



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company	Kerr-McGee Oil & Gas Onshore, L.P.			Company	Kerr-McGee Oil & Gas Onshore, L.P.		
Well	Camenisch 4N-35HZ			Well	Camenisch 4N-35HZ		
Field	Wattenberg			Field	Wattenberg		
County	Weld			County	Weld		
State	Colorado			State	Colorado		
Location:				API # : 05-123-43340			
SEC 2				TWP 1N			
Permanent Datum				Ground Level			
Log Measured From				Kelly Bushing			
Drilling Measured From				Kelly Bushing			
				Elevation 5037'			
				32 FT			
				K.B. 5069'			
				D.F. 5068'			
				G.L. 5037'			

Date	20-JUN-2017
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Run Number	Two
Depth Driller	13946 FT
Depth Logger	7657 FT
Bottom Logged Interval	7652 FT
Top Log Interval	Surface
Open Hole Size	8.50"
Type Fluid	Water
Density / Viscosity	8.34 lb/gal
Max. Recorded Temp.	234°F
Estimated Cement Top	See Log
Time Well Ready	ROA
Time Logger on Bottom	13:37
Equipment Number	HD-0343
Location	Fort Lupton, CO
Recorded By	J. Morrison
Witnessed By	Kyle Carver

Borehole Record				Tubing Record			
Run Number	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	1856 FT
Intermediate #1	5 1/2	17	HC P110	Surface	13936 FT
Intermediate #2					
Liner					

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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 referenced to Casing Tally reported Marker Joint at 6973 FT
Adjusted +5 FT to correlate with Marker Joint
Gauge Ring/Junk Basket ran to 7753 FT with no debris found
Log ran from 7652 to surface
Log ran with 2800 PSI surface induced pressure
Logging tools were clean and free of debris upon completion of operations

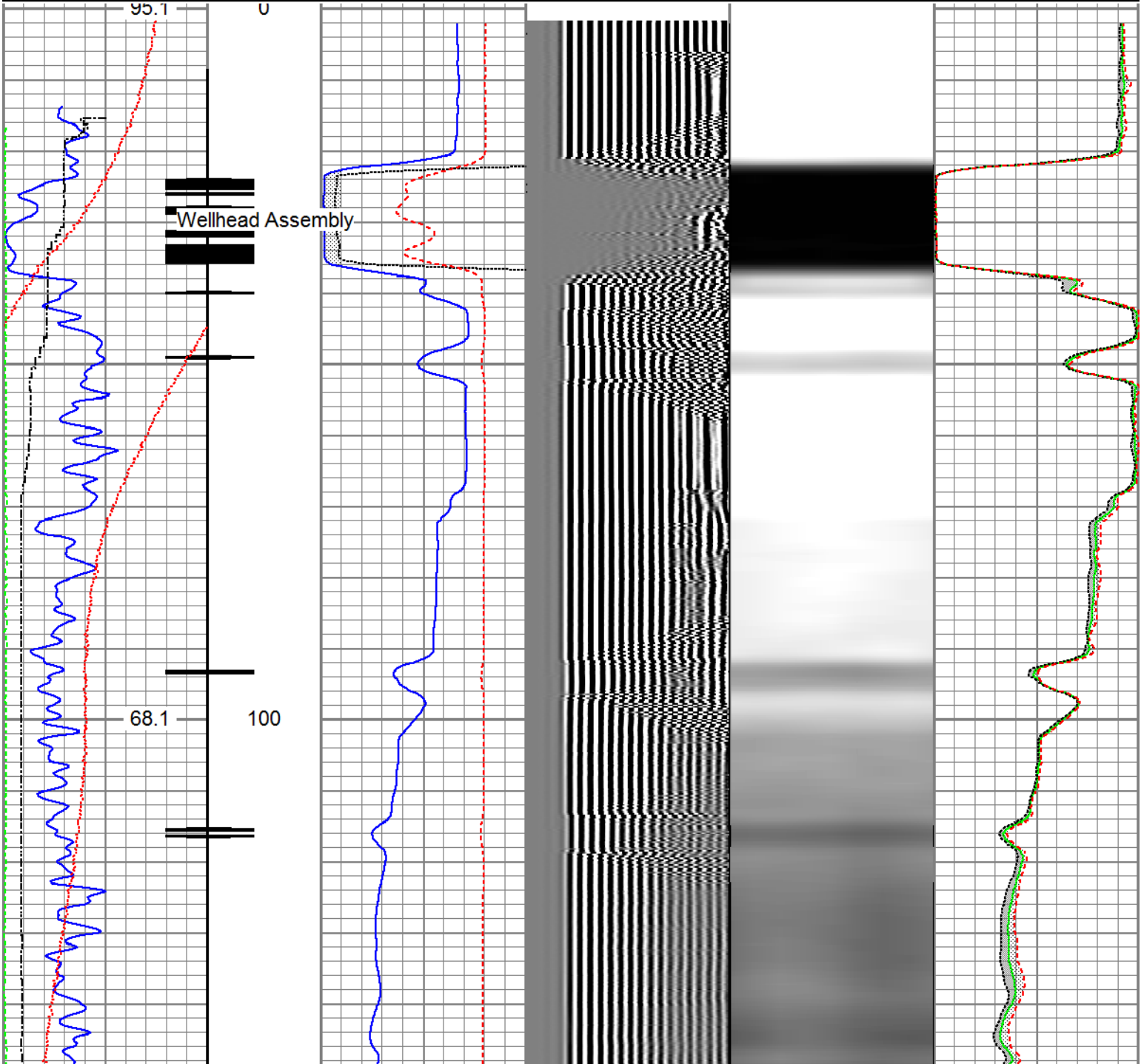
Thank you for choosing Reliance Oilfield Services, LLC!!

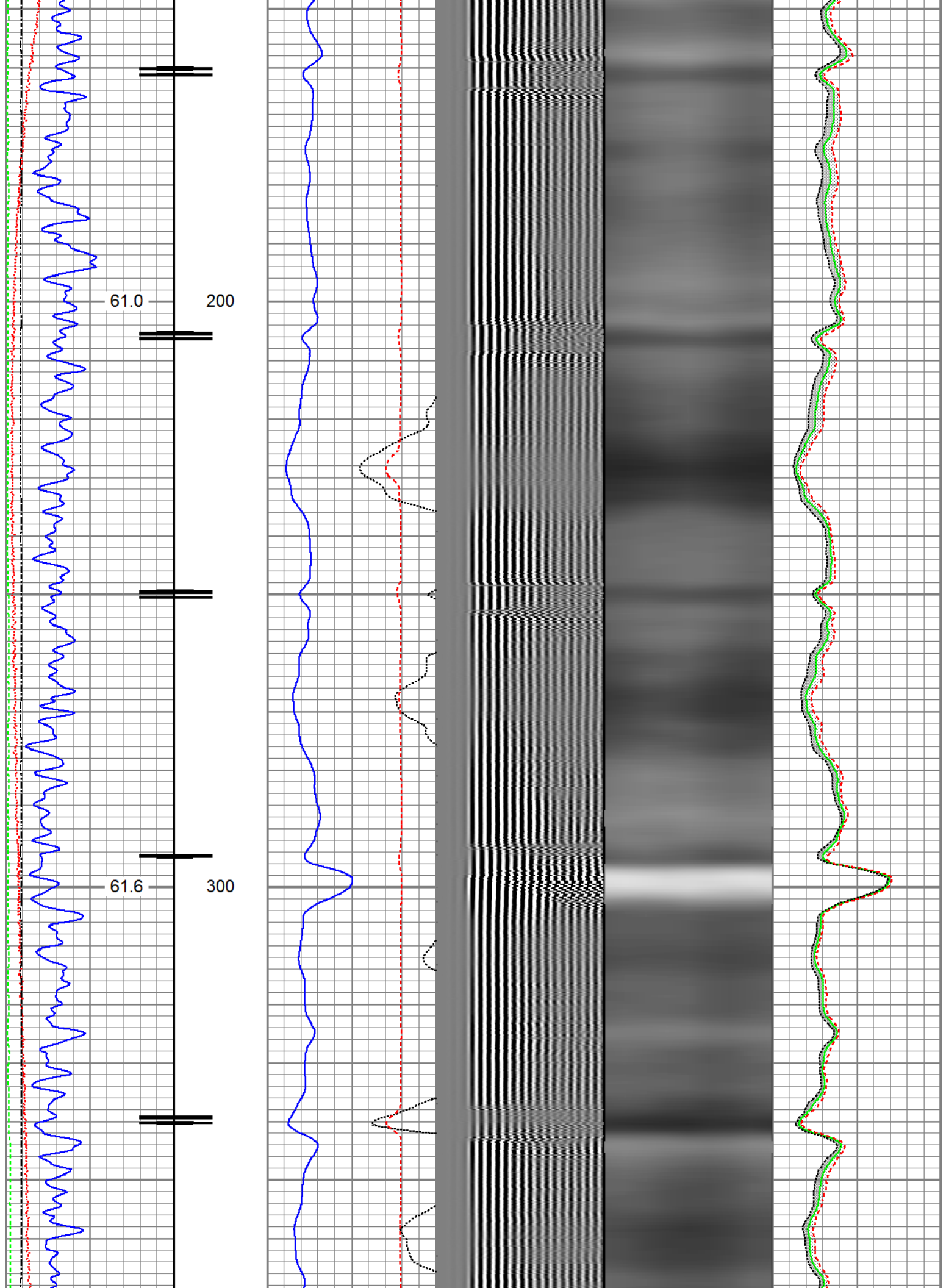


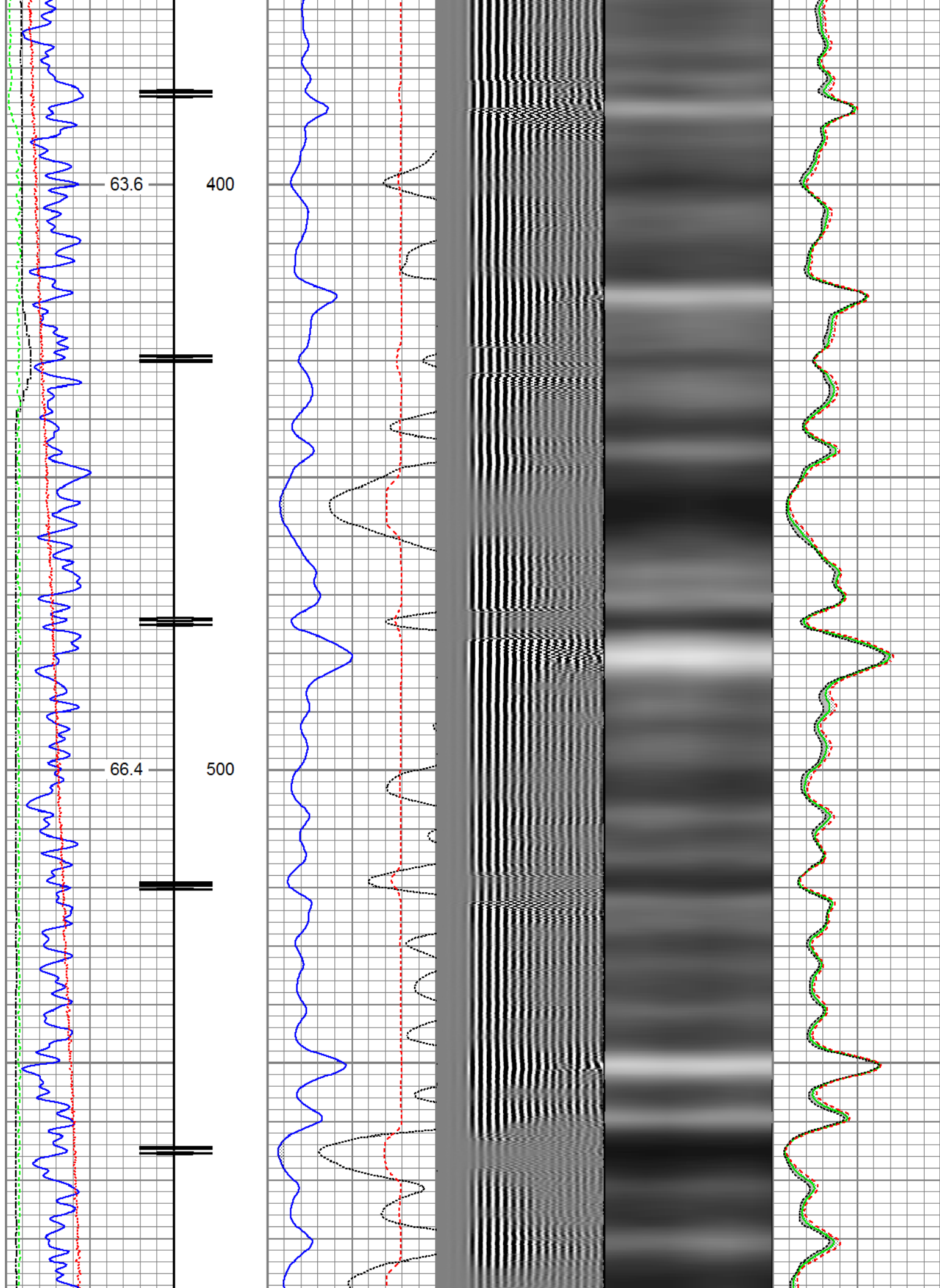
Main Pass

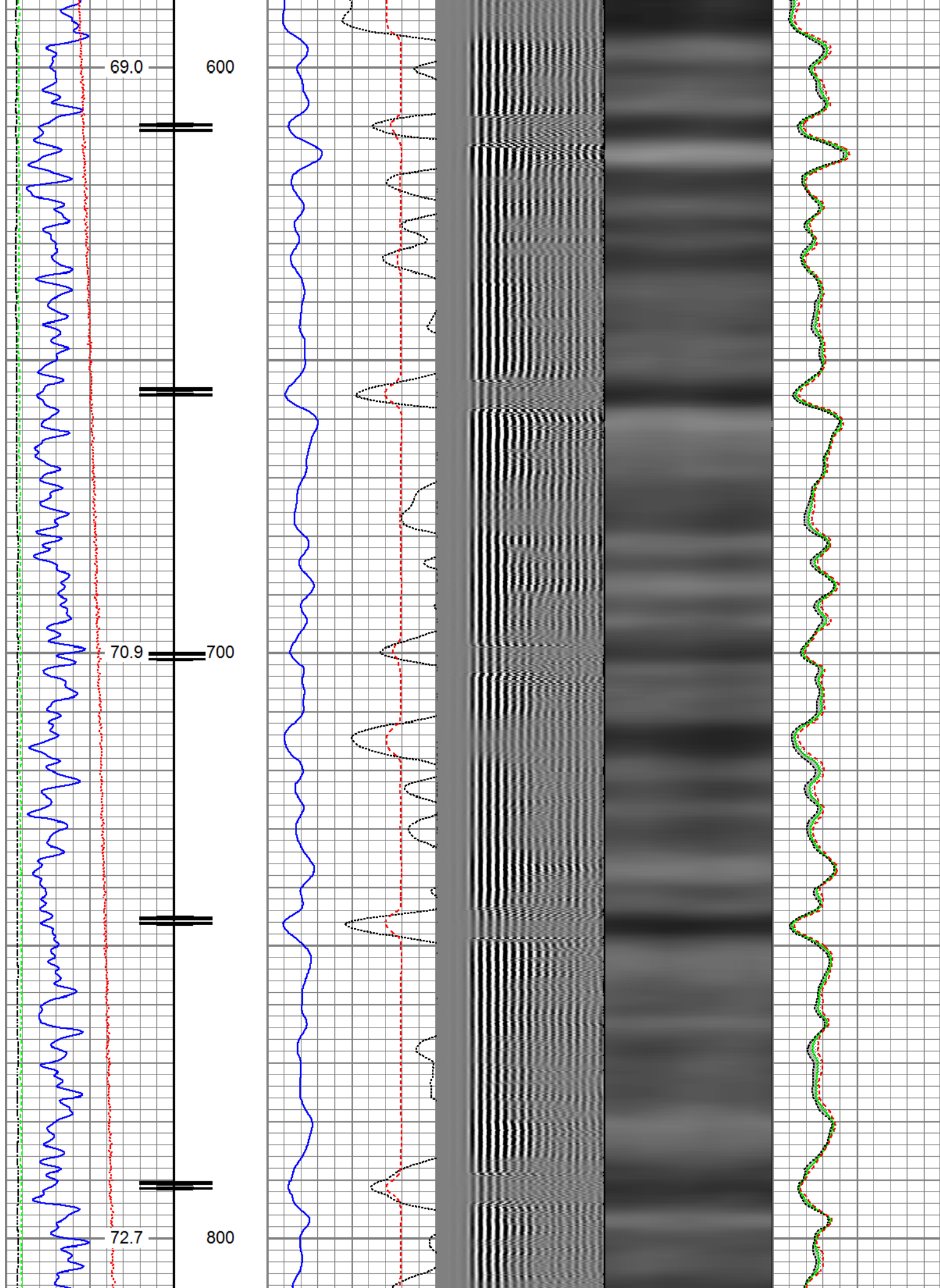
Recorded with 2800 PSI Surface Induced Pressure

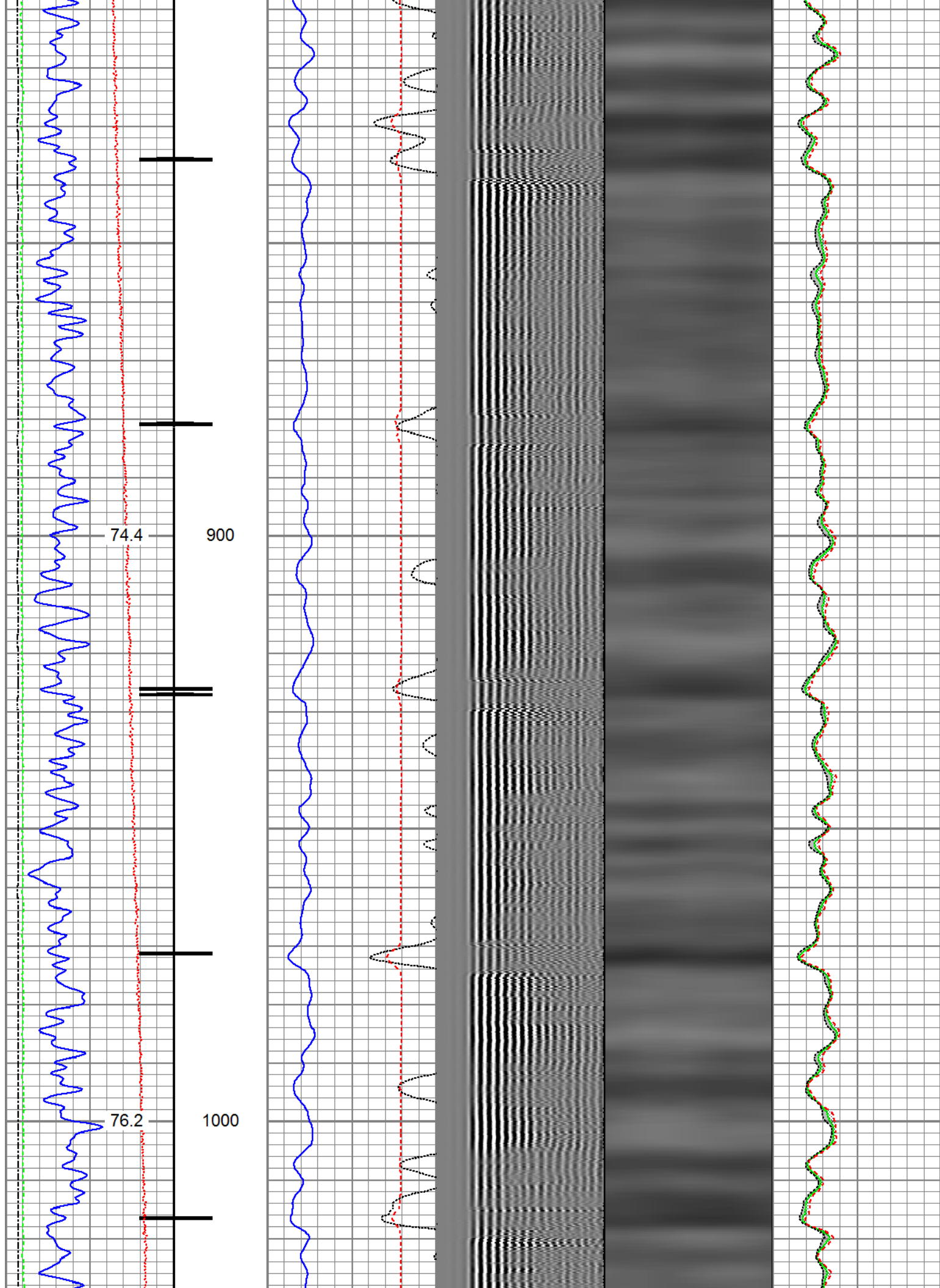
<div>Gamma Ray</div> <div>0 (GAPI) 120</div> <div>Casing Collar Locator</div>	<div>3' Amplitude</div> <div>0 (mV) 100</div> <div>3' Amplitude x 5</div> <div>0 (mV) 20</div> <div>3' Travel Time</div> <div>650 (usec) 150</div>	<div>5' Variable Density Log</div> <div>200 1200</div>	<div>Sector Map</div>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

