



Radial Cement Bond  
Gamma Ray  
Casing Collar Log

Company	Kerr-McGee Oil and Gas Onshore LP		
Well	Sarchet 36N-20HZ		
Field	Wattenberg		
County	Weld		
State	Colorado		
Location:		API # : 05-123-41920	Other Services
SEC 20 TWP 2N RGE 65W			Junk Basket Gauge Ring
Permanent Datum	Ground Level	Elevation	4915'
Log Measured From	Kelly Bushing	16 FT	
Drilling Measured From	Kelly Bushing		K.B. 4931' D.F. 4930' G.L. 4915'

Date	10-NOV-2015
Run Number	Two
Depth Driller	12639 FT
Depth Logger	7452 FT
Bottom Logged Interval	7448 FT
Top Log Interval	Surface
Open Hole Size	7.875"
Type Fluid	Water
Density / Viscosity	8.34 lbm/gal
Max. Recorded Temp.	242°F
Estimated Cement Top	68 FT
Time Well Ready	ROA
Time Logger on Bottom	11:25 AM
Equipment Number	HD-0331
Location	Ft. Lupton, CO
Recorded By	B. Kalkwarf
Witnessed By	Darrel Bothwell

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record	Size (in)	Wgt (lbs/ft)	Grade	Top	Bottom		
Surface Casing	9 5/8	36	J55 LT&C	Surface	1849 FT		
Intermediate #1	5 1/2	17	HCP-110 LTC	Surface	12623 FT		
Intermediate #2							
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 ran as per customer request  
Depth reference to Casing Tally reported Marker Joint at 6399 FT  
Adjusted log 2 FT to correlate with Marker Joint  
Gauge Ring/Junk Basket ran from 7506 FT 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 FMC Technologies Completion Services, Inc.



Main Pass

Recorded With 2800 PSI Surface Induced Pressure

Database File:0512341920\_anadarko\_sarchet 36n-20hz\_11-10-15\_rbl.db

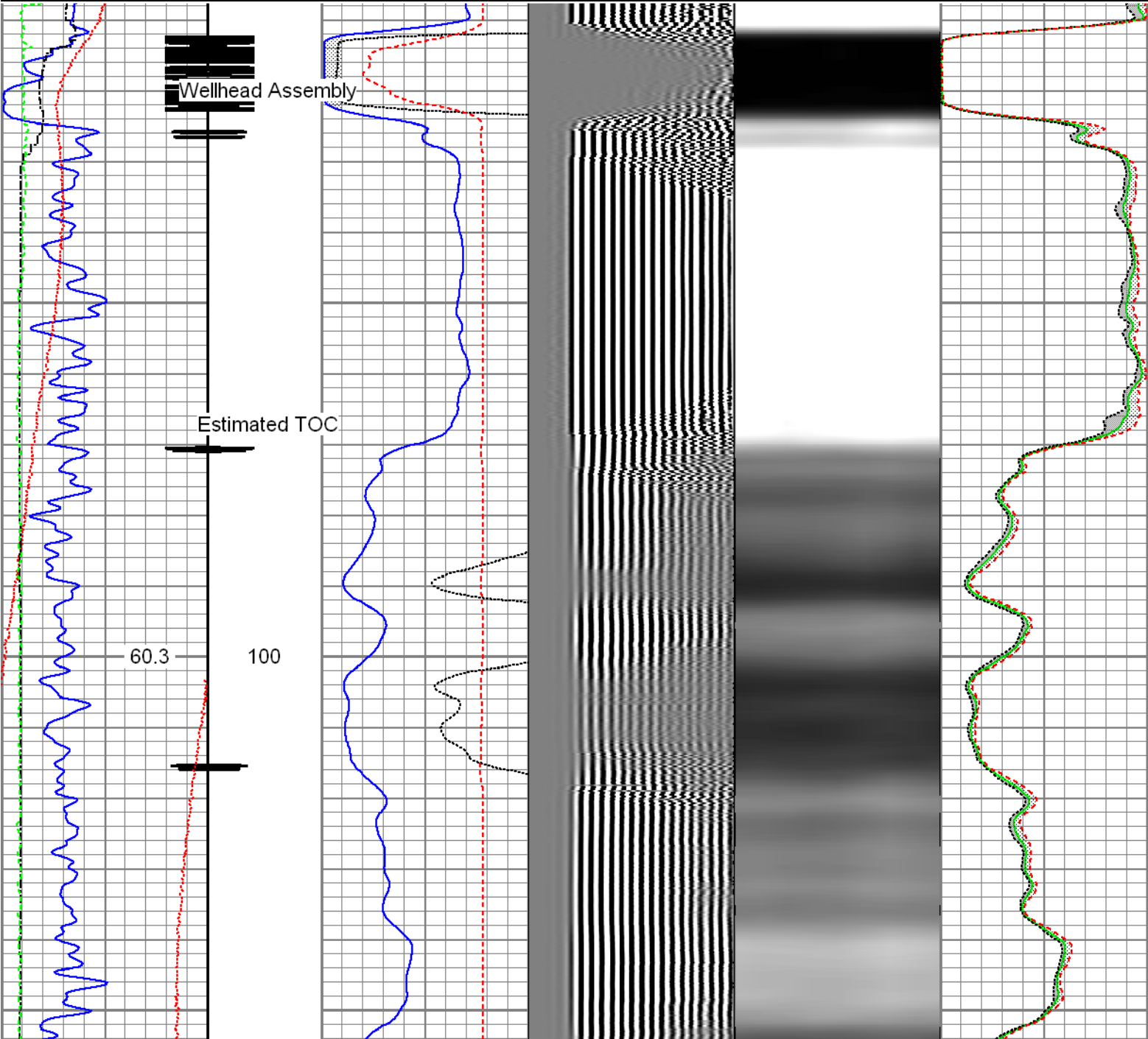
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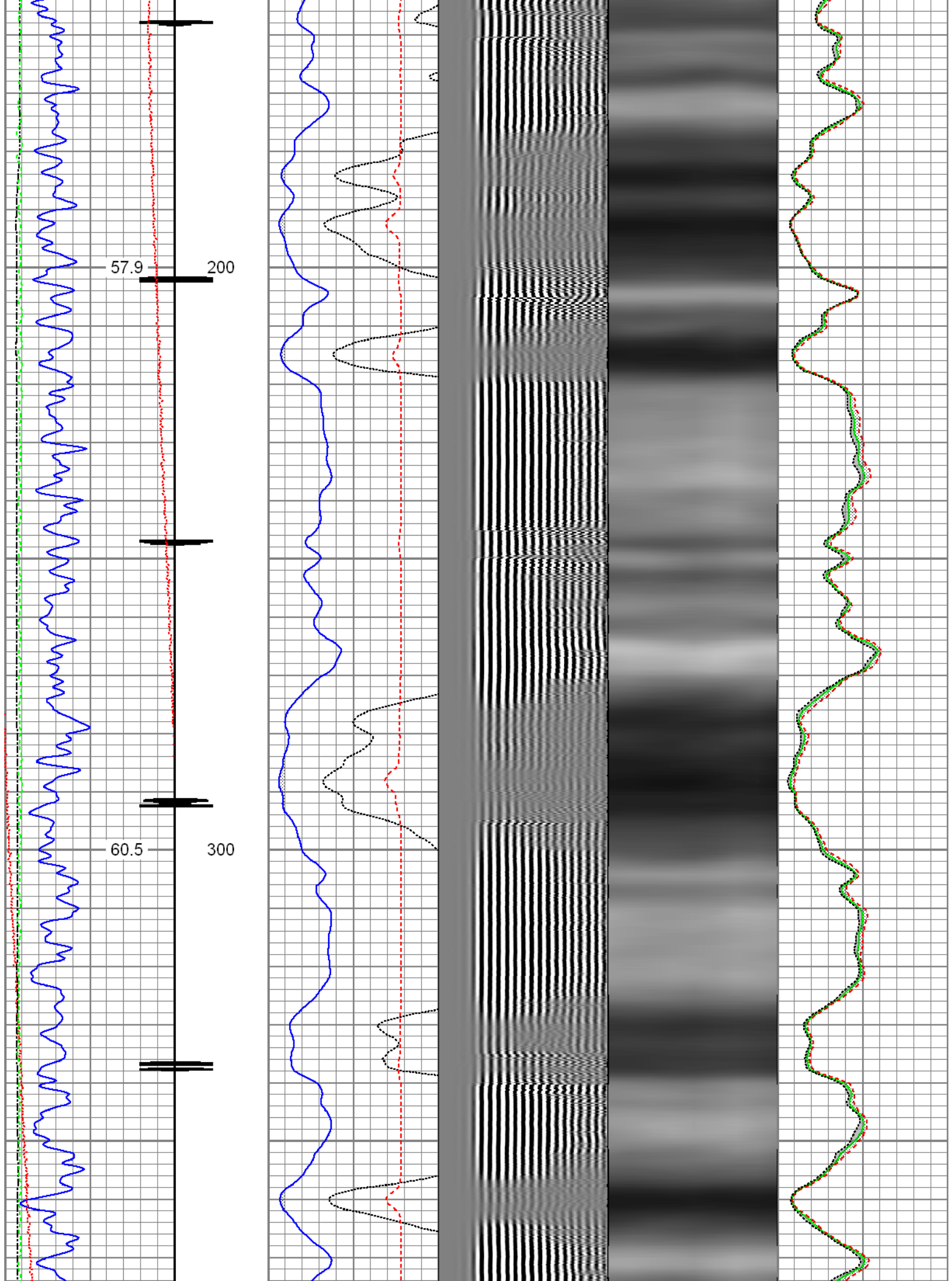
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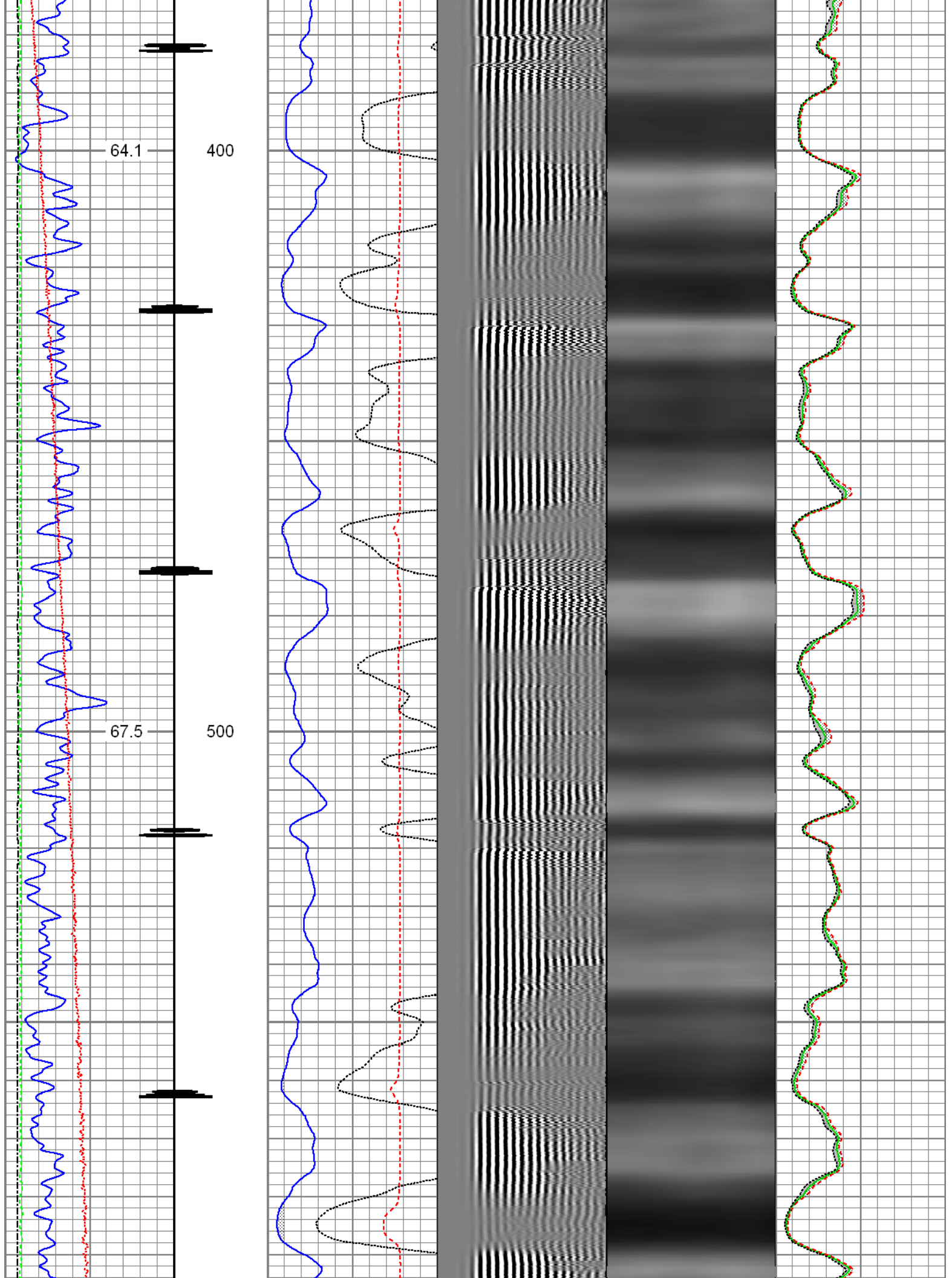
Dataset Creation:Wed Nov 11 10:04:57 2015 by Calc SCH 120430

Charted by:Depth in Feet scaled 1:240

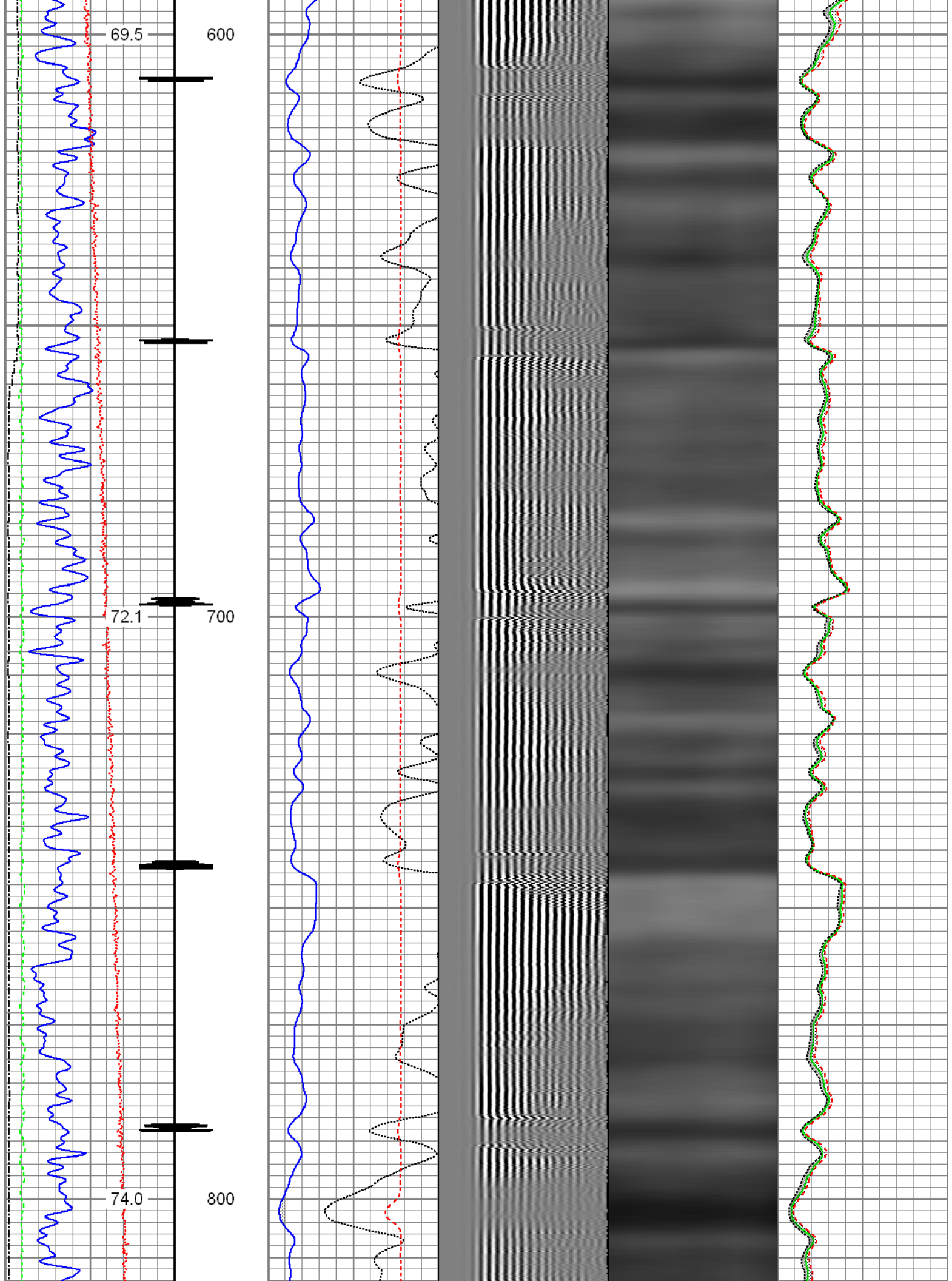
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
Temperature	0 (mV) 20			0 100
0 (degF) 20	3' Travel Time			Maximum Amplitude
Line Speed	650 (usec) 150			0 100
-150 (ft/min) 150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

