

Company		Kerr-McGee Oil & Gas Onshore, L.P.	
Well		Ferge 29N-14HZ	
Field		Wattenberg	
County		Weld	
State		Colorado	
Location:		API #: 05-123-36344	
SEC 14 TWP 3N RGE 66W		Other Services Gauge Ring RBP CIL	
Permanent Datum	Ground Level	Elevation	4913'
Log Measured From	Kelly Bushing (13 FT)	K.B. 4926'	D.F. 4925'
Drilling Measured From	Kelly Bushing	G.L. 4913'	
Date	21 May 2014		
Run Number	Three		
Depth Driller	12188 FT		
Depth Logger	6648 FT		
Bottom Logged Interval	6653 FT		
Top Log Interval	Surface		
Open Hole Size	8.750"		
Type Fluid	Water		
Density / Viscosity	8.34 lbm/gal		
Max. Recorded Temp.	240°F		
Estimated Cement Top	33 FT		
Time Well Ready	7:00 AM		
Time Logger on Bottom	8:00 AM		
Equipment Number	HD-134		
Location	Fort Lupton, CO.		
Recorded By	W. Wacker		
Witnessed By	Sonny Secura		
Borehole Record		Tubing Record	
Run Number	Bit	From	To
	Size	Weight	From
			To
Casing Record	Size (in)	Wgt (lbs/ft)	Grade
Surface Casing	9-5/8"	36#	J-55 LTC
Intermediate #1	7"	26#	110 LTC
Intermediate #2			
Liner	4-1/2"	11.6#	P-110
			6583 FT
			12178 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.

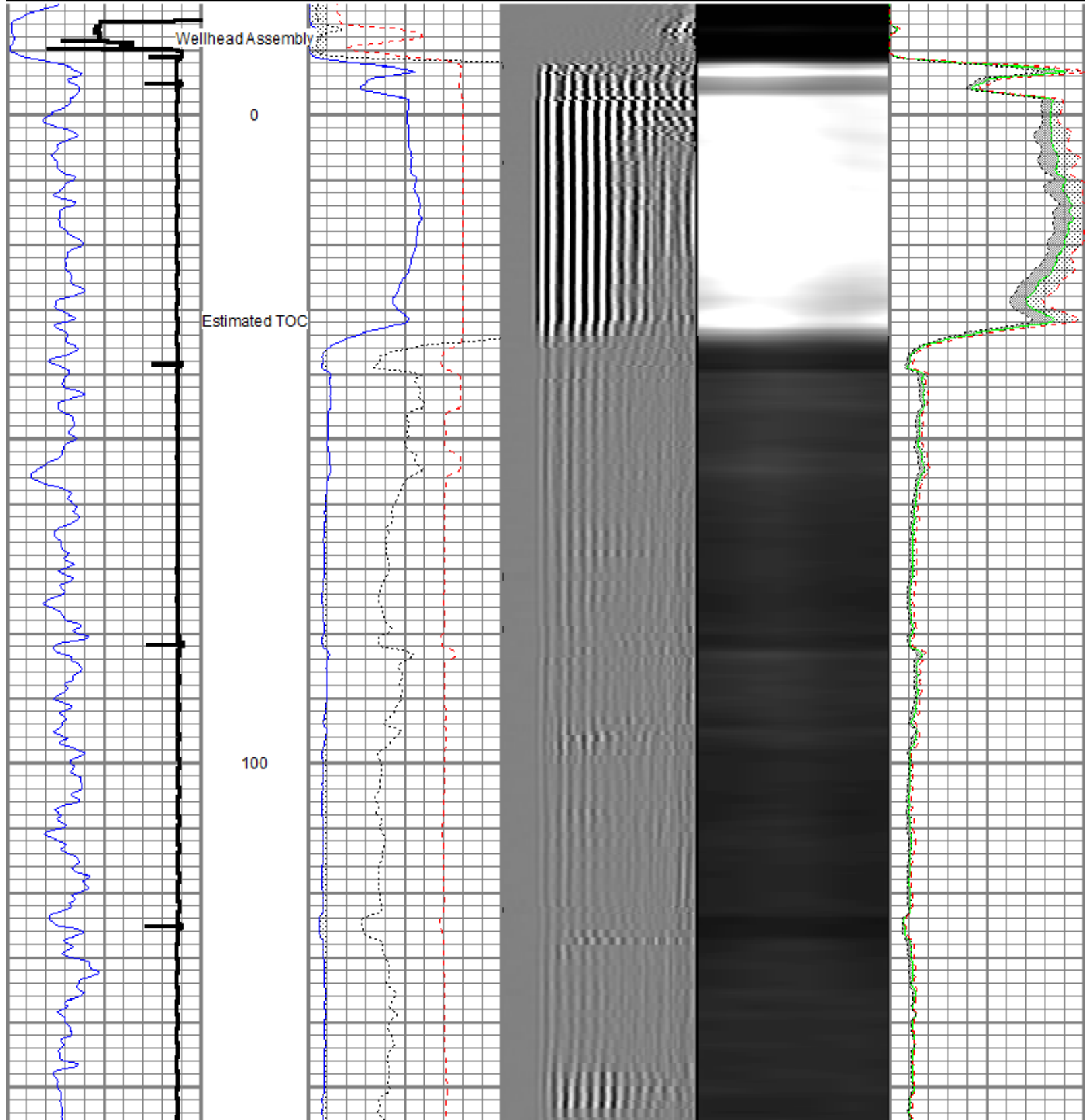
**Comments**

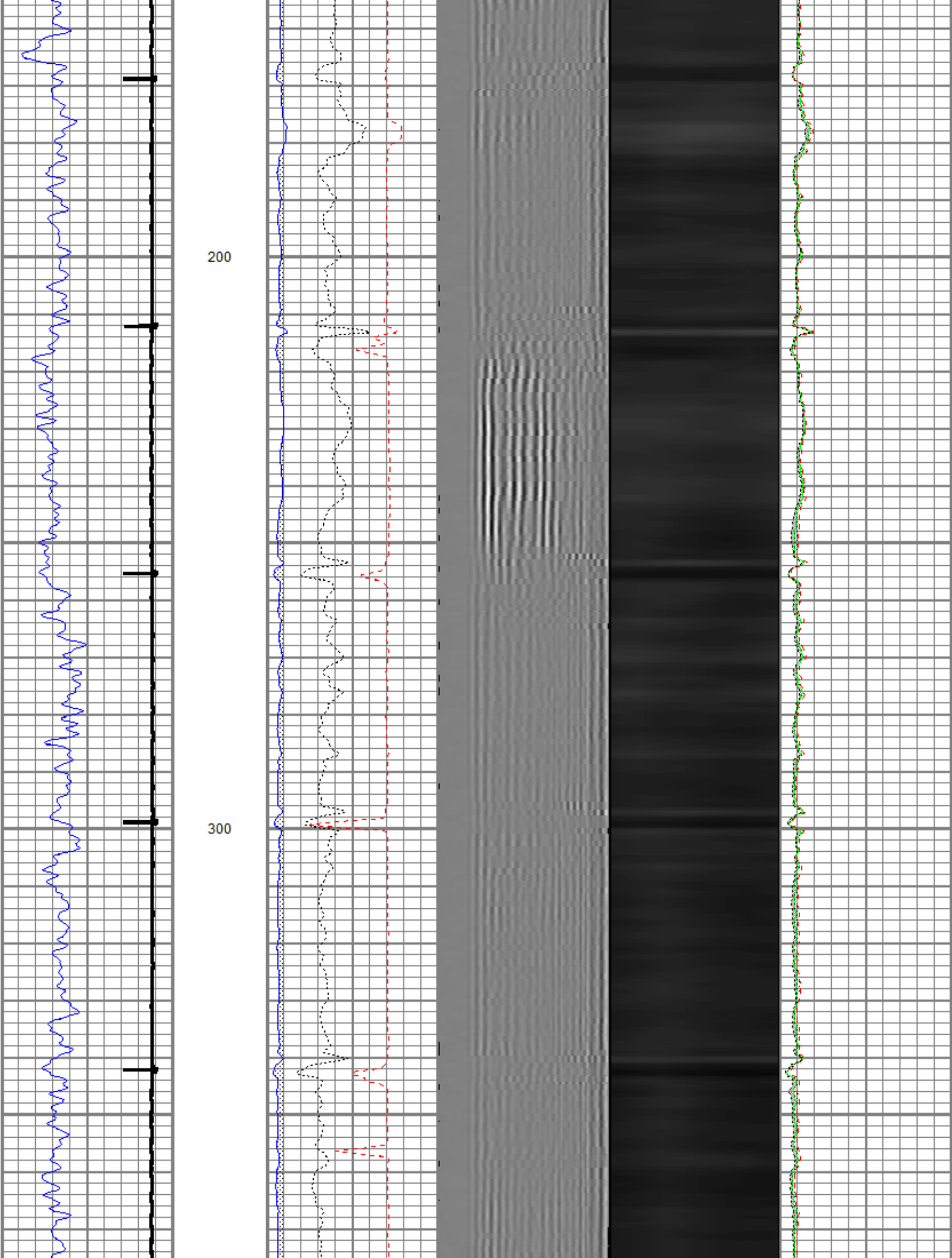
**Log ran as per Customer request**  
**All wireline depths measured from KB zero at 13 FT.**  
**Depth reference to Casing Tally reported Liner Top at 6583 FT.**  
**Adjusted -19 FT from KB zero to correlate with Liner Top**  
**Gauge Ring / Junk Basket run 3 Joints below Liner Top run prior to log run.**  
**Retrievable Bridge Plug set at 6664 FT prior to log.**  
**Log ran from just above RBP to surface.**  
**Log ran with 2800 PSI surface induced pressure.**

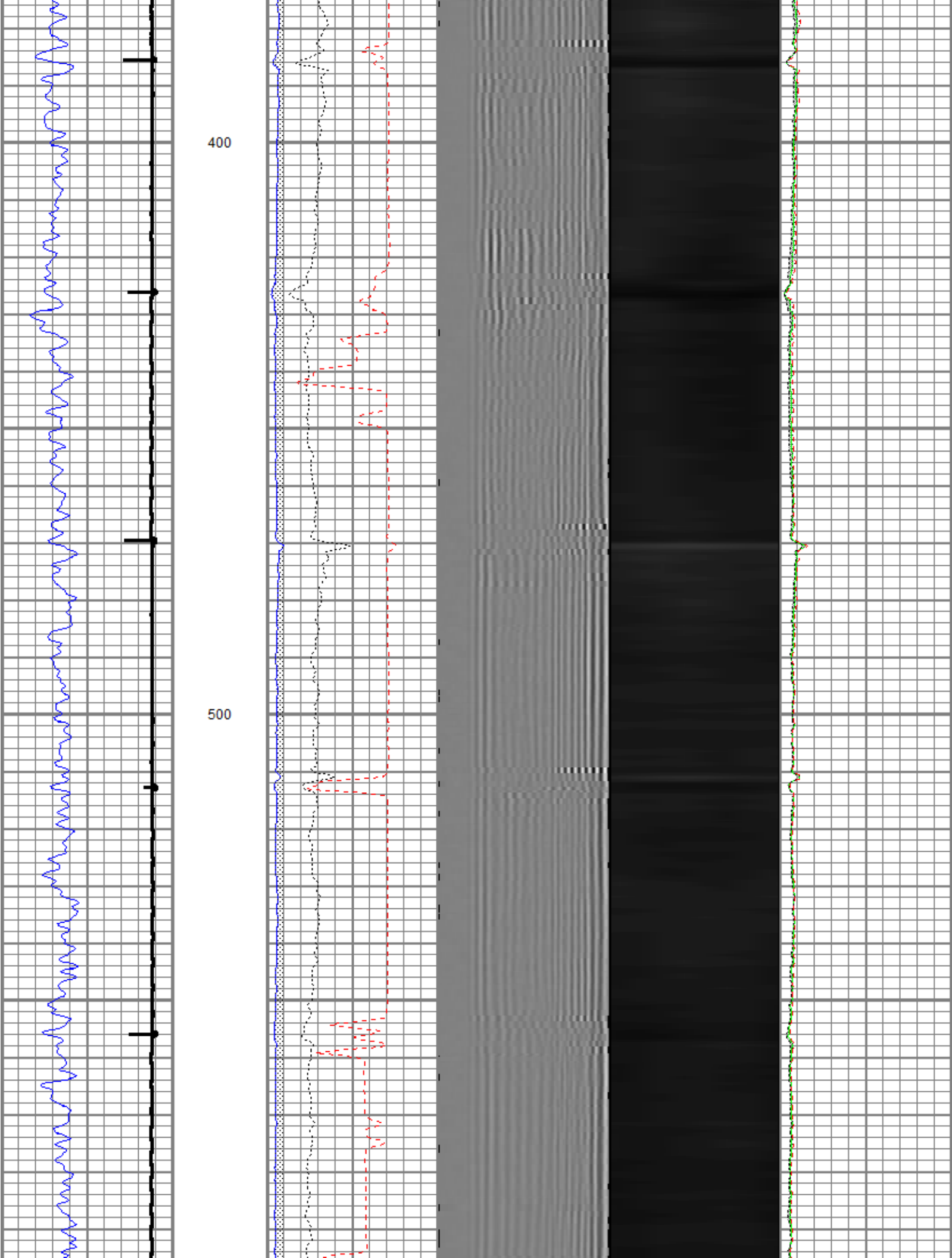
**Thank you for choosing FMC Technologies Completion Services!!**

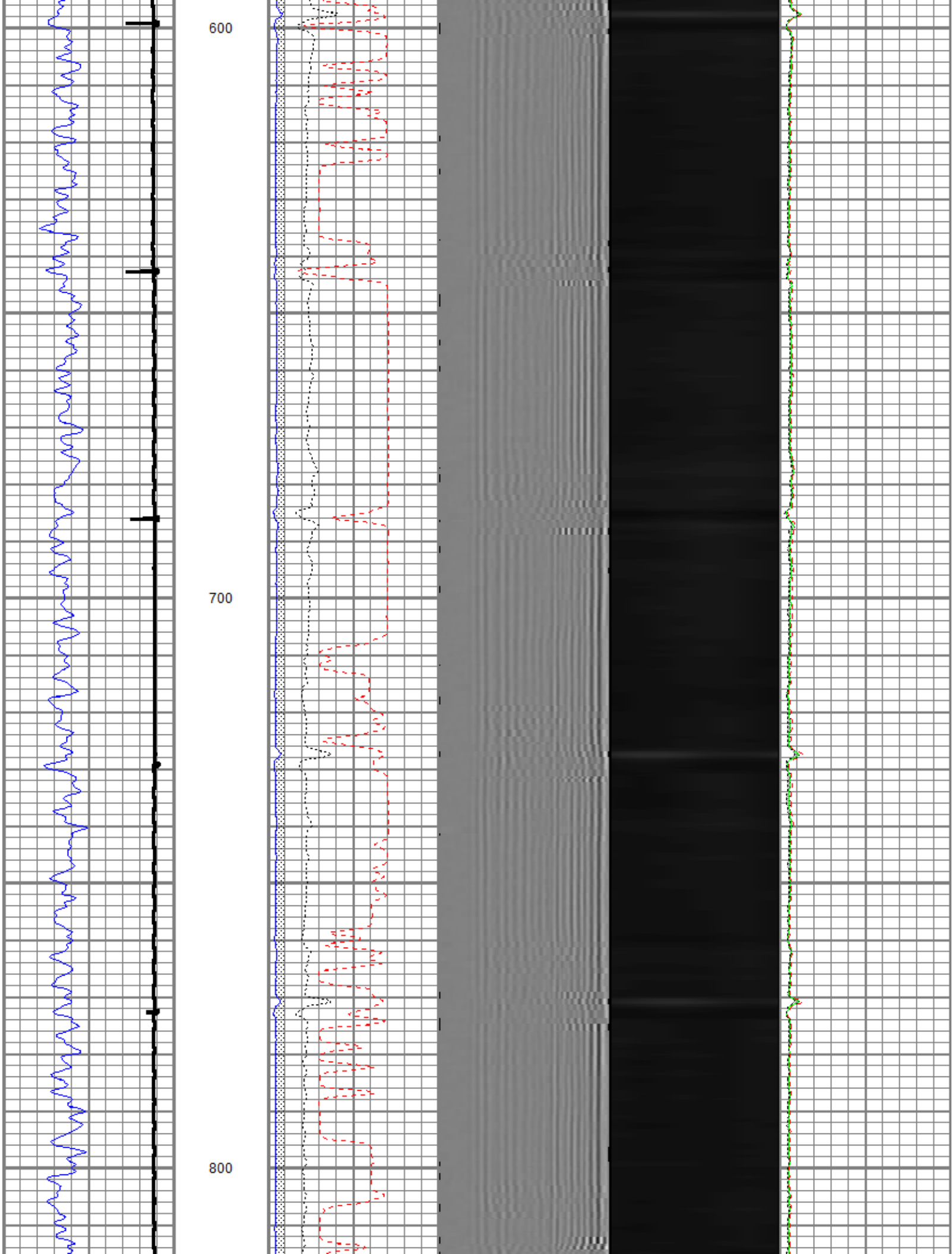
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 Dataset Pathname: main  
 Presentation Format: rbt4\_mit  
 Dataset Creation: Wed May 21 07:57:30 2014 by Log 7.0 B1  
 Charted by: Depth in Feet scaled 1:240

