



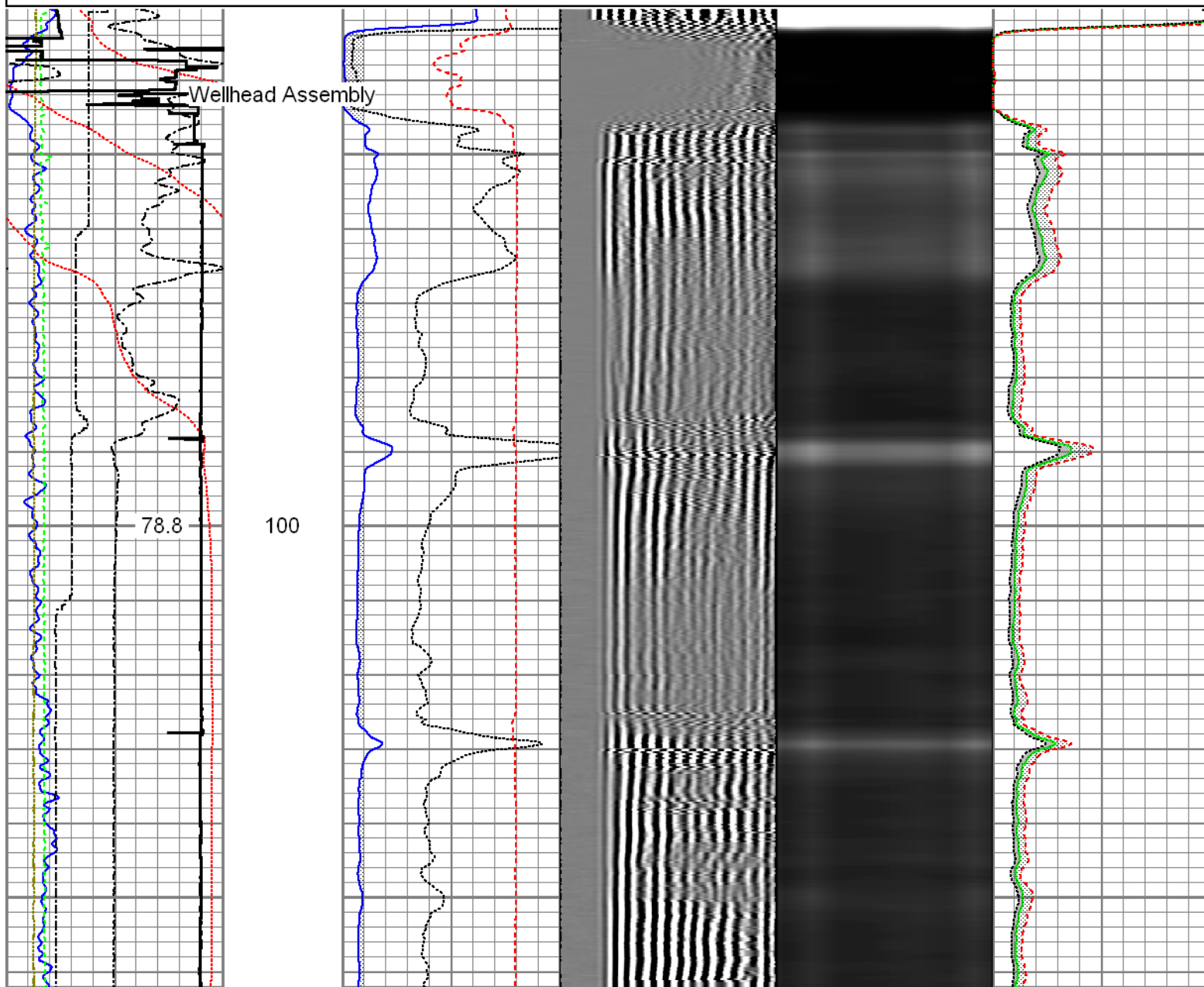
<<< Fold Here >>>
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible 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 Tie Back Extension reported at 5399 FT Adjusted log +23 FT to correlate with Tie Back Extension Log ran from 5727 FT to surface Recorded with 1500 PSI surface induced pressure Thank you for choosing FMC Technologies Surface Integrated Services.

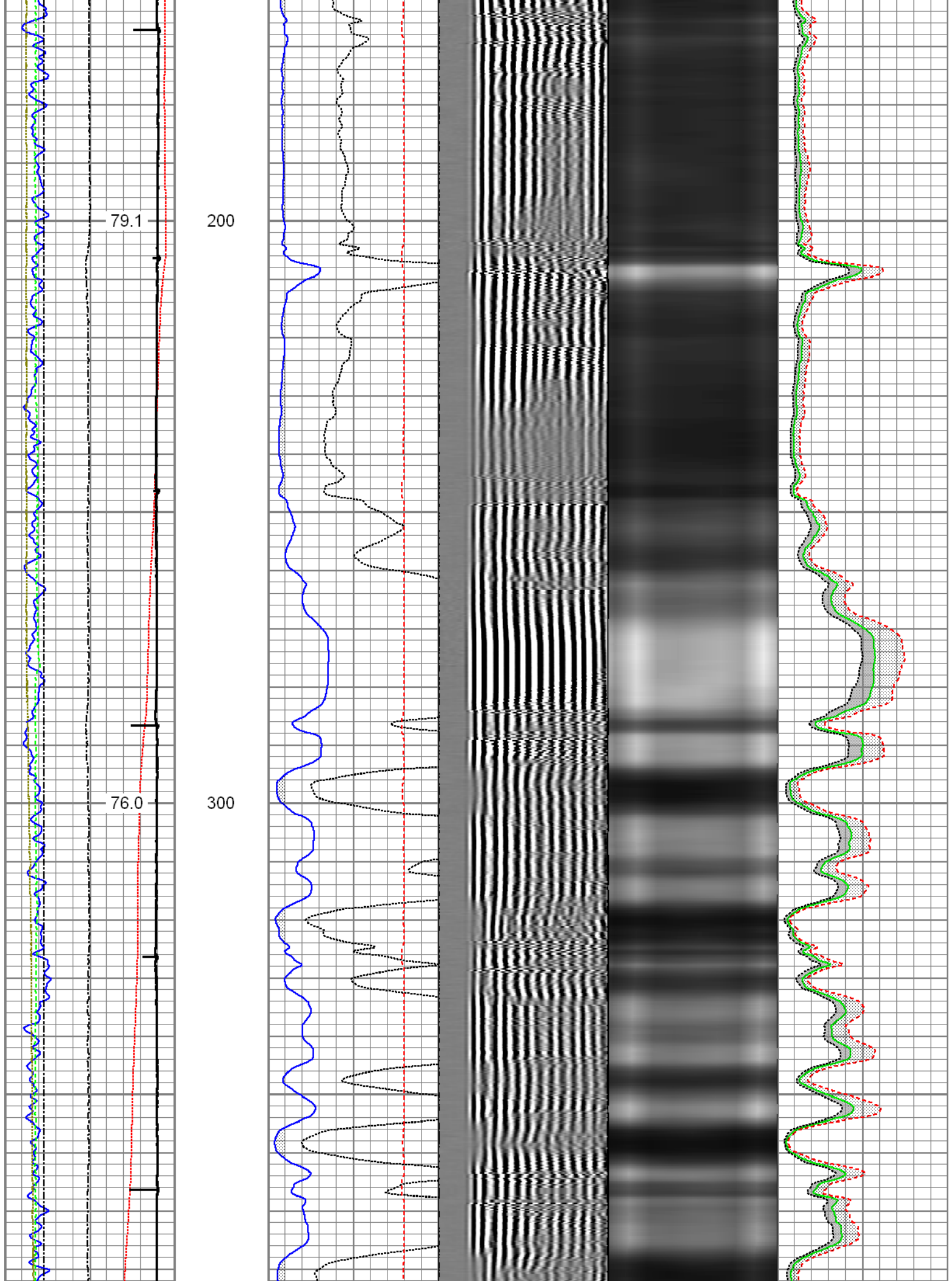


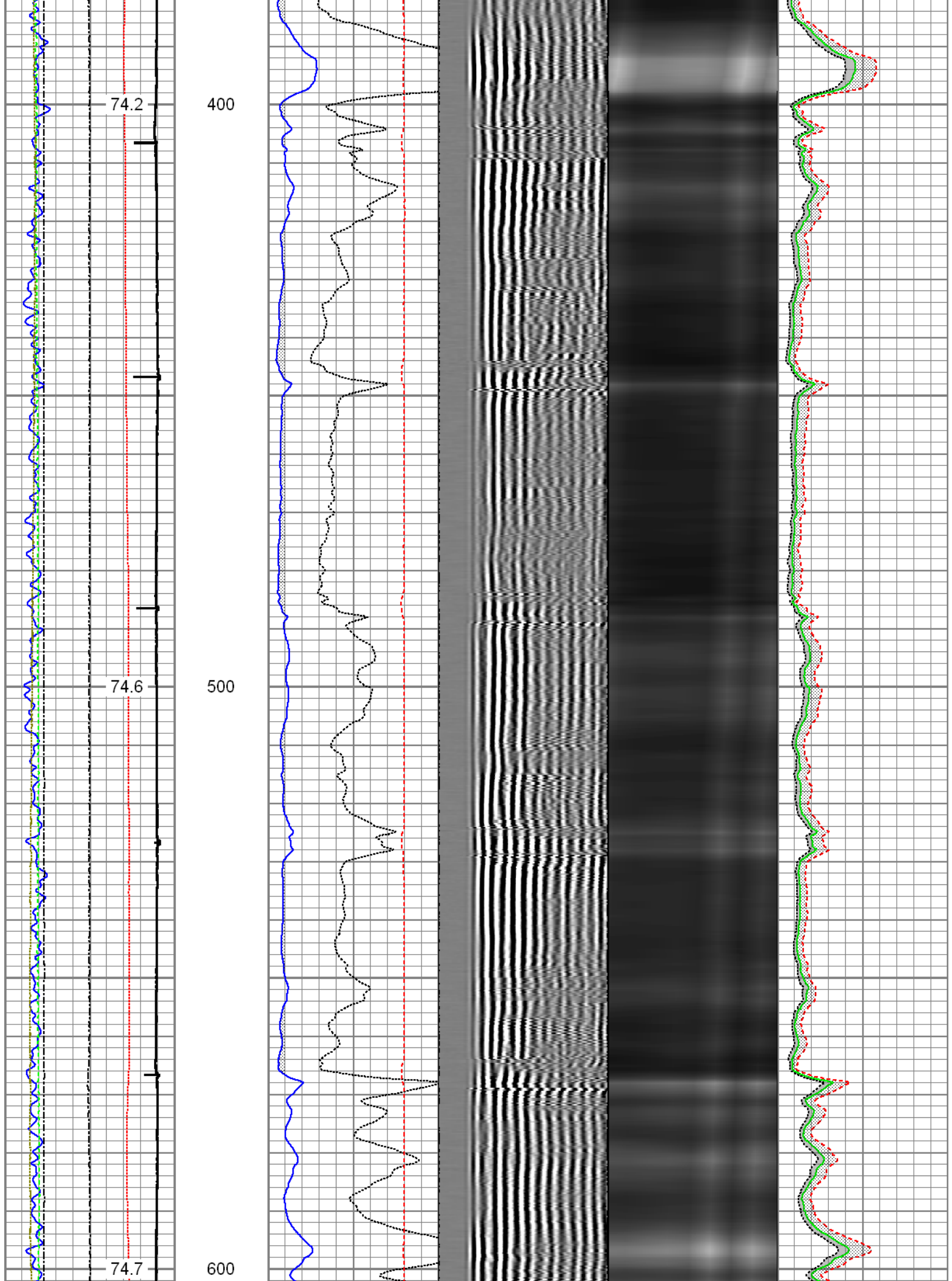
Recorded With 1500 PSI Surface Induced Pressure

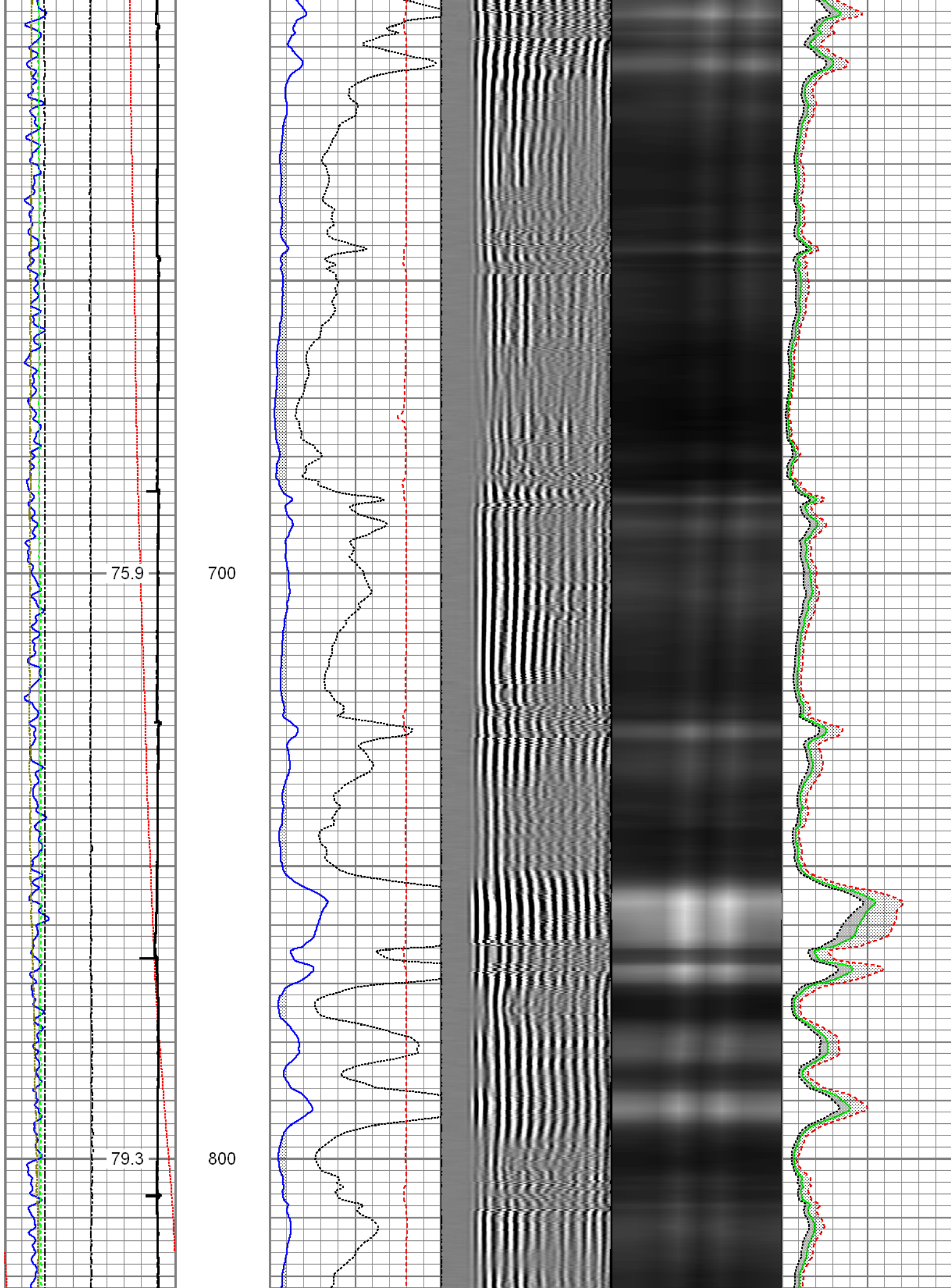
Database File: c:\warrior\data\12-16-15_whiting_razor 12f-0105a_mit_rbl\processed_12-16-15_whiting_razor 12f-0105a_mit_rbl
Dataset Pathname: pass27.1
Presentation Format: rbt4_mit
Dataset Creation: Thu Dec 17 16:56:41 2015 by Calc SCH 120430
Charted by: Depth in Feet scaled 1:240

