



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company Kerr-McGee Oil and Gas Onshore LP				Company Kerr-McGee Oil and Gas Onshore LP			
Well Greenleaf 26N-2HZ				Well Greenleaf 26N-2HZ			
Field Wattenberg				Field Wattenberg			
County Weld				County Weld			
State Colorado				State Colorado			
Location:				API # : 05-123-40621			
SEC 2 TWP 2N RGE 65W				Other Services MIT JB/GR			
Permanent Datum				Ground Level			
Log Measured From				Kelly Bushing			
Drilling Measured From				Kelly Bushing			
Elevation 4847'				Elevation K.B. 4863' D.F. 4862' G.L. 4847'			
Date				8-MAR-2015			
Run Number				One			
Depth Driller				11967 FT			
Depth Logger				7530 FT			
Bottom Logged Interval				7515 FT			
Top Log Interval				Surface			
Open Hole Size				---			
Type Fluid				Water			
Density / Viscosity				8.34 lbm/gal			
Max. Recorded Temp.				242°F			
Estimated Cement Top				46 FT			
Time Well Ready				ROA			
Time Logger on Bottom				12:30 A.M.			
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				4.5			
Liner				11.6			
P-110				6545 FT			
11963 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 reference to Casing Tally reported Liner Top at 6545 FT.
Adjusted log -24 FT to correlate with Liner Top.
Log ran from as deep as possible to surface
Log ran with 2800 PSI surface induced pressure.
No debris found on logging tools after run.

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



Main 7" Pass

Recorded with 2800 PSI Surface Induced Pressure

Database File:0512340621_anadarko_greenleaf 26n-2hz_03-08-15_mit_rbl.db

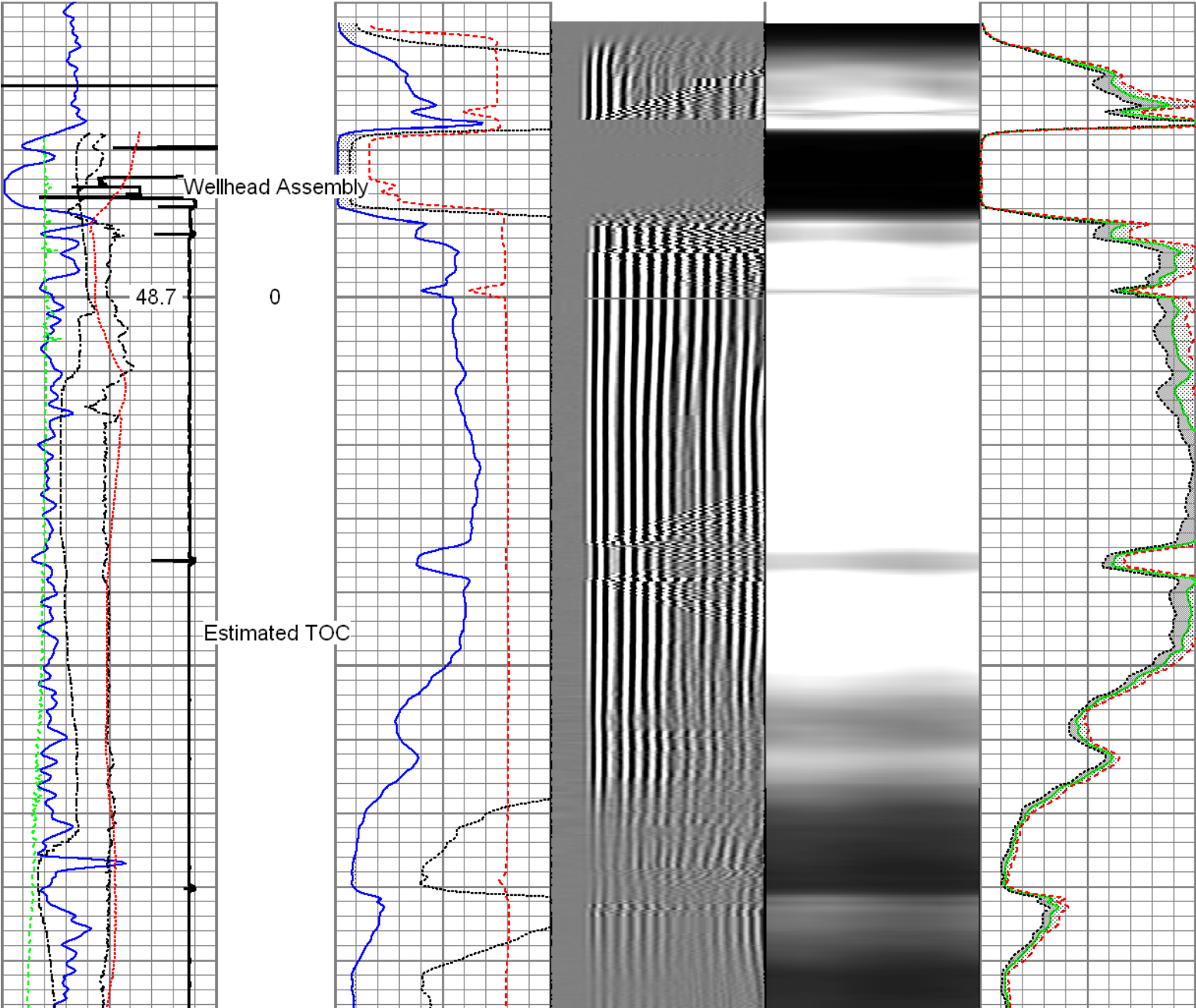
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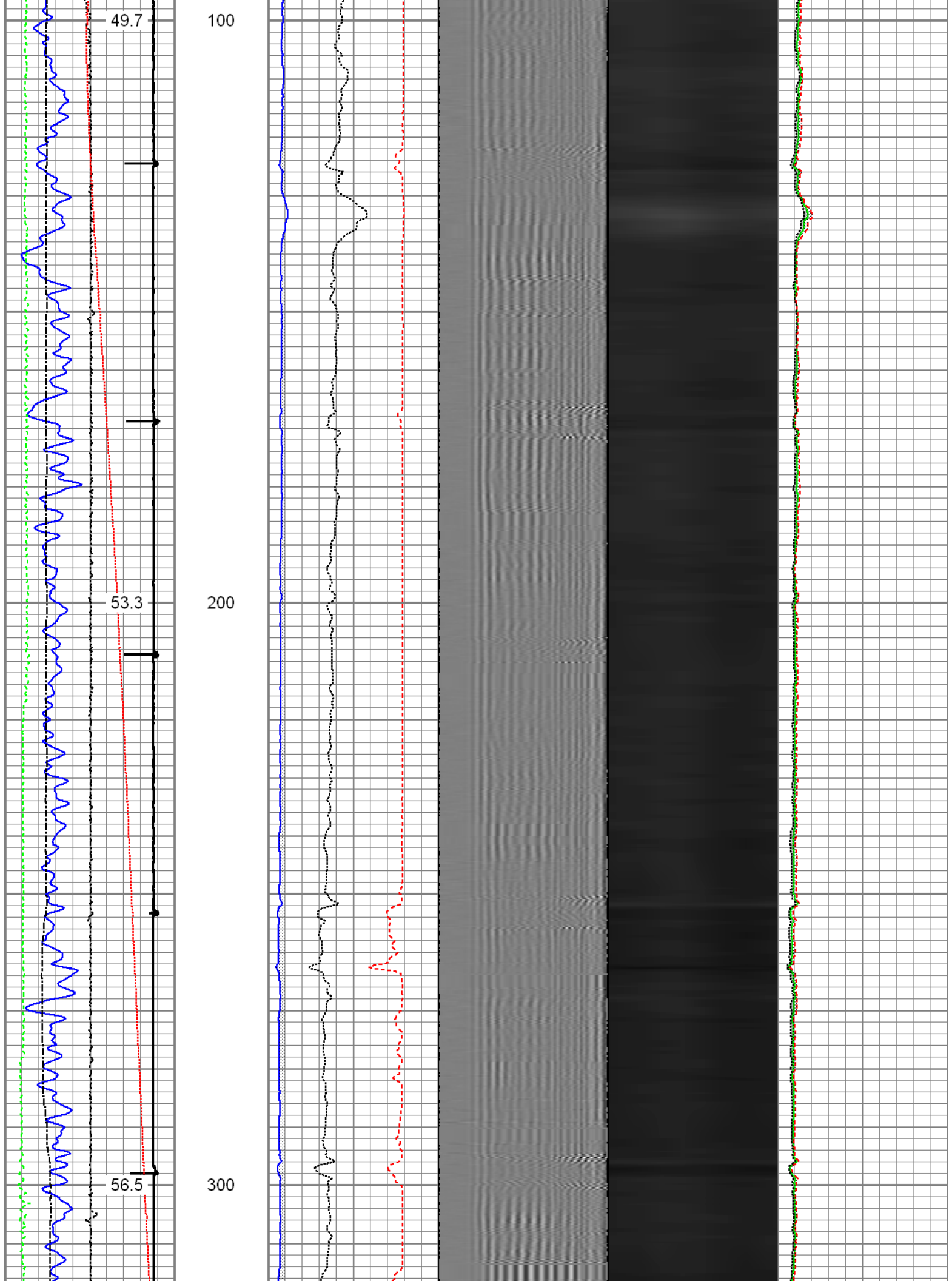
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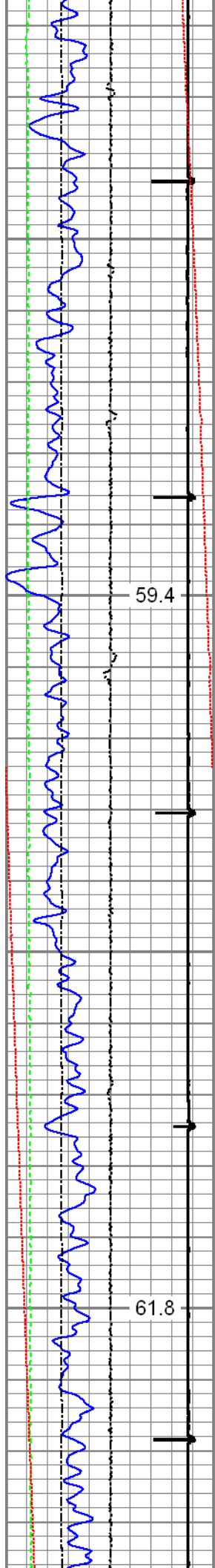
Dataset Creation:Mon Mar 09 06:40:47 2015

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





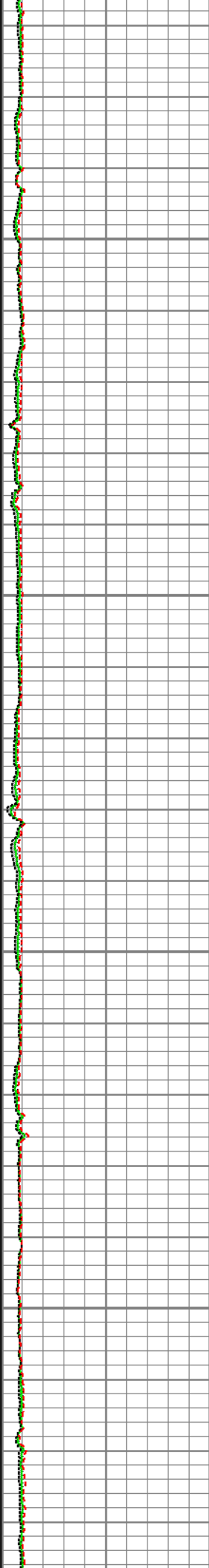
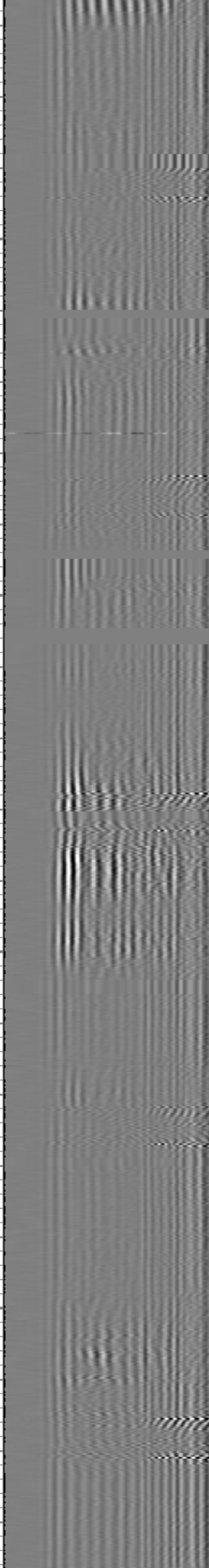
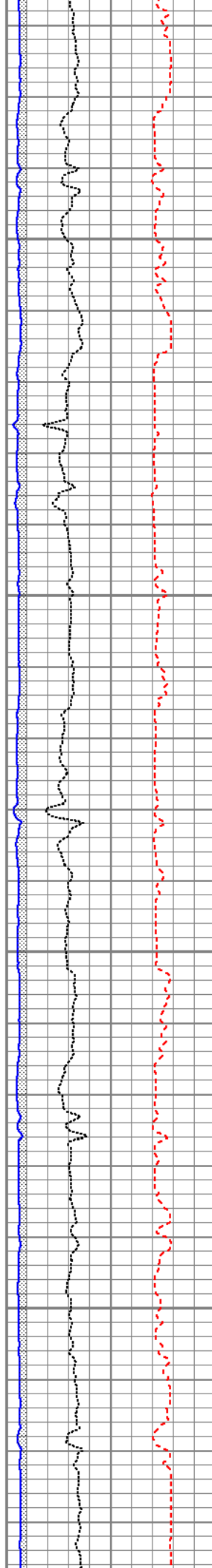


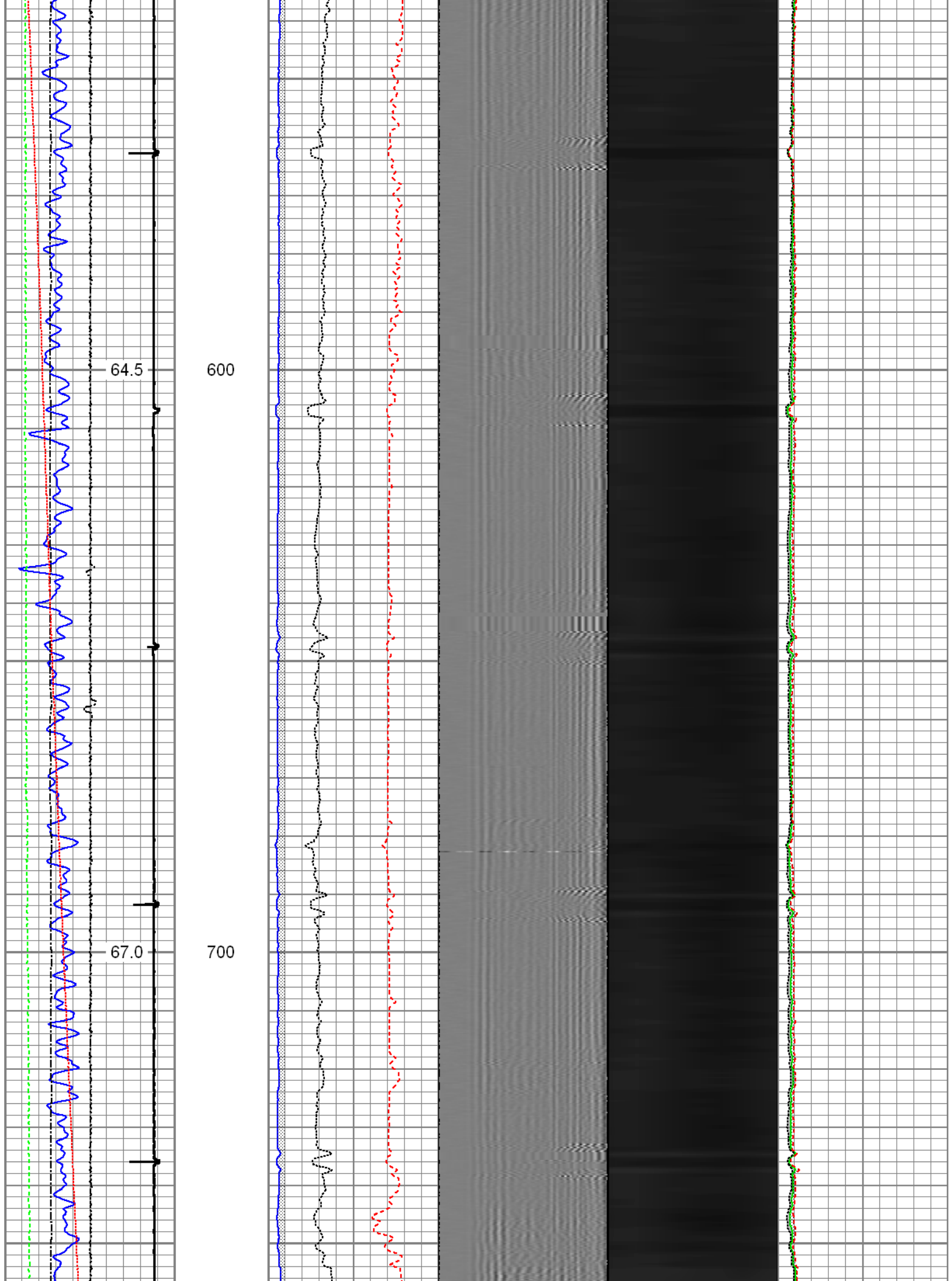
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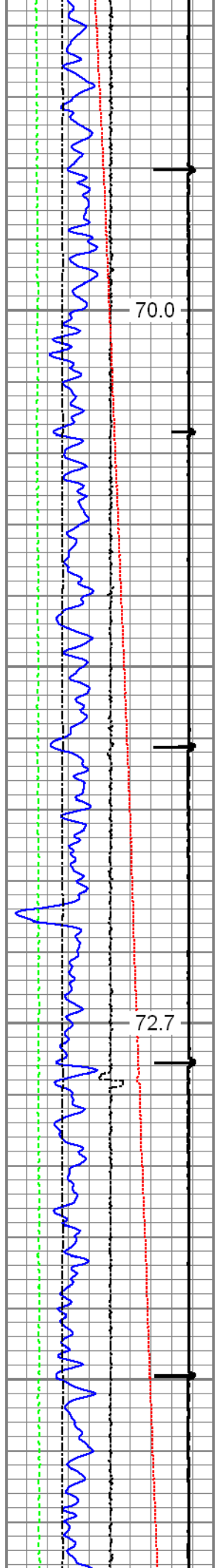
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61.8

500

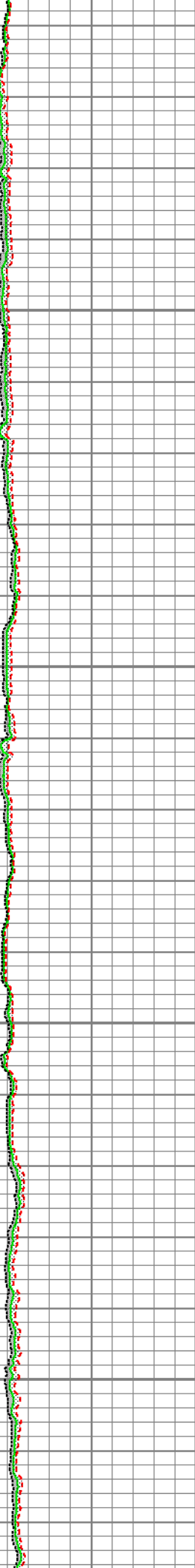
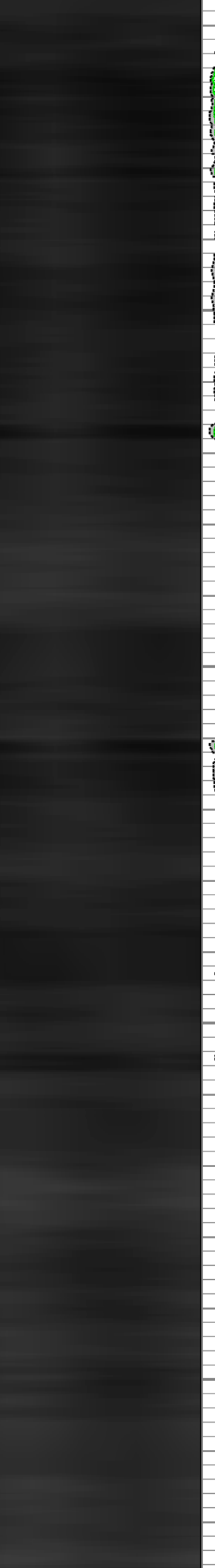
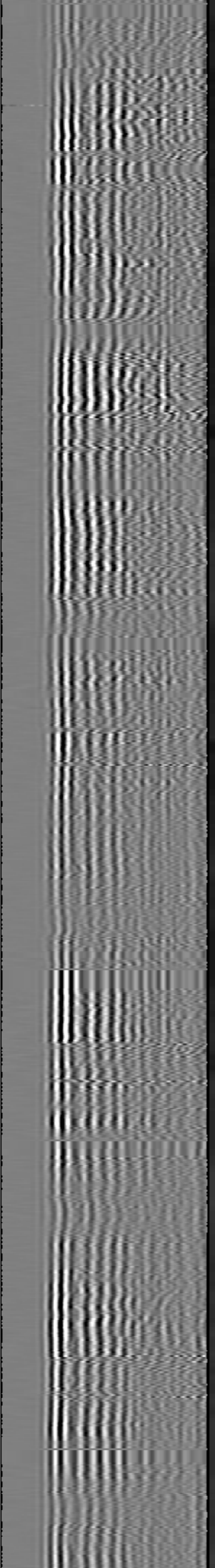
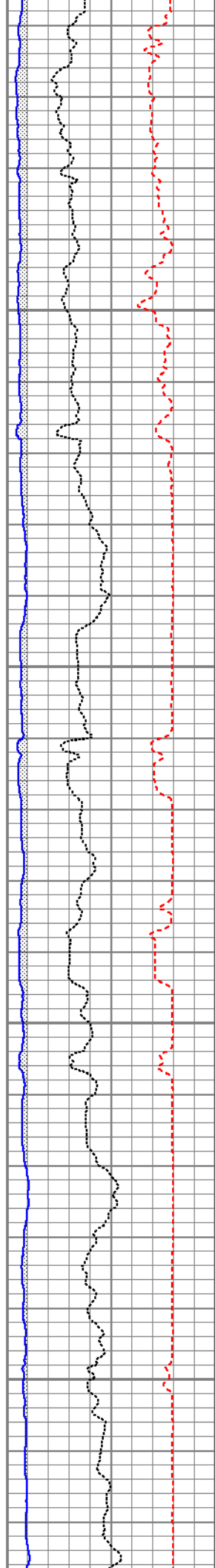


