



Radial Cement Bond Log

Company Kerr-McGee Oil & Gas Onshore, L.P.				Company Kerr-McGee Oil & Gas Onshore, L.P.			
Well Grenemyer 36N-3HZ				Well Grenemyer 36N-3HZ			
Field Wattenberg				Field Wattenberg			
County Weld				County Weld			
State Colorado				State Colorado			
Location:				API # : 05-123-38415			
SHL: 636' FNL 2575' FEL Lat/Long: 40.0131/-104.876402 SEC 34 TWP 1N RGE 67W				GR			
Permanent Datum		Ground Level		Elevation		Elevation	
Log Measured From		Kelly Bushing		16FT		K.B. 5065' D.F. 5064' G.L. 5049'	
Drilling Measured From		Kelly Bushing					
Date				03-FEB-2014			
Run Number				One			
Depth Driller				15163 FT			
Depth Logger				6891 FT			
Bottom Logged Interval				6891 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				90 FT			
Time Well Ready				11:00			
Time Logger on Bottom				12:00			
Equipment Number				HD-134			
Location				Fort Lupton, CO			
Recorded By				C. Bryan			
Witnessed By				Trevor Daniel			
Borehole Record				Tubing Record			
Run Number		Bit		From		To	
Casing Record		Size (in)		Wgt. (lbs/Ft)		Grade	
Surface Casing		9-5/8"		36#		---	
Intermediate #1		7"		26#		---	
Intermediate #2							
Liner		4-1/2"		11.6#		---	
						6862 FT	
						15,154 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

Logged with 2500 PSI at surface
Correlated to Top of Liner at 6862'

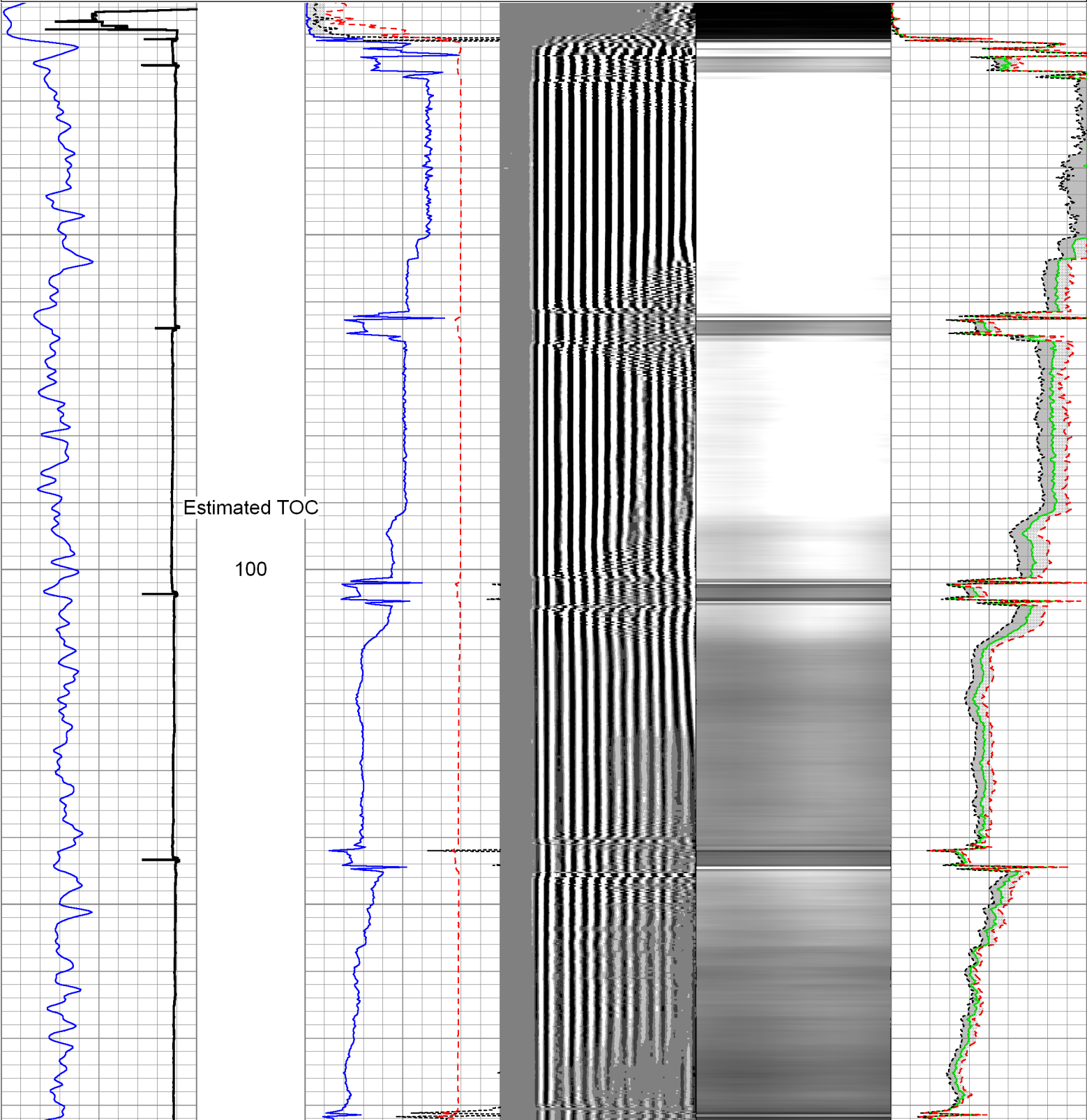
Thank you for choosing FMC Technologies Completion Services, Inc.

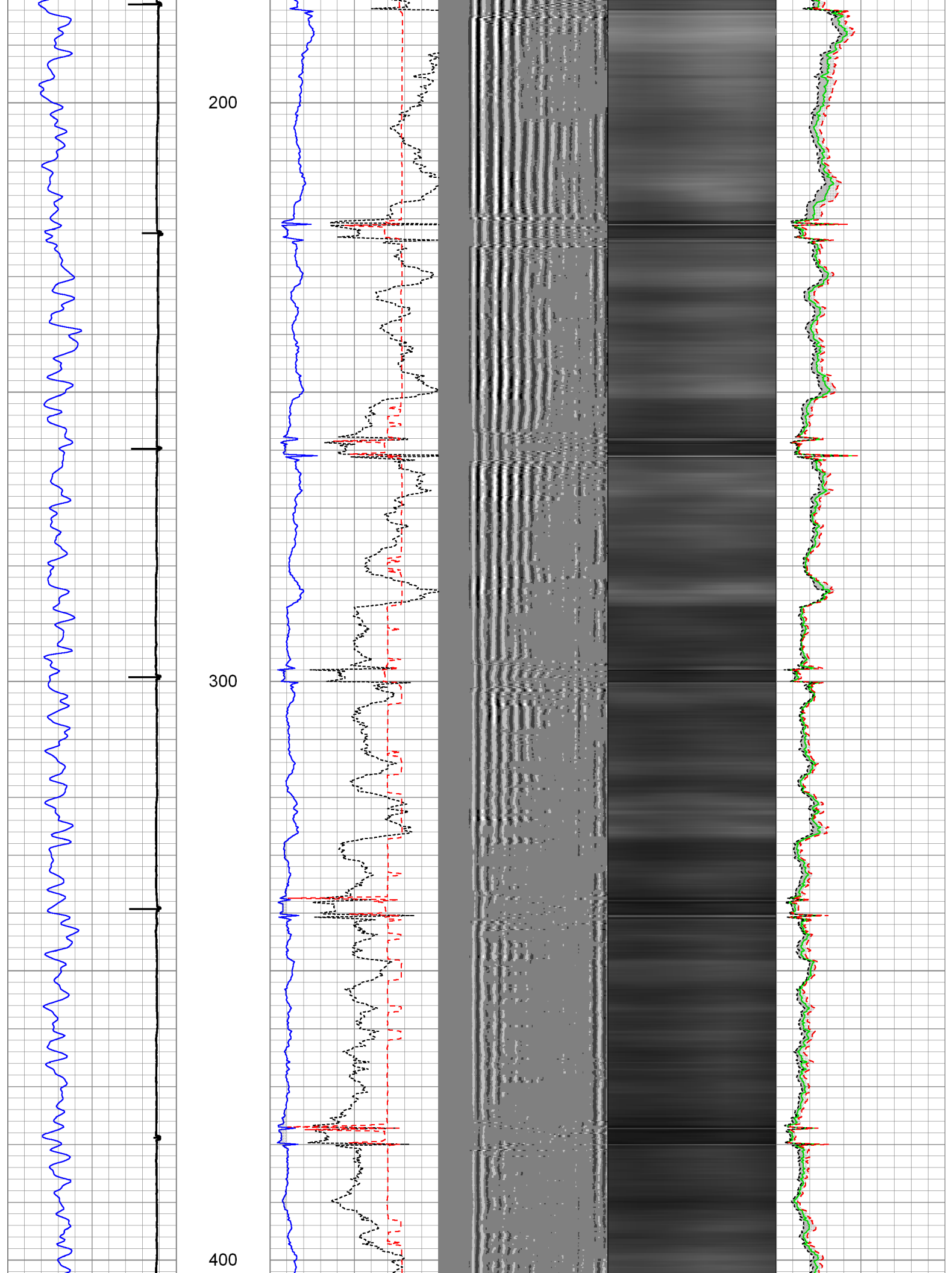


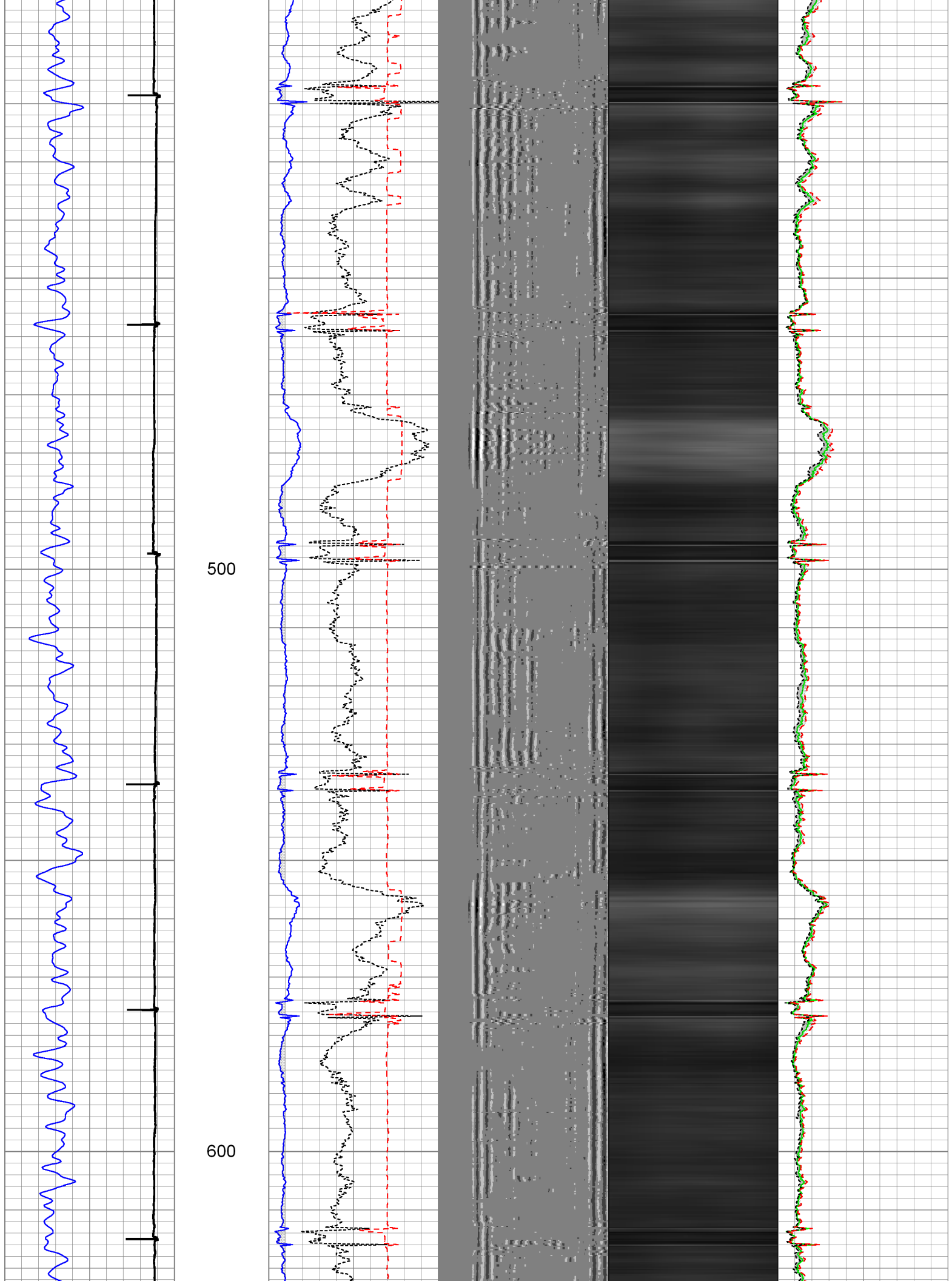
Main Pass

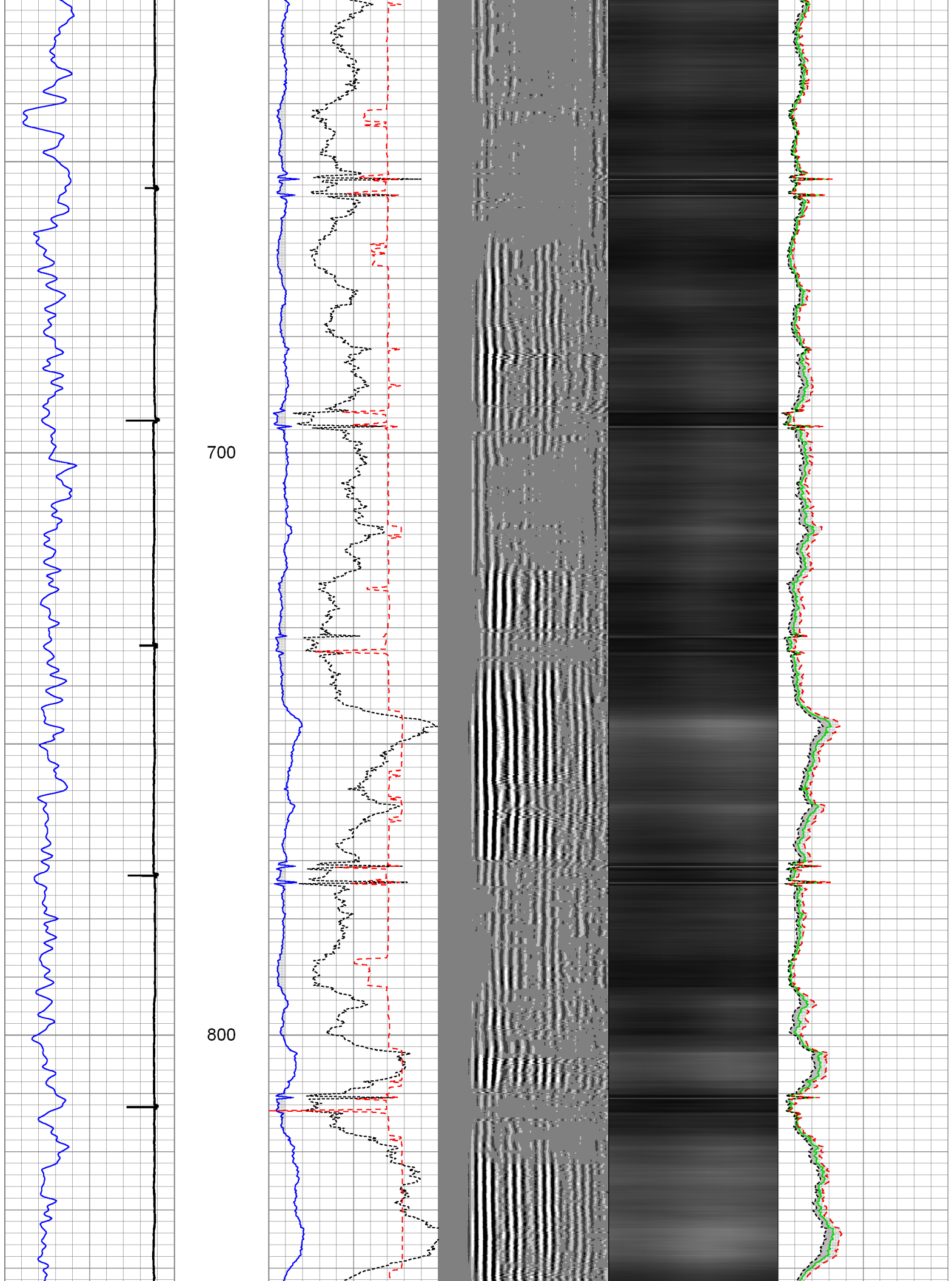
Logged with 2500 PSI @ Surface

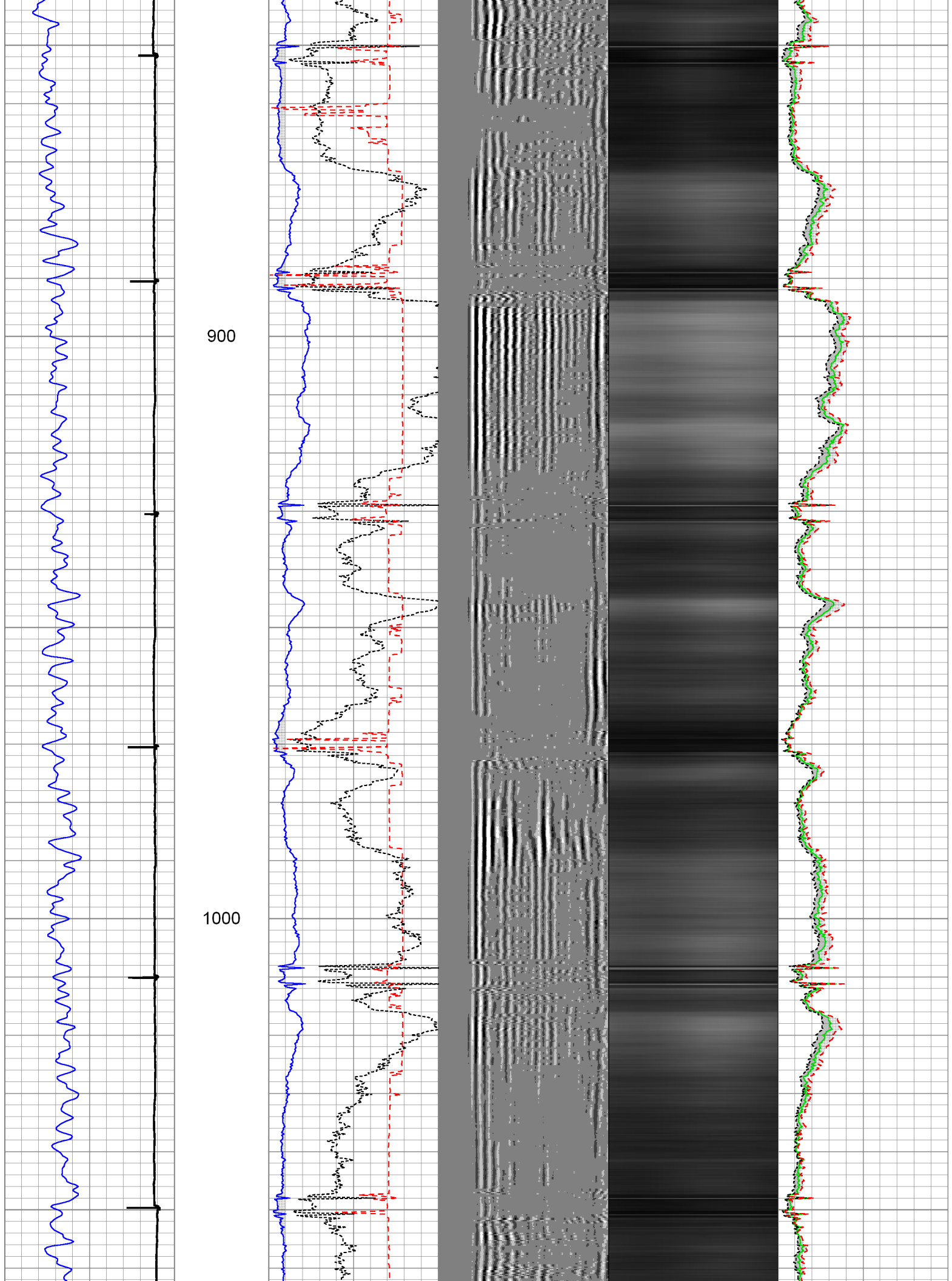
Gamma Ray			3' Amplitude		5' Variable Density Log	Sector Map	Average Amplitude		
0	(GAPI)	120	0	(mV)			100	0	100
Collar Locator			3' Amplitude x 5				Minimum Amplitude		
			0	(mV)			20	0	100
			3' Travel Time				Maximum Amplitude		
			650	(usec)			150	0	100

