



Radial Cement Bond  
Gamma Ray  
Casing Collar Log

Company Kerr-McGee Oil & Gas Onshore, L.P.  
Well Folley North #1  
Field Wattenberg  
County Larimer  
State Colorado

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Location: API #: 05-069-06486

SEC 13 TWP 5N RGE 68W

Permanent Datum Ground Level Elevation 4923'  
Log Measured From Kelly Bushing 20 FT  
Drilling Measured From Kelly Bushing

Other Services  
Gauge Ring  
Elevation  
K.B. 4943'  
D.F. 4942'  
G.L. 4923'

Date 25-AUG-2016

Run Number Two

Depth Driller 18245 FT

Depth Logger 7292 FT

Bottom Logged Interval 7288 FT

Top Log Interval Surface

Open Hole Size 7.875"

Type Fluid Water

Density / Viscosity 8.34 lbm/gal

Max. Recorded Temp. 219.6 °F

Estimated Cement Top 764 FT

Time Well Ready ROA

Time Logger on Bottom 13.07

Equipment Number HD-0361

Location Fort Lupton, CO

Recorded By Wayne Wacker

Witnessed By Noe Pulido

Borehole Record

Run Number

Bit

From

To

Size

Weight

From

To

Tubing Record

Run Number

Bit

From

To

Size

Weight

From

To

Casing Record

Run Number

Bit

From

To

Size (in)

Wgt (lbs/ft)

Grade

Top

Bottom

Comments

Log ran as per customer request  
Depth referenced to Casing Tally reported Marker Joint Top at 6433 FT  
Adjusted log +3 FT to correlate with Marker Joint Top  
Gauge Ring/Junk Basket ran to 7292 FT with no debris found  
Log ran from as deep as possible in heel to surface  
Log ran with 2800 PSI surface induced pressure  
Logging tools were clean and free of any debris upon completion of operations  
  
Thank you for choosing Reliance Oilfield Services, LLC!!

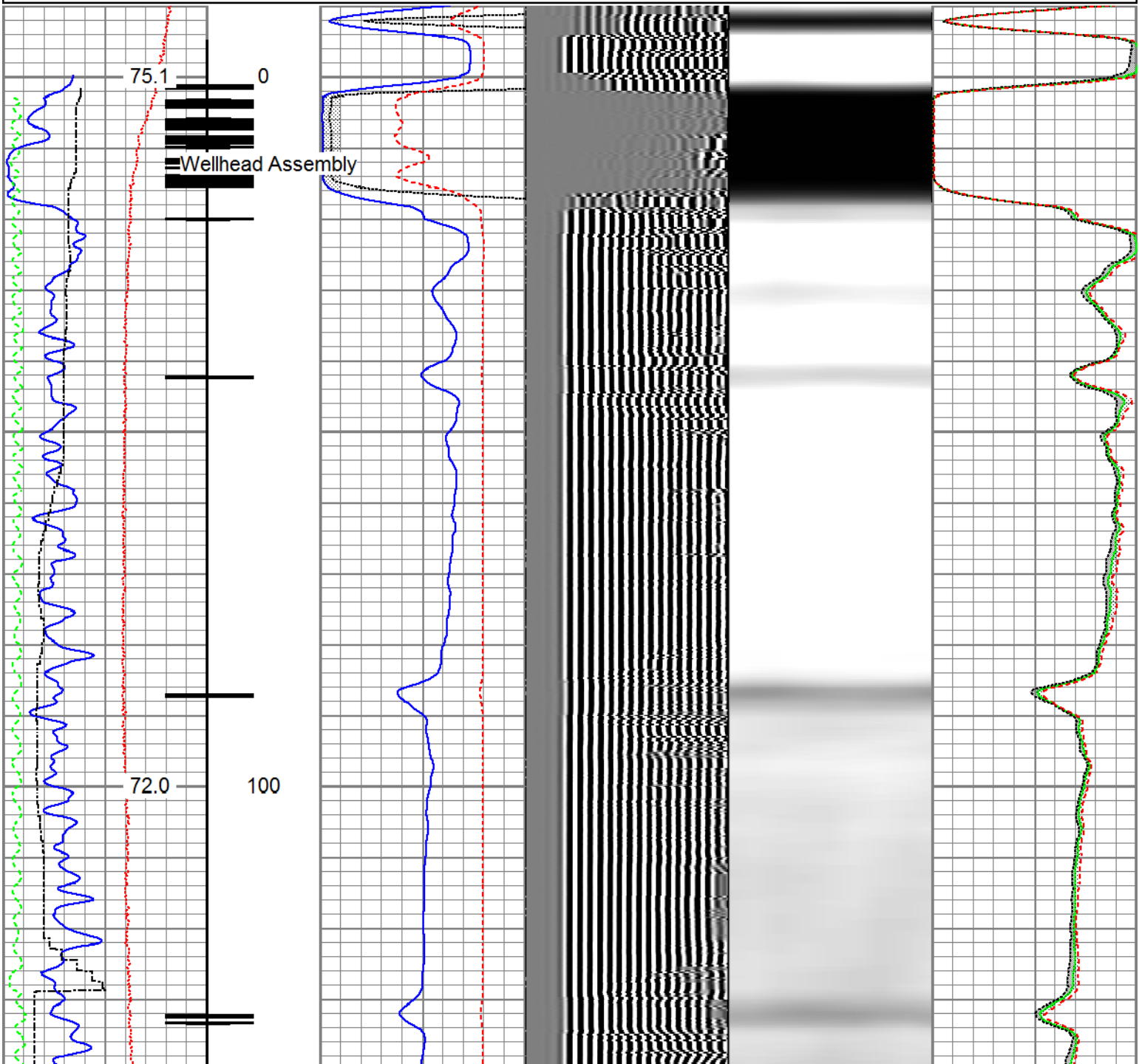


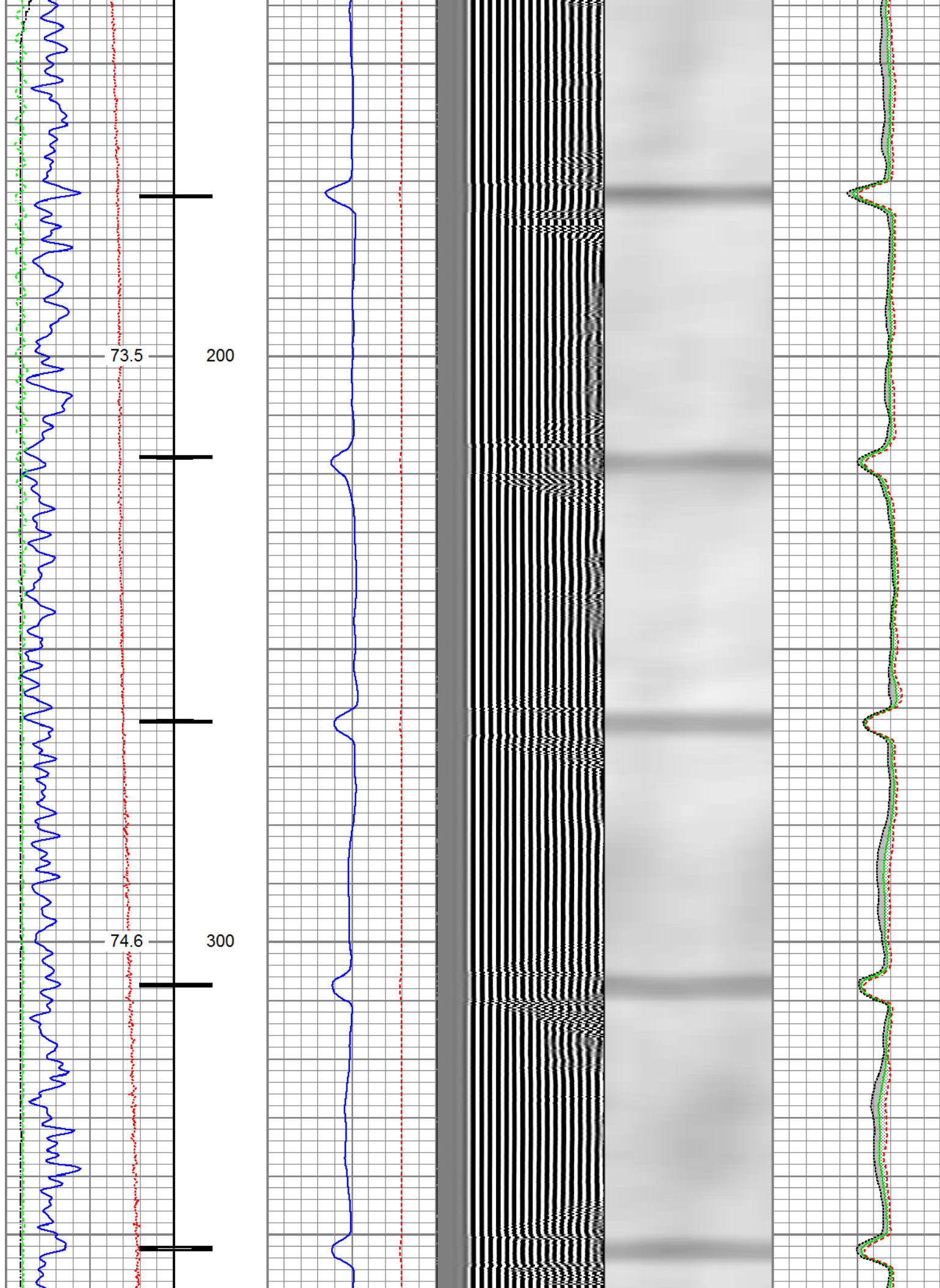
Main Pass

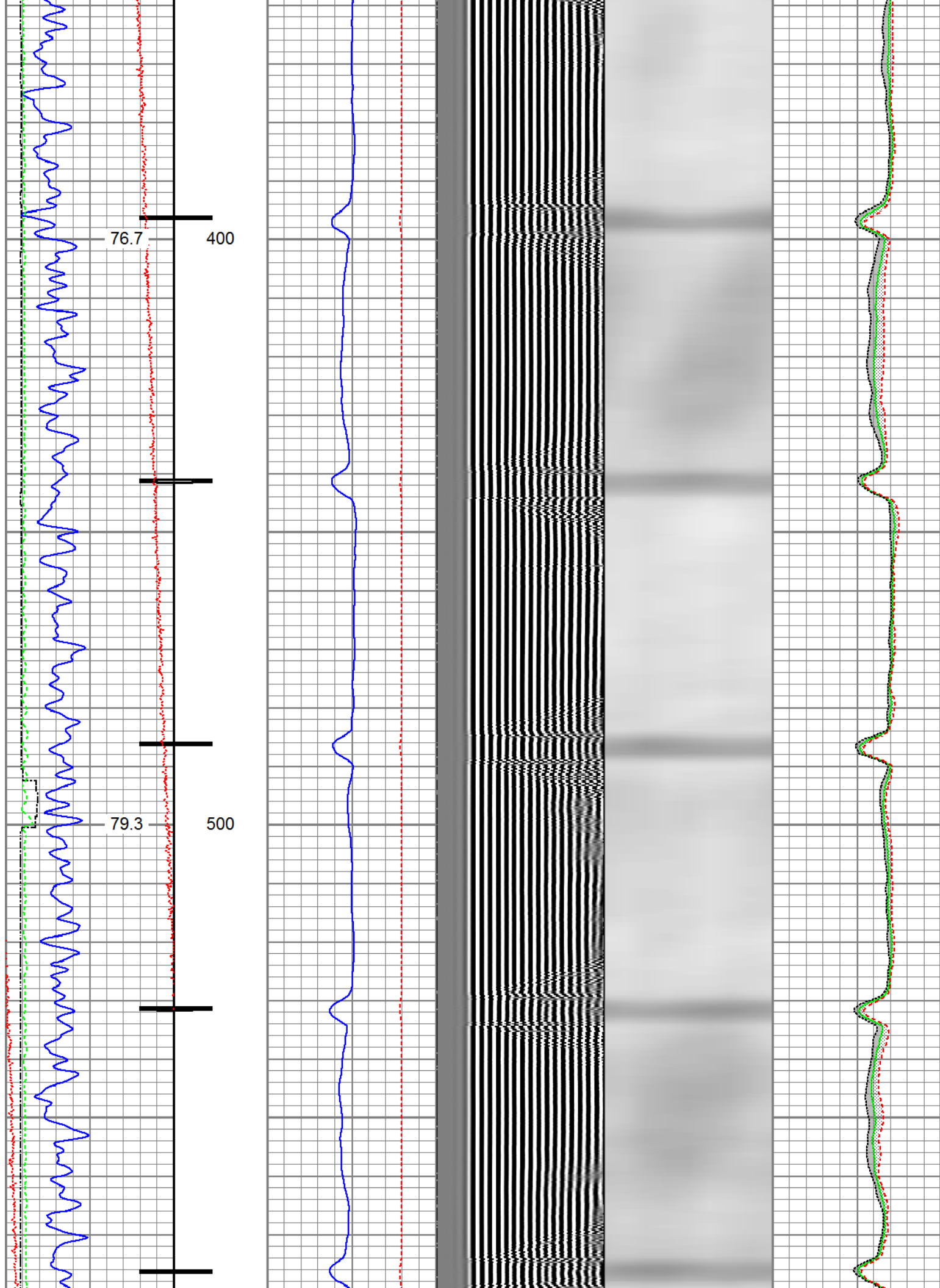
Recorded With 2800 PSI Surface Induced Pressure

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Dataset Pathname	mainmain
Presentation Format	ros_radri
Dataset Creation	Thu Aug 25 13:15:26 2016
Charted by	Depth in Feet scaled 1:240

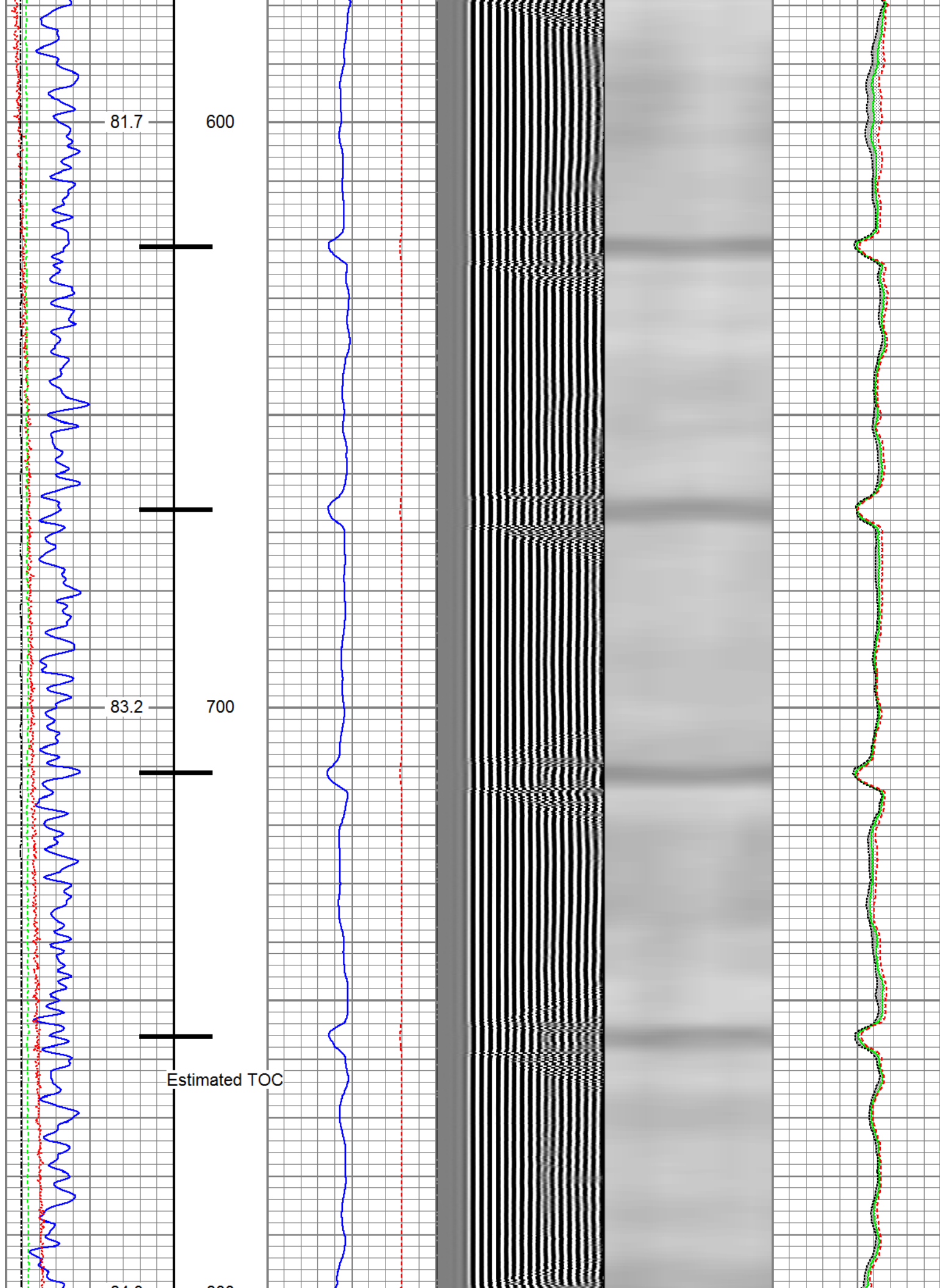
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
	0 (mV) 20			0 100
Temperature	3' Travel Time			Maximum Amplitude
0 (degF) 20	650 (usec) 150			0 100
Line Speed				
-150 (ft/min)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