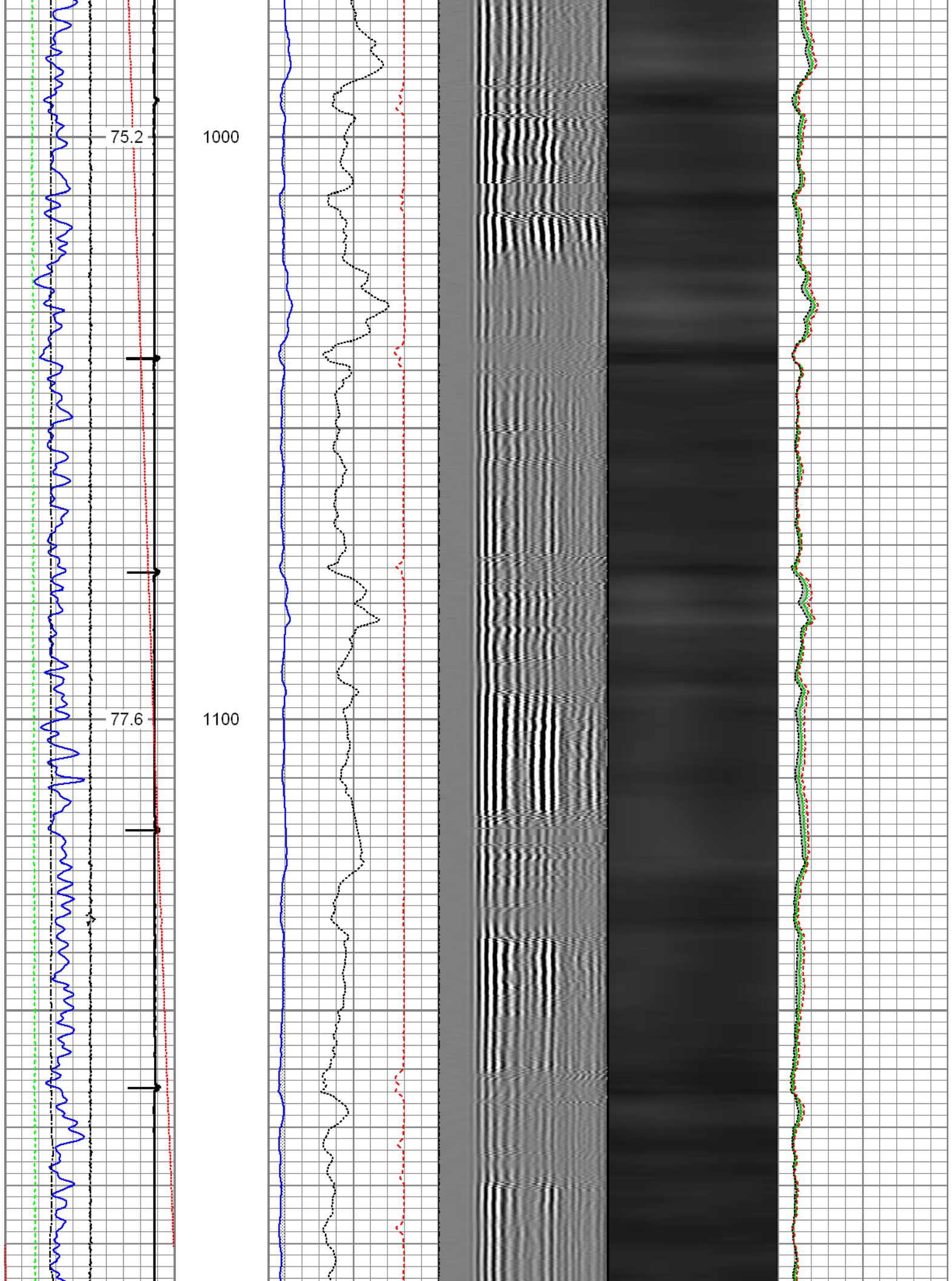


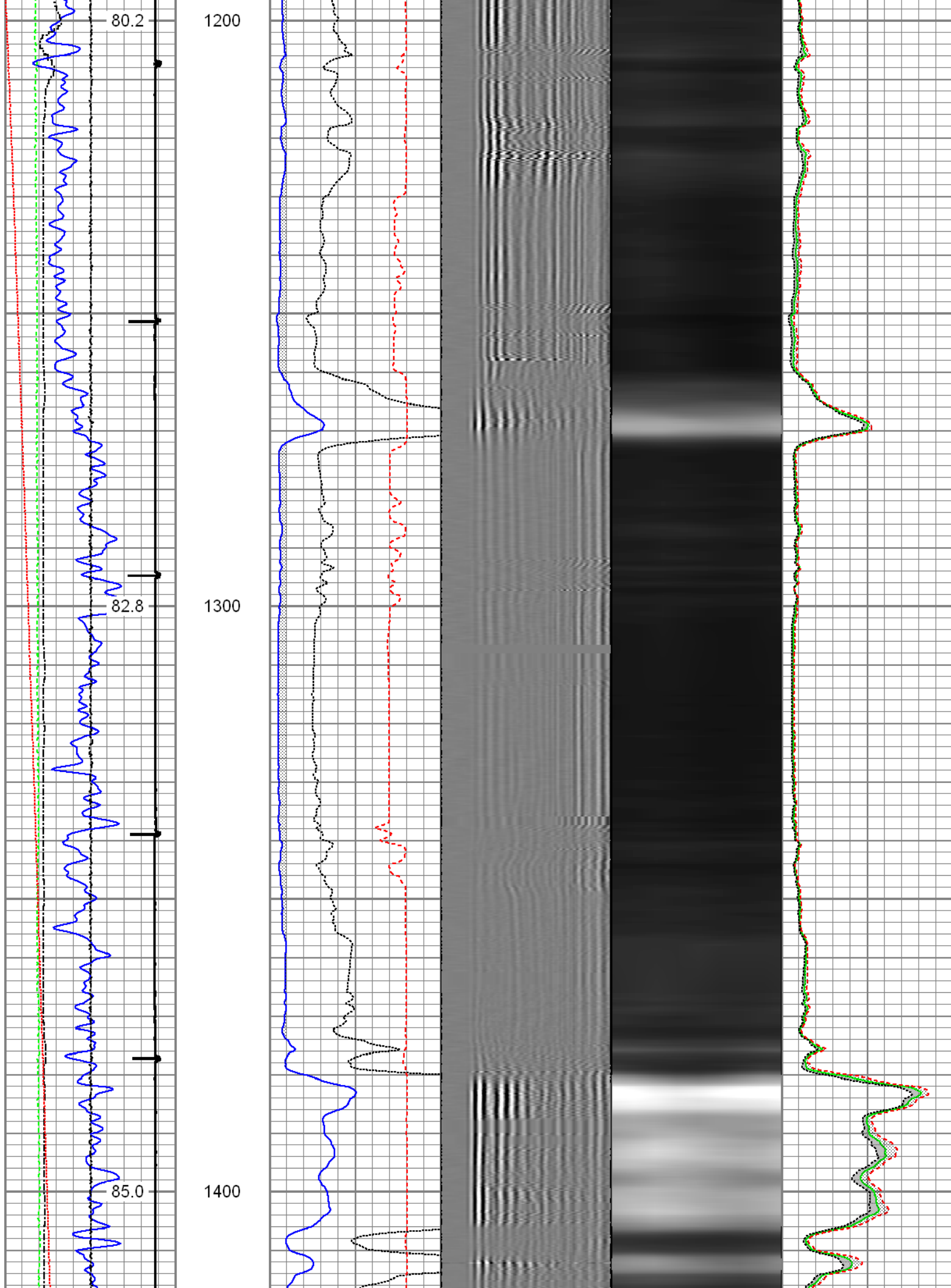


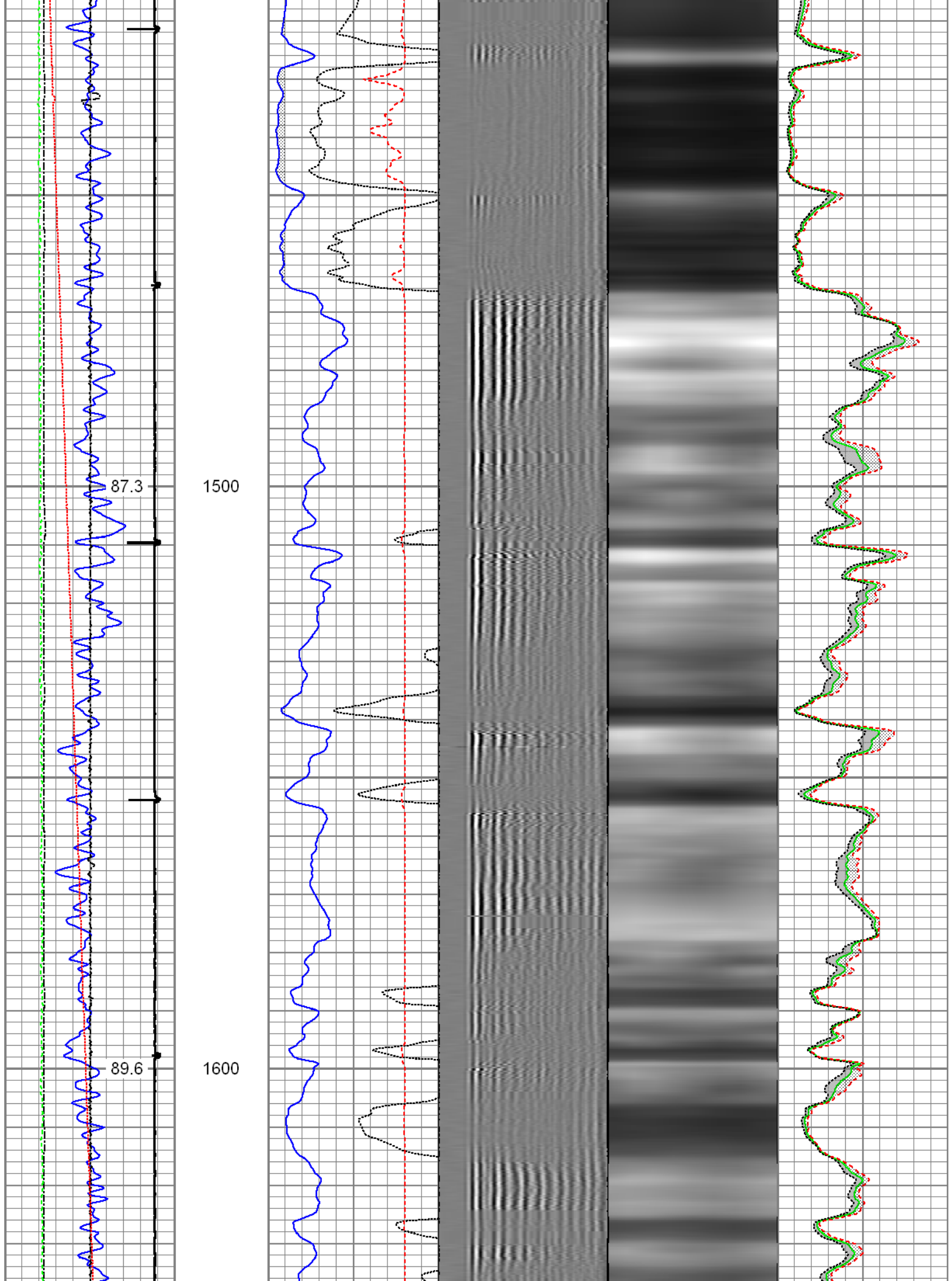
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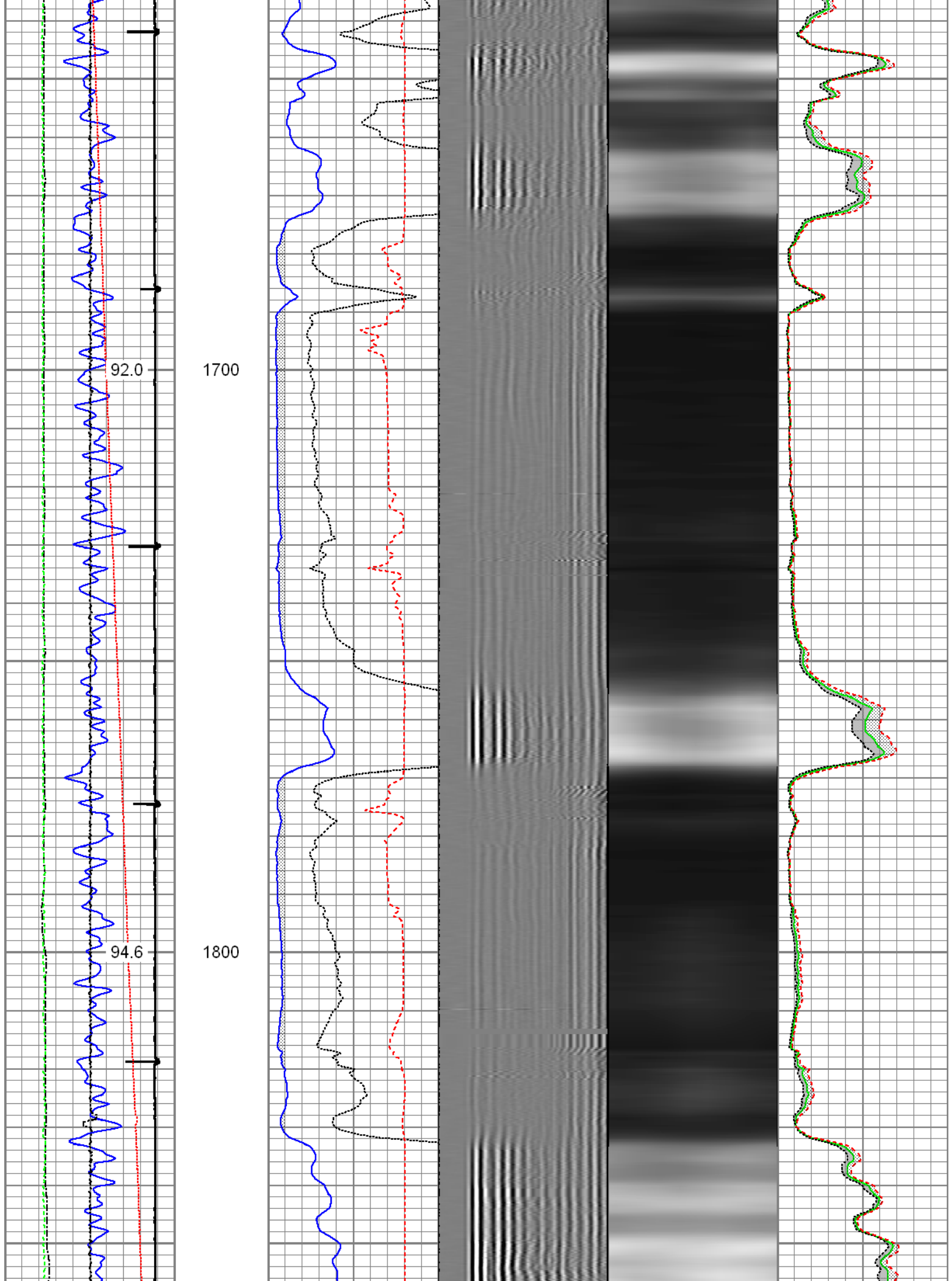
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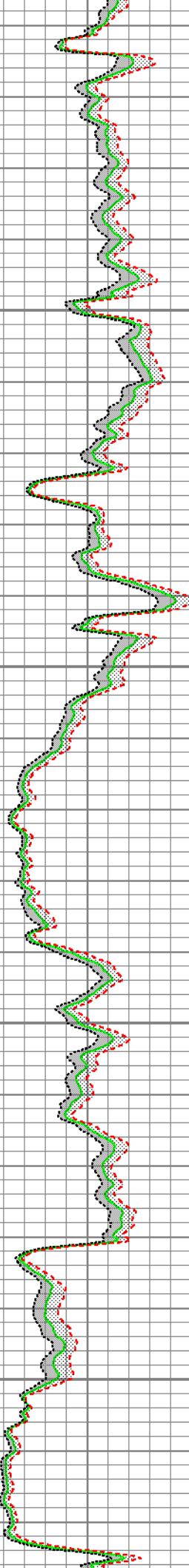
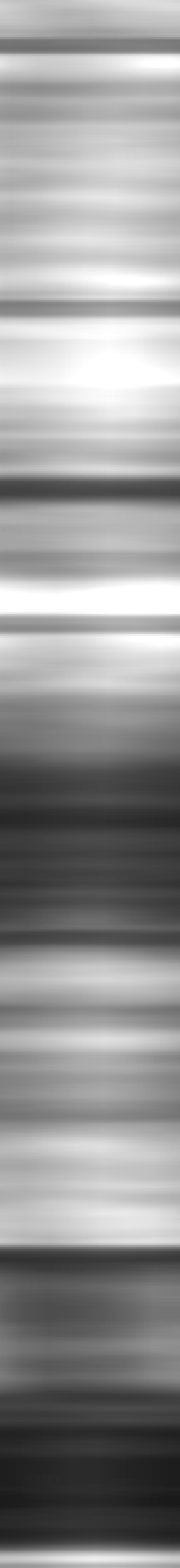
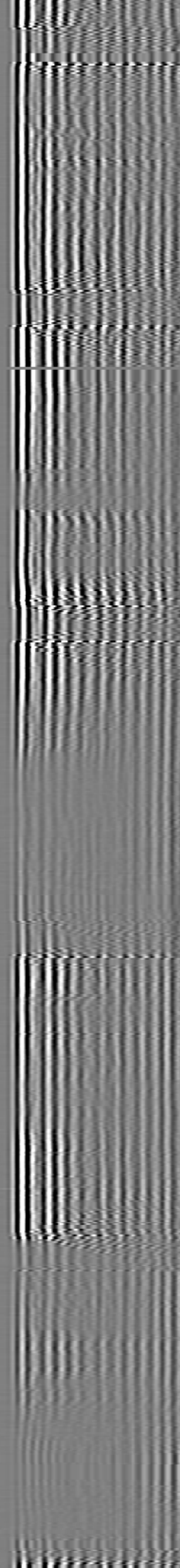
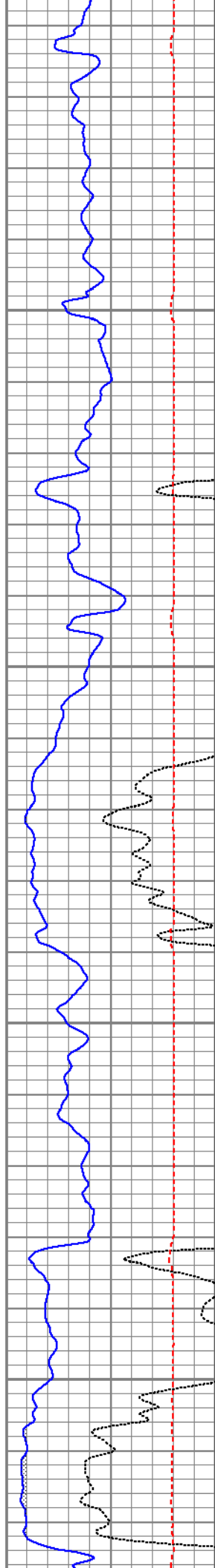
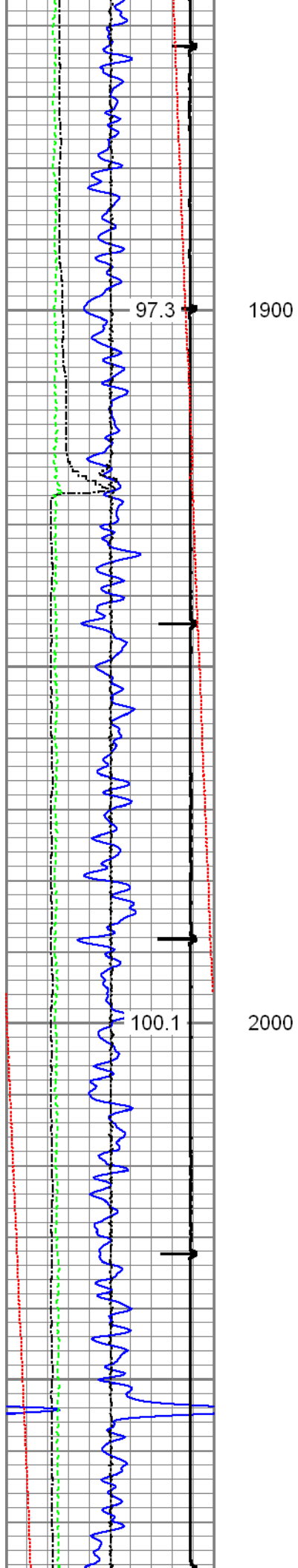


