



Radial Cement Bond  
Gamma Ray  
Casing Collar Log

Company Kerr-McGee Oil & Gas Onshore, L.P.  
Well Jaguar 36C-35HZ  
Field Wattenberg  
County Weld  
State Colorado

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Location: API #: 05-123-42624  
SEC 23 TWP 1N RGE 67W  
Permanent Datum Ground Level Elevation ---  
Log Measured From Kelly Bushing 17 FT  
Drilling Measured From Kelly Bushing  
Other Services  
Gauge Ring  
Elevation  
K.B. ---  
D.F. ---  
G.L. ---

Date	28-FEB-2017									
Run Number	One									
Depth Driller	18056 FT									
Depth Logger	7152 FT									
Bottom Logged Interval	7147 FT									
Top Log Interval	Surface									
Open Hole Size	7.875"									
Type Fluid	Water									
Density / Viscosity	8.34 lb/gal									
Max. Recorded Temp.	222°F									
Estimated Cement Top	Surface									
Time Well Ready	ROA									
Time Logger on Bottom	1430									
Equipment Number	HD-0361									
Location	Fort Lupton, CO									
Recorded By	Chad Bryan									
Witnessed By	Corey Bales									
Borehole Record				Tubing Record						
Run Number	Bit	From	To	Size (in)	Weight (lb/ft)	From	To			
Casing Record	Size (in)	Wgt (lb/ft)	Grade	Top	Bottom					
Surface Casing	9 5/8	36	---	Surface	2262 FT					
Intermediate #1	5 1/2	17	---	Surface	18056 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 referenced to Marker Joint at 6987 FT  
Adjusted -10 FT to correlate with Marker Joint  
Log ran from 7152 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 Reliance Oilfield Services, LLC!!