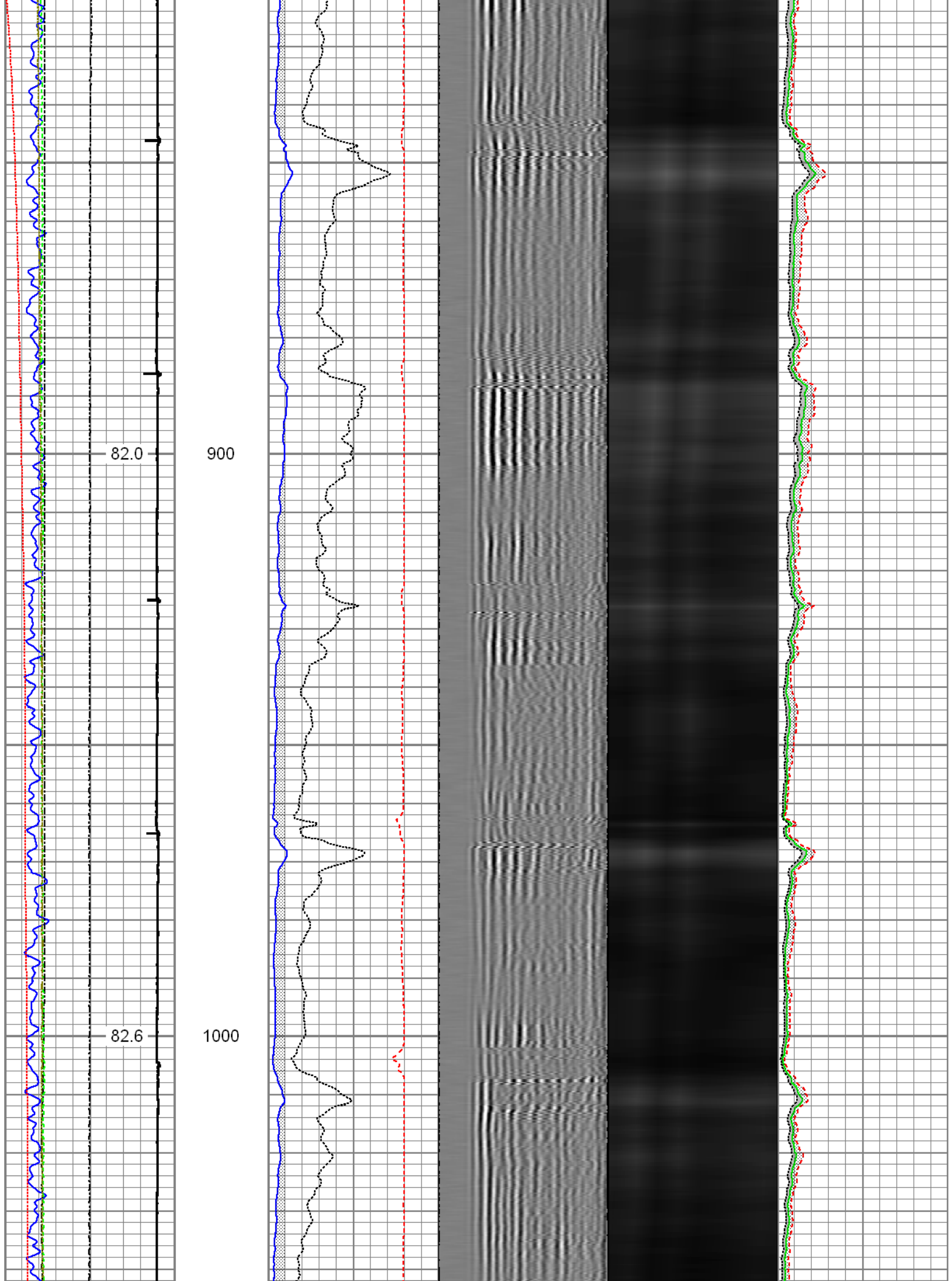
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Line Speed	3' Amplitude x 5			Mimimum Amplitude
-100 (ft/min) 100	0 (mV) 20			0 100
Line Tension	3' Travel Time			Maximum Amplitude
0 (lb) 2000	650 (usec) 150			0 100
Differential Temperature				
-2 (degF) 2				
Temperature				
0 (degF) 20				
-10 Deviation (°) 90				
Casing Collar Locator				

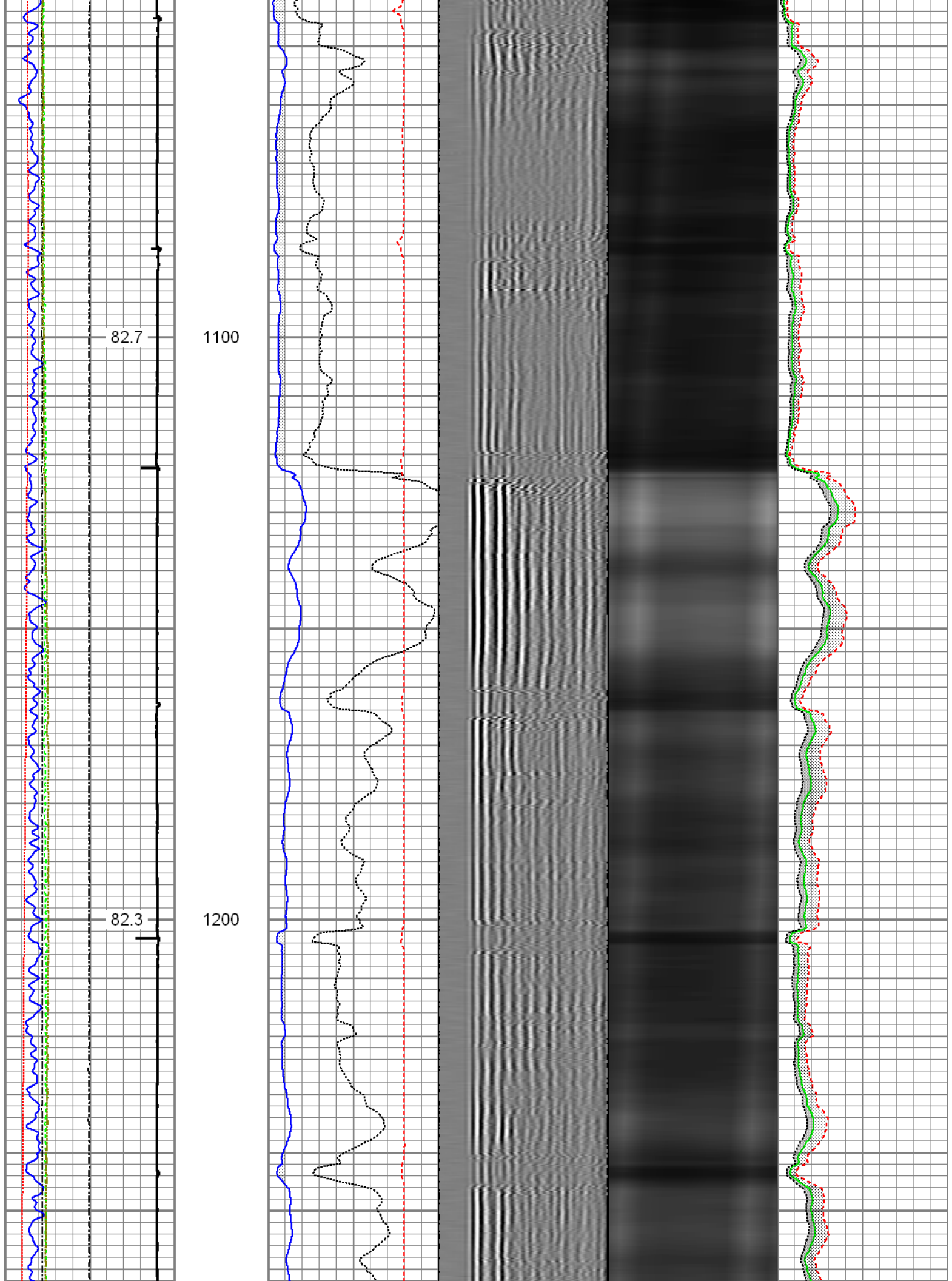


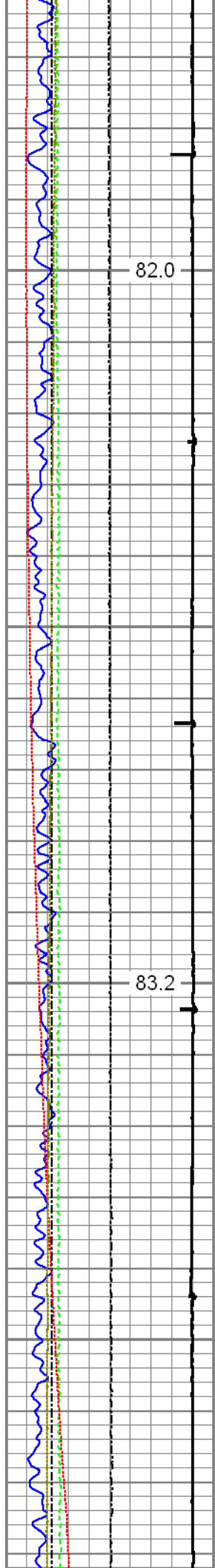






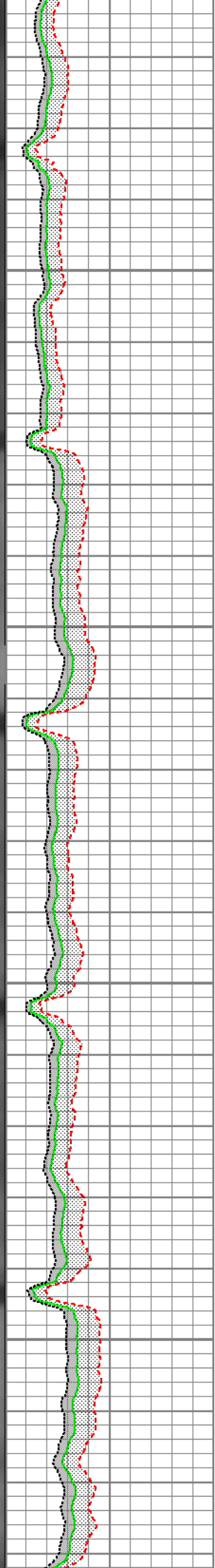
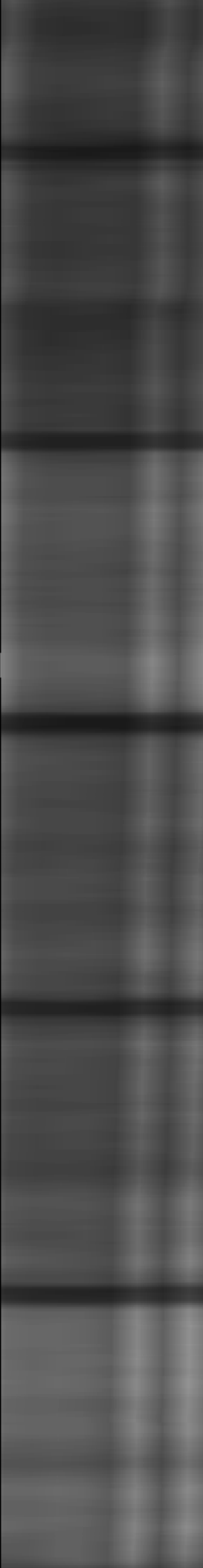
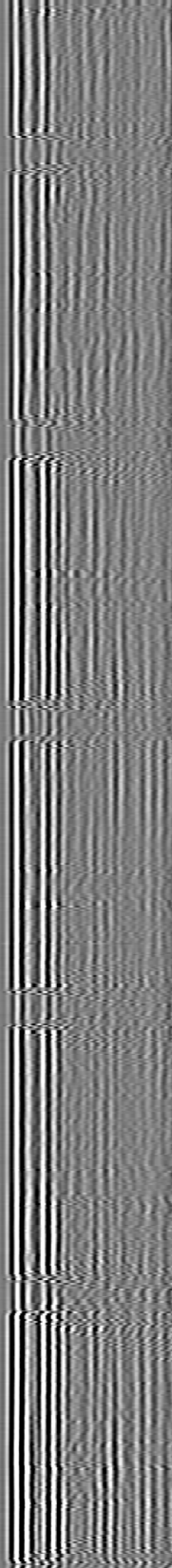
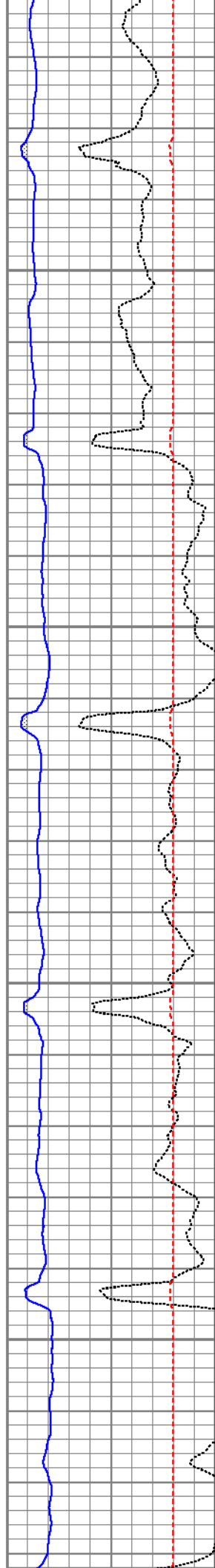


