



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company Kerr-McGee Oil & Gas Onshore, L.P.
Well Encore 1C-12HZ
Field Wattenberg
County Larimer
State Colorado

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Location:

API #: 05-069-06479

SEC 12 TWP 5N RGE 68W

Other Services
Gauge Ring

Permanent Datum Ground Level Elevation 4991'
Log Measured From Kelly Bushing 16 FT
Drilling Measured From Kelly Bushing

Elevation
K.B. 5007'
D.F. 5006'
G.L. 4991'

Date 22-SEP-2015

Run Number One

Depth Driller 14168 FT

Depth Logger 7774 FT

Bottom Logged Interval 7770 FT

Top Log Interval Surface

Open Hole Size 7.875"

Type Fluid Water

Density / Viscosity 8.34 lbm/gal

Max. Recorded Temp. 224°F

Estimated Cement Top 30 FT

Time Well Ready ROA

Time Logger on Bottom 10:52

Equipment Number HD-0324

Location Fort Lupton, CO

Recorded By Chad Bryan

Witnessed By Steve Vigil

Borehole Record

Tubing Record

To

Bit From

To

Size

Weight From

To

Casing Record Size (in) Wgt (lbs/ft) Grade Top Bottom

Surface Casing 9 5/8 36 J-55 Surface 1861 FT

Intermediate #1 5 1/2 17 HCP-110 Surface 14168 FT

Intermediate #2

Liner

<<< 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 16 FT
Gauge Ring ran to 7831 FT prior to log, with no debris found in Junk Basket
Casing Tally reported Marker Joint at 6780 FT
Recorded Marker Joint at 6812 FT to 6826 FT
Recorded with 2800 PSI surface induced pressure
Logging tools were clean and free of any debris upon completion of operations
Thank you for choosing FMC Technologies Completion Services, Inc.!!



Main Pass

Recorded with 2800 PSI Surface Induced Pressure

Database File: c:\warrior\data\0506906479_anadarko_encore 1c-12hz_09-22-15_rbl_revised\0506906479_anadarko

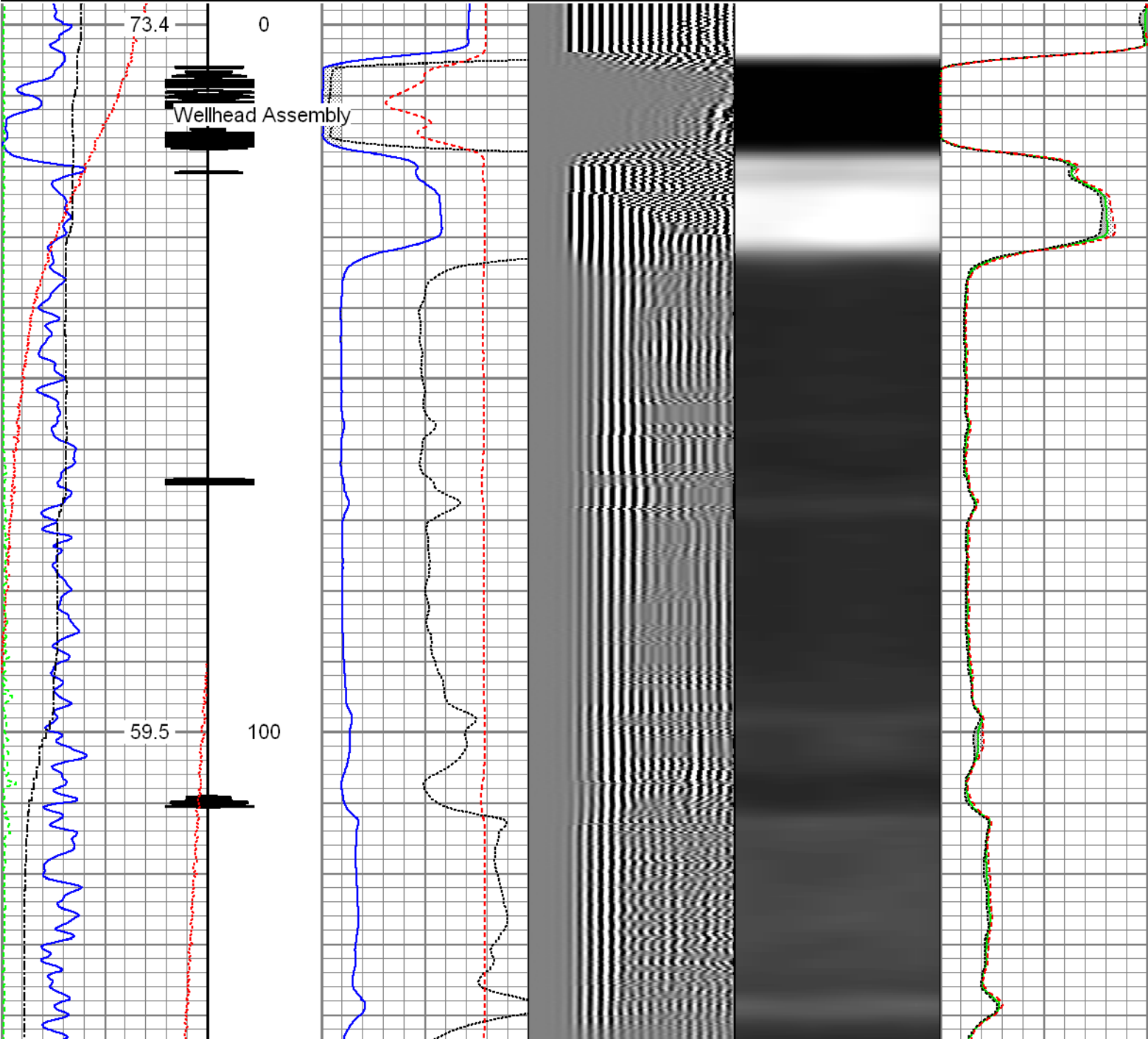
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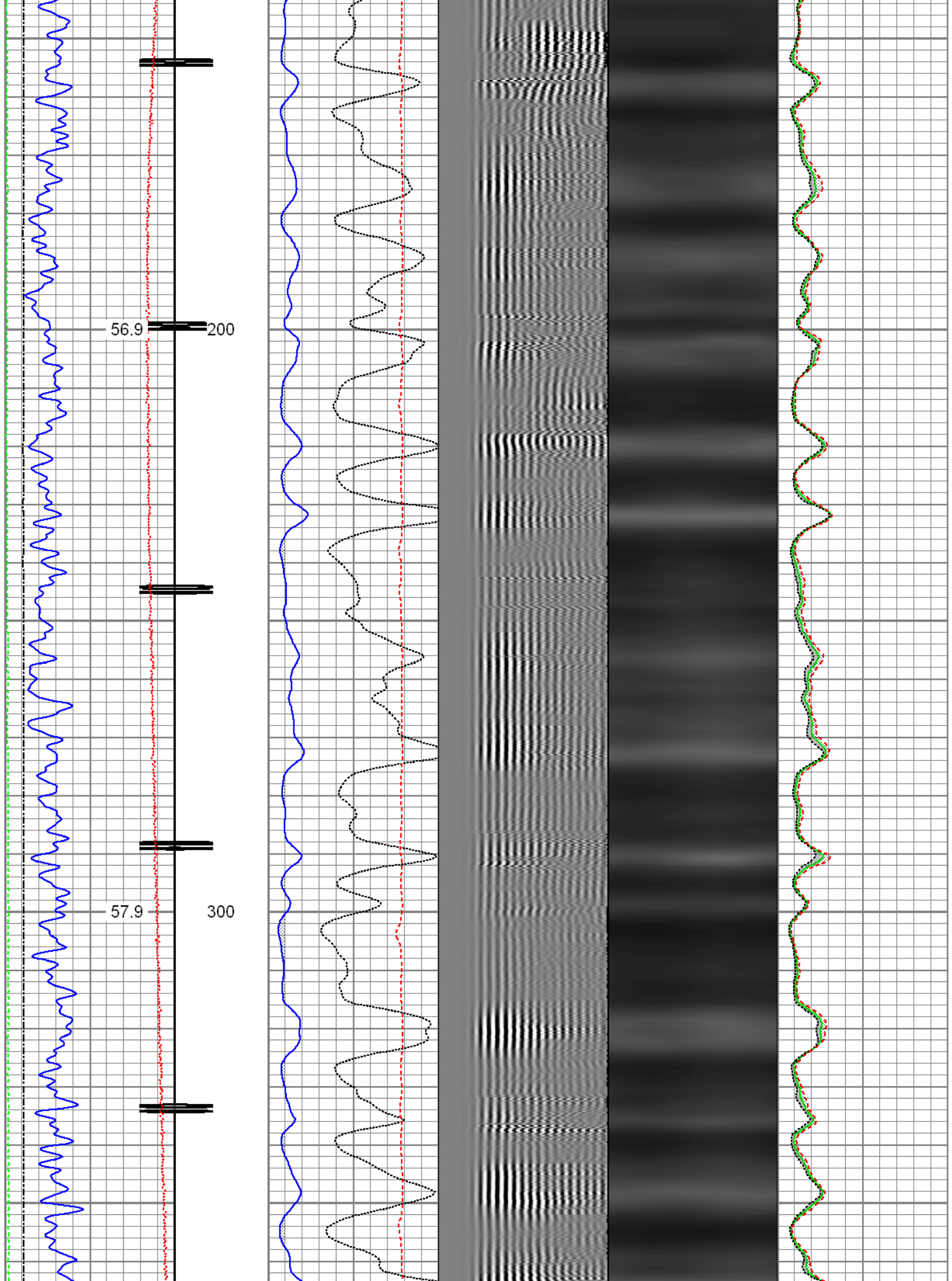
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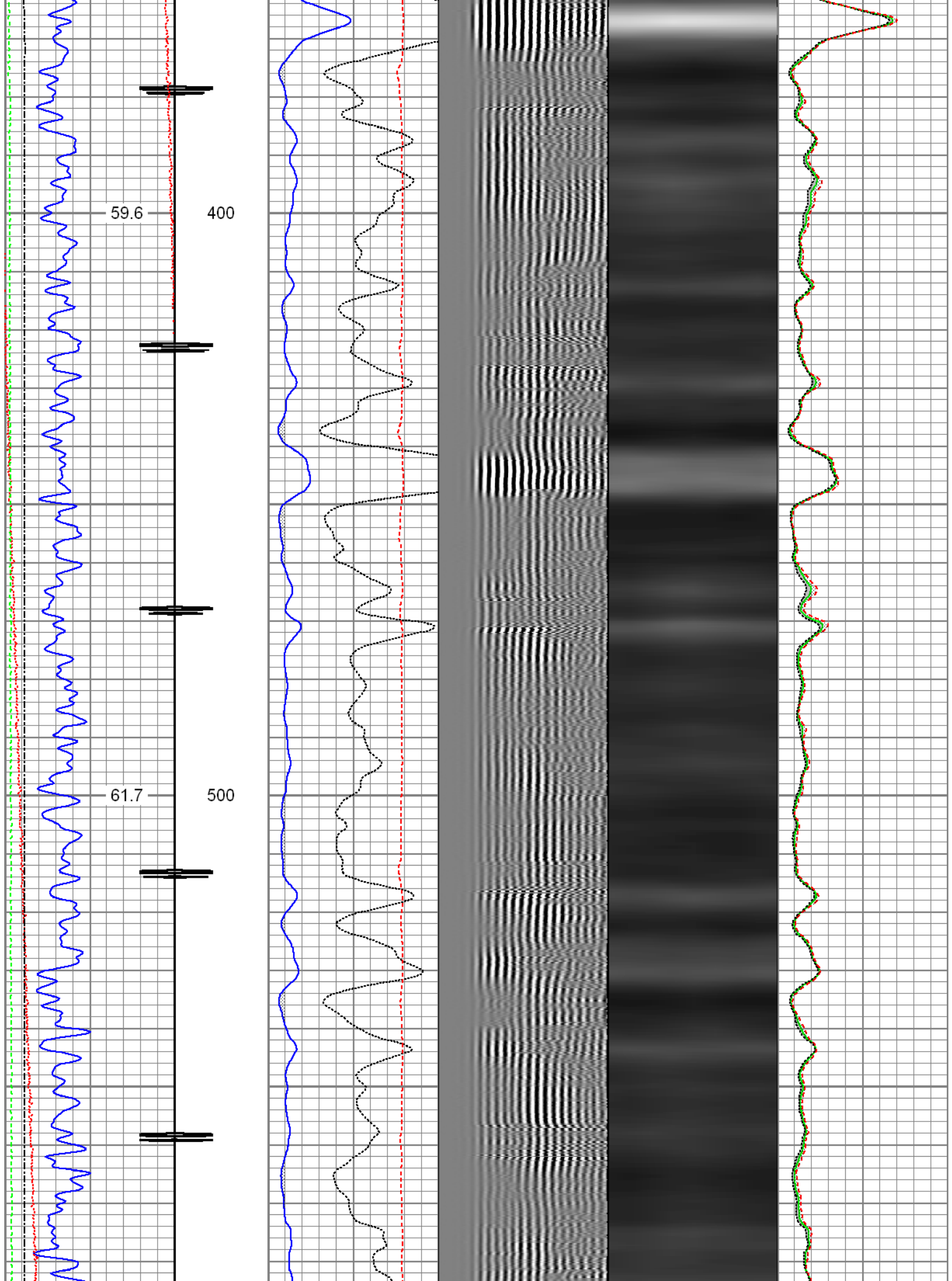
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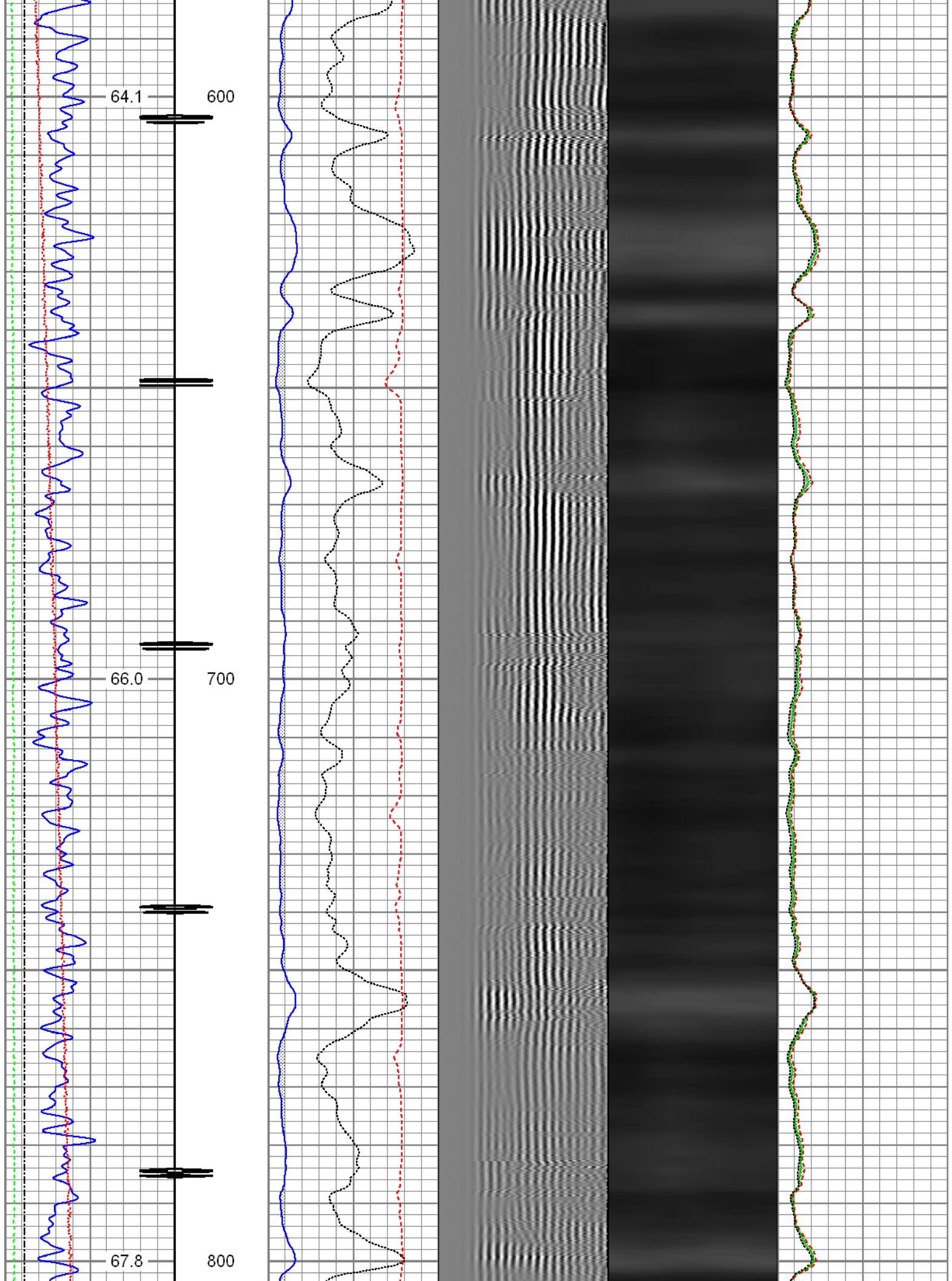
Charted by: Depth in Feet scaled 1:240

