



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company Kerr-McGee Oil & Gas Onshore, L.P.		Company Kerr-McGee Oil & Gas Onshore, L.P.	
Well Jester 8N-14HZ		Well Jester 8N-14HZ	
Field Wattenberg		Field Wattenberg	
County Weld		County Weld	
State Colorado		State Colorado	
Location:		API #: 05-123-41350	
SEC 15 TWP 3N RGE 67W		Other Services Gauge Ring MIT	
Permanent Datum		Ground Level	
Log Measured From Kelly Bushing		Elevation 4793'	
Drilling Measured From Kelly Bushing		20 FT	
Elevation		K.B. 4813'	
		D.F. 4812'	
		G.L. 4793'	
Date 03-SEP-2015			
Run Number Two			
Depth Driller 17007 FT			
Depth Logger 6980 FT			
Bottom Logged Interval 6975 FT			
Top Log Interval Surface			
Open Hole Size 8.750"			
Type Fluid Water			
Density / Viscosity 8.34 lbm/gal			
Max. Recorded Temp. 230°F			
Estimated Cement Top Surface			
Time Well Ready ROA			
Time Logger on Bottom 09:23			
Equipment Number HD-0119			
Location Fort Lupton, CO			
Recorded By Andrew Olmsted			
Witnessed By Josh Gustafson			
Borehole Record			
Tubing Record			
Run Number		To	
Bit From		Size	
		Weight	
		From	
		To	
Casing Record		Size (in)	
Surface Casing		Wgt (lbs/ft)	
Intermediate #1		Grade	
Intermediate #2		Top	
Liner		Bottom	
4 1/2		834 FT	
11.6		7352 FT	
P-110 LTC		6291 FT	
		17003 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 6291 FT
Adjusted -23 FT to correlate to liner top
Gauge Ring/Junk Basket ran to 7050 FT
Log ran from as deep as possible in heel 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: y:\shared\logs_for_processing\shared\shared\0512341350_anadarko_jester 8n-14hz_09-03-15_mit_r

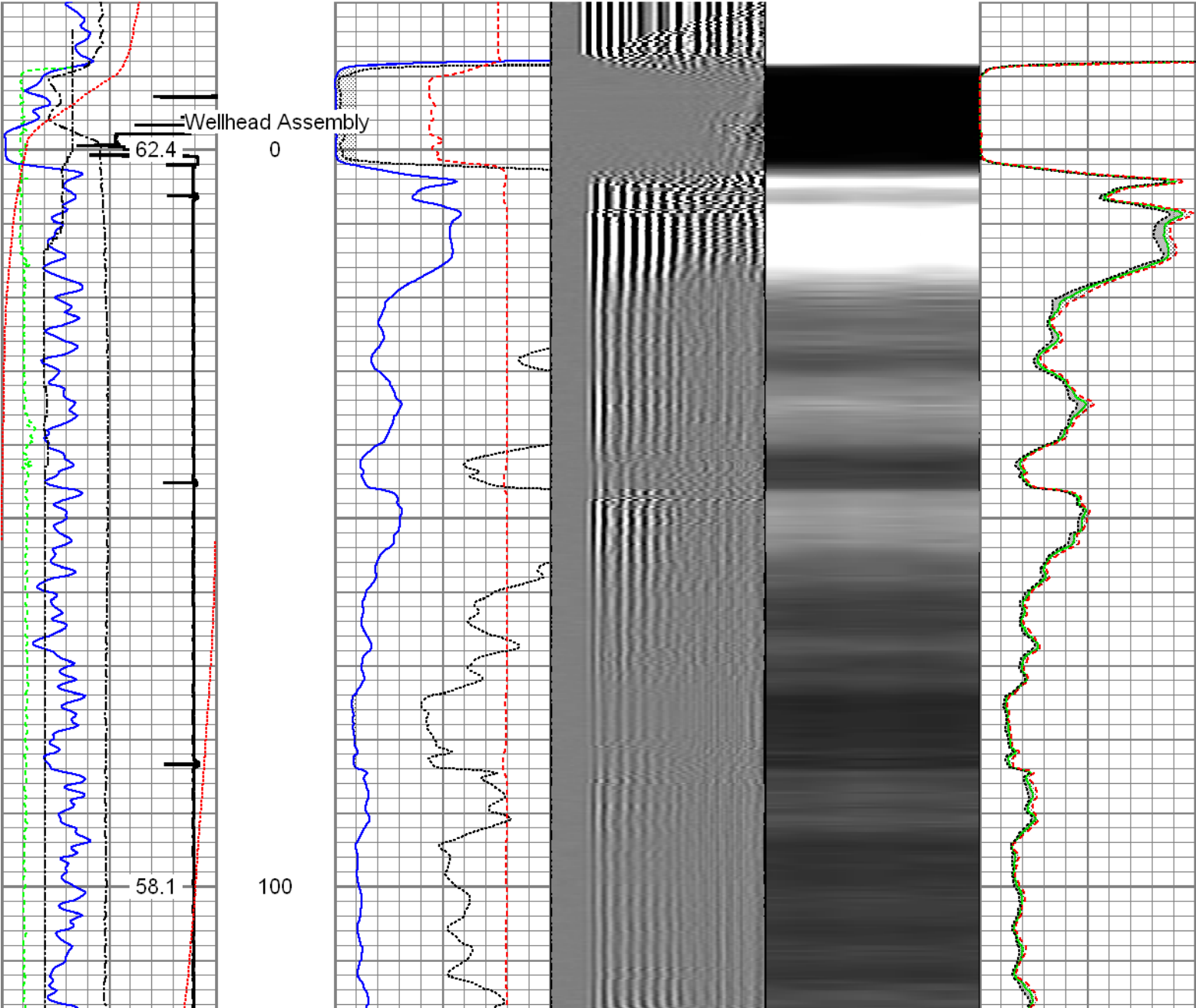
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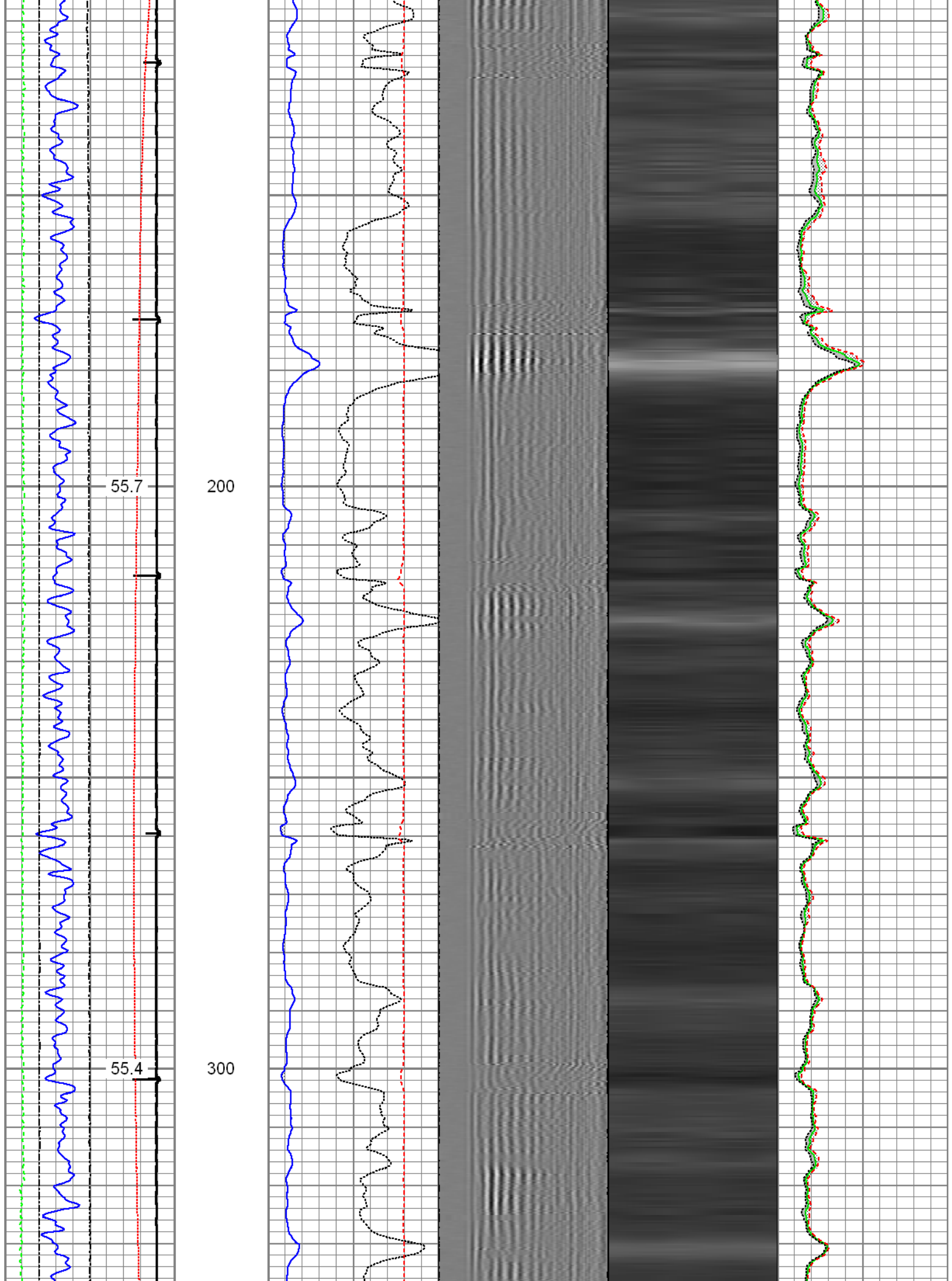
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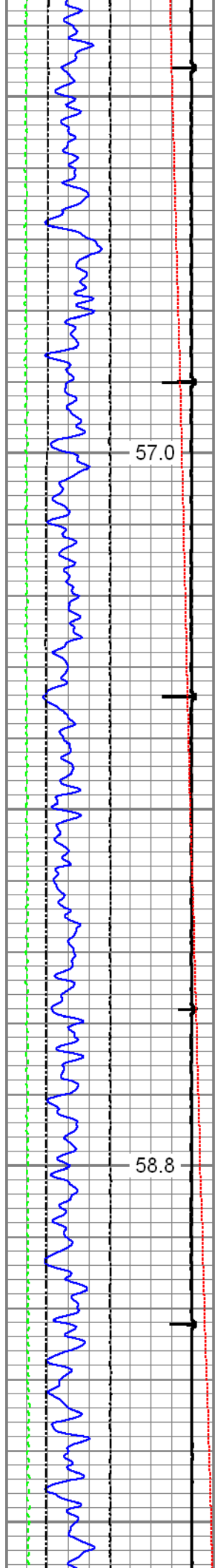
Dataset Creation: Thu Sep 03 09:23:05 2015 by Log 7.0 B1

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				
Differential Temperature				
-2 (degF) 2				
Temperature				
0 (degF) 20				

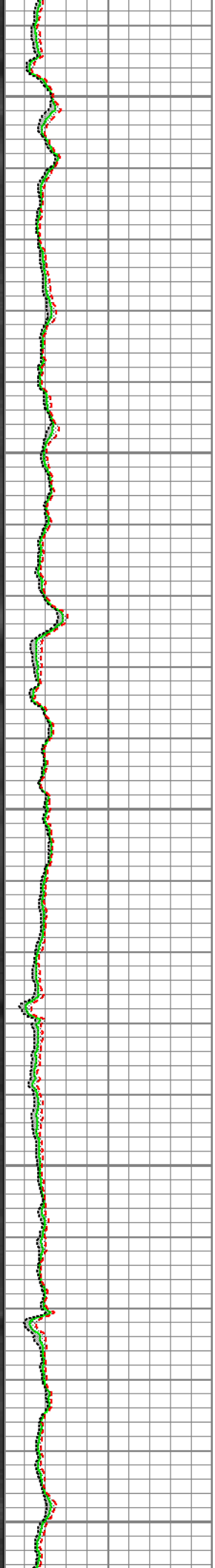
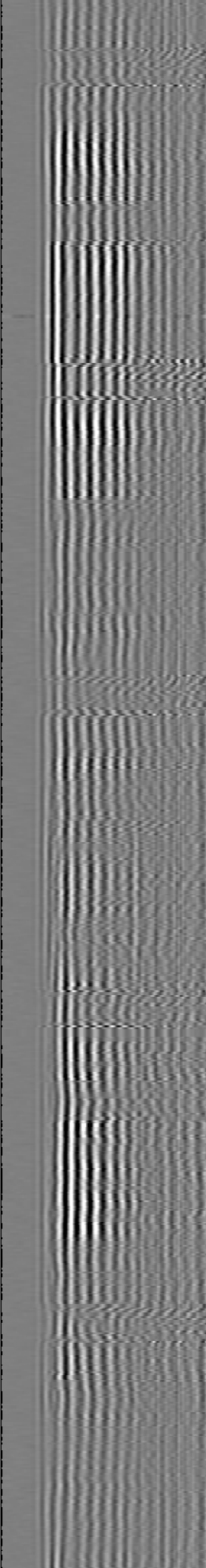
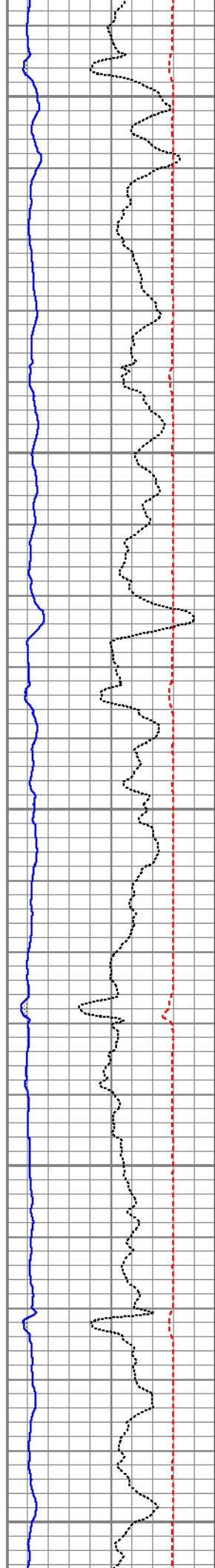


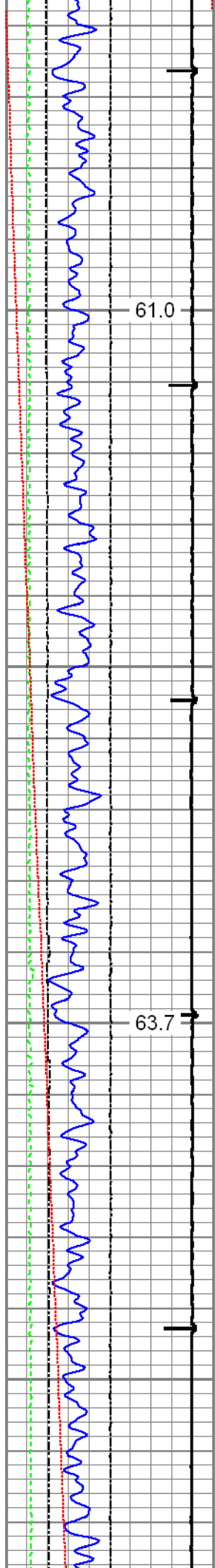




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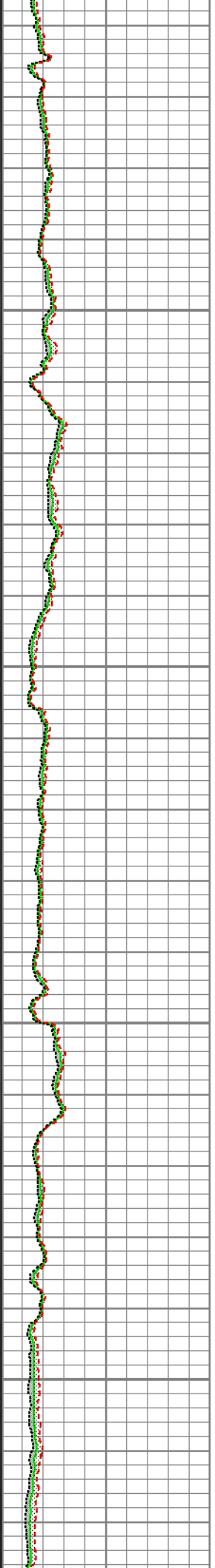
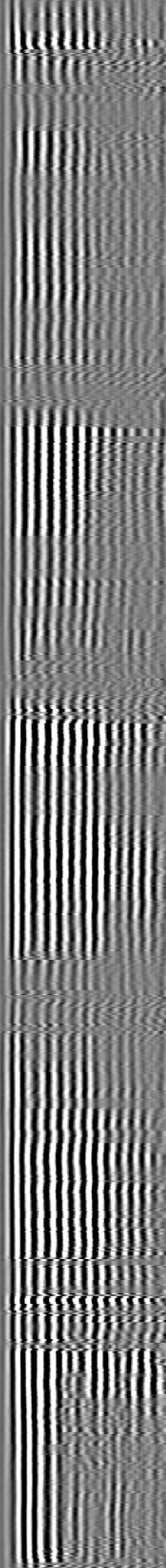
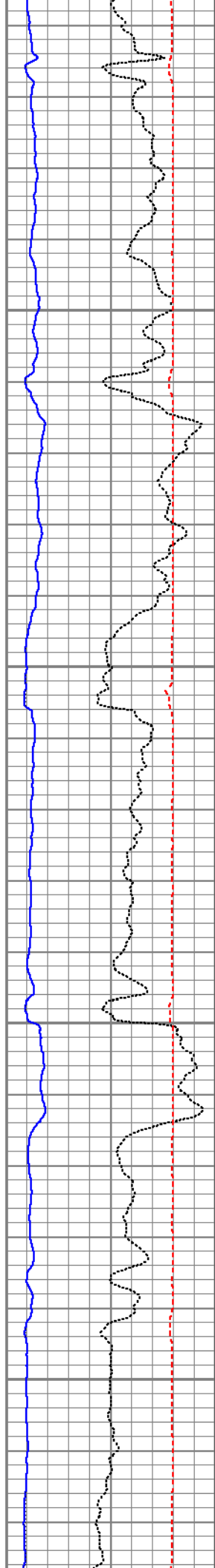
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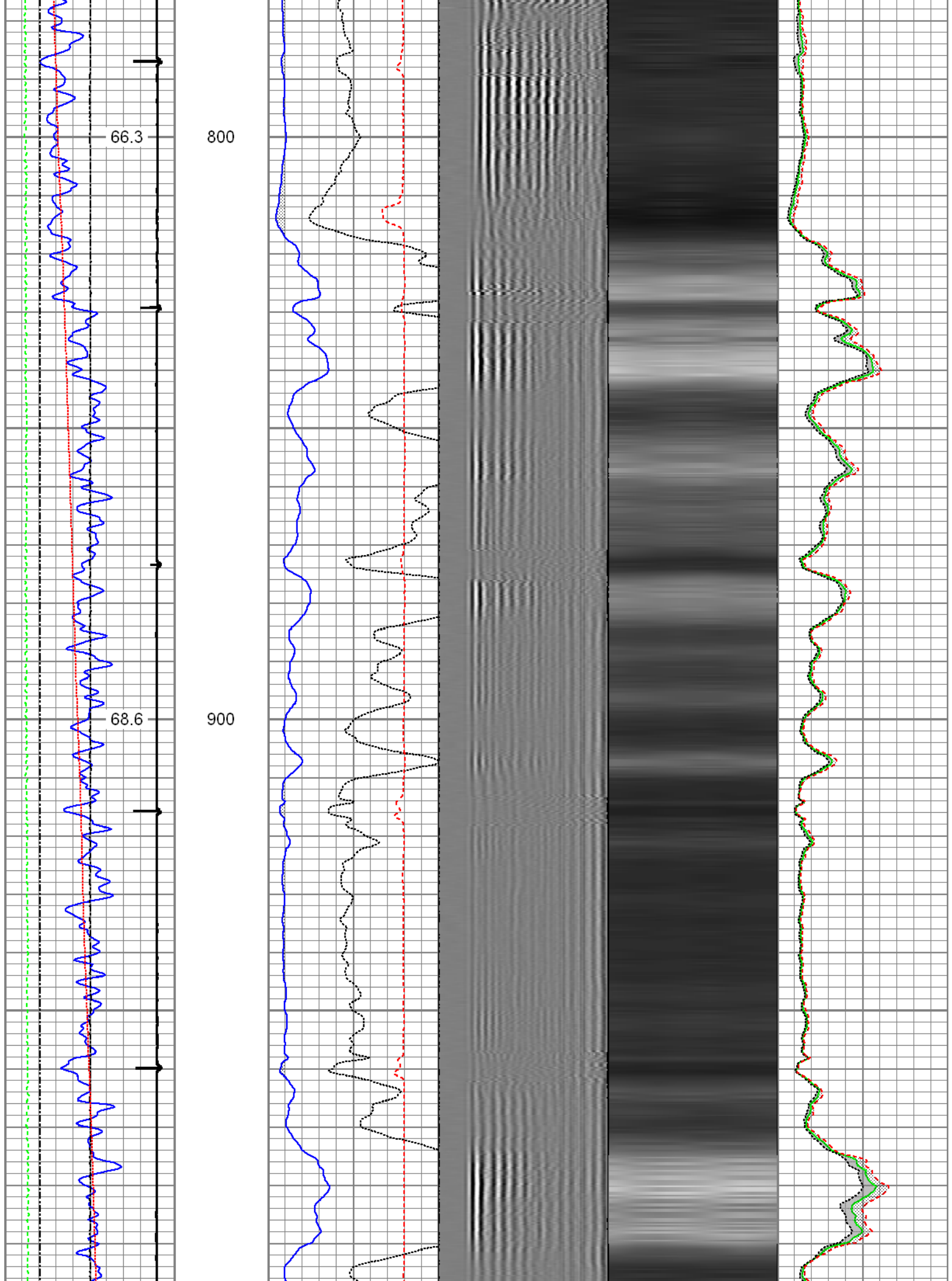


