



Radial Cement Bond  
Gamma Ray  
Casing Collar Log

Company TEP Rocky Mountain LLC  
Well Federal WMC 331-20  
Field Rulison  
County Garfield  
State Colorado

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Well Federal WMC 331-20  
Field Rulison  
County Garfield  
State Colorado

Location: API # : 05-045-24500

Other Services

SEC 17 TWP 7S RGE 93W

Elevation

Permanent Datum Ground Level Elevation 8869  
Log Measured From Kelly Bushing  
Drilling Measured From Kelly Bushing  
K.B. 8899 FT  
D.F. 8898 FT  
G.L. 8869 FT

Date 04-JAN-2023

Run Number	One		
Depth Driller	11075 FT		
Depth Logger	10997 FT		
Bottom Logged Interval	10990 FT		
Top Log Interval	Surface		
Open Hole Size	8.75"		
Type Fluid	Water		
Density / Viscosity	8.34 Lb/Gal		
Max. Recorded Temp.	259 °F		
Estimated Cement Top	See Log		
Time Well Ready	ROA		
Time Logger on Bottom	12:15		
Equipment Number	8045		
Location	Grand Junction		
Recorded By	P. Edwards		
Witnessed By	D. Welsh		

Borehole Record		Tubing Record					
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	9-5/8"	36	Surface	1131 FT
Prot. String				
Production String	4-1/2"	11.6	Surface	11065 FT
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 is correlated to 30' K.B.  
Marker joint logged @ 6485 FT - 6495 FT  
Log ran with 0 PSI at surface

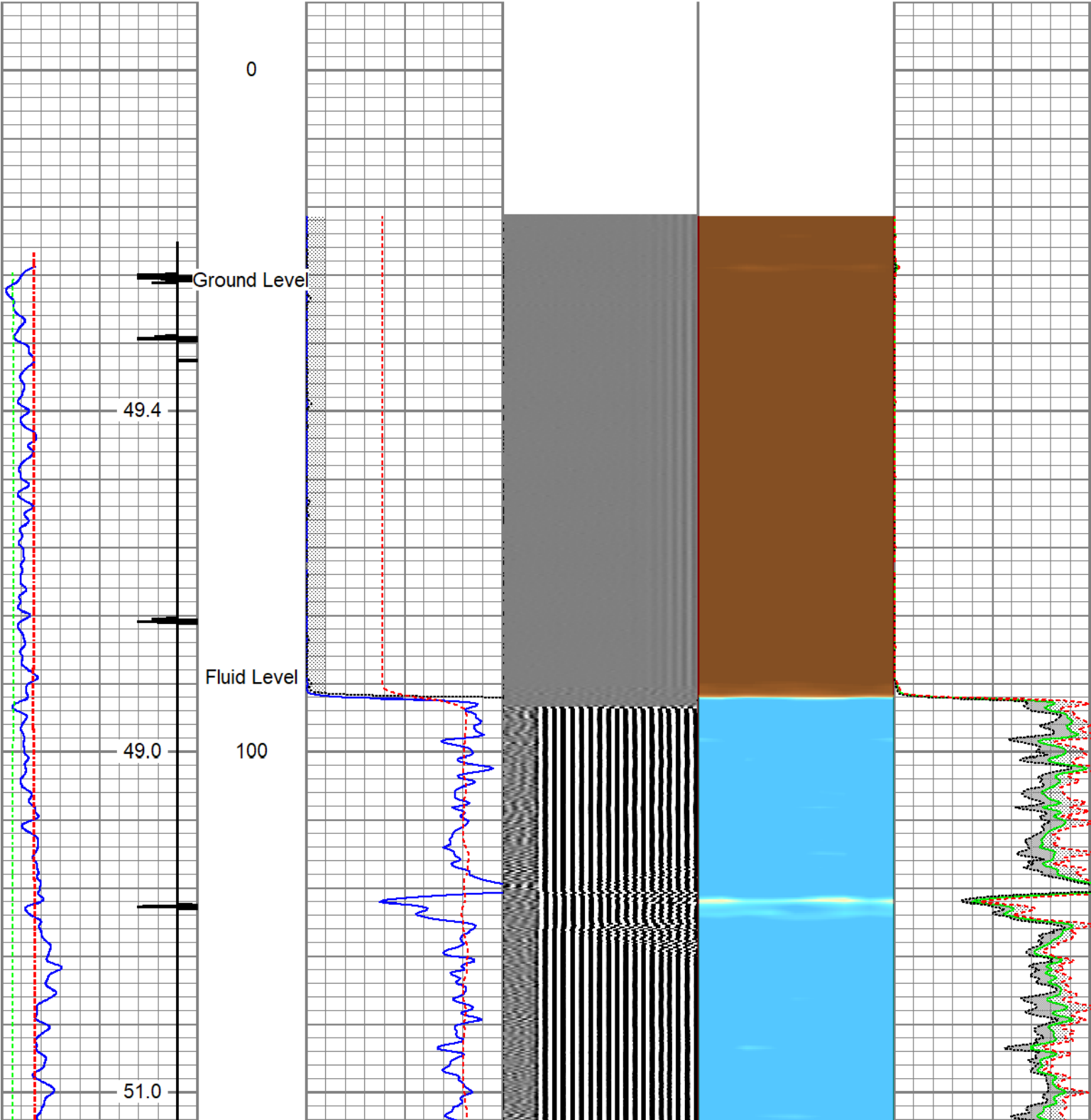
Thank you for choosing The Wireline Group!

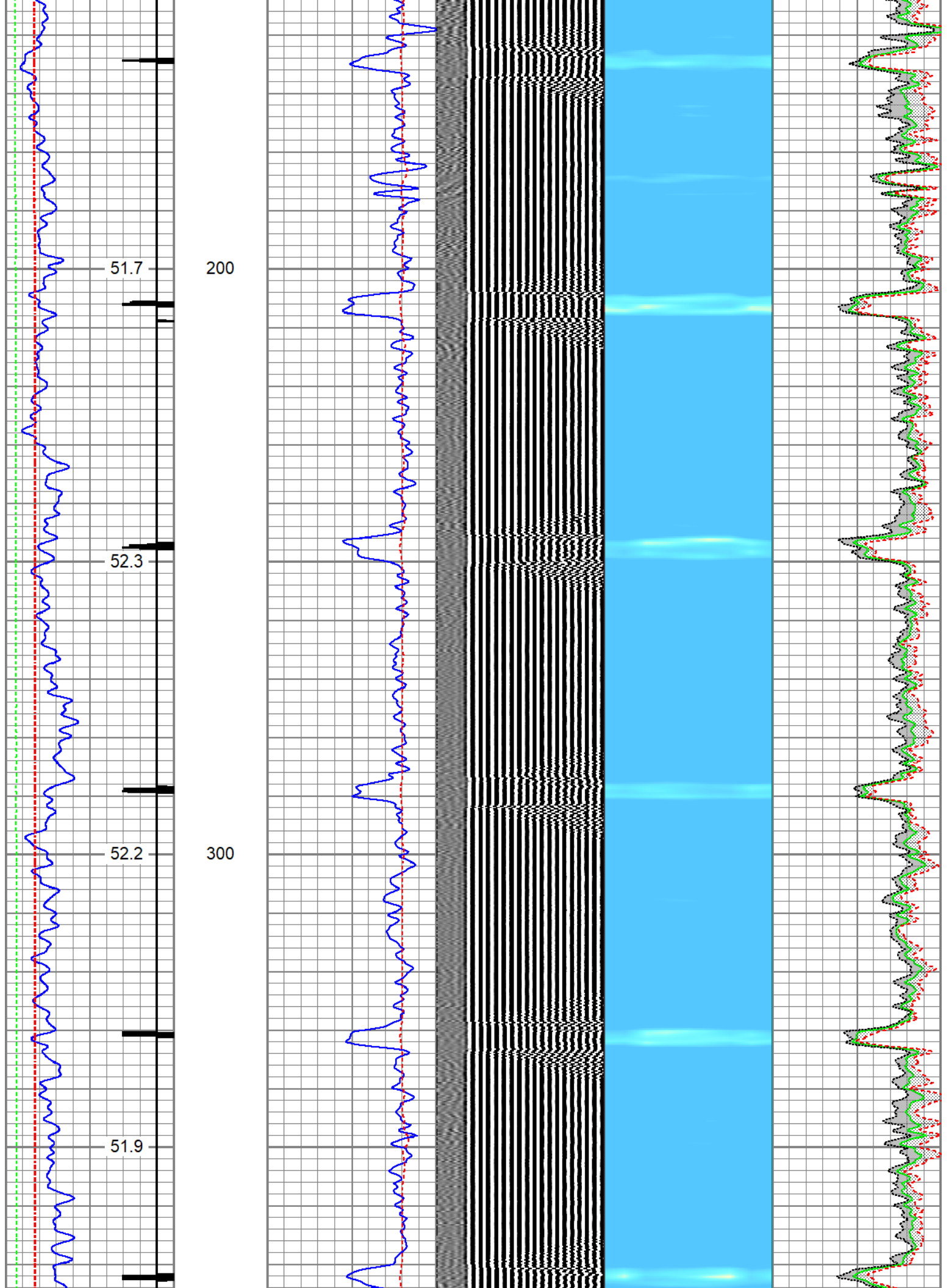


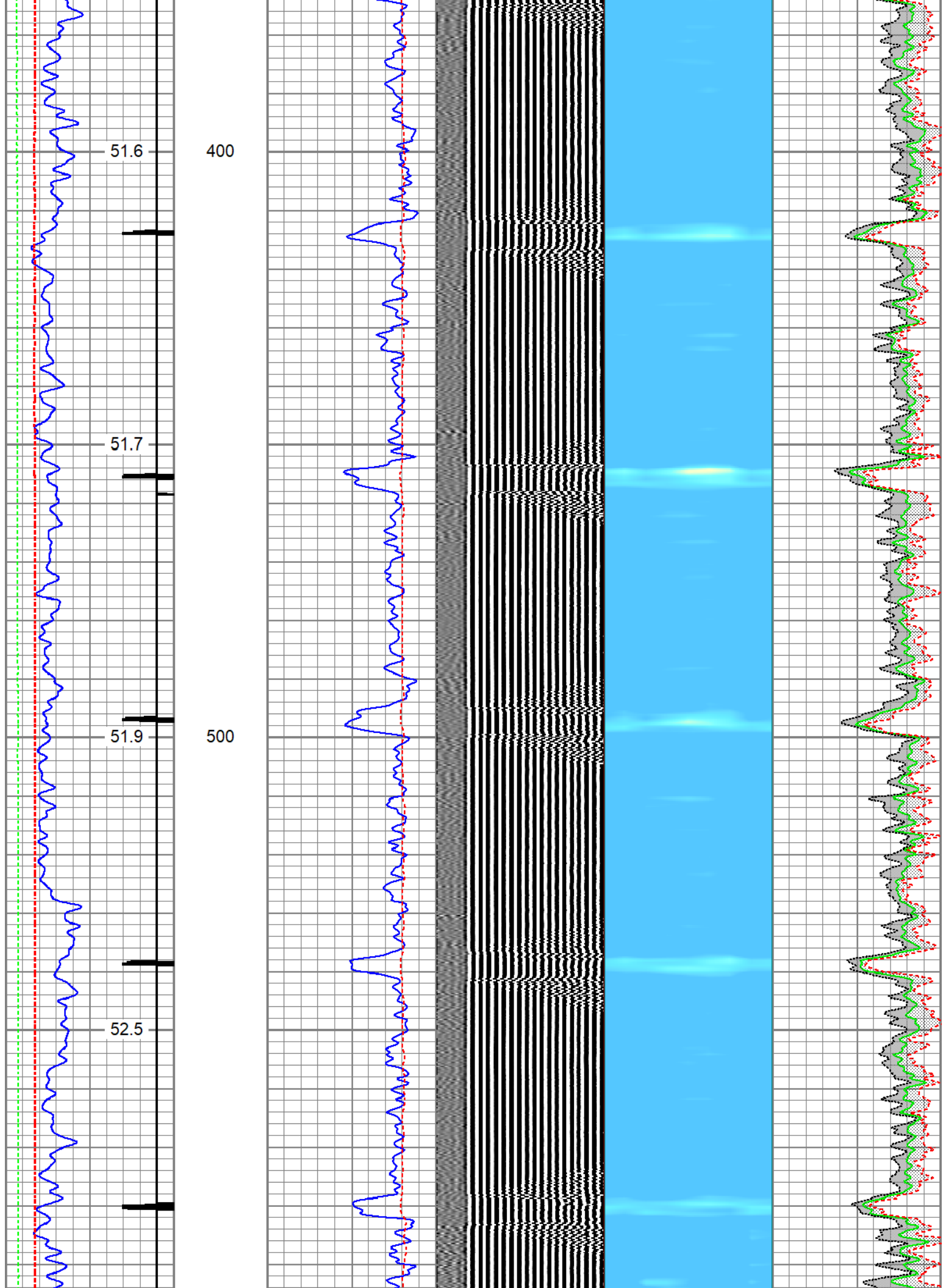
Main Pass 5" = 100'

Database File	tep_wmc fed 331-20_rcbl_1-4-2023.db
Dataset Pathname	main
Presentation Format	twgrcbl
Dataset Creation	Wed Jan 04 12:15:39 2023
Charted by	Depth in Feet scaled 1:240

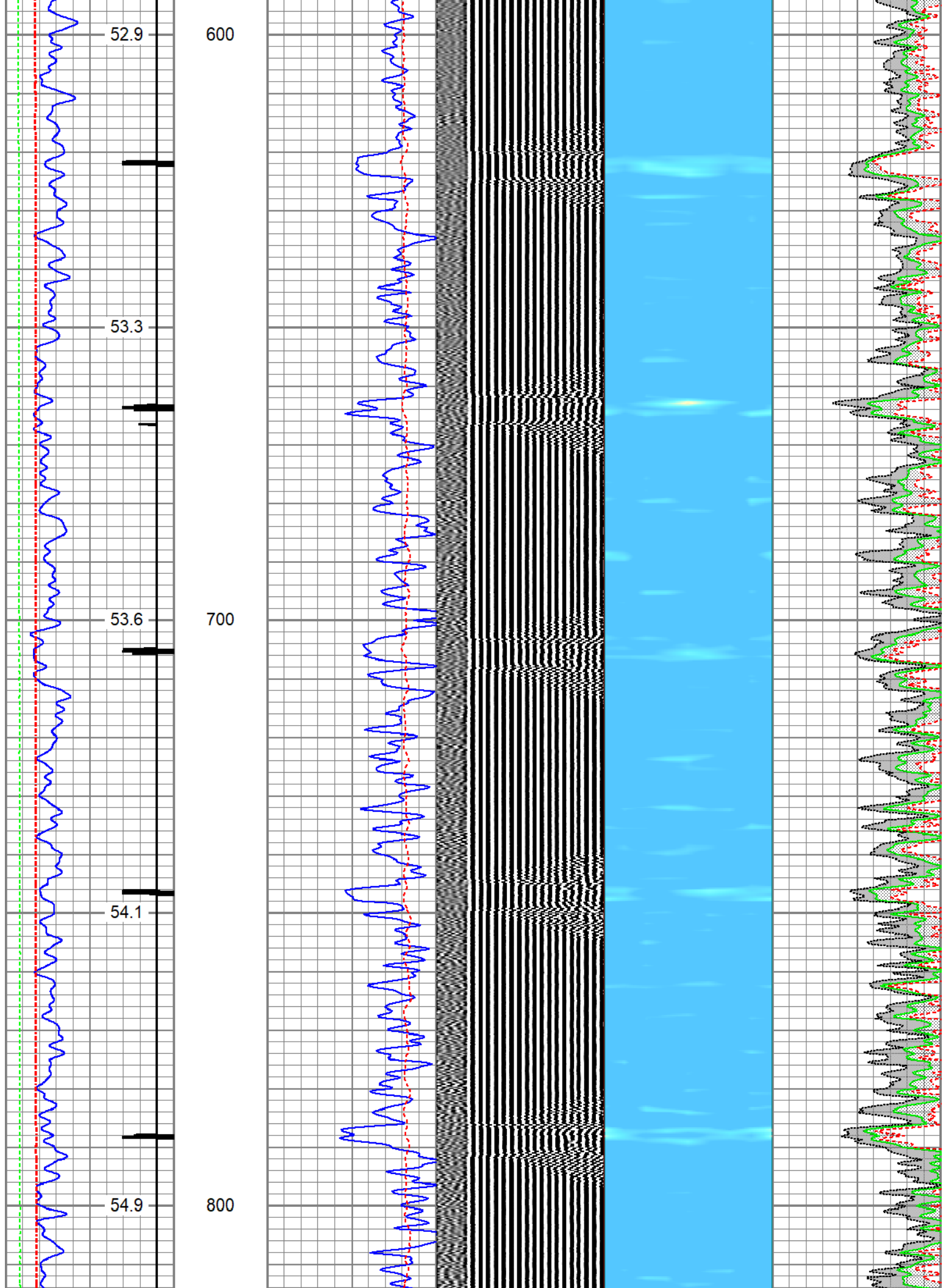
Gamma Ray		3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 200		0 (mV) 100	200 (usec) 1200		0 120
Line Tension		3' Amplitude x 5			Minimum Amplitude
0 (lb) 4000		0 (mV) 20			0 120
-9 CCL 1		3' Travel Time			Maximum Amplitude
0 Temp (degF) 300		650 (usec) 150			0 120

