



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 Jeltz 36N-19HZ				Well Jeltz 36N-19HZ			
Field Wattenberg				Field Wattenberg			
County Weld				County Weld			
State Colorado				State Colorado			
Location:				API # : 05-123-36566			
SHL: 275' FNL & 1888' FEL				Other Services Gauge Ring CIL			
Lat / Long: 40.043131 / -104.930857							
SEC 19 TWP 1N RGE 67W							
Permanent Datum		Ground Level		Elevation		Elevation	
Log Measured From		Kelly Bushing (13 FT)				K.B. 5160'	
Drilling Measured From		Kelly Bushing				D.F. 5159'	
						G.L. 5147'	
Date		23-Aug-2013					
Run Number		One					
Depth Driller		12152 FT					
Depth Logger		7132 FT					
Bottom Logged Interval		7127 FT					
Top Log Interval		Surface					
Open Hole Size		8.750"					
Type Fluid		Water					
Density / Viscosity		8.34 lbm/gal					
Max. Recorded Temp.		221 degF					
Estimated Cement Top		20 FT					
Time Well Ready		07:00					
Time Logger on Bottom		08:30					
Equipment Number		HD-0119					
Location		Fort Lupton, CO					
Recorded By		J. Raby					
Witnessed By		Fernando Ortega					
Borehole Record				Tubing Record			
Run Number		Bit		From		To	
Casing Record		Size (in)		Wgt (lbs/Ft)		Grade	
Surface Casing		9-5/8"		36#		J-55	
Intermediate #1		7"		26#		HCP-110	
Intermediate #2							
Liner		4-1/2"		11.6#		P-110	
						7049 FT	
						12137 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

Radial Cement Bond Log - Casing Inspection Log is first recorded log in hole.  
Depth reference to Casing Tally reported Top of Liner at 7049'  
Adjusted -8' to Liner Top at 7049' from a 13' KB zero.  
RCBL-CIL ran at 2500 PSI surface induced pressure.  
Estimated Cement Top recorded at 20'  
Frequency Hz change at 900' from 11Hz to 5Hz for surface casing MTT readings.

Thank you for choosing FMC Technologies Completion Services, Inc.



Main Pass

Recorded with 2500 PSI Surface Induced Pressure

Database File:05-123-36566\_anadarko\_jelts36n-19hz\_rcbl\_cil\_23-aug-2013\_w7.db

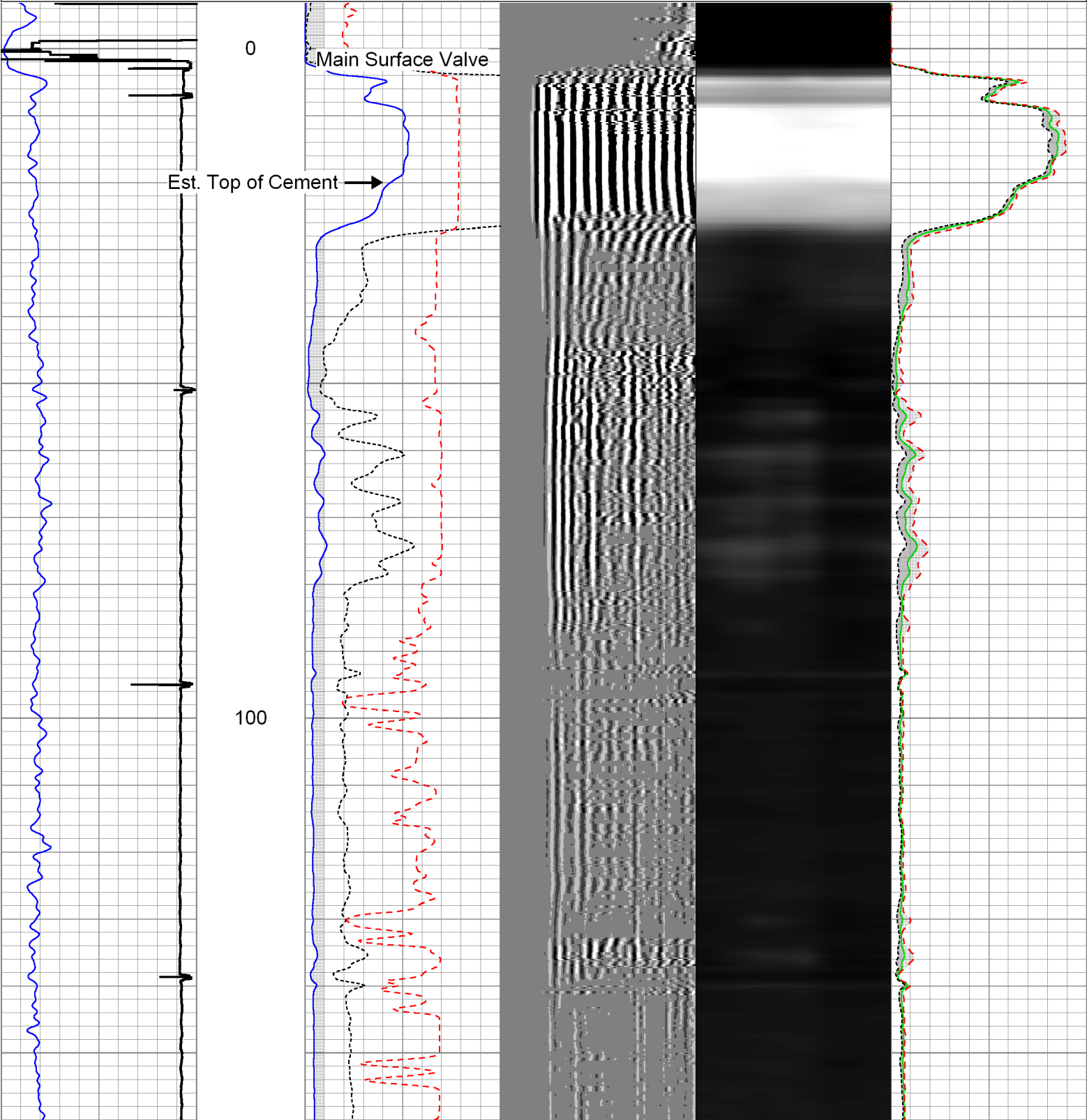
Dataset Pathname:mainpass

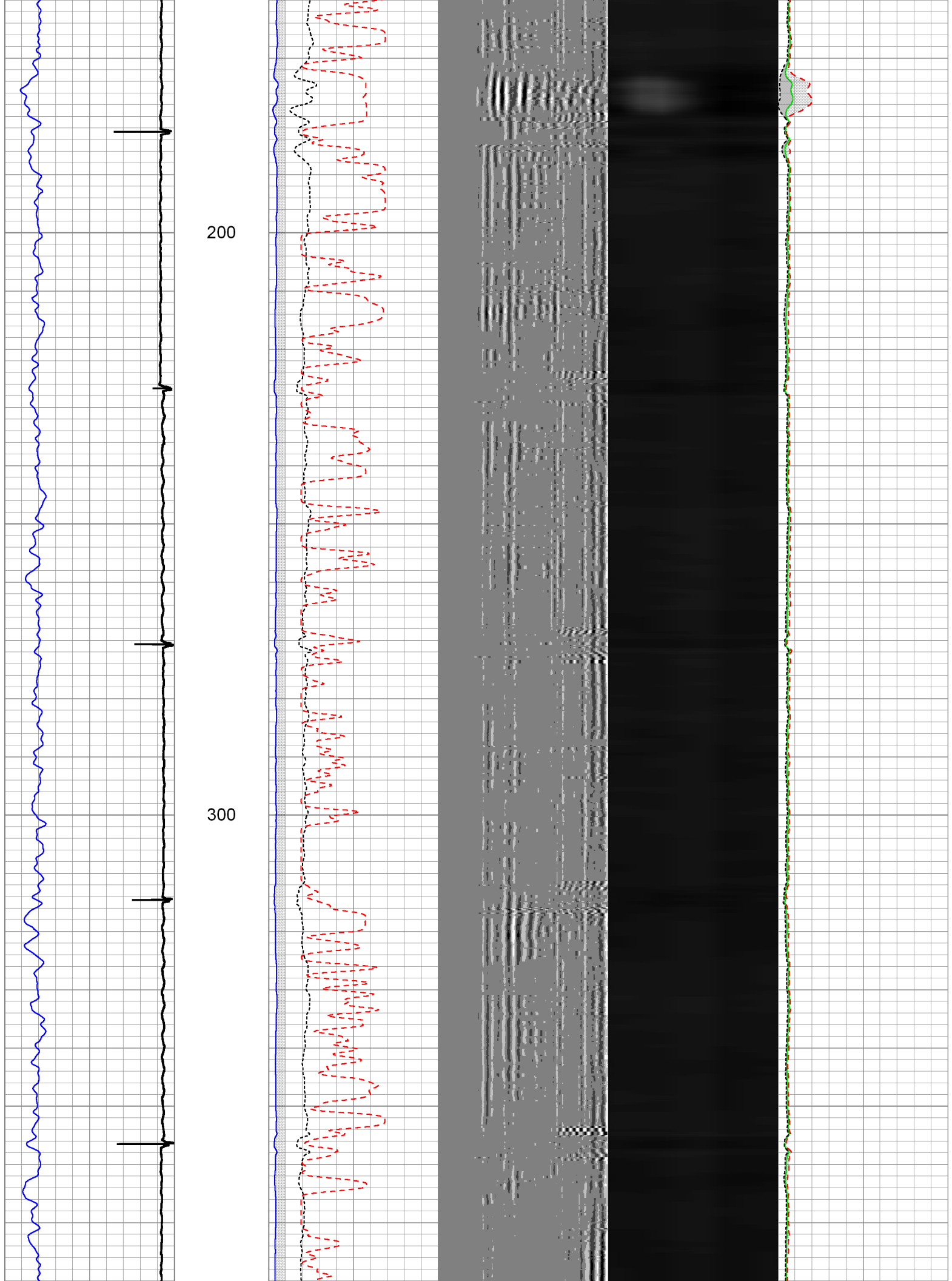
Presentation Format:rib

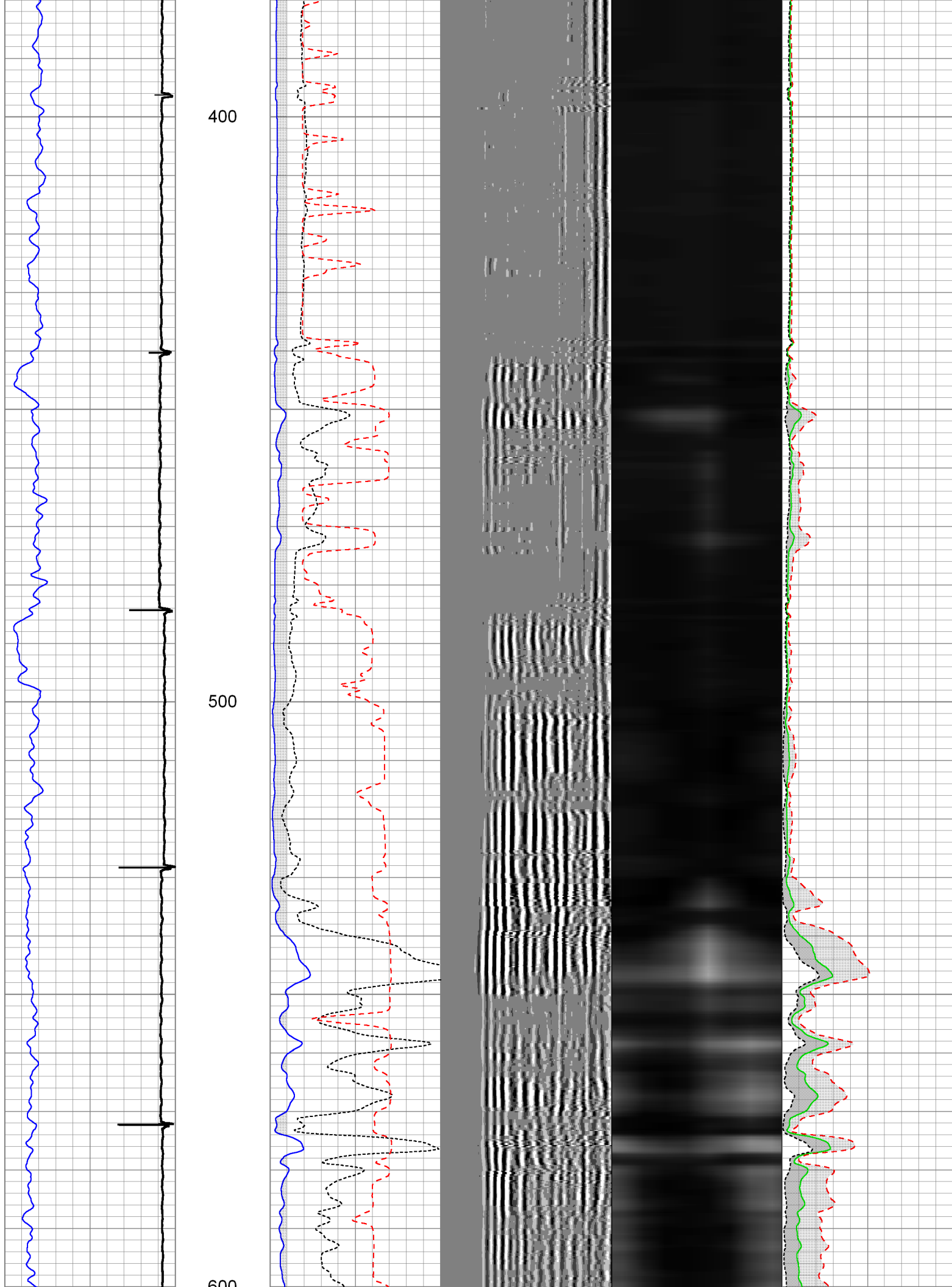
Dataset Creation:Fri Aug 23 08:33:23 2013 by Log Sondex V7.03

Charted by:Depth in Feet scaled 1:240

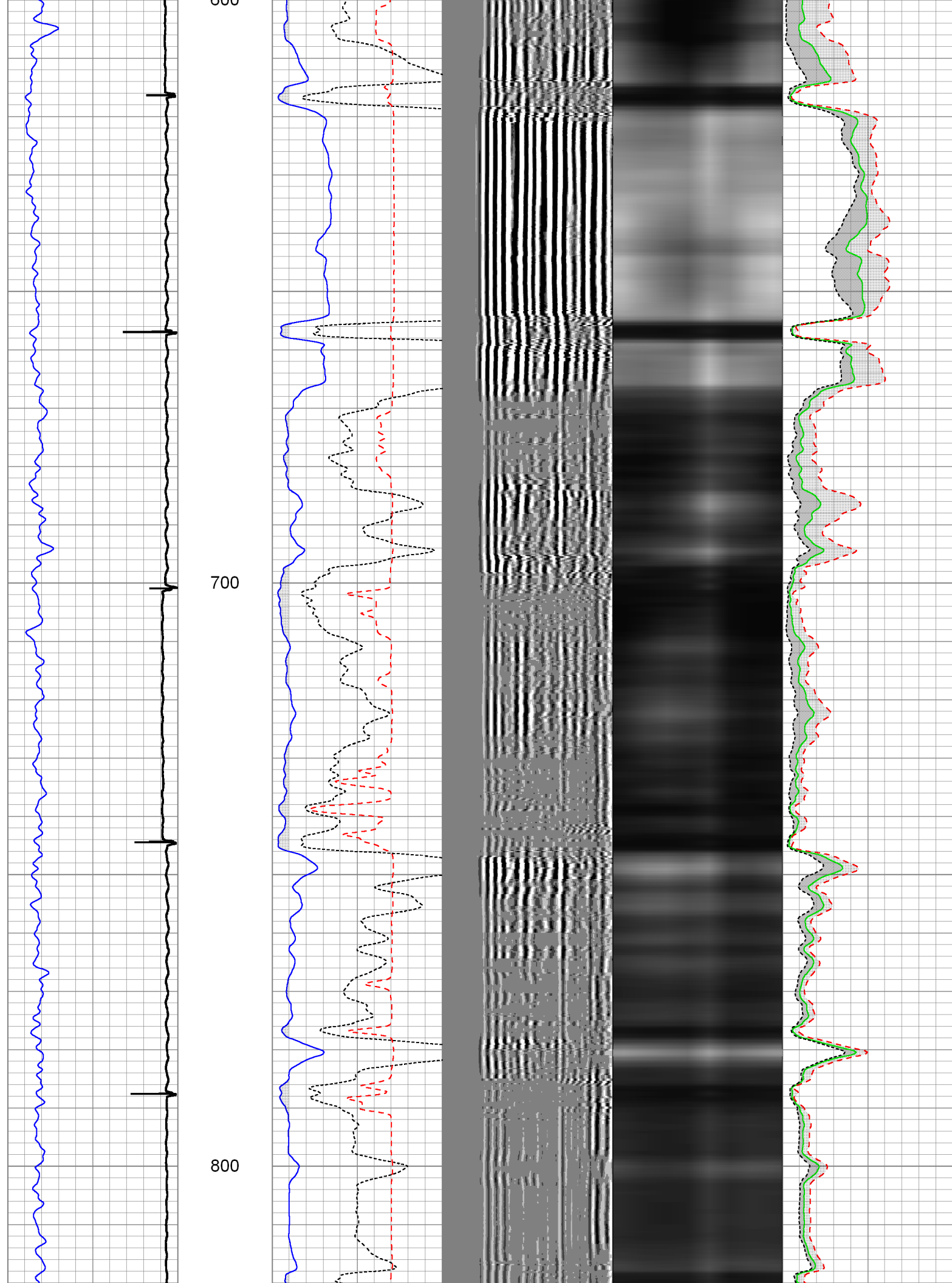
Gamma Ray			3' Amplitude		5' Variable Density Log	Sector Map	Average Amplitude		
0	(GAPI)	120	0	(mV)			100	0	100
CCL			3' Amplitude x 5				Minimum Amplitude		
			0	(mV)			20	0	100
			3' Travel Time				Maximum Amplitude		
			650	(usec)			150	0	100

