



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 Elliott State 41C-17HZ				Well Elliott State 41C-17HZ			
Field Wattenberg				Field Wattenberg			
County Weld				County Weld			
State Colorado				State Colorado			
Location:				API # : 05-123-39080			
Permanent Datum				SHL: 1546' FNL, 839' FWL, SWNW			
Log Measured From				Lat / Long: 40.228906/ -104.92025			
Drilling Measured From				SEC 17 TWP 3N RGE 67W			
Ground Level				Elevation 4,813'			
Kelly Bushing				Elevation 14 FT			
Kelly Bushing				Elevation 4,813'			
K.B. 4,827'				Other Services			
D.F. 4,826'				Plug			
G.L. 4,813'				MIT			
				Gauge ring			
				Elevation			
Date				15-June-2014			
Run Number				Three			
Depth Driller				---			
Depth Logger				6,740 FT			
Bottom Logged Interval				6,740 FT			
Top Log Interval				Surface			
Open Hole Size				8.750"			
Type Fluid				Water			
Density / Viscosity				8.34 lbm/gal			
Max. Recorded Temp.				210 F			
Estimated Cement Top				302 FT			
Time Well Ready				ROA			
Time Logger on Bottom				9:00 a.m.			
Equipment Number				HD-255			
Location				Fort Lupton, CO			
Recorded By				W. Wacker			
Witnessed By				Donnie Frederick			
Borehole Record				Tubing Record			
Run Number				Bit			
From				To			
				Size			
				Weight			
				From			
				To			
Casing Record				Size (in)			
Surface Casing				Wgt (lbs/ft)			
Intermediate #1				Grade			
Intermediate #2				Top			
Liner				Bottom			
				9 5/8"			
				36			
				J-55 LTC			
				Surface			
				1,244 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.
All wireline depths measured from KB zero at 14 FT
Depth reference to Casing Tally reported Liner top @ 6,686 FT.
Adjusted log 3.5 FT to correlate with Liner Top.
Gauge Ring / Junk Basket run to 6,894 FT.
Retrievable Bridge Plug set at 6,770 FT.
Log ran with 2400 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 2400 PSI at Surface

