



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company		Kerr McGee Oil & Gas Onshore LP	
Well		Benson Farms 14C-19HZ	
Field		Wattenberg	
County		Weld	
State		Colorado	
Company		Kerr McGee Oil & Gas Onshore LP	
Well		Benson Farms 14C-19HZ	
Field		Wattenberg	
County		Weld	
State		Colorado	
Location:		API # : 05-123-39337	
SHL: 677' FSL 72' FEL SESE		Other Services	
LAT: 40.206221 LONG: -104.960901		Gauge ring	
SEC 23 TWP 3N RGE 68W		MIT	
Permanent Datum		Ground Level	
Log Measured From		Kelly Bushing	
Drilling Measured From		Kelly Bushing	
Elevation		4961'	
K.B. 4977'		D.F. 4976'	
G.L. 4961'			
Date		16-Sept-2014	
Run Number		Two	
Depth Driller		14517 FT	
Depth Logger		7374 FT	
Bottom Logged Interval		7359 FT	
Top Log Interval		Surface	
Open Hole Size		9.625	
Type Fluid		Water	
Density / Viscosity		8.34 lb/gal	
Max. Recorded Temp.		213° F	
Estimated Cement Top		942 FT	
Time Well Ready		ROA	
Time Logger on Bottom		14:30	
Equipment Number		HD 0255	
Location		Ft. Lupton, CO	
Recorded By		J. Raby	
Witnessed By		Trevor Daniel	
Borehole Record		Tubing Record	
Run Number		Bit	
From		To	
Size		Weight	
From		To	
Casing Record		Size (in)	
Surface Casing		9.625	
Intermediate #1		7	
Intermediate #2		4.5	
Liner		11.6	
Grade		Top	
Surface		1233 FT	
Surface		7717 FT	
6612 FT		14504 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
Log ran from as deep as possible to surface.
Log ran with 2800 PSI surface induced pressure.
Adjusted -6 FT to correlate to liner top.

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



7.0" Main Pass

Recorded with 2800 PSI surface induced pressure.

Database File:0512339337_anadarko_benson farms 14c-19hz_09-16-14_mit_rbl.db

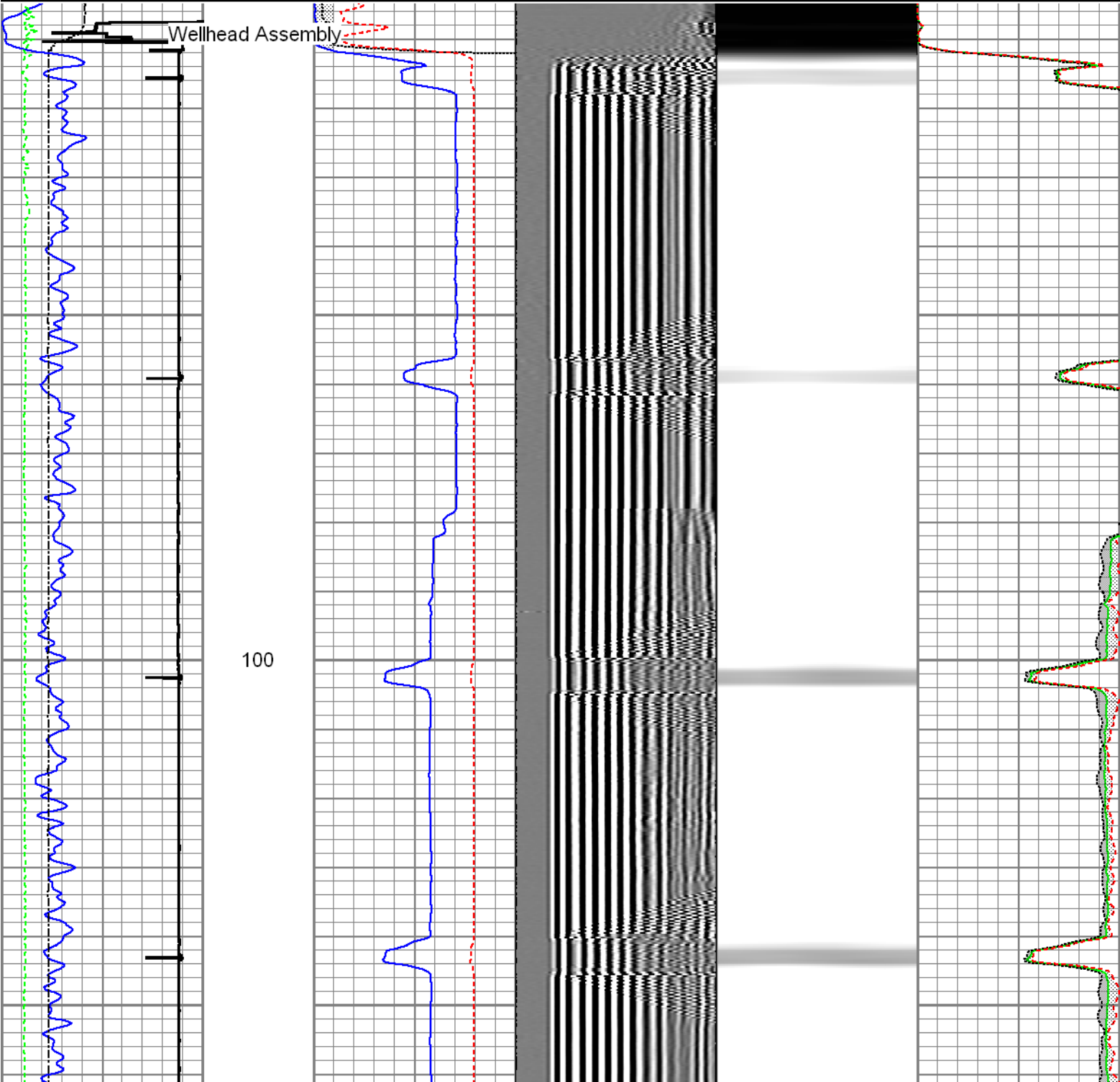
Dataset Pathname:pass7

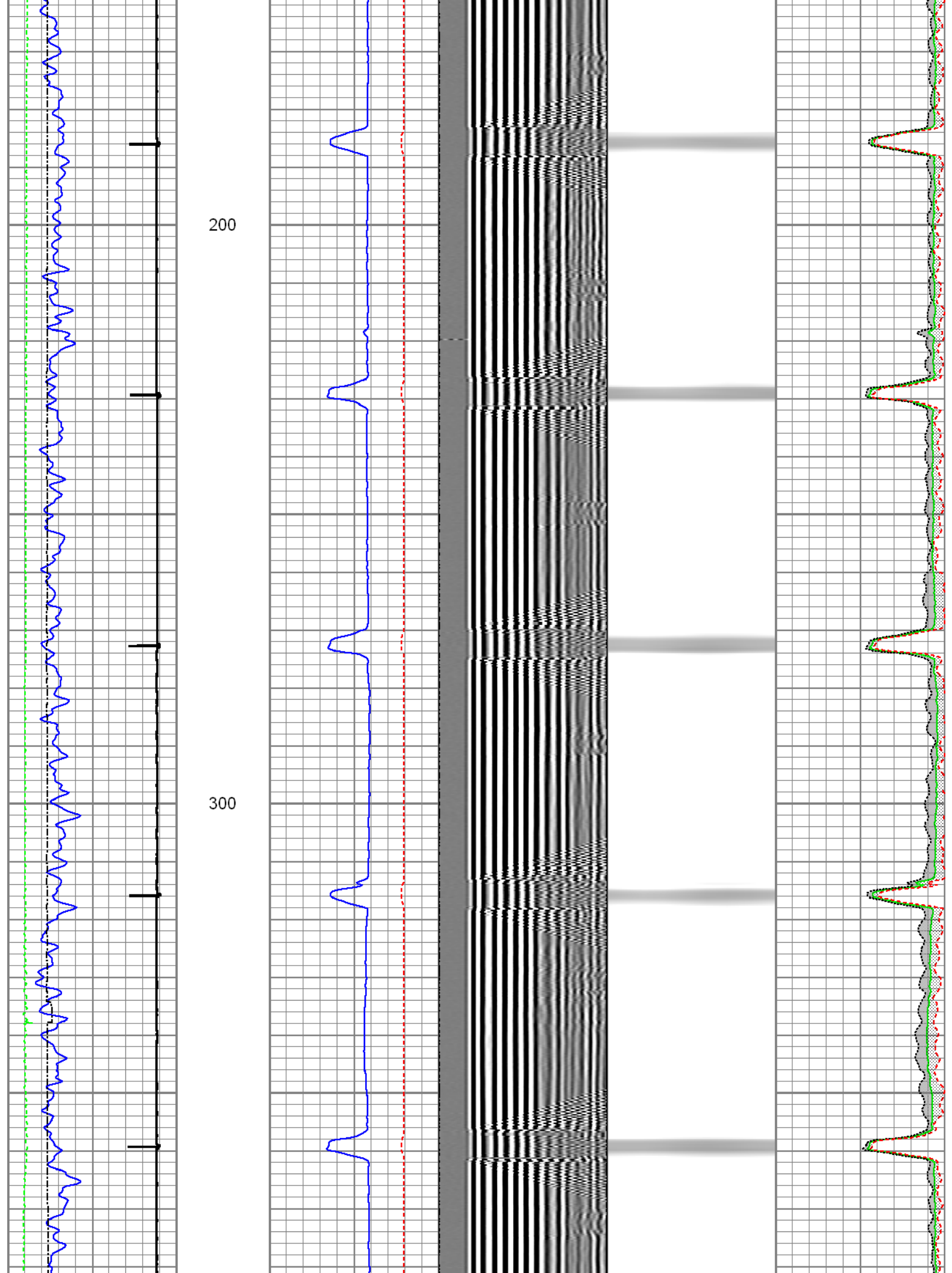
Presentation Format:rbt4_mit

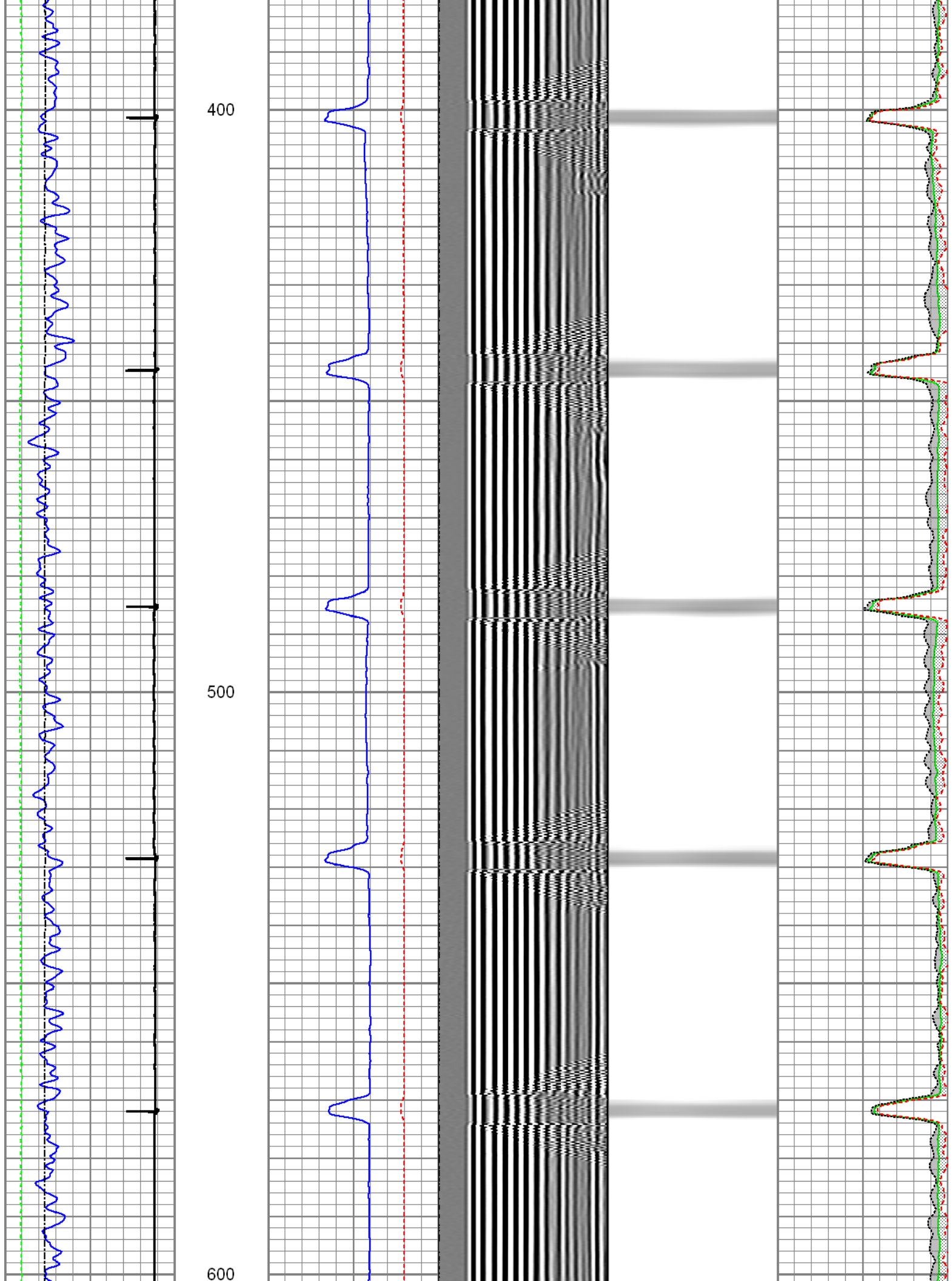
Dataset Creation:Tue Sep 16 15:25:03 2014 by Log SCH 111116

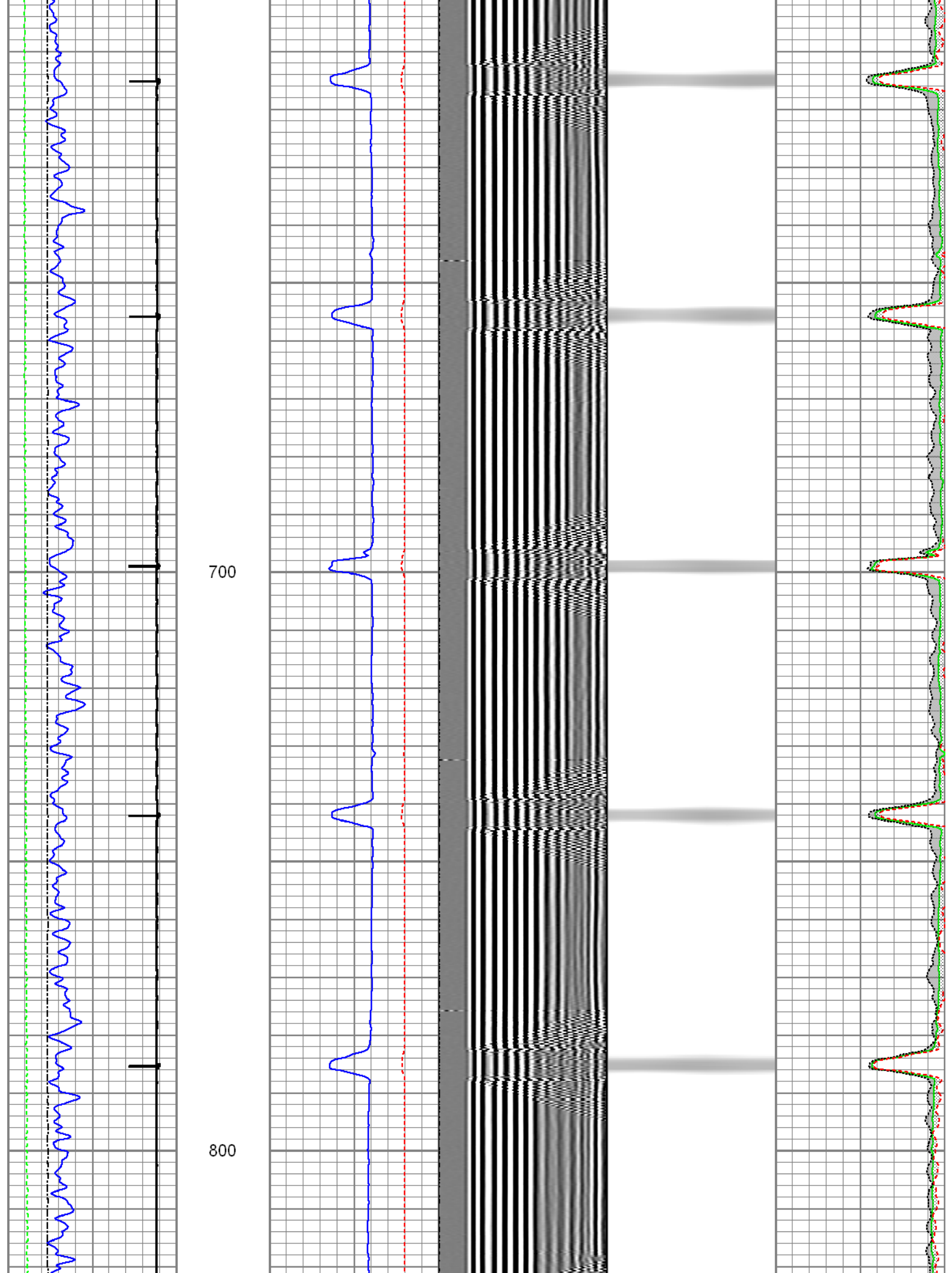
Charted by:Depth in Feet scaled 1:240

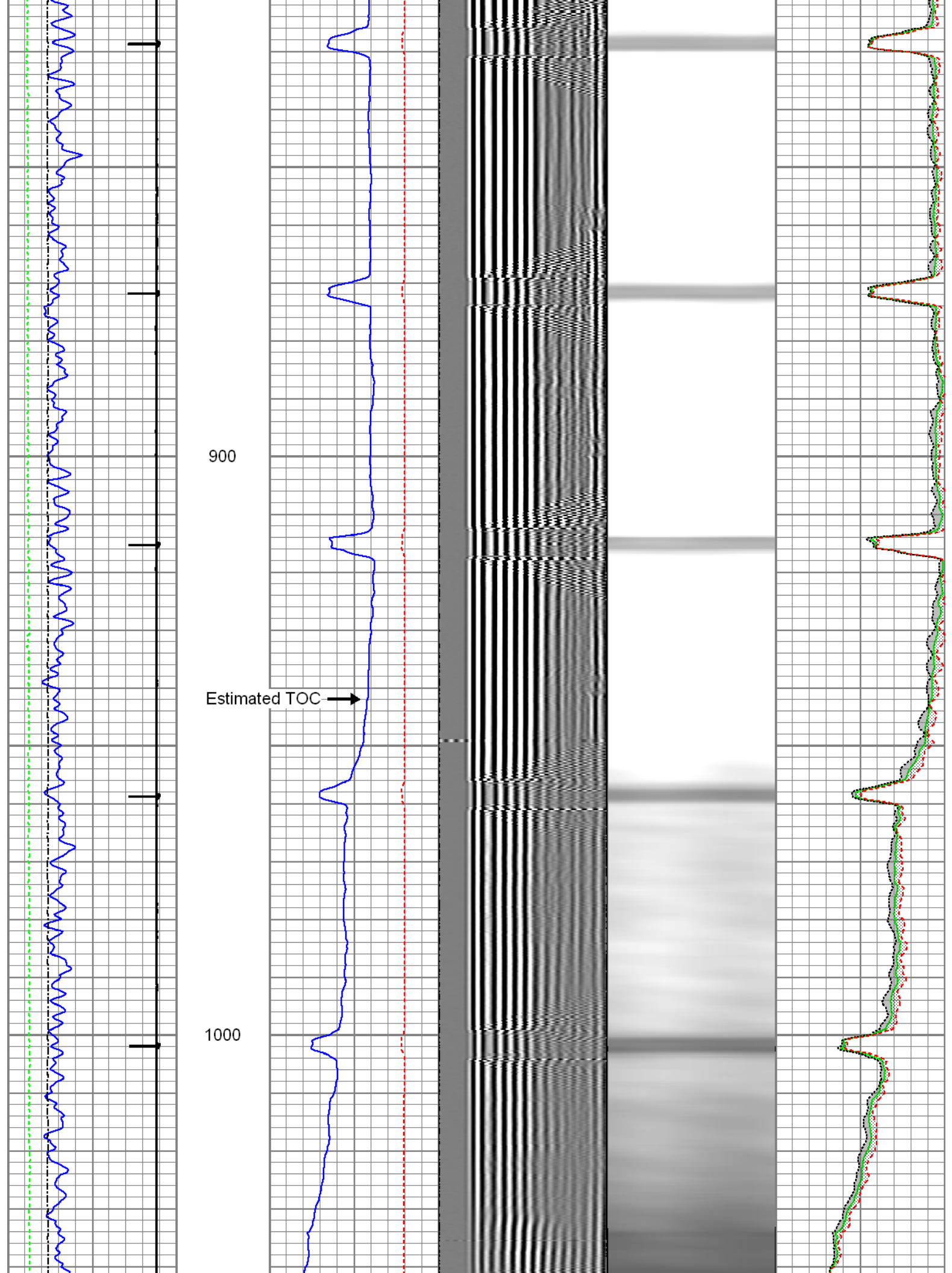
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
Line Speed	0 (mV) 20			0 100
-100 (ft/min) 100	3' Travel Time			Maximum Amplitude
Line Tension	650 (usec) 150			0 100
0 (lb) 2000				

