



Radial Cement Bond  
Gamma Ray  
Casing Collar Log

Company		TEP Rocky Mountain LLC	
Well		Federal WMC 532-20	
Field		Rulison	
County		Garfield	
State		Colorado	
Location:		API # : 05-045-24489	
Other Services			
Permanent Datum		Ground Level	
Log Measured From		Kelly Bushing	
Drilling Measured From		Kelly Bushing	
SEC 17 TWP 7S RGE 93W		Elevation 8869	
Elevation			
K.B. 8899 FT			
D.F. 8898 FT			
G.L. 8869 FT			
Date		02-JAN-2023	
Run Number		One	
Depth Driller		11477 FT	
Depth Logger		11136 FT	
Bottom Logged Interval		11129 FT	
Top Log Interval		Surface	
Open Hole Size		8.75"	
Type Fluid		Water	
Density / Viscosity		8.34 Lb/Gal	
Max. Recorded Temp.		248 °F	
Estimated Cement Top		See Log	
Time Well Ready		ROA	
Time Logger on Bottom		15:30	
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	
Surface String		Wgt/Ft	
Prot. String		36	
Production String		Top	
Liner		Bottom	
4-1-2"		11.6	
Surface		11250 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 is correlated to 30' K.B.  
Marker joint logged @ 7029 FT - 7039 FT  
Log ran with 0 PSI at surface

Thank you for choosing The Wireline Group!



Main Pass 5" = 100'

Database Filefed wmc 532-20 rcbl 01-02-2023\tep\_wmc fed 532-20\_rcbl\_1-2-2023.db

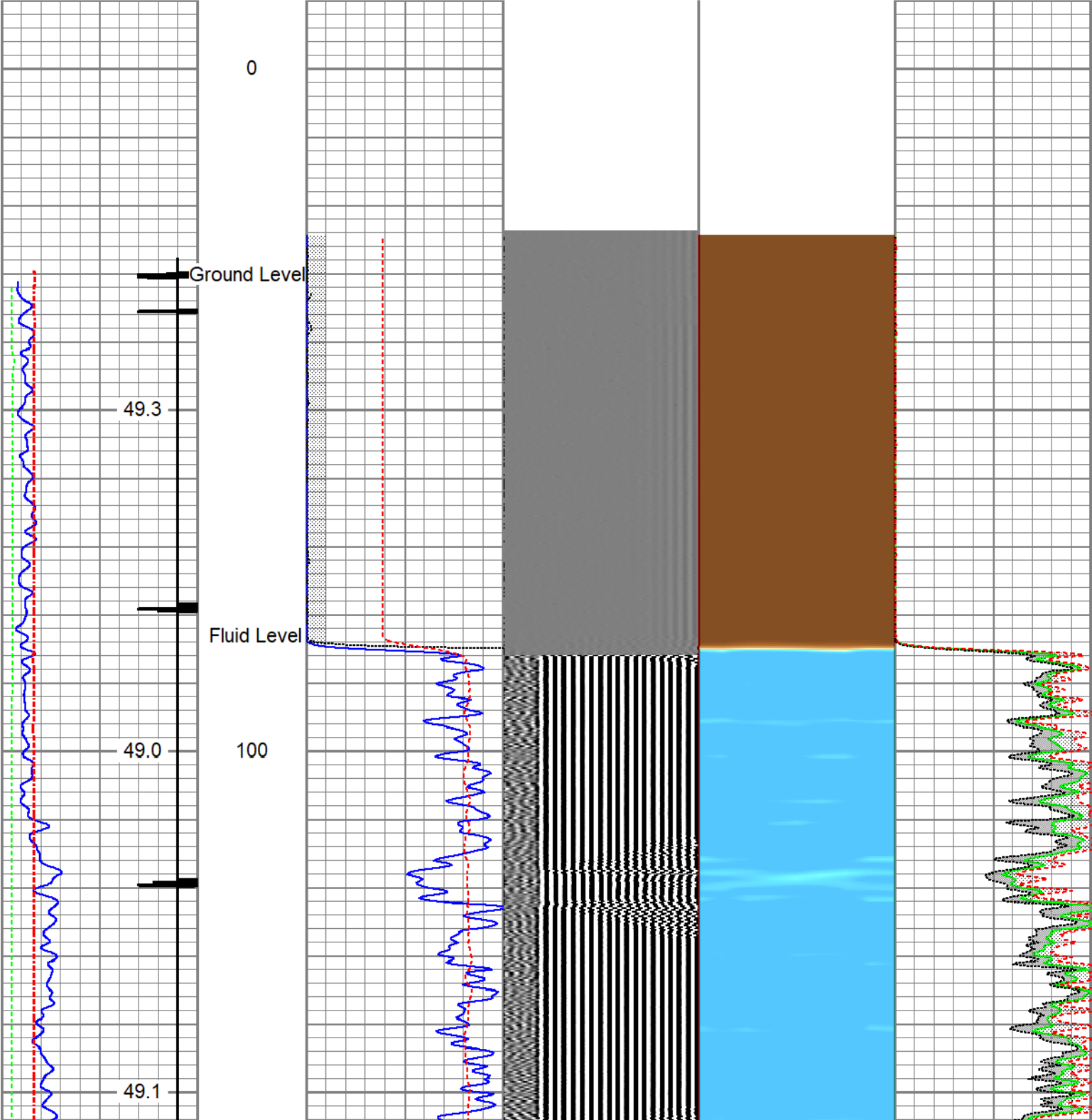
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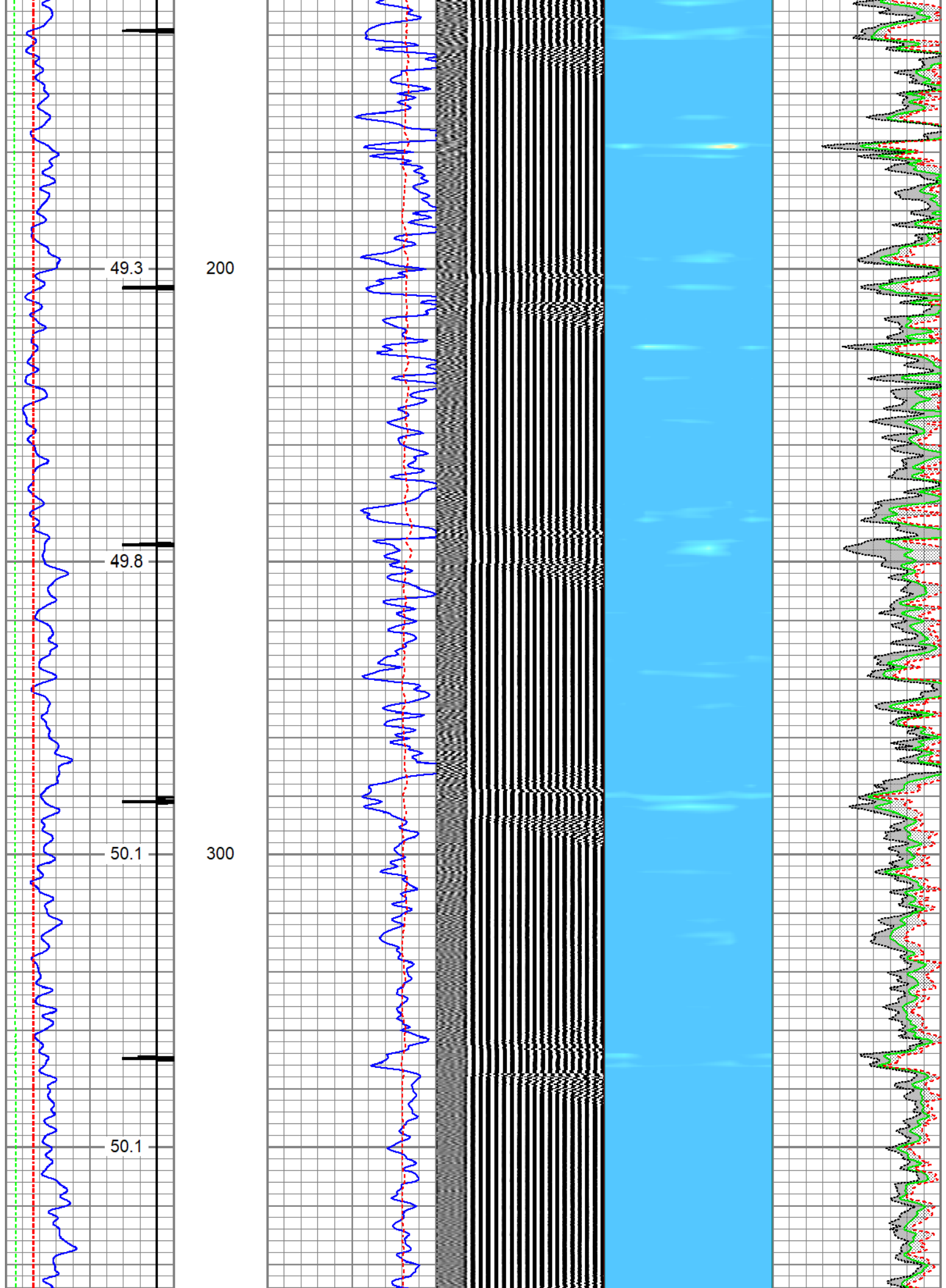
Presentation Formattwgrcbl

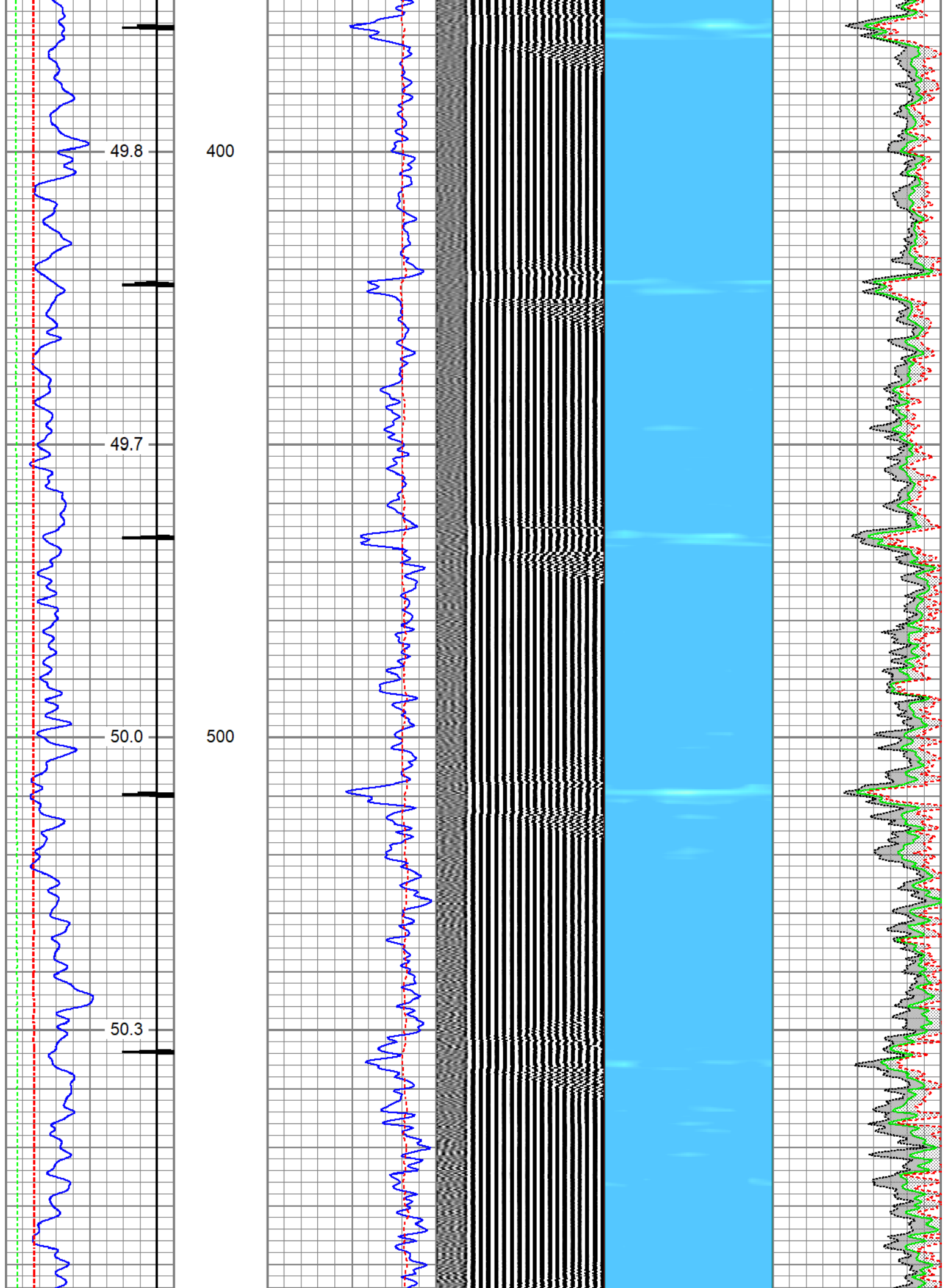
Dataset CreationTue Jan 03 11:18:22 2023

Charted byDepth in Feet scaled 1:240

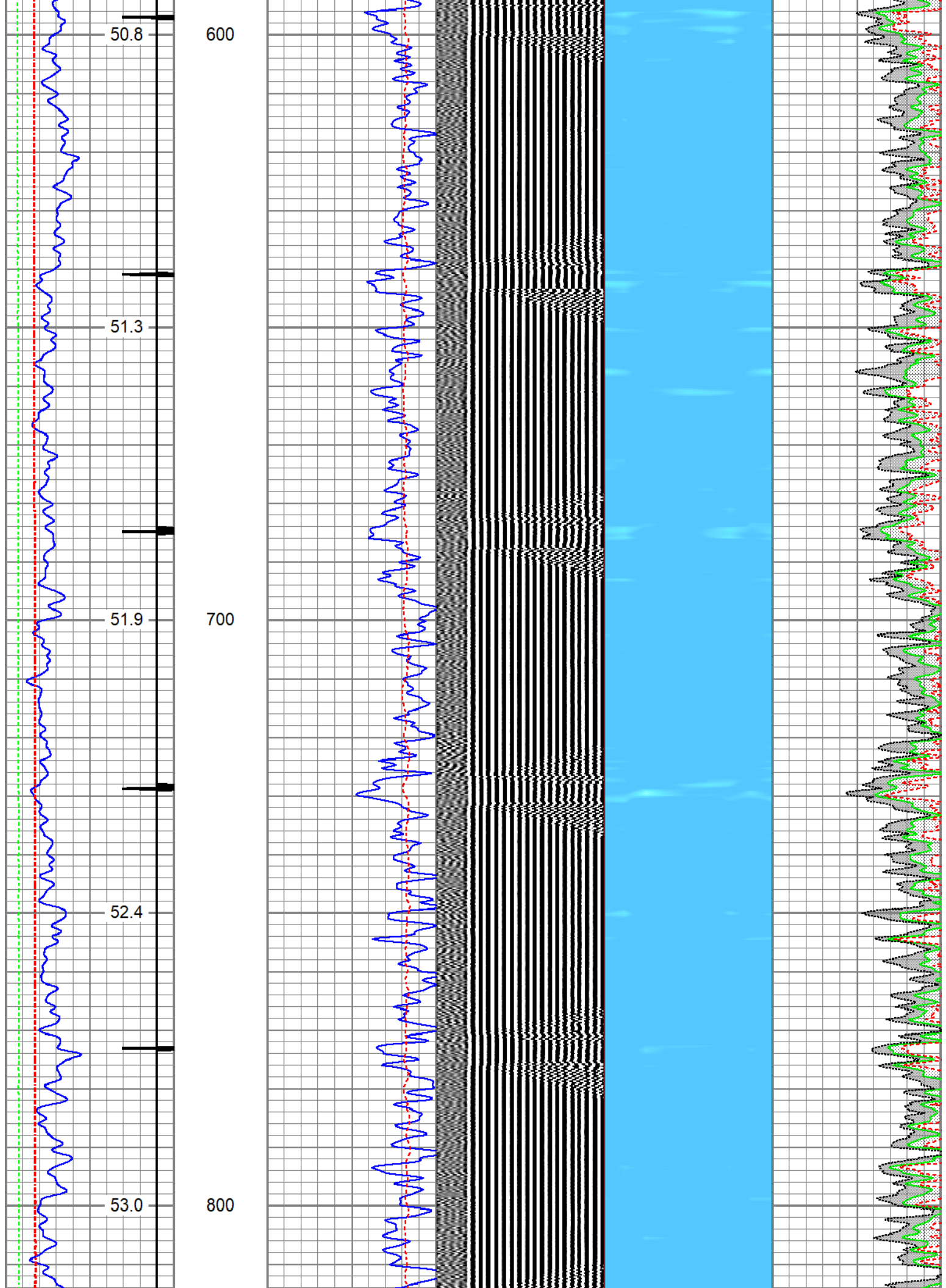
Gamma Ray		3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 200		0 (mV) 100	200 (usec) 1200		0 120
Line Tension		3' Amplitude x 5			Minimum Amplitude
0 (lb) 4000		0 (mV) 20			0 120
-9 CCL 1		3' Travel Time			Maximum Amplitude
0 Temp (degF) 300		650 (usec) 150			0 120

