



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company	Kerr-McGee Oil & Gas Onshore, L.P.				
Well	Goodin 38N - A6HZ				
Field	Wattenberg				
County	Weld				
State	Colorado				
Location:	Company	Kerr-McGee Oil & Gas Onshore, L.P.			
	Well	Goodin 38N - A6HZ			
	Field	Wattenberg			
	County	Weld			
	State	Colorado			
API # : 05-123-40748	Other Services				
	Gauge Ring MIT				
SEC 7	TWP	1N	RGE	65W	Elevation
	Permanent Datum	Ground Level	Elevation	4979'	
Log Measured From	Kelly Bushing				25 FT
Drilling Measured From	Kelly Bushing				
Elevation	K.B. 5004'				G.L. 4979'
	D.F. 5003'				
	G.L. 4979'				

Date	27-JUN-2015
Run Number	Two
Depth Driller	13,429 FT
Depth Logger	7,450 FT
Bottom Logged Interval	7,435 FT
Top Log Interval	Surface
Open Hole Size	8.750"
Type Fluid	Water
Density / Viscosity	8.34 lbm/gal
Max. Recorded Temp.	231°F
Estimated Cement Top	Surface
Time Well Ready	ROA
Time Logger on Bottom	8:09 A.M.
Equipment Number	HD-0119
Location	Ft. Lupton, CO
Recorded By	A. Olmsted
Witnessed By	Levi McArthur

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record	Size (in)	Wgt (lbs/ft)	Grade	Top	Bottom		
Surface Casing	9 5/8	36	J-55	Surface	1,586 FT		
Intermediate #1	7	26	HCP 110 LTC	Surface	7,631 FT		
Intermediate #2							
Liner	4 1/2	11.6	P-110 LTC/DOX	6,761 FT	13,425 FT		

>>> 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 casing tally reported liner top at 6,761 FT
Adjusted +3 FT to correlate to liner top
Gauge Ring/Junk Basket ran to 7,479 FT
Log ran from as deep as possible in heel to surface
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:0512340748_anadarko_goodin 38n-a6hz_06-27-15_mit_rbl.db

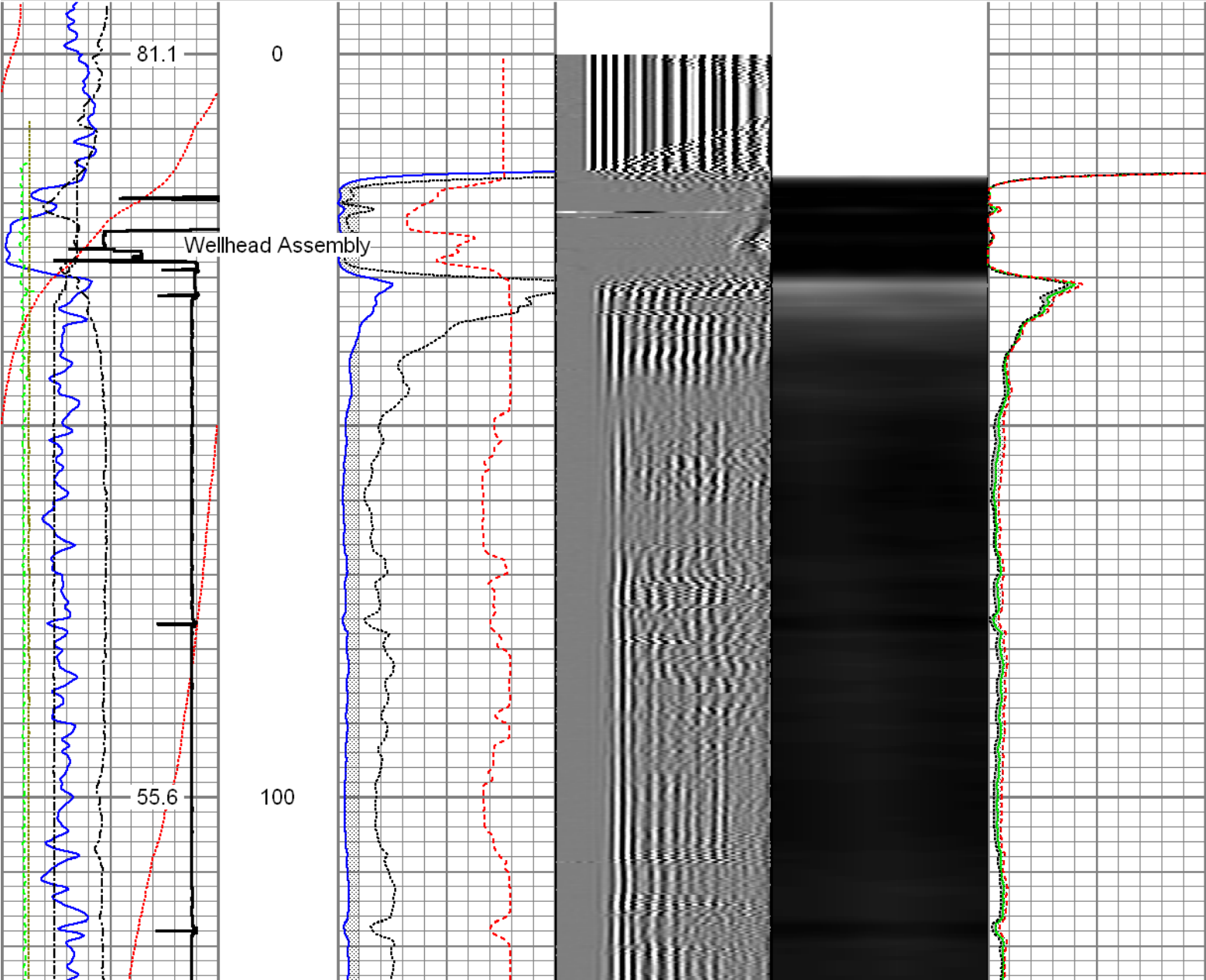
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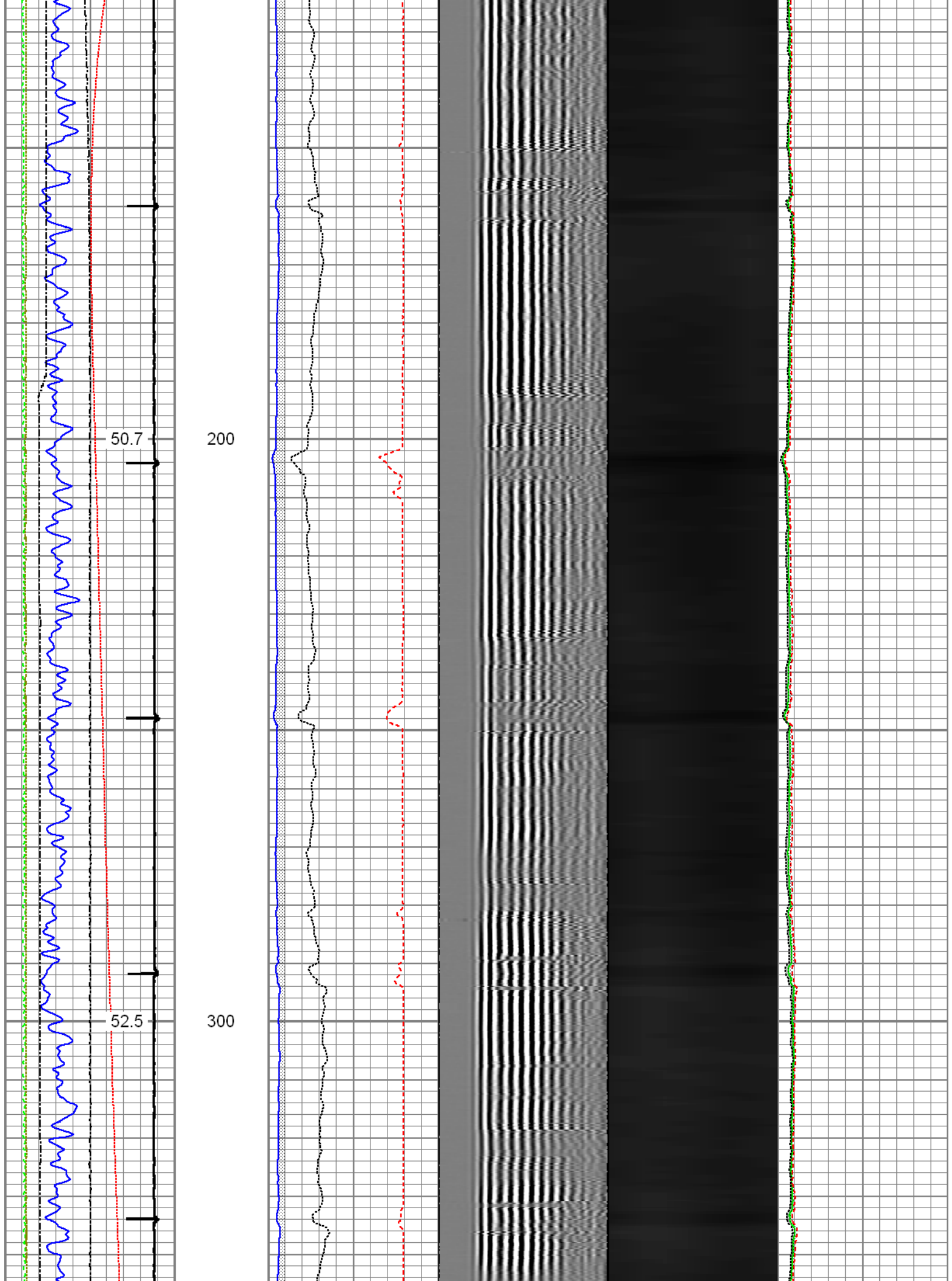
Presentation Format:rbt4_mit

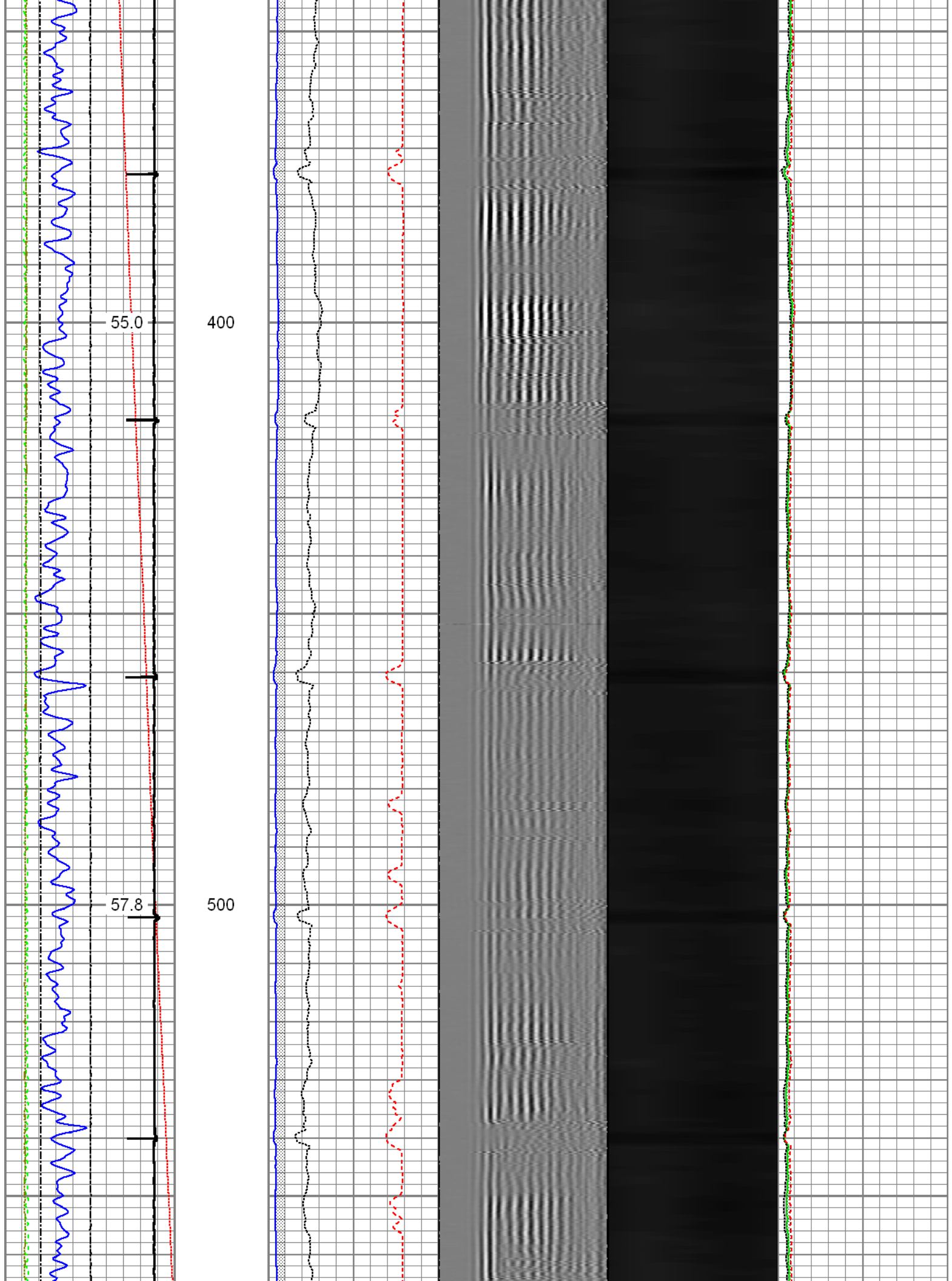
Dataset Creation:Sat Jun 27 08:10:15 2015 by Log 7.0 B1

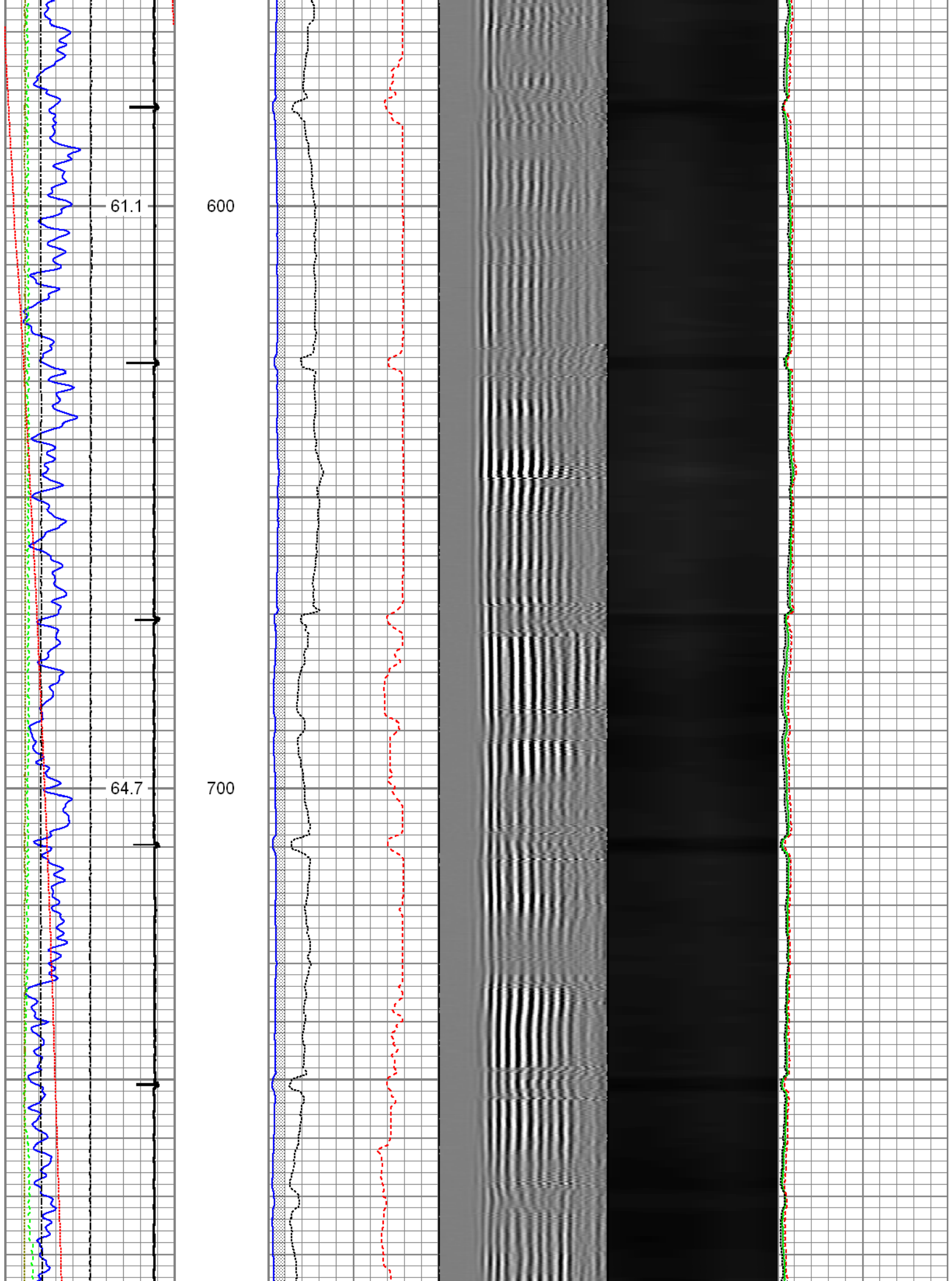
Charted by:Depth in Feet scaled 1:240

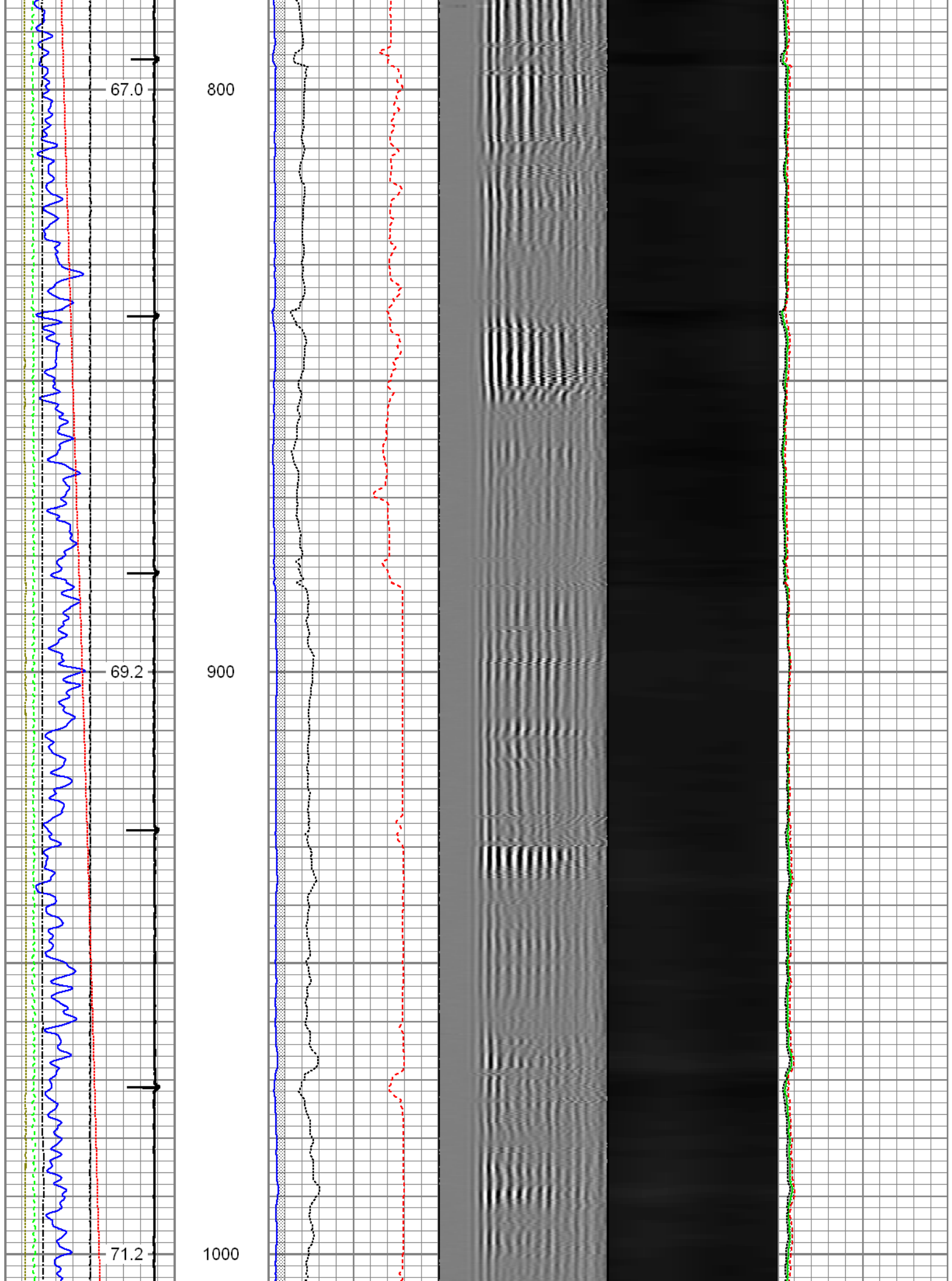
Gamma Ray		3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120		0 (mV) 100	200 1200		0 100
Line Speed		3' Amplitude x 5			Mimimum Amplitude
-100 (ft/min) 100		0 (mV) 20			0 100
Line Tension		3' Travel Time			Maximum Amplitude
0 (lb) 2000		650 (usec) 150			0 100
Differential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

