



Radial Cement Bond Log

Company Kerr-McGee Oil & Gas Onshore, L.P.				Company Kerr-McGee Oil & Gas Onshore, L.P.				
Well Paragon 10N-31HZ				Well Paragon 10N-31HZ				
Field Wattenberg				Field Wattenberg				
County Weld				County Weld				
State Colorado				State Colorado				
Location:				API # : 05-123-38548				
SHL: 290' FSL 1612' FEL				Other Services				
Lat/Long: 40.074048/-104.702902				GR Plug				
SEC 6 TWP 1N RGE 65W				Elevation				
Permanent Datum		Ground Level		Elevation		K.B. 5010'		
Log Measured From		Kelly Bushing		25 FT		D.F. 5009'		
Drilling Measured From		Kelly Bushing				G.L. 4985'		
Date		21-FEB-2014						
Run Number		One						
Depth Driller		14,353 FT						
Depth Logger		6620 FT						
Bottom Logged Interval		6620 FT						
Top Log Interval		Surface						
Open Hole Size		8.750"						
Type Fluid		Water						
Density / Viscosity		8.34 lbm/gal						
Max. Recorded Temp.		215 degF						
Estimated Cement Top		380 FT						
Time Well Ready		7.00						
Time Logger on Bottom		3:45 P.M.						
Equipment Number		HD-255						
Location		Fort Lupton, CO						
Recorded By		Wayne Wacker						
Witnessed By		Edgar Chavez						
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#		Surface	1,152 FT		
Intermediate #1		7"	26#		Surface	7,551 FT		
Intermediate #2								
Liner		4-1/2"	11.6#		6574 FT	14,338 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 was correlated to liner top at 6574'
Logged With 2200 PSI at Surface

Thank you for choosing FMC Technologies Completion Services, Inc.



Main Pass

Logged With 2200 PSI At Surface

Database File: 0512338548_anadarko_paragon 10n-31hz_02-21-14_mit_rbl.db

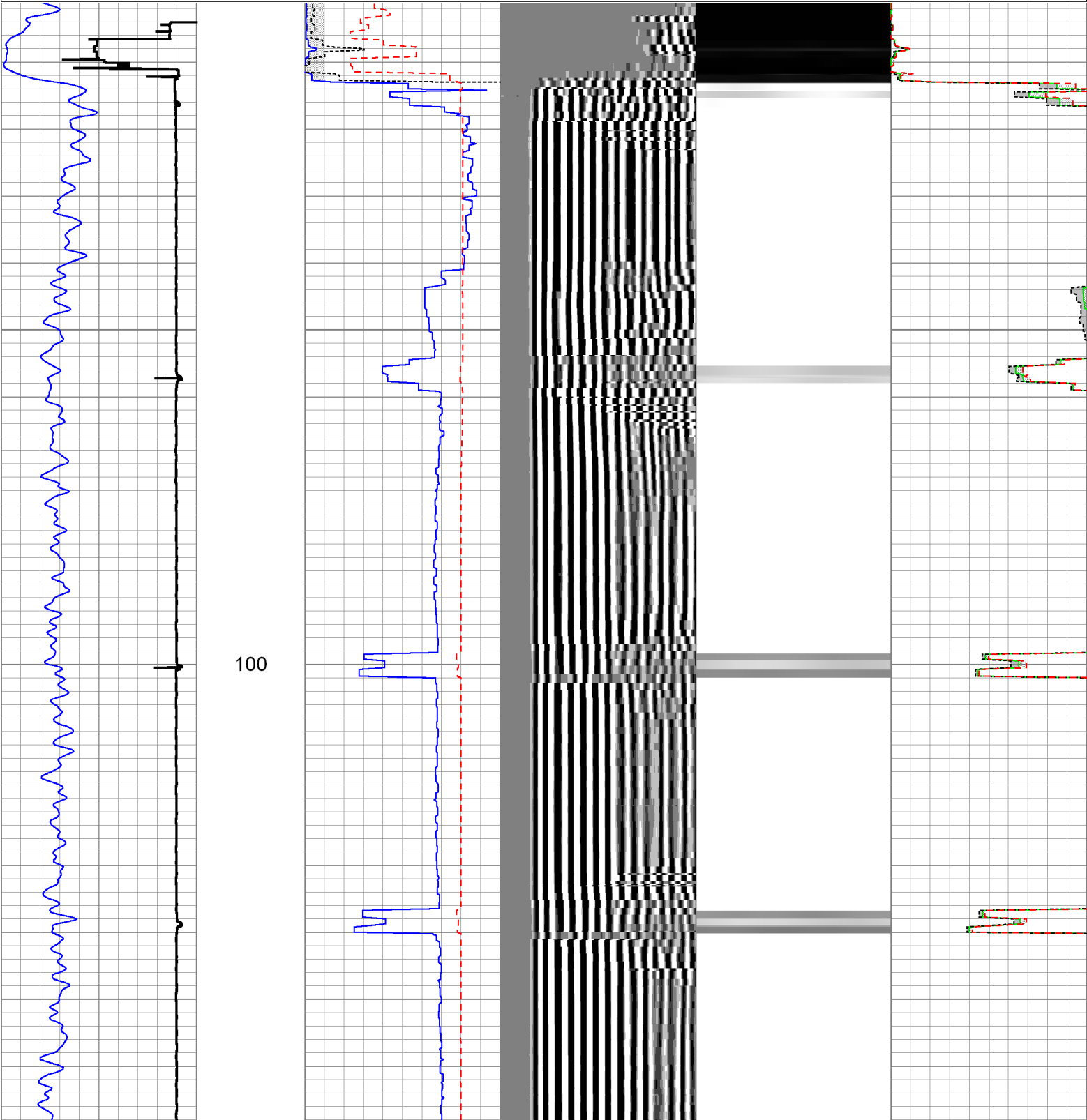
Dataset Pathname: main

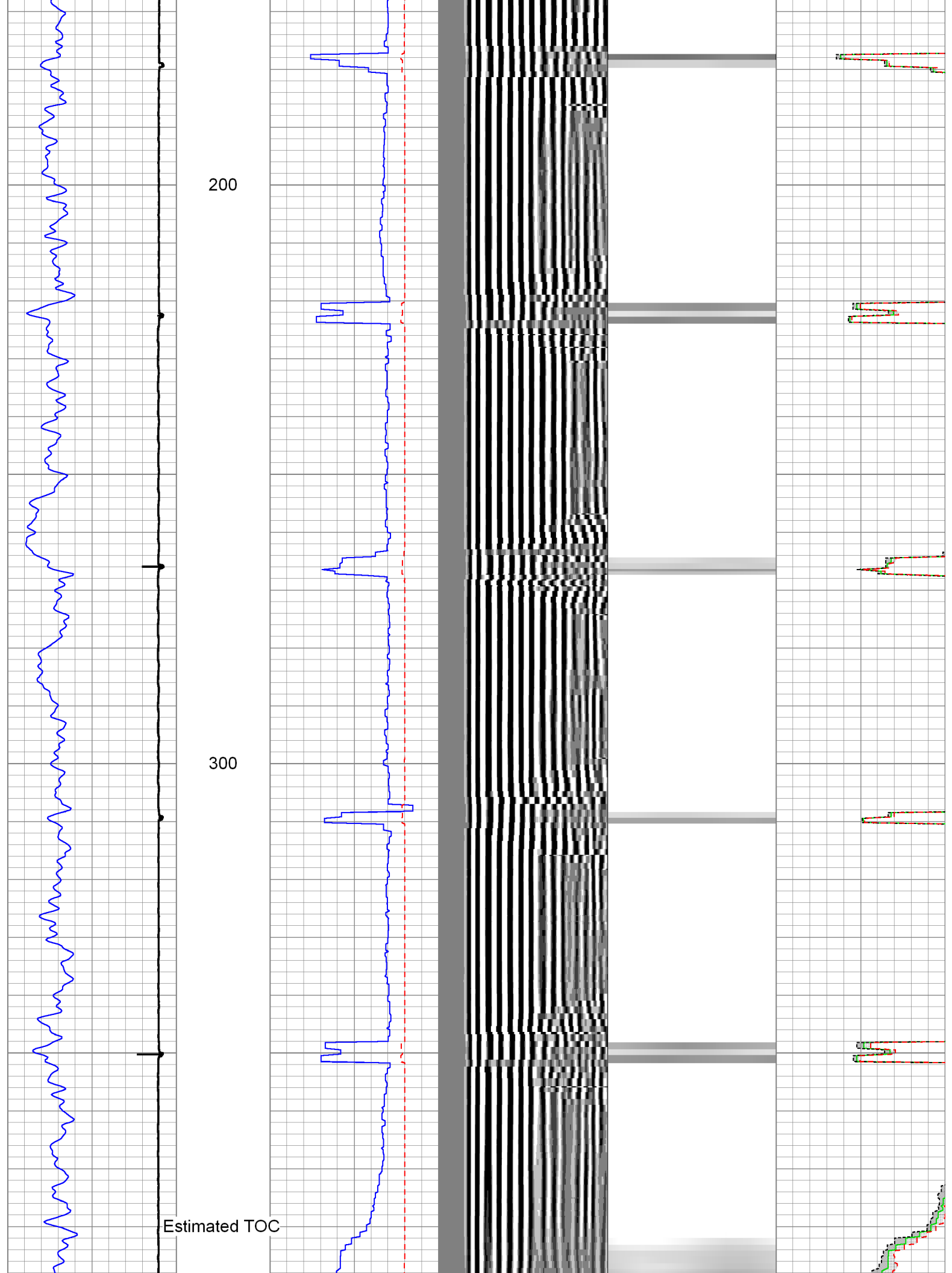
Presentation Format: rbt007

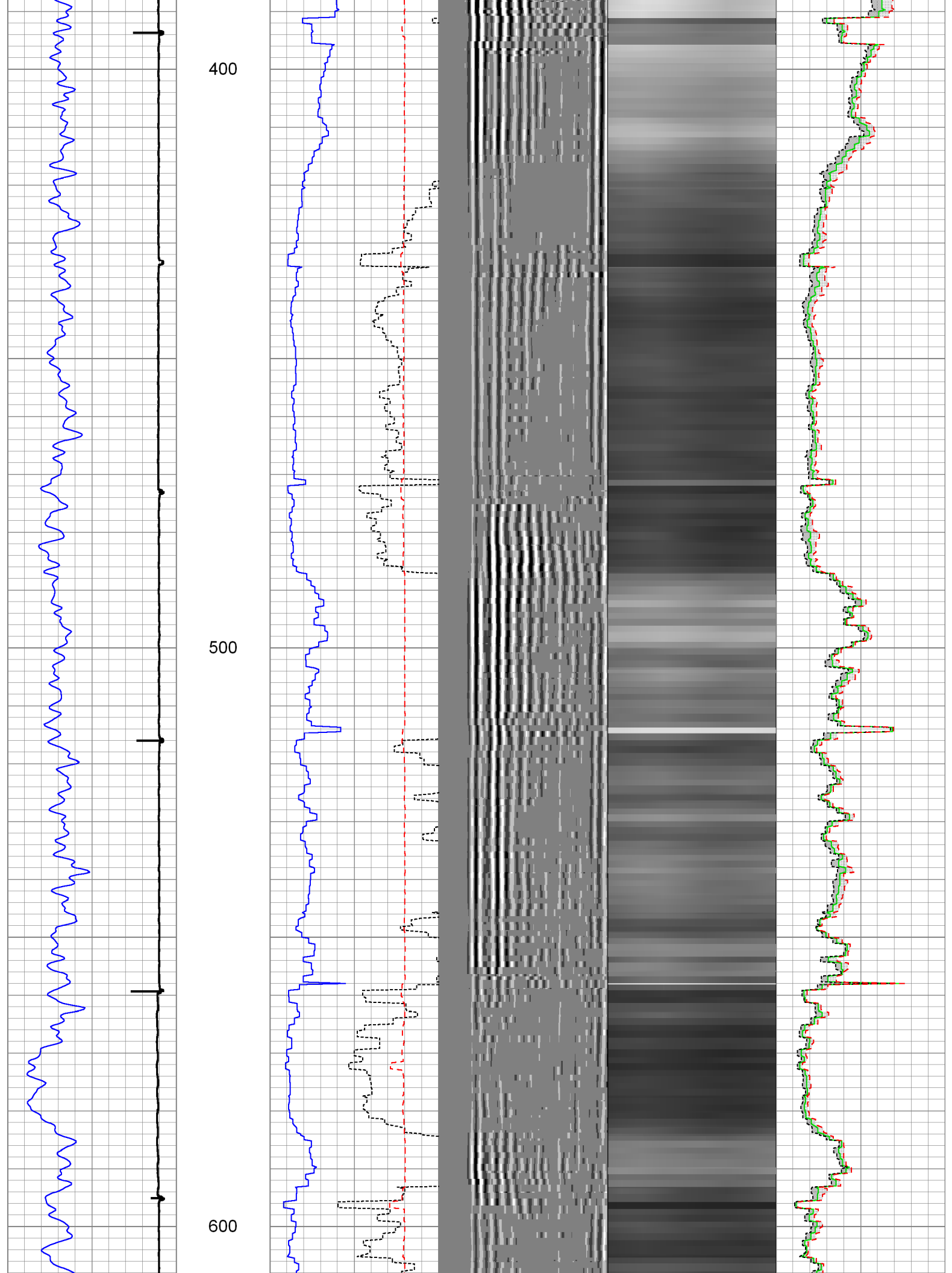
Dataset Creation: Fri Feb 21 15:51:03 2014 by Log Sondex V7.03

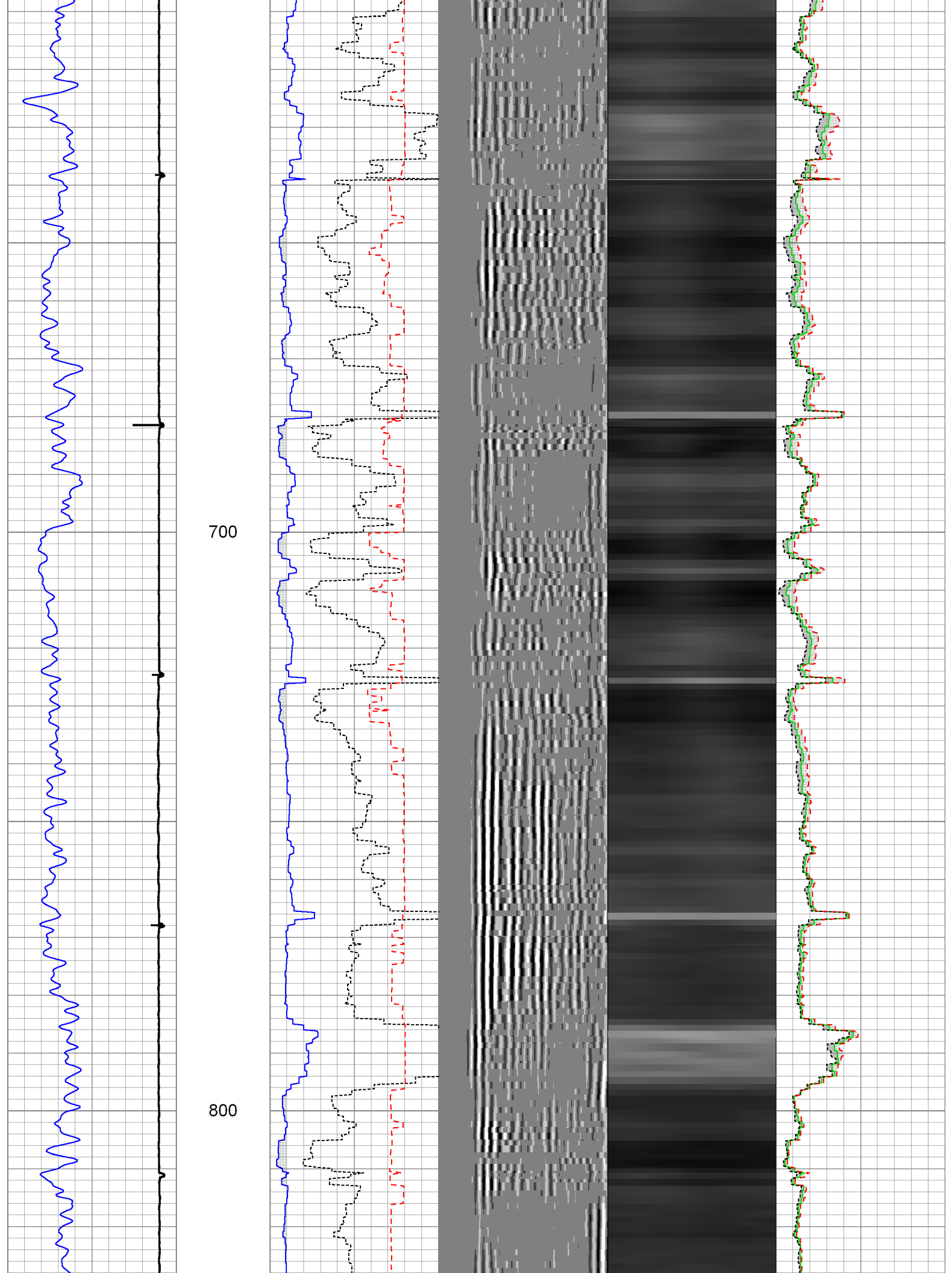
Charted by: Depth in Feet scaled 1:240

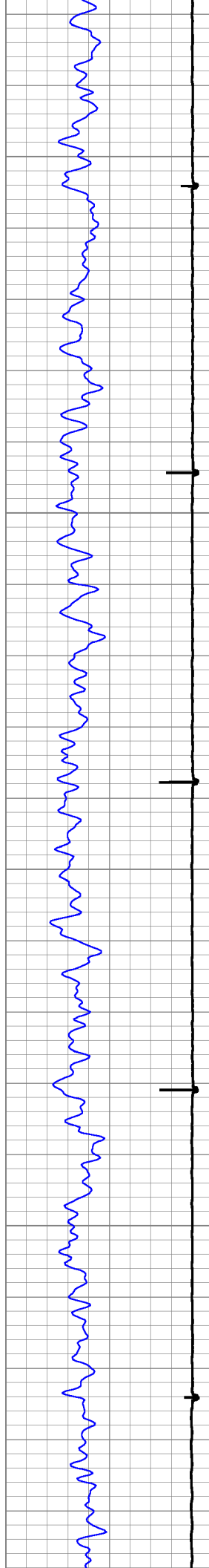
Gamma Ray		3' Amplitude		5' Variable Density Log		Sector Map		Average Amplitude	
0	(GAPI) 120	0	(mV) 100	200	1200			0	100
Collar Locator		3' Amplitude x 5						Minimum Amplitude	
		0	(mV) 20					0	100
		3' Travel Time						Maximum Amplitude	
		650	(usec) 150					0	100





