



Company	Kerr-McGee Oil and Gas Onshore LP
Well	Hansen State 26C-36HZ
Field	Wattenberg
County	Weld
	State
	Colorado

Location: API #: 05-123-39195

711' FNL & 665' FWL NWNW

SEC 35 TWP T3N RGE 68W

Permanent Datum	Ground Level	Elevation	4936
Log Measured From	Kelly Bushing	18 FT	
Drilling Measured From	Kelly Bushing		

Elevation	
K.B. 4952'	
D.F. 4951'	
G.L. 4936'	

Company	Kerr-McGee Oil and Gas Onshore LP
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20-Nov-2014

Run Number	1 WO
Depth Driller	16951 FT

Depth Logger	7306 FT
Bottom Interval	7306 FT

op Log Interval	Surface
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Open Hole Size	NA
Type Fluid	Water

density / Viscosity	8.34 lbm/g
Day Recorded Temperature	724 Dec

Estimated Cement Top	Surface
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Time Well Ready	ROA
Time Logger on Bottom	4:15 PM

Equipment Number	HD-134
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Location	11. Lupton
Recorded By	Rob Cameron

Recorded By	NOB Carter
Witnessed By	Levi McArthur

Borehole Record		
Run Number	Bit	From To

[illegible]

Raising Record	Size (in)	Wgt (lbs/ft)
Surface Casting	0.5-0.8"	35

Surface Casing	9-5/8"	36
Intermediate #1	7"	26

intermediate #1	7"	26
intermediate #2		

intermediate #2		
ner	4.5"	116

ner	4.5	11.6

P-110	6609 F	76957 F

<<< 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 reference to Casing Tally reported Liner Top 6609 FT.
Adjusted log -19 FT to correlate with Liner Top.
Log ran from below liner top to surface
Log ran with 2800 PSI surface Induced pressure.

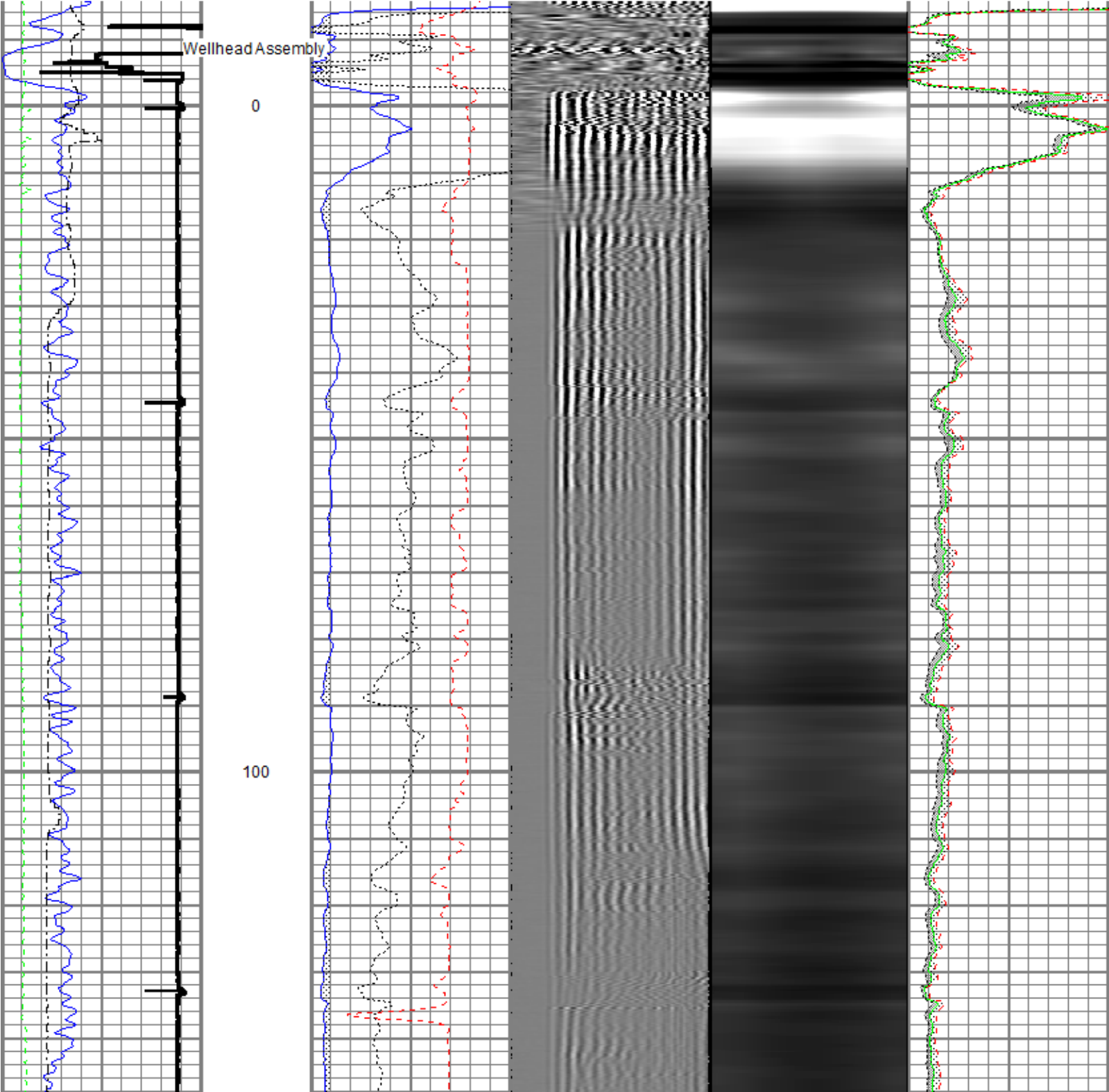
Thank you for Choosing FMC Technologies Completion Services, Inc.!!

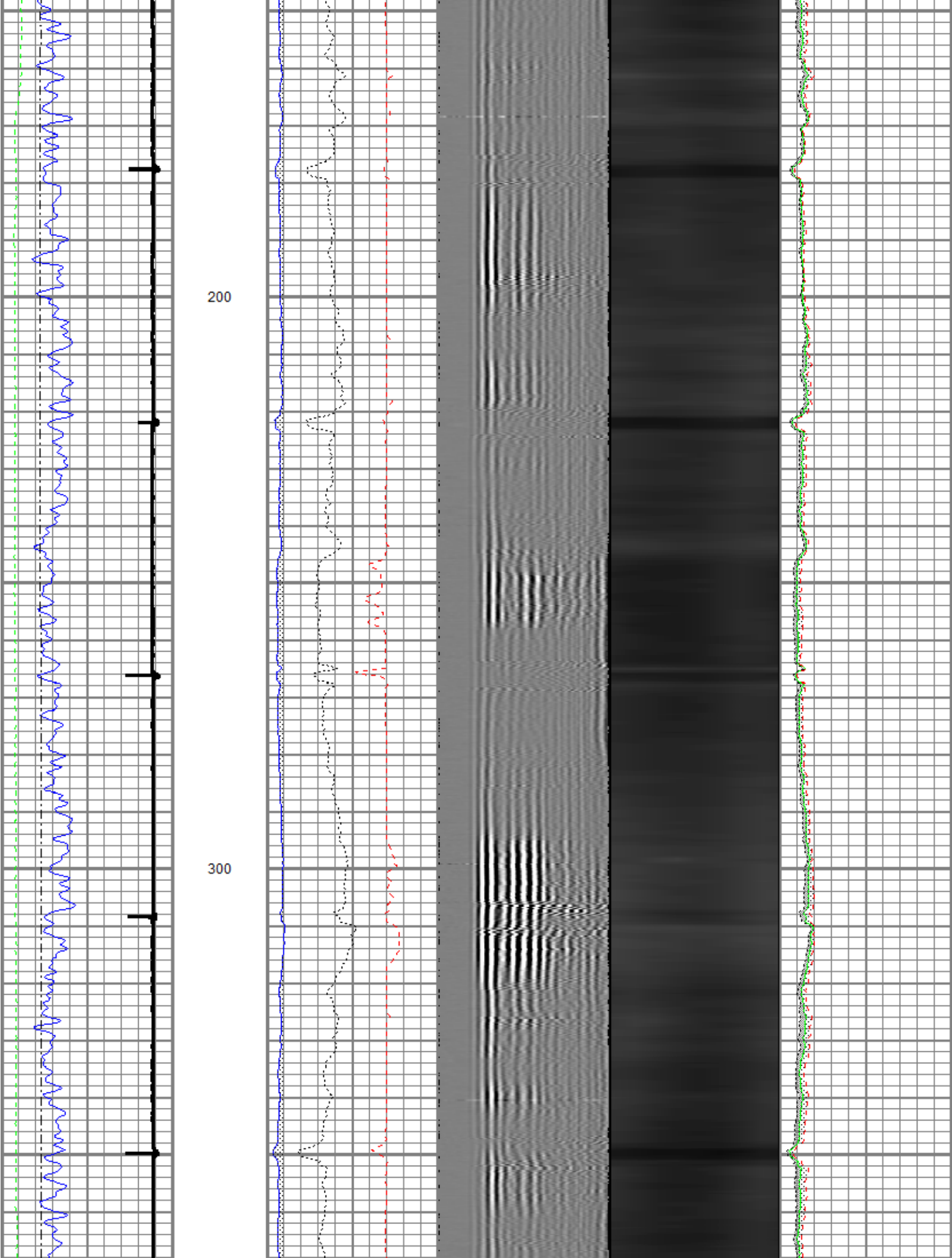
Mian Pass

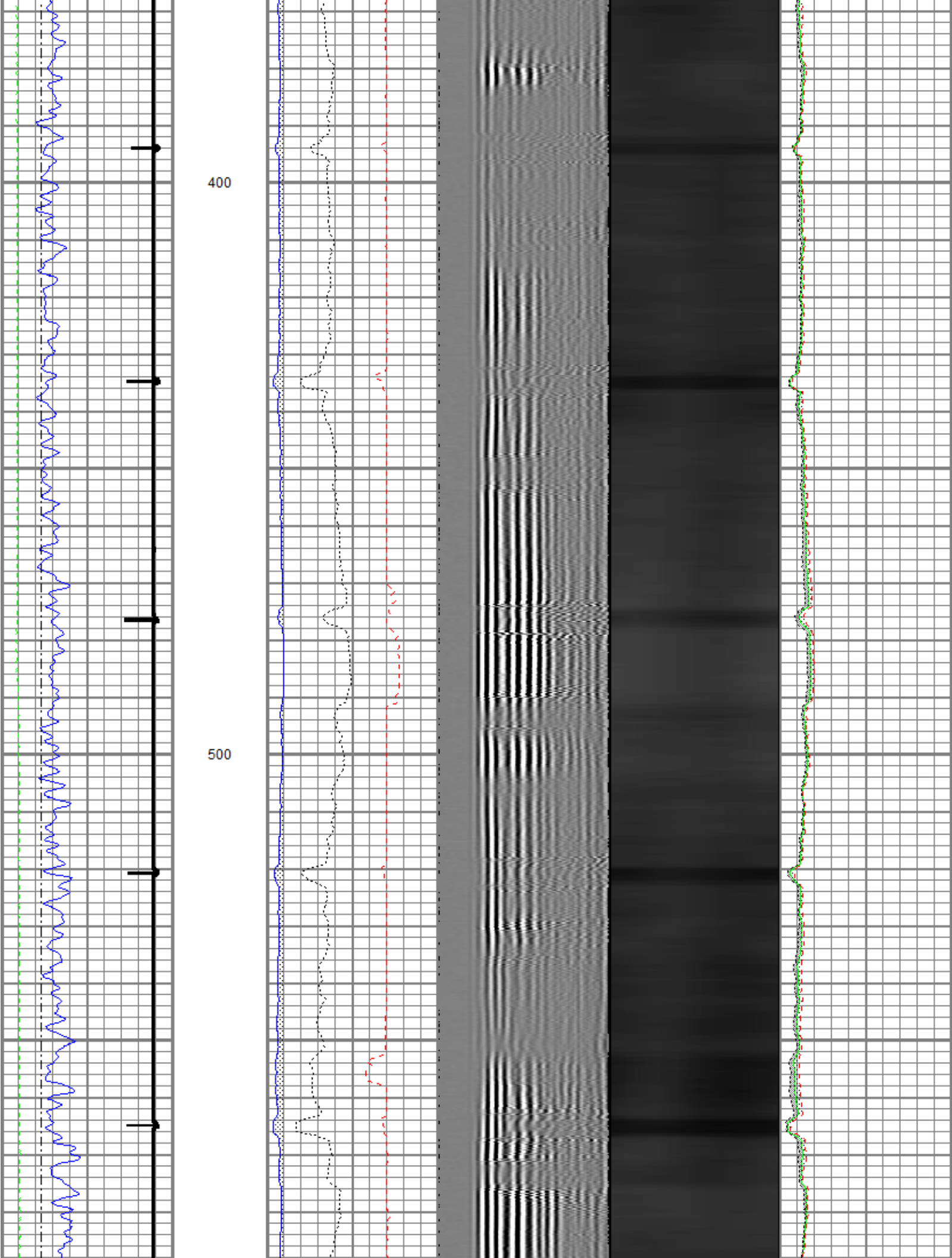


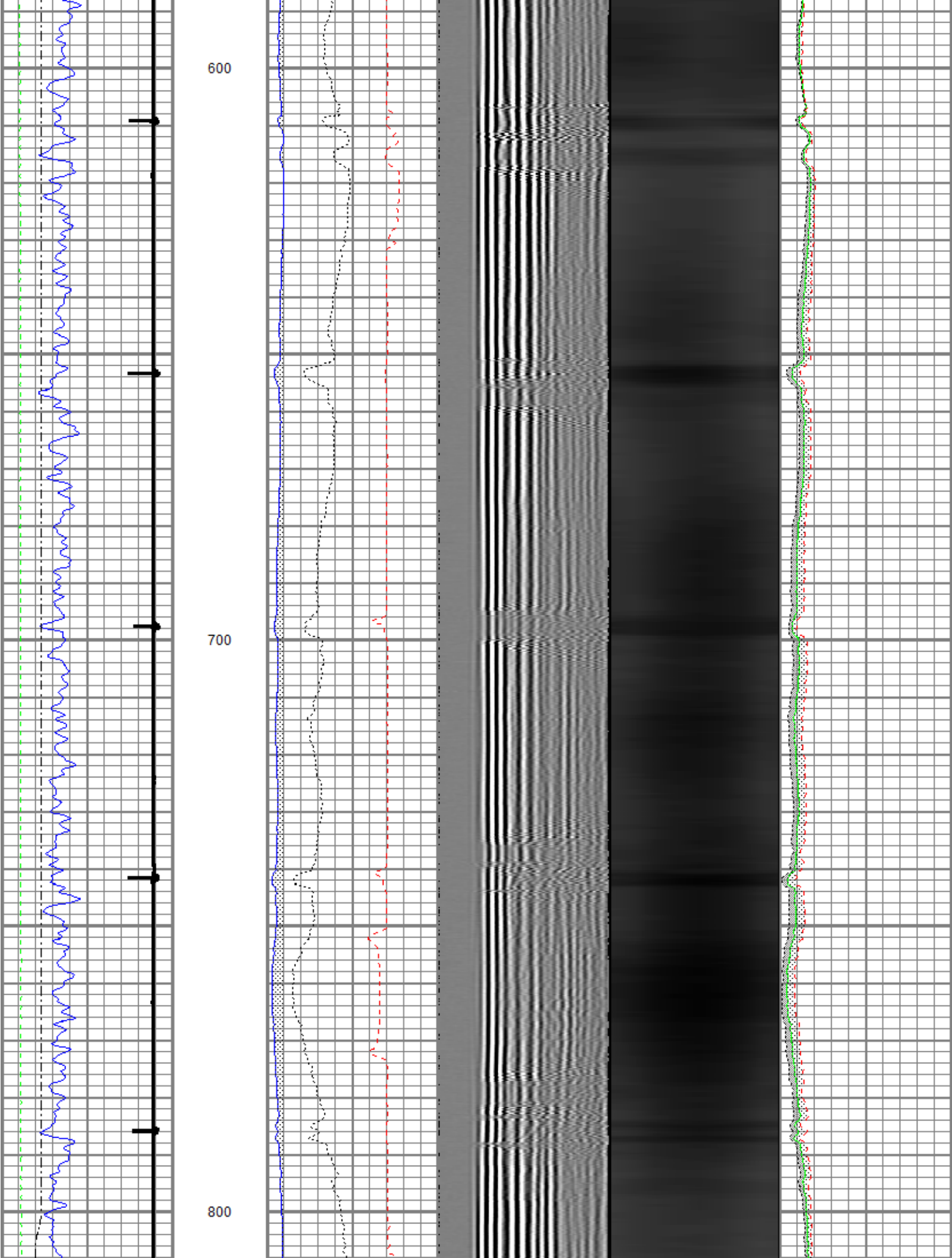
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Dataset Pathname:	main
Presentation Format:	rbt4_mit
Dataset Creation:	Thu Nov 20 16:30:32 2014 by Log 7.0 B1
Charted by:	Depth in Feet scaled 1:240

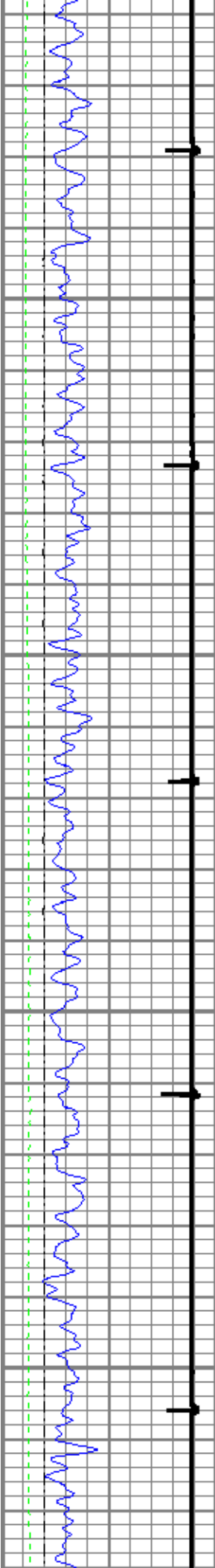
Gamma Ray (GAPI)	0 120	3' Amplitude (mV) 100 3' Amplitude x 5 (mV) 20	5' Variable Density Log 200 1200	Sector Map	Average Amplitude 100 Minimum Amplitude Maximum Amplitude
Casing Collar Locator	0 100	3' Travel Time (usec) 150			0 100
Line Speed (ft/min)	-100 100				
Line Tension (lb)	0 2000				