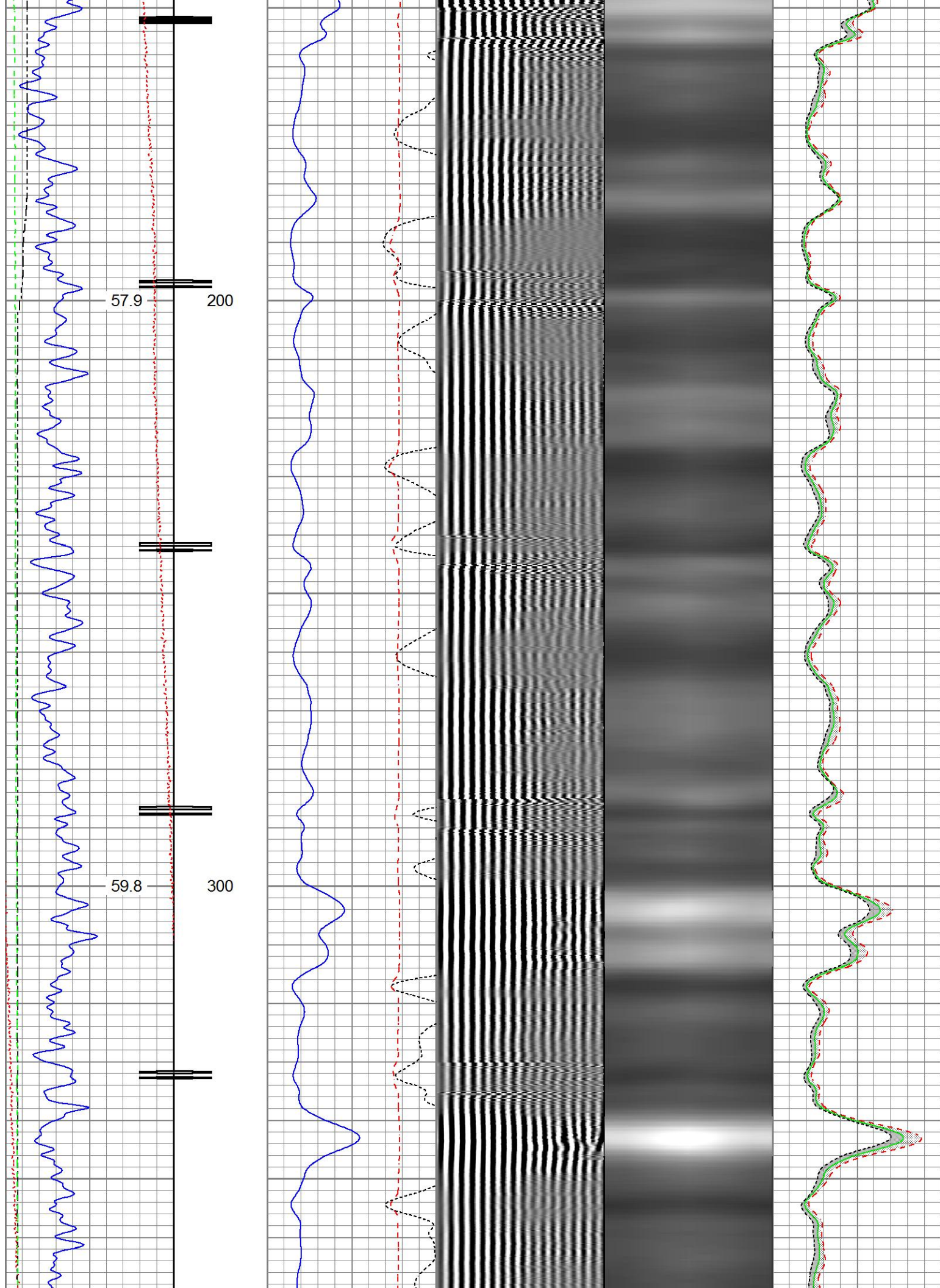


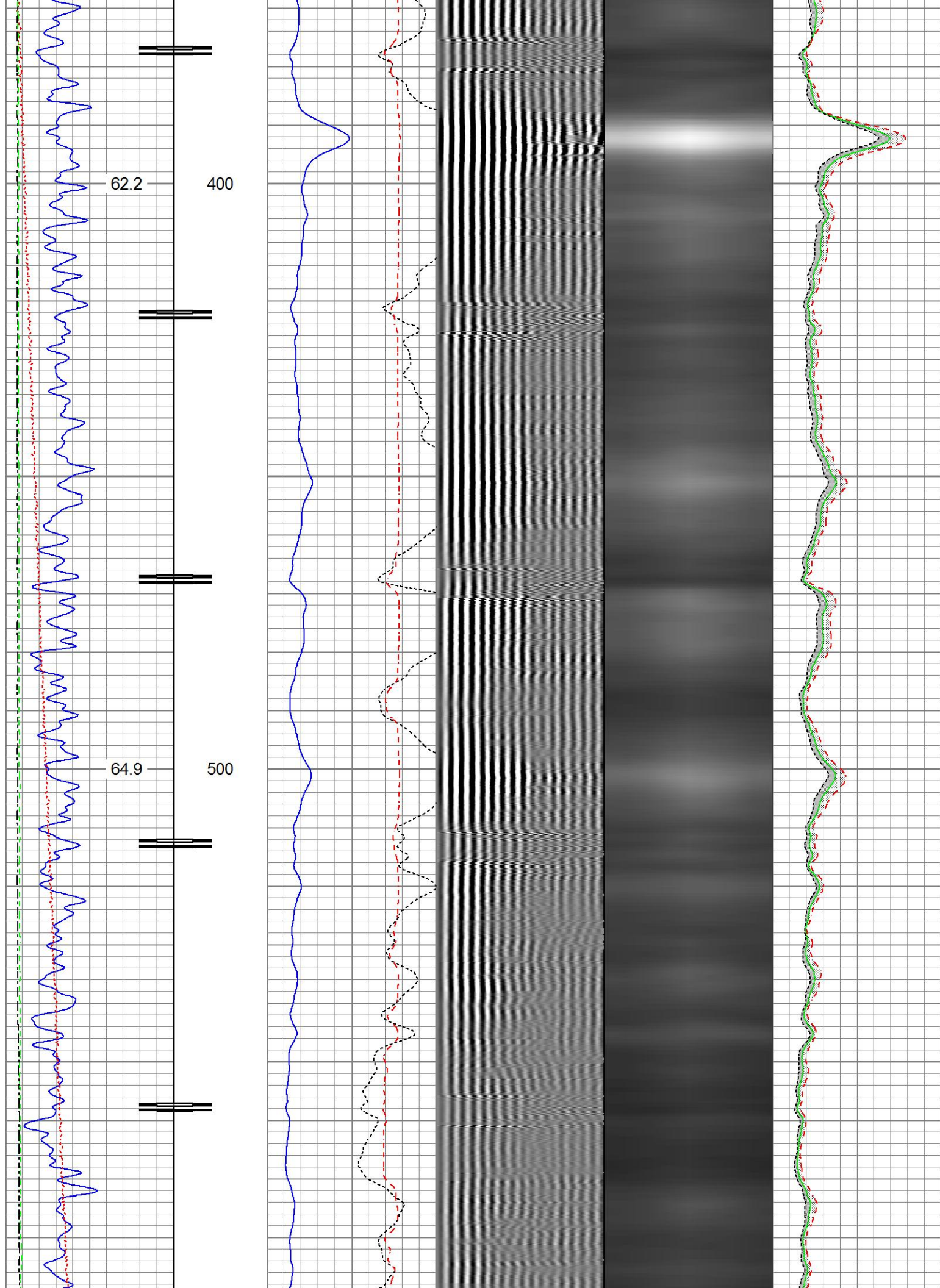
Main Pass

Recorded with 2800 PSI Surface Induced Pressure

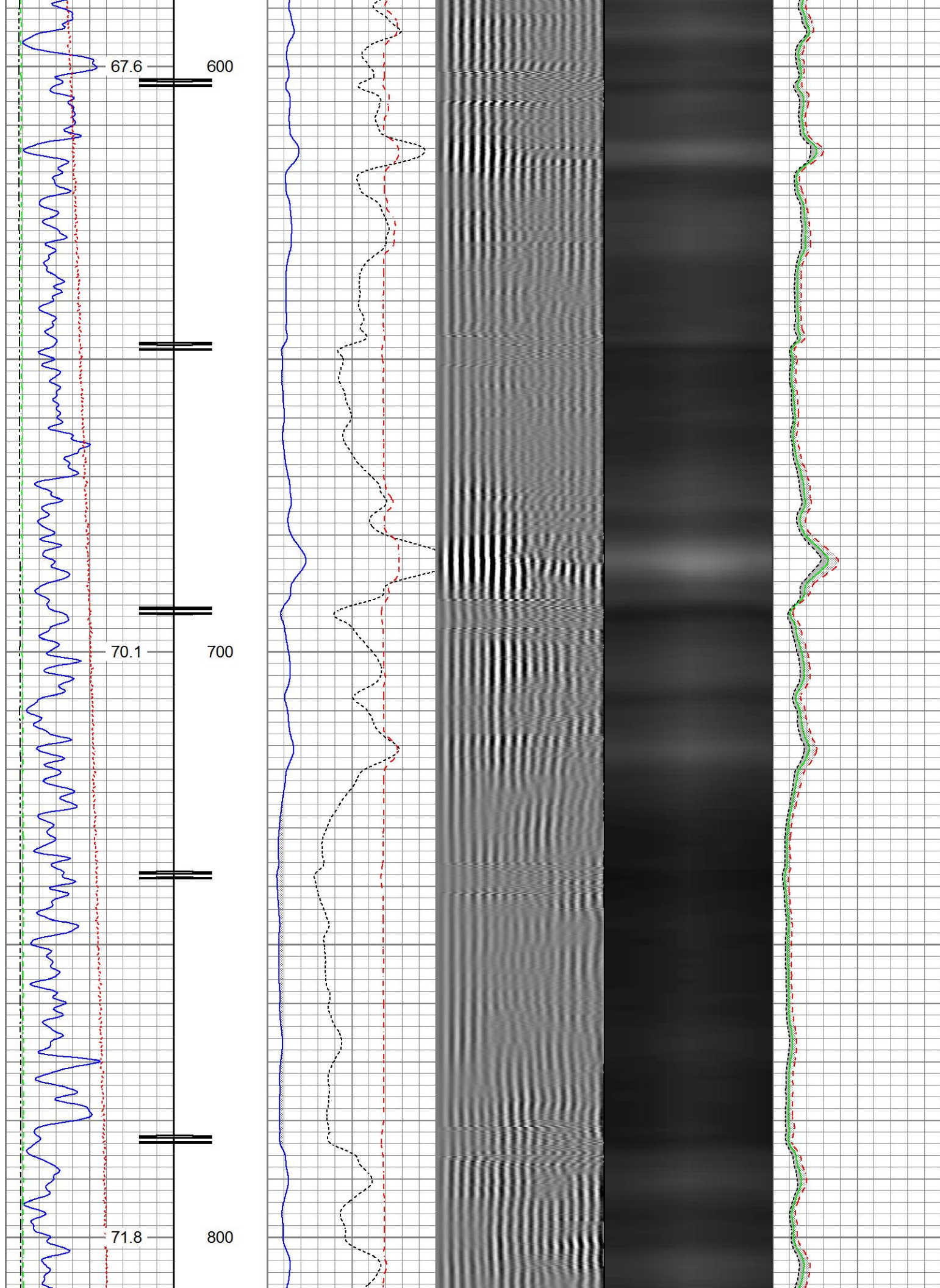
Gamma Ray			3' Amplitude			5' Variable Density Log		Sector Map		Average Amplitude	
0	(GAPI)	120	0	(mV)	100	400	1200			0	100
Casing Collar Locator			3' Amplitude x 5							Minimum Amplitude	
Temperature			0 (mV) 20							0 100	
0	(degF)	20	3' Travel Time							Maximum Amplitude	
Line Speed			650 (usec) 150							0 100	
-150	(ft/min)	150									
Line Tension											
0	(lb)	2000									

