



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company Caerus Piceance LLC

Well FED 15D-13-496

Field Grand Valley

County Garfield State Colorado

Location: API #: 05-045-24174

Other Services

SEC 24 TWP 4S RGE 96W

Elevation

Permanent Datum Ground Level Elevation 8128'
Log Measured From Kelly Bushing 30 FT
Drilling Measured From Kelly Bushing

K.B. 8158'
D.F. ---
G.L. 8128'

Company Caerus Piceance LLC
Well FED 15D-13-496
Field Grand Valley
County Garfield
State Colorado

Date	19-FEB-2020			
Run Number	One			
Depth Driller	12590 FT			
Depth Logger	12523 FT			
Bottom Logged Interval	12511 FT			
Top Log Interval	Surface			
Open Hole Size	8.750"			
Type Fluid	Water			
Density / Viscosity	8.34 lb/gal			
Max. Recorded Temp.	292°F			
Estimated Cement Top	See Log			
Time Well Ready	ROA			
Time Logger on Bottom	10:20			
Equipment Number	HD-0331			
Location	Grand Junction, CO			
Recorded By	J. Donnelly			
Witnessed By	---			
Borehole Record				
Run Number	Bit	From	To	Size
				Weight
				From
				To
Tubing Record				
Casing Record	Size (in)	Wgt (lbs/ft)	Grade	Top
Surface Casing	9 5/8	36	J-55	Surface
Intermediate #1	4 1/2	11.6	P-110	Surface
Intermediate #2				
Inner				

<<< 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 30 FT
Marker Joint Recorded from 8052-8063 FT
Recorded with 0 PSI Surface Induced Pressure

Thank you for choosing Reliance Oilfield Services, LLC!

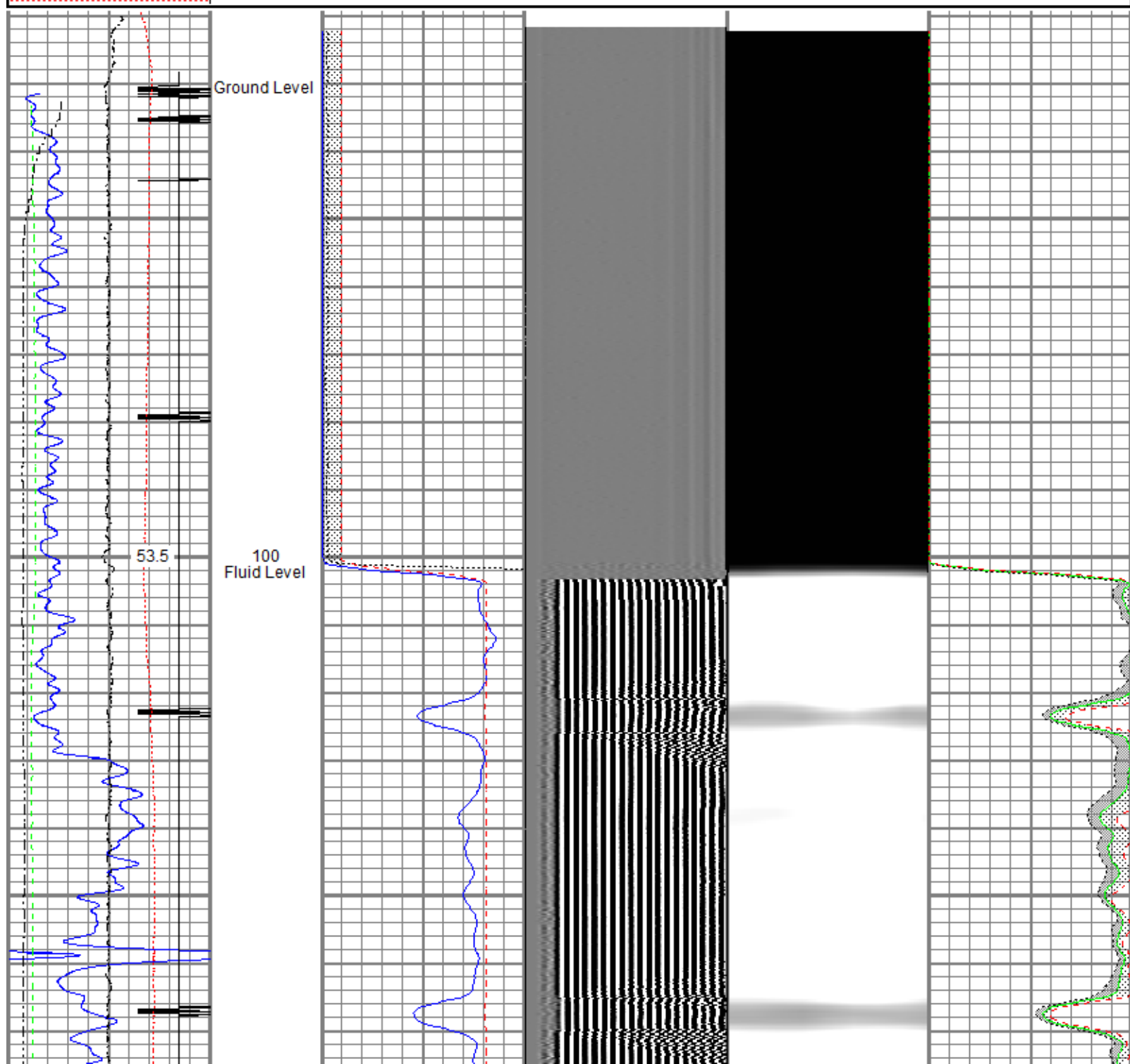
Main Pass

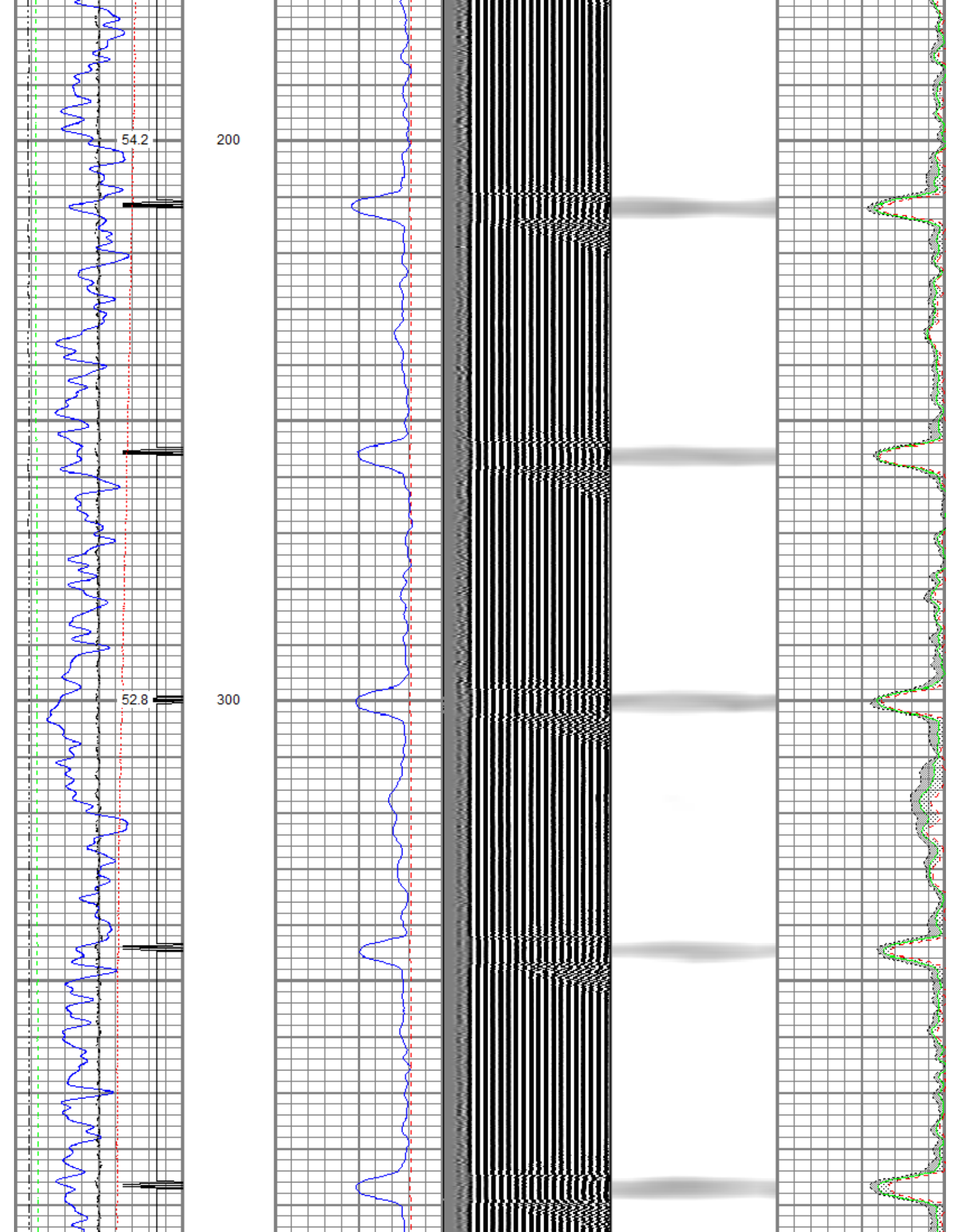


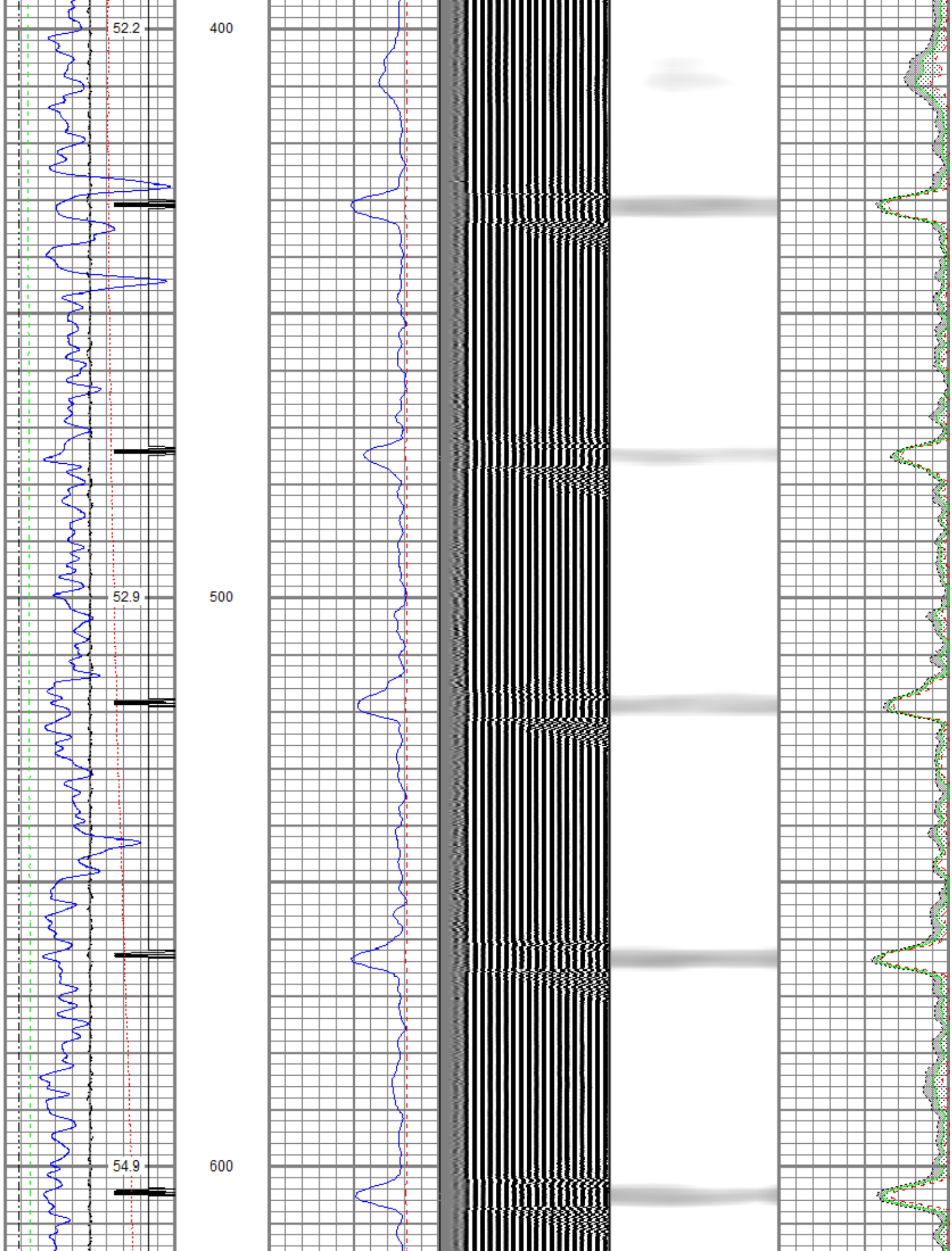
Recorded With 0 PSI Surface Induced Pressure

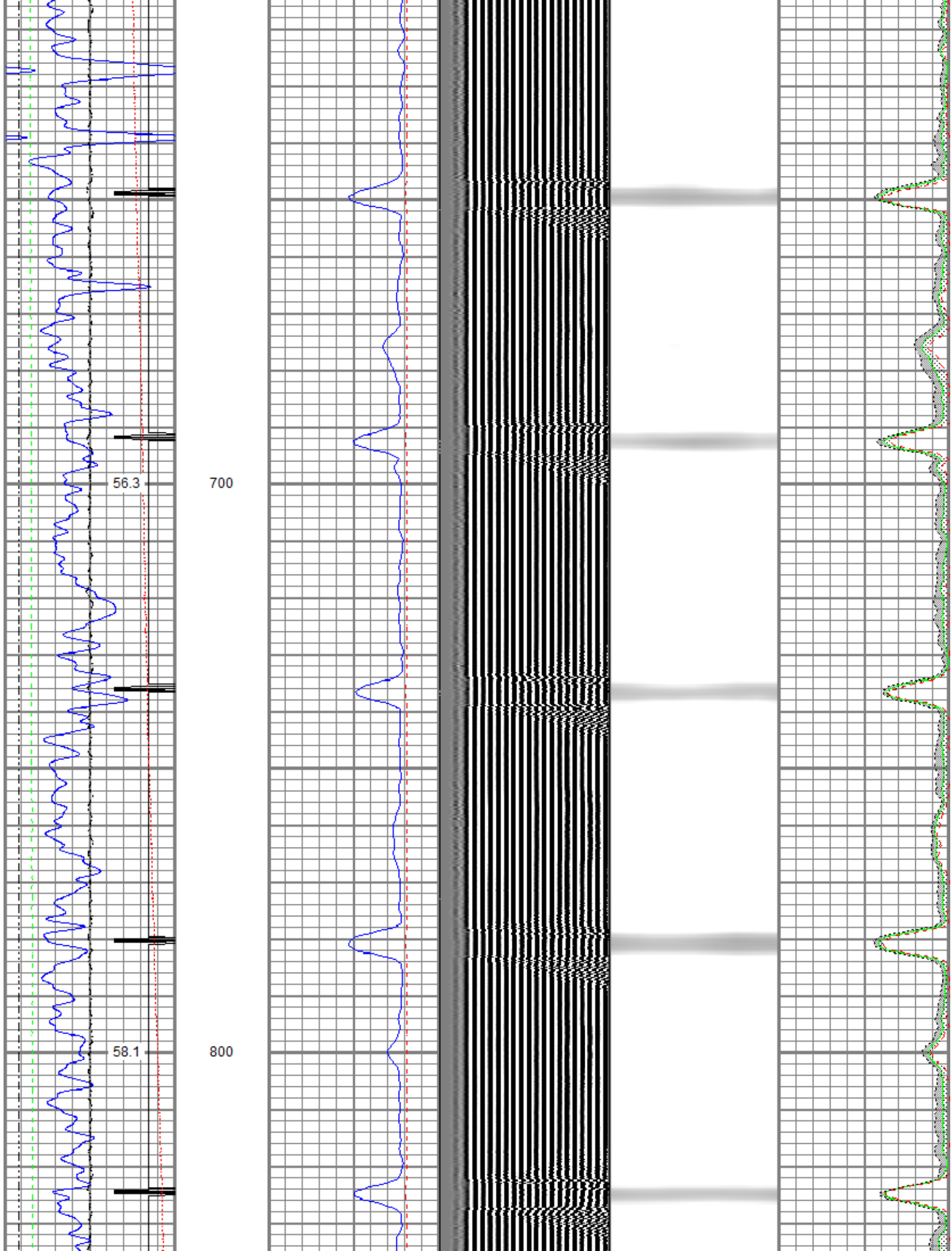
Database File caerus\caerus_fed 15d-13-496_rbl_02-18-20\processed_caerus_fed 15d-13-496_rbl_02-19-20.db
 Dataset Pathname main.2
 Presentation Format ros_radri_caerus
 Dataset Creation Fri Feb 21 13:31:46 2020
 Charted by Depth in Feet scaled 1:240

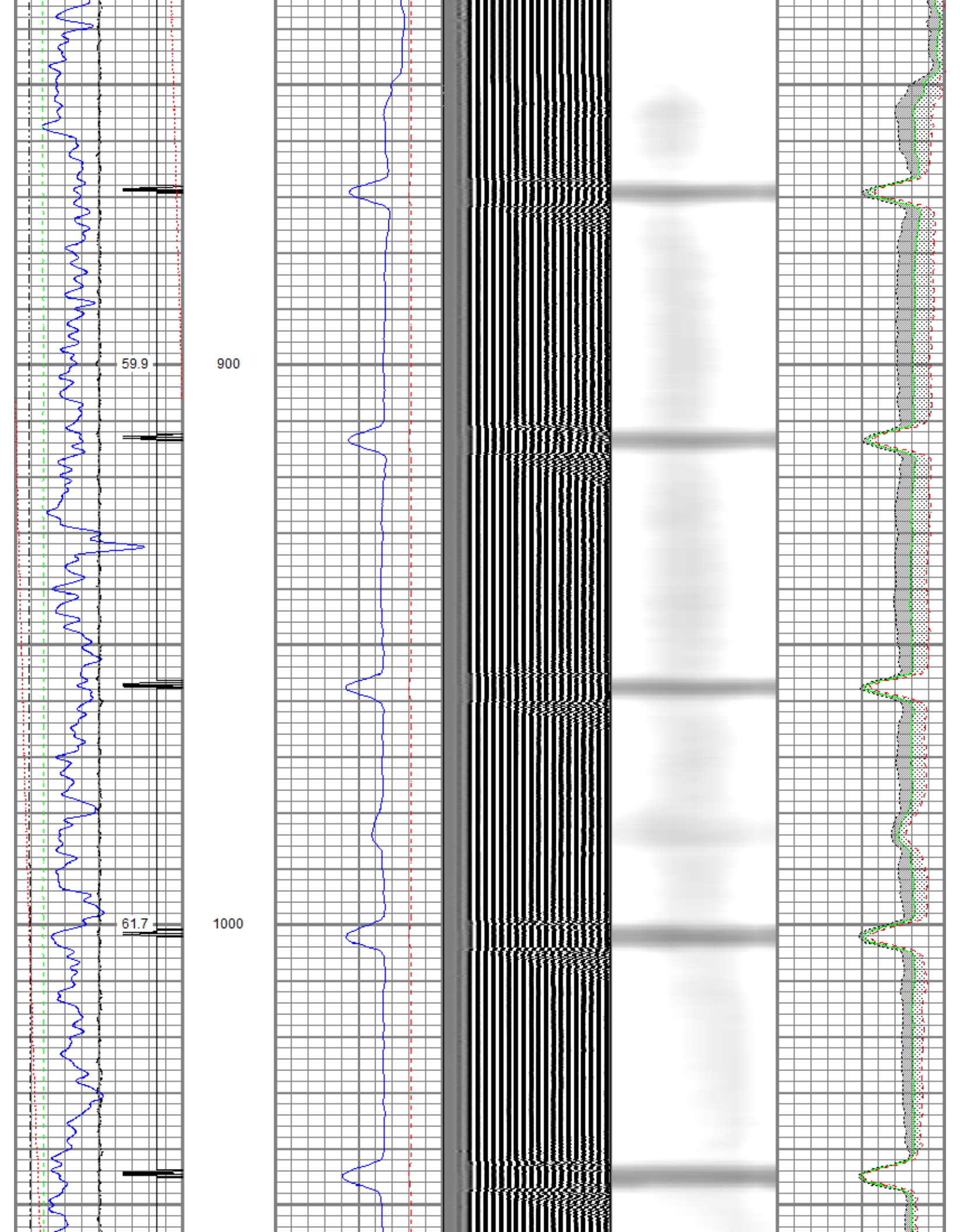
Gamma Ray	0	3' Amplitude (mV) 100	5' Variable Density Log	Sector Map	0	Average Amplitude 100
(GAPI) 120		3' Amplitude x 5	200 (usec) 1200			Minimum Amplitude
Casing Collar Locator	0	(mV) 20			0	100
Line Speed		3' Travel Time				Maximum Amplitude
-150 (ft/min) 150		650 (usec) 150			0	100
Line Tension (lb) 2000						
Differential Temperature						
-2 (degF) 2						
Temperature (degF) 20						