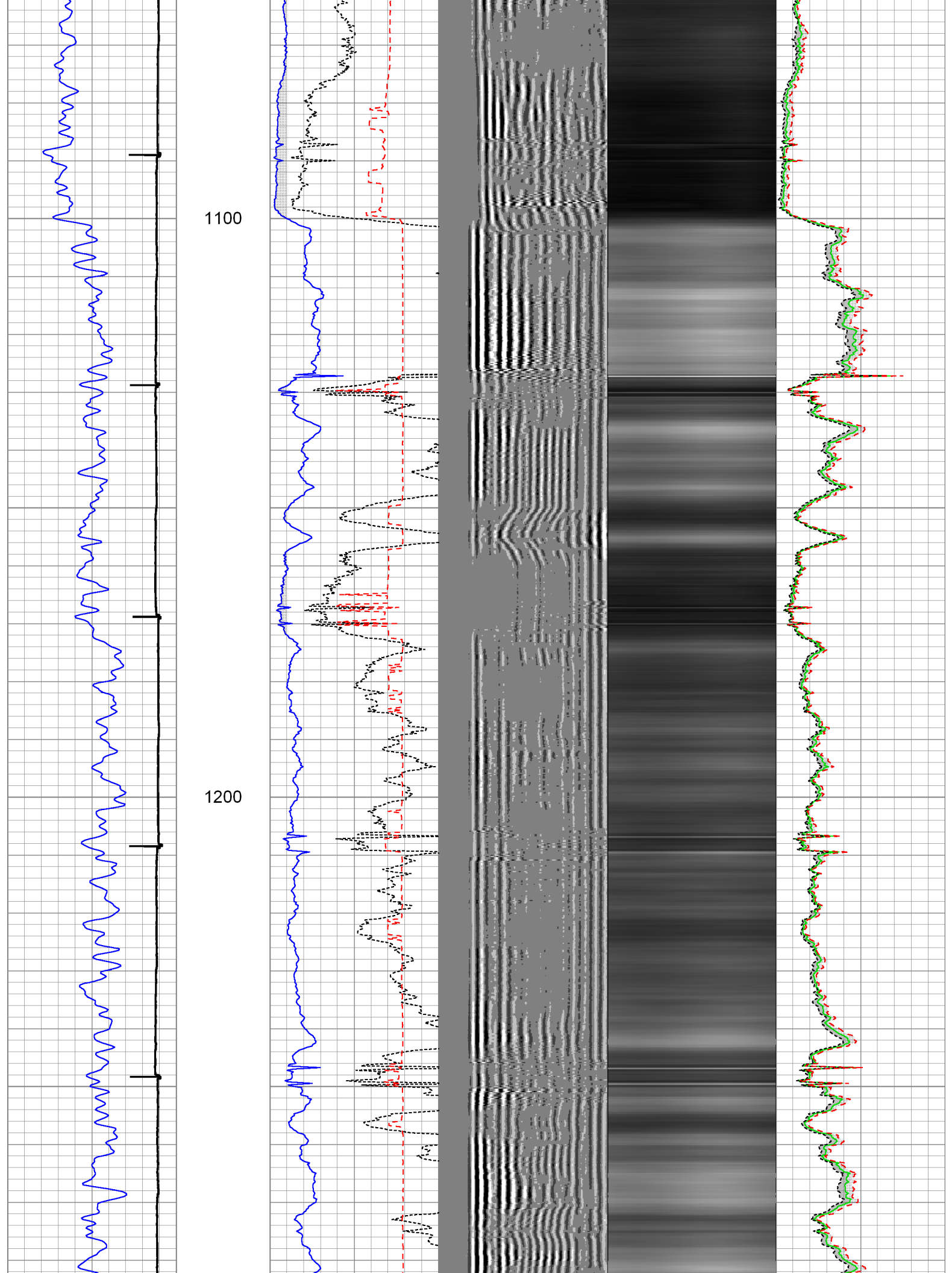


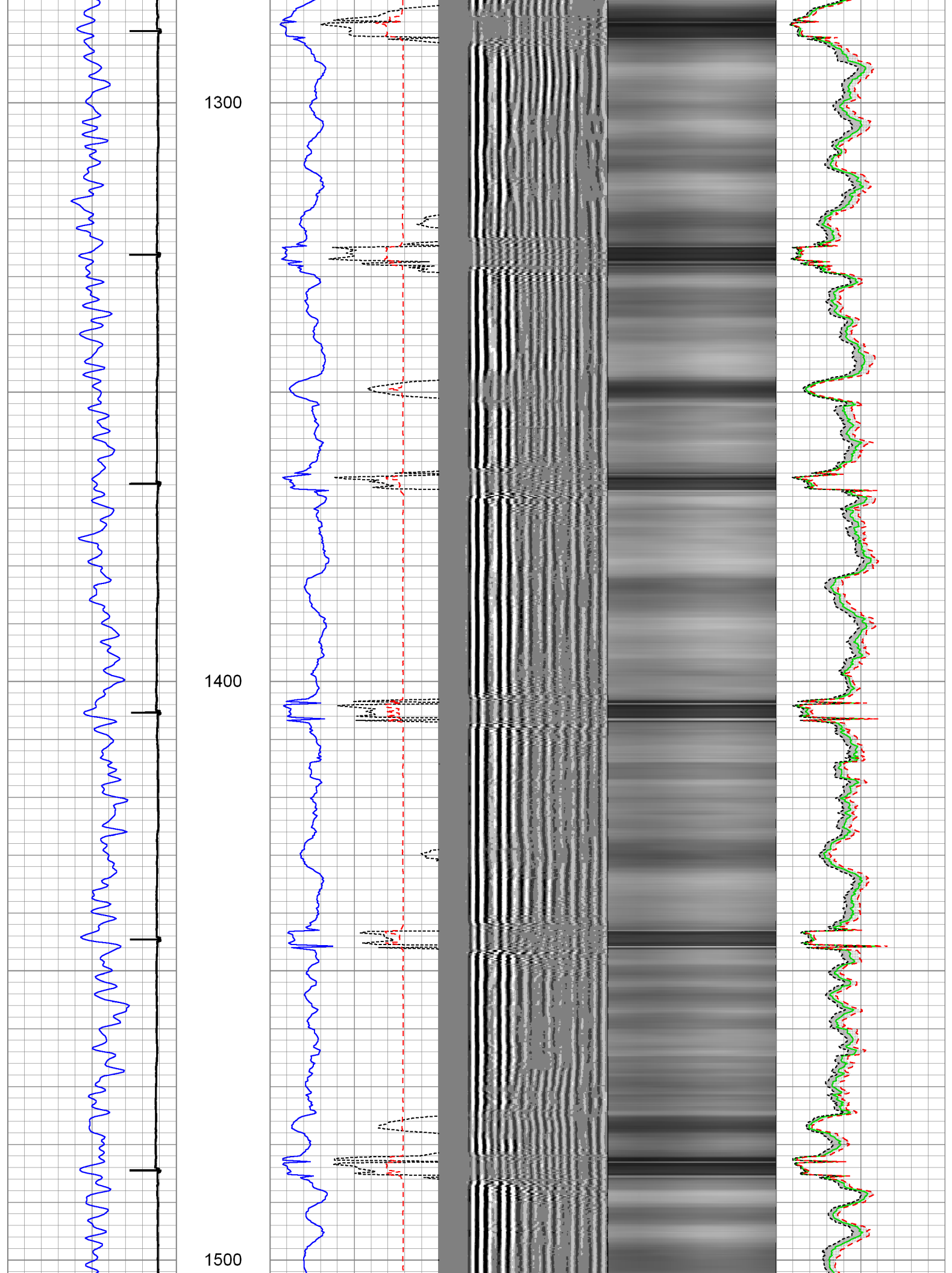


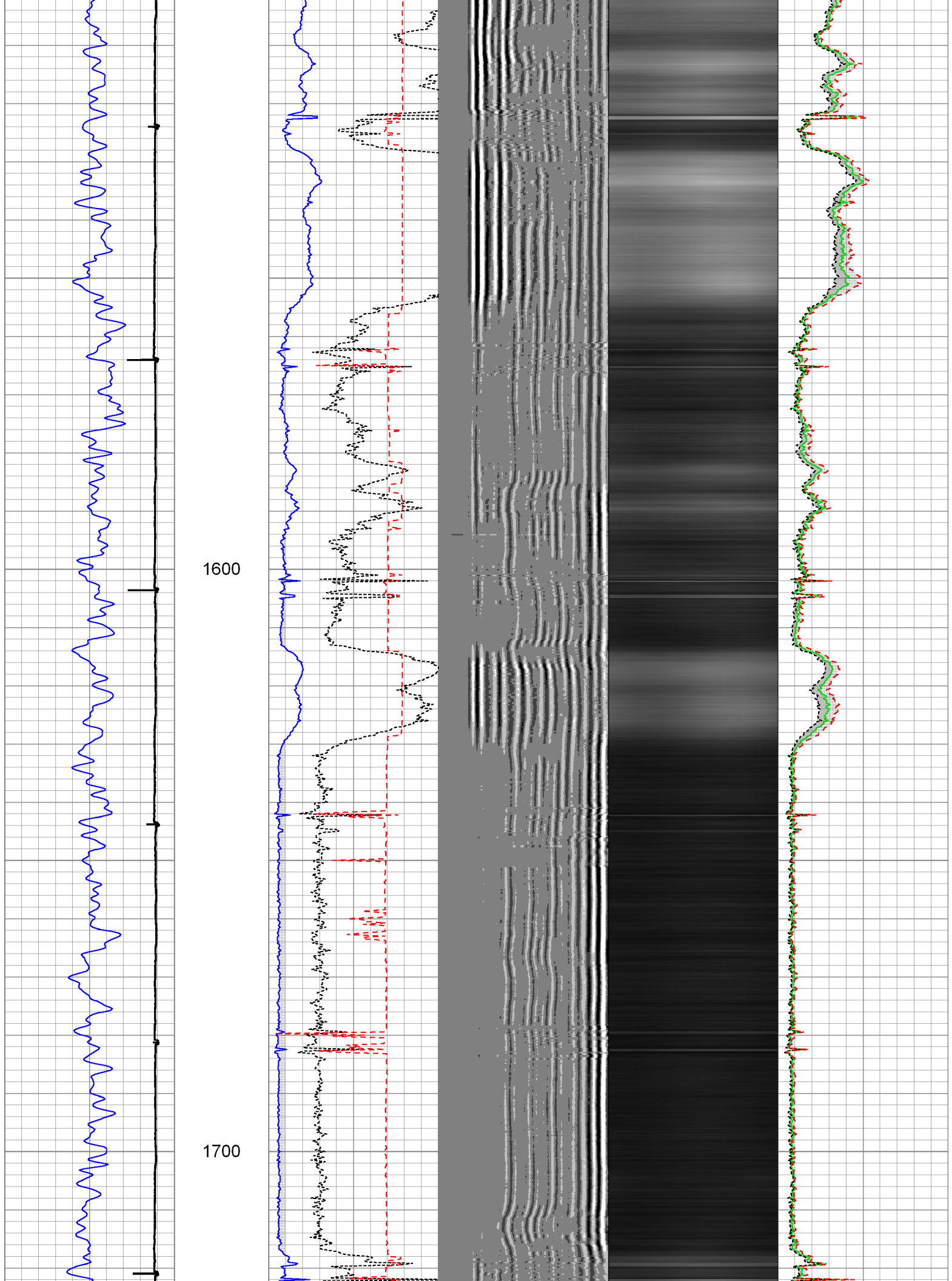


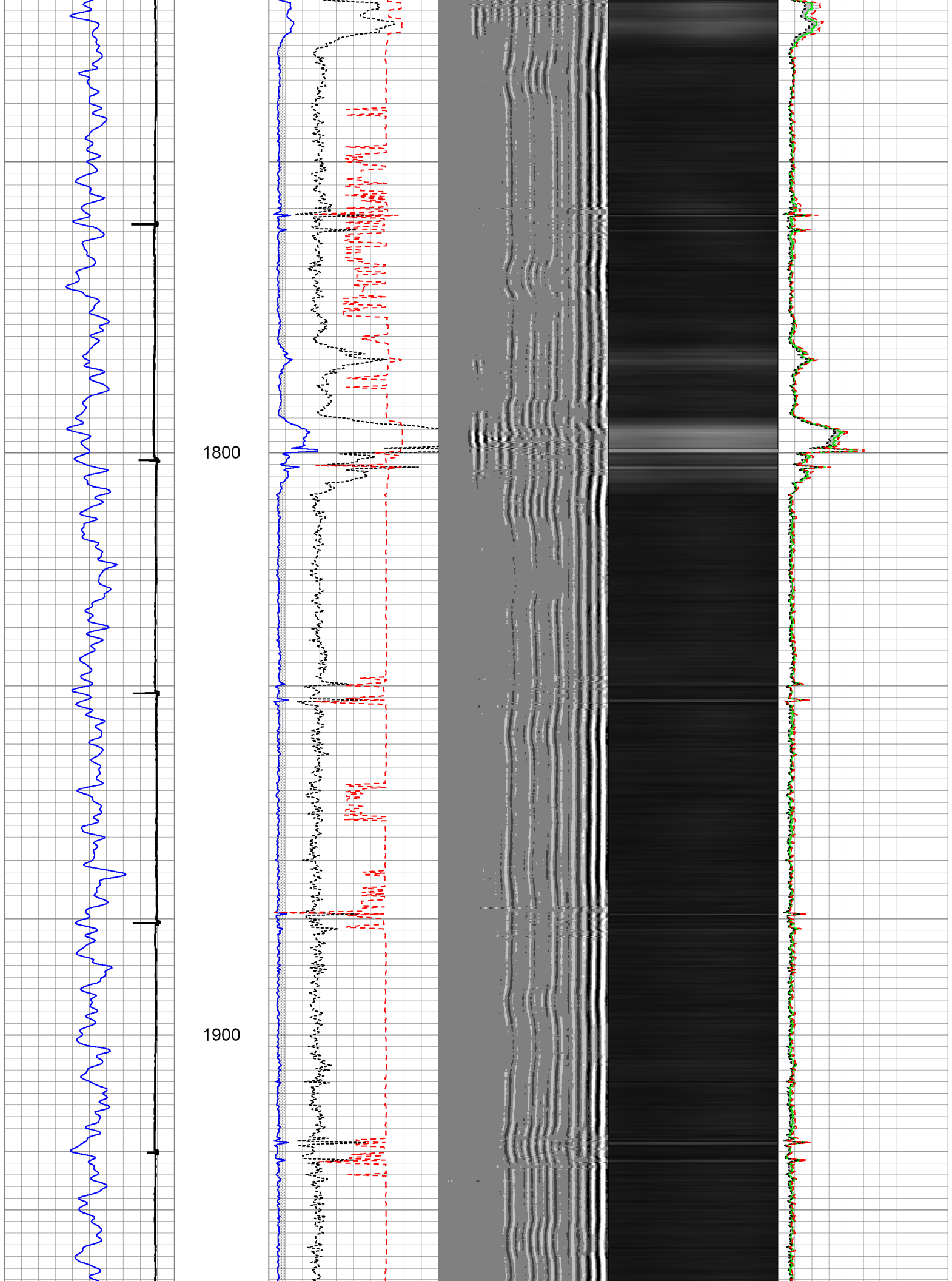






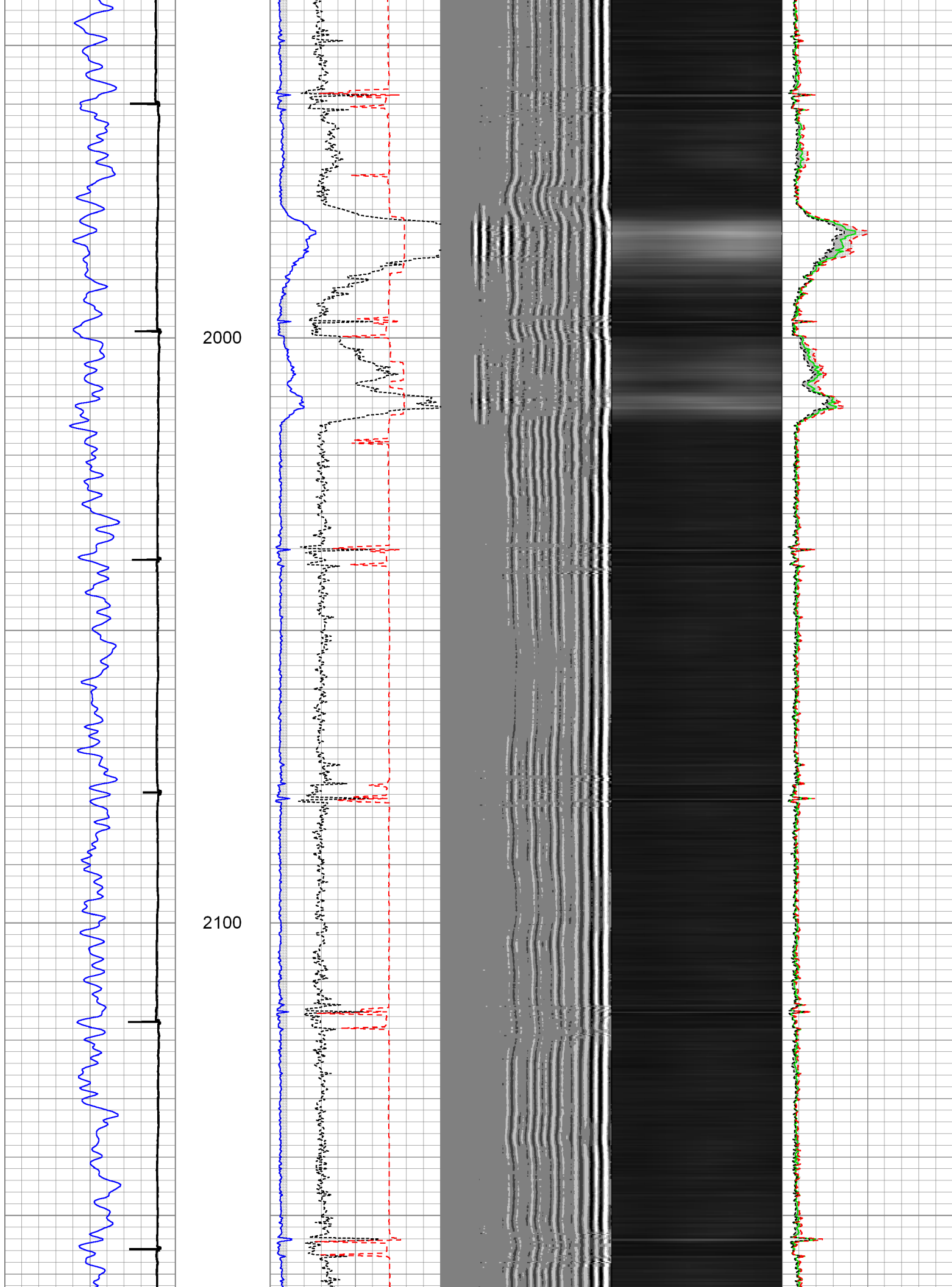






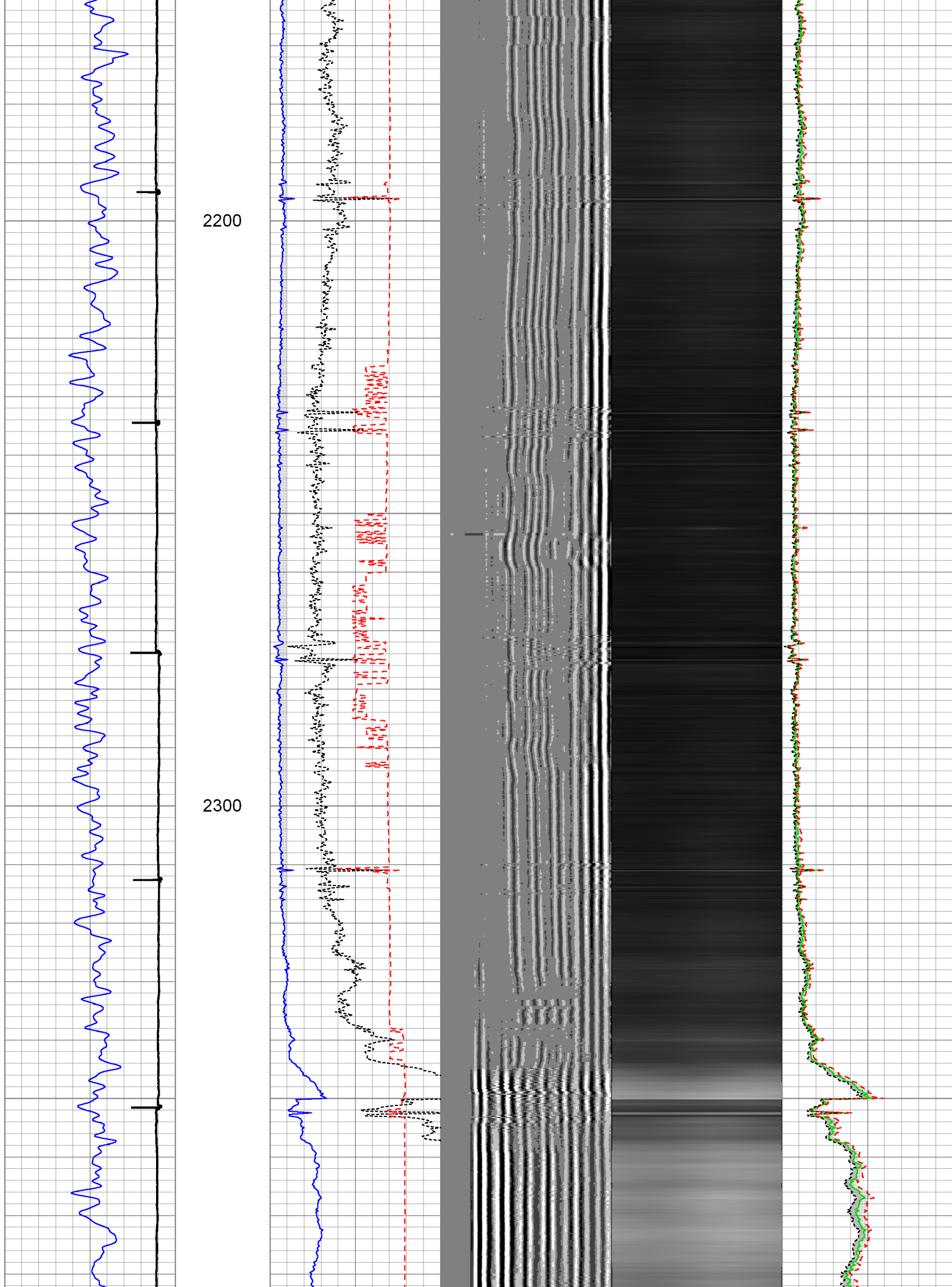
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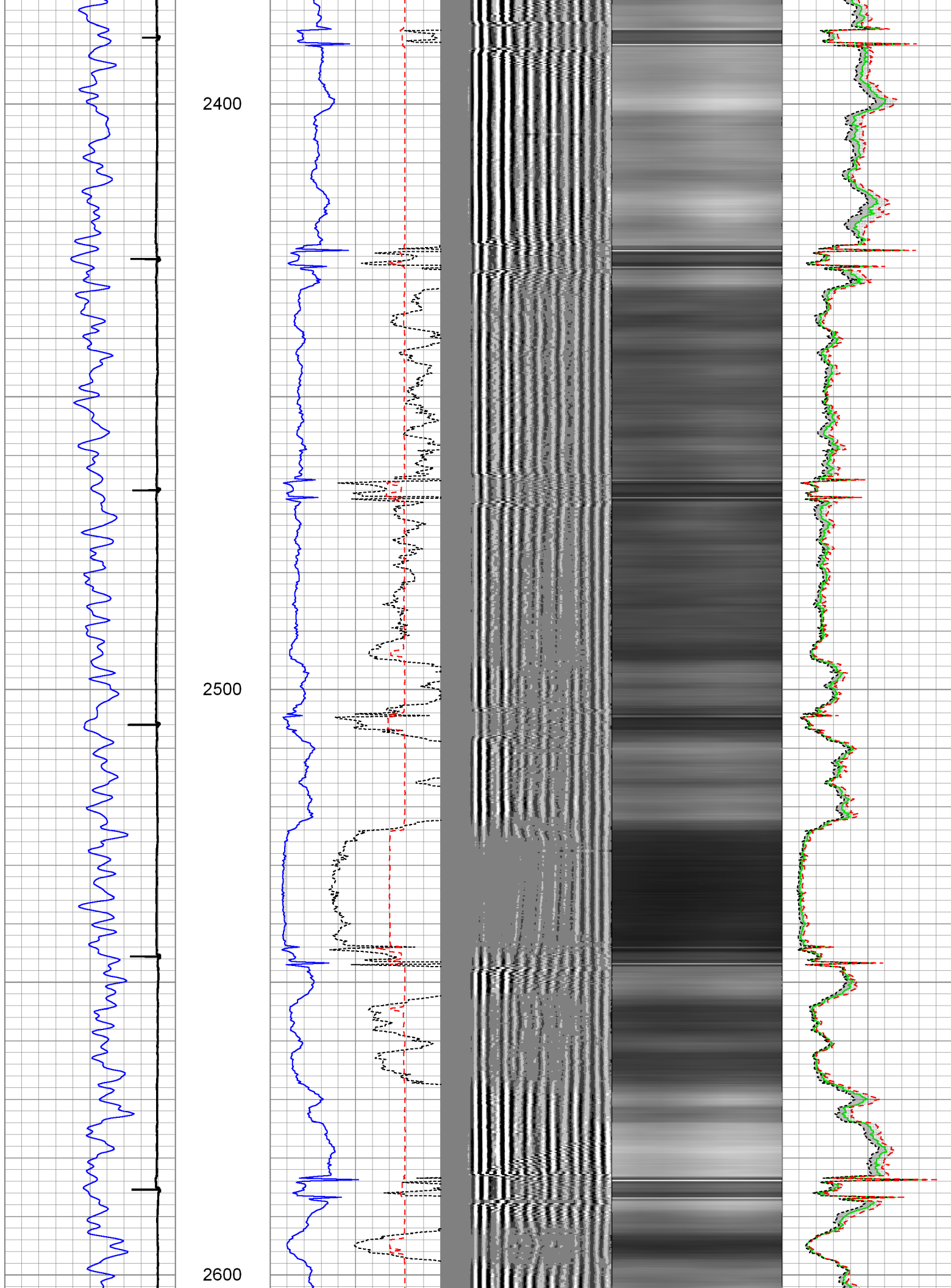