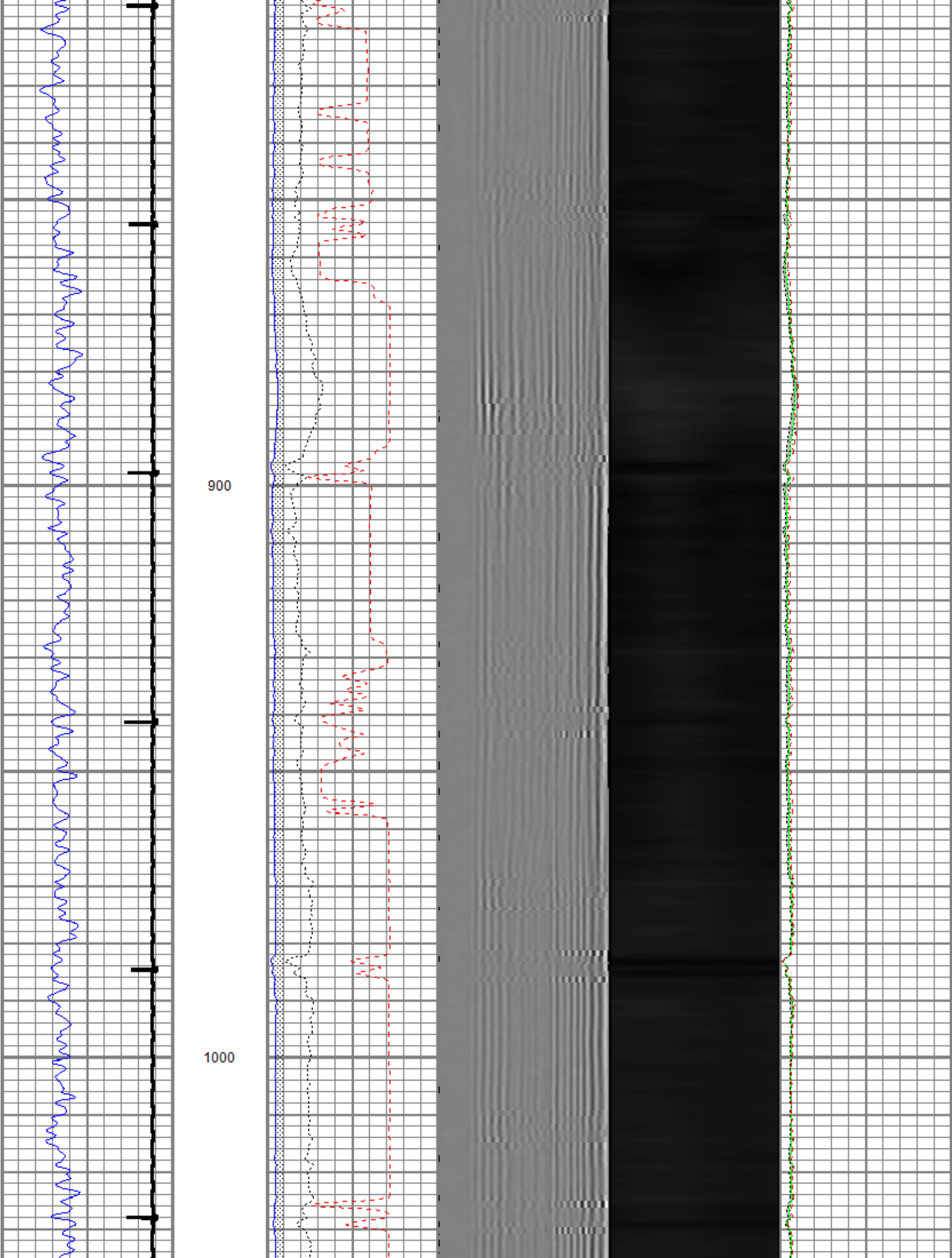
Gamma Ray	0	3' Amplitude (mV) 100	5' Variable Density Log	Sector Map	0	Average Amplitude 100
(GAPI) 120		3' Amplitude x 5	200			Minimum Amplitude
Casing Collar Locator	0	(mV) 20	1200		0	100
		3' Travel Time				Maximum Amplitude
		650 (usec) 150			0	100



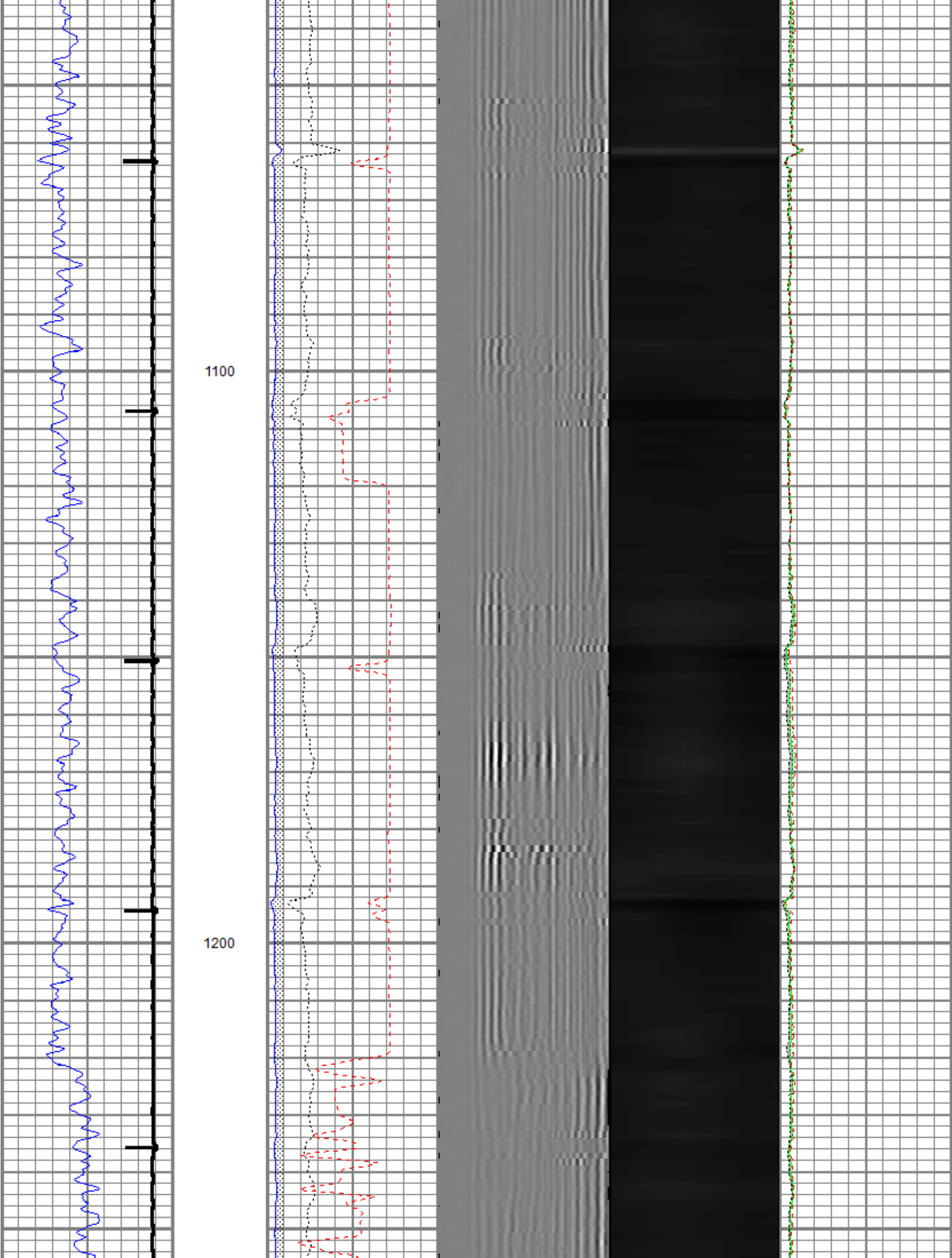


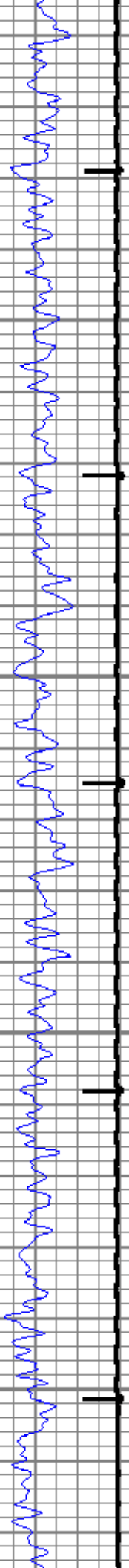






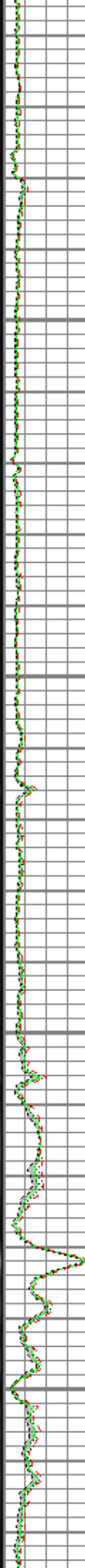
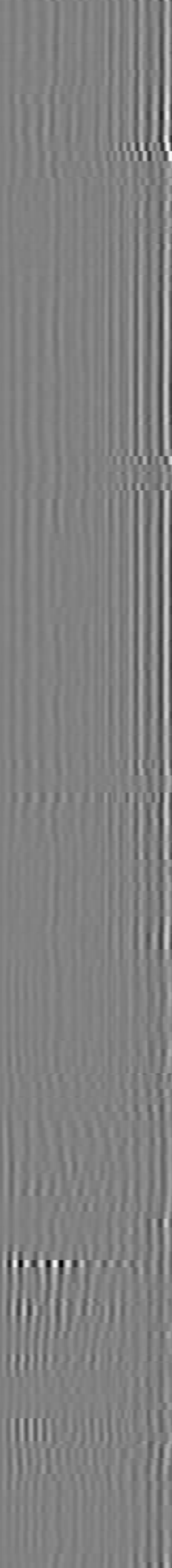
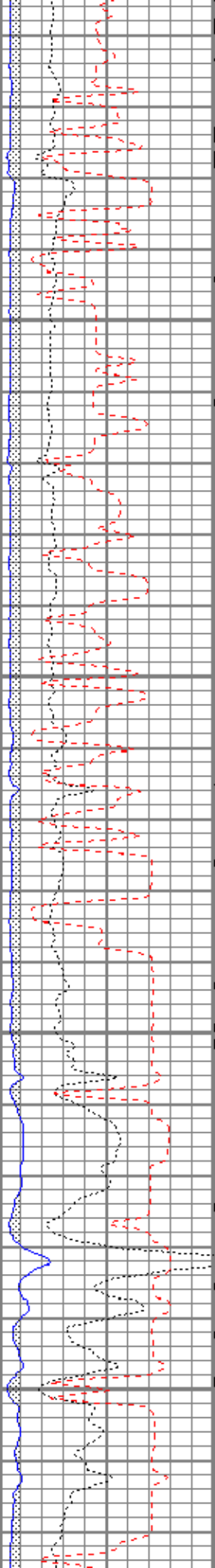




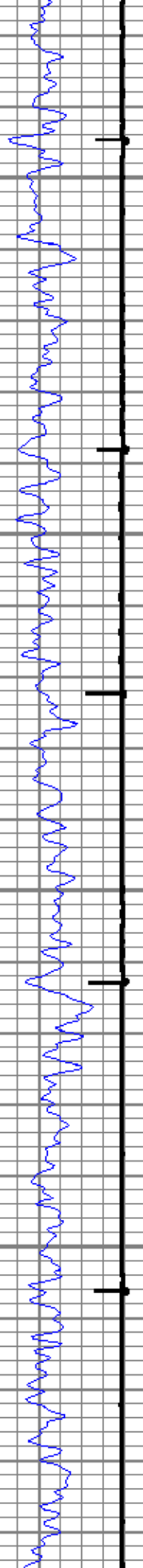


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1400

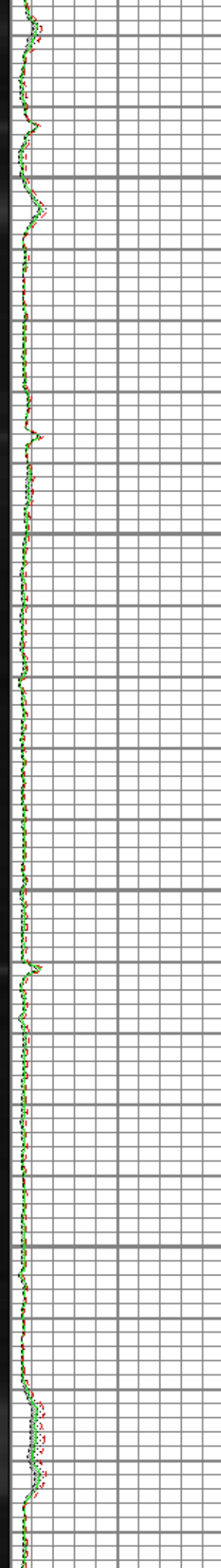
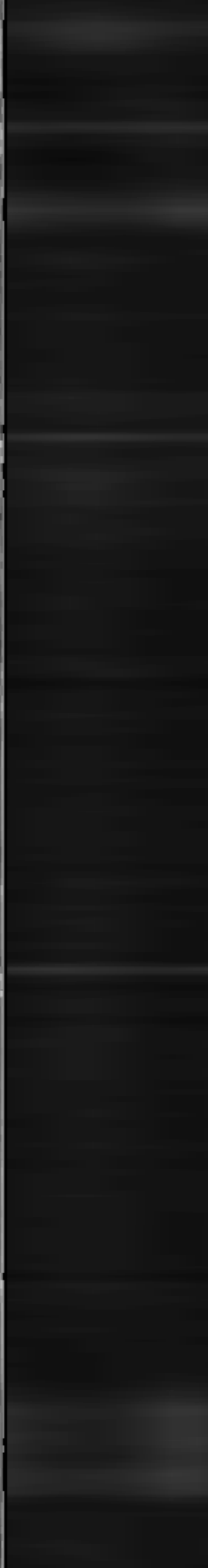
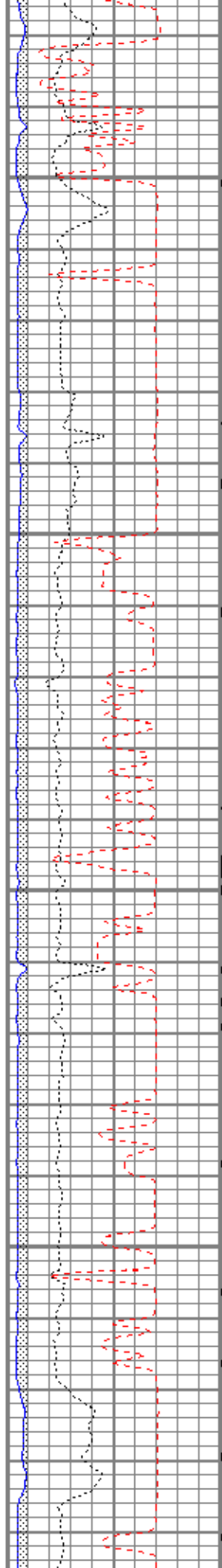


