



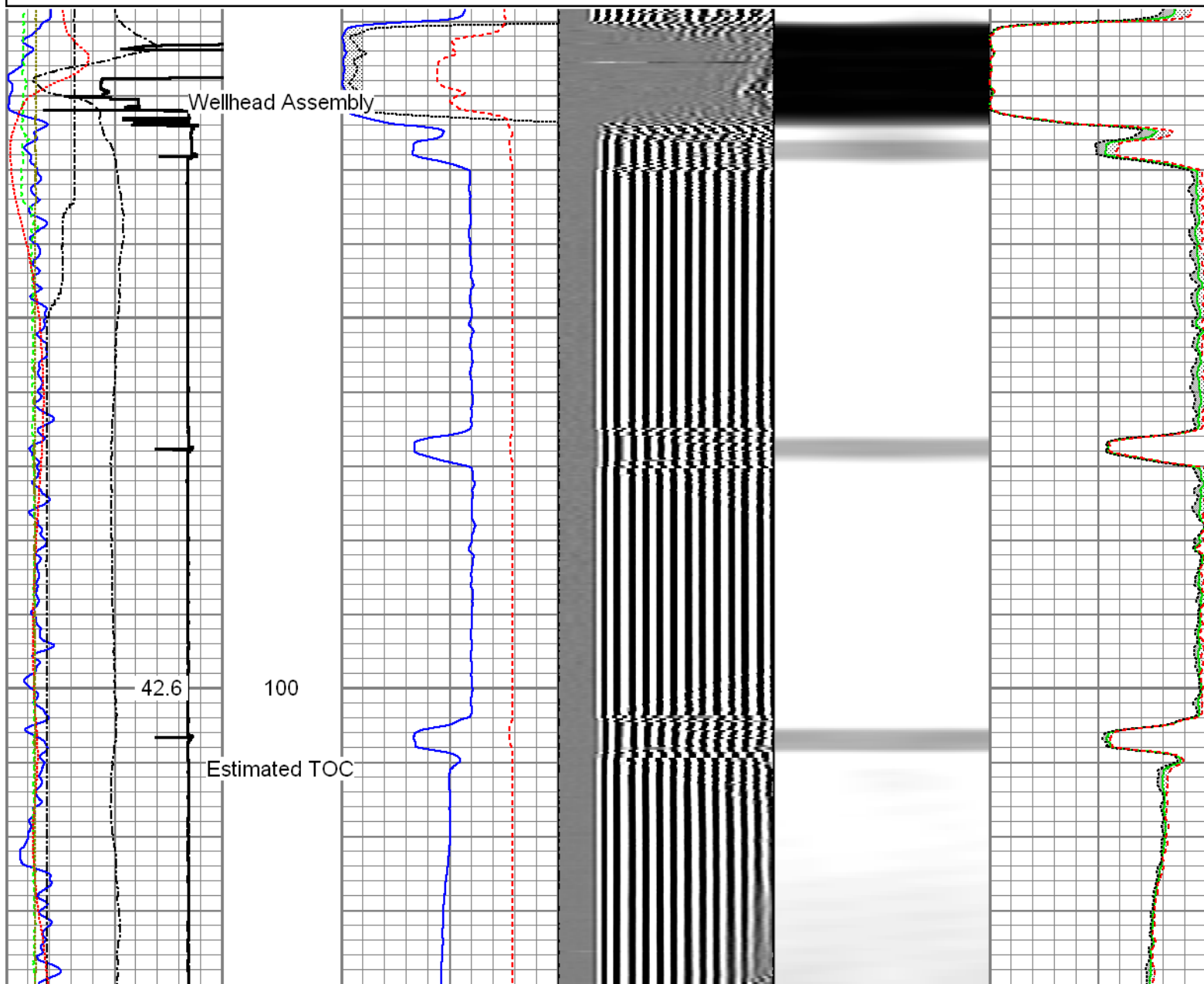
<<< Fold Here >>>
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible 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 Kelly Bushing at 24 FT Log ran from just above Liner Top to surface Marker Joints found at 5931 FT and 6071 FT Recorded with 2500 PSI surface induced pressure Logging tools were clean and free of any debris upon completion of operations Thank you for choosing FMC Technologies Surface Integrated Services.

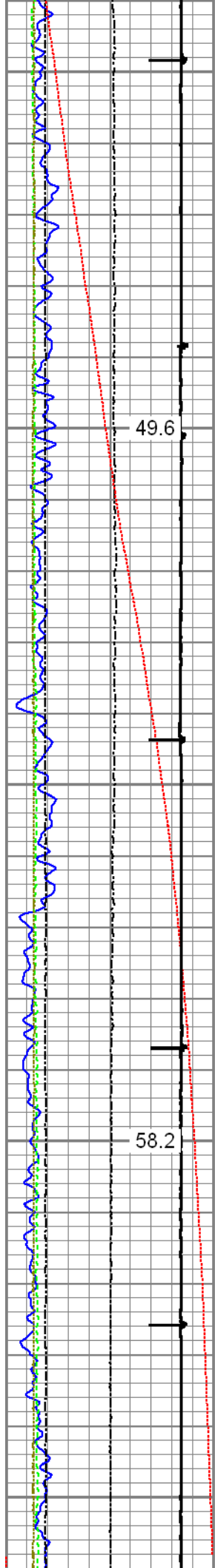


Recorded With 2500 PSI Surface Induced Pressure

Database File: c:\warrior\data\12-19-15_noble_moser h34-717_mit_rbl\12-19-15_noble_moser h34-717_mit_rbl.db
Dataset Pathname: pass6.1
Presentation Format: rbt4_mit
Dataset Creation: Sun Dec 20 12:07:30 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				



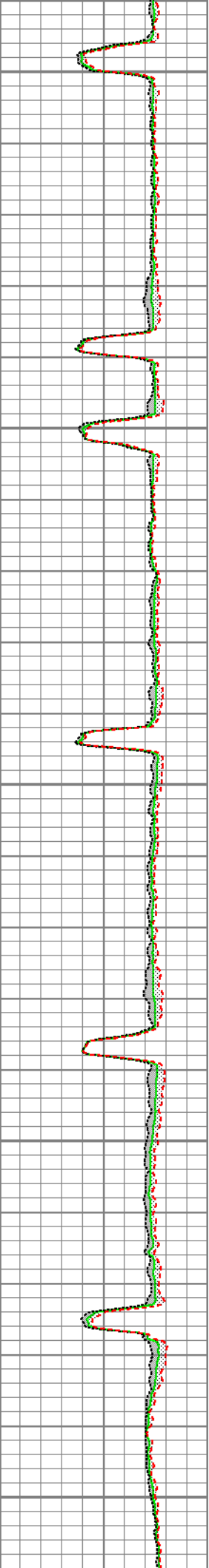
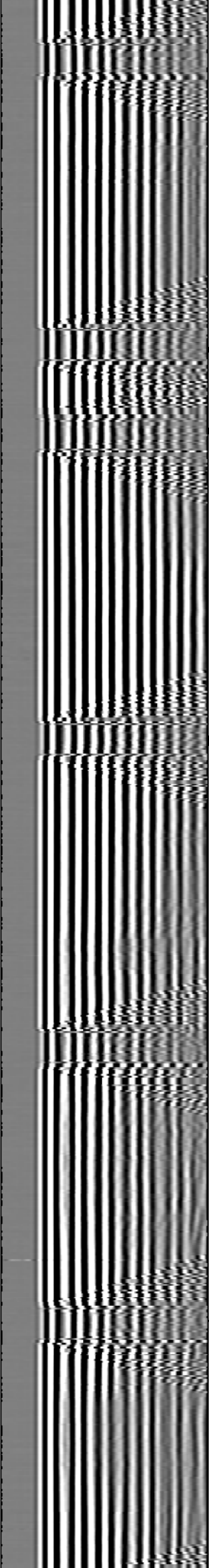
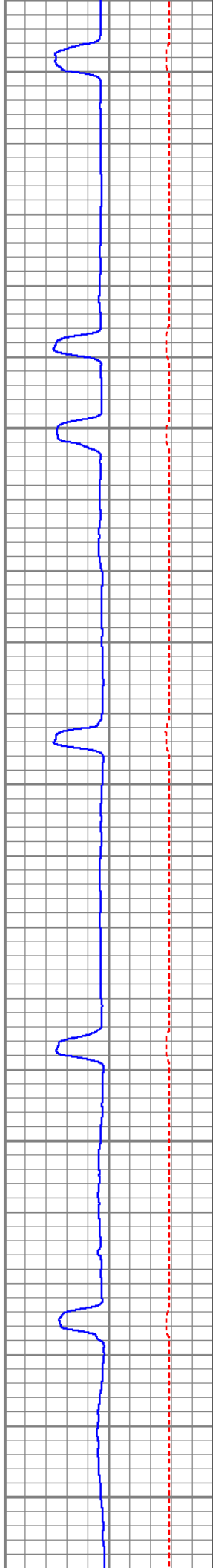


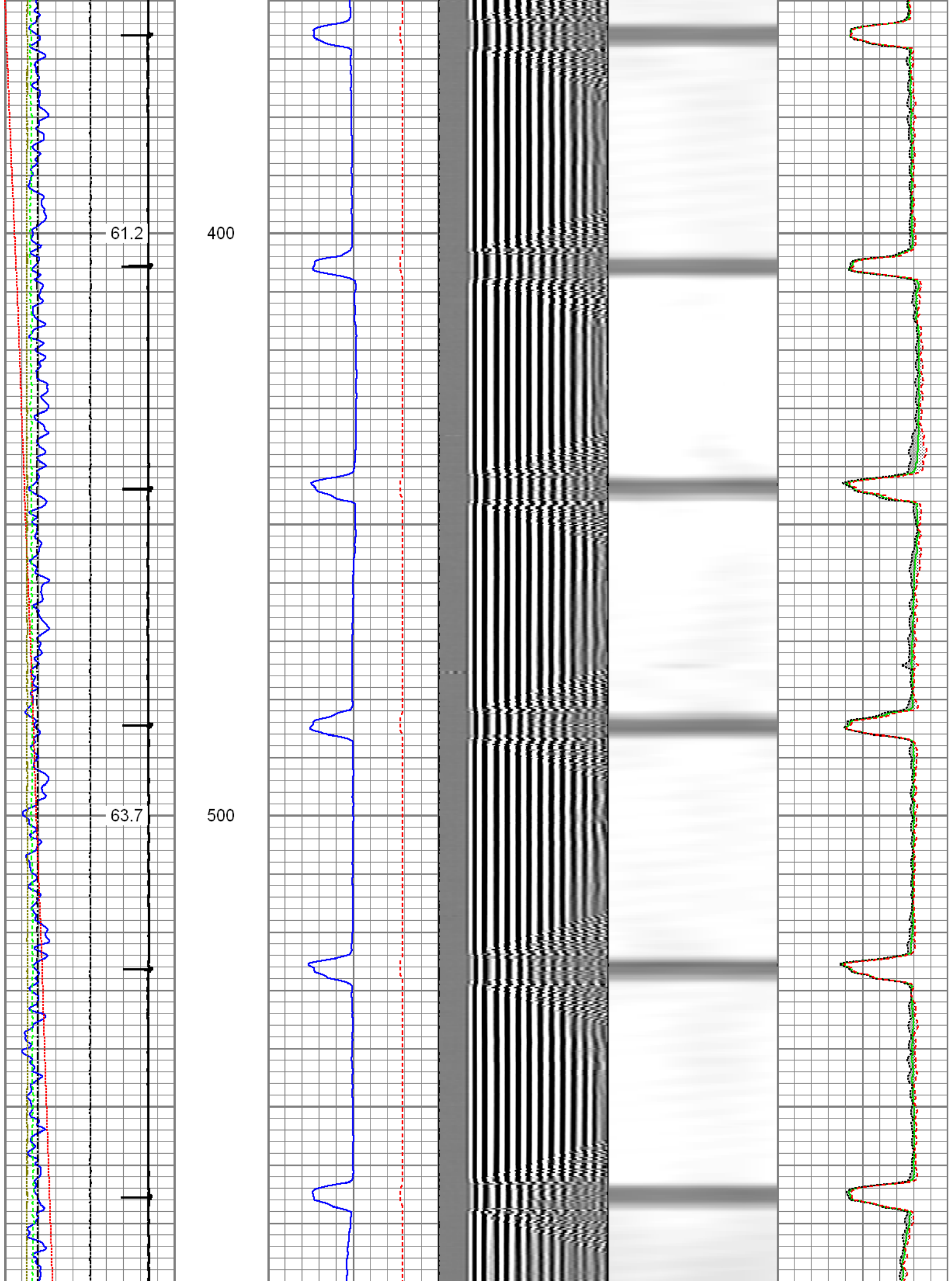
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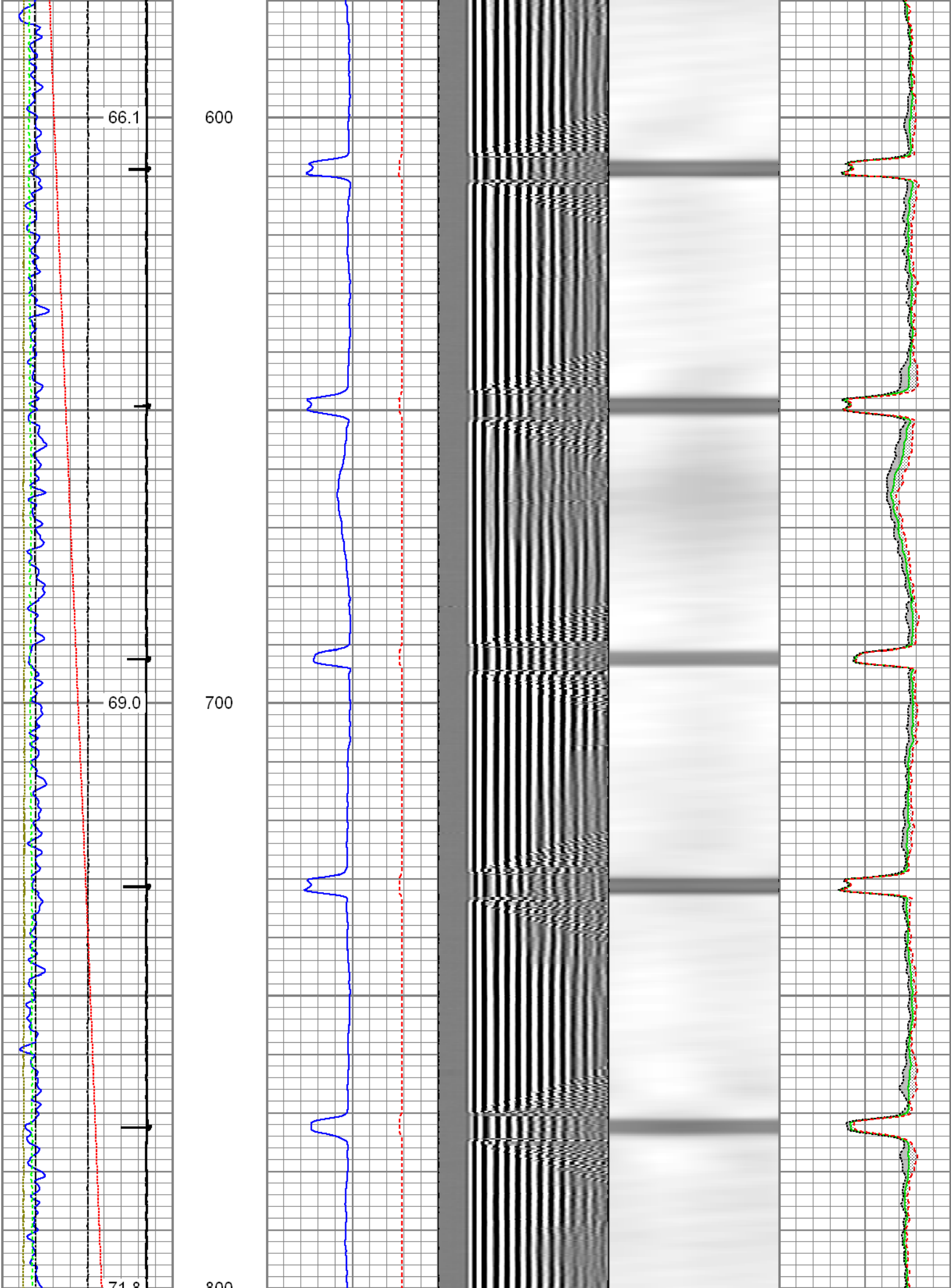
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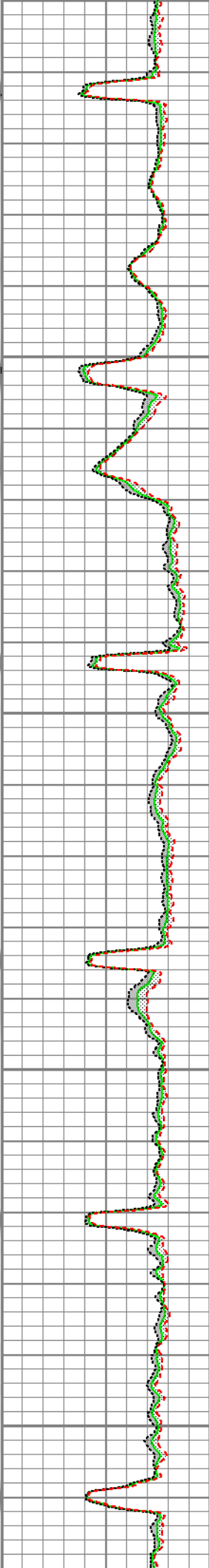
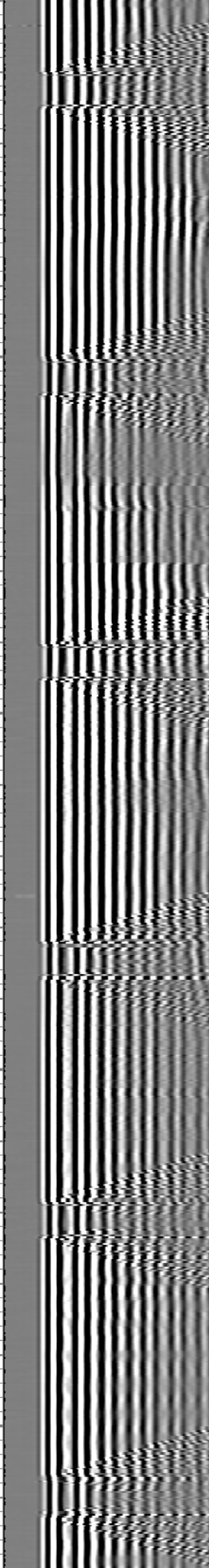
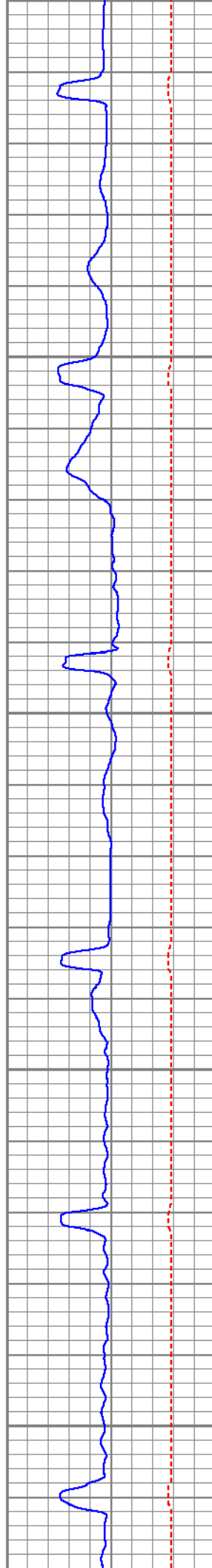
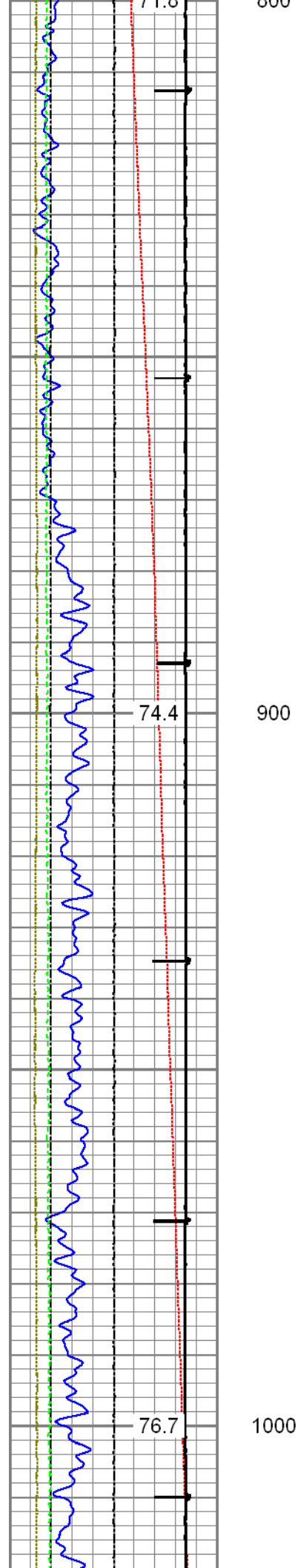
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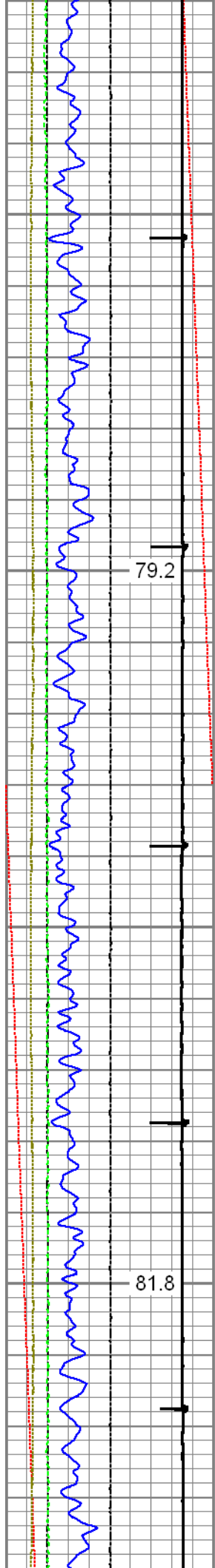
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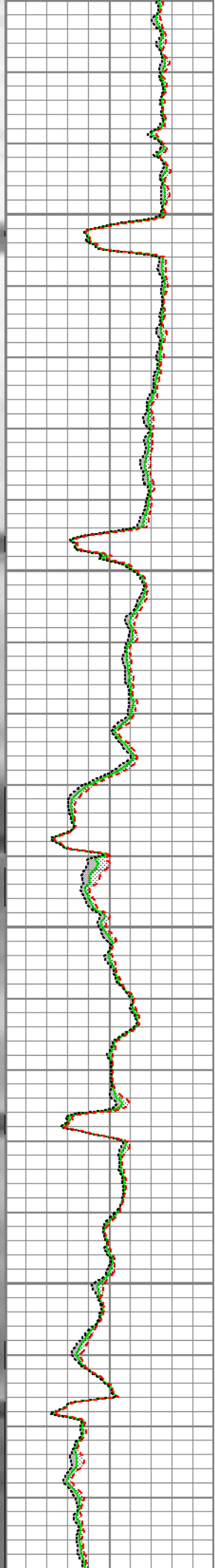
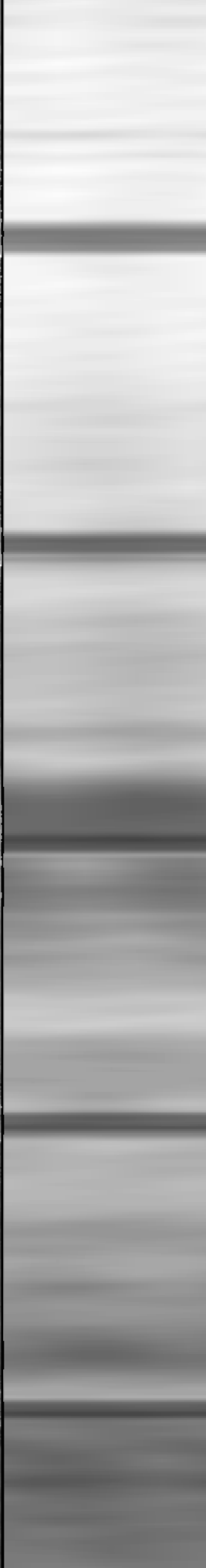
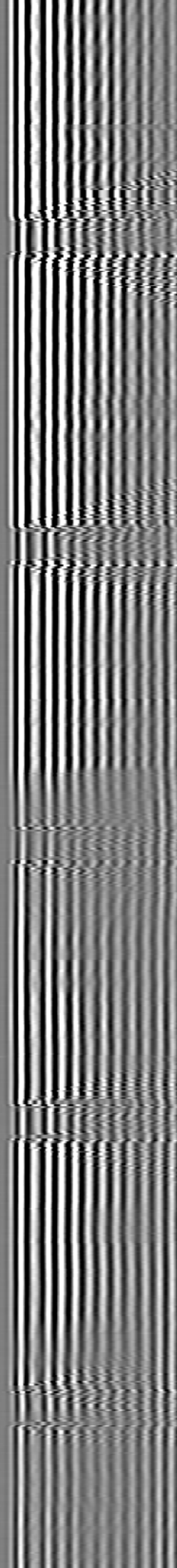
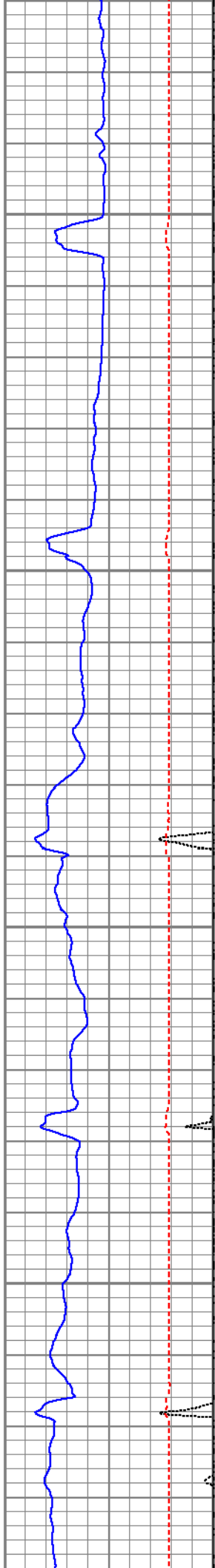