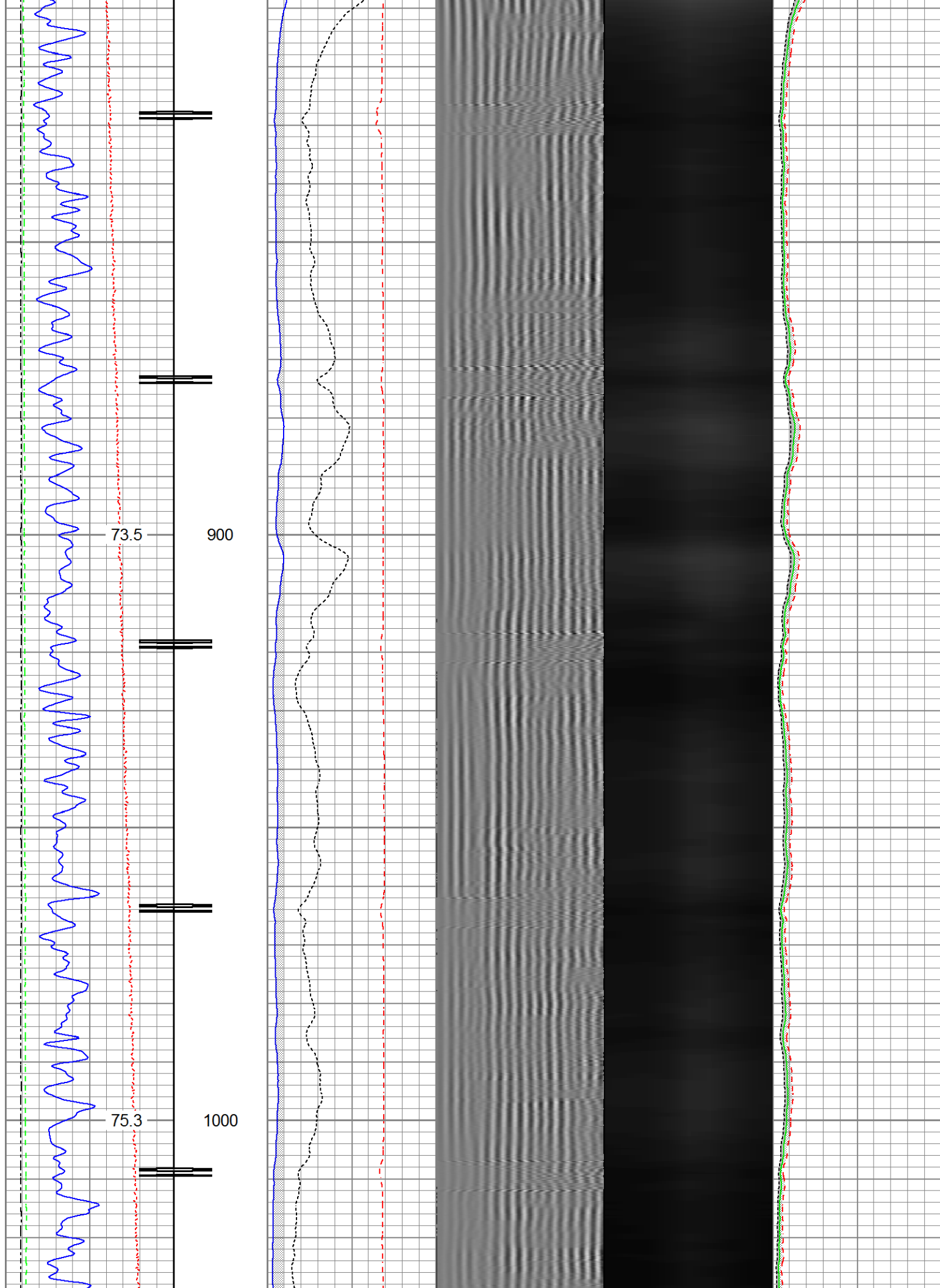




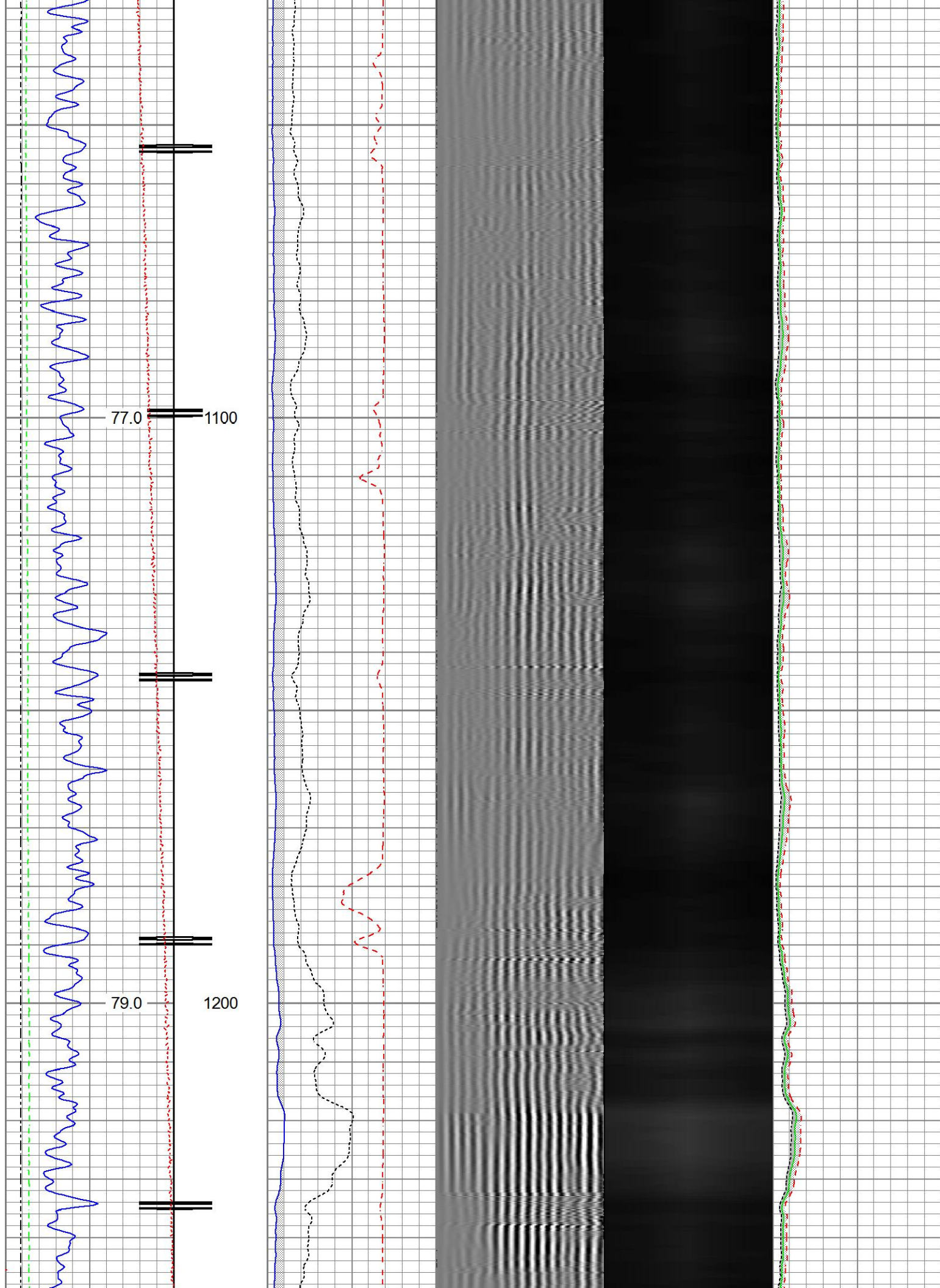


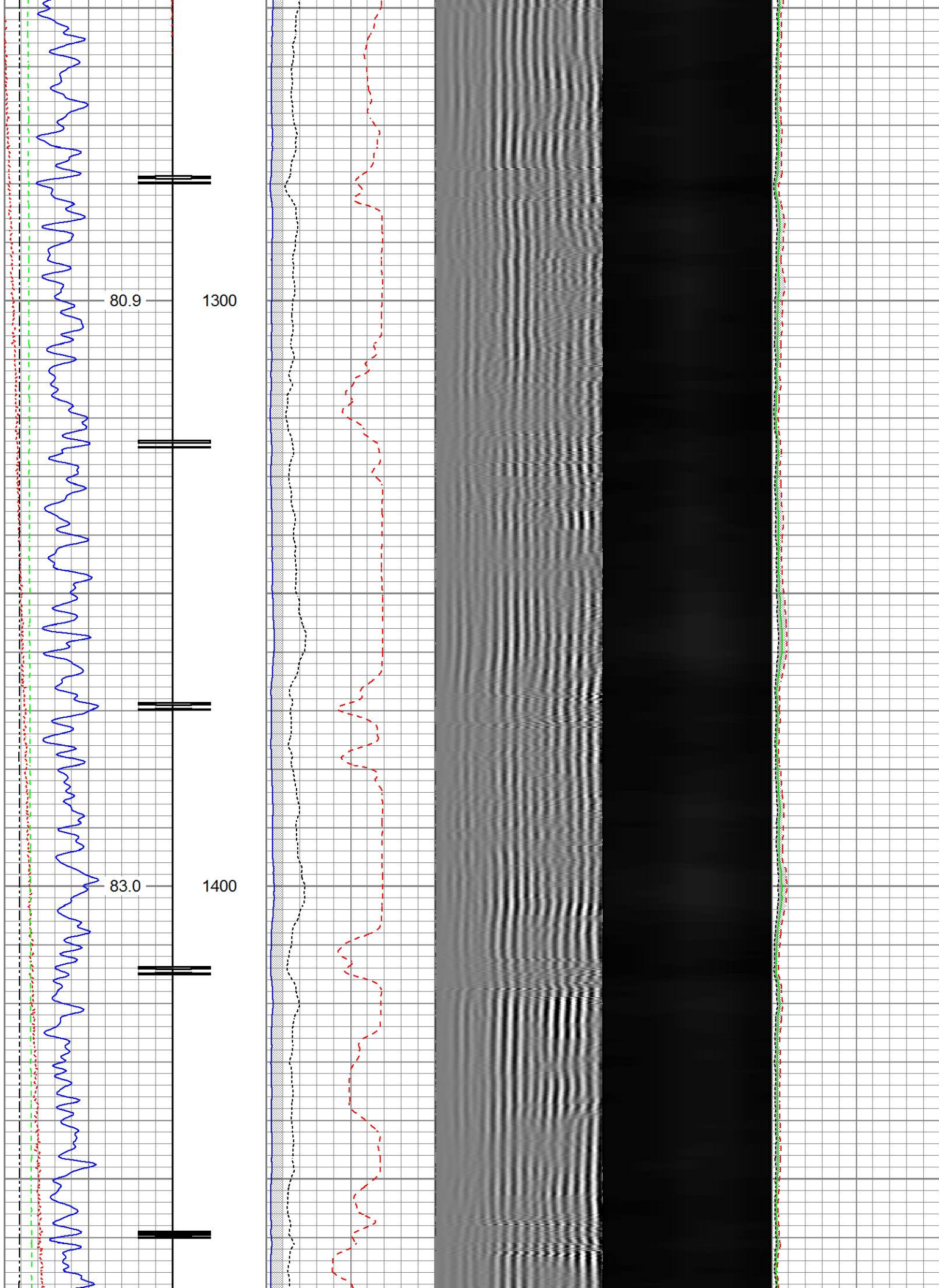