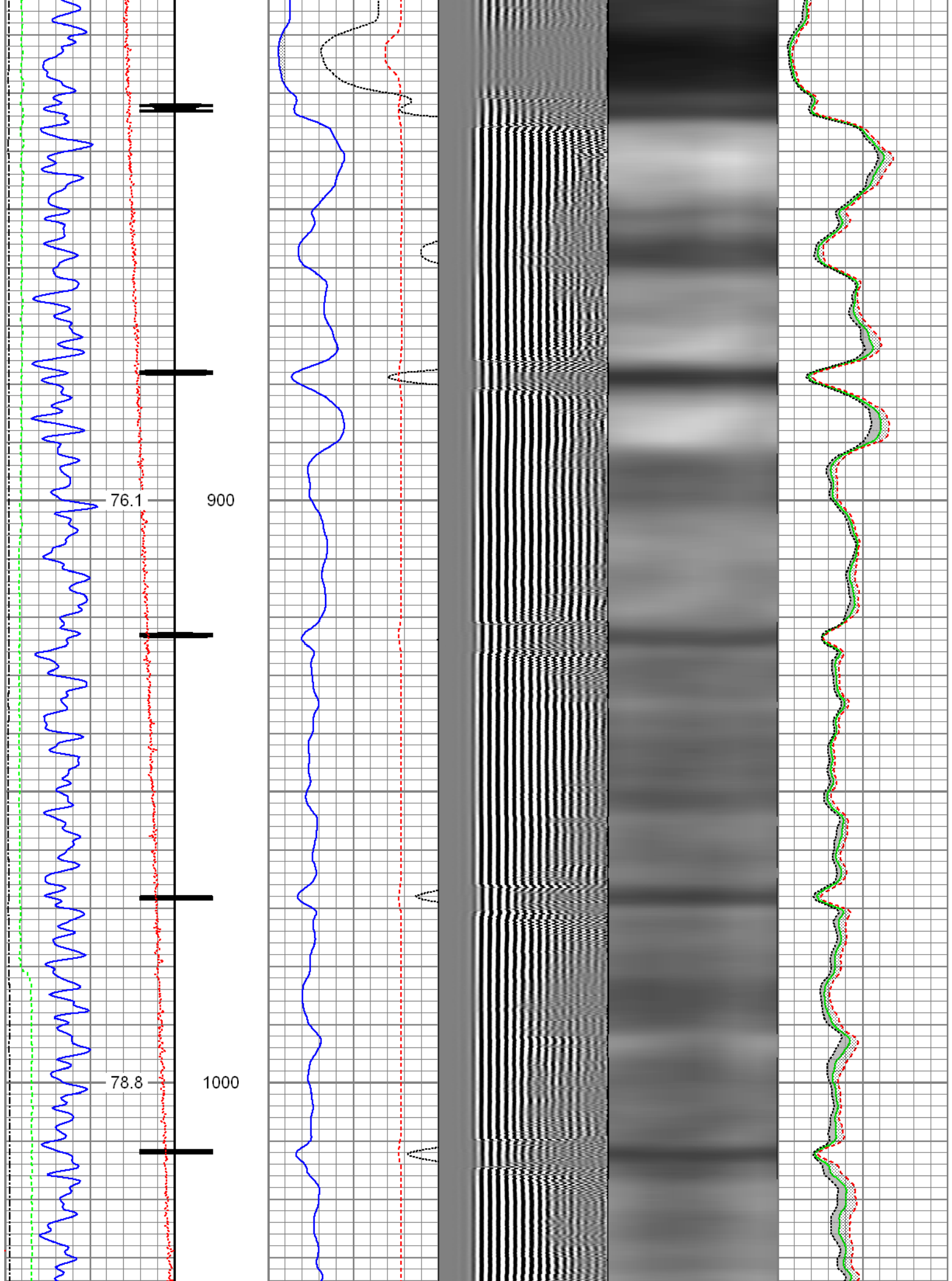


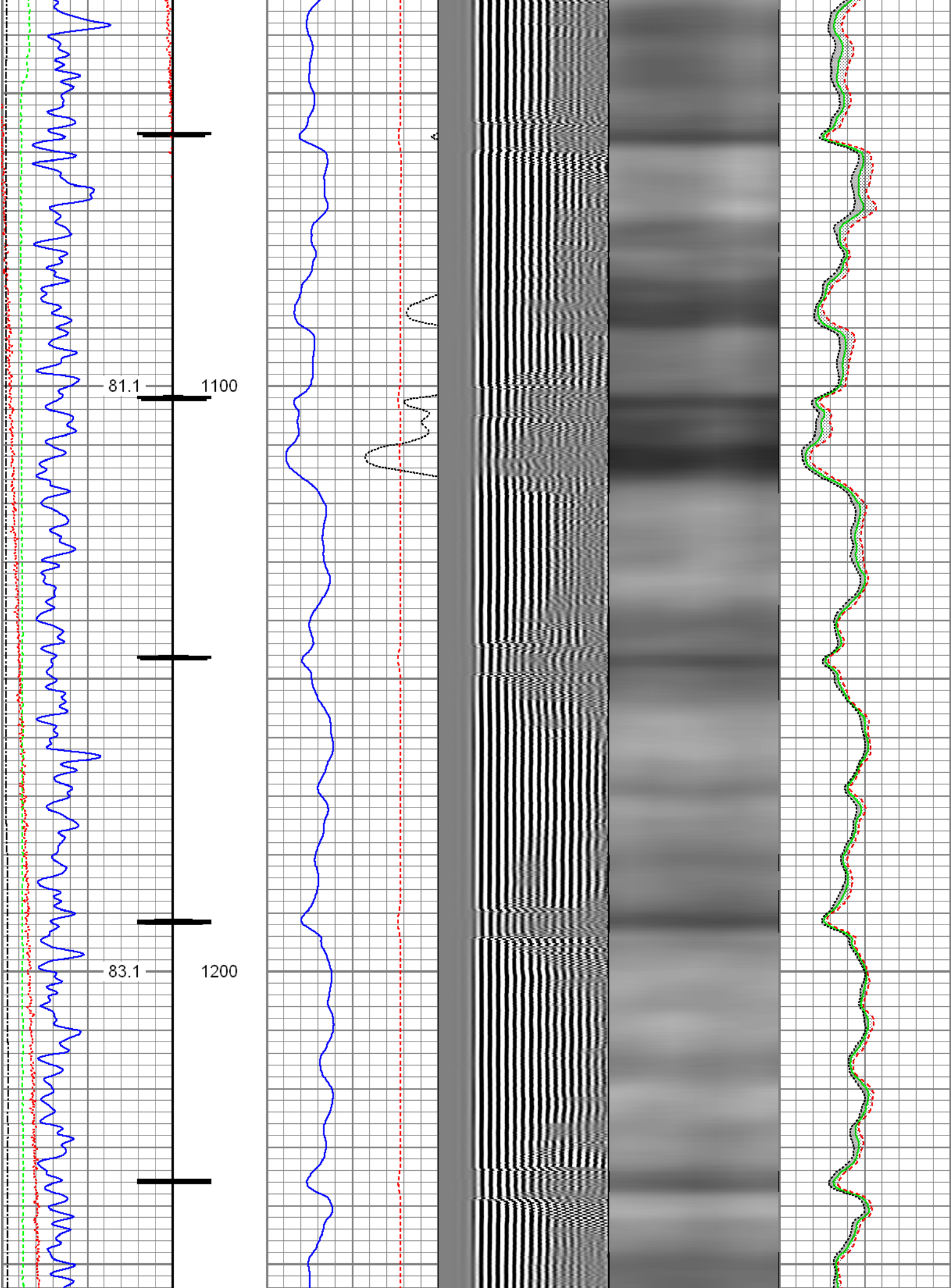




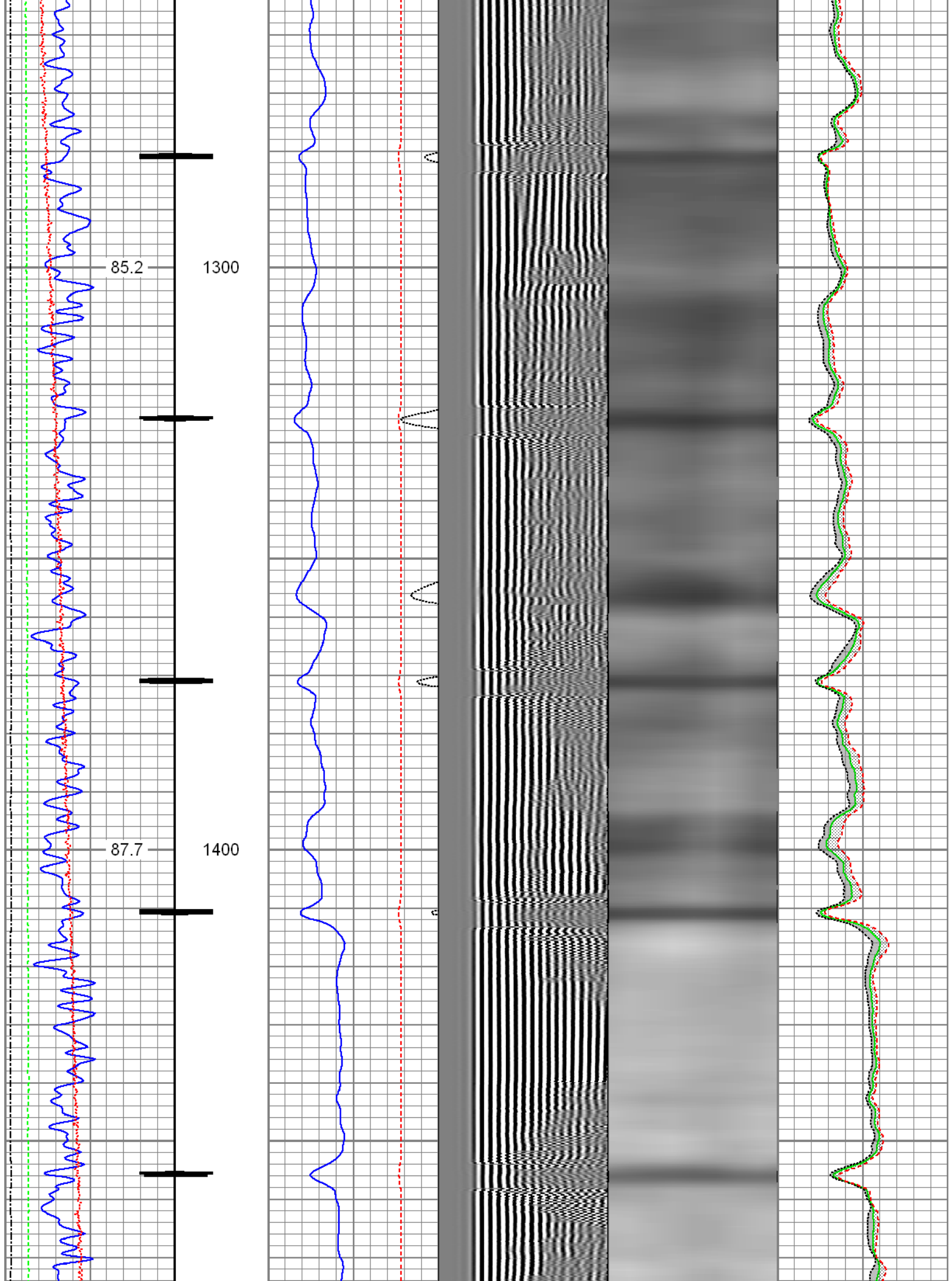




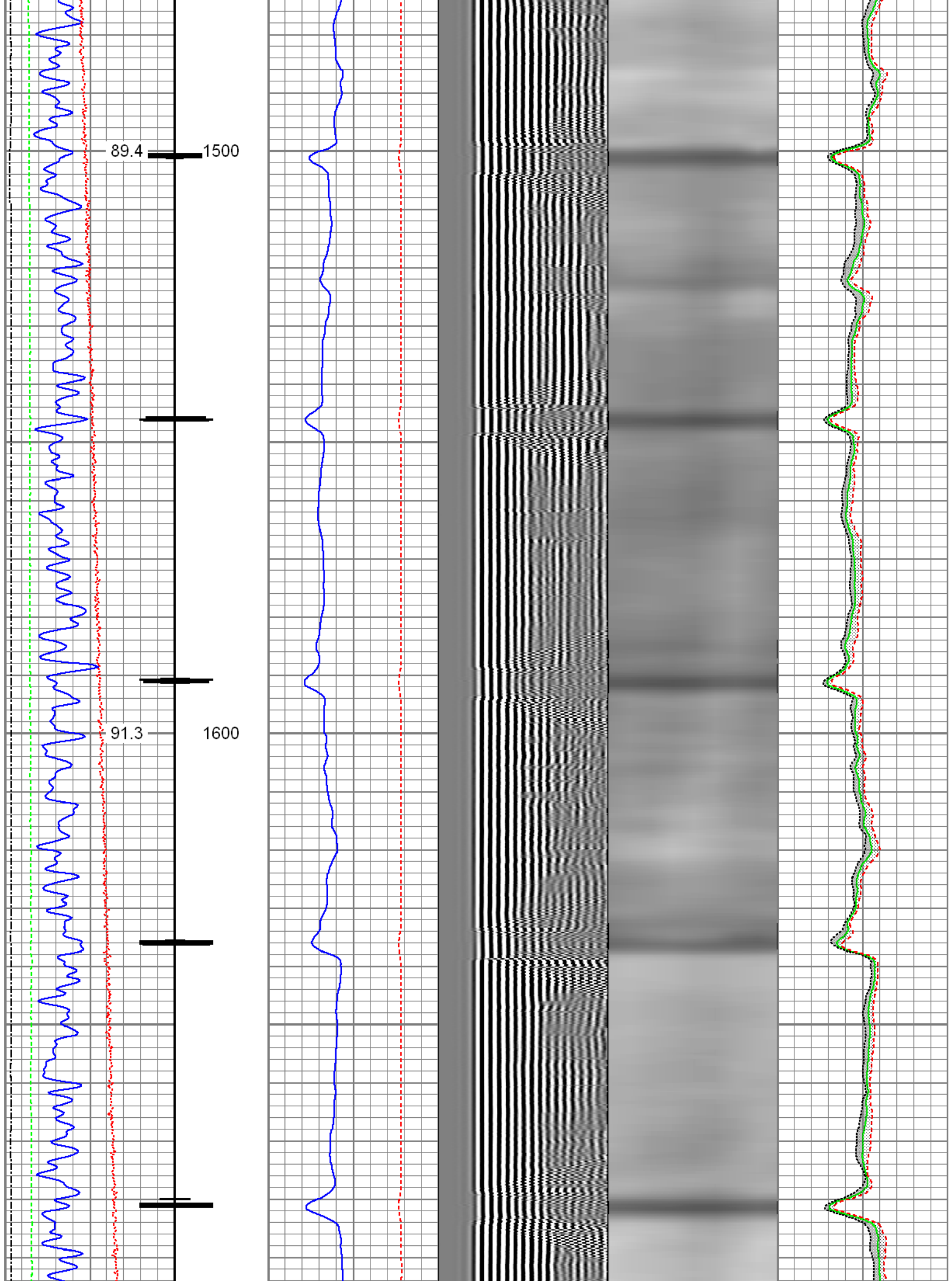


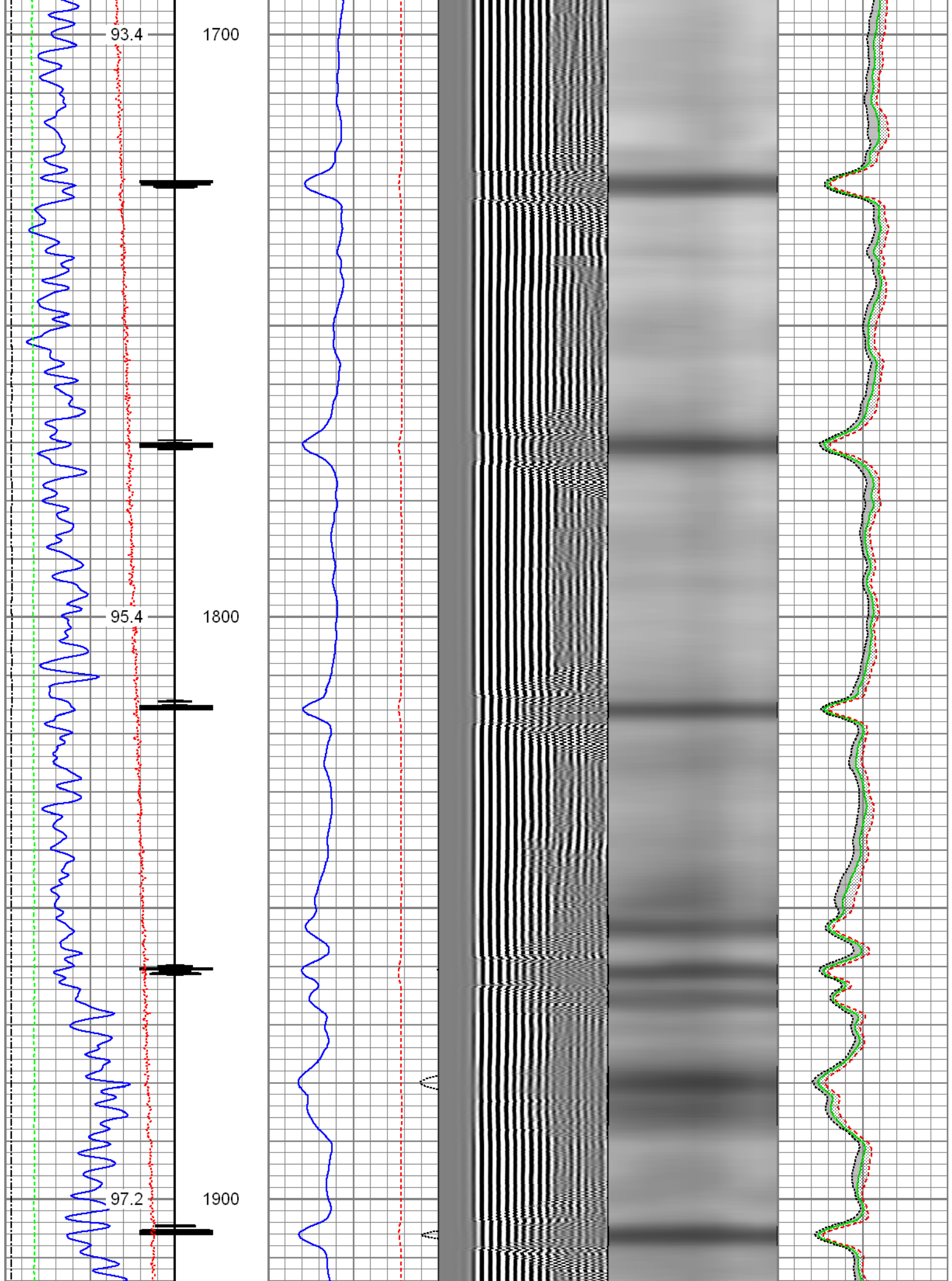


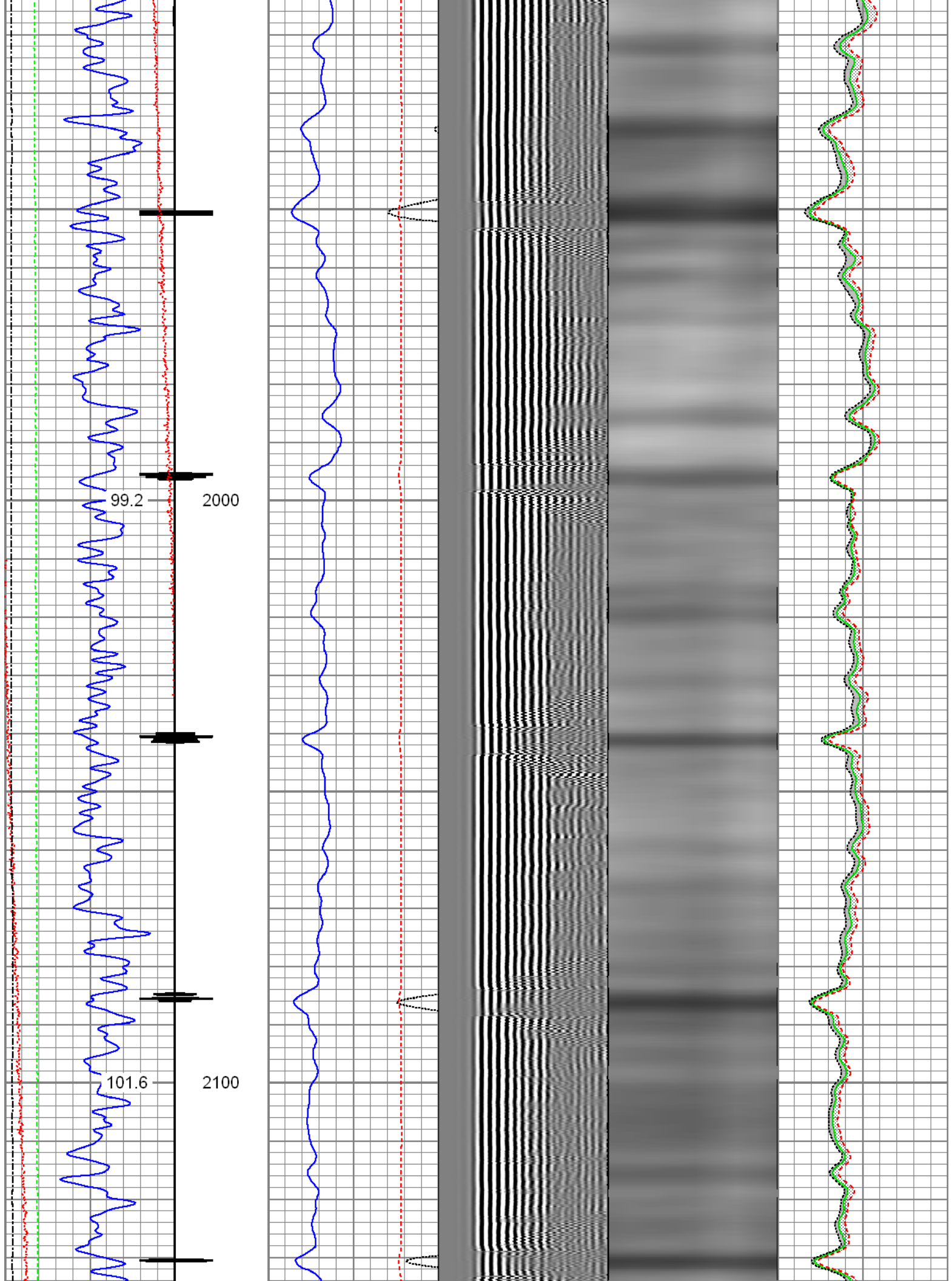




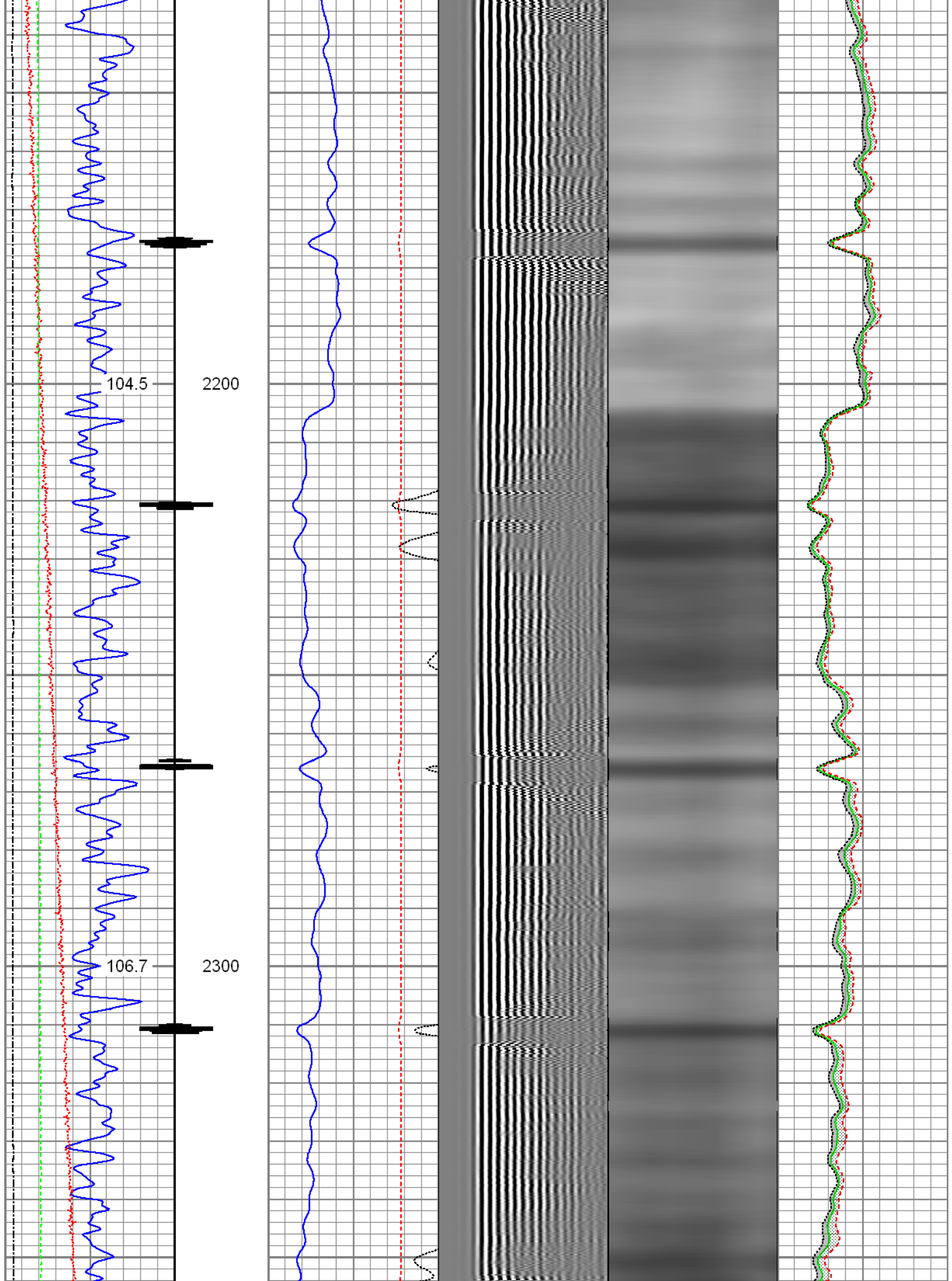




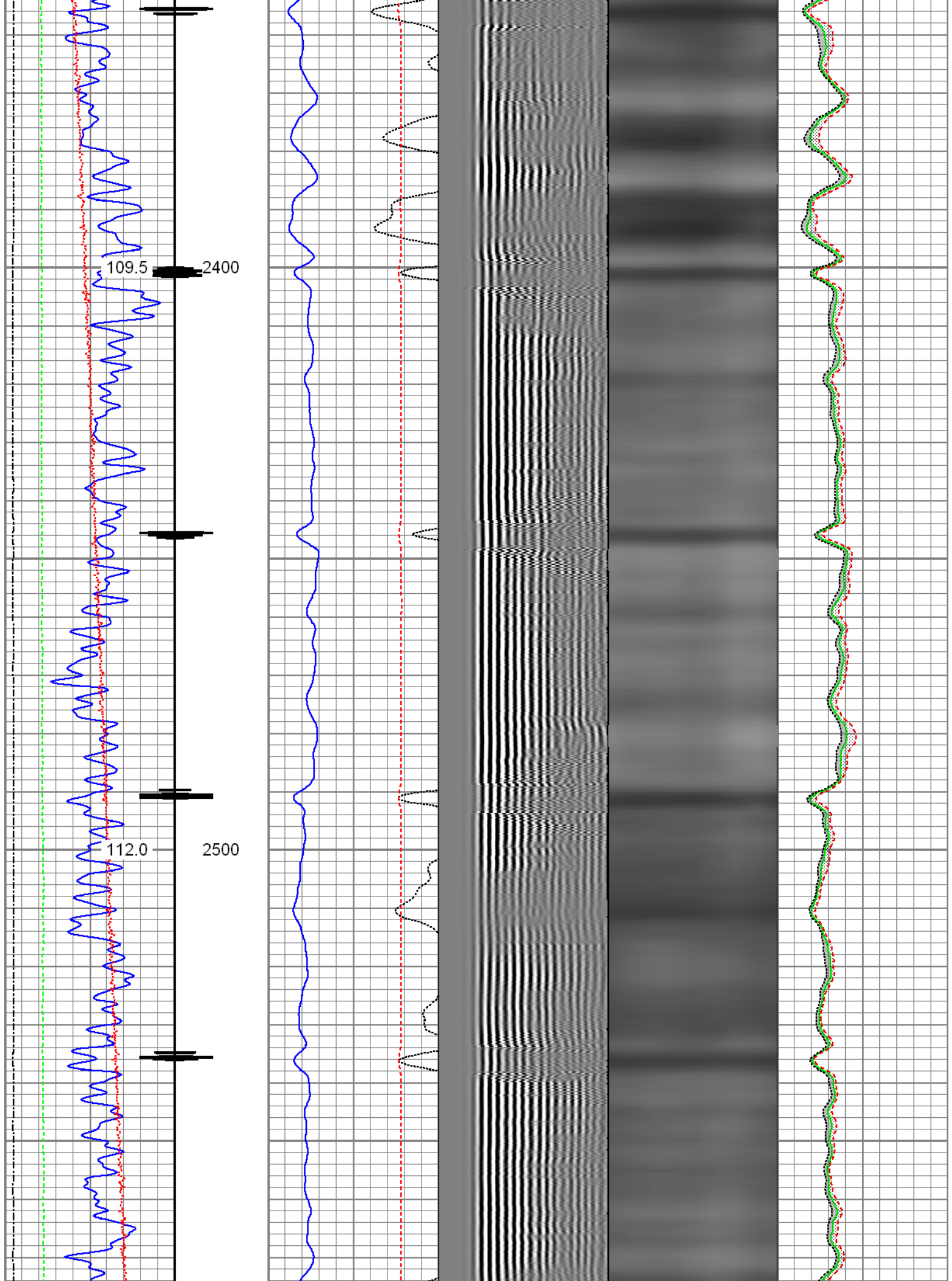


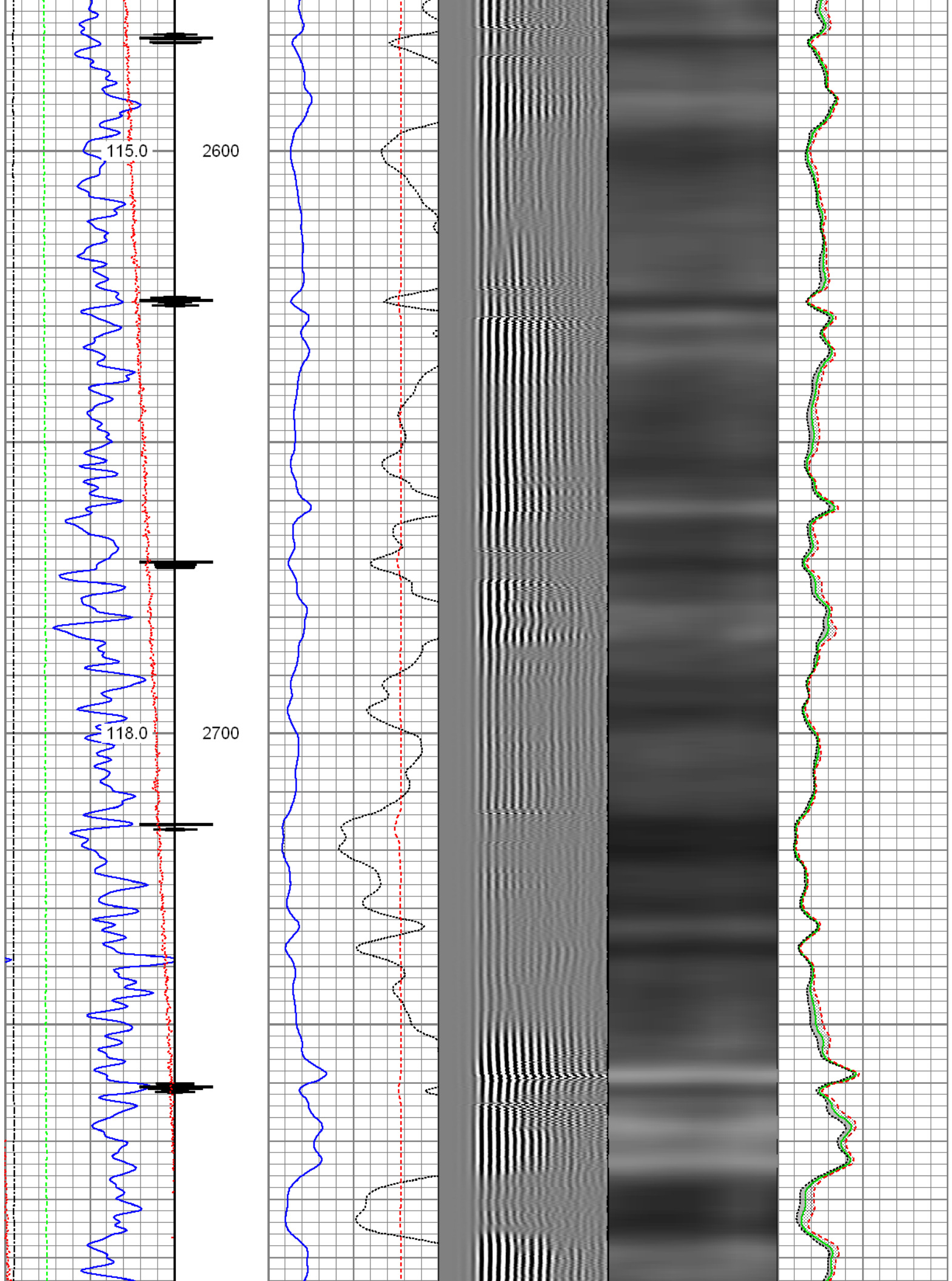


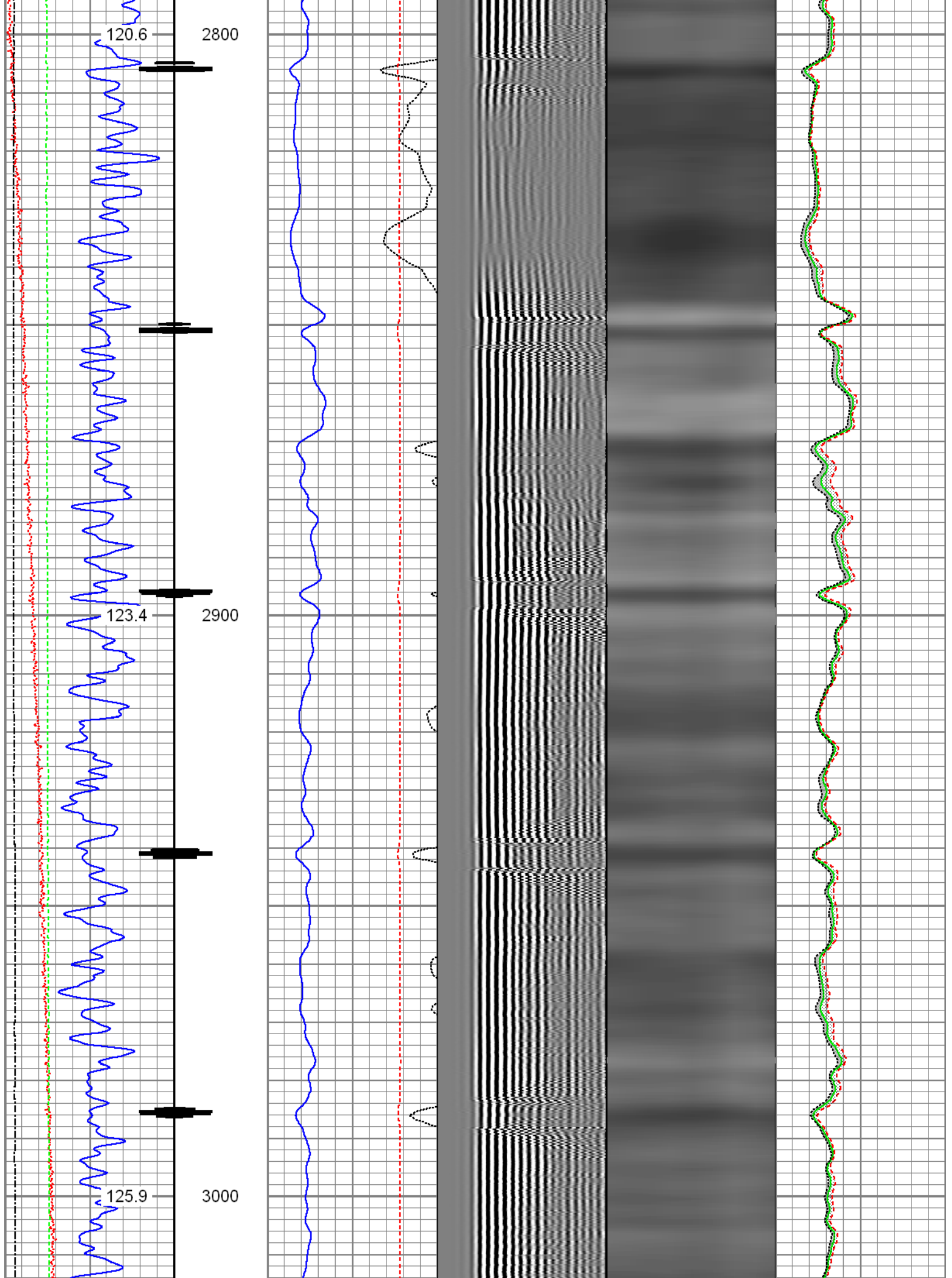




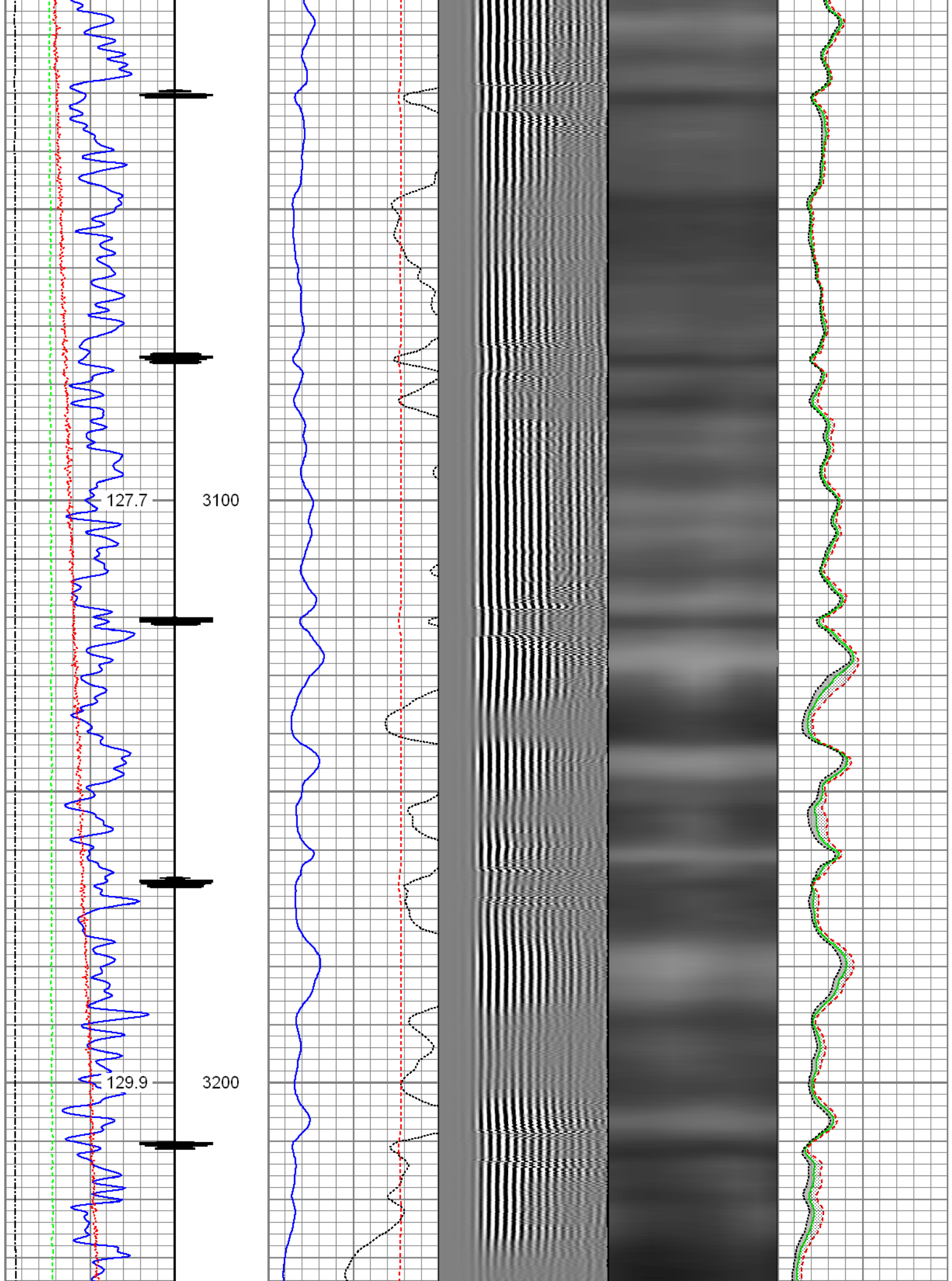




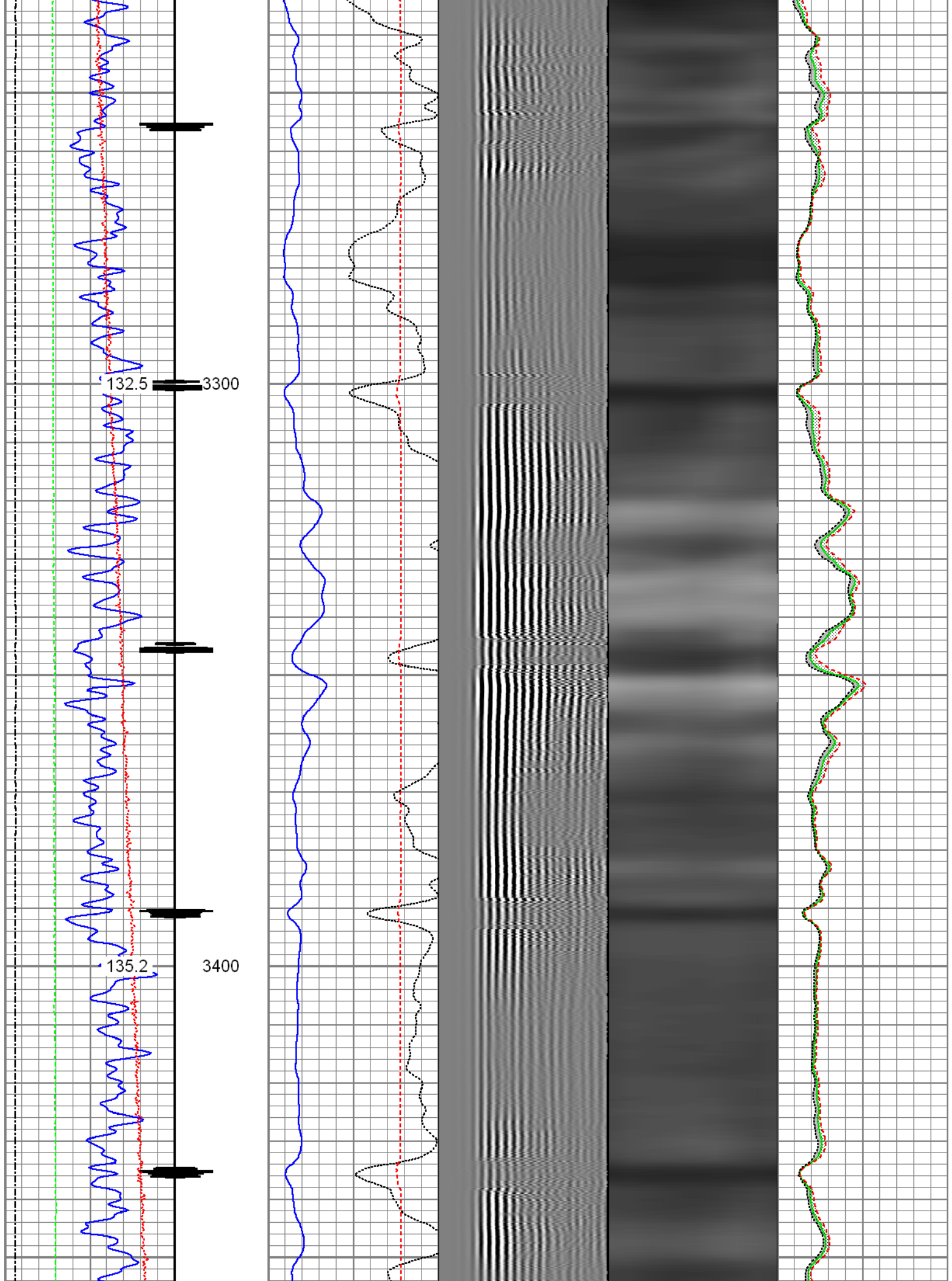


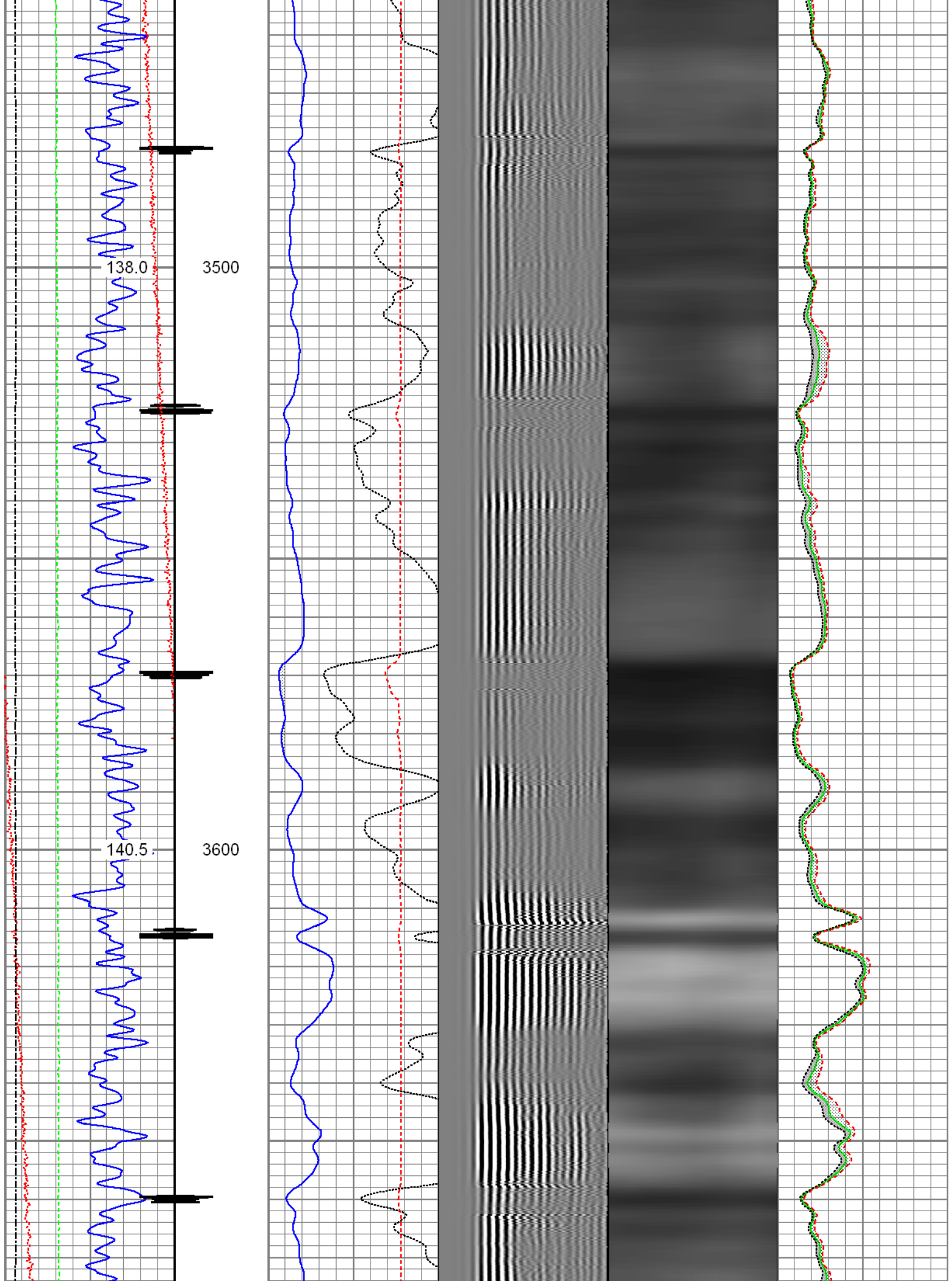


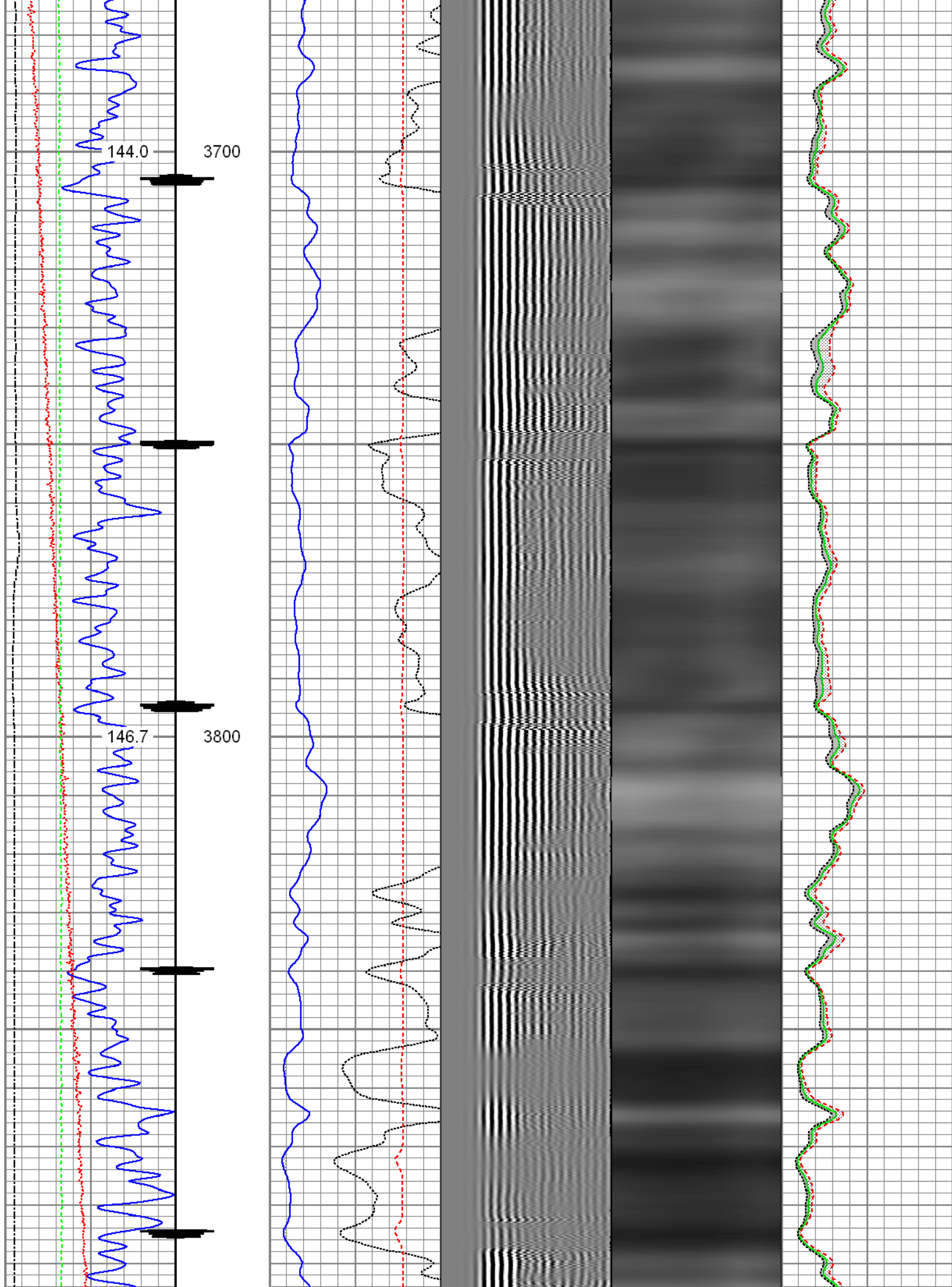


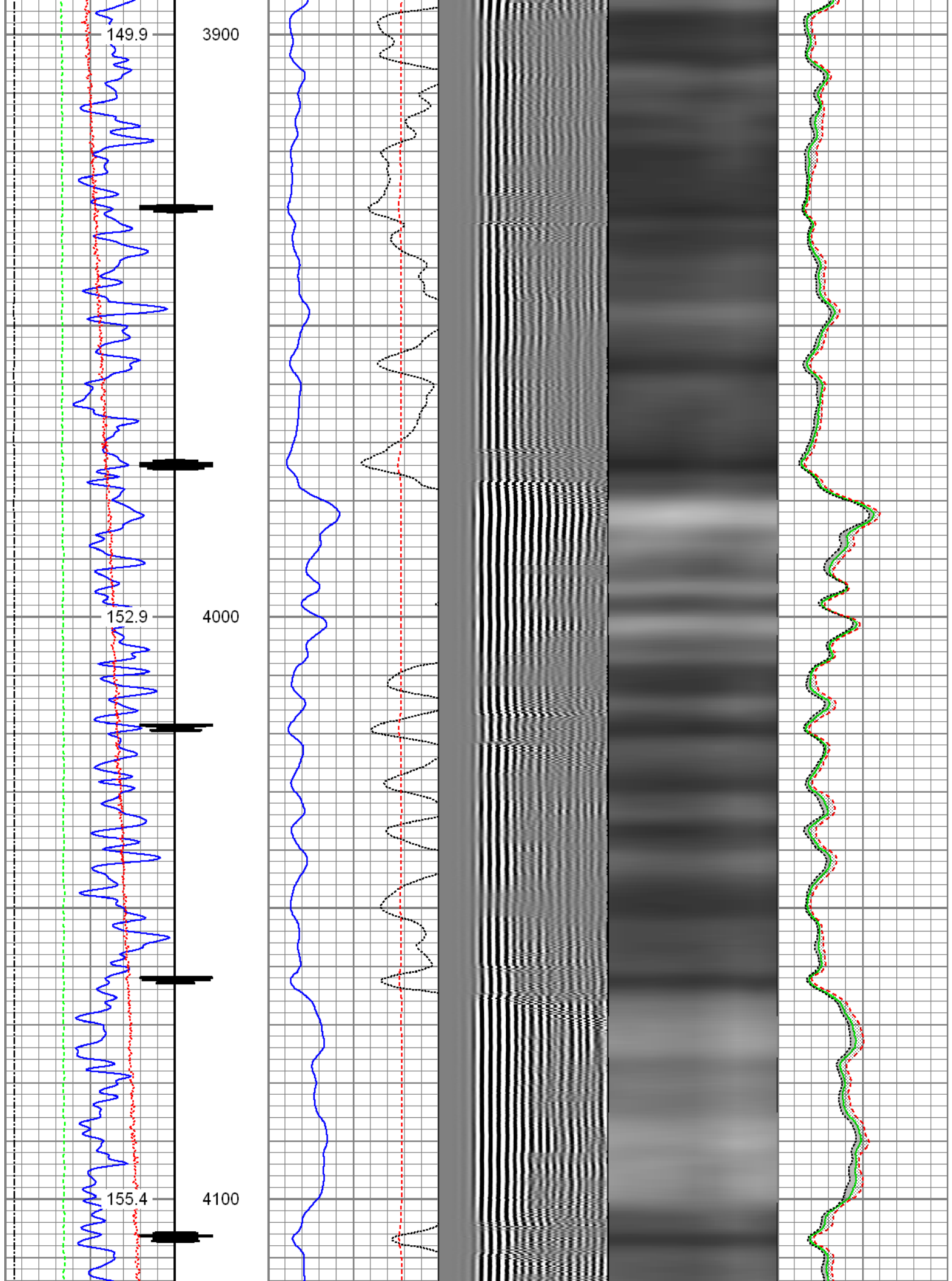