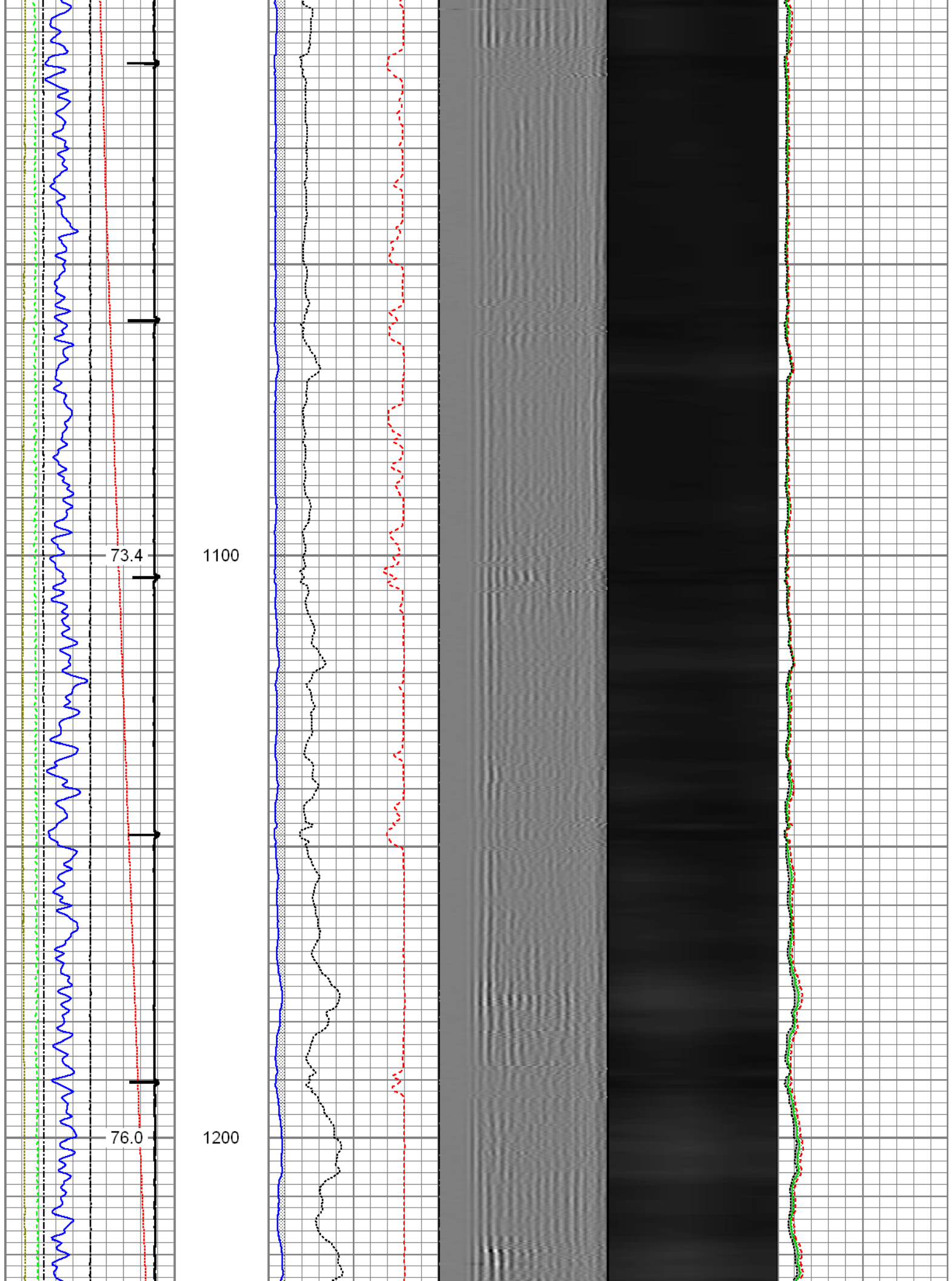


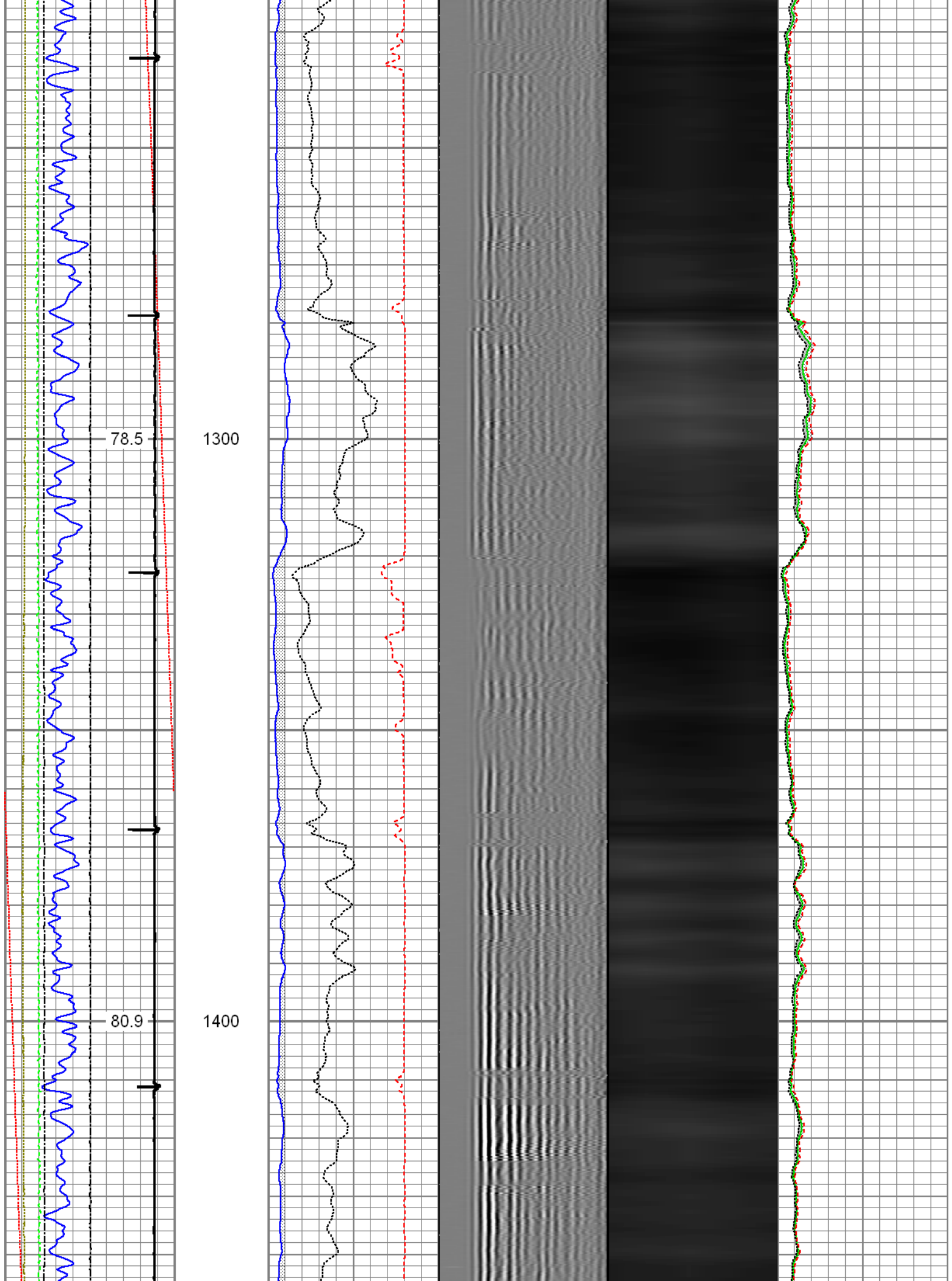


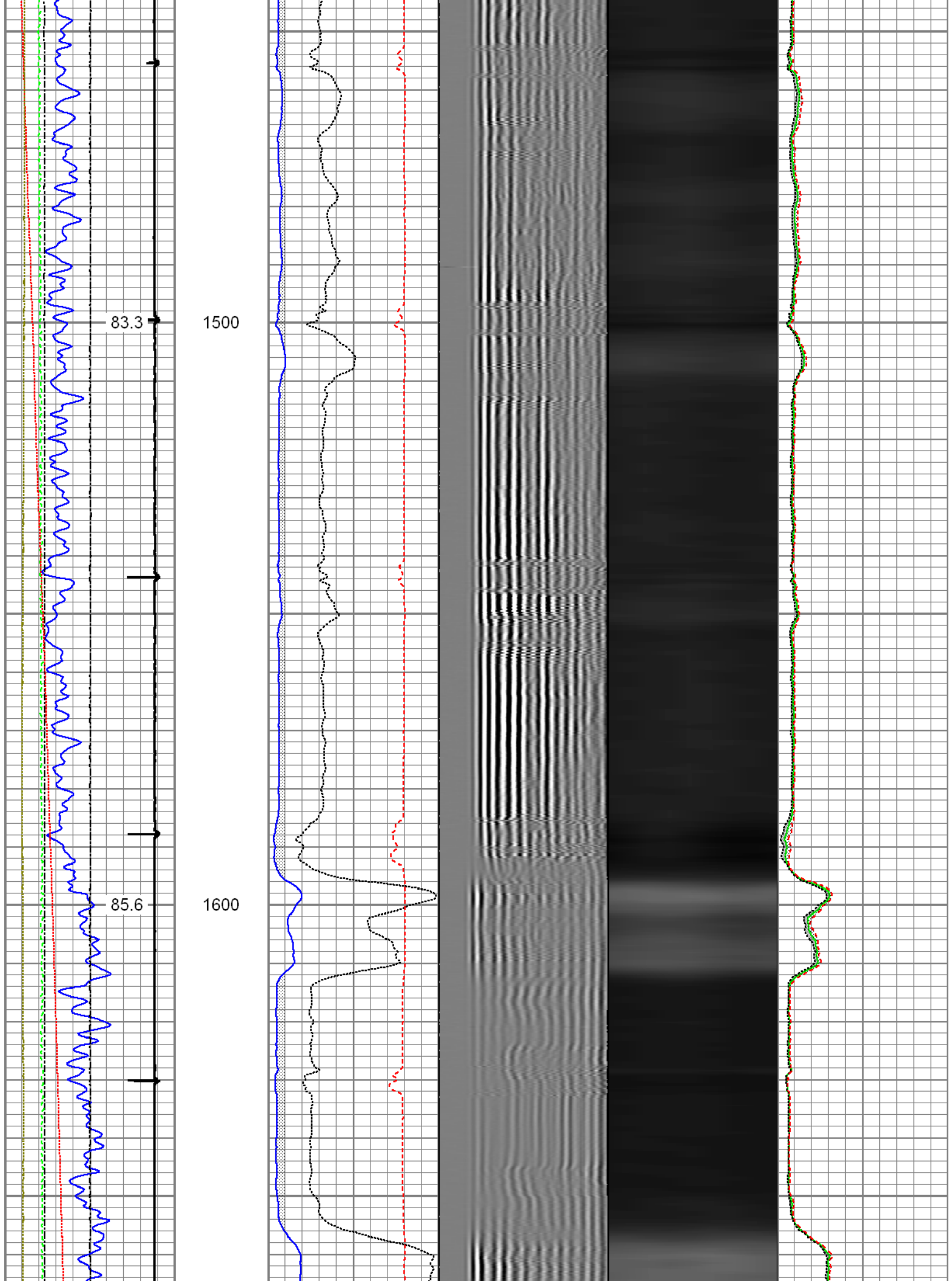


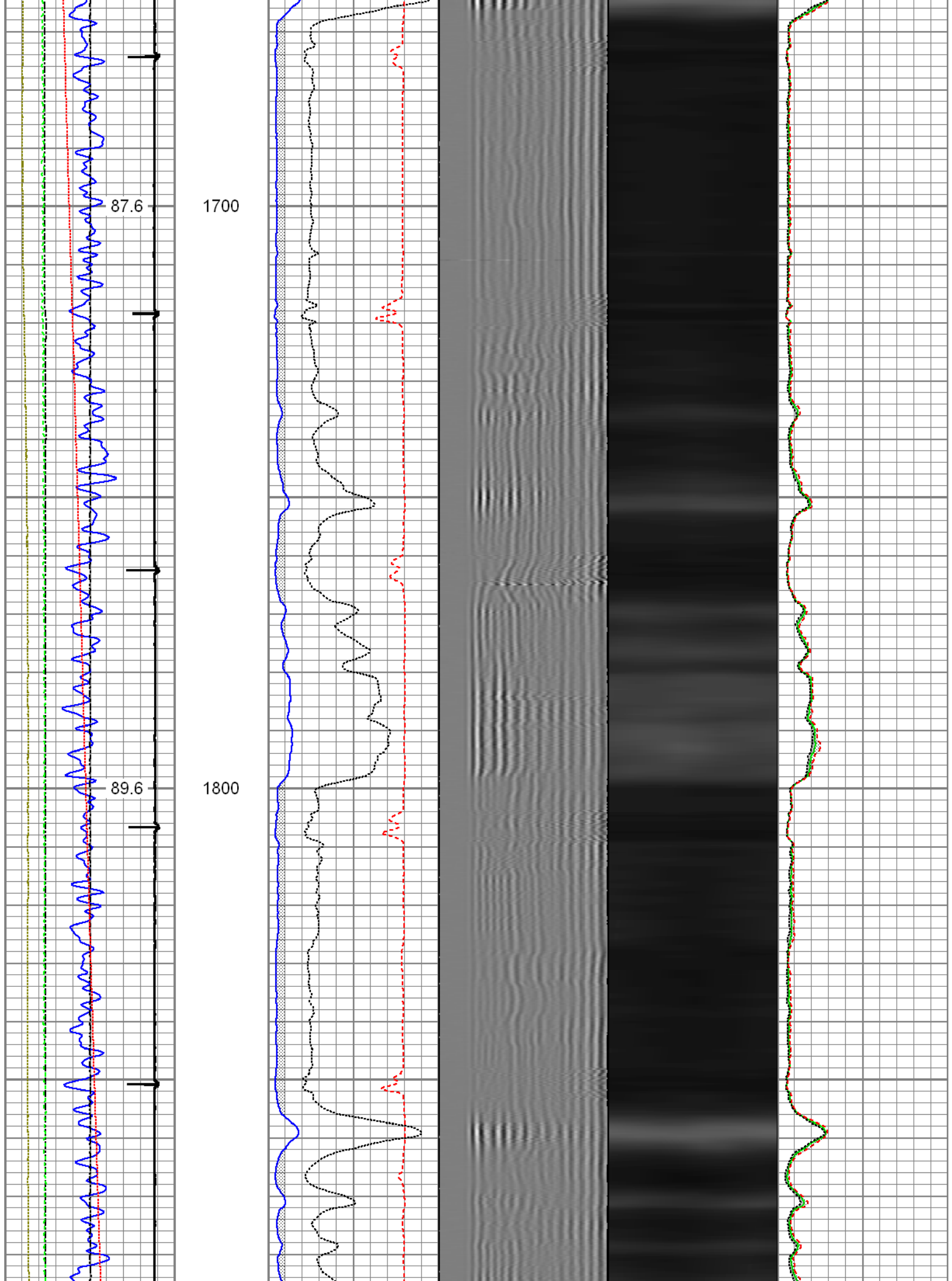


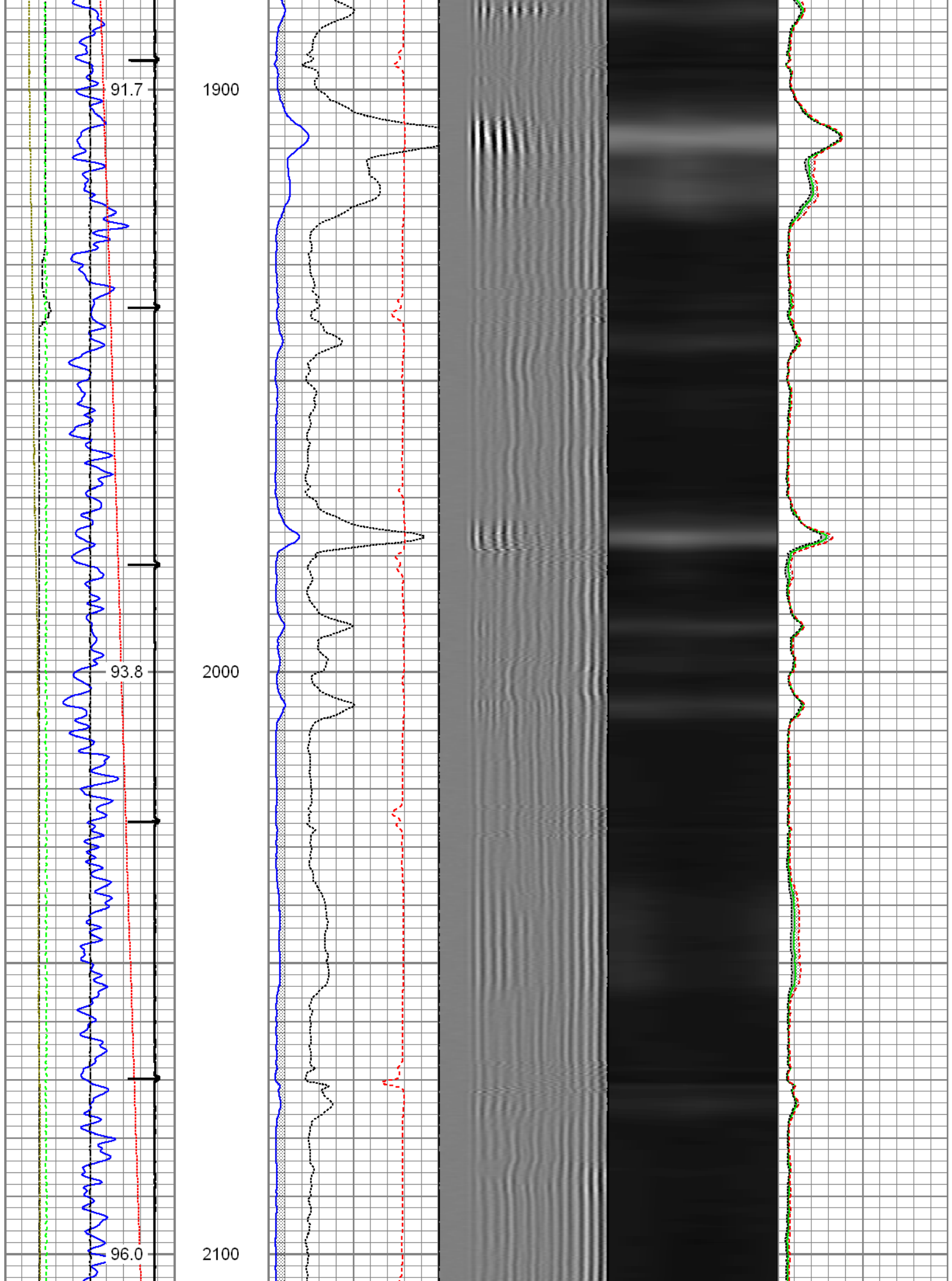


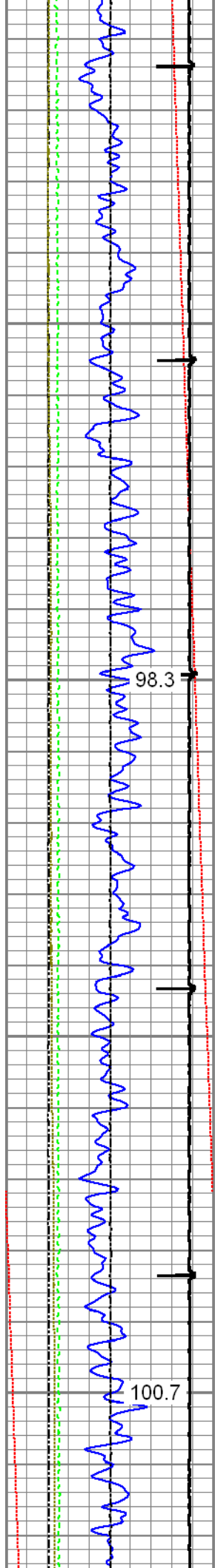






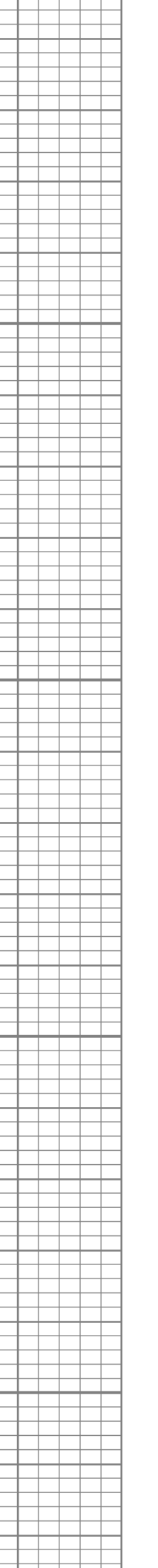
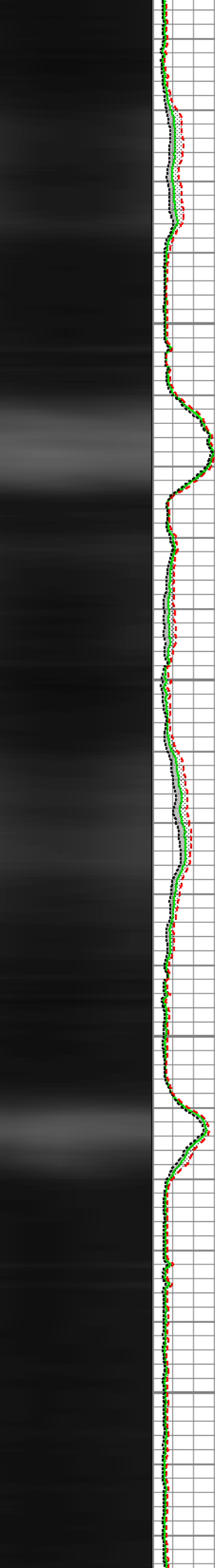
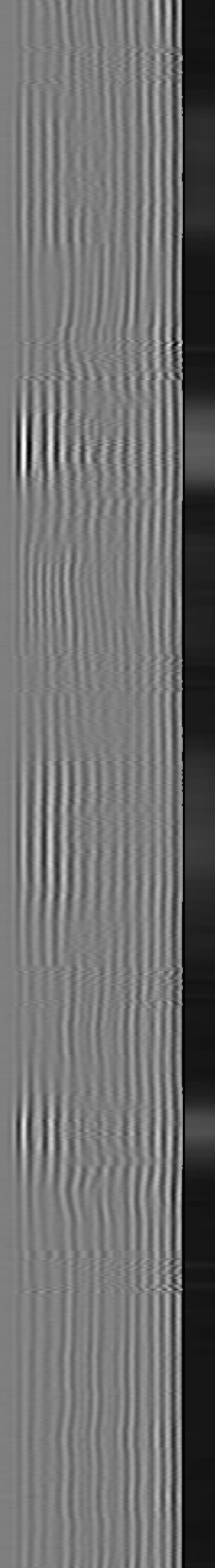