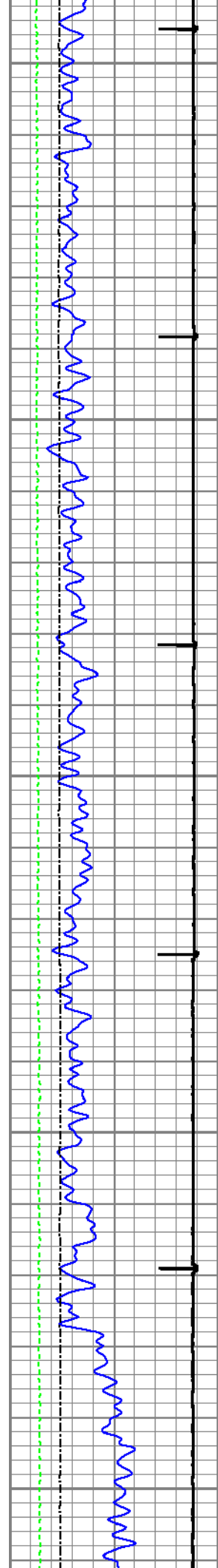






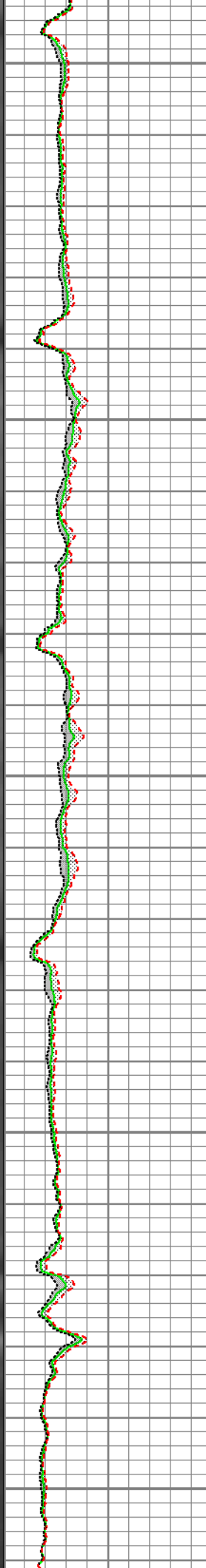
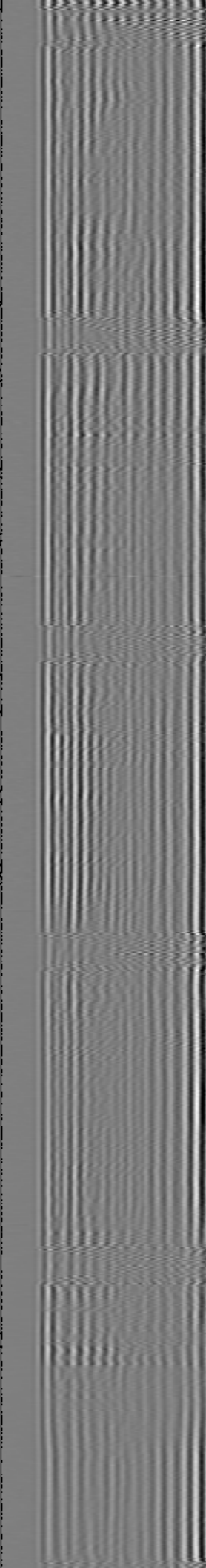
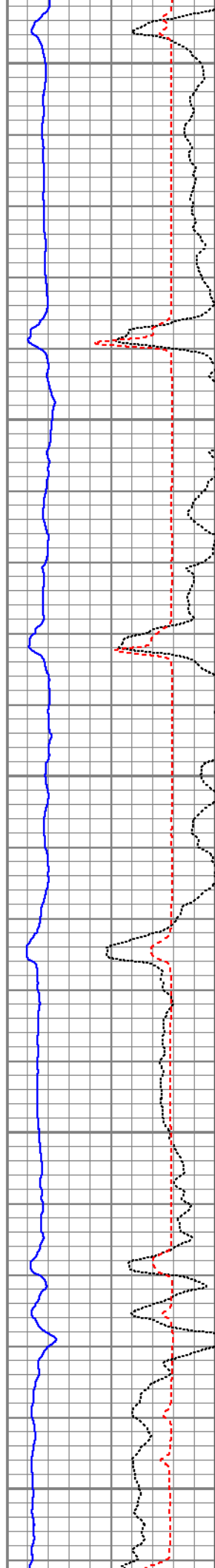


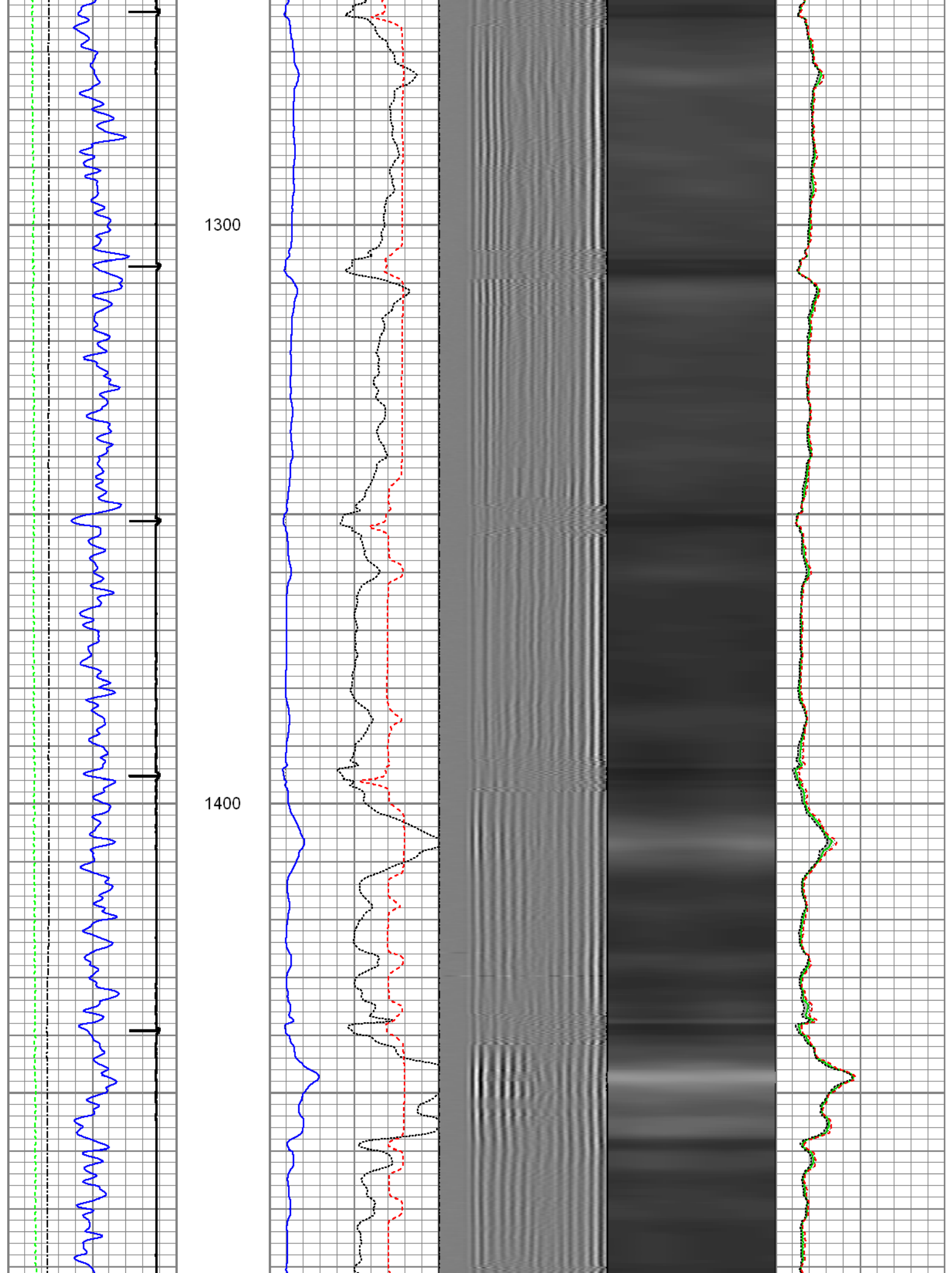


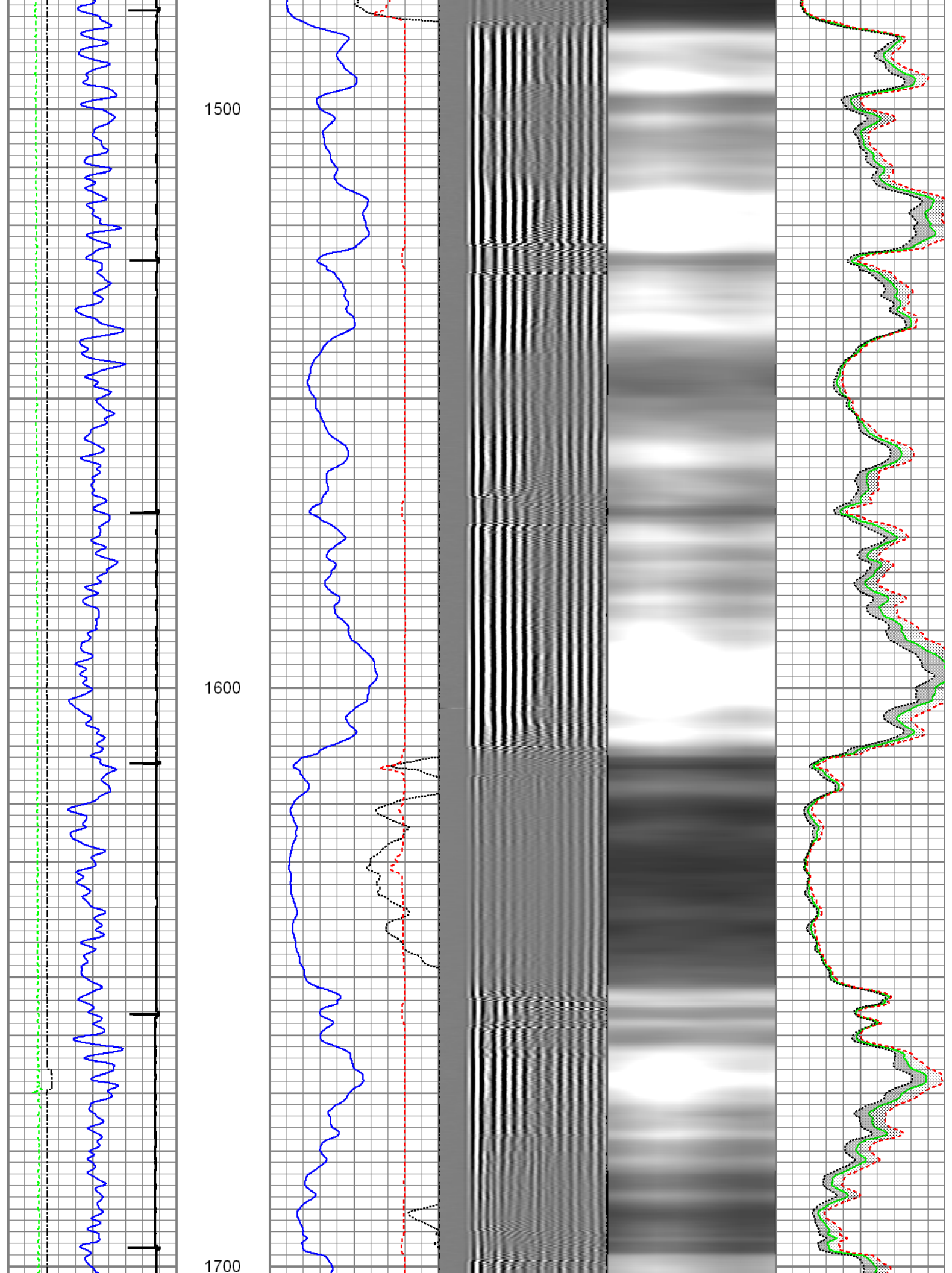


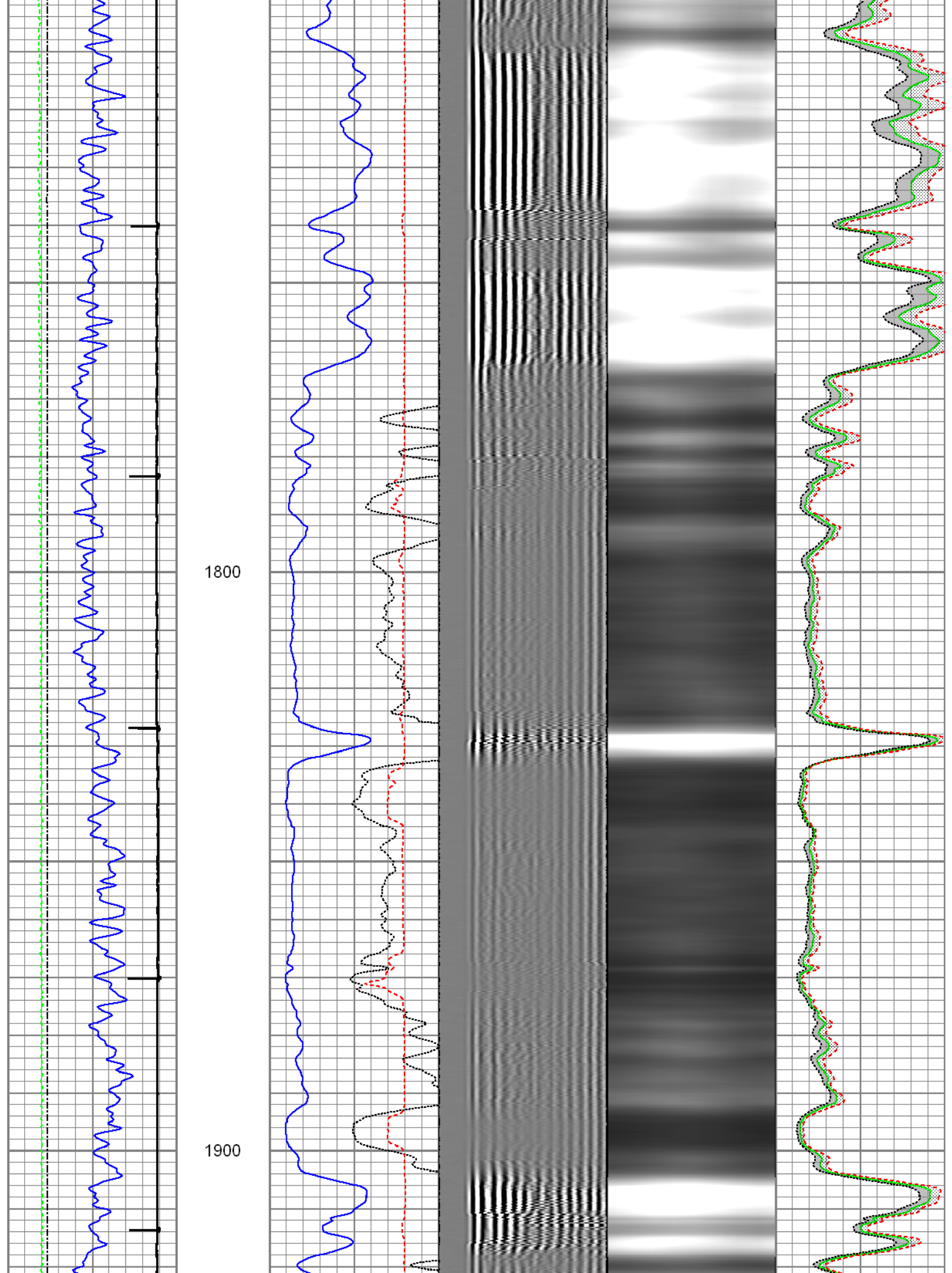
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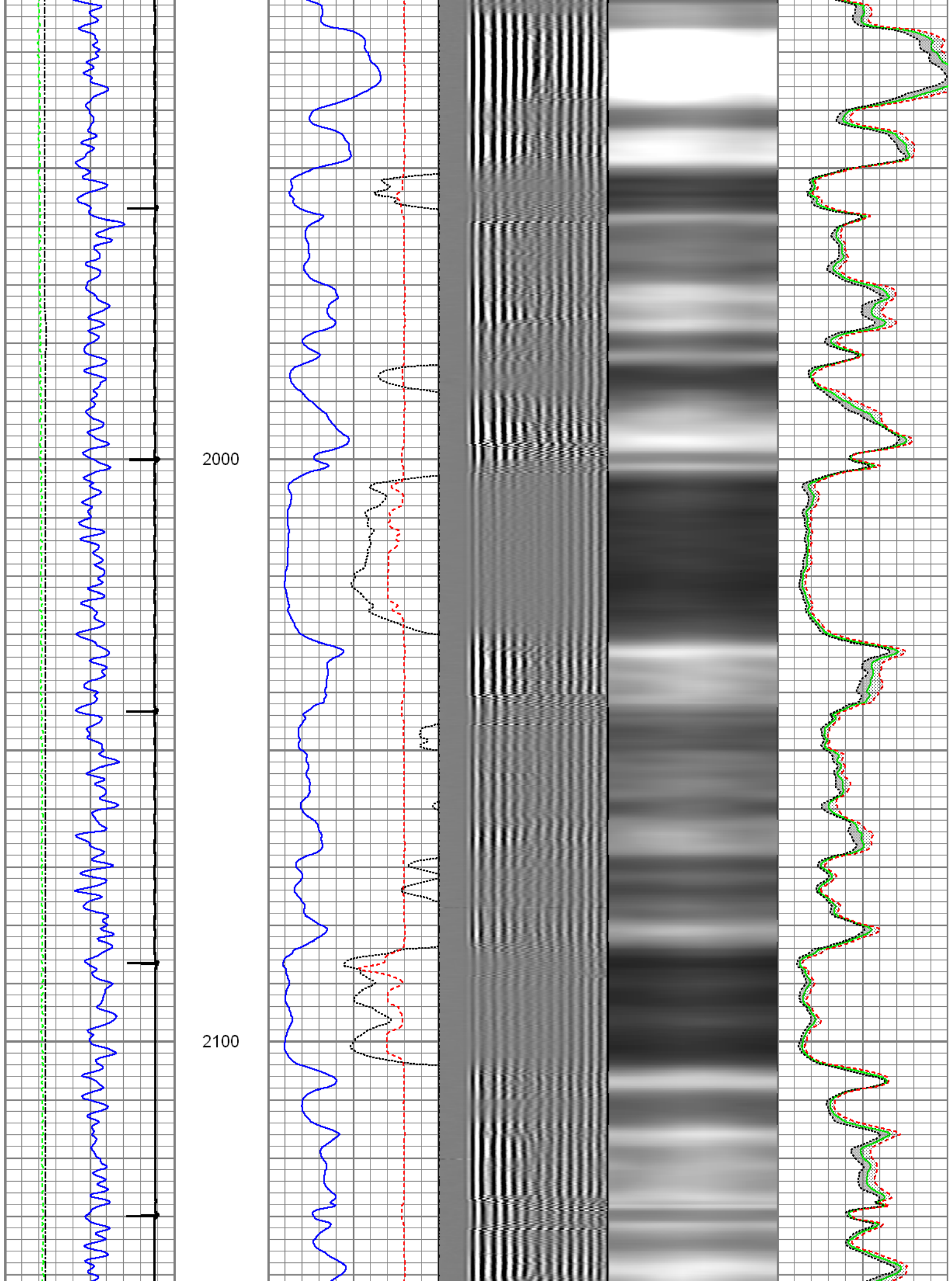
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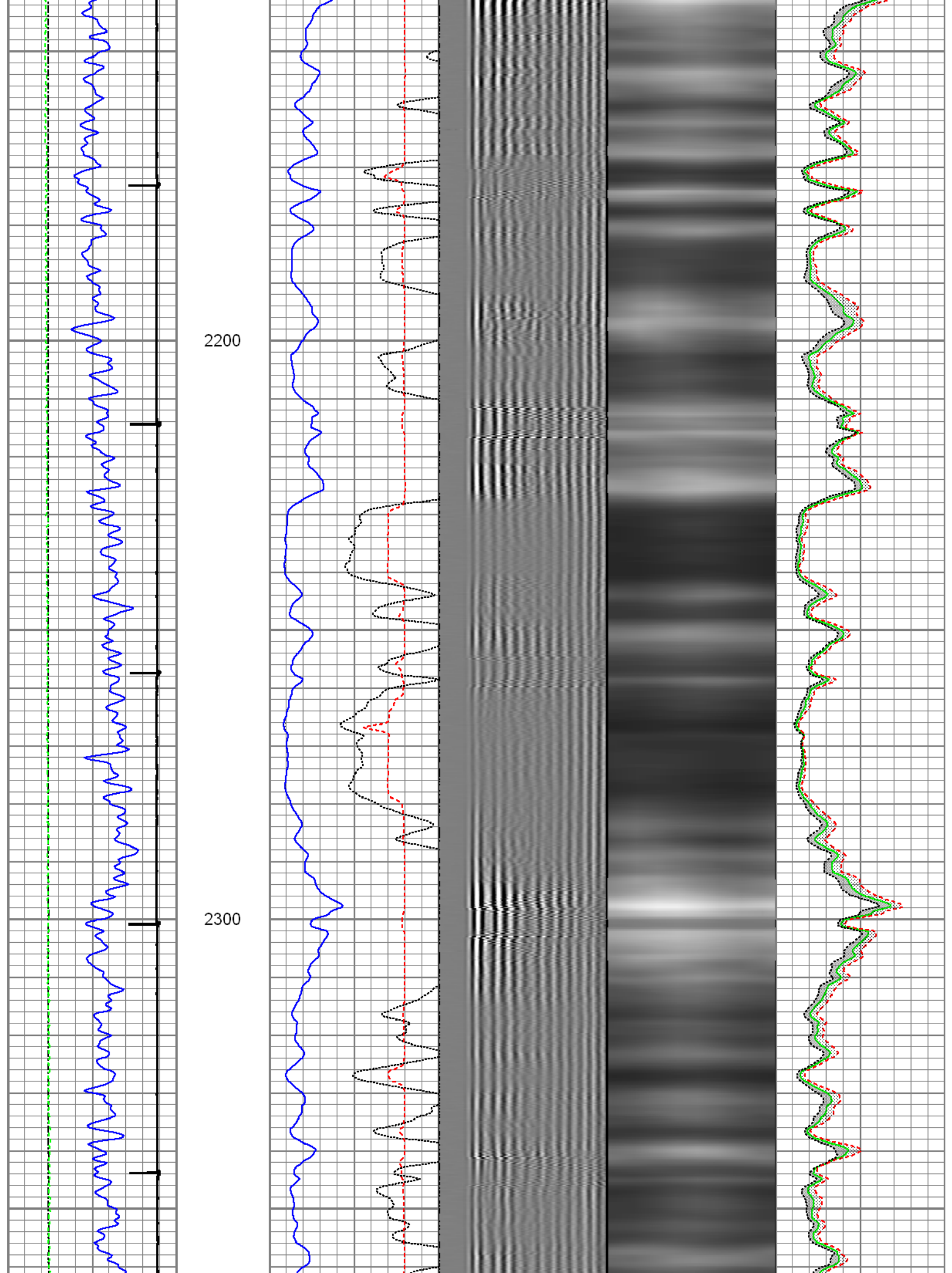