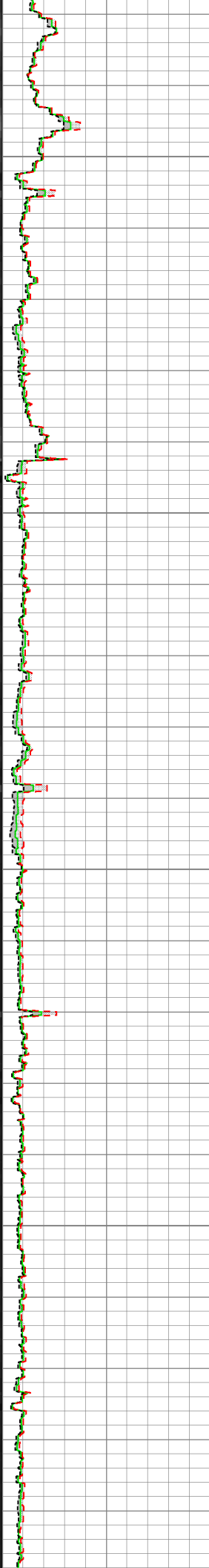
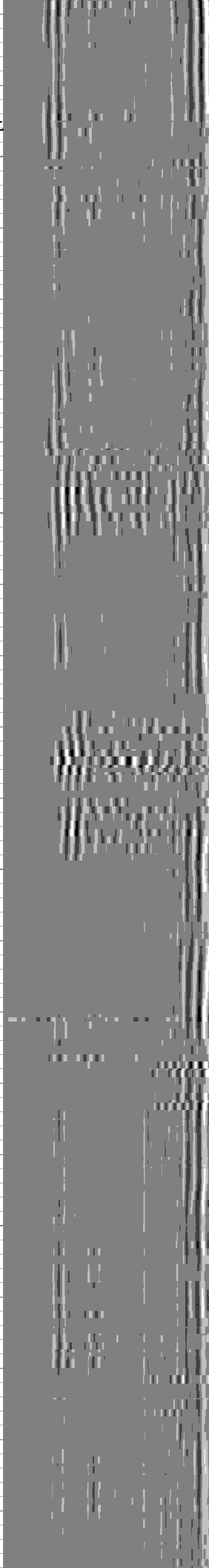
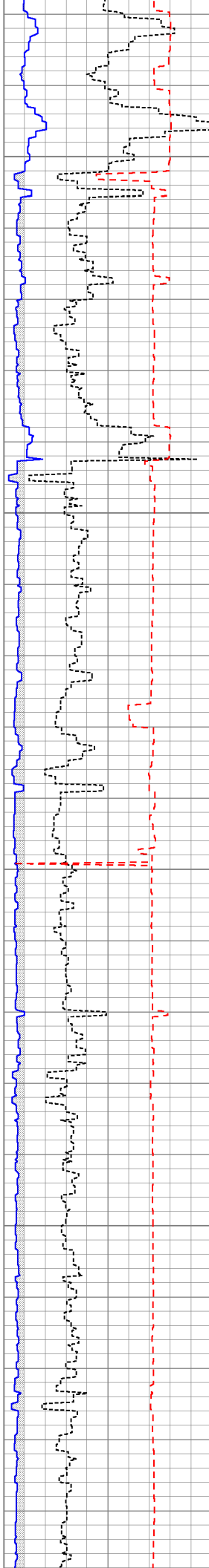


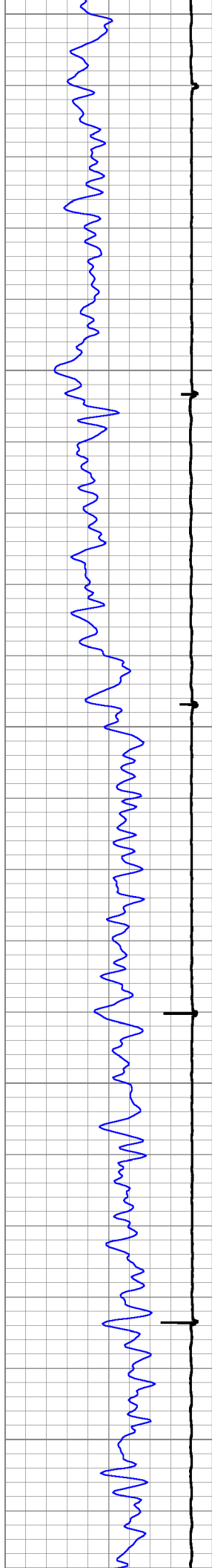




900

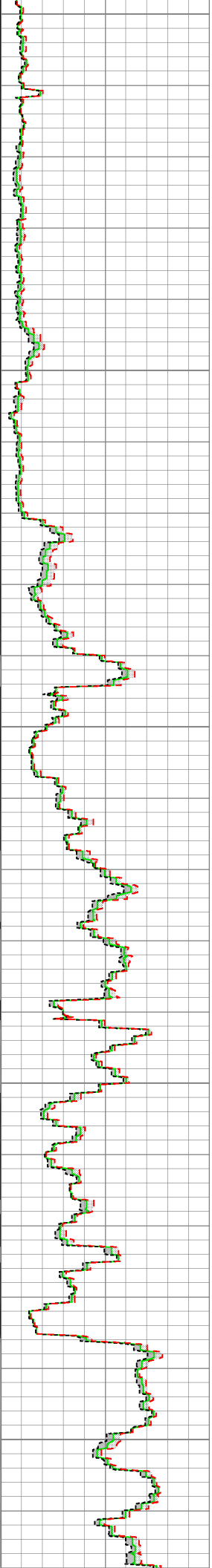
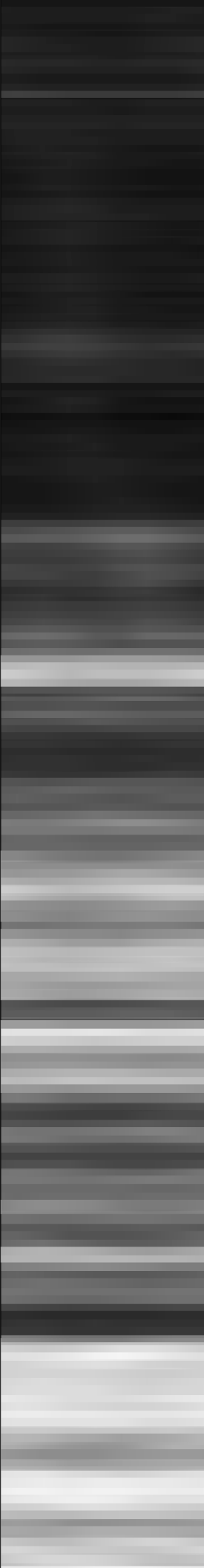
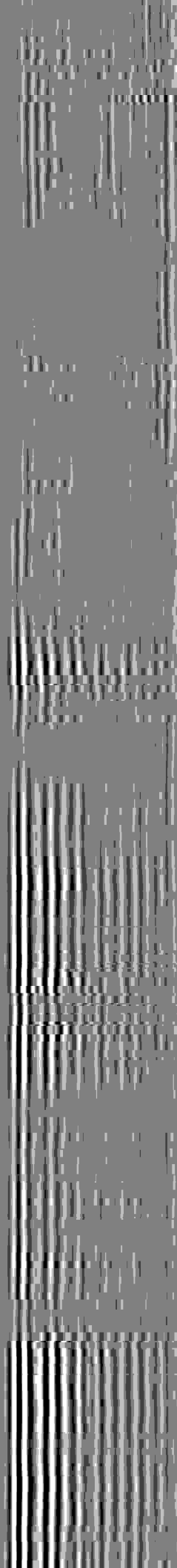
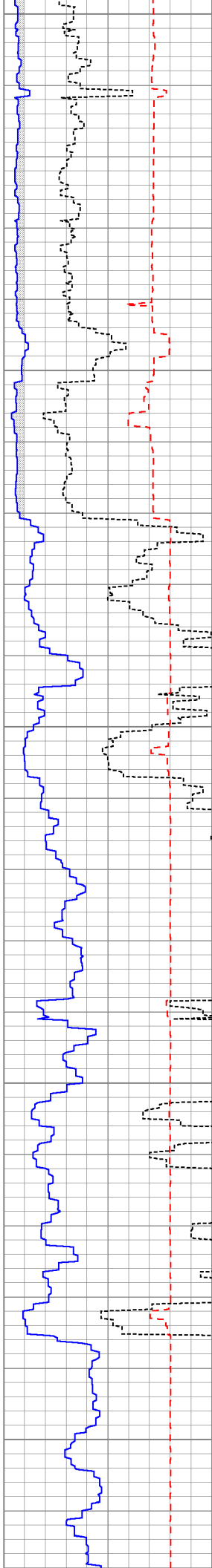
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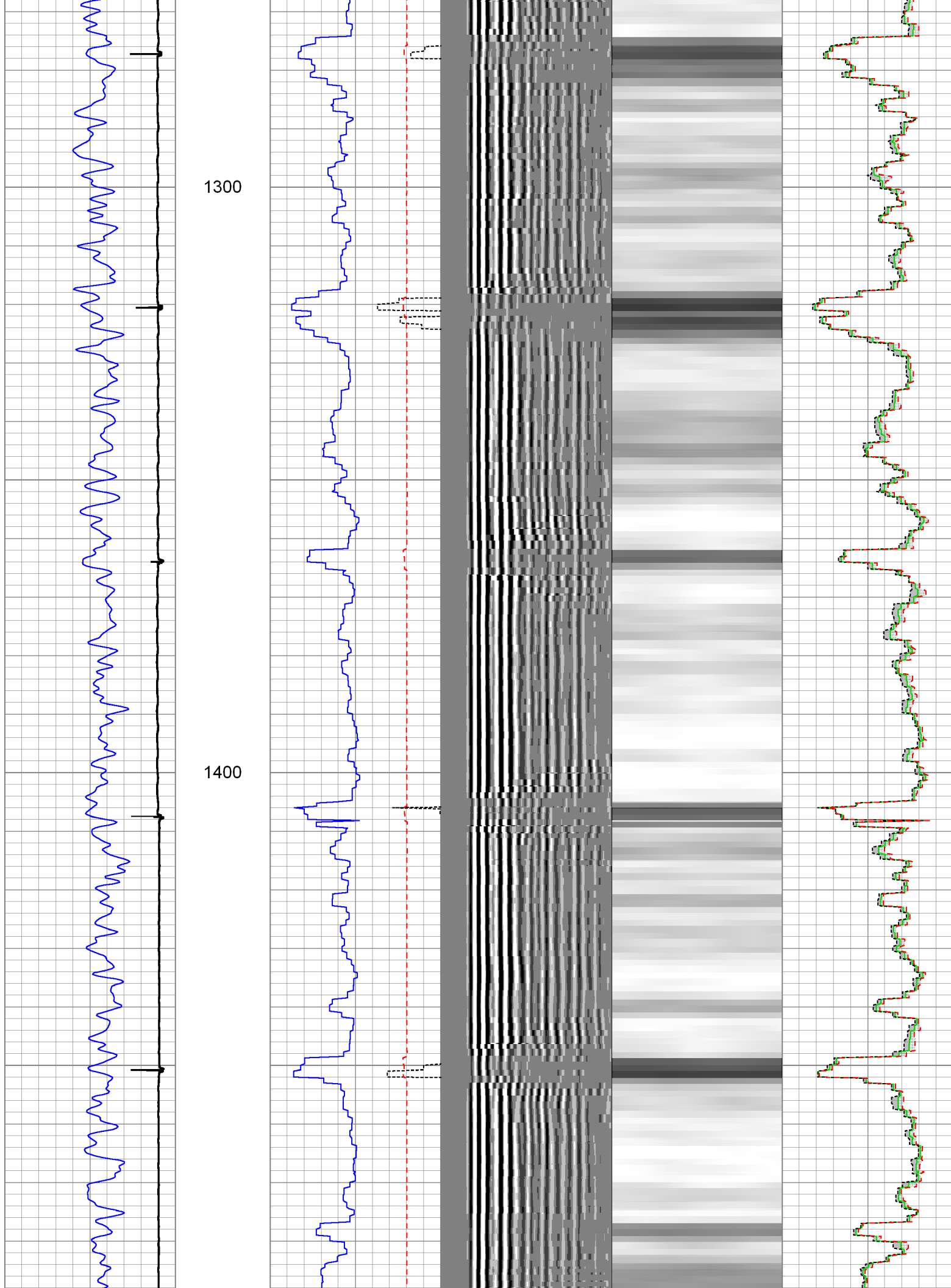
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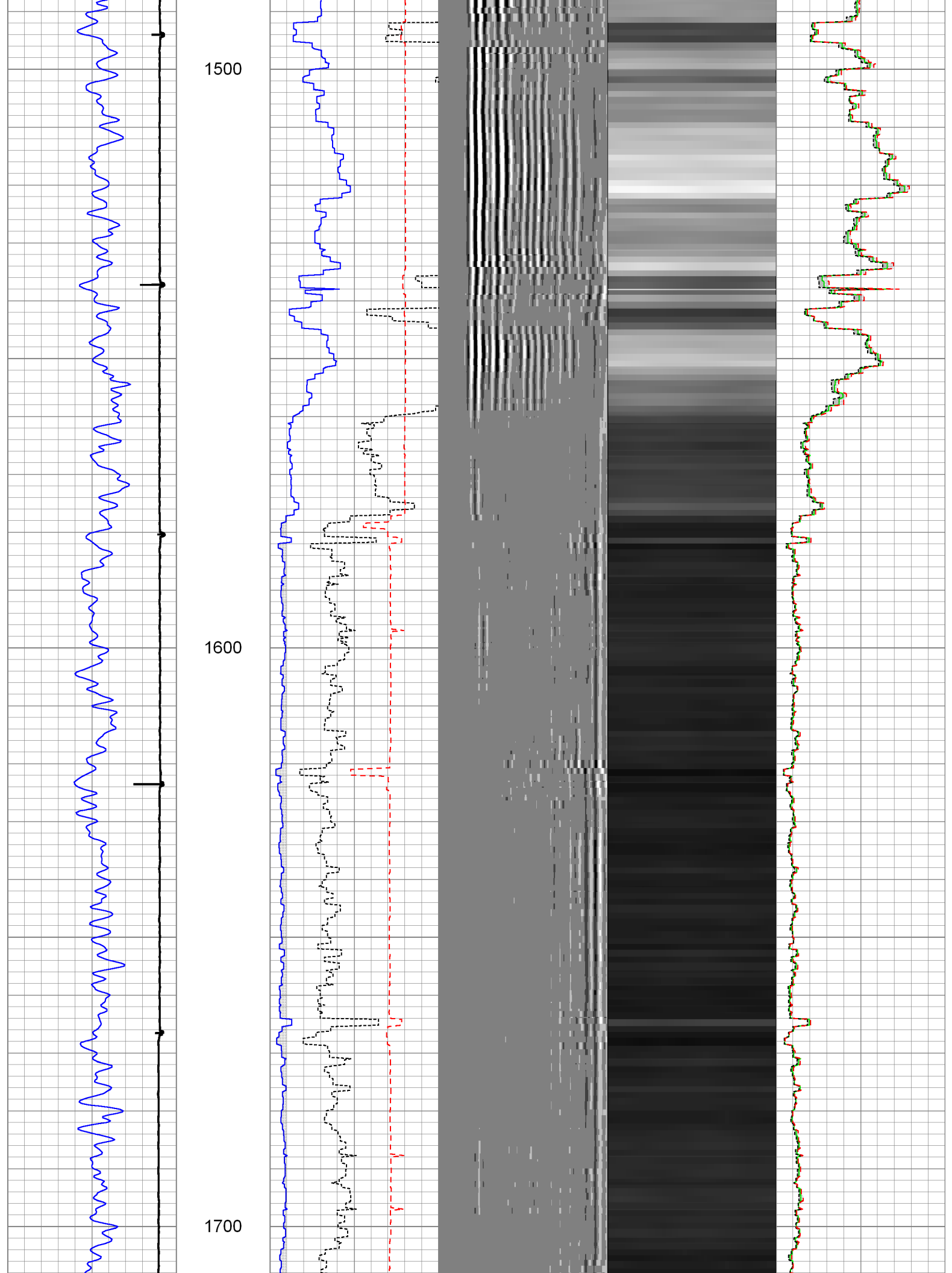
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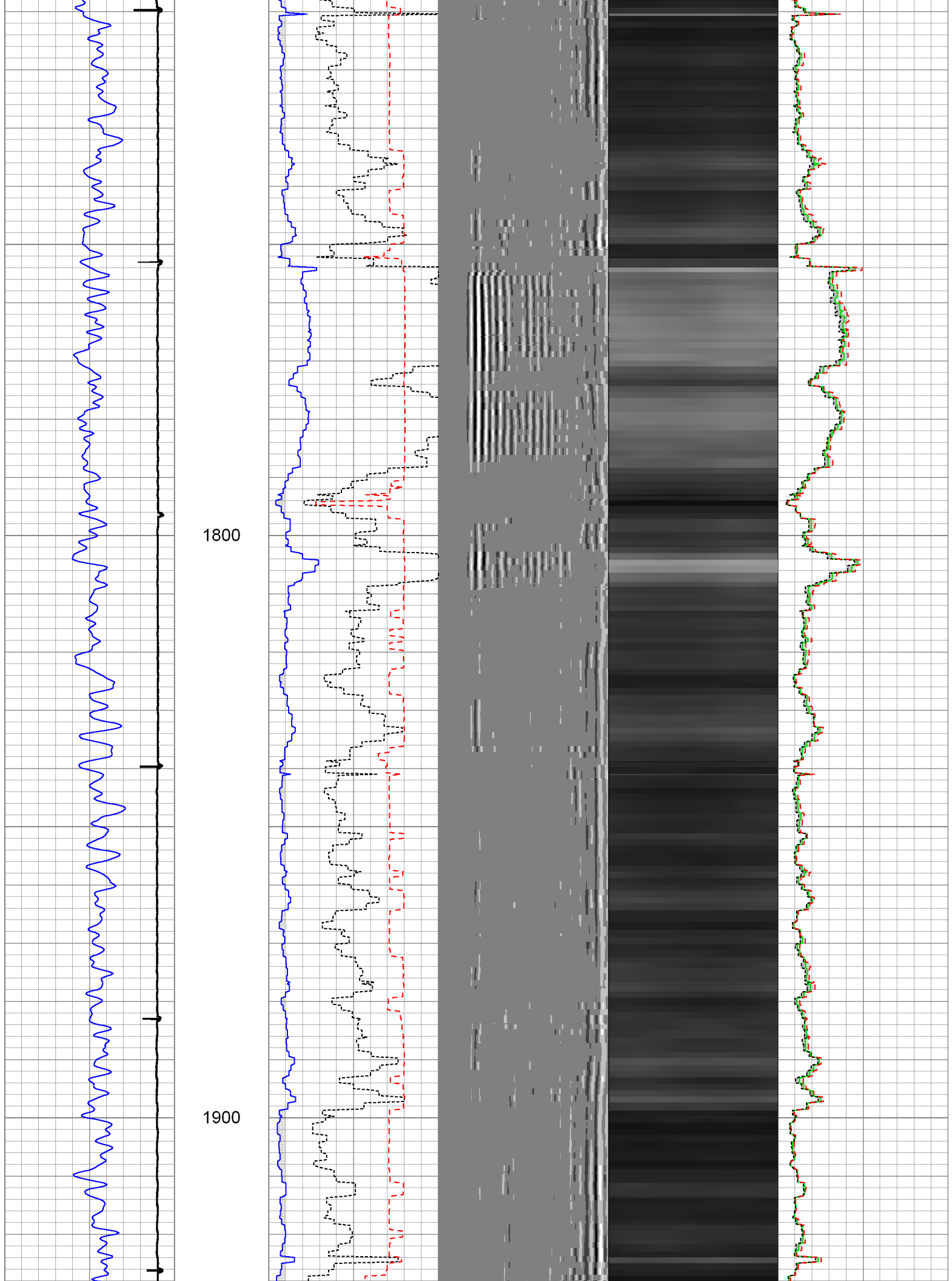