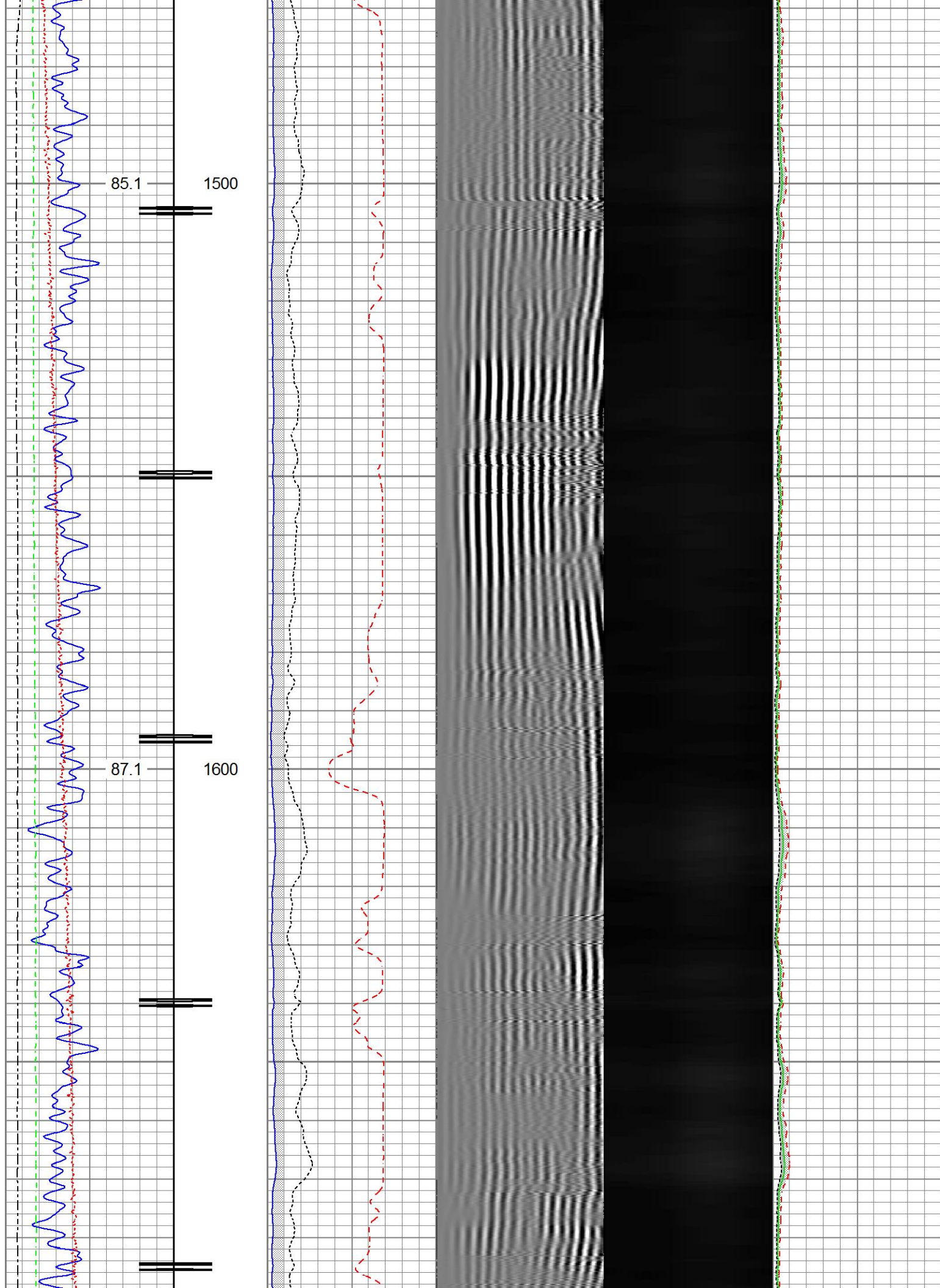


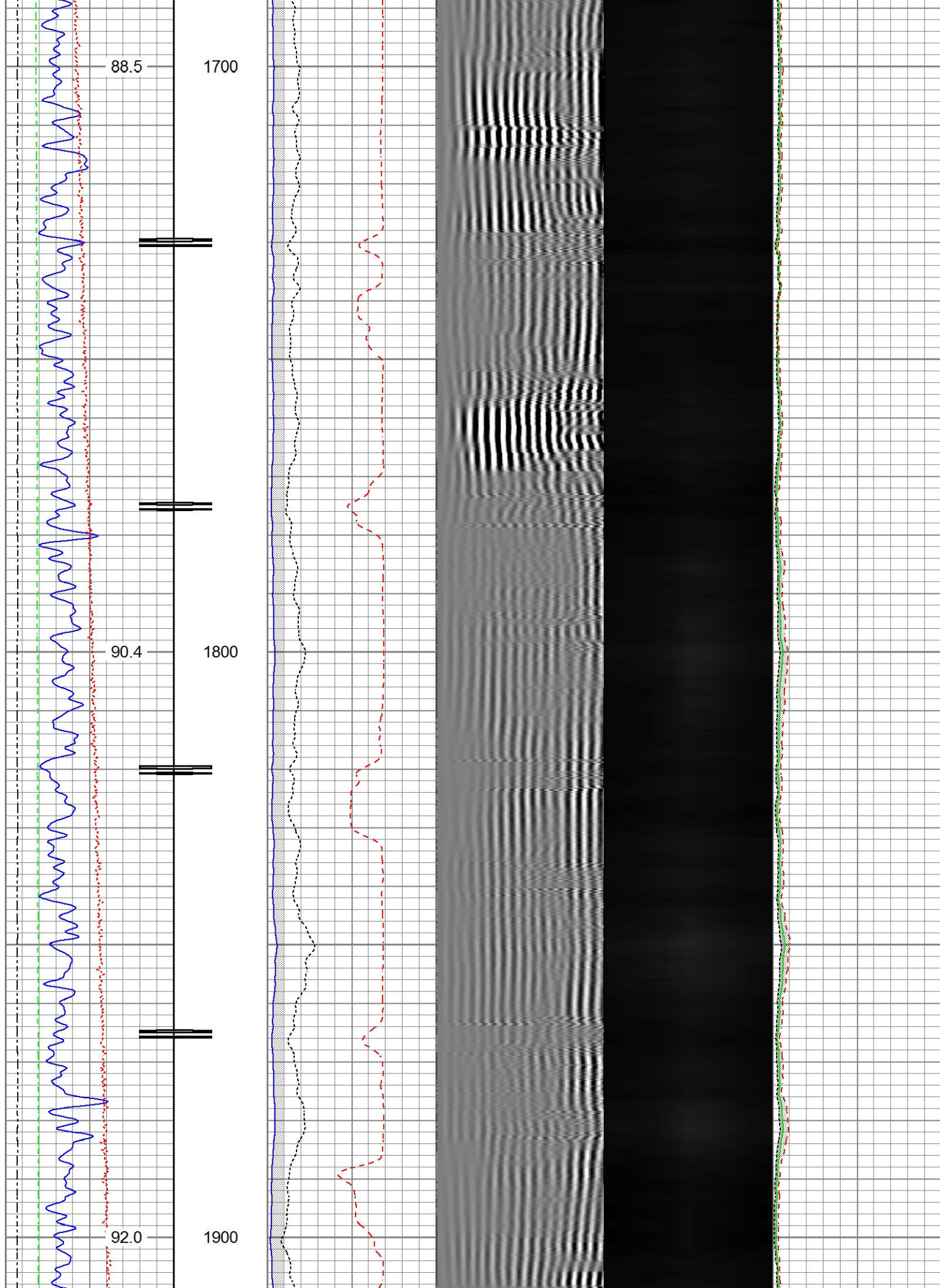




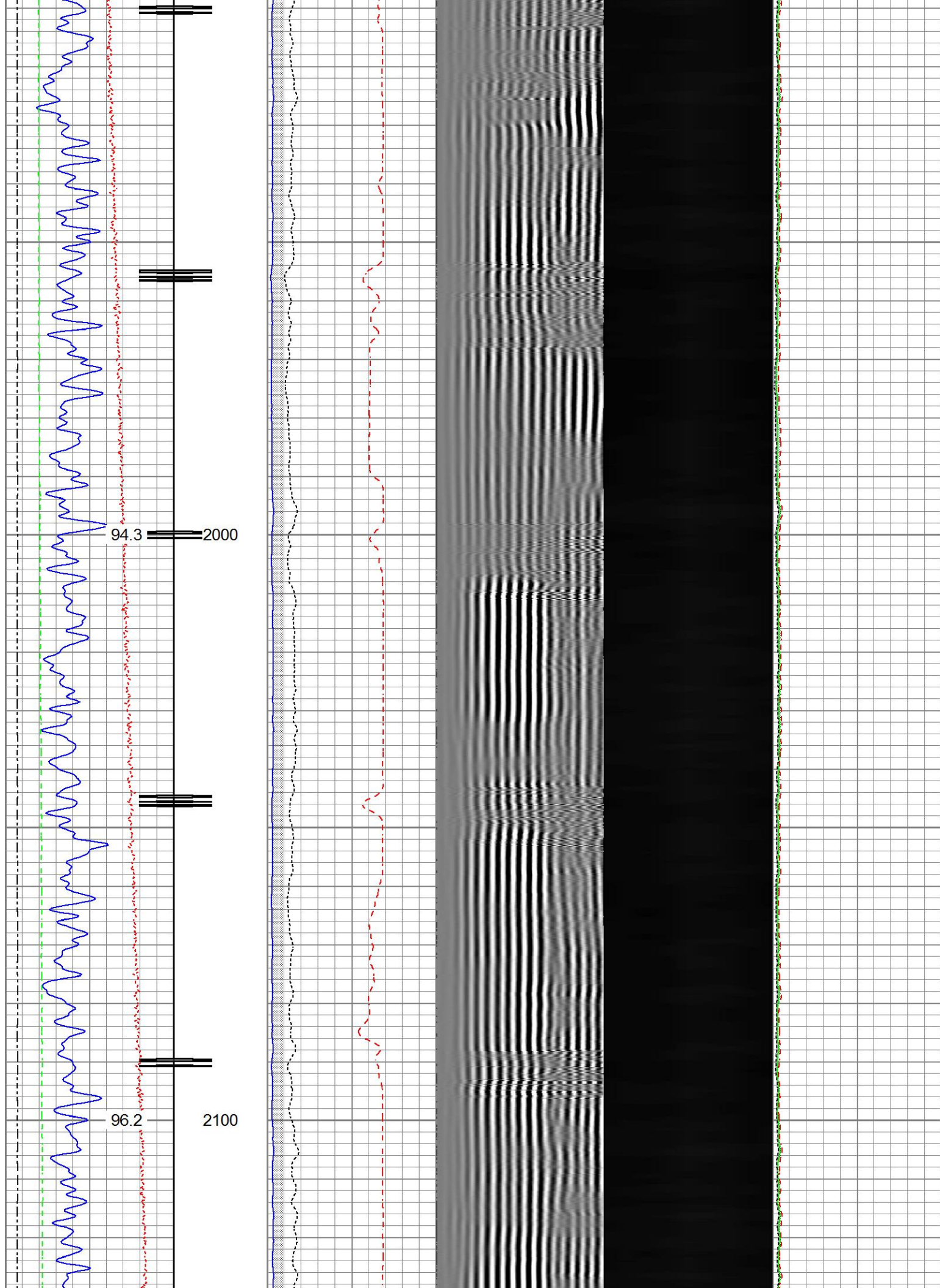


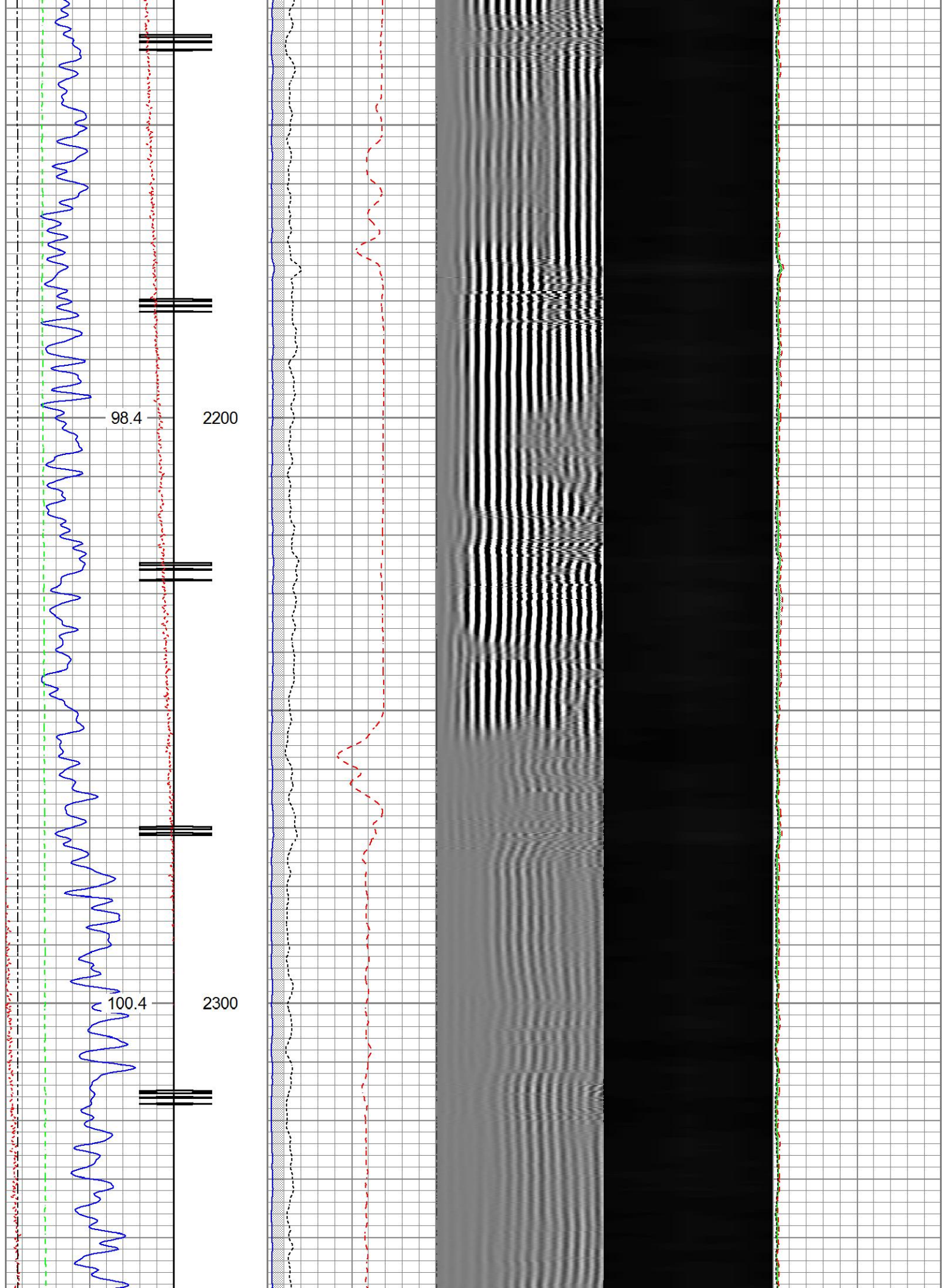