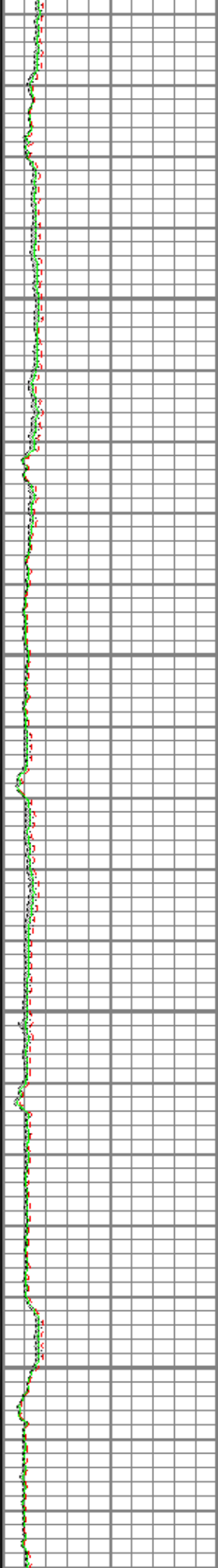
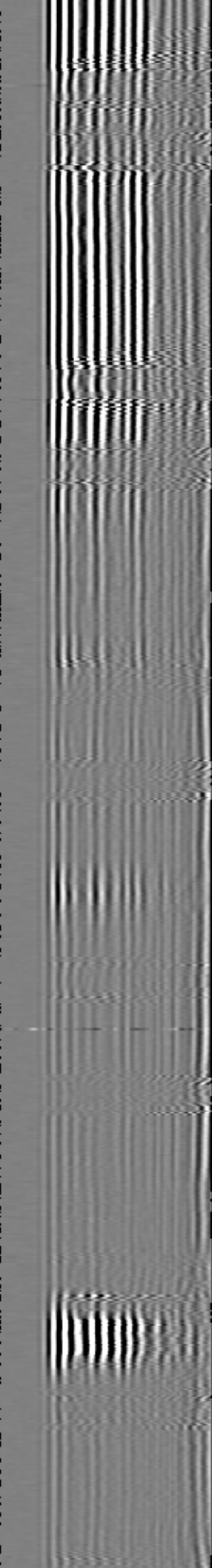
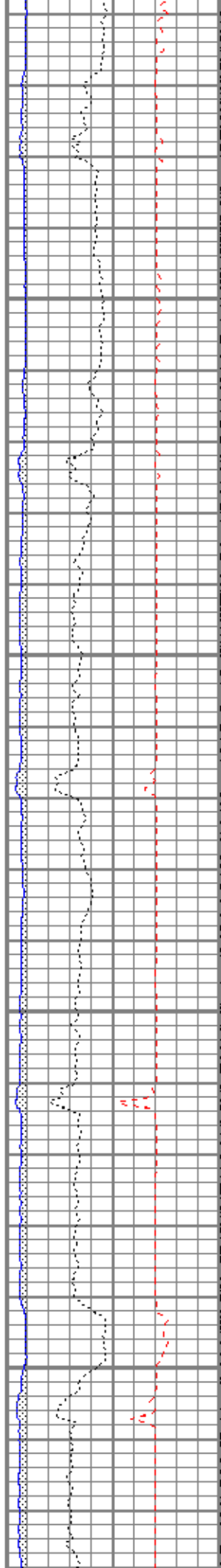


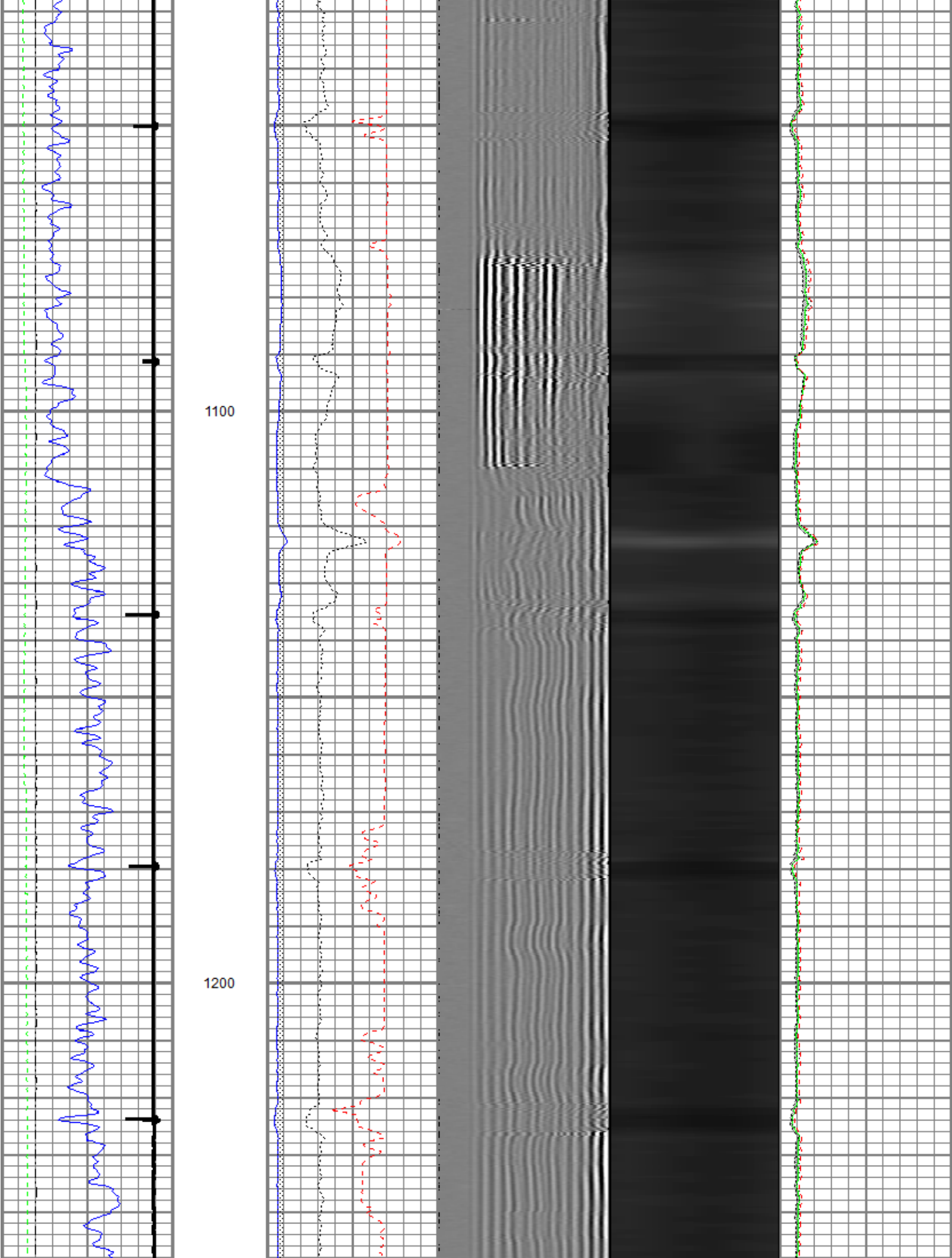


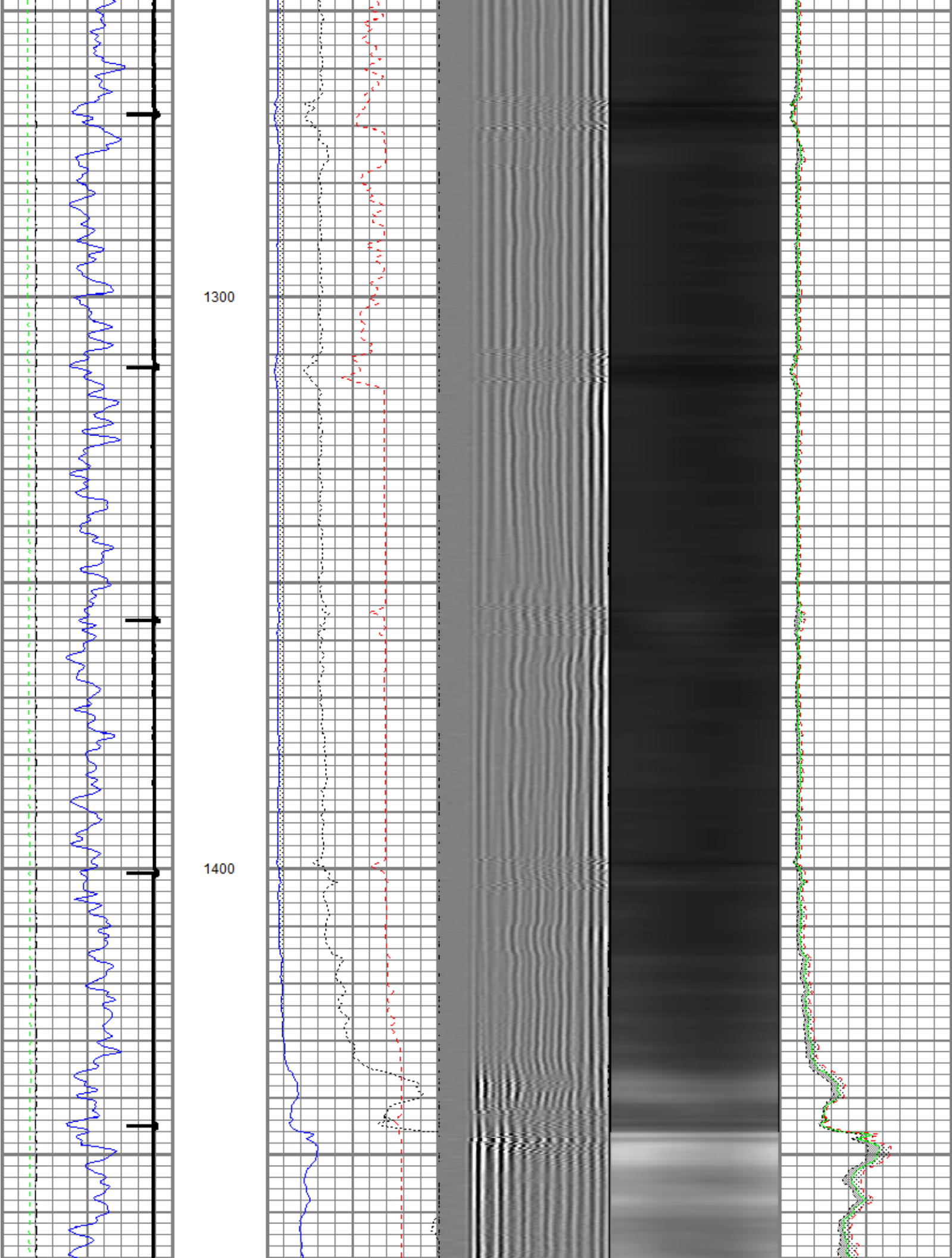


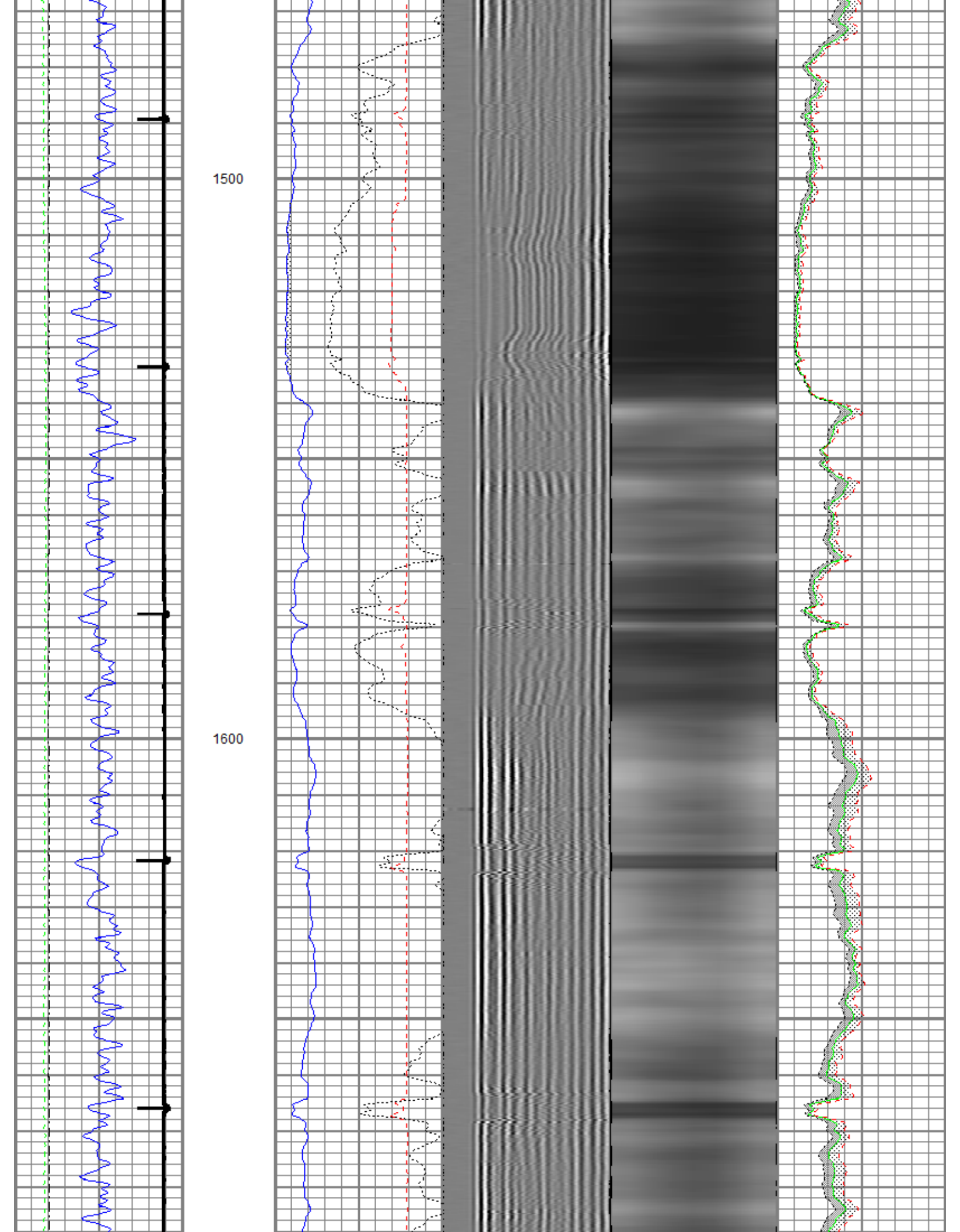
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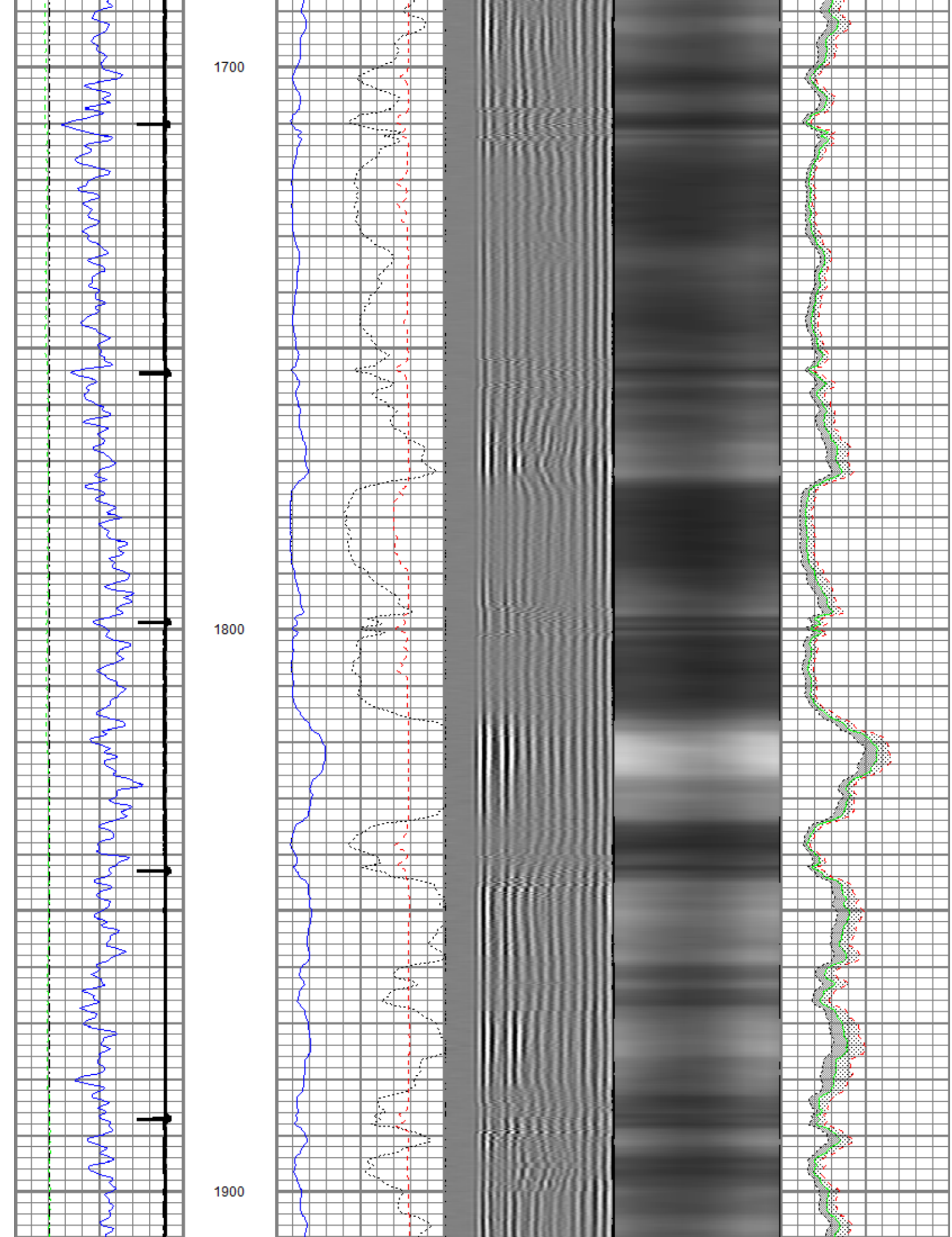
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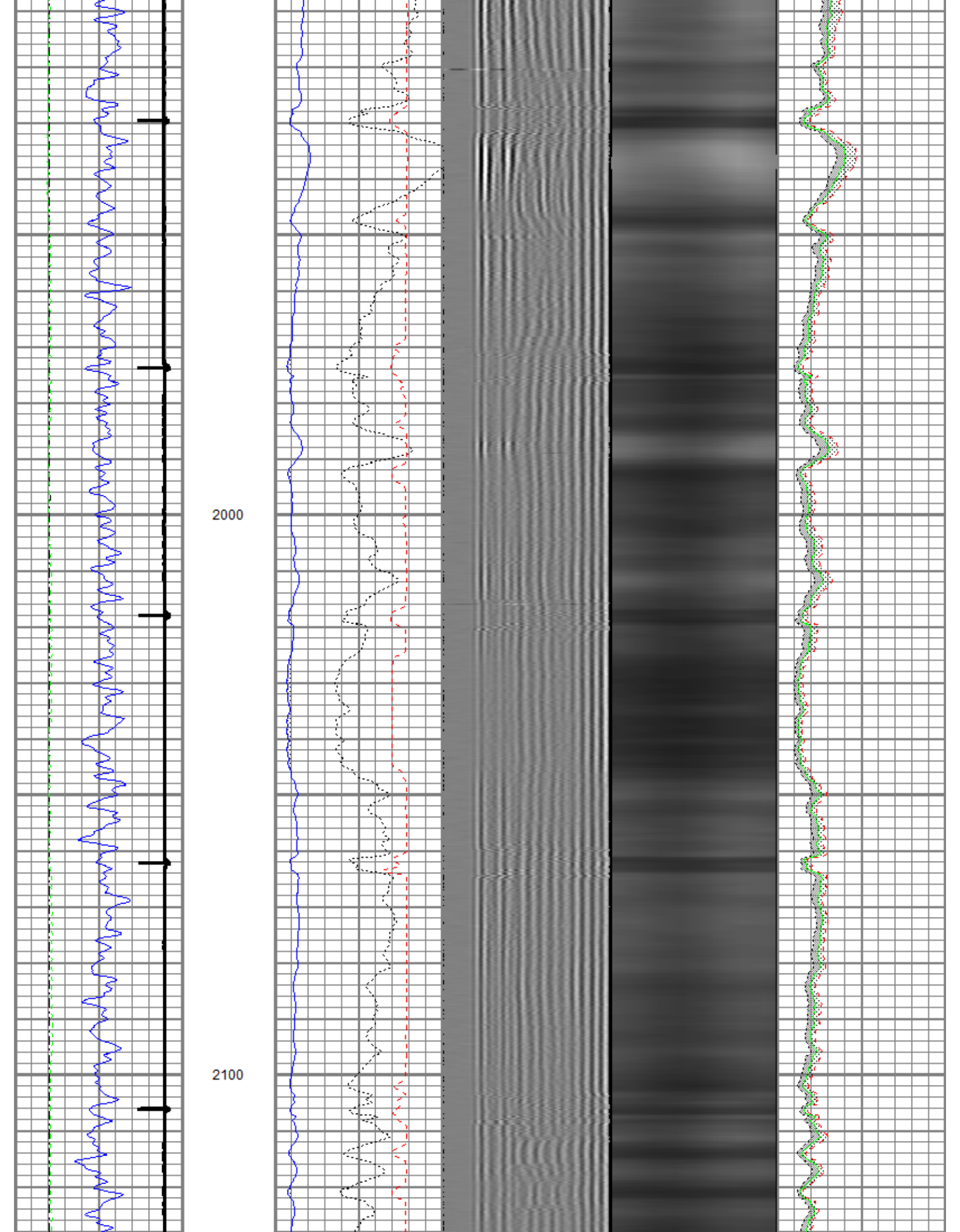