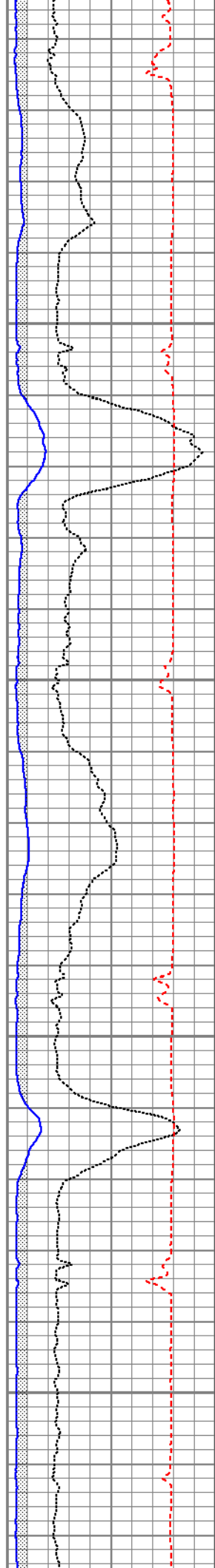


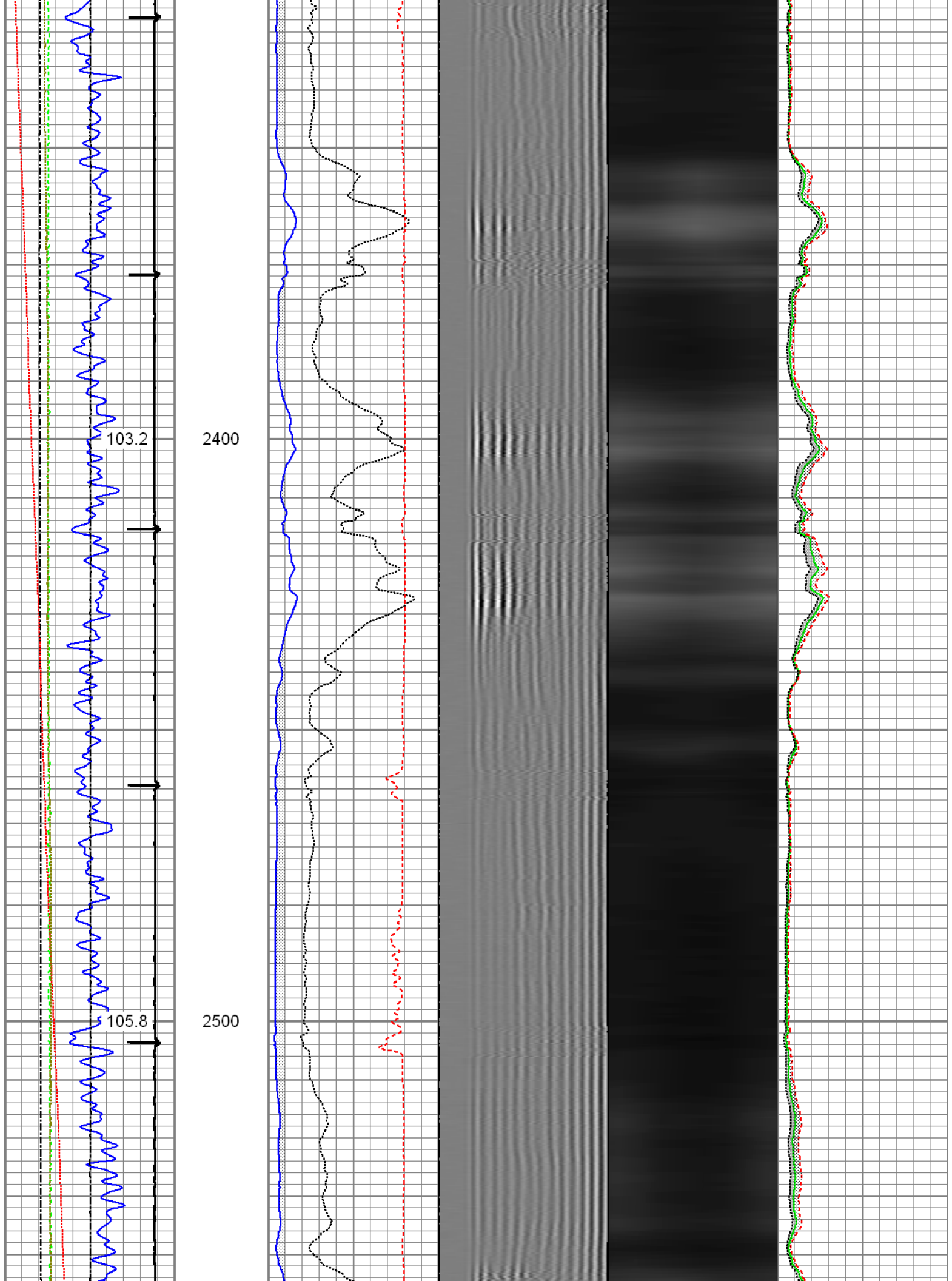


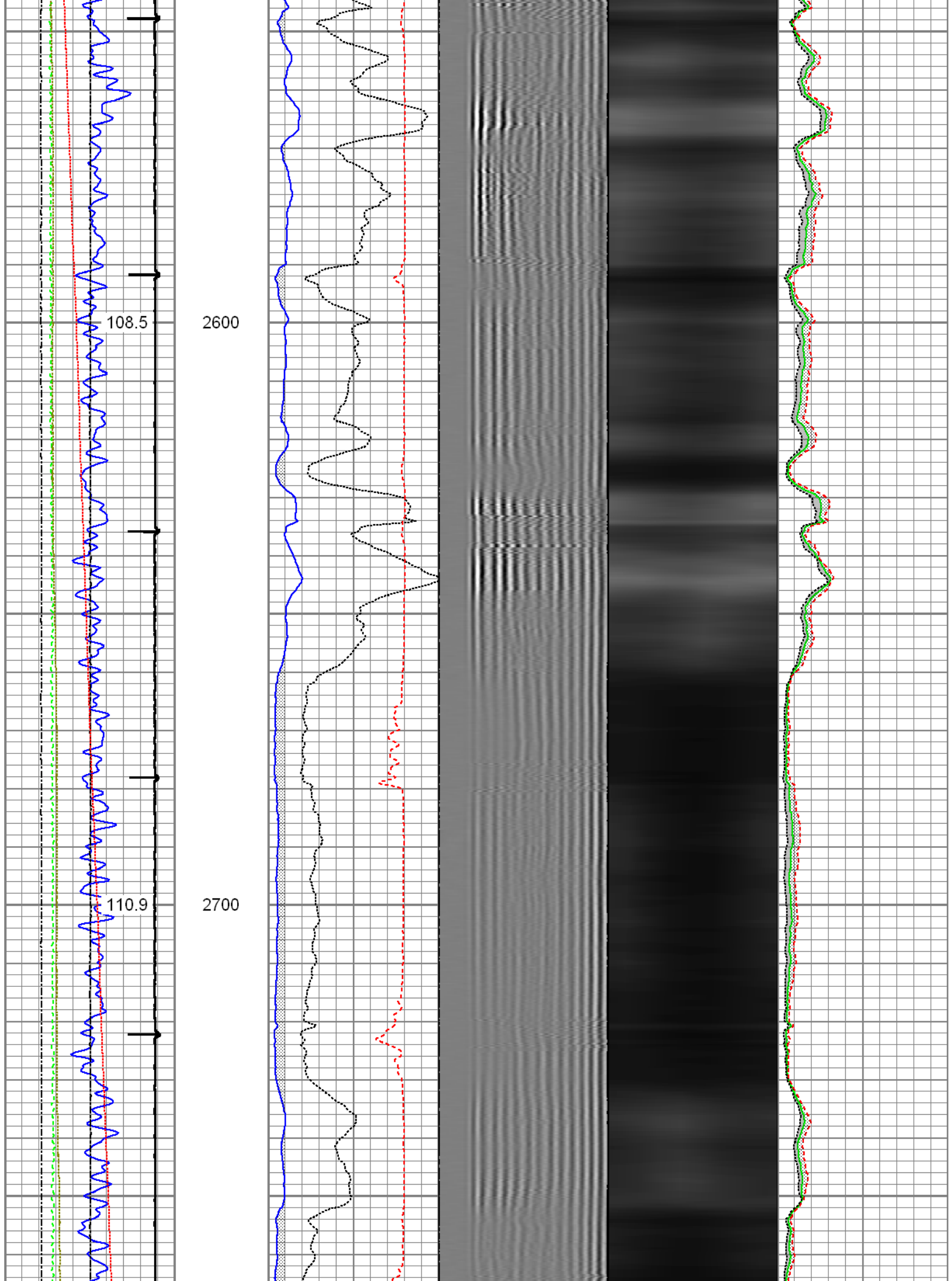


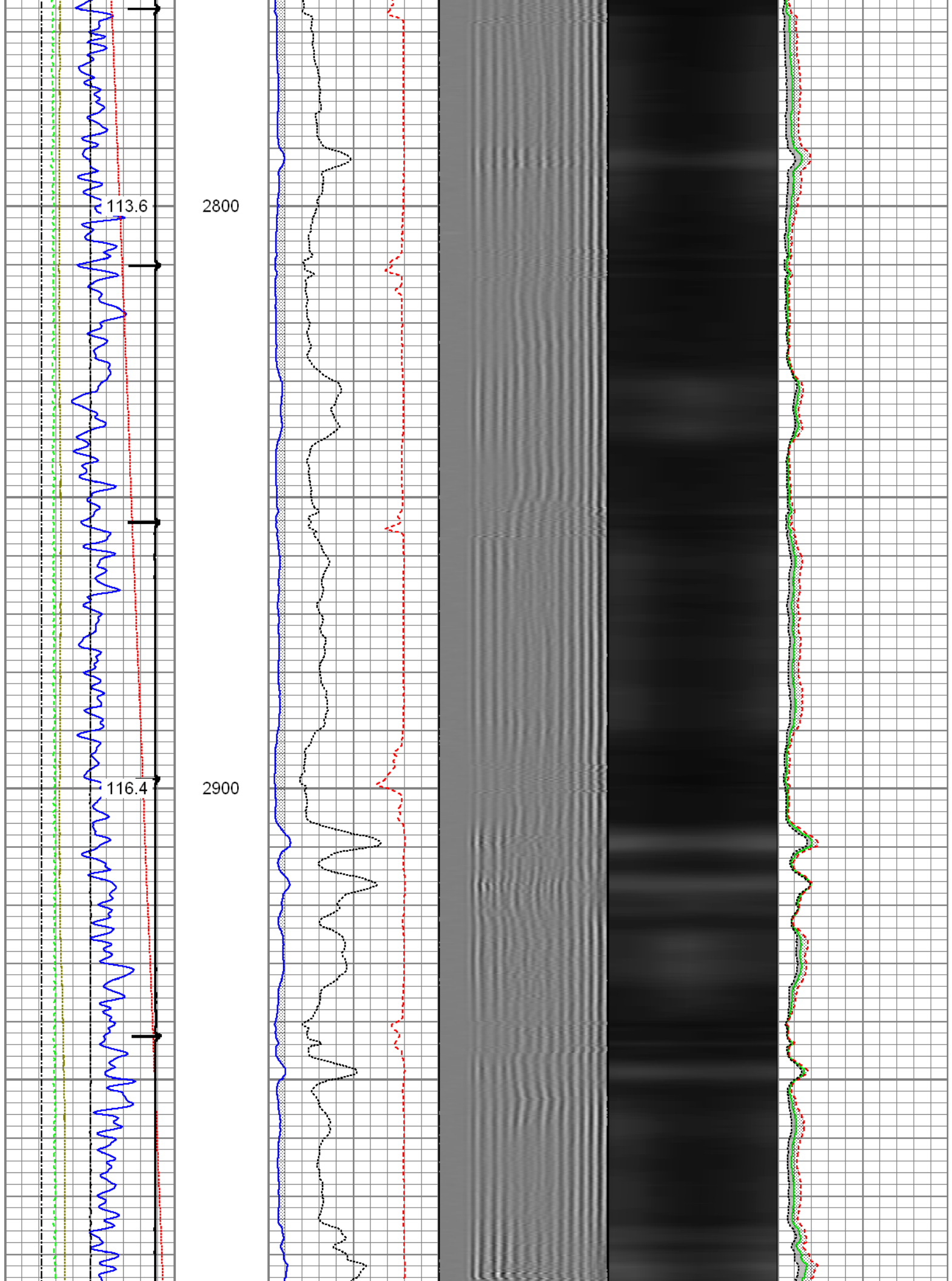
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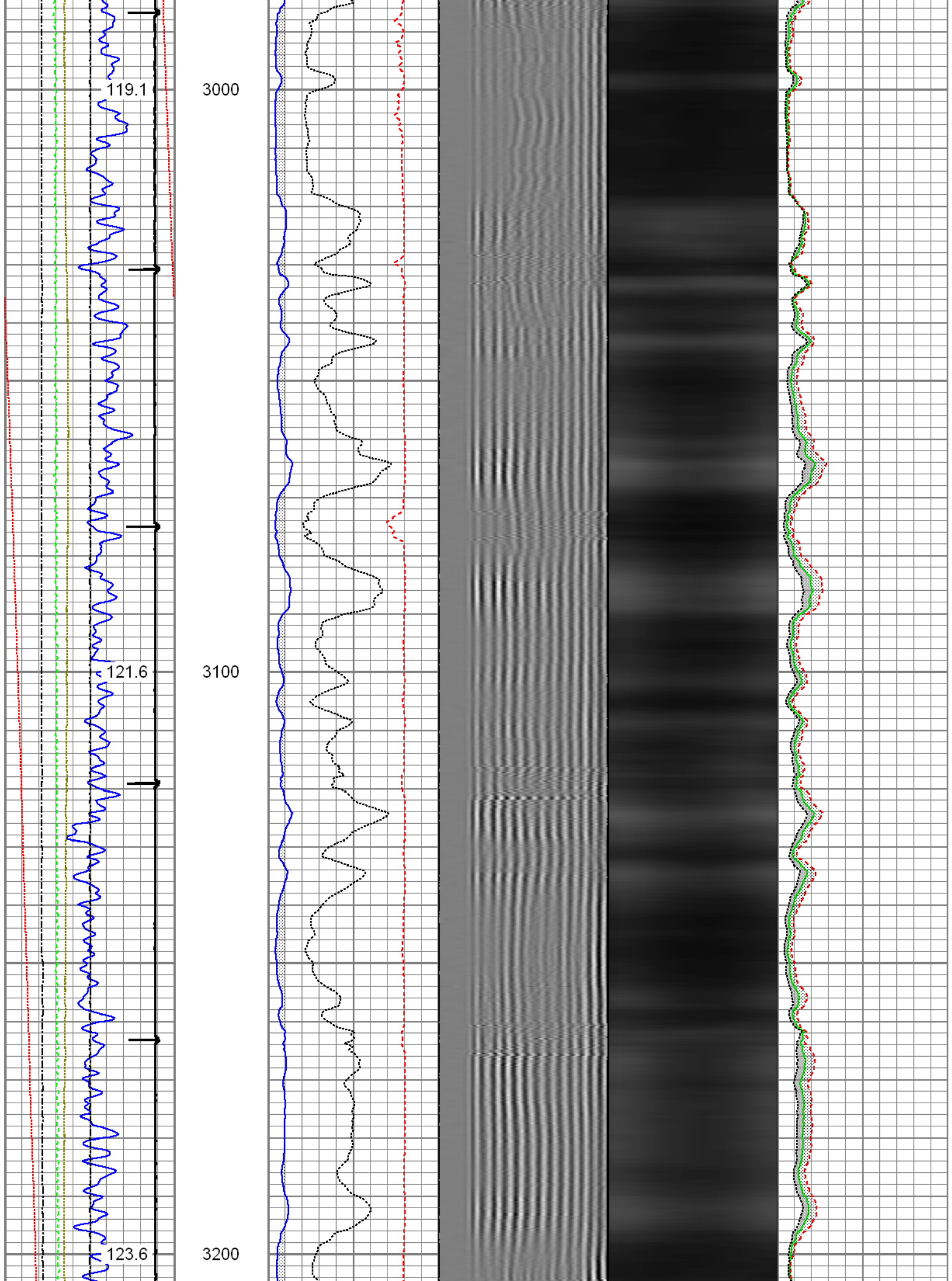
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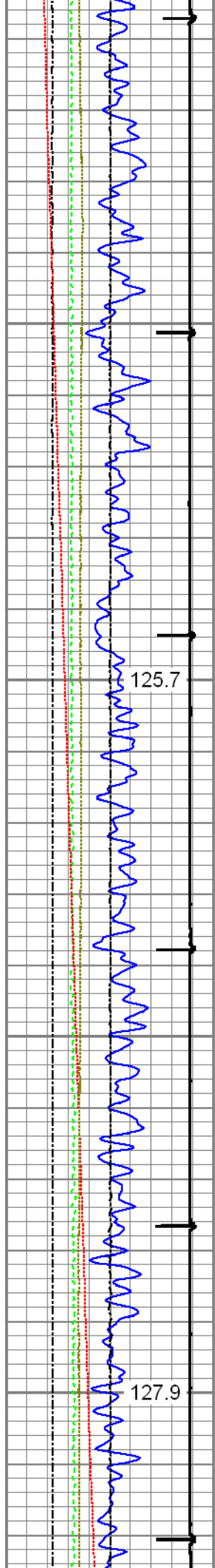










