



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company		Kerr-McGee Oil and Gas Onshore, L.P.	
Well		Kerr 36C-25HZ	
Field		Wattenberg	
County		Weld	
State		Colorado	
Company		Kerr-McGee Oil and Gas Onshore, L.P.	
Well		Kerr 36C-25HZ	
Field		Wattenberg	
County		Weld	
State		Colorado	
Location:		API # : 05-123-38980	
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		4883'	
K.B. 4899'		D.F. 4898'	
G.L. 4883'			
Date		06-Feb-2015	
Run Number		Two	
Depth Driller		17923 FT	
Depth Logger		6604 FT	
Bottom Logged Interval		6599 FT	
Top Log Interval		Surface	
Open Hole Size		8-3/4"	
Type Fluid		Water	
Density / Viscosity		8.34 lbm/gal	
Max. Recorded Temp.		224°F	
Estimated Cement Top		32 FT	
Time Well Ready		ROA	
Time Logger on Bottom		13:07	
Equipment Number		HD-0134	
Location		Ft. Lupton, CO	
Recorded By		J. Morrison	
Witnessed By		Rick Dunford	
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		4-1/2	
Liner		11.6	
Grade		J-55	
HCP 110		Surface	
P-110		6666 FT	
17919 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 correlated to Kelly Bushing at 16 FT.
Could not get through Liner Top due to debris in well.
Gauge Ring/Junk Basket ran to tagged depth at 6674 FT.
Log ran from above tagged depth at 6604 FT to surface.
Log ran with 2800 PSI surface induced pressure.
Logging tools were clean and free of debris upon completion of operations.

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



Main Pass

Recorded with 2800 PSI Surface Induced Pressure

Database File:0512338980_anadarko_kerr 36c-25hz_02-06-15_mit_rbl.db

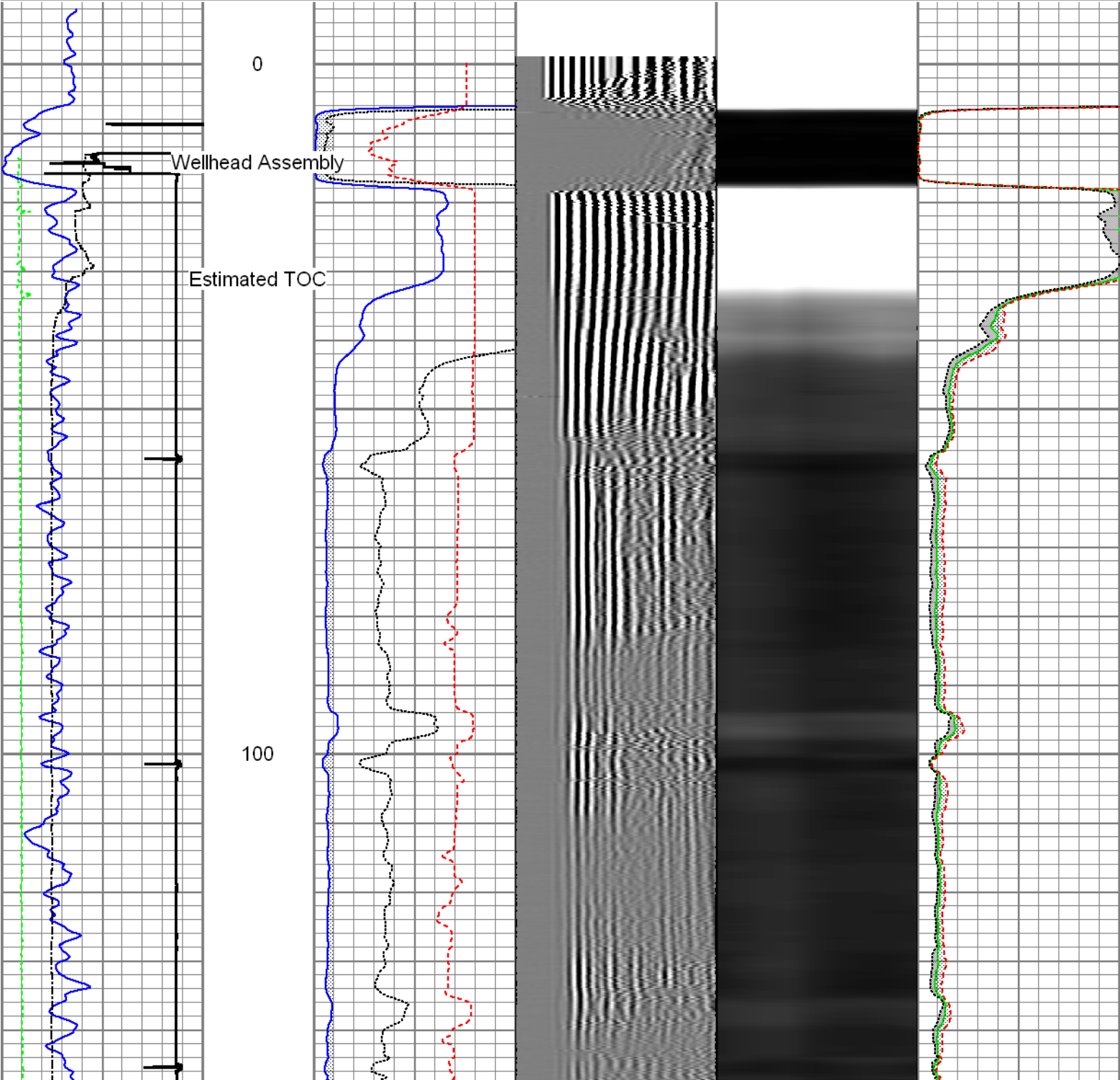
Dataset Pathname:main.2

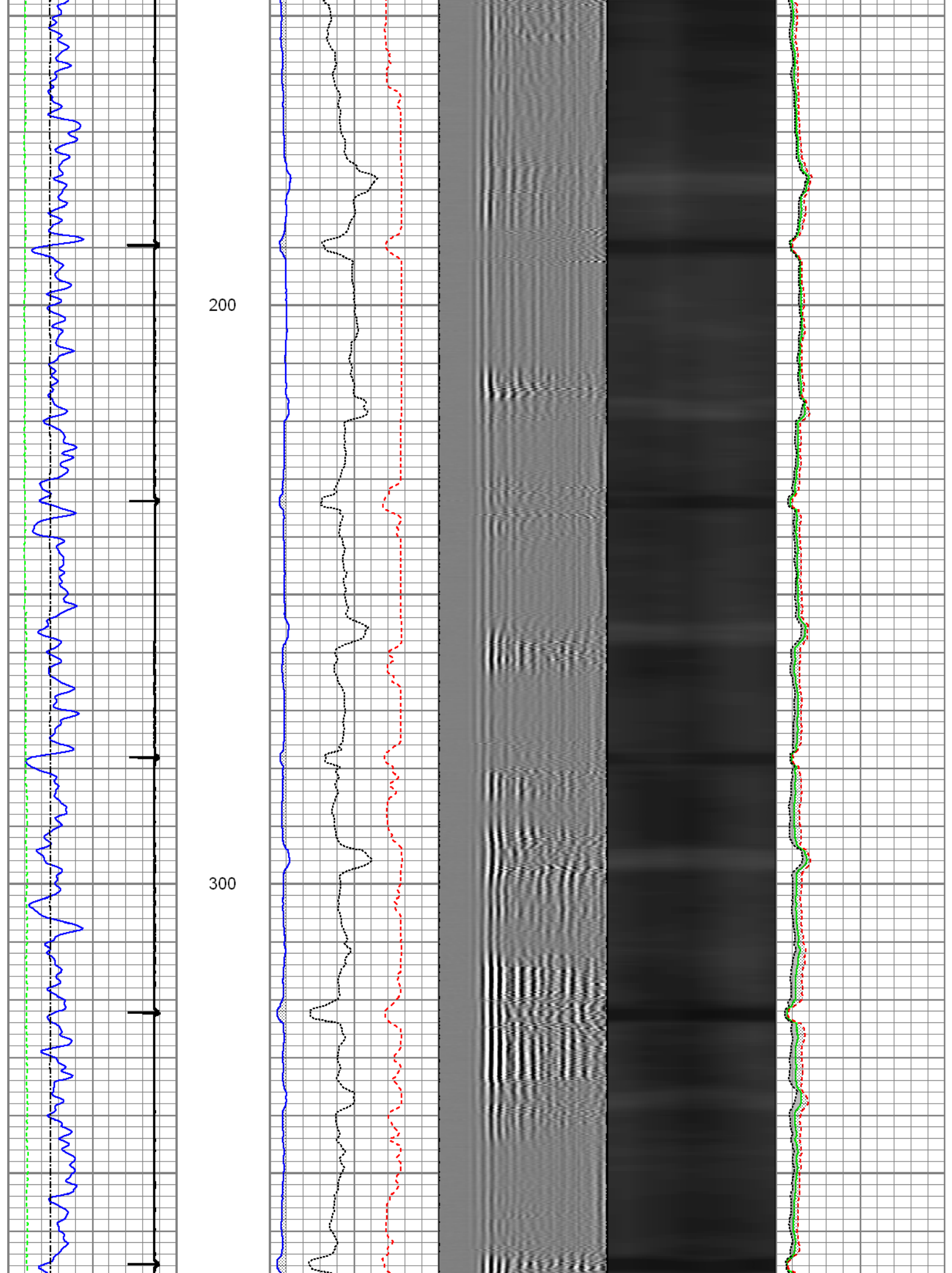
Presentation Format:rbt4_mit

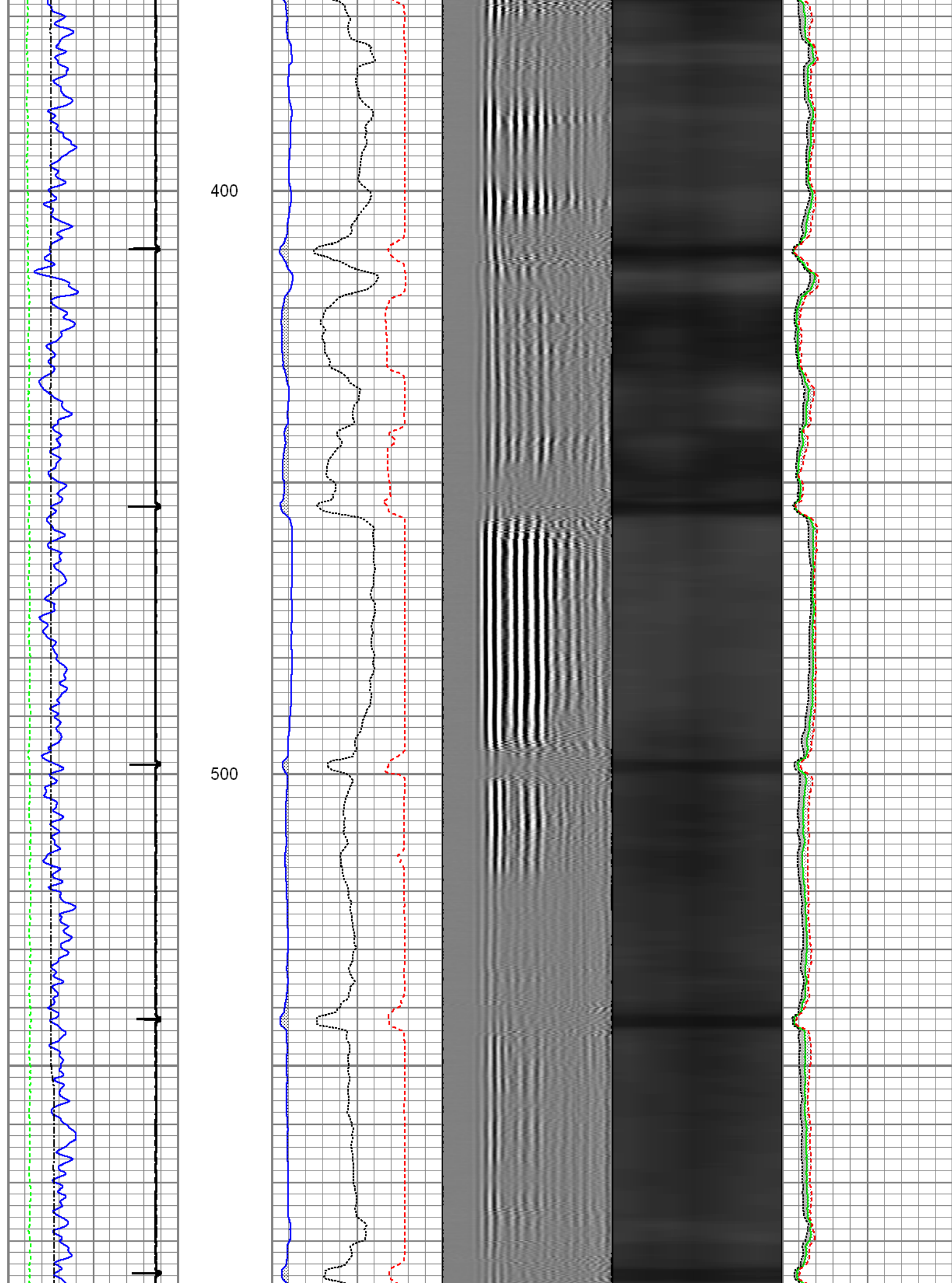
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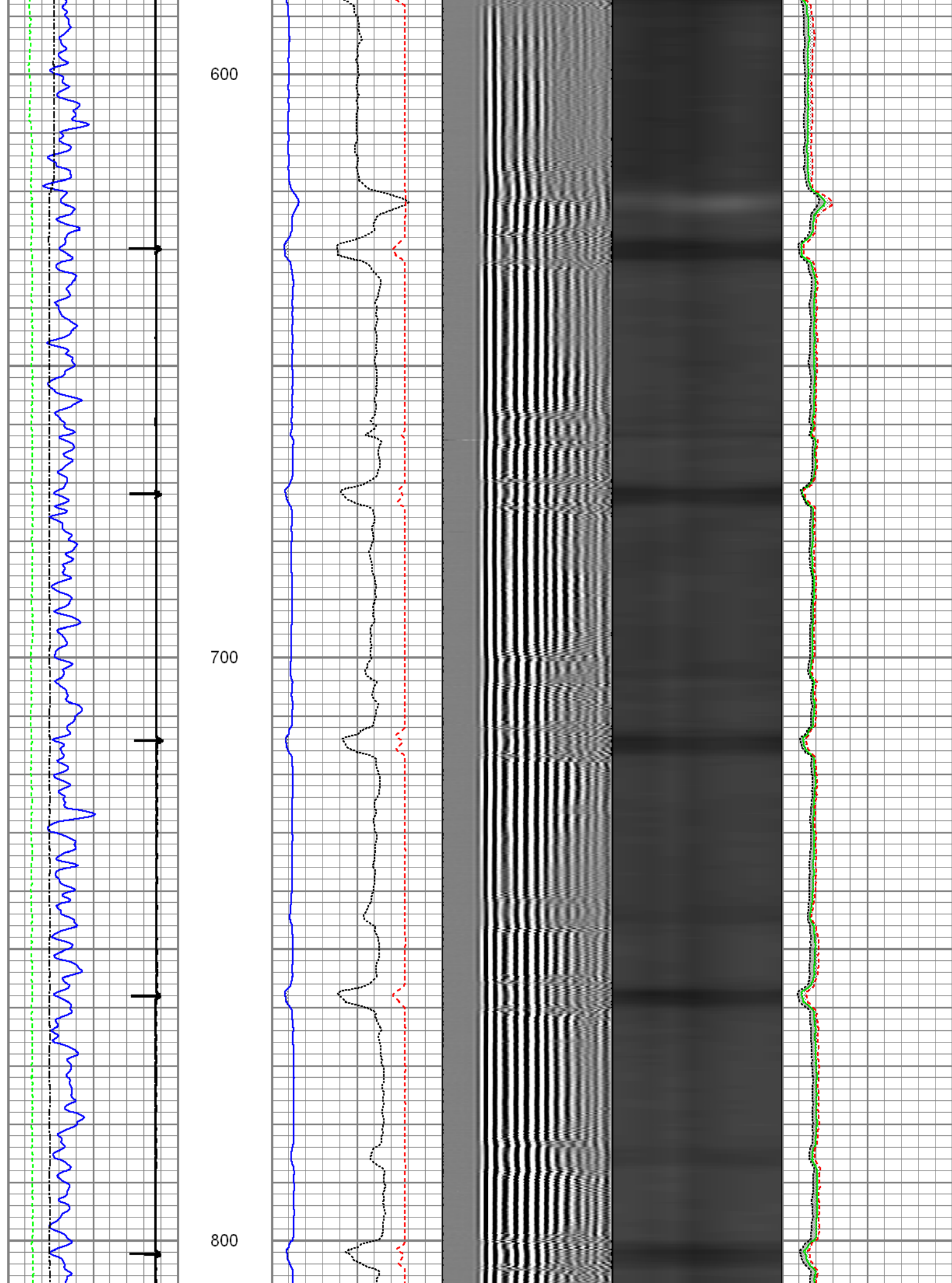
Charted by:Depth in Feet scaled 1:240