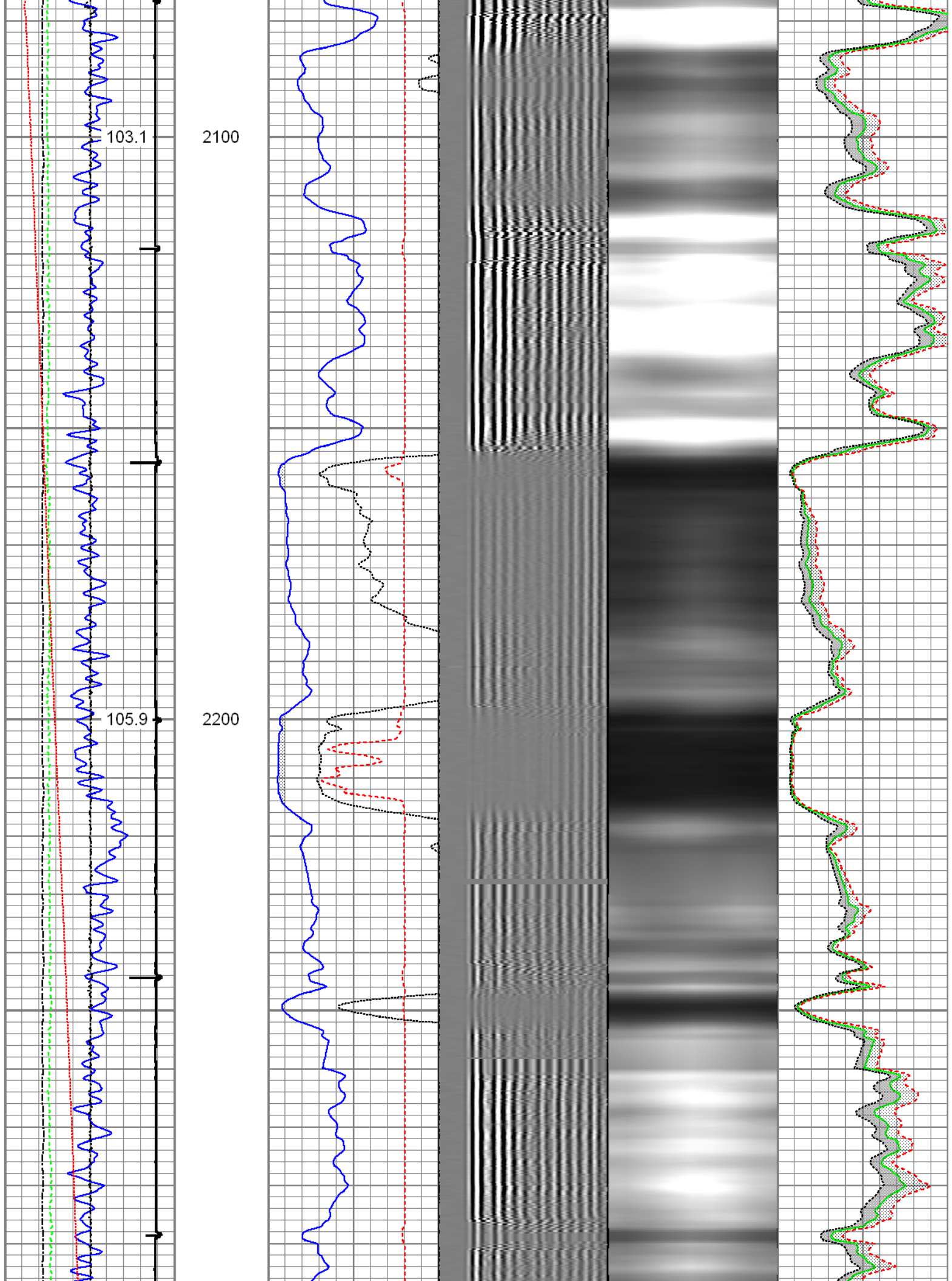


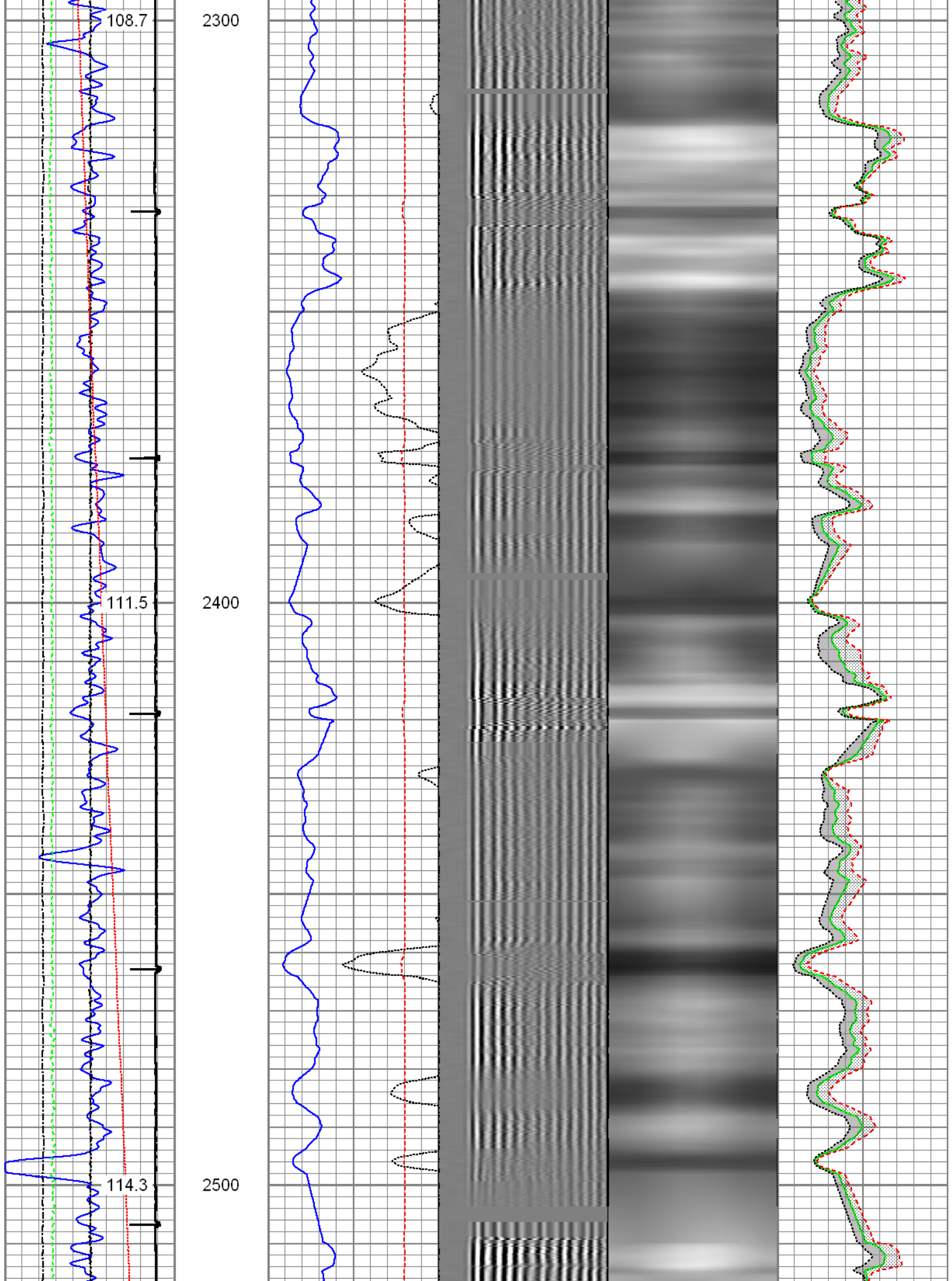


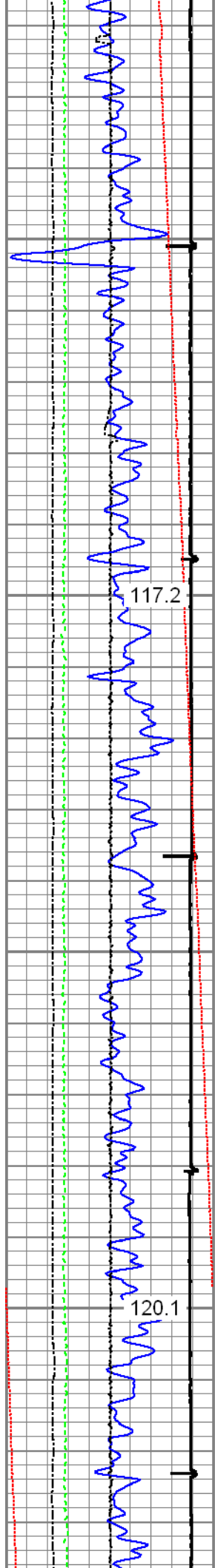






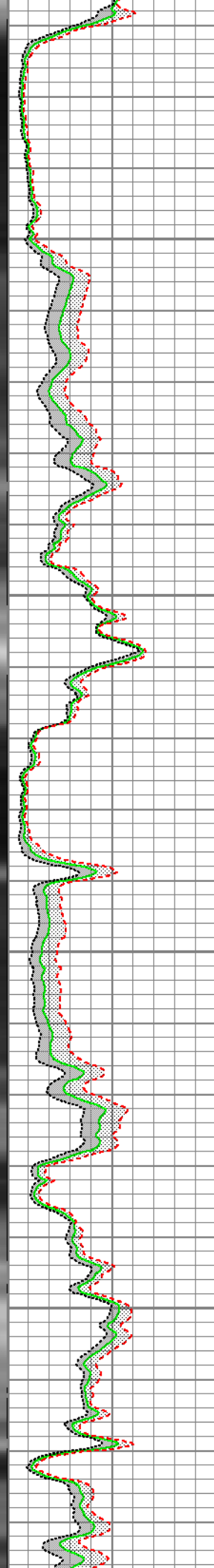
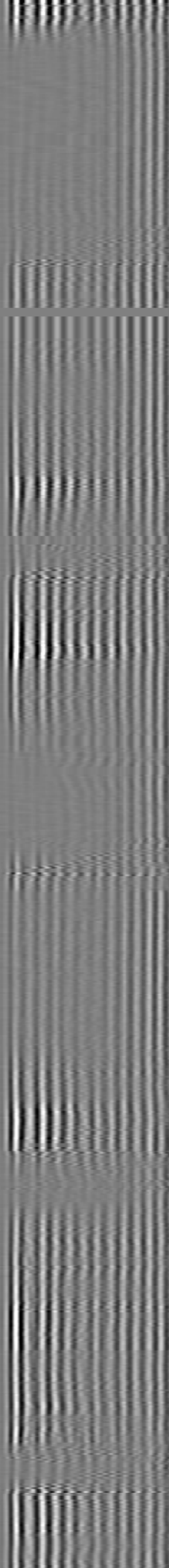
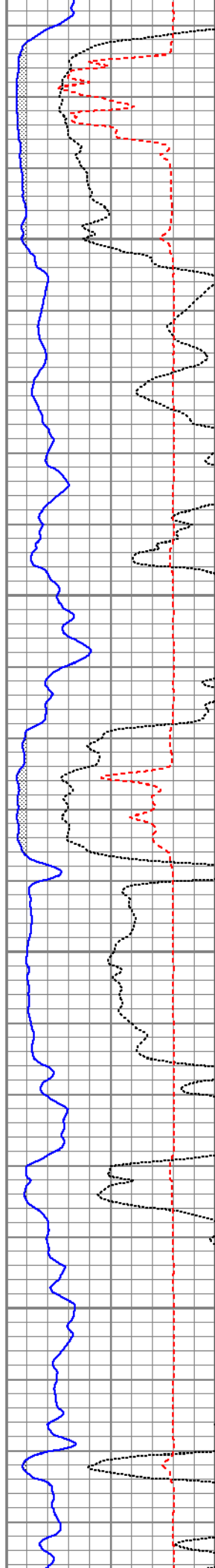


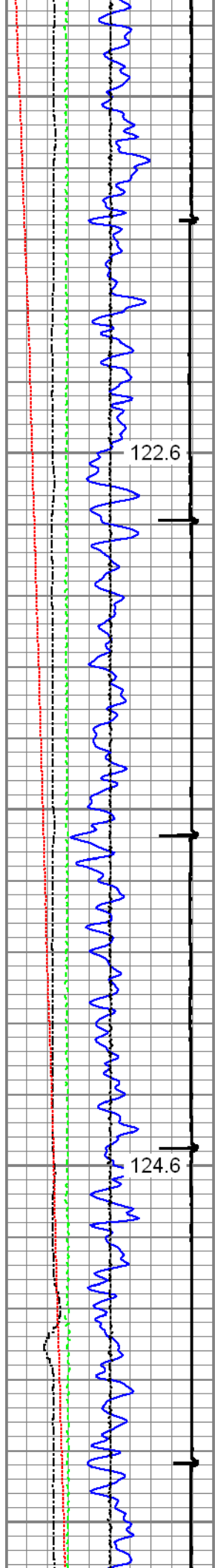




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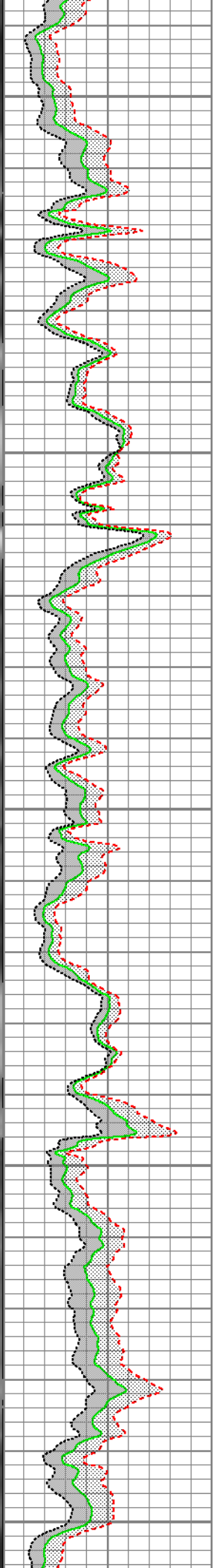
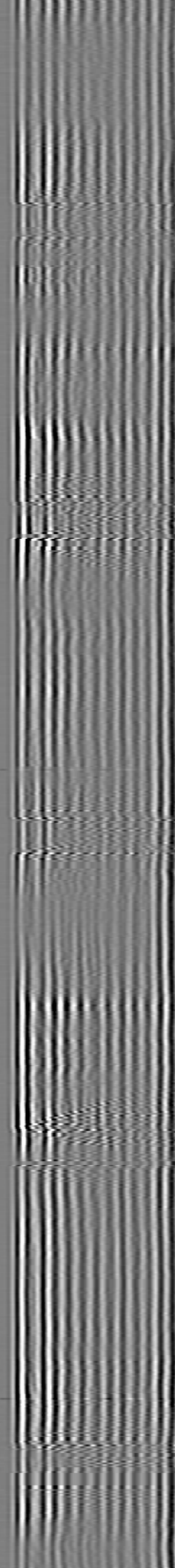
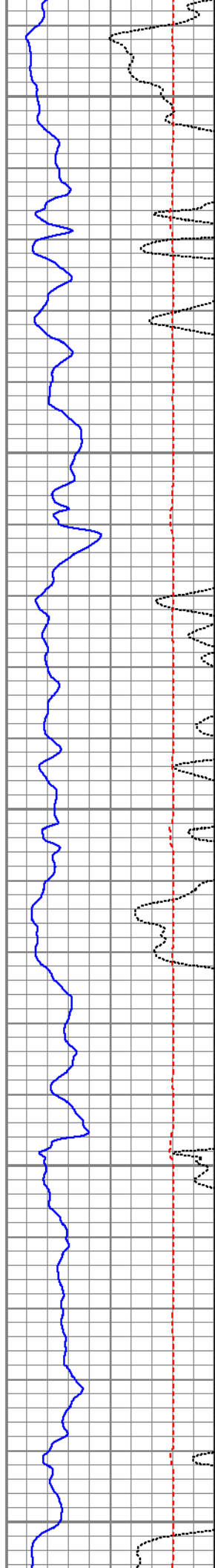
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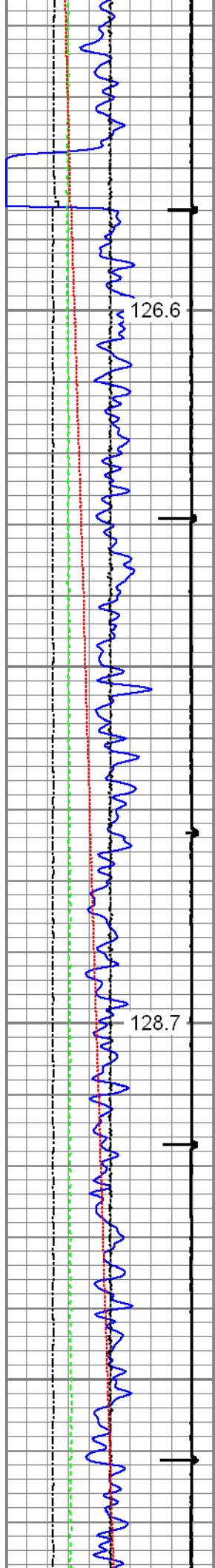




