



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company Kerr-McGee Oil & Gas Onshore, L.P.

Well Farley 23-5HZ

Field Wattenberg

County Weld State Colorado

Location: API #: 05-123-50193

SEC 23 TWP 3N RGE 66W

Other Services
JBGR
RBP
RBL 0 PSI
Elevation

Permanent Datum
Log Measured From
Drilling Measured From
Ground Level
Ground Level
Kelly Bushing
Elevation
0 FT
4939'

K.B. 4956'
D.F. ---
G.L. 4939'

Date	07-DEC-2019
Run Number	Three
Depth Driller	13041 FT
Depth Logger	6760 FT
Bottom Logged Interval	6745 FT
Top Log Interval	Surface
Open Hole Size	7.875"
Type Fluid	Water
Density / Viscosity	8.34 lb/gal
Max. Recorded Temp.	237°F
Estimated Cement Top	See Log
Time Well Ready	ROA
Time Logger on Bottom	11:20
Equipment Number	HD-361
Location	Platteville, CO
Recorded By	J. Barnett
Witnessed By	J. McCarthy
G. Lueck	
Borehole Record	
Run Number	Bit
From	To
Size	Weight
From	To
Tubing Record	
Casing Record	Size (in)
Surface Casing	Wgt (lbs/ft)
Intermediate #1	Grade
Intermediate #2	Top
Inner	Bottom

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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 6680 FT
Adjusted -5 FT to correlate with Marker Joint
Gauge Ring/Junk Basket ran to 7693 FT
Retrievable Bridge Plug set at 6780 FT
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!!

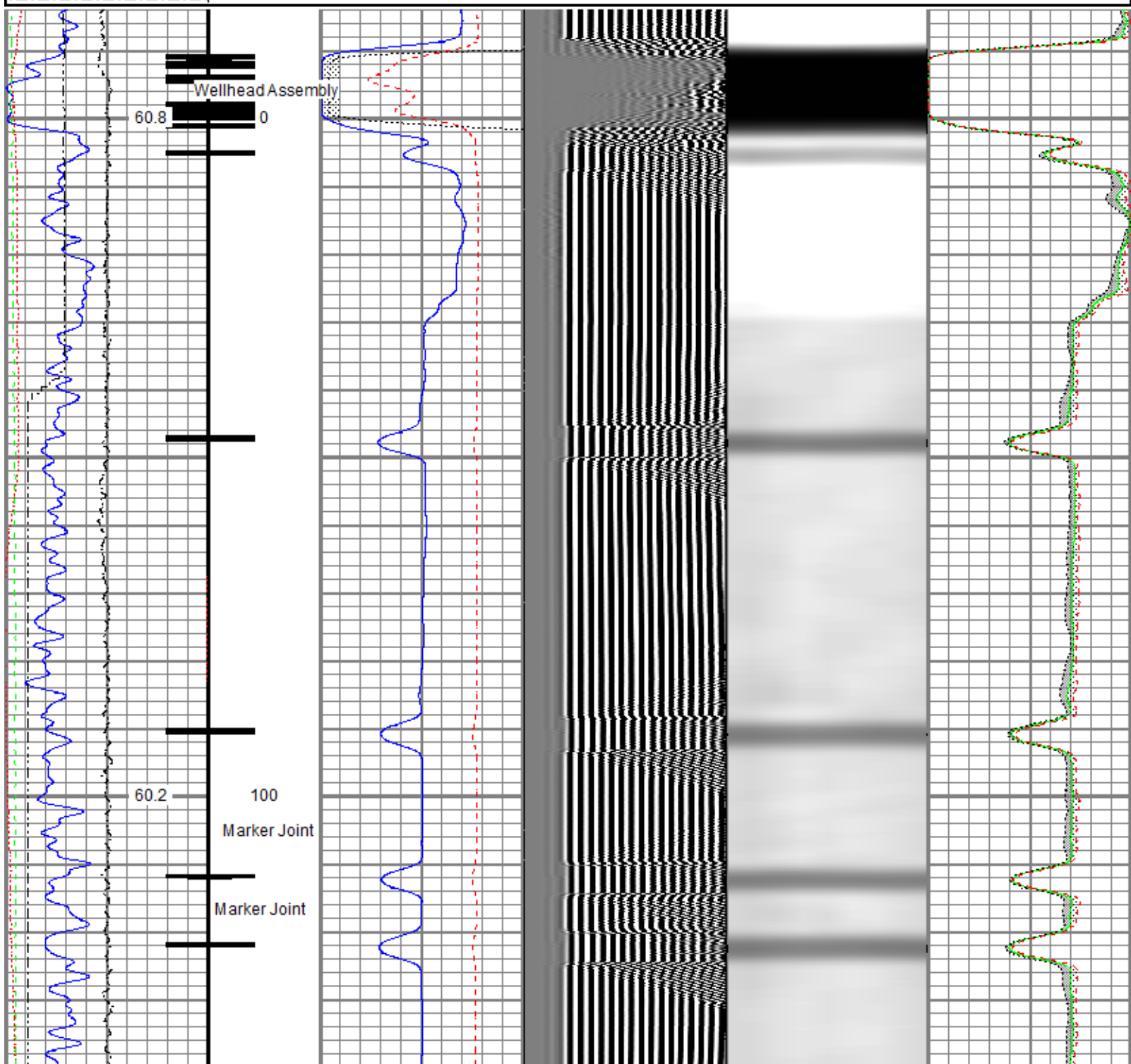
Main Pass

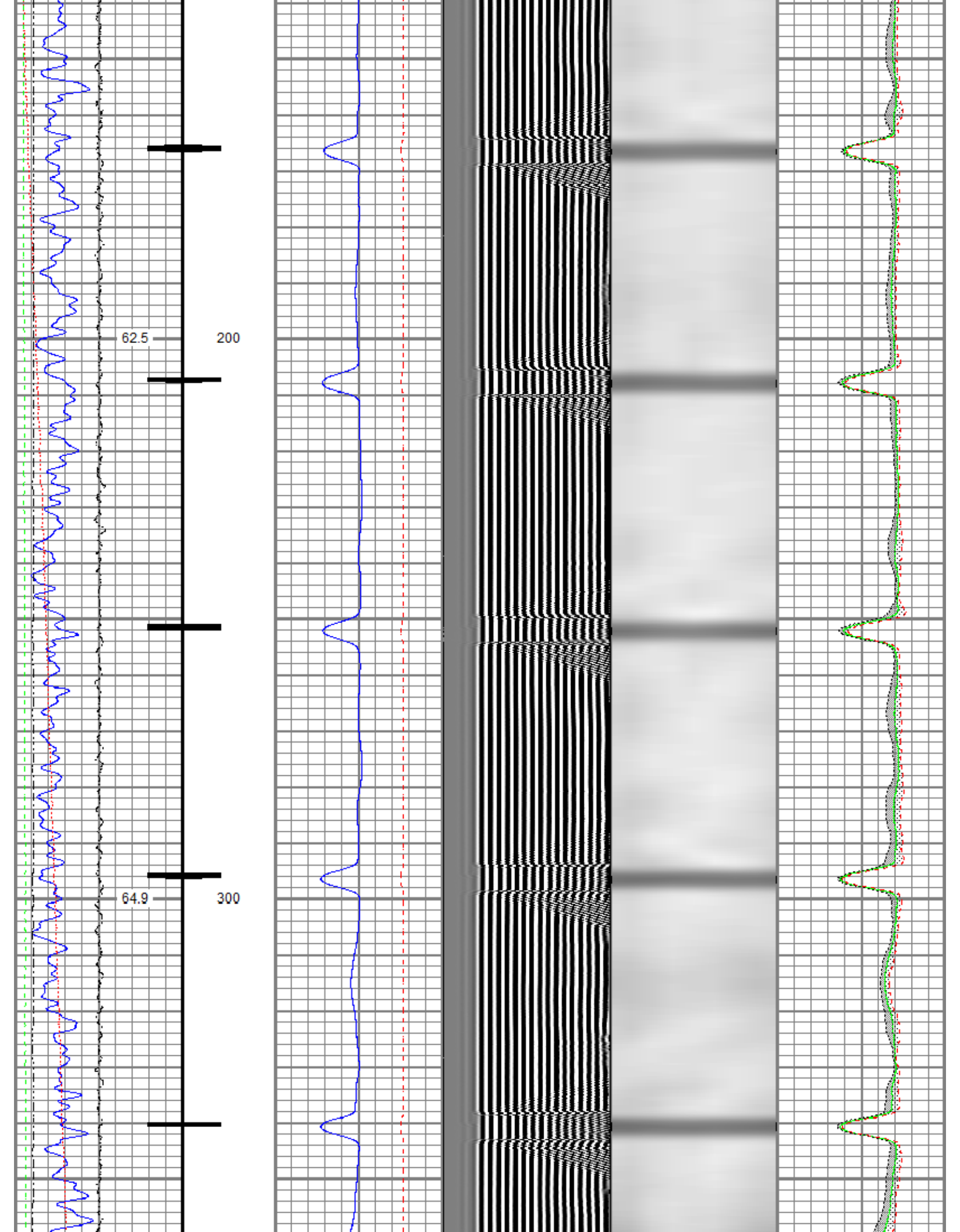


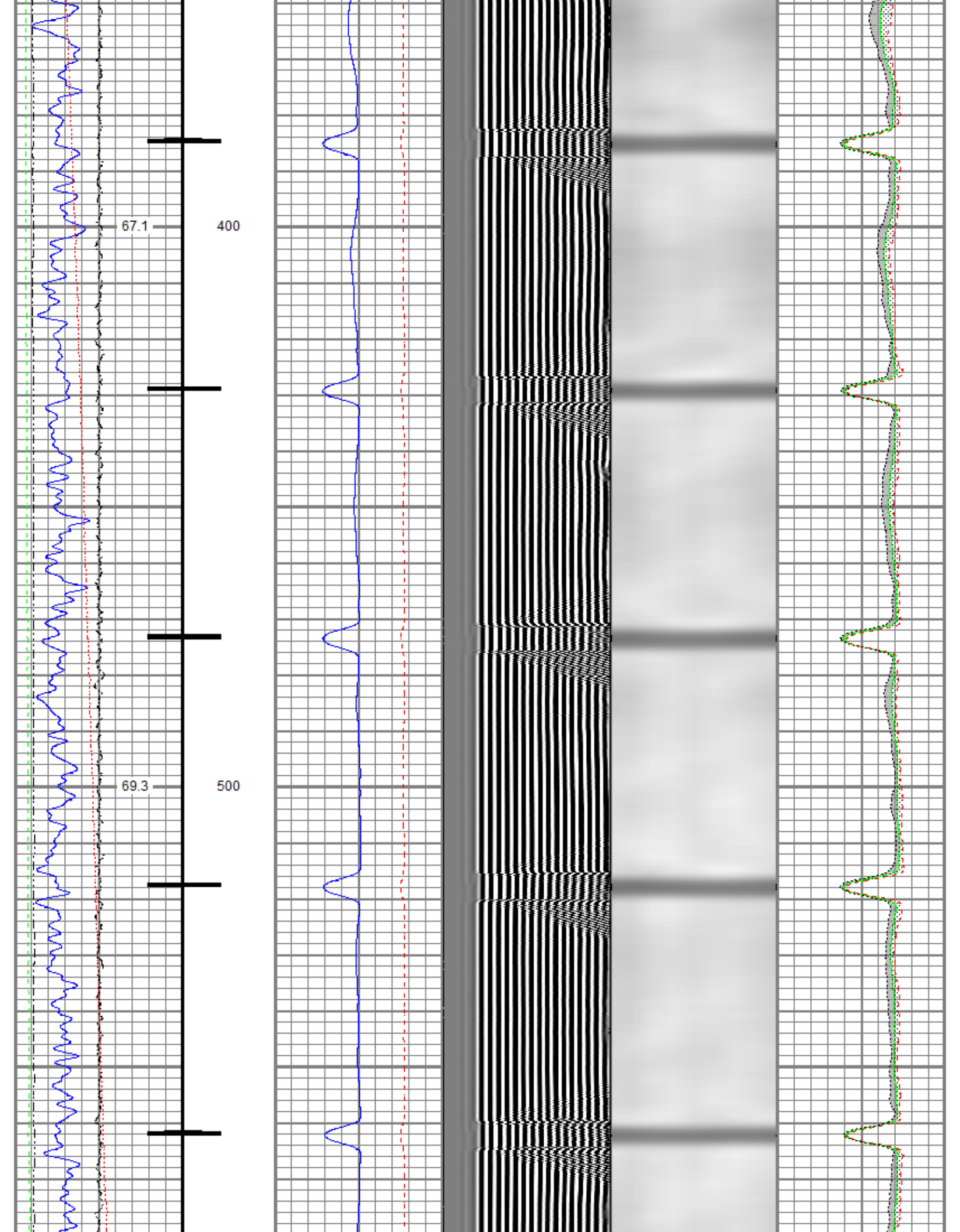
Recorded With 2800 PSI Surface Induced Pressure

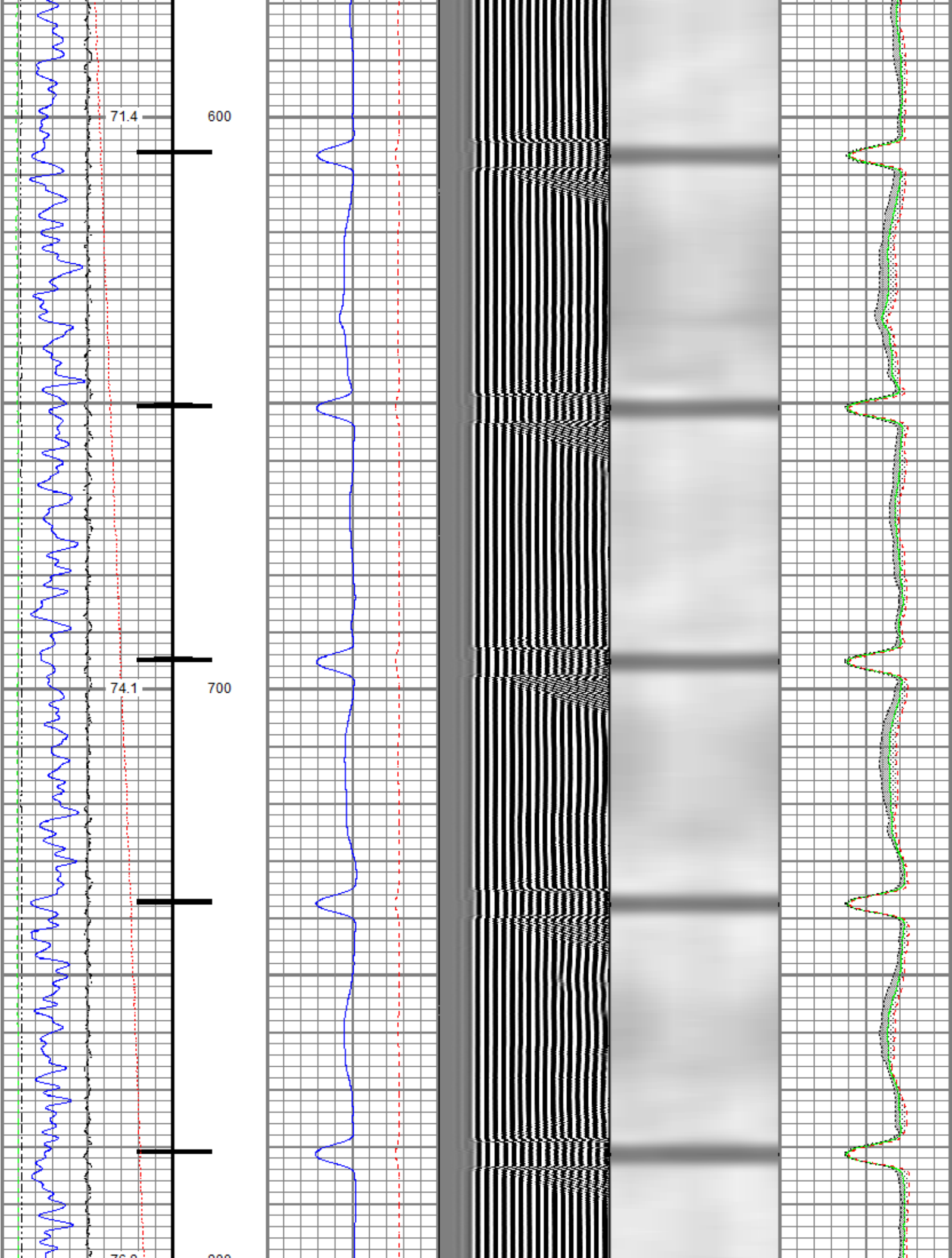
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 Dataset Pathname 2800/pass4.2
 Presentation Format ros_radrii
 Dataset Creation Tue Dec 10 12:54:38 2019
 Charted by Depth in Feet scaled 1:240