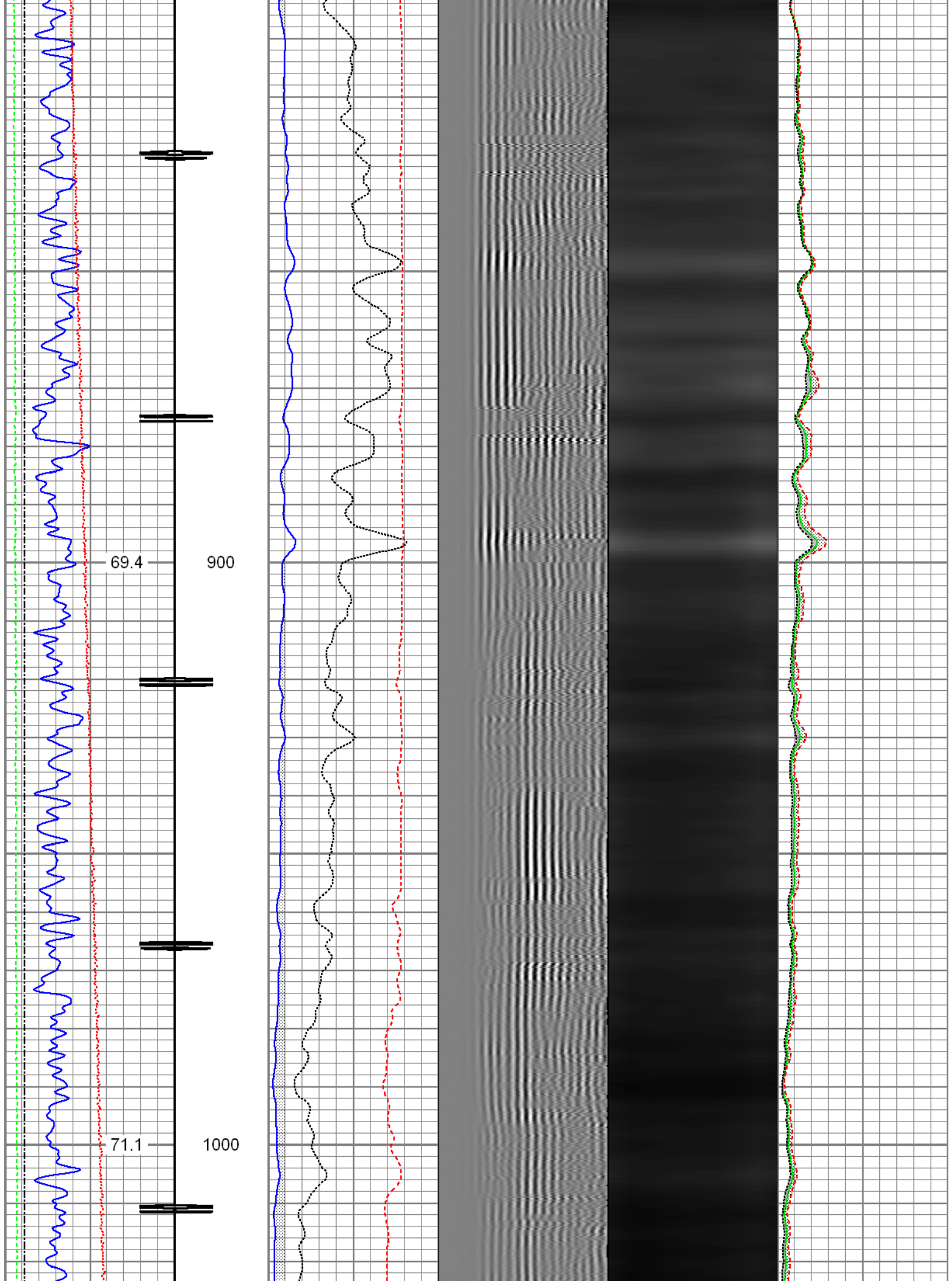
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
Temperature	0 (mV) 20			0 100
0 (degF) 20	3' Travel Time			Maximum Amplitude
Line Speed	650 (usec) 150			0 100
-150 (ft/min) 150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