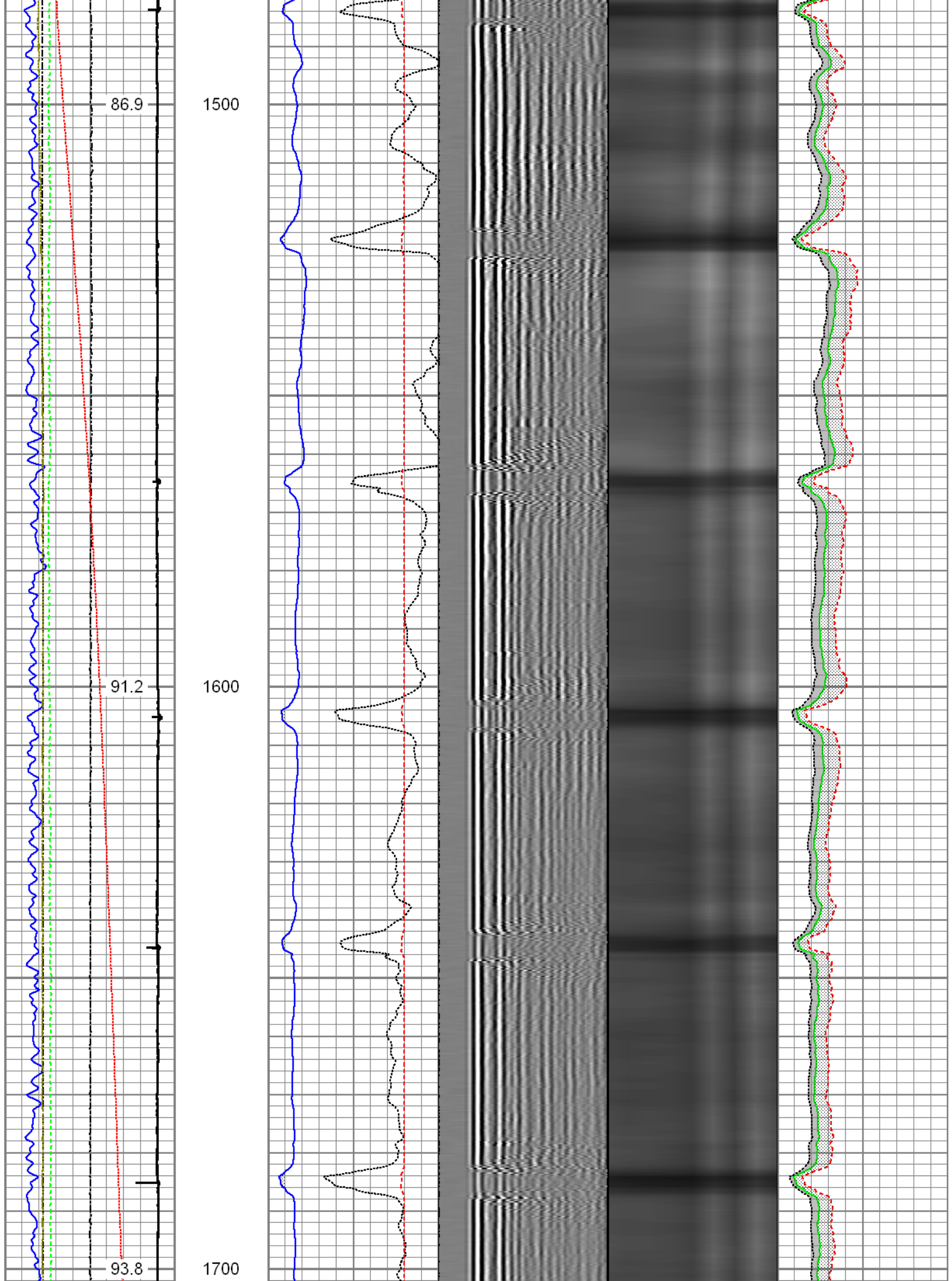


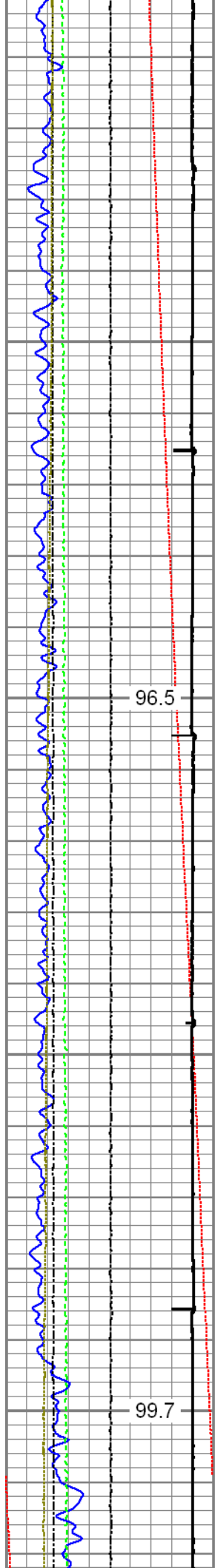


1300

1400

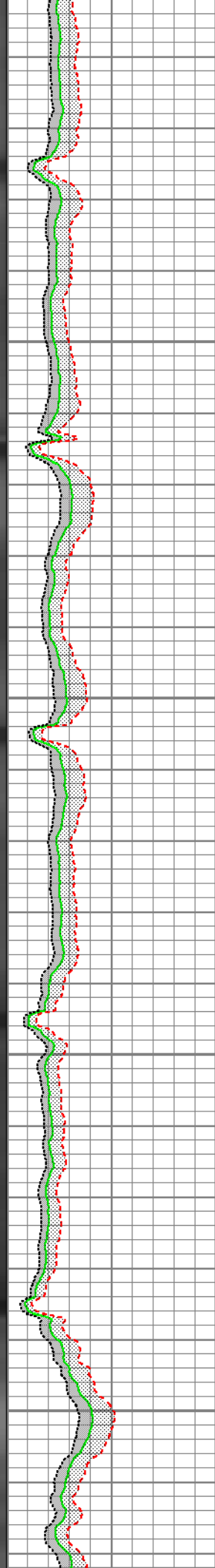
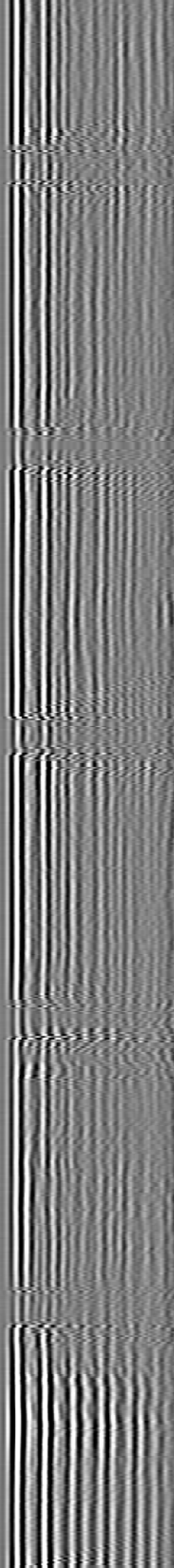
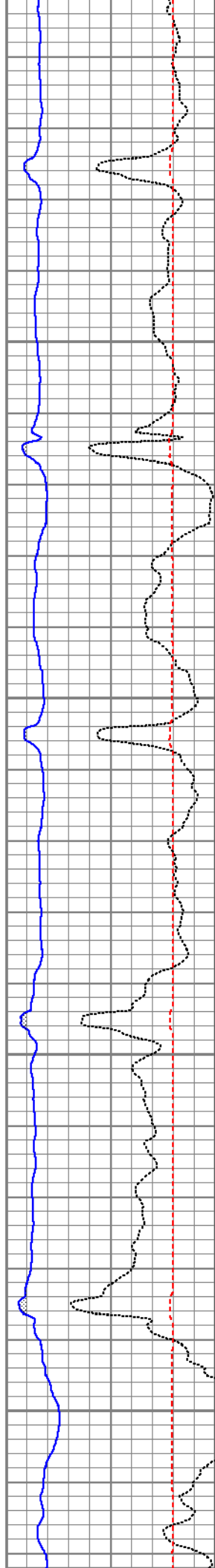


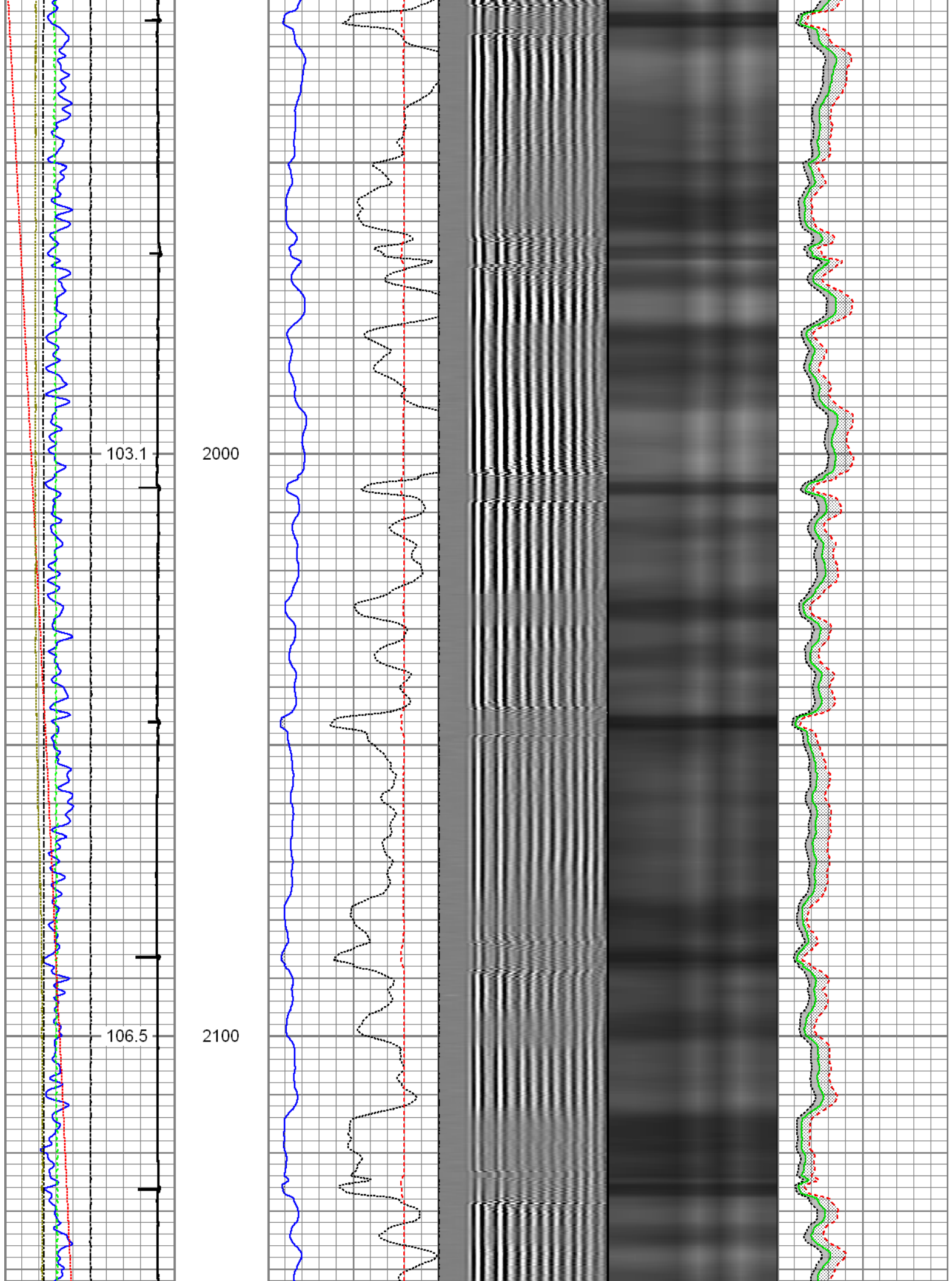


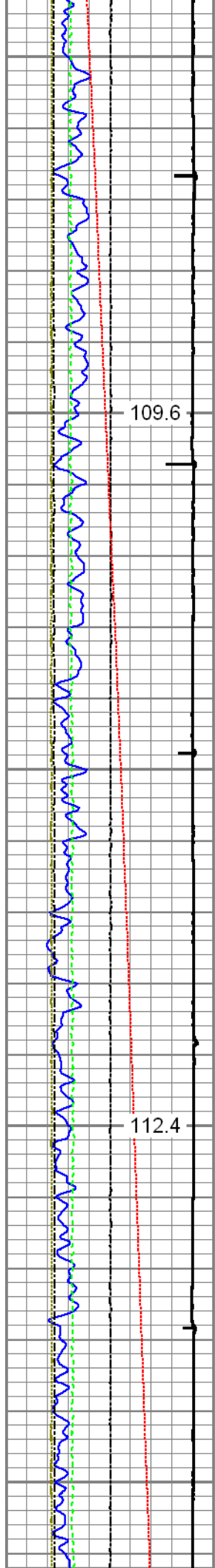


1800

1900

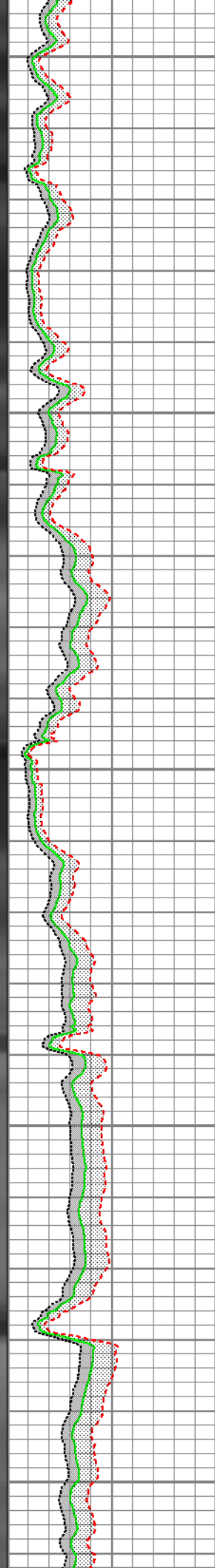
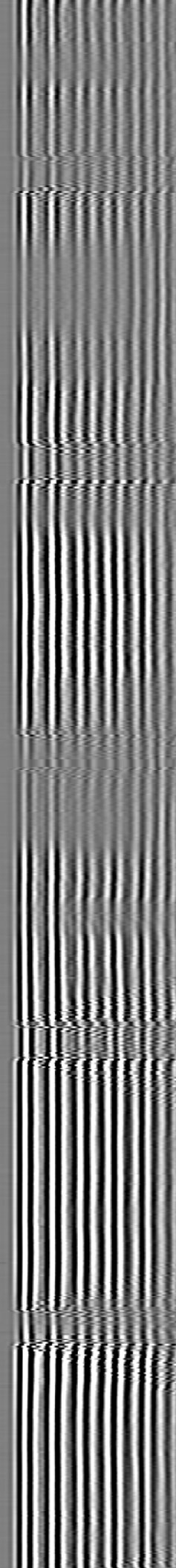
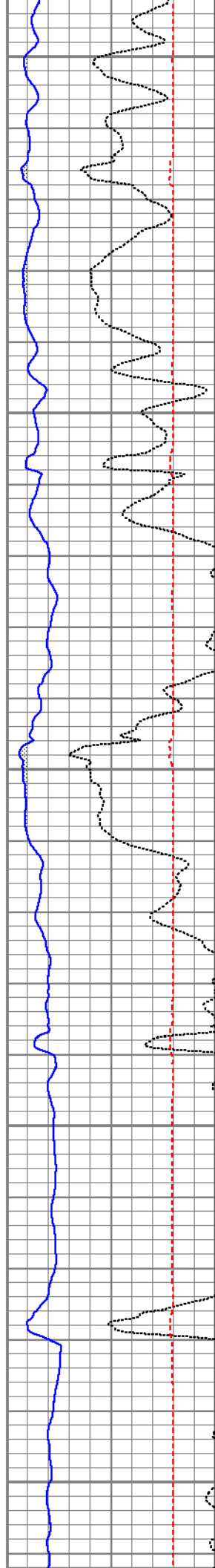