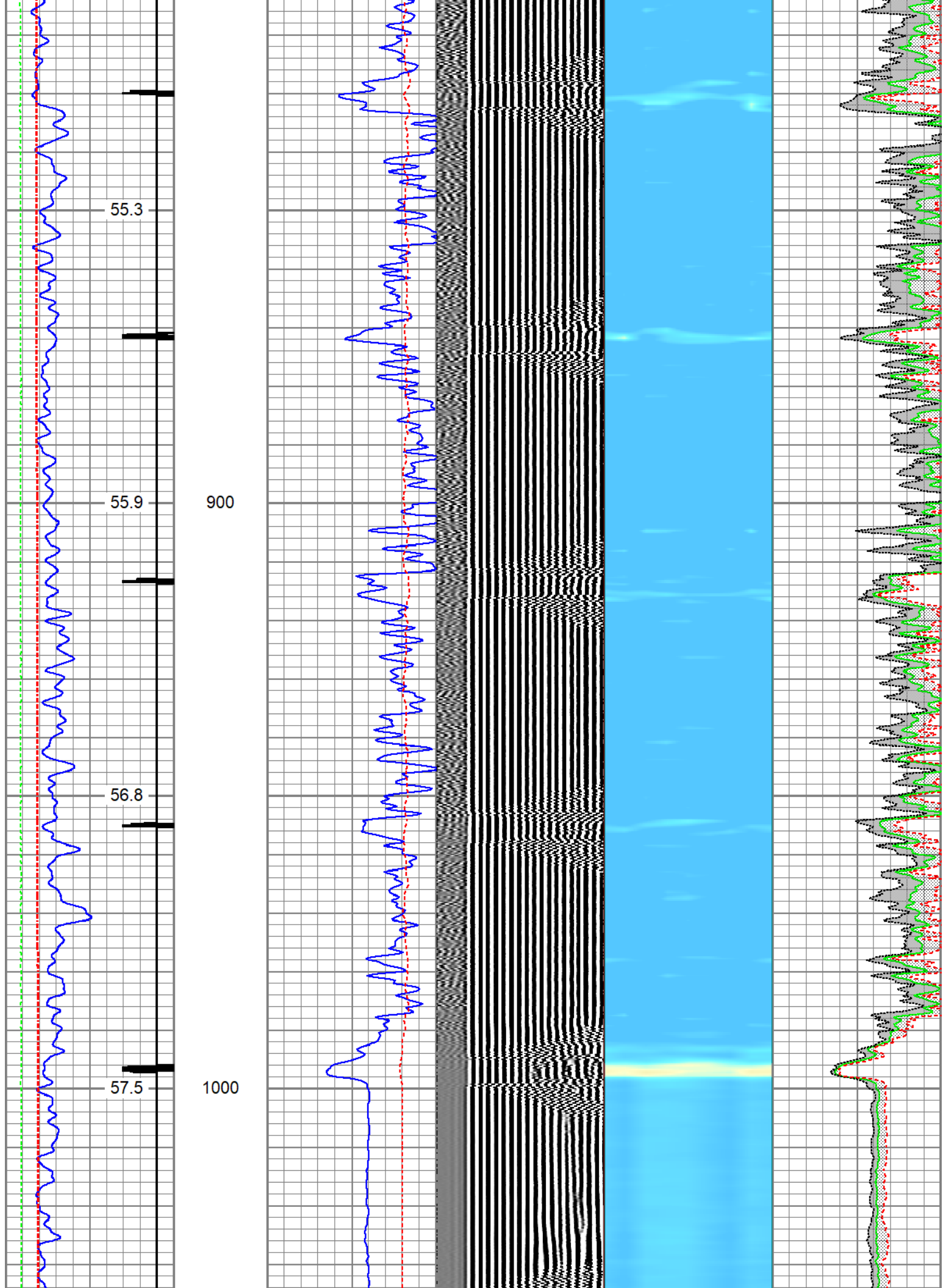


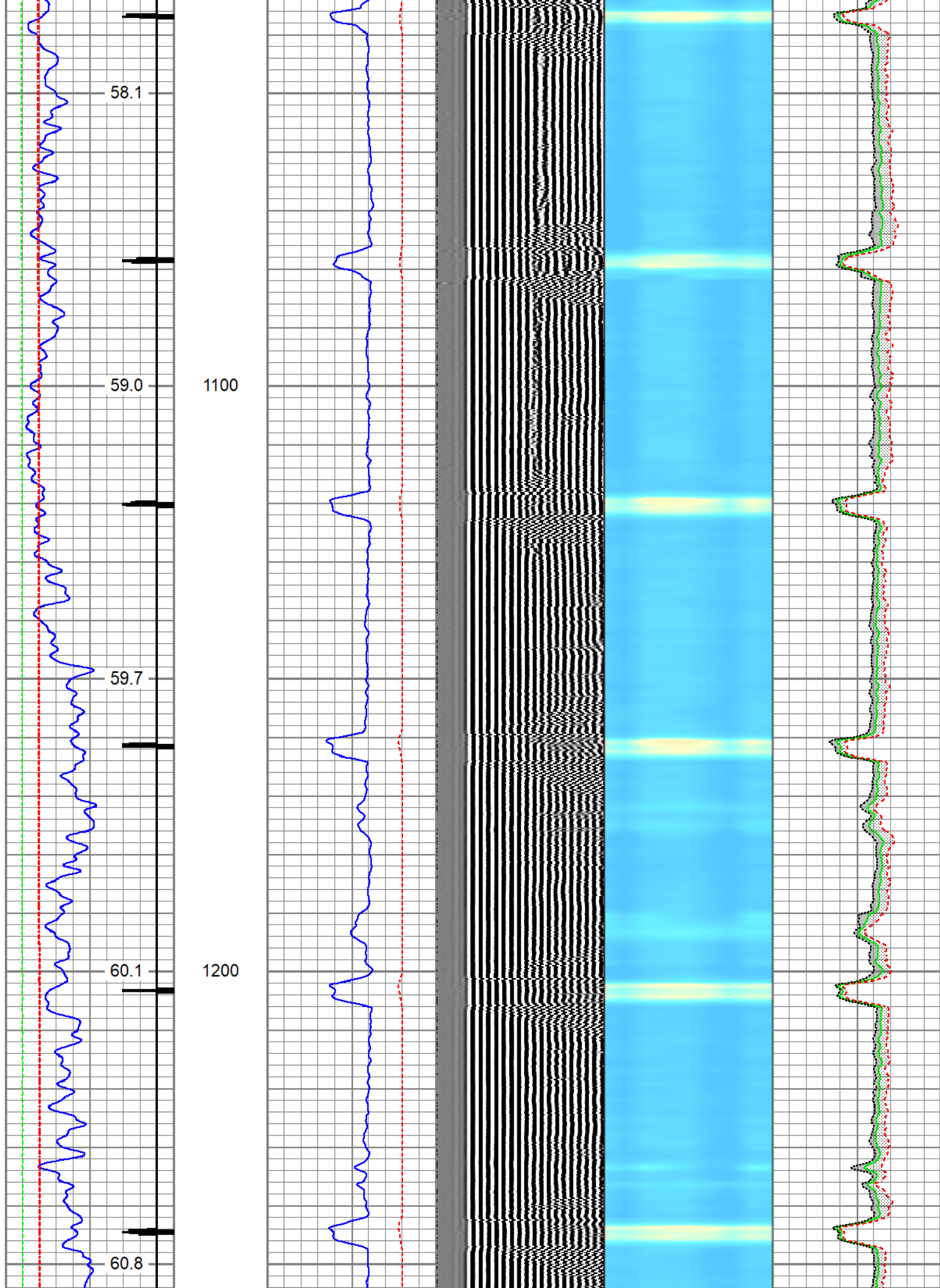




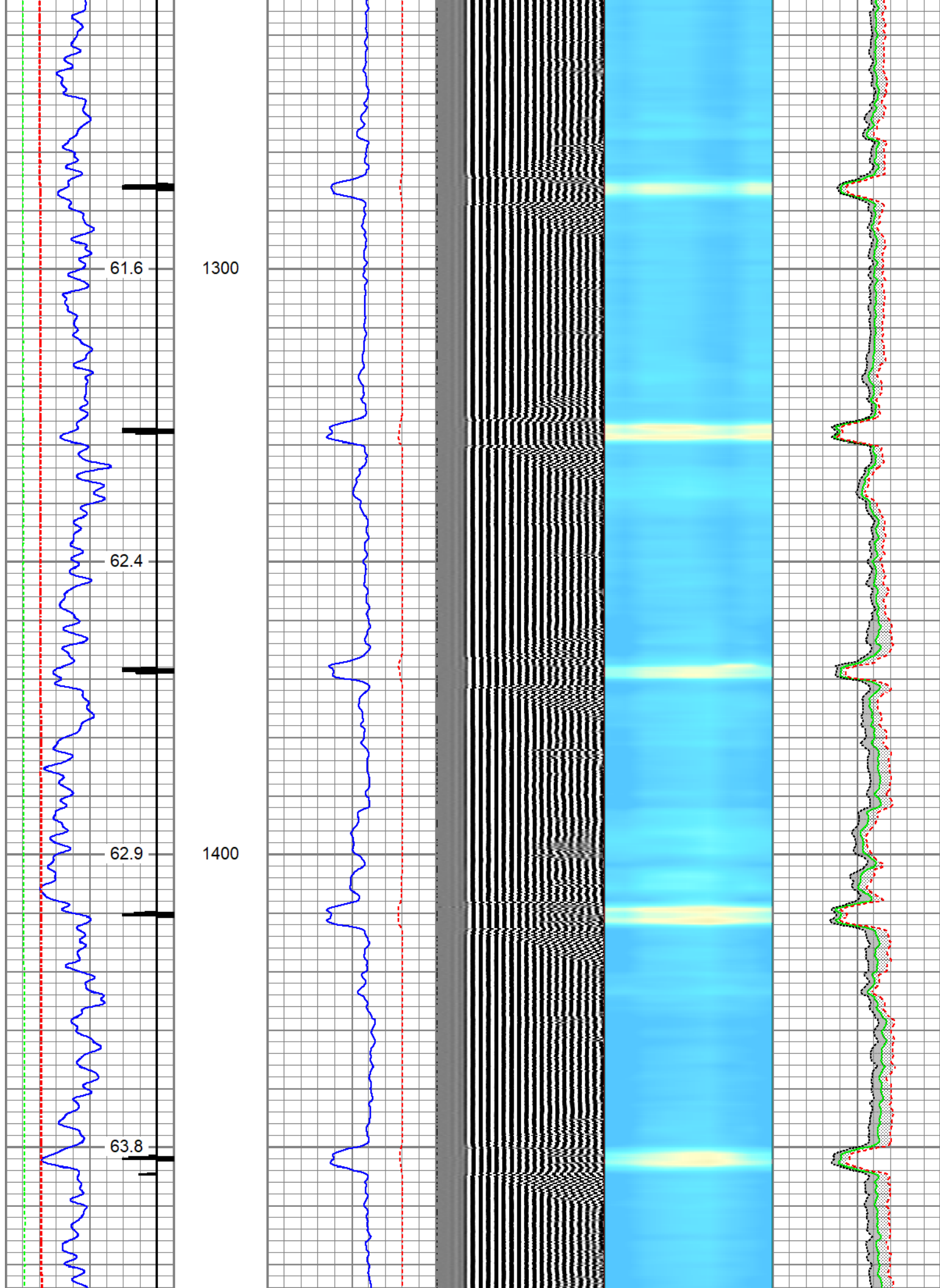




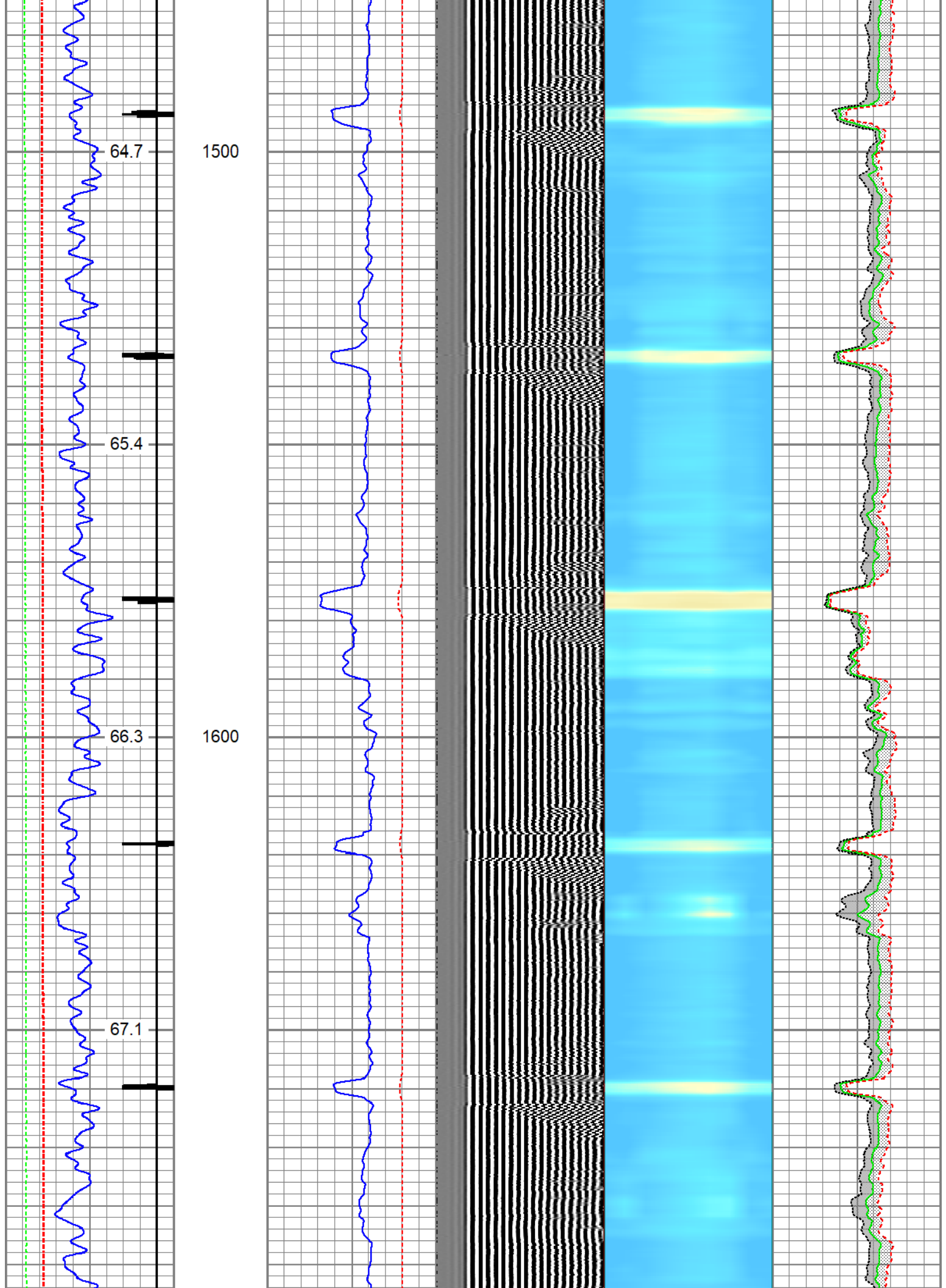


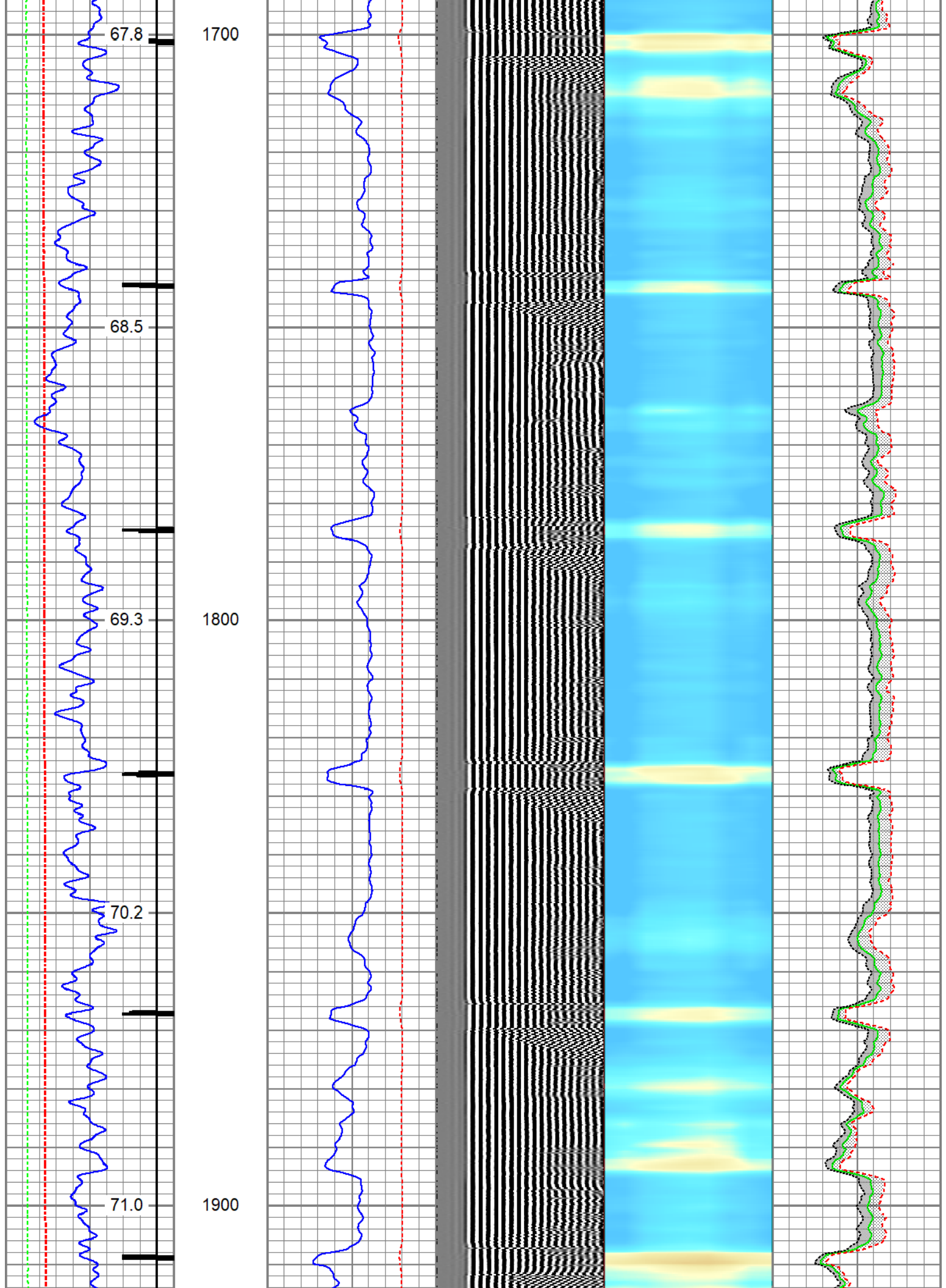


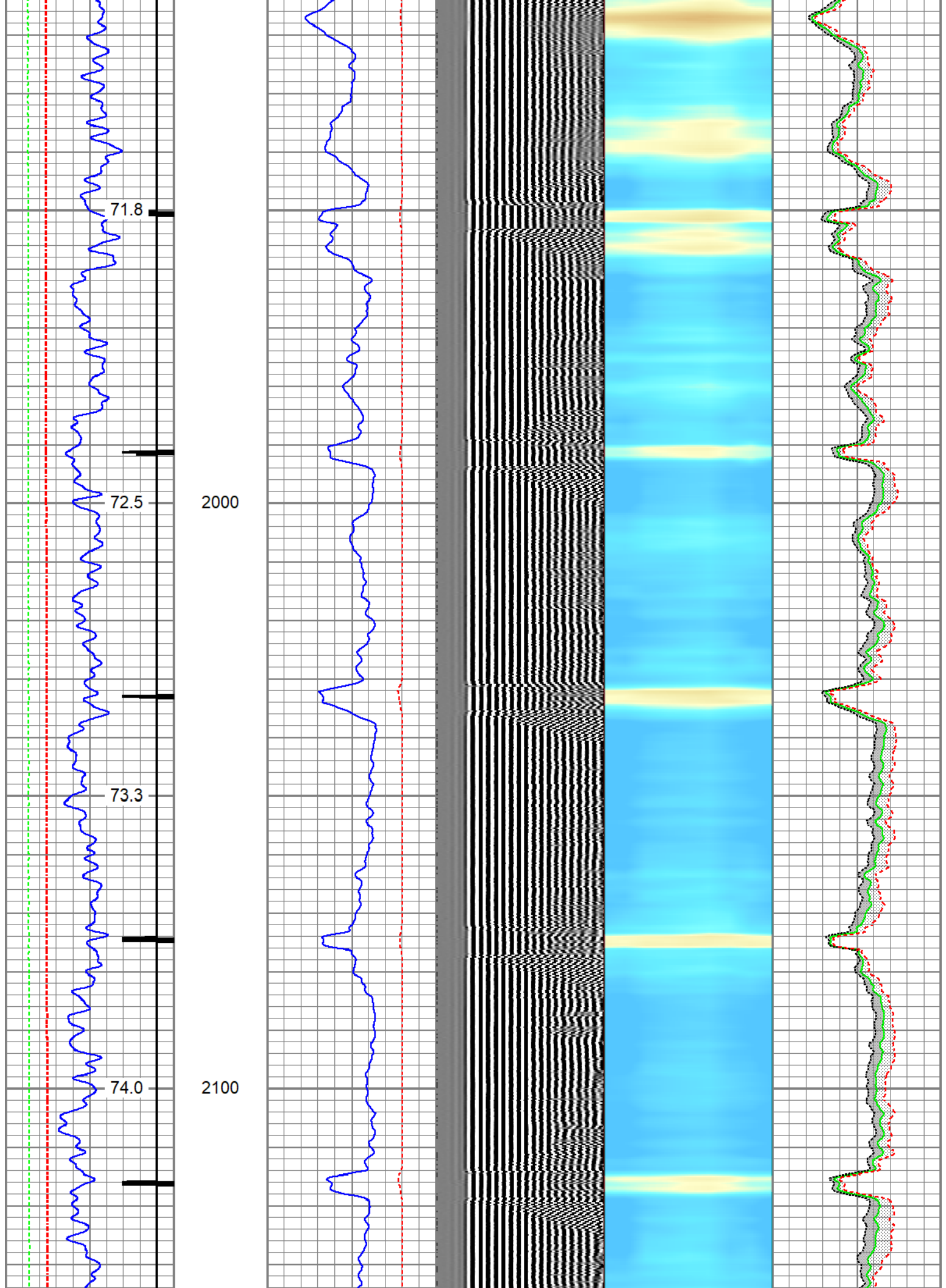




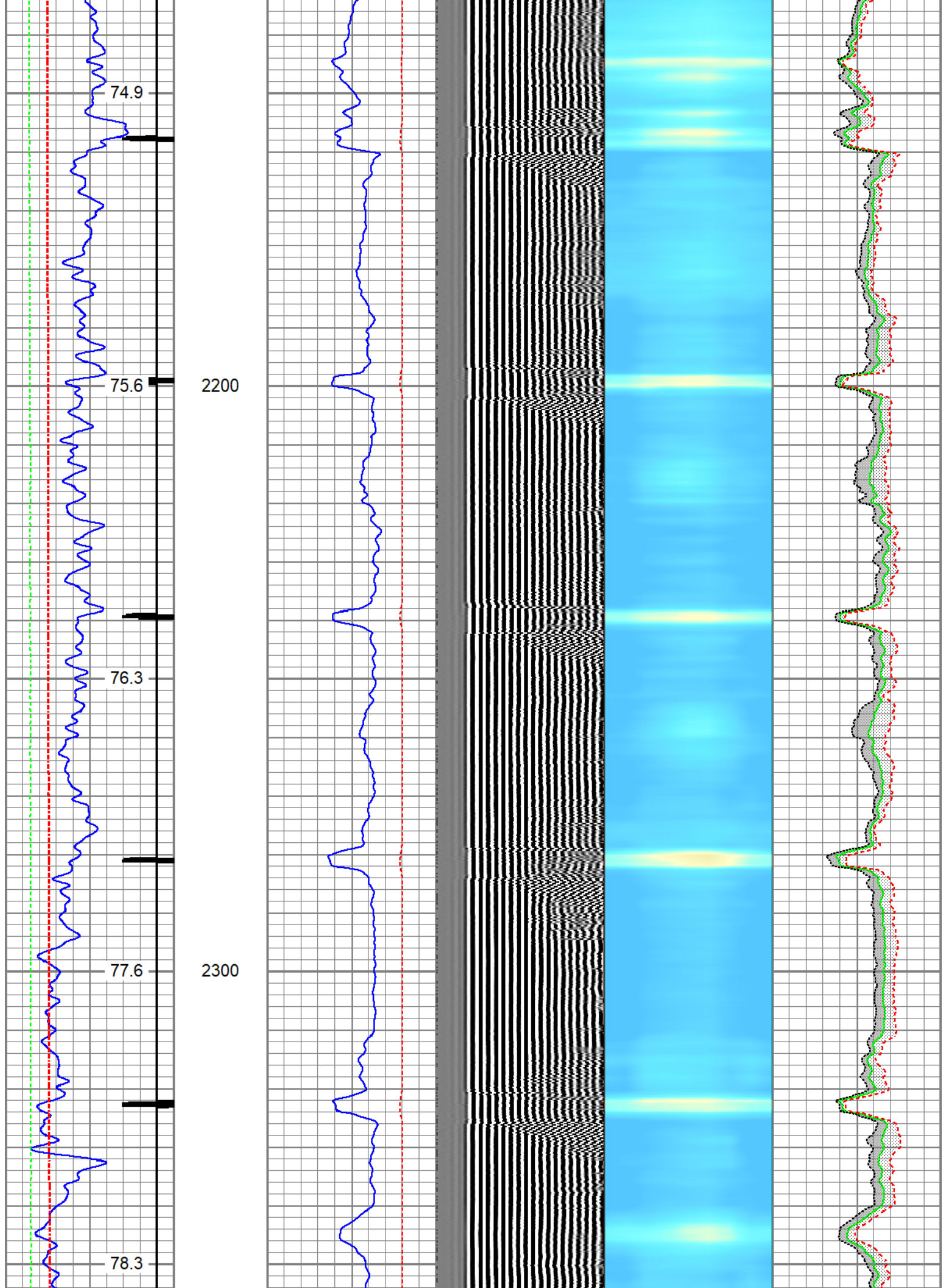




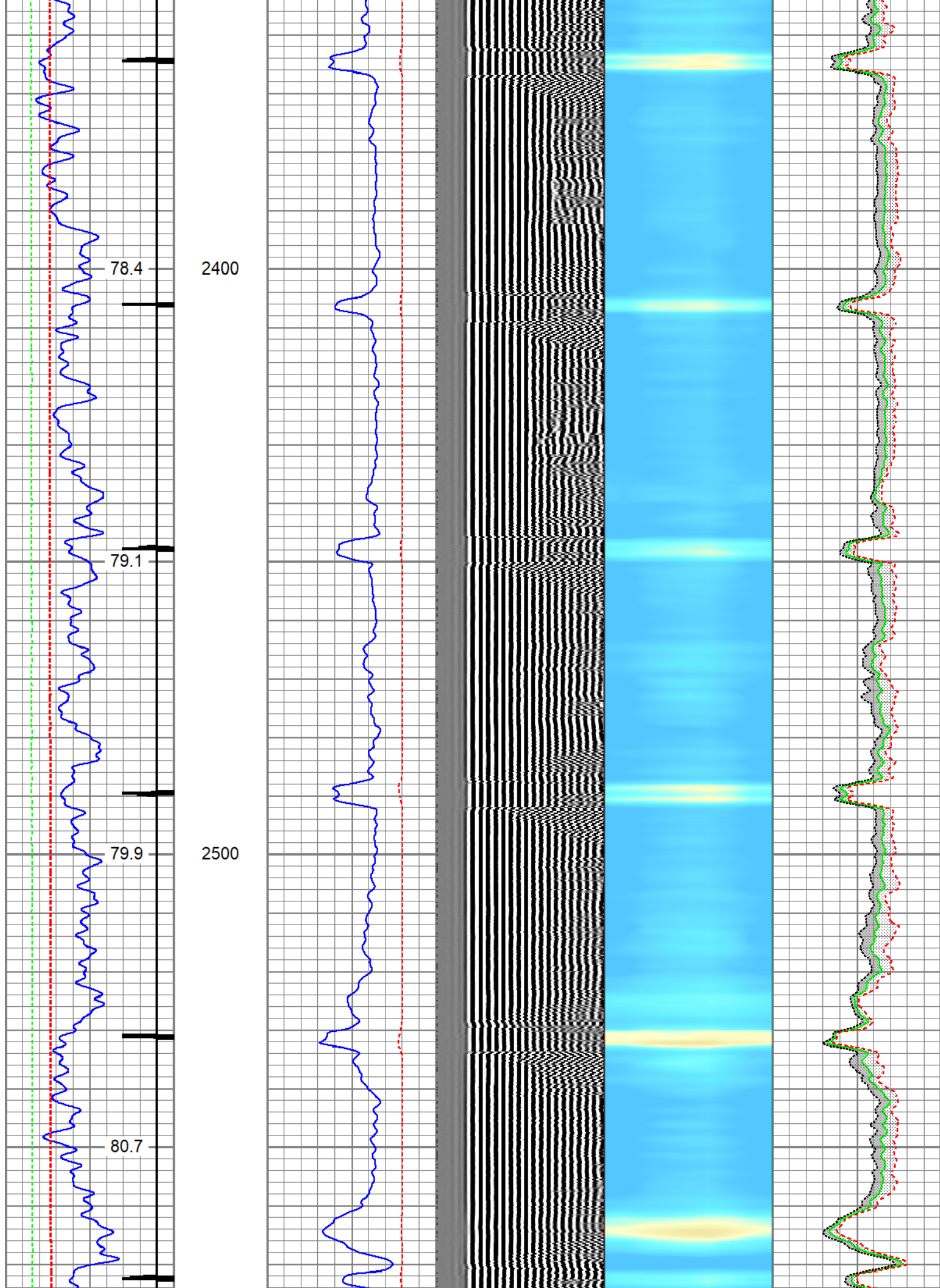


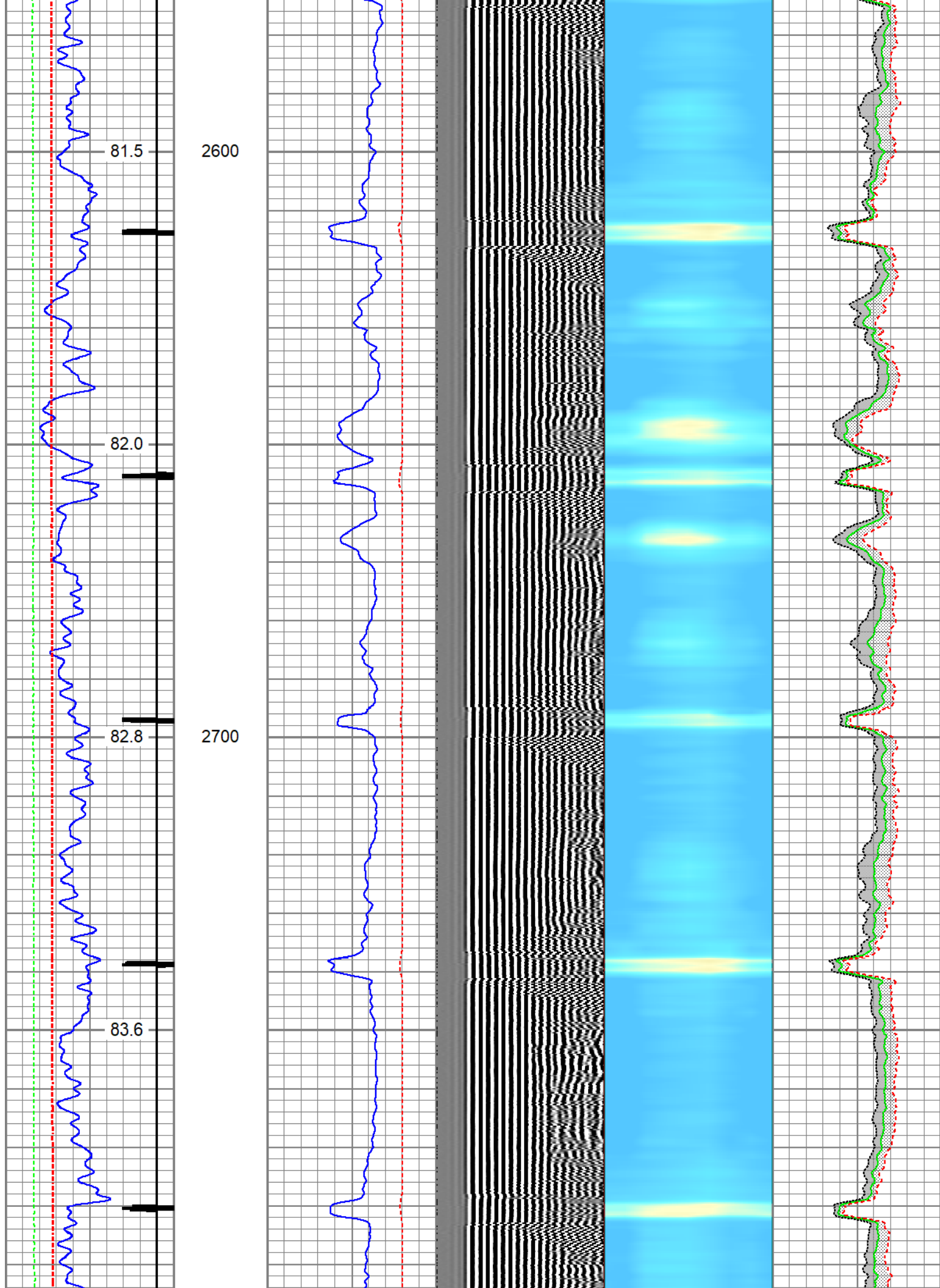


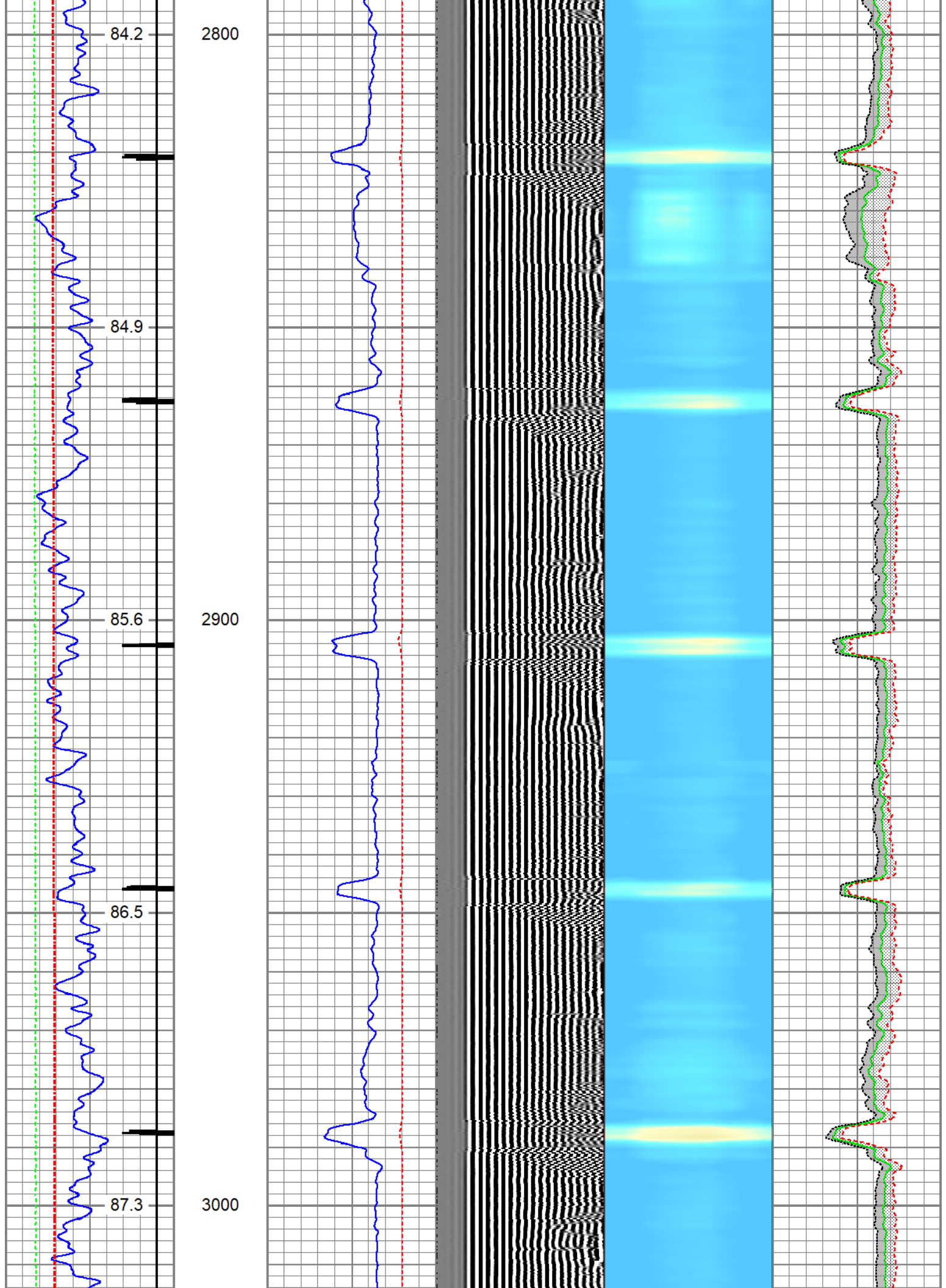




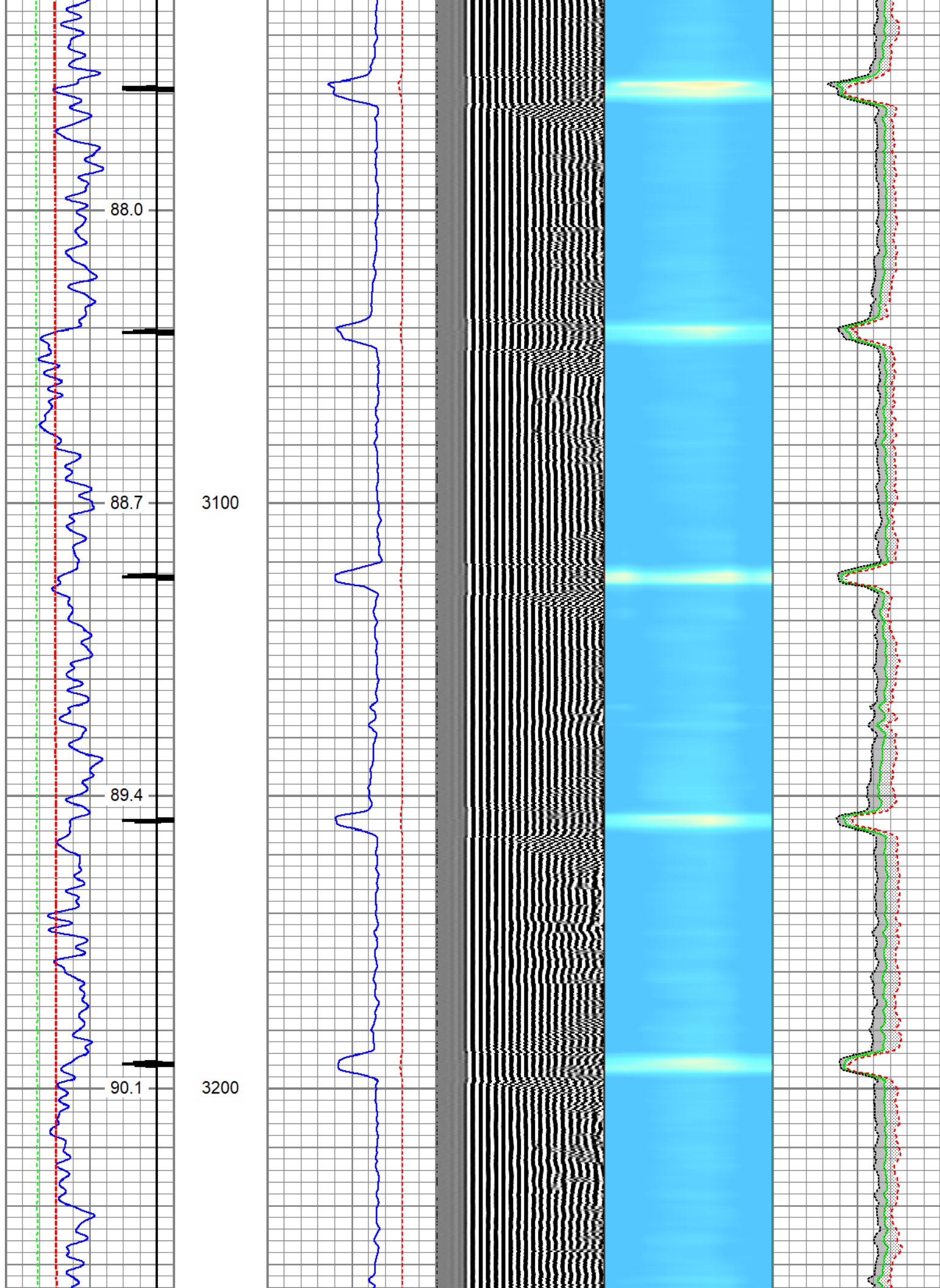




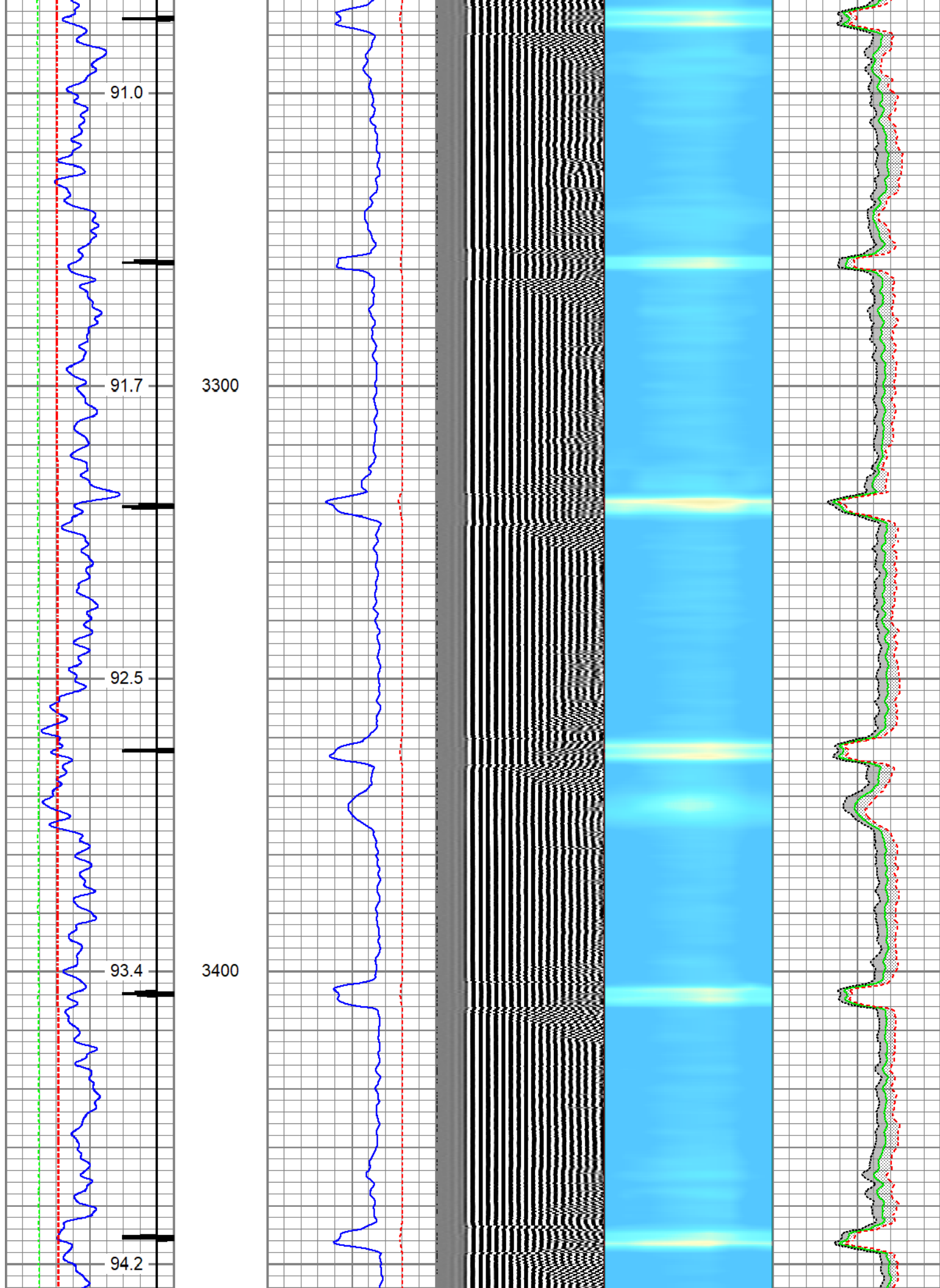


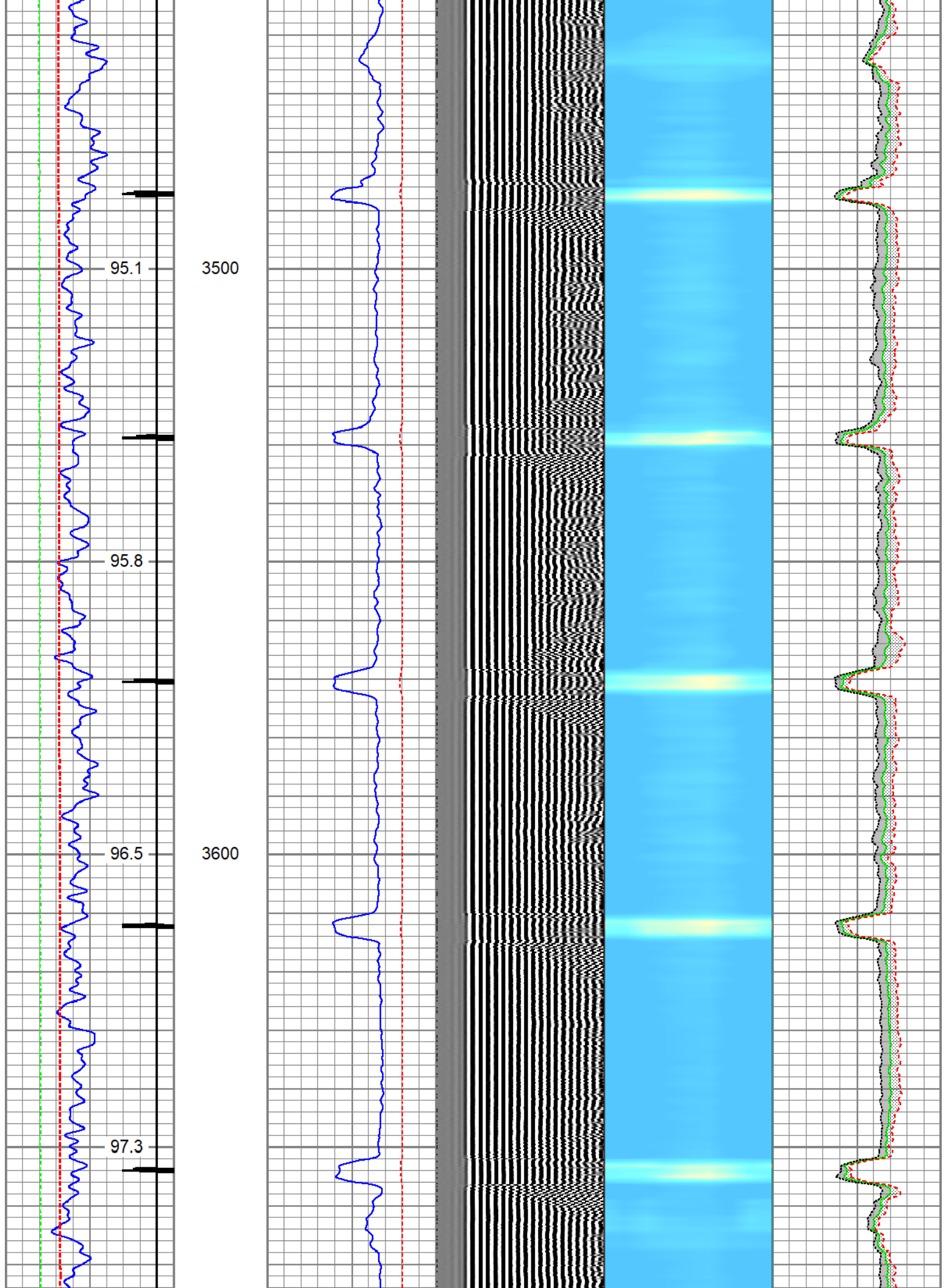


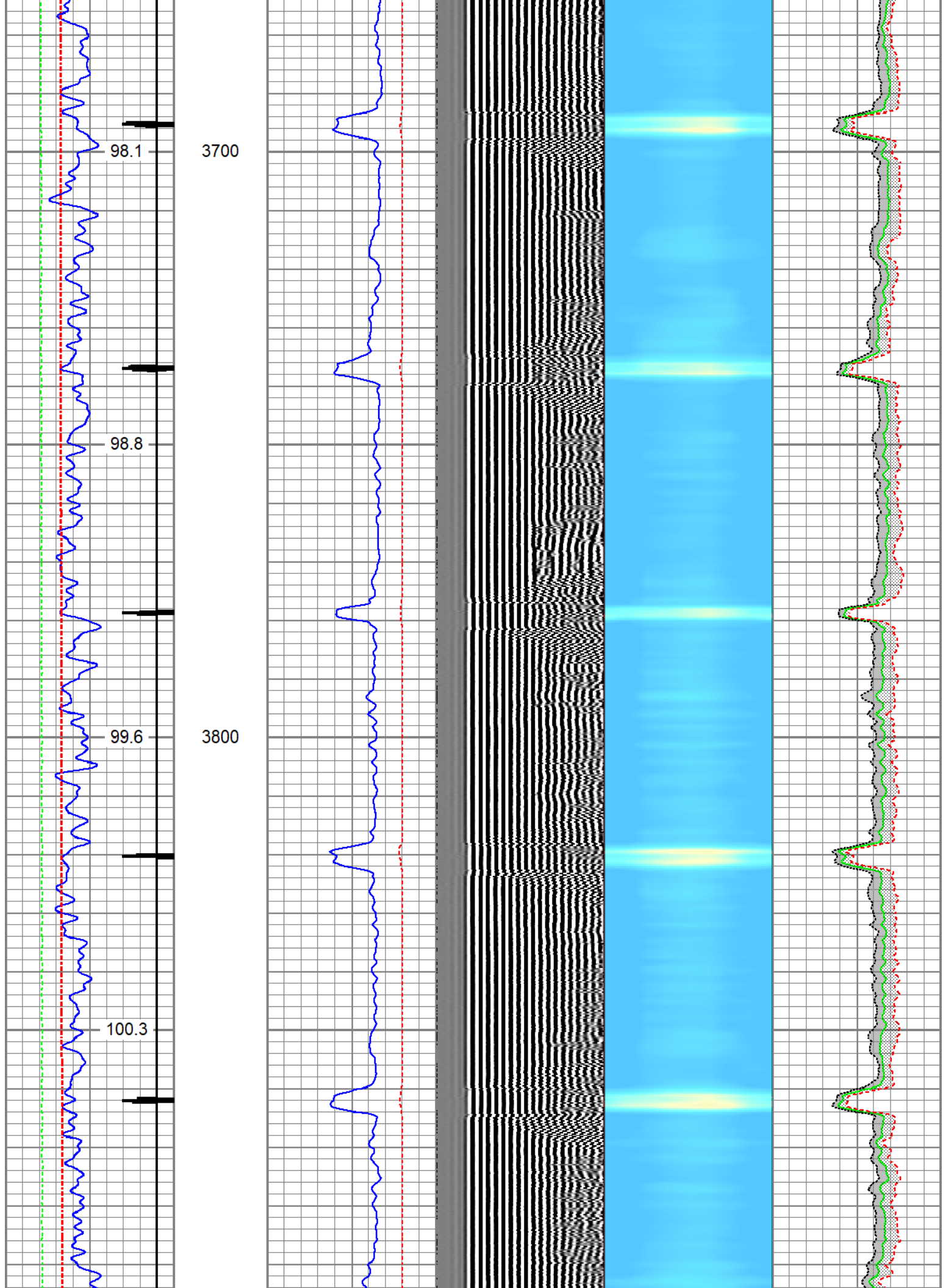




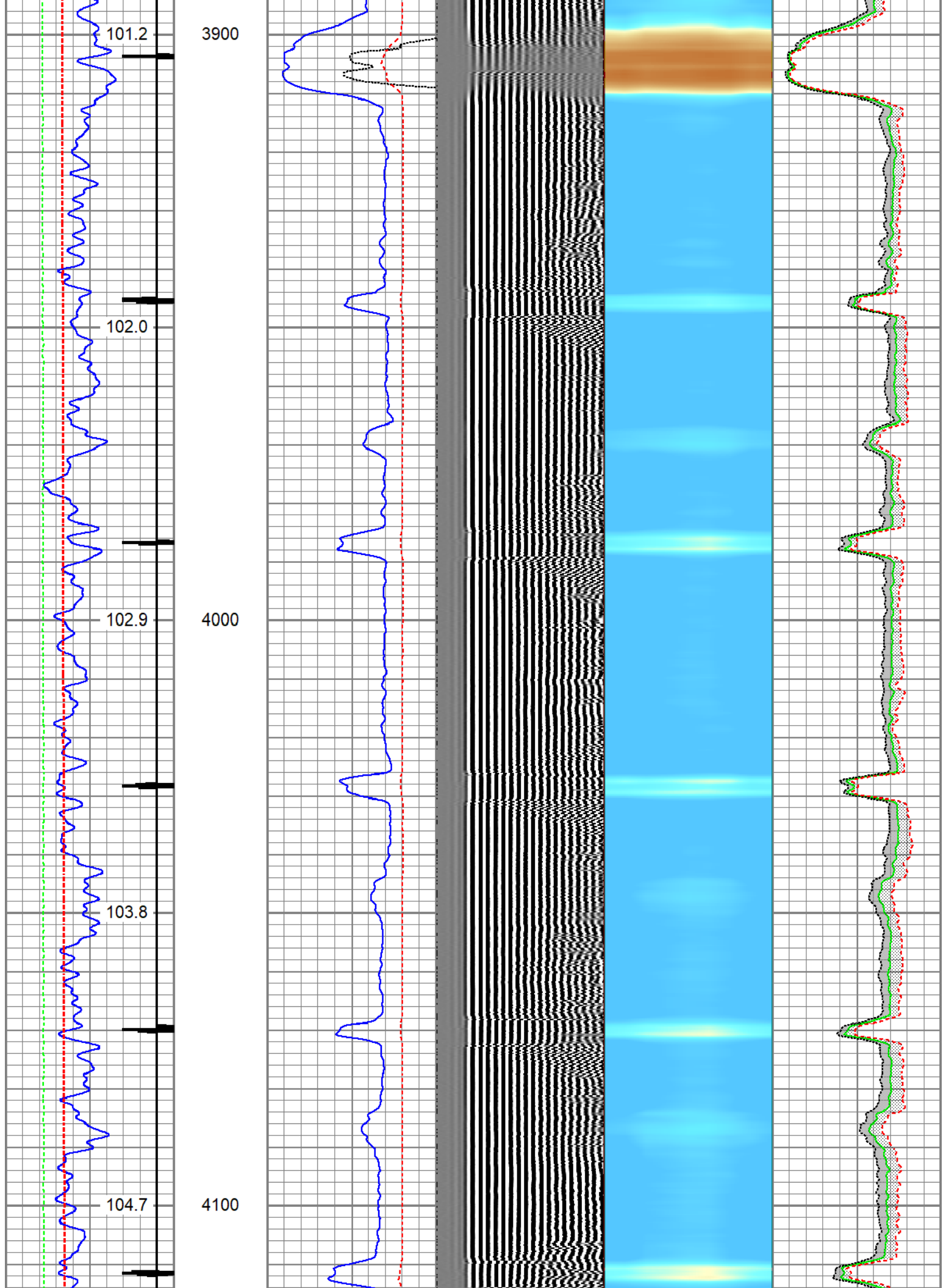




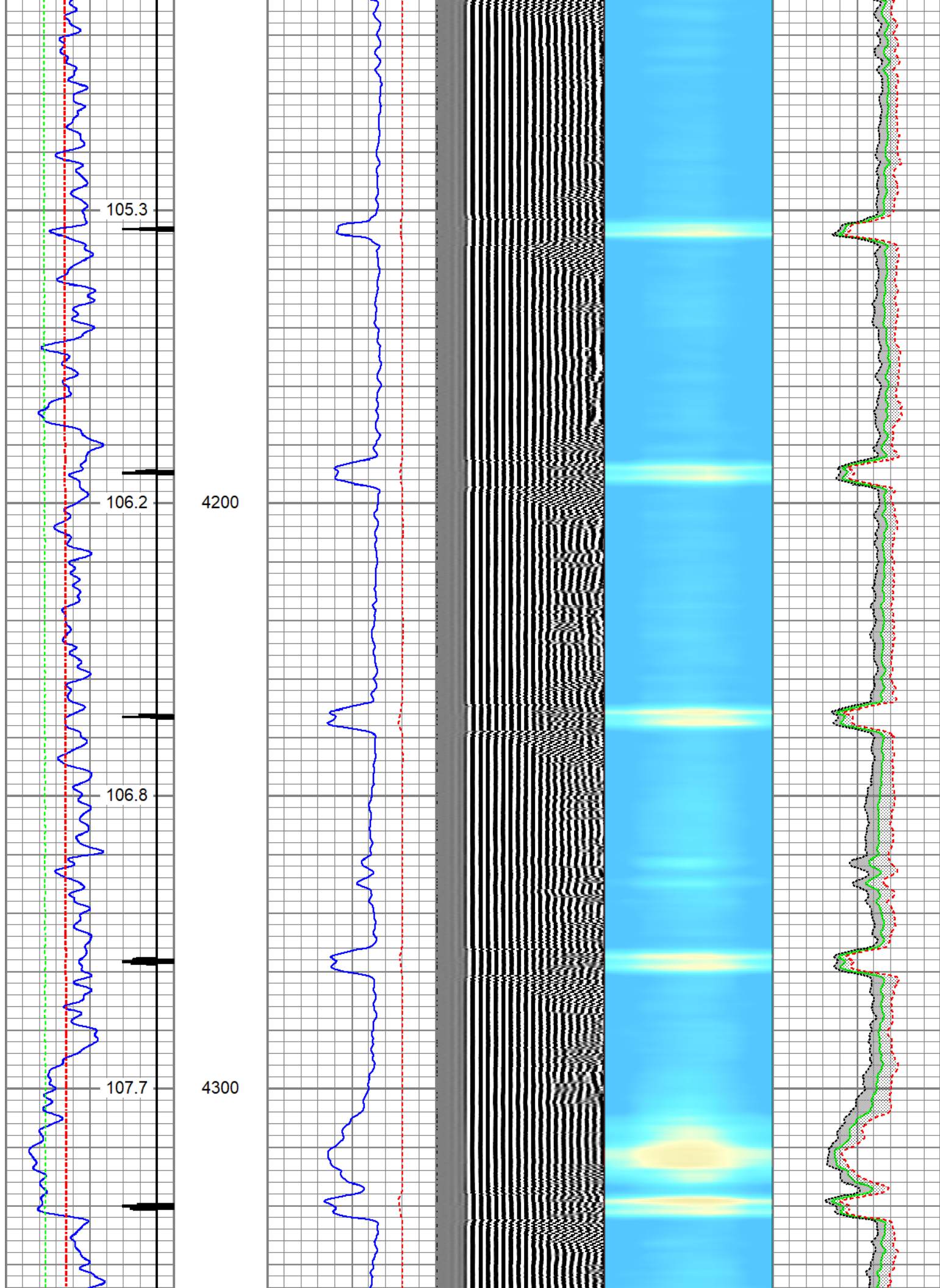


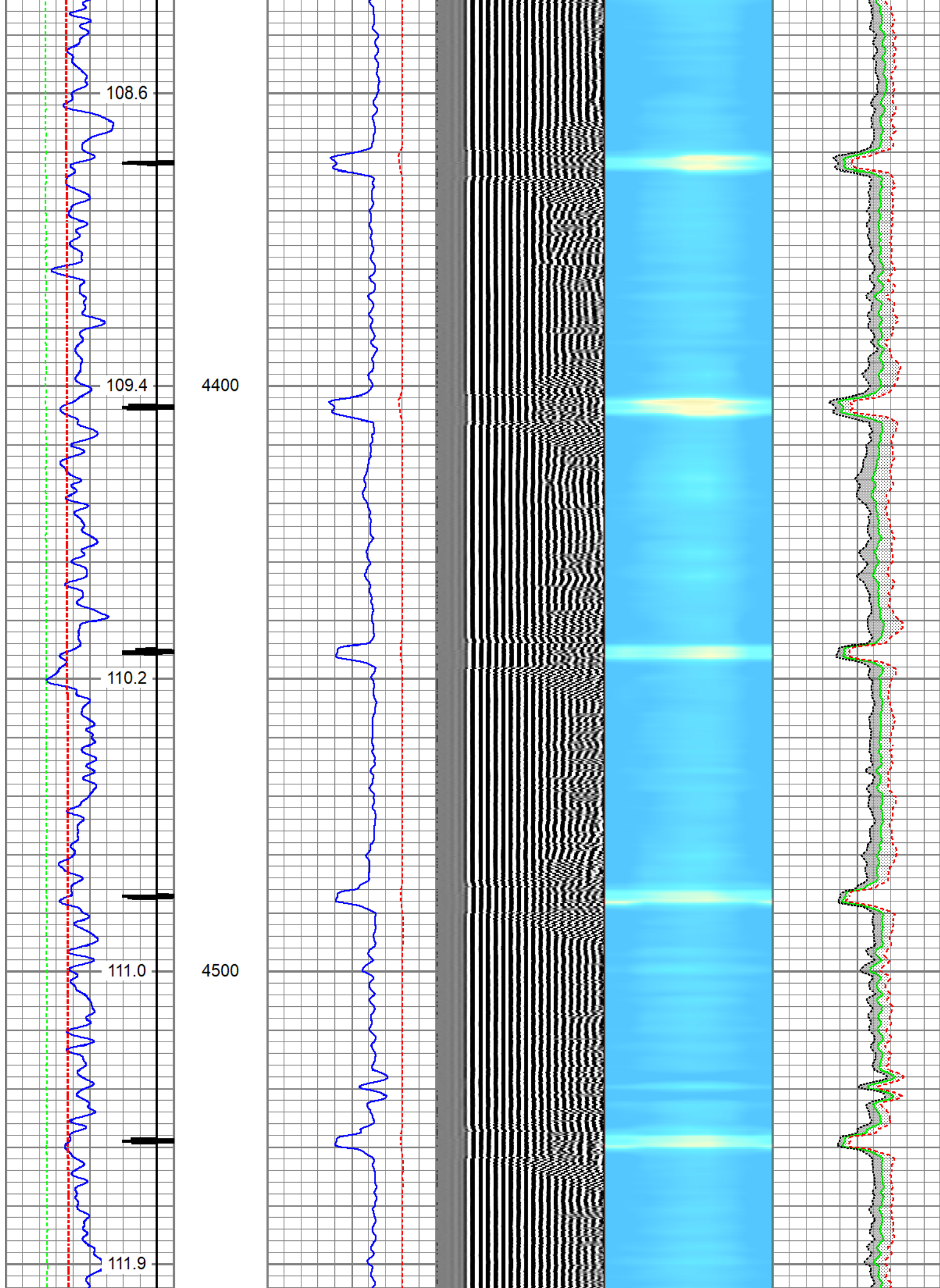


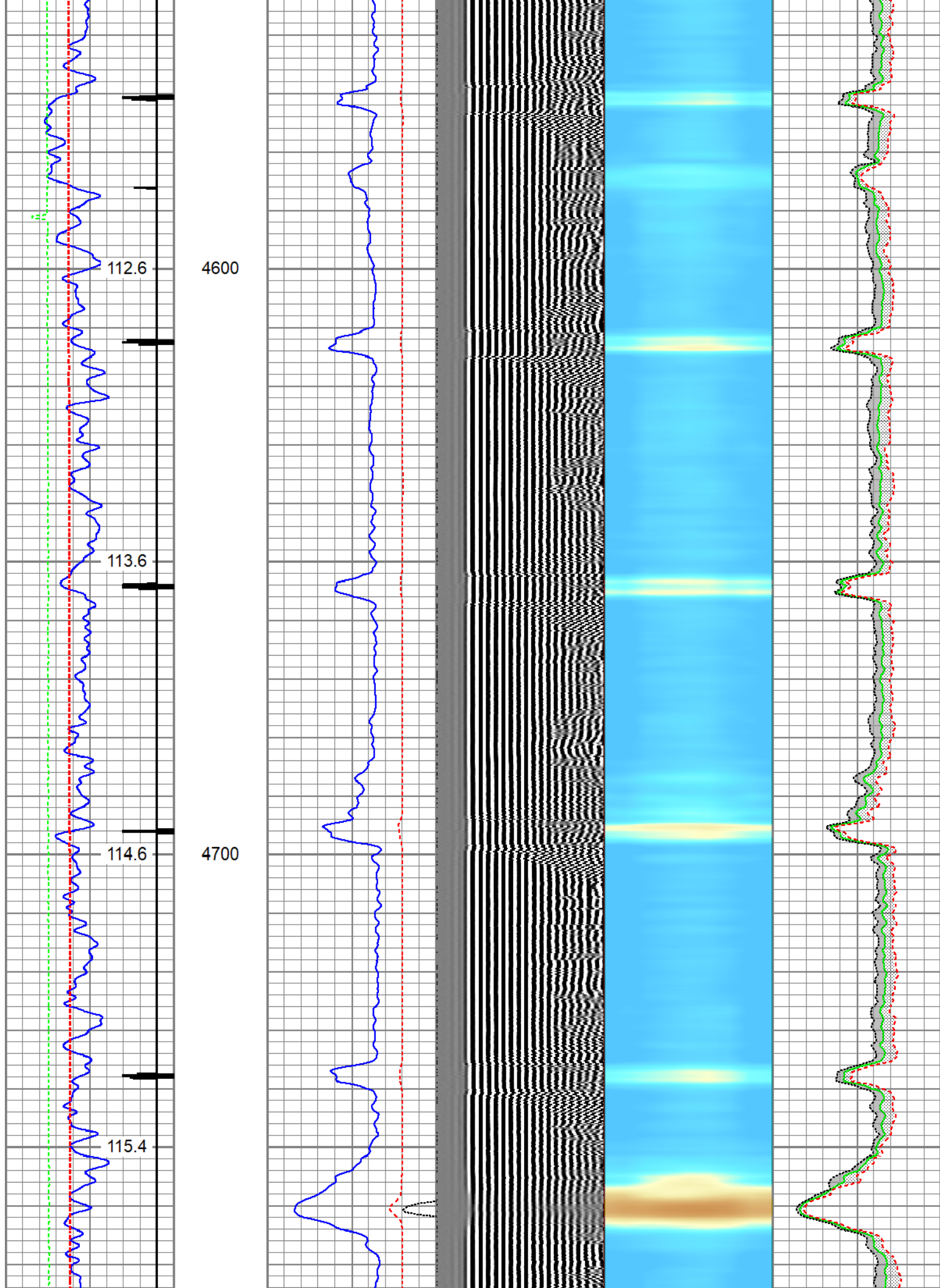




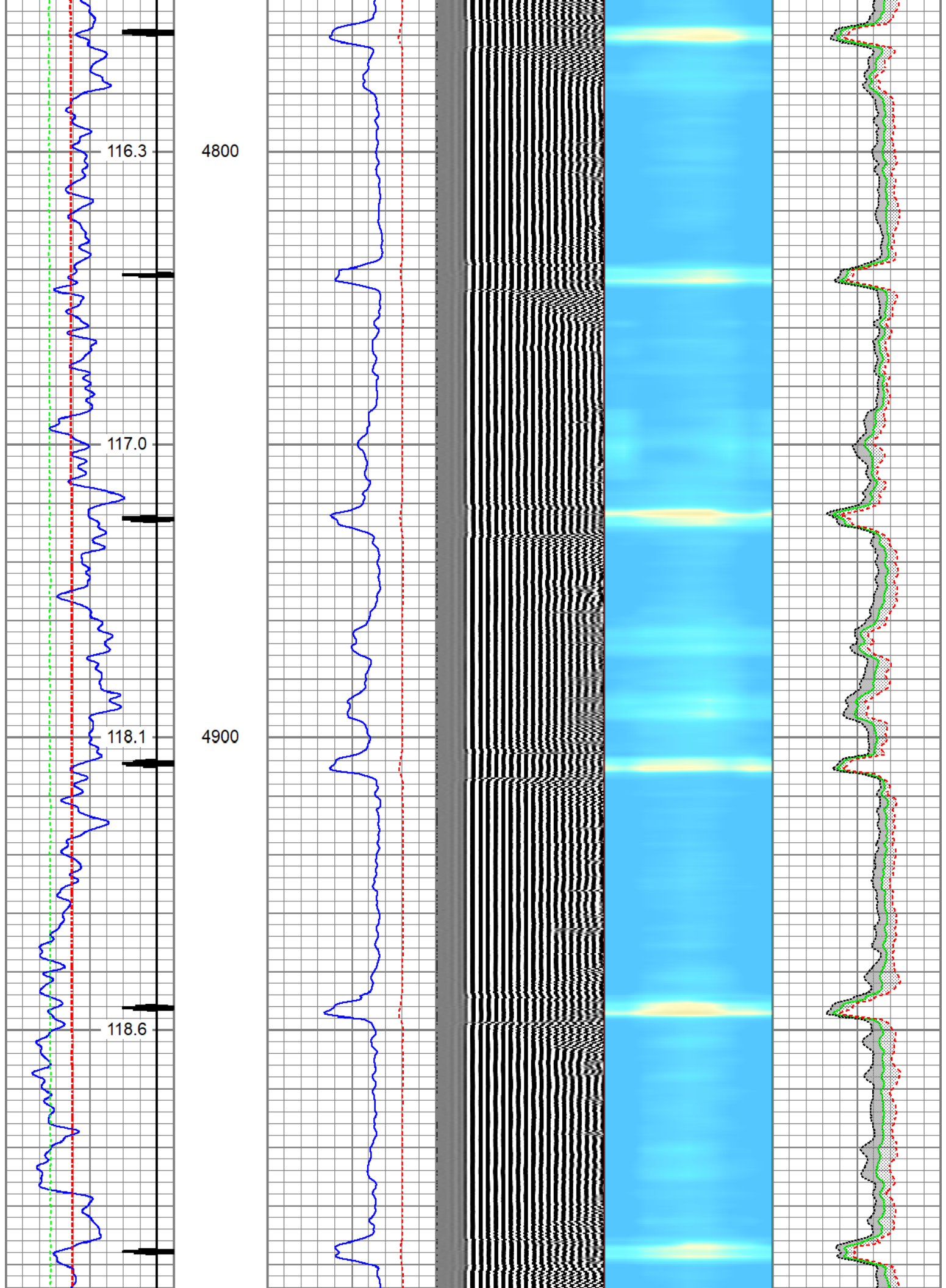


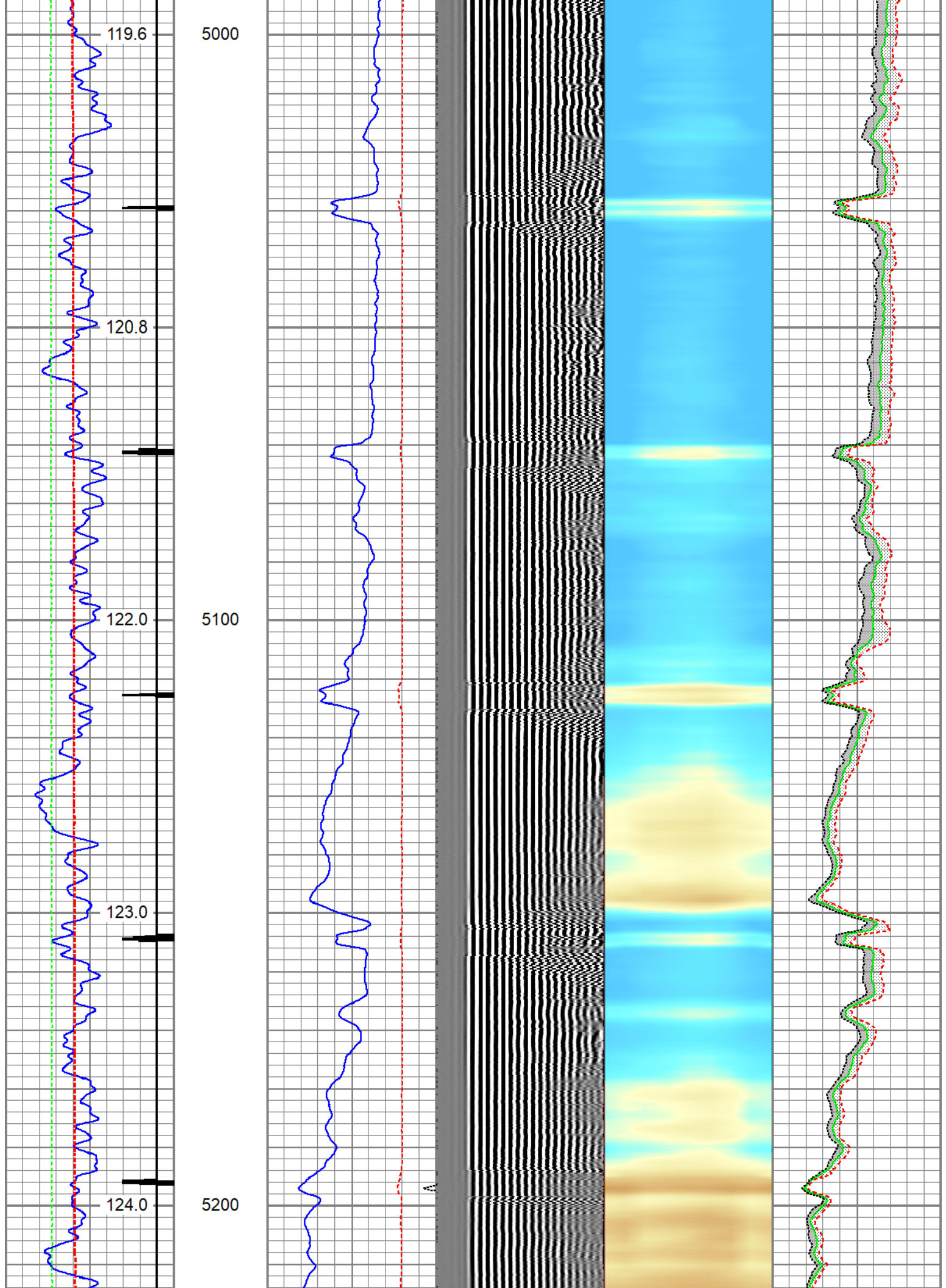


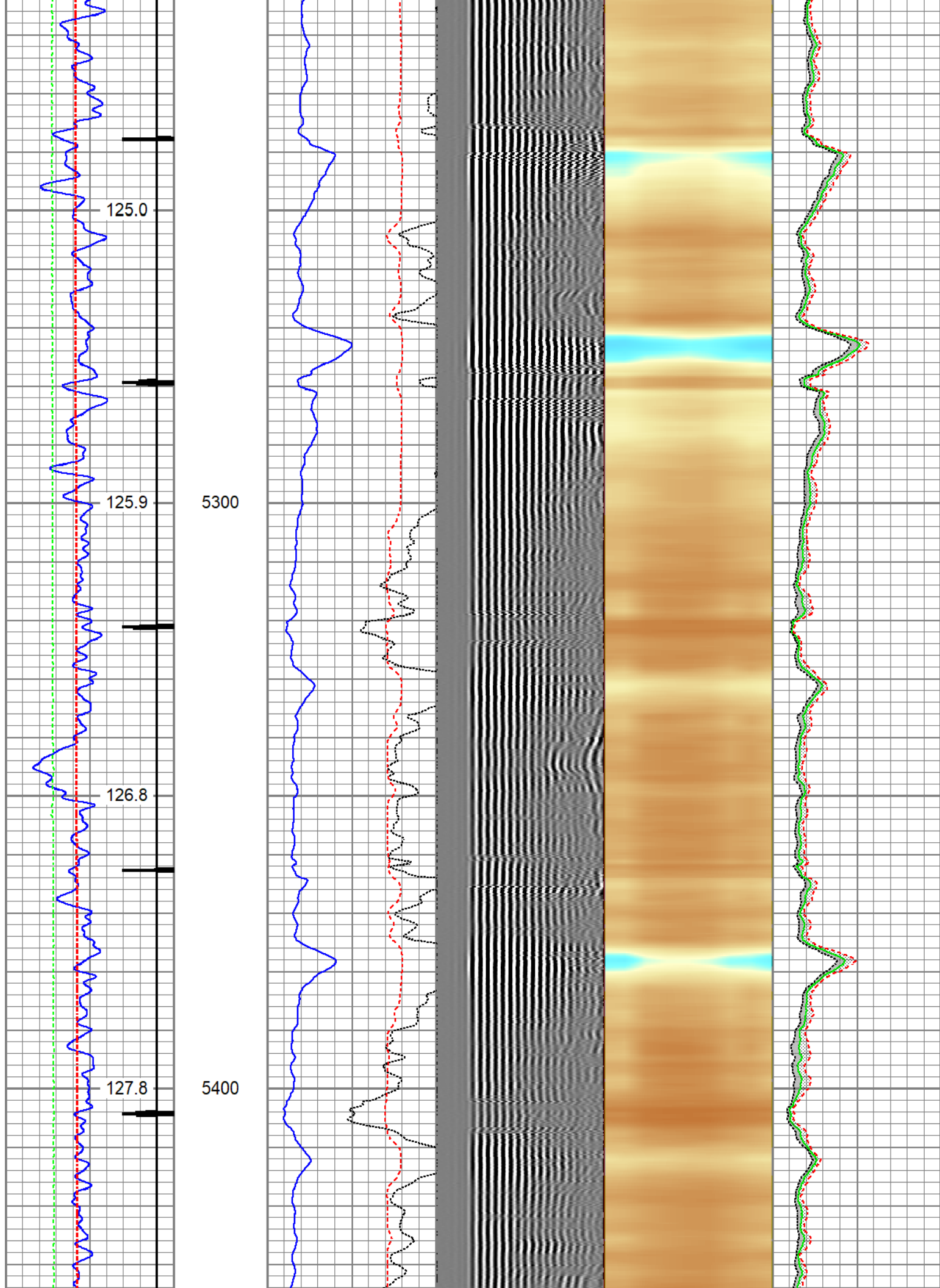