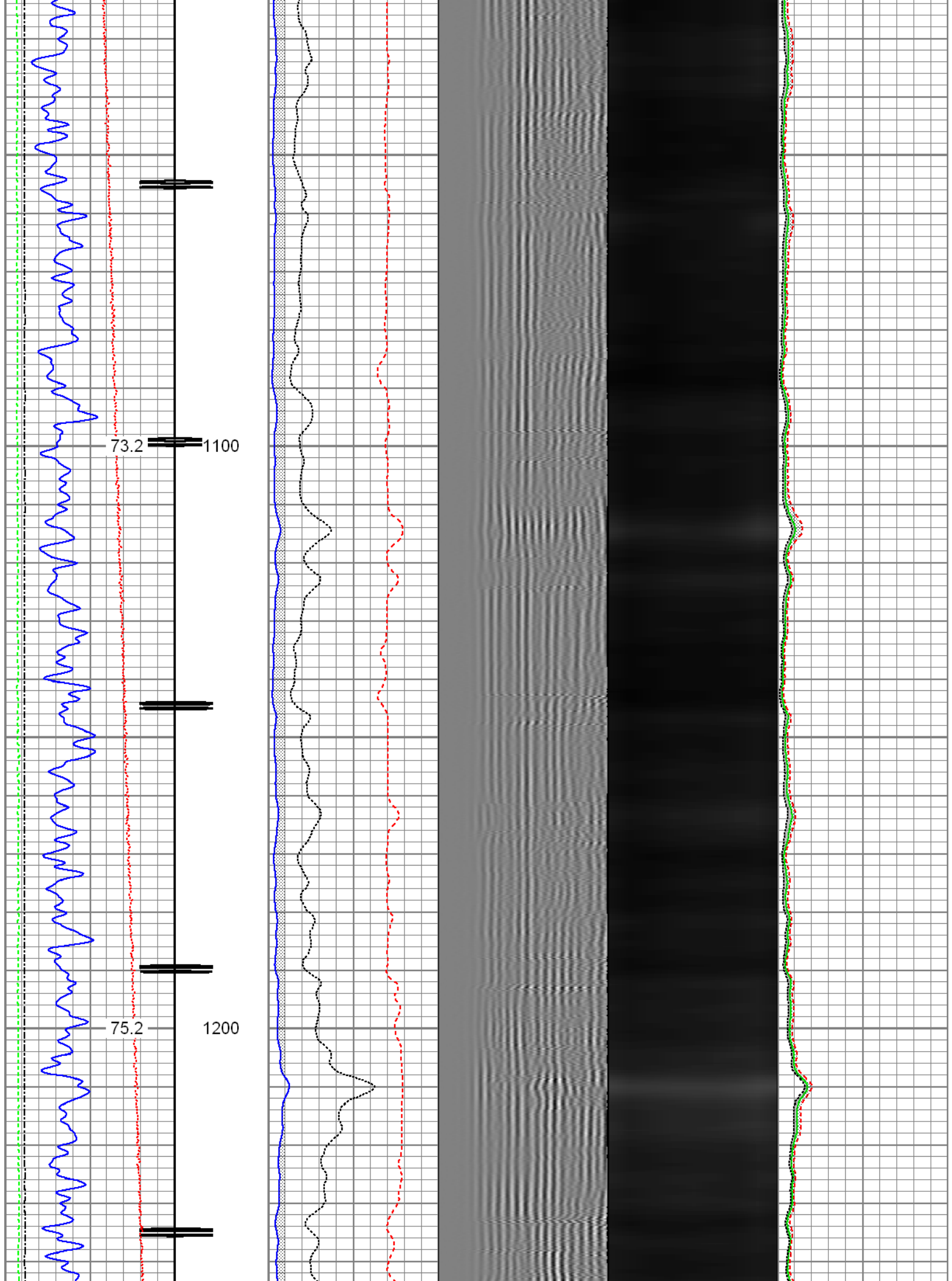


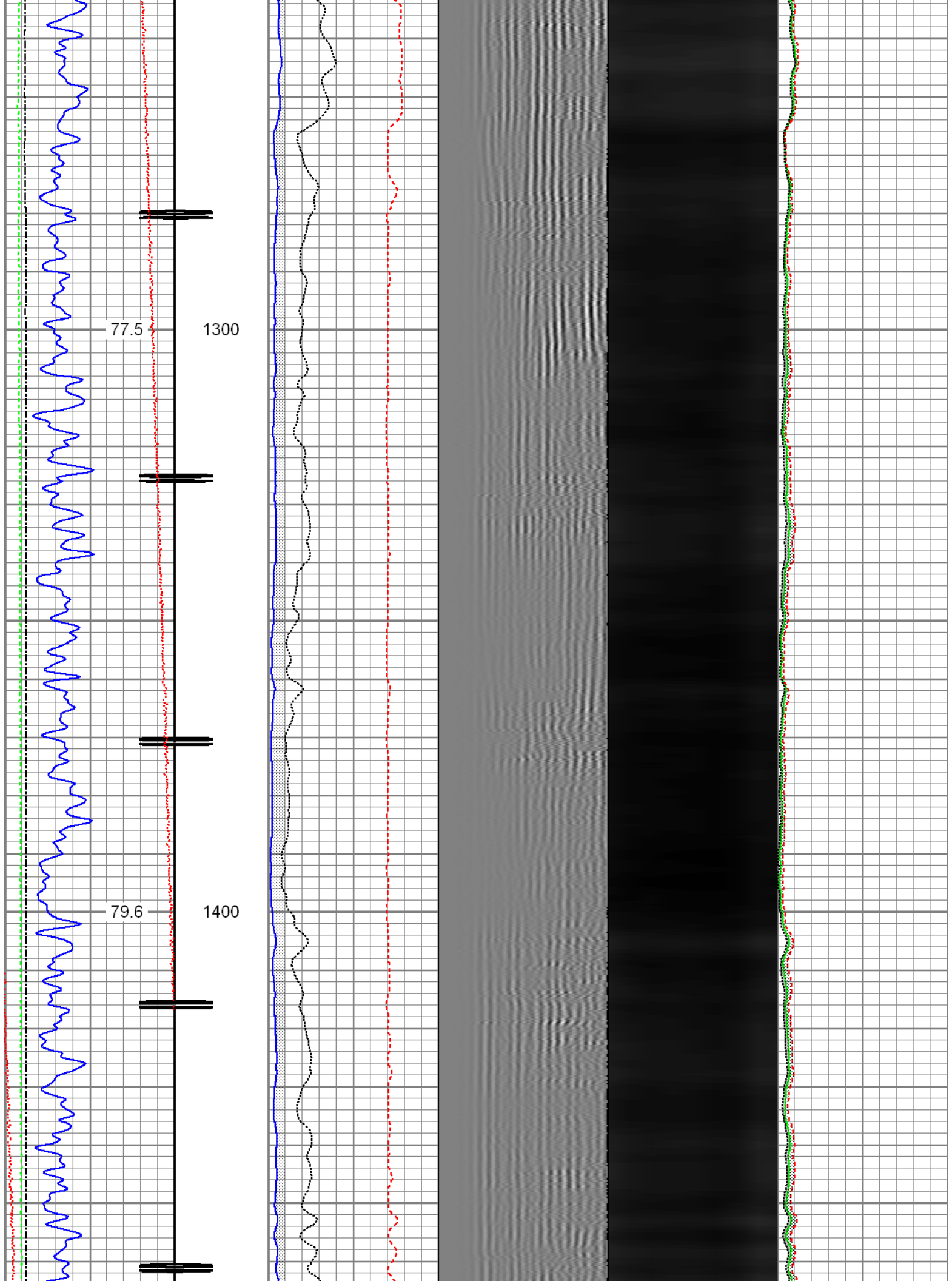


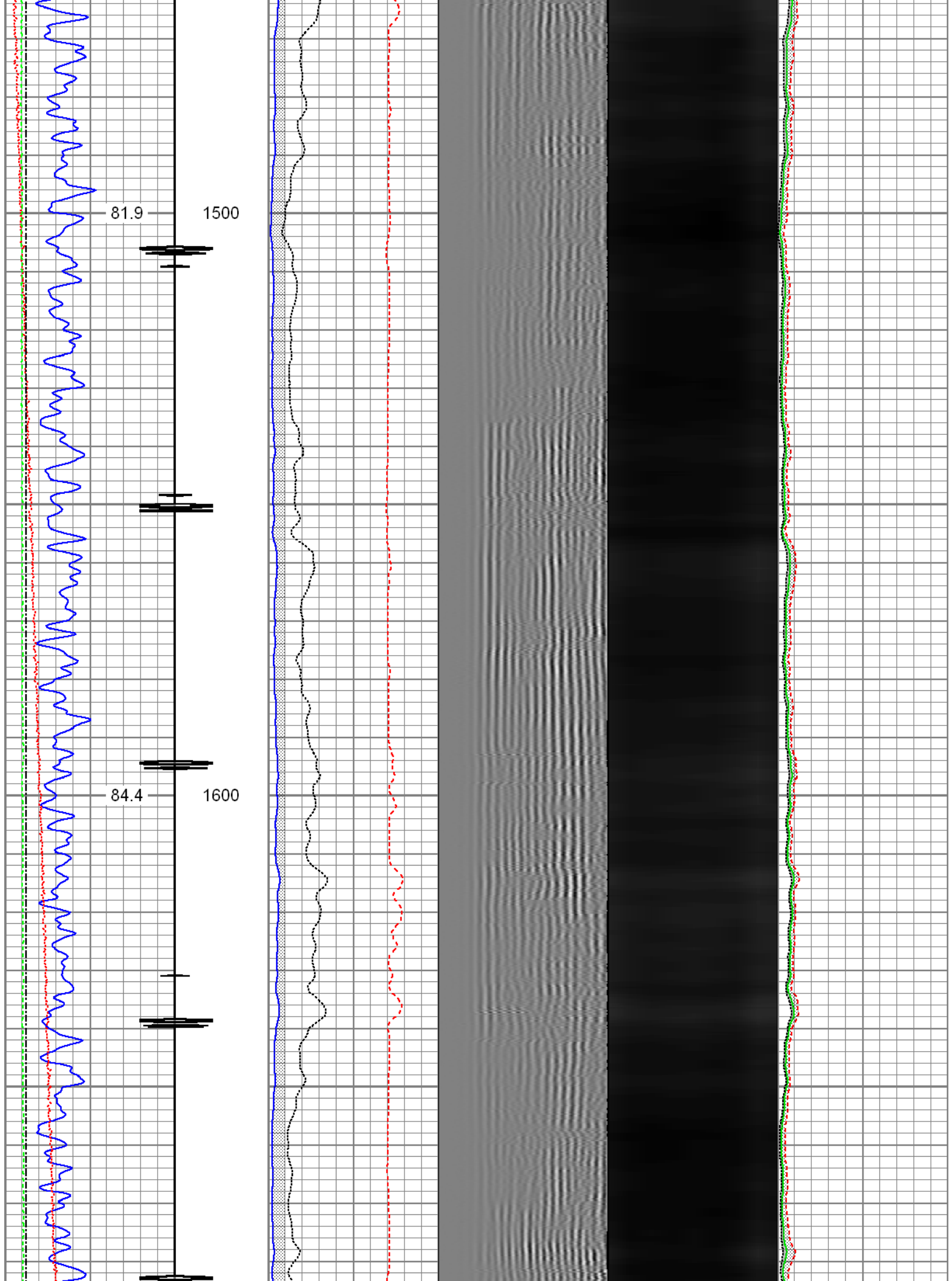


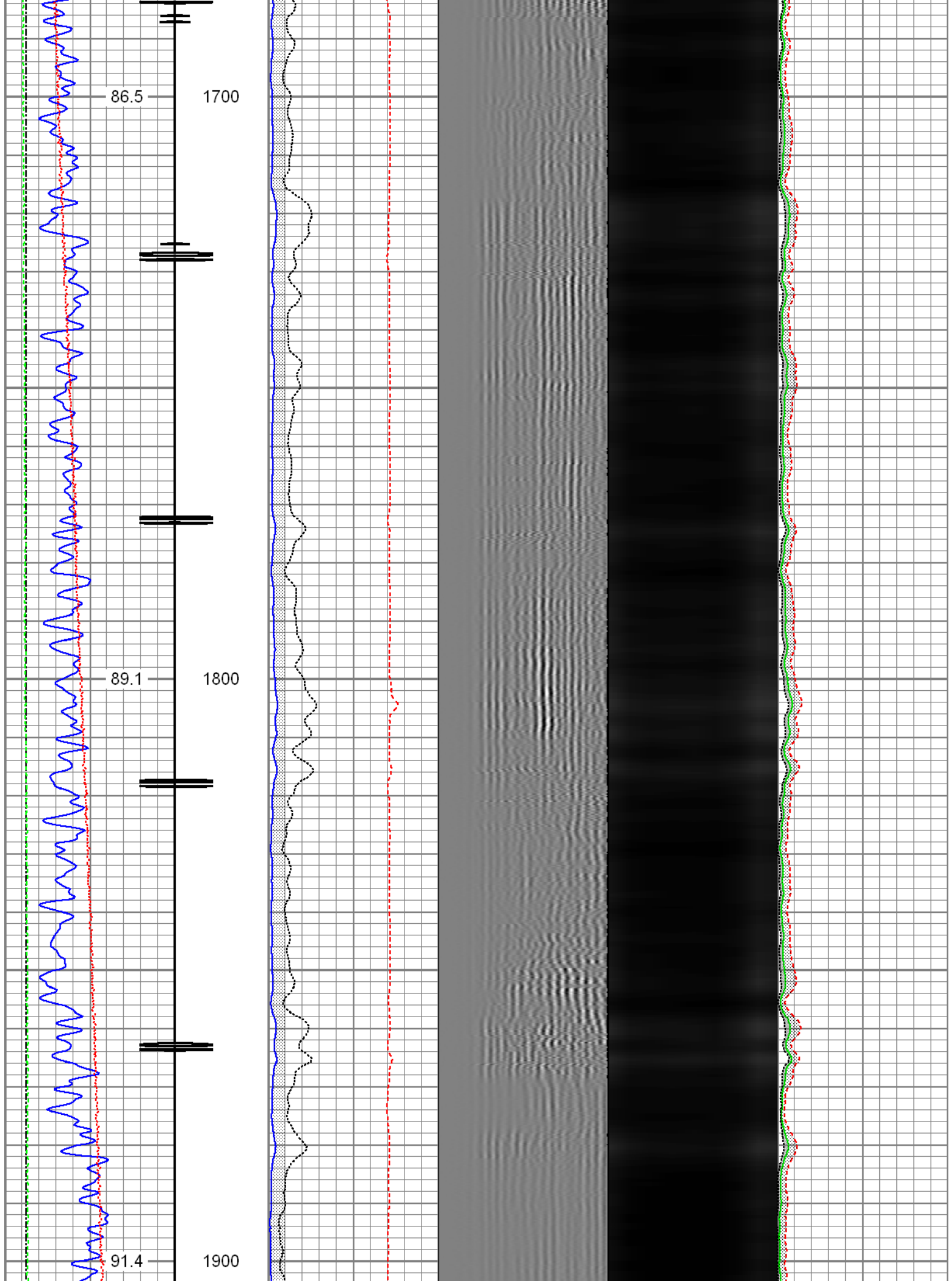


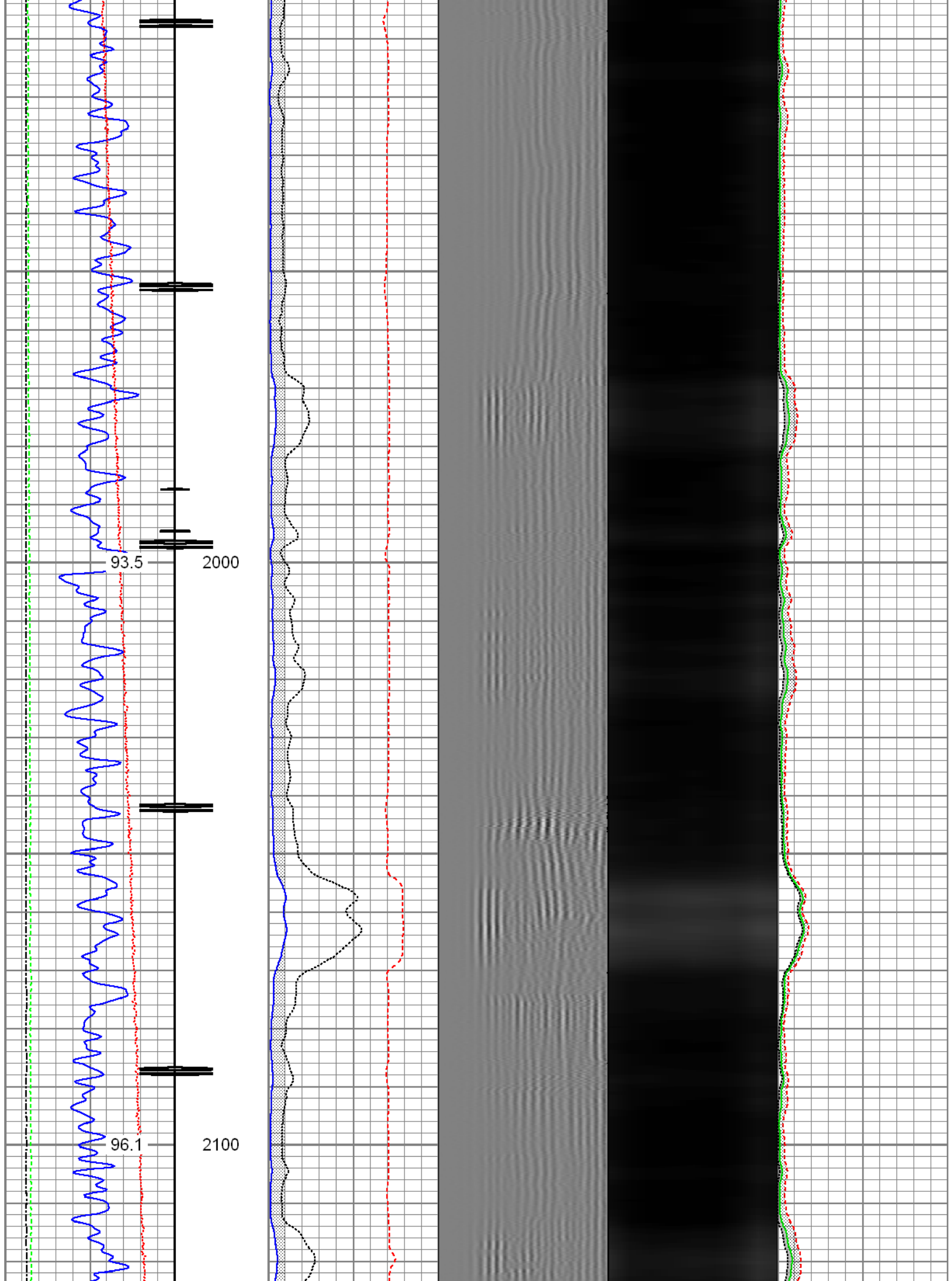


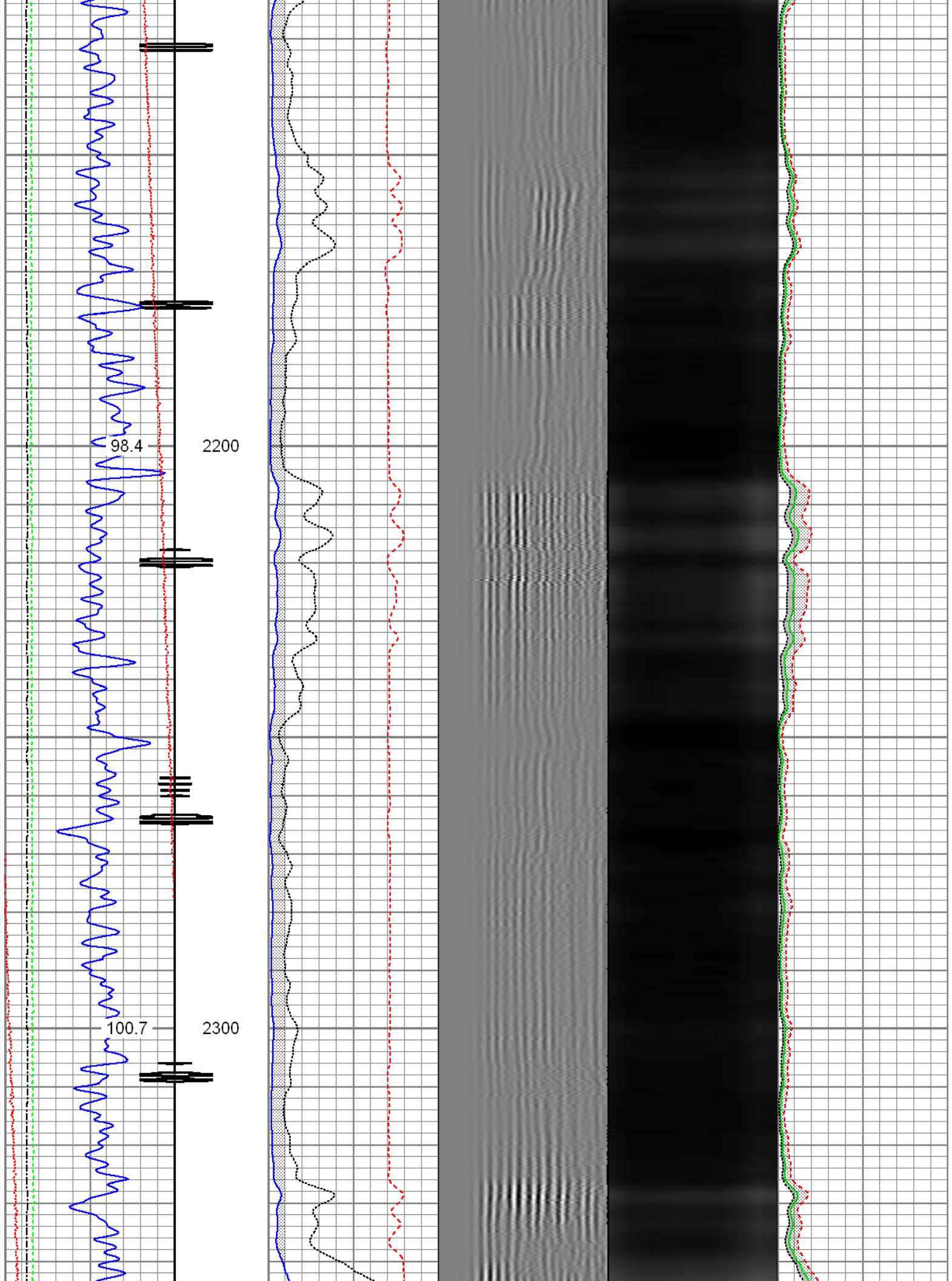


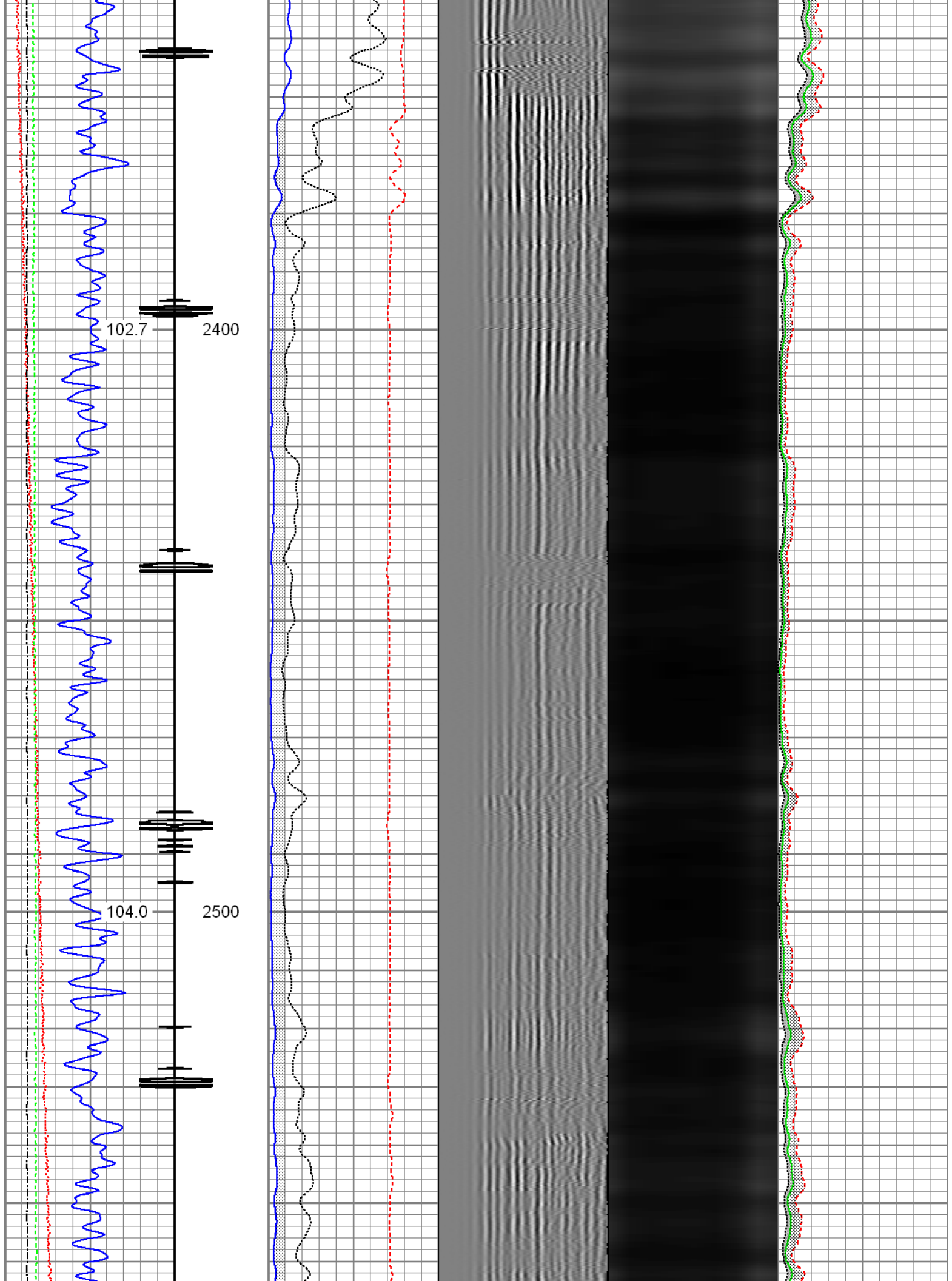


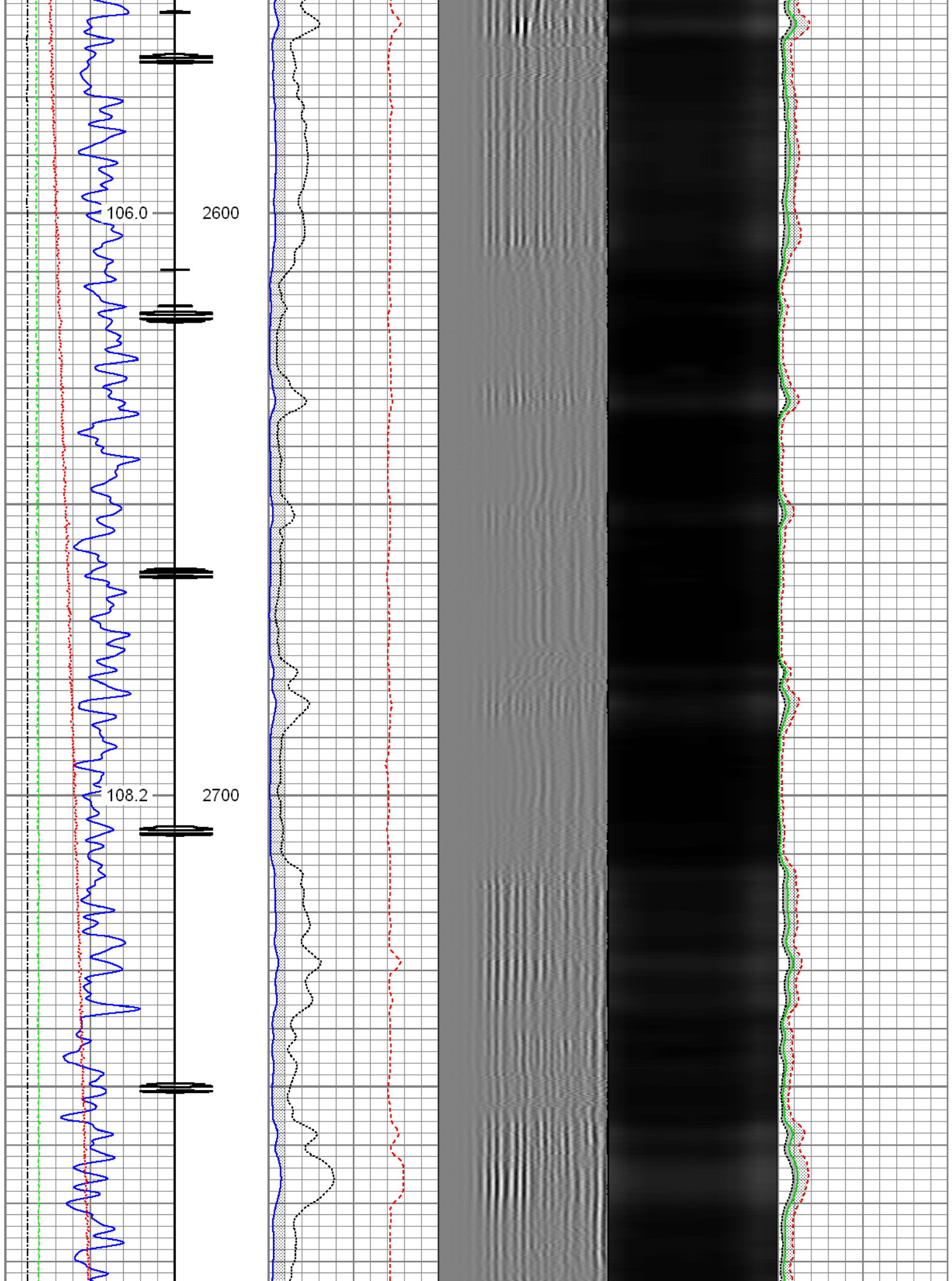


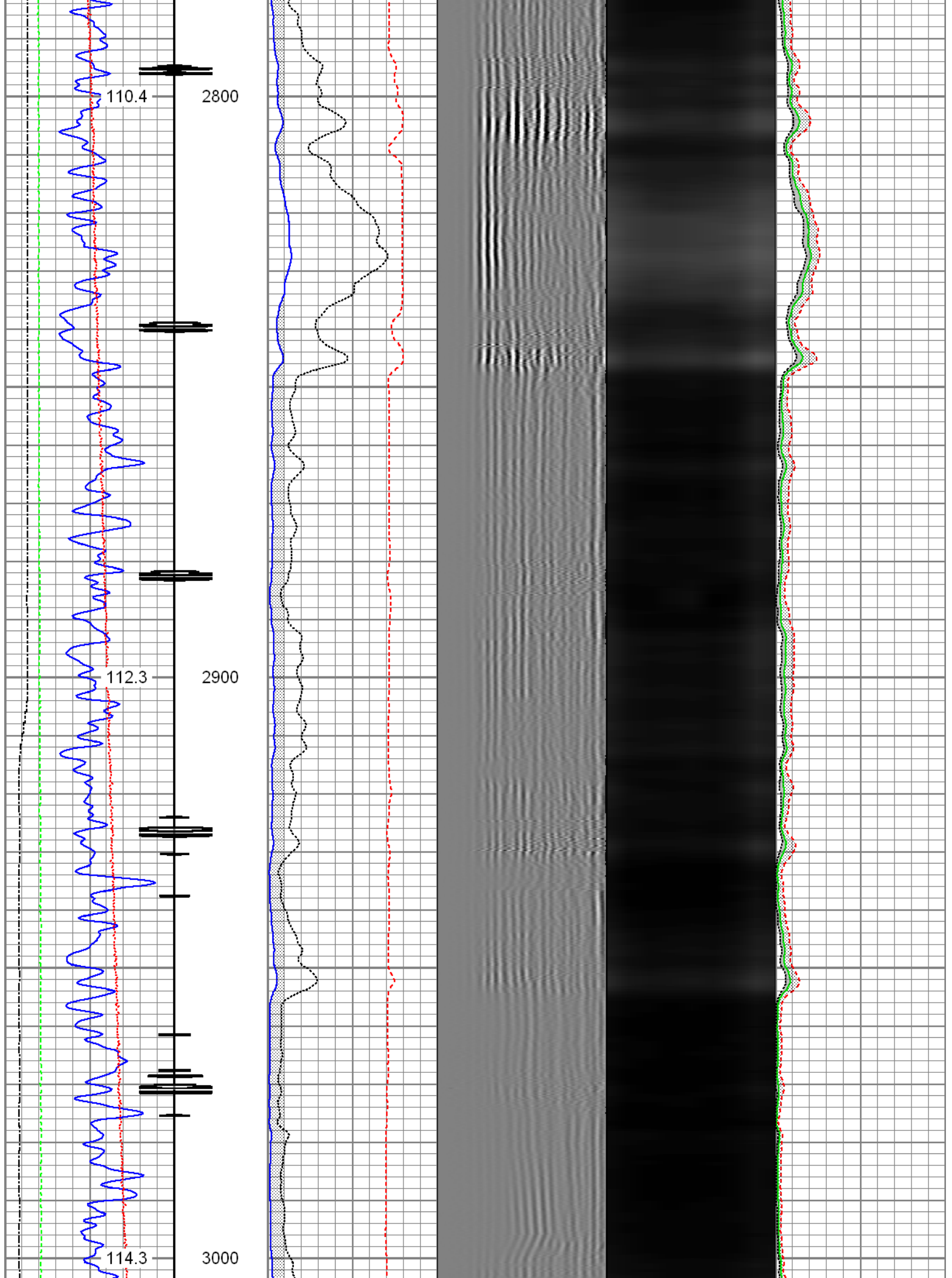


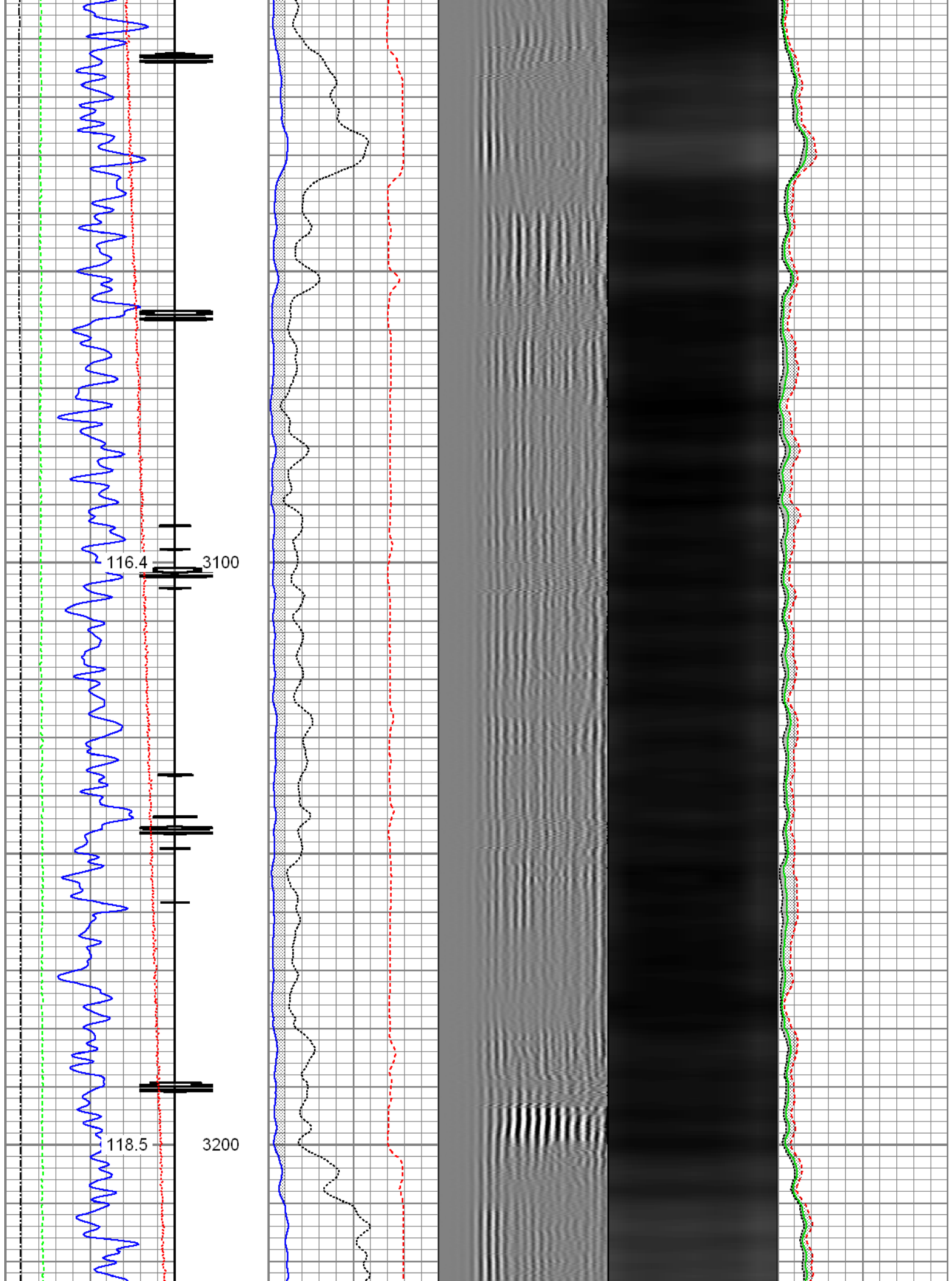


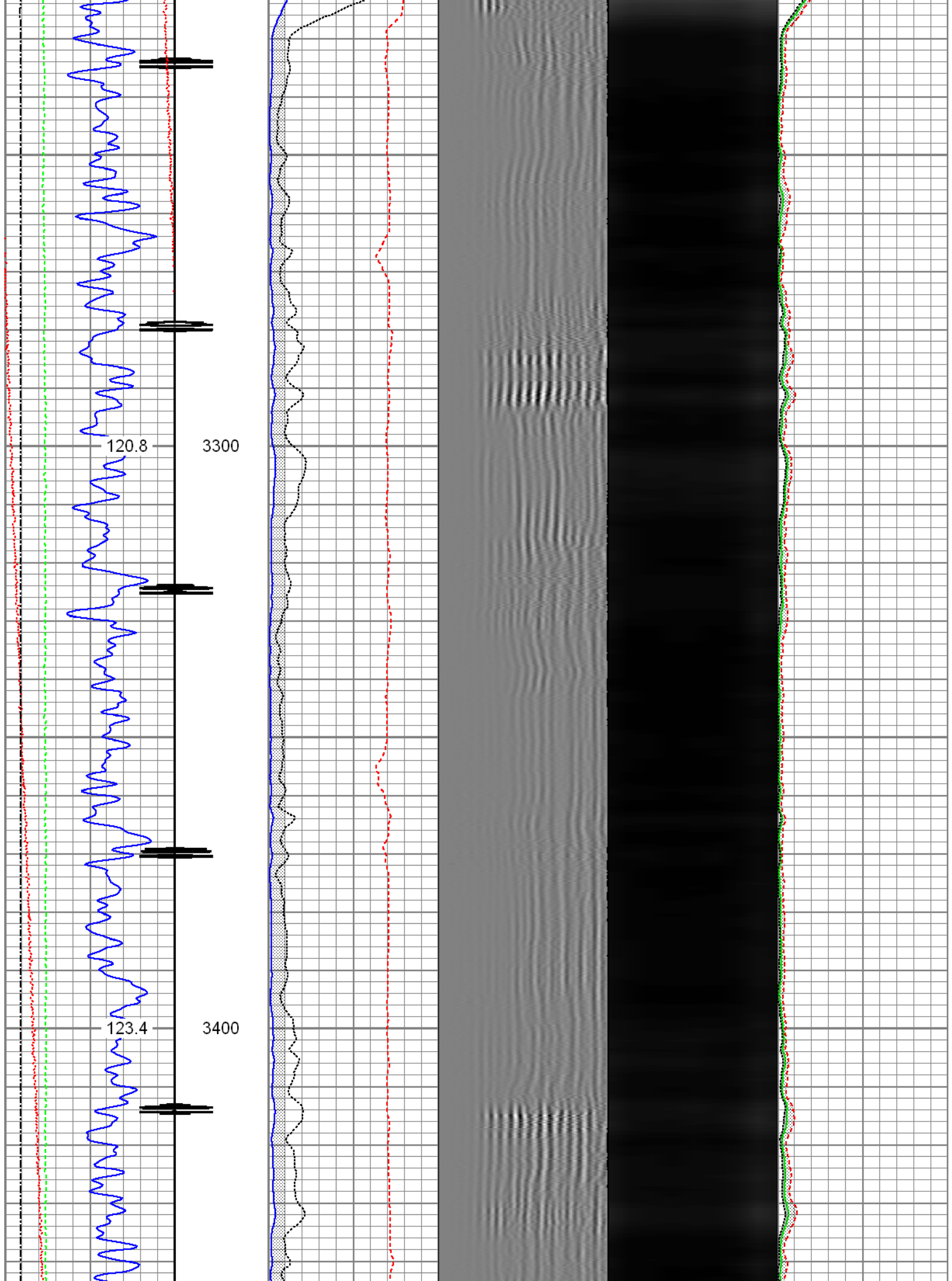


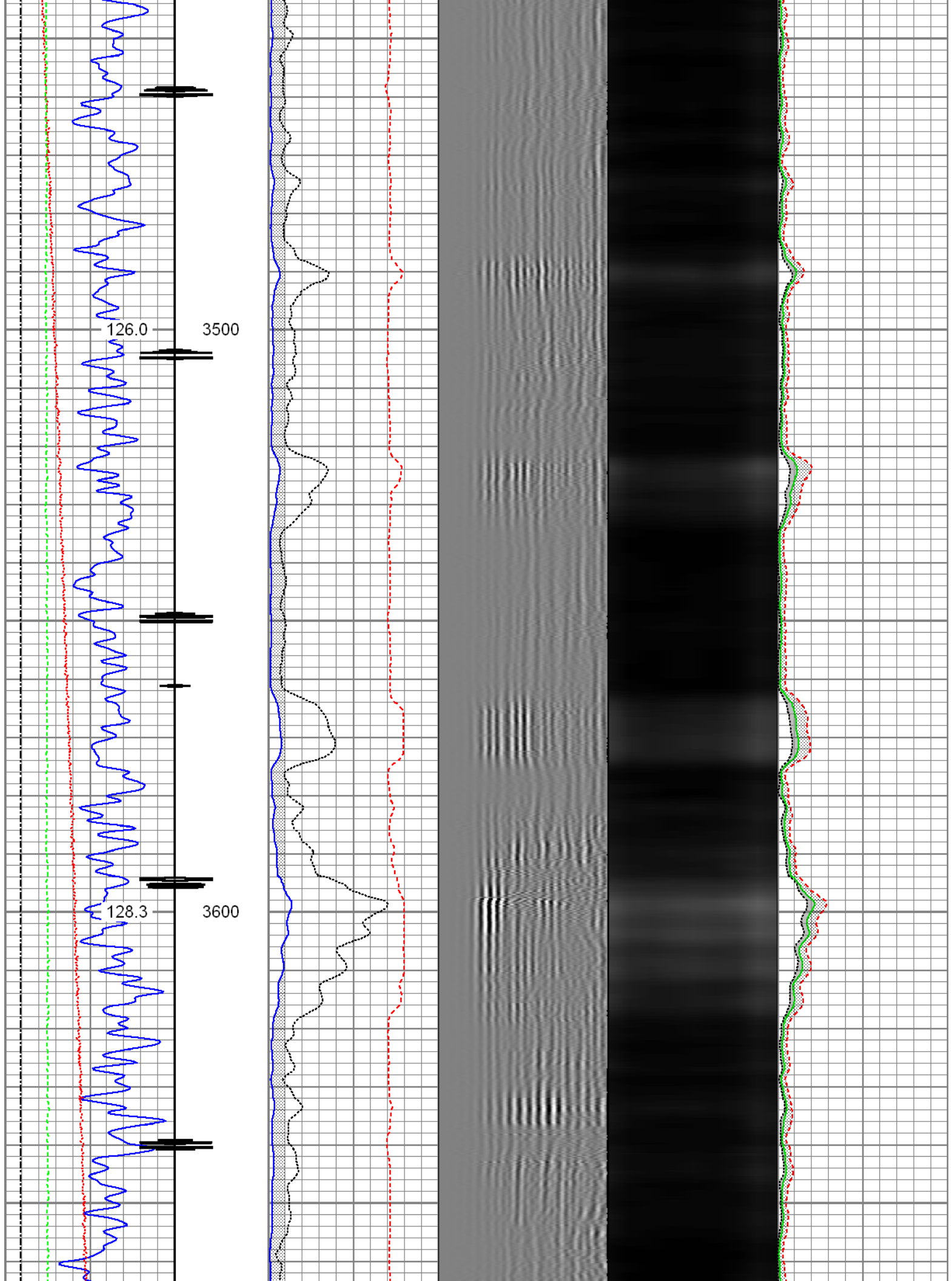


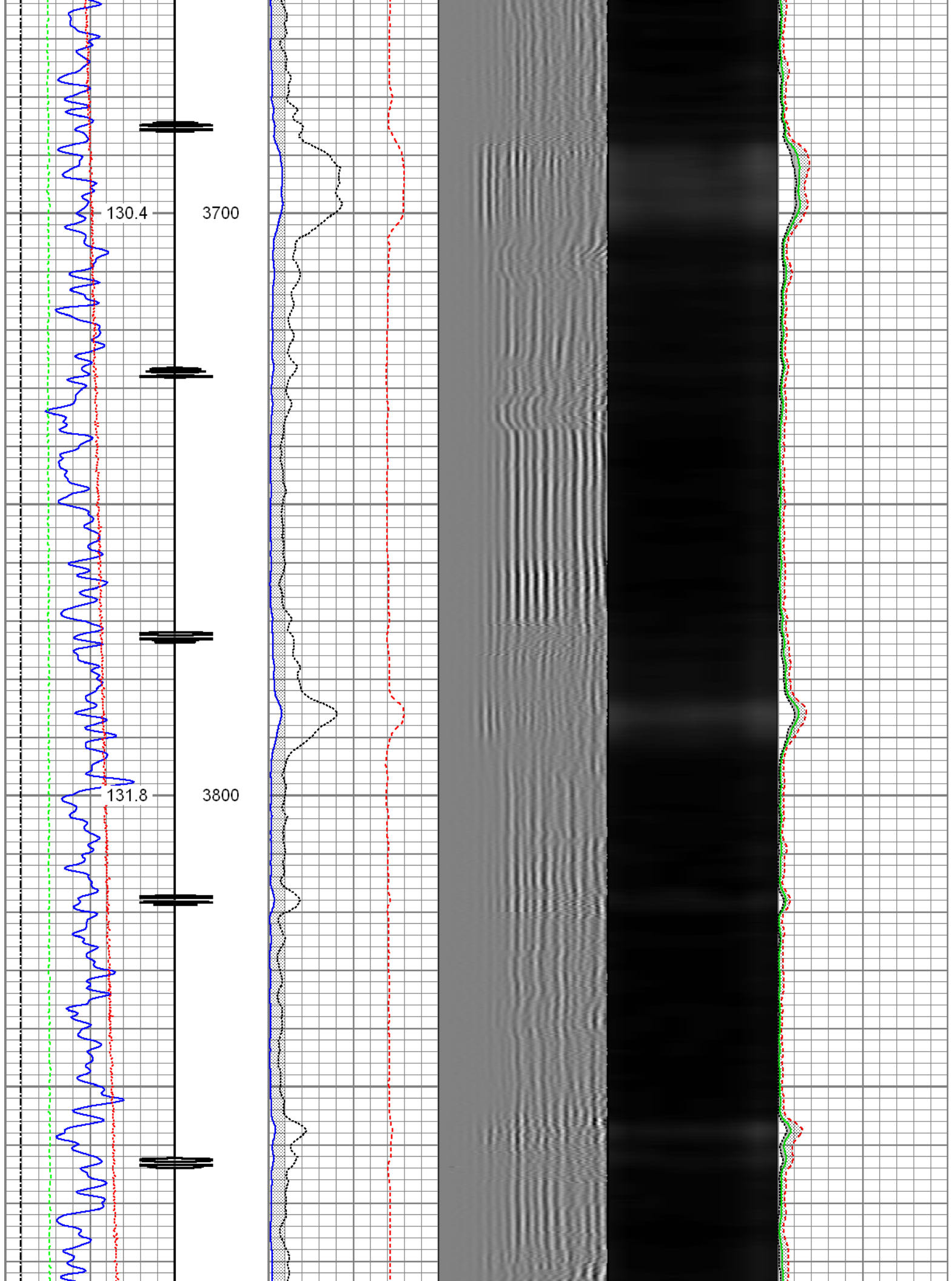


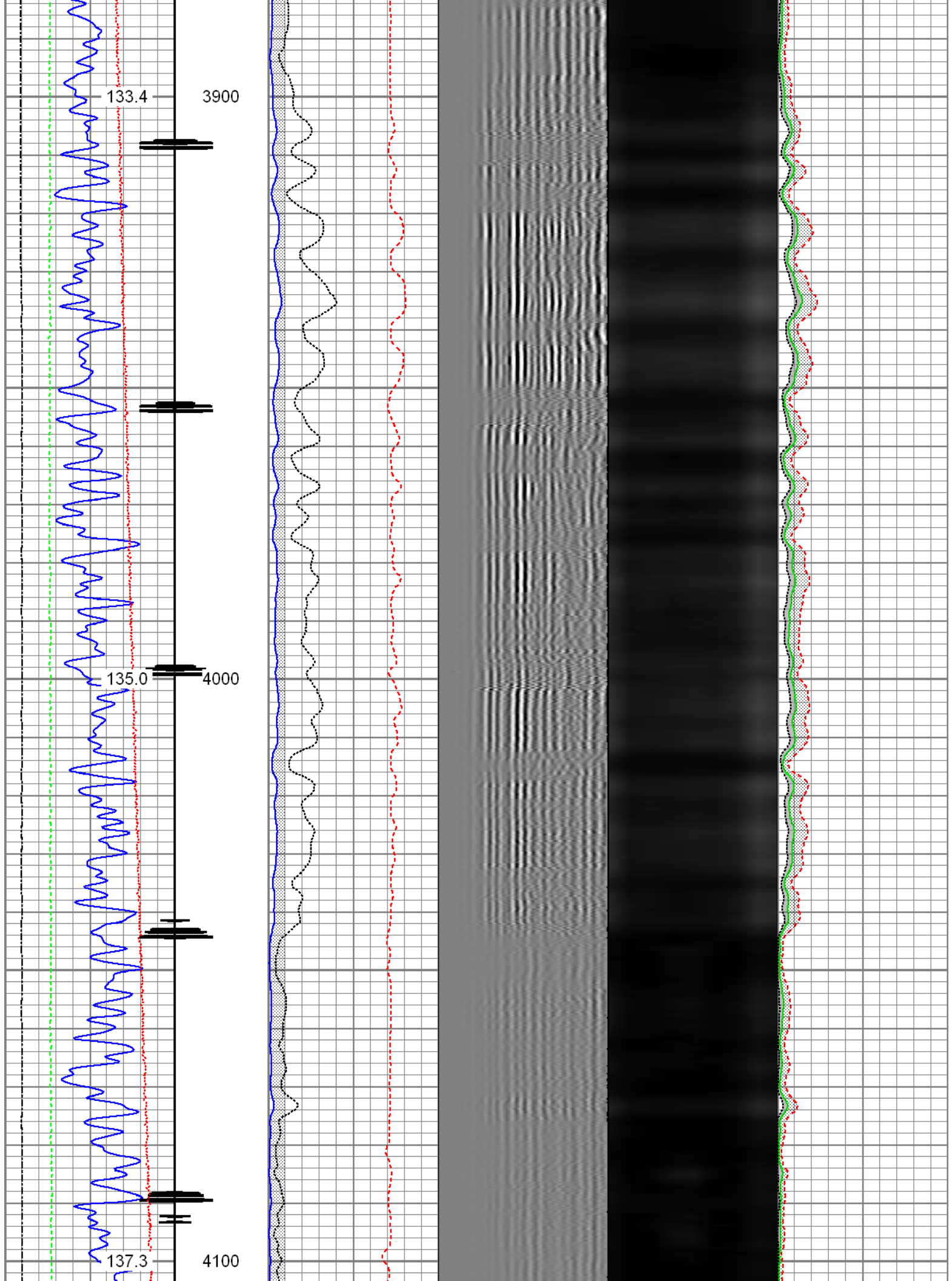


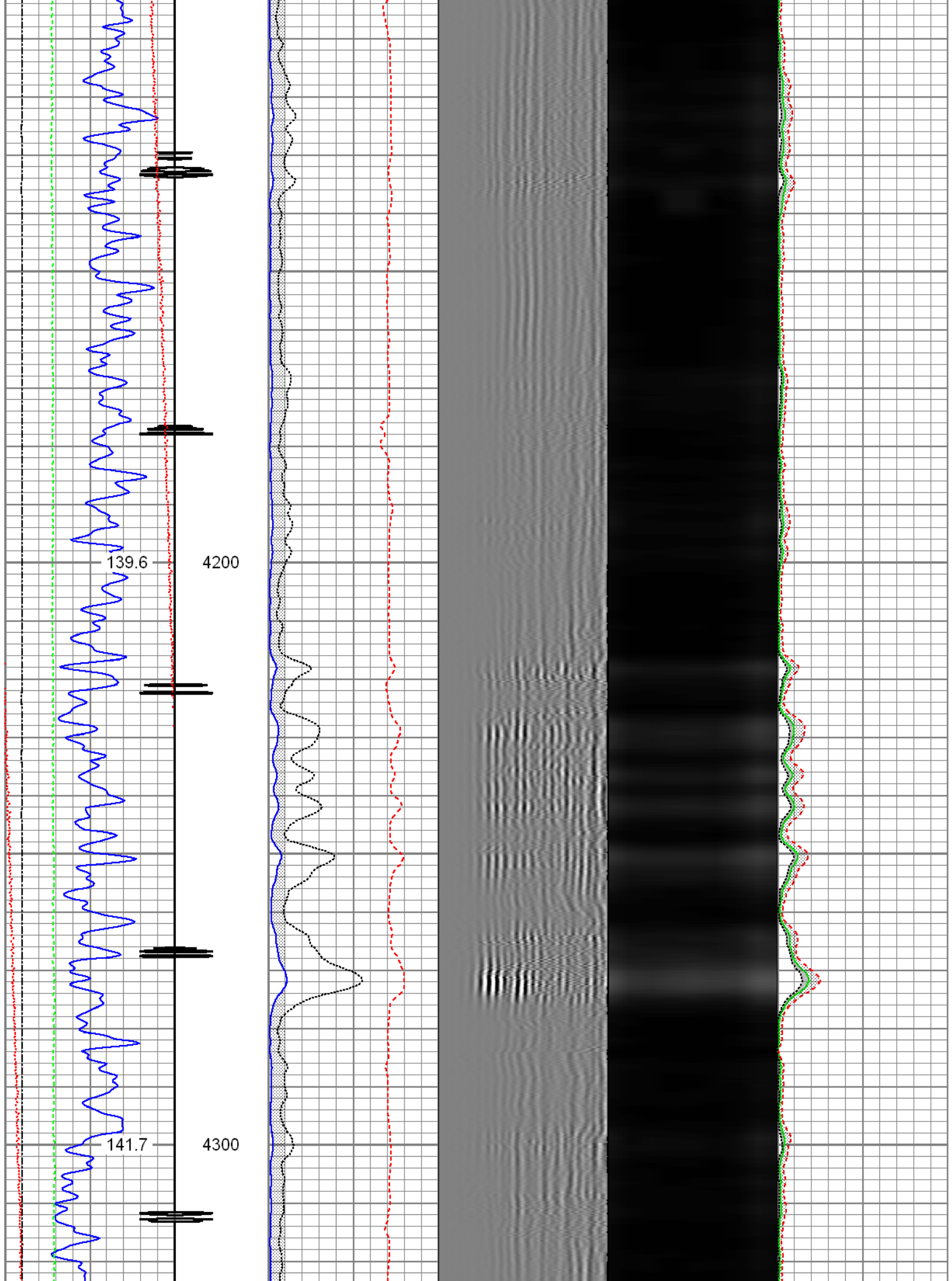


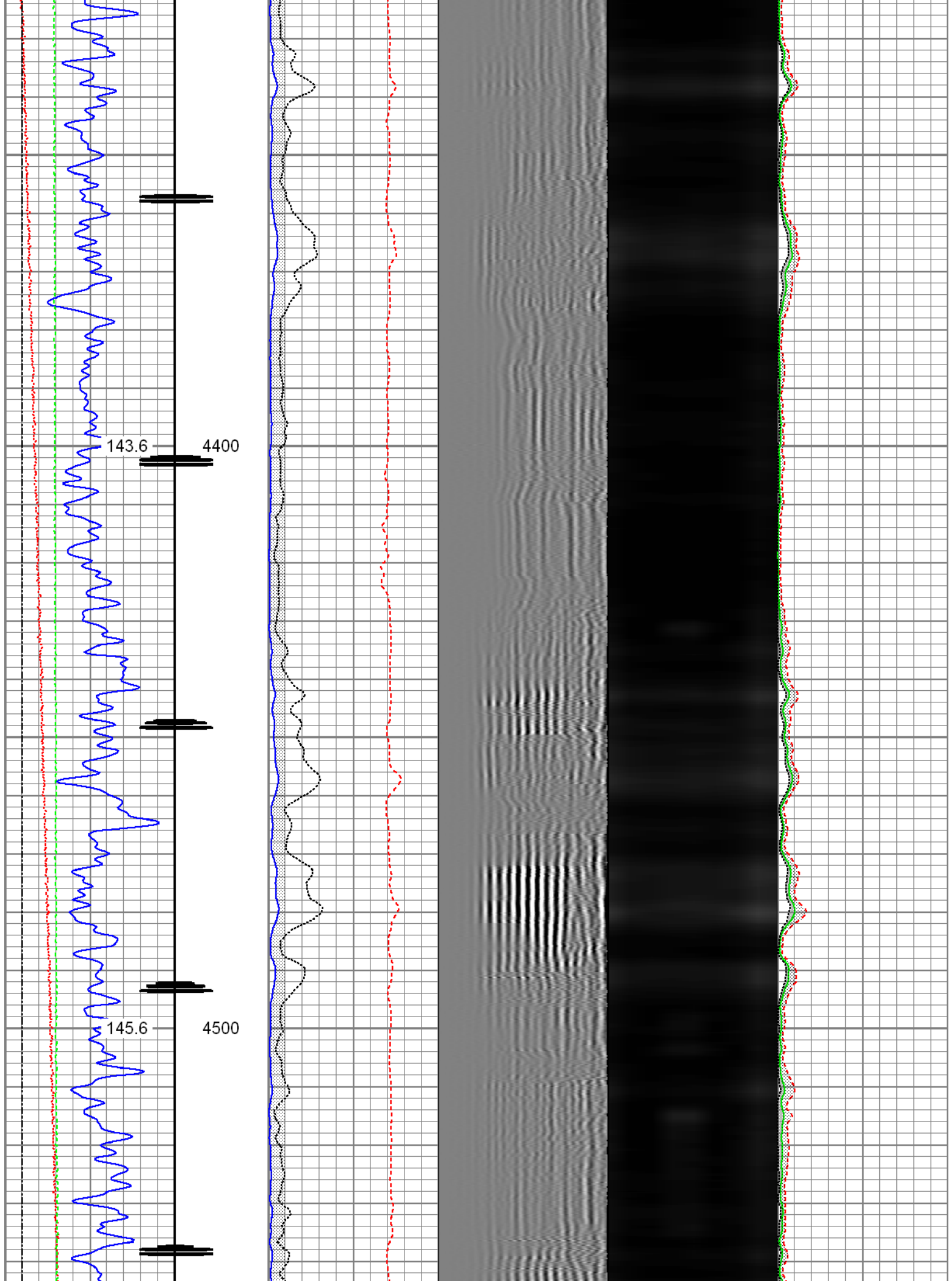


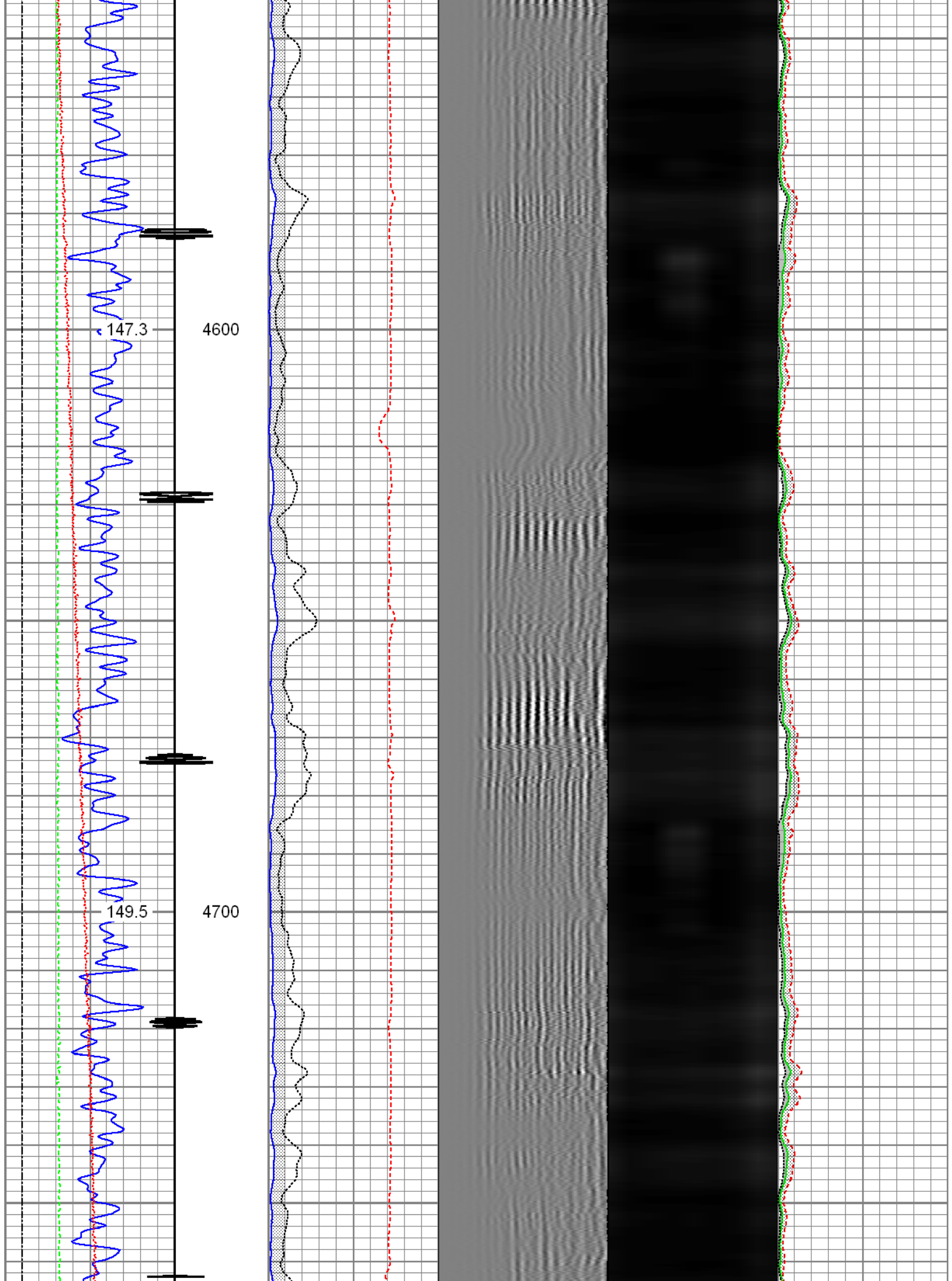


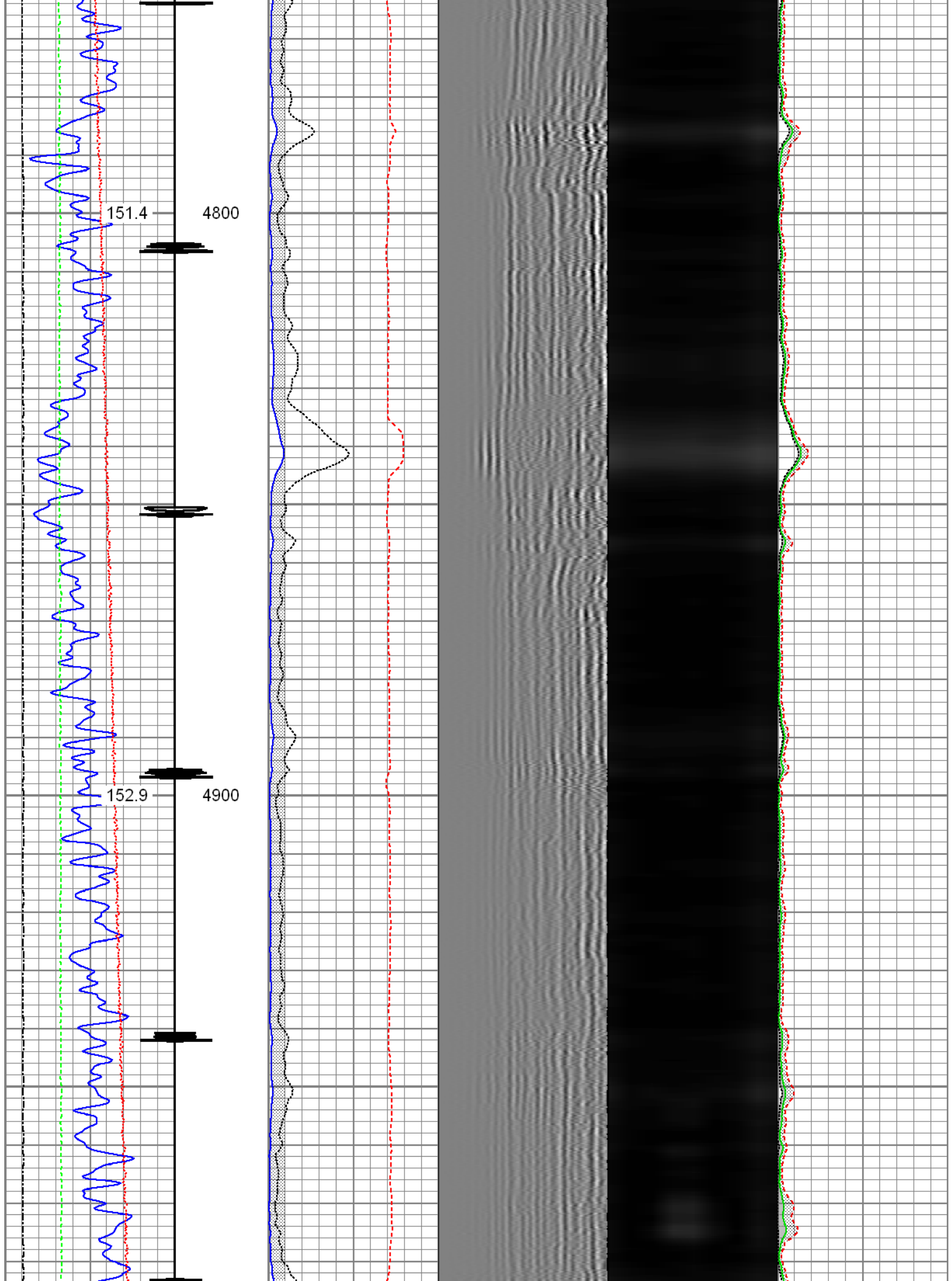


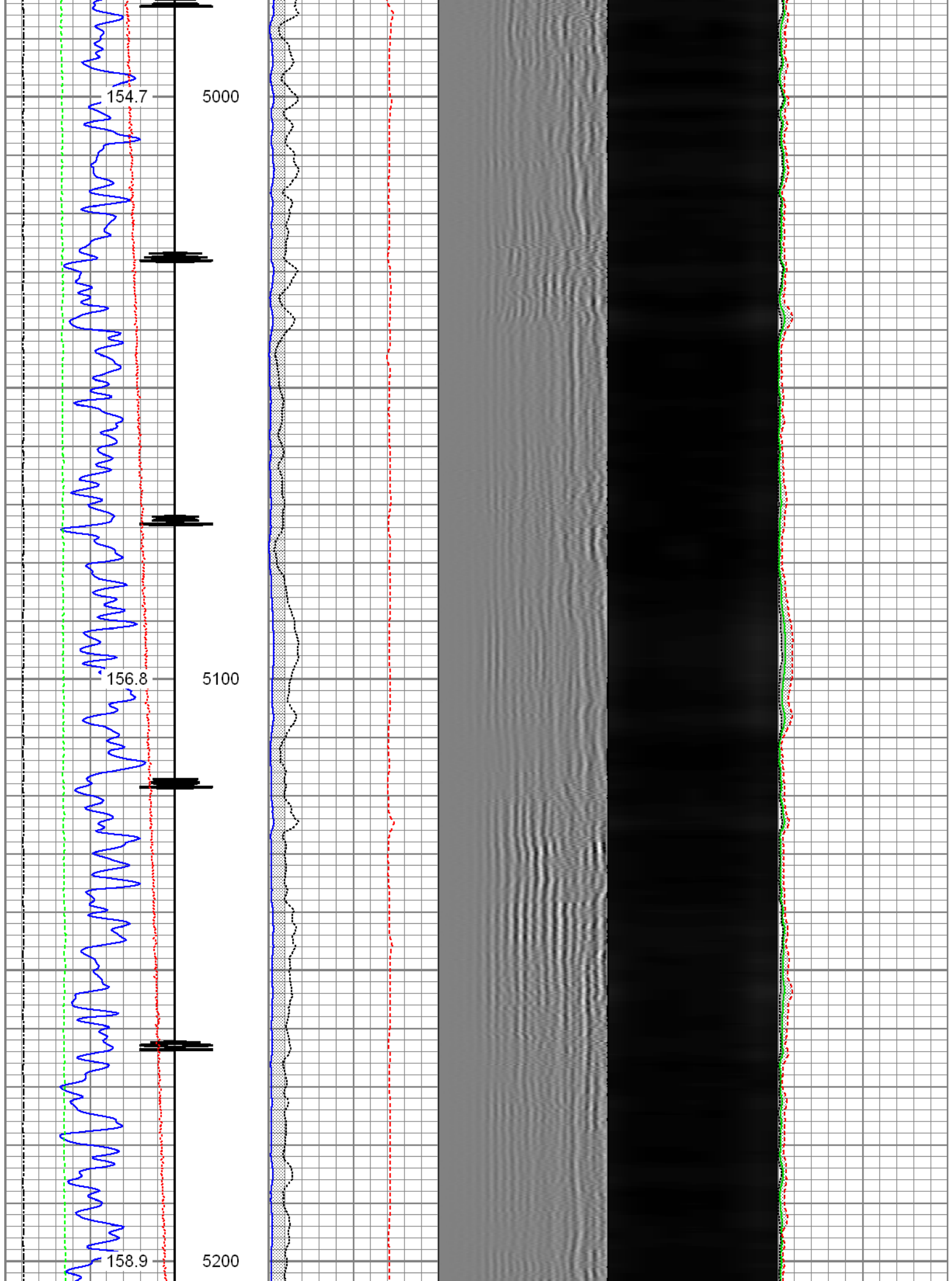


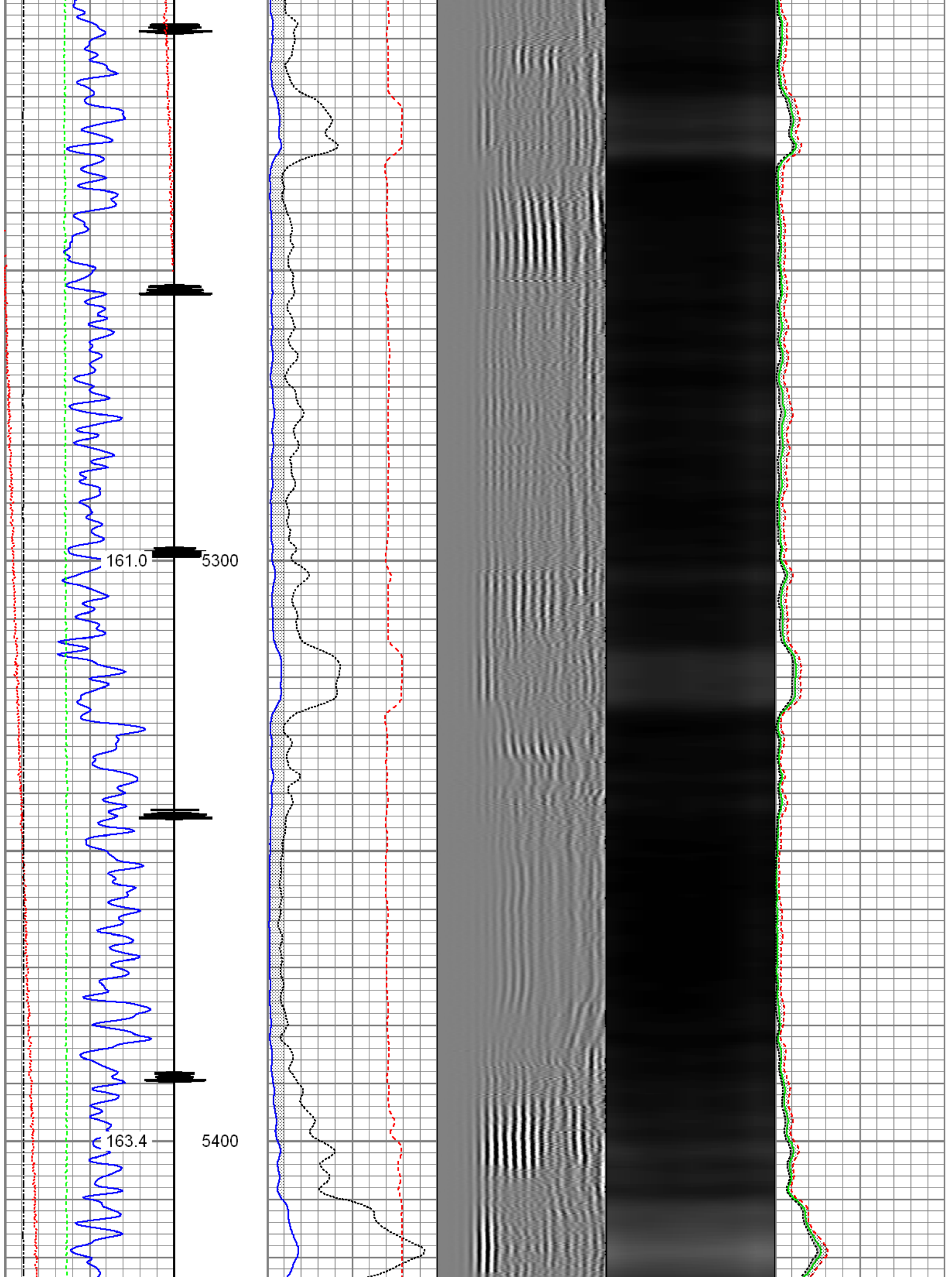


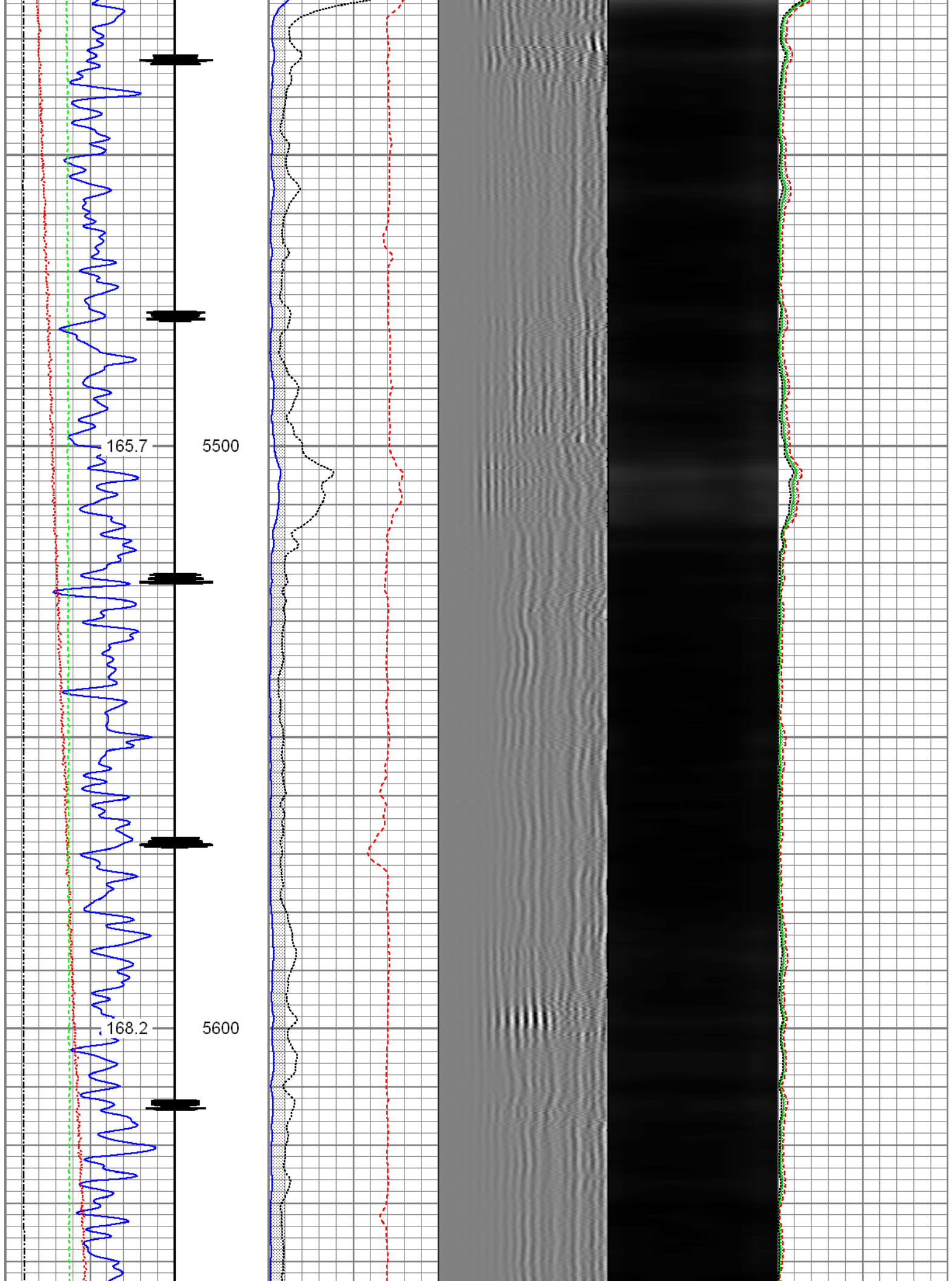