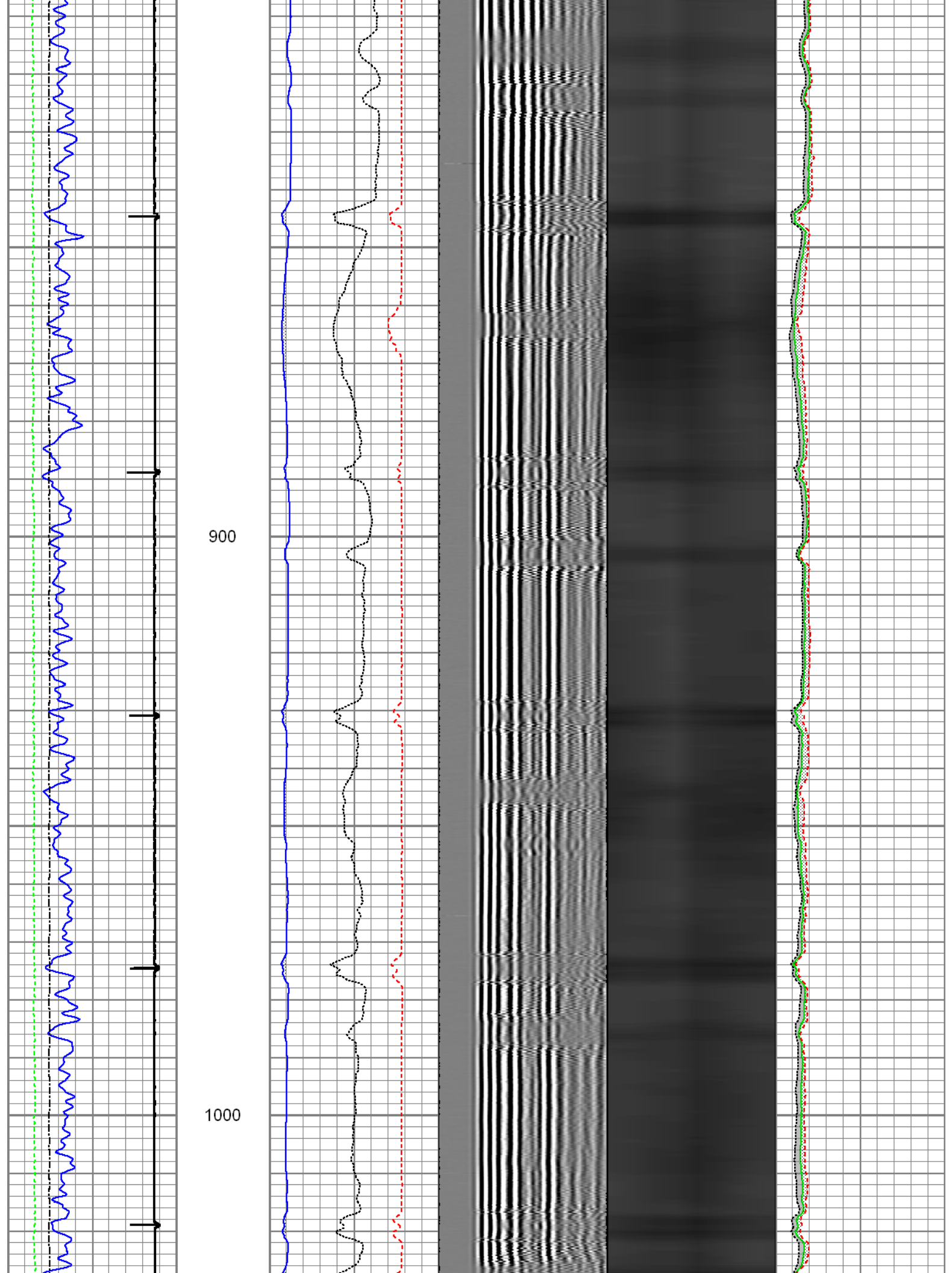
Gamma Ray		3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120		0 (mV) 100	200 1200		0 100
Line Speed		3' Amplitude x 5			Minimum Amplitude
-100 (ft/min) 100		0 (mV) 20			0 100
Line Tension		3' Travel Time			Maximum Amplitude
0 (lb) 2000		650 (usec) 150			0 100
Casing Collar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