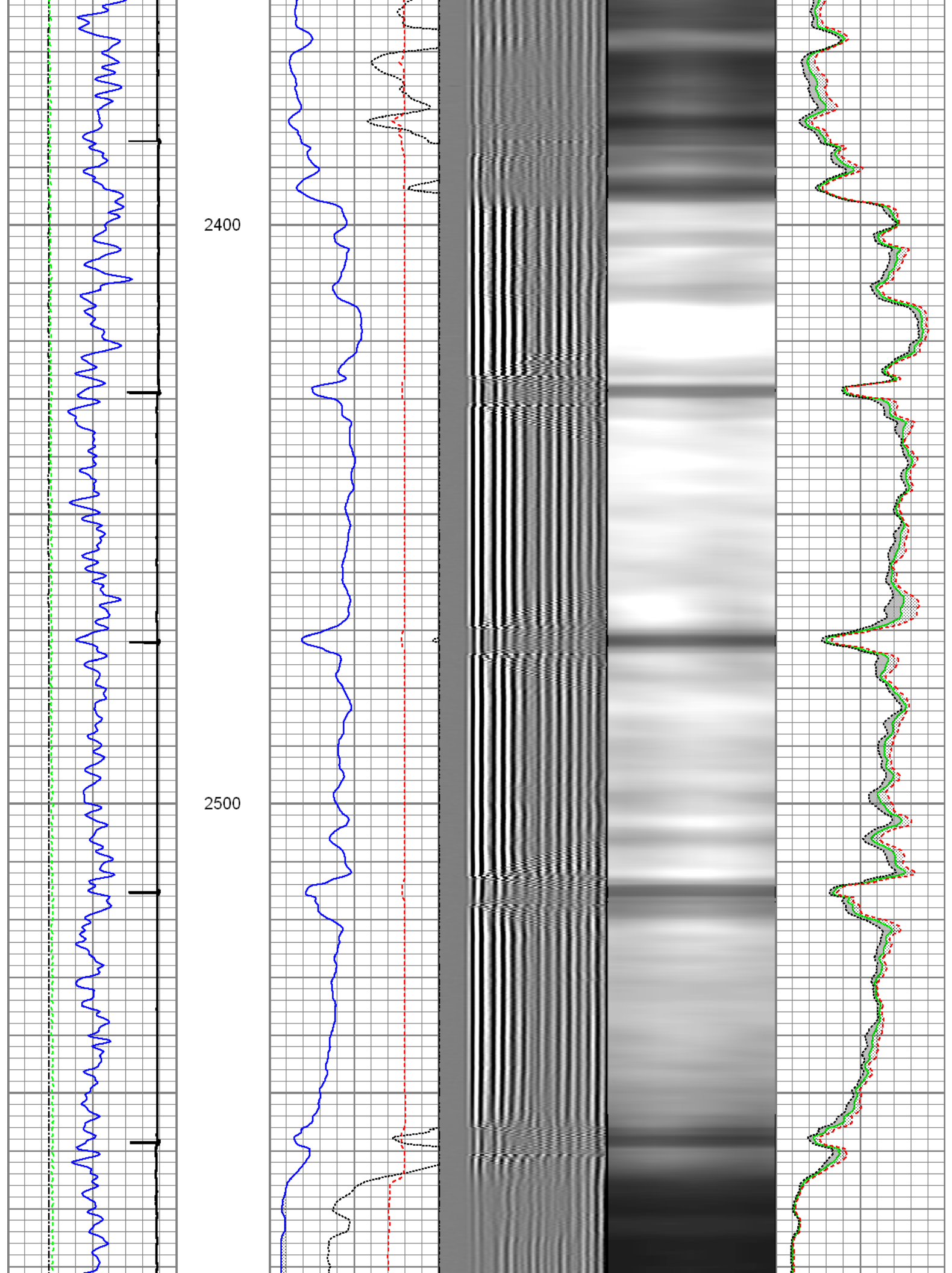


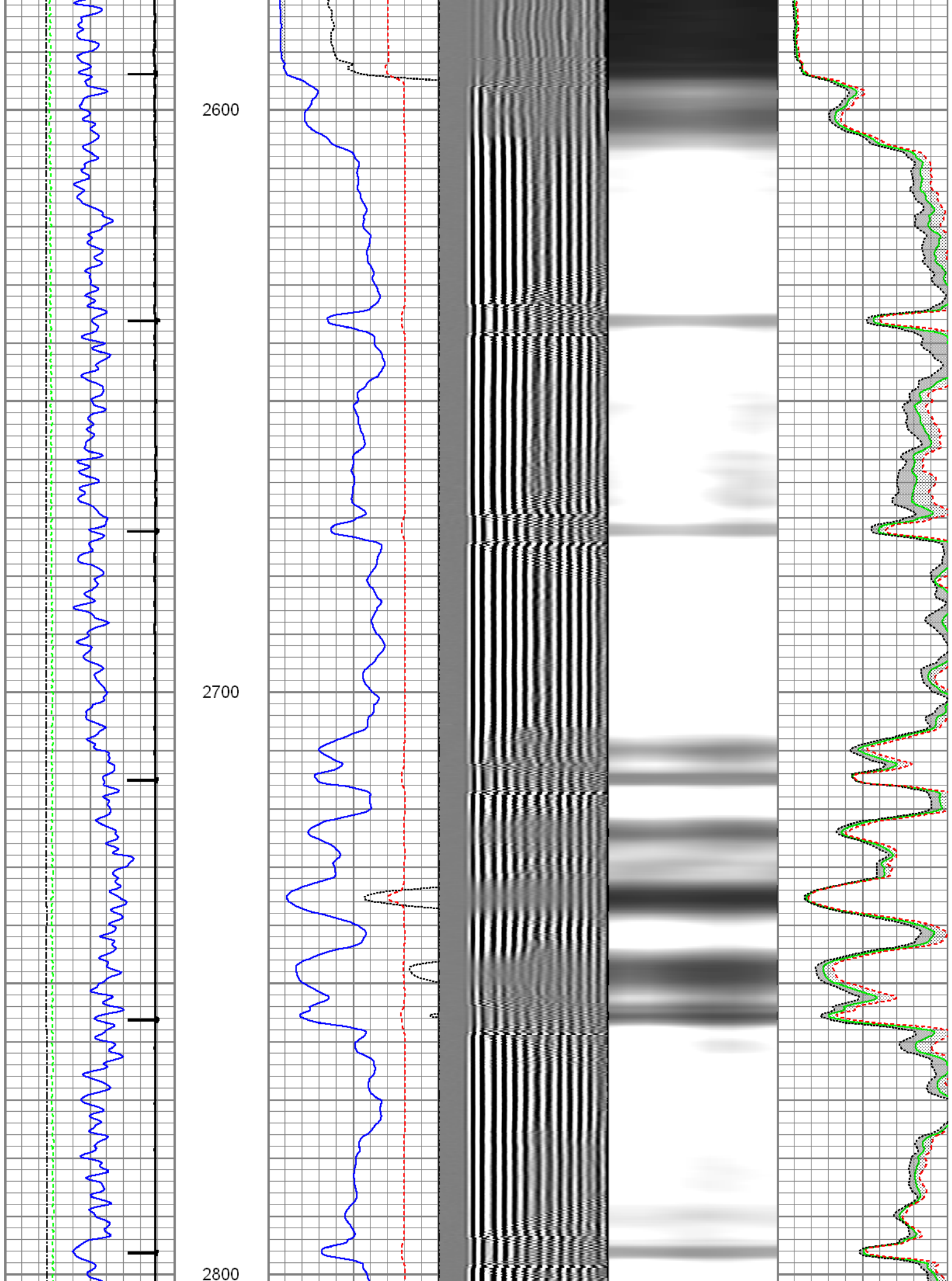


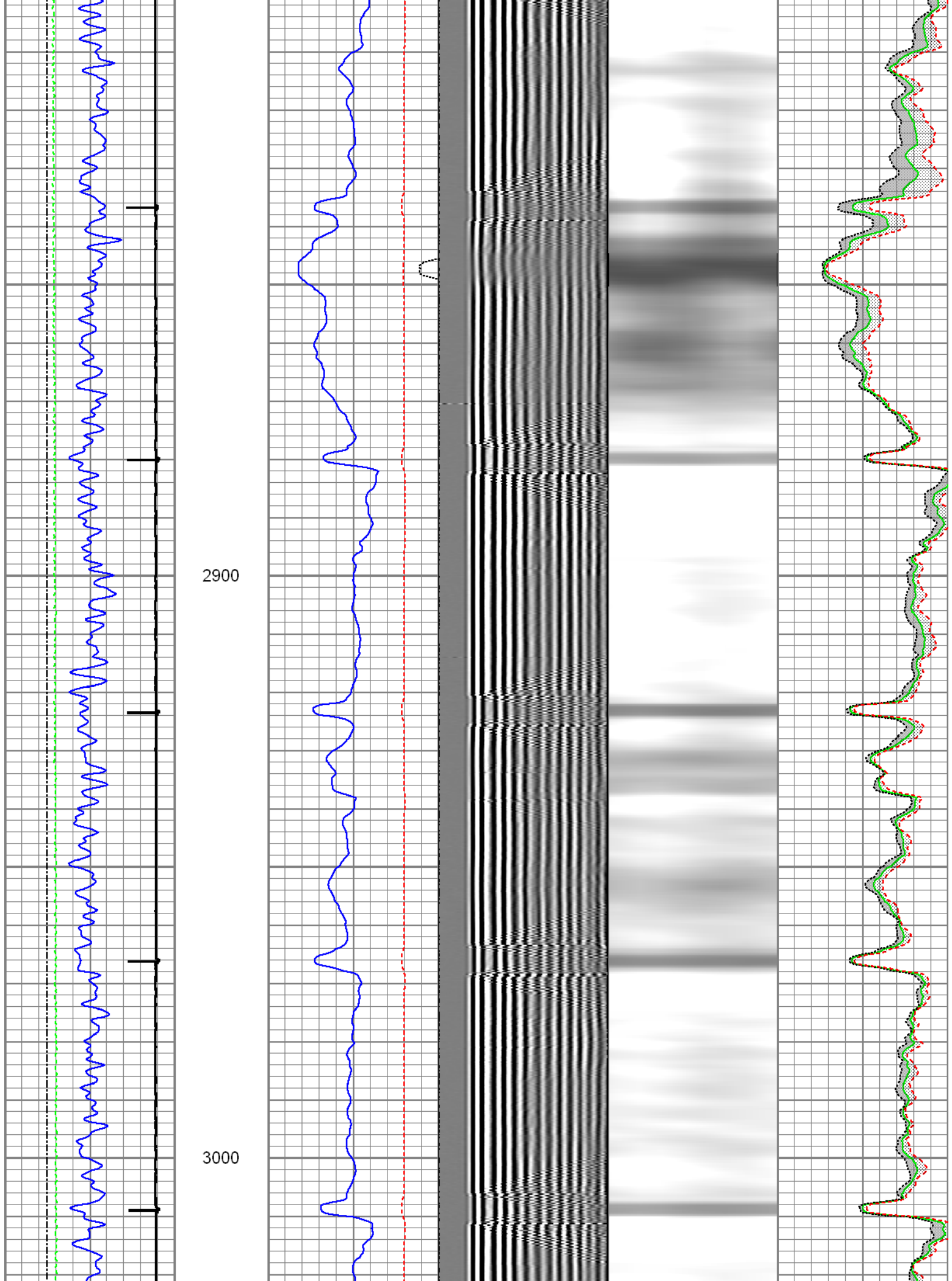


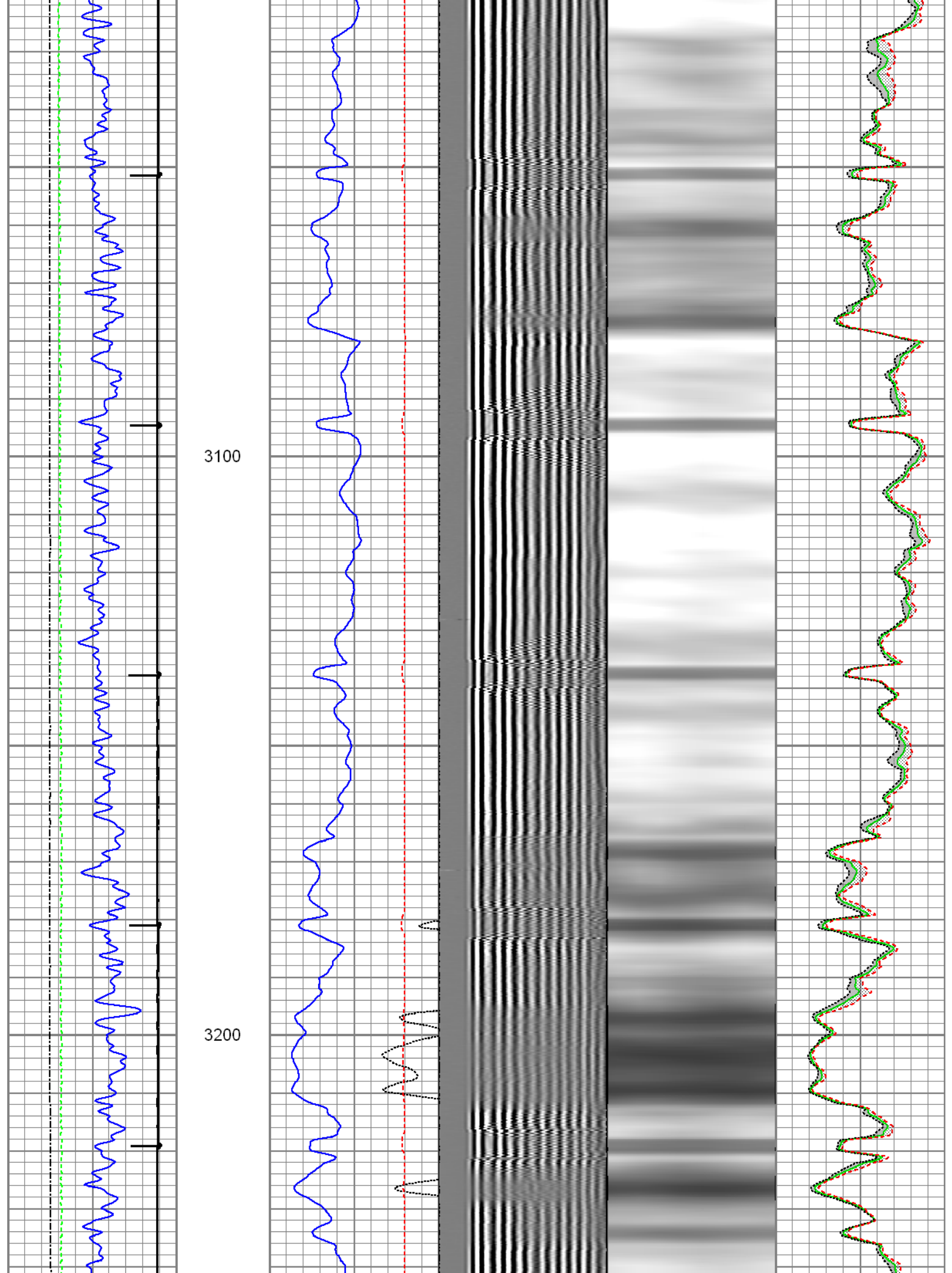


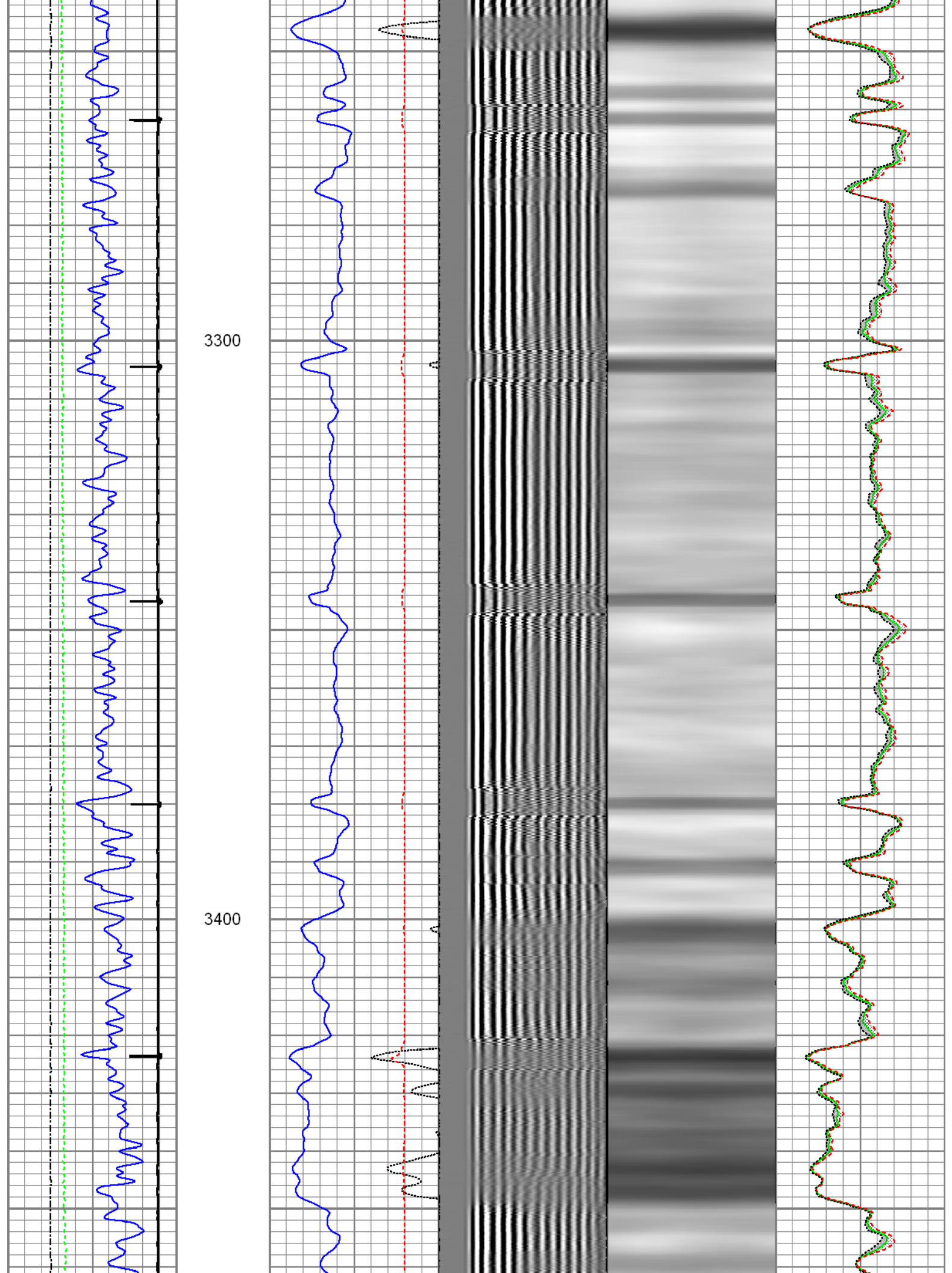