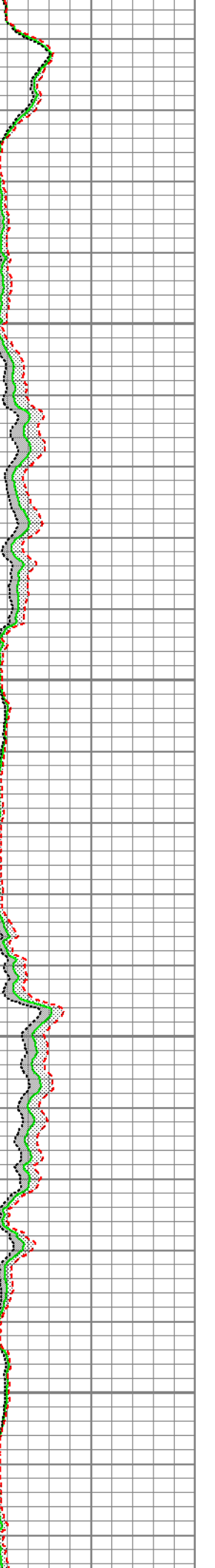
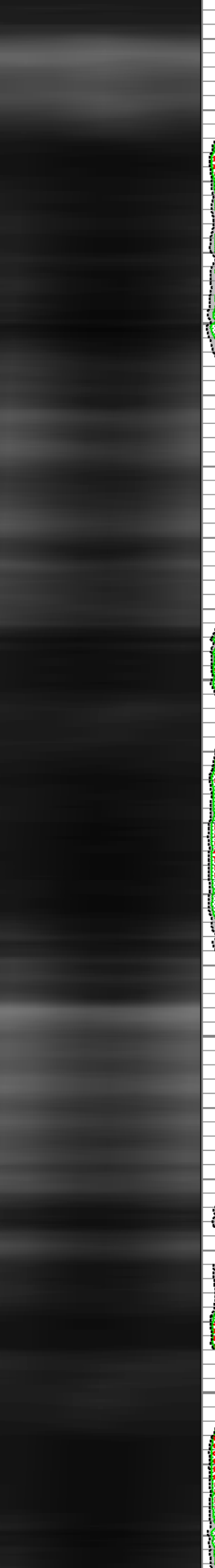
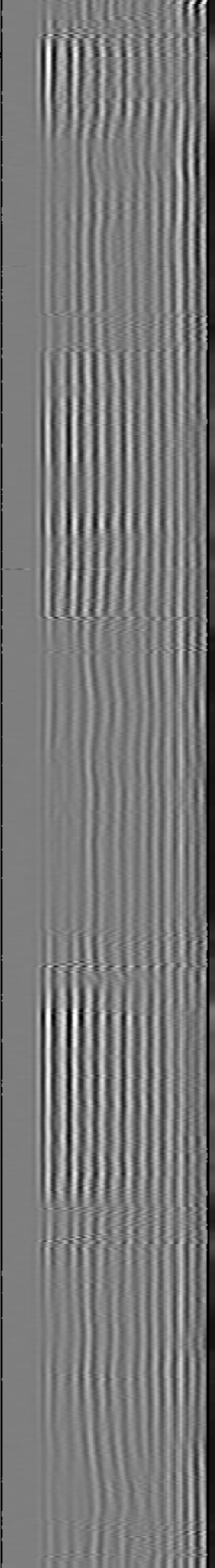
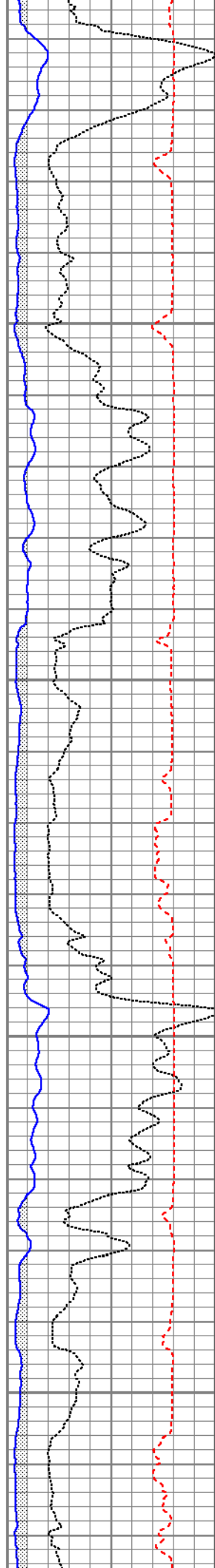


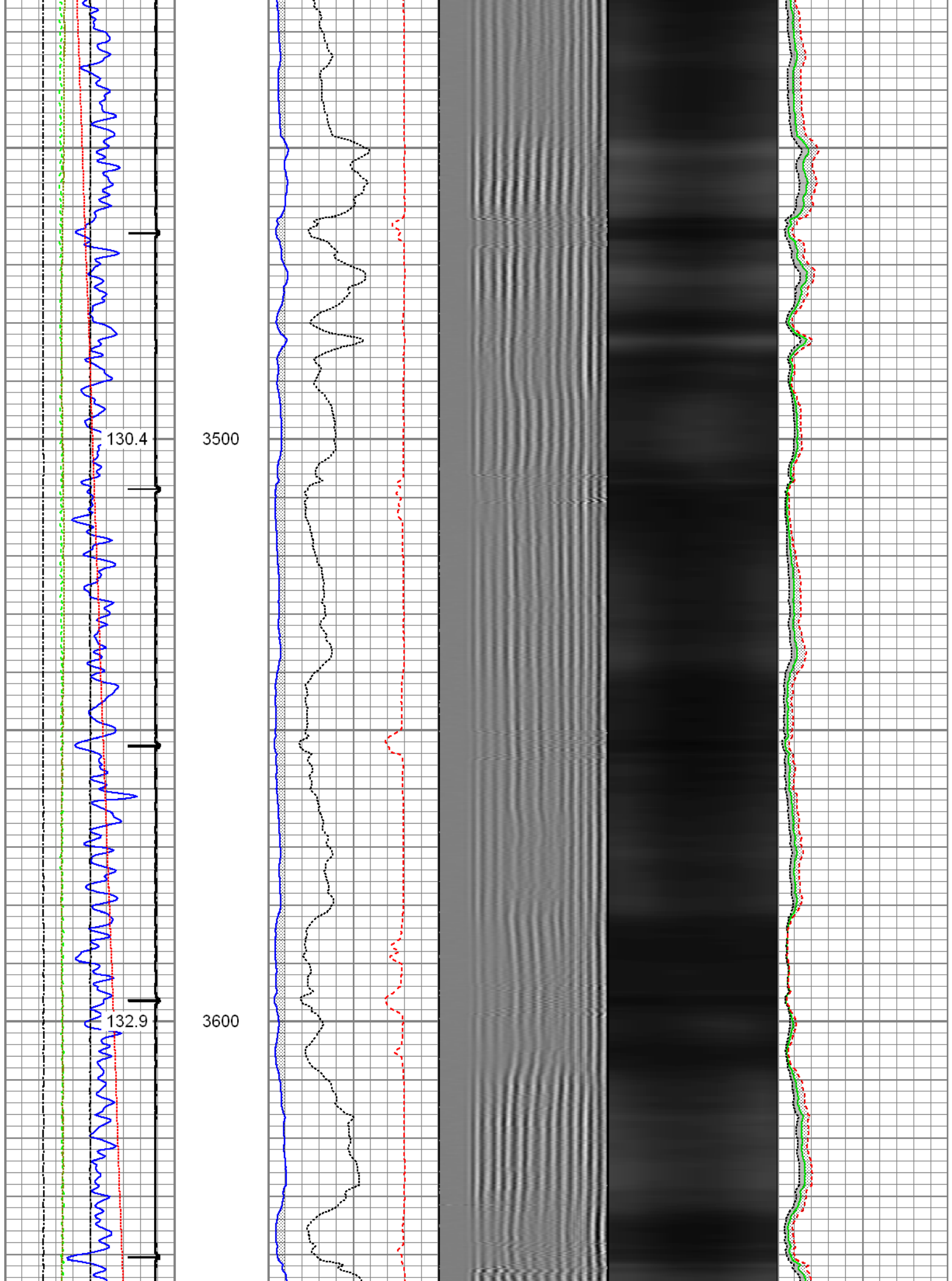
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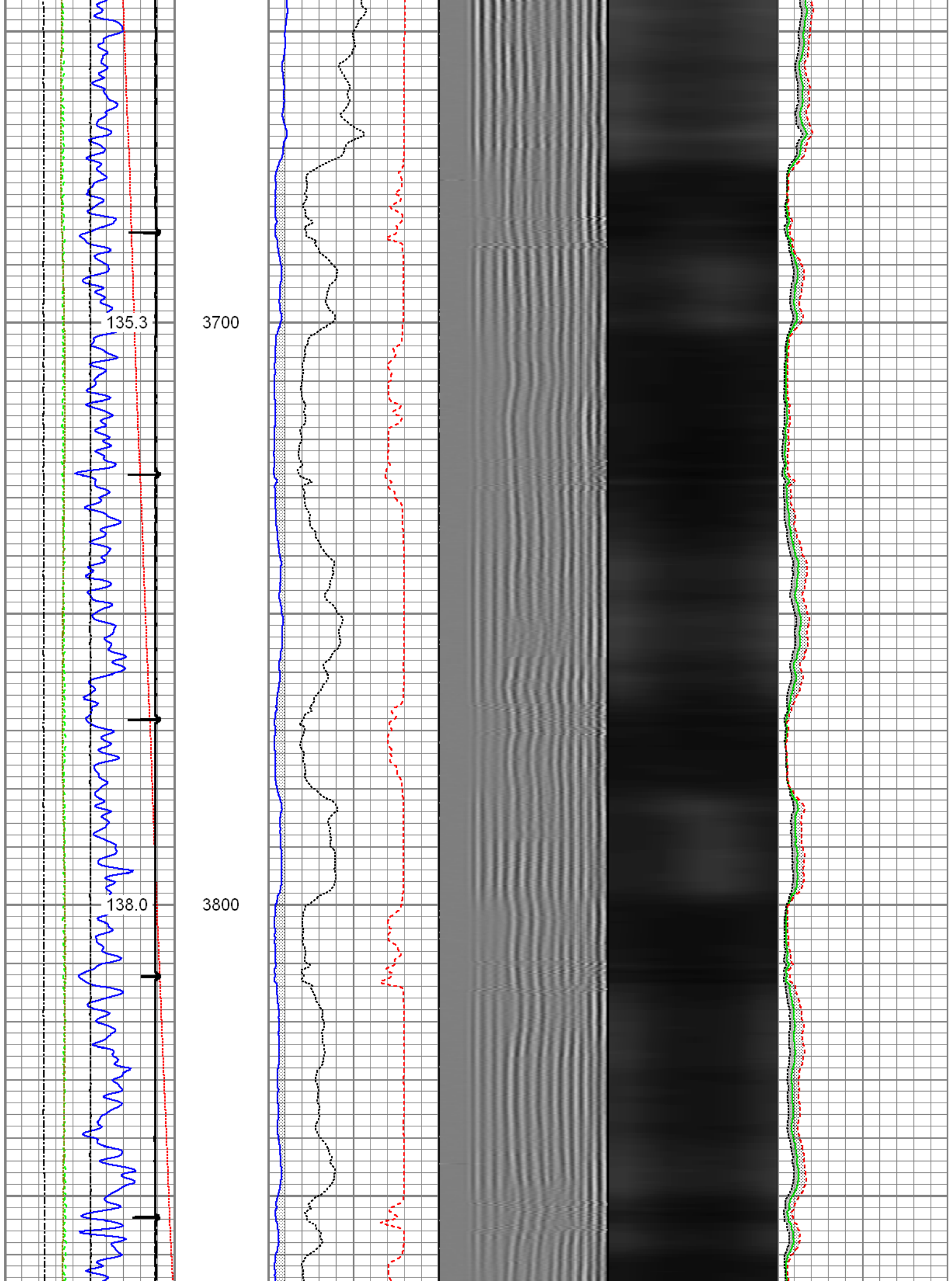
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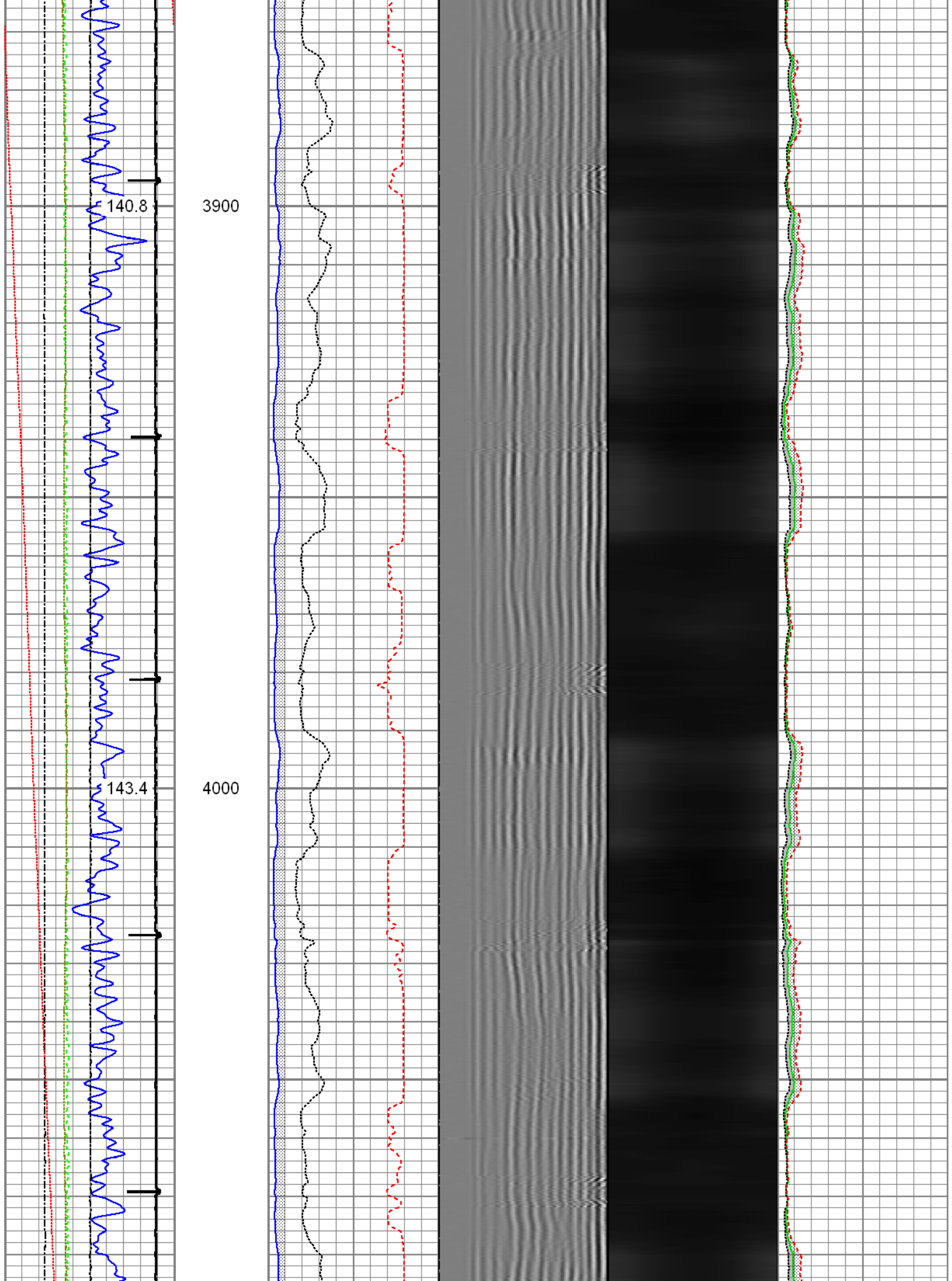
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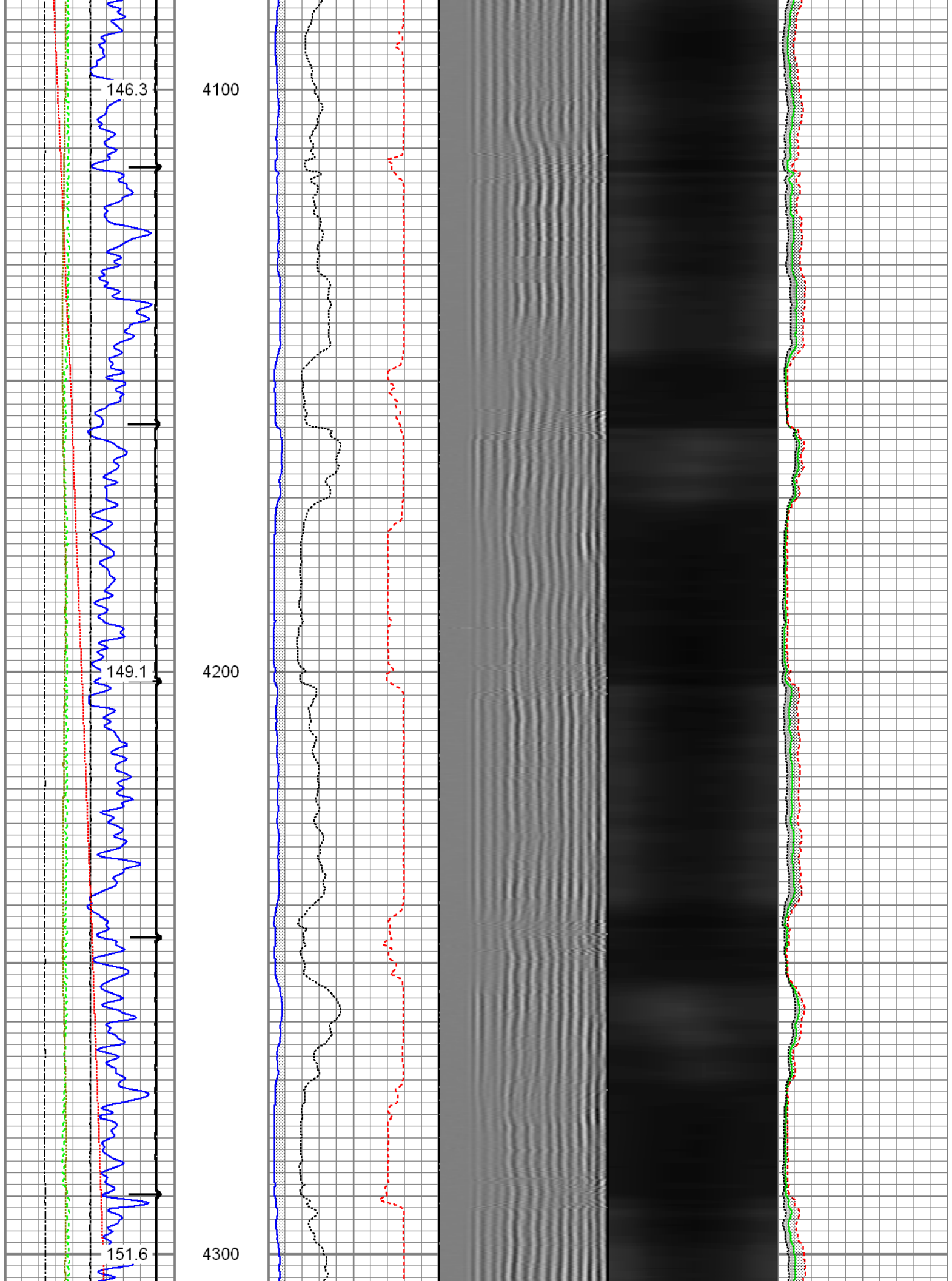
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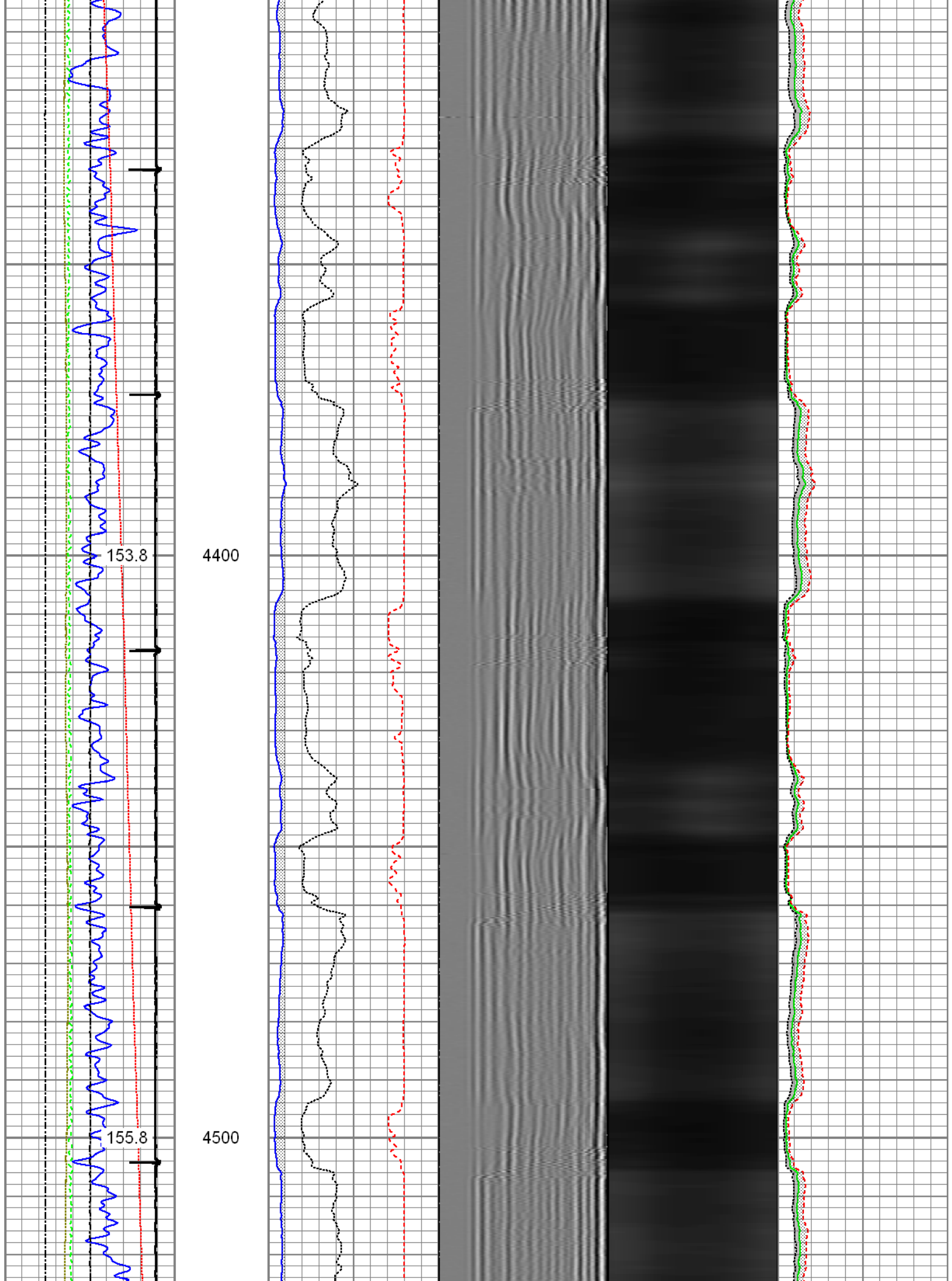