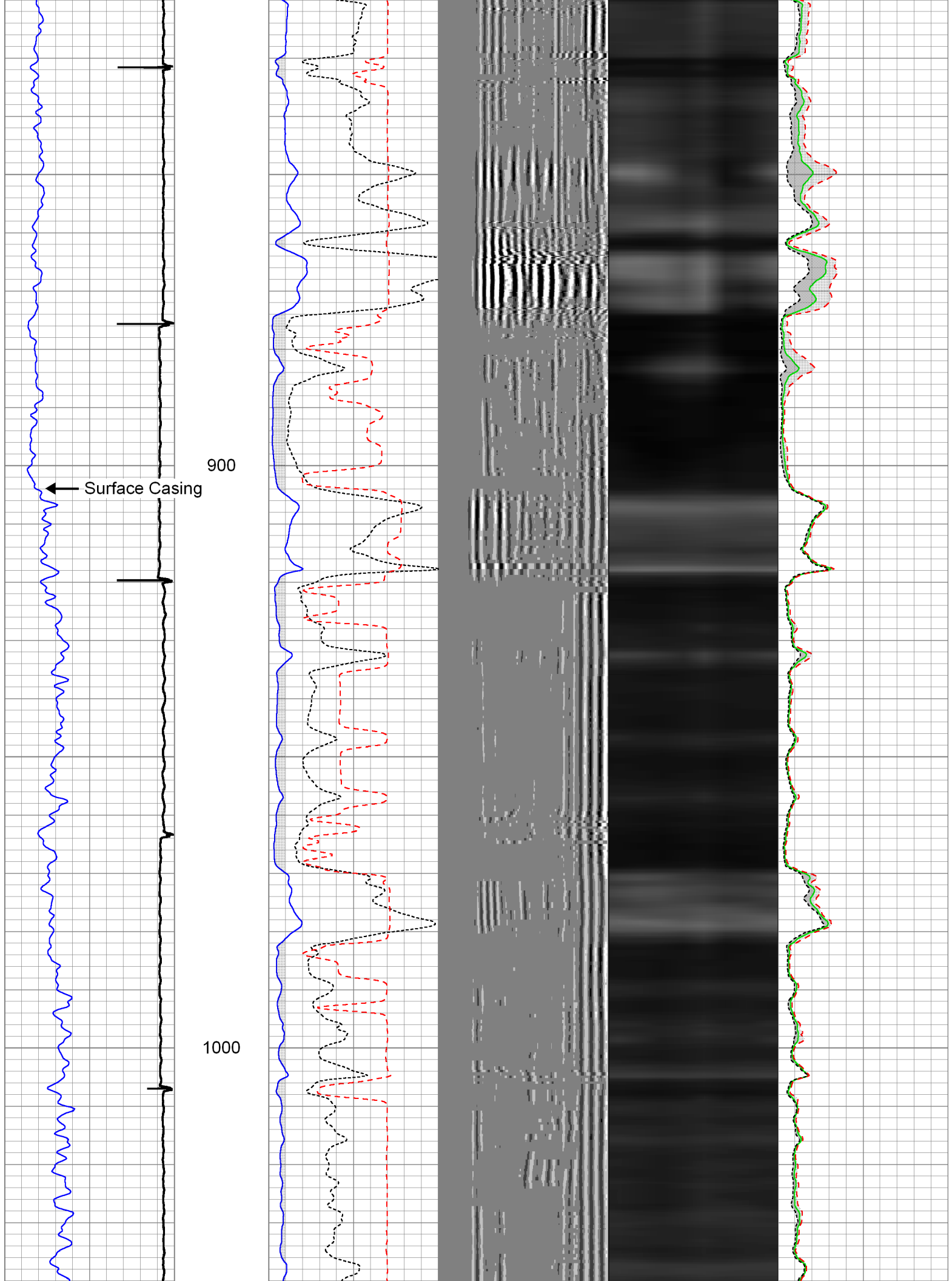


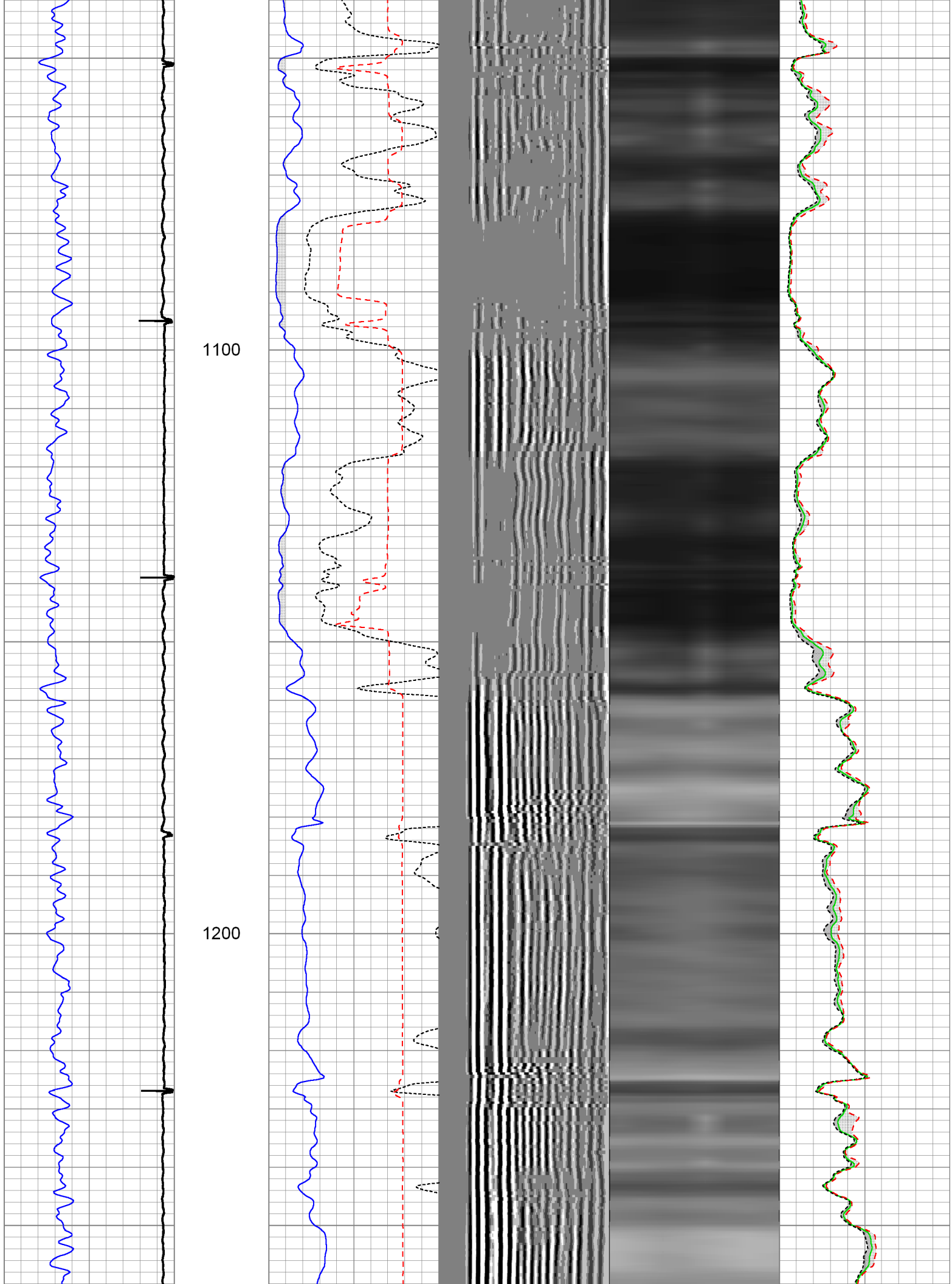


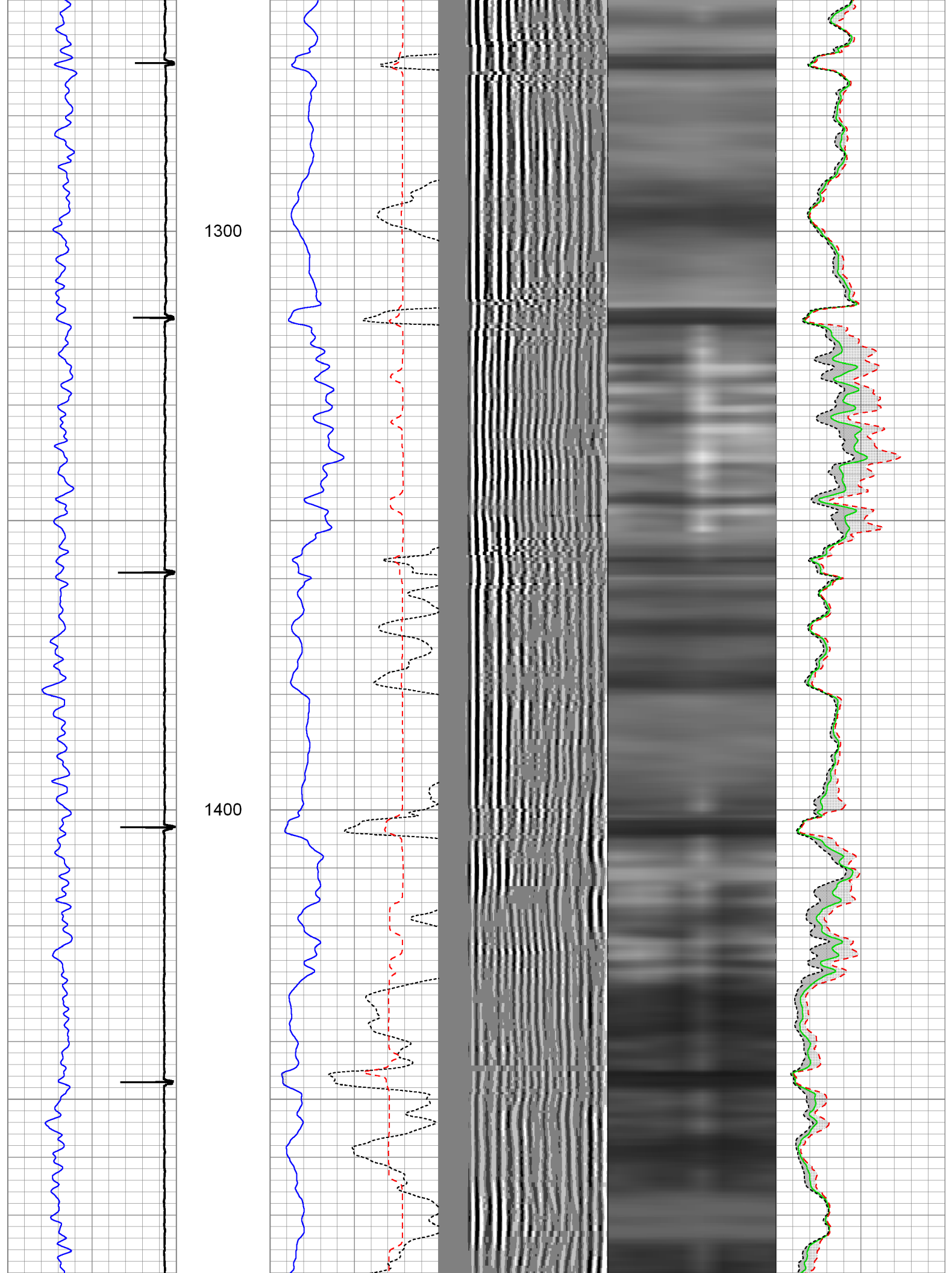


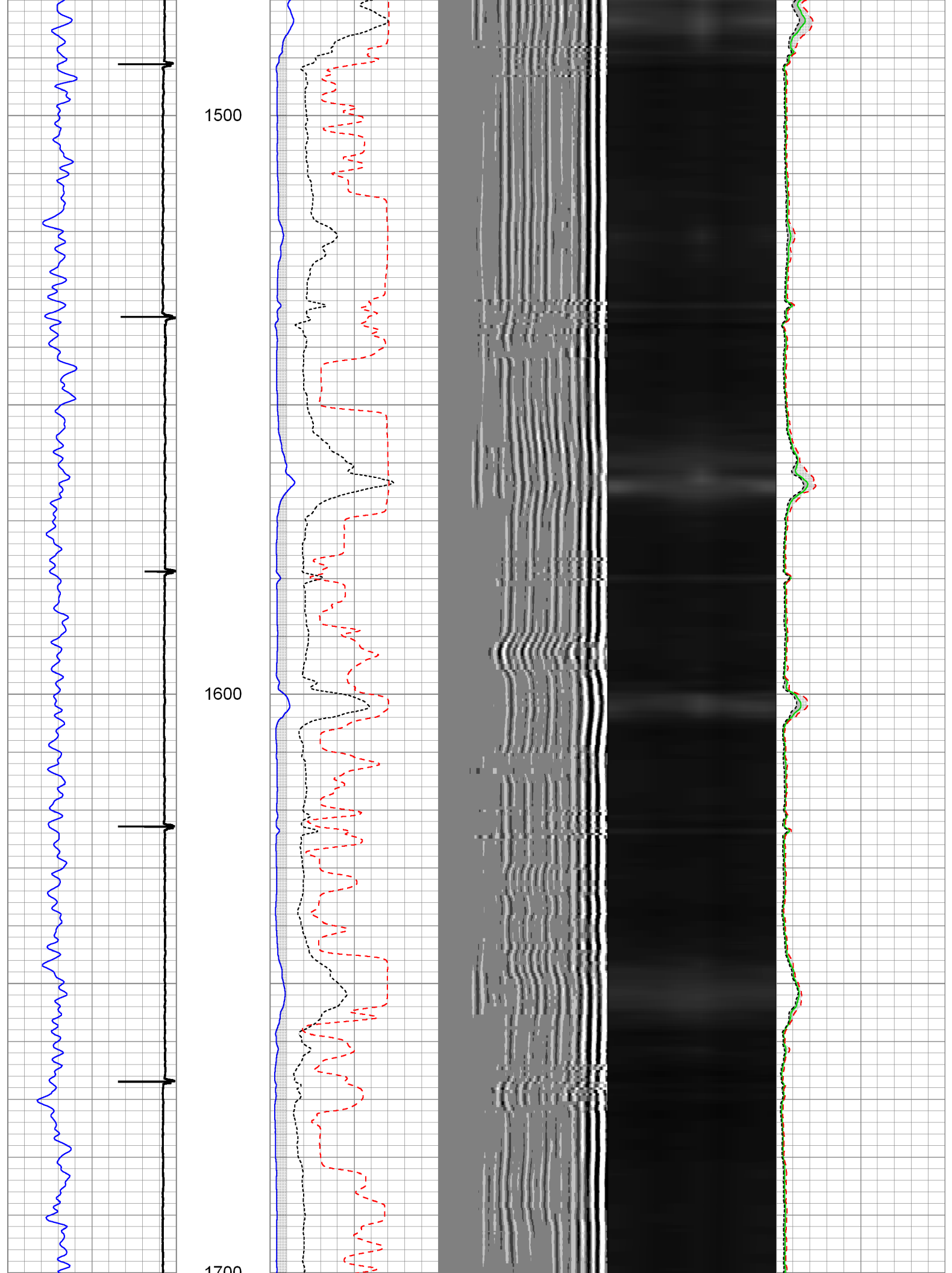








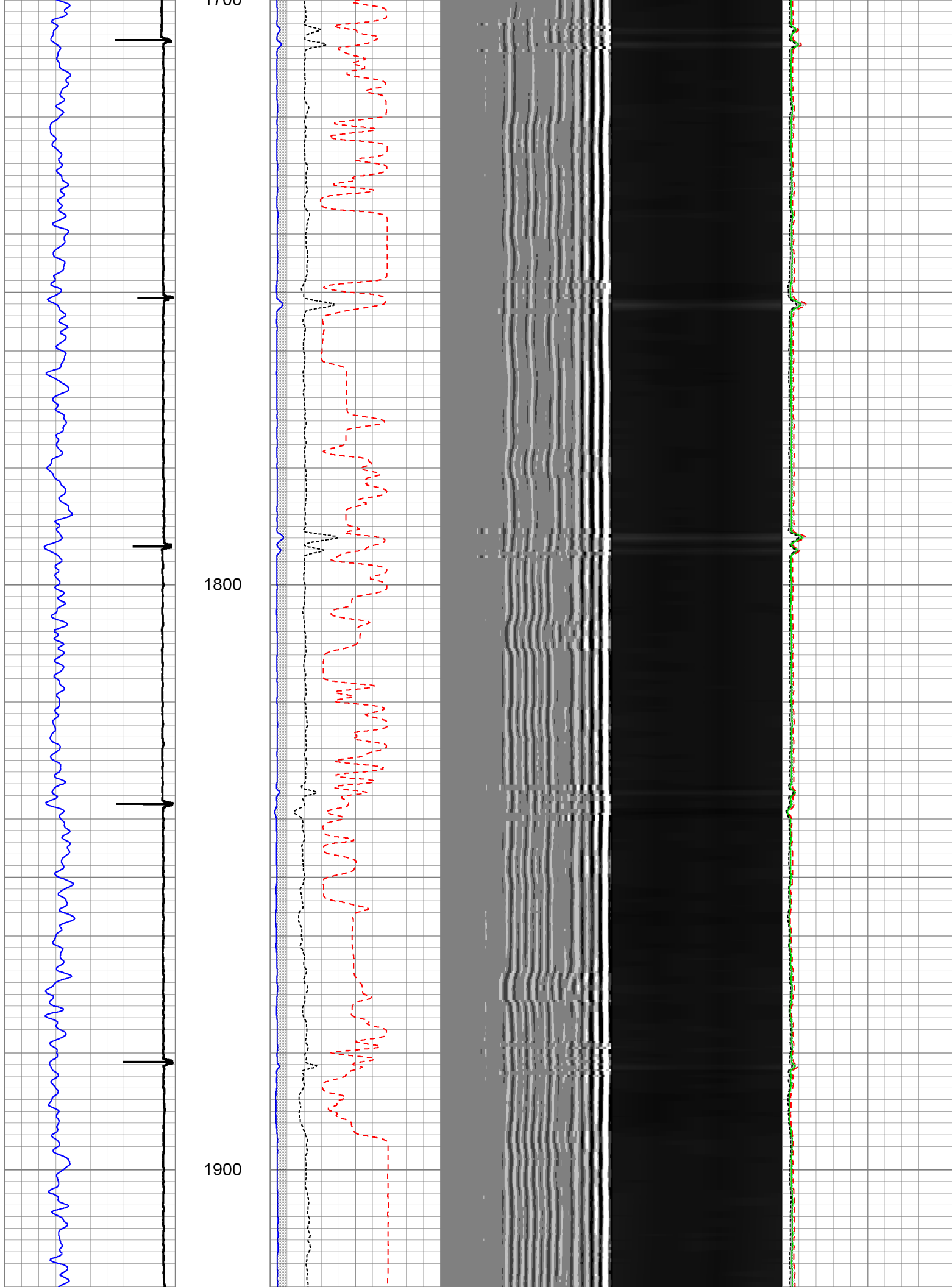




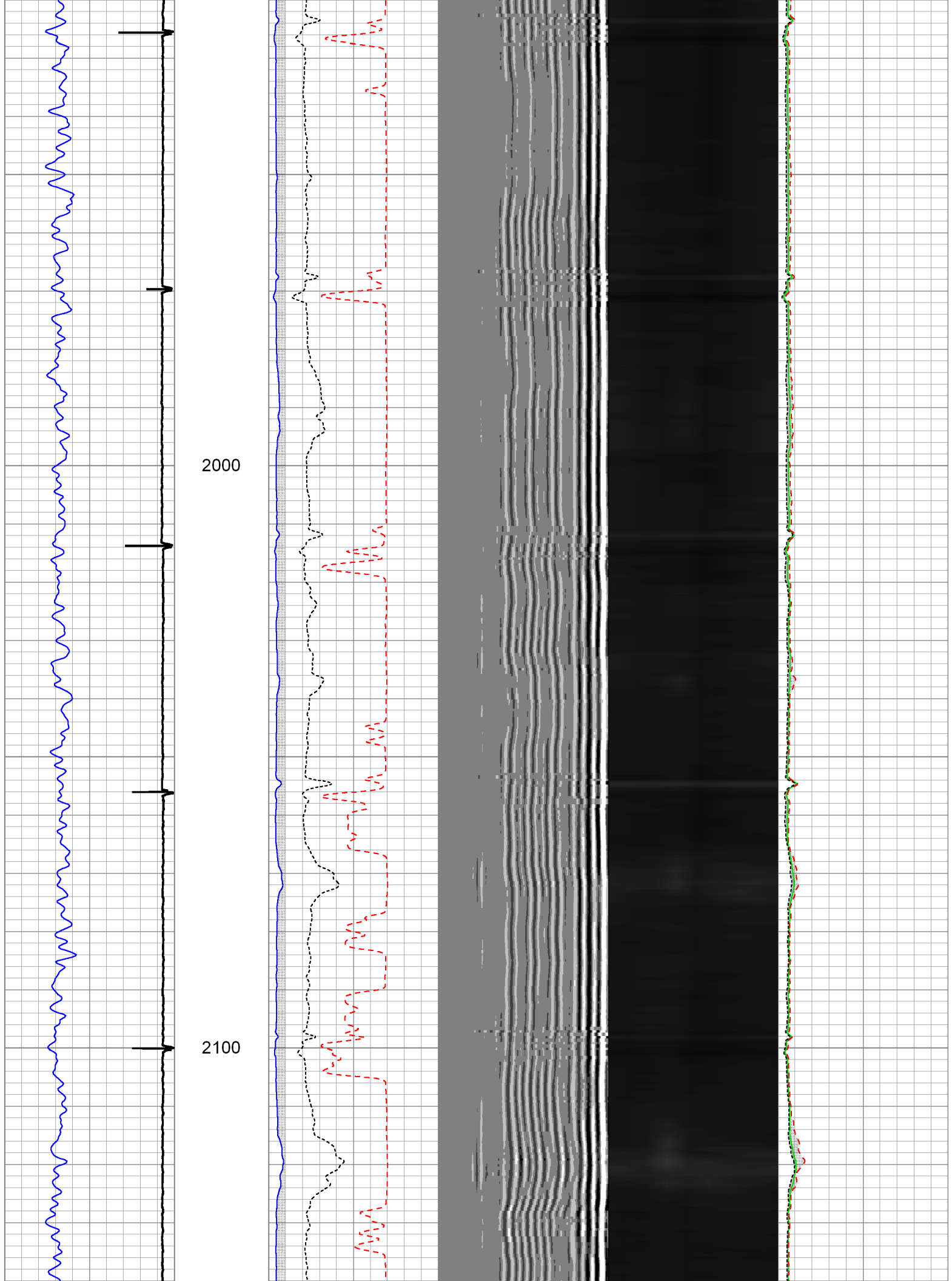