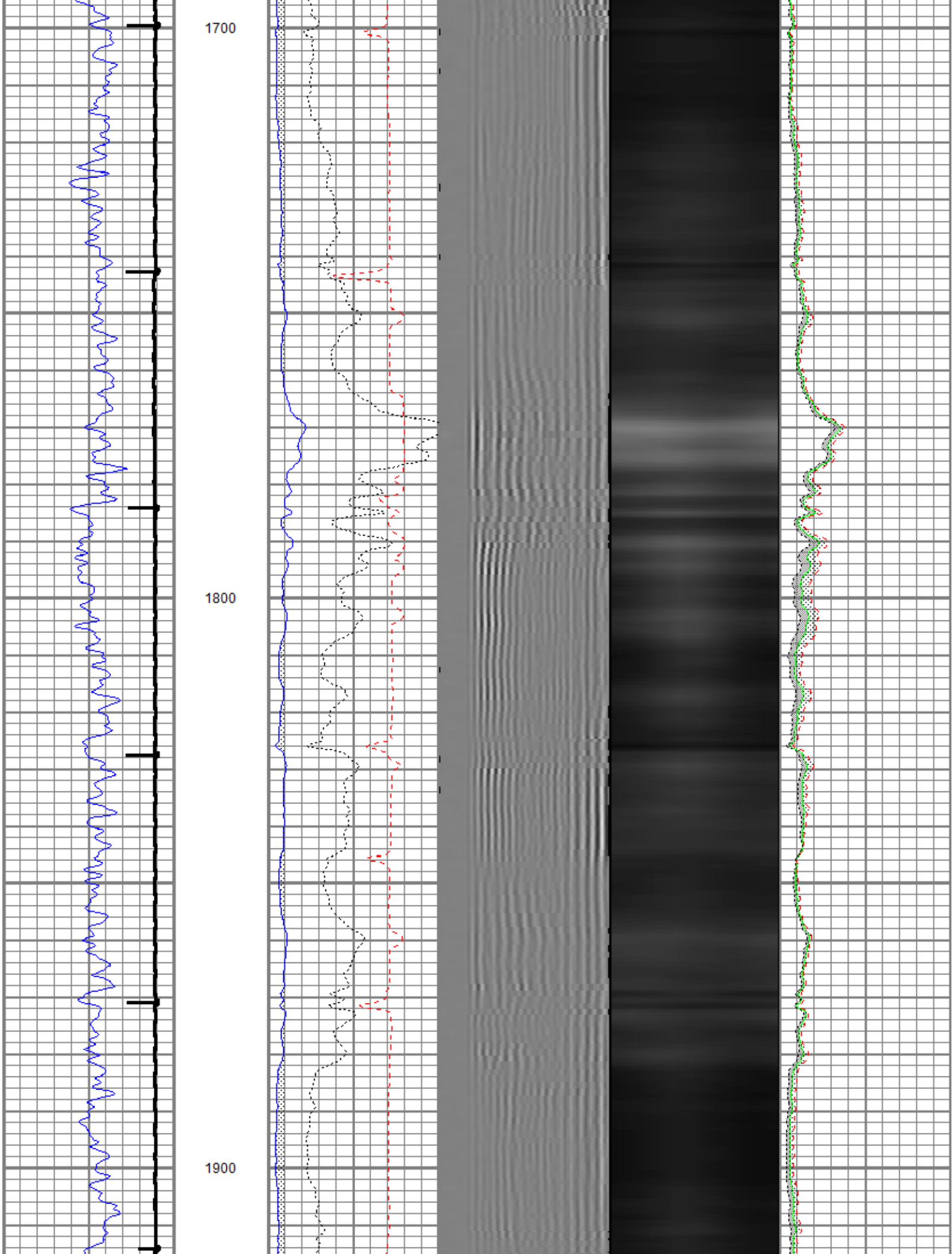


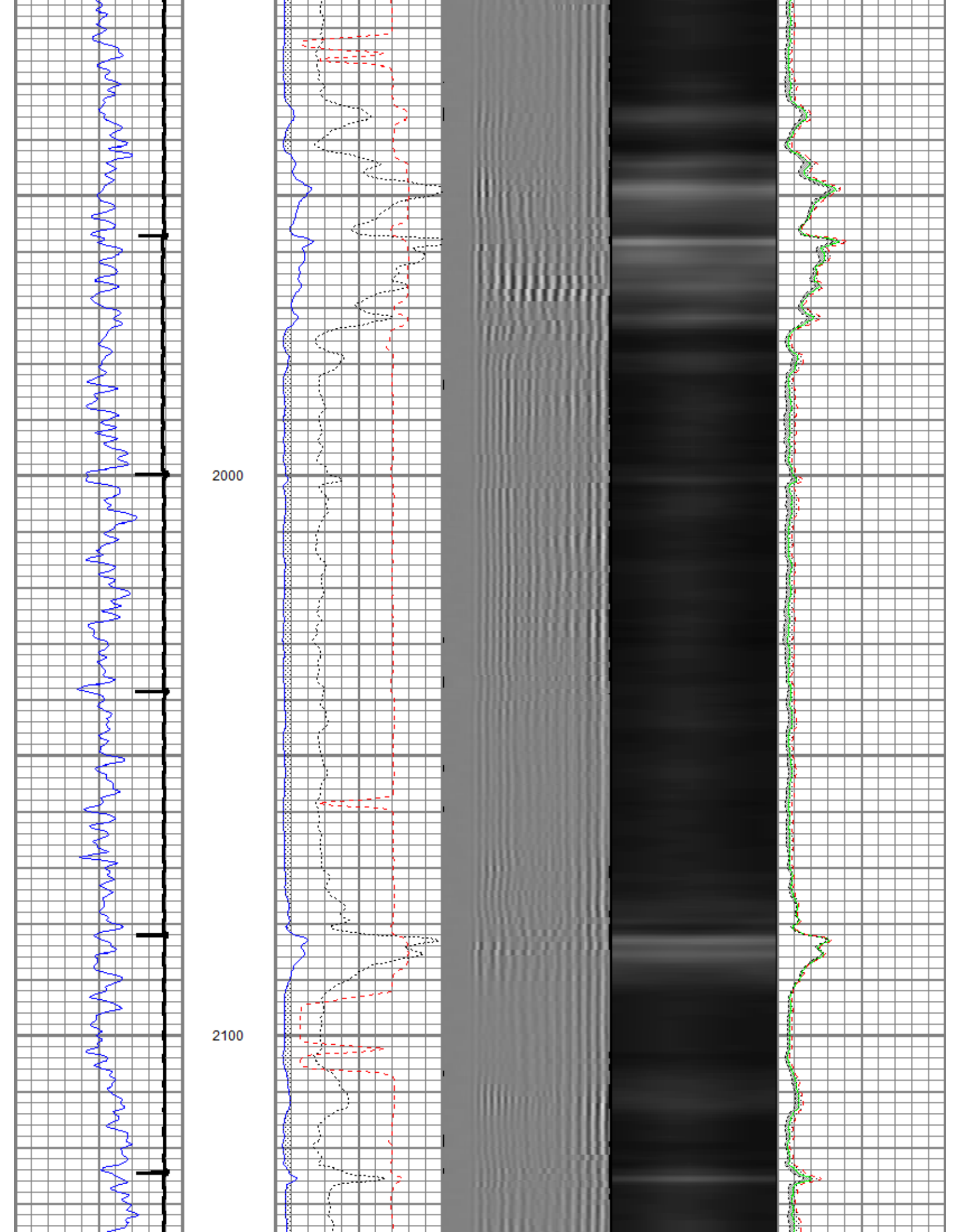


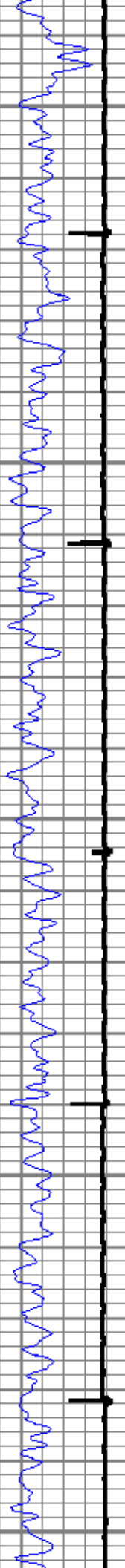
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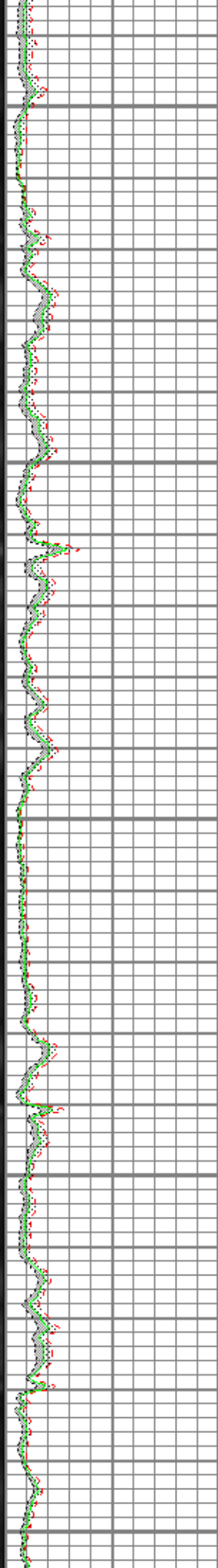
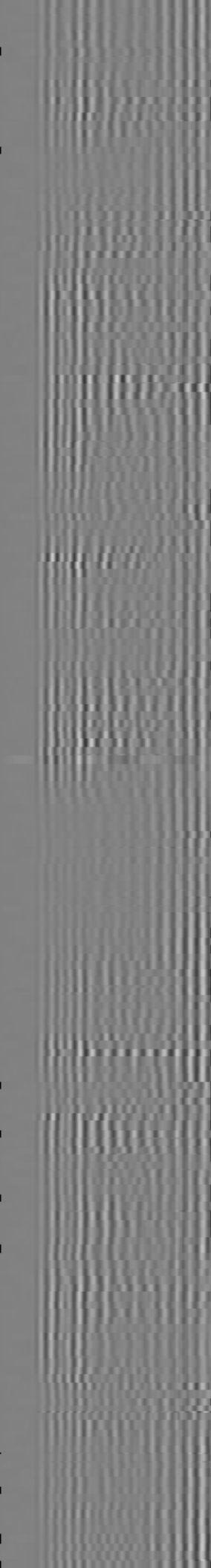
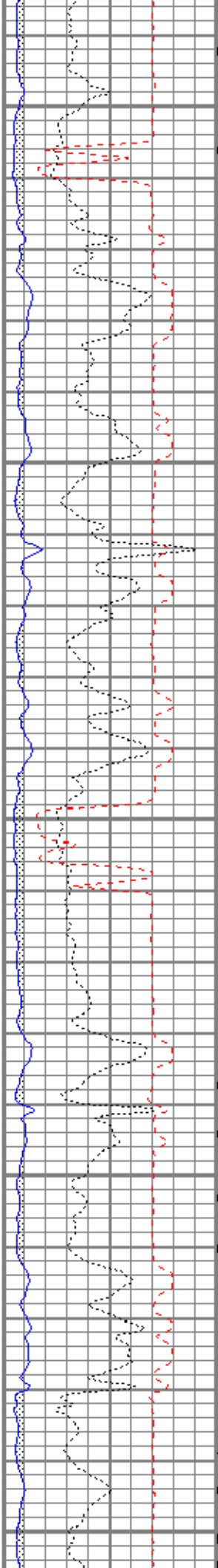


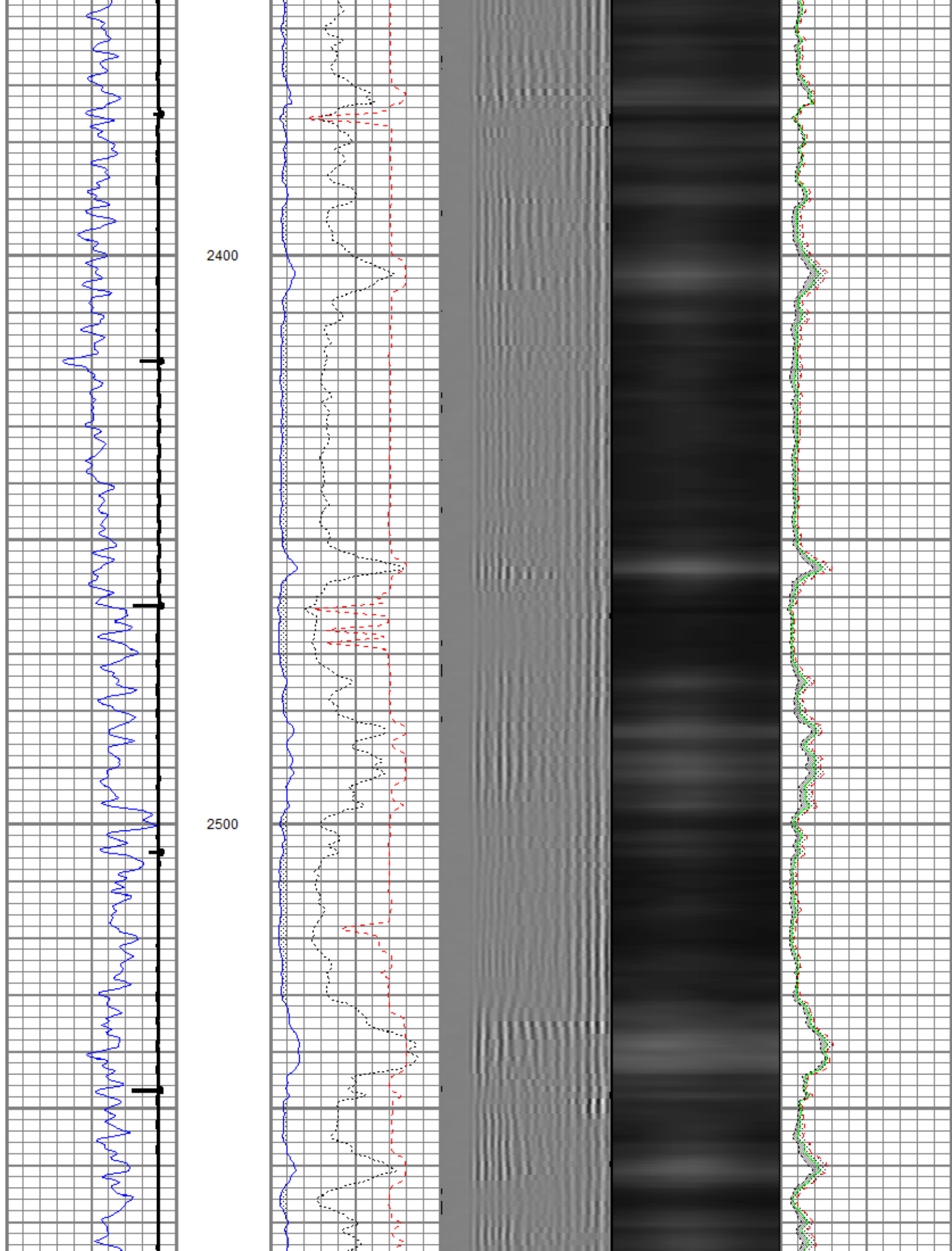


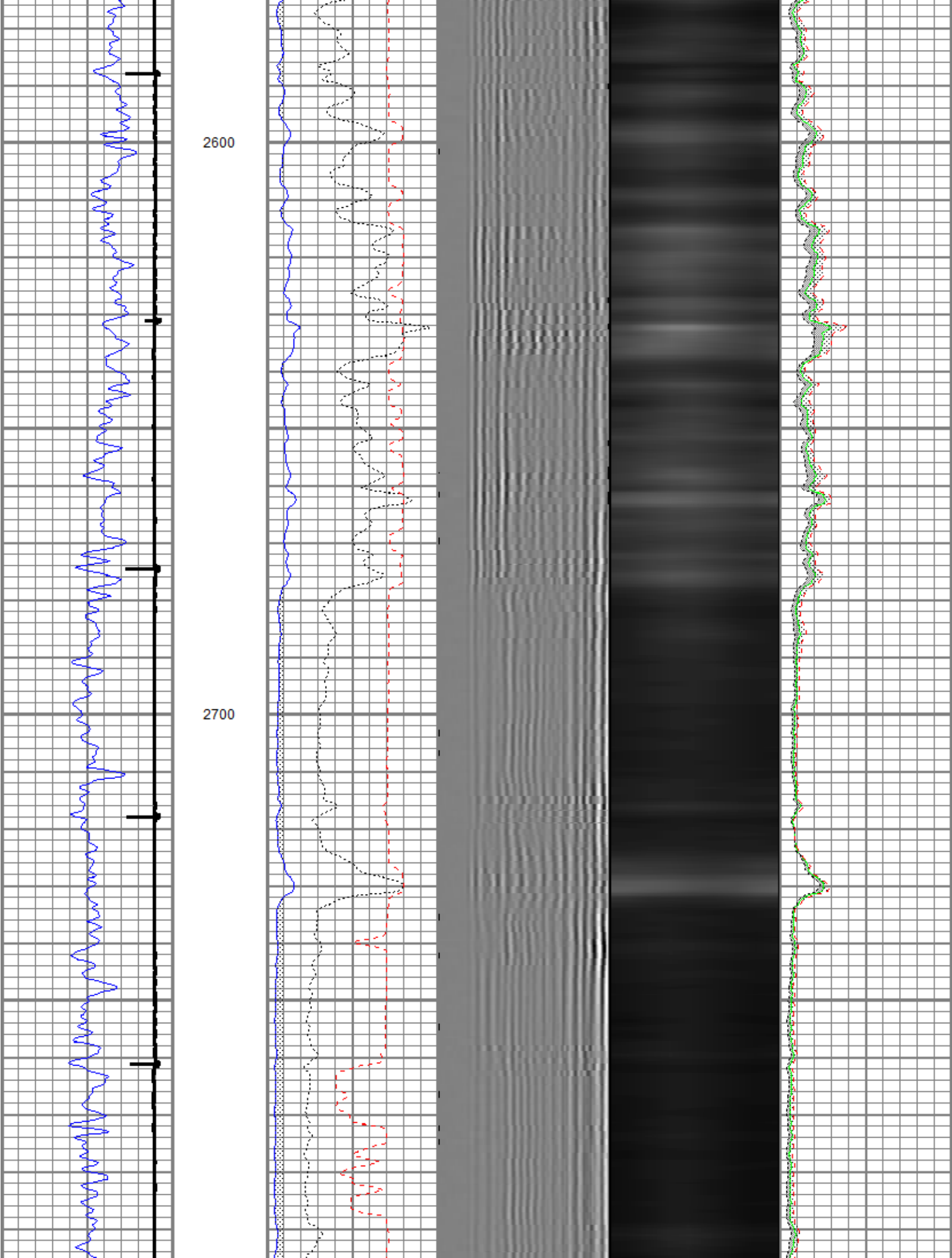


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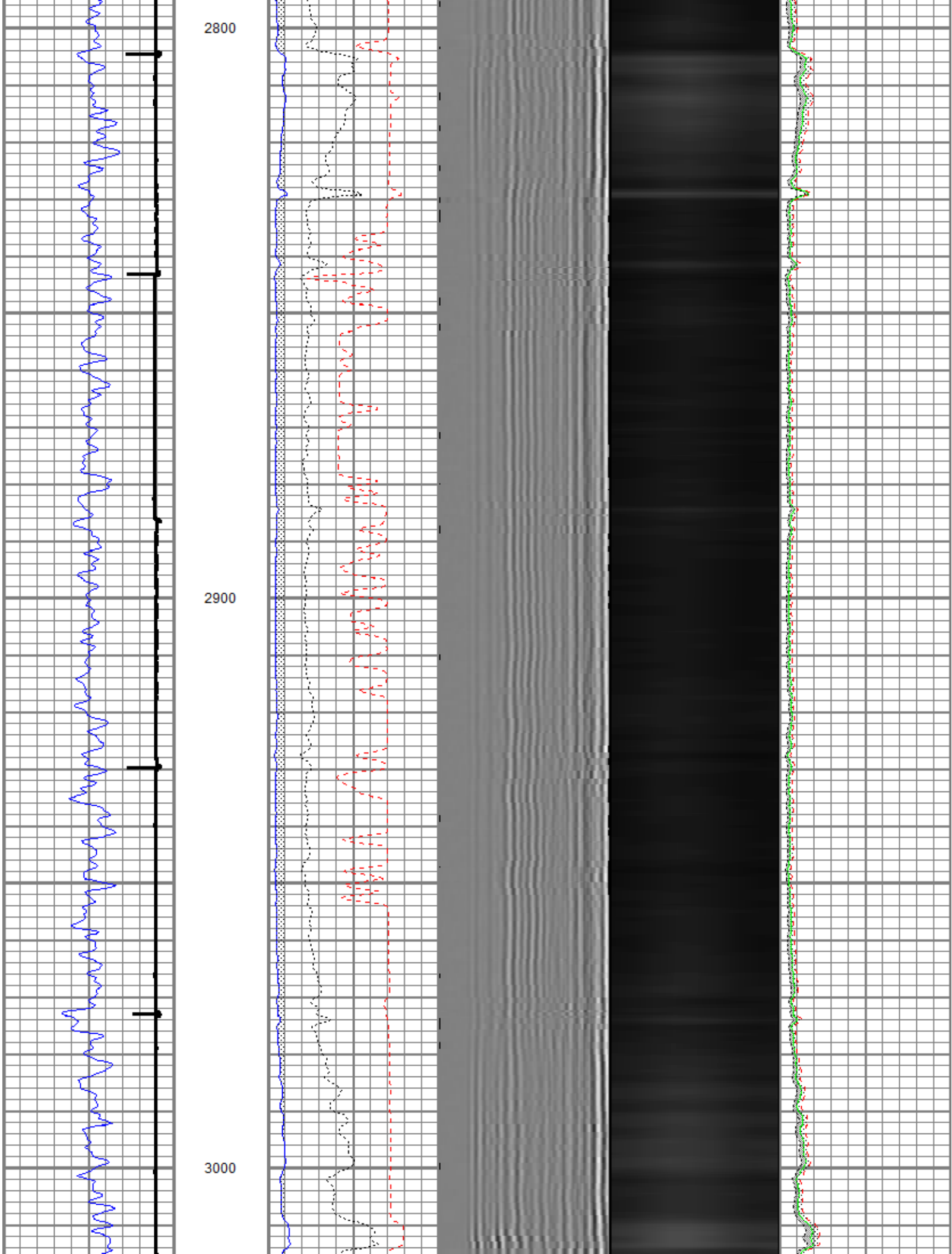
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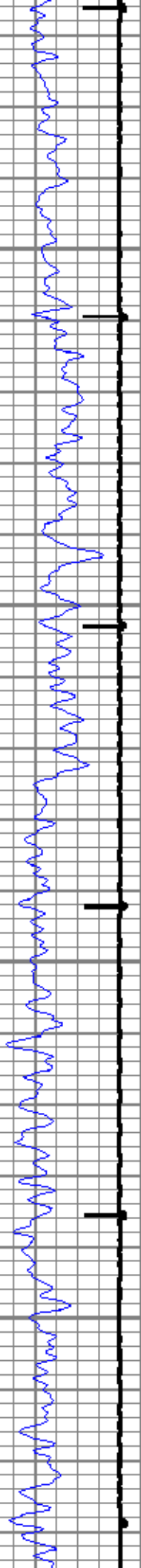