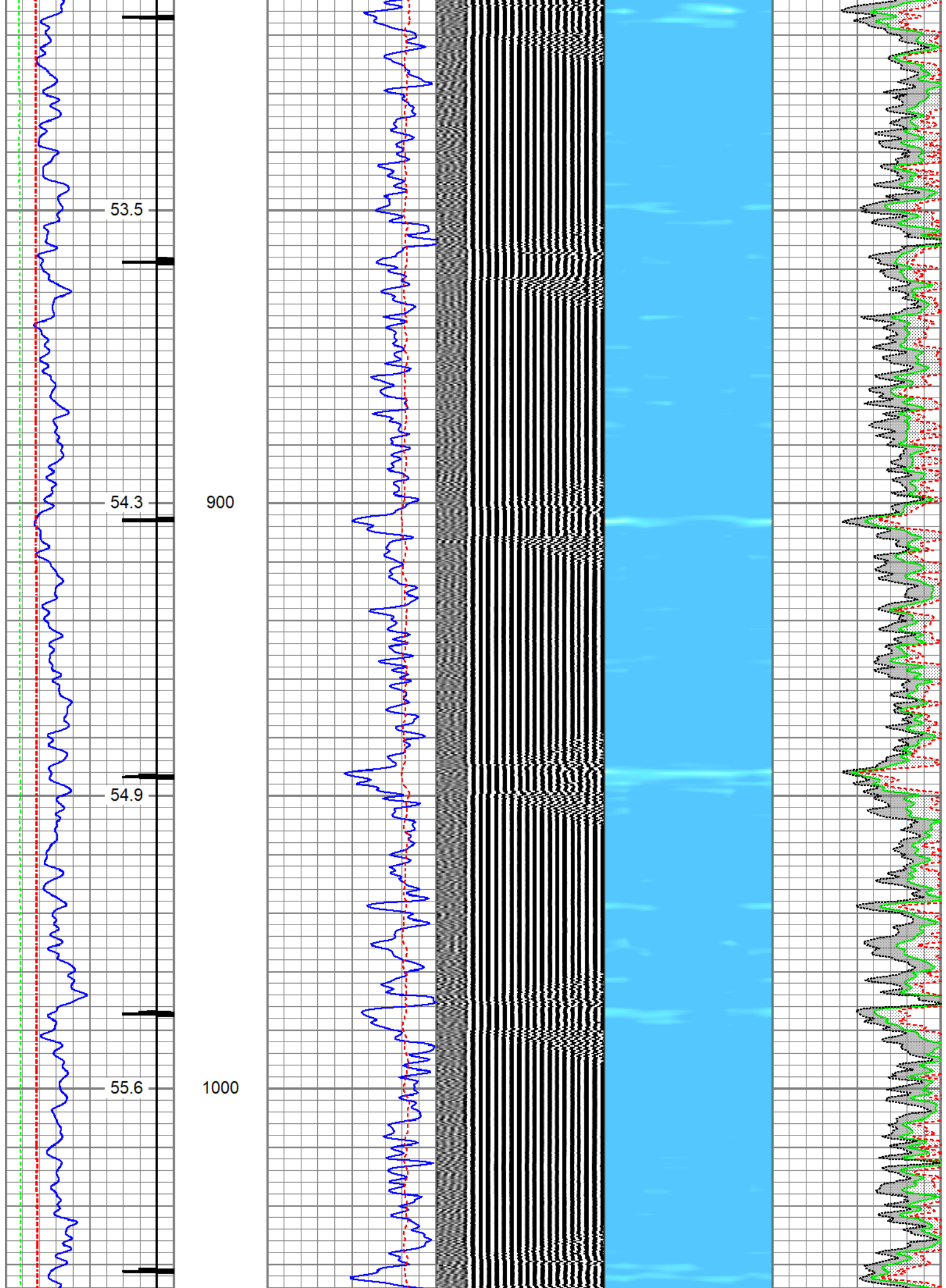


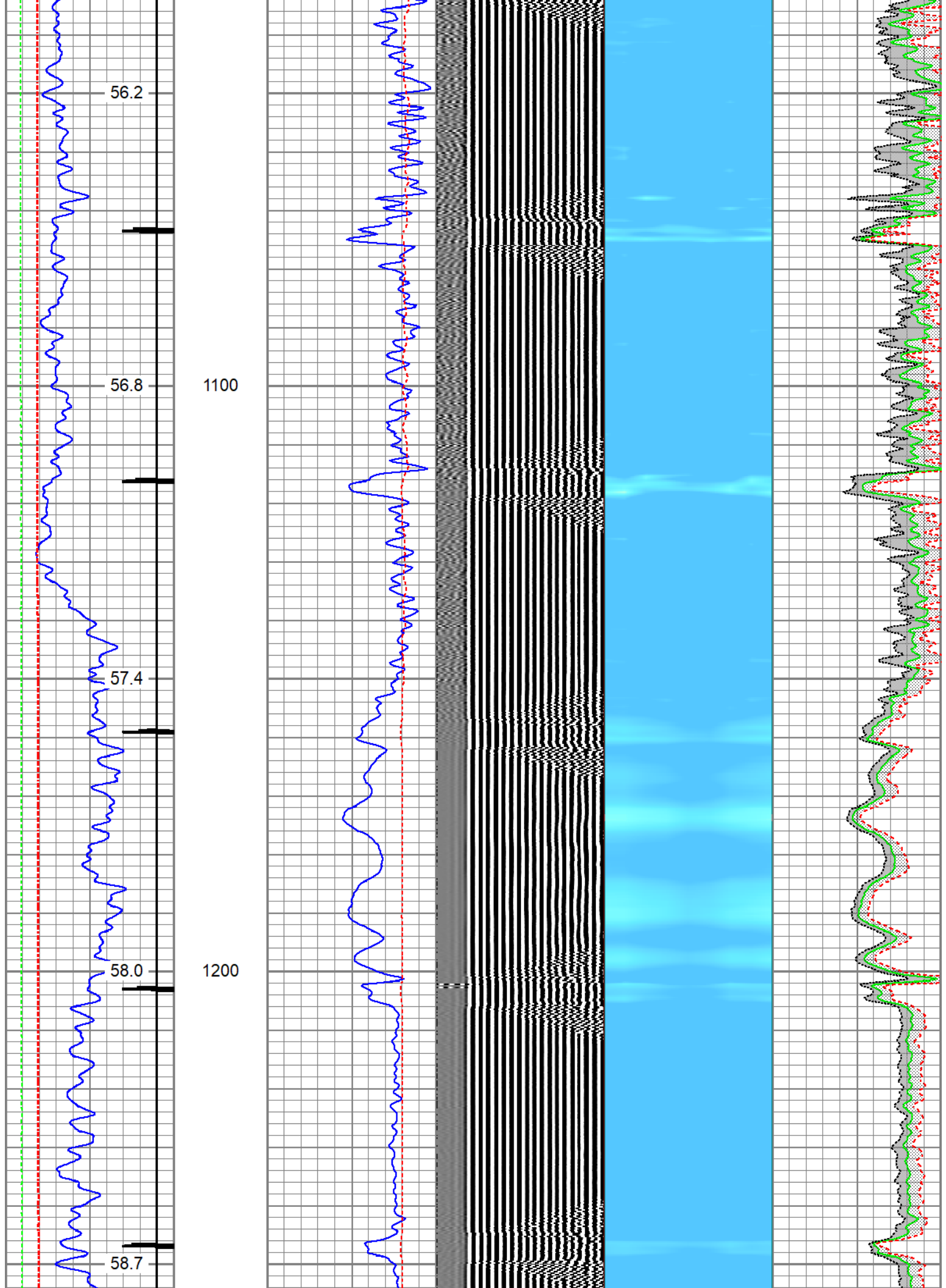




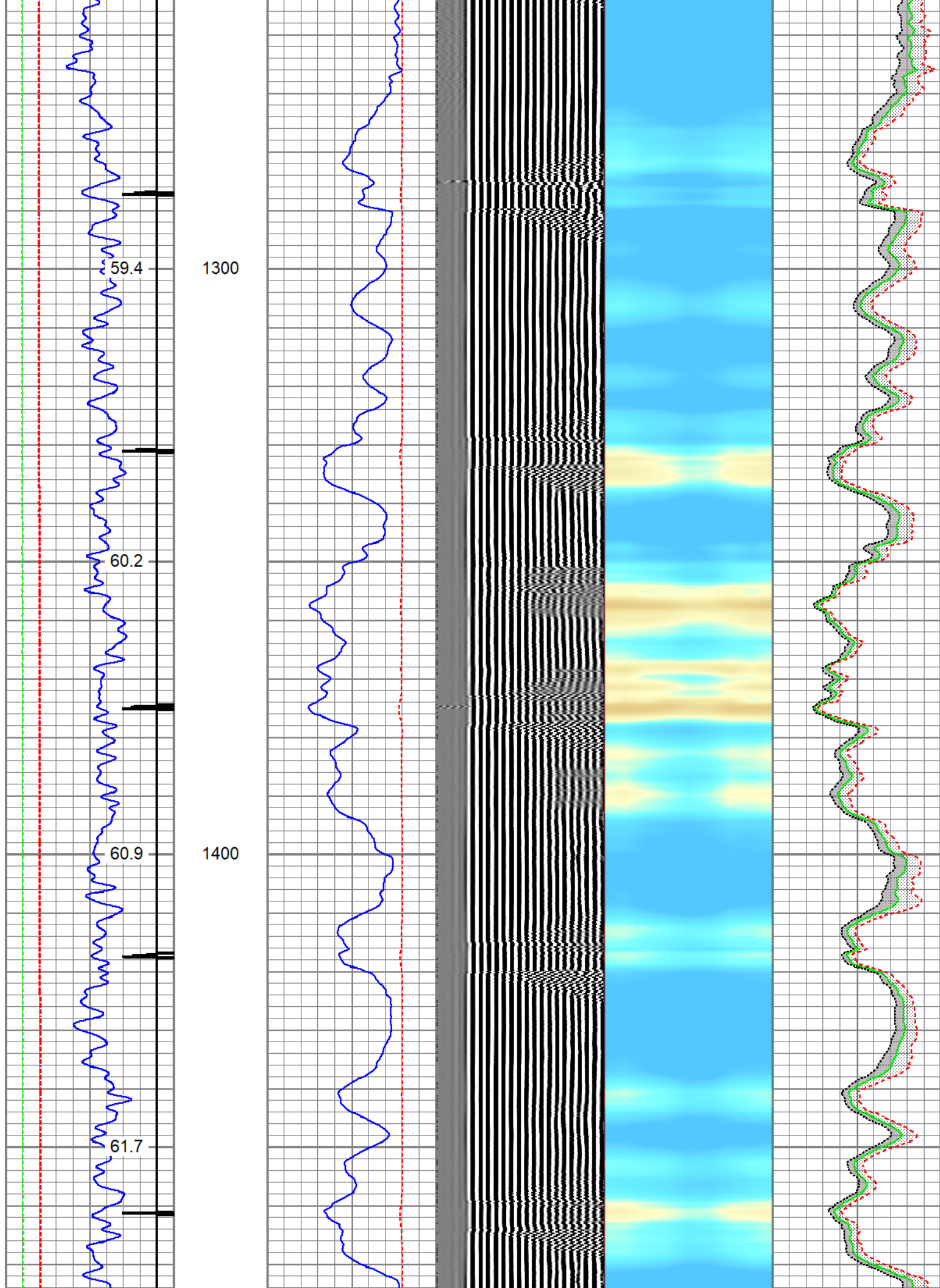




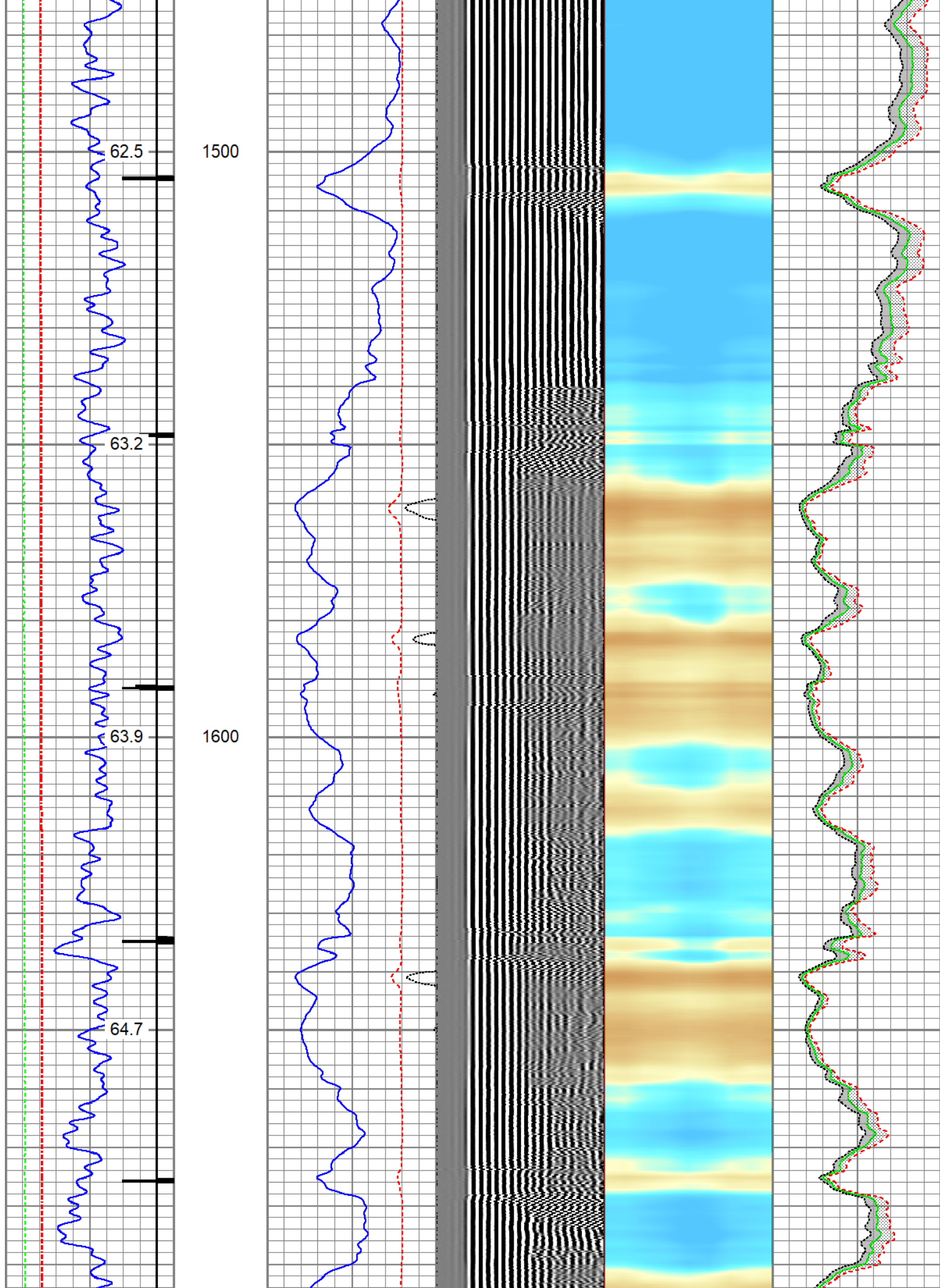


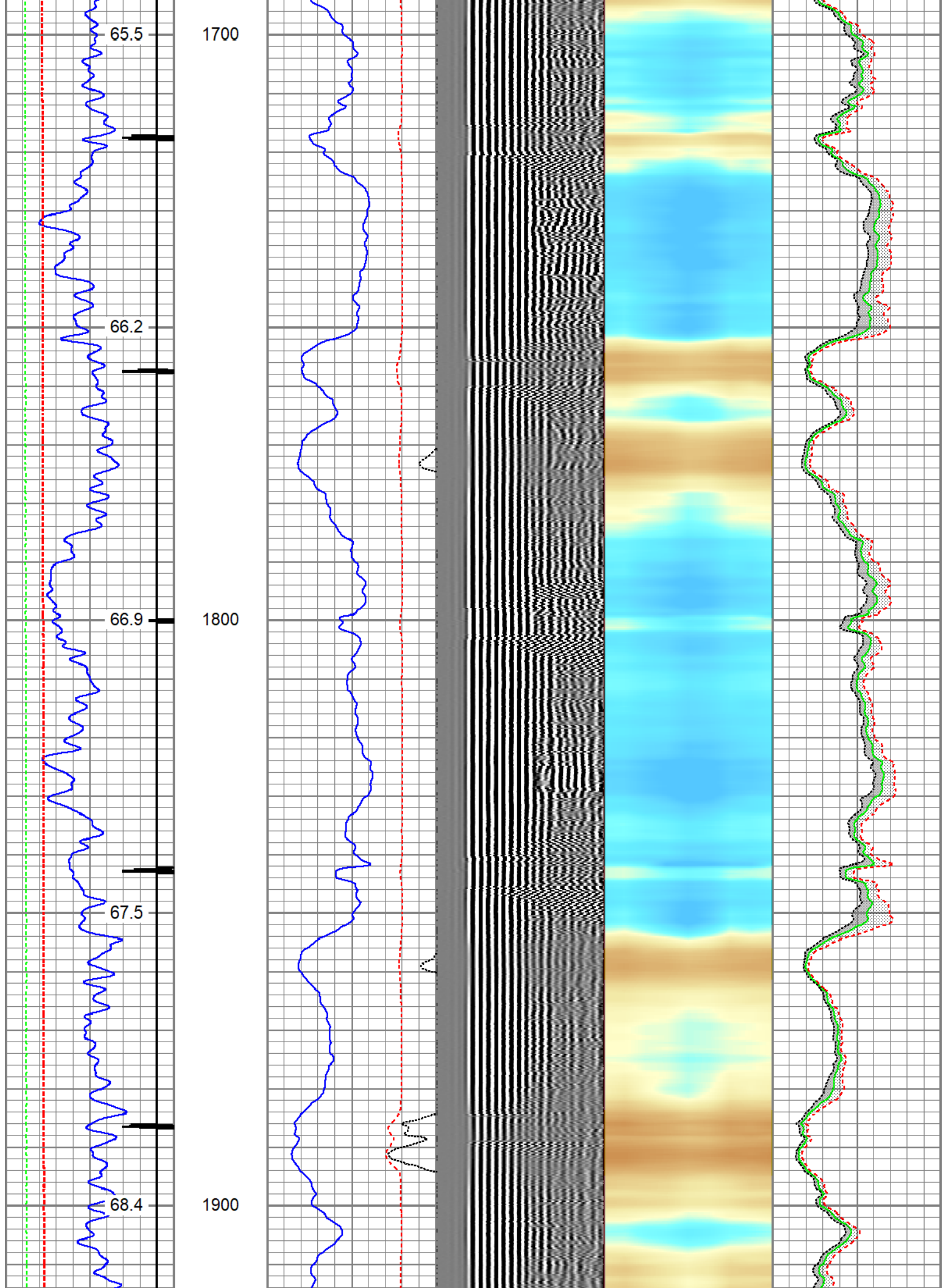


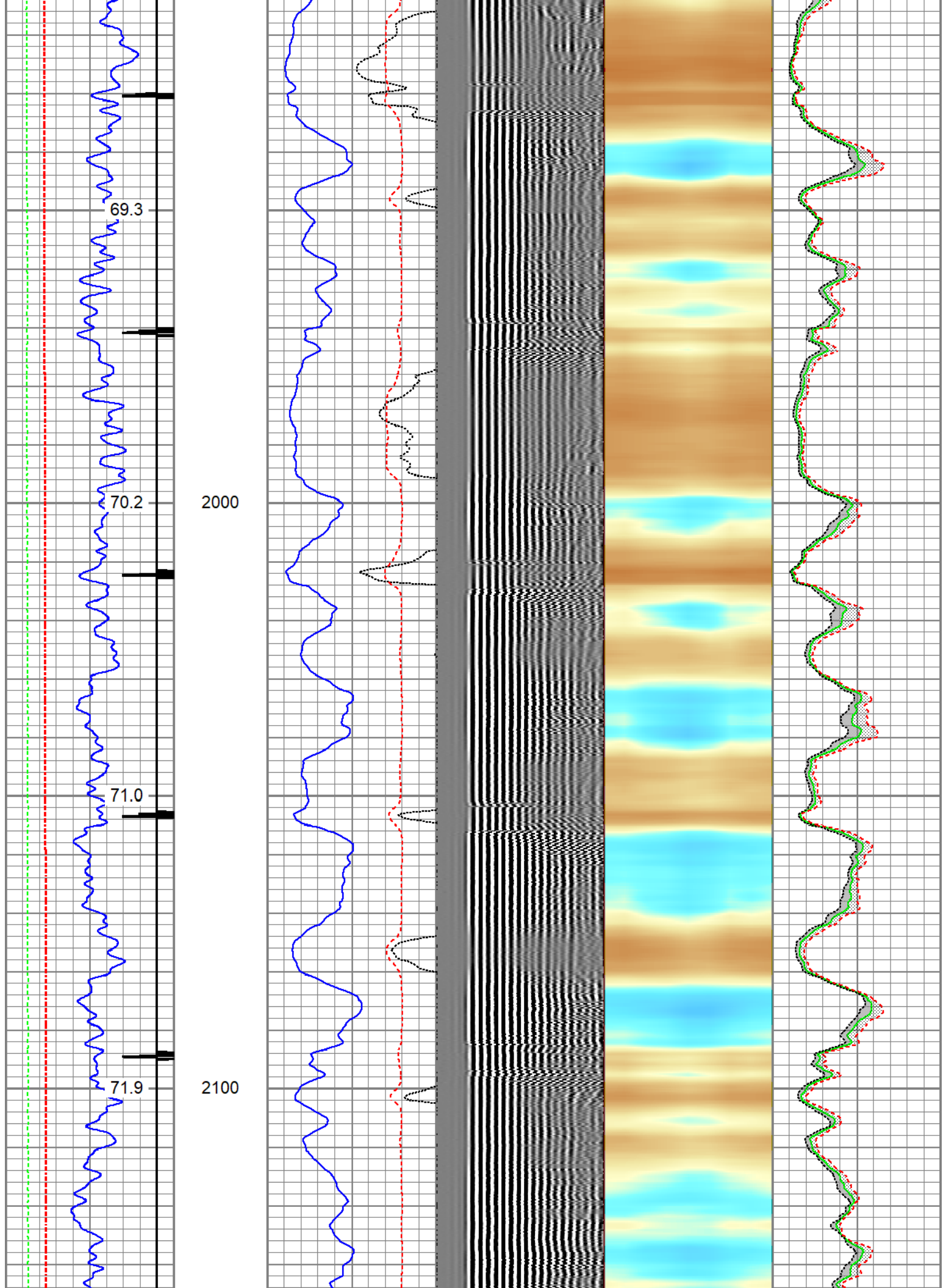




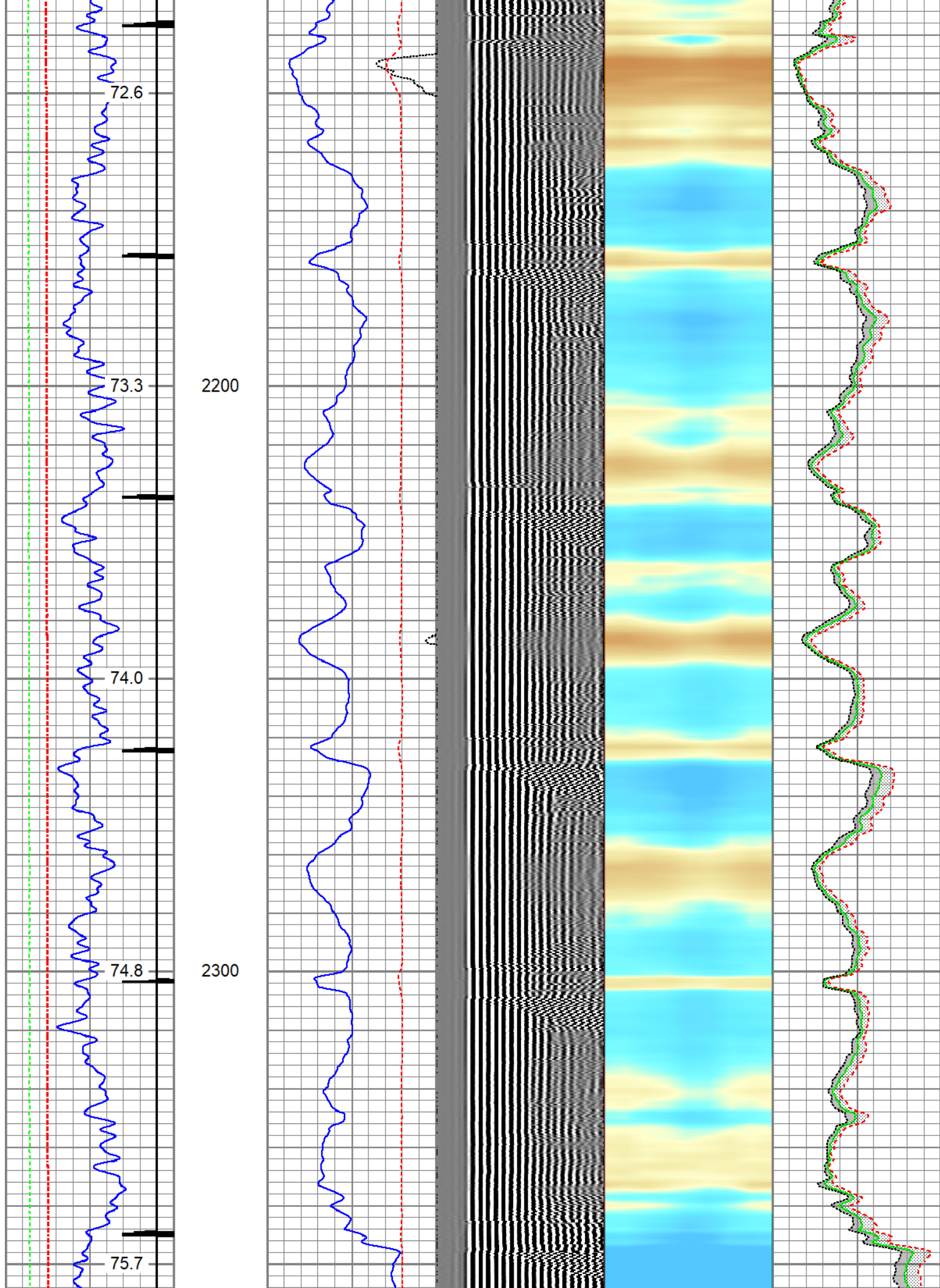




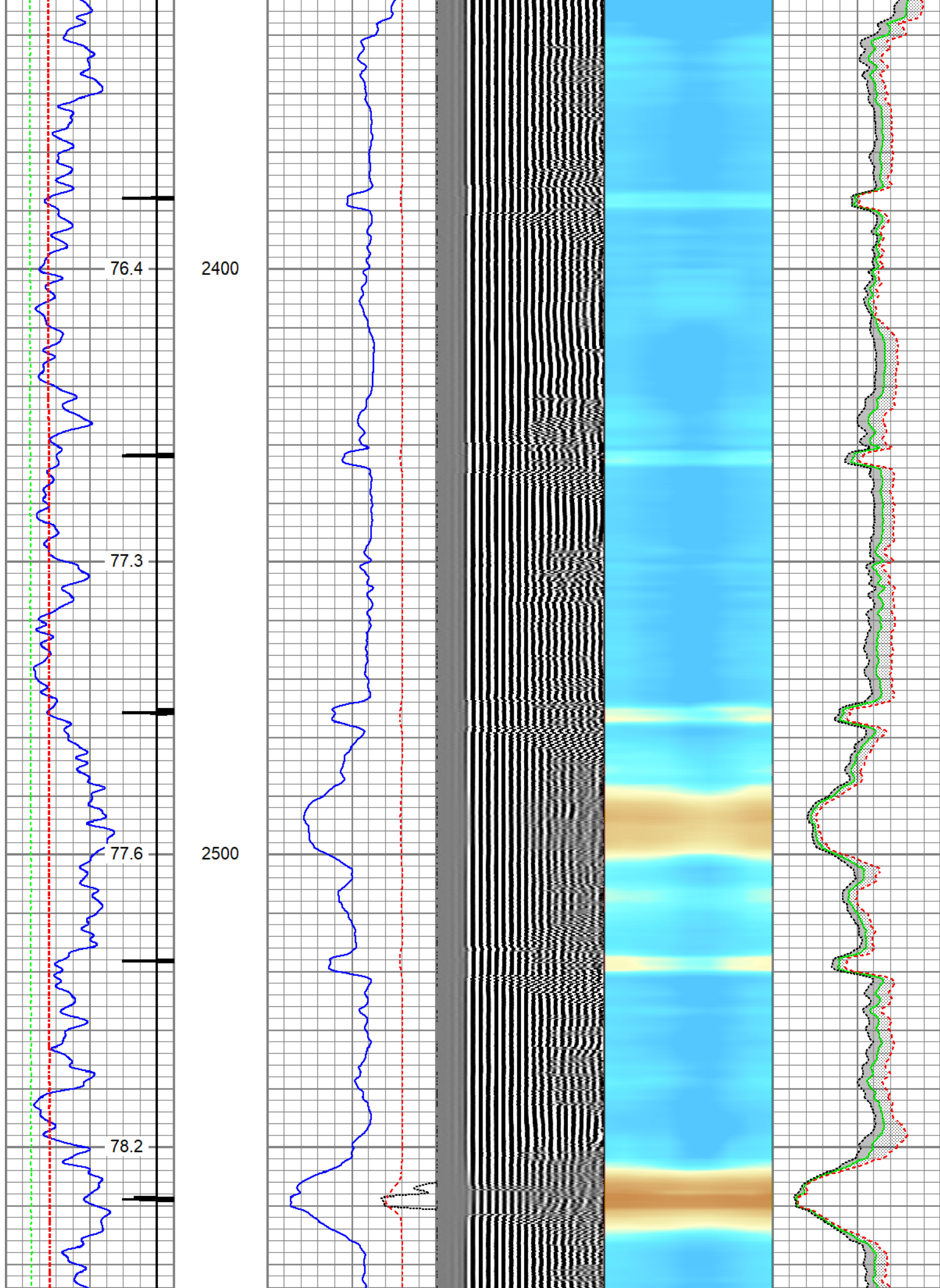


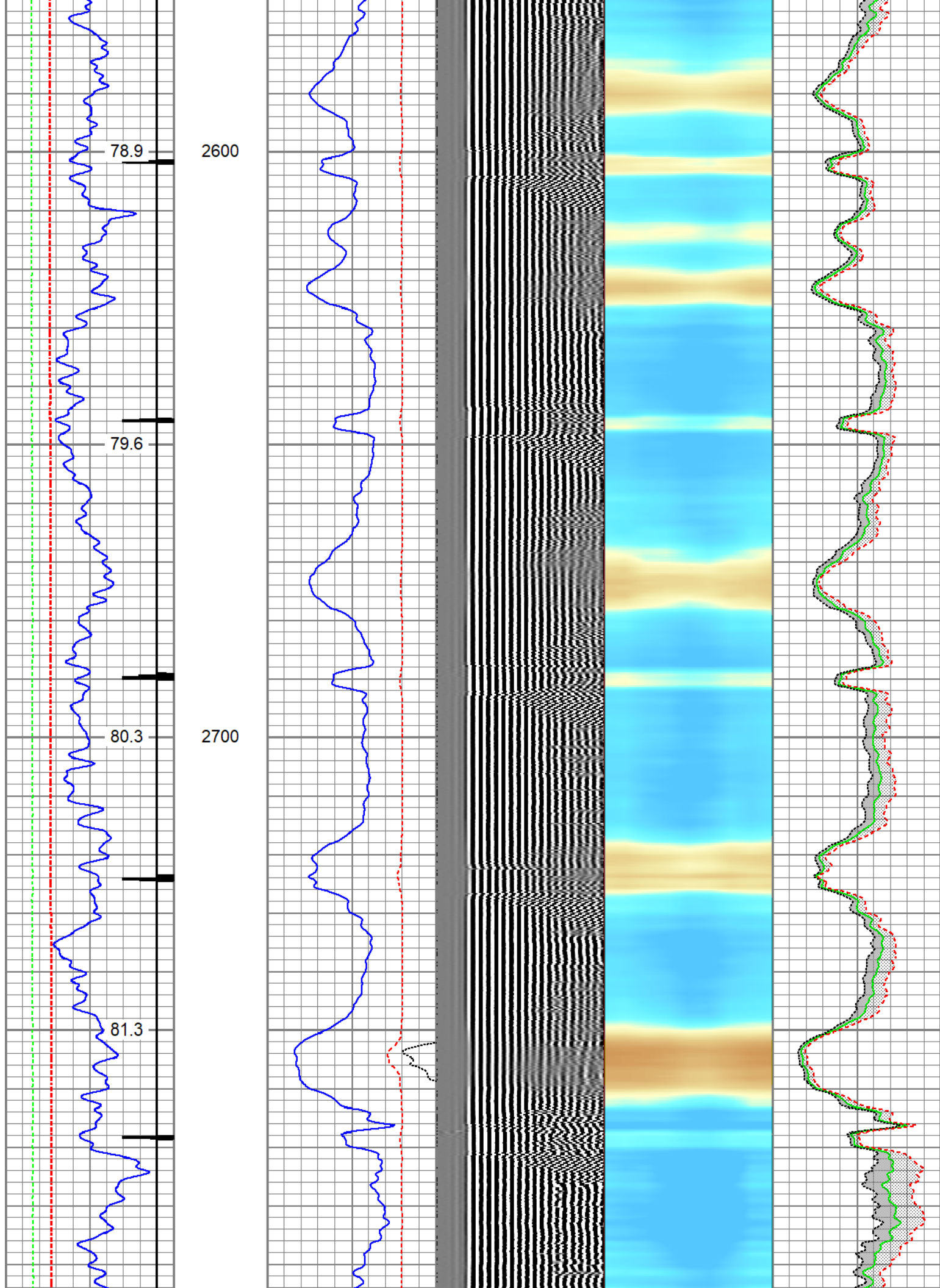


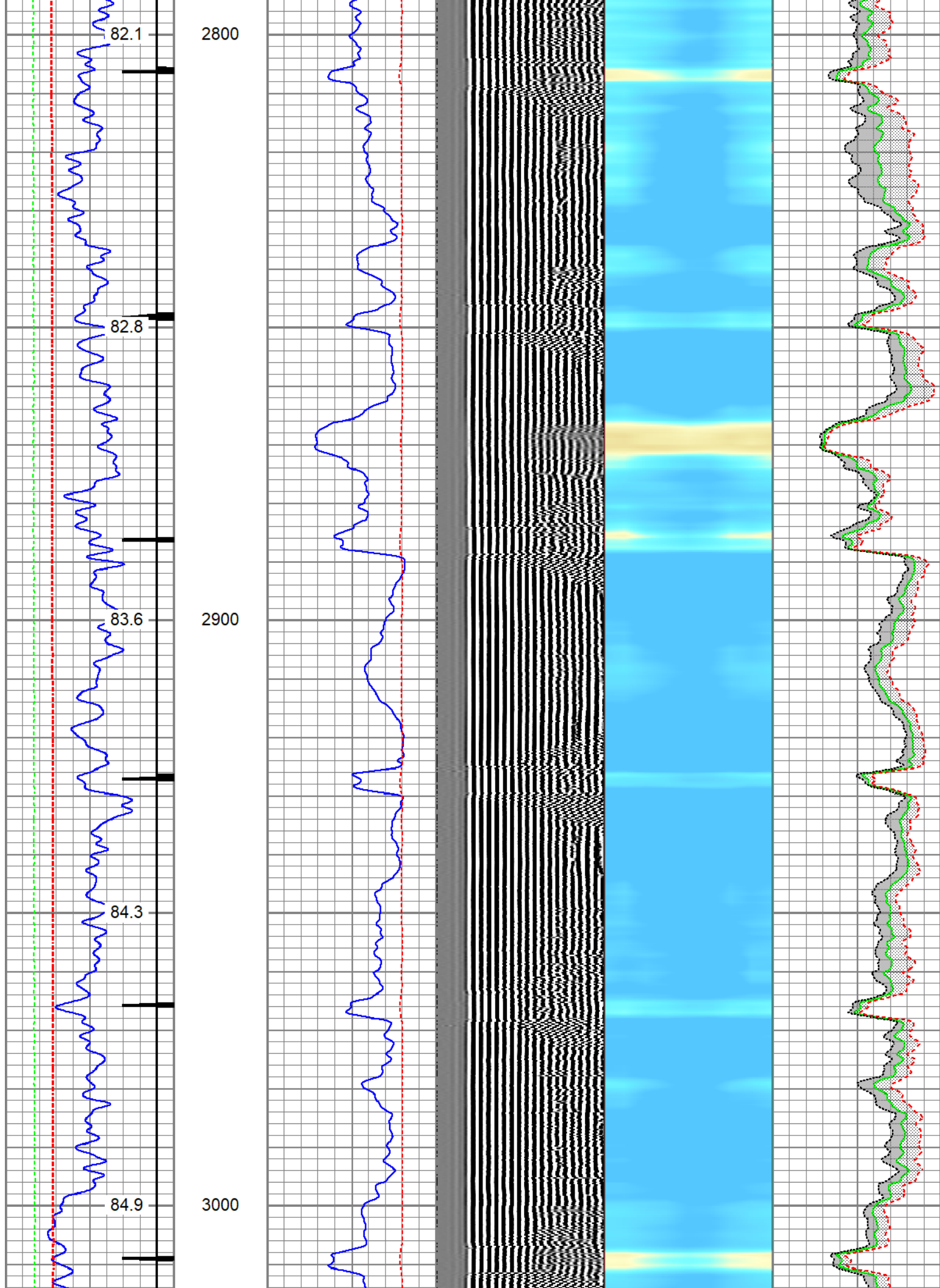




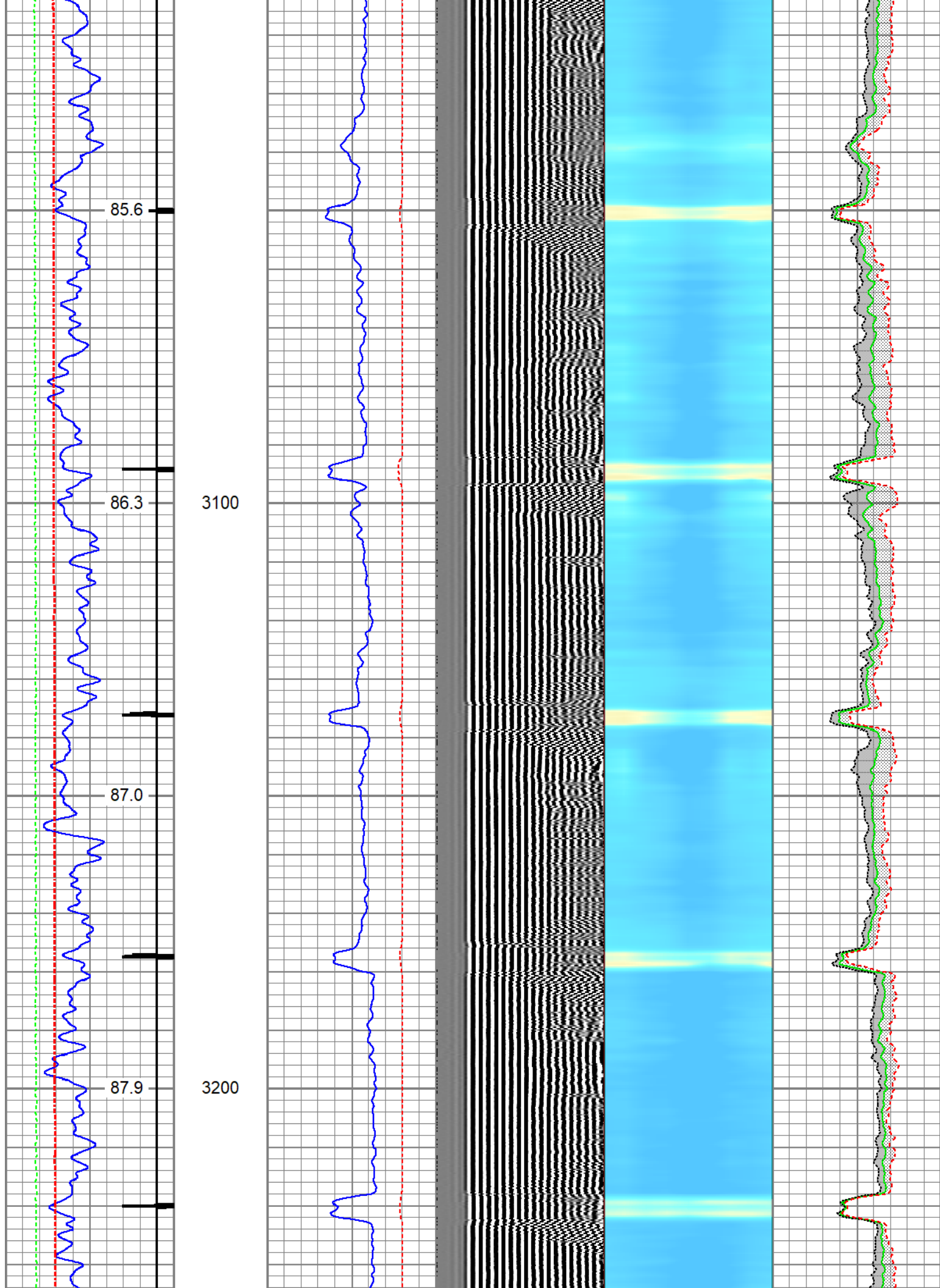




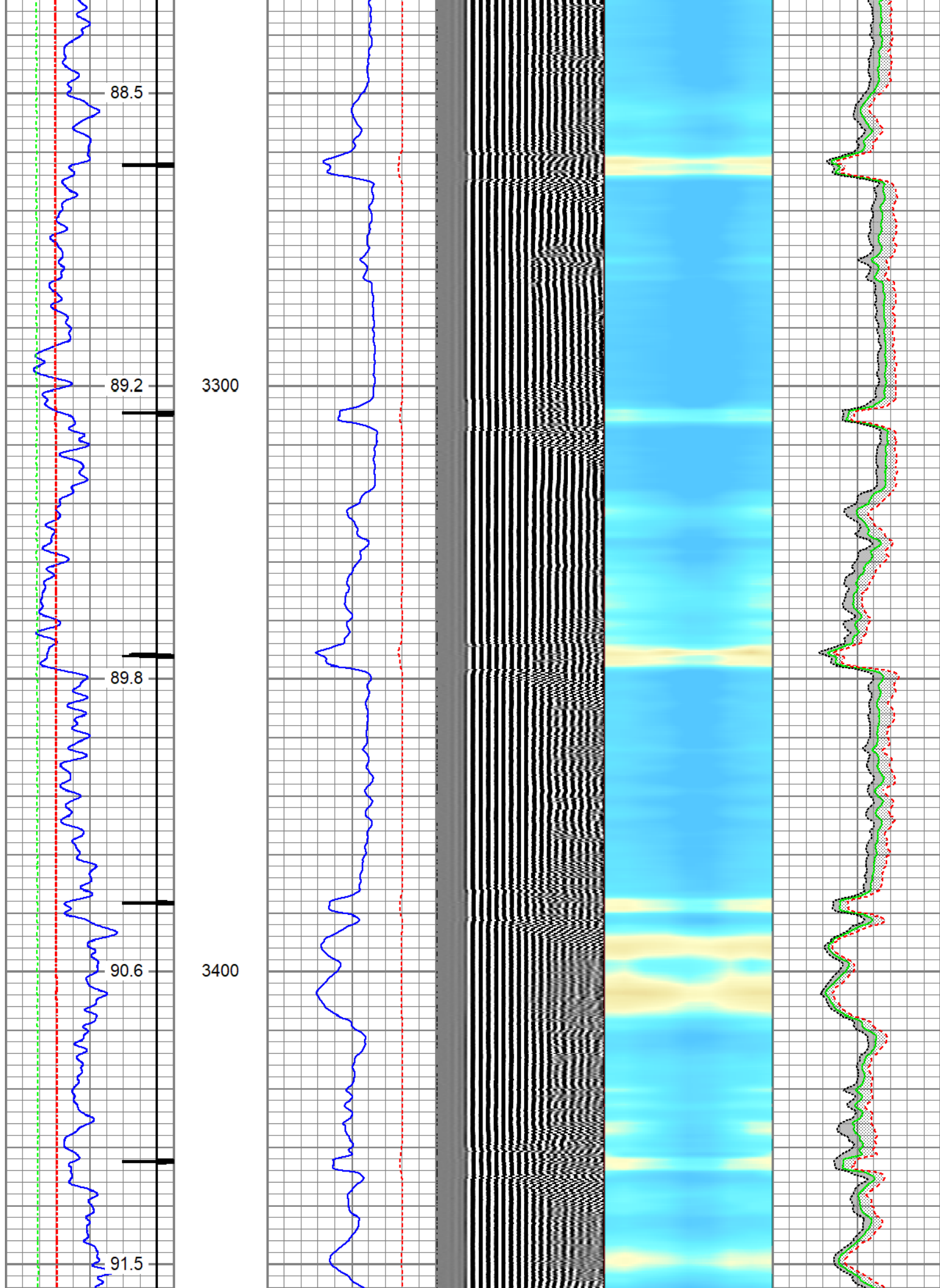


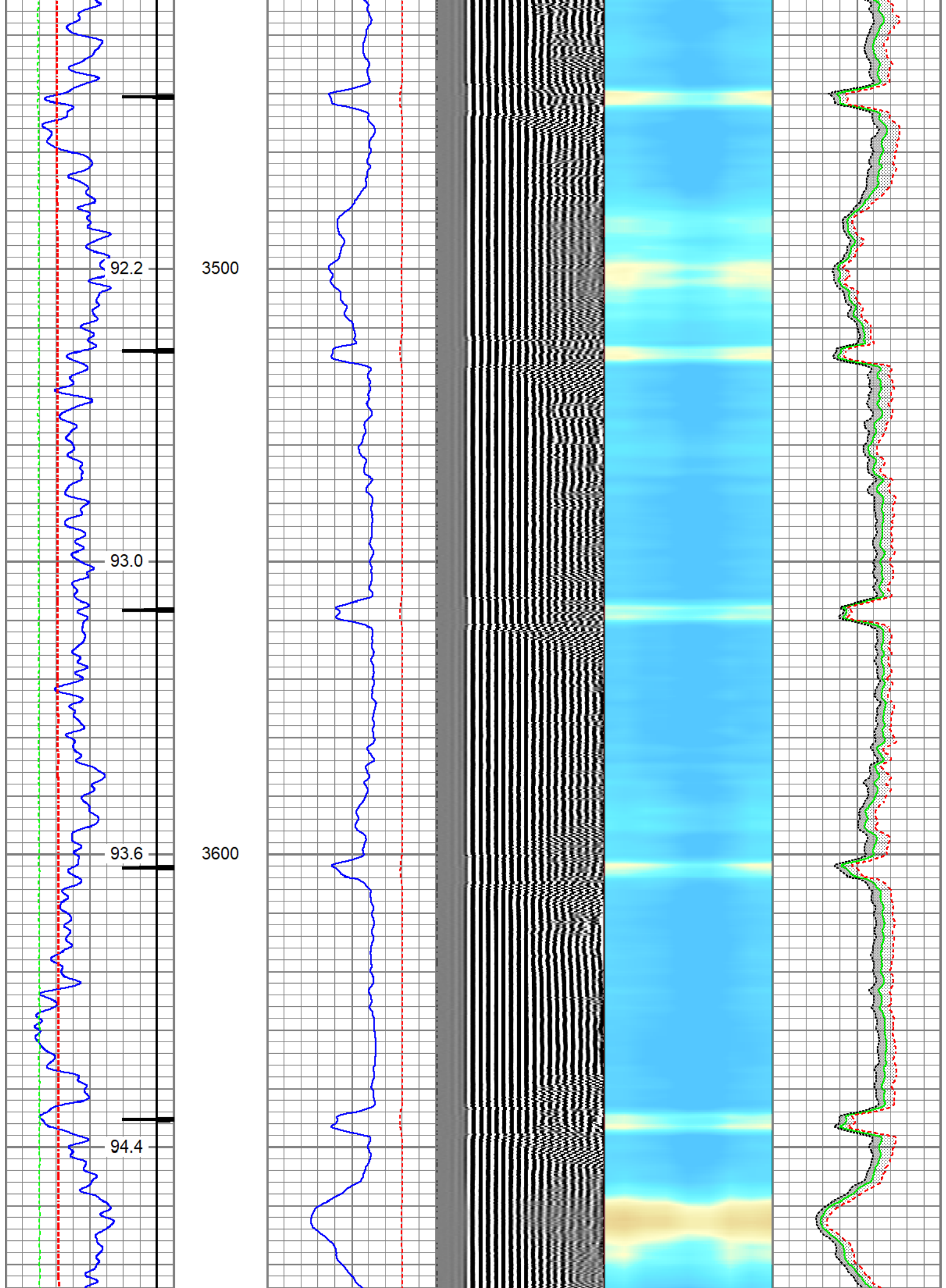


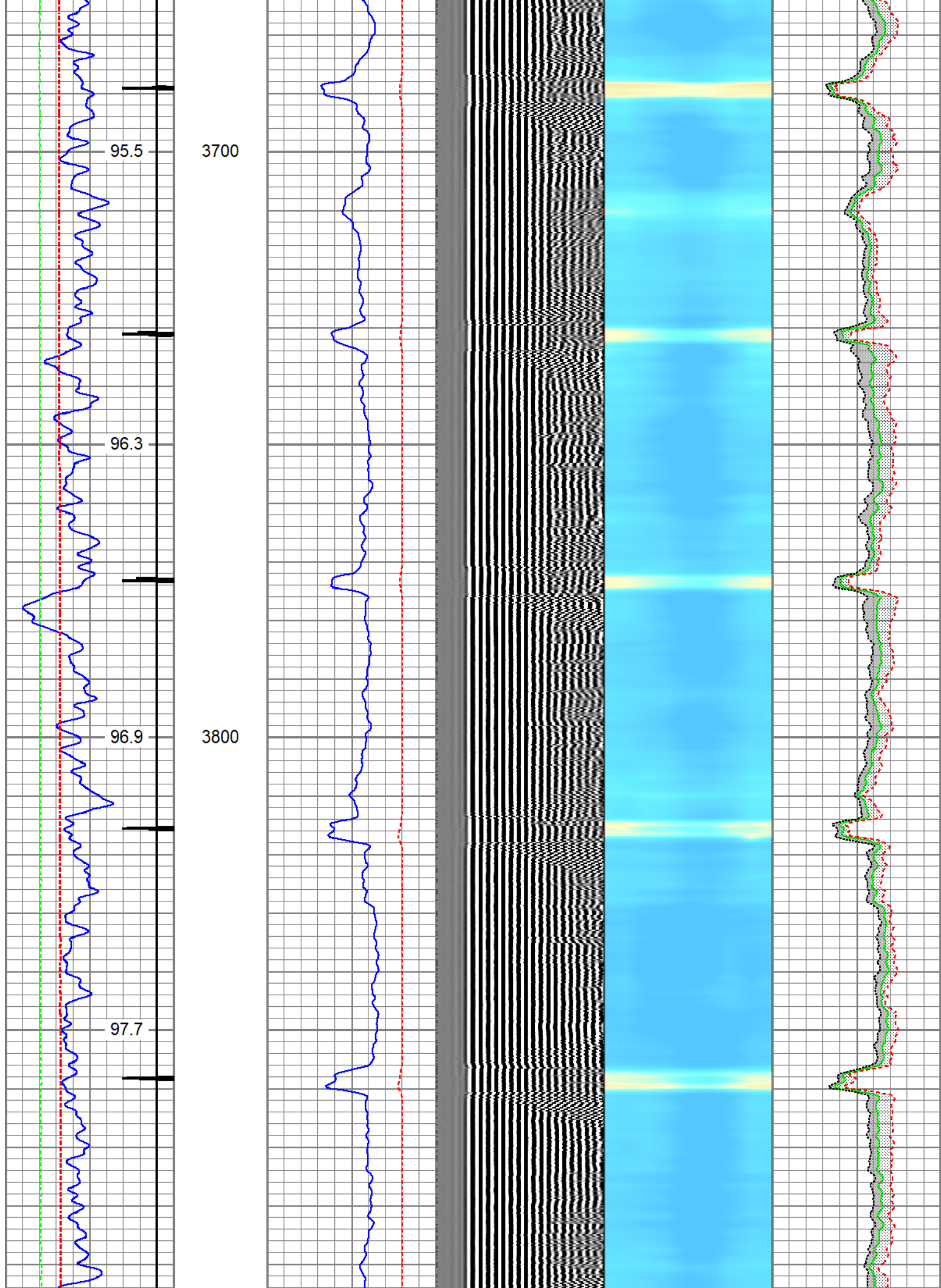