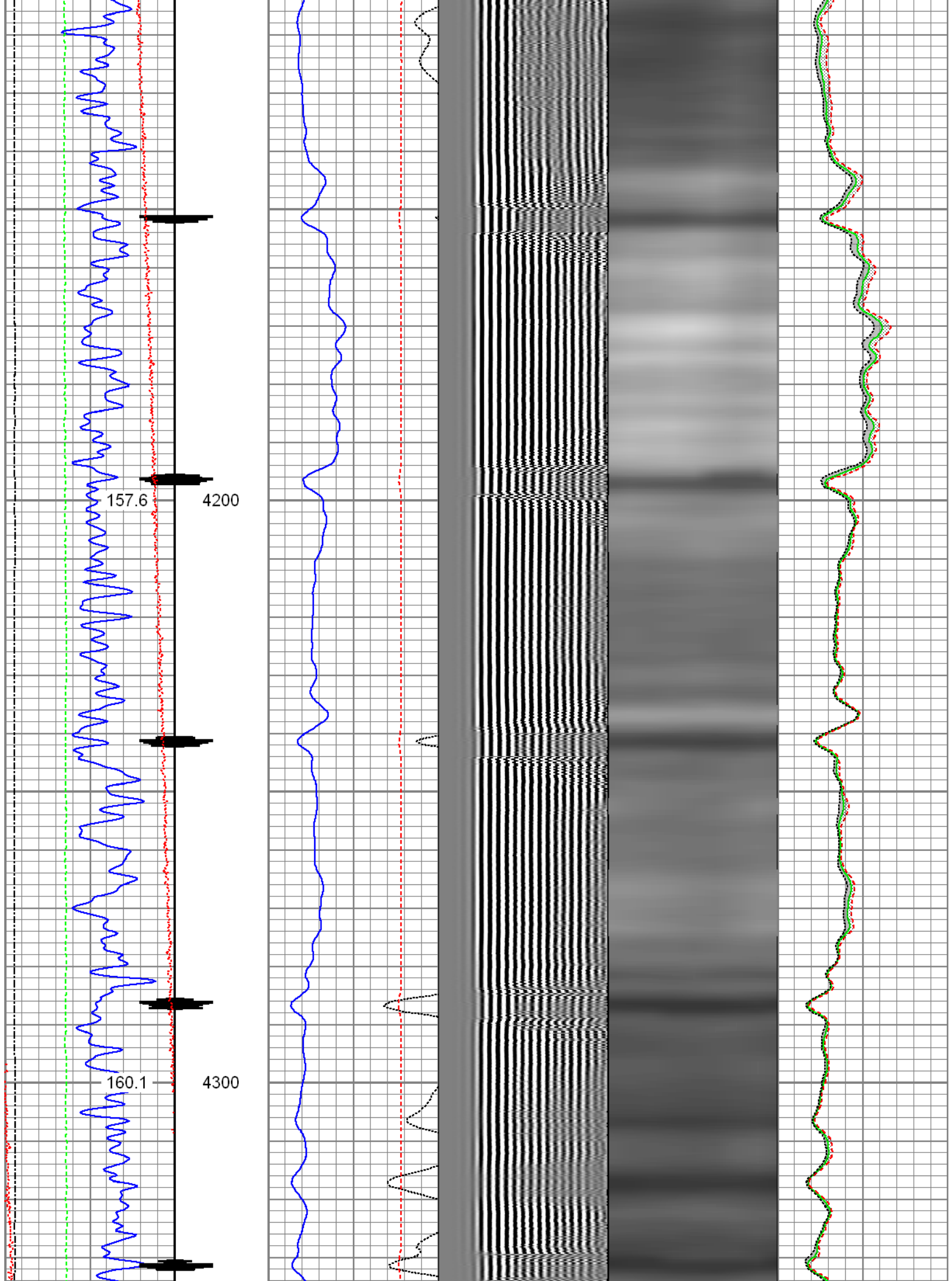


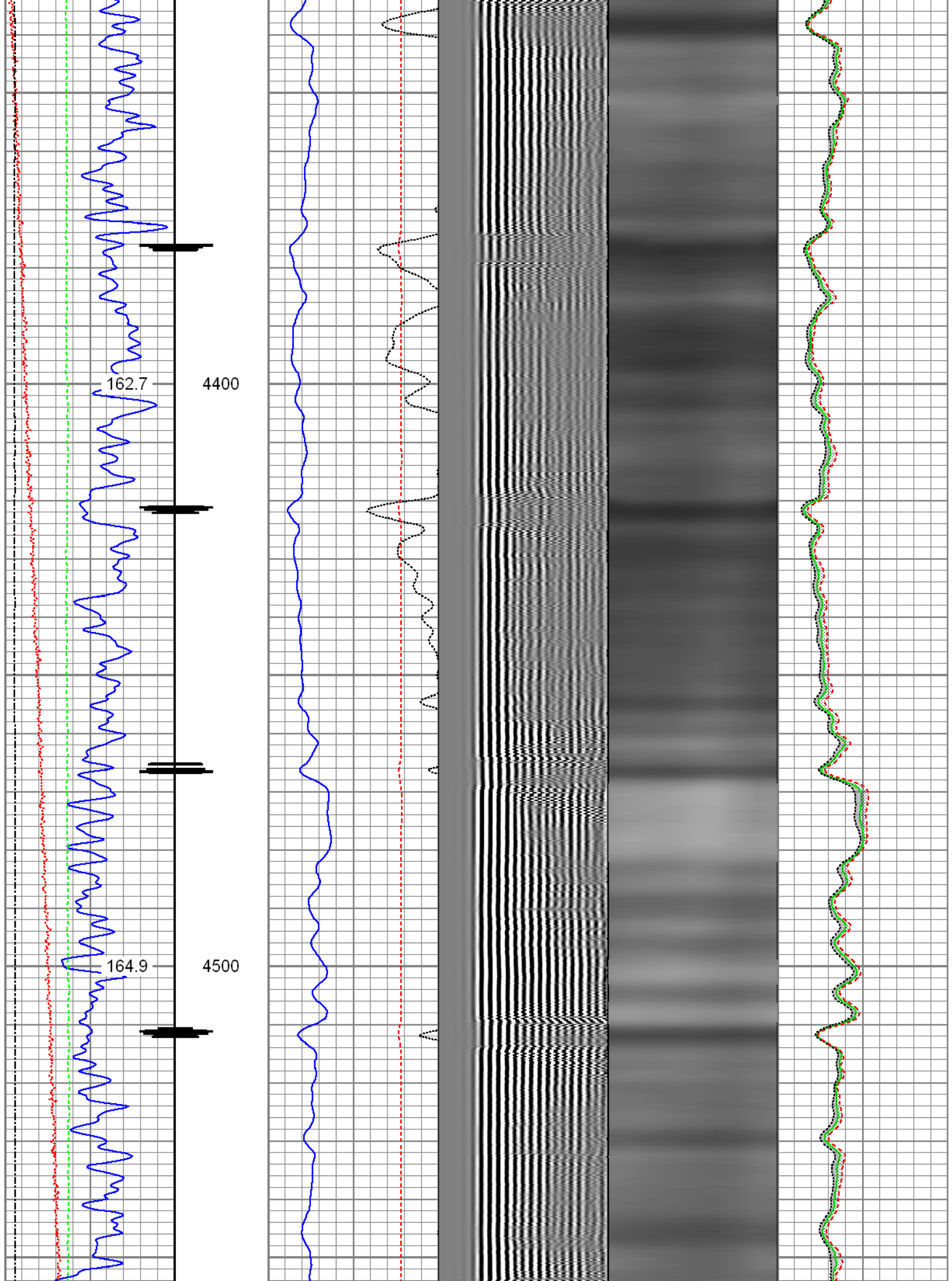


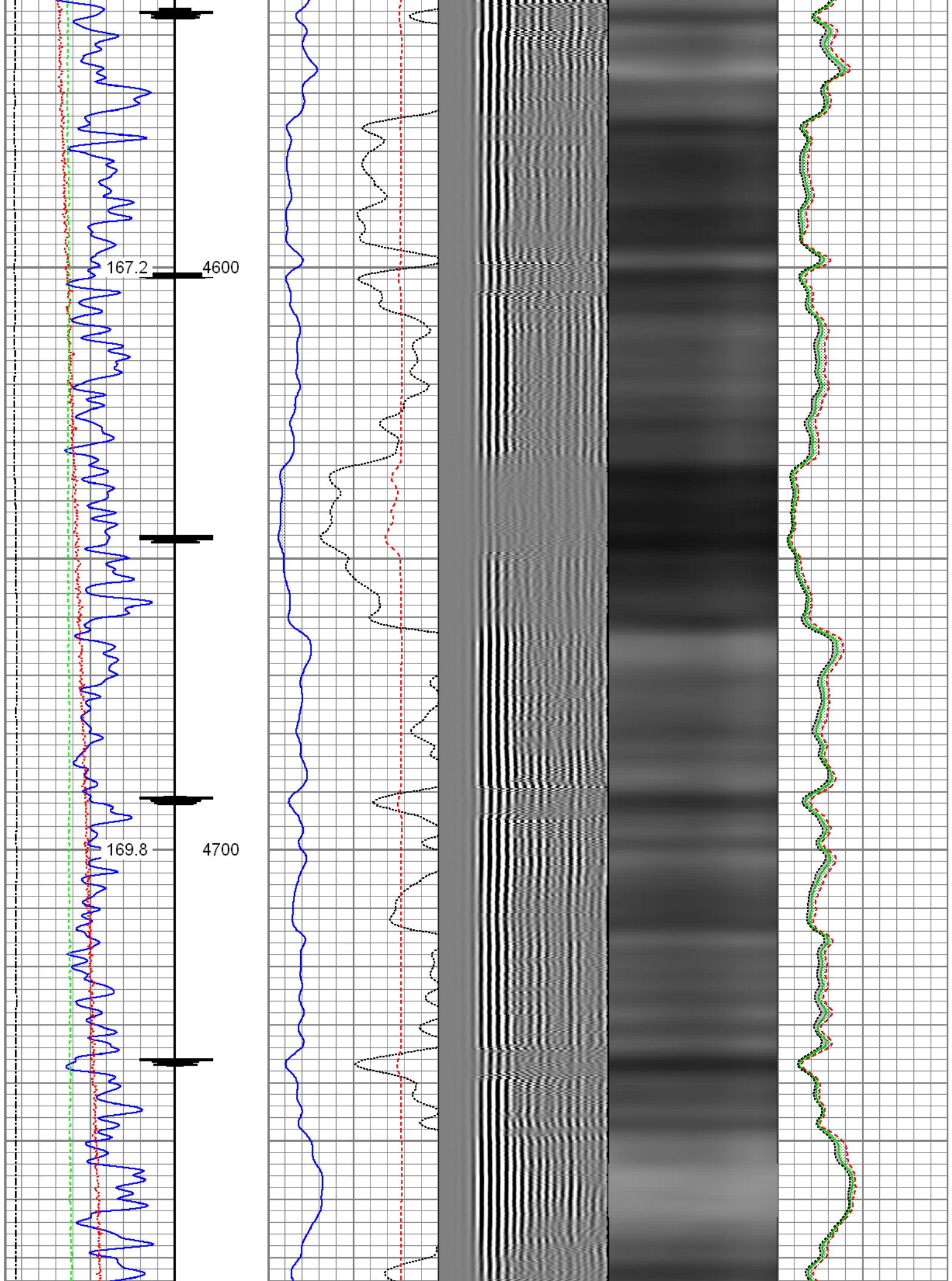




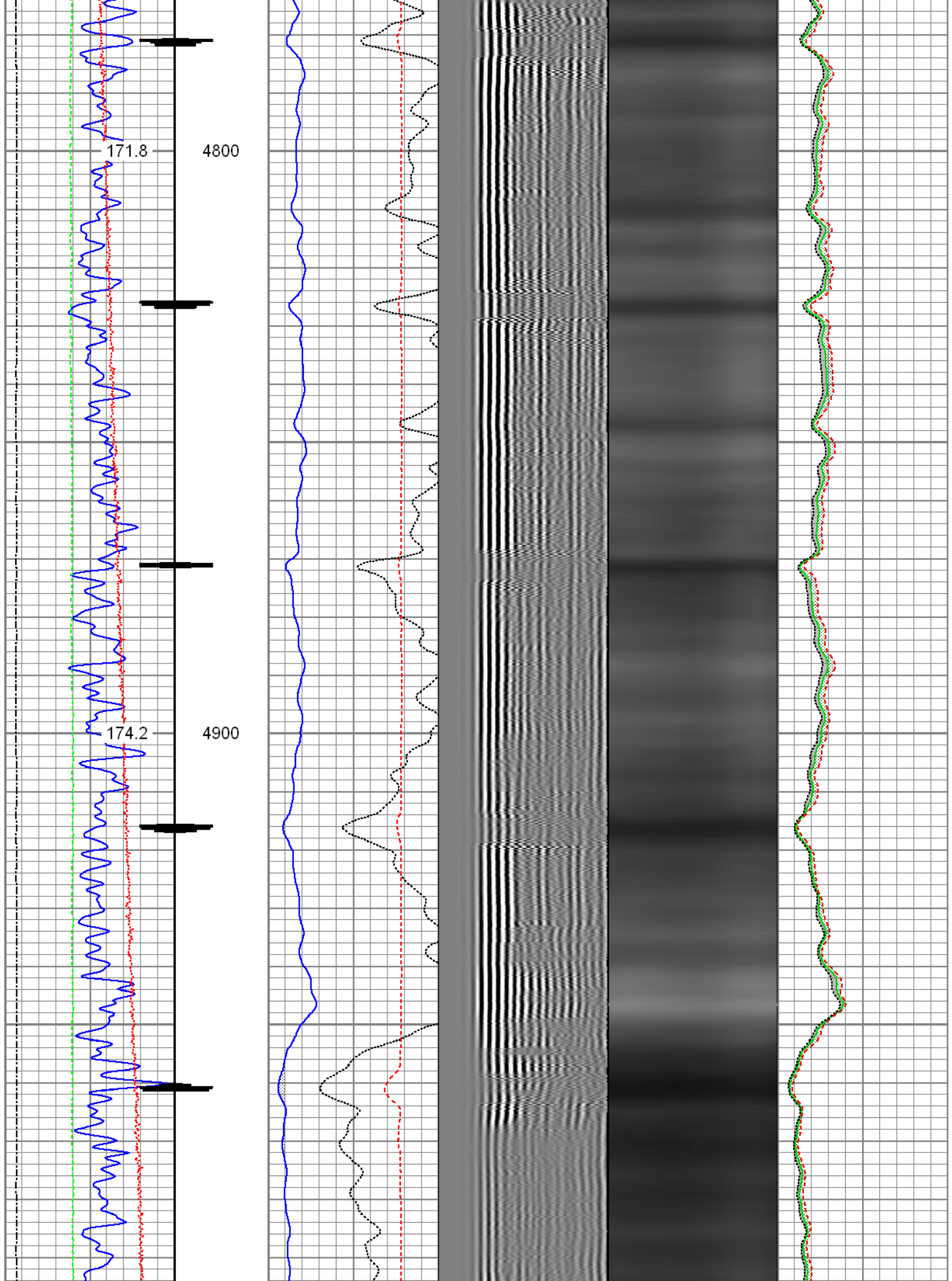




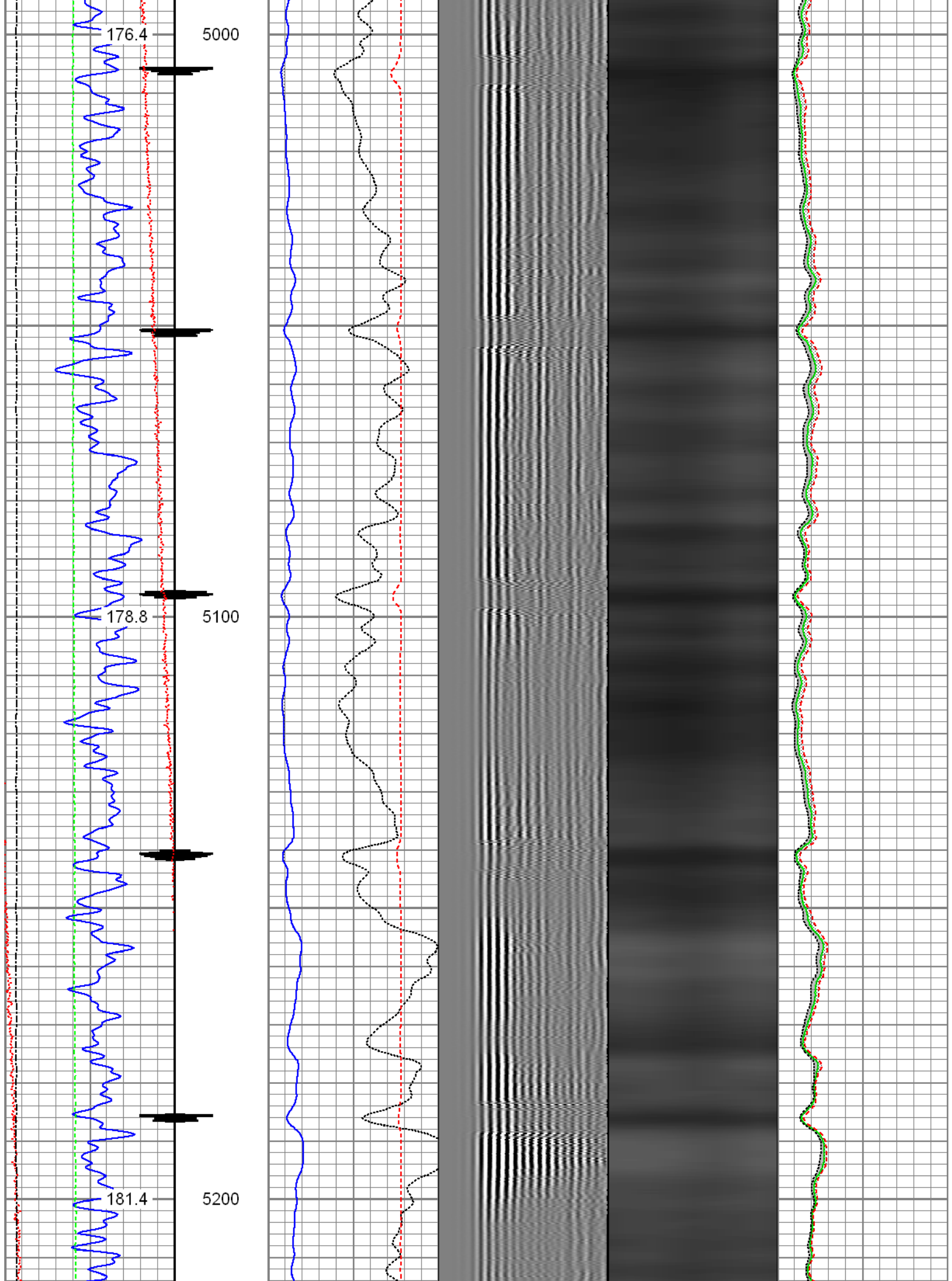


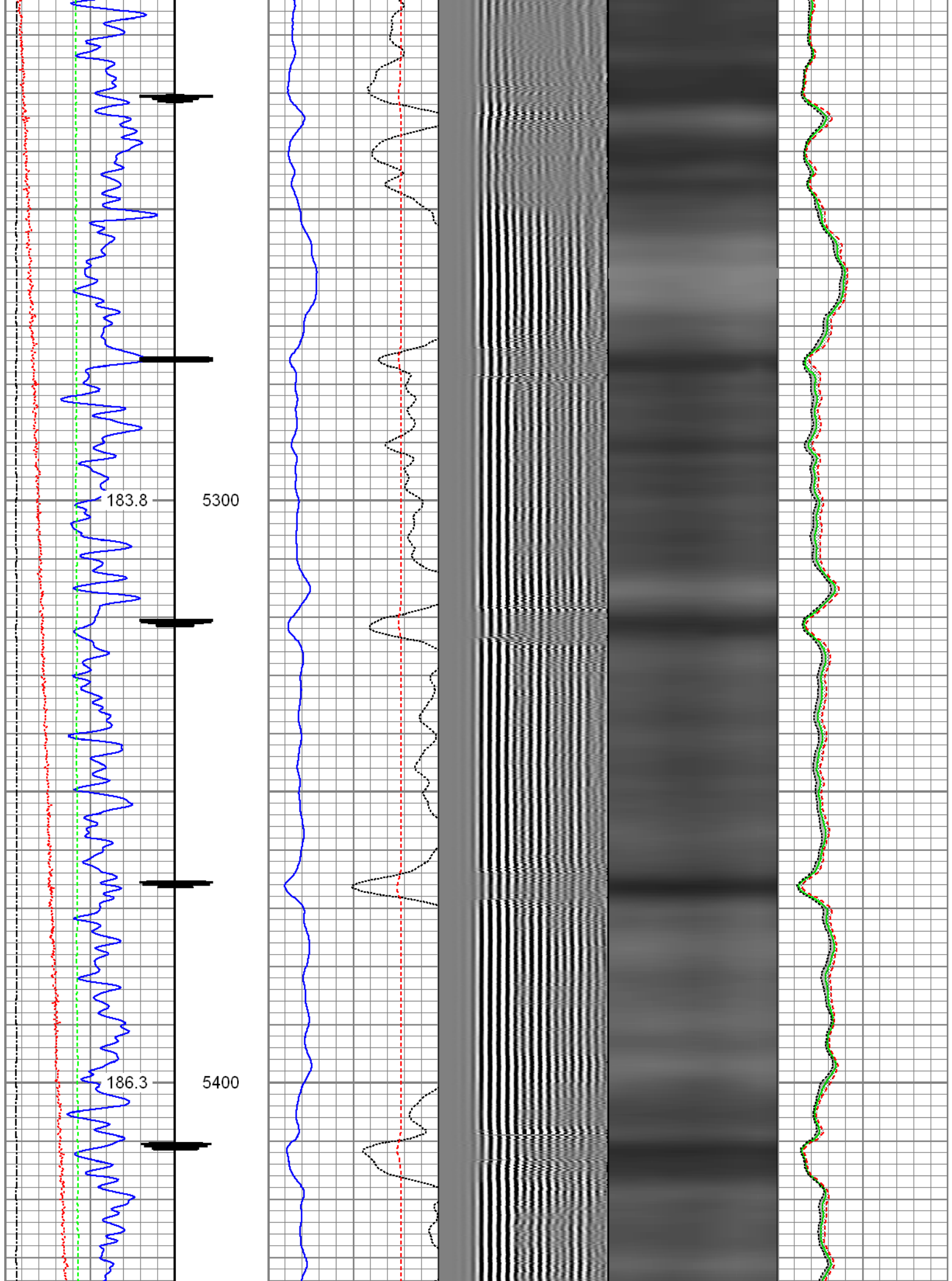


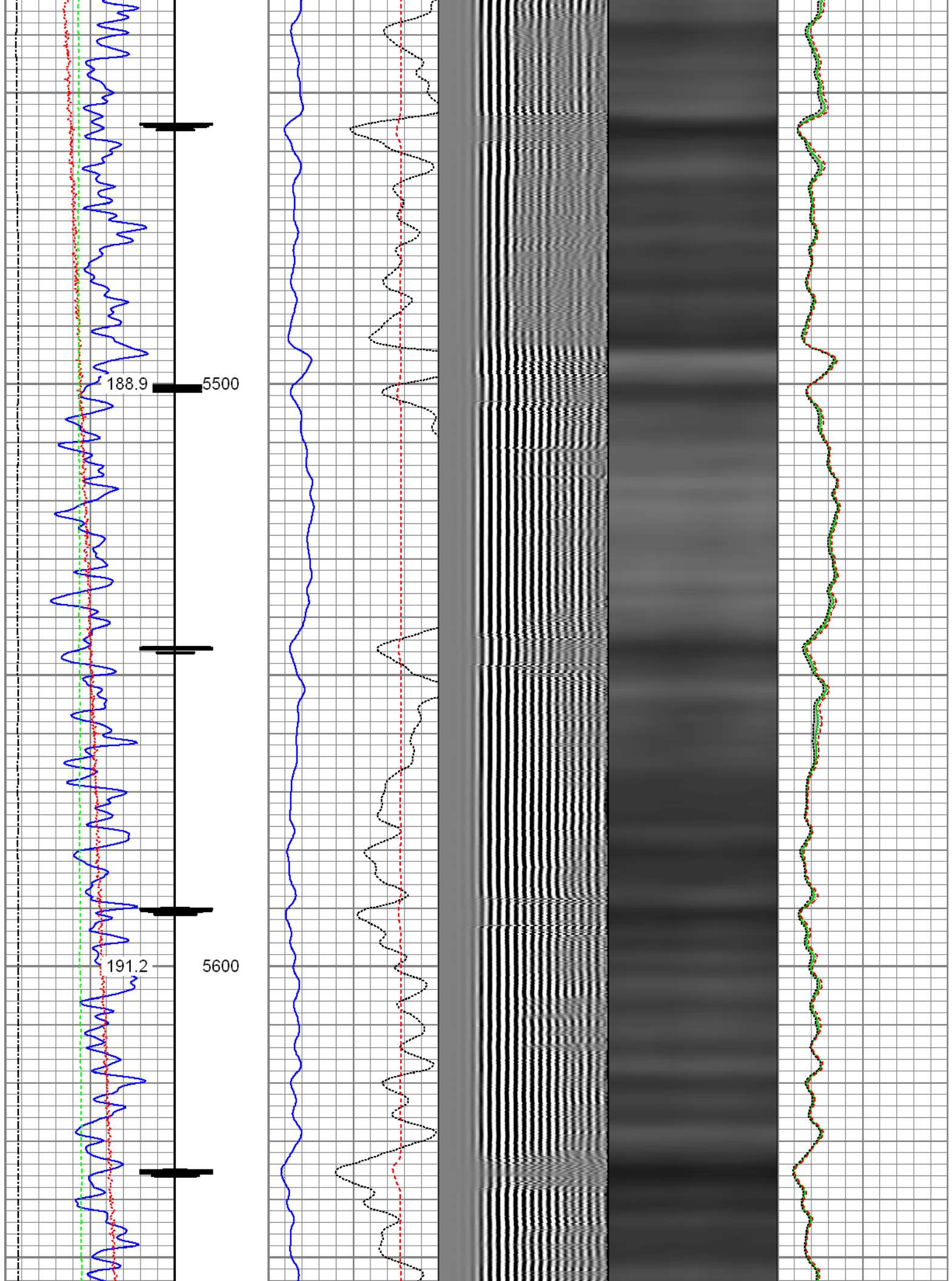




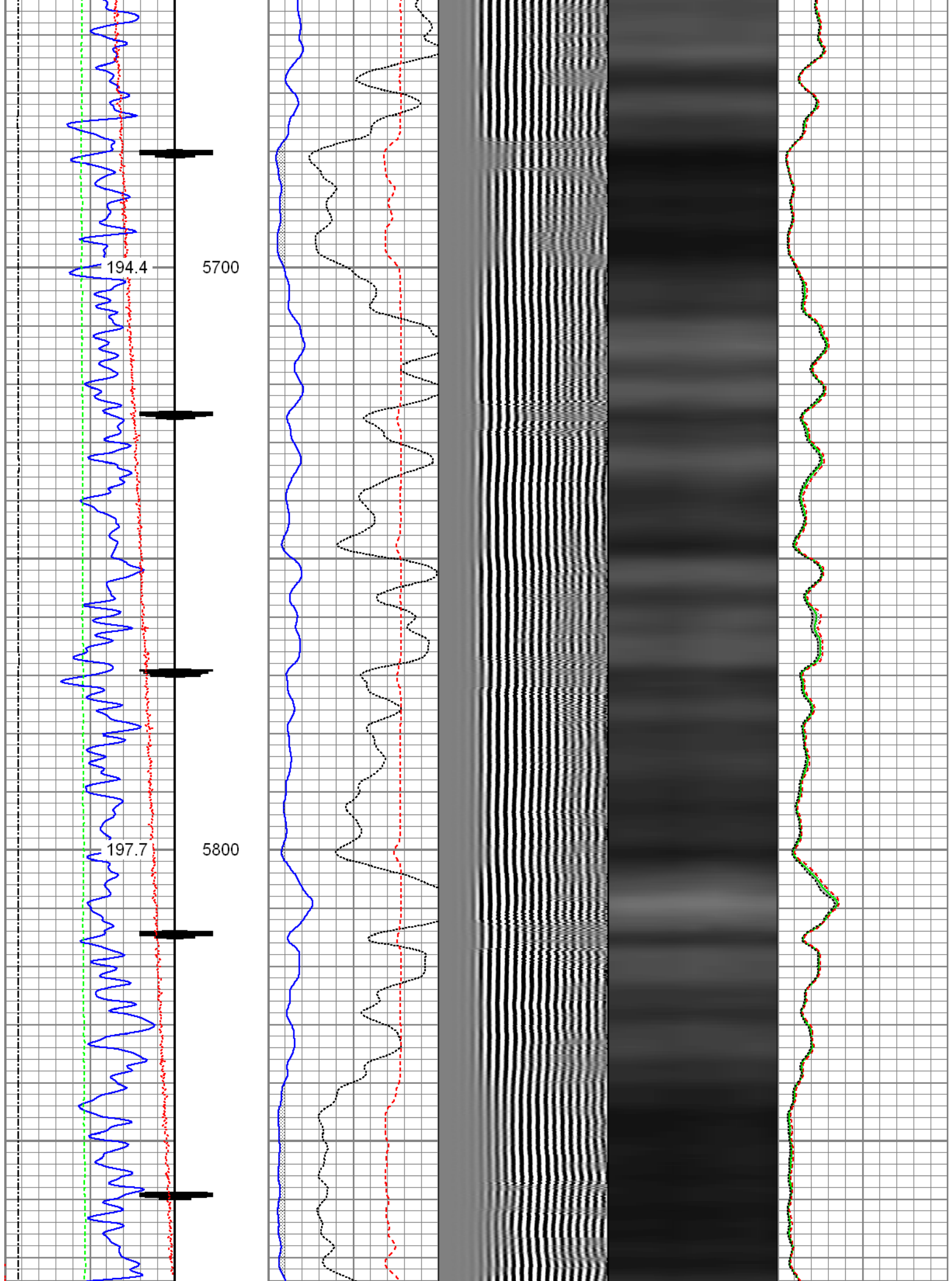




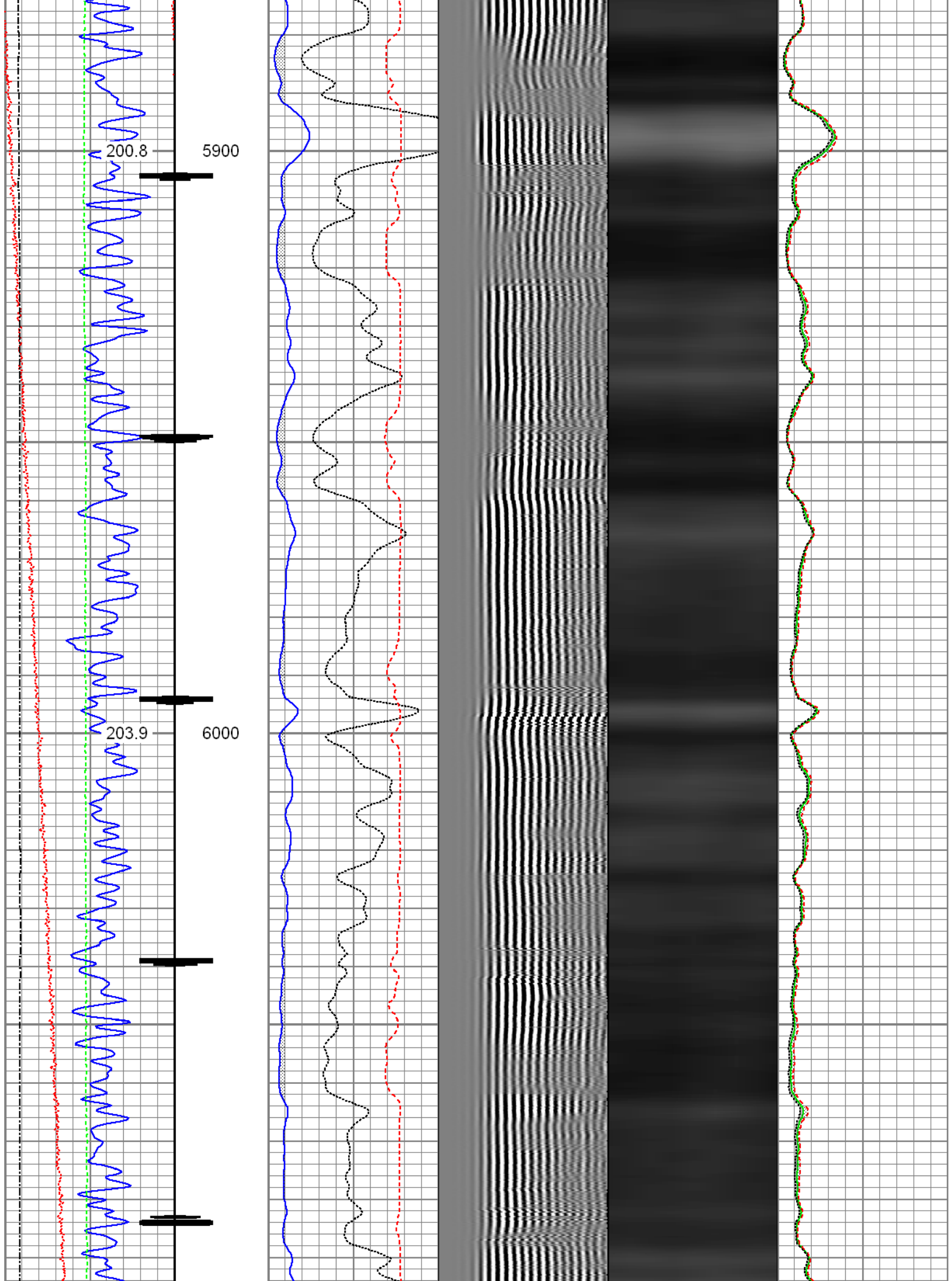


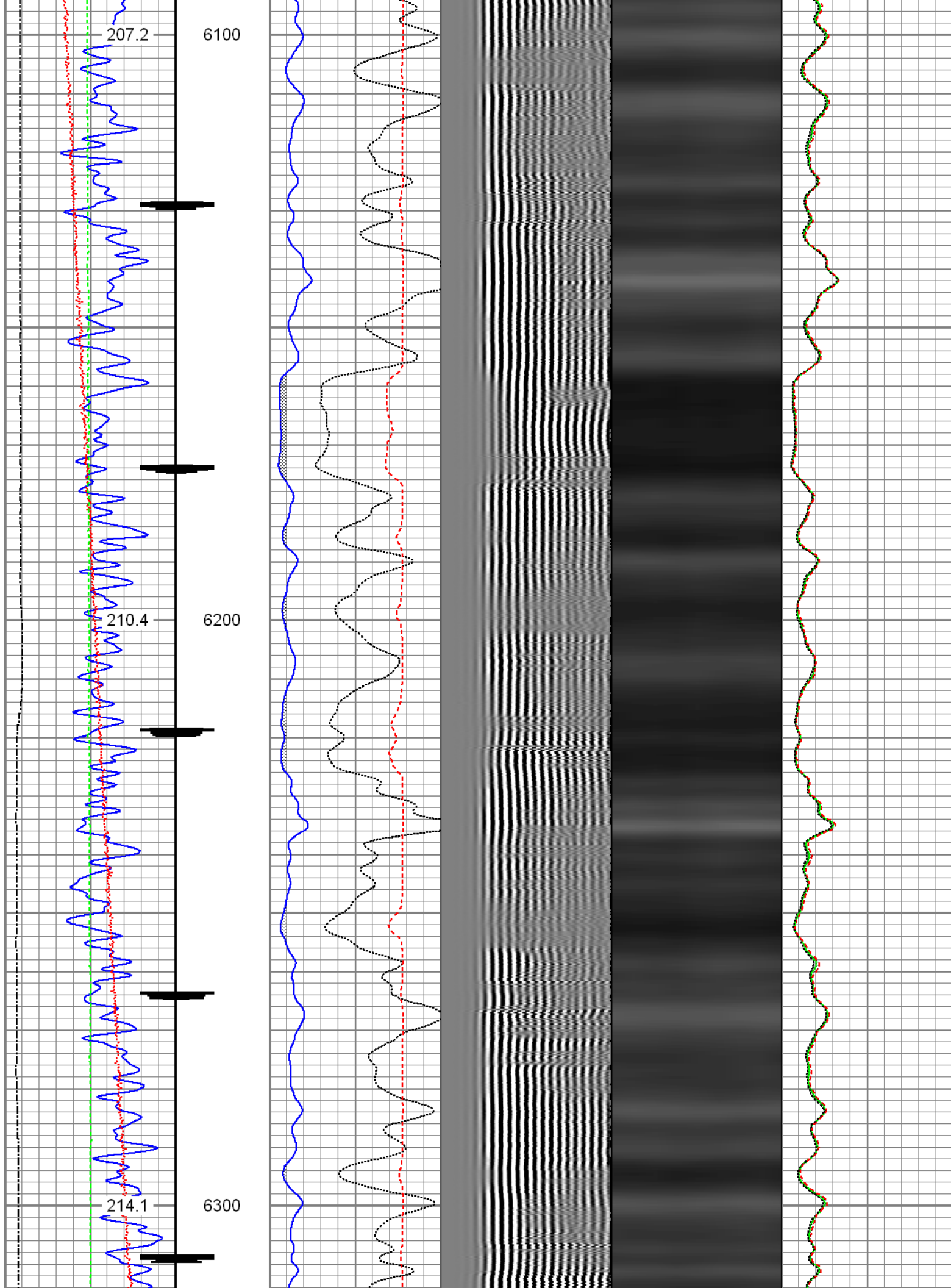


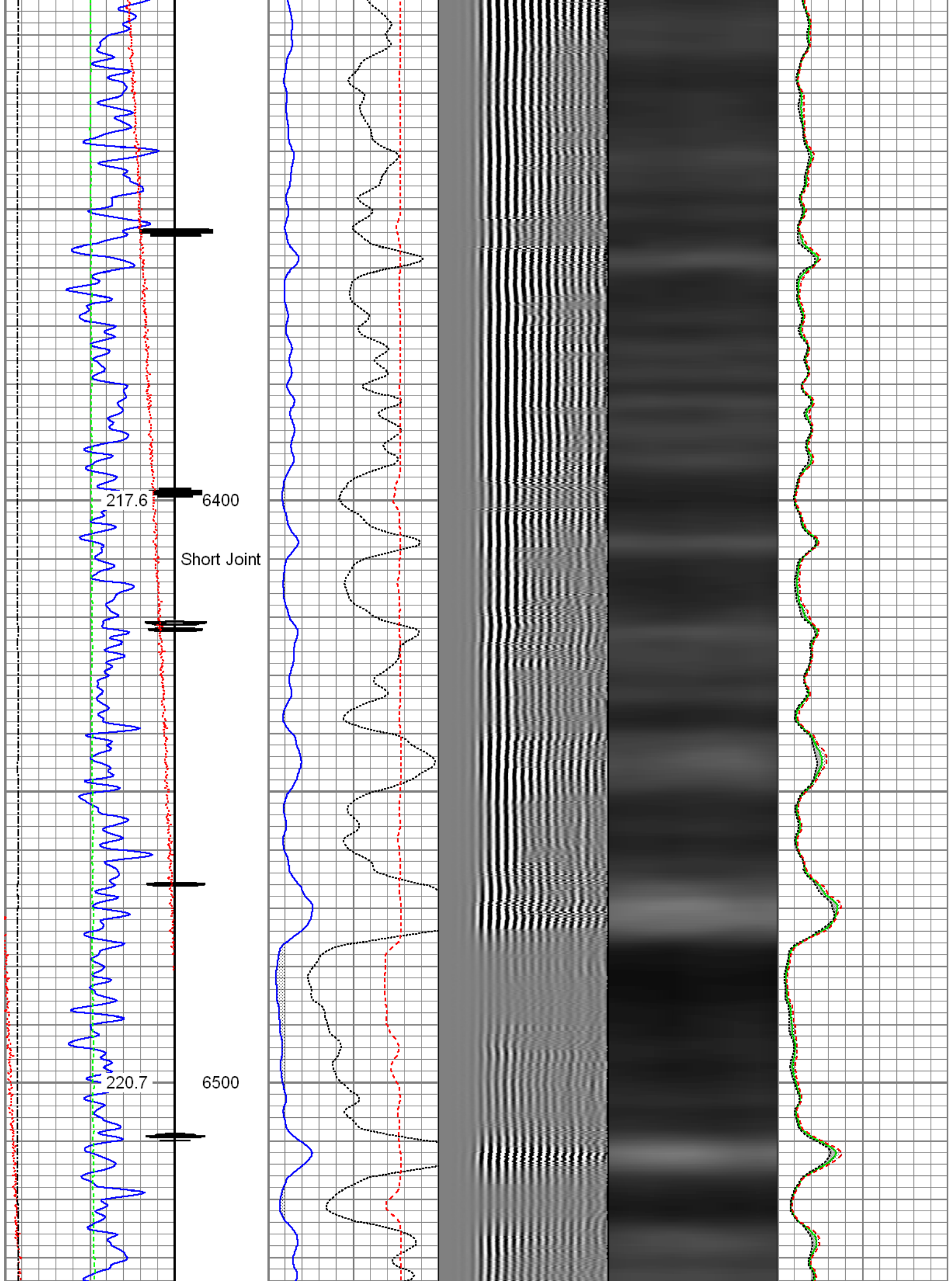


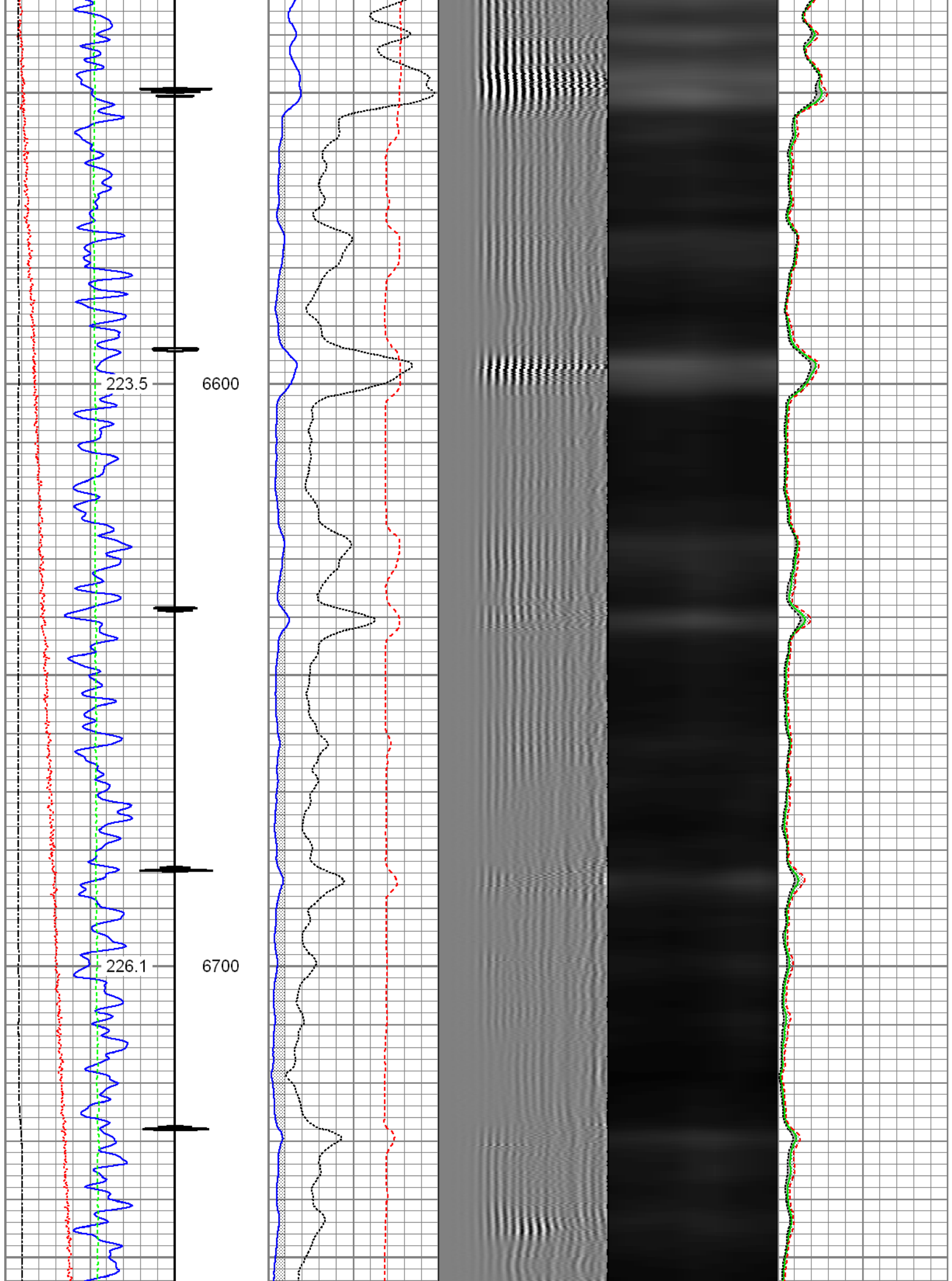




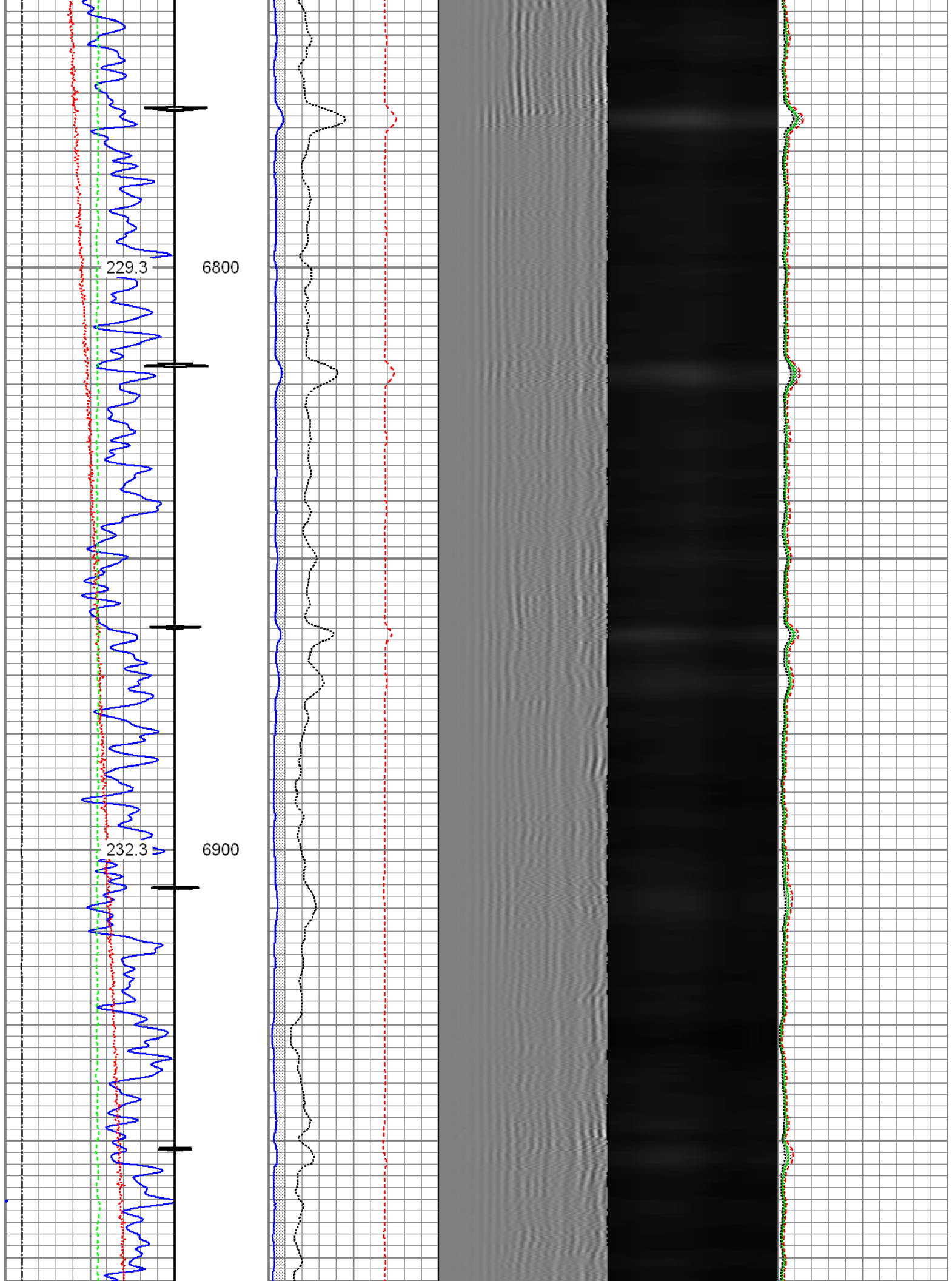


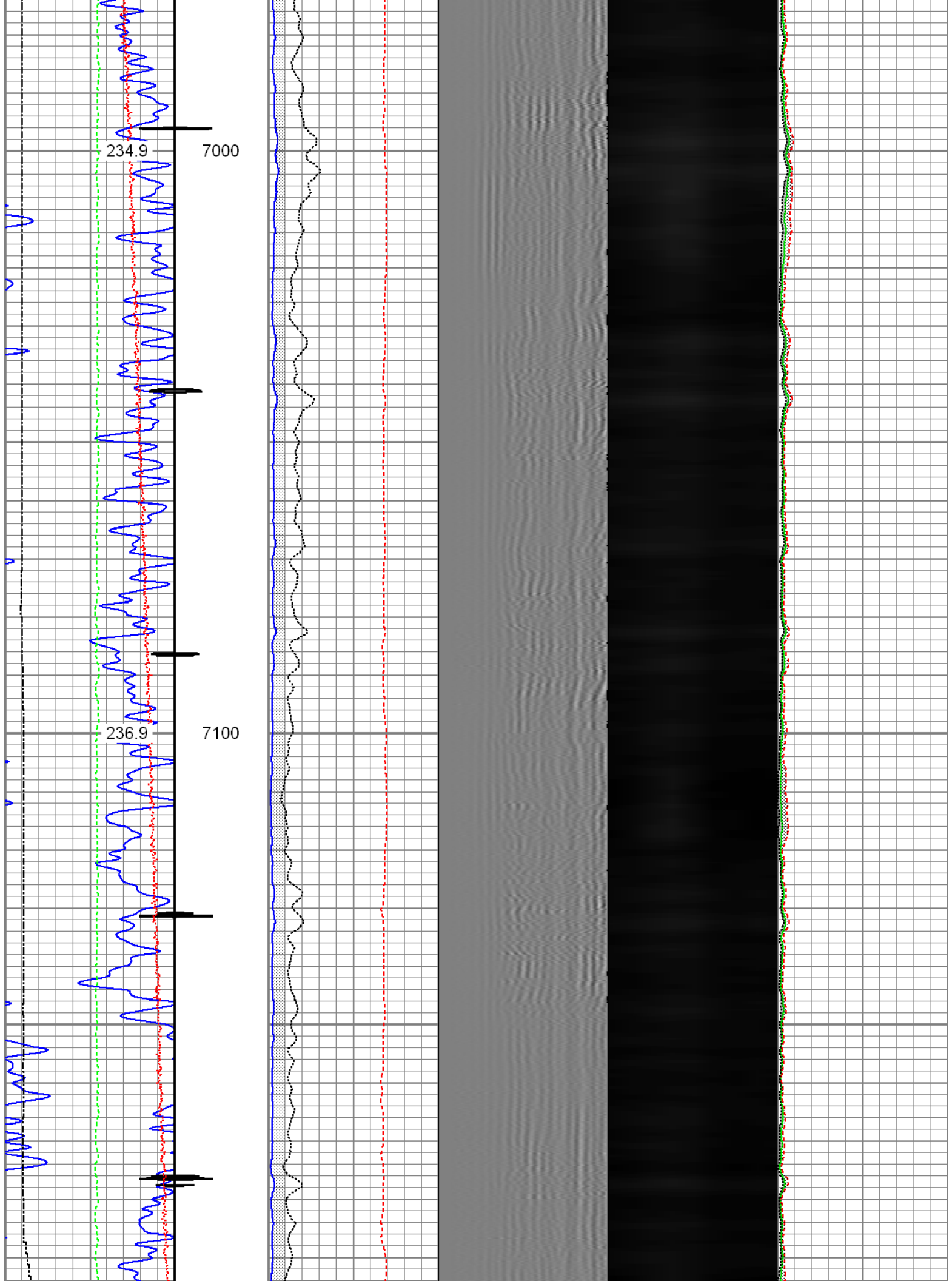


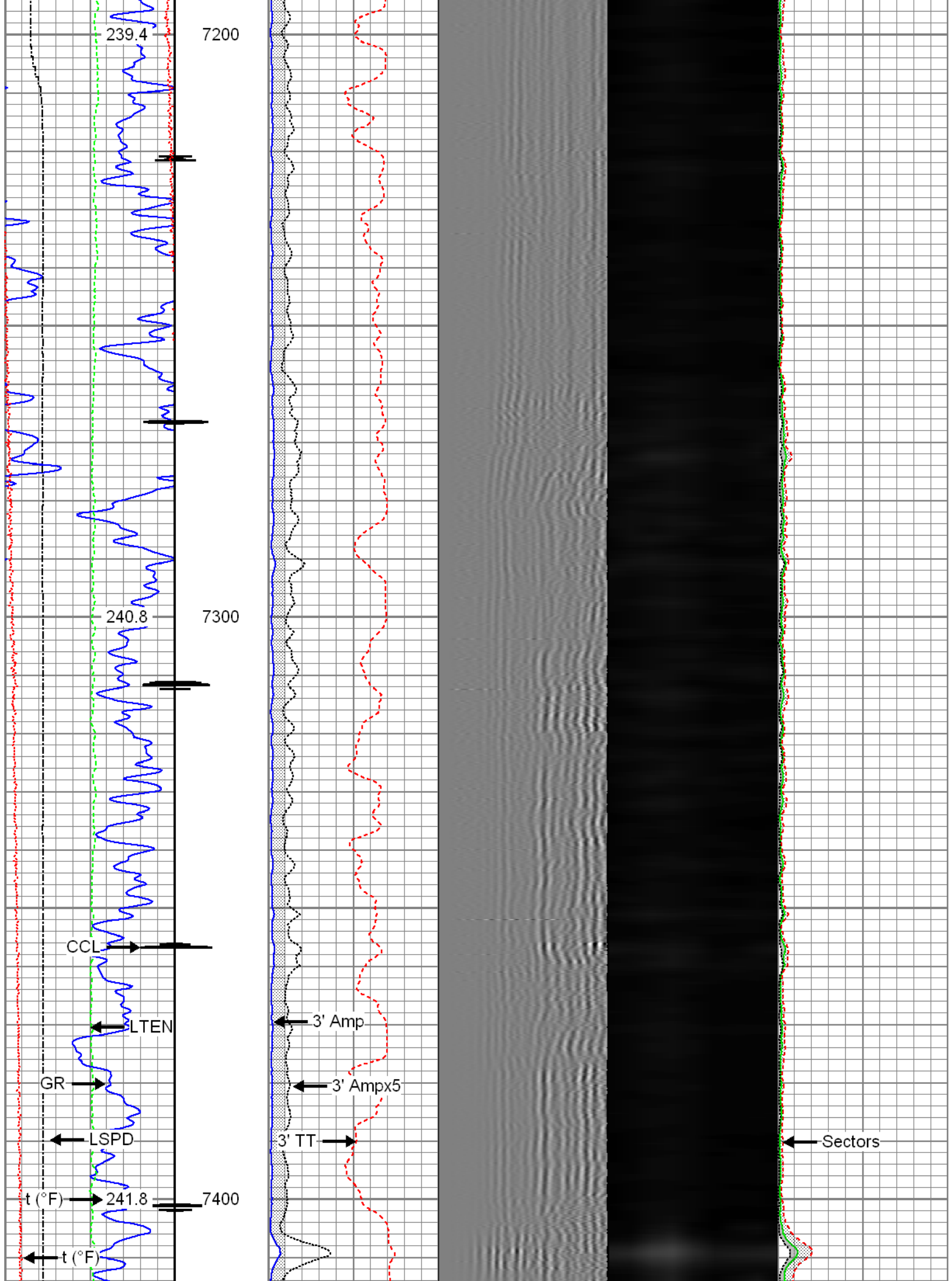