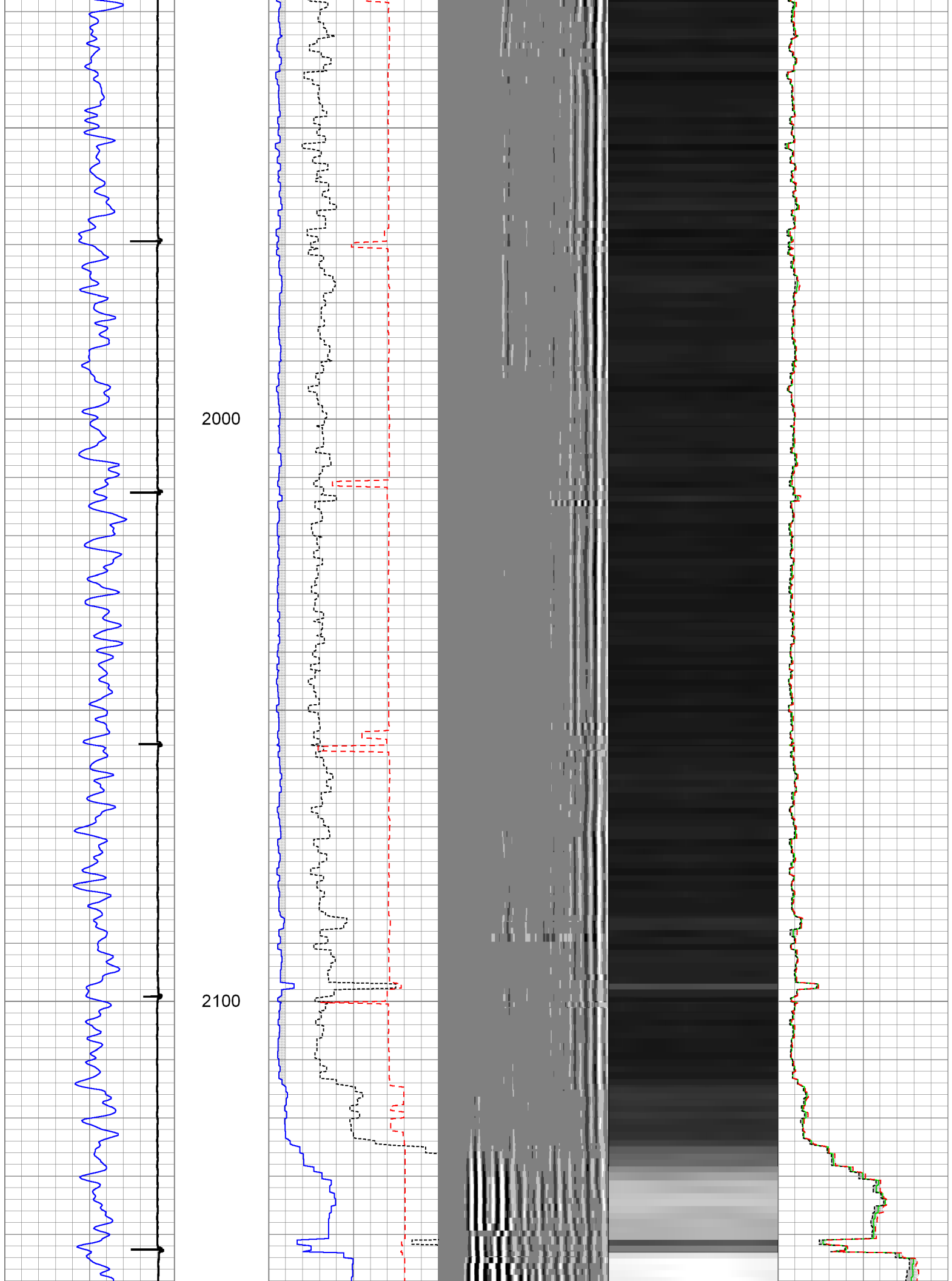
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1400



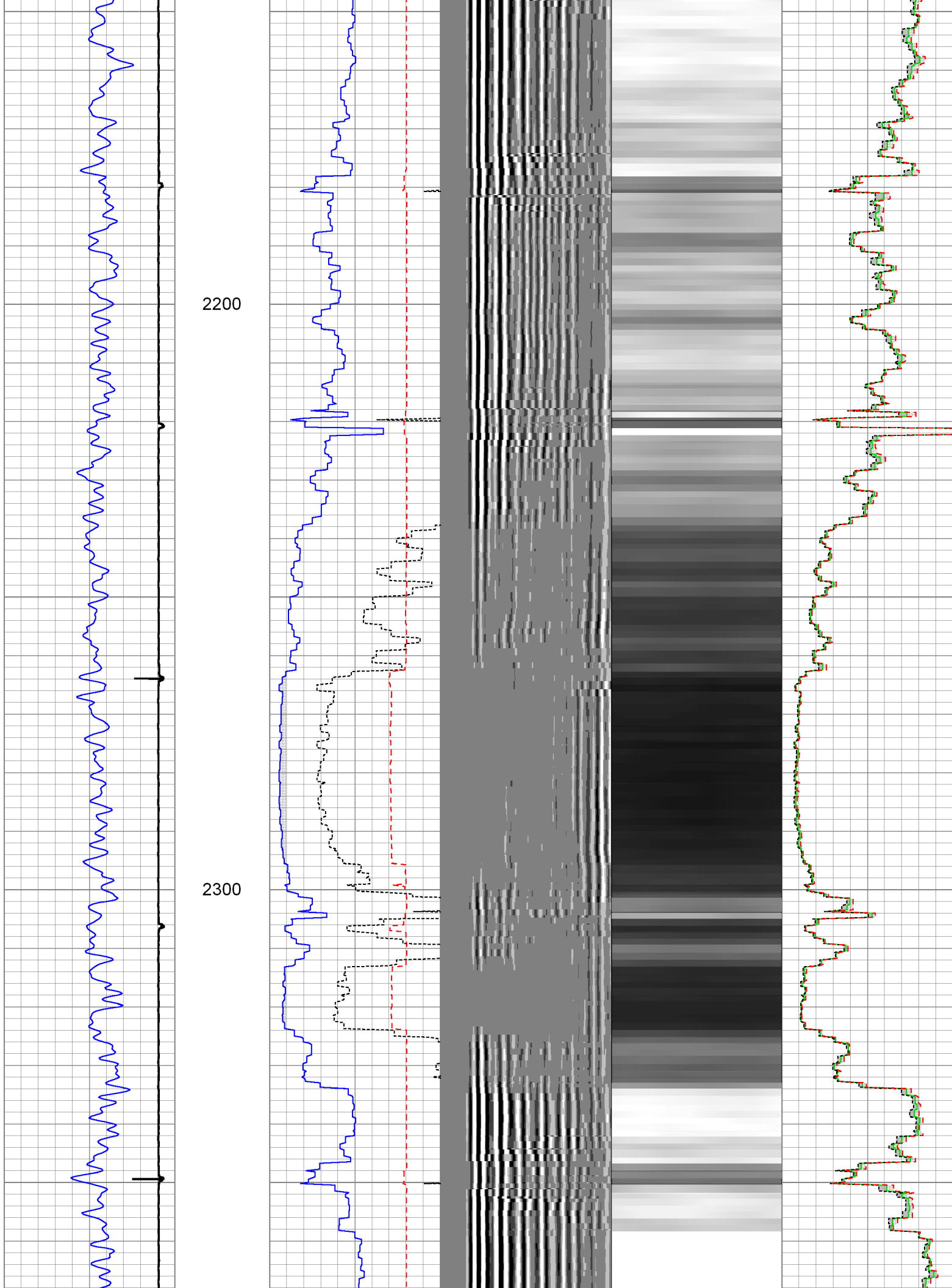






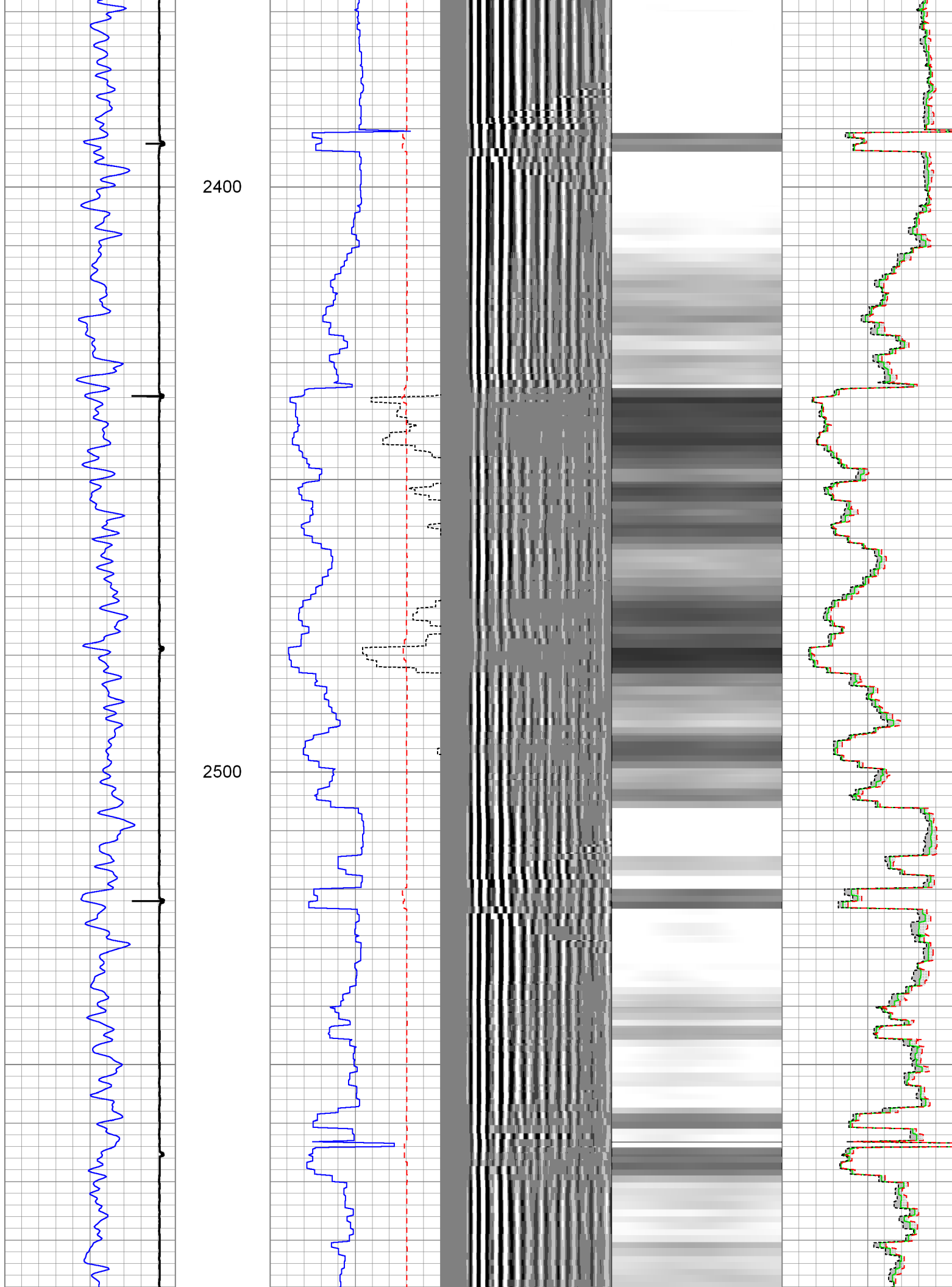
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2300