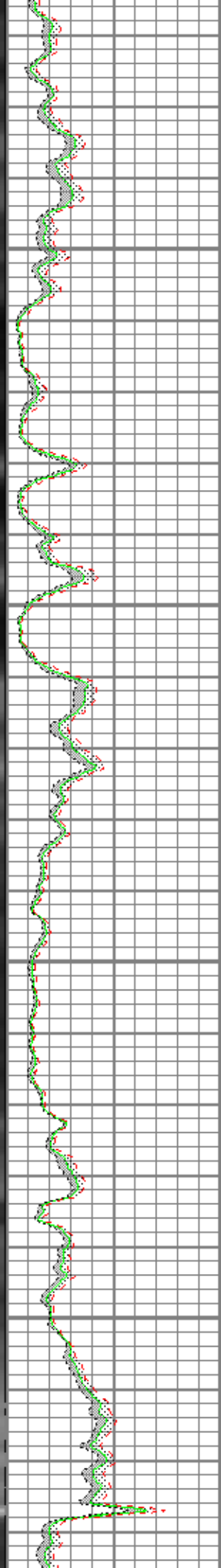
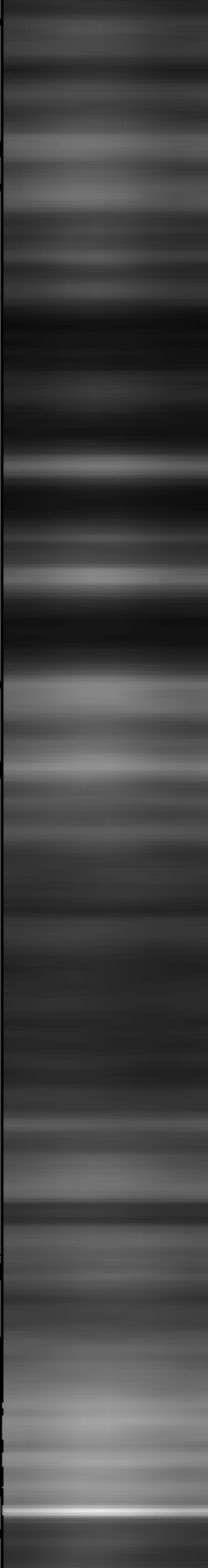
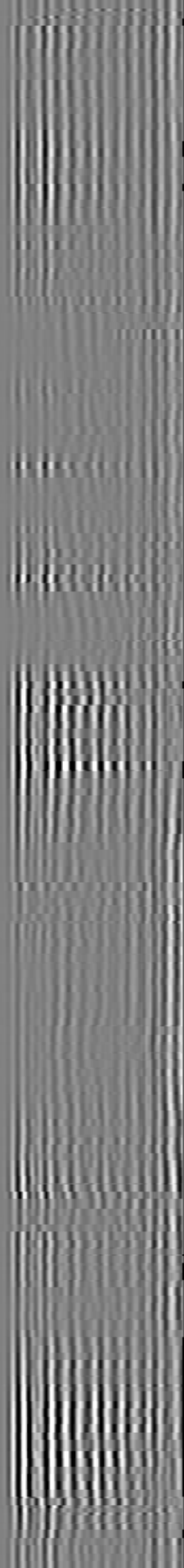
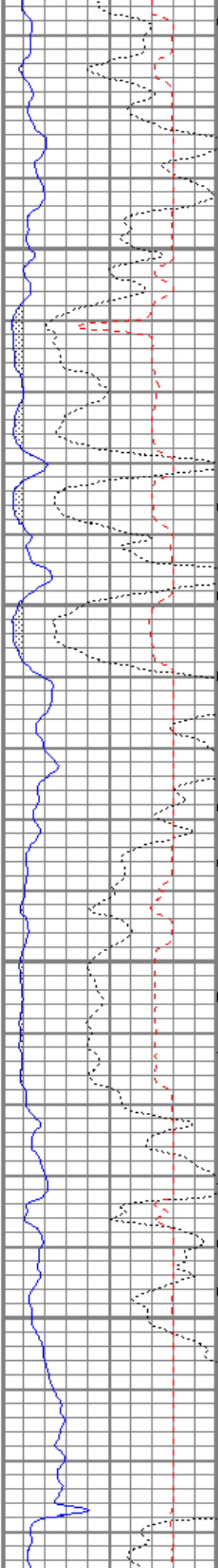


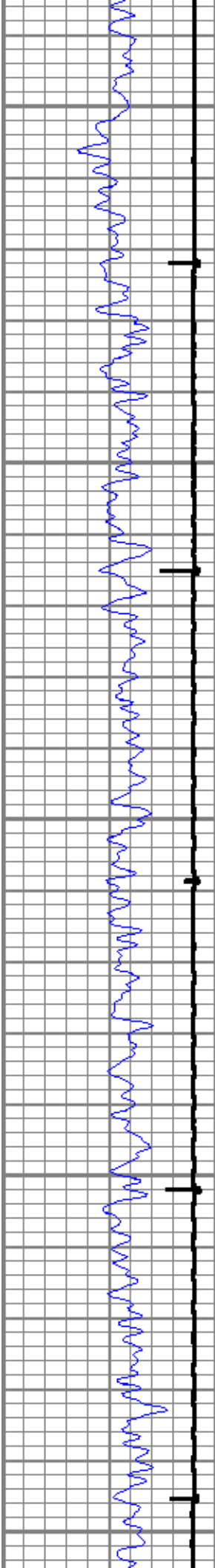




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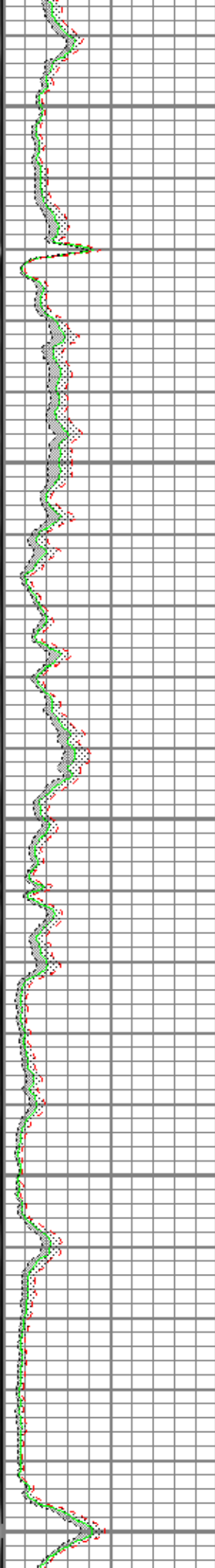
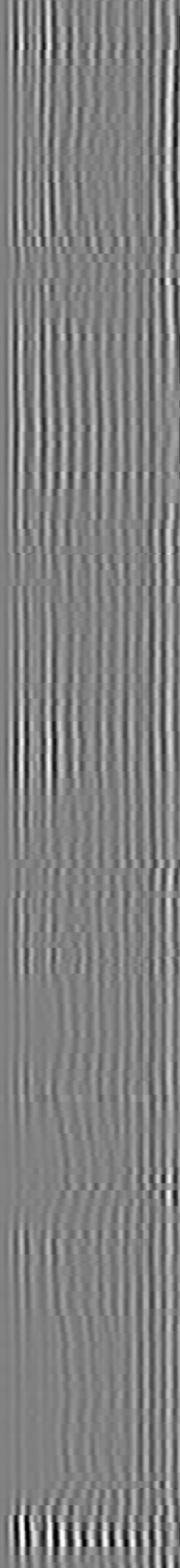
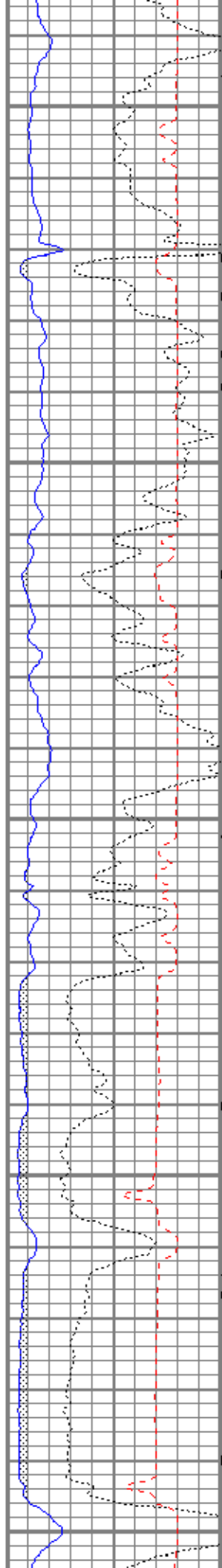
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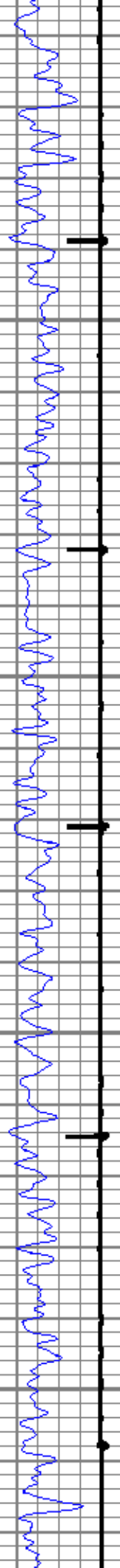




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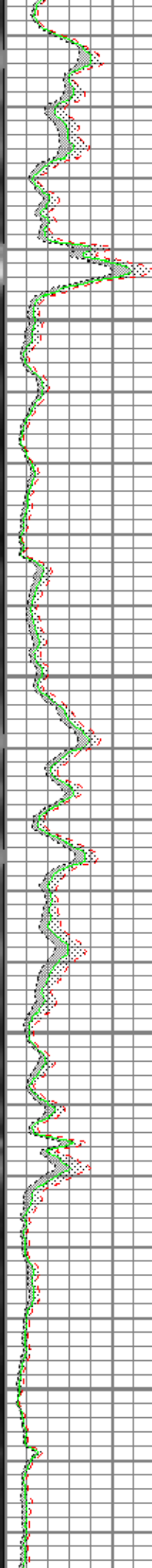
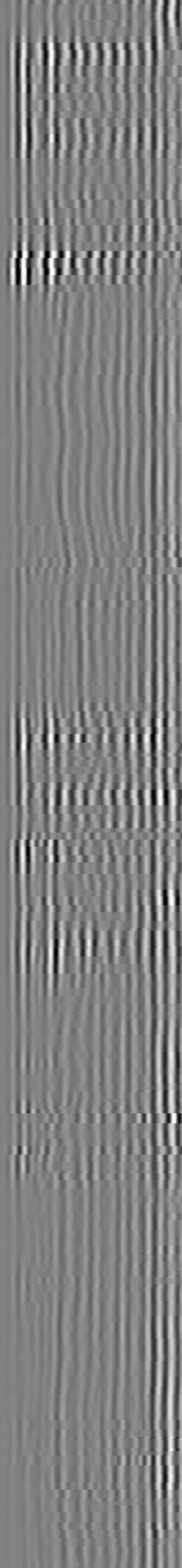
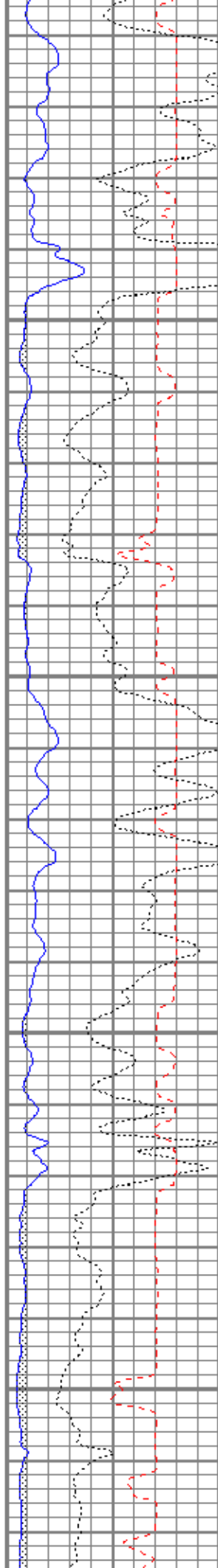
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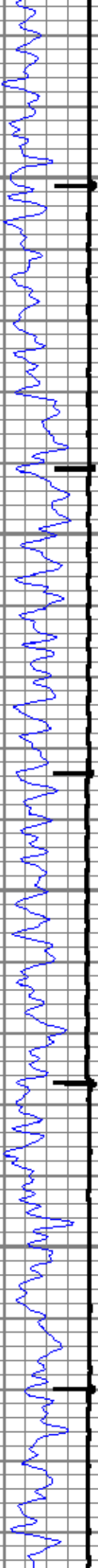