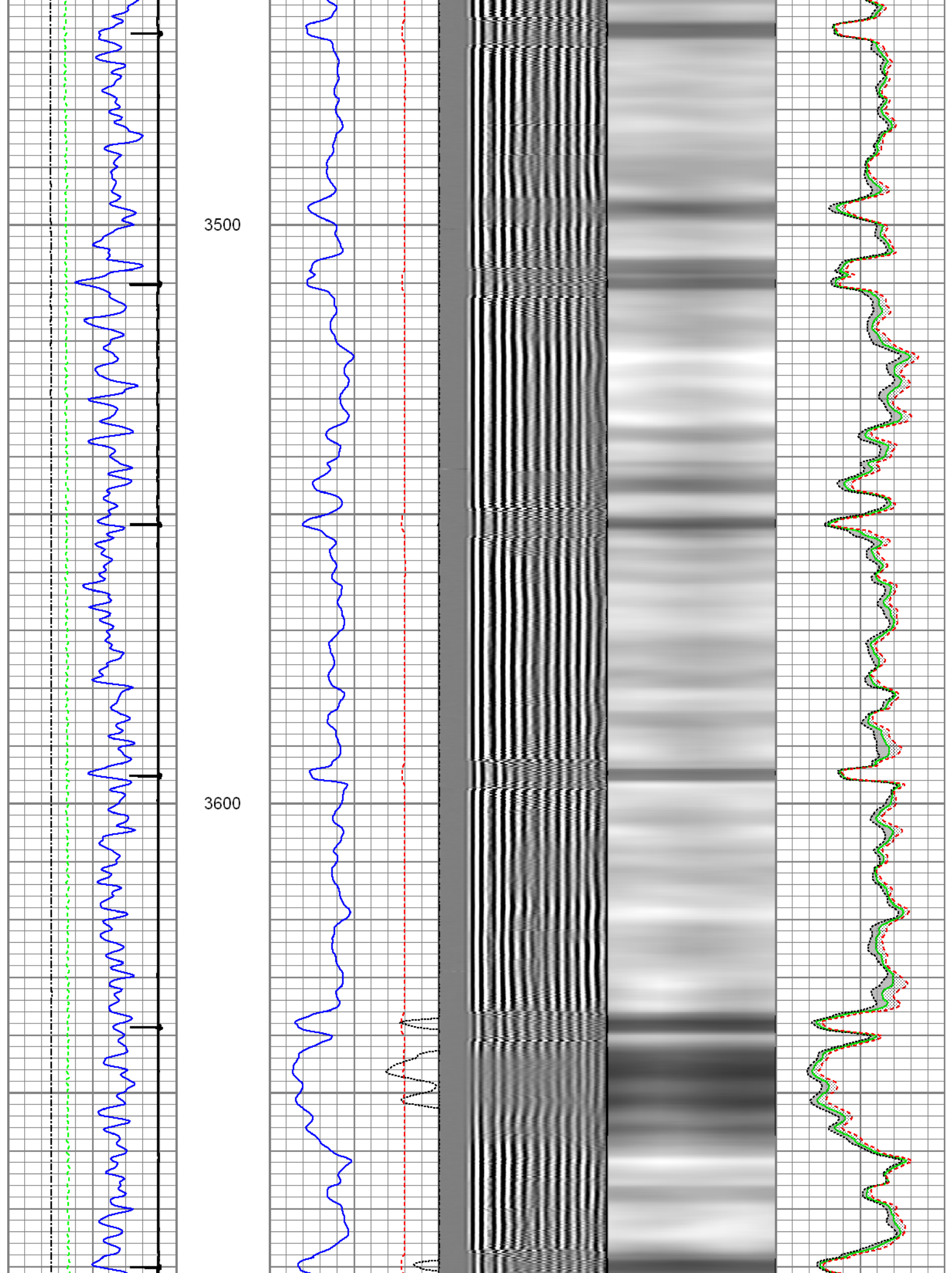


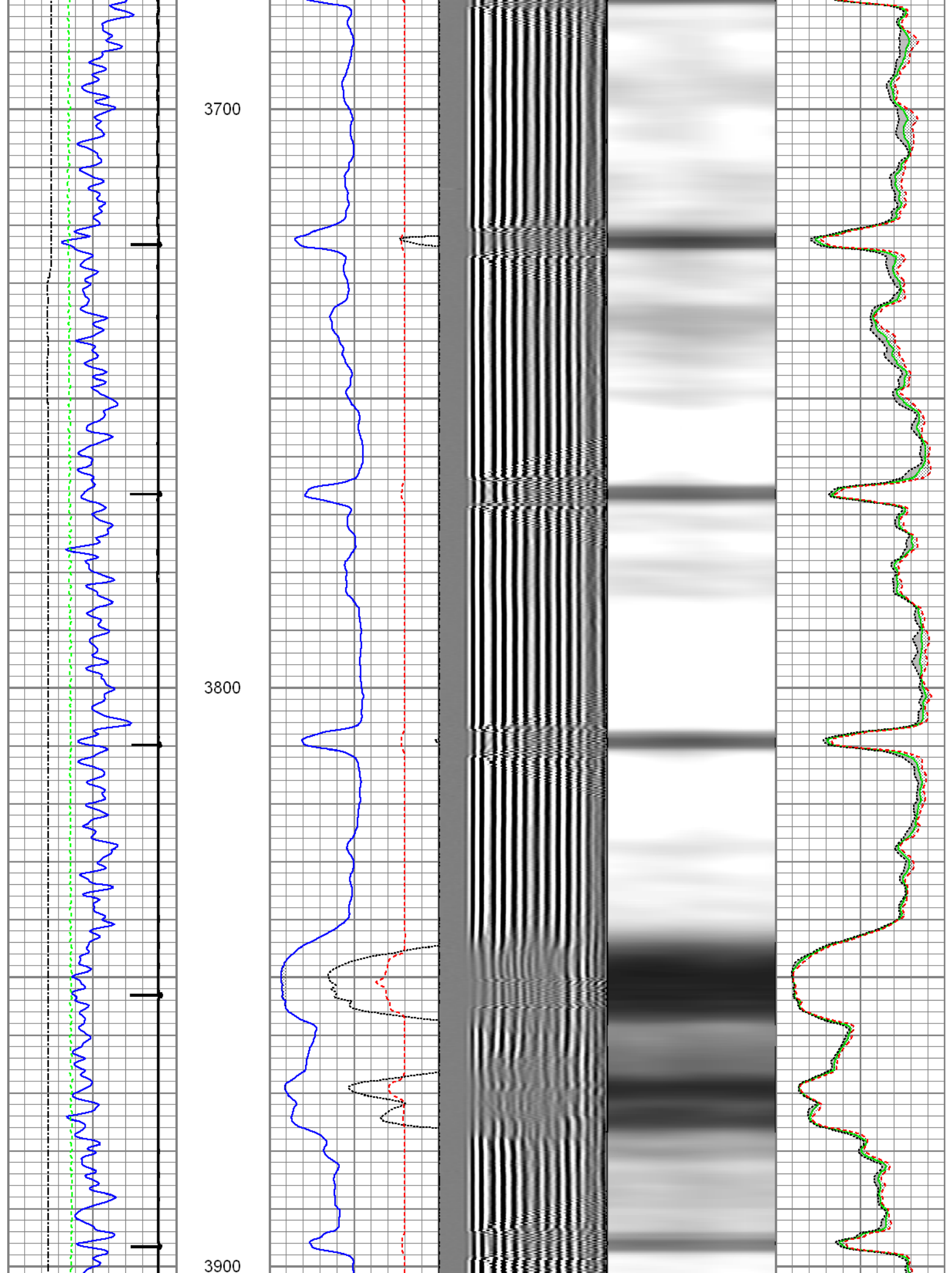


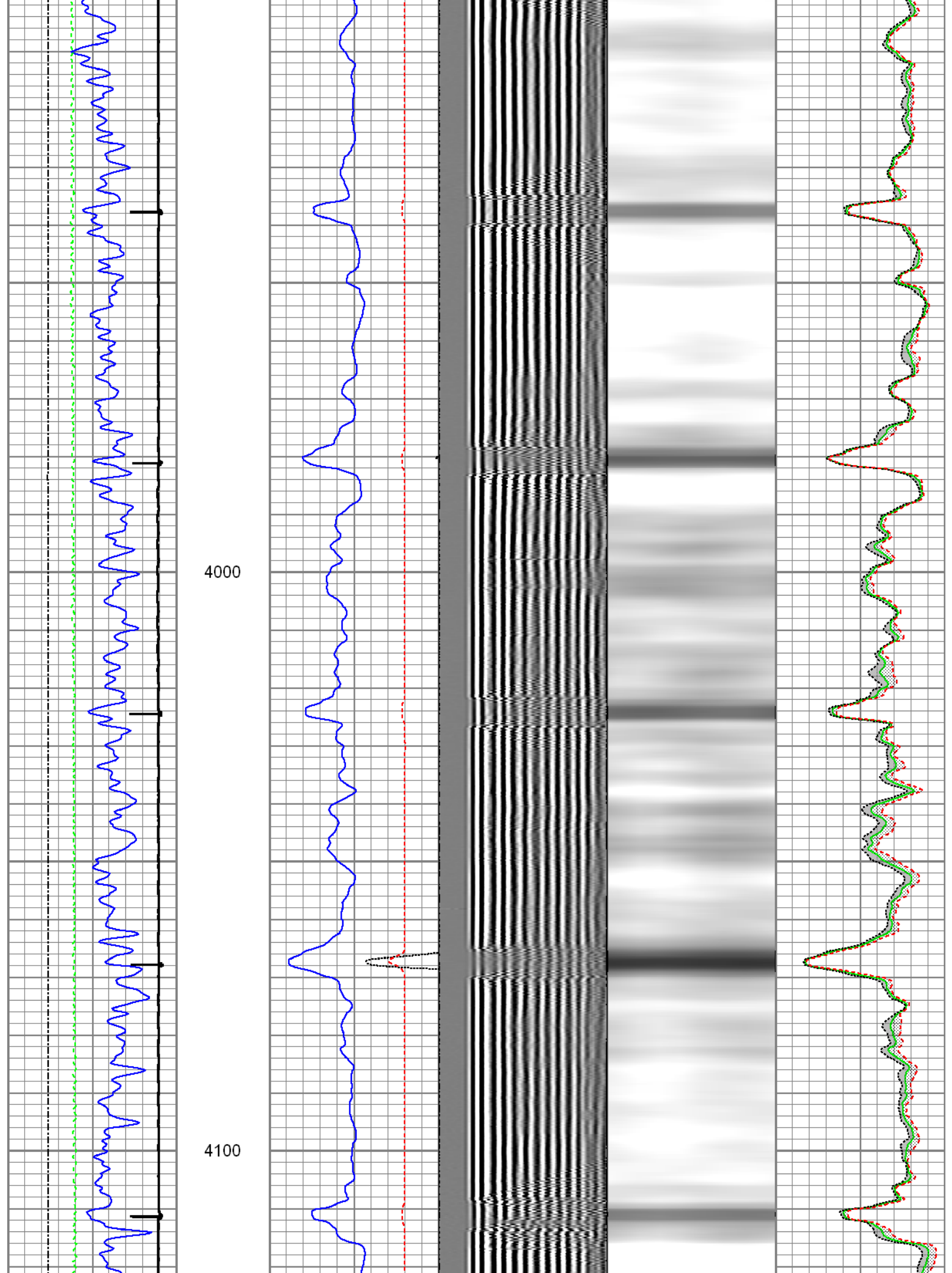


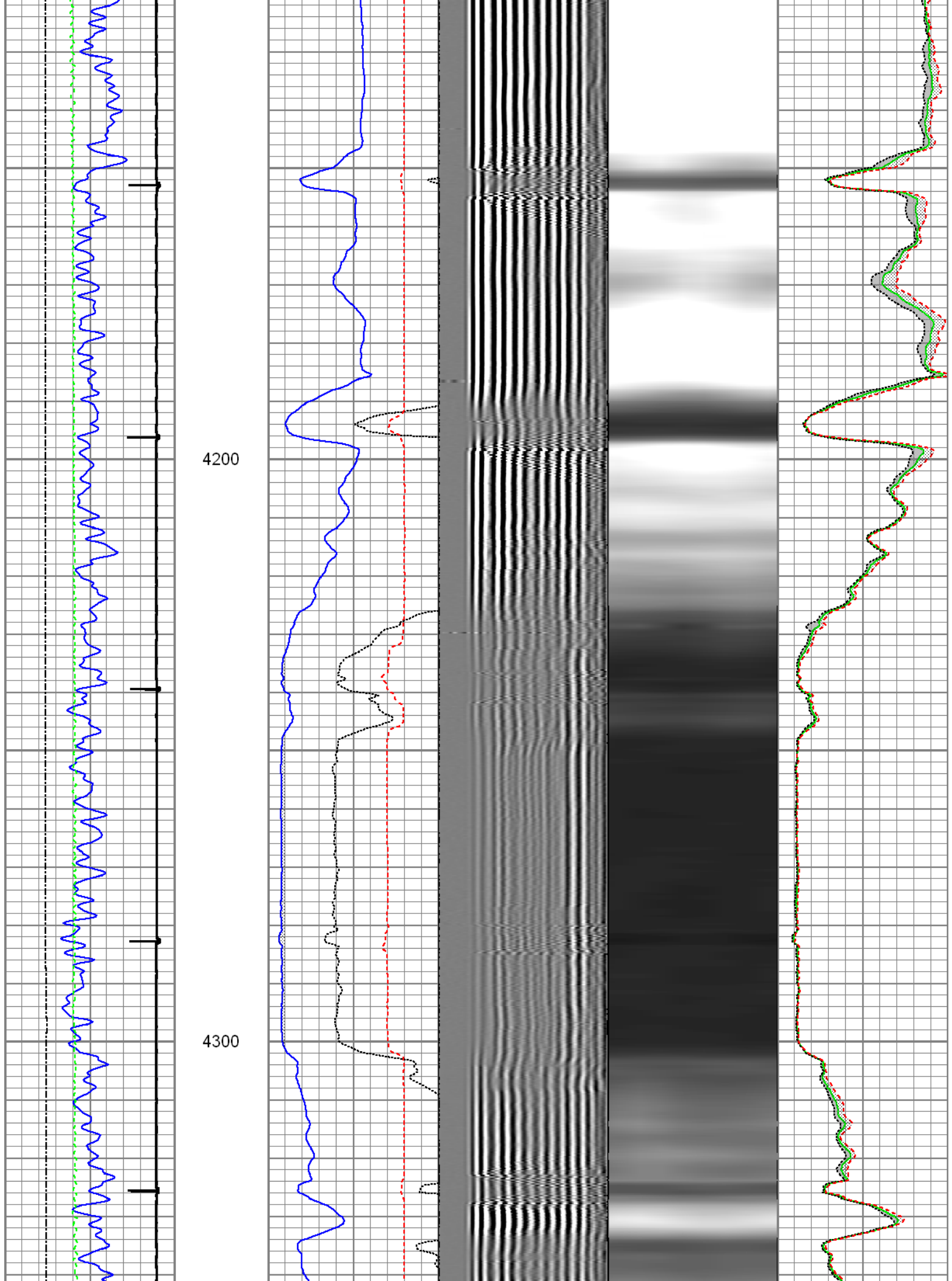


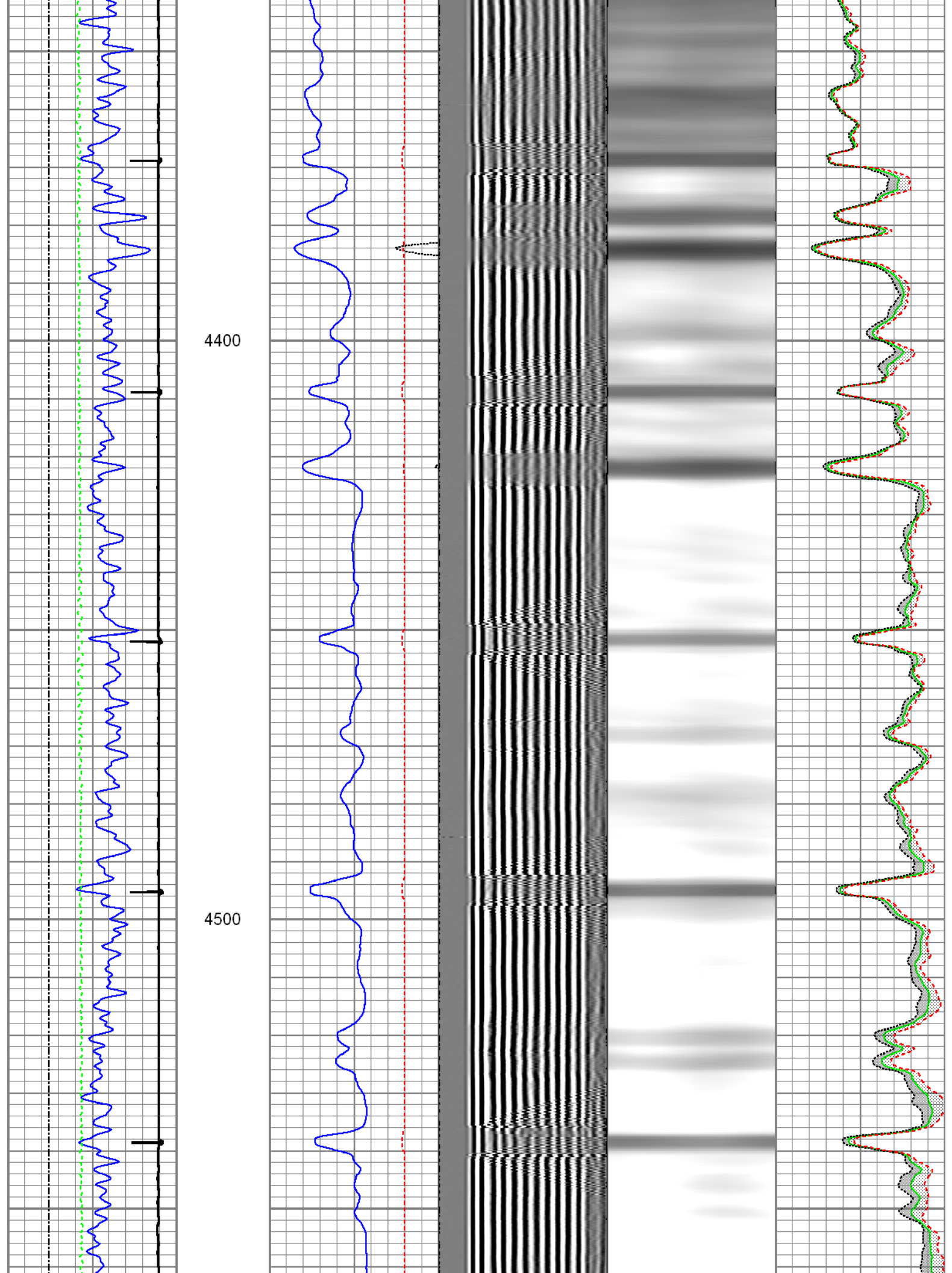


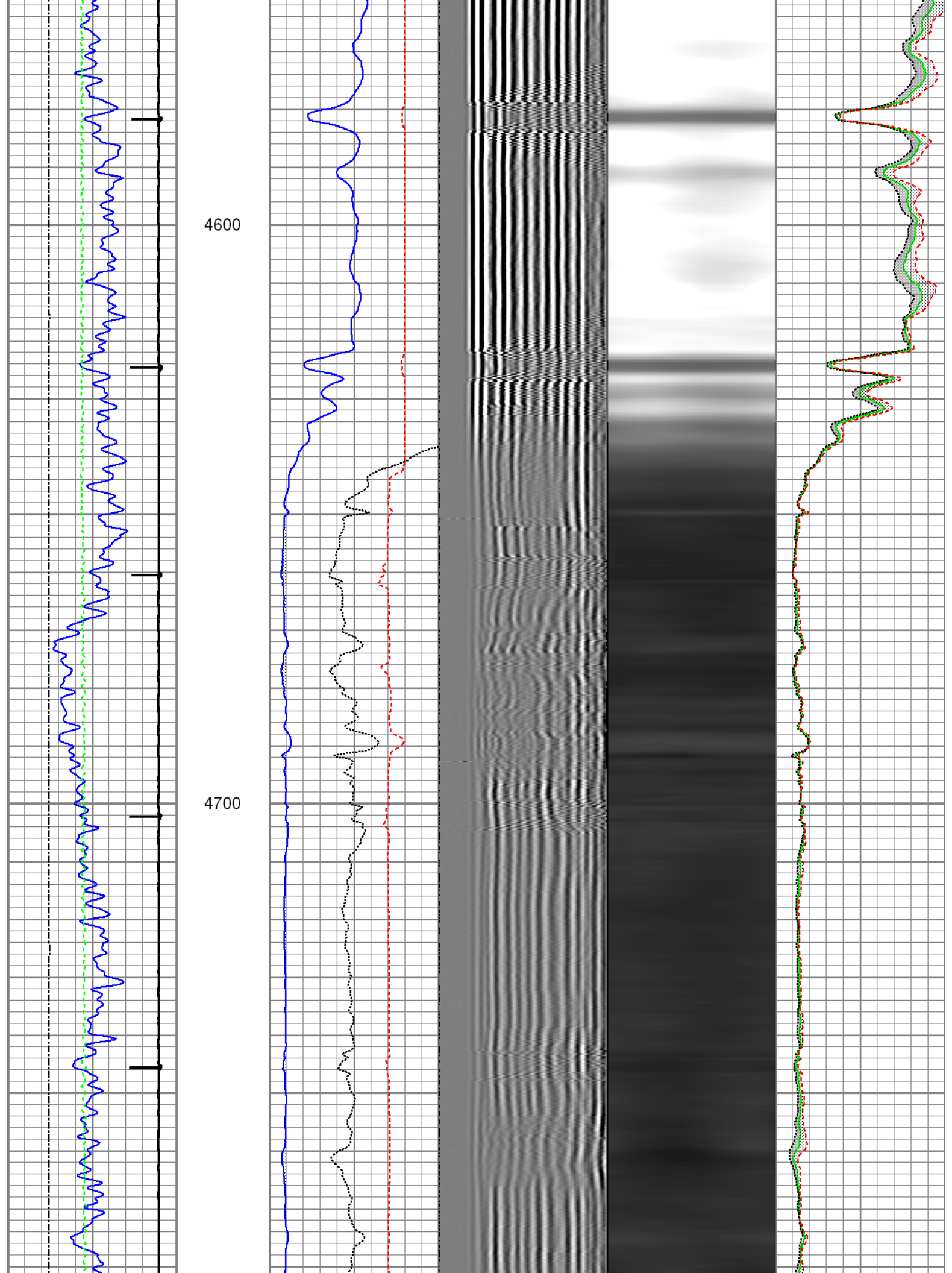