2400

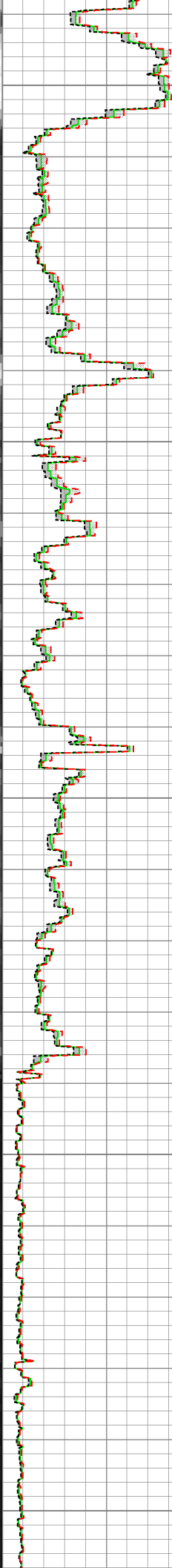
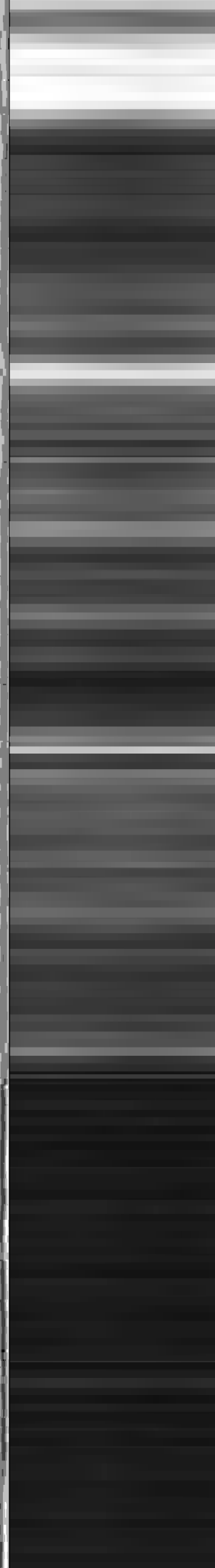
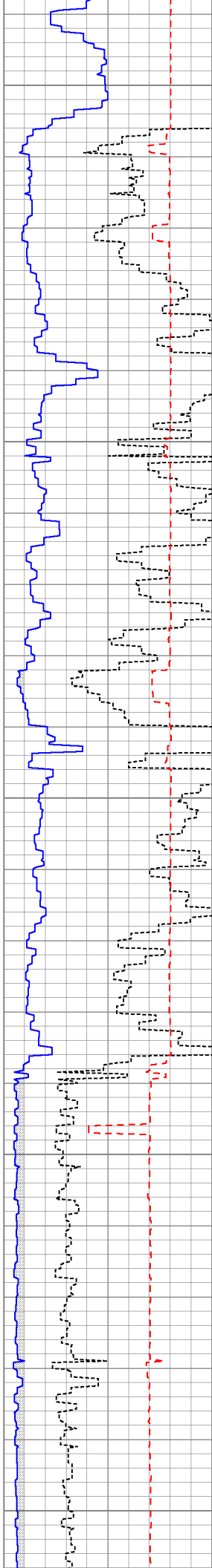
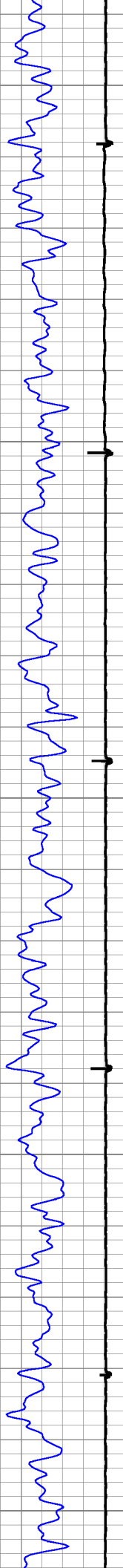
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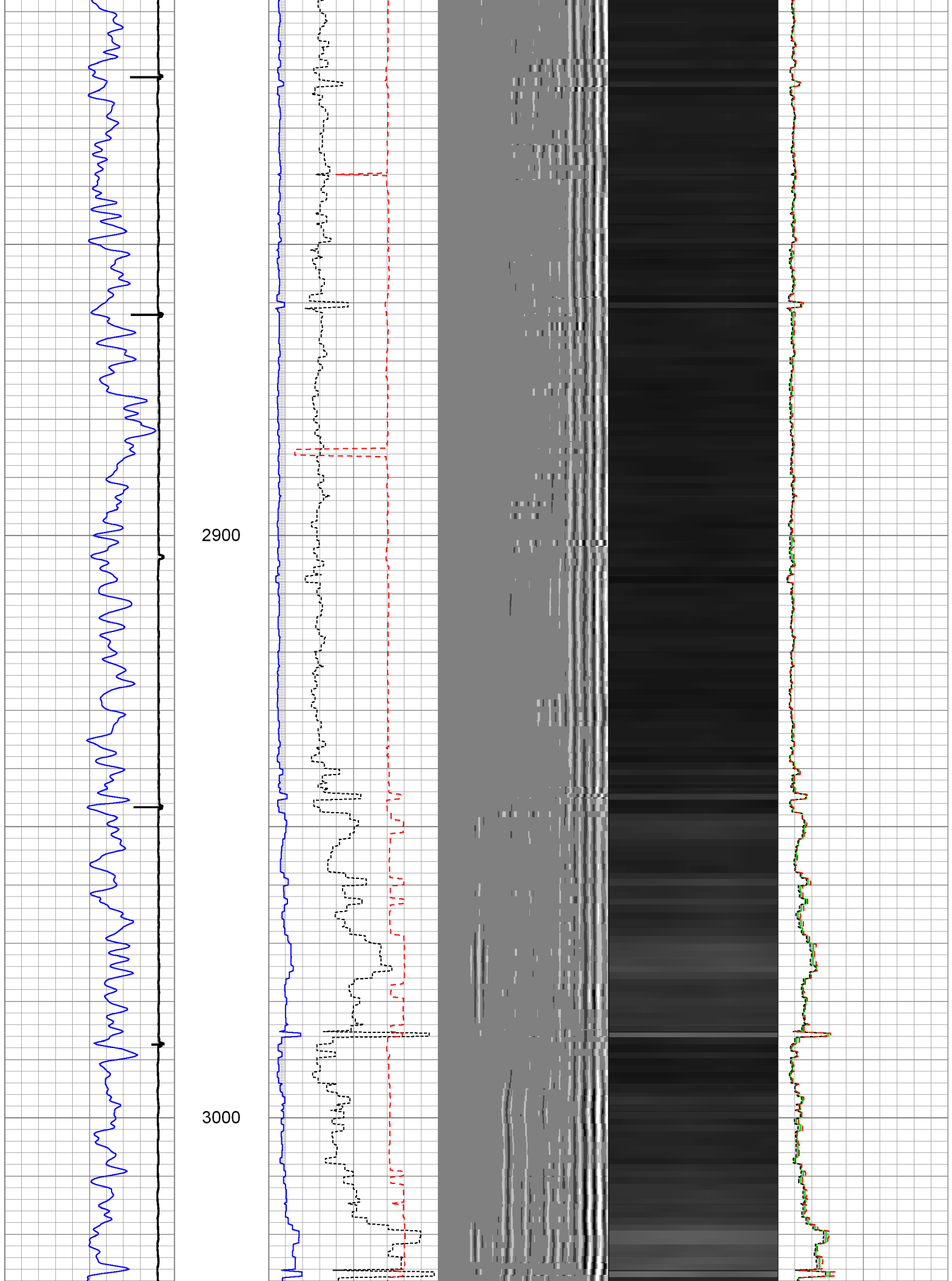