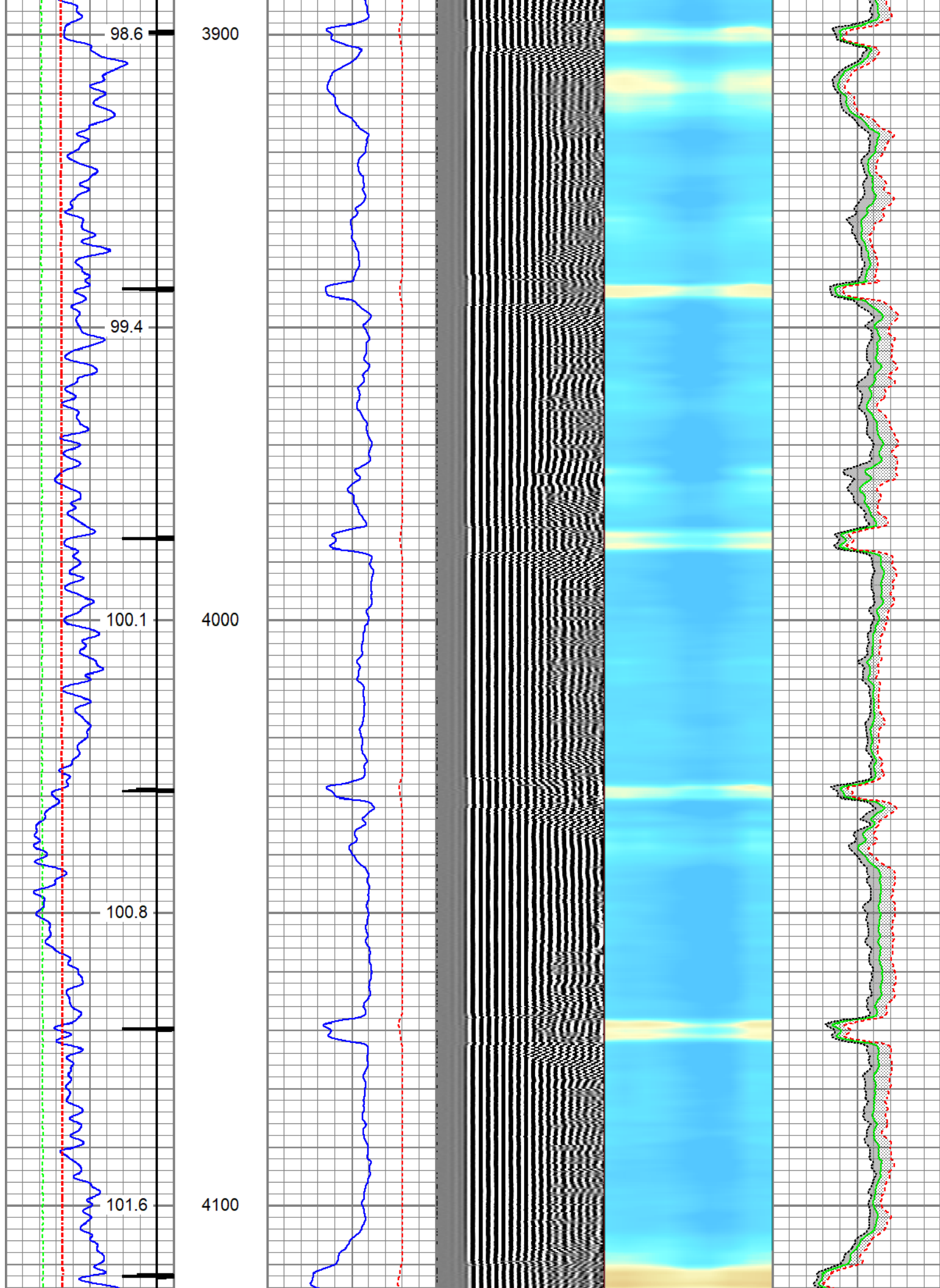




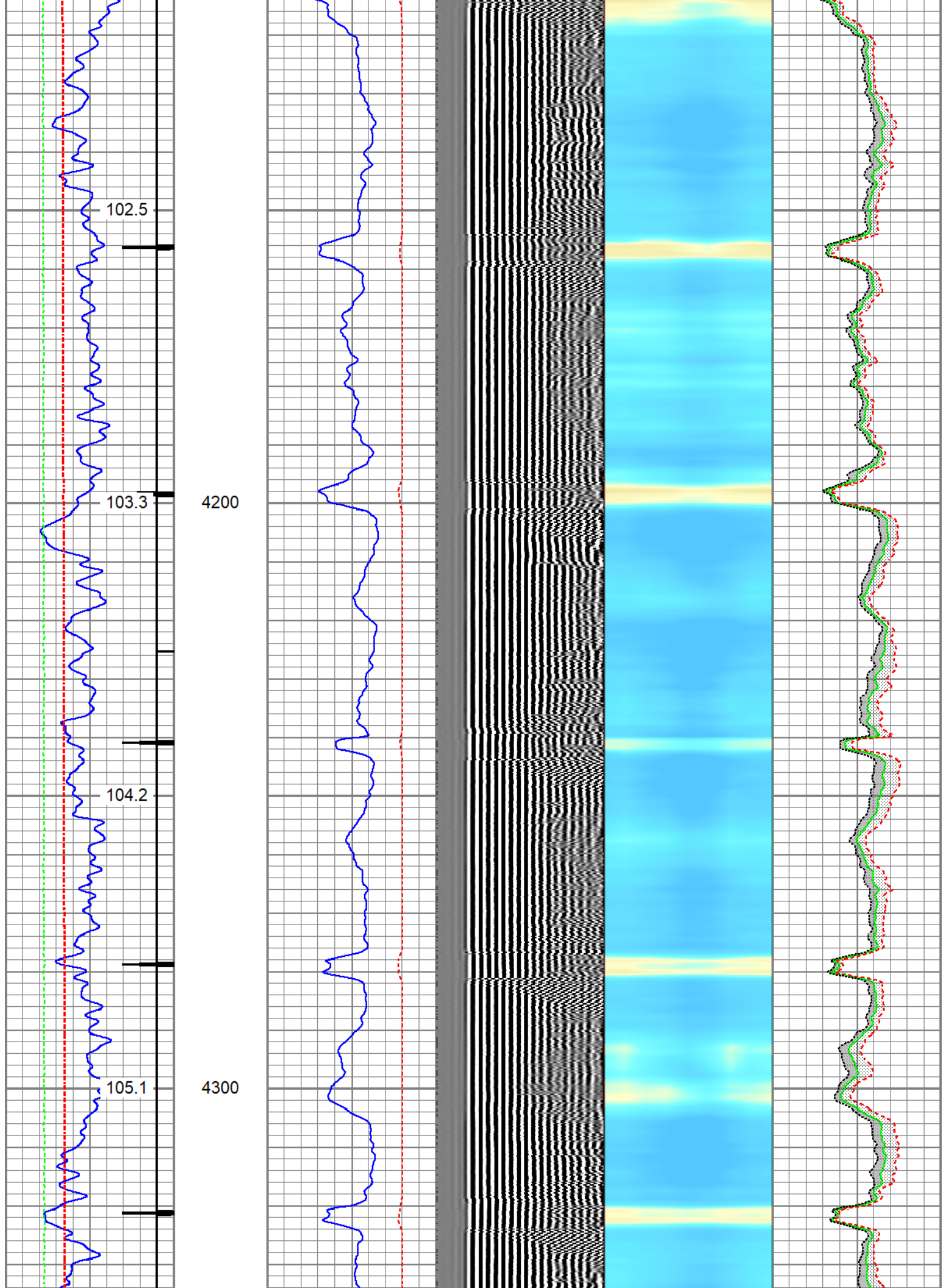


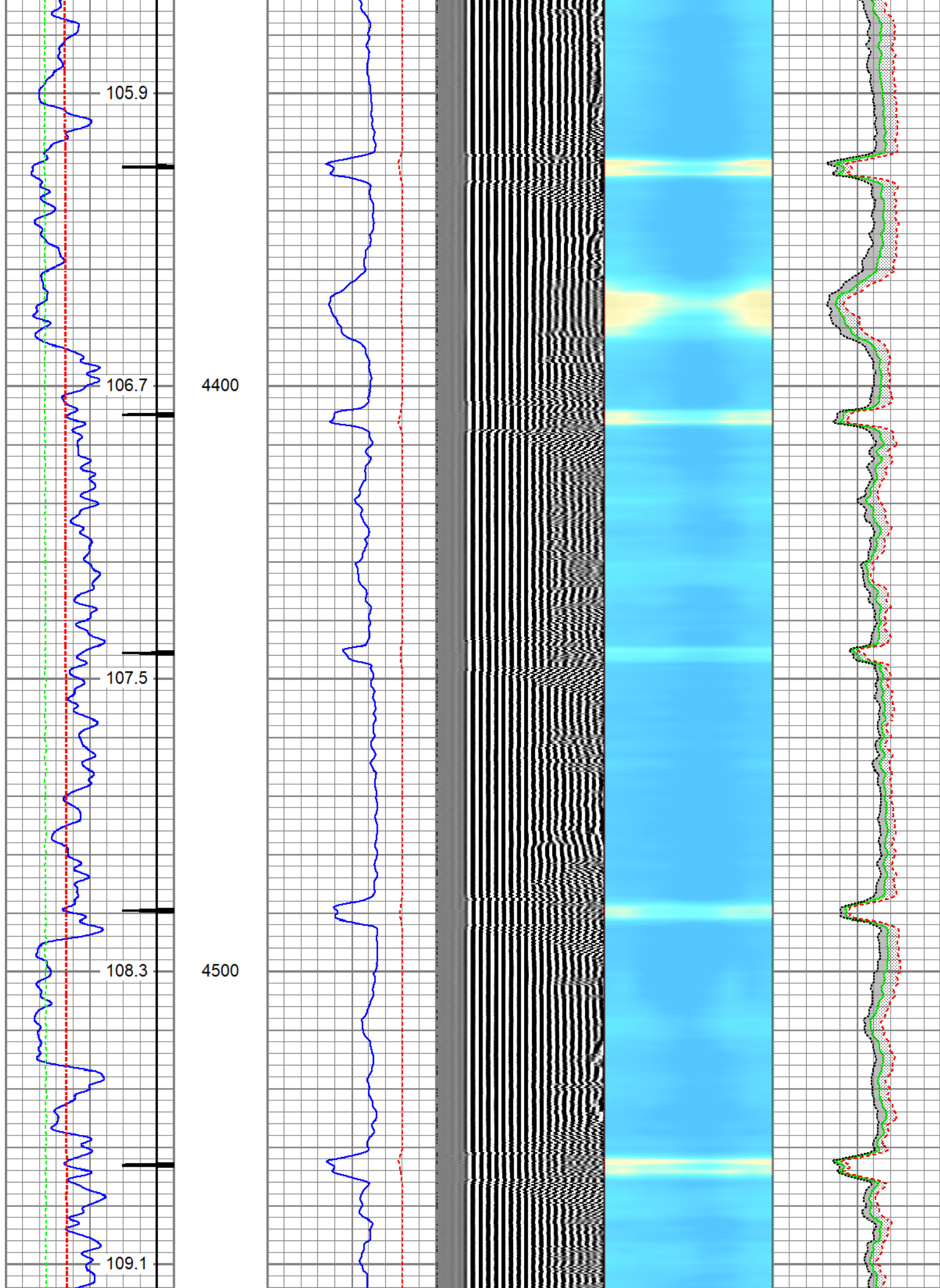


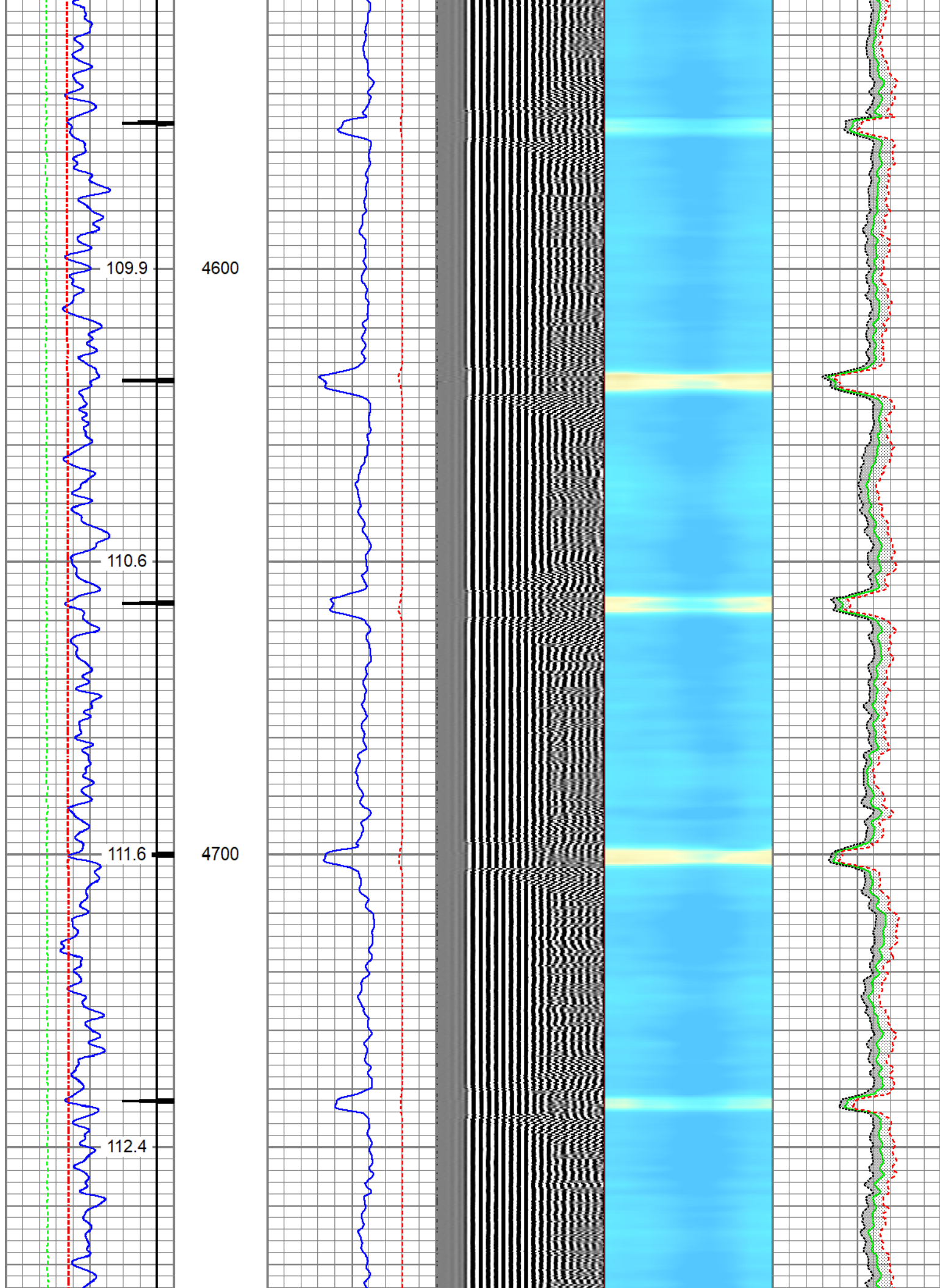




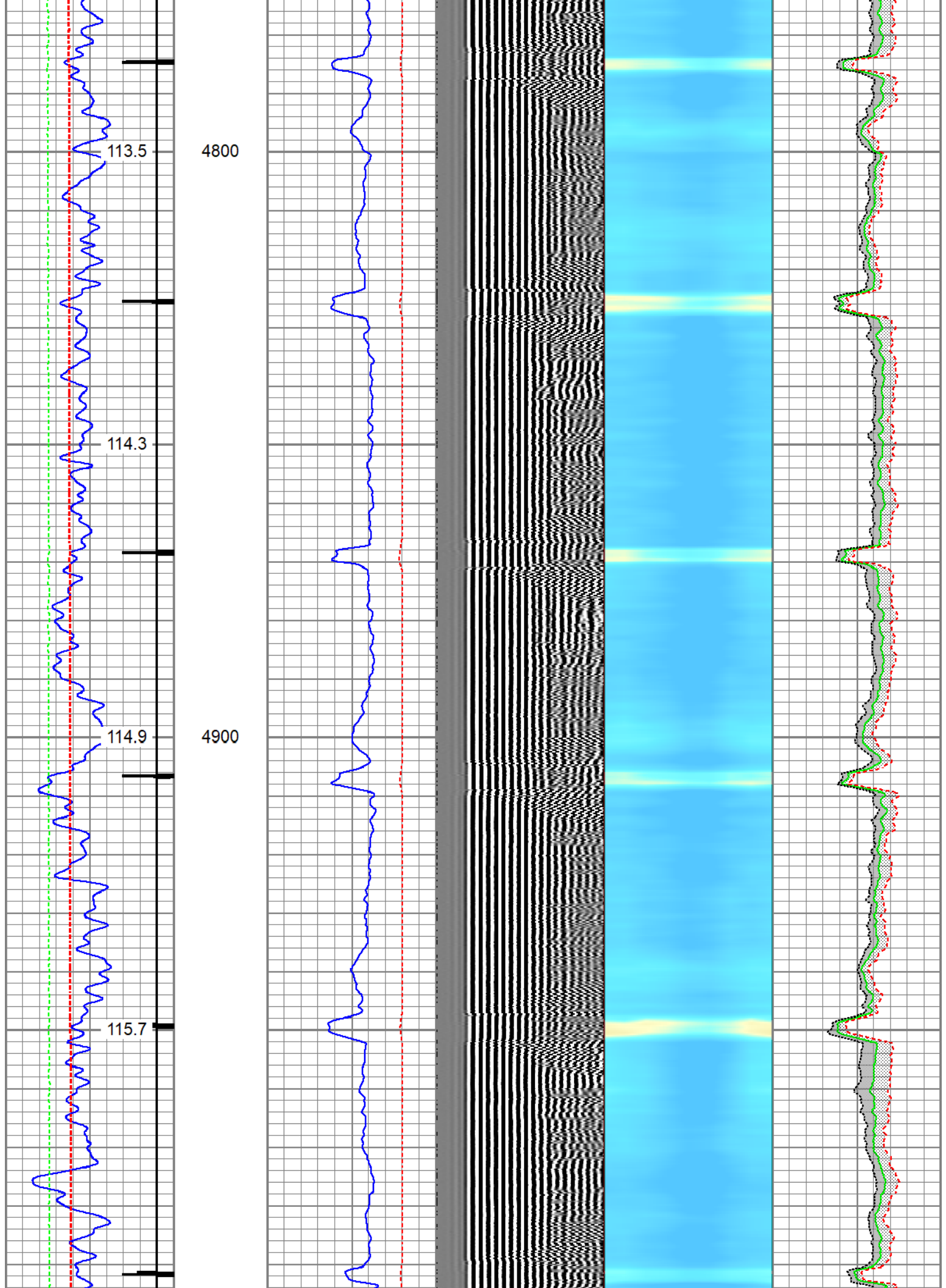


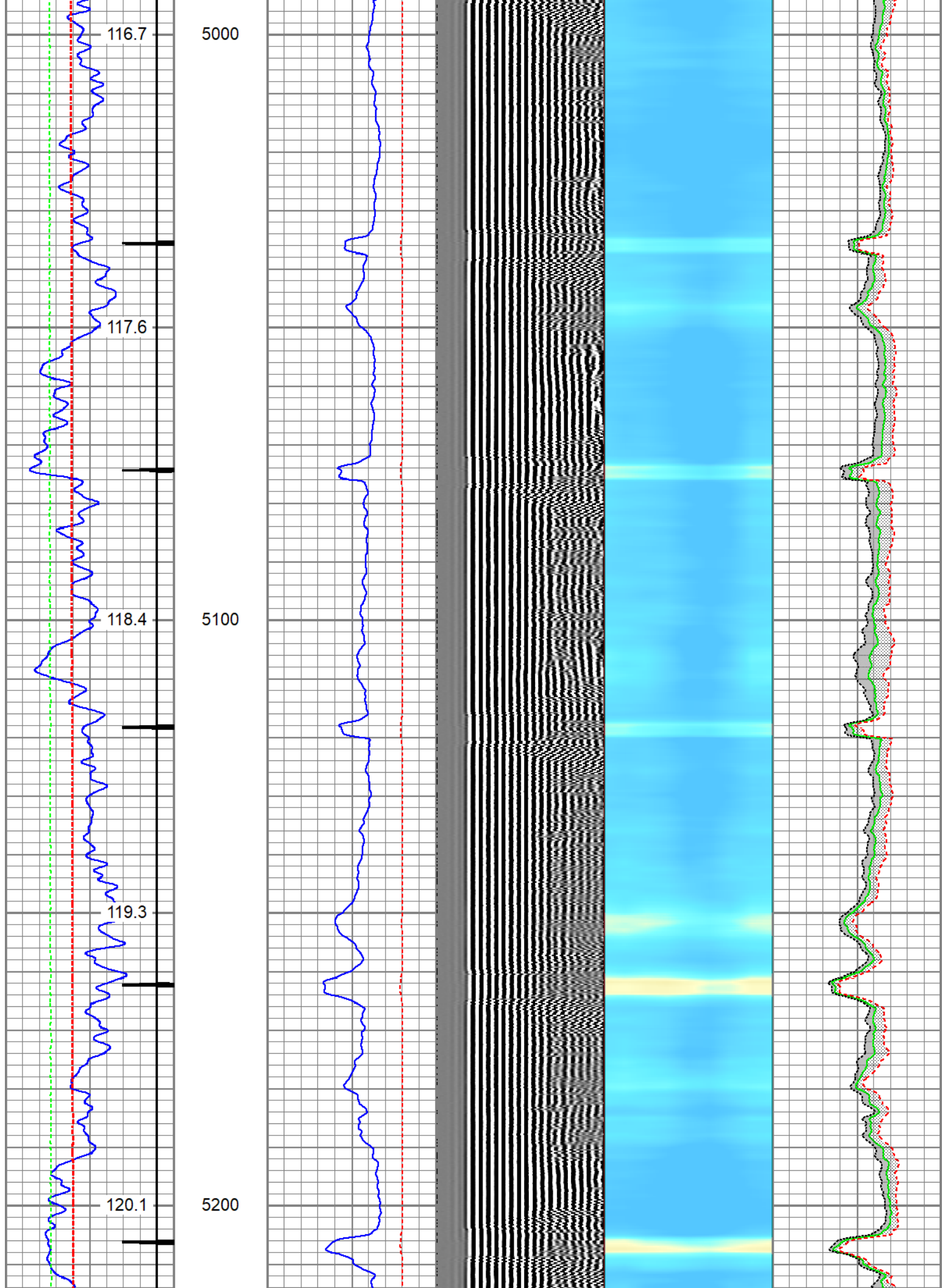


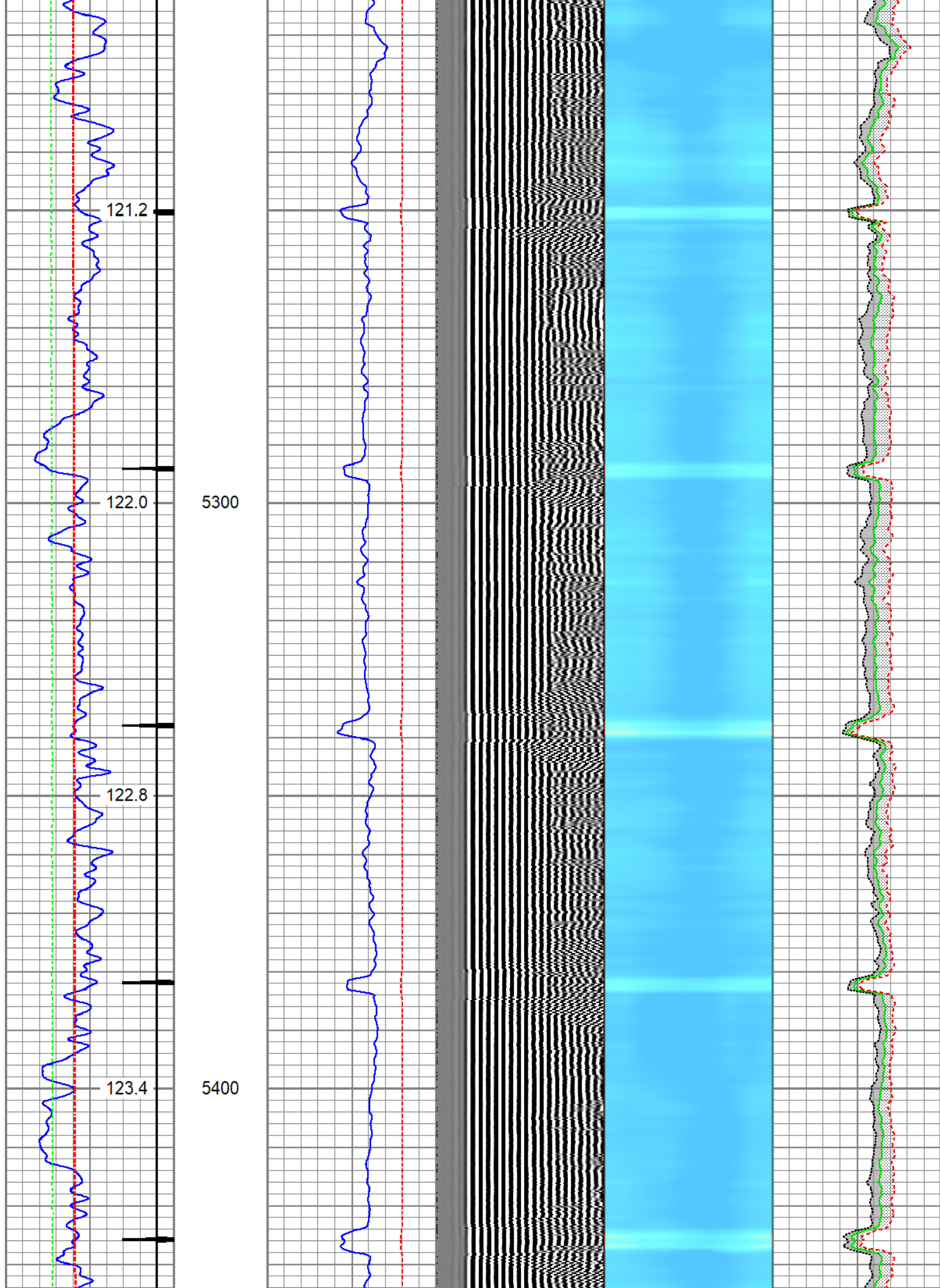




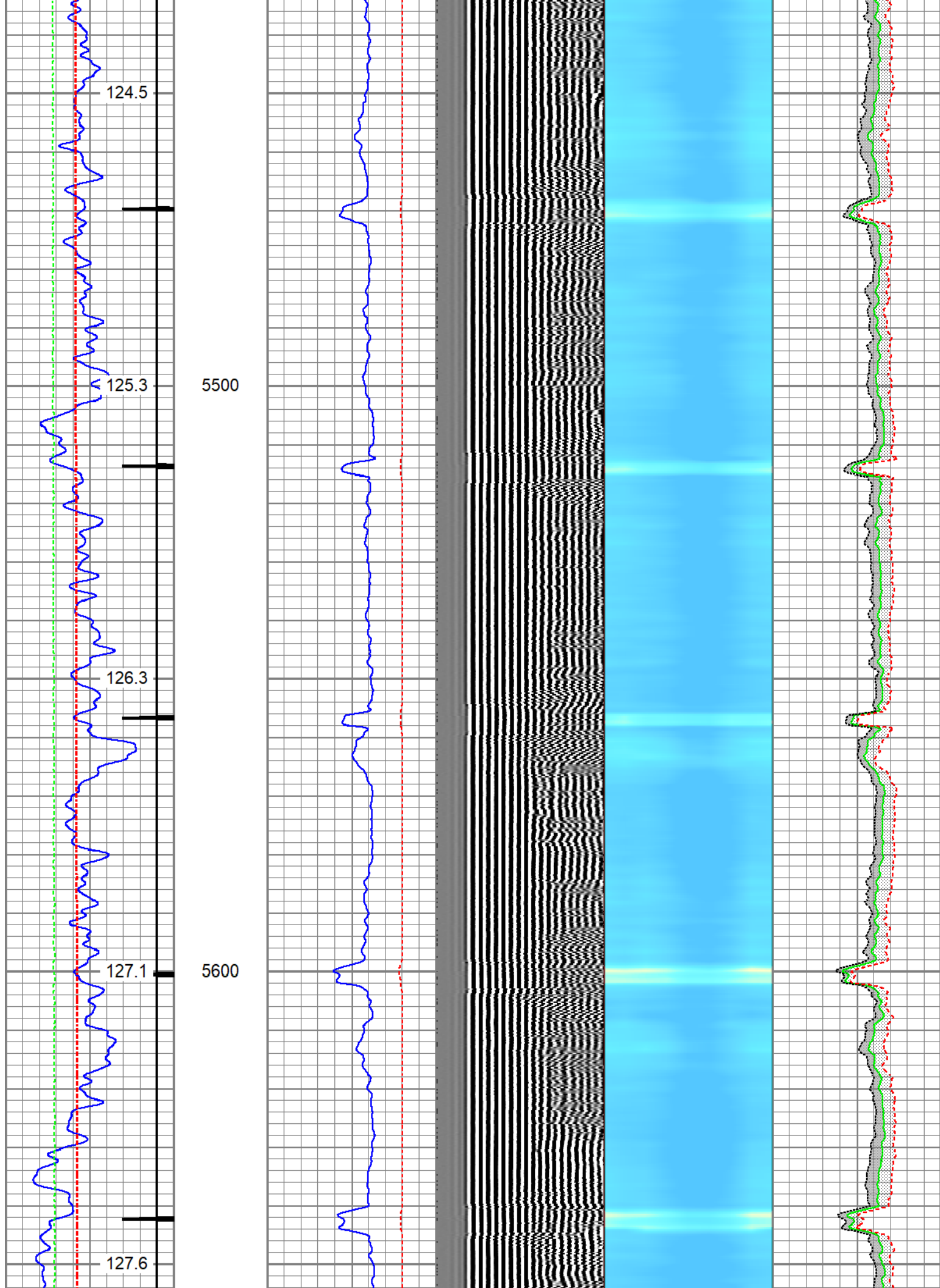


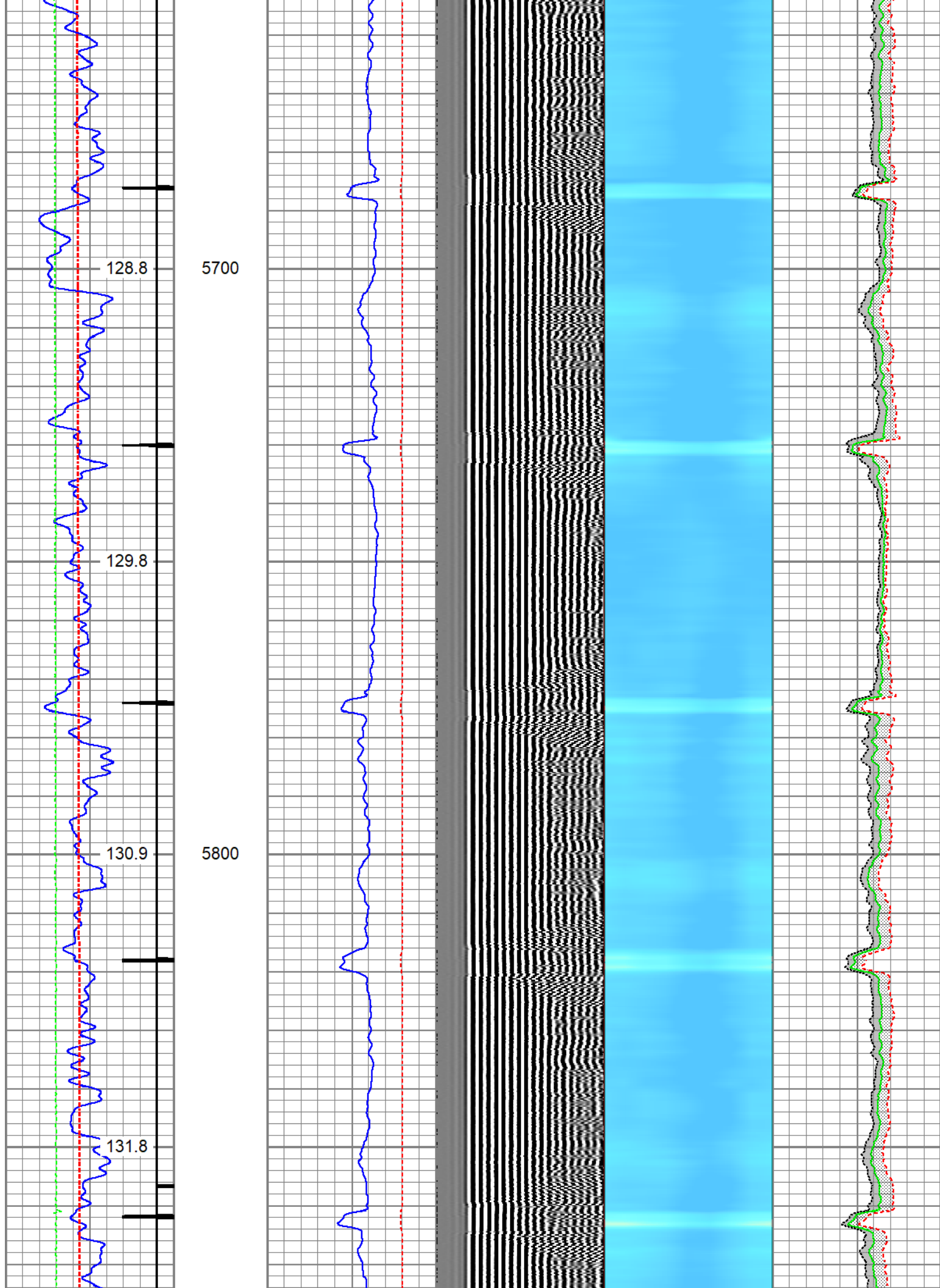


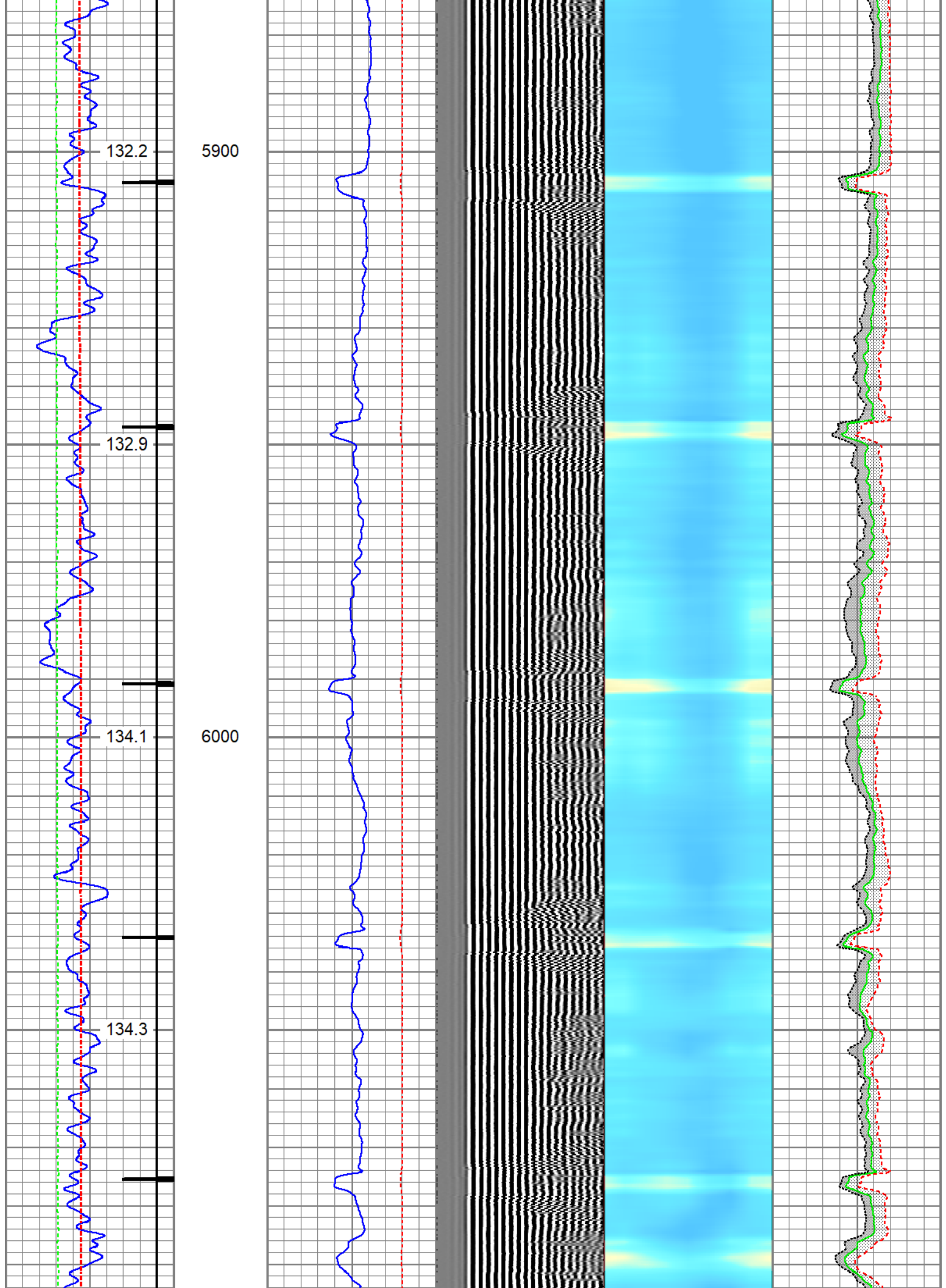




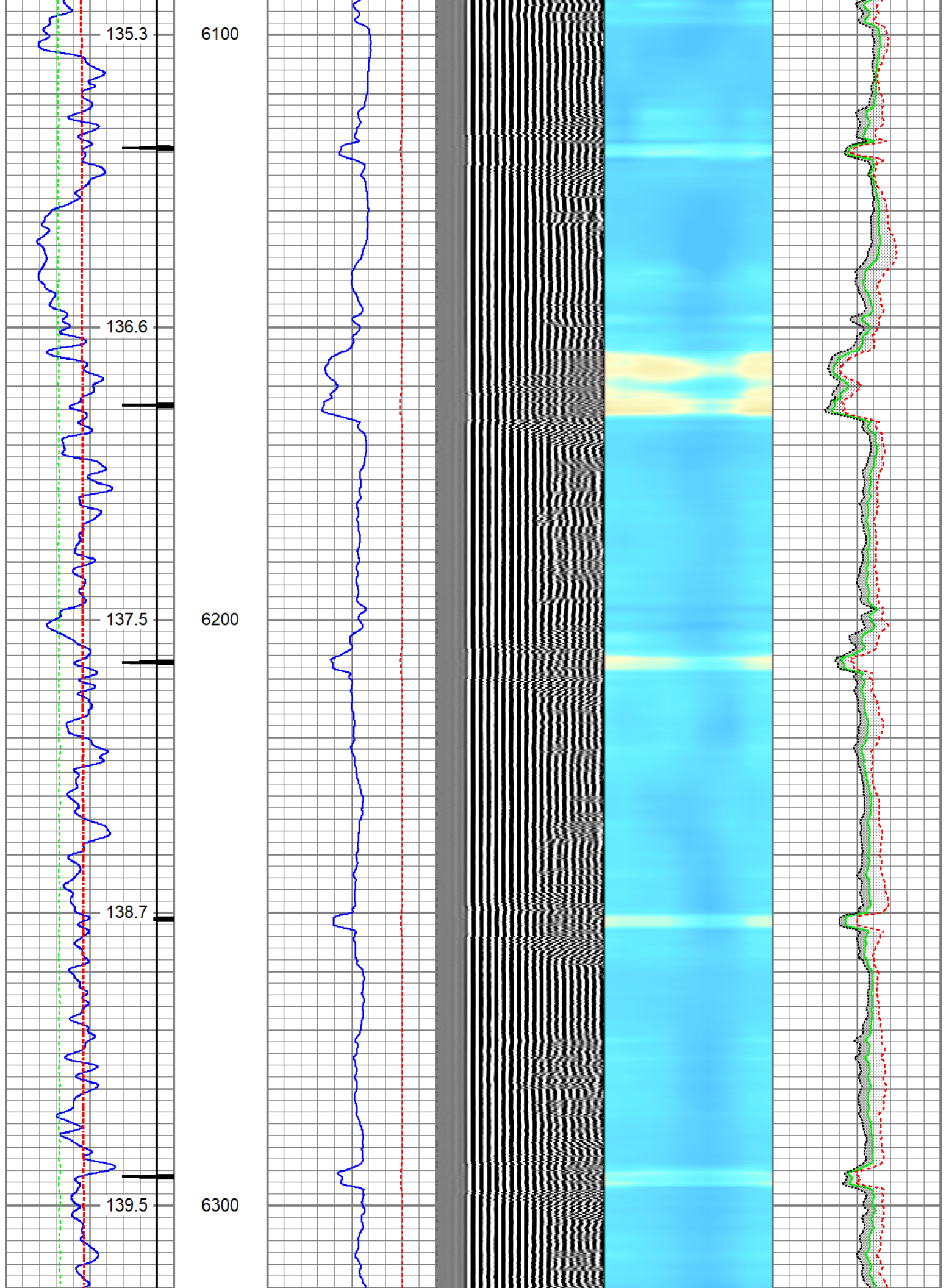


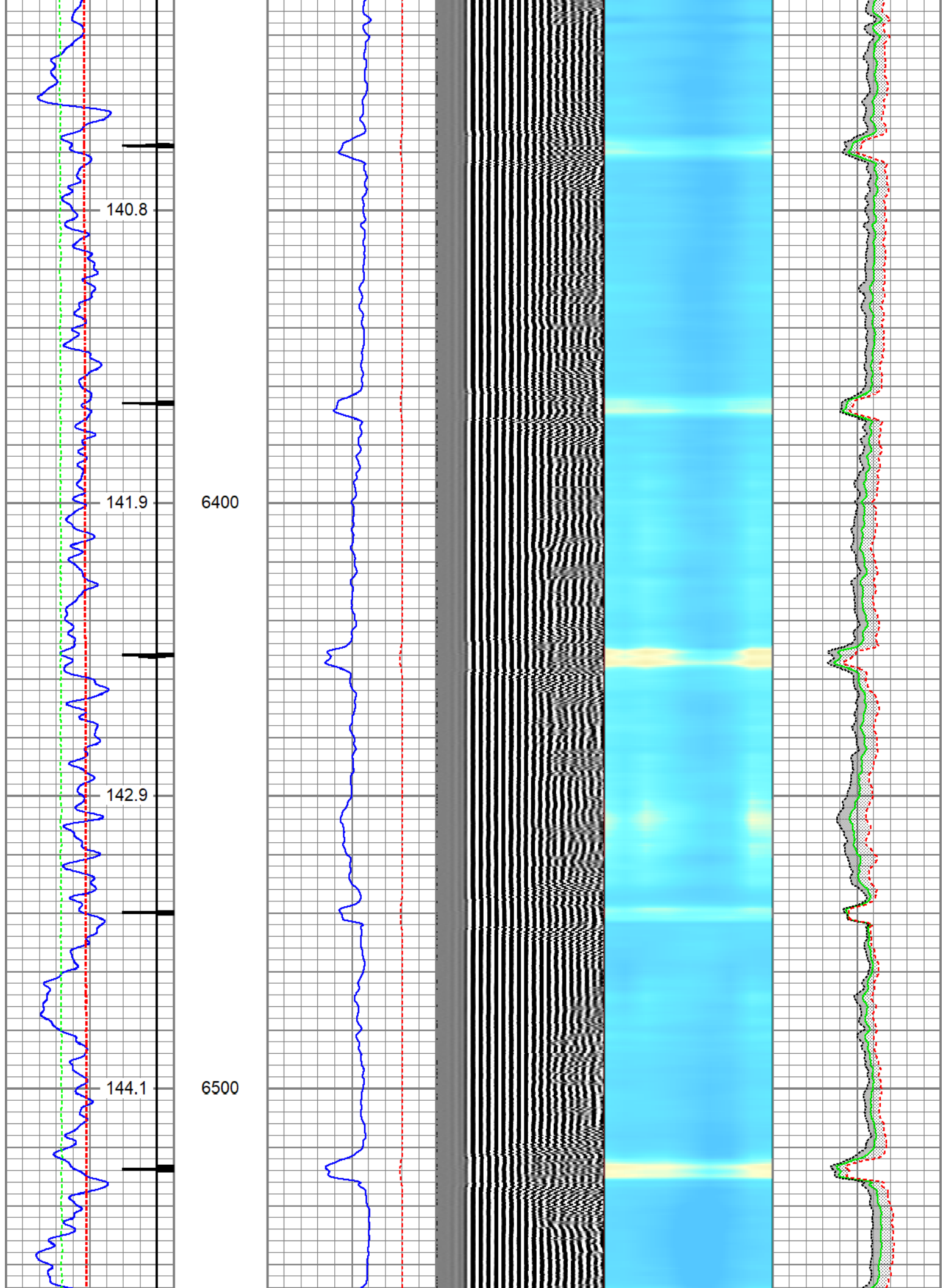


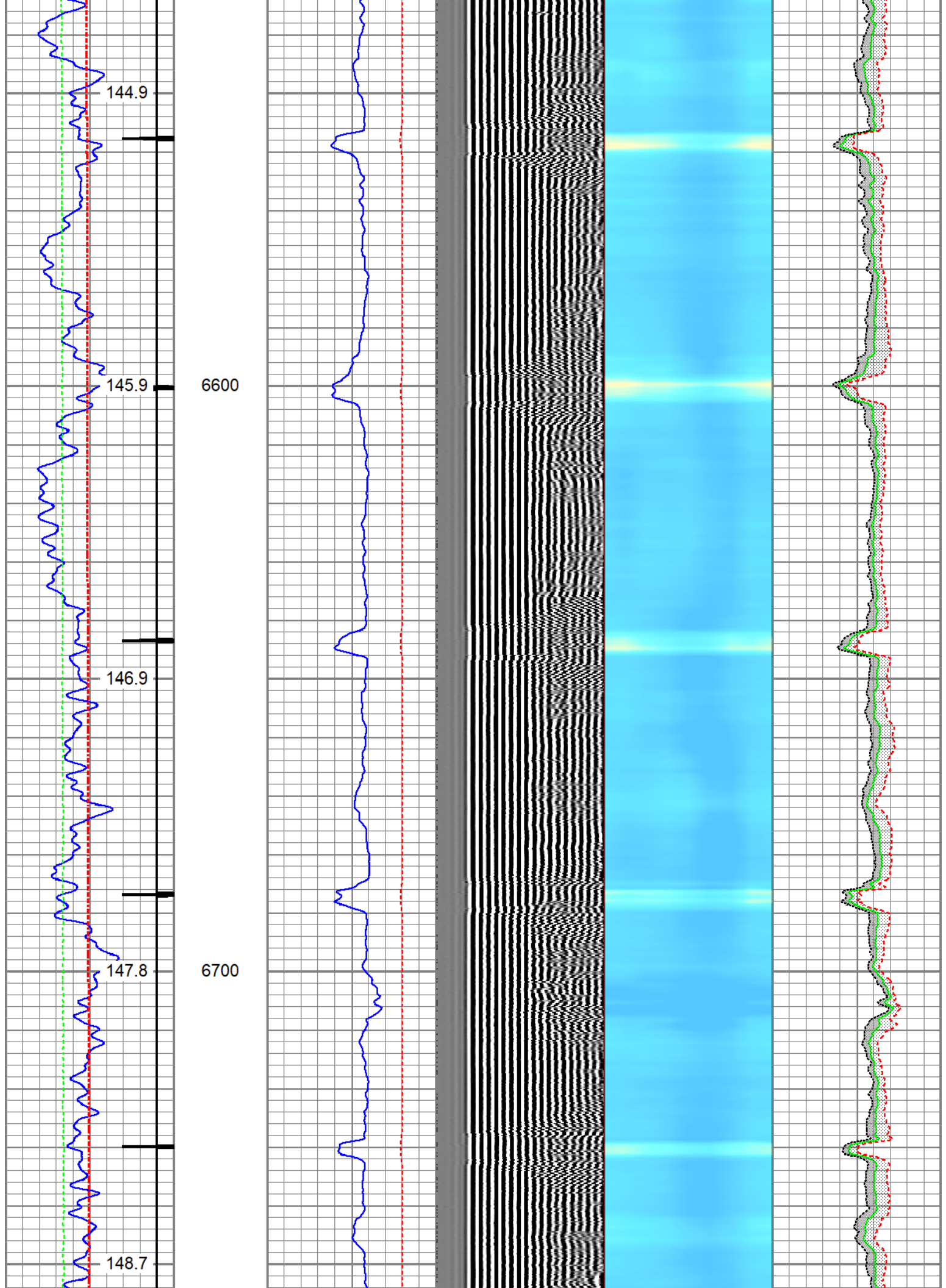




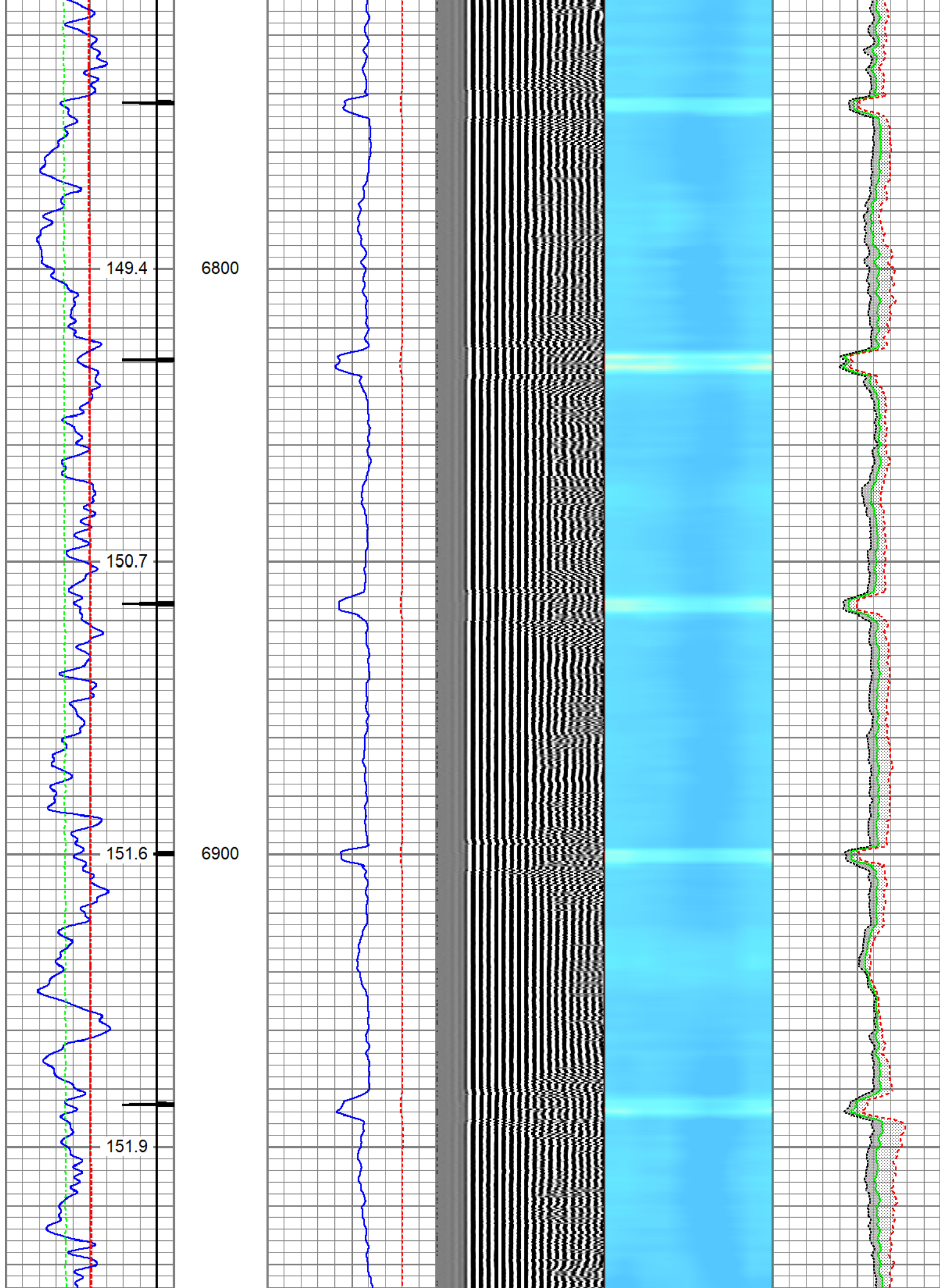


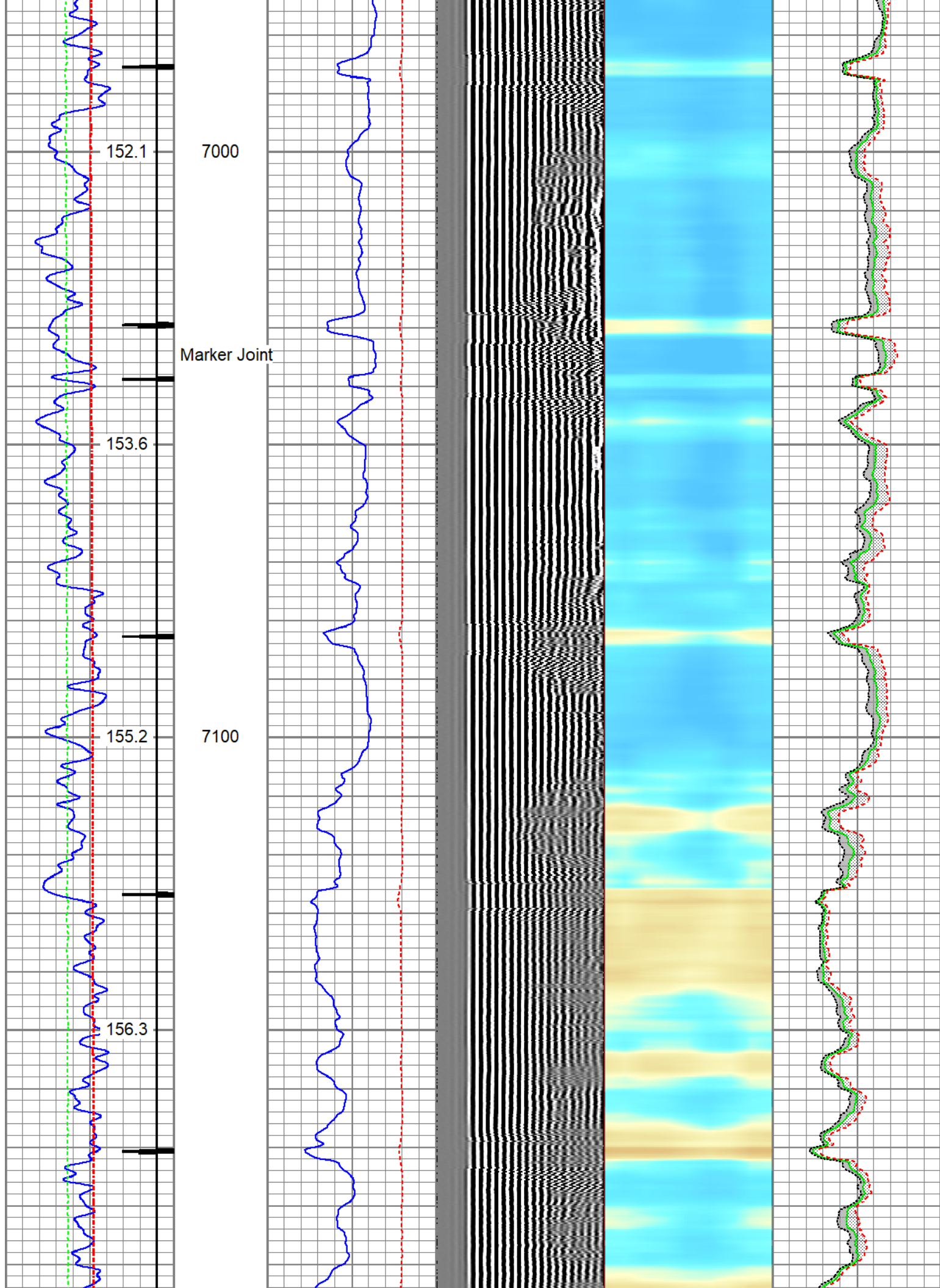