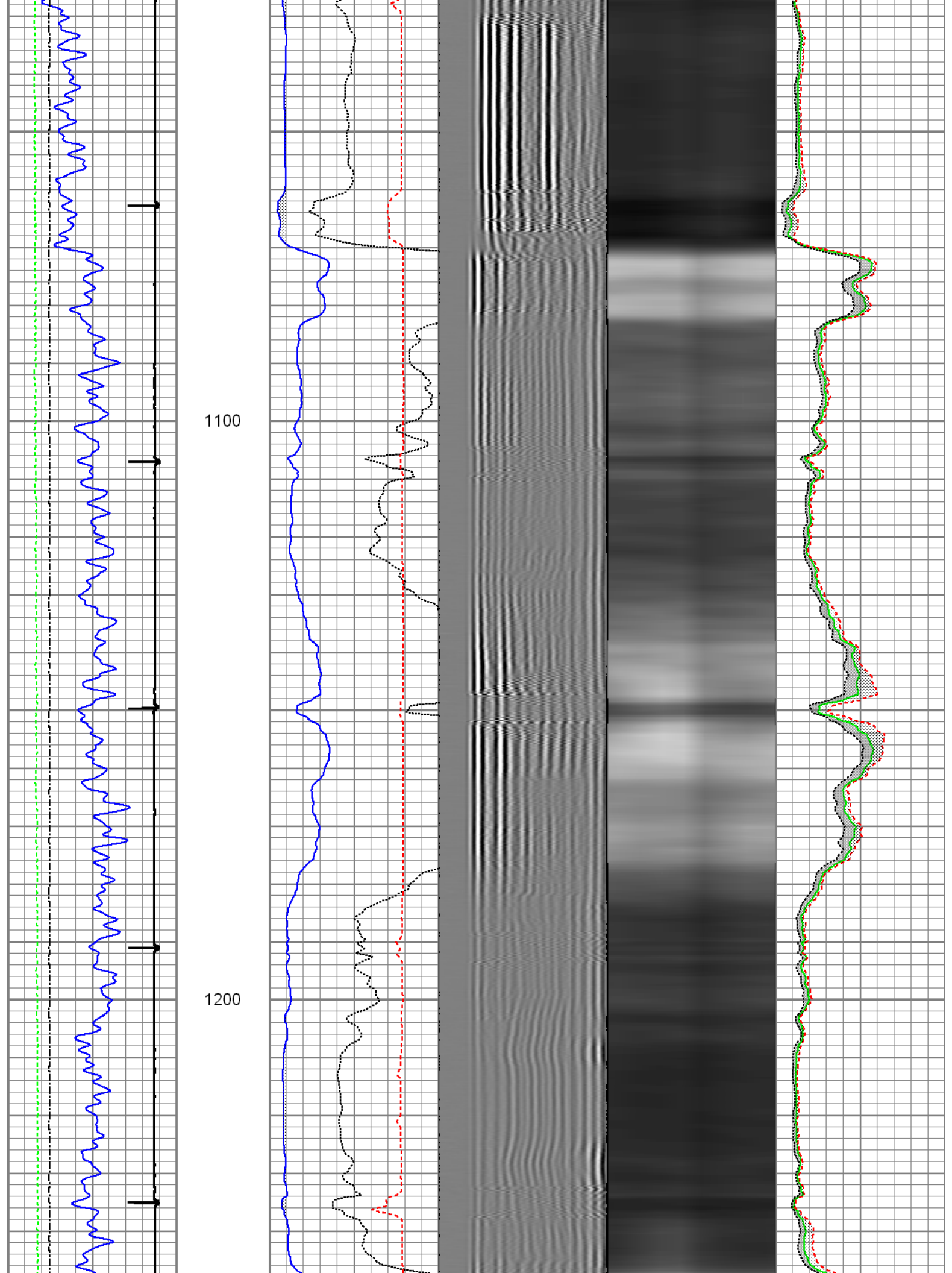


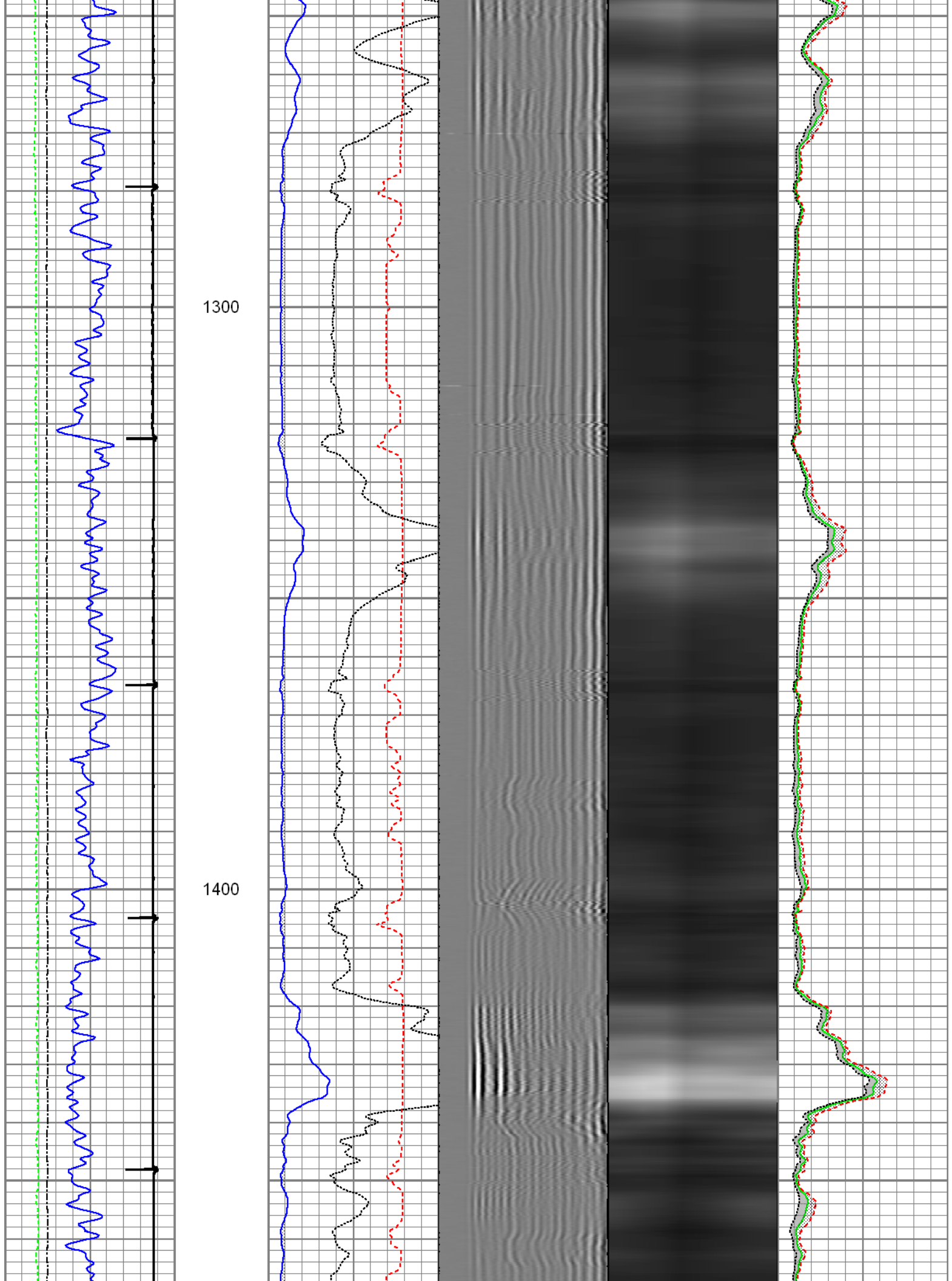


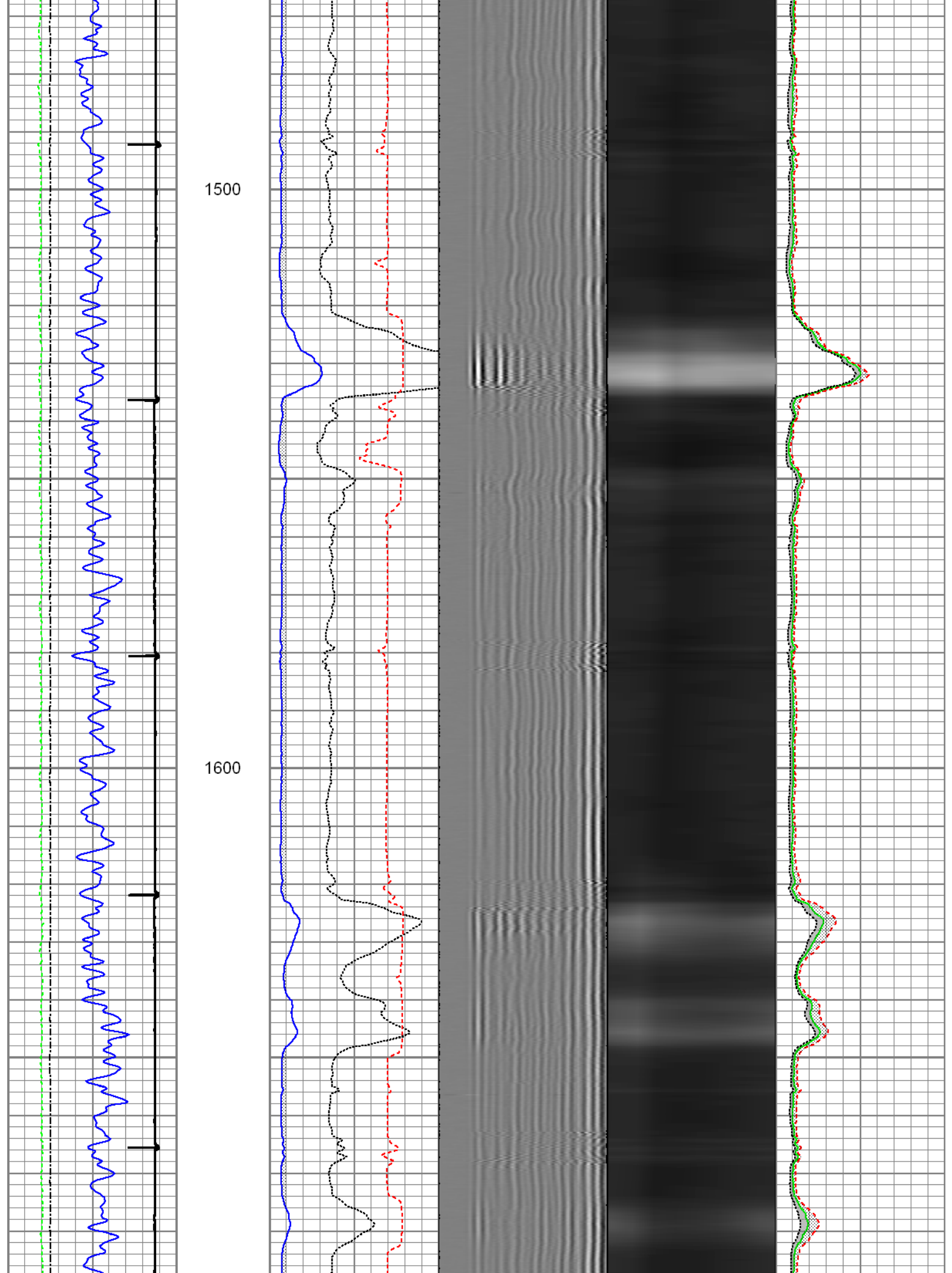


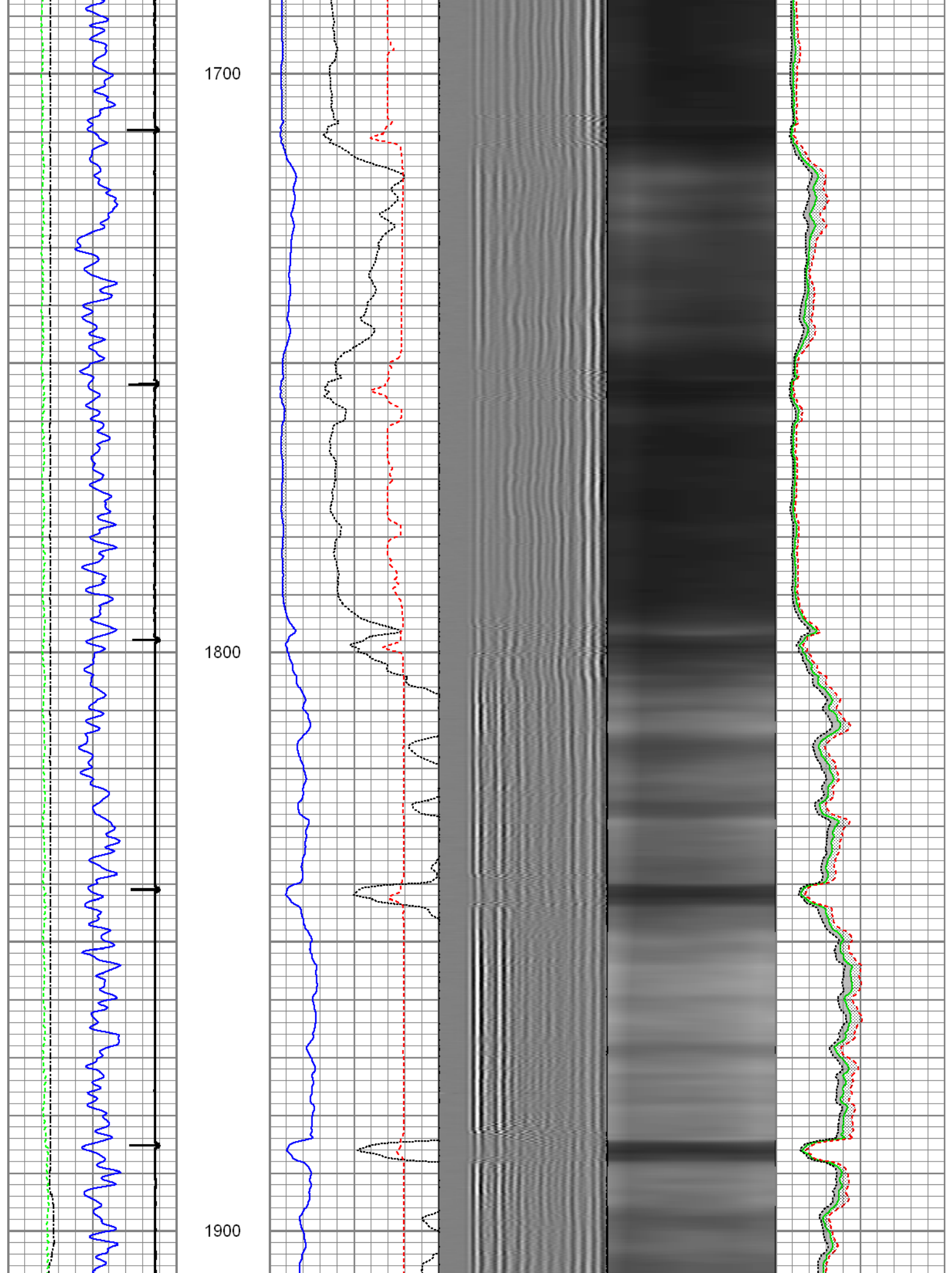


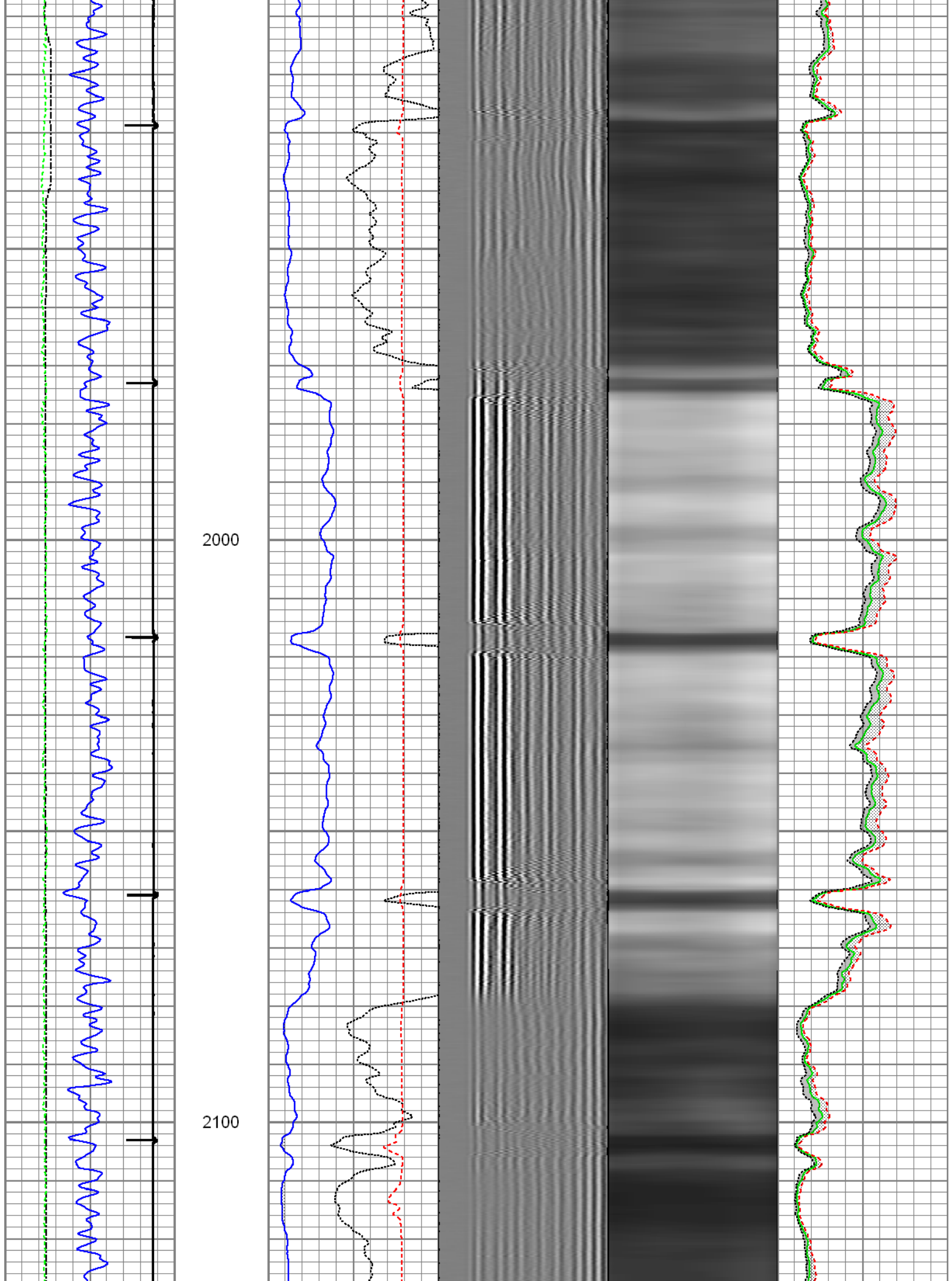


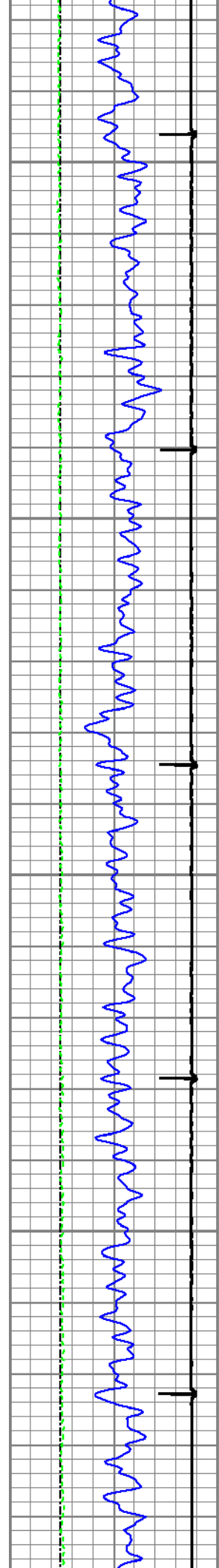






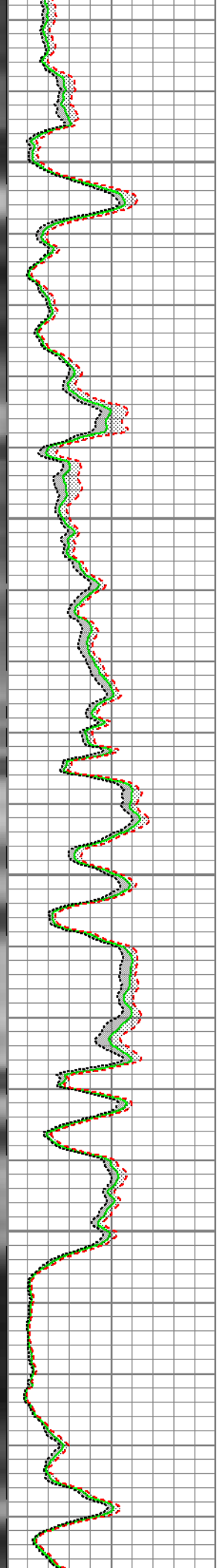
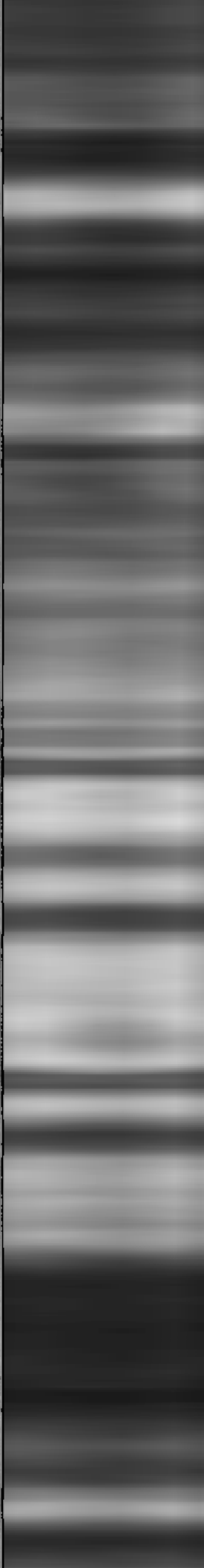
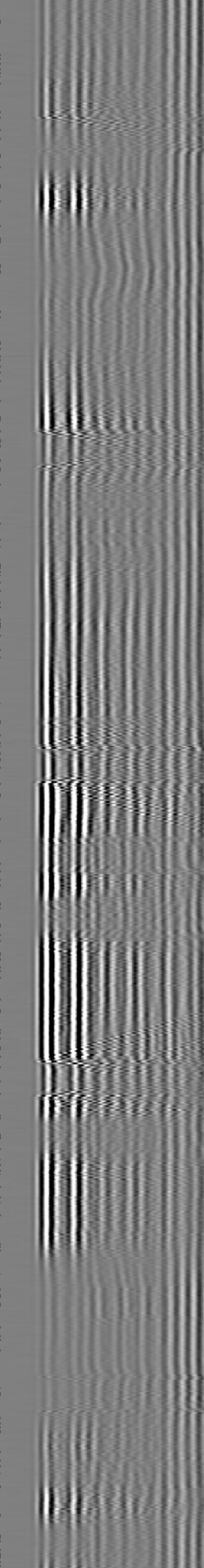
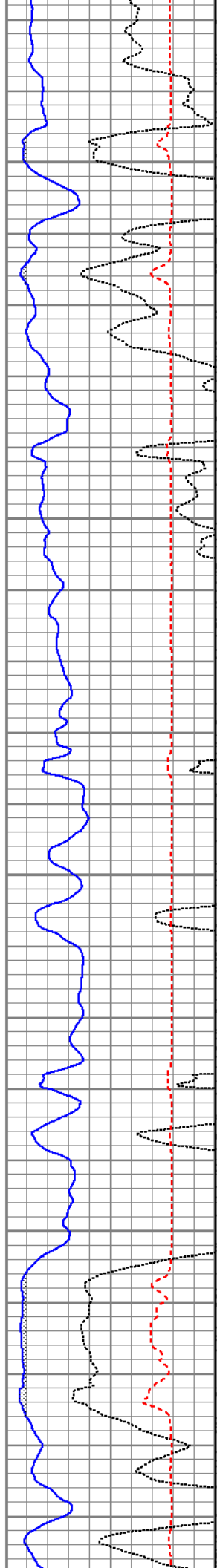