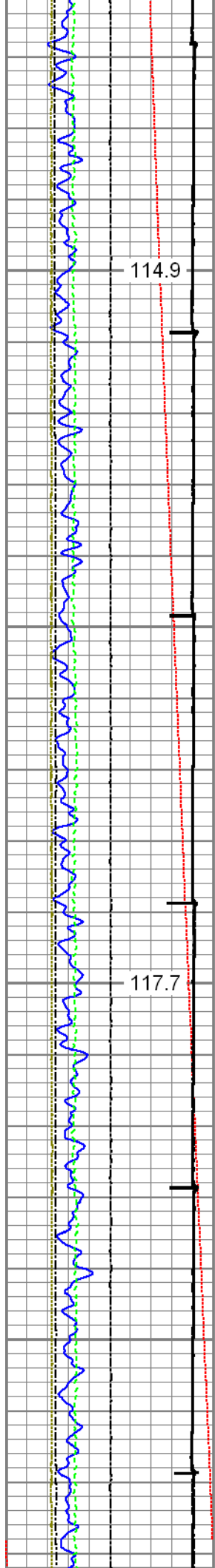




2200

2300



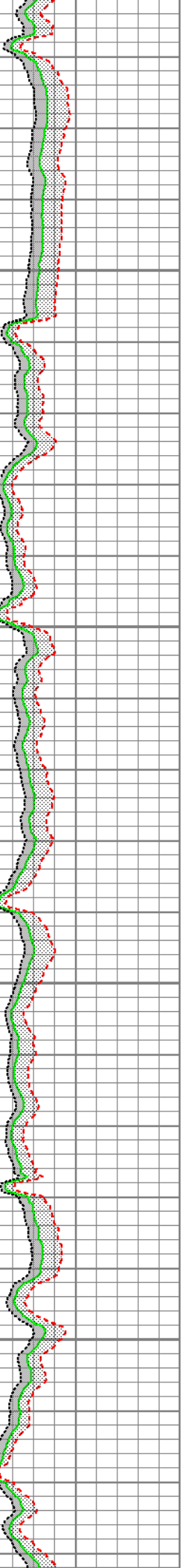
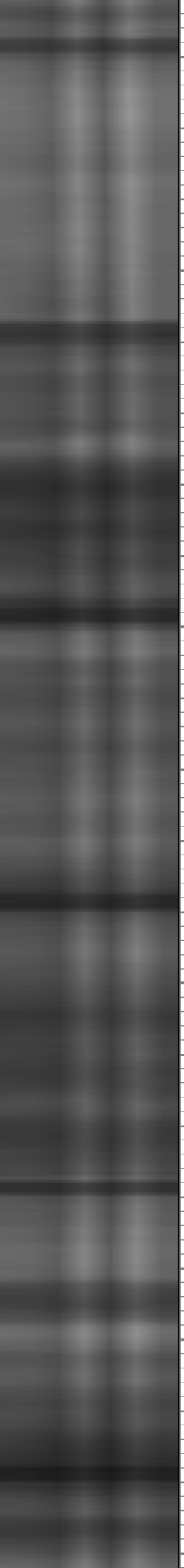
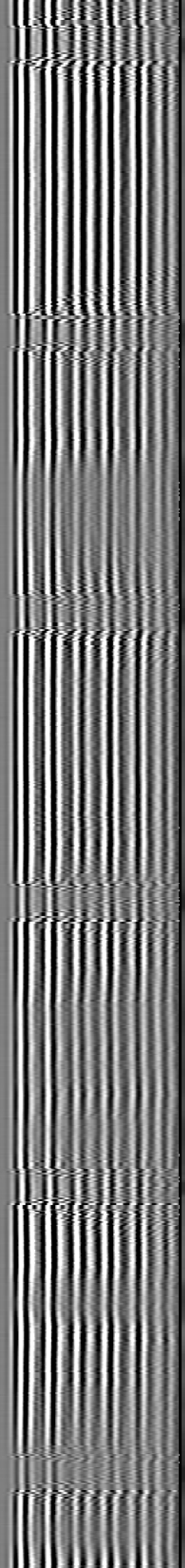
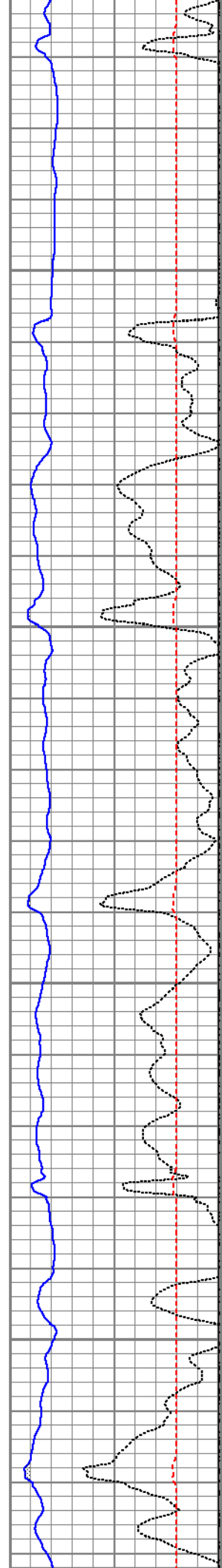


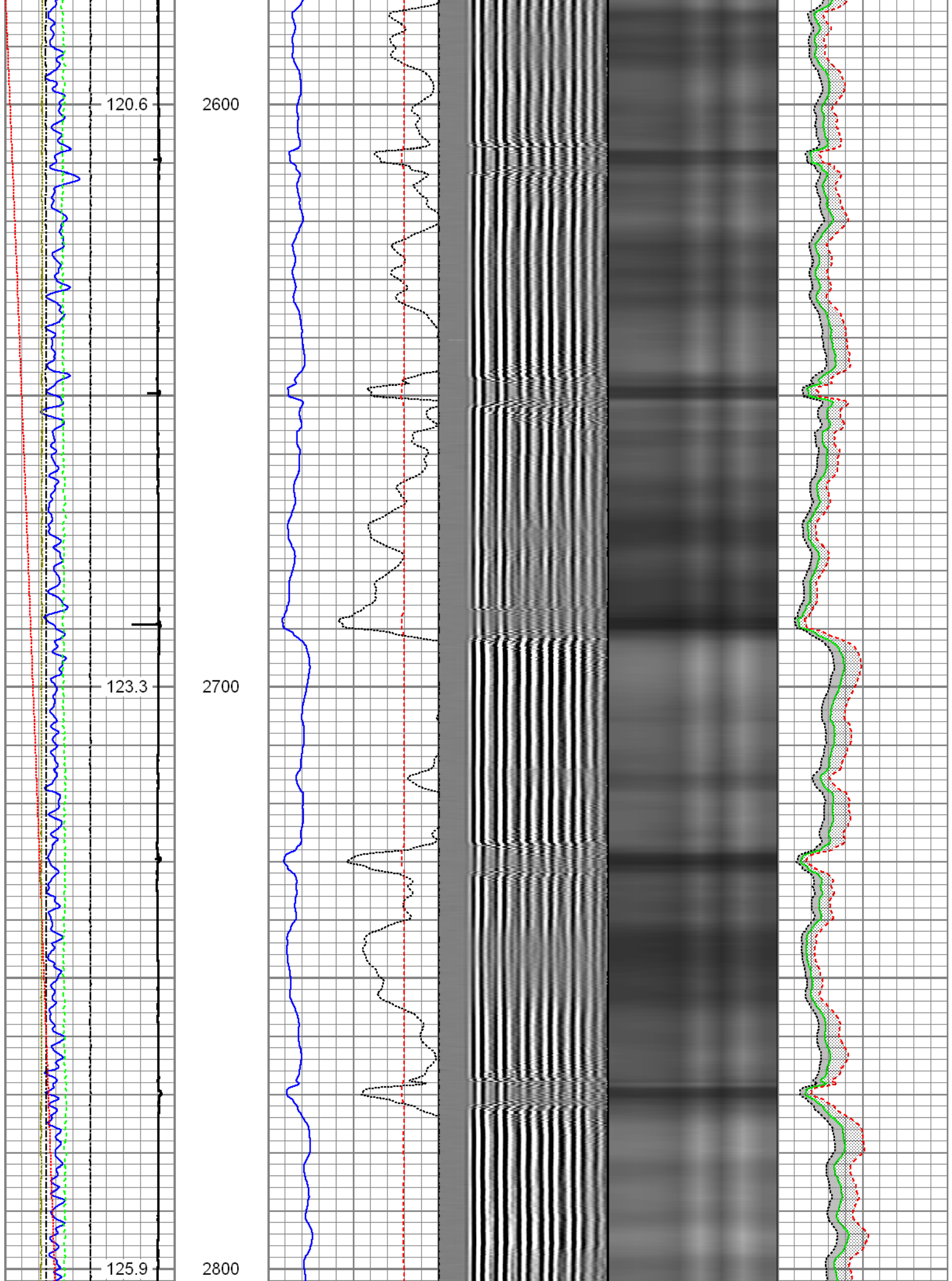
114.9

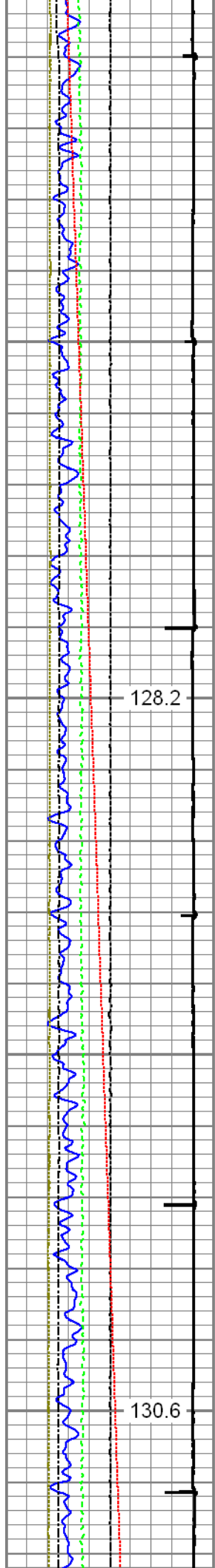
117.7

2400

2500

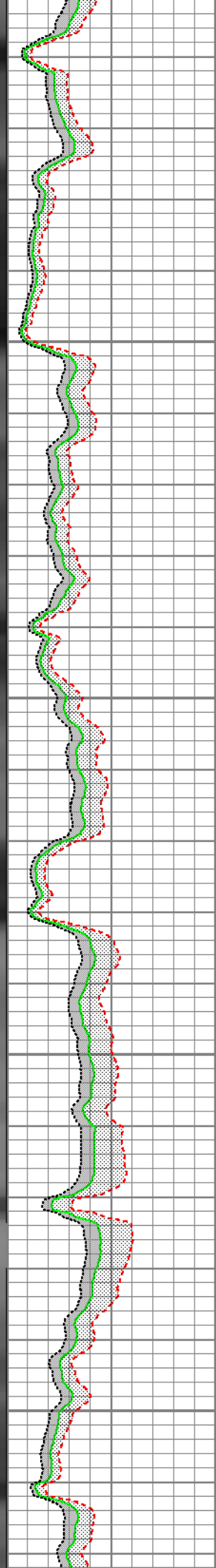
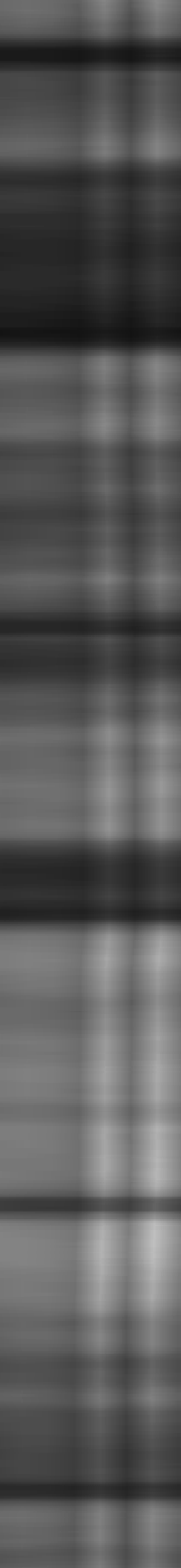
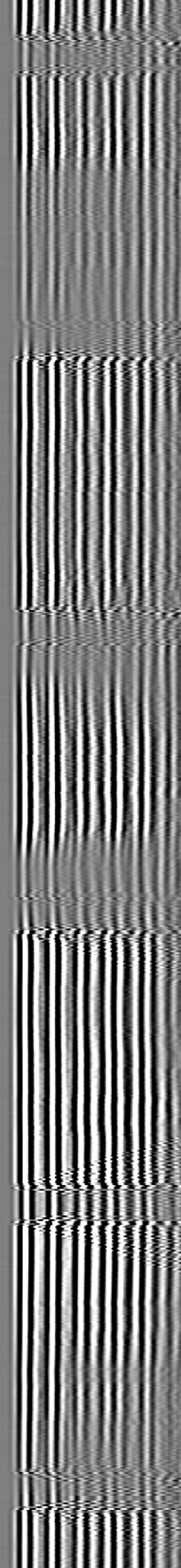
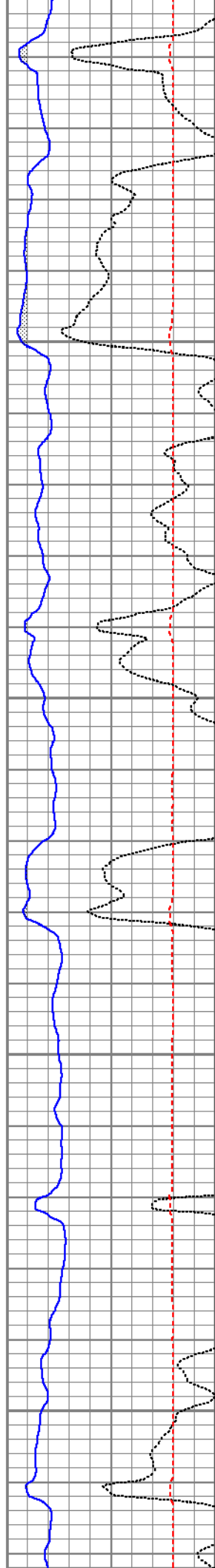