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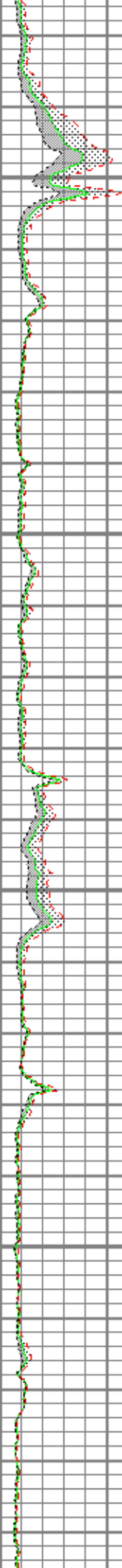
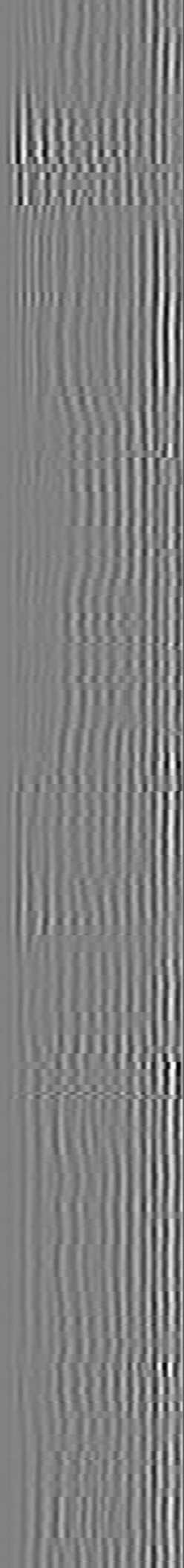
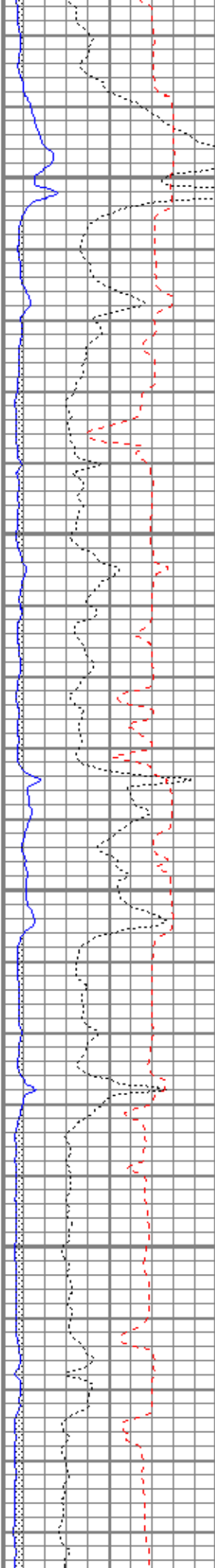
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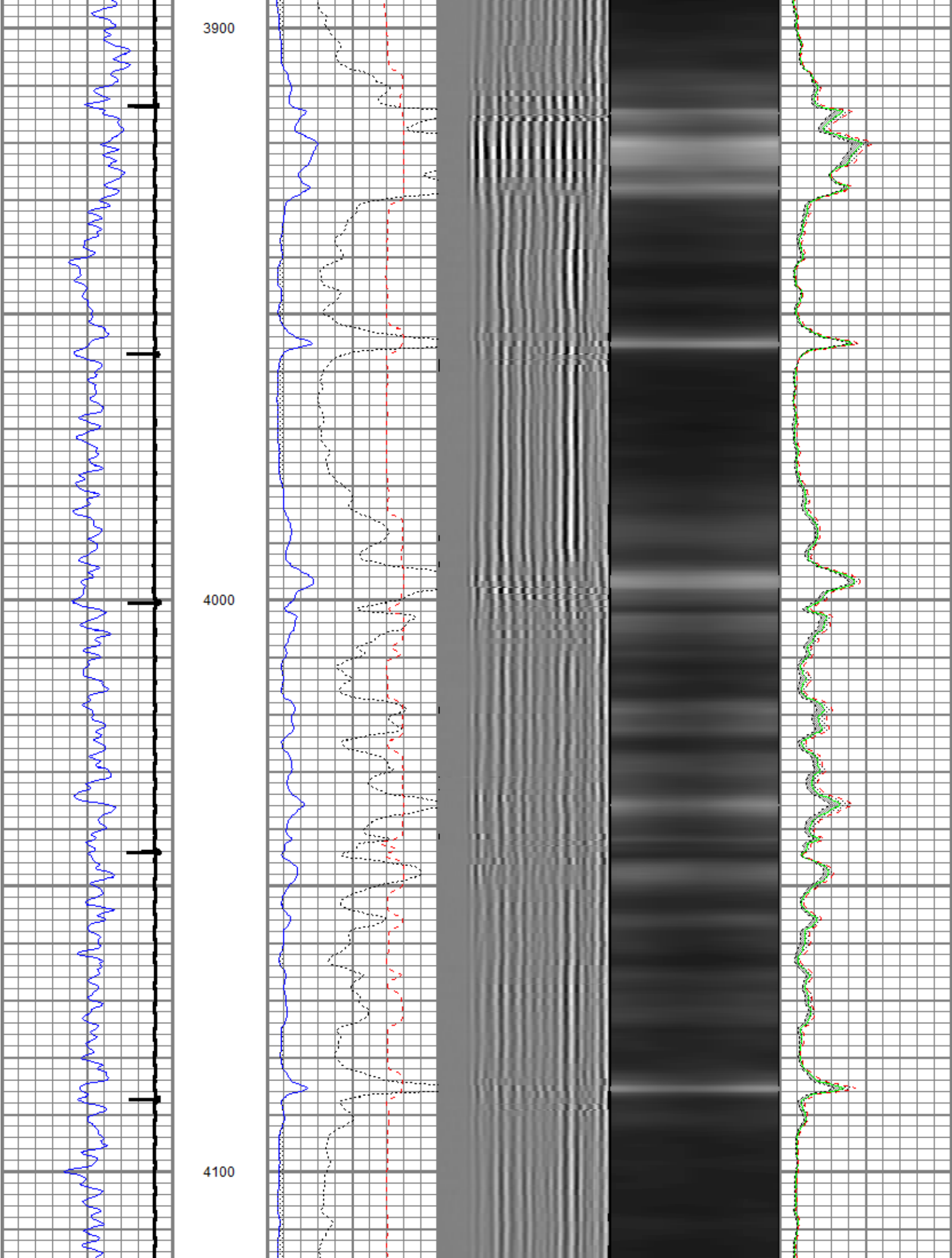




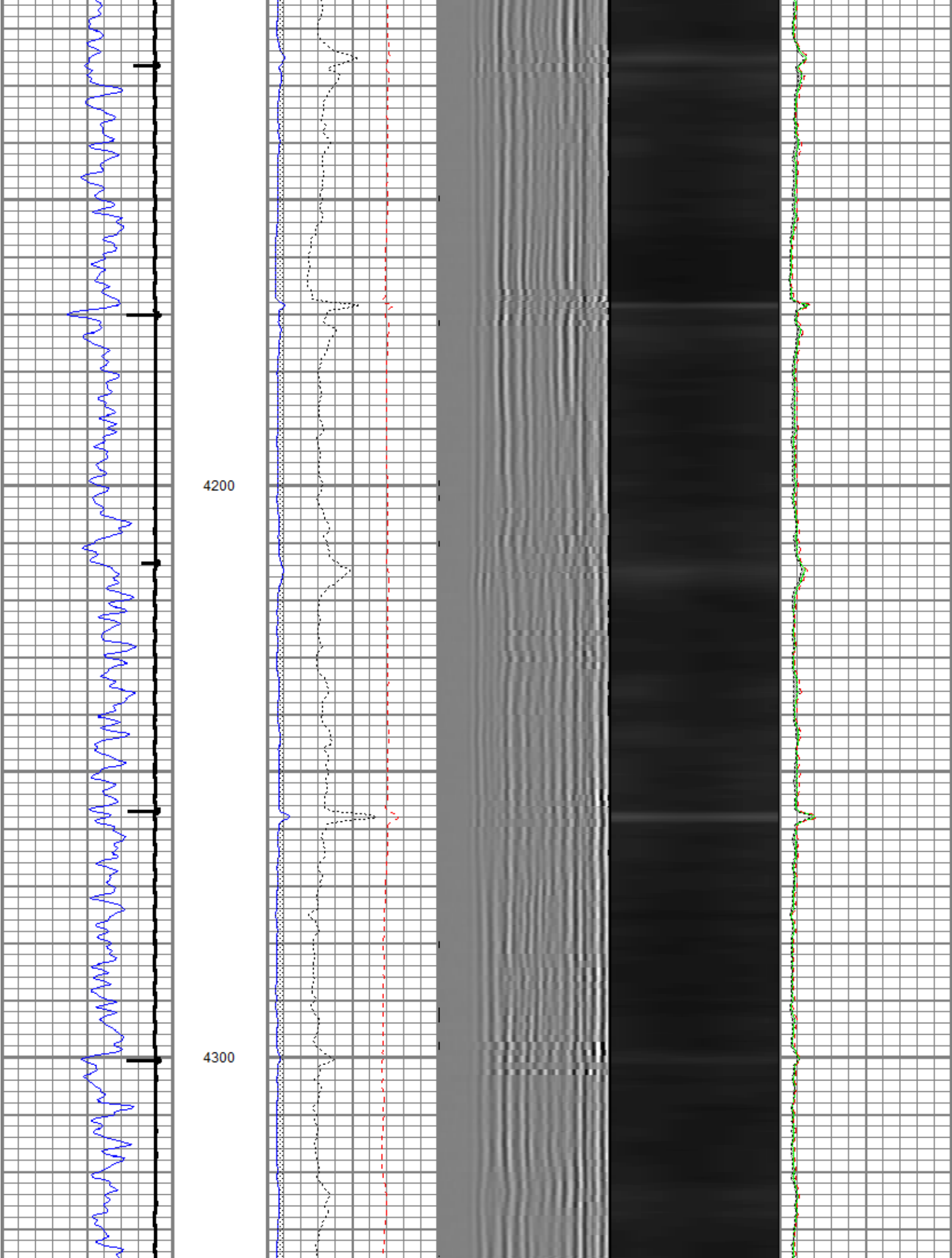
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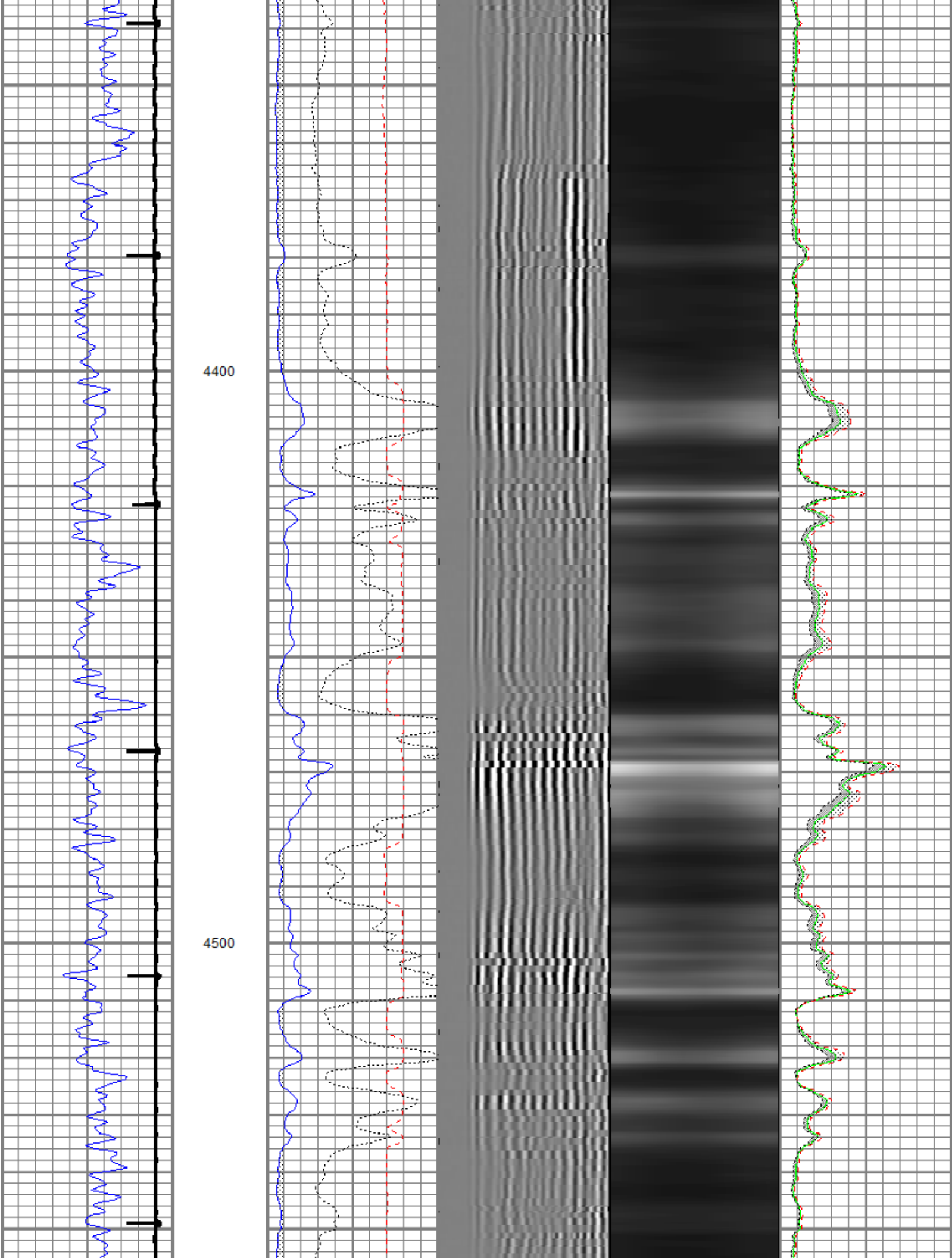
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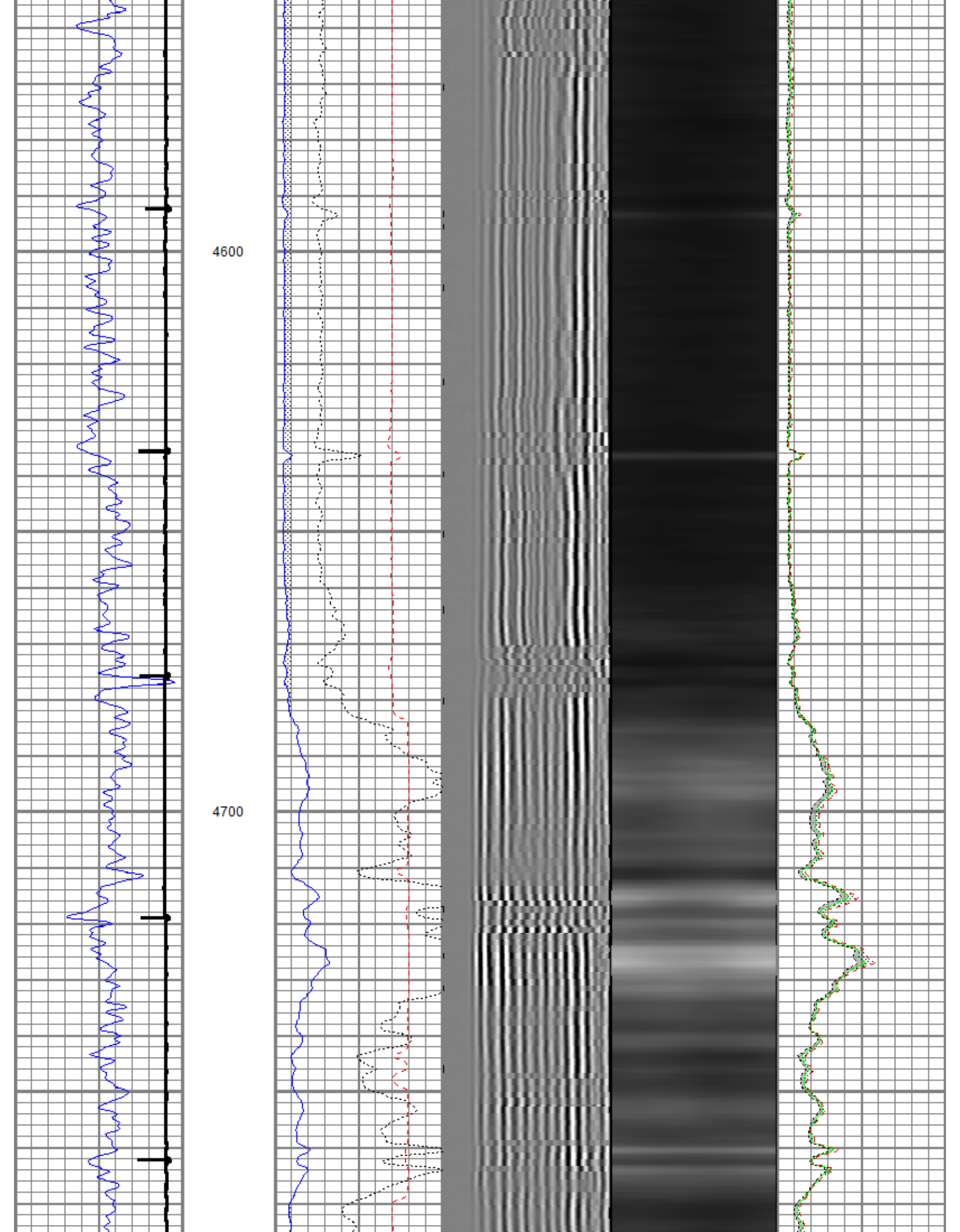


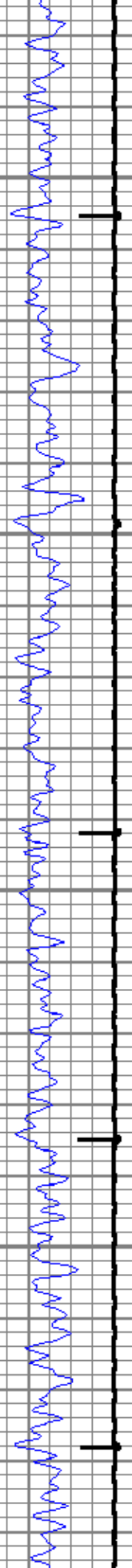






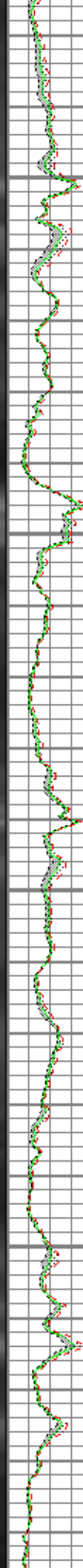
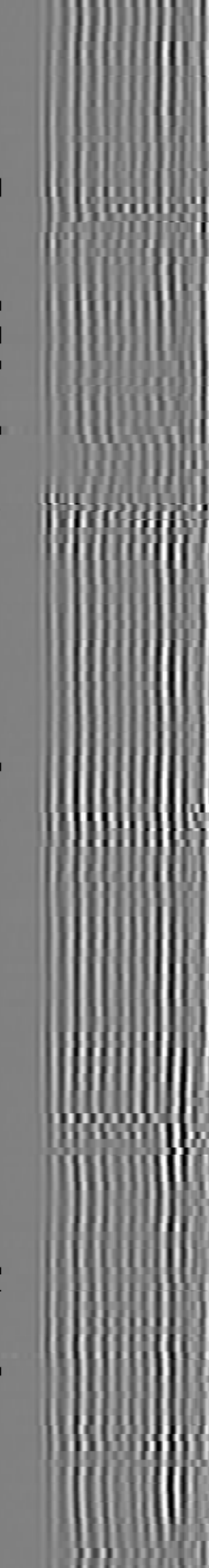
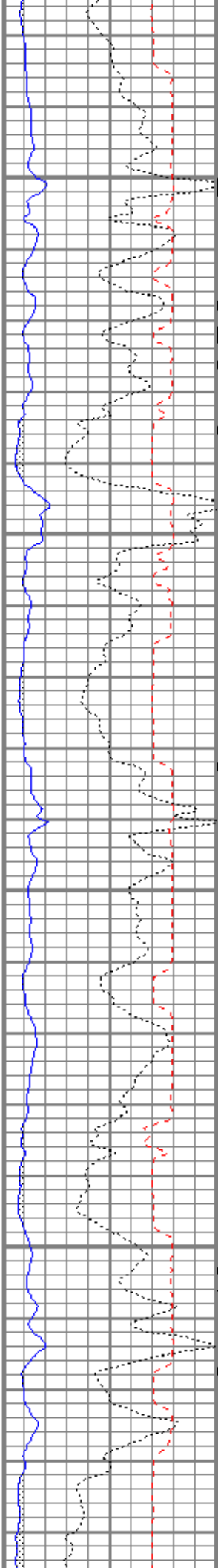