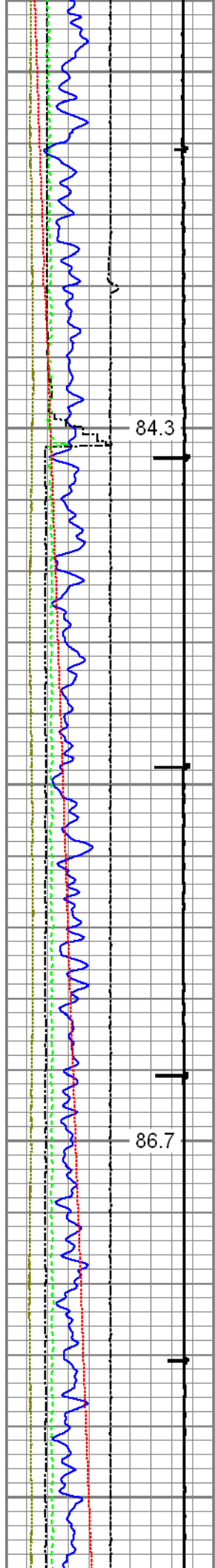
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1100

81.8

1200



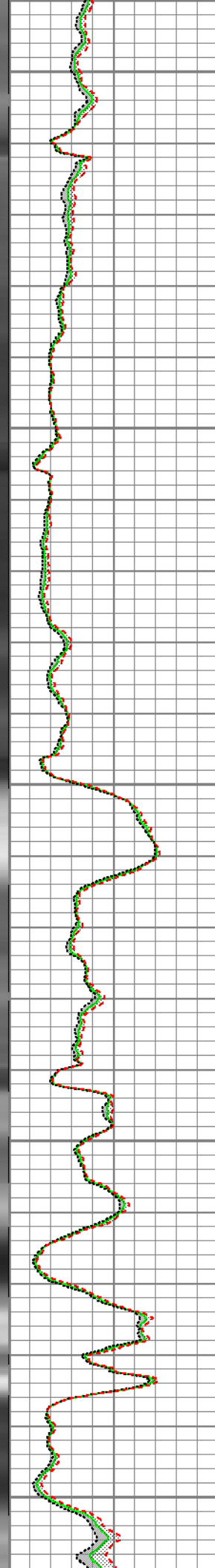
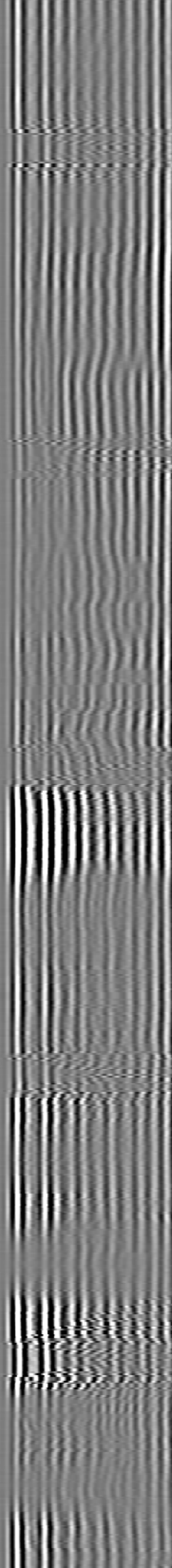
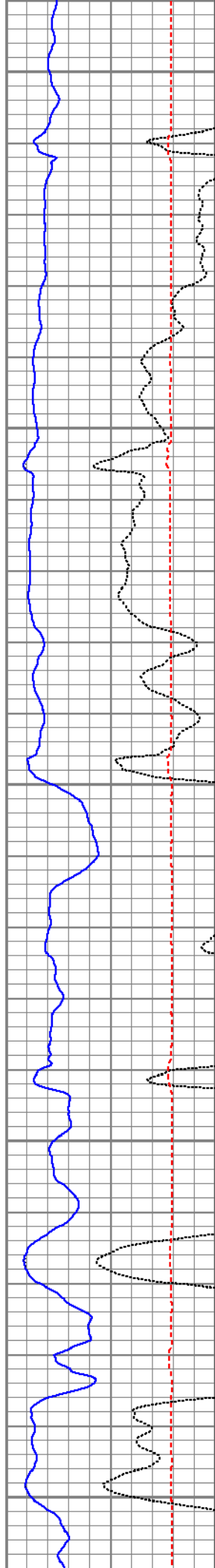