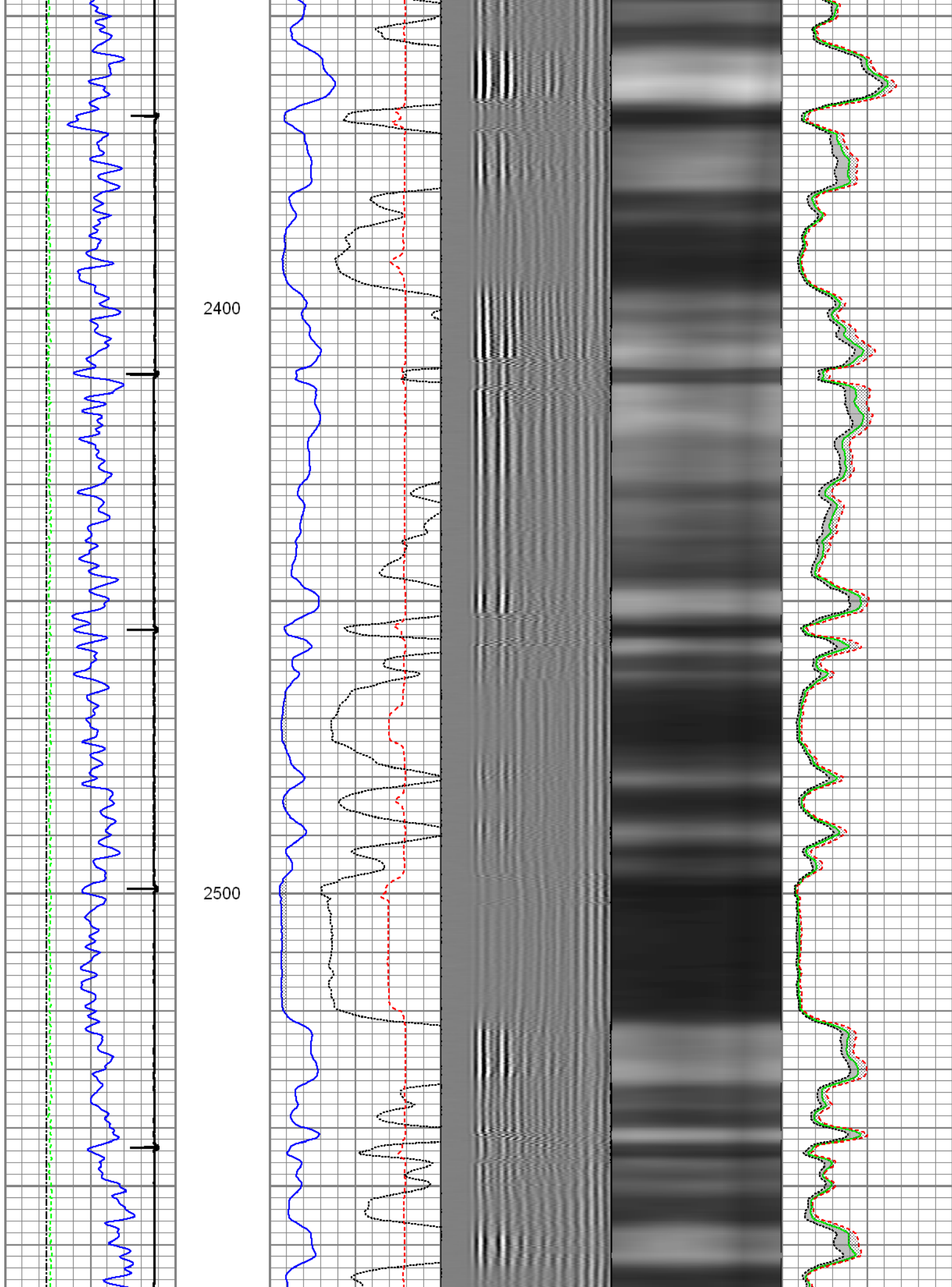


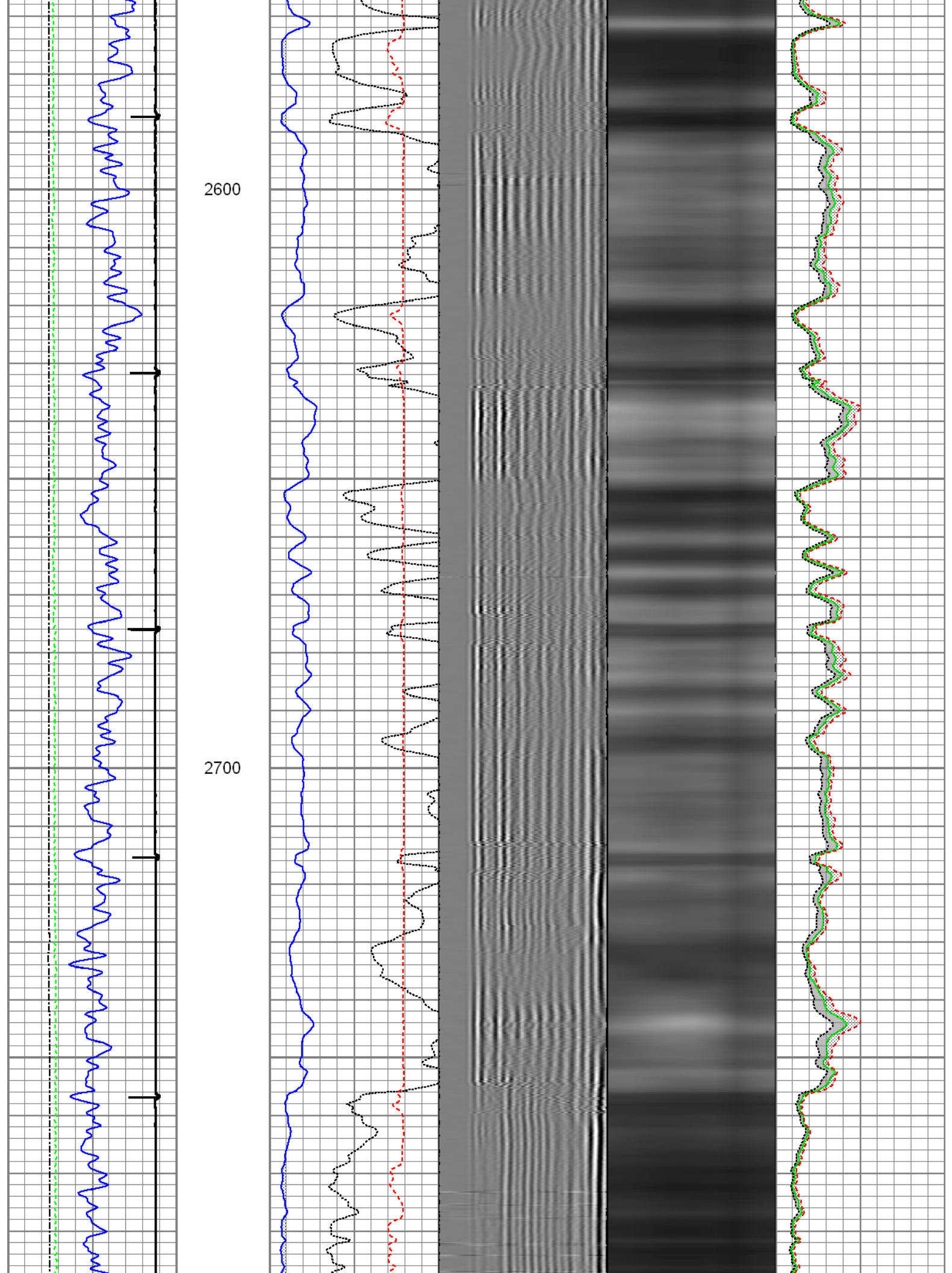


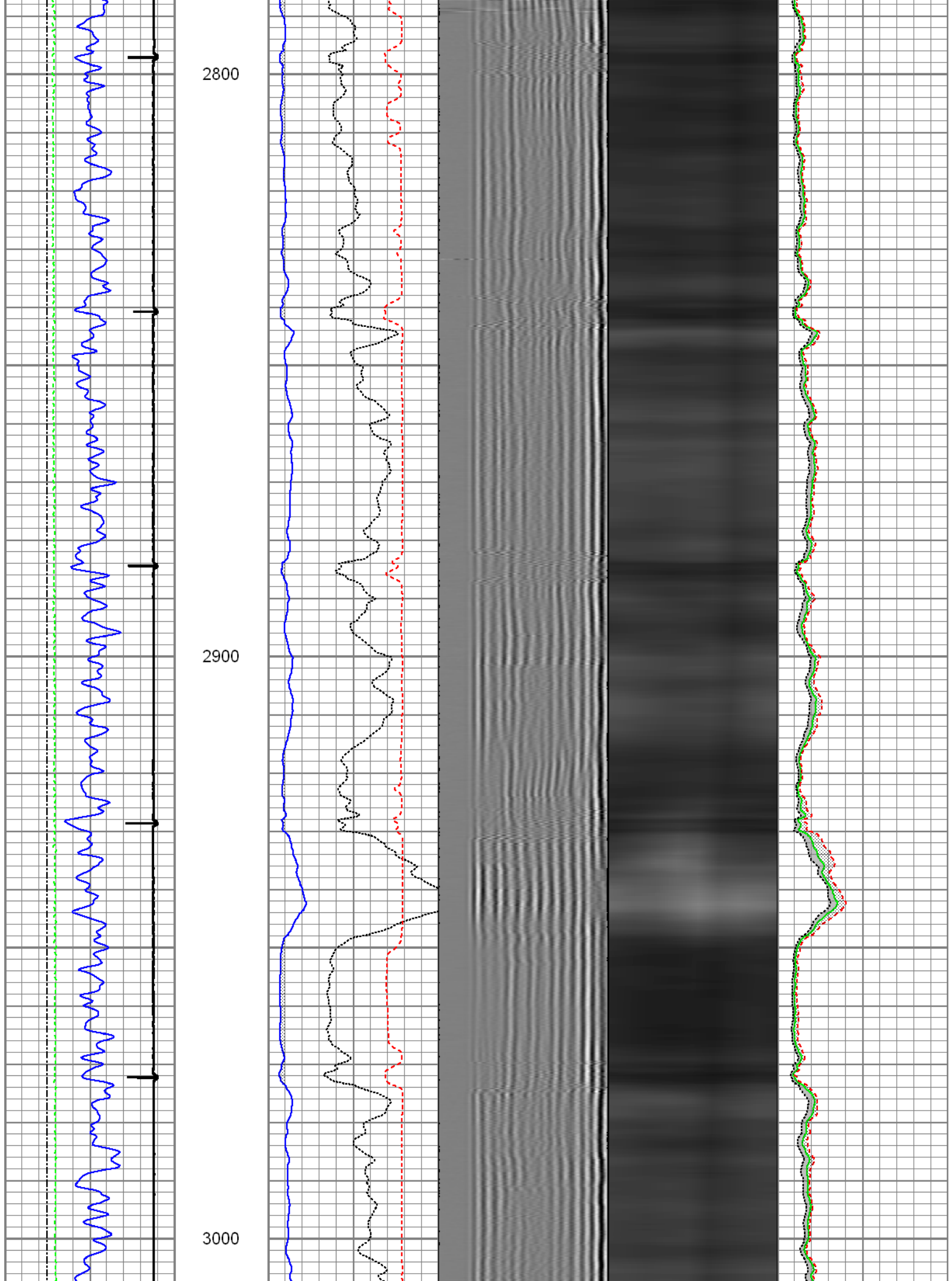
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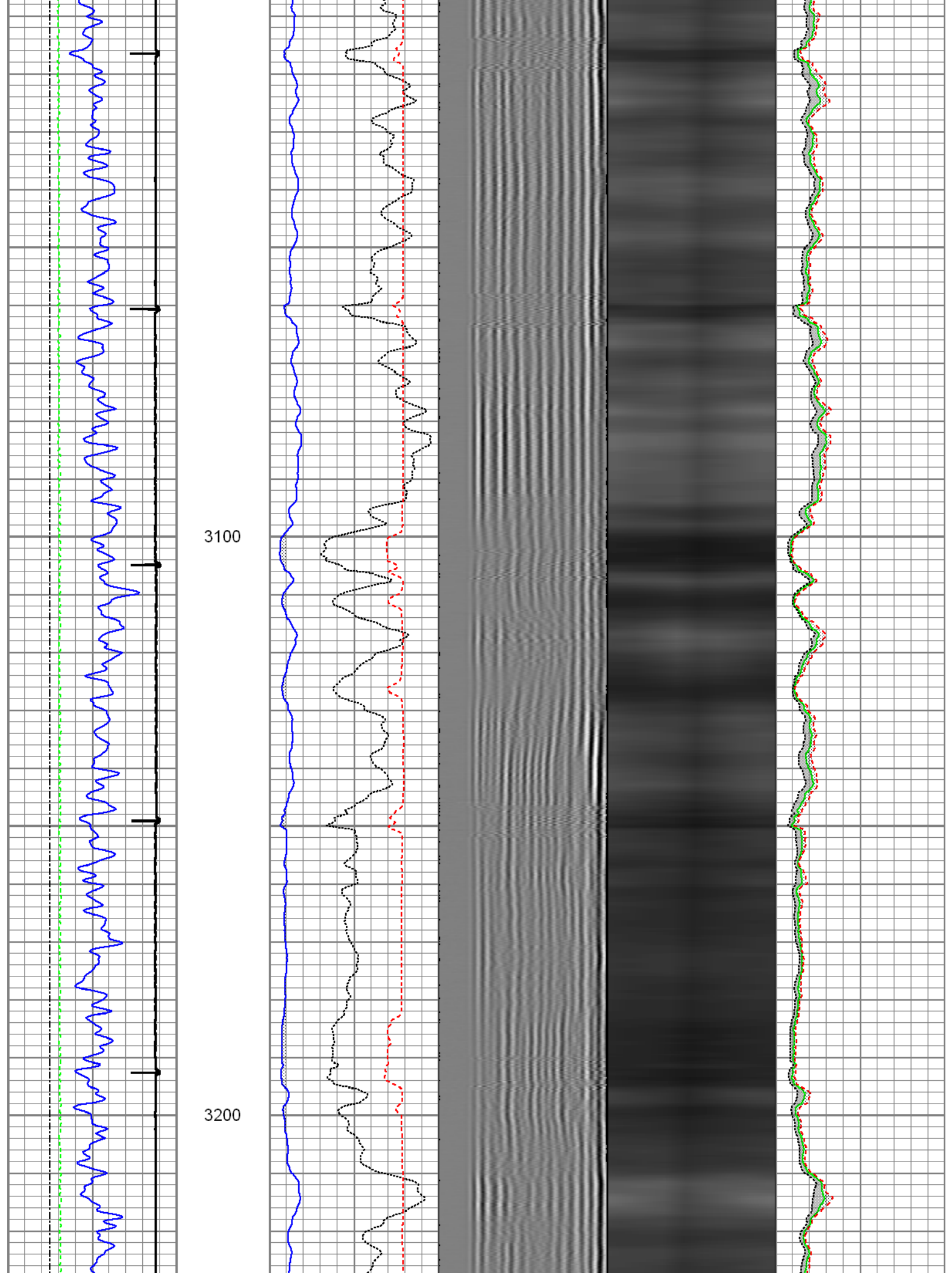
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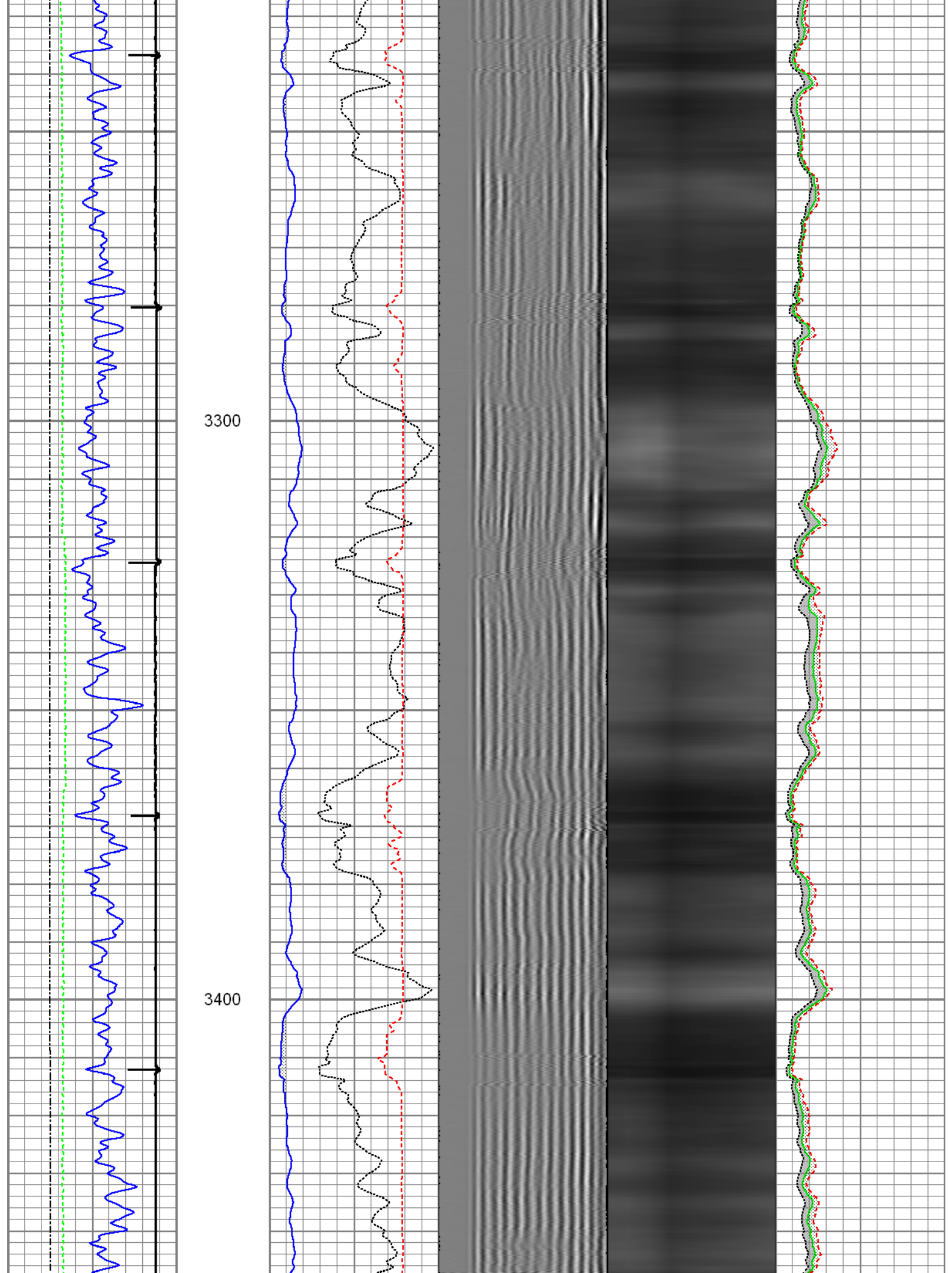