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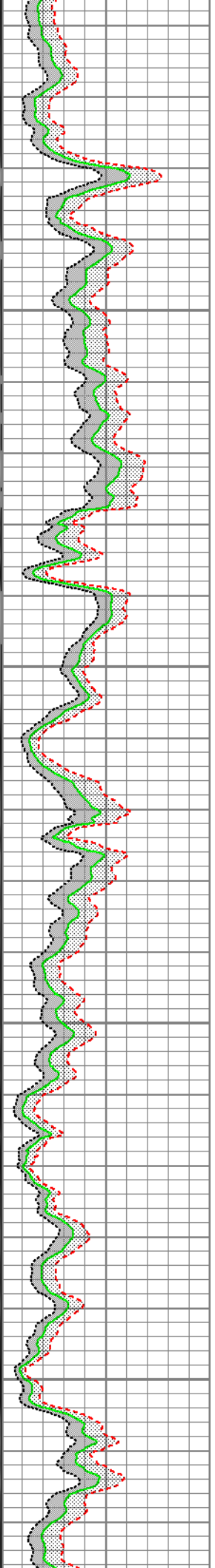
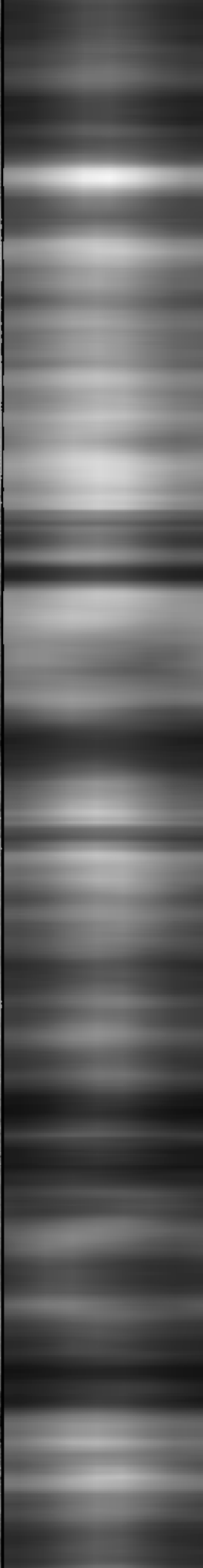
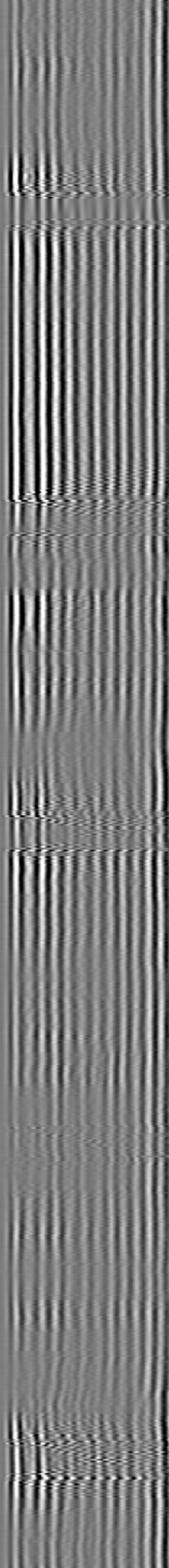
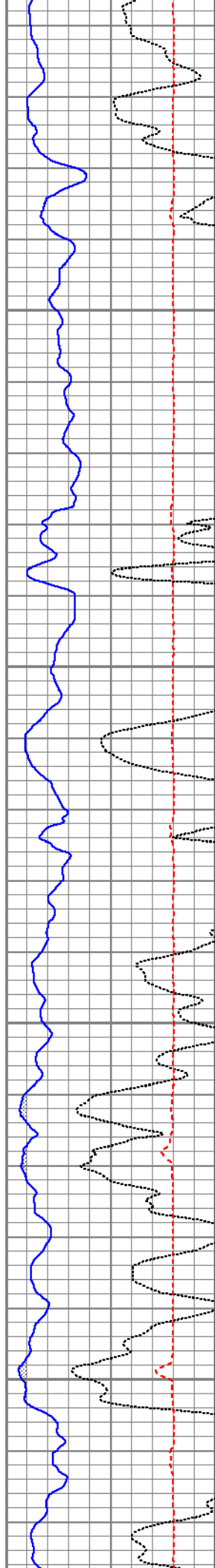
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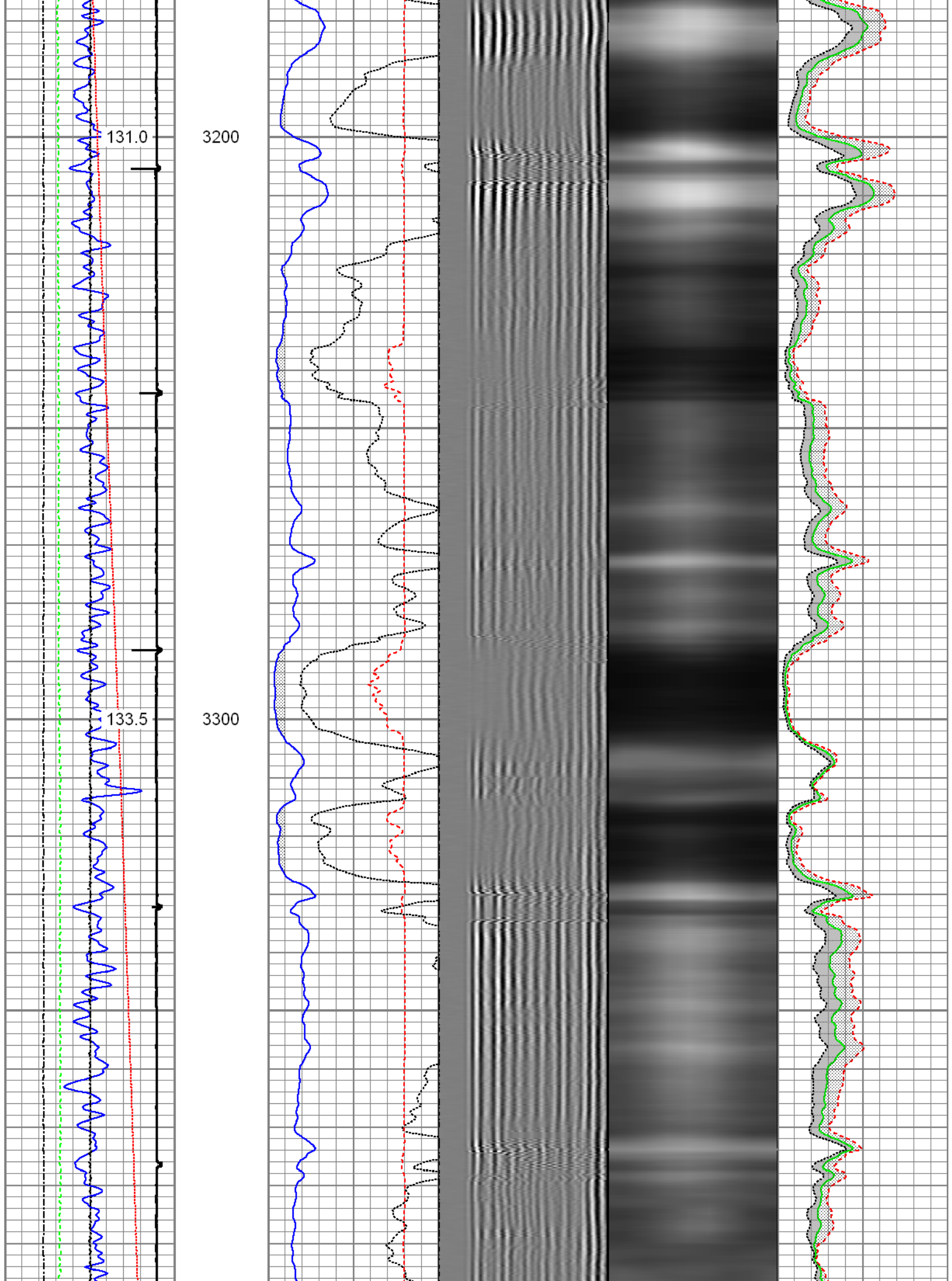


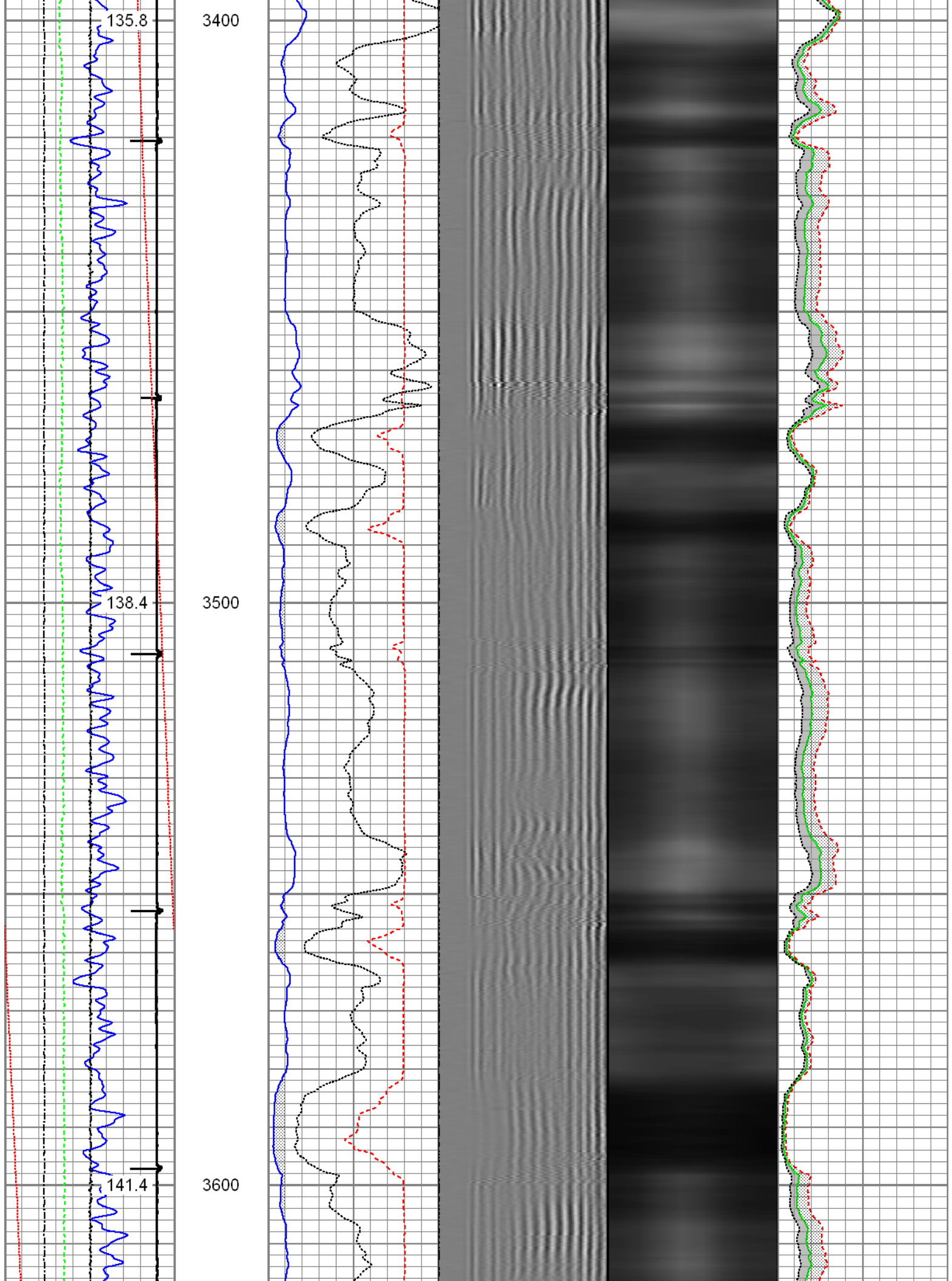


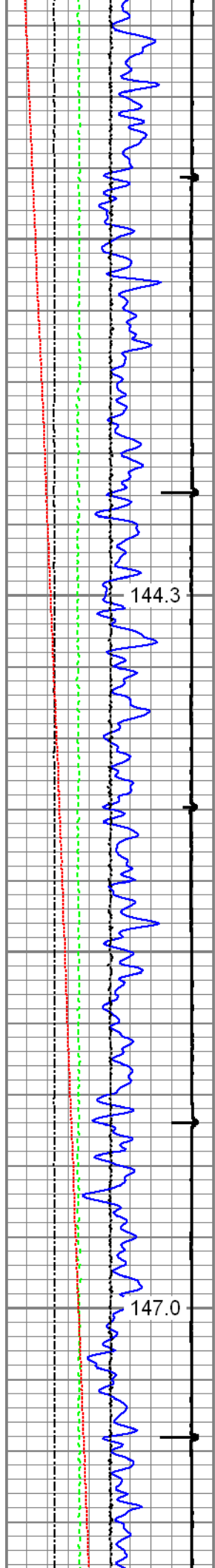
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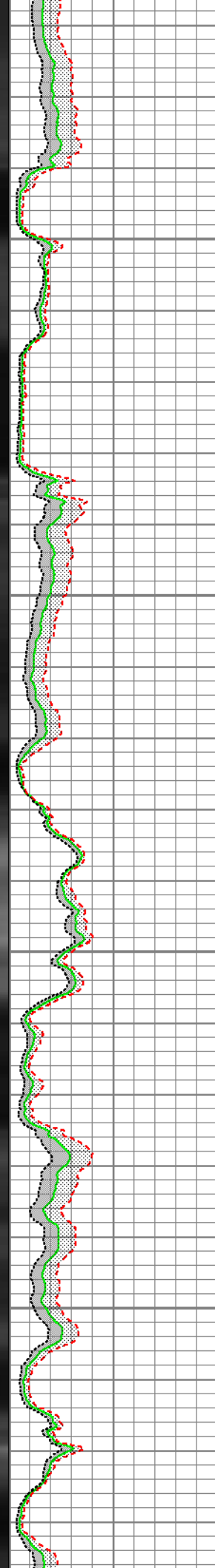
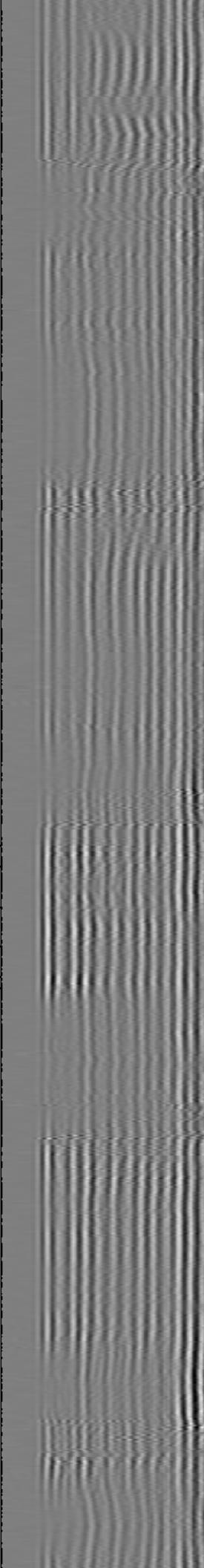
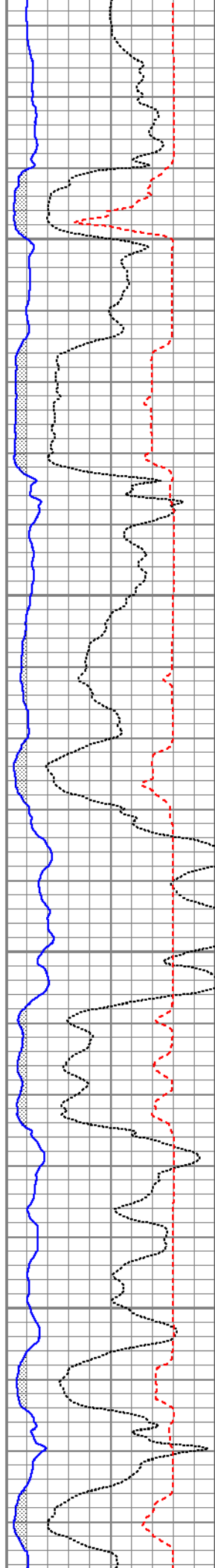


