



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company		Kerr McGee Oil & Gas Onshore LP	
Well		Kerr 14C-25HZ	
Field		Wattenberg	
County		Weld	
State		Colorado	
Location:		API #: 05-123-38978	
SEC 13 TWP 2N RGE 67W		Other Services Gauge ring MIT	
Permanent Datum		Ground Level	
Log Measured From		Kelly Bushing	
Drilling Measured From		Kelly Bushing	
Elevation		4885'	
K.B. 4901'		D.F. 4900'	
G.L. 4885'			
Date		05-Feb-2015	
Run Number		Two	
Depth Driller		17.817 FT	
Depth Logger		6821 FT	
Bottom Logged Interval		6805 FT	
Top Log Interval		Surface	
Open Hole Size		9.625"	
Type Fluid		Water	
Density / Viscosity		8.34 lbm/gl	
Max. Recorded Temp.		208° F	
Estimated Cement Top		Surface	
Time Well Ready		R.O.A.	
Time Logger on Bottom		8:21	
Equipment Number		HD-0119	
Location		Ft. Lupton, CO	
Recorded By		E. Vaughn	
Witnessed By		Randy Anderson	
Borehole Record		Tubing Record	
Run Number		Bit	
From		To	
Size		Weight	
From		To	
Casing Record		Size (in)	
Surface Casing		9-5/8	
Intermediate #1		7	
Intermediate #2		4.5	
Liner		11.6	
Wgt (lbs/ft)		Grade	
36		J-55	
26		HCP-110	
HCP-110		Surface	
6647 FT		7866 FT	
17.813 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.
Depth referenced to Casing Tally reported liner top at 6647 FT.
Adjusted -3 FT to correlate to liner top.
Log ran as deep as possible to surface.
Log ran with 2800 PSI surface induced pressure.
Gauge ring stacked out @ 6845 FT
Log ran from 6820 FT

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



7" Main Pass

Recorded with 2800 PSI Surface Induced Pressure

Database File:0512338978_anadarko_kerr 14c-25hz_02-05-15_mit_rbl.db

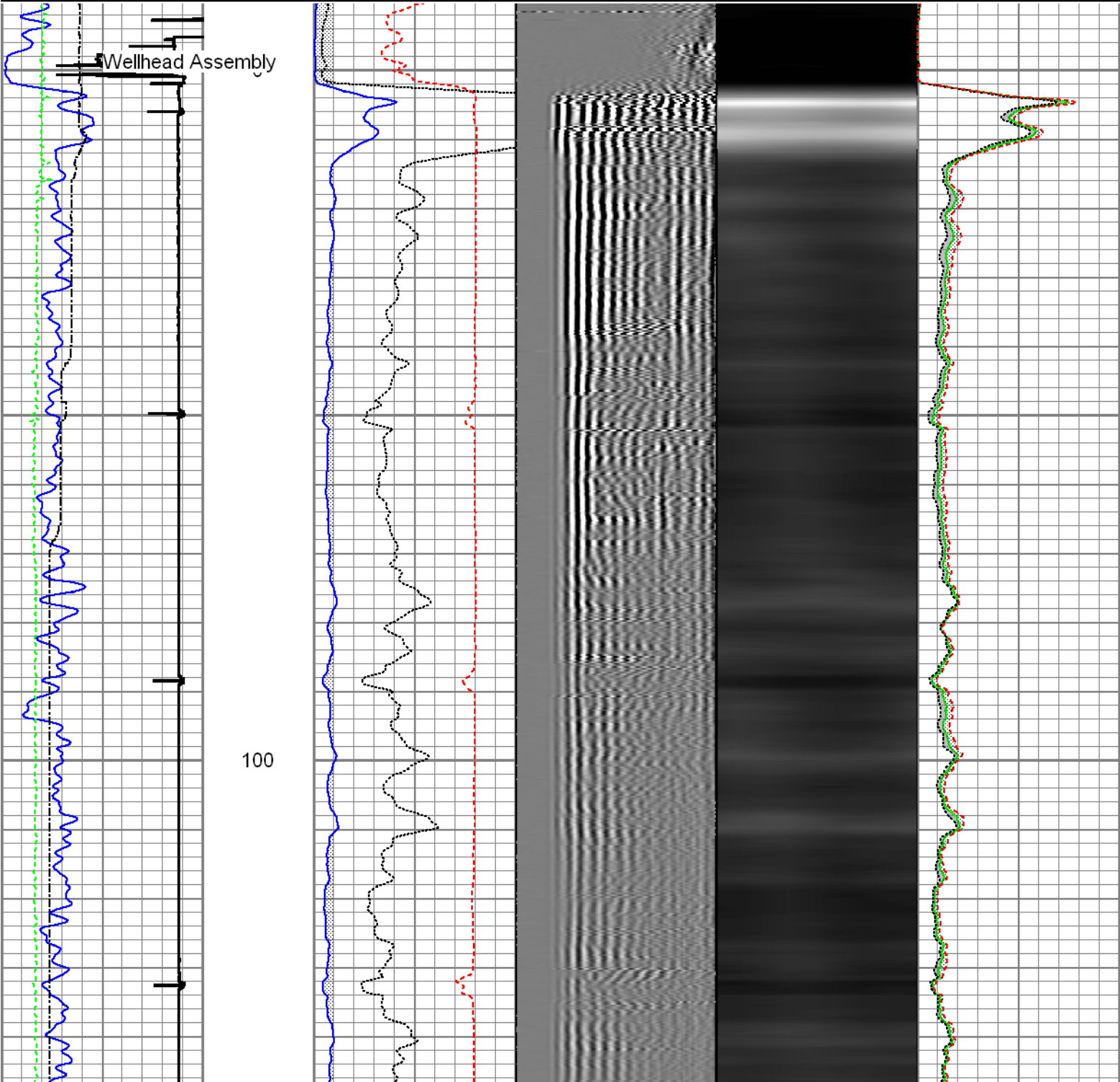
Dataset Pathname:7main1

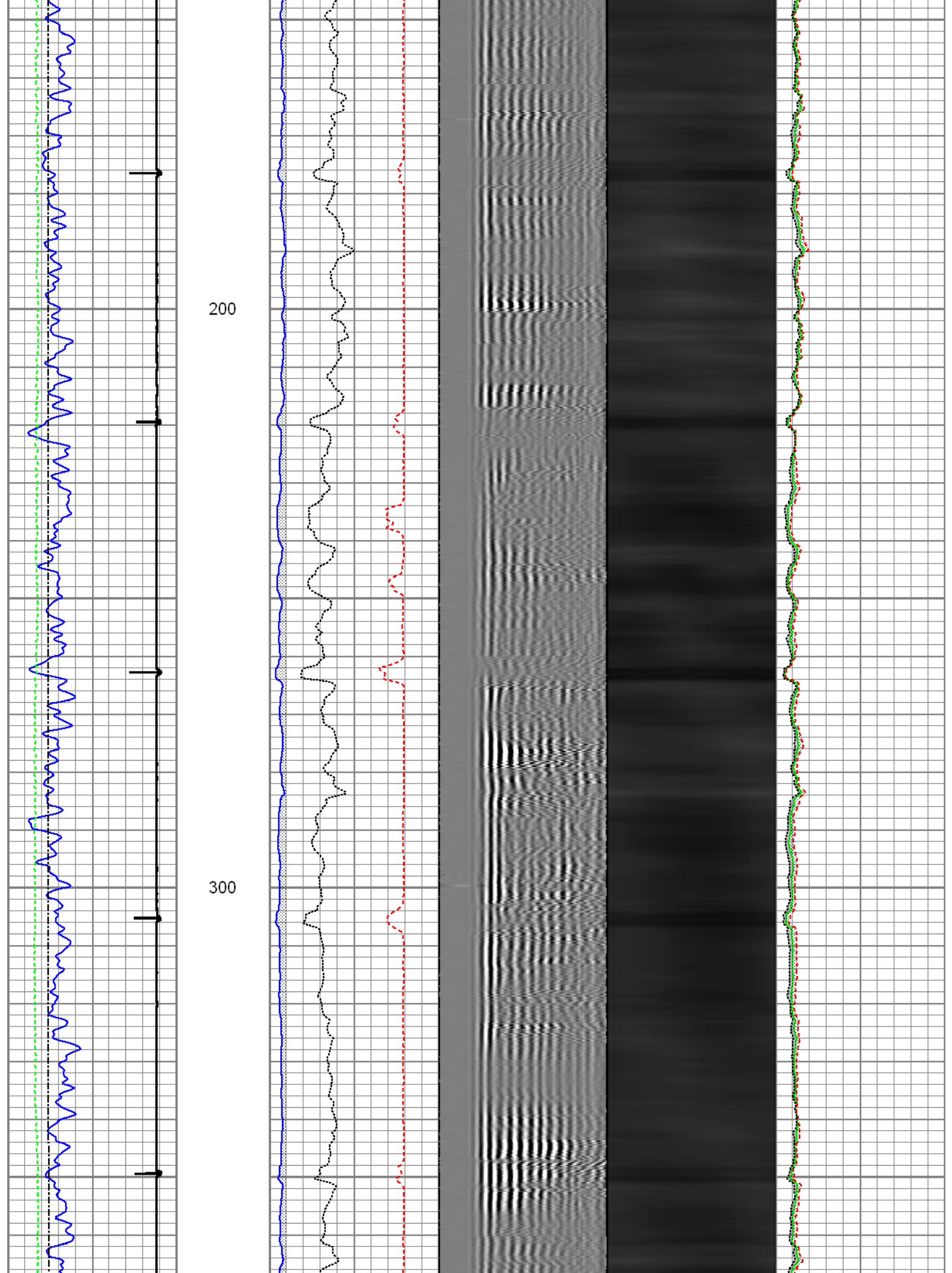
Presentation Format:rbt4_mit

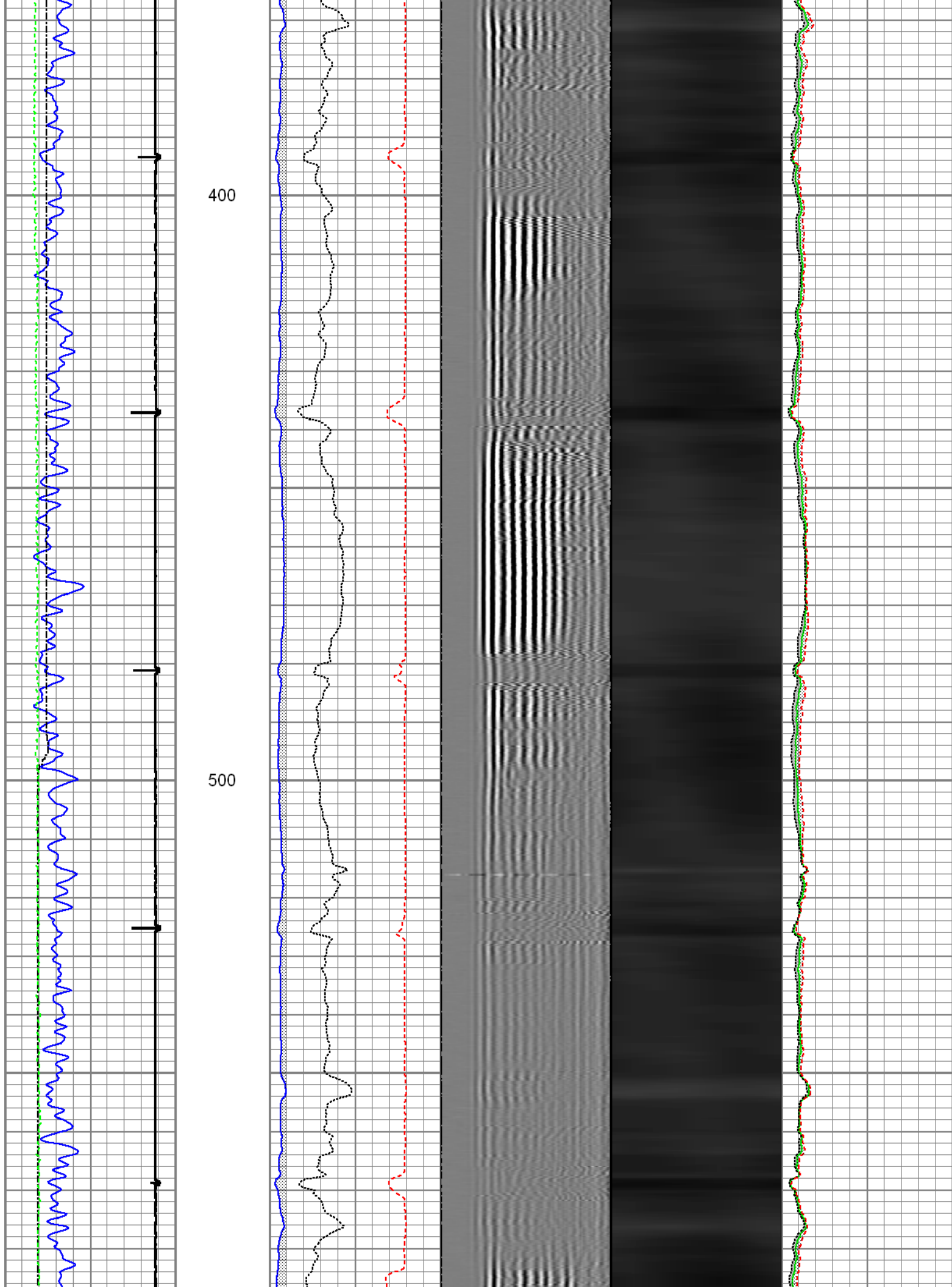
Dataset Creation:Fri Feb 06 08:49:11 2015 by Log 7.0 B1