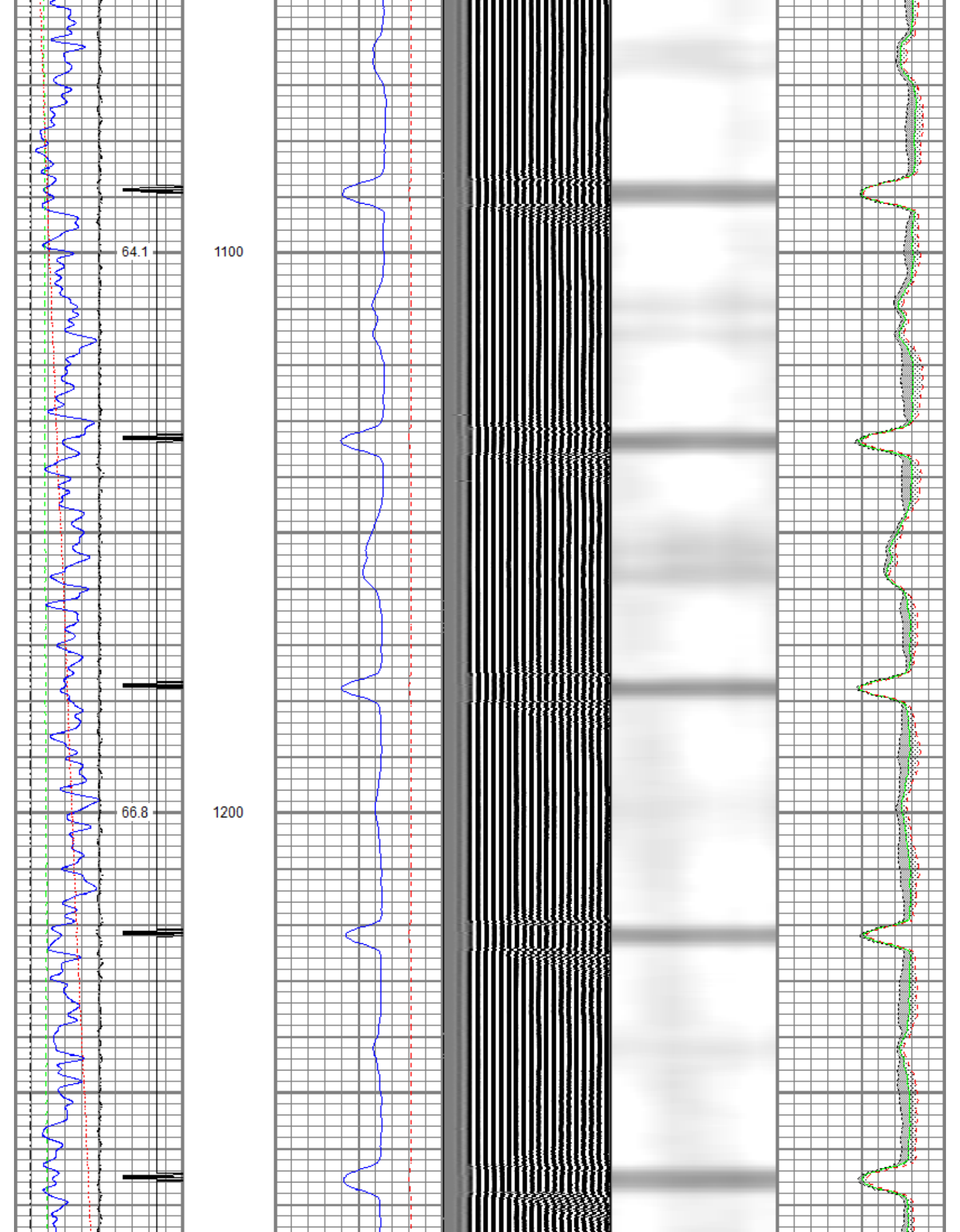


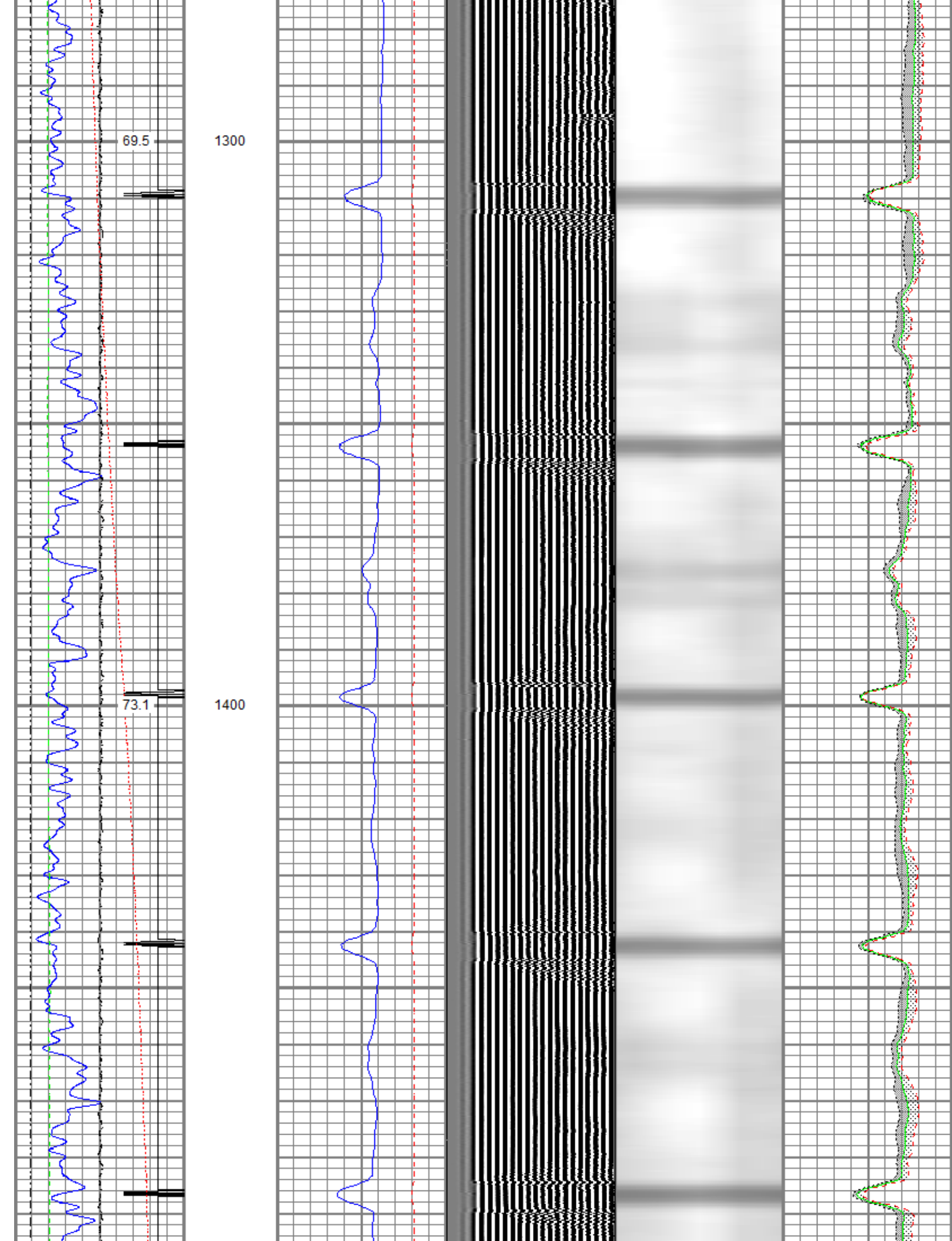


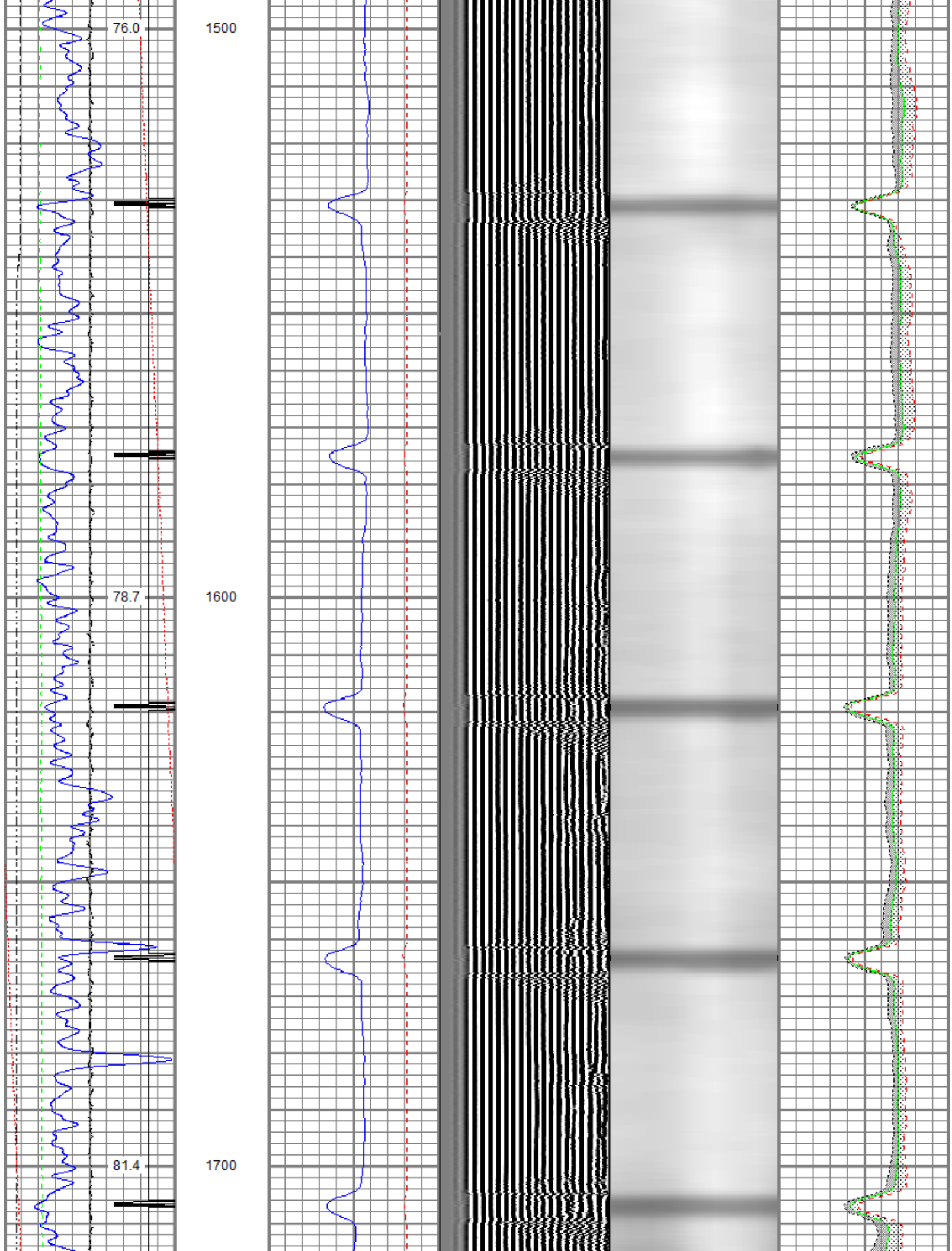


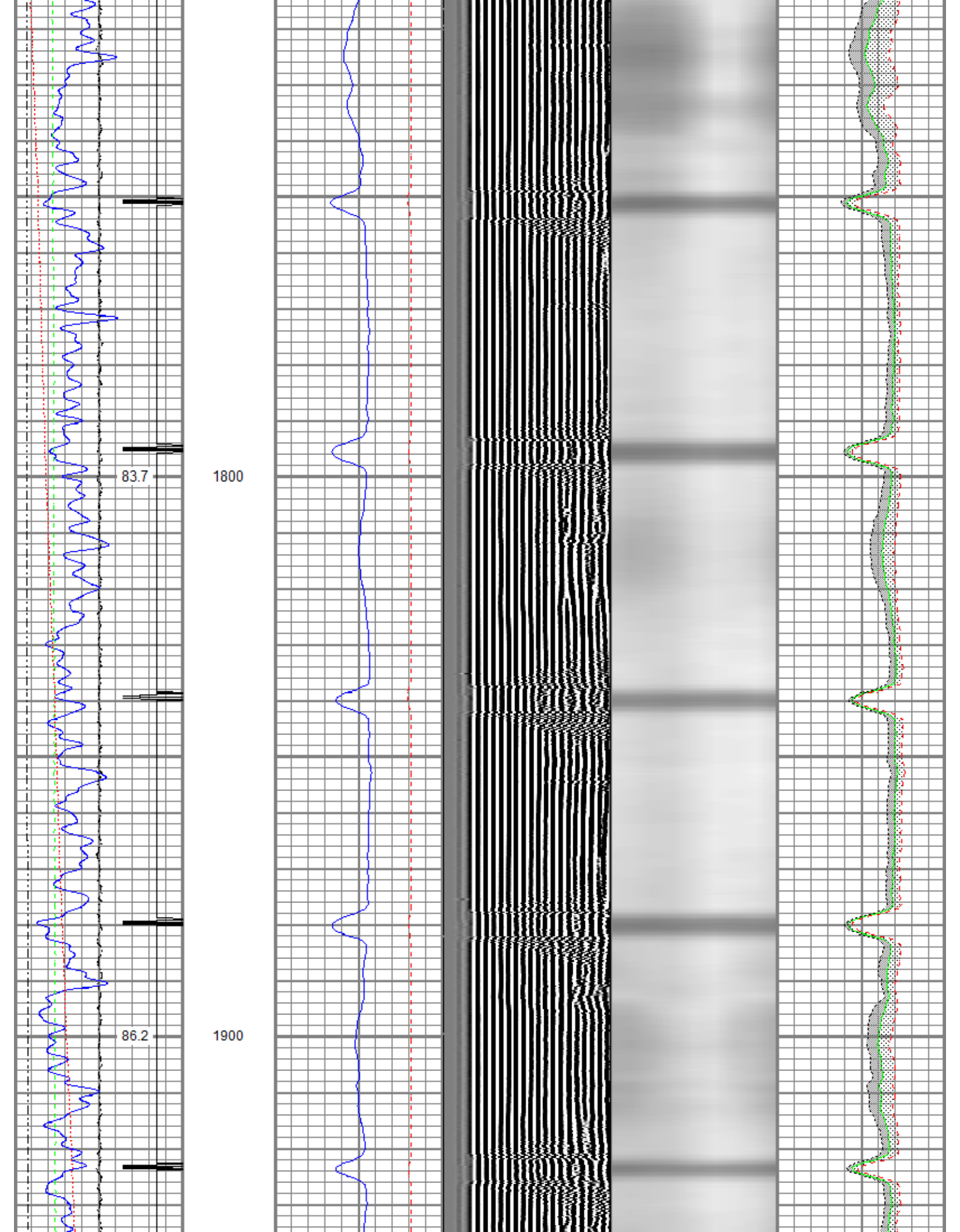


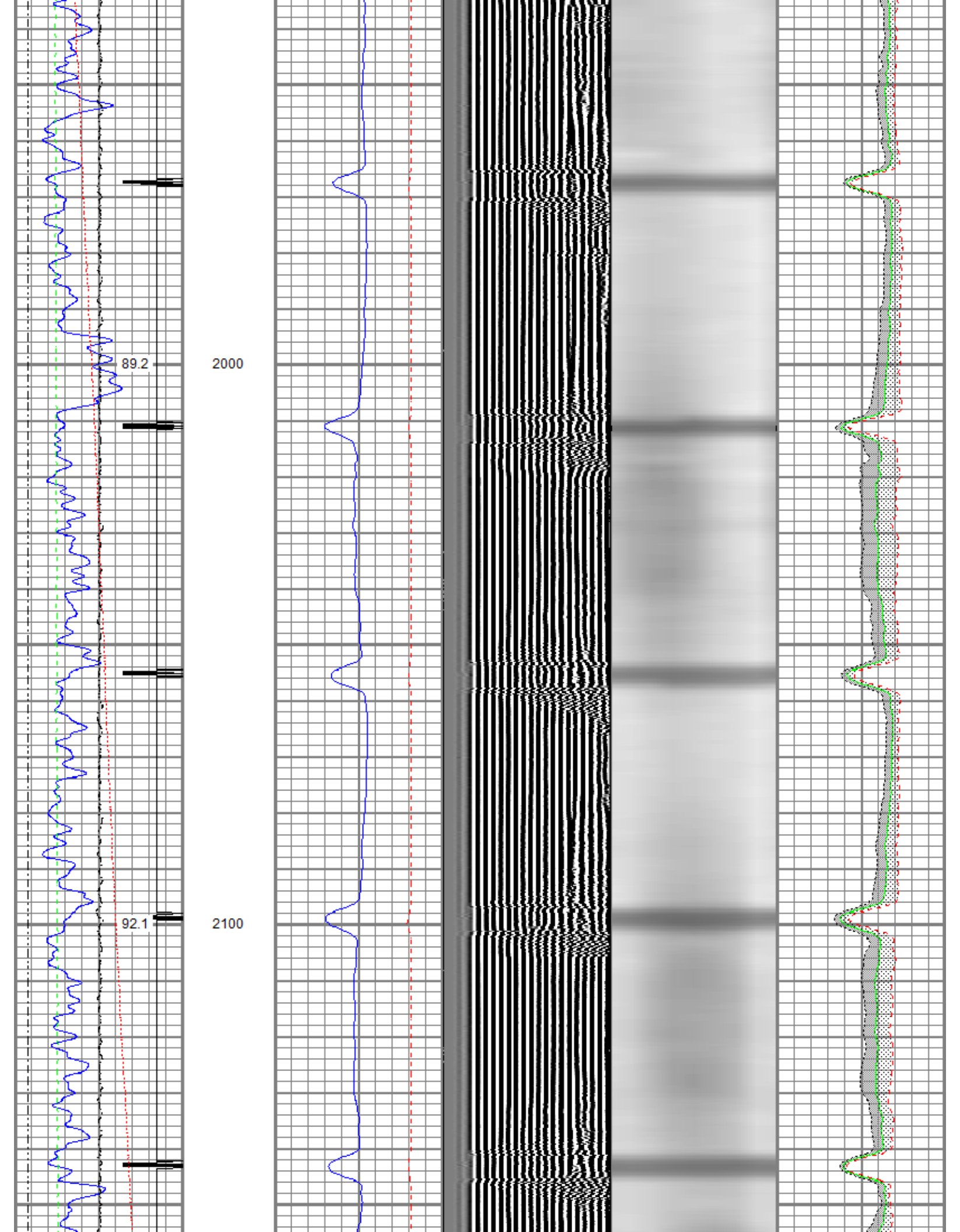


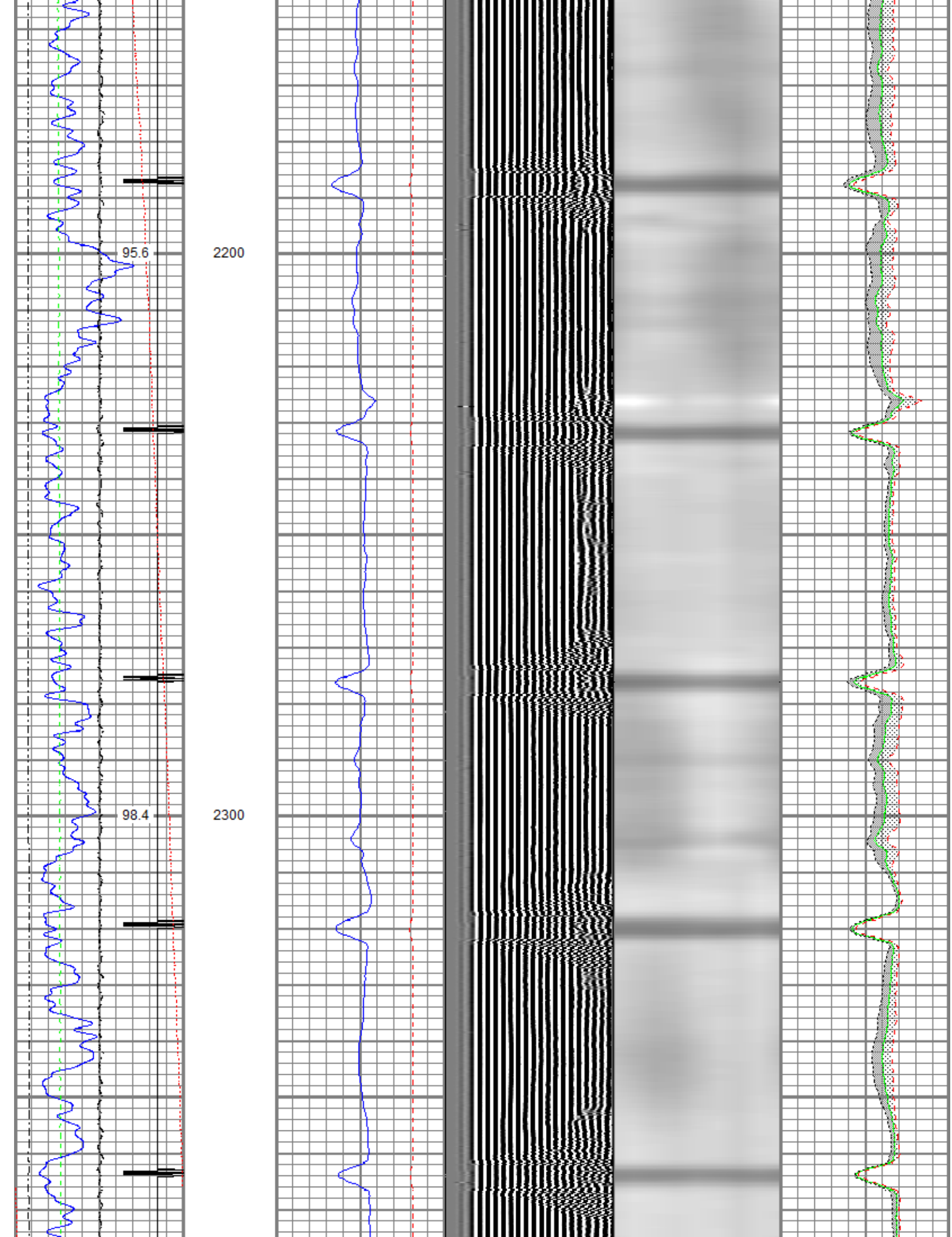


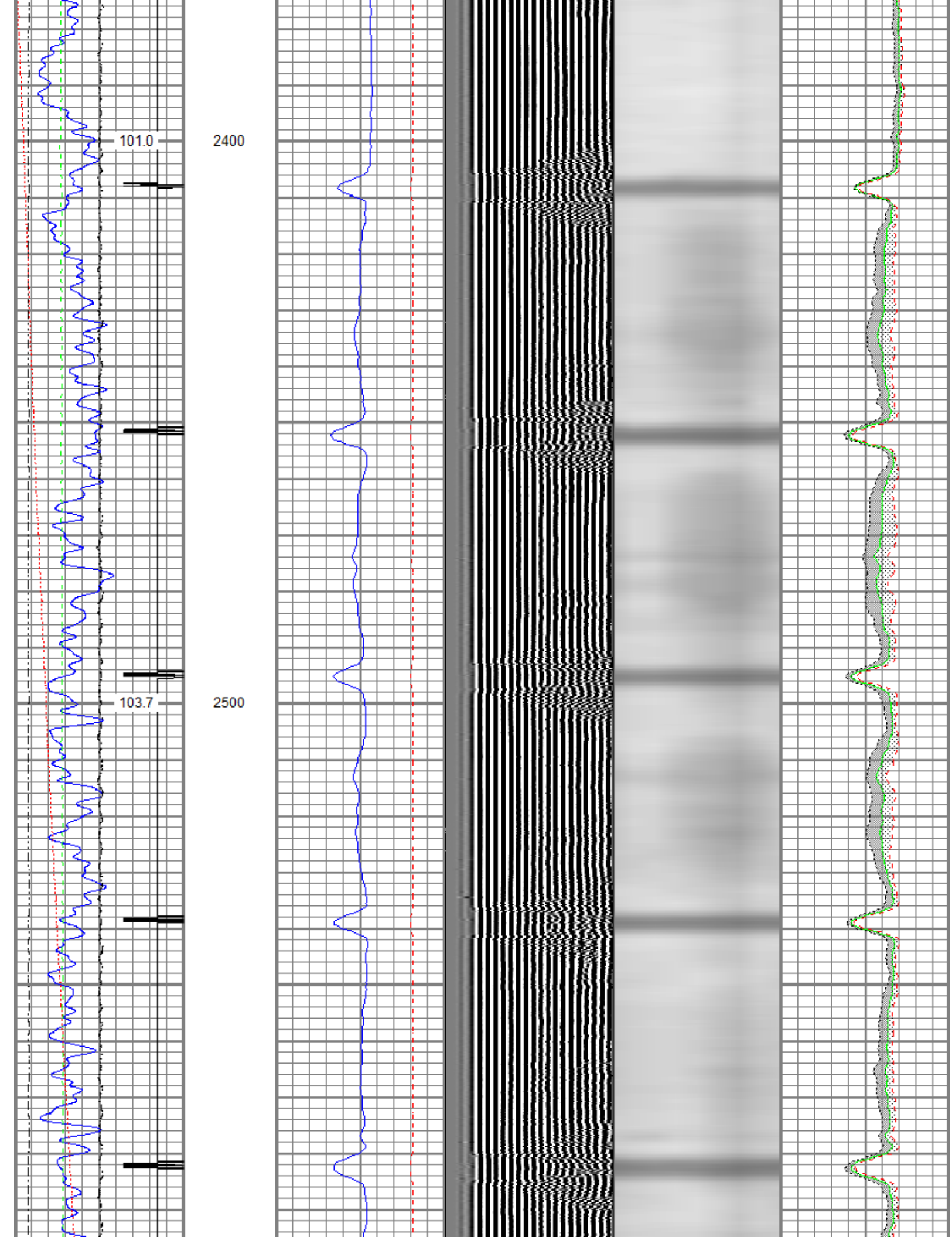


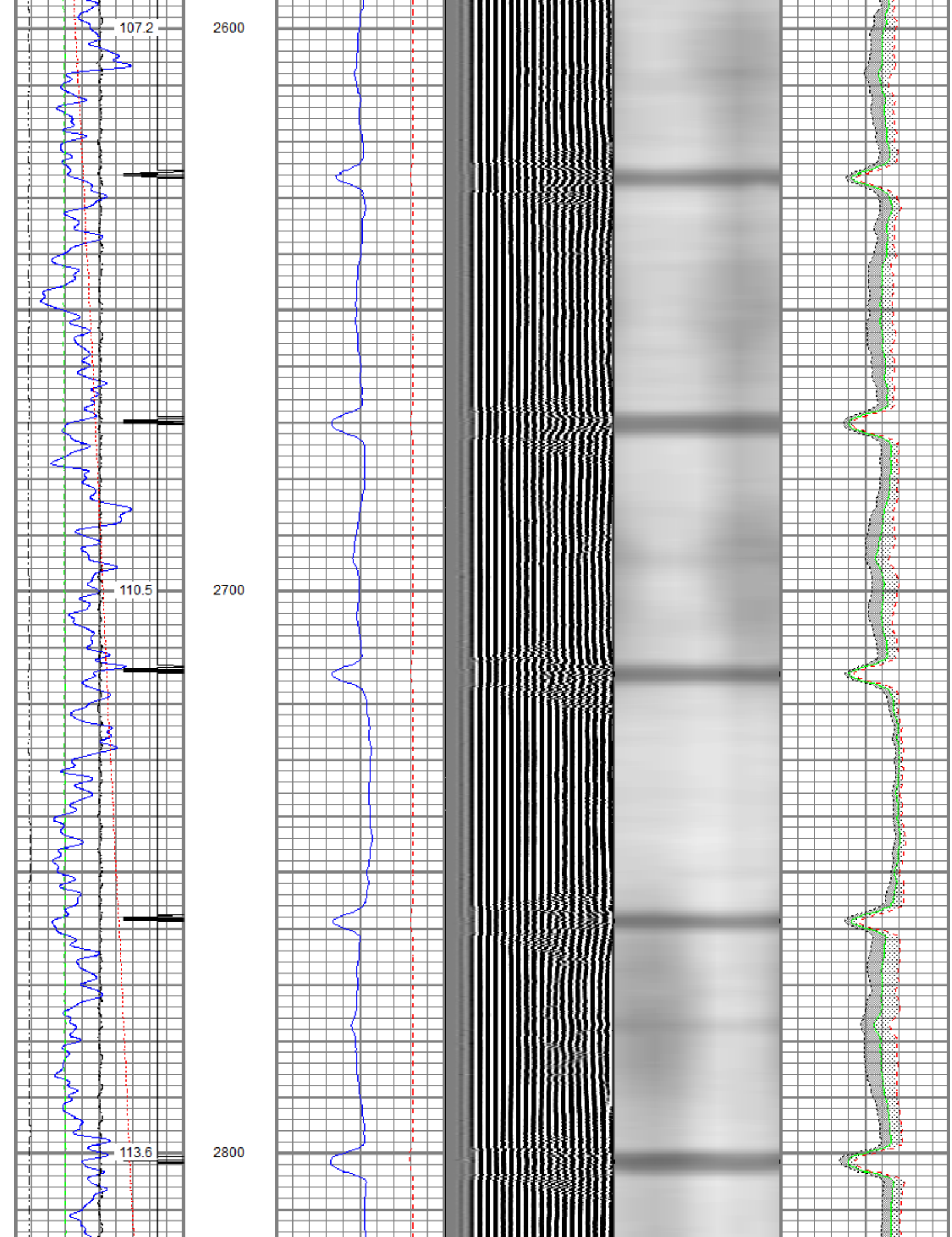


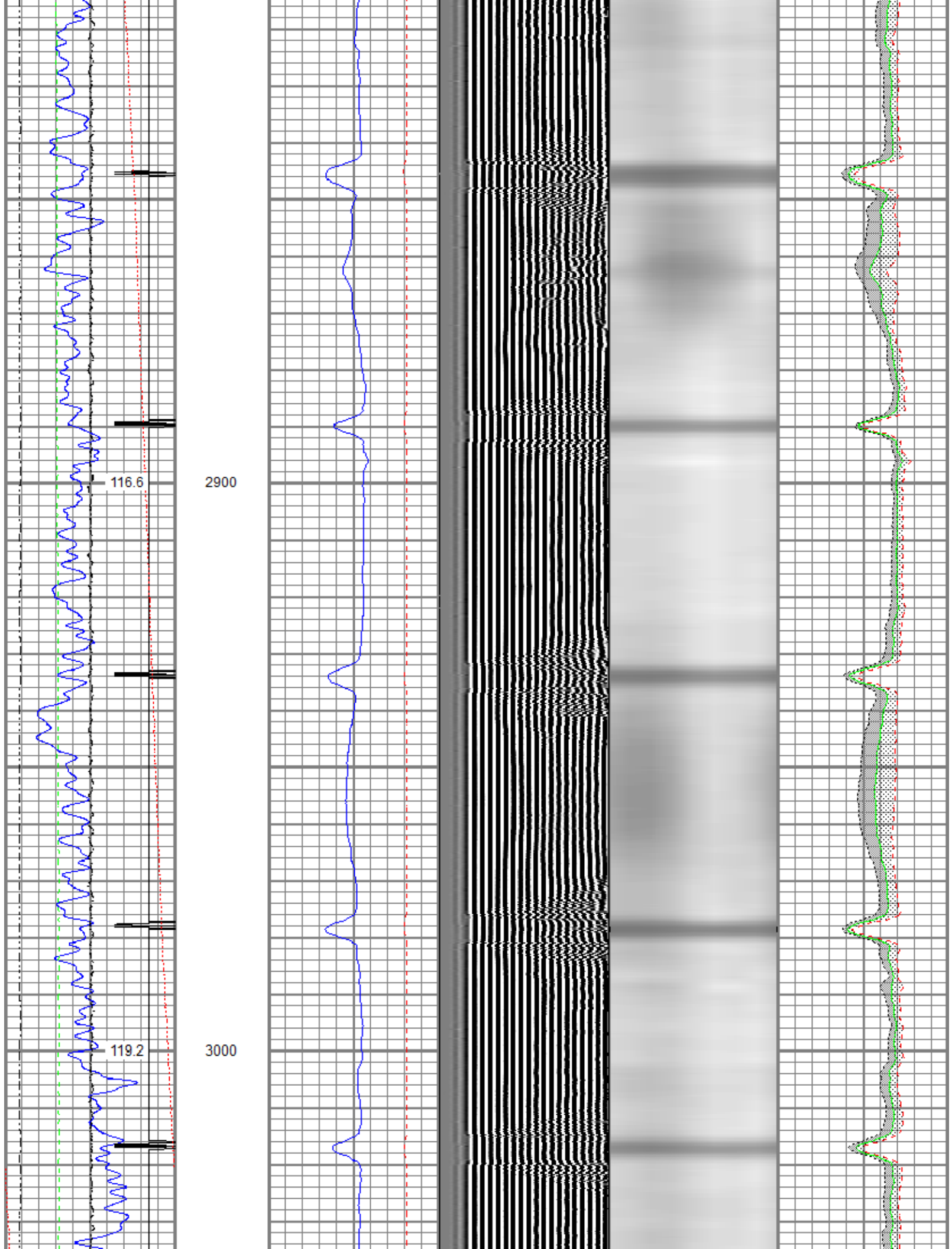


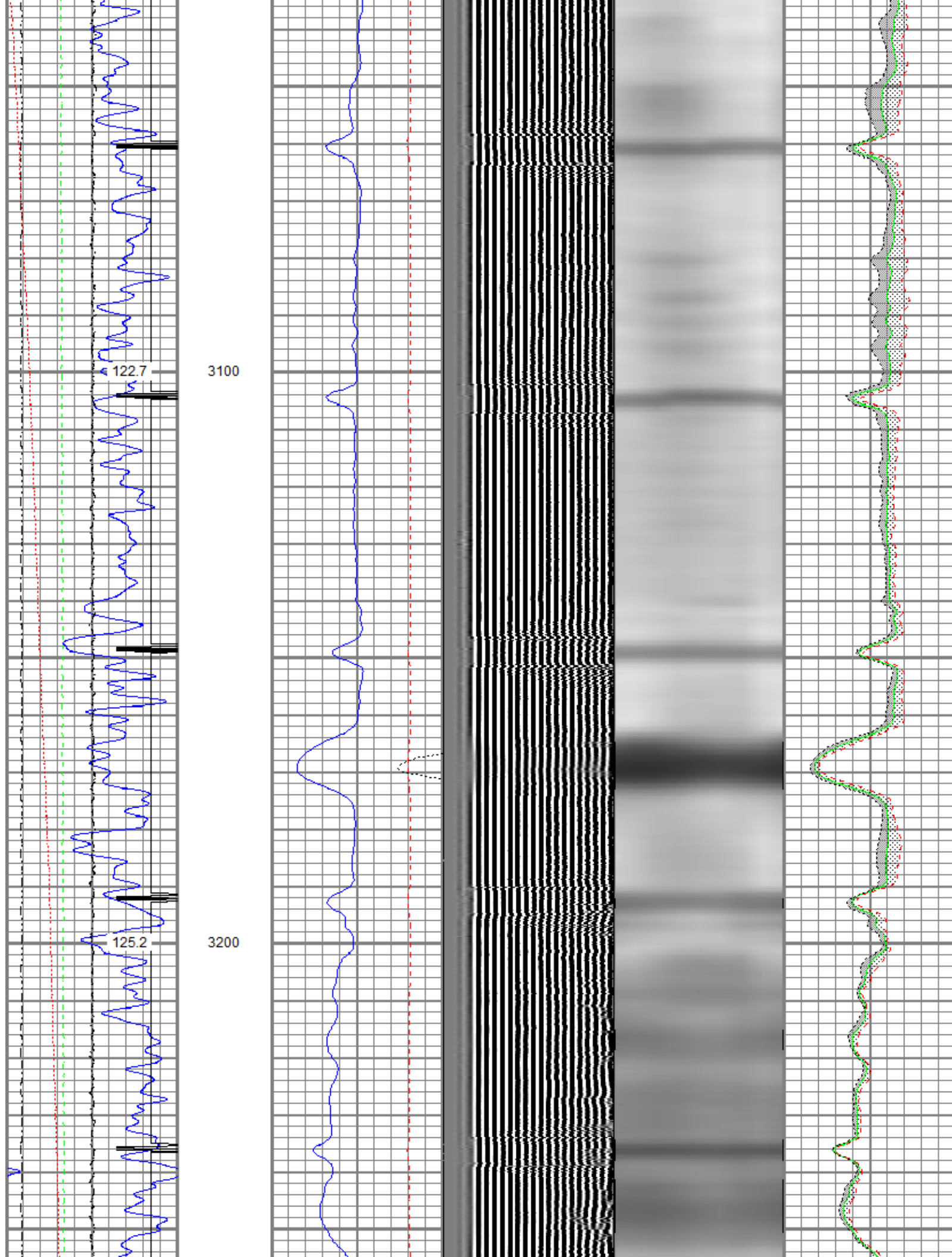