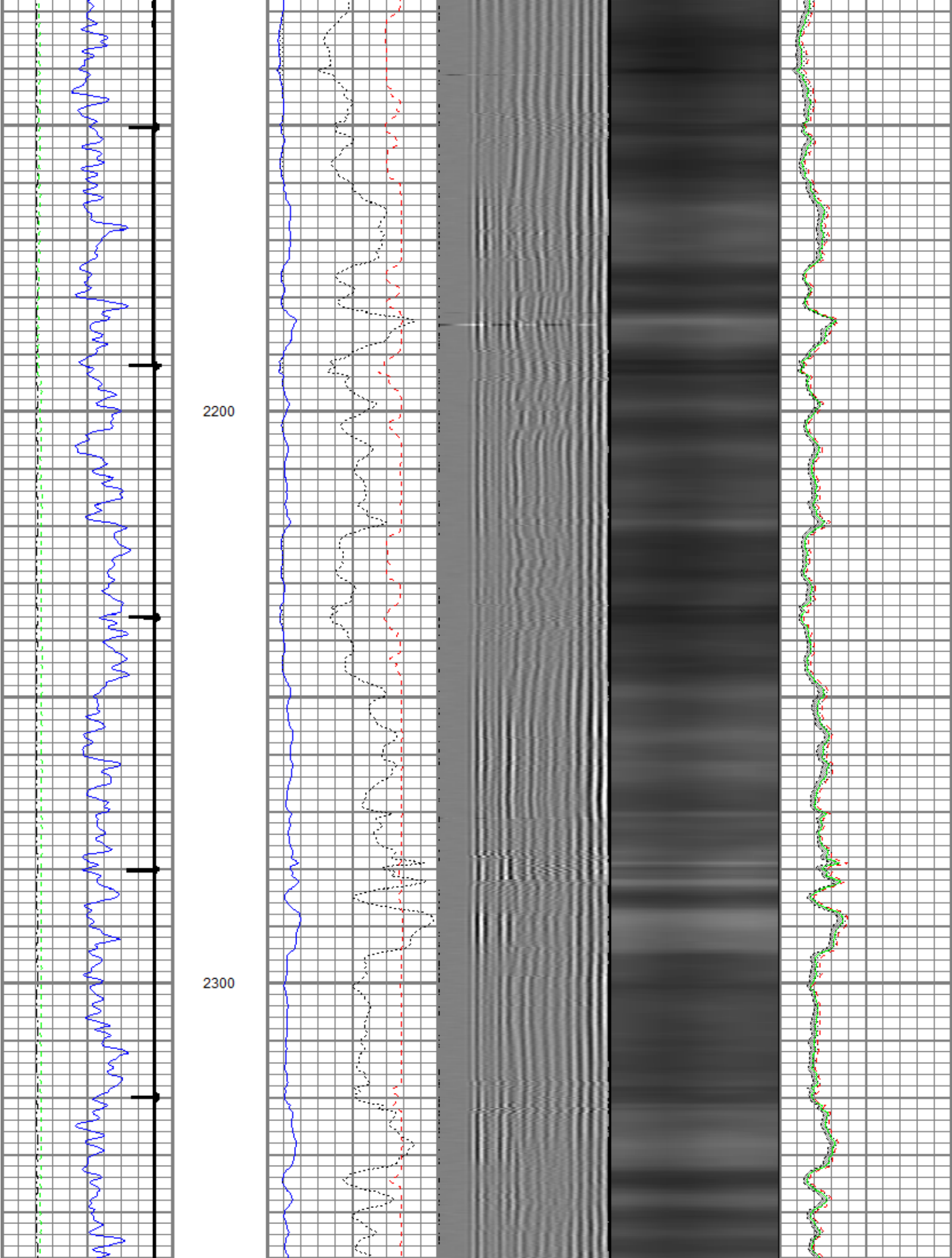


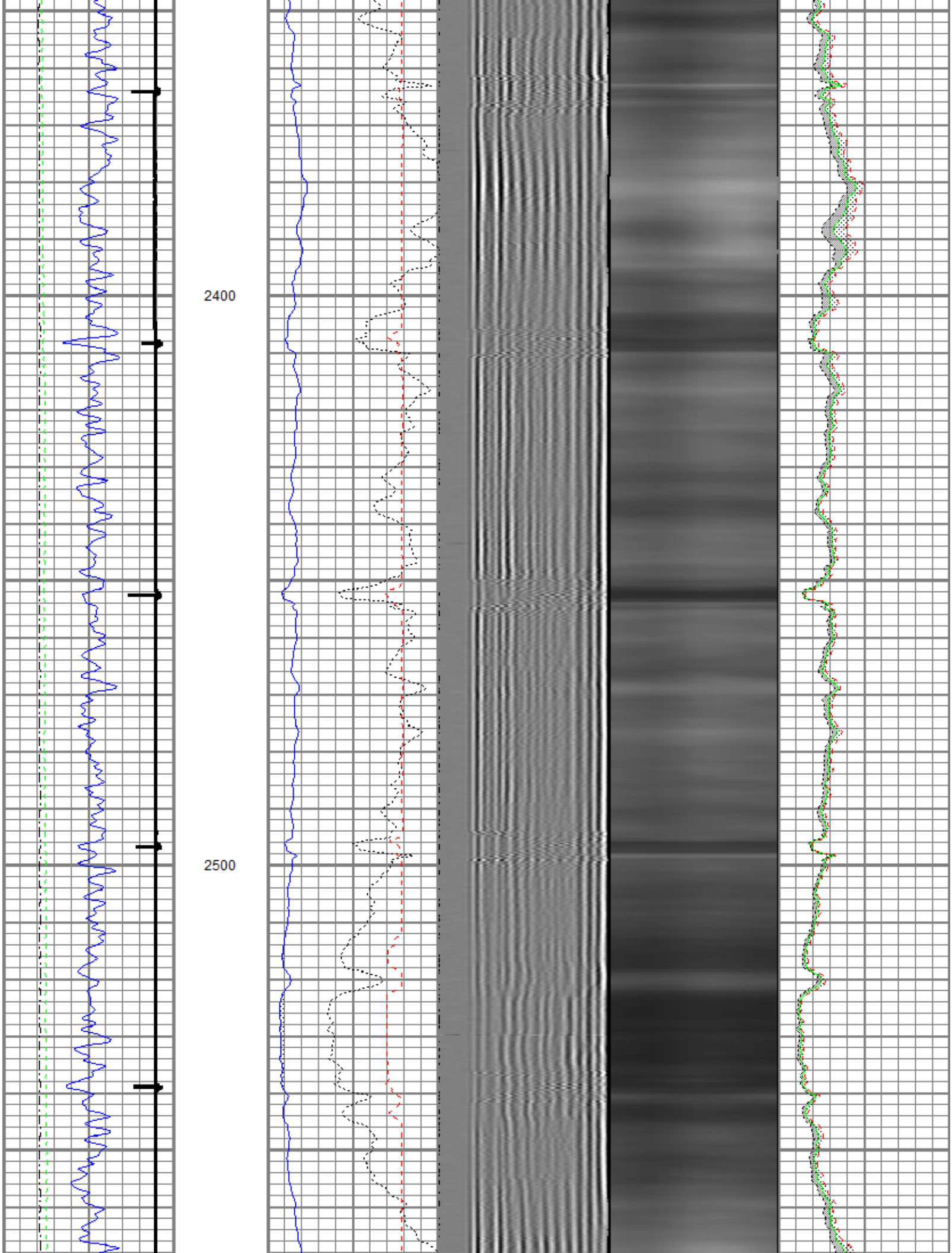


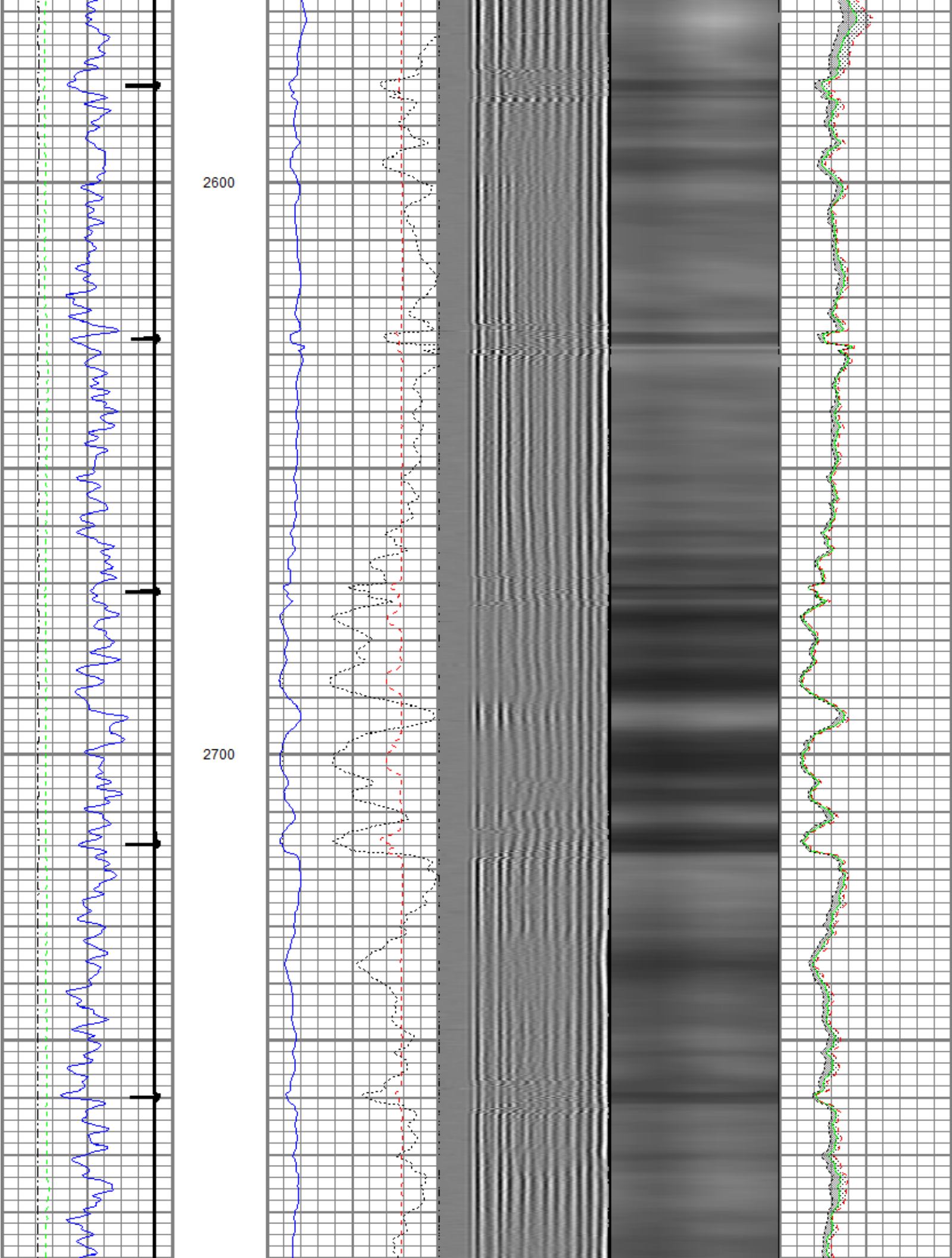


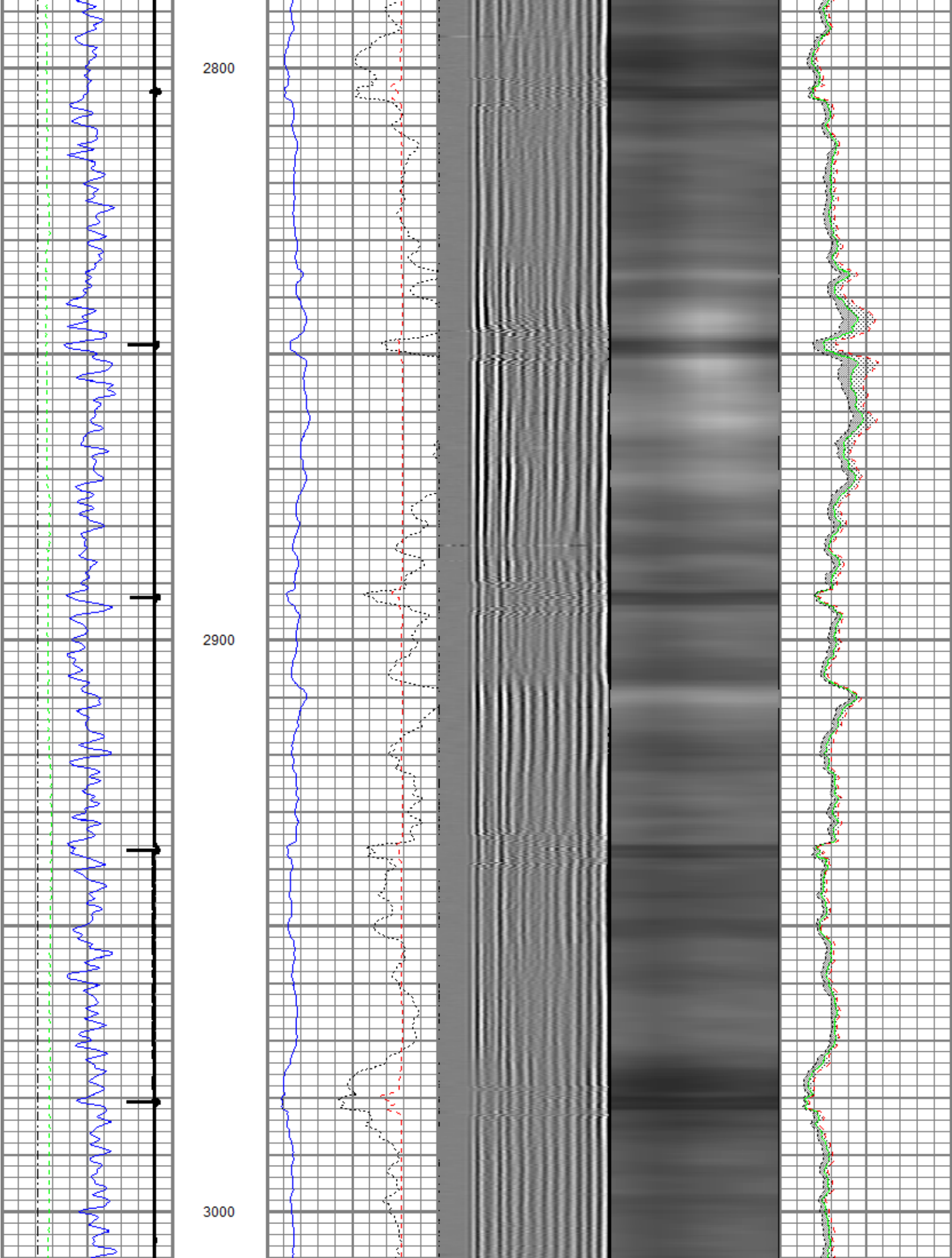


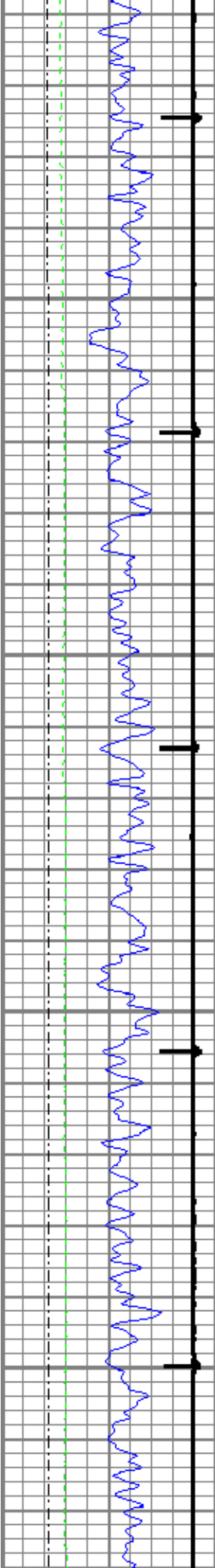






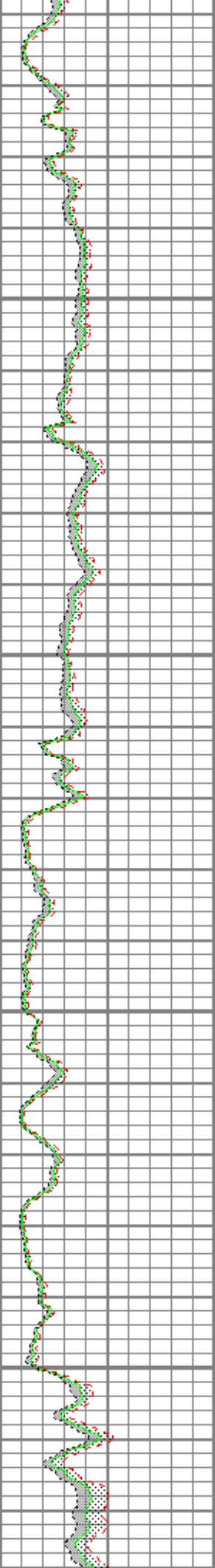
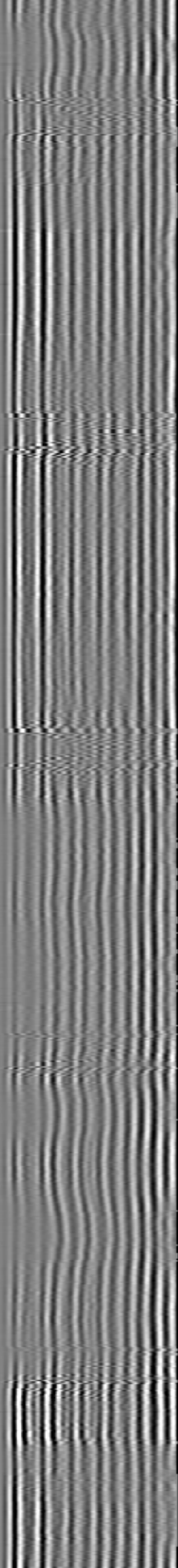
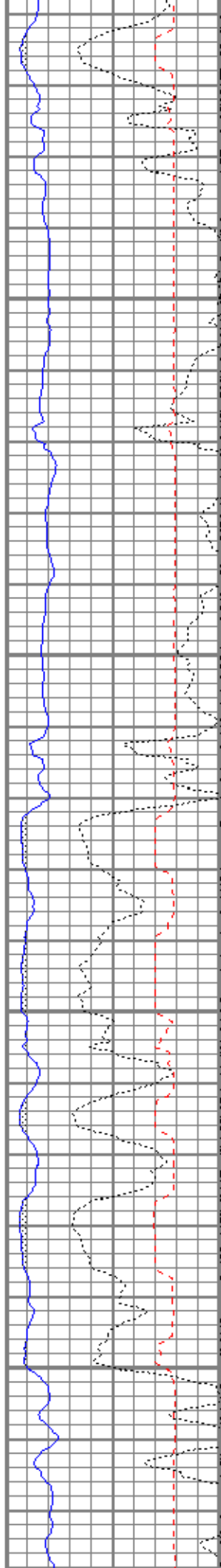