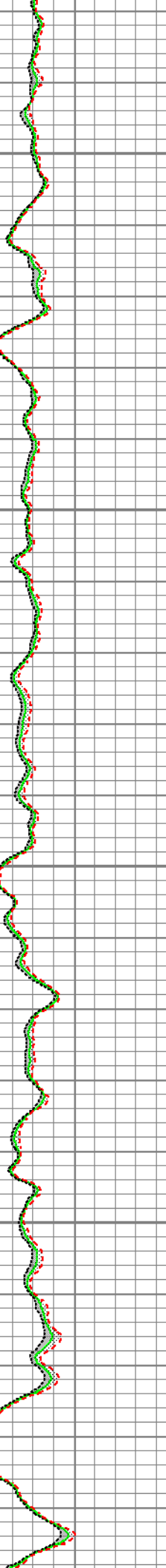
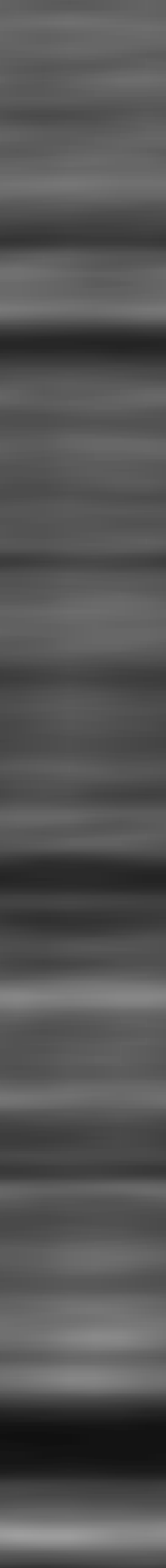
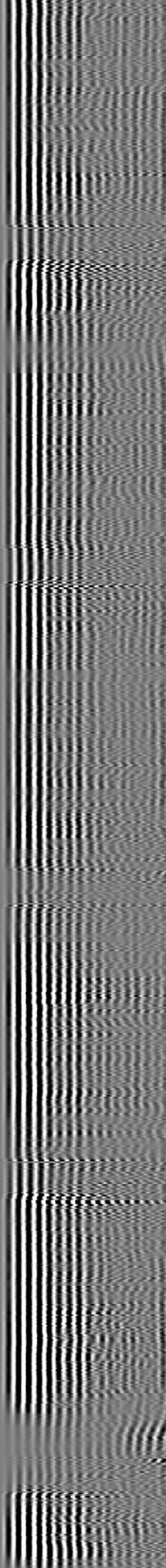
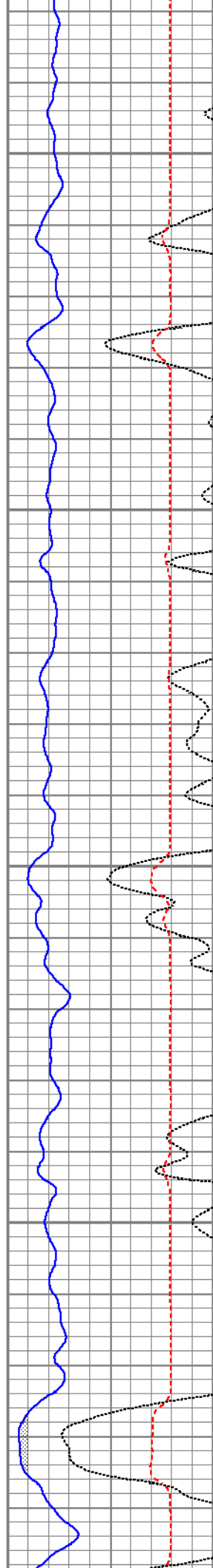
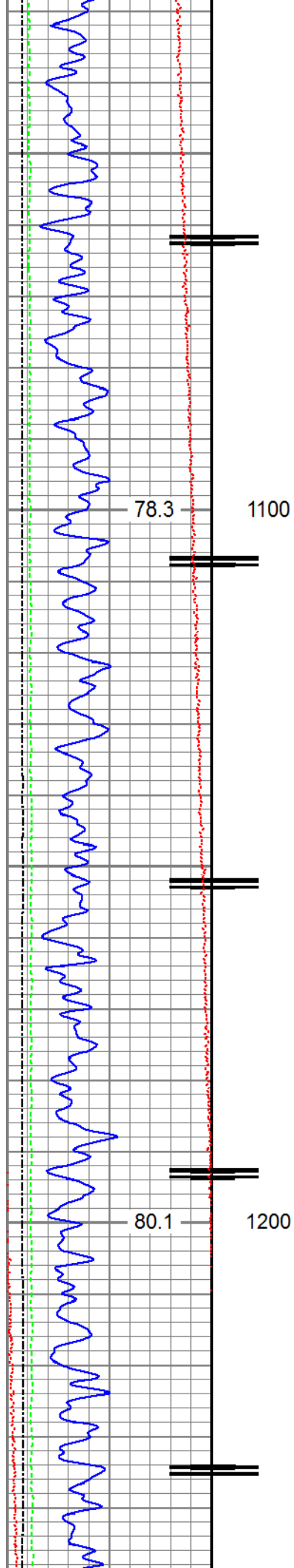