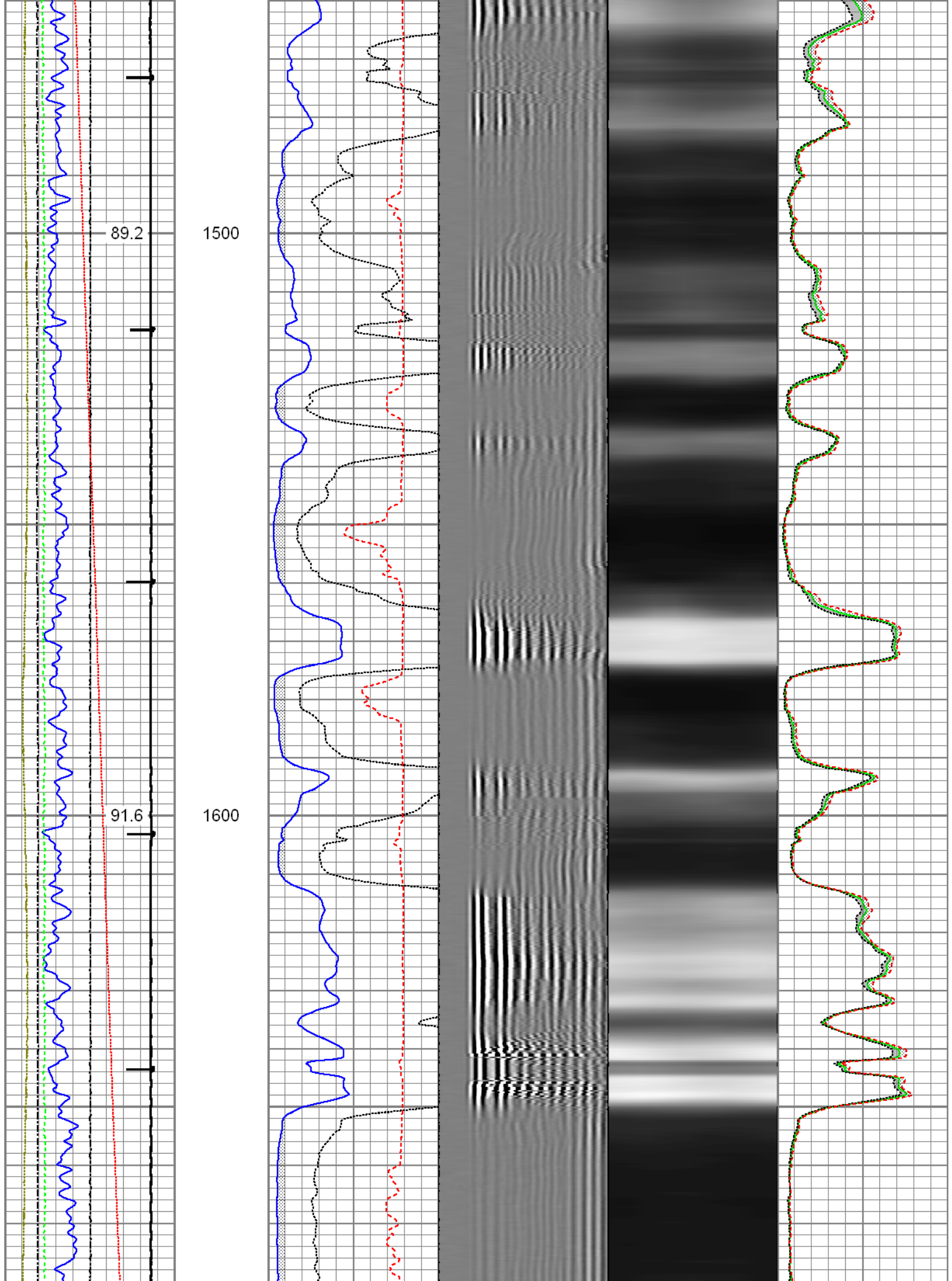
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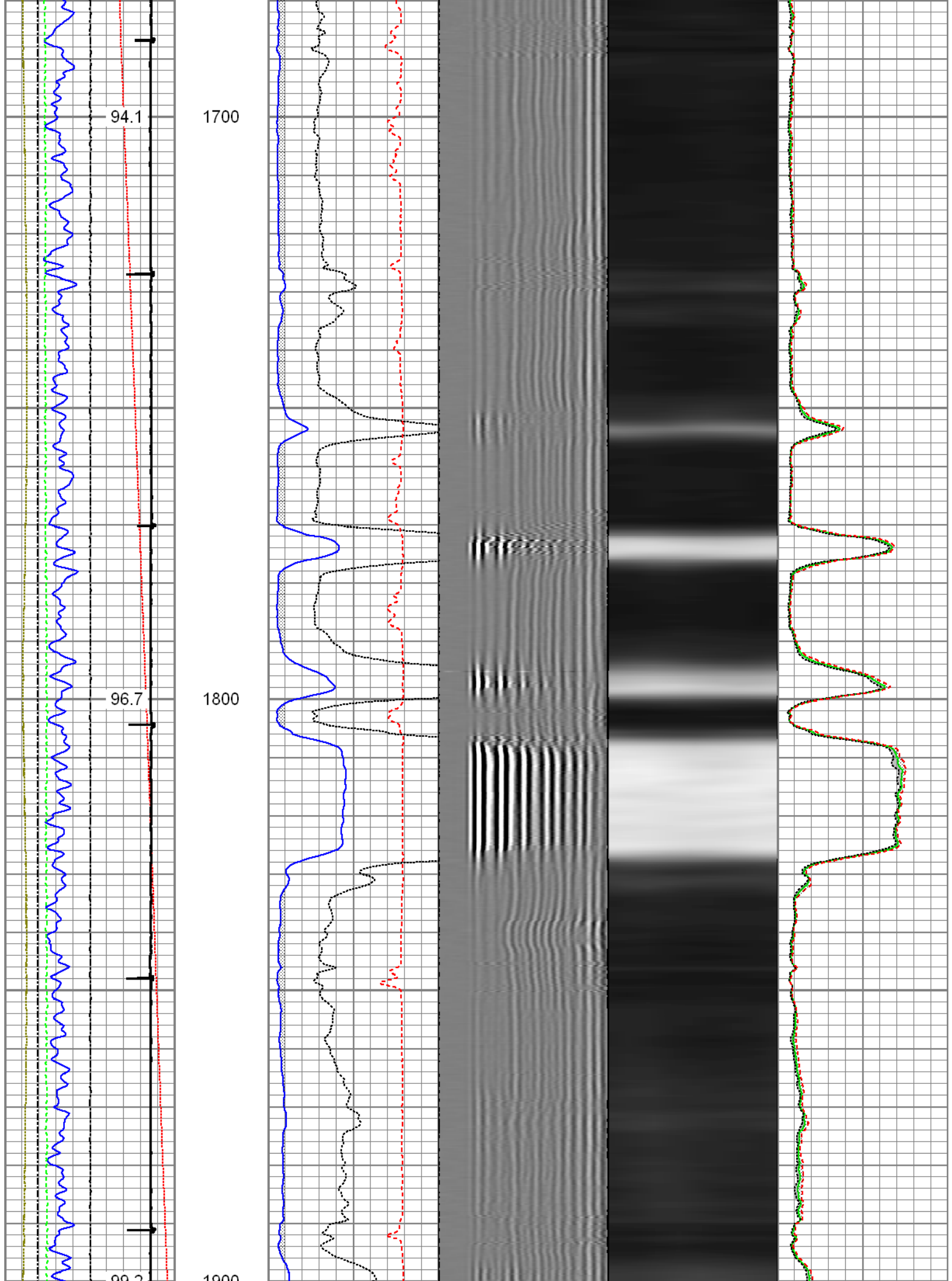
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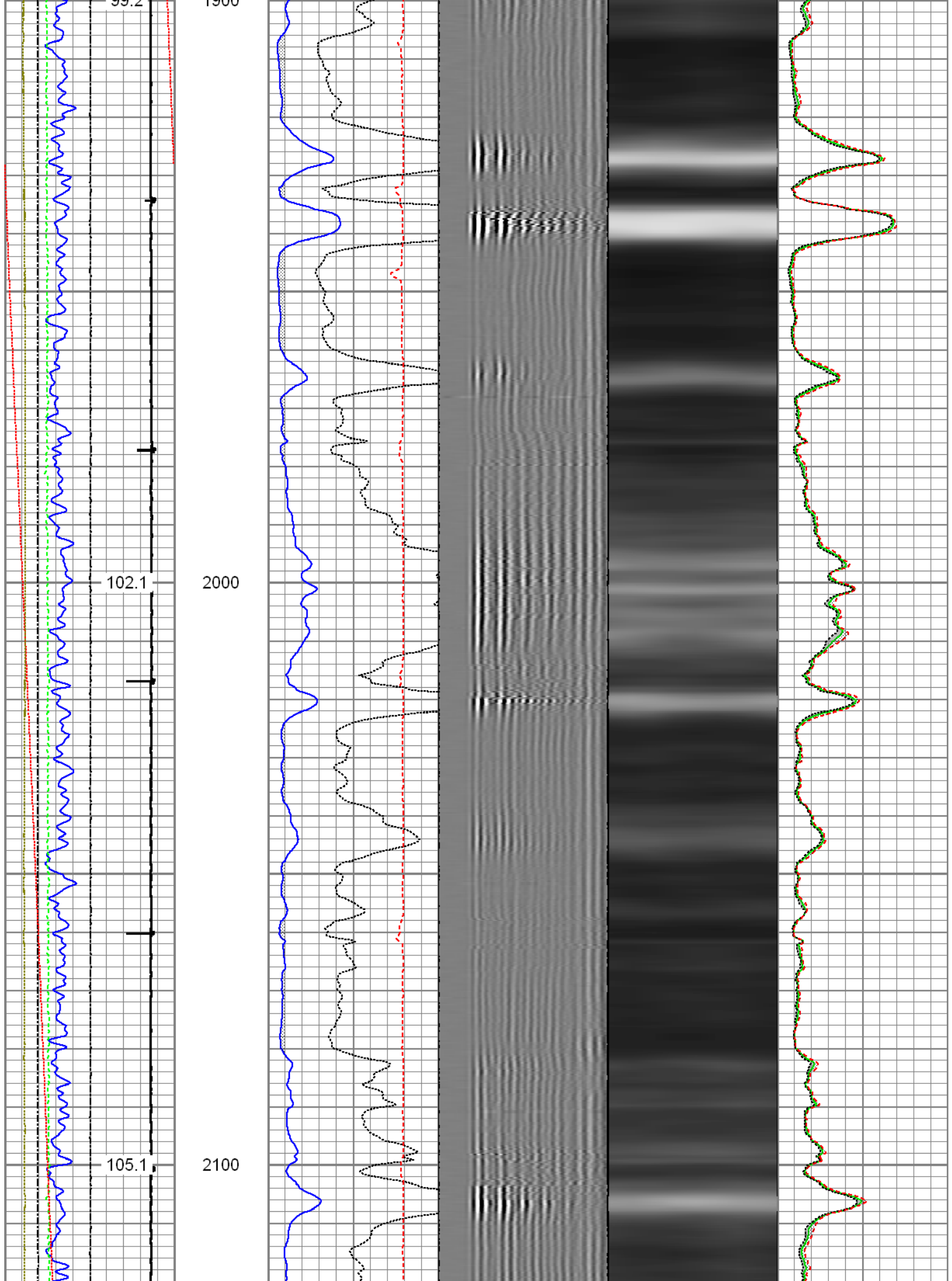
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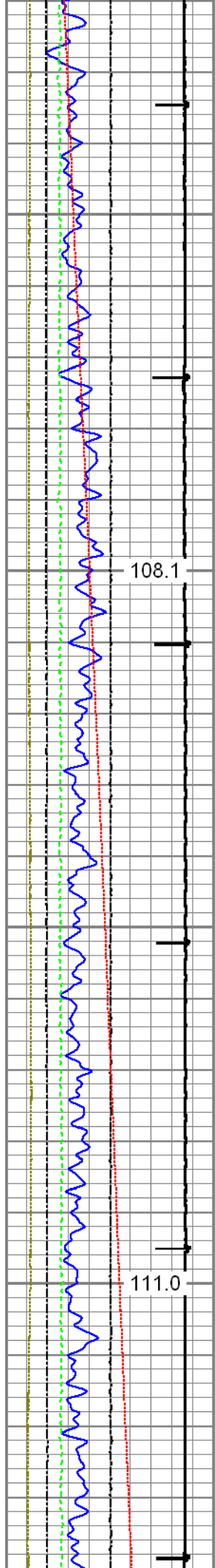
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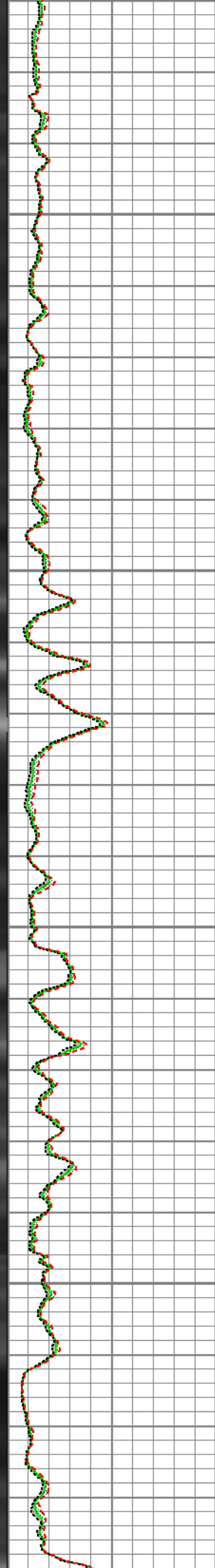
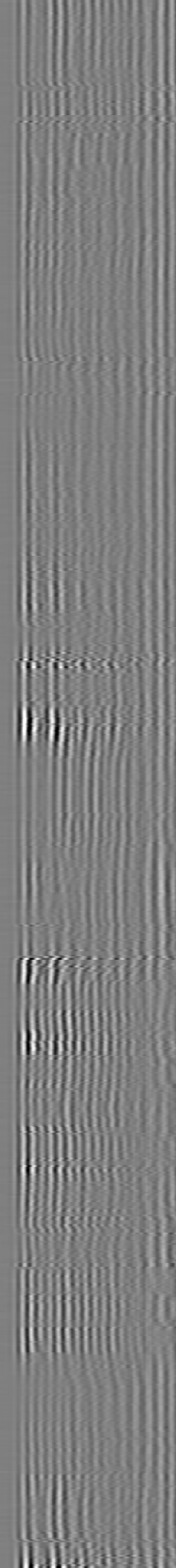
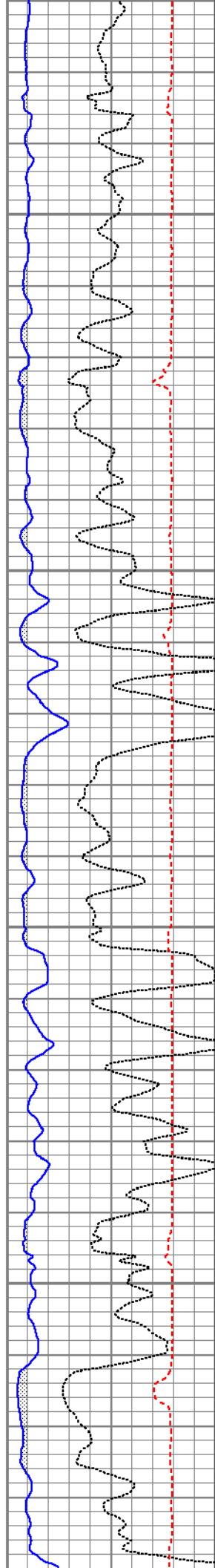


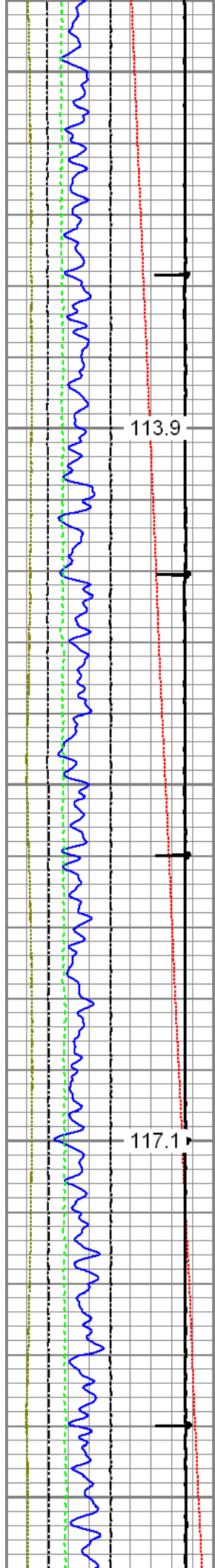
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111.0

2200

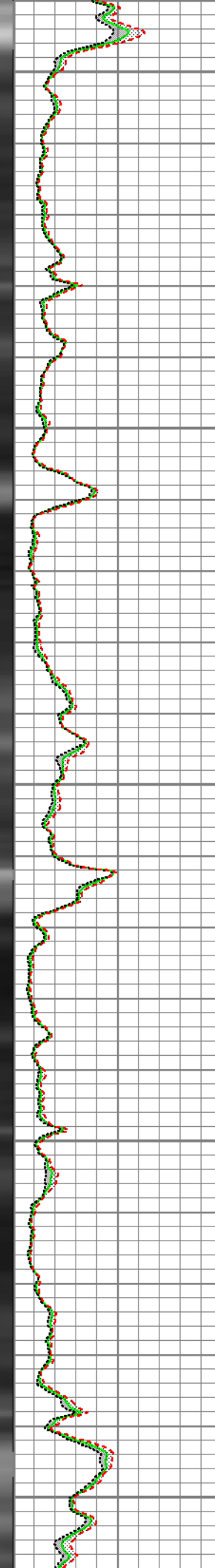
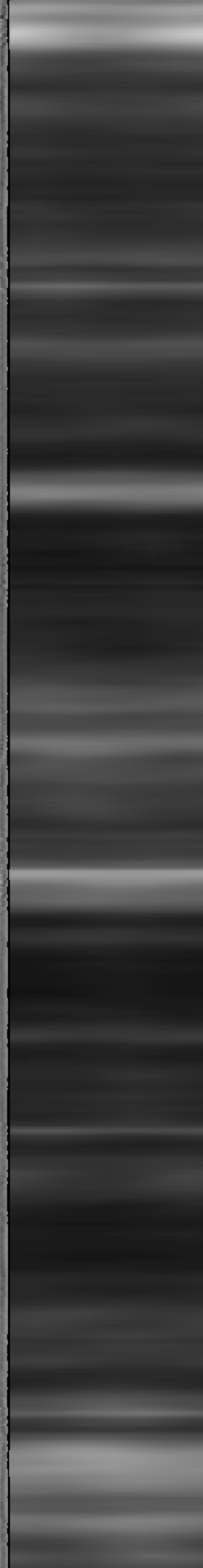
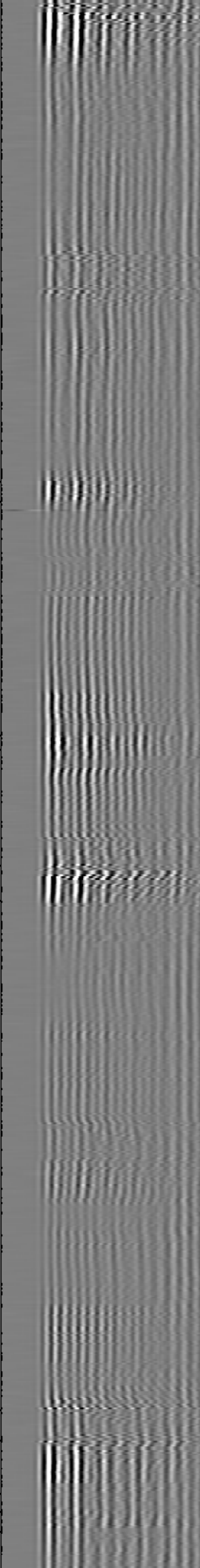
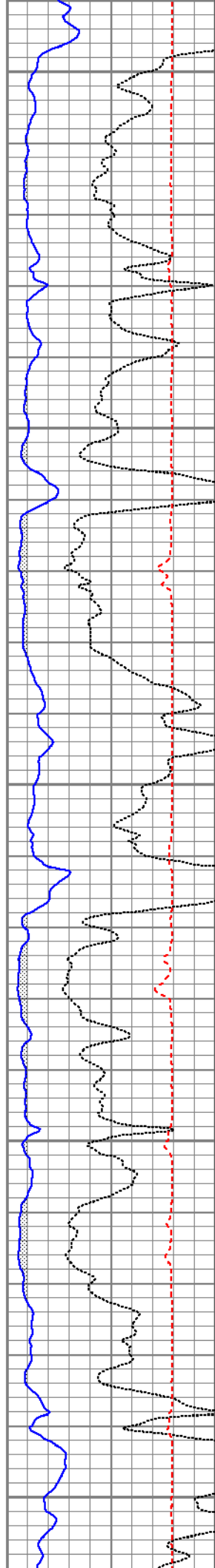
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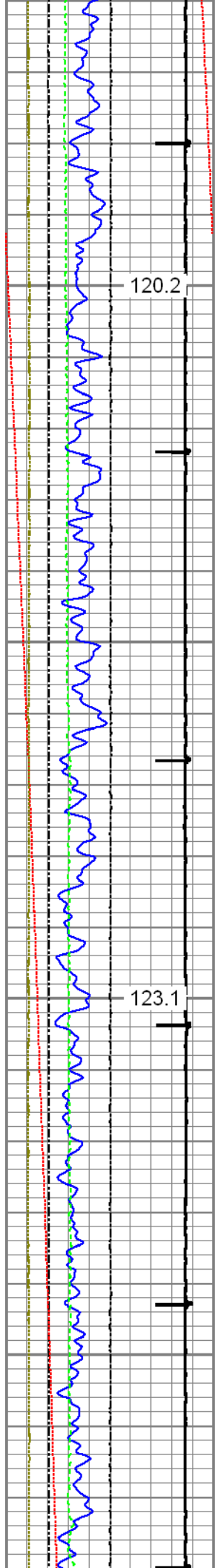




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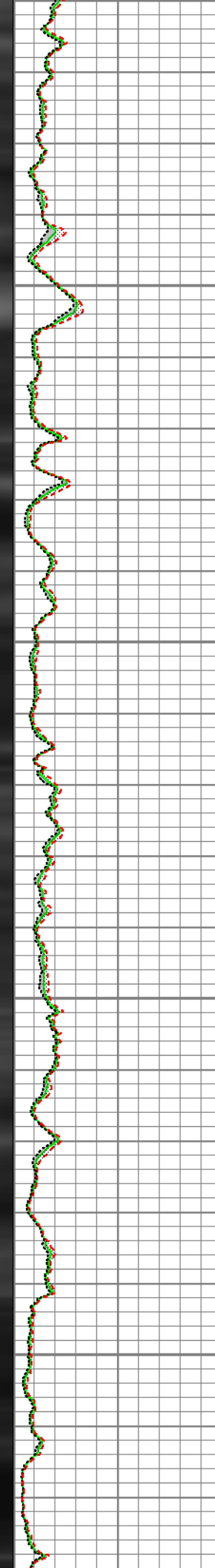
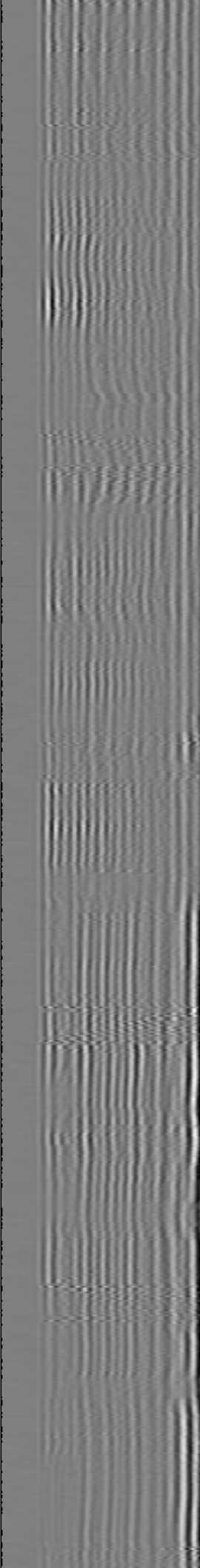
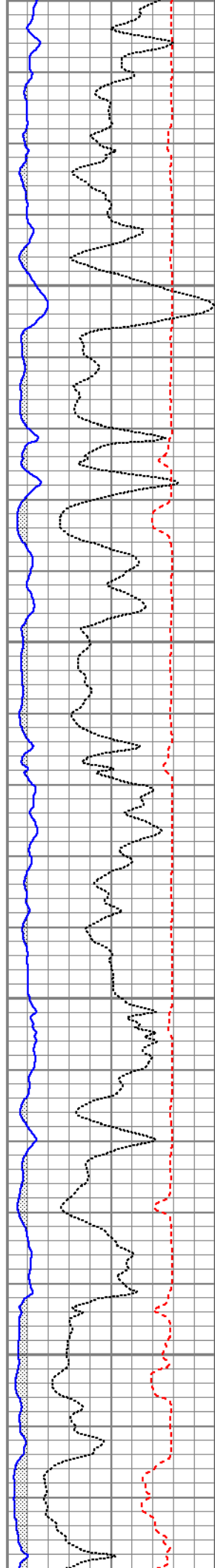
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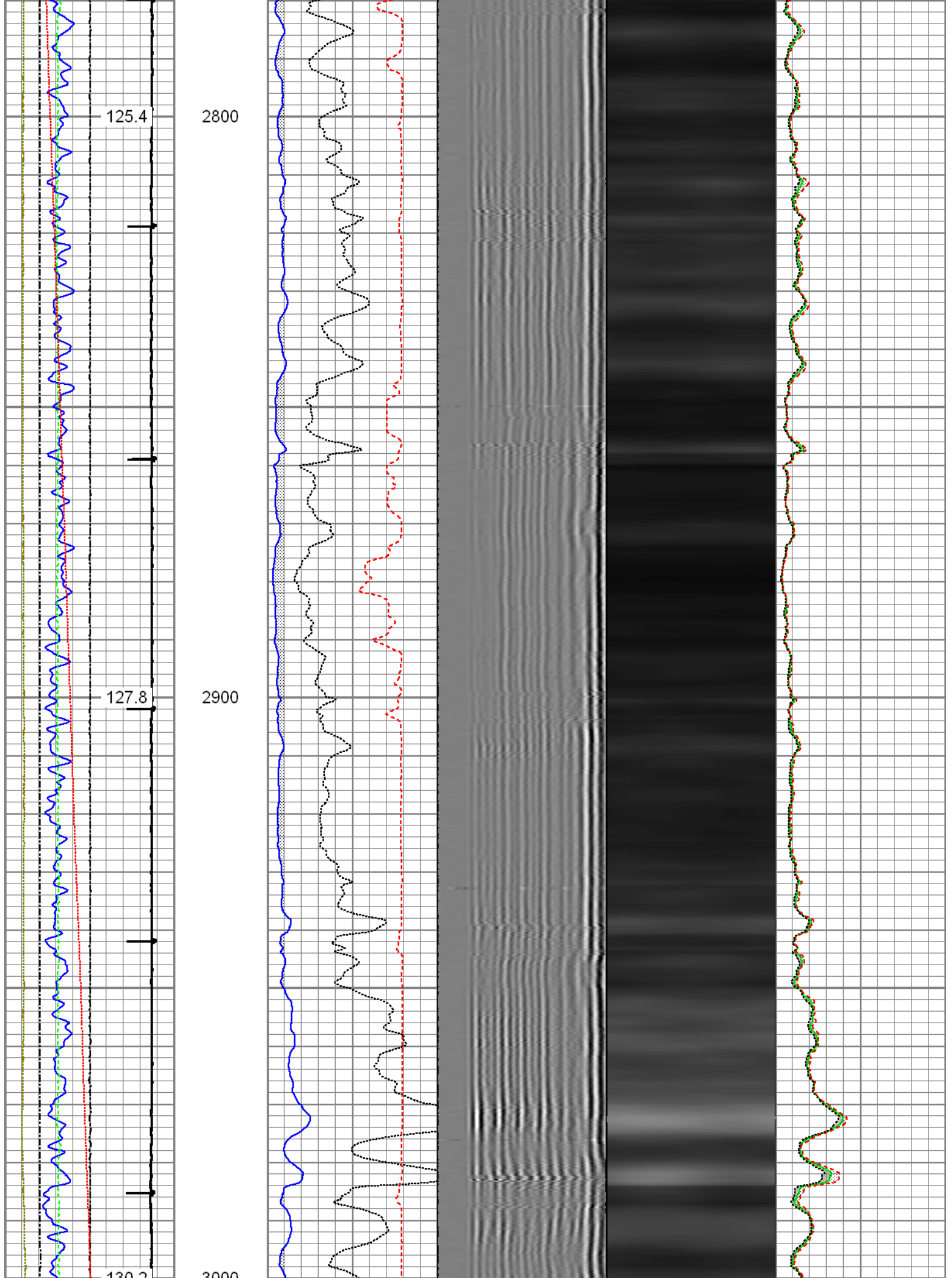