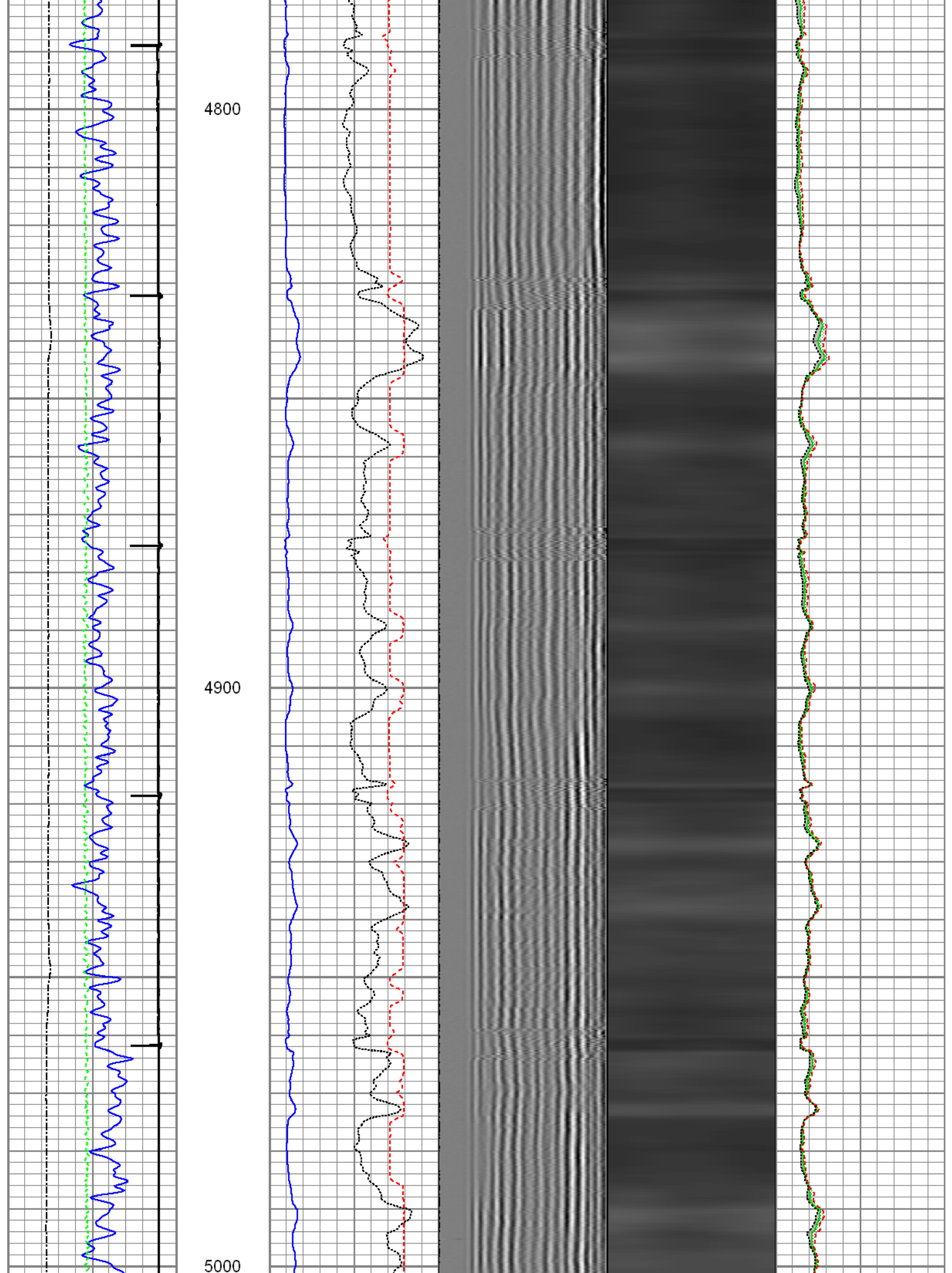


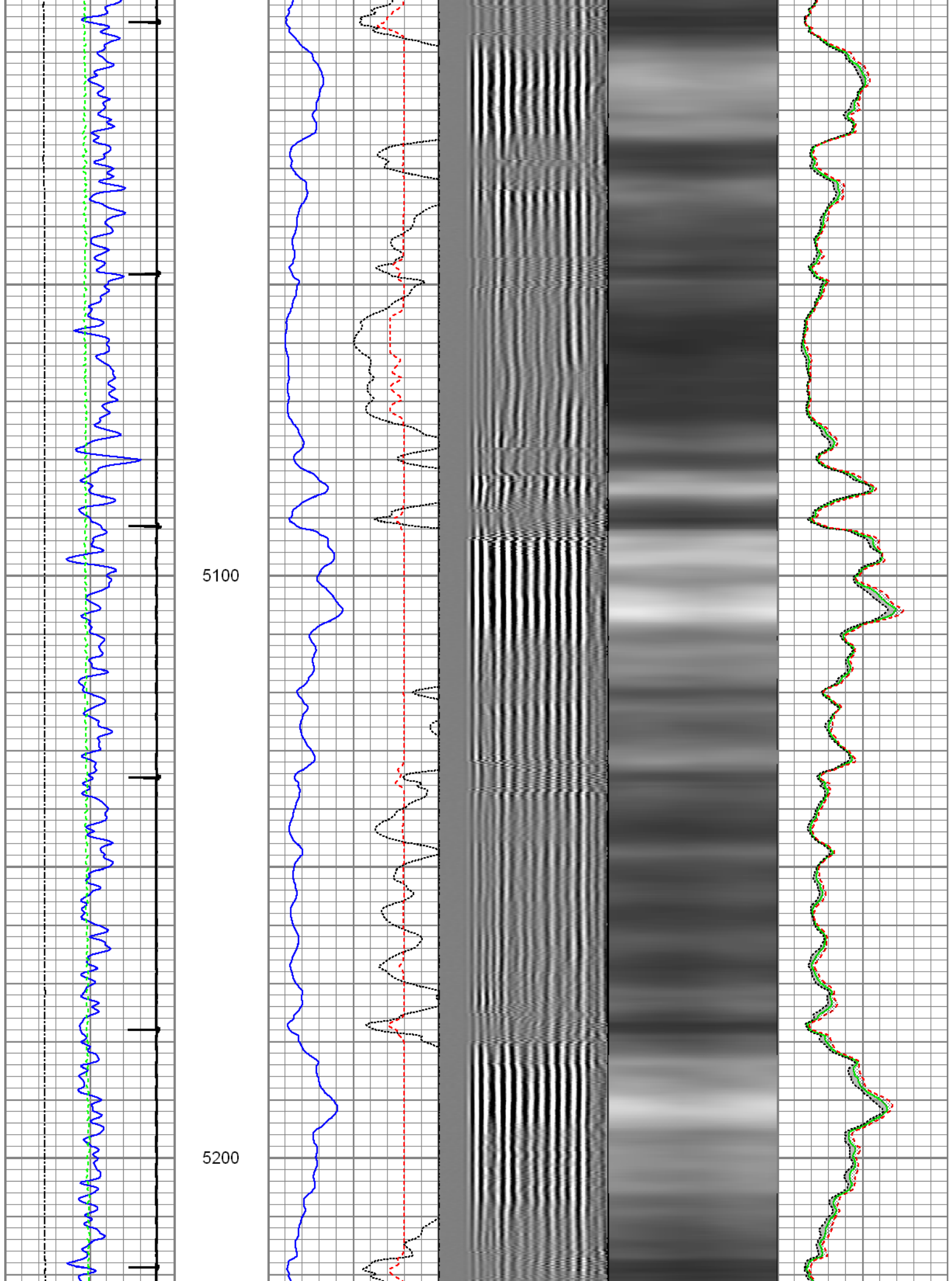


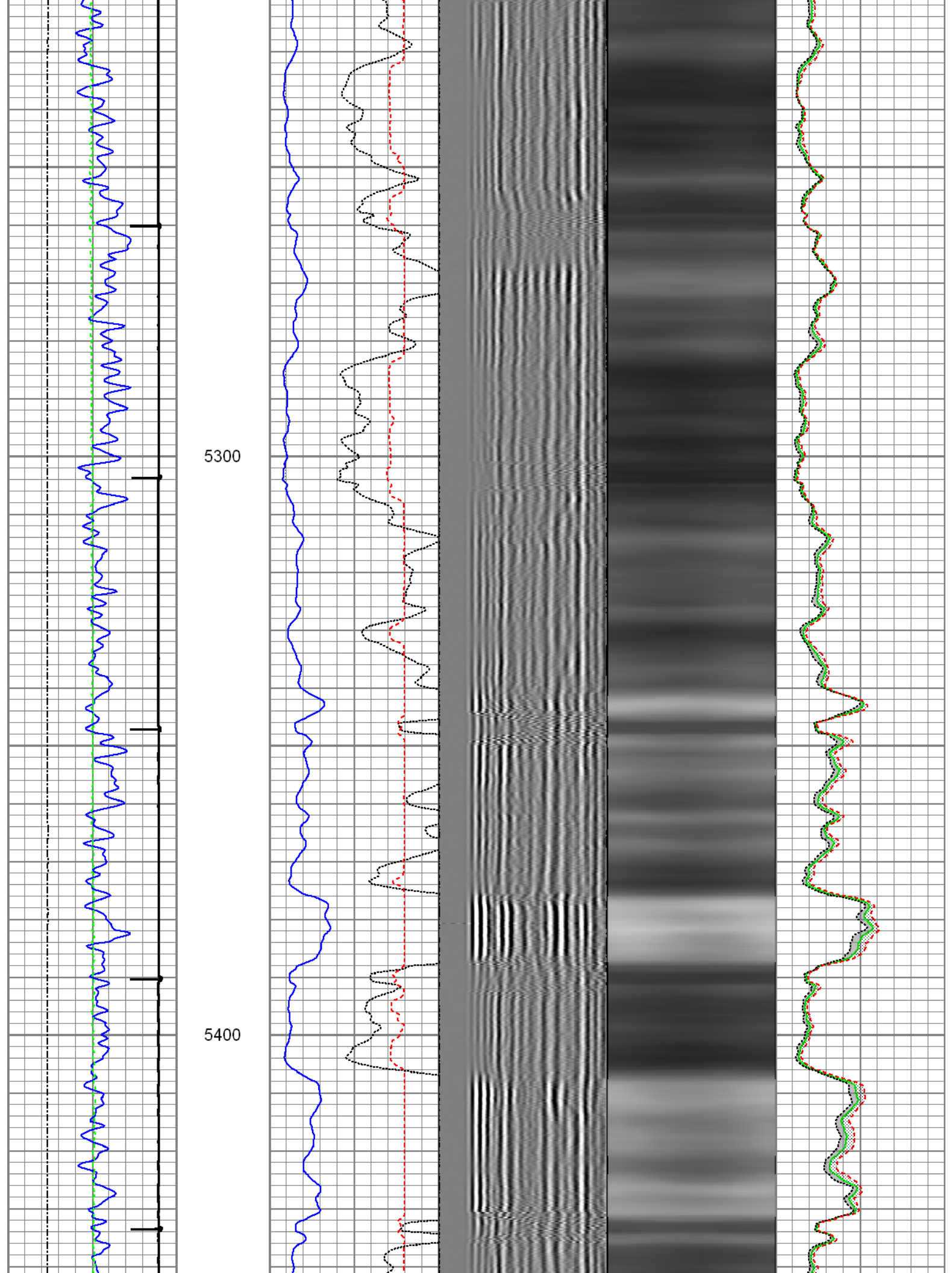


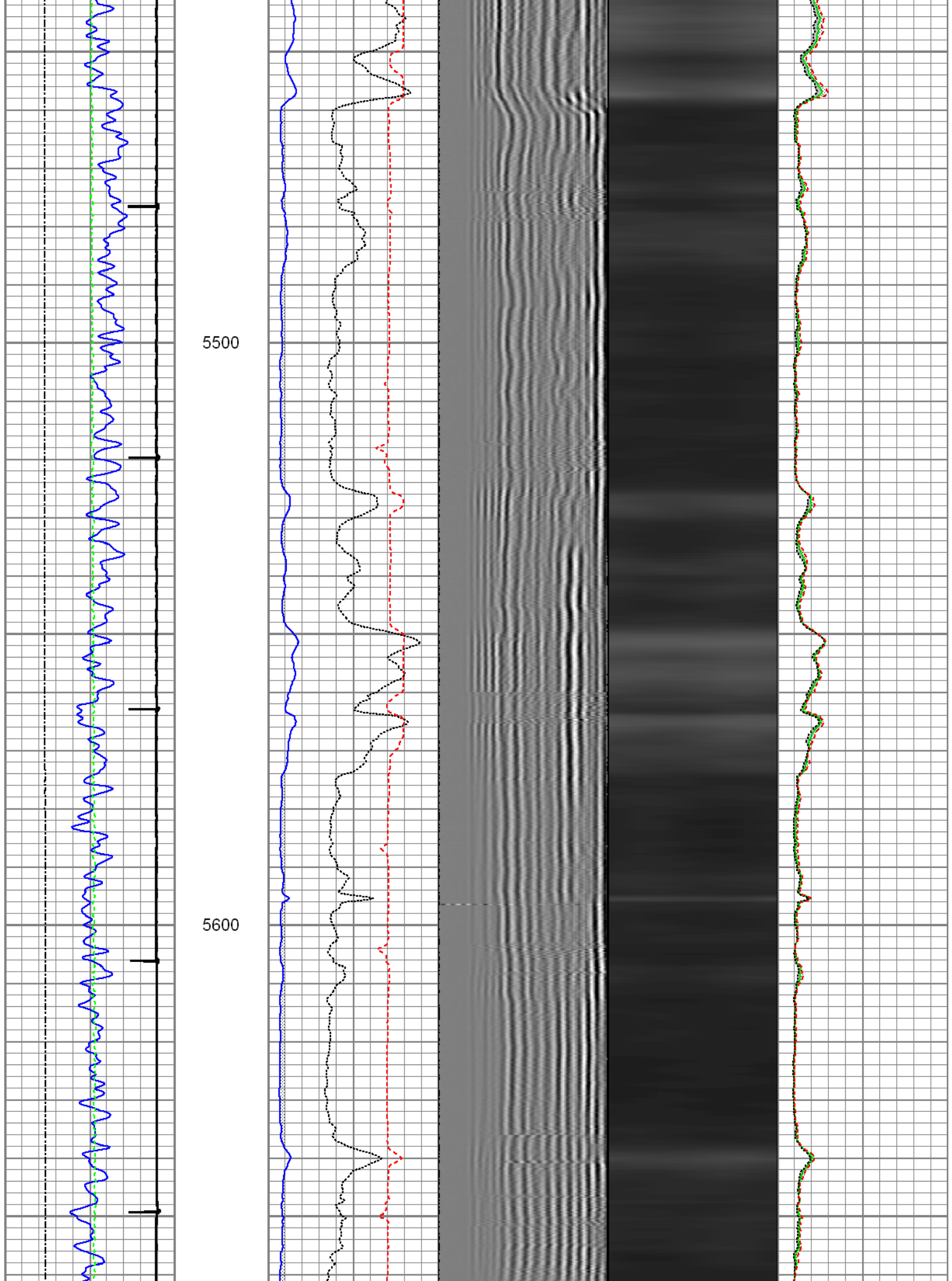


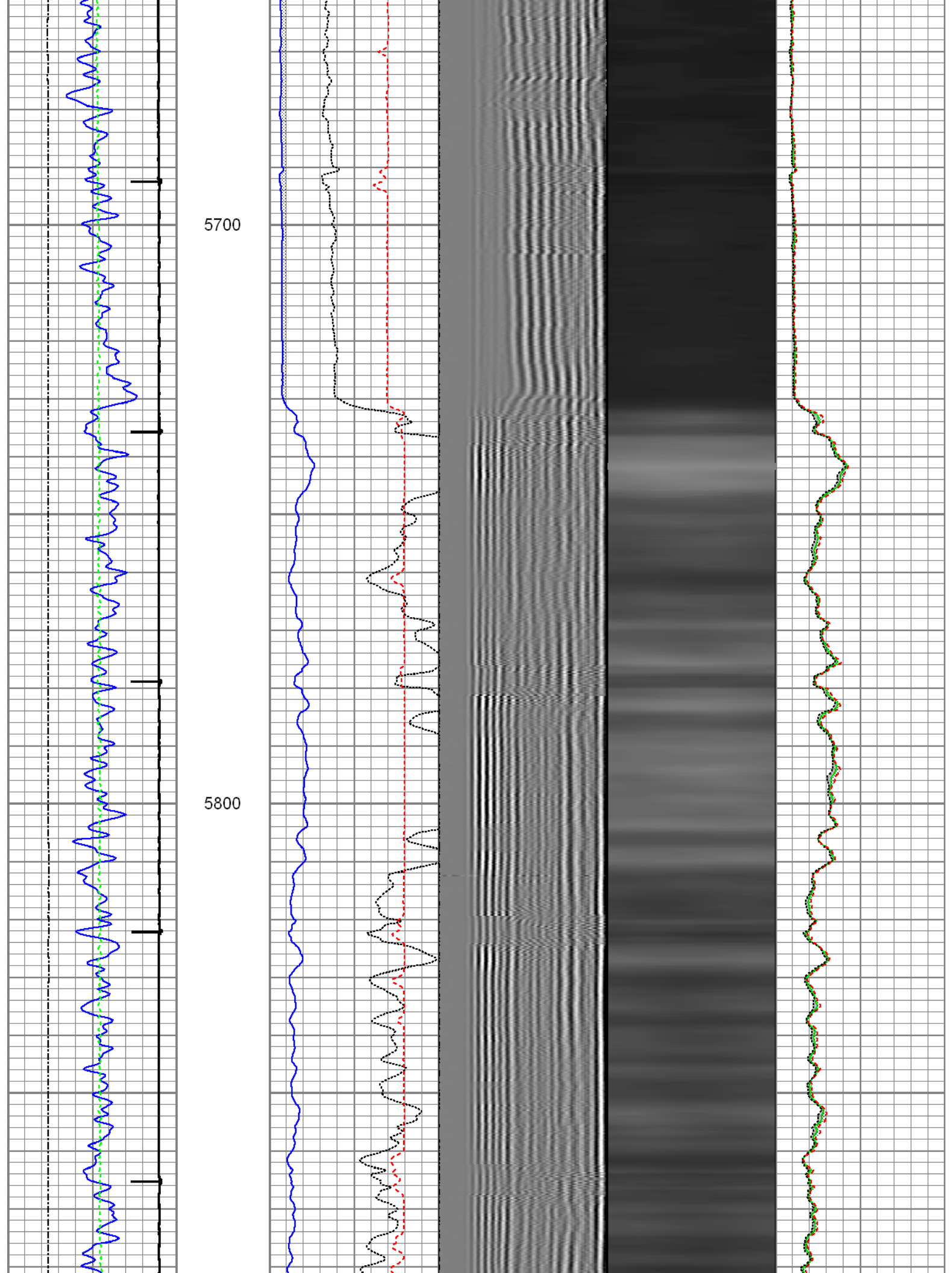