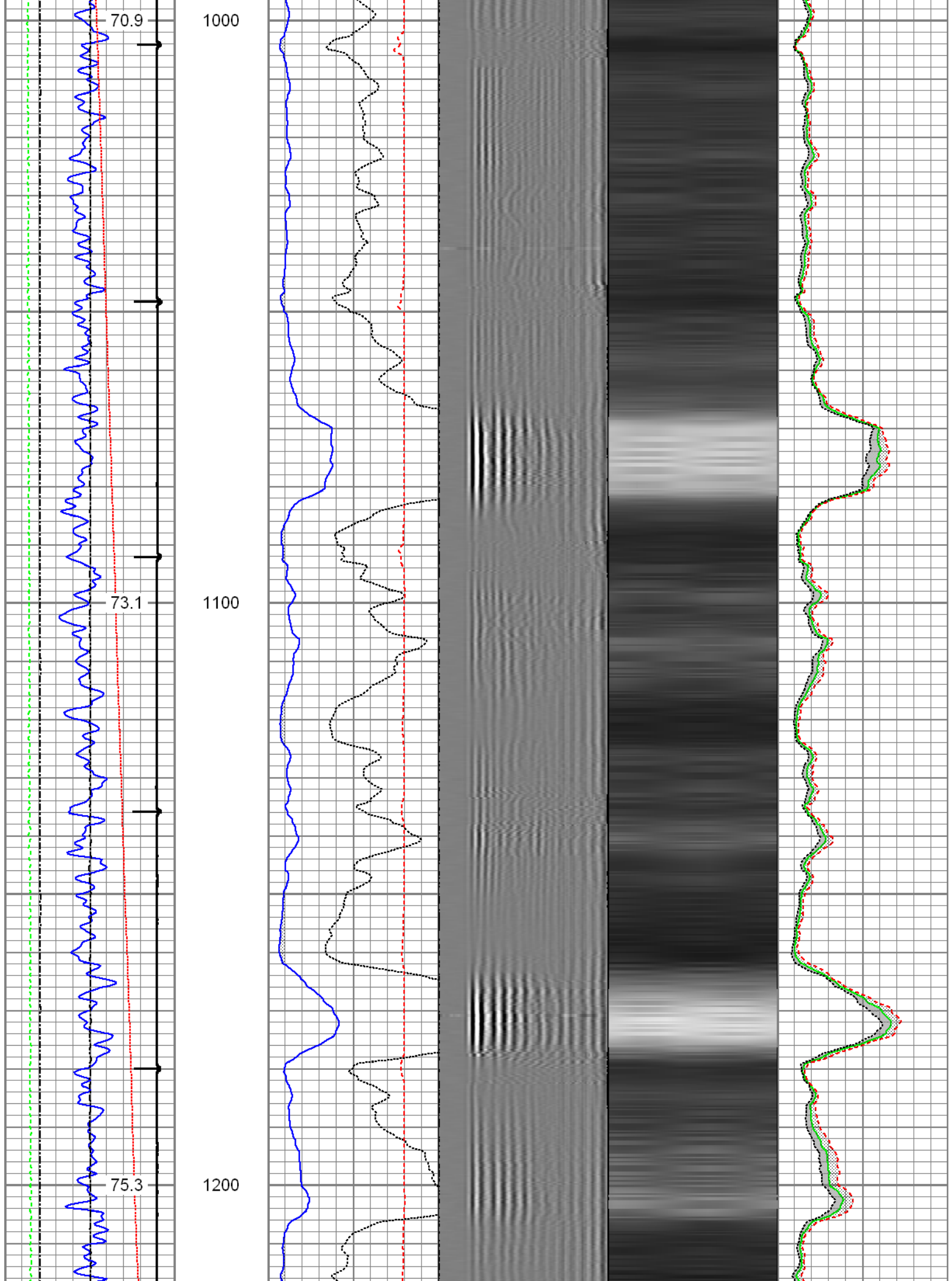


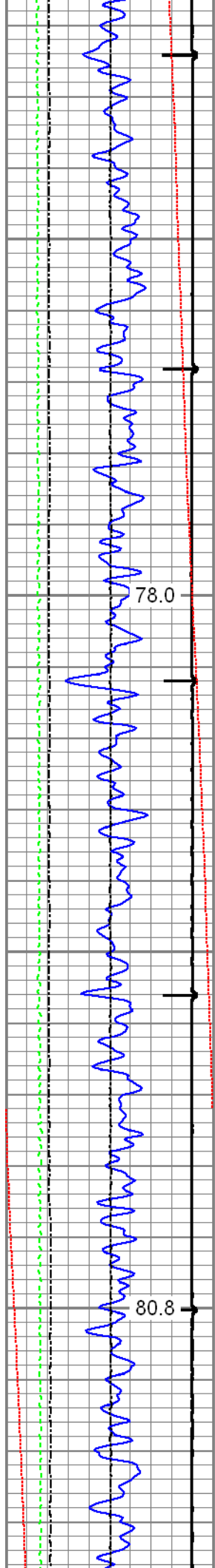
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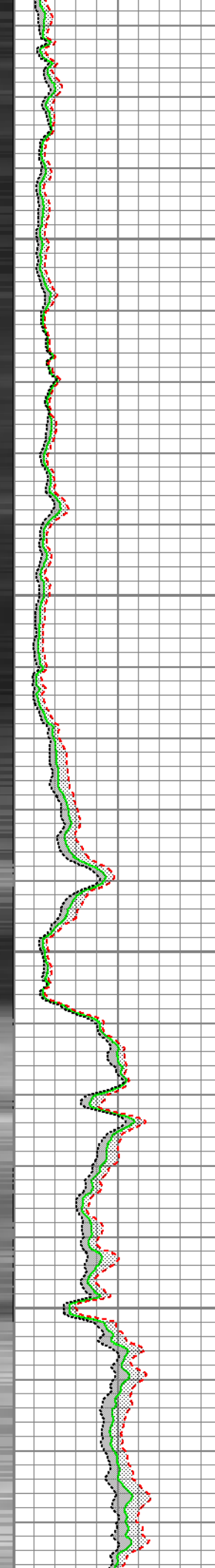
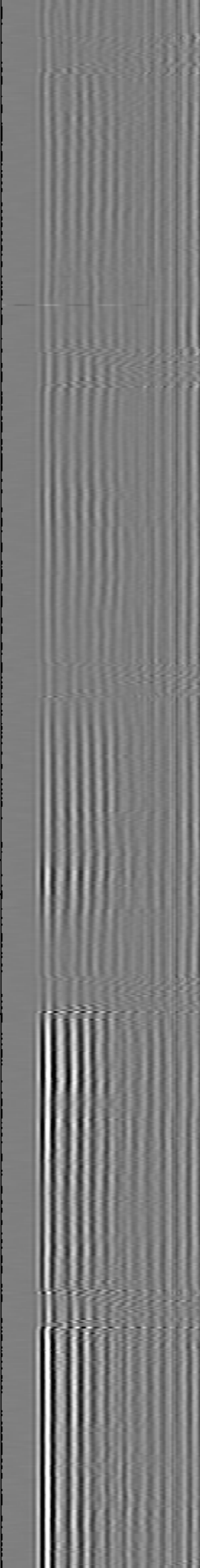
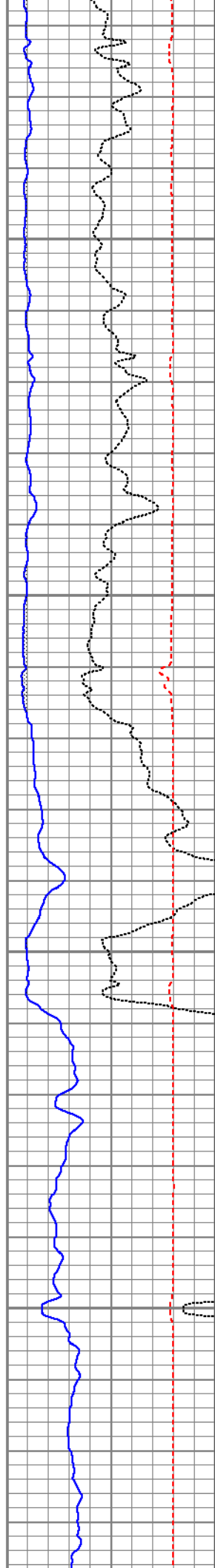