Database File: 0512339080_anadarko_elliott state 41c-17hz_06-15-2014_mit_rbl.db

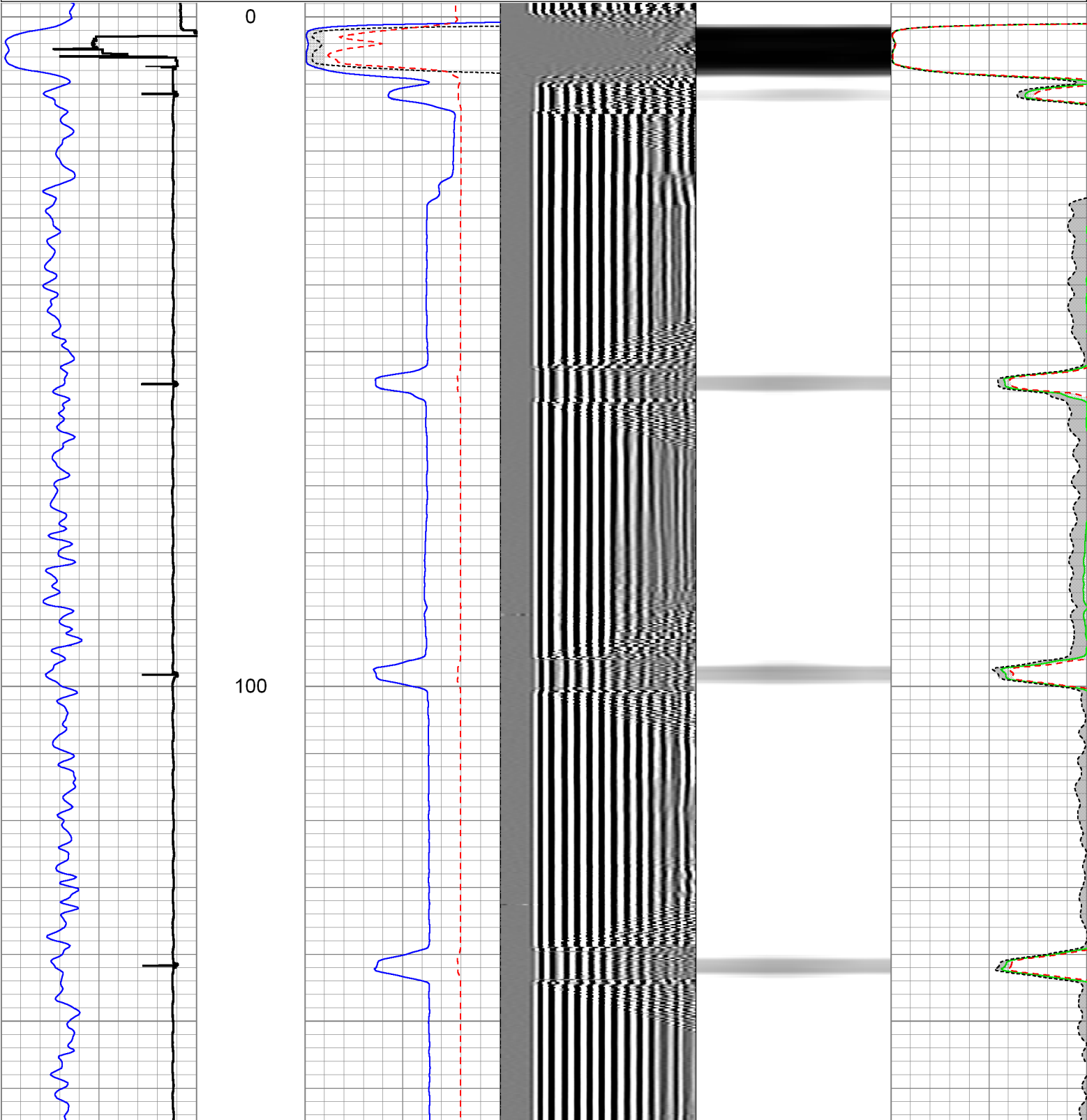
Dataset Pathname: main

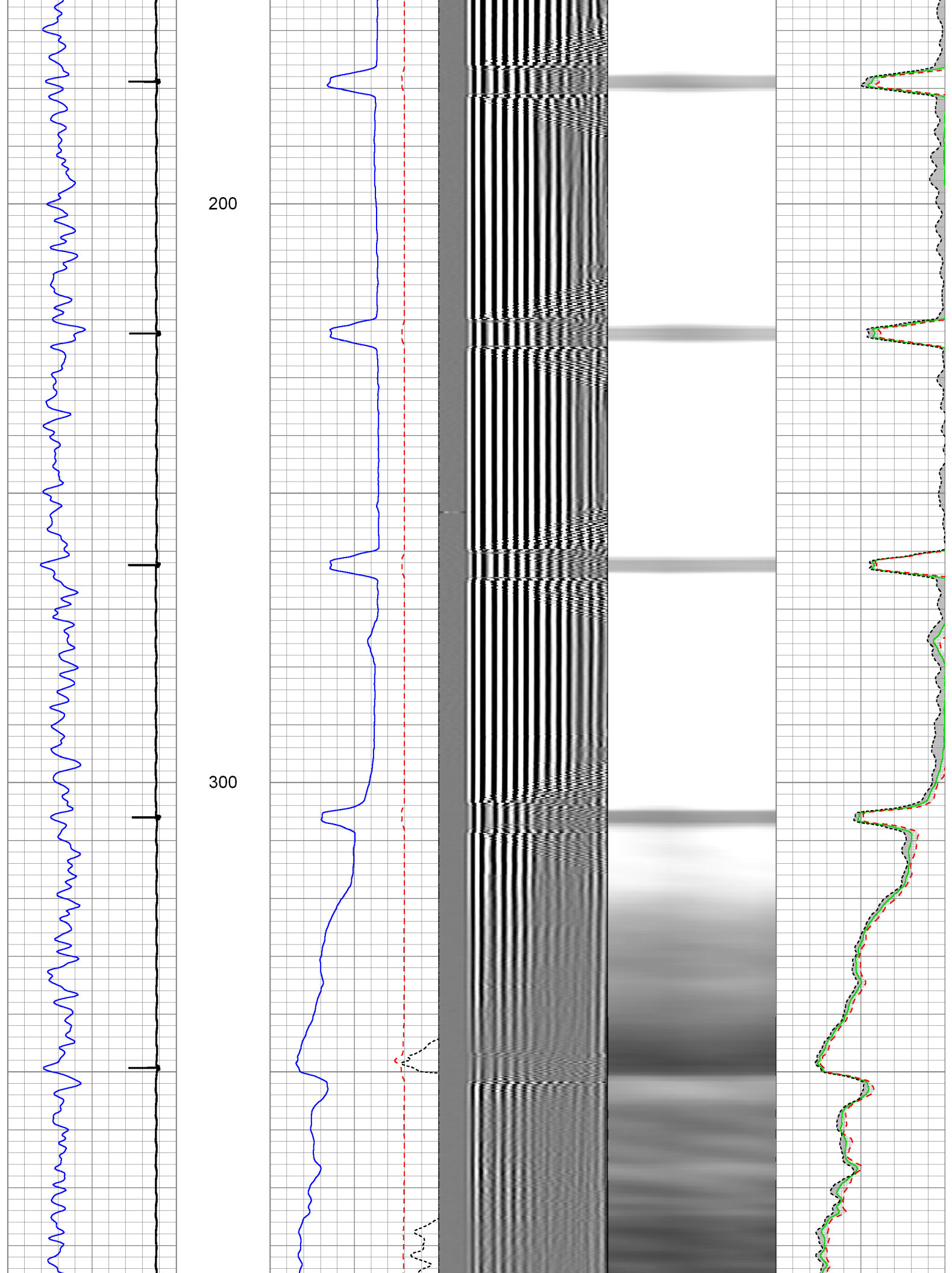
Presentation Format: rbt4_mit

Dataset Creation: Sun Jun 15 09:01:36 2014 by Log SCH 111116

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

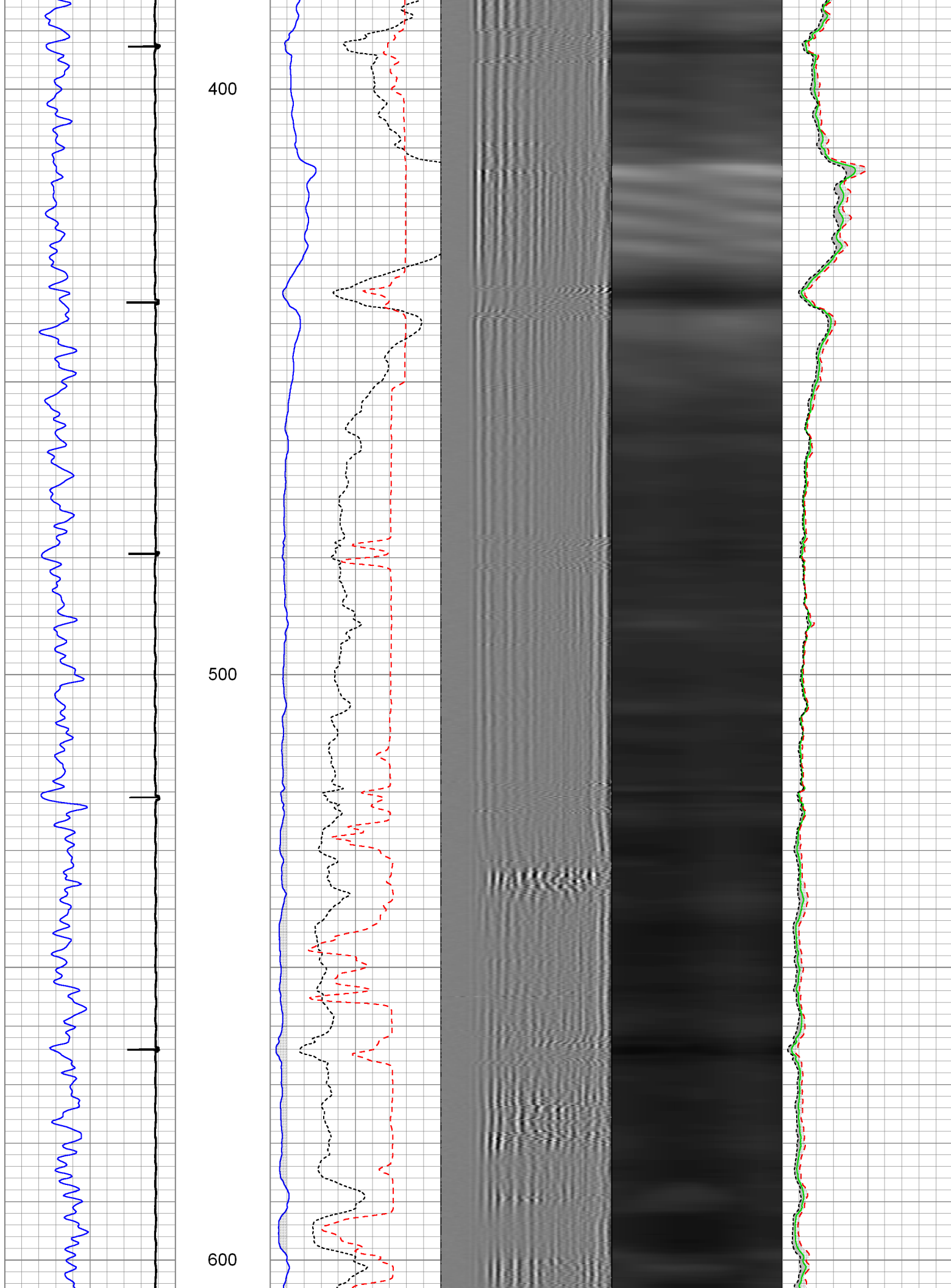


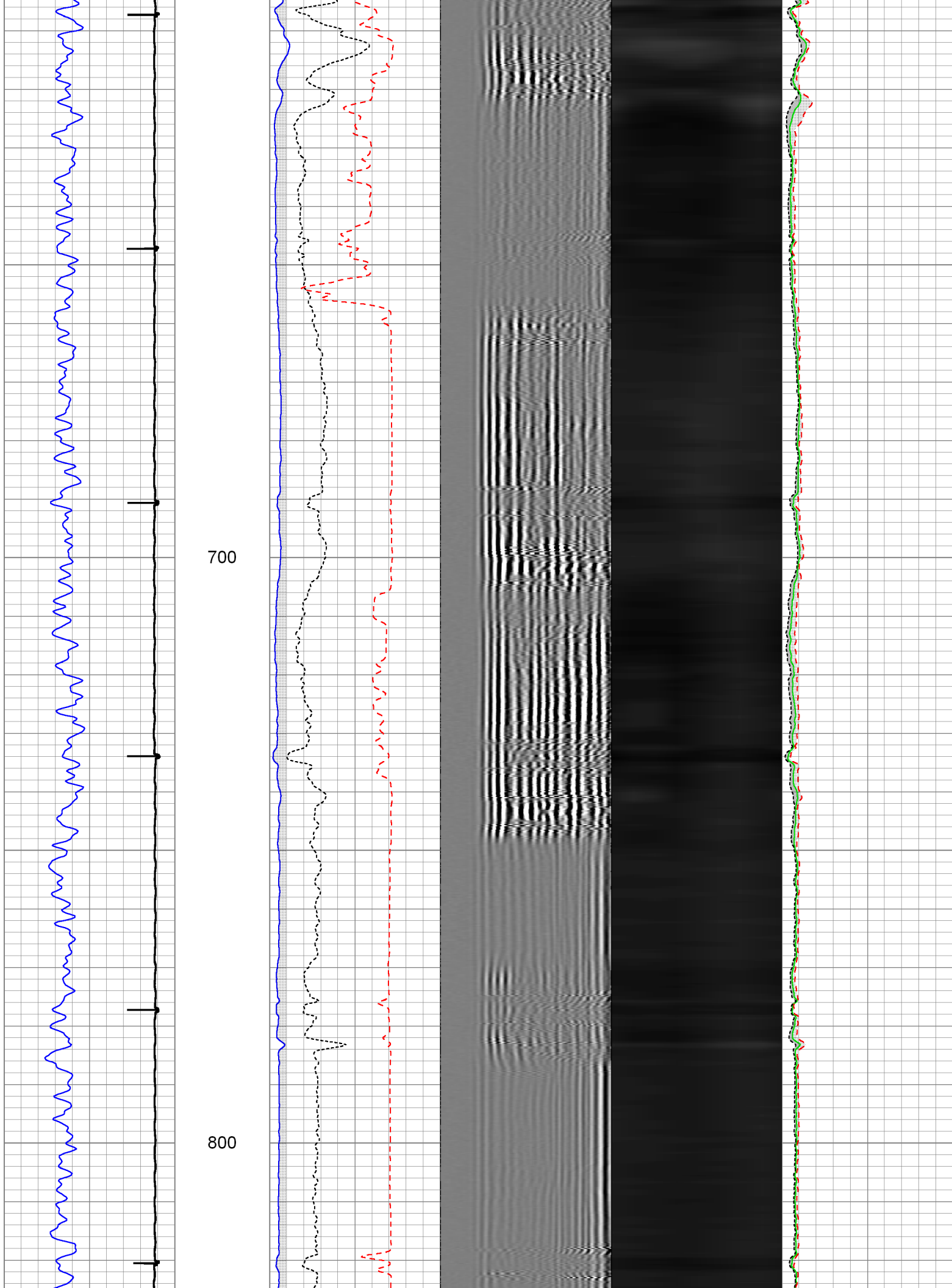


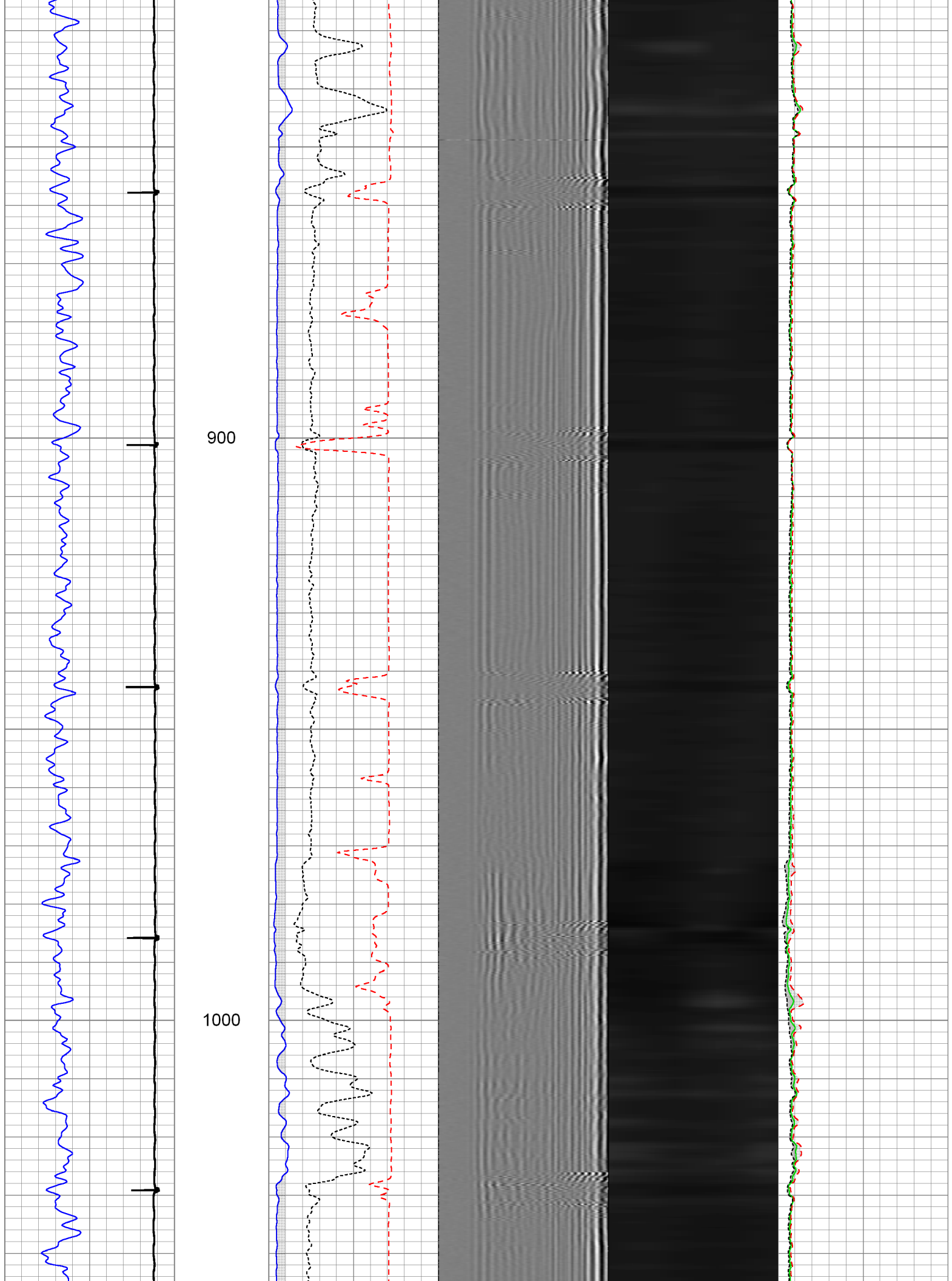
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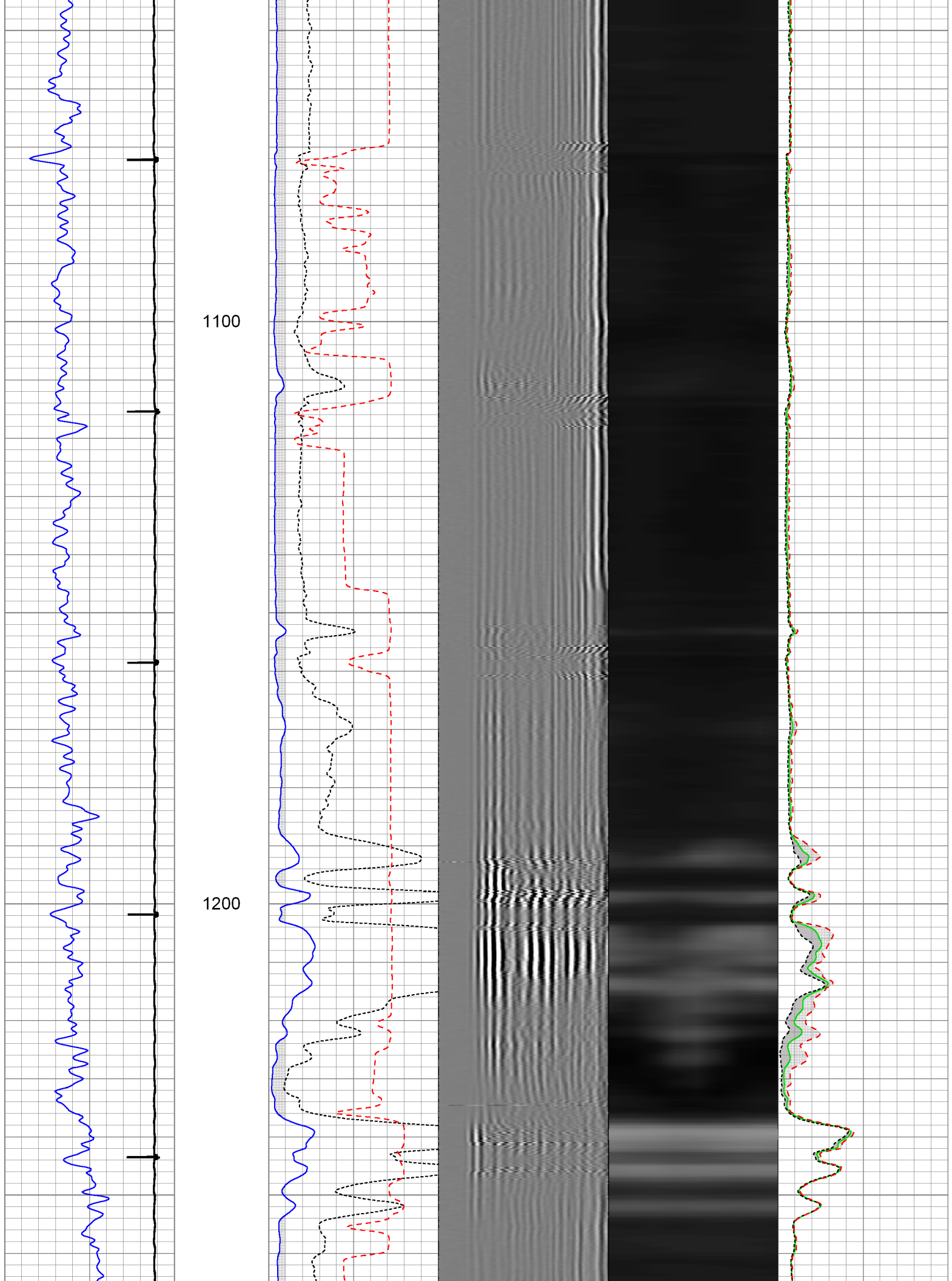
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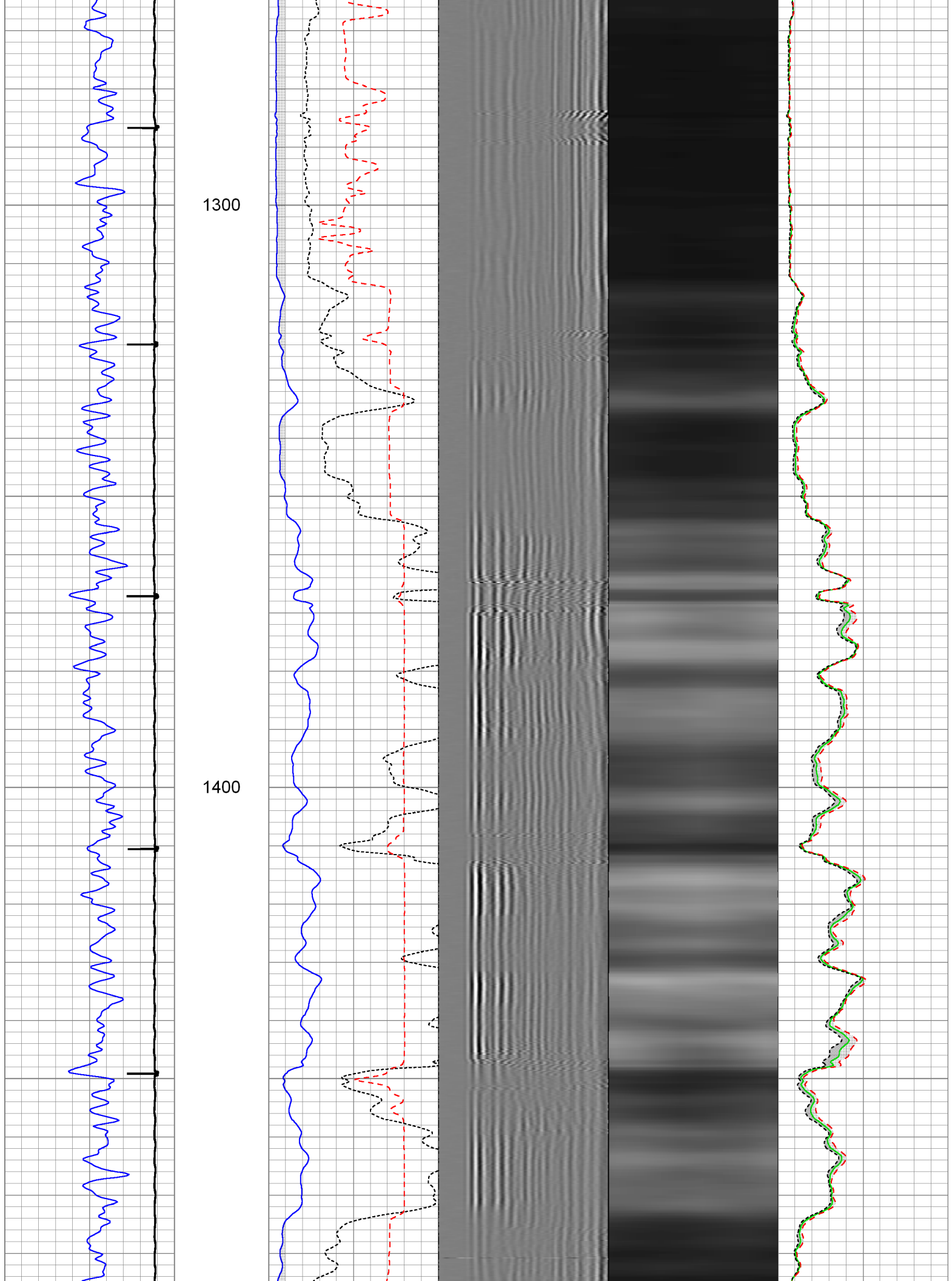
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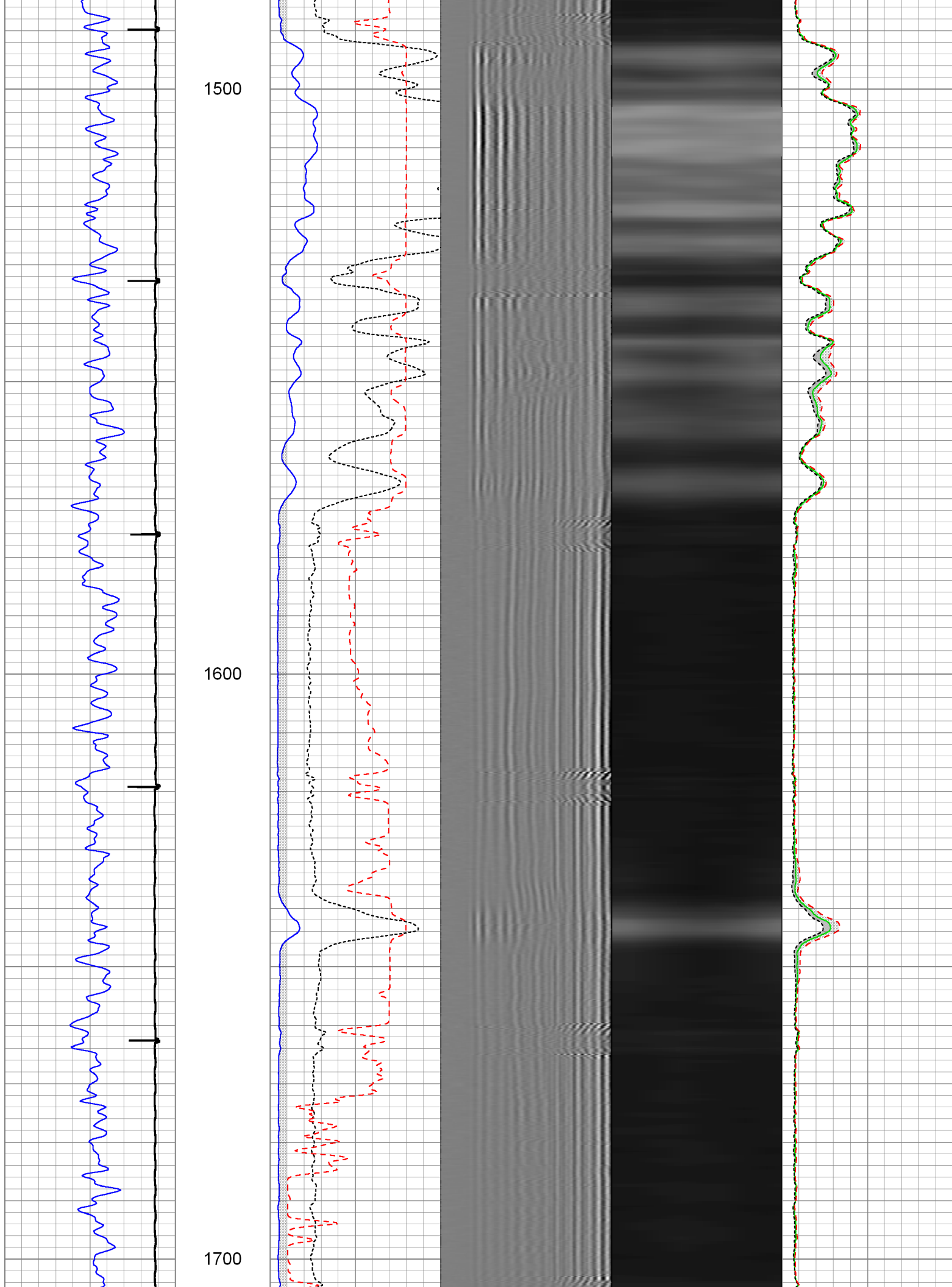