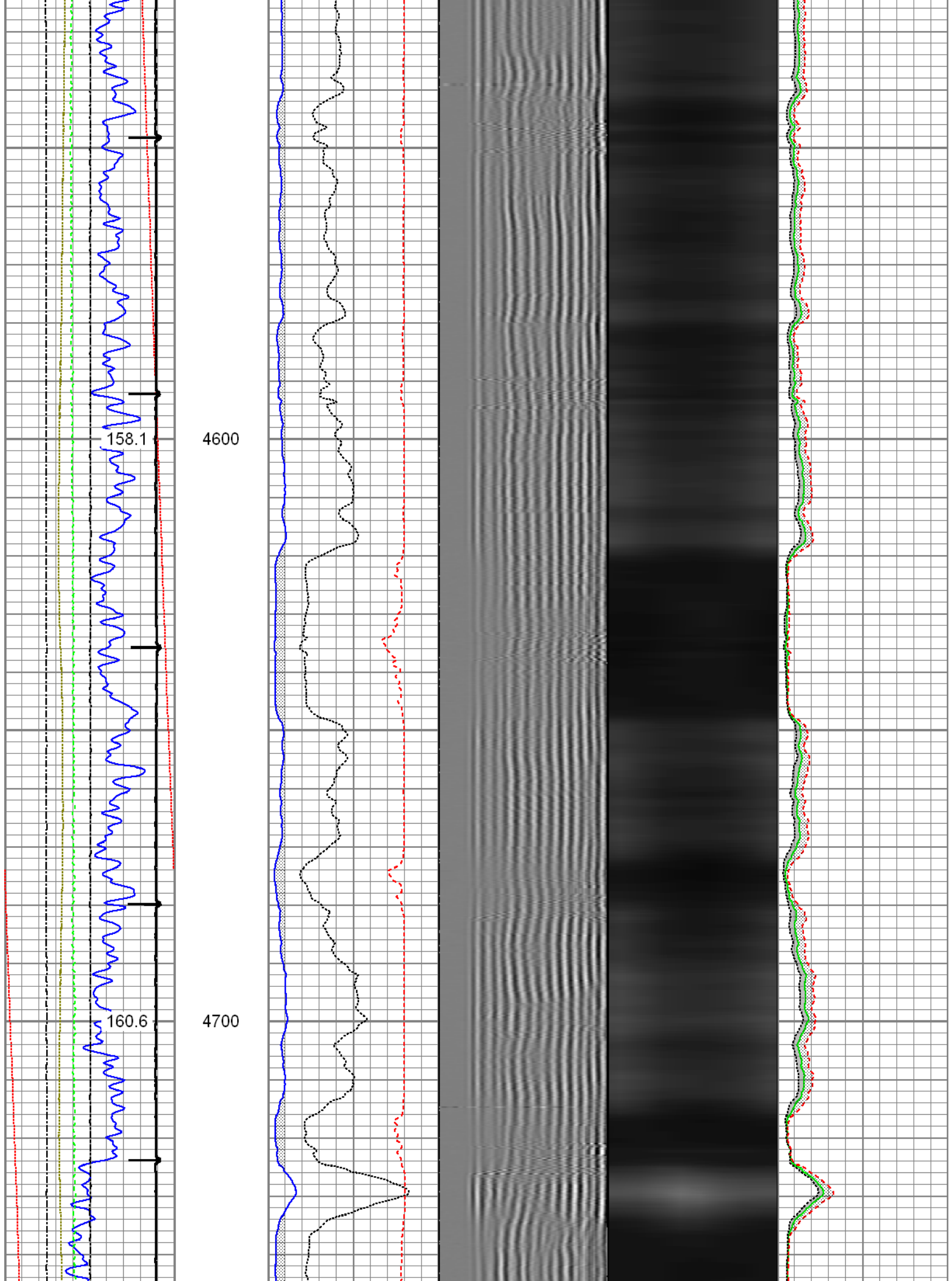


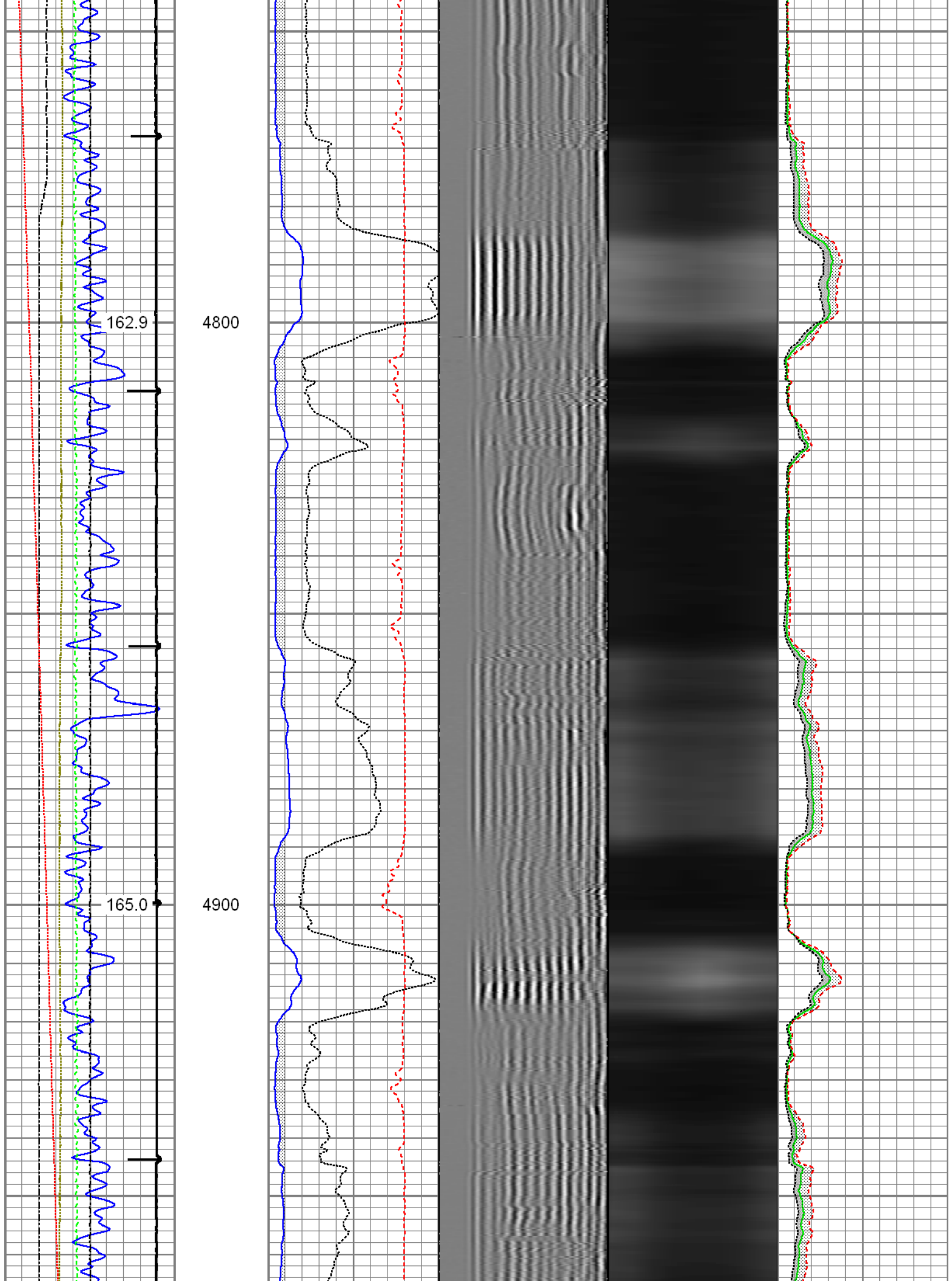


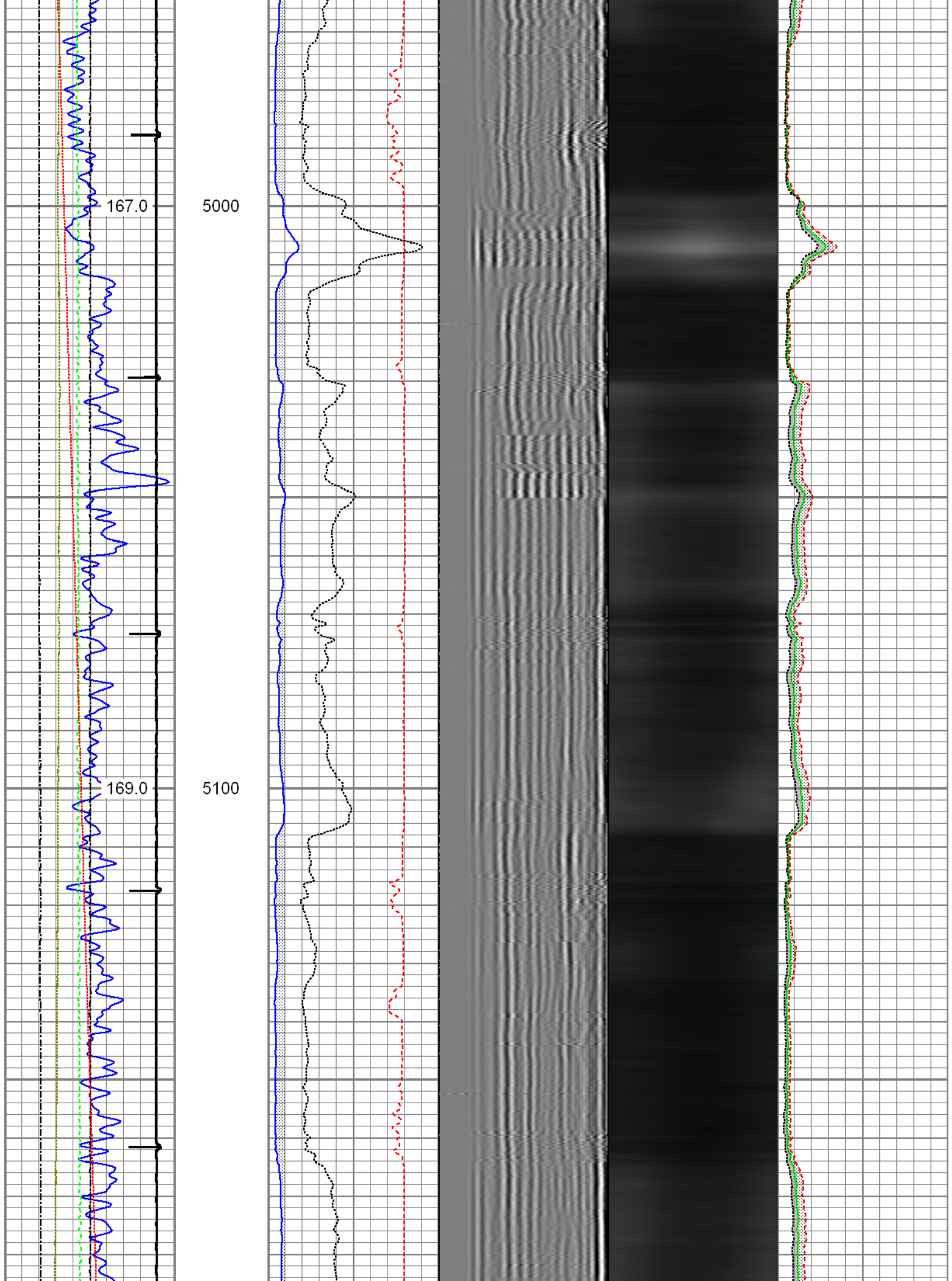


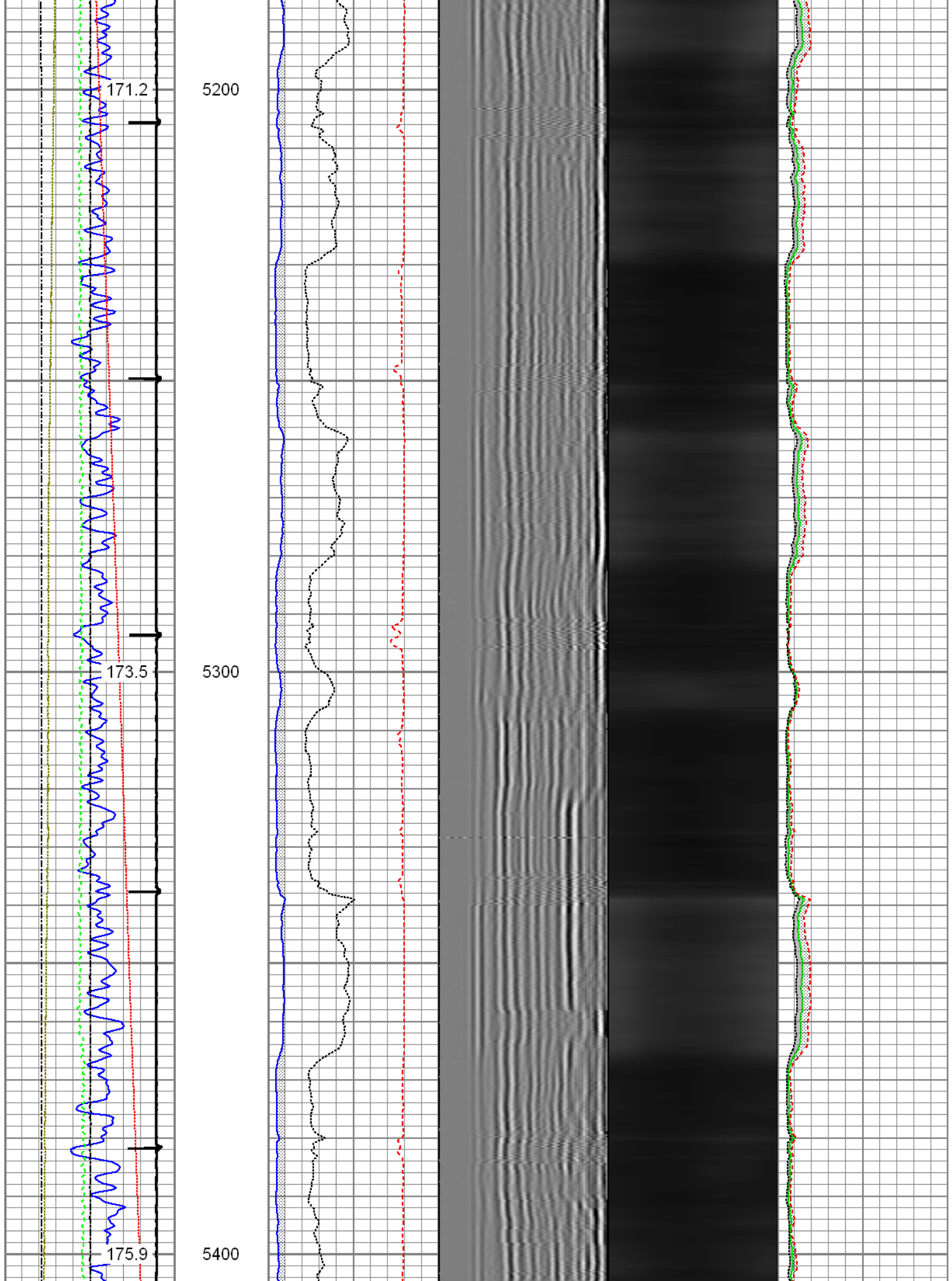


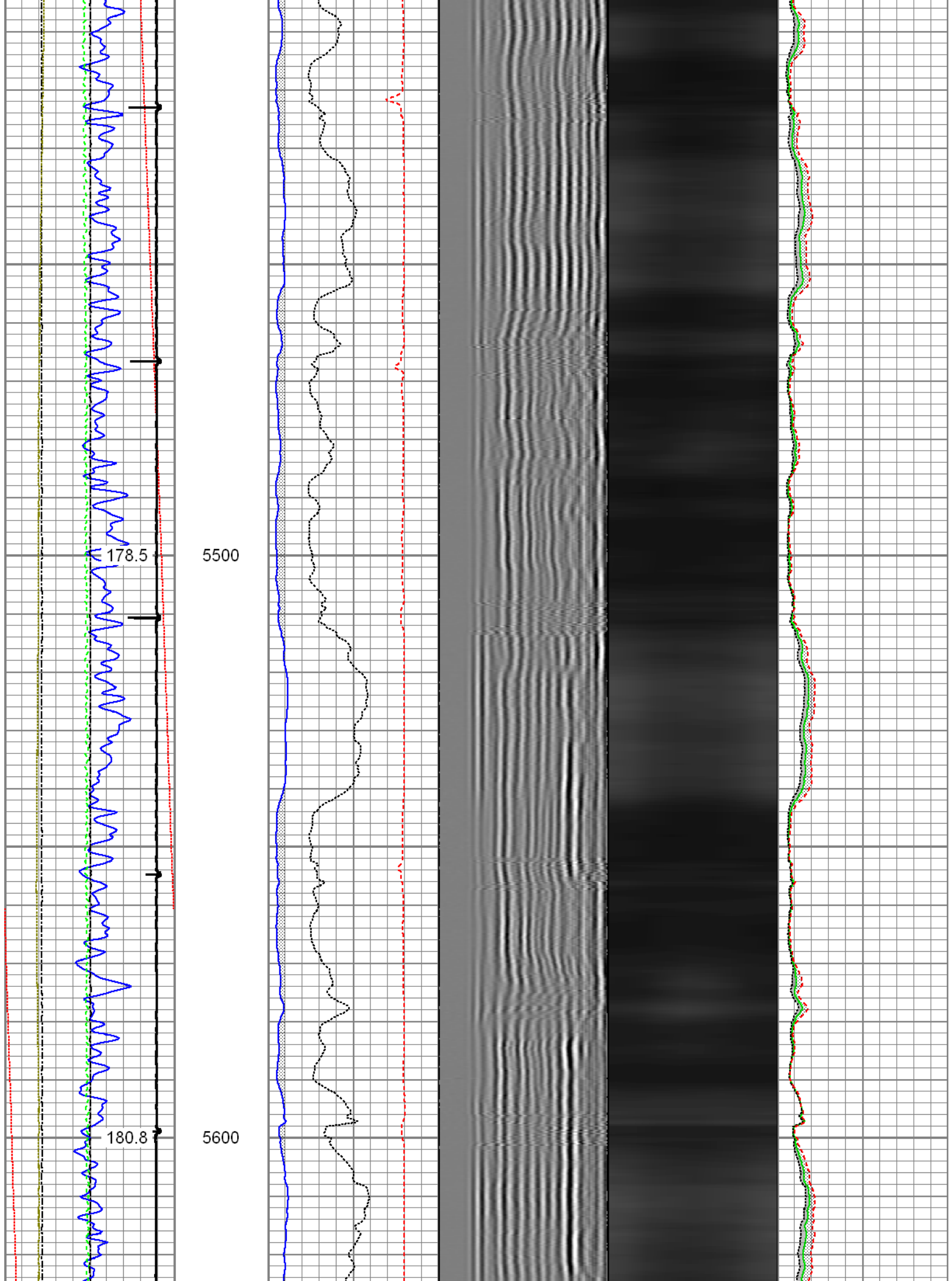