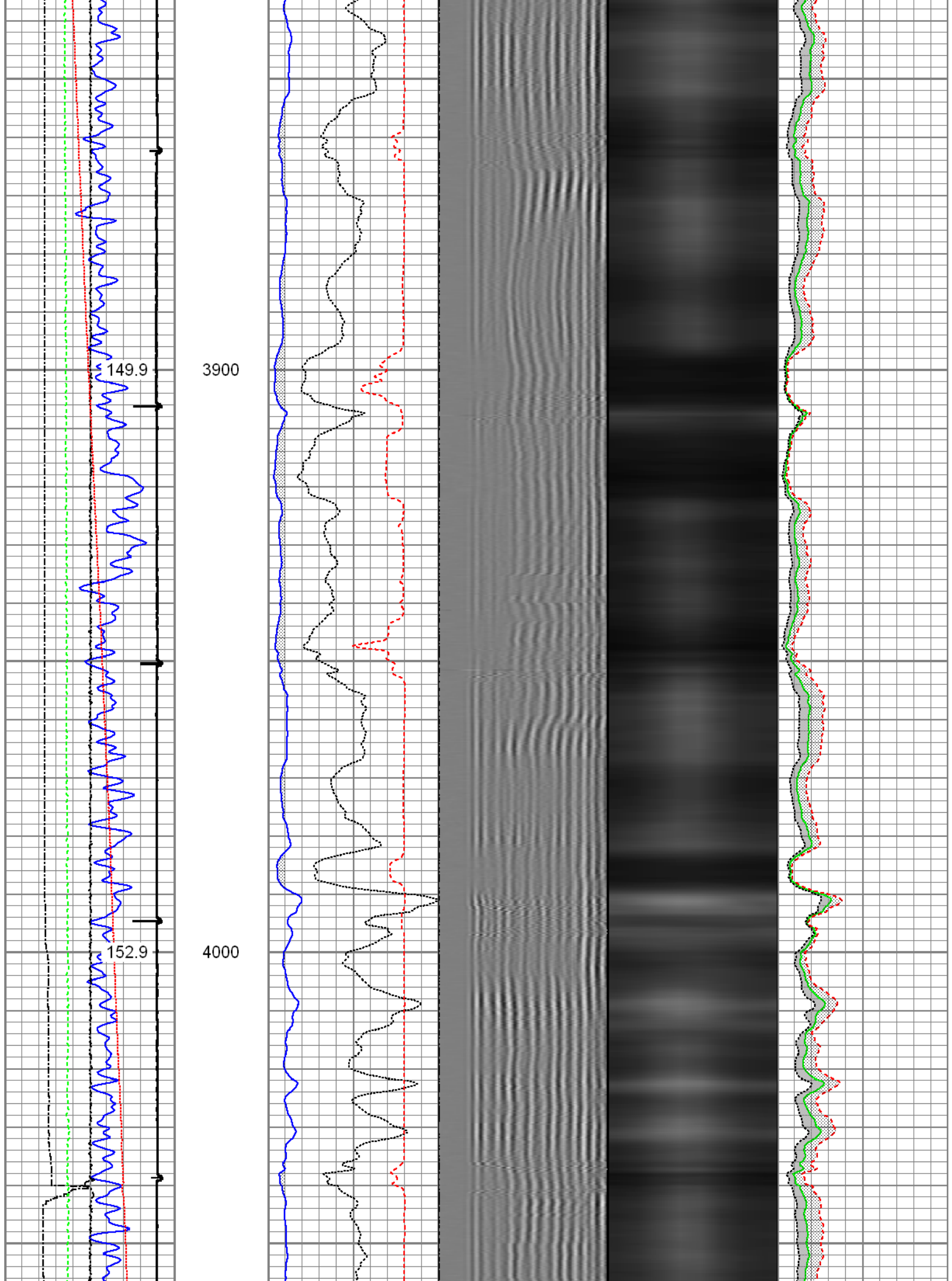


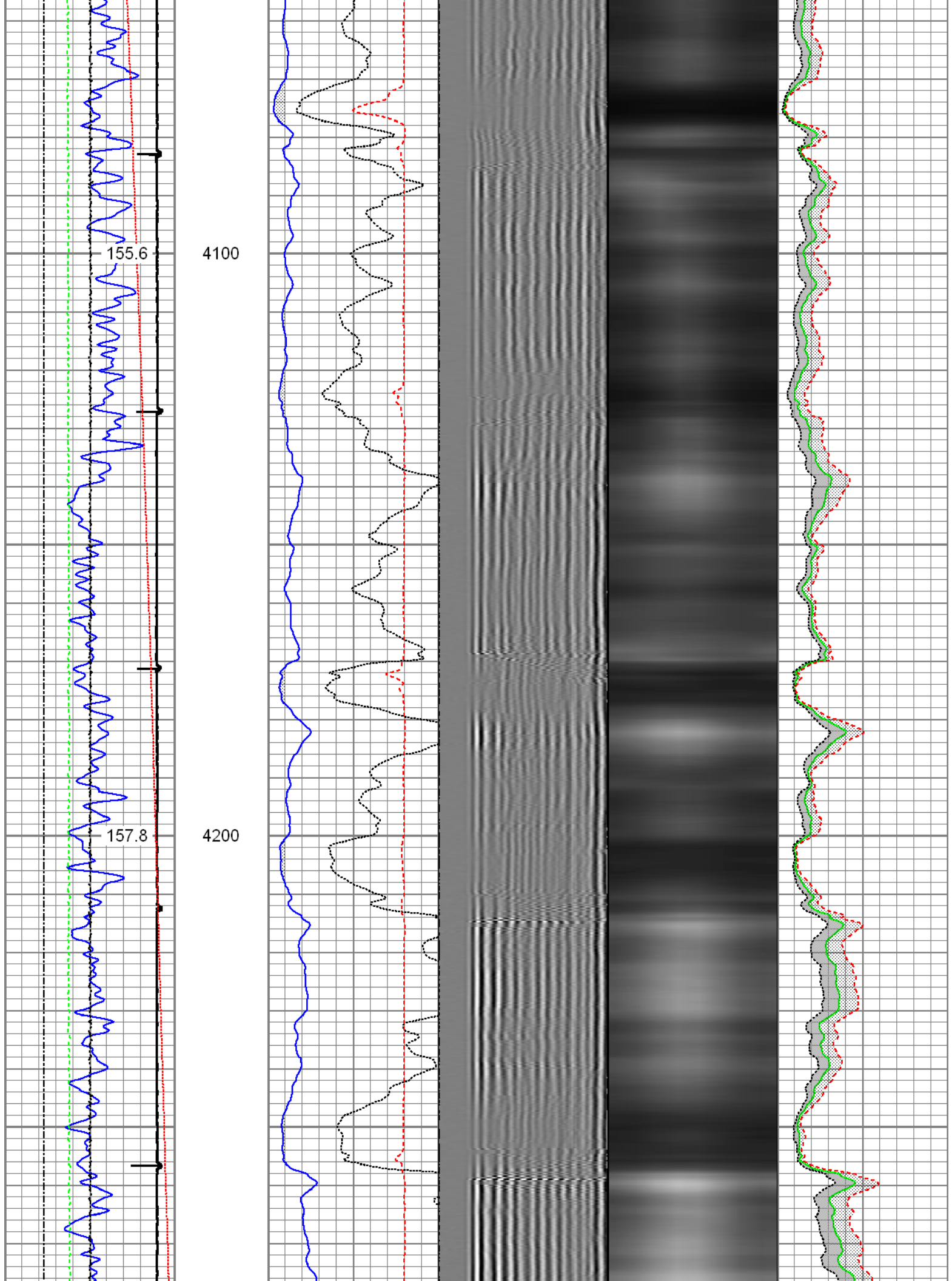


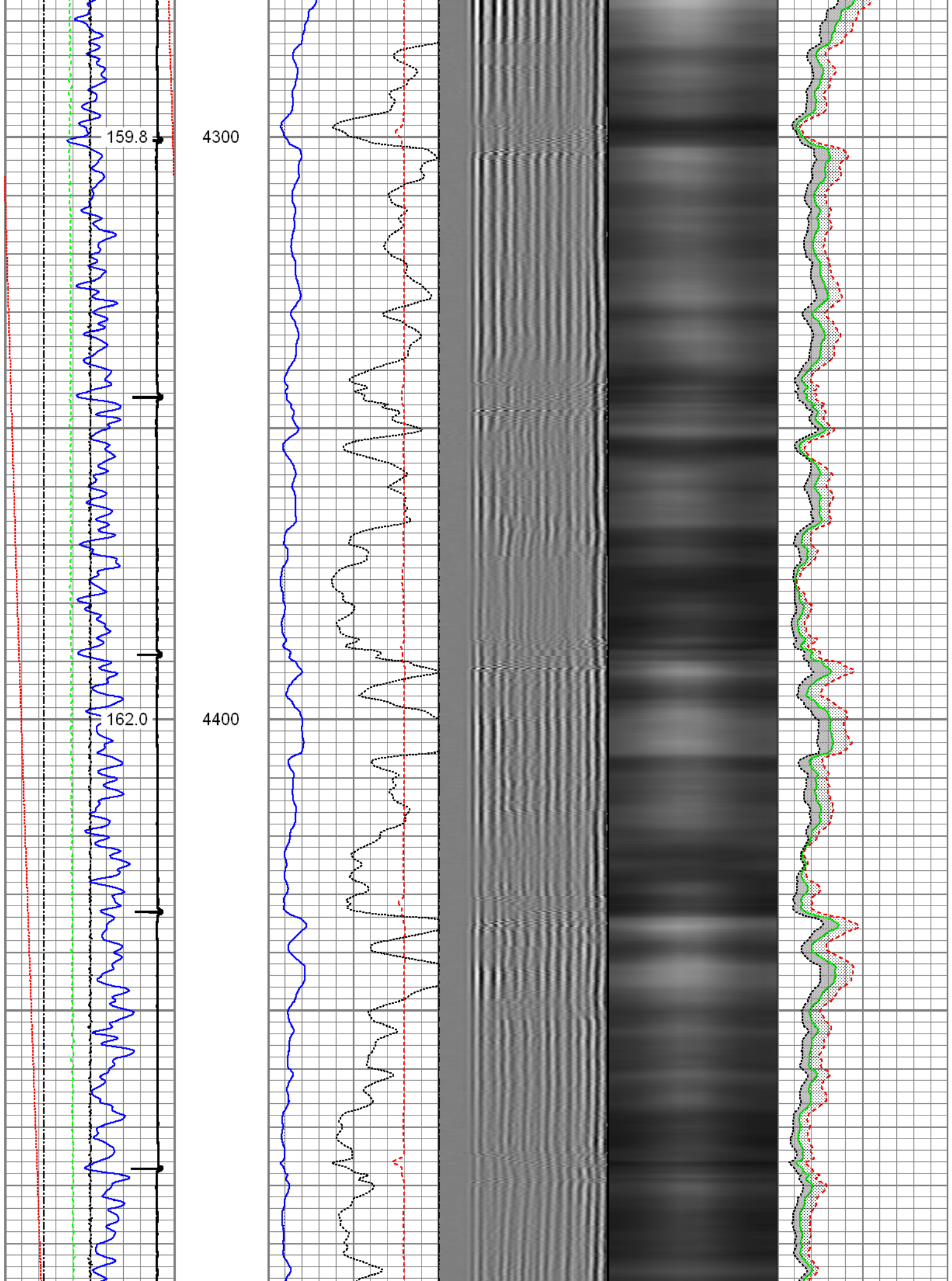
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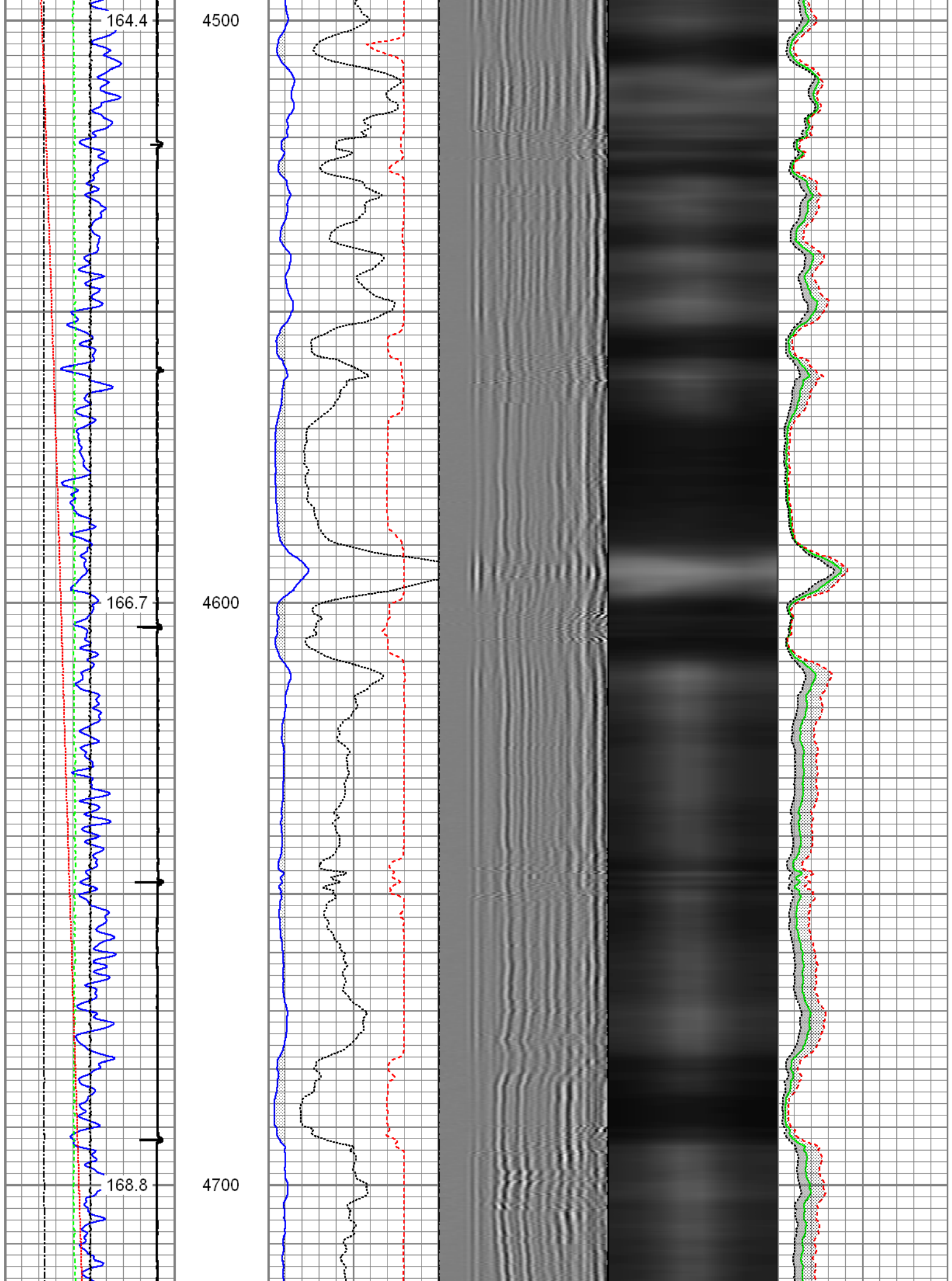
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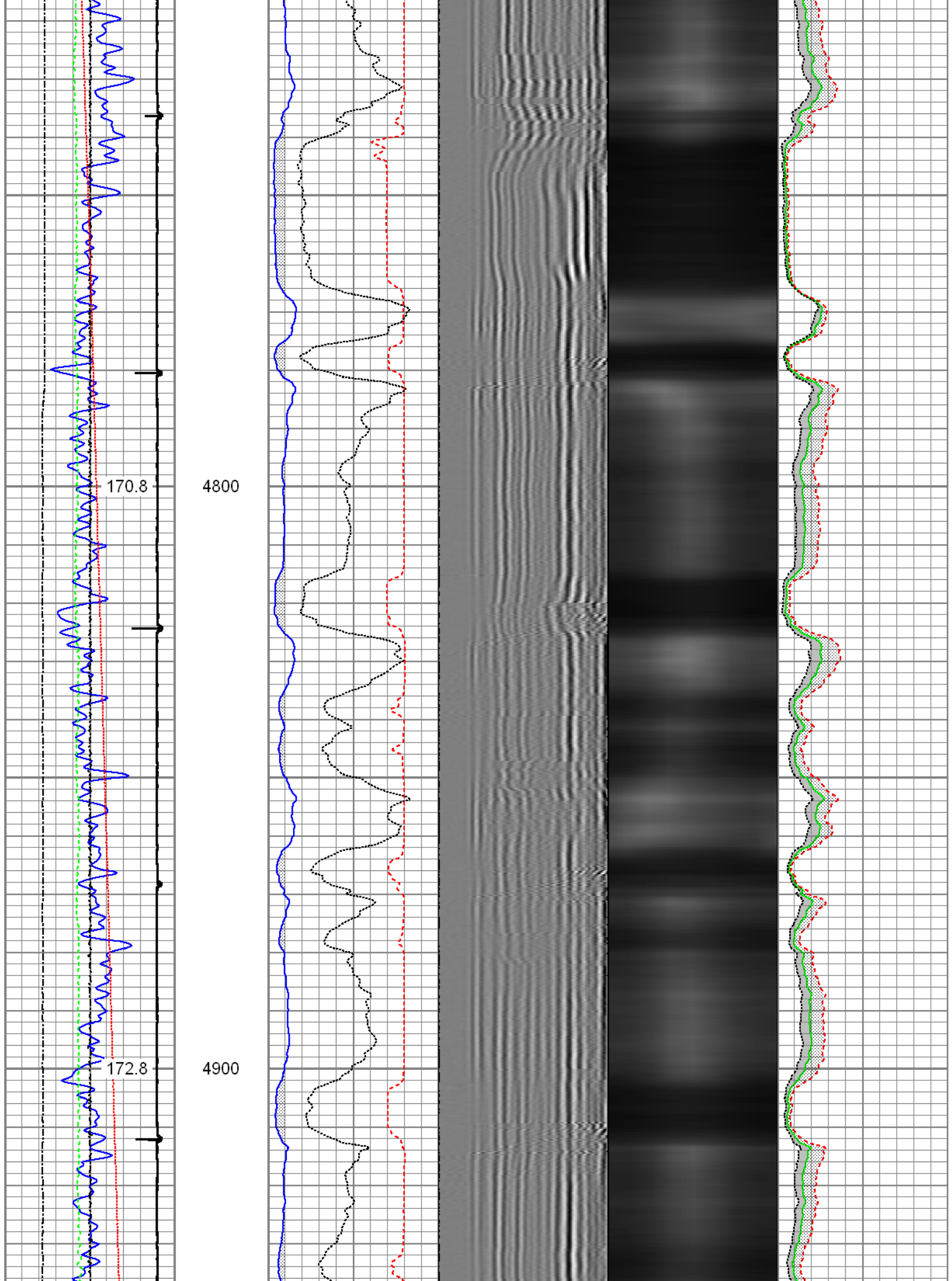


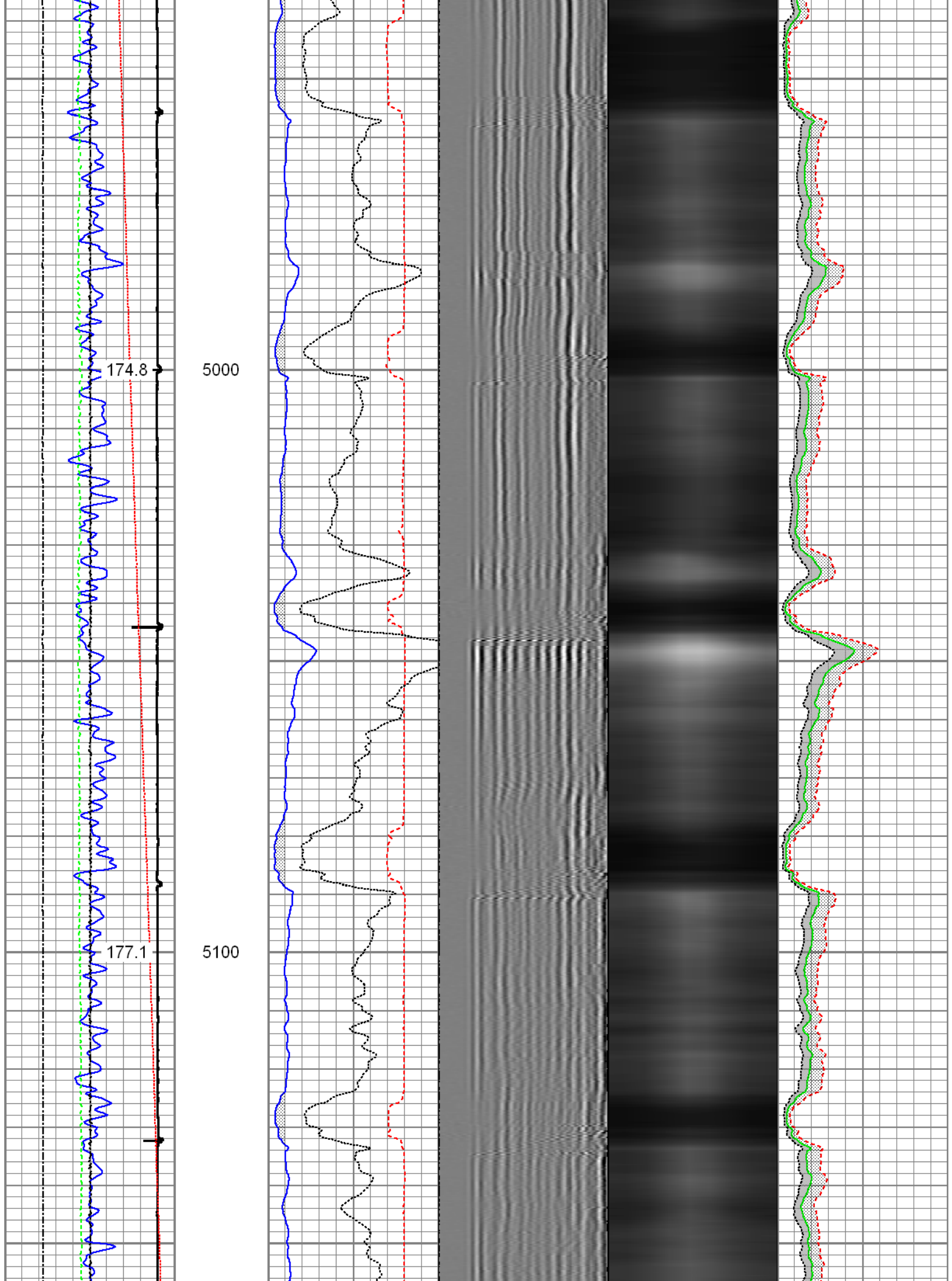


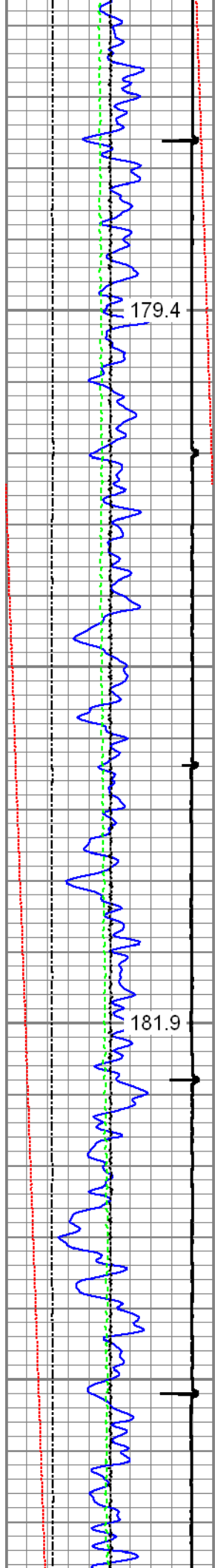










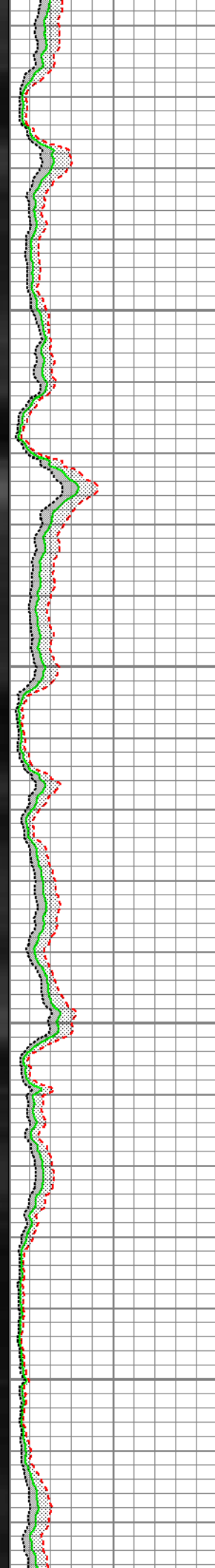
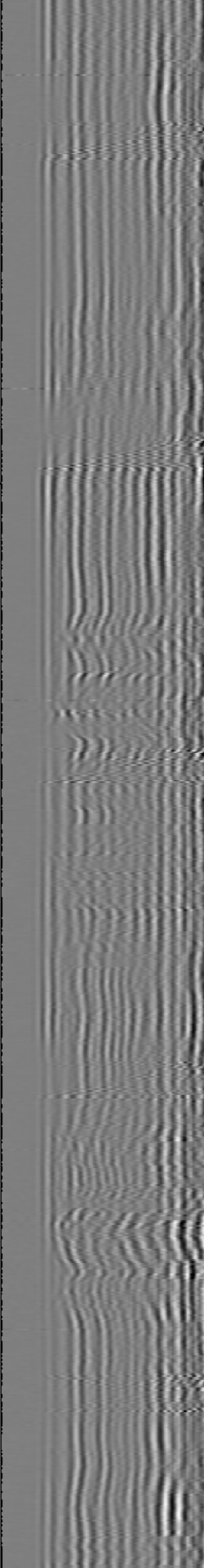
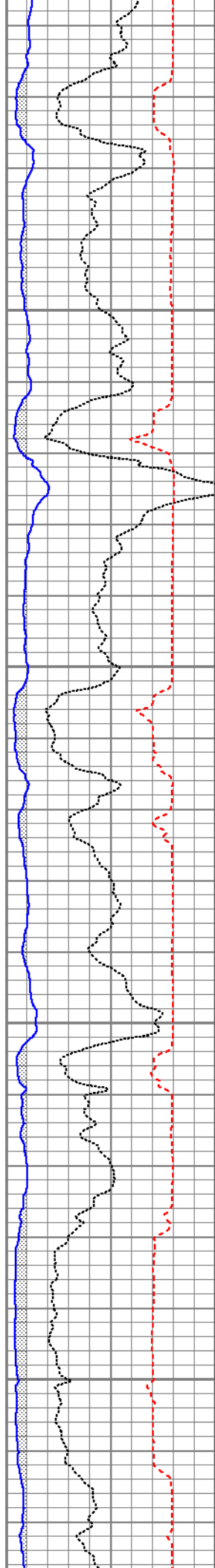