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1800

1900

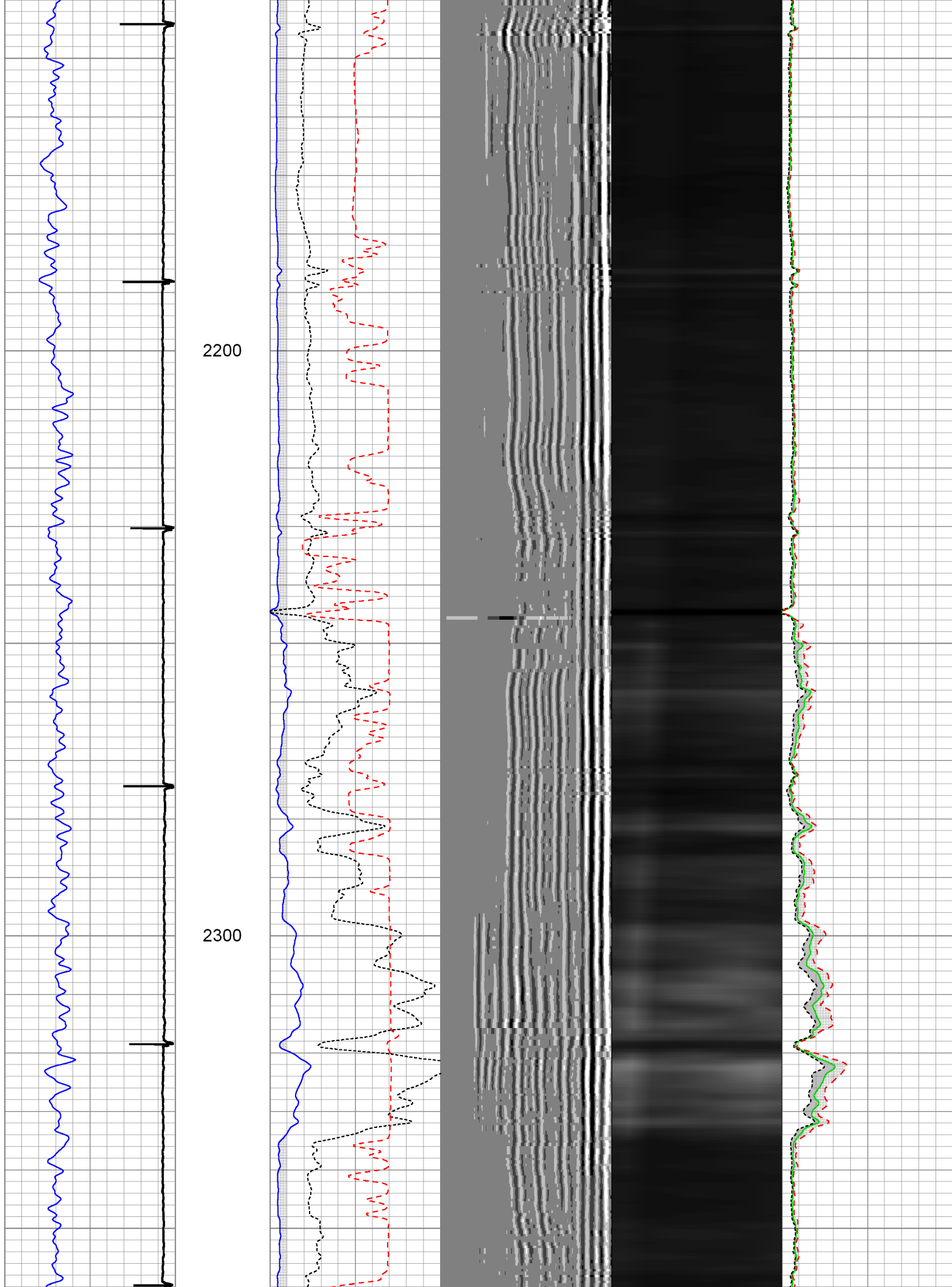


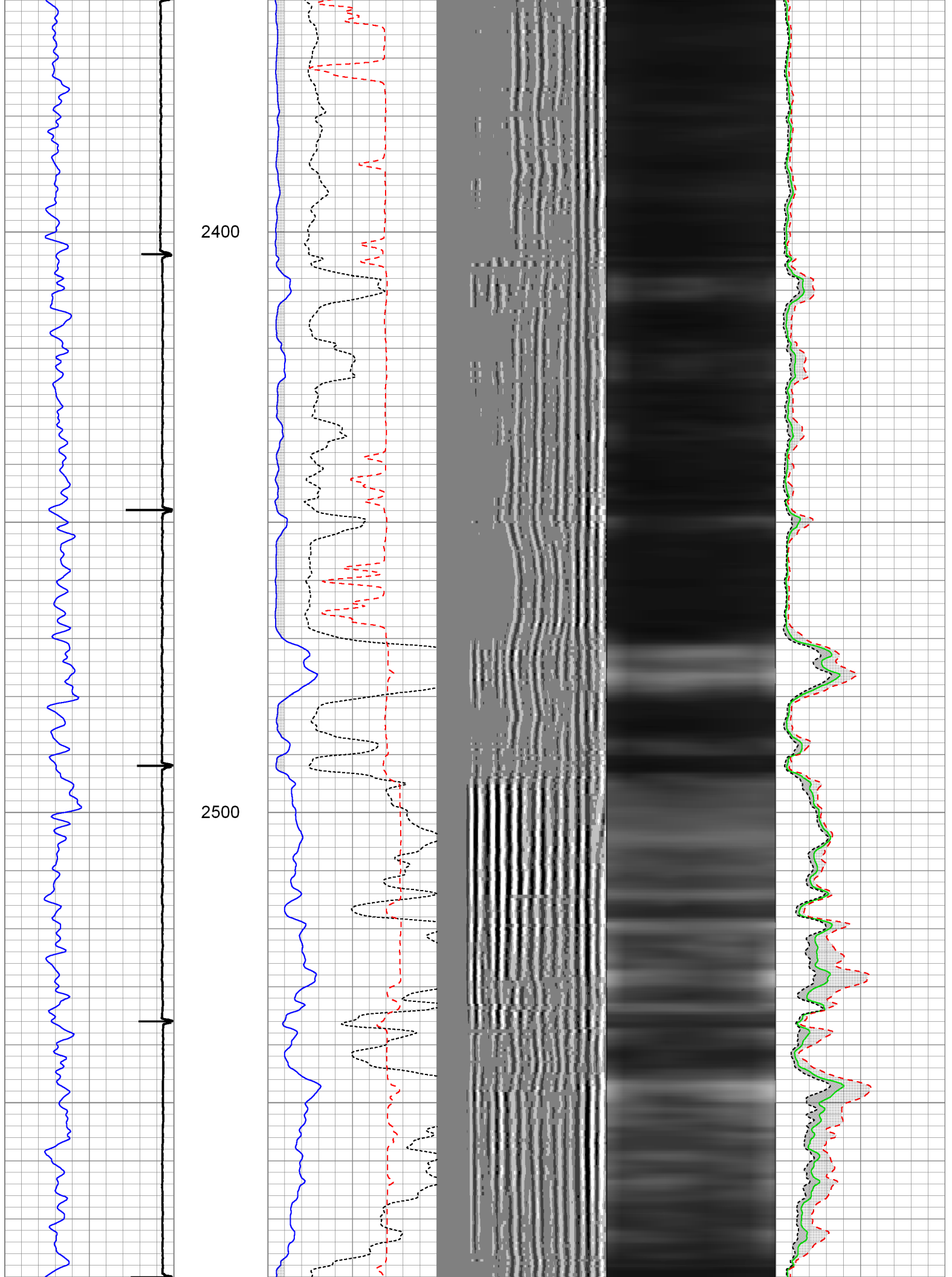




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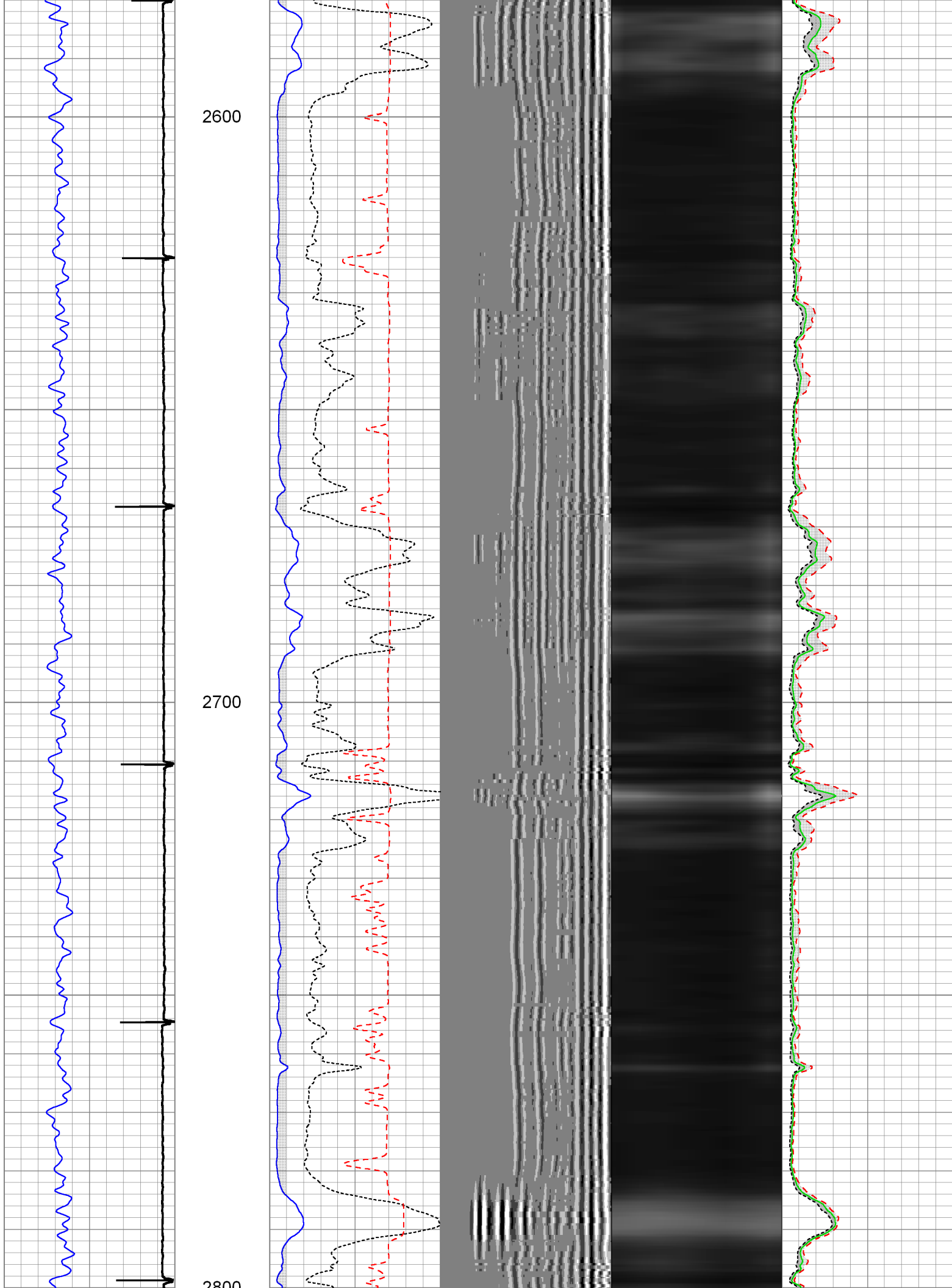