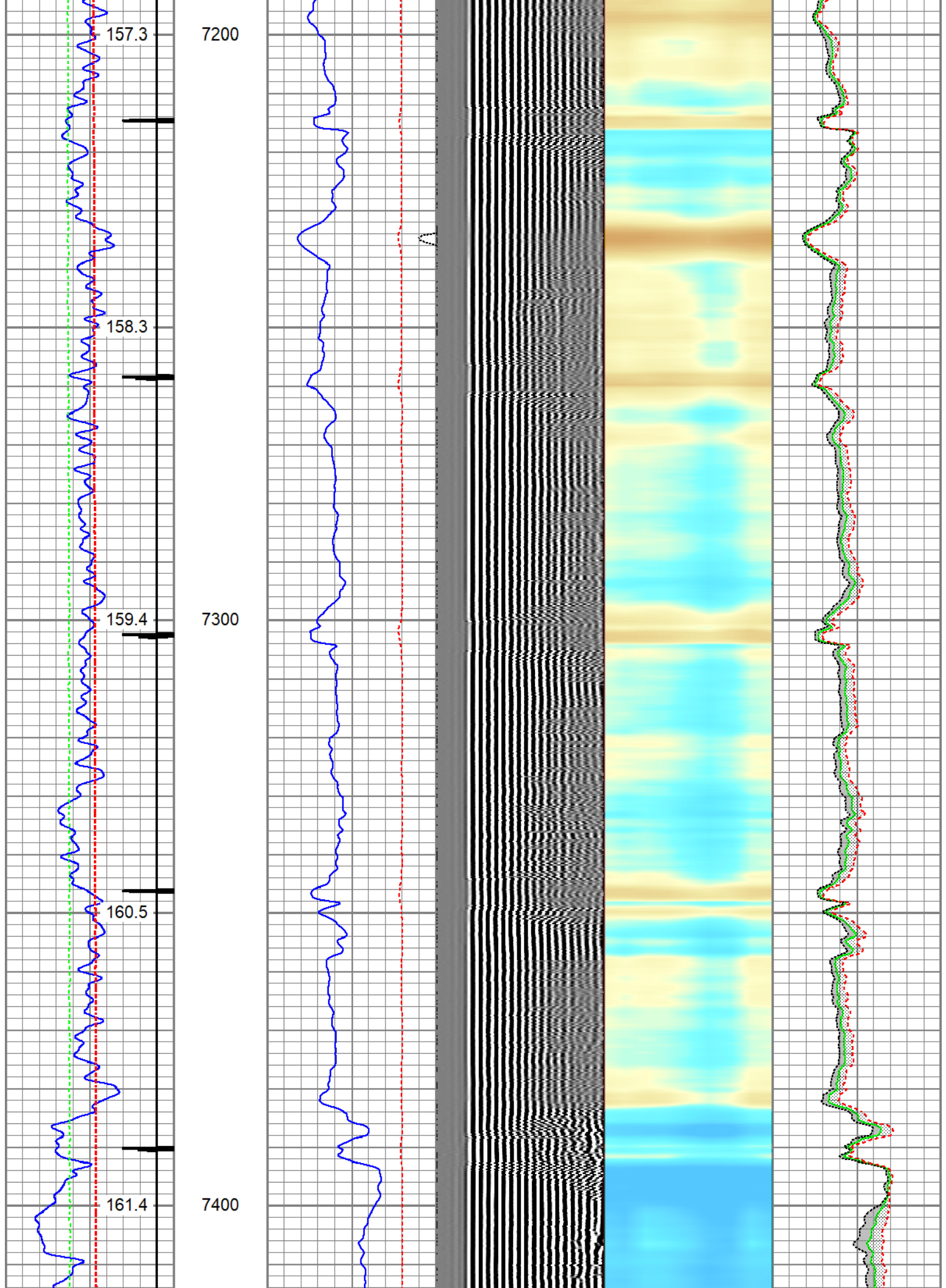




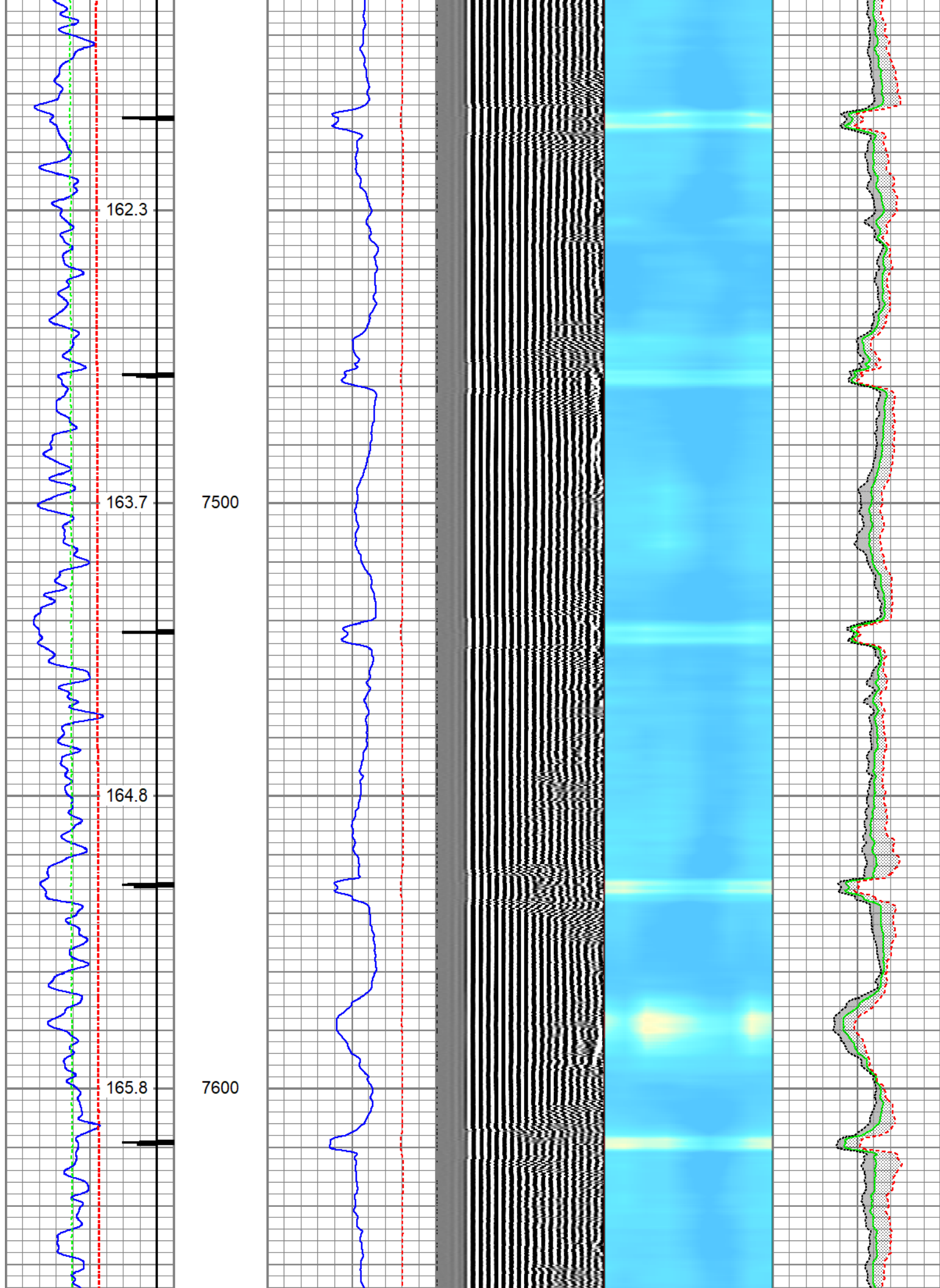


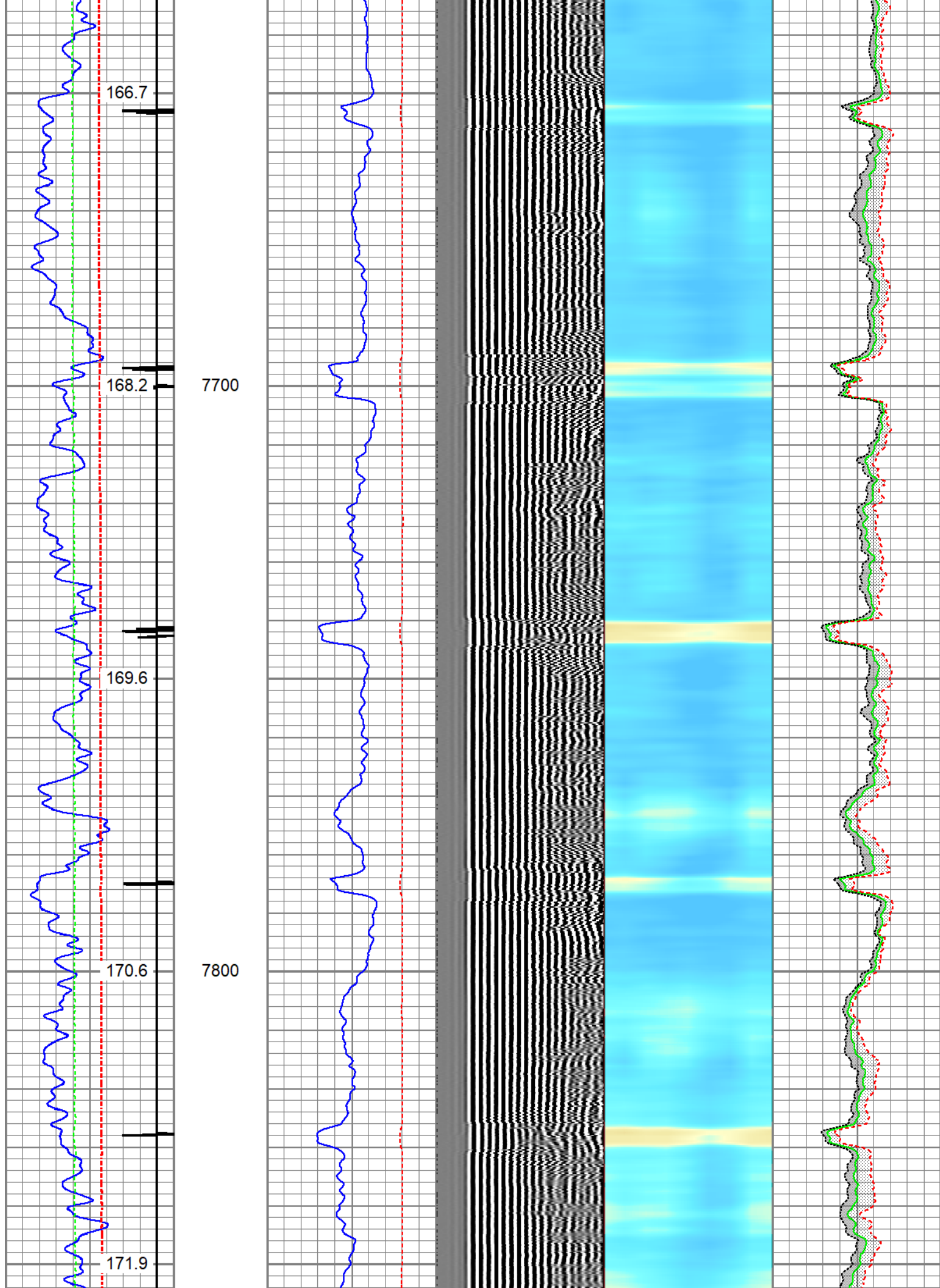


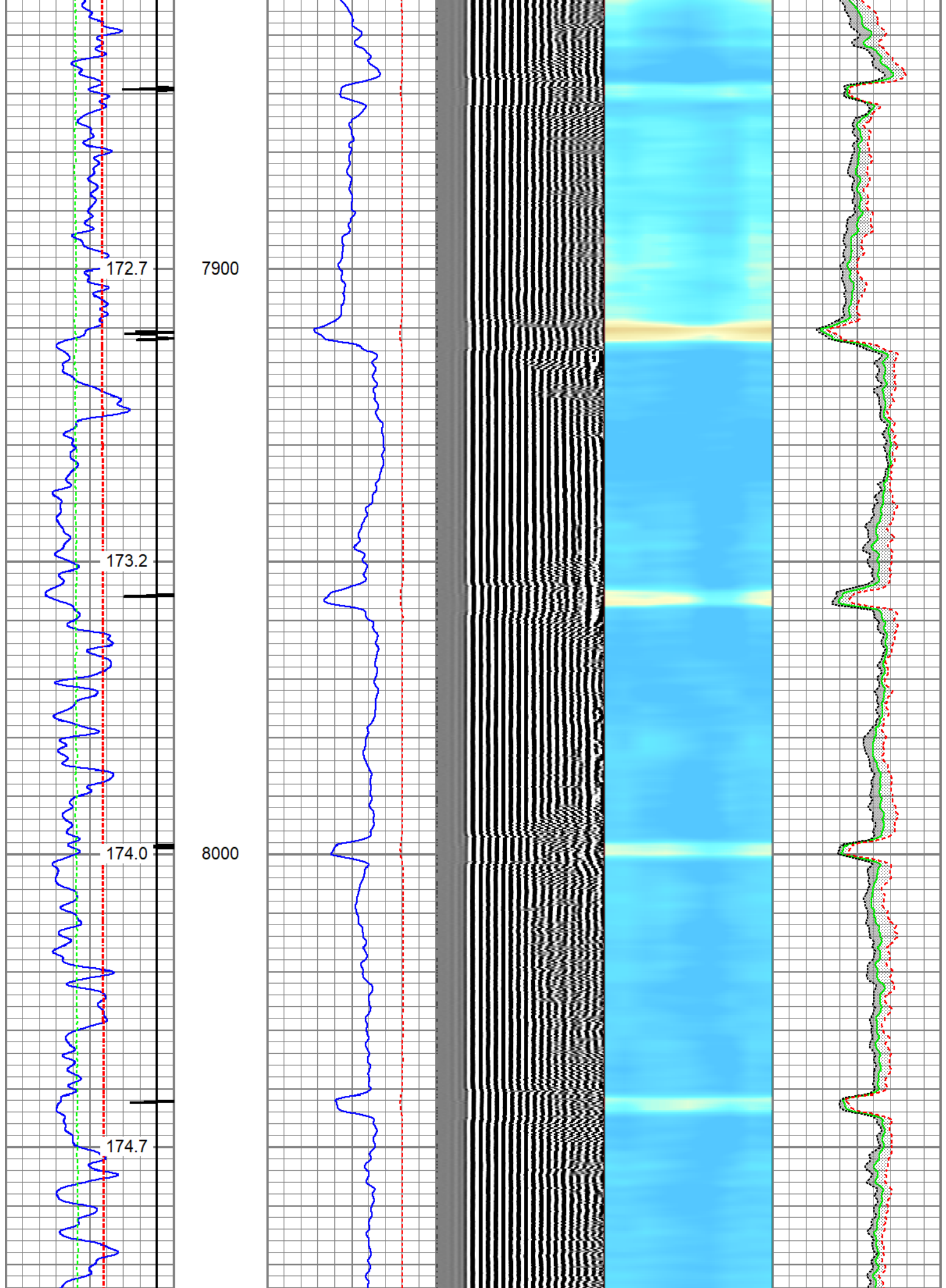




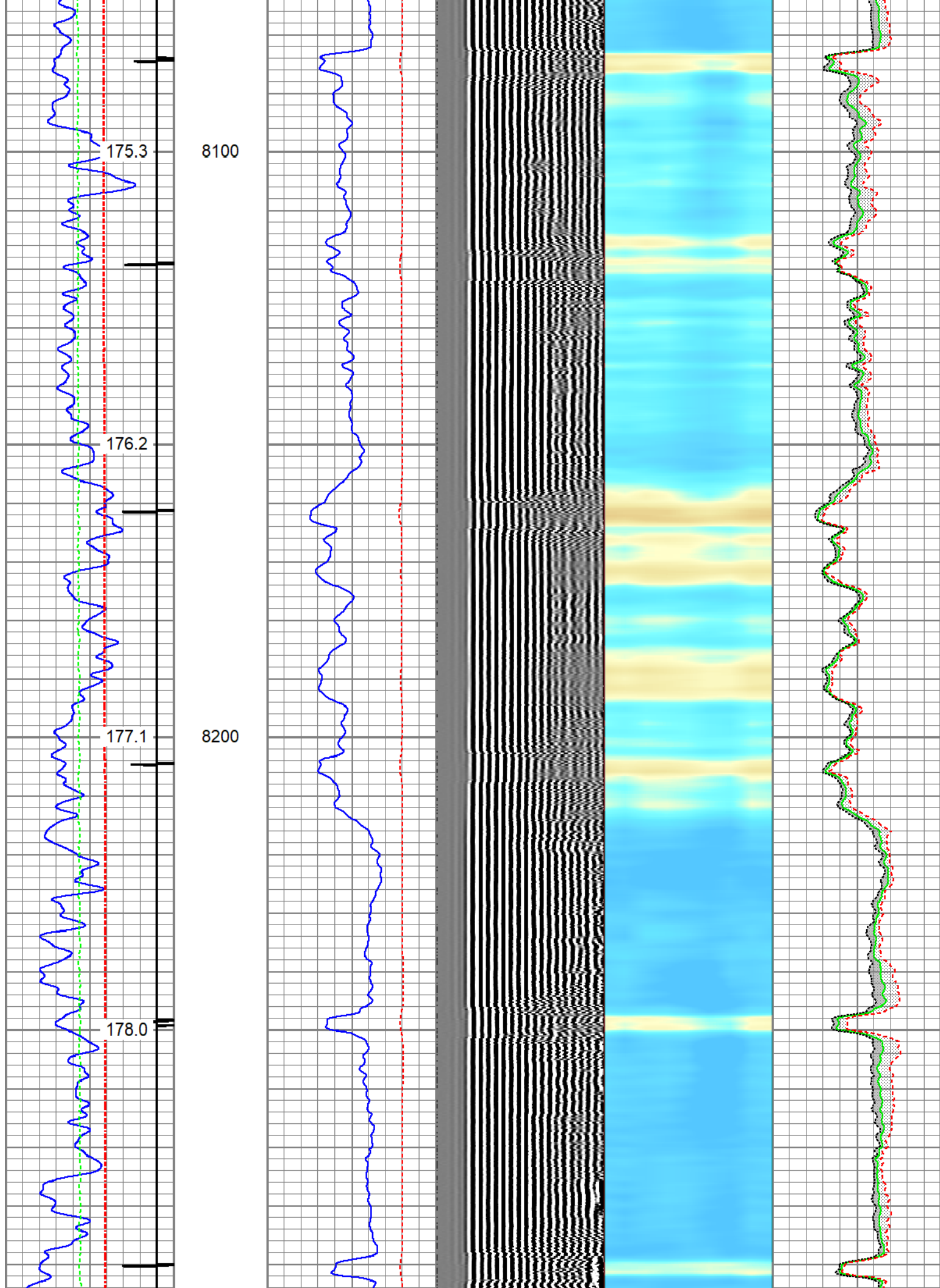


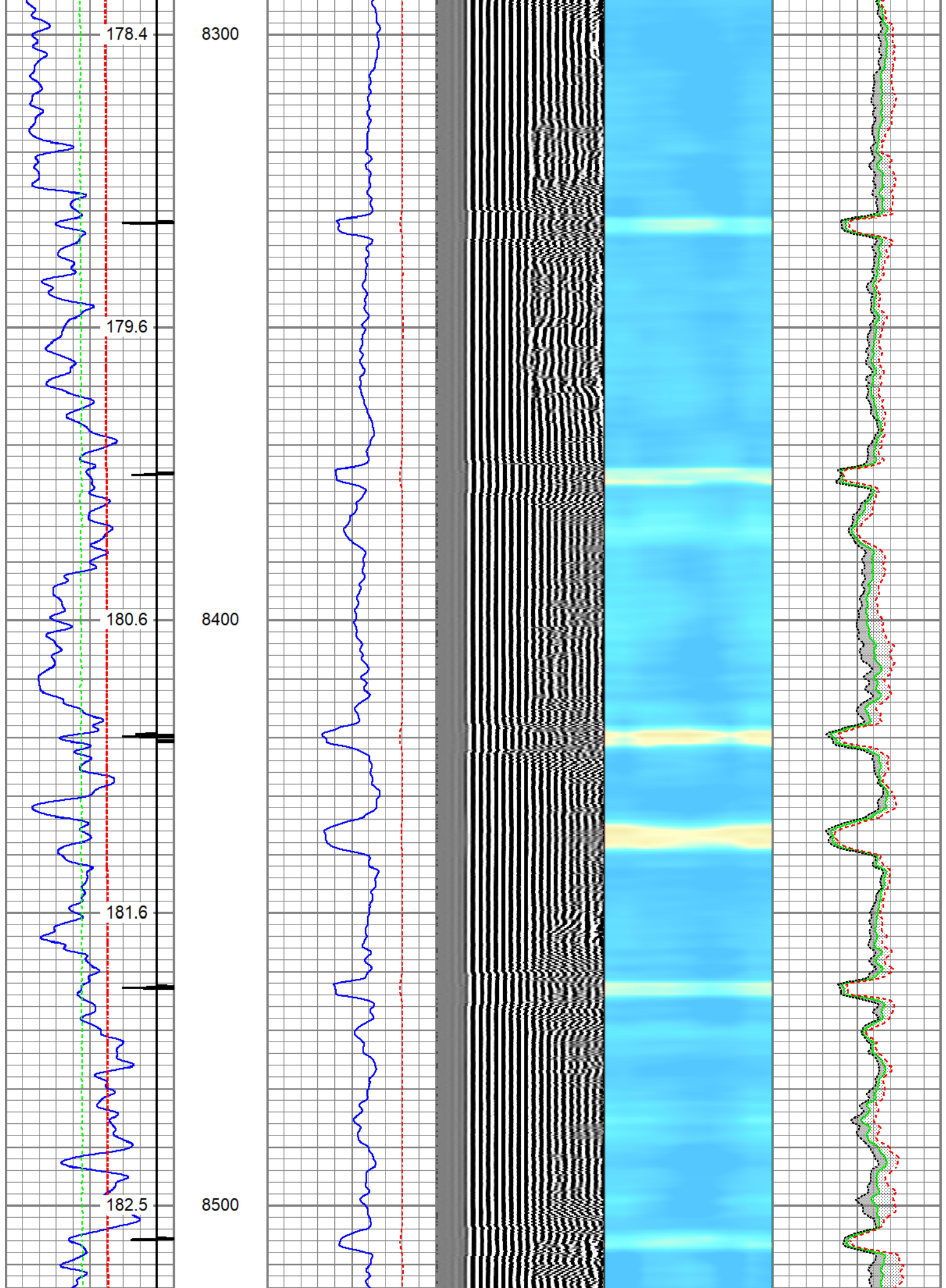


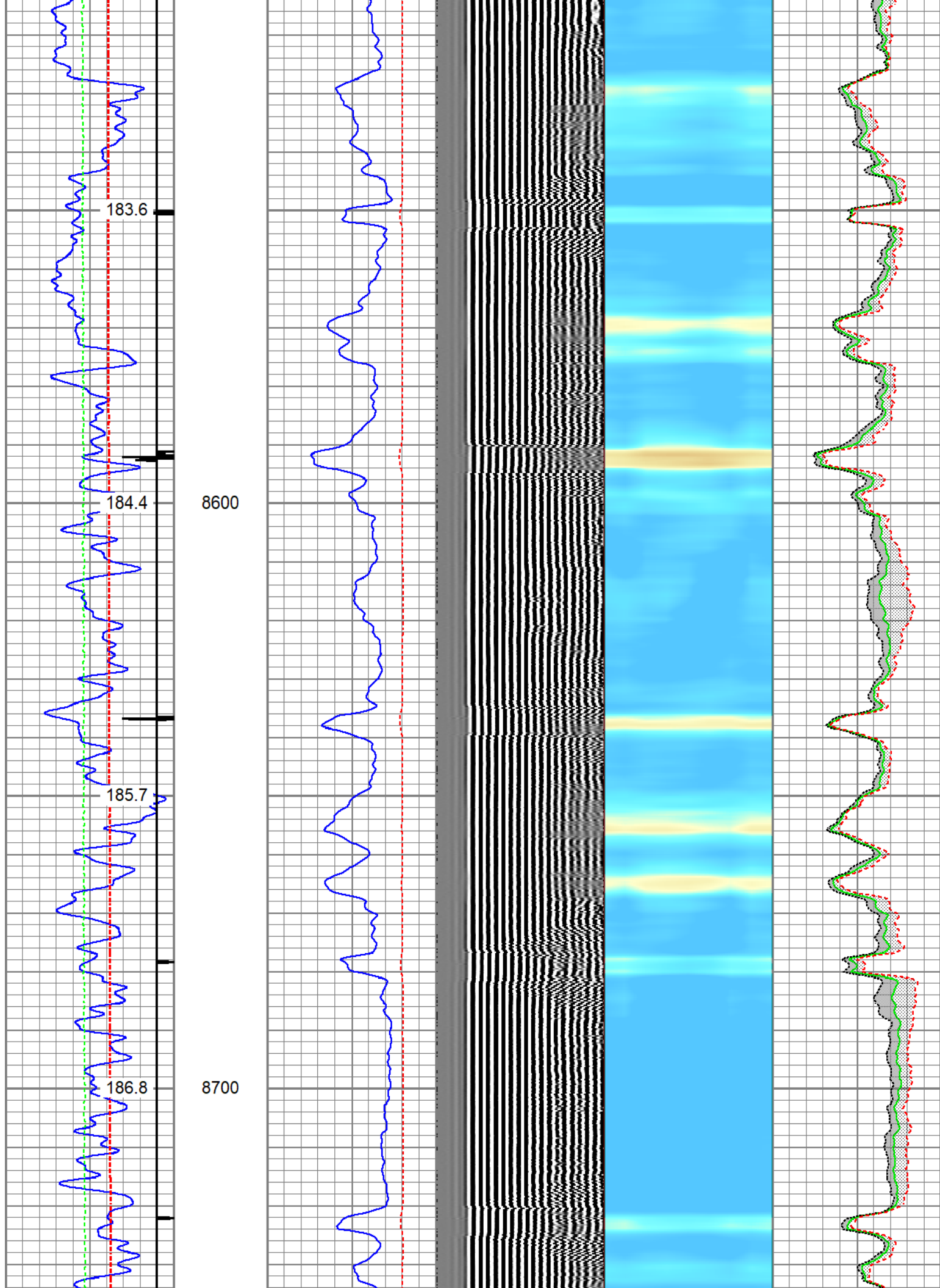




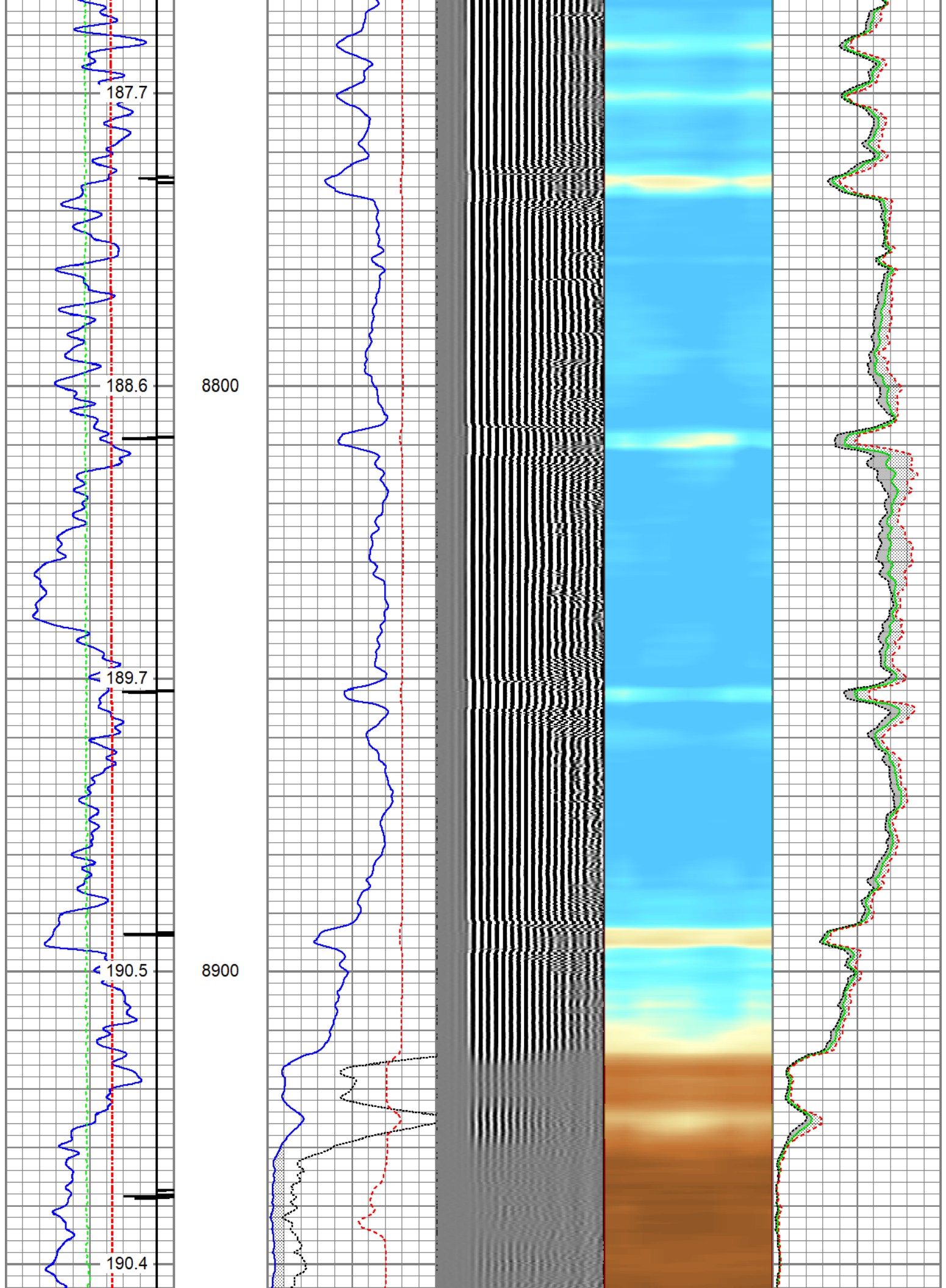


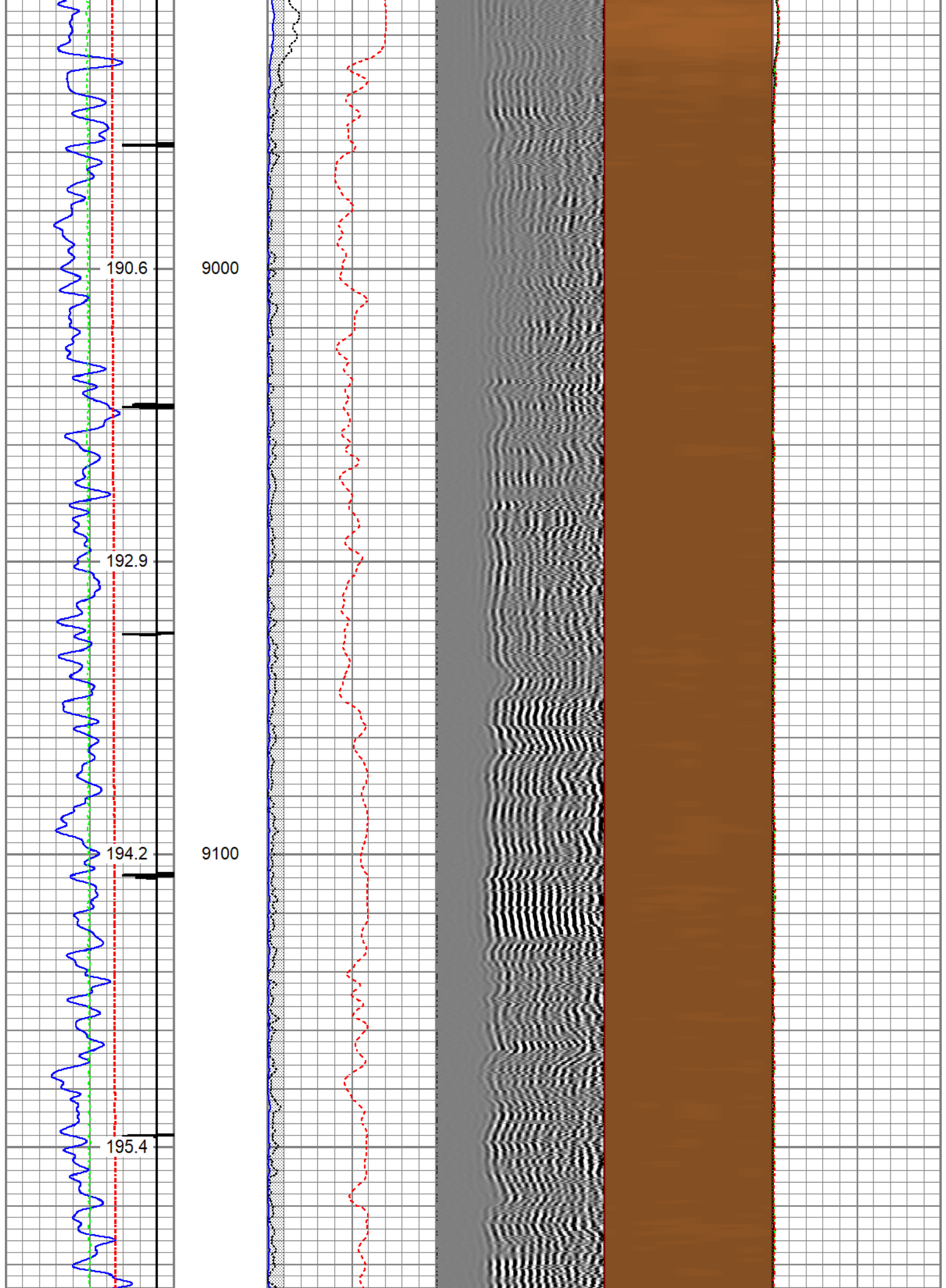


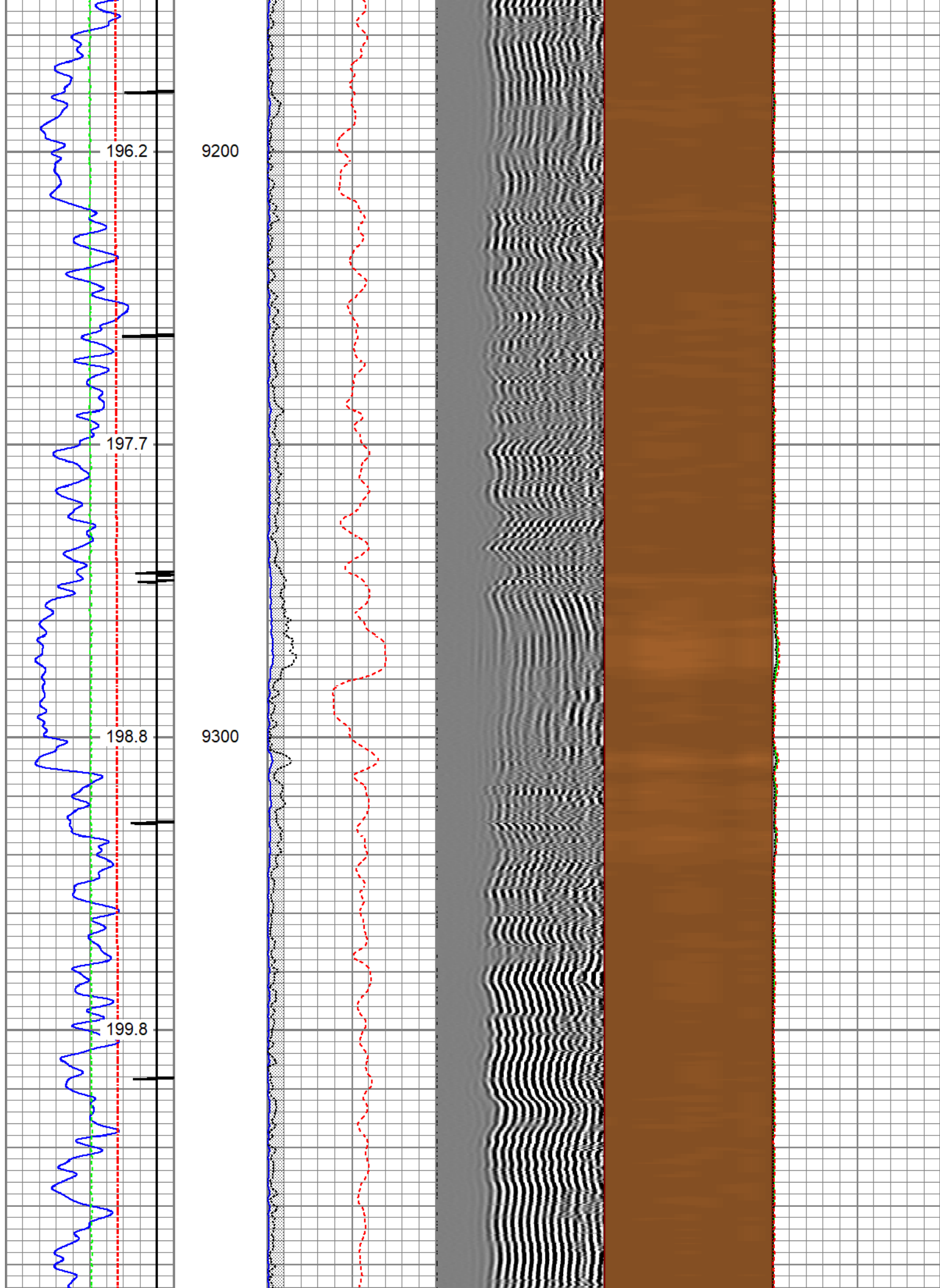




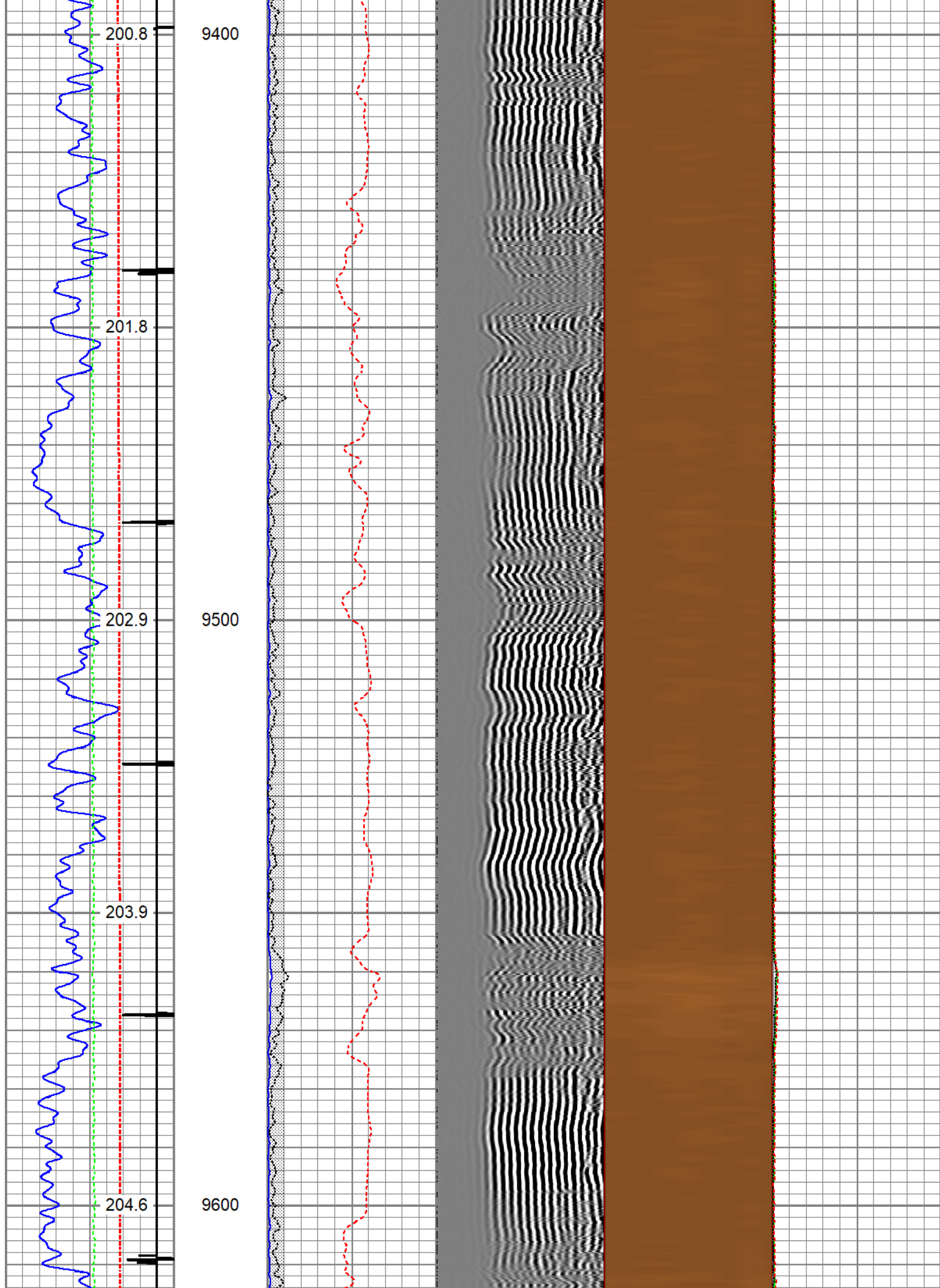


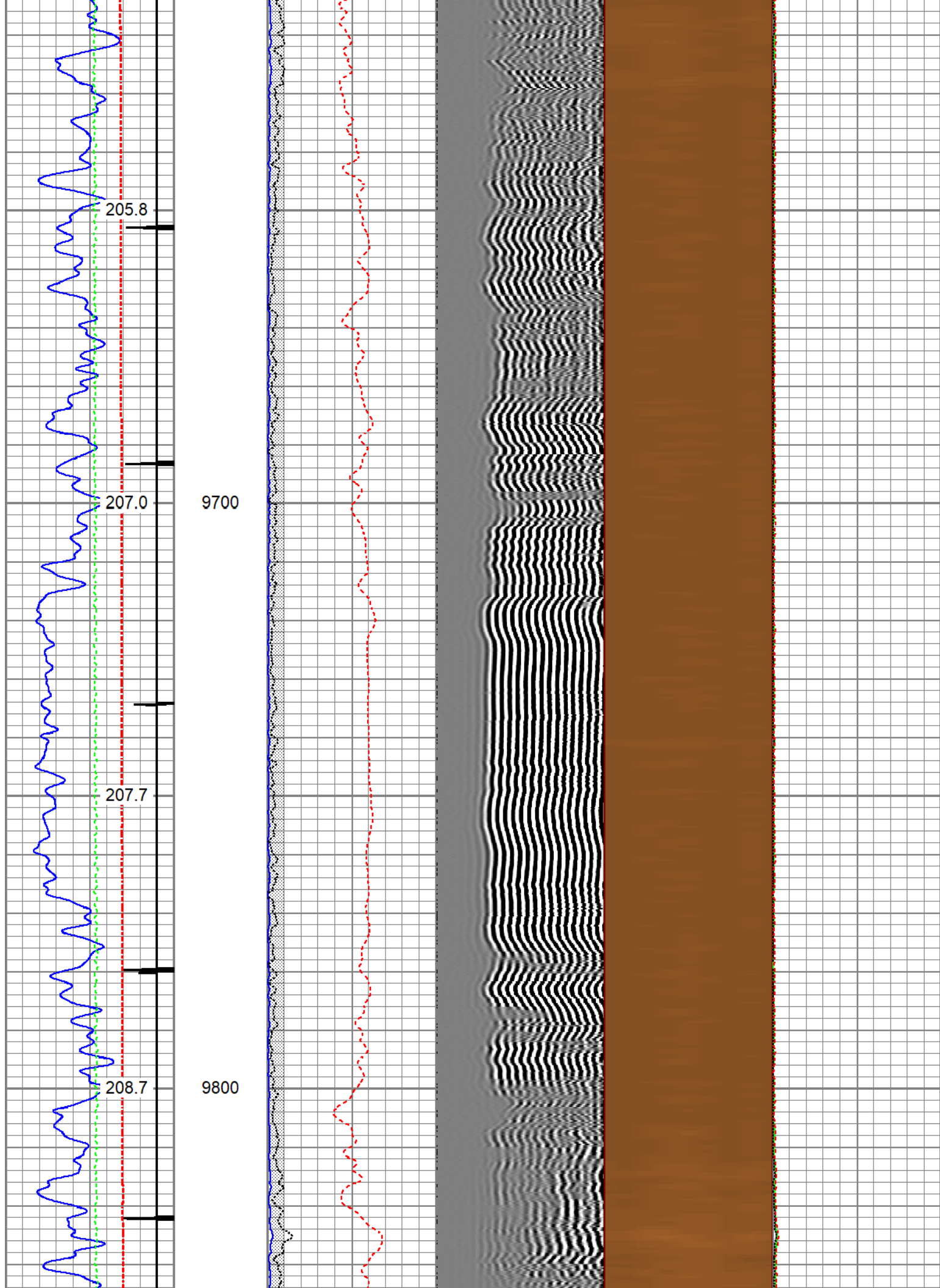


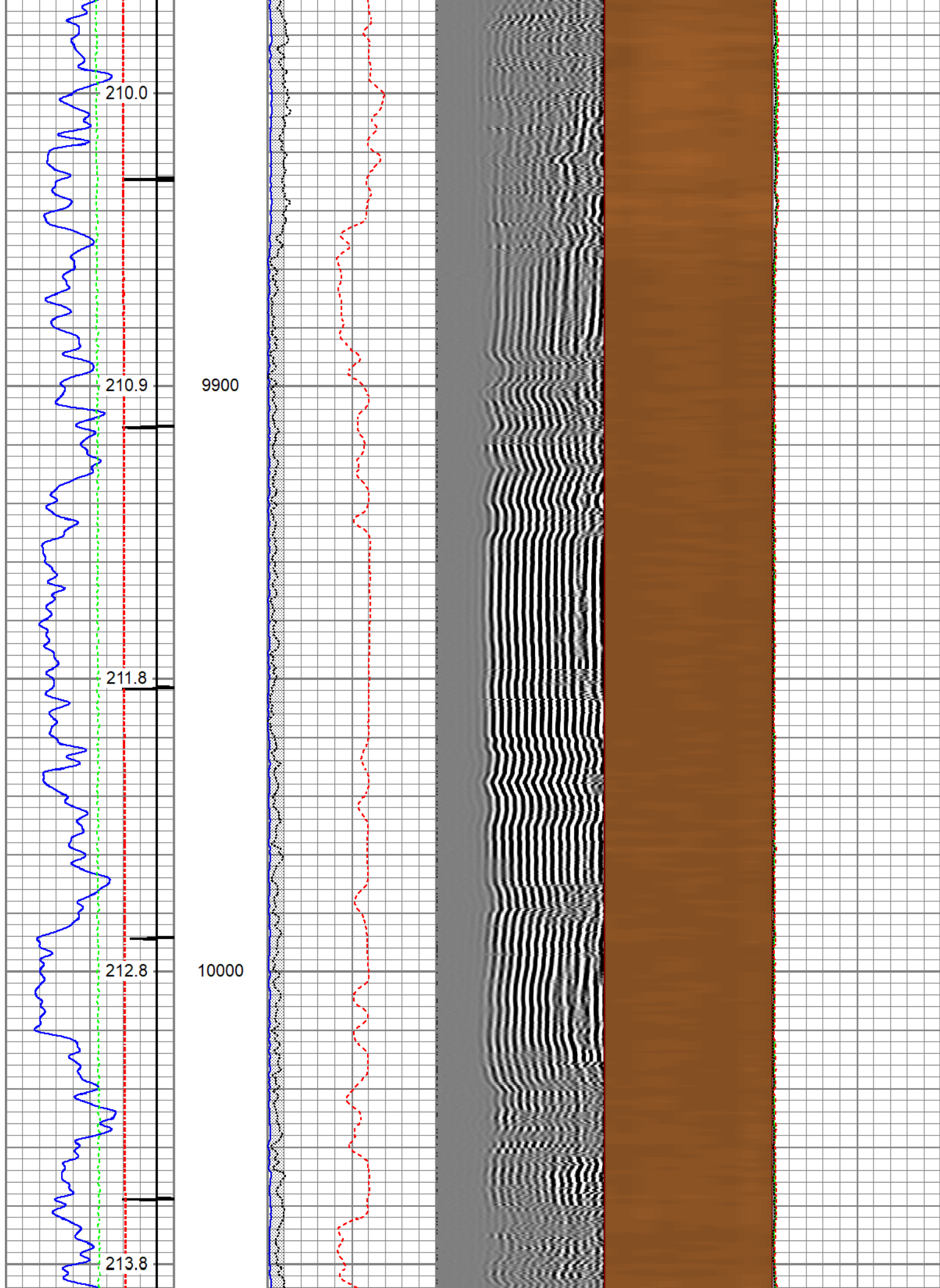




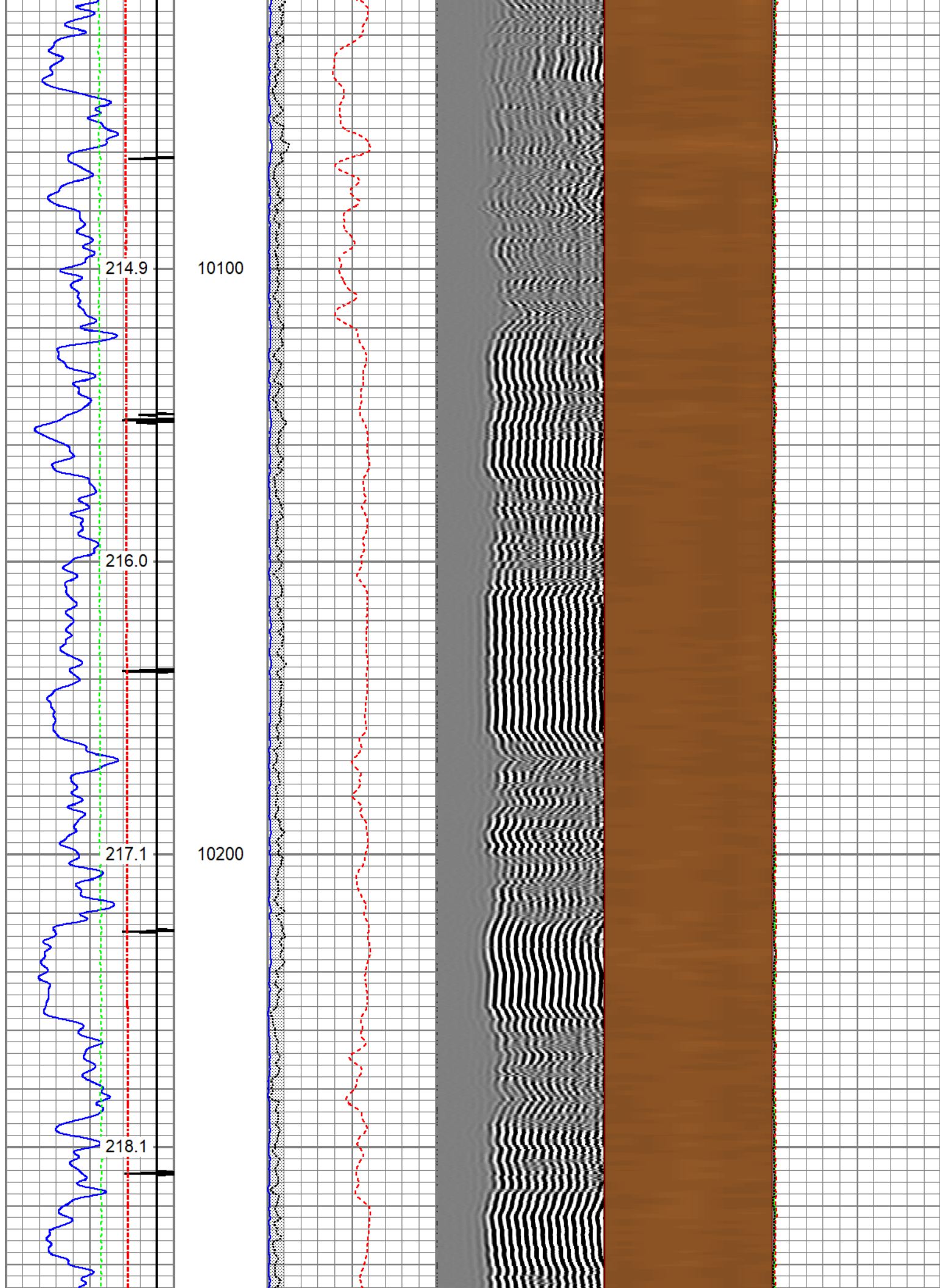