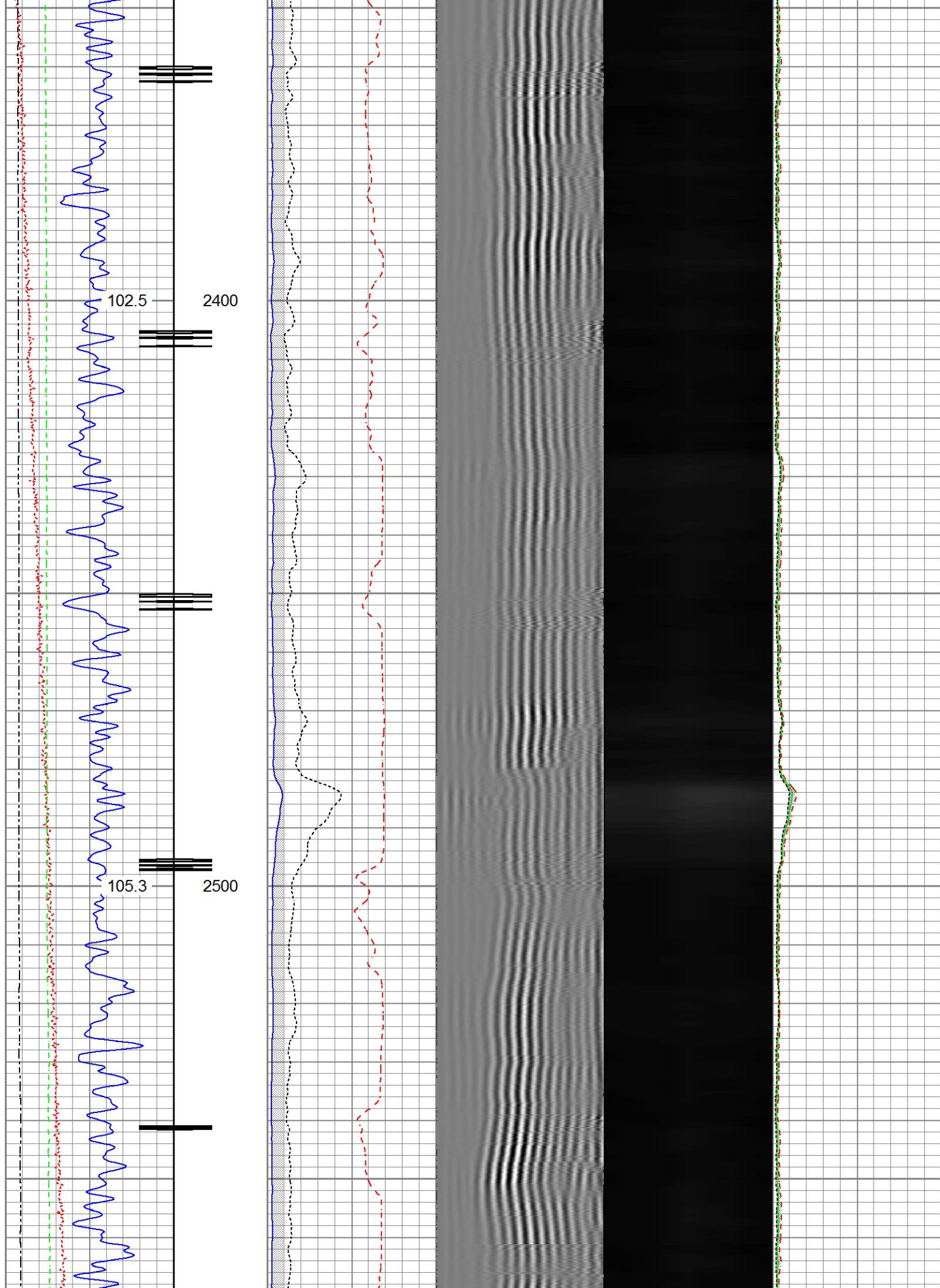


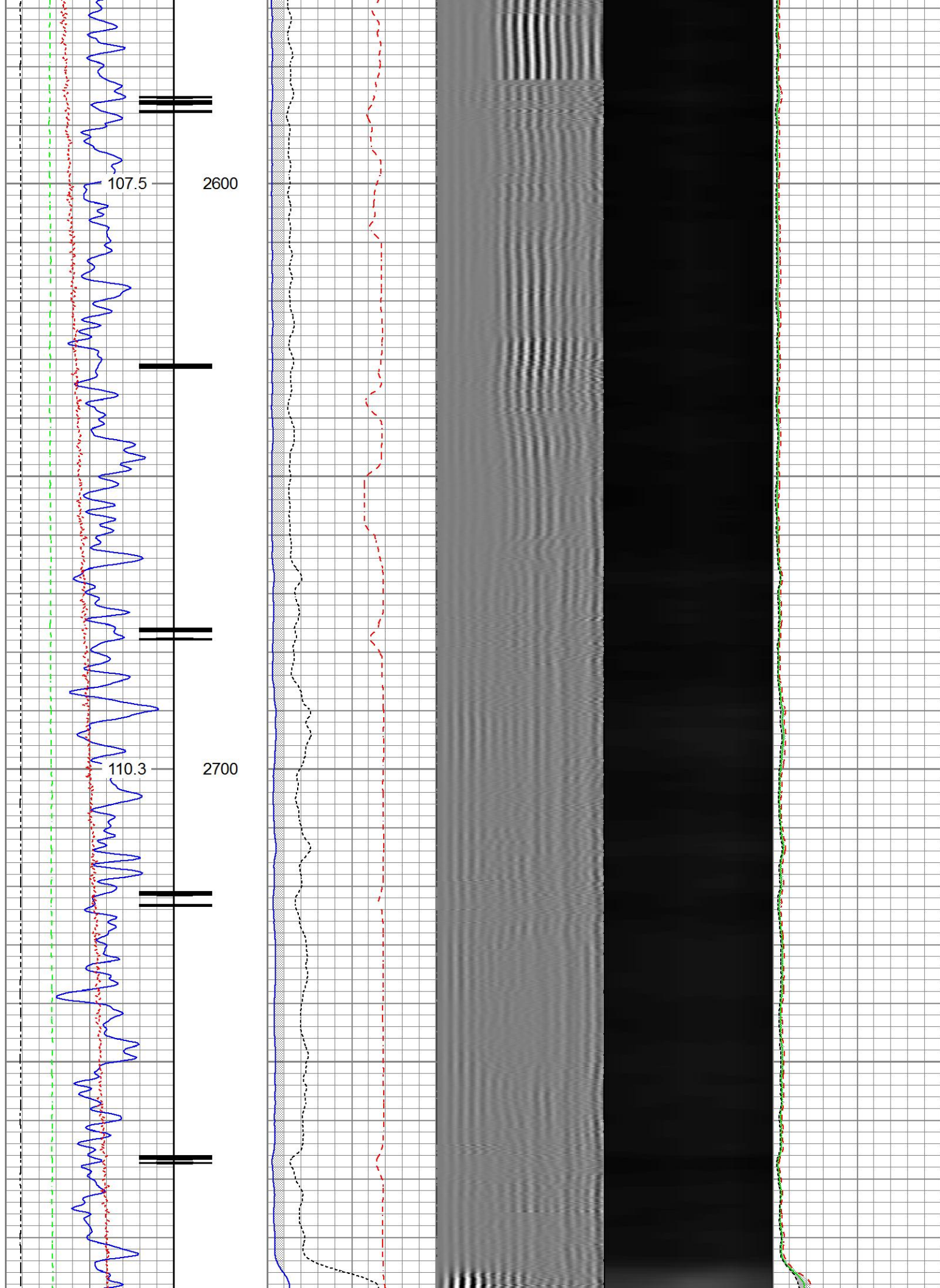




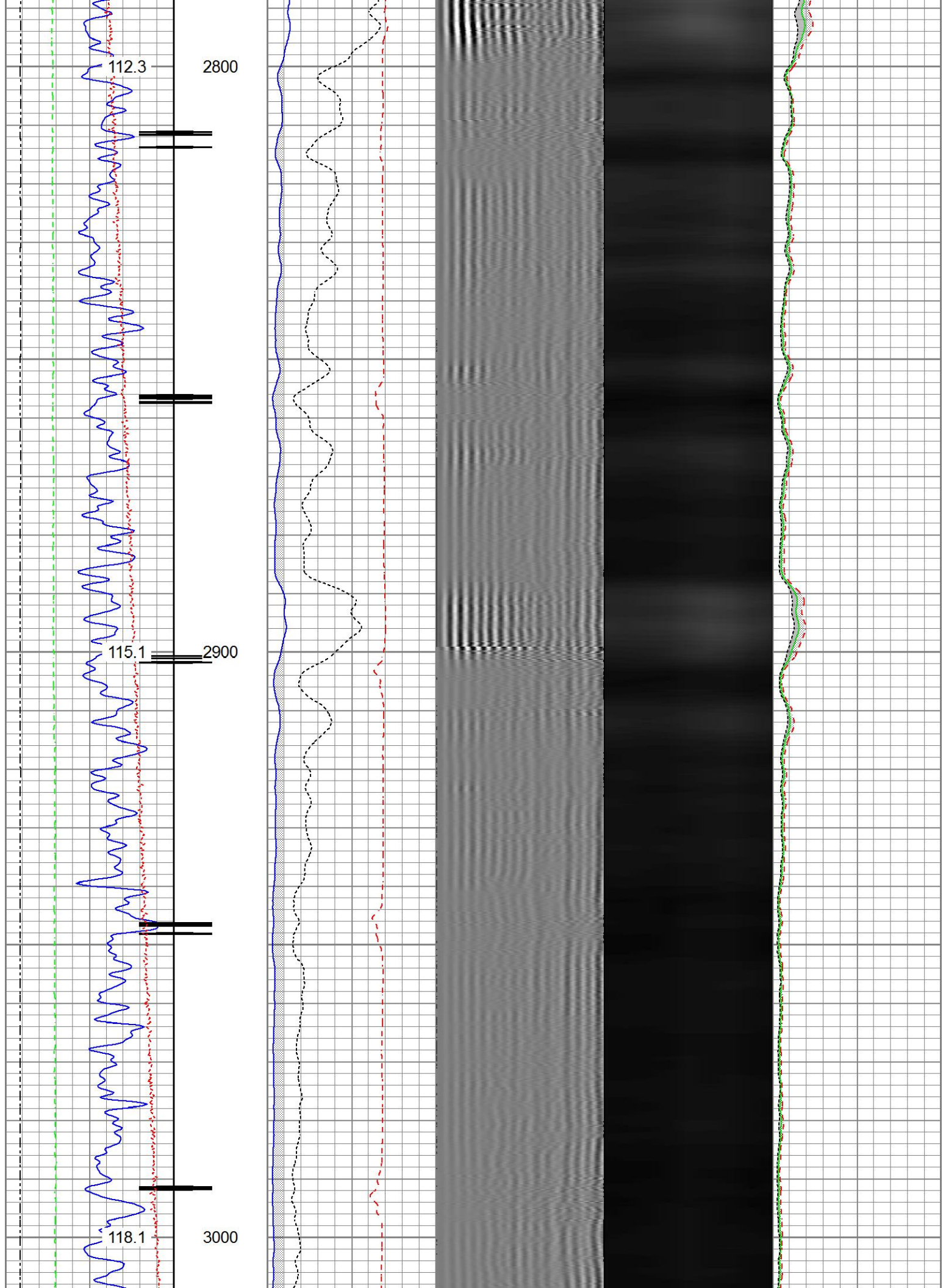