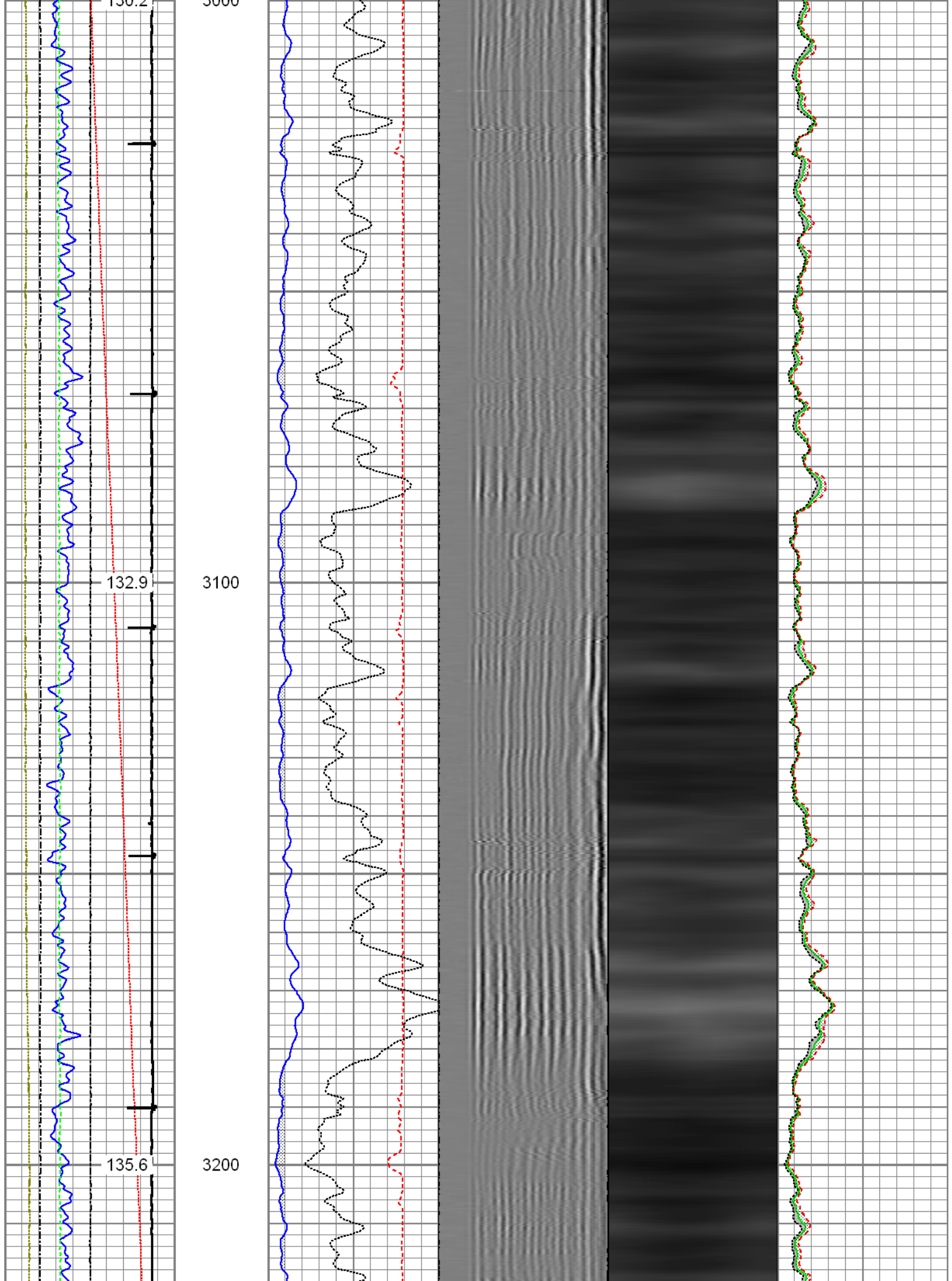


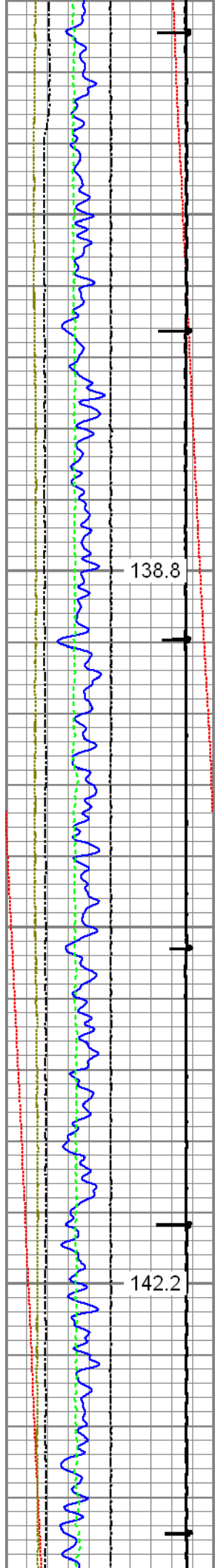
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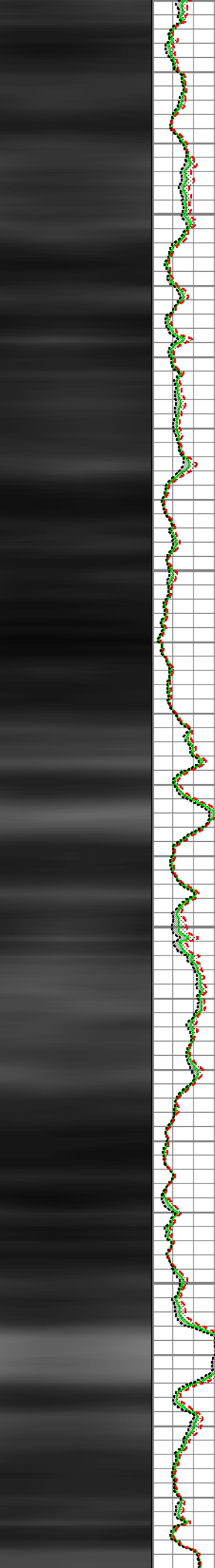
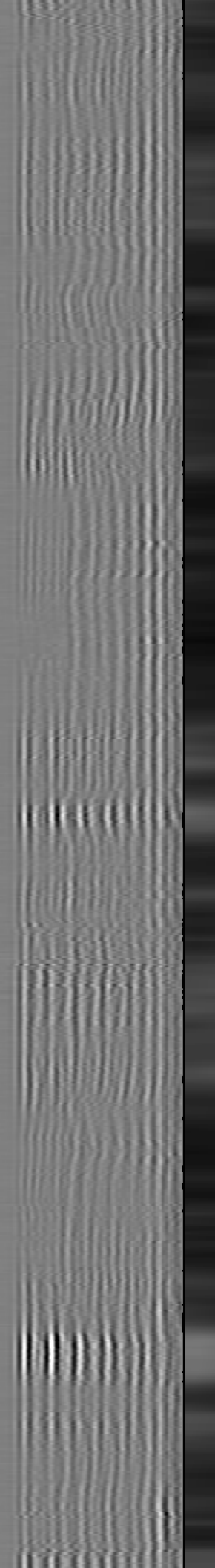
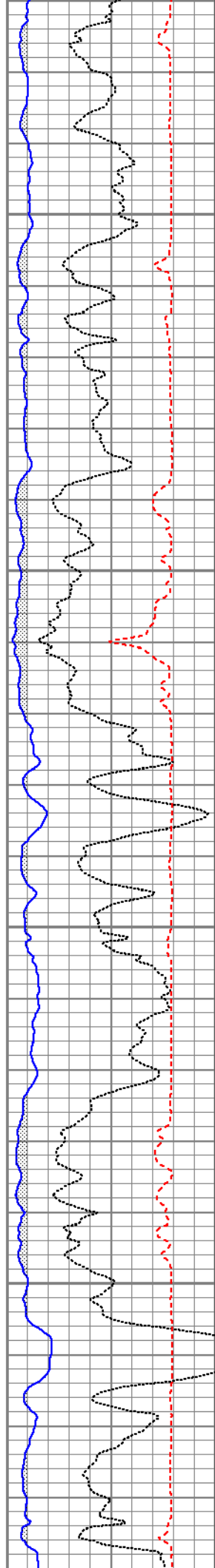


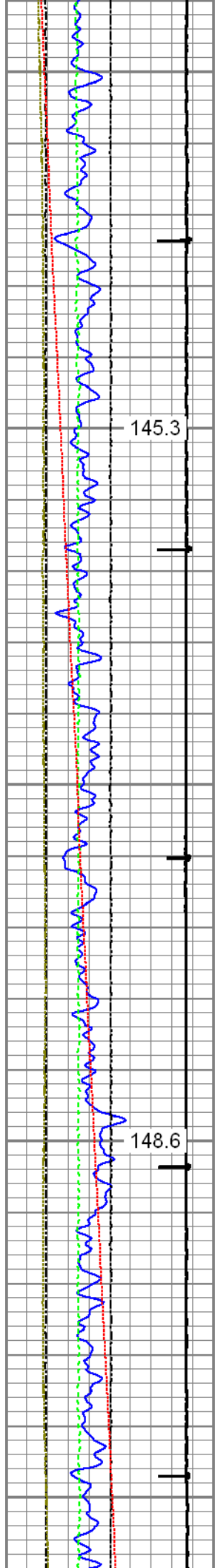




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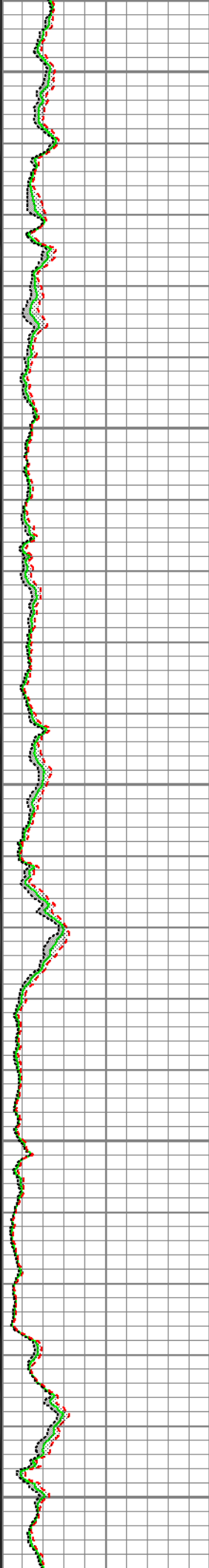
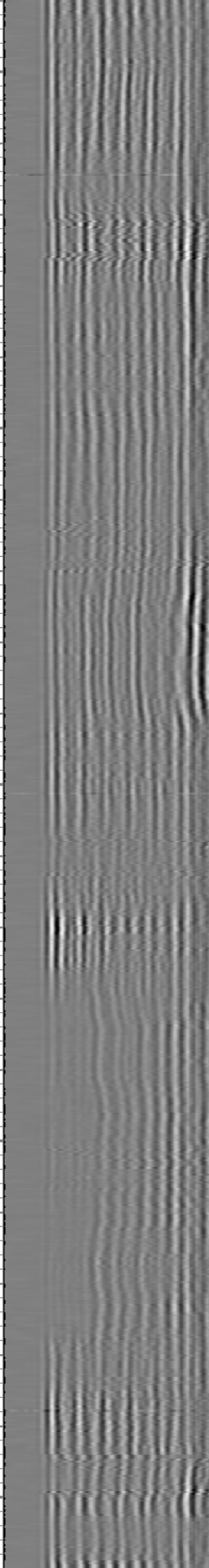
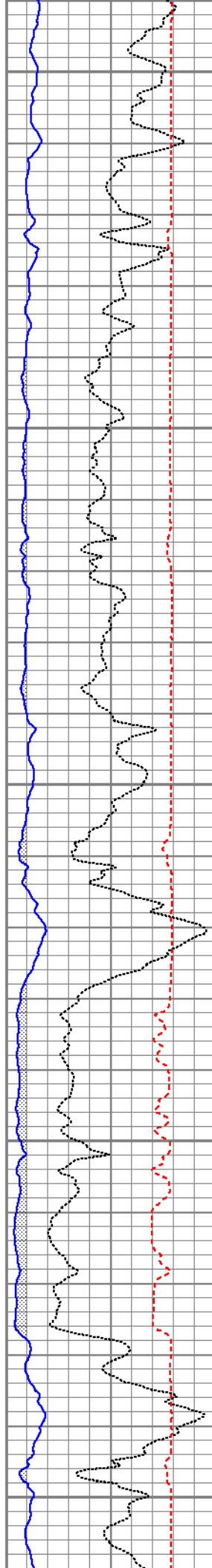
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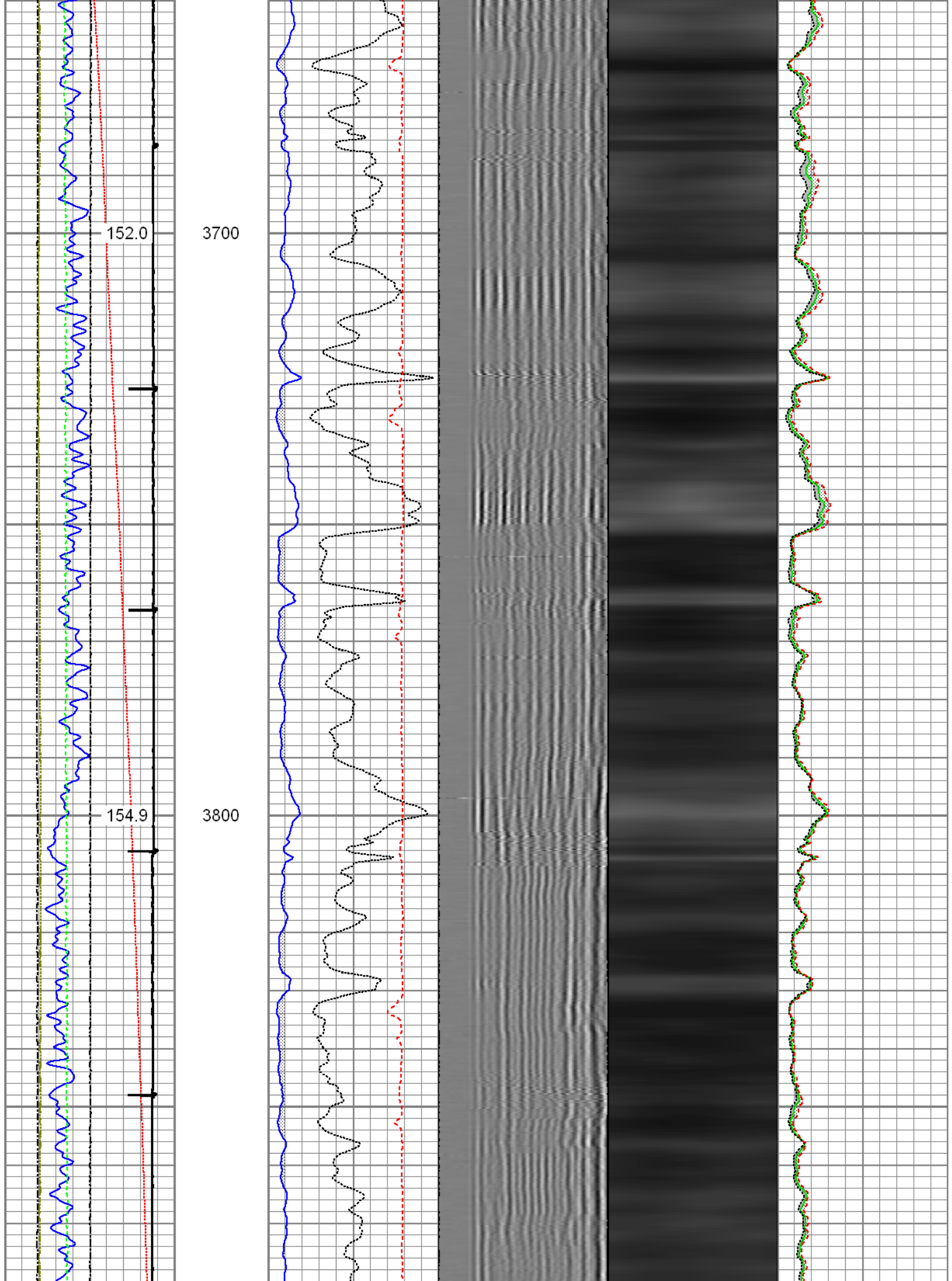