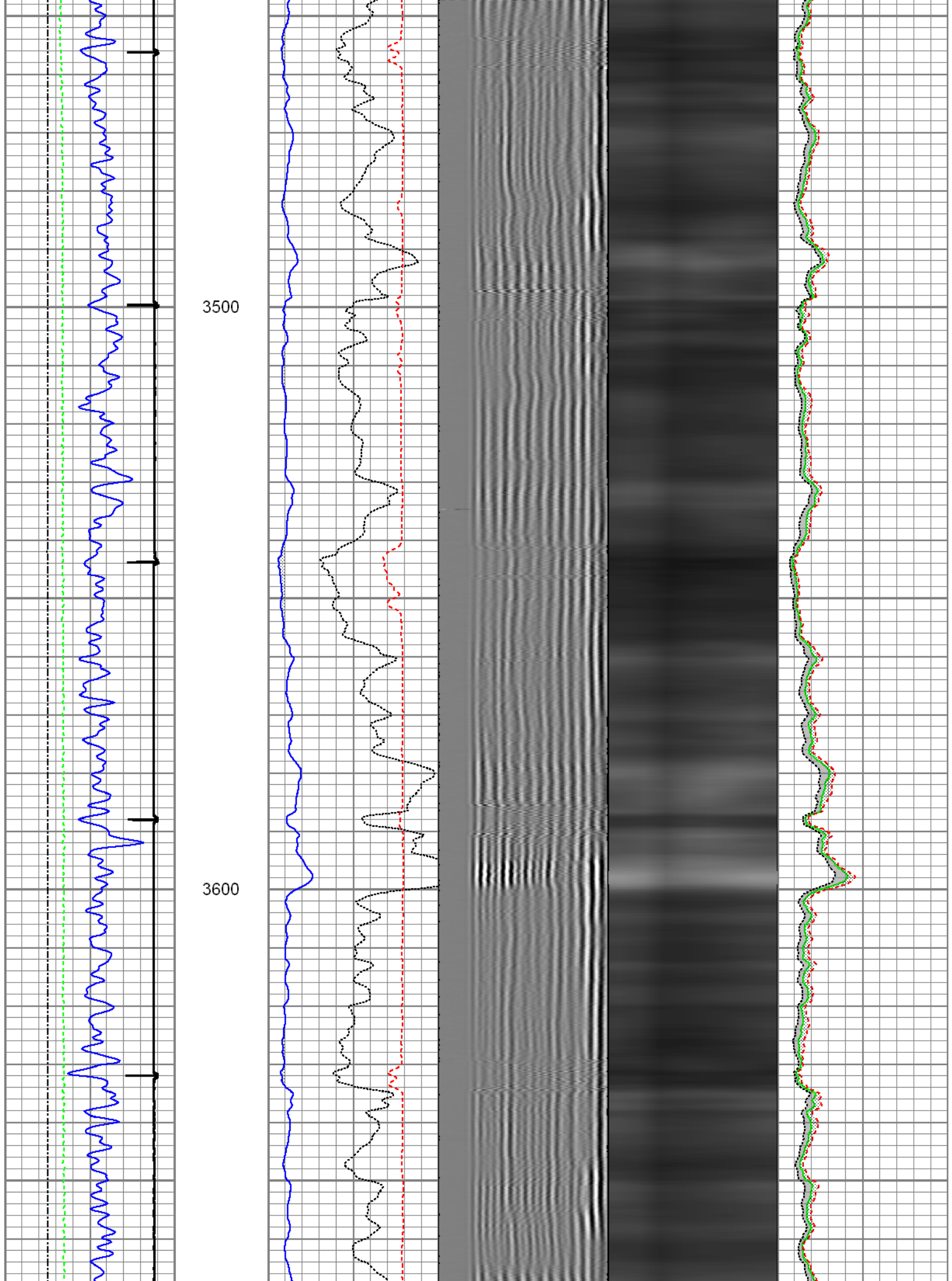


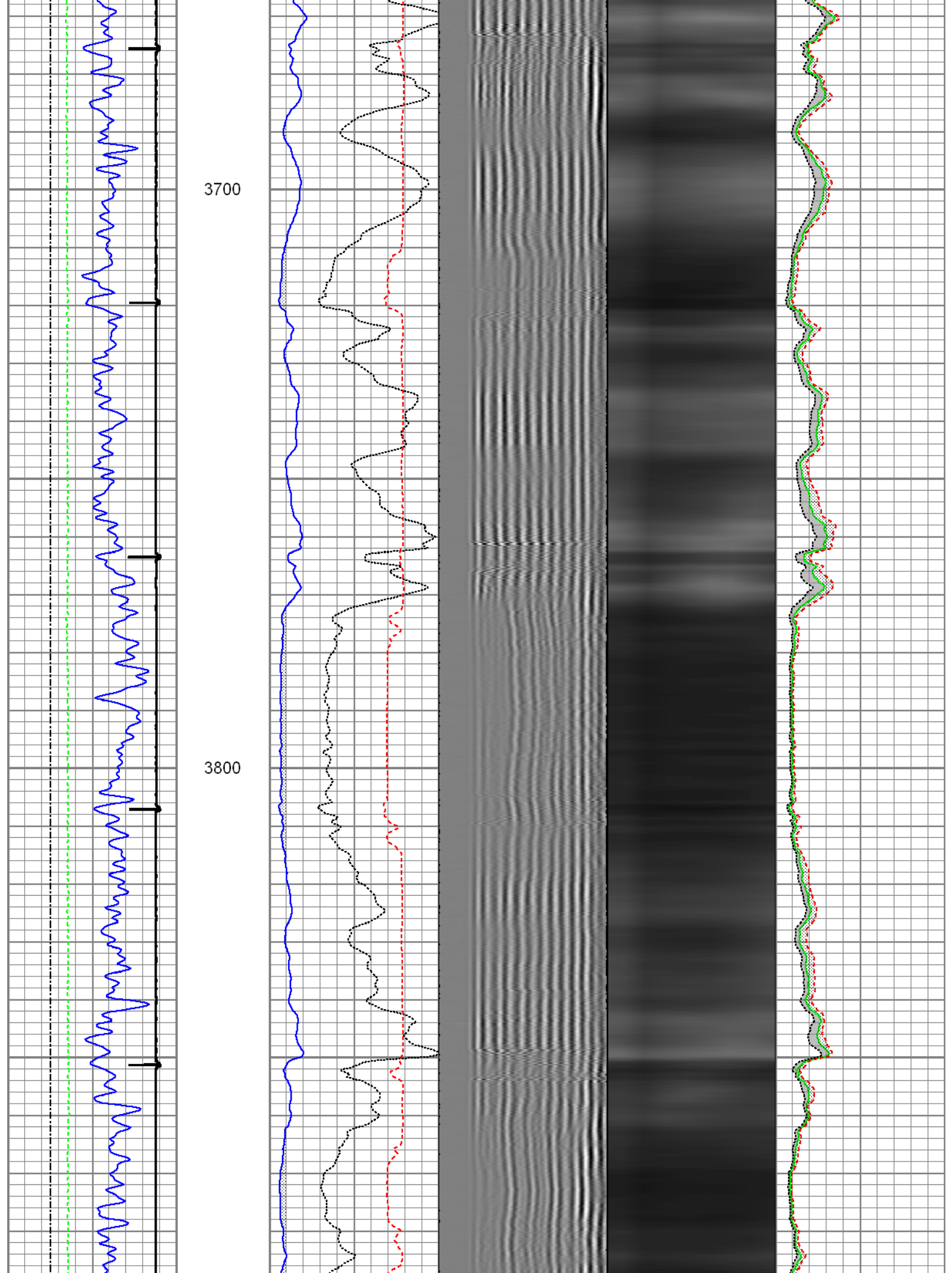


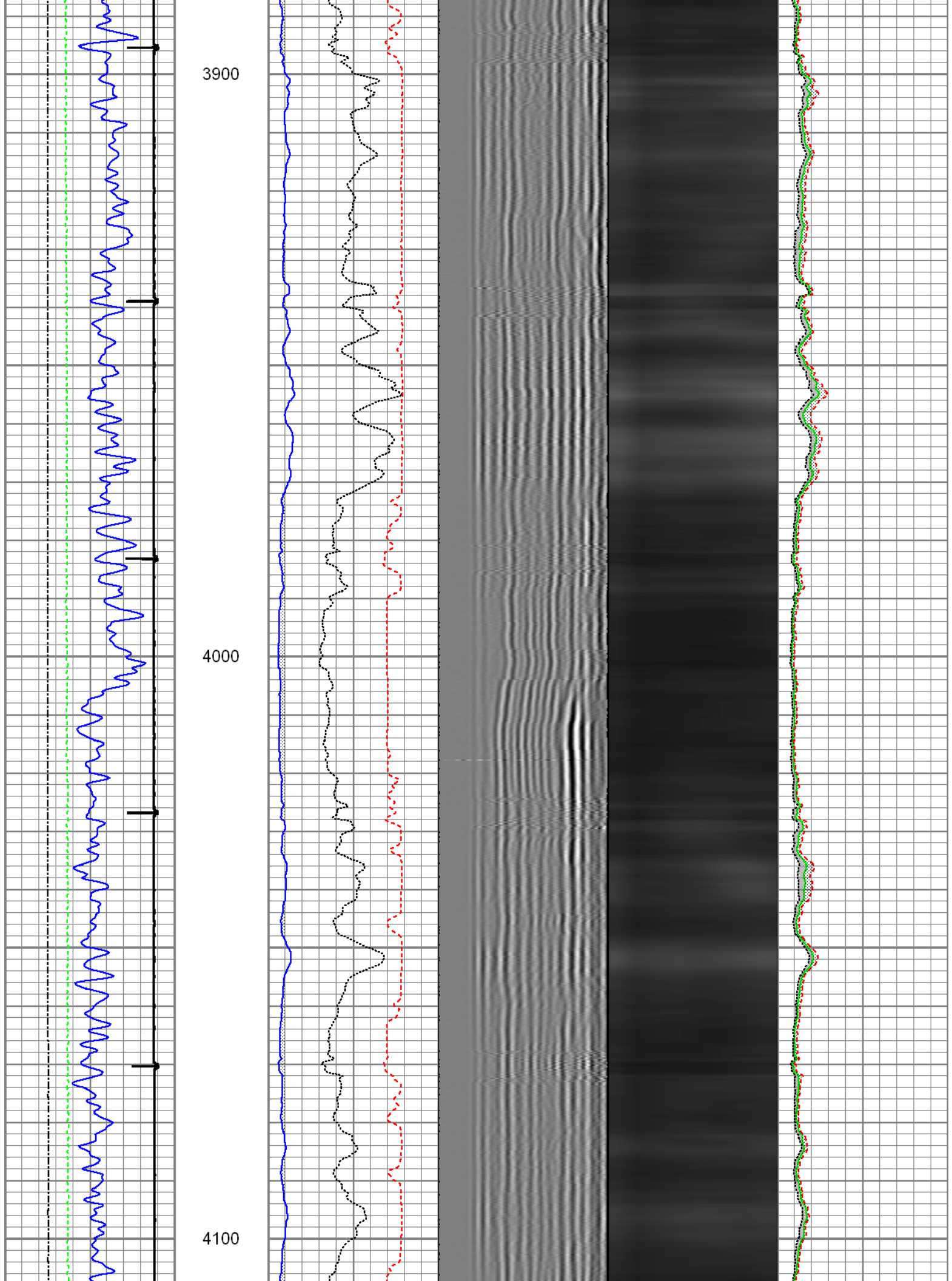


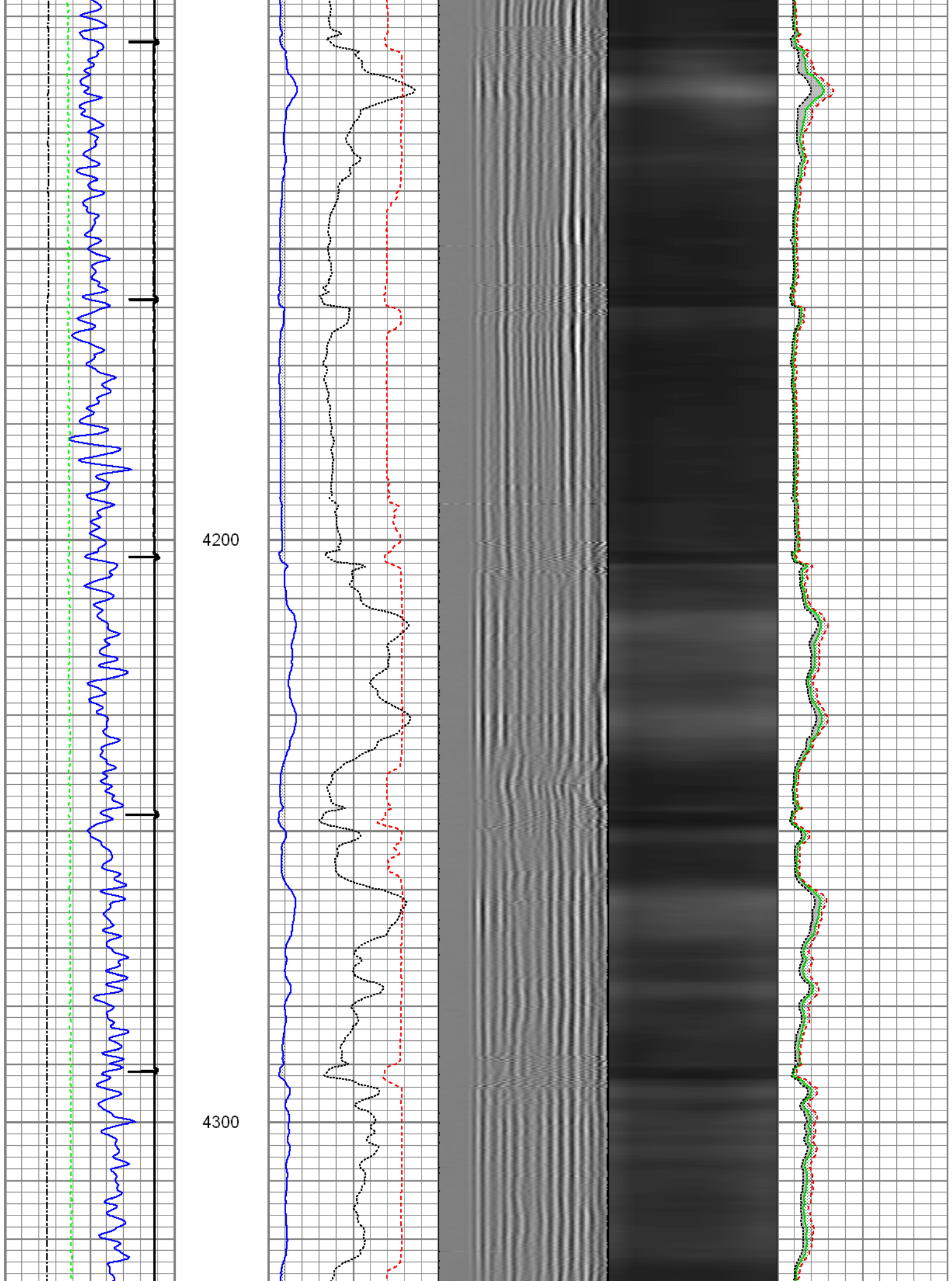


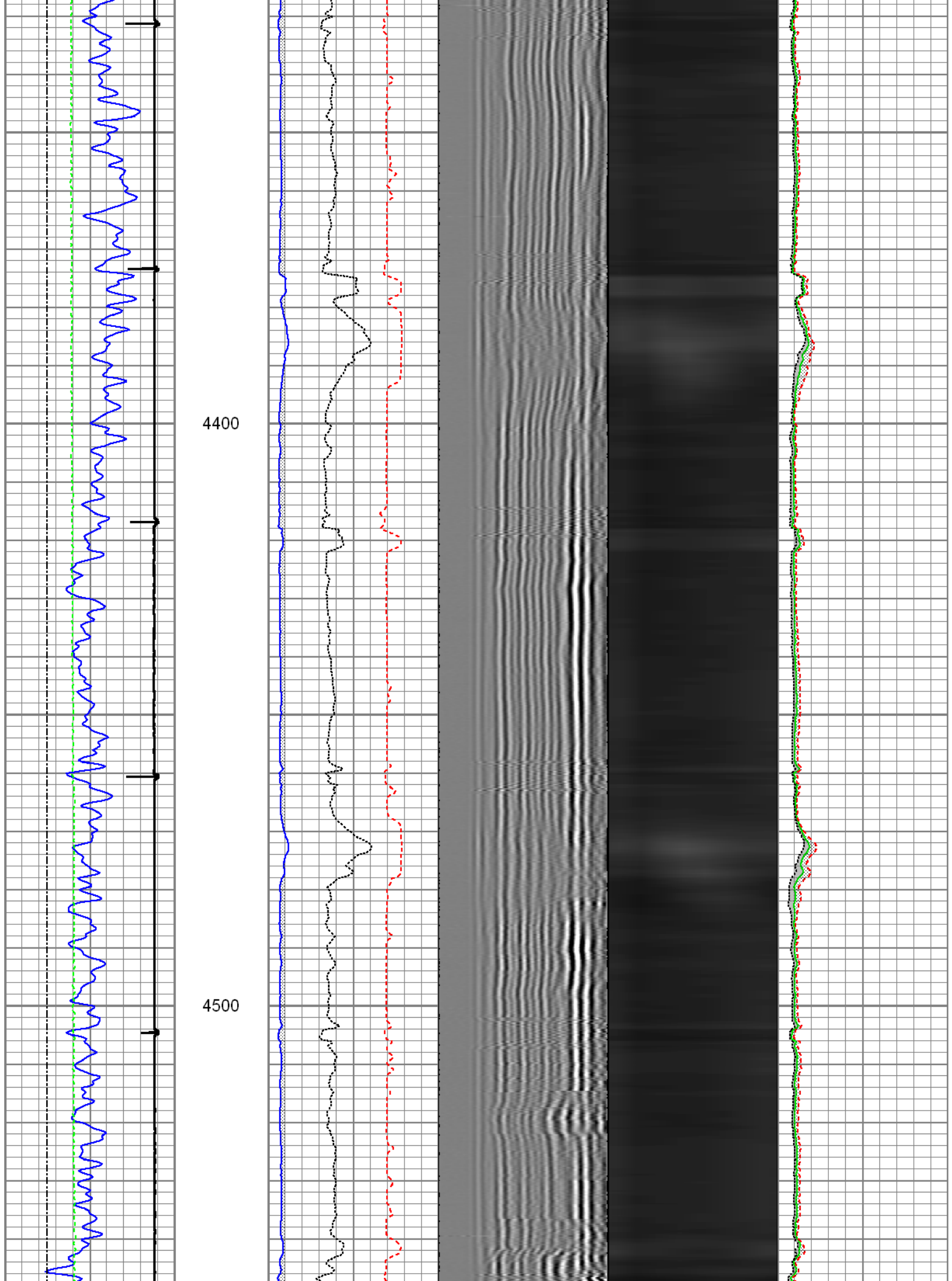


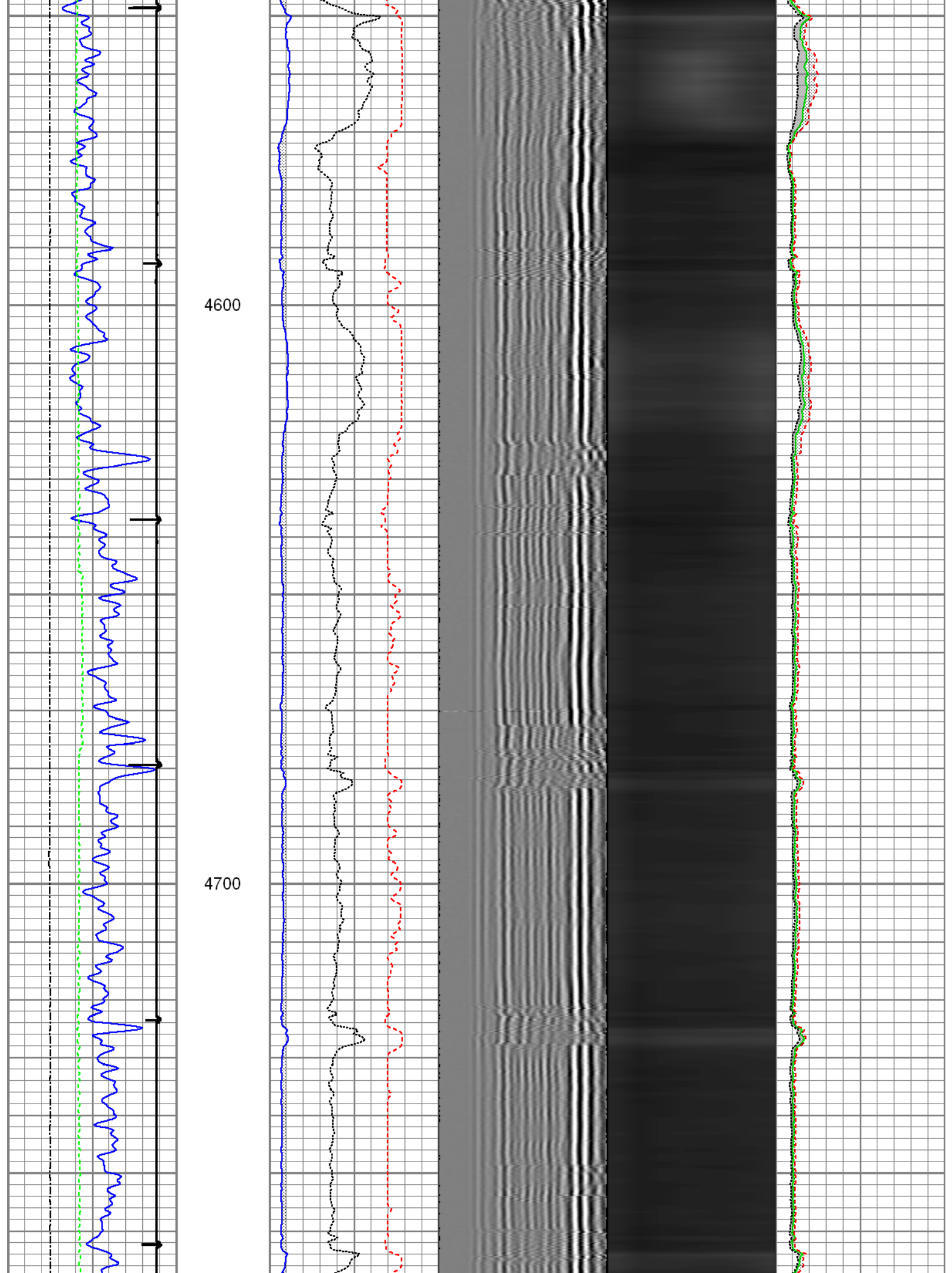