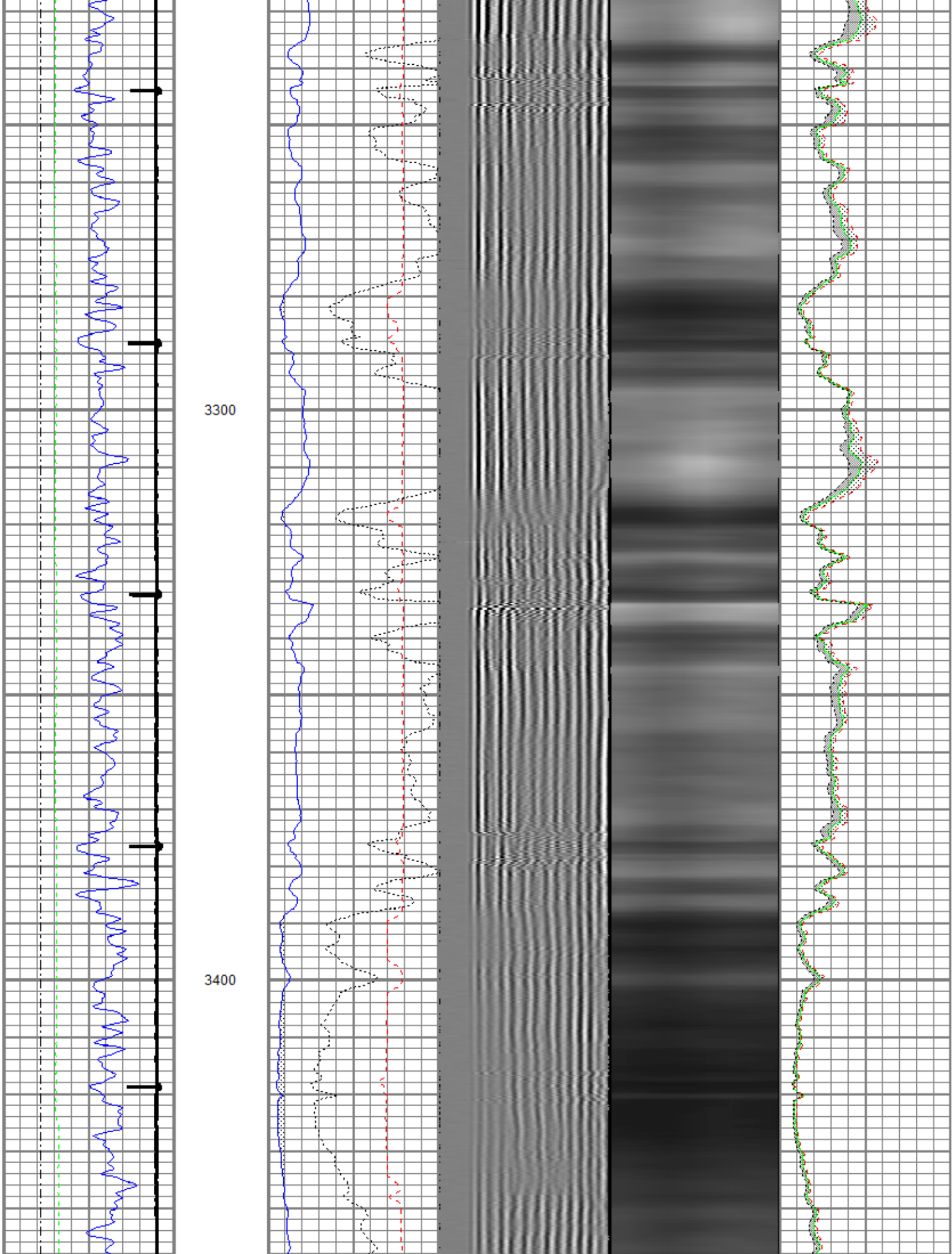


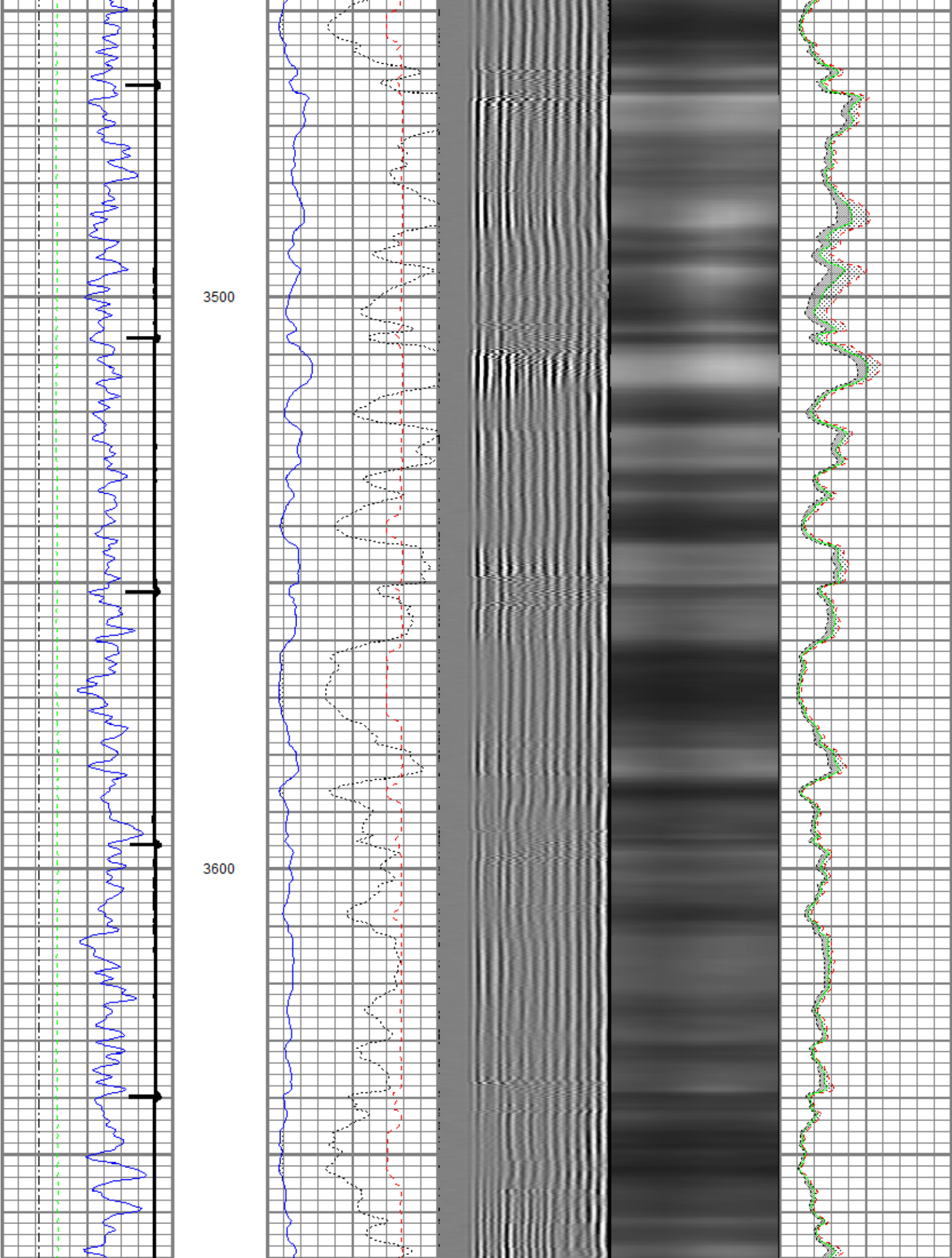


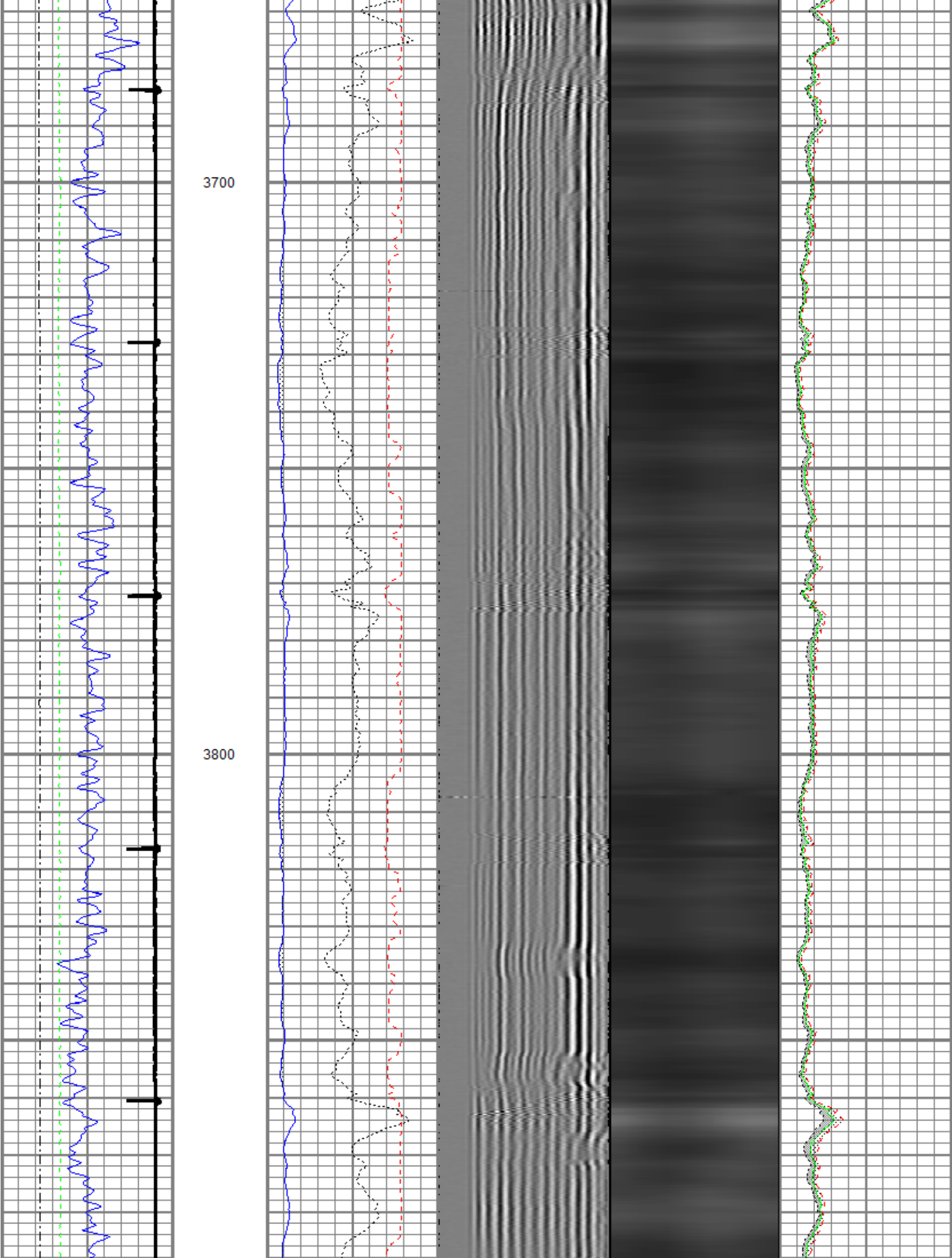
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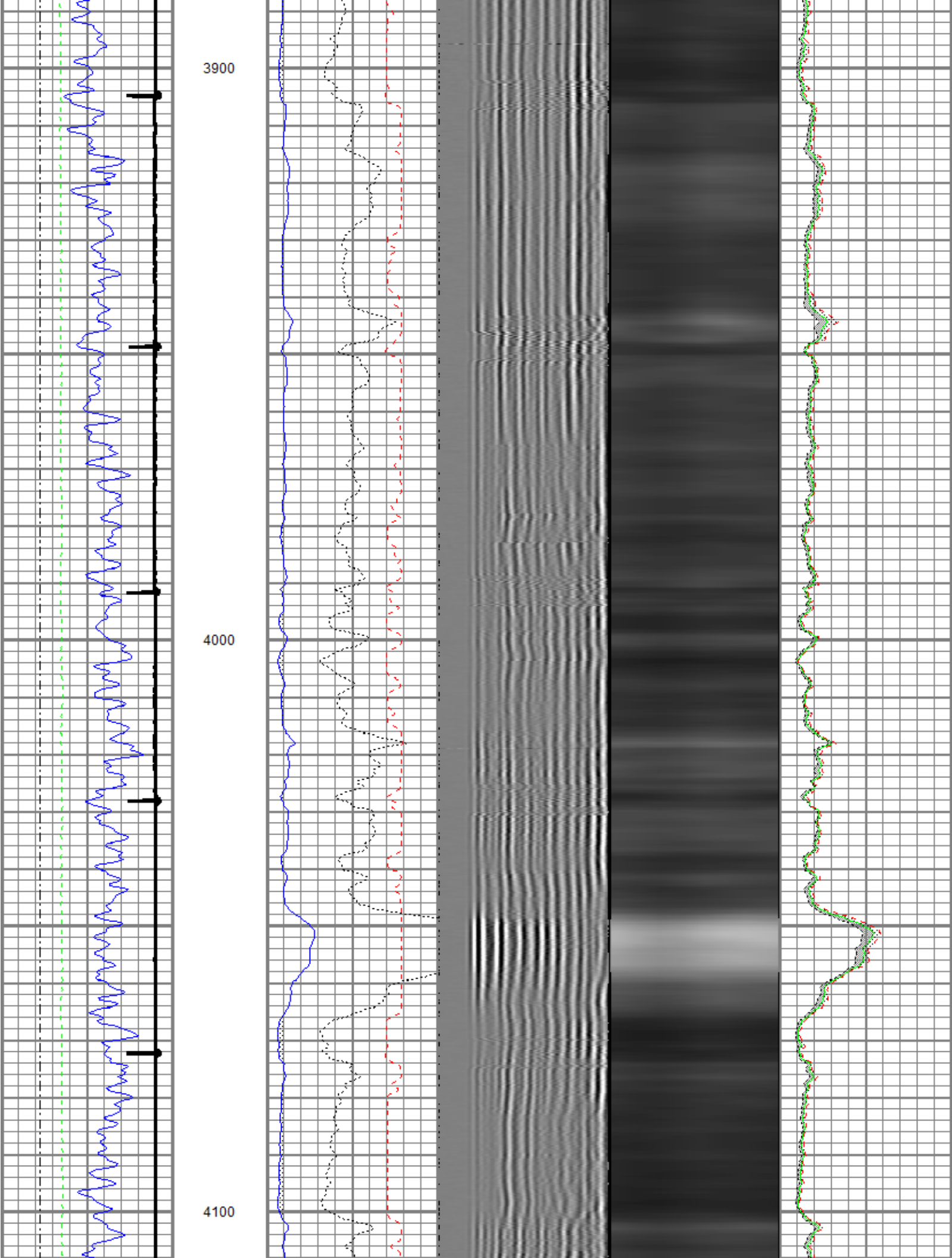
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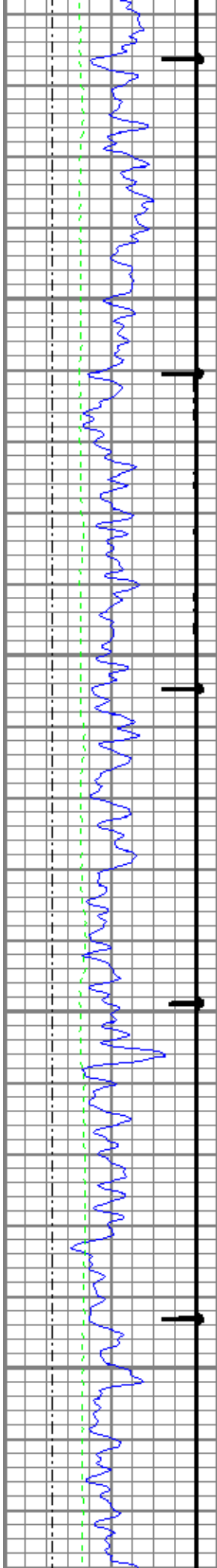






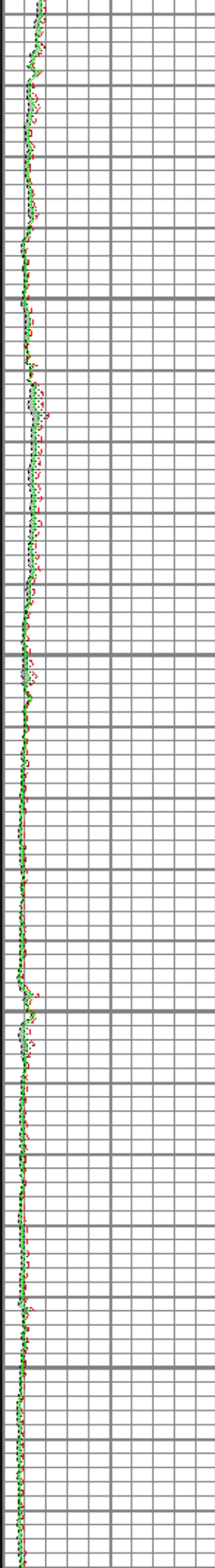
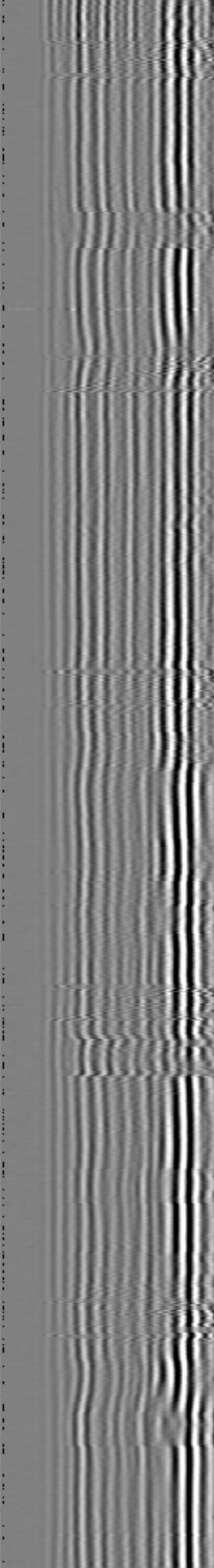
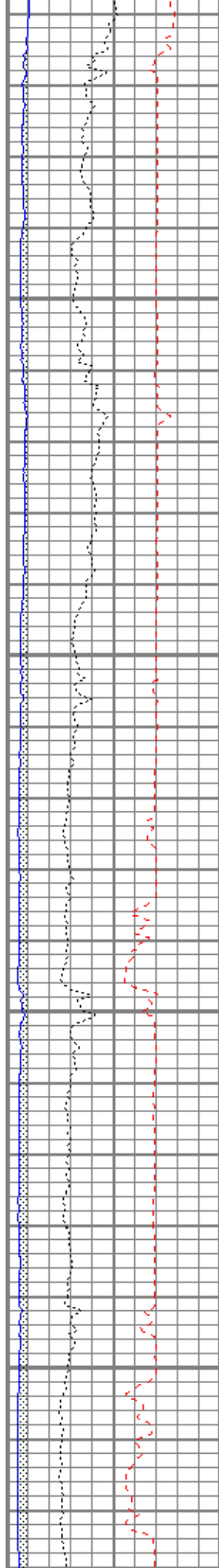