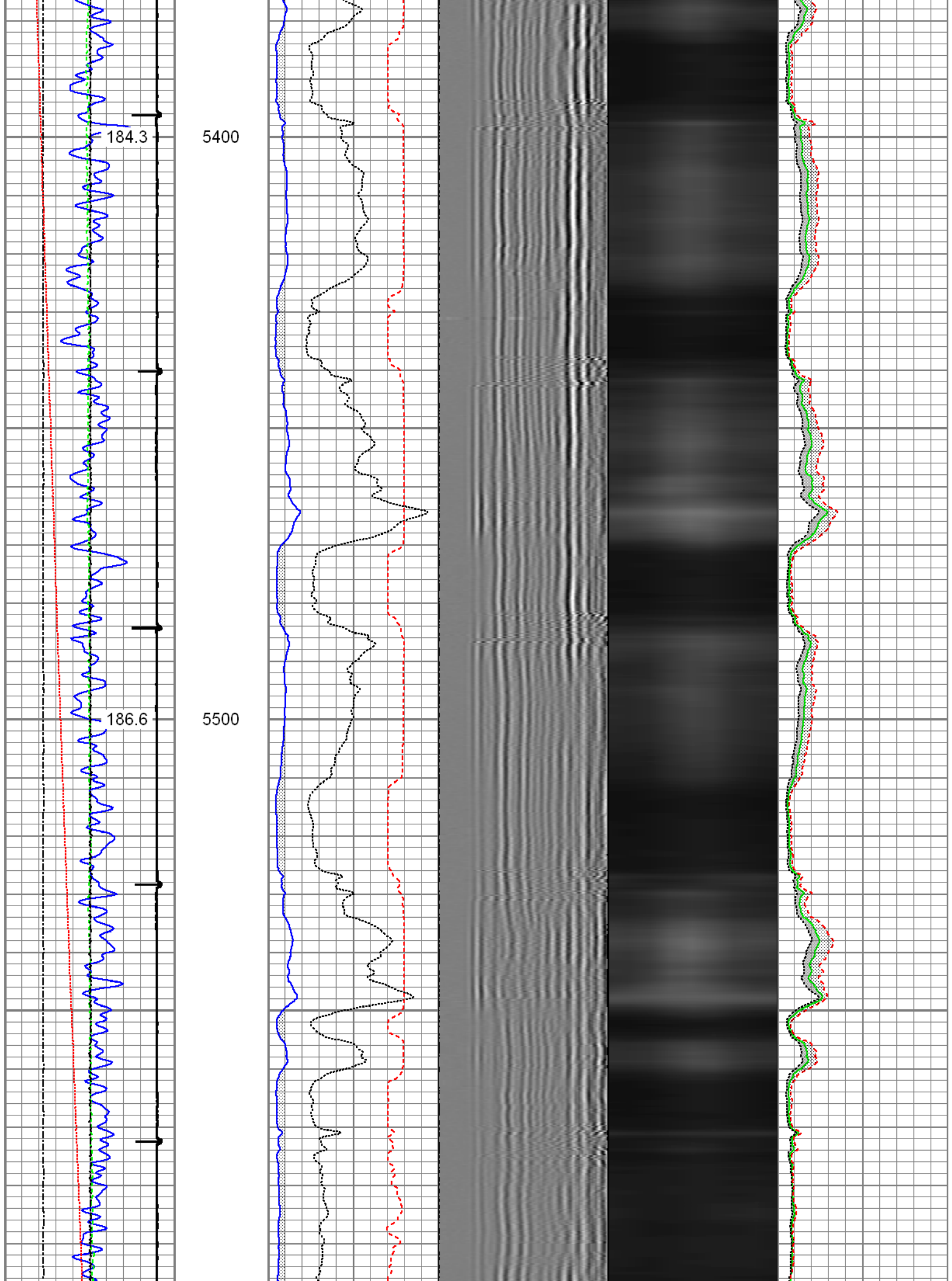
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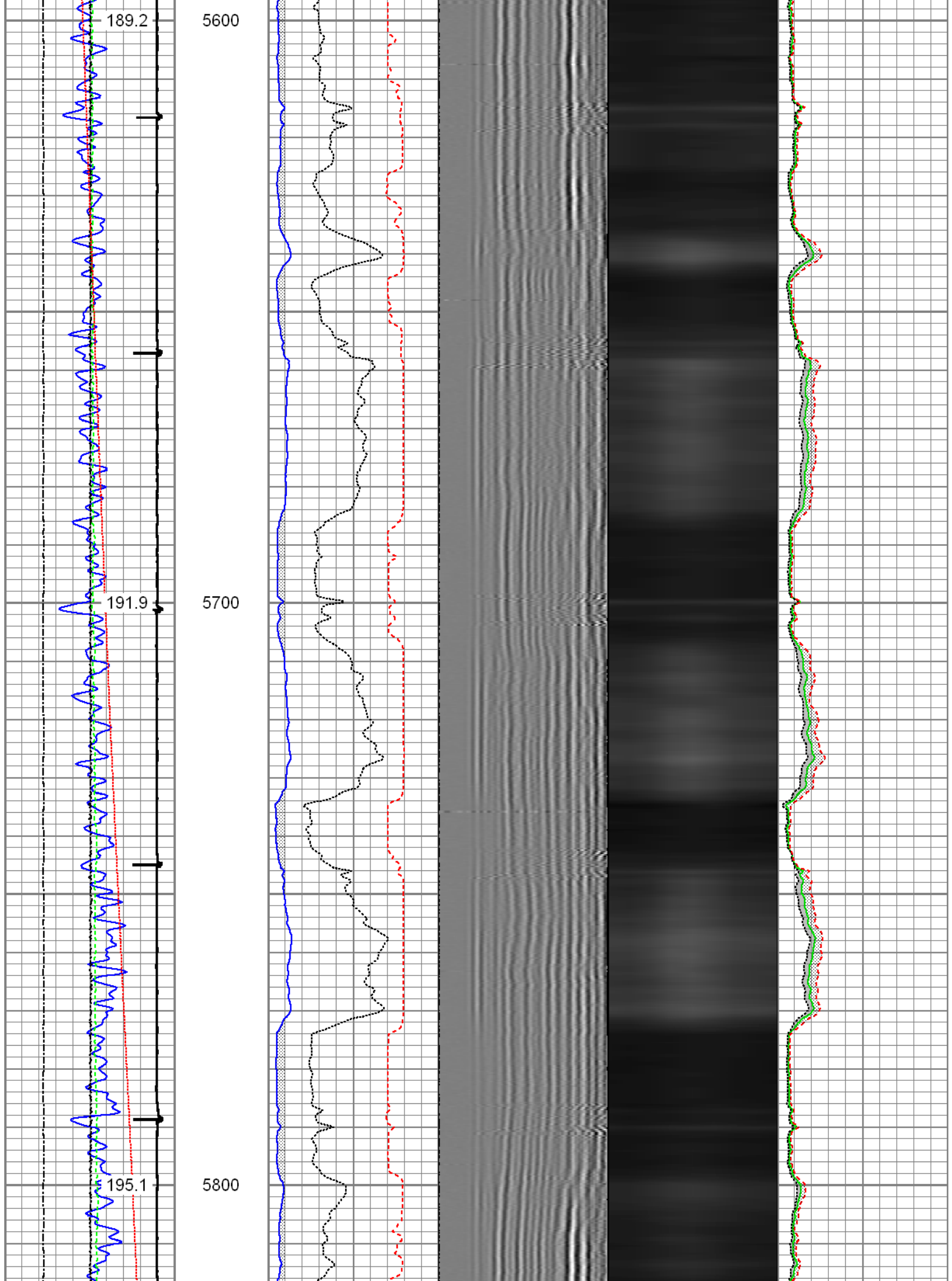
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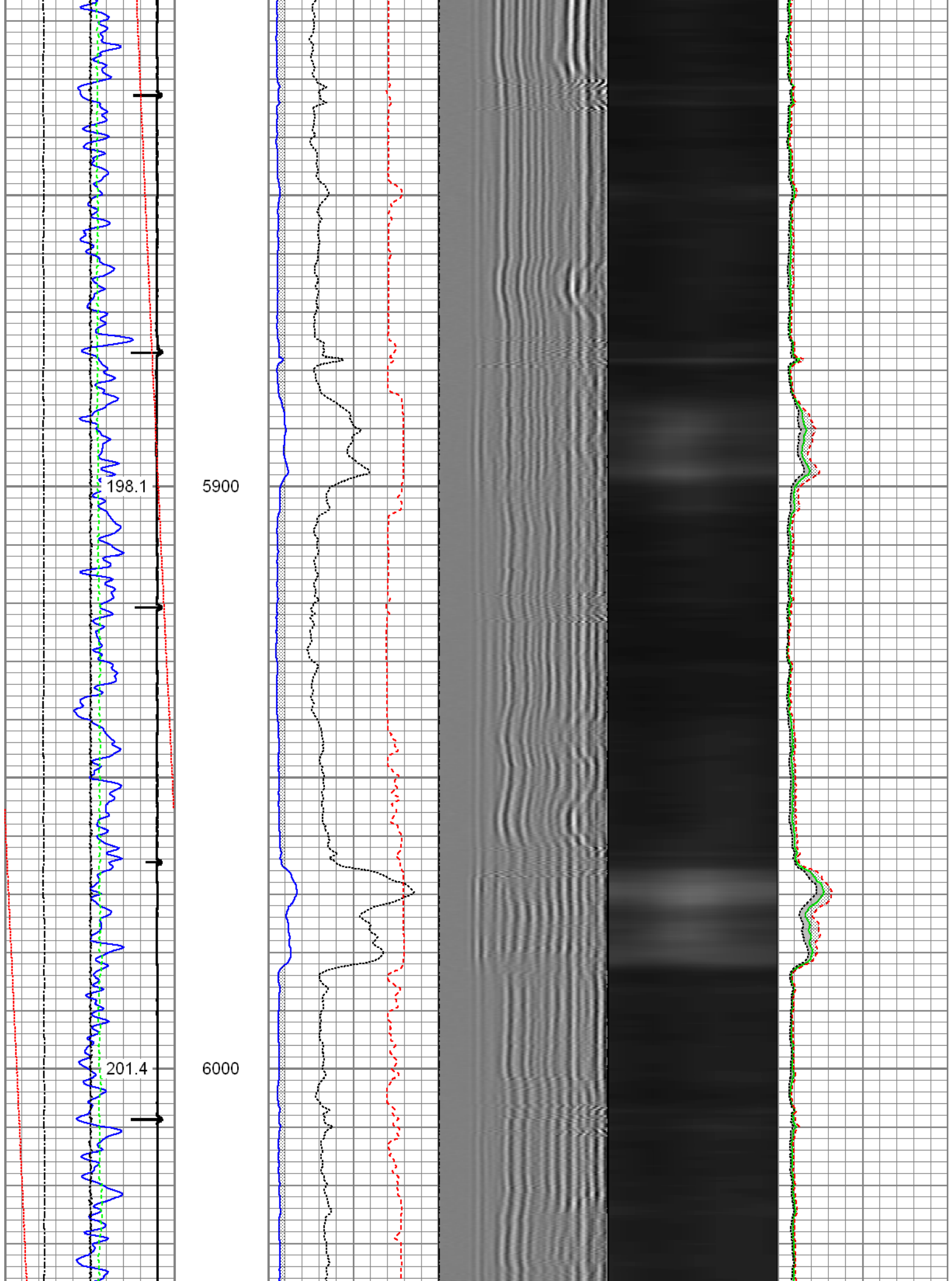
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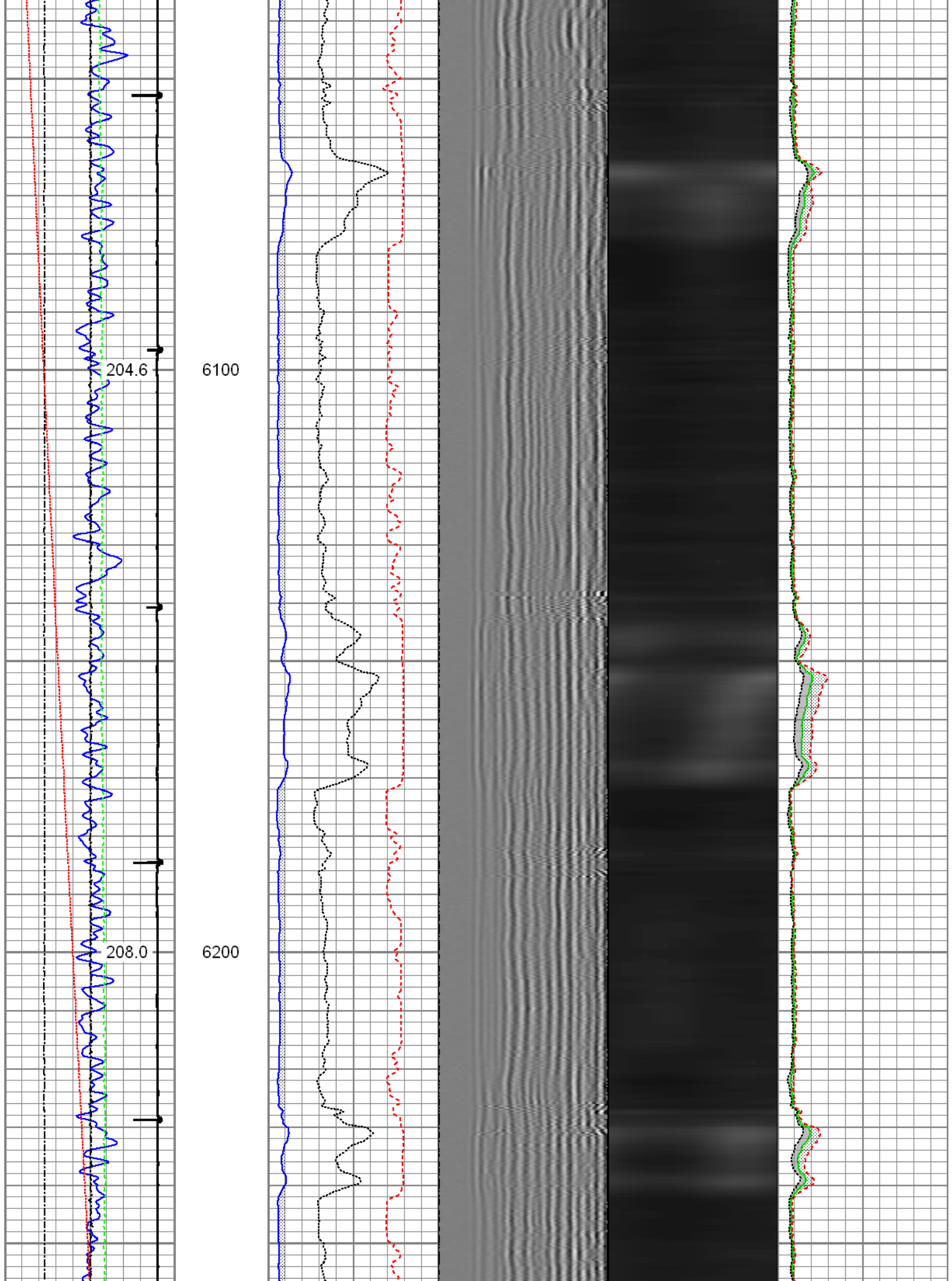
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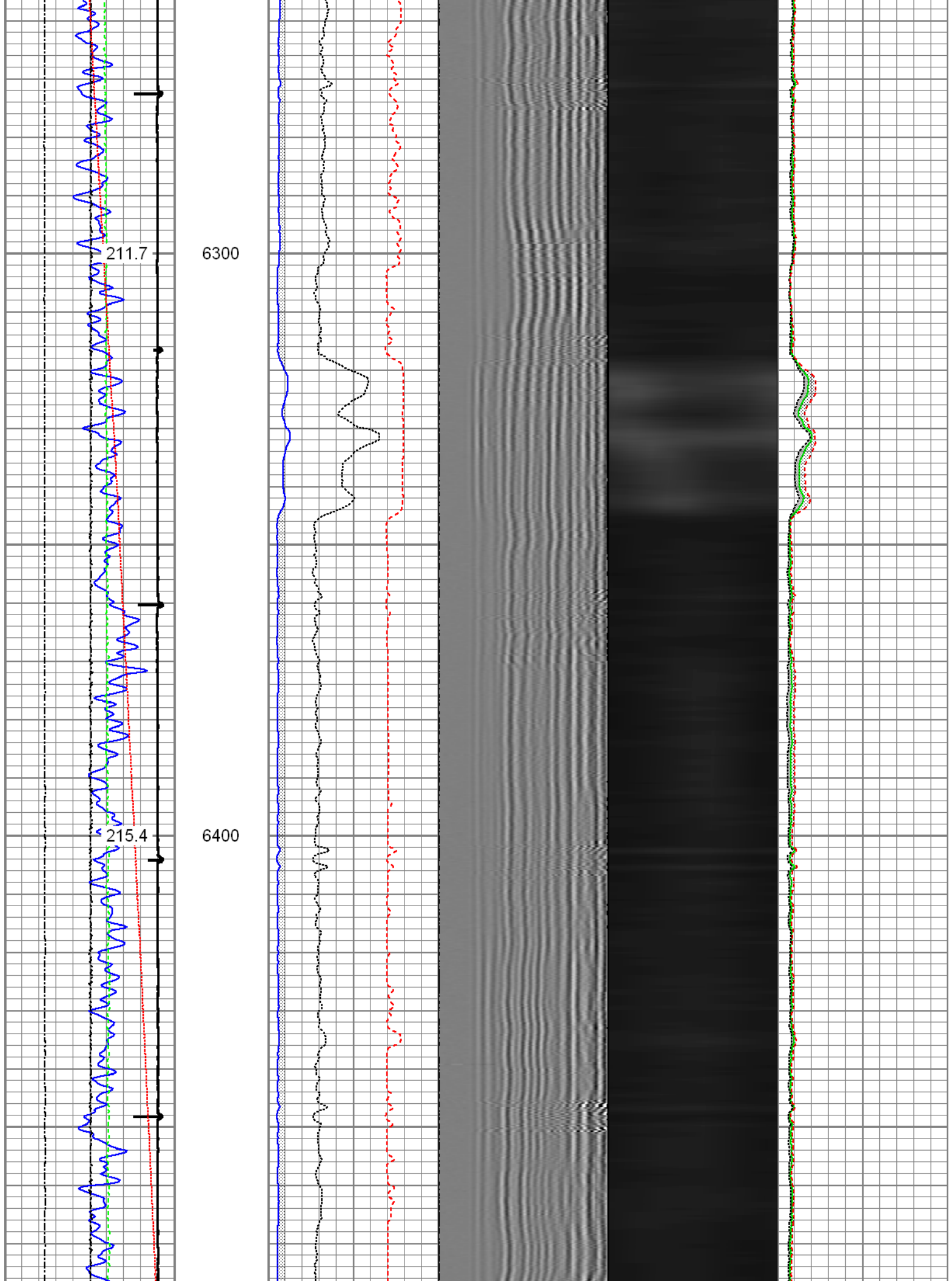