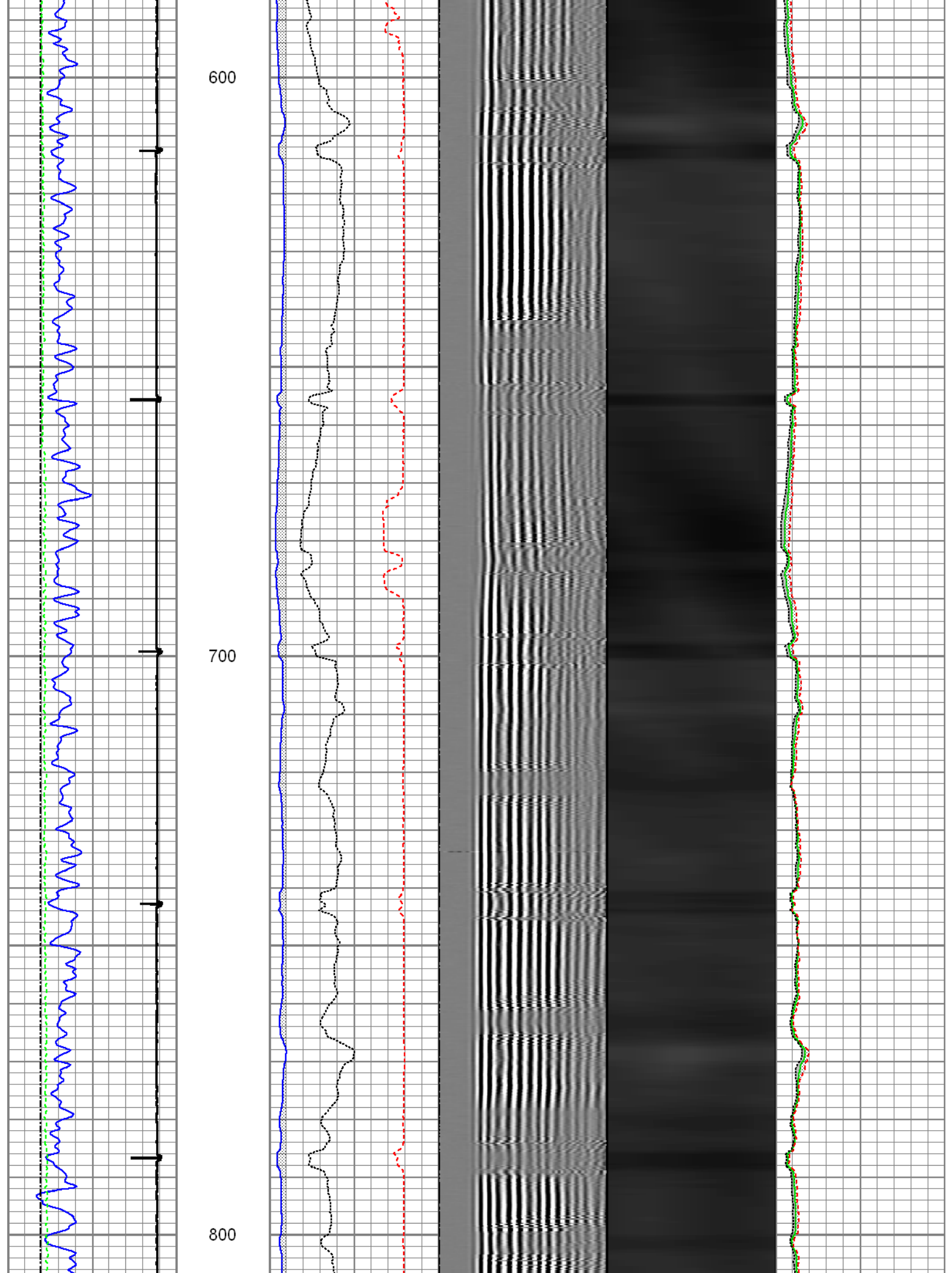
Charted by:Depth in Feet scaled 1:240

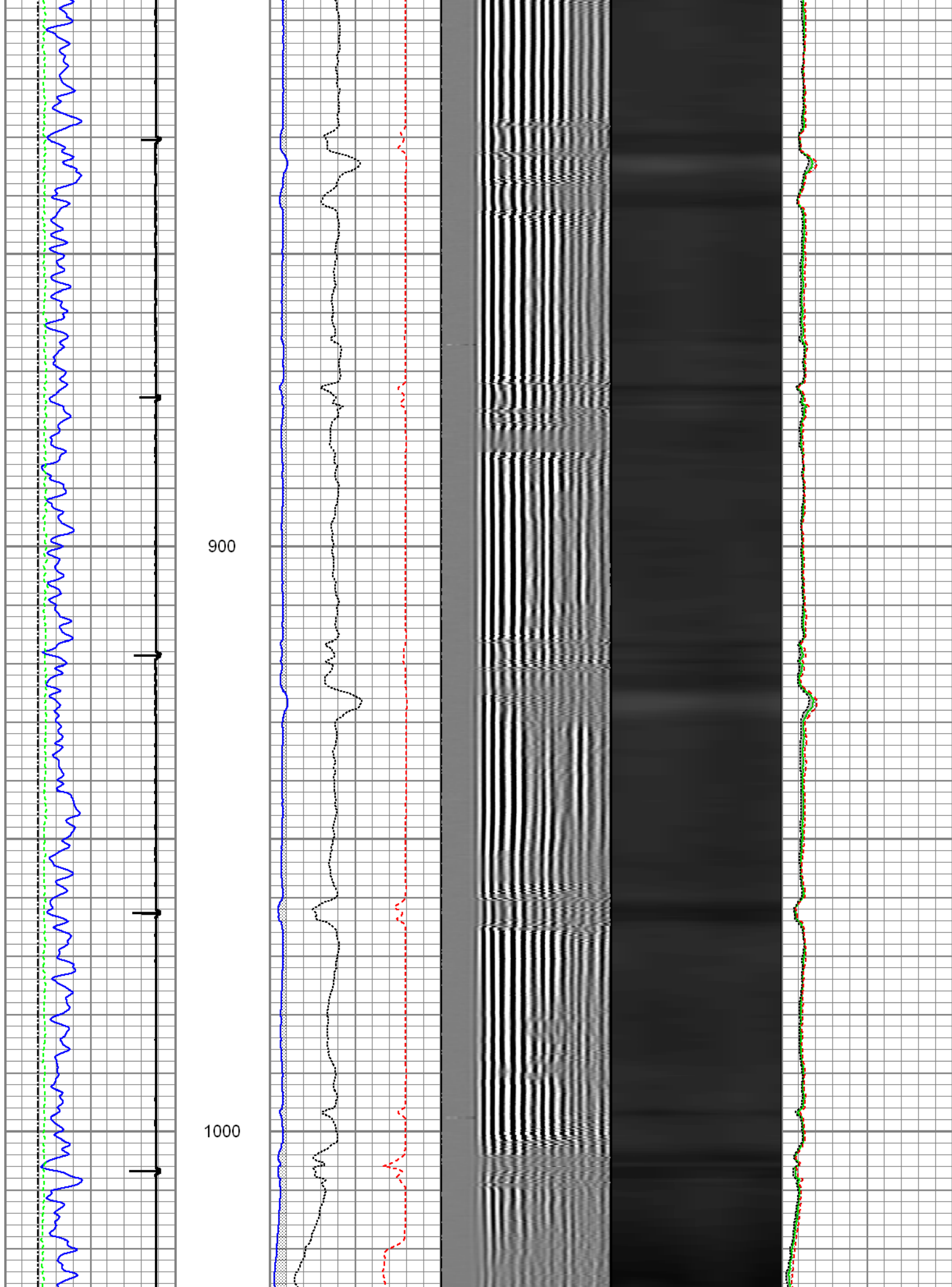
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
Line Speed	0 (mV) 20			0 100
-100 (ft/min) 100	3' Travel Time			Maximum Amplitude
Line Tension	650 (usec) 150			0 100
0 (lb) 2000				

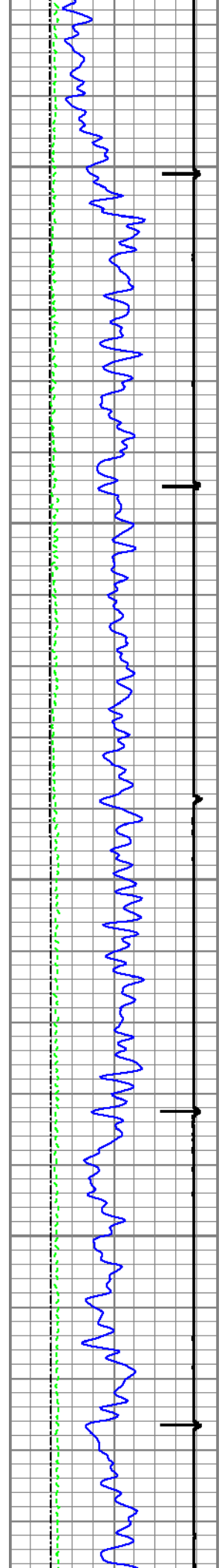






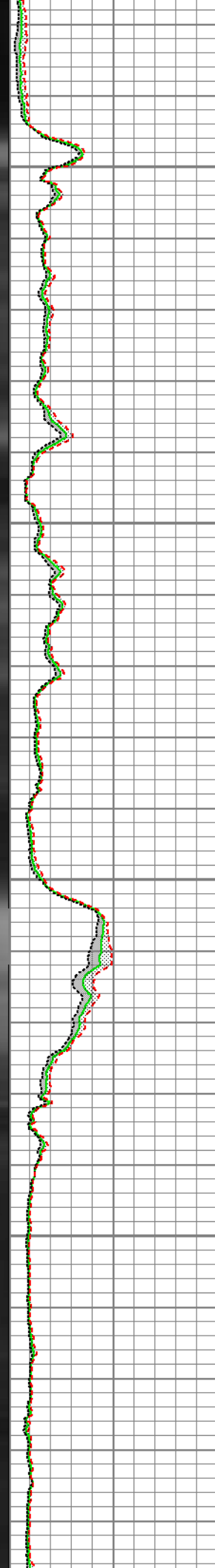
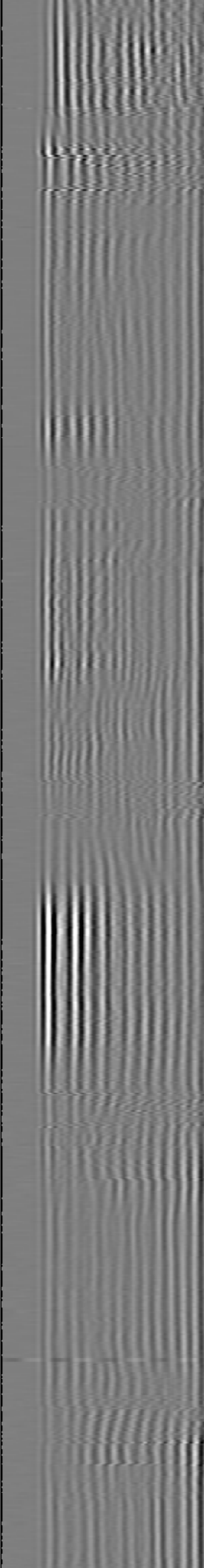
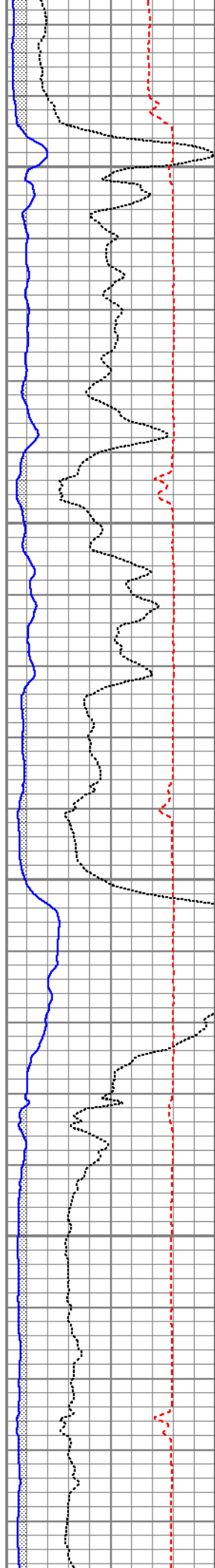