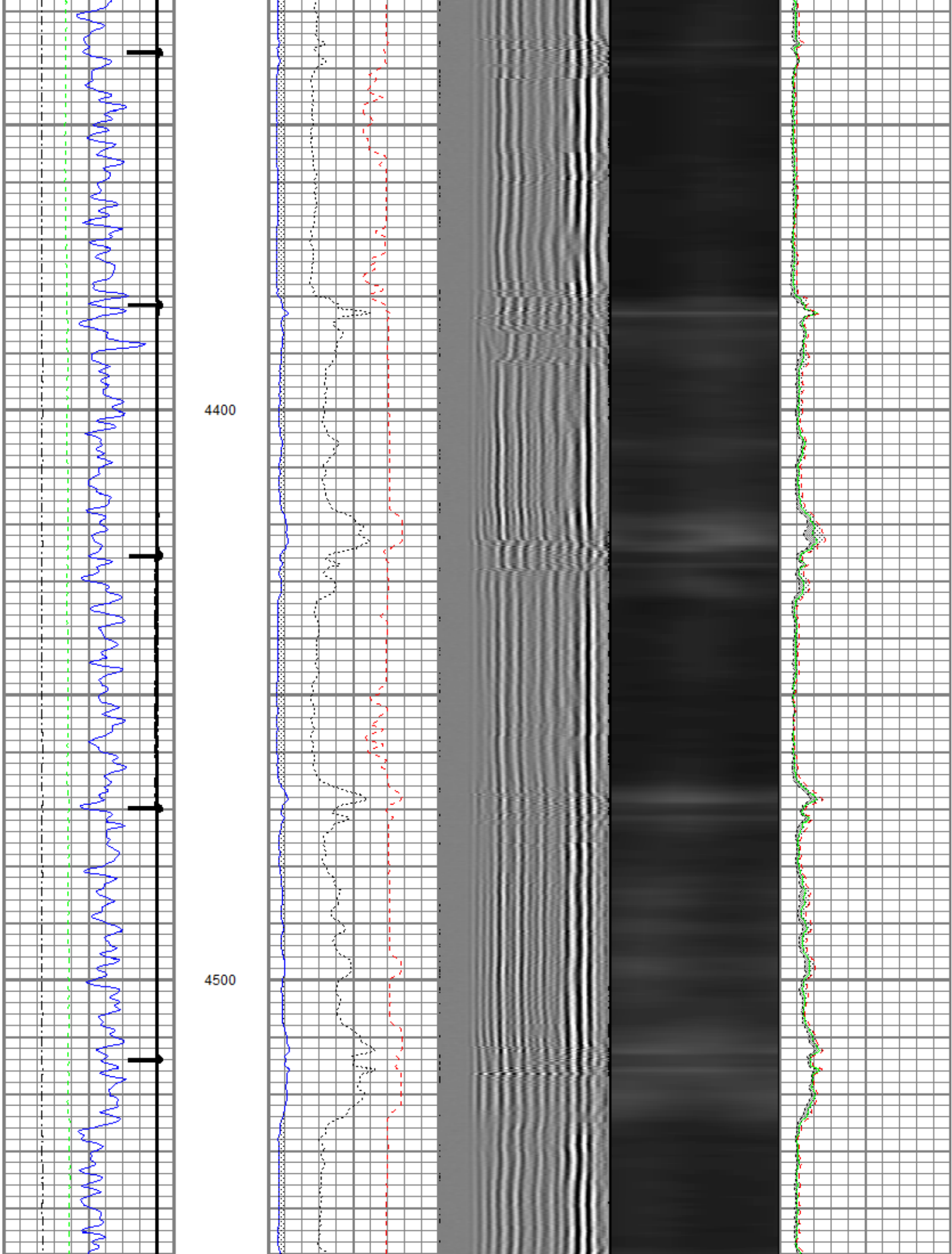


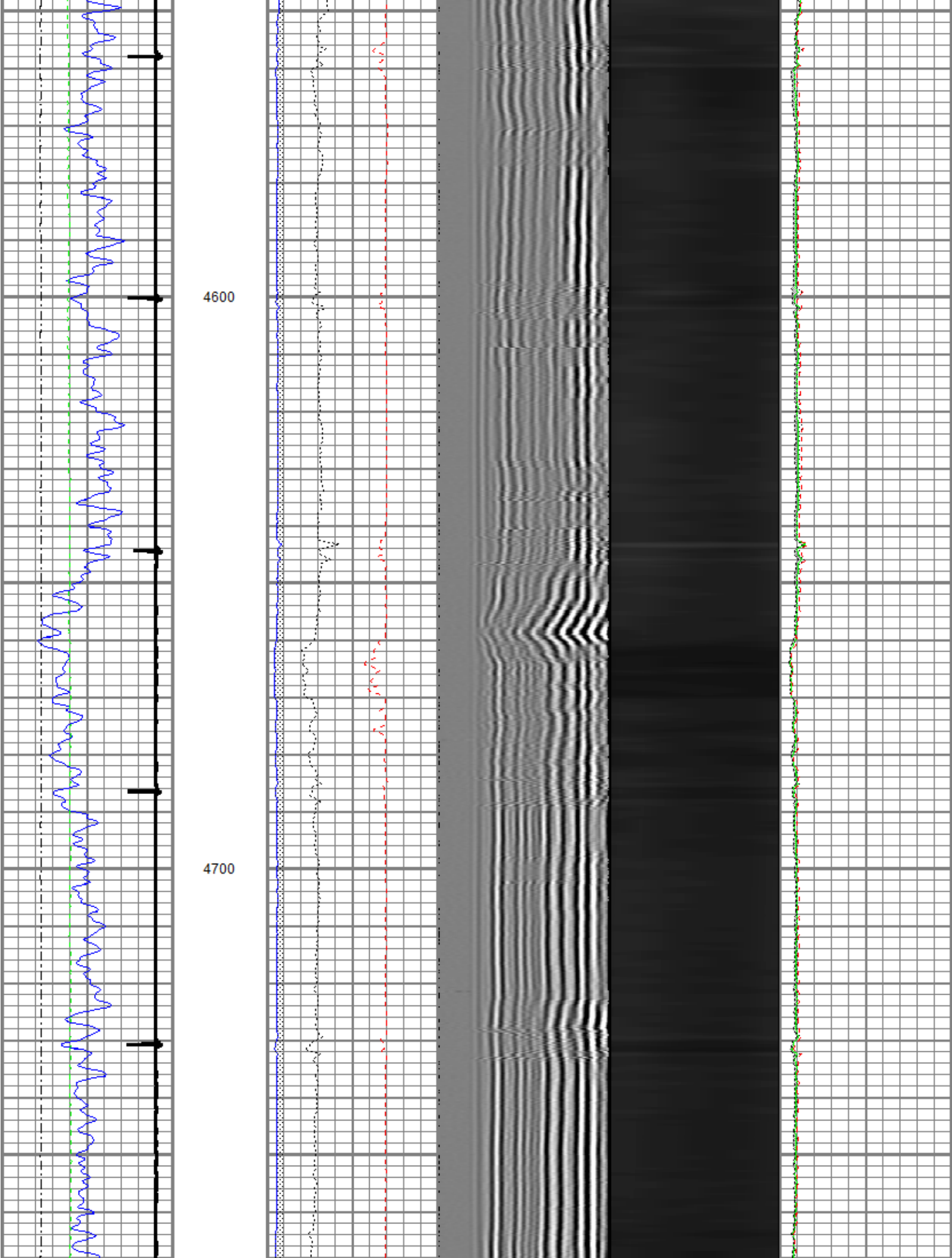


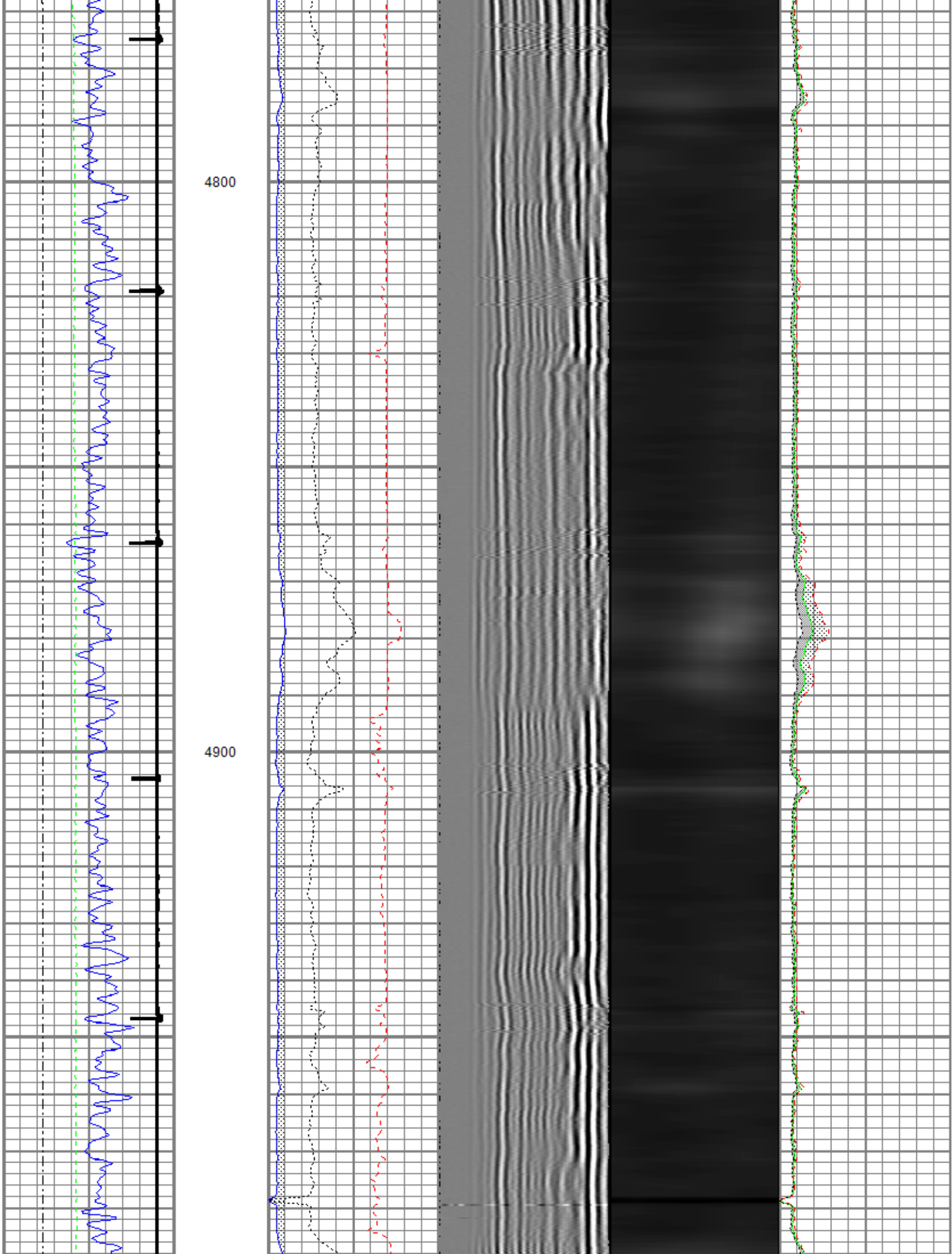
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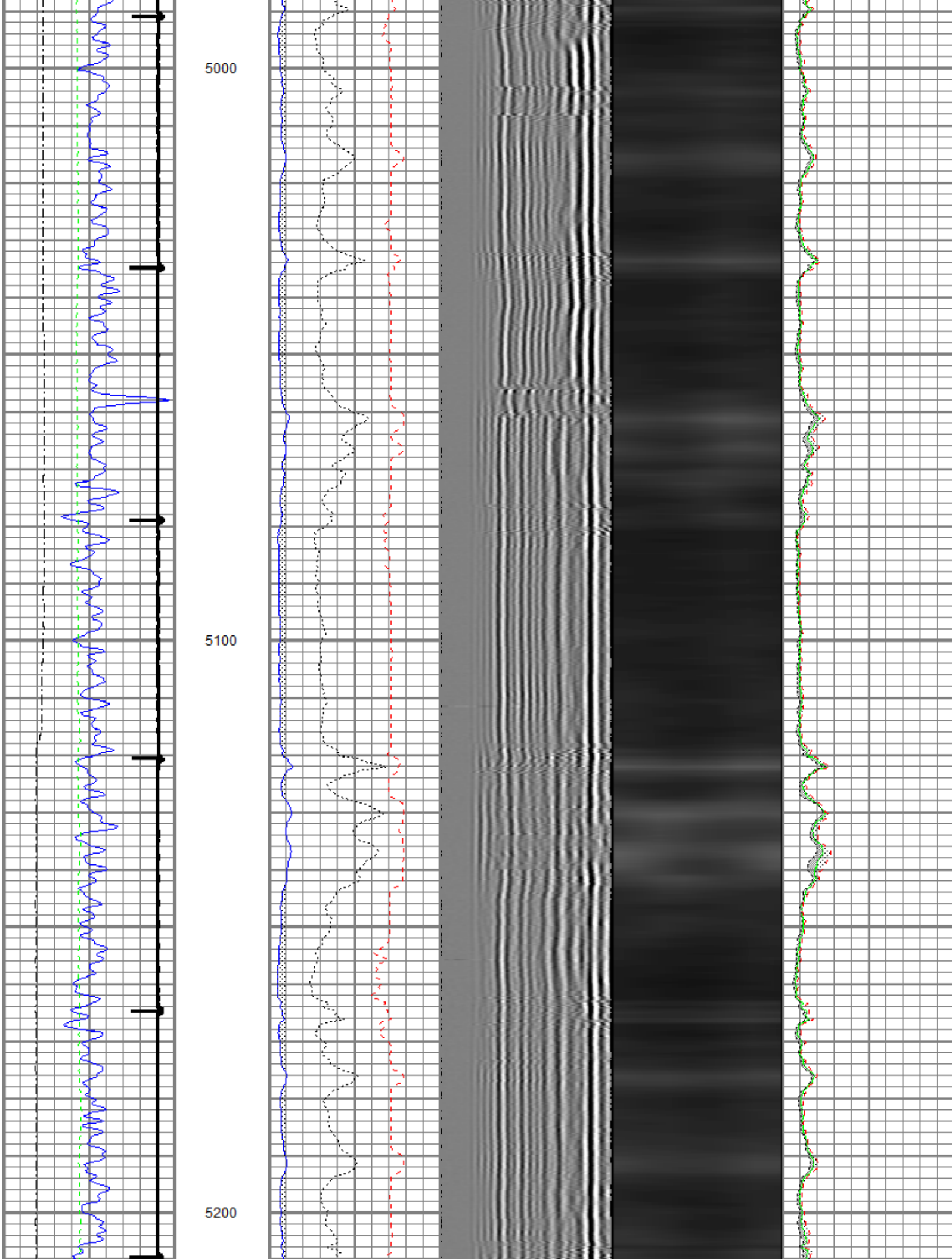
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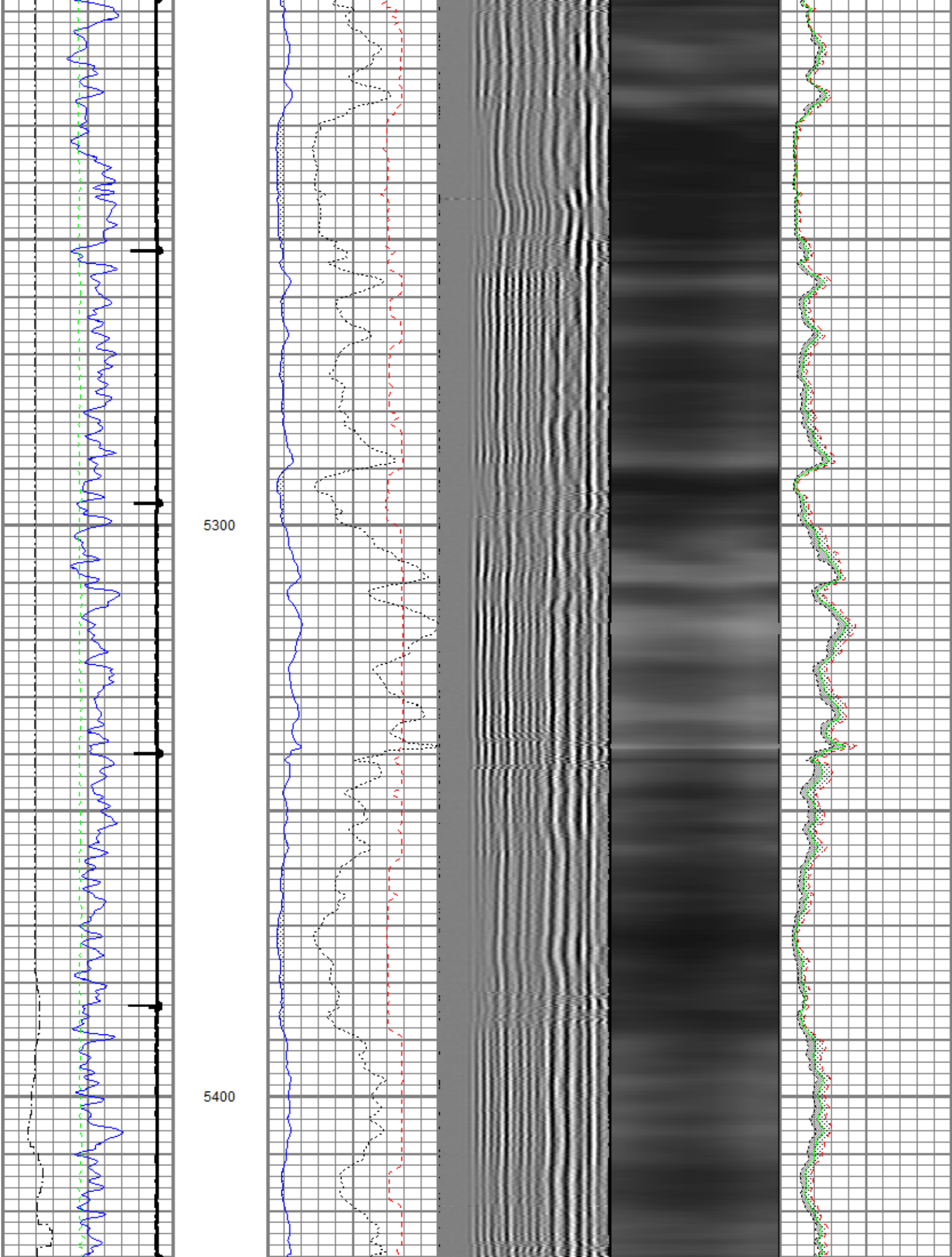