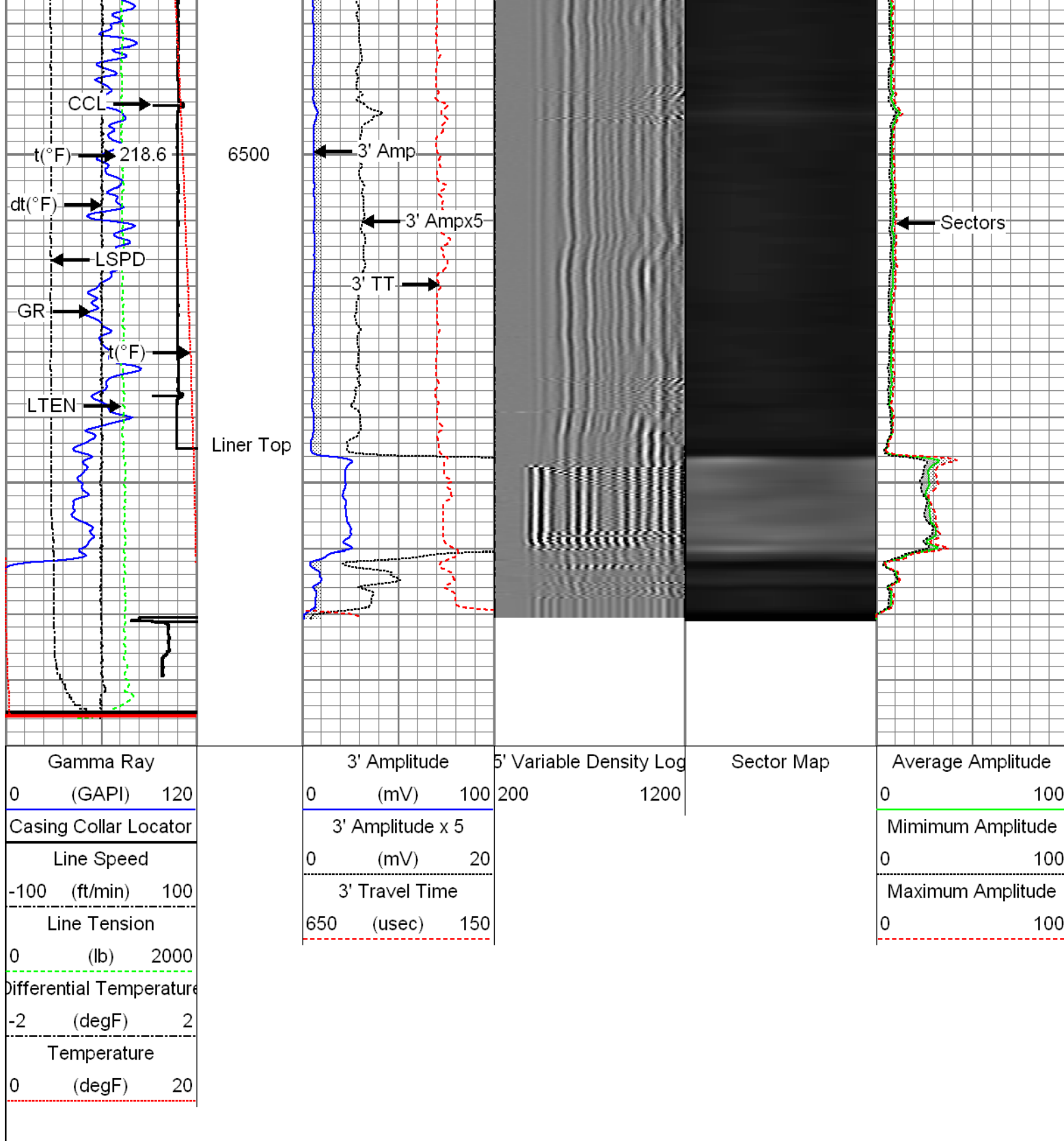










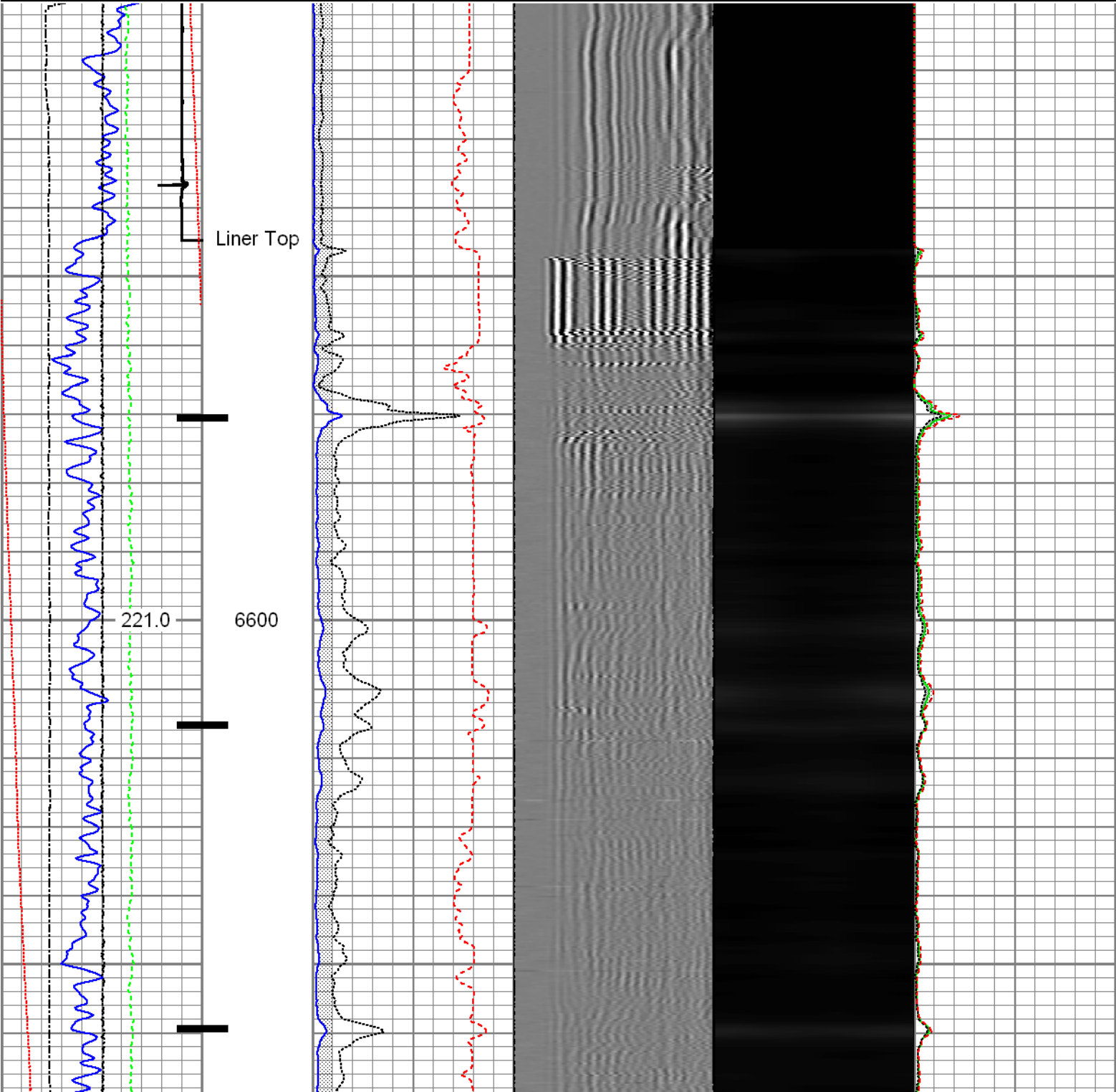


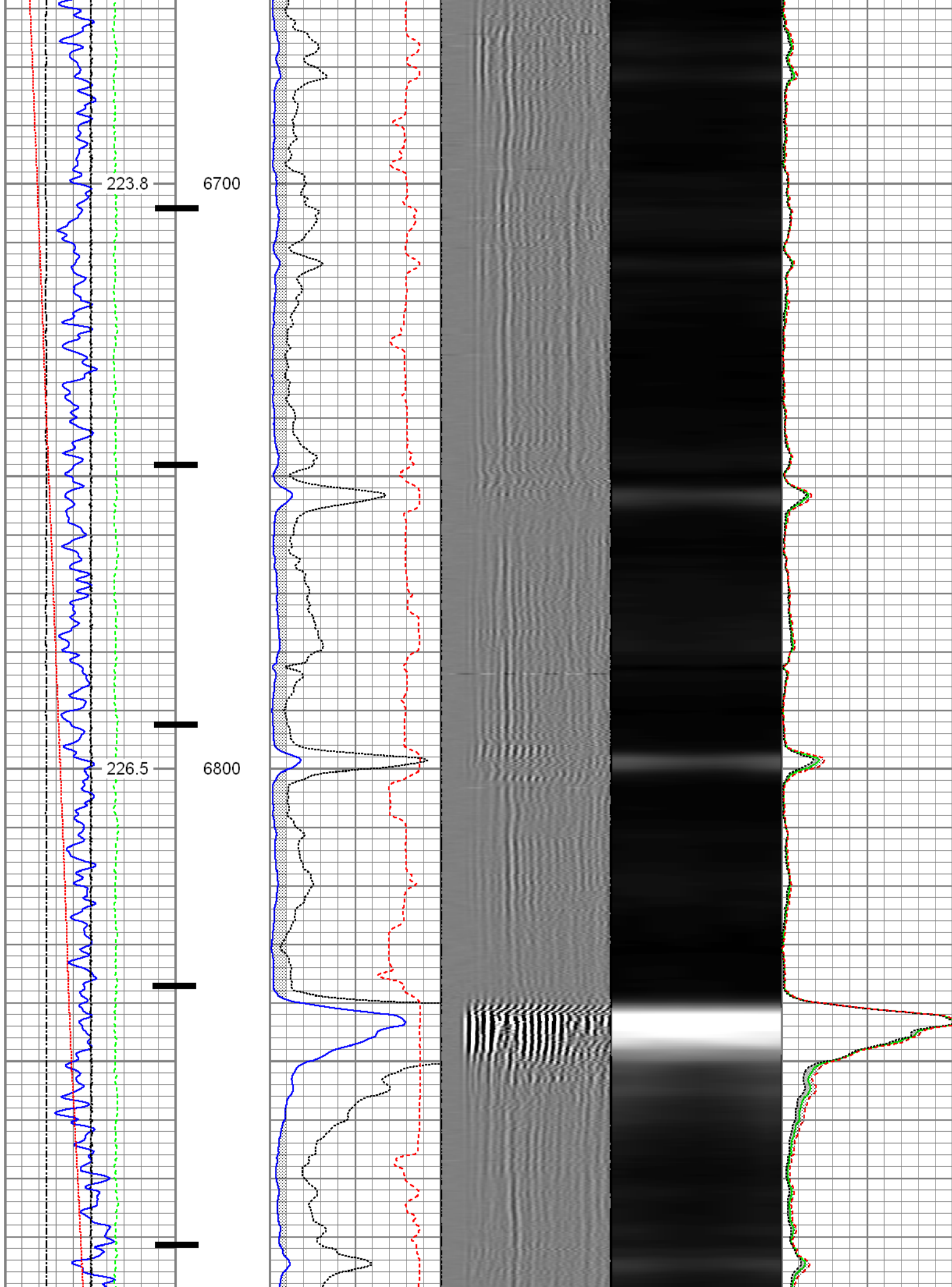
Main 4.5" Pass

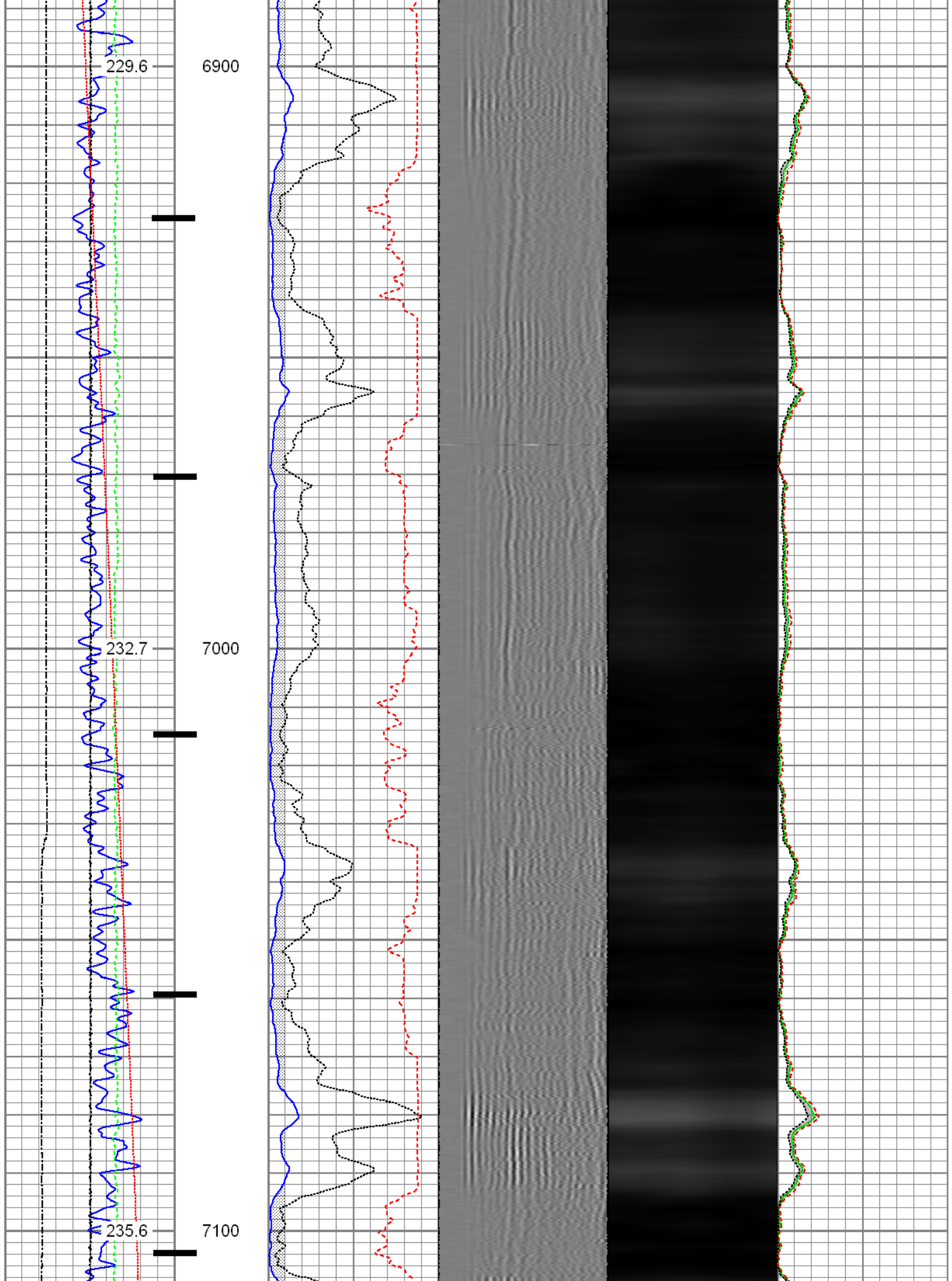
Recorded With 2800 PSI Surface Induced Pressure

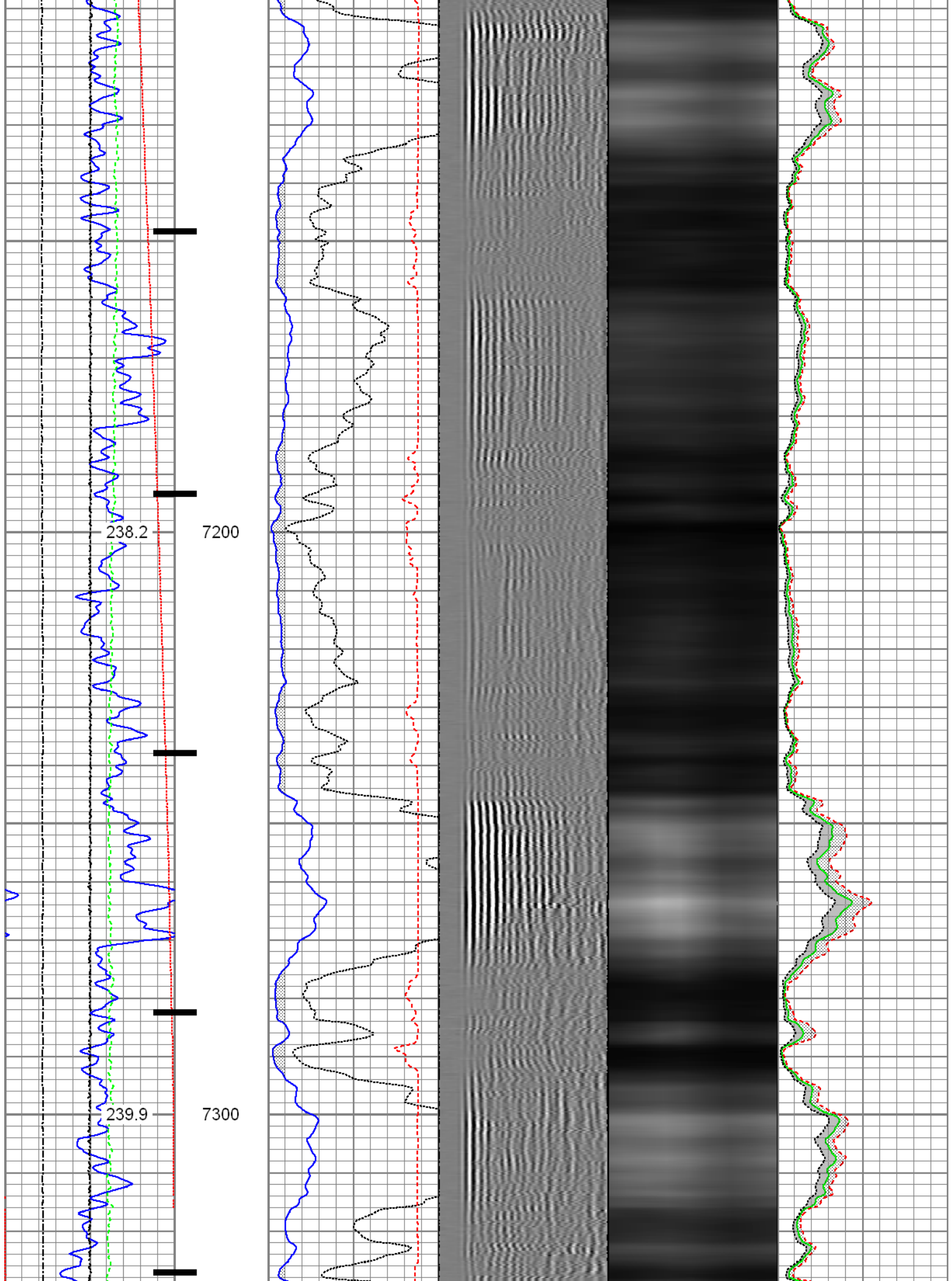
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 Dataset Creation: Wed Mar 11 12:57:05 2015 by Calc SCH 120430
 Charted by: Depth in Feet scaled 1:240

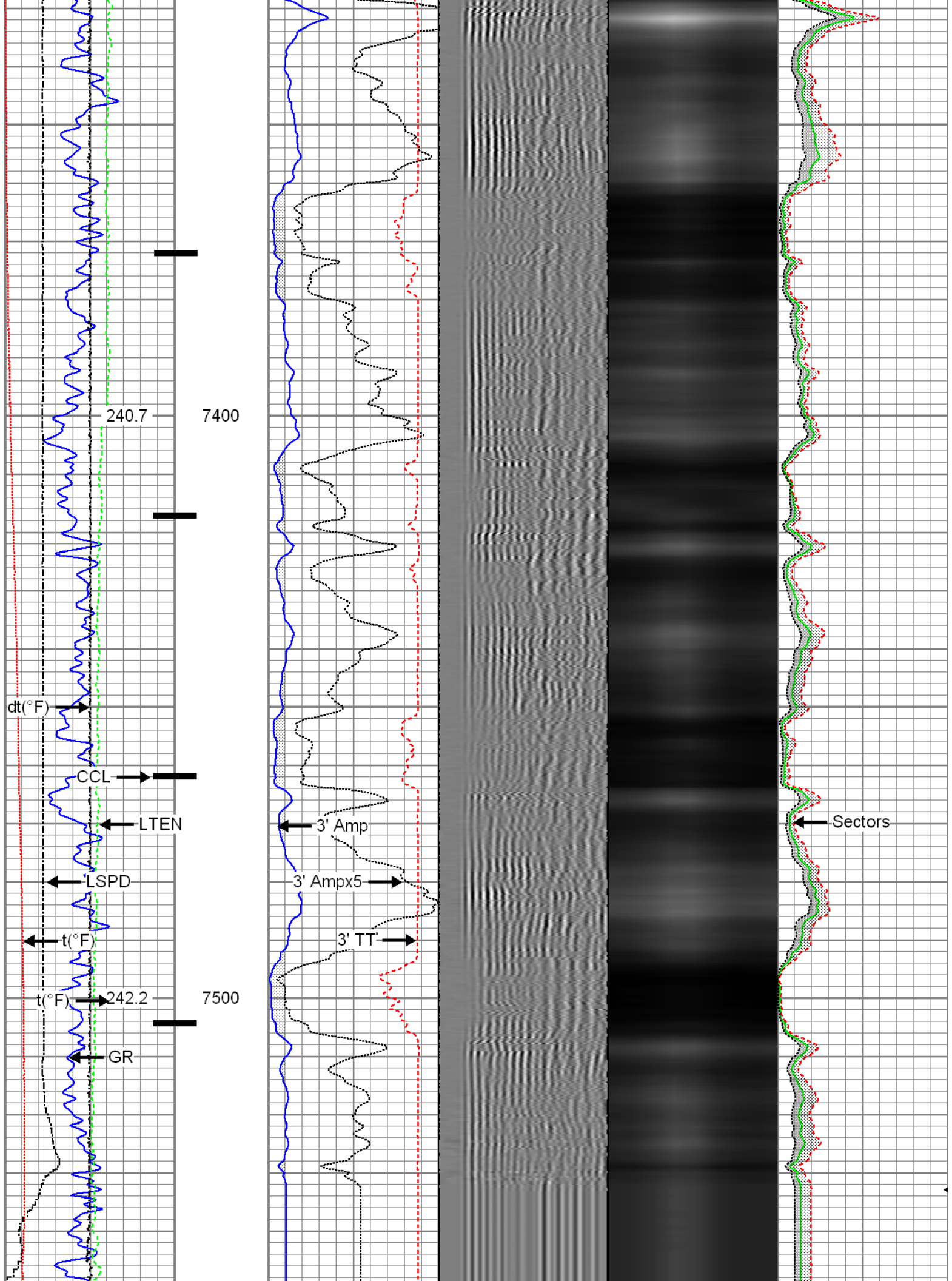
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Minimum Amplitude
Line Speed	0 (mV) 20			0 100
-100 (ft/min) 100	3' Travel Time			Maximum Amplitude
Line Tension	650 (usec) 150			0 100
0 (lb) 2000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