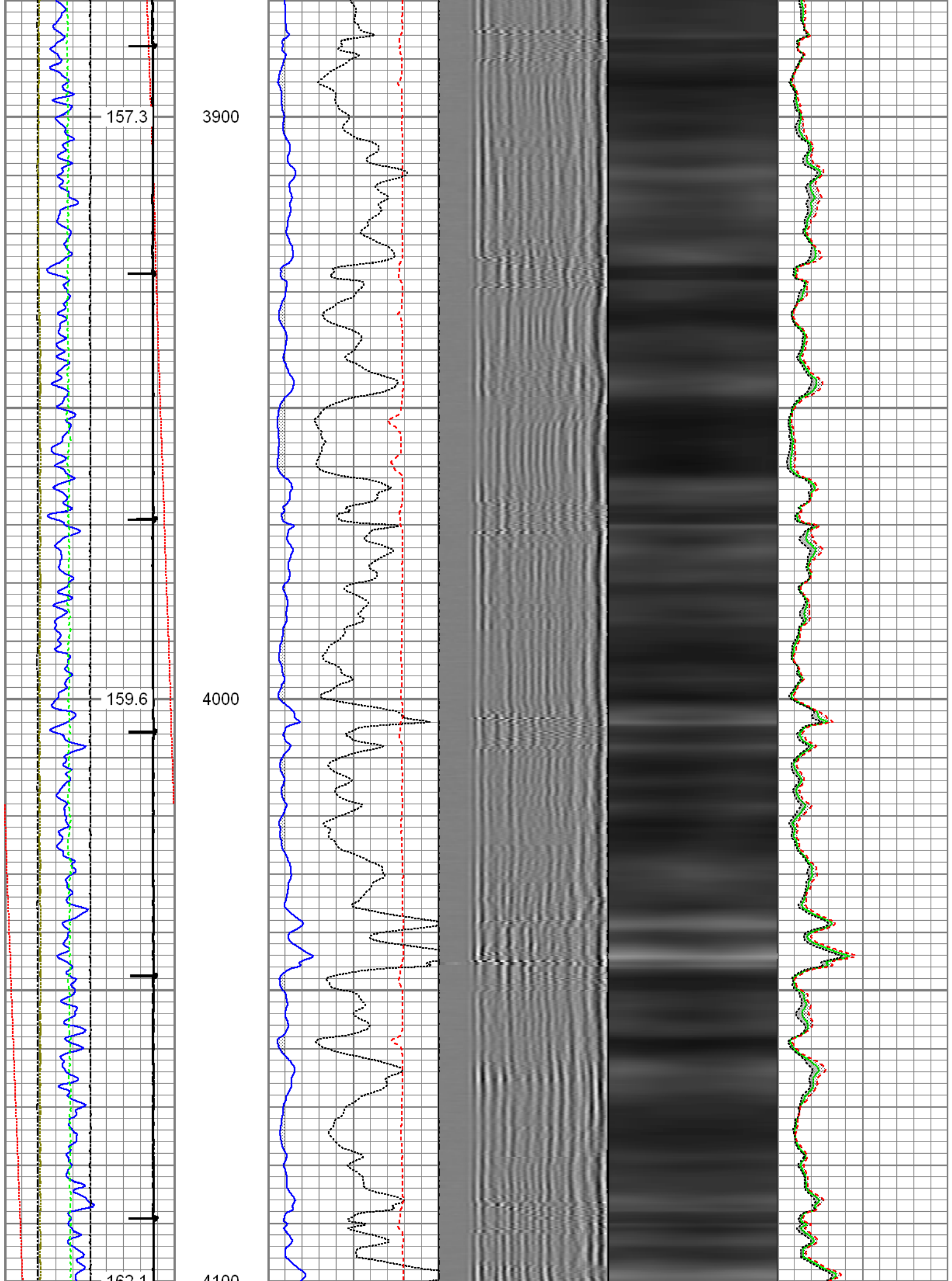


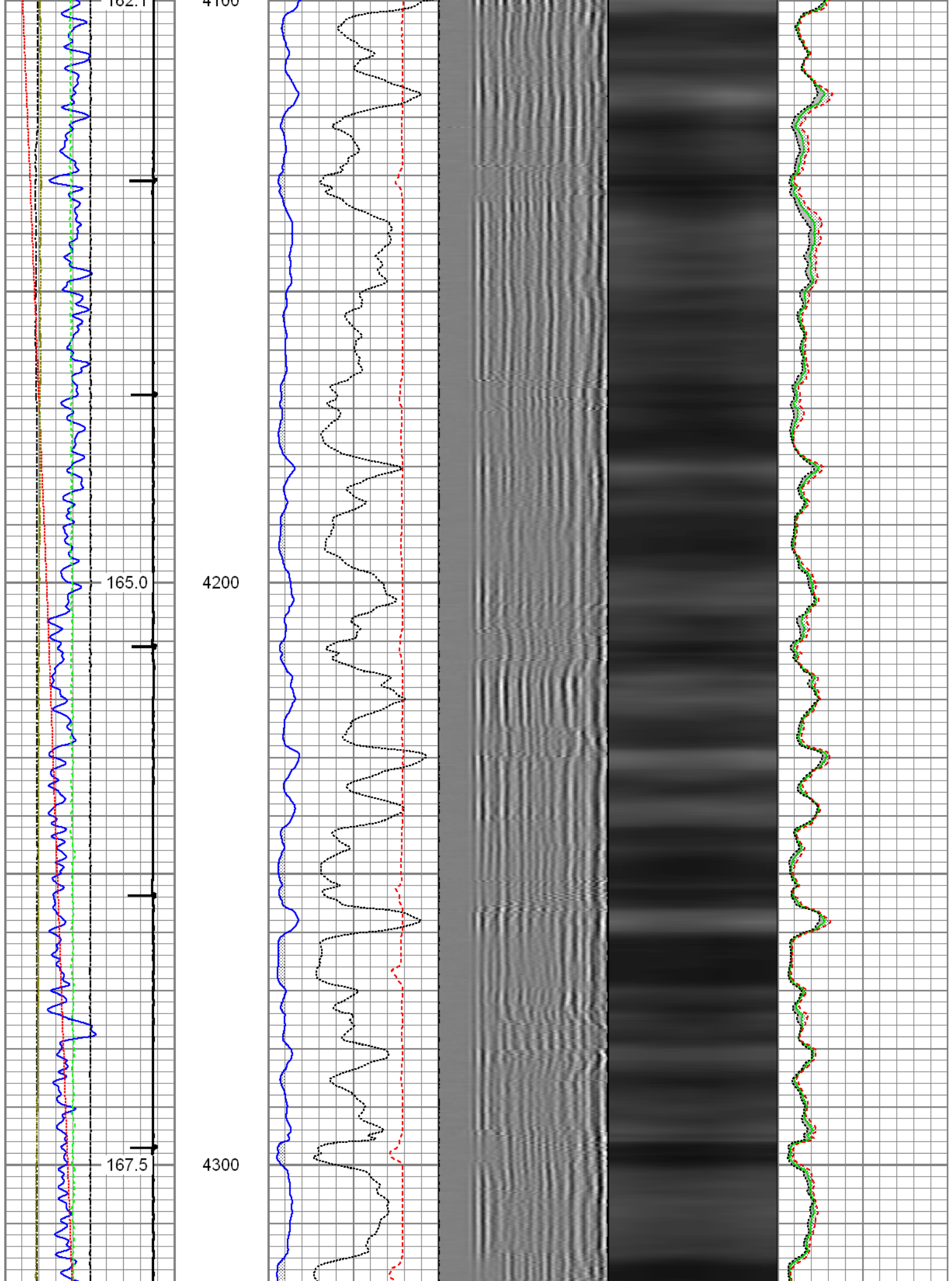
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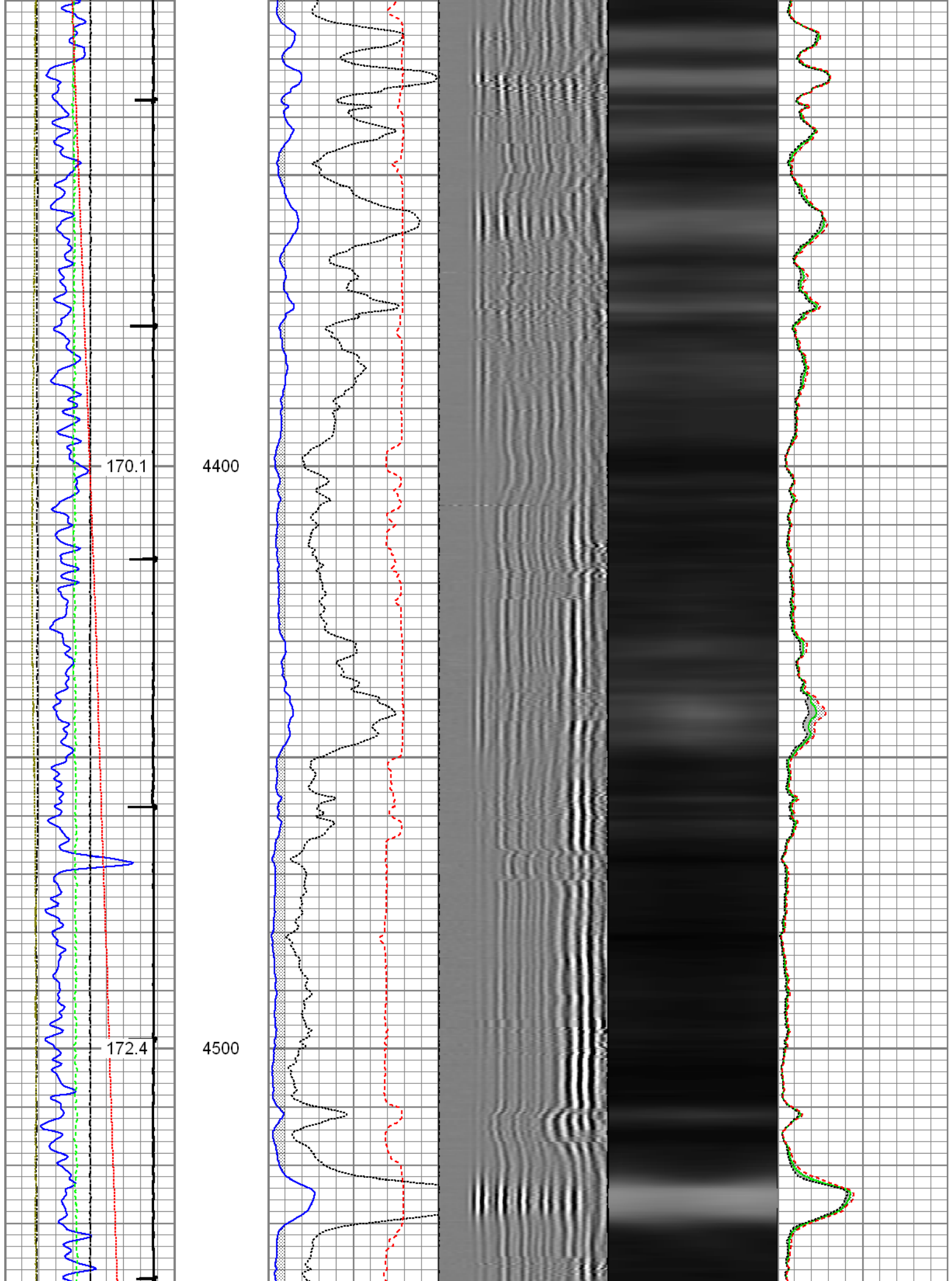
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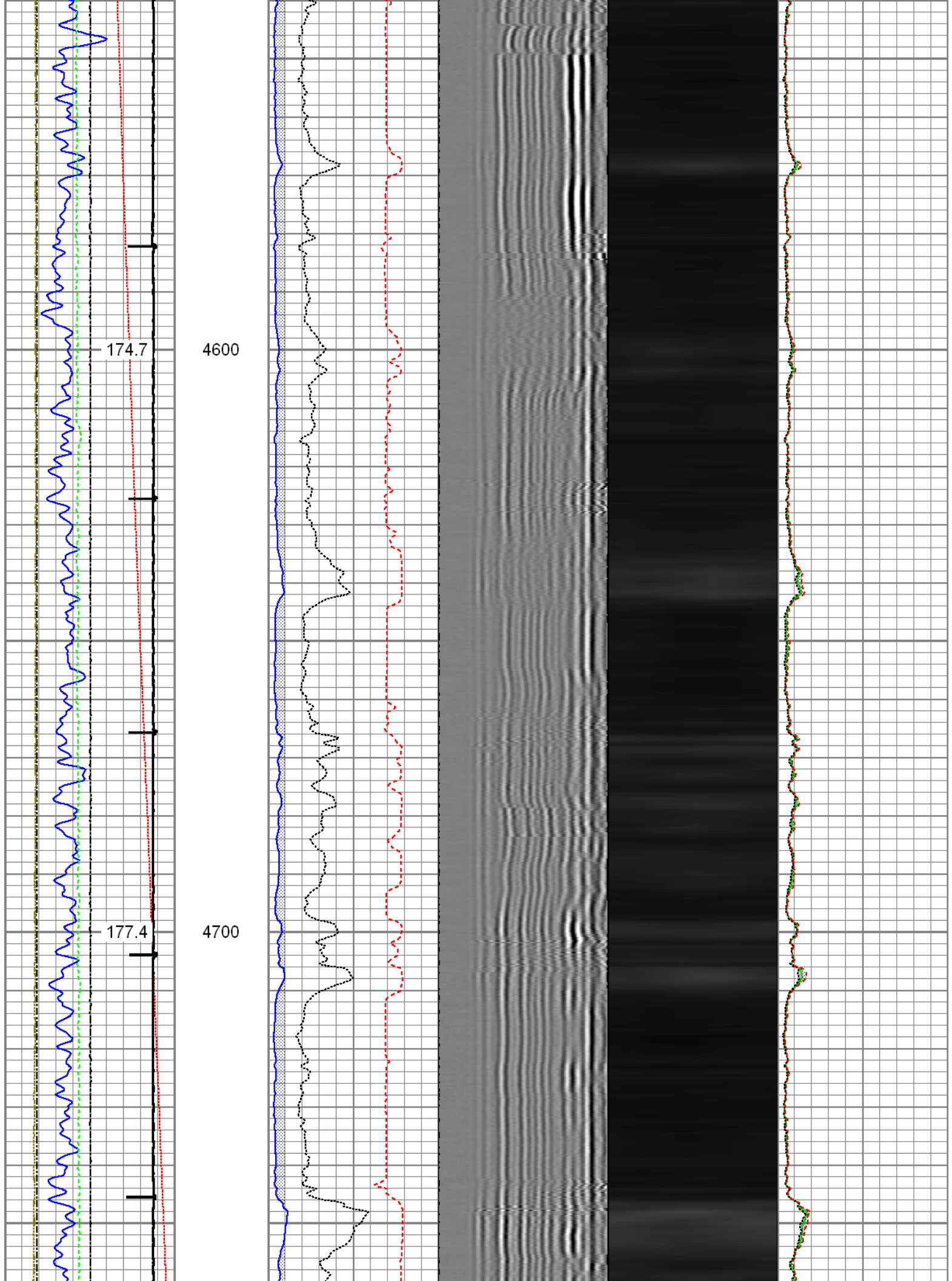