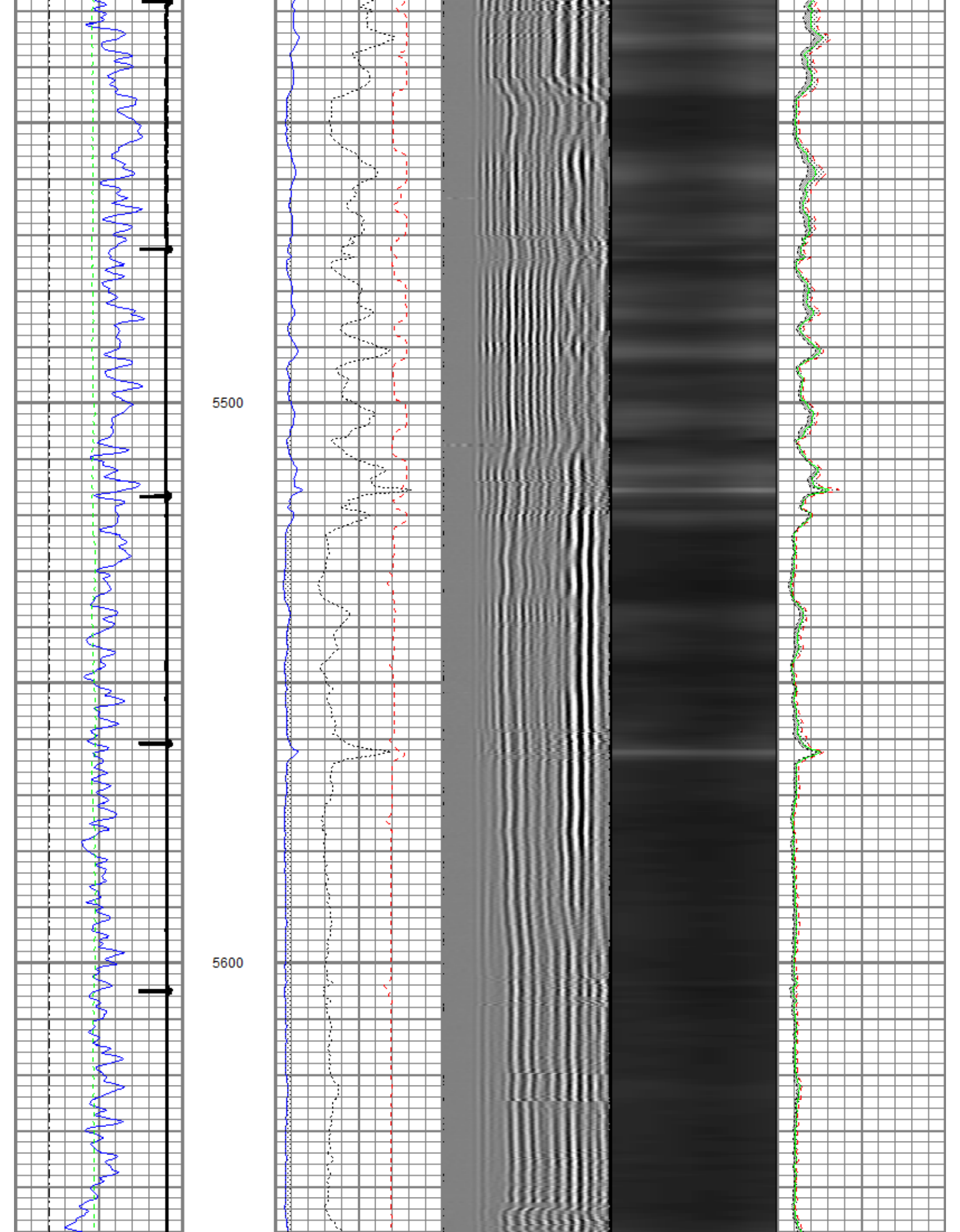


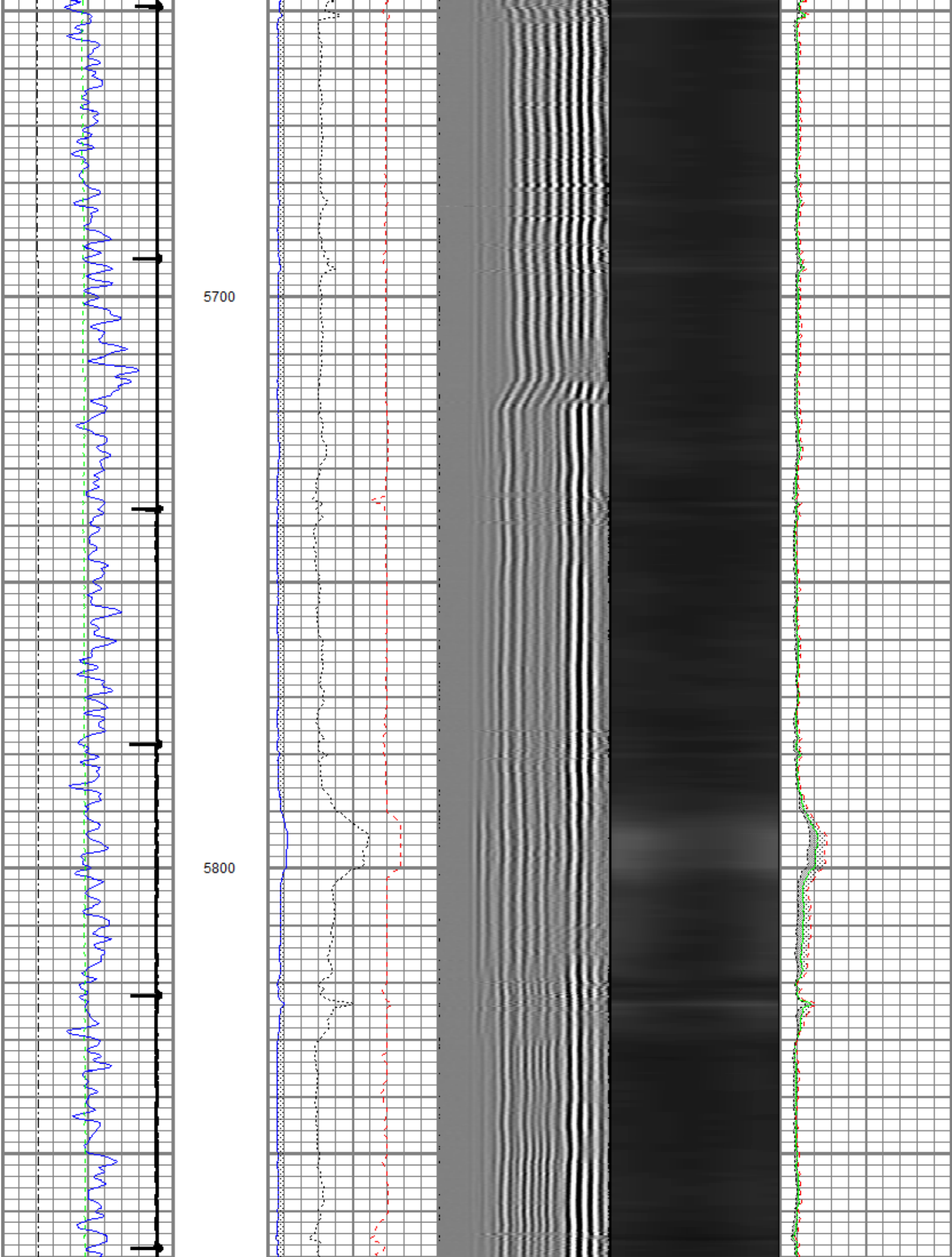


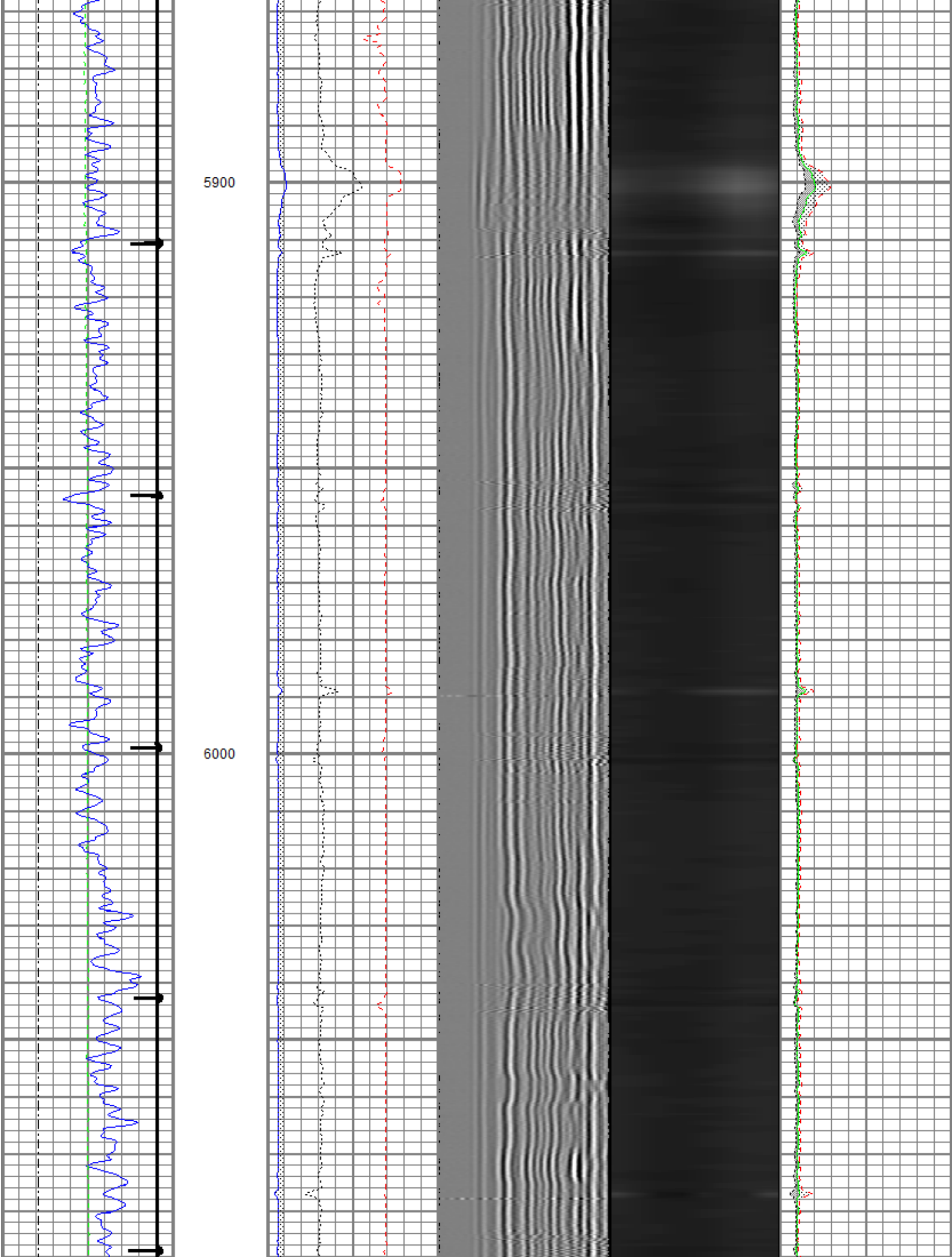


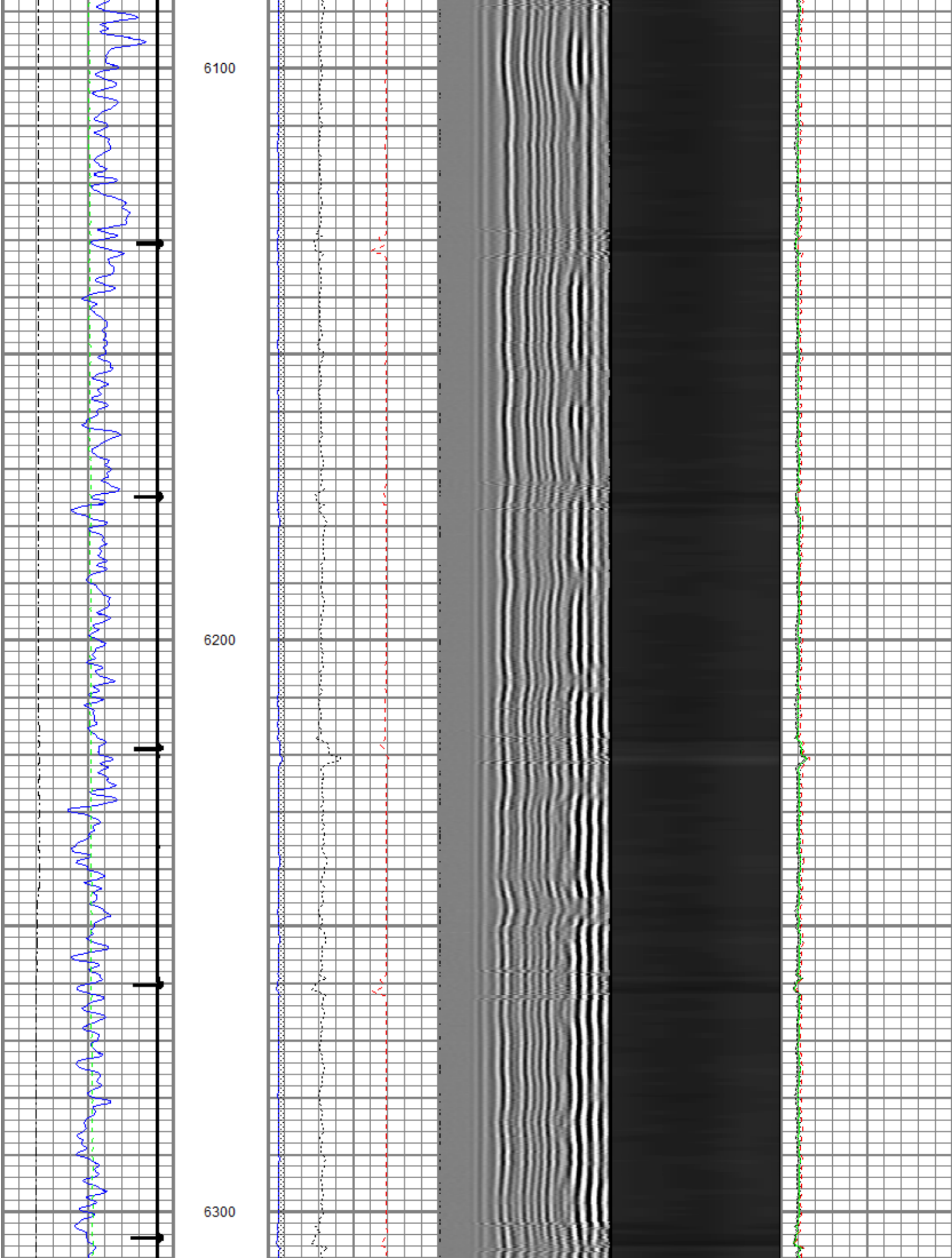


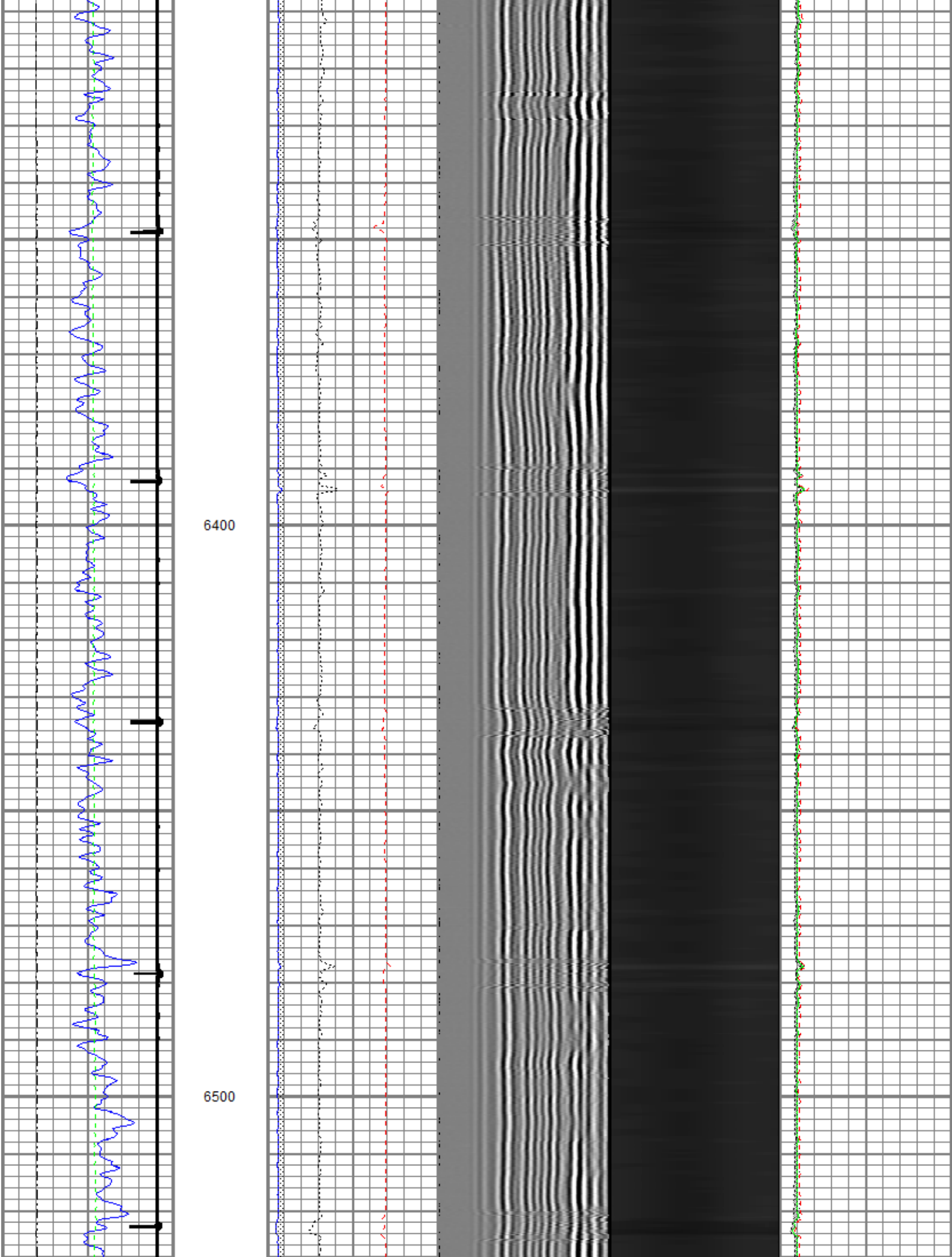


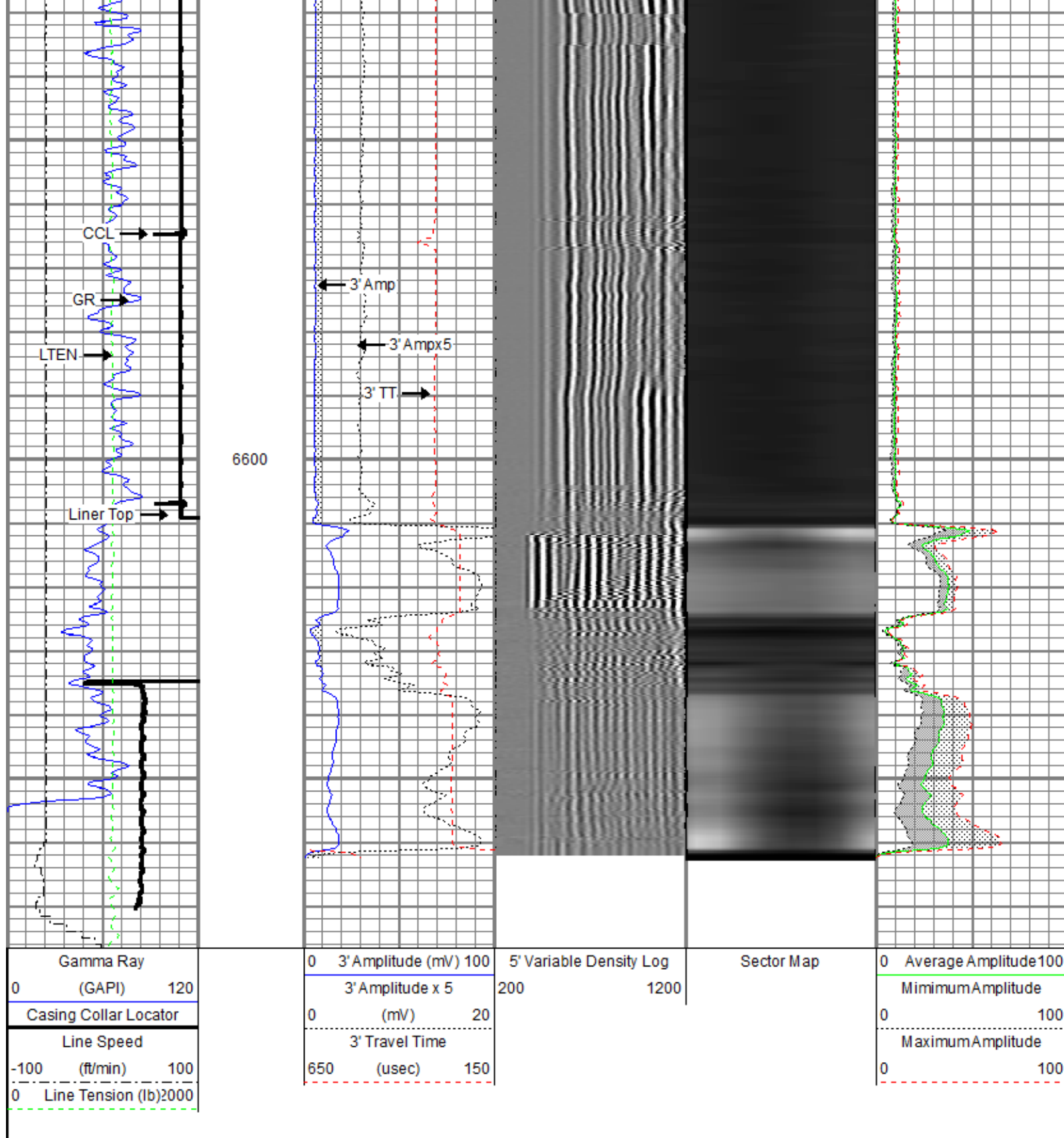












4.5 Main Pass

Logged with 2800 PSI at surface

Database File: anadarko_hansen_state_26c-36hz_rcbl-cil.db

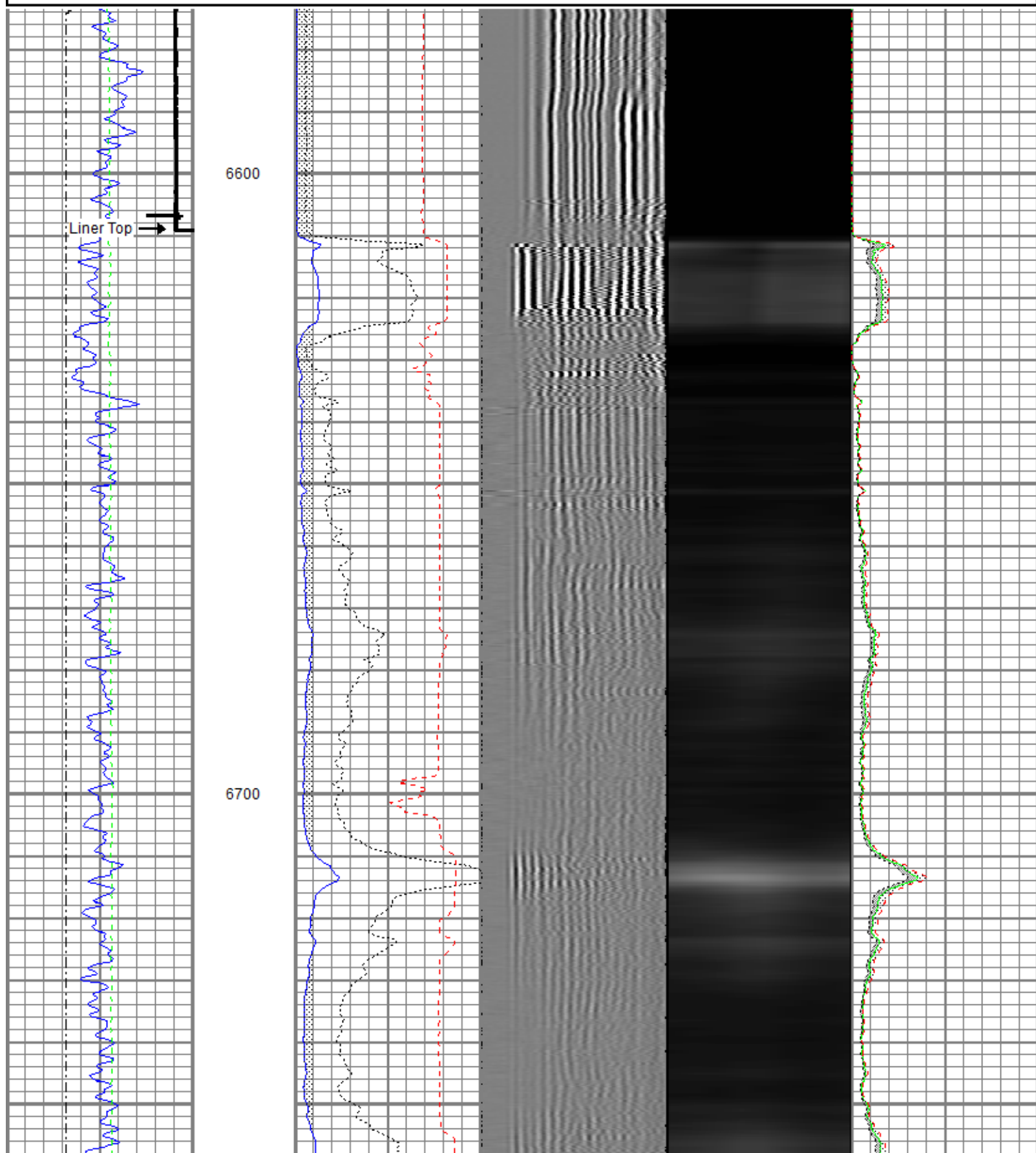
Dataset Pathname: 4.5main

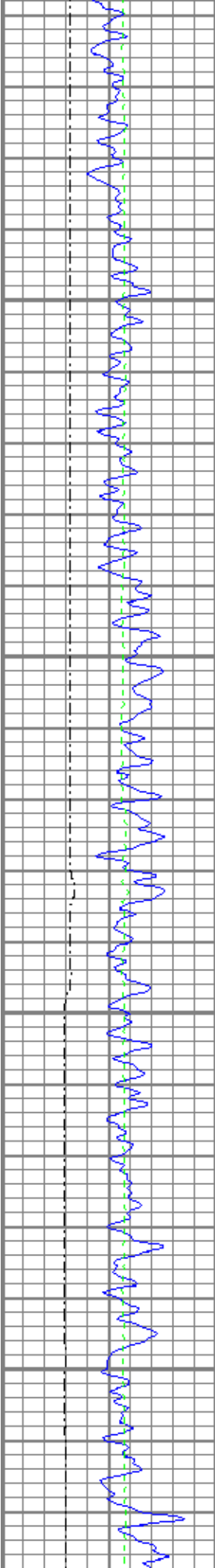
Presentation Format: rbt004

Dataset Creation: Thu Nov 20 15:55:33 2014 by Log 7.0 B1