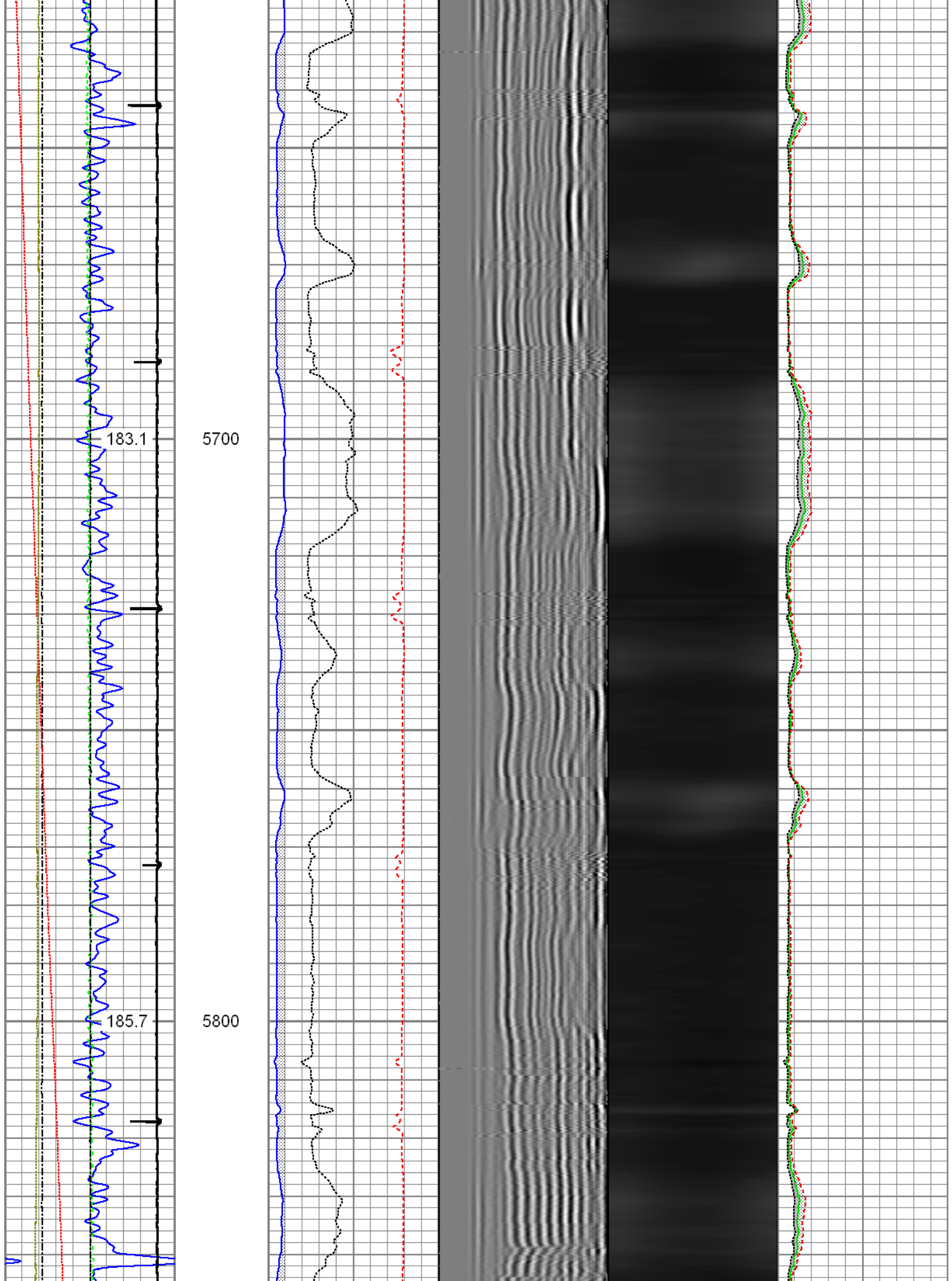


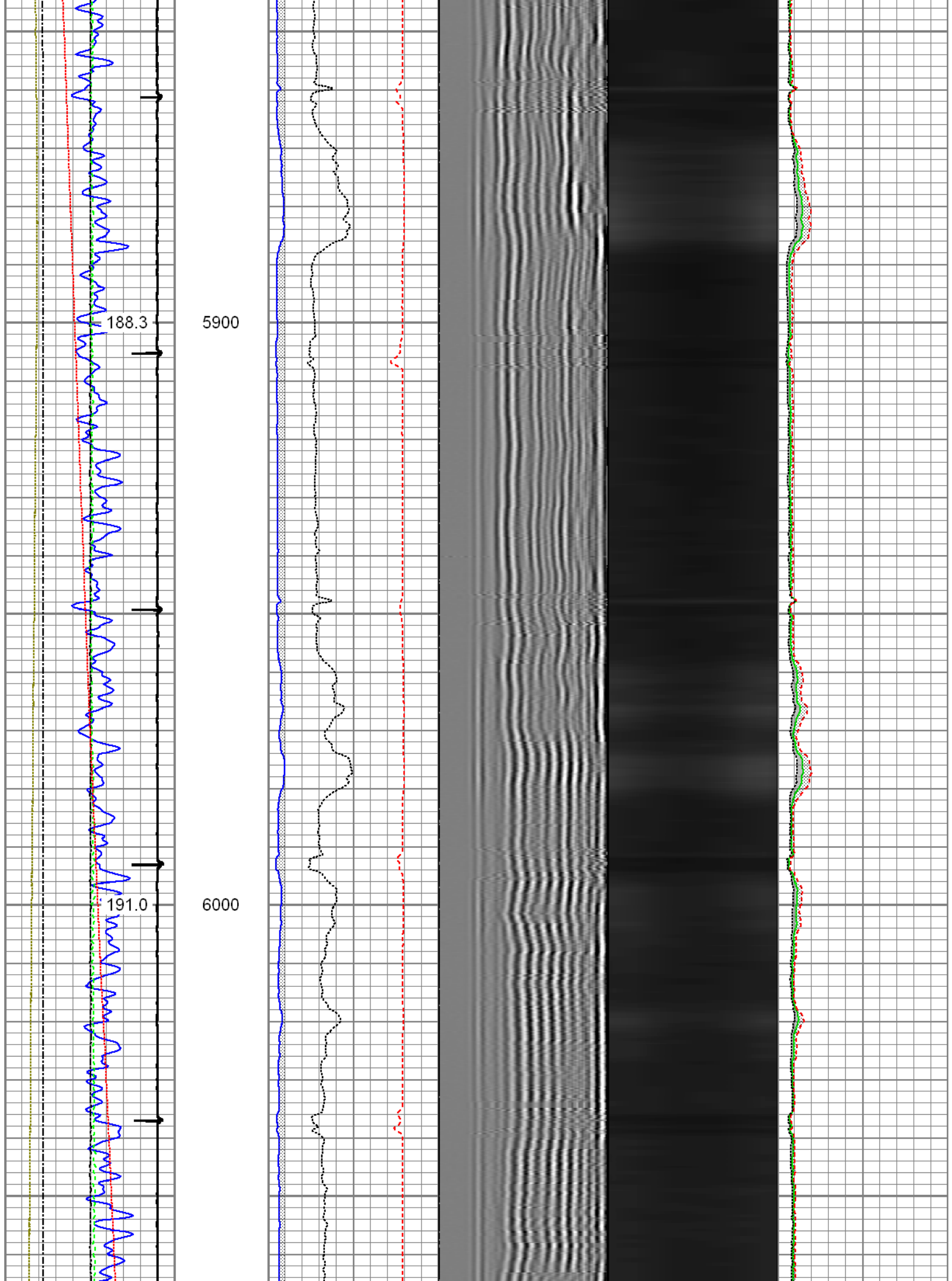


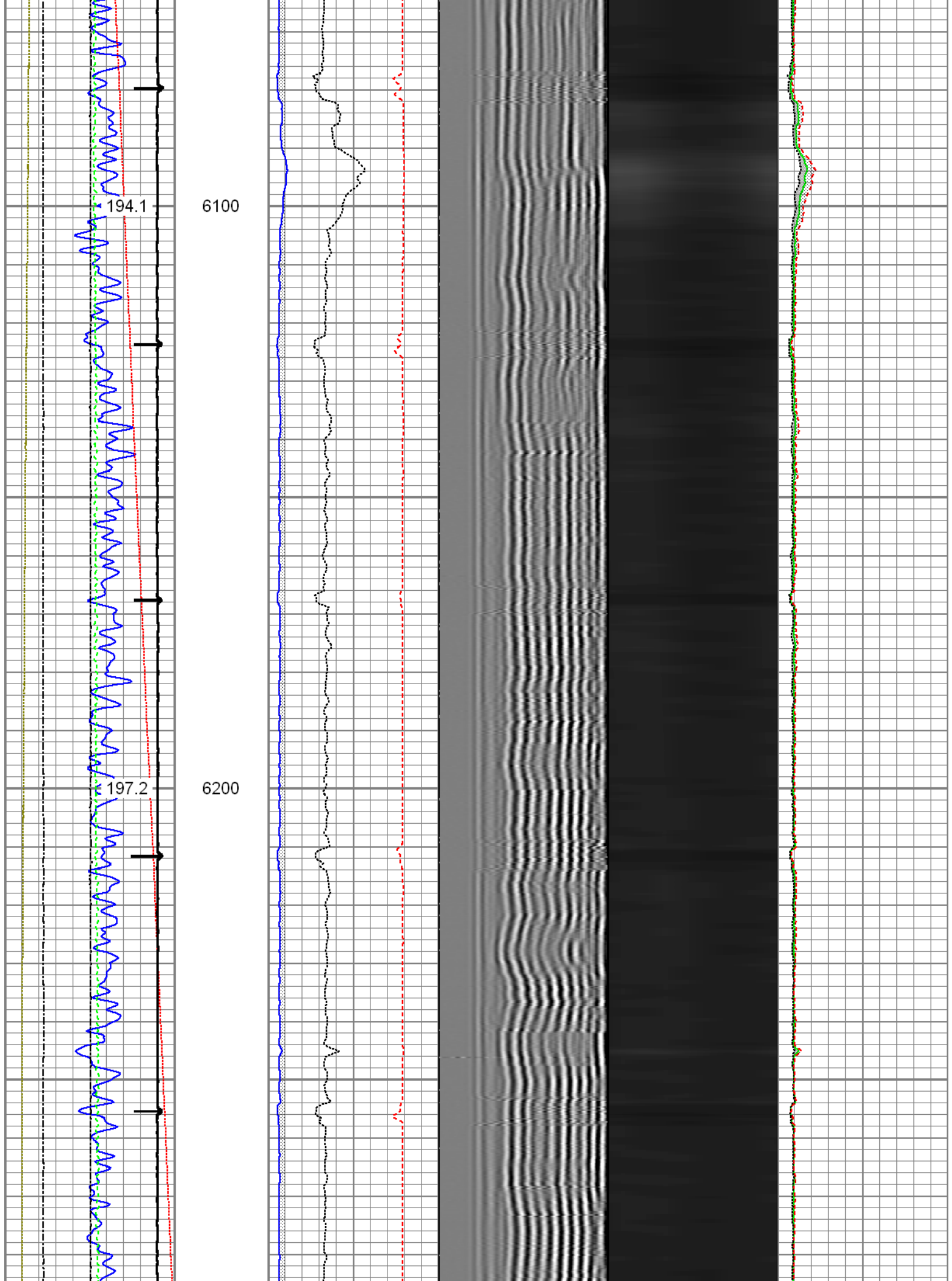


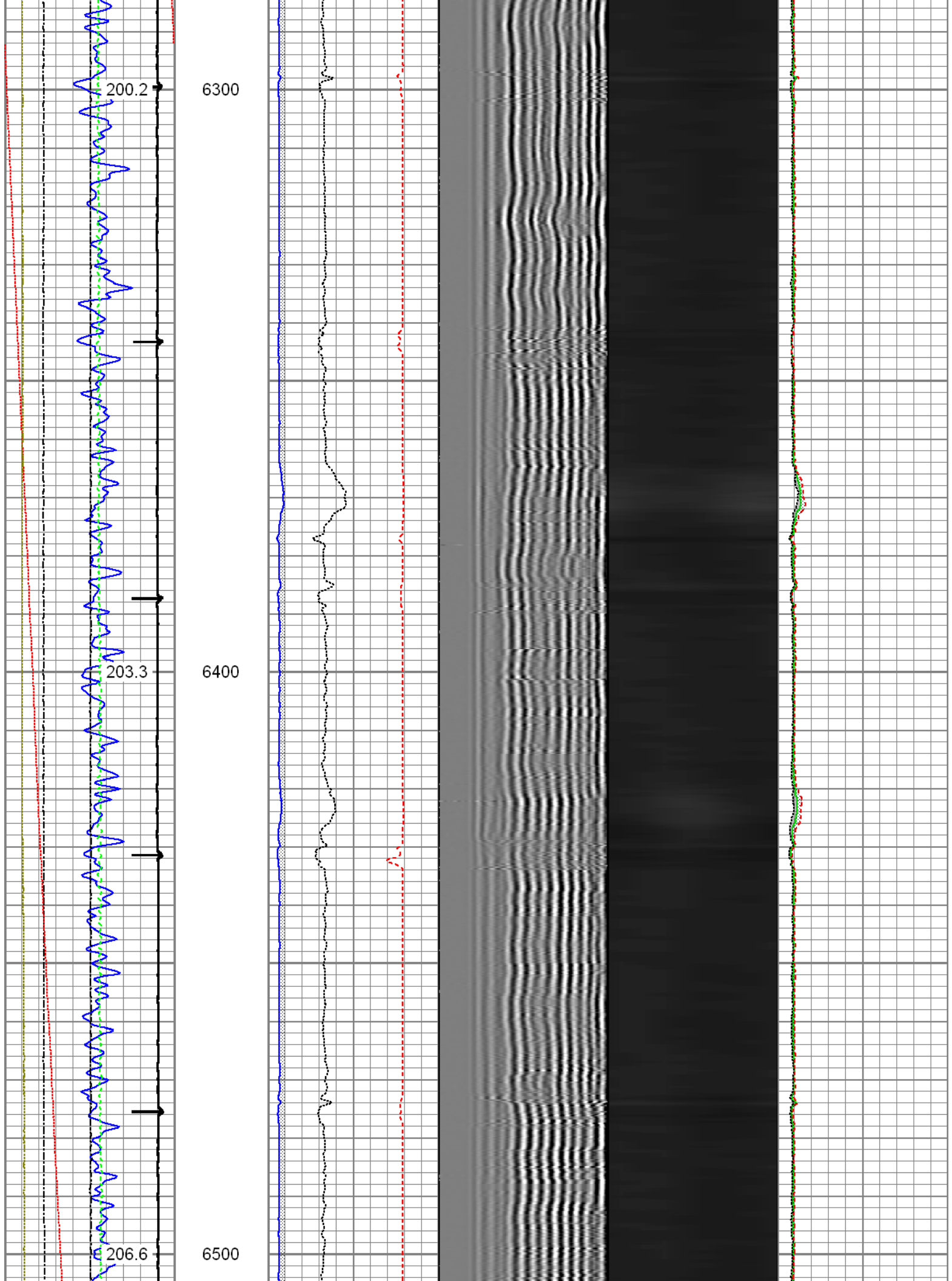


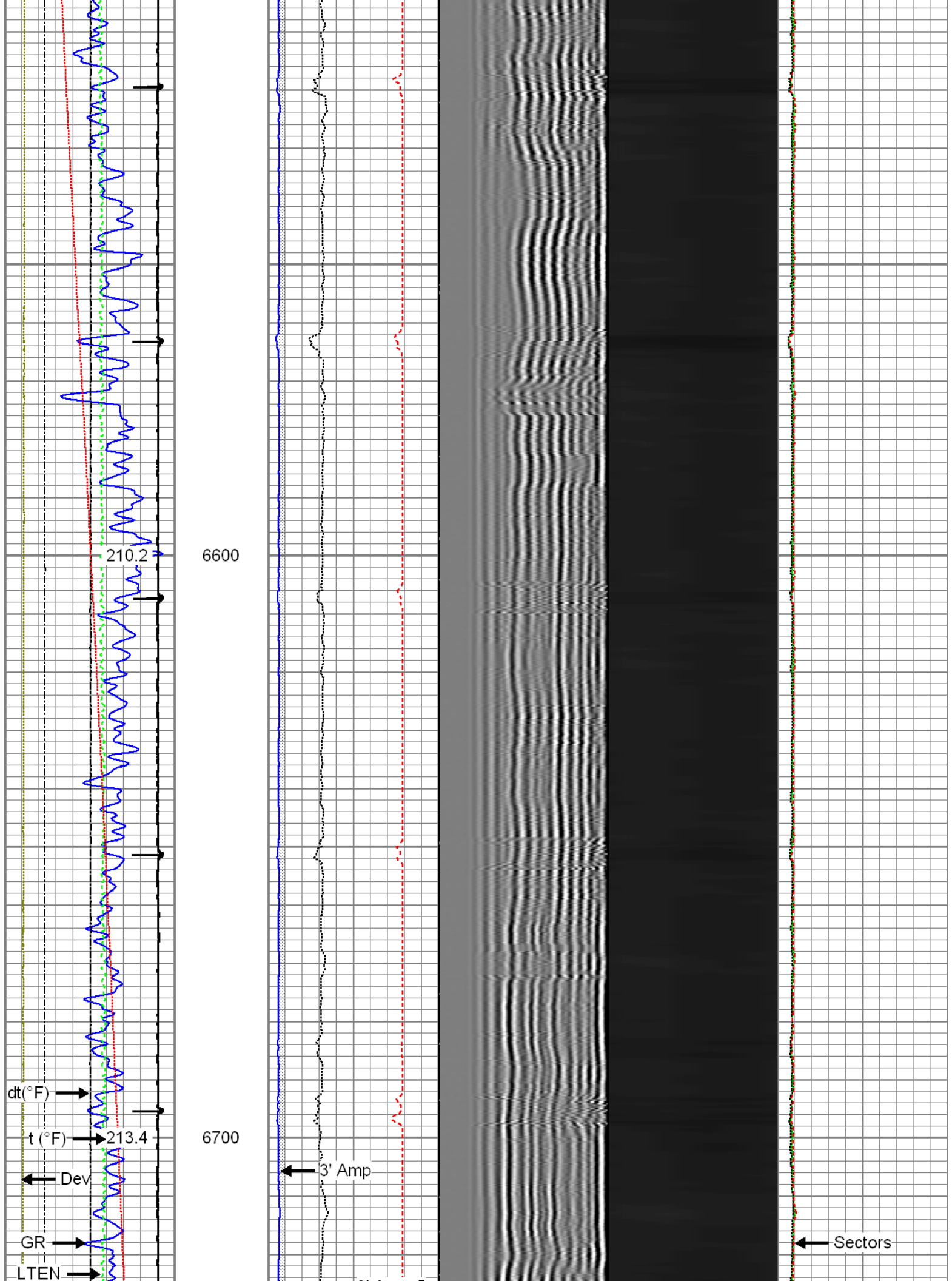


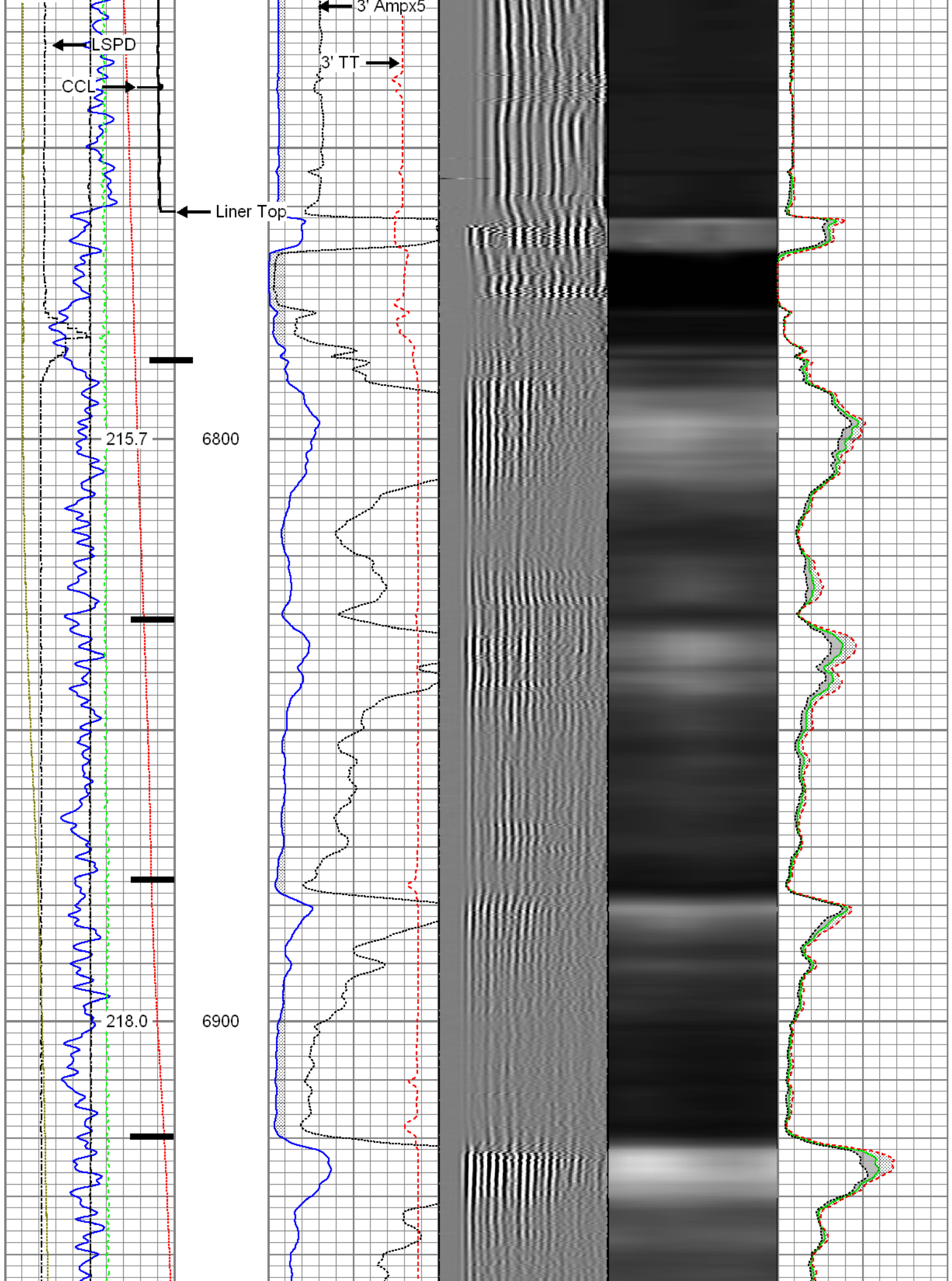