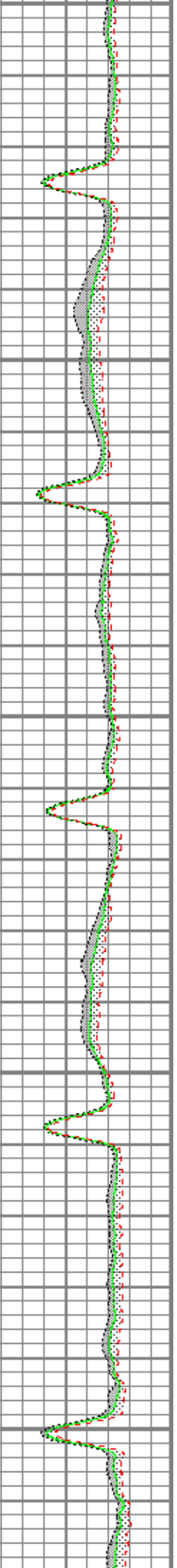
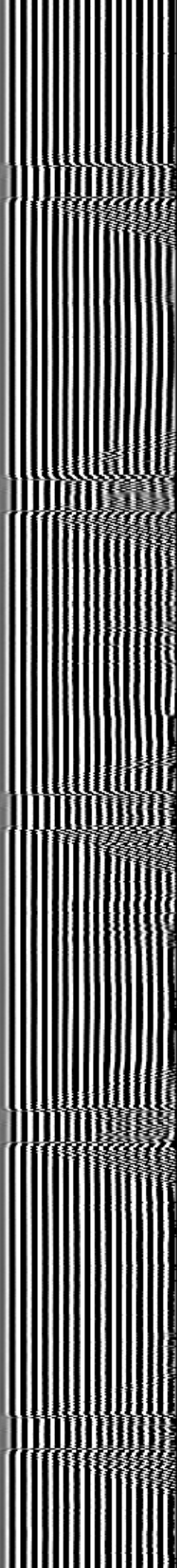
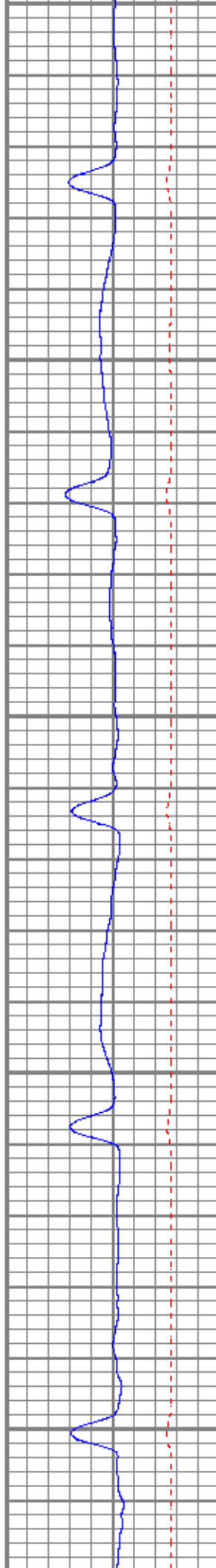
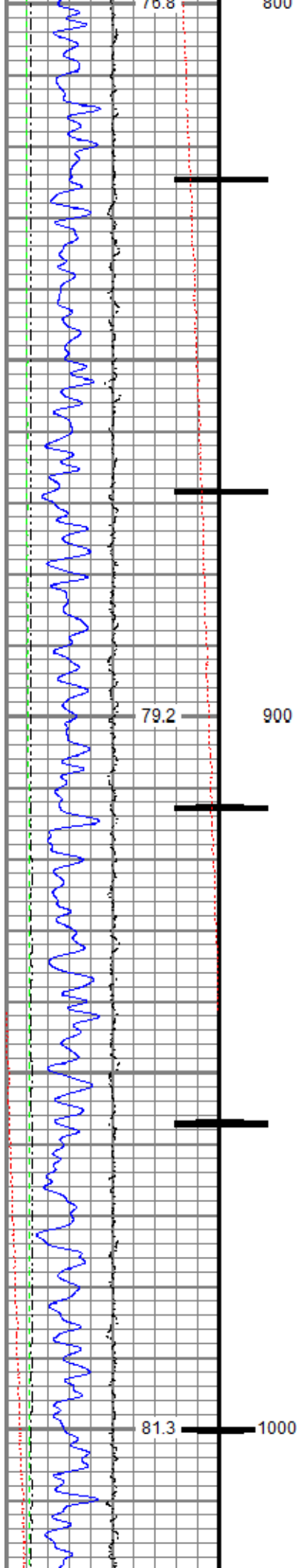
Gamma Ray	0	3' Amplitude (mV) 100	5' Variable Density Log	Sector Map	0	Average Amplitude 100
(GAPI) 120		3' Amplitude x 5	200 (usec) 1200			Minimum Amplitude
Casing Collar Locator	0	(mV) 20			0	100
Temperature (degF) 20		3' Travel Time				Maximum Amplitude
Line Speed	650	(usec) 150			0	100
-150 (ft/min)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