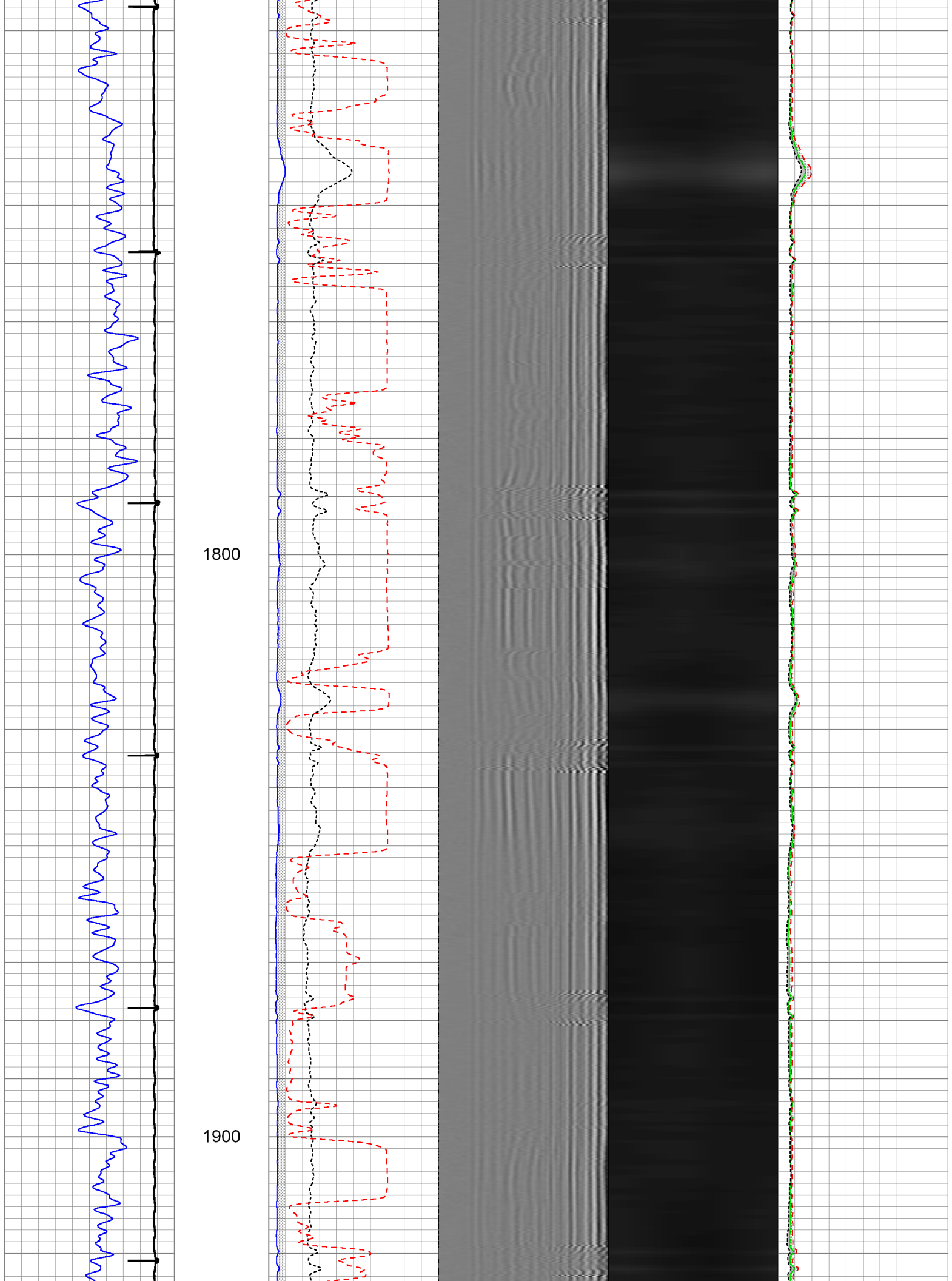


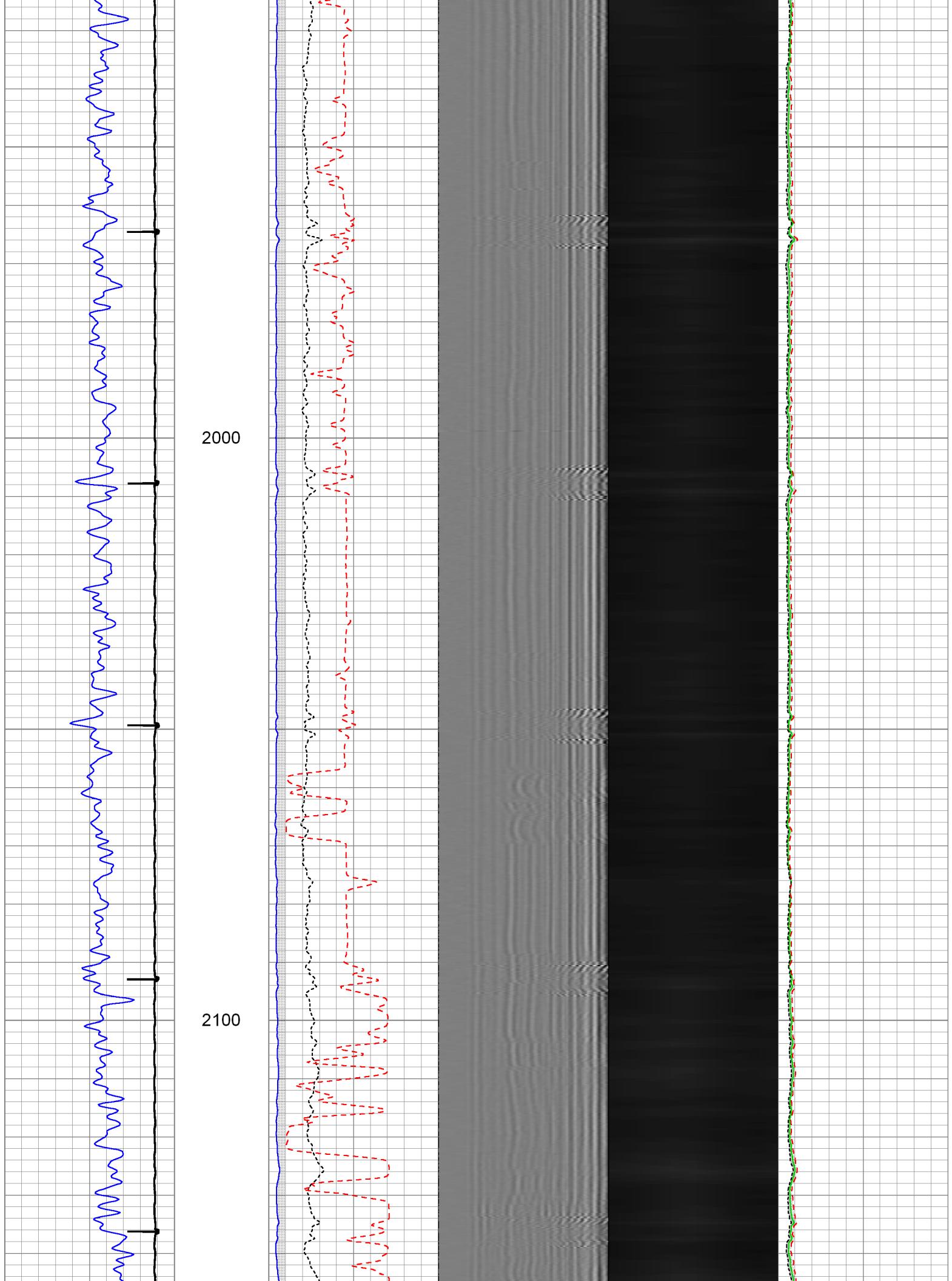
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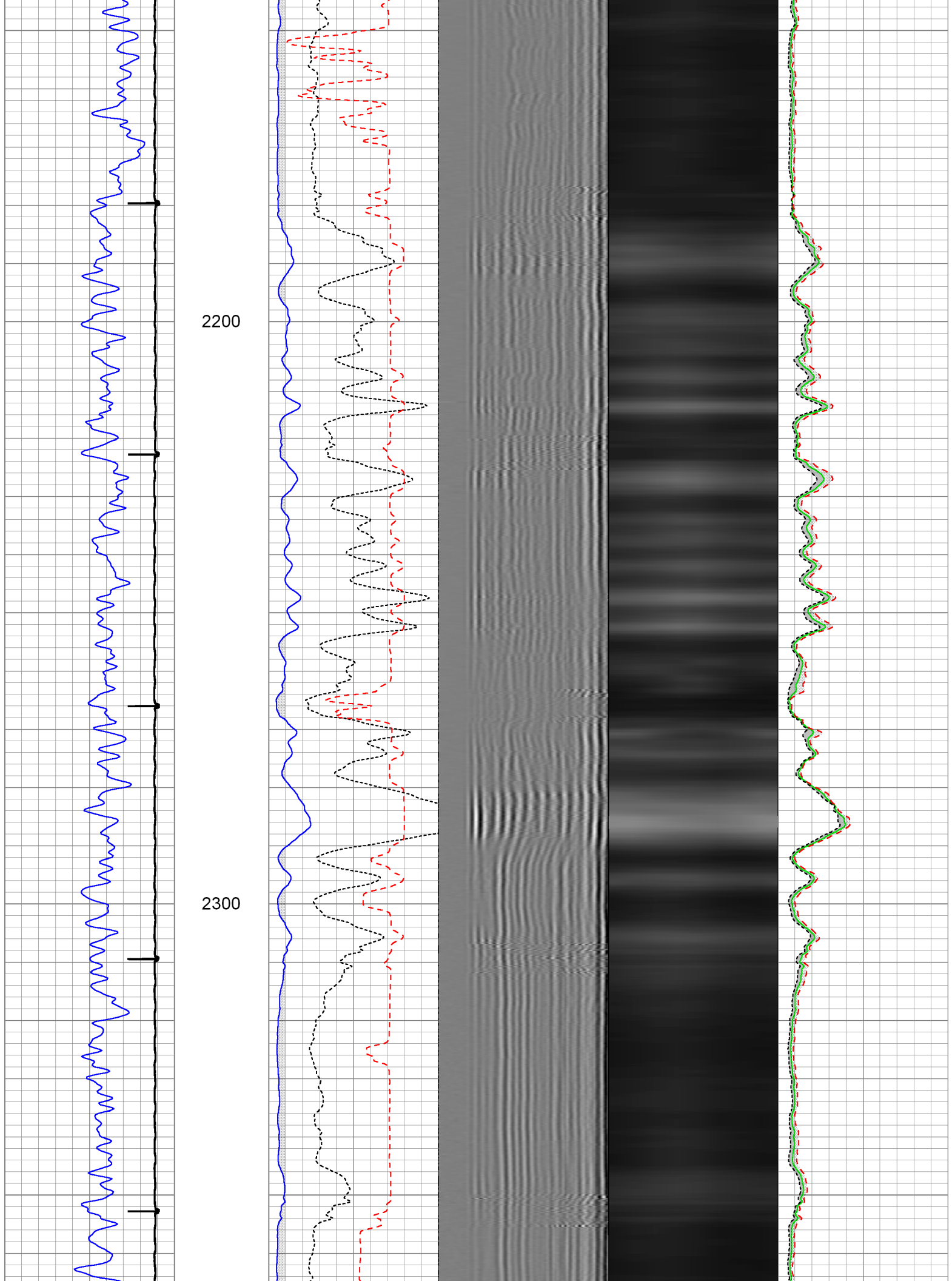
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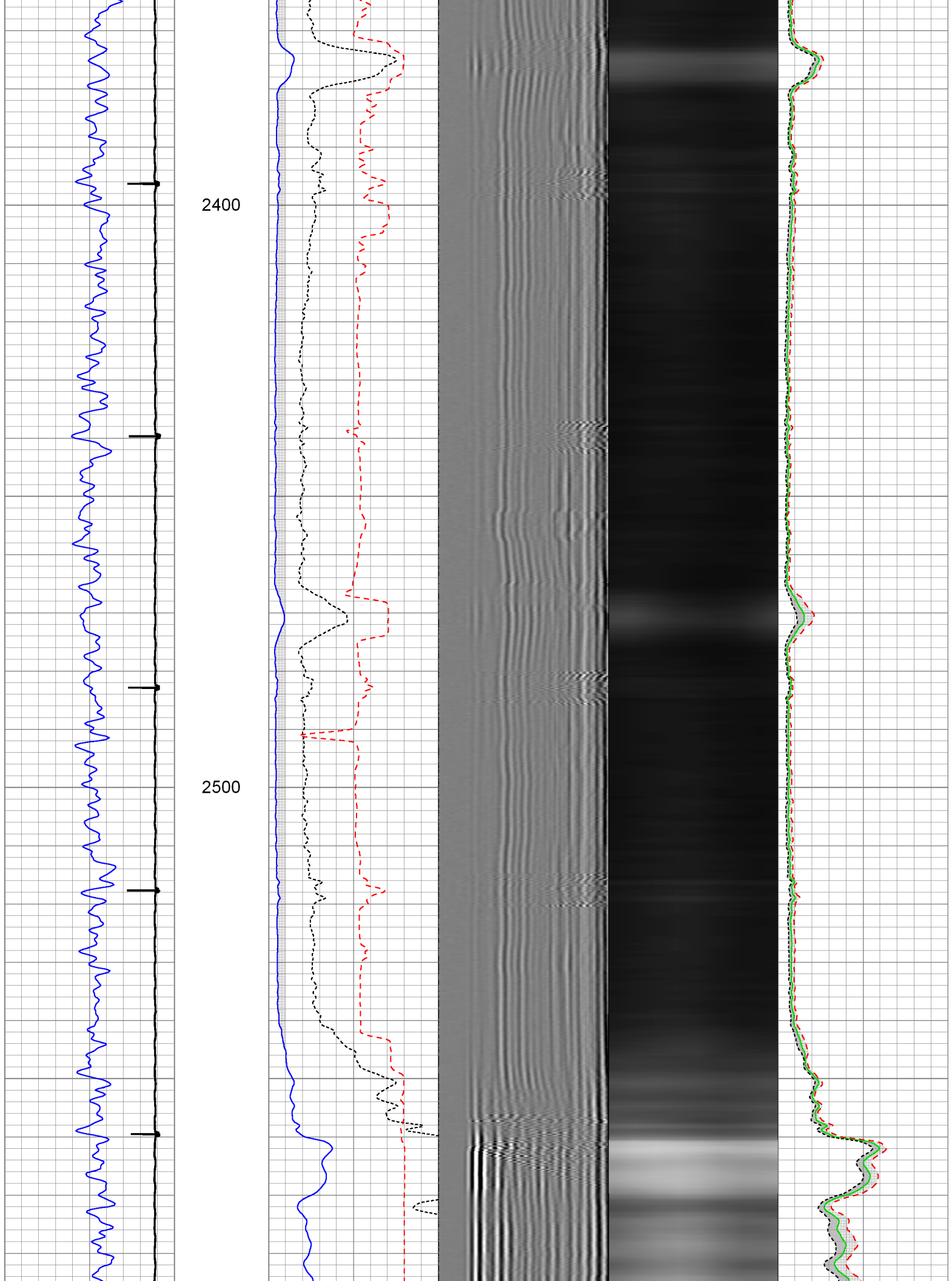
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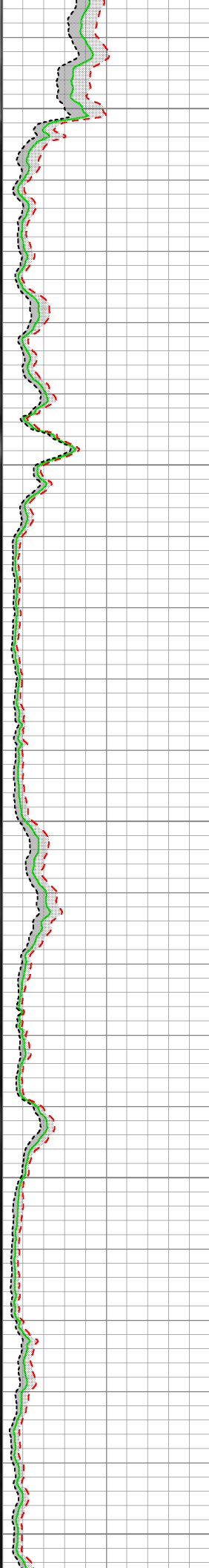
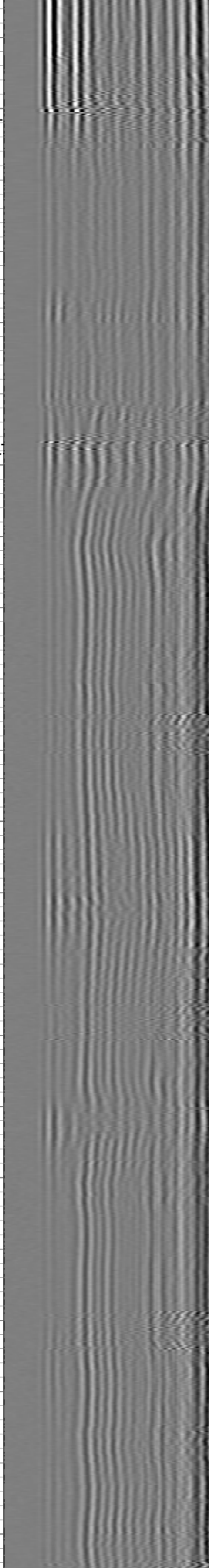
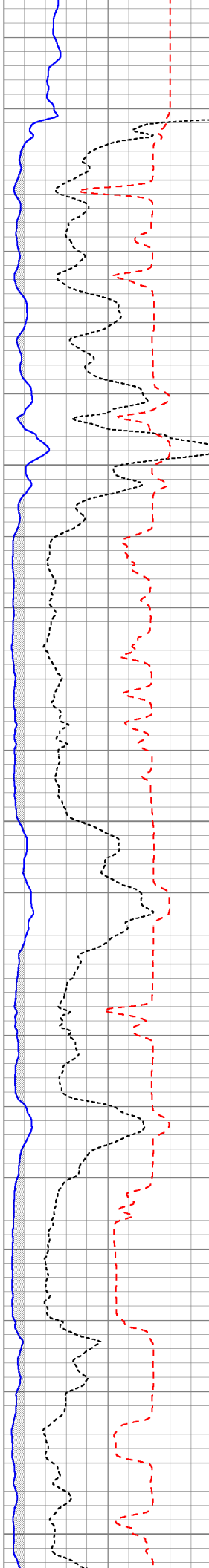
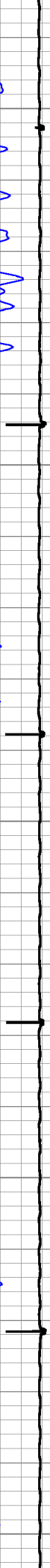
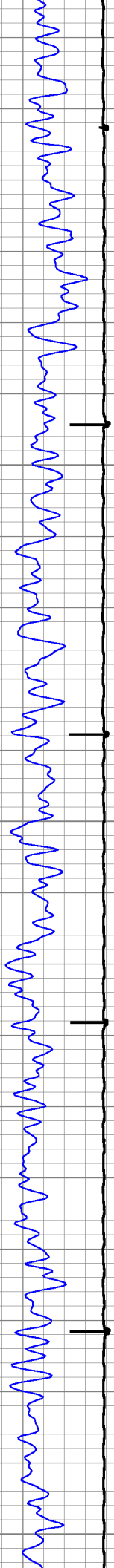