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2200

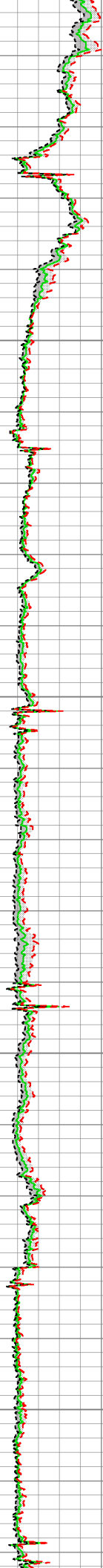
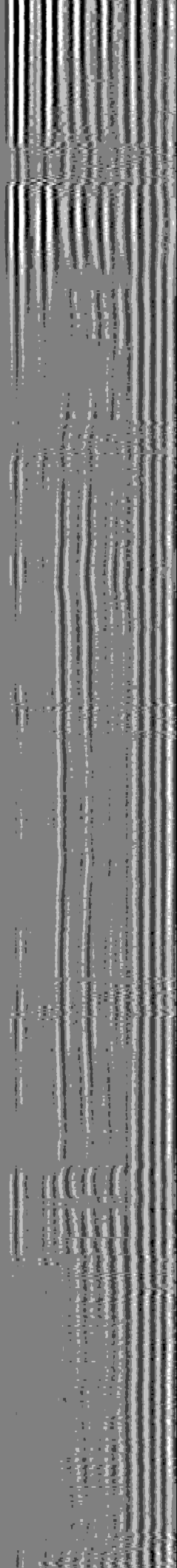
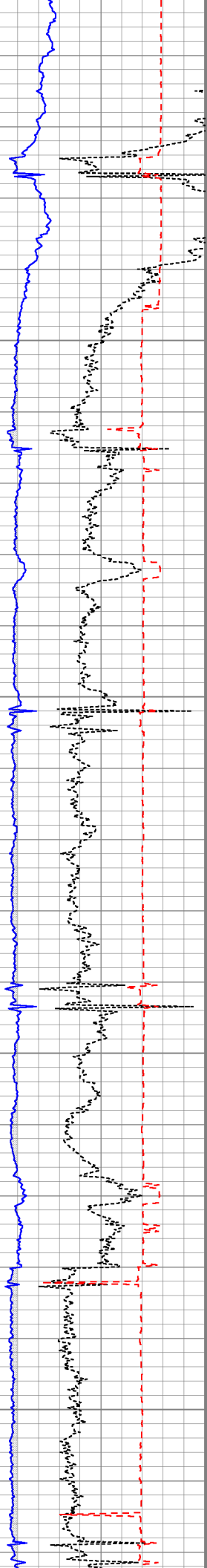
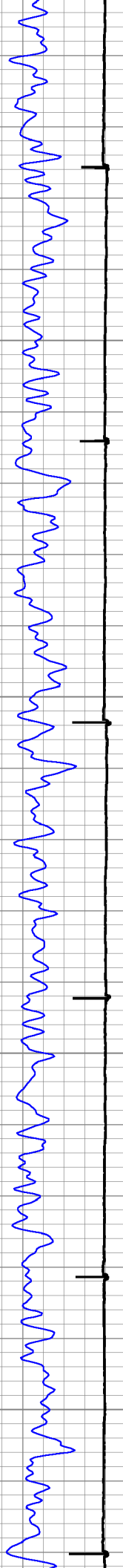
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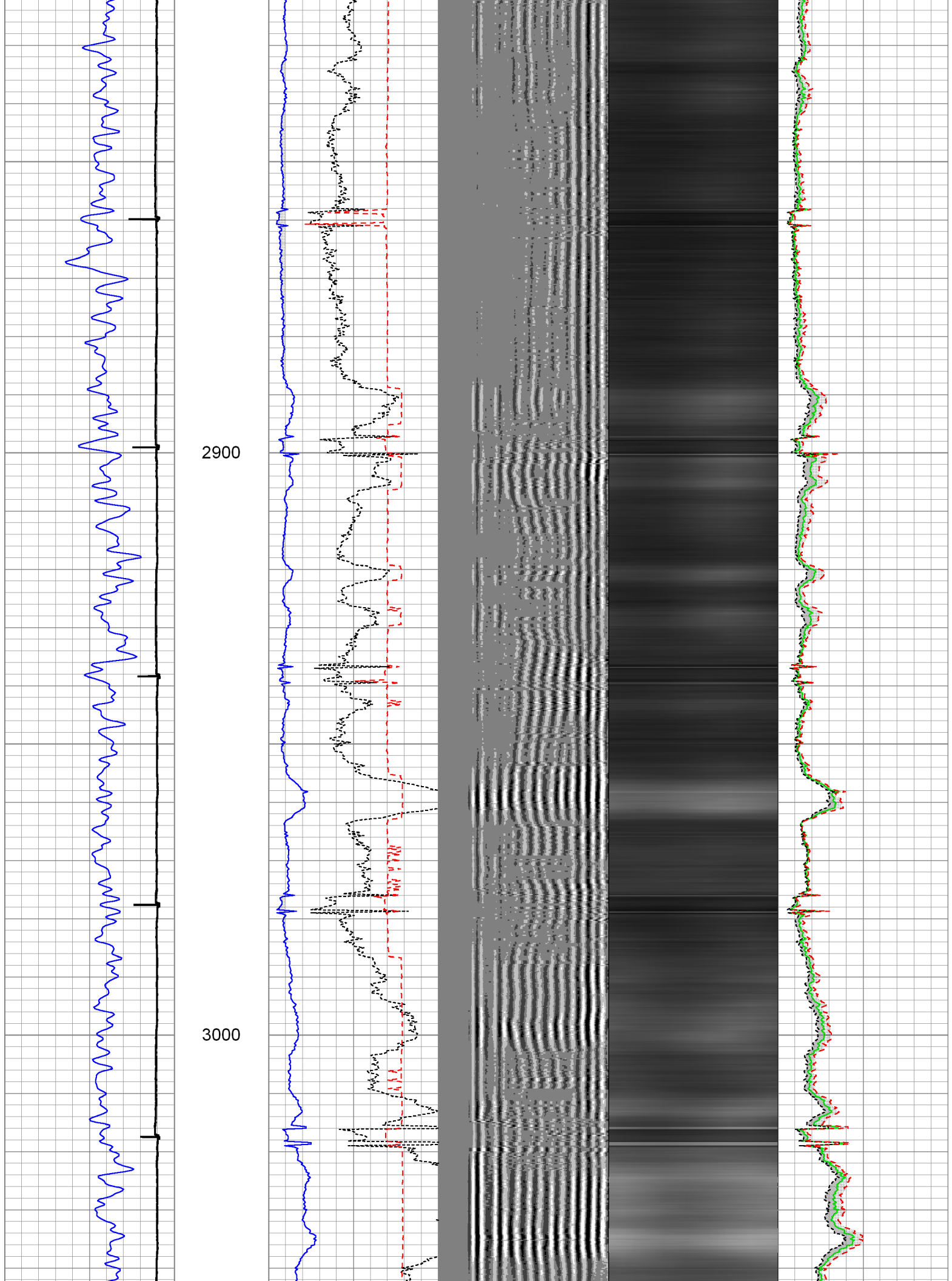