2600

2700

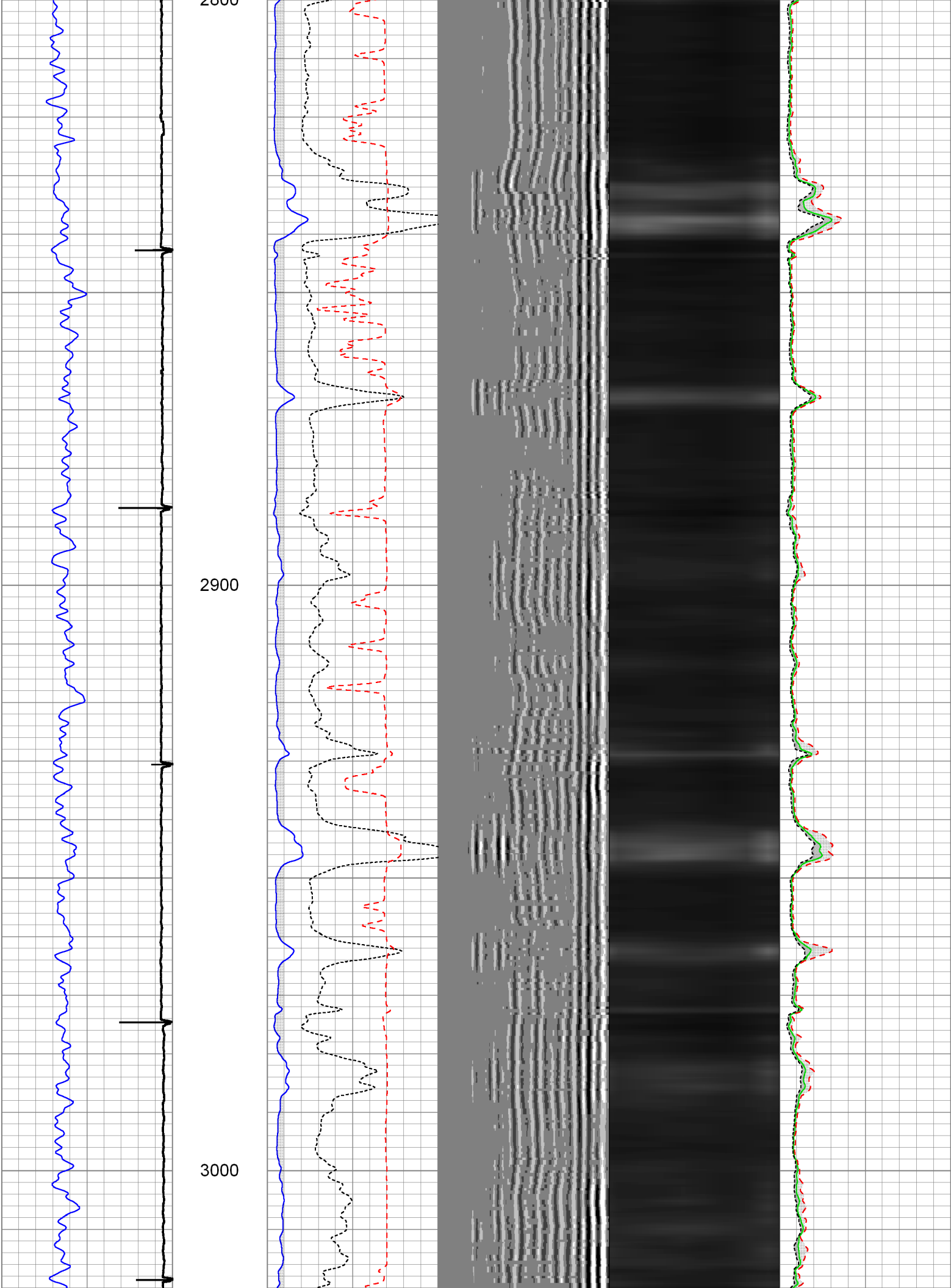
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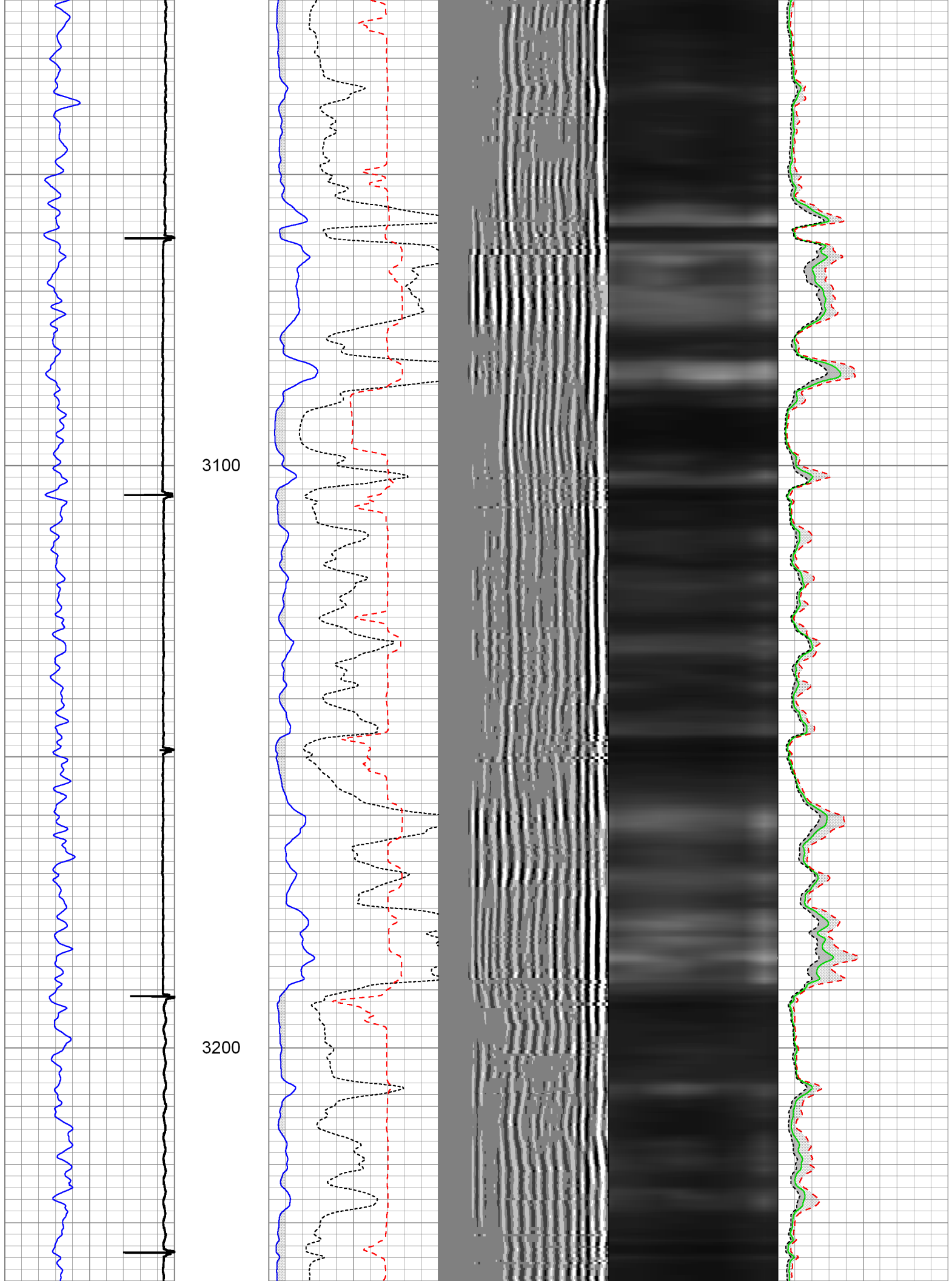


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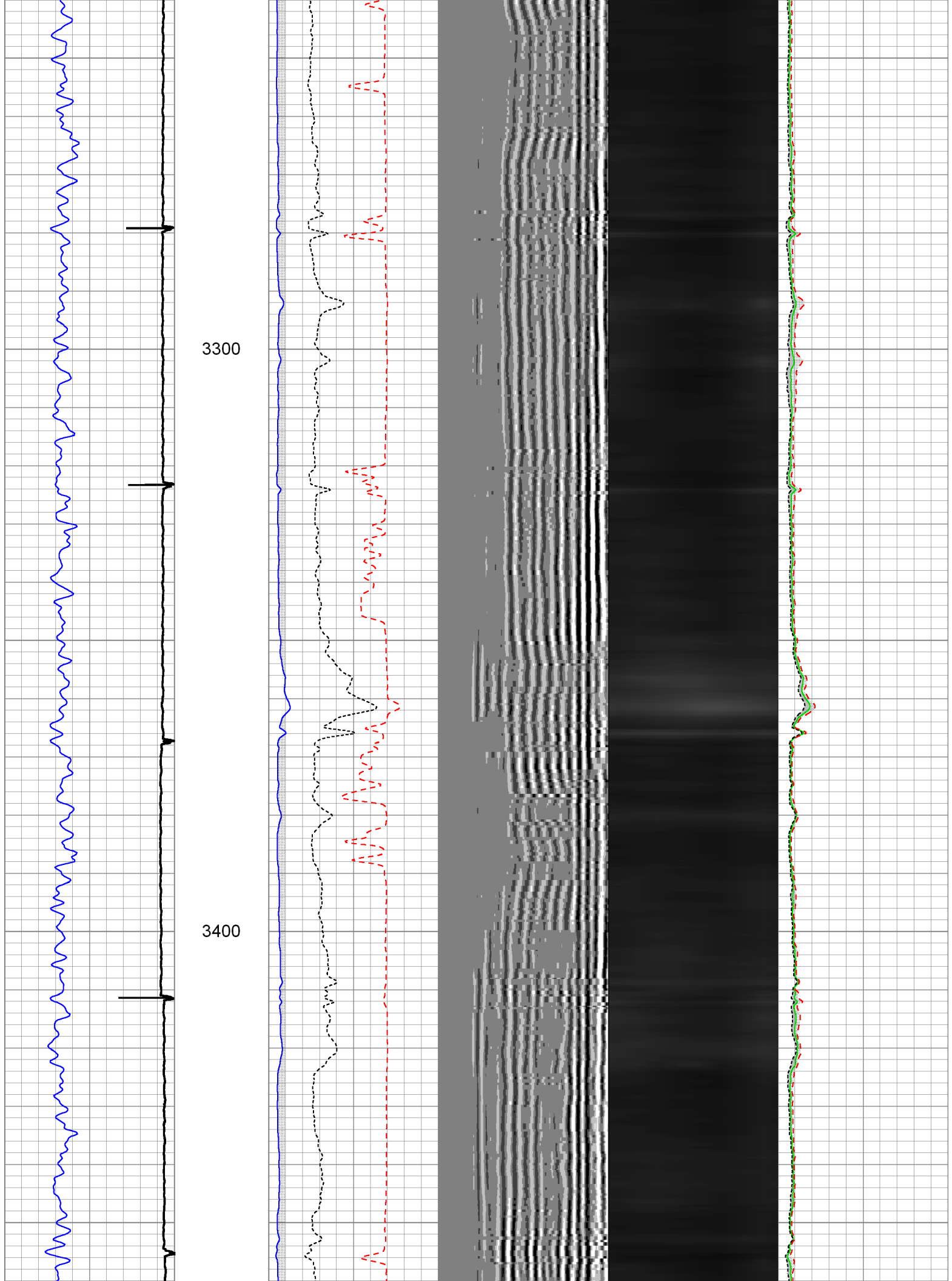
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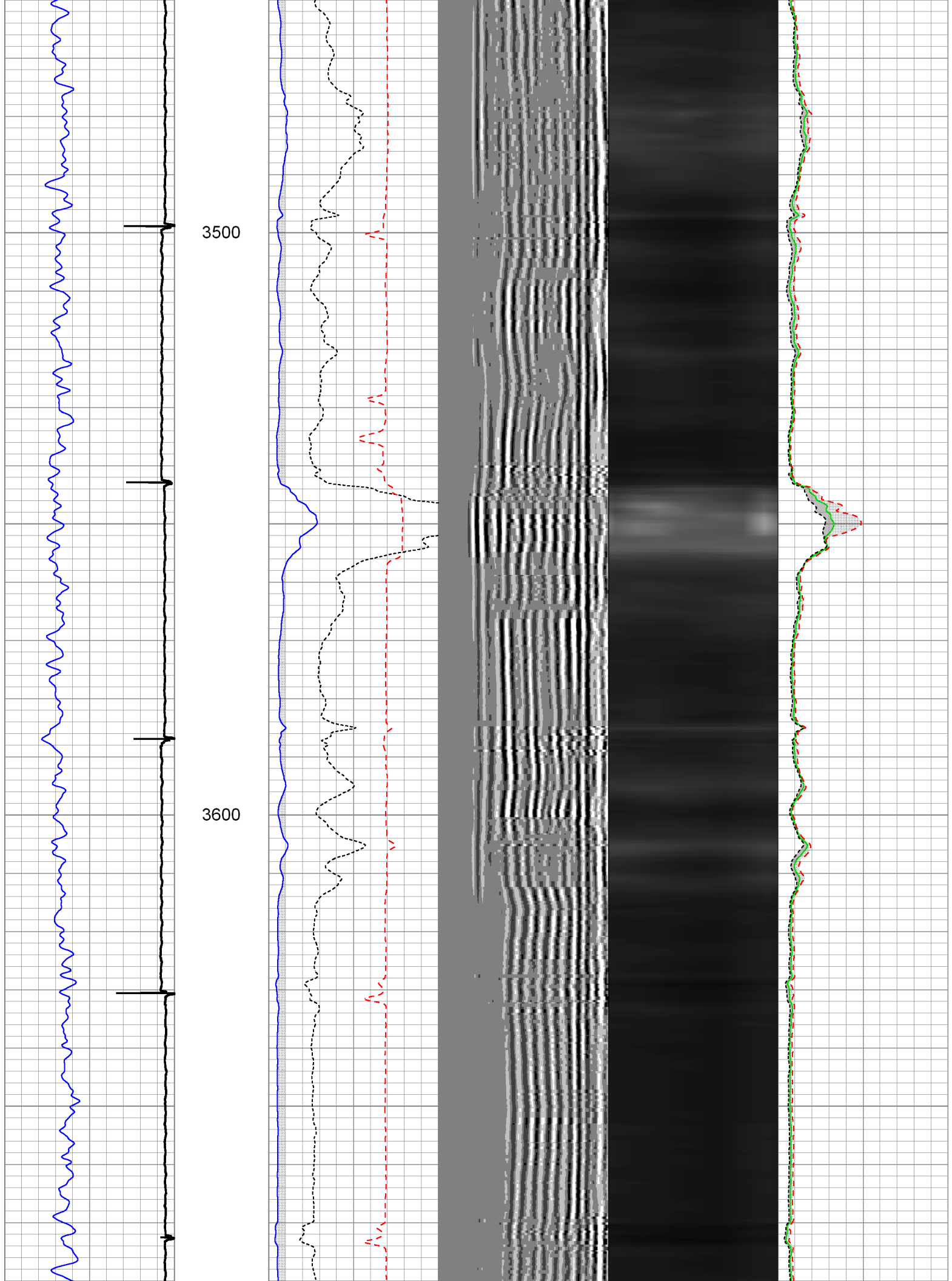
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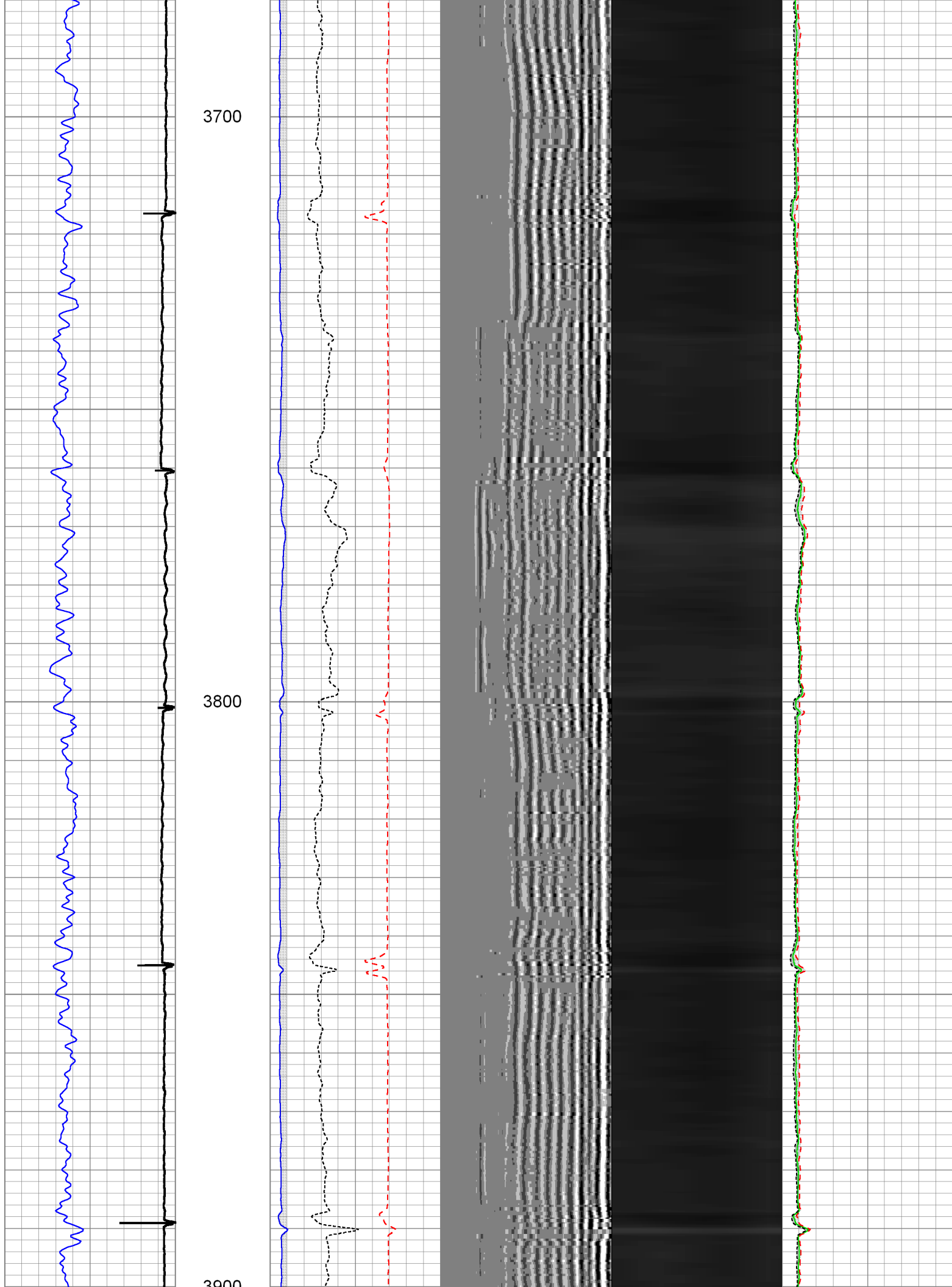