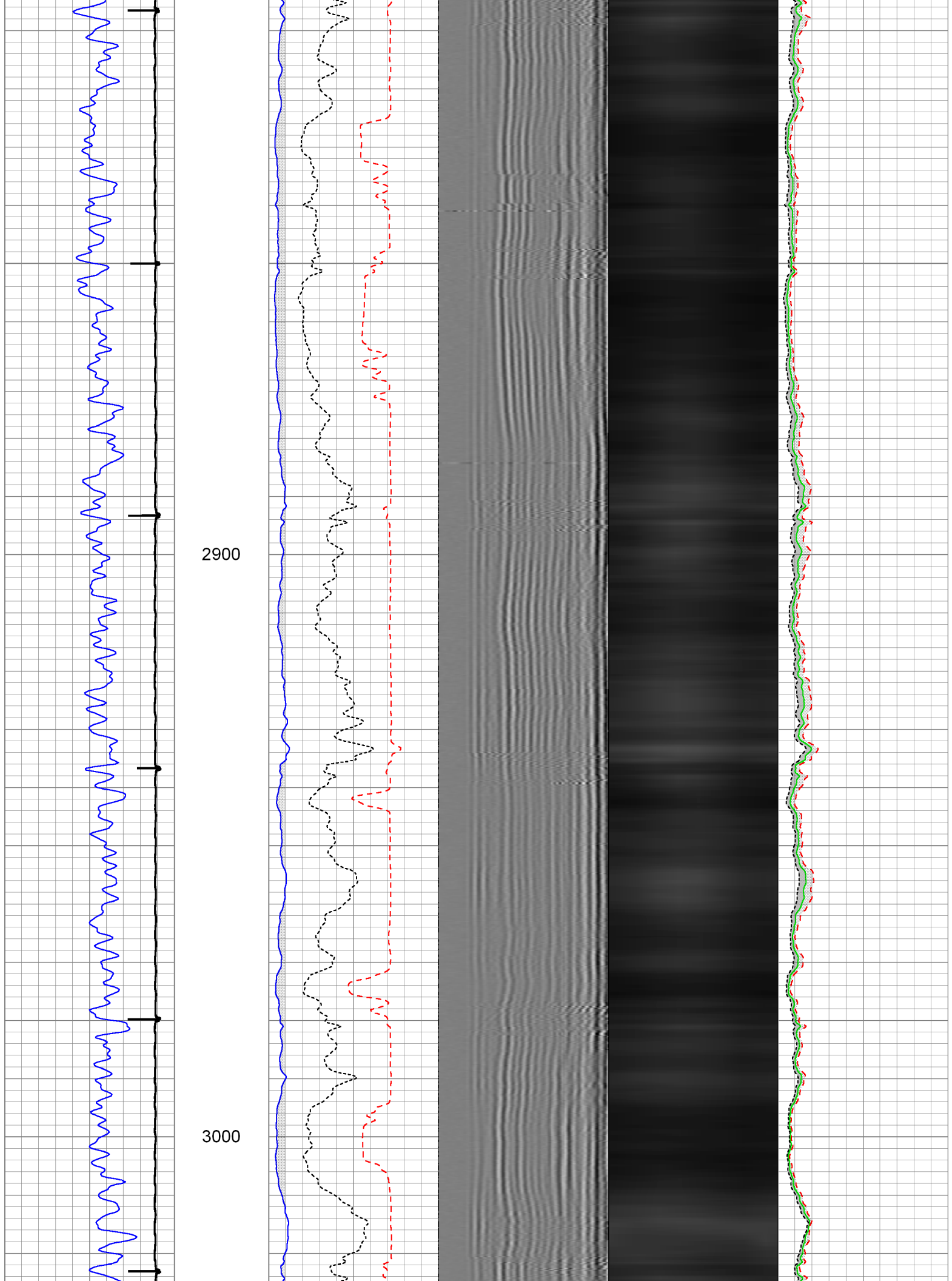


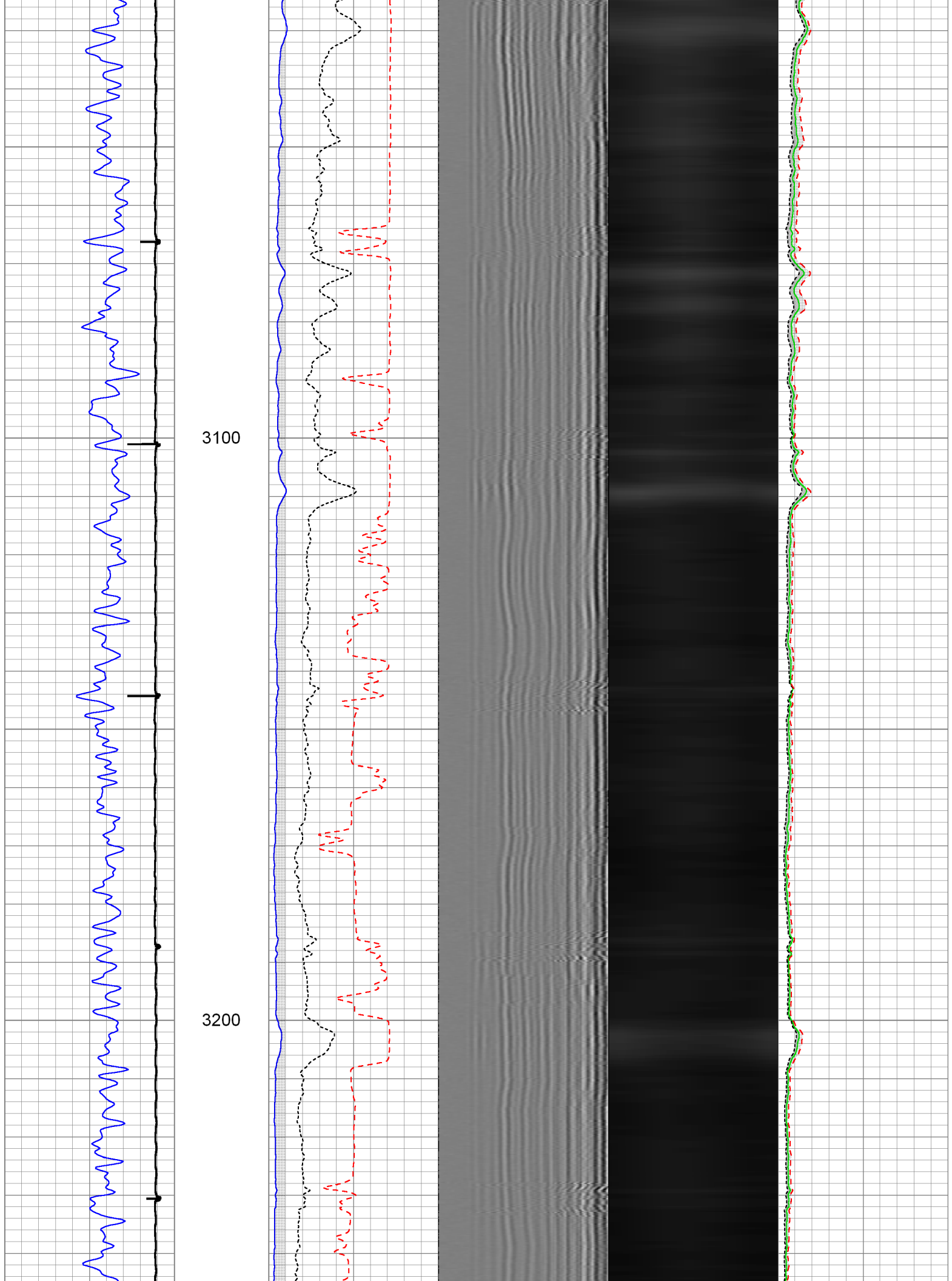
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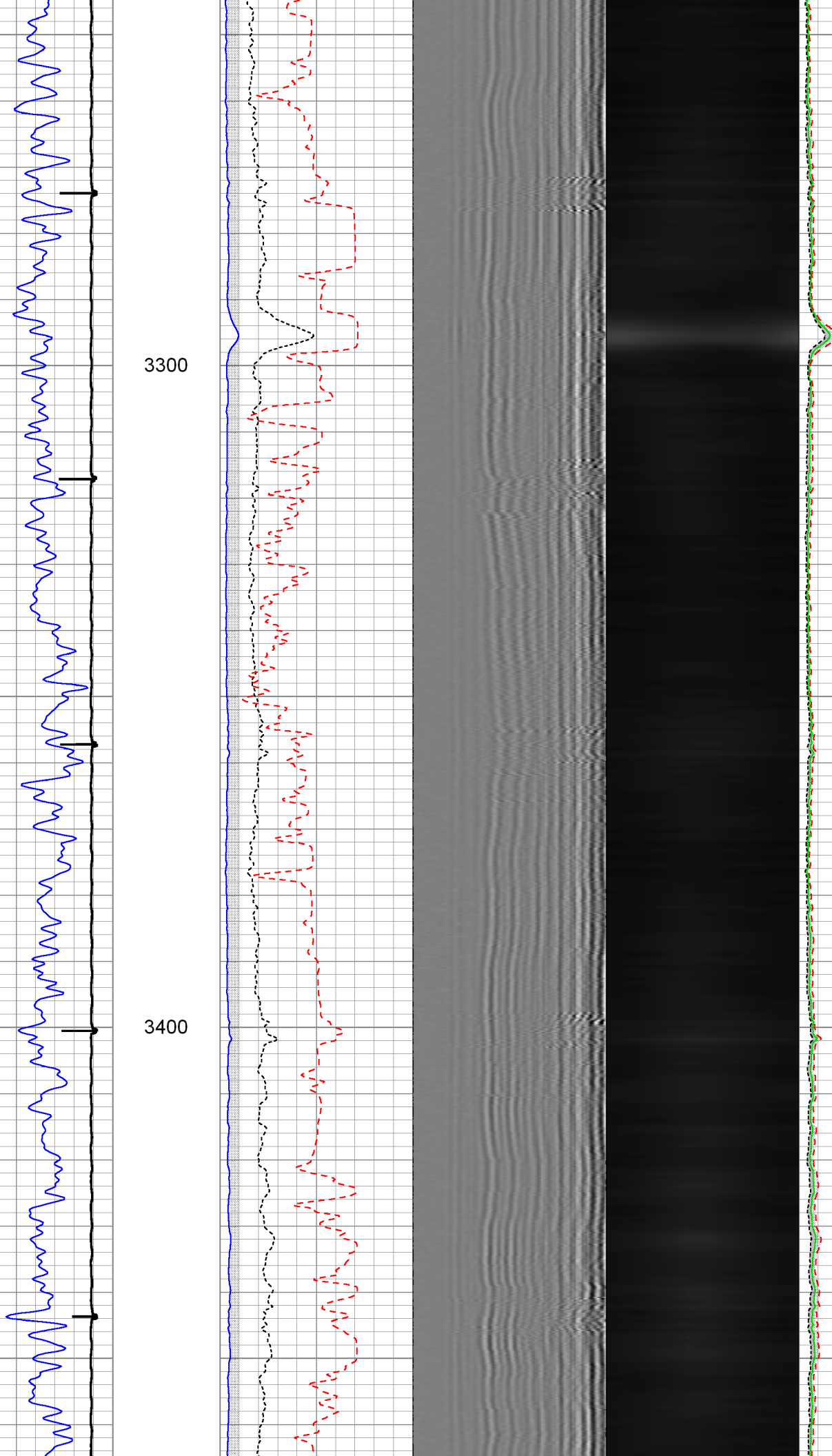
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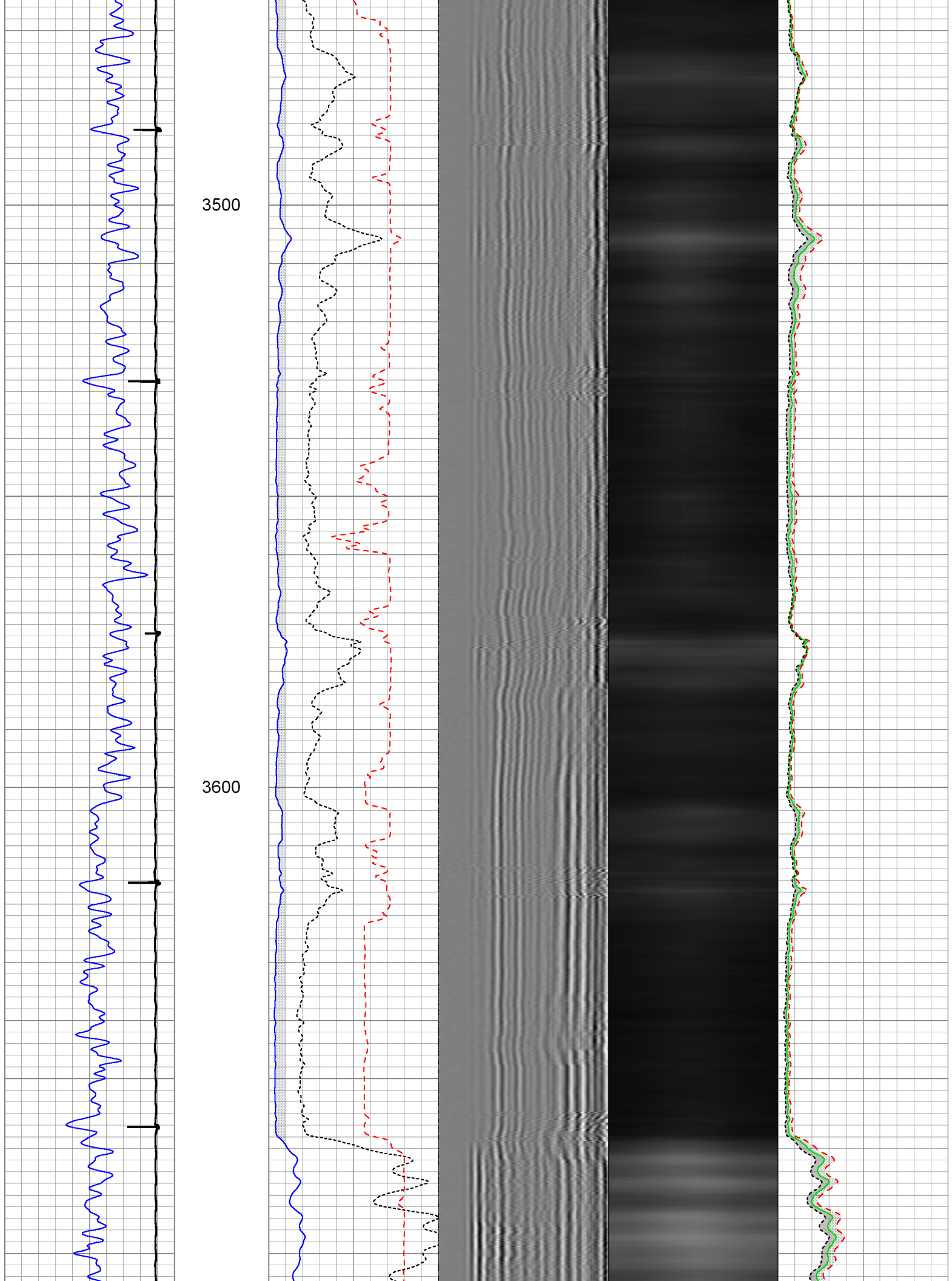
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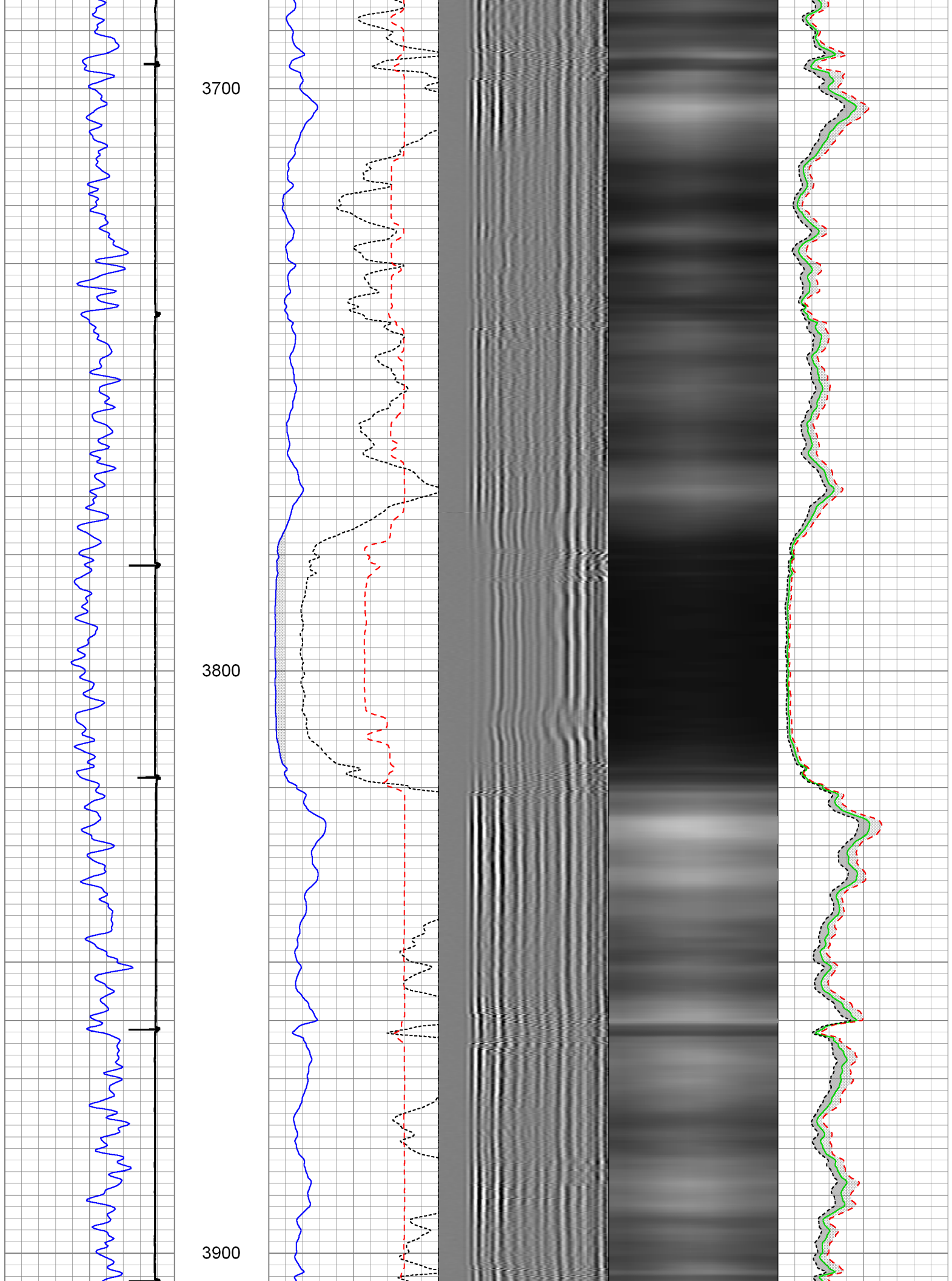