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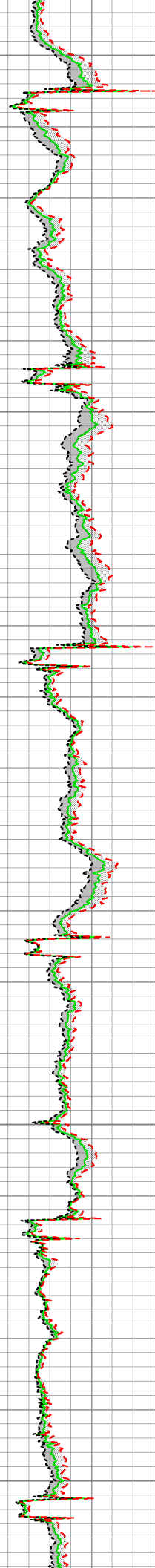
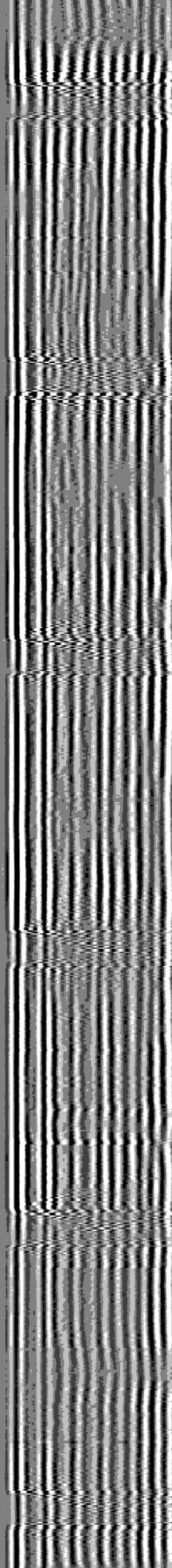
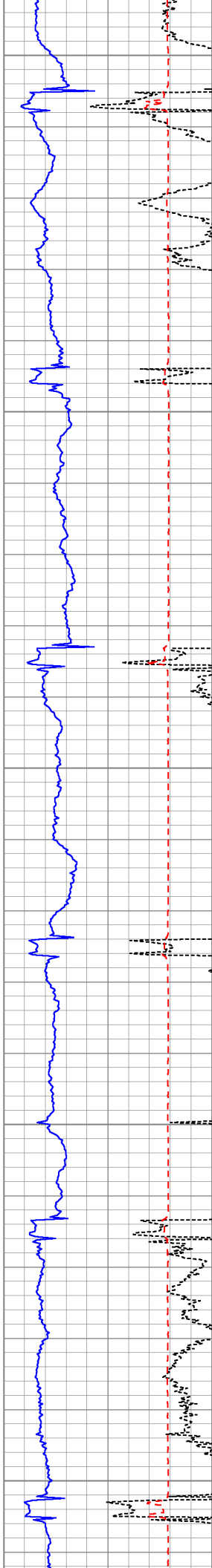
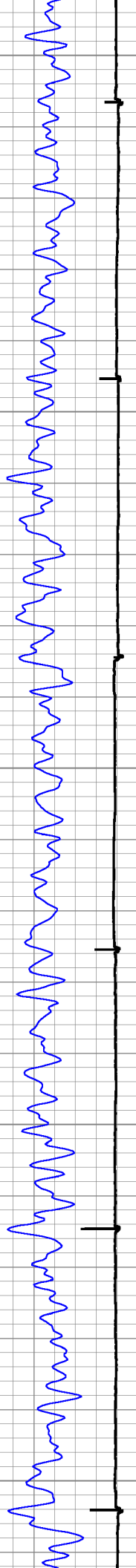
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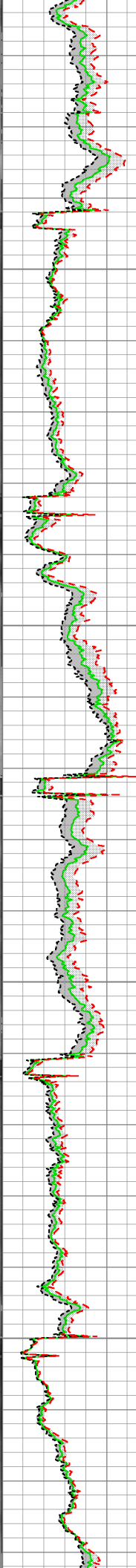
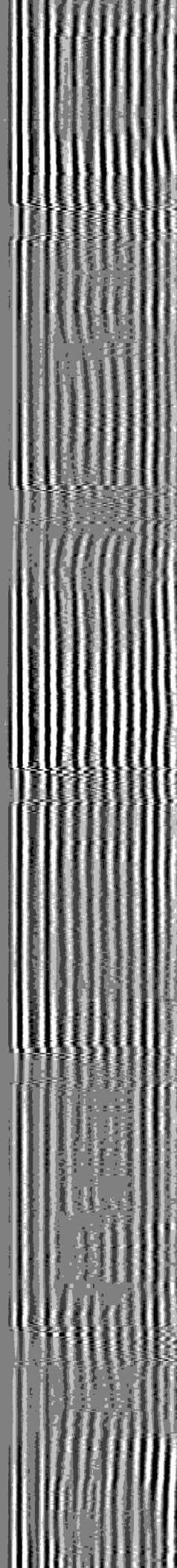
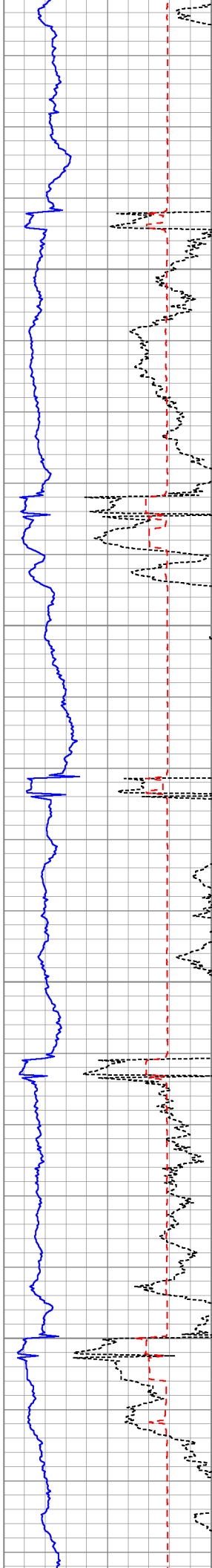
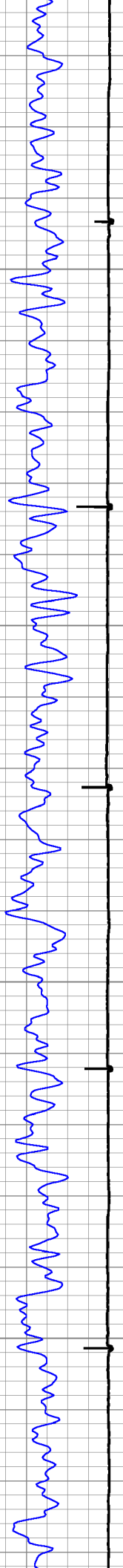
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3200



3300

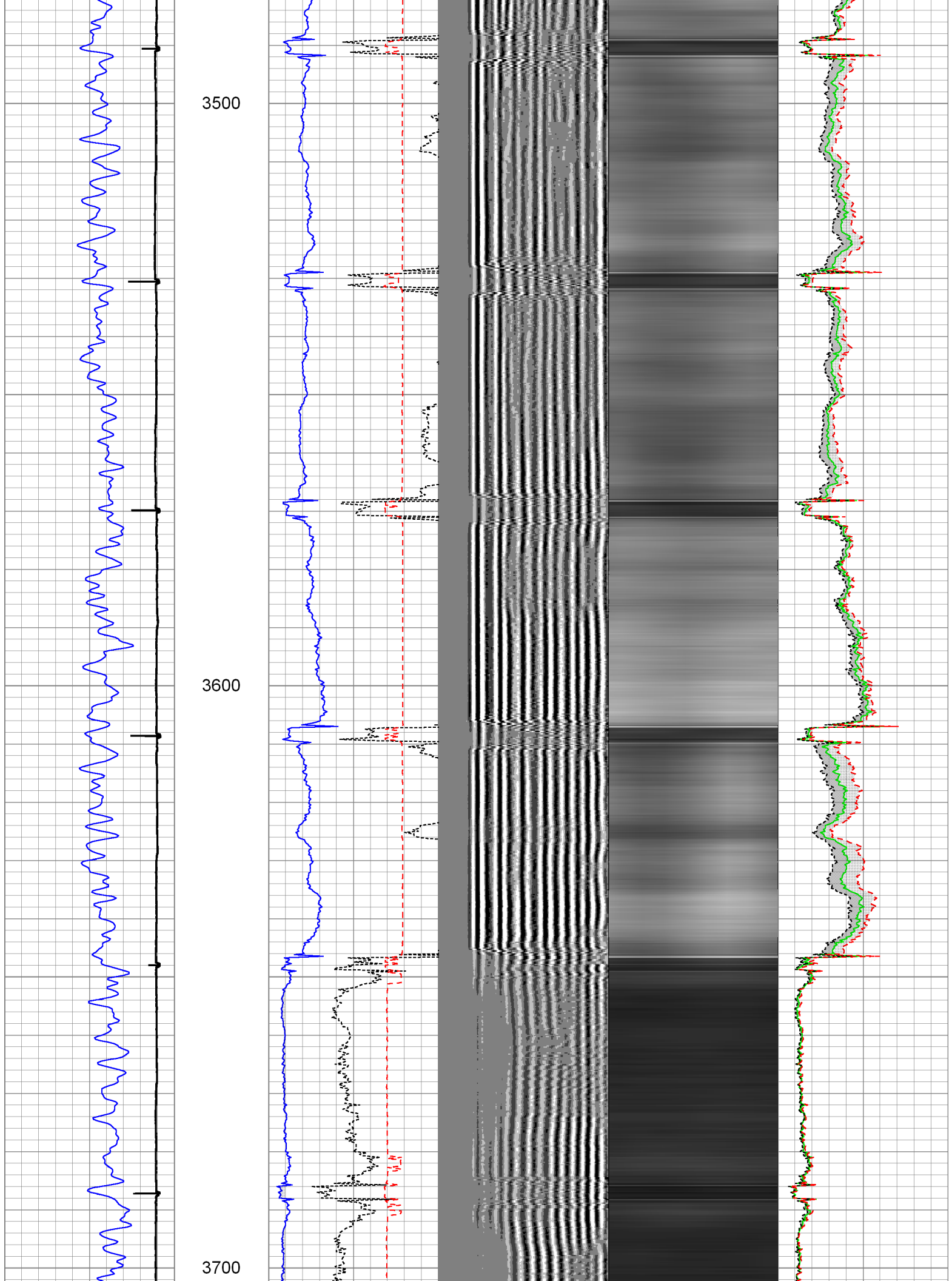
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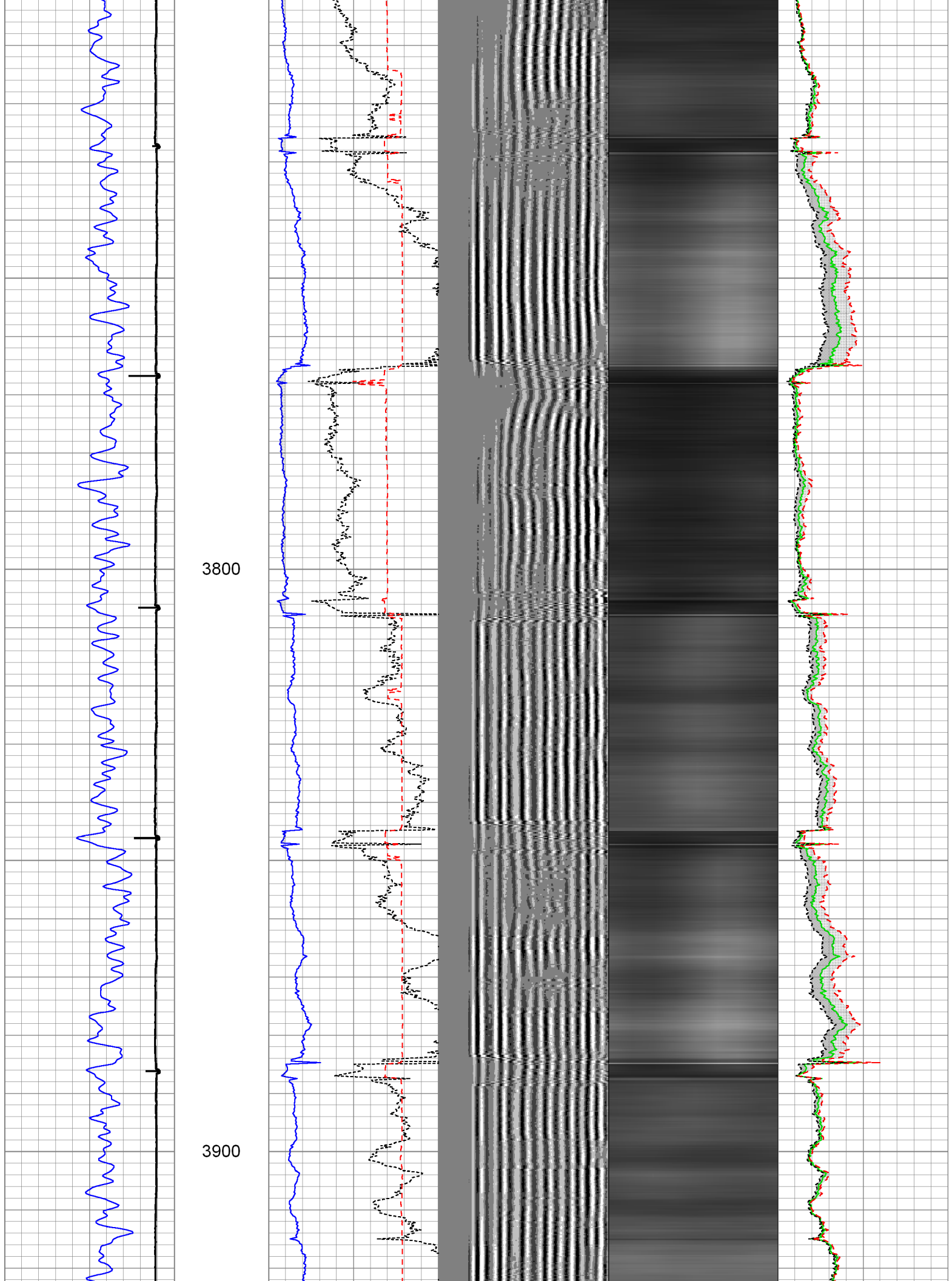


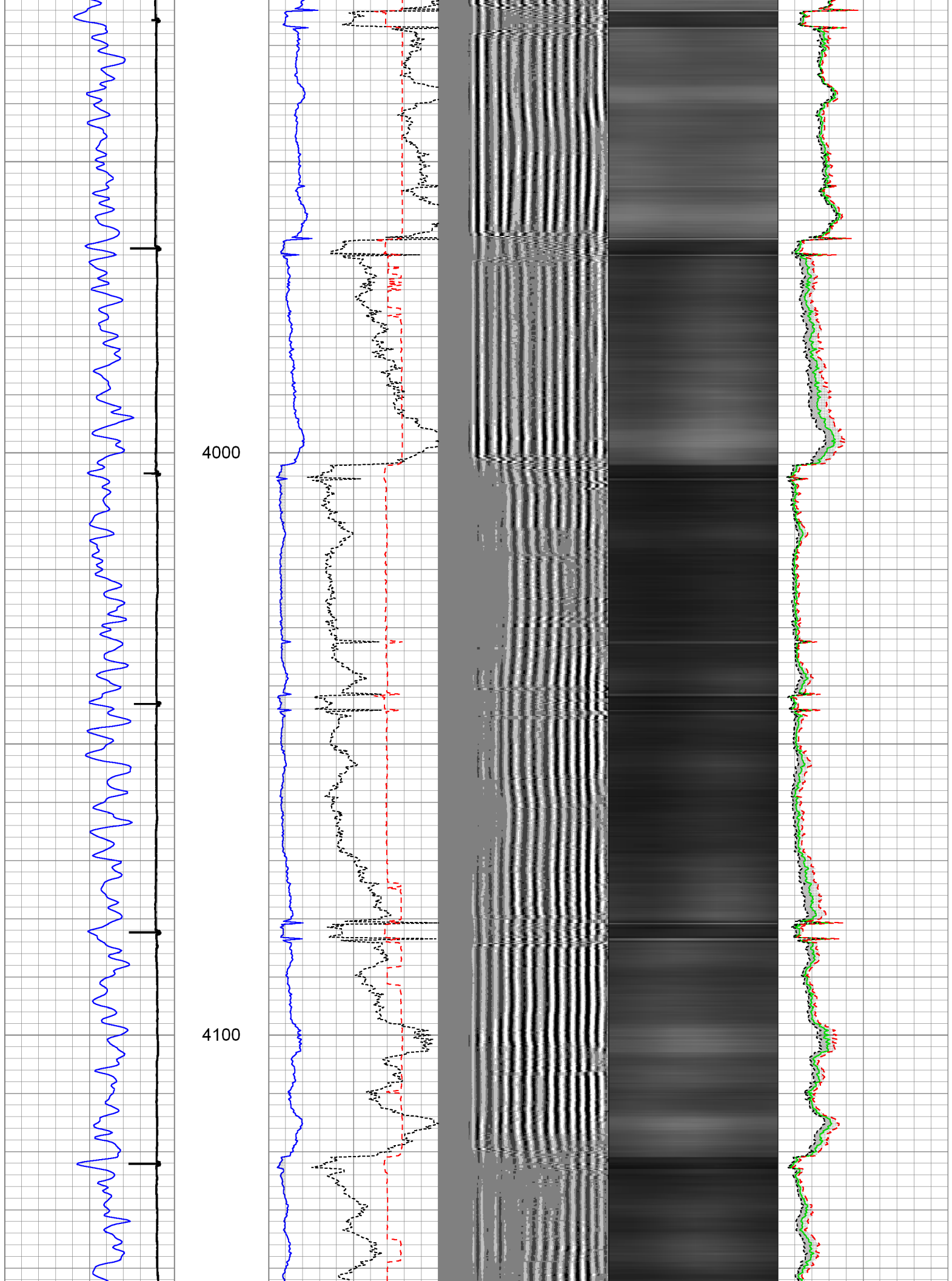
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3700