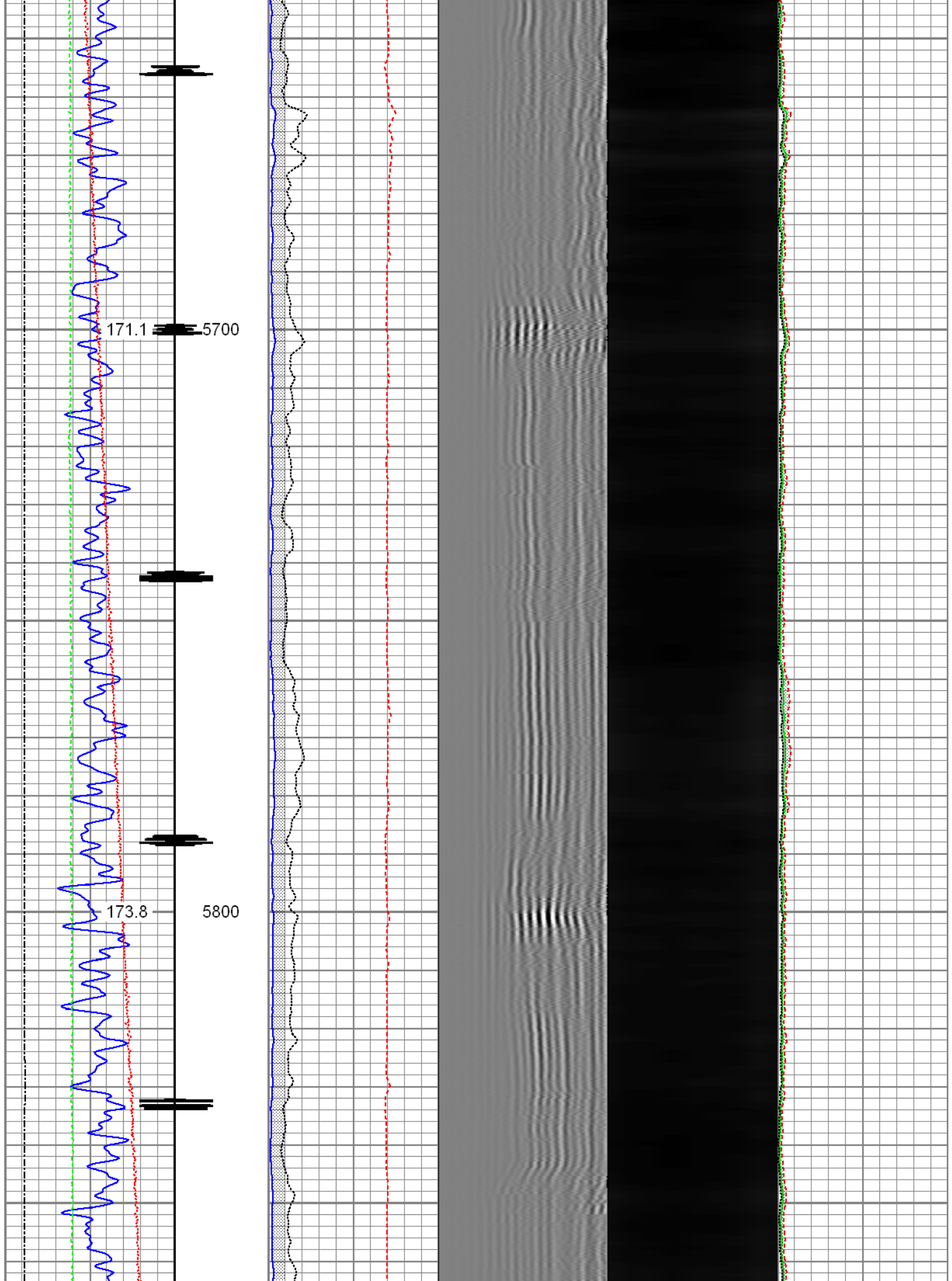


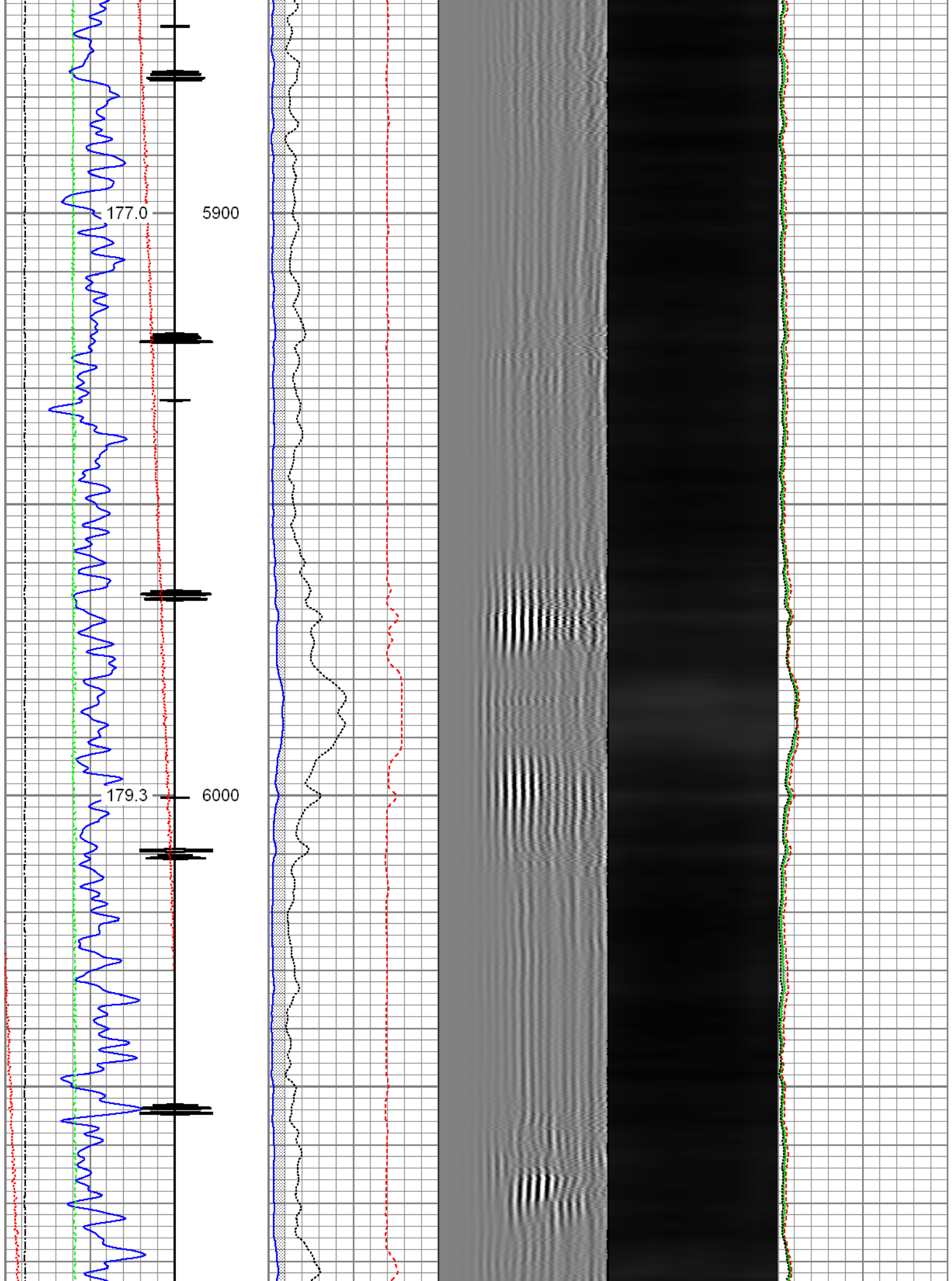


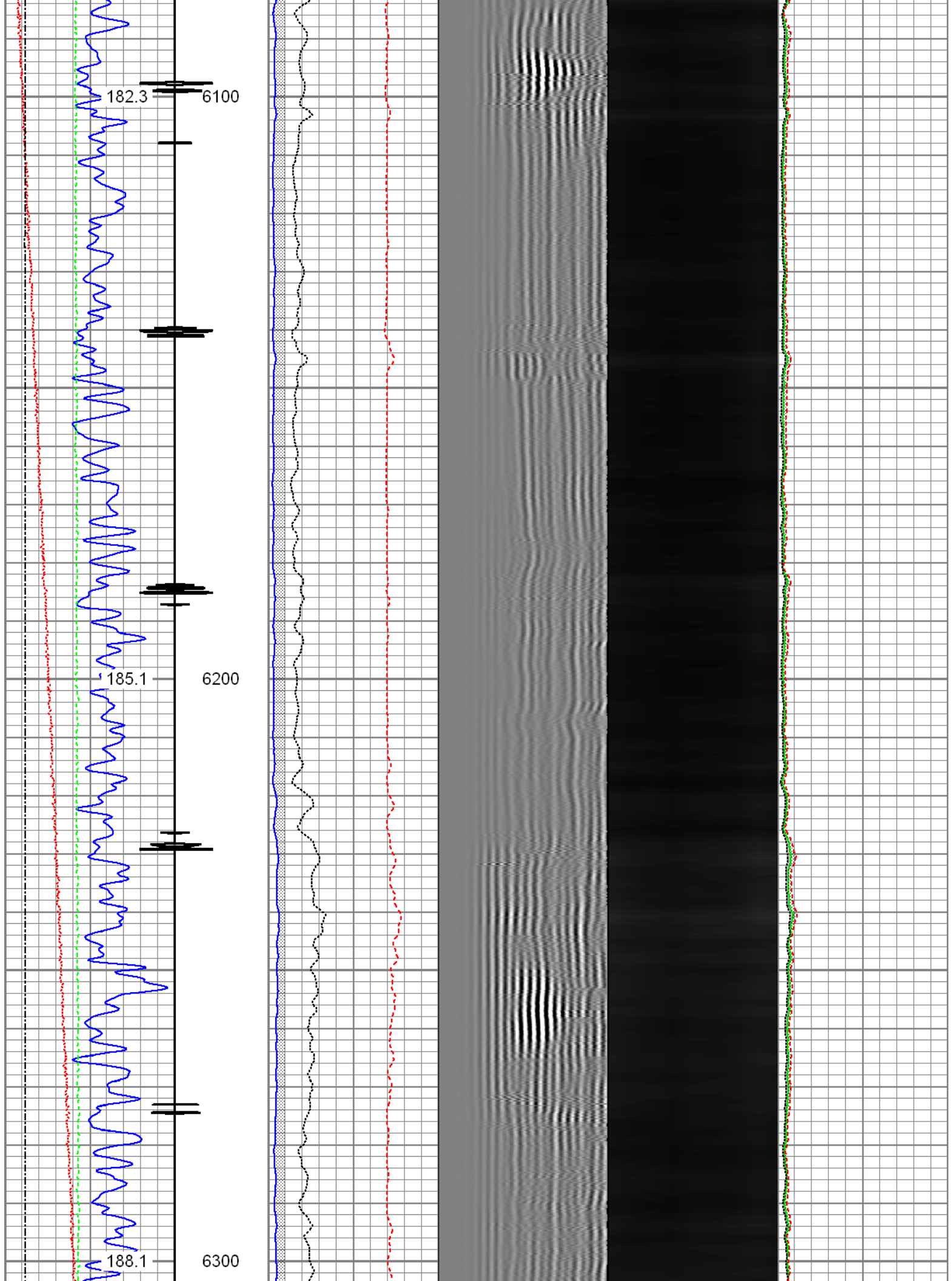


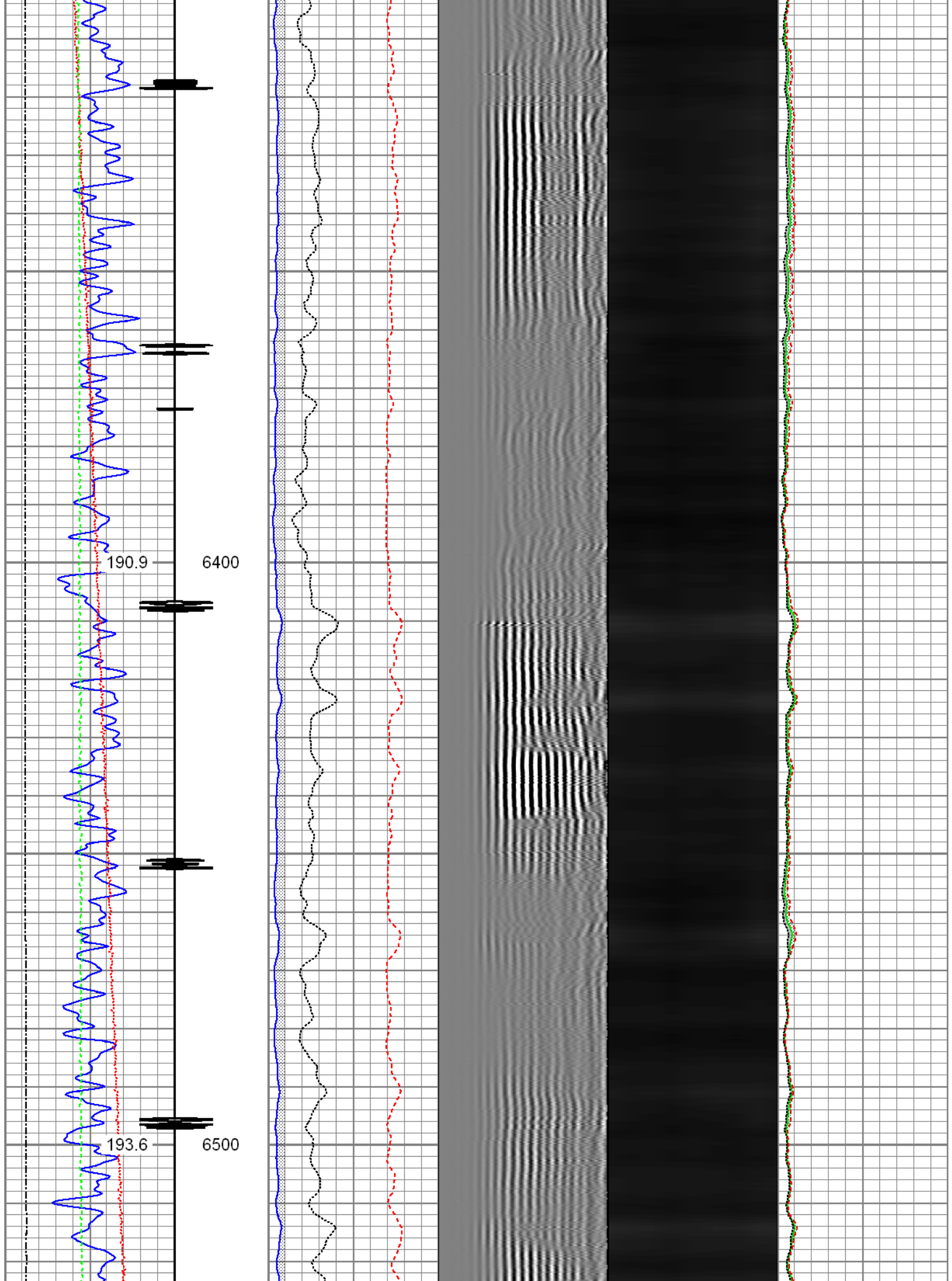


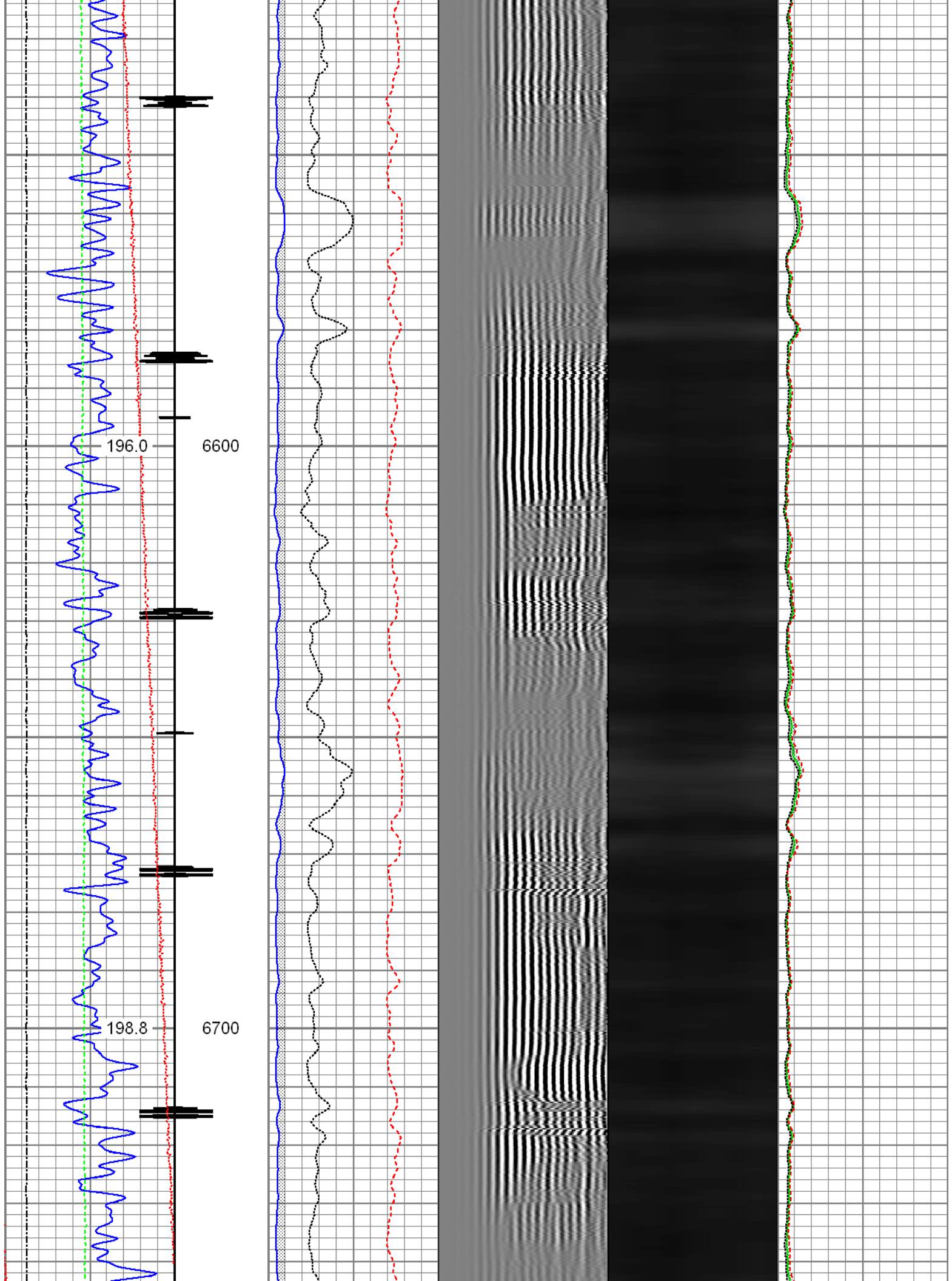


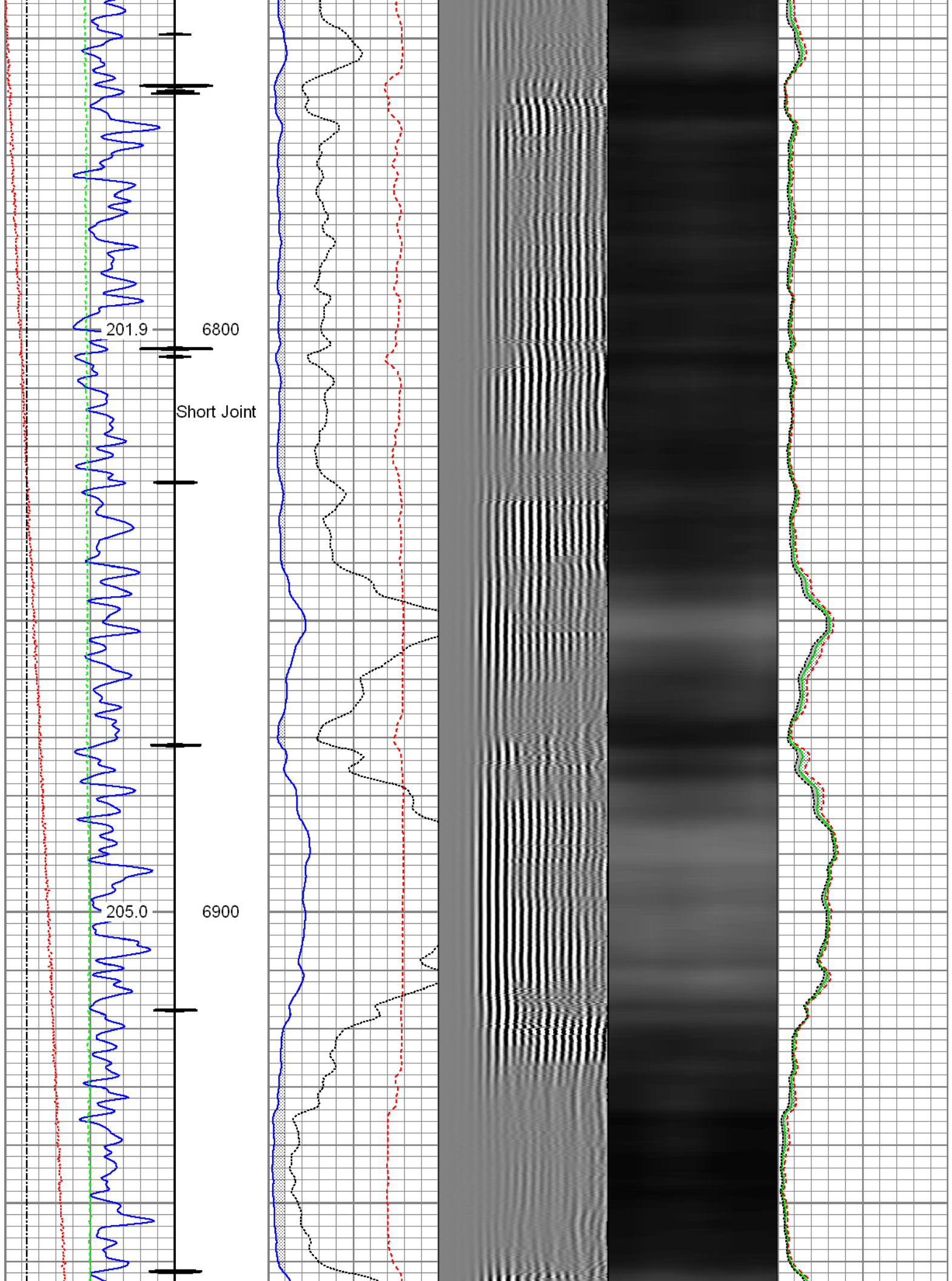


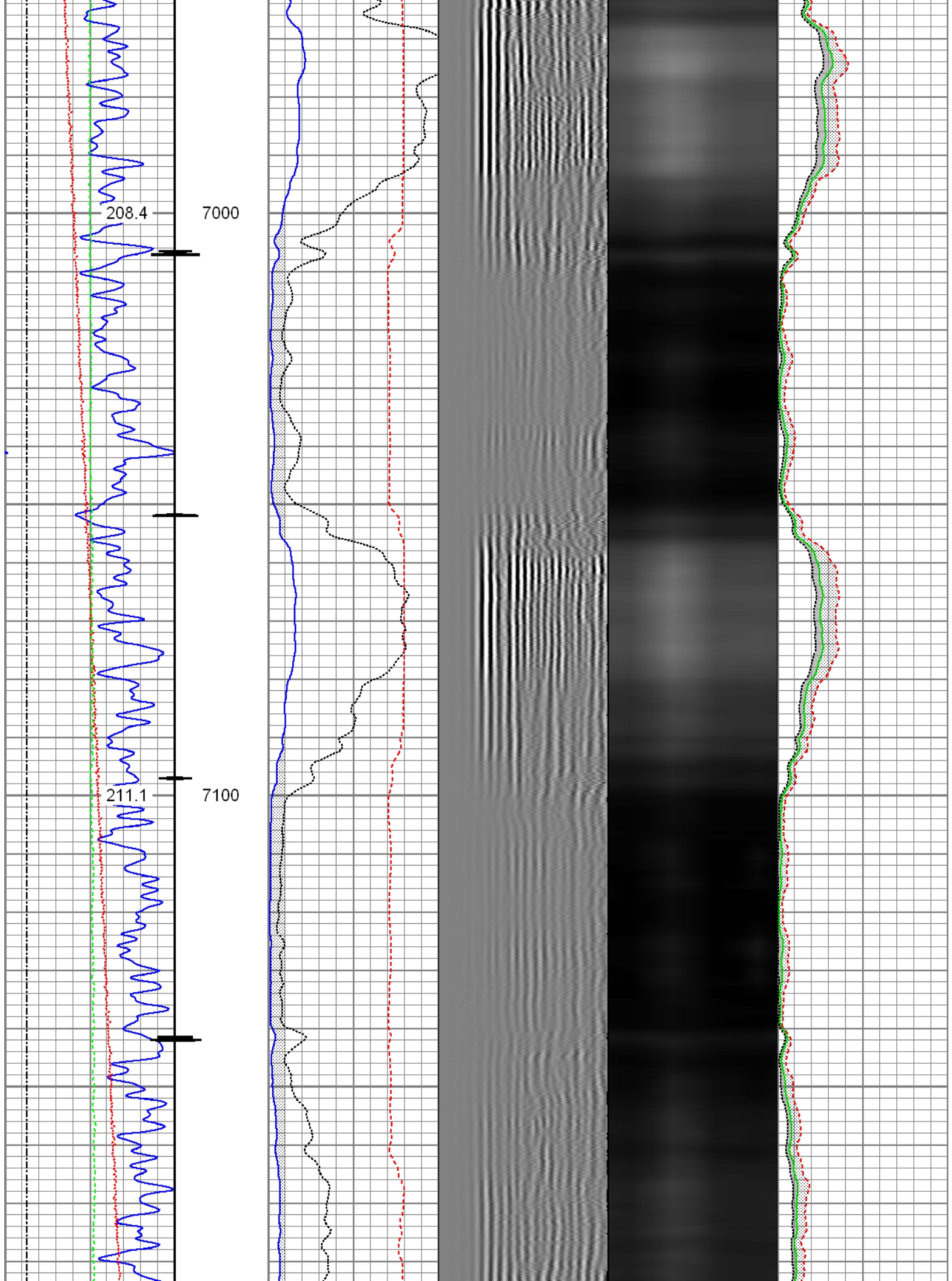


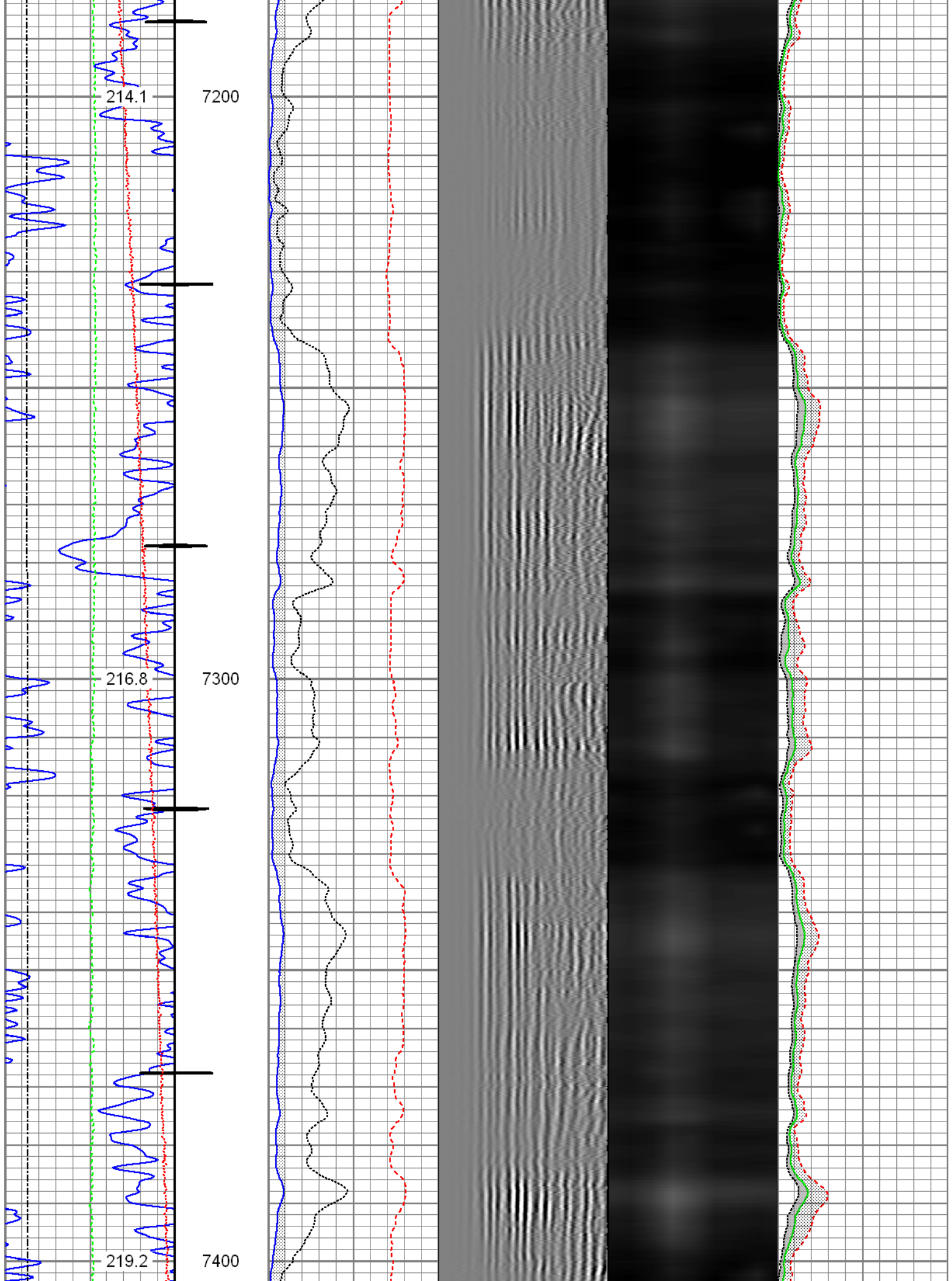


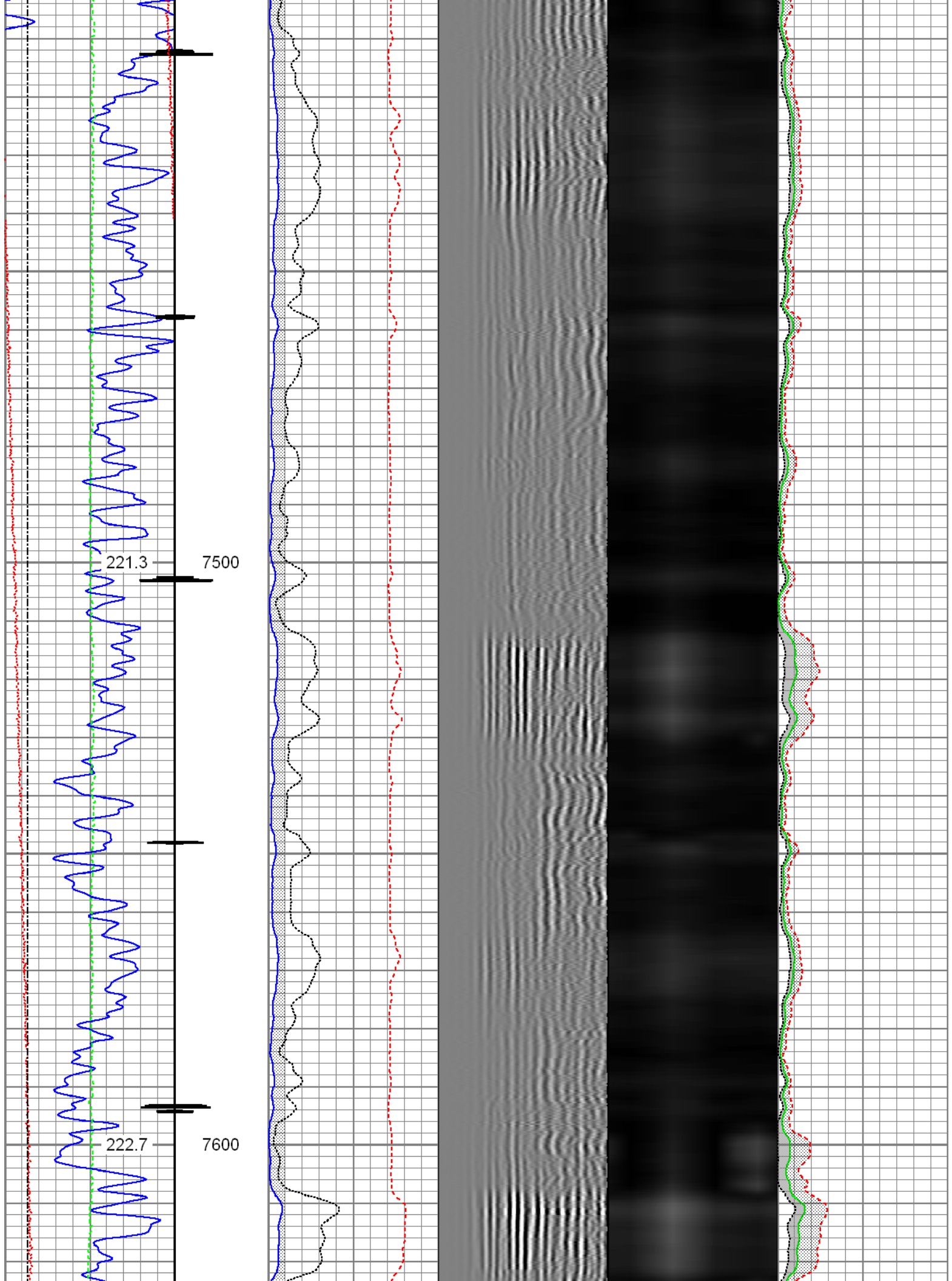


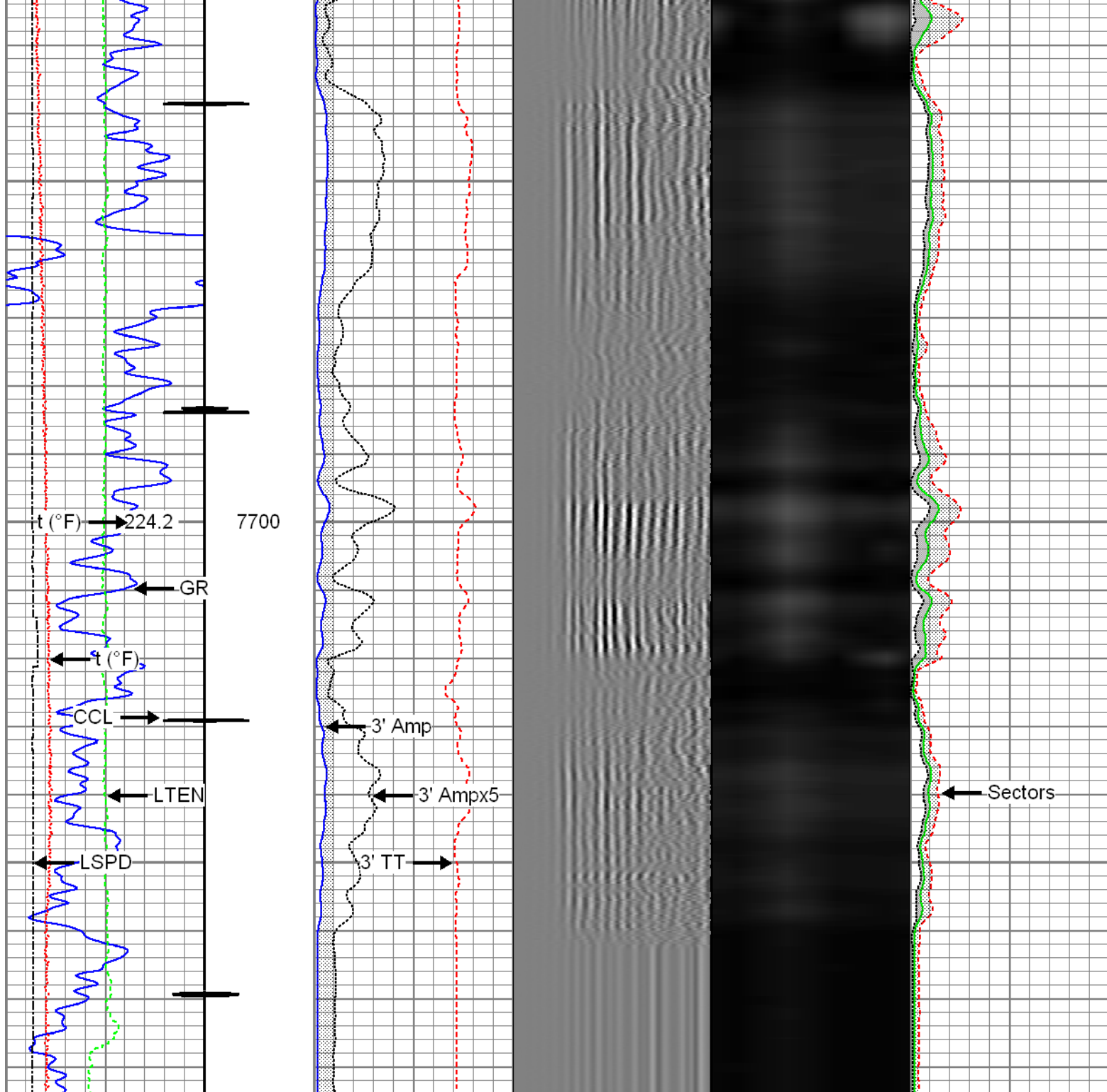













Gamma Ray 0 (GAPI) 120	3' Amplitude 0 (mV) 100	5' Variable Density Log 200 1200	Sector Map	Average Amplitude 0 100
Casing Collar Locator 0 (degF) 20	3' Amplitude x 5 0 (mV) 20			Minimum Amplitude 0 100
Line Speed -150 (ft/min) 150	3' Travel Time 650 (usec) 150			Maximum Amplitude 0 100
Line Tension 0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

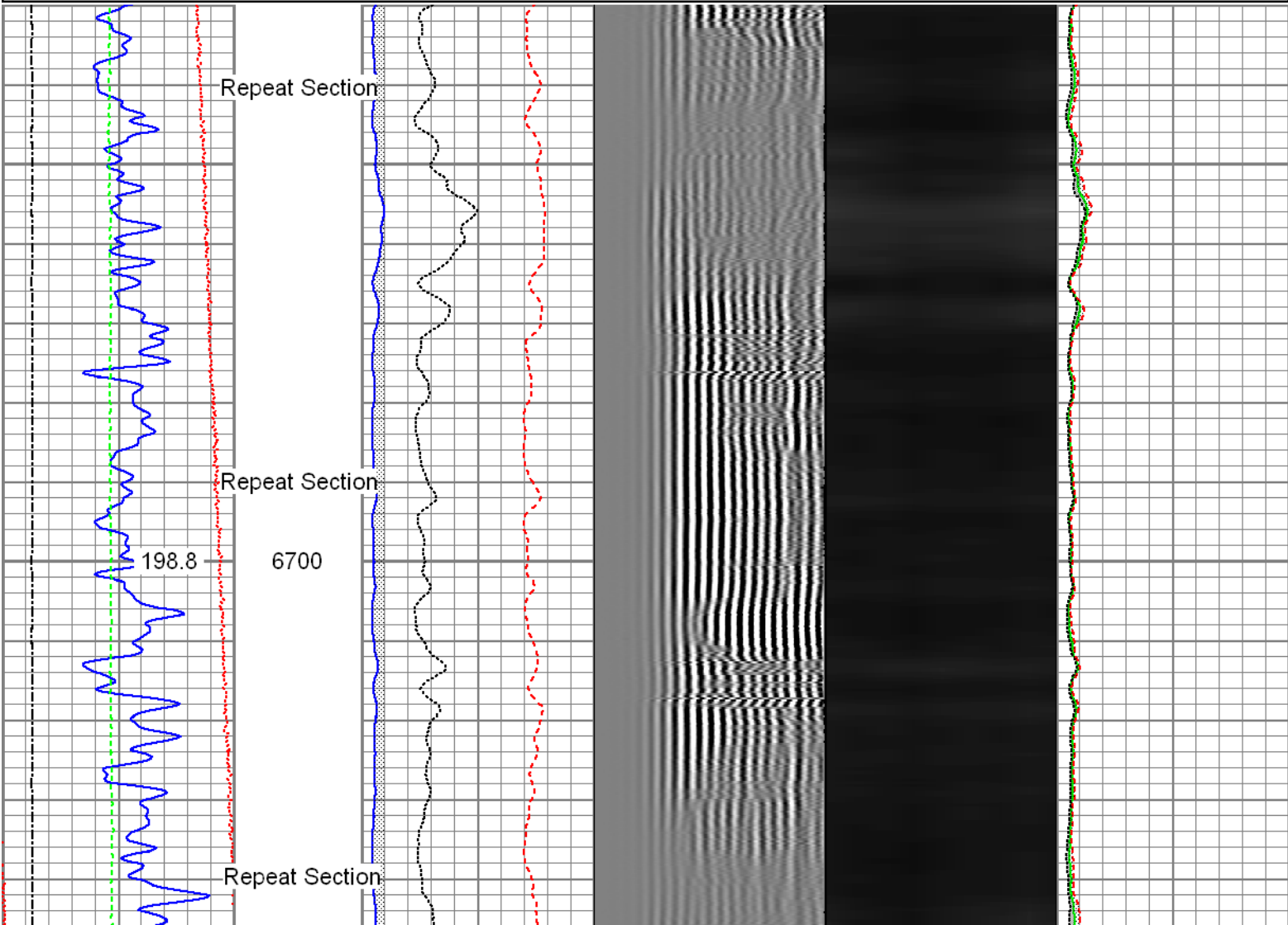


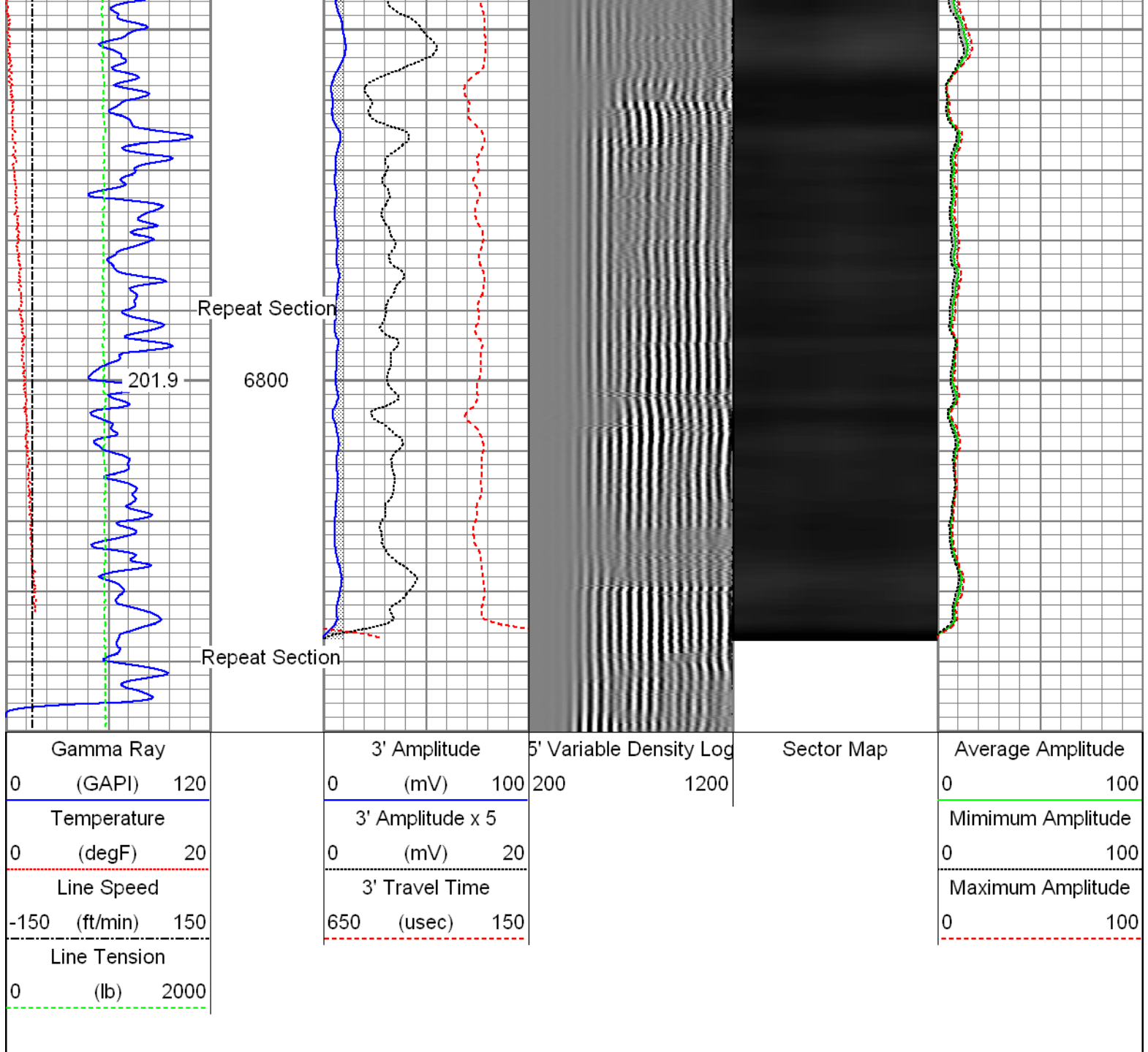
Repeat Section