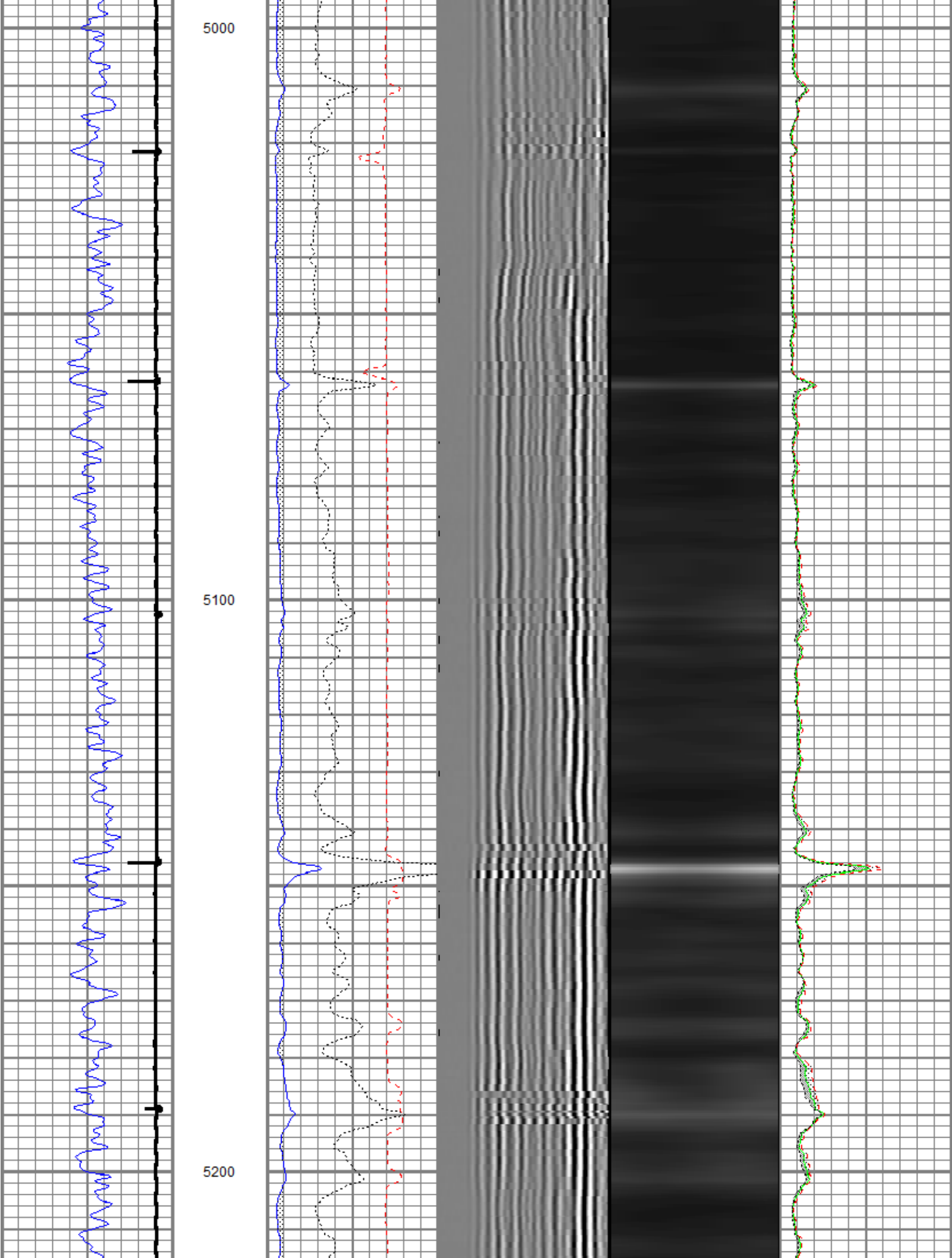


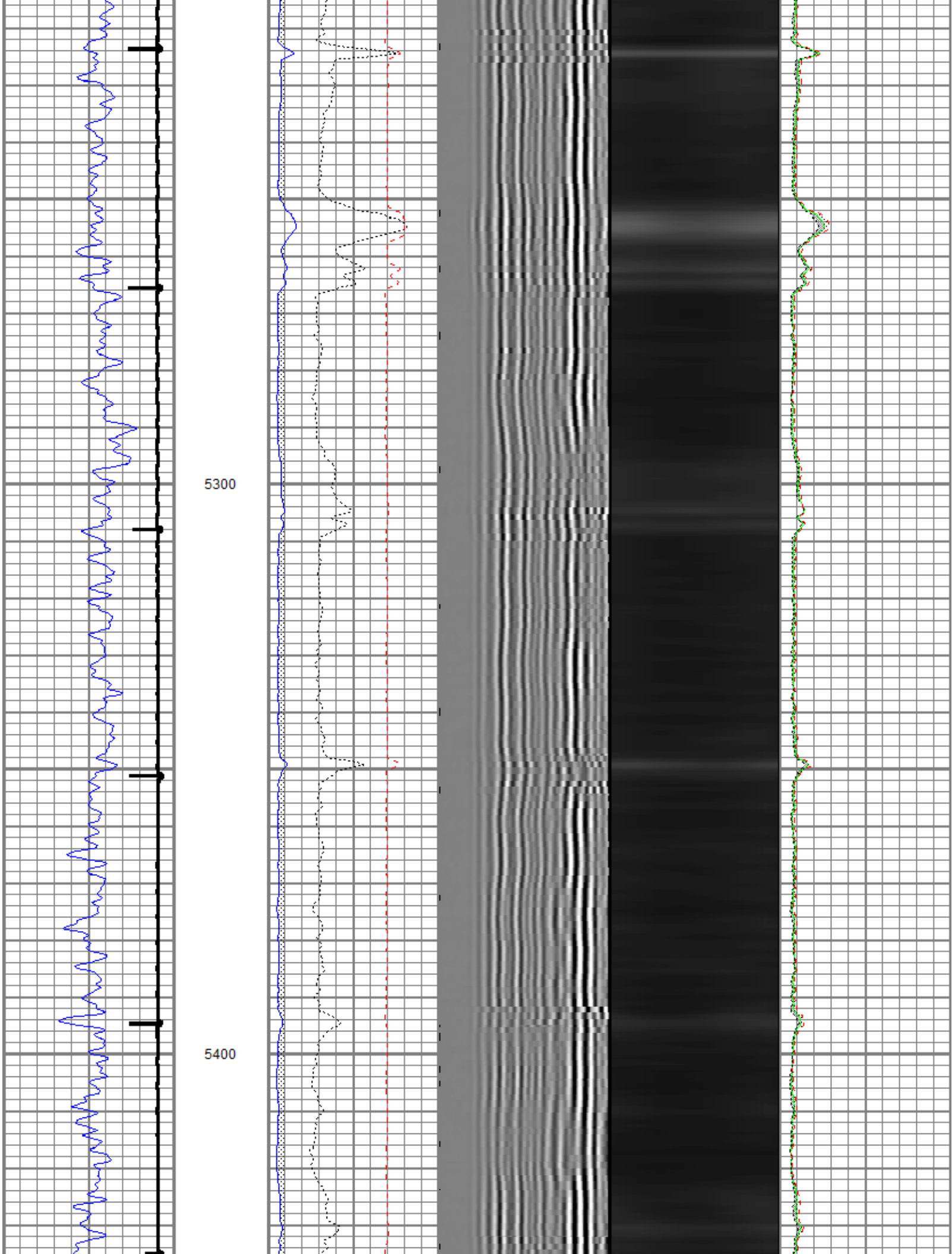


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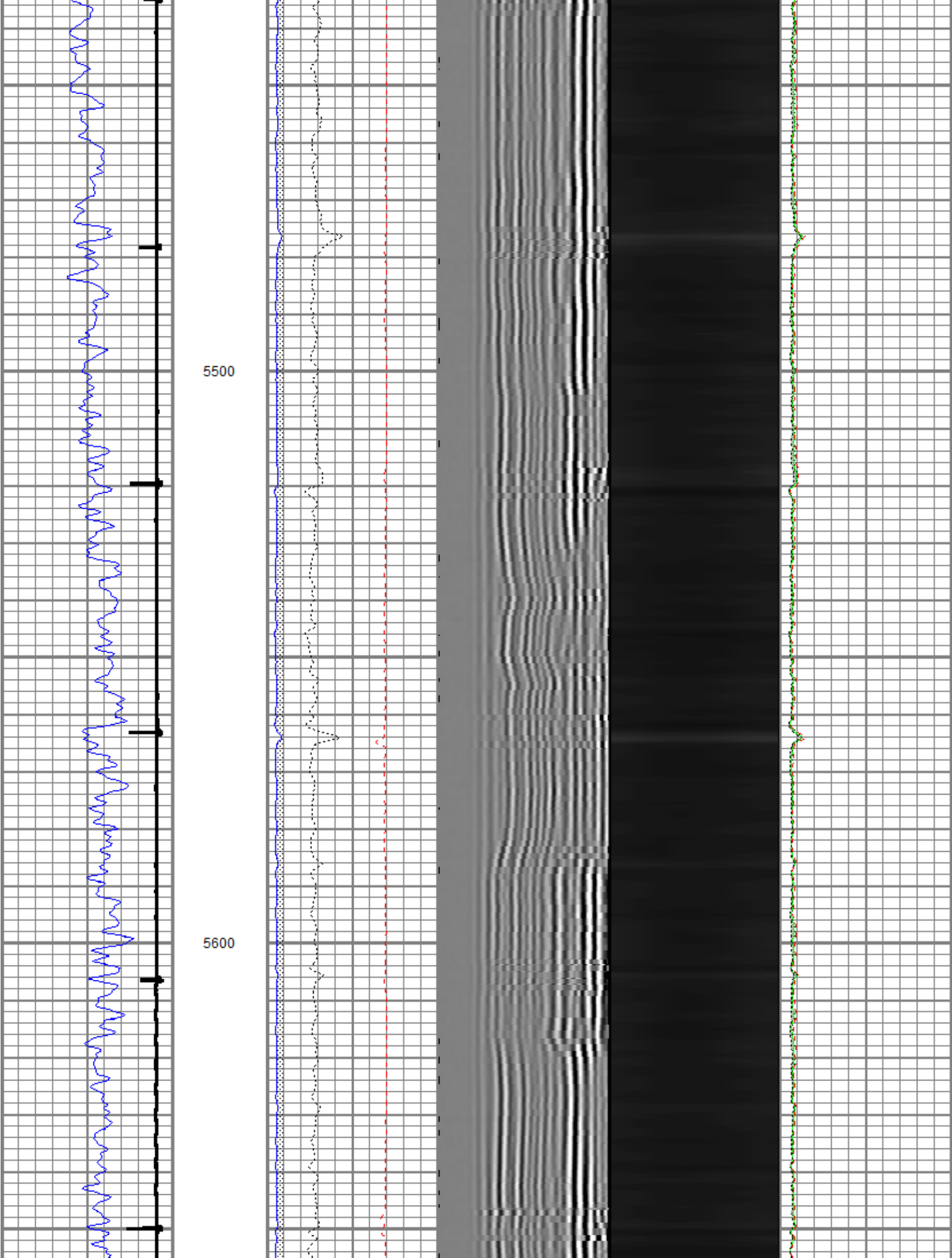
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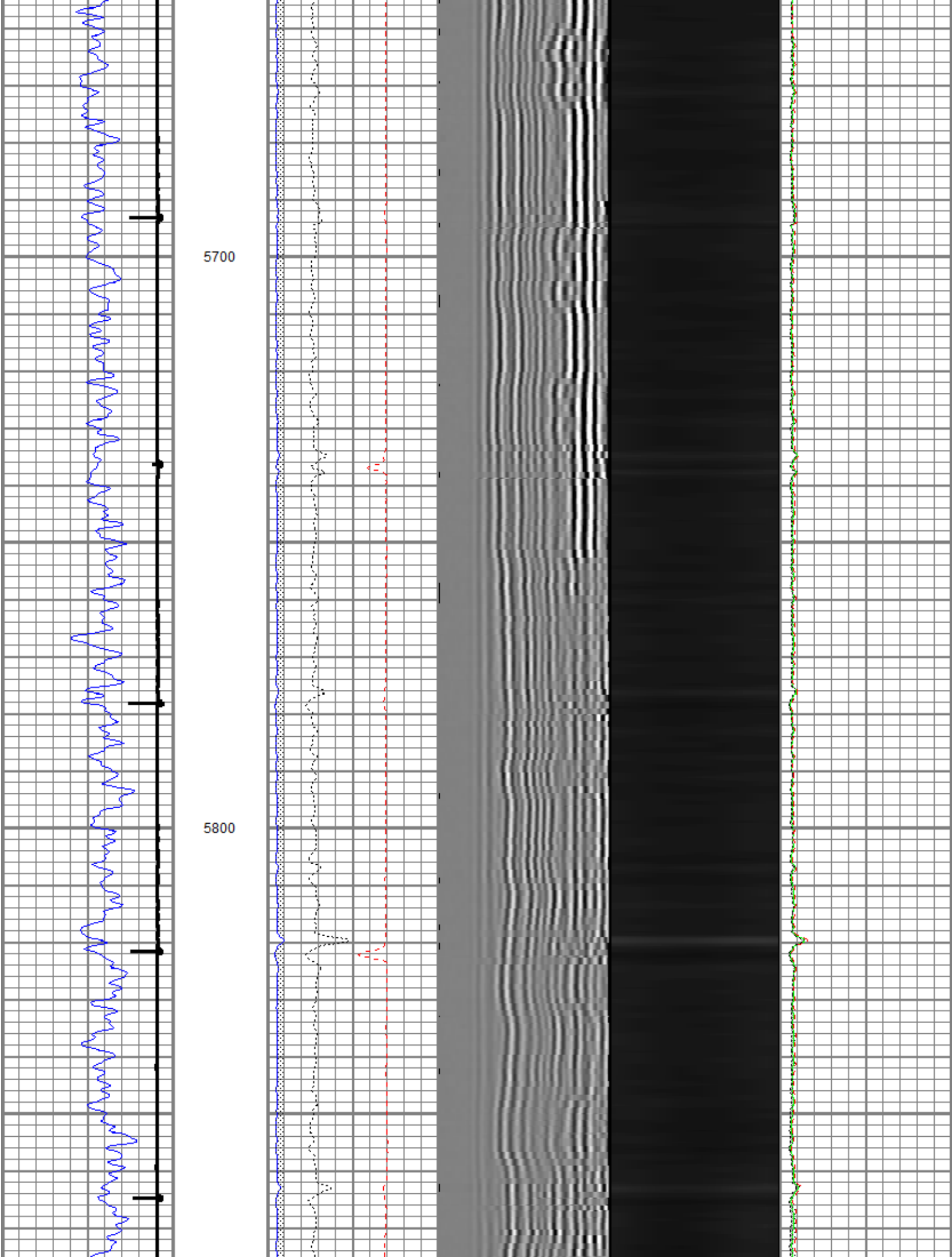


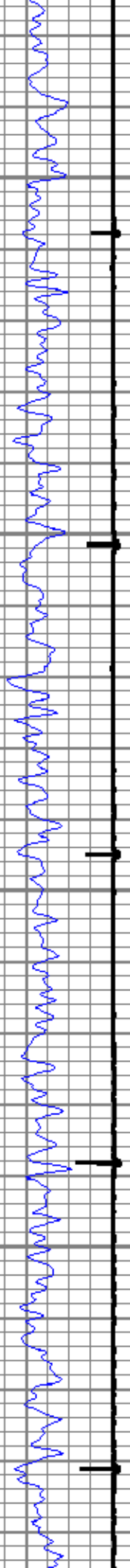






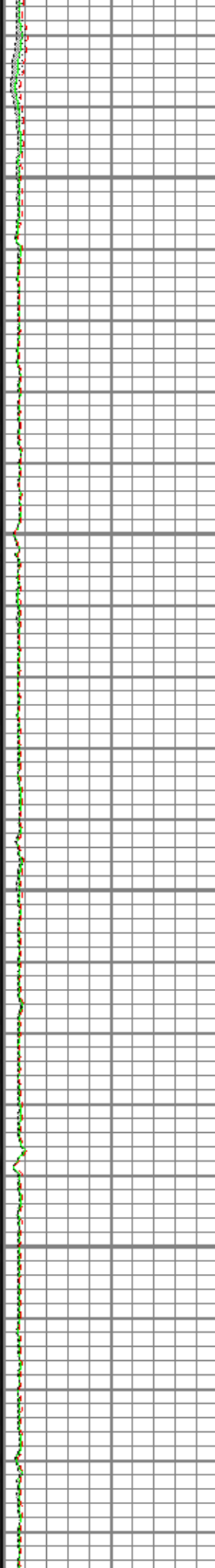
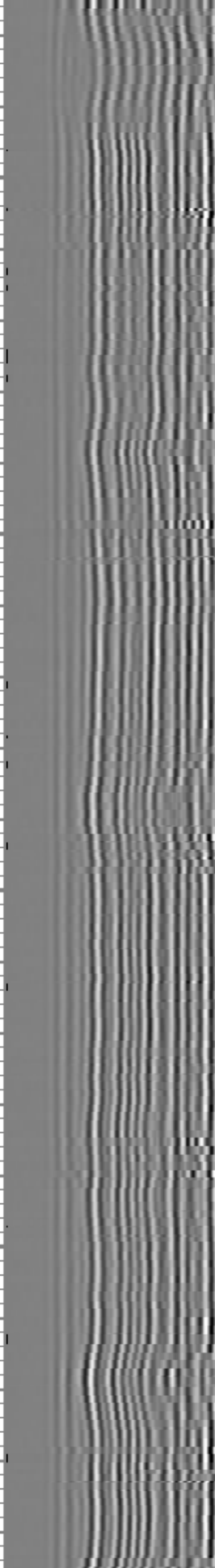
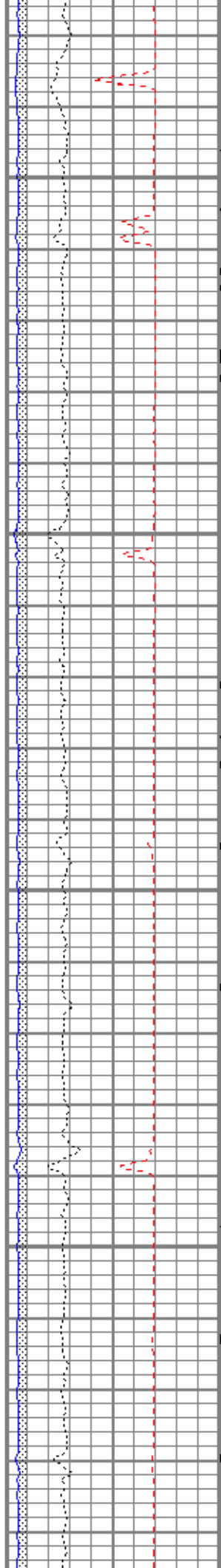