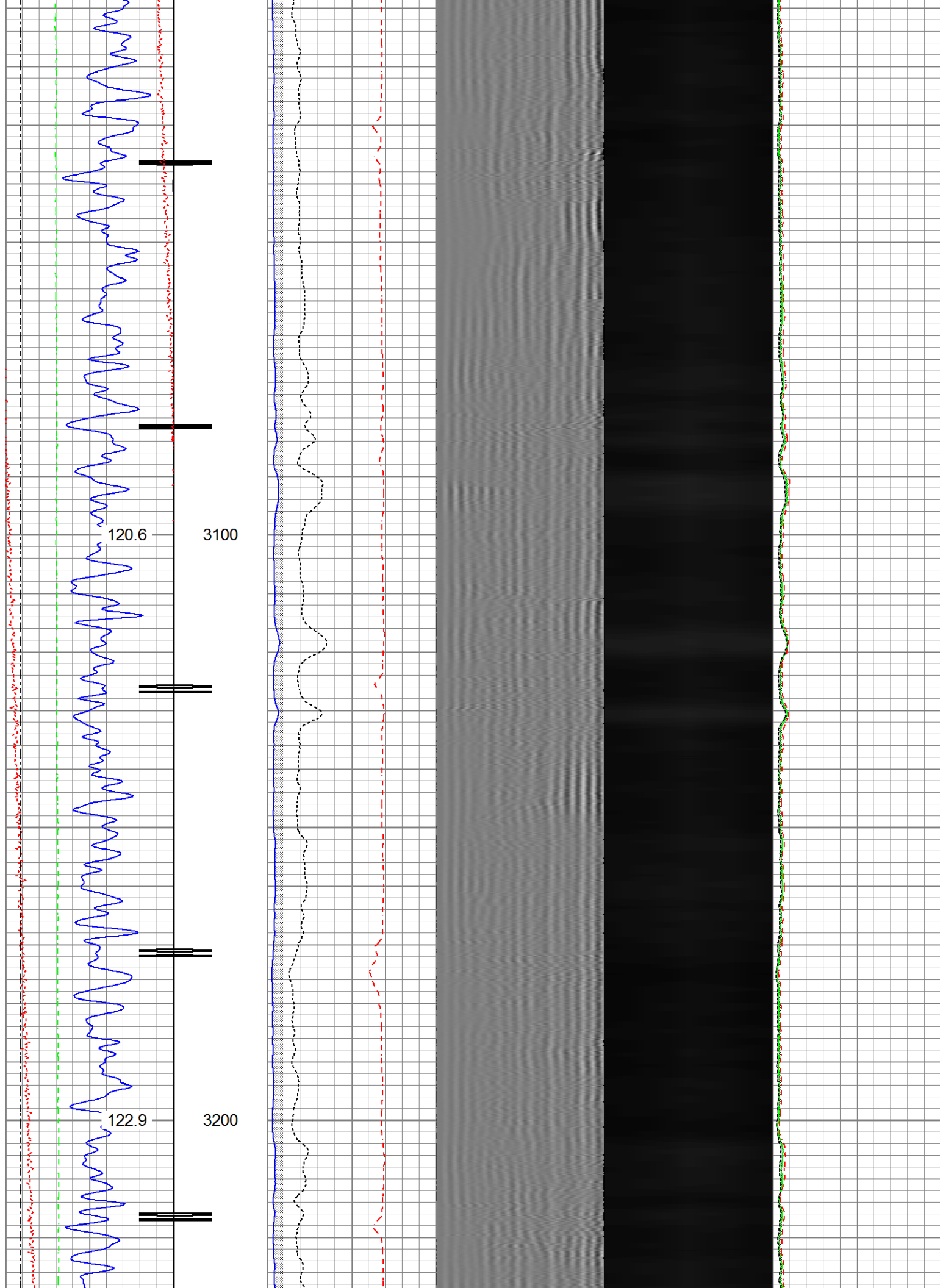




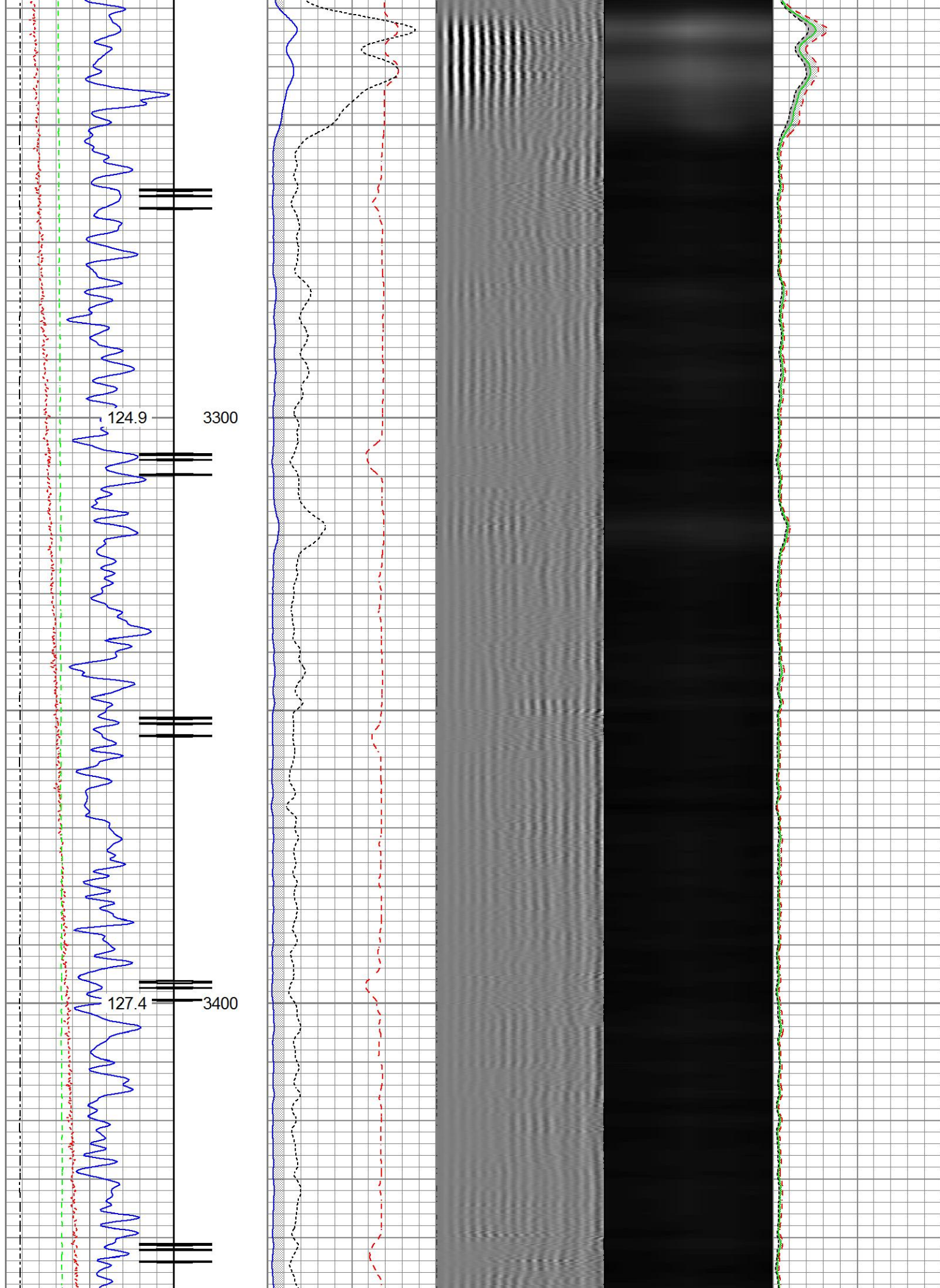


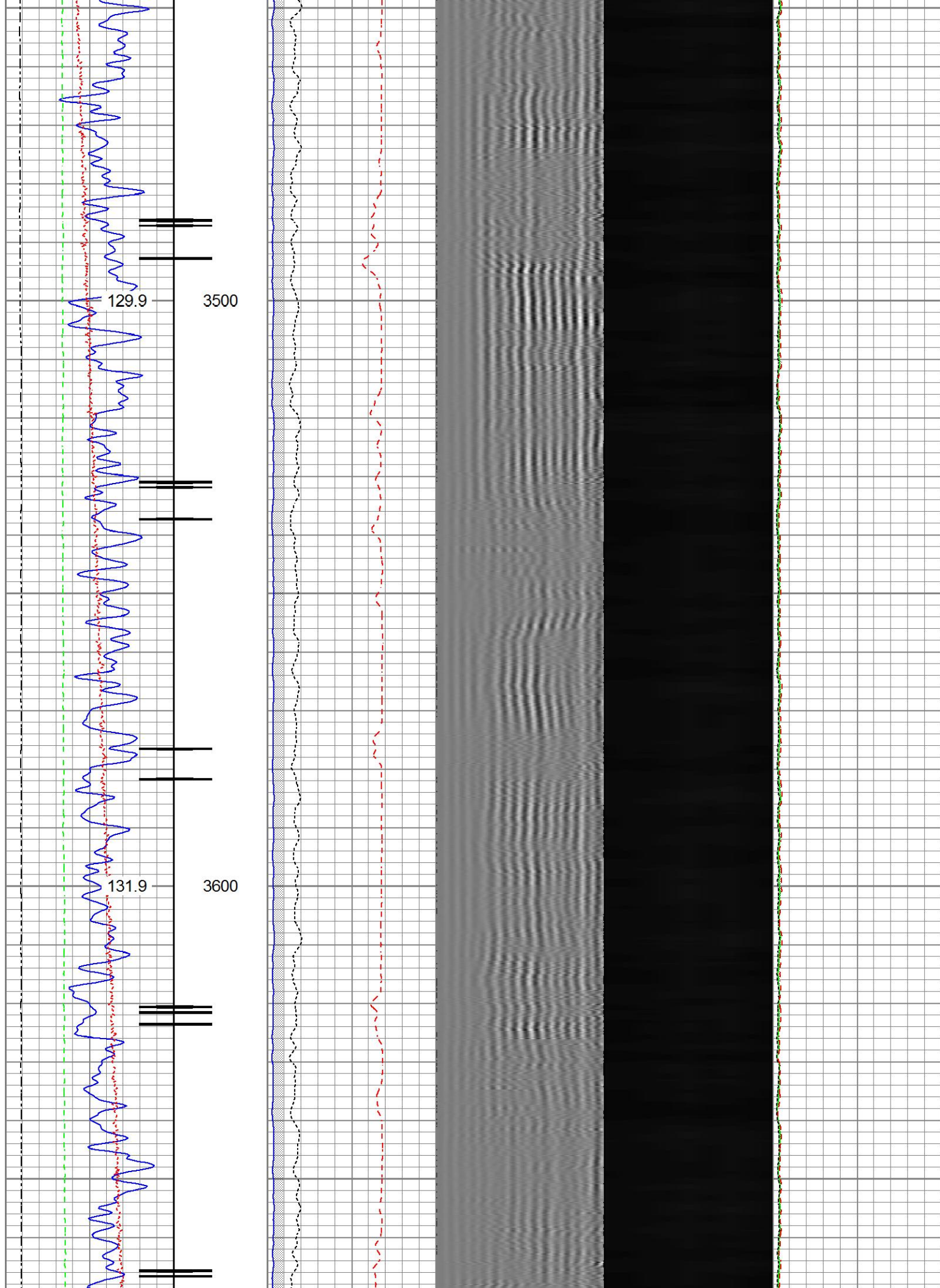