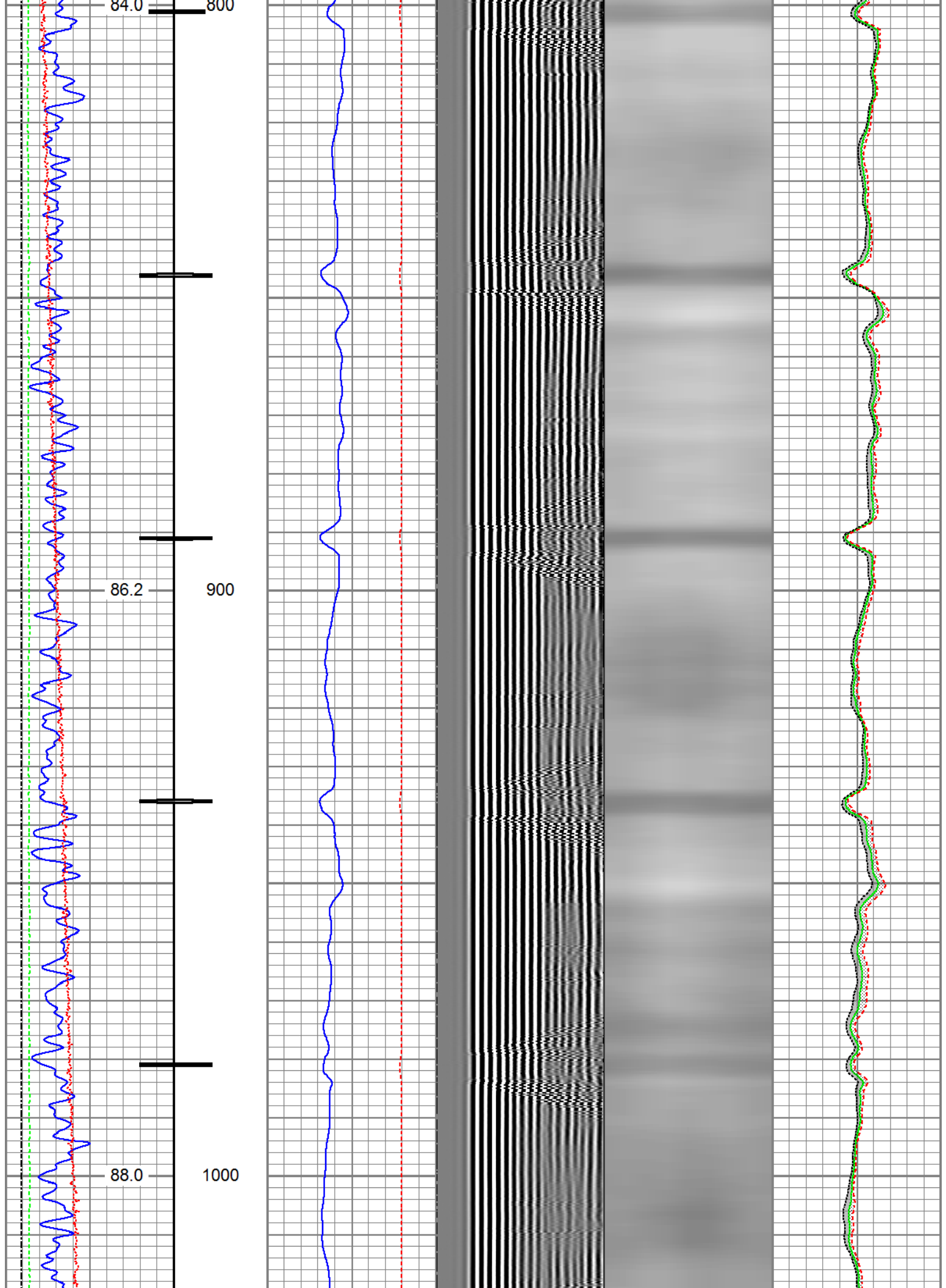


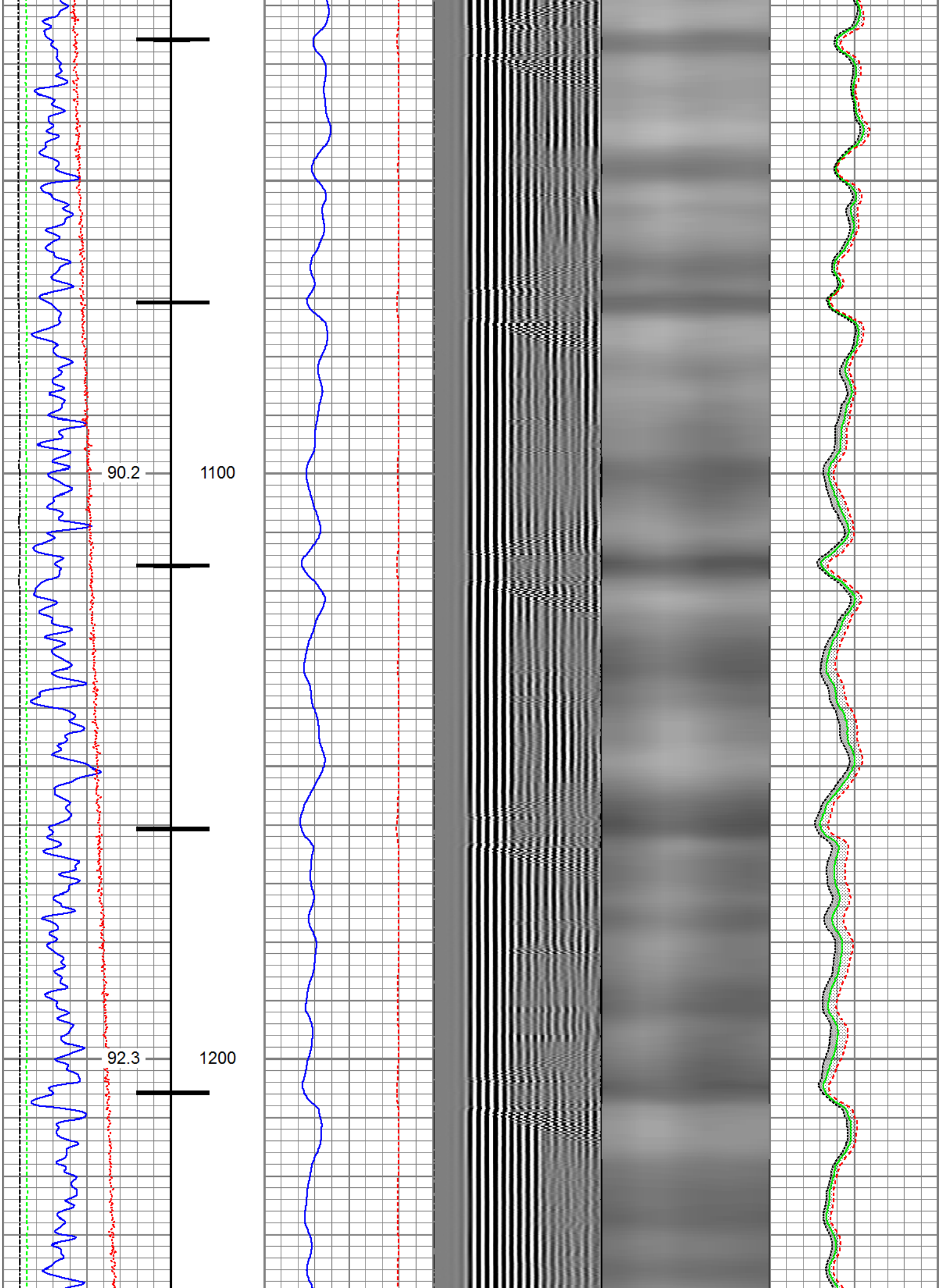


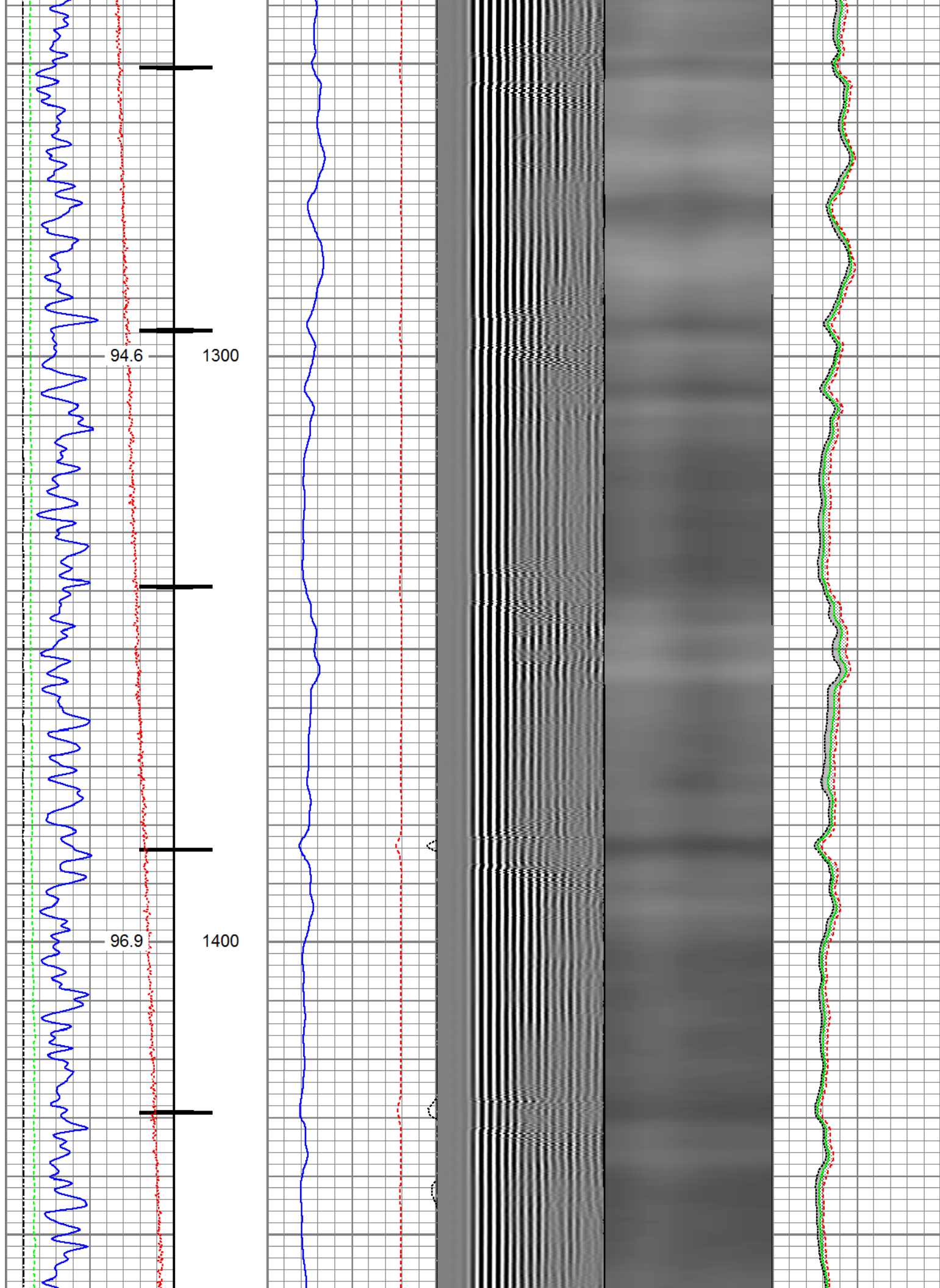




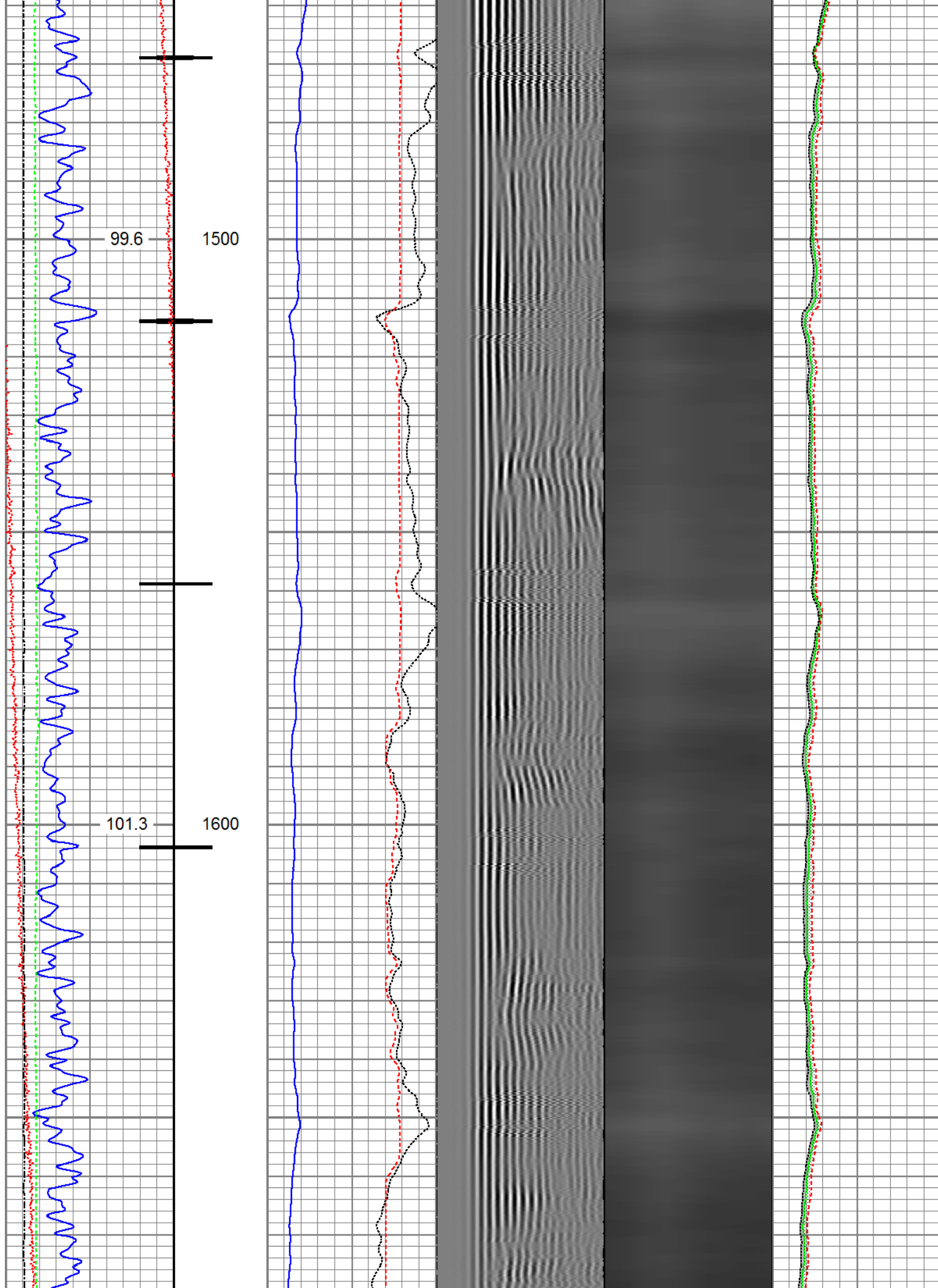


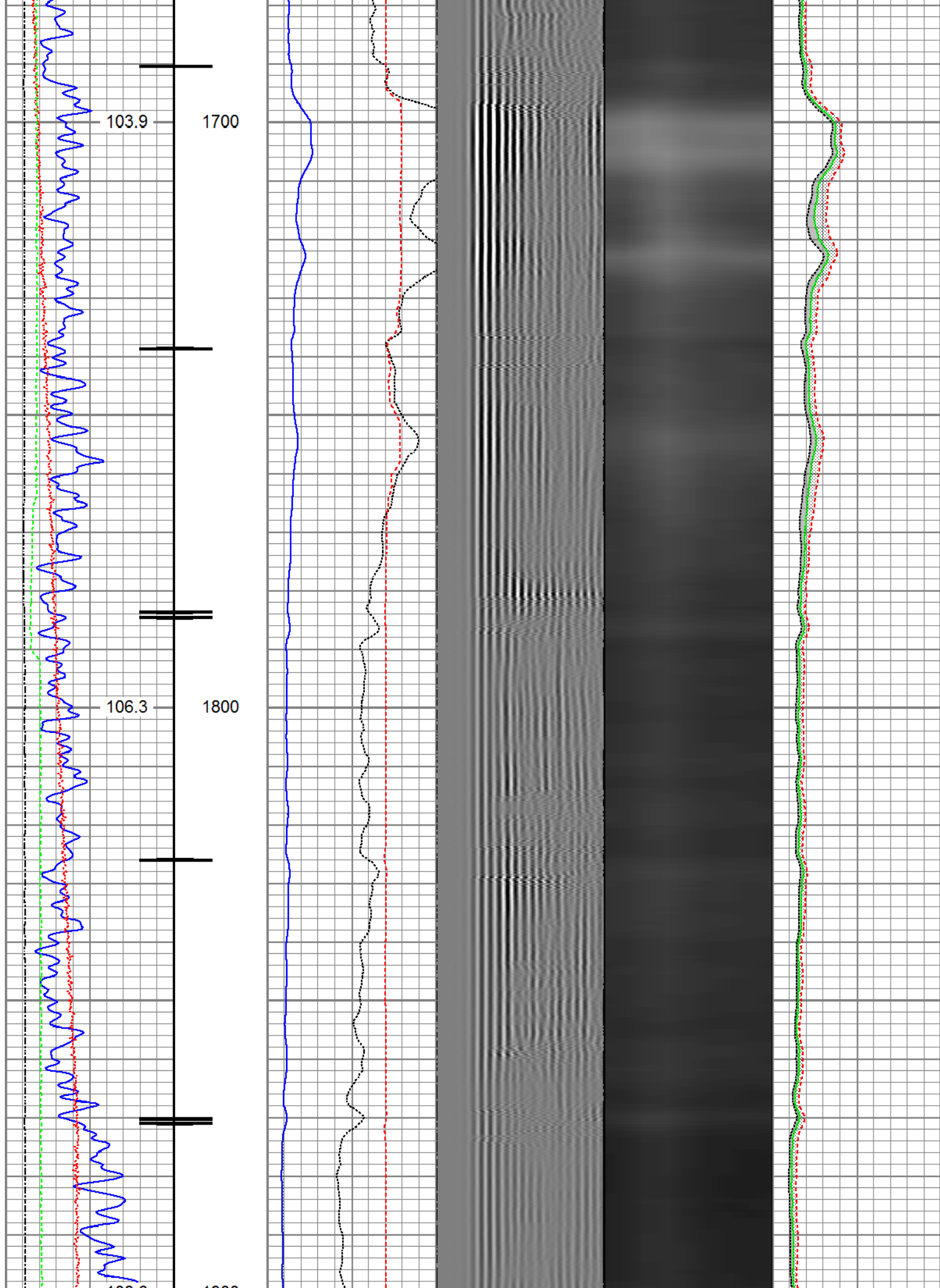


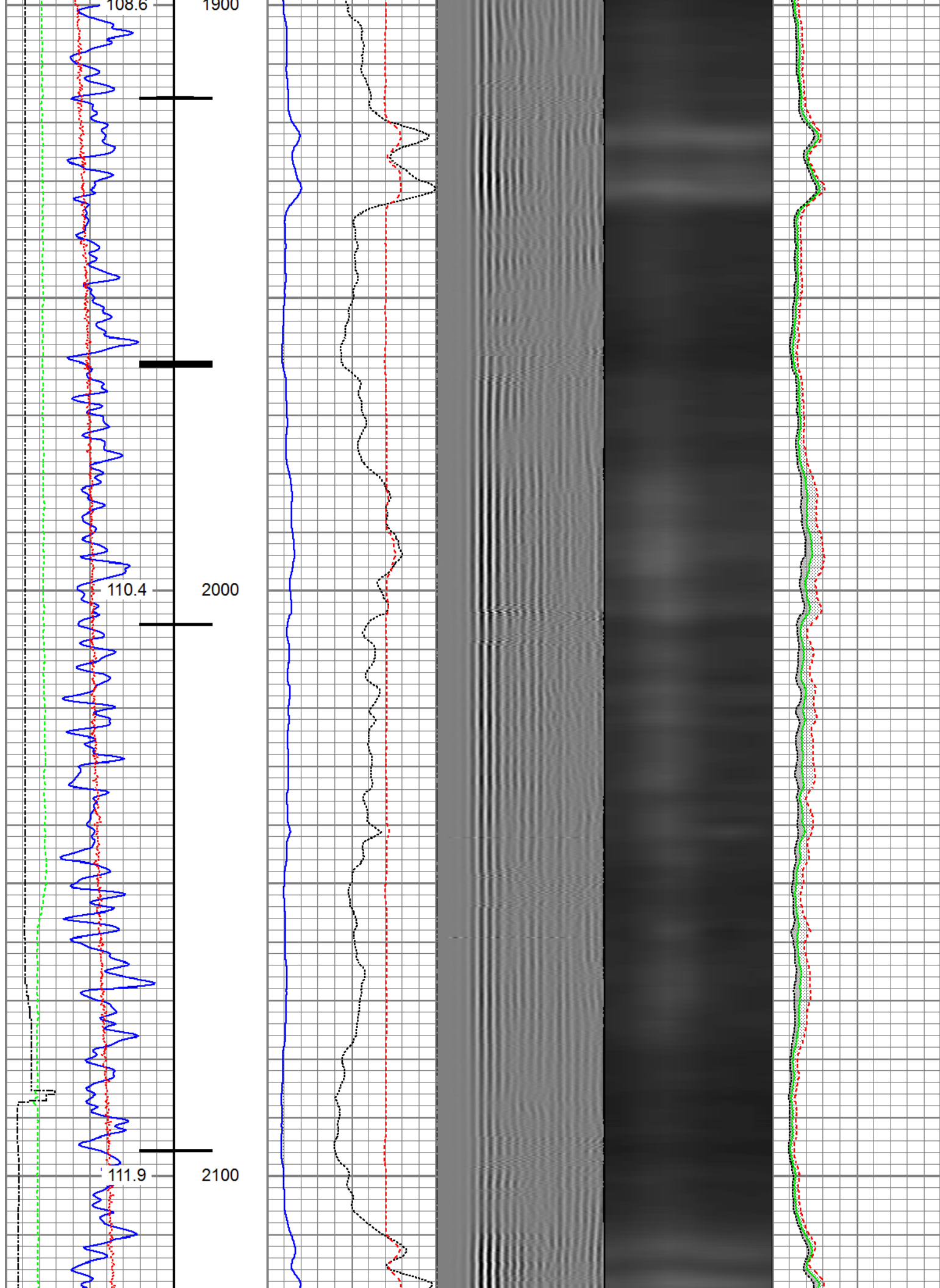


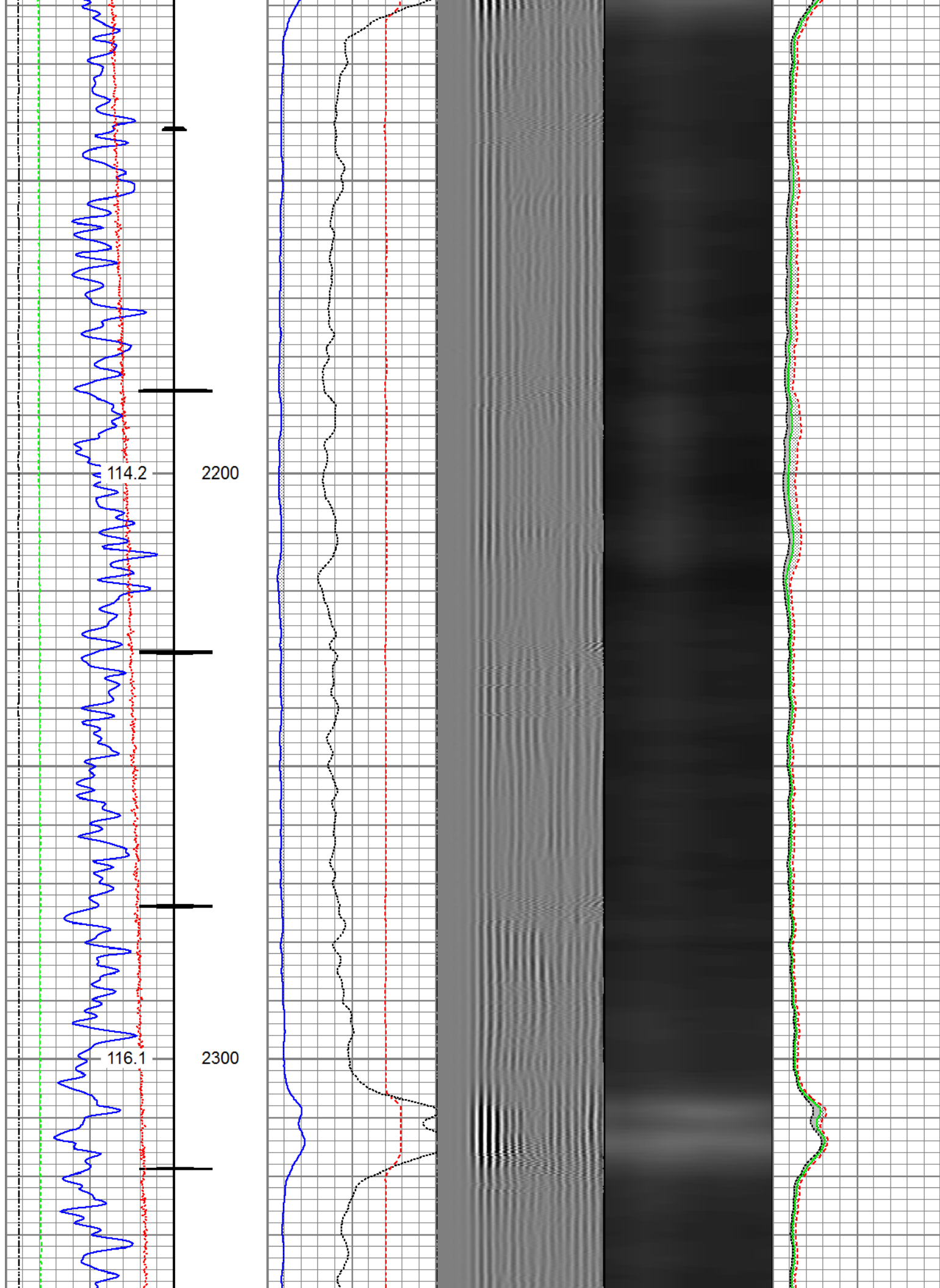




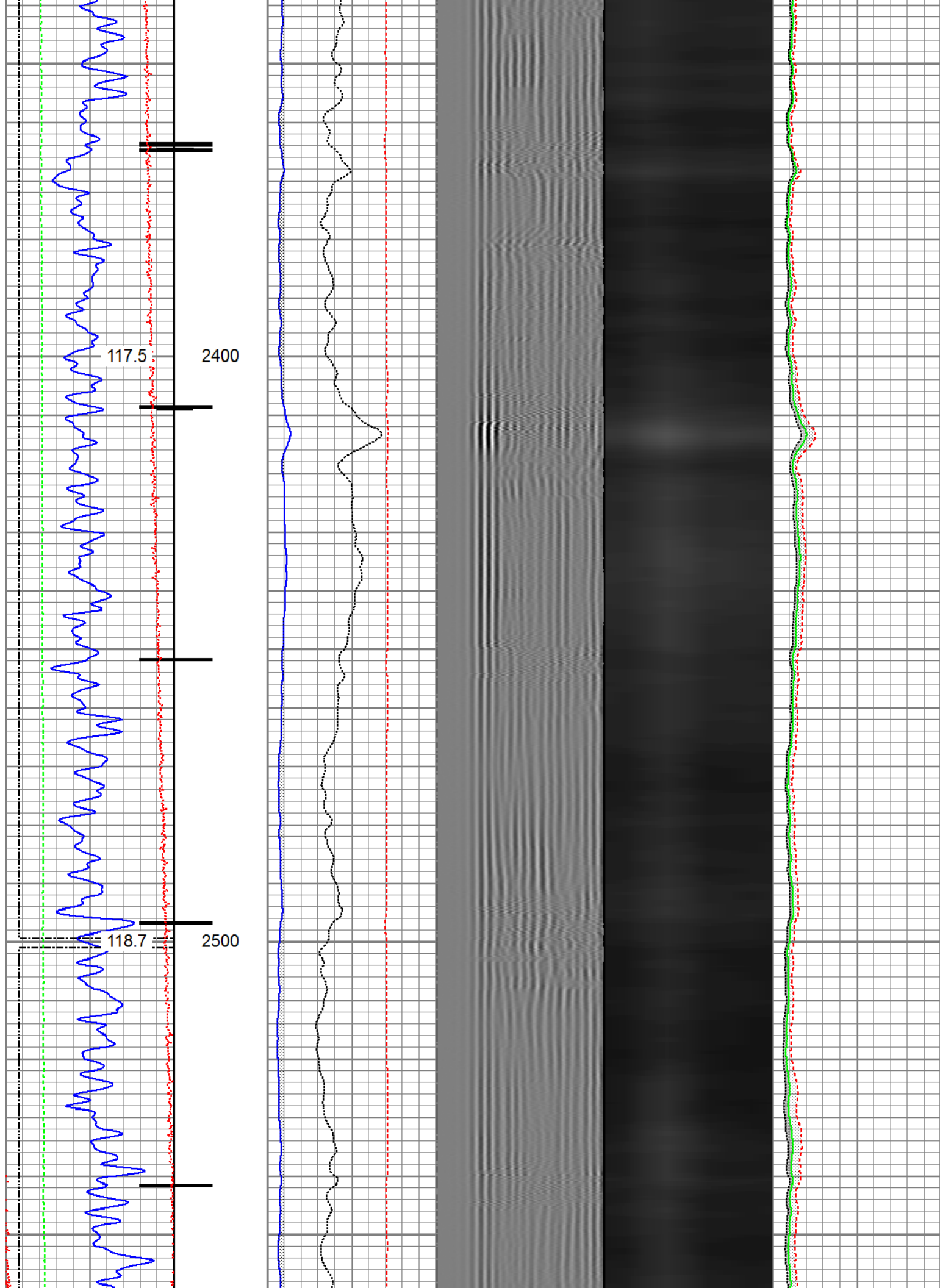


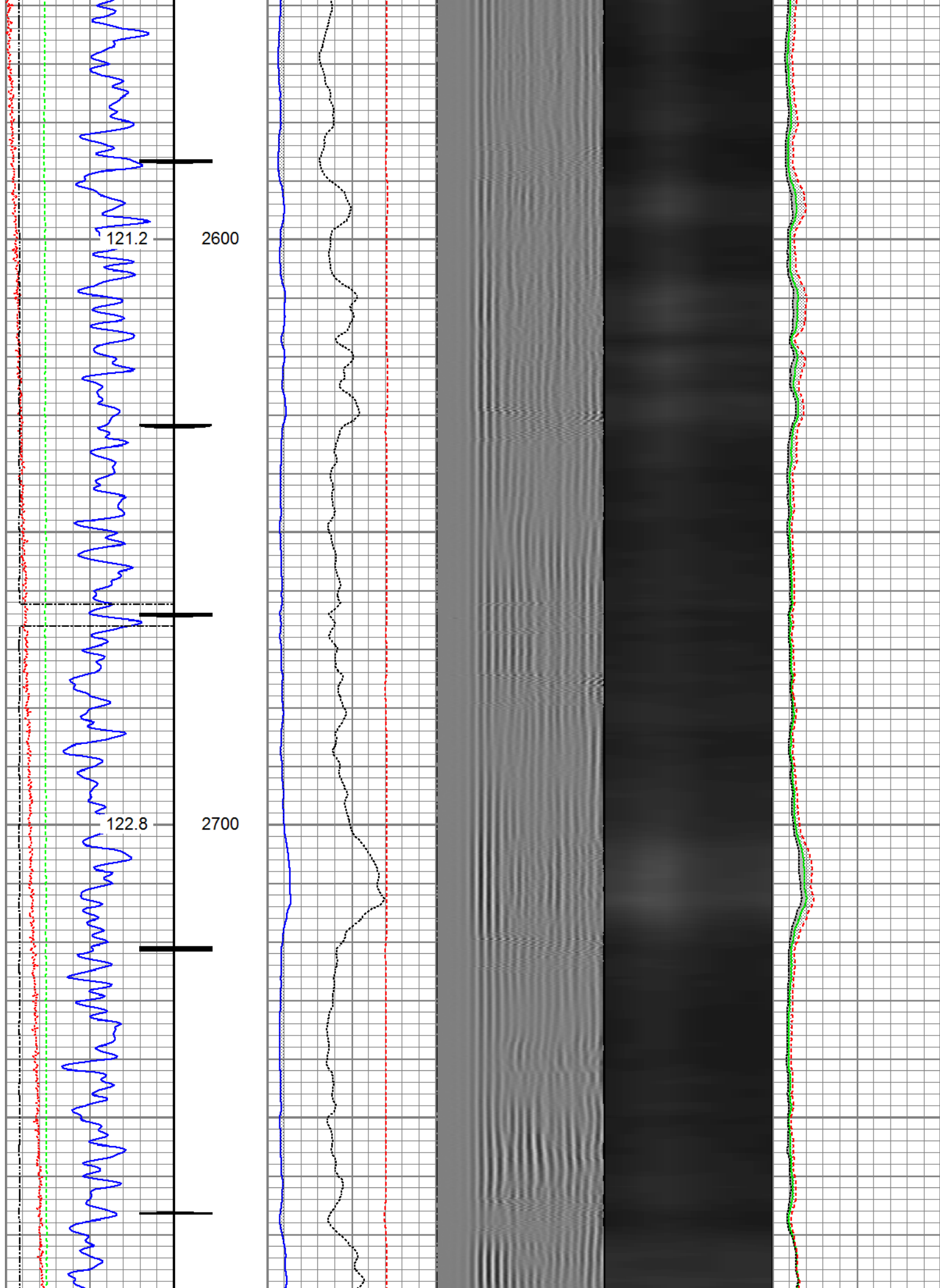


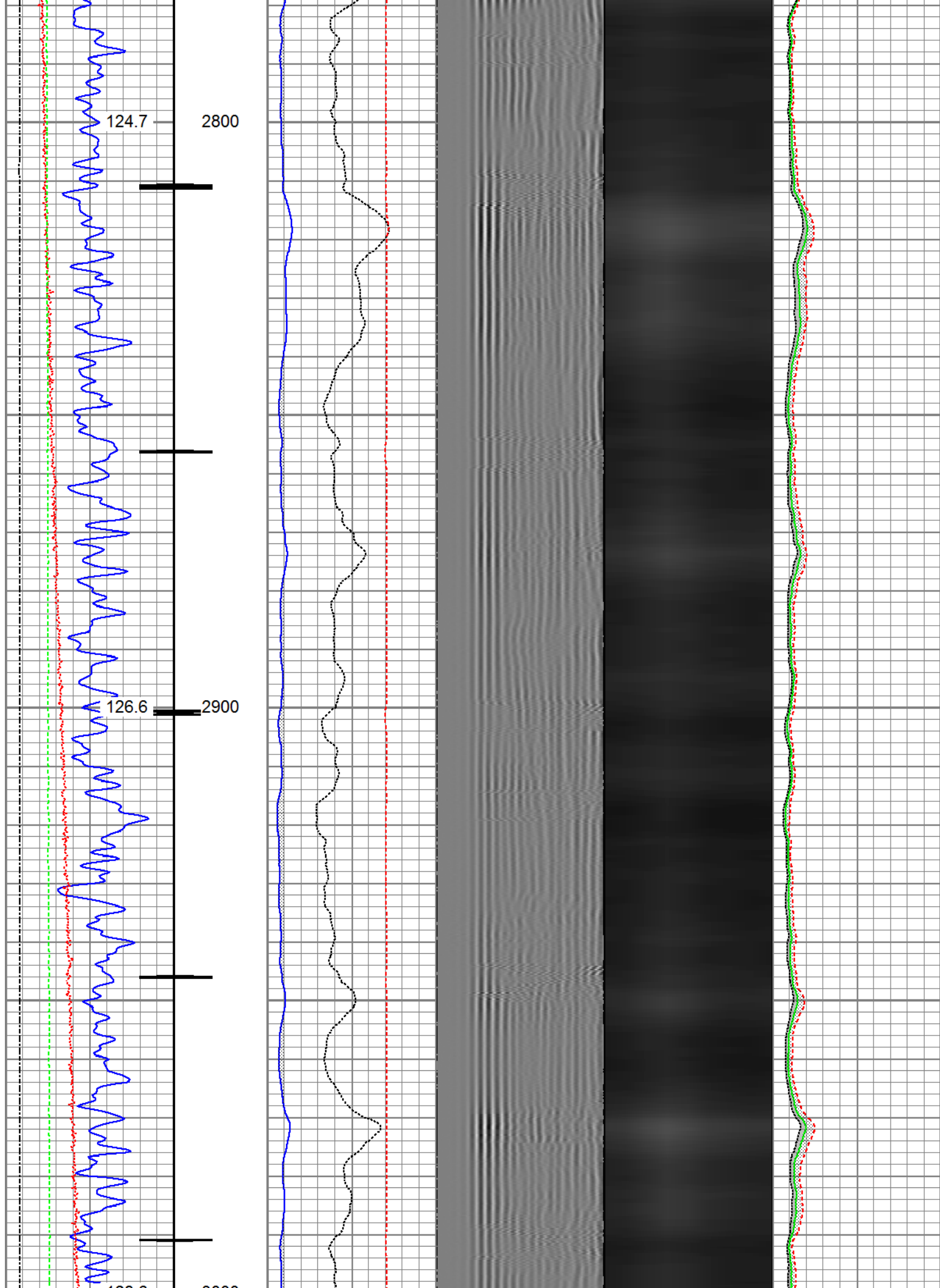


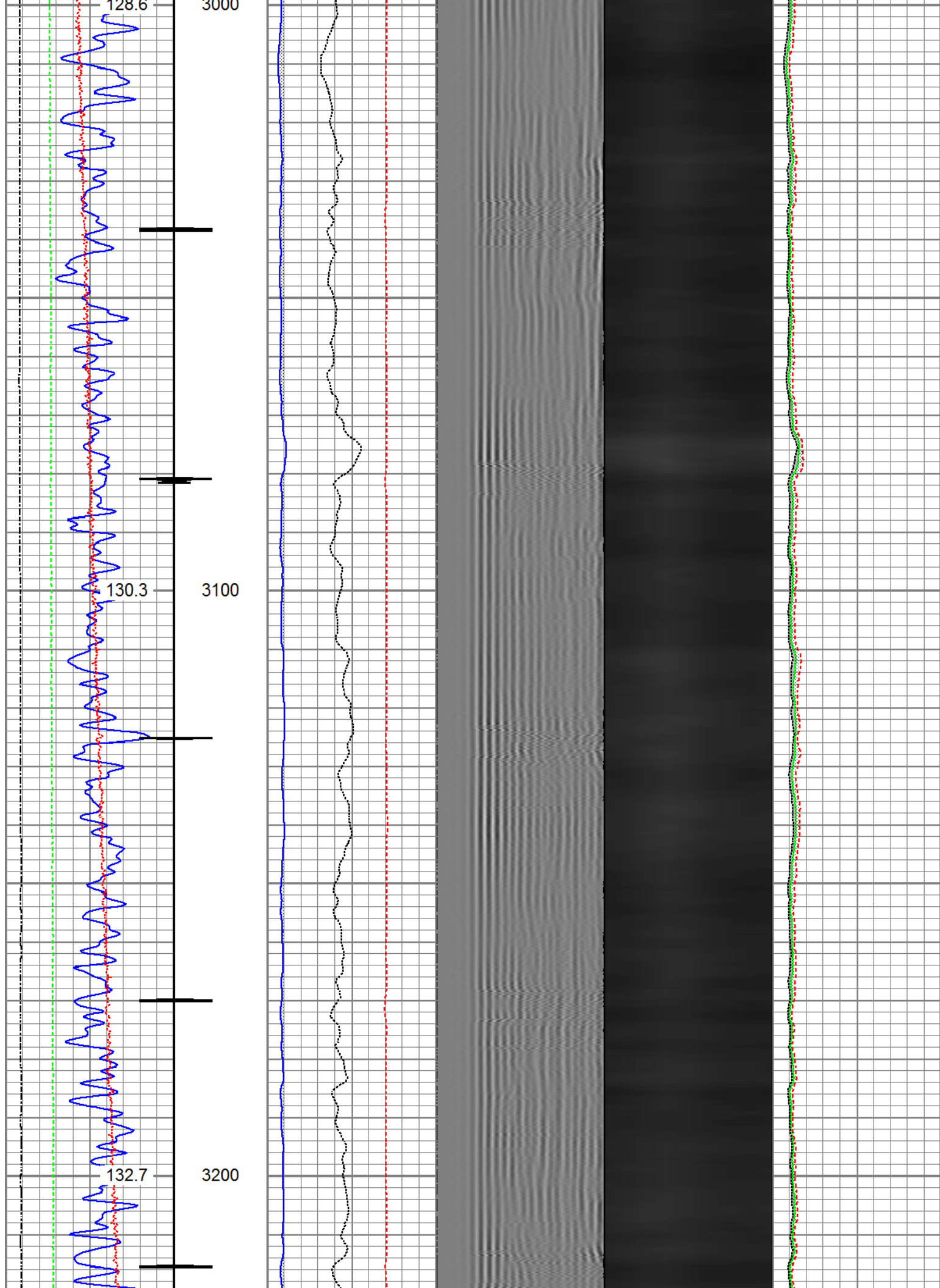




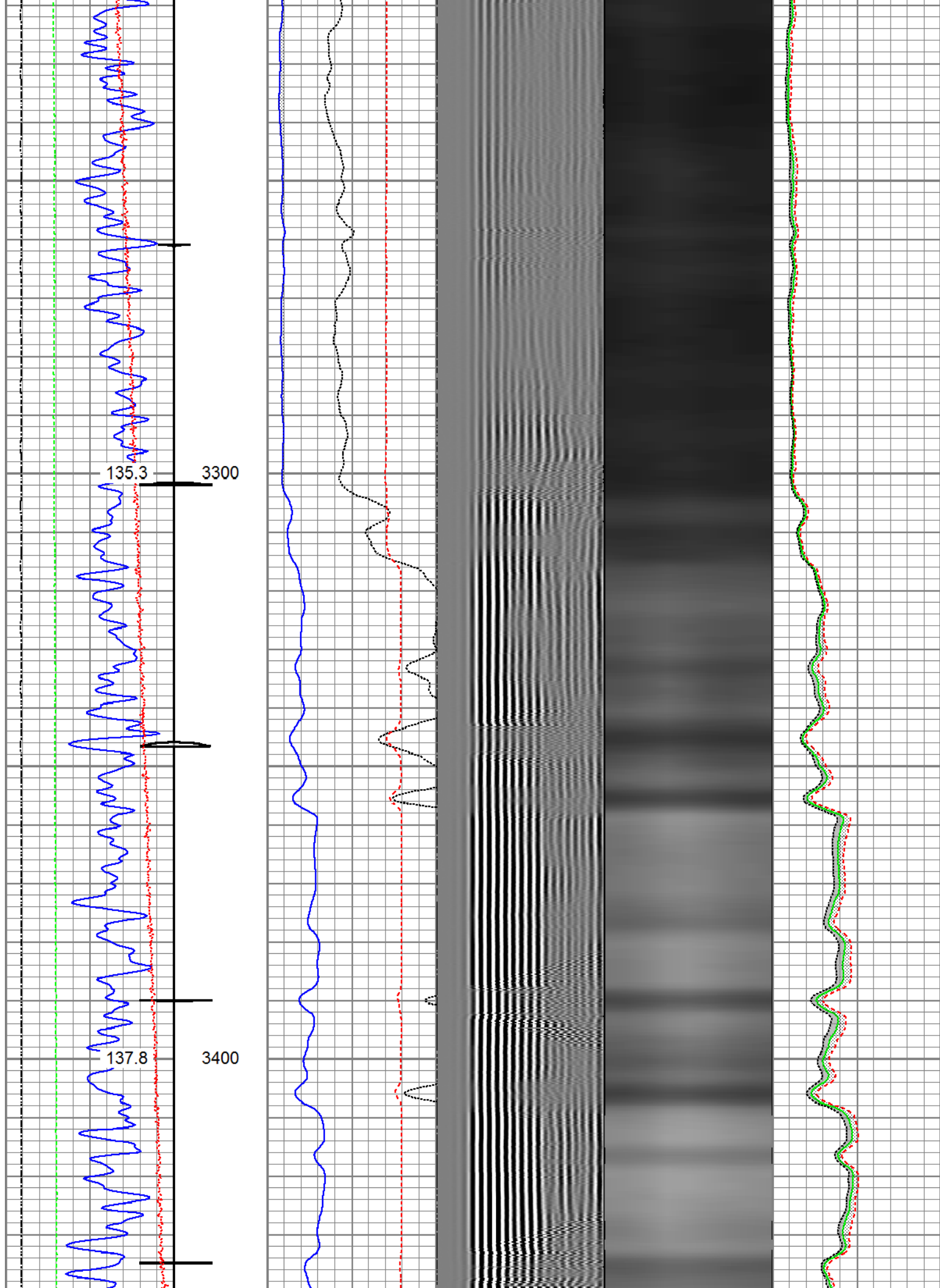


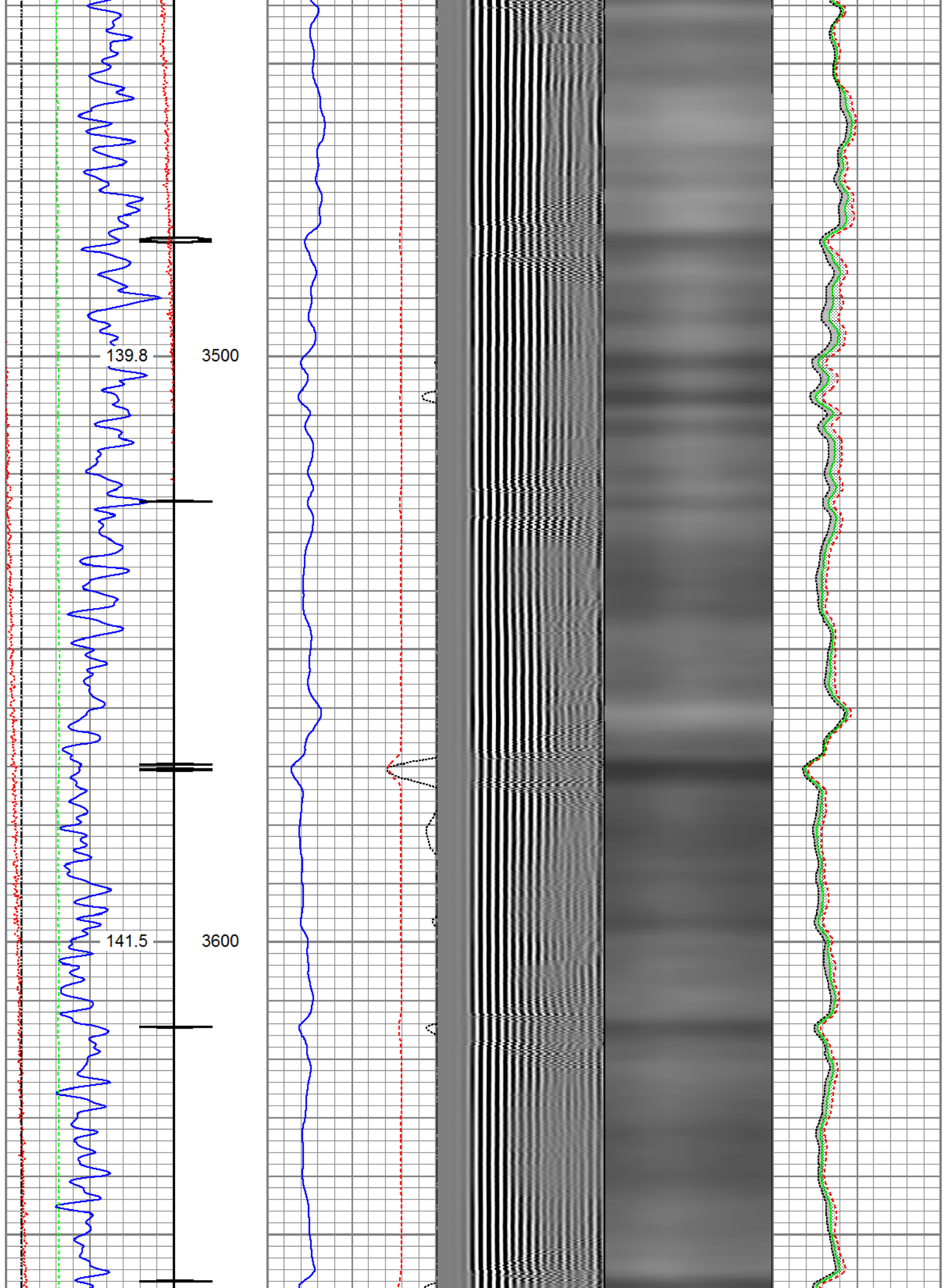


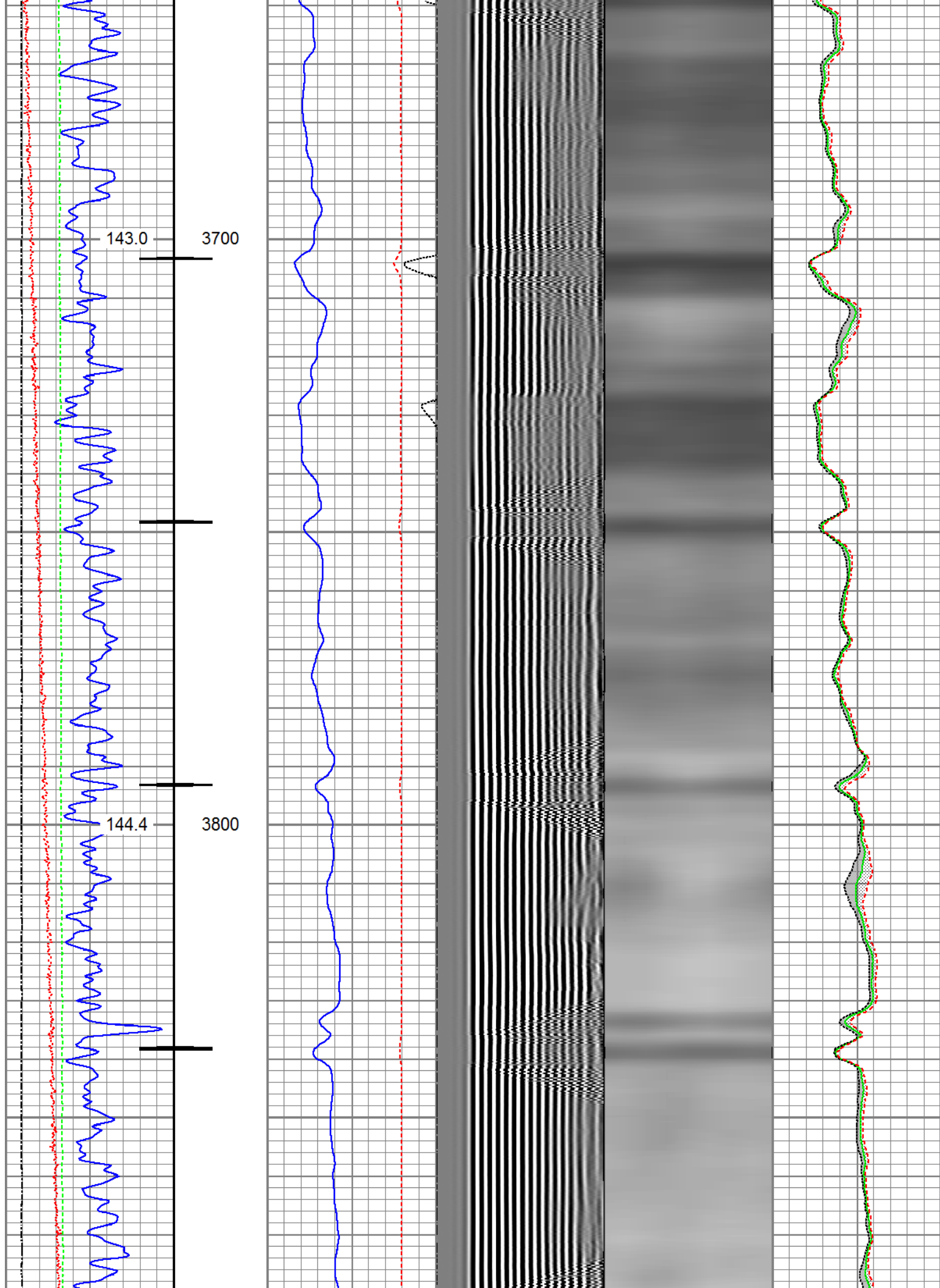


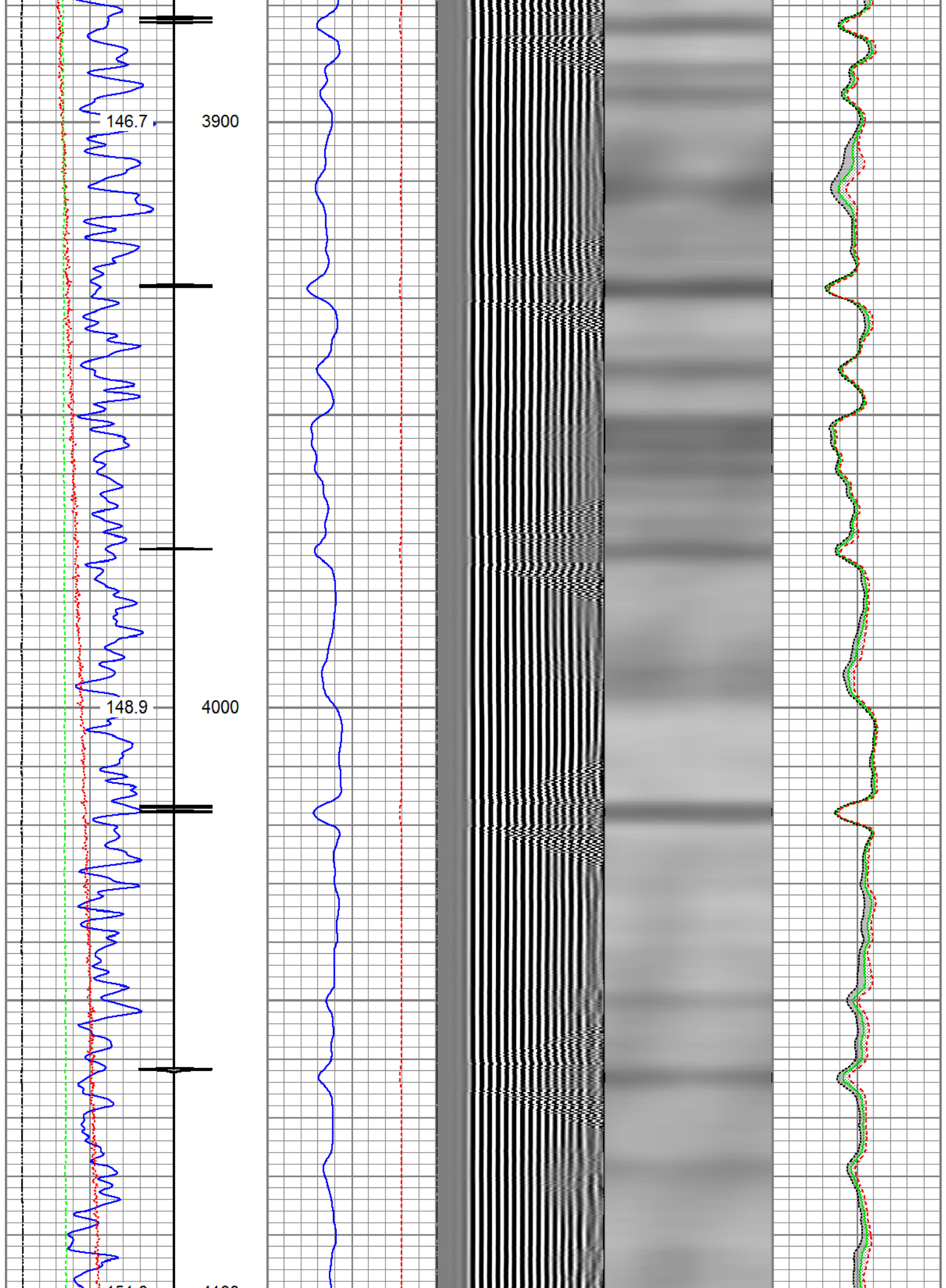