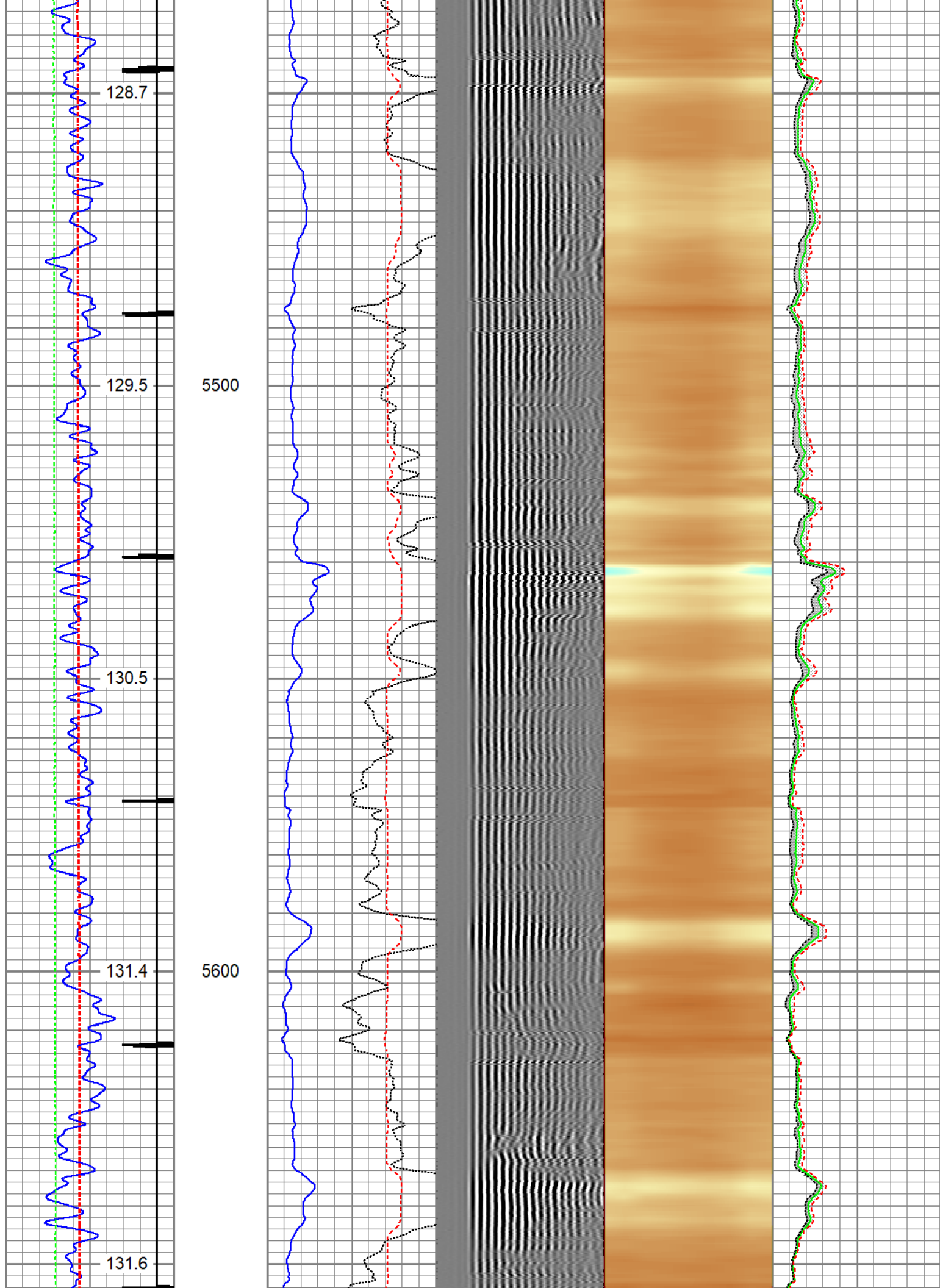


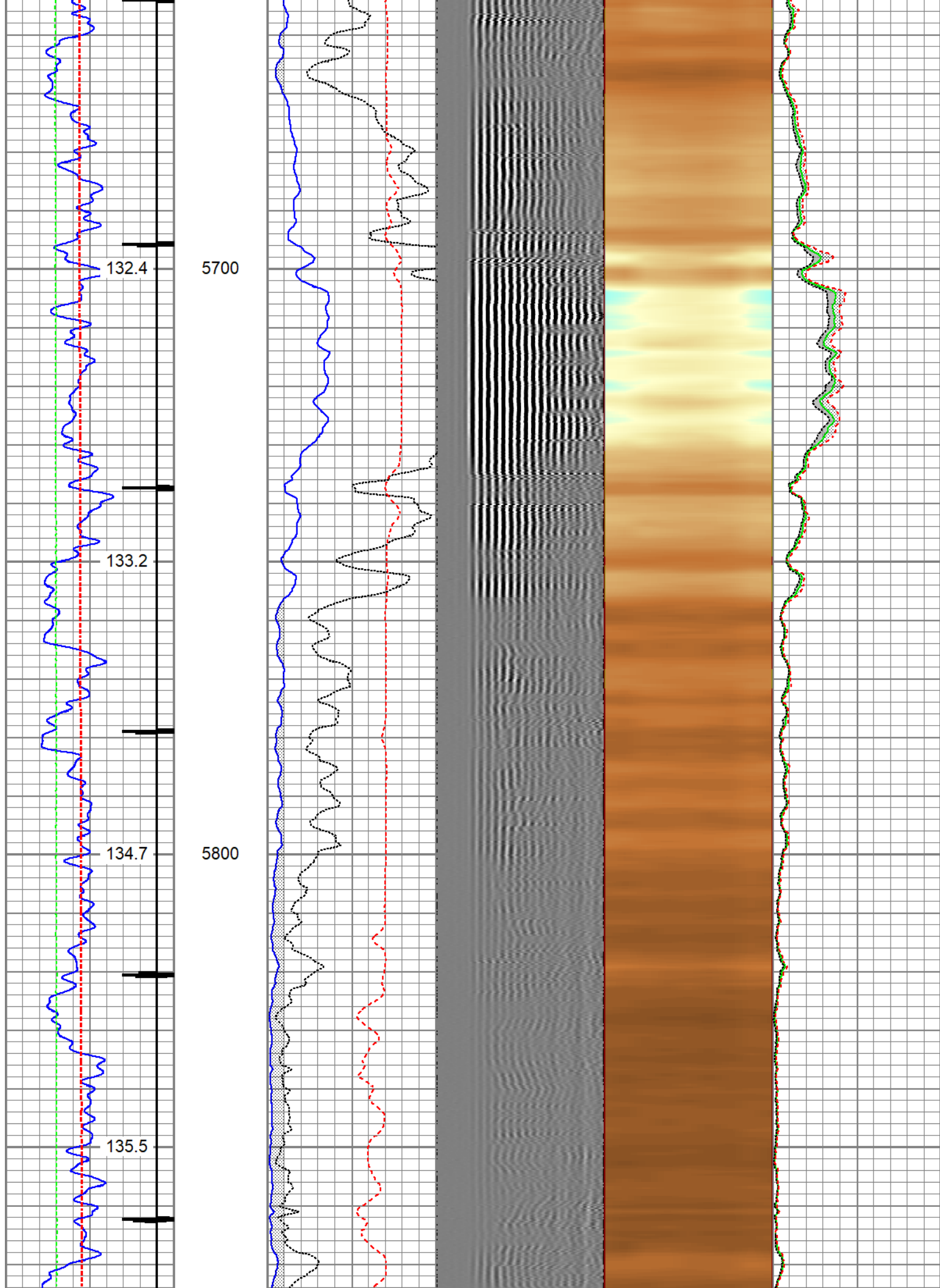


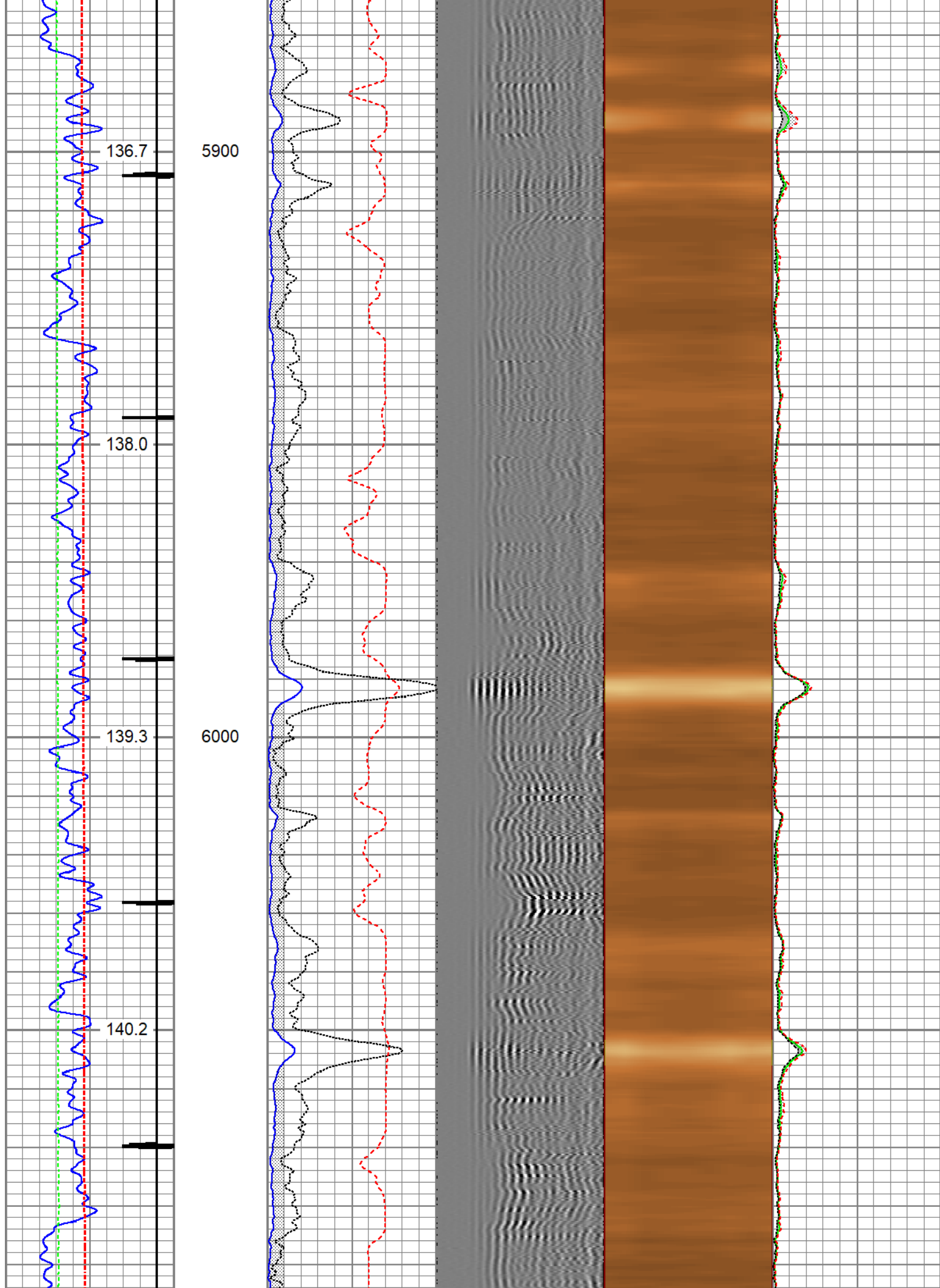




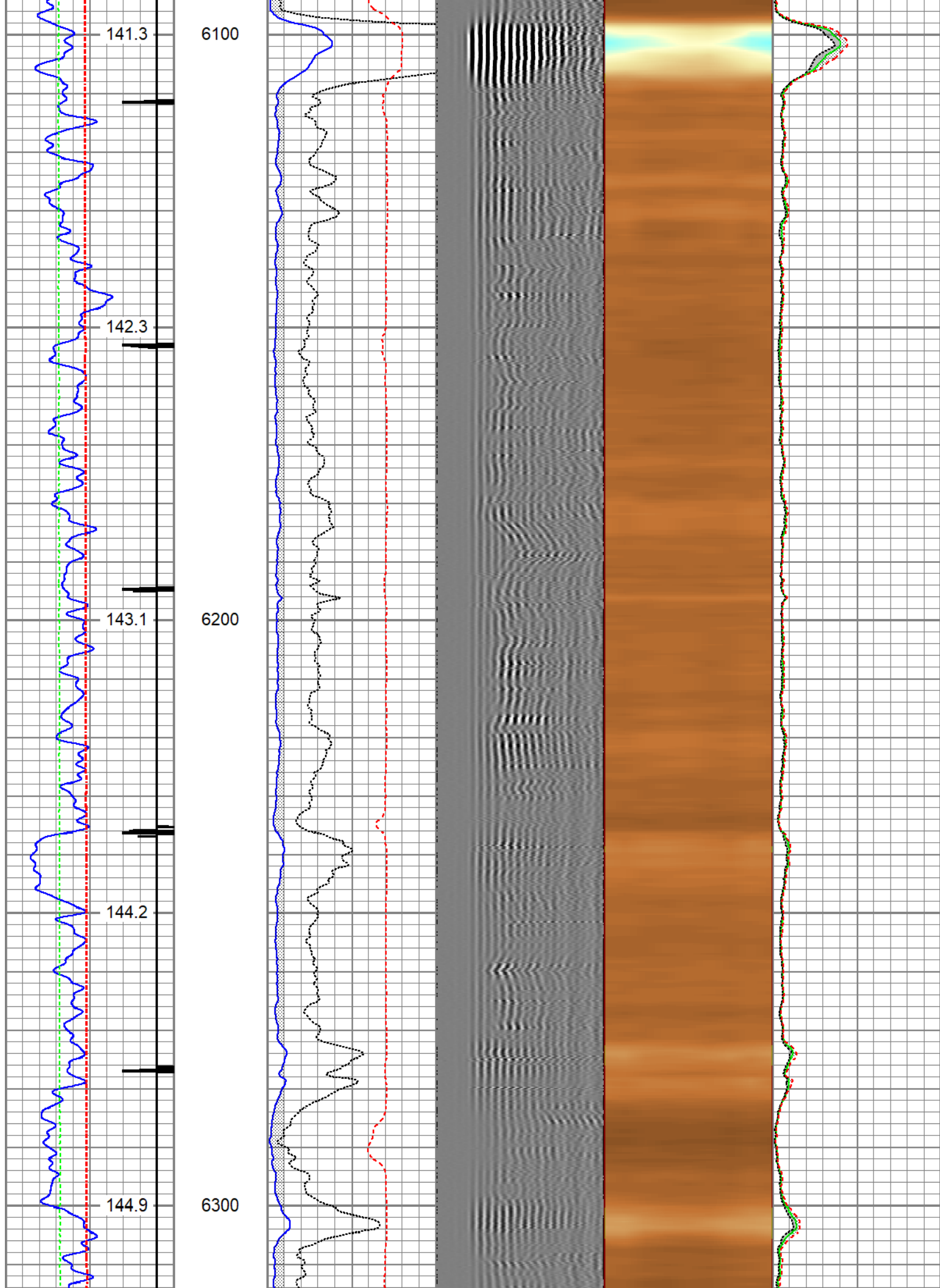


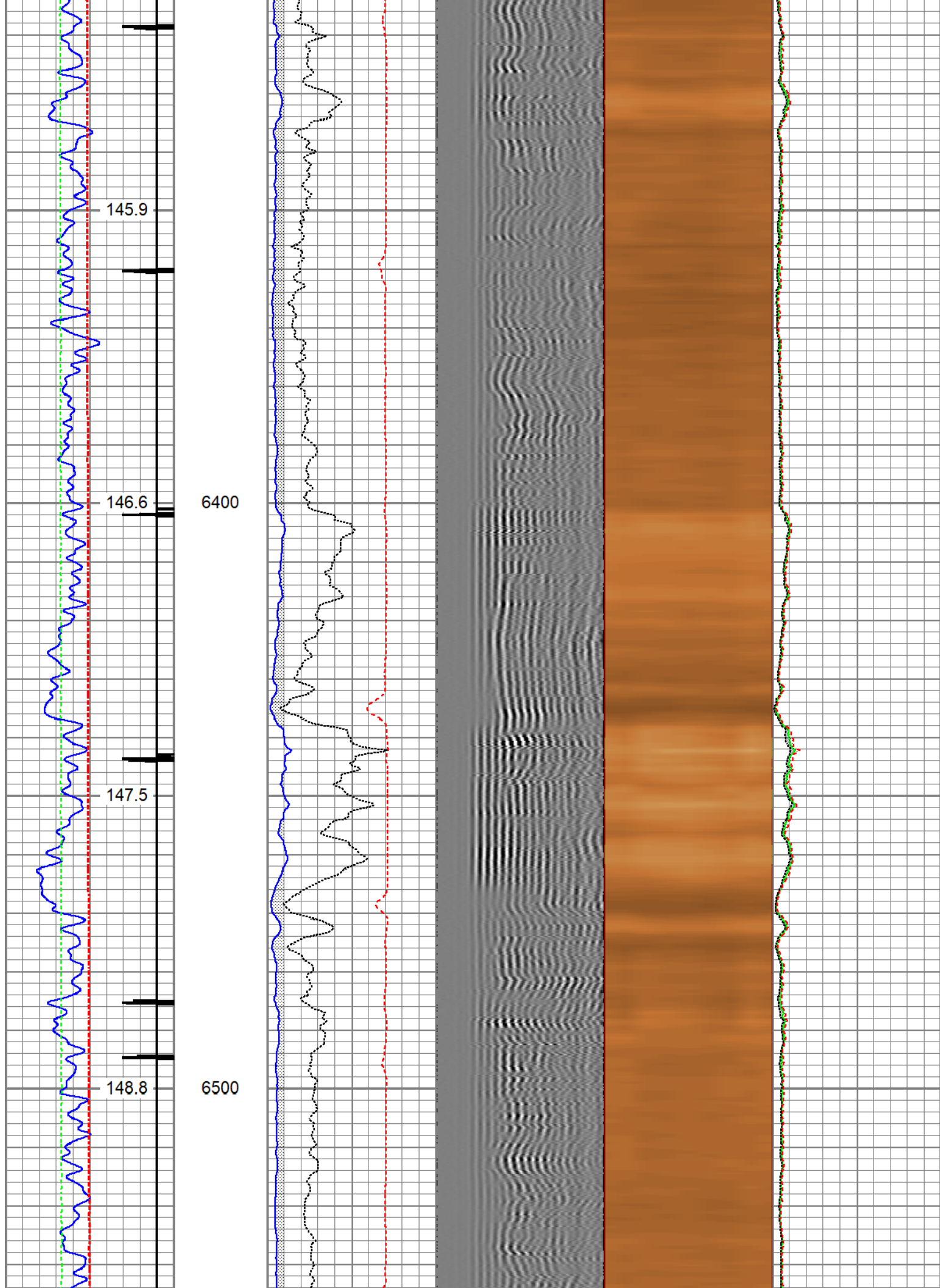


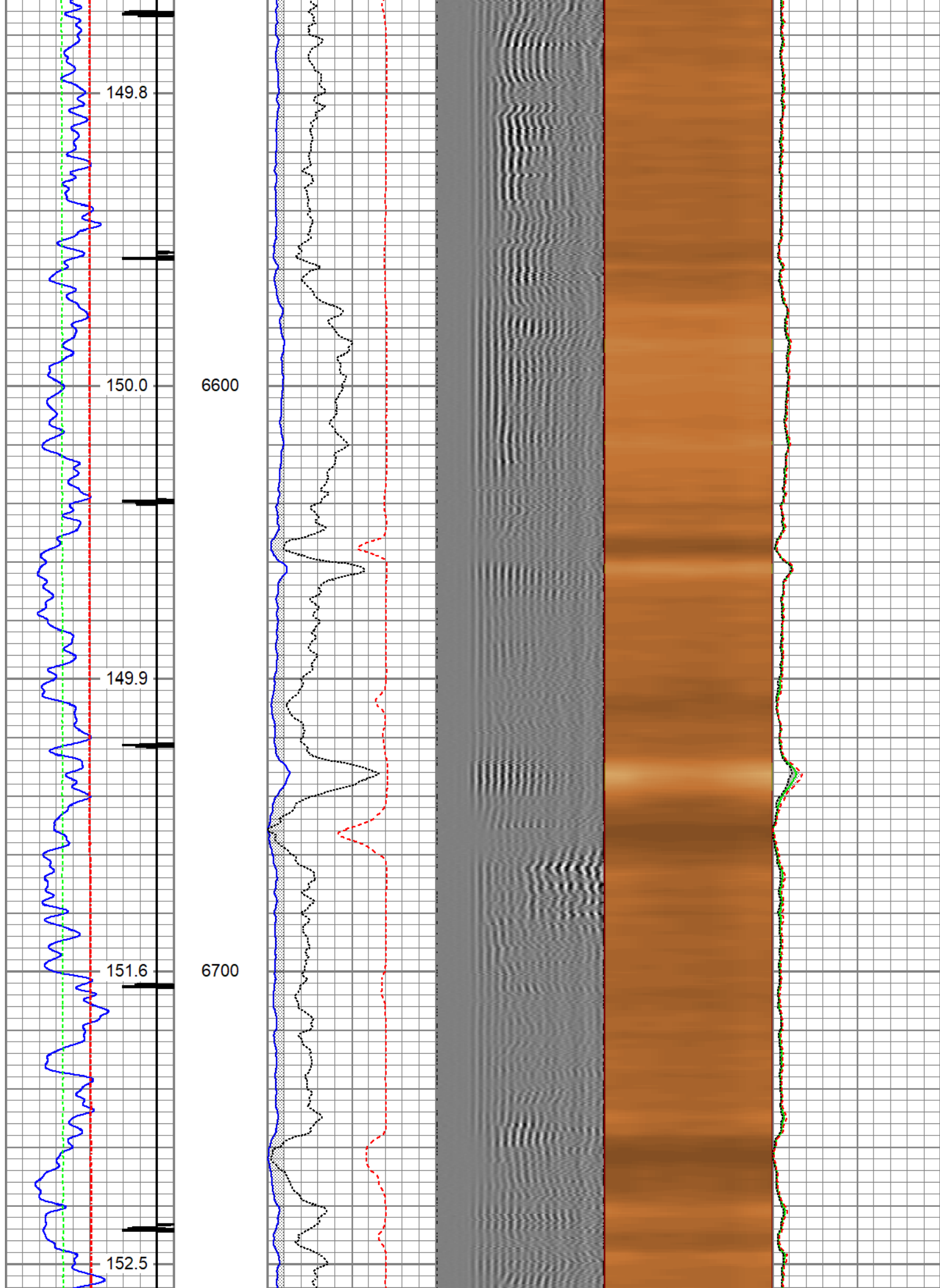




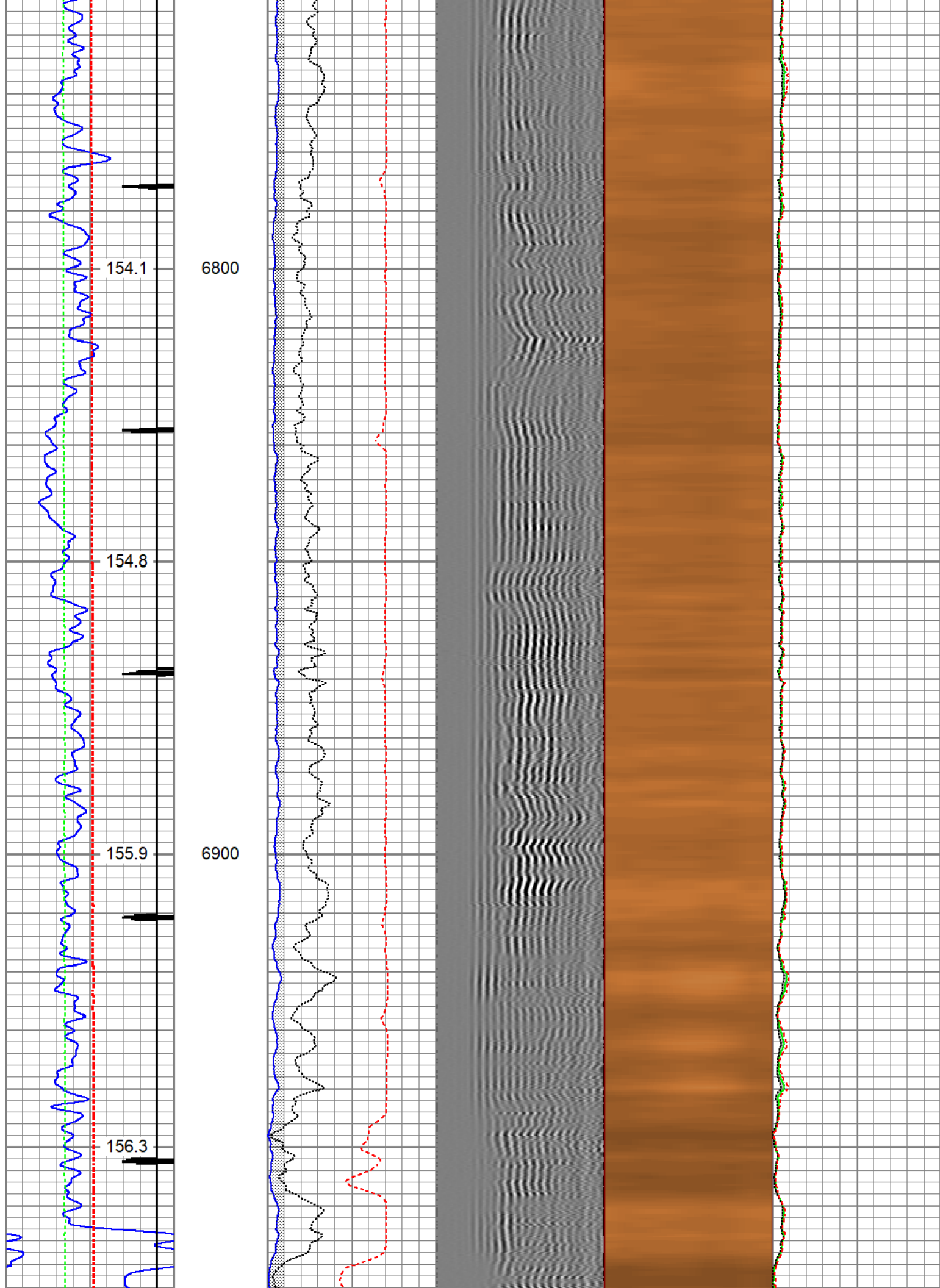


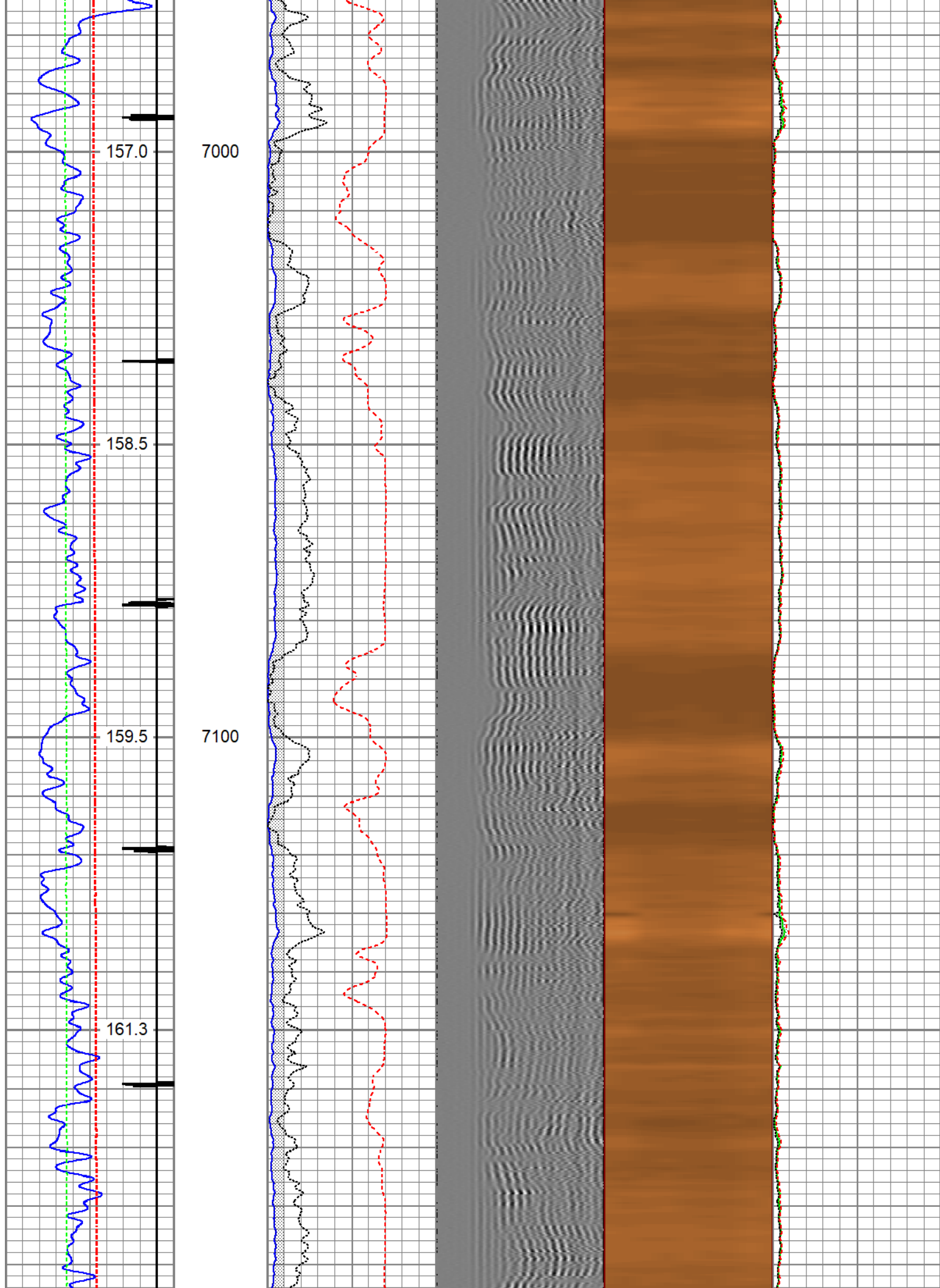


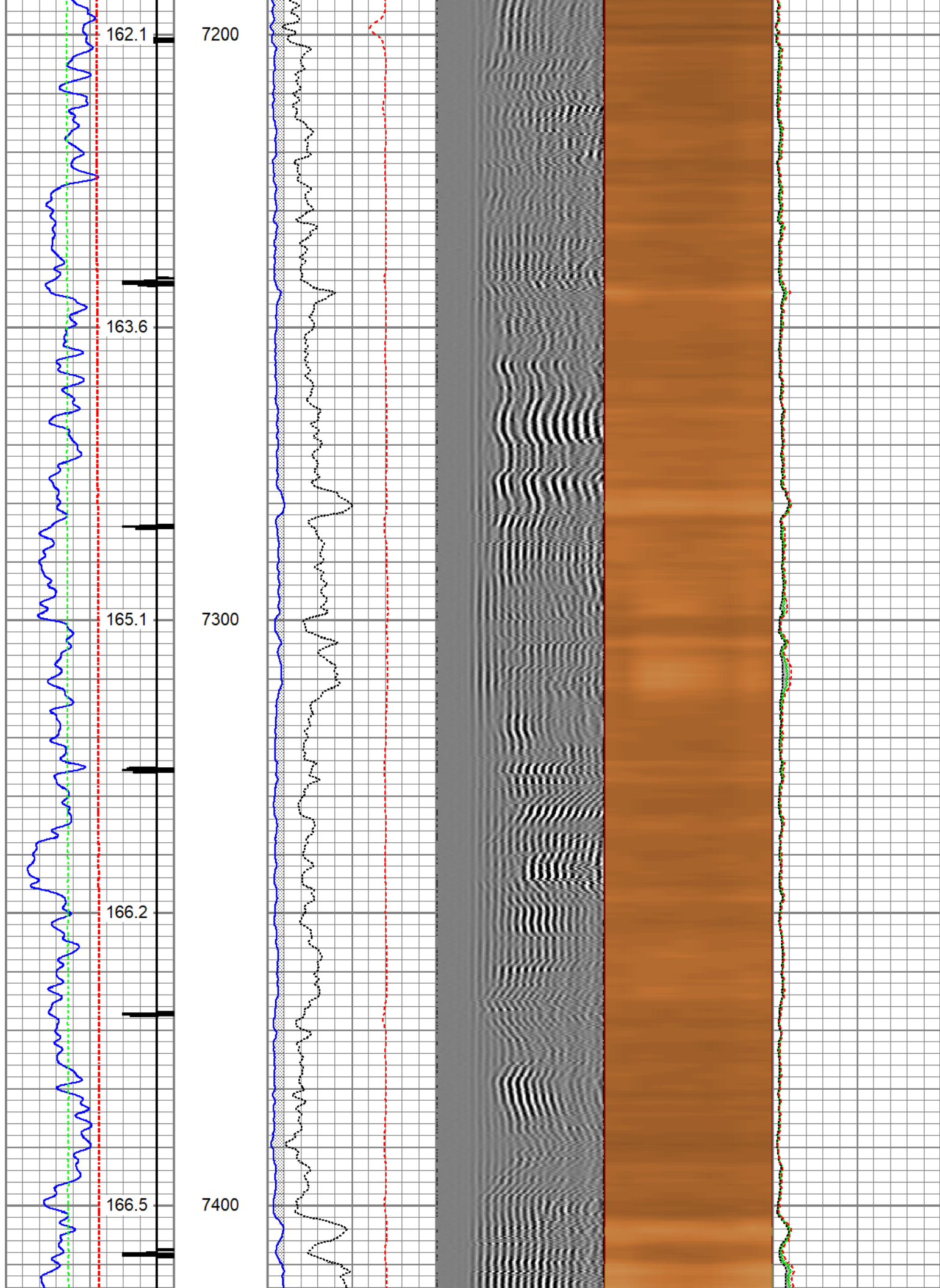




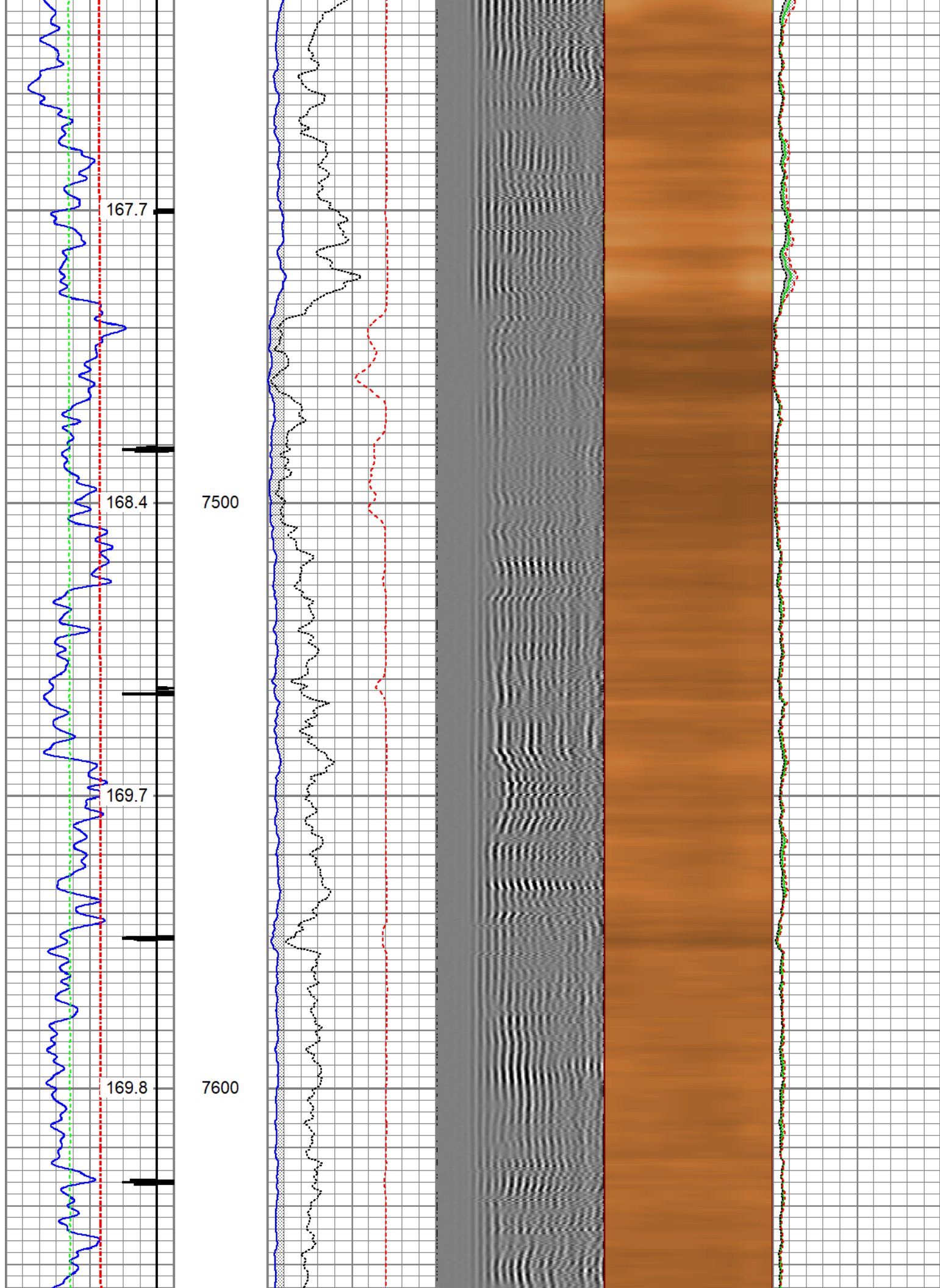


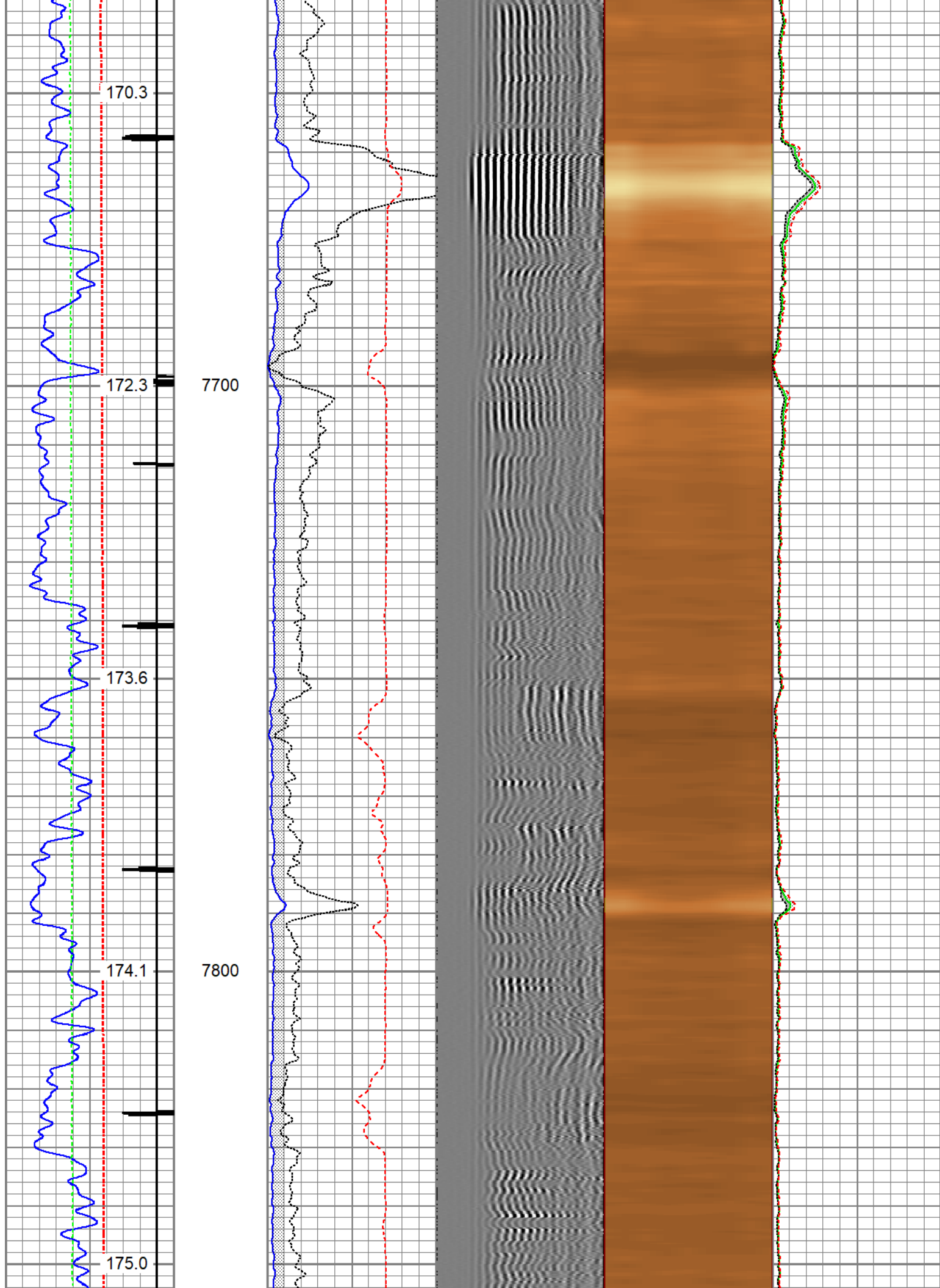


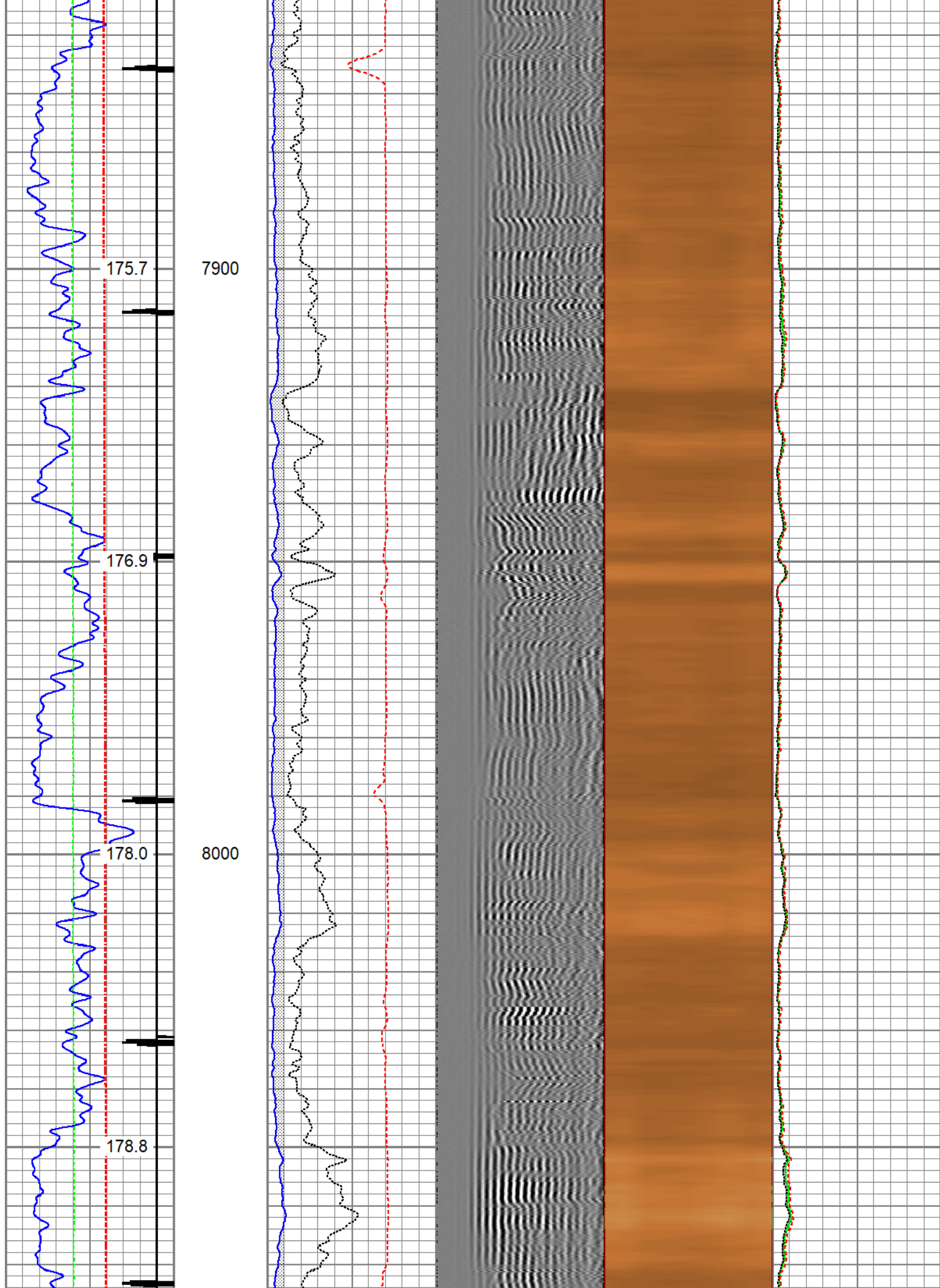




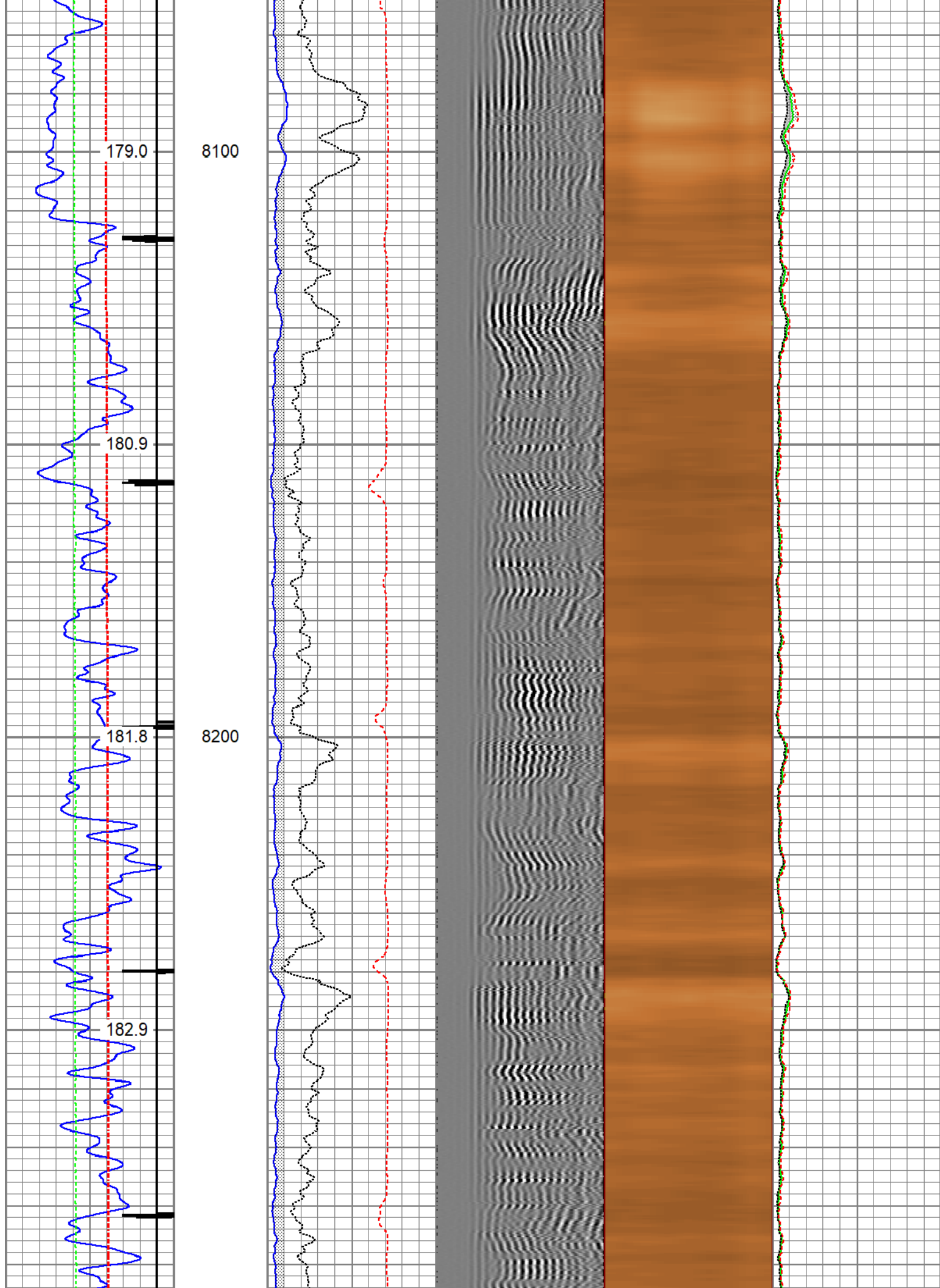


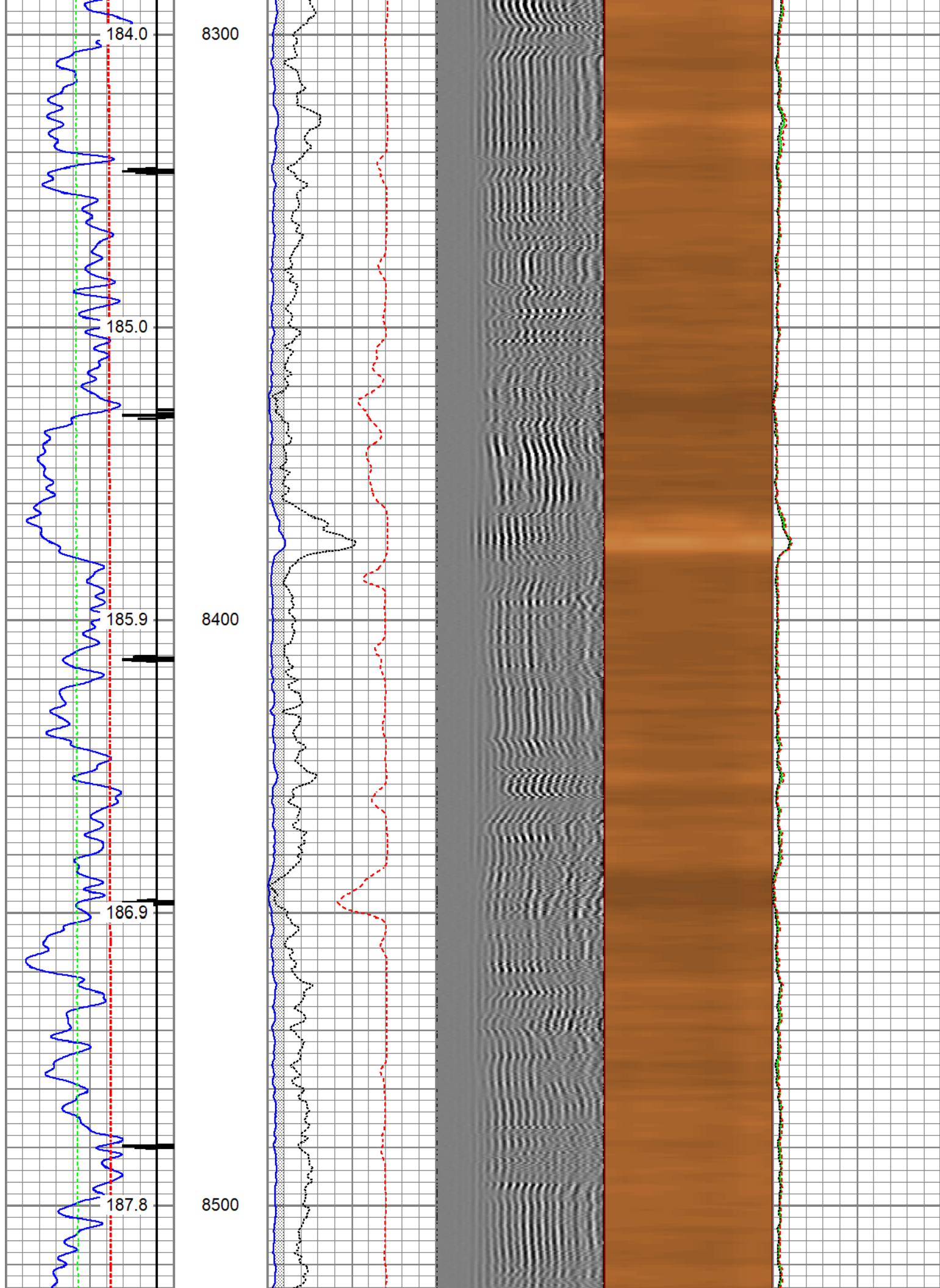


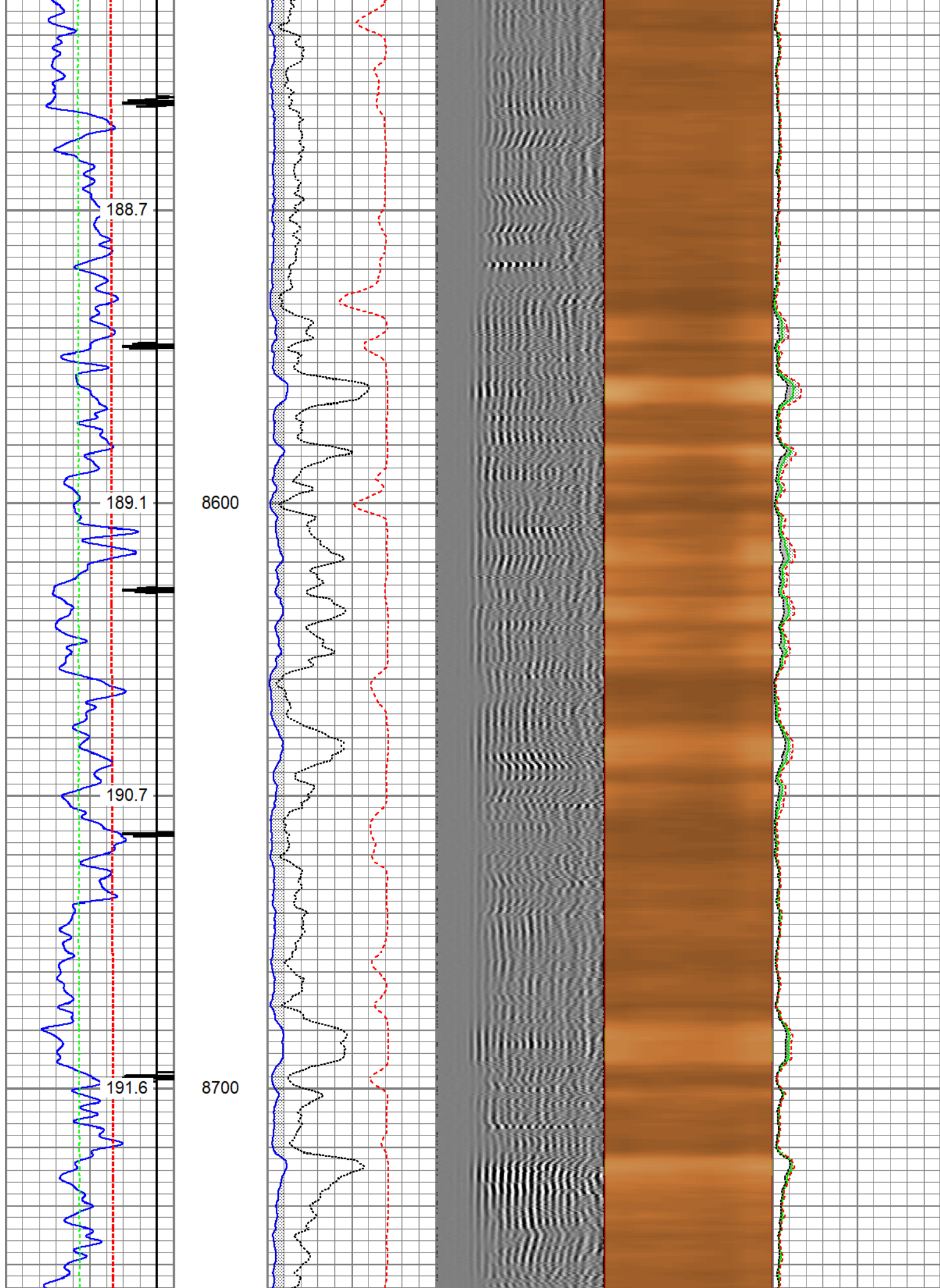




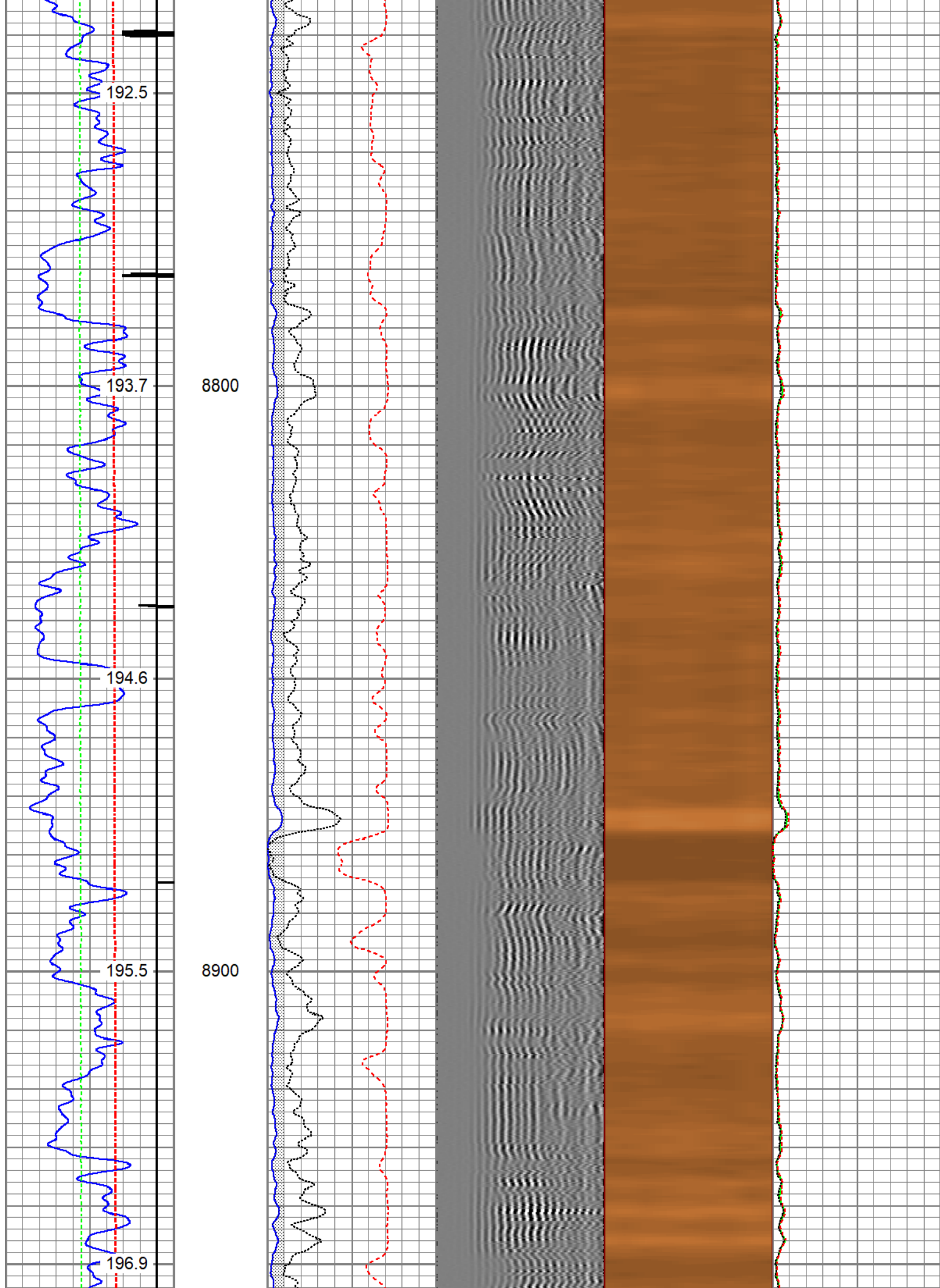


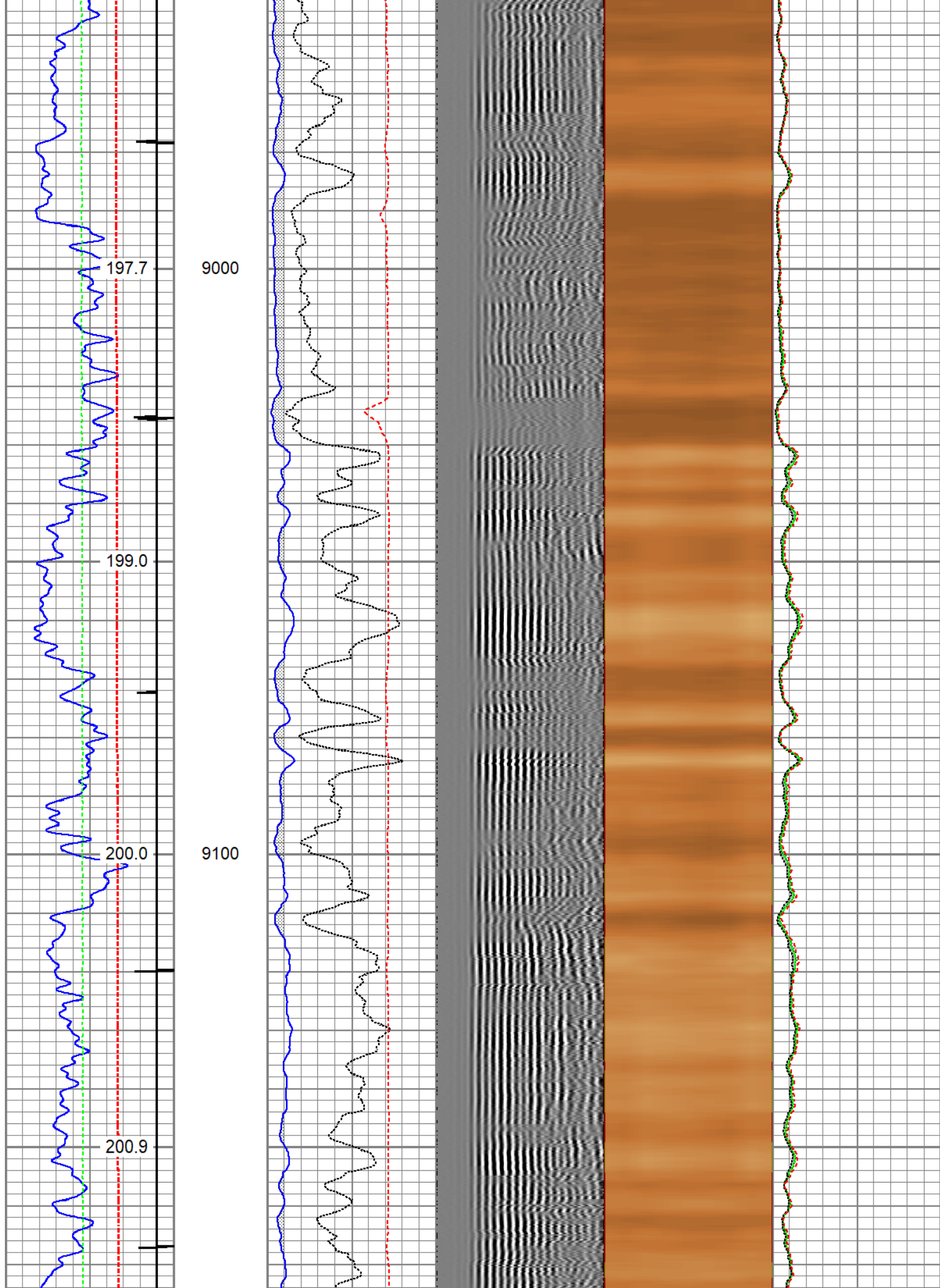


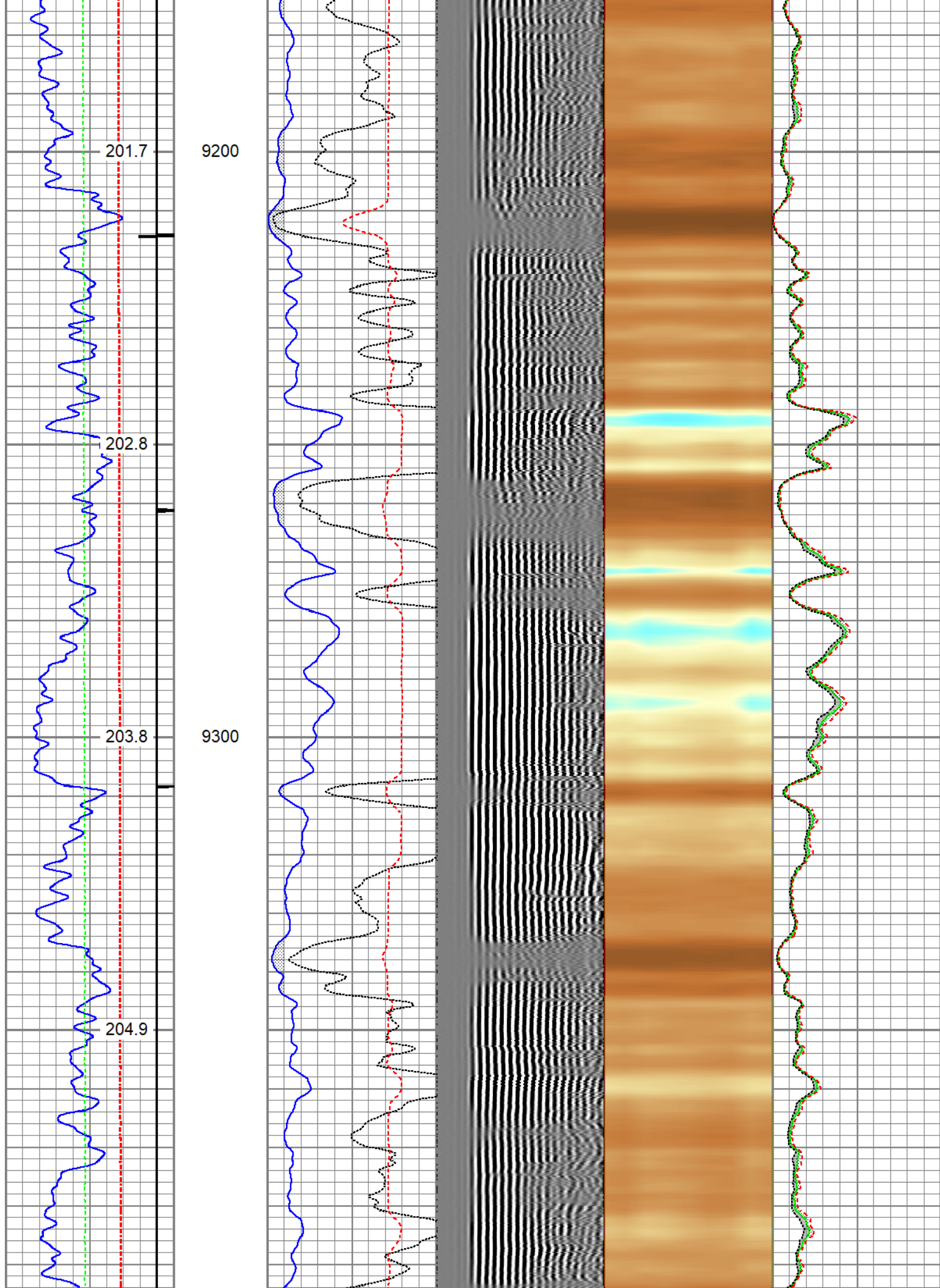




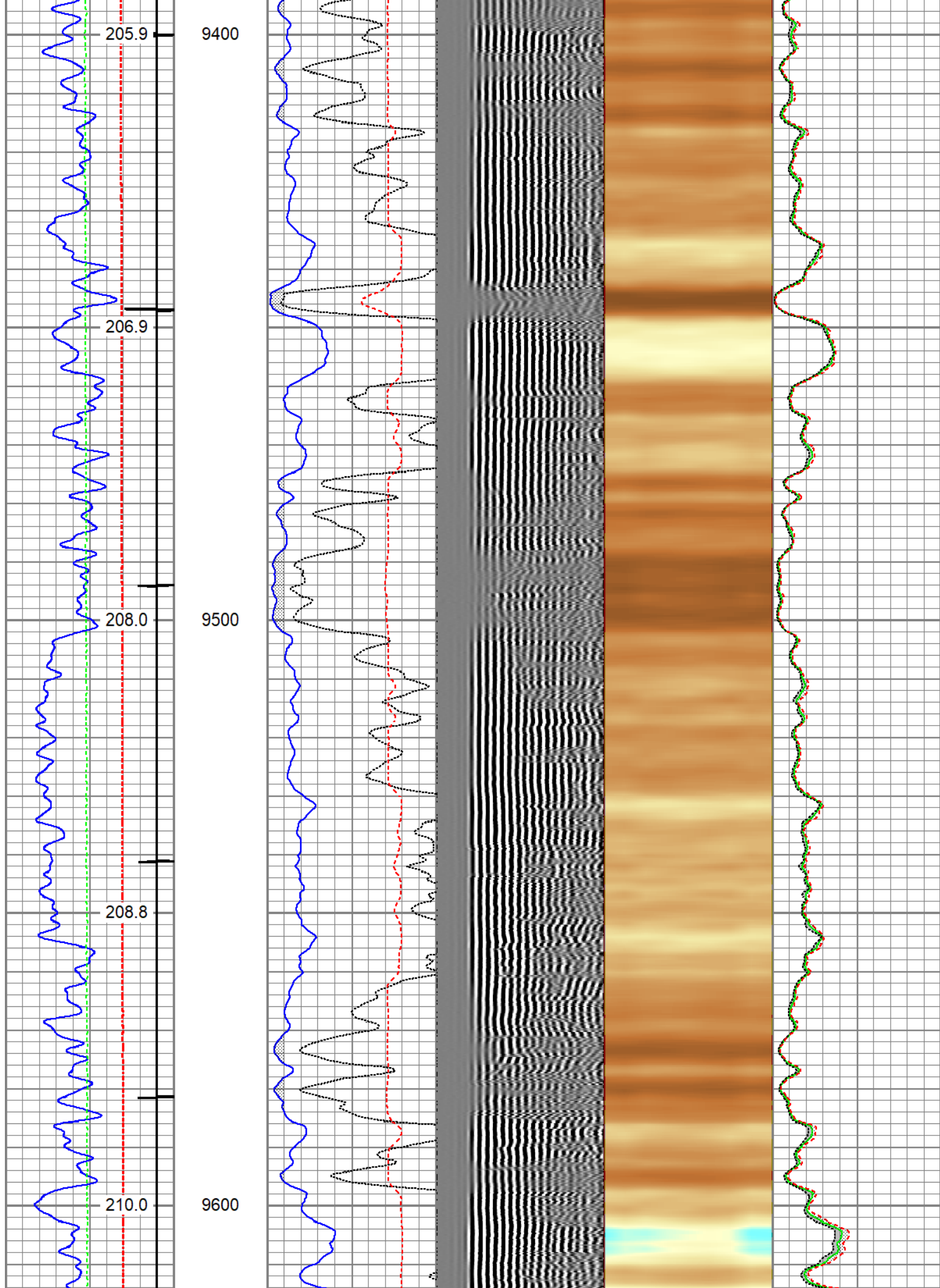


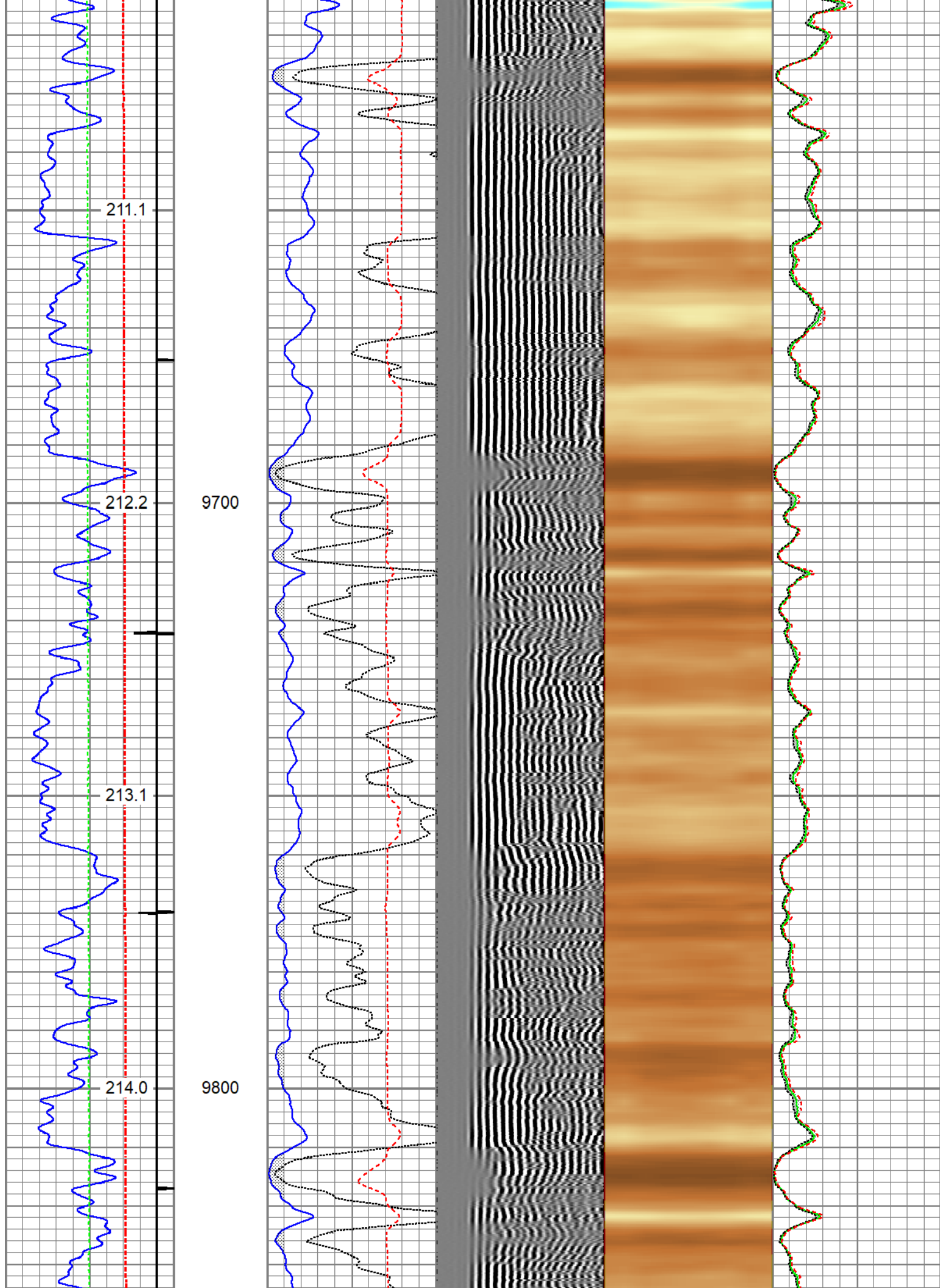