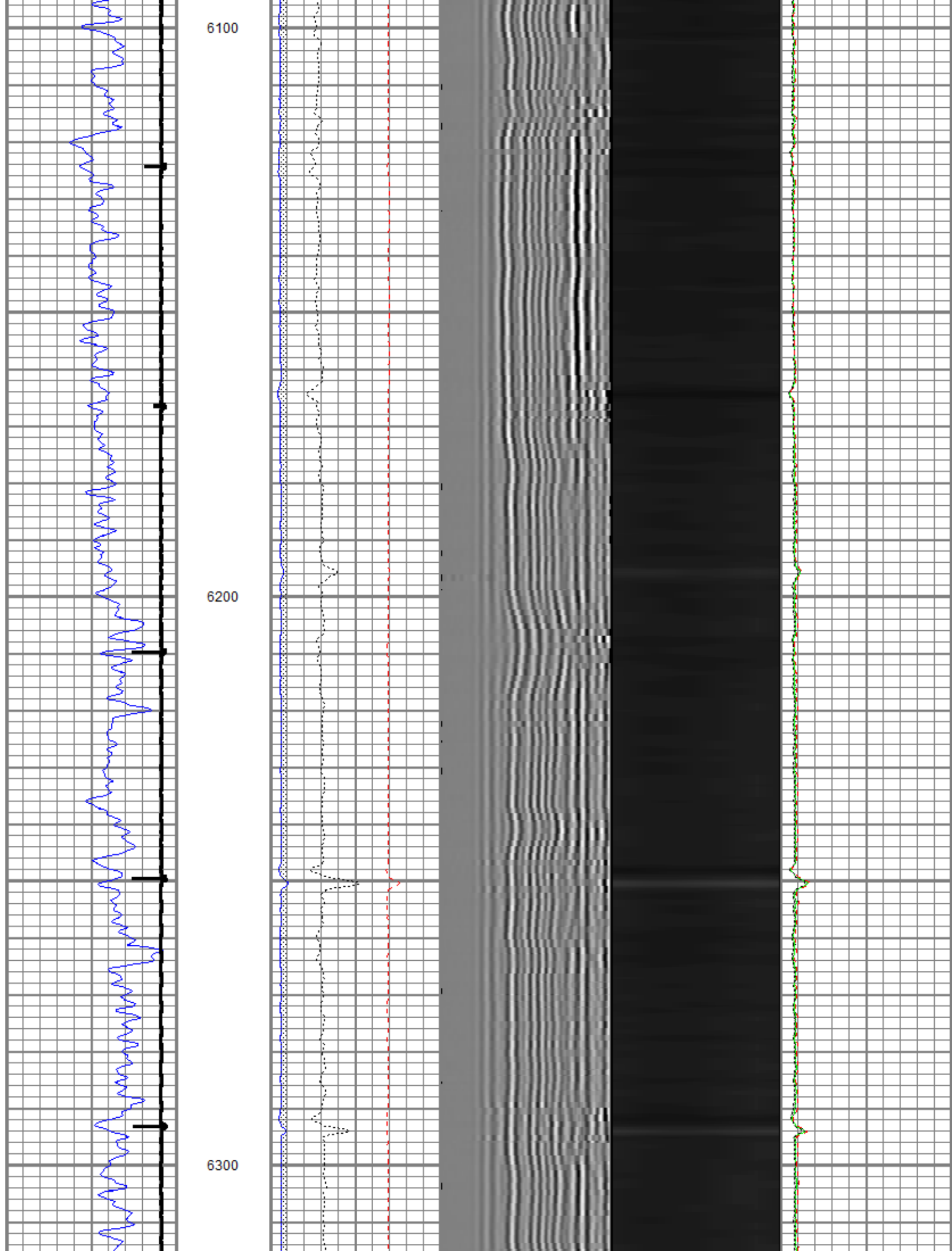


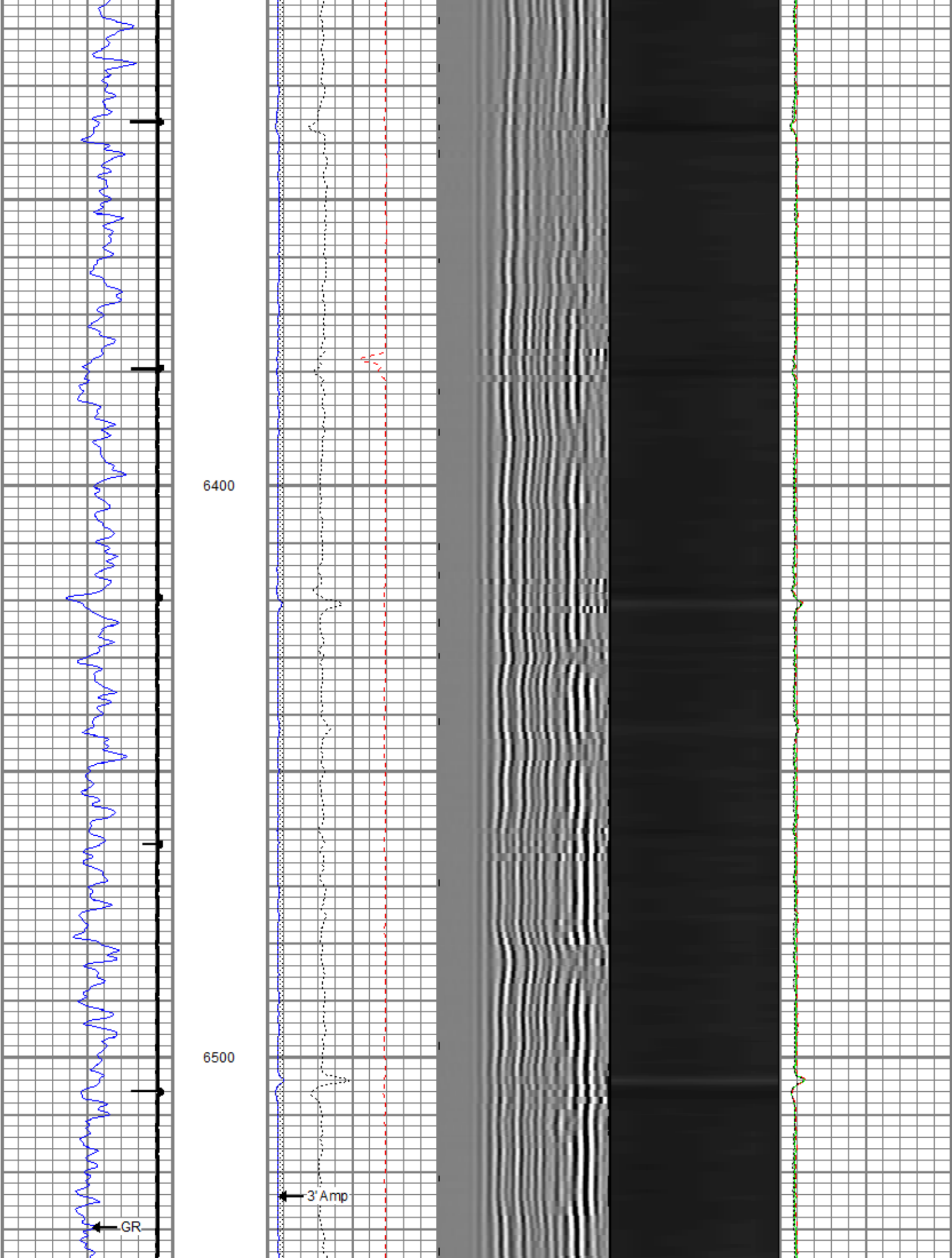


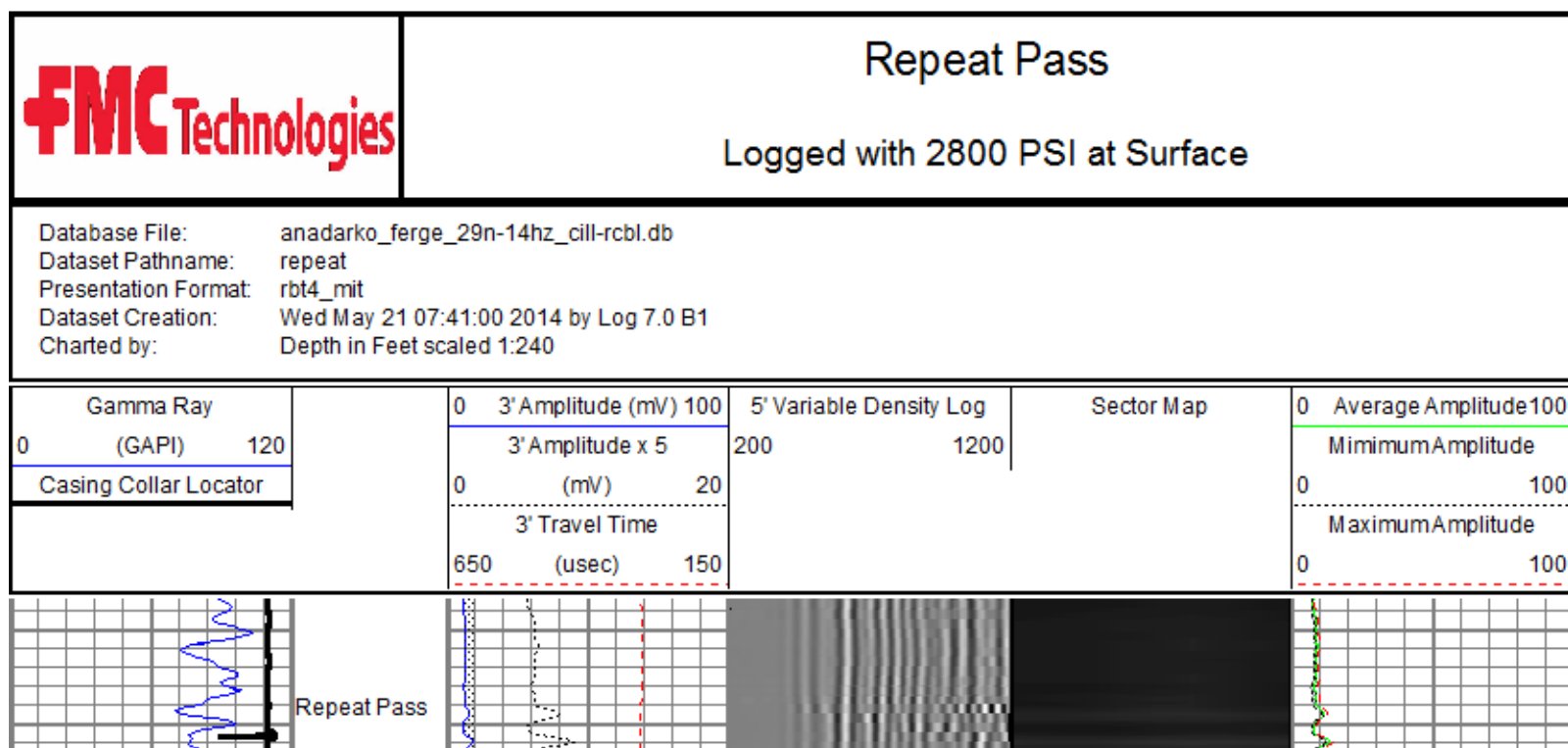
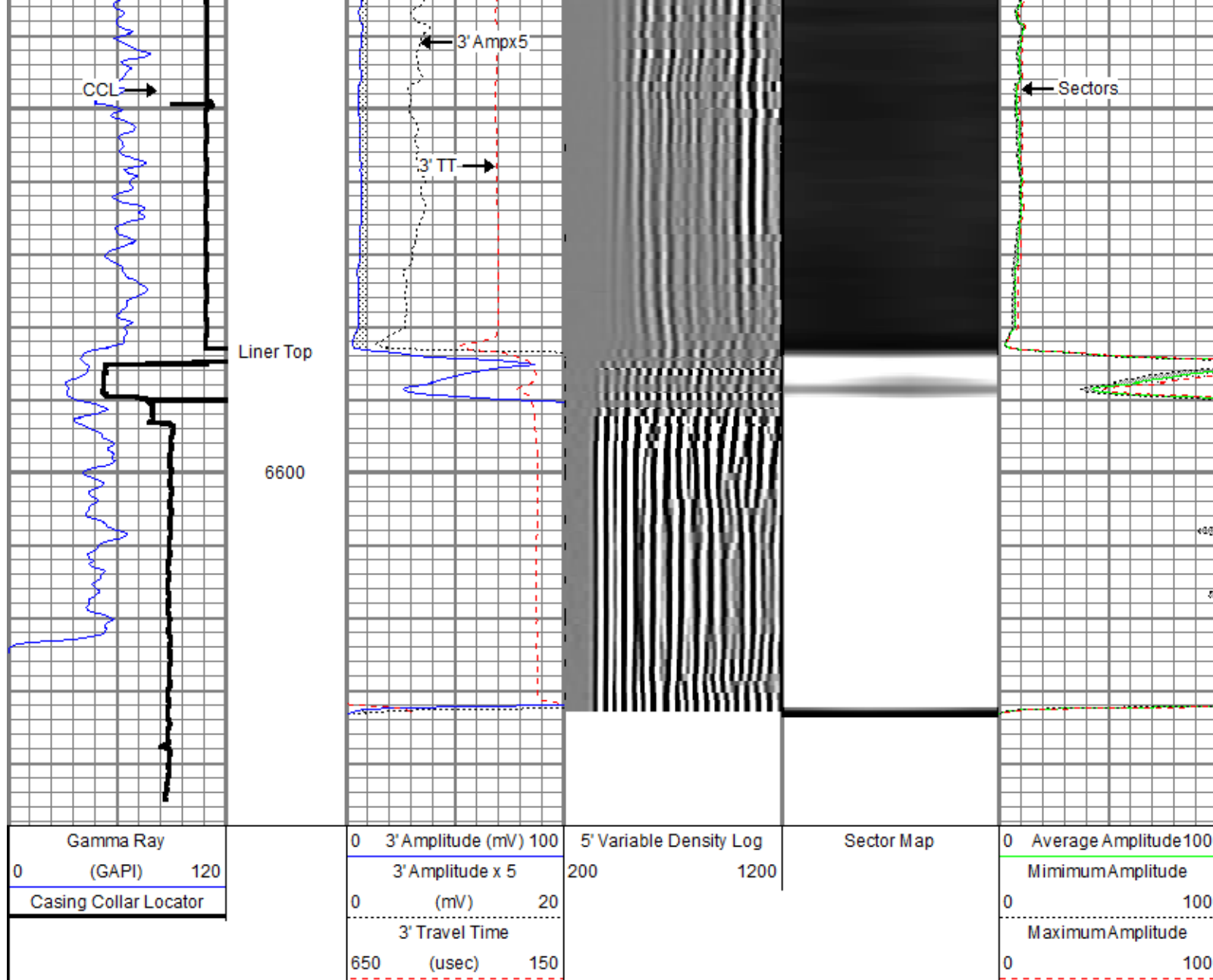
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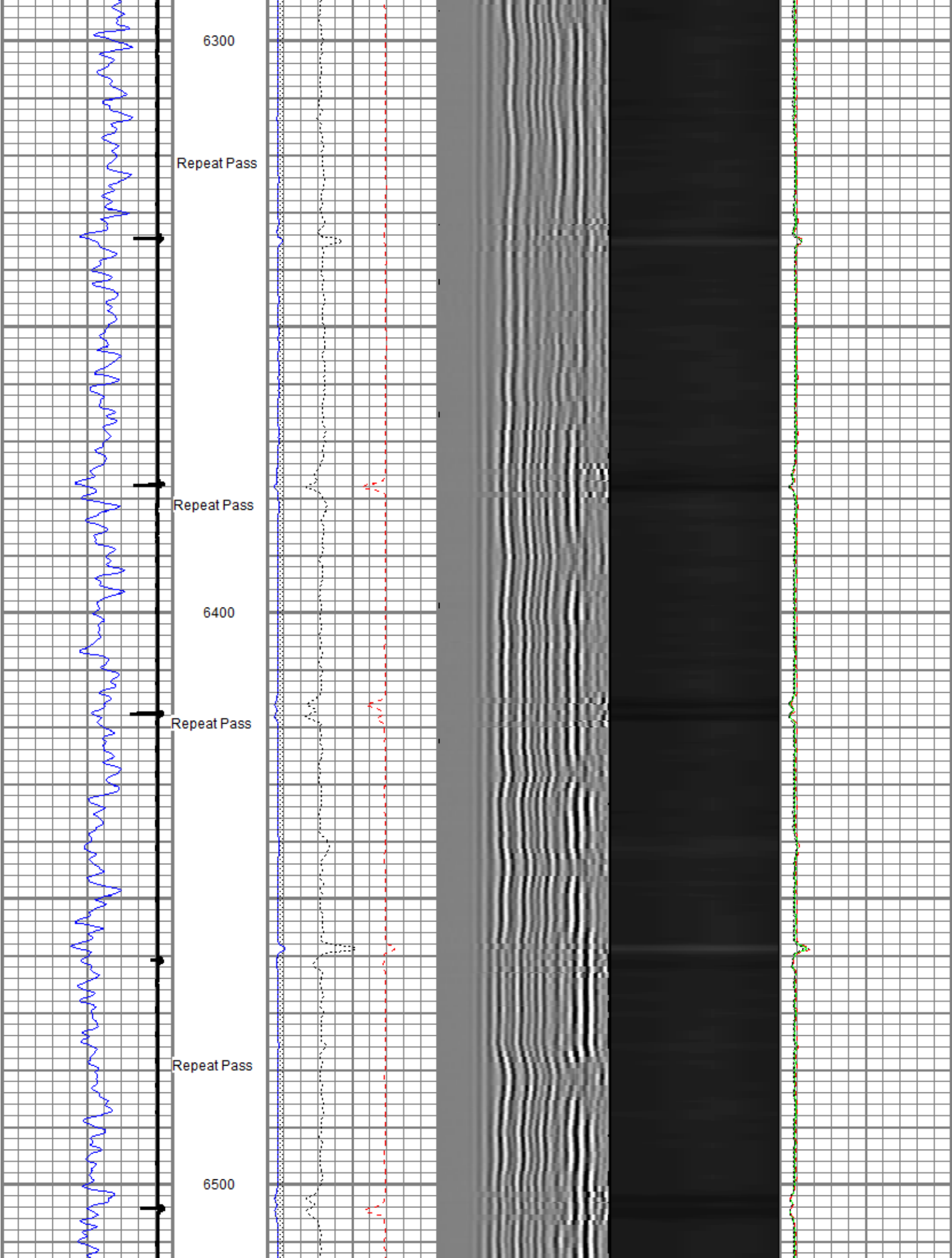