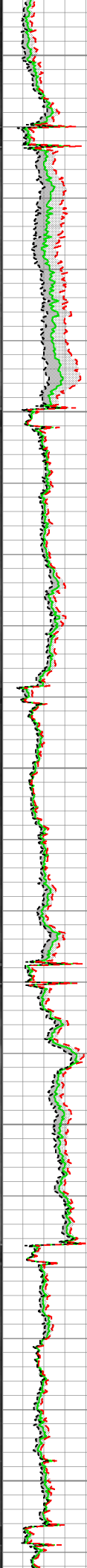
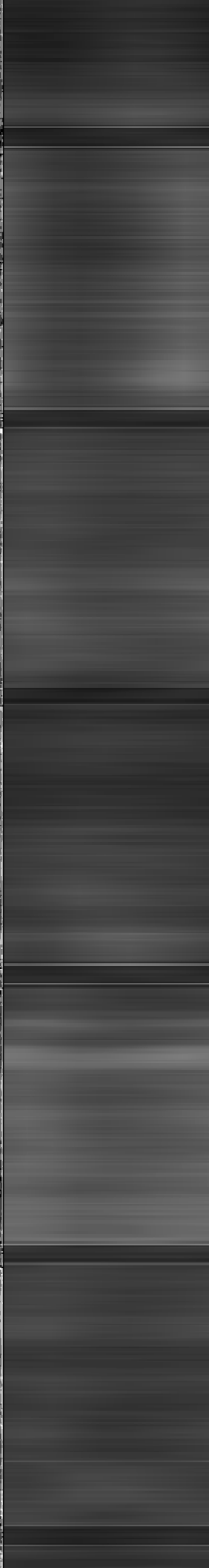
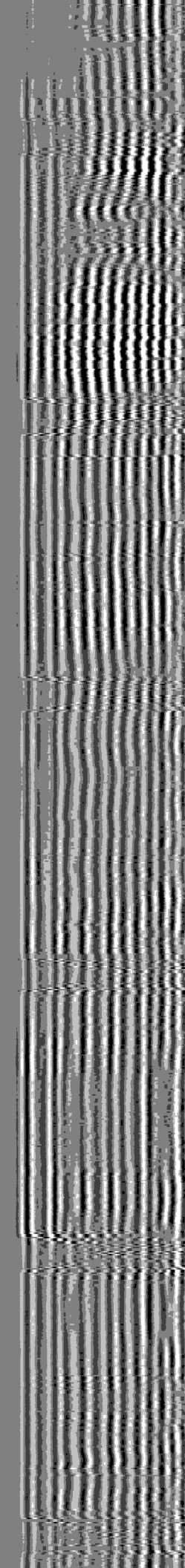
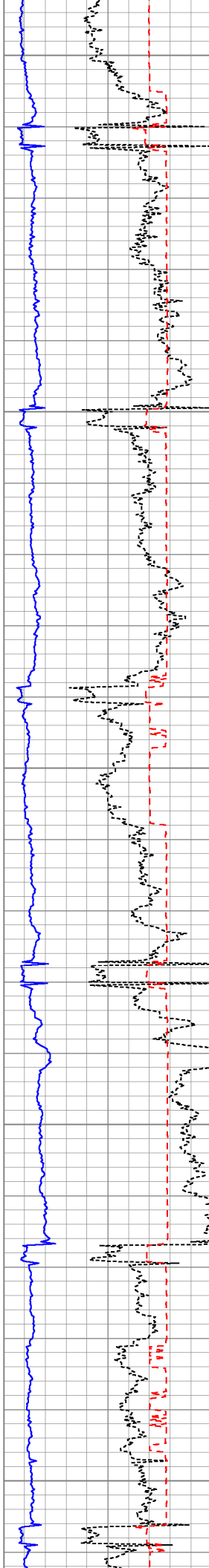


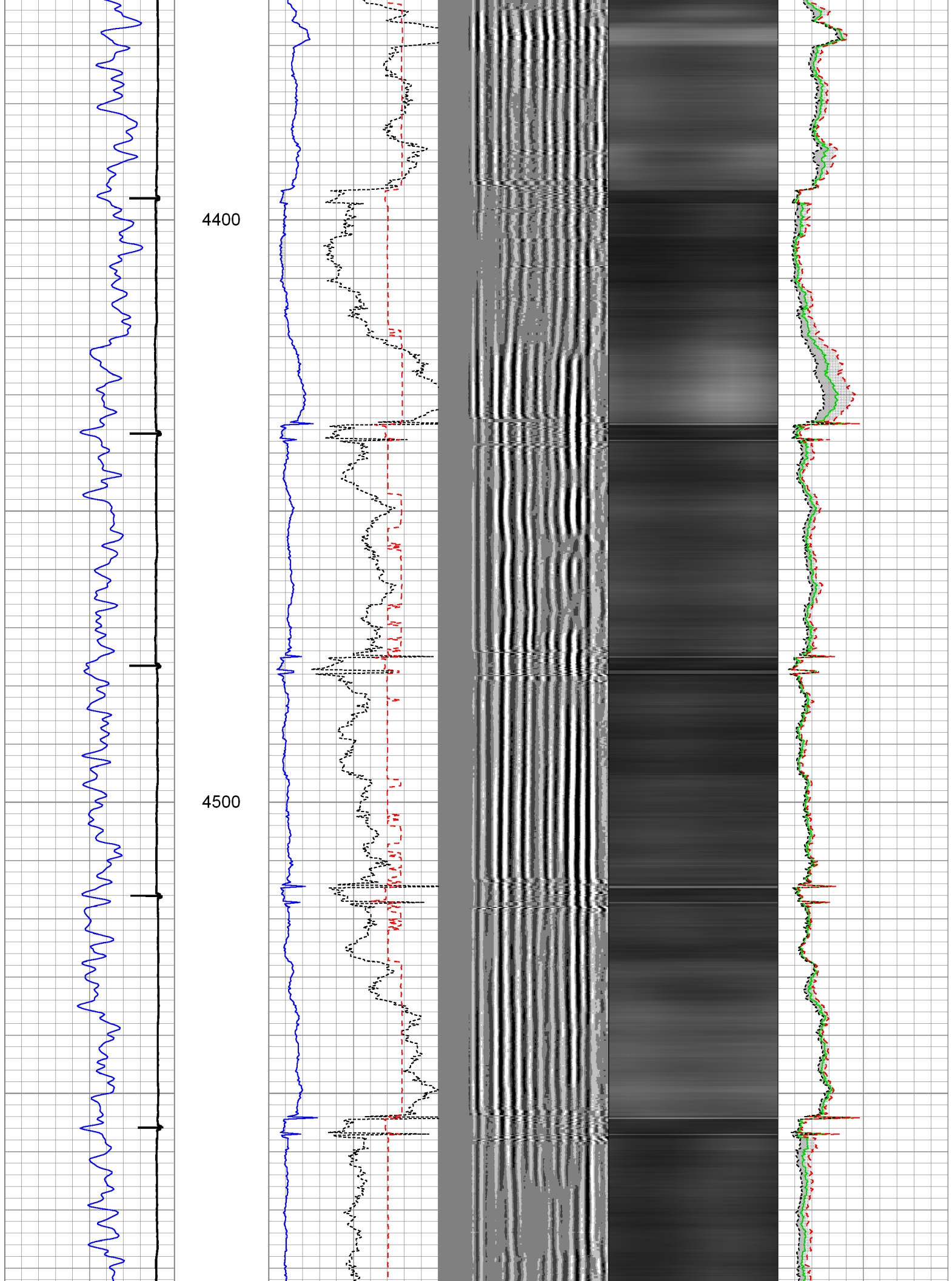




4200

4300



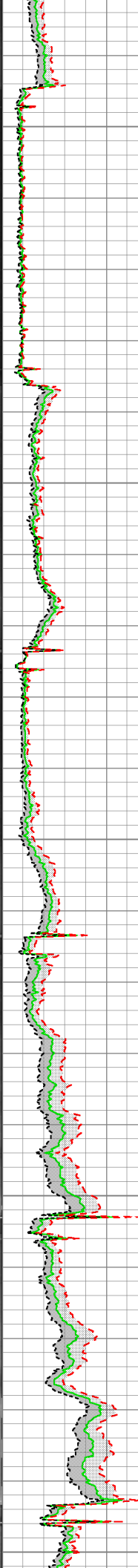
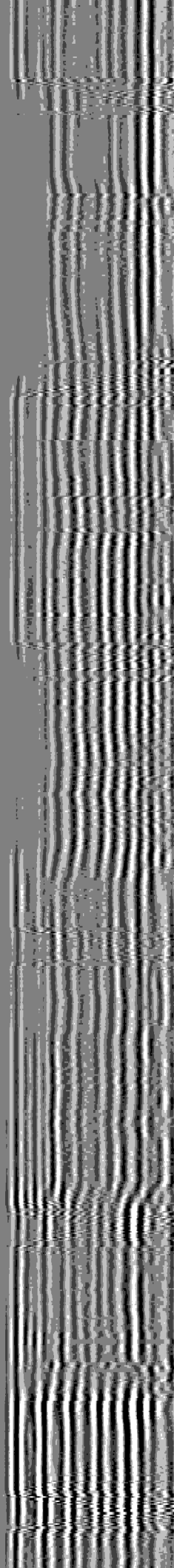
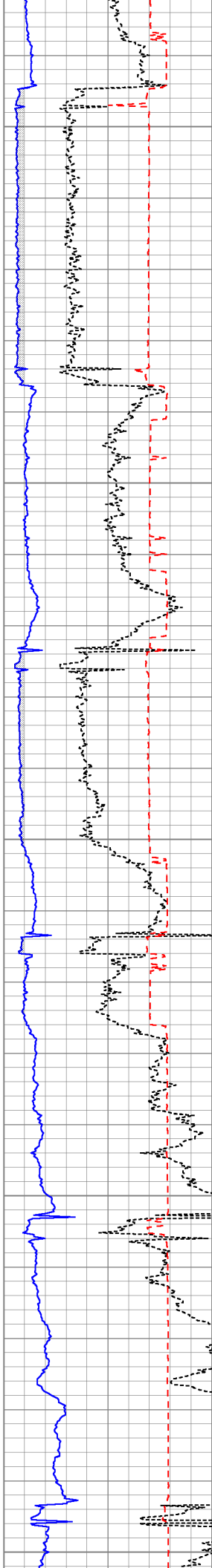


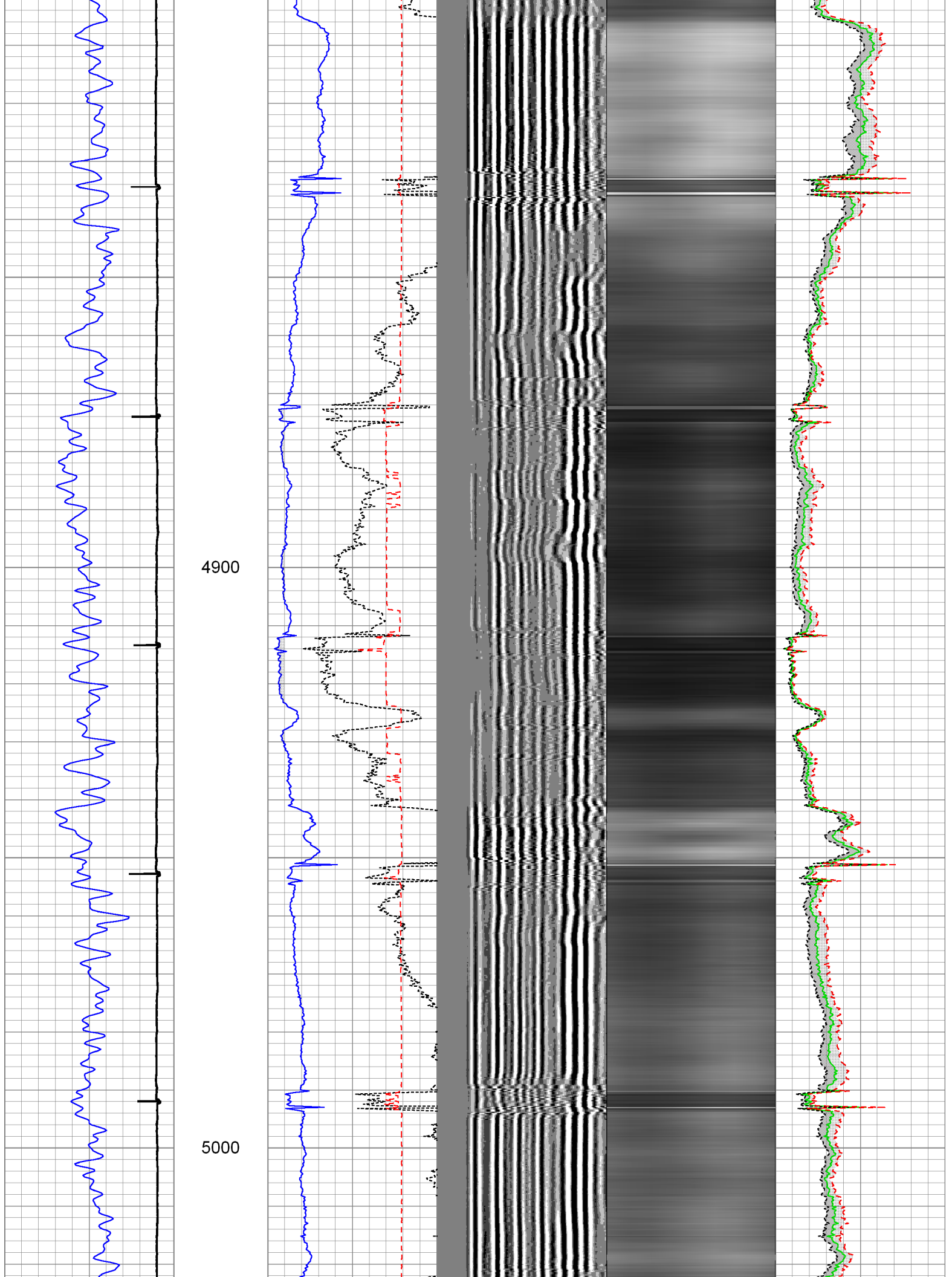


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4700

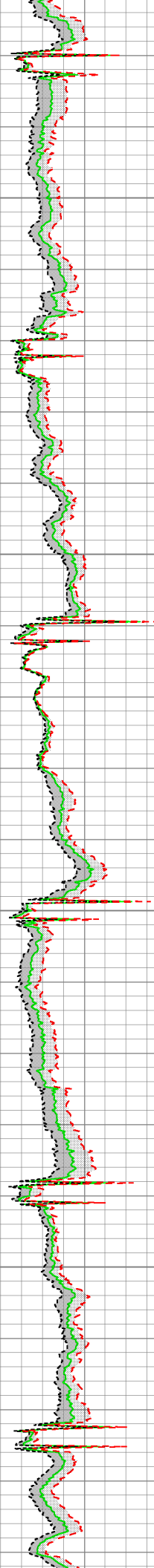
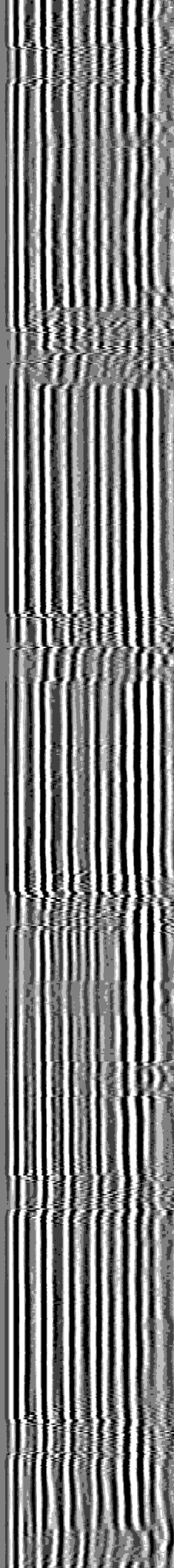
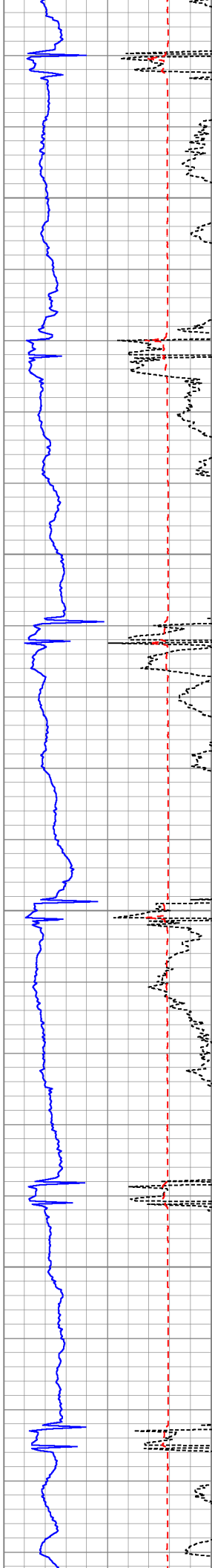
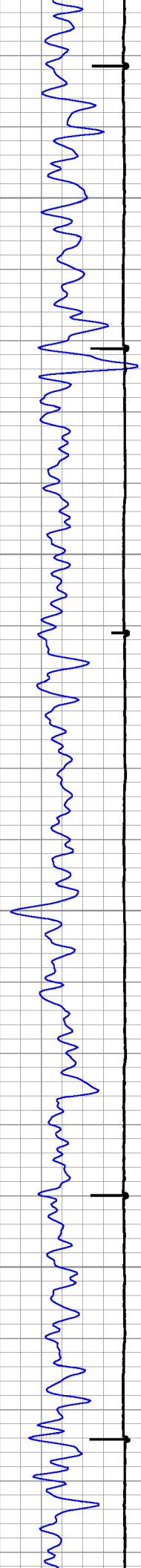
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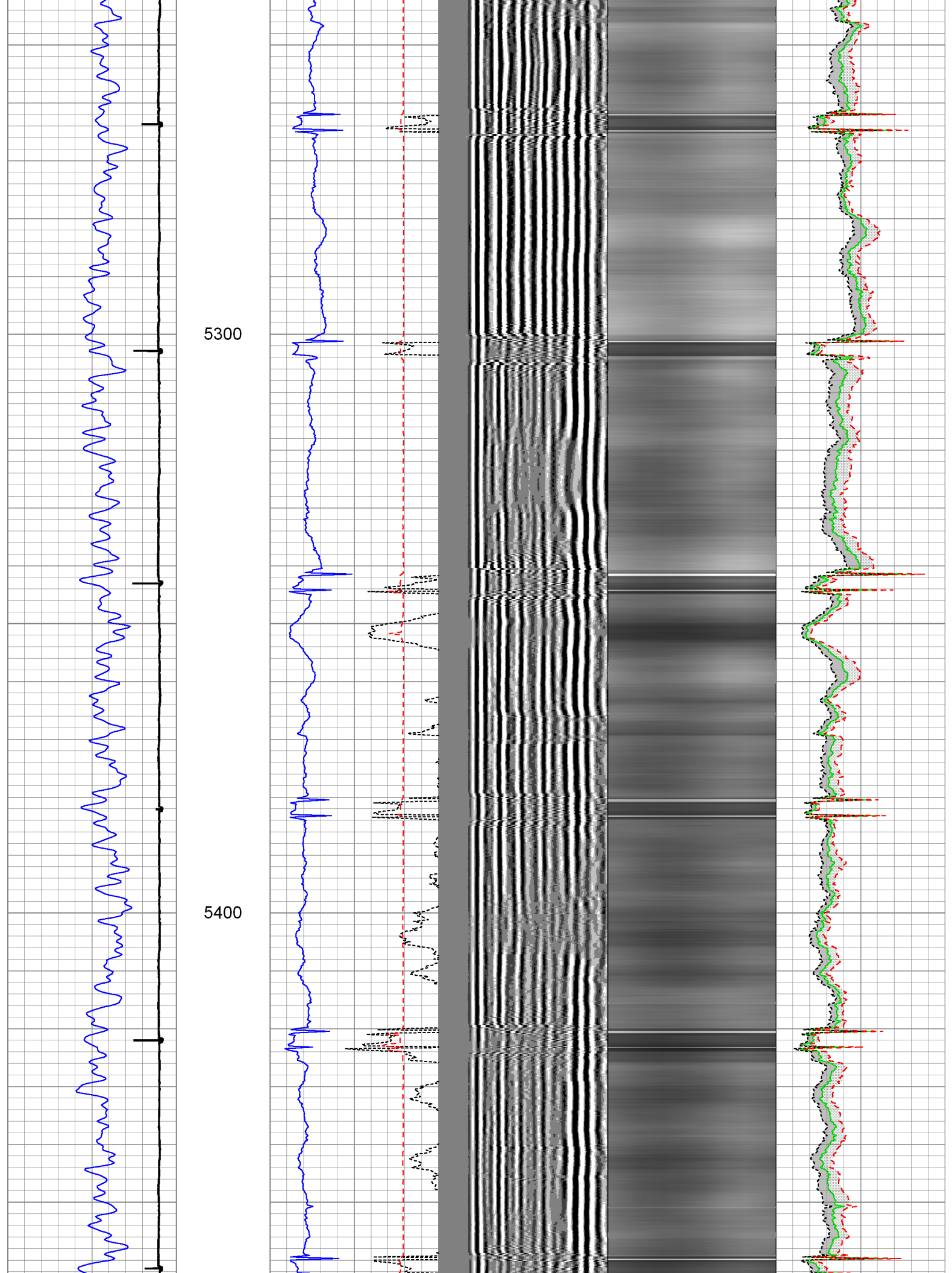