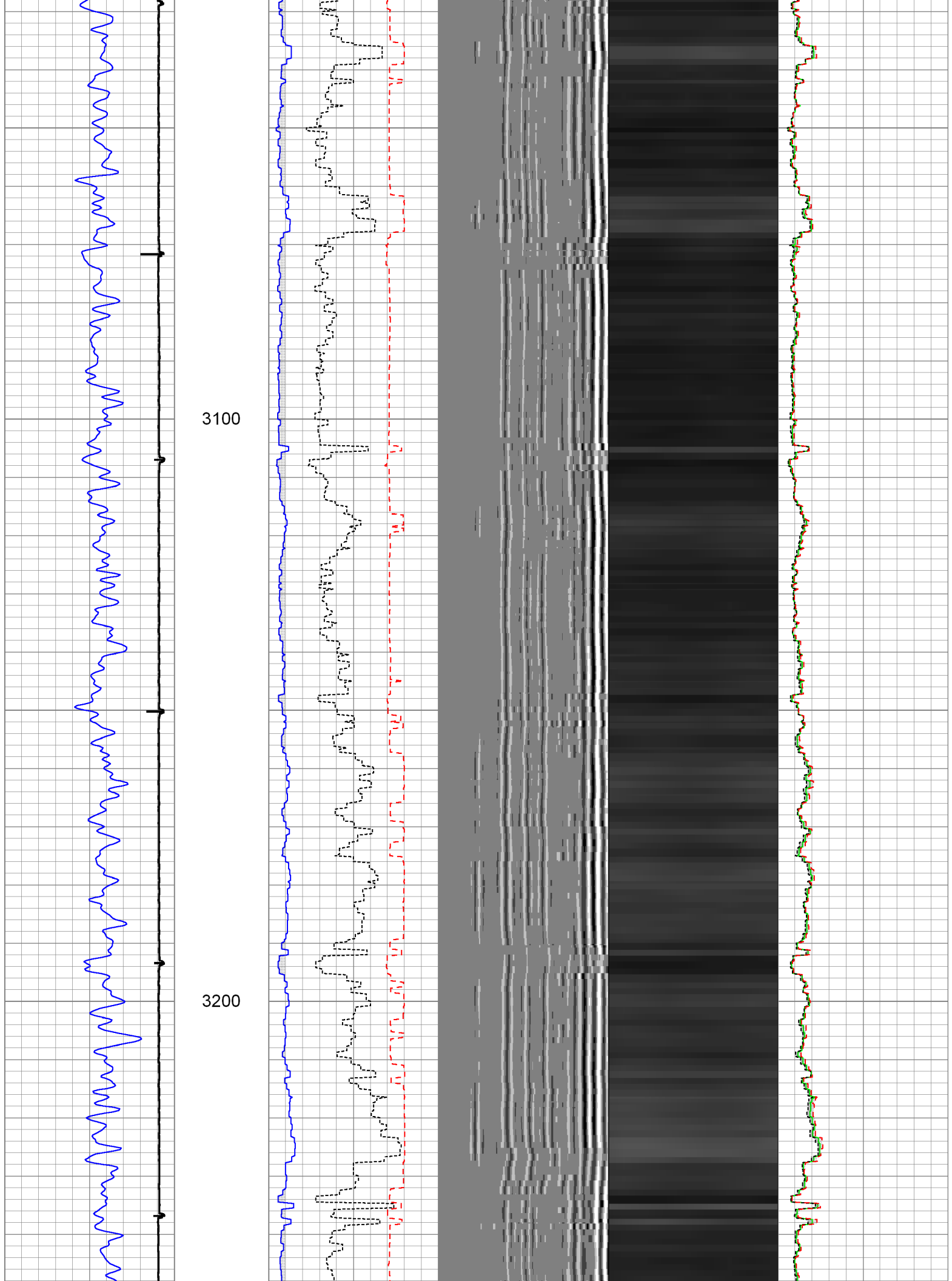
2600

2700

2800

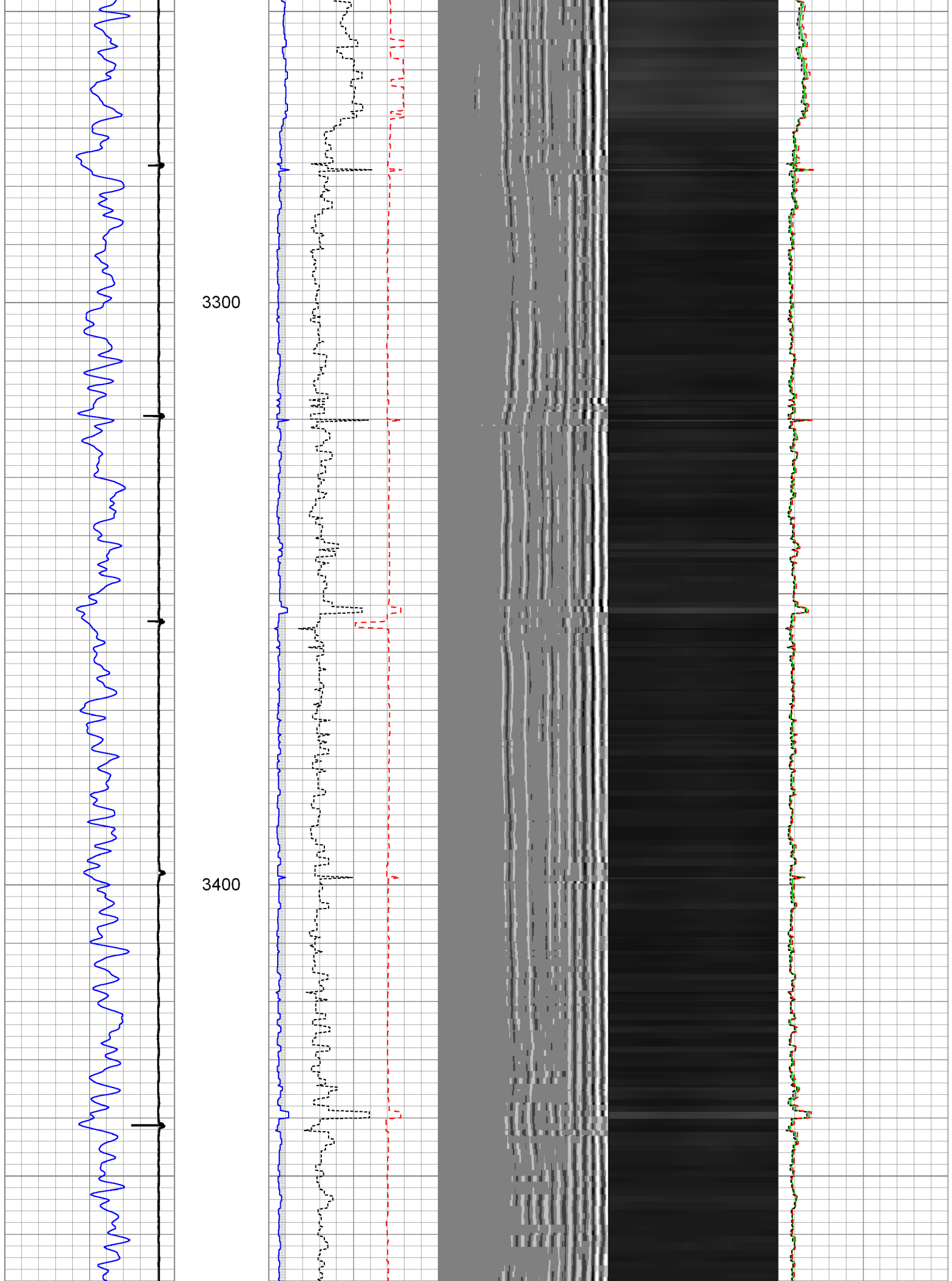






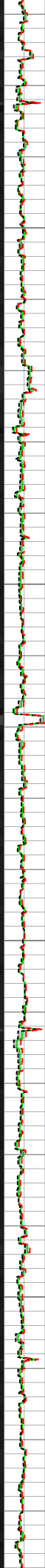
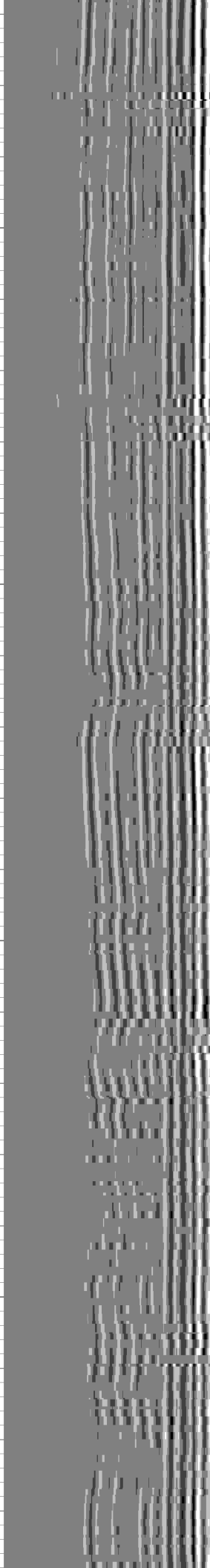
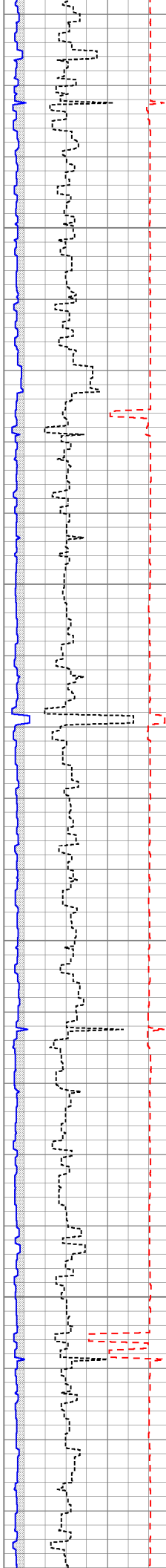
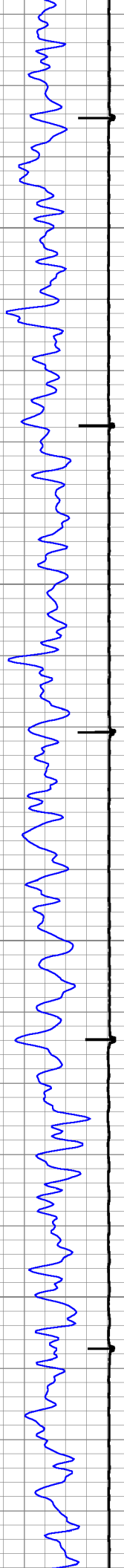
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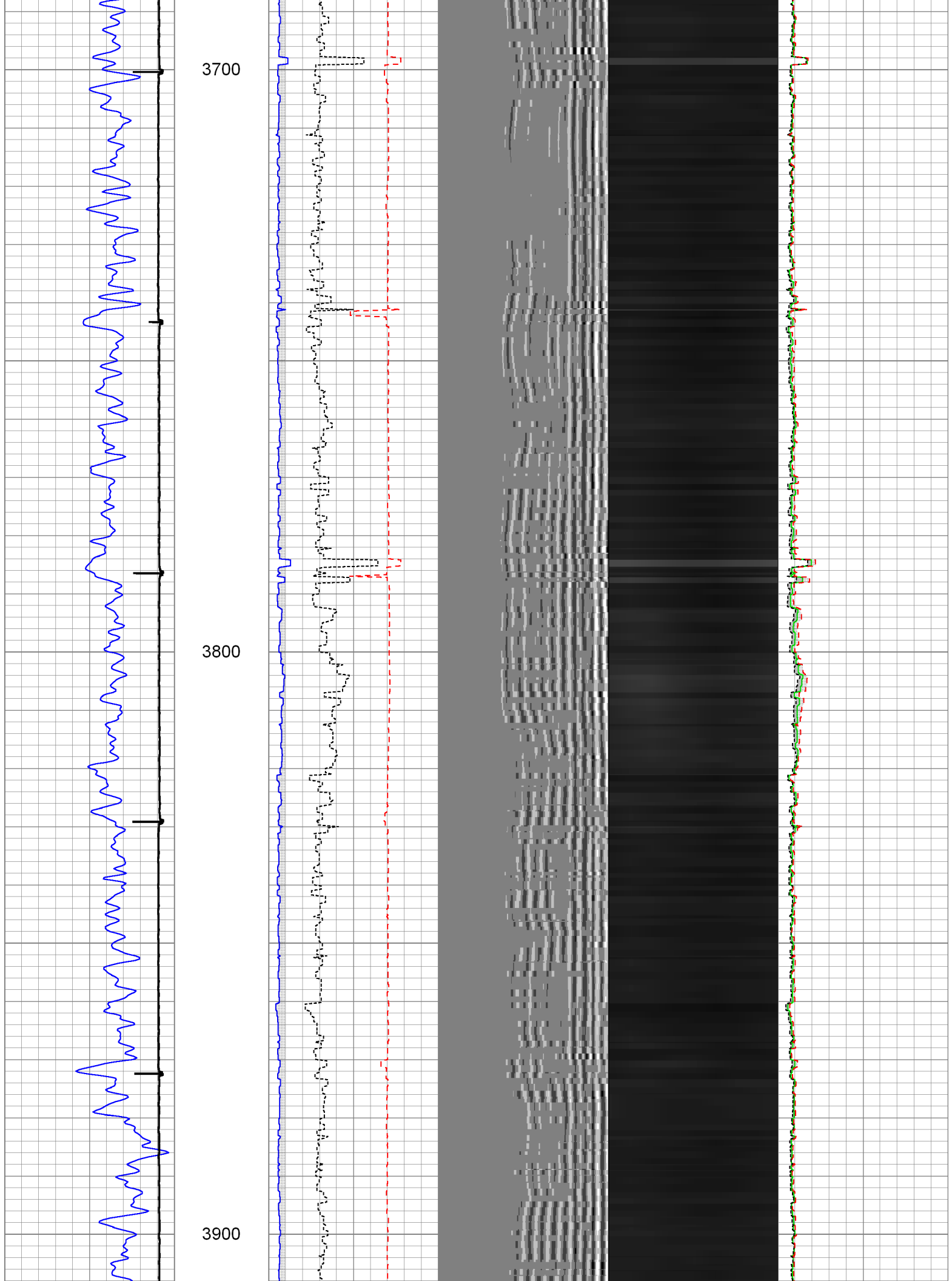
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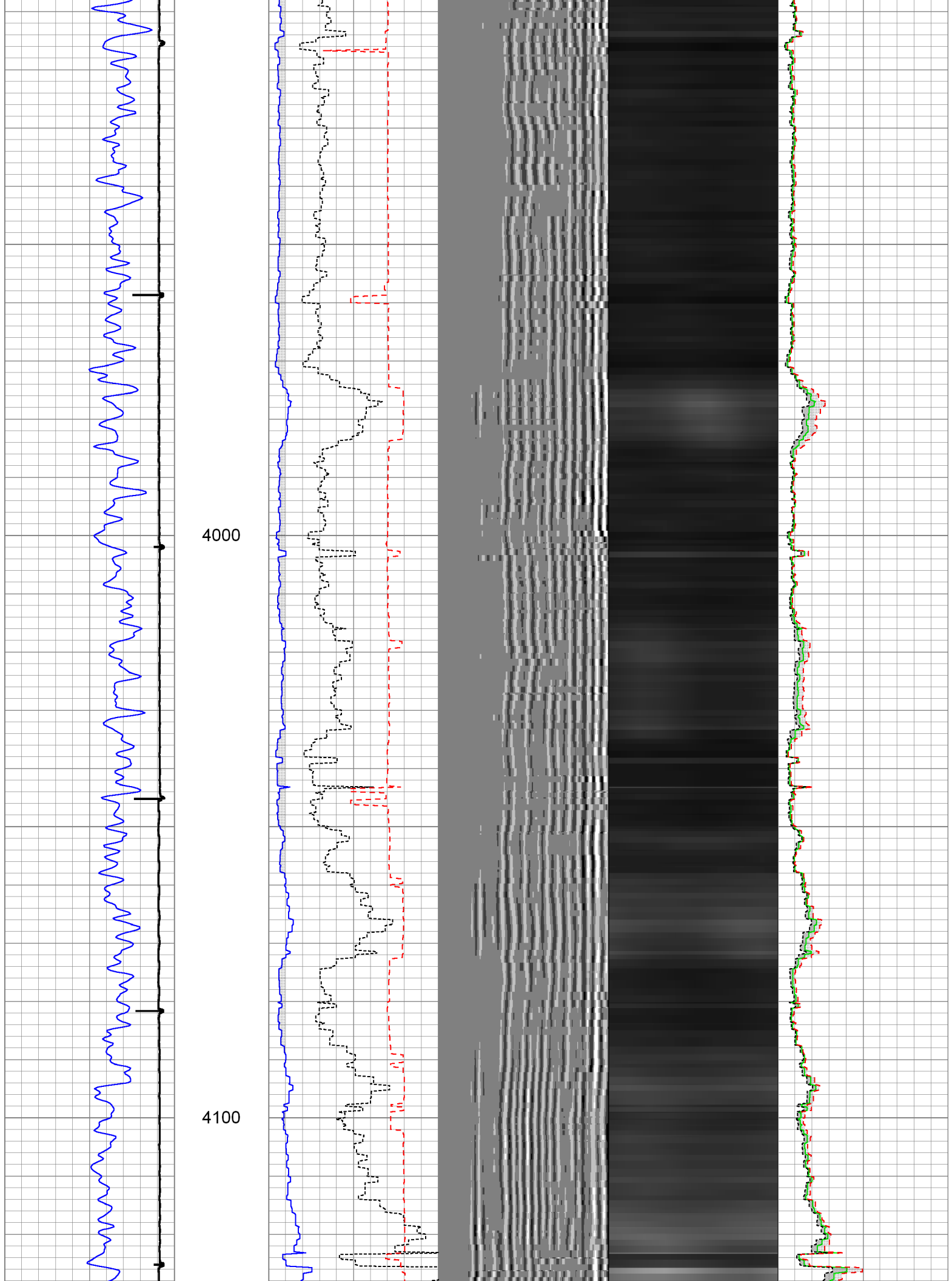


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3600

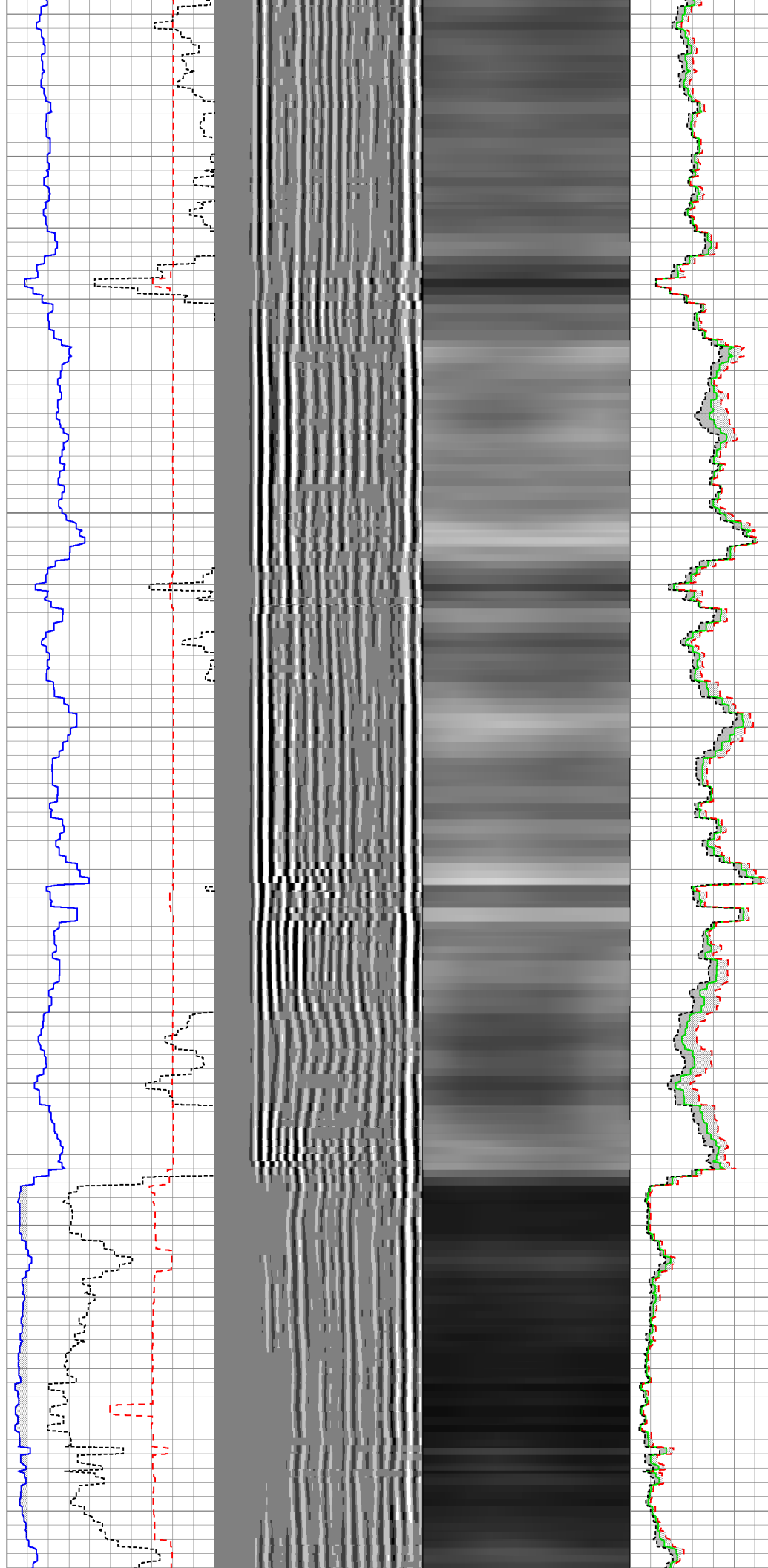






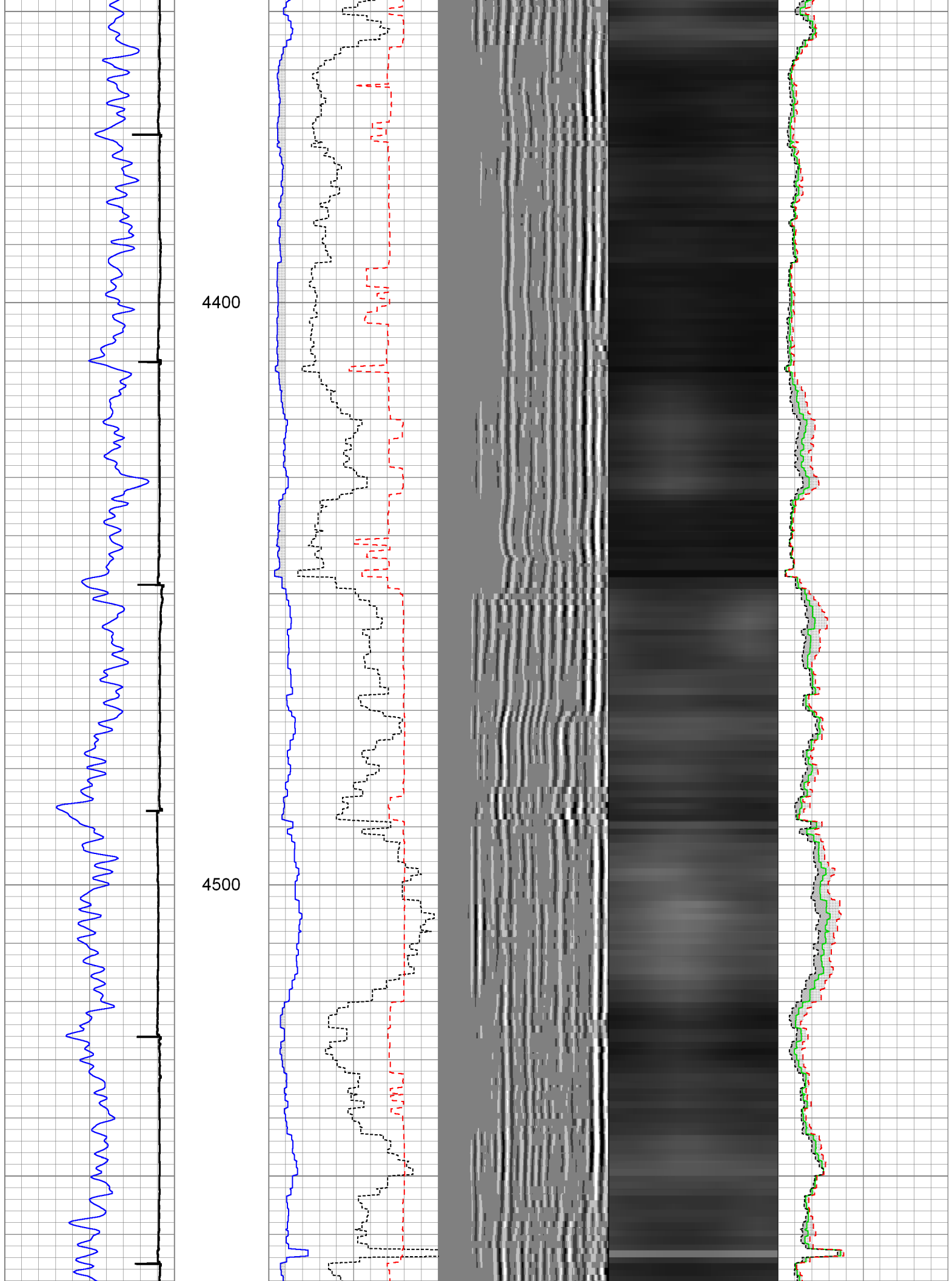
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4300