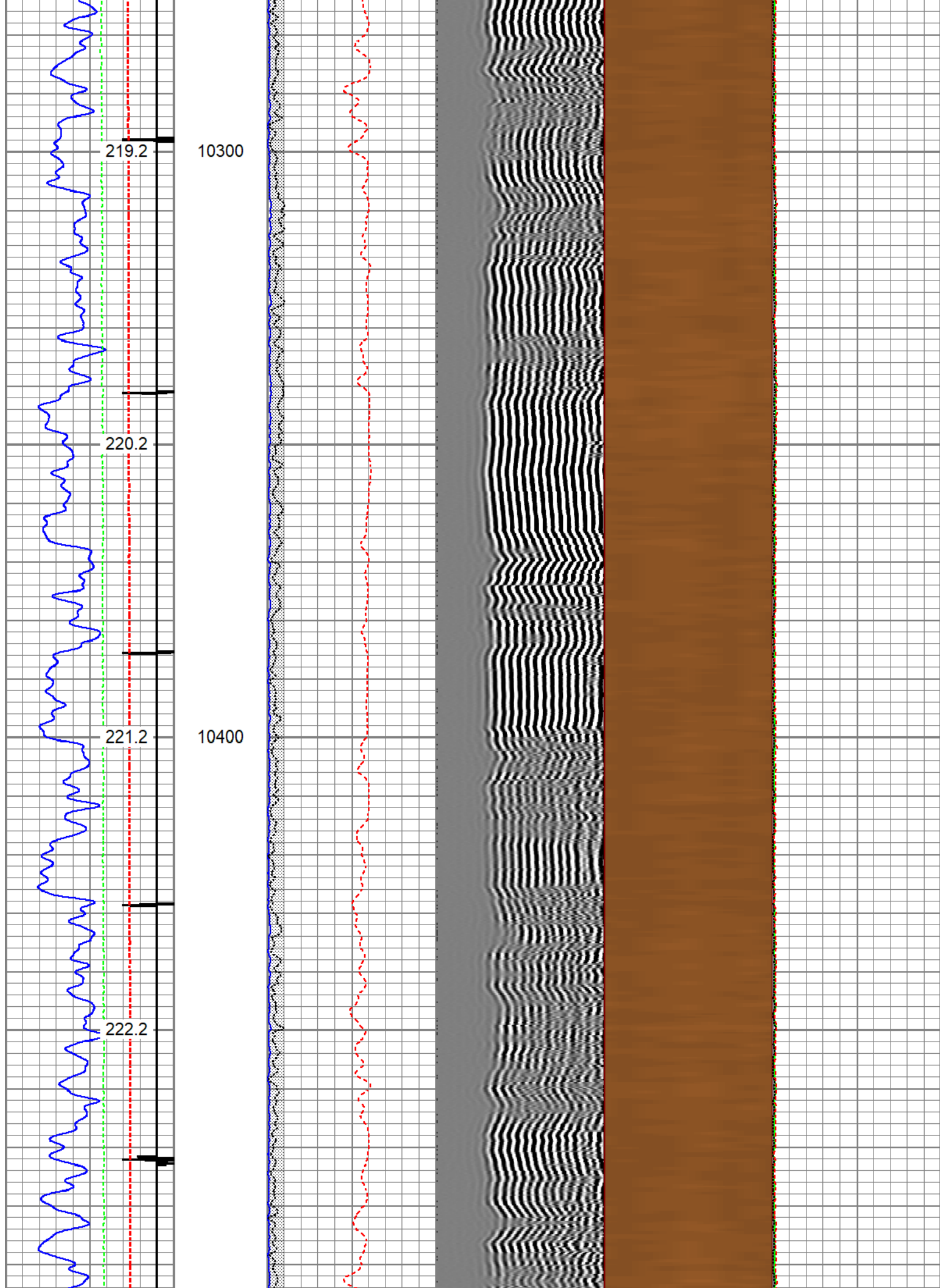


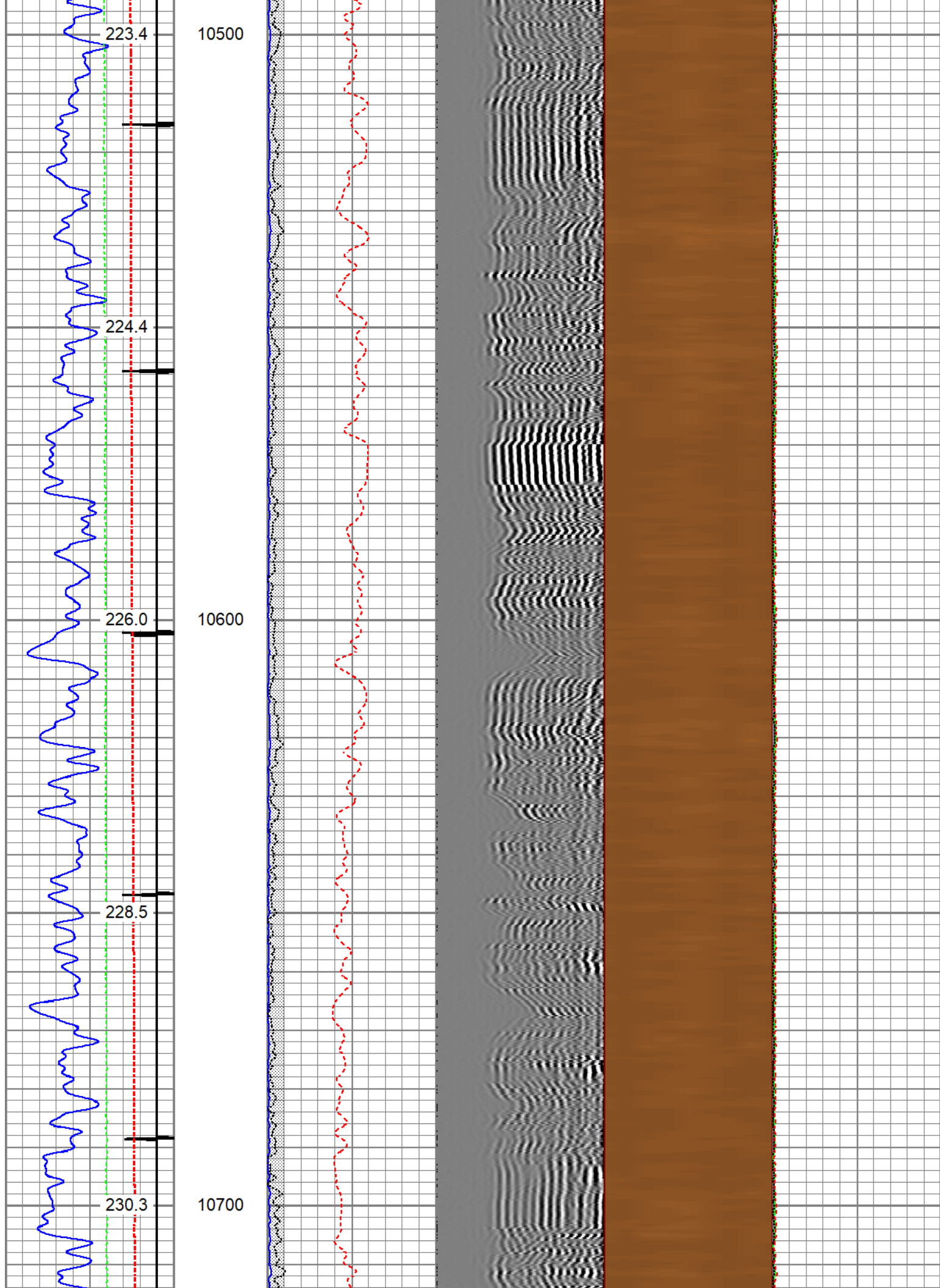




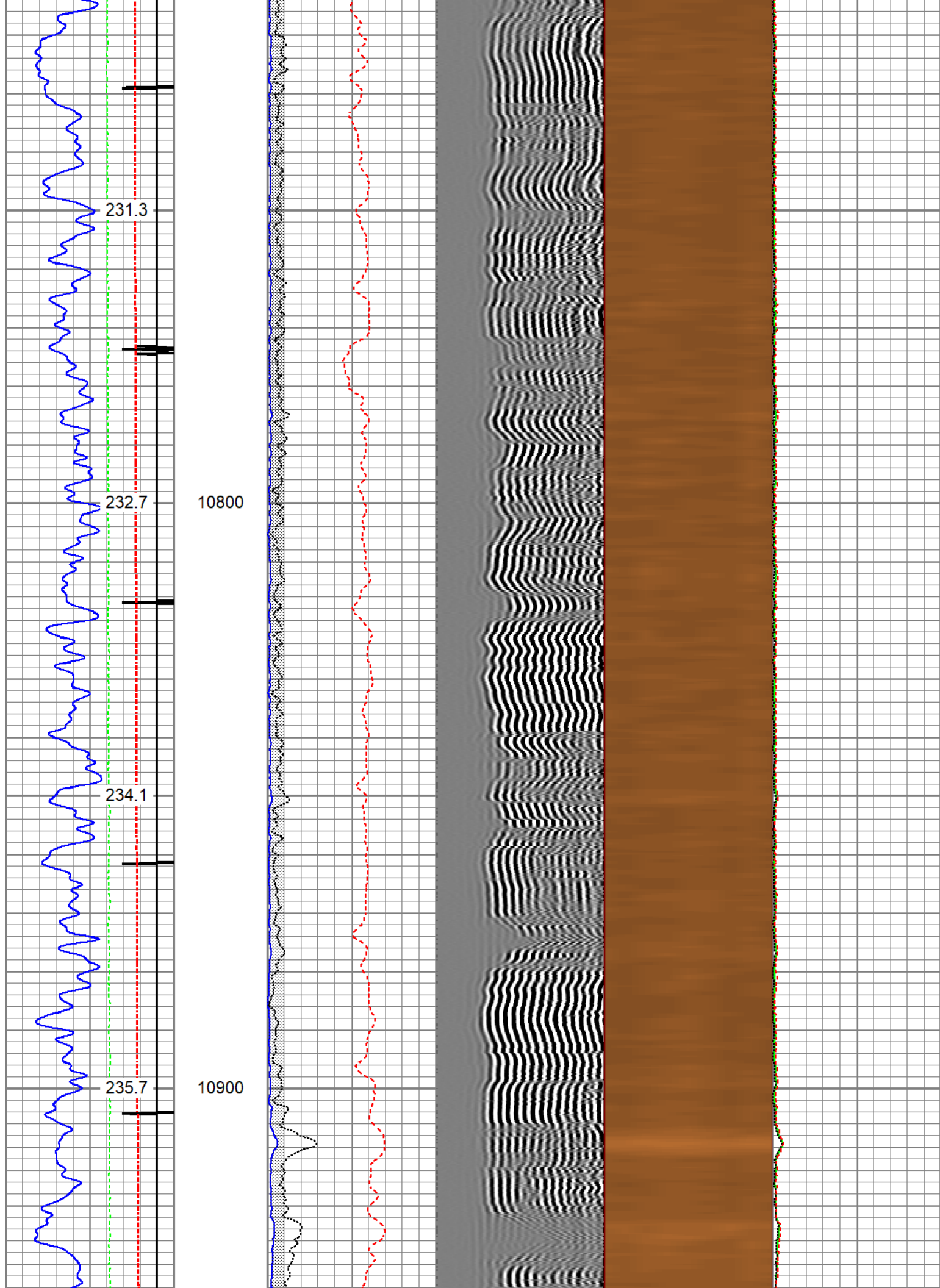


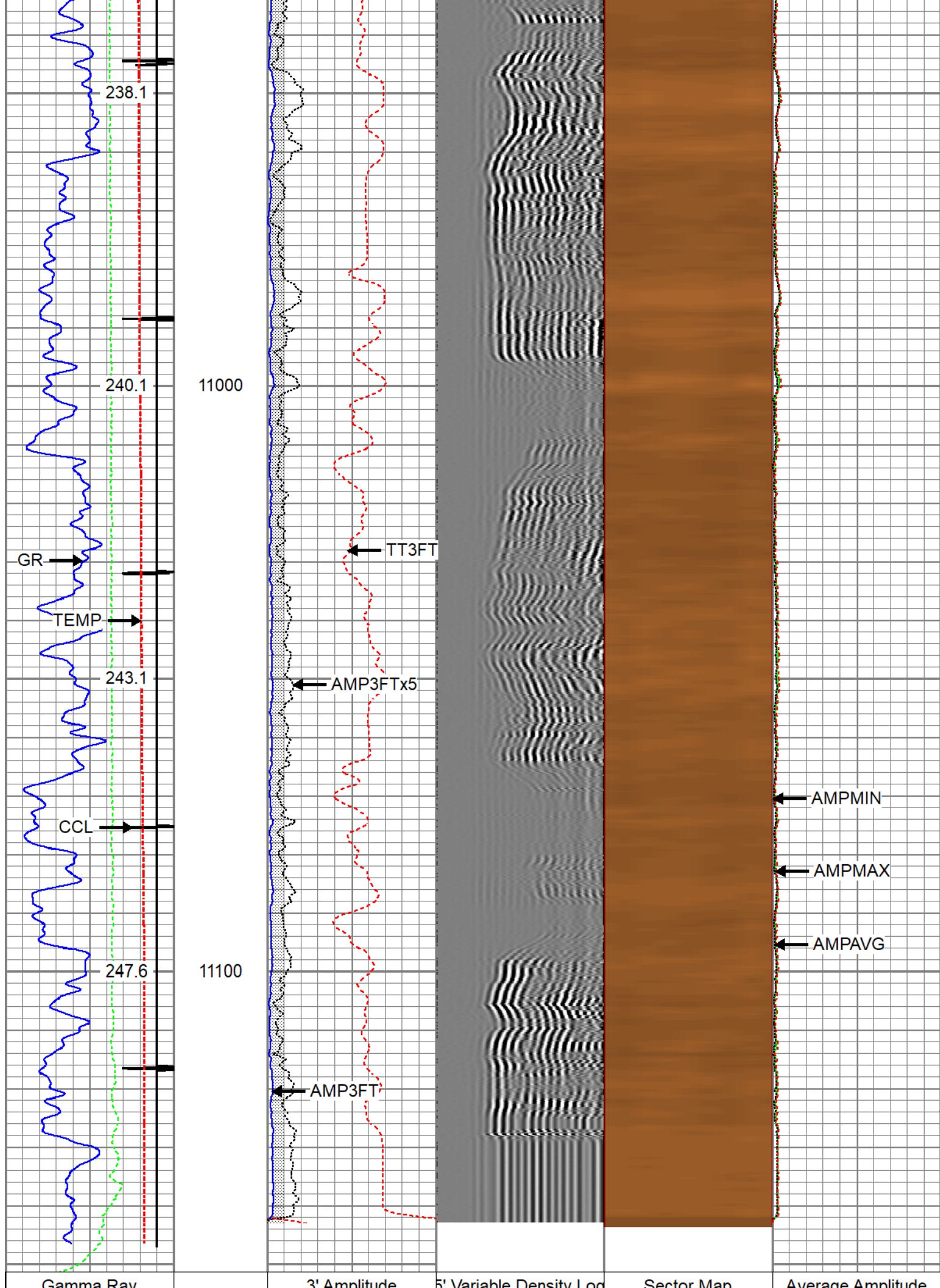










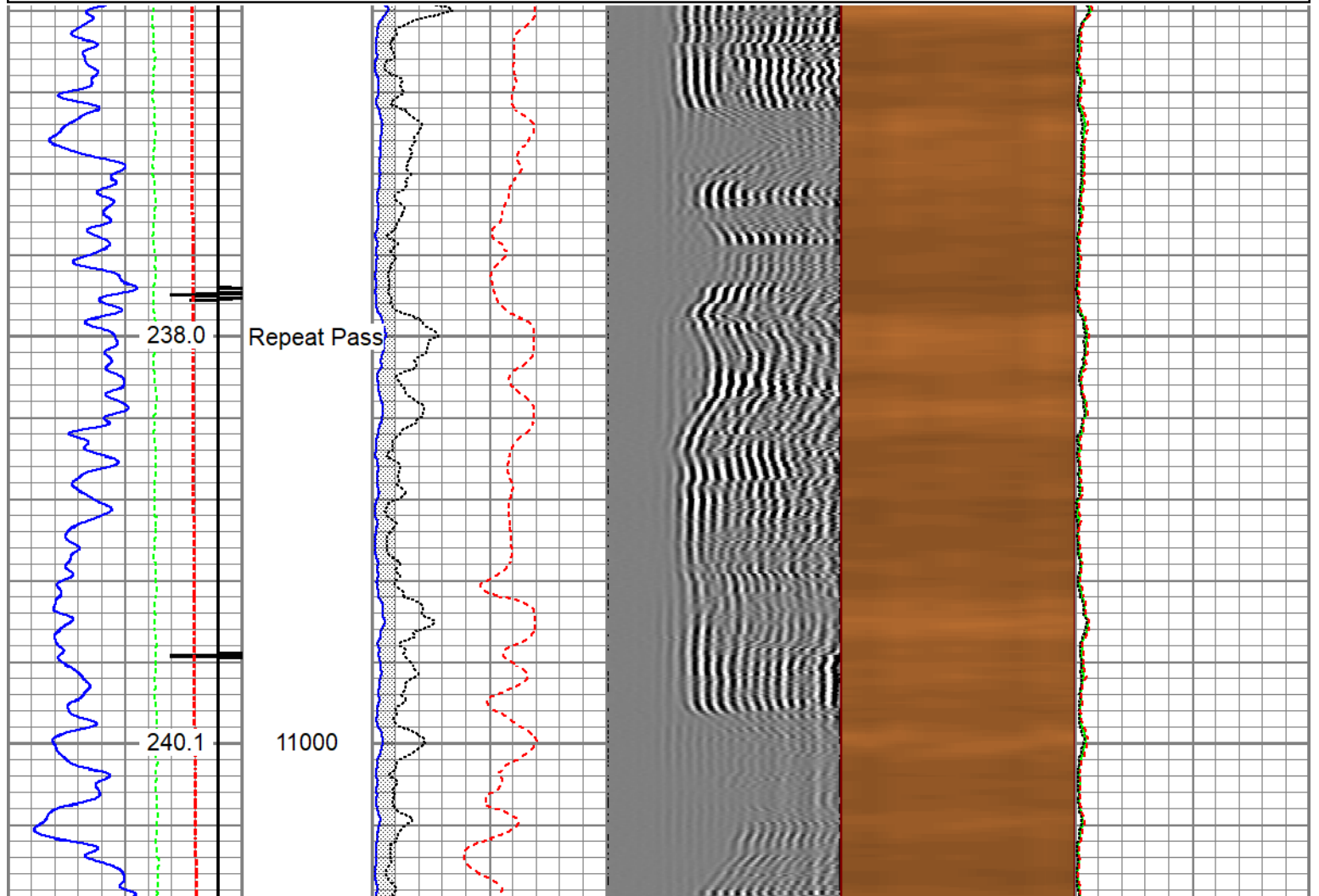


Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 200	0 (mV) 100	200 (usec) 1200		0 120
Line Tension	3' Amplitude x 5			Minimum Amplitude
0 (lb) 4000	0 (mV) 20			0 120
-9 CCL 1	3' Travel Time			Maximum Amplitude
0 Temp (degF) 300	650 (usec) 150			0 120

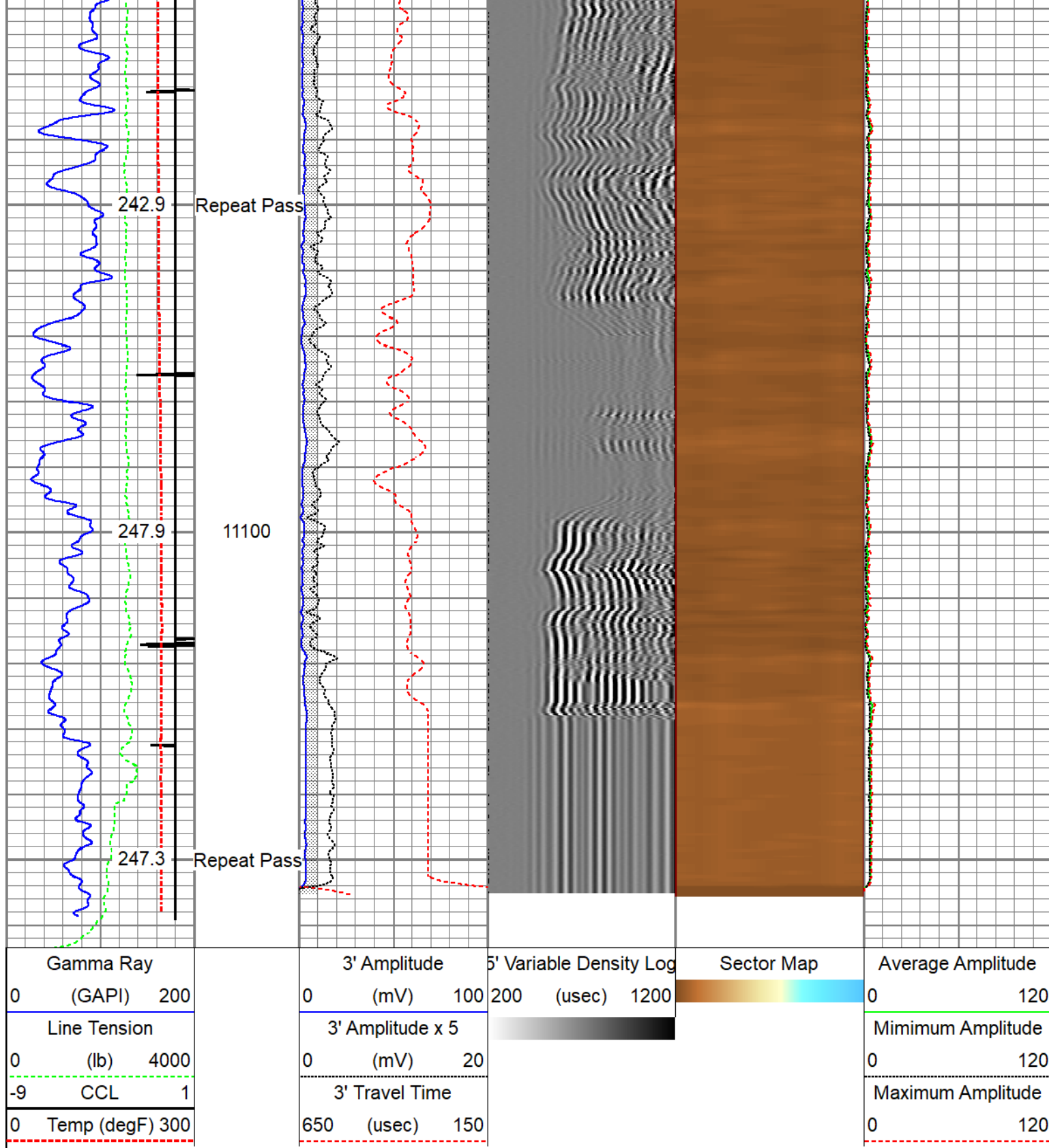
	Repeat Pass 5" = 100'
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Database File	fed wmc 532-20 rcbl 01-02-2023\tep_wmc fed 532-20_rcbl_1-2-2023.db