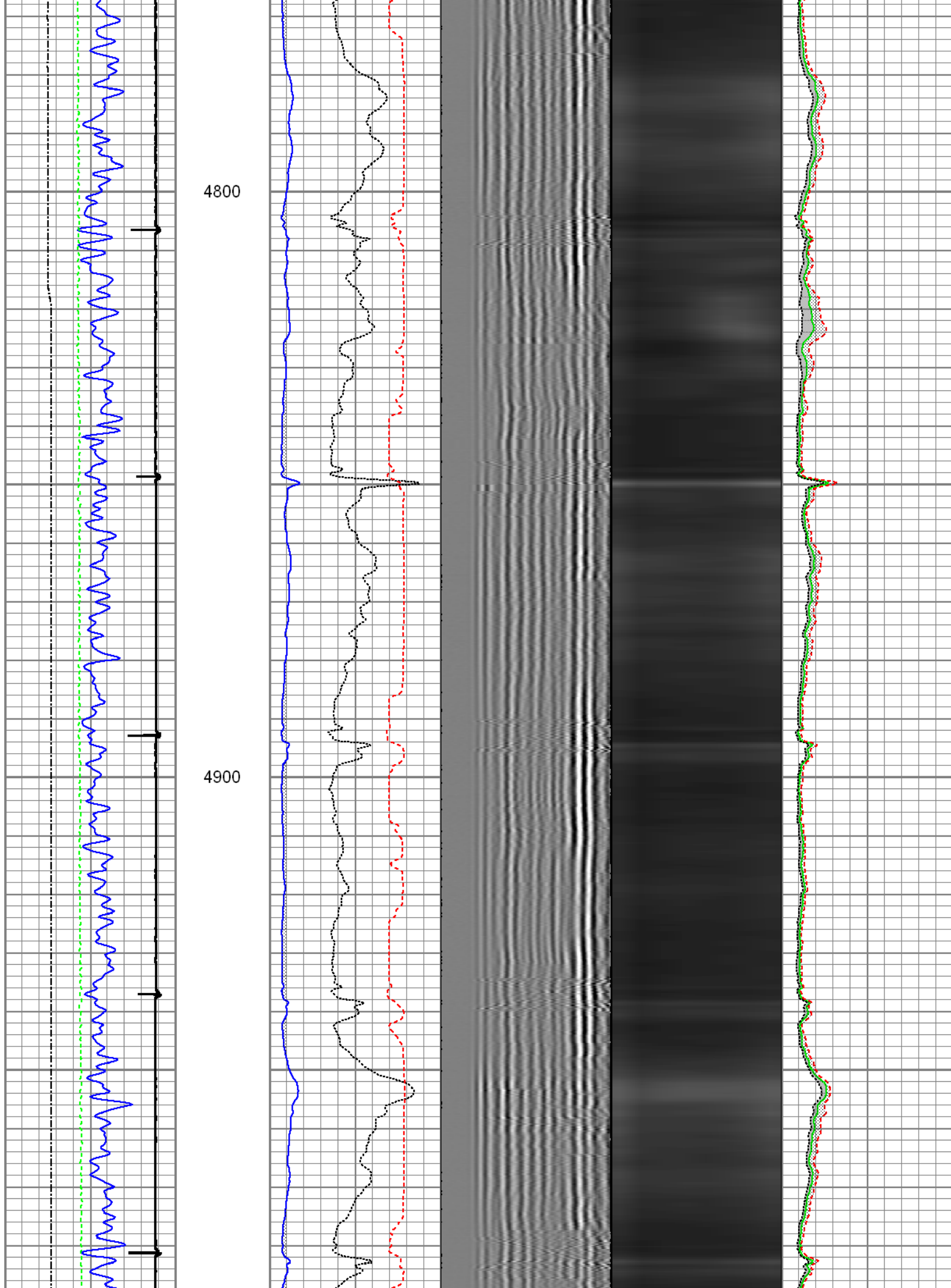






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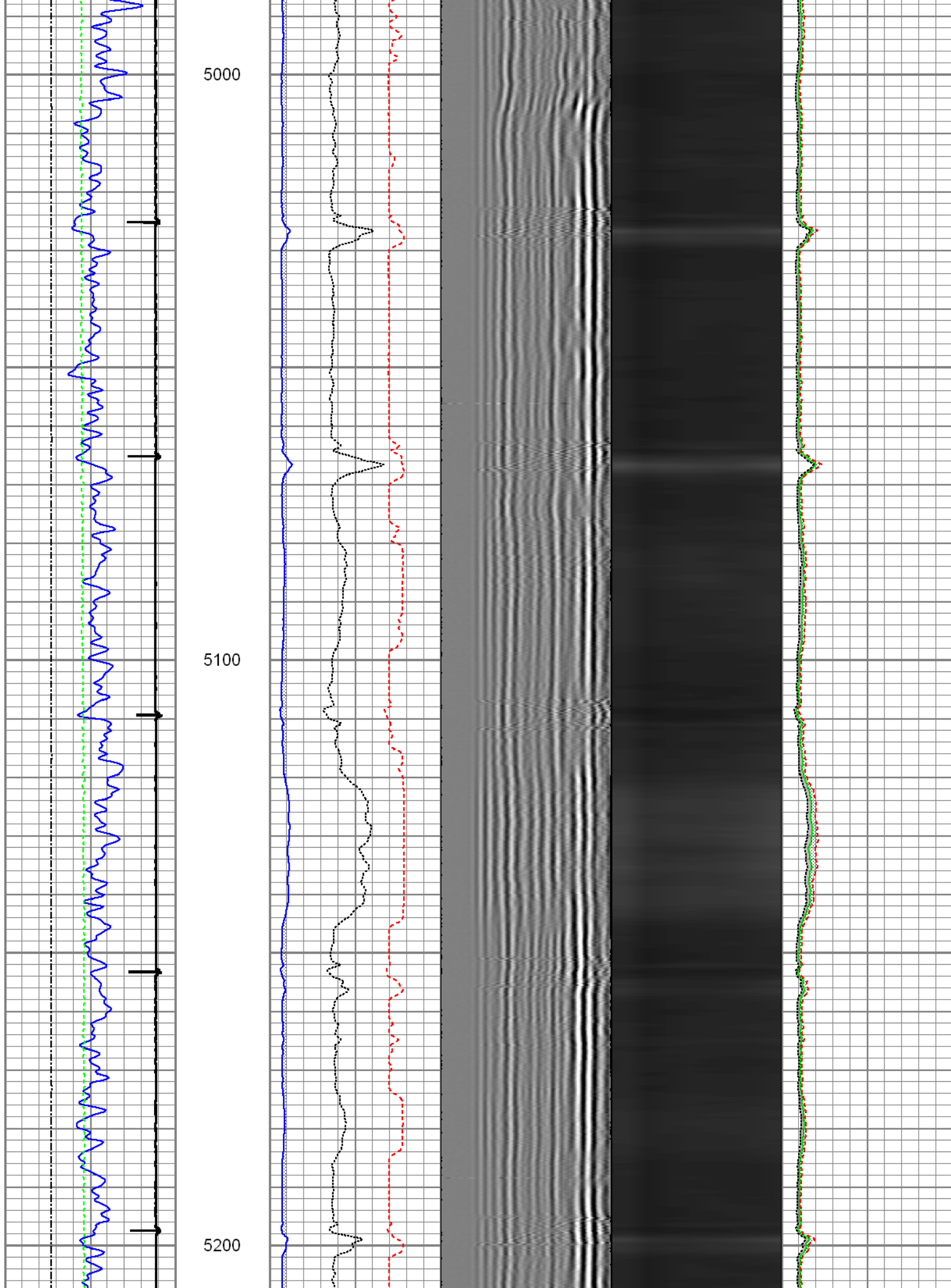
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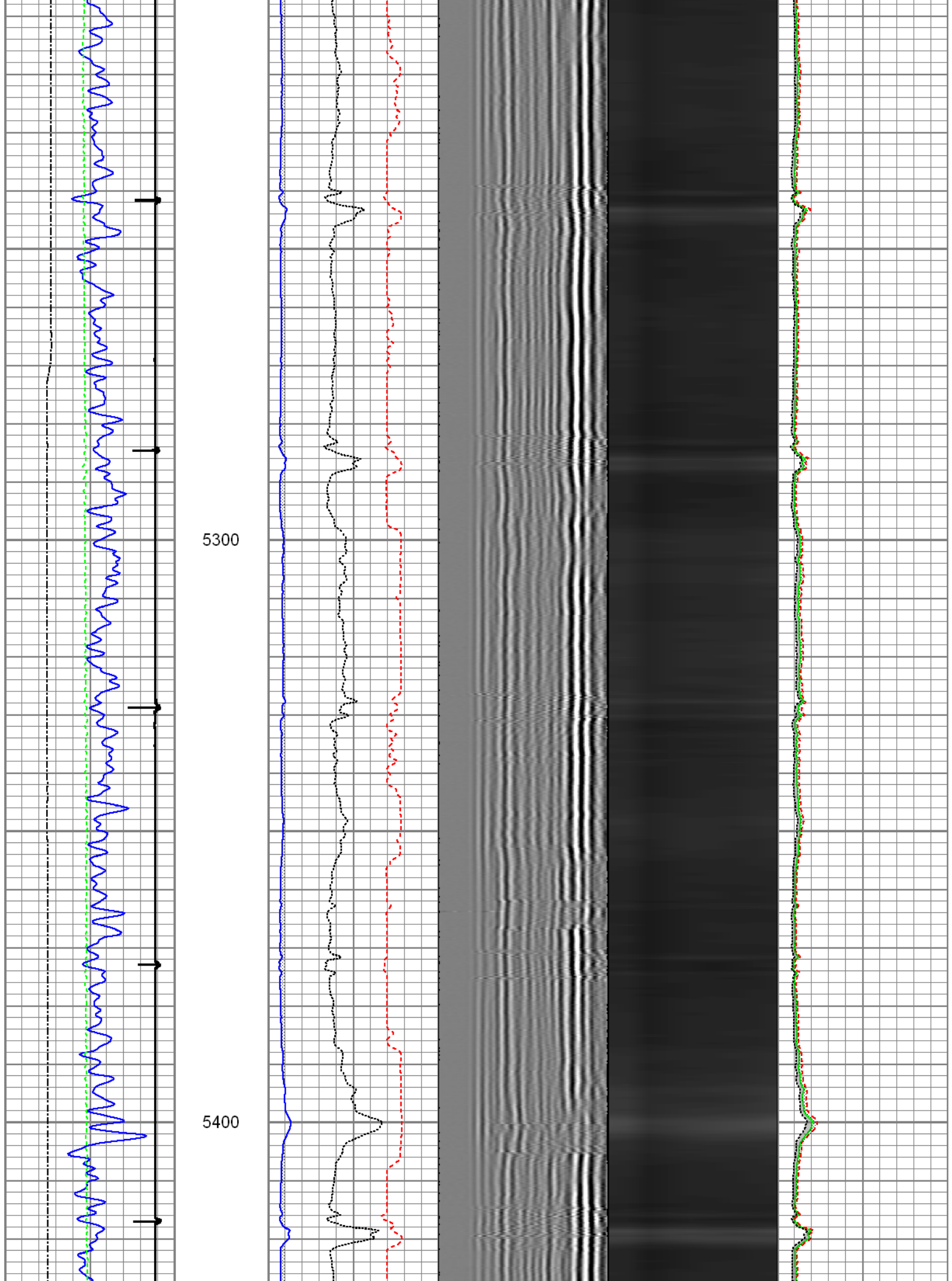