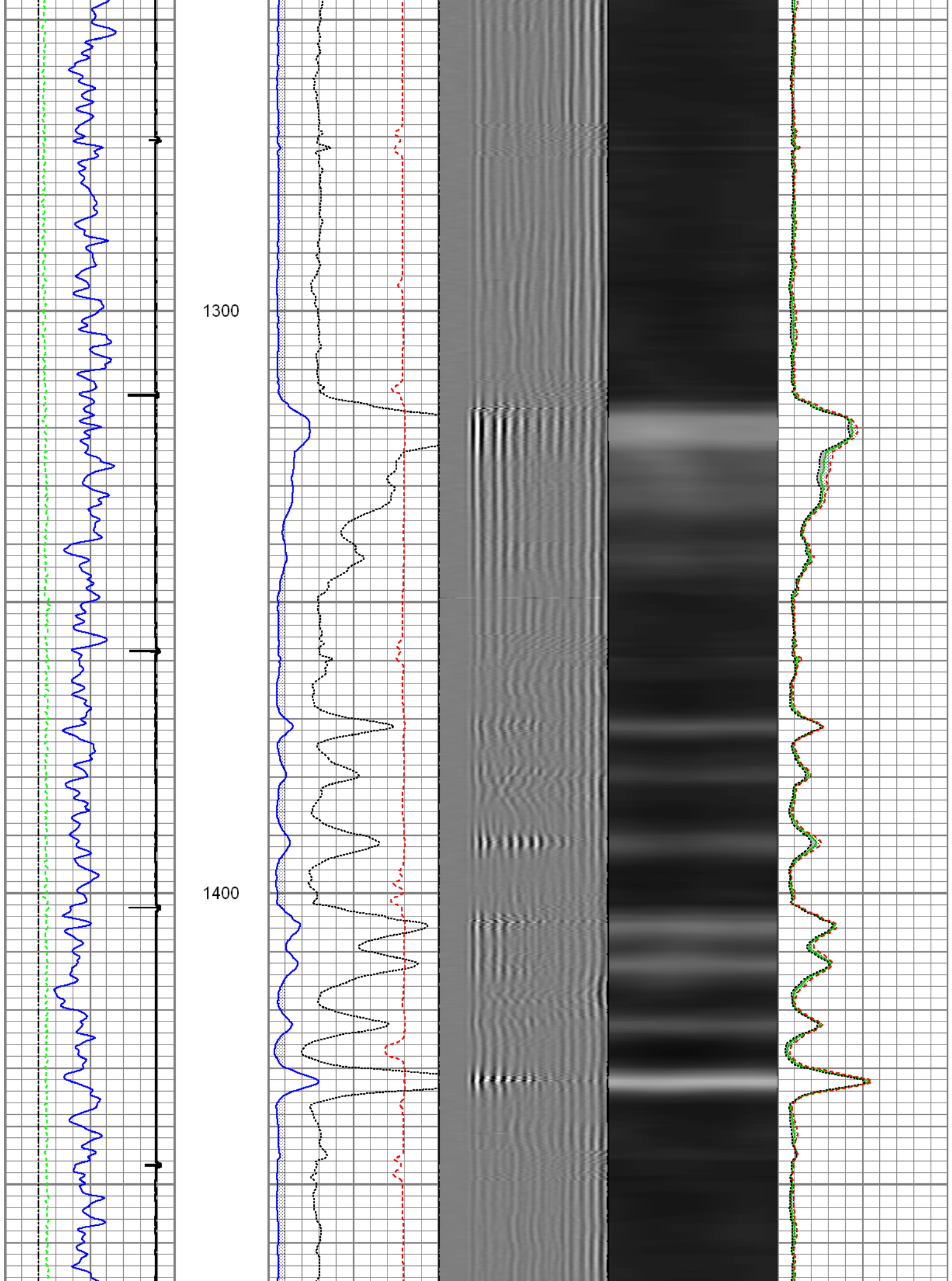


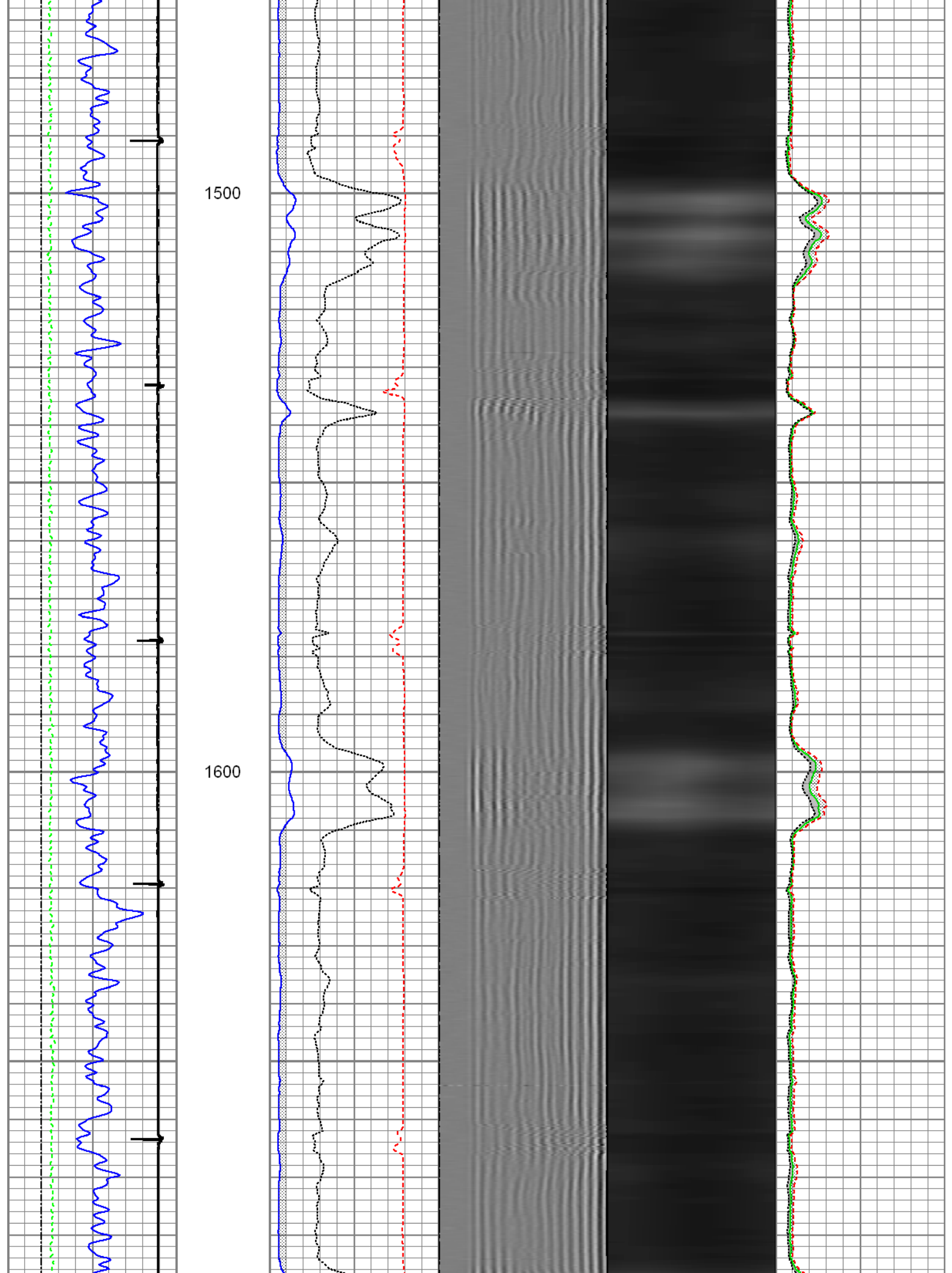


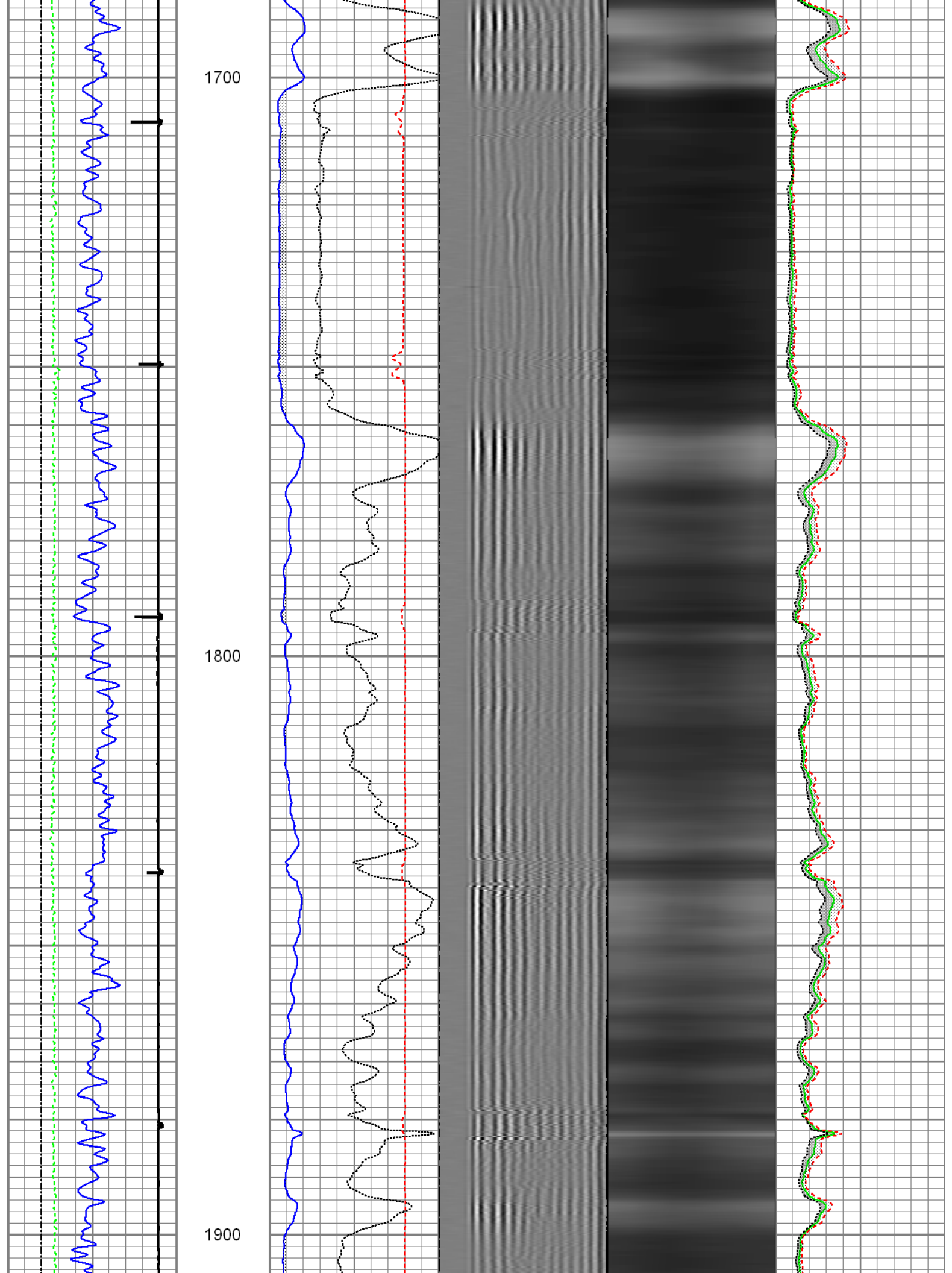
1100

1200



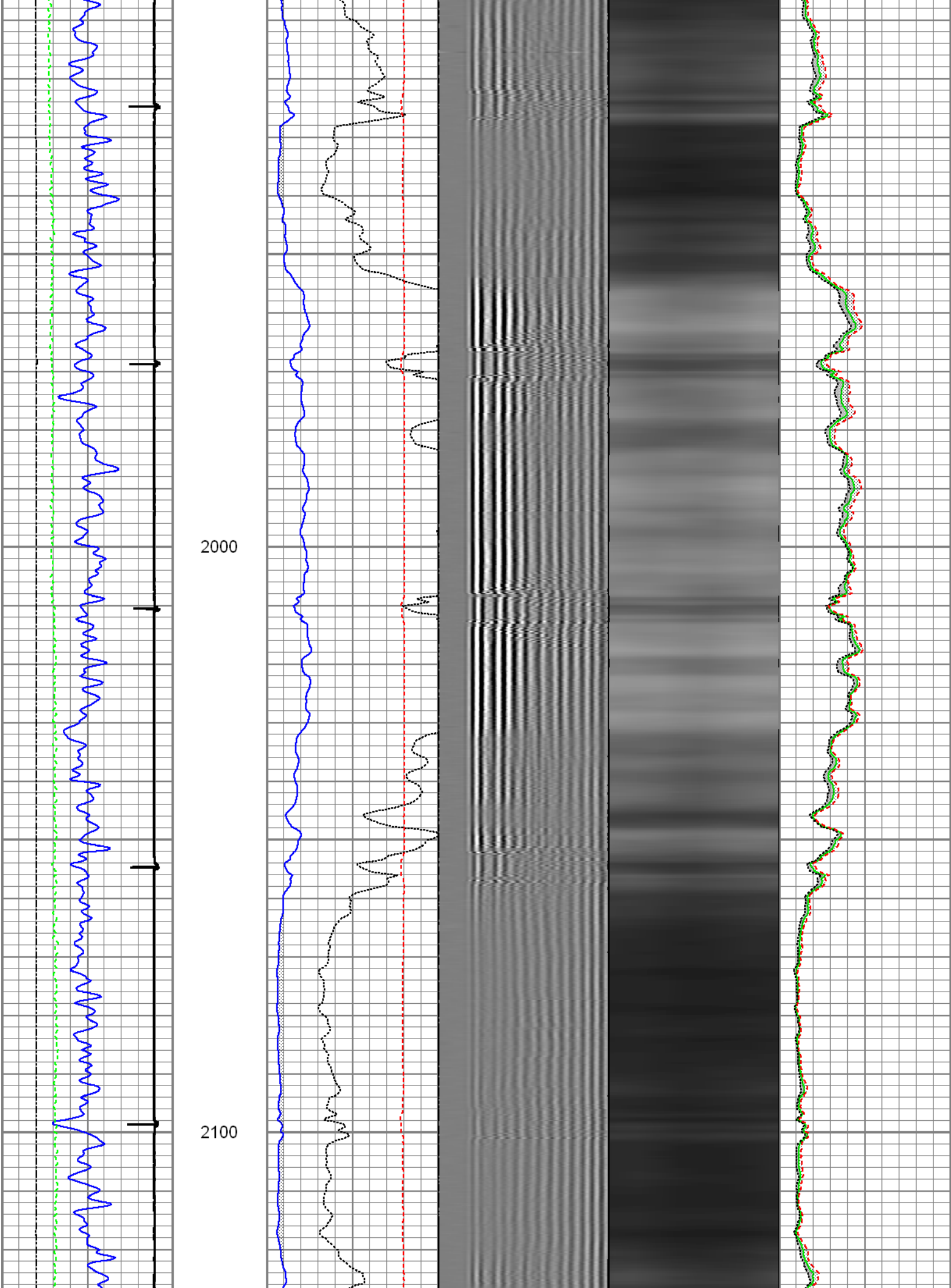






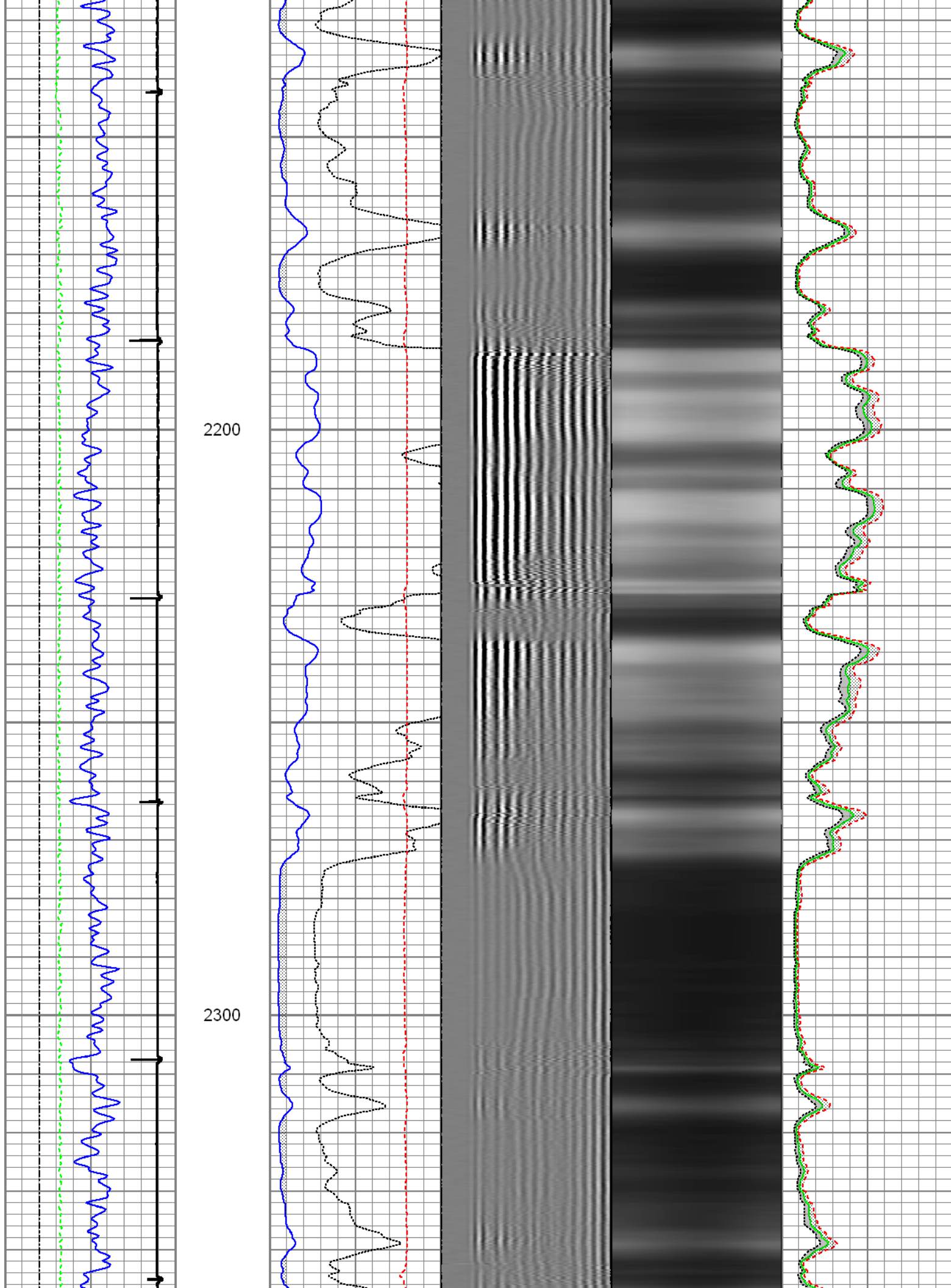
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2100



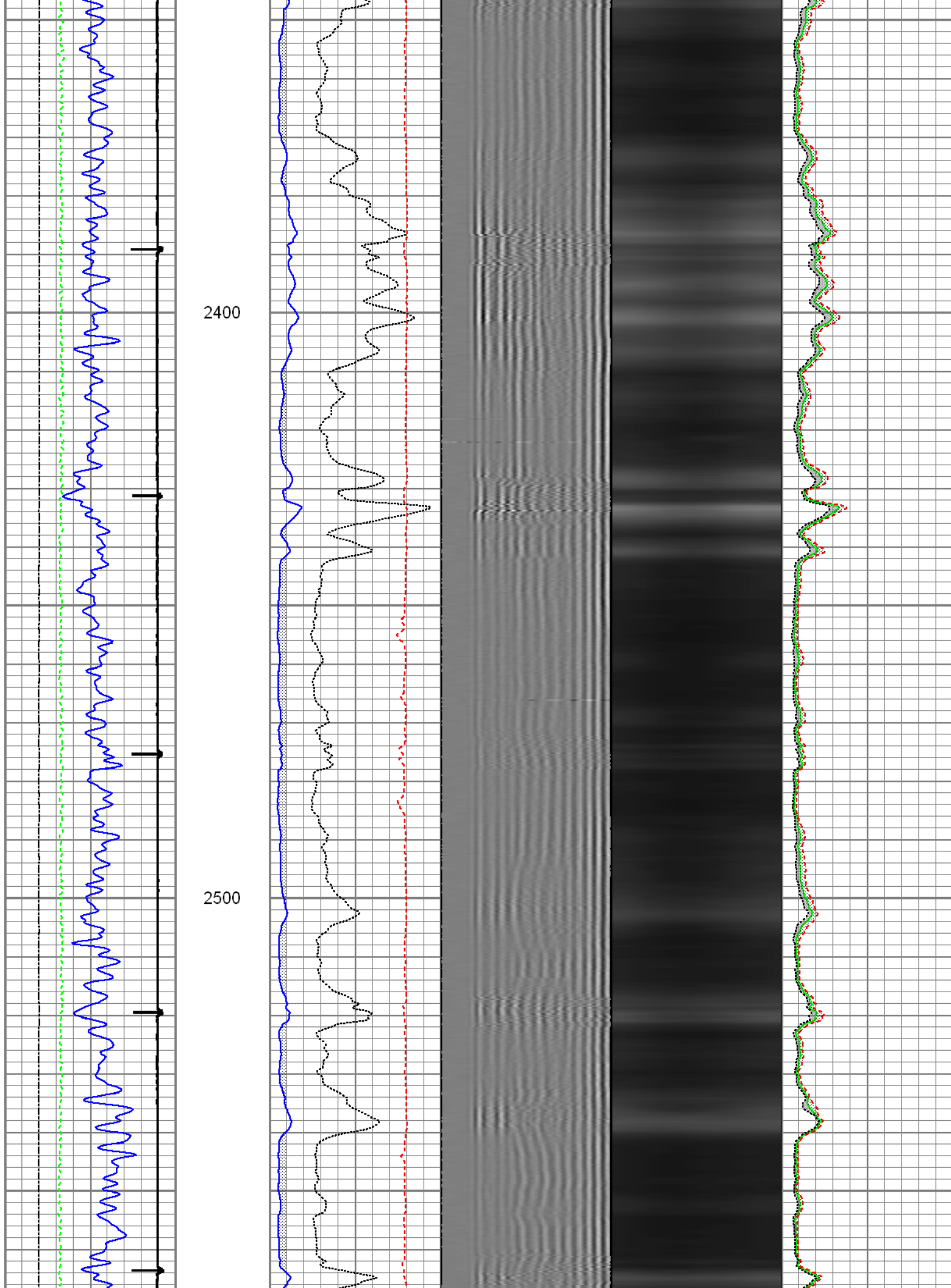
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2300