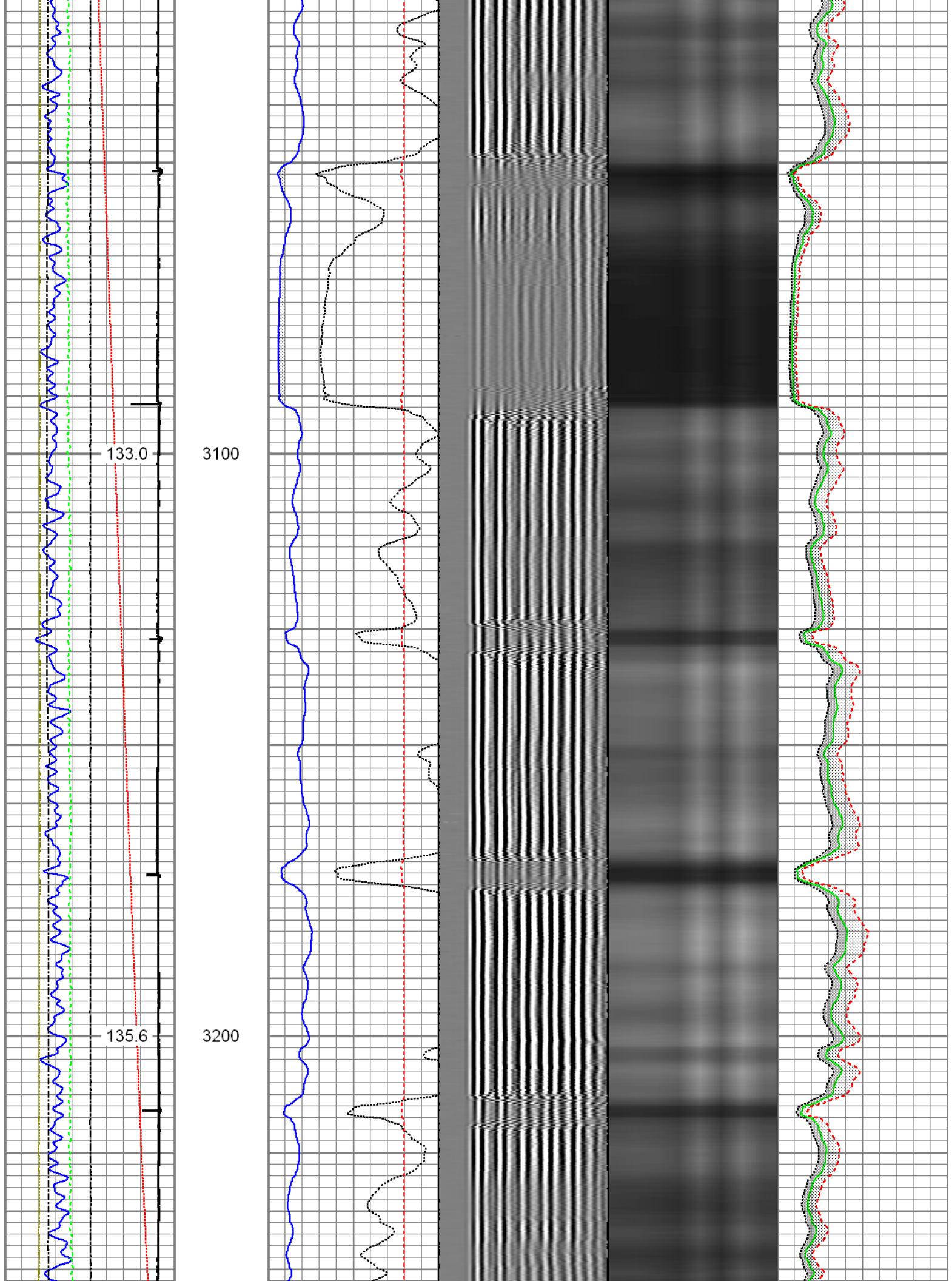


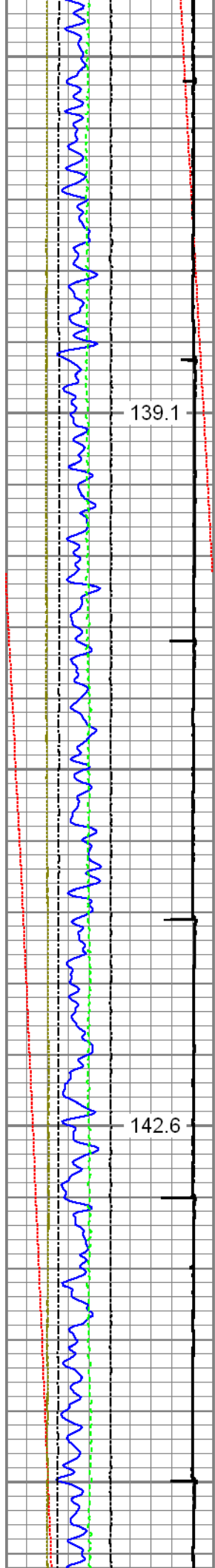


2900

3000

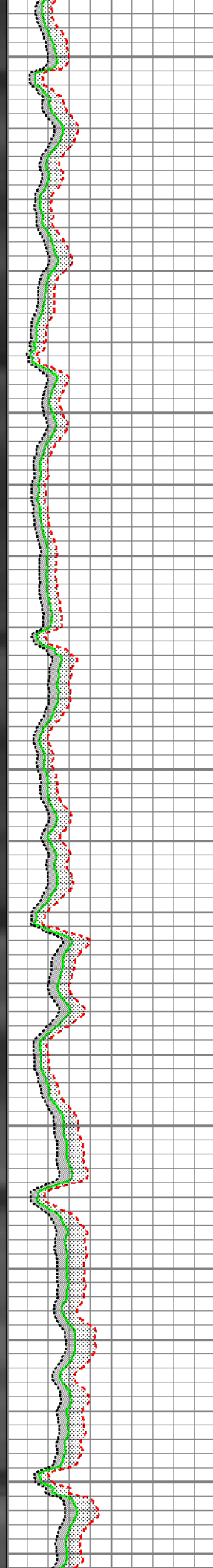
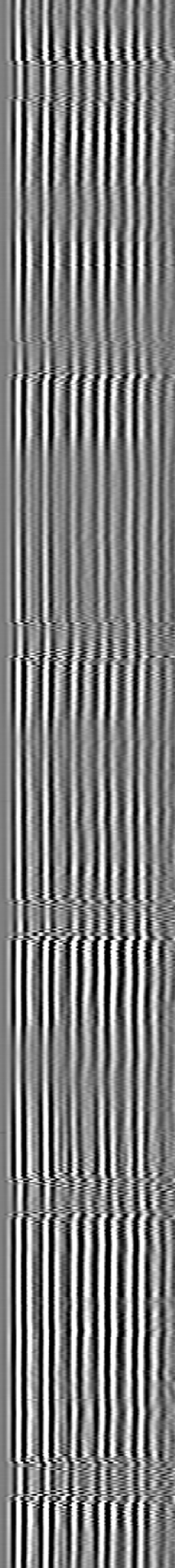
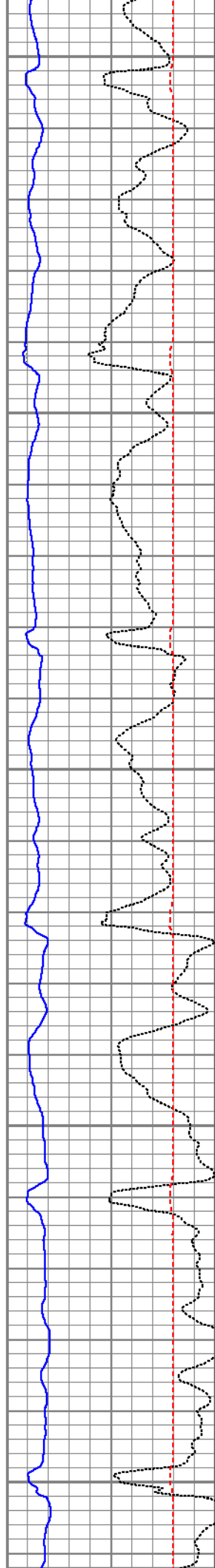