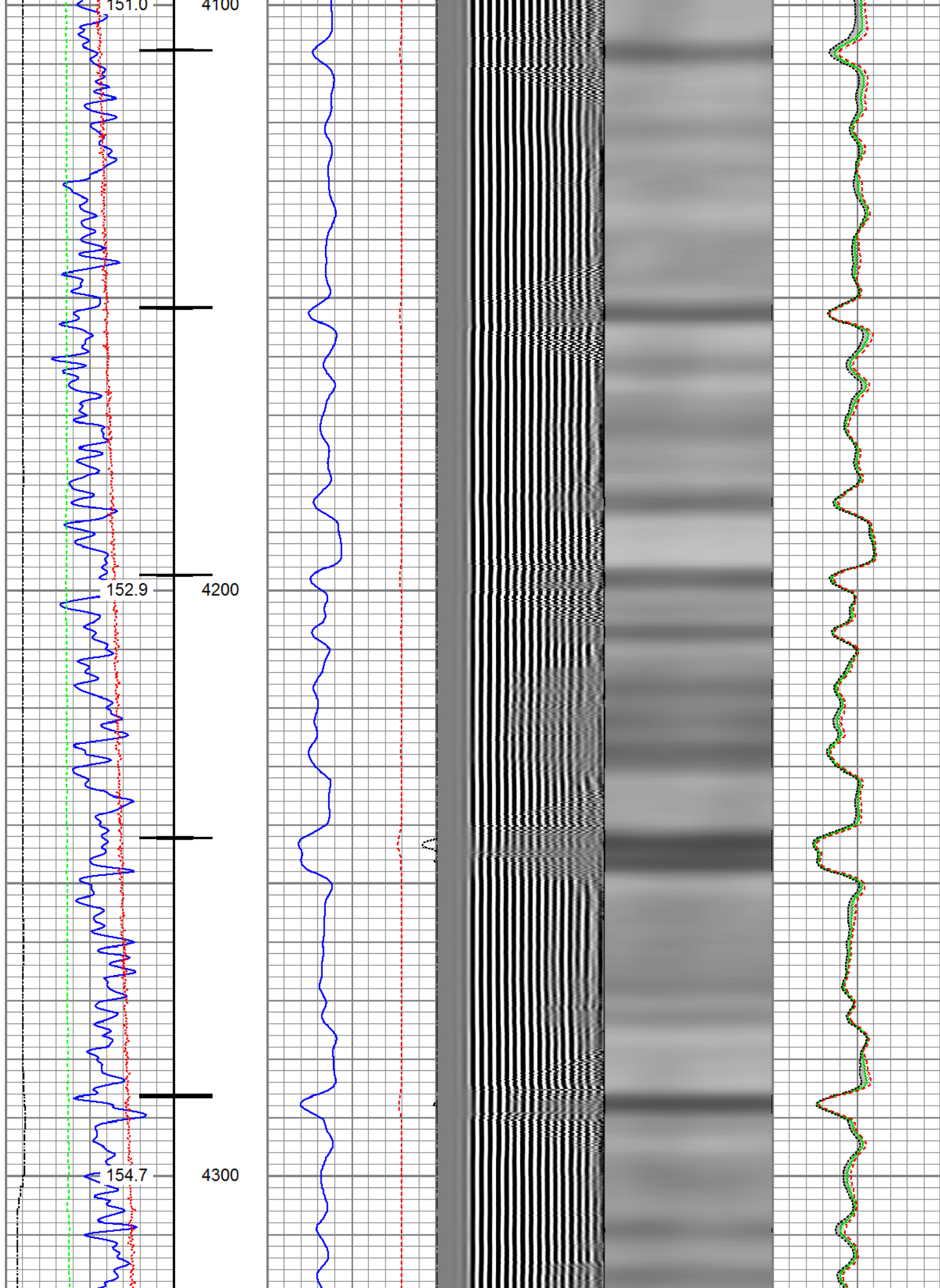


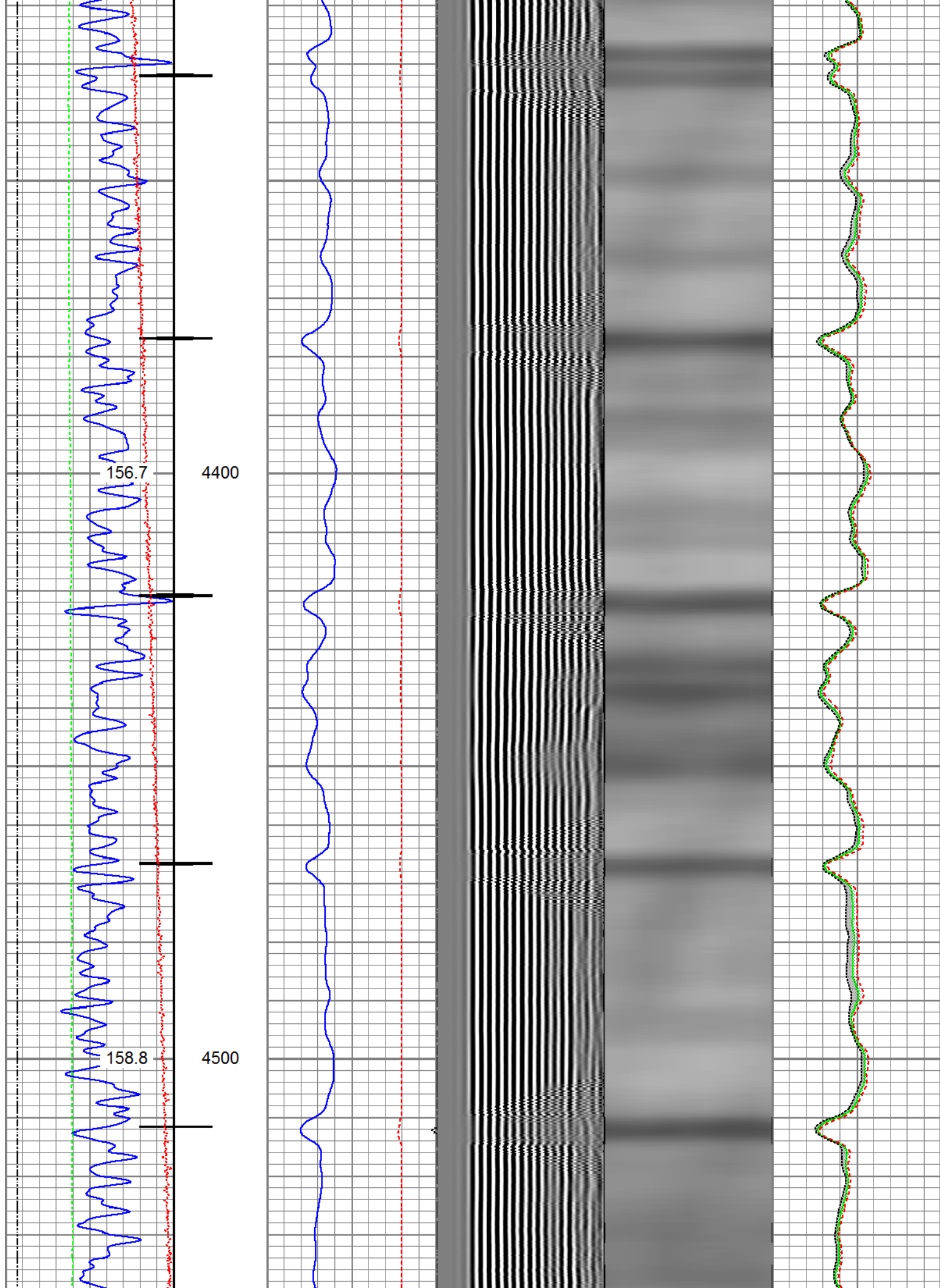


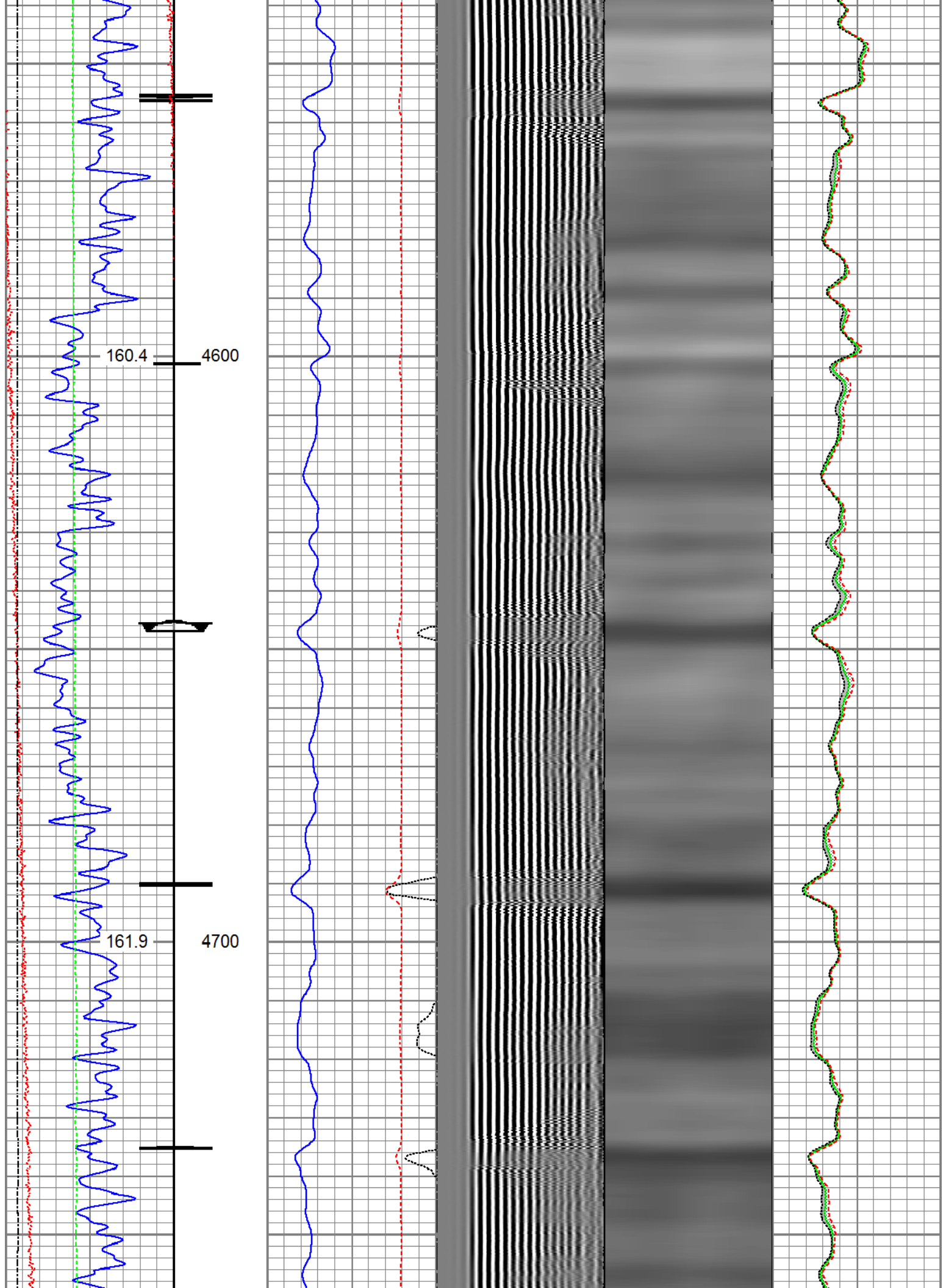


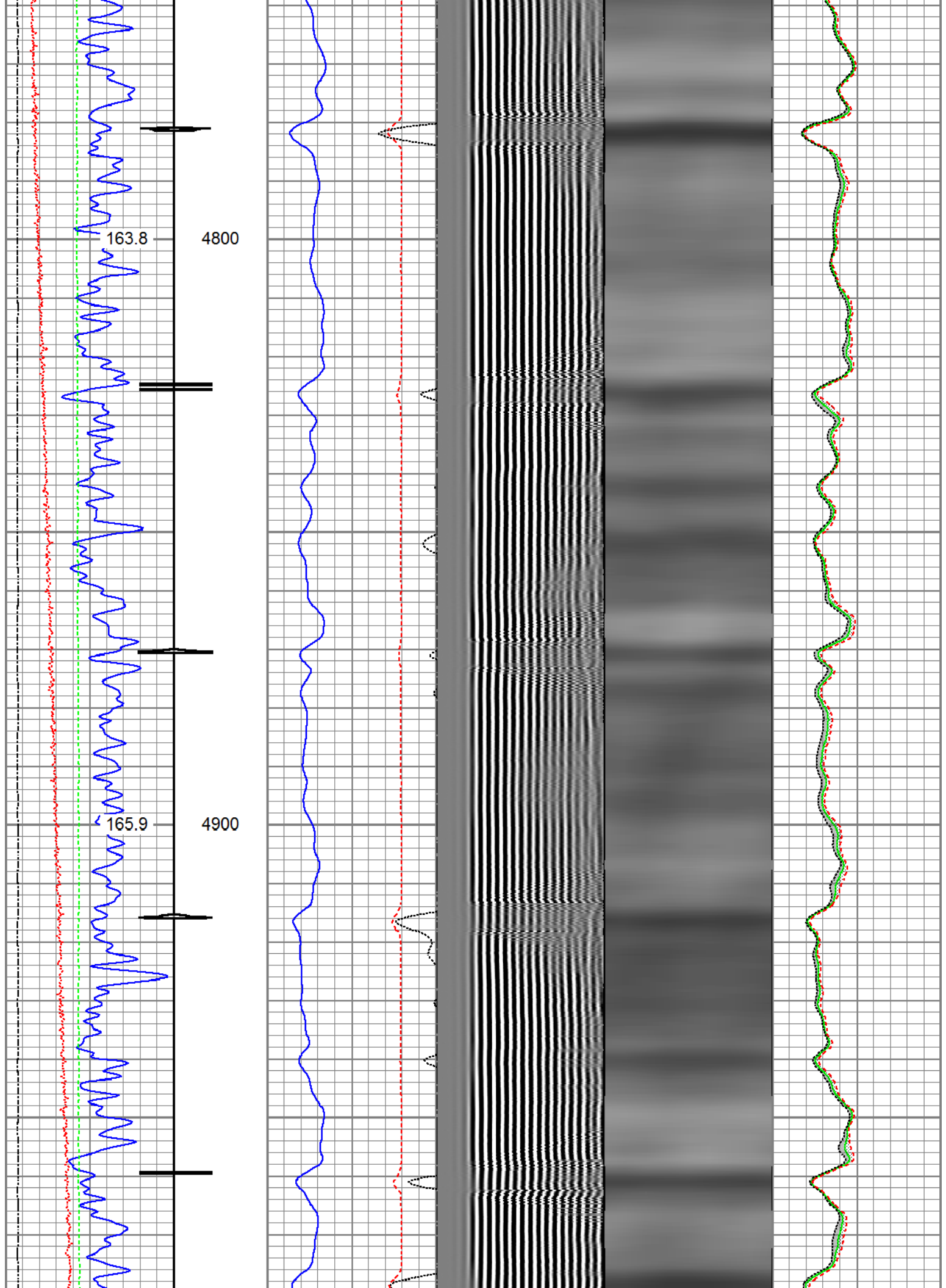




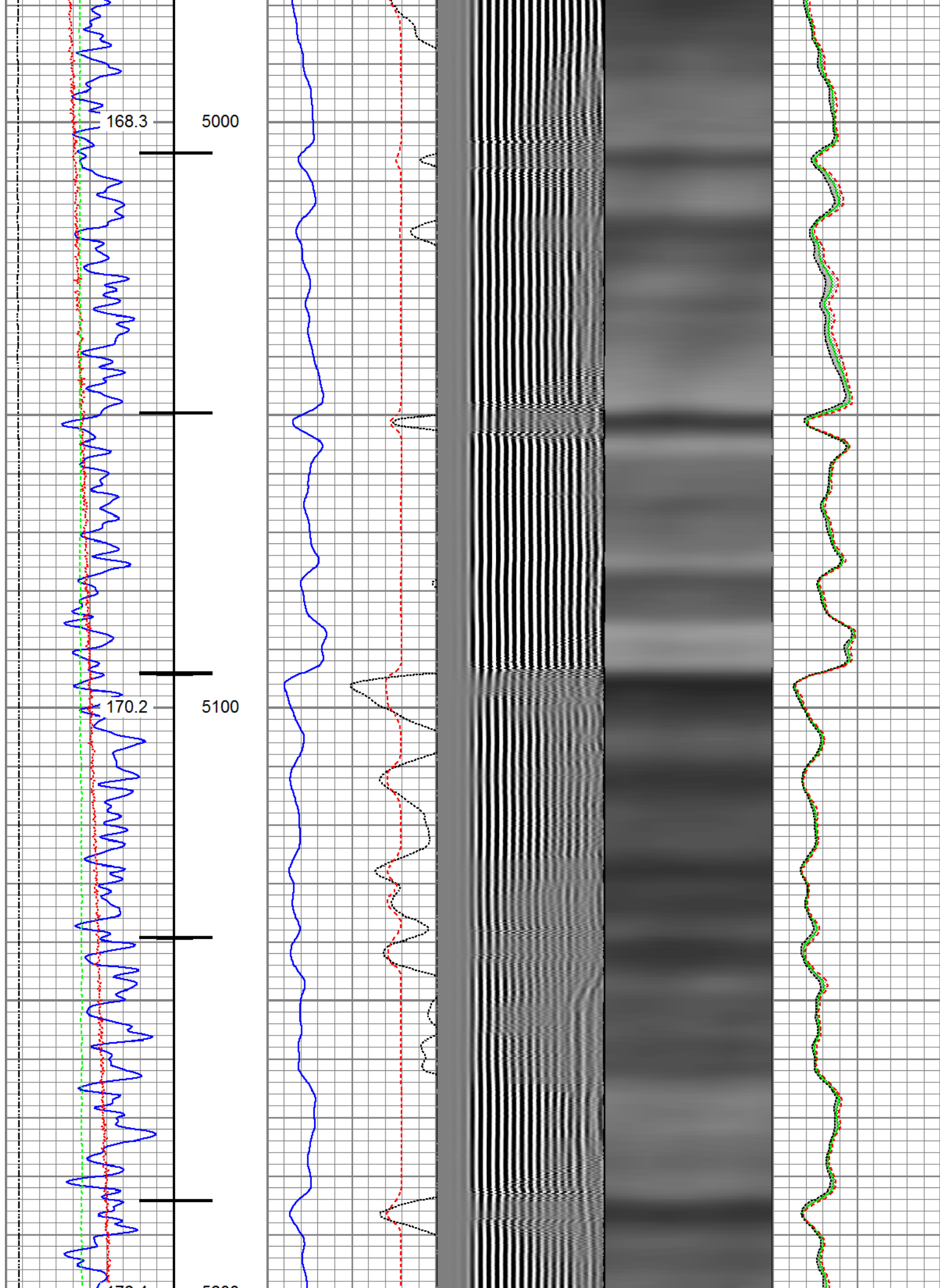




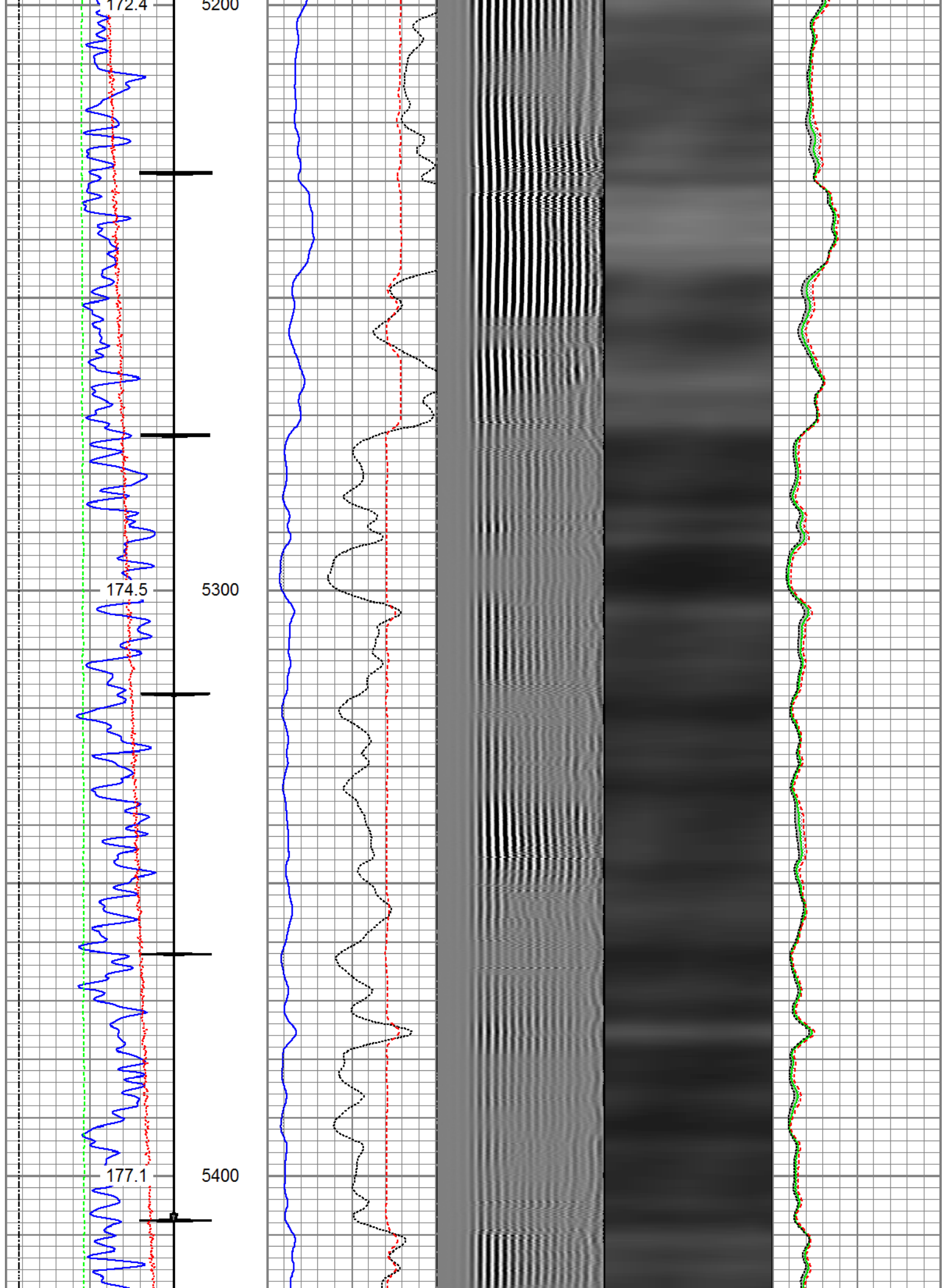


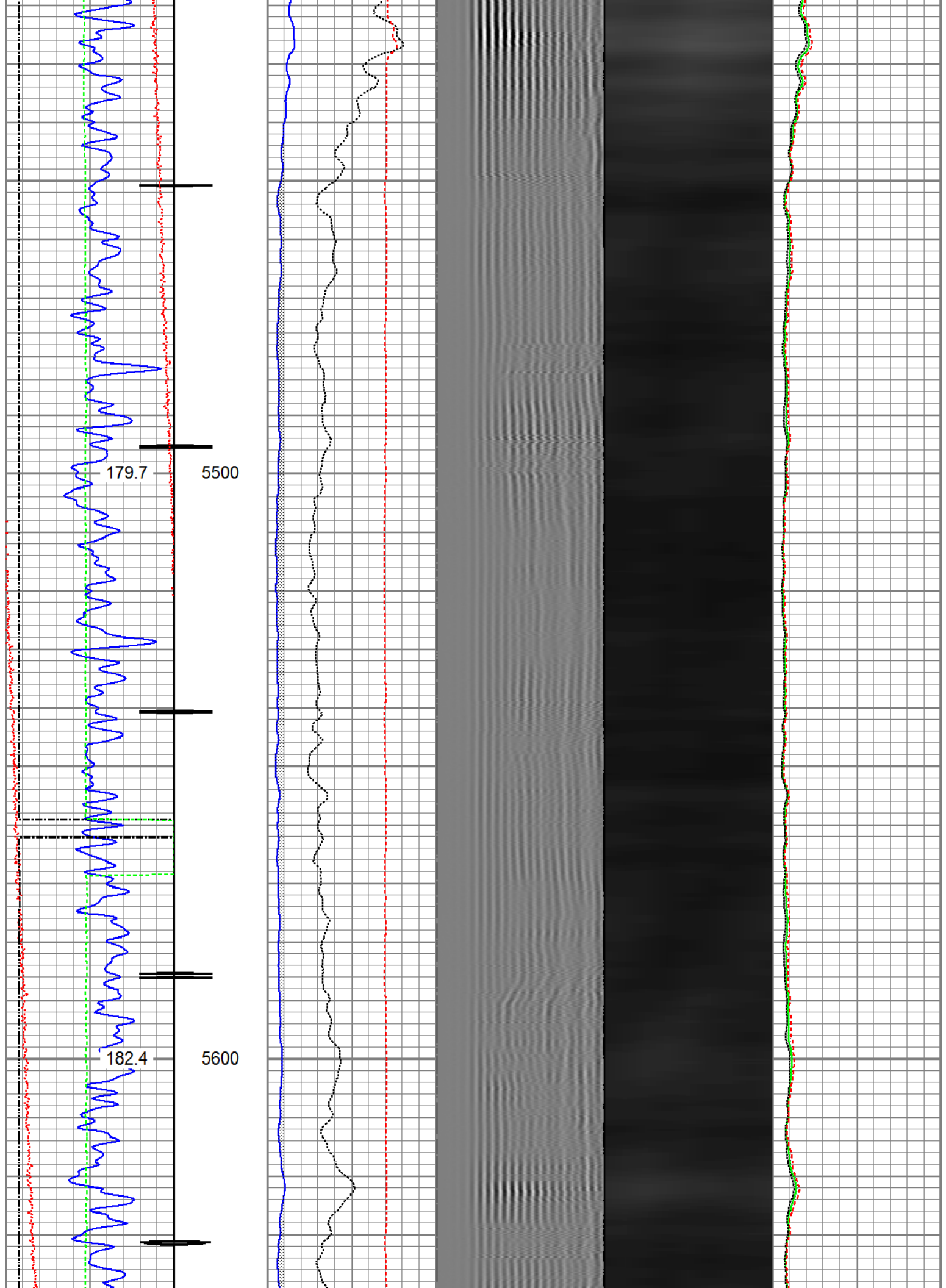


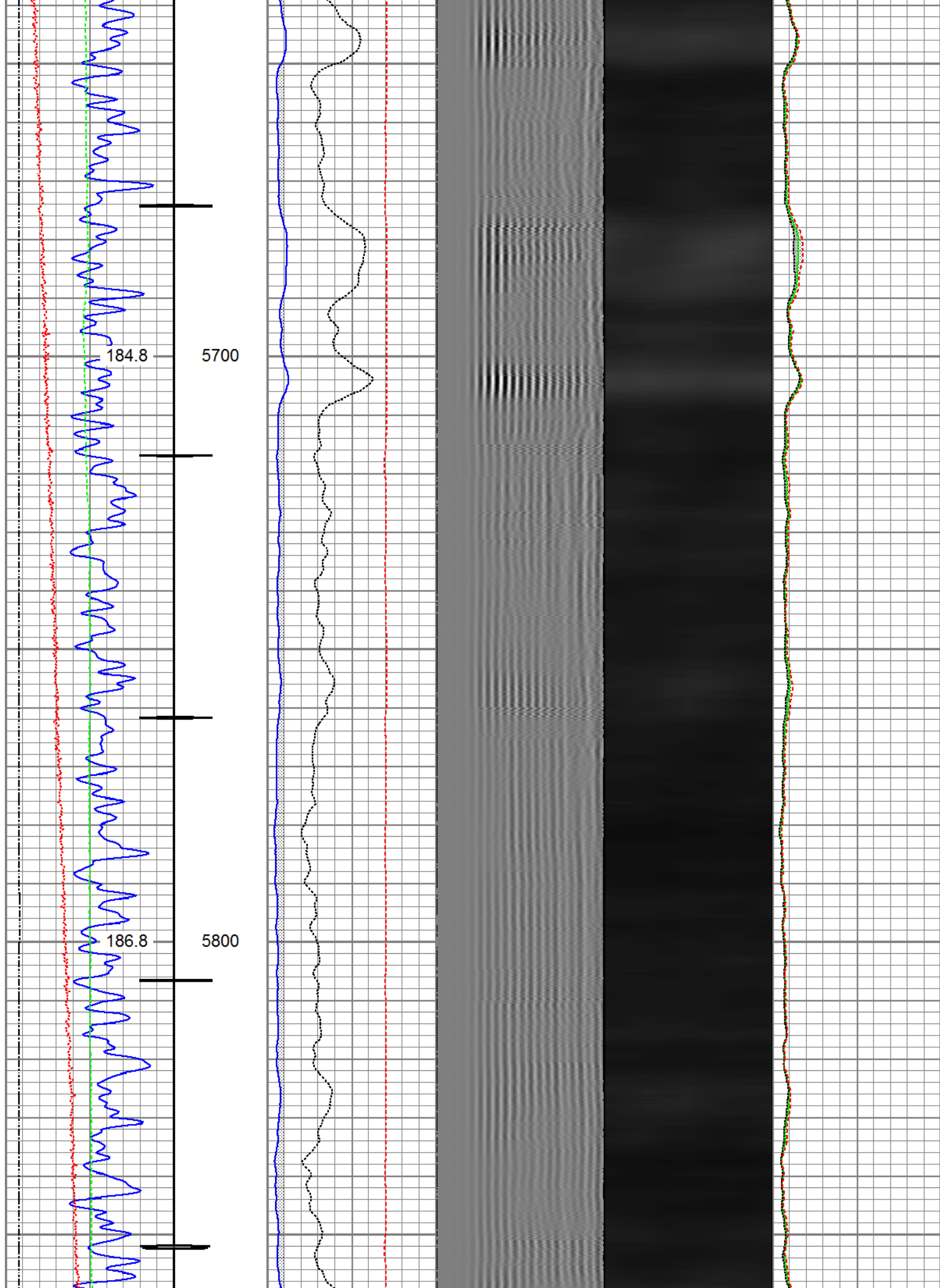


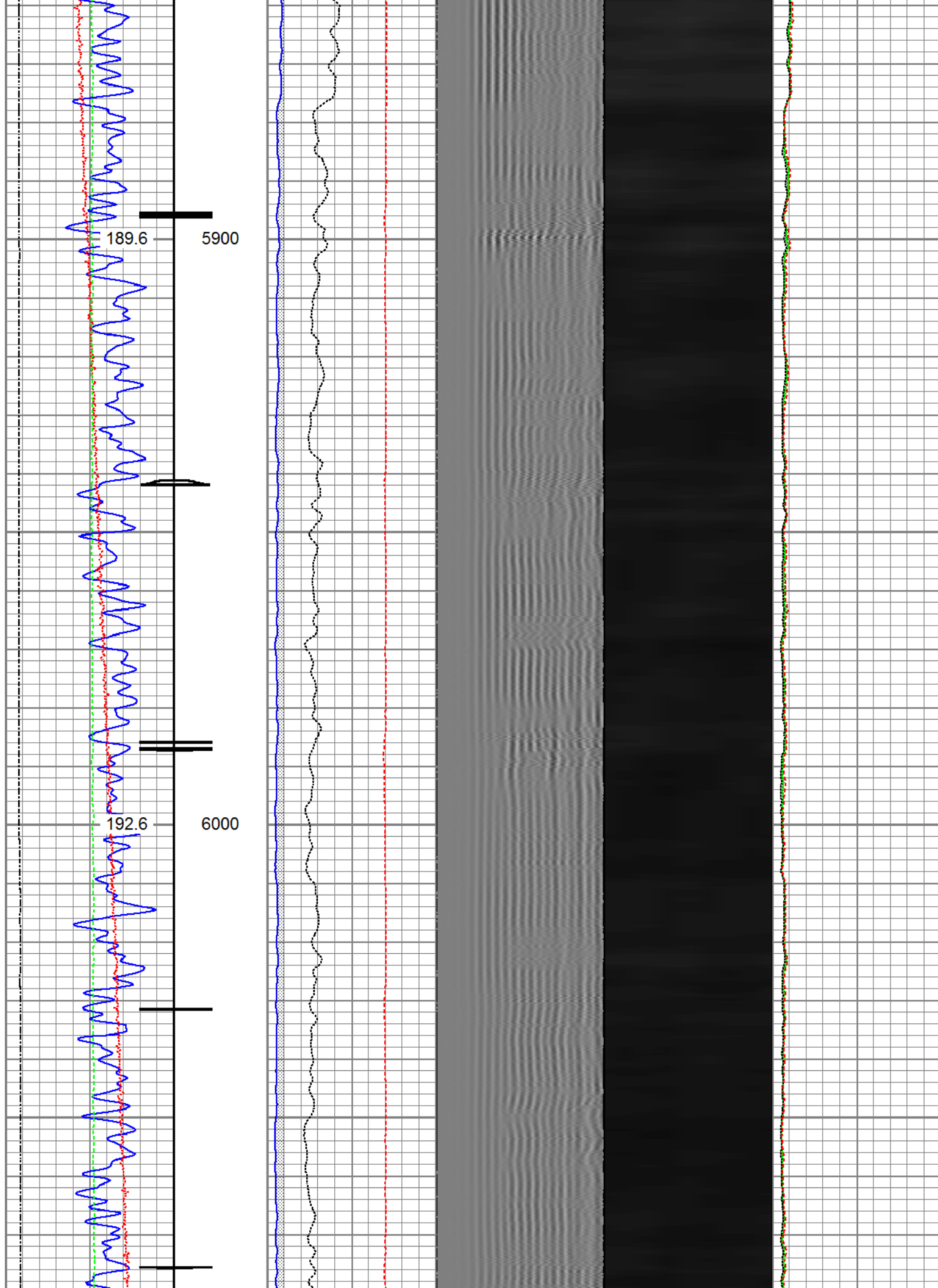


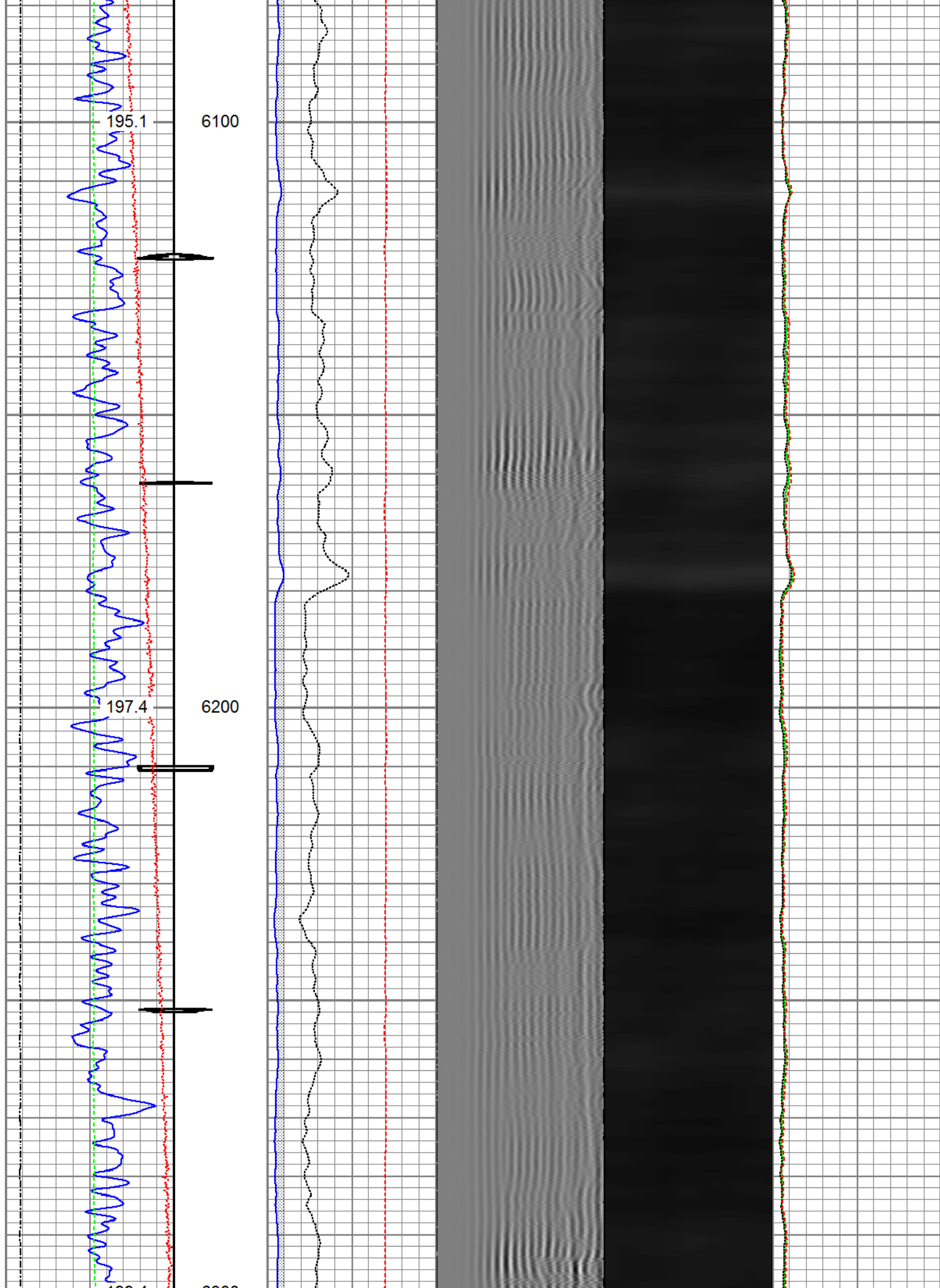




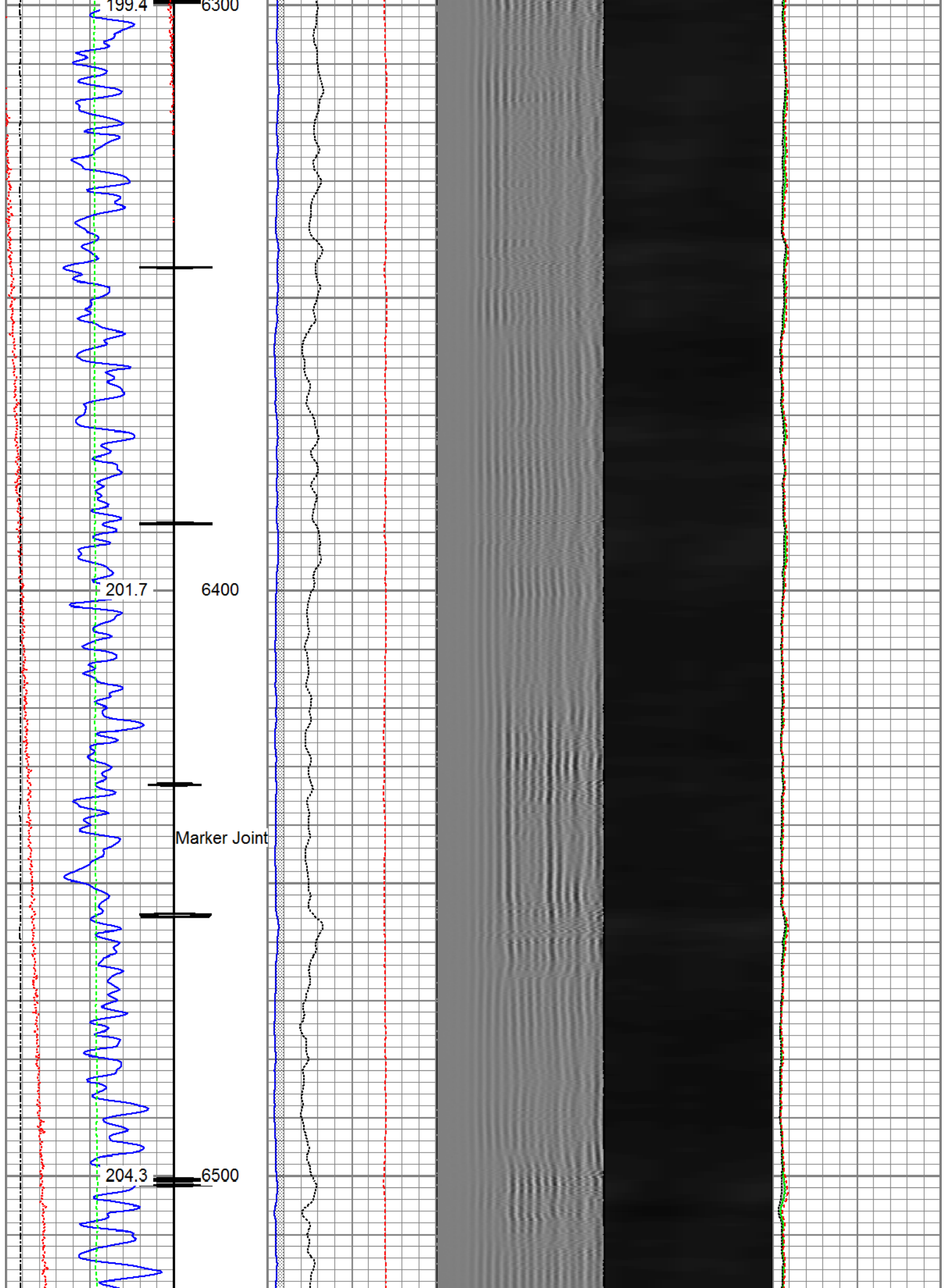


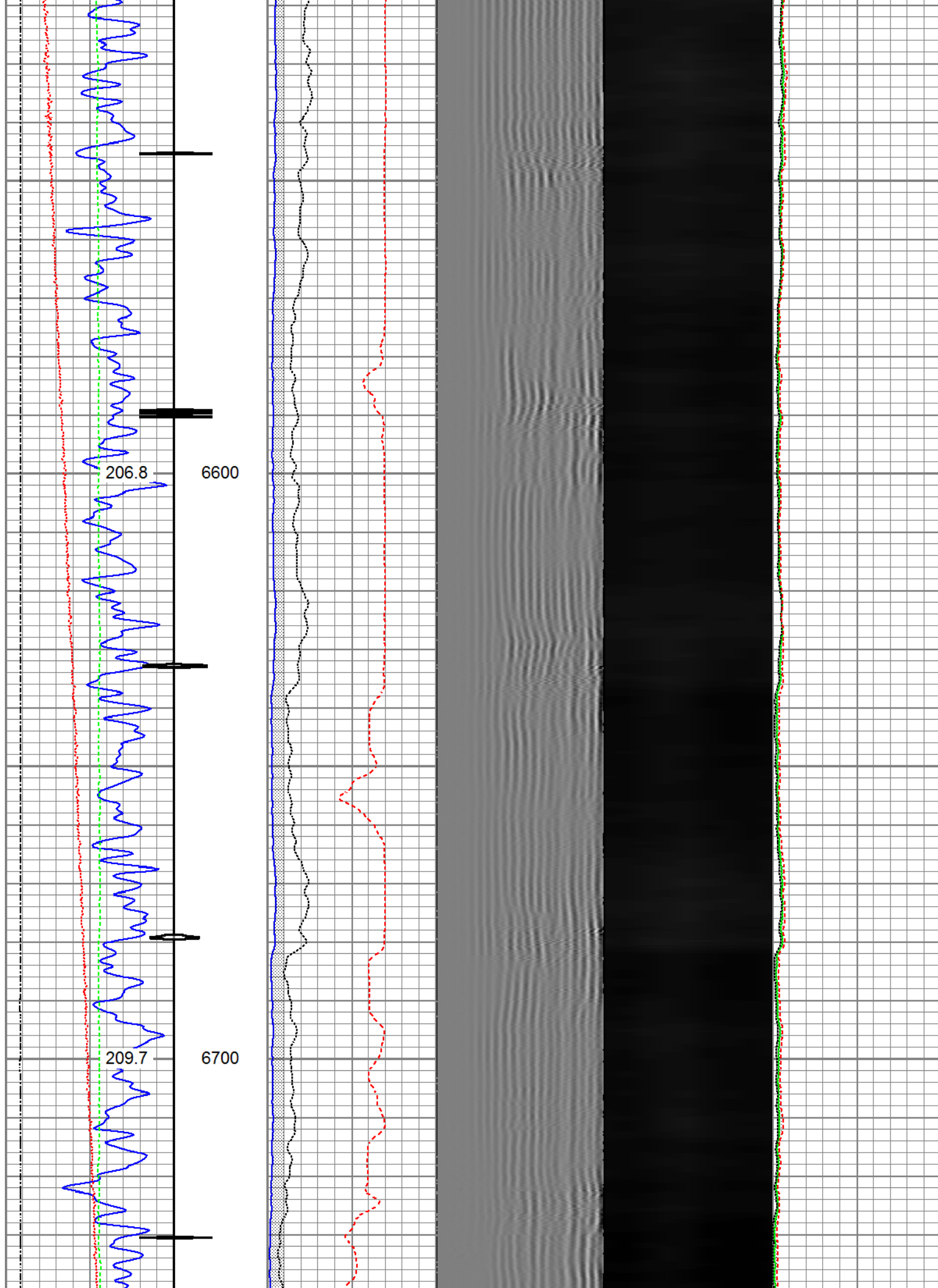


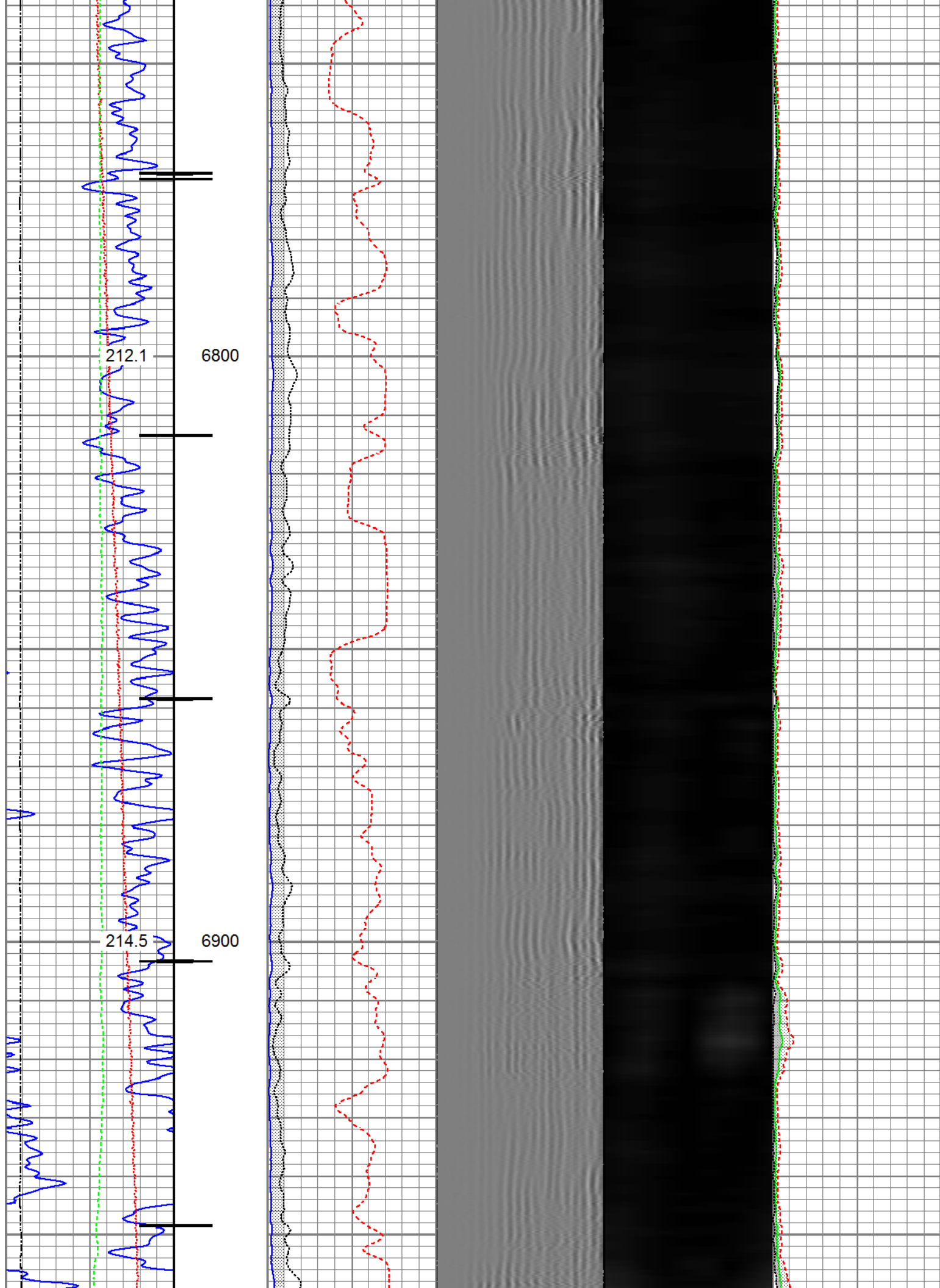


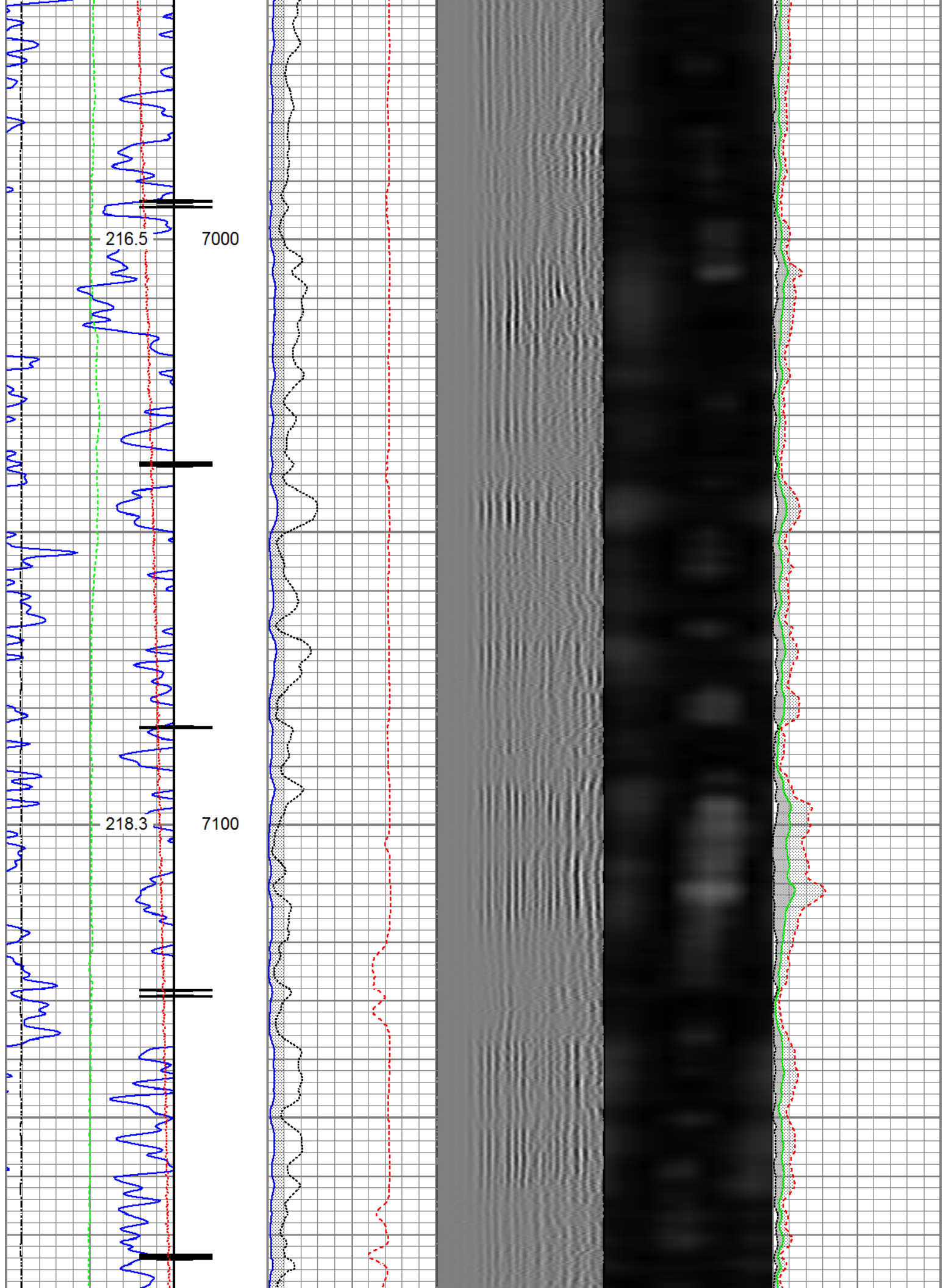