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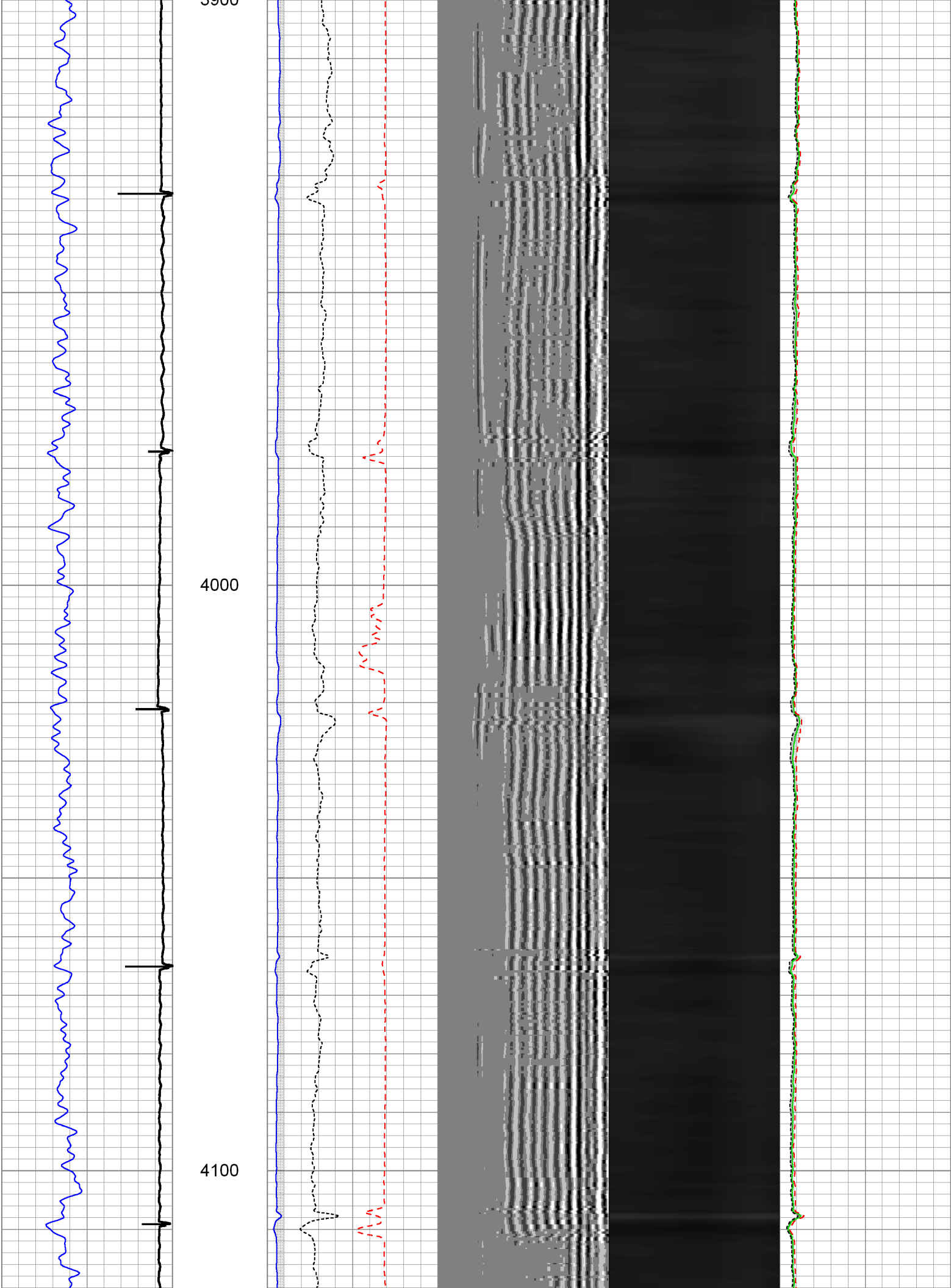
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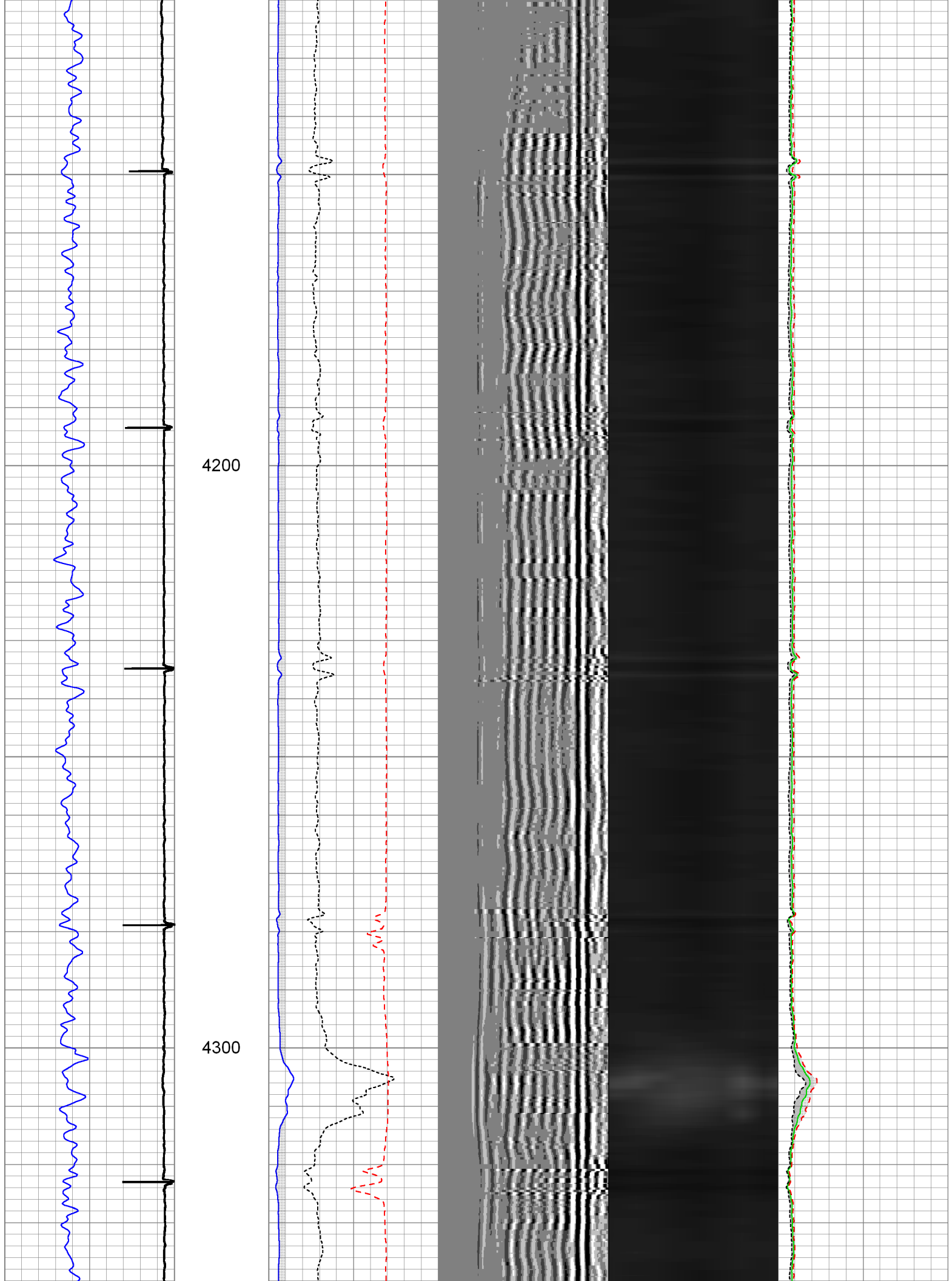


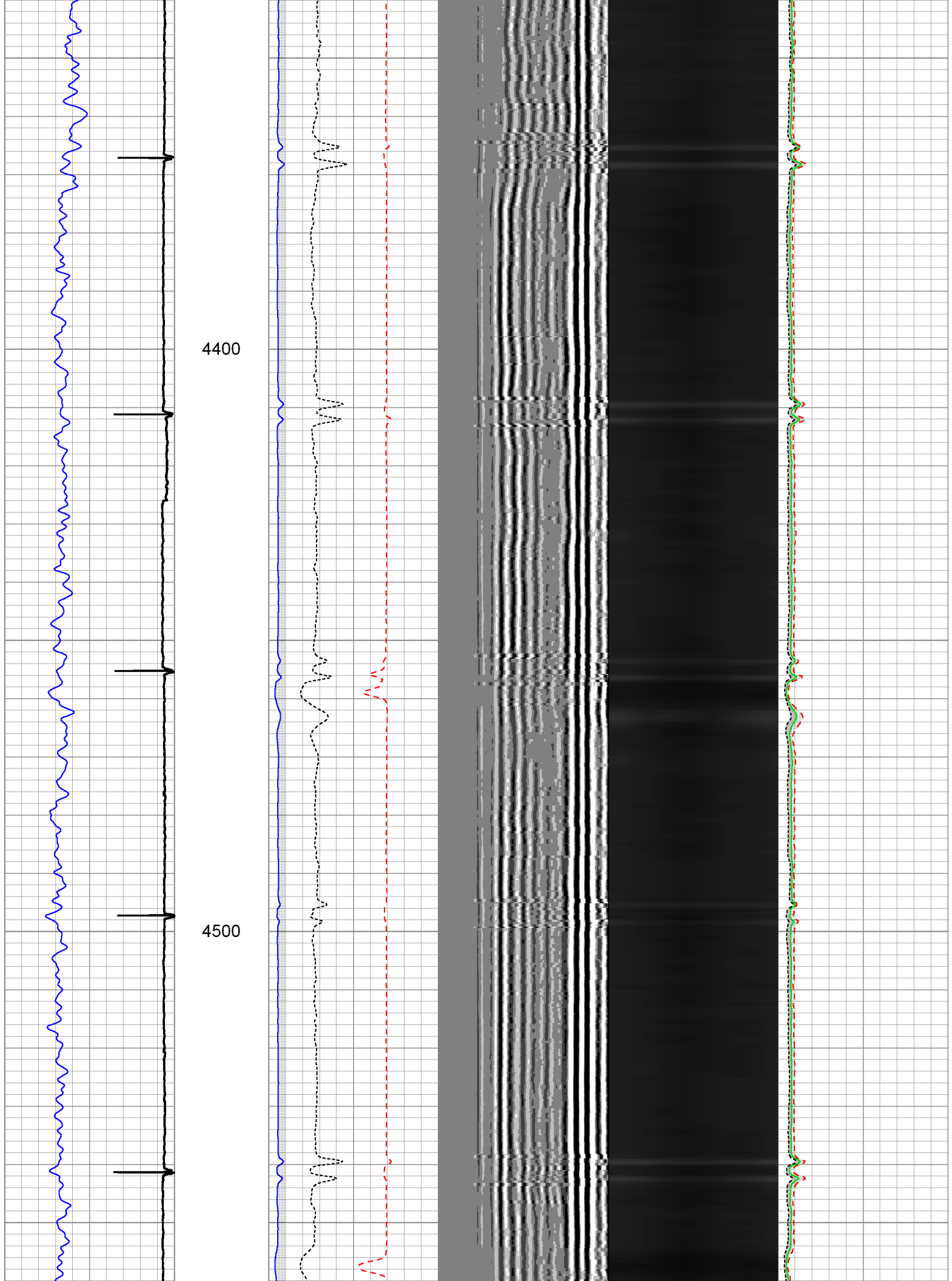
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4000