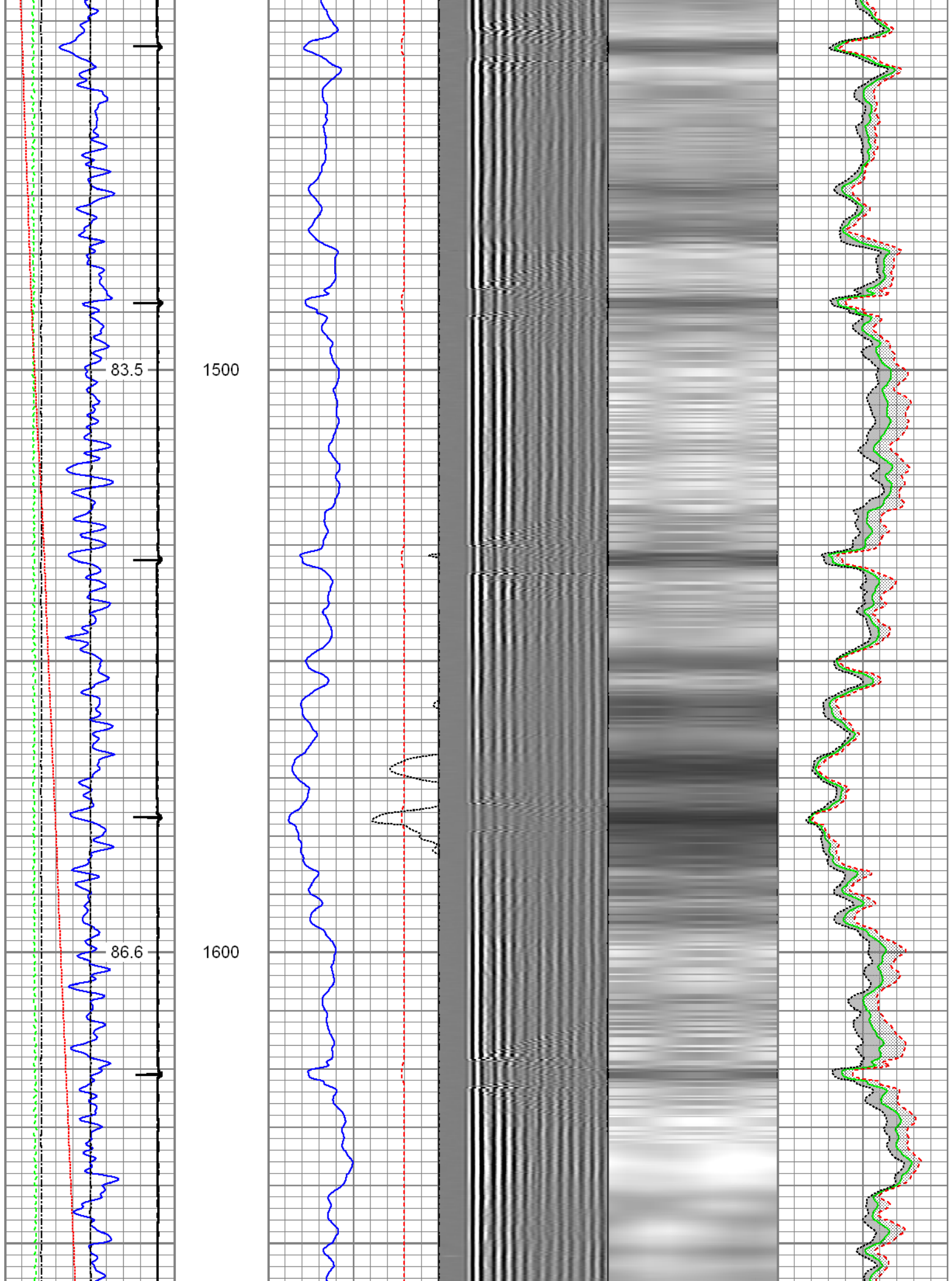


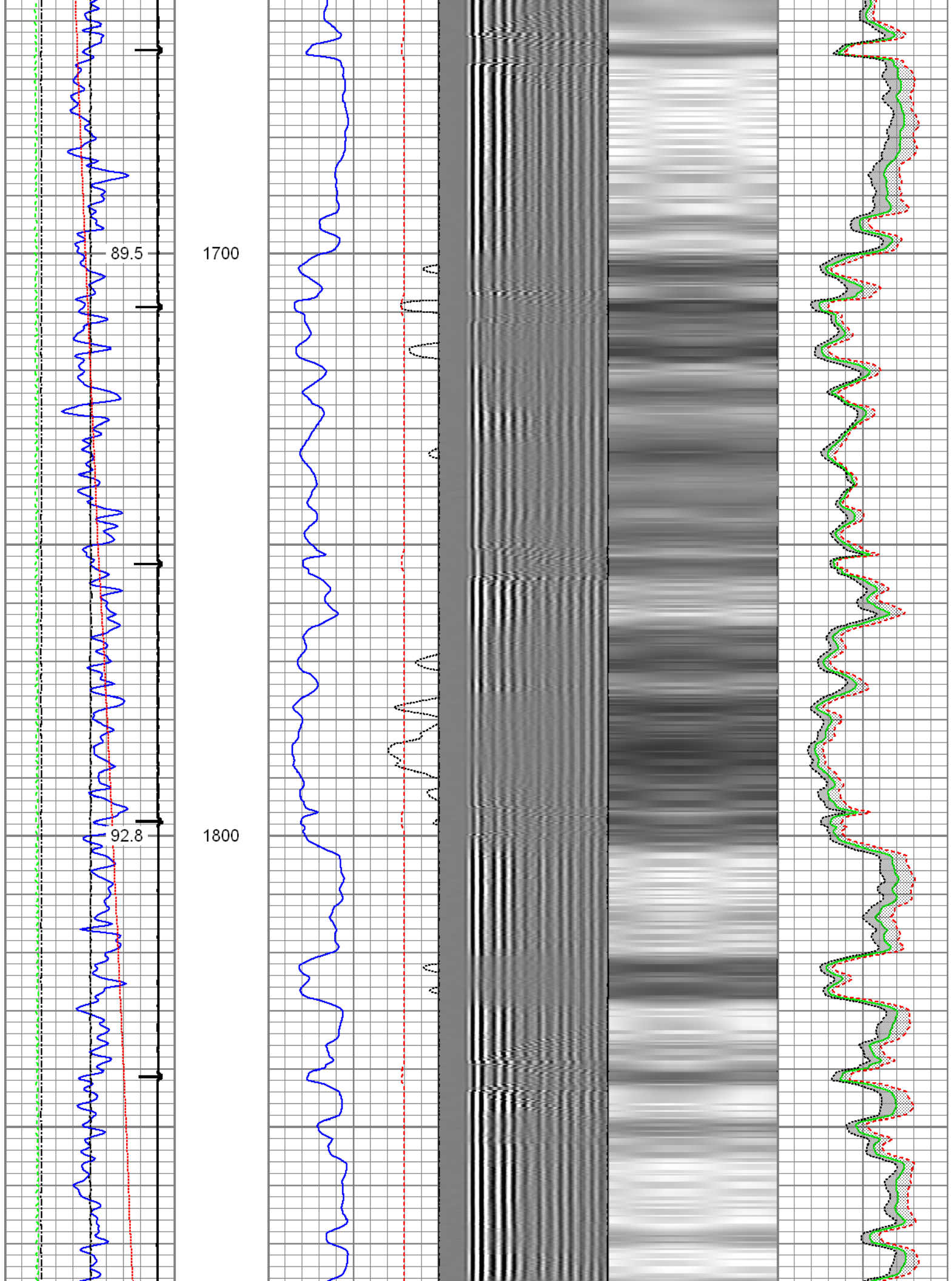


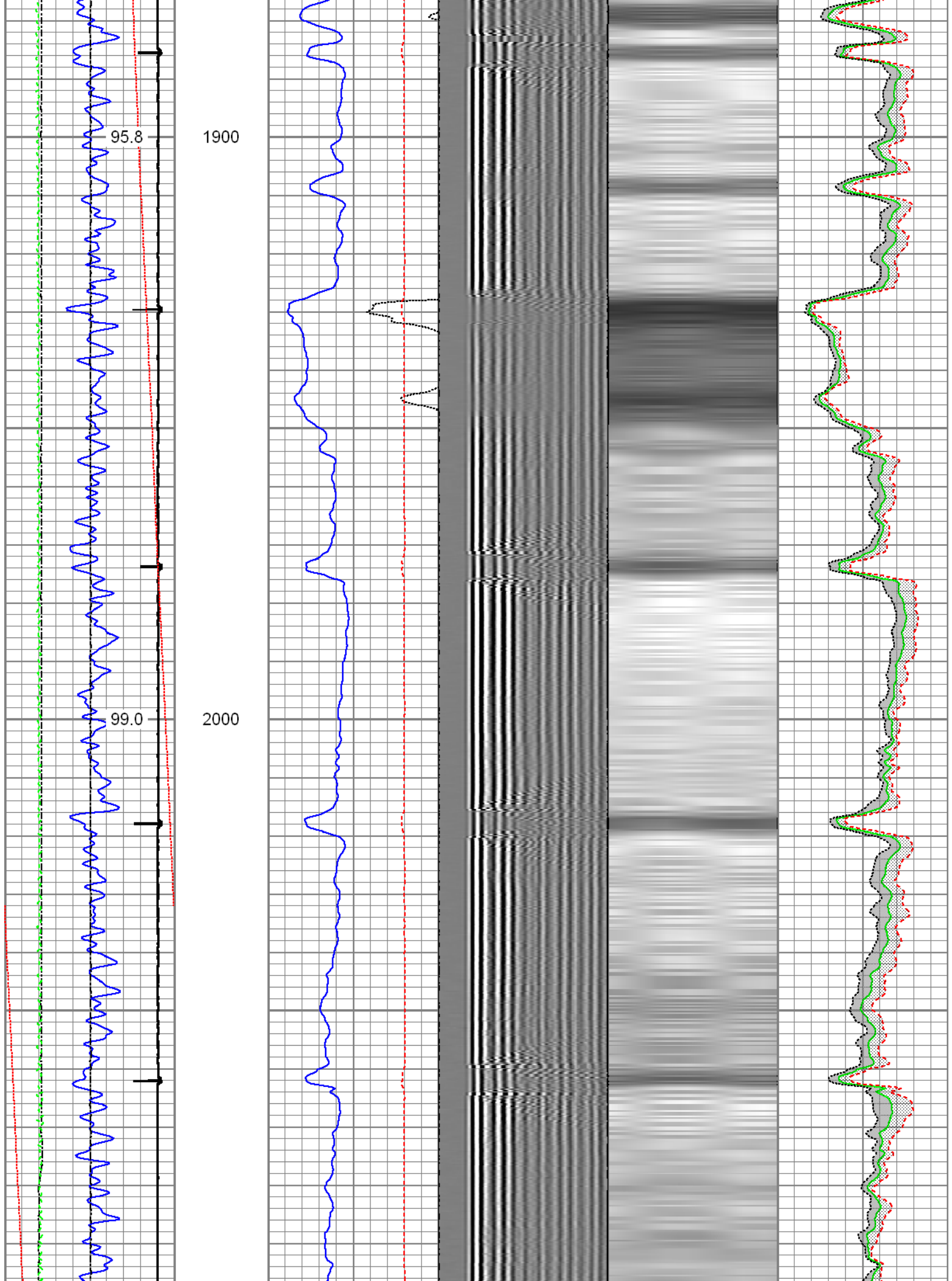
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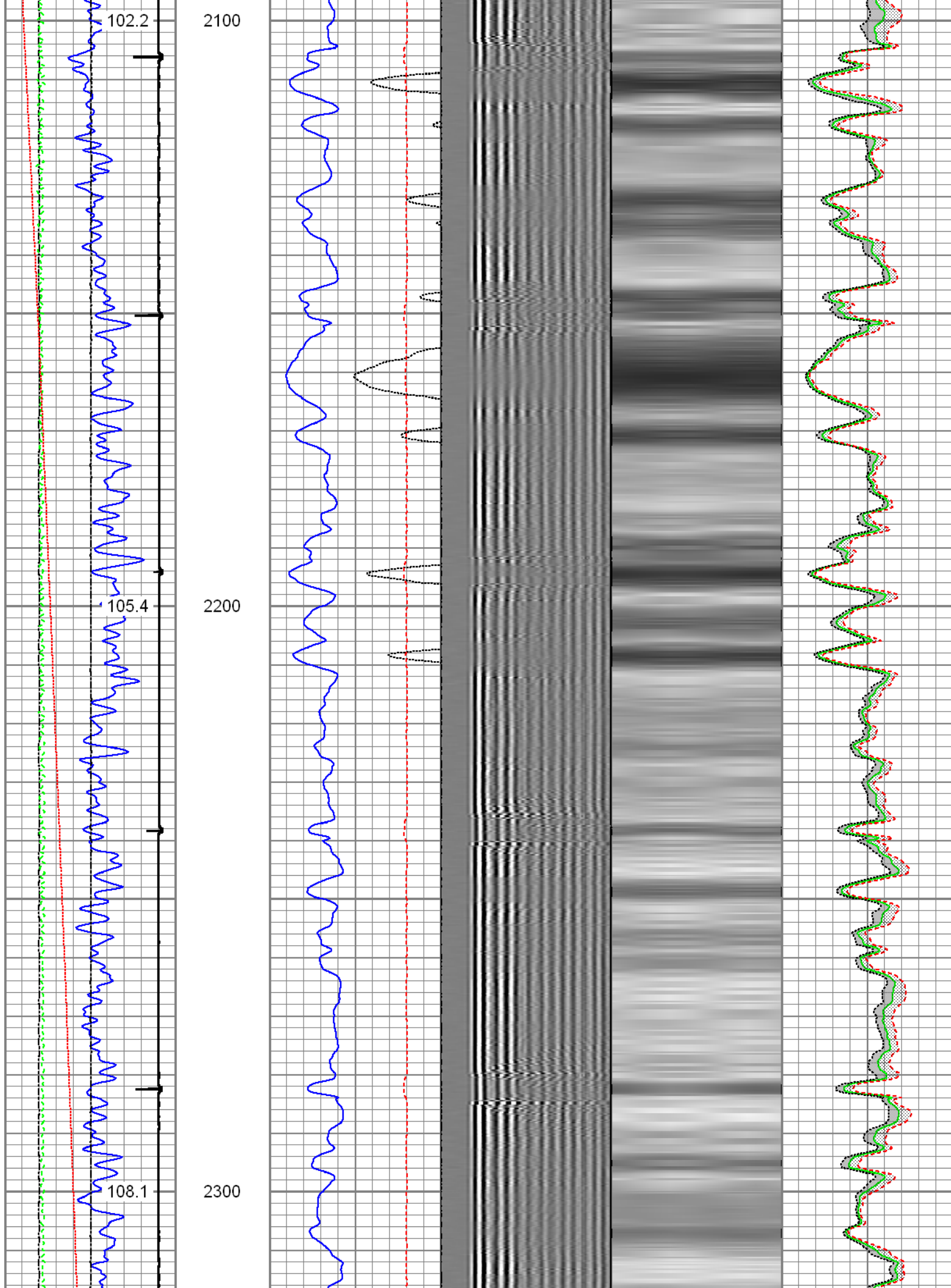
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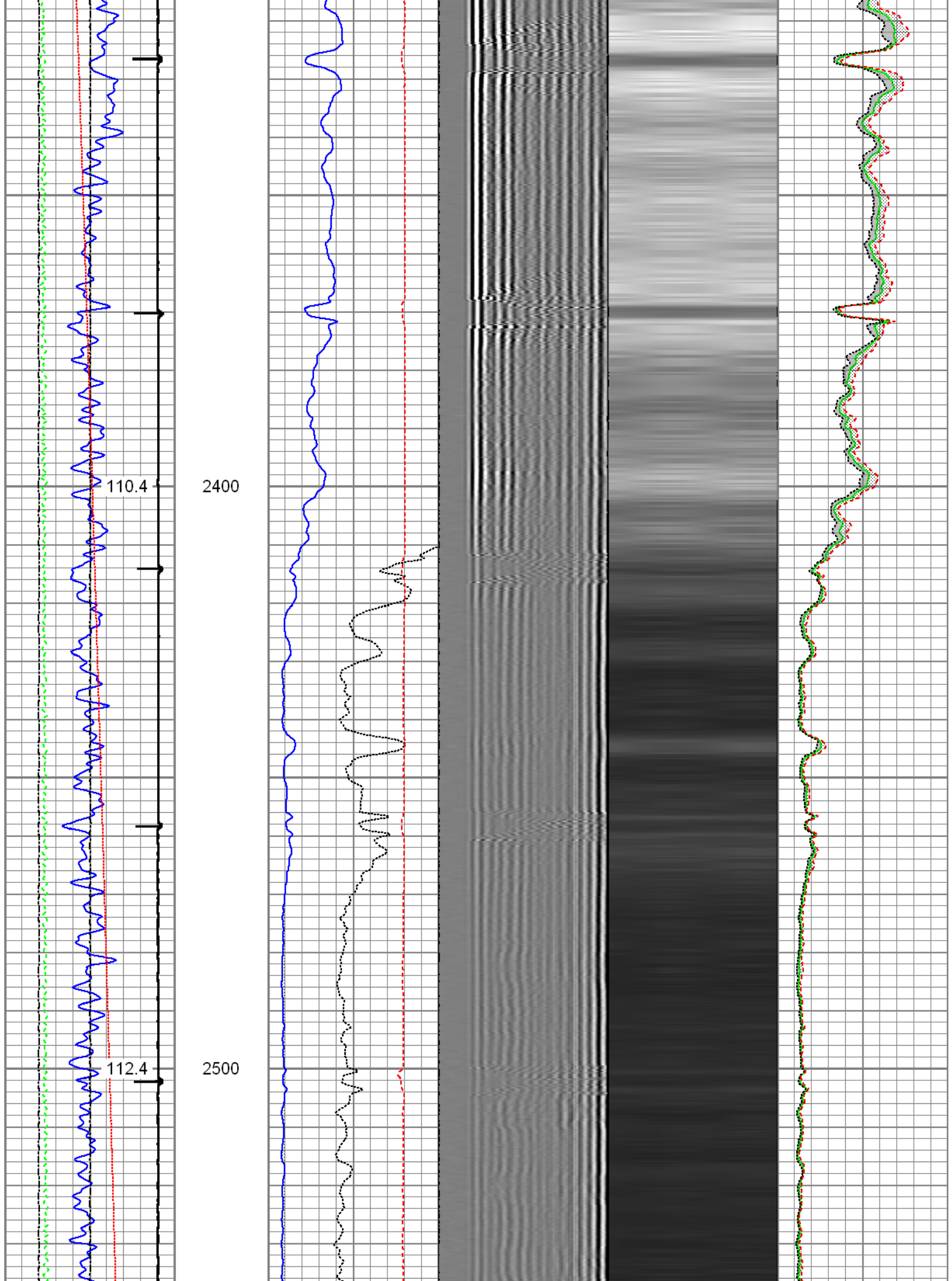