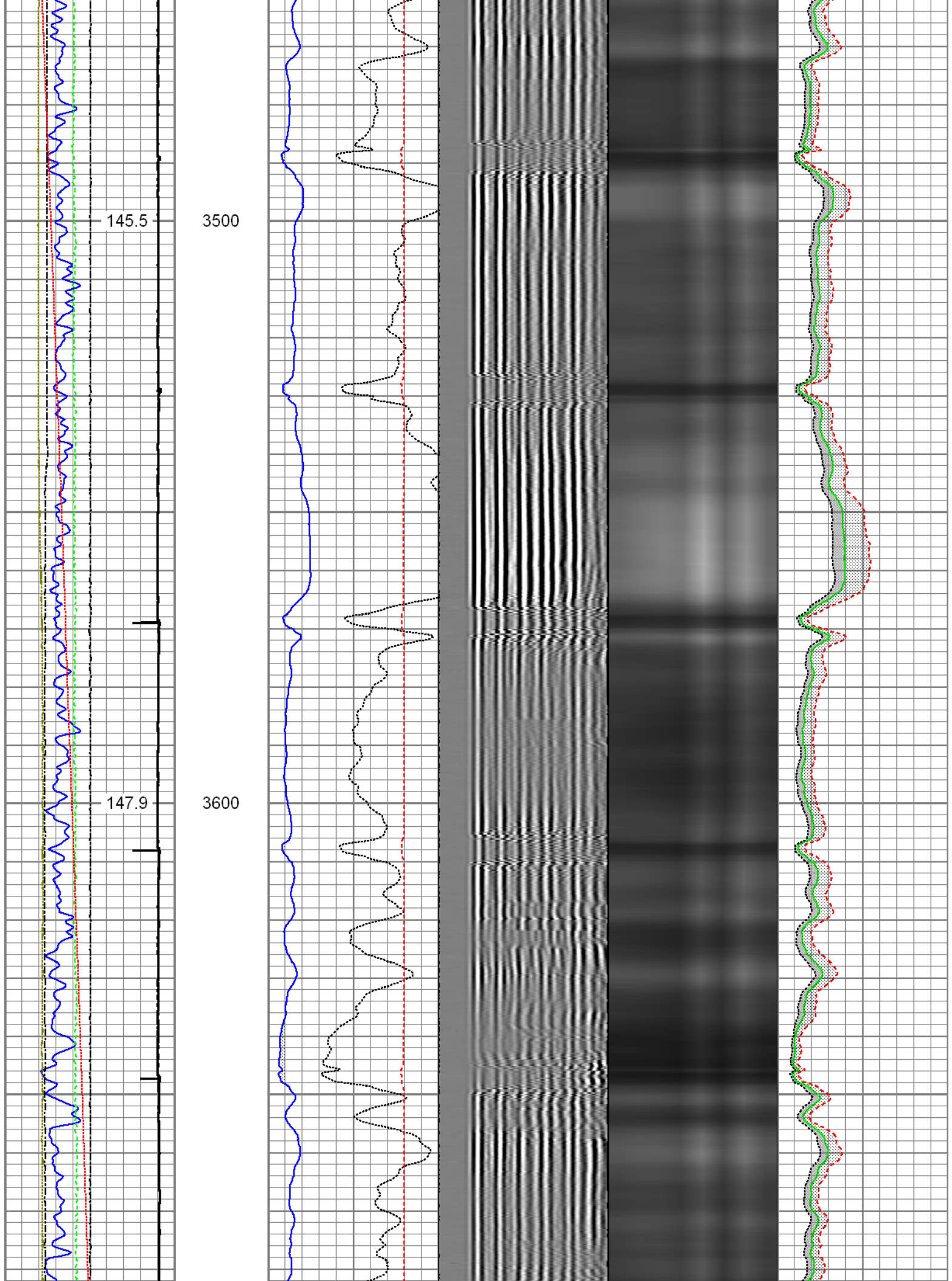


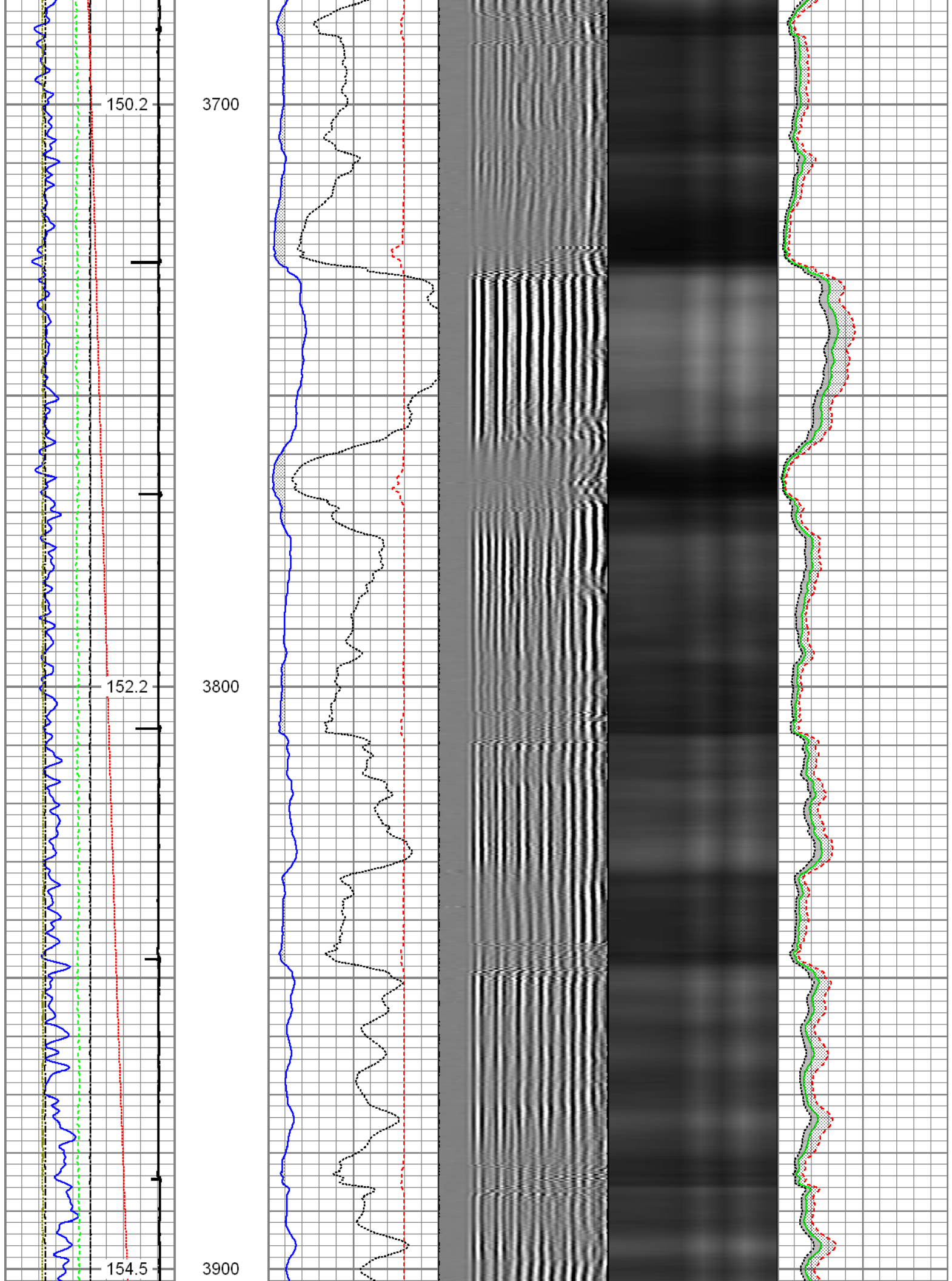


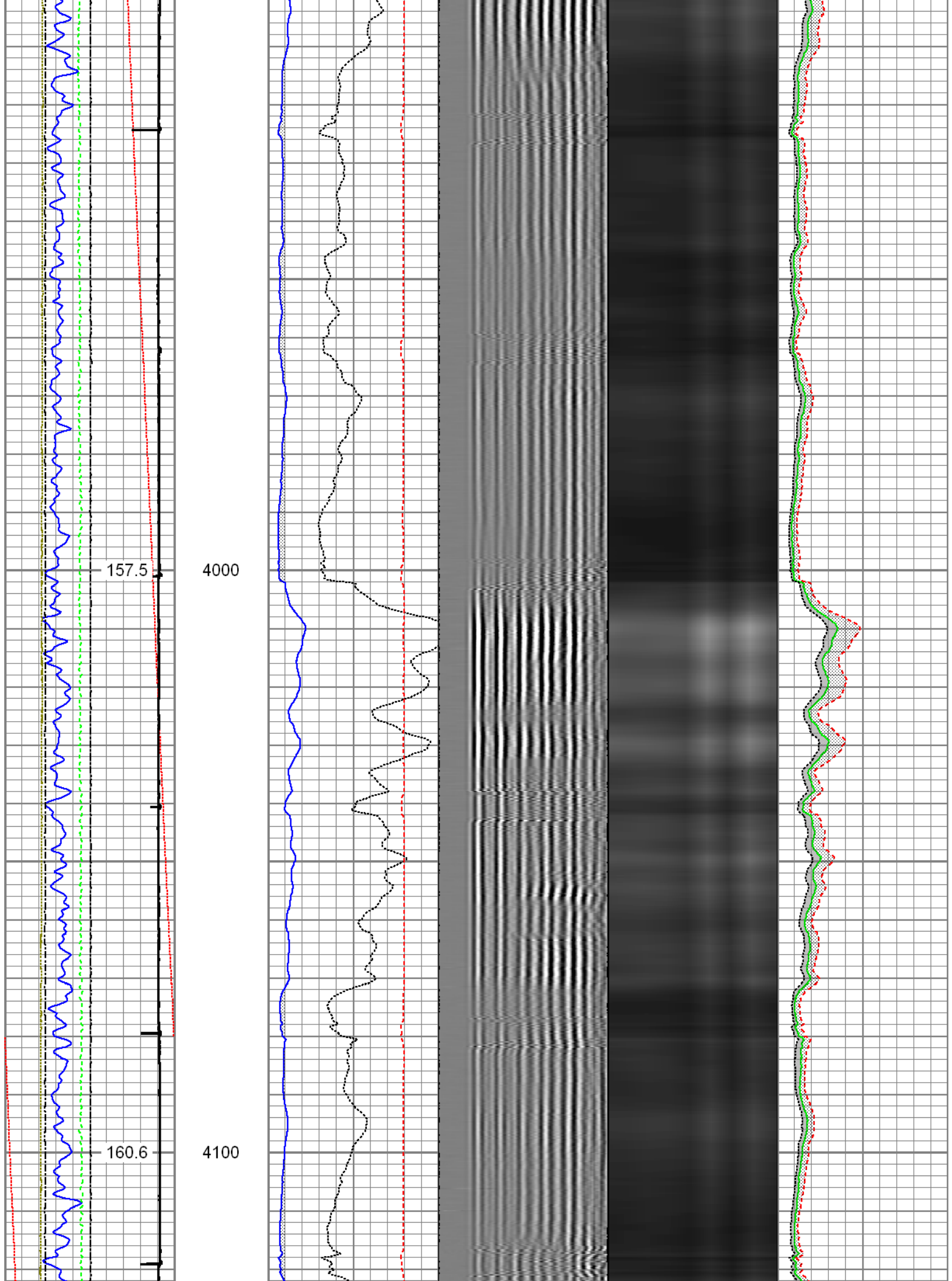
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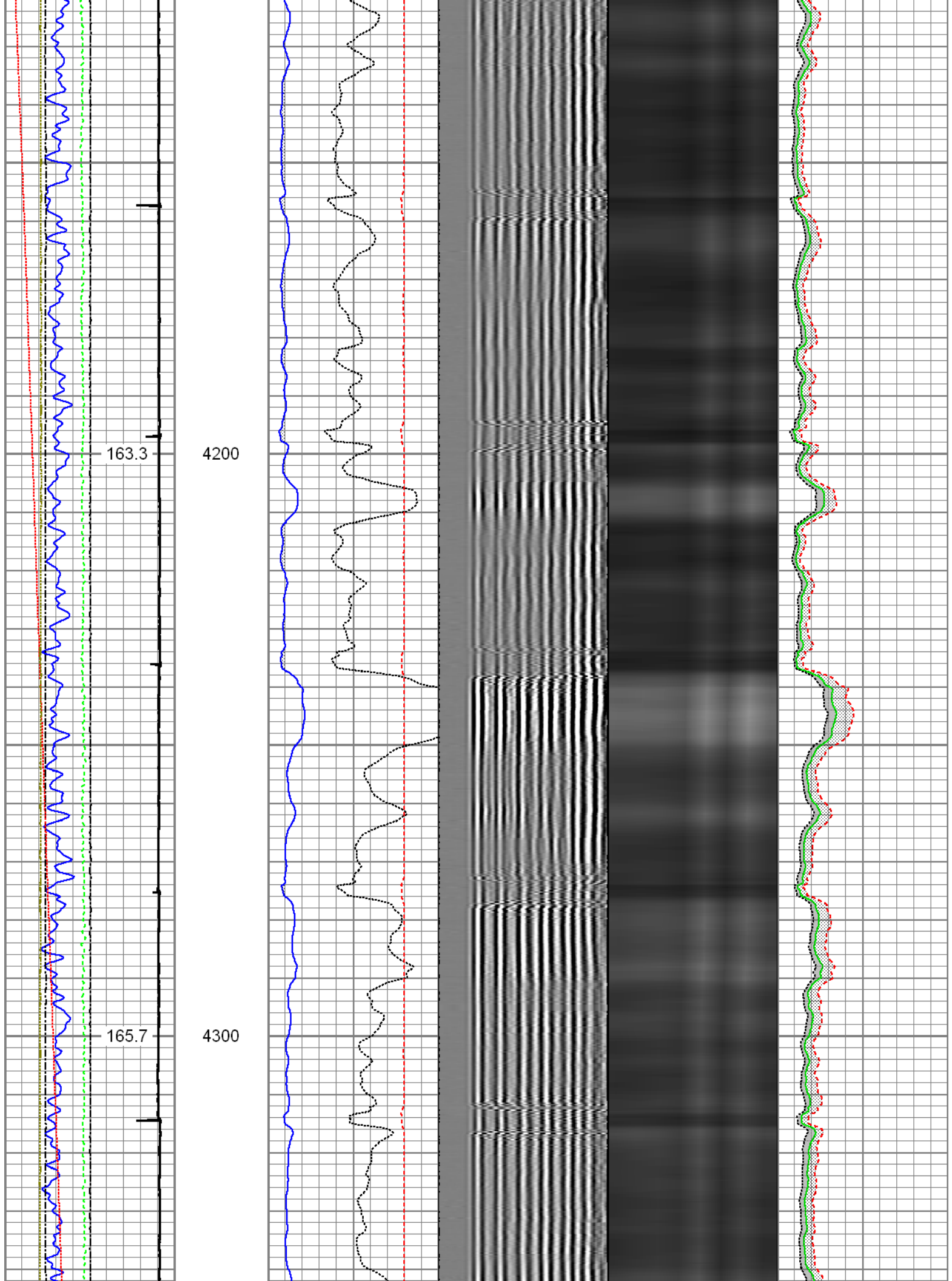
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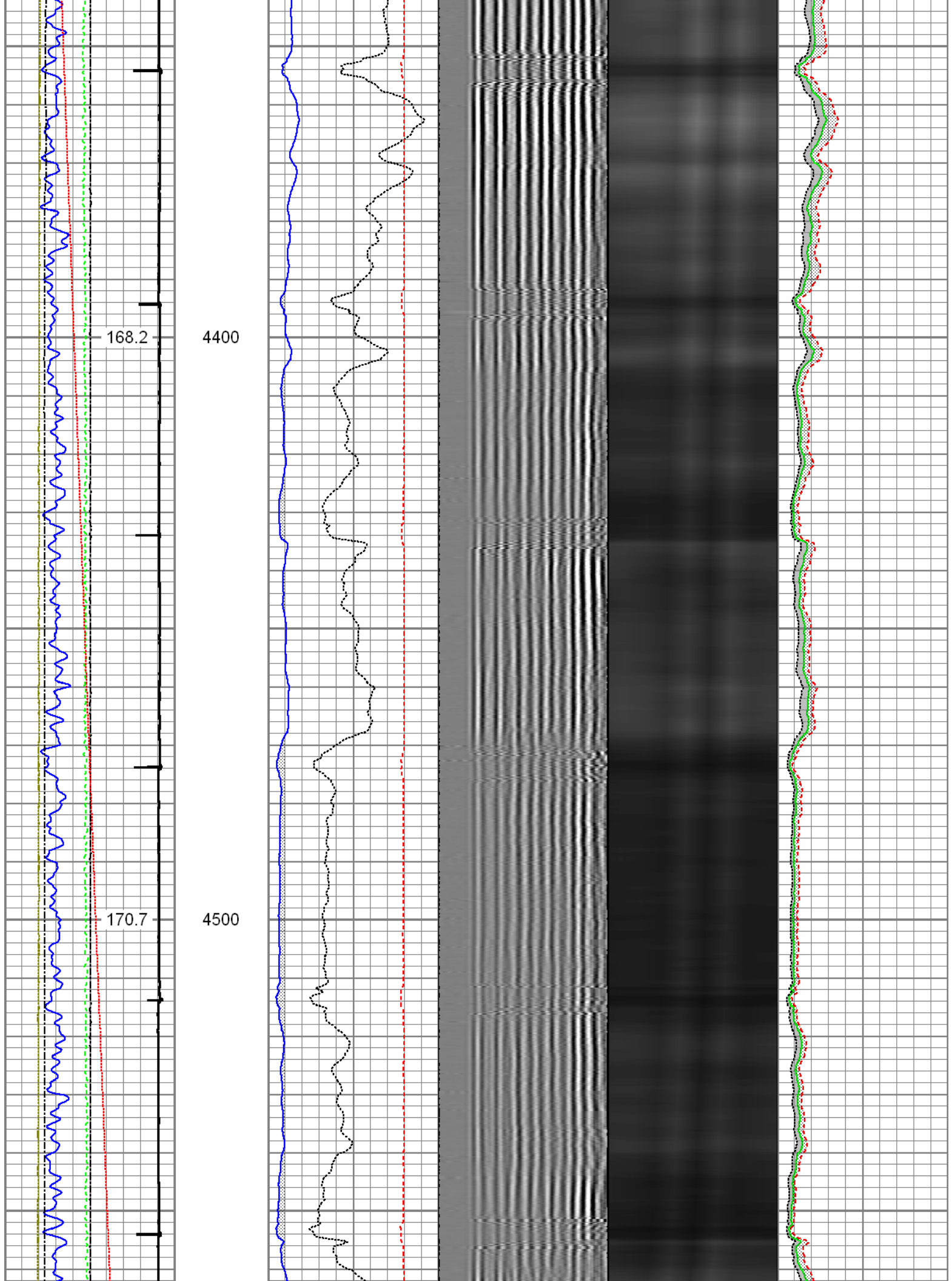