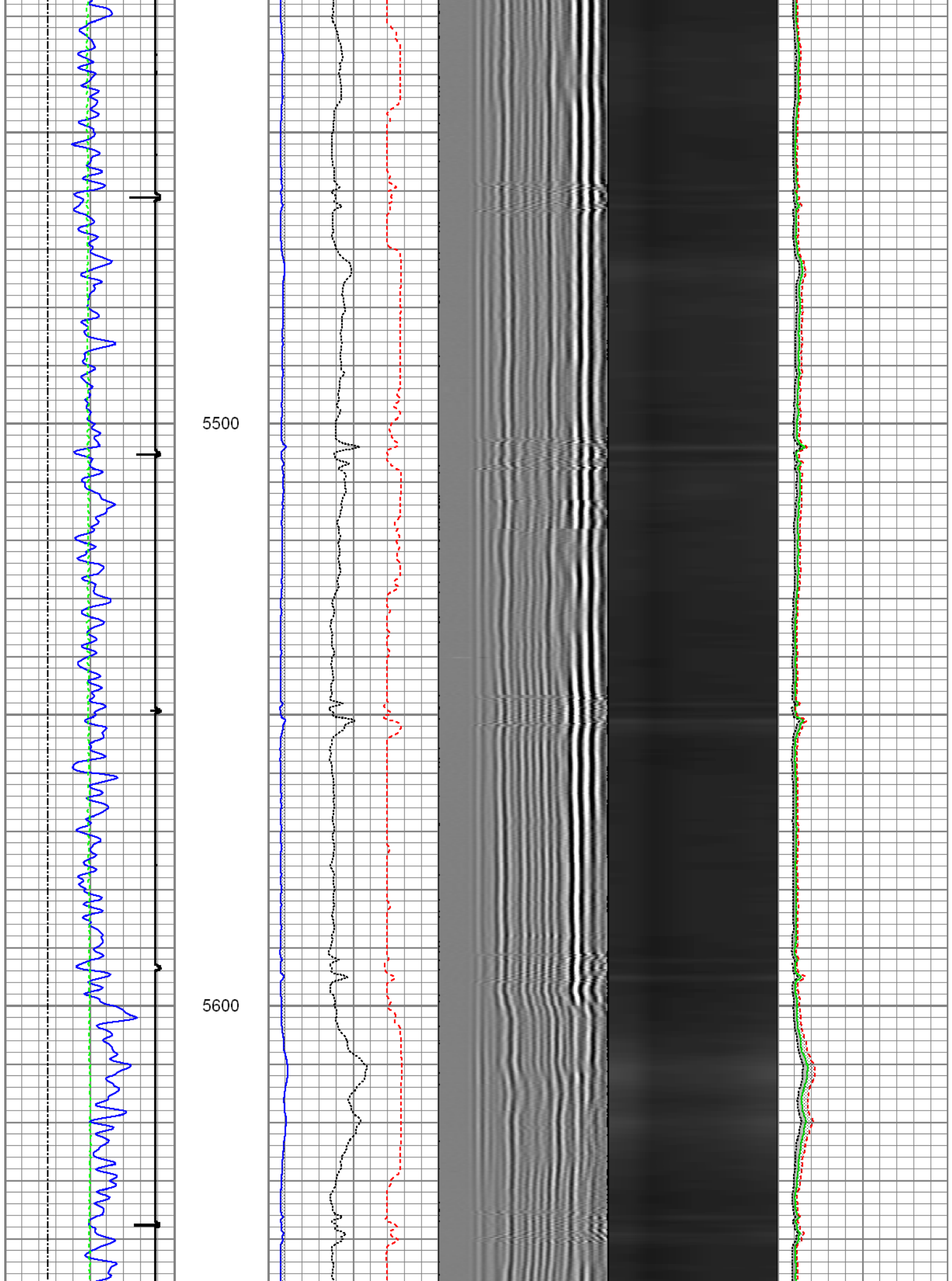
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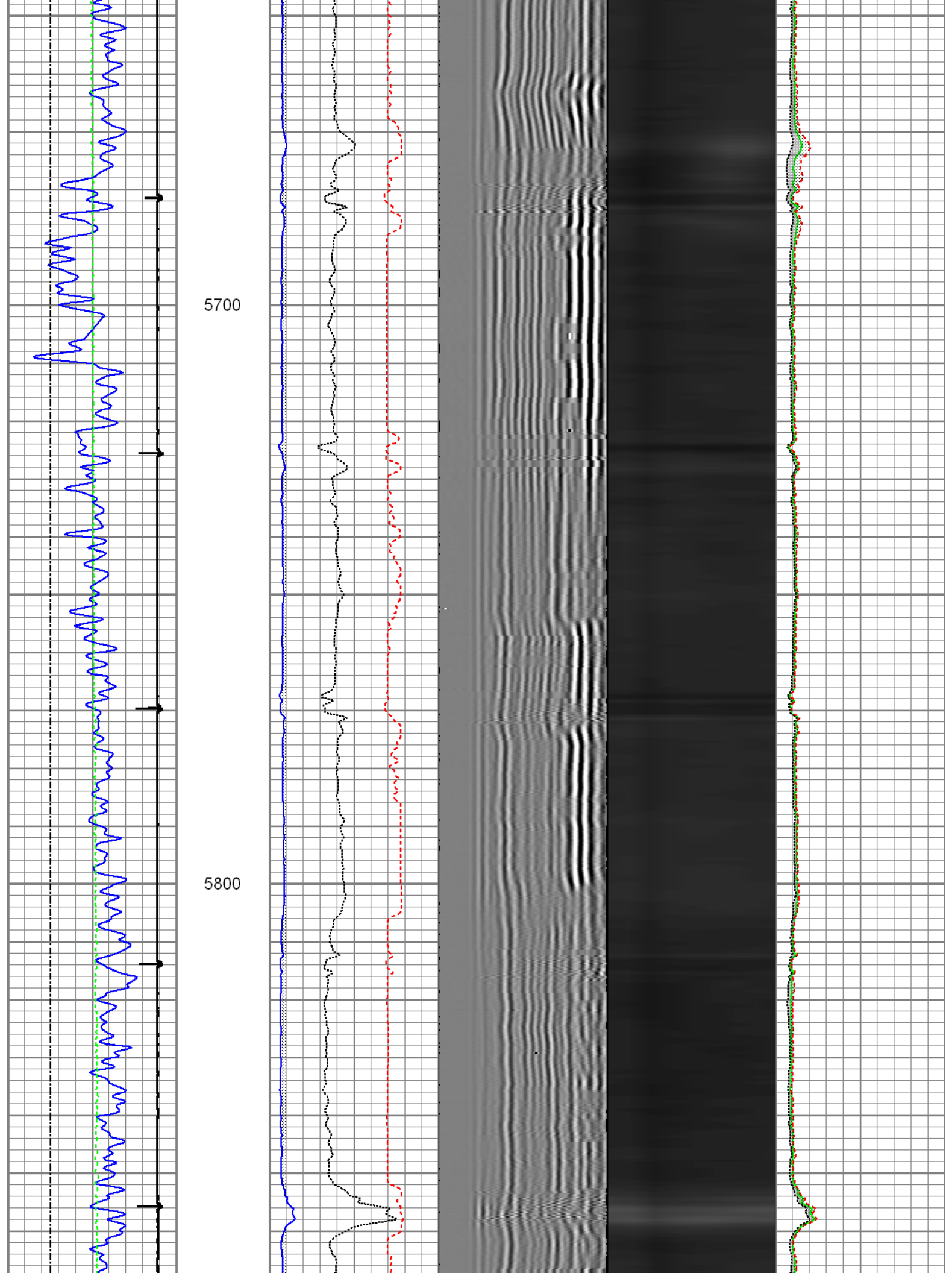
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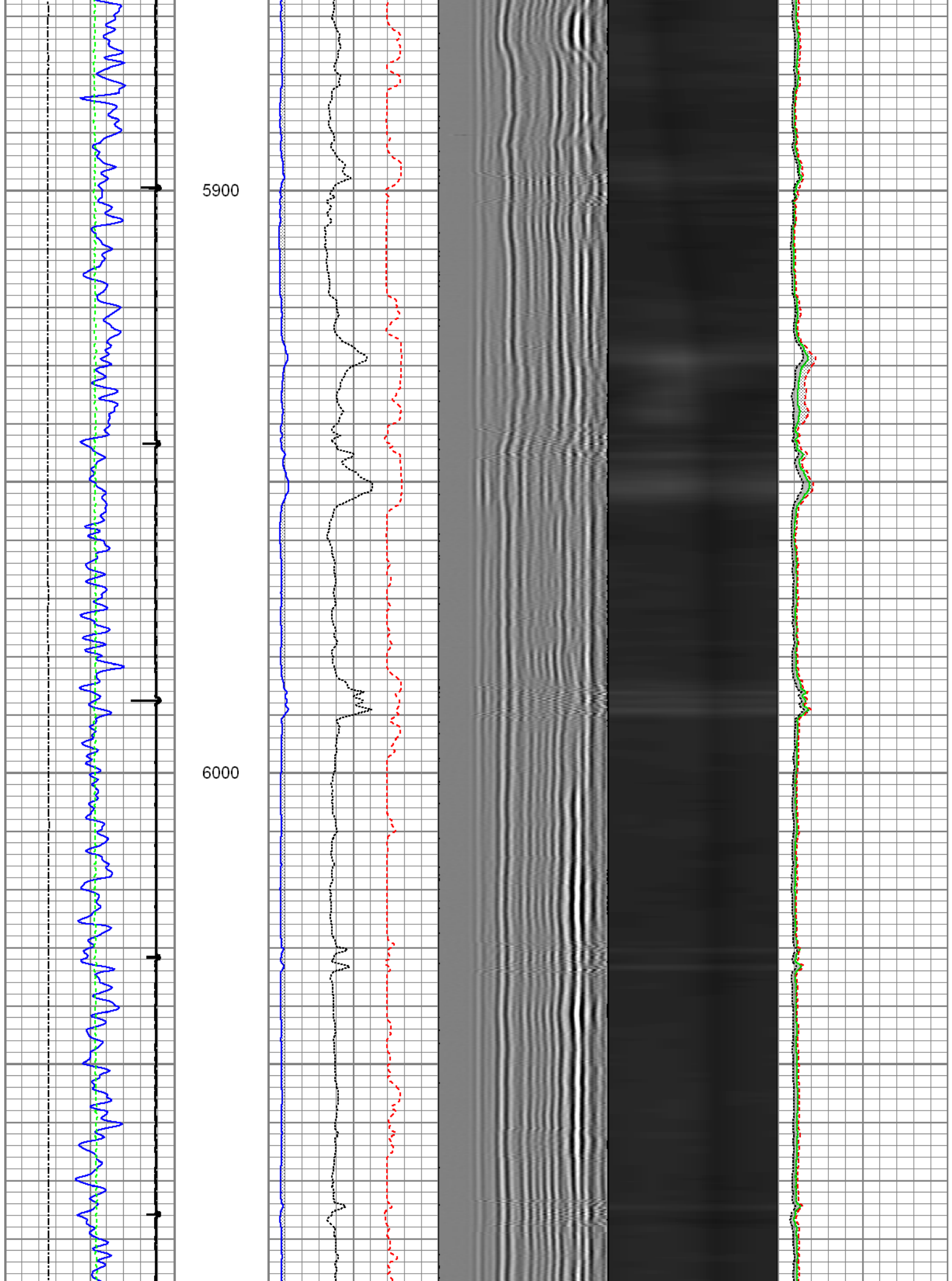
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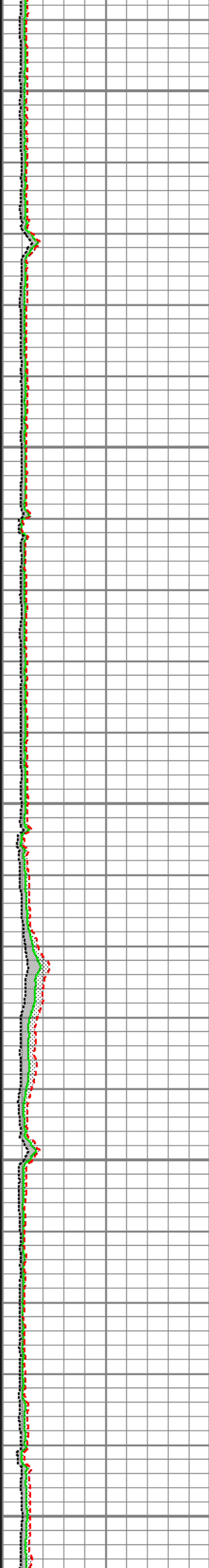
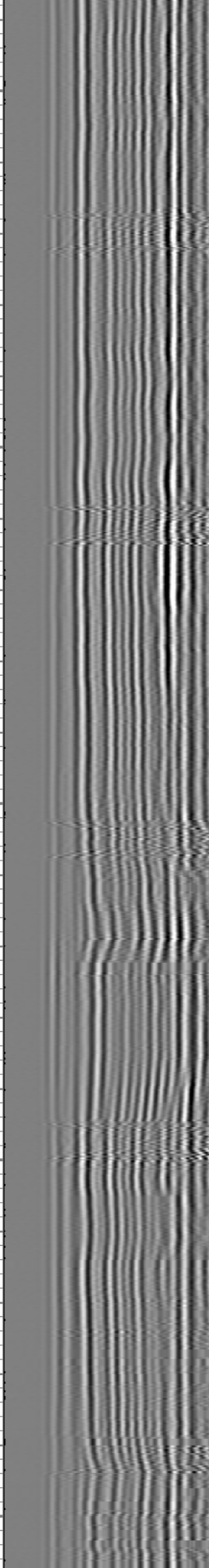
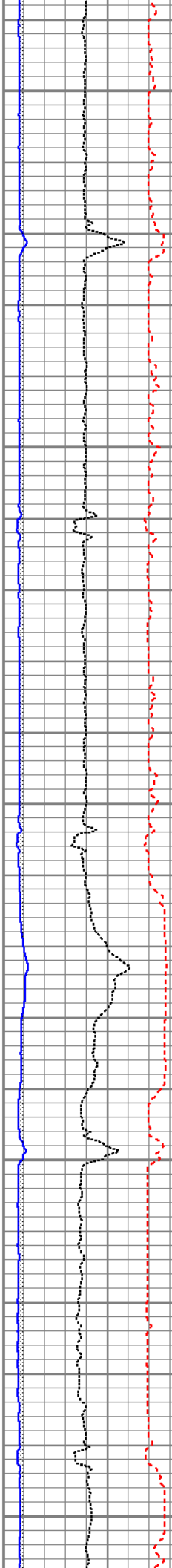
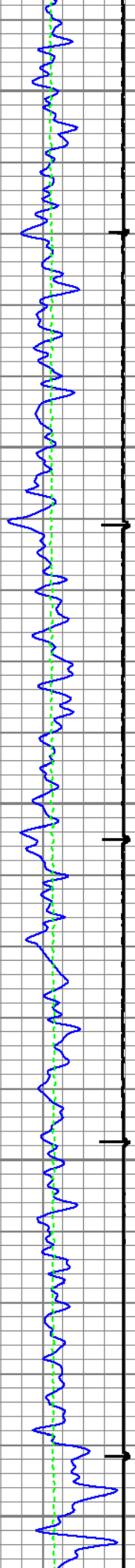


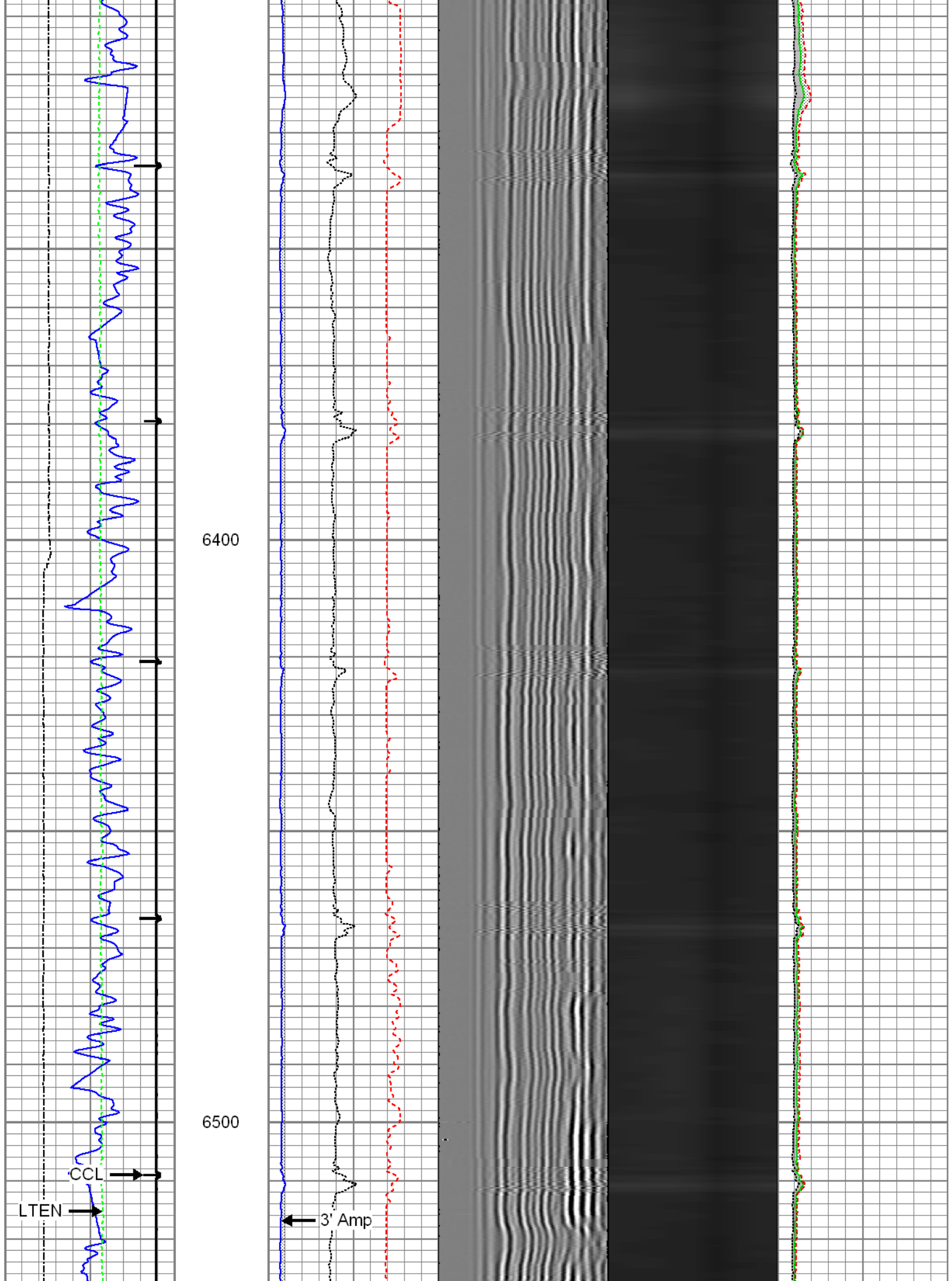


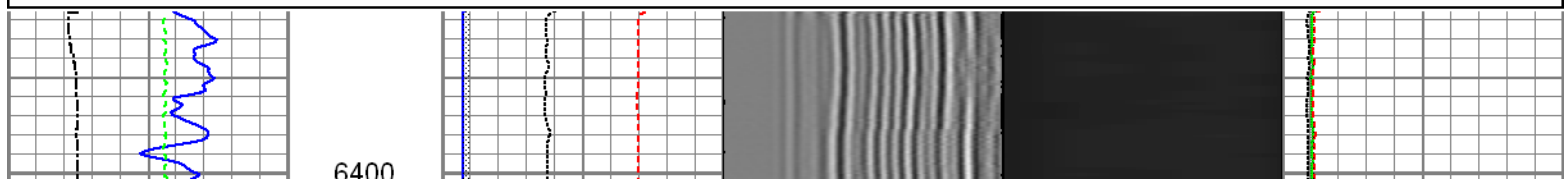
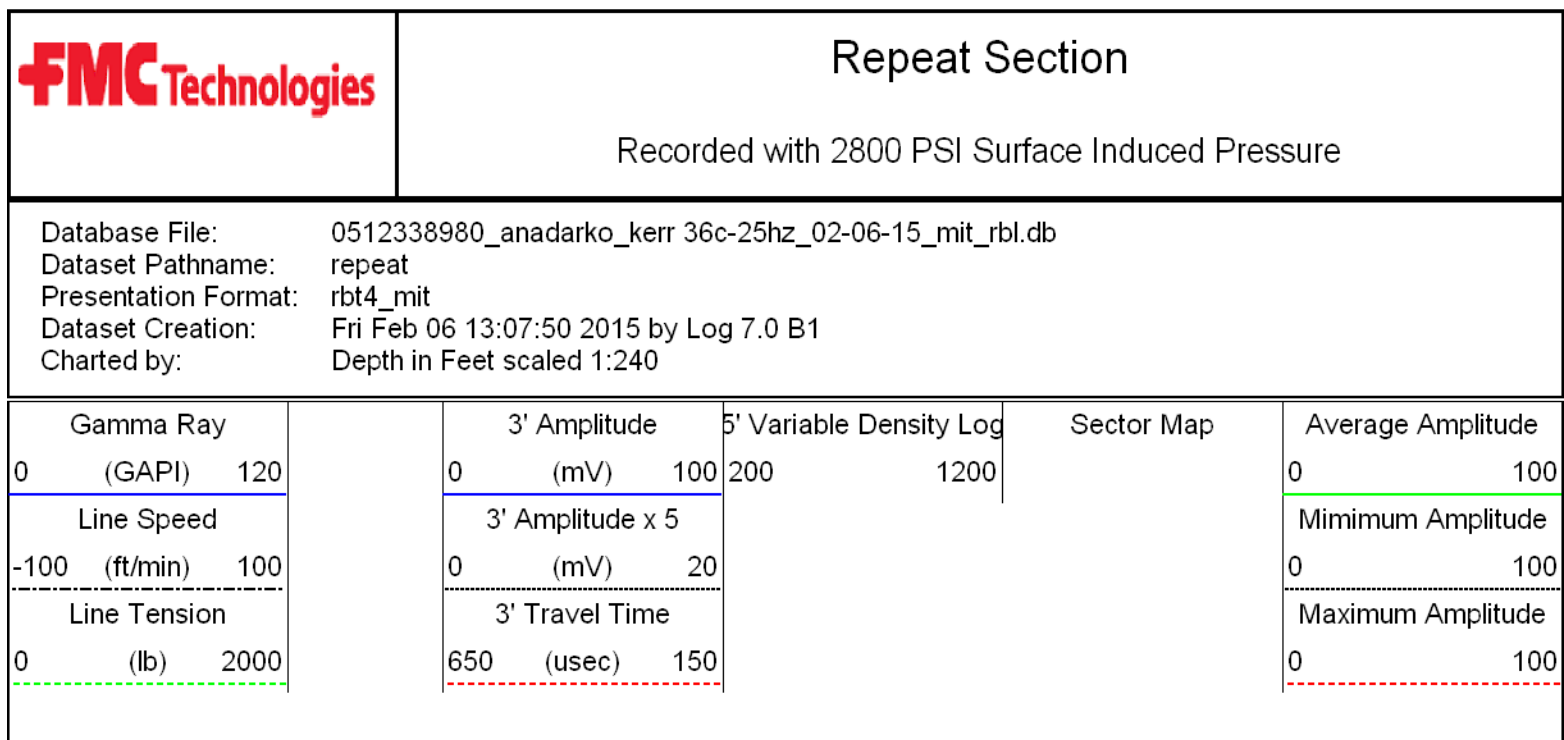
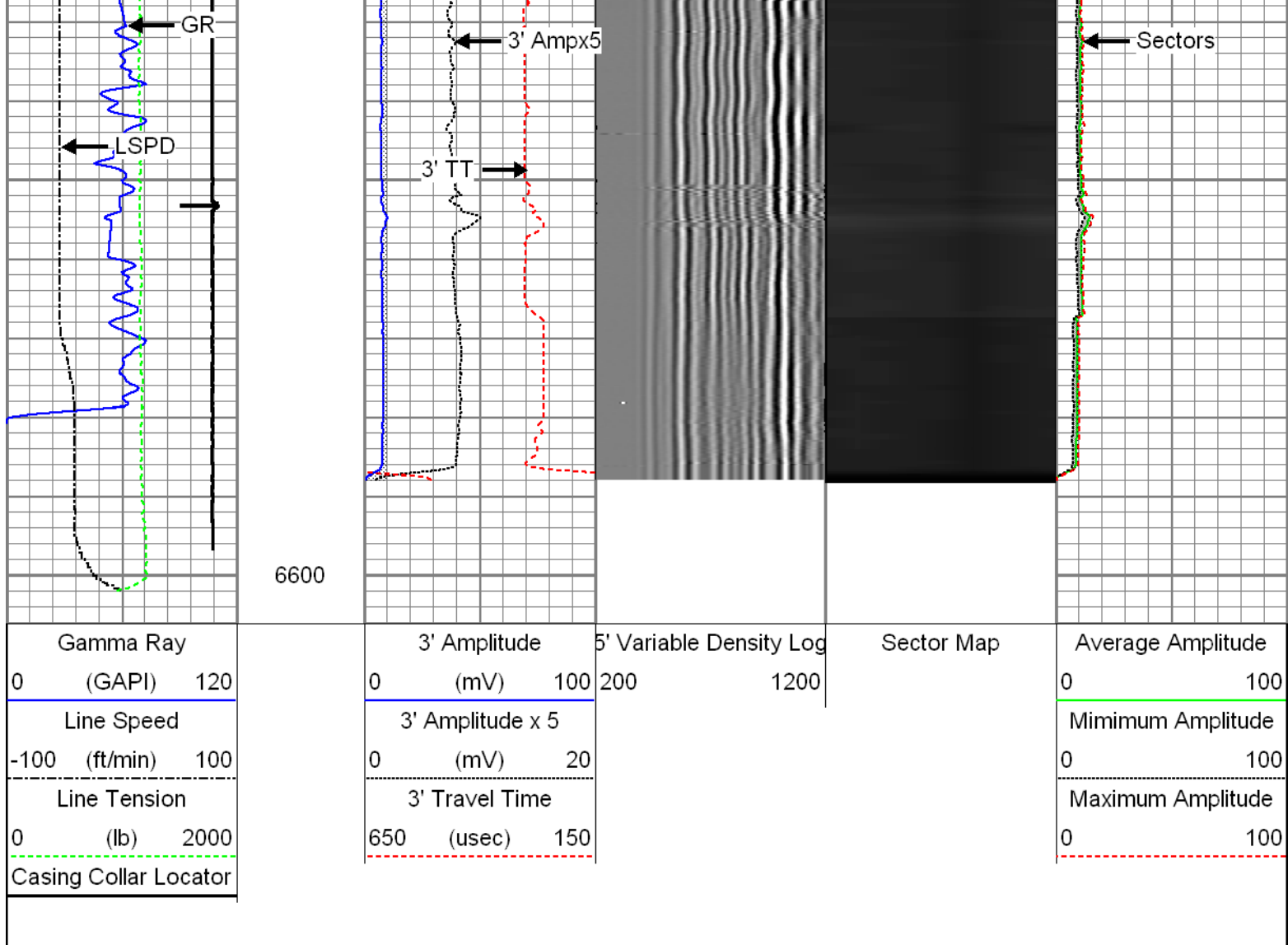
6100