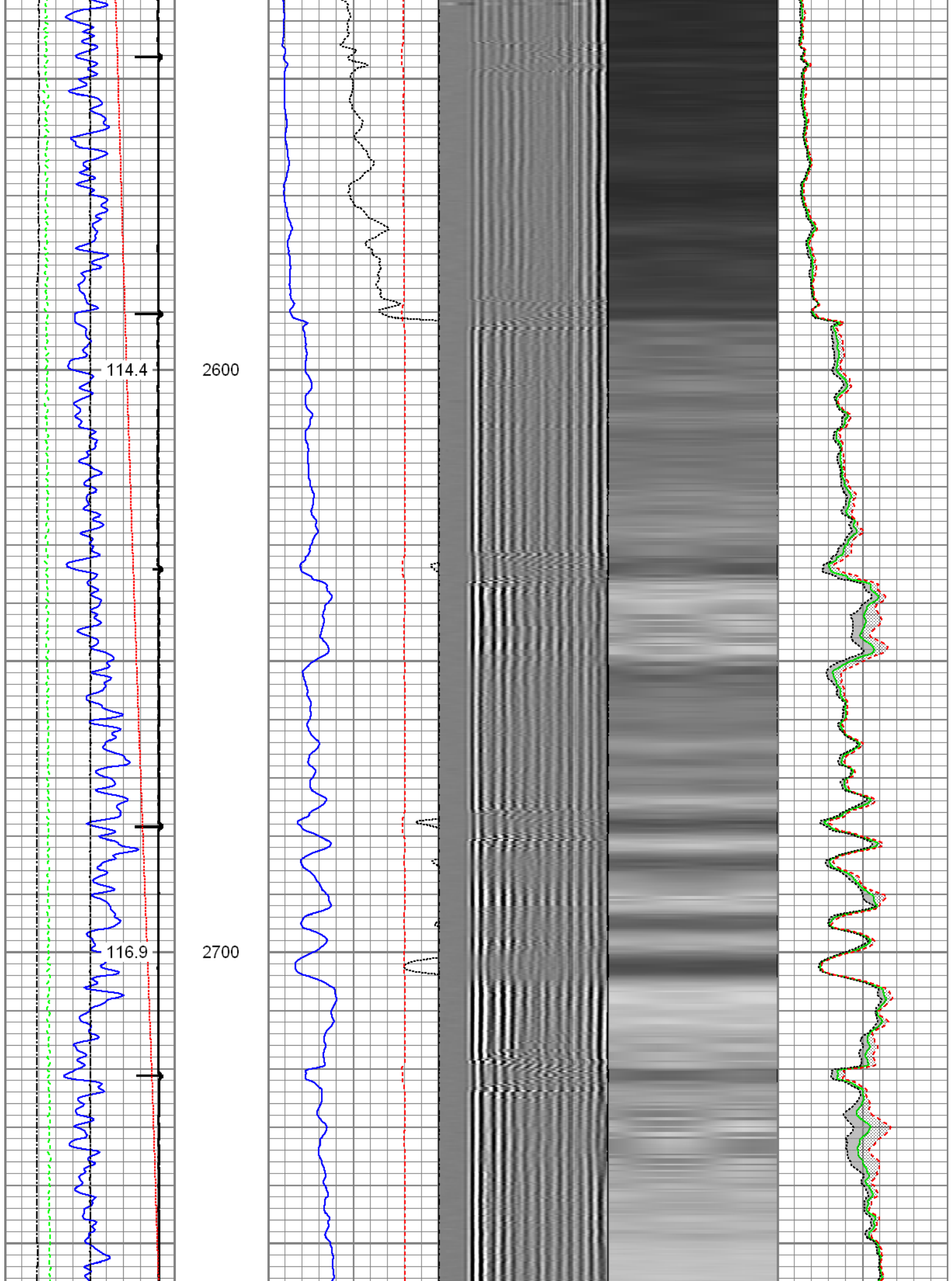


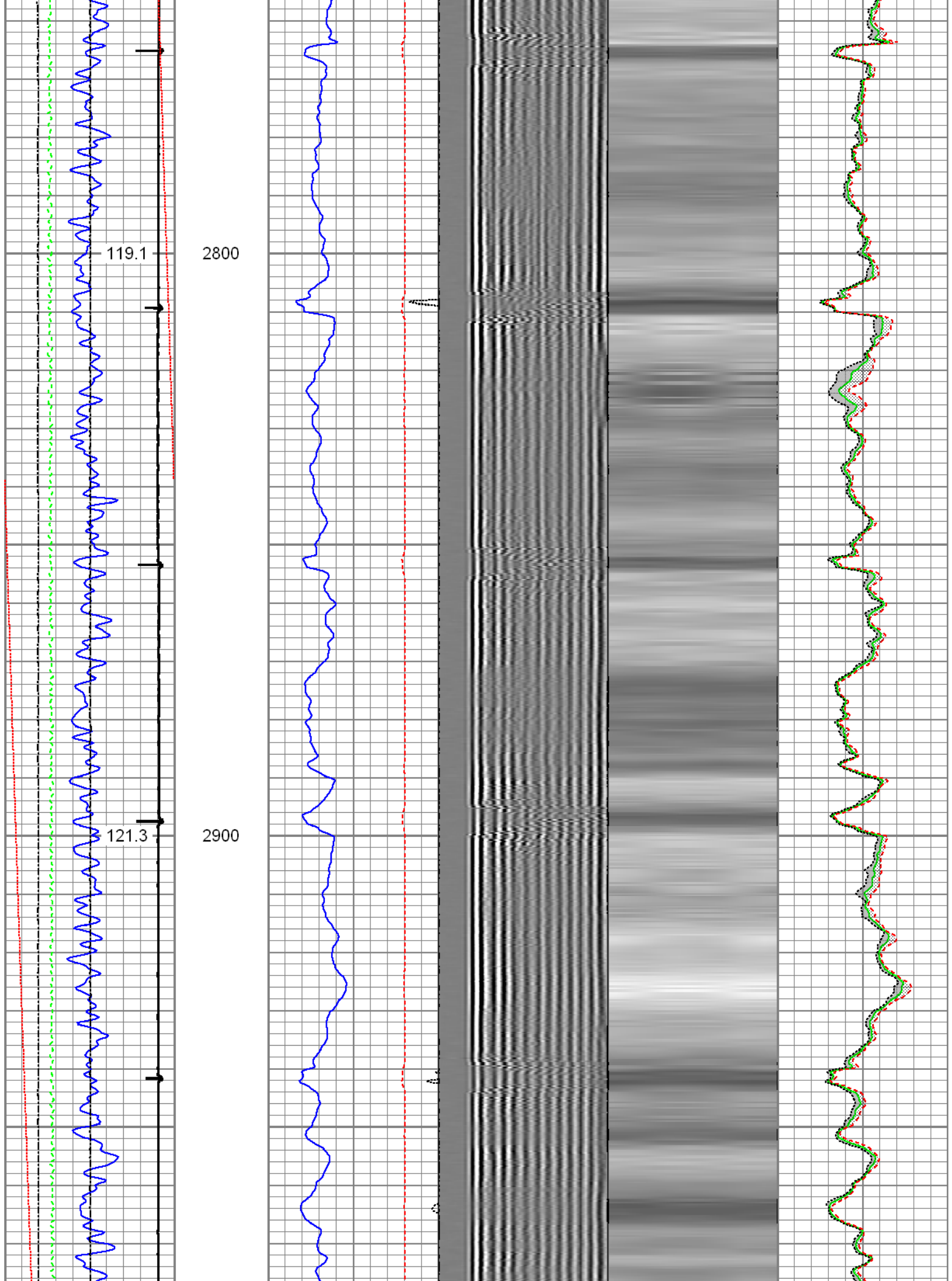


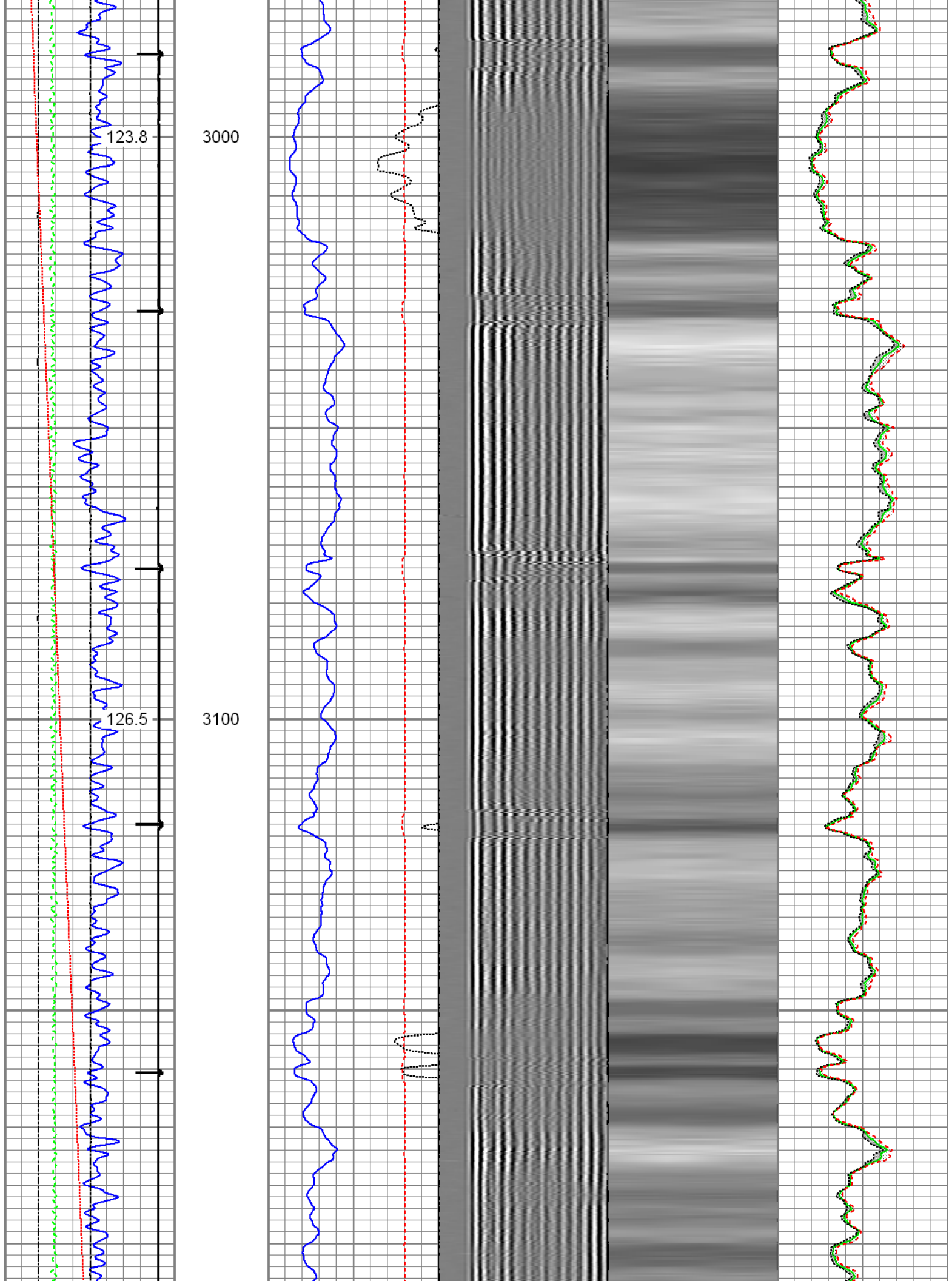


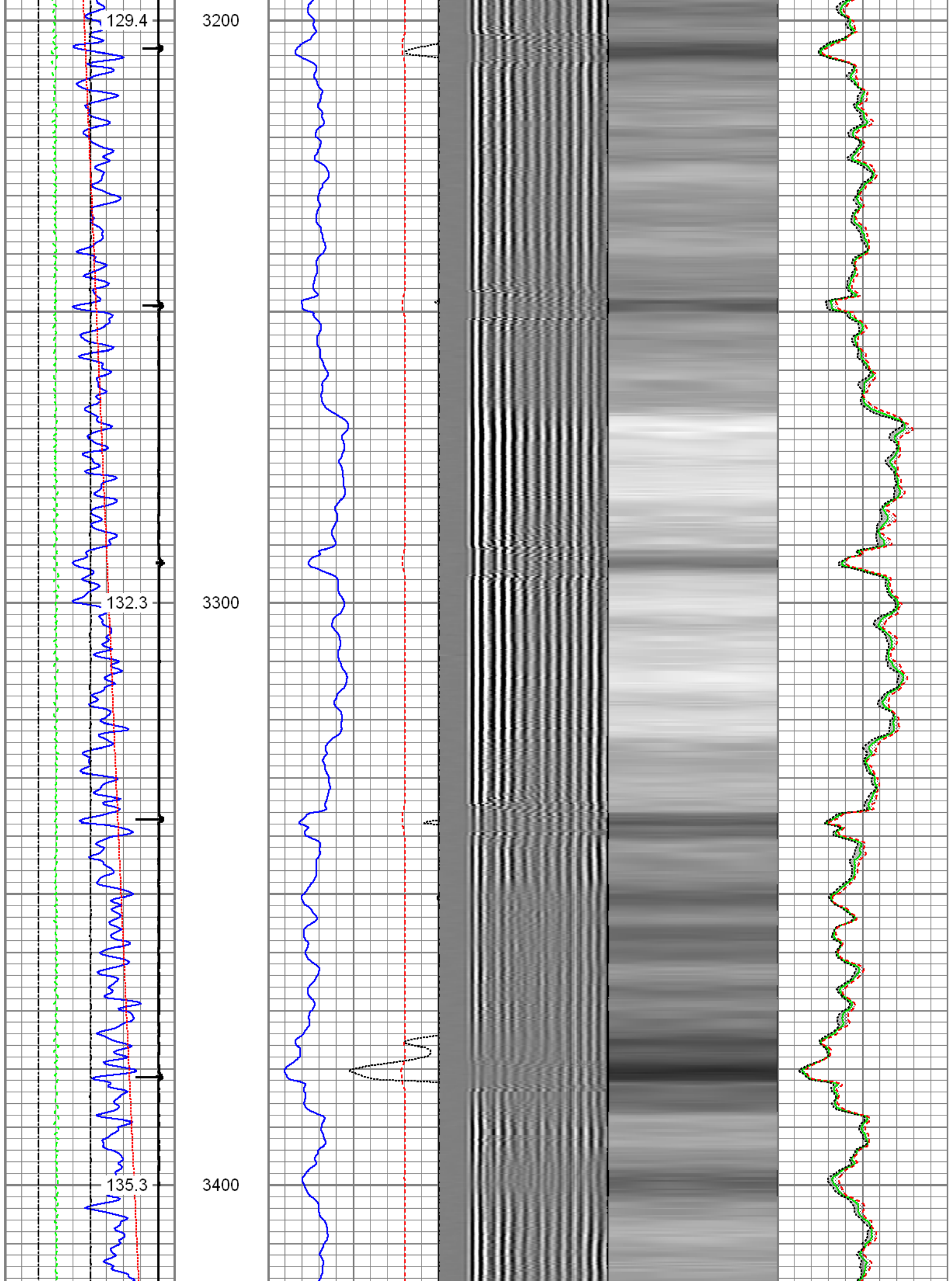


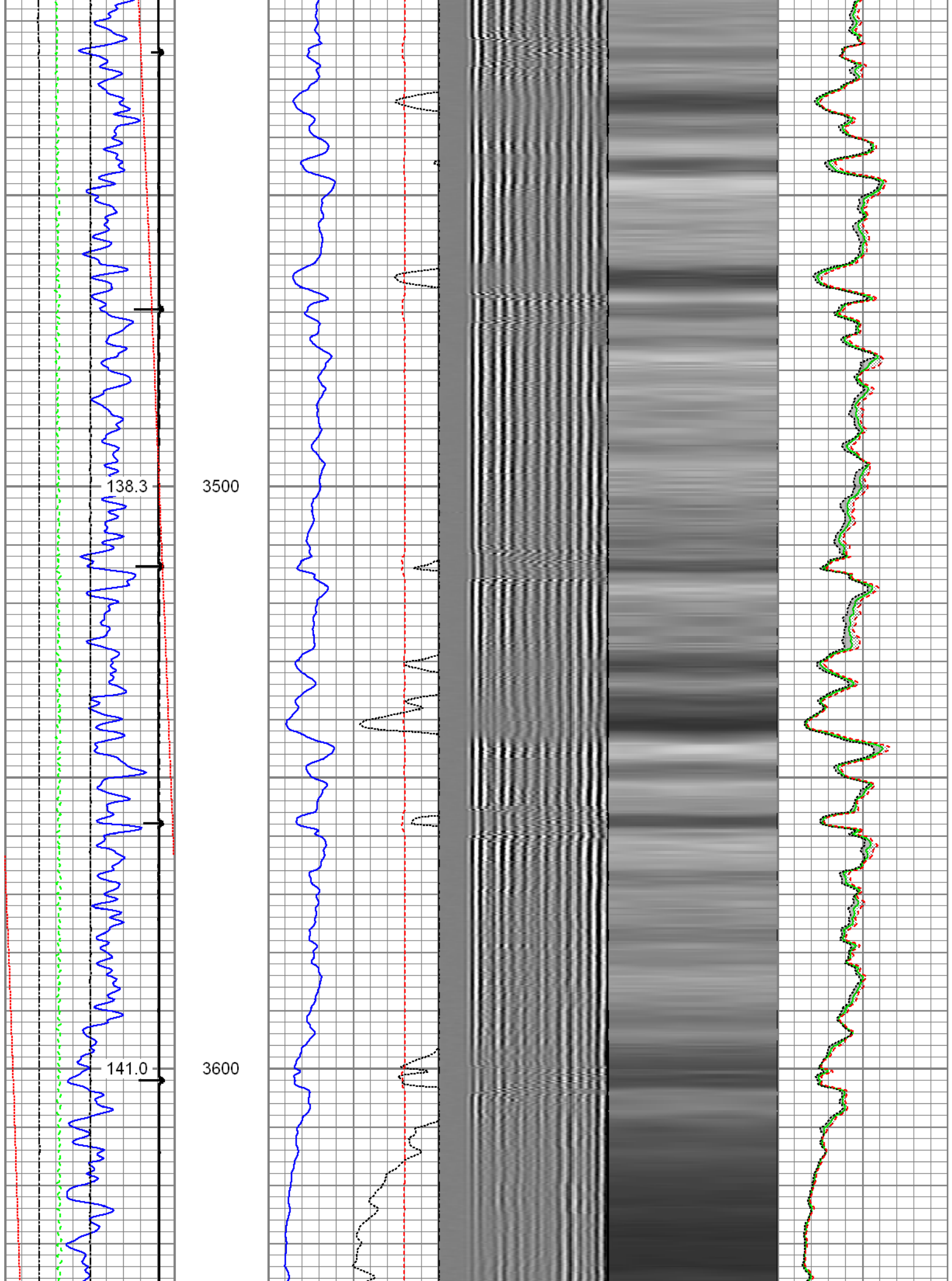


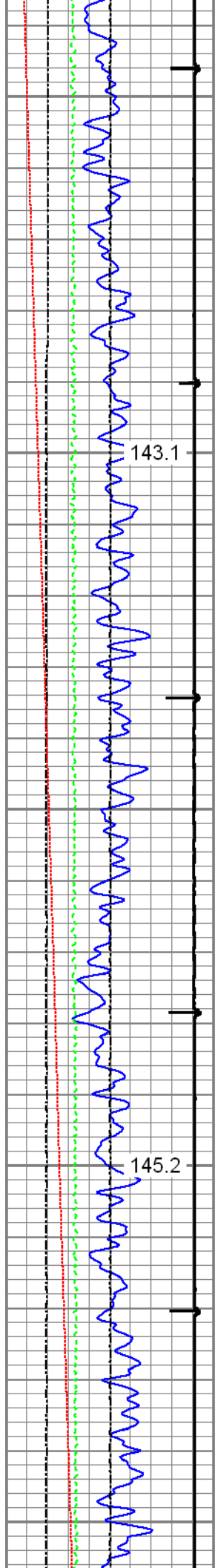






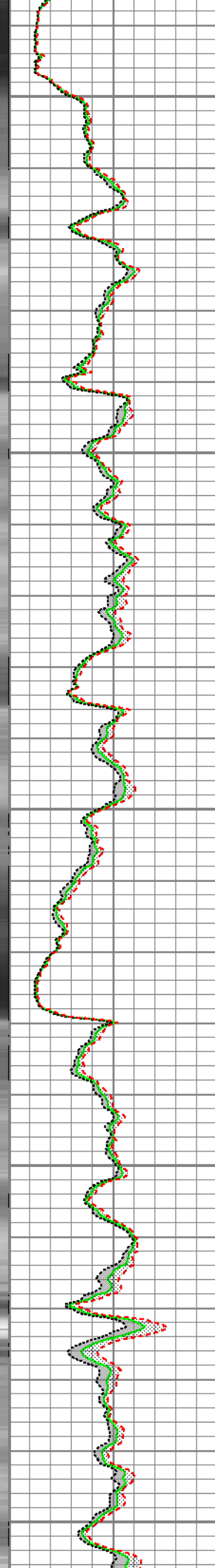
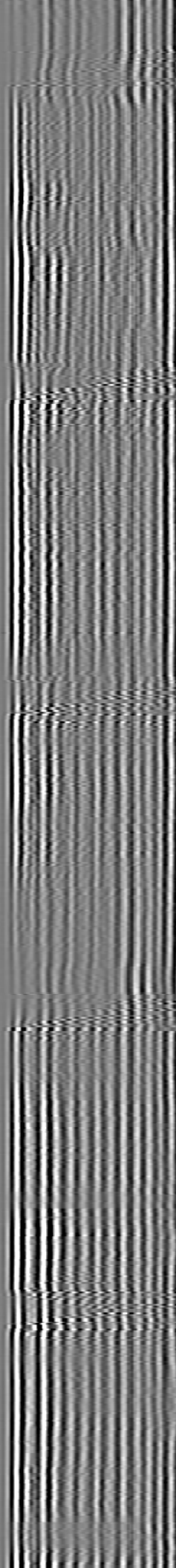
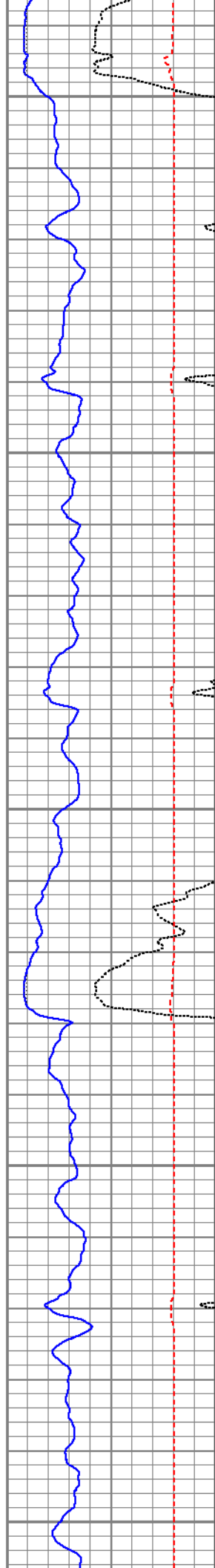