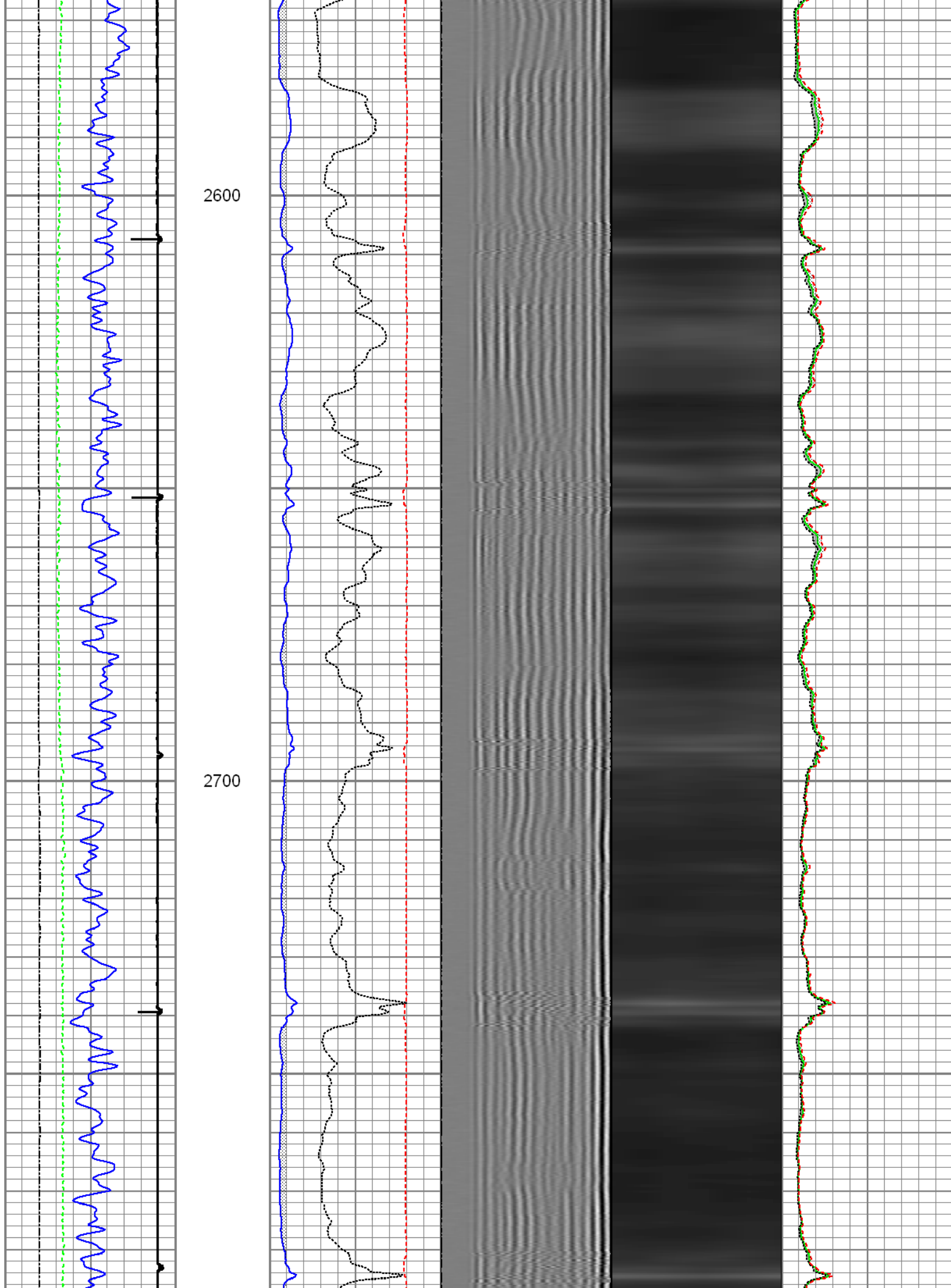
2400

2500



2600

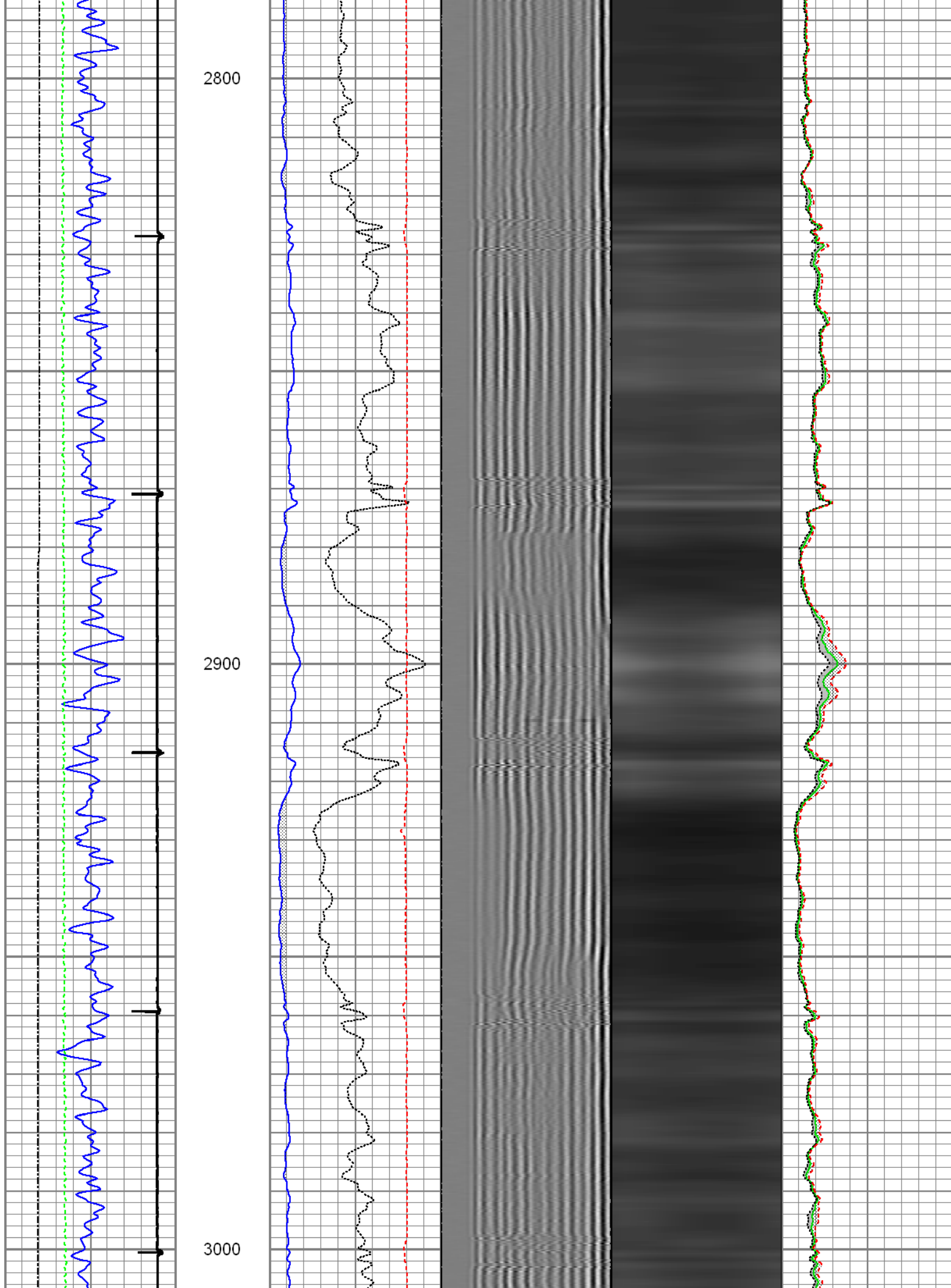
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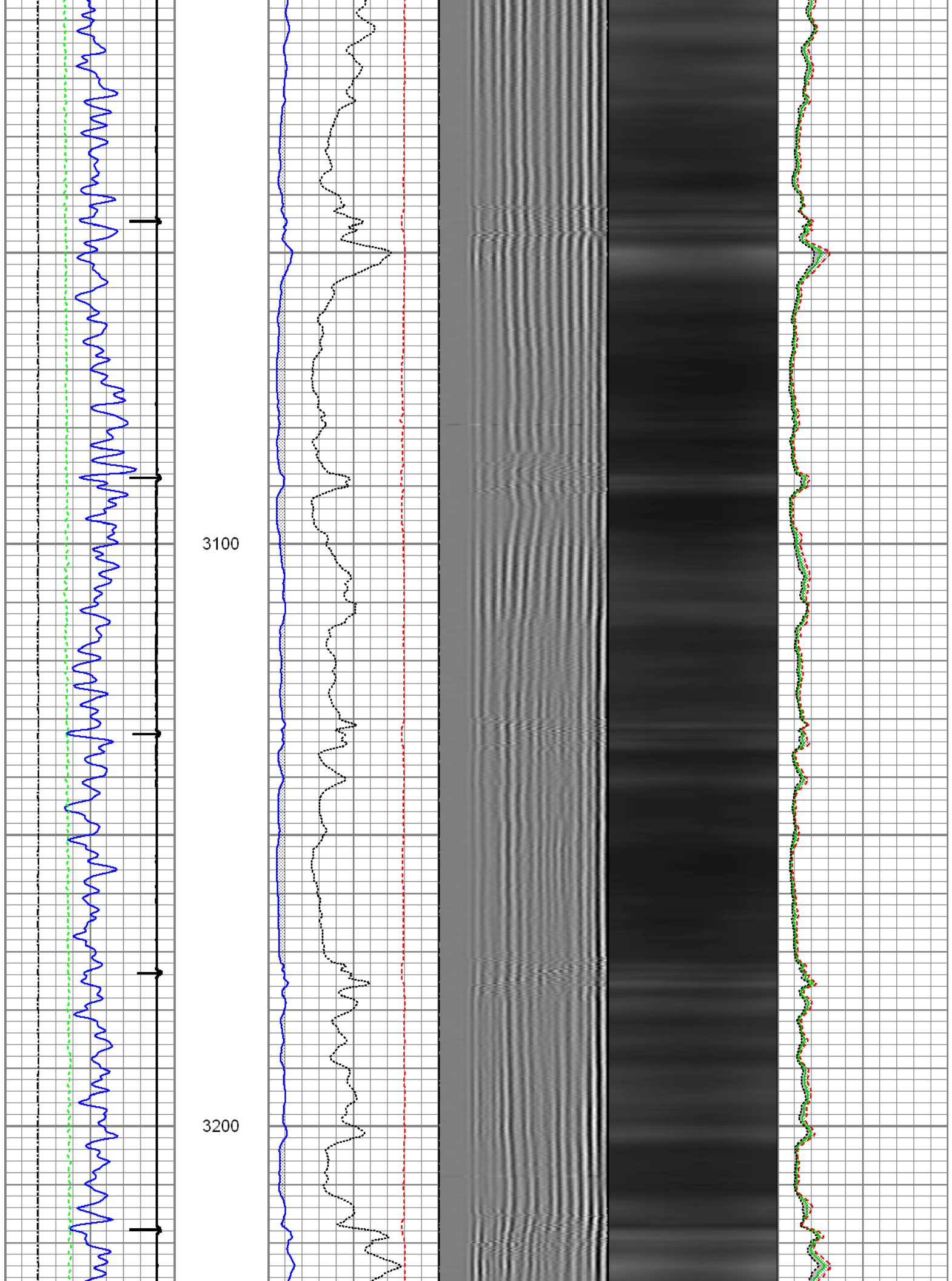


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2900

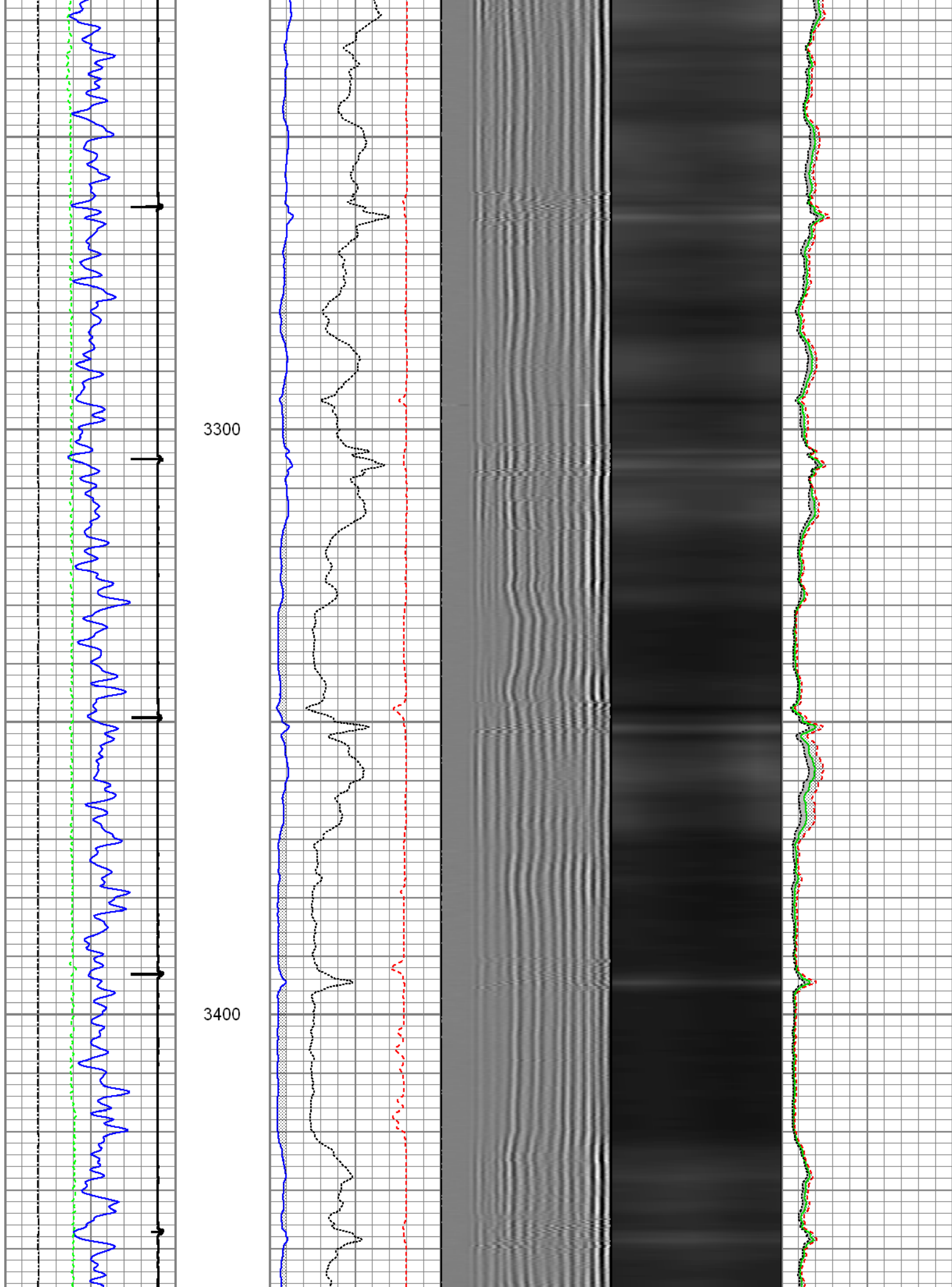
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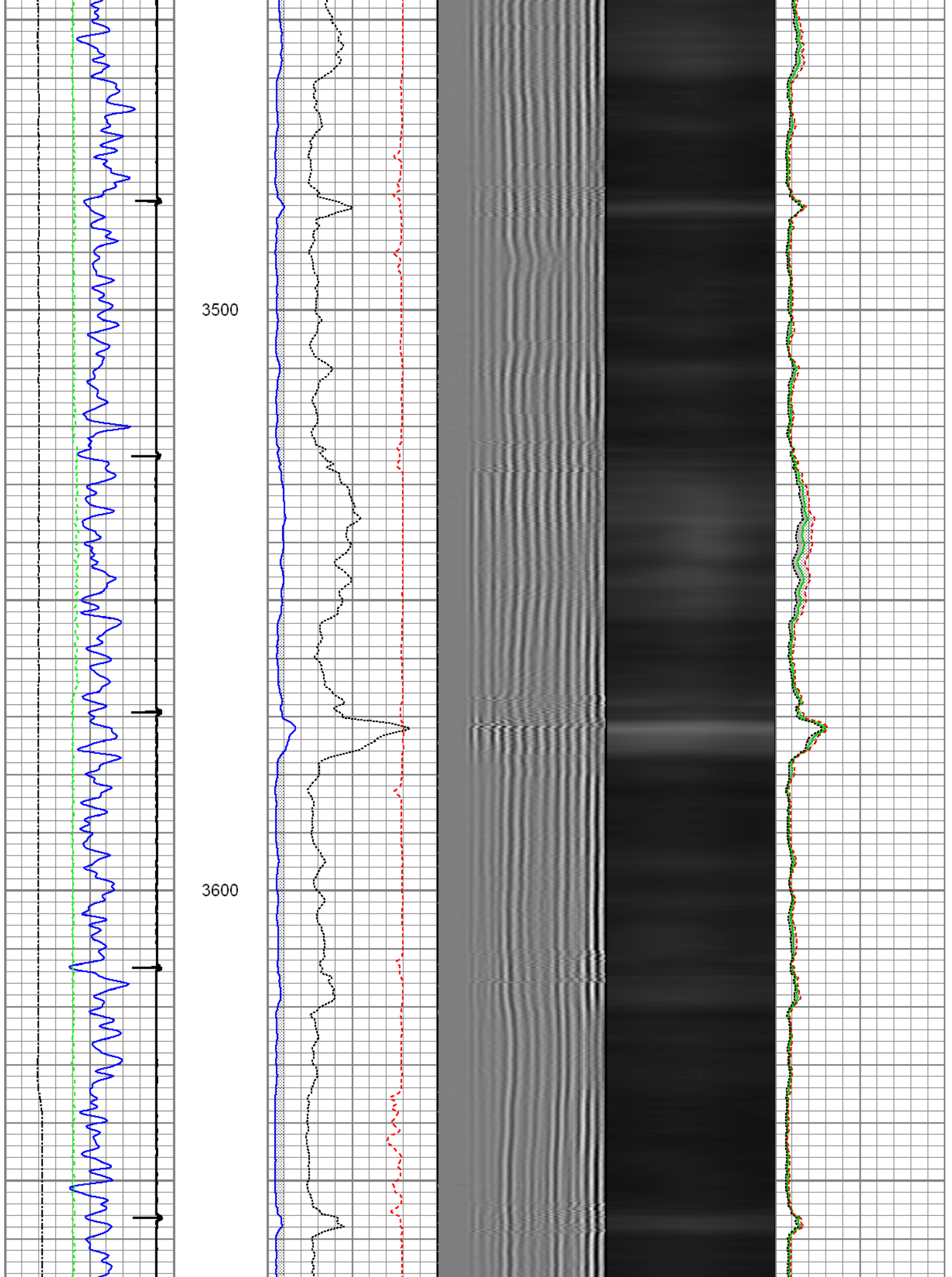




3300

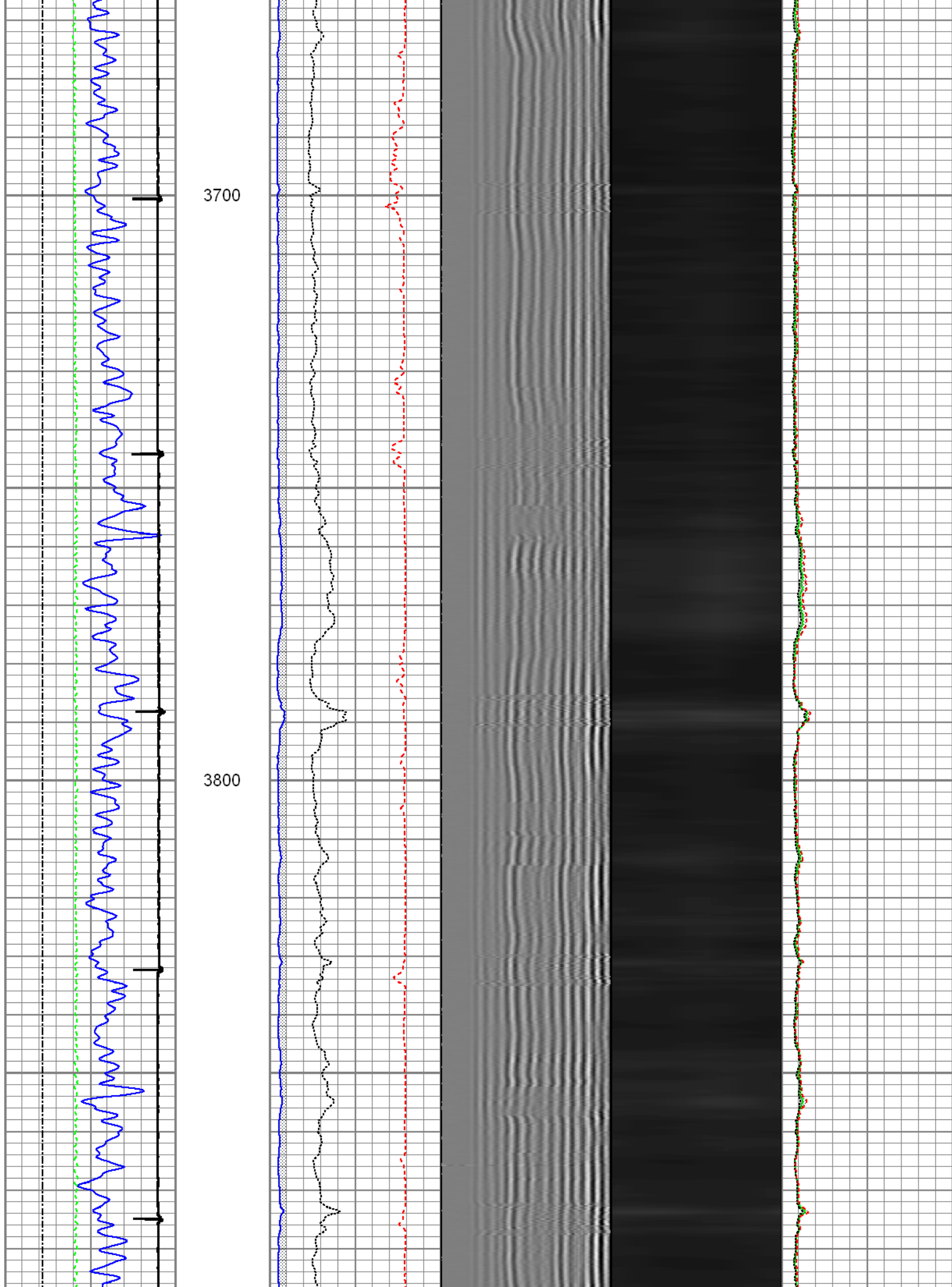
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3700