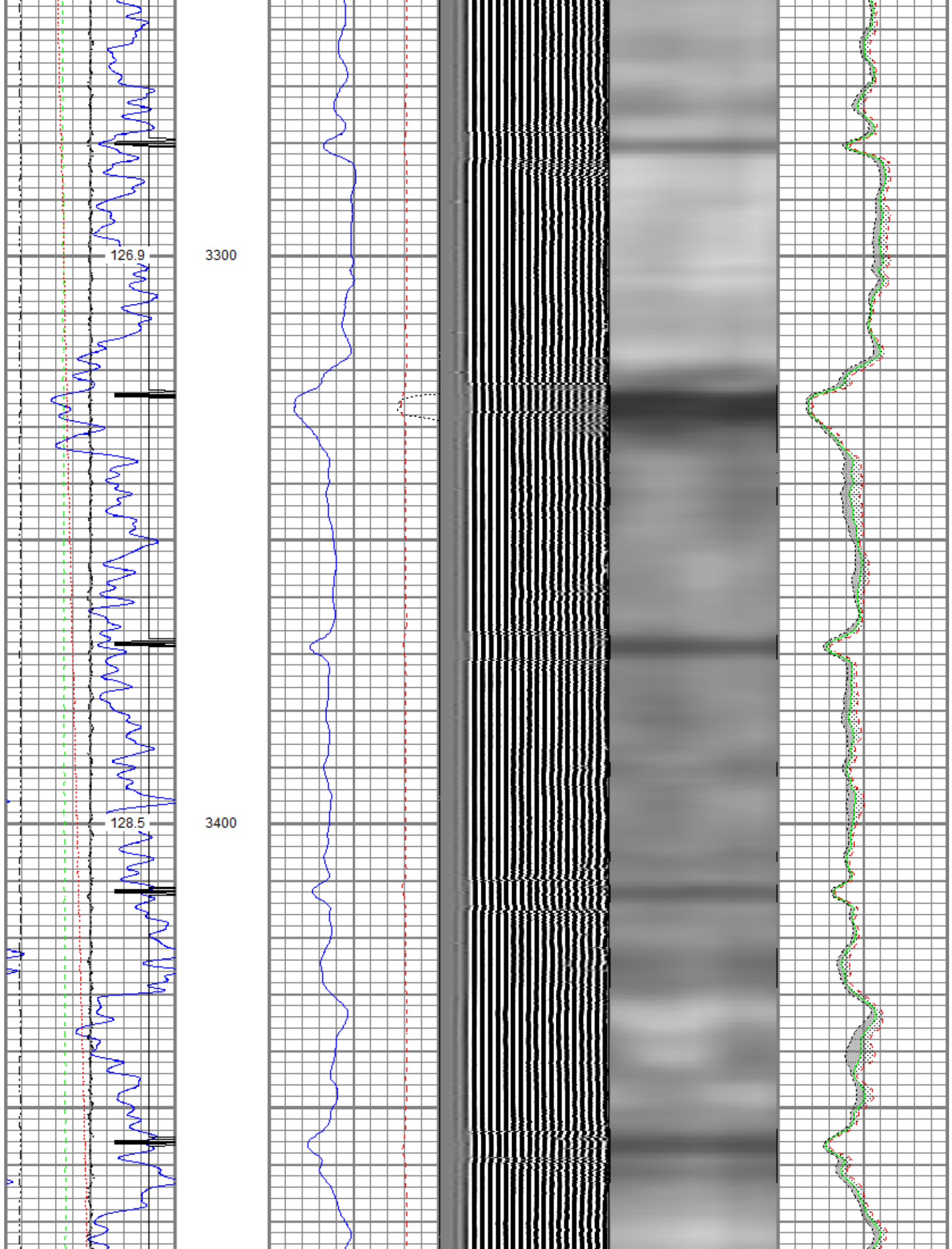


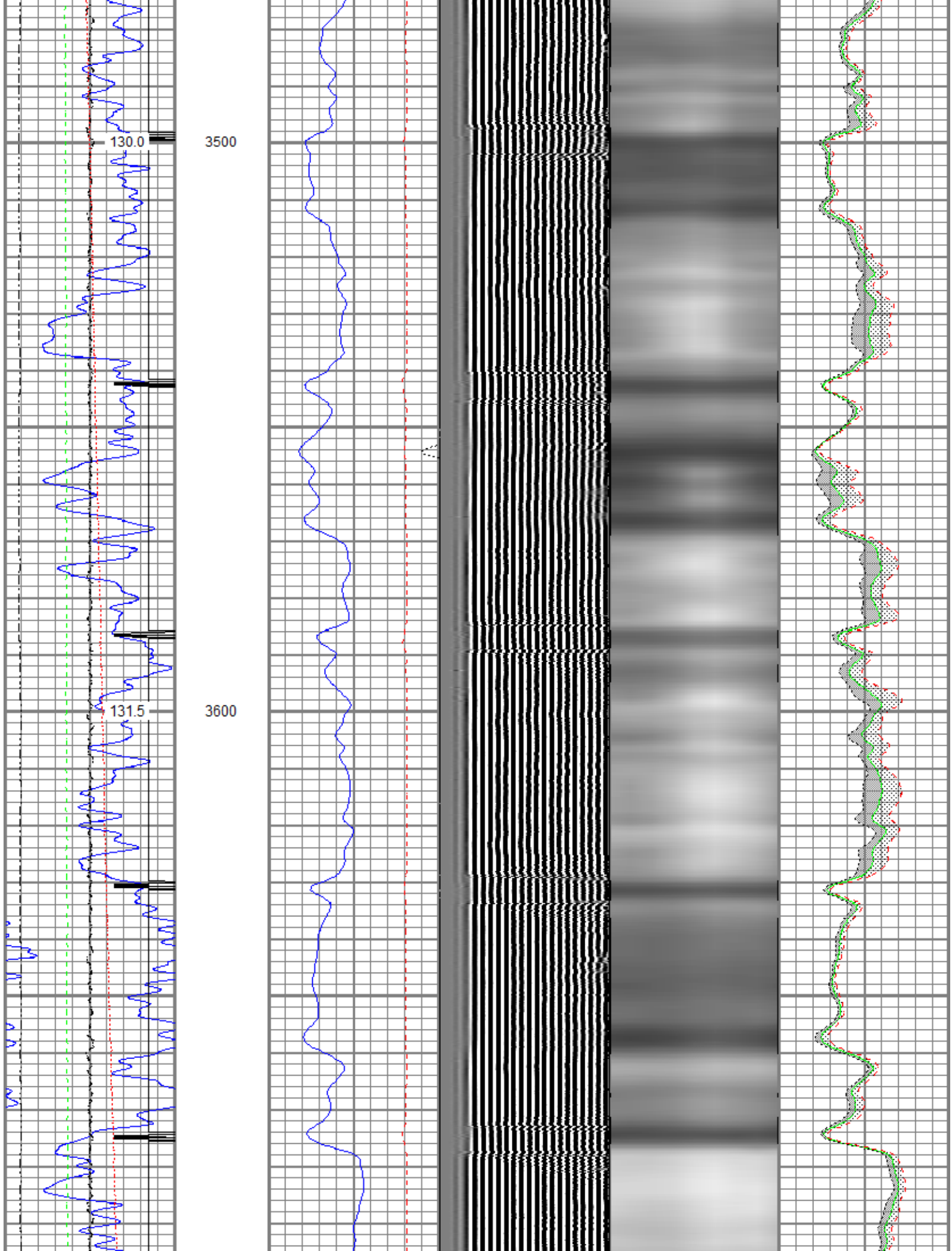


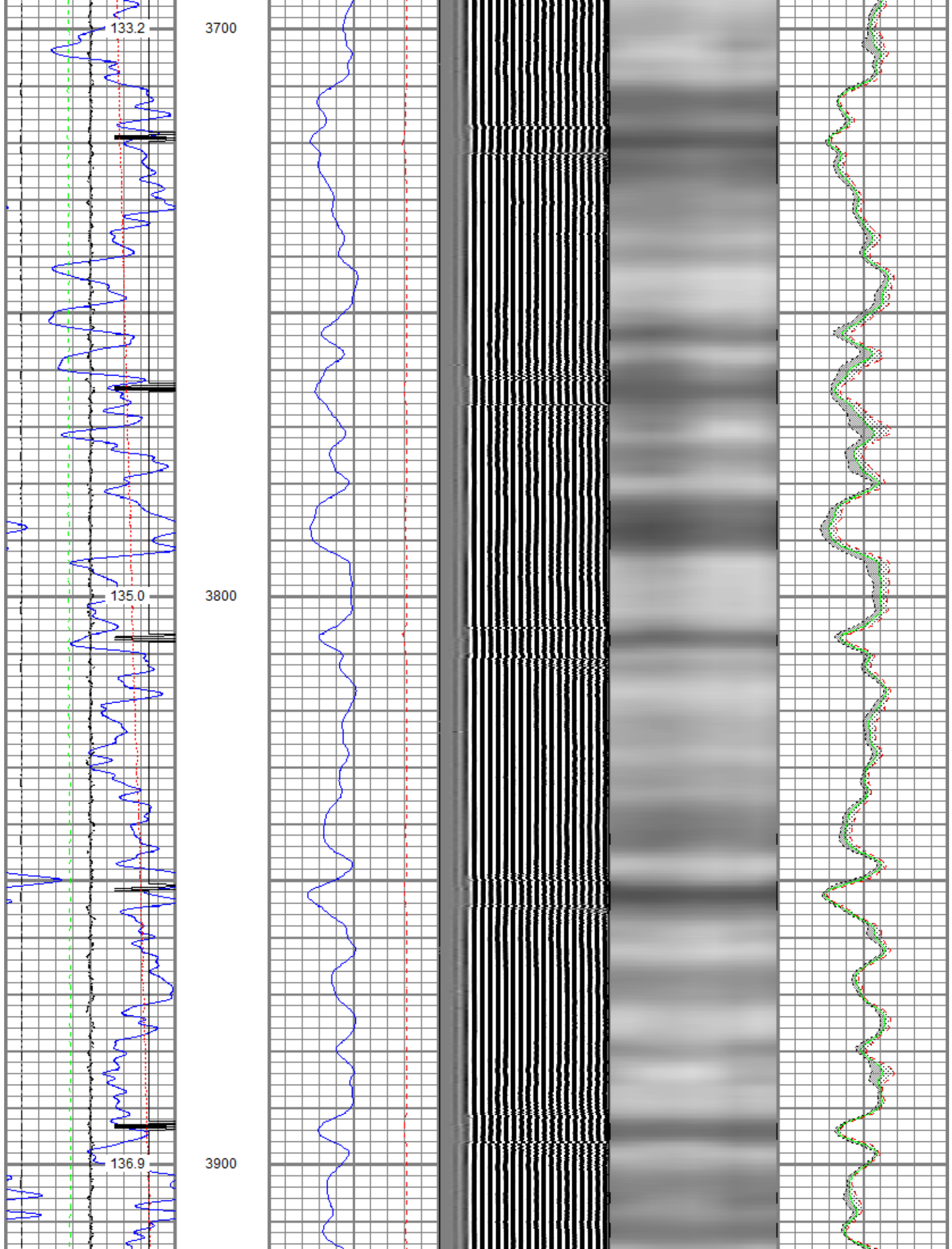


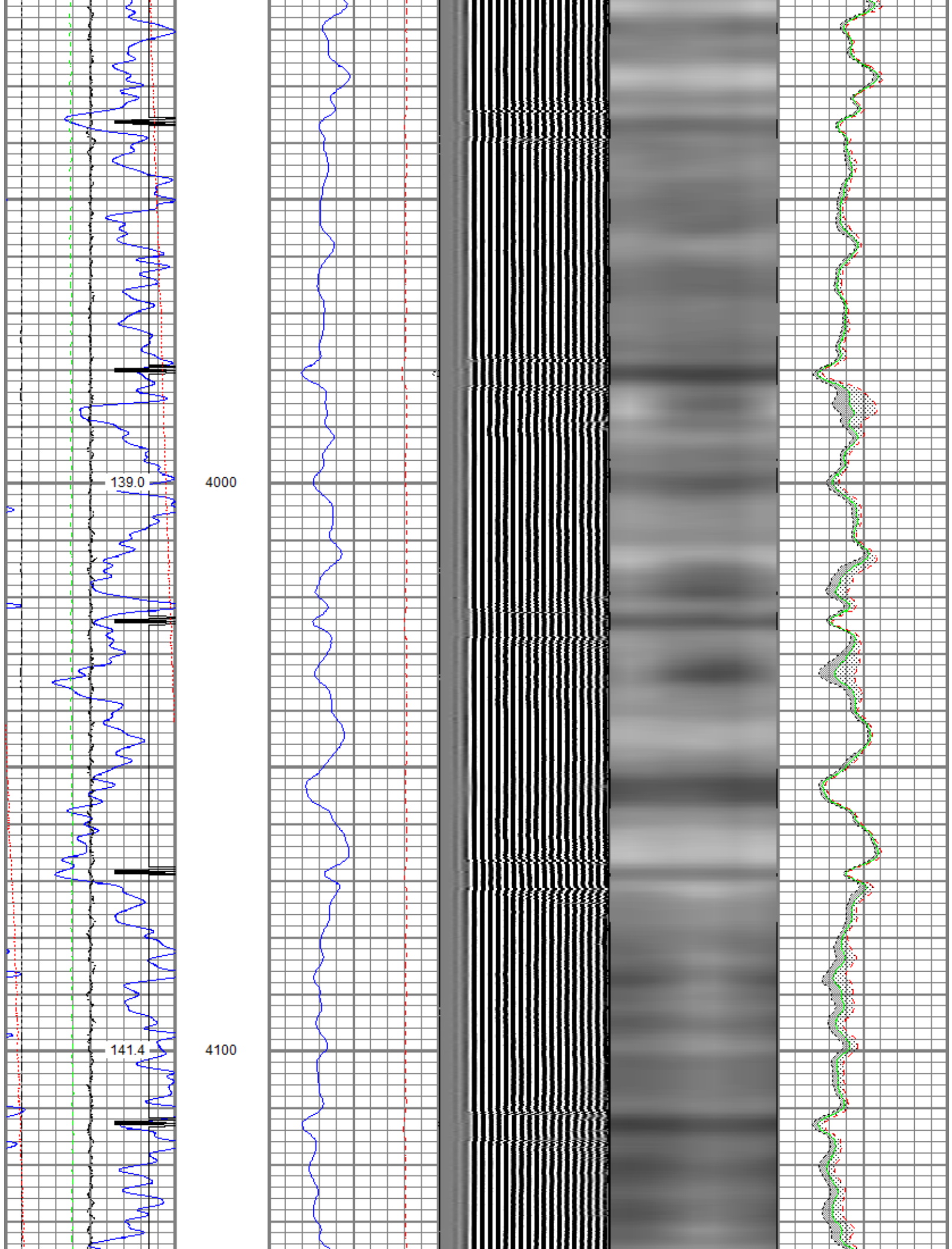


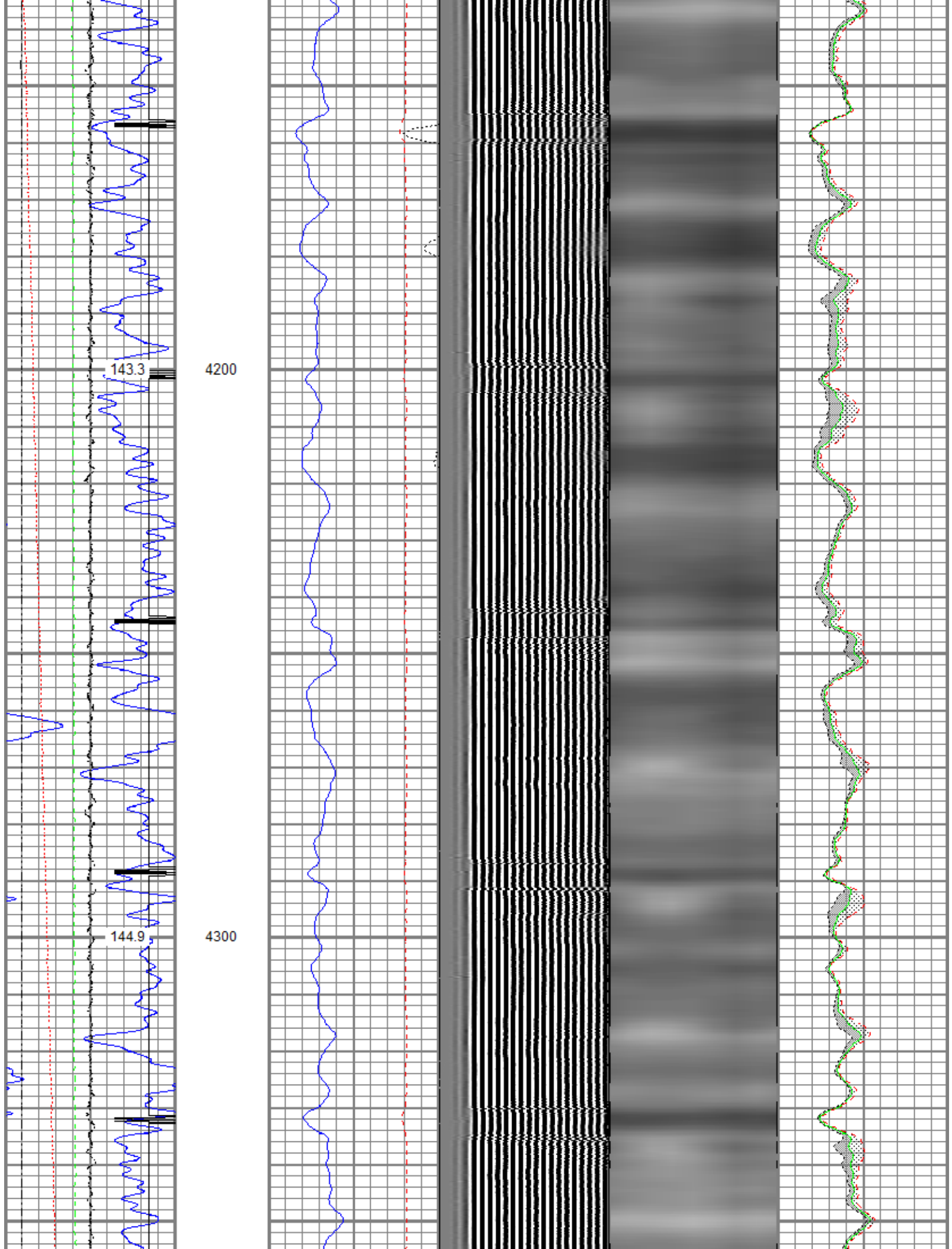


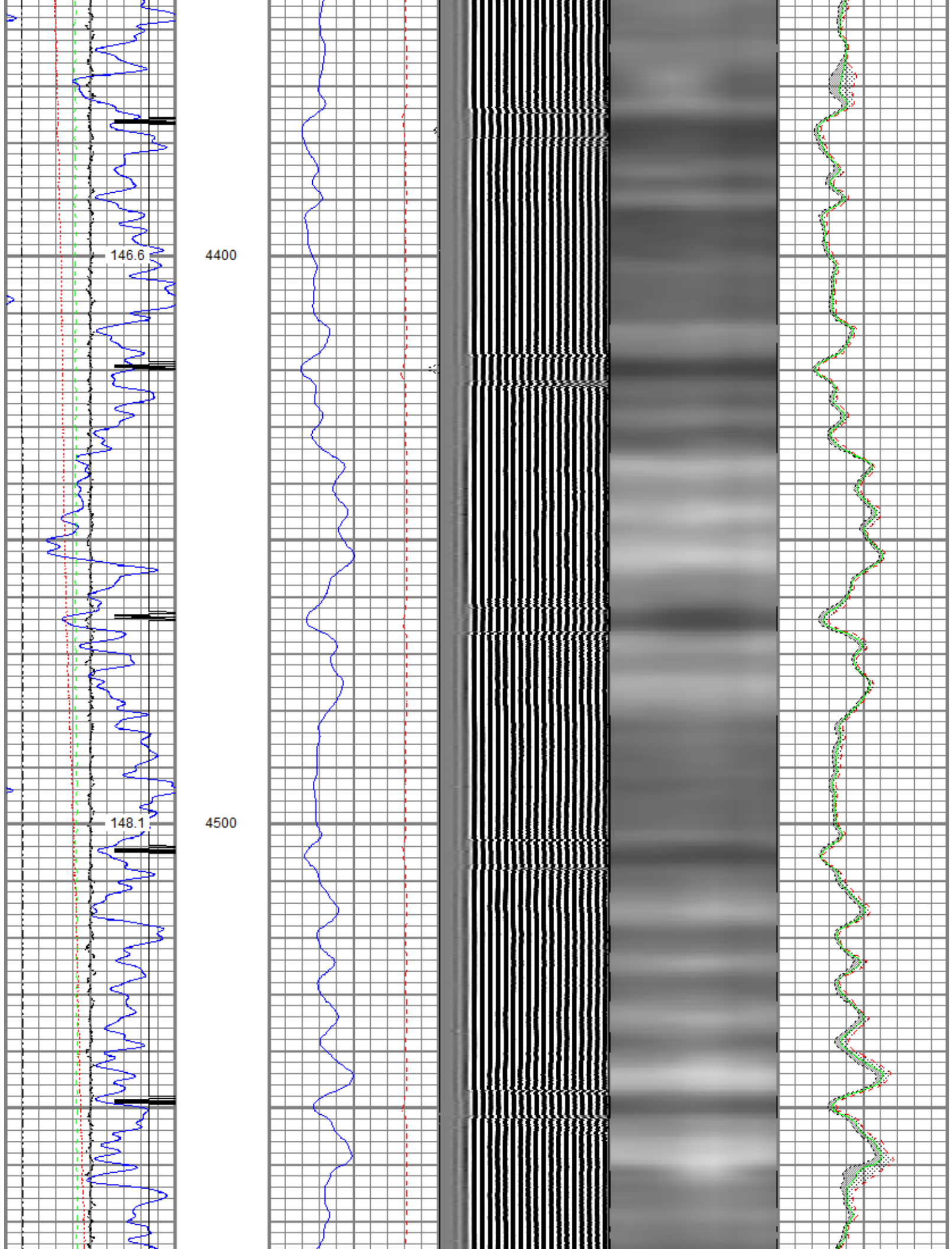


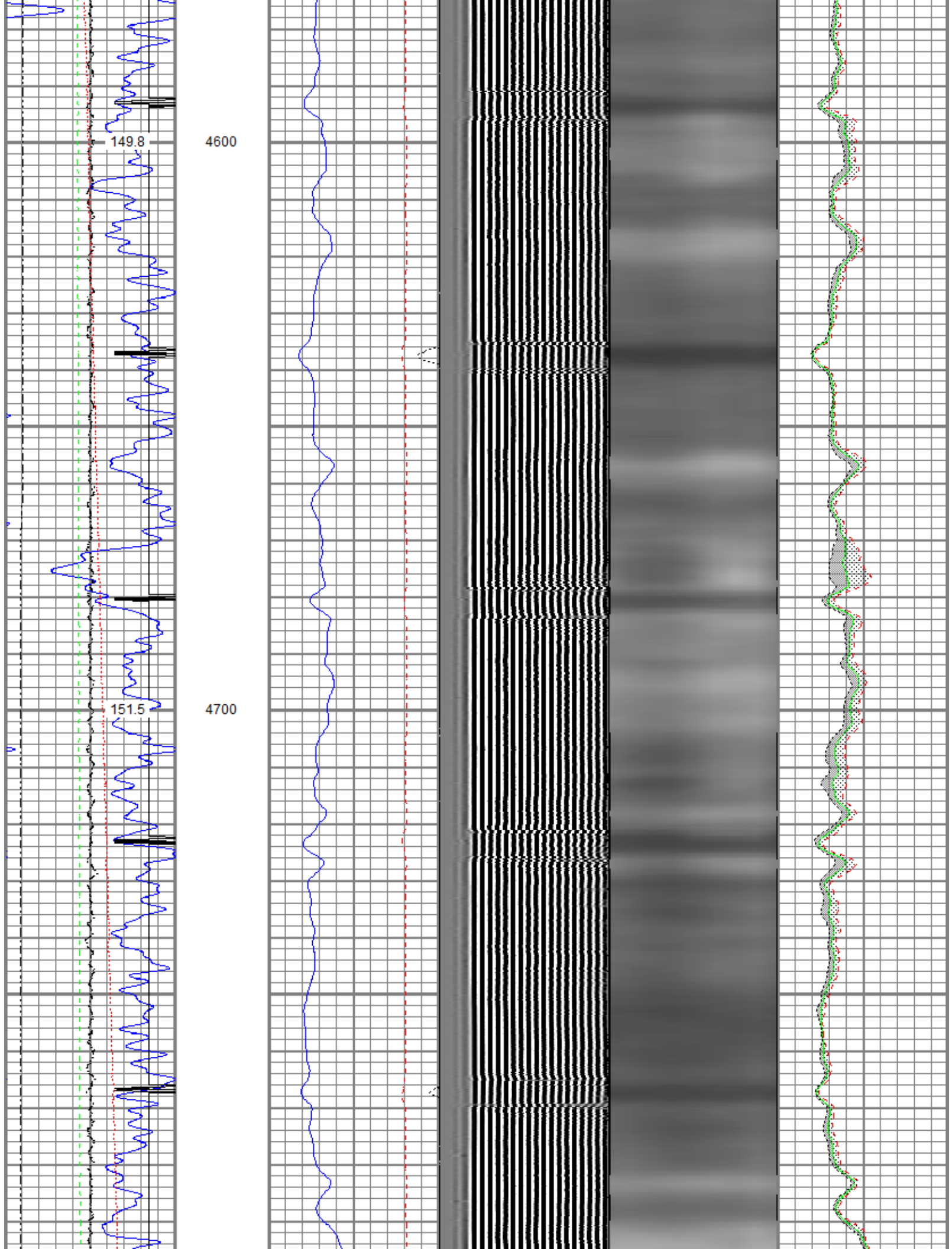


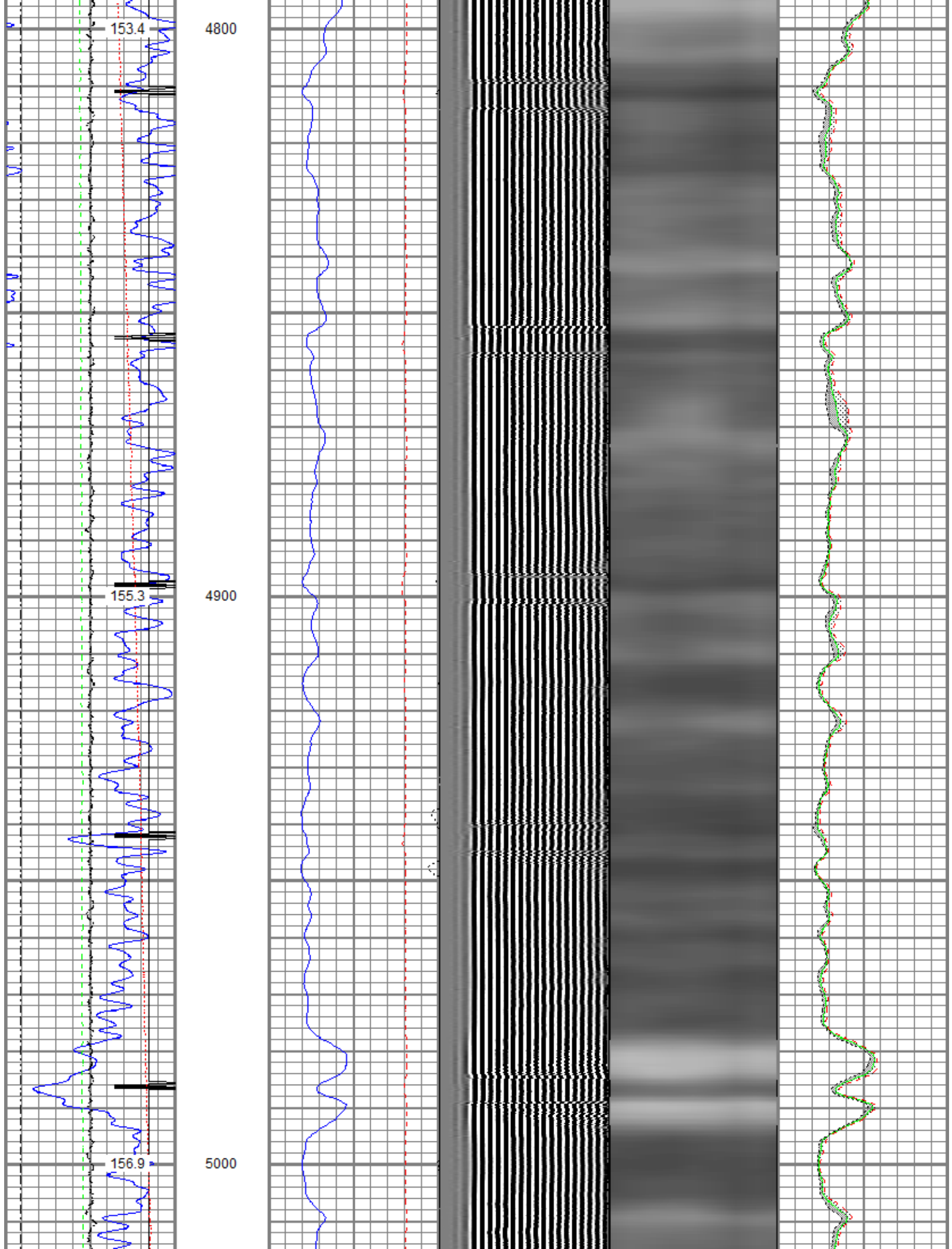


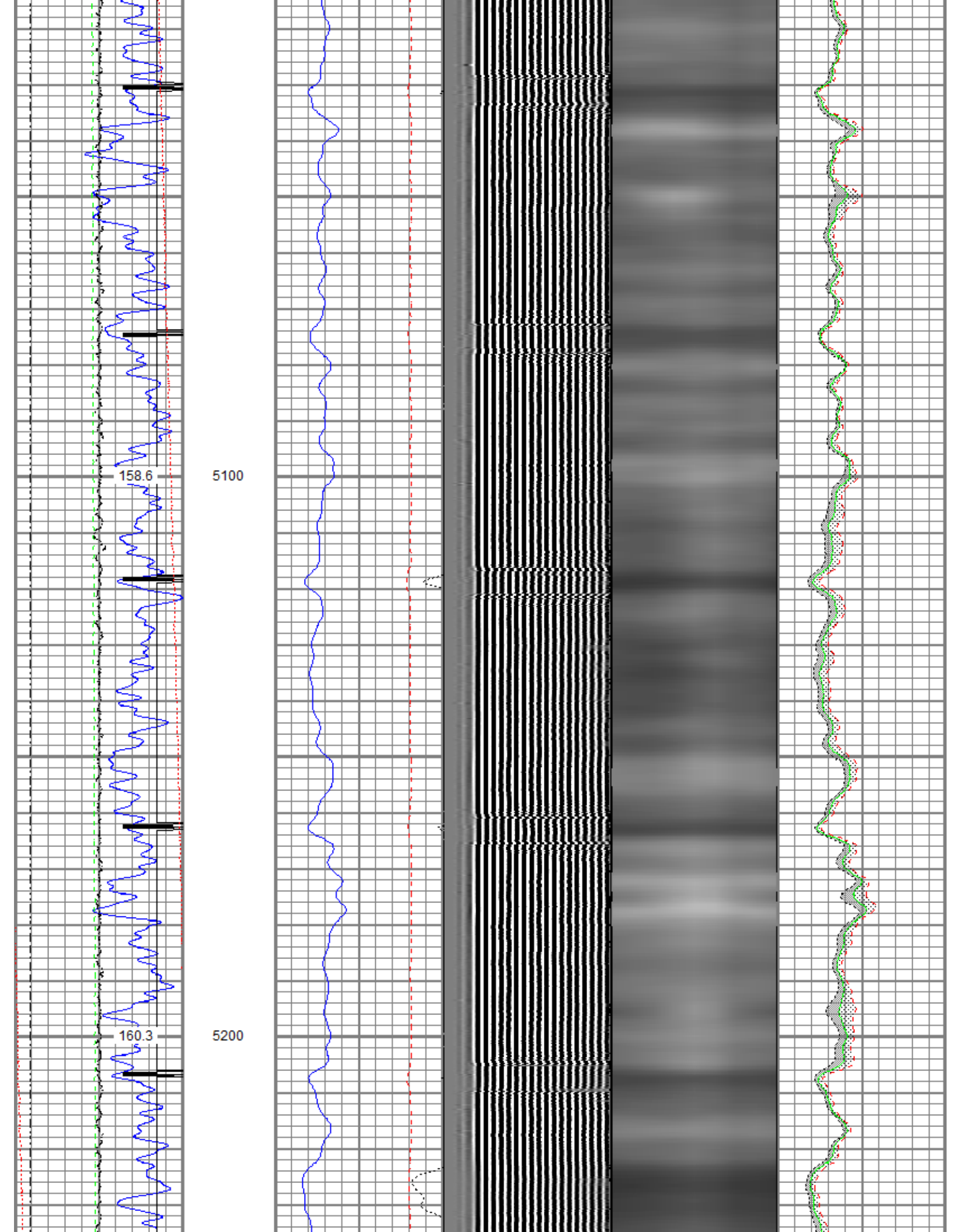