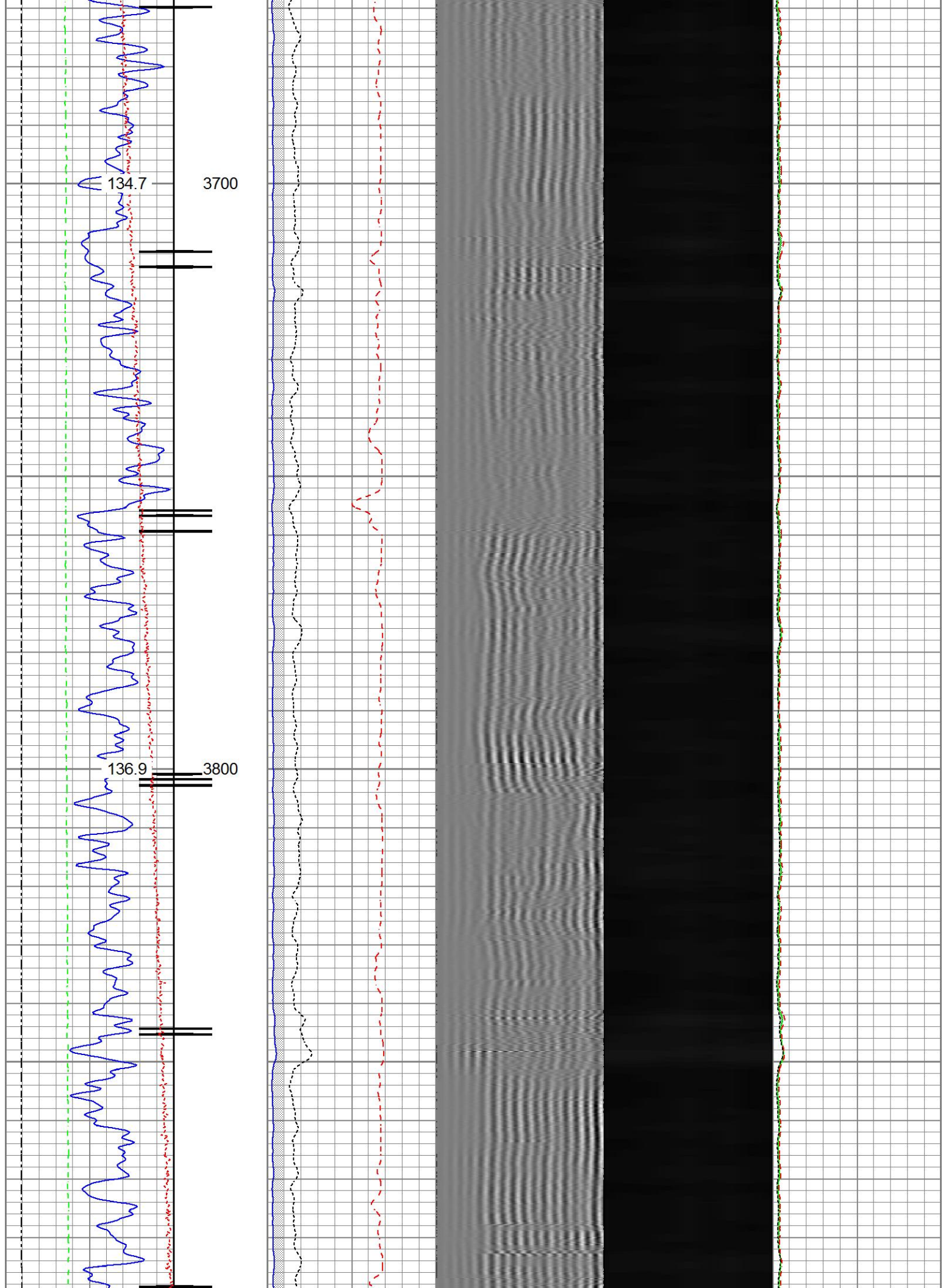


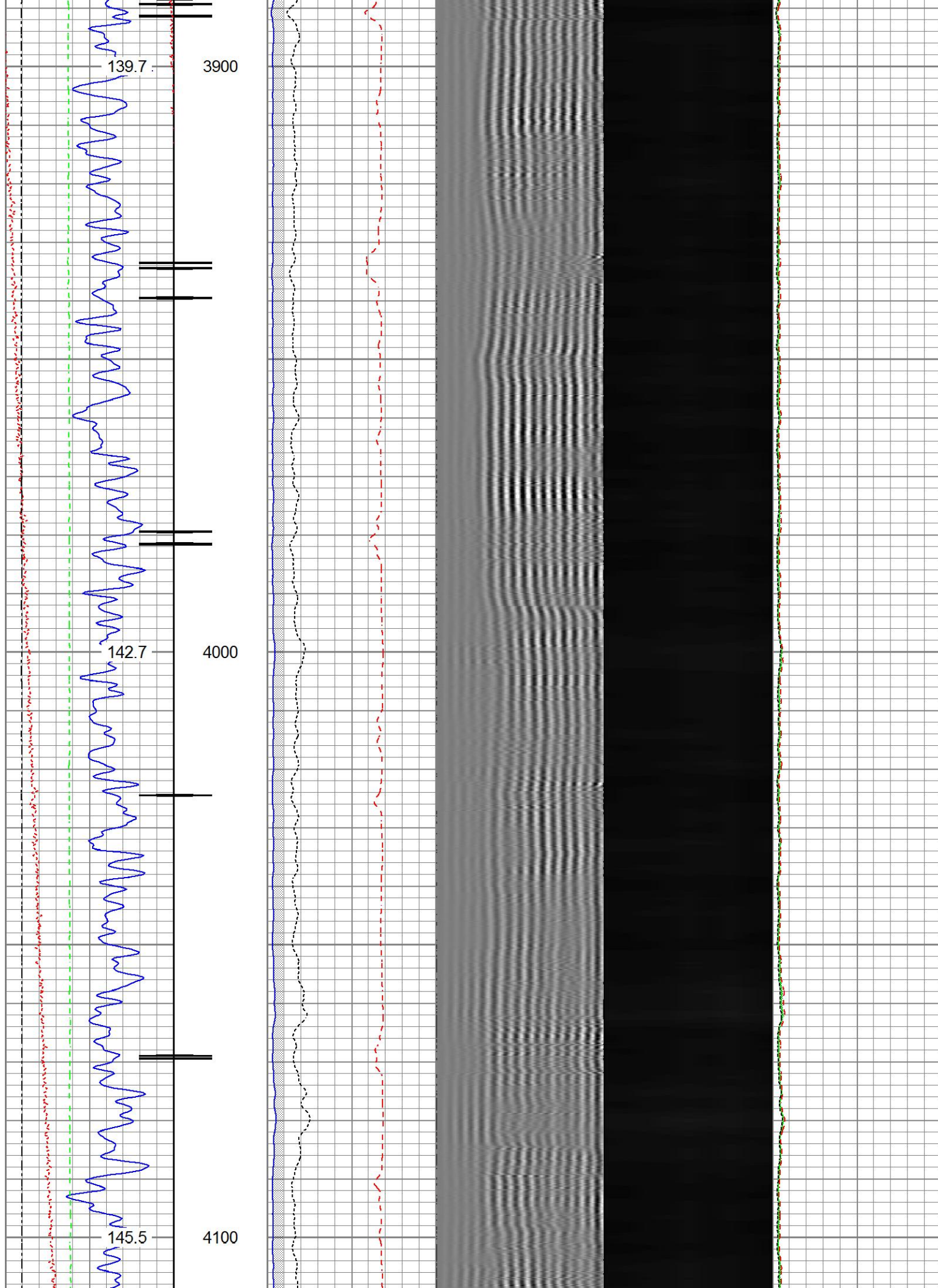




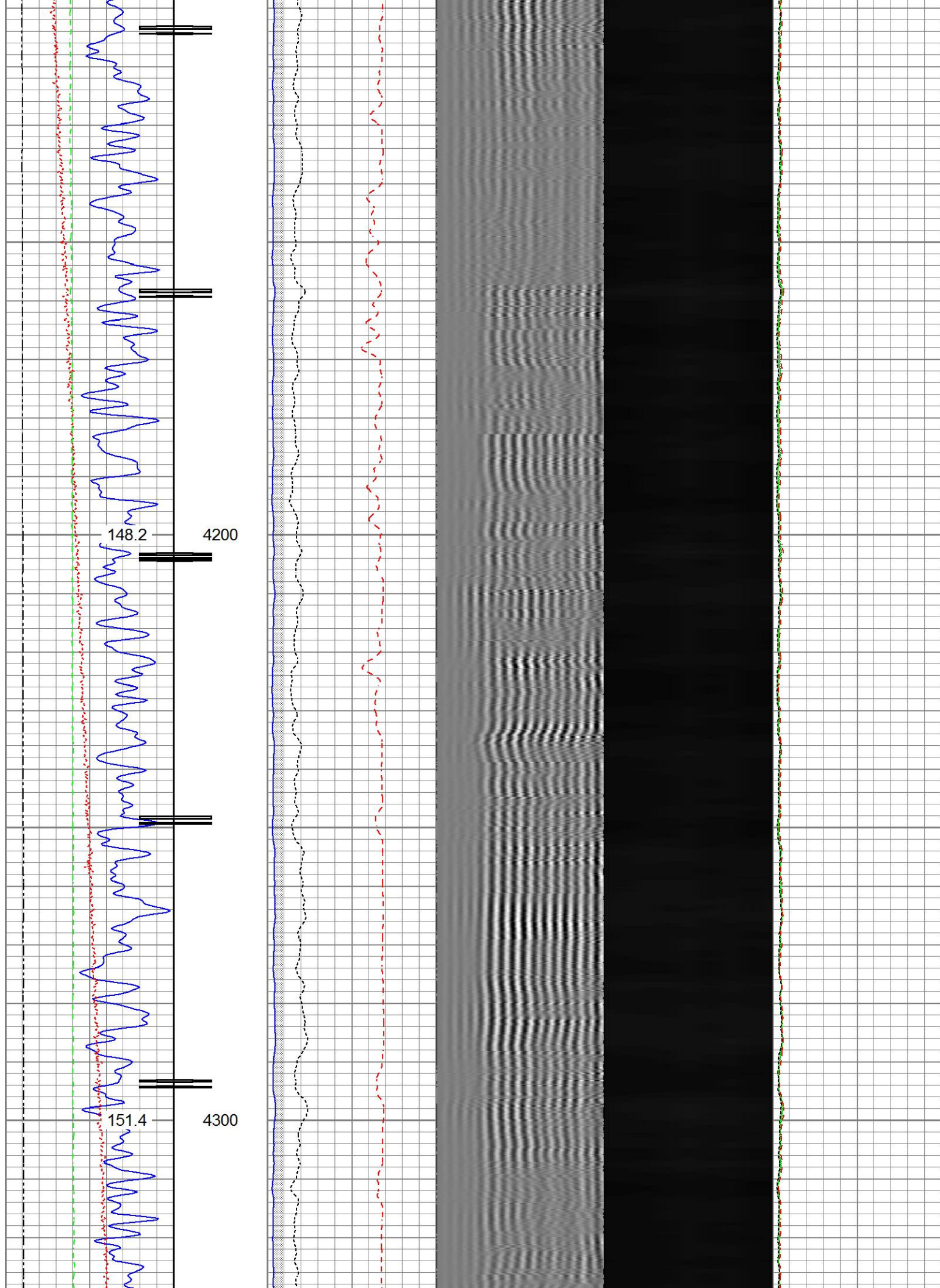


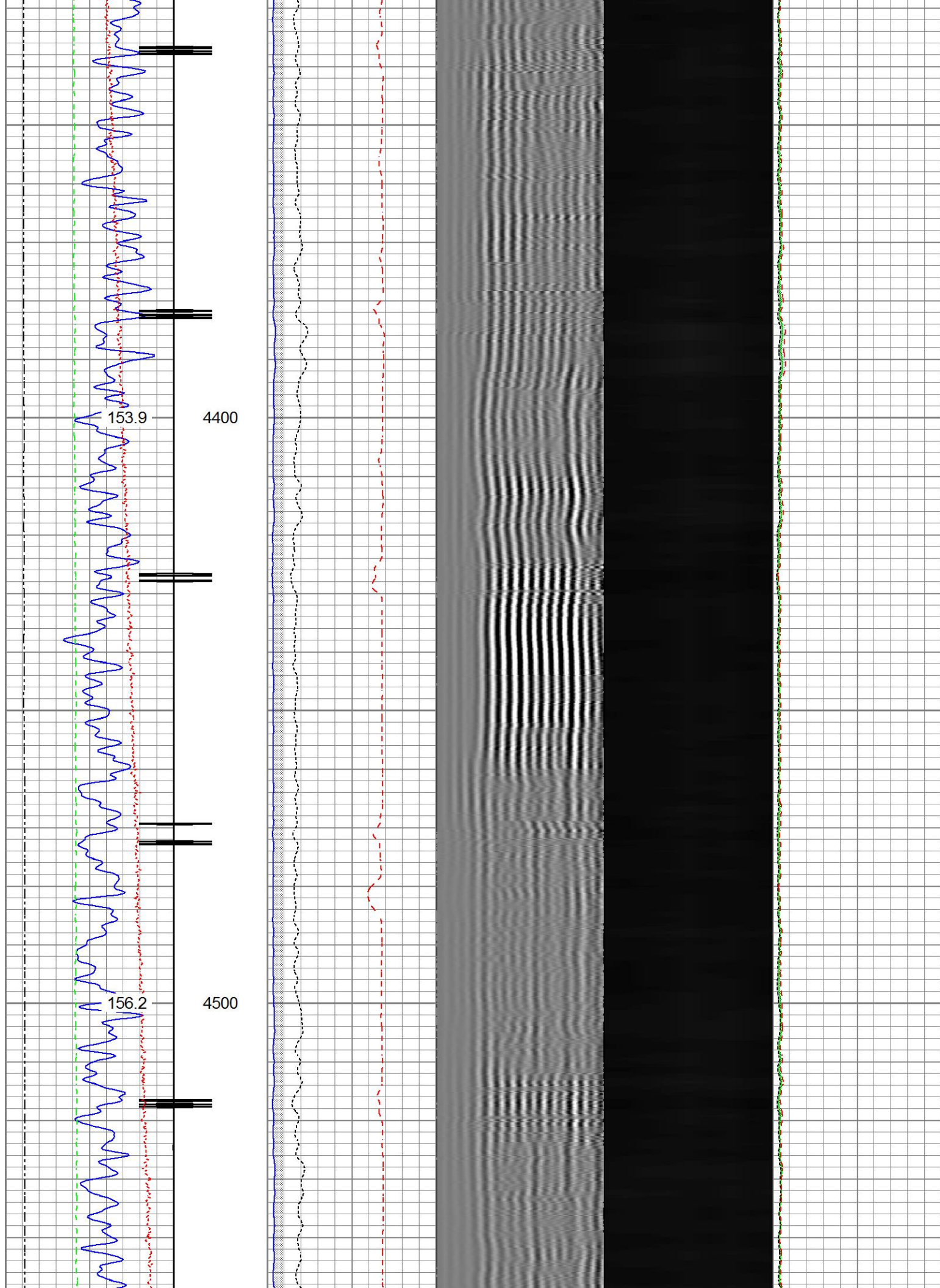