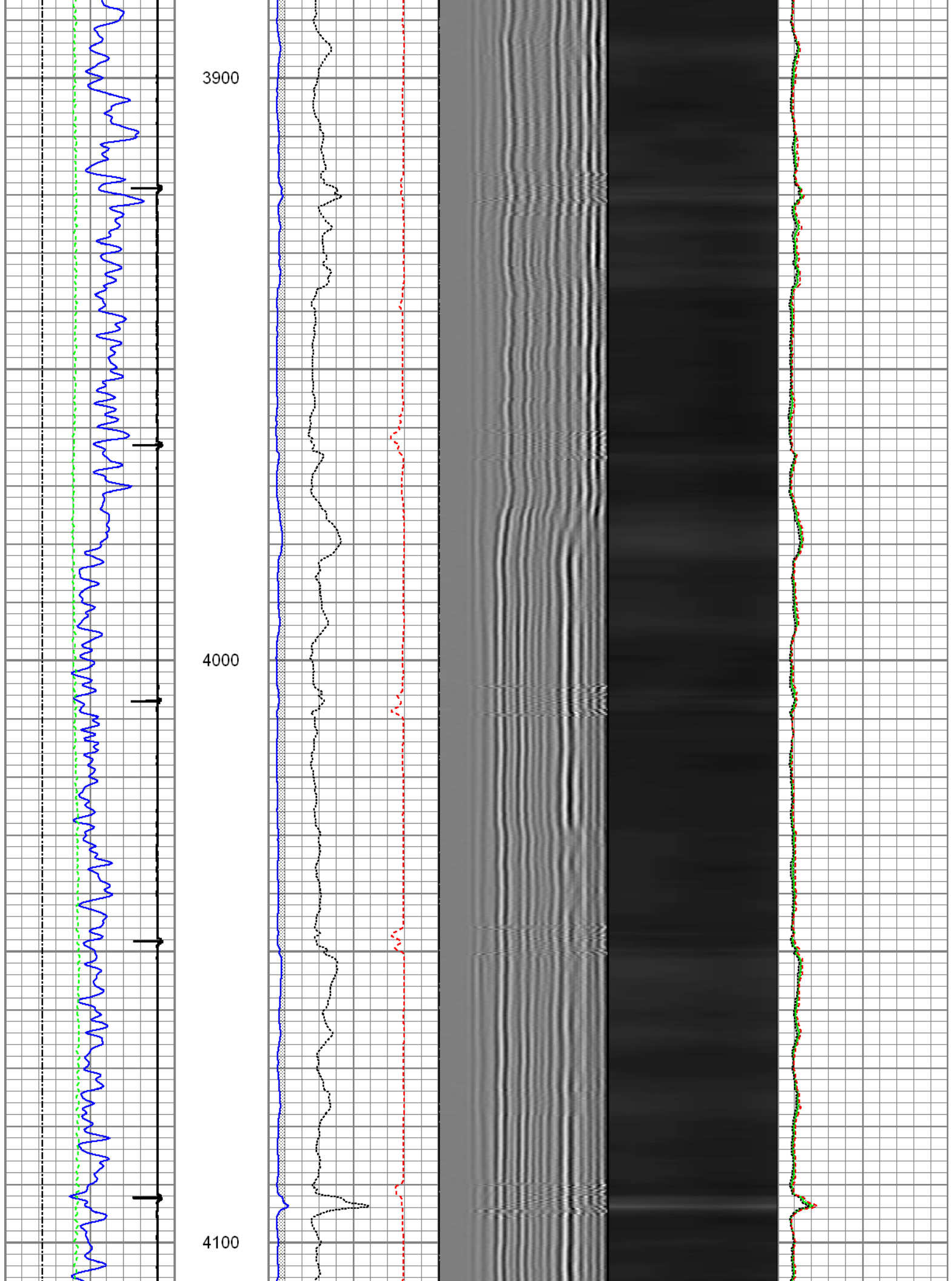
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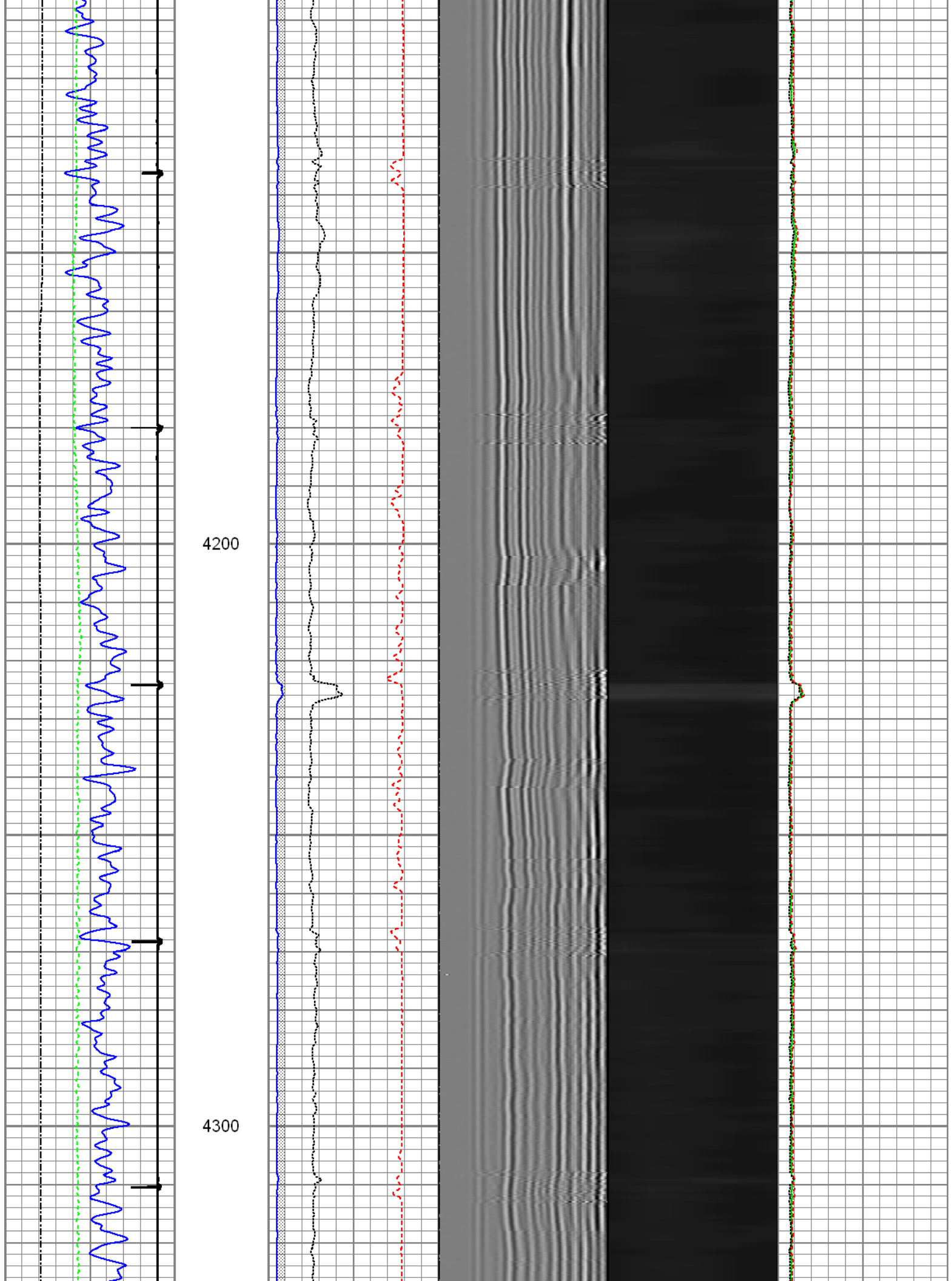


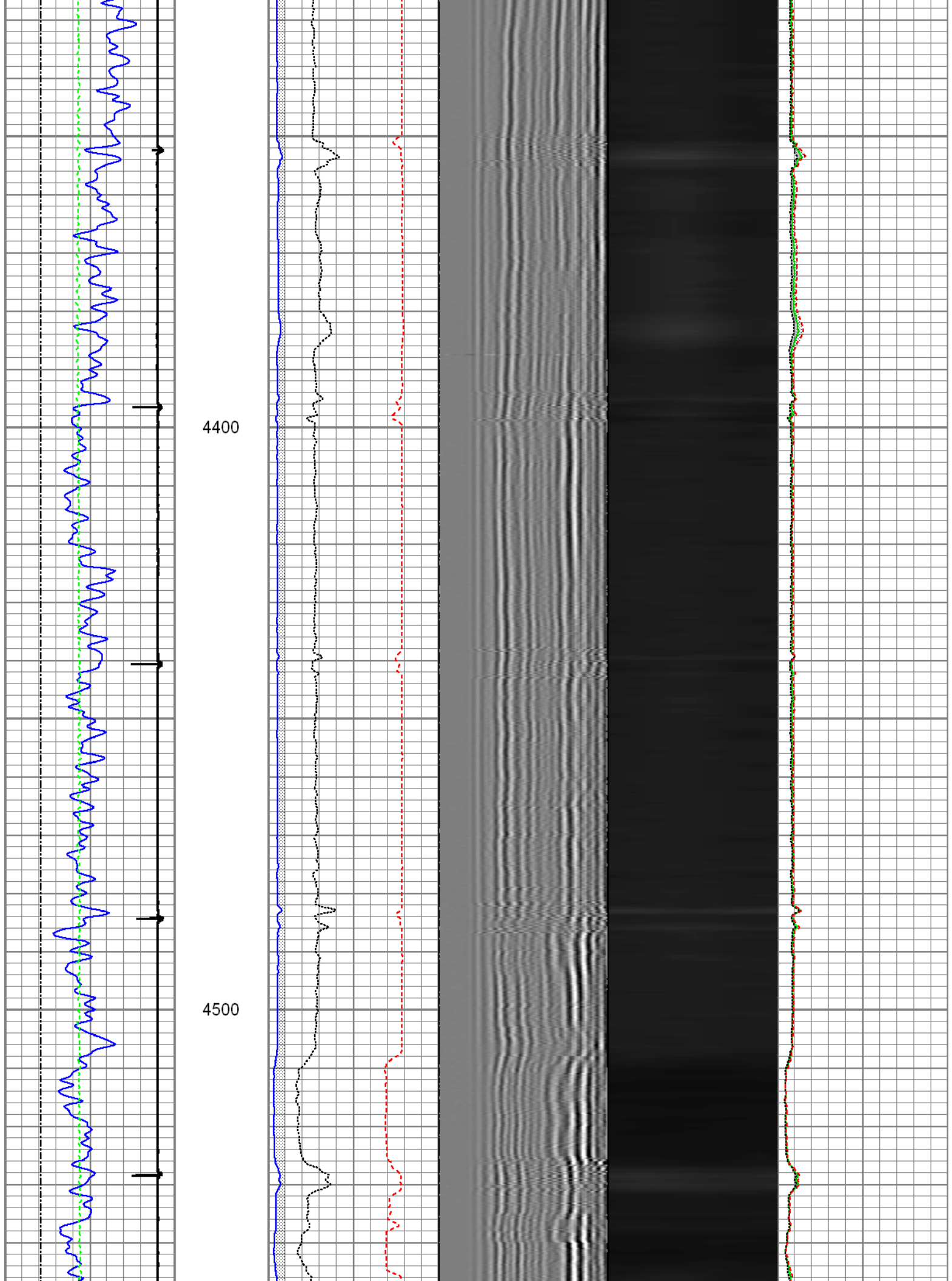
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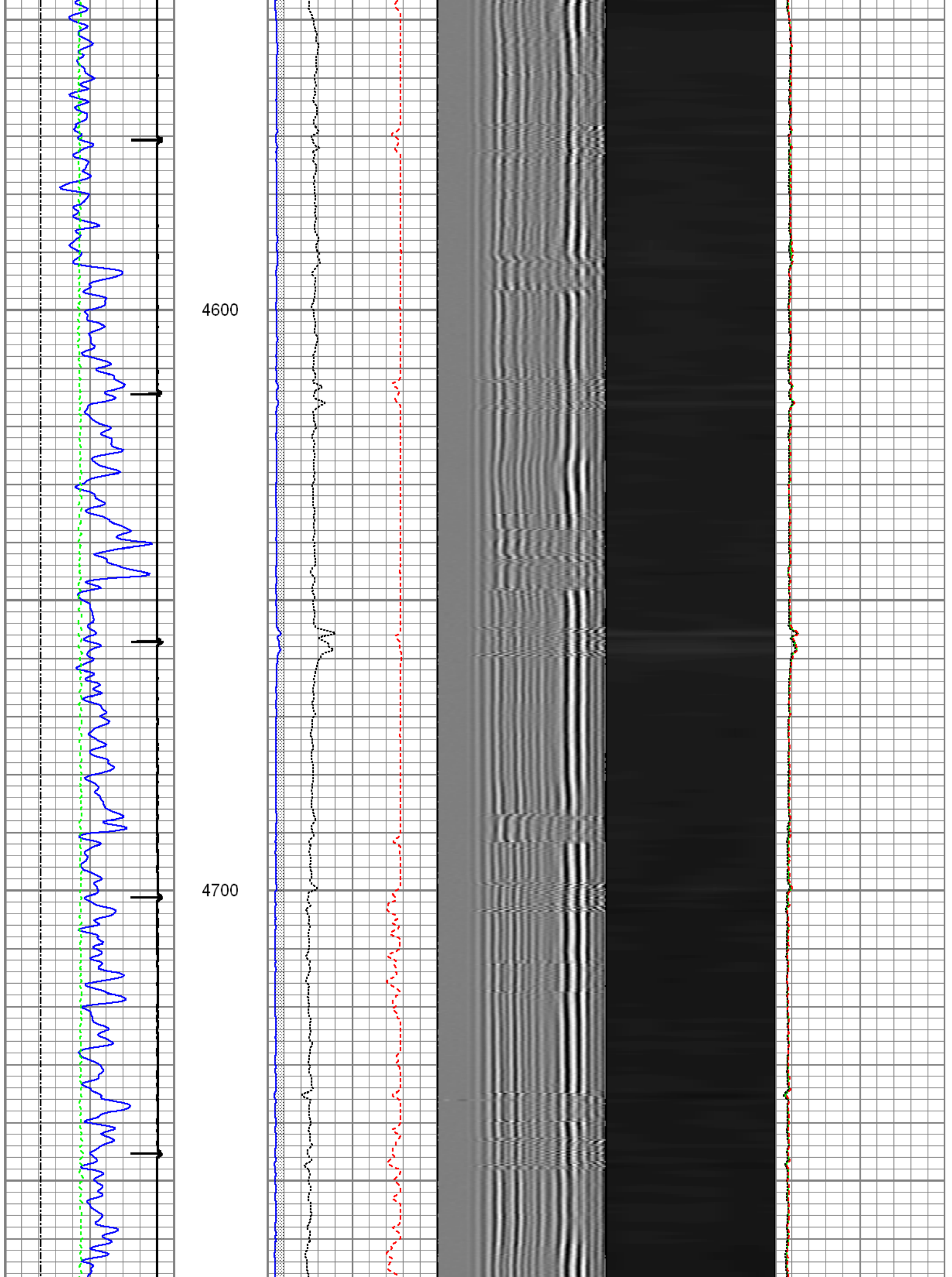
4000