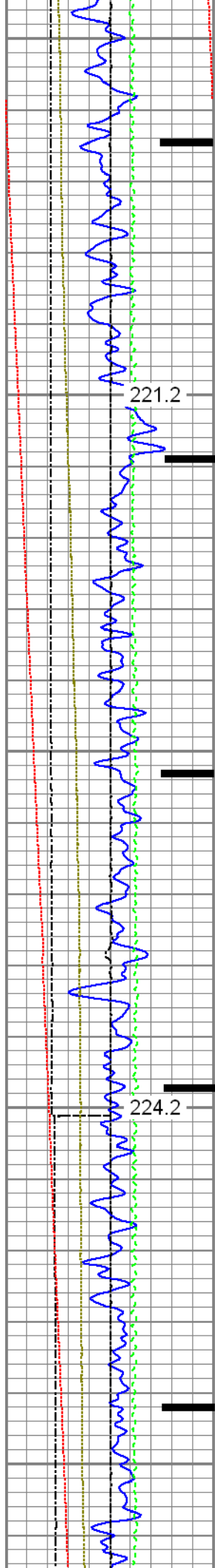










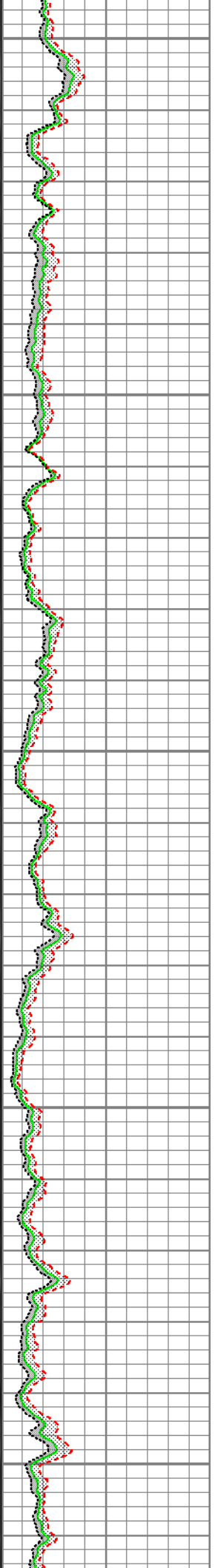
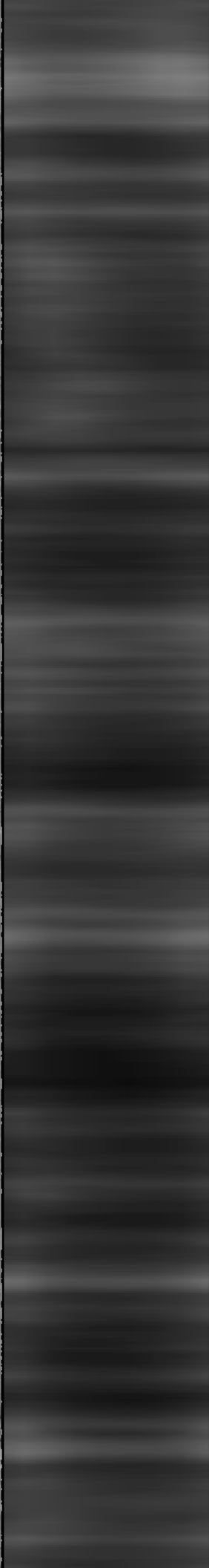
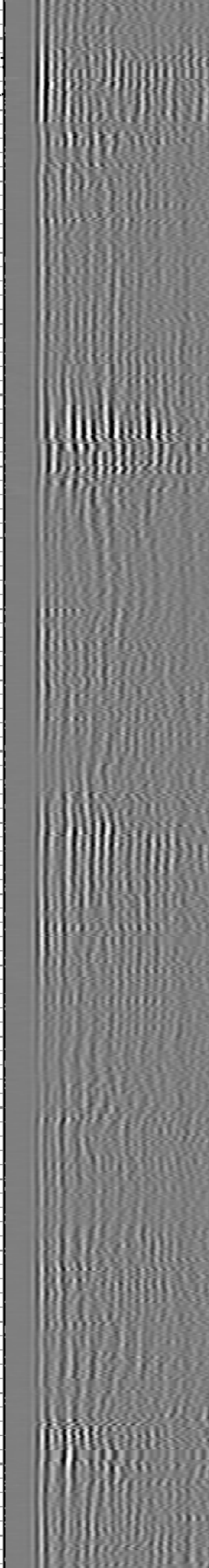
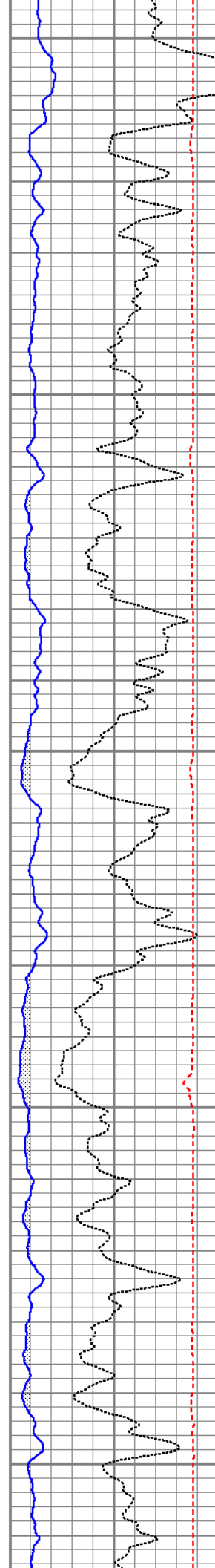