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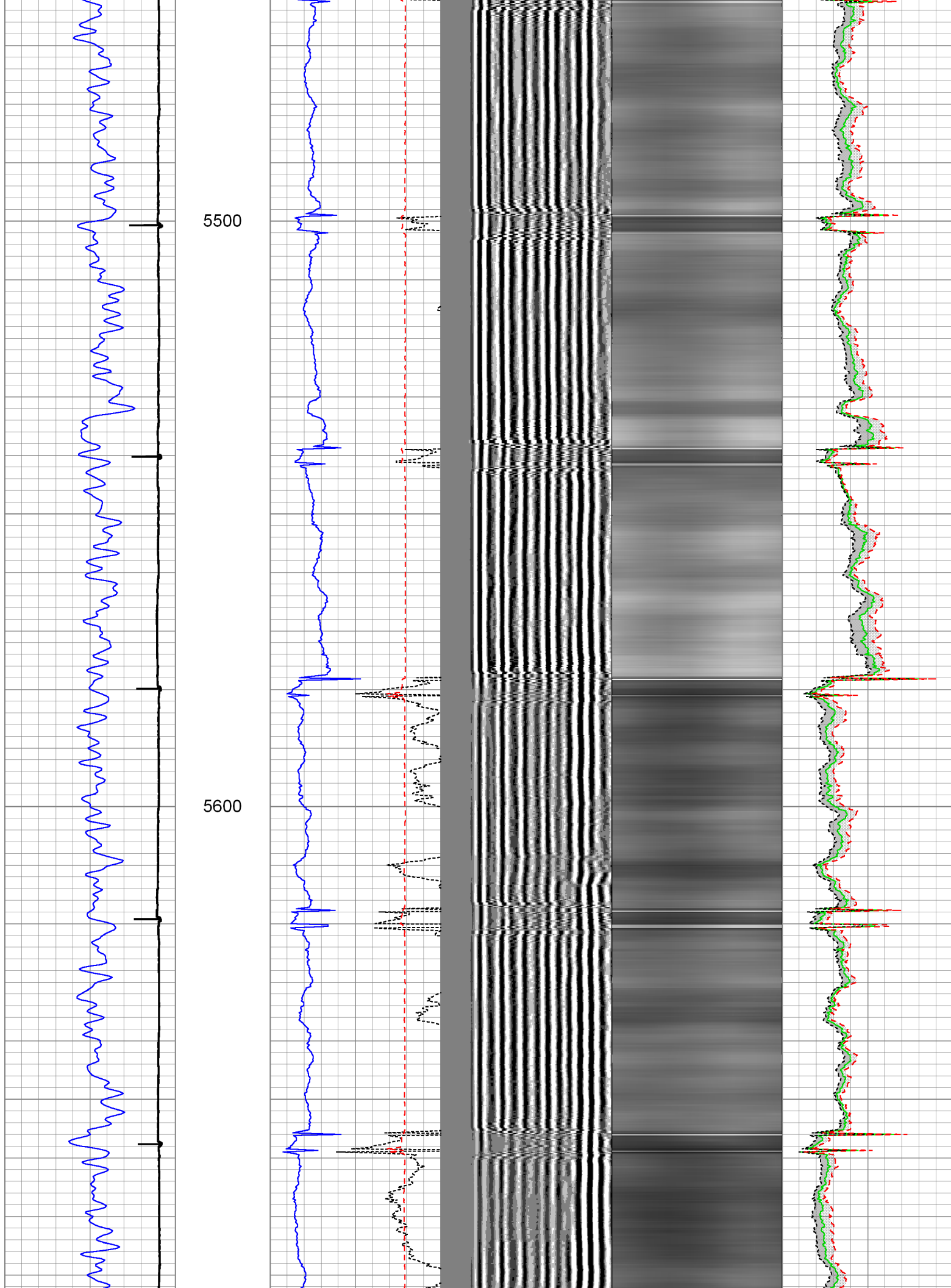
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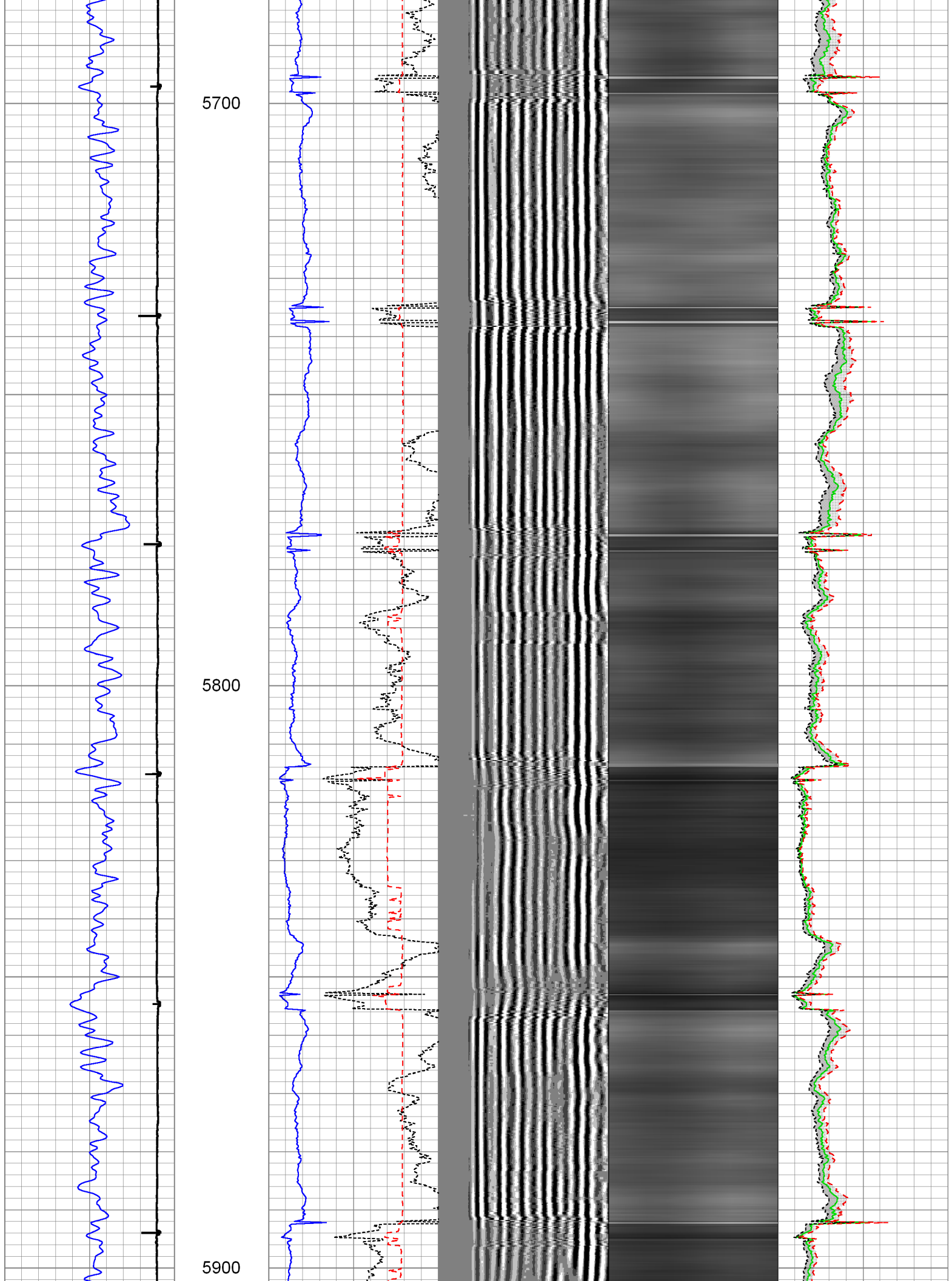
5600



5700

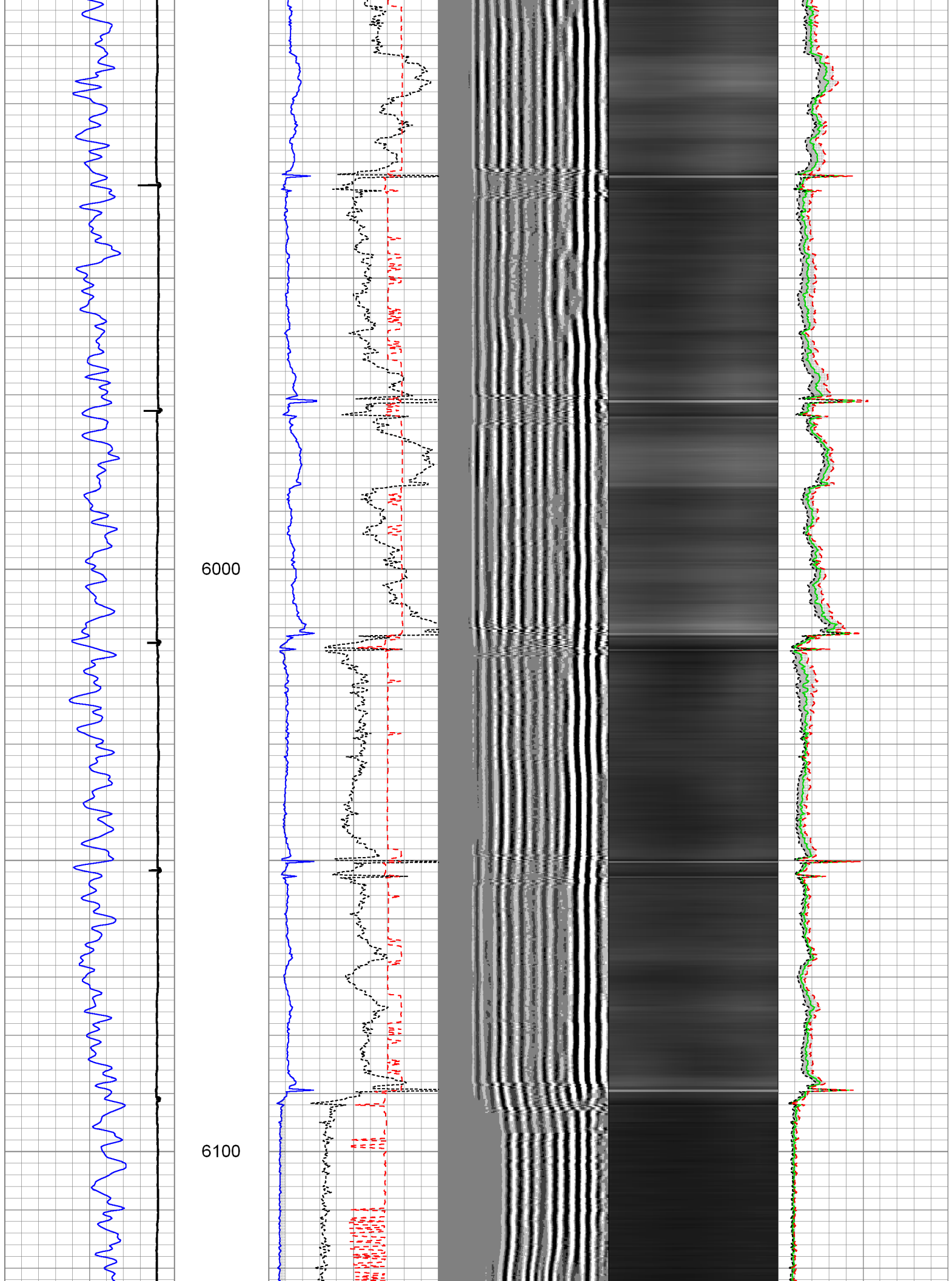
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5900