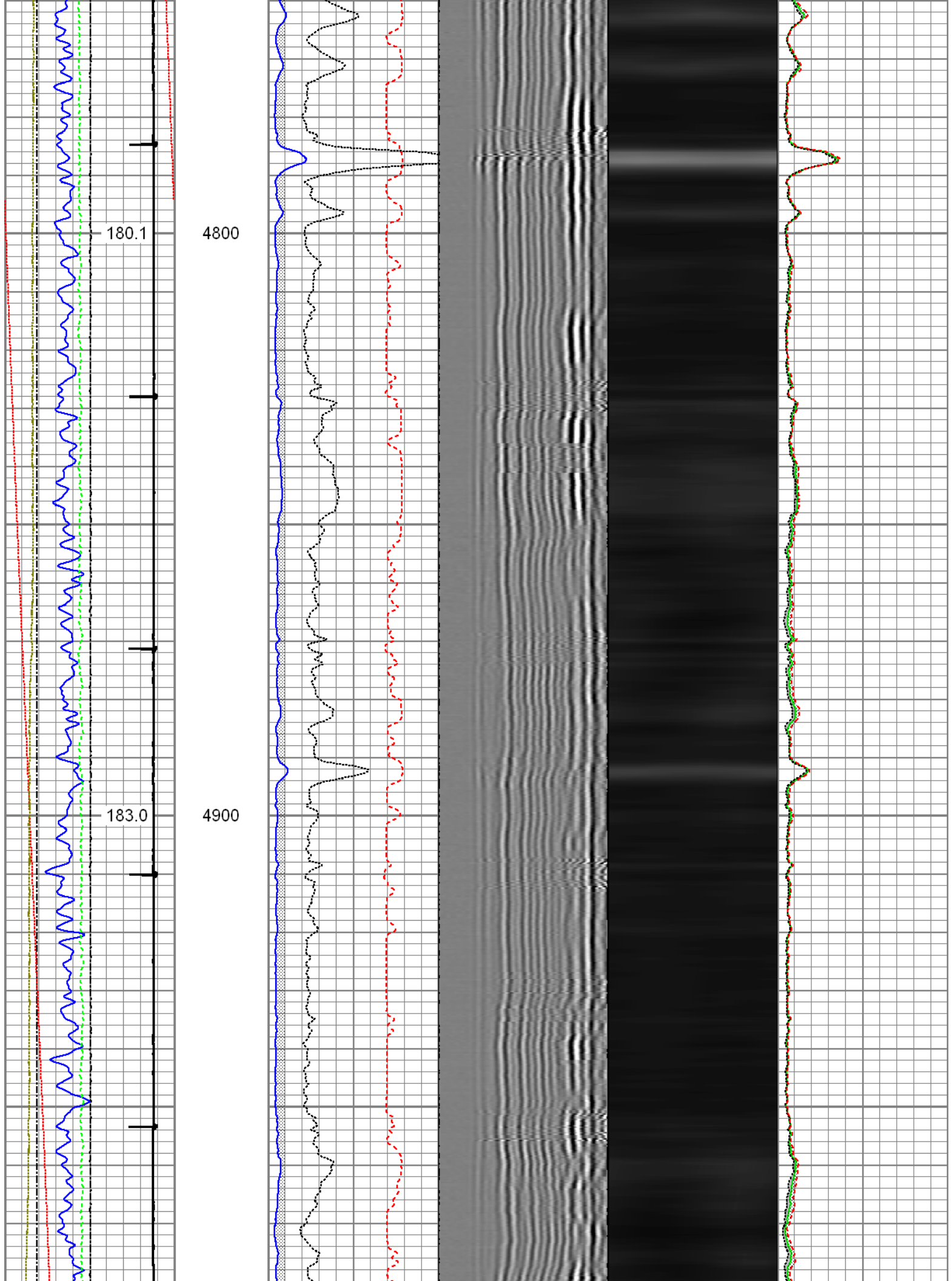


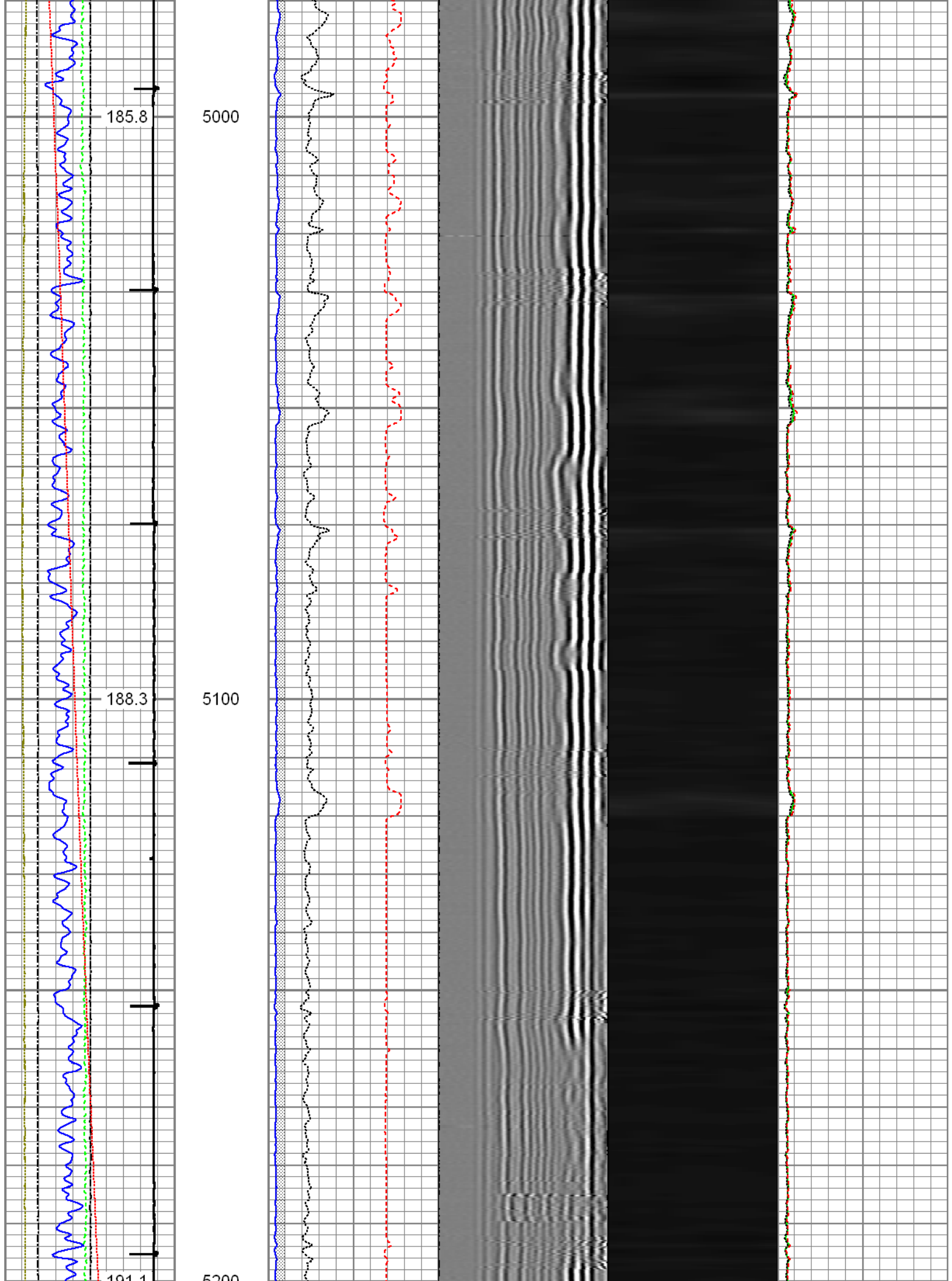


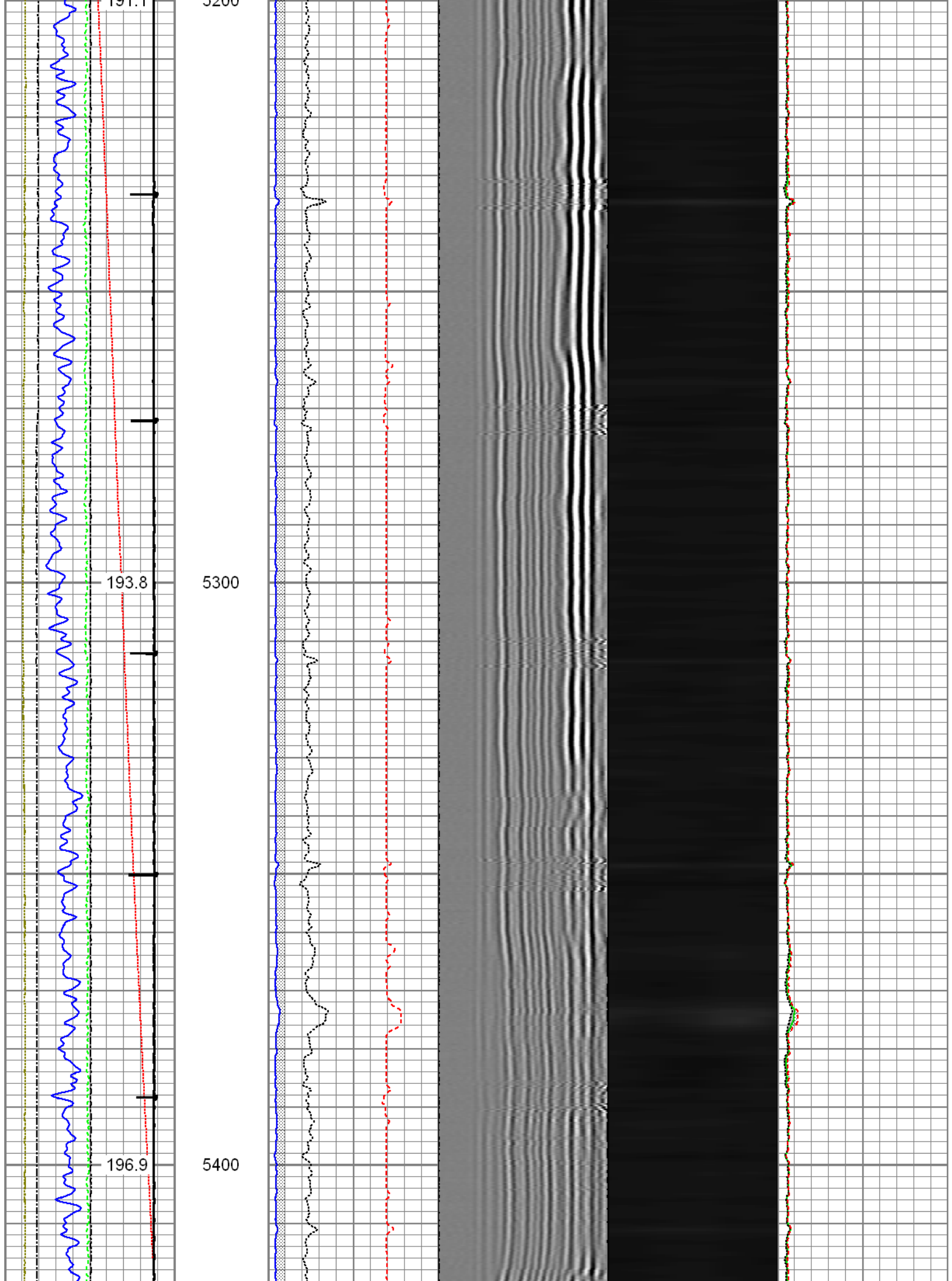


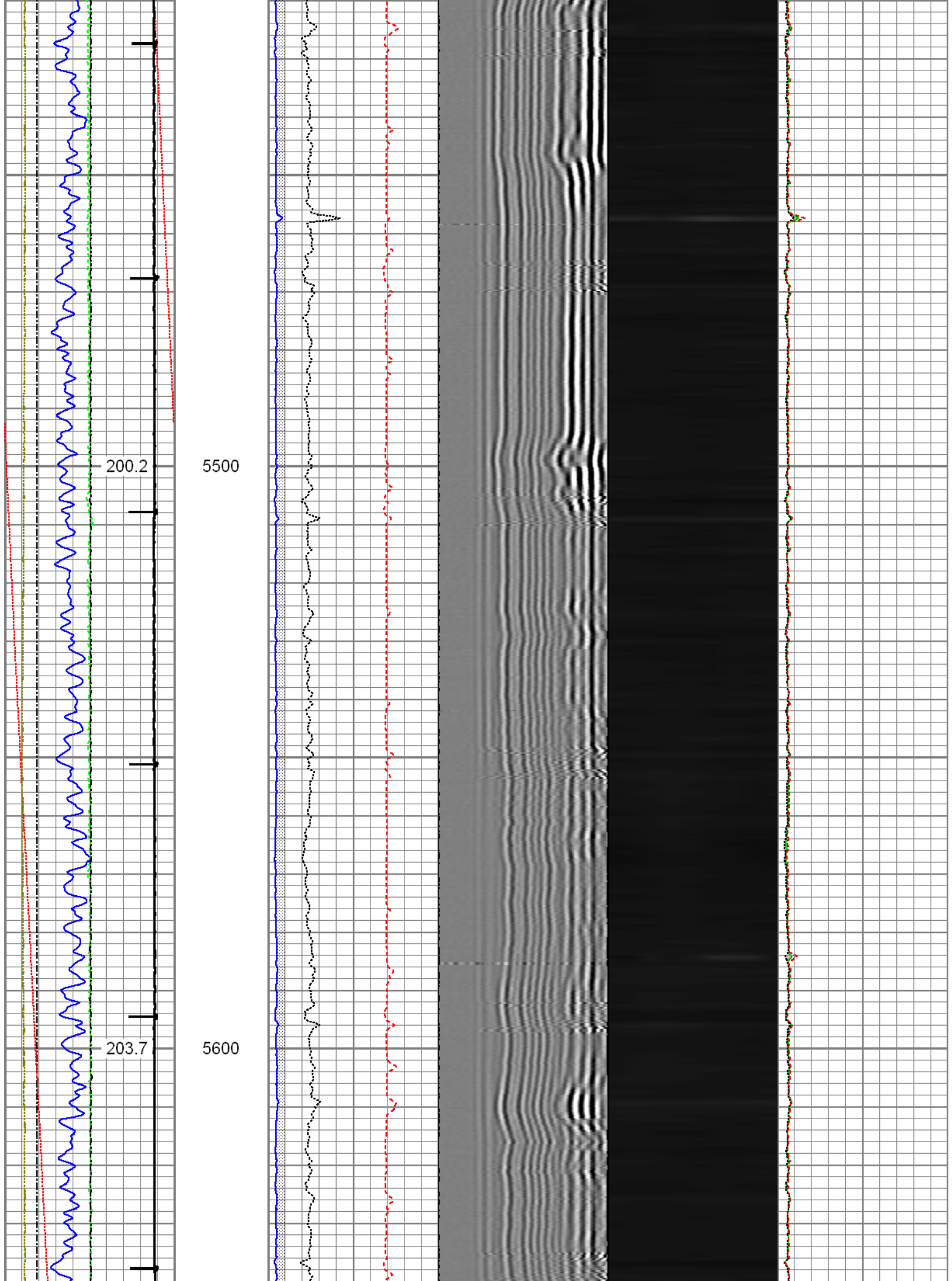


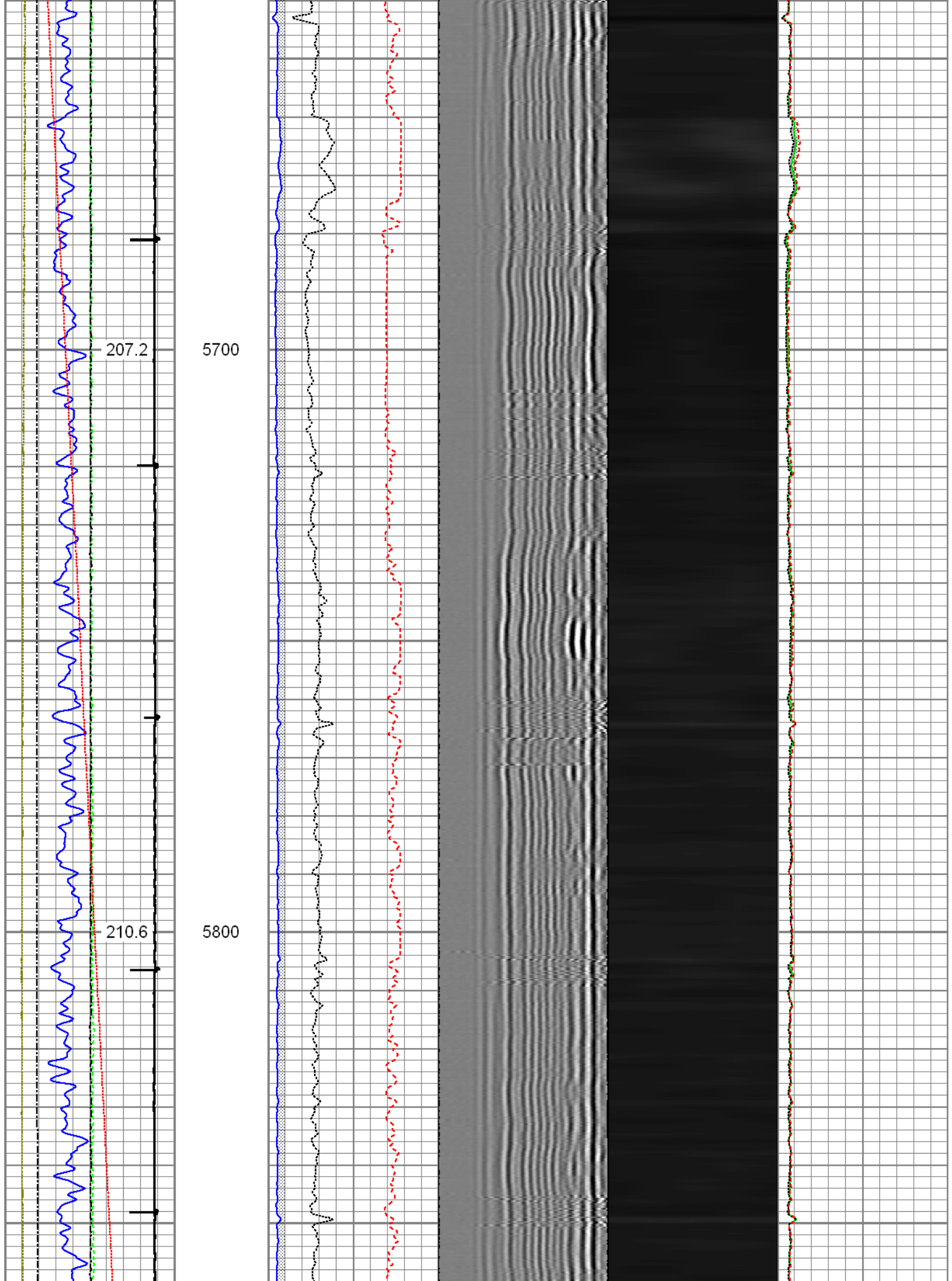


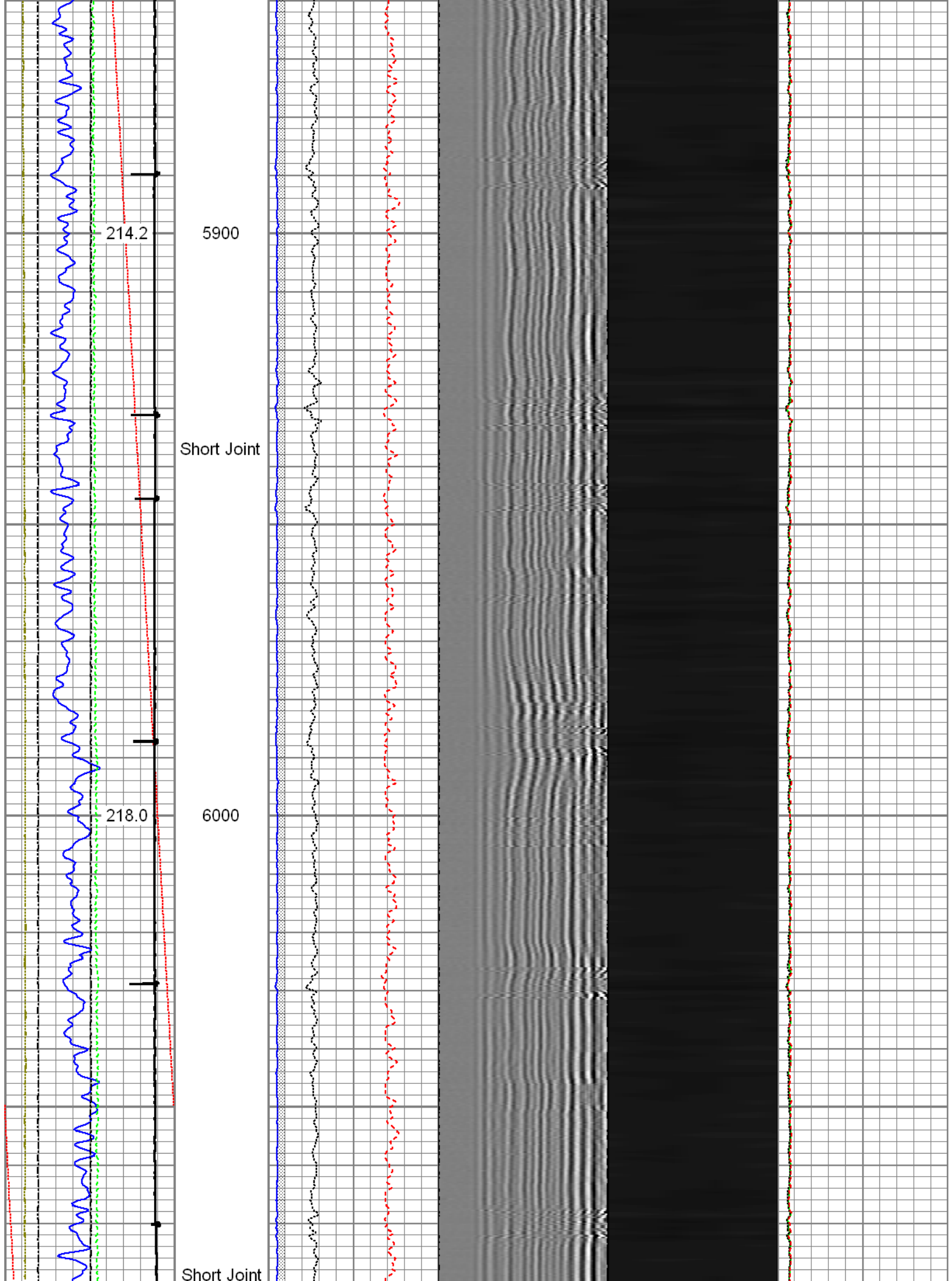


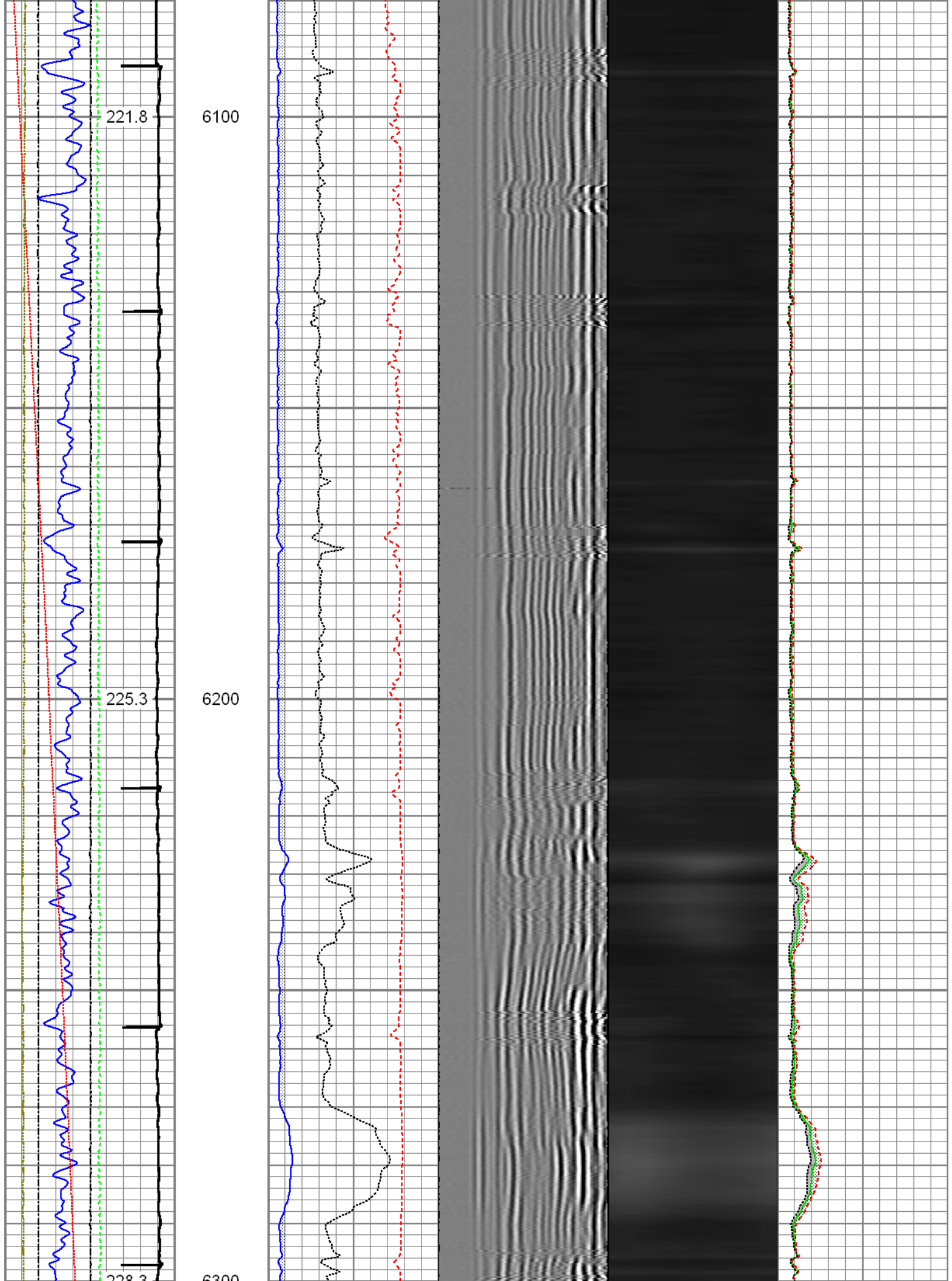


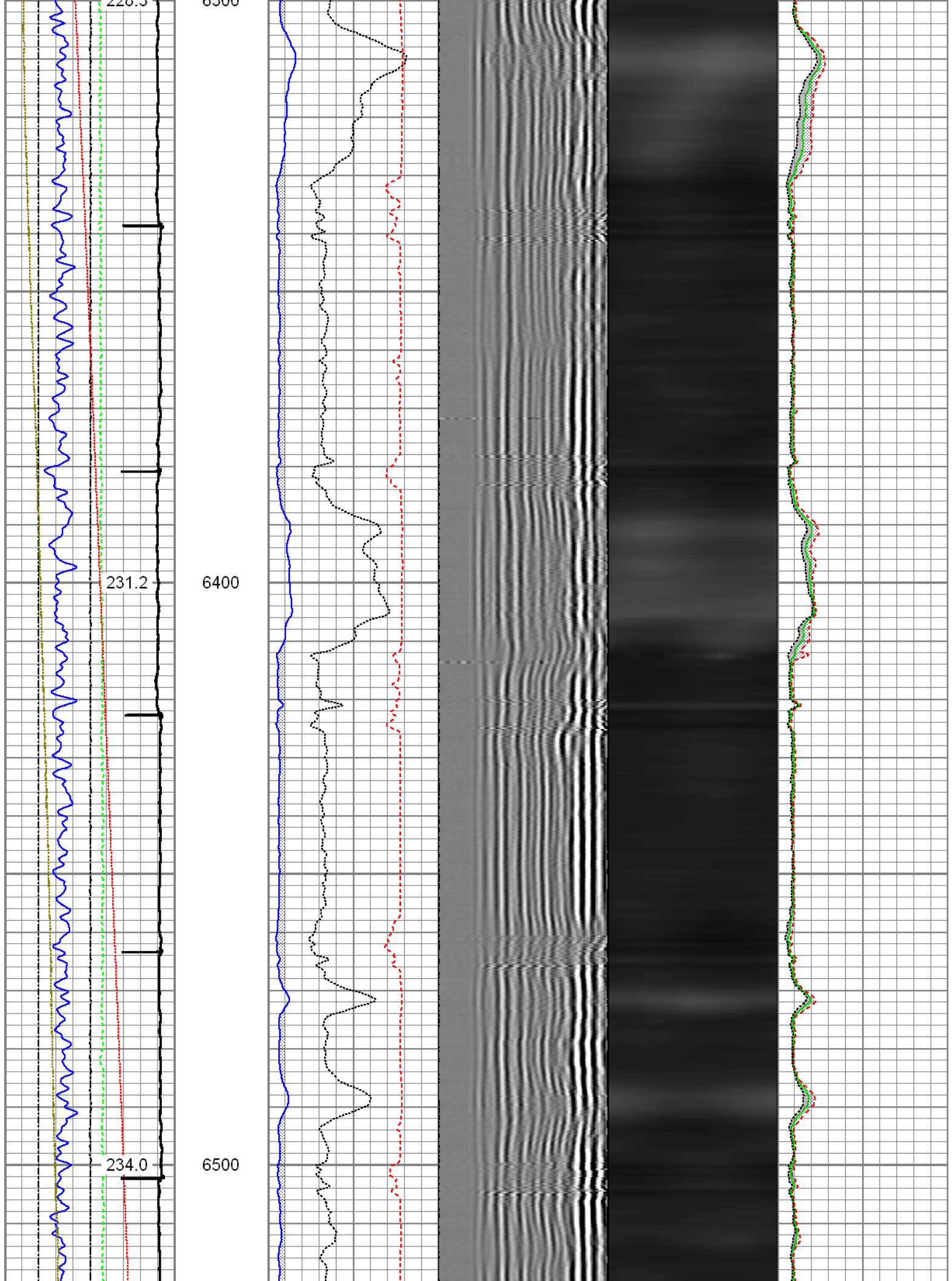


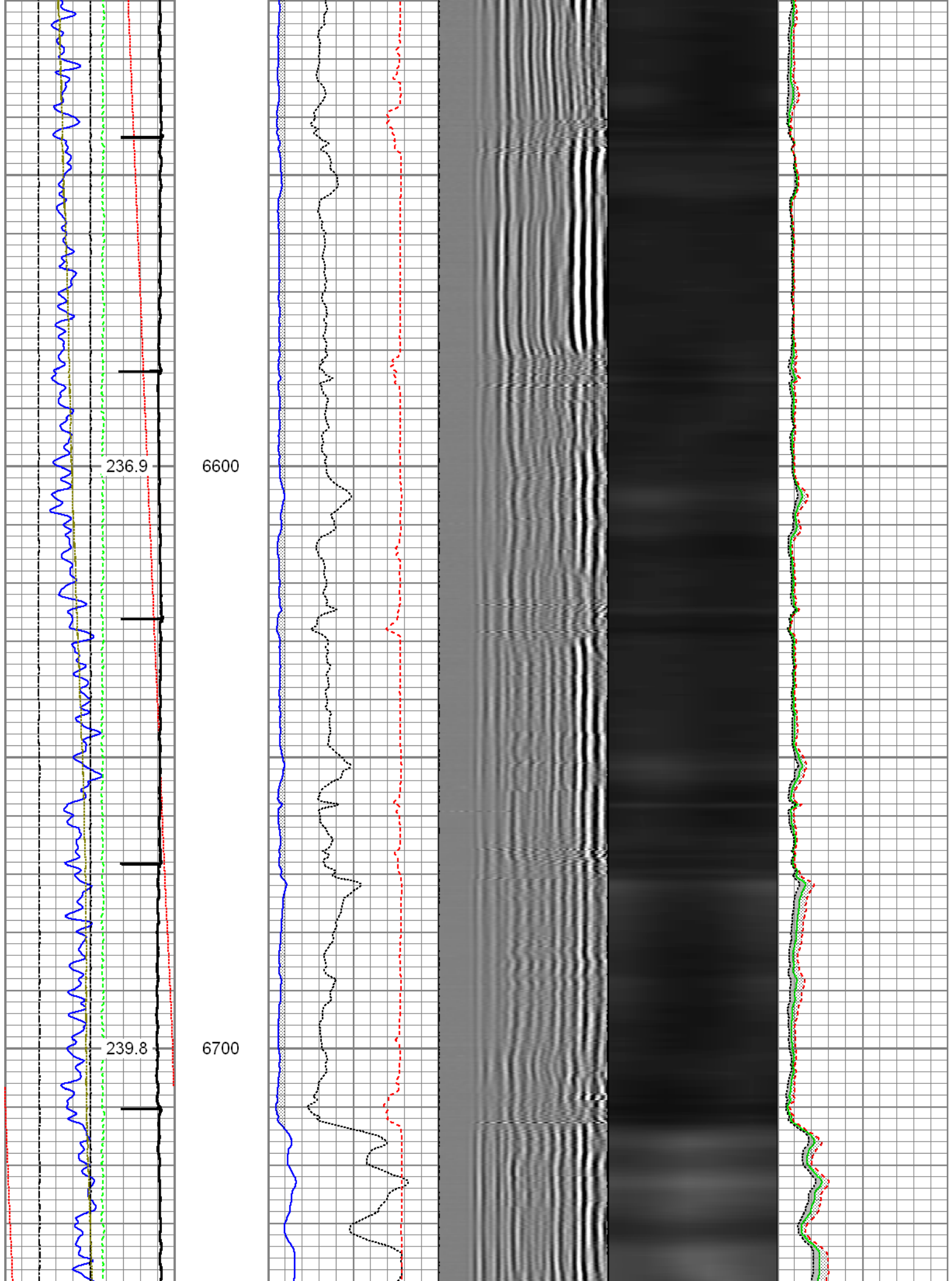


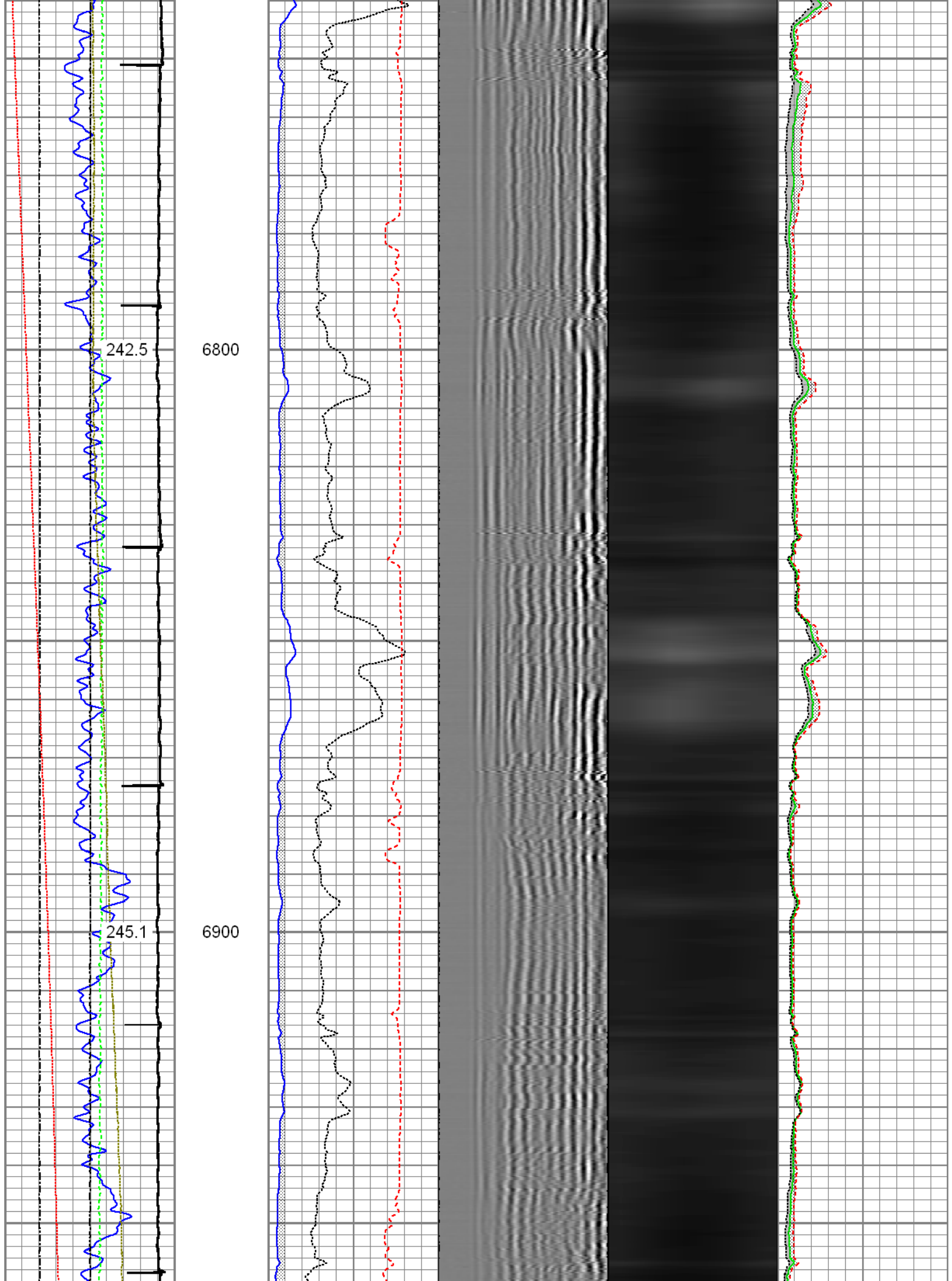


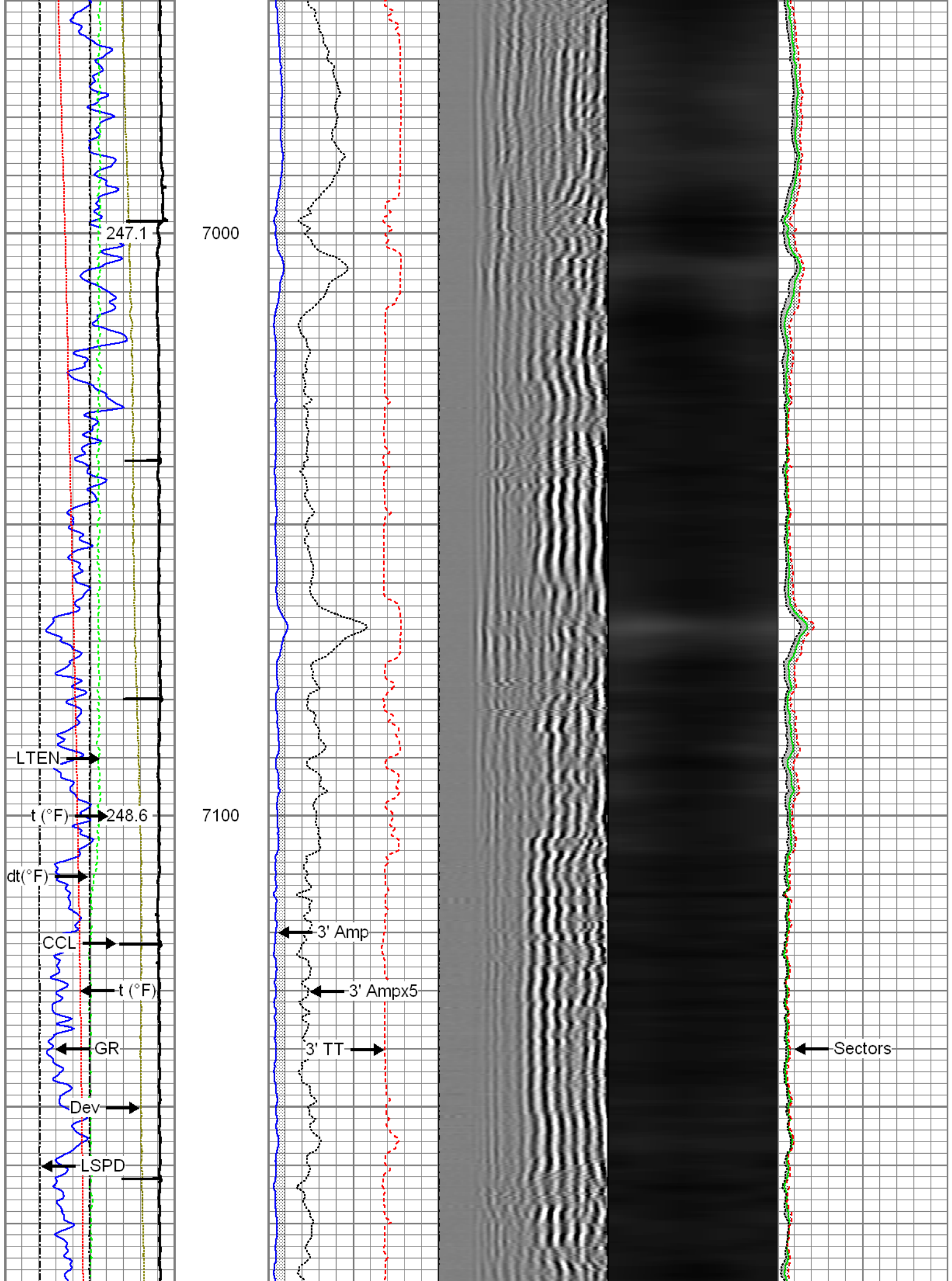


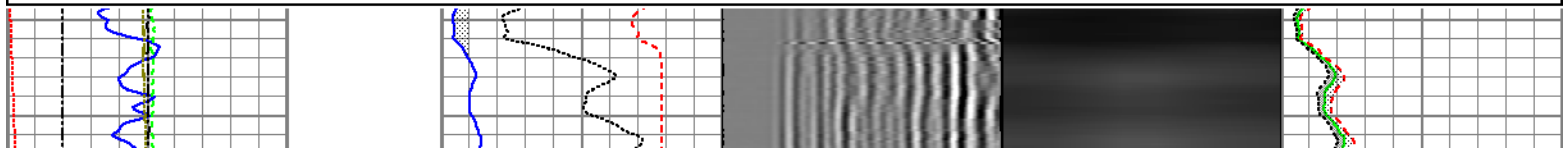
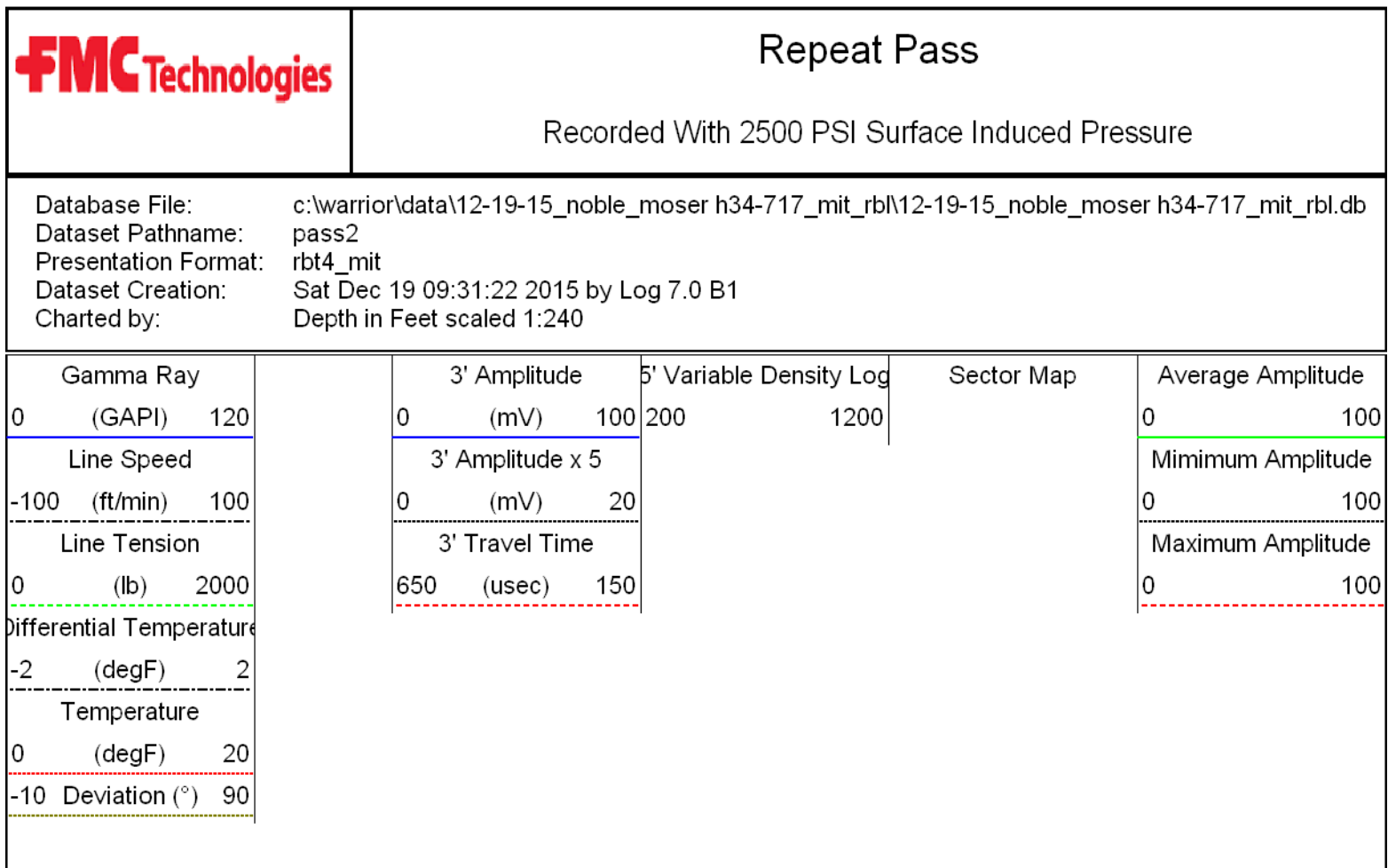
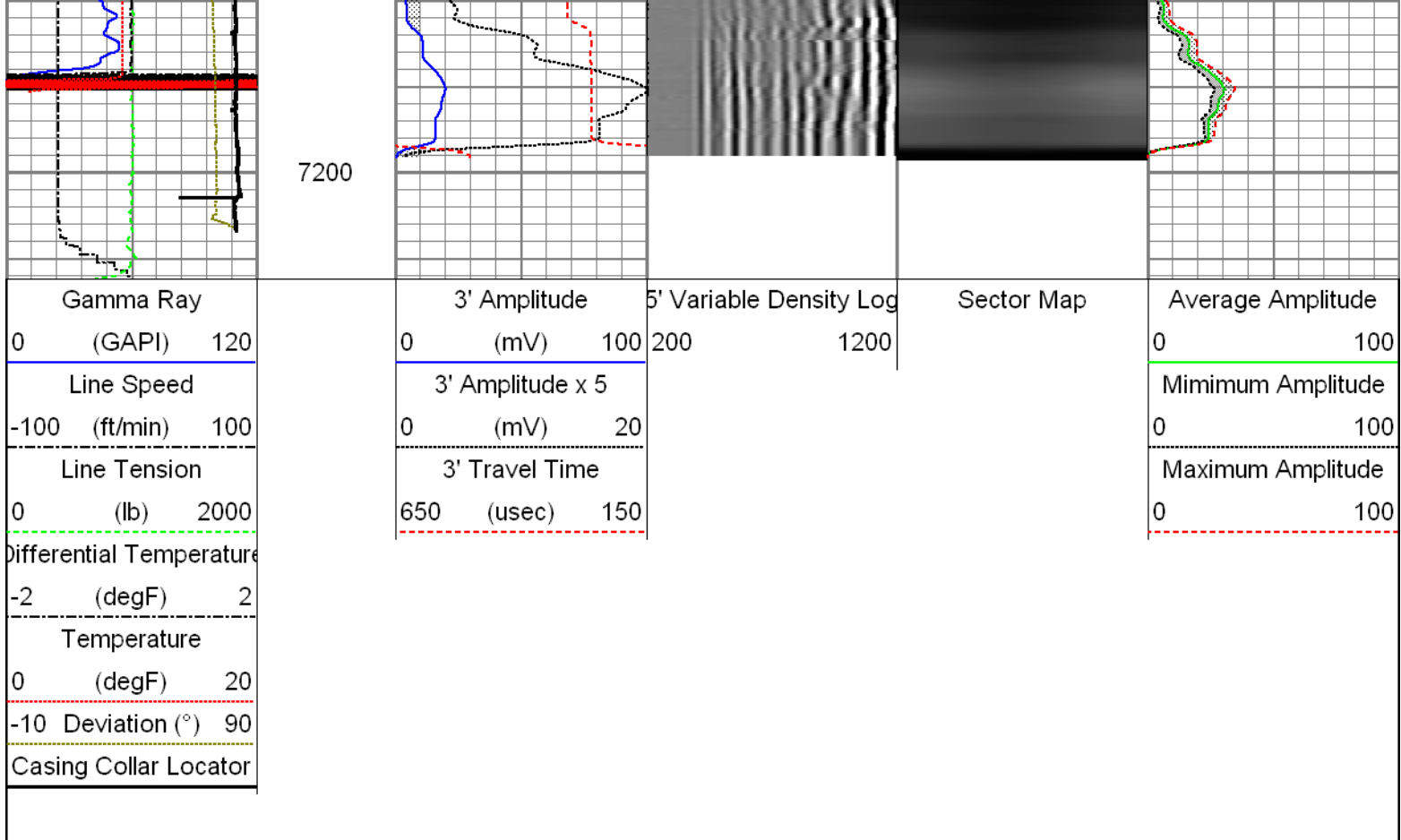


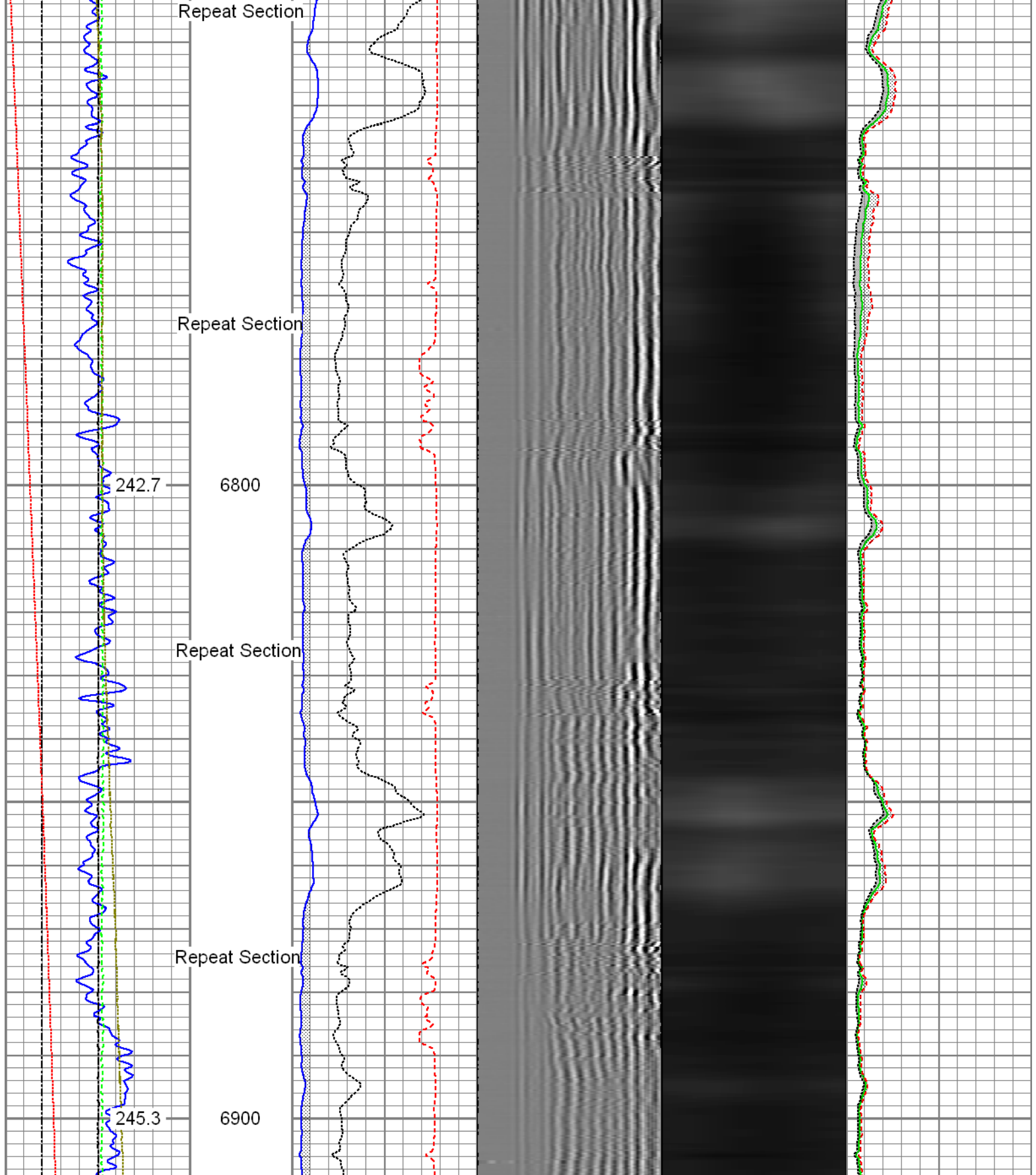








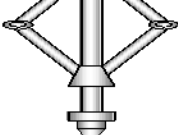




Gamma Ray		3' Amplitude		5' Variable Density Log		Sector Map		Average Amplitude	
0	(GAPI) 120	0	(mV) 100	200	1200			0	100
Line Speed		3' Amplitude x 5						Minimum Amplitude	
-100	(ft/min) 100	0	(mV) 20					0	100
Line Tension		3' Travel Time						Maximum Amplitude	
0	(lb) 2000	650	(usec) 150					0	100
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
			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
TEMP	22.45		UW_PRT-UW_PRT_016 (10025095) Platinum Resistance Thermometer	1.04	1.69	5.20
			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		UW_PRC #3 -DSSRAC (082) 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 (10012912) 40 Multifinger Imaging Tool	4.54	2.75	61.10

TSTAMP	0.00		UW_PRC #4 -UW_PRC_057 (1037) Sondex 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00
			UW_BUL-UW_BUL_006 (10019616) Sondex Ultrawire Bullnose Terminator	0.22	1.69	1.20
Dataset: 12-19-15_Noble_Moser H34-717_MIT_RBL.db: field/well/run1/pass6 Total Length: 28.09 ft Total Weight: 324.50 lb O.D. 3.13 in						

Calibration Report			