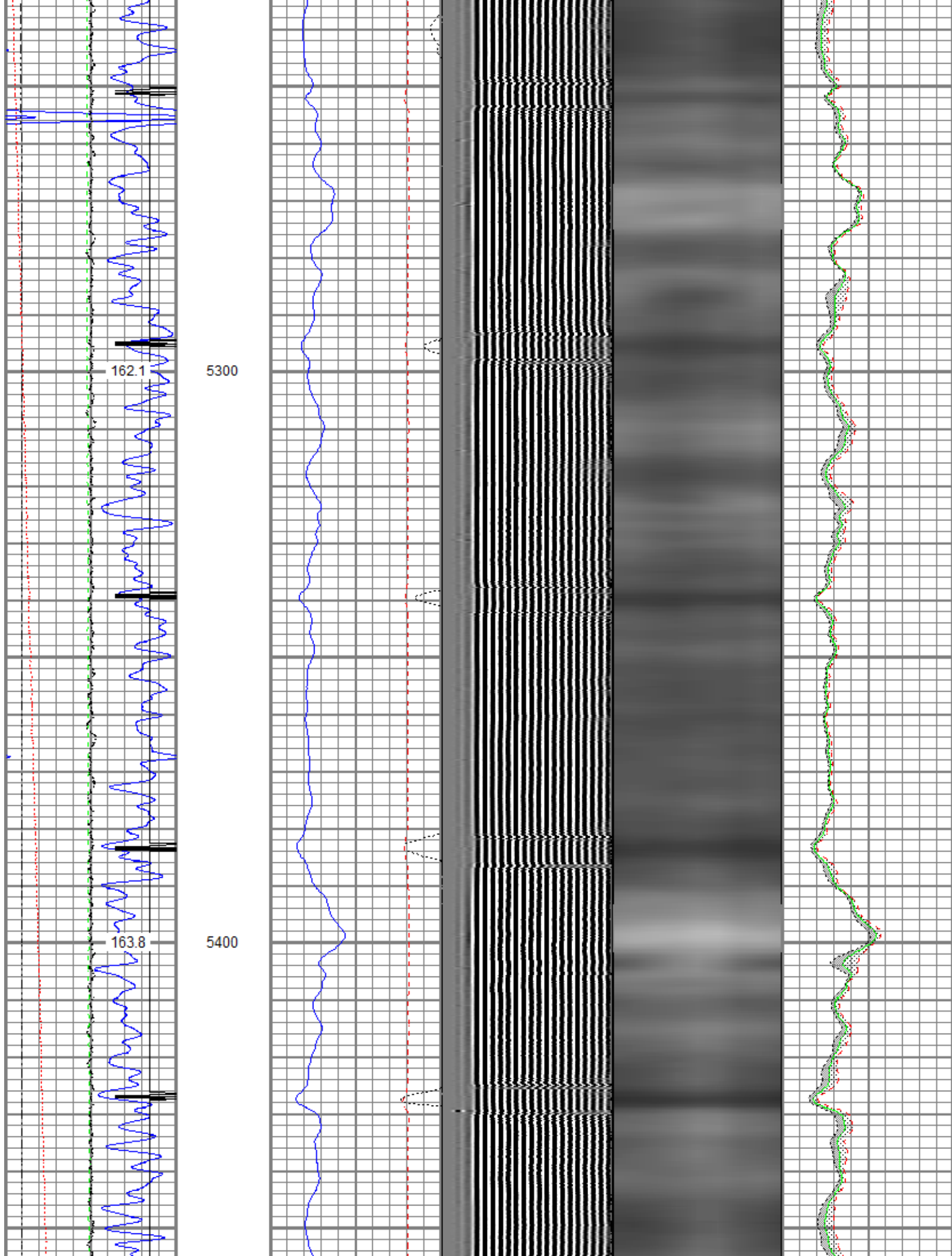


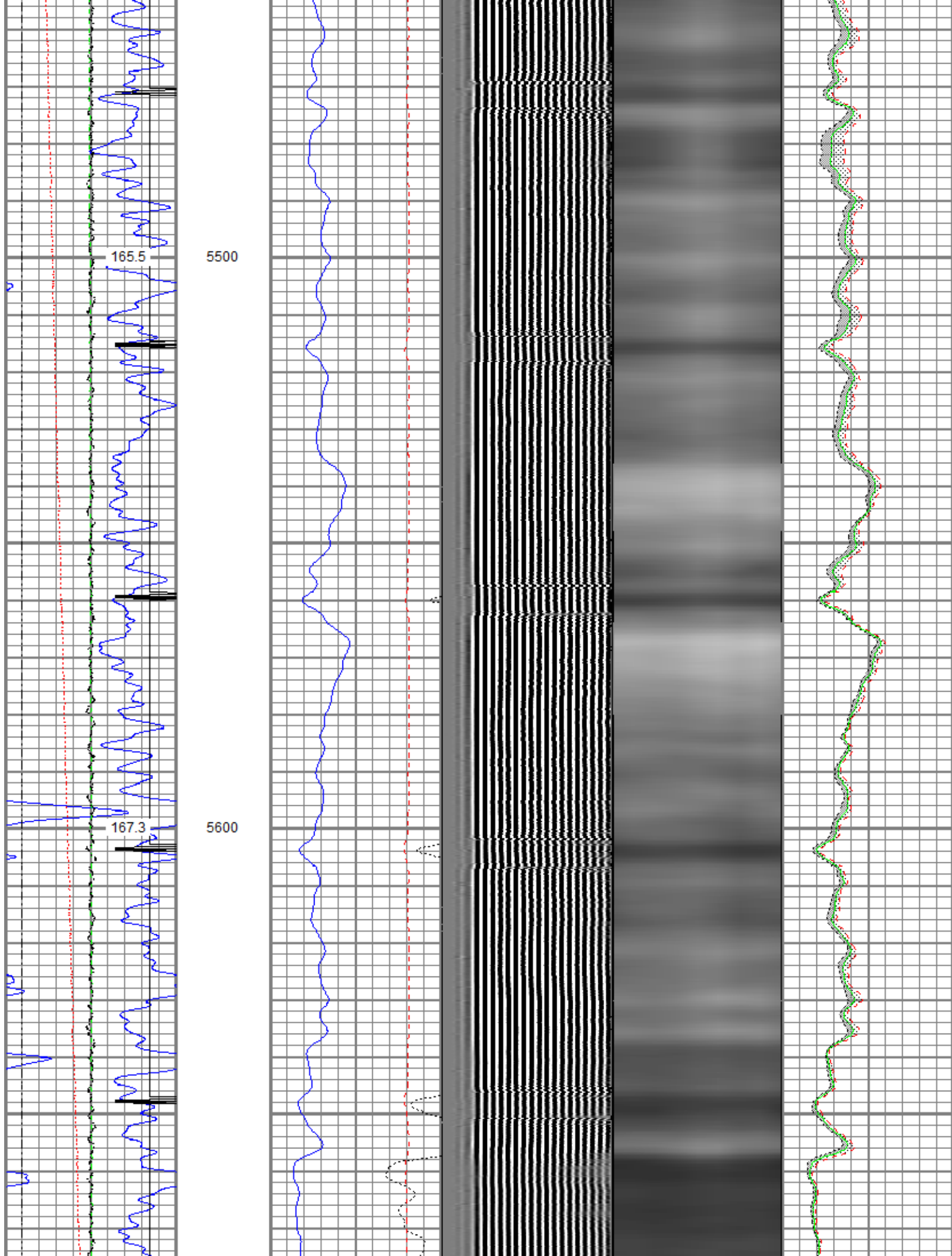


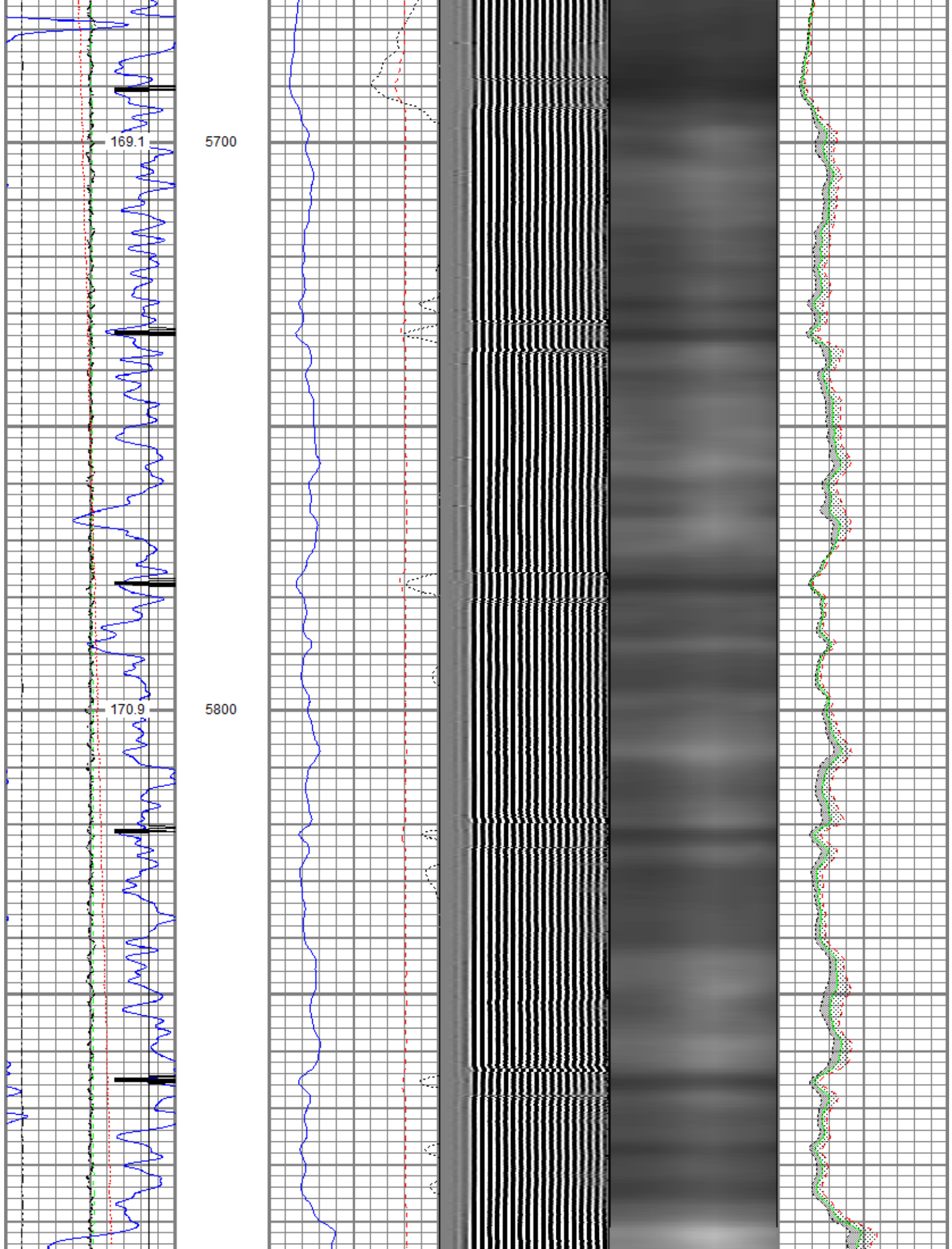


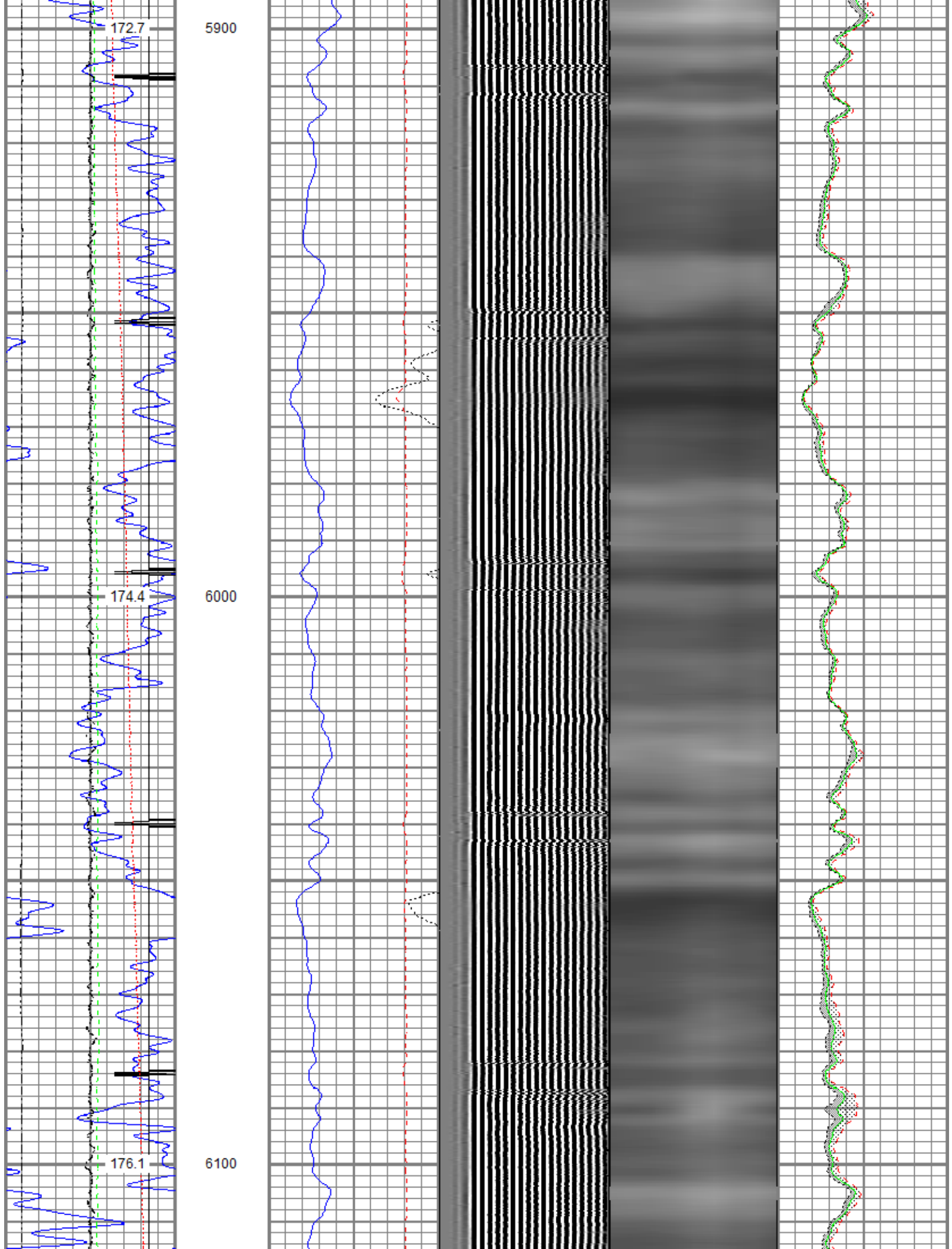


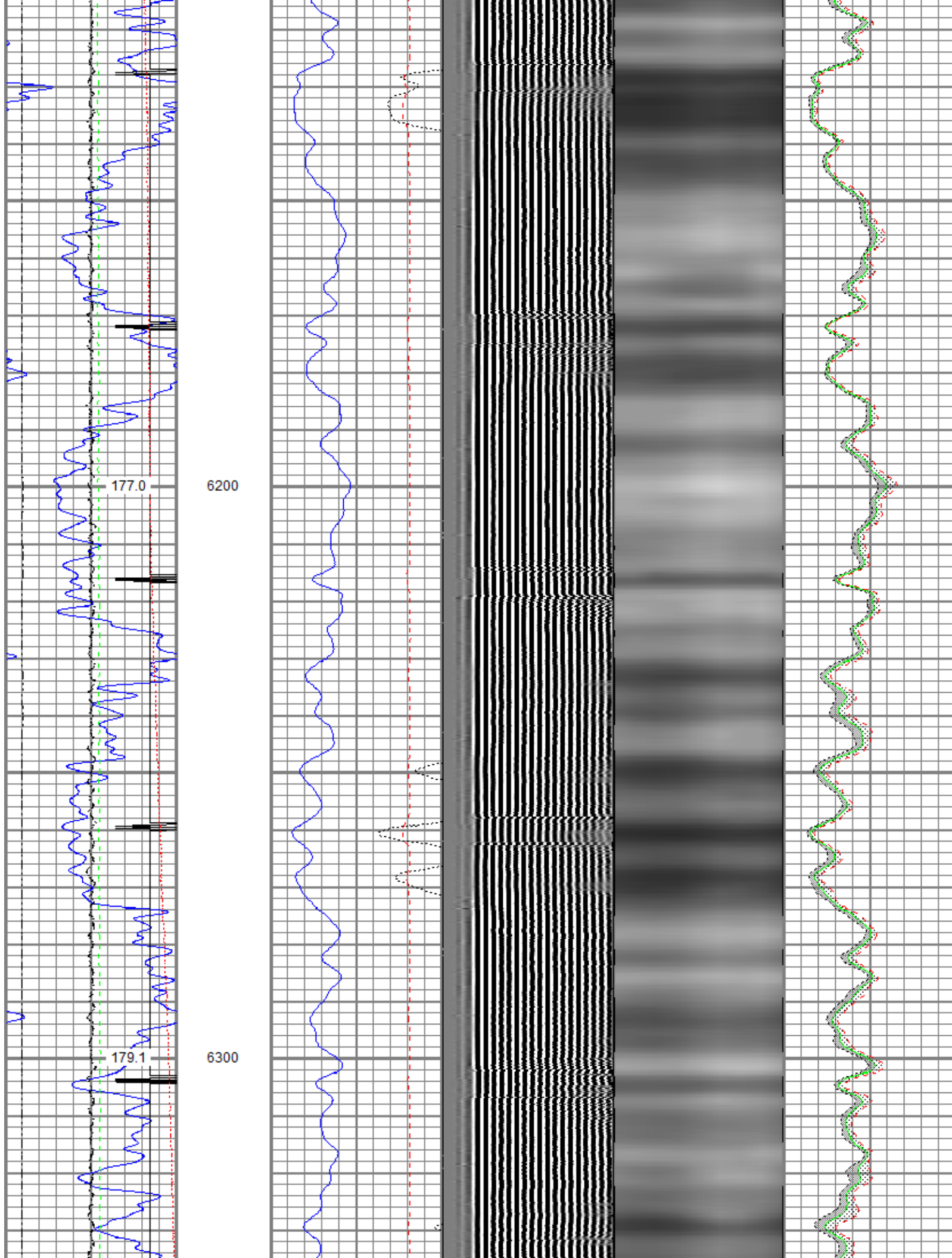


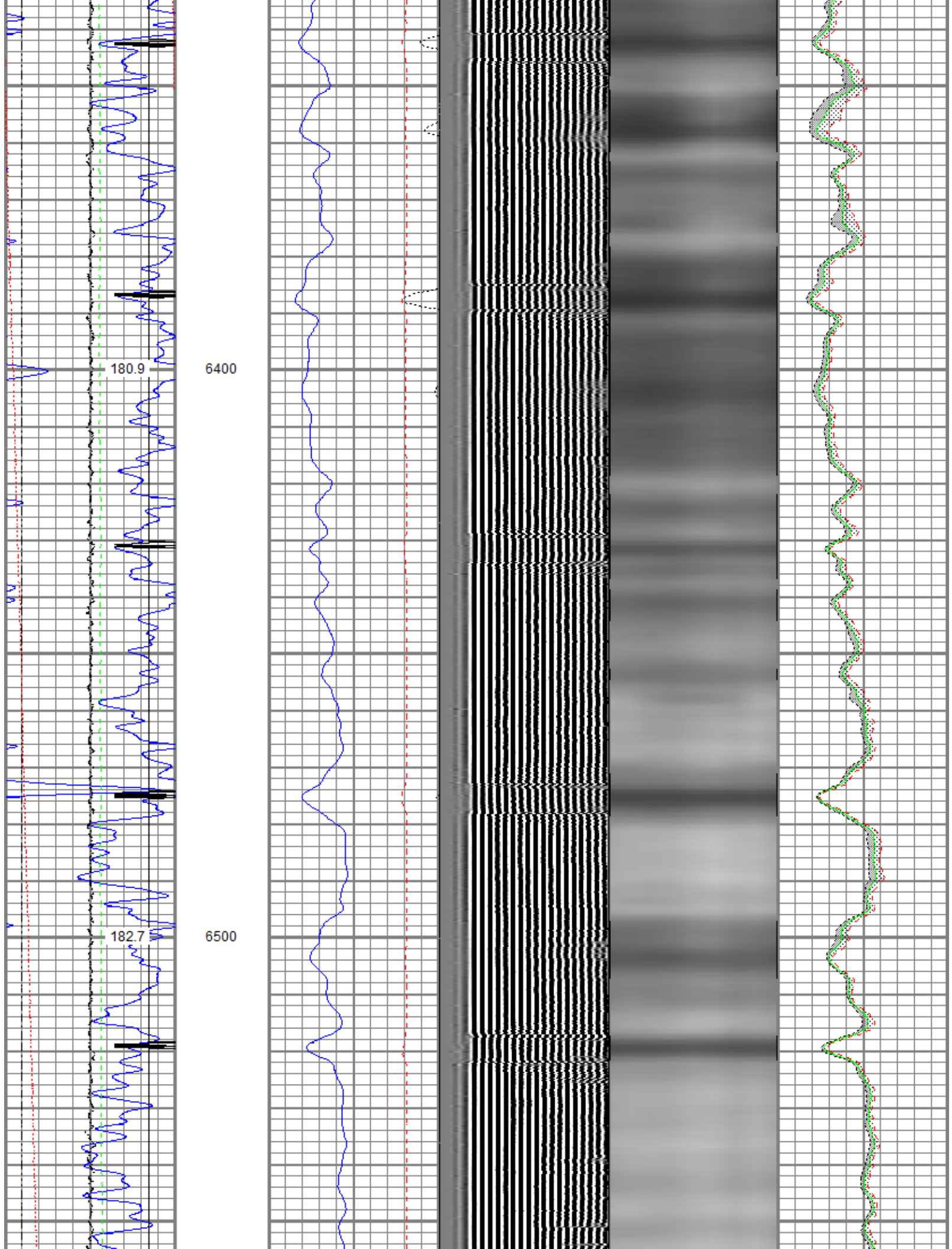


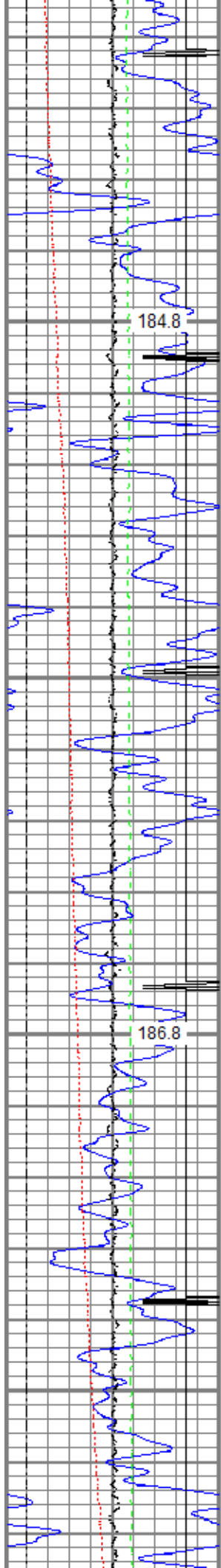






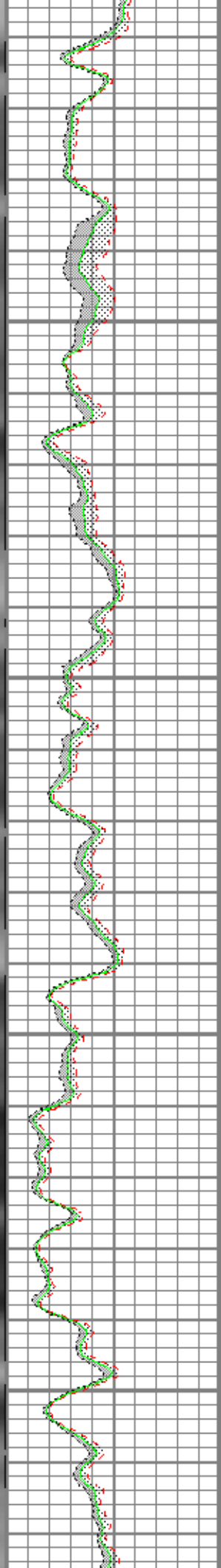
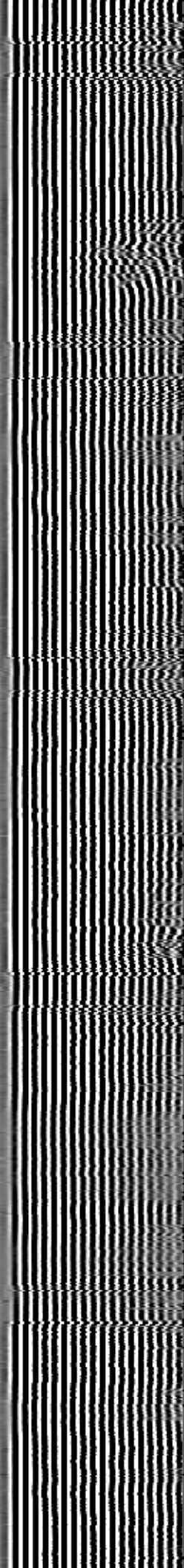
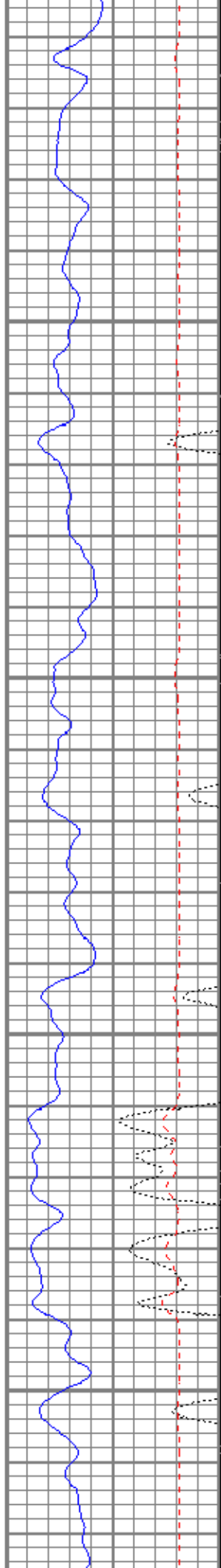