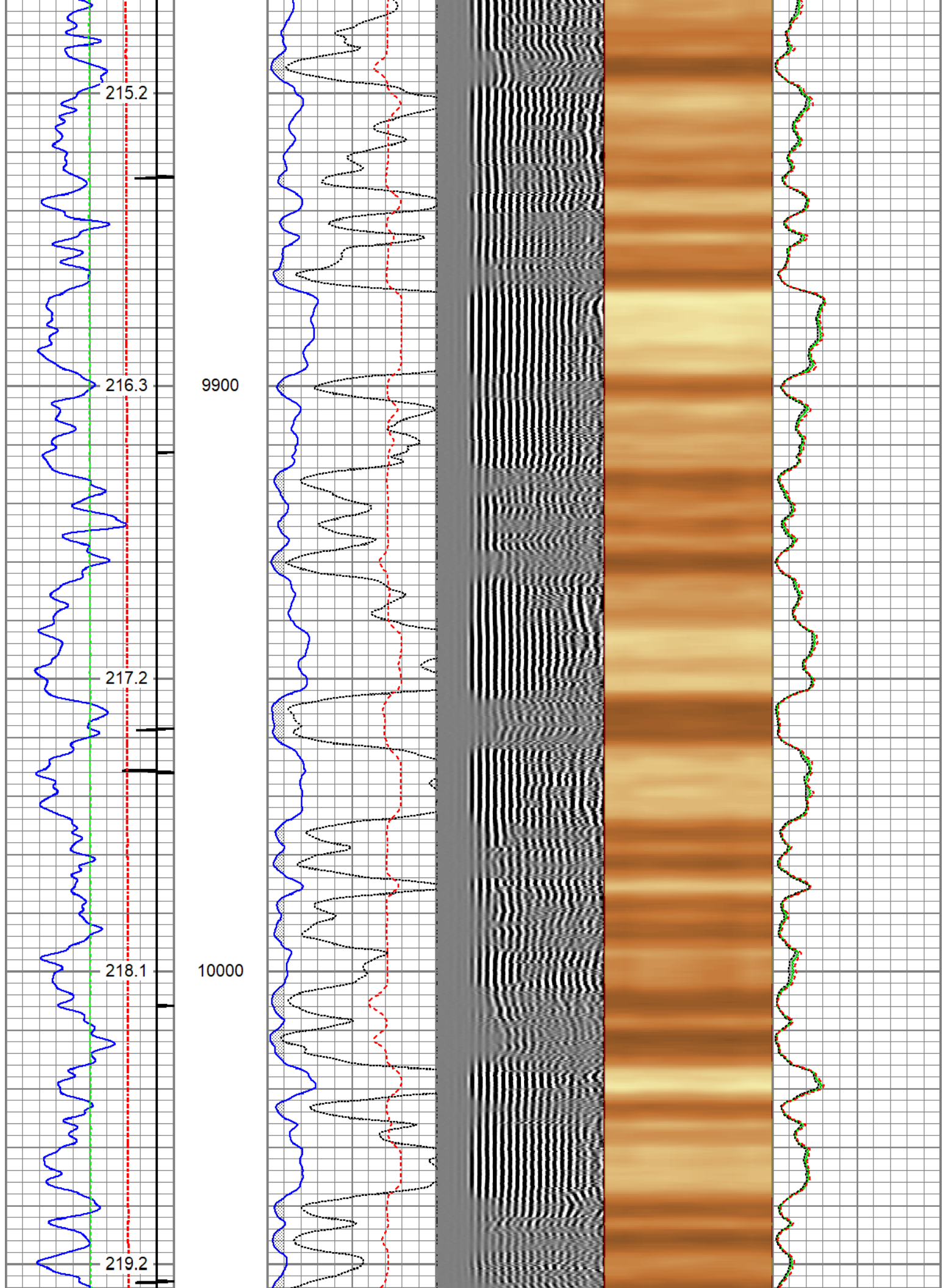




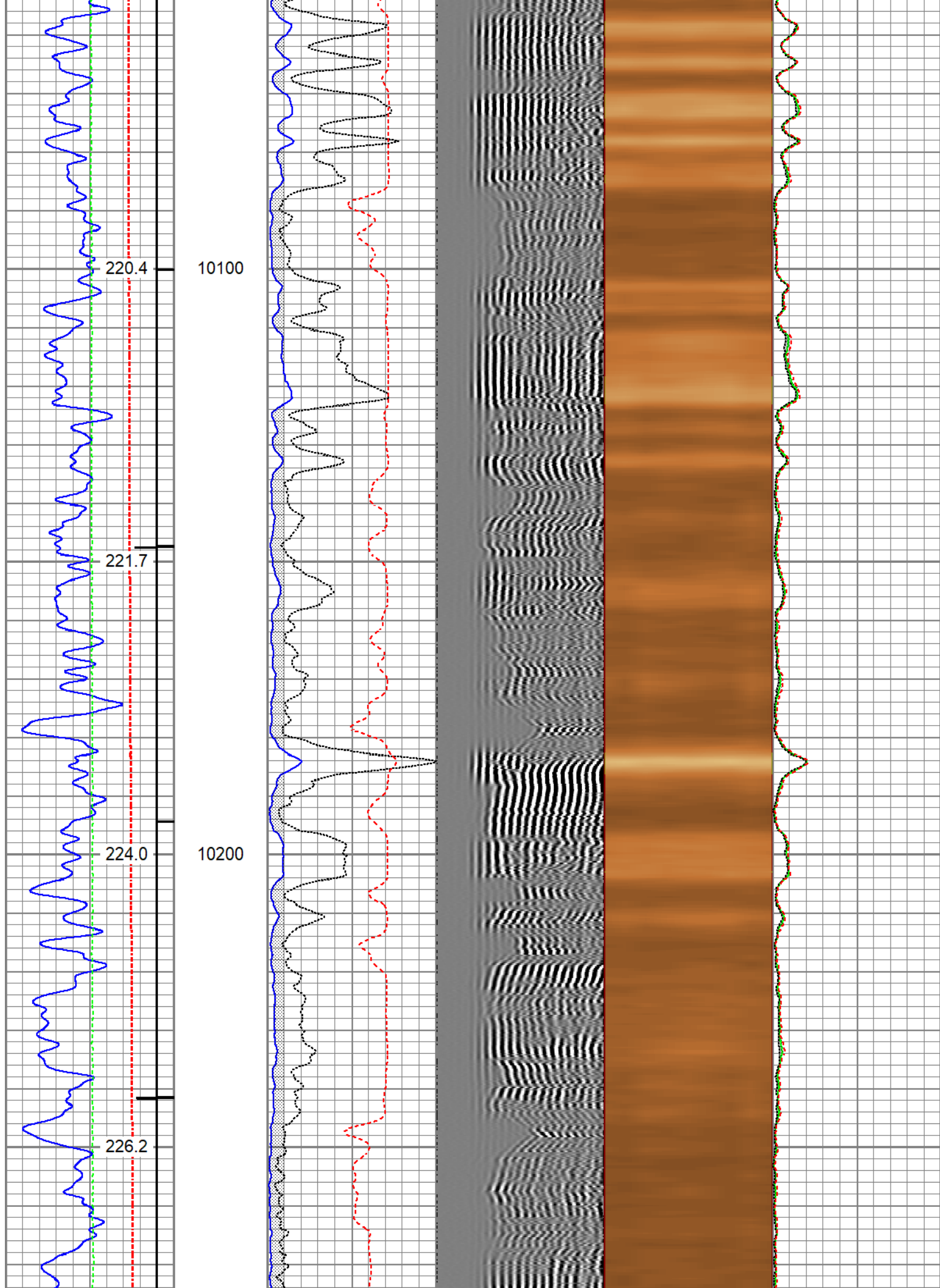


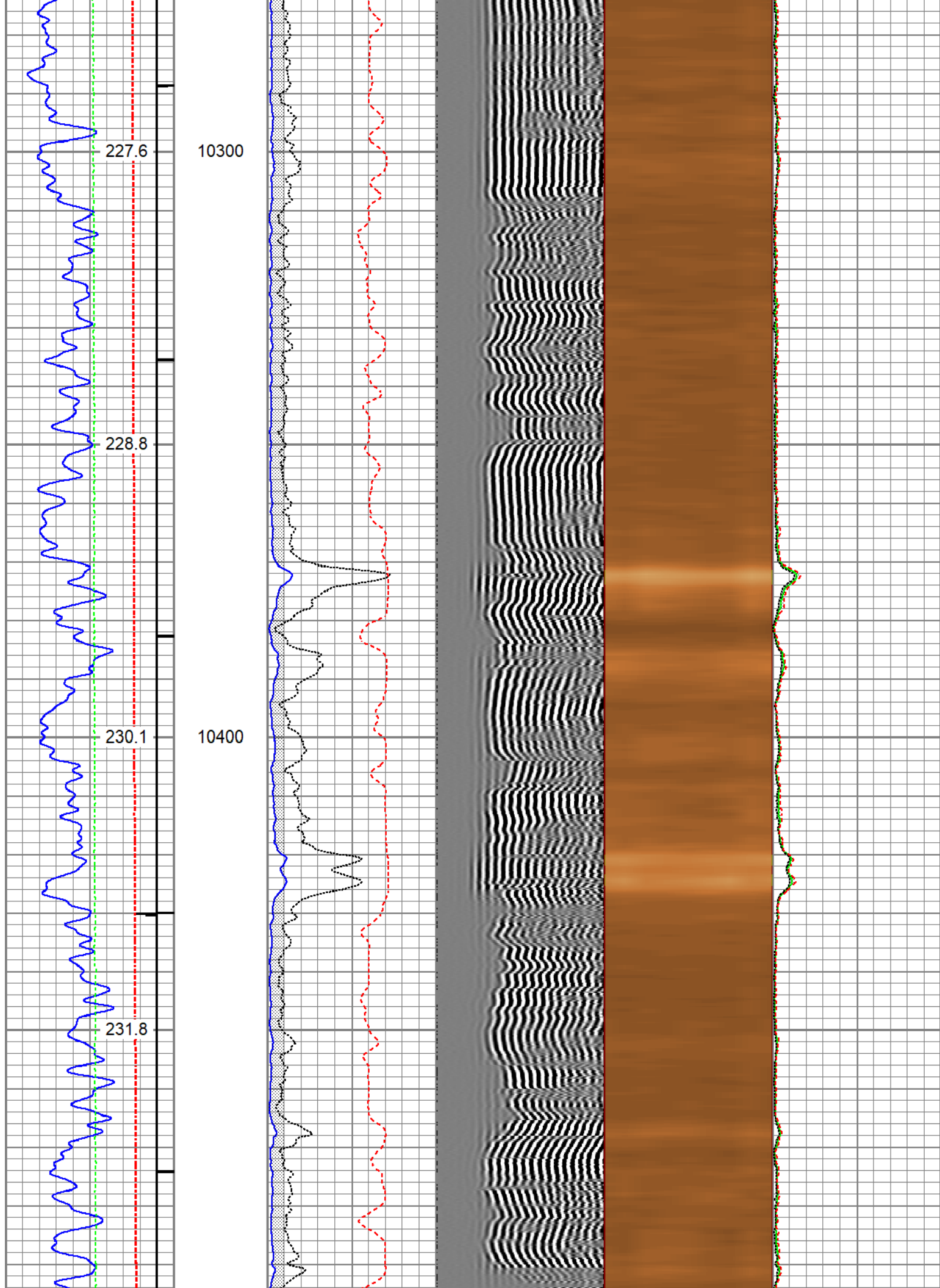


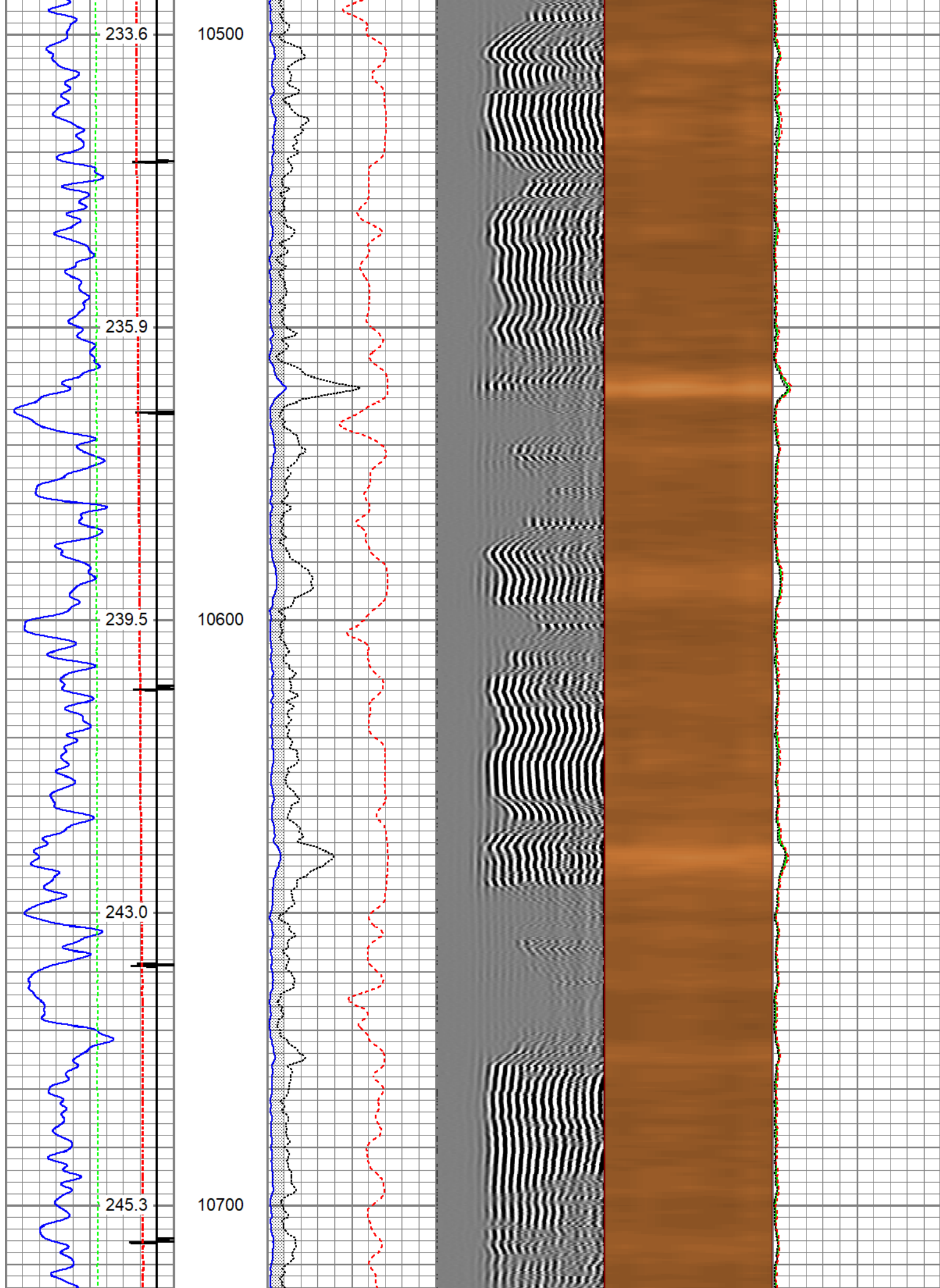




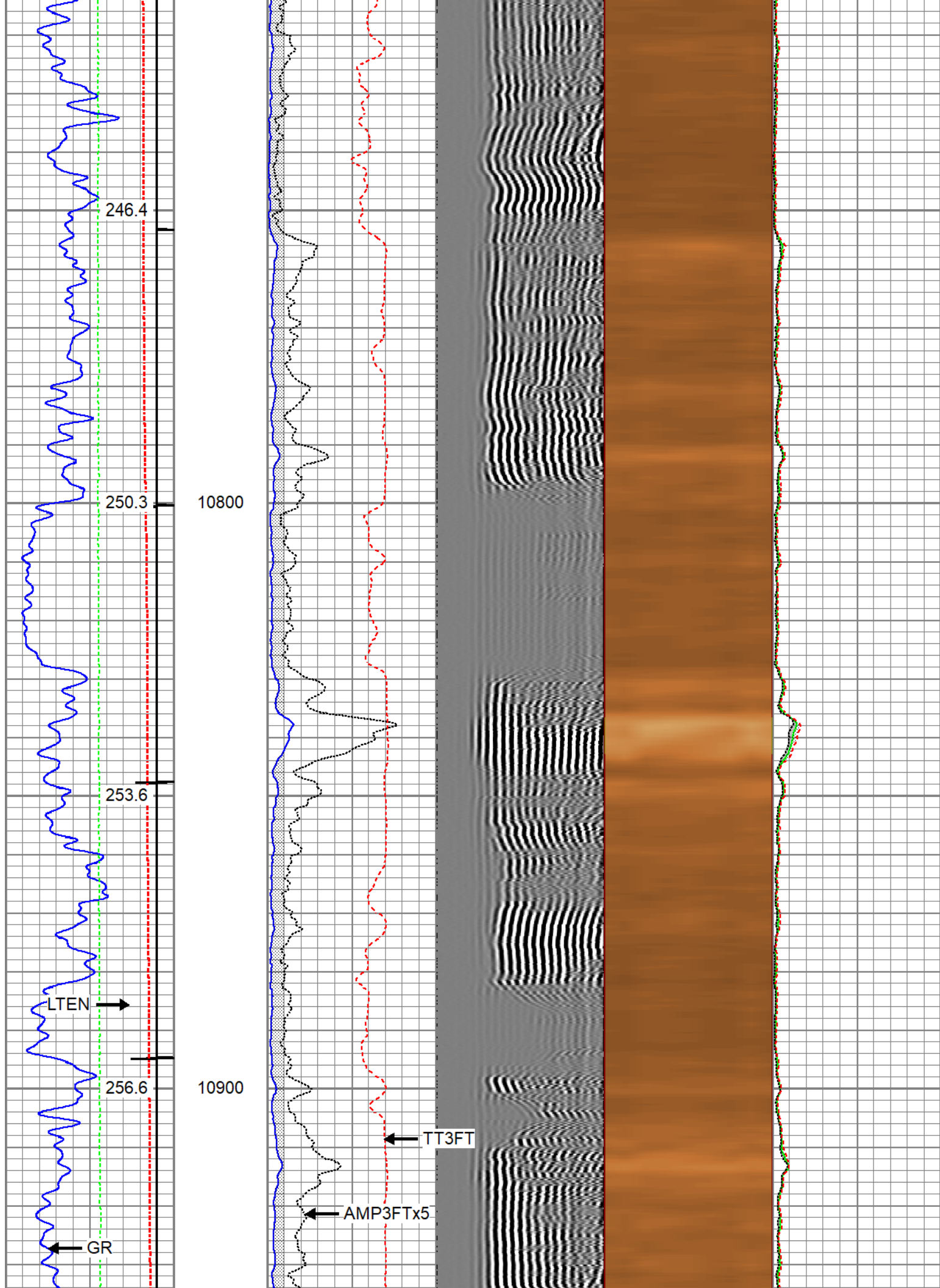


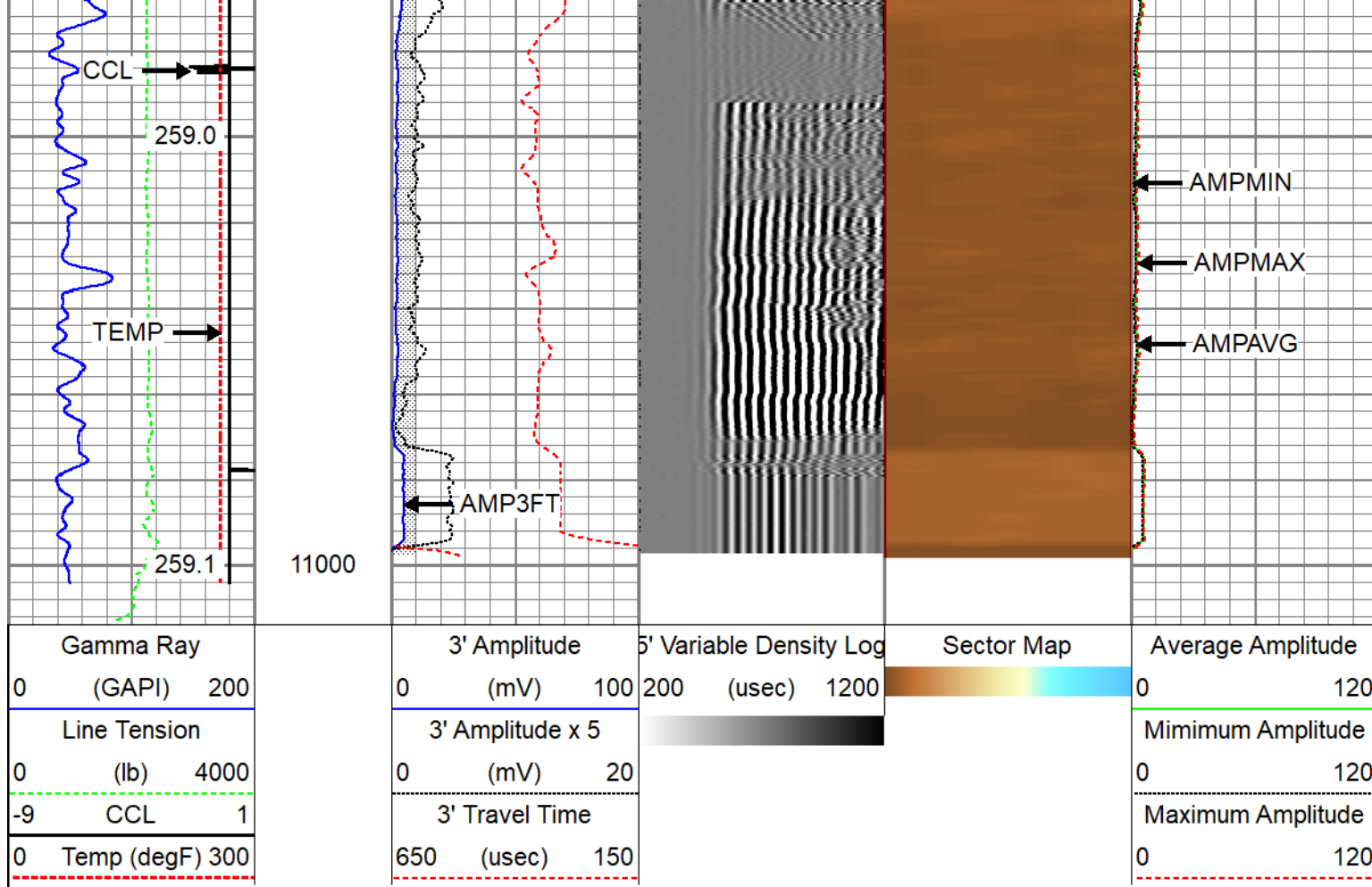












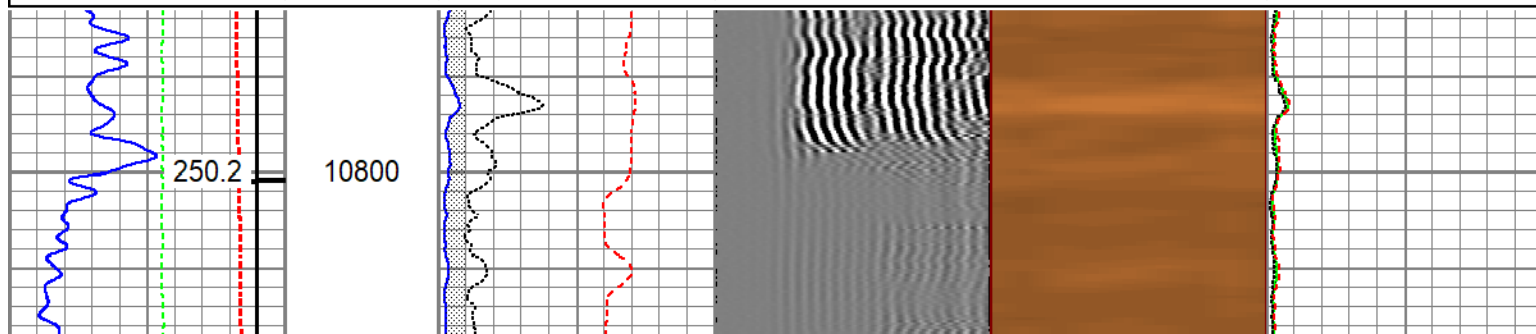


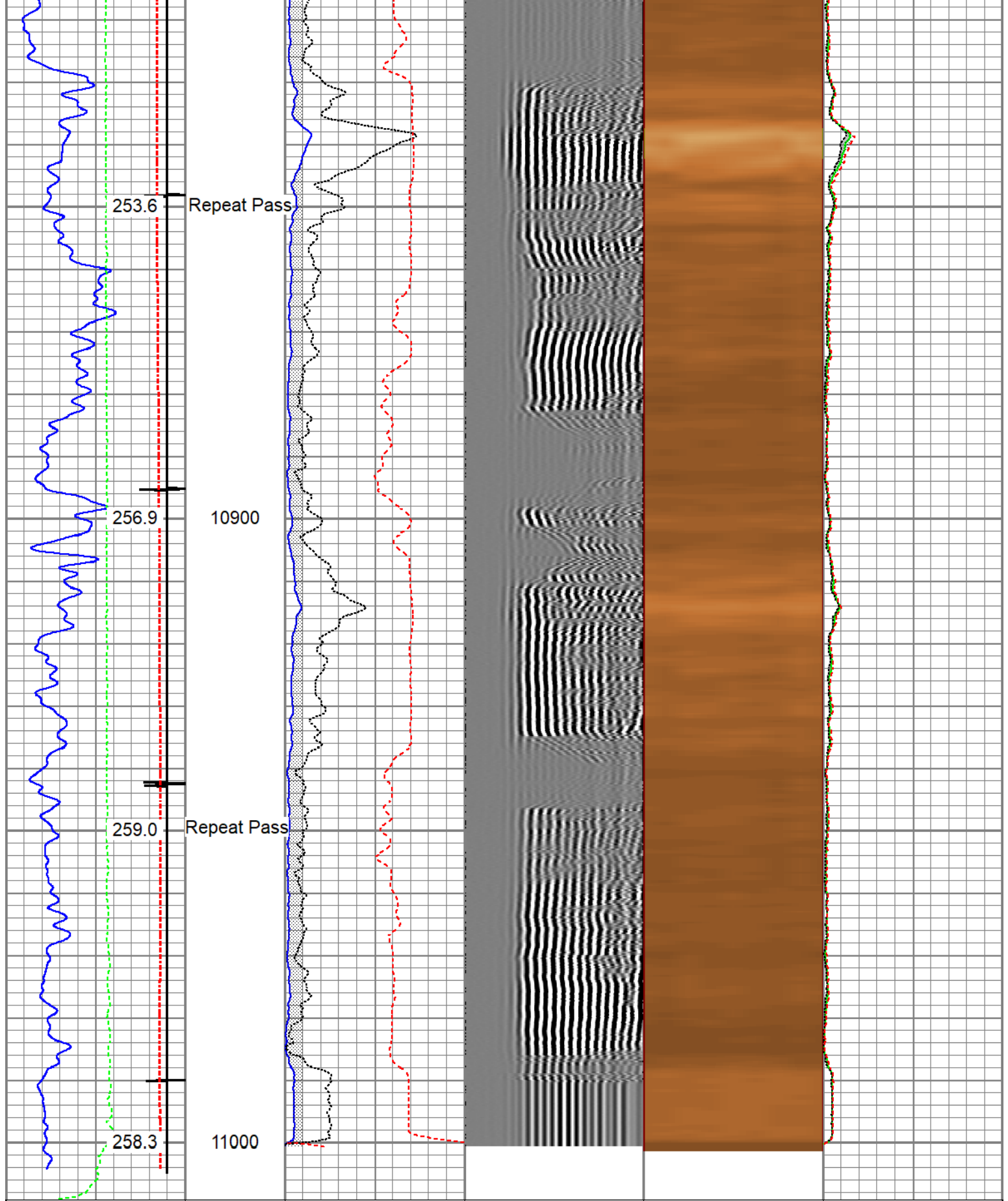
## Repeat Pass 5" = 100'

Database File  
Dataset Pathname  
Presentation Format  
Dataset Creation  
Charted by

tep\_wmc fed 331-20\_rcbl\_1-4-2023.db  
repeat  
twgrcbl  
Wed Jan 04 12:11:03 2023  
Depth in Feet scaled 1:240

Gamma Ray (GAPI)	3' Amplitude (mV)	5' Variable Density Log (usec)	Sector Map	Average Amplitude
0 200	0 100	200 1200		0 120
Line Tension (lb)	3' Amplitude x 5 (mV)			Minimum Amplitude
0 4000	0 20			0 120
-9 CCL	3' Travel Time (usec)			Maximum Amplitude
1 300	650 150			0 120





Gamma Ray (GAPI)	3' Amplitude (mV)	5' Variable Density Log (usec)	Sector Map	Average Amplitude