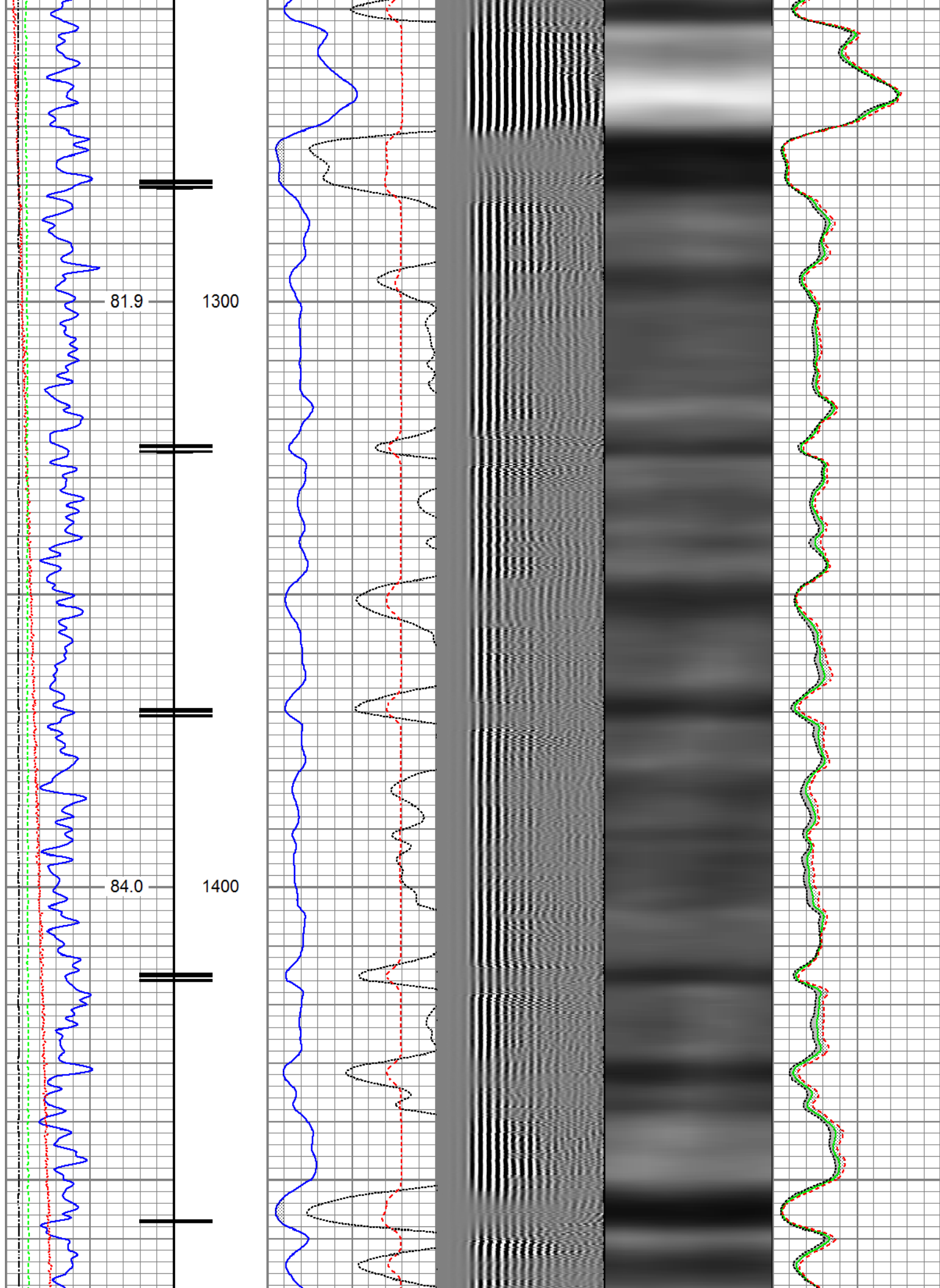


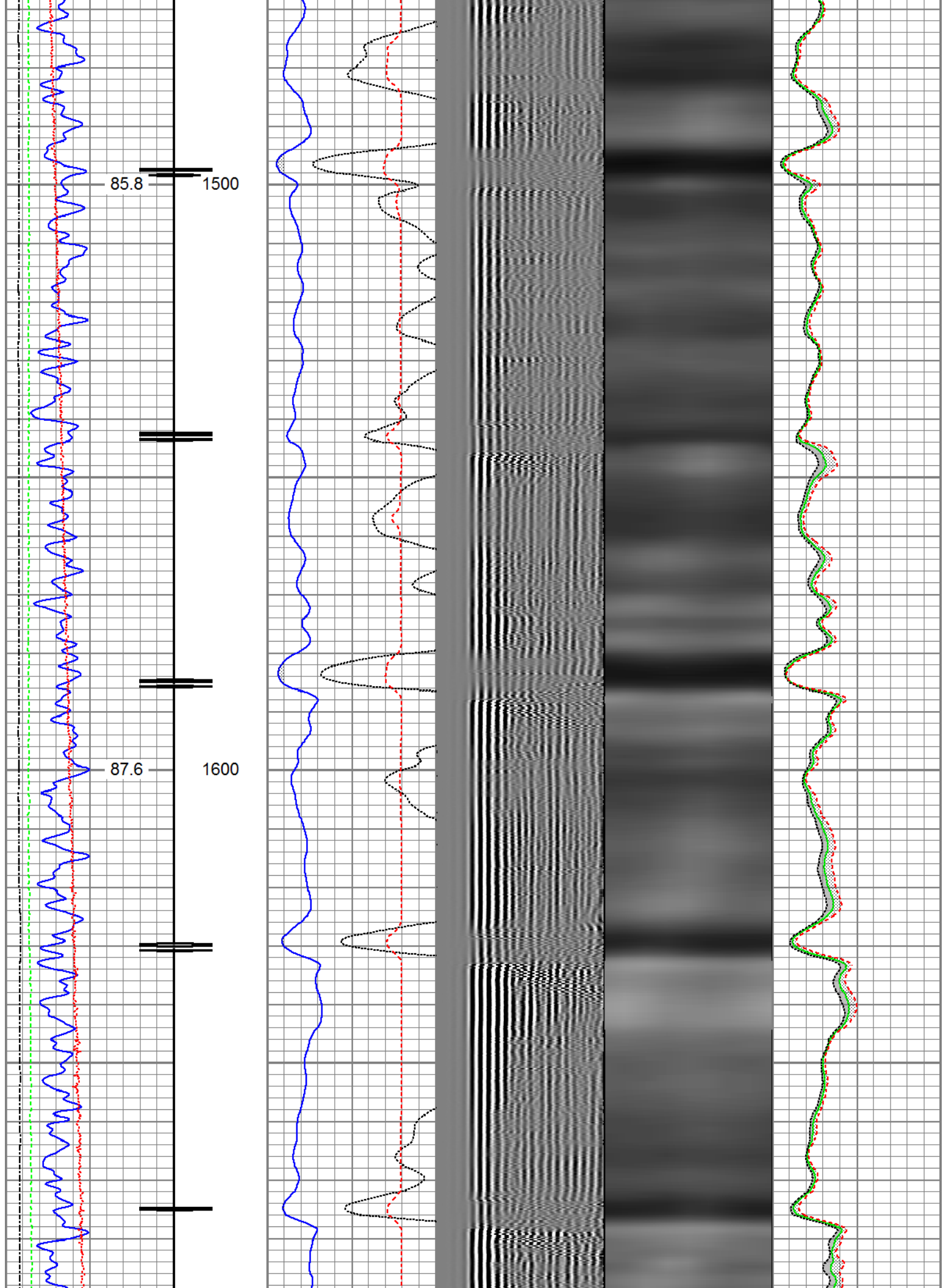


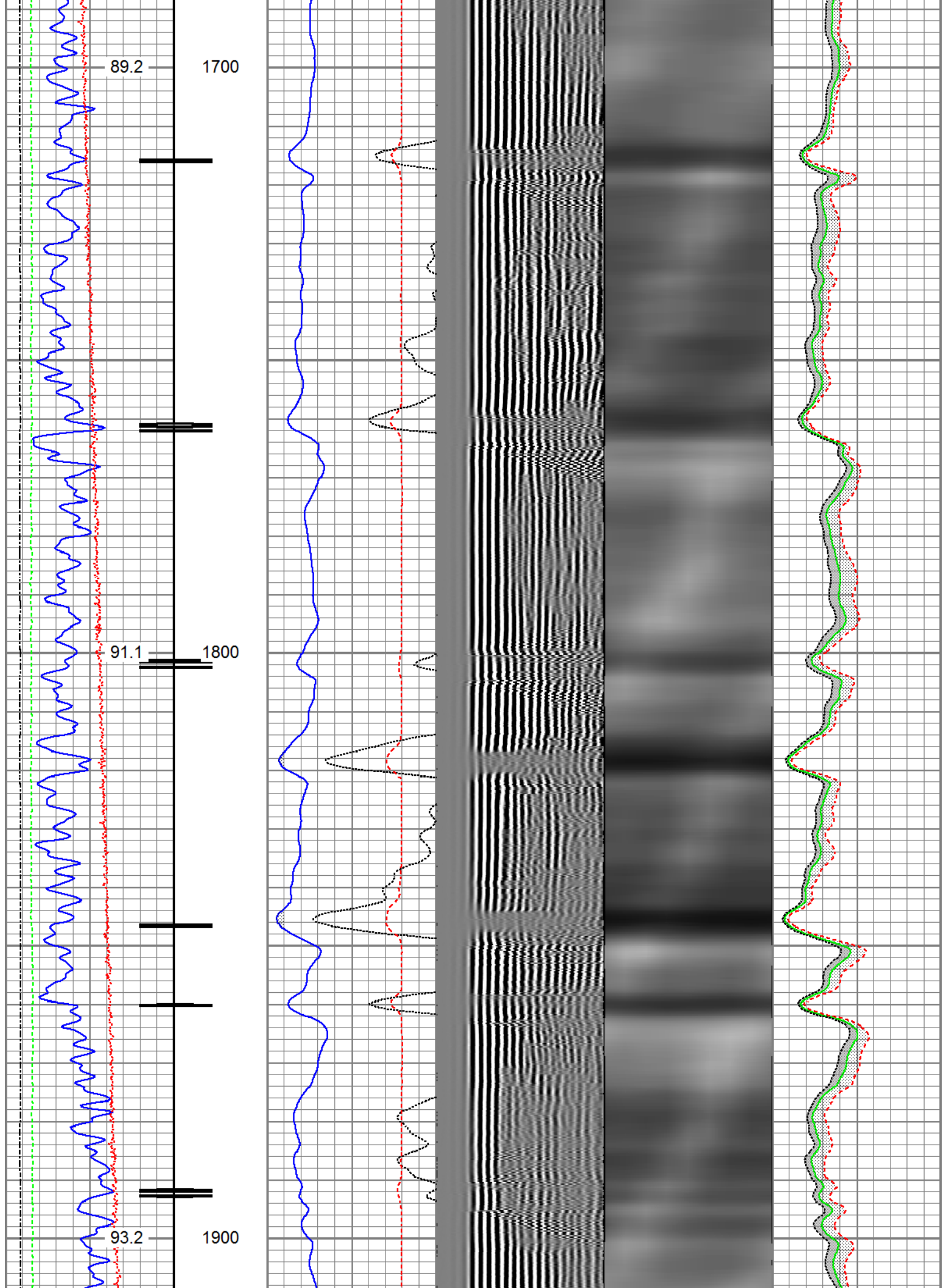


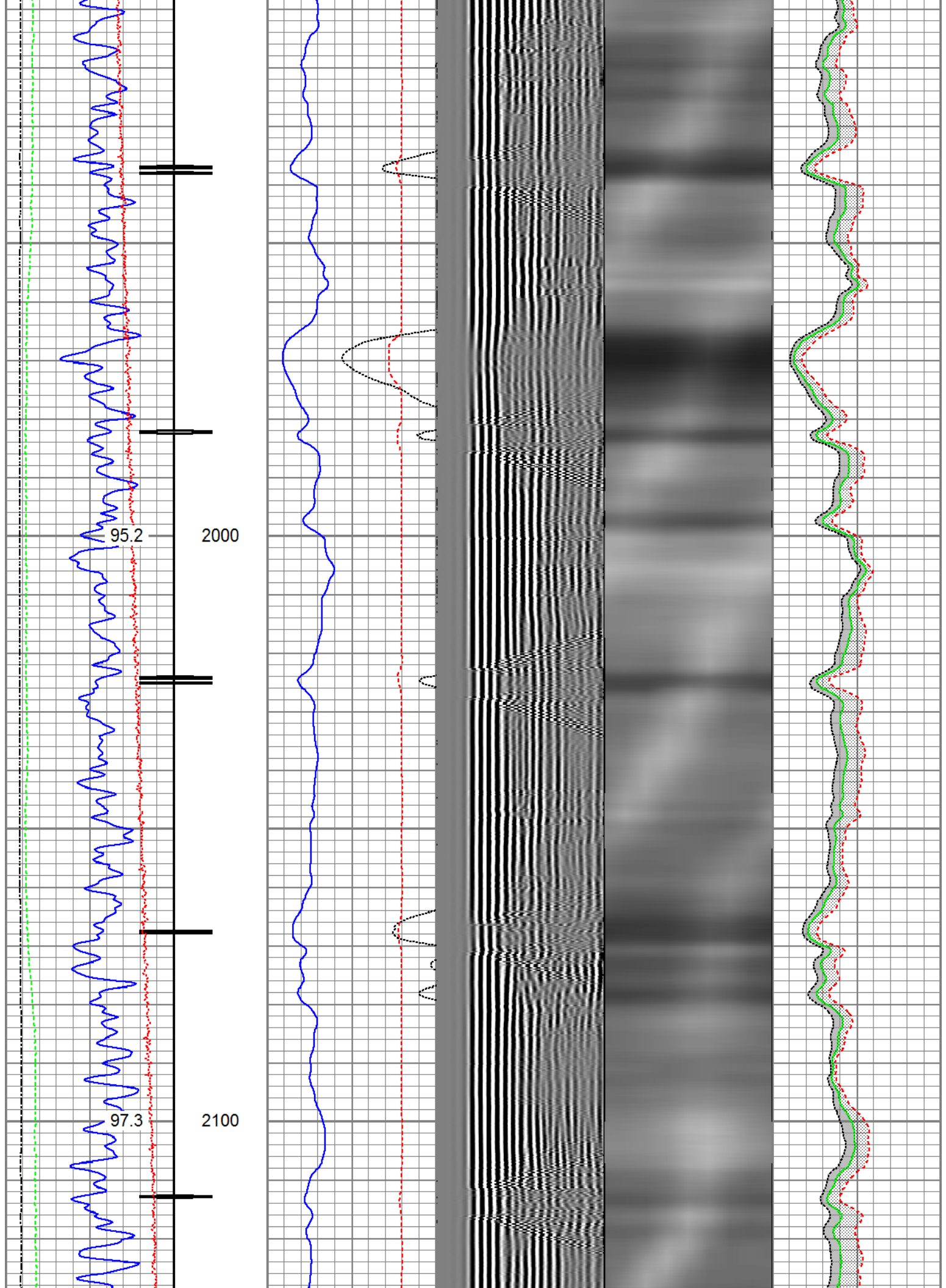


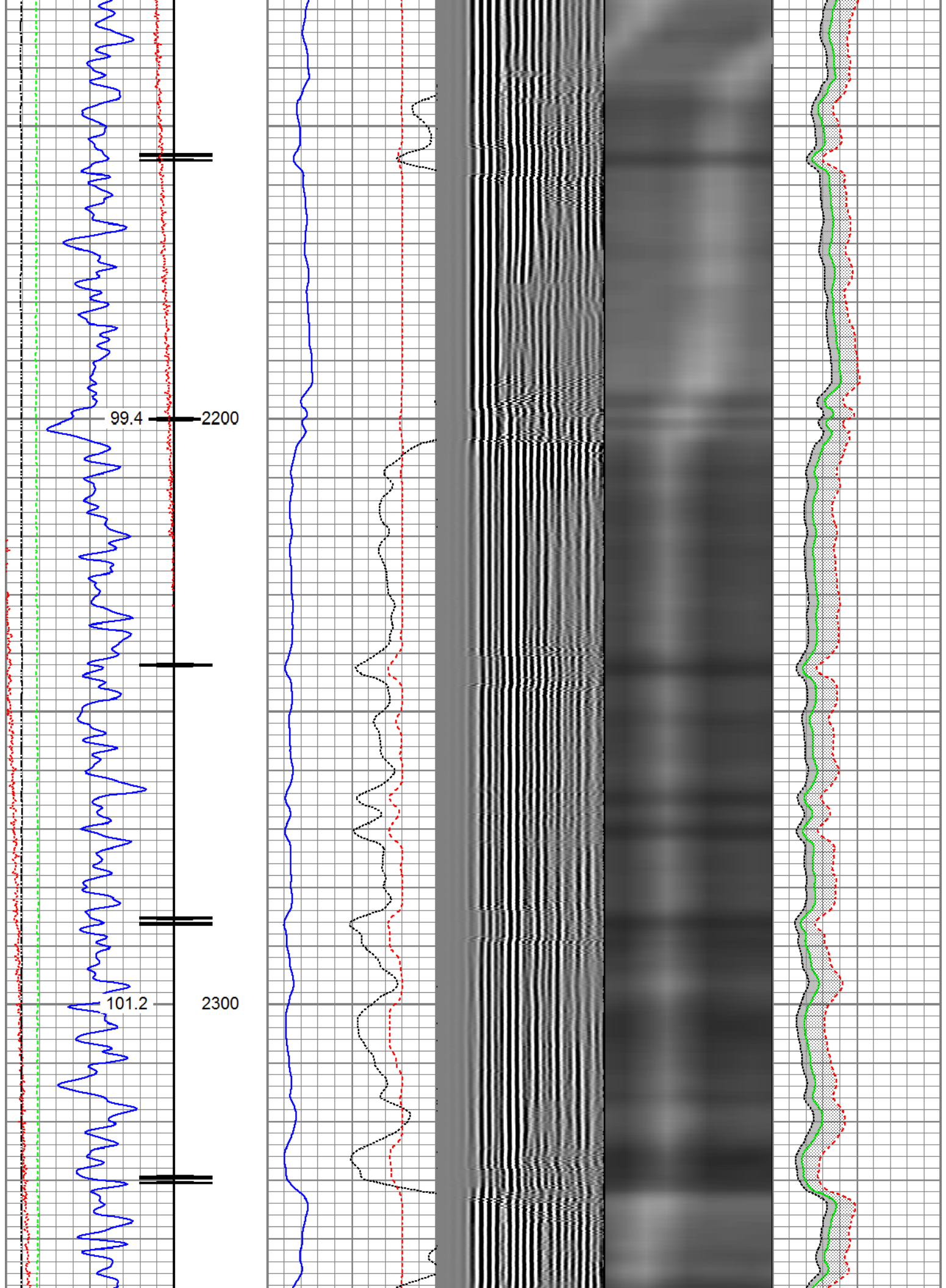


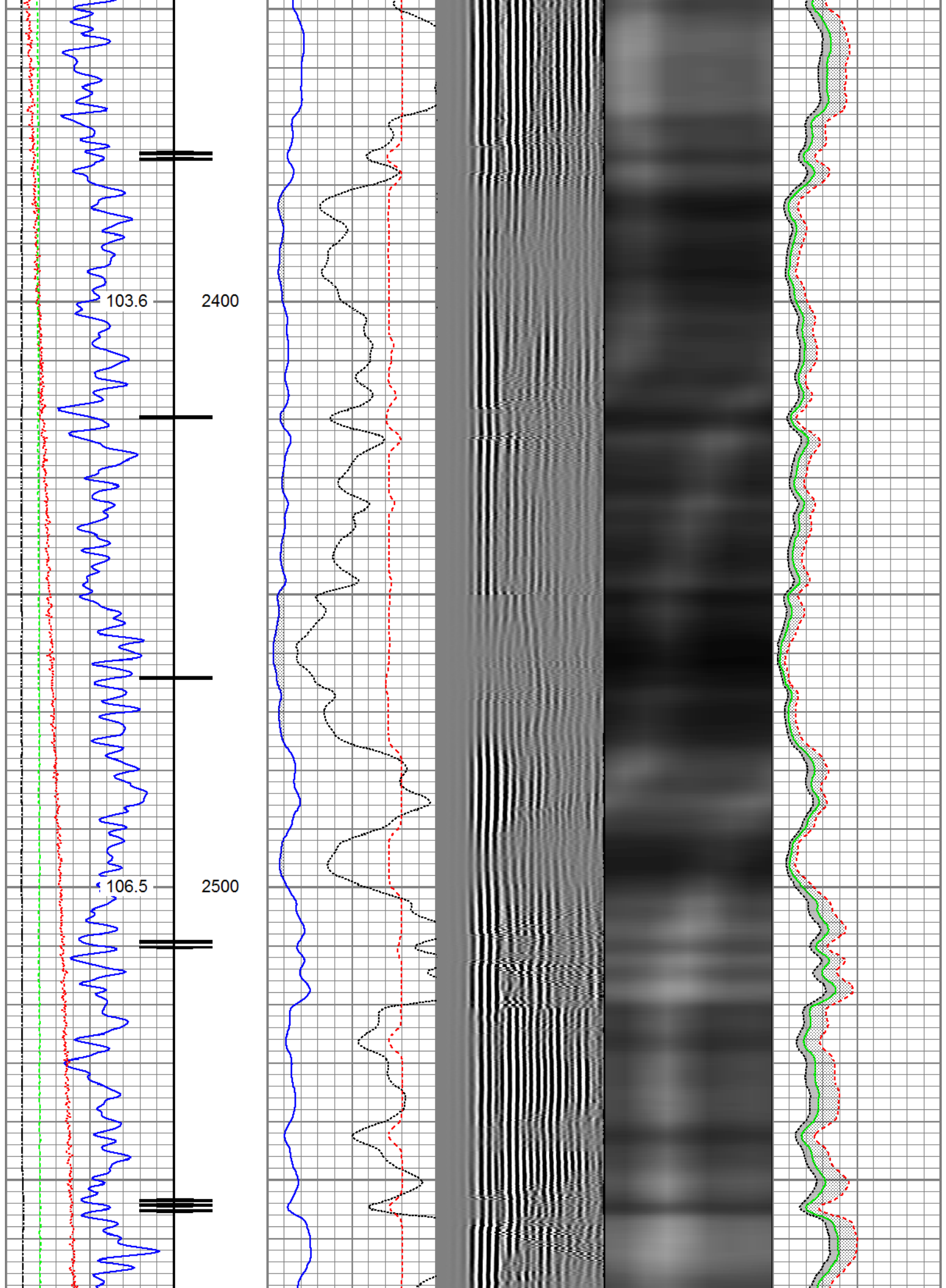


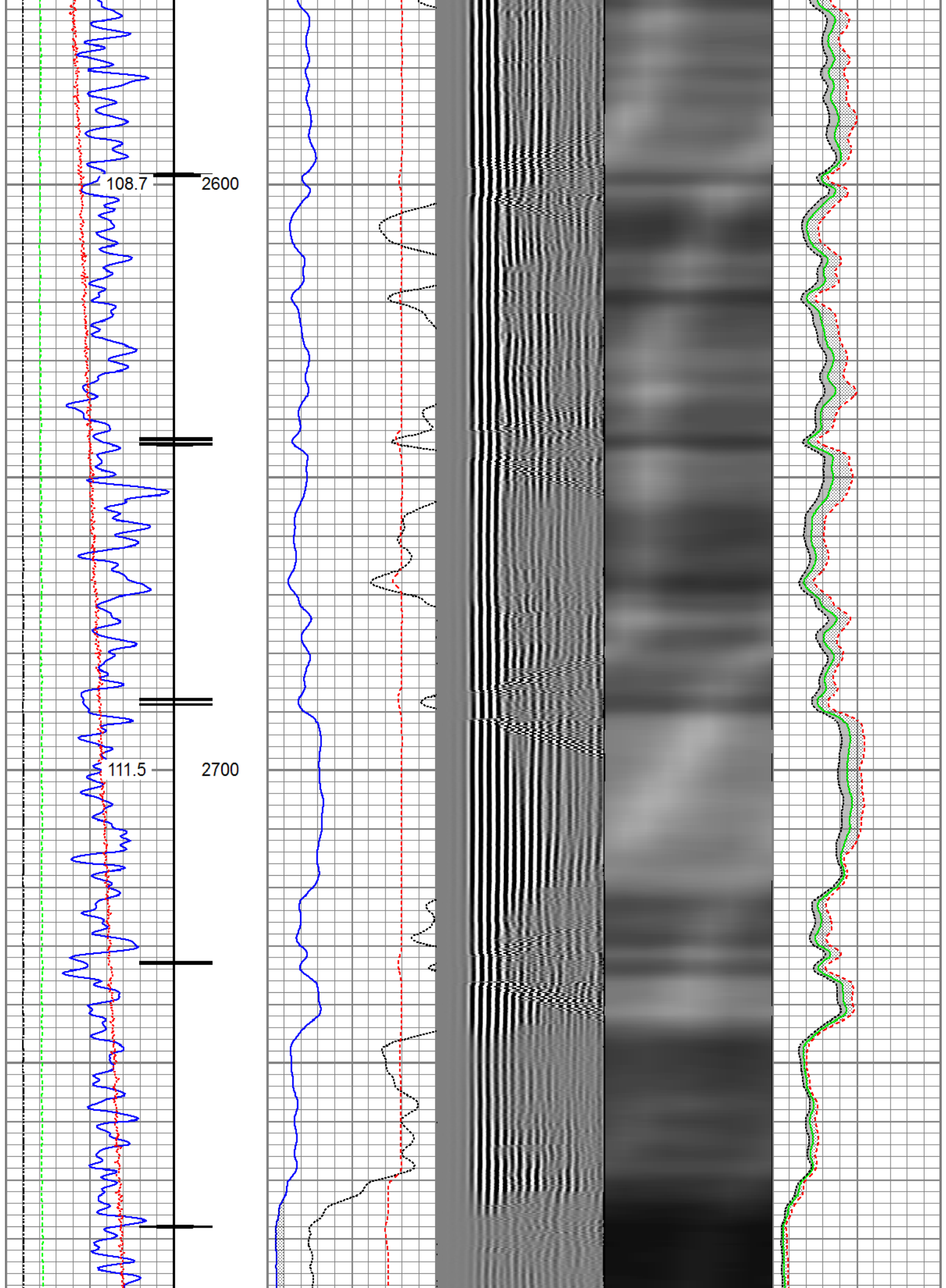


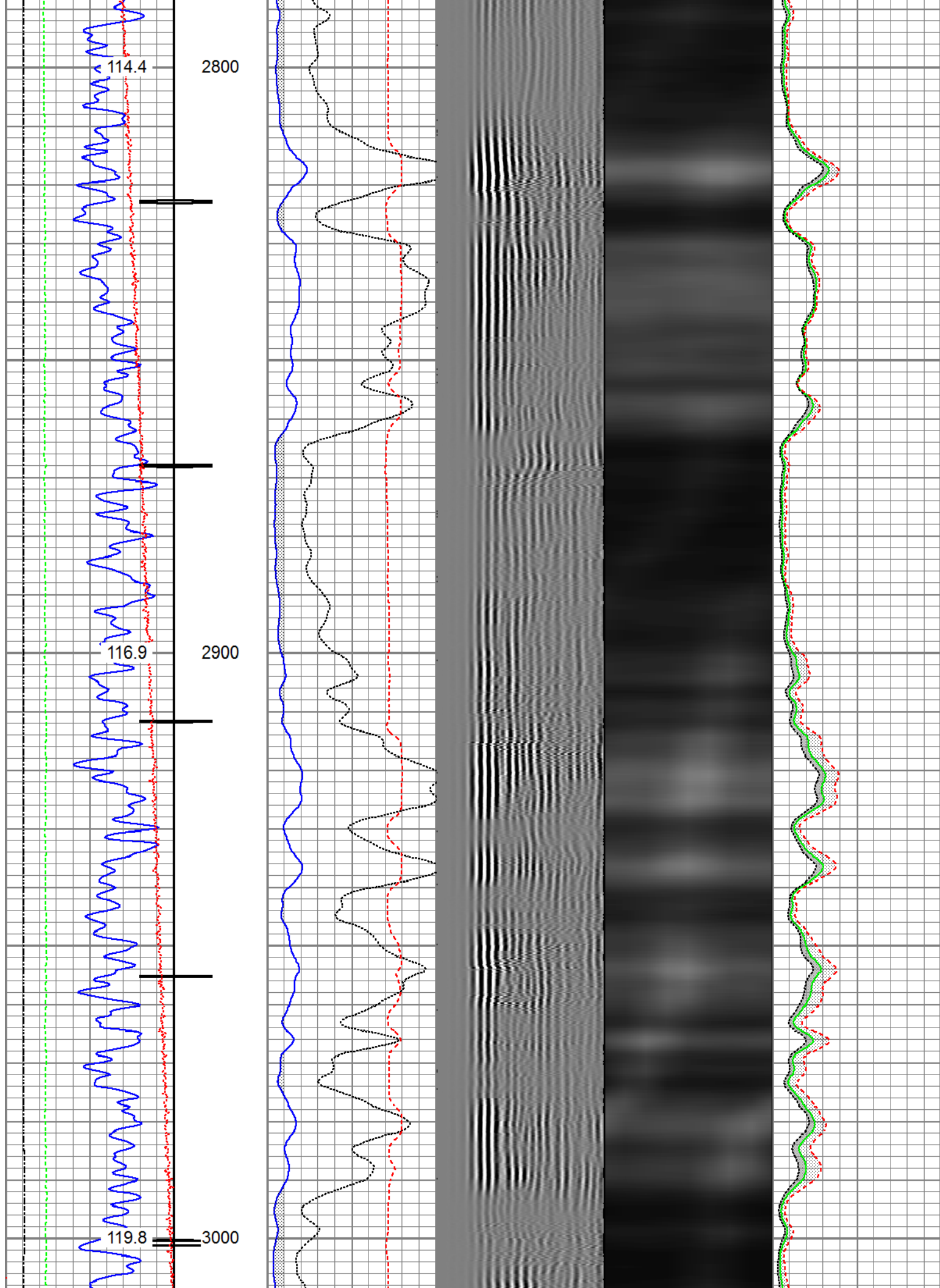


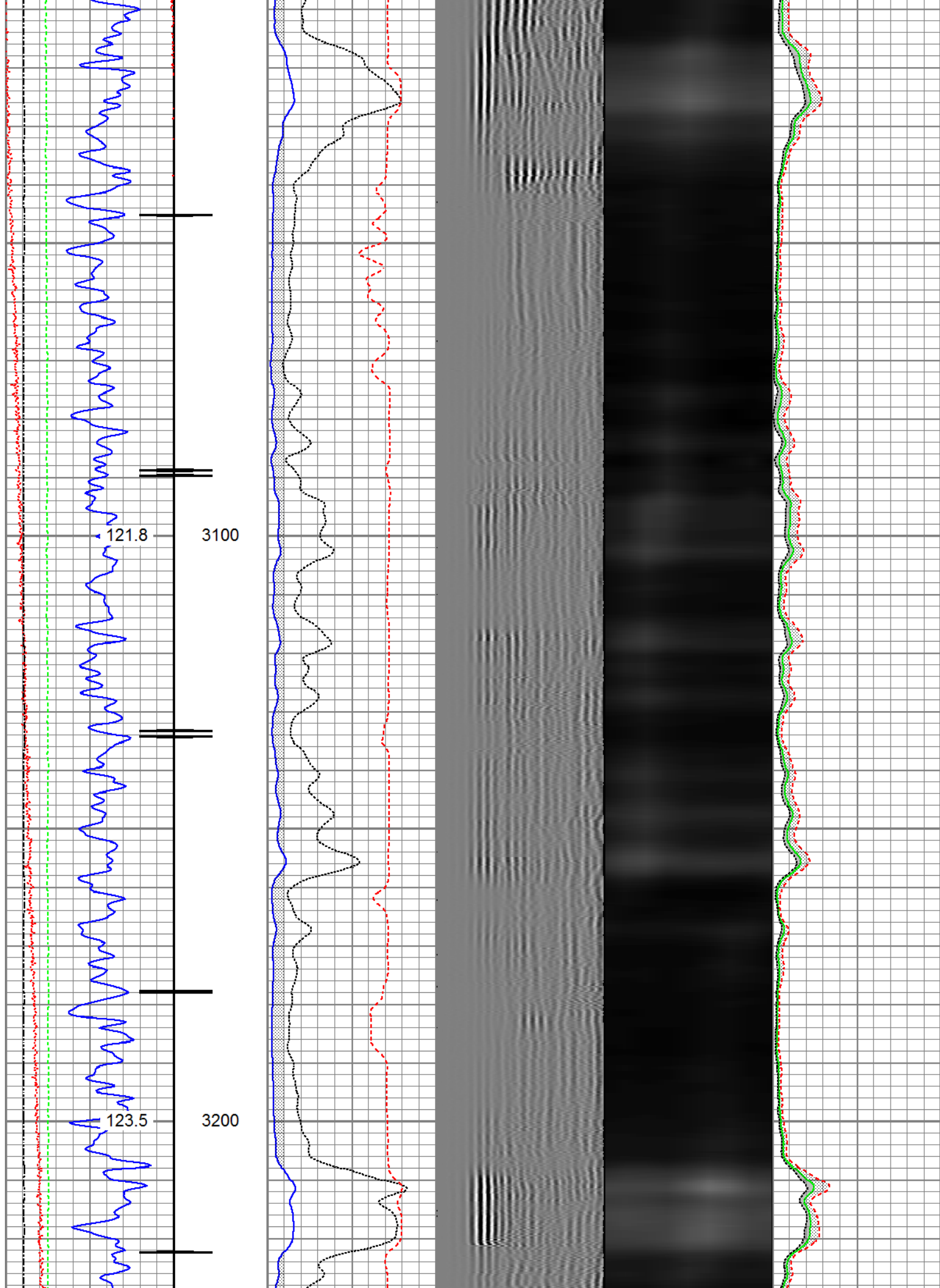


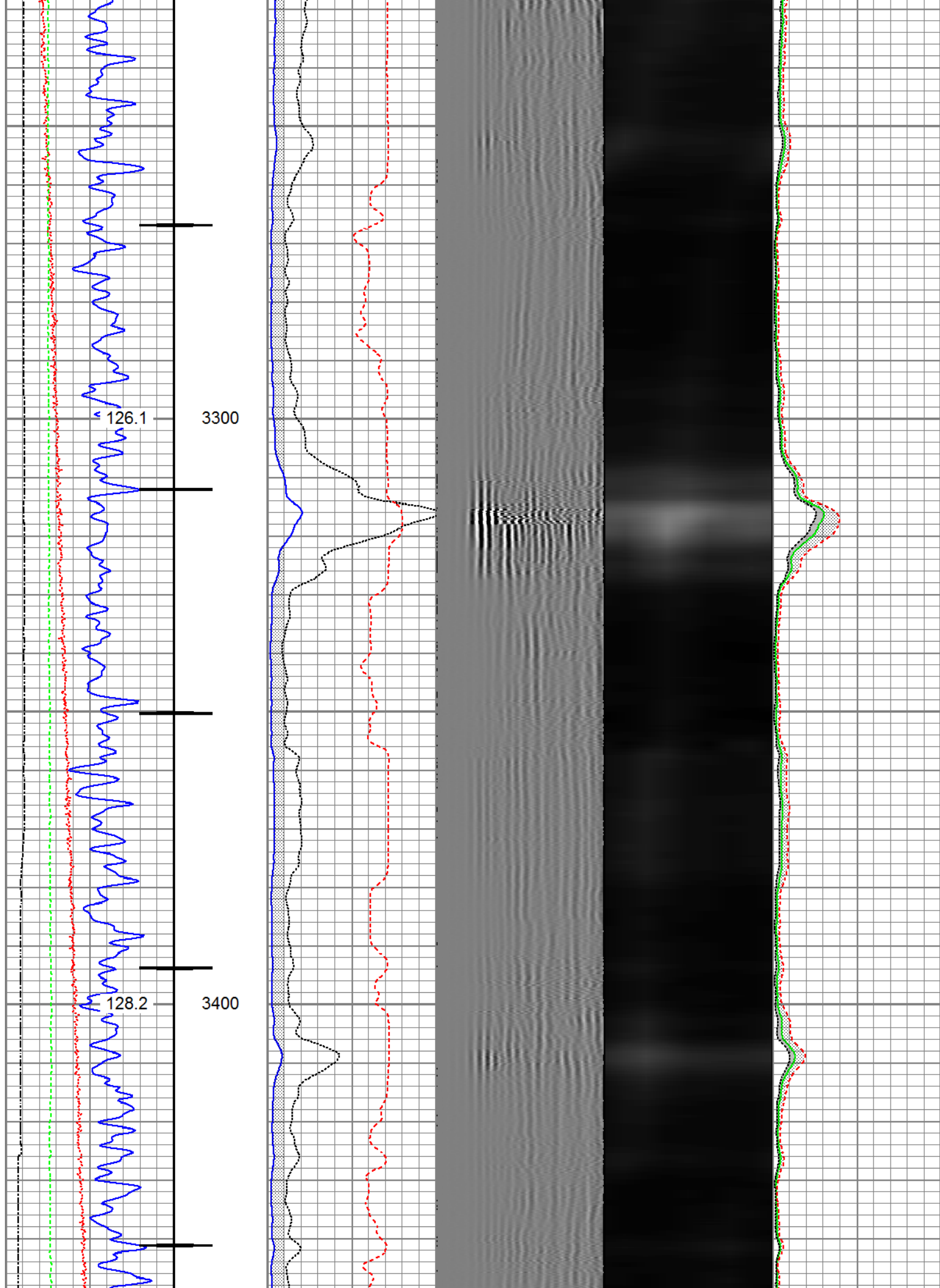


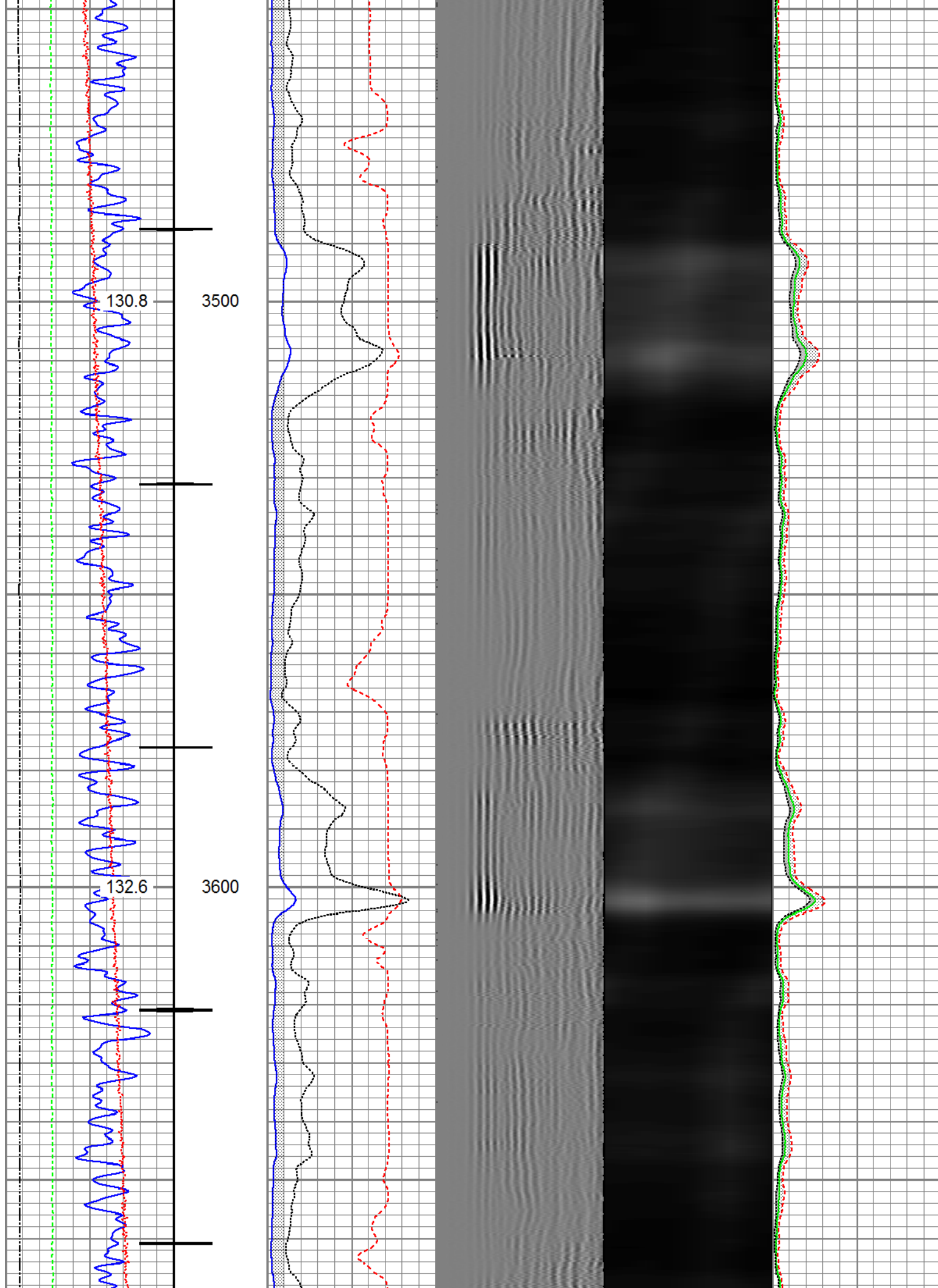


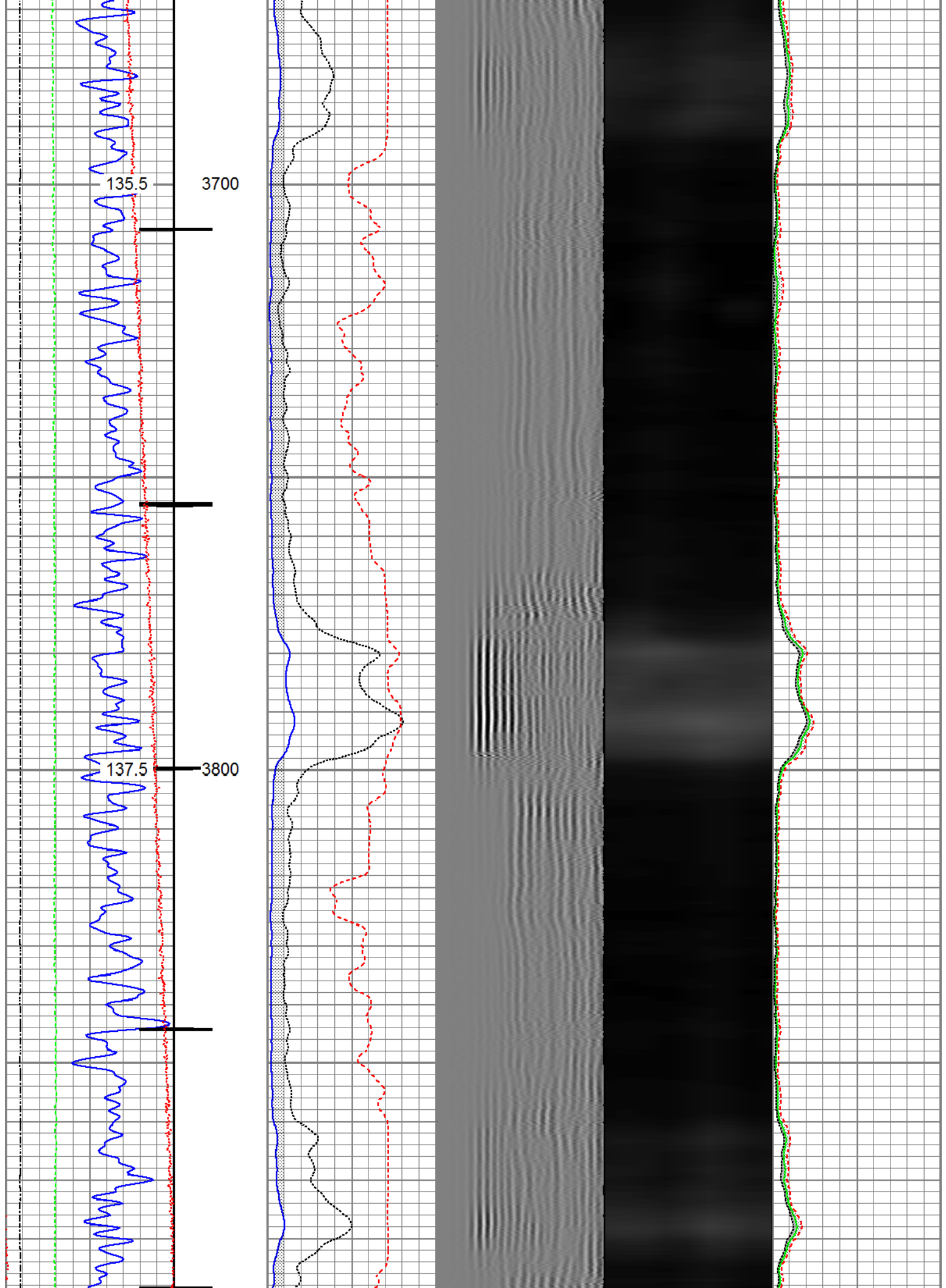


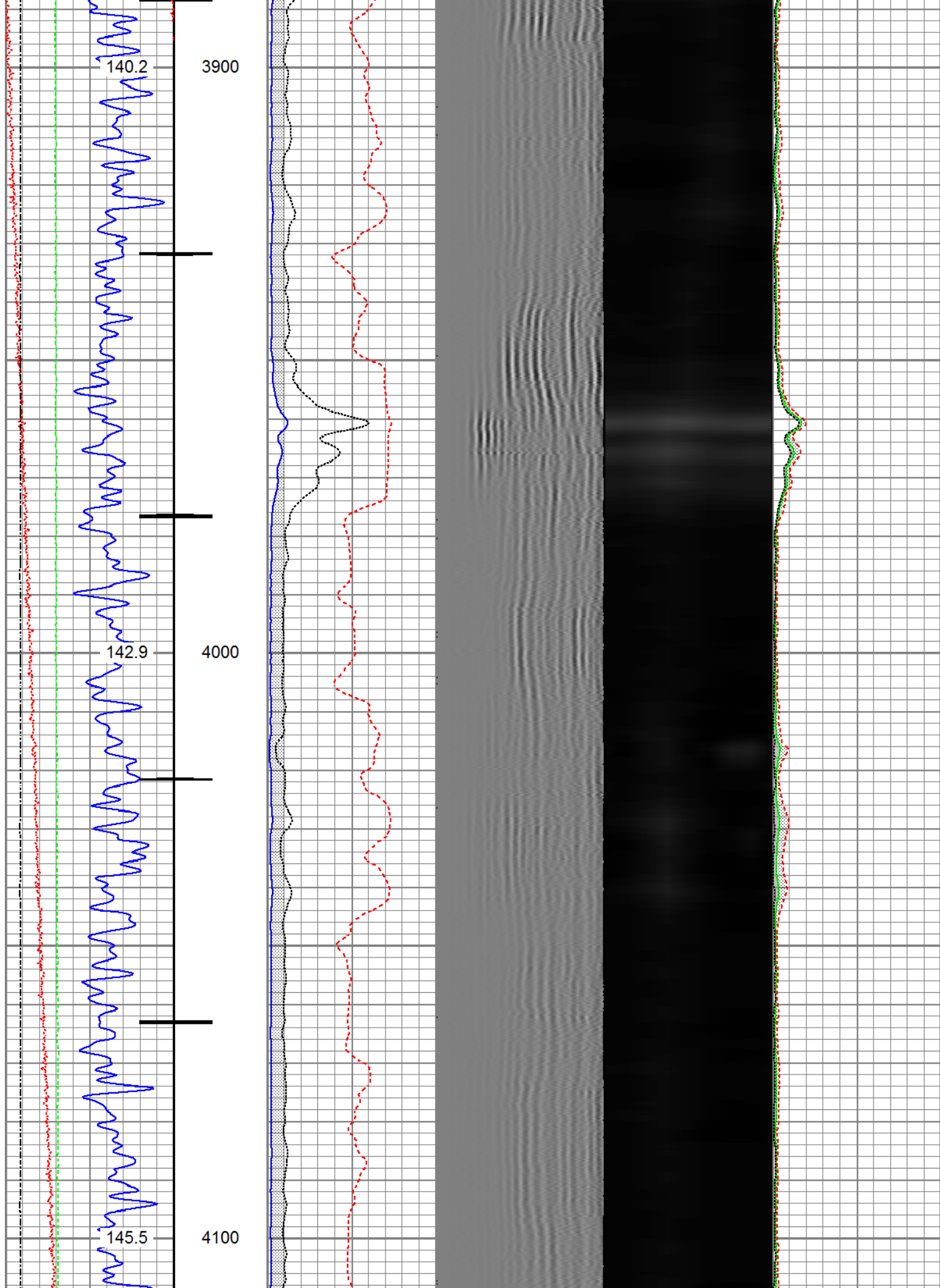


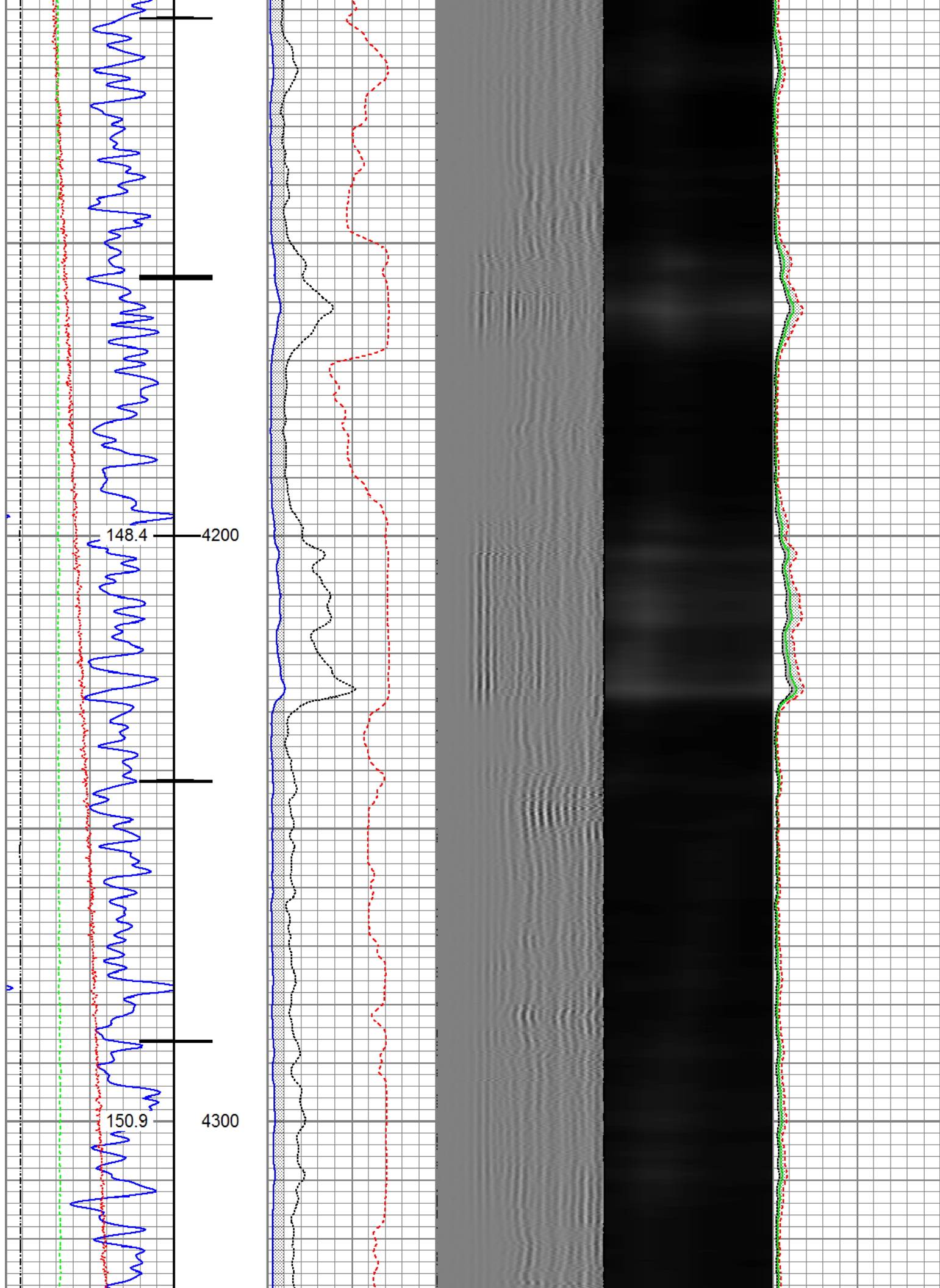


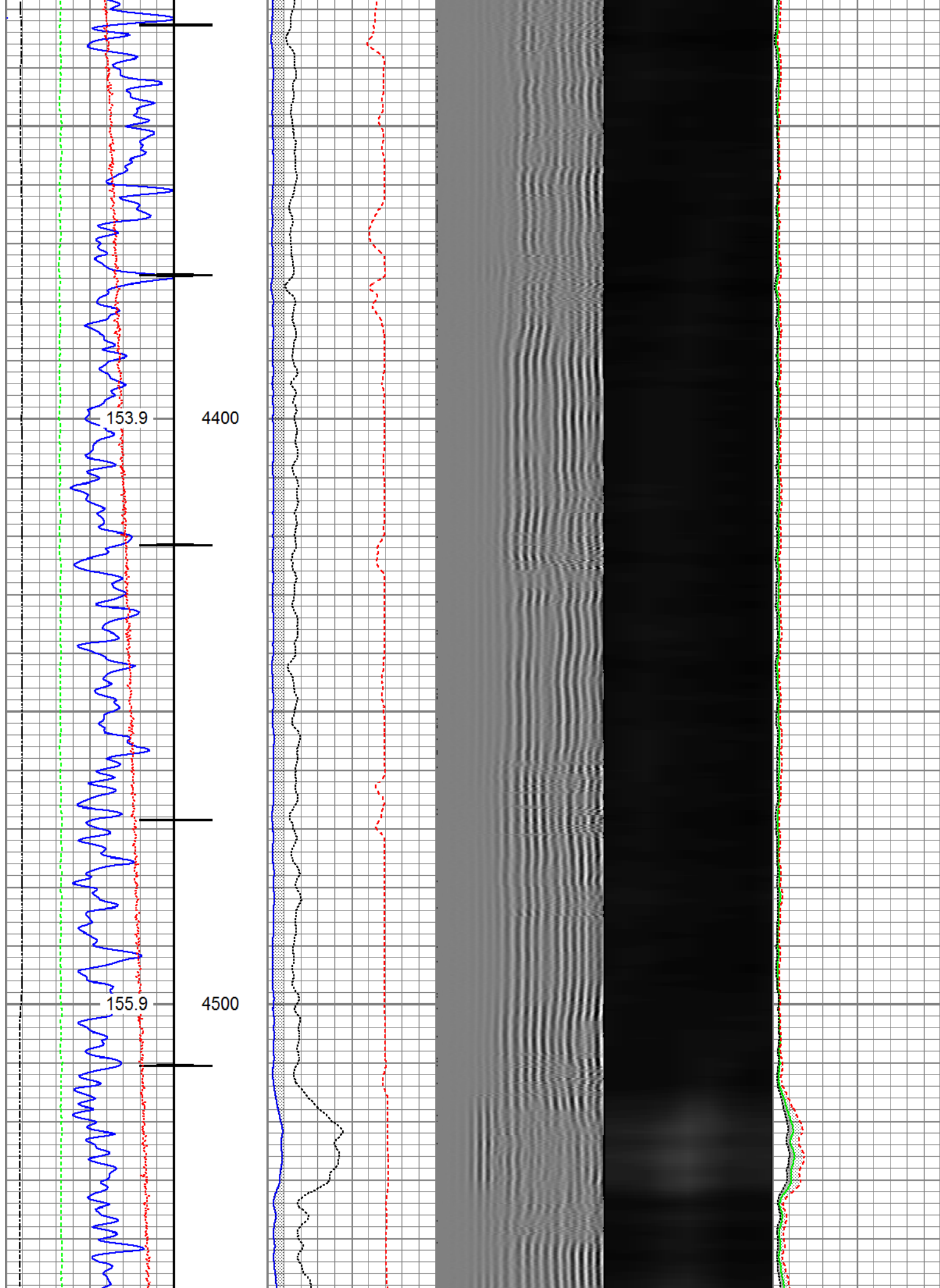


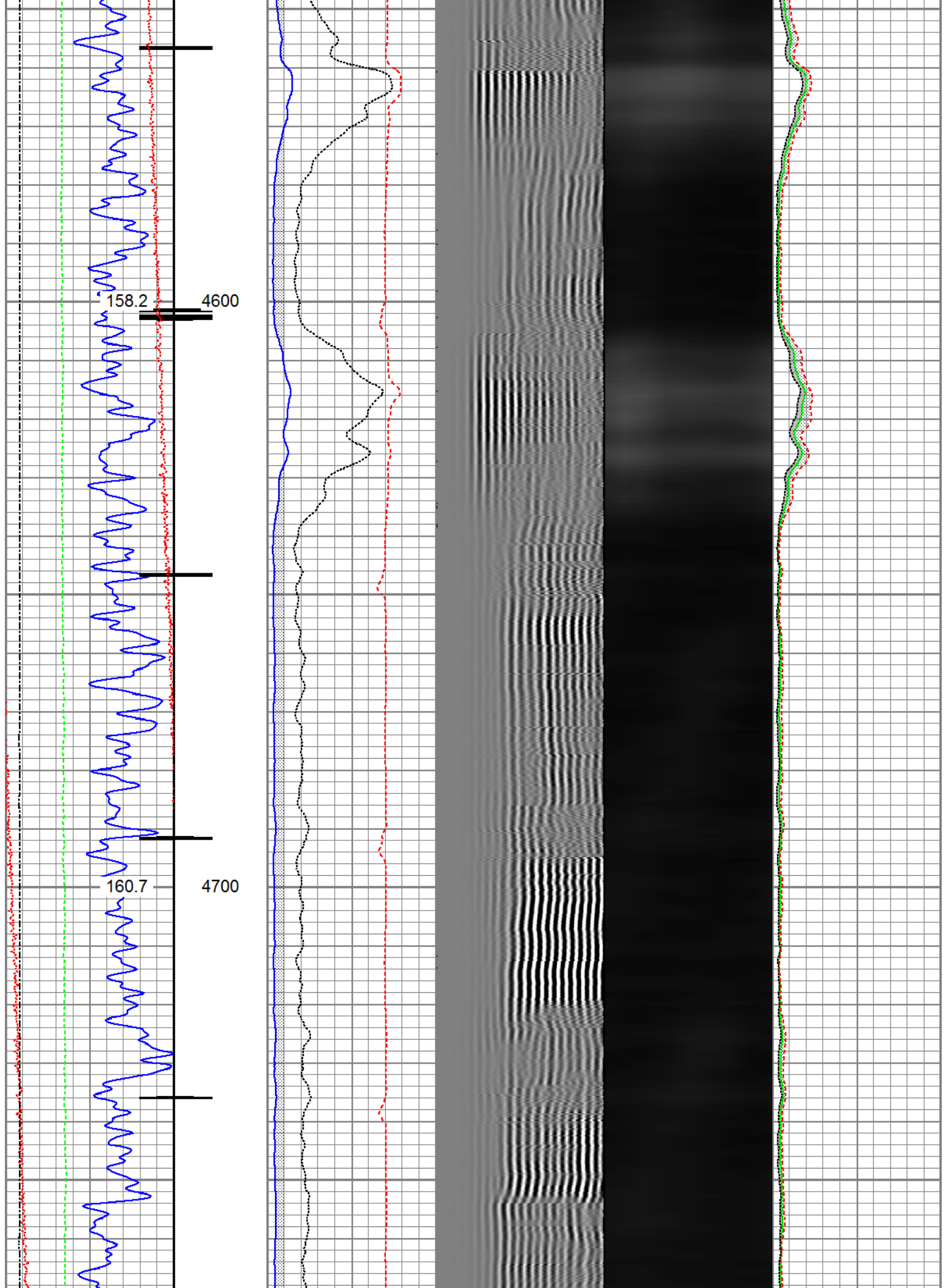