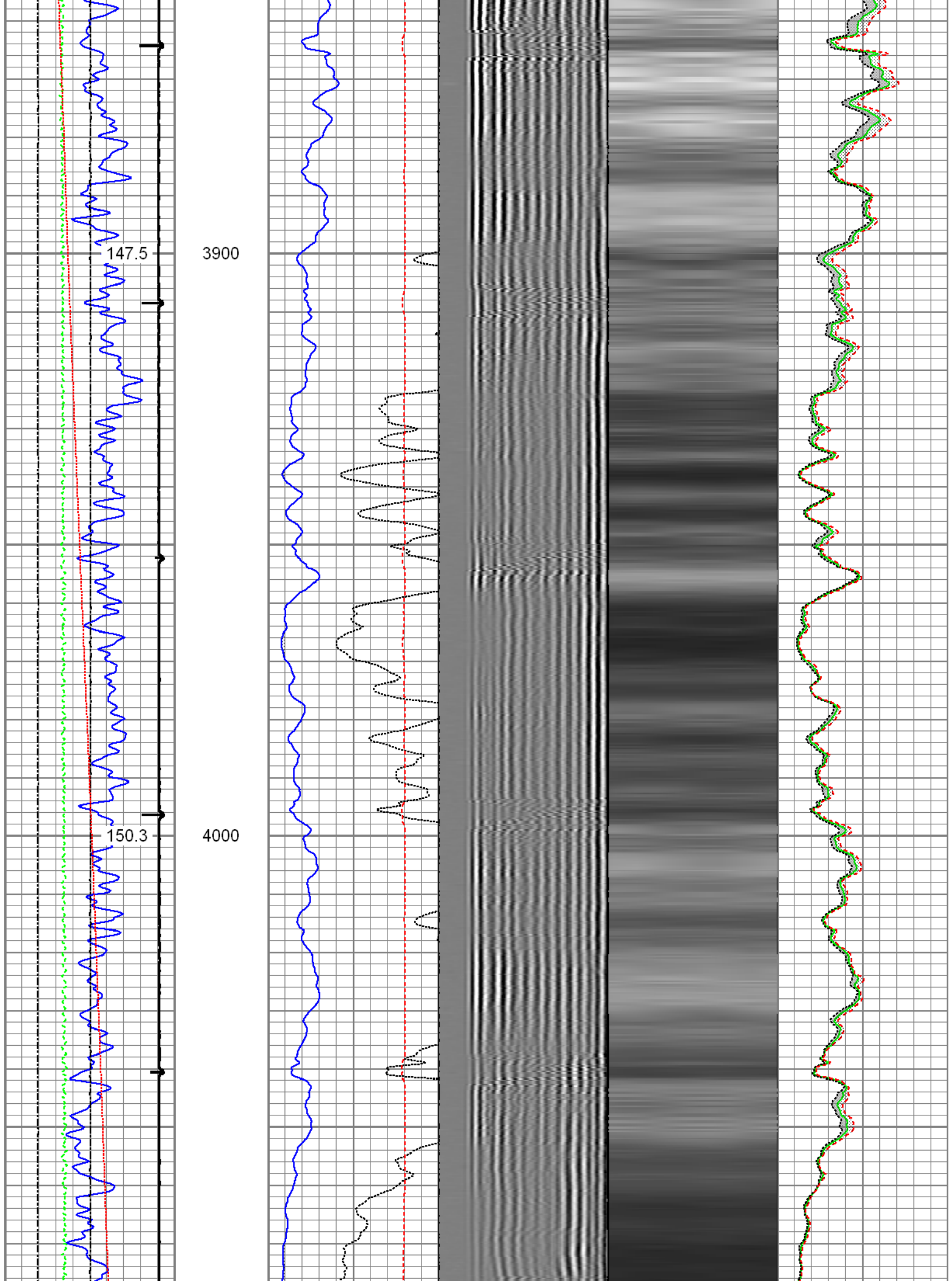


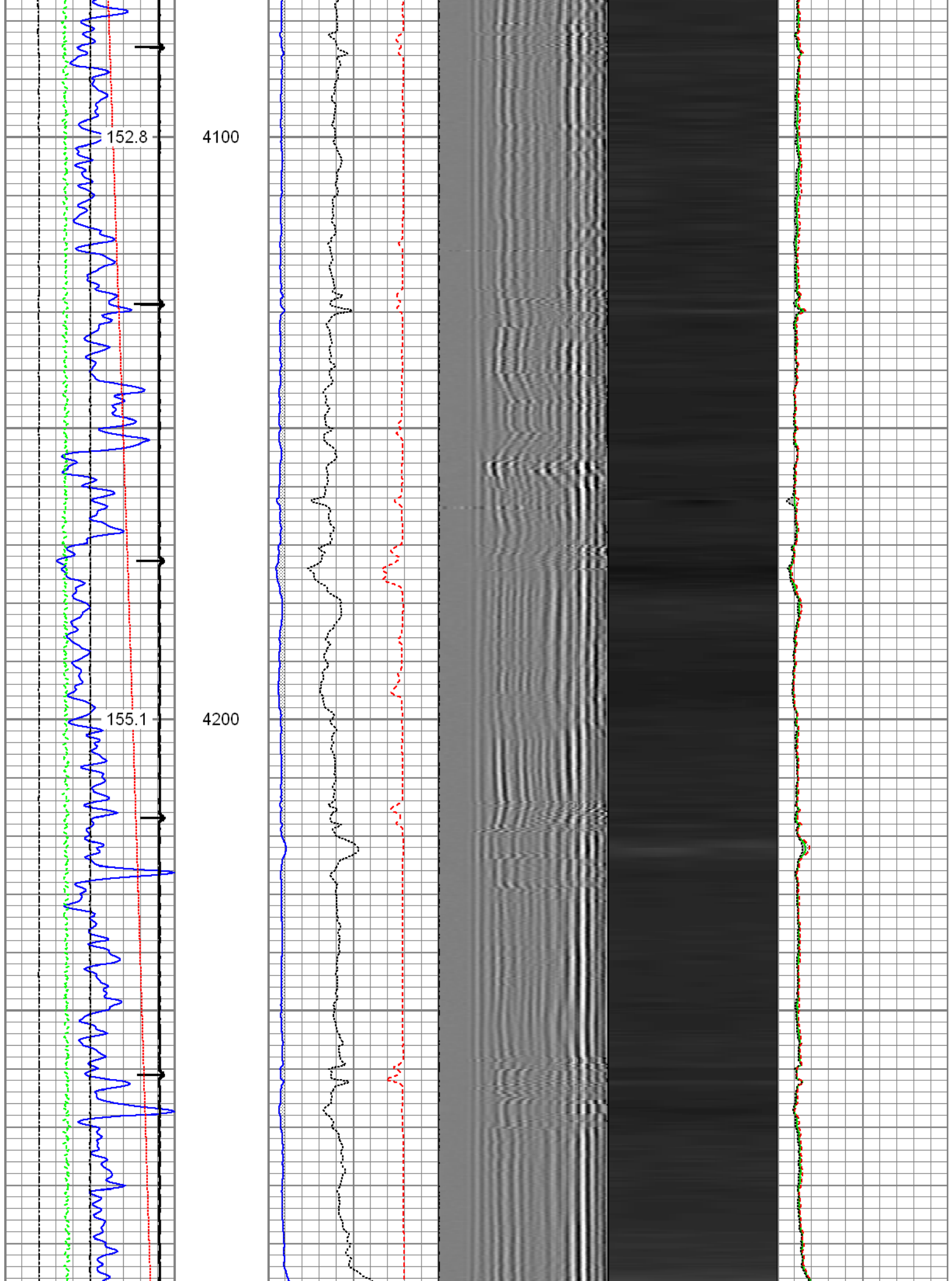


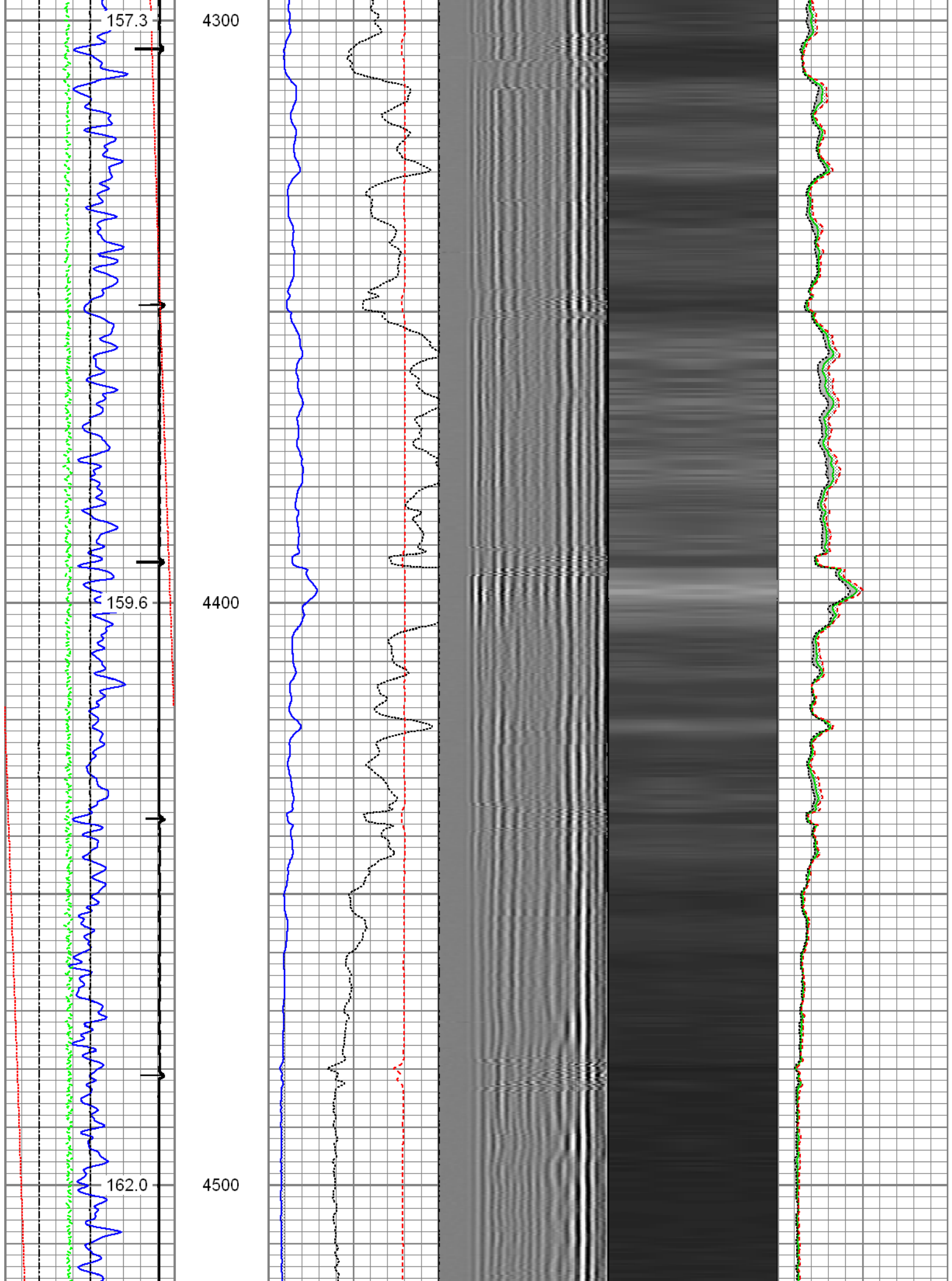
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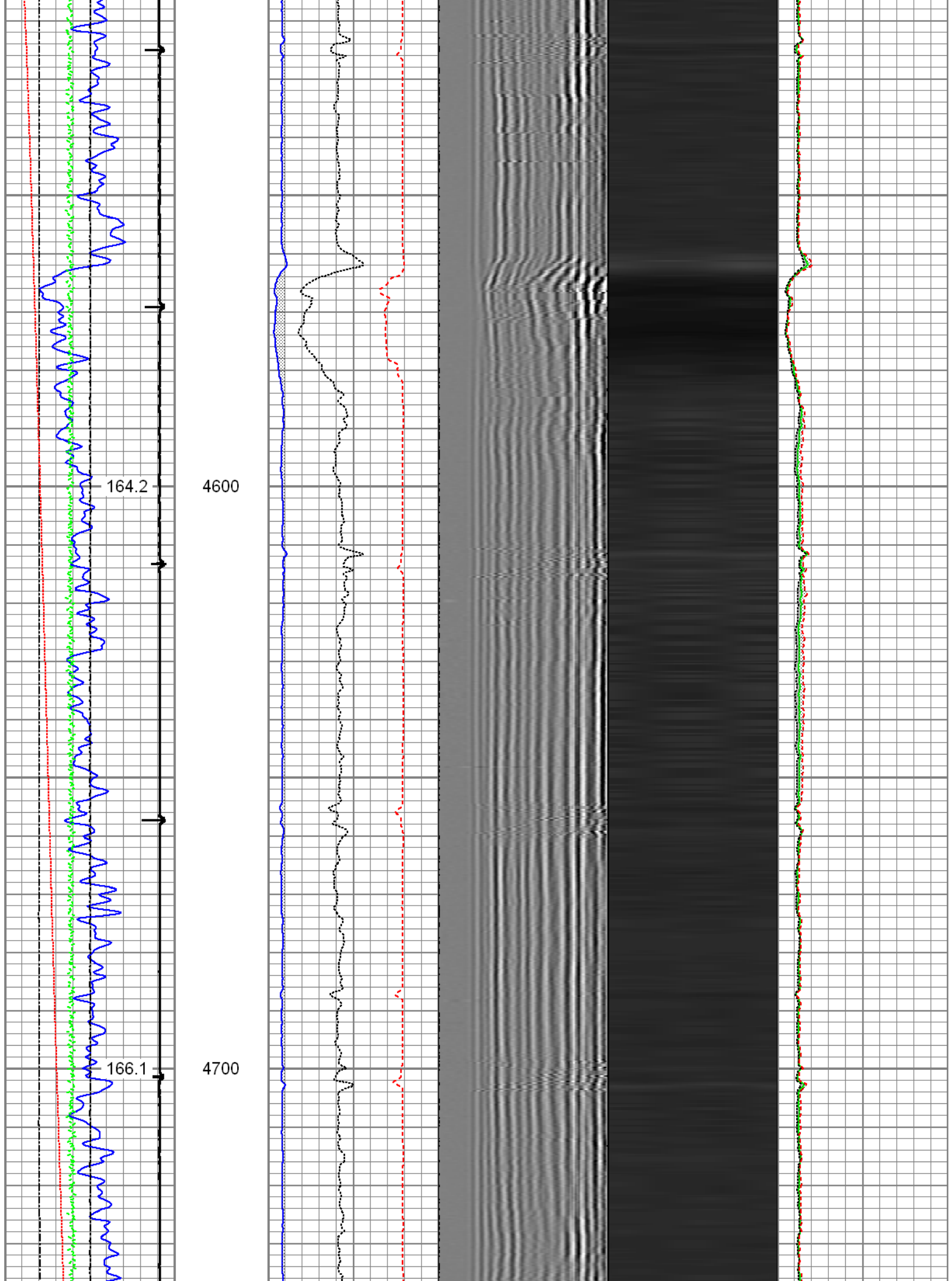
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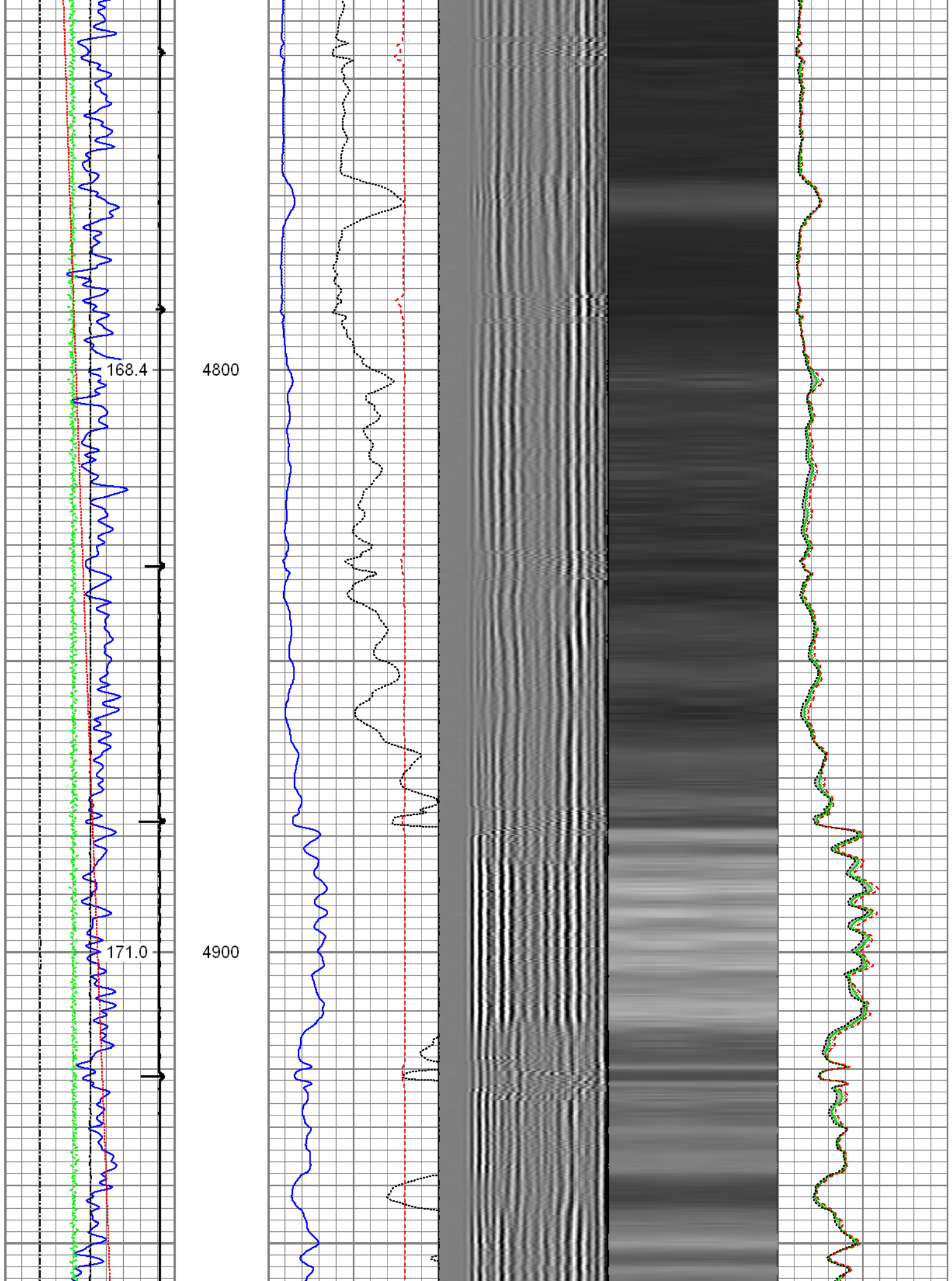