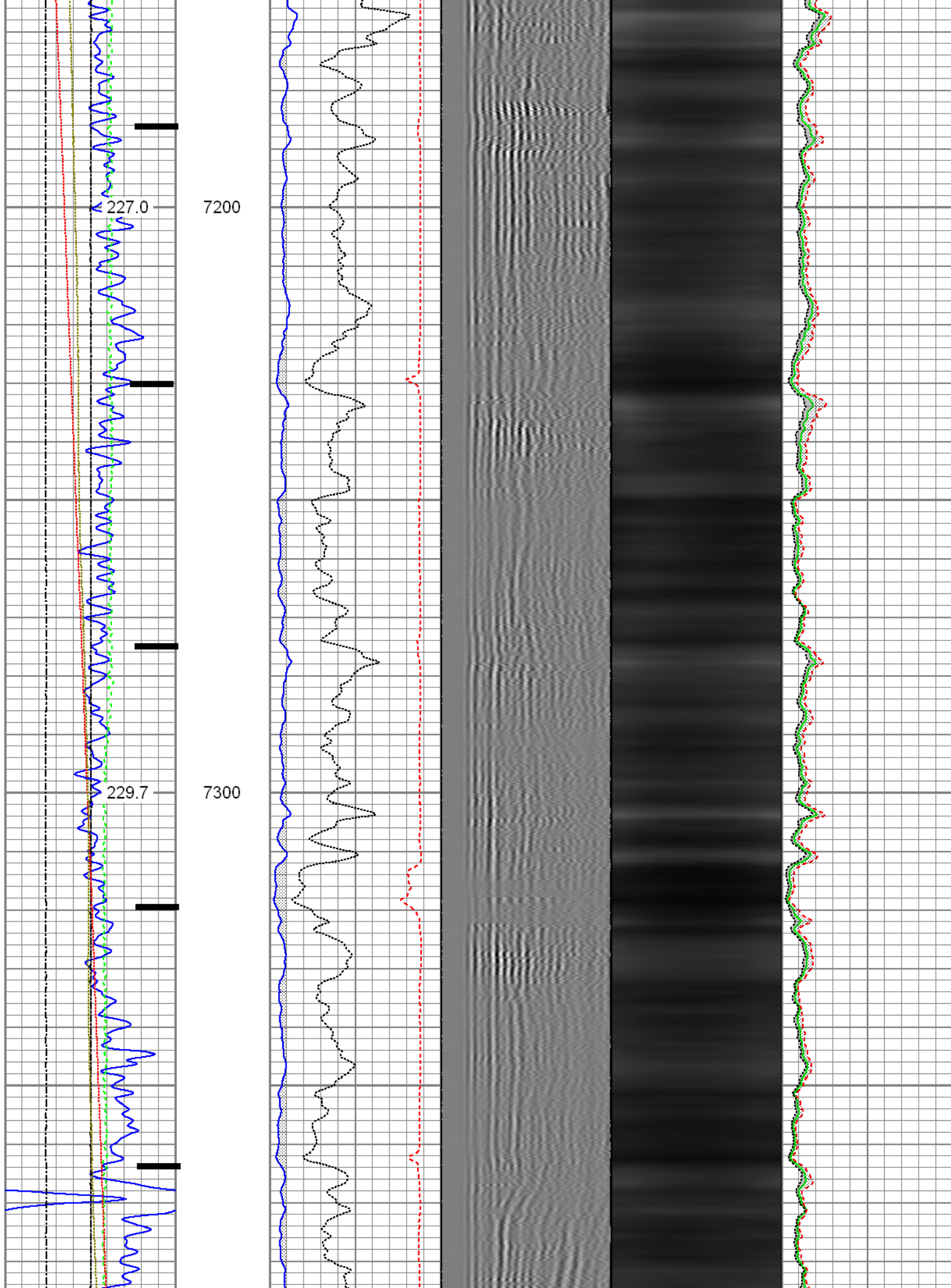
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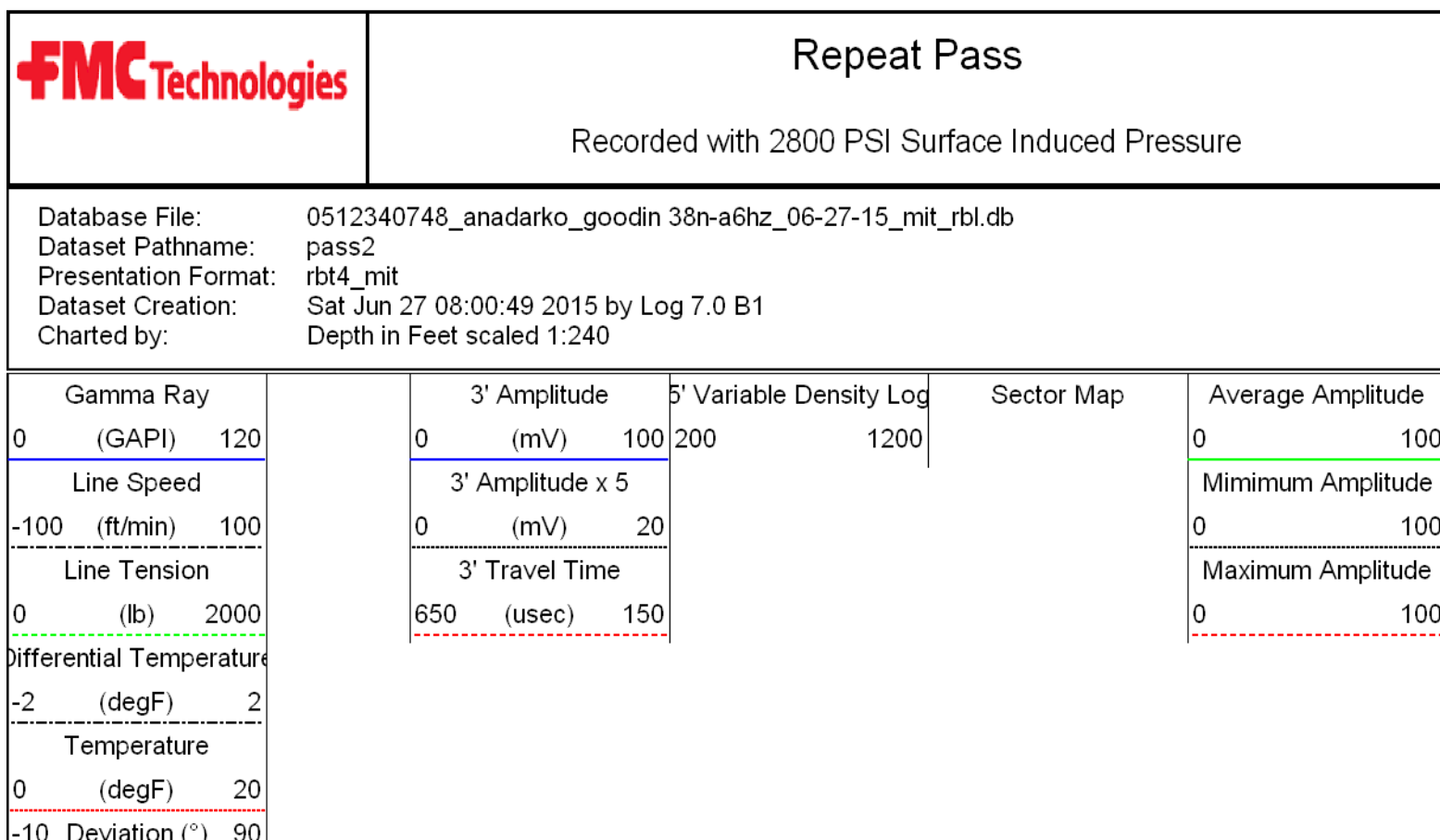
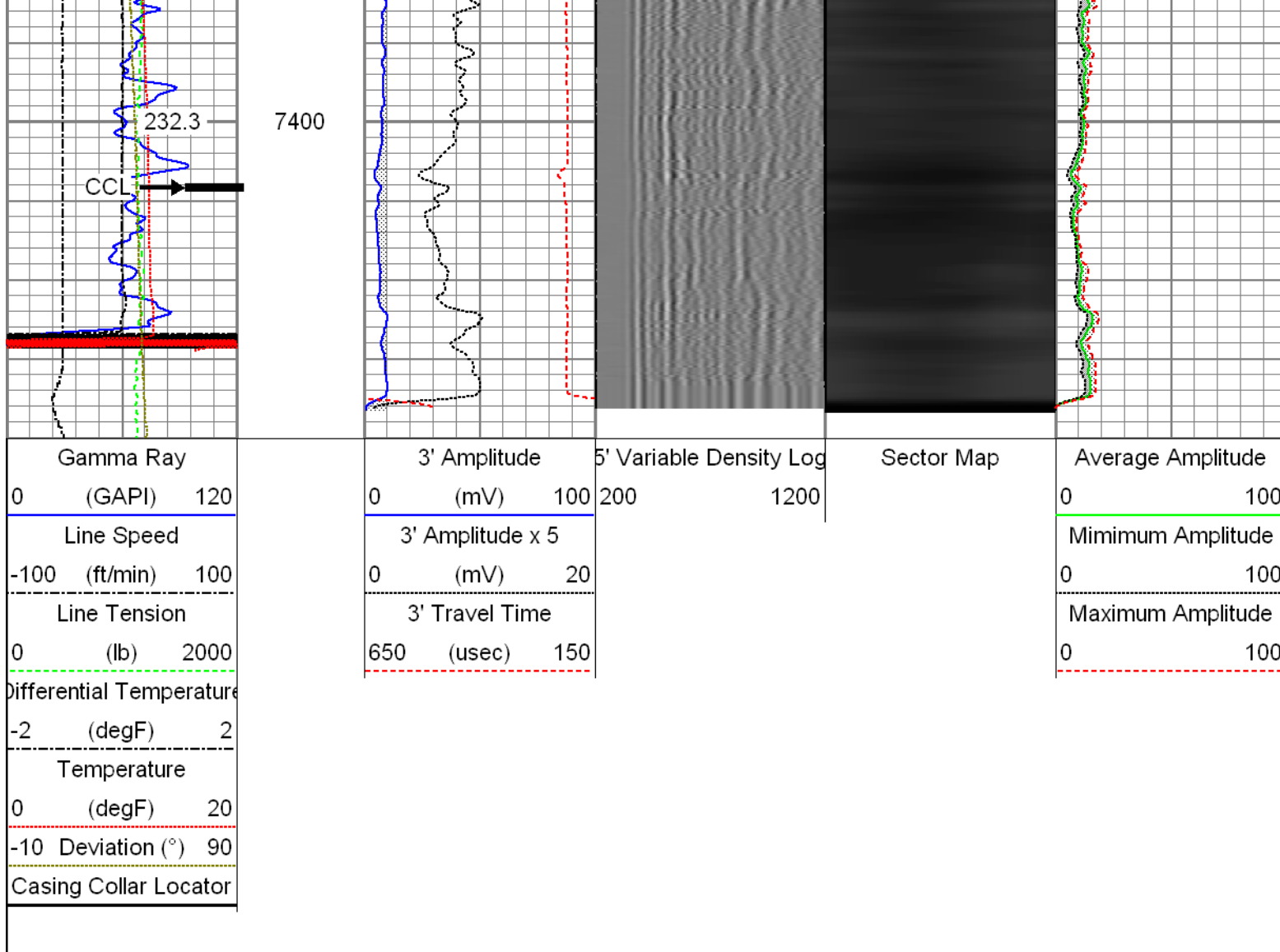
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224.2

7100



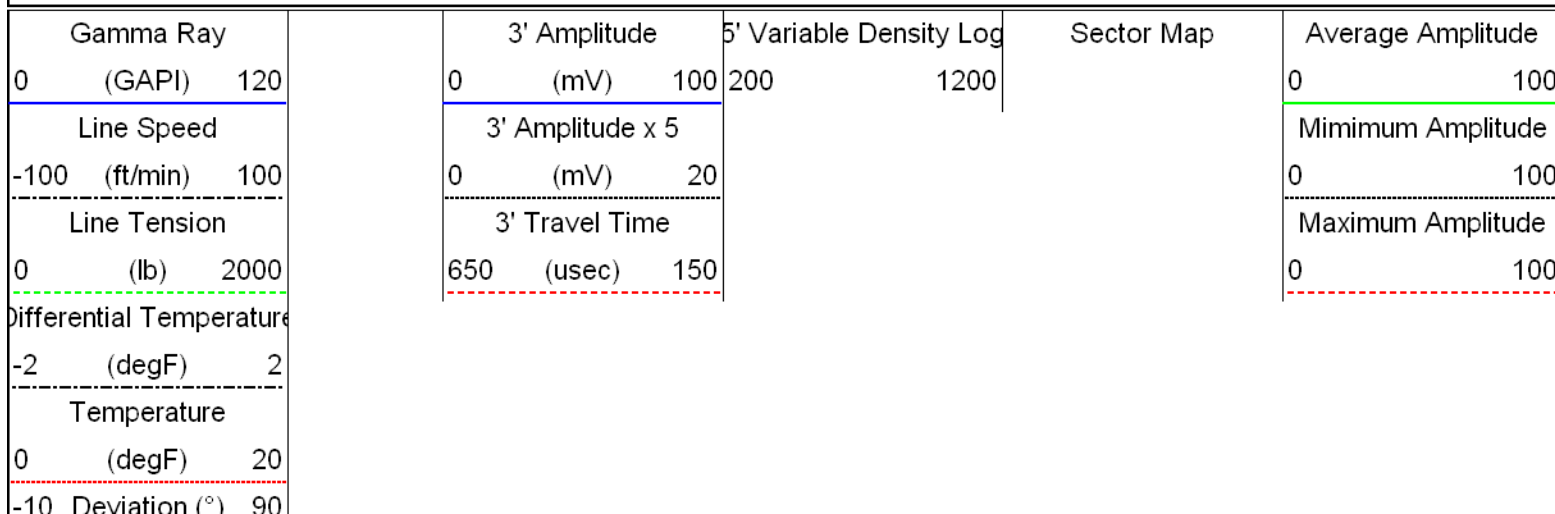


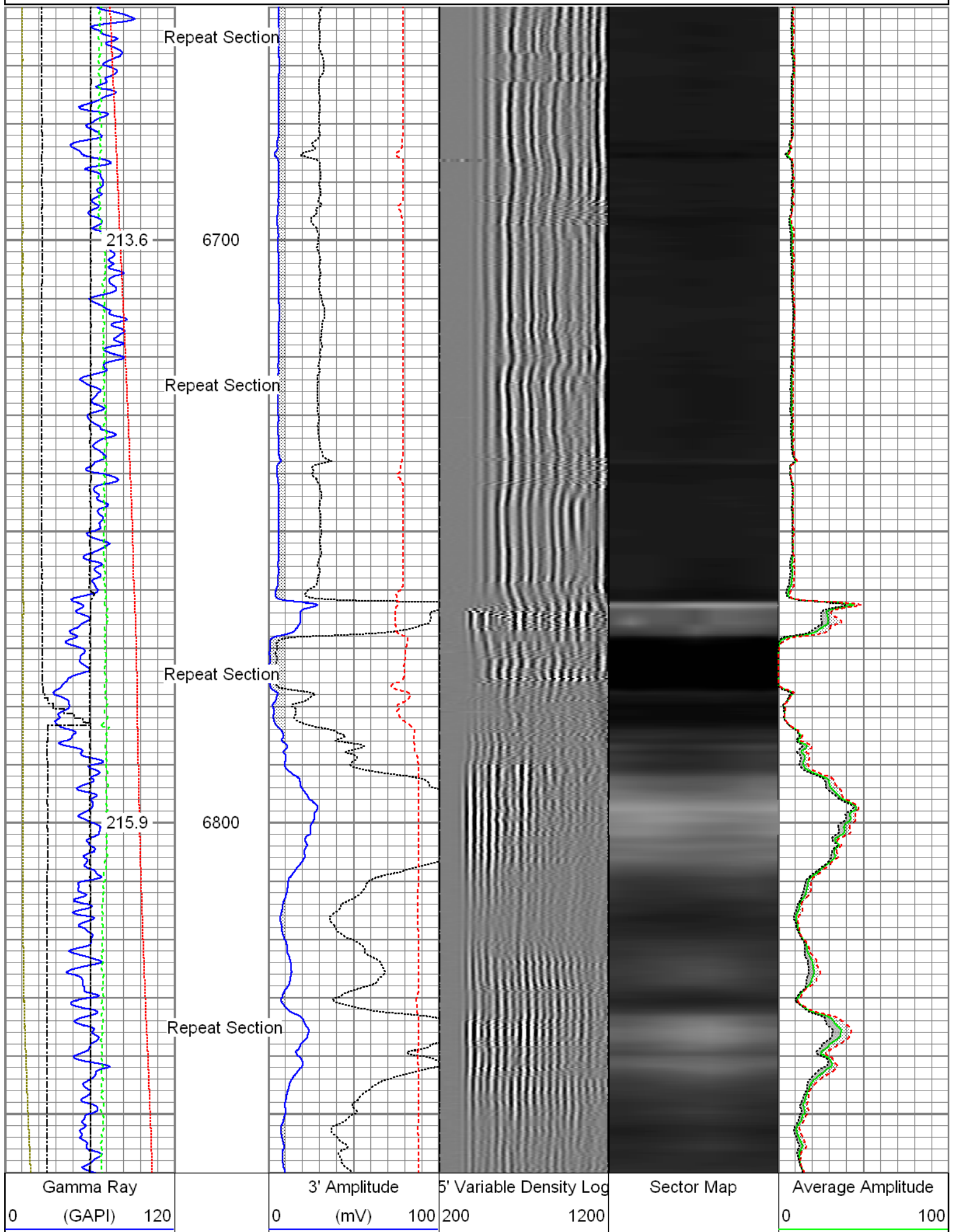


Repeat Pass


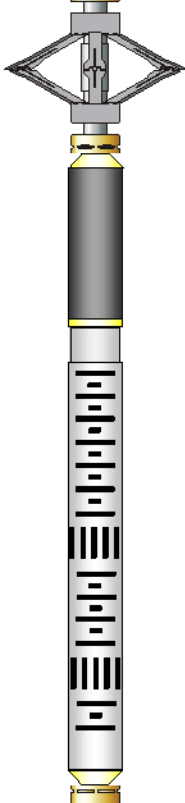
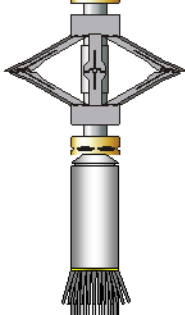
Recorded with 2800 PSI Surface Induced Pressure

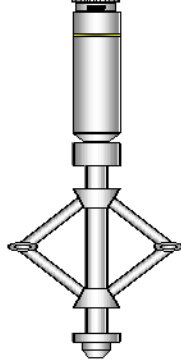
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 Dataset Pathname: pass2
 Presentation Format: rbt4_mit
 Dataset Creation: Sat Jun 27 08:00:49 2015 by Log 7.0 B1
 Charted by: Depth in Feet scaled 1:240





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
Differential Temperature		
-2 (degF) 2		
Temperature		
0 (degF) 20		
-10 Deviation (°) 90		

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
			GOpin-GOpin 2" GO Pin to GO Pin Connection	0.23	2.00	5.00
			UW_AGS-UW_AGS_001 (218874) 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 (10013899) Production Gamma Ray	1.93	1.69	9.50
TEMP	22.45		UW_PRT-UW_PRT_016 (10025100) Platinum Resistance Thermometer	1.04	1.69	5.20
			UW_PRC-DSSRAC (084) 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		UW_PRC-DSSRAC (083) 2-3/4" DSS 5 Arm Roller Centralizer	2.55	2.75	32.00
CBLROT	15.42					
WVF5FT	14.42					
MIT	5.41		UW MIT-UW MIT40 042 (10014703)	4.54	2.75	61.10

TSTAMP	0.00		40 Multifinger Imaging Tool			
			UW_PRC #4 -UW_PRC_057 (1101) Sondex 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00
			UW_BUL-UW_BUL_006 (218707) Sondex Ultrawire Bullnose Terminator	0.22	1.69	1.20
Dataset: 0512340748_Anadarko_Goodin 38N-A6HZ_06-27-15_MIT_RBL.db: field/well/run1/pass4 Total Length: 28.32 ft Total Weight: 329.50 lb O.D.: 3.13 in						

Calibration Report			
Database File:	0512340748_anadarko_goodin 38n-a6hz_06-27-15_mit_rbl.db		
Dataset Pathname:	pass4		
Dataset Creation:	Sat Jun 27 08:10:15 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: Sat Jun 27 07:30:17 2015							
Ring size:	4		5		6		7
(in)		Sens		Sens		Sens	
Finger 01:	1078	378.0	1456	384.0	1840	401.0	2241
Finger 02:	1039	384.0	1423	398.0	1821	422.0	2243
Finger 03:	1055	372.0	1427	382.0	1809	409.0	2218
Finger 04:	993	381.0	1374	408.0	1782	436.0	2218
Finger 05:	1023	363.0	1386	375.0	1761	404.0	2165
Finger 06:	1024	375.0	1399	392.0	1791	422.0	2213
Finger 07:	1024	372.0	1396	385.0	1781	412.0	2193
Finger 08:	1002	376.0	1378	401.0	1779	429.0	2208
Finger 09:	1073	380.0	1453	385.0	1838	409.0	2247
Finger 10:	1037	374.0	1411	388.0	1799	413.0	2212
Finger 11:	1017	375.0	1392	391.0	1783	425.0	2208
Finger 12:	1099	372.0	1471	370.0	1841	387.0	2228
Finger 13:	1048	369.0	1417	388.0	1805	417.0	2222
Finger 14:	1028	384.0	1412	405.0	1817	427.0	2244
Finger 15:	985	380.0	1365	409.0	1774	432.0	2206
Finger 16:	1040	375.0	1415	397.0	1812	416.0	2228
Finger 17:	1070	371.0	1441	388.0	1829	402.0	2231
Finger 18:	1105	376.0	1481	388.0	1860	402.0	2271

Finger 18:	1103	376.0	1481	388.0	1869	402.0	2271
Finger 19:	1062	381.0	1443	398.0	1841	411.0	2252
Finger 20:	978	379.0	1357	407.0	1764	420.0	2184
Finger 21:	1073	376.0	1449	391.0	1840	407.0	2247
Finger 22:	1054	380.0	1434	399.0	1833	410.0	2243
Finger 23:	1090	384.0	1474	400.0	1874	408.0	2282
Finger 24:	1058	351.0	1409	371.0	1780	384.0	2164
Finger 25:	1063	387.0	1450	405.0	1855	409.0	2264
Finger 26:	1024	371.0	1395	397.0	1792	405.0	2197
Finger 27:	1191	396.0	1587	398.0	1985	397.0	2382
Finger 28:	1067	364.0	1431	384.0	1815	397.0	2212
Finger 29:	1010	375.0	1385	399.0	1784	415.0	2199
Finger 30:	997	376.0	1373	401.0	1774	421.0	2195
Finger 31:	1209	409.0	1618	411.0	2029	419.0	2448
Finger 32:	984	374.0	1358	383.0	1741	401.0	2142
Finger 33:	1081	399.0	1480	412.0	1892	430.0	2322
Finger 34:	957	372.0	1329	390.0	1719	416.0	2135
Finger 35:	1118	402.0	1520	409.0	1929	425.0	2354
Finger 36:	1034	365.0	1399	374.0	1773	396.0	2169
Finger 37:	1104	402.0	1506	405.0	1911	424.0	2335
Finger 38:	1073	374.0	1447	378.0	1825	400.0	2225
Finger 39:	1062	370.0	1432	368.0	1800	391.0	2191
Finger 40:	976	390.0	1366	409.0	1775	441.0	2216

Segmented Cement Bond Log Calibration Report						
Serial Number:		1063				
Tool Model:		UW_RBT_004				
Calibration Casing Diameter:		7.000	in			
Calibration Depth:		-76.119	ft			
Master Calibration, performed Sat Jun 27 07:31:34 2015:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	-0.003	1.000	0.800	62.165	61.204	0.961
5FT	-0.006	1.000	0.800	62.165	60.993	1.172
S1	-0.004	1.000	0.000	100.000	99.635	0.365
S2	-0.004	1.000	0.000	100.000	99.635	0.365
S3	-0.004	1.000	0.000	100.000	99.635	0.365
S4	-0.004	1.000	0.000	100.000	99.628	0.372
S5	-0.002	1.000	0.000	100.000	99.760	0.240
S6	-0.003	1.000	0.000	100.000	99.720	0.280
S7	-0.002	1.000	0.000	100.000	99.756	0.244
S8	-0.002	1.000	0.000	100.000	99.755	0.245

Temperature Calibration Report					
Serial Number:		10025100			
Tool Model:		UW_PRT_016			
Performed:		Wed Feb 11 13:47:59 2015			
Point #	Reading			Reference	
1	13249.00	cps		68.00	degF
2	18454.00	cps		104.00	degF
3	29735.00	cps		176.00	degF
4	41457.00	cps		248.00	degF
5	52851.00	cps		320.00	degF
6	59128.00	cps		356.00	degF
7		cps			degF
8		cps			degF
9					

9
10

cps
cps

degF
degF

Gamma Ray Calibration Report

Serial Number:	10013899	
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, L.P.
Well	Goodin 38N-A6HZ
Field	Wattenberg
County	Weld
State	Colorado