Recorded with 2800 PSI Surface Induced Pressure

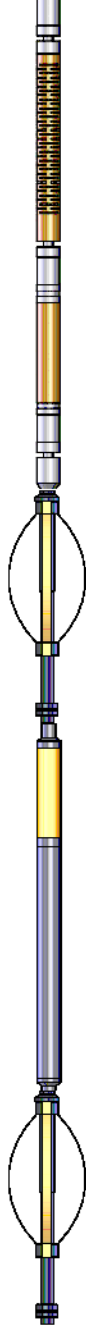
Database File: c:\warrior\data\0506906479_anadarko_encore 1c-12hz_09-22-15_rbl_revised\0506906479_anadarko
Dataset Pathname: repeat.1
Presentation Format: radii
Dataset Creation: Thu Sep 24 17:12:35 2015 by Calc 7.0 B1
Charted by: Depth in Feet scaled 1:240

<div>Gamma Ray</div> <div>0 (GAPI) 120</div> <div>Temperature</div> <div>0 (degF) 20</div> <div>Line Speed</div> <div>-150 (ft/min) 150</div> <div>Line Tension</div> <div>0 (lb) 2000</div>	<div>3' Amplitude</div> <div>0 (mV) 100</div> <div>3' Amplitude x 5</div> <div>0 (mV) 20</div> <div>3' Travel Time</div> <div>650 (usec) 150</div>	<div>5' Variable Density Log</div> <div>200 1200</div>	<div>Sector Map</div>	<div>Average Amplitude</div> <div>0 100</div> <div>Mimimum Amplitude</div> <div>0 100</div> <div>Maximum Amplitude</div> <div>0 100</div>