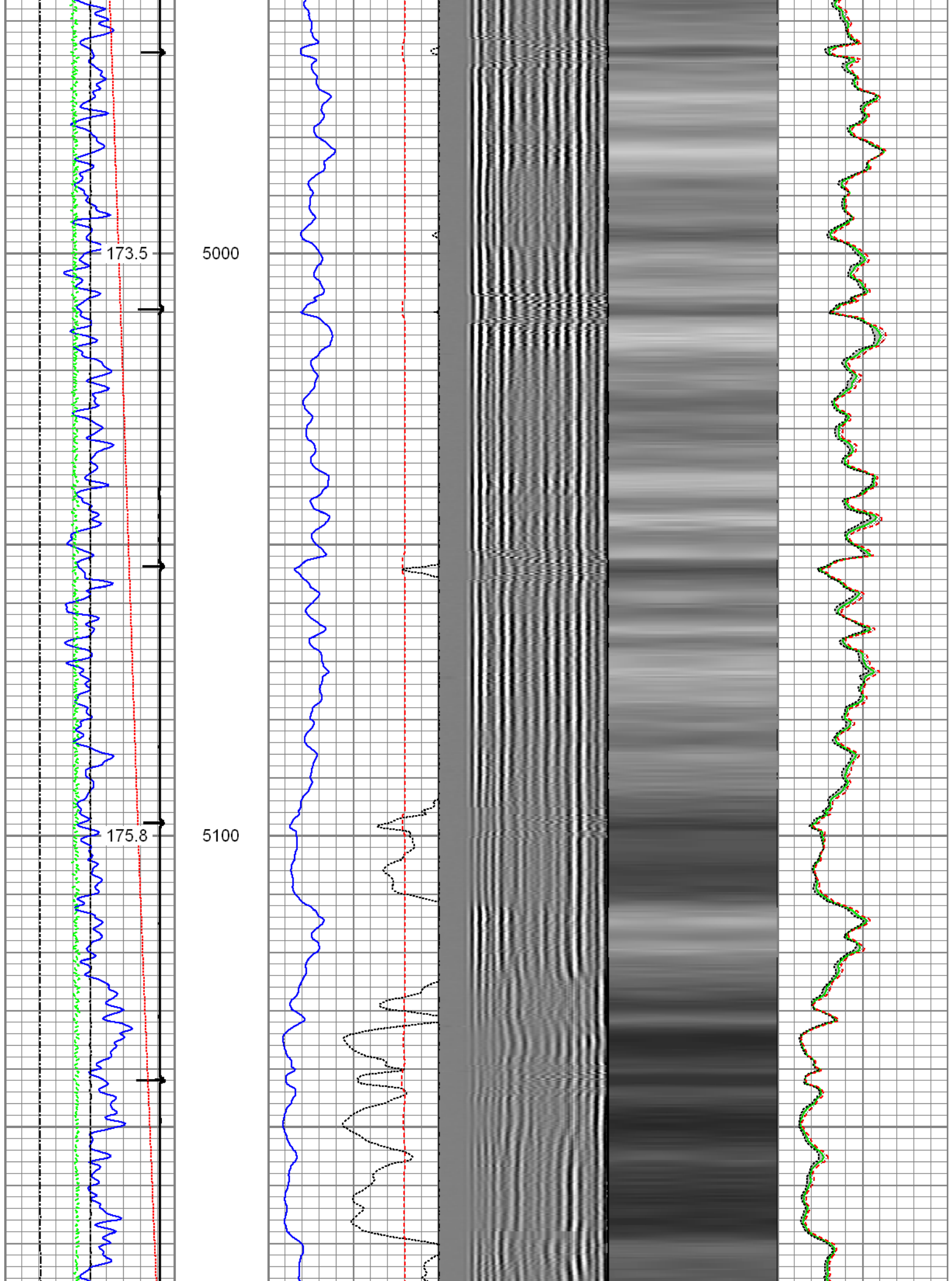


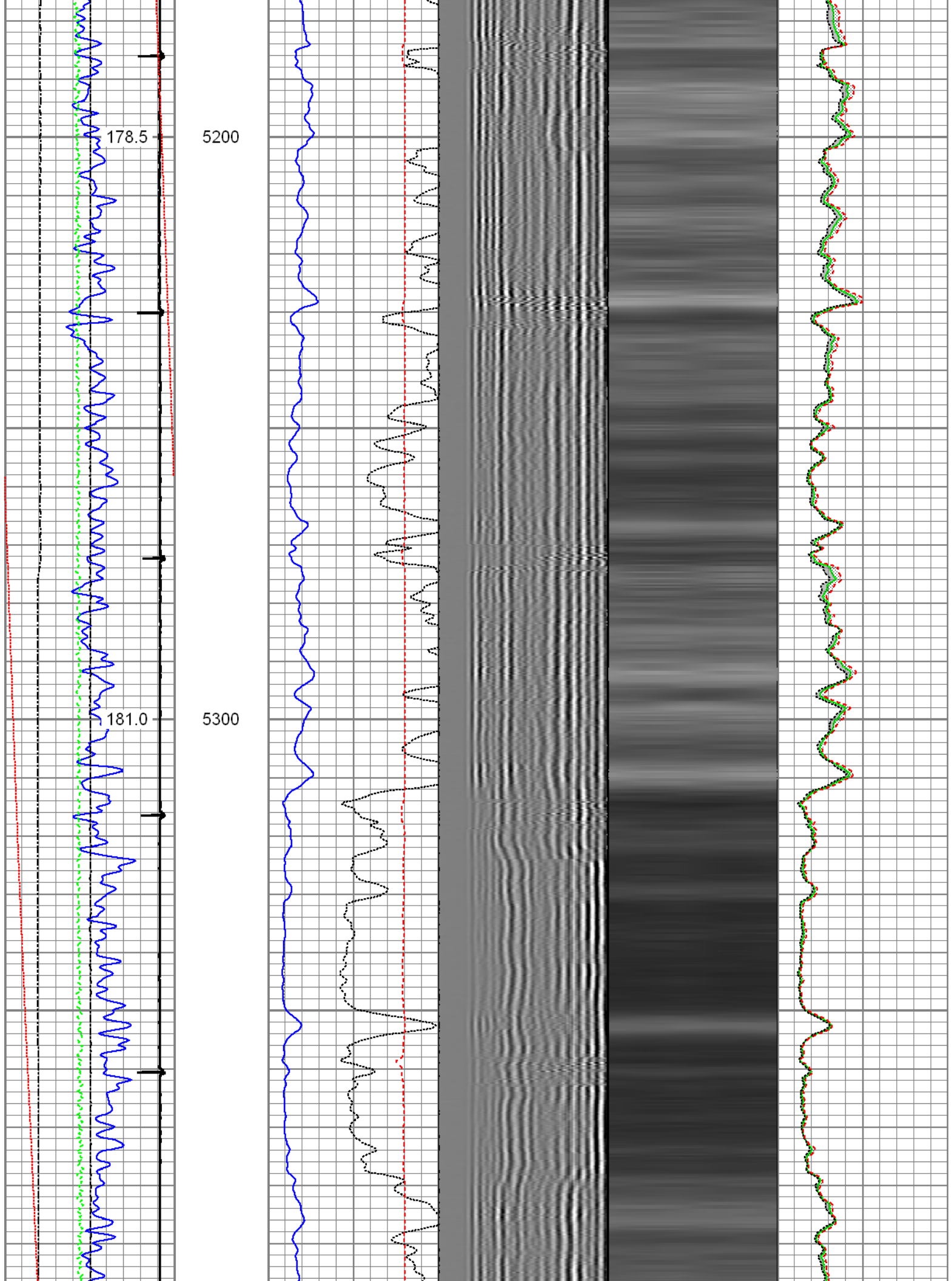


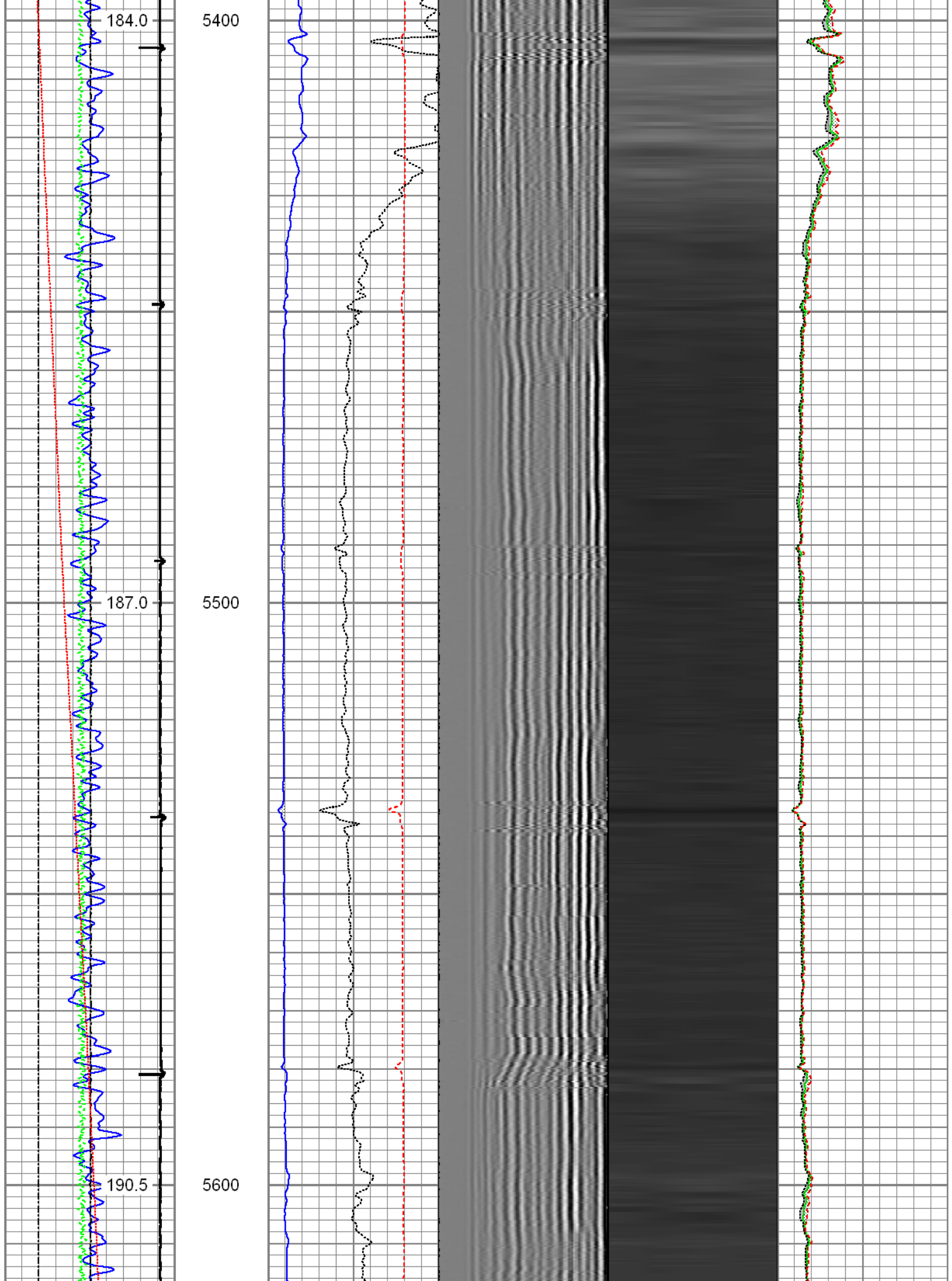


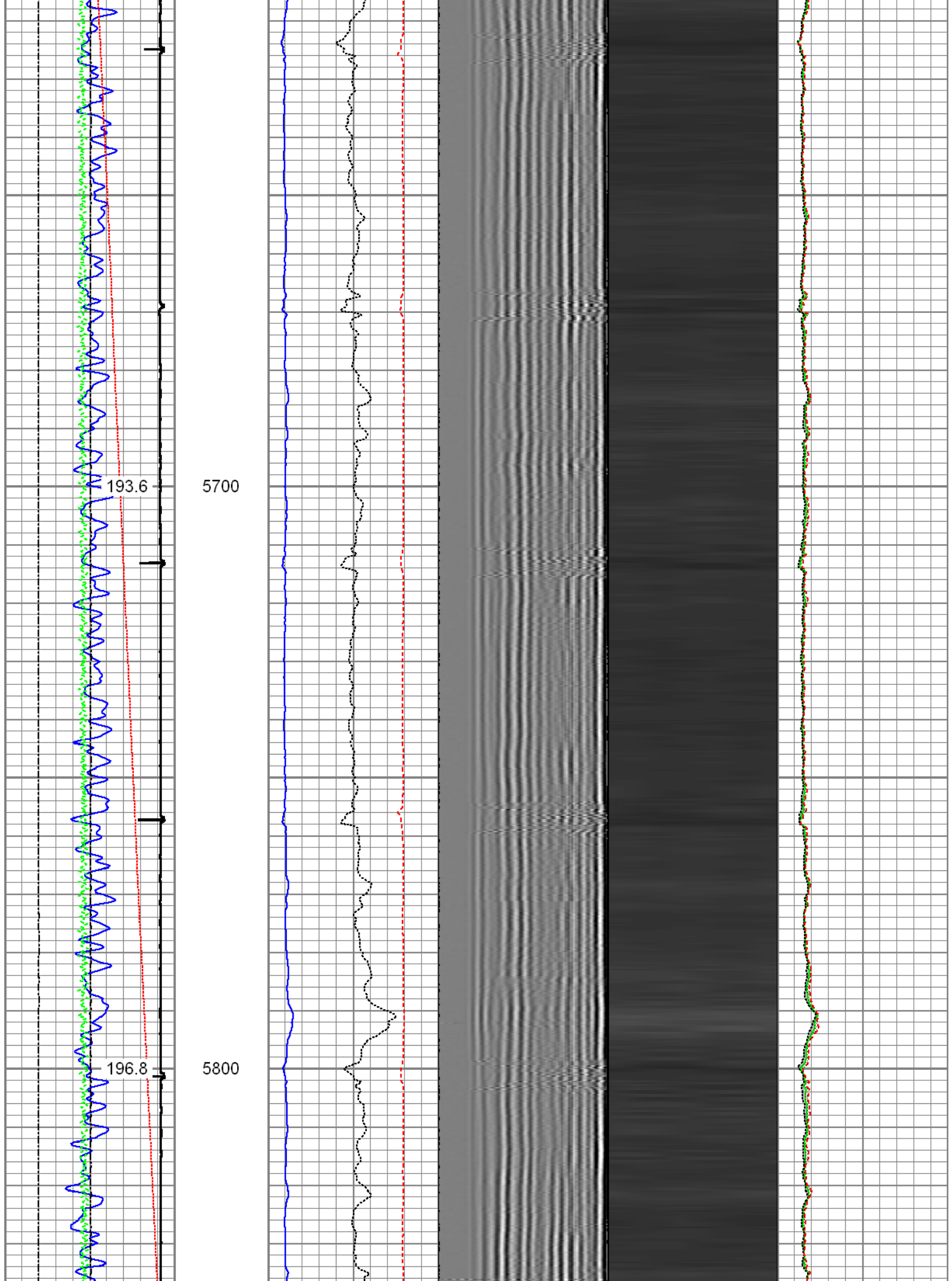


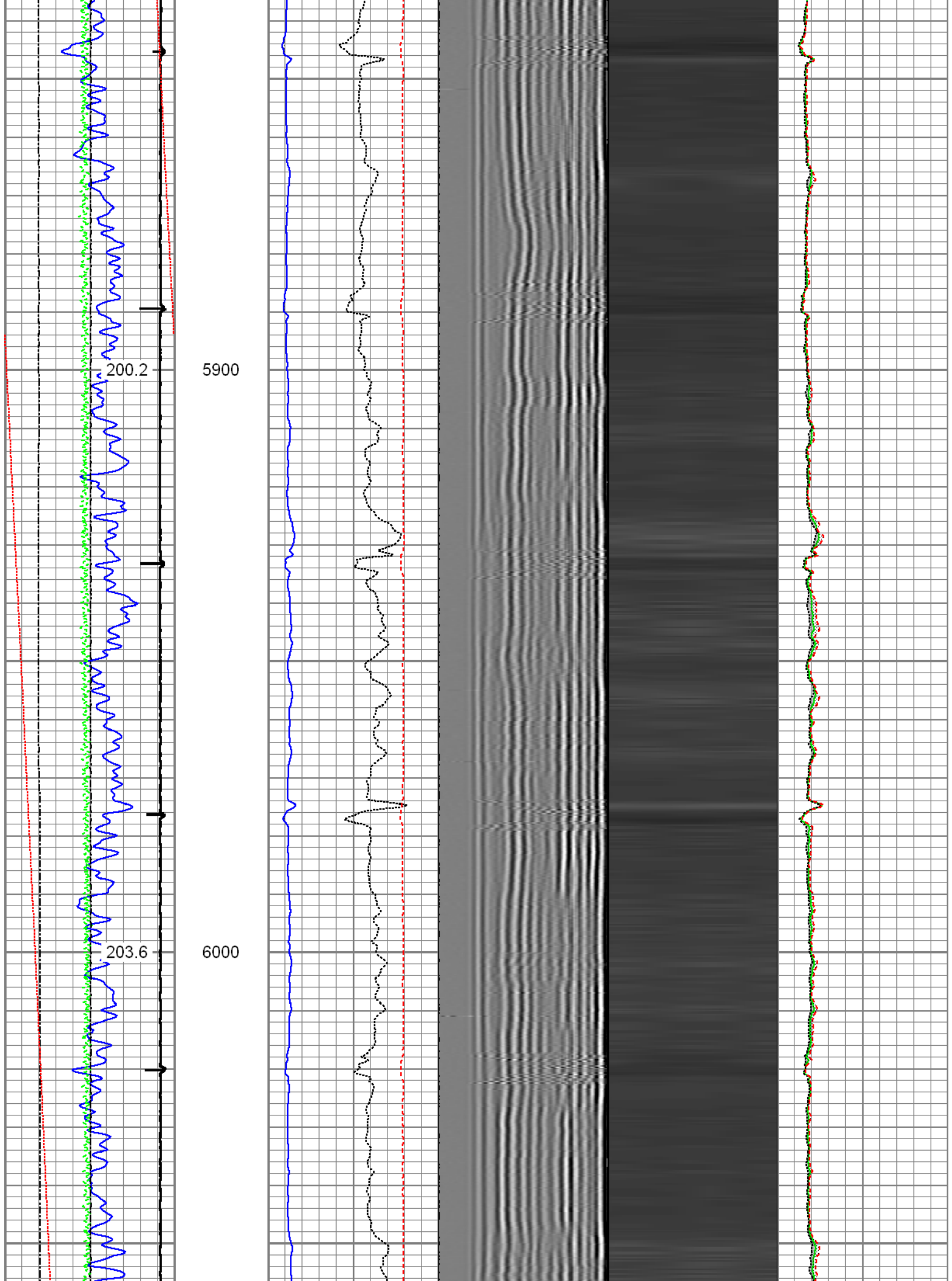