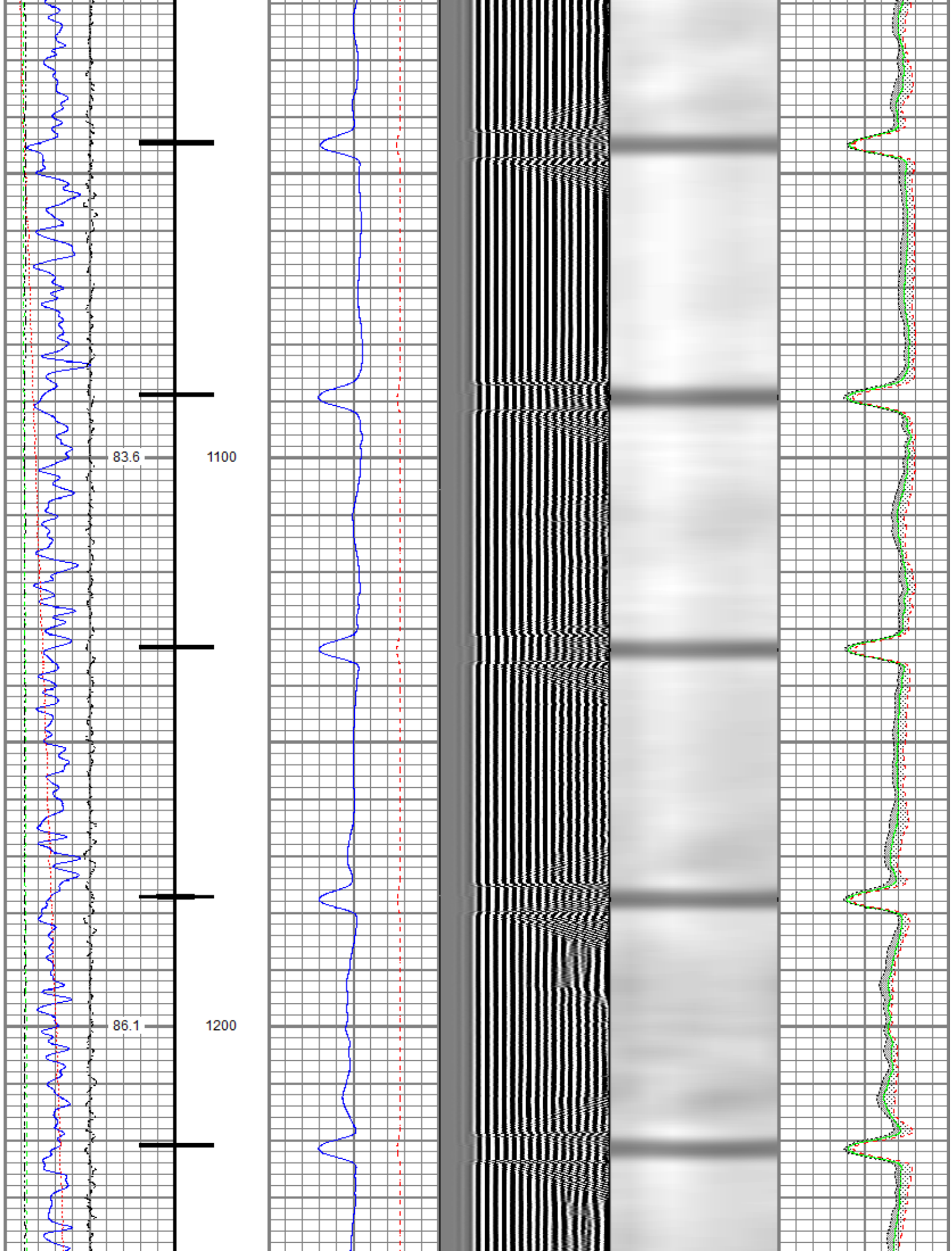


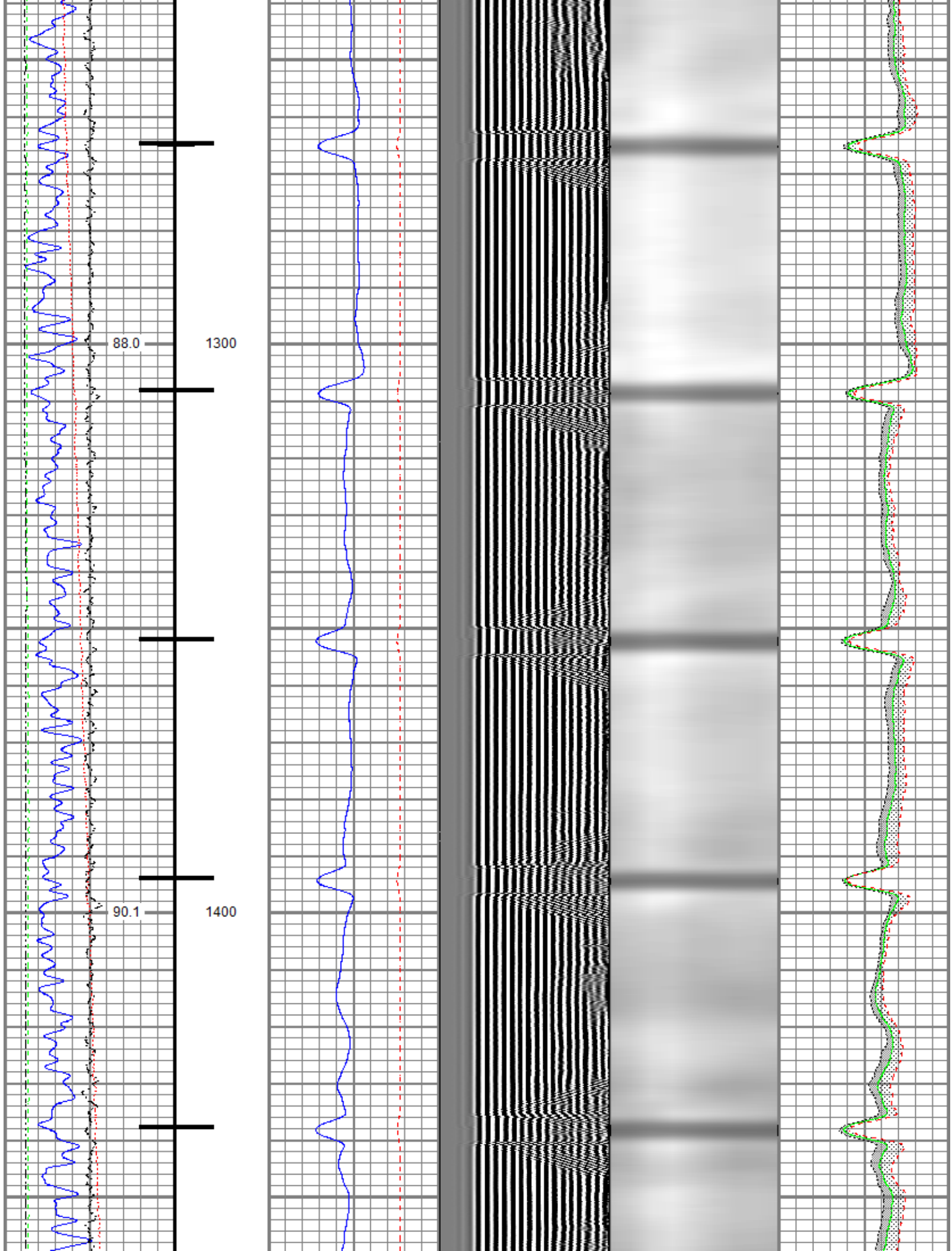


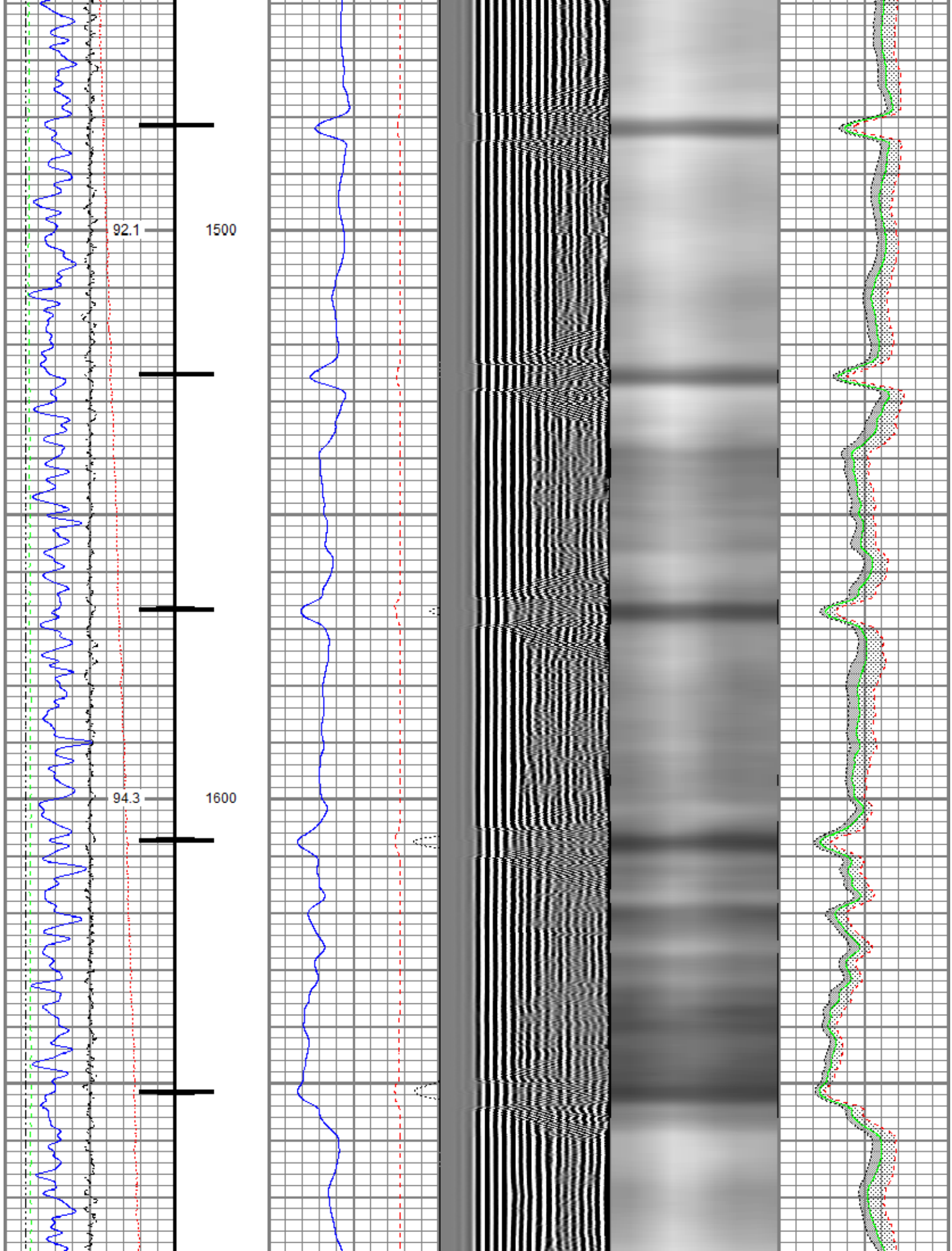


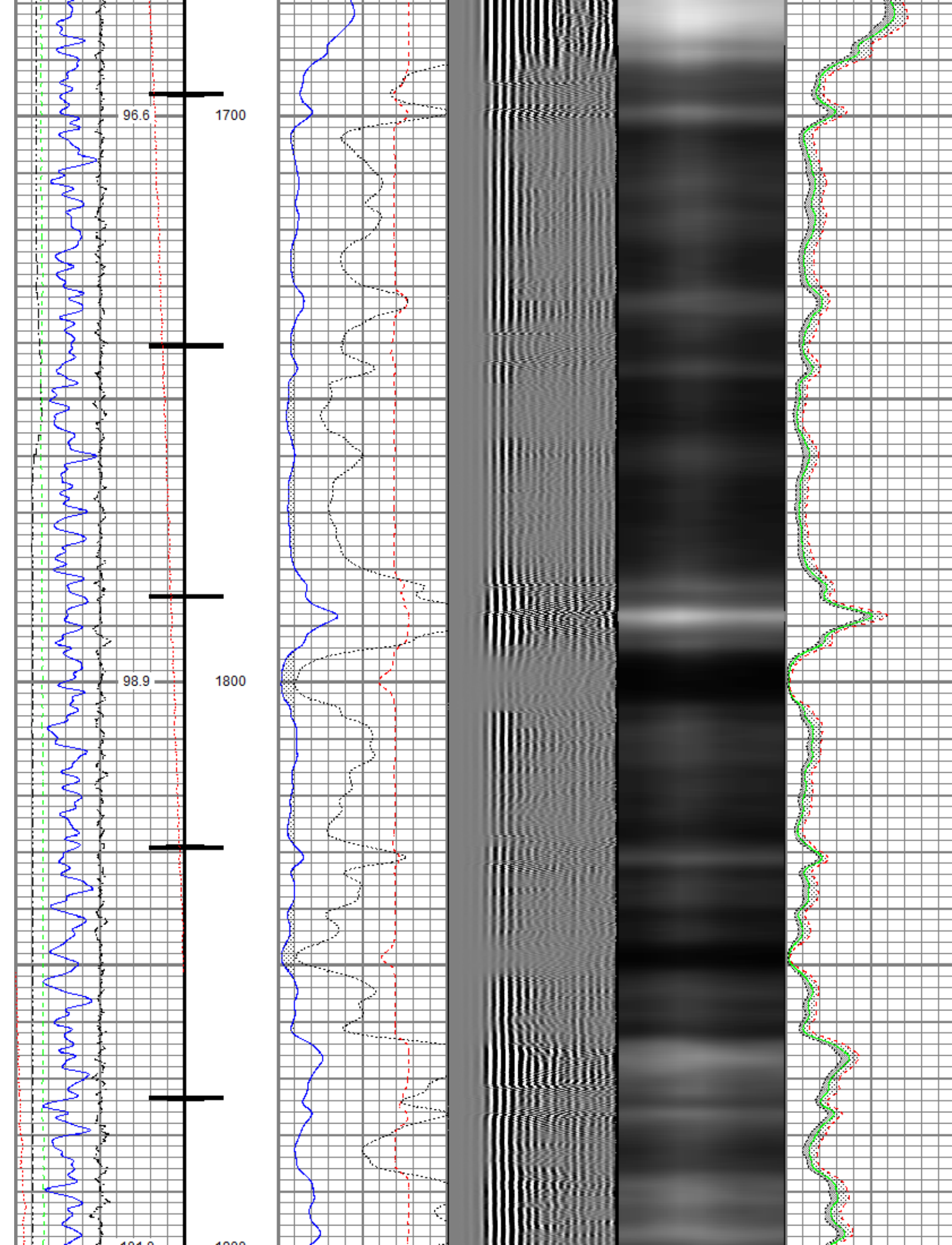


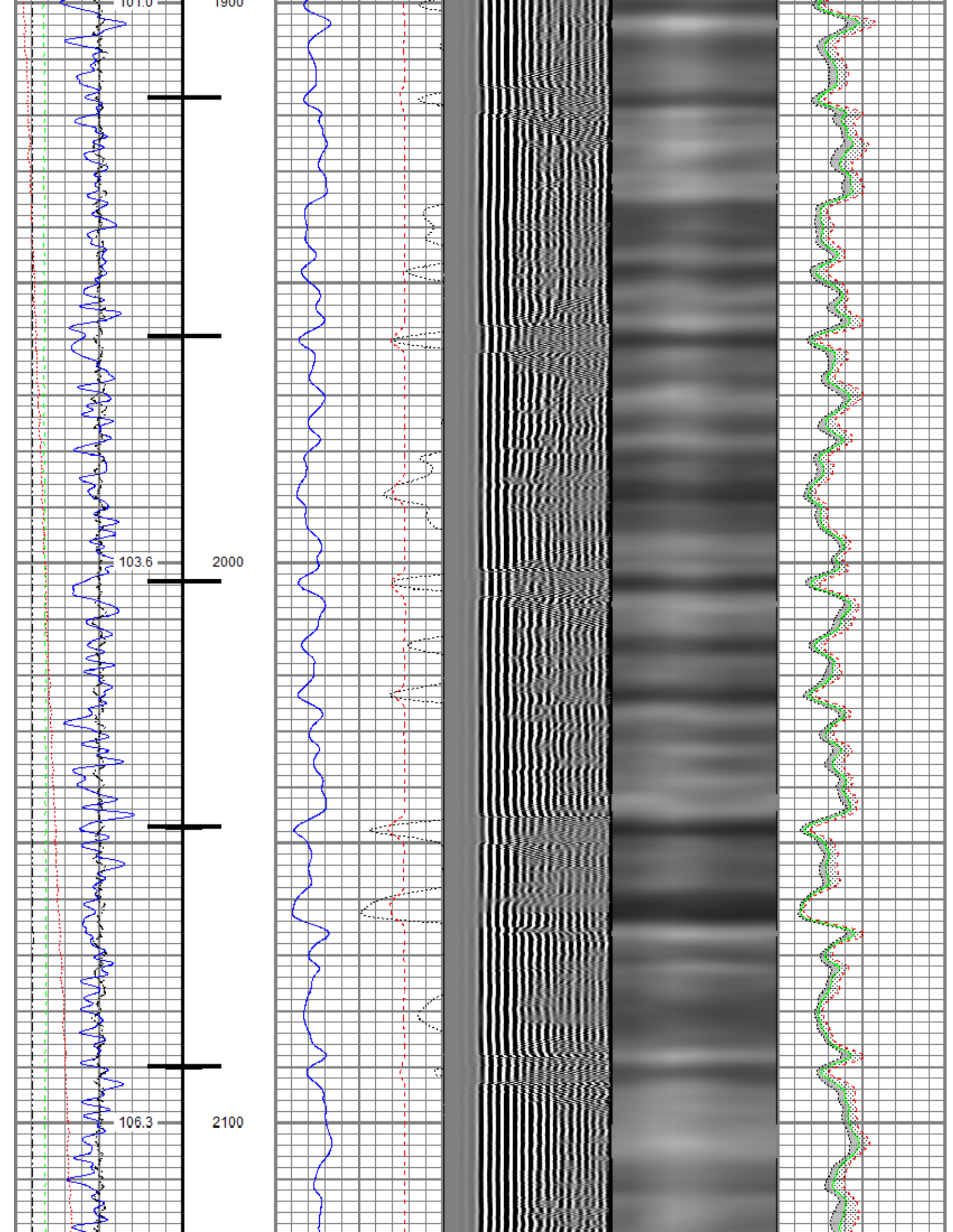


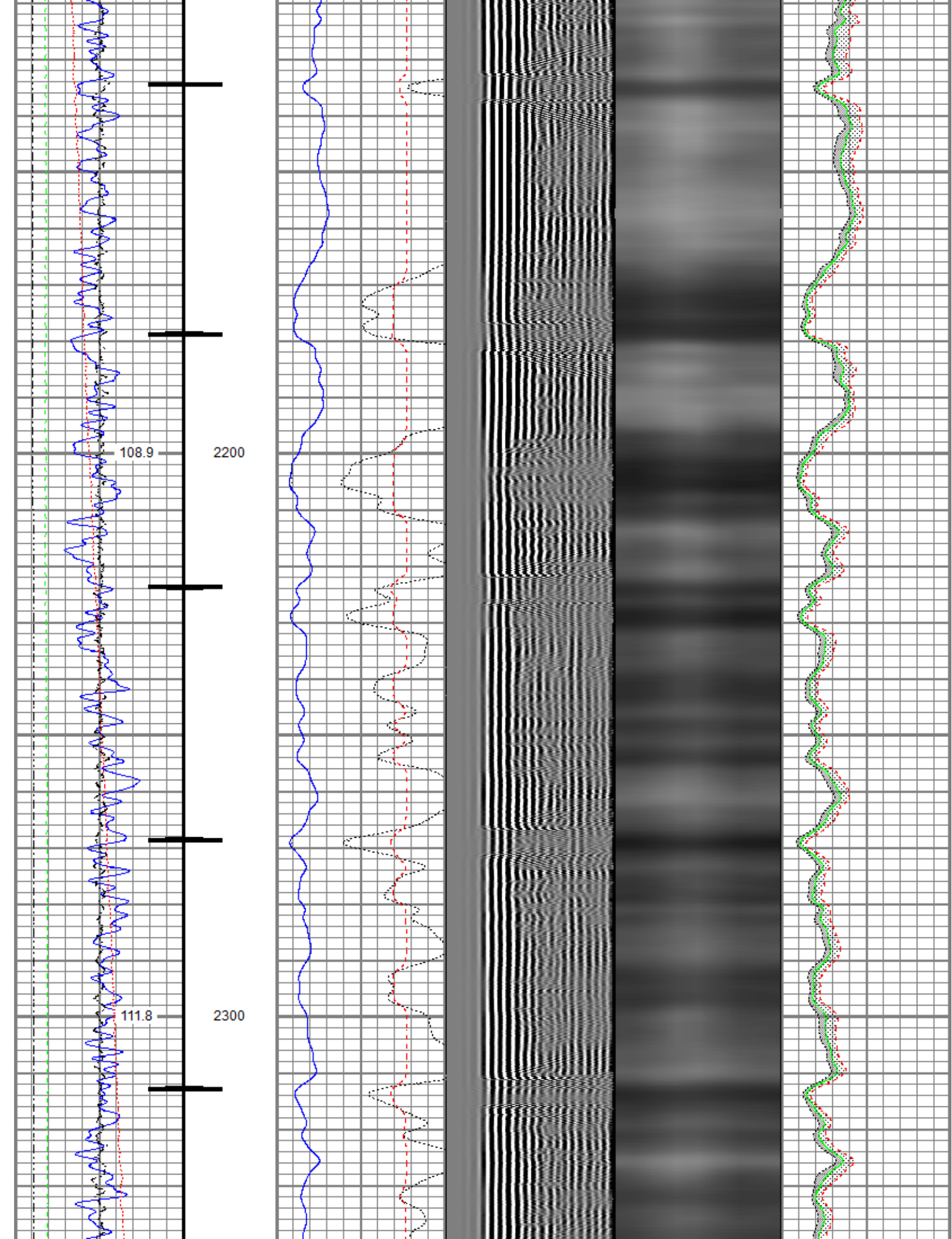


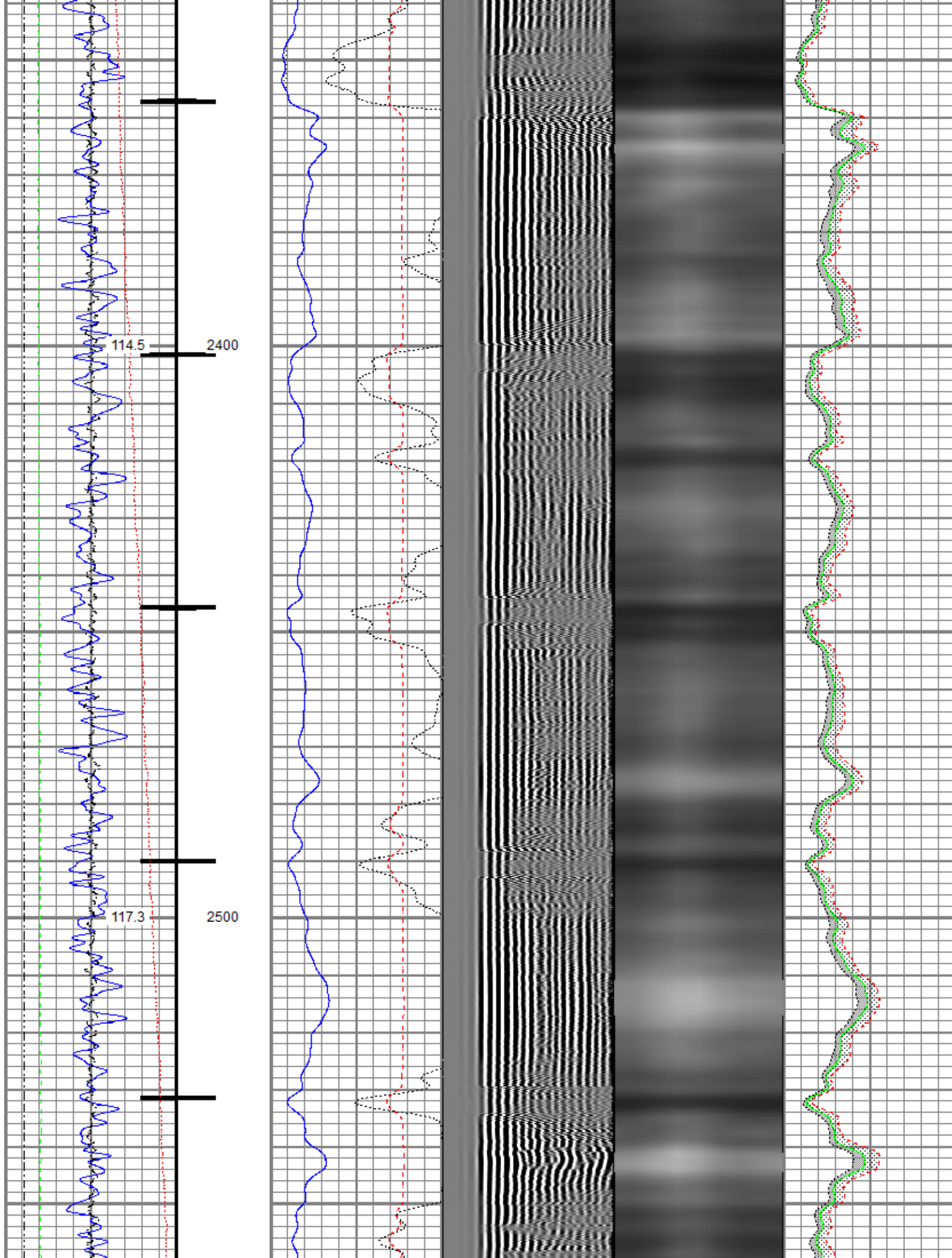


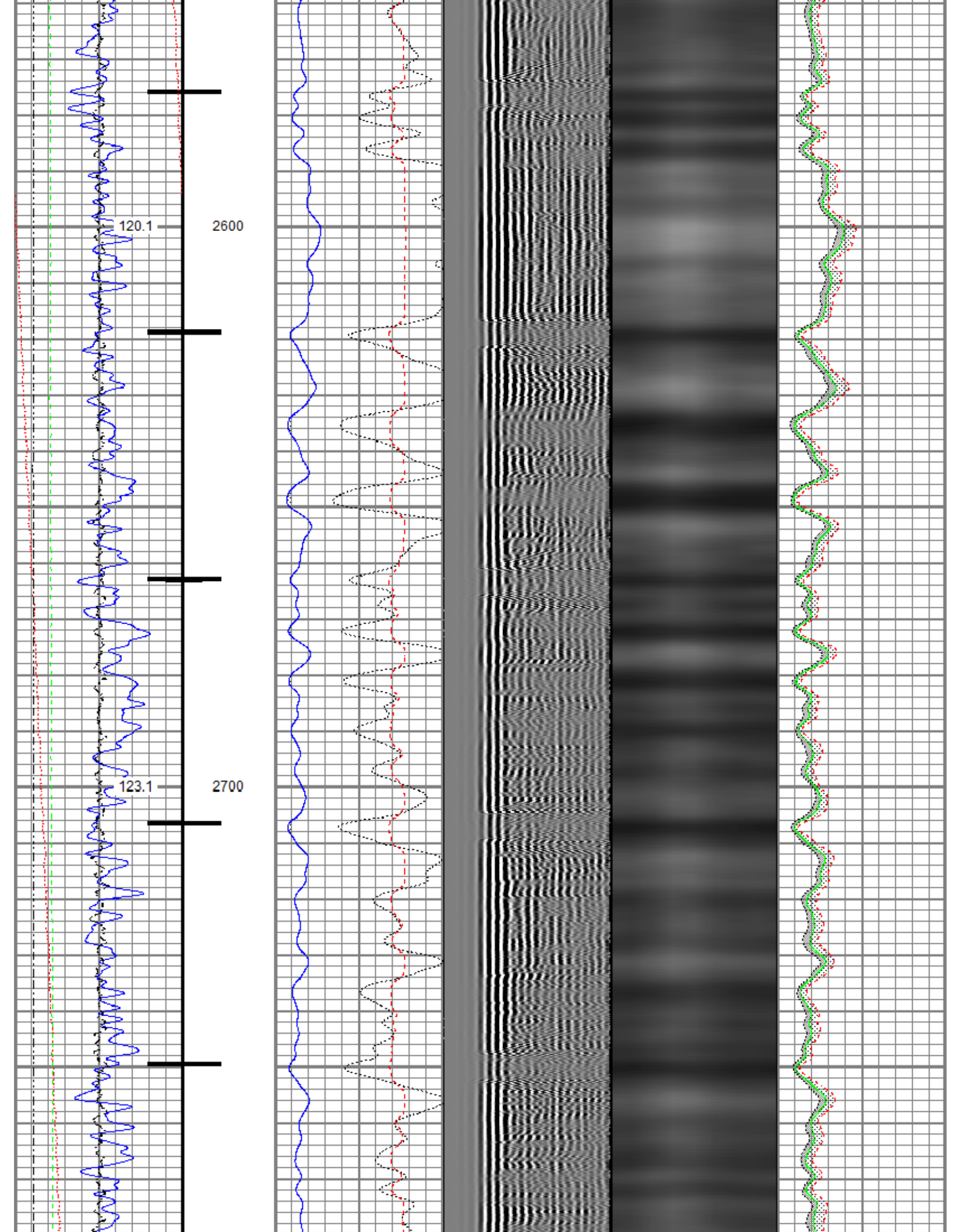


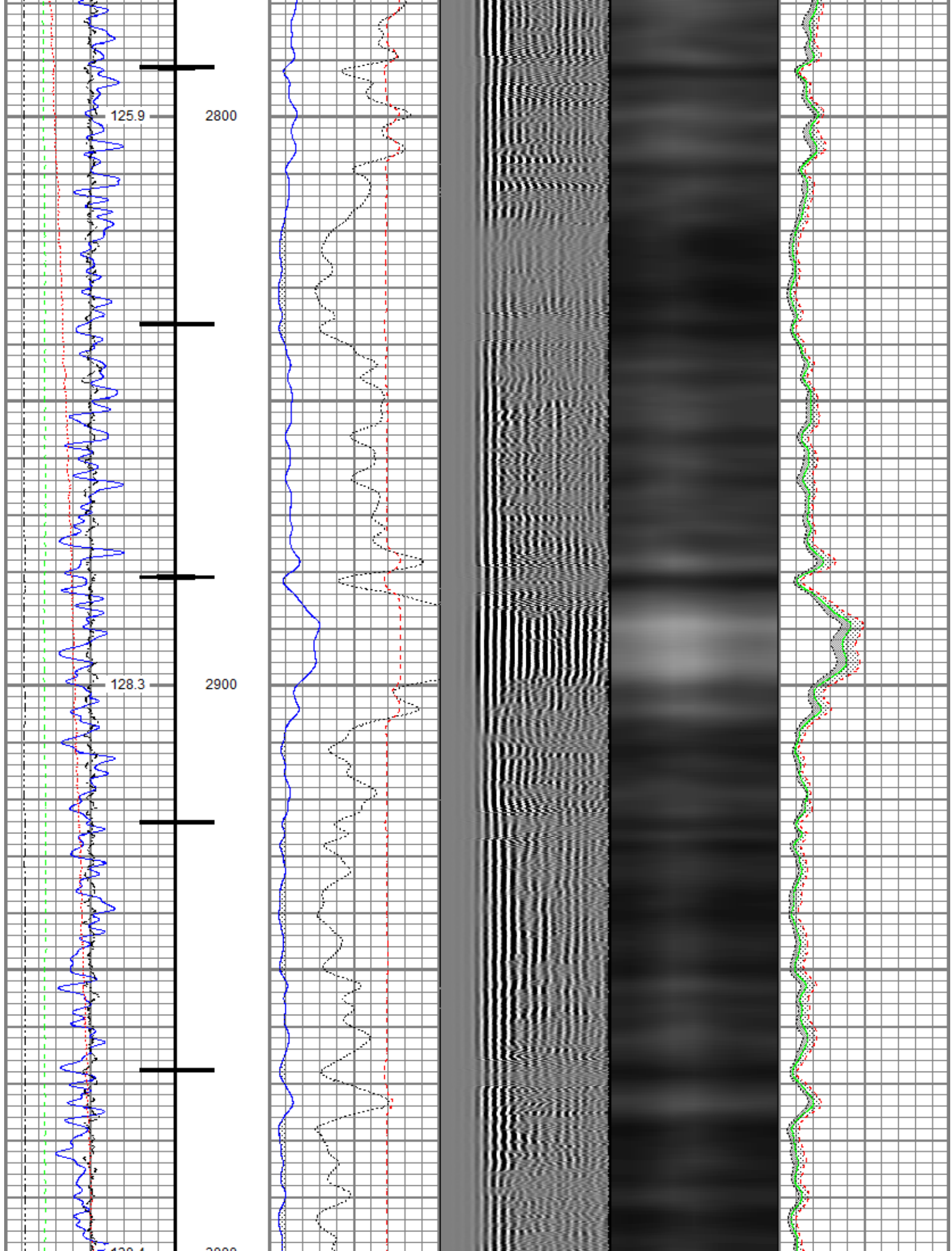


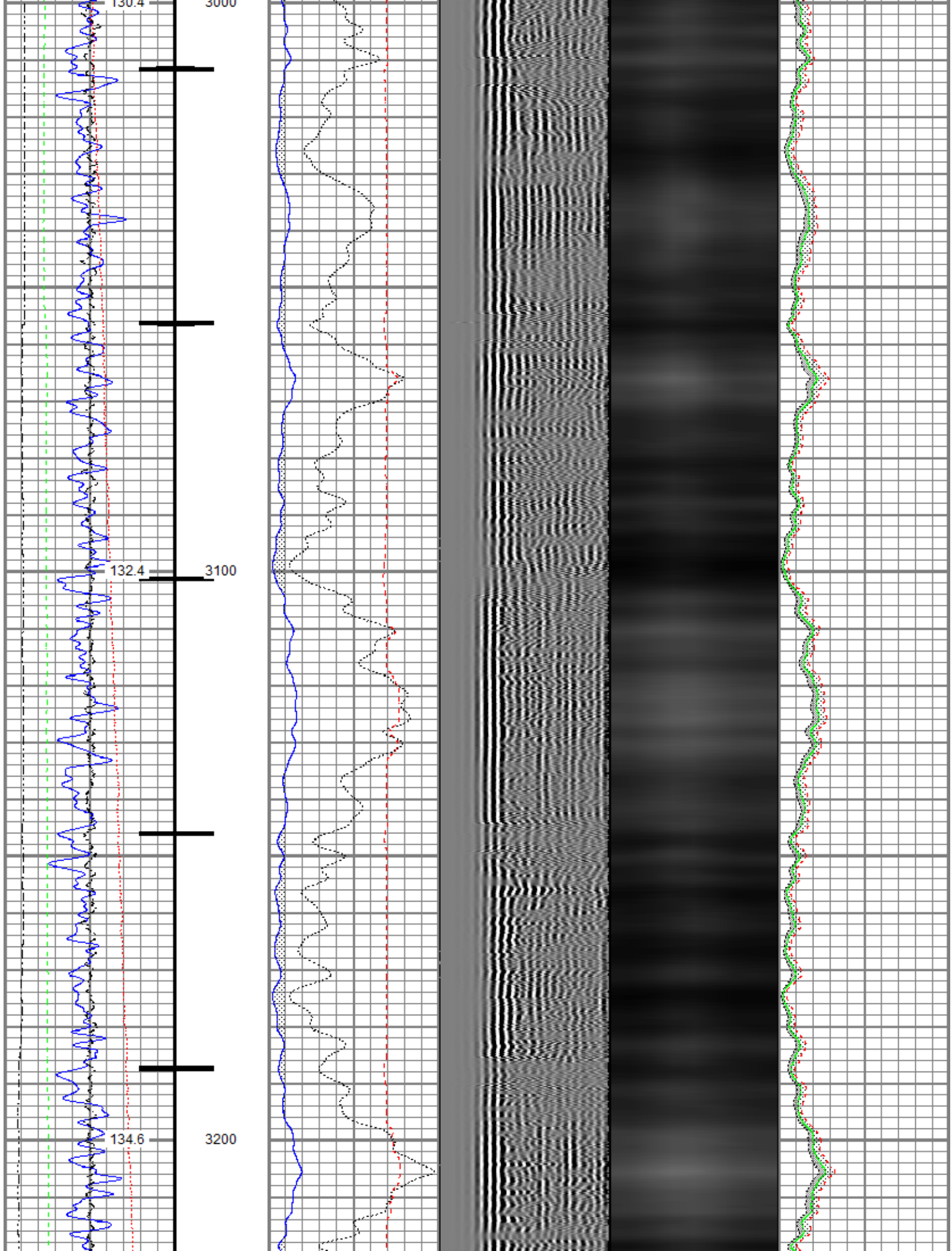


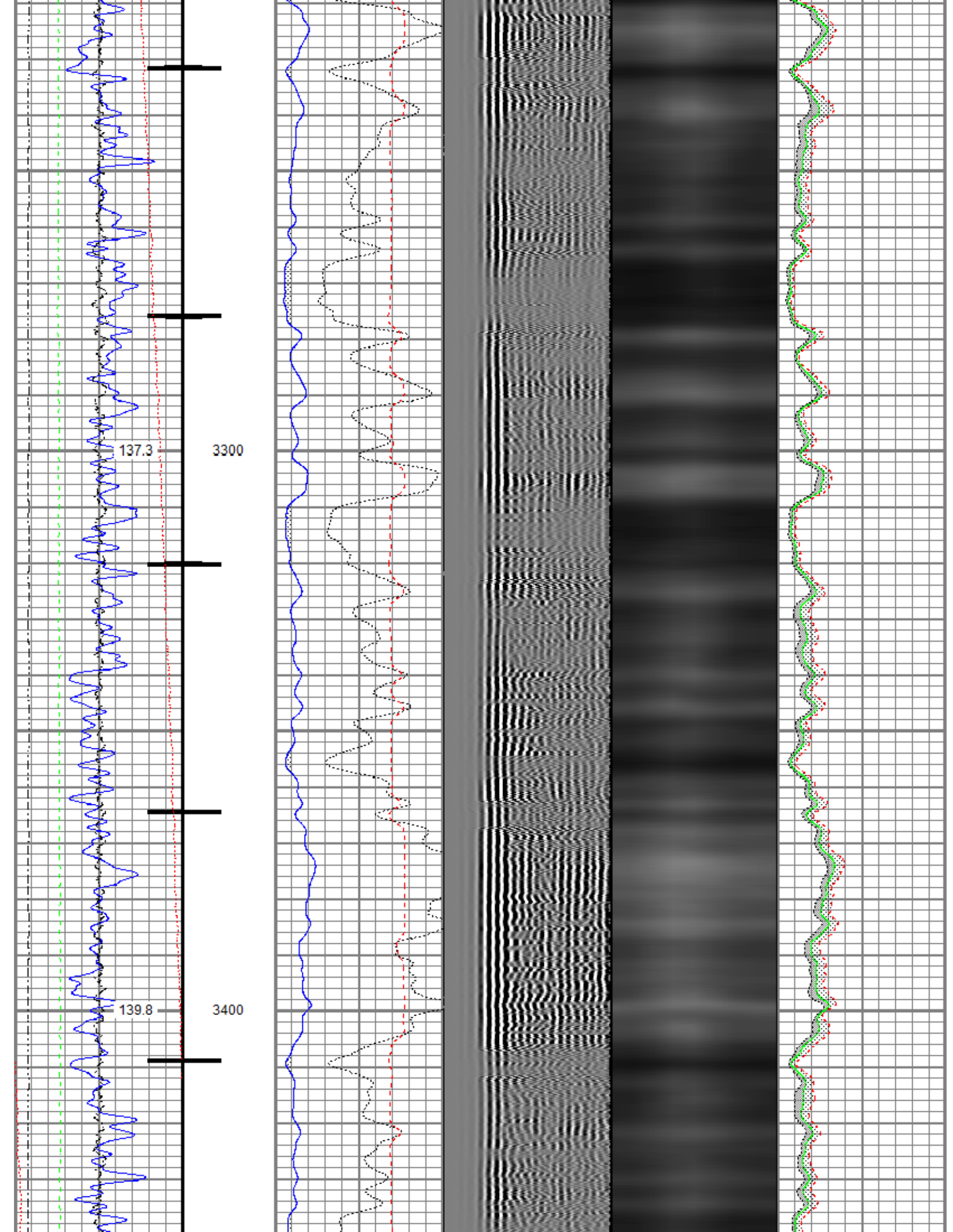


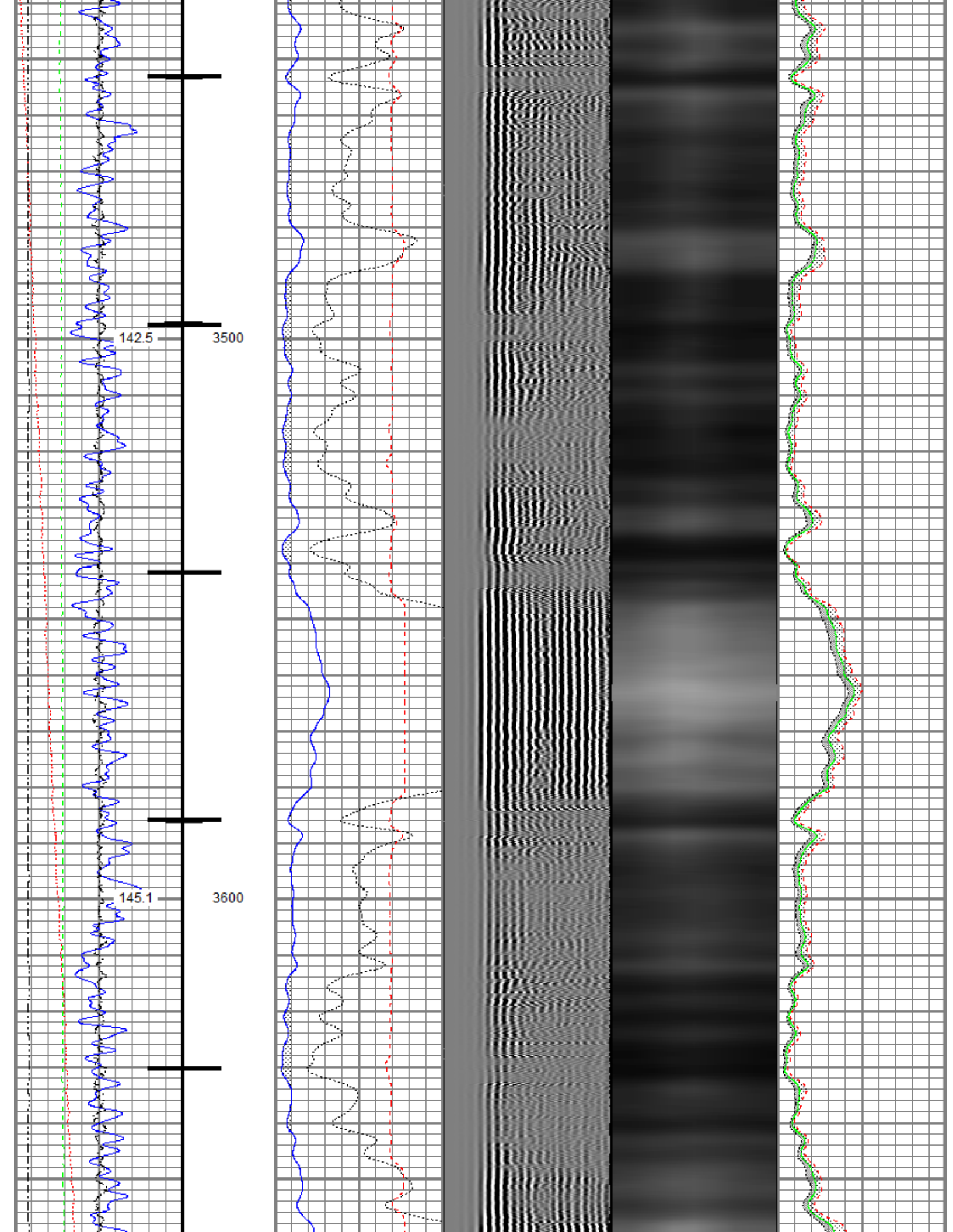