4100



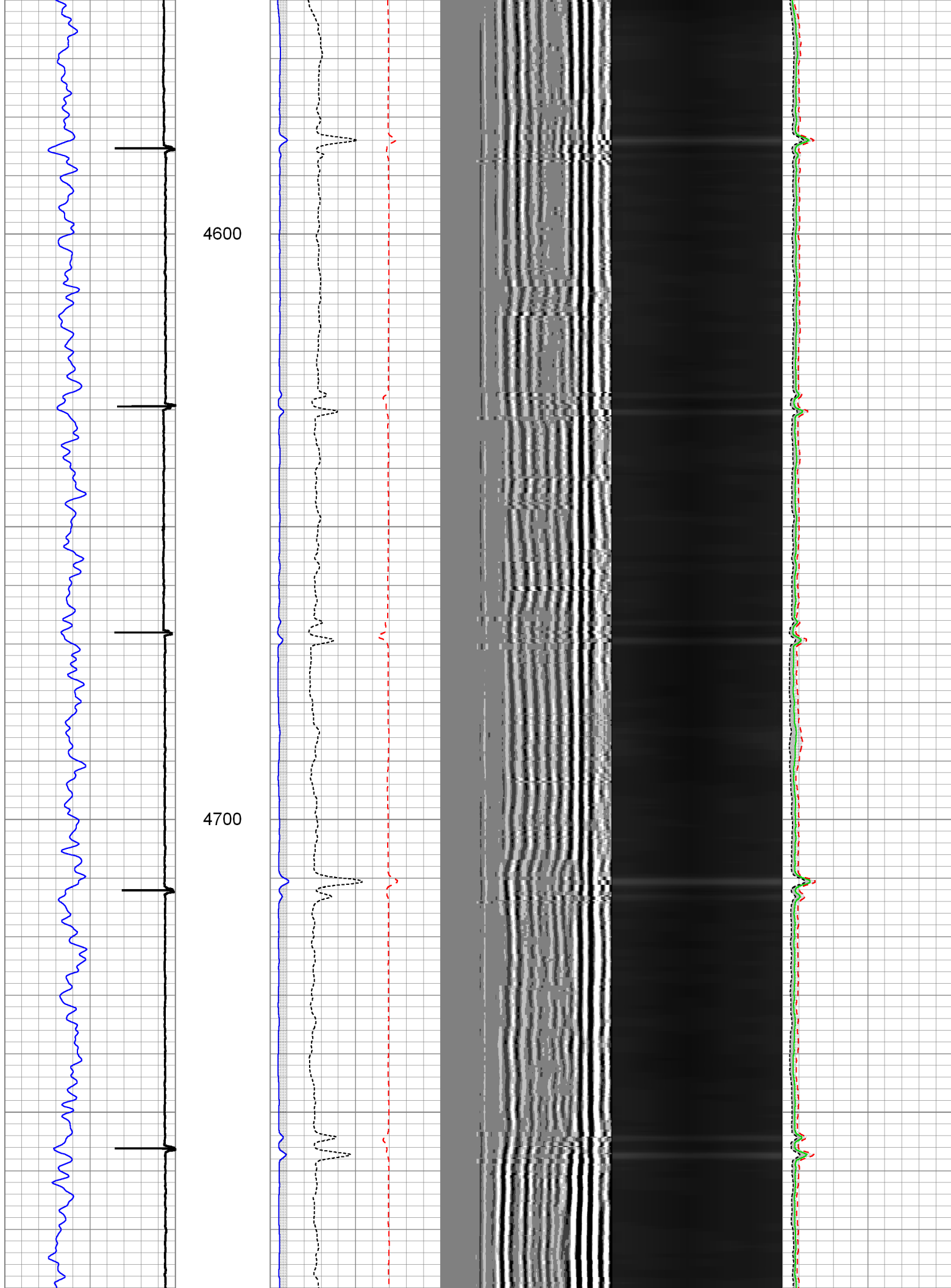


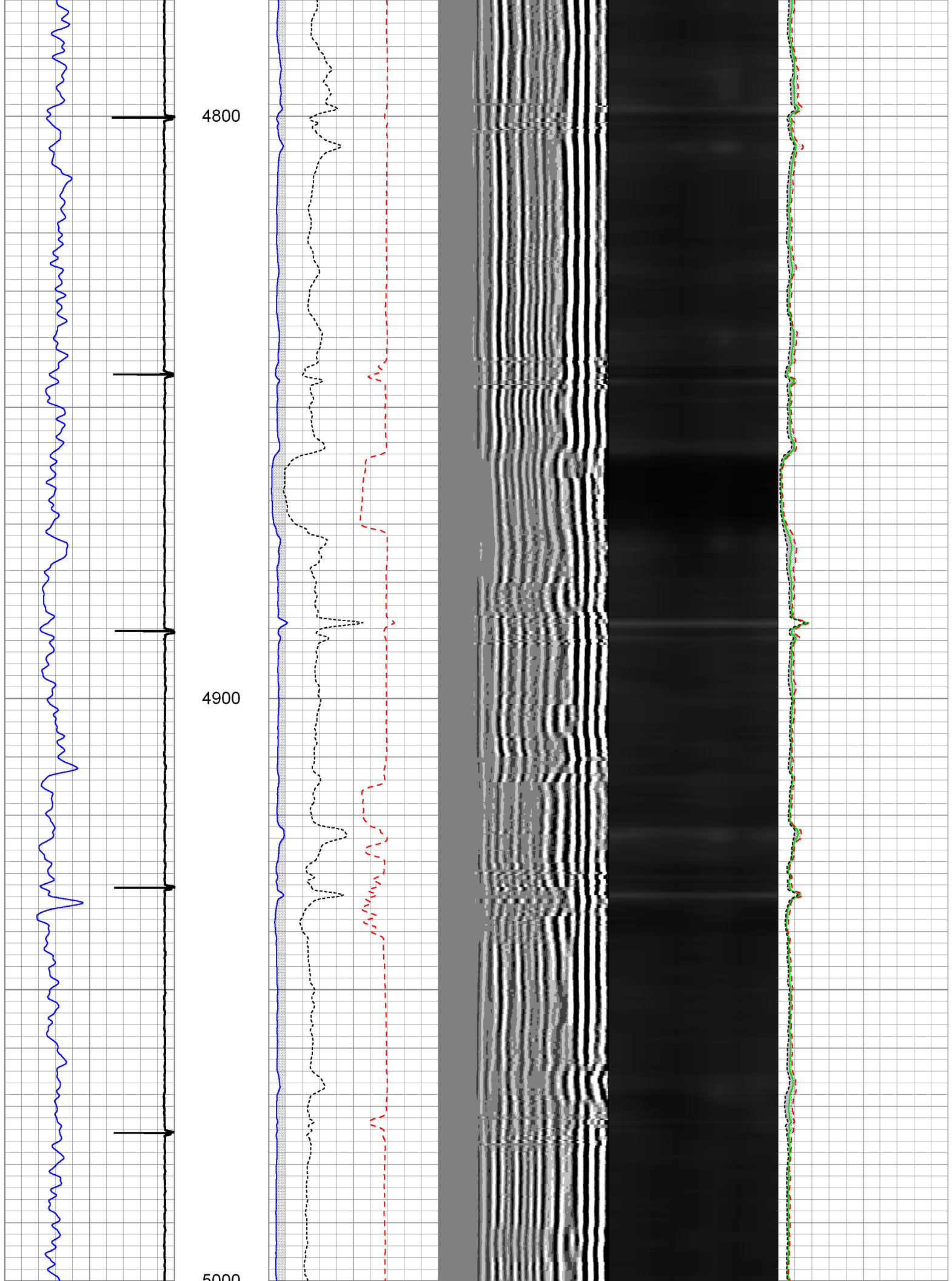




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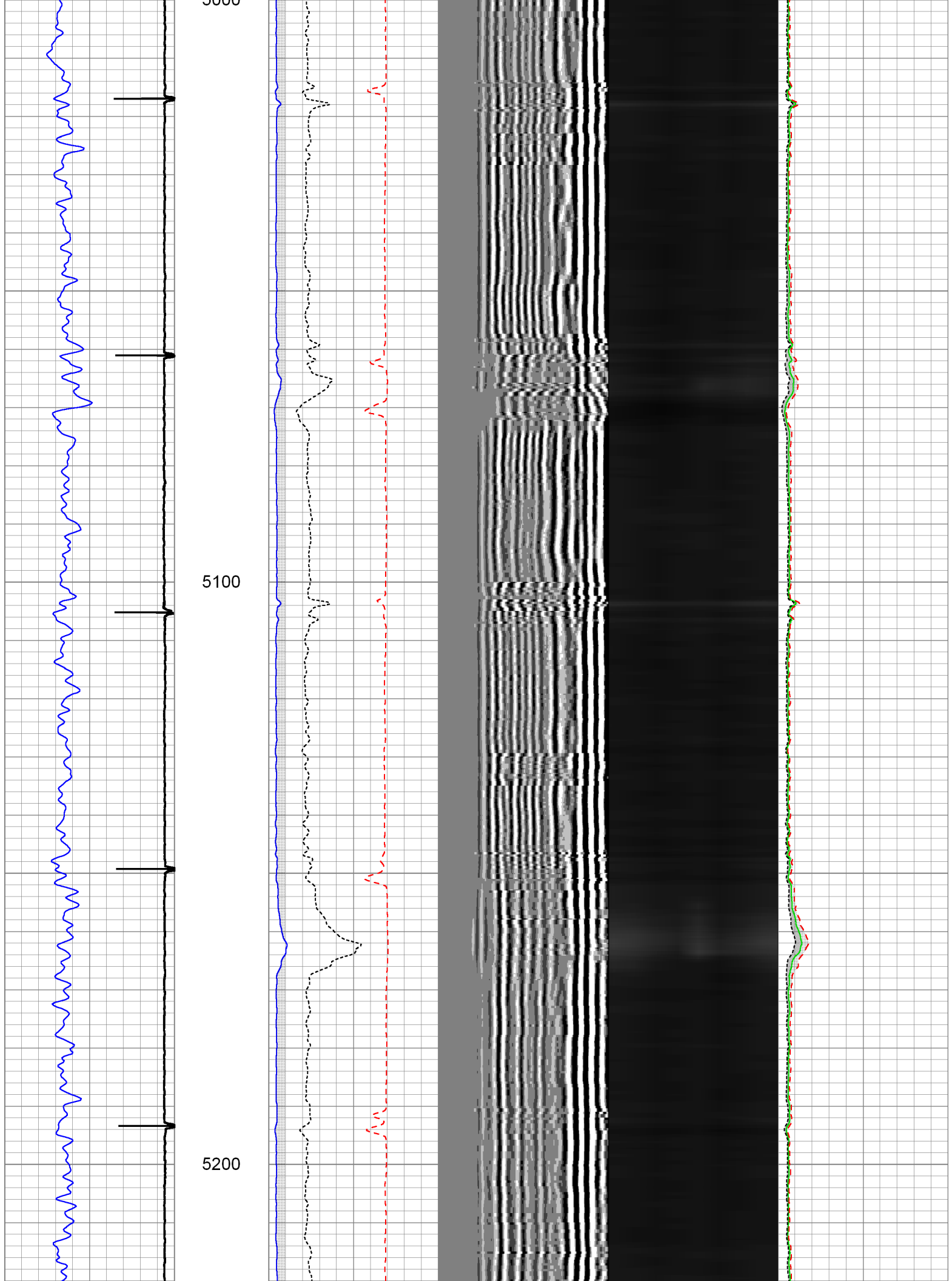




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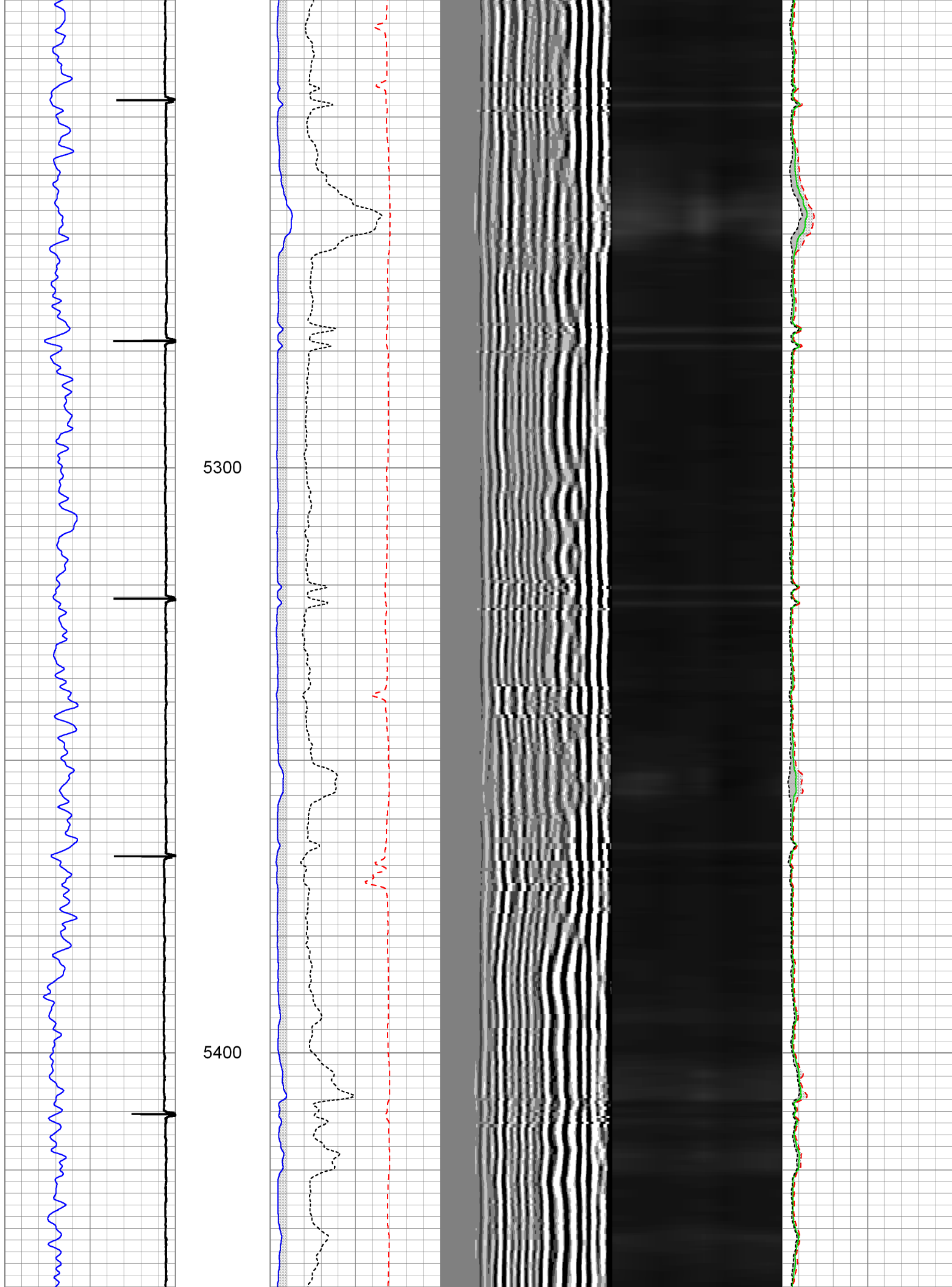
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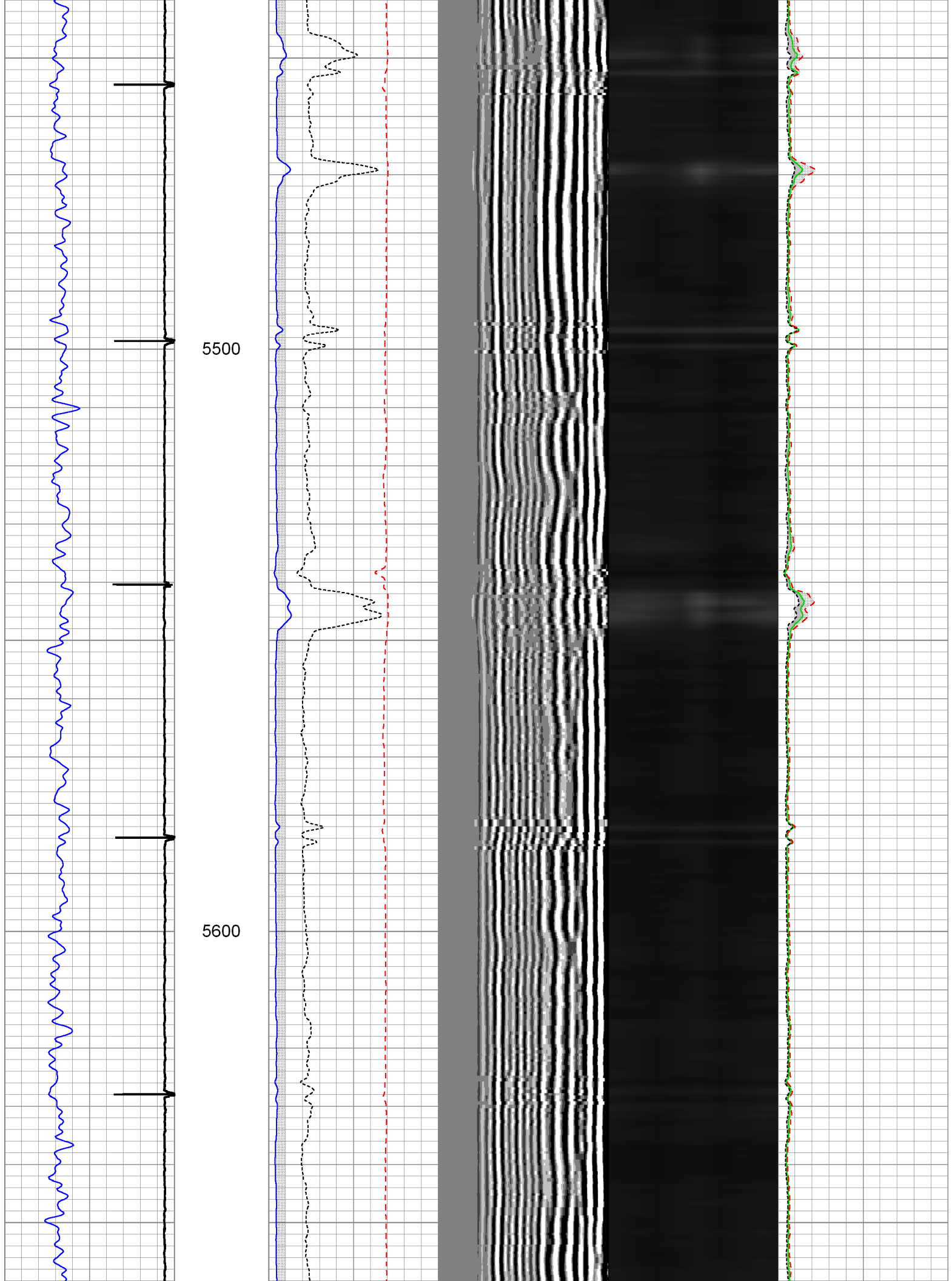
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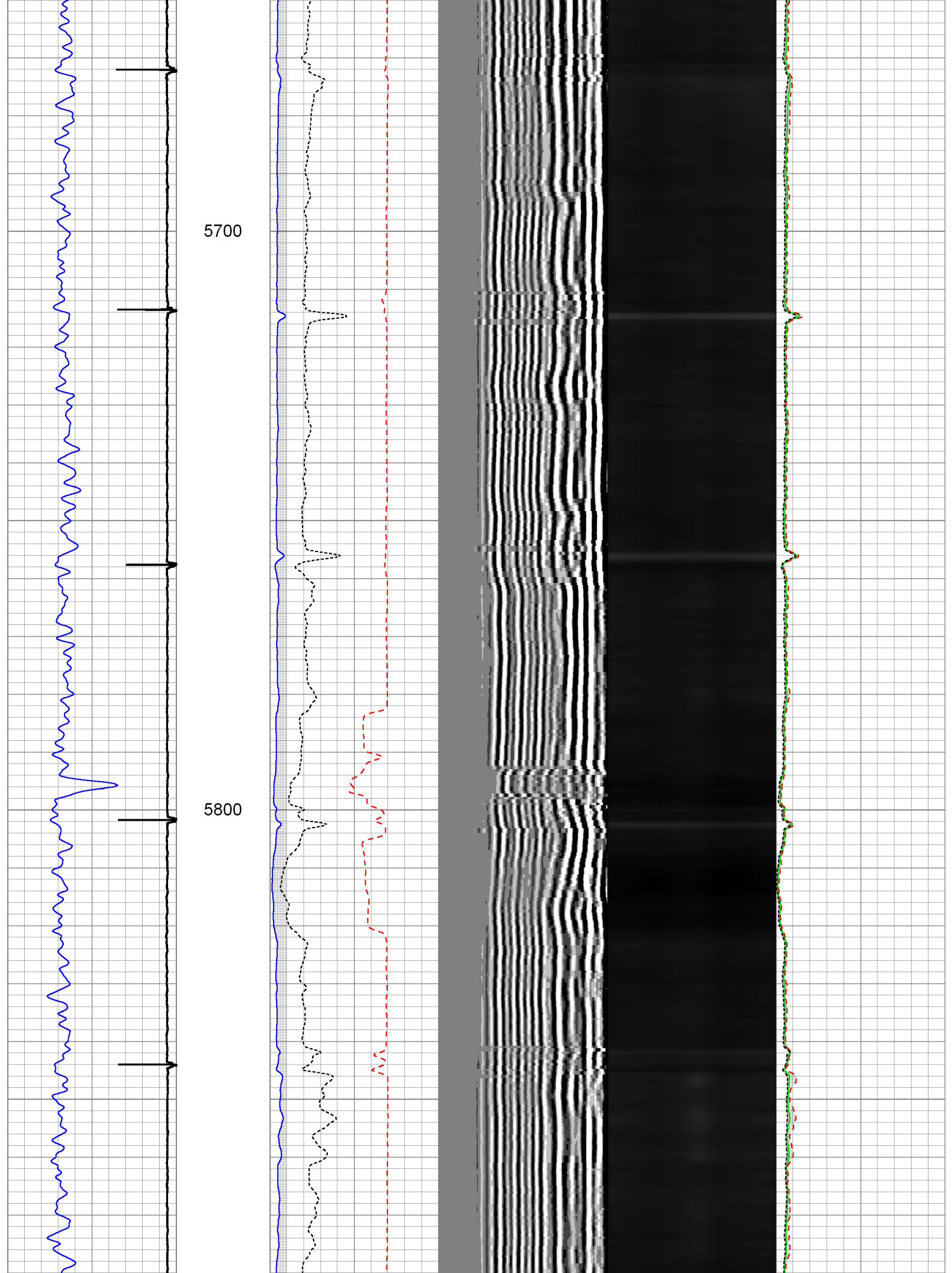