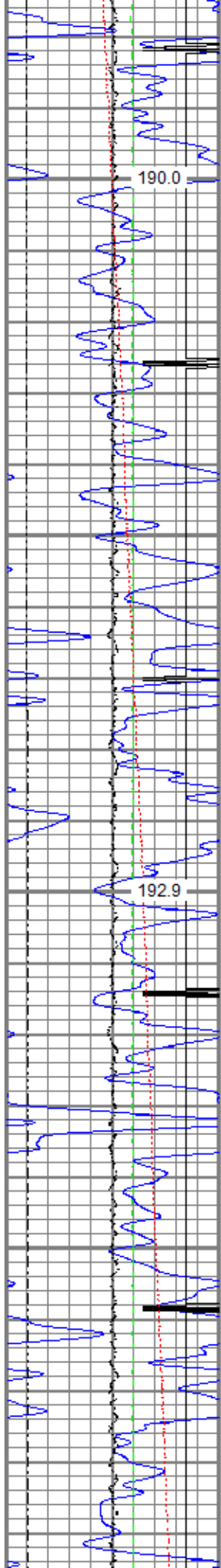




6600

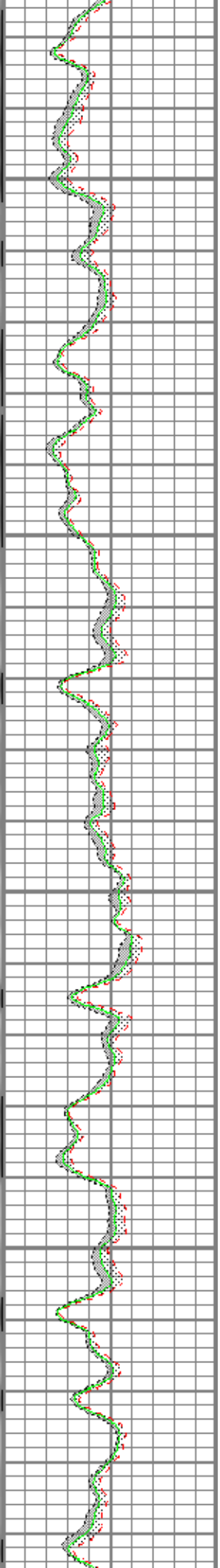
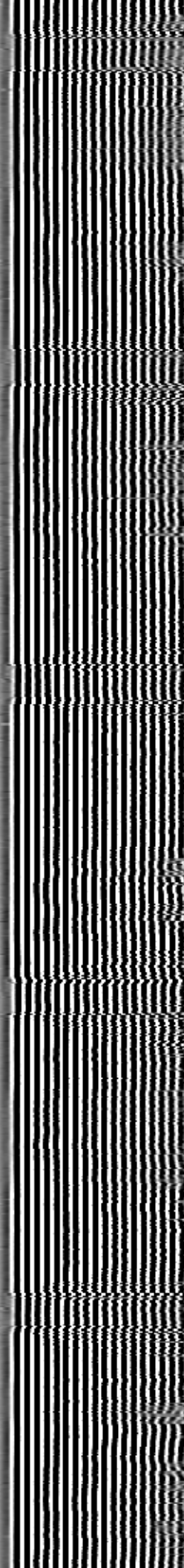
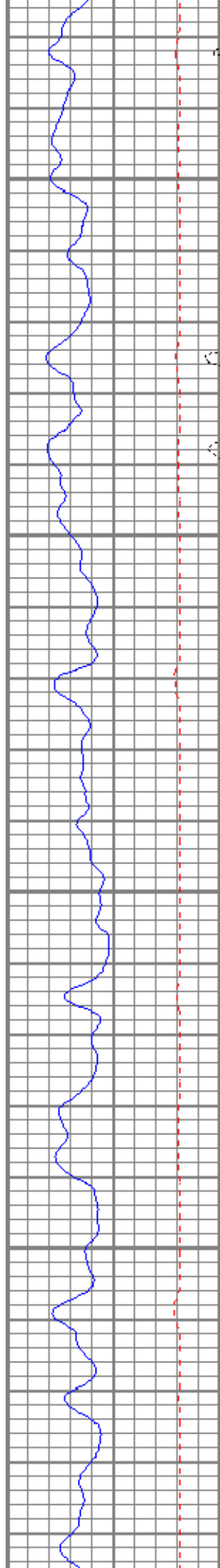
6700