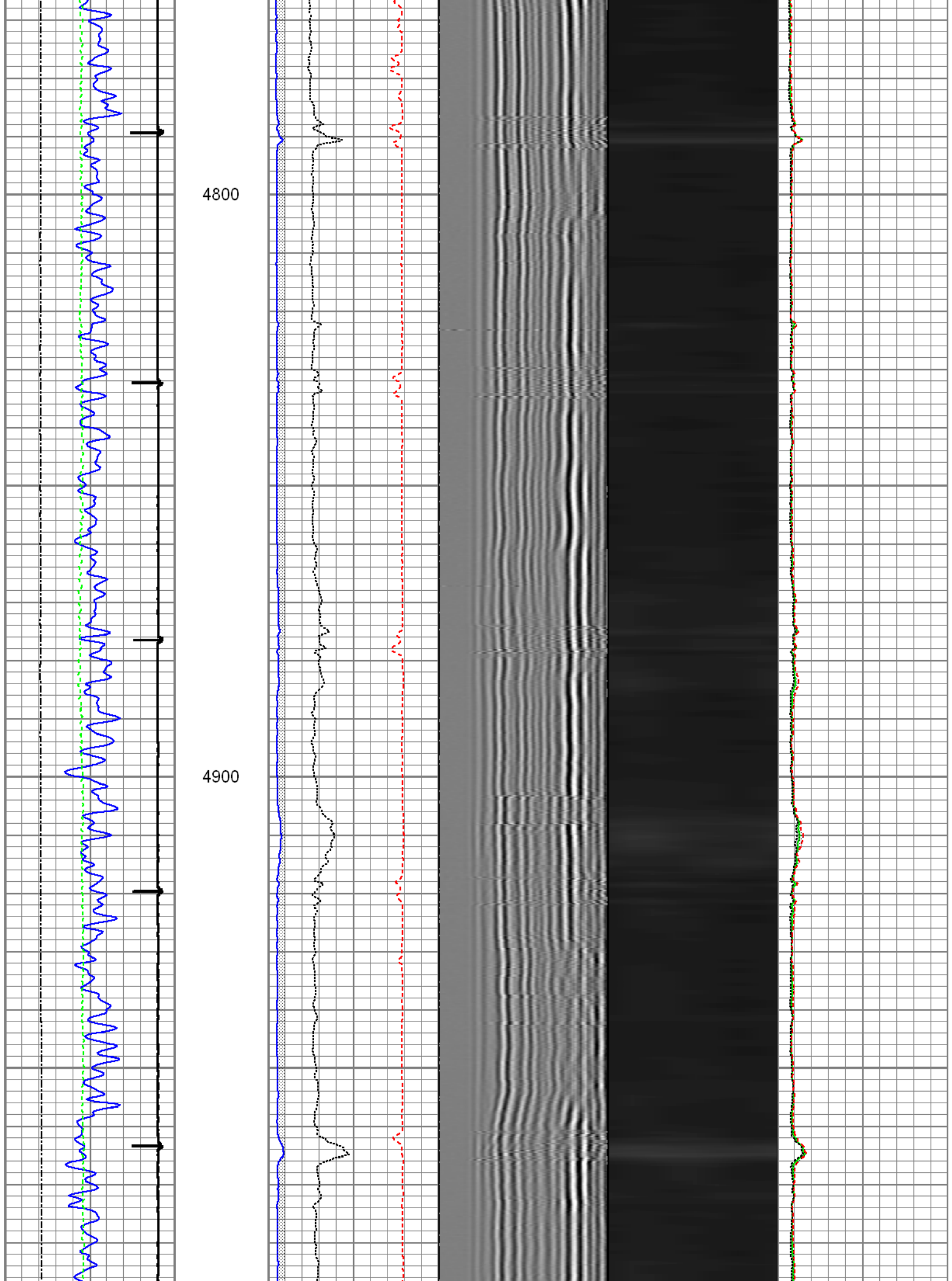
4100

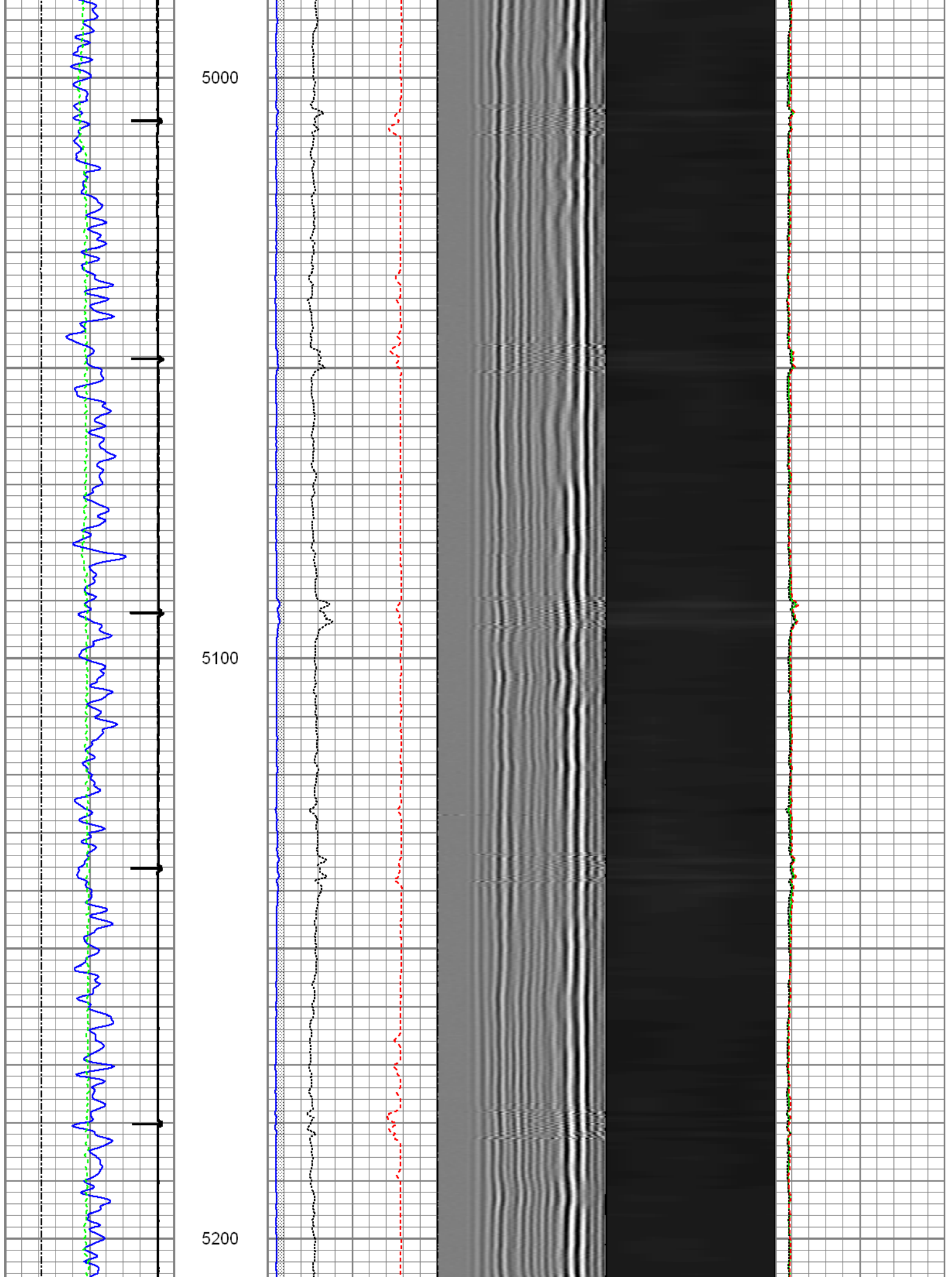


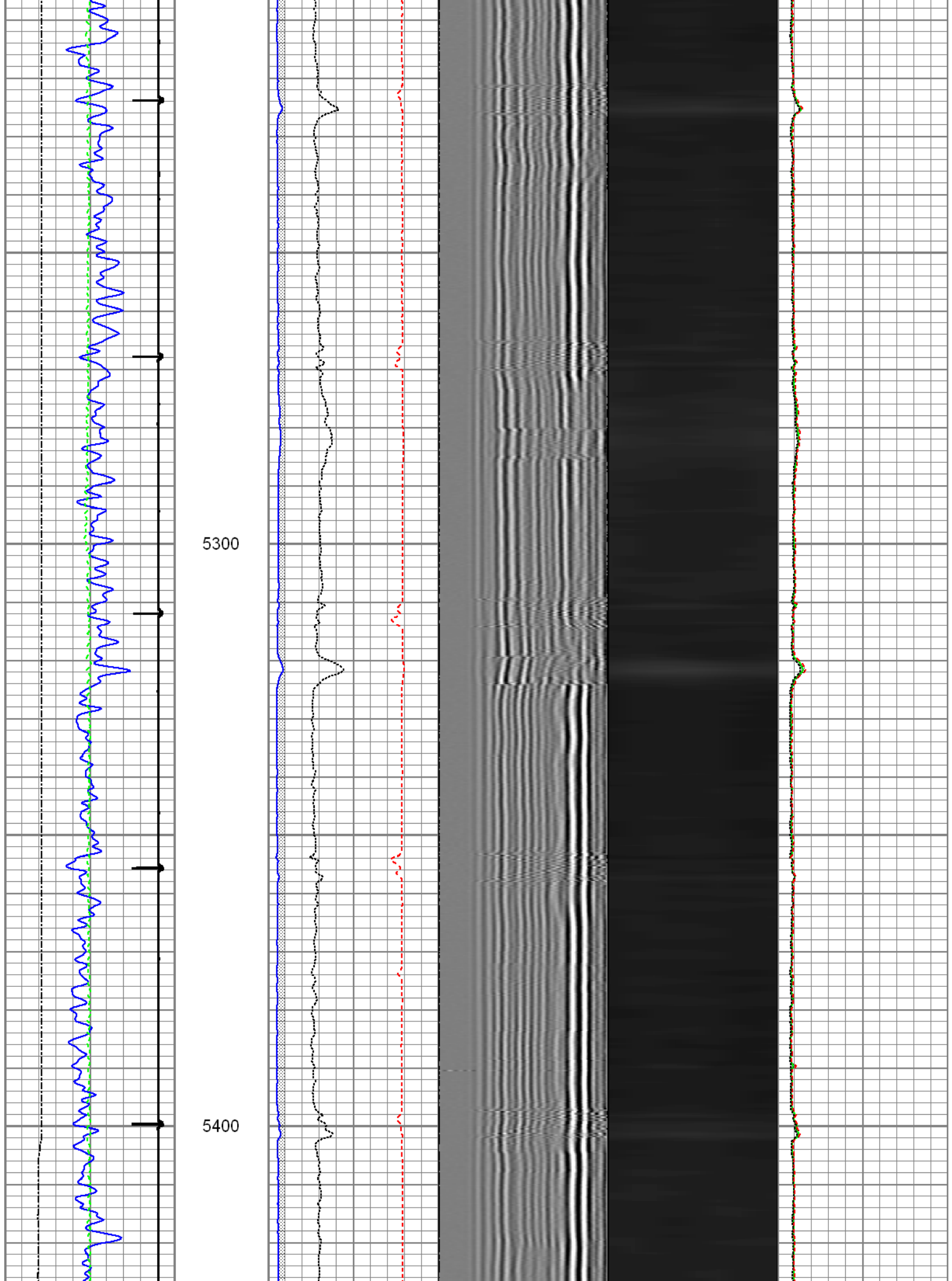


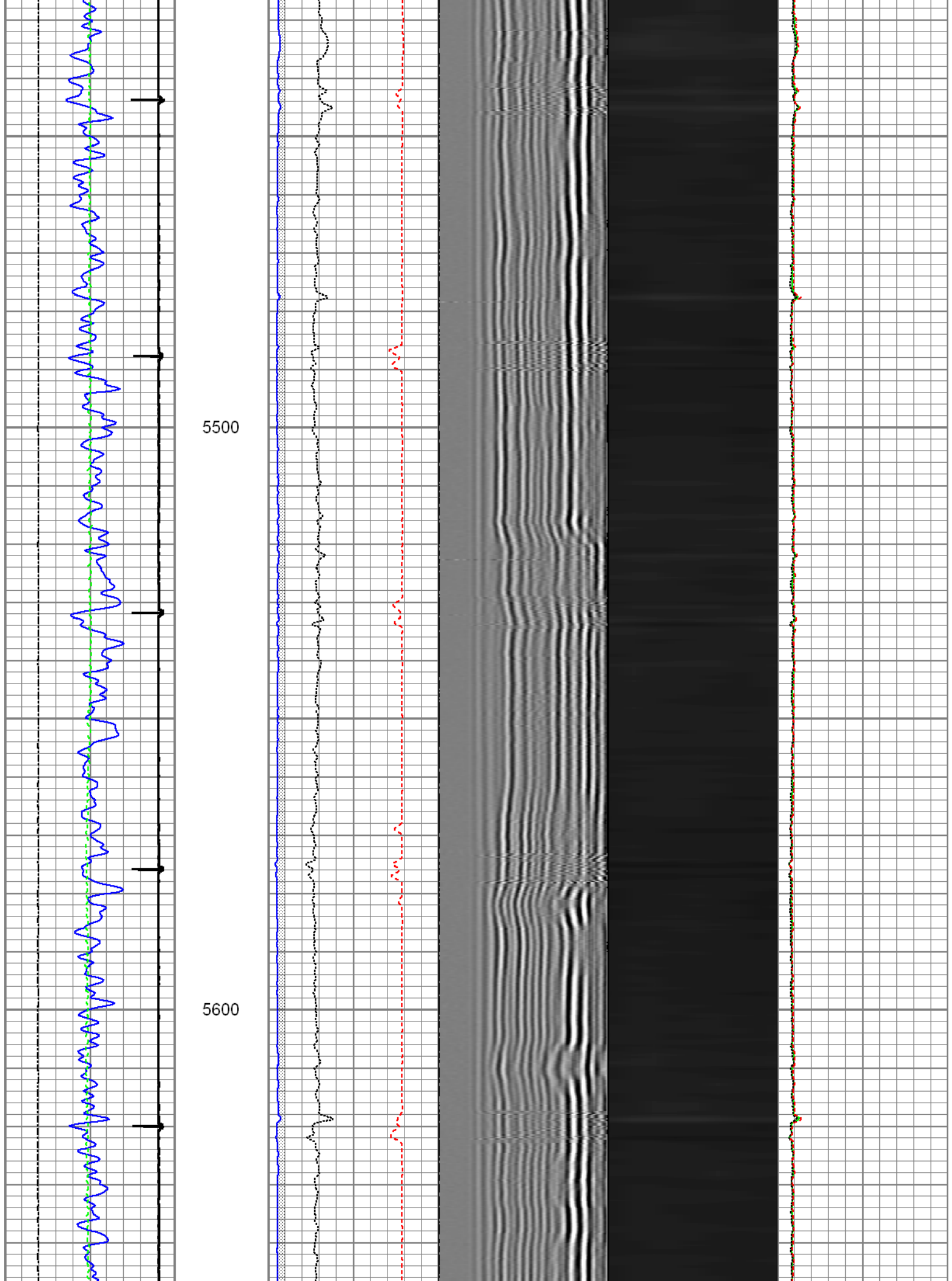


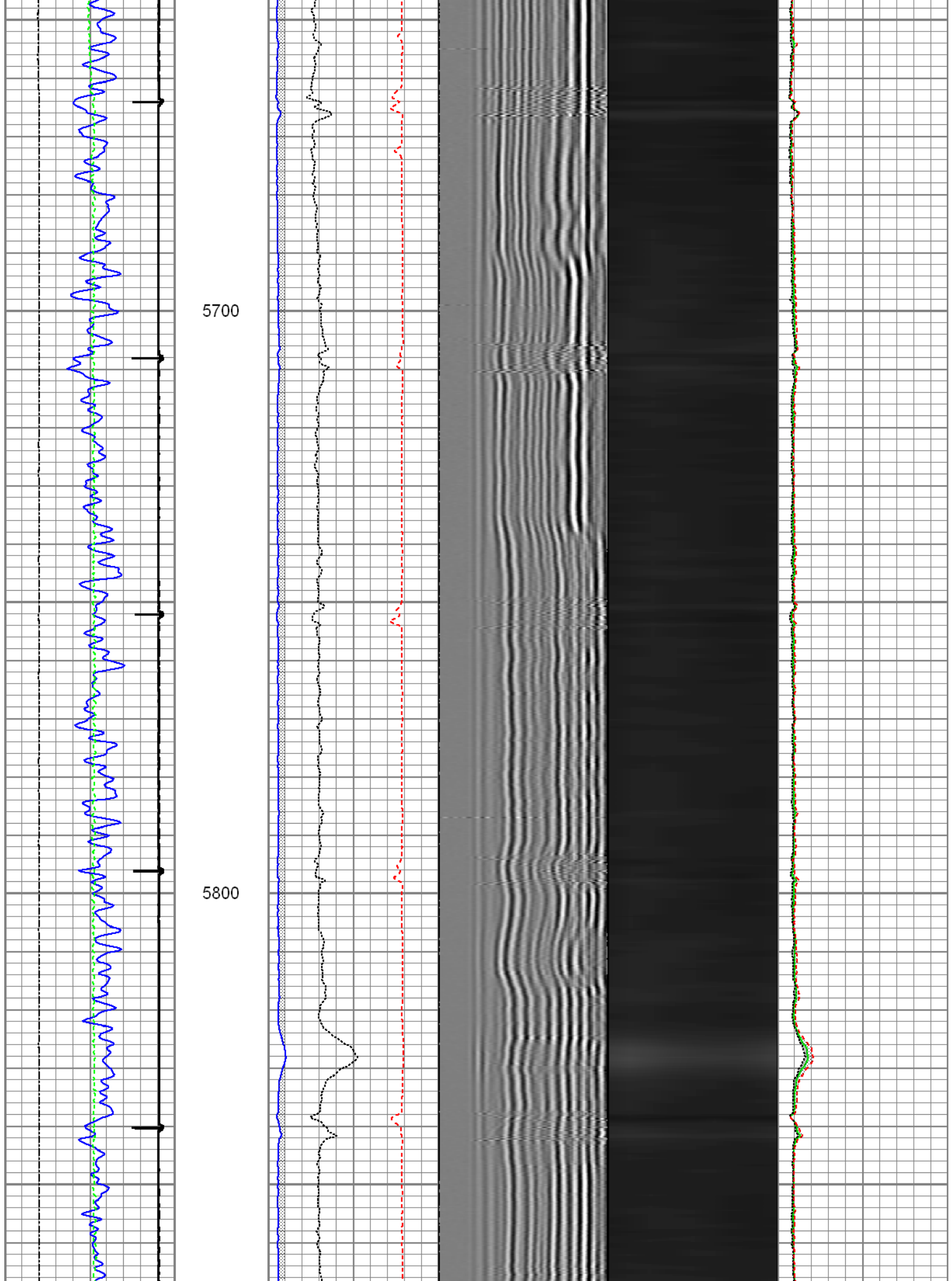






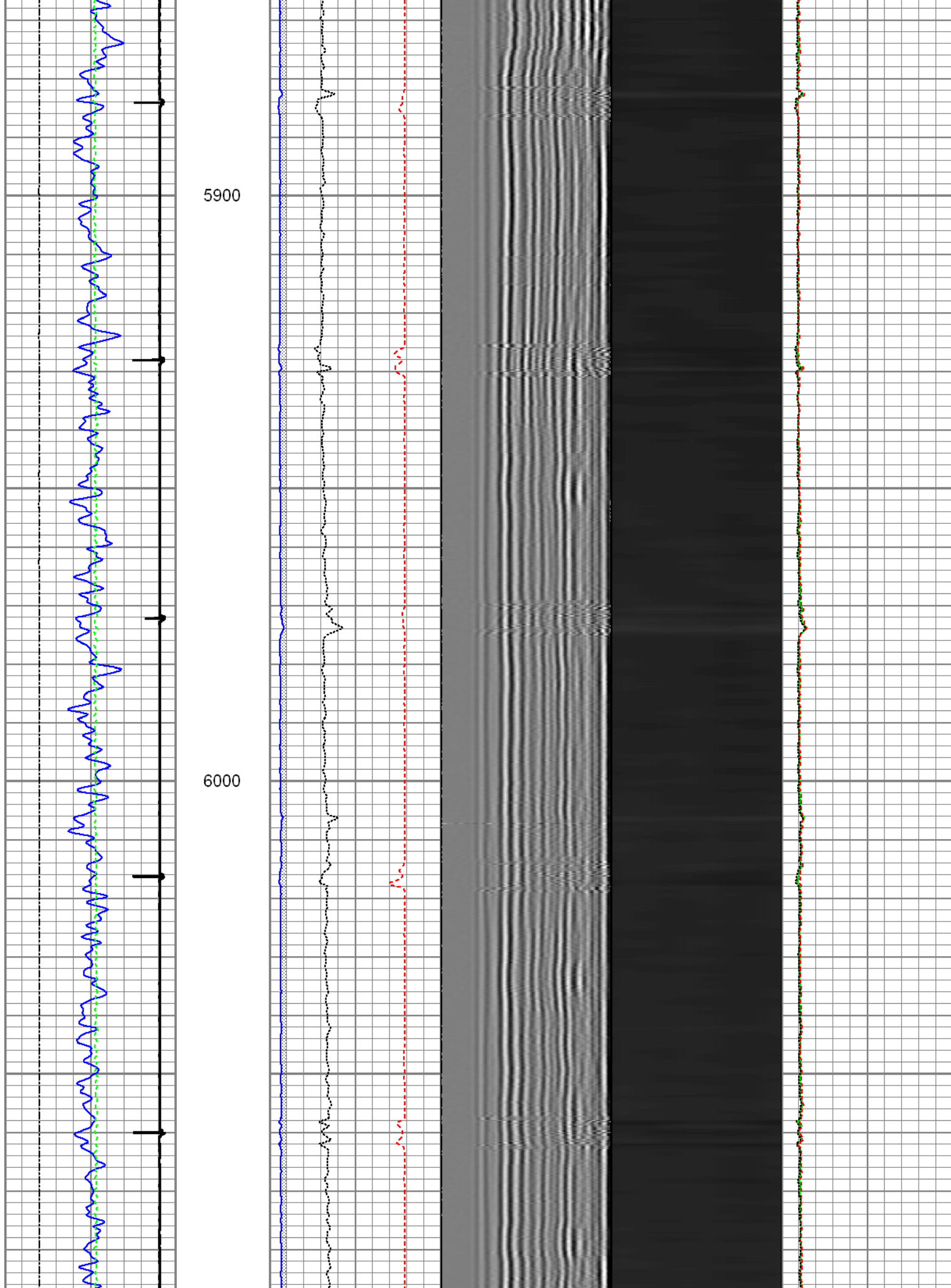


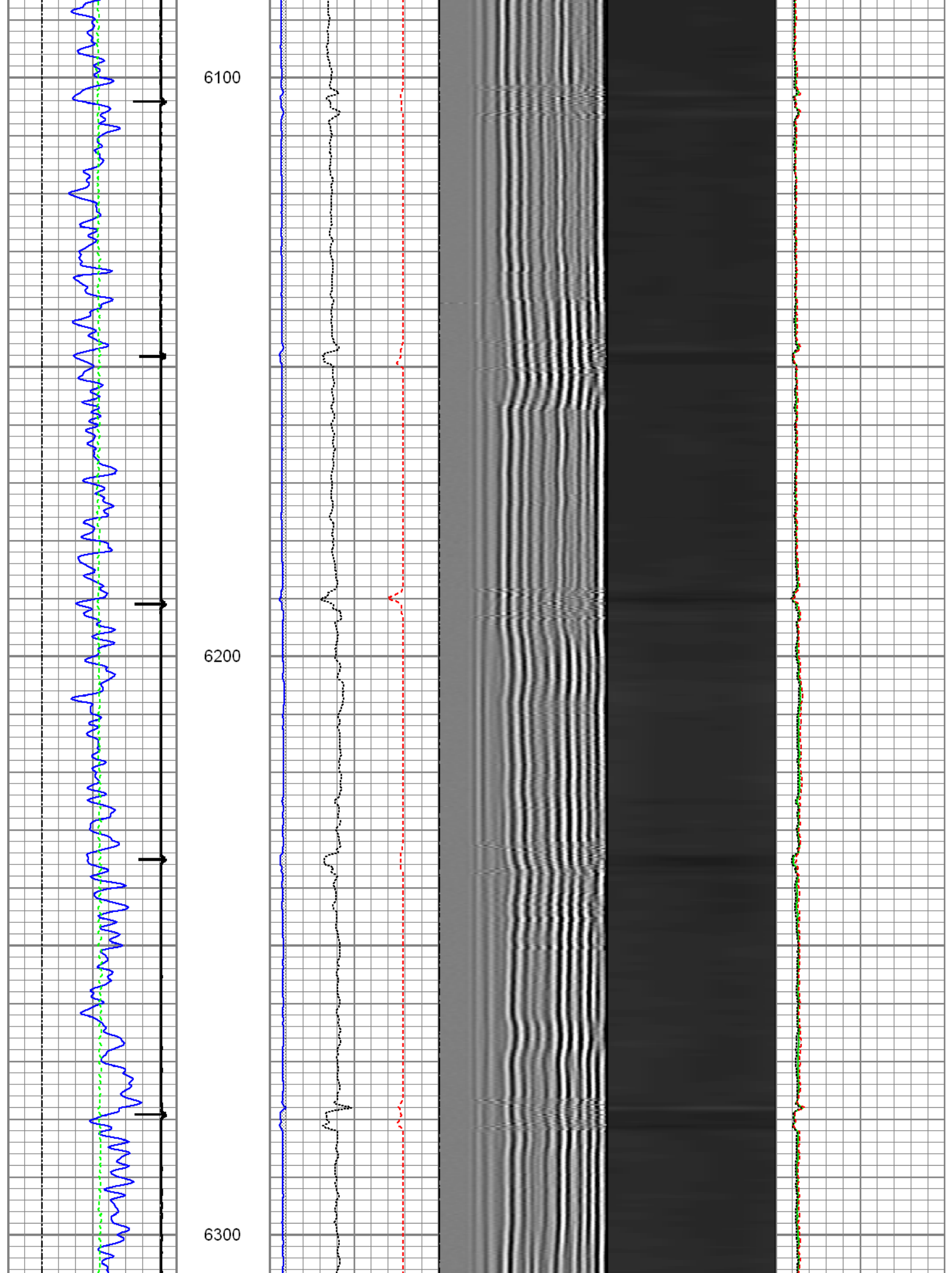


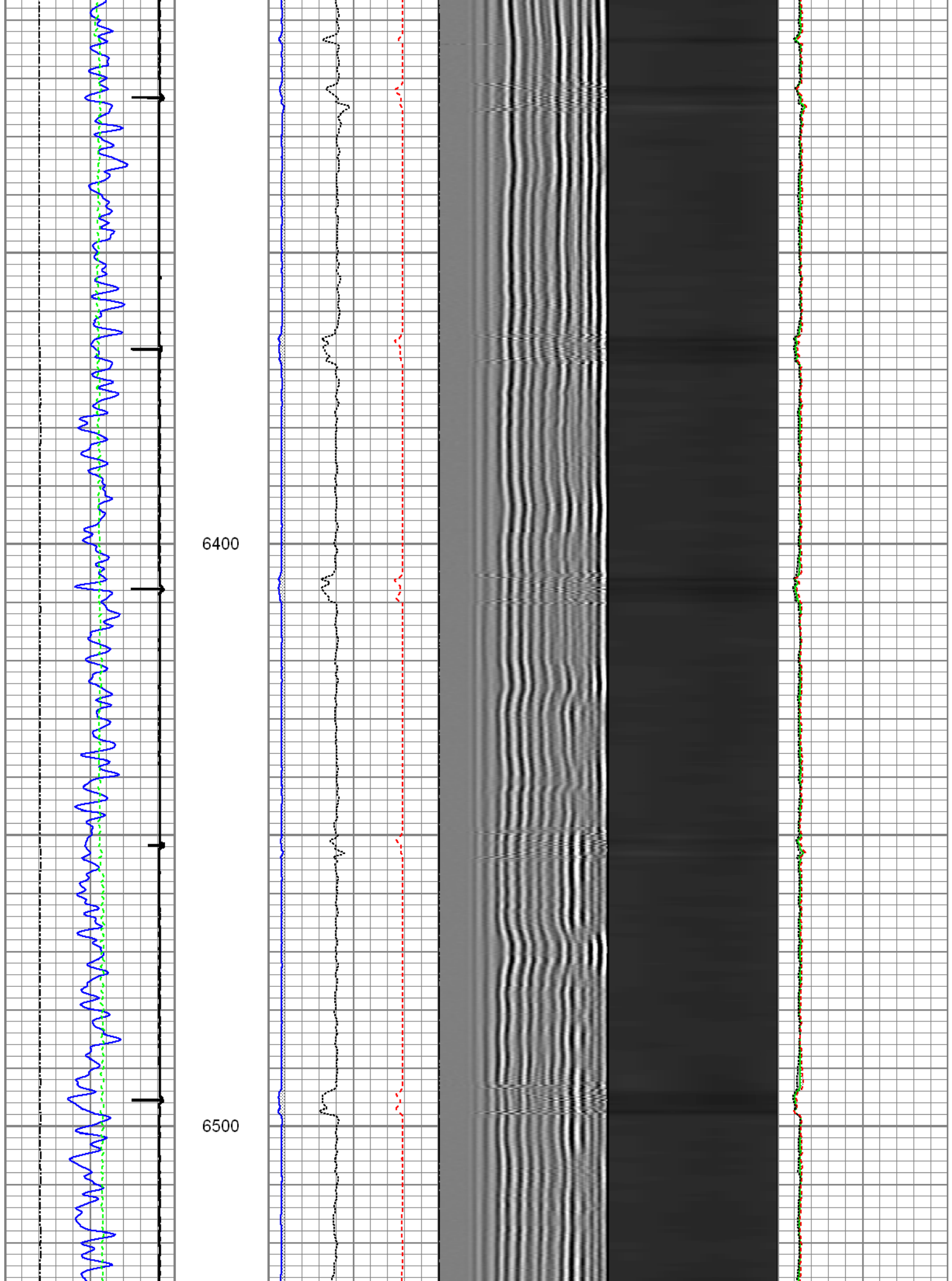


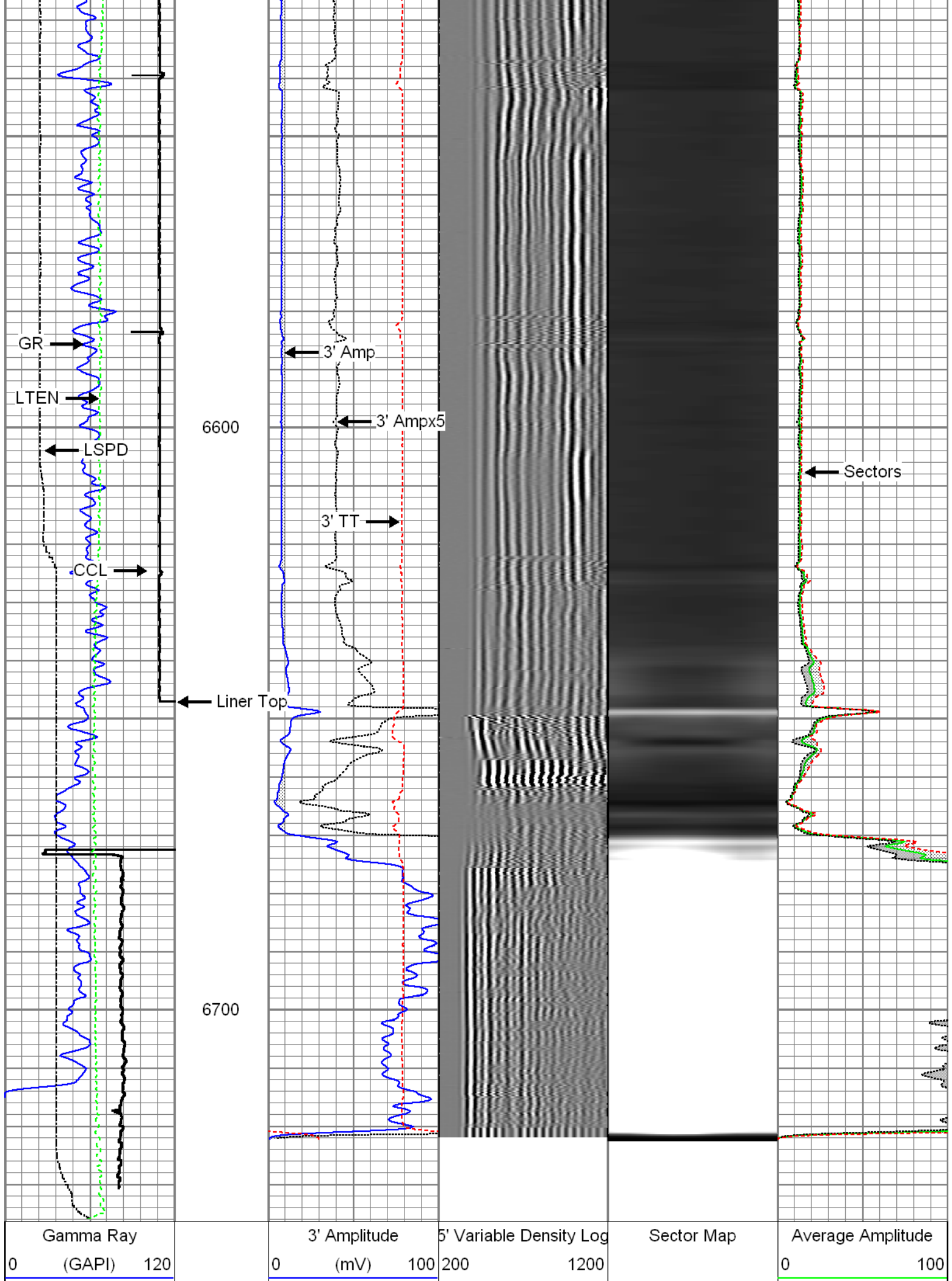
5900

6000










Casing Collar Locator	3' Amplitude x 5	Minimum Amplitude