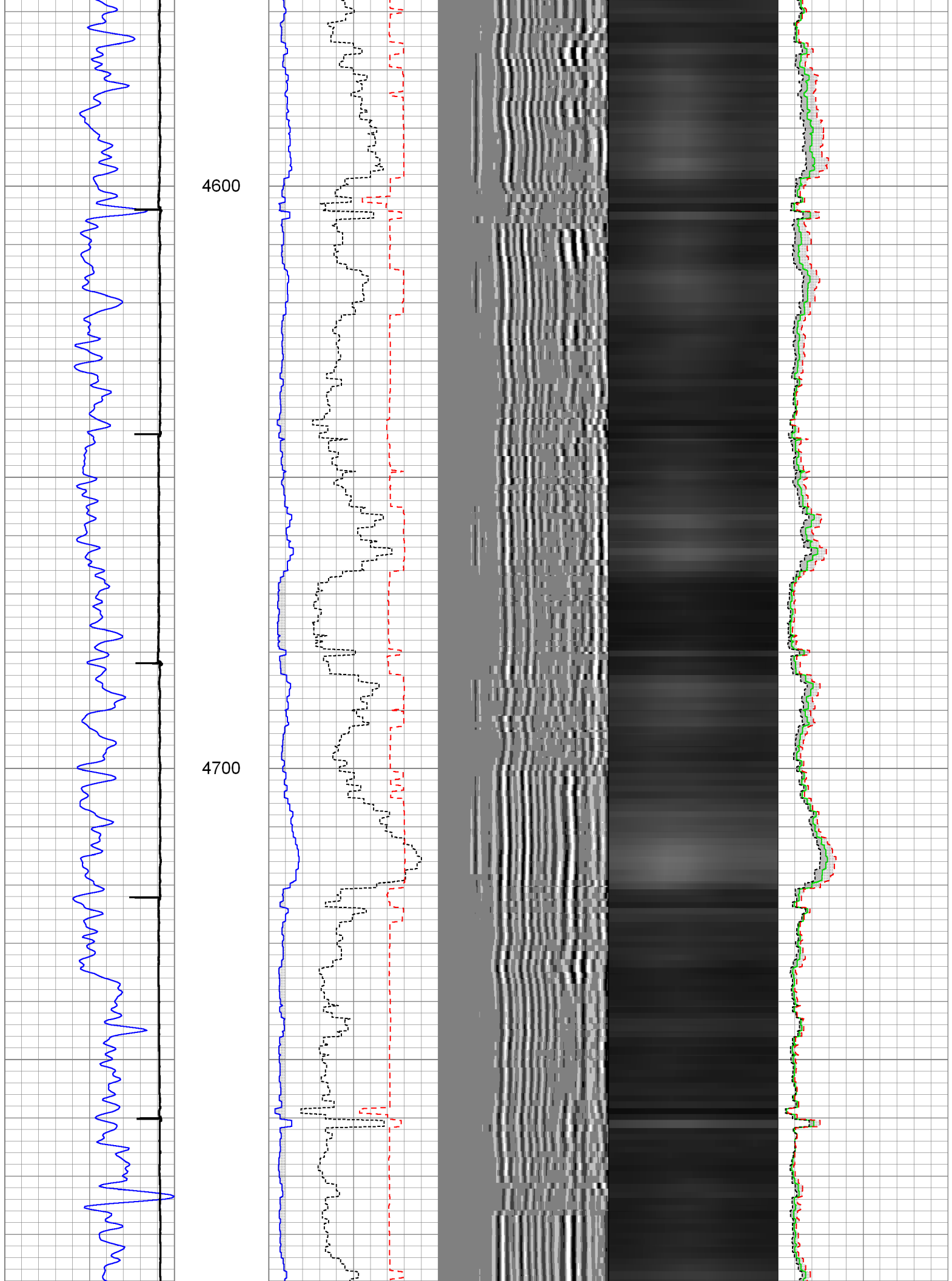
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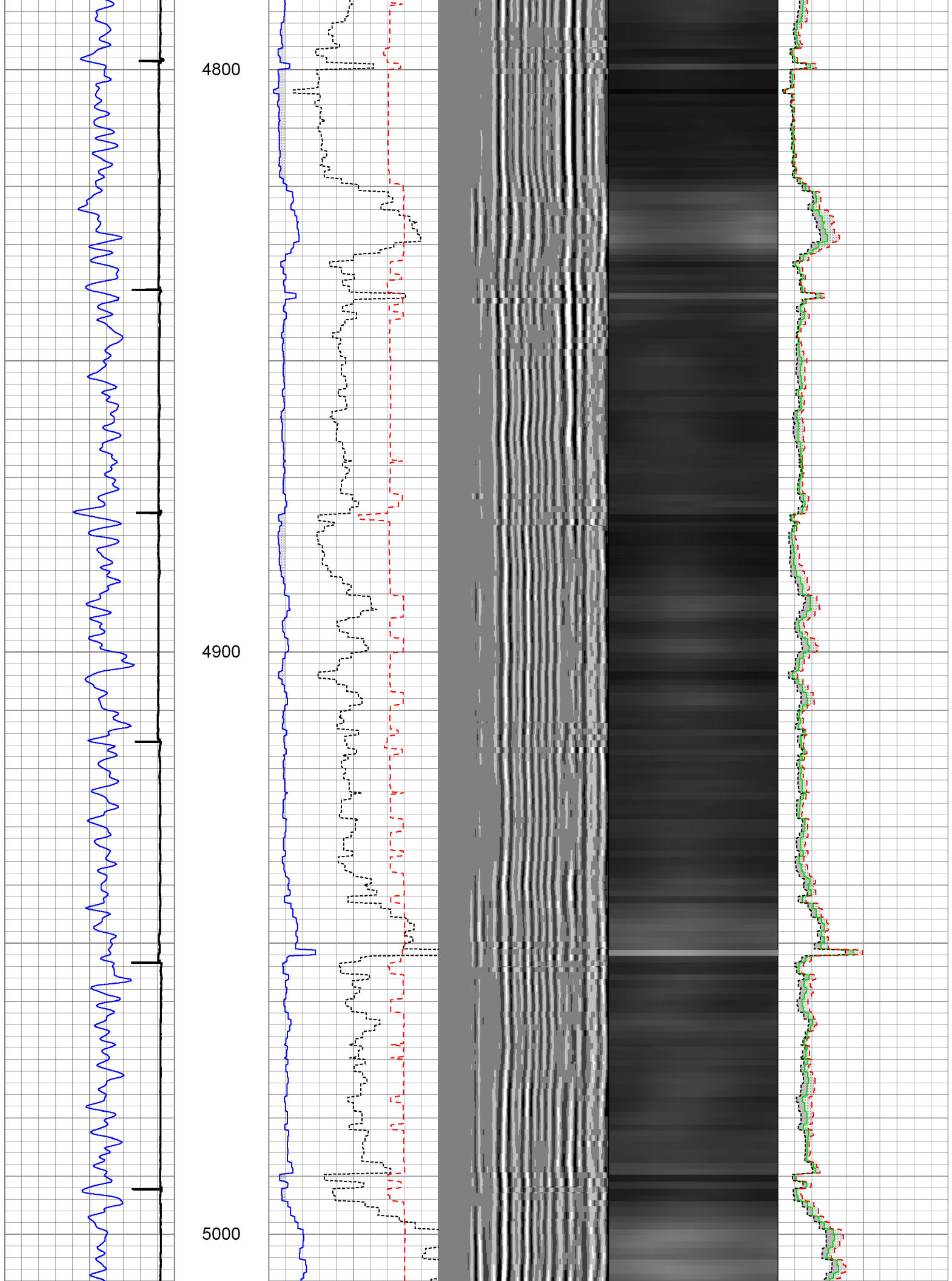
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4600

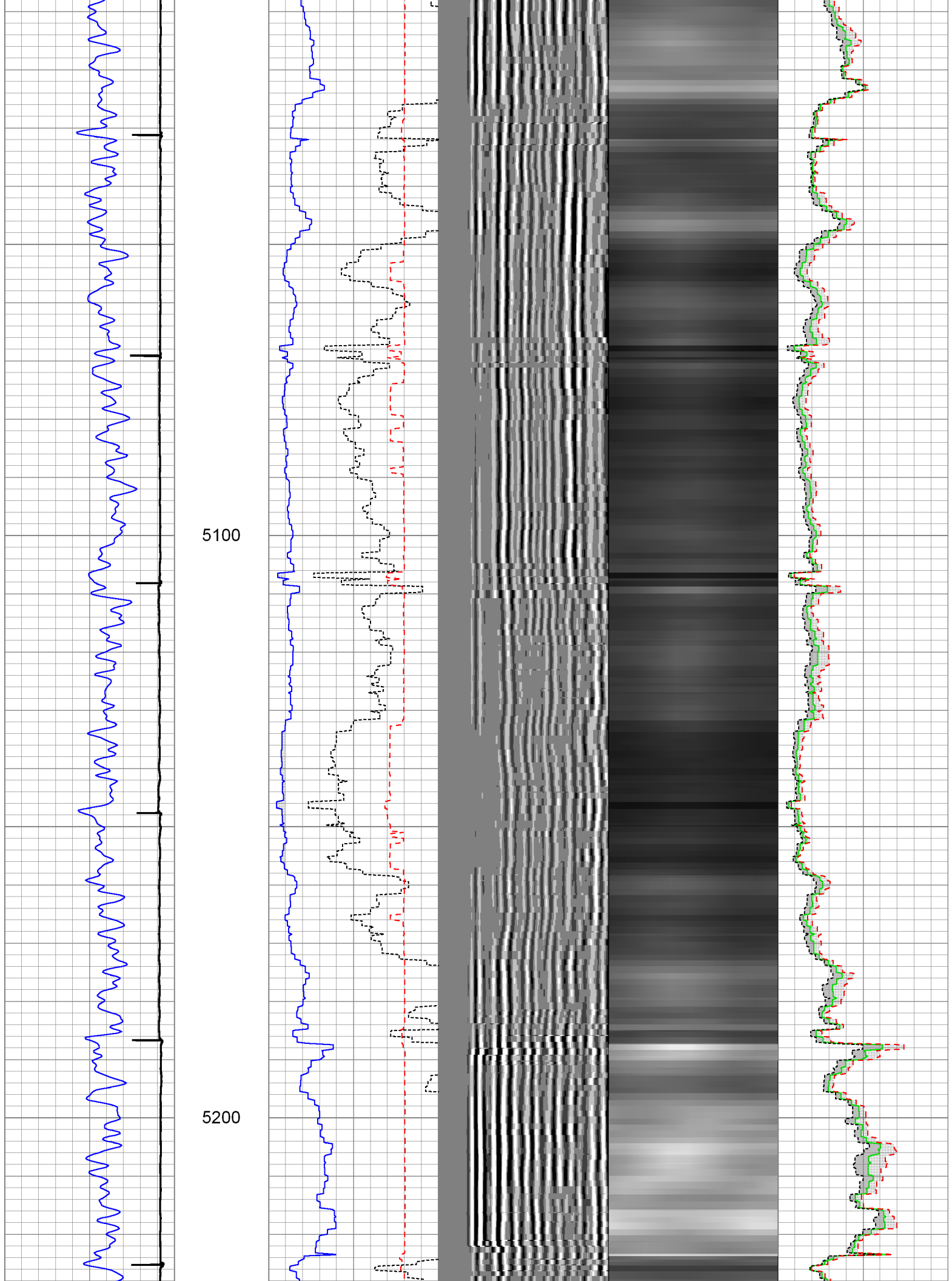
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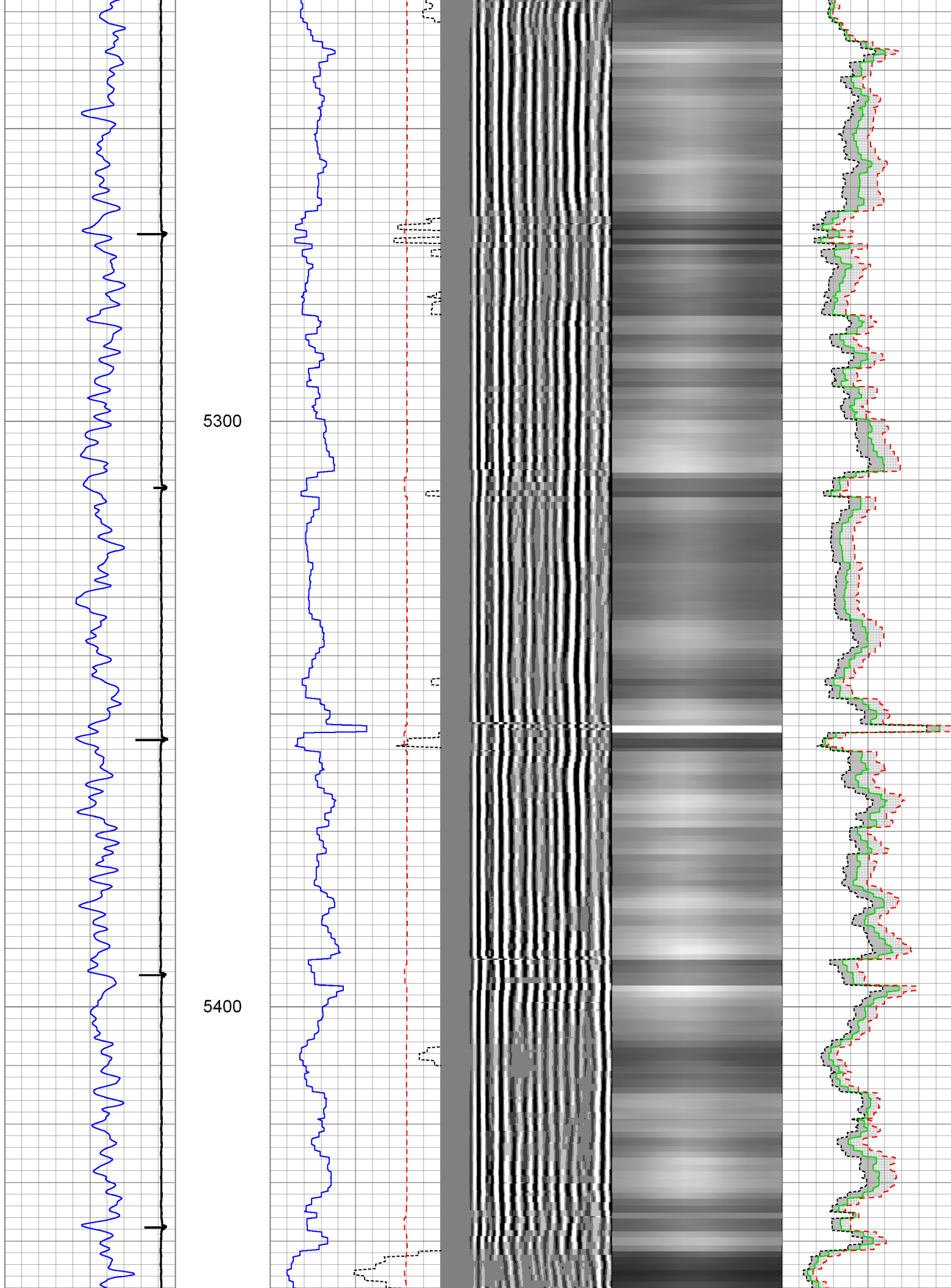
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5200