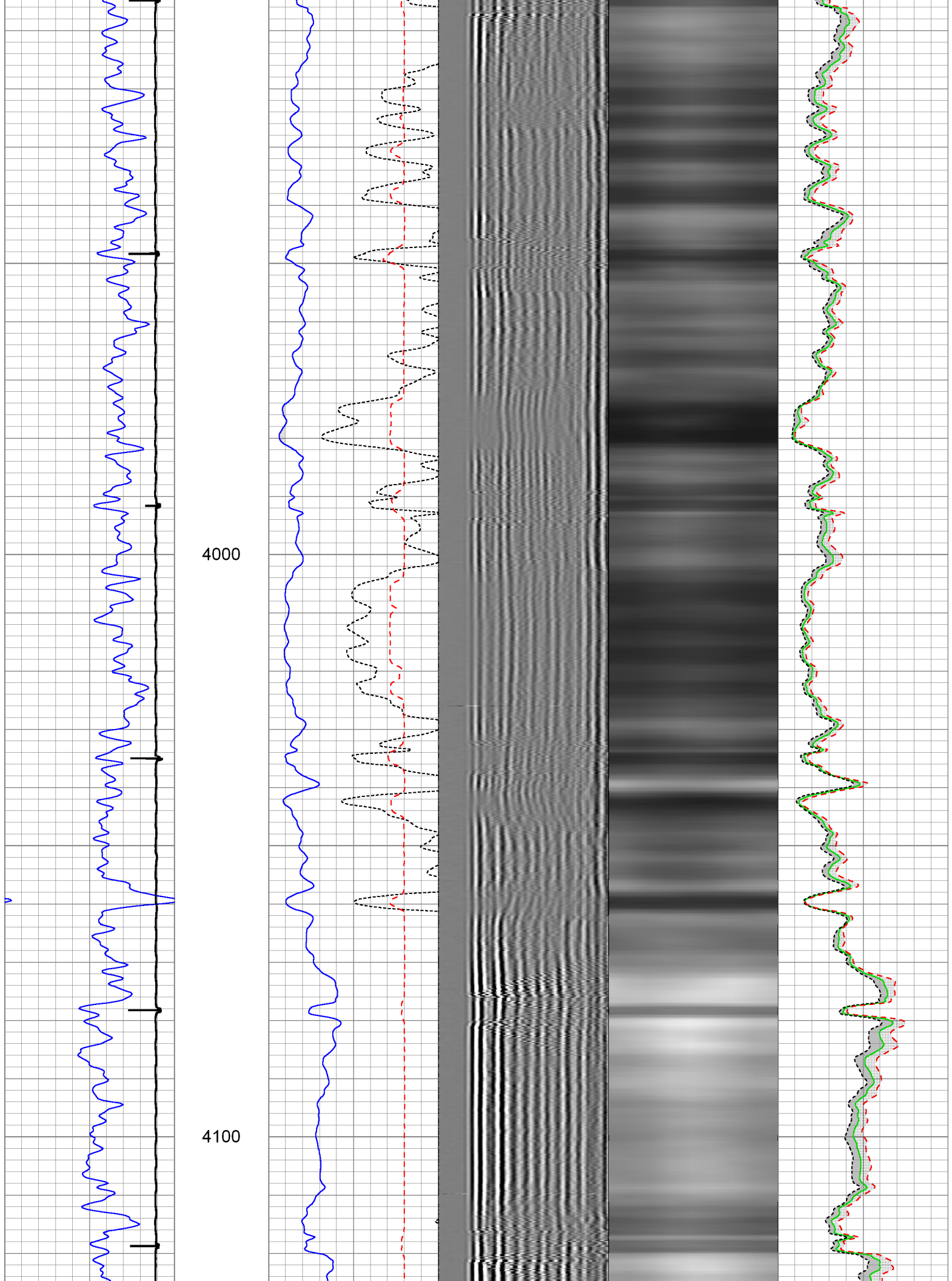


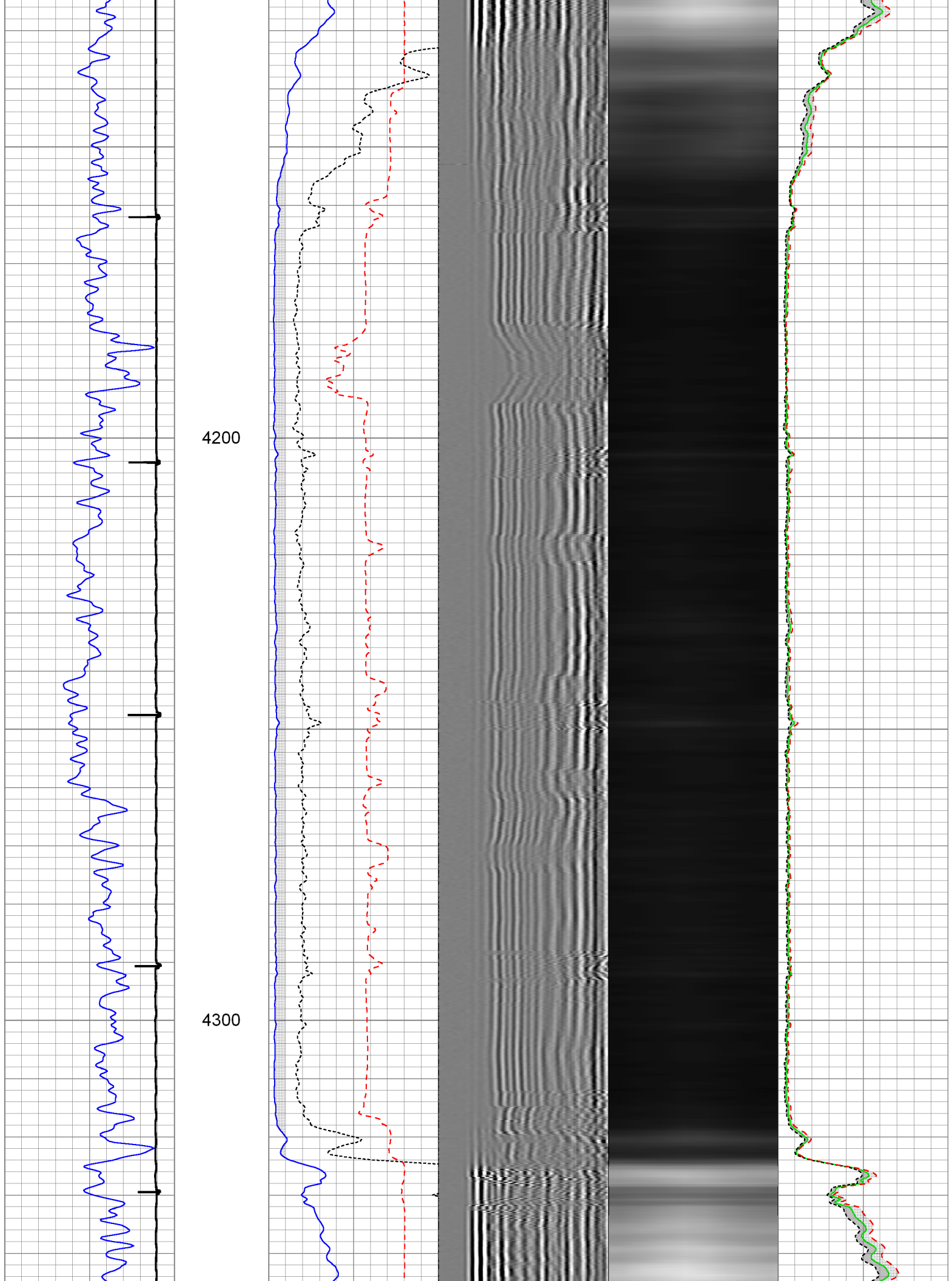
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3800

3900

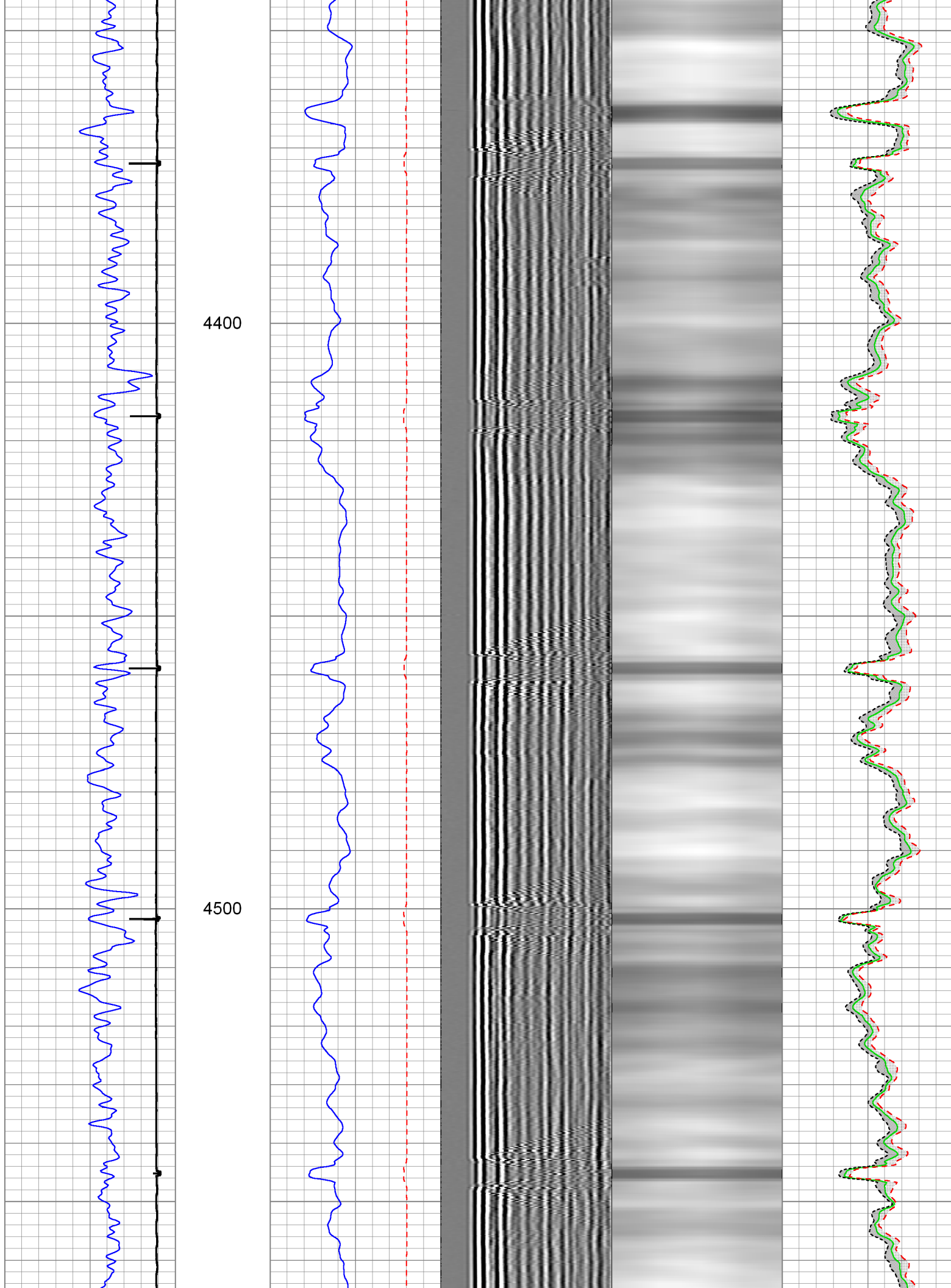






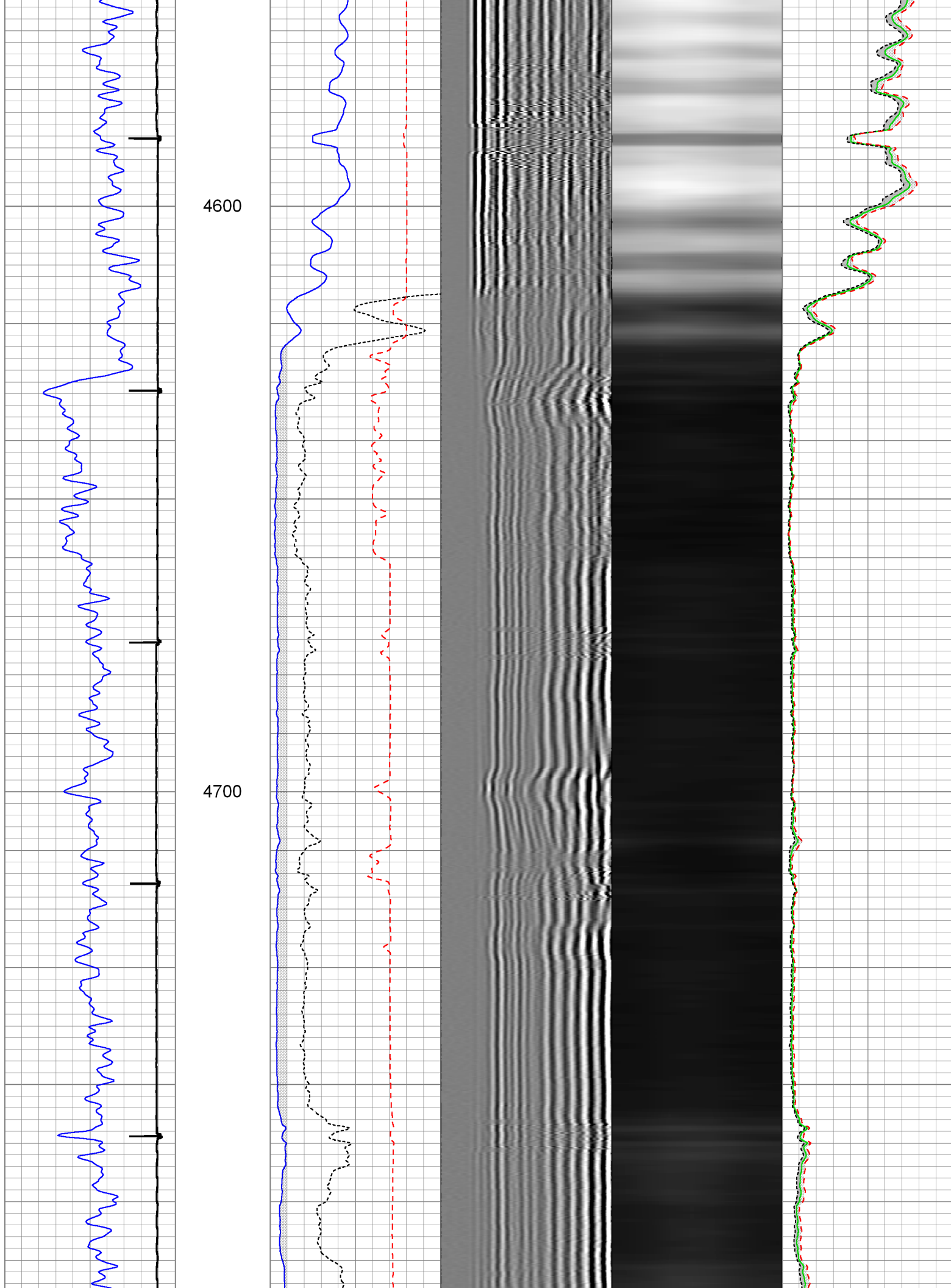
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4500