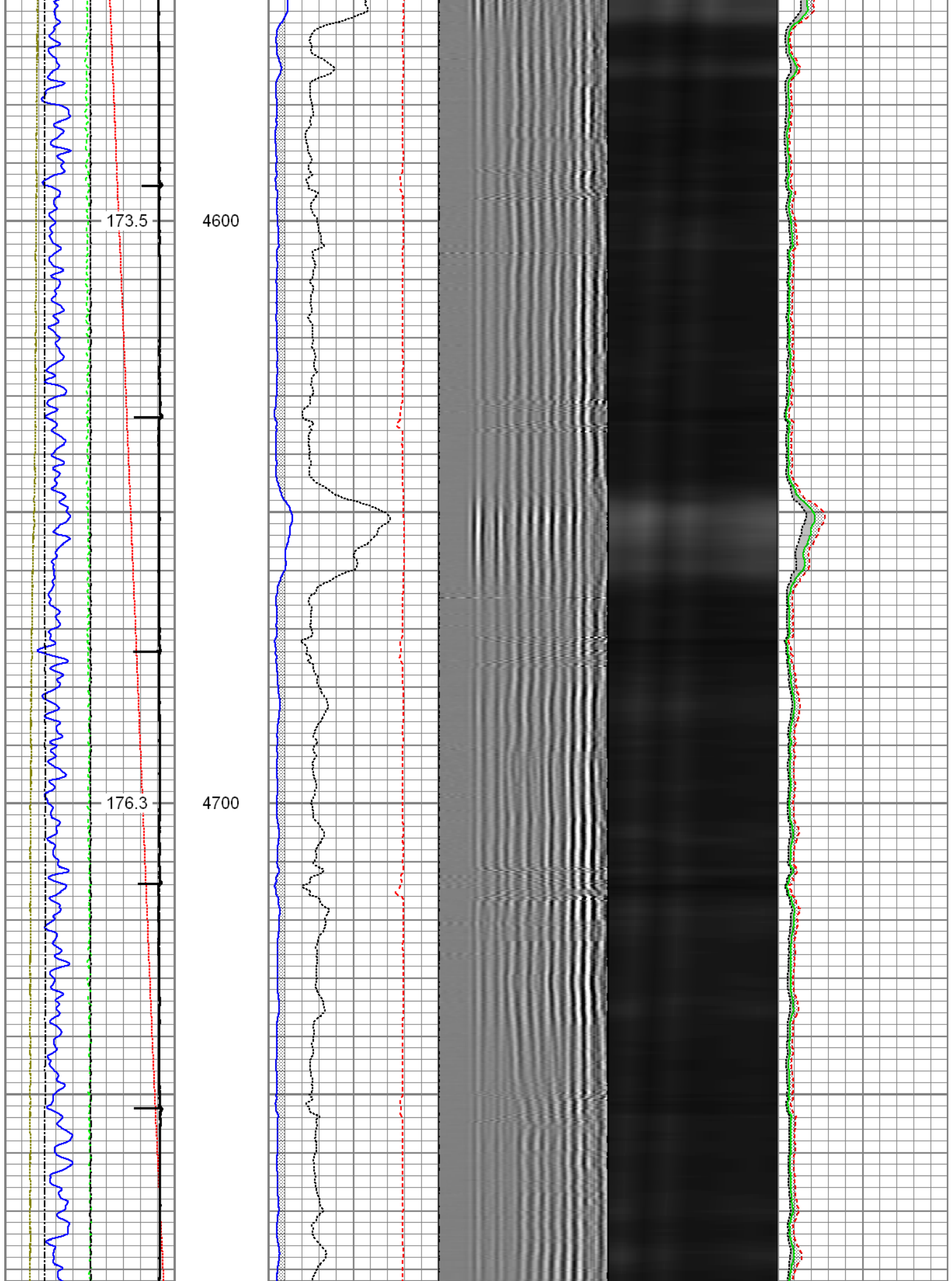


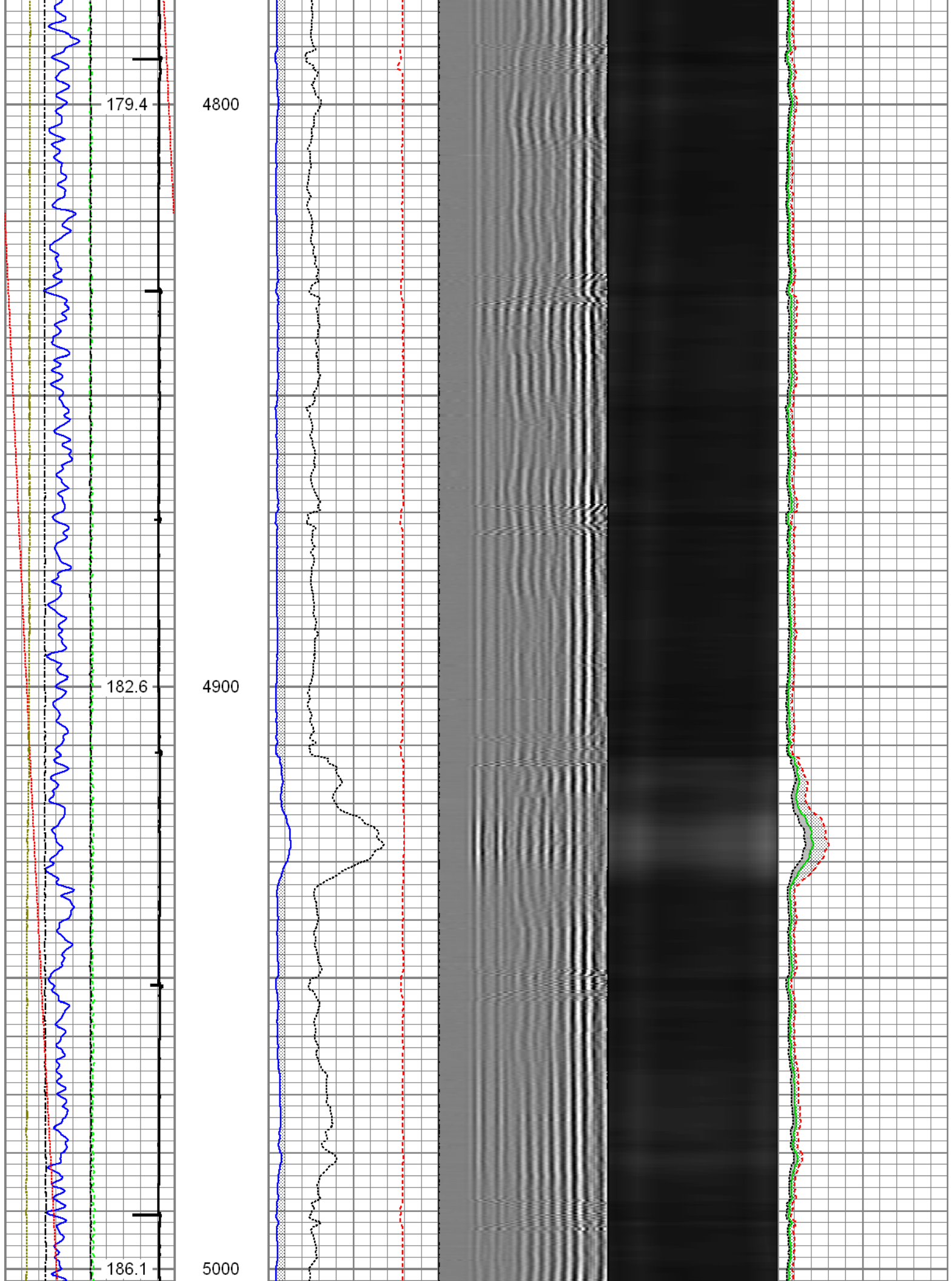


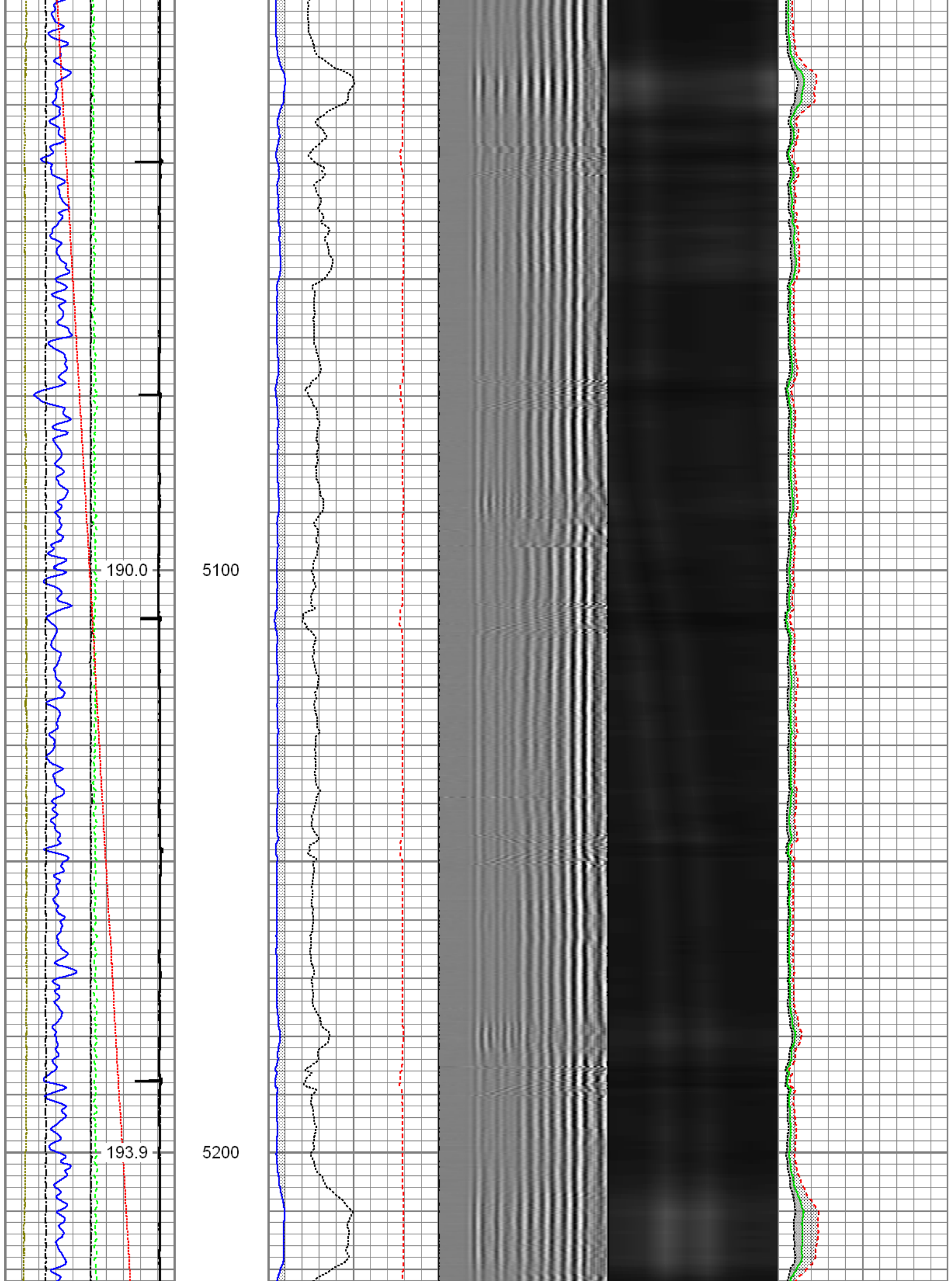


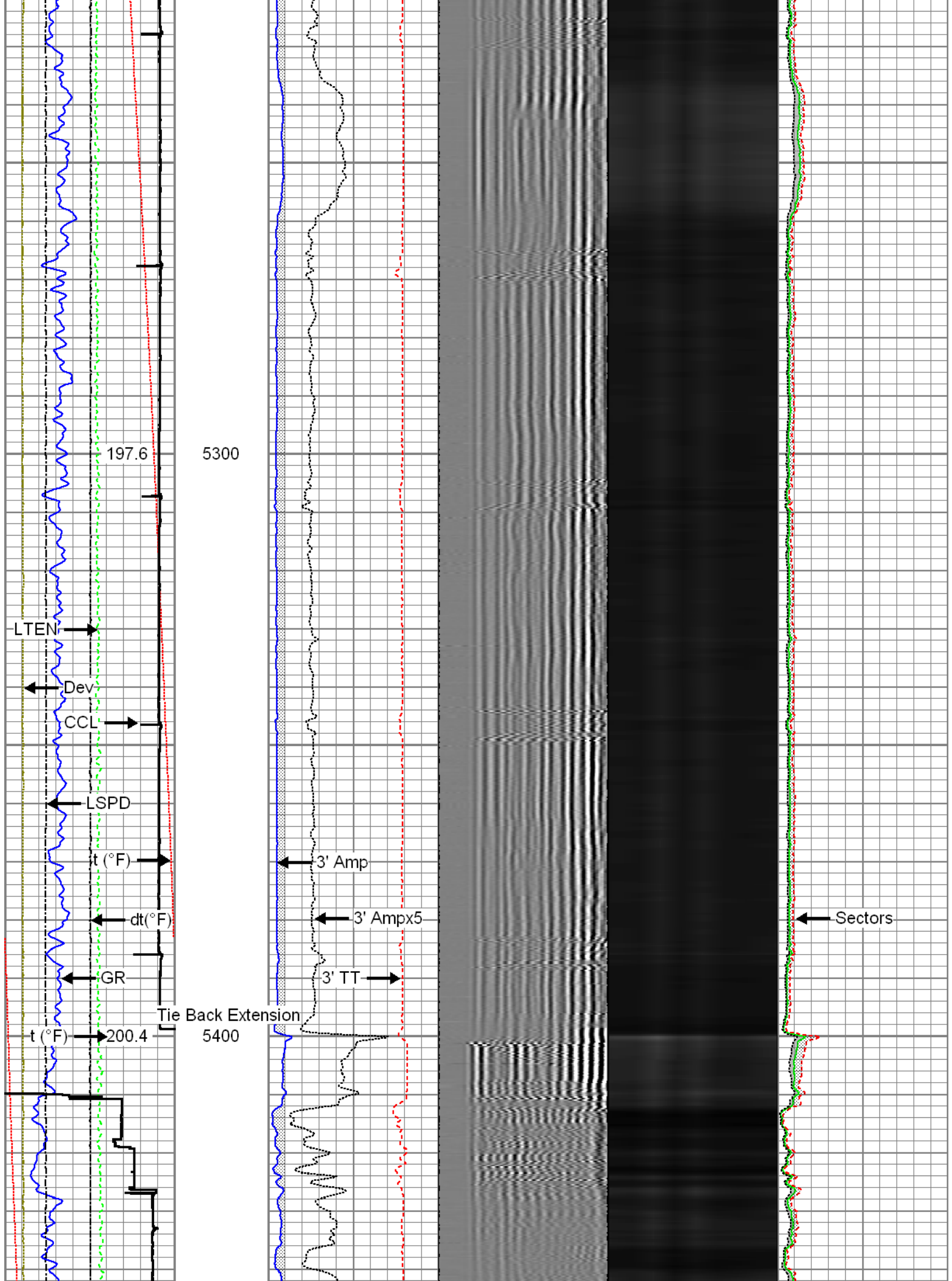


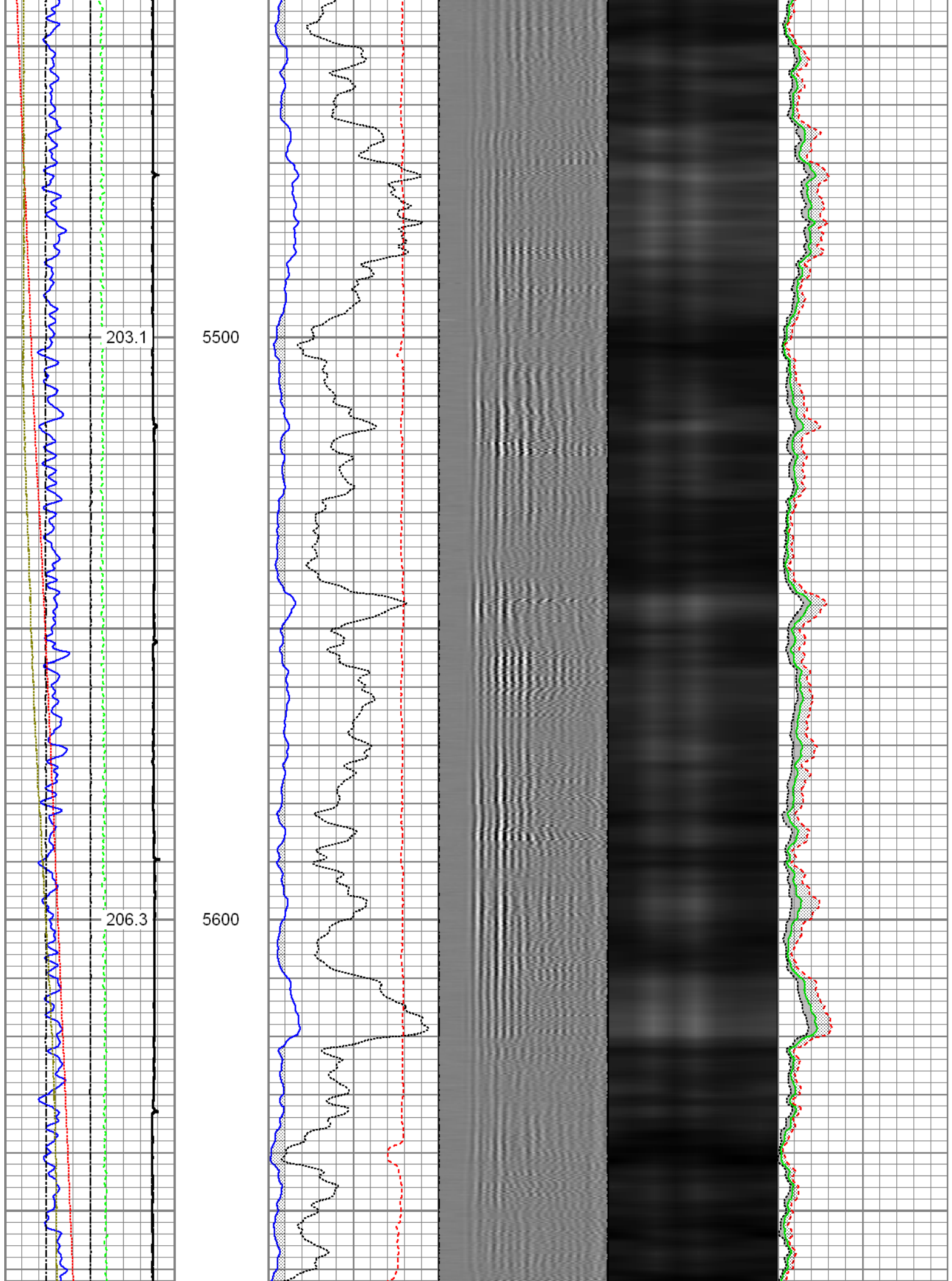




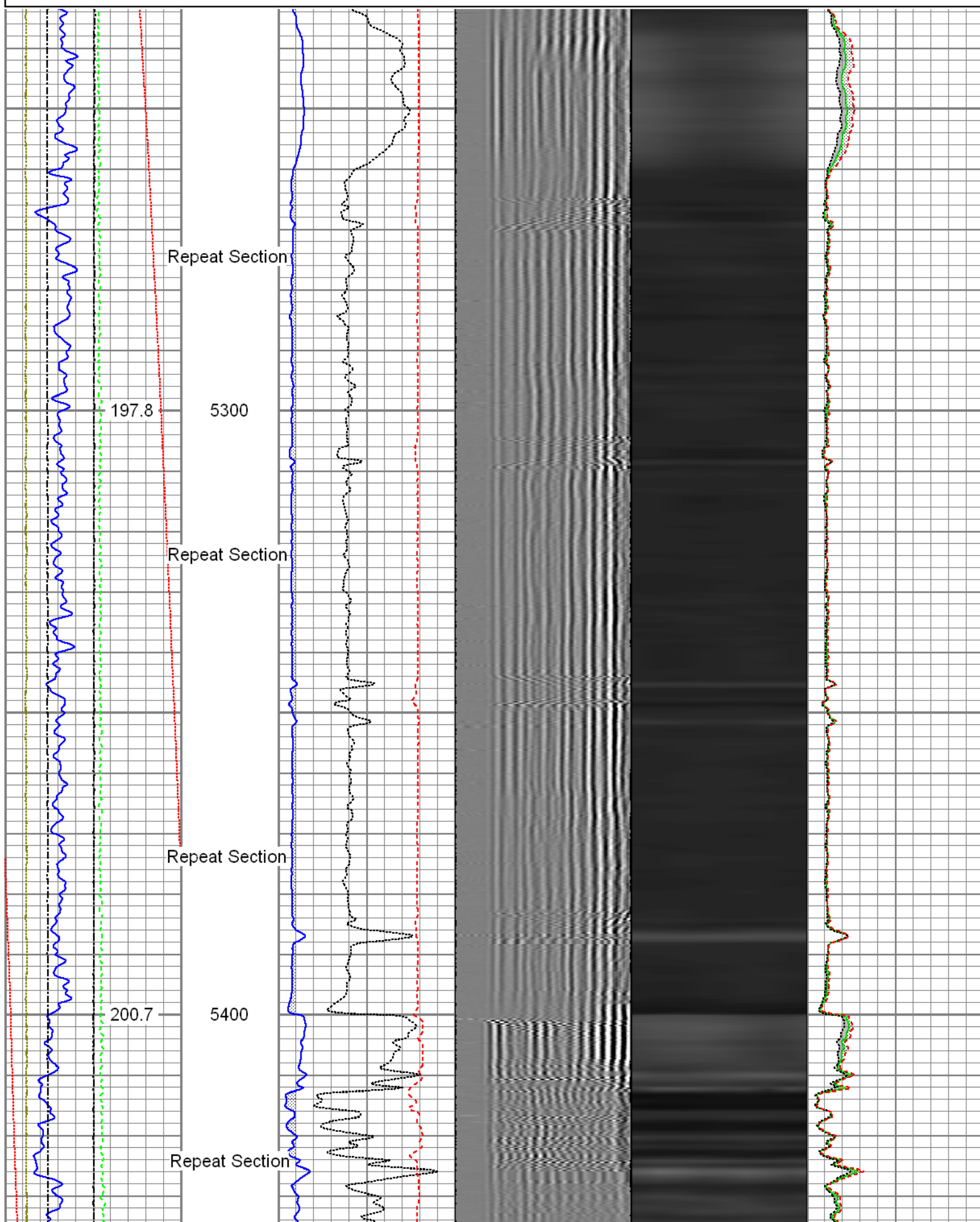


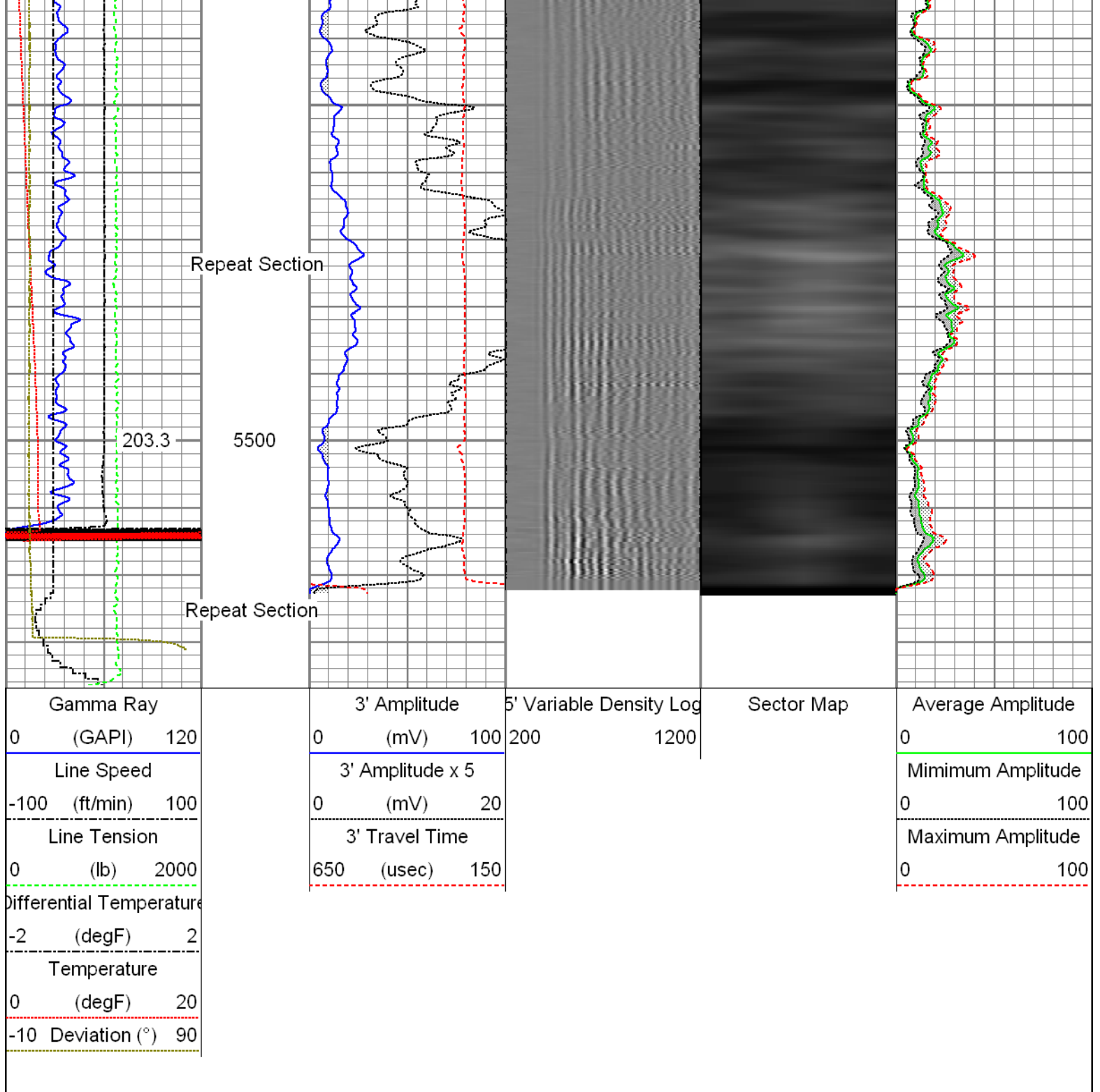








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Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
GR	23.85		T_CH14375_1_GO Titan 1-7/16" Assembled Electric Cable Head with 1" Fishing Neck	1.03	1.44	4.00
			UW_AGS-UW_AGS_001 (215017) Sondex Adapter - GO Box to Sondex Pin	0.21	1.69	1.00
			UW_XTU-UW_XTU_002 (10010522) 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_PRT-UW_PRT_016 (10025095) Platinum Resistance Thermometer	1.04	1.69	5.20
TEMP	22.45					

			UW_PRC-DSSRAC (081) 2-3/4" DSS 5 Arm Roller Centralizer	2.55	2.75	32.00
WVF3FT	15.42		UW_RBT-UW_RBT_004 (10022773) 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 #3 -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 #4 -UW_PRC_057 (1037) Sondex 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00
TSTAMP	0.00		UW_BUL-UW_BUL_006 (10019616) Sondex Ultrawire Bullnose Terminator	0.22	1.69	1.20
Dataset: PROCESSED_12-16-15_Whiting_Razor 12F-0105A_MIT_RBL.db: field/well/run1/pass27 Total Length: 28.09 ft Total Weight: 324.50 lb O.D. 3.13 in						

Calibration Report	
Database File:	C:\Warrior\Data\12-16-15_Whiting_Razor 12F-0105A_MIT_RBL\PROCESSED_12-16-15_Whiting_Ra
Dataset Pathname:	pass27.1
Dataset Creation:	Thu Dec 17 16:56:41 2015 by Calc SCH 120430
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

Vertical:		Inc X	Inc Y
Finger 1 up:		1968	1974
Finger 31 up:		1740	1744
Finger 21 up:		2215	1741
Finger 11 up:		2205	2224
		1731	2217
Sensitivity ratio:	0.992868		
X-axis angle:	134.307		
Deviation const.:	335.589		

Finger Calibration Report

Performed:

Wed Dec 16 13:42:05 2015

Ring size: (in)	4		5		6		7
		Sens		Sens		Sens	
Finger 01:	1056	357.0	1413	375.0	1788	411.0	2199
Finger 02:	1188	367.0	1555	376.0	1931	402.0	2333
Finger 03:	1071	370.0	1441	398.0	1839	428.0	2267
Finger 04:	1118	360.0	1478	386.0	1864	417.0	2281
Finger 05:	1140	368.0	1508	393.0	1901	414.0	2315
Finger 06:	1141	366.0	1507	395.0	1902	416.0	2318
Finger 07:	1081	361.0	1442	400.0	1842	416.0	2258
Finger 08:	1165	362.0	1527	396.0	1923	415.0	2338
Finger 09:	1126	362.0	1488	395.0	1883	410.0	2293
Finger 10:	1119	356.0	1475	398.0	1873	407.0	2280
Finger 11:	1123	350.0	1473	394.0	1867	408.0	2275
Finger 12:	1177	356.0	1533	401.0	1934	405.0	2339
Finger 13:	1171	352.0	1523	395.0	1918	393.0	2311
Finger 14:	1136	357.0	1493	404.0	1897	408.0	2305