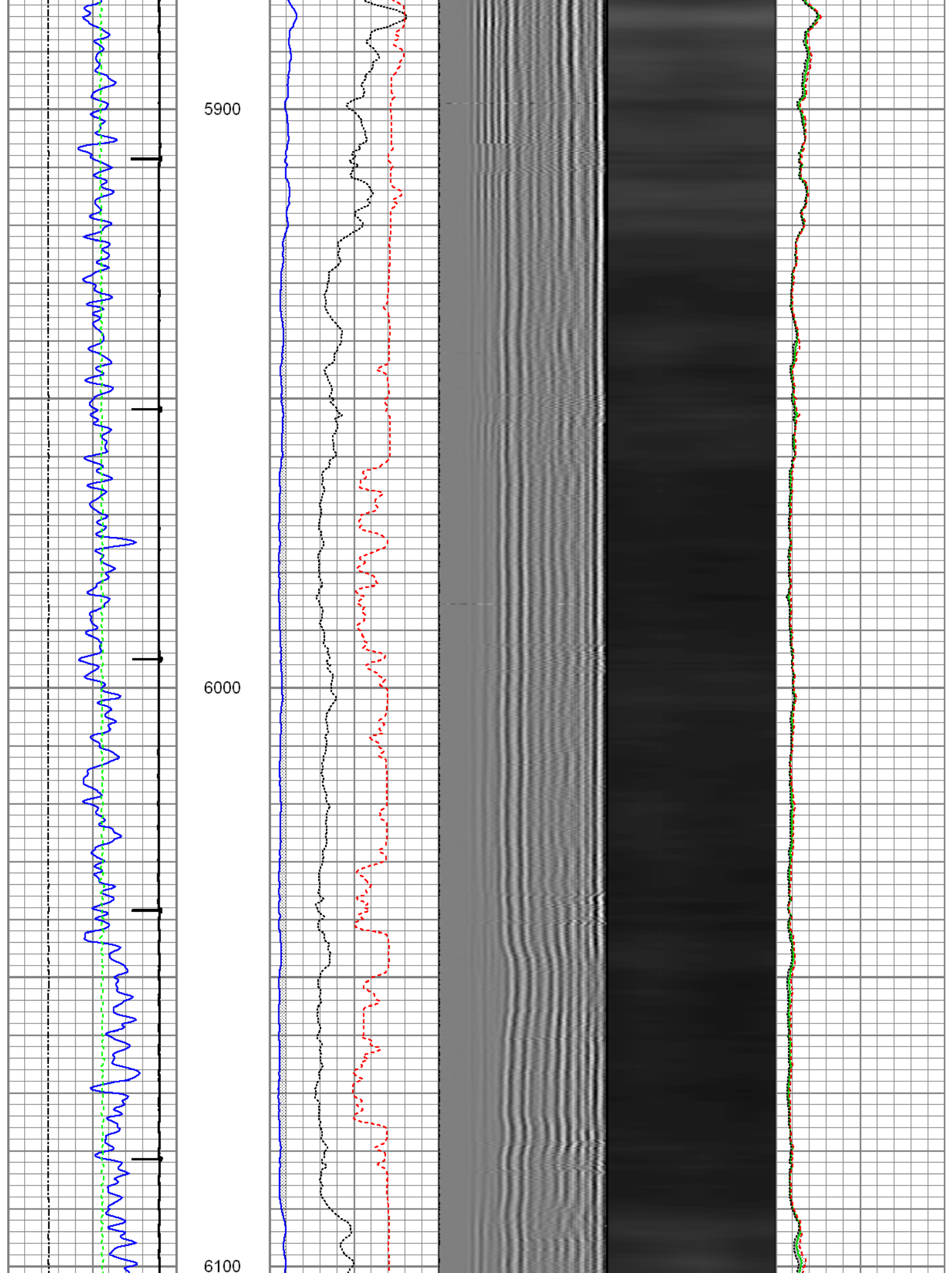


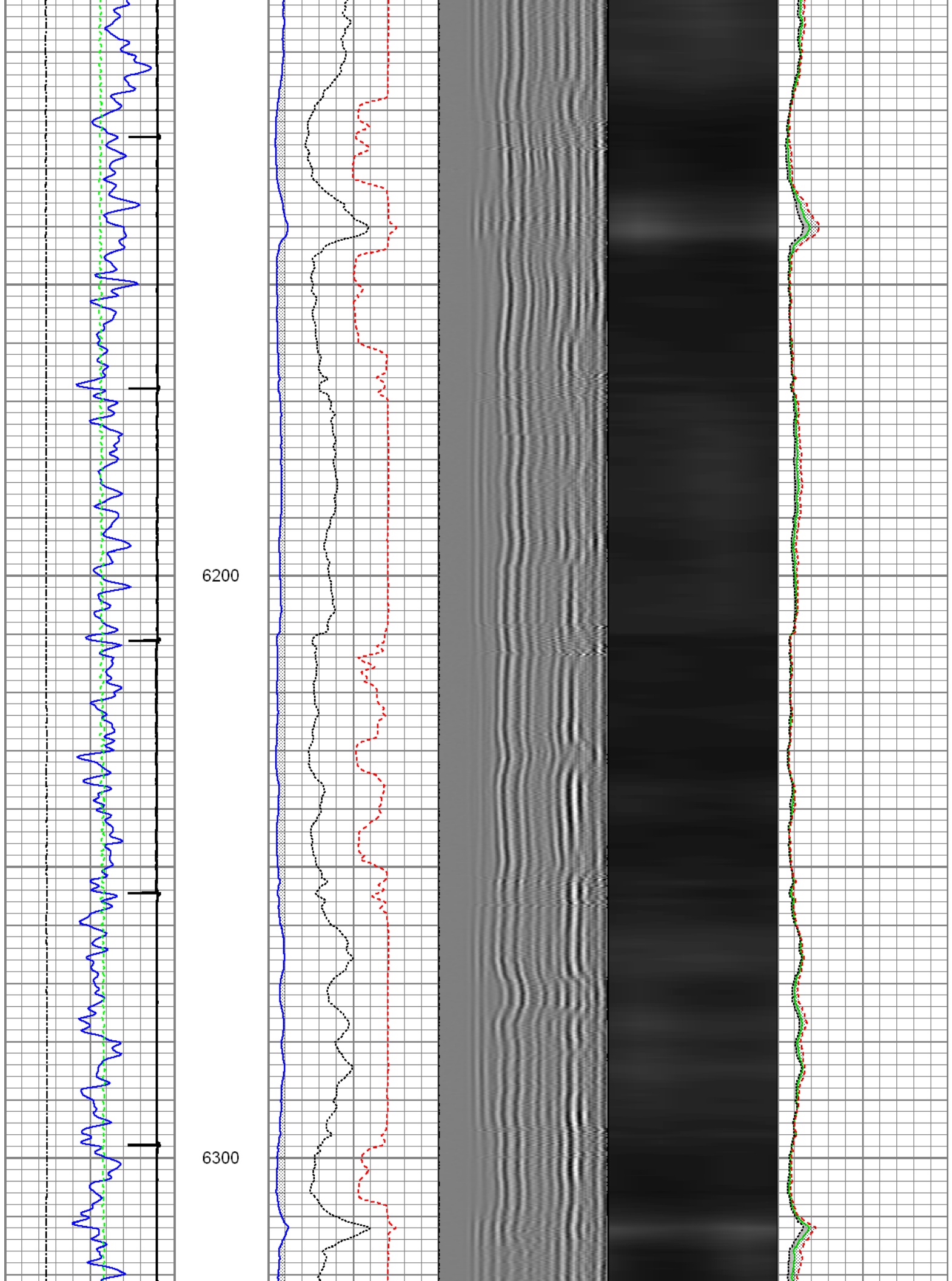






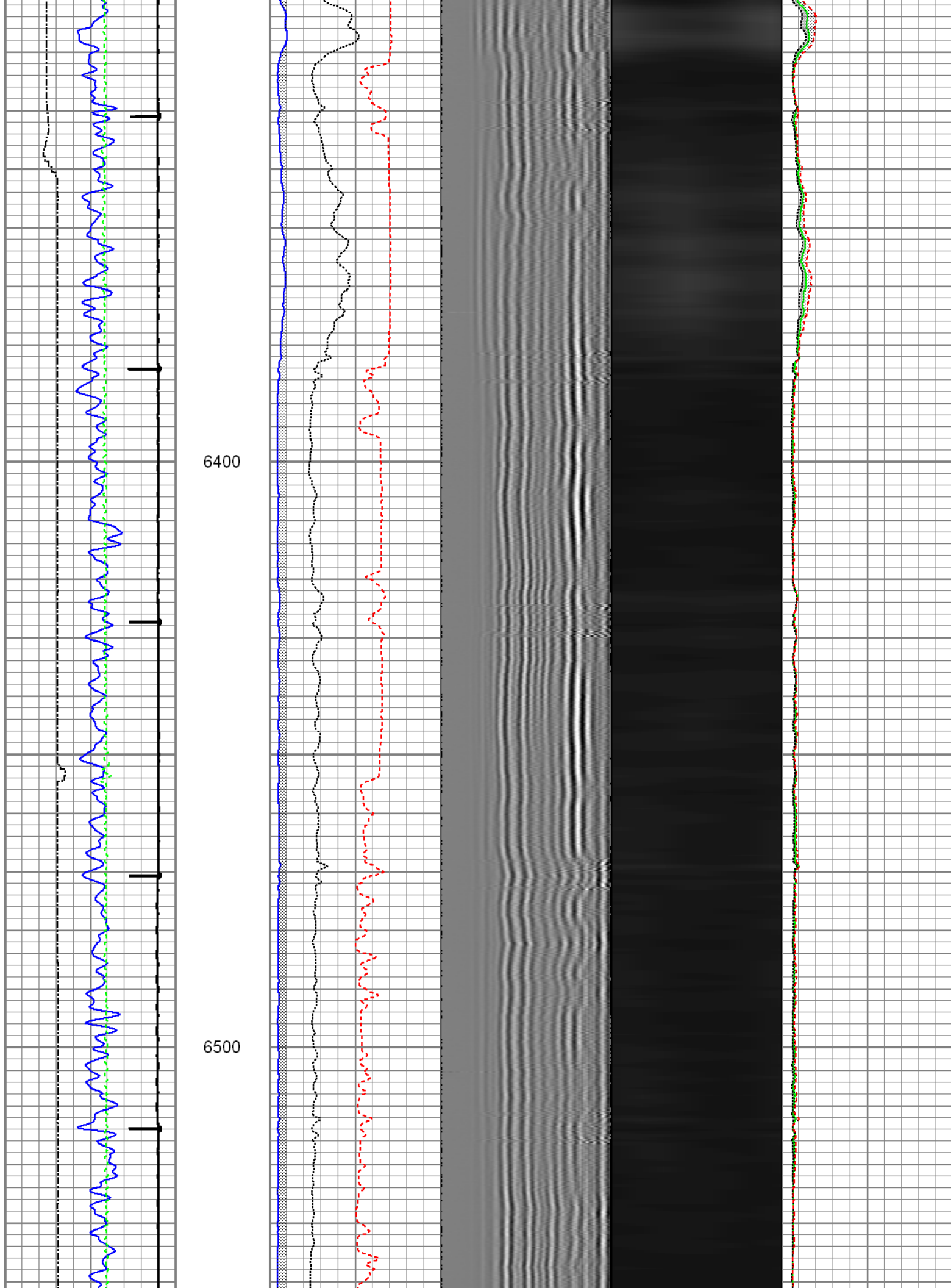


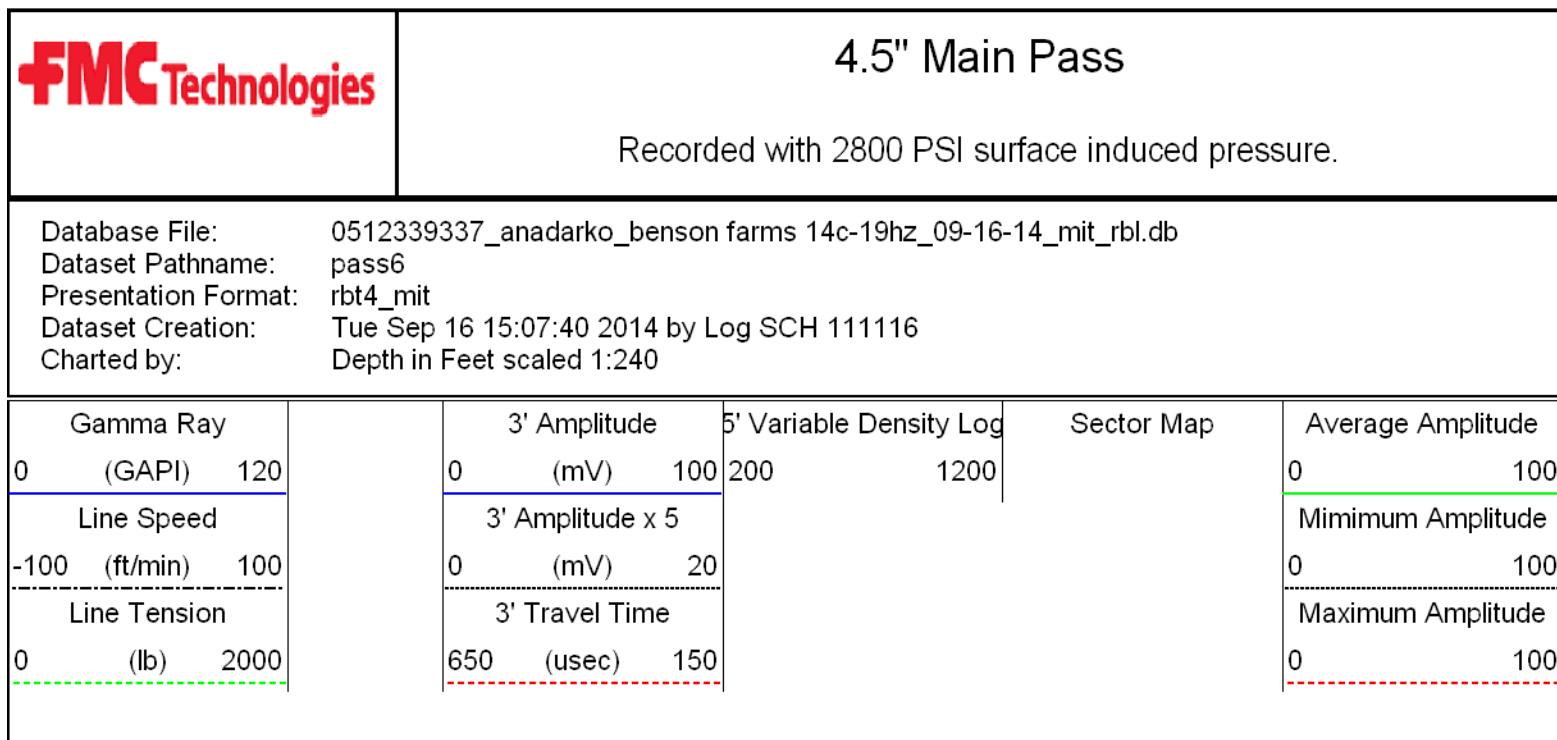
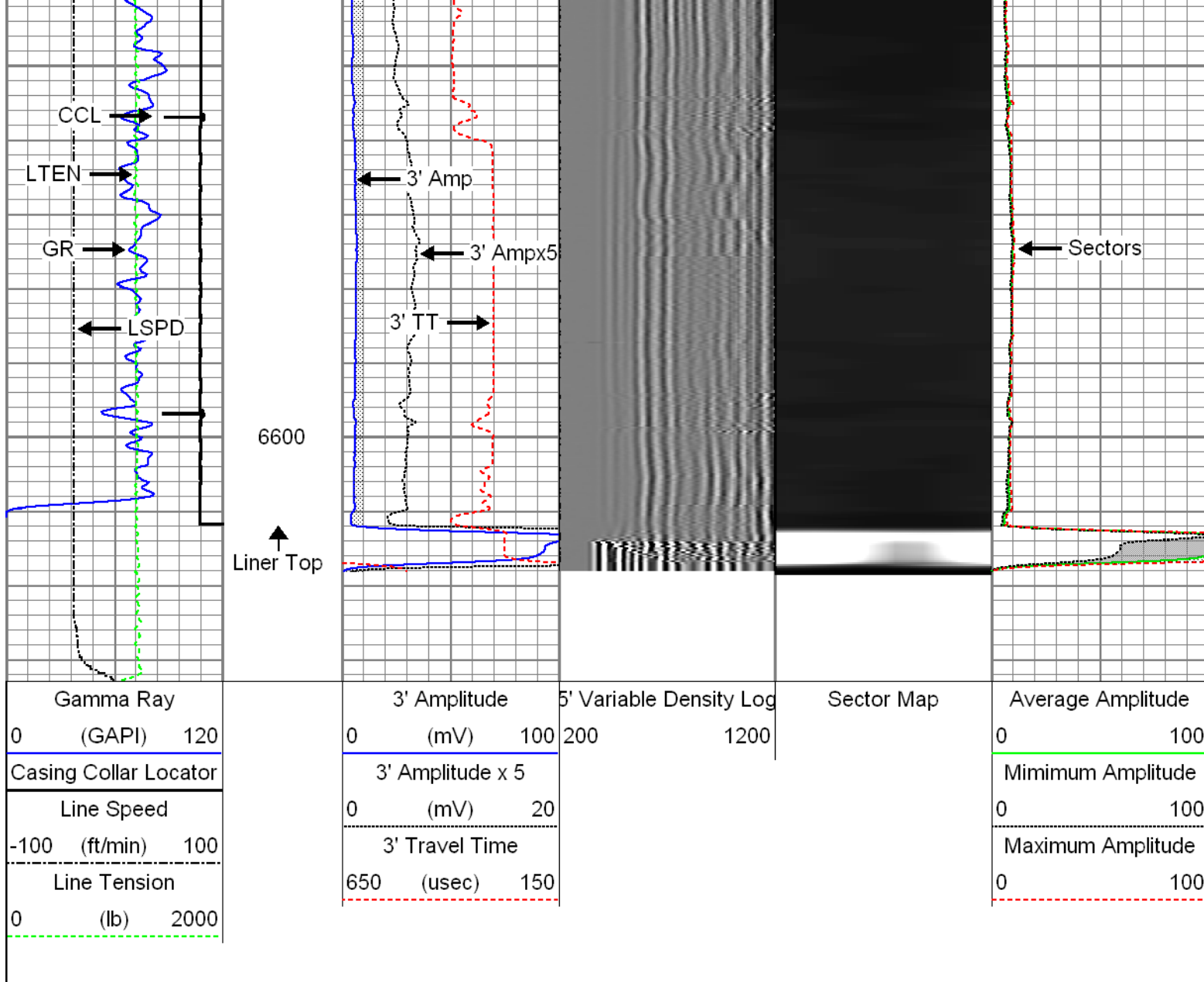