Line Speed	0 (mV) 20	0 100
-100 (ft/min) 100	3' Travel Time	Maximum Amplitude
Line Tension	650 (usec) 150	0 100
0 (lb) 2000		

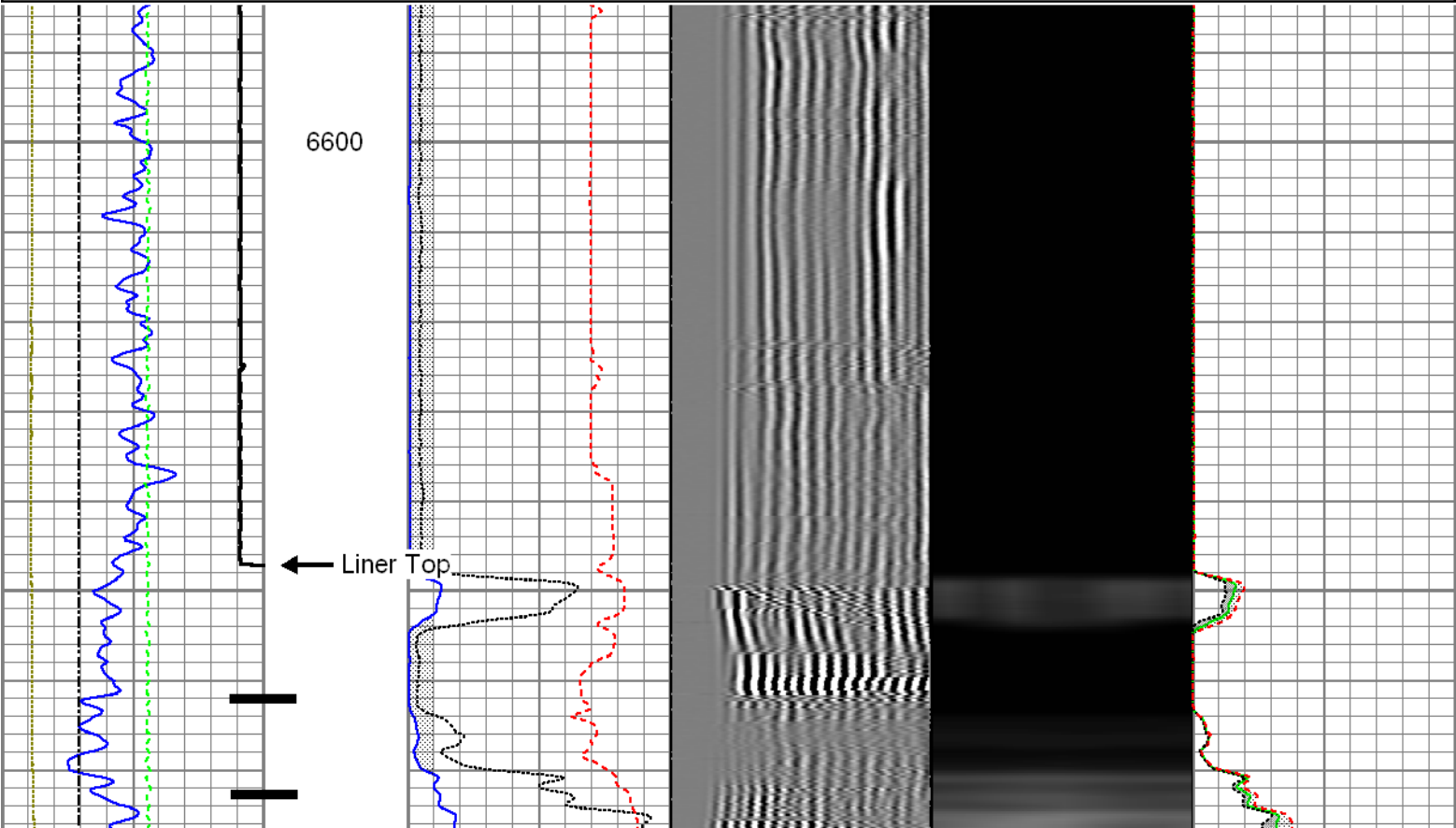


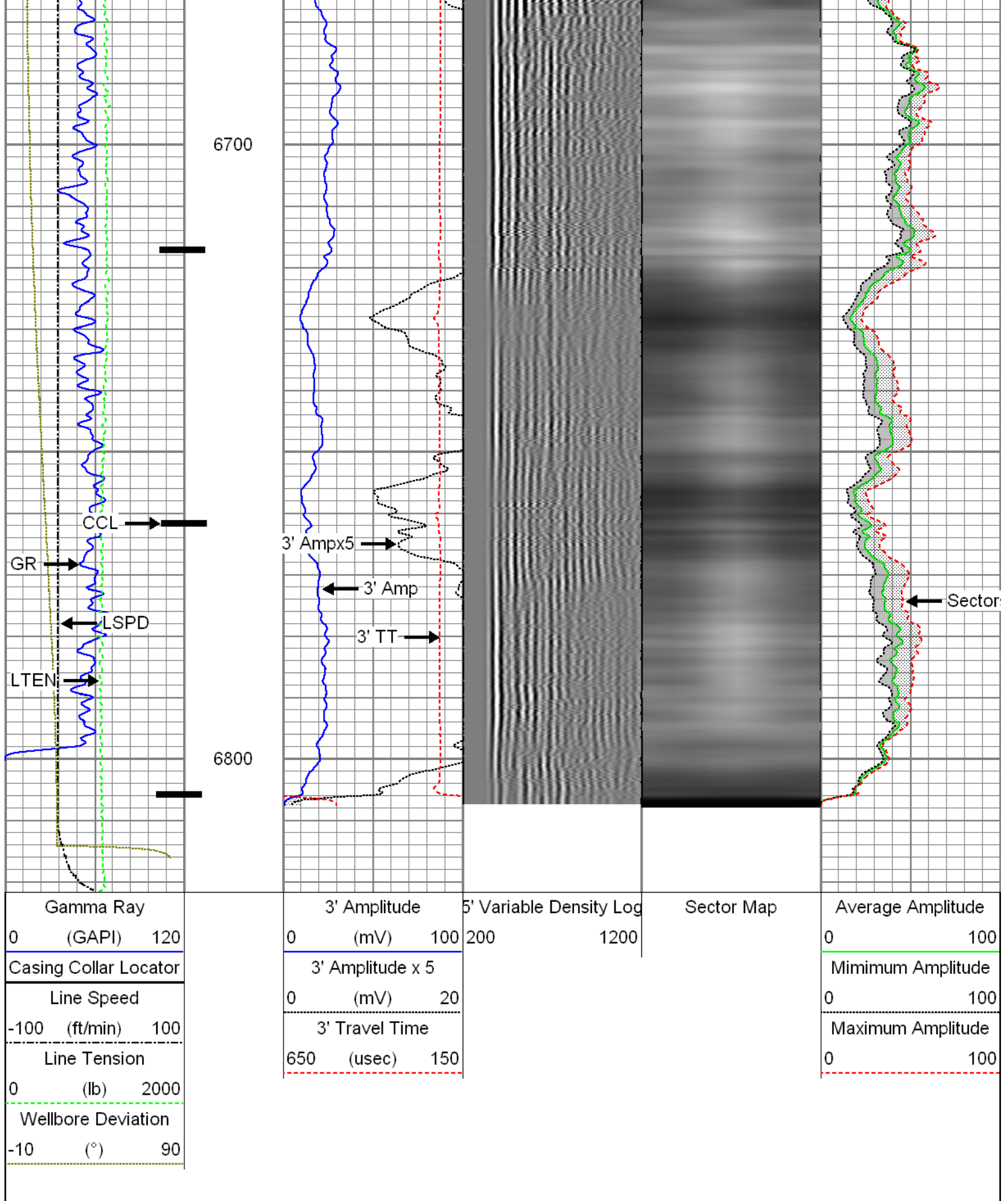
4.5" Main Pass

Recorded with 2800 PSI Surface Induced Pressure

Database File: 0512338978_anadarko_kerr 14c-25hz_02-05-15_mit_rbl.db
Dataset Pathname: 45main1
Presentation Format: rbt4_mit
Dataset Creation: Fri Feb 06 08:38:22 2015 by Log 7.0 B1
Charted by: Depth in Feet scaled 1:240