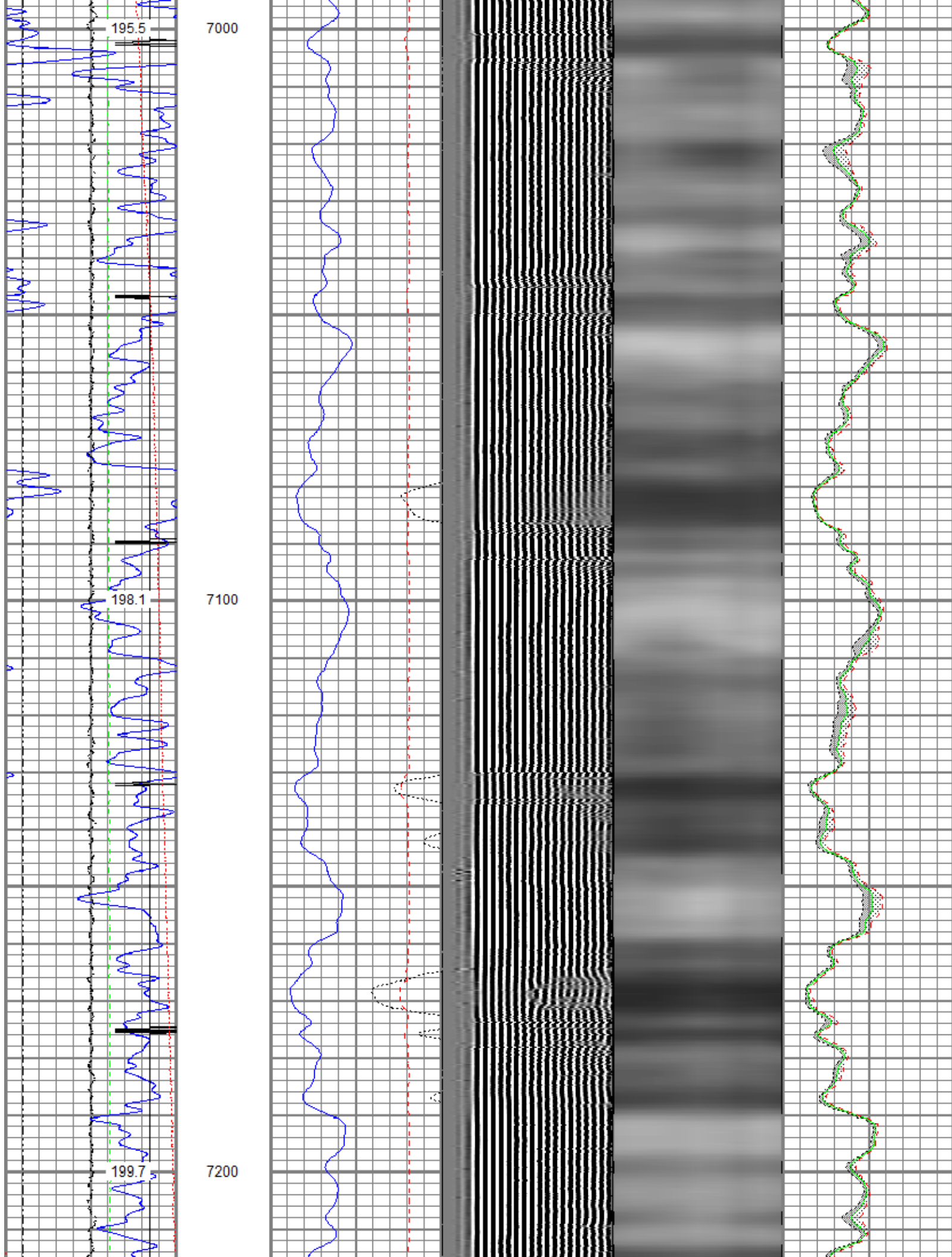


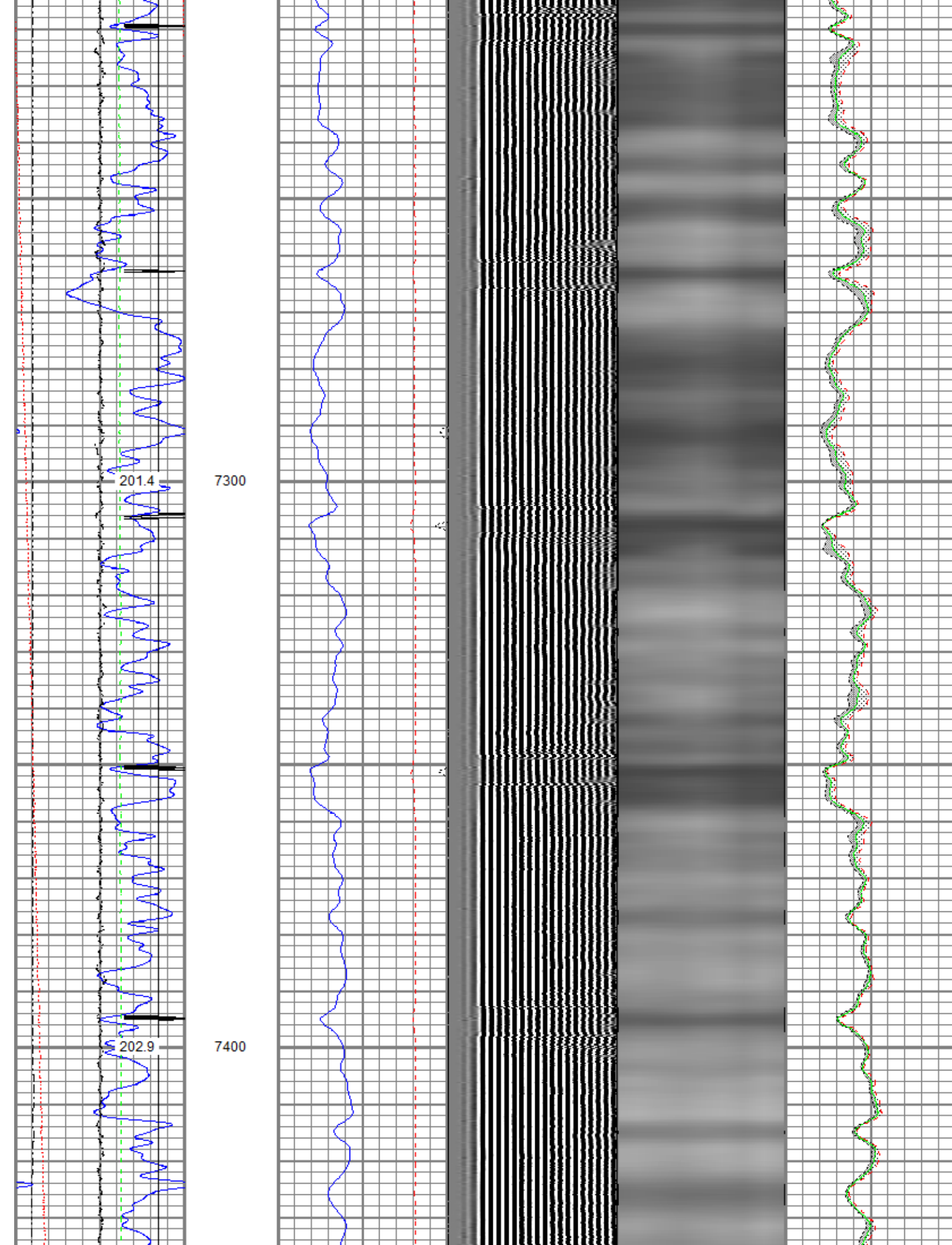


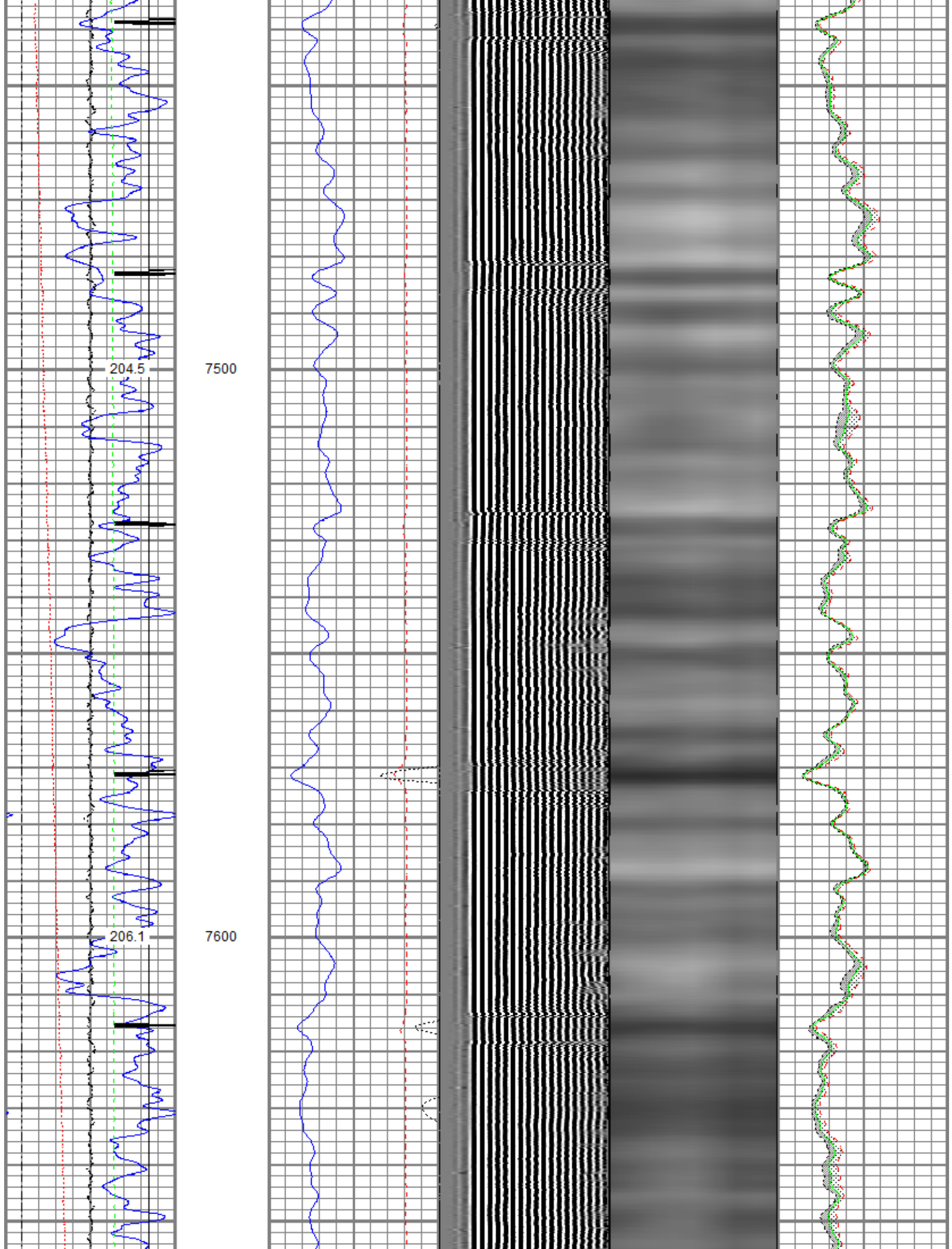
6800

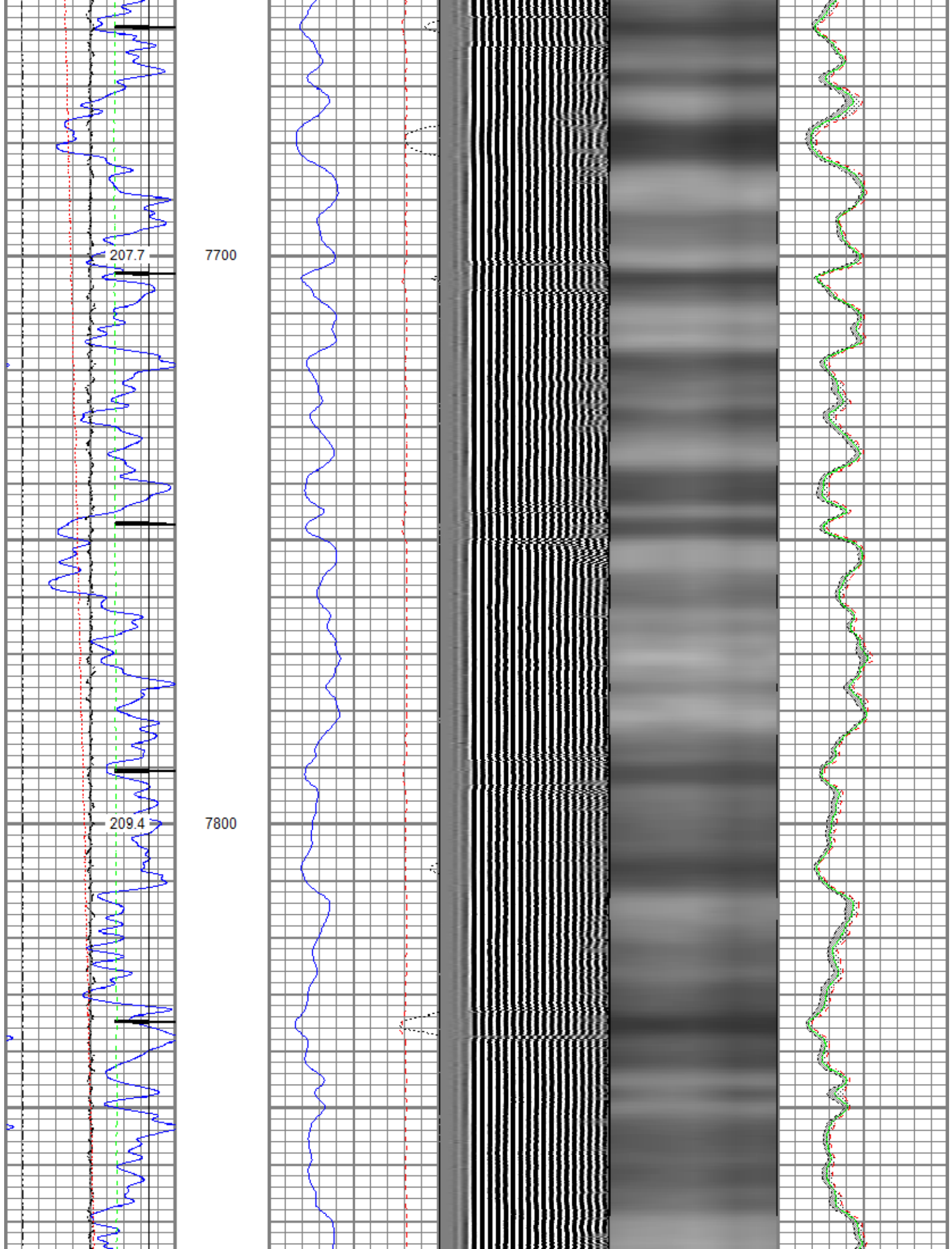
6900

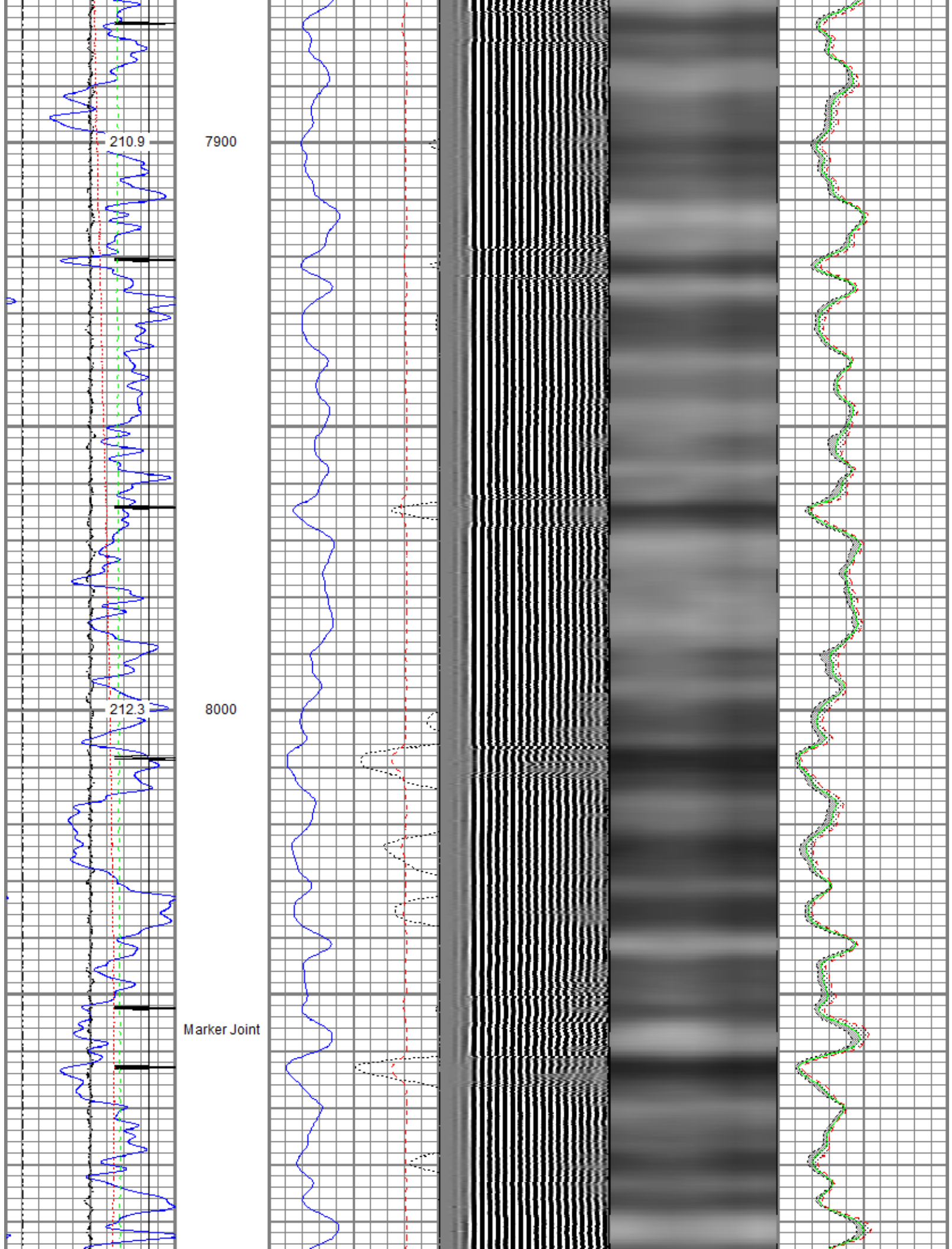


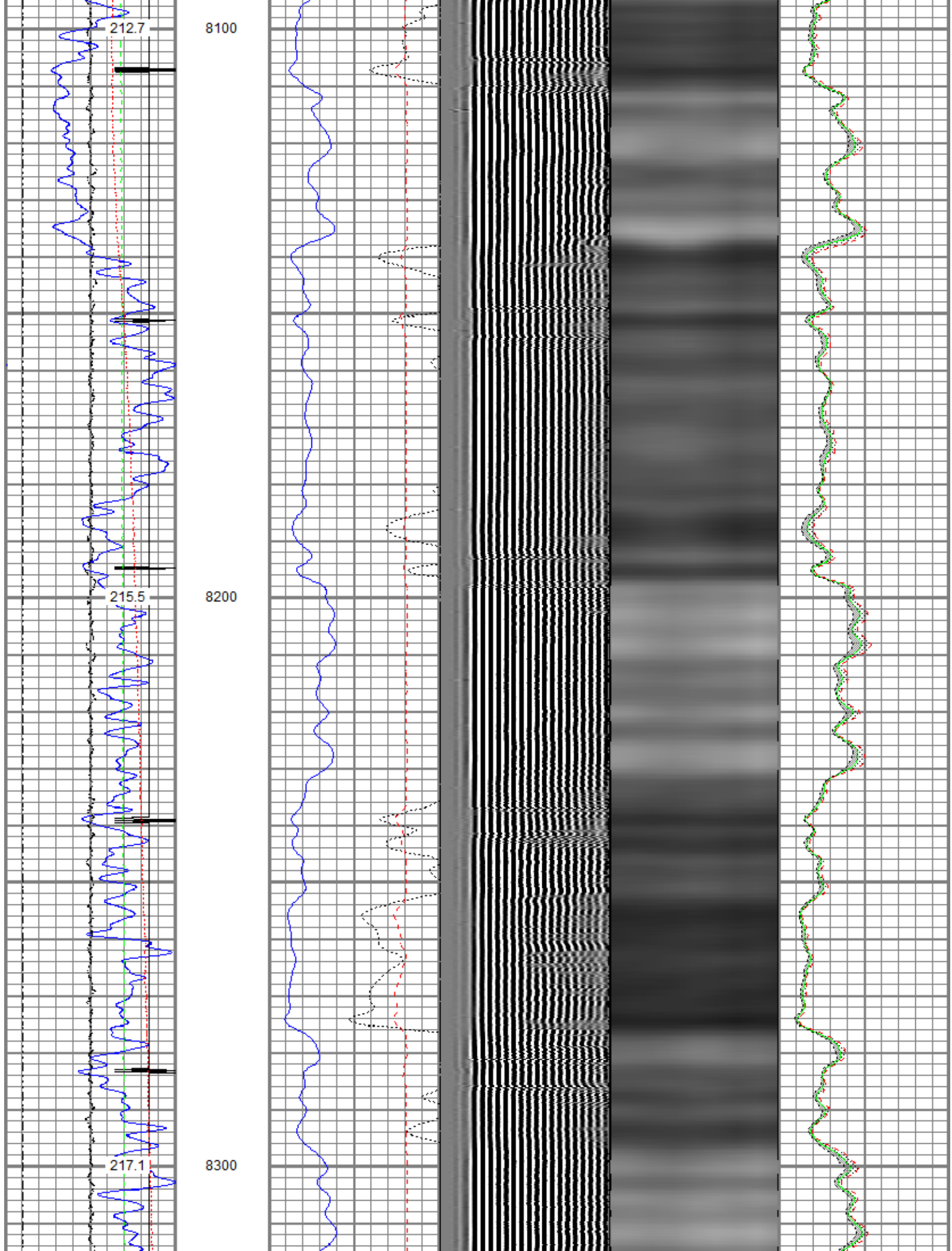


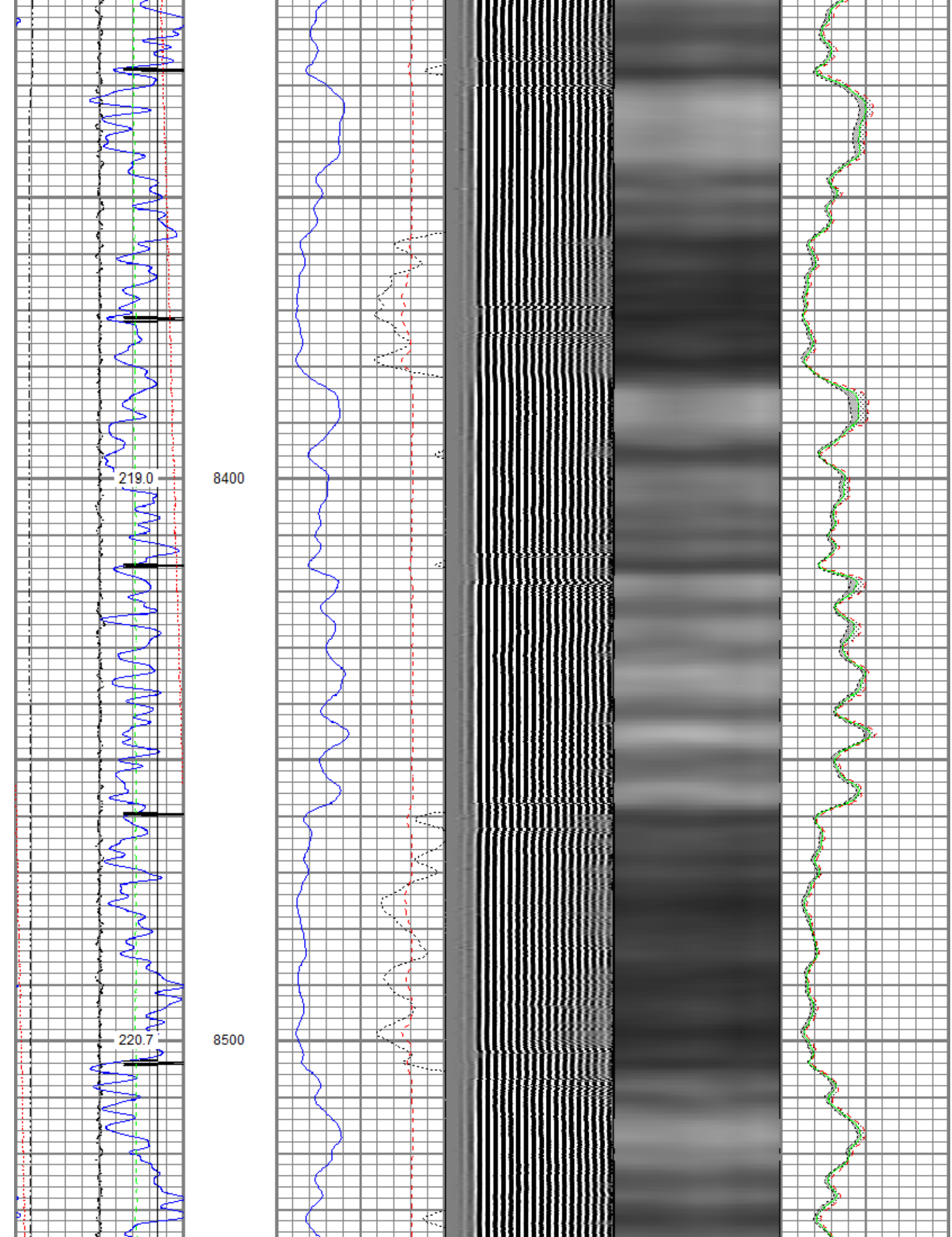


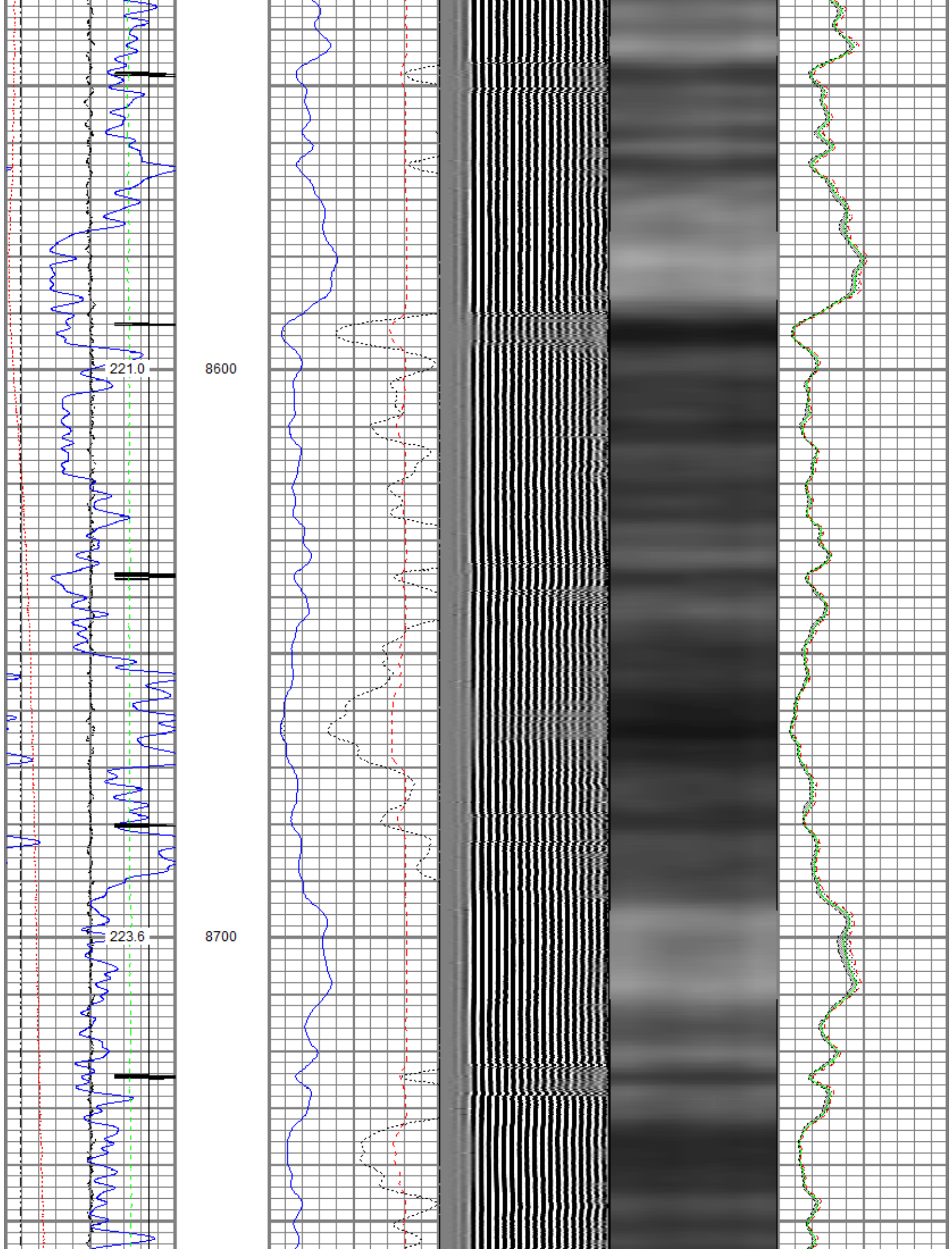


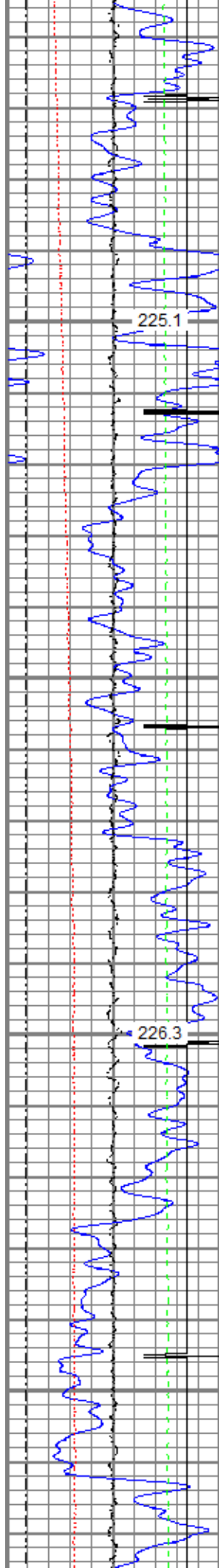






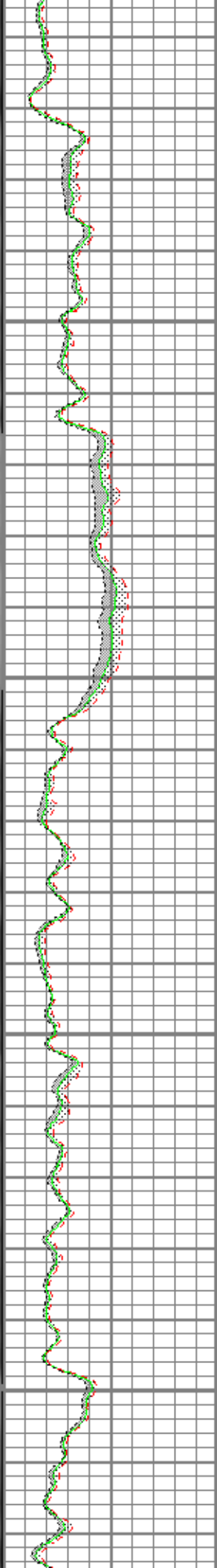
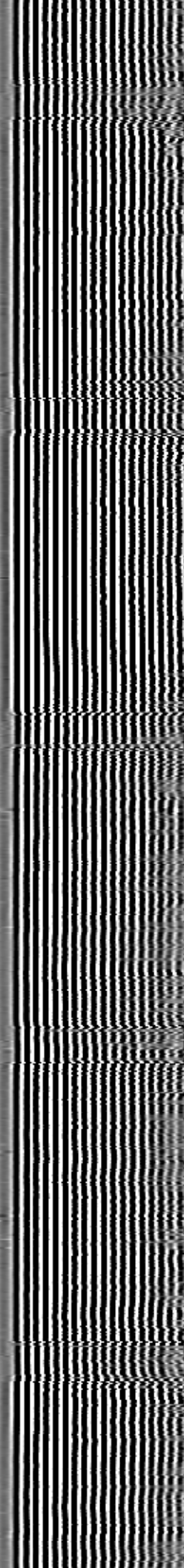
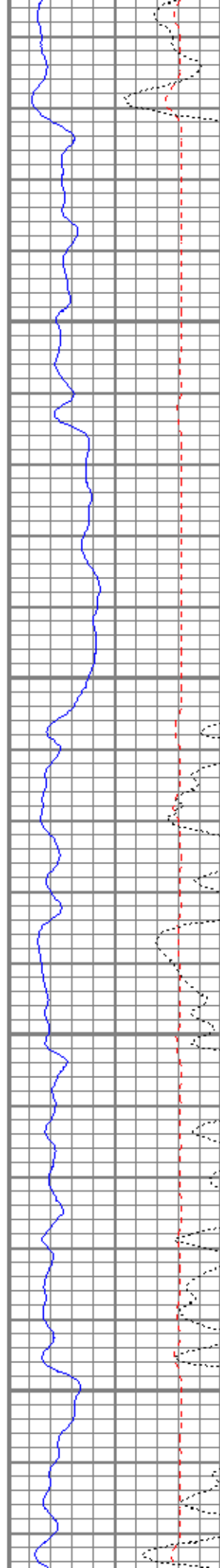


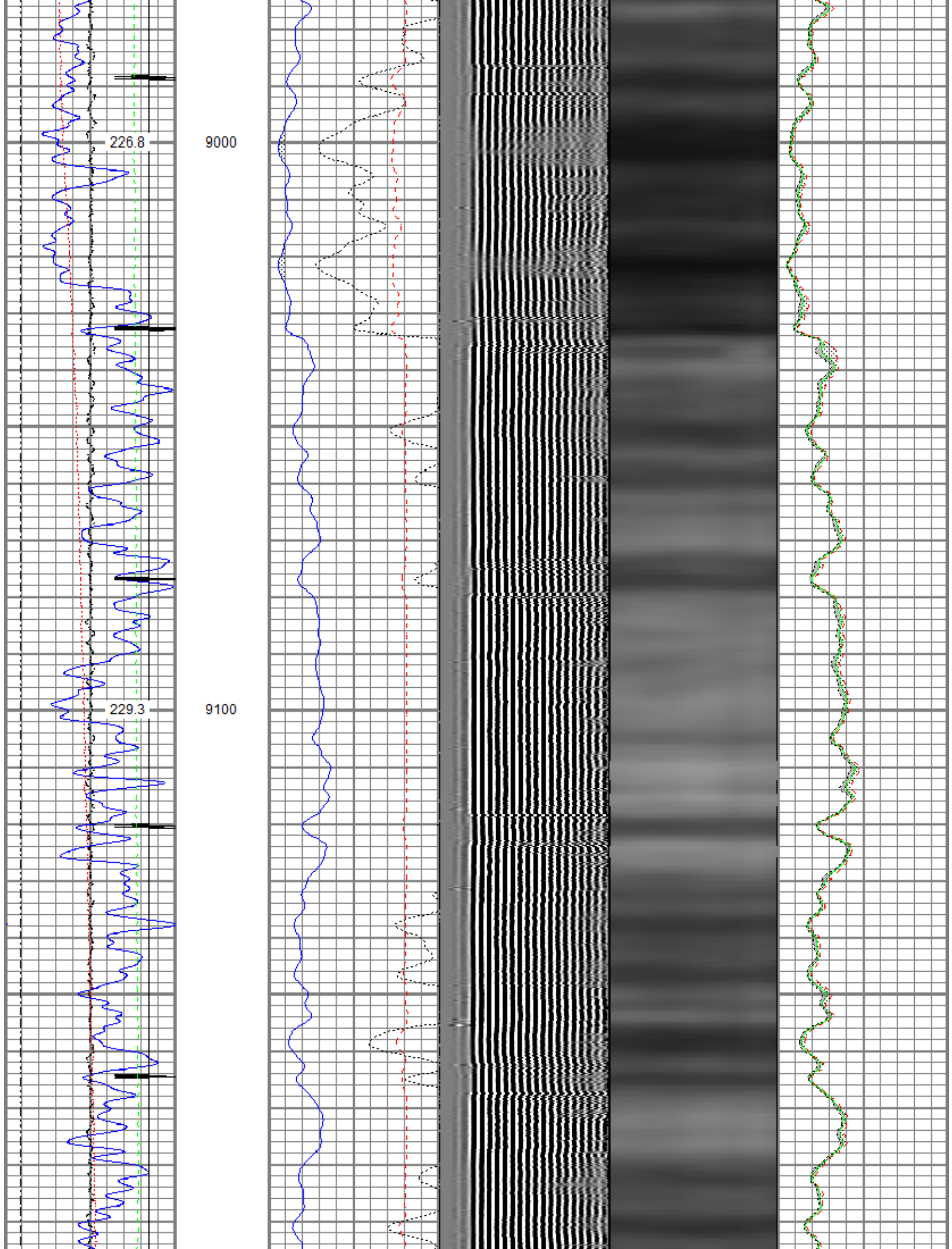


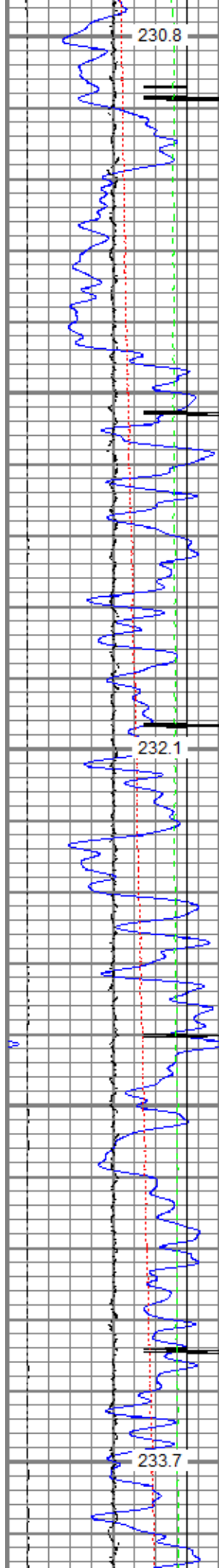


8800

8900



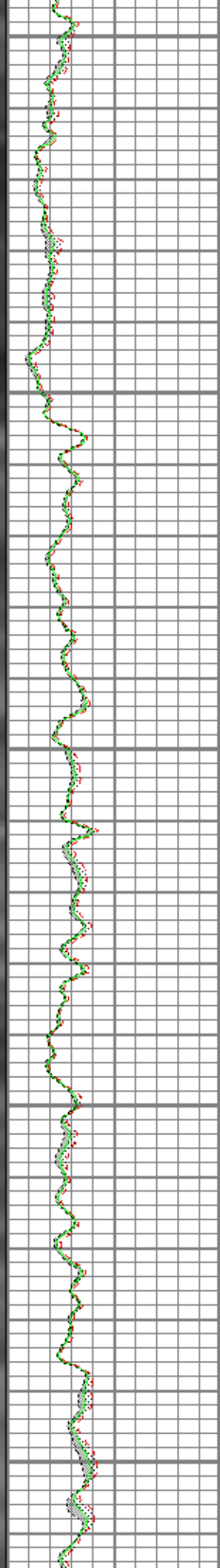
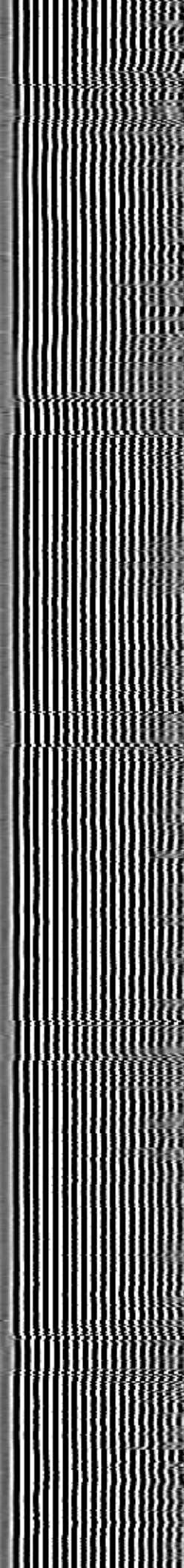
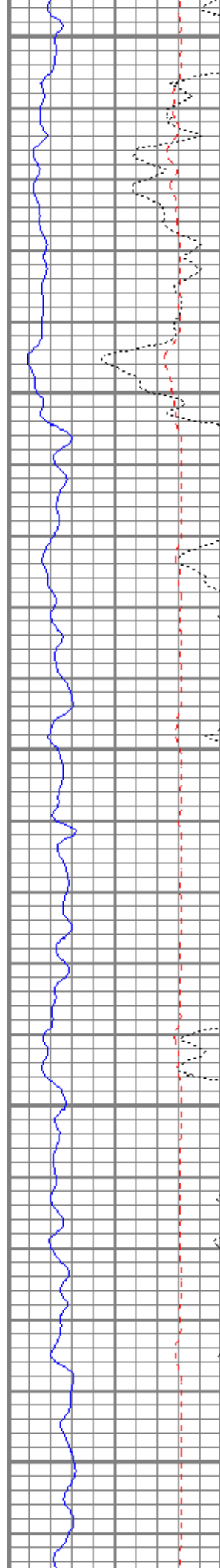


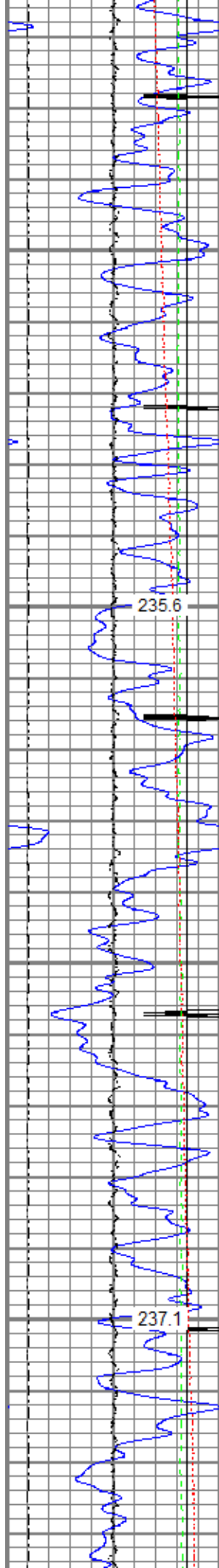


9200

9300

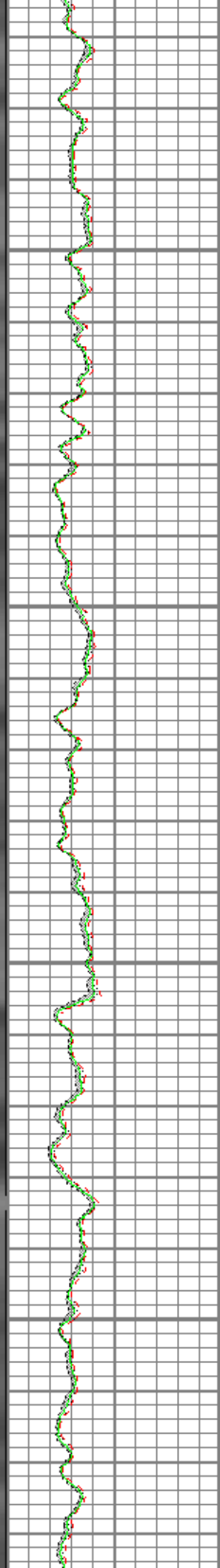
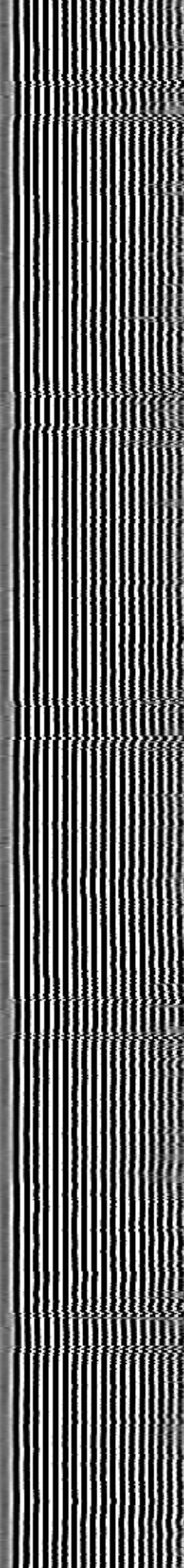
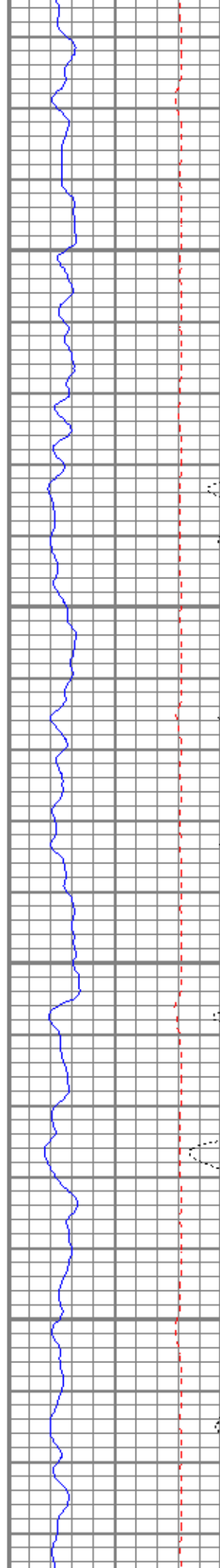
9400