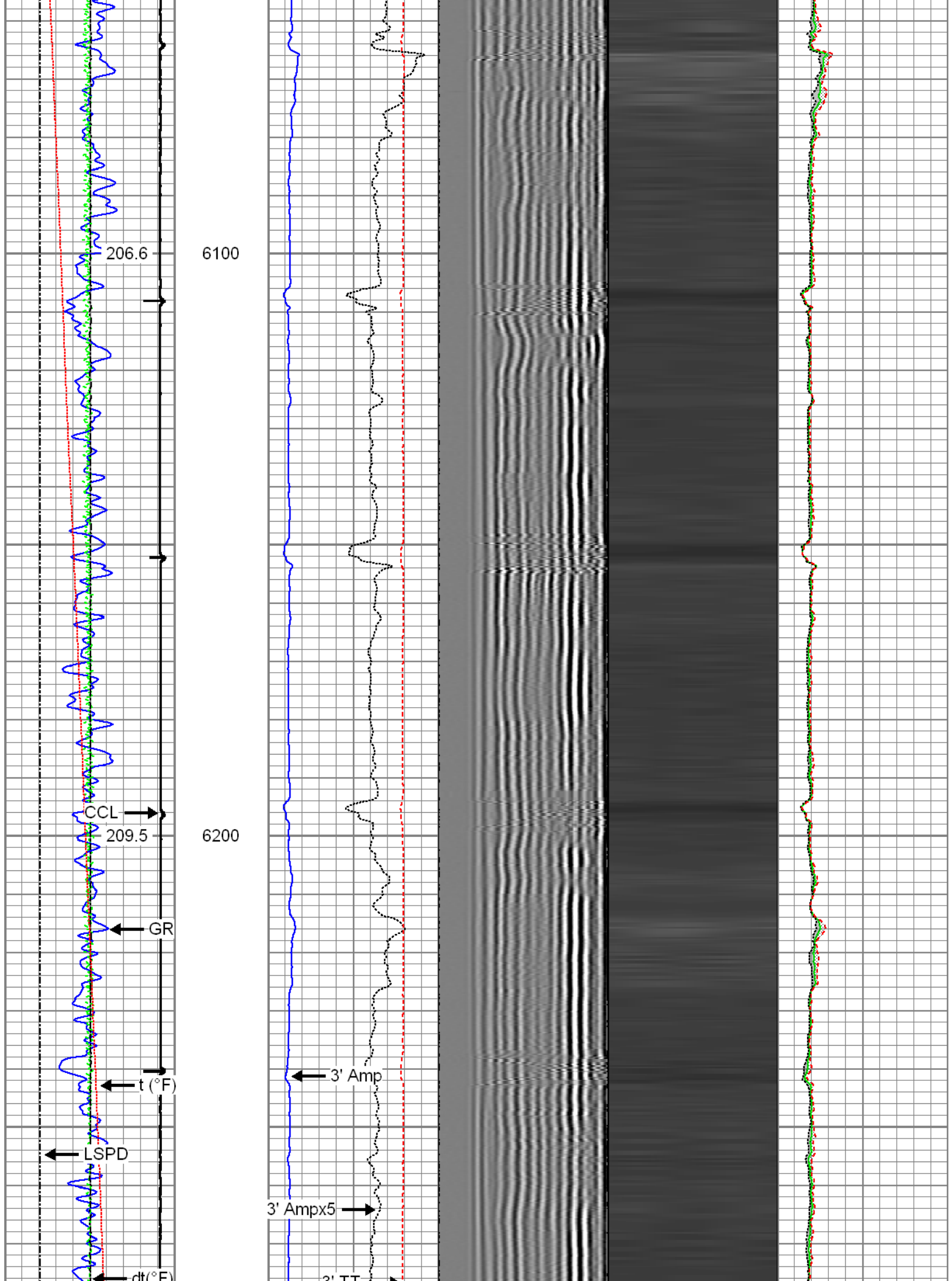


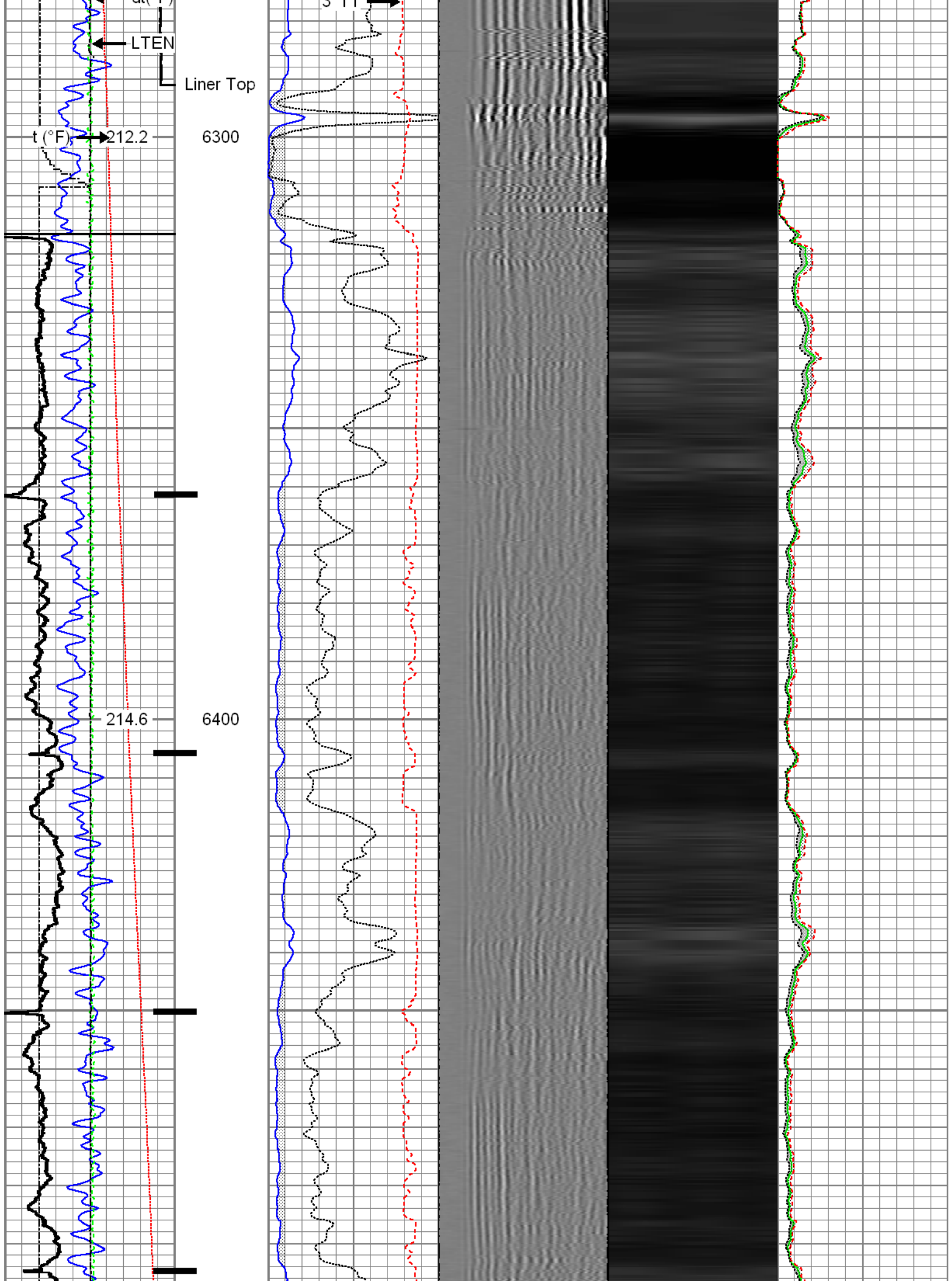


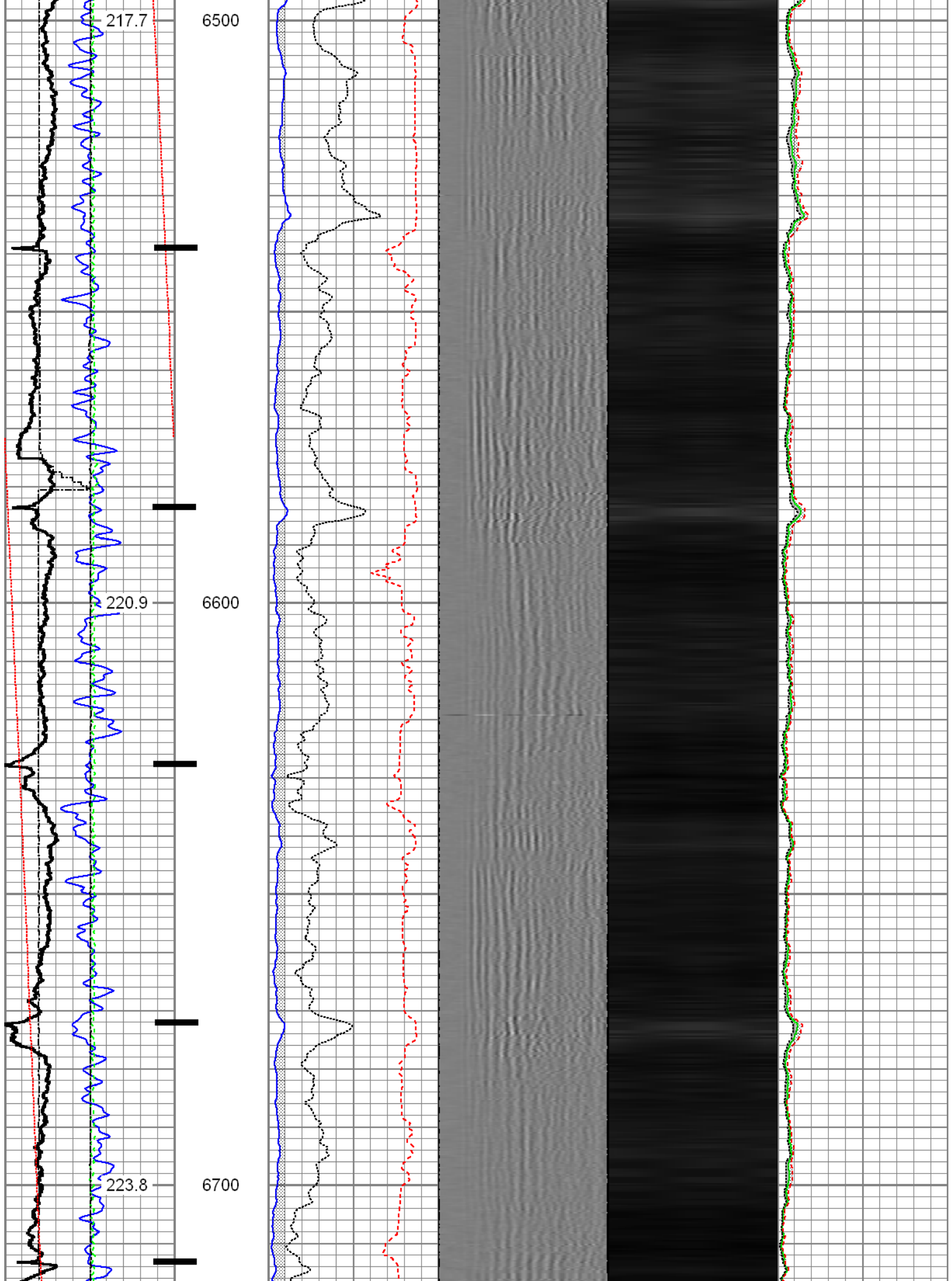


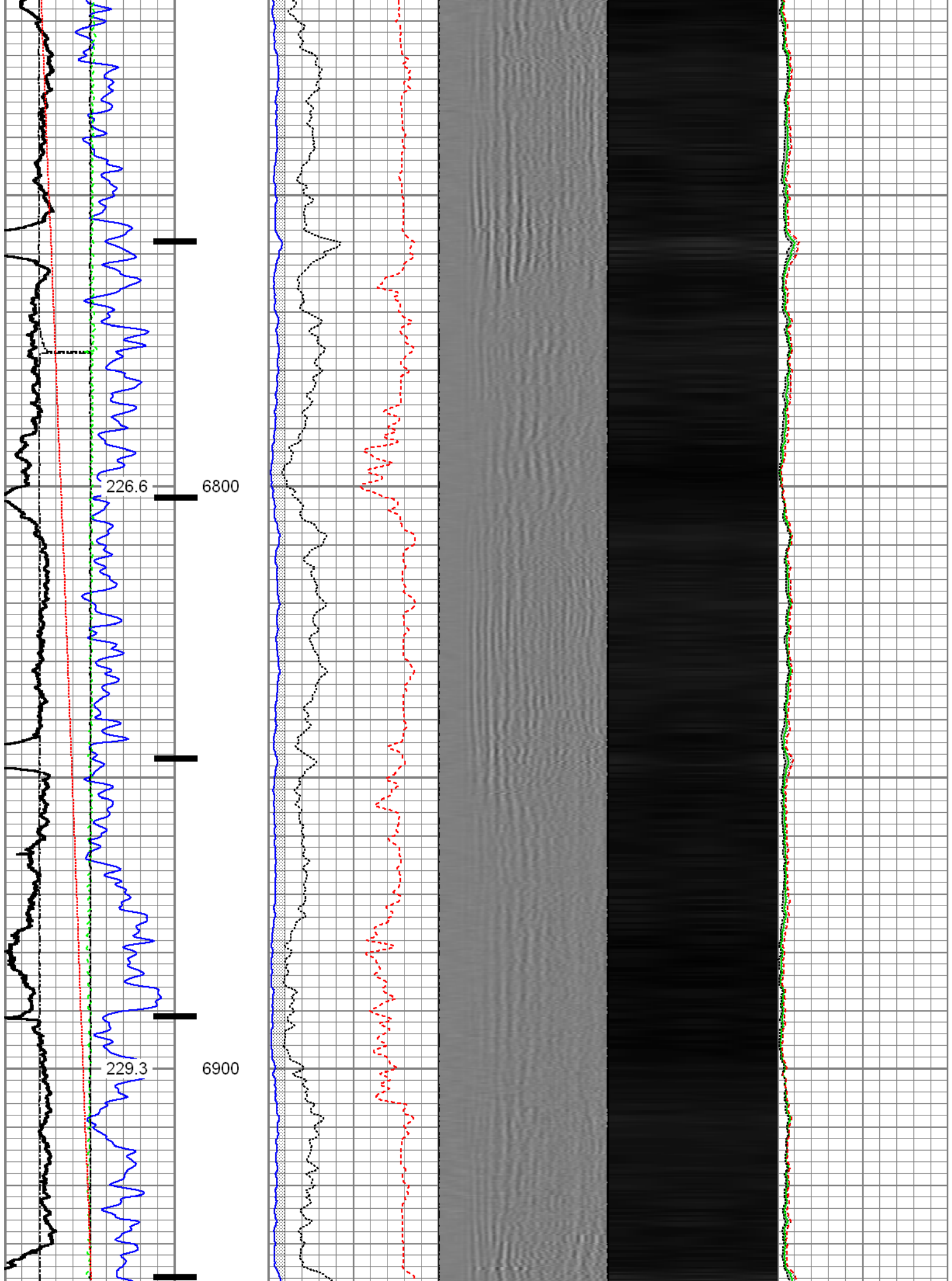


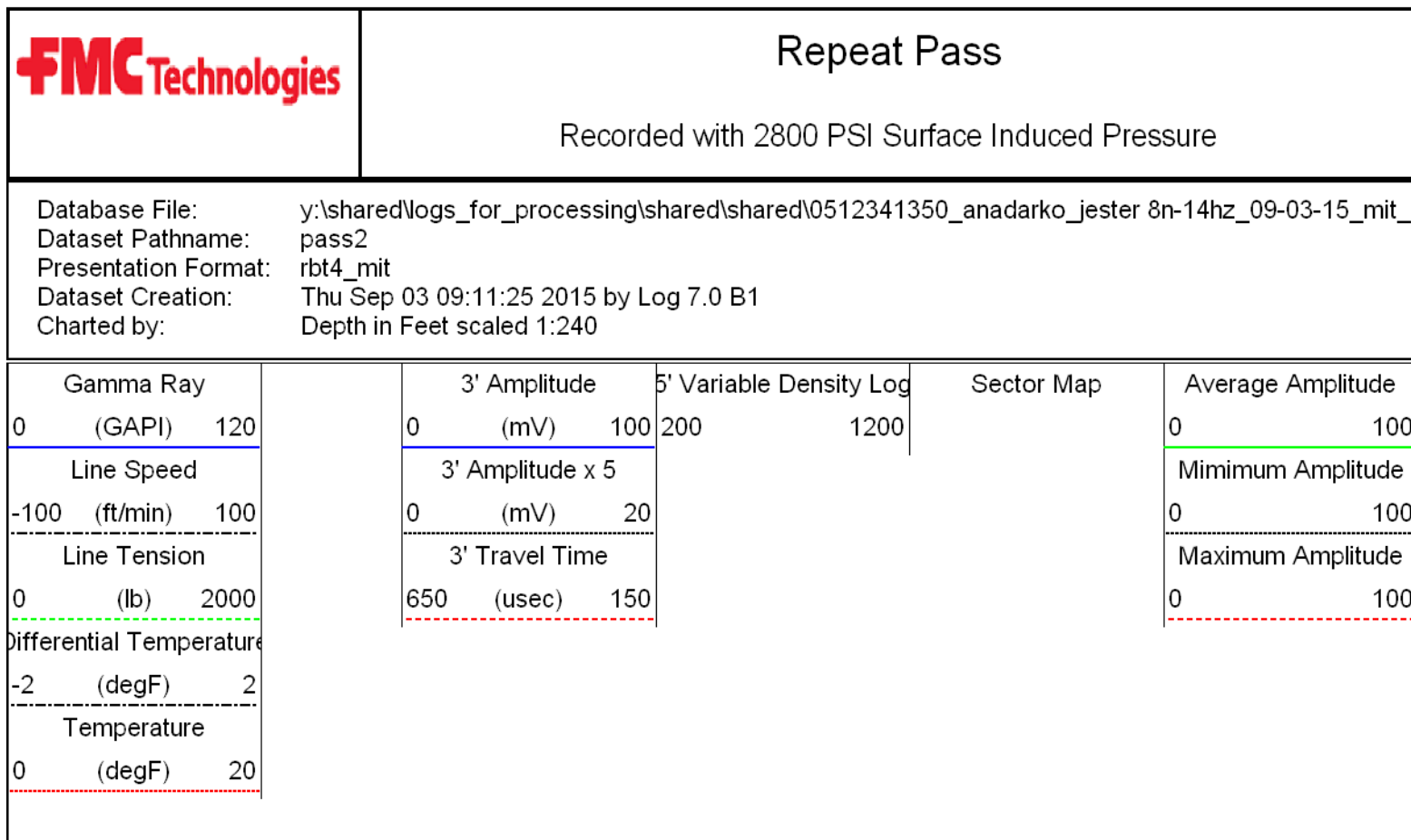
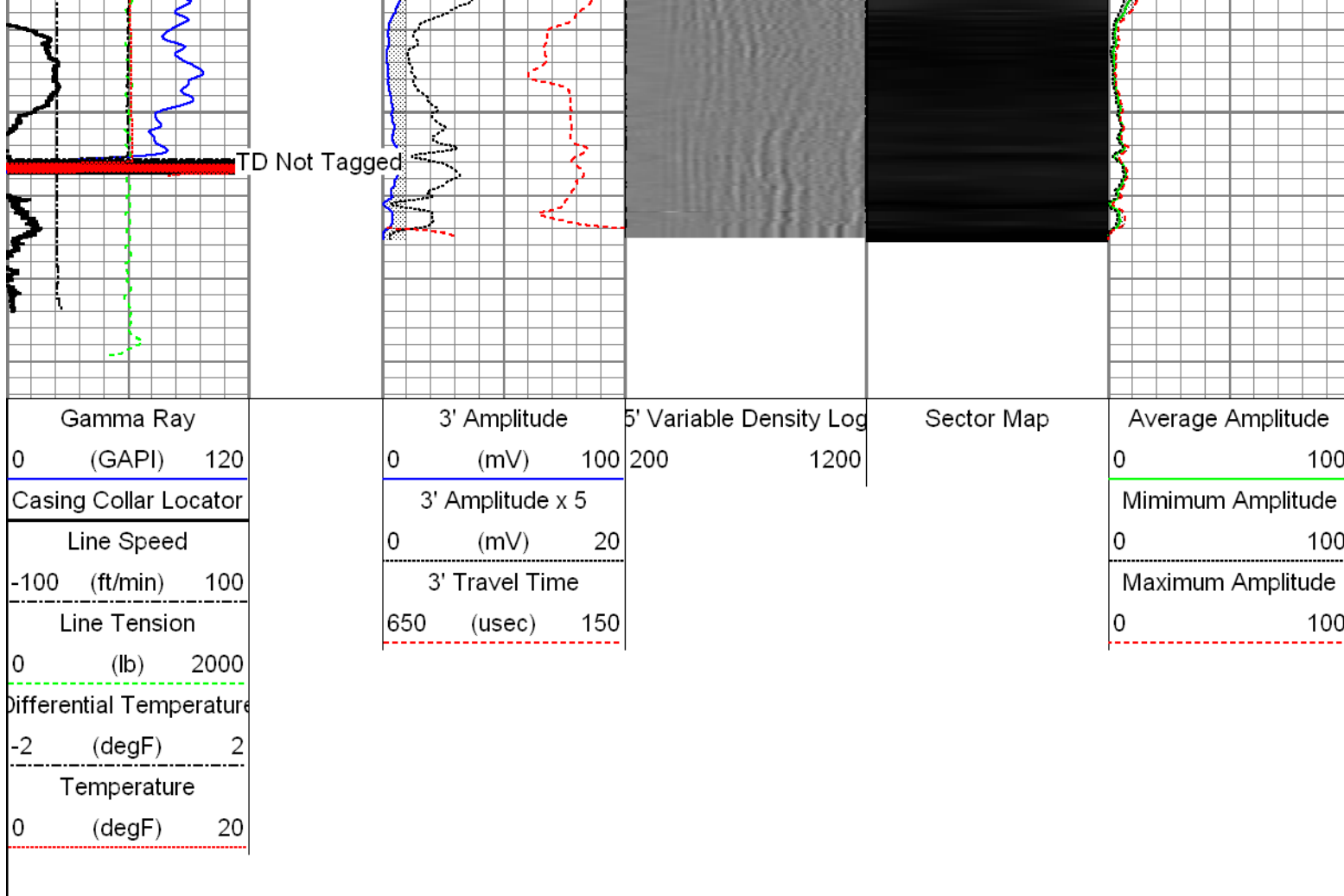