6400

6500

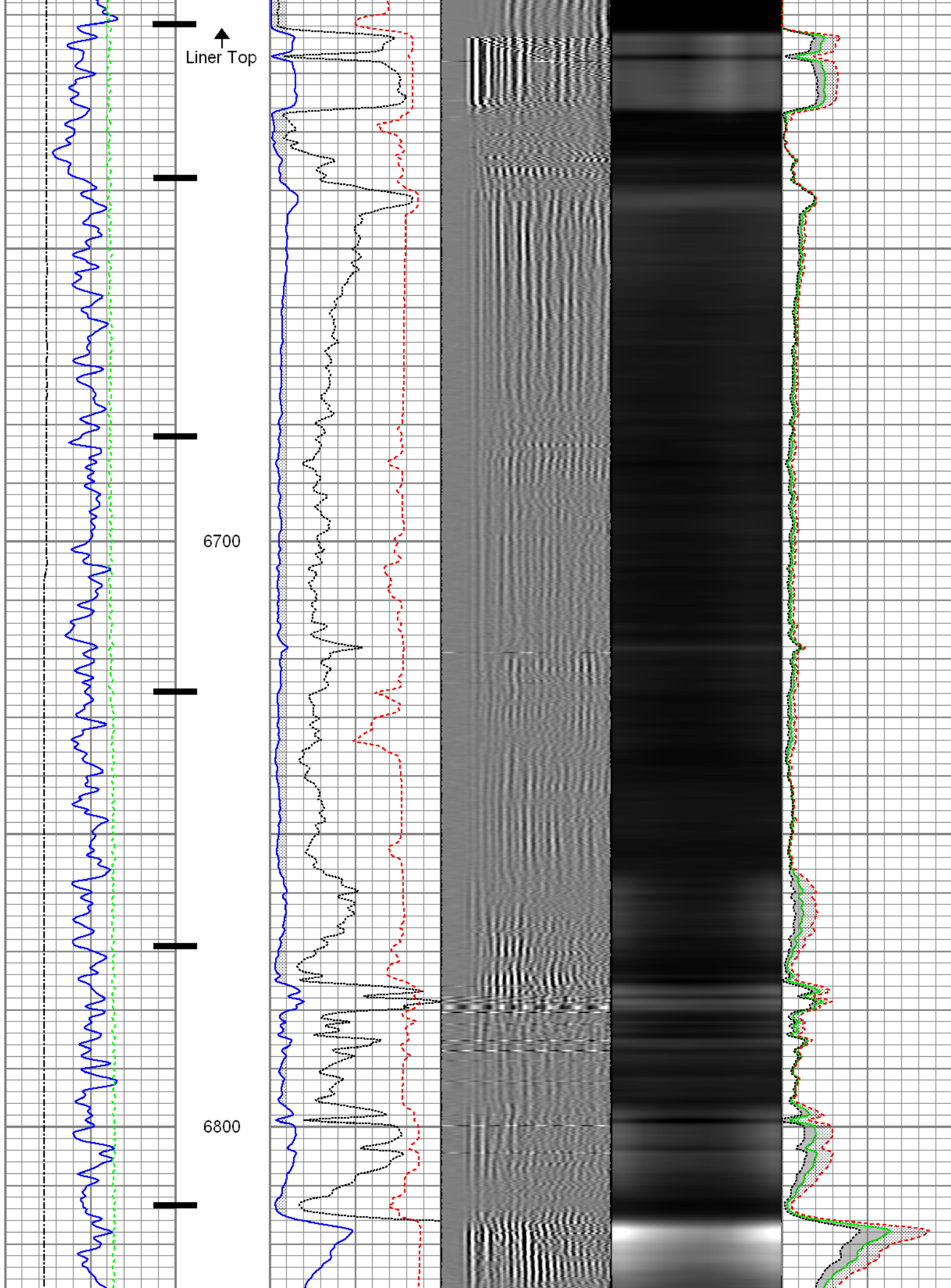


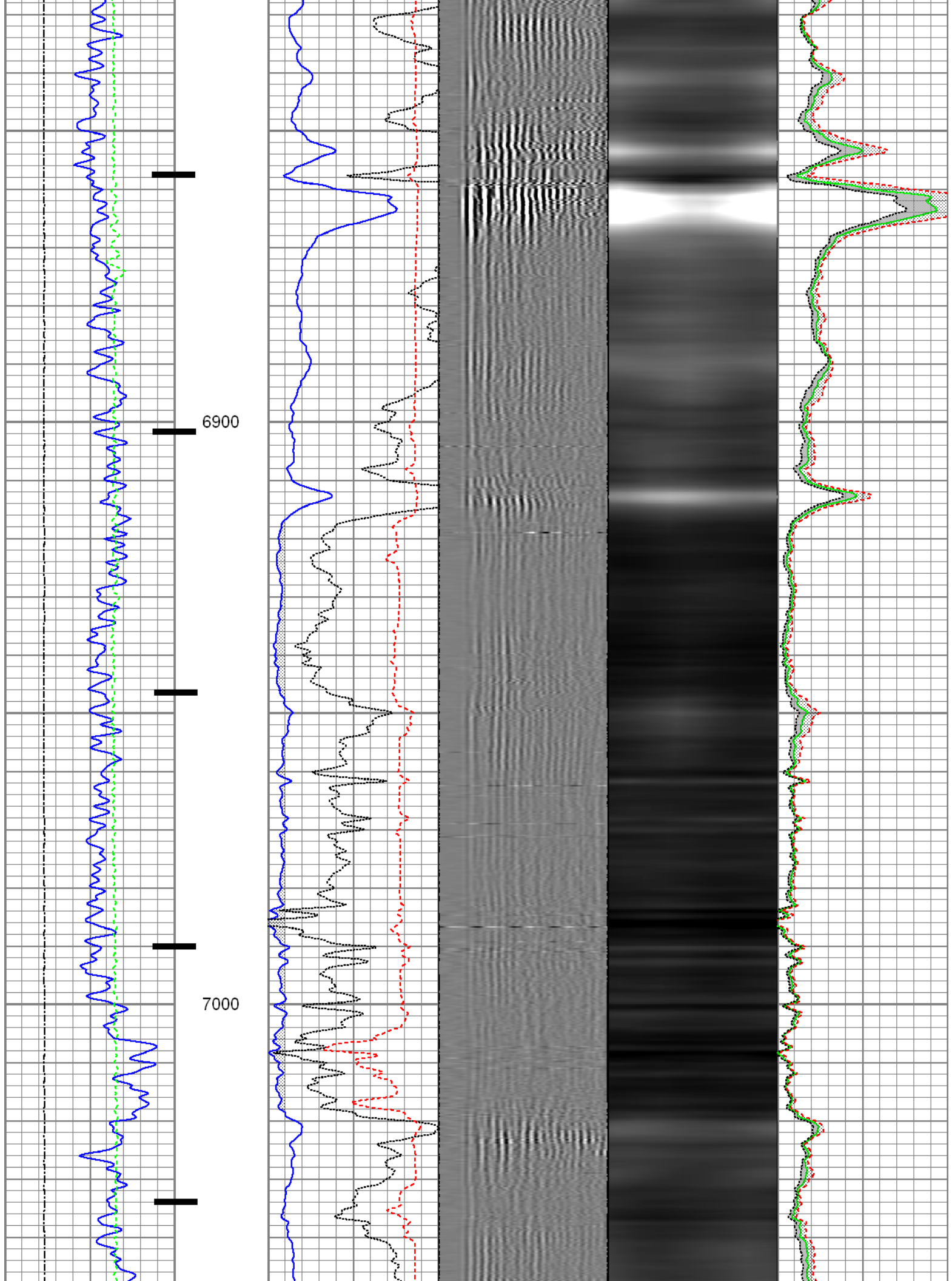


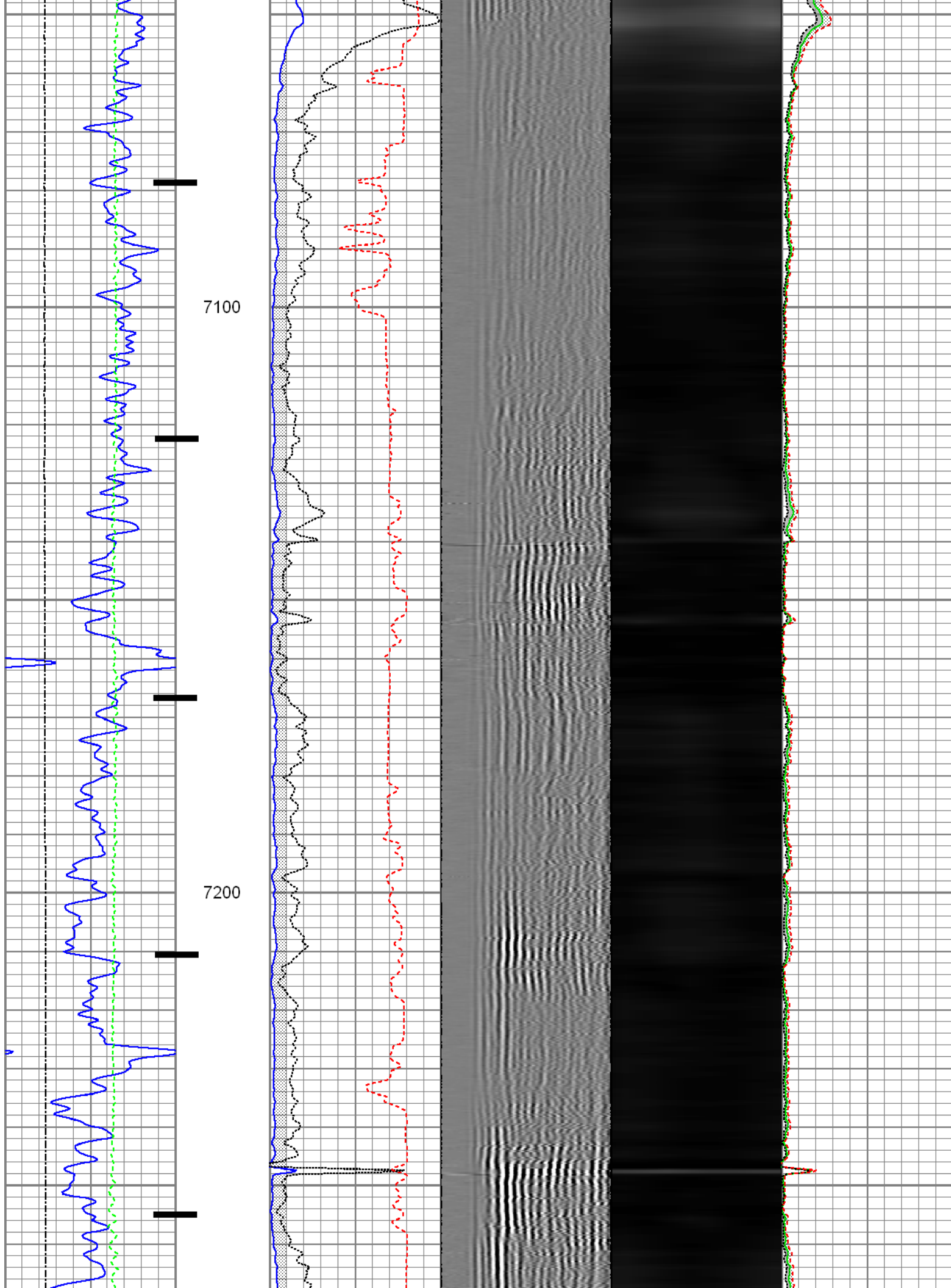
Liner Top

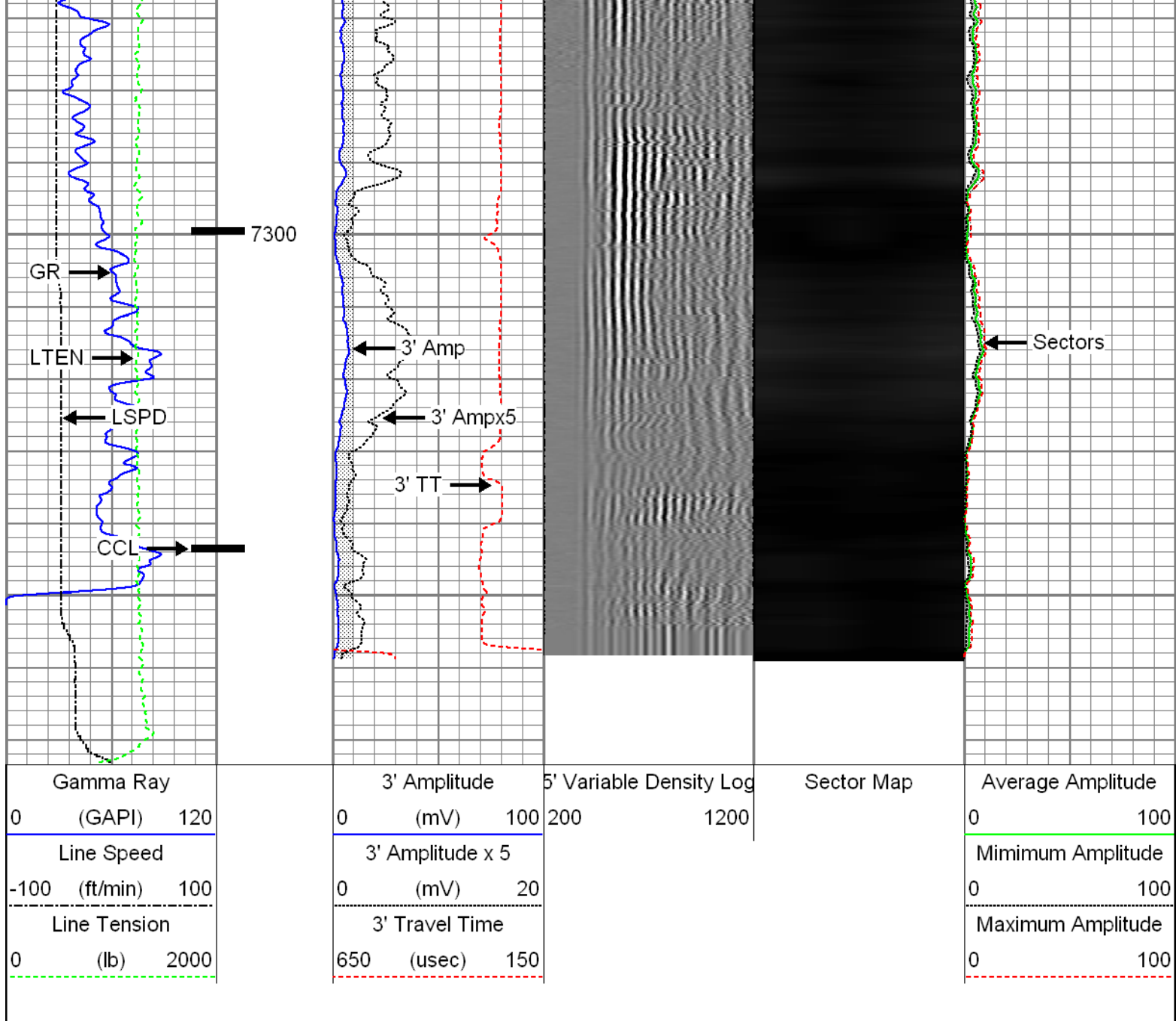
6700

6800





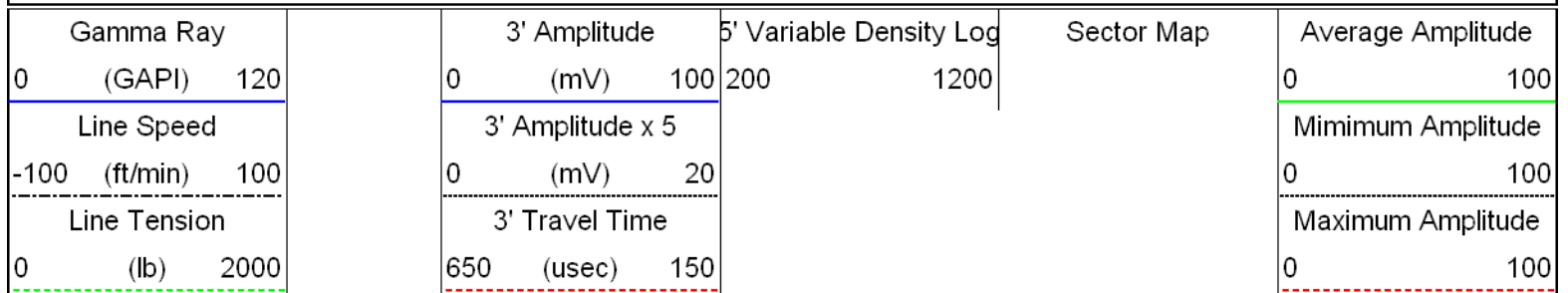


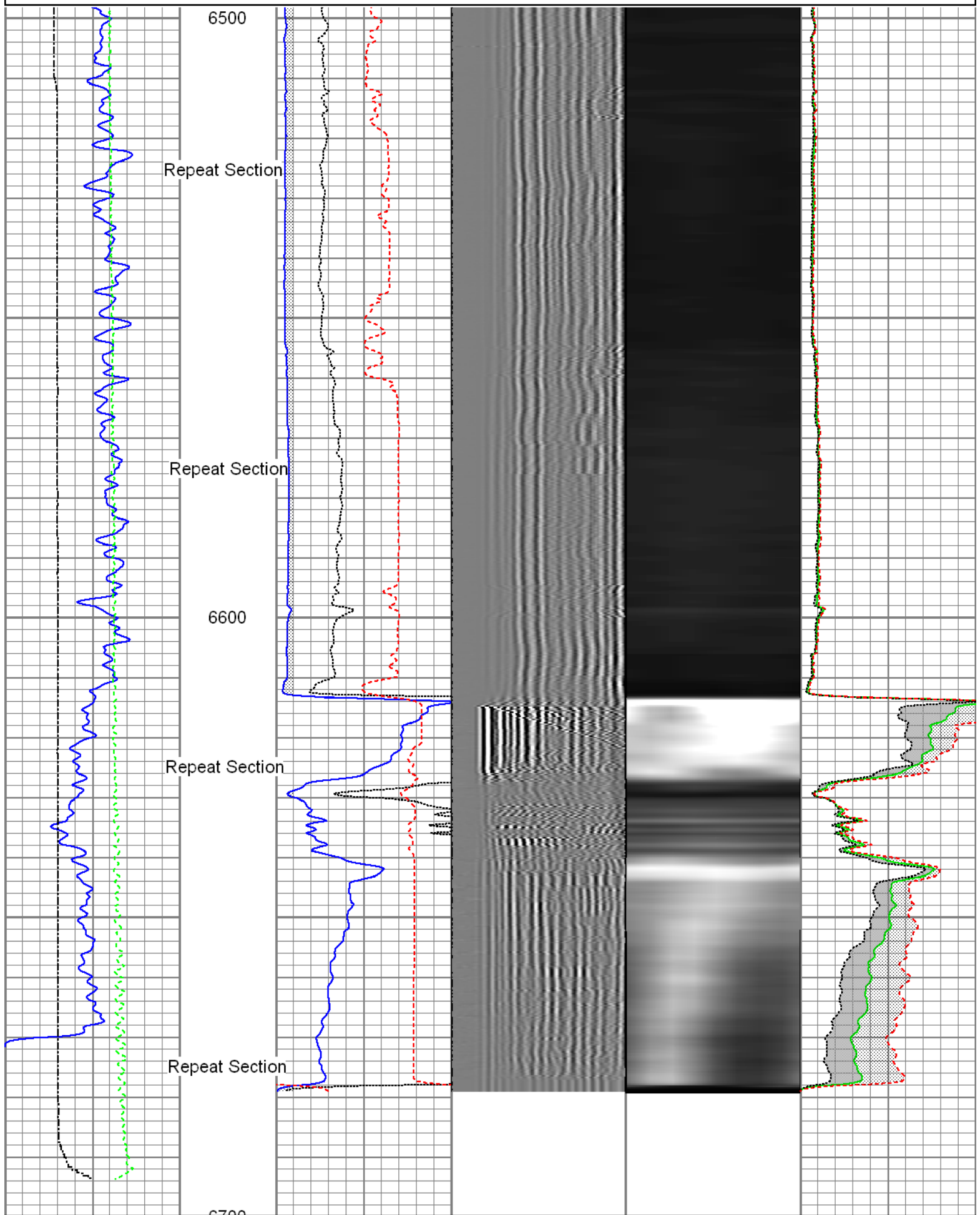


Repeat Pass

Recorded with 2800 Psi surface induced pressure

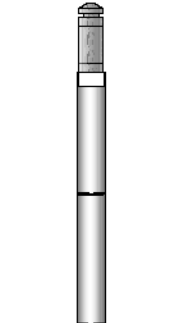
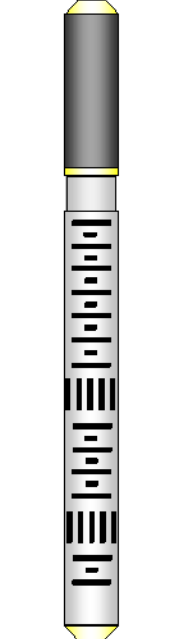
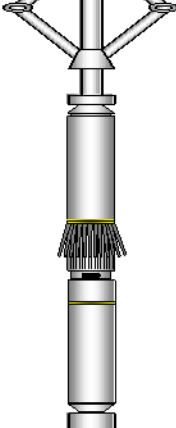
Database File: 0512339337_anadarko_benson farms 14c-19hz_09-16-14_mit_rbl.db
 Dataset Pathname: pass4
 Presentation Format: rbt4_mit
 Dataset Creation: Tue Sep 16 14:54:37 2014 by Log SCH 111116
 Charted by: Depth in Feet scaled 1:240

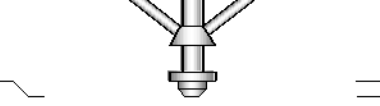




Gamma Ray (GAPI)	3' Amplitude (mV)	5' Variable Density Log	Sector Map	Average Amplitude
0 120	0 100	200 1200		0 100
Line Speed	3' Amplitude x 5			Minimum Amplitude

-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	23.67		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 (051219) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
			UW_PGR-UW_PGR_020 (211727) Production Gamma Ray	1.93	1.69	9.50
			UW_PRC-UW_PRC_057 (1037) Sondex 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00
WVFS3FT	15.85		UW_RBT-UW_RBT_004 (1066) Sondex Ultrawire 3-1/8" Radial Bond Tool	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					
MIT	5.41		UW_PRC #3 -UW_PRC_057 (1038) Sondex 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00
			UW_MIT-UW_MIT40_042 (10014703) 40 Multifinger Imaging Tool	4.54	2.75	61.10
			UW_PRC-UW_PRC_057 (1101)	2.98	2.75	32.00

TSTAMP	0.00		UW_BUL-UW_BUL_006 (218707) Sondex Ultrawire Bullnose Terminator	0.22	1.69	1.20
Dataset: 0512339337_Anadarko_Benson Farms 14C-19HZ_09-16-14_MIT_RBL.db: field/well/run1/pass6 Total Length: 27.92 ft Total Weight: 319.30 lb O.D. 3.13 in						

Calibration Report			
Database File:	0512339337_Anadarko_Benson Farms 14C-19HZ_09-16-14_MIT_RBL.db		
Dataset Pathname:	pass8		
Dataset Creation:	Tue Sep 16 17:50:50 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						
Performed: Tue Sep 16 13:57:46 2014						
Ring size:	4	5	6	7		
(in)						
	Sens	Sens	Sens			
Finger 01:	1126 355.0	1481 379.0	1860 394.0	2254		
Finger 02:	1152 372.0	1524 401.0	1925 414.0	2339		
Finger 03:	1073 353.0	1426 389.0	1815 408.0	2223		
Finger 04:	1031 361.0	1392 410.0	1802 430.0	2232		
Finger 05:	1071 347.0	1418 384.0	1802 395.0	2197		
Finger 06:	1064 363.0	1427 400.0	1827 413.0	2240		
Finger 07:	1073 353.0	1426 392.0	1818 403.0	2221		
Finger 08:	1032 360.0	1392 410.0	1802 424.0	2226		
Finger 09:	1099 363.0	1462 396.0	1858 399.0	2257		
Finger 10:	1142 356.0	1498 394.0	1892 398.0	2290		
Finger 11:	1112 360.0	1472 406.0	1878 411.0	2289		
Finger 12:	1219 352.0	1571 377.0	1948 372.0	2320		
Finger 13:	1131 354.0	1485 403.0	1888 406.0	2294		
Finger 14:	1052 361.0	1413 413.0	1826 423.0	2249		
Finger 15:	1044 360.0	1404 413.0	1817 431.0	2248		
Finger 16:	1128 357.0	1485 403.0	1888 416.0	2304		
Finger 17:	1101 346.0	1447 388.0	1835 401.0	2236		
Finger 18:	1135 345.0	1480 385.0	1865 400.0	2265		
Finger 19:	1091 355.0	1446 397.0	1843 414.0	2257		
Finger 20:	1019 352.0	1371 403.0	1774 424.0	2198		
Finger 21:	1095 341.0	1436 383.0	1819 408.0	2227		
Finger 22:	1113 352.0	1465 390.0	1855 415.0	2270		
Finger 23:	1167 324.0	1491 359.0	1850 383.0	2233		
Finger 24:	1106 360.0	1466 394.0	1860 416.0	2276		
Finger 25:	1091 345.0	1436 386.0	1822 418.0	2240		
Finger 26:	1124 345.0	1469 379.0	1848 405.0	2253		

Finger 26:	1124	343.0	1403	373.0	1848	403.0	2233
Finger 27:	1166	342.0	1508	373.0	1881	403.0	2284
Finger 28:	1134	358.0	1492	384.0	1876	415.0	2291
Finger 29:	1163	361.0	1524	392.0	1916	424.0	2340
Finger 30:	1096	352.0	1448	389.0	1837	432.0	2269
Finger 31:	1151	351.0	1502	376.0	1878	402.0	2280
Finger 32:	1140	362.0	1502	391.0	1893	419.0	2312
Finger 33:	1071	357.0	1428	384.0	1812	423.0	2235