6200

6300





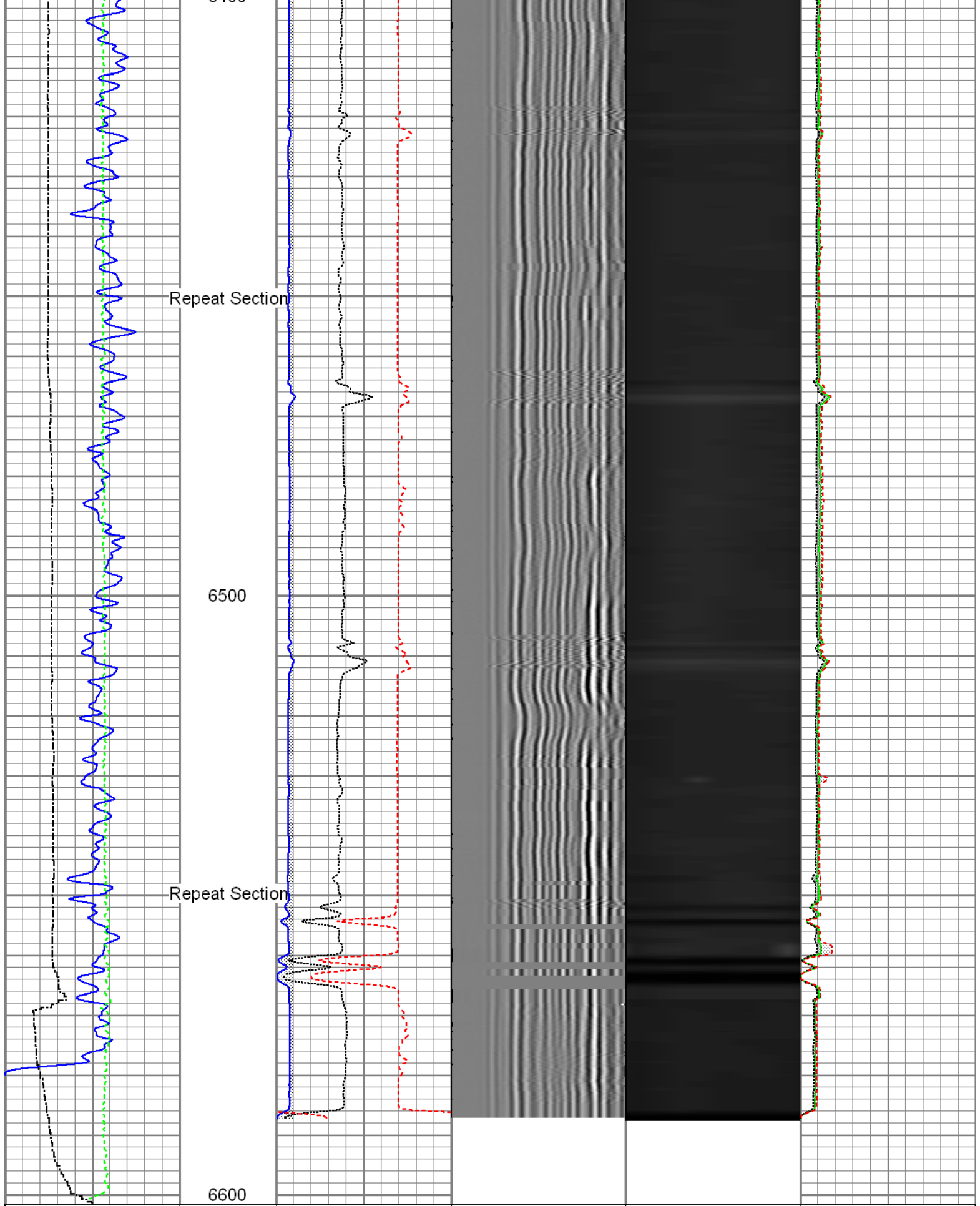


FMC Technologies

Repeat Section

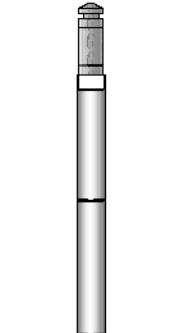
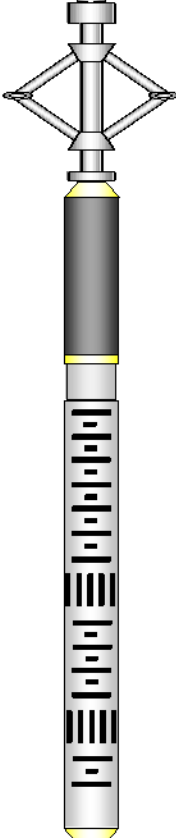
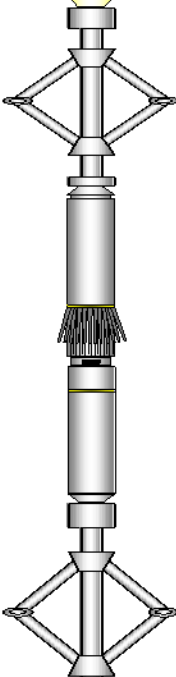
Recorded with 2800 PSI Surface Induced Pressure



Database File: 0512338980_anadarko_kerr 36c-25hz_02-06-15_mit_rbl.db
 Dataset Pathname: repeat
 Presentation Format: rbt4_mit
 Dataset Creation: Fri Feb 06 13:07:50 2015 by Log 7.0 B1
 Charted by: Depth in Feet scaled 1:240



Gamma Ray 0 (GAPI) 120	3' Amplitude 0 (mV) 100	5' Variable Density Log 200 1200	Sector Map	Average Amplitude 0 100
Line Speed -100 (ft/min) 100	3' Amplitude x 5 0 (mV) 20			Mimimum Amplitude 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 (215017) Sondex Adapter - GO Box to Sondex Pin	0.21	1.69	1.00
			UW_XTU-UW_XTU_002 (10024281) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
			UW_PGR-UW_PGR_020 (10024555) Production Gamma Ray	1.93	1.69	9.50
			UW_PRC #4 -DSSRAC (081) 2-3/4" DSS 5 Arm Roller Centralizer	2.55	2.75	32.00
WVFS3FT	15.42		UW_RBT-UW_RBT_004 (10013454) 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					
WVFS5FT	14.42					
MIT	5.41		UW_PRC-DSSRAC (082) 2-3/4" DSS 5 Arm Roller Centralizer	2.55	2.75	32.00
			UW_MIT-UW_MIT40_042 (10014703) 40 Multifinger Imaging Tool	4.54	2.75	61.10
			UW_PRC #3 -UW_PRC_057 (1038) Sondex 2-3/4" 4-Arm Production Roller Centraliser	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: 0512338980_anadarko_kerr 36c-25hz_02-06-15_mit_rbl.db: field/well/run1/main.2 Total Length: 27.05 ft Total Weight: 319.30 lb O.D.: 3.13 in							

Calibration Report			
Database File:	0512338980_anadarko_kerr 36c-25hz_02-06-15_mit_rbl.db		
Dataset Pathname:	cal		
Dataset Creation:	Fri Feb 06 16:18:59 2015 by Log 7.0 B1		
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:				Fri Feb 06 12:21:47 2015			
Ring size:	4	5	6	7			
(in)							
	Sens	Sens	Sens				
Finger 01:	1086 358.0	1444 409.0	1853 395.0	2248			
Finger 02:	1038 361.0	1399 427.0	1826 419.0	2245			
Finger 03:	1040 353.0	1393 411.0	1804 408.0	2212			
Finger 04:	1005 365.0	1370 436.0	1806 432.0	2238			
Finger 05:	1015 345.0	1360 404.0	1764 401.0	2165			
Finger 06:	1022 358.0	1380 422.0	1802 418.0	2220			
Finger 07:	1026 354.0	1380 414.0	1794 411.0	2205			
Finger 08:	995 354.0	1349 424.0	1773 427.0	2200			
Finger 09:	1068 360.0	1428 415.0	1843 402.0	2245			
Finger 10:	1057 361.0	1418 419.0	1837 410.0	2247			
Finger 11:	996 354.0	1350 420.0	1770 419.0	2189			
Finger 12:	1103 355.0	1458 394.0	1852 384.0	2236			
Finger 13:	1047 352.0	1399 414.0	1813 416.0	2229			
Finger 14:	1014 365.0	1379 430.0	1809 430.0	2239			
Finger 15:	982 365.0	1347 428.0	1775 436.0	2211			
Finger 16:	1020 358.0	1378 418.0	1796 422.0	2218			
Finger 17:	1064 354.0	1418 405.0	1823 401.0	2224			
Finger 18:	1106 358.0	1464 409.0	1873 407.0	2280			
Finger 19:	1054 362.0	1416 415.0	1831 417.0	2248			
Finger 20:	983 359.0	1342 422.0	1764 428.0	2192			
Finger 21:	1044 351.0	1395 407.0	1802 412.0	2214			
Finger 22:	1036 356.0	1392 413.0	1805 415.0	2220			
Finger 23:	1090 362.0	1452 412.0	1864 413.0	2277			
Finger 24:	1056 331.0	1387 383.0	1770 384.0	2154			
Finger 25:	1080 367.0	1447 420.0	1867 416.0	2283			
Finger 26:	1030 350.0	1380 407.0	1787 412.0	2199			
Finger 27:	1200 377.0	1577 417.0	1994 410.0	2404			

Finger 28:	1077	347.0	1424	400.0	1824	406.0	2230
Finger 29:	1021	355.0	1376	415.0	1791	419.0	2210
Finger 30:	995	351.0	1346	417.0	1763	424.0	2187
Finger 31:	1218	382.0	1600	429.0	2029	417.0	2446
Finger 32:	1010	352.0	1362	405.0	1767	401.0	2168
Finger 33:	1194	393.0	1587	443.0	2030	428.0	2458
Finger 34:	981	350.0	1331	413.0	1744	413.0	2157
Finger 35:	1132	377.0	1509	433.0	1942	421.0	2363
Finger 36:	1027	338.0	1365	393.0	1758	391.0	2149
Finger 37:	1076	362.0	1438	420.0	1858	412.0	2270
Finger 38:	1085	351.0	1436	405.0	1841	397.0	2238
Finger 39:	1065	340.0	1405	391.0	1796	387.0	2183
Finger 40:	988	368.0	1356	438.0	1794	434.0	2228

Post Survey Calibration Check								
Performed: Fri Feb 06 16:18:49 2015								
Ring size: (in)	4	Nom. wear	5	Nom. wear	6	Nom. wear	7	Nom. wear
Finger 01:	4.008	0.004	5.008	0.004	6.005	0.002	7.008	0.004
Finger 02:	4.012	0.006	5.010	0.005	6.002	0.001	7.008	0.004
Finger 03:	4.006	0.003	5.005	0.002	6.001	0.001	7.017	0.009
Finger 04:	4.012	0.006	5.006	0.003	6.003	0.002	7.007	0.003
Finger 05:	4.007	0.004	5.005	0.002	6.010	0.005	7.013	0.006
Finger 06:	4.012	0.006	5.008	0.004	6.009	0.005	7.011	0.006
Finger 07:	4.013	0.006	5.011	0.006	6.006	0.003	7.011	0.006
Finger 08:	4.010	0.005	5.007	0.003	6.005	0.002	7.009	0.005
Finger 09:	4.005	0.002	5.002	0.001	6.000	0.000	7.003	0.002
Finger 10:	4.007	0.003	5.005	0.003	6.001	0.001	7.005	0.003
Finger 11:	4.011	0.006	5.010	0.005	6.006	0.003	7.009	0.005
Finger 12:	4.010	0.005	5.004	0.002	6.006	0.003	7.007	0.004
Finger 13:	4.009	0.004	5.006	0.003	6.001	0.000	7.008	0.004
Finger 14:	4.013	0.006	5.009	0.004	6.007	0.004	7.013	0.007
Finger 15:	4.014	0.007	5.007	0.004	6.009	0.004	7.009	0.004
Finger 16:	4.011	0.005	5.009	0.004	6.007	0.004	7.011	0.006
Finger 17:	4.011	0.005	5.006	0.003	6.003	0.002	7.011	0.006
Finger 18:	4.007	0.004	5.007	0.004	6.002	0.001	7.006	0.003
Finger 19:	4.012	0.006	5.006	0.003	6.007	0.003	7.011	0.005
Finger 20:	4.005	0.002	5.003	0.002	6.005	0.002	7.017	0.009
Finger 21:	4.007	0.003	5.009	0.005	6.003	0.001	7.009	0.004
Finger 22:	4.008	0.004	5.009	0.005	6.003	0.002	7.009	0.004
Finger 23:	4.004	0.002	5.005	0.003	6.003	0.002	7.017	0.008
Finger 24:	4.011	0.005	5.002	0.001	6.002	0.001	7.007	0.004
Finger 25:	4.011	0.005	5.007	0.004	6.004	0.002	7.011	0.006
Finger 26:	4.011	0.005	5.009	0.005	6.010	0.005	7.011	0.005
Finger 27:	4.011	0.005	5.006	0.003	6.004	0.002	7.006	0.003
Finger 28:	4.010	0.005	5.008	0.004	6.005	0.003	7.008	0.004
Finger 29:	4.010	0.005	5.005	0.002	6.006	0.003	7.010	0.005
Finger 30:	4.008	0.004	5.009	0.005	6.006	0.003	7.008	0.004
Finger 31:	4.013	0.006	5.004	0.002	6.006	0.003	7.008	0.004
Finger 32:	4.010	0.005	5.006	0.003	6.002	0.001	7.005	0.002
Finger 33:	4.012	0.006	5.006	0.003	6.001	0.001	7.008	0.004
Finger 34:	4.009	0.005	5.008	0.004	6.005	0.002	7.008	0.004
Finger 35:	4.013	0.007	5.009	0.005	6.006	0.003	7.013	0.006
Finger 36:	4.009	0.004	5.005	0.003	6.006	0.003	7.009	0.004
Finger 37:	4.007	0.003	5.009	0.005	6.006	0.003	7.018	0.009
Finger 38:	4.010	0.005	5.008	0.004	6.006	0.003	7.011	0.006
Finger 39:	4.006	0.003	5.003	0.001	6.006	0.003	7.009	0.004
Finger 40:	4.009	0.005	5.004	0.002	6.002	0.001	7.011	0.005
Average:	4.010	0.005	5.007	0.003	6.005	0.002	7.010	0.005

Segmented Cement Bond Log Calibration Report

Serial Number:	10013454
Tool Model:	UW_RBT_004

Calibration Casing Diameter: 7.000 in
Calibration Depth: 221.591 ft

Master Calibration, performed Fri Feb 06 12:33:28 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	-0.002	0.614	0.800	62.165	99.678	0.958
5FT	-0.003	0.629	0.800	62.165	97.066	1.093
S1	-0.001	0.603	0.000	100.000	165.515	0.232
S2	-0.004	0.560	0.000	100.000	177.301	0.662
S3	-0.003	0.558	0.000	100.000	178.448	0.494
S4	-0.004	0.655	0.000	100.000	151.718	0.556
S5	-0.002	0.649	0.000	100.000	153.642	0.263
S6	-0.004	0.633	0.000	100.000	157.197	0.570
S7	-0.002	0.613	0.000	100.000	162.482	0.397
S8	-0.002	0.611	0.000	100.000	163.139	0.392

Gamma Ray Calibration Report

Serial Number: 10024555
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 and Gas Onshore, L.P.
Well Kerr 36C-25HZ
Field Wattenberg
County Weld
State Colorado