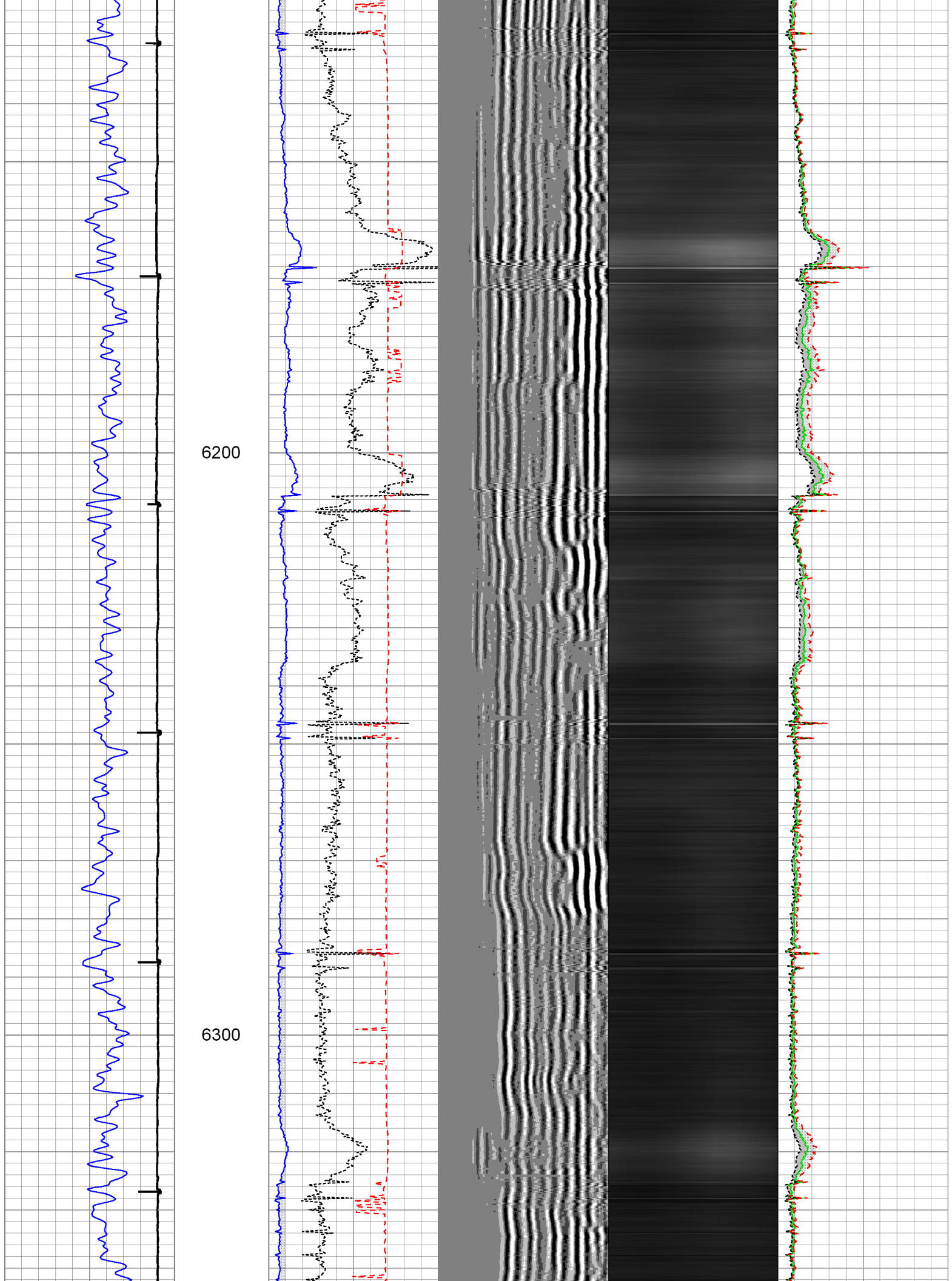
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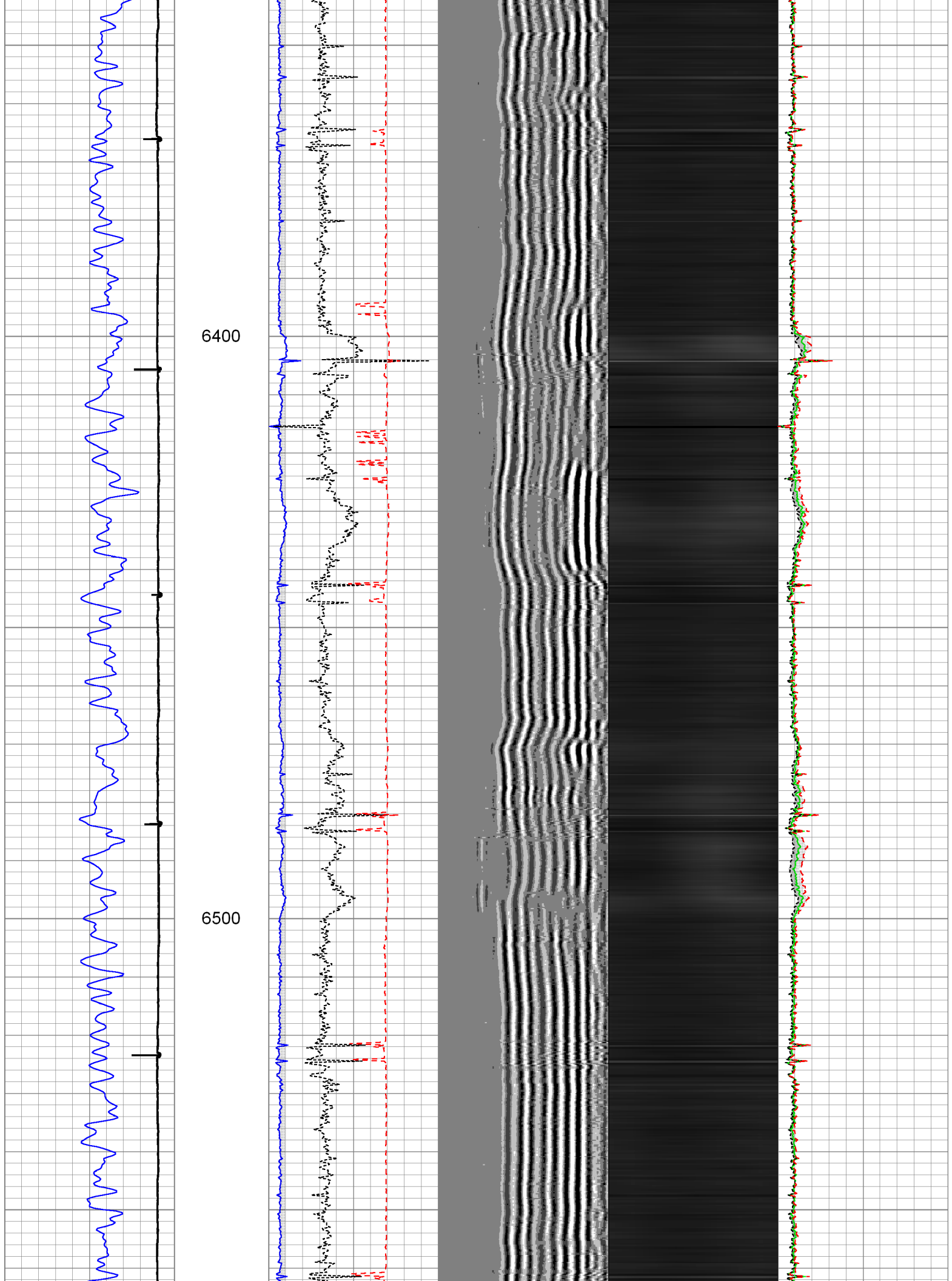
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6200

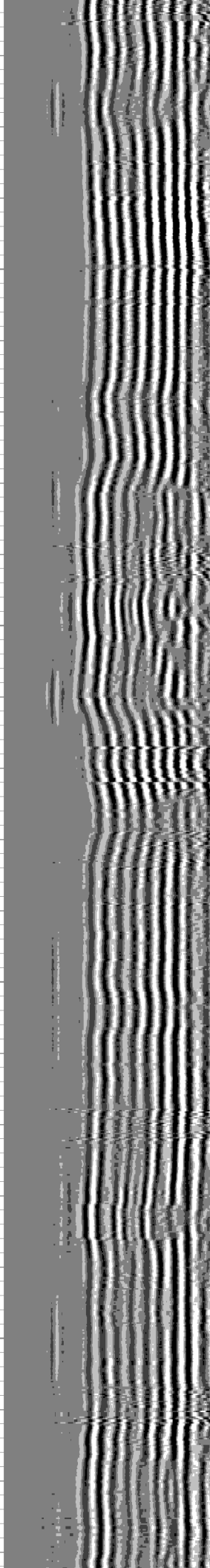
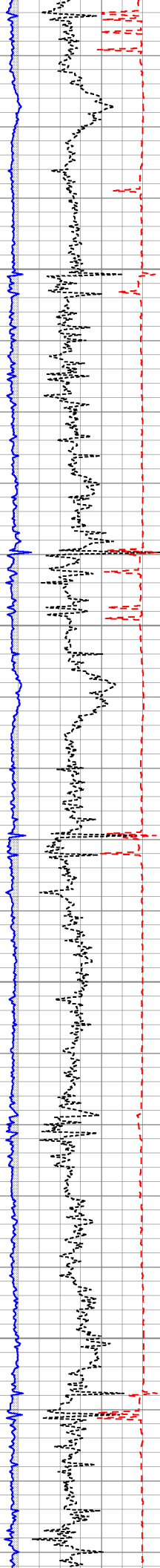
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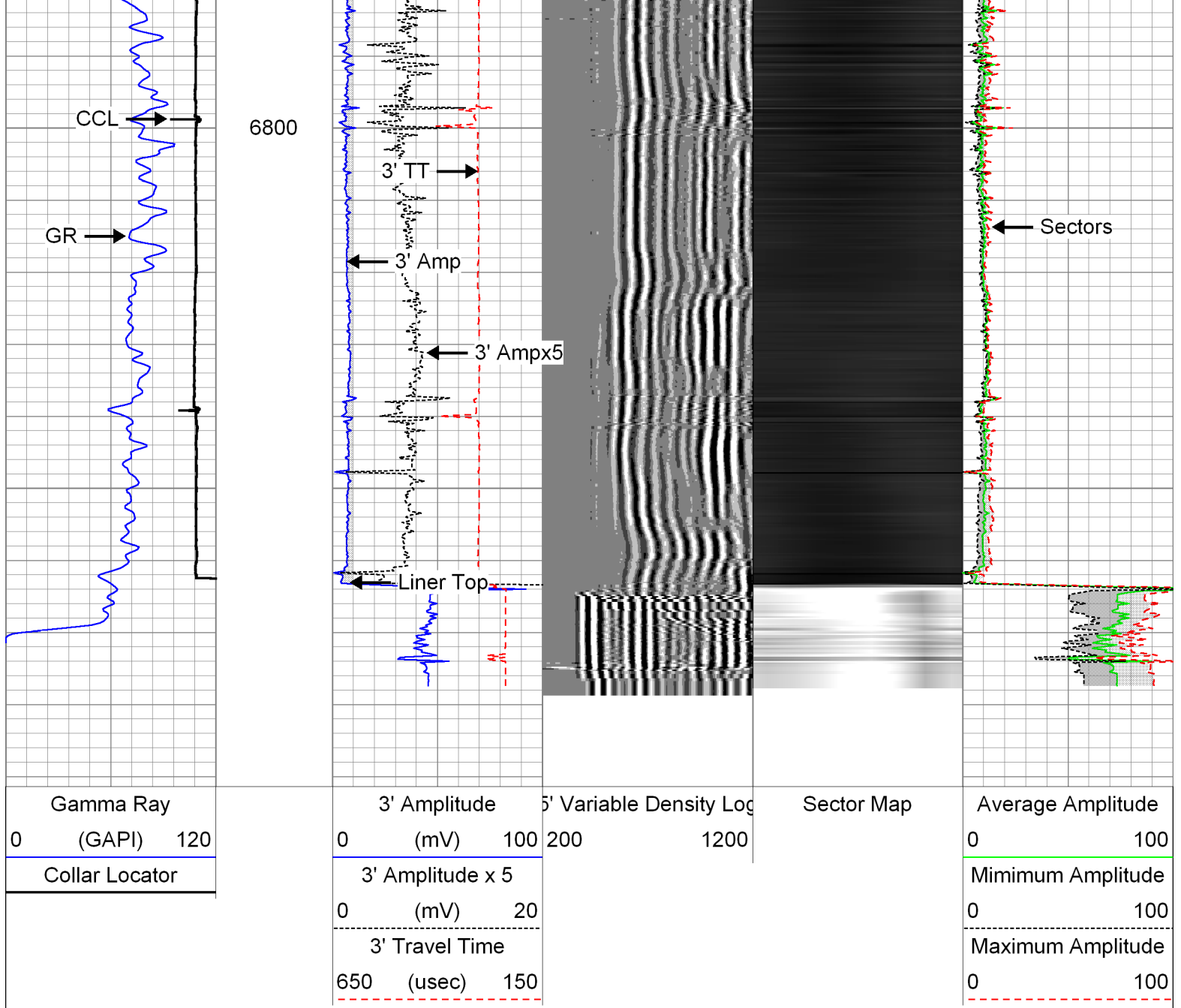




6600

6700

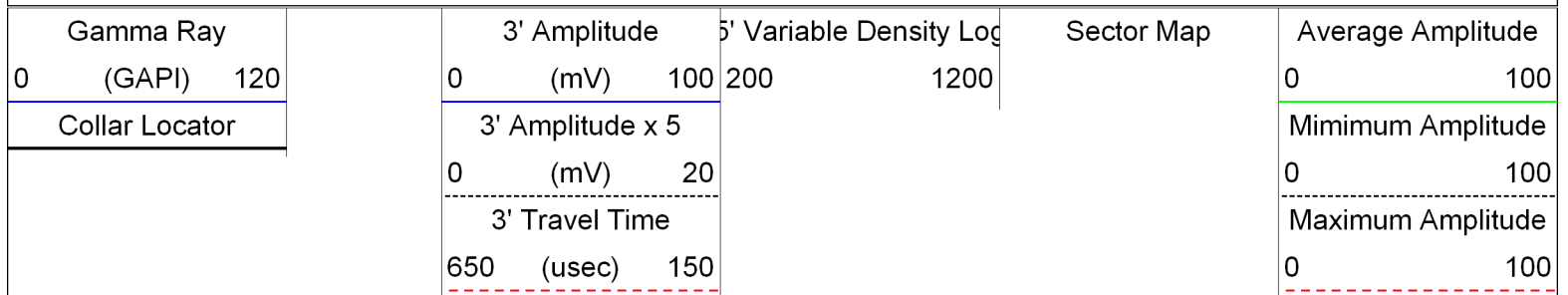




Main Pass in 4.5" Liner

Logged with 2500 PSI @ Surface

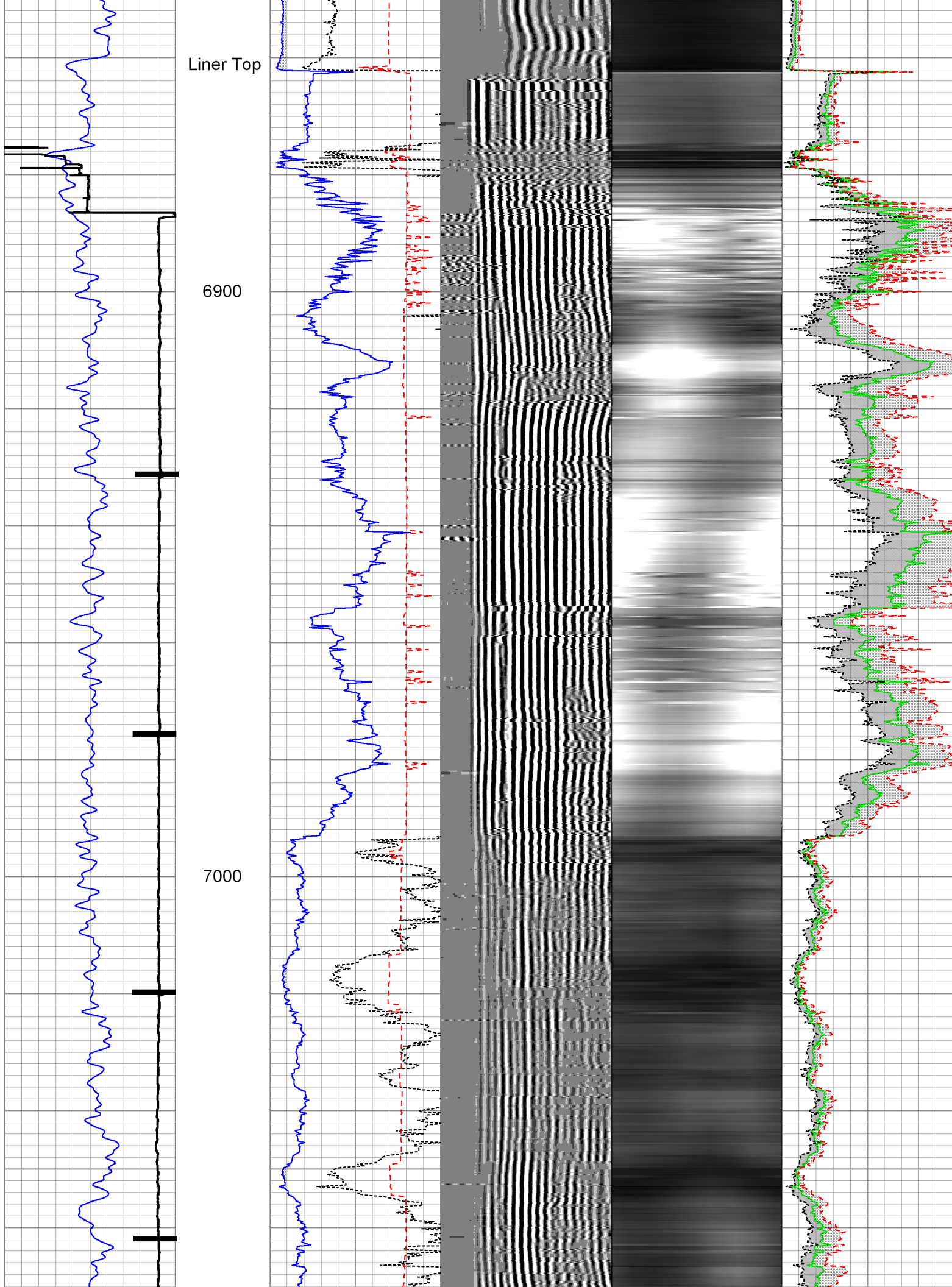
Database File: 0512338415_anadarko_grenemyer 36n-3hz_02-03-14_mit_rbl.db
 Dataset Pathname: main
 Presentation Format: rbt007
 Dataset Creation: Mon Feb 03 12:22:23 2014 by Log Sondex V7.03
 Charted by: Depth in Feet scaled 1:240