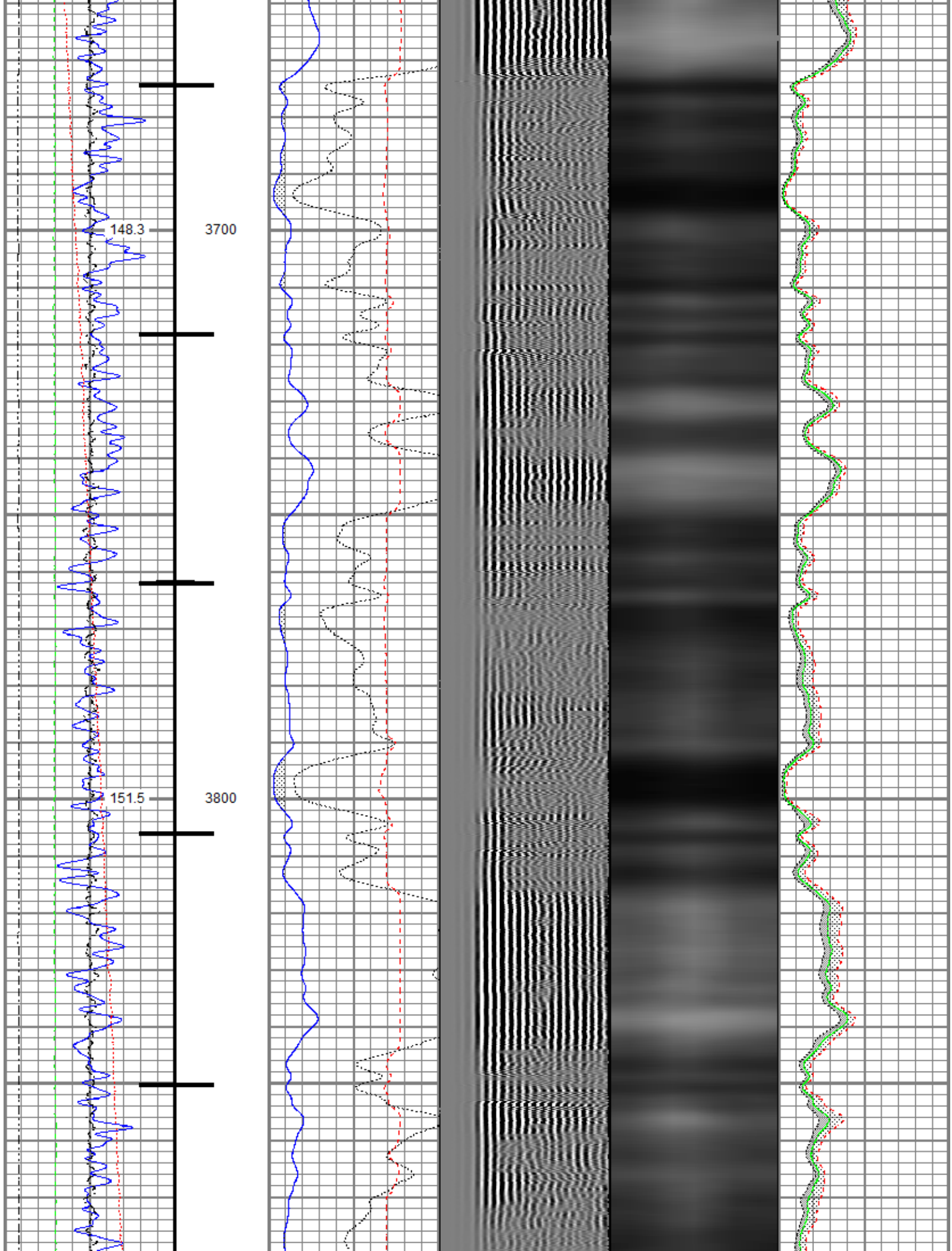


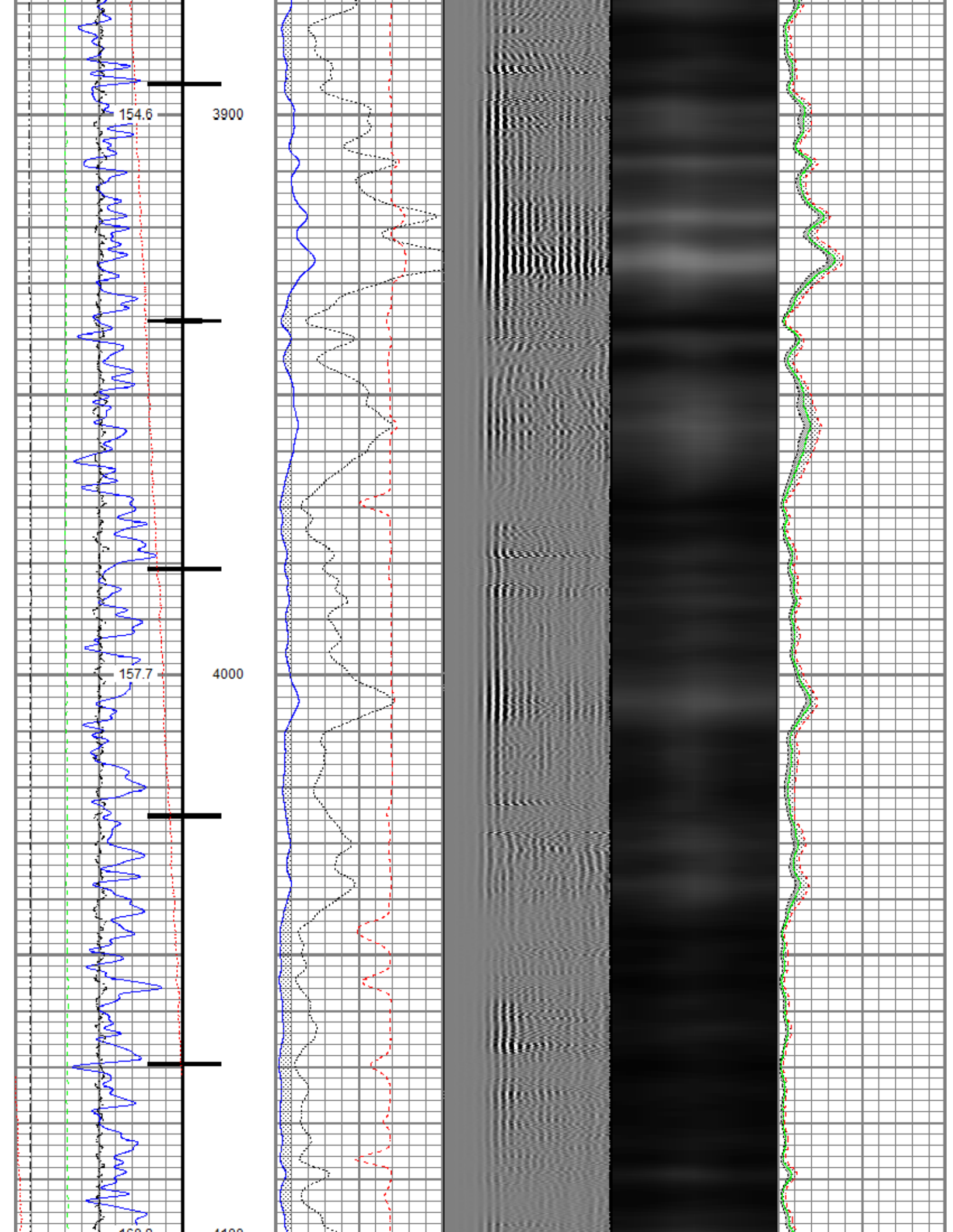


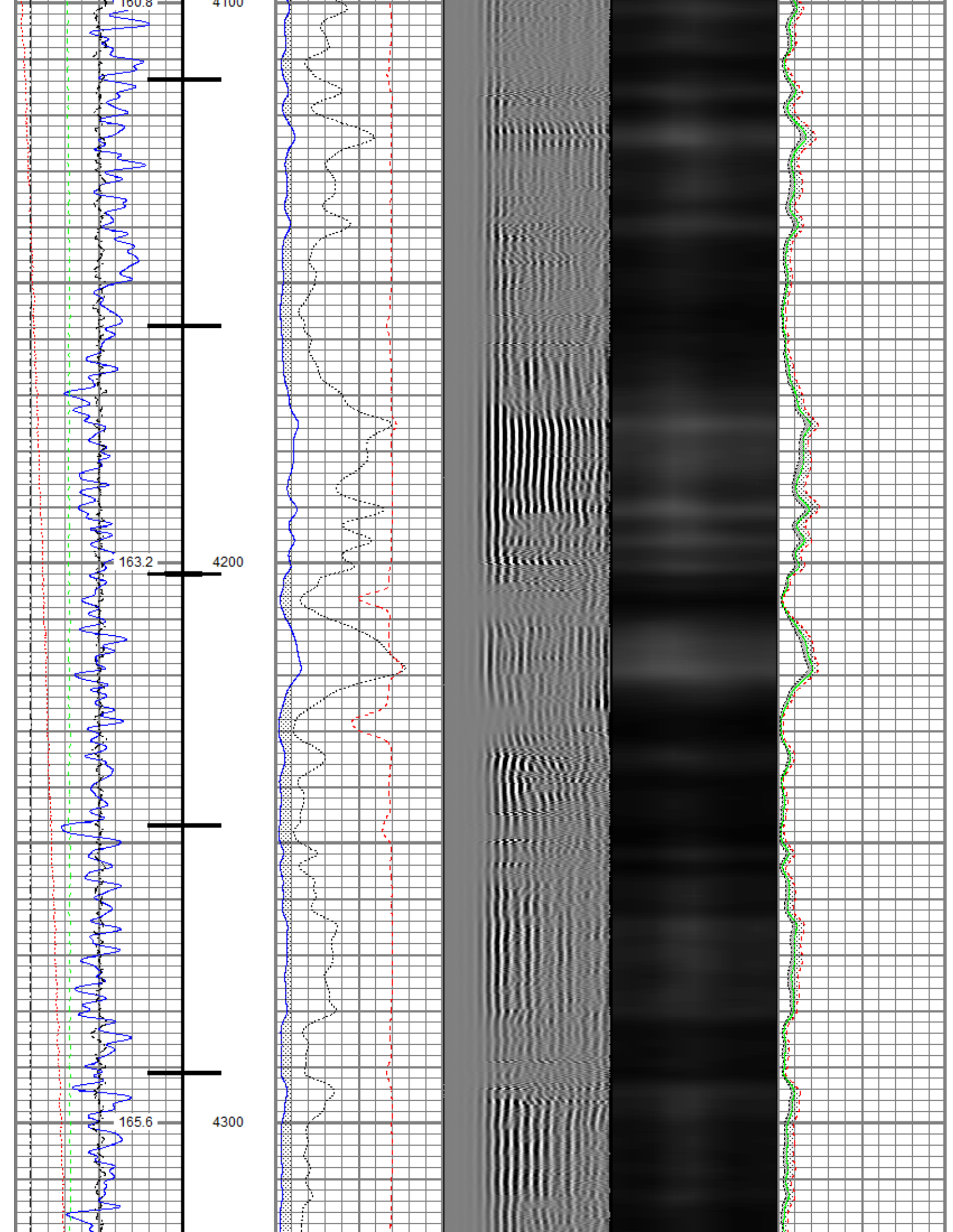


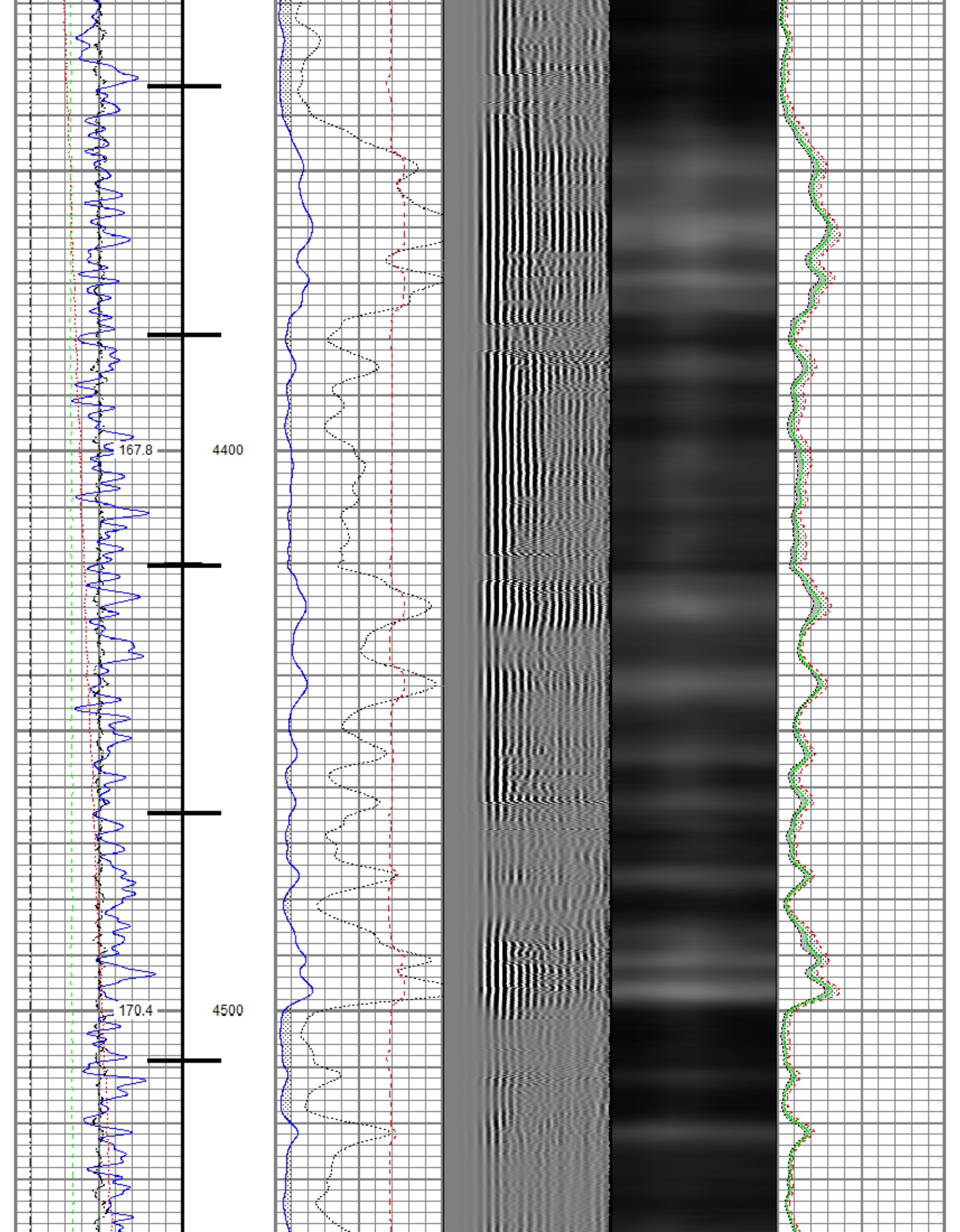


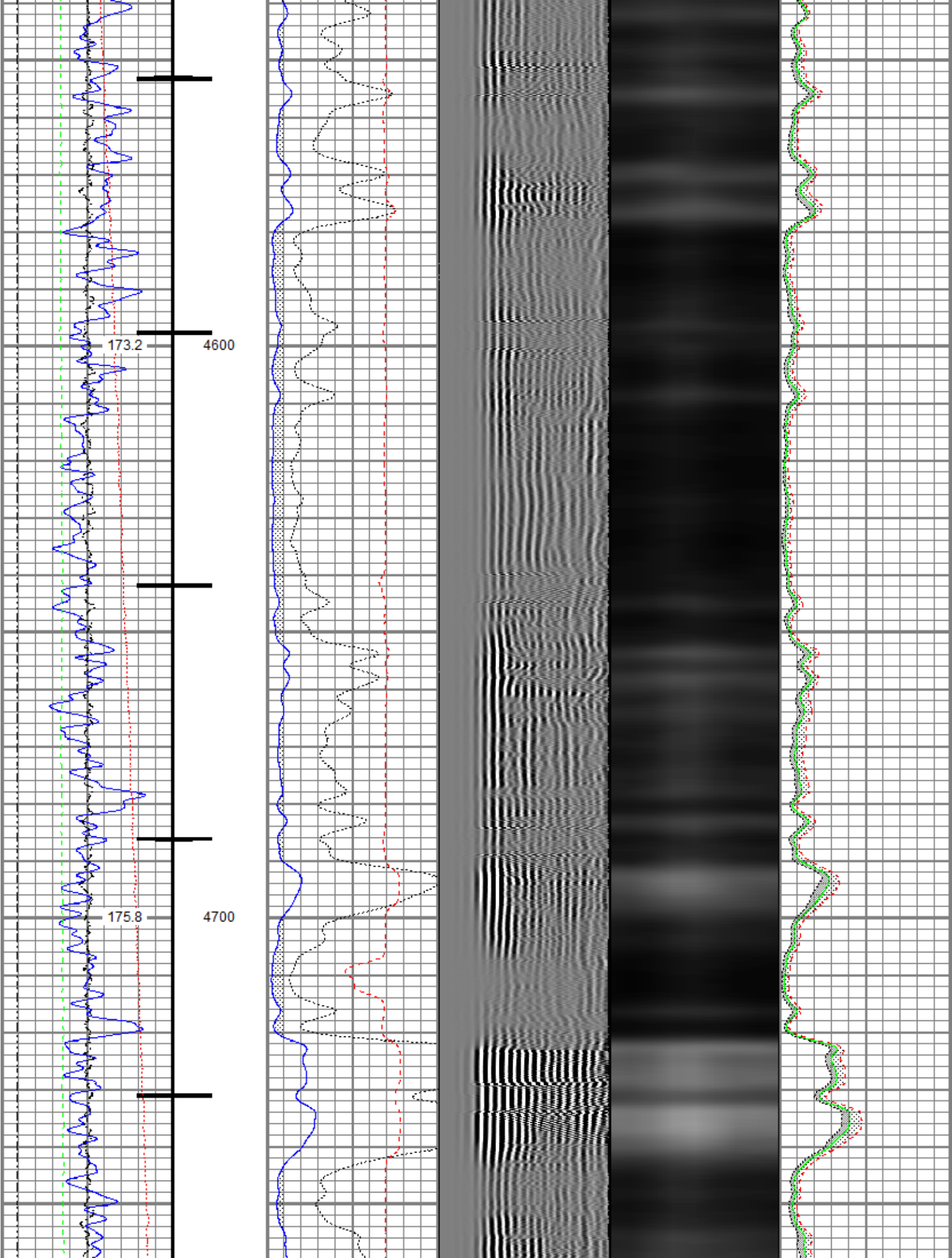


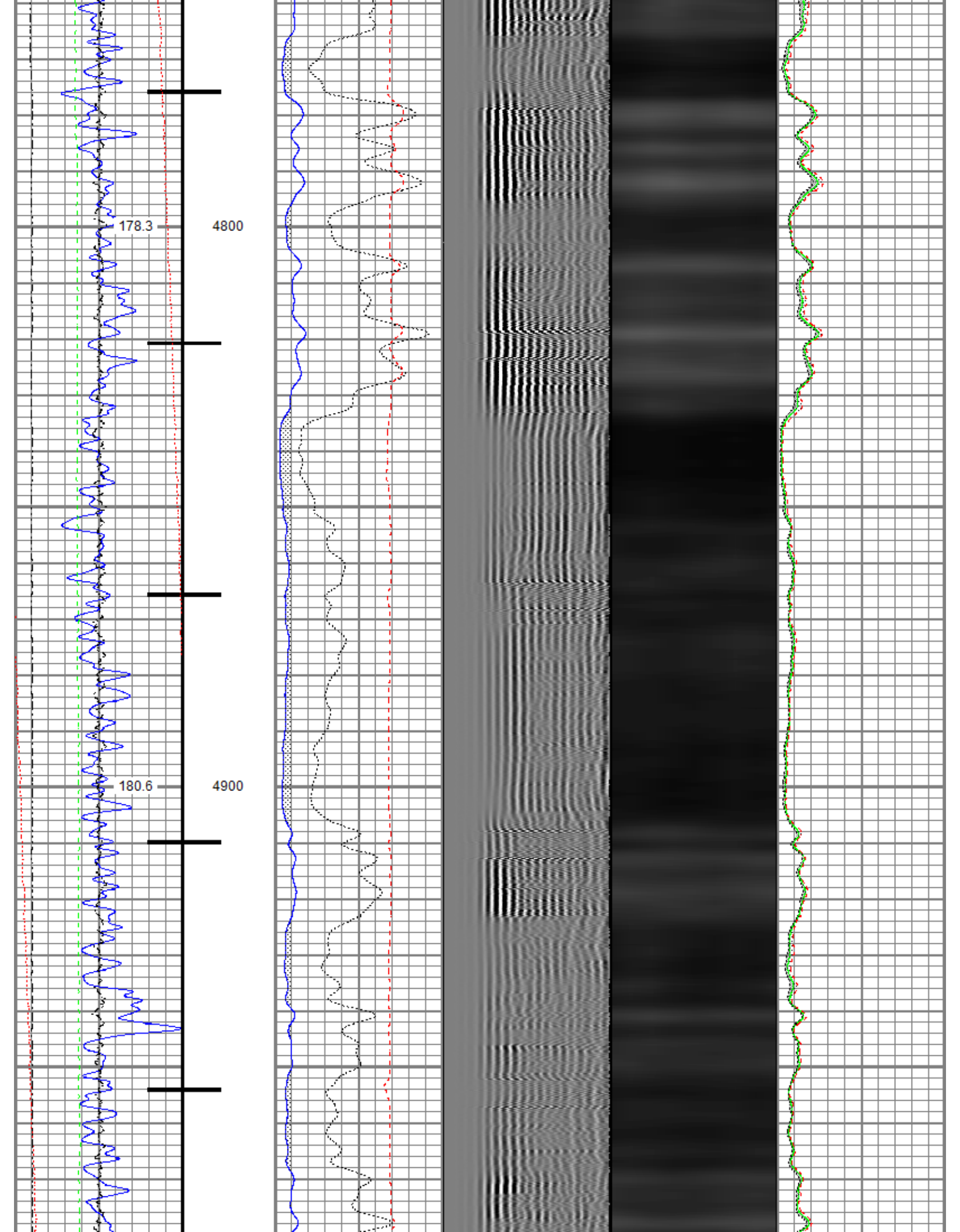


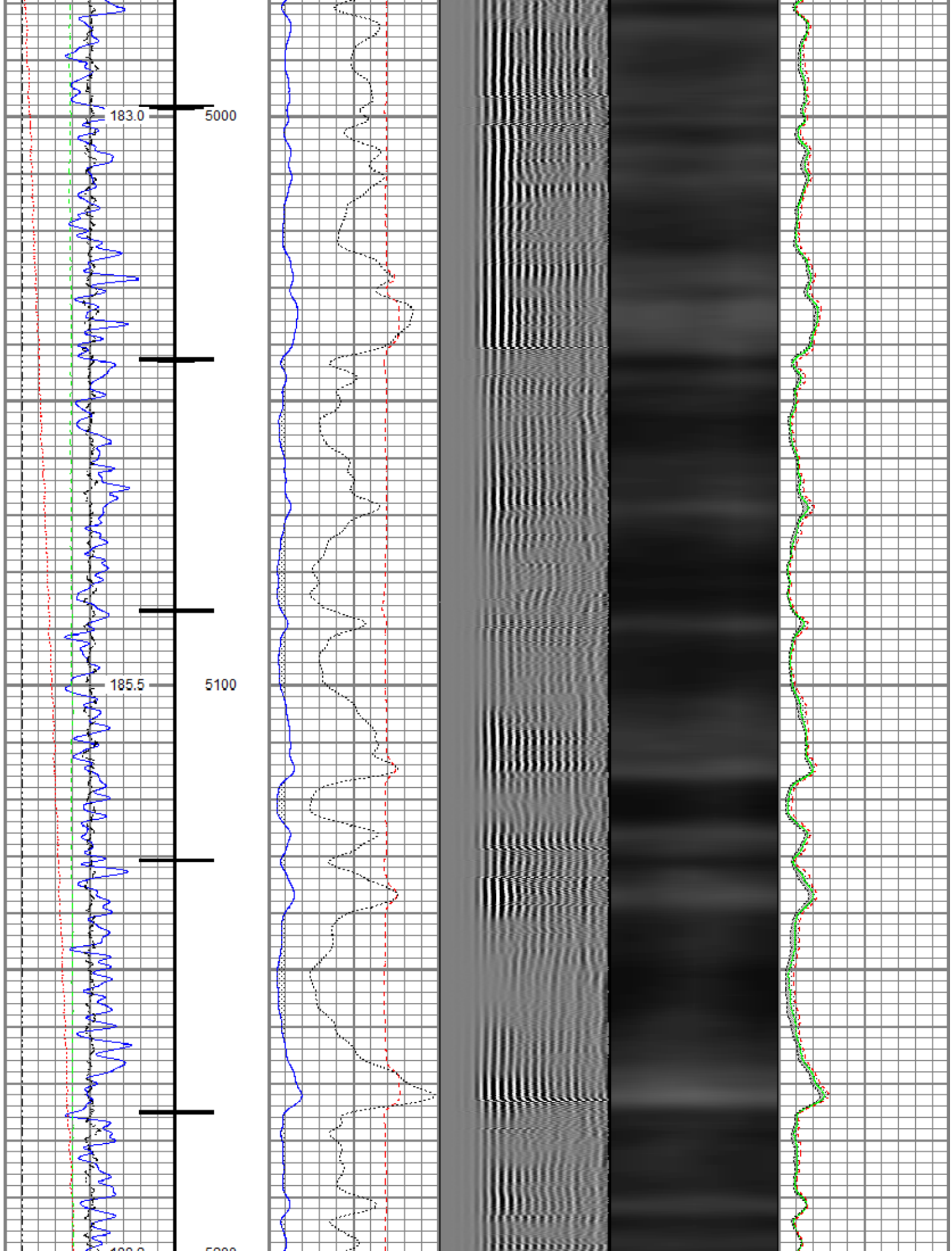


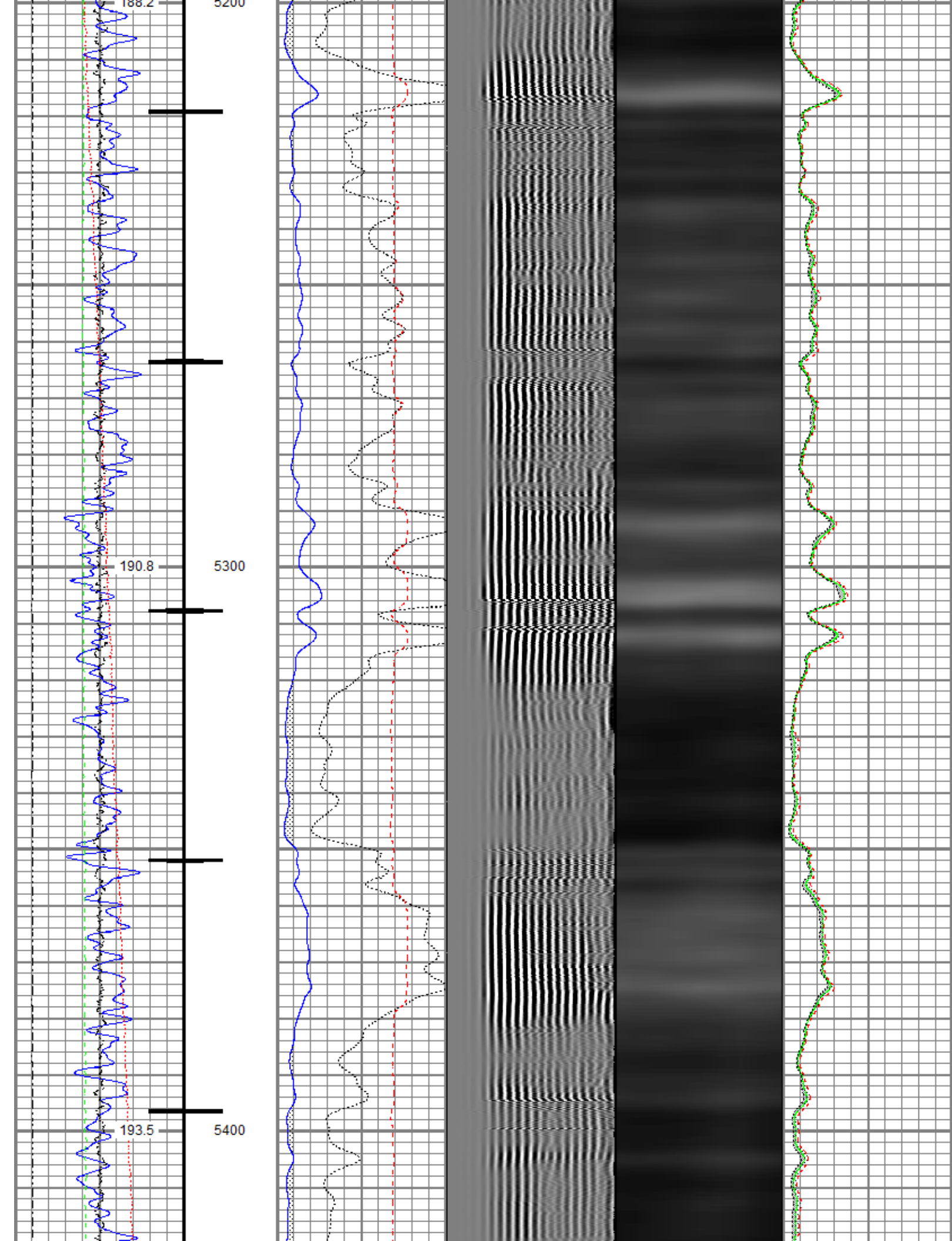


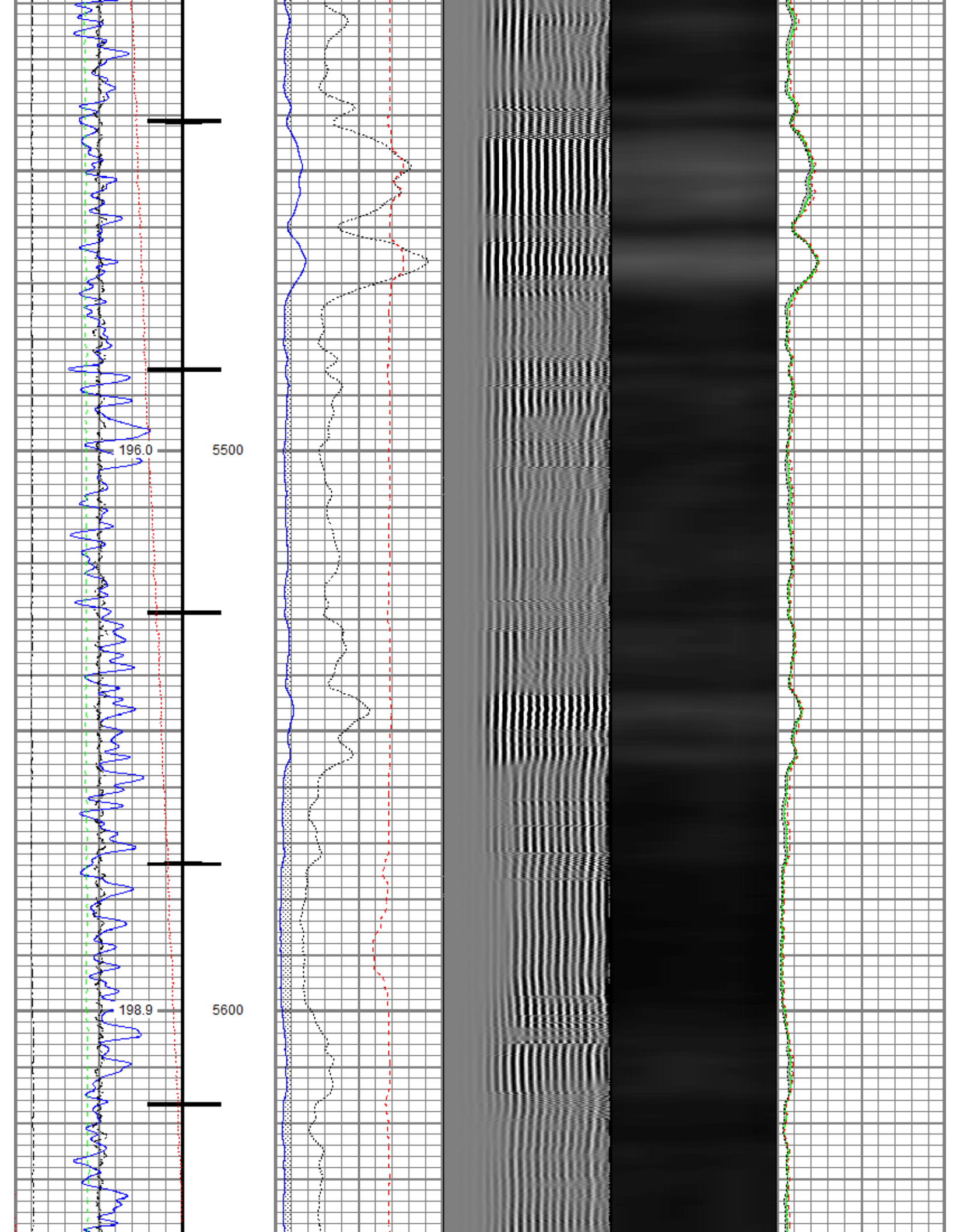


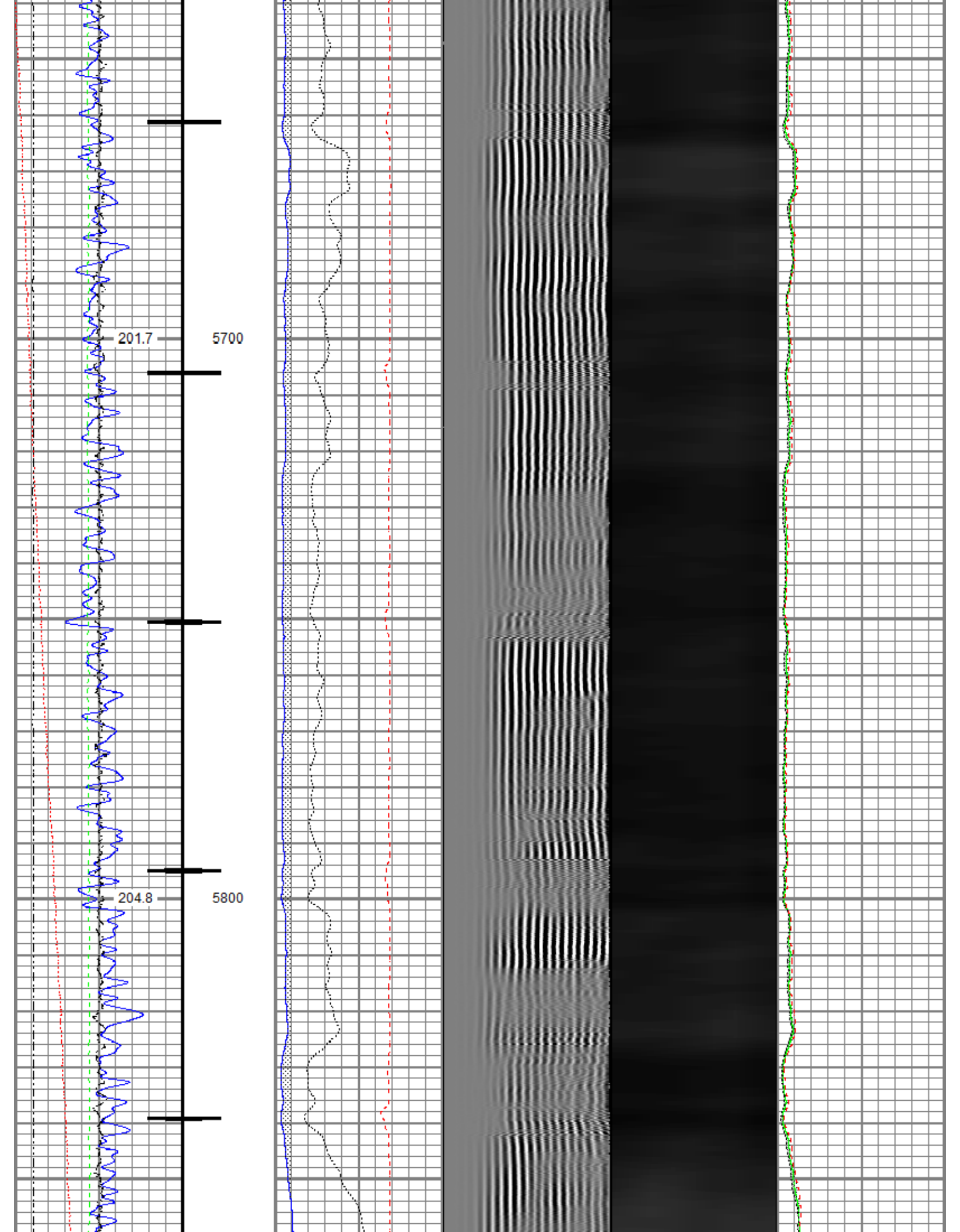


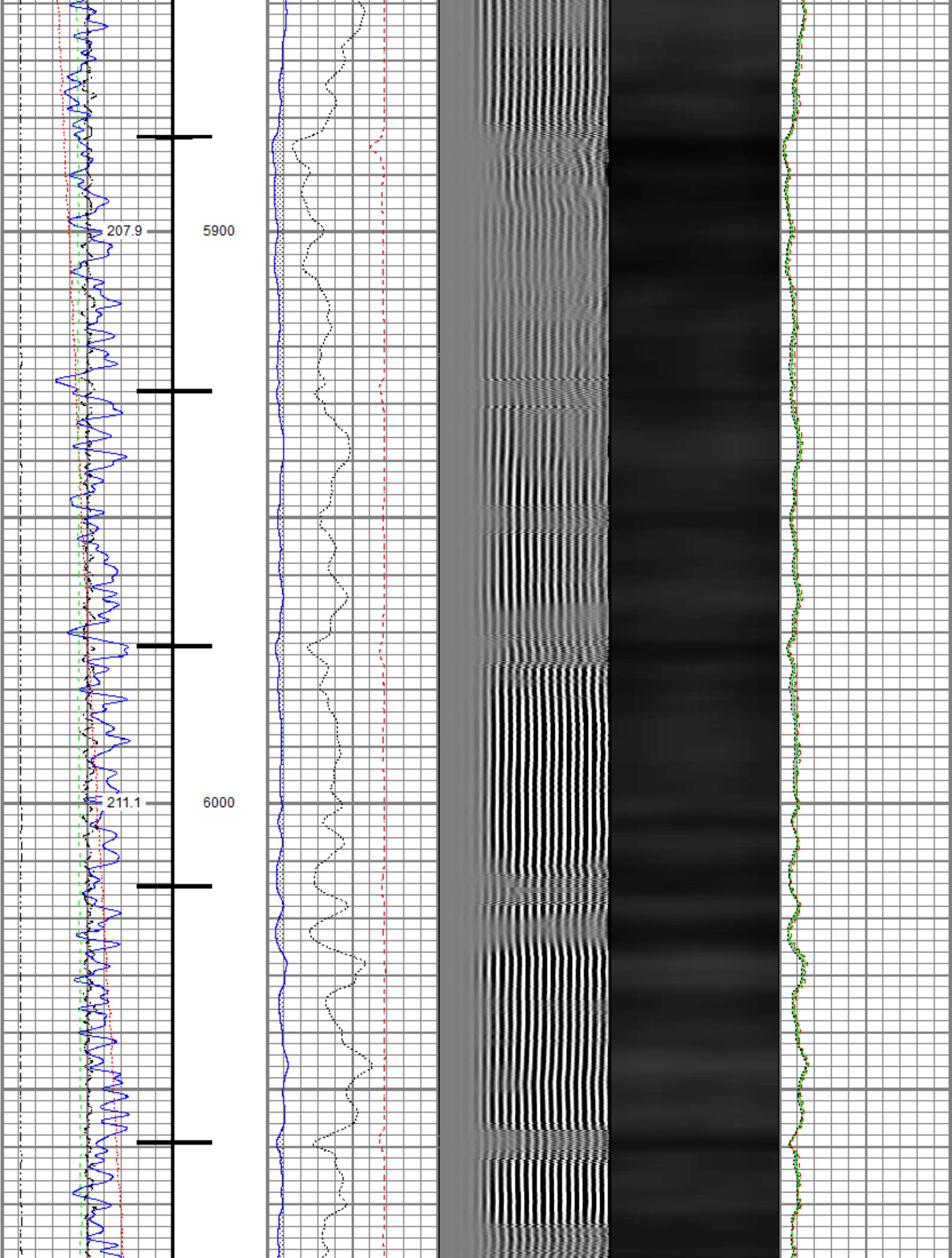


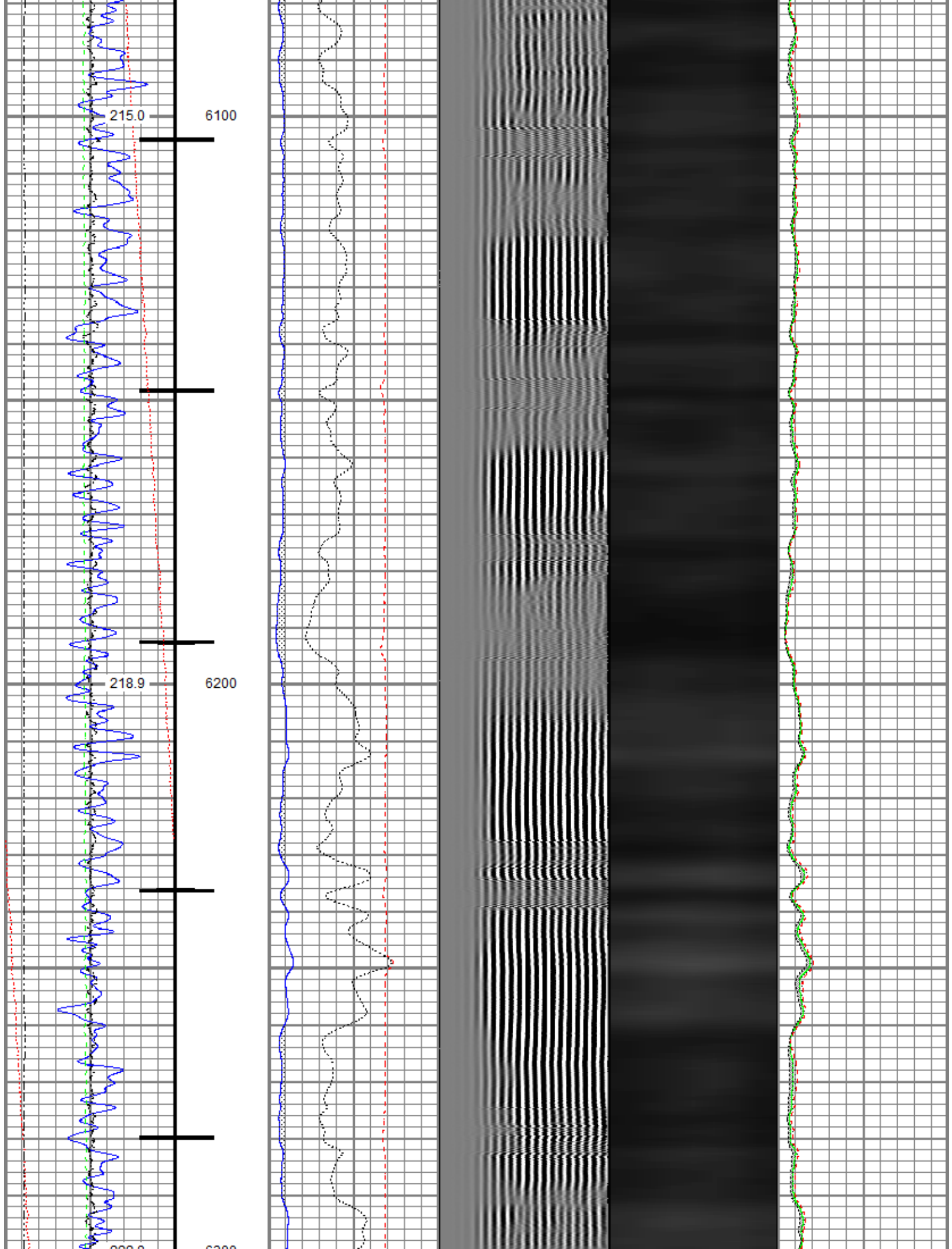