Dataset Pathname	repeat
Presentation Format	twgrcbl
Dataset Creation	Mon Jan 02 15:21:08 2023
Charted by	Depth in Feet scaled 1:240

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







### Calibration Report

Database File C:\ProgramData\Warrior\Data\Fed WMC 532-20 RCBL 01-02-2023\tep\_wmc fed 532-20\_rcbl\_1-2-2023  
Dataset Pathname main.1  
Dataset Creation Tue Jan 03 11:18:22 2023

### Gamma Ray Calibration Report

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 Mon Jan 2 14:39:14 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

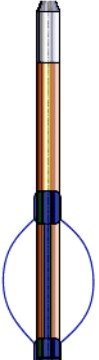

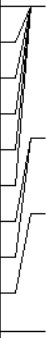

Internal Reference Calibration, performed (Not Performed):						
	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.003	0.764	1.000	0.000

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
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Performed:	Thu Jul 28 15:46:49 2022
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	Low Read.	High Read.	Low Ref.	High Ref.	
X Accelerometer	-931.00	904.00	-1.00	1.00	gee
Y Accelerometer	-899.00	884.00	-1.00	1.00	gee
Z Accelerometer	1.47	886.18	0.00	1.00	gee

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					
RBT_ACCZ	5.10		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
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					
GC-GCT275-0000	2.72		GC-GCT275-0000 (FW1311-93)	4.77	2.75	55.00



GCT_IntTemp	2.00		Probe 2.75" Gamma Ray - CCL w/ Temp			
			Plug-FA108-0000 1.38" Bull Plug	0.33	1.38	1.00
Dataset: tep_wmc fed 532-20_rcbl_1-2-2023.db: field/well/run1/main Total length: 13.85 ft Total weight: 186.00 lb O.D.: 3.25 in						

Company	TEP Rocky Mountain LLC				
Well	Federal WMC 532-20				
Field	Rulison				
County	Garfield		State	Colorado	
			Radial Cement Bond Gamma Ray Casing Collar Log		