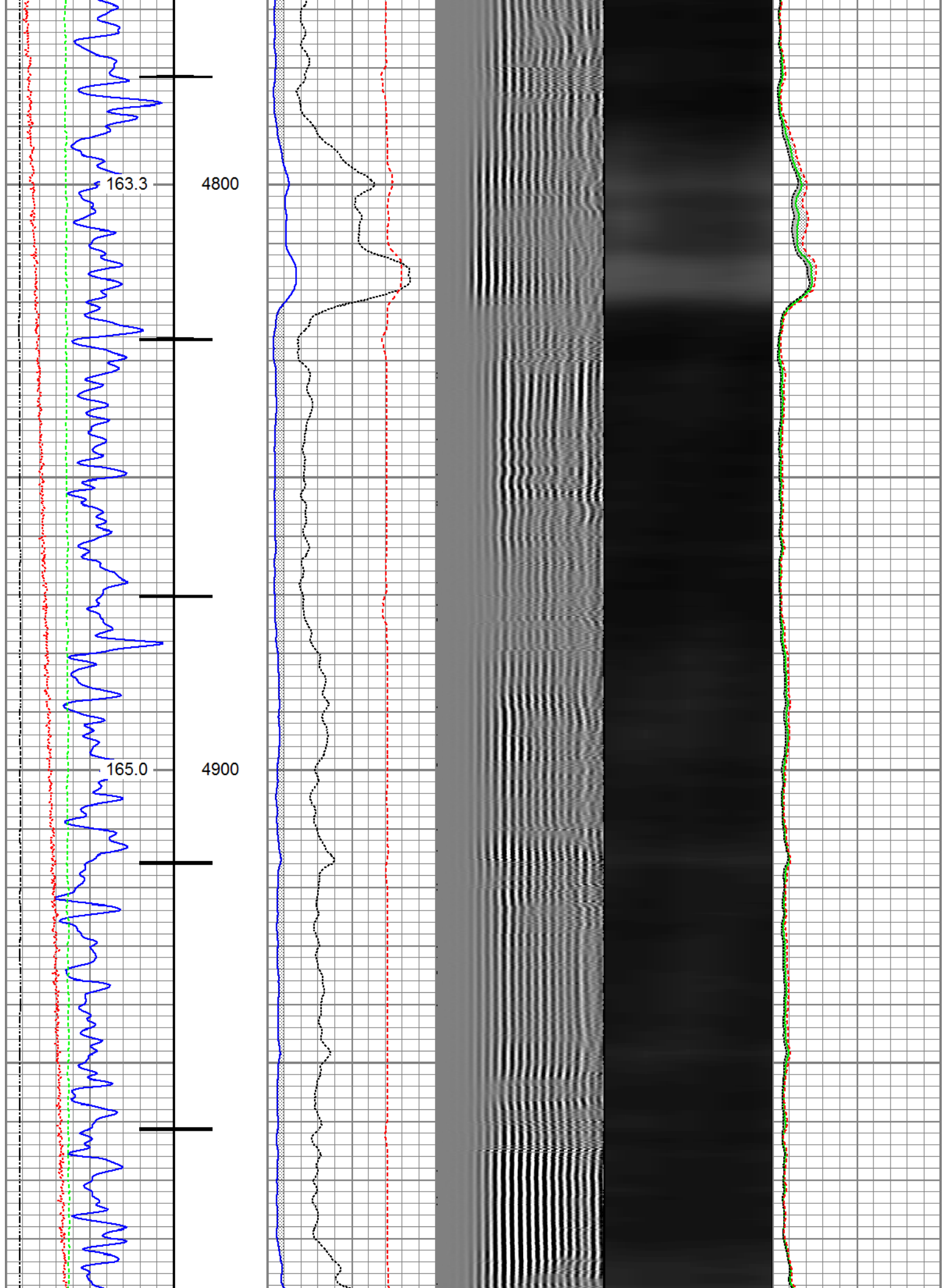


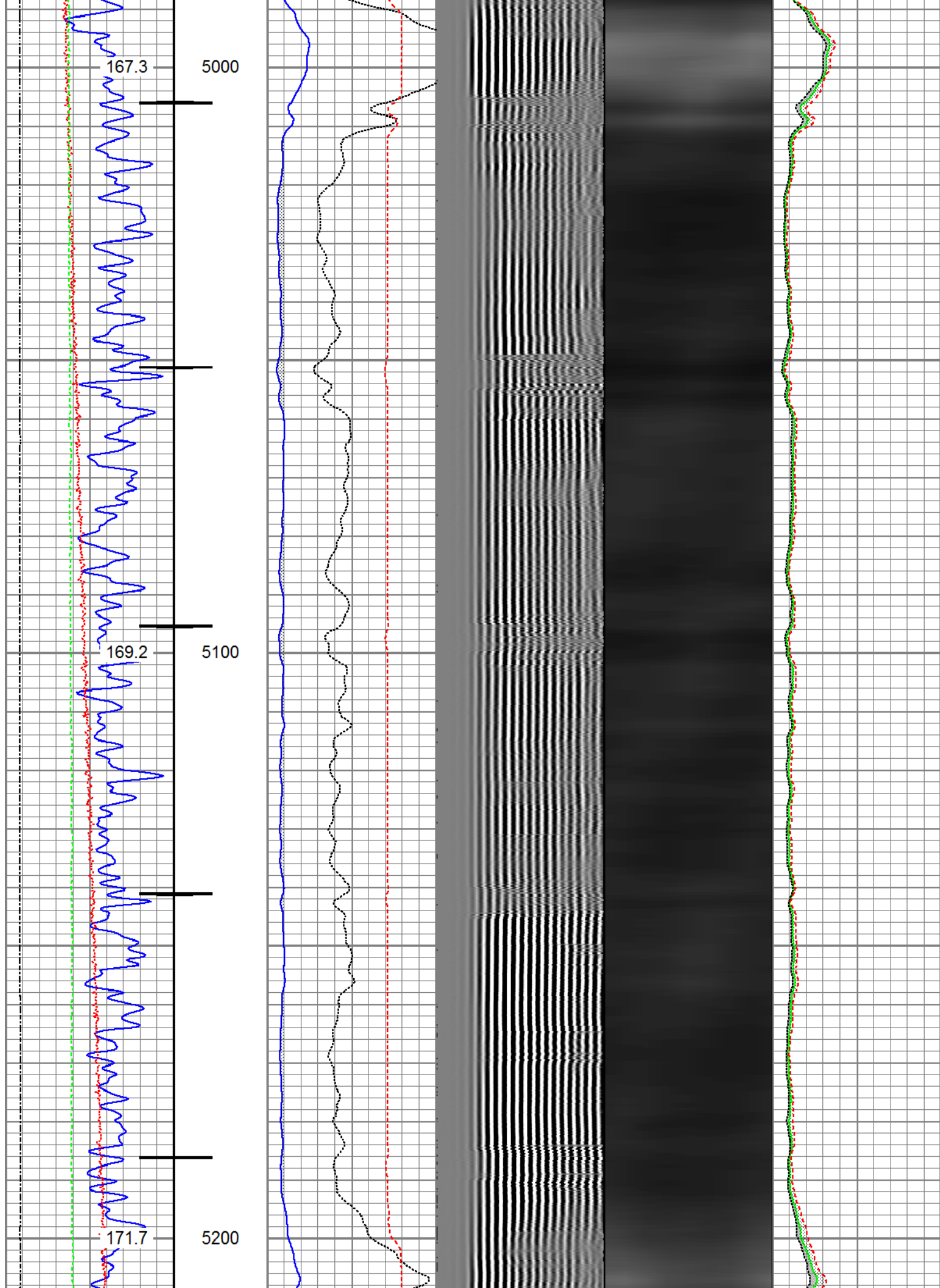


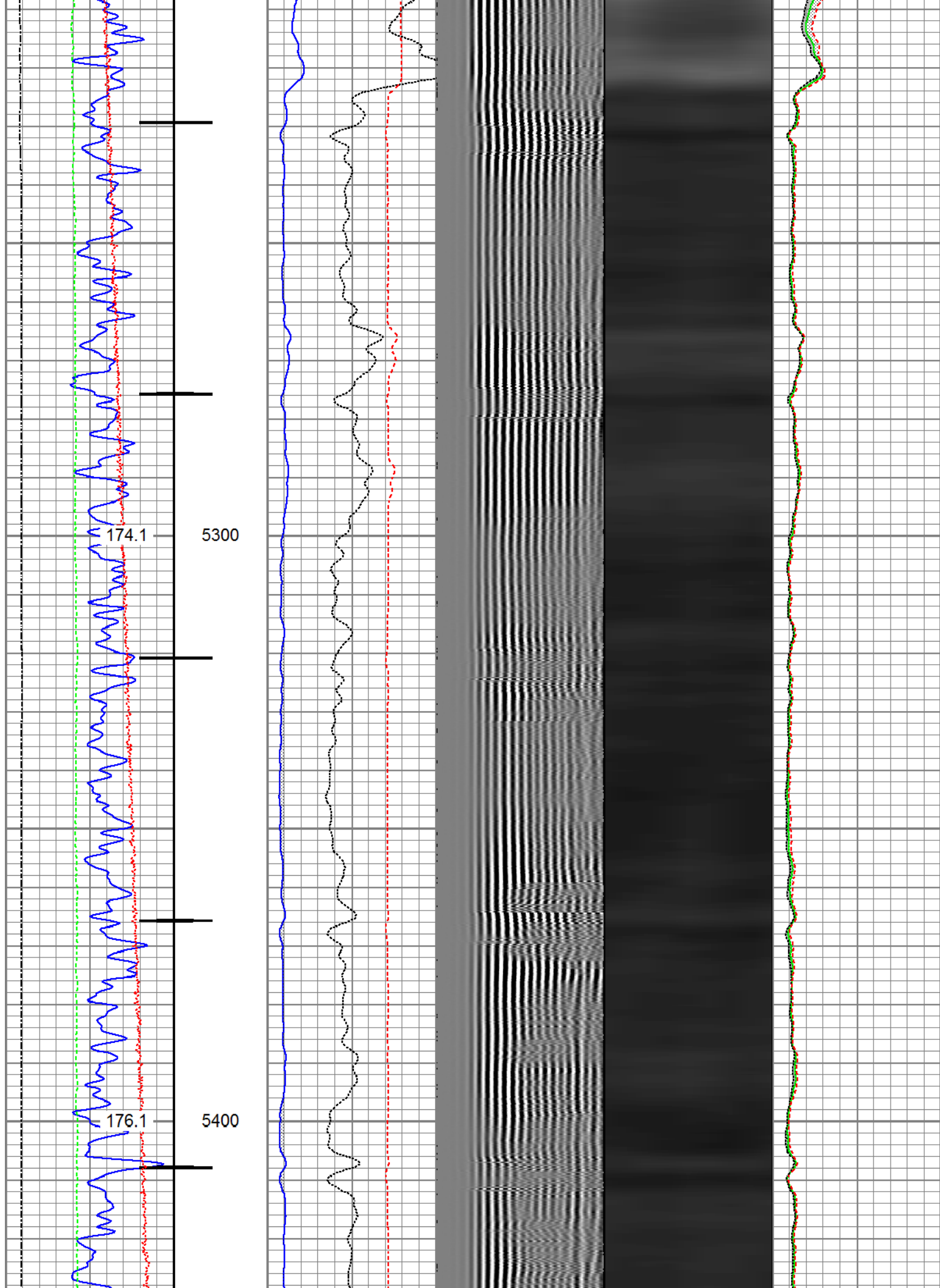


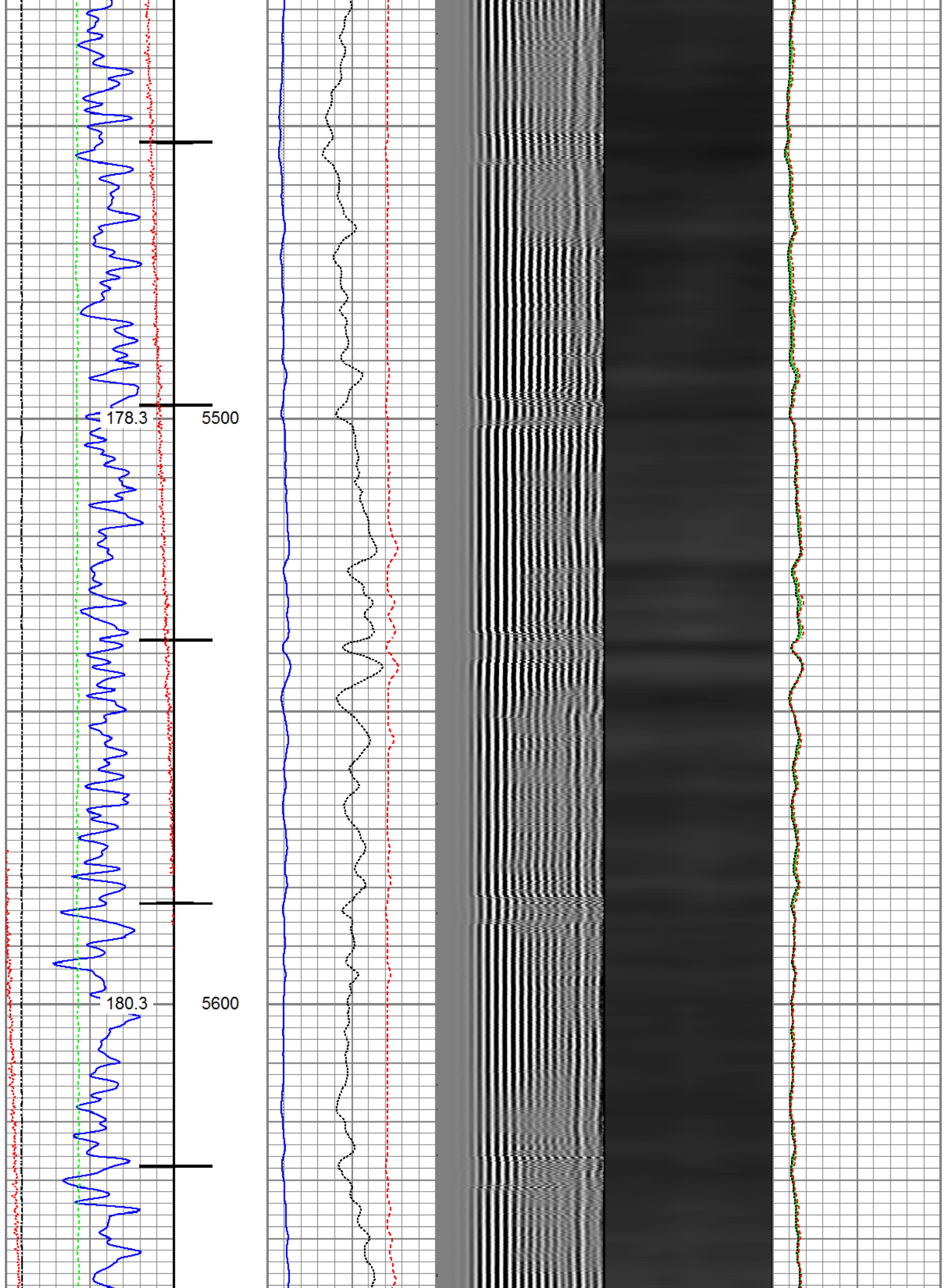


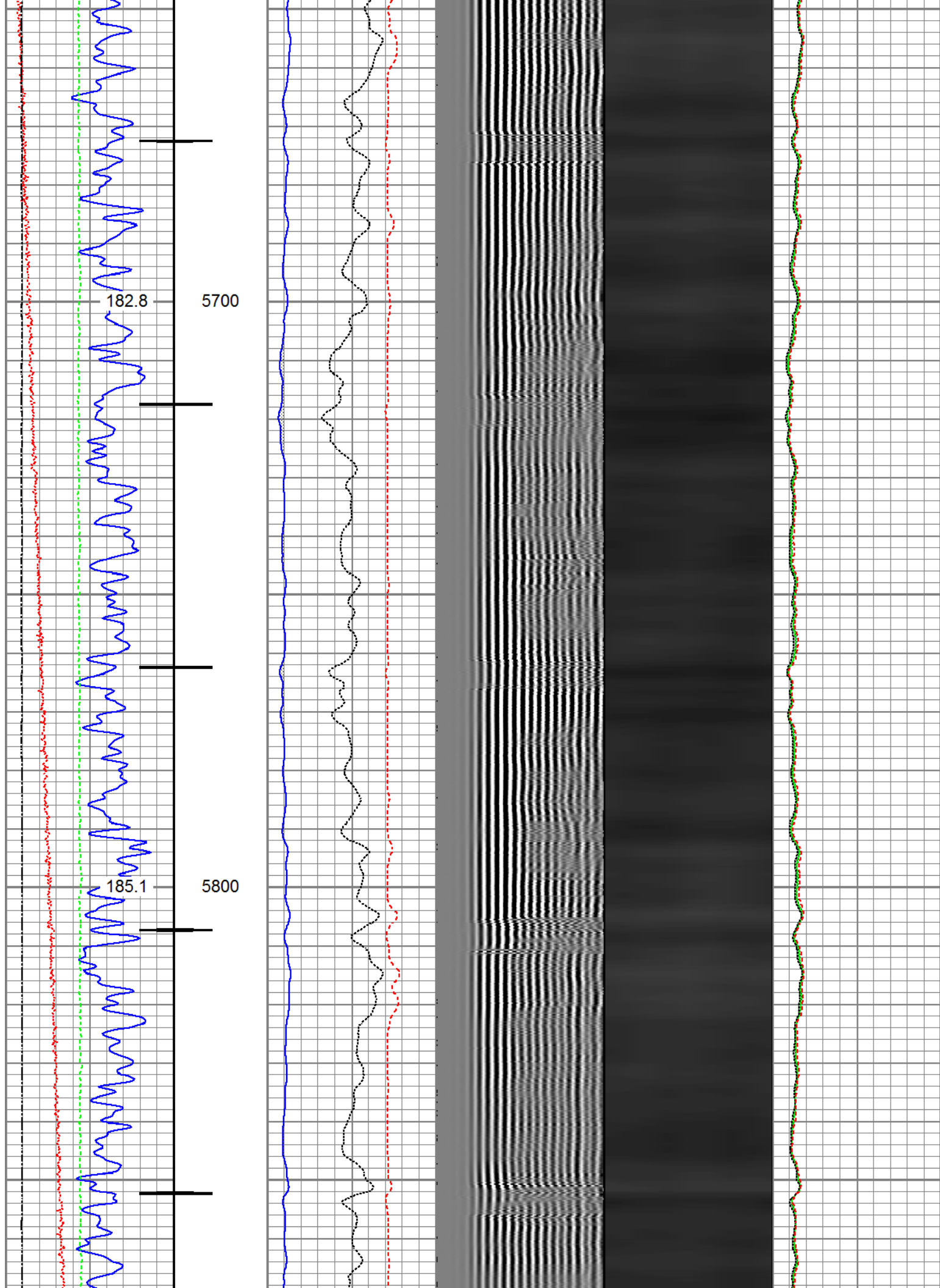


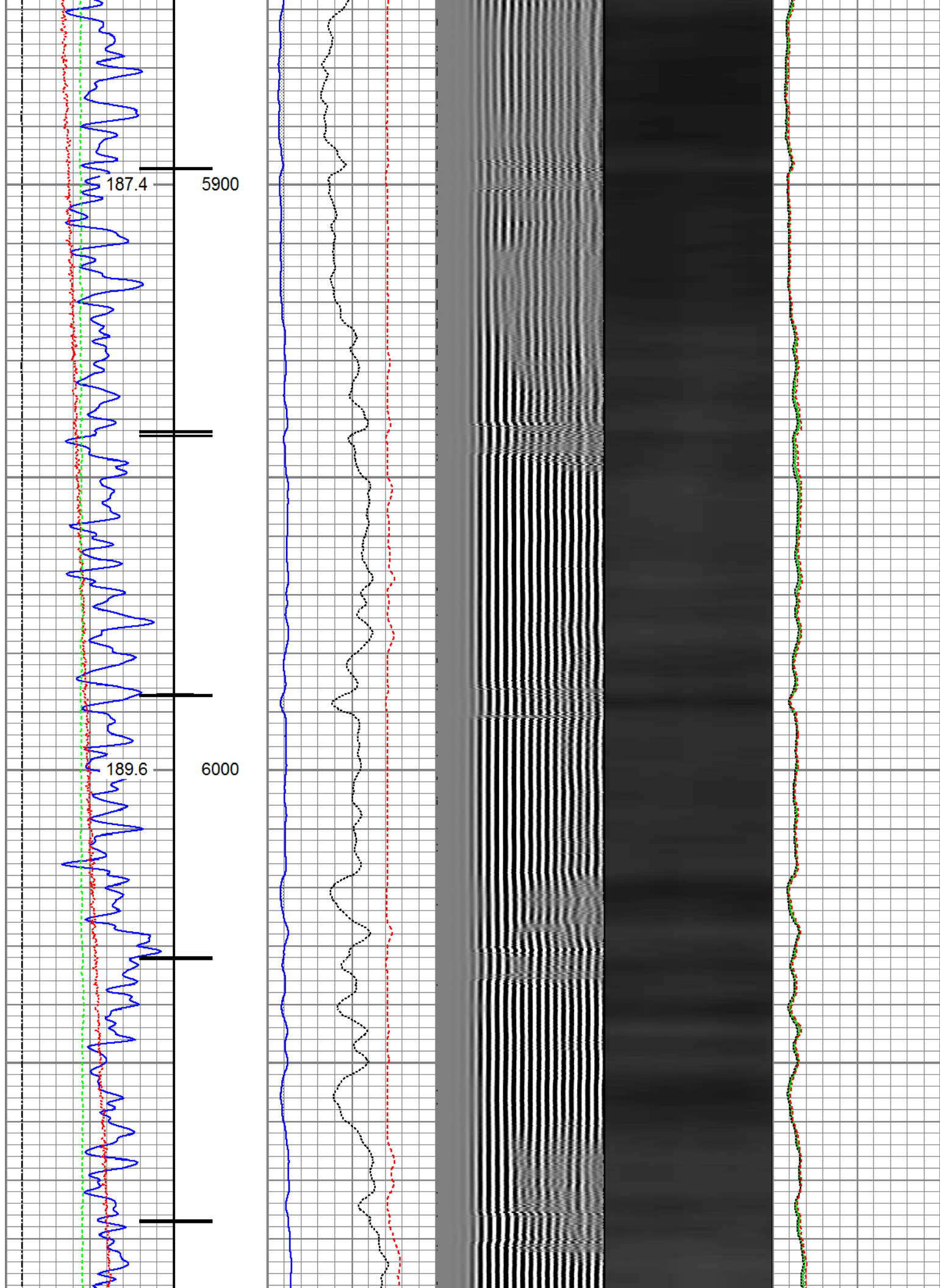


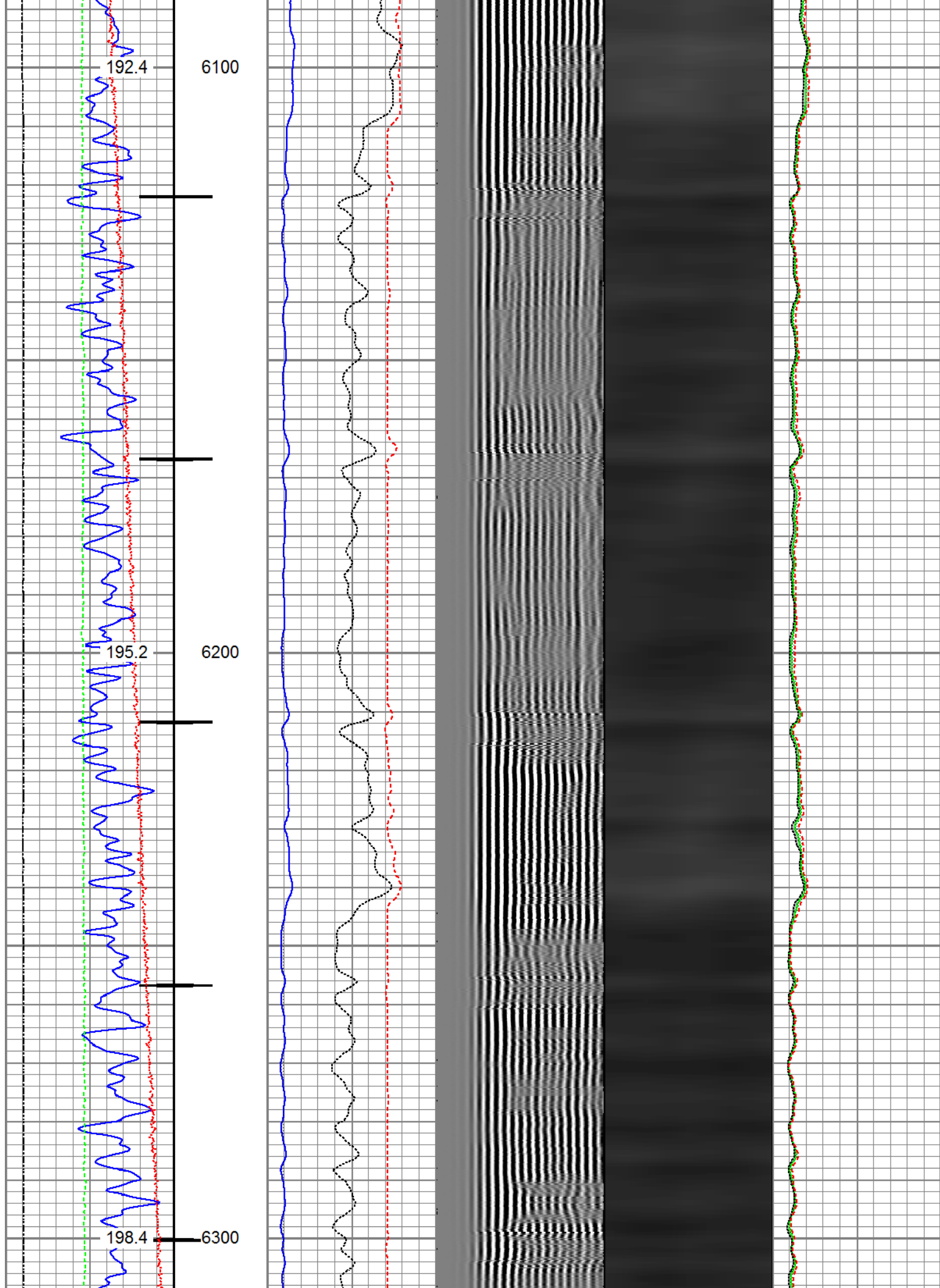


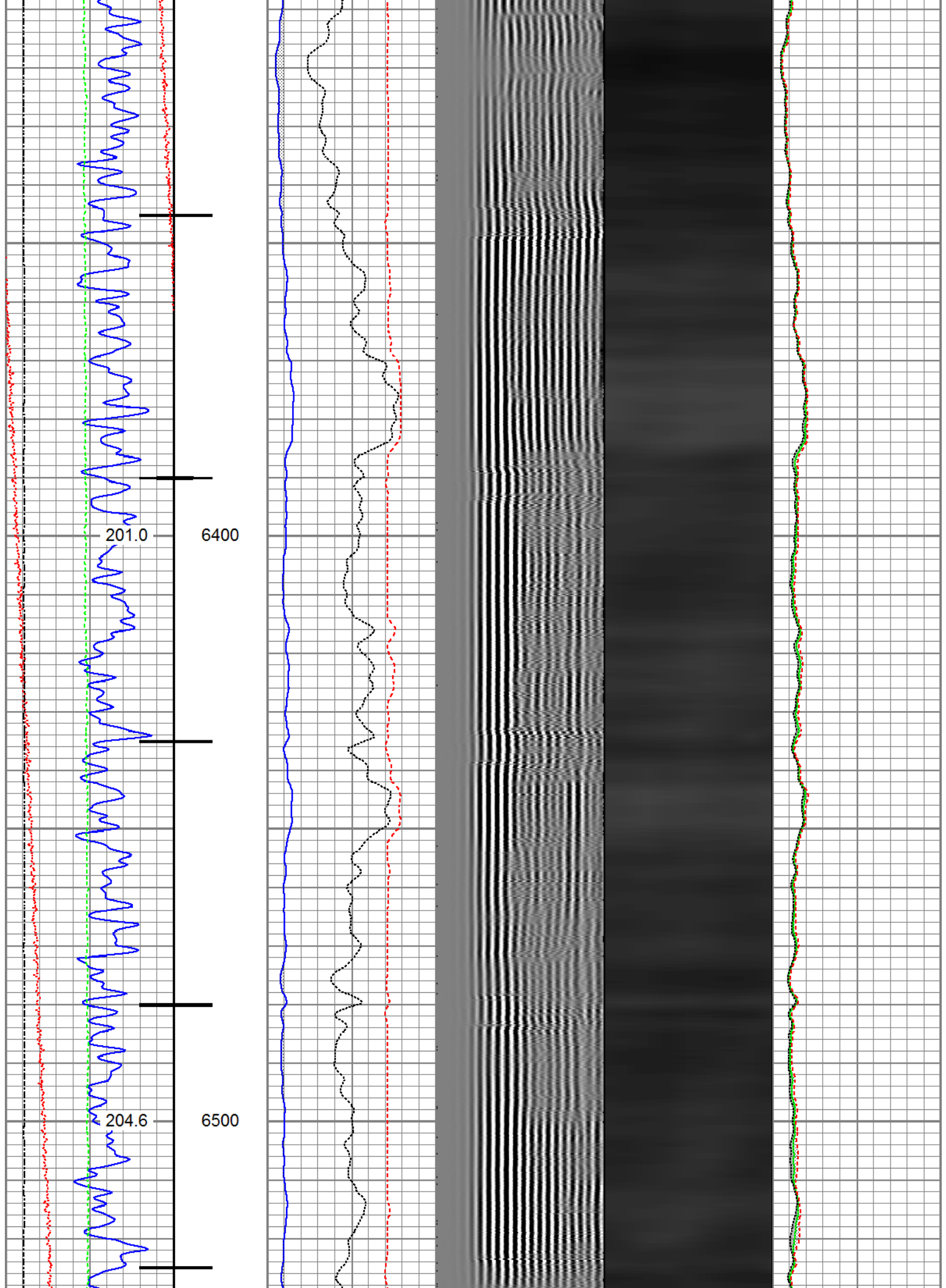


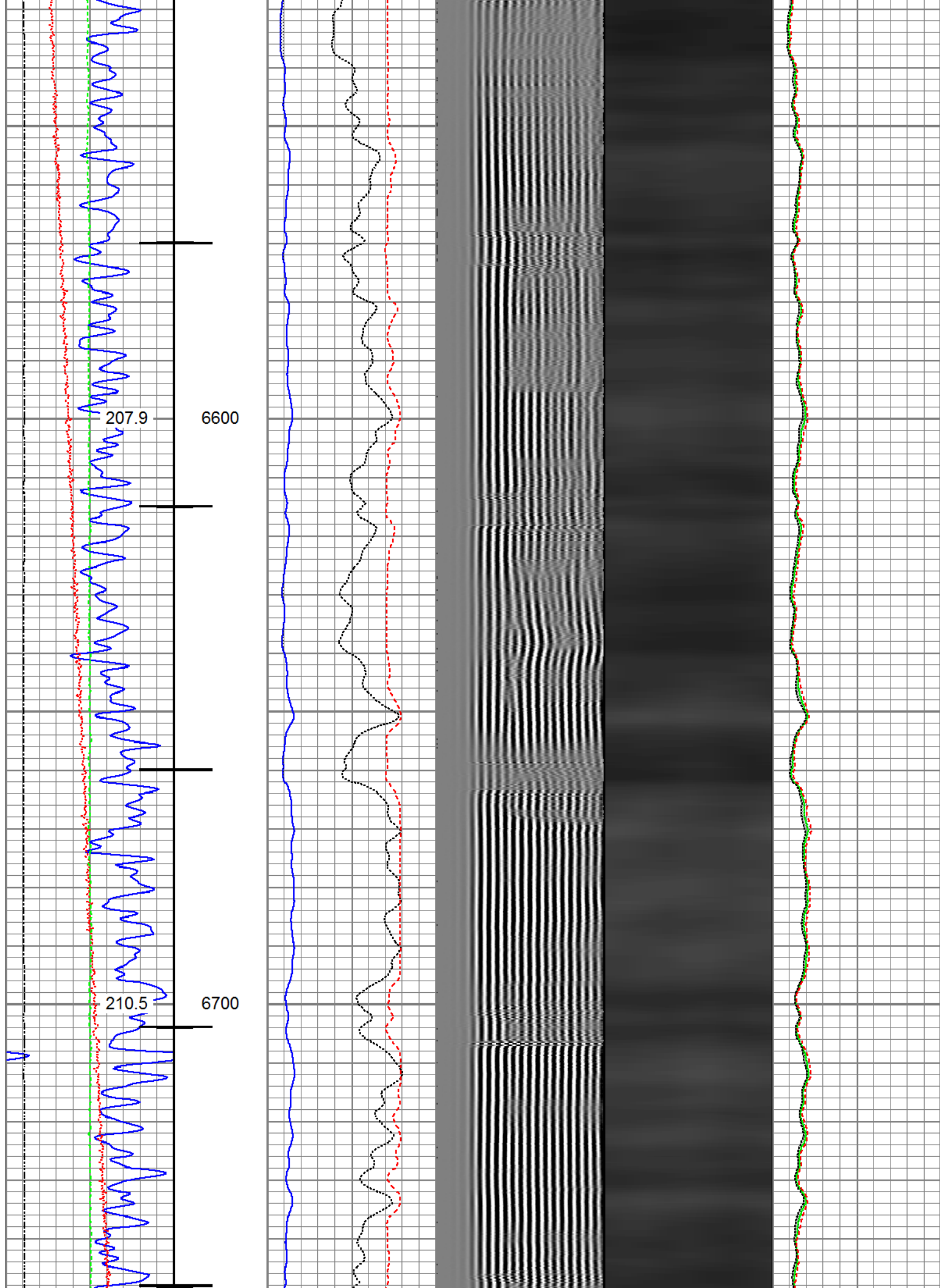


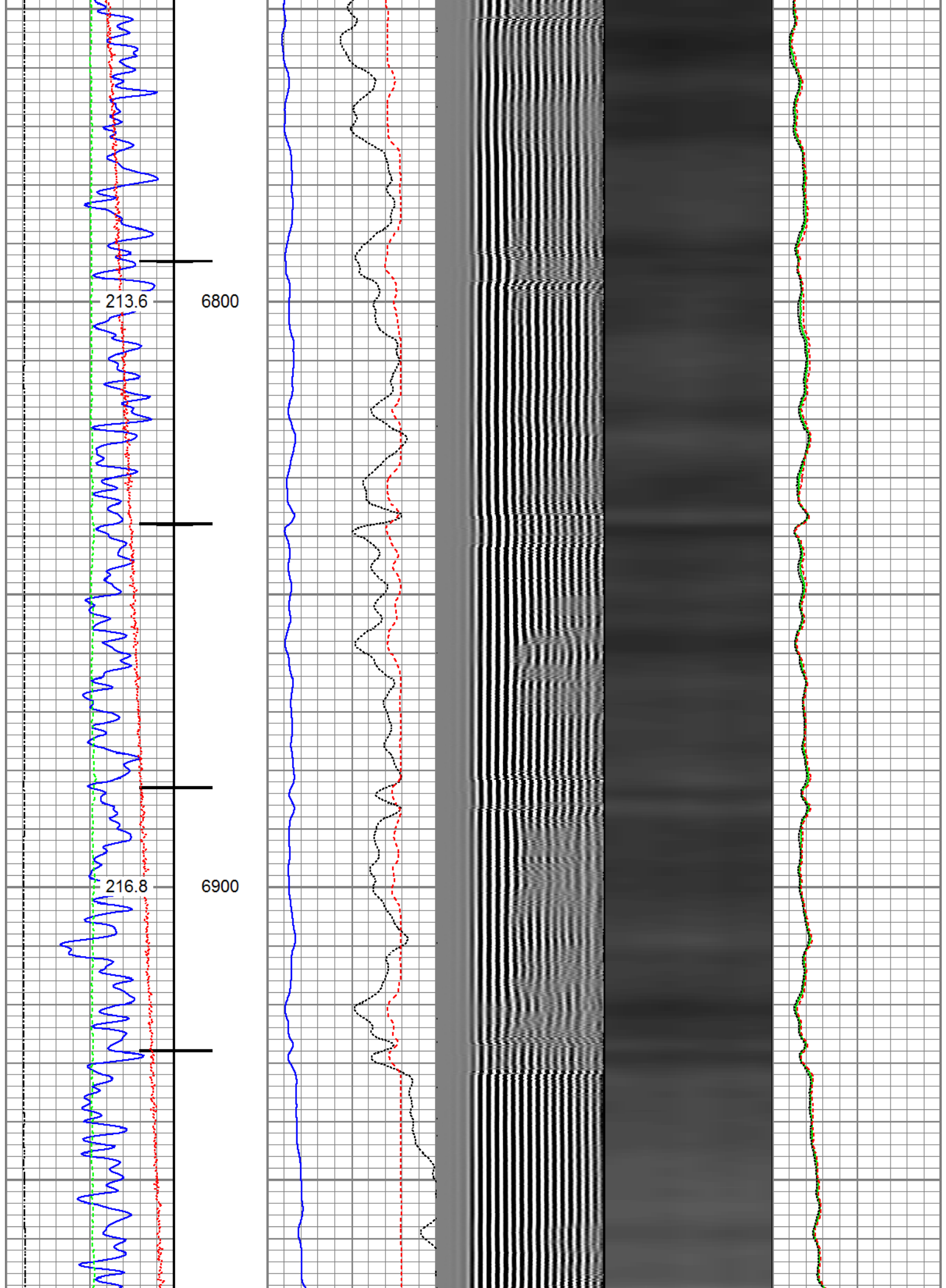


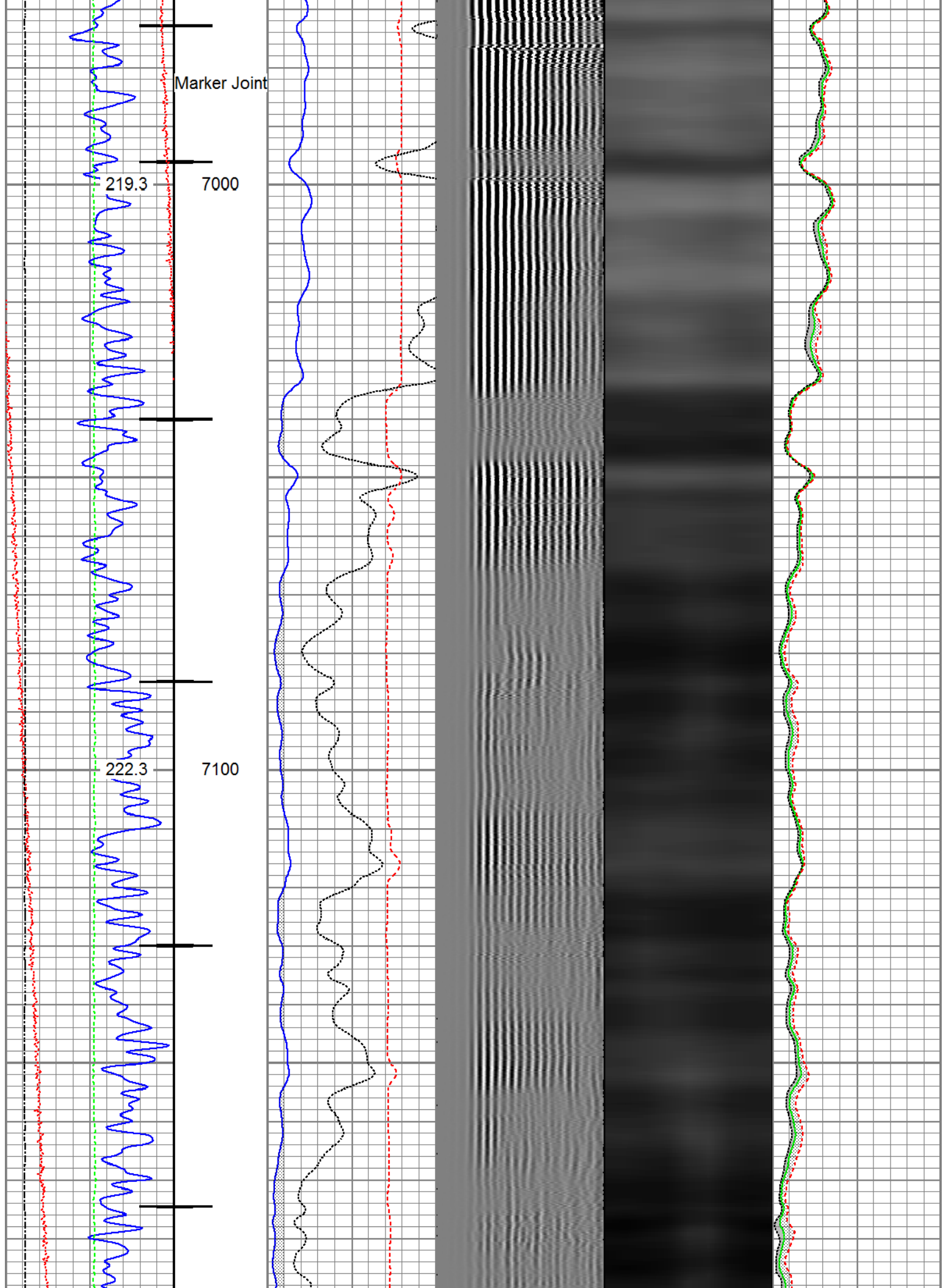


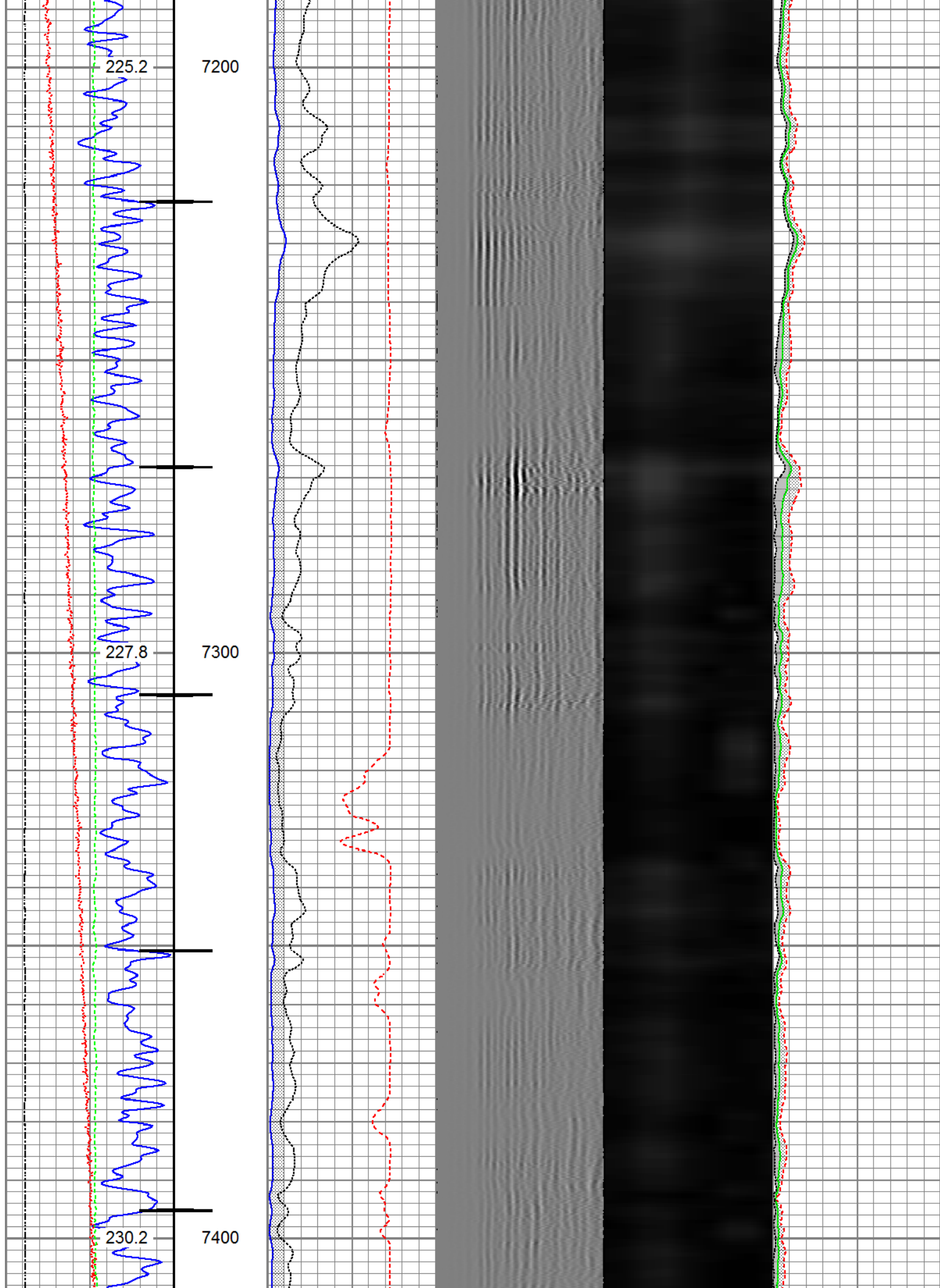


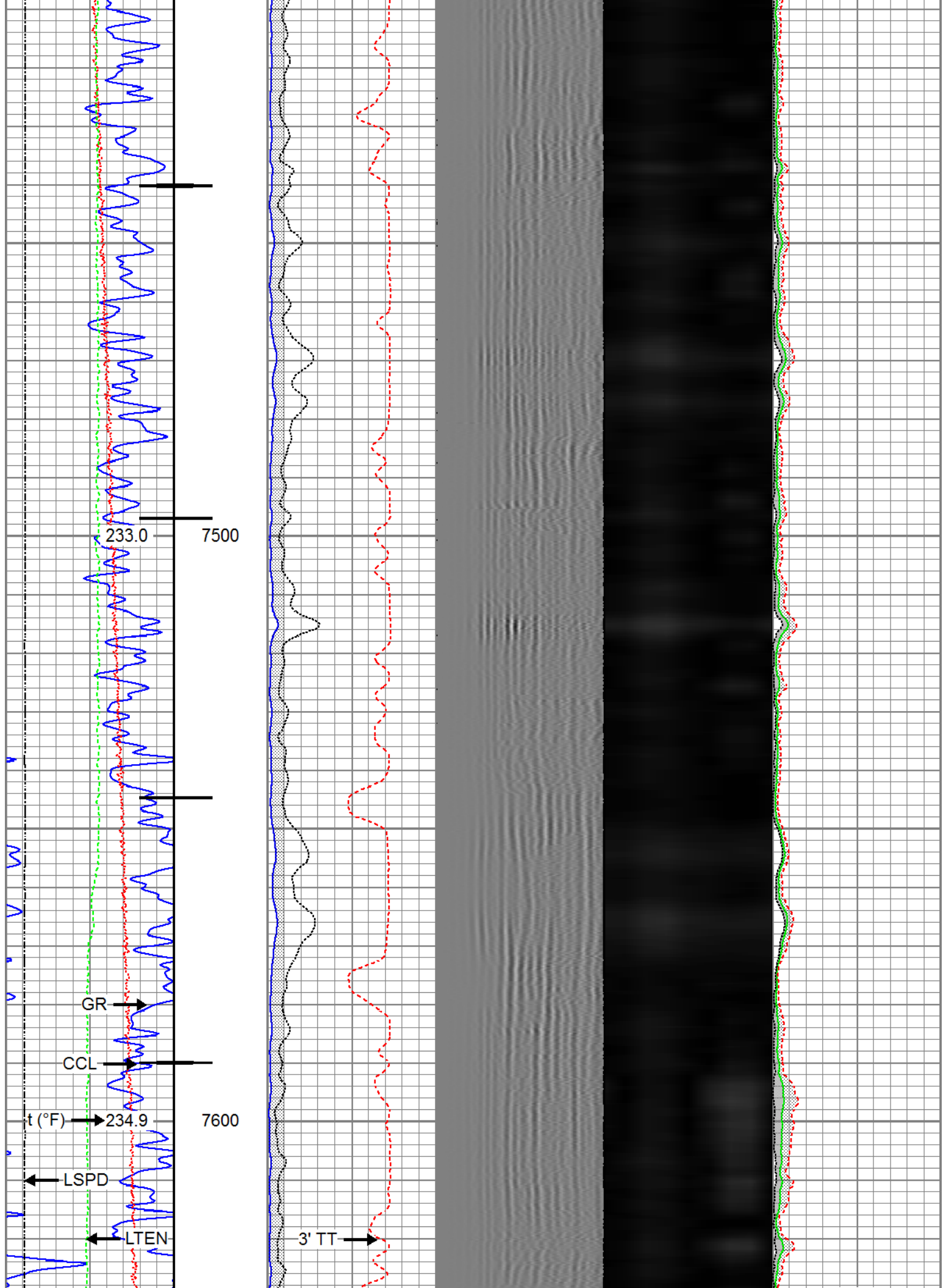


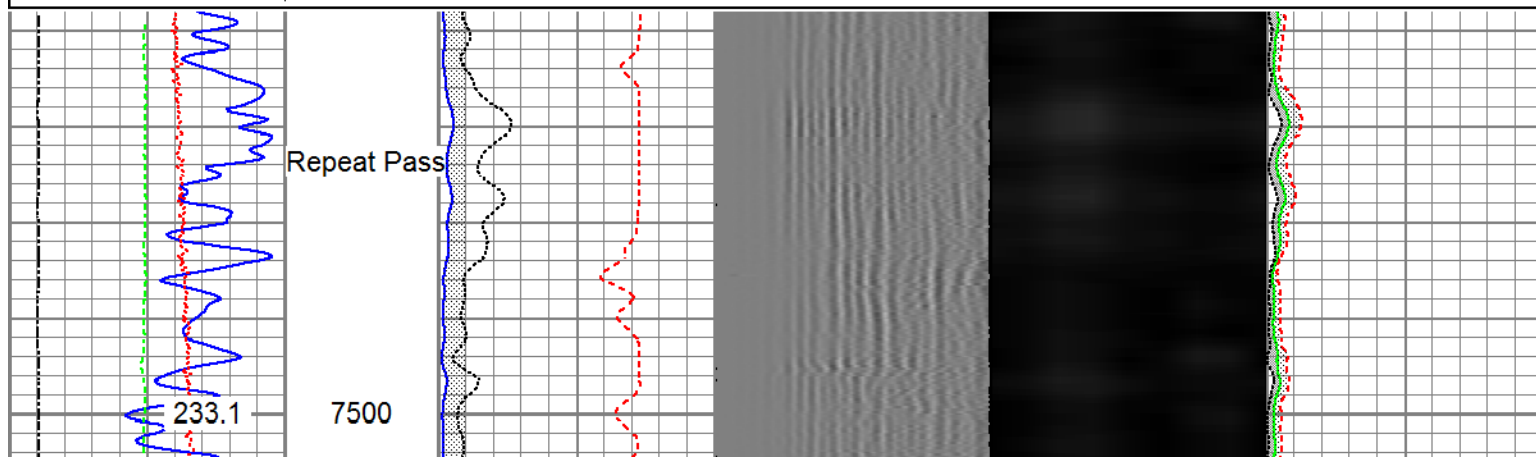
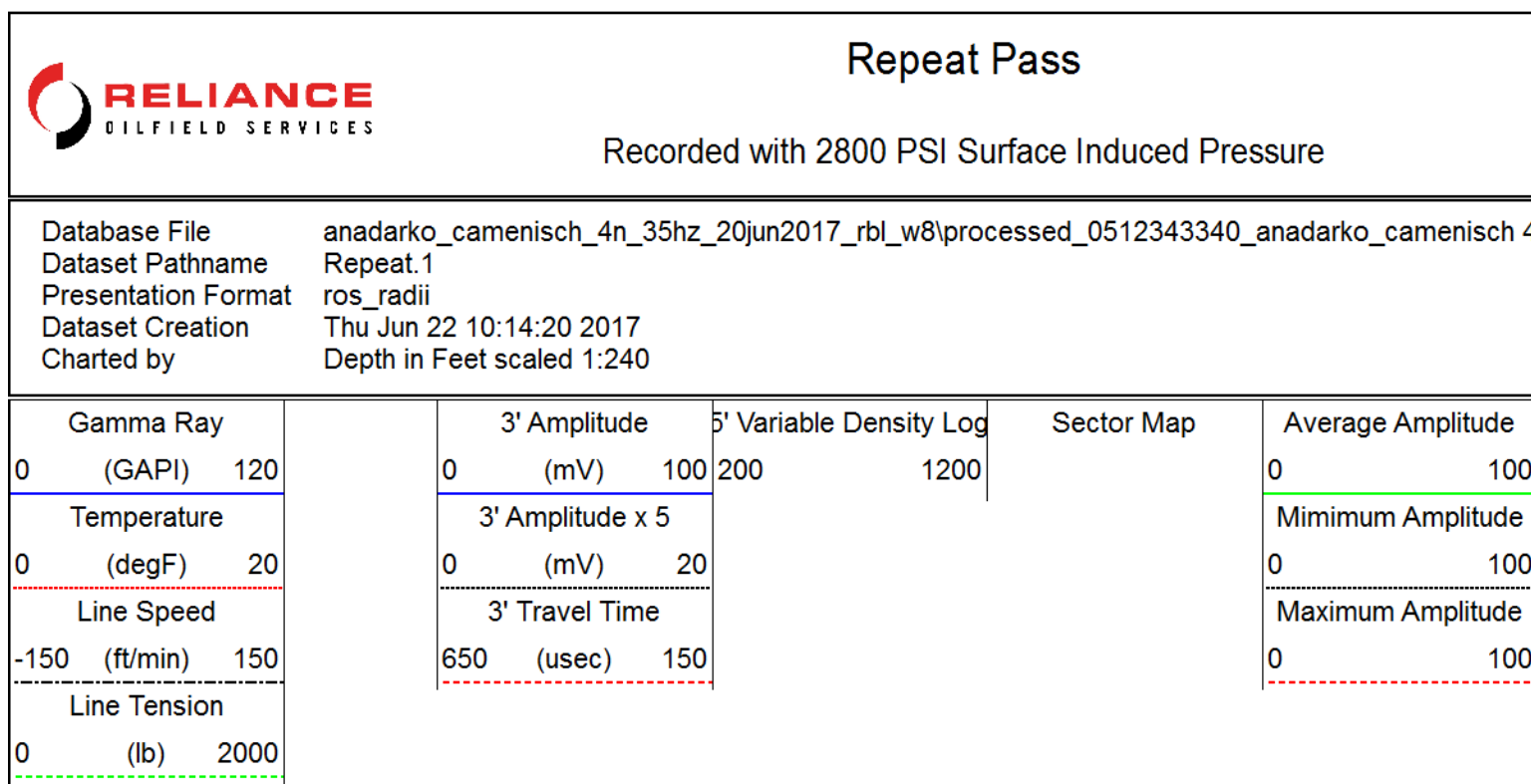
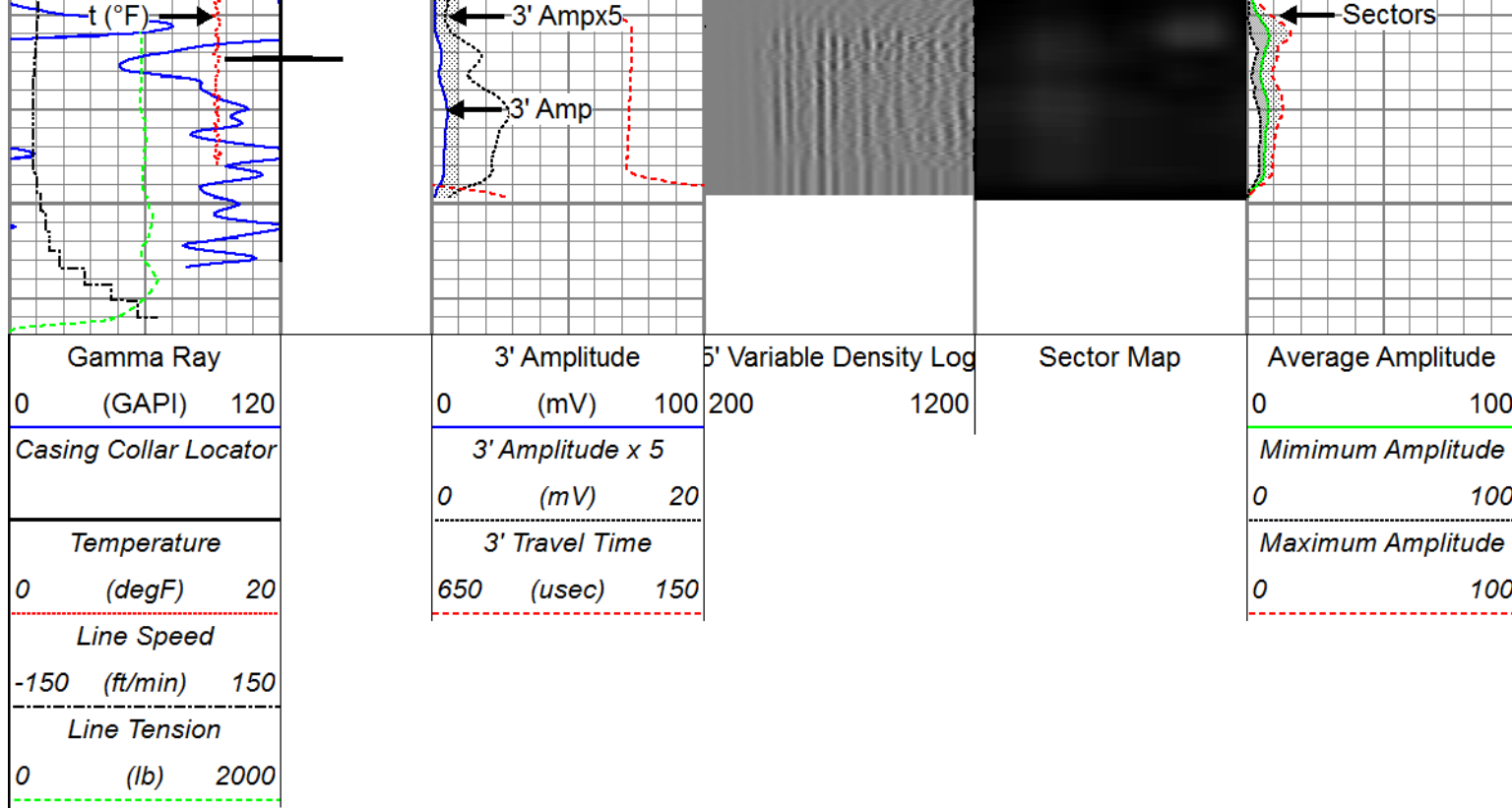