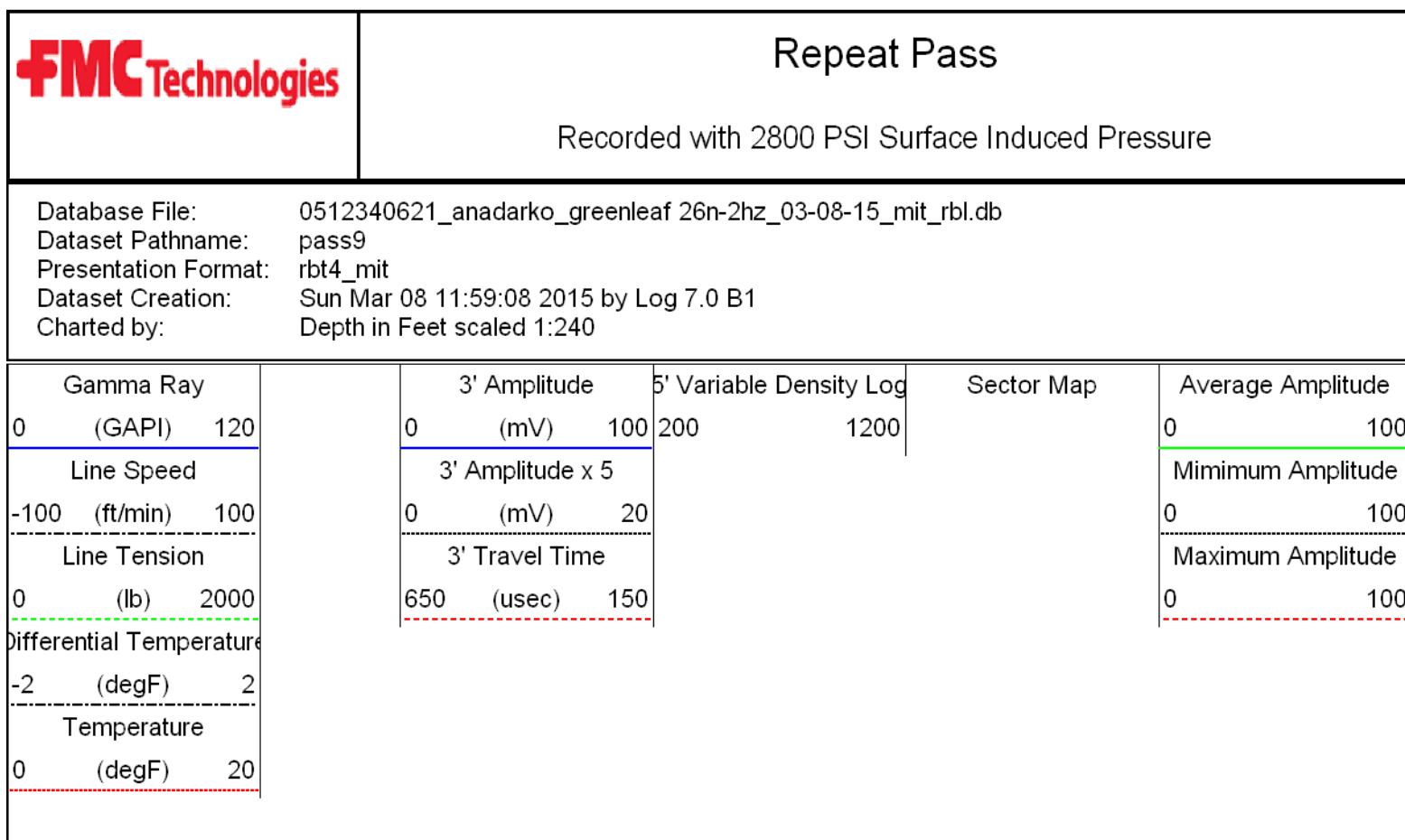
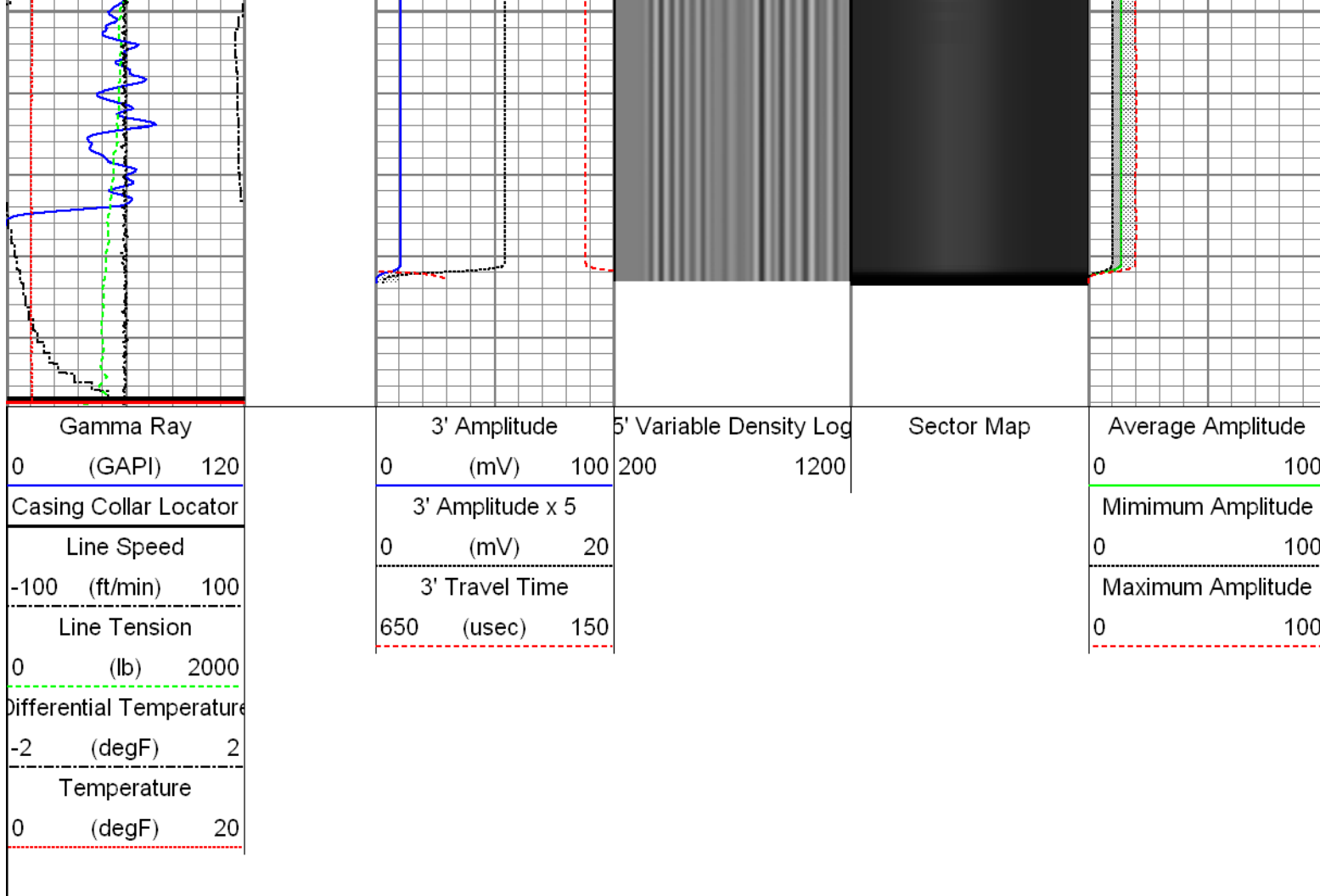


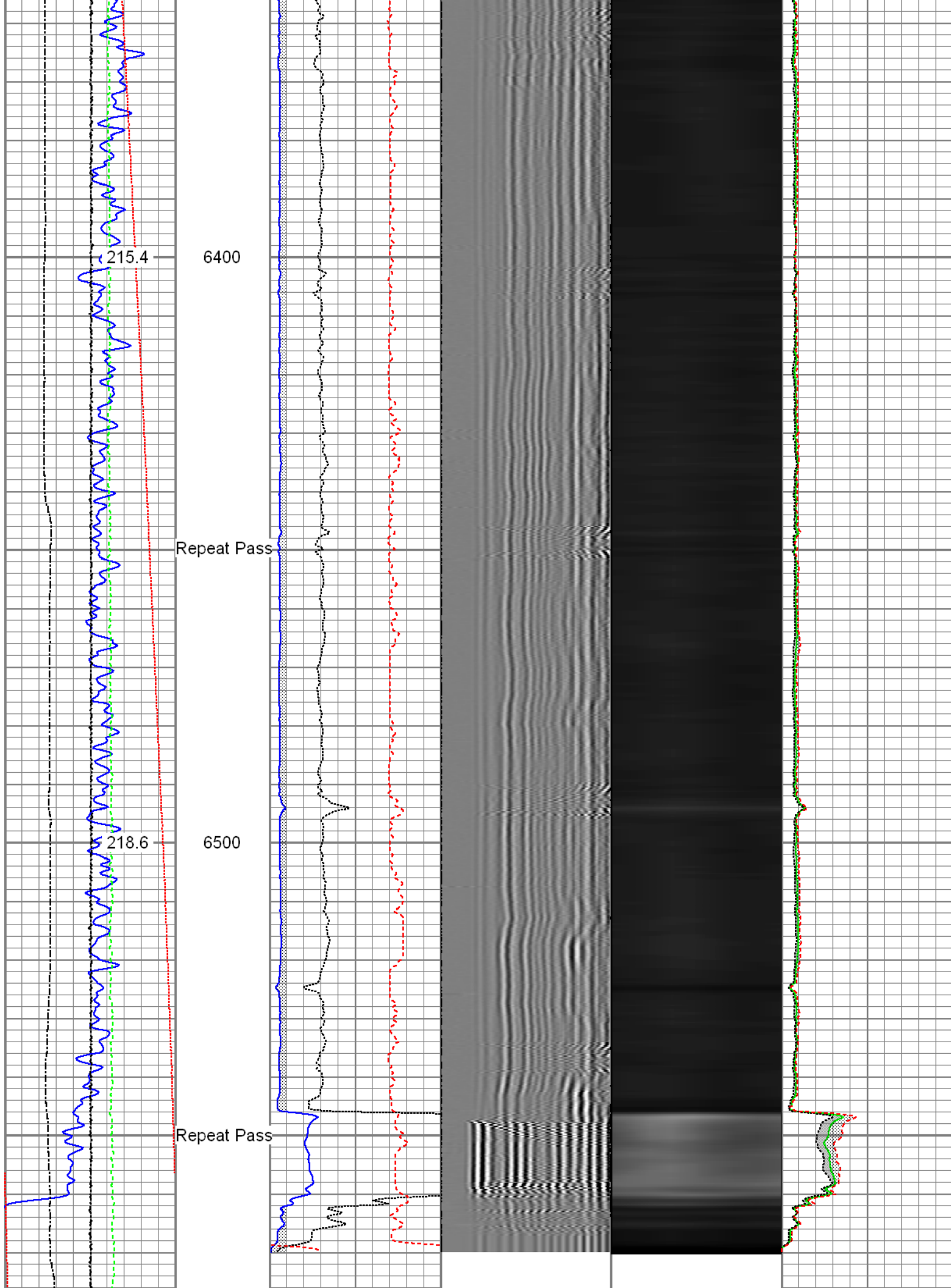


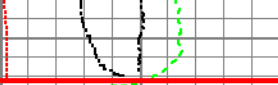


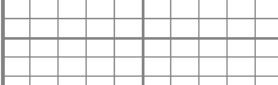


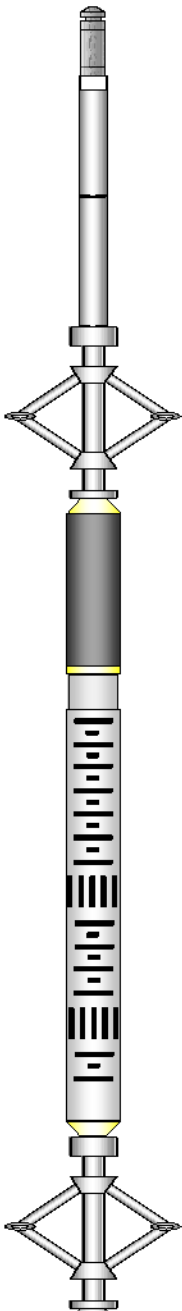
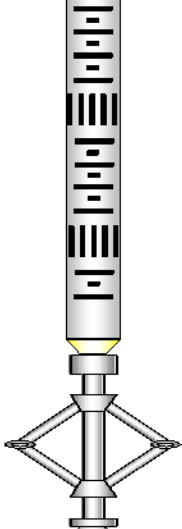


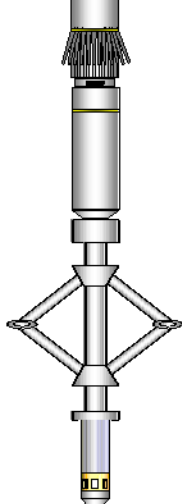






							
Gamma Ray (GAPI)		3' Amplitude (mV)		5' Variable Density Log		Sector Map	
0 120		0 100		200 1200		0 100	
Line Speed (ft/min)		3' Amplitude x 5 (mV)				Minimum Amplitude	
-100 100		0 20				0 100	
Line Tension (lb)		3' Travel Time (usec)				Maximum Amplitude	
0 2000		650 150				0 100	
Differential Temperature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

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 (211461) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
			UW_PGR-UW_PGR_020 (10024770) 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
WVF3FT	16.46		UW_RBT-UW_RBT_004 (1066) Sondex Ultrawire 3-1/8" Radial Bond Tool	9.47	3.13	140.00
WVFS1	16.46					
WVFS2	16.46					
WVFS3	16.46					
WVFS4	16.46					
WVFS5	16.46					
WVFS6	16.46					
WVFS7	16.46					
WVFS8	16.46					
CBLTEMP	16.46					
CBLROT	16.46					
WVF5FT	15.46		UW_PRC-DSSRAC (080) 2-3/4" DSS 5 Arm Roller Centralizer	2.55	2.75	32.00

MIT	6.45		UW_MIT-UW_MIT40_027 (218949) 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
			UW_PRT-UW_PRT_016 (10025100) Platinum Resistance Thermometer	1.04	1.69	5.20
TEMP TSTAMP	0.37 0.00		UW_BUL-UW_BUL_006 (218707) Sondex Ultrawire Bullnose Terminator	0.22	1.69	1.20
Dataset: 0512340621_anadarko_greenleaf 26n-2hz_03-08-15_mit_rbl.db: field/well/run1/merge1 Total Length: 28.09 ft Total Weight: 324.50 lb O.D. 3.13 in						

Calibration Report						
Database File: 0512340621_anadarko_greenleaf 26n-2hz_03-08-15_mit_rbl.db						
Dataset Pathname: merge1						
Dataset Creation: Mon Mar 09 06:40:47 2015						
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		cps		degF		
10		cps		degF		

Multi-finger Imaging Tool Calibration Report			
Serial Number:		218949	
Number of Fingers:		40	
Tool Model:		UW_MIT40_027	
Inclinometer Calibration Report			
Performed:		Wed Feb 04 15:56:40 2015	
Calibration Angle:		45	
		Inc X	Inc Y
Vertical:		1974	1952
Finger 1 up:		1742	1712
Finger 31 up:		2190	1713
Finger 21 up:		2211	2172
Finger 11 up:		1759	2218
Sensitivity ratio:	0.93246		
X-axis angle:	137.544		
Deviation const.:	318.482		

Finger Calibration Report
Performed: Sun Mar 08 10:40:08 2015

Ring size: (in)	4	Sens	5	Sens	6	Sens	7
Finger 01:	1365	274.0	1639	296.0	1935	307.0	2242
Finger 02:	1443	261.0	1704	295.0	1999	299.0	2298
Finger 03:	1651	267.0	1918	290.0	2208	284.0	2492
Finger 04:	1660	267.0	1927	290.0	2217	277.0	2494
Finger 05:	1524	249.0	1773	281.0	2054	275.0	2329
Finger 06:	1518	250.0	1768	276.0	2044	266.0	2310
Finger 07:	1340	265.0	1605	301.0	1906	293.0	2199
Finger 08:	1530	248.0	1778	277.0	2055	268.0	2323
Finger 09:	1411	257.0	1668	298.0	1966	287.0	2253
Finger 10:	1470	259.0	1729	295.0	2024	275.0	2299
Finger 11:	1466	256.0	1722	283.0	2005	272.0	2277
Finger 12:	1306	274.0	1580	309.0	1889	299.0	2188
Finger 13:	1570	276.0	1846	299.0	2145	283.0	2428
Finger 14:	1396	279.0	1675	316.0	1991	301.0	2292
Finger 15:	1526	259.0	1785	282.0	2067	278.0	2345
Finger 16:	1392	281.0	1673	303.0	1976	299.0	2275
Finger 17:	1626	269.0	1895	283.0	2178	279.0	2457
Finger 18:	1372	290.0	1662	310.0	1972	314.0	2286
Finger 19:	1630	260.0	1890	260.0	2150	259.0	2409
Finger 20:	1506	263.0	1769	272.0	2041	284.0	2325
Finger 21:	1589	251.0	1840	253.0	2093	266.0	2359
Finger 22:	1528	271.0	1799	278.0	2077	294.0	2371
Finger 23:	1346	275.0	1621	281.0	1902	301.0	2203
Finger 24:	1676	264.0	1940	260.0	2200	280.0	2480
Finger 25:	1360	288.0	1648	293.0	1941	325.0	2266
Finger 26:	1534	285.0	1819	281.0	2100	313.0	2413
Finger 27:	1467	257.0	1724	255.0	1979	284.0	2263
Finger 28:	1645	272.0	1917	268.0	2185	297.0	2482
Finger 29:	1467	269.0	1736	269.0	2005	304.0	2309
Finger 30:	1427	265.0	1692	272.0	1964	309.0	2273
Finger 31:	1528	259.0	1787	261.0	2048	291.0	2339
Finger 32:	1344	245.0	1589	265.0	1854	311.0	2165
Finger 33:	1612	289.0	1901	295.0	2196	323.0	2519
Finger 34:	1542	261.0	1803	263.0	2066	288.0	2354
Finger 35:	1439	255.0	1694	273.0	1967	294.0	2261
Finger 36:	1590	266.0	1856	279.0	2135	298.0	2433
Finger 37:	1602	263.0	1865	275.0	2140	295.0	2435
Finger 38:	1501	253.0	1754	281.0	2035	296.0	2331
Finger 39:	1465	263.0	1728	294.0	2022	304.0	2326
Finger 40:	1581	271.0	1852	295.0	2147	303.0	2450

Segmented Cement Bond Log Calibration Report

Serial Number: 1066
Tool Model: UW_RBT_004

Calibration Casing Diameter: 7.000 in
Calibration Depth: 1153.292 ft

Master Calibration, performed Sun Mar 08 11:37:58 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	0.000	0.677	1.000	62.200	90.397	0.989
5FT	-0.007	0.617	1.000	62.200	98.098	1.708
S1	-0.001	0.669	0.000	100.000	149.231	0.140
S2	-0.000	0.718	0.000	100.000	139.322	0.029

S2	-0.000	0.745	0.000	100.000	136.922	0.139
S3	-0.001	0.729	0.000	100.000	136.945	0.139
S4	-0.001	0.706	0.000	100.000	141.368	0.147
S5	-0.001	0.657	0.000	100.000	151.946	0.137
S6	-0.000	0.632	0.000	100.000	158.254	0.046
S7	-0.001	0.629	0.000	100.000	158.775	0.171
S8	-0.001	0.641	0.000	100.000	155.730	0.158

Gamma Ray Calibration Report

Serial Number:	10024770		
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 LP
Well	Greenleaf 26N-2HZ
Field	Wattenberg
County	Weld
State	Colorado