0 200	0 100	200 1200		0 120
Line Tension (lb)	3' Amplitude x 5 (mV)			Minimum Amplitude
0 4000	0 20			0 120
-9 CCL	3' Travel Time (usec)			Maximum Amplitude
1	650 150			0 120
Temp (degF)				
0 300				



Calibration Report		
Database File	tep_wmc fed 331-20_rcbl_1-4-2023.db	
Dataset Pathname	main	
Dataset Creation	Wed Jan 04 12:15:39 2023	

Gamma Ray Calibration Report
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Serial Number:	FW1311-93	
Tool Model:	GCT275-0000	
Performed:	Thu Dec 29 18:15:38 2022	
Calibrator Value:	168.0	GAPI
Background Reading:	69.0	cps
Calibrator Reading:	299.3	cps
Sensitivity:	0.7294	GAPI/cps

Segmented Cement Bond Log Calibration Report
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Serial Number:	FW1312-30	
Tool Model:	Probe275acc	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	278.924	ft

Master Calibration, performed Tue Jan 3 07:14:00 2023:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.004	0.511	0.000	81.196	147.744	-0.671
CAL	0.003	0.764				
5'	0.013	0.470	0.000	81.196	189.928	-2.321
SUM						
S1	0.005	0.516	0.000	100.000	185.992	-1.072
S2	0.007	0.547	0.000	100.000	179.809	-1.220
S3	0.004	0.492	0.000	100.000	179.337	-0.921
S4	0.005	0.532	0.000	100.000	175.506	-0.867
S5	0.004	0.528	0.000	100.000	172.552	-0.669
S6	0.005	0.528	0.000	100.000	172.189	-0.946
S7	0.006	0.551	0.000	100.000	176.780	-1.127
S8	0.004	0.486	0.000	100.000	186.883	-0.747

Internal Reference Calibration, performed (Not Performed):						
	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.003	0.764	1.000	0.000

Air Zero Calibration, performed Mon Jan 2 11:33:52 2023:						
	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.000		0.000		0.000	

5'	0.000	0.000	0.000
SUM			
S1	0.000	0.000	0.000
S2	0.000	0.000	0.000