Finger 34:	1072	358.0	1430	394.0	1824	428.0	2252
Finger 35:	1127	350.0	1477	374.0	1851	404.0	2255
Finger 36:	1094	360.0	1454	390.0	1844	421.0	2265
Finger 37:	1160	350.0	1510	373.0	1883	397.0	2280
Finger 38:	1176	352.0	1528	370.0	1898	393.0	2291
Finger 39:	1156	349.0	1505	384.0	1889	410.0	2299
Finger 40:	1032	371.0	1403	409.0	1812	434.0	2246

Post Survey Calibration Check								
Performed: Tue Sep 16 17:50:44 2014								
Ring size: (in)	4	Nom. wear	5	Nom. wear	6	Nom. wear	7	Nom. wear
Finger 01:	4.001	0.000	4.996	-0.002	5.999	-0.001	7.000	-0.000
Finger 02:	3.994	-0.003	4.994	-0.003	5.993	-0.003	6.998	-0.001
Finger 03:	4.000	-0.000	4.998	-0.001	5.994	-0.003	6.992	-0.004
Finger 04:	3.998	-0.001	4.996	-0.002	5.999	-0.001	6.994	-0.003
Finger 05:	4.000	0.000	4.996	-0.002	5.995	-0.003	6.994	-0.003
Finger 06:	3.998	-0.001	4.993	-0.003	5.994	-0.003	6.991	-0.005
Finger 07:	3.999	-0.001	4.997	-0.002	5.995	-0.003	7.001	0.000
Finger 08:	4.000	0.000	4.998	-0.001	5.993	-0.004	6.992	-0.004
Finger 09:	4.001	0.000	4.998	-0.001	5.993	-0.004	6.988	-0.006
Finger 10:	3.988	-0.006	4.993	-0.004	5.994	-0.003	6.989	-0.005
Finger 11:	3.999	-0.001	4.998	-0.001	5.991	-0.004	6.991	-0.004
Finger 12:	3.991	-0.005	4.996	-0.002	5.994	-0.003	6.991	-0.004
Finger 13:	3.991	-0.004	5.001	0.000	5.992	-0.004	6.992	-0.004
Finger 14:	3.997	-0.001	4.995	-0.003	5.996	-0.002	6.992	-0.004
Finger 15:	3.994	-0.003	4.993	-0.003	5.998	-0.001	6.992	-0.004
Finger 16:	3.990	-0.005	4.993	-0.003	5.996	-0.002	6.991	-0.004
Finger 17:	3.988	-0.006	4.993	-0.003	5.997	-0.001	6.993	-0.003
Finger 18:	3.990	-0.005	4.993	-0.003	5.995	-0.003	6.993	-0.004
Finger 19:	3.997	-0.002	4.996	-0.002	5.999	-0.000	6.991	-0.005
Finger 20:	3.995	-0.002	4.994	-0.003	5.994	-0.003	6.995	-0.003
Finger 21:	3.997	-0.002	4.999	-0.001	5.999	-0.000	6.996	-0.002
Finger 22:	3.995	-0.002	4.997	-0.002	5.998	-0.001	6.997	-0.001
Finger 23:	3.989	-0.005	4.995	-0.003	5.997	-0.002	6.998	-0.001
Finger 24:	3.999	-0.000	4.997	-0.001	6.000	-0.000	6.999	-0.000
Finger 25:	4.000	0.000	4.996	-0.002	5.994	-0.003	7.000	0.000
Finger 26:	3.995	-0.002	4.994	-0.003	5.990	-0.005	6.988	-0.006
Finger 27:	3.996	-0.002	4.999	-0.001	5.993	-0.003	6.997	-0.002
Finger 28:	3.997	-0.001	4.998	-0.001	5.996	-0.002	6.994	-0.003
Finger 29:	3.997	-0.002	4.995	-0.003	5.998	-0.001	7.001	0.000
Finger 30:	3.995	-0.002	4.995	-0.003	5.993	-0.004	6.978	-0.011
Finger 31:	3.996	-0.002	5.001	0.000	6.000	-0.000	7.002	0.001
Finger 32:	3.994	-0.003	4.993	-0.003	5.994	-0.003	7.003	0.001
Finger 33:	3.994	-0.003	4.989	-0.005	5.987	-0.006	6.974	-0.013
Finger 34:	3.997	-0.001	4.998	-0.001	5.992	-0.004	6.984	-0.008
Finger 35:	3.992	-0.004	4.993	-0.004	5.982	-0.009	6.966	-0.017
Finger 36:	3.999	-0.001	5.000	-0.000	5.999	-0.000	6.999	-0.001
Finger 37:	4.000	0.000	5.002	0.001	6.001	0.000	7.005	0.002
Finger 38:	3.999	-0.001	4.994	-0.003	5.996	-0.002	7.000	-0.000
Finger 39:	3.949	-0.026	4.988	-0.006	6.011	0.005	7.000	-0.000
Finger 40:	4.000	-0.000	4.996	-0.002	5.997	-0.001	6.998	-0.001
Average:	3.995	-0.003	4.996	-0.002	5.995	-0.002	6.993	-0.003

Segmented Cement Bond Log Calibration Report

Serial Number: 1088
Tool Model: UW_RBT_004

Calibration Casing Diameter: 7.000 in
Calibration Depth: 576.800 ft

Master Calibration, performed Tue Sep 16 14:15:07 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	-0.001	0.692	0.800	62.165	88.507	0.912
5FT	-0.006	0.685	0.800	62.165	88.836	1.342
S1	-0.000	0.626	0.000	100.000	159.670	0.076
S2	-0.002	0.645	0.000	100.000	154.590	0.366
S3	-0.002	0.681	0.000	100.000	146.341	0.325
S4	-0.004	0.726	0.000	100.000	137.022	0.492
S5	-0.002	0.743	0.000	100.000	134.207	0.318
S6	-0.003	0.739	0.000	100.000	134.748	0.355
S7	-0.002	0.717	0.000	100.000	138.954	0.309
S8	-0.002	0.664	0.000	100.000	150.208	0.303

Gamma Ray Calibration Report

Serial Number: 211727
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 Benson Farms 14C-19HZ
Field Wattenberg
County Weld
State Colorado