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Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			T_CH14375_1_GO Titan 1-7/16" Assembled Electric Cable Head with 1" Fishing Neck	1.03	1.44	4.00
			Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
HeadVolt	19.49					
Temp	16.72					

WVF3FT	14.55		Probe_RADII-C-2-3/4" (FW1302-001) Probe 2-3/4" Sector Cement Bond Tool with Temperature Probe	9.19	2.75	105.00
WVFCAL	14.55					
WVFS1	14.55					
WVFS2	14.55					
WVFS3	14.55					
WVFS4	14.55					
WVFS5	14.55					
WVFS6	14.55					
WVFS7	14.55					
WVFS8	14.55					
WVF5FT	13.55					
			Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
CCL	6.51					
DCCL	6.51					
			Probe_CCL_GR-2.75"Digital (FW1307-038) 4.54 Probe 2-3/4" Digital CCL / Gamma Ray Combined	4.54	2.75	55.00
GR	3.77					
			Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
Dataset: 0506906479_Anadarko_Encore 1C-12HZ_09-22-15_RBL.db: field/well/run1/main.1 Total Length: 23.40 ft Total Weight: 194.00 lb O.D. 2.75 in						

Calibration Report		
Database File:	C:\Warrior\Data\0506906479_Anadarko_Encore 1C-12HZ_09-22-15_RBL_REVISIED\0506906479_An	
Dataset Pathname:	main.1	
Dataset Creation:	Thu Sep 24 17:08:14 2015 by Calc 7.0 B1	
Gamma Ray Calibration Report		
Serial Number:	FW1307-038	
Tool Model:	2.75"Digital	
Performed:	Wed Sep 16 09:20:20 2015	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.6000	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: FW1302-001
 Tool Model: 2-3/4"

Calibration Casing Diameter: 5.500 in
 Calibration Depth: 0.002 ft

Master Calibration, performed Thu Sep 24 17:08:11 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.009	0.675	0.800	71.921	106.684	-0.109
CAL	0.763	0.768				
5'	0.011	0.607	0.800	71.921	119.290	-0.467
SUM						
S1	0.005	0.677	0.000	100.000	148.642	-0.693
S2	0.011	0.706	0.000	100.000	143.900	-1.561
S3	0.009	0.713	0.000	100.000	142.207	-1.343
S4	0.010	0.690	0.000	100.000	147.208	-1.511
S5	0.009	0.666	0.000	100.000	152.204	-1.400
S6	0.009	0.645	0.000	100.000	157.372	-1.483
S7	0.009	0.648	0.000	100.000	156.531	-1.450
S8	0.009	0.668	0.000	100.000	151.629	-1.315

Internal Reference Calibration, performed Wed Dec 31 17:00:00 1969:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.763	0.768	1.000	0.000

Air Zero Calibration, performed Tue Sep 22 10:04:14 2015:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.008		0.000		0.000	
5'	0.008		0.000		0.001	
SUM						
S1	0.003		0.000		-0.000	
S2	0.008		0.000		0.000	
S3	0.008		0.000		-0.000	
S4	0.009		0.000		-0.000	
S5	0.008		0.000		0.000	
S6	0.008		0.000		0.000	
S7	0.009		0.000		-0.000	
S8	0.009		0.000		-0.000	



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Well Encore 1C-12HZ

Field Wattenberg

County Larimer

State Colorado