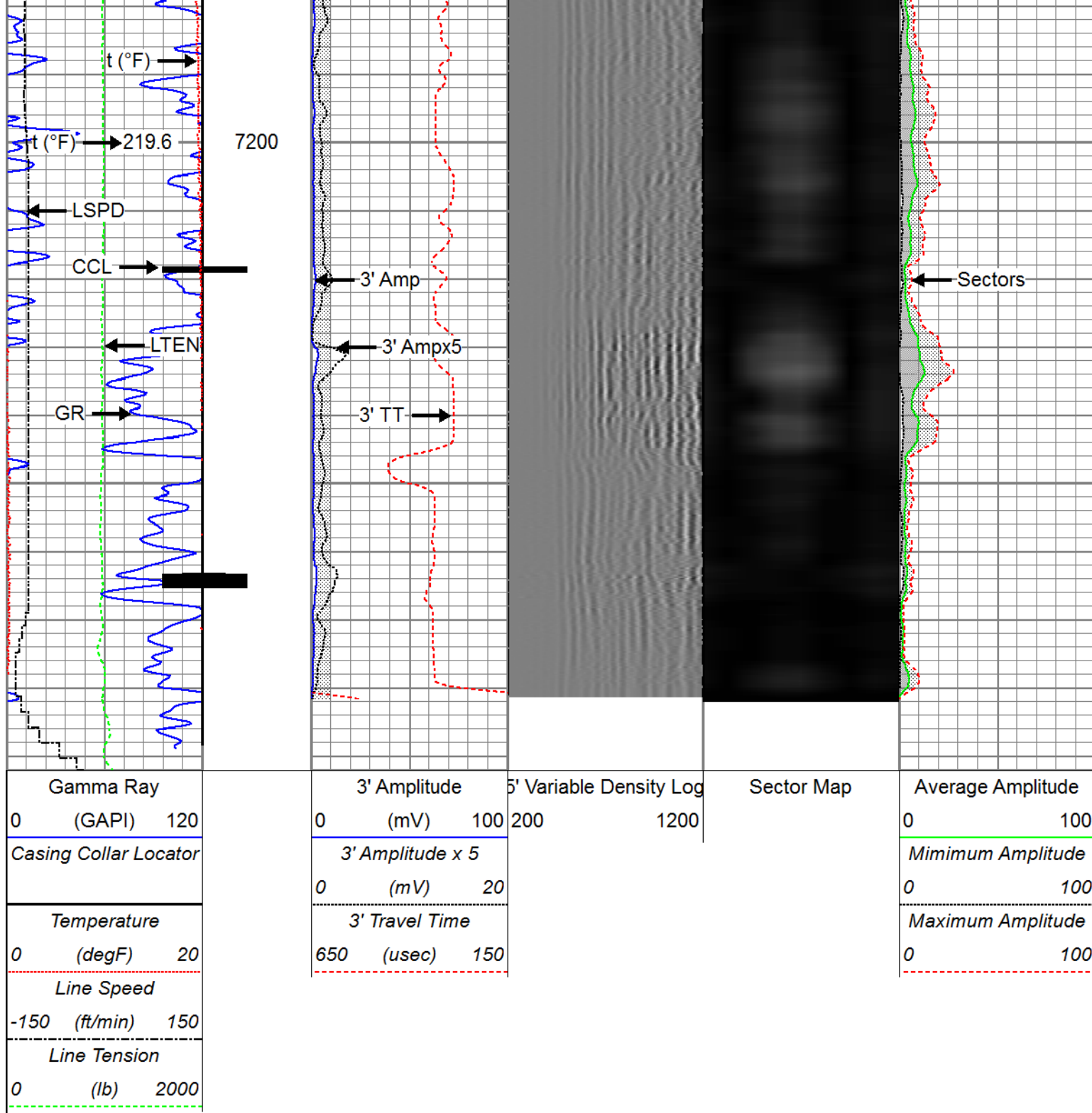








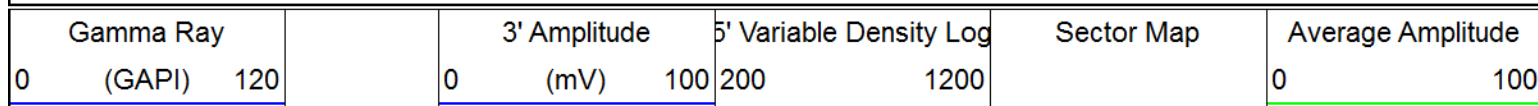




## Repeat Section

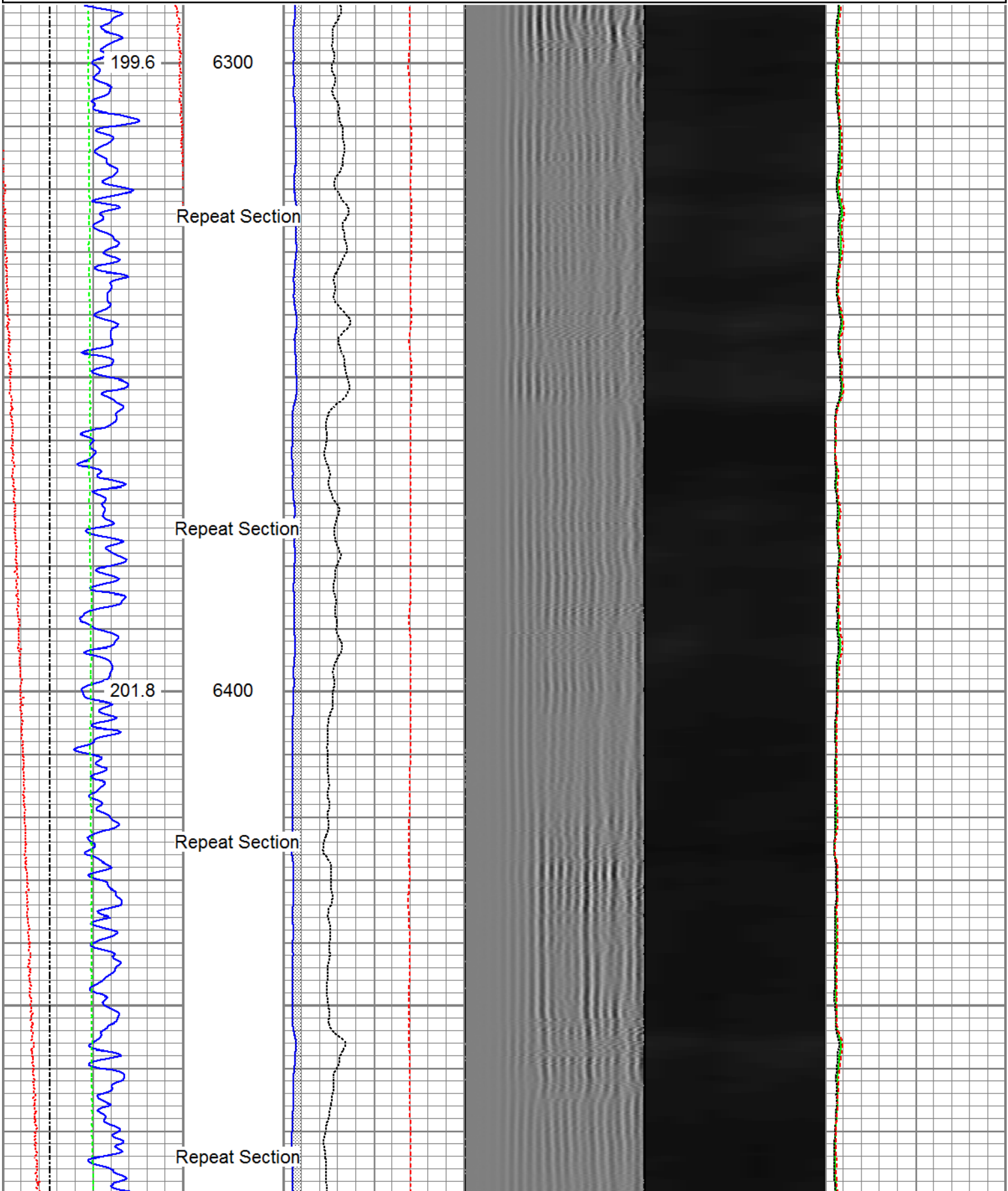
Recorded With 2800 PSI Surface Induced Pressure

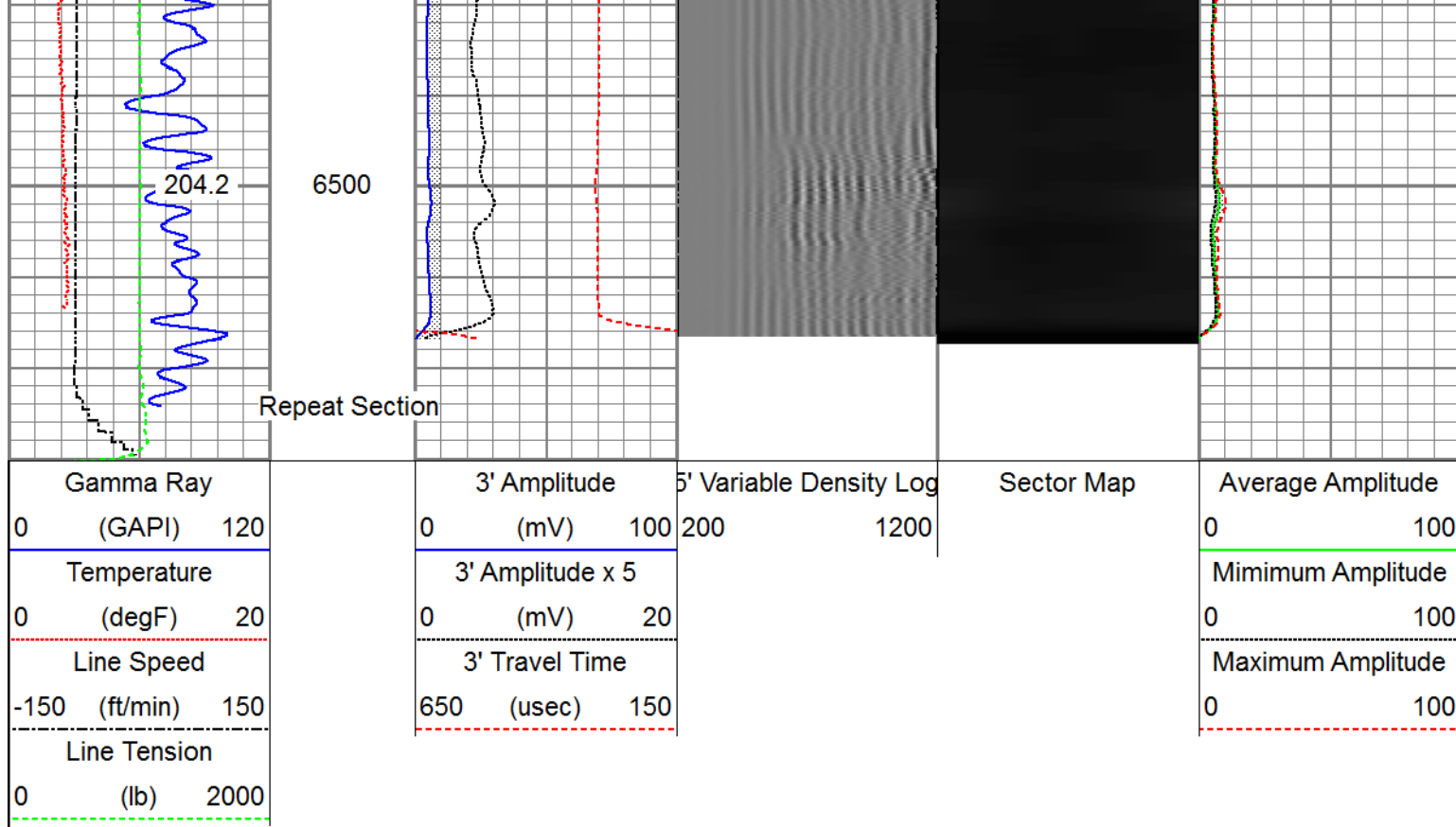
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Dataset Pathname	repeat
Presentation Format	ros_radii
Dataset Creation	Thu Aug 25 12:49:30 2016
Charted by	Depth in Feet scaled 1:240



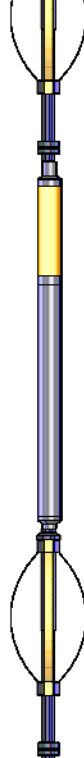


Temperature			3' Amplitude x 5			Minimum Amplitude		
0	(degF)	20	0	(mV)	20	0		100
Line Speed			3' Travel Time			Maximum Amplitude		
-150	(ft/min)	150	650	(usec)	150	0		100