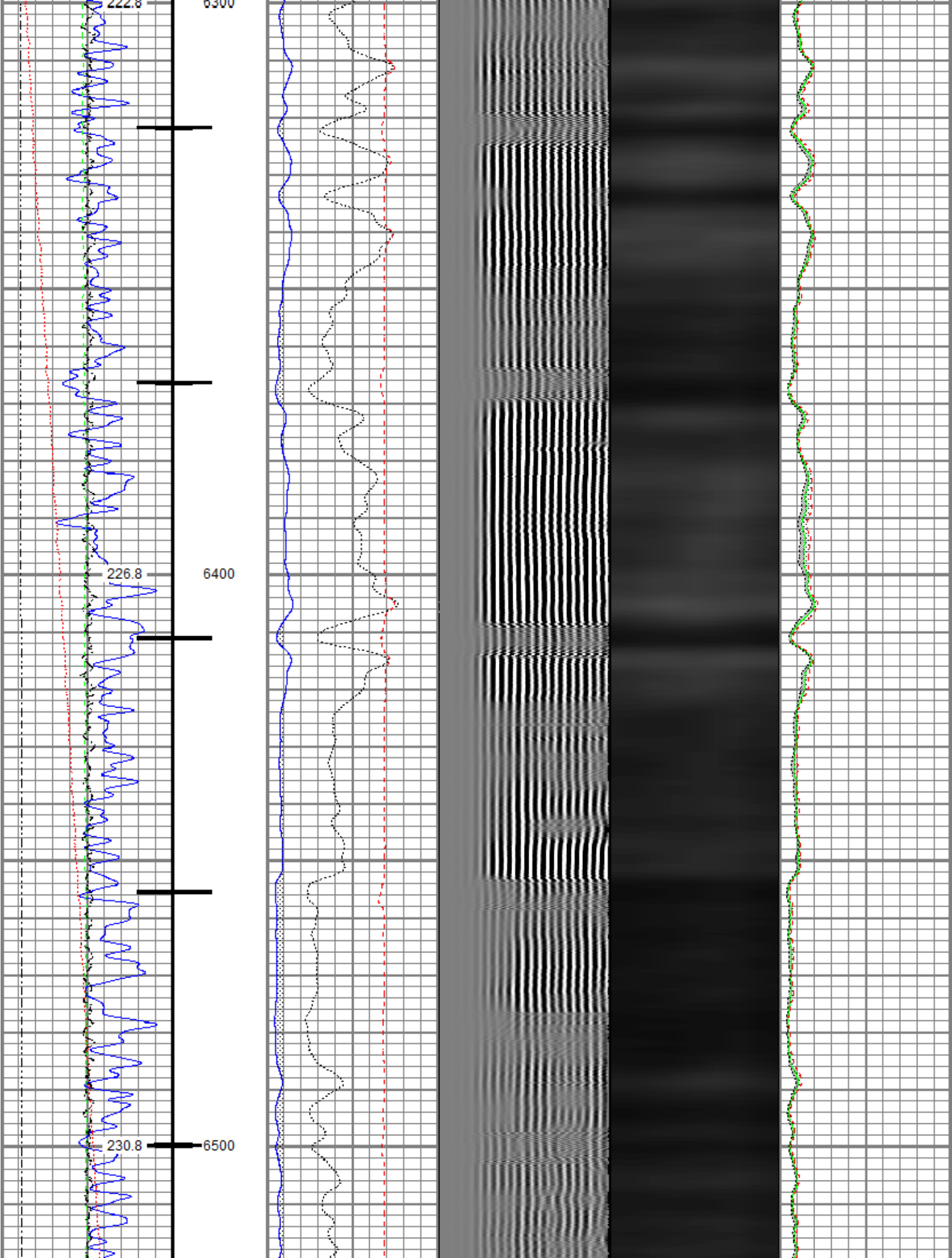


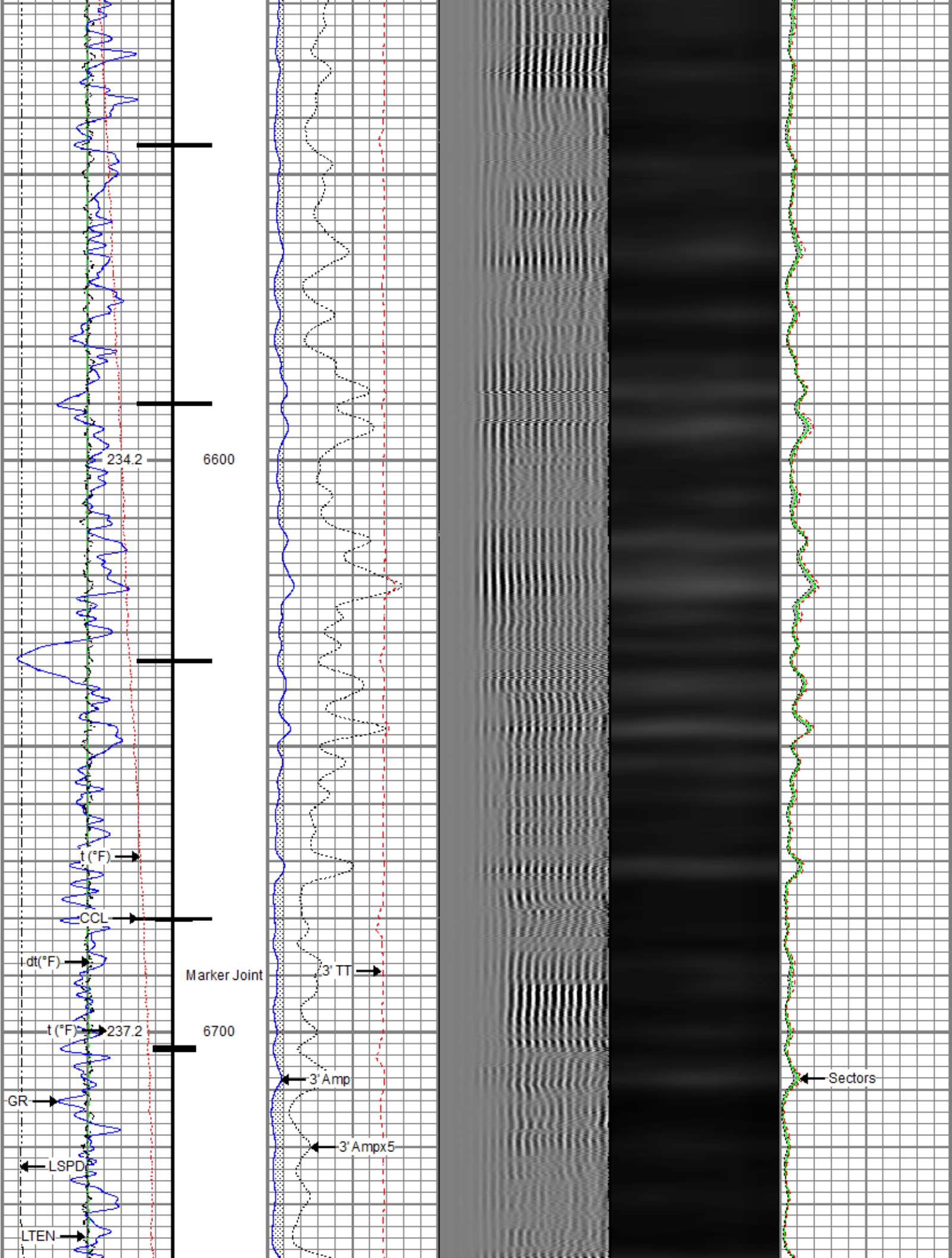


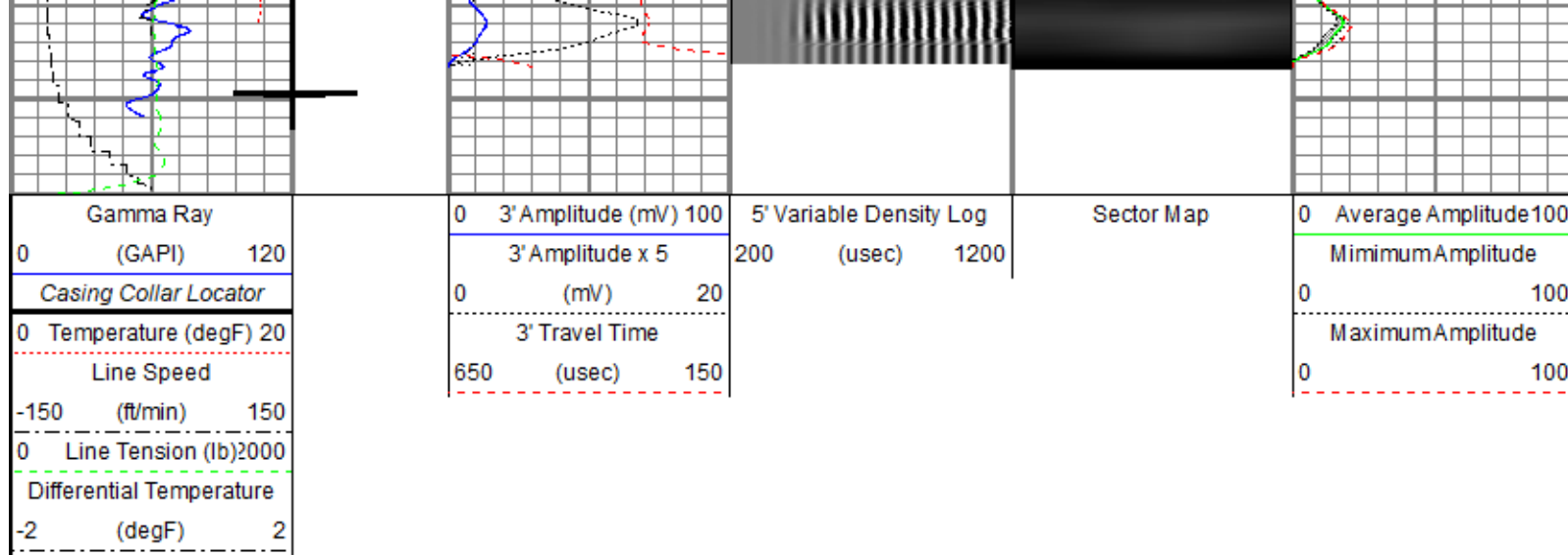








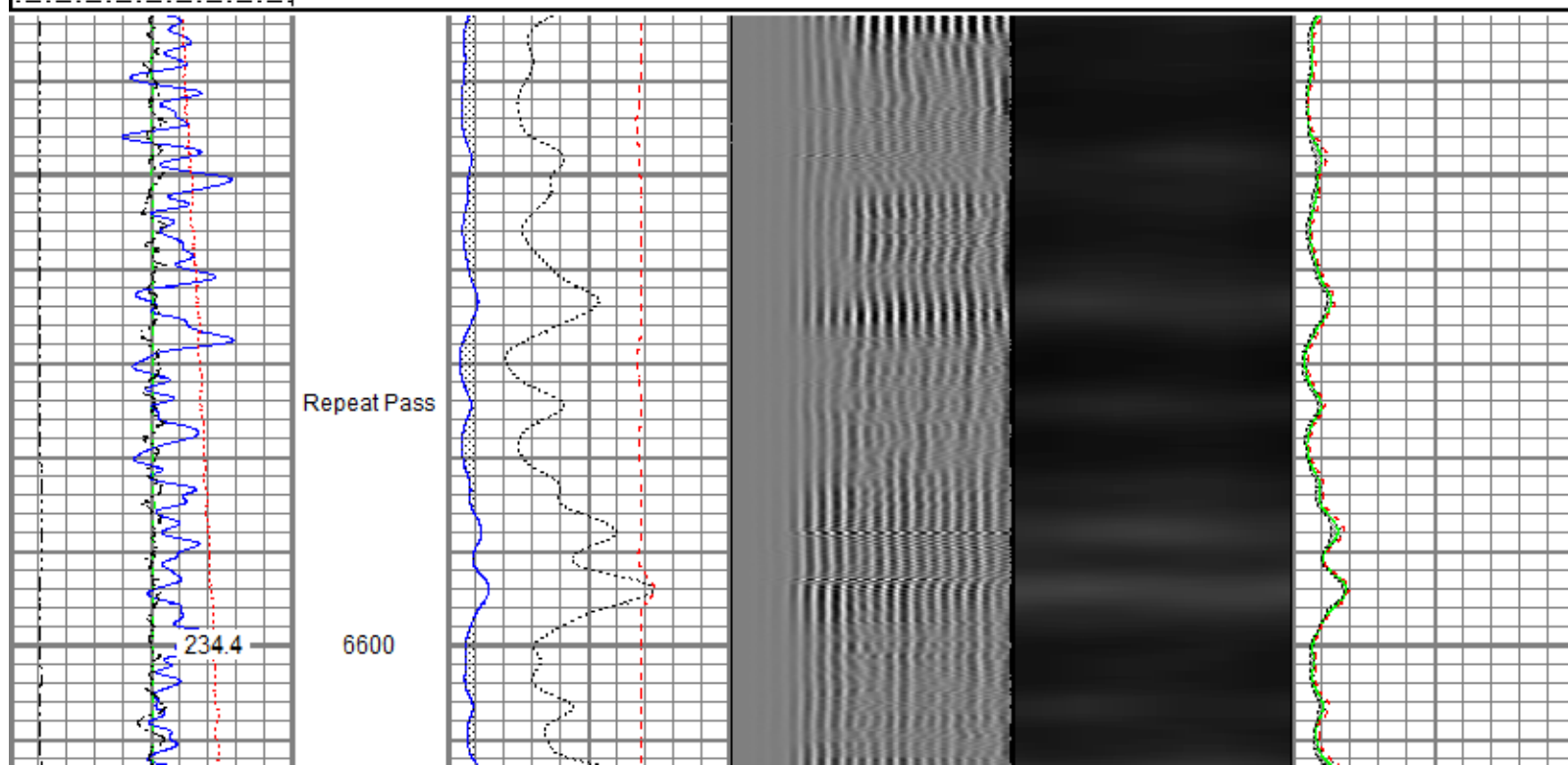
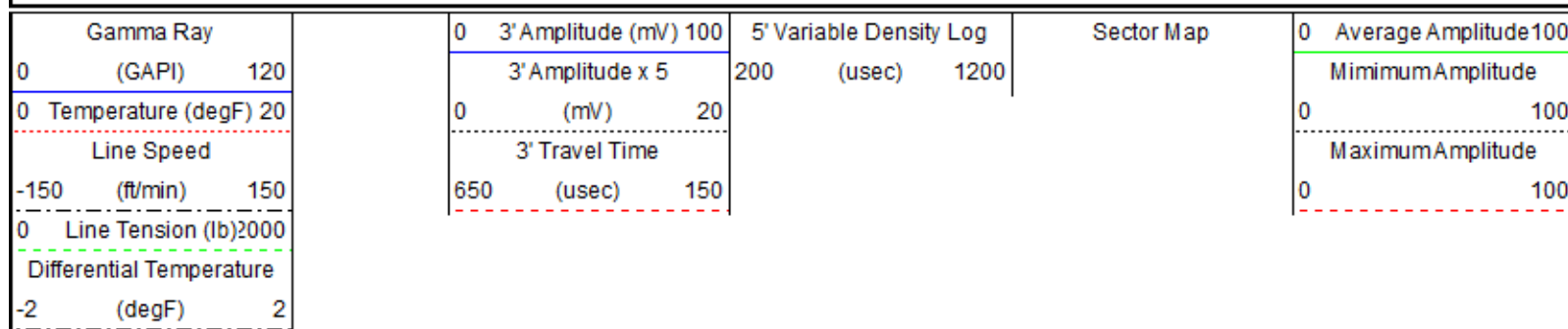


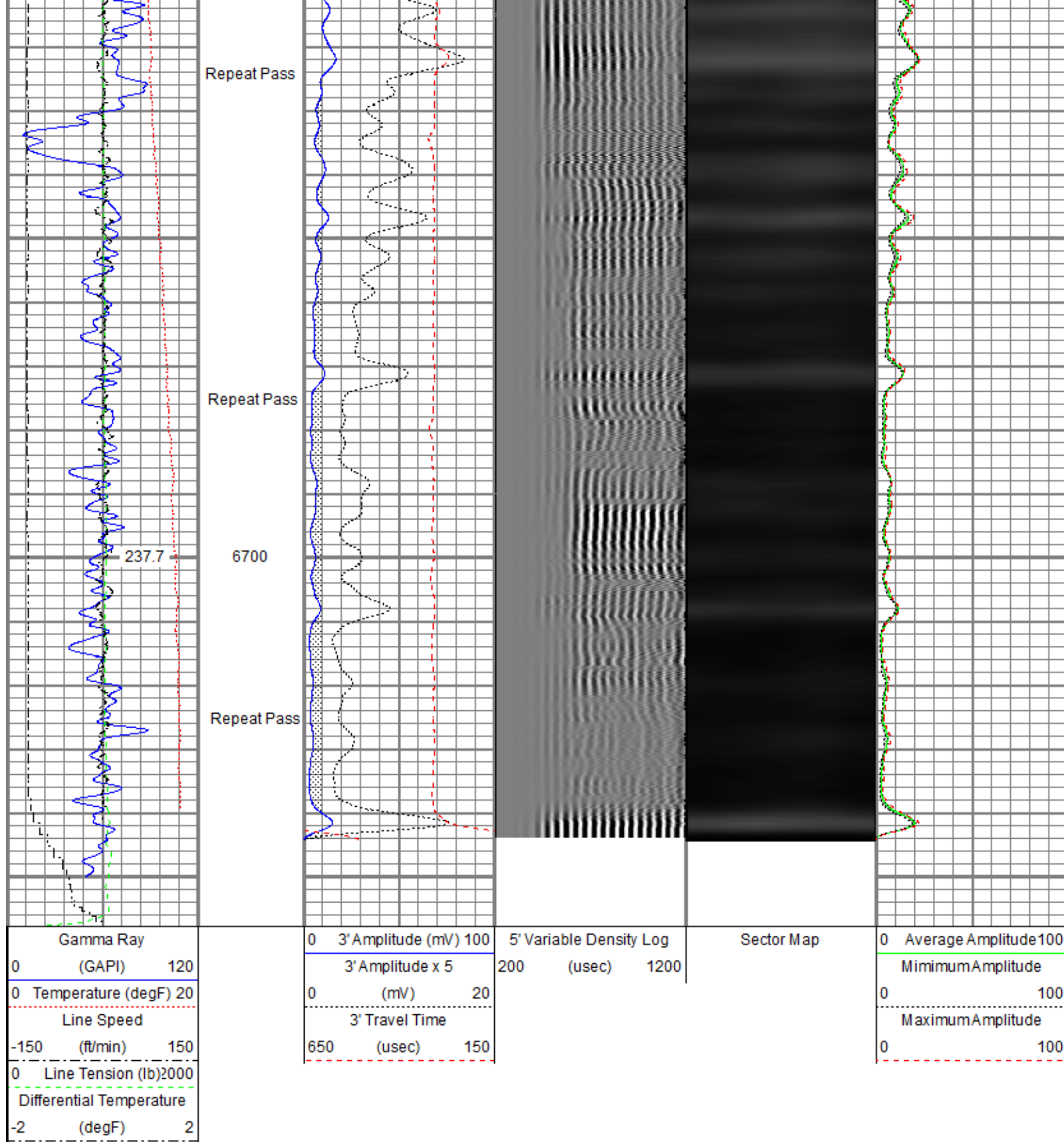


Repeat Pass

Recorded With 2800 PSI Surface Induced Pressure

Database File oxy\0512350193_oxy_farley 23-5hz_rbl_12-07-19\processed_0512350193_oxy_farley 23-5hz_rbl_12-07-19.db
 Dataset Pathname 2800/pass2.2
 Presentation Format ros_radri