5300

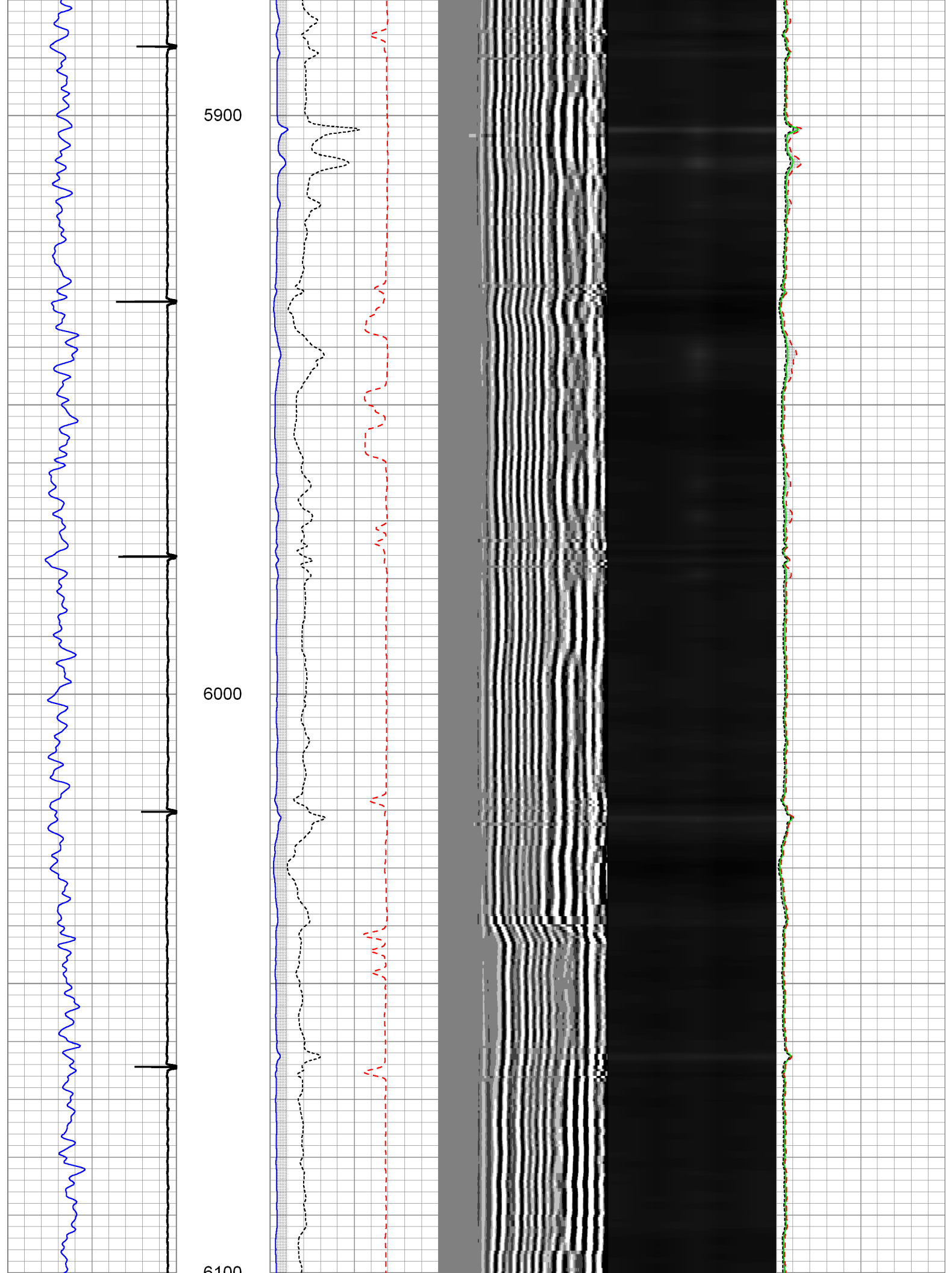
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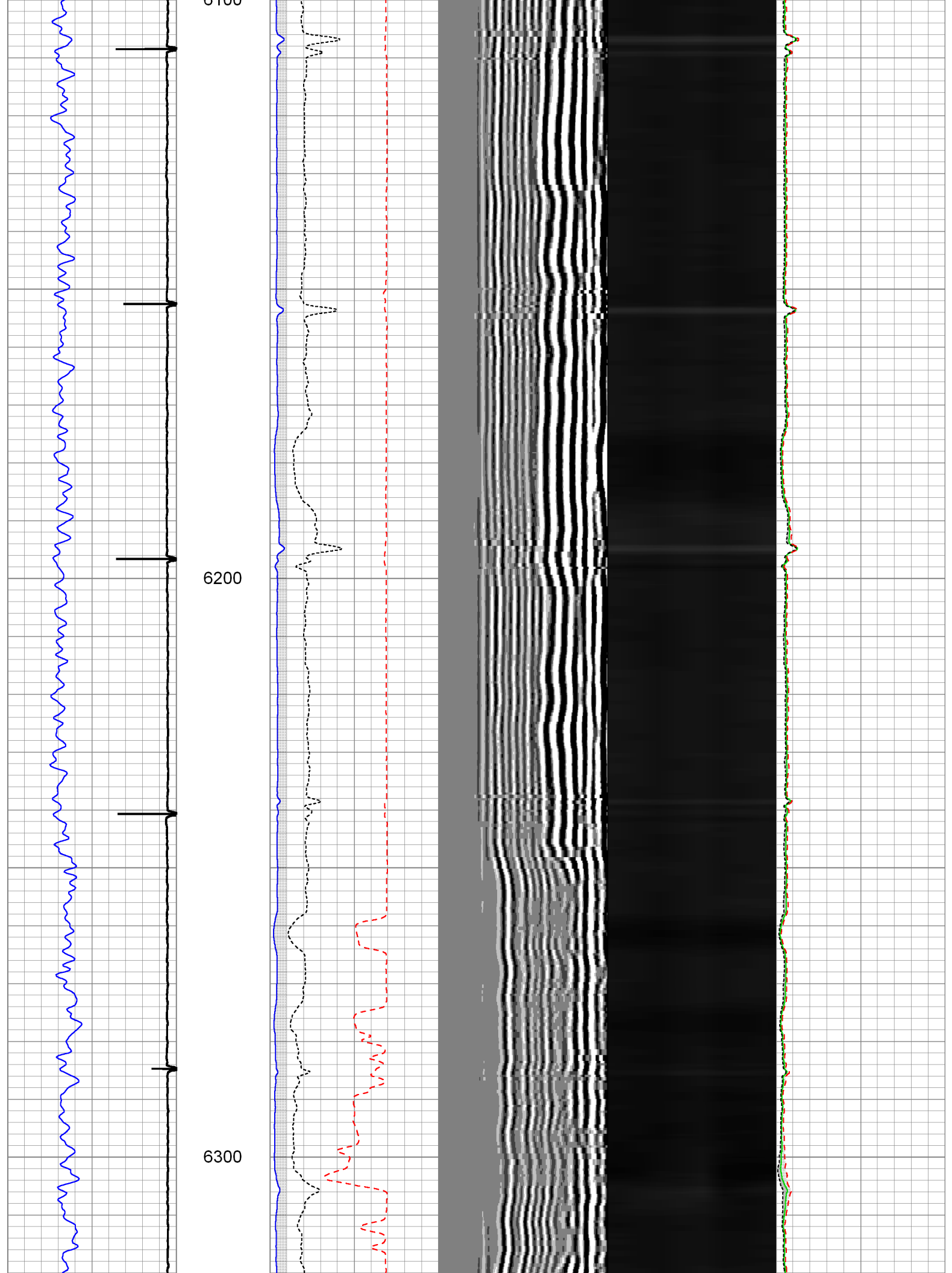