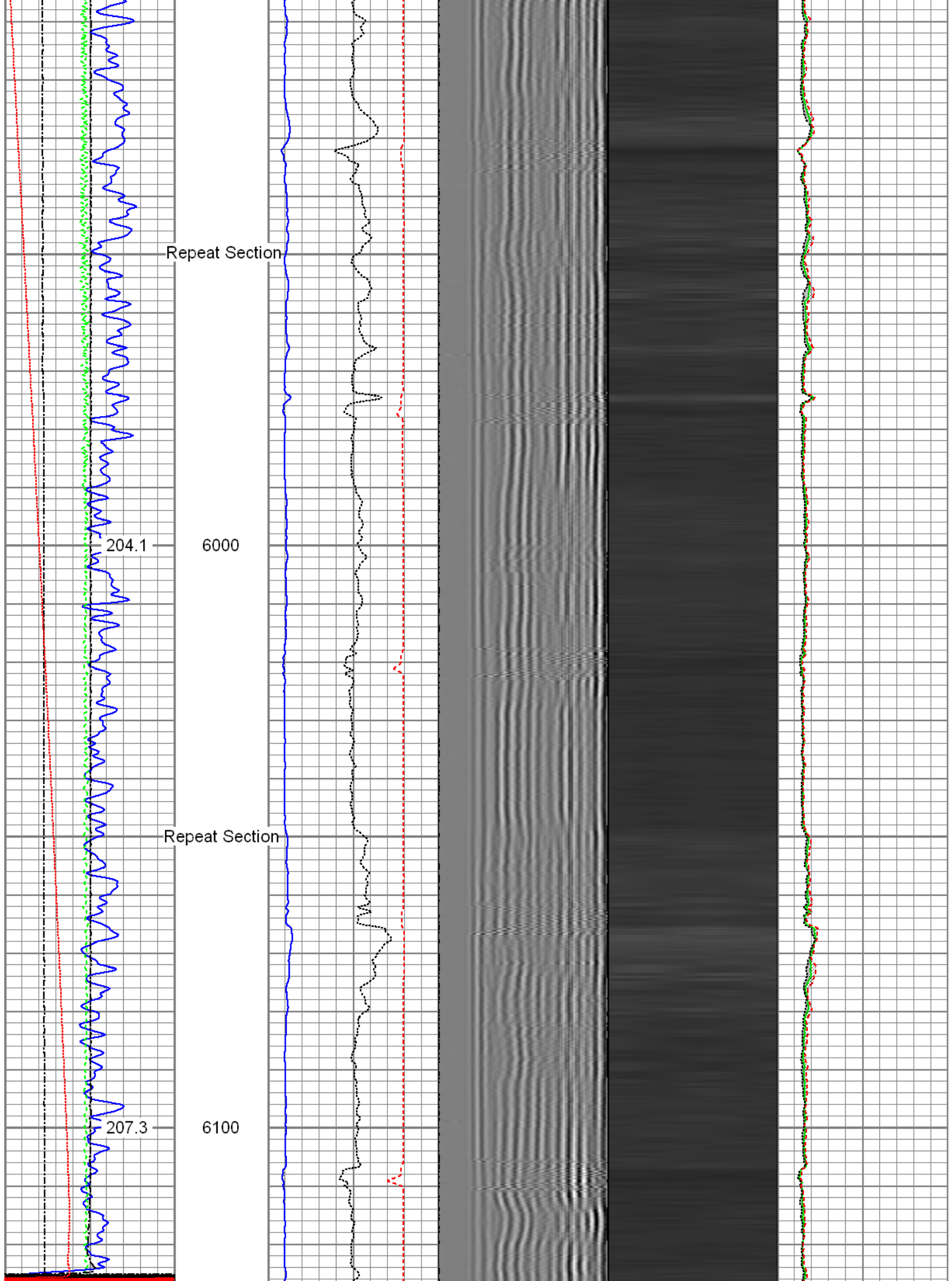


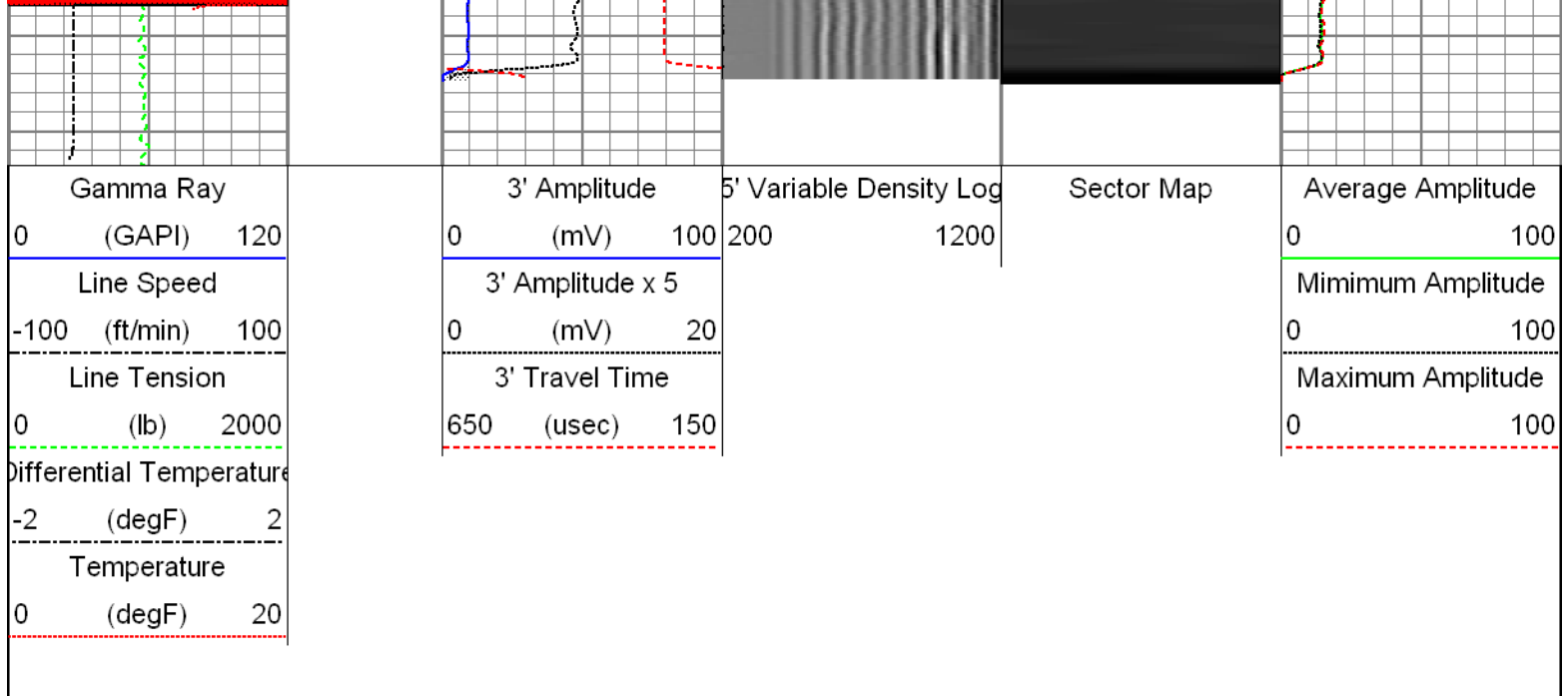


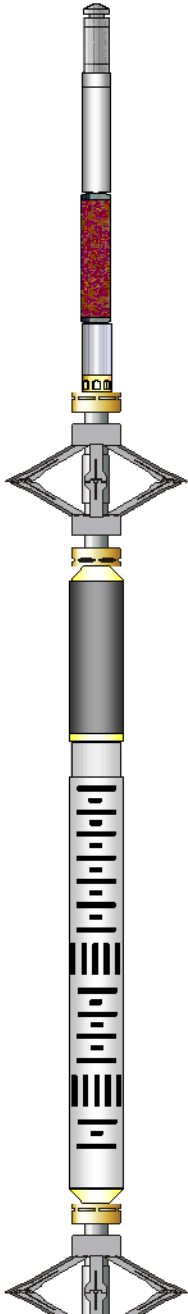
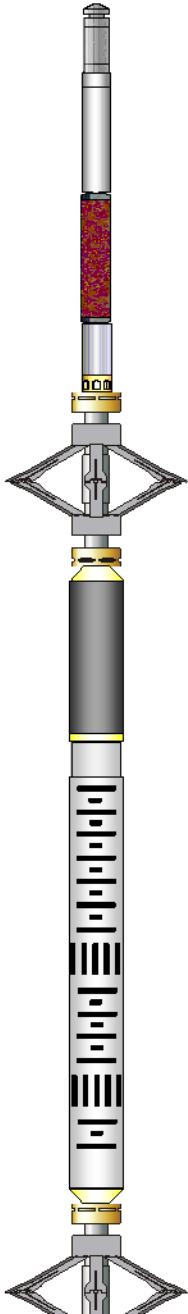


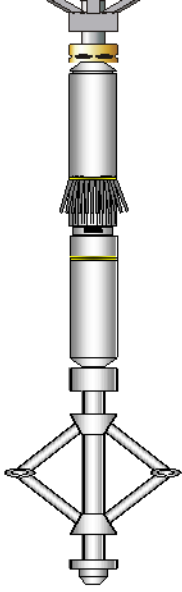








Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
GR	23.85		T_CH14375_1_GO Titan 1-7/16" Assembled Electric Cable Head with 1" Fishing Neck	1.03	1.44	4.00
			UW_AGS-UW_AGS_001 (215017) Sondex Adapter - GO Box to Sondex Pin	0.21	1.69	1.00
			UW_XTU-UW_XTU_002 (10010522) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
			UW_PGR-UW_PGR_020 (10019371) Production Gamma Ray	1.93	1.69	9.50
			UW_PRT-UW_PRT_016 (10025097) Platinum Resistance Thermometer	1.04	1.69	5.20
TEMP	22.45		UW_PRC #3 -DSSRAC (082) 2-3/4" DSS 5 Arm Roller Centralizer	2.55	2.75	32.00
WVF3FT	15.42		UW_RBT-UW_RBT_004 (1066) 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 (080) 2-3/4" DSS 5 Arm Roller Centralizer	2.55	2.75	32.00

MIT	5.41		UW_MIT-UW_MIT40_027 (218949) 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 (031422) Sondex Ultrawire Bullnose Terminator	0.22	1.69	1.20
Dataset: 0512341350_Anadarko_Jester 8N-14HZ_09-03-15_MIT_RBL.db: field/well/run1/pass4 Total Length: 28.09 ft Total Weight: 324.50 lb O.D. 3.13 in						

Calibration Report	
Database File:	Y:\Shared\Logs_For_Processing\Shared\Shared\0512341350_Anadarko_Jester 8N-14HZ_09-03-15_M
Dataset Pathname:	pass7
Dataset Creation:	Sat Sep 05 13:38:10 2015

Multi-finger Imaging Tool Calibration Report
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Serial Number:	218949
Number of Fingers:	40
Tool Model:	UW_MIT40_027

Inclinometer Calibration Report		
Performed:	Mon, Oct, 06 14:03:04 2008	
Calibration Angle:	45	
	Inc X	Inc Y
Vertical:	1996	1984
Finger 1 up:	1780	1738
Finger 31 up:	2235	1756
Finger 21 up:	2216	2228
Finger 11 up:	1736	2196
Sensitivity ratio:	1.0062	
X-axis angle:	131.534	
Deviation const.:	331.322	

Finger Calibration Report						
Performed: Thu Sep 03 11:49:48 2015						
Ring size:	4	5	6	7		
(in)						
	Sens	Sens	Sens			
Finger 01:	1375 281.0	1656 297.0	1953 310.0	2263		
Finger 02:	1439 279.0	1718 292.0	2010 304.0	2314		
Finger 03:	1653 279.0	1932 285.0	2217 291.0	2508		
Finger 04:	1666 278.0	1944 282.0	2226 285.0	2511		
Finger 05:	1530 263.0	1793 272.0	2065 282.0	2347		
Finger 06:	1528 258.0	1786 266.0	2052 274.0	2326		
Finger 07:	1345 270.0	1615 286.0	1901 301.0	2202		
Finger 08:	1539 257.0	1796 264.0	2060 275.0	2335		
Finger 09:	1411 269.0	1680 287.0	1967 300.0	2267		
Finger 10:	1483 264.0	1747 275.0	2022 286.0	2308		
Finger 11:	1469 263.0	1733 280.0	2013 286.0	2299		

Finger 11:	1469	263.0	1732	280.0	2012	286.0	2298
Finger 12:	1313	278.0	1591	291.0	1882	311.0	2193
Finger 13:	1570	279.0	1849	287.0	2136	297.0	2433
Finger 14:	1411	281.0	1692	291.0	1983	310.0	2293
Finger 15:	1530	260.0	1790	273.0	2063	287.0	2350
Finger 16:	1396	278.0	1674	292.0	1966	312.0	2278
Finger 17:	1629	269.0	1898	277.0	2175	289.0	2464
Finger 18:	1367	287.0	1654	304.0	1958	323.0	2281
Finger 19:	1629	258.0	1887	261.0	2148	263.0	2411
Finger 20:	1497	261.0	1758	278.0	2036	293.0	2329
Finger 21:	1584	248.0	1832	259.0	2091	267.0	2358
Finger 22:	1518	272.0	1790	286.0	2076	297.0	2373
Finger 23:	1336	274.0	1610	288.0	1898	302.0	2200
Finger 24:	1668	263.0	1931	272.0	2203	281.0	2484
Finger 25:	1351	286.0	1637	309.0	1946	324.0	2270
Finger 26:	1525	285.0	1810	298.0	2108	308.0	2416
Finger 27:	1458	256.0	1714	274.0	1988	286.0	2274
Finger 28:	1619	277.0	1896	287.0	2183	293.0	2476
Finger 29:	1460	270.0	1730	291.0	2021	302.0	2323
Finger 30:	1411	273.0	1684	296.0	1980	307.0	2287
Finger 31:	1520	265.0	1785	282.0	2067	289.0	2356
Finger 32:	1338	264.0	1602	286.0	1888	296.0	2184
Finger 33:	1601	300.0	1901	317.0	2218	318.0	2536
Finger 34:	1532	270.0	1802	283.0	2085	285.0	2370
Finger 35:	1431	266.0	1697	287.0	1984	290.0	2274
Finger 36:	1582	281.0	1863	295.0	2158	297.0	2455
Finger 37:	1594	277.0	1871	288.0	2159	295.0	2454
Finger 38:	1483	277.0	1760	290.0	2050	300.0	2350
Finger 39:	1459	278.0	1737	298.0	2035	308.0	2343
Finger 40:	1577	286.0	1863	302.0	2165	302.0	2467

Post Survey Calibration Check
Performed: Thu Sep 03 14:55:41 2015

Ring size: (in)	4	Nom. wear	5	Nom. wear	6	Nom. wear	7	Nom. wear
Finger 01:	4.006	0.003	5.002	0.001	6.010	0.005	7.010	0.005
Finger 02:	3.993	-0.004	4.989	-0.005	5.994	-0.003	7.005	0.002
Finger 03:	3.998	-0.001	4.997	-0.002	6.000	0.000	7.008	0.004
Finger 04:	3.999	-0.001	5.001	0.000	6.004	0.002	7.012	0.006
Finger 05:	3.997	-0.001	5.001	0.000	5.996	-0.002	7.015	0.008
Finger 06:	3.999	-0.000	5.000	0.000	5.999	-0.001	7.007	0.004
Finger 07:	4.004	0.002	5.001	0.000	6.003	0.001	7.007	0.004
Finger 08:	3.995	-0.002	4.996	-0.002	6.001	0.000	7.013	0.006
Finger 09:	3.990	-0.005	4.986	-0.007	5.977	-0.011	6.984	-0.008
Finger 10:	3.988	-0.006	4.995	-0.003	6.002	0.001	7.009	0.005
Finger 11:	4.001	0.001	4.983	-0.009	5.955	-0.022	6.948	-0.026
Finger 12:	4.010	0.005	4.993	-0.004	6.000	-0.000	6.999	-0.001
Finger 13:	4.001	0.001	4.994	-0.003	5.998	-0.001	6.999	-0.000
Finger 14:	4.013	0.007	4.996	-0.002	6.003	0.001	7.004	0.002
Finger 15:	3.992	-0.004	4.994	-0.003	5.987	-0.006	6.998	-0.001
Finger 16:	4.001	0.000	4.999	-0.000	5.993	-0.004	6.999	-0.001
Finger 17:	3.990	-0.005	4.987	-0.007	5.991	-0.004	7.011	0.005
Finger 18:	4.006	0.003	5.009	0.004	5.999	-0.000	7.025	0.013
Finger 19:	3.993	-0.003	5.013	0.007	6.000	-0.000	7.016	0.008
Finger 20:	4.035	0.018	5.090	0.045	6.066	0.033	7.001	0.001
Finger 21:	3.992	-0.004	5.014	0.007	6.009	0.005	7.031	0.016
Finger 22:	3.996	-0.002	5.004	0.002	5.990	-0.005	7.023	0.011
Finger 23:	4.017	0.008	4.993	-0.004	5.989	-0.005	7.008	0.004
Finger 24:	4.001	0.000	4.989	-0.006	5.989	-0.005	6.999	-0.001
Finger 25:	4.000	-0.000	4.995	-0.003	5.987	-0.007	7.000	0.000
Finger 26:	3.991	-0.005	4.995	-0.003	5.987	-0.007	7.021	0.011
Finger 27:	3.991	-0.004	4.992	-0.004	5.998	-0.001	6.986	-0.007
Finger 28:	4.001	0.001	4.993	-0.004	5.988	-0.006	6.984	-0.008
Finger 29:	3.999	-0.000	4.997	-0.002	5.993	-0.004	6.989	-0.006
Finger 30:	3.993	-0.003	4.998	-0.001	5.994	-0.003	6.994	-0.003
Finger 31:	3.992	-0.003	4.992	-0.003	5.982	-0.003	6.992	-0.003

Finger 31:	3.999	-0.000	4.996	-0.002	5.996	-0.002	6.996	-0.002
Finger 32:	3.997	-0.001	4.994	-0.003	6.001	0.000	7.005	0.003
Finger 33:	3.999	-0.001	4.992	-0.004	5.993	-0.004	7.000	0.000
Finger 34:	3.994	-0.003	4.994	-0.003	5.994	-0.003	7.003	0.002
Finger 35:	4.008	0.004	4.999	-0.001	5.995	-0.002	7.012	0.006
Finger 36:	3.992	-0.004	4.994	-0.003	5.990	-0.005	7.001	0.000
Finger 37:	4.009	0.005	4.999	-0.000	6.002	0.001	7.003	0.002
Finger 38:	4.002	0.001	4.987	-0.006	5.990	-0.005	6.995	-0.002
Finger 39:	4.027	0.013	5.026	0.013	6.031	0.015	7.033	0.017
Finger 40:	4.002	0.001	4.998	-0.001	5.989	-0.005	7.006	0.003
Average:	4.000	0.000	4.999	-0.000	5.997	-0.001	7.004	0.002

Segmented Cement Bond Log Calibration Report

Serial Number:	1066
Tool Model:	UW_RBT_004
Calibration Casing Diameter:	7.000 in
Calibration Depth:	-29.431 ft

Master Calibration, performed Thu Sep 03 11:48:03 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	-0.002	0.693	0.800	62.165	88.347	0.981
5FT	-0.006	0.653	0.800	62.165	93.109	1.368
S1	-0.002	0.666	0.000	100.000	149.853	0.262
S2	-0.003	0.677	0.000	100.000	147.214	0.370
S3	-0.002	0.686	0.000	100.000	145.169	0.354
S4	-0.004	0.701	0.000	100.000	141.856	0.513
S5	-0.002	0.705	0.000	100.000	141.410	0.323
S6	-0.002	0.712	0.000	100.000	139.925	0.321
S7	-0.001	0.715	0.000	100.000	139.653	0.176
S8	-0.002	0.688	0.000	100.000	145.079	0.246

Temperature Calibration Report

Serial Number:	10025097
Tool Model:	UW_PRT_016
Performed:	Wed Feb 11 13:44:44 2015

Point #	Reading	Reference
1	13053.00 cps	68.00 degF
2	18014.00 cps	104.00 degF
3	29668.00 cps	176.00 degF
4	41181.00 cps	248.00 degF
5	52983.00 cps	320.00 degF
6	58931.00 cps	356.00 degF
7	cps	degF
8	cps	degF
9	cps	degF
10	cps	degF

Gamma Ray Calibration Report

Serial Number:	10019371
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	Jester 8N-14HZ
	Field	Wattenberg
	County	Weld
	State	Colorado