Checked by: Depth in Feet scaled 1:240

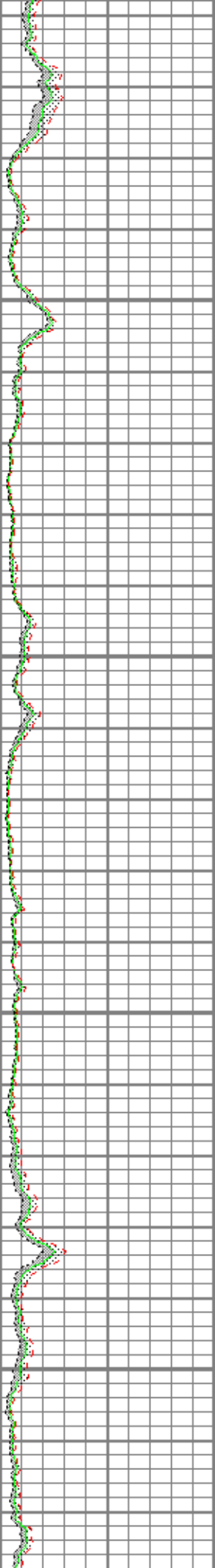
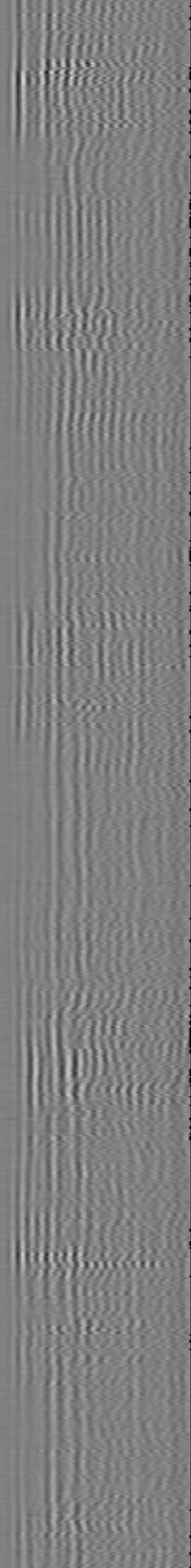
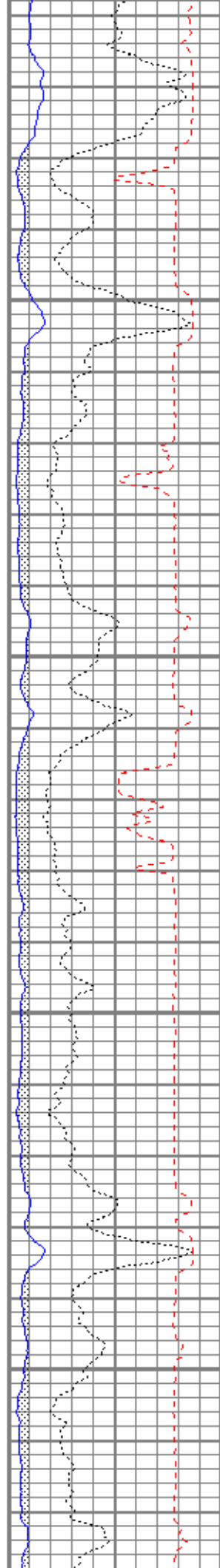
Gamma Ray		0	3' Amplitude (mV)	100	5' Variable Density Log		Sector Map	0	Average Amplitude	100
0	(GAPI)	120	3' Amplitude x 5		200	1200			Minimum Amplitude	
Casing Collar Locator			0	(mV)	20			0		100
Line Speed			3' Travel Time						Maximum Amplitude	
-150	(ft/min)	150	650	(usec)	150			0		100
Line Tension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