4600

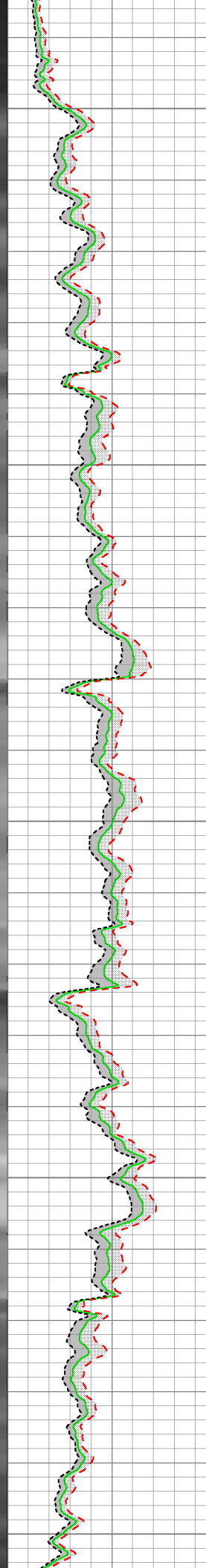
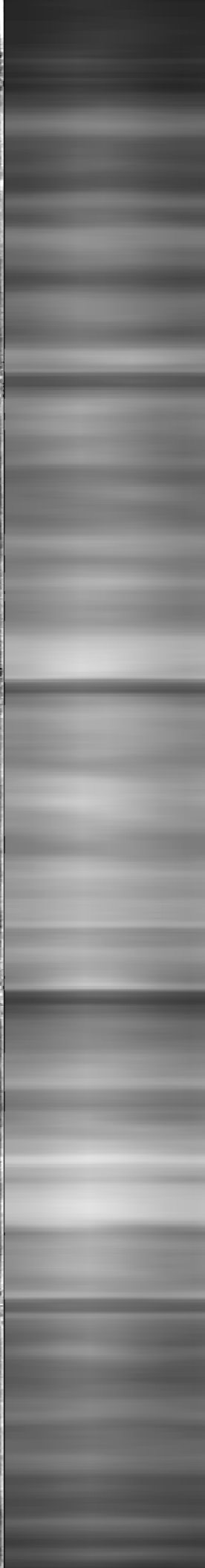
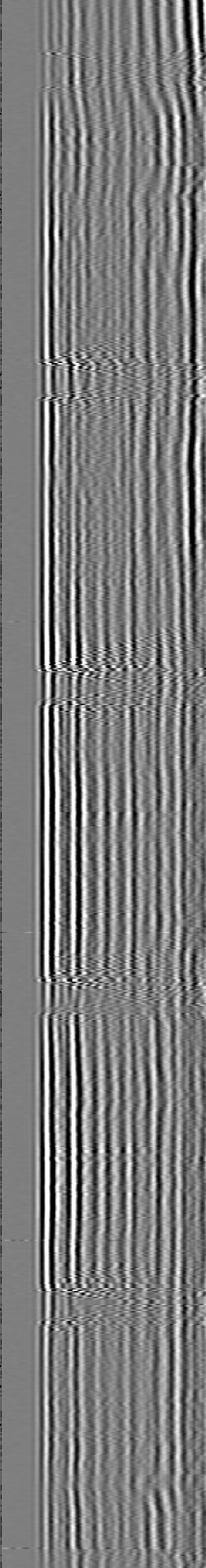
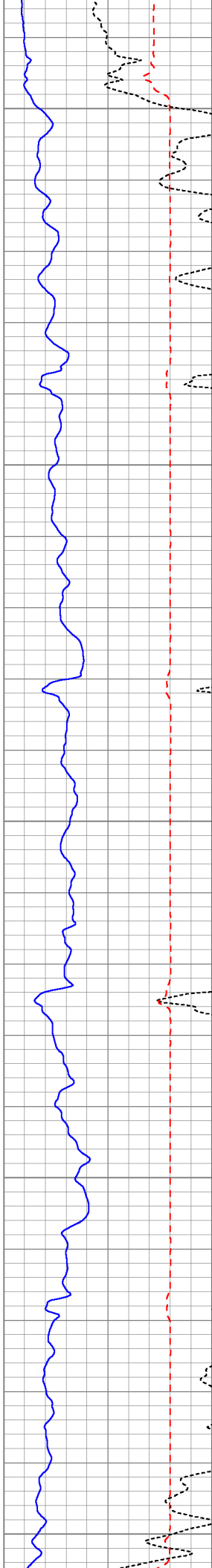
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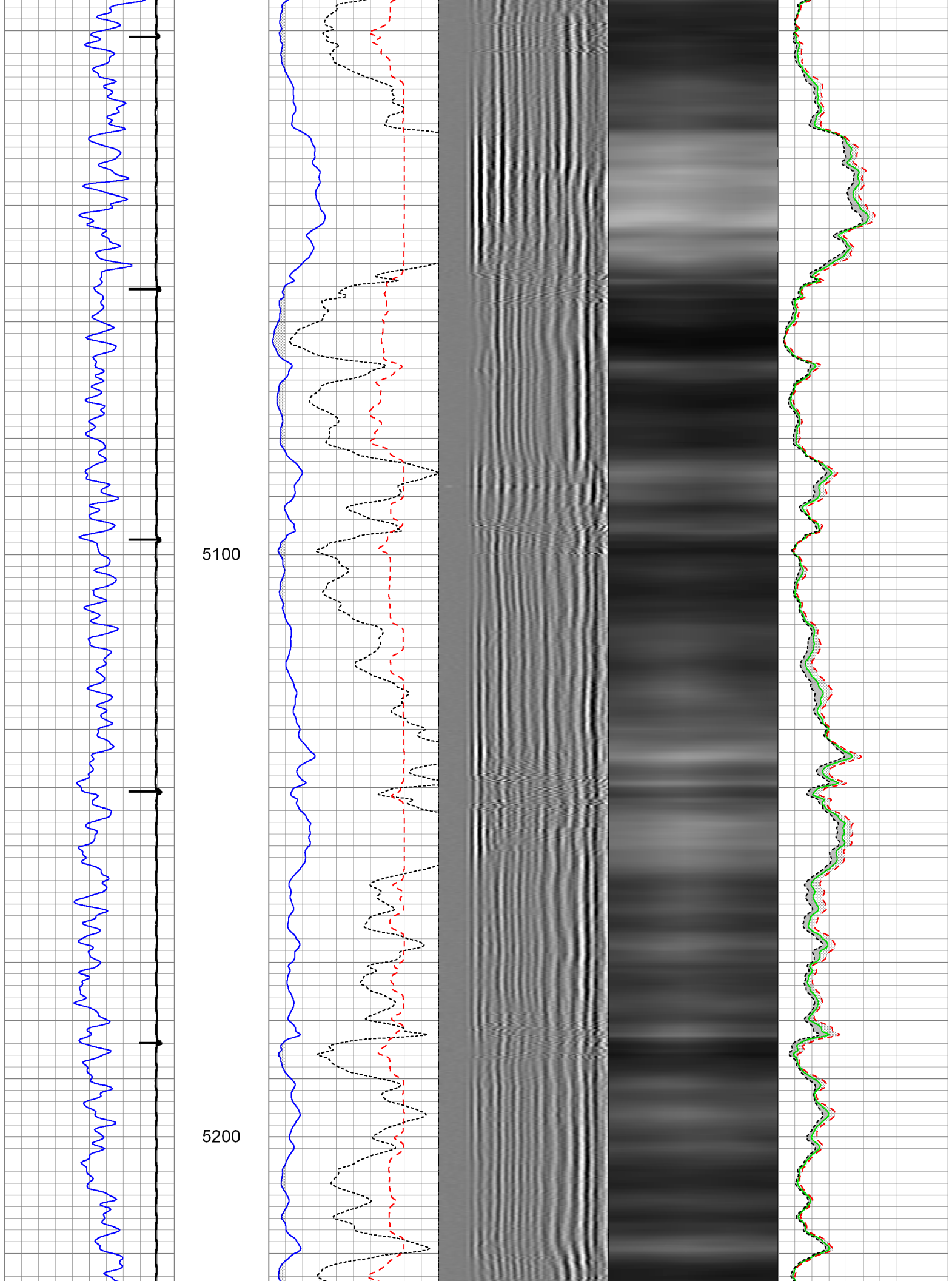


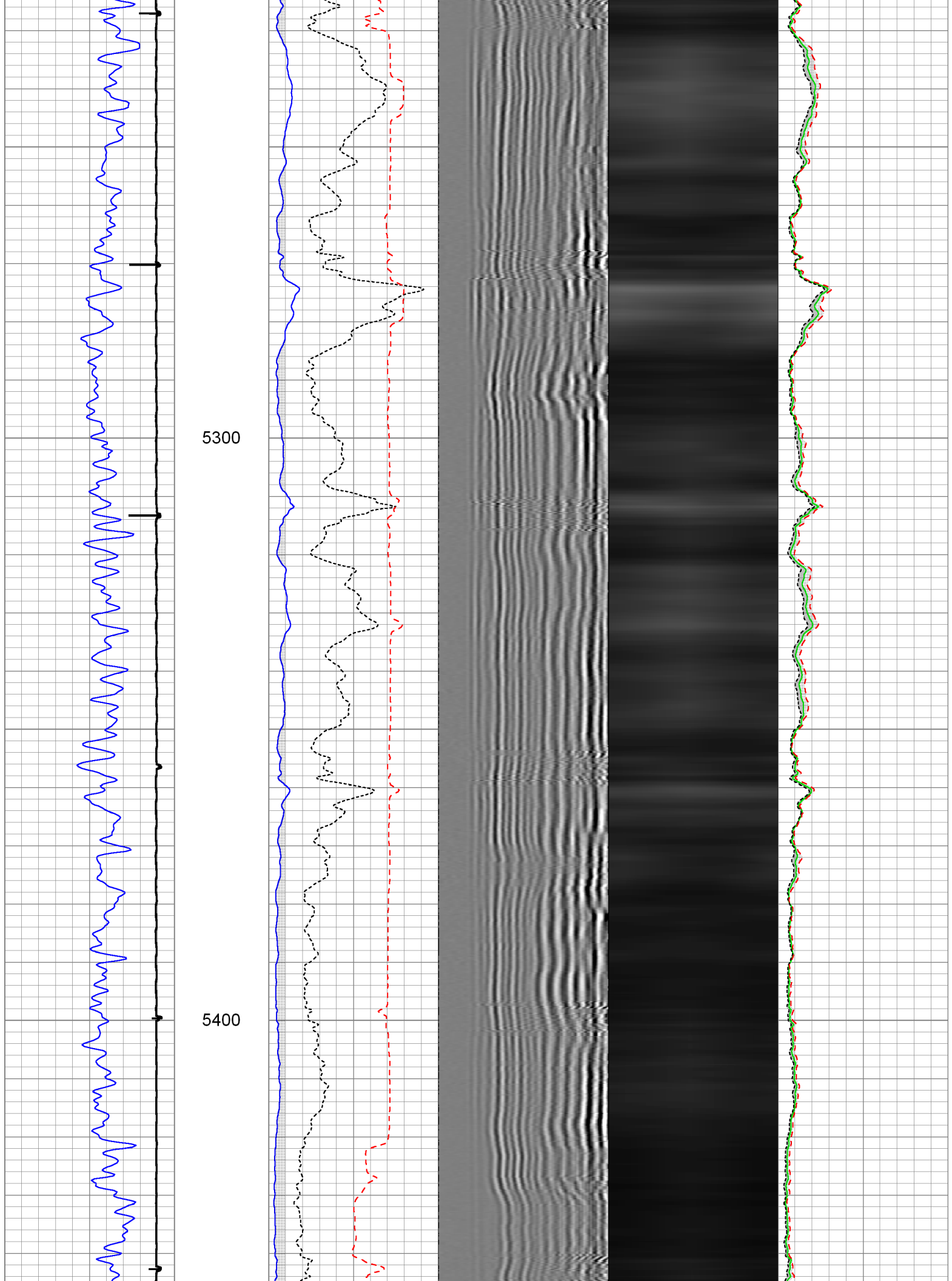
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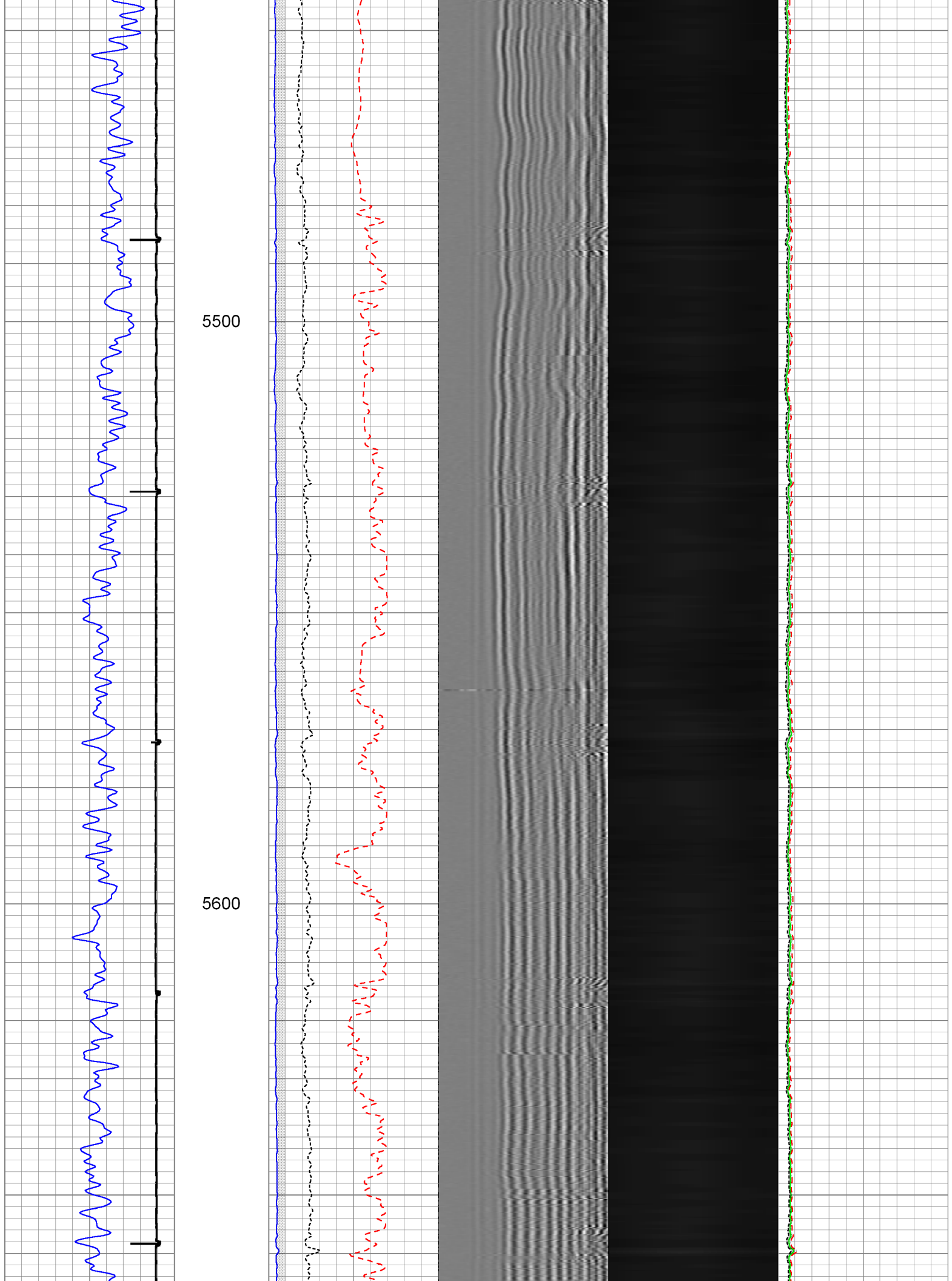
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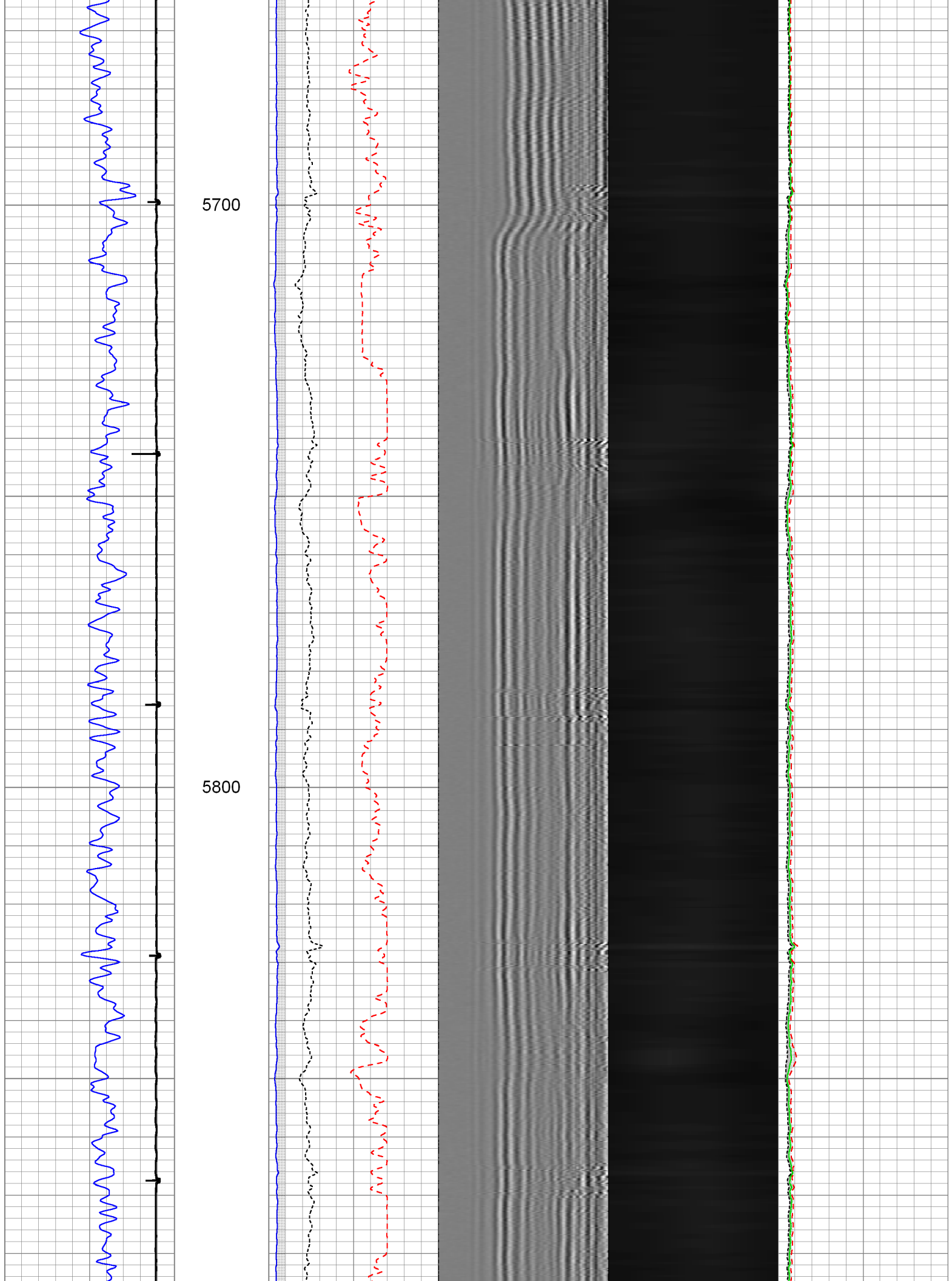
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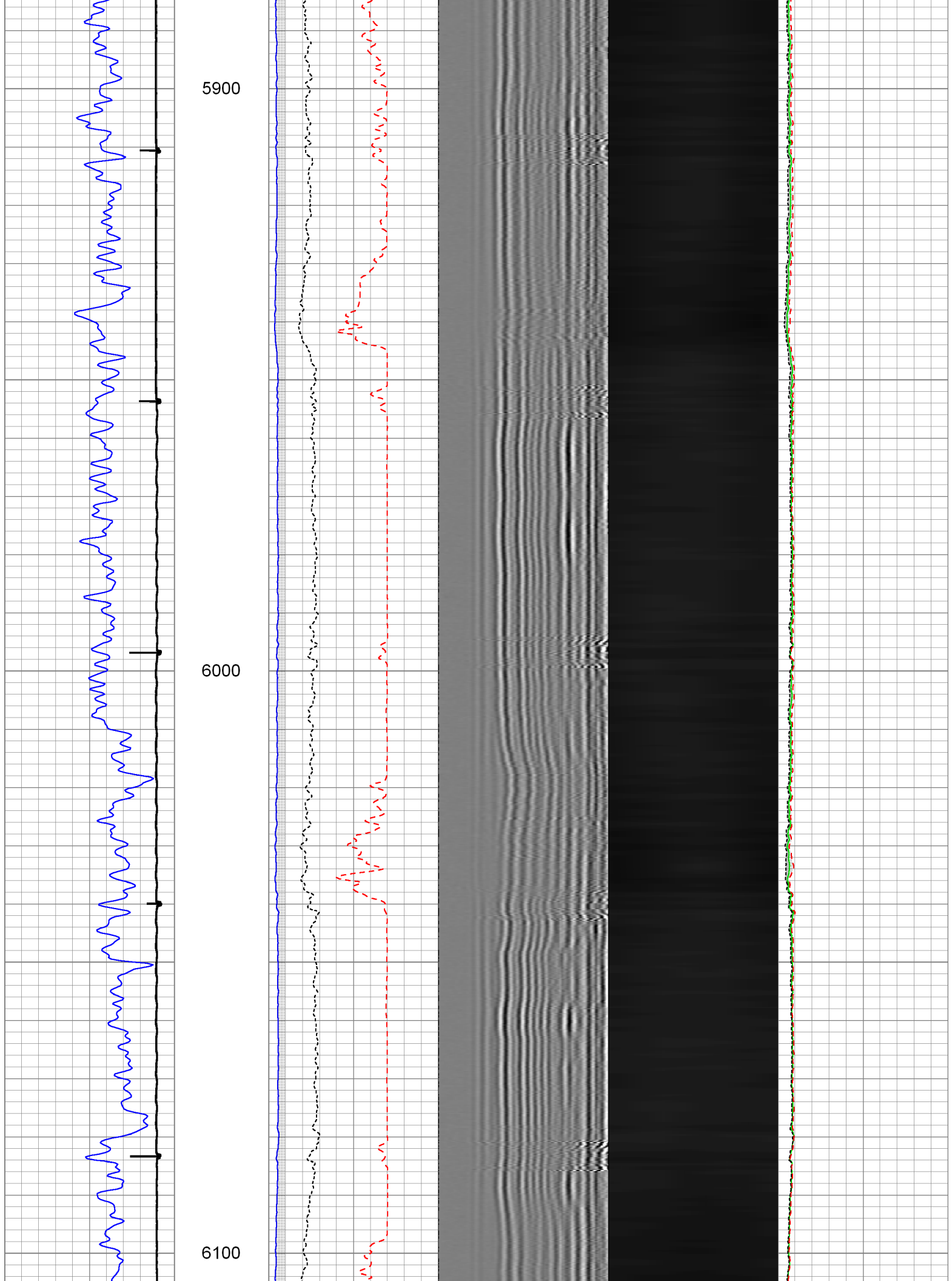