Database File:	c:\warrior\data\12-19-15_noble_moser h34-717_mit_rbl\12-19-15_noble_moser h34-717_mit_rbl.db		
Dataset Pathname:	pass6.1		
Dataset Creation:	Sun Dec 20 12:07:30 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	
		Inc X	Inc Y
Vertical:		1968	1974
Finger 1 up:		1740	1744
Finger 31 up:		2215	1741
Finger 21 up:		2205	2224
Finger 11 up:		1731	2217
Sensitivity ratio:	0.992868		
X-axis angle:	134.307		
Deviation const.:	335.589		

Finger Calibration Report						
Performed:			Sun Mar 16 14:17:33 2014			
Ring size:	4	5	6	7		
(in)						
	Sens	Sens	Sens	Sens		
Finger 01:	1034 381.0	1415 389.0	1804 396.0	2200		
Finger 02:	1047 370.0	1417 400.0	1817 402.0	2219		
Finger 03:	968 398.0	1366 407.0	1773 432.0	2205		
Finger 04:	998 388.0	1386 392.0	1778 424.0	2202		
Finger 05:	1008 396.0	1404 399.0	1803 436.0	2239		
Finger 06:	1027 393.0	1420 403.0	1823 438.0	2261		
Finger 07:	988 398.0	1386 396.0	1782 442.0	2224		
Finger 08:	1027 385.0	1412 390.0	1802 444.0	2246		
Finger 09:	1040 389.0	1429 390.0	1819 442.0	2261		
Finger 10:	1041 385.0	1426 390.0	1816 446.0	2262		
Finger 11:	1076 382.0	1458 390.0	1848 440.0	2288		
Finger 12:	1078 370.0	1448 387.0	1835 446.0	2281		
Finger 13:	1117 367.0	1484 392.0	1876 427.0	2303		
Finger 14:	1131 366.0	1497 393.0	1890 444.0	2334		
Finger 15:	1065 360.0	1425 403.0	1828 458.0	2286		
Finger 16:	1095 354.0	1449 401.0	1850 454.0	2304		
Finger 17:	1110 346.0	1456 399.0	1855 456.0	2311		
Finger 18:	1200 331.0	1531 386.0	1917 424.0	2341		
Finger 19:	1157 323.0	1480 385.0	1865 429.0	2294		
Finger 20:	1150 324.0	1474 399.0	1873 434.0	2307		
Finger 21:	1189 325.0	1514 393.0	1907 415.0	2322		
Finger 22:	1160 317.0	1477 398.0	1875 427.0	2302		
Finger 23:	1124 319.0	1443 407.0	1850 432.0	2282		