Finger 15:	1107	358.0	1465	417.0	1882	419.0	2301
Finger 16:	1123	362.0	1485	419.0	1904	425.0	2329
Finger 17:	1045	340.0	1385	404.0	1789	418.0	2207
Finger 18:	1155	344.0	1499	397.0	1896	403.0	2299
Finger 19:	1132	348.0	1480	405.0	1885	417.0	2302
Finger 20:	1098	354.0	1452	412.0	1864	428.0	2292
Finger 21:	1115	360.0	1475	408.0	1883	416.0	2299
Finger 22:	1077	363.0	1440	414.0	1854	432.0	2286
Finger 23:	1077	368.0	1445	422.0	1867	440.0	2307
Finger 24:	1103	358.0	1461	389.0	1850	405.0	2255
Finger 25:	1046	364.0	1410	412.0	1822	436.0	2258
Finger 26:	1167	358.0	1525	380.0	1905	405.0	2310
Finger 27:	1071	368.0	1439	398.0	1837	428.0	2265
Finger 28:	1114	365.0	1479	382.0	1861	408.0	2269
Finger 29:	1052	371.0	1423	399.0	1822	432.0	2254
Finger 30:	1075	365.0	1440	388.0	1828	427.0	2255
Finger 31:	1114	361.0	1475	381.0	1856	416.0	2272
Finger 32:	1162	394.0	1556	416.0	1972	442.0	2414
Finger 33:	1140	366.0	1506	367.0	1873	396.0	2269
Finger 34:	1090	377.0	1467	388.0	1855	434.0	2289
Finger 35:	949	336.0	1285	362.0	1647	418.0	2065
Finger 36:	1058	370.0	1428	385.0	1813	436.0	2249
Finger 37:	1143	375.0	1518	377.0	1895	419.0	2314
Finger 38:	1172	367.0	1539	371.0	1910	401.0	2311
Finger 39:	1185	364.0	1549	368.0	1917	401.0	2318
Finger 40:	1089	370.0	1459	385.0	1844	421.0	2265

Segmented Cement Bond Log Calibration Report

Serial Number:	10022773
Tool Model:	UW_RBT_004
Calibration Casing Diameter:	7.000 in
Calibration Depth:	263.060 ft

Master Calibration, performed Thu Dec 17 16:56:39 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	0.003	1.457	0.800	62.165	42.208	0.660
5FT	-0.002	0.781	0.800	62.165	78.378	0.942
S1	0.004	1.108	0.000	100.000	90.594	-0.345
S2	0.002	1.574	0.000	100.000	63.626	-0.122
S3	0.003	1.579	0.000	100.000	63.476	-0.197
S4	0.002	1.485	0.000	100.000	67.453	-0.153
S5	0.003	1.484	0.000	100.000	67.522	-0.225
S6	0.003	1.564	0.000	100.000	64.047	-0.168
S7	0.003	1.097	0.000	100.000	91.427	-0.286
S8	0.003	1.605	0.000	100.000	62.425	-0.209

Temperature Calibration Report

Serial Number: 10025095
Tool Model: UW_PRT_016
Performed: Wed Feb 11 13:43:20 2015

Point #	Reading	Reference
1	12798.00 cps	68.00 degF
2	18136.00 cps	104.00 degF
3	29513.00 cps	176.00 degF
4	40905.00 cps	248.00 degF
5	52487.00 cps	320.00 degF
6	58362.00 cps	356.00 degF
7	cps	degF
8	cps	degF
9	cps	degF
10	cps	degF

Gamma Ray Calibration Report

Serial Number: 211727
Tool Model: UW_PGR_020
Performed: Mon Nov 23 09:56:50 2015

Calibrator Value: 1.0 GAPI
Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps
Sensitivity: 0.6000 GAPI/cps



Company Whiting Oil and Gas Corporation
Well Razor 12F-0105A
Field Wildcat
County Weld
State Colorado