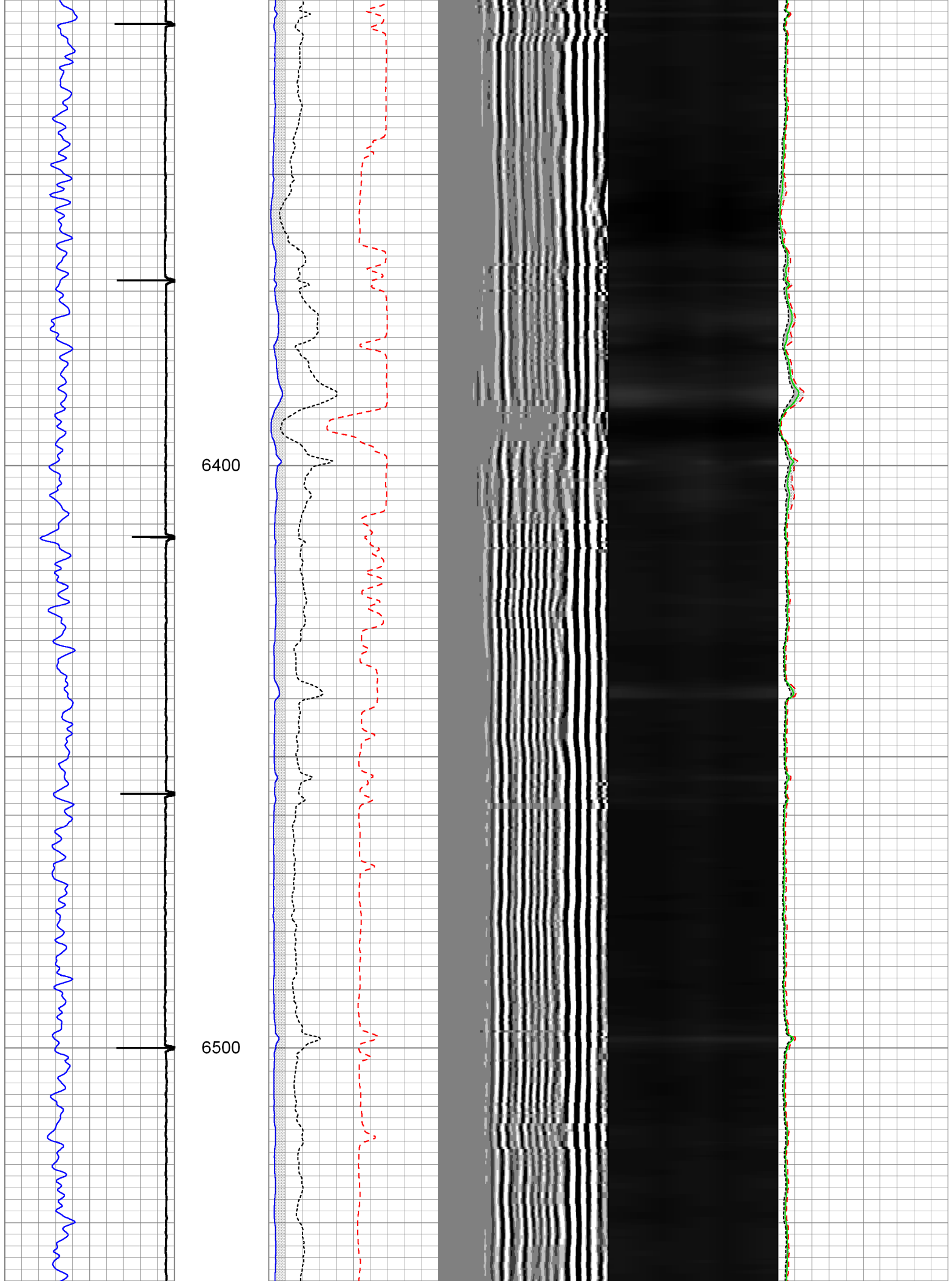






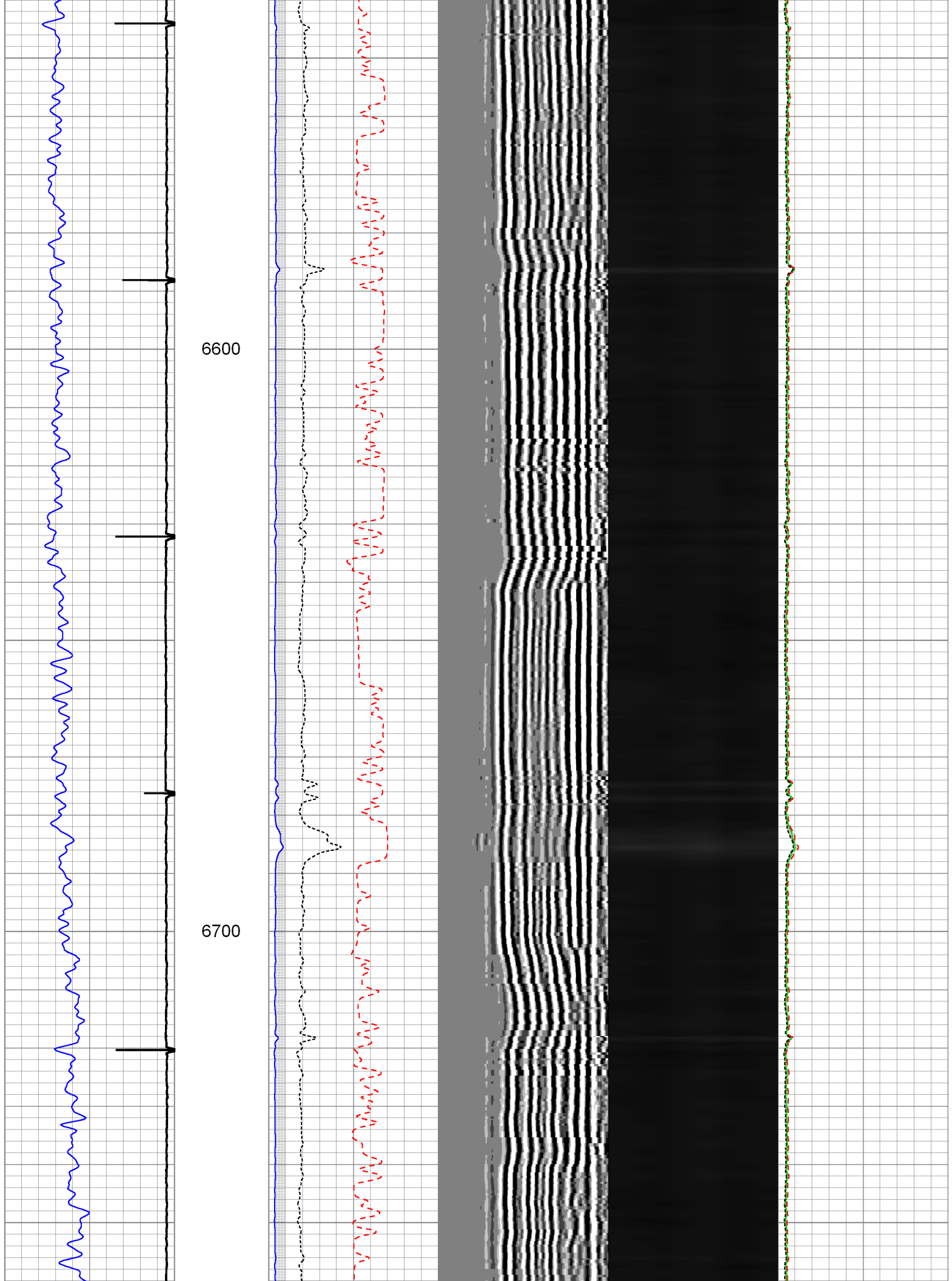


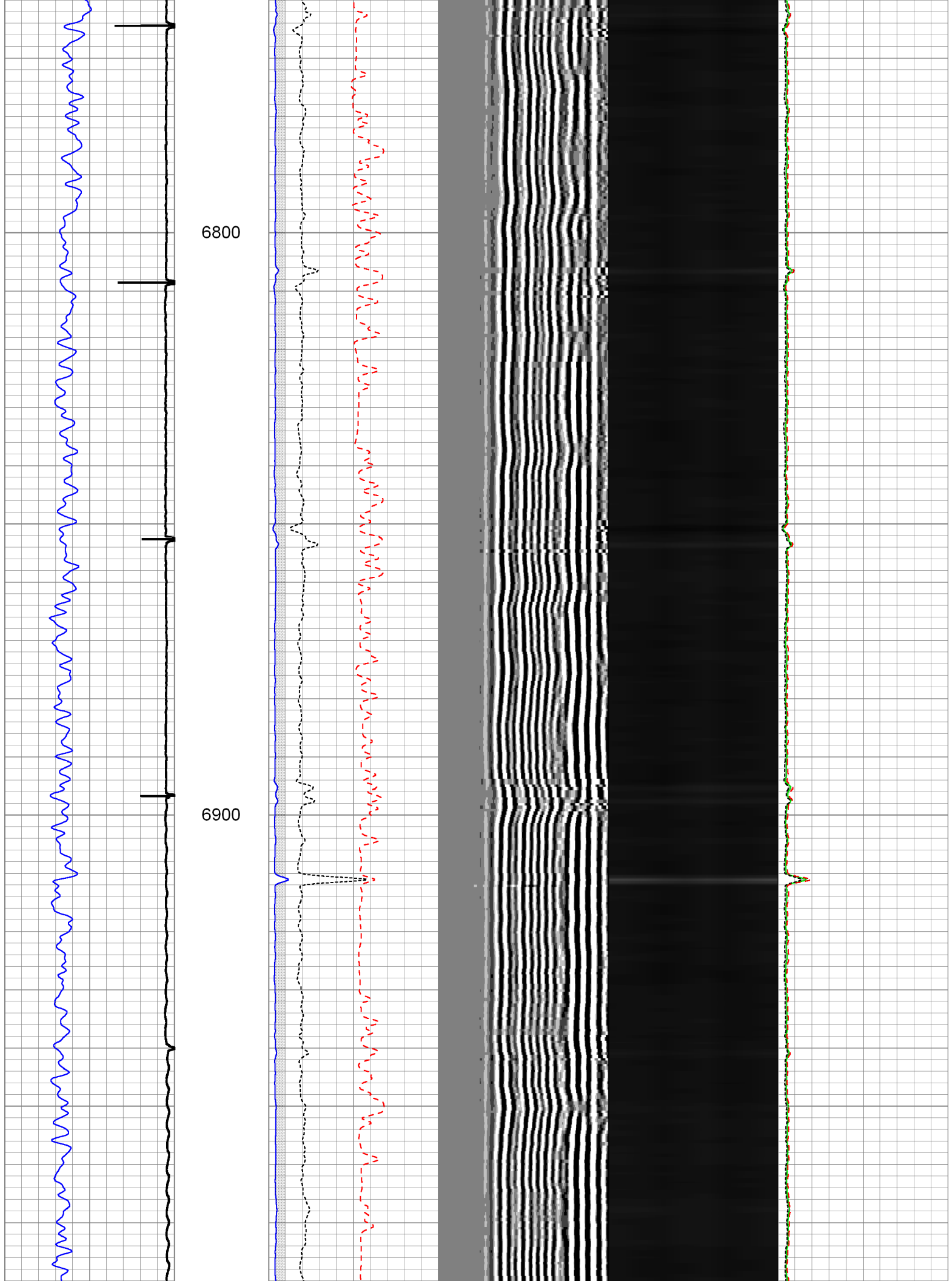


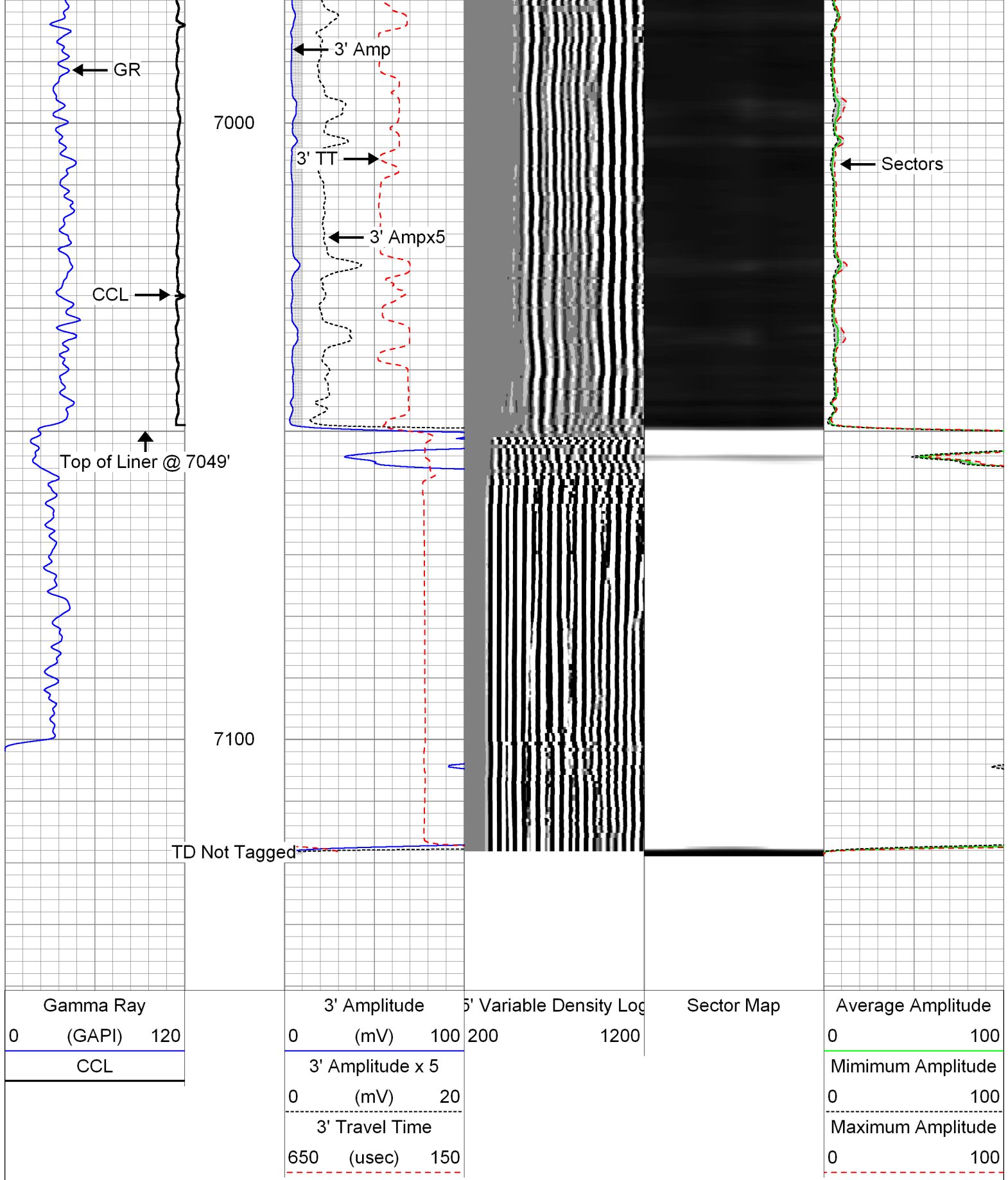


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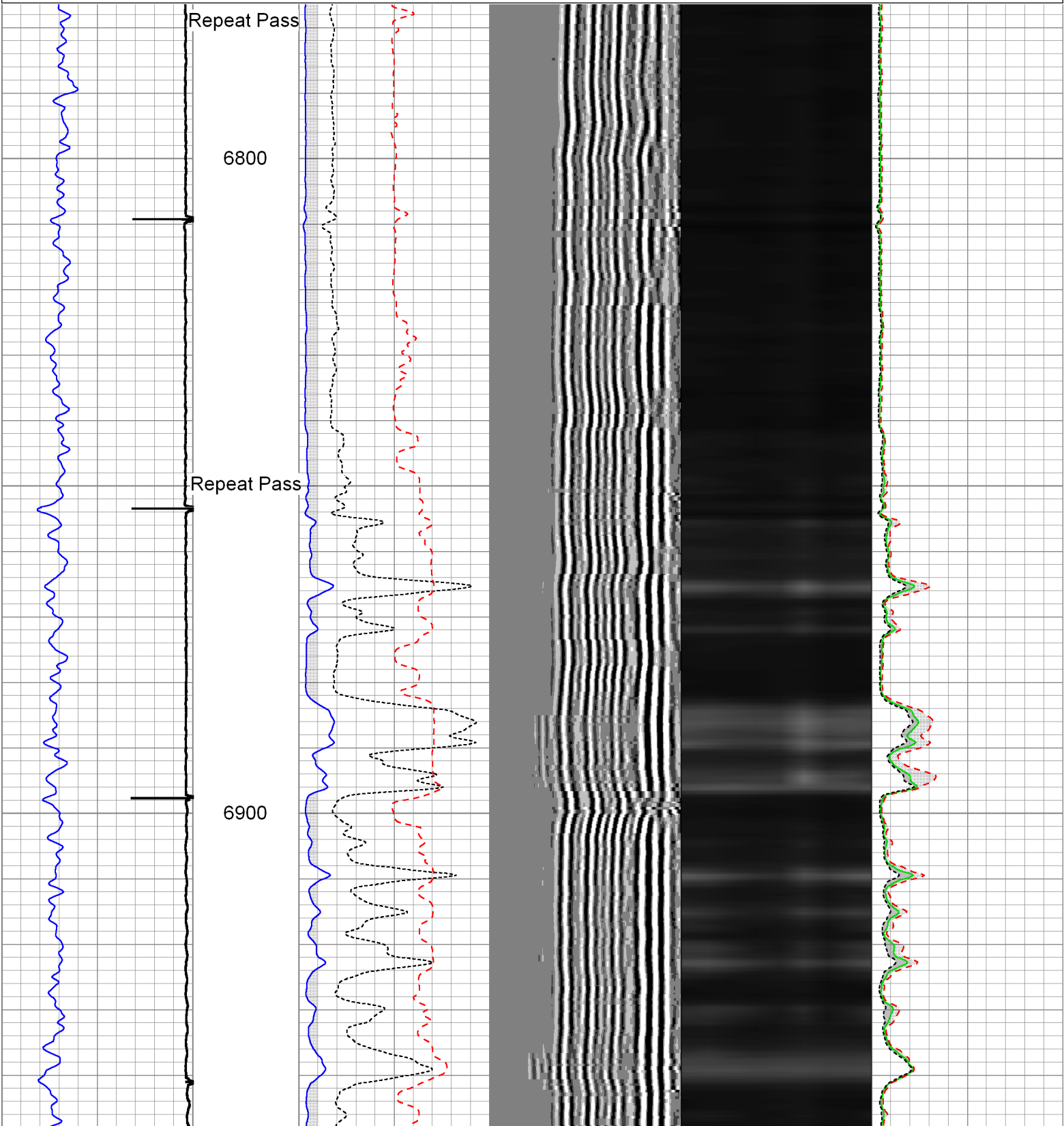
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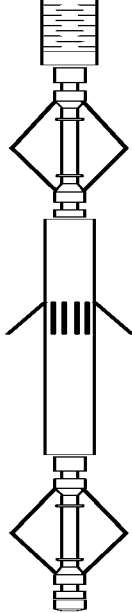


Gamma Ray		3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 150		0 (mV) 100	200 1200		0 100
Collar Locator		3' Amplitude x 5			Minimum Amplitude
		0 (mV) 20			0 100
		3' Travel Time			Maximum Amplitude
		650 (usec) 150			0 100







WVFS6	15.54		PRC-034 (000006) Production Roller Centraliser (4 Arm)	2.91	1.69	13.00
WVFS7	15.54					
WVFS8	15.54					
CBLTEMP	15.54					
CBLROT	15.54					
WVF5FT	14.54					
MIT	5.30		MIT-027 (218949) Multifinger Imaging Tool (UW 40F)	4.54	2.75	61.10
			PRC-057 (000007) Production Roller Centraliser (4 Arm)	2.74	2.75	32.00
TSTAMP	0.00		BUL-006 (000002) Bullnose Terminator	0.22	1.69	1.20
Dataset: 05-123-36566_anadarko_jelts36n-19hz_rcbl_cil_23-aug-2013_w7.db: field/well/run1/mainpass Total Length: 36.11 ft Total Weight: 315.30 lb O.D. 3.13 in						

Calibration Report	
Database File:	05-123-36566_anadarko_jelts36n-19hz_rcbl_cil_23-aug-2013_w7.db
Dataset Pathname:	aftrcal
Dataset Creation:	Fri Aug 23 14:13:44 2013 by Log Sondex V7.03

Multi-finger Imaging Tool Calibration Report	
Serial Number:	218949
Number of Fingers:	40
Tool Model:	027

Inclinometer Calibration Report		
Performed:	Mon, Oct, 06 14:03:04 2008	
Calibration Angle:	45	
	Inc X	Inc Y
Vertical:	1996	1984
Finger 1 up:	1780	1738
Finger 31 up:	2235	1756
Finger 21 up:	2216	2228
Finger 11 up:	1736	2196
Sensitivity ratio:	1.0062	
X-axis angle:	131.534	
Deviation const.:	331.322	

Finger Calibration Report							
Performed:				Fri Aug 23 06:55:34 2013			
Ring size:	4	5	6	7			
(in)							
	Sens	Sens	Sens				
Finger 01:	1513 250.0	1763 273.0	2036 282.0	2318			
Finger 02:	1504 258.0	1762 277.0	2039 284.0	2323			
Finger 03:	1488 258.0	1746 282.0	2028 290.0	2318			
Finger 04:	1469 266.0	1735 287.0	2022 292.0	2314			
Finger 05:	1486 265.0	1751 287.0	2038 295.0	2333			
Finger 06:	1468 265.0	1733 284.0	2017 290.0	2307			
Finger 07:	1516 254.0	1770 271.0	2041 276.0	2317			
Finger 08:	1486 270.0	1756 287.0	2043 292.0	2335			
Finger 09:	1531 257.0	1788 270.0	2058 274.0	2332			
Finger 10:	1500 260.0	1770 270.0	2054 270.0	2320			

Finger 10:	1509	269.0	1778	276.0	2054	276.0	2330
Finger 11:	1500	273.0	1773	277.0	2050	281.0	2331
Finger 12:	1491	269.0	1760	274.0	2034	278.0	2312
Finger 13:	1528	263.0	1791	263.0	2054	267.0	2321
Finger 14:	1458	284.0	1742	282.0	2024	290.0	2314
Finger 15:	1492	287.0	1779	281.0	2060	285.0	2345
Finger 16:	1462	294.0	1756	287.0	2043	294.0	2337
Finger 17:	1506	276.0	1782	266.0	2048	270.0	2318
Finger 18:	1501	285.0	1786	275.0	2061	283.0	2344
Finger 19:	1485	292.0	1777	278.0	2055	288.0	2343
Finger 20:	1516	286.0	1802	268.0	2070	274.0	2344
Finger 21:	1478	302.0	1780	284.0	2064	298.0	2362
Finger 22:	1477	289.0	1766	274.0	2040	288.0	2328
Finger 23:	1542	268.0	1810	254.0	2064	266.0	2330
Finger 24:	1476	300.0	1776	285.0	2061	302.0	2363
Finger 25:	1497	283.0	1780	273.0	2053	291.0	2344
Finger 26:	1441	300.0	1741	289.0	2030	311.0	2341
Finger 27:	1521	282.0	1803	273.0	2076	289.0	2365
Finger 28:	1509	268.0	1777	264.0	2041	283.0	2324
Finger 29:	1499	284.0	1783	280.0	2063	295.0	2358
Finger 30:	1240	291.0	1531	300.0	1831	327.0	2158
Finger 31:	1457	257.0	1714	261.0	1975	280.0	2255
Finger 32:	1477	286.0	1763	295.0	2058	311.0	2369
Finger 33:	1399	295.0	1694	314.0	2008	337.0	2345
Finger 34:	1544	255.0	1799	257.0	2056	270.0	2326
Finger 35:	1513	262.0	1775	276.0	2051	291.0	2342
Finger 36:	1514	264.0	1778	284.0	2062	297.0	2359
Finger 37:	1628	273.0	1901	291.0	2192	304.0	2496
Finger 38:	1378	246.0	1624	268.0	1892	287.0	2179
Finger 39:	1474	264.0	1738	287.0	2025	302.0	2327
Finger 40:	1518	251.0	1769	275.0	2044	283.0	2327

Post Survey Calibration Check								
Performed: Fri Aug 23 14:12:47 2013								
Ring size: (in)	4	Nom. wear	5	Nom. wear	6	Nom. wear	7	Nom. wear
Finger 01:	3.912	-0.044	4.894	-0.053	5.904	-0.048	6.906	-0.047
Finger 02:	3.905	-0.047	4.889	-0.056	5.901	-0.049	6.895	-0.053
Finger 03:	3.902	-0.049	4.886	-0.057	5.905	-0.048	6.912	-0.044
Finger 04:	3.901	-0.049	4.890	-0.055	5.909	-0.045	6.920	-0.040
Finger 05:	3.911	-0.044	4.896	-0.052	5.907	-0.046	6.904	-0.048
Finger 06:	3.914	-0.043	4.896	-0.052	5.909	-0.045	6.905	-0.048
Finger 07:	3.893	-0.054	4.891	-0.054	5.909	-0.045	6.907	-0.047
Finger 08:	3.901	-0.049	4.896	-0.052	5.907	-0.046	6.906	-0.047
Finger 09:	3.897	-0.051	4.903	-0.048	5.913	-0.043	6.924	-0.038
Finger 10:	3.902	-0.049	4.898	-0.051	5.918	-0.041	6.922	-0.039
Finger 11:	3.899	-0.050	4.901	-0.049	5.911	-0.045	6.916	-0.042
Finger 12:	3.885	-0.057	4.898	-0.051	5.913	-0.044	6.915	-0.043
Finger 13:	3.904	-0.048	4.902	-0.049	5.913	-0.043	6.915	-0.042
Finger 14:	3.890	-0.055	4.897	-0.052	5.914	-0.043	6.910	-0.045
Finger 15:	3.894	-0.053	4.893	-0.053	5.904	-0.048	6.901	-0.050
Finger 16:	3.900	-0.050	4.896	-0.052	5.908	-0.046	6.902	-0.049
Finger 17:	3.901	-0.050	4.894	-0.053	5.908	-0.046	6.905	-0.047
Finger 18:	3.894	-0.053	4.890	-0.055	5.900	-0.050	6.904	-0.048
Finger 19:	3.897	-0.052	4.890	-0.055	5.902	-0.049	6.899	-0.050
Finger 20:	3.903	-0.049	4.884	-0.058	5.904	-0.048	6.912	-0.044
Finger 21:	3.904	-0.048	4.891	-0.054	5.906	-0.047	6.905	-0.047
Finger 22:	3.906	-0.047	4.887	-0.056	5.904	-0.048	6.906	-0.047
Finger 23:	3.899	-0.050	4.893	-0.053	5.902	-0.049	6.904	-0.048
Finger 24:	3.914	-0.043	4.892	-0.054	5.909	-0.045	6.907	-0.047
Finger 25:	3.907	-0.046	4.893	-0.054	5.910	-0.045	6.909	-0.045
Finger 26:	3.906	-0.047	4.894	-0.053	5.914	-0.043	6.913	-0.043
Finger 27:	3.905	-0.048	4.894	-0.053	5.912	-0.044	6.918	-0.041
Finger 28:	3.890	-0.055	4.892	-0.054	5.907	-0.047	6.908	-0.046
Finger 29:	3.904	-0.048	4.901	-0.050	5.911	-0.045	6.917	-0.041
Finger 30:	3.912	-0.045	4.904	-0.052	5.912	-0.044	6.914	-0.045

Finger 30:	3.910	-0.045	4.901	-0.050	5.912	-0.044	6.911	-0.045
Finger 31:	3.889	-0.056	4.902	-0.049	5.913	-0.043	6.914	-0.043
Finger 32:	3.894	-0.053	4.905	-0.048	5.914	-0.043	6.919	-0.041
Finger 33:	3.897	-0.051	4.901	-0.049	5.911	-0.045	6.910	-0.045
Finger 34:	3.891	-0.055	4.890	-0.055	5.909	-0.046	6.905	-0.047
Finger 35:	3.896	-0.052	4.895	-0.053	5.909	-0.046	6.912	-0.044
Finger 36:	3.893	-0.054	4.895	-0.052	5.908	-0.046	6.905	-0.048
Finger 37:	3.894	-0.053	4.890	-0.055	5.904	-0.048	6.906	-0.047
Finger 38:	3.900	-0.050	4.894	-0.053	5.905	-0.048	6.909	-0.046
Finger 39:	3.898	-0.051	4.889	-0.056	5.905	-0.047	6.901	-0.049
Finger 40:	3.904	-0.048	4.888	-0.056	5.907	-0.047	6.904	-0.048
Average:	3.900	-0.050	4.894	-0.053	5.908	-0.046	6.909	-0.045

### Segmented Cement Bond Log Calibration Report

Serial Number:	2639
Tool Model:	004
Calibration Casing Diameter:	7.000 in
Calibration Depth:	4599.603 ft

Master Calibration, performed Thu Aug 22 08:44:36 2013:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	0.006	0.706	0.800	62.165	87.623	0.262
5FT	0.001	0.756	0.800	62.165	81.256	0.701
S1	0.010	0.726	0.000	100.000	139.527	-1.349
S2	0.005	0.649	0.000	100.000	155.140	-0.750
S3	0.003	0.616	0.000	100.000	163.110	-0.526
S4	0.002	0.628	0.000	100.000	159.985	-0.391
S5	0.006	0.685	0.000	100.000	147.320	-0.921
S6	0.008	0.767	0.000	100.000	131.662	-1.008
S7	0.004	0.822	0.000	100.000	122.209	-0.430
S8	0.001	0.802	0.000	100.000	124.721	-0.073

### 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	Jeltz 36N-19HZ
Field	Wattenberg
County	Weld
State	Colorado