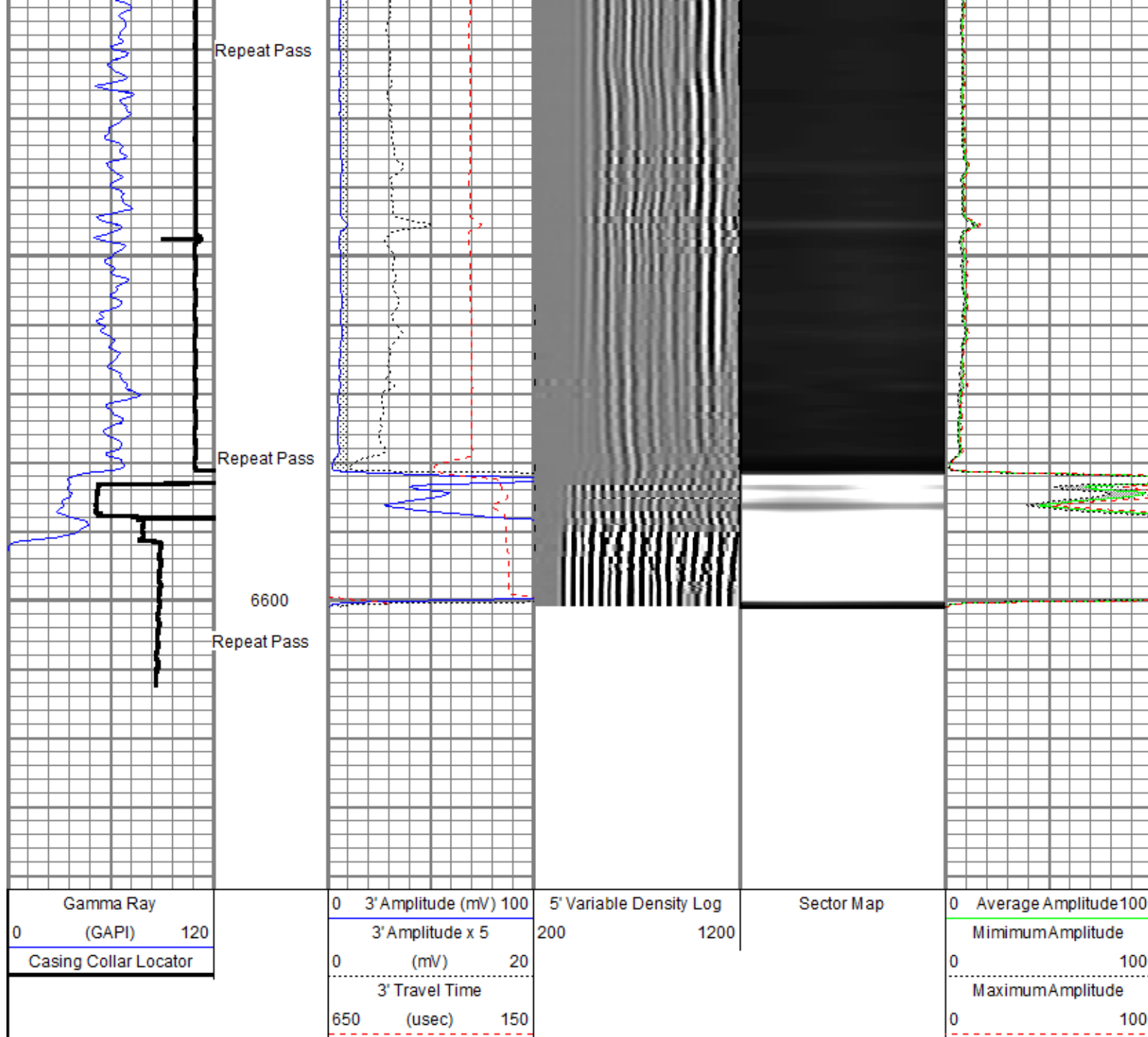


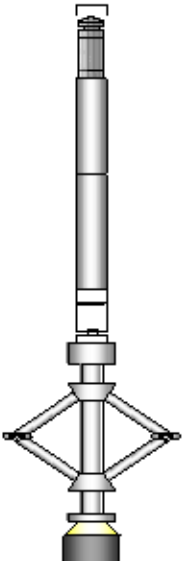


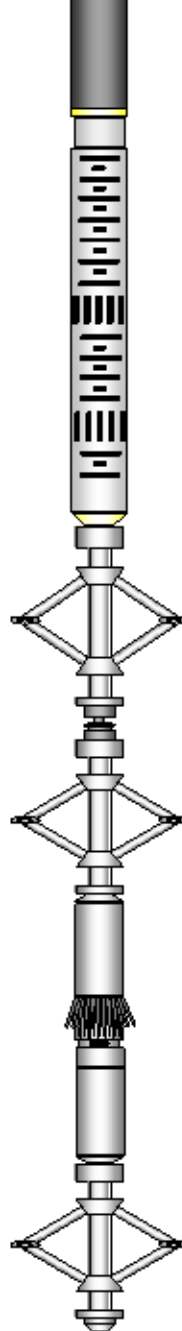








Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
GR	27.26		UW_AGS-UW_AGS_001 (215017) Sondex Adapter - GO Box to Sondex Pin	0.21	1.69	1.00
			T_CH14375_1_GO Titan 1-7/16" Assembled Electric Cable Head with 1" Fishing Neck	1.03	1.44	4.00
			UW_XTU-UW_XTU_002 (211461) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
			UW_PGR-UW_PGR_020 (211727) Production Gamma Ray	1.93	1.69	9.50
			UW_PSJ-PSJ_008 (10018474) Sondex 1-11/16" Ultrawire Swivel Joint	0.91	1.69	9.00
			UW_PRC #4 -UW_PRC_057 (1037) Sondex 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00

WVF3FT	18.53		UW_RBT-UW_RBT_004 (1066) Sondex Ultrawire 3-1/8" Radial Bond Tool	9.47	3.13	140.00
WVFS1	18.53					
WVFS2	18.53					
WVFS3	18.53					
WVFS4	18.53					
WVFS5	18.53					
WVFS6	18.53					
WVFS7	18.53					
WVFS8	18.53					
CBLTEMP	18.53					
CBLROT	18.53					
WVF5FT	17.53		UW_PRC-UW_PRC_057 (1038) Sondex 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00
			UW_PKJ-PKJ_013 (10018069) Sondex 1-11/16" Ultrawire Knuckle Joint	0.57	1.69	3.50
			UW_PRC-DSSRAC (084) 2-3/4" DSS 5 Arm Roller Centralizer	2.55	2.75	32.00
MIT	4.97		UW_MIT-UW_MIT40_042 (10012912) 40 Multifinger Imaging Tool	4.54	2.75	61.10
TSTAMP	0.00		UW_PRC #3 -DSSRAC (081) 2-3/4" DSS 5 Arm Roller Centralizer	2.55	2.75	32.00
ITEMPX	0.00		UW_BUL-UW_BUL_006 (218707) Sondex Ultrawire Bullnose Terminator	0.22	1.69	1.20
HVOLTX	0.00					
Dataset: anadarko_ferge_29n-14hz_cill-rcbl.db: field/well/run1/main Total Length: 31.51 ft Total Weight: 363.80 lb O.D. 3.13 in						

Calibration Report			
Database File:	anadarko_ferge_29n-14hz_cill-rcbl.db		
Dataset Pathname:	postcal		
Dataset Creation:	Wed May 21 10:29:38 2014 by Log 7.0 B1		
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:

Wed May 21 06:25:56 2014

Ring size:	4		5		6		7
(in)		Sens		Sens		Sens	
Finger 01:	1052	349.0	1401	382.0	1783	411.0	2194
Finger 02:	1178	369.0	1547	381.0	1928	409.0	2337
Finger 03:	1069	368.0	1437	408.0	1845	425.0	2270
Finger 04:	1083	364.0	1447	383.0	1830	417.0	2247
Finger 05:	1090	365.0	1455	395.0	1850	422.0	2272
Finger 06:	1084	364.0	1448	393.0	1841	416.0	2257
Finger 07:	1079	365.0	1444	397.0	1841	419.0	2260
Finger 08:	1101	361.0	1462	390.0	1852	416.0	2268
Finger 09:	1090	366.0	1456	390.0	1846	412.0	2258
Finger 10:	1087	364.0	1451	390.0	1841	413.0	2254
Finger 11:	1105	364.0	1469	389.0	1858	410.0	2268
Finger 12:	1098	363.0	1461	389.0	1850	414.0	2264
Finger 13:	1111	362.0	1473	384.0	1857	406.0	2263
Finger 14:	1087	368.0	1455	394.0	1849	417.0	2266
Finger 15:	1052	372.0	1424	405.0	1829	430.0	2259
Finger 16:	1071	371.0	1442	402.0	1844	430.0	2274
Finger 17:	1036	371.0	1407	403.0	1810	433.0	2243
Finger 18:	1125	362.0	1487	387.0	1874	408.0	2282
Finger 19:	1083	363.0	1446	392.0	1838	418.0	2256
Finger 20:	1055	368.0	1423	403.0	1826	429.0	2255
Finger 21:	1077	373.0	1450	400.0	1850	411.0	2261
Finger 22:	1040	369.0	1409	406.0	1815	427.0	2242
Finger 23:	1015	369.0	1384	414.0	1798	437.0	2235
Finger 24:	1069	366.0	1435	391.0	1826	401.0	2227
Finger 25:	1028	369.0	1397	408.0	1805	431.0	2236
Finger 26:	1152	360.0	1512	379.0	1891	393.0	2284
Finger 27:	1092	368.0	1460	402.0	1862	413.0	2275
Finger 28:	1122	359.0	1481	385.0	1866	401.0	2267
Finger 29:	1072	369.0	1441	406.0	1847	425.0	2272
Finger 30:	1086	364.0	1450	397.0	1847	411.0	2258
Finger 31:	1110	360.0	1470	392.0	1862	409.0	2271
Finger 32:	1092	369.0	1461	405.0	1866	418.0	2284
Finger 33:	1152	358.0	1510	378.0	1888	385.0	2273
Finger 34:	1125	352.0	1477	387.0	1864	404.0	2268
Finger 35:	1059	369.0	1428	415.0	1843	432.0	2275
Finger 36:	1078	362.0	1440	399.0	1839	417.0	2256
Finger 37:	1111	361.0	1472	394.0	1866	407.0	2273
Finger 38:	1140	353.0	1493	383.0	1876	394.0	2270
Finger 39:	1135	349.0	1484	382.0	1866	398.0	2264
Finger 40:	1092	361.0	1453	393.0	1846	416.0	2262

# Post Survey Calibration Check

Performed:

Wed May 21 10:29:12 2014

Ring size:	4	Nom.	5	Nom.	6	Nom.	7	Nom.
(in)		wear		wear		wear		wear
Finger 01:	4.005	0.003	5.005	0.003	6.013	0.006	7.000	0.000
Finger 02:	4.022	0.011	4.991	-0.004	5.998	-0.001	6.977	-0.012
Finger 03:	4.021	0.010	5.003	0.002	5.990	-0.005	6.990	-0.005
Finger 04:	4.023	0.012	4.982	-0.009	5.993	-0.003	6.992	-0.004
Finger 05:	4.023	0.012	5.007	0.003	6.008	0.004	7.000	-0.000
Finger 06:	4.022	0.011	5.008	0.004	6.006	0.003	7.010	0.005
Finger 07:	4.022	0.011	5.015	0.008	6.014	0.007	7.017	0.009
Finger 08:	4.023	0.012	5.009	0.005	6.010	0.005	7.015	0.008
Finger 09:	4.022	0.011	5.008	0.004	6.007	0.003	7.012	0.006
Finger 10:	4.031	0.015	5.013	0.006	6.008	0.004	7.013	0.007
Finger 11:	4.024	0.012	5.013	0.006	6.008	0.004	7.013	0.006
Finger 12:	4.029	0.015	5.013	0.006	6.009	0.004	7.005	0.003
Finger 13:	4.022	0.011	5.008	0.004	6.005	0.002	7.011	0.005
Finger 14:	4.025	0.012	5.008	0.004	6.008	0.004	7.008	0.004
Finger 15:	4.026	0.013	5.008	0.004	6.009	0.005	7.004	0.002
Finger 16:	4.017	0.008	5.005	0.003	6.008	0.004	7.001	0.000

Finger 17:	4.032	0.016	5.012	0.006	6.013	0.006	7.013	0.007
Finger 18:	4.018	0.009	5.003	0.002	6.004	0.002	7.001	0.001
Finger 19:	4.028	0.014	5.011	0.005	6.011	0.005	7.003	0.002
Finger 20:	4.021	0.010	5.000	0.000	6.005	0.002	7.002	0.001
Finger 21:	4.019	0.009	5.020	0.010	6.014	0.007	7.010	0.005
Finger 22:	4.021	0.011	5.006	0.003	6.006	0.003	7.004	0.002
Finger 23:	4.015	0.007	5.005	0.002	5.997	-0.001	6.996	-0.002
Finger 24:	4.018	0.009	5.003	0.002	6.005	0.003	7.006	0.003
Finger 25:	4.021	0.010	5.005	0.002	6.017	0.008	7.018	0.009
Finger 26:	4.027	0.014	5.003	0.002	6.008	0.004	7.005	0.002
Finger 27:	4.025	0.013	5.006	0.003	5.999	-0.000	7.001	0.001
Finger 28:	4.018	0.009	5.001	0.001	6.003	0.002	7.003	0.001
Finger 29:	4.022	0.011	5.001	0.001	6.000	-0.000	6.999	-0.000
Finger 30:	4.027	0.013	5.006	0.003	6.004	0.002	7.009	0.005
Finger 31:	4.034	0.017	5.014	0.007	6.007	0.003	7.002	0.001
Finger 32:	4.029	0.014	5.011	0.005	6.013	0.007	7.010	0.005
Finger 33:	4.017	0.009	5.008	0.004	6.008	0.004	7.008	0.004
Finger 34:	4.025	0.012	5.013	0.007	6.009	0.005	7.010	0.005
Finger 35:	4.020	0.010	5.011	0.006	6.007	0.004	7.011	0.005
Finger 36:	4.027	0.014	5.013	0.006	6.012	0.006	7.015	0.008
Finger 37:	4.031	0.016	5.014	0.007	6.010	0.005	7.013	0.007
Finger 38:	4.022	0.011	5.013	0.006	6.012	0.006	7.016	0.008
Finger 39:	4.026	0.013	5.016	0.008	6.016	0.008	7.017	0.009
Finger 40:	4.021	0.011	5.009	0.004	6.011	0.006	7.005	0.002
Average:	4.023	0.012	5.008	0.004	6.007	0.004	7.006	0.003

#### Segmented Cement Bond Log Calibration Report

Serial Number: 1066  
Tool Model: UW\_RBT\_004  
  
Calibration Casing Diameter: 7.000 in  
Calibration Depth: 3036.097 ft

Master Calibration, performed Wed May 21 07:08:19 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	-0.001	0.749	0.800	62.165	81.816	0.866
5FT	-0.006	0.682	0.800	62.165	89.165	1.344
S1	0.000	0.689	0.000	100.000	145.053	-0.005
S2	-0.001	0.658	0.000	100.000	151.797	0.178
S3	-0.001	0.660	0.000	100.000	151.125	0.184
S4	-0.002	0.714	0.000	100.000	139.693	0.314
S5	-0.001	0.781	0.000	100.000	127.892	0.145
S6	-0.001	0.833	0.000	100.000	119.870	0.161
S7	-0.001	0.837	0.000	100.000	119.282	0.135
S8	-0.001	0.772	0.000	100.000	129.293	0.153

#### Gamma Ray Calibration Report

Serial Number: 211727  
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 Ferge 29N-14HZ  
Field Wattenberg