Line Tension								
0	(lb)	2000						





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
			Probe_ELine_BowSpring_Centralizer-P_EB Probe 2-3/4" Electric Inline Bowspring Centralizer	2.8875	2.75	20.00
HeadVolt	19.51					
Temp	16.72					
WVFS8	14.55		Probe_RADII-C-P_RBT_2750 (FW1302-0029.19)	2.75	2.75	105.00
WVFS7	14.55					
WVFS6	14.55					
WVFS5	14.55					
WVFS4	14.55					
WVFS3	14.55					
WVFS2	14.55					
WVFS1	14.55					
WVFCAL	14.55					
WVF3FT	14.55					
WVF5FT	13.55					
HEADVOLT	10.30					

<div>DCCL</div> <div>CCL</div> <div>GR</div>	6.51		Probe_ELine_BowSpring_Centralizer-P_EB52.8875 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.75	20.00
	6.51		Probe_GR_CCL-P_CGR_2750_S (FW12124.54) Probe 2-3/4" Digital CCL / Gamma Ray Combined	2.75	55.00
	3.77		Probe_ELine_BowSpring_Centralizer-P_EB52.8875 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.75	20.00
Dataset: processed_0506906486_anadarko_folley north 1_08-25-16_rbl_w8.db: field/well/run1/mainmain Total length: 23.40 ft Total weight: 225.40 lb O.D.: 2.75 in					

Calibration Report	
Database File	C:\ProgramData\Warrior\Data\anadarko_folley_north_1_25-aug-2016_rcbl_w8\PROCESSED_0506906486
Dataset Pathname	mainmain
Dataset Creation	Thu Aug 25 13:15:26 2016