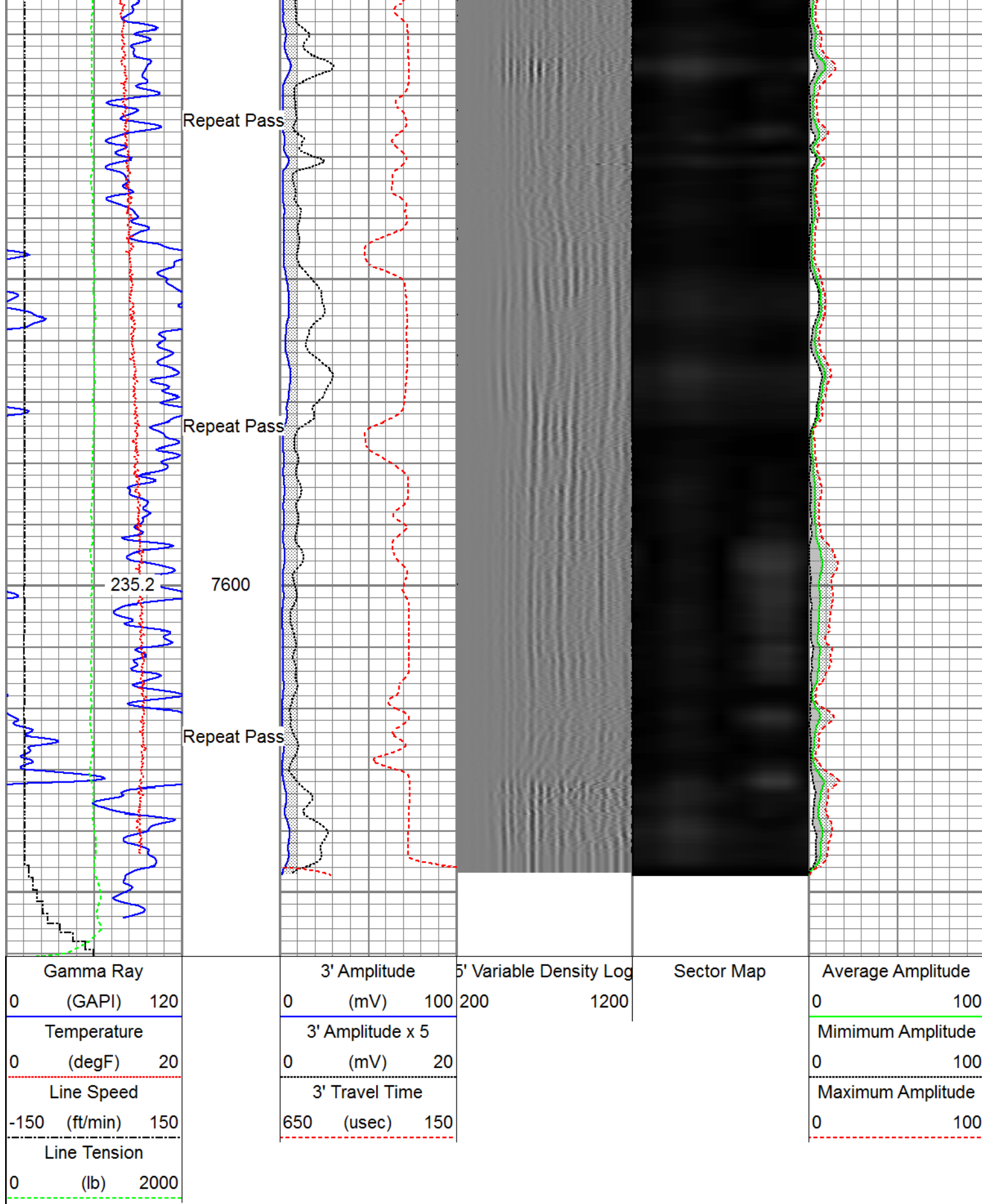













Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Titan_Electric_Cable_Heads-Titan_1-11/16" Electric Cable Head with 1" Fishing Neck	1.03	1.69	5.40

Temp	16.75				
WVFS8	14.58		Probe_RADII-C-P_RBT_2750 (FW1305-0969.19)	2.75	105.00
WVFS7	14.58		Probe 2-3/4" Sector Cement Bond Tool with Temperature Probe		
WVFS6	14.58				
WVFS5	14.58				
WVFS4	14.58				
WVFS3	14.58				
WVFS2	14.58				
WVFS1	14.58				
WVFCAL	14.58				
WVF3FT	14.58				
WVF5FT	13.58				
HeadVolt	10.33				
			Probe_ELine_BowSpring_Centralizer-P_EB52.8875	2.75	20.00
DCCL	6.51	Probe 2-3/4" Electric Inline Bowspring Centralizer			
CCL	6.51				
		Probe_GR_CCL-P_CGR_2750_S (FW12124.57)	2.75	55.00	