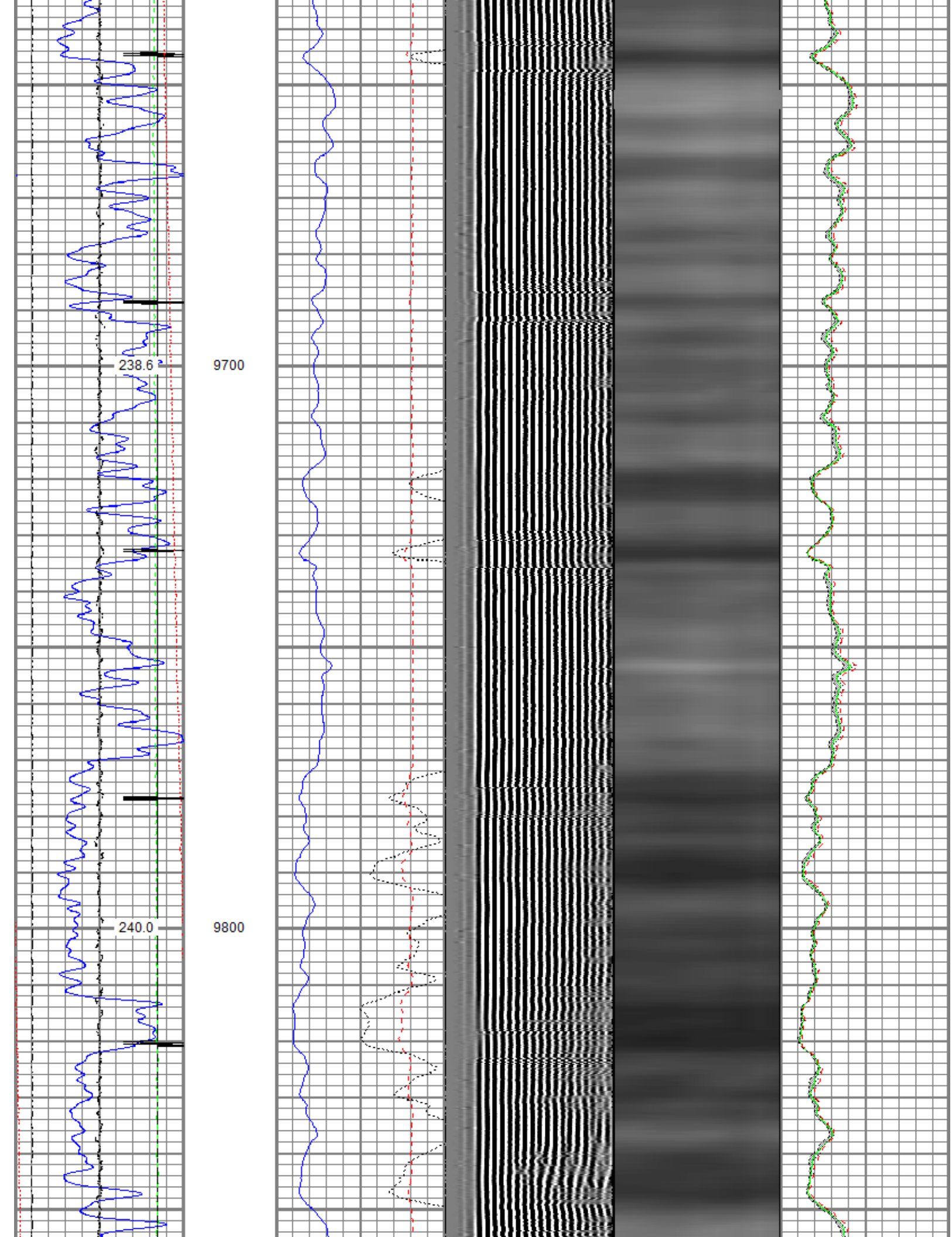


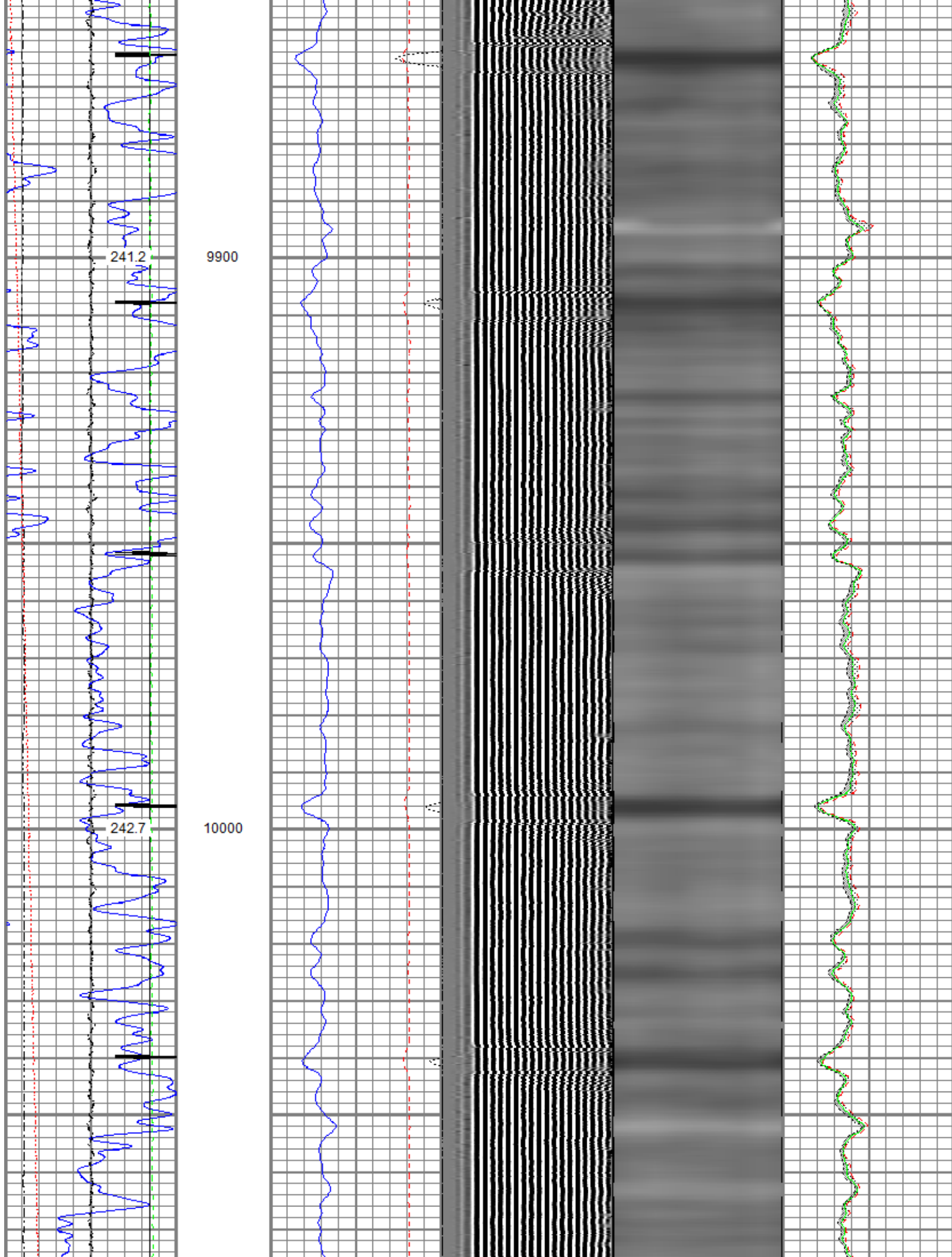


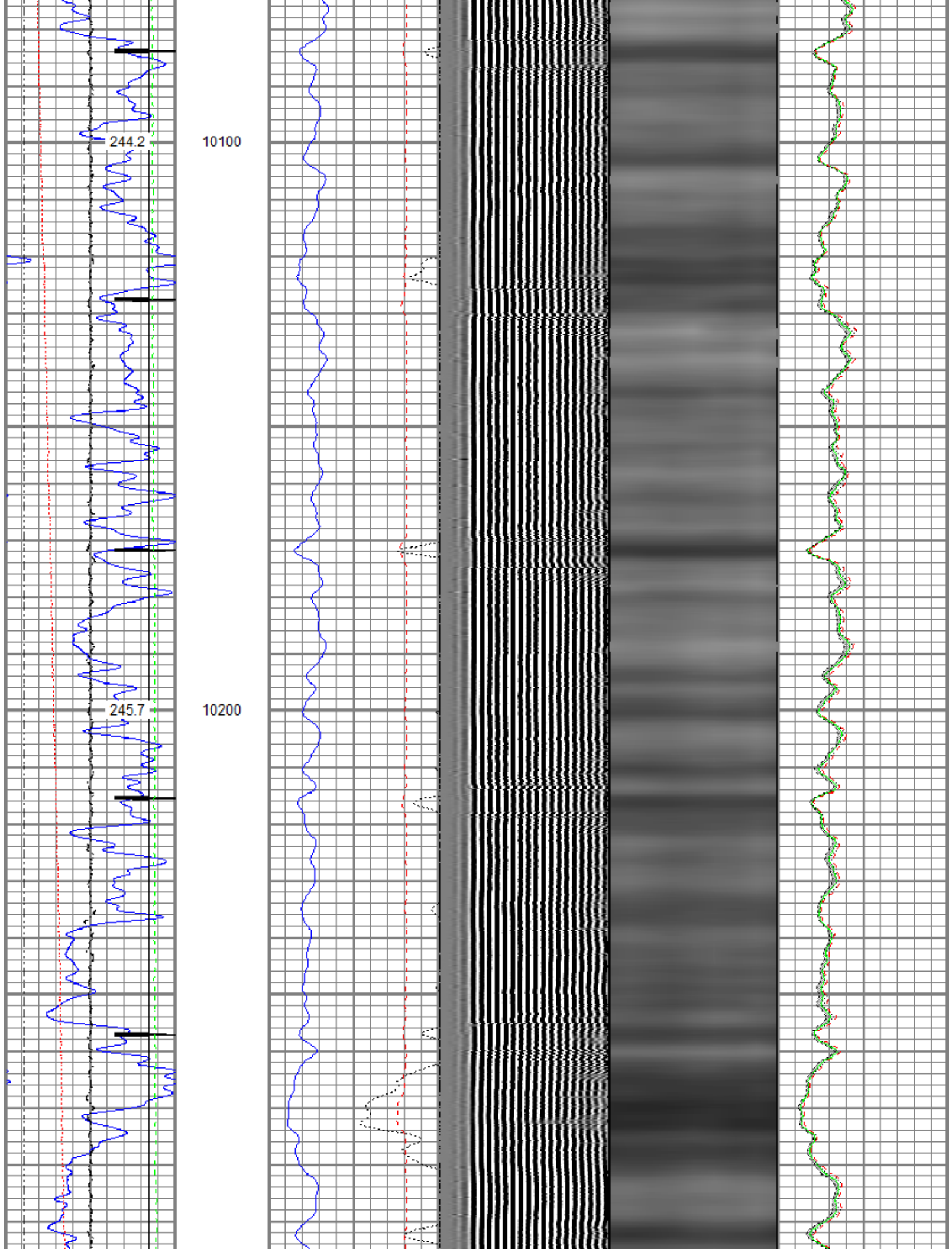
9500

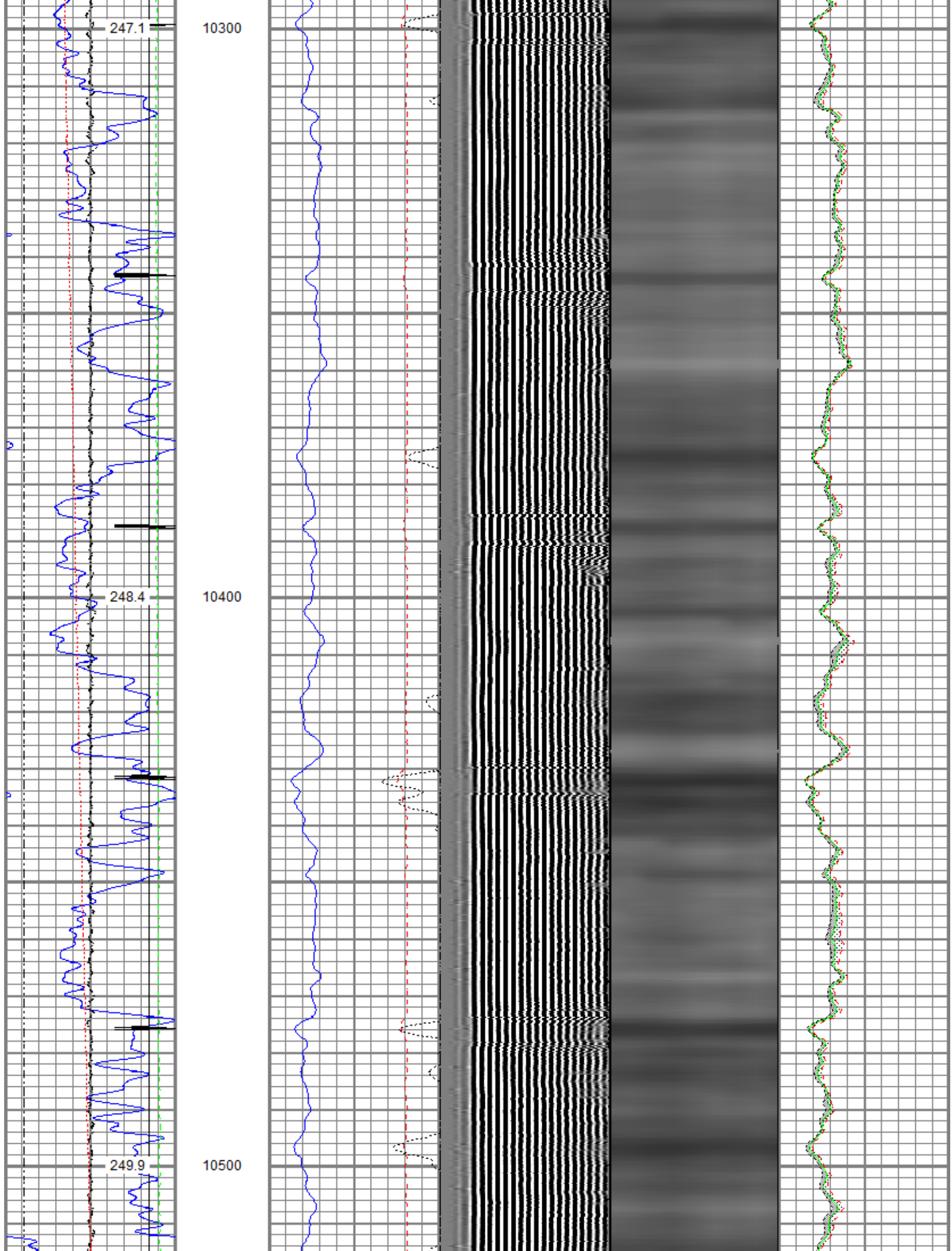
9600

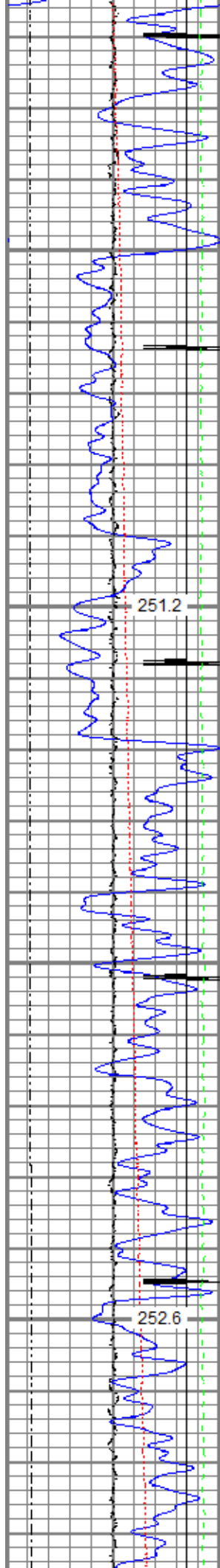






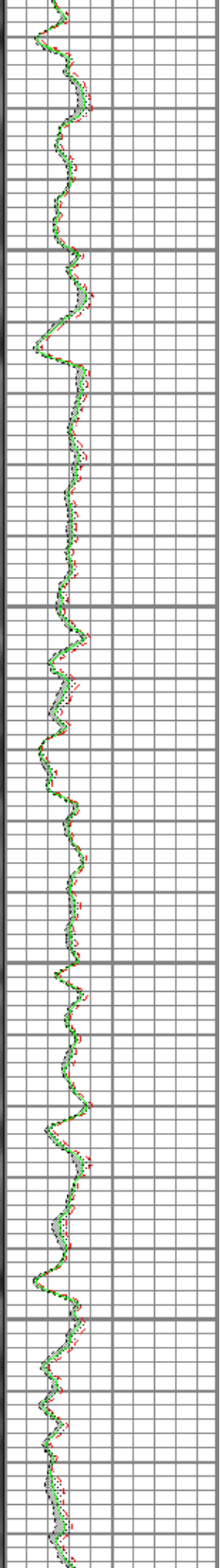
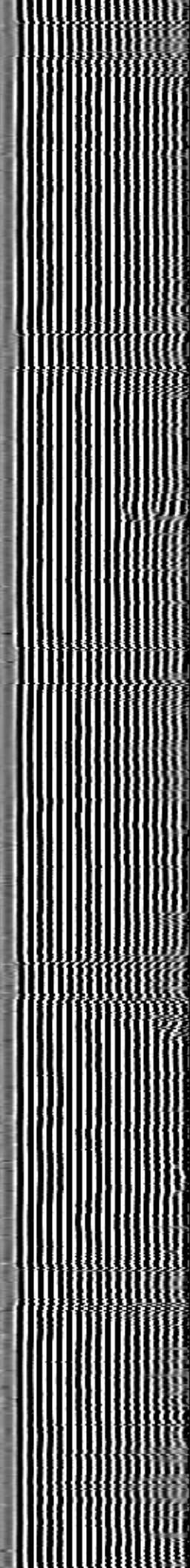
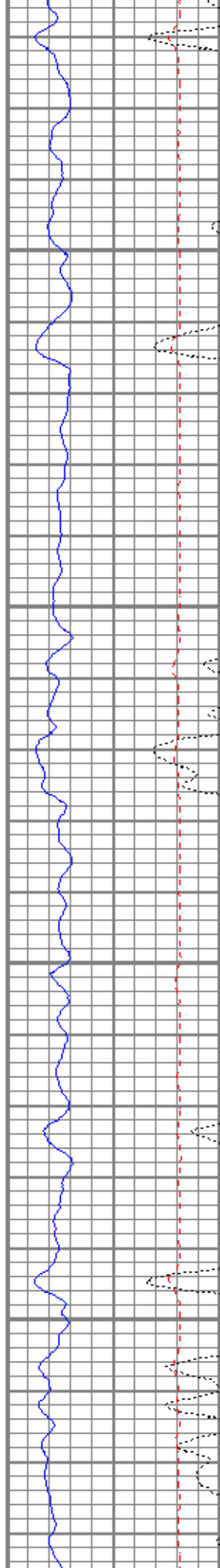


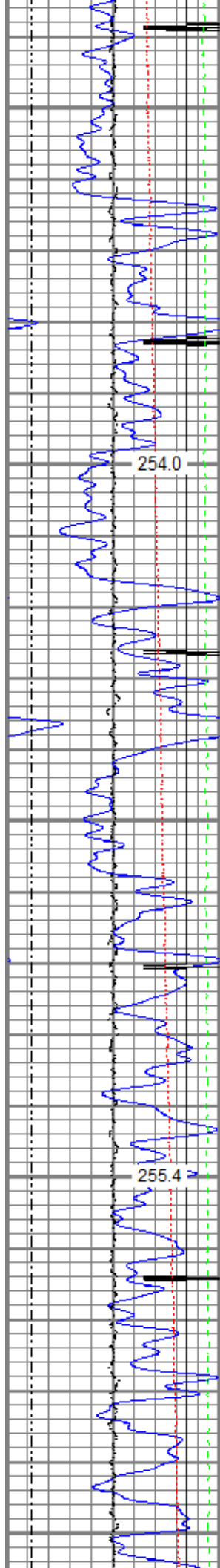




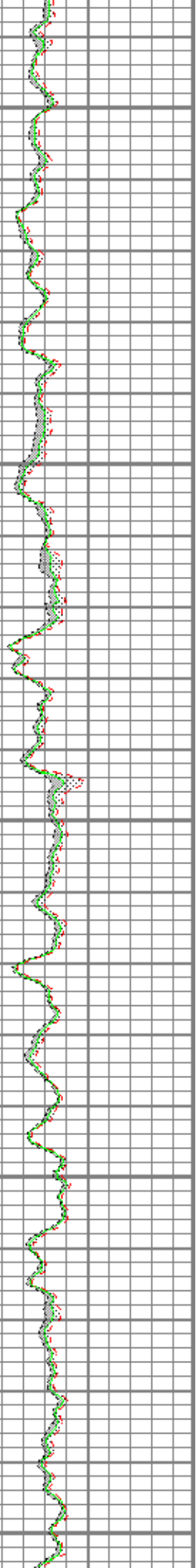
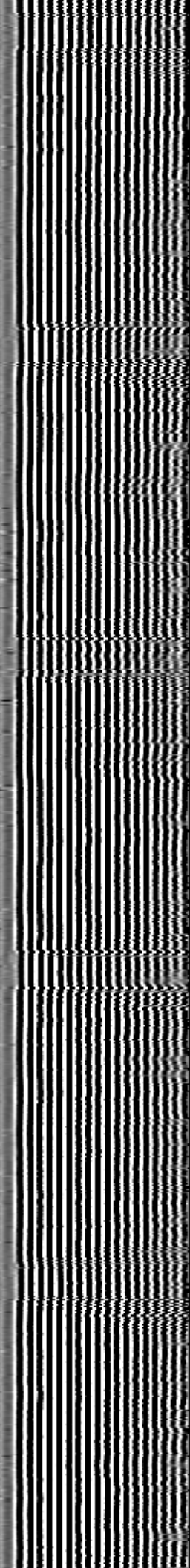
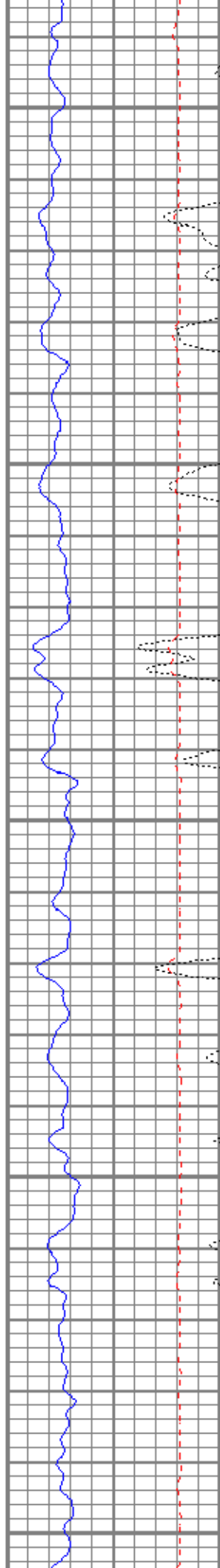
10600