S3	0.000	0.000	0.000
S4	0.000	0.000	0.000
S5	0.000	0.000	0.000
S6	0.000	0.000	0.000
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000

## Inclinometer Calibration Report



Performed: Thu Jul 28 15:46:49 2022

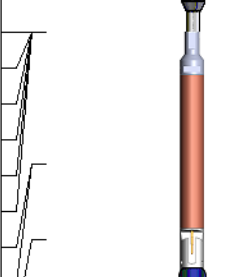
Low Read. High Read. Low Ref. High Ref.

X Accelerometer	-931.00	904.00	-1.00	1.00	gee
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Y Accelerometer	-899.00	884.00	-1.00	1.00	gee
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Z Accelerometer	1.47	886.18	0.00	1.00	gee
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Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GCT_FMWR	13.85		SO BS CENT-2750-4500 Slip Over 2-3/4" I.D. for 4-1/2" O.D. Casing Bow Spring Centralizer	1.33	3.25	10.00
mSec_Count	13.85					
RBT_Status	13.85					
Error_Ct	13.85					
WVFS8	9.35		RBT8acc-Probe275acc (FW1312-30) 2.75" Radial Corrosion with accelerometer	8.75	2.75	110.00
WVFS7	9.35					
WVFS6	9.35					
WVFS5	9.35					
WVFS4	9.35					
WVFS3	9.35					
WVFS2	9.35					
WVFS1	9.35					
WVF3FT	9.35					
WVF5FT	8.35					

Tool Joint	Tool Joint Length (ft)	Tool Joint Weight (lb)	Tool Joint O.D. (in)	Tool Joint ID (in)	Tool Joint Weight (lb)	Tool Joint O.D. (in)	Tool Joint ID (in)
RBT_ACCZ	5.10						
RBT_ACCY	5.10						
RBT_ACCX	5.10						
GCT_HV	5.10						
WVFSYNC	5.10						
WVFCAL	5.10						
CCL\$2	4.14						
CCL\$1	4.14						
GCT_Temp	3.59						
GR	2.72						
GCT_IntTemp	2.00						
				SO BS CENT-2750-4500 Slip Over 2-3/4" I.D. for 4-1/2" O.D. Casing Bow Spring Centralizer GC-GCT275-0000 (FW1311-93) Probe 2.75" Gamma Ray - CCL w/ Temp	1.33	3.25	10.00
				Plug-FA108-0000 1.38" Bull Plug	0.33	1.38	1.00
Dataset: tep_wmc fed 331-20_rcbl_1-4-2023.db: field/well/run1/main Total length: 13.85 ft Total weight: 186.00 lb O.D.: 3.25 in							