		Probe 2-3/4" Digital CCL / Gamma Ray Combined			
GR	3.77				
		Probe_ELine_BowSpring_Centralizer-P_EB52.8875	2.75	20.00	
		Probe 2-3/4" Electric Inline Bowspring Centralizer			
Dataset: PROCESSED_0512343340_Anadarko_Camenisch 4N-35HZ_RBL_06-20-17.db: field/well/run1/Main.1					
Total length: 20.55 ft					
Total weight: 205.40 lb					
O.D.: 2.75 in					

Calibration Report

Database File C:\ProgramData\Warrior\Data\anadarko_camenisch_4n_35hz_20jun2017_rbl_w8\PROCESSED_0512343340_Anadarko_Camenisch 4N-35HZ_RBL_06-20-17.db
 Dataset Pathname Main.1
 Date and Time 06/20/2017 11:44:53 AM

Gamma Ray Calibration Report

Serial Number: FW1212-026
 Tool Model: P_CGR_2750_S
 Performed: Mon Aug 15 10:19:05 2016

 Calibrator Value: 1.0 GAPI

 Background Reading: 0.0 cps
 Calibrator Reading: 1.6 cps

 Sensitivity: 0.6000 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: FW1305-096
 Tool Model: P_RBT_2750

 Calibration Casing Diameter: 5.500 in
 Calibration Depth: 46.846 ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.004	0.806	0.800	71.921	87.790	1.144
CAL	0.831	0.831				
5'	-0.004	0.699	0.800	71.921	101.211	1.165
SUM						
S1	-0.004	0.797	0.000	100.000	124.719	0.539
S2	-0.001	0.793	0.000	100.000	126.019	0.069
S3	-0.001	0.798	0.000	100.000	125.283	0.080
S4	-0.001	0.807	0.000	100.000	123.654	0.182
S5	-0.003	0.820	0.000	100.000	121.532	0.368
S6	-0.002	0.832	0.000	100.000	119.852	0.284
S7	0.000	0.820	0.000	100.000	121.930	-0.025
S8	0.001	0.812	0.000	100.000	123.248	-0.083

Internal Reference Calibration, performed Tue Nov 08 12:17:54 2016:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.831	0.831	1.000	0.000

Air Zero Calibration, performed Tue Jun 20 10:50:05 2017:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.004		0.000		-0.000	
5'	0.005		0.000		0.000	
SUM						
S1	-0.000		0.000		0.000	
S2	0.004		0.000		0.001	
S3	0.005		0.000		0.001	
S4	0.004		0.000		-0.000	

S5	0.004	0.000	0.000
S6	0.004	0.000	-0.000
S7	0.004	0.000	-0.000
S8	0.004	0.000	-0.000



Company	Kerr-McGee Oil & Gas Onshore, L.P.
Well	Camenisch 4N-35HZ
Field	Wattenberg
County	Weld
State	Colorado