Liner Top

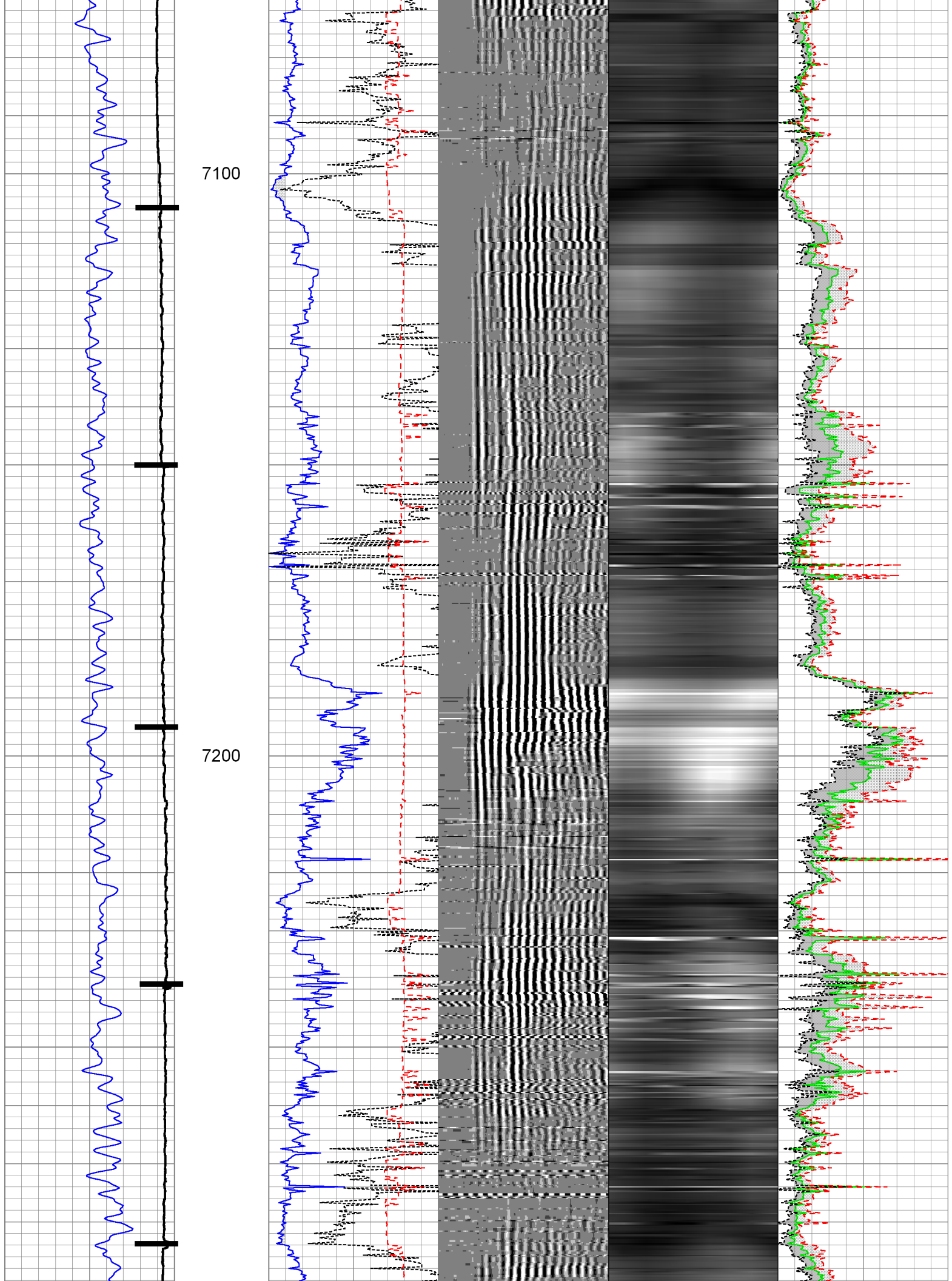
6900

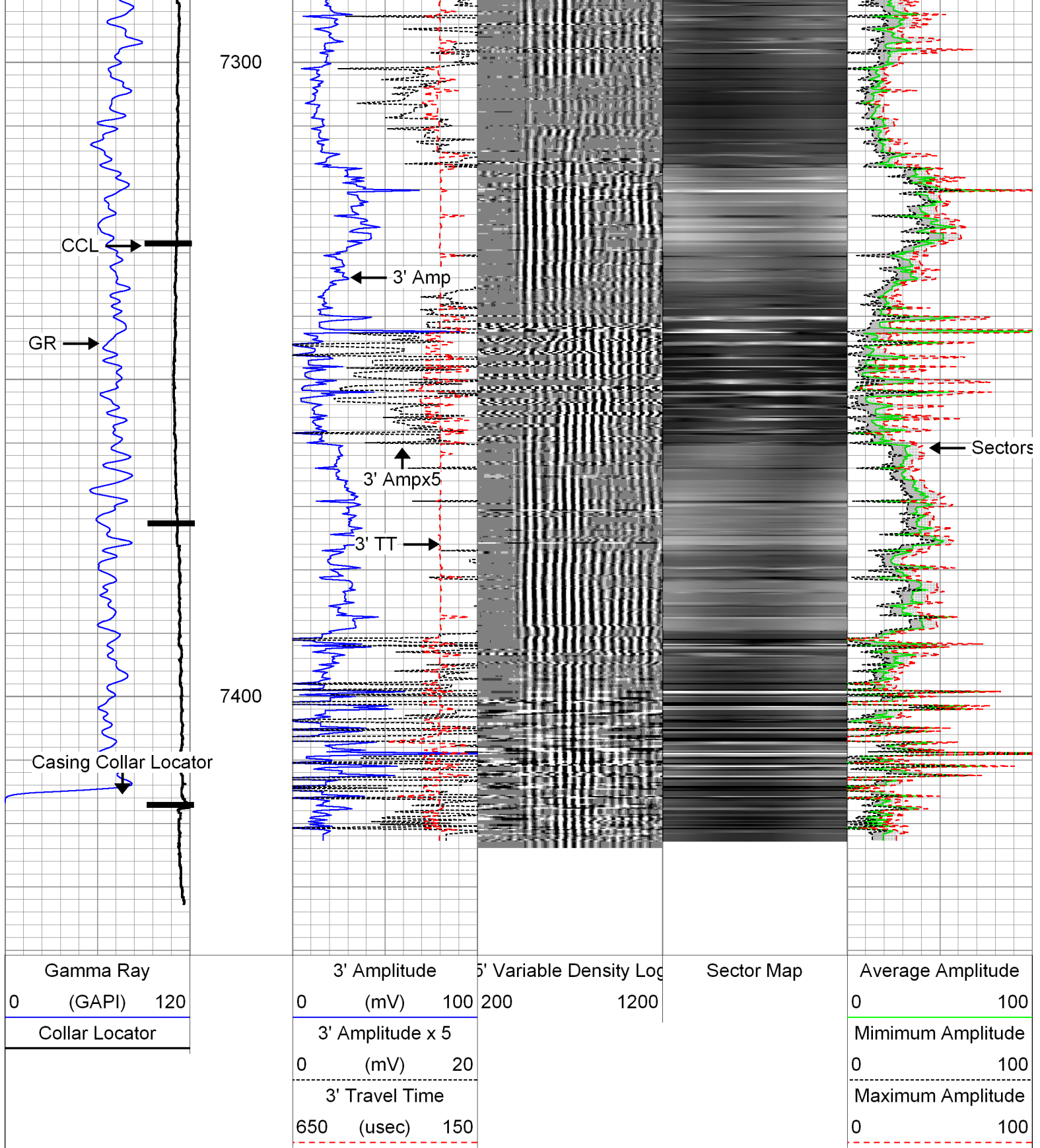
7000



7100

7200



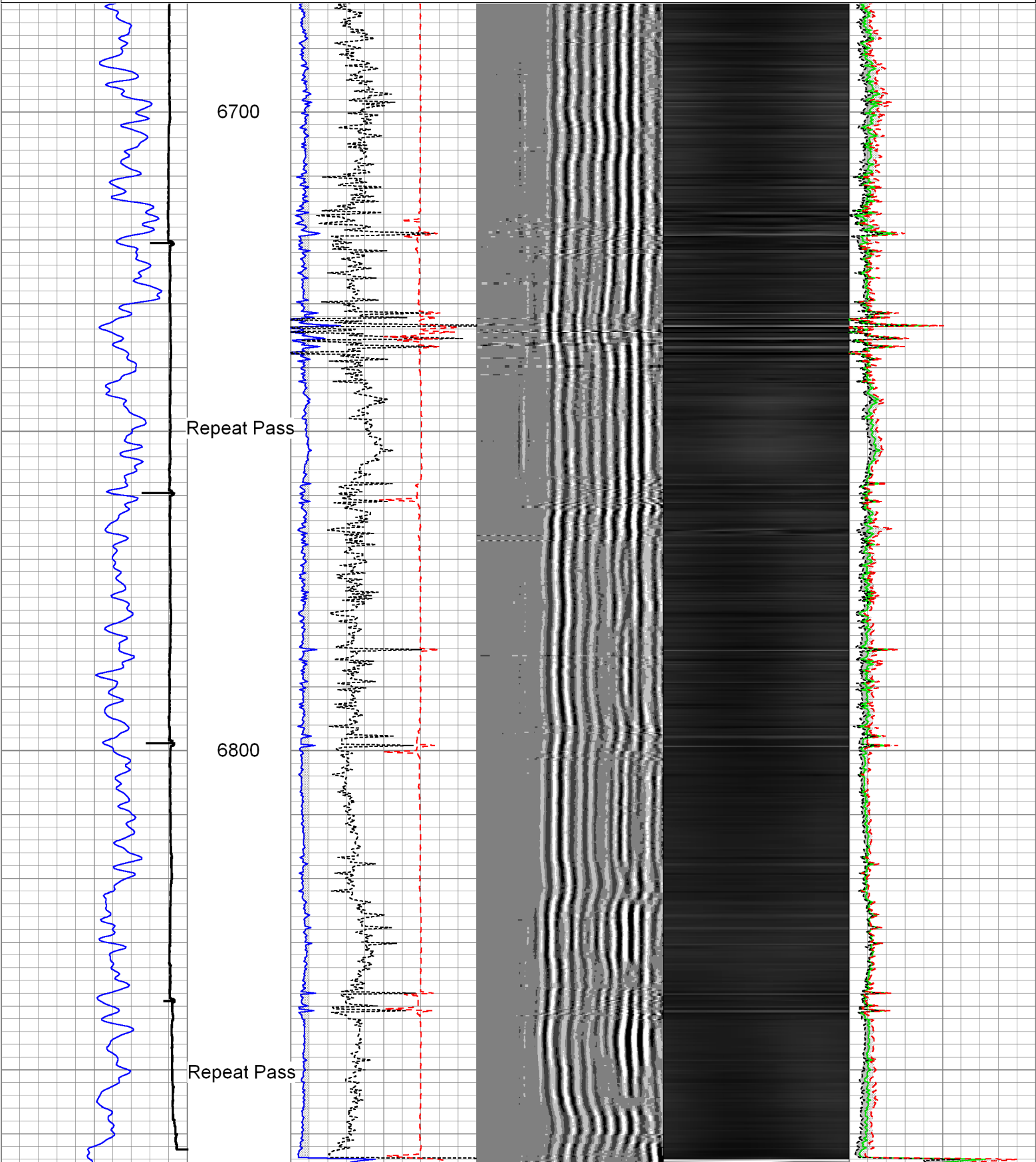


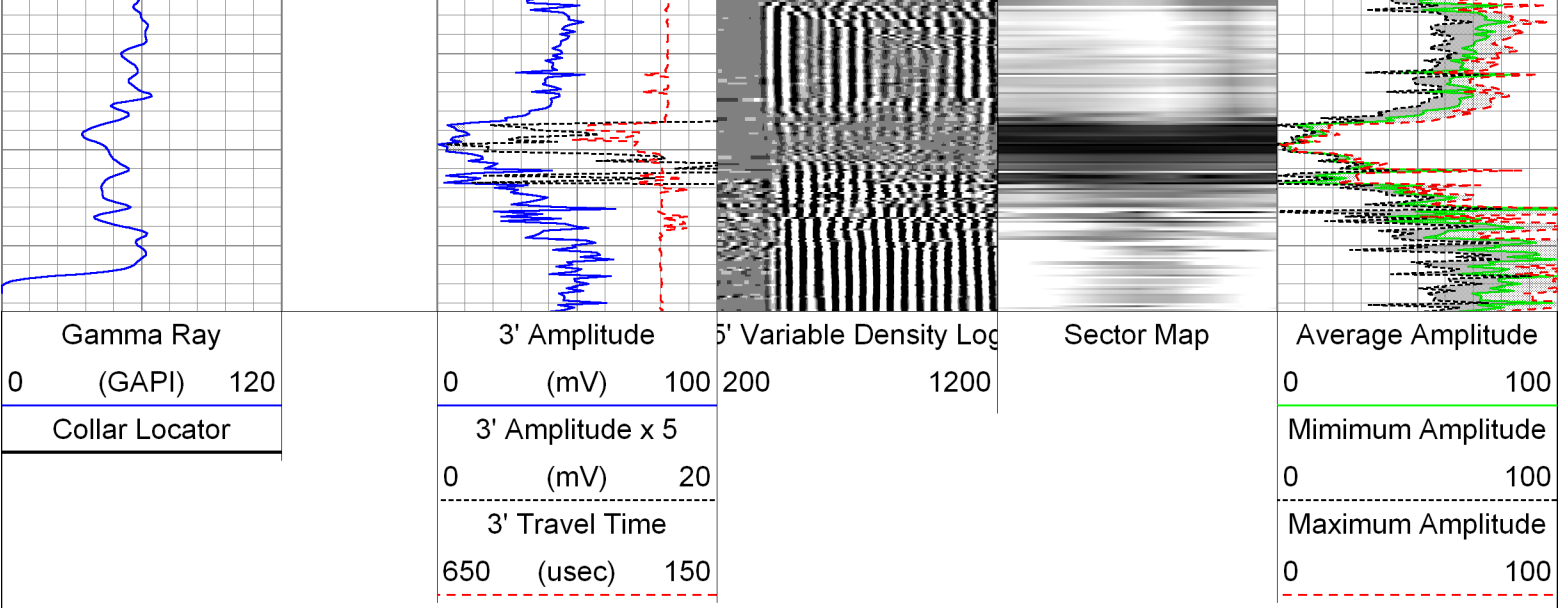
Repeat Pass

Logged with 2500 PSI @ Surface

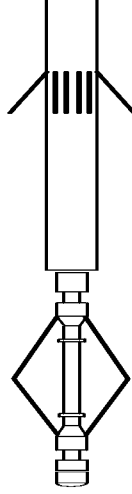
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 Dataset Pathname: repeat
 Presentation Format: rbt007
 Dataset Creation: Mon Feb 03 11:38:40 2014 by Log Sander V7.02

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





Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
GR	23.67		AES 1-7/16" Cablehead	1.08	1.44	1.00
			AGS-001 (219135) Adaptor GO to Sondex	0.21	1.69	1.00
			XTU-002 (051219) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
			PGR-020 (10013899) Production Gamma Ray	1.93	1.69	9.50
			PRC-057 (1101) 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00
WVF3FT	15.85		RBT-004 (10013454in7) Radial Bond Tool (UW 3 1/8)	9.47	3.13	140.00
WVFS1	15.85					
WVFS2	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		PRC-057 (1102) 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00

MIT	5.41		MIT-027 (218950) 40 Multifinger Imaging Tool	4.54	2.75	61.10
			PRC-057 (1038) 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00
TSTAMP	0.00		BUL-006 (219228) Bullnose Terminator	0.22	1.69	1.20
Dataset: 0512338415_anadarko_grenemyer 36n-3hz_02-03-14_mit_rbl.db: field/well/run1/main2 Total Length: 27.97 ft Total Weight: 316.30 lb O.D.: 3.13 in						

Calibration Report			
Database File:	0512338415_anadarko_grenemyer 36n-3hz_02-03-14_mit_rbl.db		
Dataset Pathname:	main2		
Dataset Creation:	Mon Feb 03 12:53:51 2014 by Log Sondex V7.03		
Multi-finger Imaging Tool Calibration Report			
Serial Number:		218950	
Number of Fingers:		40	
Tool Model:		027	
Inclinometer Calibration Report			
Performed:		Fri, Oct, 10 10:41:51 2008	
Calibration Angle:		45	
		Inc X	Inc Y
Vertical:		1996	1975
Finger 1 up:		2238	2226
Finger 31 up:		1760	2216
Finger 21 up:		1769	1745
Finger 11 up:		2250	1738
Sensitivity ratio:	1.00023		
X-axis angle:	314.283		
Deviation const.:	339.139		

Finger Calibration Report							
				Performed: Mon Feb 03 08:58:22 2014			
Ring size:	4	5	6	7			
(in)							
	Sens	Sens	Sens				
Finger 01:	1399 273.0	1672 261.0	1933 307.0	2240			
Finger 02:	1589 255.0	1844 240.0	2084 275.0	2359			
Finger 03:	1524 288.0	1812 269.0	2081 309.0	2390			
Finger 04:	1555 274.0	1829 255.0	2084 292.0	2376			
Finger 05:	1591 263.0	1854 240.0	2094 272.0	2366			
Finger 06:	1585 275.0	1860 251.0	2111 285.0	2396			
Finger 07:	1573 284.0	1857 261.0	2118 286.0	2404			
Finger 08:	1623 261.0	1884 236.0	2120 259.0	2379			
Finger 09:	1558 301.0	1859 275.0	2134 293.0	2427			
Finger 10:	1603 285.0	1888 261.0	2149 267.0	2416			
Finger 11:	1580 285.0	1865 271.0	2136 275.0	2411			
Finger 12:	1555 301.0	1856 291.0	2147 292.0	2439			
Finger 13:	1567 291.0	1858 282.0	2140 272.0	2412			

Finger 14:	1561	292.0	1853	293.0	2146	280.0	2426
Finger 15:	1547	291.0	1838	298.0	2136	282.0	2418
Finger 16:	1549	289.0	1838	304.0	2142	284.0	2426
Finger 17:	1540	287.0	1827	308.0	2135	285.0	2420
Finger 18:	1586	272.0	1858	294.0	2152	264.0	2416
Finger 19:	1603	261.0	1864	285.0	2149	258.0	2407
Finger 20:	1478	280.0	1758	321.0	2079	293.0	2372
Finger 21:	1437	285.0	1722	333.0	2055	304.0	2359
Finger 22:	1489	278.0	1767	325.0	2092	296.0	2388
Finger 23:	1540	255.0	1795	301.0	2096	272.0	2368
Finger 24:	1527	254.0	1781	307.0	2088	288.0	2376
Finger 25:	1505	265.0	1770	319.0	2089	296.0	2385
Finger 26:	1441	269.0	1710	323.0	2033	307.0	2340
Finger 27:	1441	261.0	1702	317.0	2019	305.0	2324
Finger 28:	1474	269.0	1743	314.0	2057	305.0	2362
Finger 29:	1457	264.0	1721	306.0	2027	306.0	2333
Finger 30:	1471	262.0	1733	310.0	2043	313.0	2356
Finger 31:	1532	230.0	1762	267.0	2029	269.0	2298
Finger 32:	1496	255.0	1751	294.0	2045	307.0	2352
Finger 33:	1468	262.0	1730	290.0	2020	299.0	2319
Finger 34:	1472	267.0	1739	295.0	2034	313.0	2347
Finger 35:	1471	259.0	1730	284.0	2014	311.0	2325
Finger 36:	1684	249.0	1933	257.0	2190	284.0	2474
Finger 37:	1310	258.0	1568	268.0	1836	309.0	2145
Finger 38:	1479	273.0	1752	270.0	2022	310.0	2332
Finger 39:	1449	271.0	1720	268.0	1988	311.0	2299
Finger 40:	1563	277.0	1840	264.0	2104	302.0	2406

Segmented Cement Bond Log Calibration Report

Serial Number:	10013454in7
Tool Model:	004
Calibration Casing Diameter:	7.000 in
Calibration Depth:	-6.076 ft

Master Calibration, performed Mon Feb 03 09:01:34 2014:							
	Raw (v)		Calibrated (mv)		Results		
	Zero	Cal	Zero	Cal	Gain	Offset	
3FT	-0.003	0.732	0.800	62.165	83.574	1.029	
5FT	-0.004	0.767	0.800	62.165	79.640	1.092	
S1	-0.002	0.701	0.000	100.000	142.200	0.347	
S2	-0.004	0.770	0.000	100.000	129.232	0.517	
S3	-0.004	0.819	0.000	100.000	121.516	0.441	
S4	-0.004	0.816	0.000	100.000	121.983	0.494	
S5	-0.002	0.759	0.000	100.000	131.261	0.320	
S6	-0.004	0.695	0.000	100.000	143.185	0.524	
S7	-0.002	0.646	0.000	100.000	154.252	0.377	
S8	-0.003	0.653	0.000	100.000	152.466	0.409	

Gamma Ray Calibration Report

Serial Number:	10013899
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	Grenemyer 36N-3HZ
Field	Wattenberg
County	Weld
State	Colorado