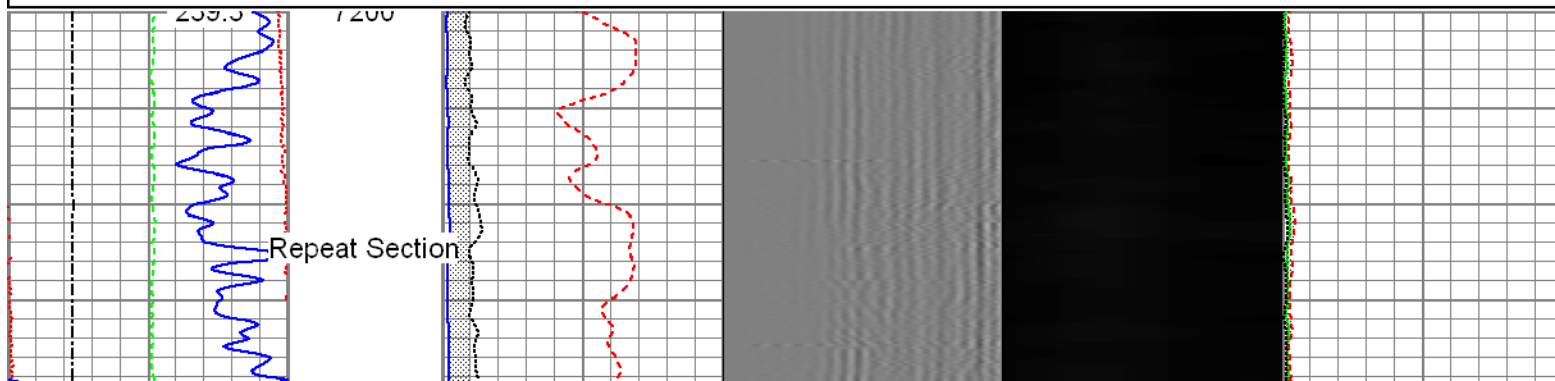
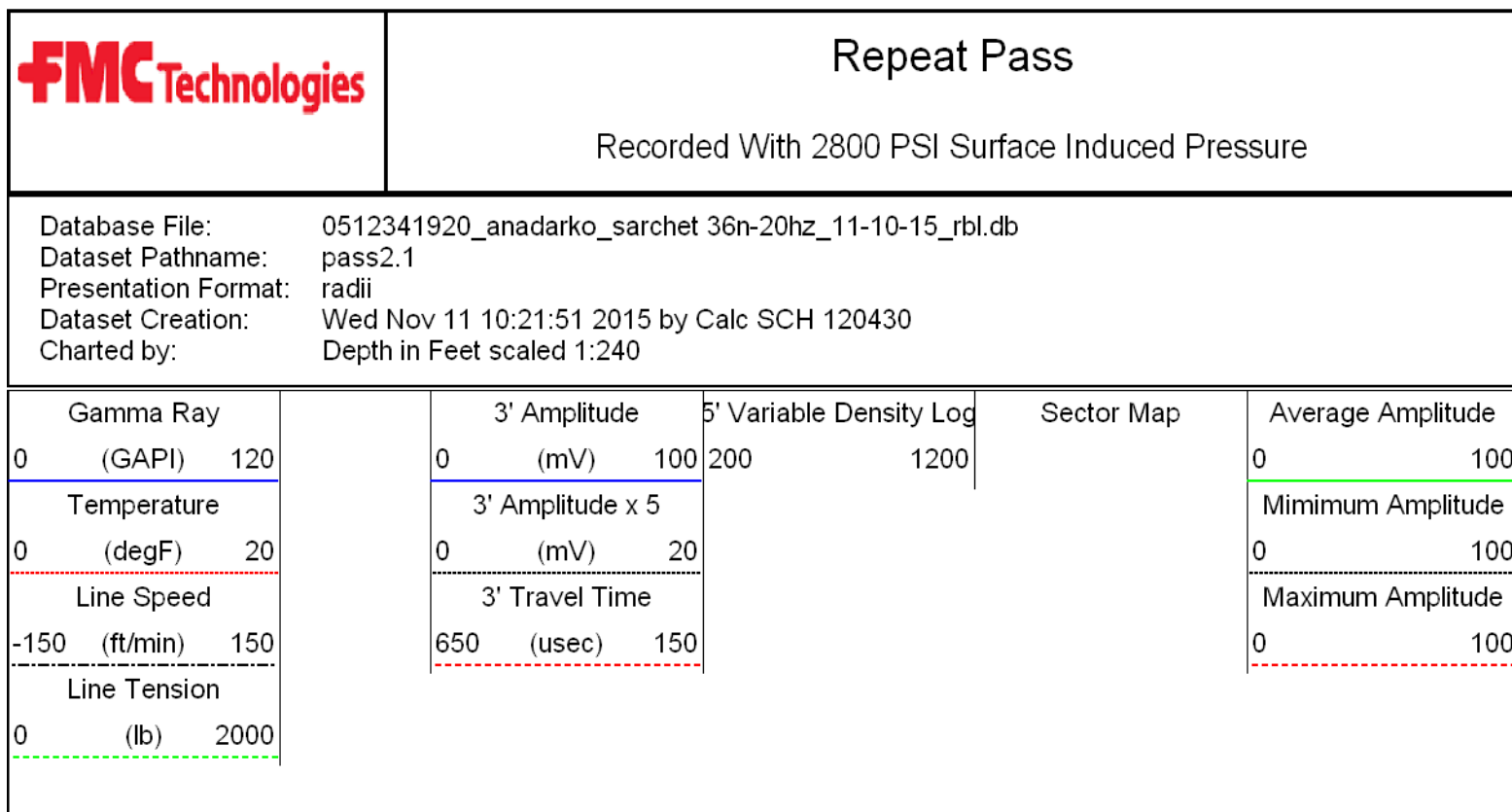
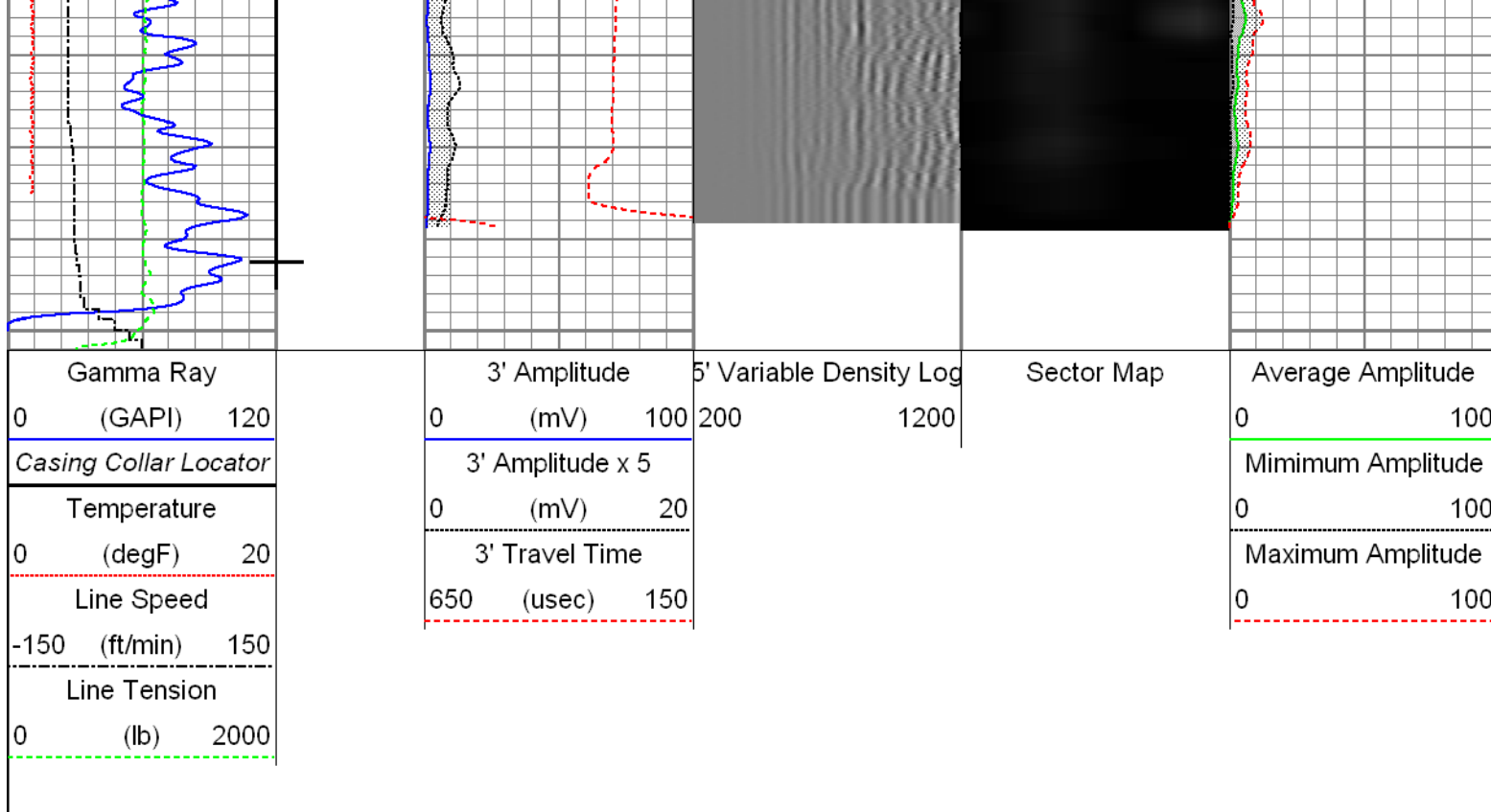




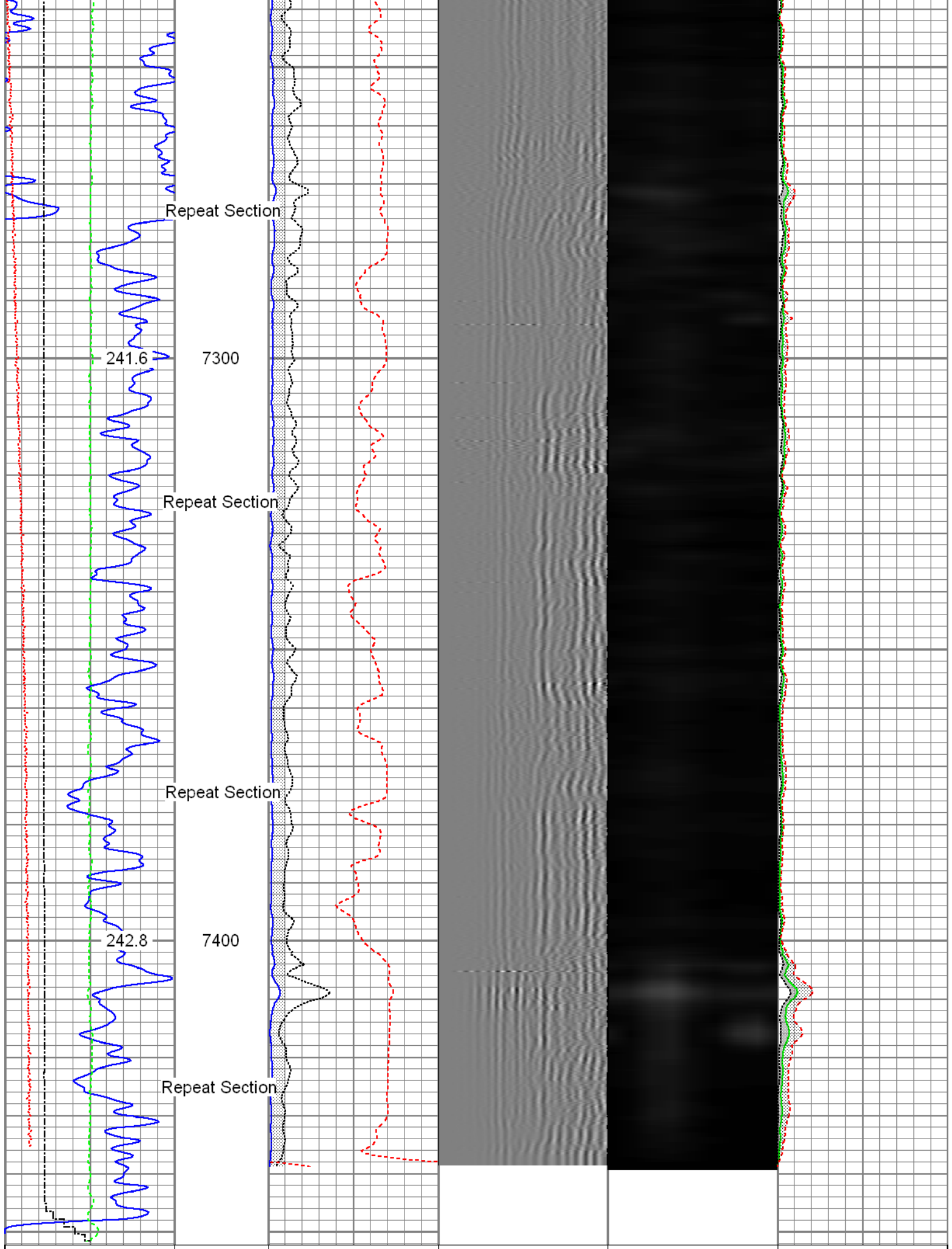






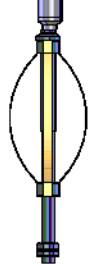






0 (GAPI) 120	0 (mV) 100 200 1200	0 100
Temperature	3' Amplitude x 5	Minimum Amplitude
0 (degF) 20	0 (mV) 20	0 100
Line Speed	3' Travel Time	Maximum Amplitude
-150 (ft/min) 150	650 (usec) 150	0 100
Line Tension		
0 (lb) 2000		

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
HeadVolt	19.49		T_CH14375_1_GO Titan 1-7/16" Assembled Electric Cable Head with 1" Fishing Neck	1.03	1.44	4.00
			Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
Temp	16.72					
WVF3FT	14.55		Probe_RADII-C-2-3/4" (FW1302-002) Probe 2-3/4" Sector Cement Bond Tool with Temperature Probe	9.19	2.75	105.00
WVFCAL	14.55					
WVFS1	14.55					
WVFS2	14.55					
WVFS3	14.55					
WVFS4	14.55					
WVFS5	14.55					
WVFS6	14.55					
WVFS7	14.55					
WVFS8	14.55					
WVF5FT	13.55					
CCL DCCL	6.51 6.51		Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
			Probe_CCL_GR-2.75"Digital (FW1211-026) Probe 2-3/4" Digital CCL / Gamma Ray Combined	4.54	2.75	55.00
GR	3.77					



Probe\_IL\_BS\_Cent

Probe 2-3/4" Inline Electrical Inline Bowspring  
Centralizer

2.88

2.75

10.00

Dataset: 0512341920\_anadarko\_sarchet 36n-20hz\_11-10-15\_rbl.db: field/well/run1/pass4.1  
Total Length: 23.40 ft  
Total Weight: 194.00 lb  
O.D. 2.75 in

### Calibration Report

Database File: 0512341920\_anadarko\_sarchet 36n-20hz\_11-10-15\_rbl.db  
Dataset Pathname: pass4.1  
Dataset Creation: Wed Nov 11 10:04:57 2015 by Calc SCH 120430

### Gamma Ray Calibration Report

Serial Number: FW1211-026  
Tool Model: 2.75" Digital  
Performed: Tue Nov 10 08:58:49 2015  
  
Calibrator Value: 1.0 GAPI  
  
Background Reading: 0.0 cps  
Calibrator Reading: 1.0 cps  
  
Sensitivity: 0.6000 GAPI/cps

### Segmented Cement Bond Log Calibration Report

Serial Number: FW1302-002  