Gamma Ray Calibration Report		
Serial Number:	FW1212-026	
Tool Model:	P_CGR_2750_S	
Performed:	Thu Jul 07 12:19:50 2016	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.6	cps
Sensitivity:	0.6061	GAPI/cps

Segmented Cement Bond Log Calibration Report		
Serial Number:	FW1302-002	
Tool Model:	P_RBT_2750	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	65.389	ft

Master Calibration, performed Thu Aug 25 12:24:01 2016:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.006	0.612	0.800	71.921	117.356	0.082
CAL	0.006	0.737				

5'	0.006	0.561	0.800	71.921	128.055	0.022
SUM						
S1	0.006	0.606	0.000	100.000	166.735	-0.991
S2	0.006	0.621	0.000	100.000	162.585	-0.957
S3	0.006	0.643	0.000	100.000	156.965	-0.947
S4	0.006	0.638	0.000	100.000	158.135	-0.936
S5	0.006	0.629	0.000	100.000	160.451	-0.981
S6	0.006	0.612	0.000	100.000	165.131	-1.022
S7	0.006	0.603	0.000	100.000	167.423	-1.032
S8	0.006	0.606	0.000	100.000	166.802	-1.030

Internal Reference Calibration, performed Tue Jul 05 07:30:50 2016:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.006	0.737	1.000	0.000

Air Zero Calibration, performed Thu Aug 25 12:23:36 2016:

	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	



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