10700



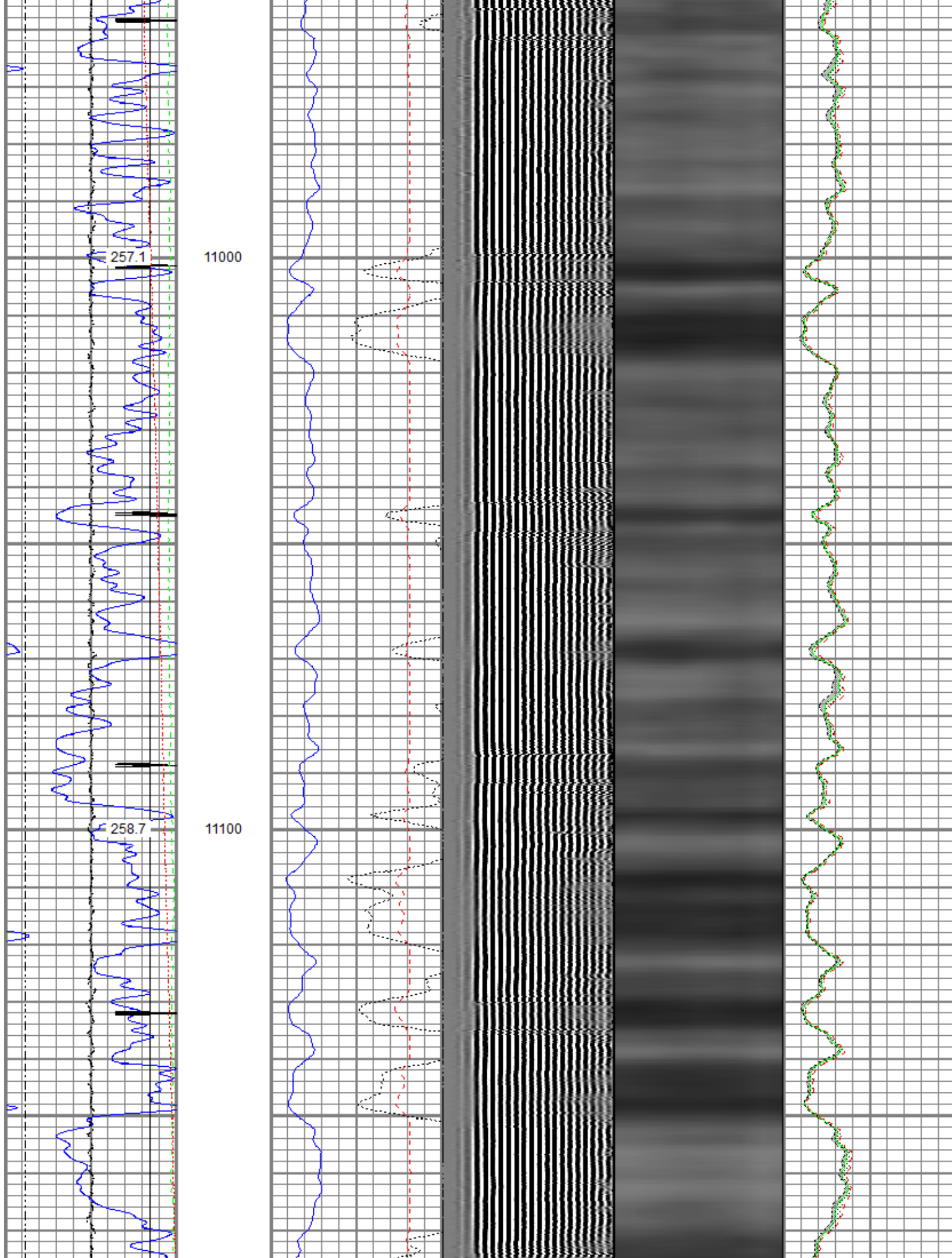


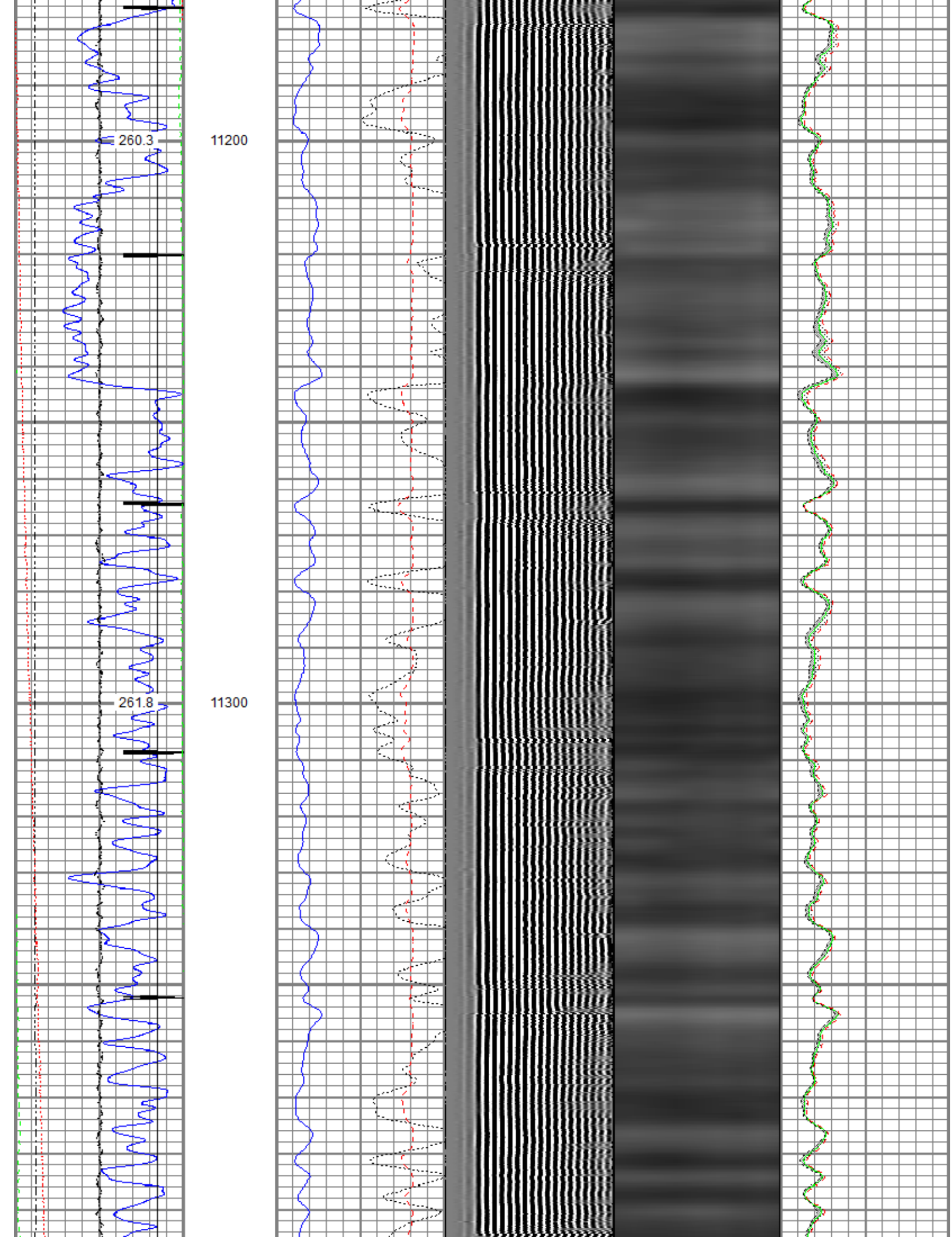
10800

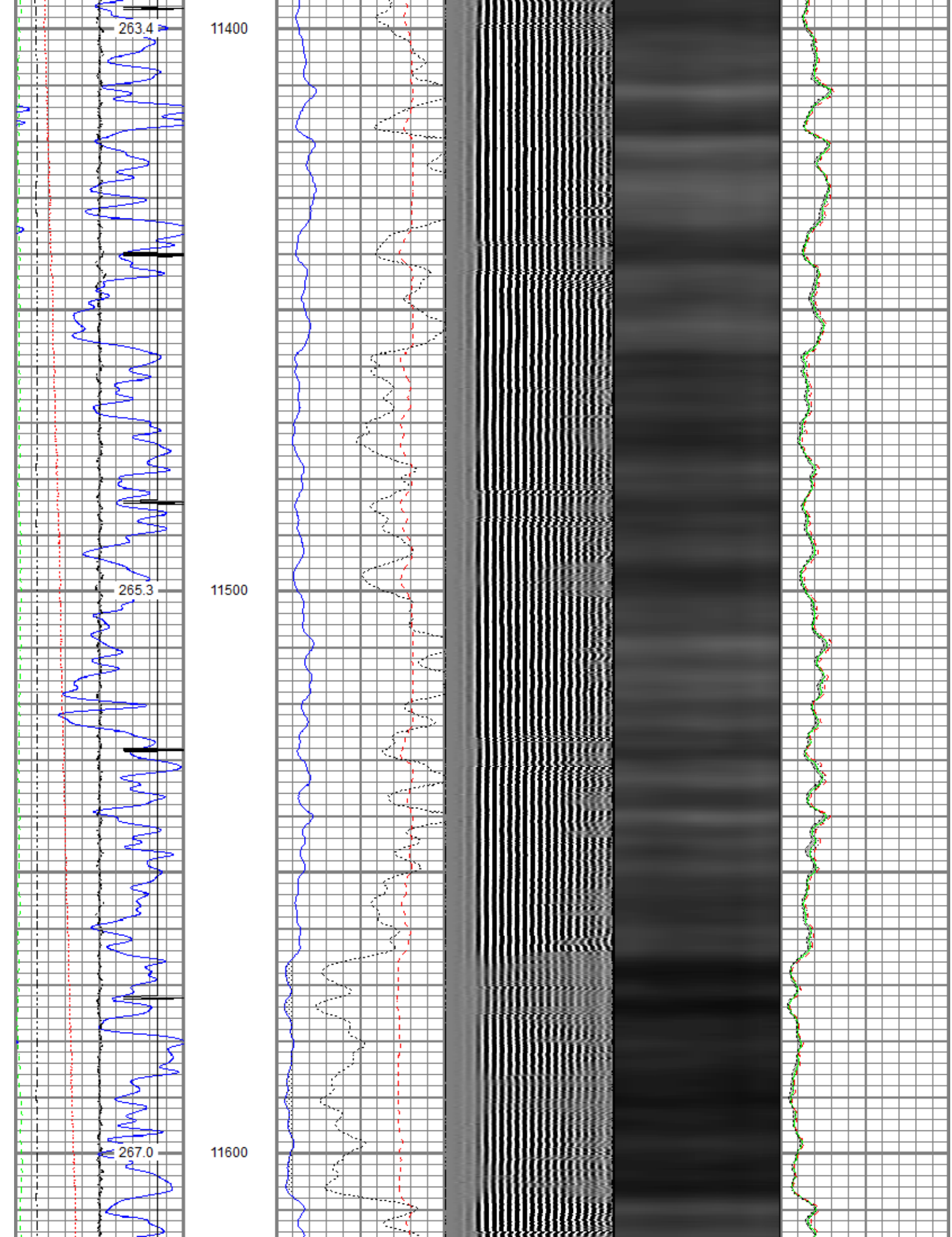


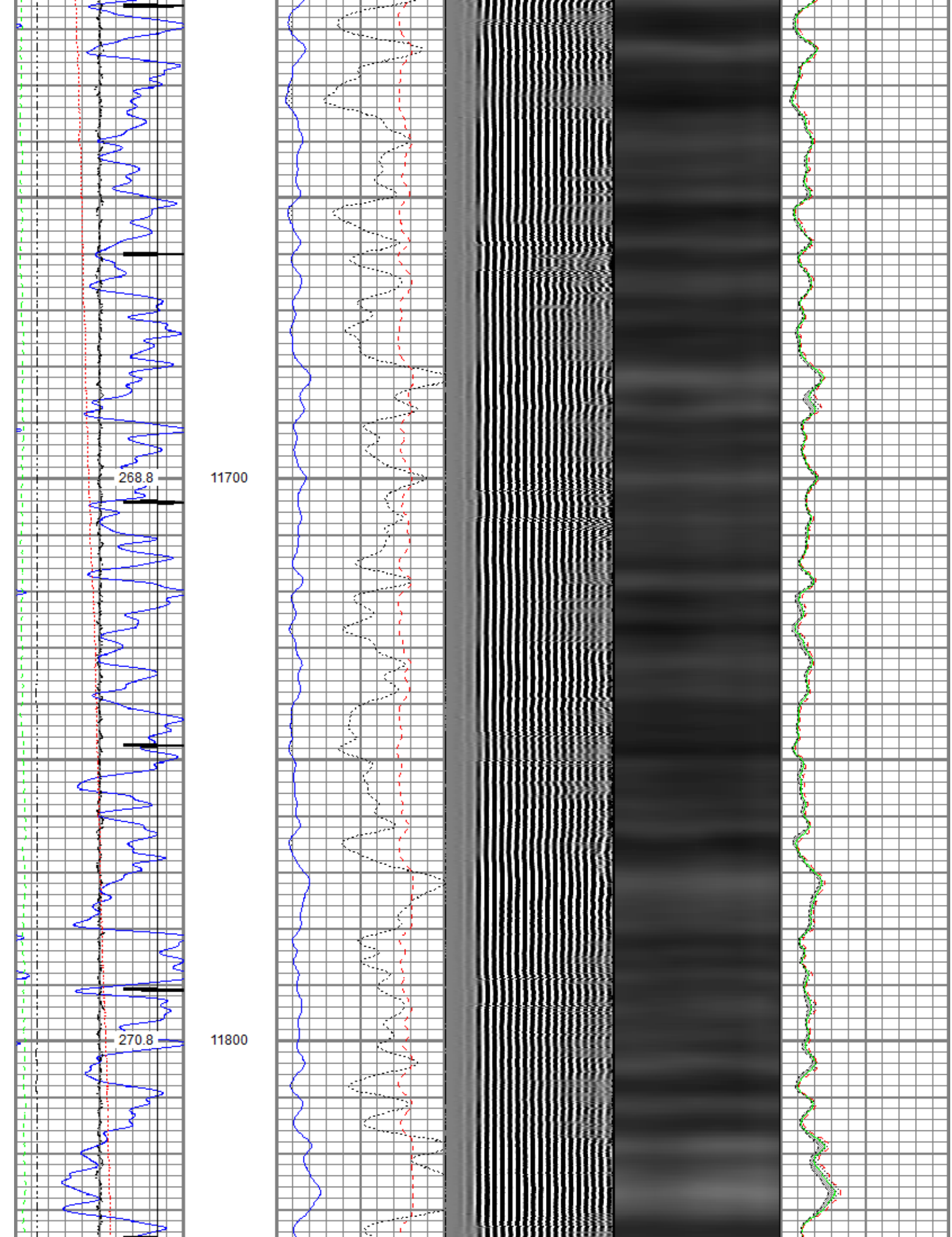
255.4

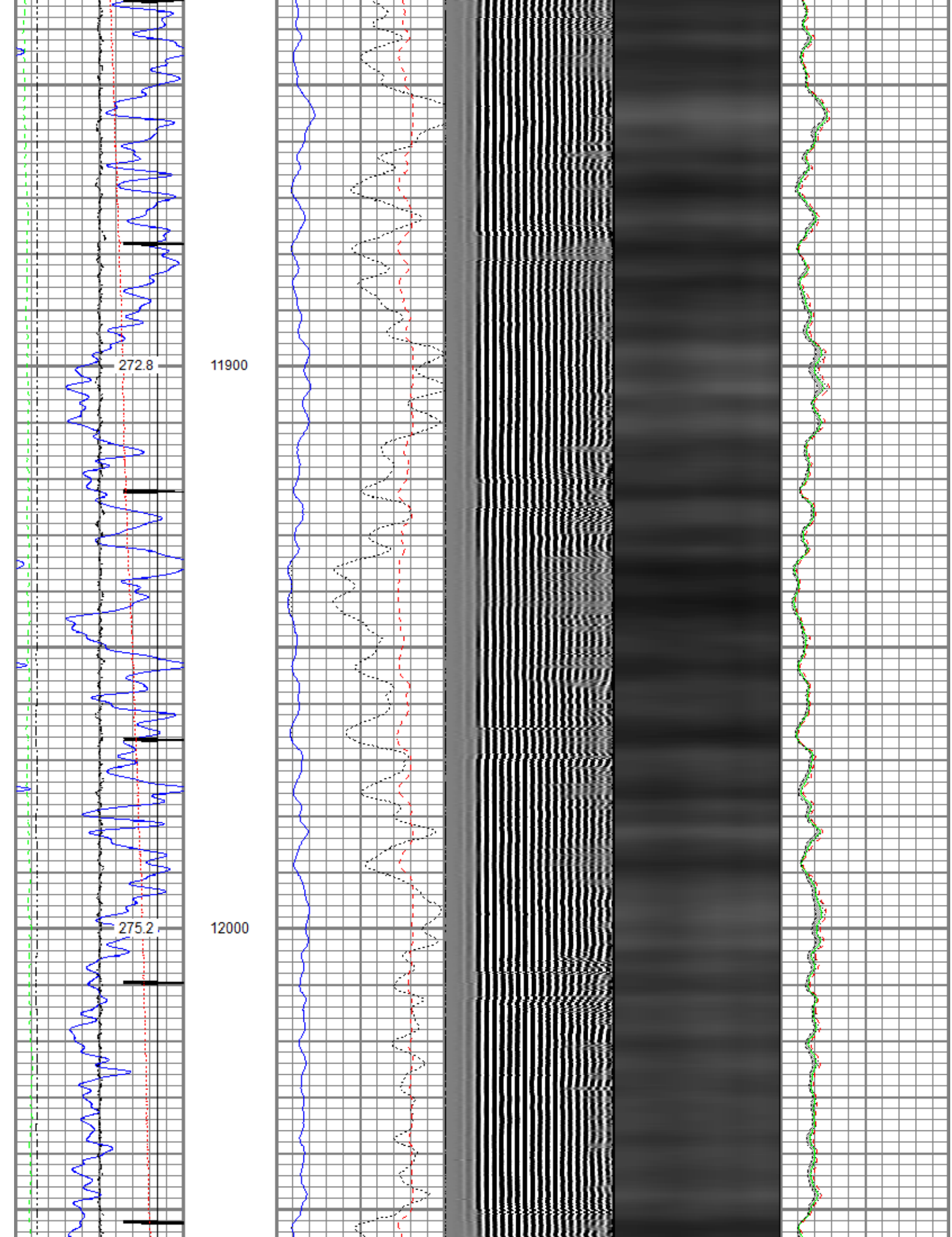
10900

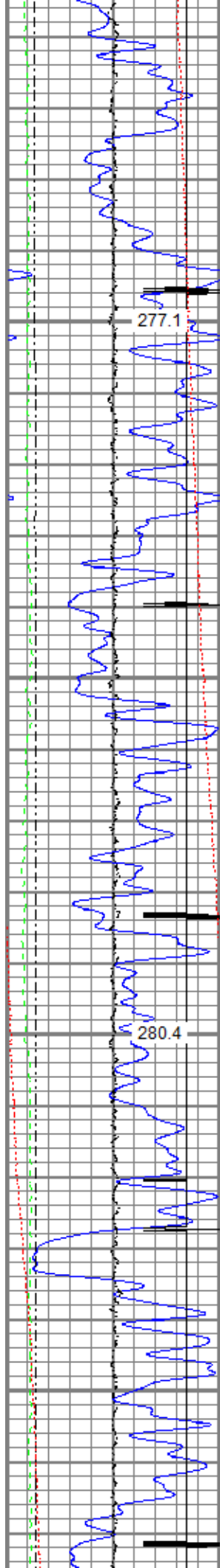






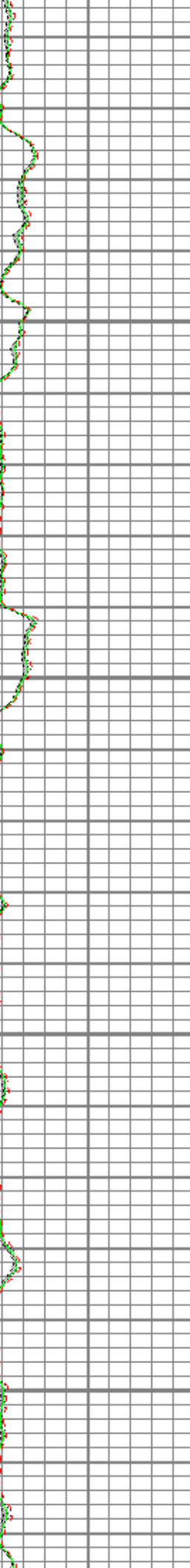
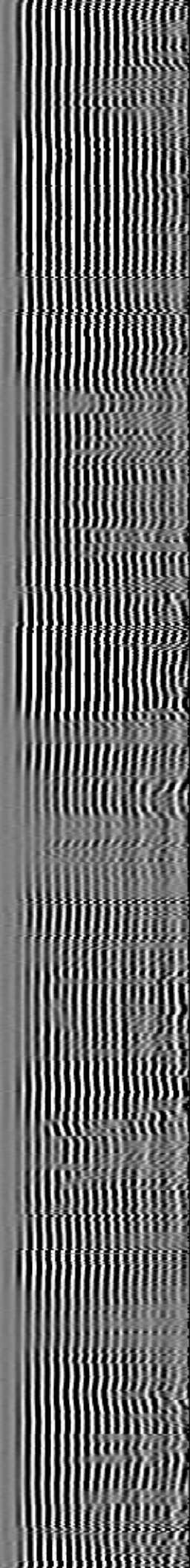
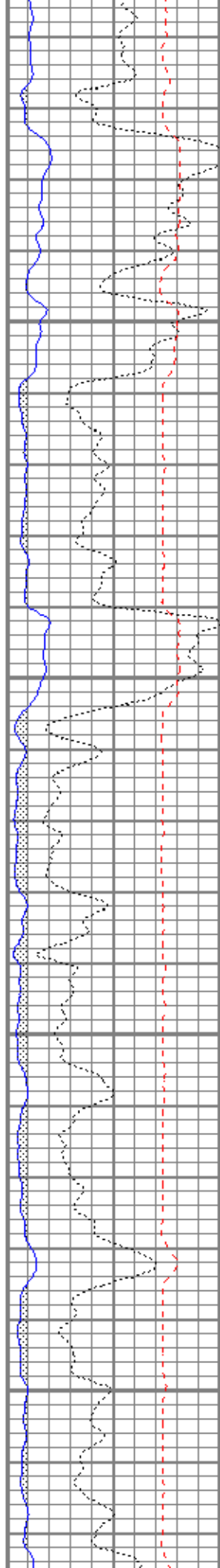


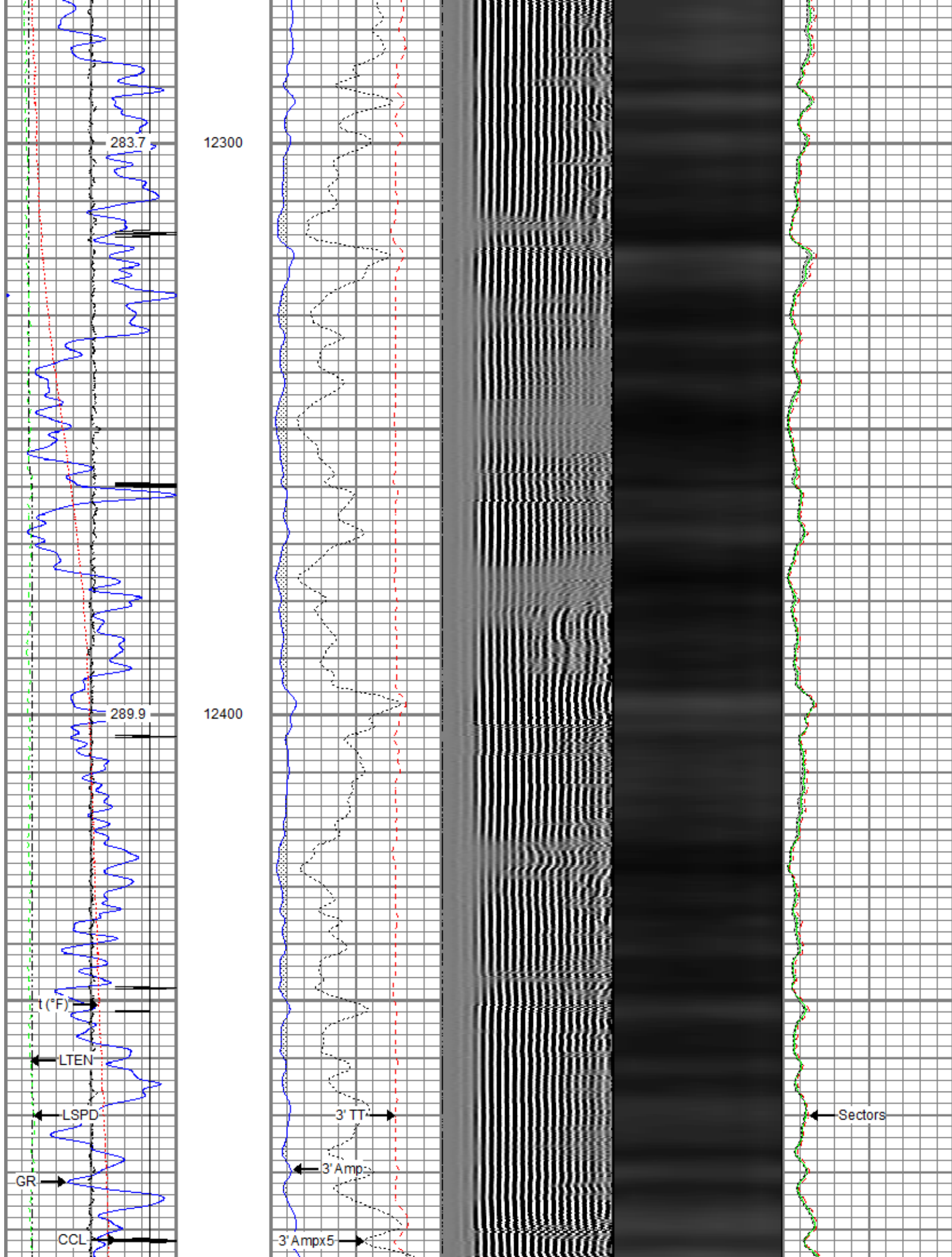


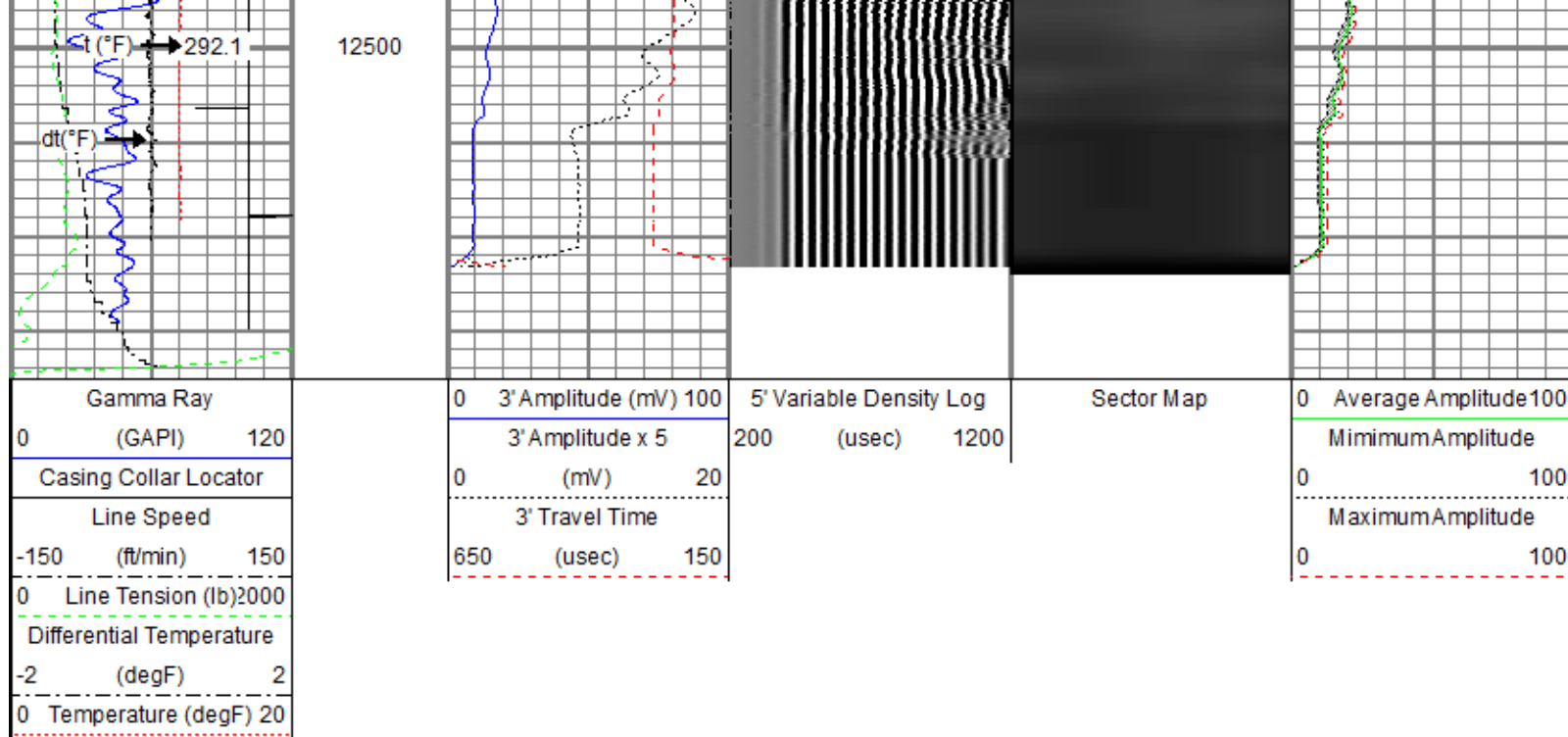


12100

12200



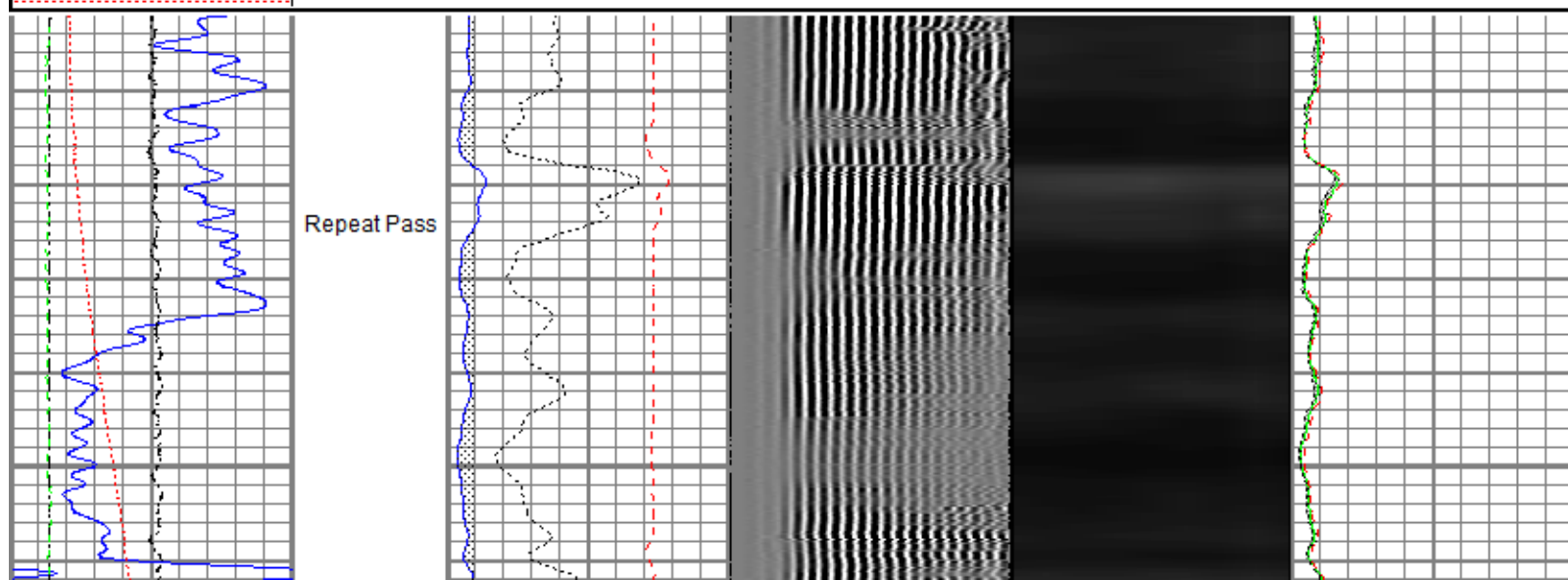
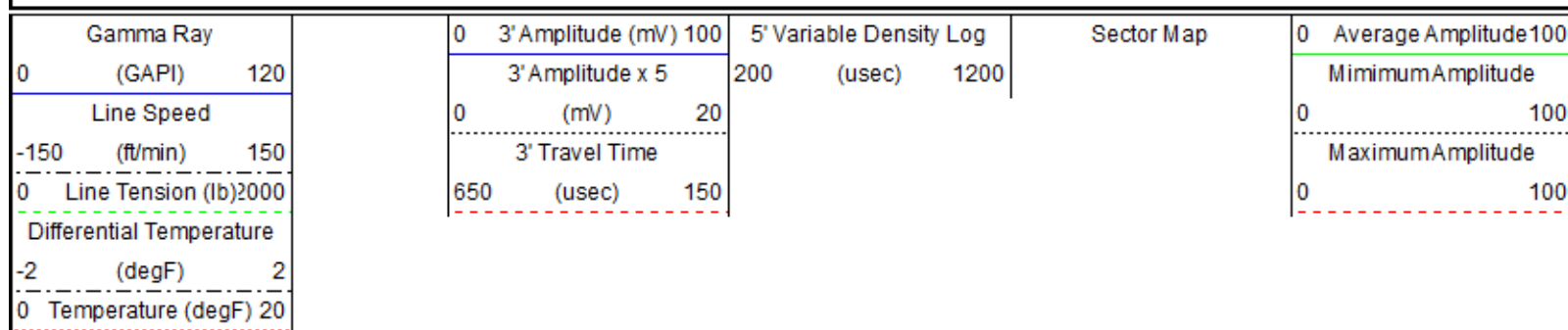


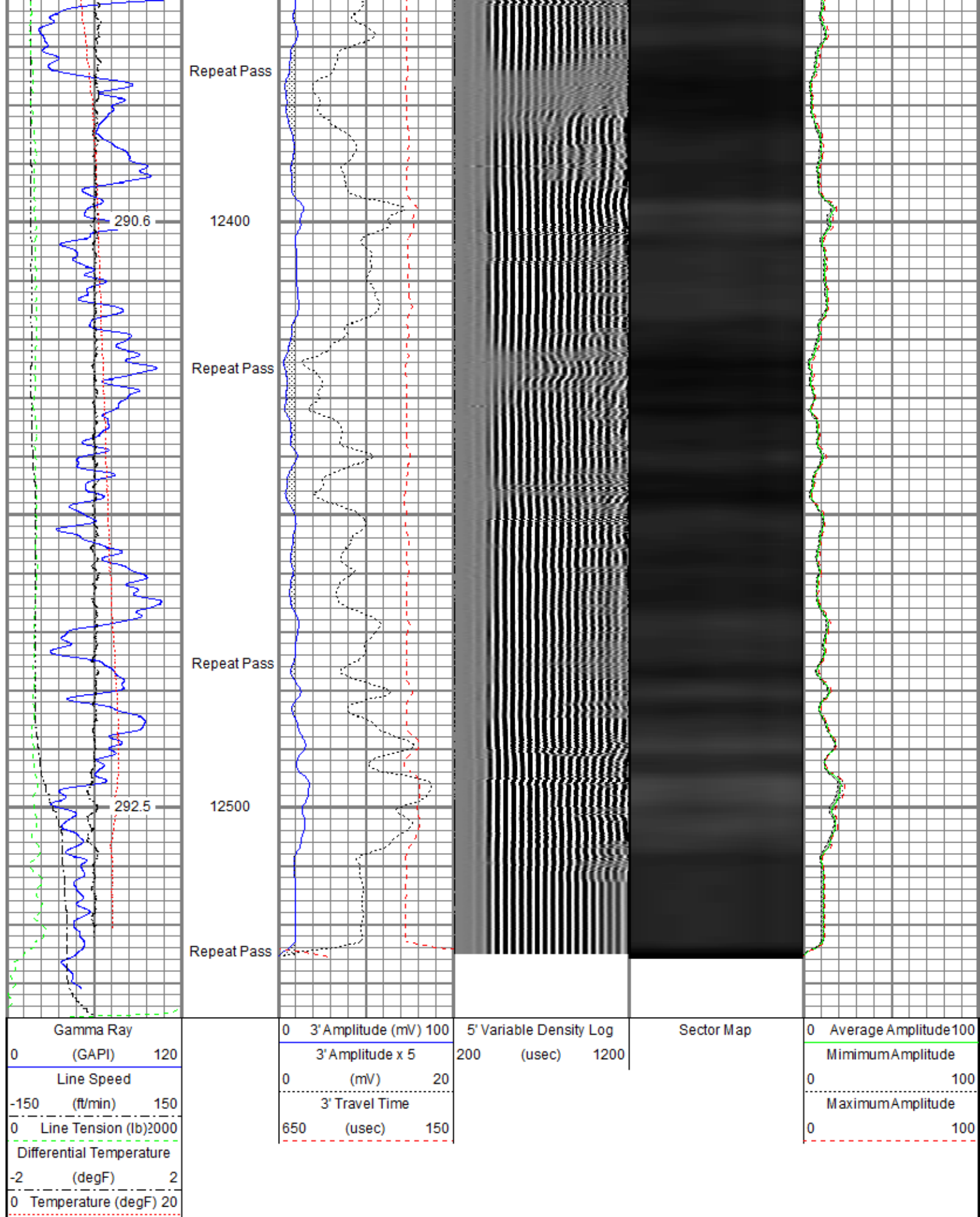


Repeat Pass

Recorded With 0 PSI Surface Induced Pressure

Database File caerus\caerus_fed 15d-13-496_rbl_02-18-20\processed_caerus_fed 15d-13-496_rbl_02-19-20.db
 Dataset Pathname Repeat.2
 Presentation Format ros_radrii_caerus
 Dataset Creation Fri Feb 21 13:33:45 2020
 Charted by Depth in Feet scaled 1:240





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)

Calibration Report

Database File c:\programdata\warrior\data\caerus\caerus_fed 15d-13-496_rbl_02-18-20\processed_caerus_fed 15d-13-496_rbl_02-19-20.db
 Dataset Pathname main.2
 Dataset Creation Fri Feb 21 13:31:46 2020

Gamma Ray Calibration Report

Serial Number: FW1211-081
 Tool Model: 2750 GOB
 Performed: Mon Oct 01 11:32:39 2018

Calibrator Value: 637.0 GAPI

Background Reading: 112.4 cps
 Calibrator Reading: 1008.7 cps

Sensitivity: 0.7107 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: FW1311-021
 Tool Model: 2750 RBT

Calibration Casing Diameter: 4.500 in
 Calibration Depth: 334.357 ft

Master Calibration, performed Wed Feb 19 22:26:34 2020:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.007	0.792	0.800	81.196	102.499	0.039
CAL	0.007	0.759				
5'	0.010	0.739	0.800	81.196	110.378	-0.345
SUM						
S1	0.004	0.752	0.000	100.000	133.721	-0.562
S2	0.008	0.744	0.000	100.000	135.805	-1.041
S3	0.008	0.807	0.000	100.000	125.141	-0.958
S4	0.008	0.886	0.000	100.000	113.990	-0.962
S5	0.008	0.861	0.000	100.000	117.183	-0.915
S6	0.008	0.820	0.000	100.000	123.064	-0.964
S7	0.008	0.792	0.000	100.000	127.488	-0.980
S8	0.008	0.760	0.000	100.000	133.035	-1.077

Air Zero Calibration, performed Wed Feb 19 12:32:32 2020:

	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

Temperature Calibration Report

Serial Number: FW1311-021
 Tool Model: 2750 RBT
 Performed: Mon Oct 01 11:32:11 2018

Reference Reading

Low Reference:	100.00	degF	112.12	degF
High Reference:	350.00	degF	415.62	degF
Gain:	0.82			
Offset:	7.65			
Delta Spacing	1			



Company	Caerus Piceance LLC
Well	FED 15D-13-496
Field	Grand Valley
County	Garfield
State	Colorado