Tool Model: 2-3/4"  
  
Calibration Casing Diameter: 5.500 in  
Calibration Depth: 57.713 ft

Master Calibration, performed Wed Nov 11 10:04:55 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	0.589	1.000	71.921	120.393	0.964
CAL	0.685	0.784				
5'	-0.000	0.511	1.000	71.921	138.701	1.007
SUM						
S1	0.000	0.580	0.000	100.000	172.522	-0.076
S2	0.000	0.550	0.000	100.000	181.780	-0.058
S3	0.000	0.554	0.000	100.000	180.400	-0.012
S4	0.000	0.575	0.000	100.000	174.041	-0.042
S5	0.000	0.636	0.000	100.000	157.353	-0.018
S6	-0.000	0.681	0.000	100.000	146.799	0.018
S7	-0.000	0.680	0.000	100.000	147.149	0.005
S8	0.000	0.649	0.000	100.000	154.151	-0.017

Internal Reference Calibration, performed Wed Dec 31 17:00:00 1969:

Raw (v)


Calibrated (v)

Results

	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.685	0.784	1.000	0.000

Air Zero Calibration, performed Tue Nov 10 09:01:53 2015:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.003	0.000	0.000
5'	0.003	0.000	-0.000
SUM			
S1	-0.002	0.000	0.000
S2	0.003	0.000	0.000
S3	0.003	0.000	-0.000
S4	0.003	0.000	-0.000
S5	0.004	0.000	-0.000
S6	0.003	0.000	-0.000
S7	0.003	0.000	-0.000
S8	0.003	0.000	0.000

	Company	Kerr-McGee Oil and Gas Onshore LP
	Well	Sarchet 36N-20HZ
	Field	Wattenberg
	County	Weld
	State	Colorado