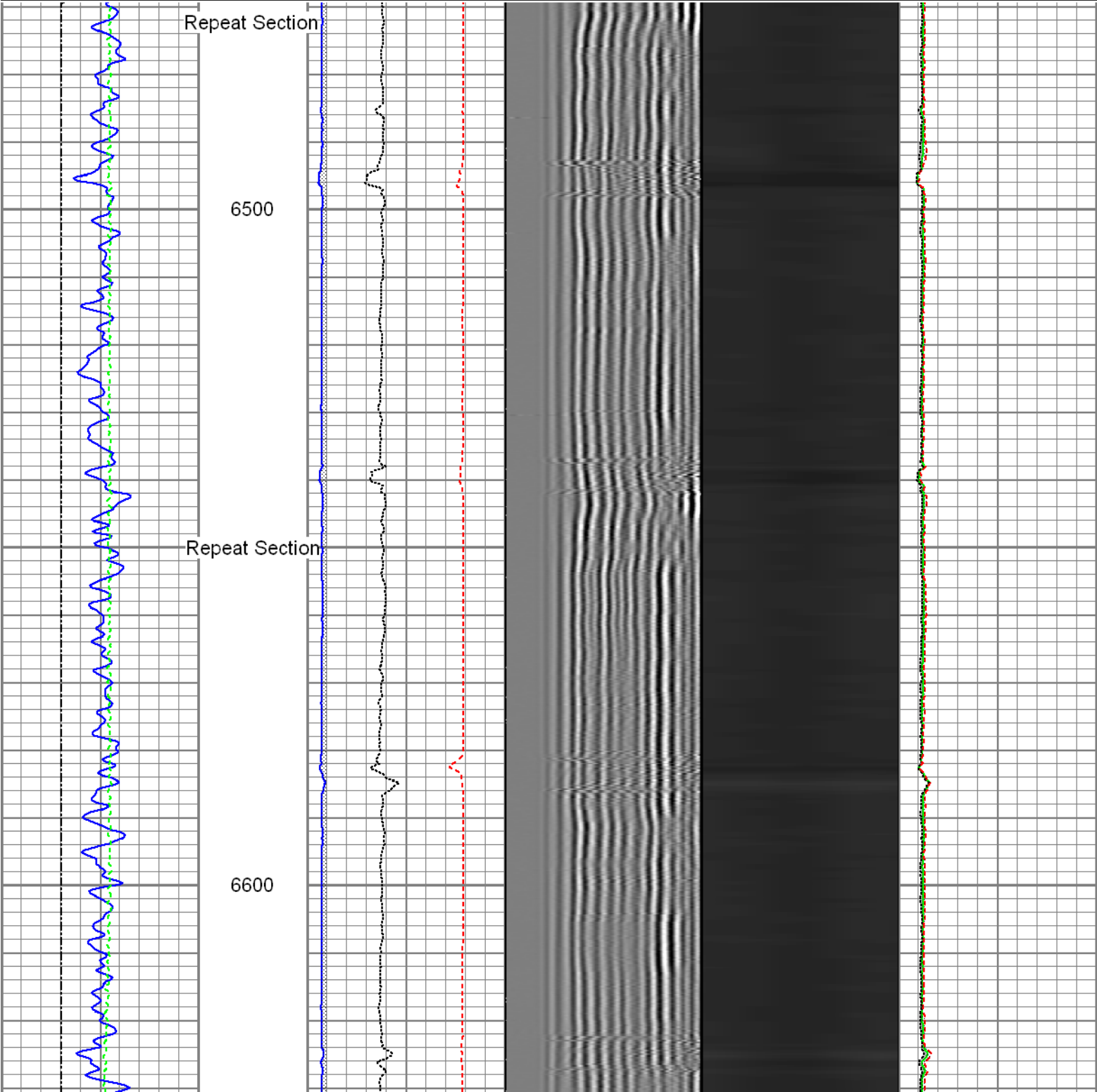
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Minimum Amplitude
Line Speed	0 (mV) 20			0 100
-100 (ft/min) 100	3' Travel Time			Maximum Amplitude
Line Tension	650 (usec) 150			0 100
0 (lb) 2000				
Wellbore Deviation				
-10 (°) 90				

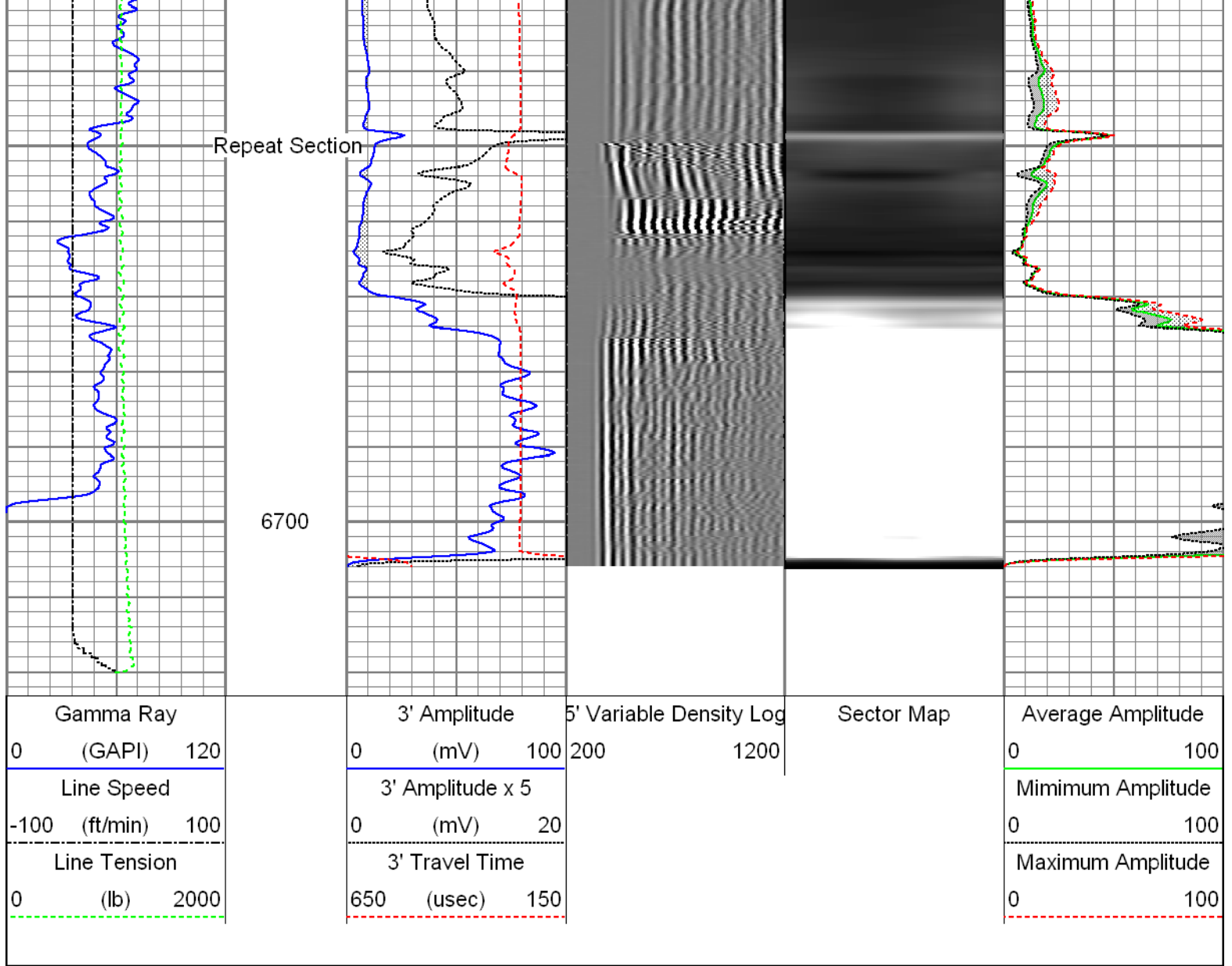




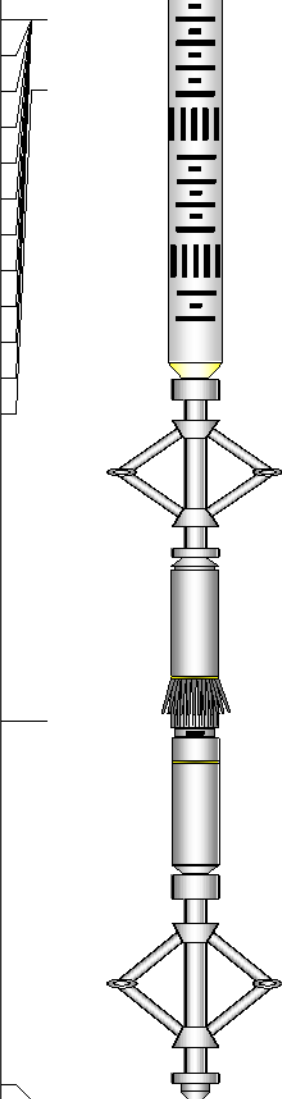
Database File: 0512338978_anadarko_kerr 14c-25hz_02-05-15_mit_rbl.db
Dataset Pathname: repeat1
Presentation Format: rbt4_mit
Dataset Creation: Fri Feb 06 08:20:55 2015 by Log 7.0 B1
Charted by: Depth in Feet scaled 1:240

Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Line Speed	3' Amplitude x 5			Minimum Amplitude
-100 (ft/min) 100	0 (mV) 20			0 100
Line Tension	3' Travel Time			Maximum Amplitude
0 (lb) 2000	650 (usec) 150			0 100





Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
GR	22.81		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 (10024281) Sondex Adapter - GO Box to Sondex Pin	0.21	1.69	1.00
			UW_XTU-UW_XTU_002 (218874) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
			UW_PGR-UW_PGR_020 (10019072) Production Gamma Ray	1.93	1.69	9.50
			UW_PRC #4 -DSSRAC (080) 2-3/4" DSS 5 Arm Roller Centralizer	2.55	2.75	32.00

WVF3FT	15.42		UW_RBT-UW_RBT_004 (1063) Sondex Ultrawire 3-1/8" Radial Bond Tool	9.47	3.13	140.00
WVFS1	15.42					
WVFS2	15.42					
WVFS3	15.42					
WVFS4	15.42					
WVFS5	15.42					
WVFS6	15.42					
WVFS7	15.42					
WVFS8	15.42					
CBLTEMP	15.42					
CBLROT	15.42					
WVF5FT	14.42		UW_PRC-DSSRAC (082) 2-3/4" DSS 5 Arm Roller Centralizer	2.55	2.75	32.00
MIT	5.41		UW_MIT-UW_MIT40_042 (10012912) 40 Multifinger Imaging Tool	4.54	2.75	61.10
			UW_PRC #3 -UW_PRC_057 (1102) Sondex 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00
TSTAMP	0.00		UW_BUL-UW_BUL_006 (10022928) Sondex Ultrawire Bullnose Terminator	0.22	1.69	1.20
<div>Dataset: 0512338978_Anadarko_Kerr 14C-25HZ_02-05-15_MIT_RBL.db: field/well/run1/7main1</div> <div>Total Length: 27.05 ft</div> <div>Total Weight: 319.30 lb</div> <div>O.D. 3.13 in</div>						

Calibration Report			
Database File:	0512338978_anadarko_kerr 14c-25hz_02-05-15_mit_rbl.db		
Dataset Pathname:	7main1		
Dataset Creation:	Fri Feb 06 08:49:11 2015 by Log 7.0 B1		
Multi-finger Imaging Tool Calibration Report			
Serial Number:	10012912		
Number of Fingers:	40		
Tool Model:	UW_MIT40_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 06 07:39:46 2015			
Ring size: (in)	4	Sens	5	Sens	6	Sens	7
Finger 01:	1112	343.0	1455	391.0	1846	410.0	2256
Finger 02:	1293	360.0	1653	386.0	2039	410.0	2449
Finger 03:	1127	361.0	1488	412.0	1900	431.0	2331
Finger 04:	1137	356.0	1493	399.0	1892	430.0	2322
Finger 05:	1143	359.0	1502	403.0	1905	419.0	2324
Finger 06:	1163	363.0	1526	405.0	1931	418.0	2349
Finger 07:	1125	365.0	1490	405.0	1895	419.0	2314
Finger 08:	1200	368.0	1568	403.0	1971	414.0	2385
Finger 09:	1152	368.0	1520	396.0	1916	413.0	2329
Finger 10:	1135	371.0	1506	399.0	1905	410.0	2315
Finger 11:	1174	374.0	1548	391.0	1939	399.0	2338
Finger 12:	1123	368.0	1491	390.0	1881	410.0	2291
Finger 13:	1152	374.0	1526	386.0	1912	394.0	2306
Finger 14:	1096	375.0	1471	392.0	1863	412.0	2275
Finger 15:	1084	384.0	1468	407.0	1875	421.0	2296
Finger 16:	1131	392.0	1523	402.0	1925	420.0	2345
Finger 17:	1038	374.0	1412	395.0	1807	435.0	2242
Finger 18:	1175	390.0	1565	389.0	1954	410.0	2364
Finger 19:	1155	405.0	1560	400.0	1960	410.0	2370
Finger 20:	1070	381.0	1451	396.0	1847	422.0	2269
Finger 21:	1067	384.0	1451	397.0	1848	411.0	2259
Finger 22:	1069	385.0	1454	398.0	1852	421.0	2273
Finger 23:	1093	392.0	1485	408.0	1893	430.0	2323
Finger 24:	1129	388.0	1517	388.0	1905	401.0	2306
Finger 25:	1042	381.0	1423	404.0	1827	427.0	2254
Finger 26:	1194	369.0	1563	385.0	1948	402.0	2350
Finger 27:	1123	371.0	1494	392.0	1886	429.0	2315
Finger 28:	1130	361.0	1491	383.0	1874	408.0	2282
Finger 29:	1038	366.0	1404	400.0	1804	435.0	2239
Finger 30:	1085	357.0	1442	396.0	1838	423.0	2261
Finger 31:	1138	355.0	1493	387.0	1880	419.0	2299
Finger 32:	1090	362.0	1452	407.0	1859	432.0	2291
Finger 33:	1183	352.0	1535	375.0	1910	391.0	2301
Finger 34:	1141	342.0	1483	384.0	1867	409.0	2276
Finger 35:	1092	365.0	1457	415.0	1872	441.0	2313
Finger 36:	1127	354.0	1481	402.0	1883	427.0	2310
Finger 37:	1231	347.0	1578	392.0	1970	417.0	2387
Finger 38:	1184	346.0	1530	386.0	1916	402.0	2318
Finger 39:	1184	343.0	1527	388.0	1915	406.0	2321
Finger 40:	1225	360.0	1585	399.0	1984	421.0	2405

Segmented Cement Bond Log Calibration Report							
Serial Number:				1063			
Tool Model:				UW_RBT_004			
Calibration Casing Diameter:				8.750	in		
Calibration Depth:				0.652	ft		

Master Calibration, performed Fri Feb 06 07:42:08 2015:							
	Raw (v)		Calibrated (mv)		Results		
	Zero	Cal	Zero	Cal	Gain	Offset	
3FT	-0.003	0.801	0.800	54.321	66.531	1.024	
5FT	-0.006	0.804	0.800	54.321	66.049	1.203	
S1	-0.004	0.756	0.000	100.000	131.561	0.482	
S2	-0.004	0.781	0.000	100.000	127.409	0.513	

S2	-0.004	0.781	0.000	100.000	127.403	0.319
S3	-0.004	0.805	0.000	100.000	123.664	0.453
S4	-0.004	0.833	0.000	100.000	119.518	0.495
S5	-0.003	0.836	0.000	100.000	119.165	0.401
S6	-0.004	0.832	0.000	100.000	119.709	0.438
S7	-0.004	0.818	0.000	100.000	121.684	0.446
S8	-0.003	0.779	0.000	100.000	127.761	0.435

Gamma Ray Calibration Report

Serial Number:	10019072	
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 LP
Well	Kerr 14C-25HZ
Field	Wattenberg
County	Weld
State	Colorado