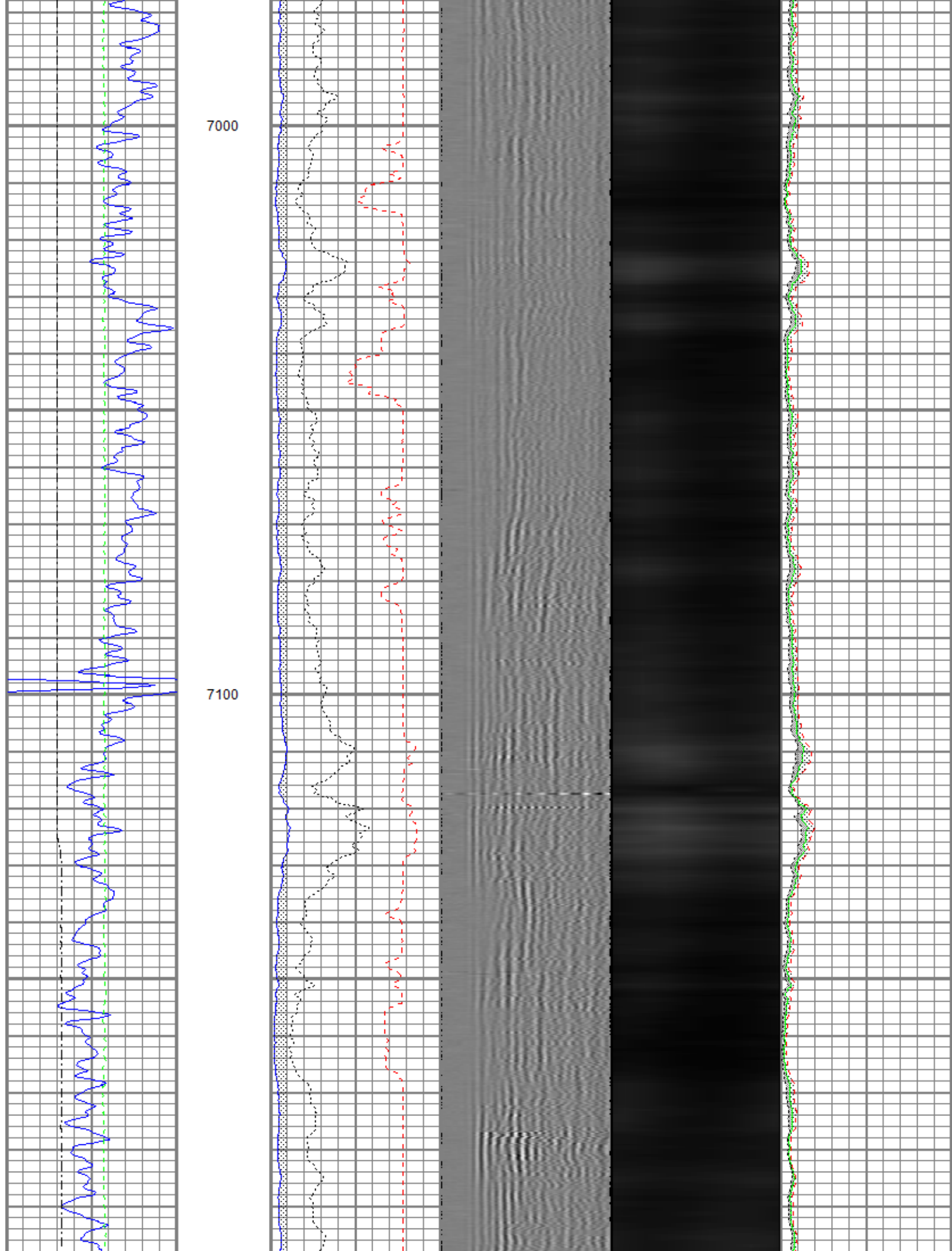


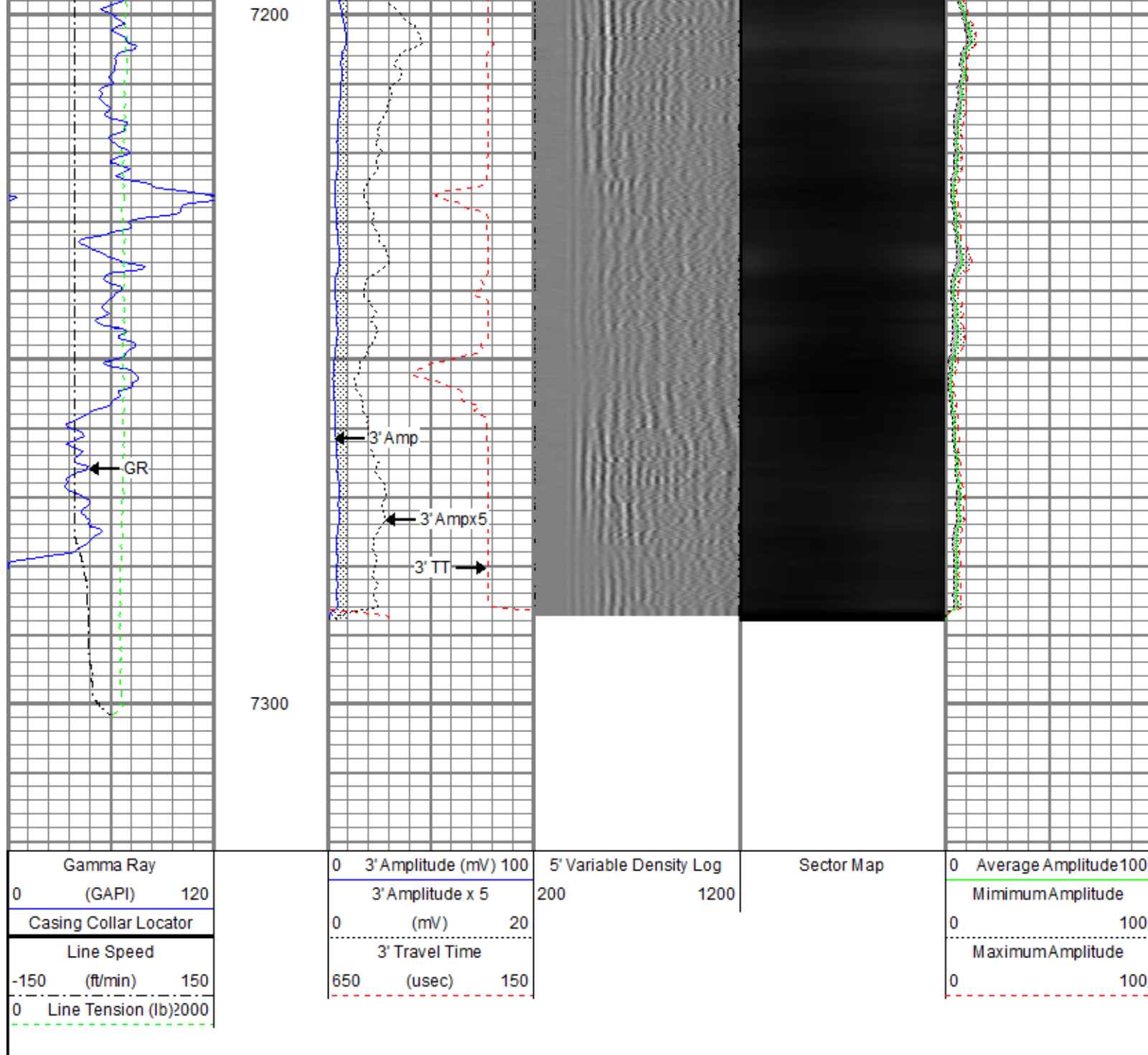


6800

6900



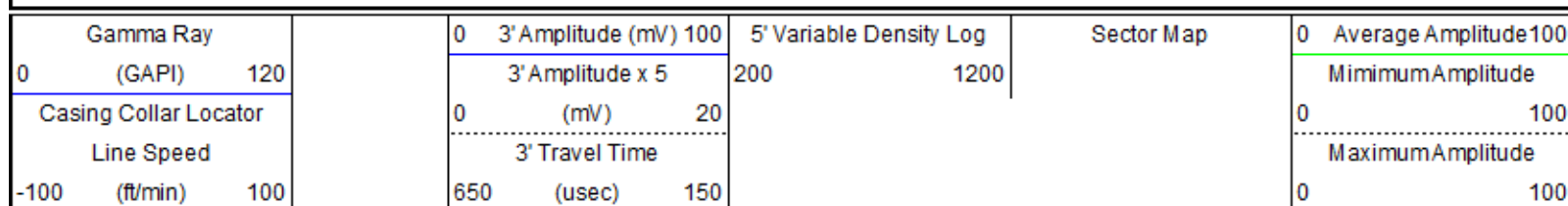


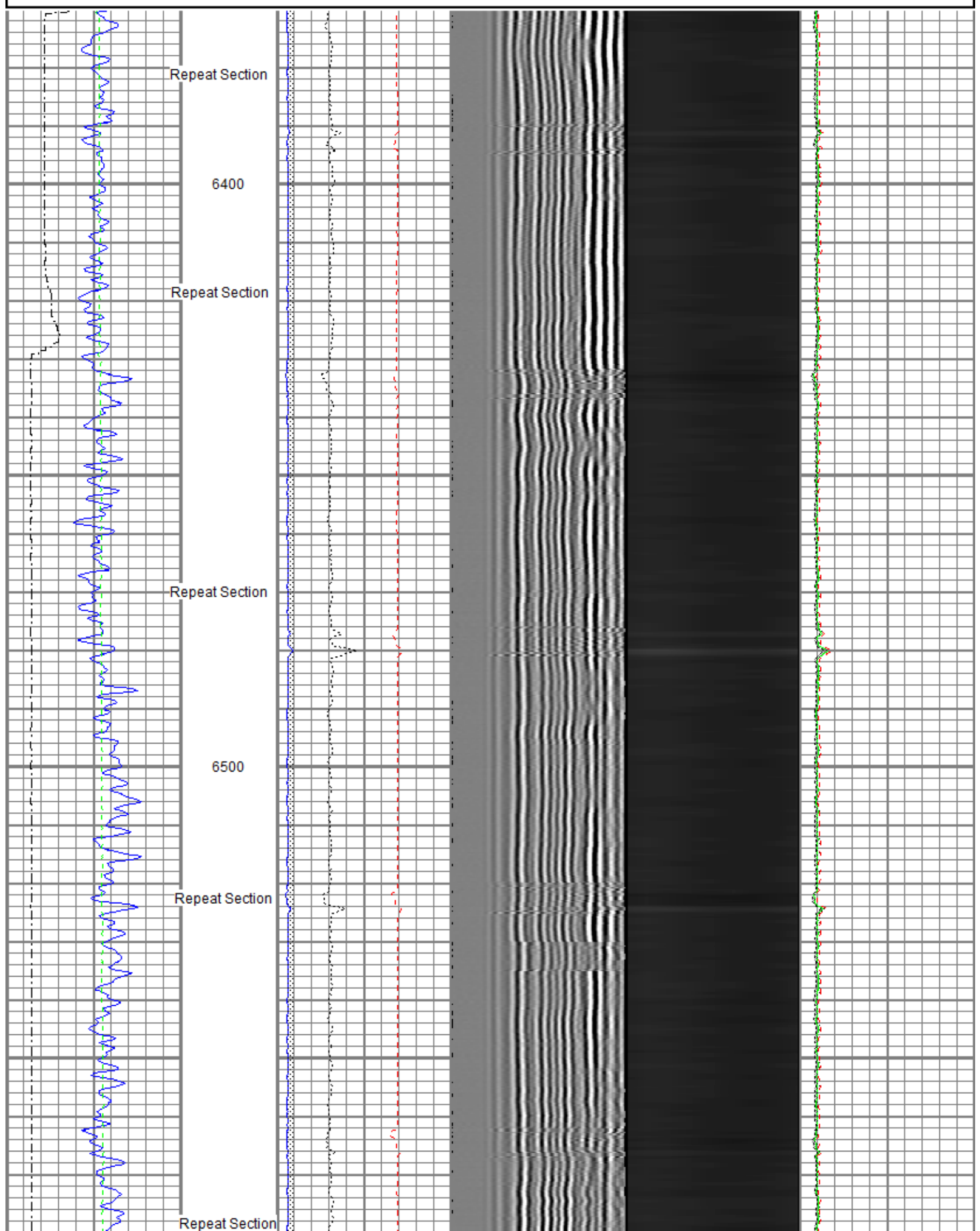


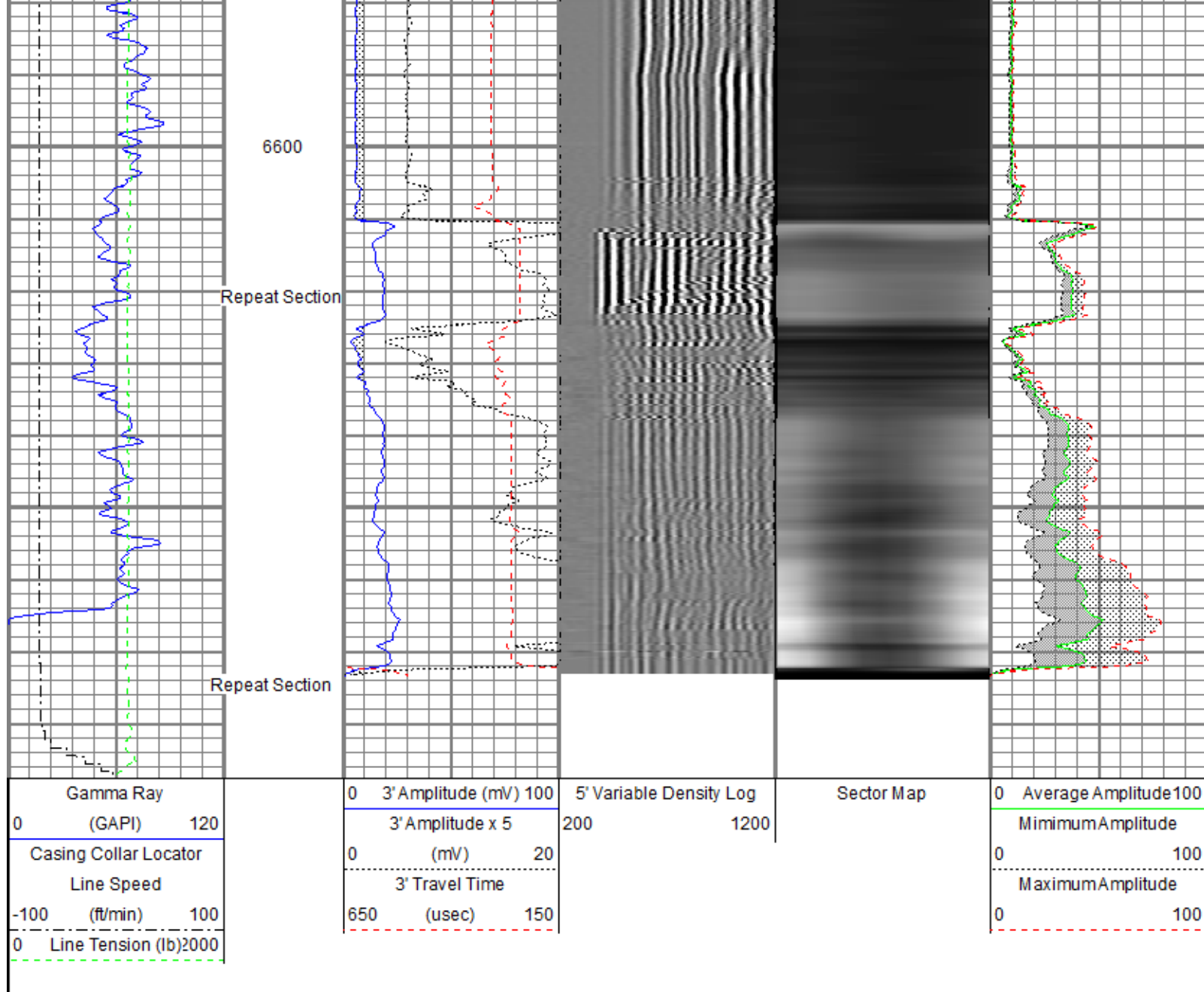
Repeat Pass

Logged with 2800 PSI induced at surface

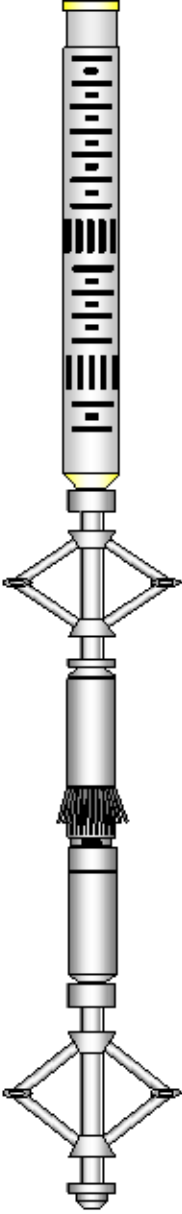
Database File: anadarko_hansen_state_26c-36hz_rcbl-cil.db
 Dataset Pathname: repeat
 Presentation Format: rbt4_mit
 Dataset Creation: Thu Nov 20 16:19:59 2014 by Log 7.0 B1
 Charted by: Depth in Feet scaled 1:240







Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
GR	22.81		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 (10013899) 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	15.42		UW_RBT-UW_RBT_004 (10013454) 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 (082) 2-3/4" DSS 5 Arm Roller Centralizer	2.55	2.75	32.00
MIT	5.41		UW_MIT-UW_MIT40_027 (218950) 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
TSTAMP	0.00					
ITEMPX	0.00					
HVOLTX	0.00		UW_BUL-UW_BUL_006 (218707) Sondex Ultrawire Bullnose Terminator	0.22	1.69	1.20
Dataset: anadarko_hansen_state_26c-36hz_rcbl-cil.db: field/well/run1/main Total Length: 27.05 ft Total Weight: 319.30 lb O.D. 3.13 in						

Calibration Report			
Database File:	anadarko_hansen_state_26c-36hz_rcbl-cil.db		
Dataset Pathname:	postcal		
Dataset Creation:	Thu Nov 20 18:57:25 2014 by Log 7.0 B1		
Multi-finger Imaging Tool Calibration Report			
	Serial Number:	218950	
	Number of Fingers:	40	
	Tool Model:	UW_MIT40_027	
Inclinometer Calibration Report			
	Performed:	Fri, Oct, 10 10:41:51 2008	
	Calibration Angle:	45	
		Inc X	Inc Y
Vertical:		1996	1975
Finger 1 up:		2238	2226
Finger 31 up:		1760	2216
Finger 21 up:		1769	1745
Finger 11 up:		2250	1738
Sensitivity ratio:	1.00023		
X-axis angle:	314.283		

Finger Calibration Report

Performed:

Thu Nov 20 15:00:24 2014

Ring size: (in)	4	Sens	5	Sens	6	Sens	7
Finger 01:	1450	276.0	1726	284.0	2010	302.0	2312
Finger 02:	1504	250.0	1754	255.0	2009	267.0	2276
Finger 03:	1409	278.0	1687	285.0	1972	306.0	2278
Finger 04:	1441	279.0	1720	285.0	2005	294.0	2299
Finger 05:	1478	270.0	1748	270.0	2018	283.0	2301
Finger 06:	1396	284.0	1680	289.0	1969	304.0	2273
Finger 07:	1402	276.0	1678	286.0	1964	300.0	2264
Finger 08:	1407	272.0	1679	281.0	1960	292.0	2252
Finger 09:	1418	282.0	1700	288.0	1988	302.0	2290
Finger 10:	1443	271.0	1714	279.0	1993	287.0	2280
Finger 11:	1413	273.0	1686	288.0	1974	298.0	2272
Finger 12:	1369	279.0	1648	296.0	1944	304.0	2248
Finger 13:	1468	258.0	1726	269.0	1995	274.0	2269
Finger 14:	1419	263.0	1682	284.0	1966	291.0	2257
Finger 15:	1415	275.0	1690	295.0	1985	301.0	2286
Finger 16:	1426	268.0	1694	291.0	1985	292.0	2277
Finger 17:	1424	273.0	1697	300.0	1997	300.0	2297
Finger 18:	1419	264.0	1683	294.0	1977	290.0	2267
Finger 19:	1465	268.0	1733	295.0	2028	292.0	2320
Finger 20:	1455	266.0	1721	297.0	2018	298.0	2316
Finger 21:	1384	281.0	1665	310.0	1975	316.0	2291
Finger 22:	1440	263.0	1703	288.0	1991	289.0	2280
Finger 23:	1445	268.0	1713	297.0	2010	298.0	2308
Finger 24:	1480	268.0	1748	296.0	2044	288.0	2332
Finger 25:	1456	272.0	1728	303.0	2031	299.0	2330
Finger 26:	1423	279.0	1702	301.0	2003	304.0	2307
Finger 27:	1482	265.0	1747	293.0	2040	290.0	2330
Finger 28:	1442	275.0	1717	300.0	2017	305.0	2322
Finger 29:	1533	253.0	1786	282.0	2068	284.0	2352
Finger 30:	1397	273.0	1670	300.0	1970	311.0	2281
Finger 31:	1456	281.0	1737	303.0	2040	308.0	2348
Finger 32:	1516	265.0	1781	283.0	2064	286.0	2350
Finger 33:	1434	281.0	1715	305.0	2020	311.0	2331
Finger 34:	1461	276.0	1737	297.0	2034	311.0	2345
Finger 35:	1487	257.0	1744	271.0	2015	280.0	2295
Finger 36:	1490	264.0	1754	283.0	2037	295.0	2332
Finger 37:	1466	280.0	1746	293.0	2039	305.0	2344
Finger 38:	1512	247.0	1759	263.0	2022	273.0	2295
Finger 39:	1451	268.0	1719	281.0	2000	292.0	2292
Finger 40:	1409	282.0	1691	295.0	1986	312.0	2298

Post Survey Calibration Check

Performed:

Thu Nov 20 18:56:54 2014

Ring size: (in)	4	Nom. wear	5	Nom. wear	6	Nom. wear	7	Nom. wear
Finger 01:	4.006	0.003	5.006	0.003	6.003	0.002	7.003	0.002
Finger 02:	3.988	-0.006	4.996	-0.002	5.996	-0.002	6.997	-0.002
Finger 03:	3.999	-0.001	5.001	0.001	6.007	0.003	7.006	0.003
Finger 04:	4.008	0.004	5.003	0.001	6.006	0.003	7.003	0.001
Finger 05:	4.005	0.002	4.996	-0.002	6.000	0.000	6.999	-0.001
Finger 06:	4.007	0.004	5.003	0.001	6.006	0.003	7.008	0.004
Finger 07:	3.984	-0.008	4.999	-0.000	6.001	0.000	7.006	0.003
Finger 08:	3.988	-0.006	4.993	-0.003	6.004	0.002	7.010	0.005
Finger 09:	4.005	0.002	4.999	-0.000	6.004	0.002	7.004	0.002
Finger 10:	4.017	0.009	5.002	0.001	6.001	0.000	6.998	-0.001
Finger 11:	3.990	-0.005	5.001	0.000	6.004	0.002	7.001	0.000
Finger 12:	3.999	-0.001	5.001	0.000	6.004	0.002	7.005	0.002
Finger 13:	4.006	0.003	4.999	-0.001	6.000	0.000	6.994	-0.003
Finger 14:	4.009	0.004	5.011	0.005	6.004	0.002	7.002	0.001
Finger 15:	3.993	-0.003	5.008	0.004	5.998	-0.001	6.997	-0.002
Finger 16:	4.011	0.006	5.011	0.006	6.008	0.004	7.007	0.004
Finger 17:	3.986	-0.007	5.005	0.002	5.999	-0.001	7.001	0.000
Finger 18:	3.996	-0.002	5.002	0.001	5.996	-0.002	7.007	0.004
Finger 19:	3.992	-0.004	4.999	-0.001	6.007	0.004	7.004	0.002
Finger 20:	3.995	-0.002	5.005	0.003	6.001	0.000	7.007	0.003

Finger 21:	3.994	-0.003	4.998	-0.001	6.005	0.002	6.996	-0.002
Finger 22:	3.999	-0.000	4.999	-0.001	6.002	0.001	6.998	-0.001
Finger 23:	3.999	-0.000	5.002	0.001	6.007	0.003	7.002	0.001
Finger 24:	4.008	0.004	5.007	0.003	5.998	-0.001	6.998	-0.001
Finger 25:	3.999	-0.001	5.008	0.004	5.999	-0.000	7.006	0.003
Finger 26:	3.994	-0.003	4.988	-0.006	6.001	0.000	7.009	0.004
Finger 27:	4.004	0.002	5.003	0.001	6.004	0.002	7.005	0.003
Finger 28:	4.000	0.000	4.995	-0.003	5.999	-0.001	6.999	-0.001
Finger 29:	3.981	-0.010	4.999	-0.000	6.002	0.001	6.998	-0.001
Finger 30:	4.012	0.006	5.006	0.003	6.012	0.006	7.008	0.004
Finger 31:	3.995	-0.003	4.998	-0.001	6.005	0.002	7.005	0.002
Finger 32:	4.000	0.000	5.000	-0.000	6.002	0.001	6.997	-0.001
Finger 33:	4.009	0.005	5.002	0.001	5.999	-0.000	7.002	0.001
Finger 34:	4.016	0.008	5.011	0.005	6.012	0.006	7.007	0.003
Finger 35:	3.994	-0.003	5.001	0.001	5.999	-0.000	7.005	0.003
Finger 36:	3.997	-0.002	5.009	0.004	6.002	0.001	7.003	0.002
Finger 37:	4.007	0.003	5.001	0.000	6.004	0.002	6.999	-0.000
Finger 38:	3.985	-0.007	5.003	0.002	5.986	-0.007	6.993	-0.004
Finger 39:	3.990	-0.005	5.007	0.004	6.003	0.002	7.000	-0.000
Finger 40:	3.988	-0.006	5.003	0.001	6.005	0.002	7.007	0.003
Average:	3.999	-0.001	5.002	0.001	6.002	0.001	7.002	0.001

Segmented Cement Bond Log Calibration Report

Serial Number: 10013454
Tool Model: UW_RBT_004

Calibration Casing Diameter: 7.000 in
Calibration Depth: -6.627 ft

Master Calibration, performed Thu Nov 20 15:04:23 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	-0.001	0.850	0.800	62.165	72.081	0.881
5FT	-0.002	0.303	0.800	62.165	200.745	1.290
S1	-0.000	0.630	0.000	100.000	158.723	0.012
S2	-0.003	0.673	0.000	100.000	148.116	0.387
S3	-0.002	0.724	0.000	100.000	137.811	0.267
S4	-0.003	0.744	0.000	100.000	133.995	0.347
S5	-0.001	0.750	0.000	100.000	133.275	0.076
S6	-0.002	0.734	0.000	100.000	135.839	0.332
S7	-0.001	0.667	0.000	100.000	149.571	0.183
S8	-0.001	0.622	0.000	100.000	160.546	0.218

Gamma Ray Calibration Report

Serial Number: 10013899
Tool Model: UW_PGR_020
Performed: Sun Jun 13 13:33:21 1993

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 1.0000 GAPI/cps



Company Kerr-McGee Oil and Gas Onshore LP
Well Hansen State 26C-36HZ
Field Wattenberg
County Weld
State Colorado