Finger 24:	1208 310.0	1518 384.0	1902 384.0	2286		
Finger 25:	1152 329.0	1482 397.0	1879 411.0	2290		

Finger 25:	1153	329.0	1482	397.0	1879	411.0	2290
Finger 26:	1251	309.0	1560	369.0	1929	372.0	2301
Finger 27:	1170	314.0	1484	397.0	1881	388.0	2269
Finger 28:	1202	314.0	1516	380.0	1896	377.0	2273
Finger 29:	1108	323.0	1431	402.0	1833	393.0	2226
Finger 30:	1141	330.0	1471	395.0	1866	382.0	2248
Finger 31:	1143	331.0	1474	392.0	1866	374.0	2240
Finger 32:	1092	343.0	1435	407.0	1842	383.0	2225
Finger 33:	1164	344.0	1508	381.0	1889	354.0	2243
Finger 34:	1131	348.0	1479	402.0	1881	365.0	2246
Finger 35:	1034	368.0	1402	416.0	1818	403.0	2221
Finger 36:	1031	365.0	1396	404.0	1800	392.0	2192
Finger 37:	1083	378.0	1461	410.0	1871	377.0	2248
Finger 38:	1056	370.0	1426	395.0	1821	382.0	2203
Finger 39:	1065	377.0	1442	387.0	1829	384.0	2213
Finger 40:	996	383.0	1379	400.0	1779	409.0	2188

Segmented Cement Bond Log Calibration Report

Serial Number:

10022773

Tool Model:

UW_RBT_004

Calibration Casing Diameter:

7.000

in

Calibration Depth:

-57.909

ft

Master Calibration, performed Sun Dec 20 12:07:27 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	-0.001	0.786	0.800	62.165	77.979	0.851
5FT	0.016	0.793	0.800	62.165	78.988	-0.466
S1	0.001	0.752	0.000	100.000	133.106	-0.123
S2	-0.001	0.775	0.000	100.000	128.808	0.143
S3	-0.001	0.772	0.000	100.000	129.455	0.078
S4	-0.001	0.767	0.000	100.000	130.263	0.132
S5	0.000	0.786	0.000	100.000	127.202	-0.009
S6	0.001	0.779	0.000	100.000	128.574	-0.113
S7	0.001	0.771	0.000	100.000	129.792	-0.117
S8	0.002	0.764	0.000	100.000	131.099	-0.198

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	Noble Energy Inc.
Well	Moser H34-717
Field	Wattenberg
County	Weld
State	Colorado