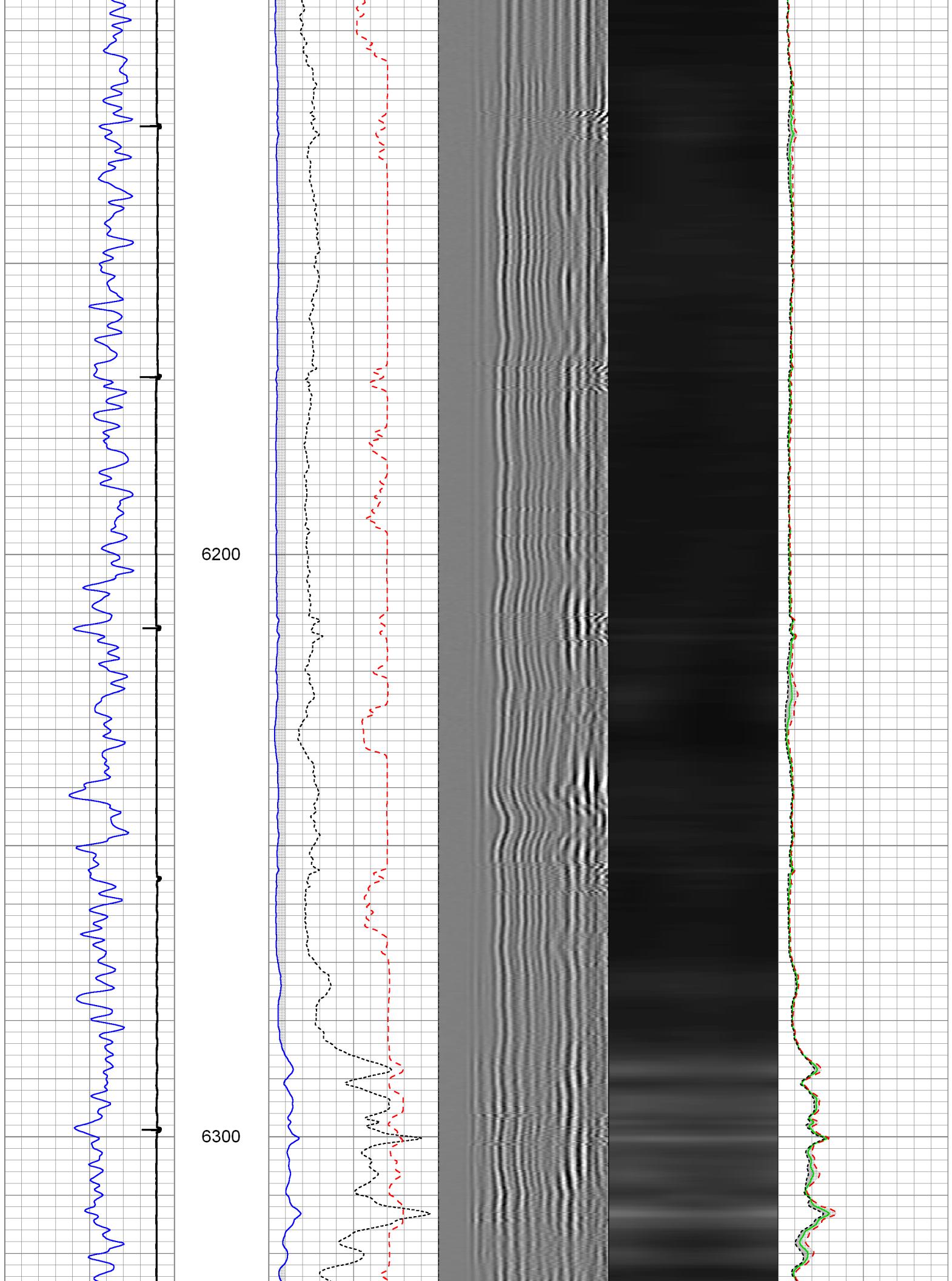


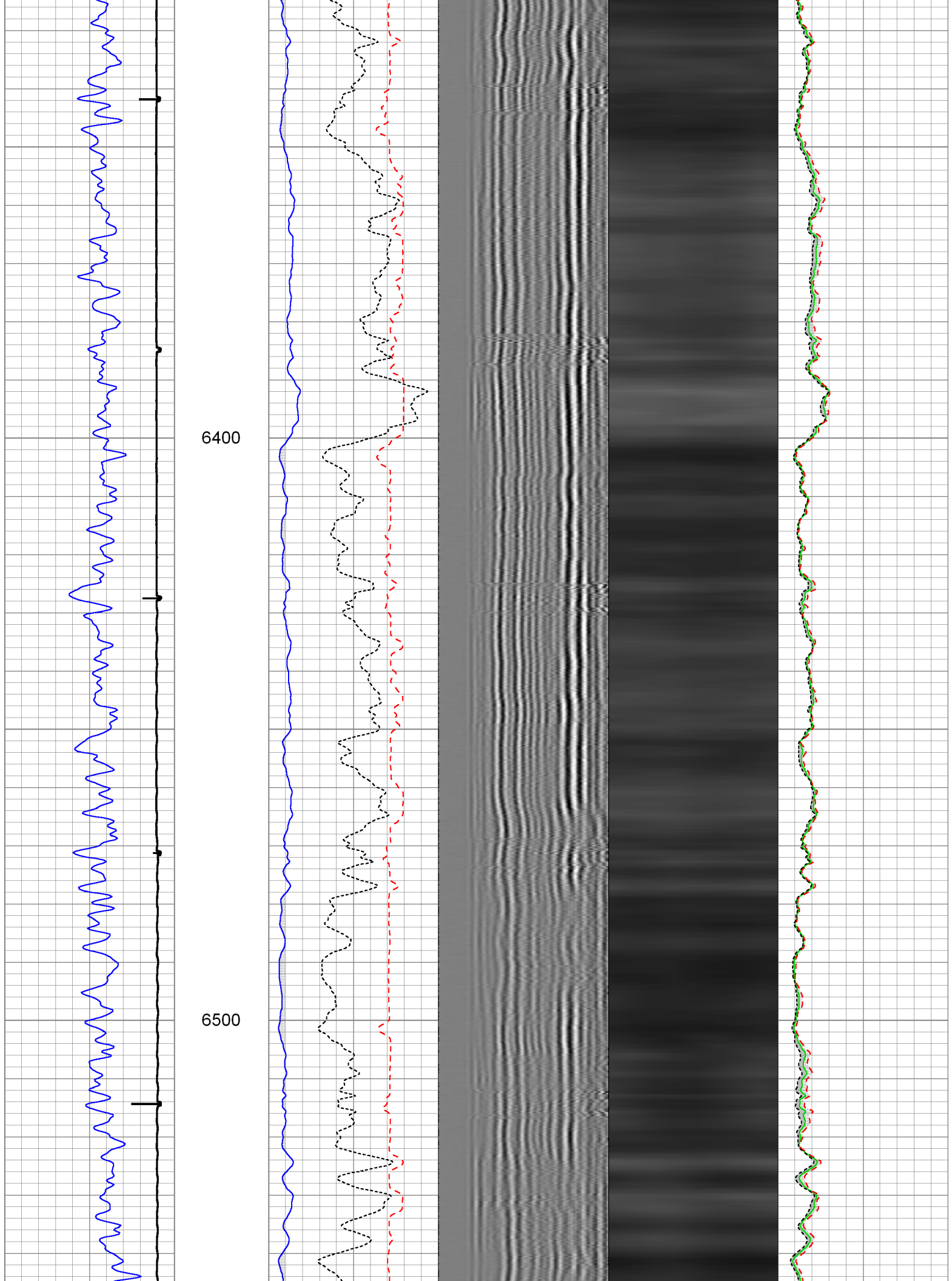


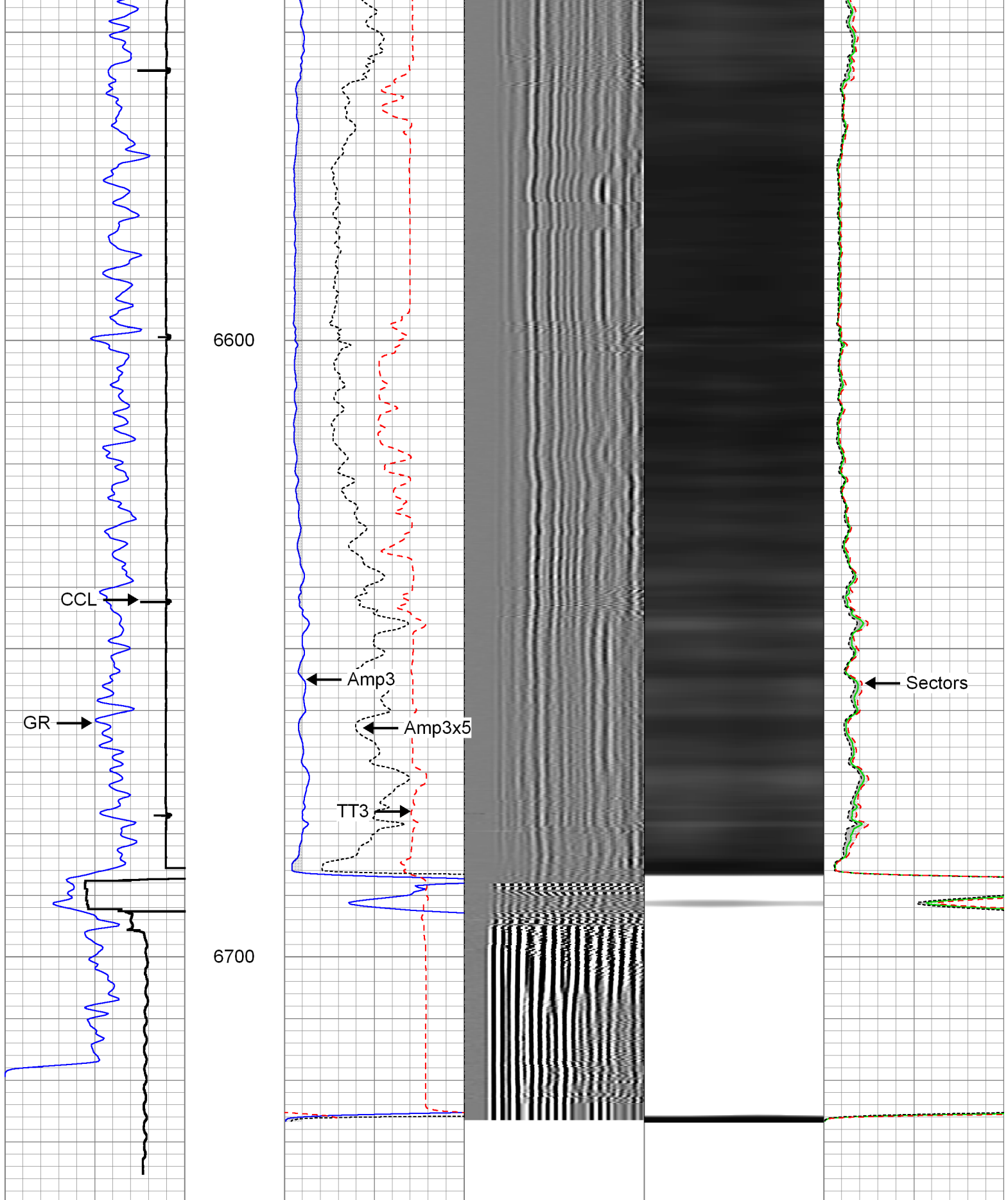












Gamma Ray (GAPI)	3' Amplitude (mV)	5' Variable Density Log	Sector Map	Average Amplitude
0 120	0 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5 (mV)			Minimum Amplitude
	0 20			0 100
	3' Travel Time			Maximum Amplitude