 Dataset Creation Tue Dec 10 13:04:13 2019
 Charted by Depth in Feet scaled 1:240





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Titan CHD-14375 GO Titan 1-7/16" Assembled Electric Cable Head with 1" Fishing Neck	1.03	1.44	3.60
			Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00

[illegible]

Performed: Sat Nov 10 12:22:37 2018

Calibrator Value:	637.0	GAPI
Background Reading:	100.1	cps
Calibrator Reading:	1264.5	cps
Sensitivity:	0.5471	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	FW1308-091
Tool Model:	2750 RBT
Calibration Casing Diameter:	5.500 in
Calibration Depth:	-33.559 ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.008	0.616	0.800	71.921	116.961	-0.082
CAL	0.006	0.670				
5'	0.010	0.504	0.800	71.921	144.100	-0.653
SUM						
S1	0.004	0.612	0.000	100.000	164.358	-0.651
S2	0.008	0.635	0.000	100.000	159.484	-1.351
S3	0.008	0.633	0.000	100.000	160.062	-1.280
S4	0.008	0.614	0.000	100.000	164.928	-1.297
S5	0.008	0.626	0.000	100.000	161.730	-1.240
S6	0.008	0.619	0.000	100.000	163.647	-1.285
S7	0.008	0.599	0.000	100.000	169.132	-1.341
S8	0.008	0.605	0.000	100.000	167.529	-1.354

Air Zero Calibration, performed Fri Dec 06 13:01:24 2019:

	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:	FW1308-091
Tool Model:	2750 RBT
Performed:	Mon Oct 01 11:32:16 2018

	Reference	Reading
Low Reference:	100.00 degF	104.72 degF
High Reference:	350.00 degF	392.24 degF
Gain:	0.87	
Offset:	8.94	
Delta Spacing	1	



Company	Kerr-McGee Oil & Gas Onshore, L.P.
Well	Farley 23-5HZ
Field	Wattenberg
County	Weld
State	Colorado