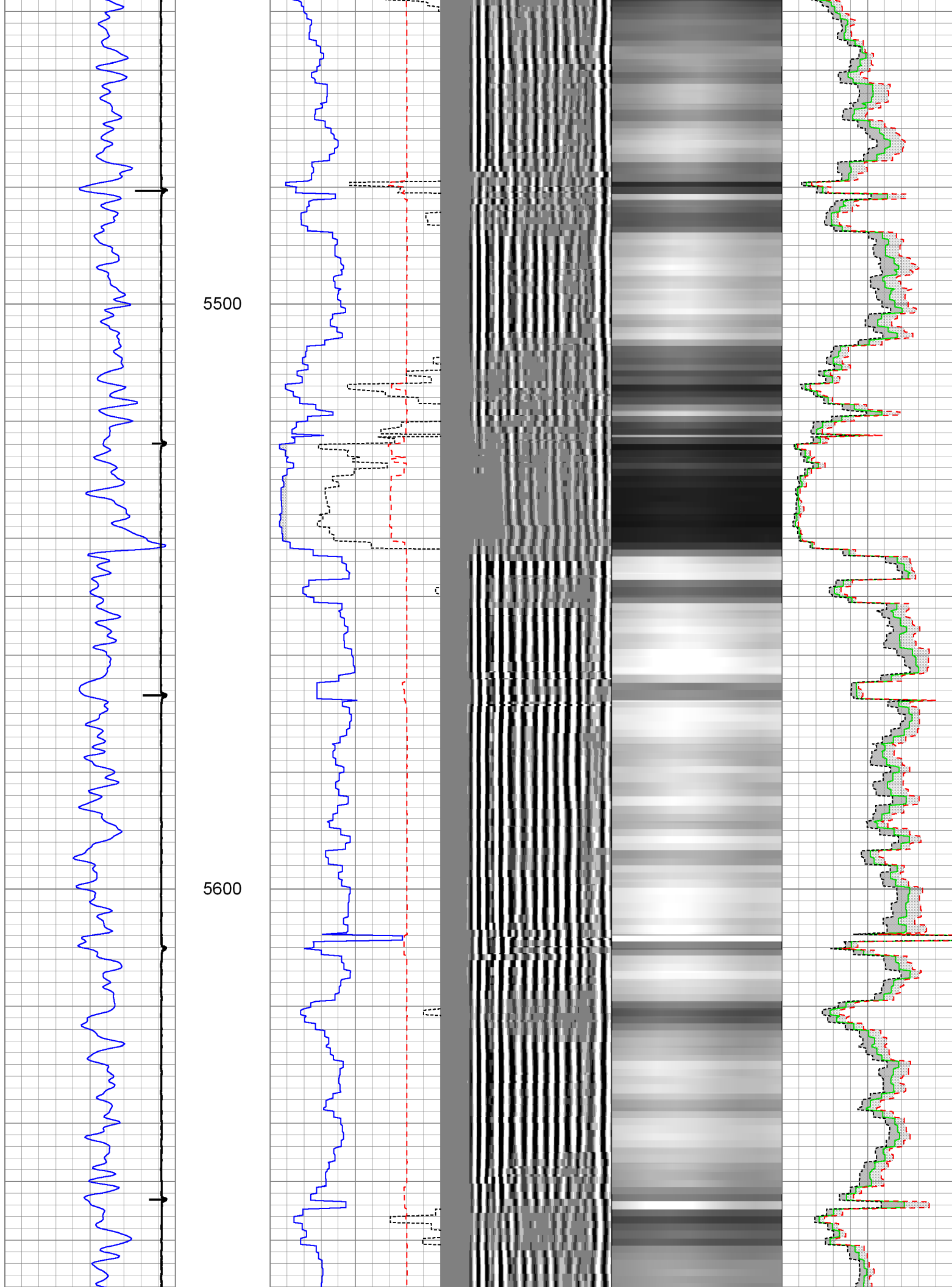
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5400



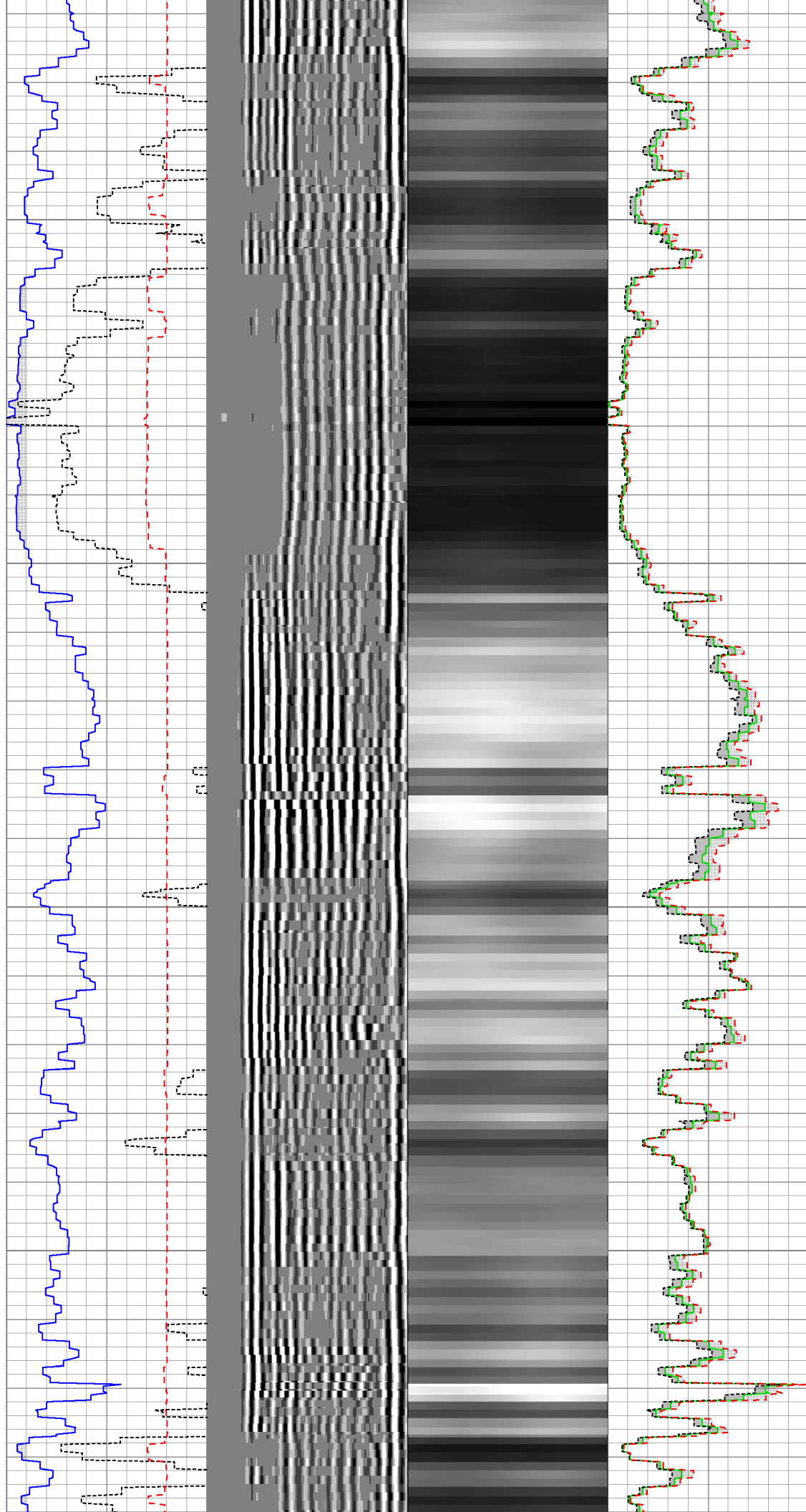
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5600



5700

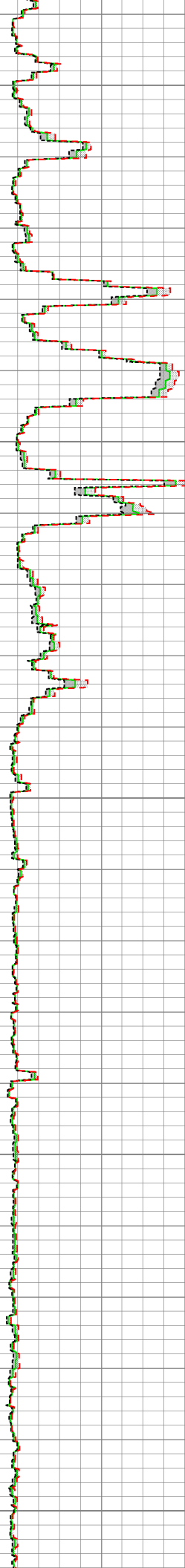
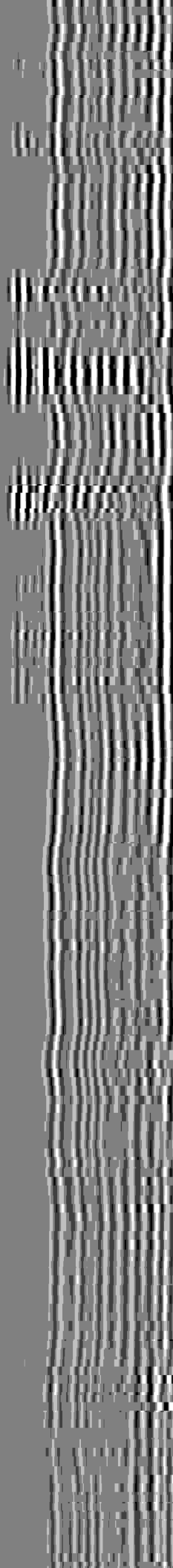
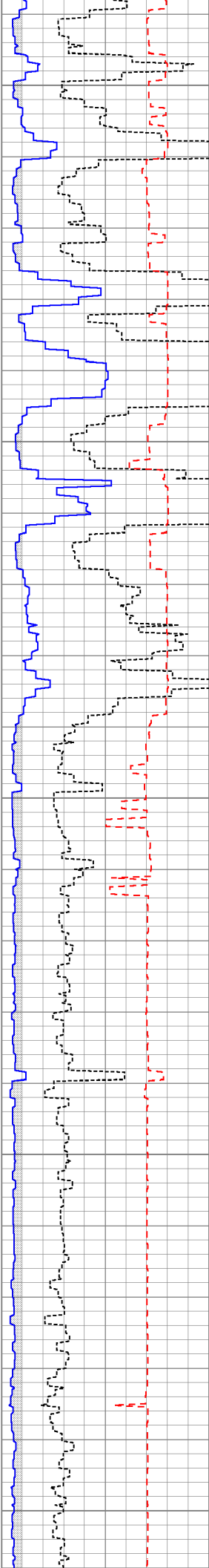
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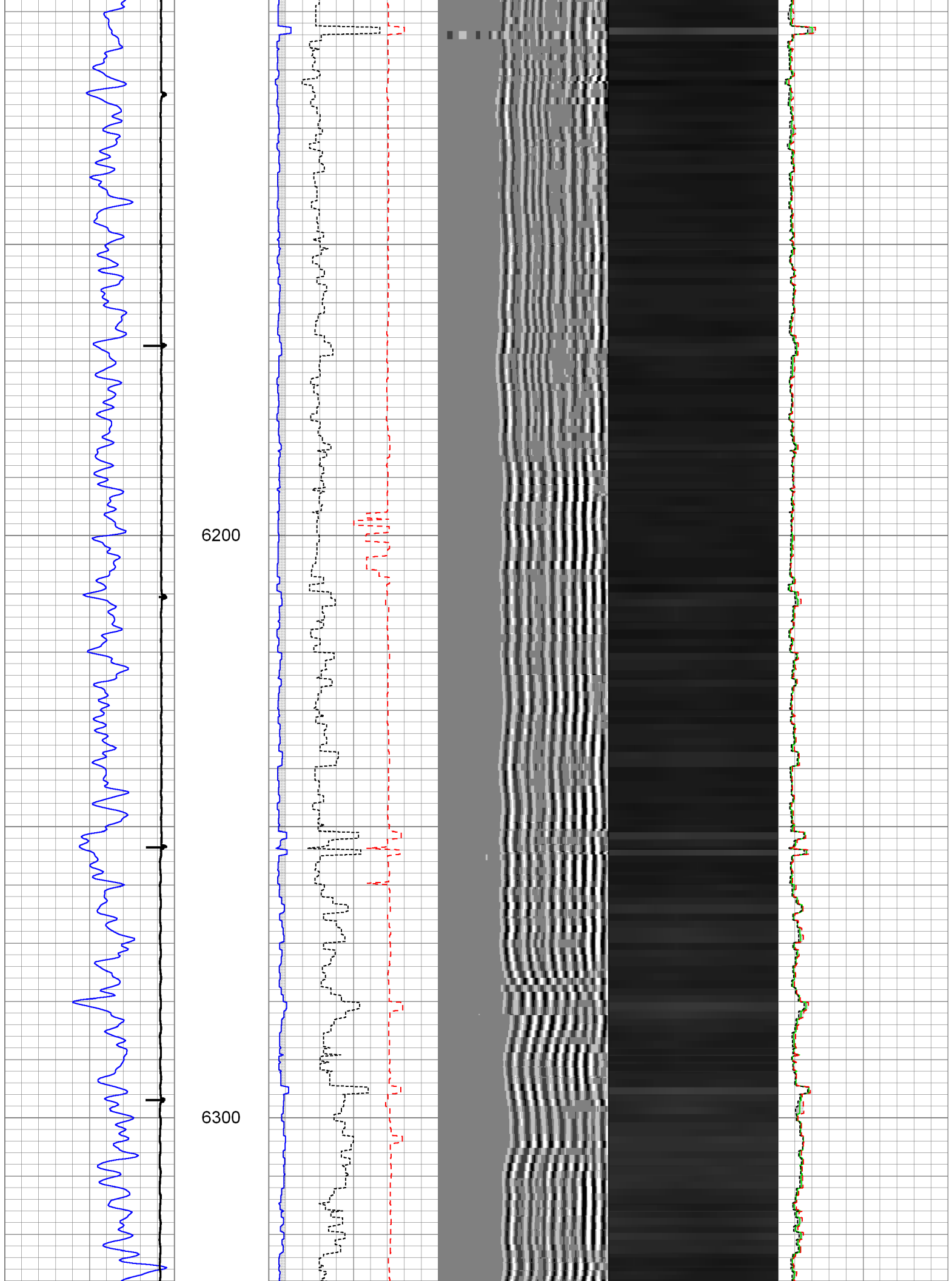