650 (usec) 150

0 100

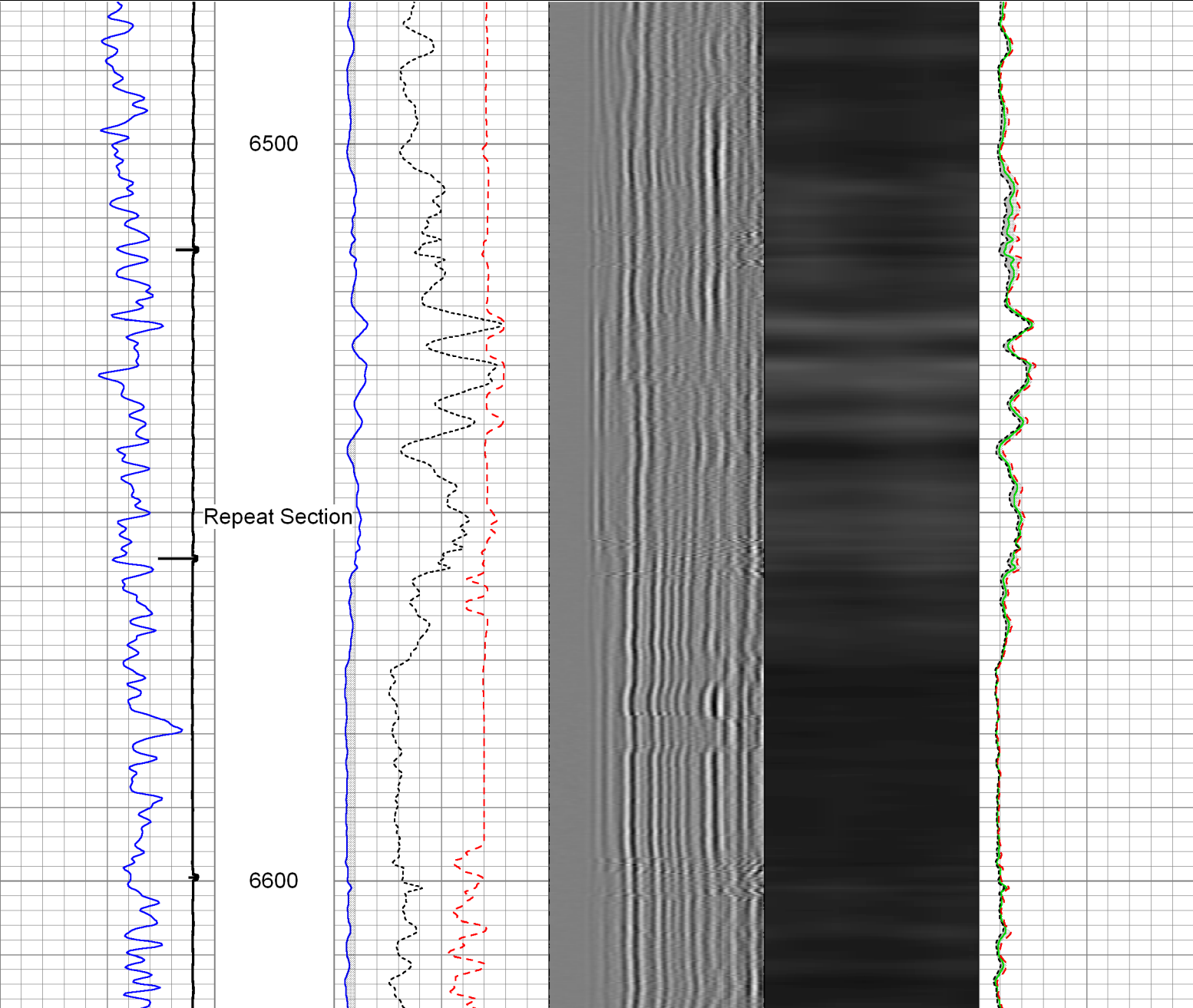


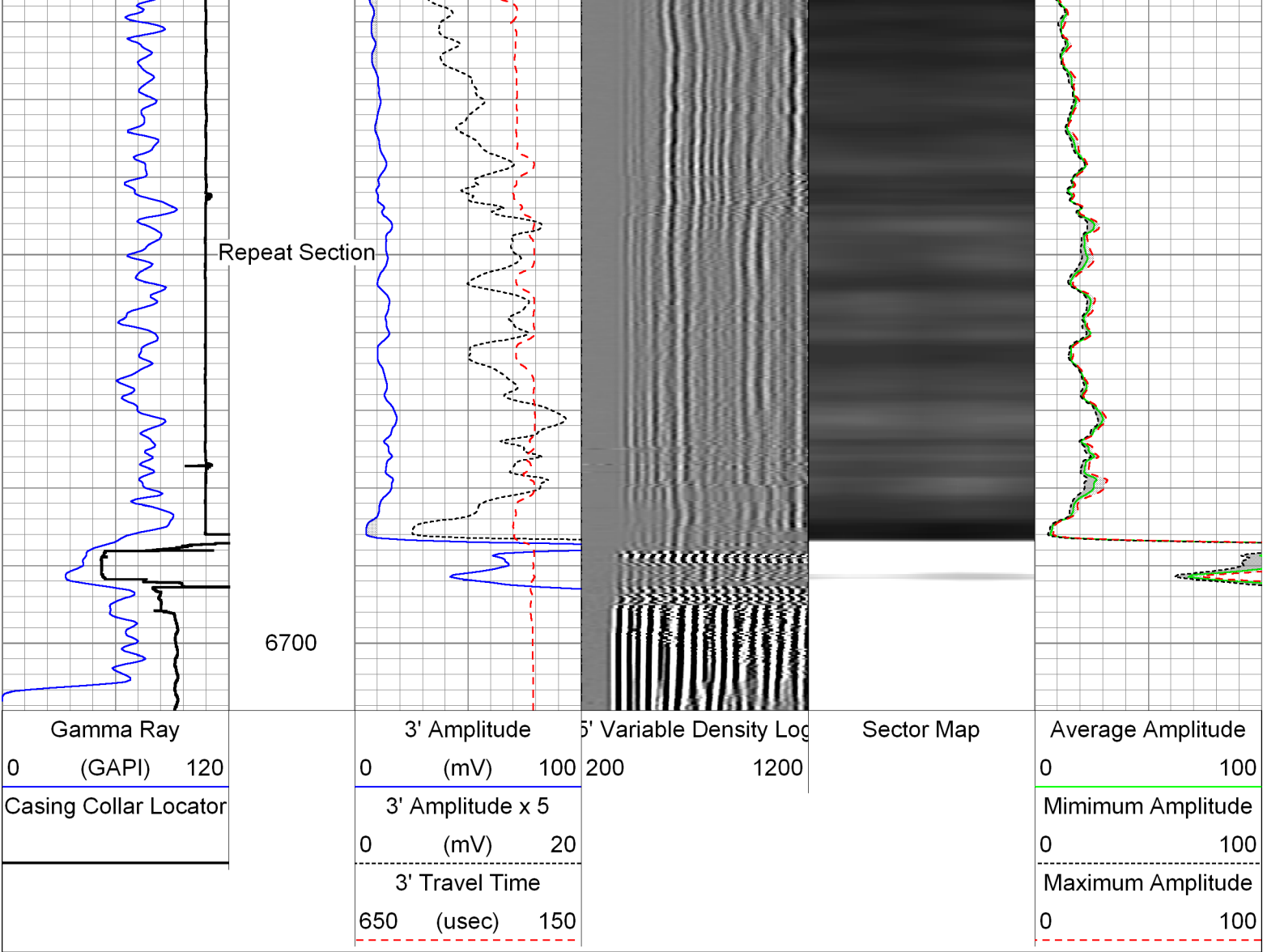
Repeat Pass

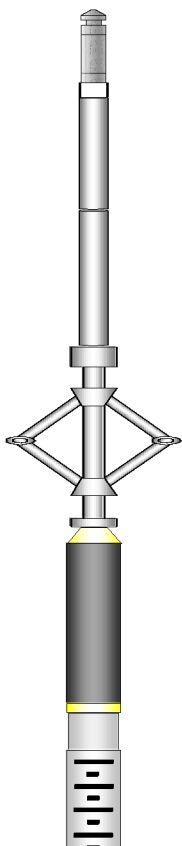
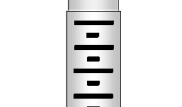
Logged with 2400 PSI at Surface

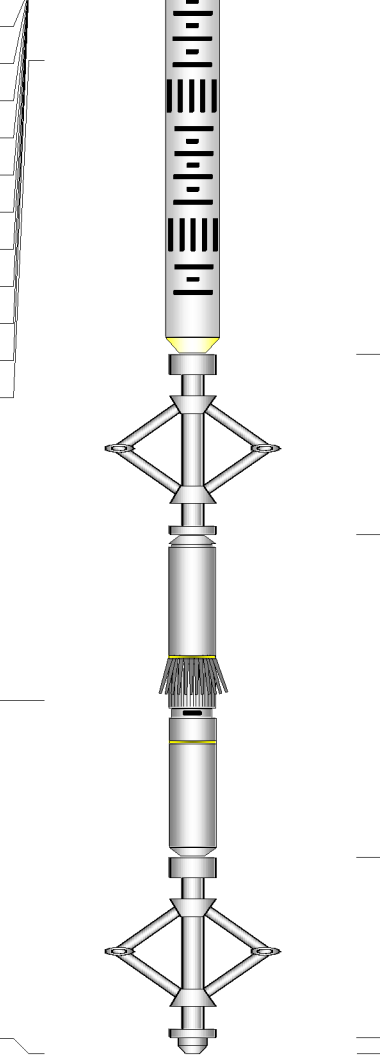
Database File: 0512339080_anadarko_elliott state 41c-17hz_06-15-2014_mit_rbl.db
Dataset Pathname: repeat
Presentation Format: rbt4_mit
Dataset Creation: Sun Jun 15 08:51:15 2014 by Log SCH 111116
Charted by: Depth in Feet scaled 1:240

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	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 (050836) Production Gamma Ray	1.93	1.69	9.50
			UW_PRC-DSSRAC (080) 2-3/4" DSS 5 Arm Roller Centralizer	2.55	2.75	32.00
WVF3FT	14.99					

WVFS1	14.99		UW_RBT-UW_RBT_004 (1066) Sondex Ultrawire 3-1/8" Radial Bond Tool	9.47	3.13	140.00
WVFS2	14.99					
WVFS3	14.99					
WVFS4	14.99					
WVFS5	14.99					
WVFS6	14.99					
WVFS7	14.99					
WVFS8	14.99					
CBLTEMP	14.99					
CBLROT	14.99					
WVF5FT	13.99					
			UW_PRC-DSSRAC (082) 2-3/4" DSS 5 Arm Roller Centralizer	2.55	2.75	32.00
MIT	4.97		UW_MIT-UW_MIT40_042 (10014703) 40 Multifinger Imaging Tool	4.54	2.75	61.10
			UW_PRC #3 -DSSRAC (084) 2-3/4" DSS 5 Arm Roller Centralizer	2.55	2.75	32.00
TSTAMP	0.00		UW_BUL-UW_BUL_006 (218707) Sondex Ultrawire Bullnose Terminator	0.22	1.69	1.20
Dataset: 0512339080_anadarko_elliott state 41c-17hz_06-15-2014_mit_rbl.db: field/well/run1/main Total Length: 26.62 ft Total Weight: 319.30 lb O.D. 3.13 in						

Calibration Report			
Database File:	0512339080_anadarko_elliott state 41c-17hz_06-15-2014_mit_rbl.db		
Dataset Pathname:	main		
Dataset Creation:	Sun Jun 15 09:01:36 2014 by Log SCH 111116		
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			

Ring size: (in)	4	Sens	5	Sens	6	Sens	7
Finger 01:	1200	335.0	1535	384.0	1919	388.0	2307
Finger 02:	1142	349.0	1491	408.0	1899	417.0	2316
Finger 03:	1145	338.0	1483	396.0	1879	403.0	2282
Finger 04:	1094	355.0	1449	424.0	1873	433.0	2306
Finger 05:	1107	336.0	1443	393.0	1836	400.0	2236
Finger 06:	1105	353.0	1458	412.0	1870	419.0	2289
Finger 07:	1128	349.0	1477	397.0	1874	404.0	2278
Finger 08:	1084	356.0	1440	414.0	1854	422.0	2276
Finger 09:	1158	364.0	1522	401.0	1923	400.0	2323
Finger 10:	1097	359.0	1456	401.0	1857	403.0	2260
Finger 11:	1096	362.0	1458	406.0	1864	413.0	2277
Finger 12:	1172	363.0	1535	383.0	1918	381.0	2299
Finger 13:	1118	365.0	1483	400.0	1883	412.0	2295
Finger 14:	1092	379.0	1471	412.0	1883	425.0	2308
Finger 15:	1055	380.0	1435	415.0	1850	434.0	2284
Finger 16:	1129	377.0	1506	395.0	1901	410.0	2311
Finger 17:	1138	378.0	1516	381.0	1897	393.0	2290
Finger 18:	1191	370.0	1561	379.0	1940	399.0	2339
Finger 19:	1139	378.0	1517	387.0	1904	407.0	2311
Finger 20:	1056	379.0	1435	394.0	1829	420.0	2249
Finger 21:	1140	370.0	1510	376.0	1886	404.0	2290
Finger 22:	1136	373.0	1509	378.0	1887	405.0	2292
Finger 23:	1230	352.0	1582	353.0	1935	377.0	2312
Finger 24:	1149	377.0	1526	383.0	1909	407.0	2316
Finger 25:	1147	366.0	1513	379.0	1892	411.0	2303
Finger 26:	1187	365.0	1552	371.0	1923	394.0	2317
Finger 27:	1194	353.0	1547	364.0	1911	394.0	2305
Finger 28:	1160	364.0	1524	378.0	1902	408.0	2310
Finger 29:	1141	363.0	1504	387.0	1891	419.0	2310
Finger 30:	1144	358.0	1502	379.0	1881	412.0	2293
Finger 31:	1198	348.0	1546	366.0	1912	389.0	2301
Finger 32:	1141	353.0	1494	382.0	1876	411.0	2287
Finger 33:	1146	349.0	1495	382.0	1877	410.0	2287
Finger 34:	1134	350.0	1484	394.0	1878	416.0	2294
Finger 35:	1192	335.0	1527	372.0	1899	391.0	2290
Finger 36:	1134	342.0	1476	392.0	1868	415.0	2283
Finger 37:	1195	327.0	1522	372.0	1894	390.0	2284
Finger 38:	1224	330.0	1554	374.0	1928	390.0	2318
Finger 39:	1124	338.0	1462	392.0	1854	411.0	2265
Finger 40:	1077	351.0	1428	419.0	1847	435.0	2282

Segmented Cement Bond Log Calibration Report

Serial Number: 1066
 Tool Model: UW_RBT_004
 Calibration Casing Diameter: 7.000 in
 Calibration Depth: 249.924 ft

Master Calibration, performed Sun Jun 15 08:01:52 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	0.001	0.648	0.800	62.165	94.855	0.688
5FT	-0.006	0.680	0.800	62.165	89.456	1.346
S1	-0.004	0.643	0.000	100.000	154.555	0.566
S2	-0.005	0.650	0.000	100.000	152.682	0.691
S3	-0.004	0.651	0.000	100.000	152.472	0.681
S4	-0.005	0.644	0.000	100.000	154.029	0.752

S4	-0.003	0.644	0.000	100.000	154.029	0.752
S5	-0.003	0.643	0.000	100.000	154.660	0.514
S6	-0.004	0.644	0.000	100.000	154.197	0.636
S7	-0.005	0.656	0.000	100.000	151.337	0.735
S8	-0.004	0.656	0.000	100.000	151.315	0.678

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, L.P.
Well	Elliott State 41C-17HZ
Field	Wattenberg
County	Weld
State	Colorado