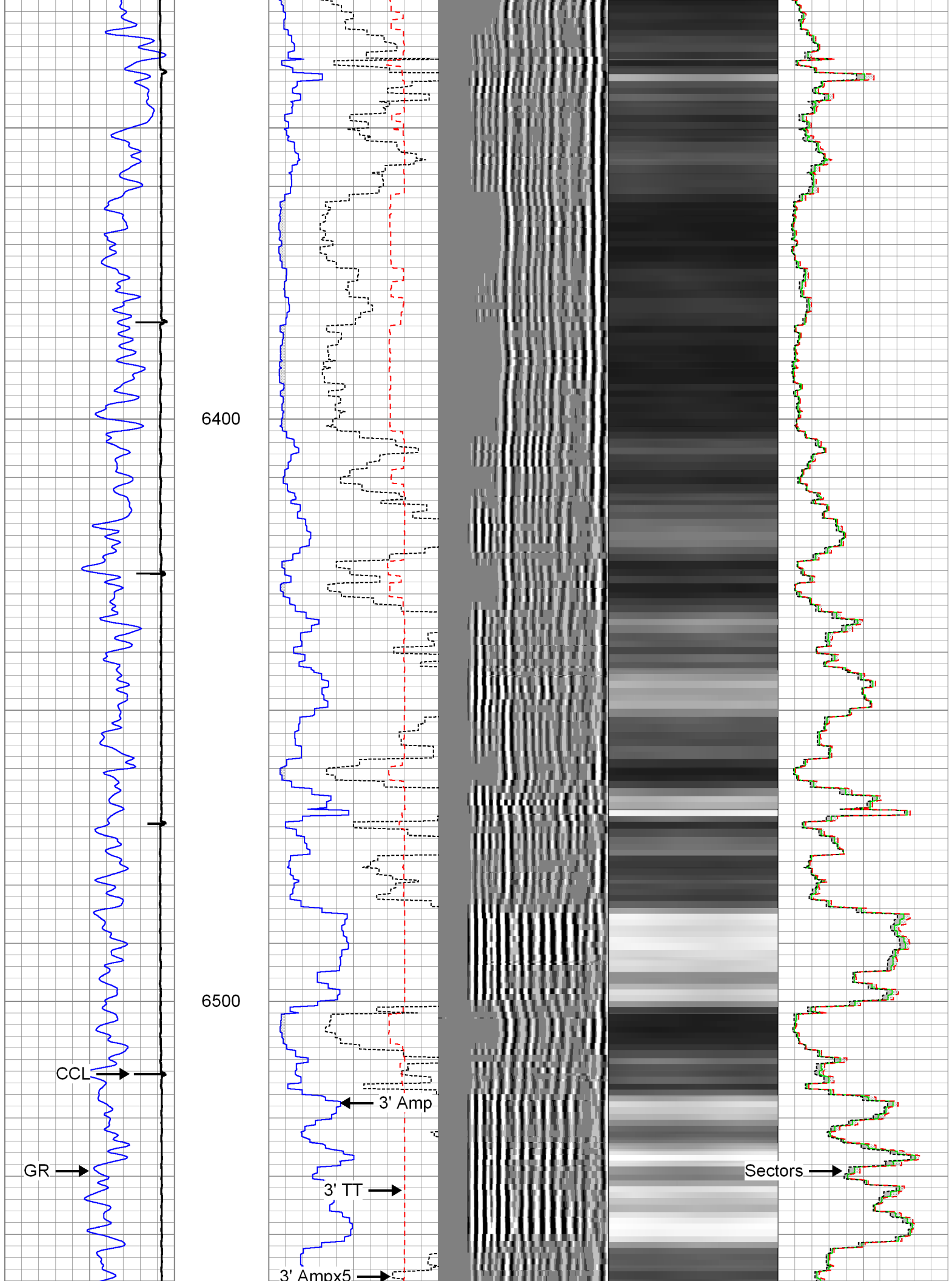
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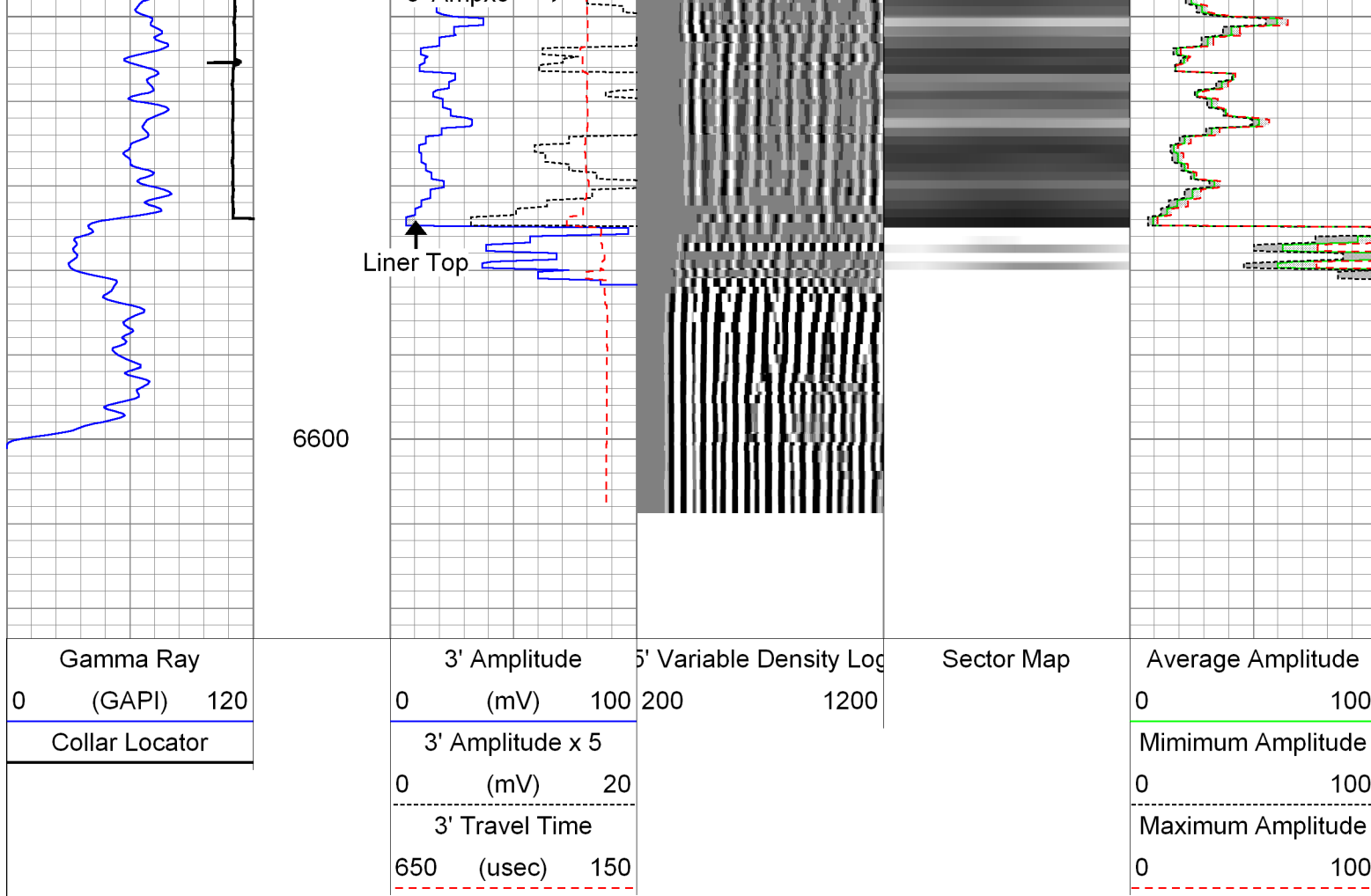
6000

6100





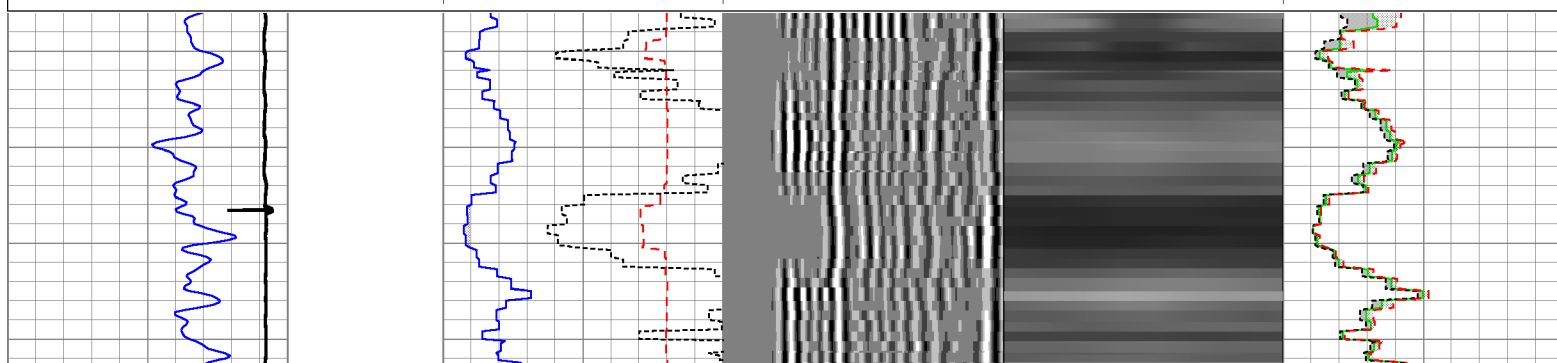
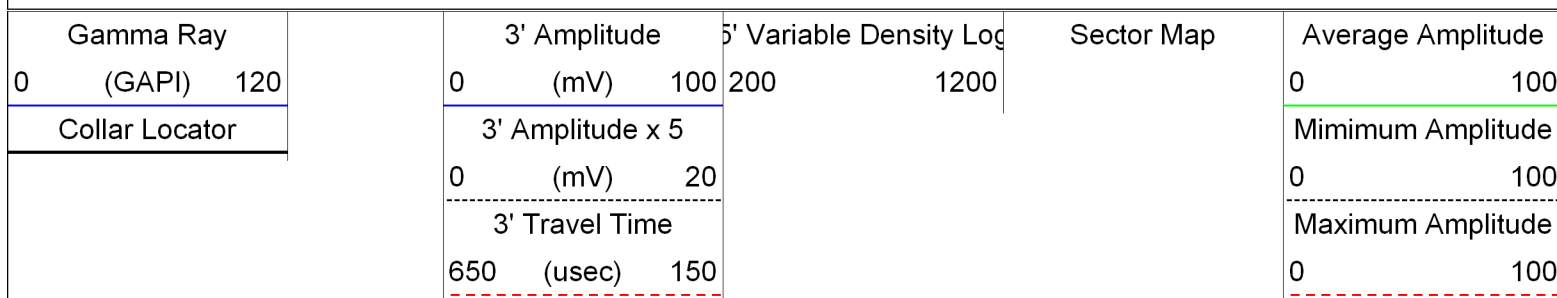


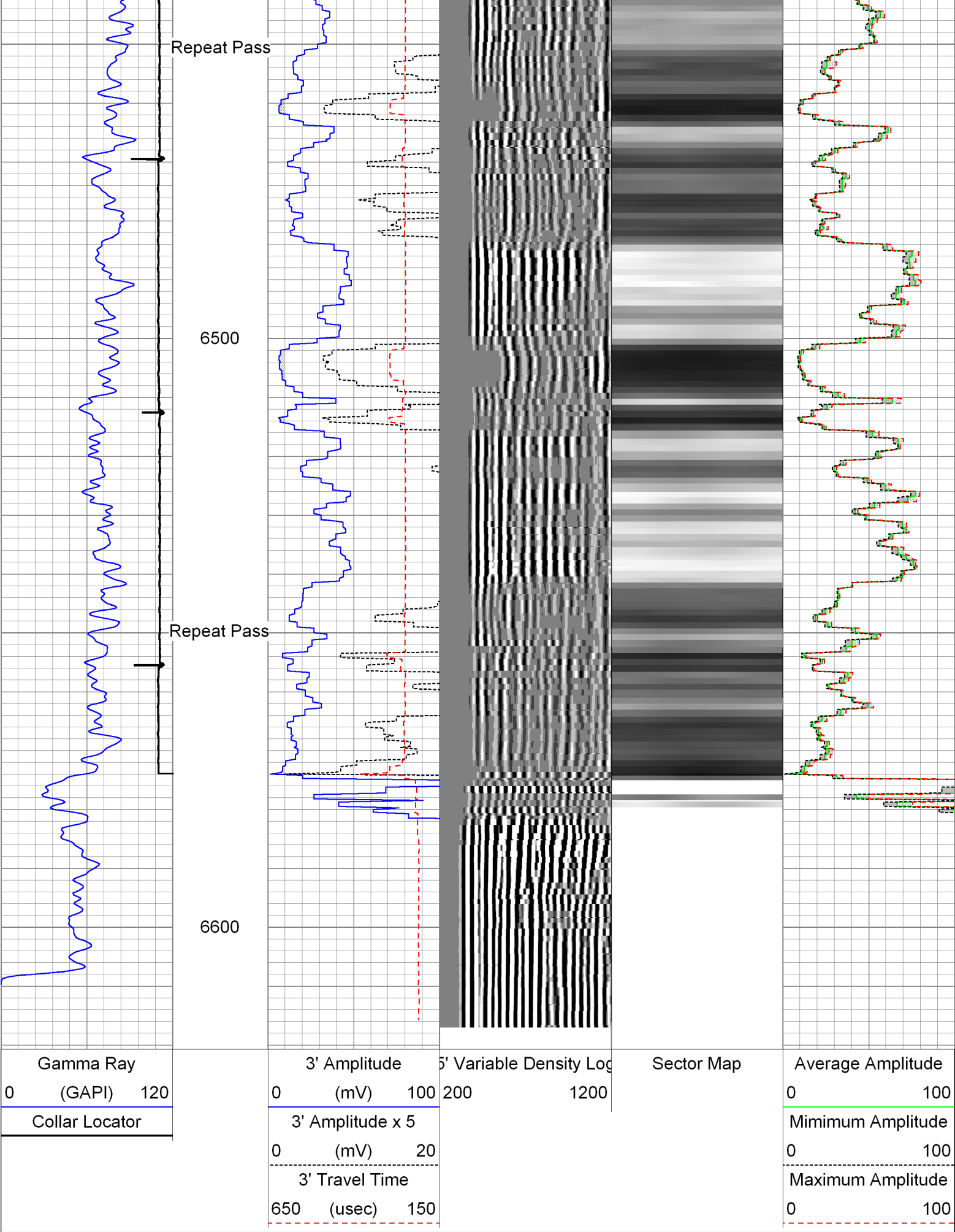


Repeat Pass

Logged With 2200 PSI At Surface

Database File: 0512338548_anadarko_paragon 10n-31hz_02-21-14_mit_rbl.db
 Dataset Pathname: repeat
 Presentation Format: rbt007
 Dataset Creation: Fri Feb 21 15:34:13 2014 by Log Sondex V7.03
 Charted by: Depth in Feet scaled 1:240





Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
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Calibration Report

Database File: 0512338548_anadarko_paragon 10n-31hz_02-21-14_mit_rbl.db
 Dataset Pathname: main
 Dataset Creation: Fri Feb 21 15:51:03 2014 by Log Sondex V7.03

Multi-finger Imaging Tool Calibration Report

Serial Number: 10012912
 Number of Fingers: 40
 Tool Model: 042

Inclinometer Calibration Report

Performed: Mon Jul 15 09:39:36 2013
 Calibration Angle: 45

	Inc X	Inc Y
Vertical:	1968	1974
Finger 1 up:	1740	1744
Finger 31 up:	2215	1741
Finger 21 up:	2205	2224
Finger 11 up:	1731	2217
Sensitivity ratio:	0.992868	
X-axis angle:	134.307	
Deviation const.:	335.589	

Finger Calibration Report

Performed: Fri Feb 21 14:33:18 2014

Ring size:	4		5		6		7
(in)		Sens		Sens		Sens	
Finger 01:	1175	404.0	1579	359.0	1938	407.0	2345
Finger 02:	1163	396.0	1559	362.0	1921	415.0	2336
Finger 03:	1121	402.0	1523	382.0	1905	433.0	2338
Finger 04:	1138	380.0	1518	371.0	1889	428.0	2317
Finger 05:	1147	375.0	1522	374.0	1896	426.0	2322
Finger 06:	1187	363.0	1550	375.0	1925	420.0	2345
Finger 07:	1153	354.0	1507	384.0	1891	427.0	2318
Finger 08:	1190	336.0	1526	379.0	1905	418.0	2323
Finger 09:	1185	334.0	1519	385.0	1904	417.0	2321
Finger 10:	1198	322.0	1520	385.0	1905	411.0	2316
Finger 11:	1213	310.0	1523	389.0	1912	404.0	2316
Finger 12:	1211	308.0	1519	394.0	1913	408.0	2321
Finger 13:	1220	298.0	1518	392.0	1910	396.0	2306
Finger 14:	1224	300.0	1524	404.0	1928	402.0	2330
Finger 15:	1186	304.0	1490	424.0	1914	416.0	2330
Finger 16:	1190	299.0	1489	425.0	1914	415.0	2329
Finger 17:	1190	299.0	1489	425.0	1914	417.0	2331
Finger 18:	1250	293.0	1543	410.0	1953	391.0	2344
Finger 19:	1208	299.0	1507	418.0	1925	400.0	2325
Finger 20:	1206	311.0	1517	428.0	1945	406.0	2351
Finger 21:	1201	323.0	1524	425.0	1949	393.0	2342
Finger 22:	1178	326.0	1504	426.0	1930	406.0	2336
Finger 23:	1131	340.0	1471	441.0	1912	422.0	2334
Finger 24:	1196	344.0	1540	410.0	1950	379.0	2329
Finger 25:	1138	361.0	1499	427.0	1926	412.0	2338
Finger 26:	1243	352.0	1595	390.0	1985	377.0	2362
Finger 27:	1173	376.0	1549	415.0	1964	403.0	2367
Finger 28:	1195	380.0	1575	397.0	1972	393.0	2365
Finger 29:	1136	406.0	1542	410.0	1952	411.0	2363
Finger 30:	1164	406.0	1570	403.0	1973	409.0	2382
Finger 31:	1162	408.0	1570	390.0	1960	403.0	2363
Finger 32:	1139	423.0	1562	401.0	1963	419.0	2382
Finger 33:	1213	418.0	1631	368.0	1999	387.0	2386
Finger 34:	1171	420.0	1591	375.0	1966	410.0	2376
Finger 35:	1118	447.0	1565	396.0	1961	432.0	2393
Finger 36:	1130	431.0	1561	379.0	1940	426.0	2366

Finger 36:	1130	431.0	1501	379.0	1940	420.0	2360
Finger 37:	1151	424.0	1575	368.0	1943	412.0	2355
Finger 38:	1175	421.0	1596	362.0	1958	402.0	2360
Finger 39:	1189	413.0	1602	360.0	1962	401.0	2363
Finger 40:	1145	422.0	1567	369.0	1936	418.0	2354

Segmented Cement Bond Log Calibration Report

Serial Number:	1066in7in
Tool Model:	004
Calibration Casing Diameter:	7.000 in
Calibration Depth:	326.377 ft

Master Calibration, performed Fri Feb 21 14:57:58 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	-0.002	0.593	0.800	62.165	103.026	1.052
5FT	-0.007	0.587	0.800	62.165	103.318	1.540
S1	-0.002	0.557	0.000	100.000	178.799	0.430
S2	-0.004	0.559	0.000	100.000	177.578	0.672
S3	-0.003	0.574	0.000	100.000	173.160	0.558
S4	-0.005	0.596	0.000	100.000	166.586	0.781
S5	-0.003	0.614	0.000	100.000	162.061	0.415
S6	-0.004	0.630	0.000	100.000	157.855	0.570
S7	-0.003	0.622	0.000	100.000	160.163	0.434
S8	-0.003	0.586	0.000	100.000	169.786	0.435

Gamma Ray Calibration Report

Serial Number:	10013902
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	Paragon 10N-31HZ
Field	Wattenberg
County	Weld
State	Colorado