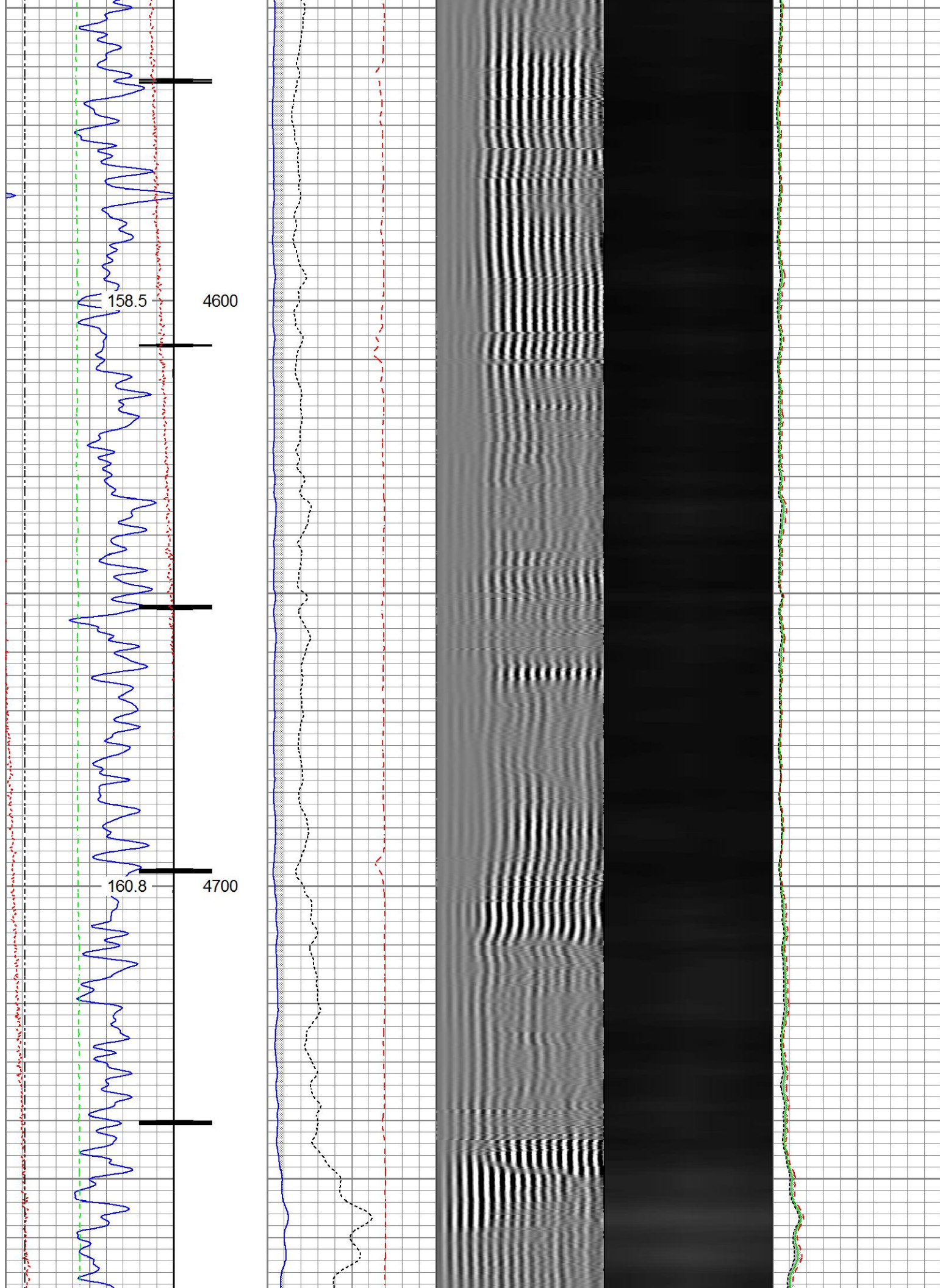


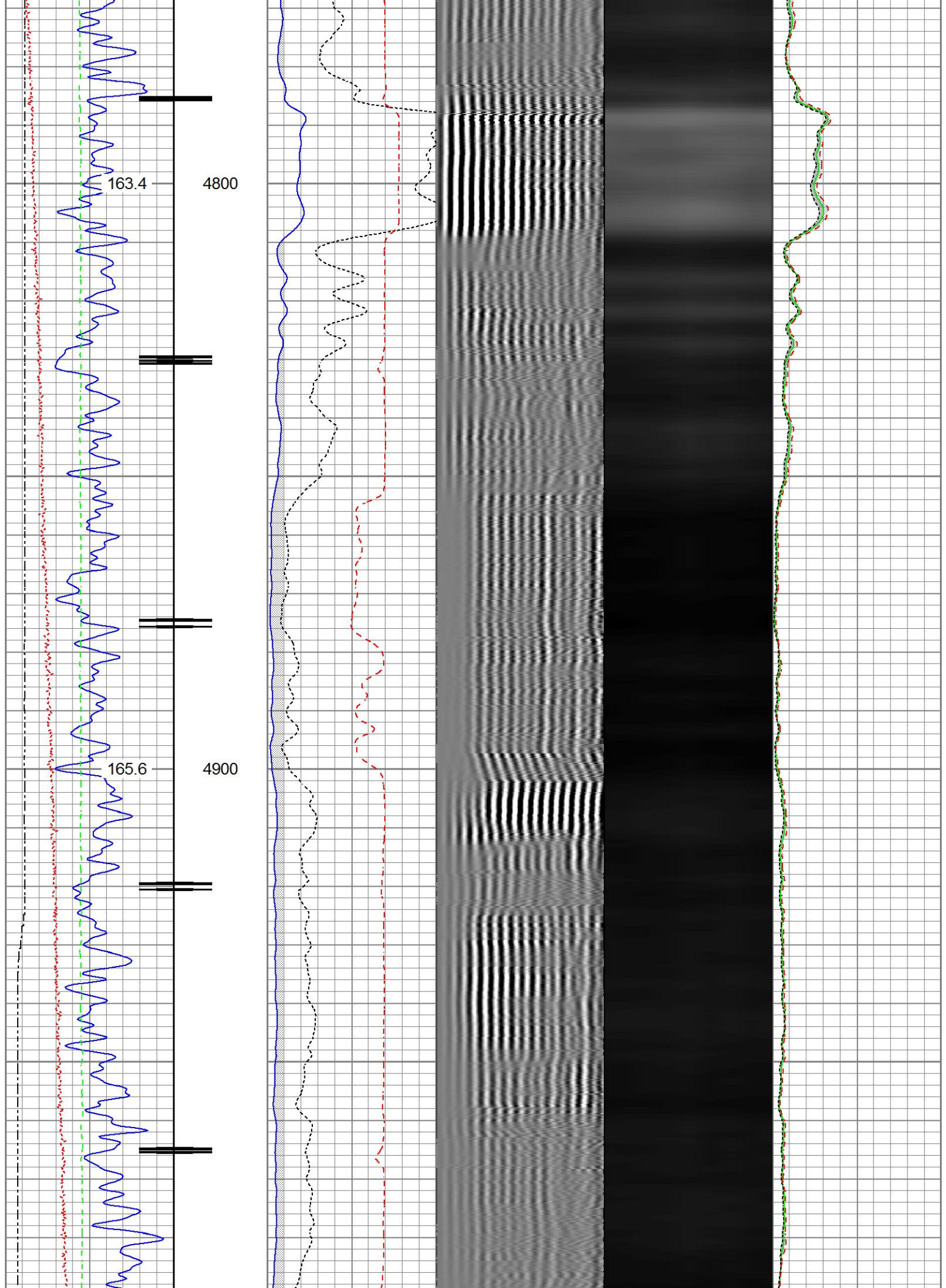




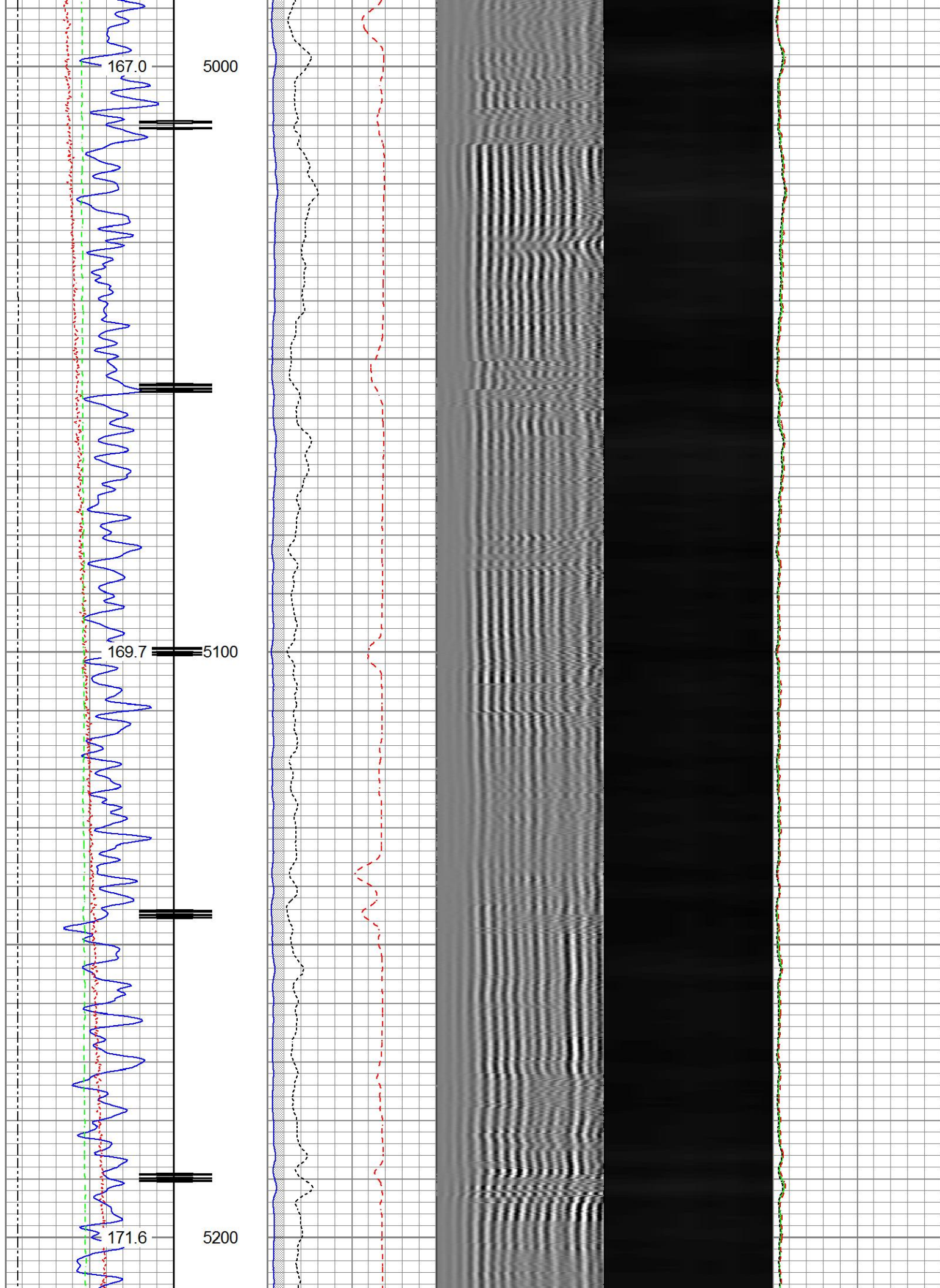


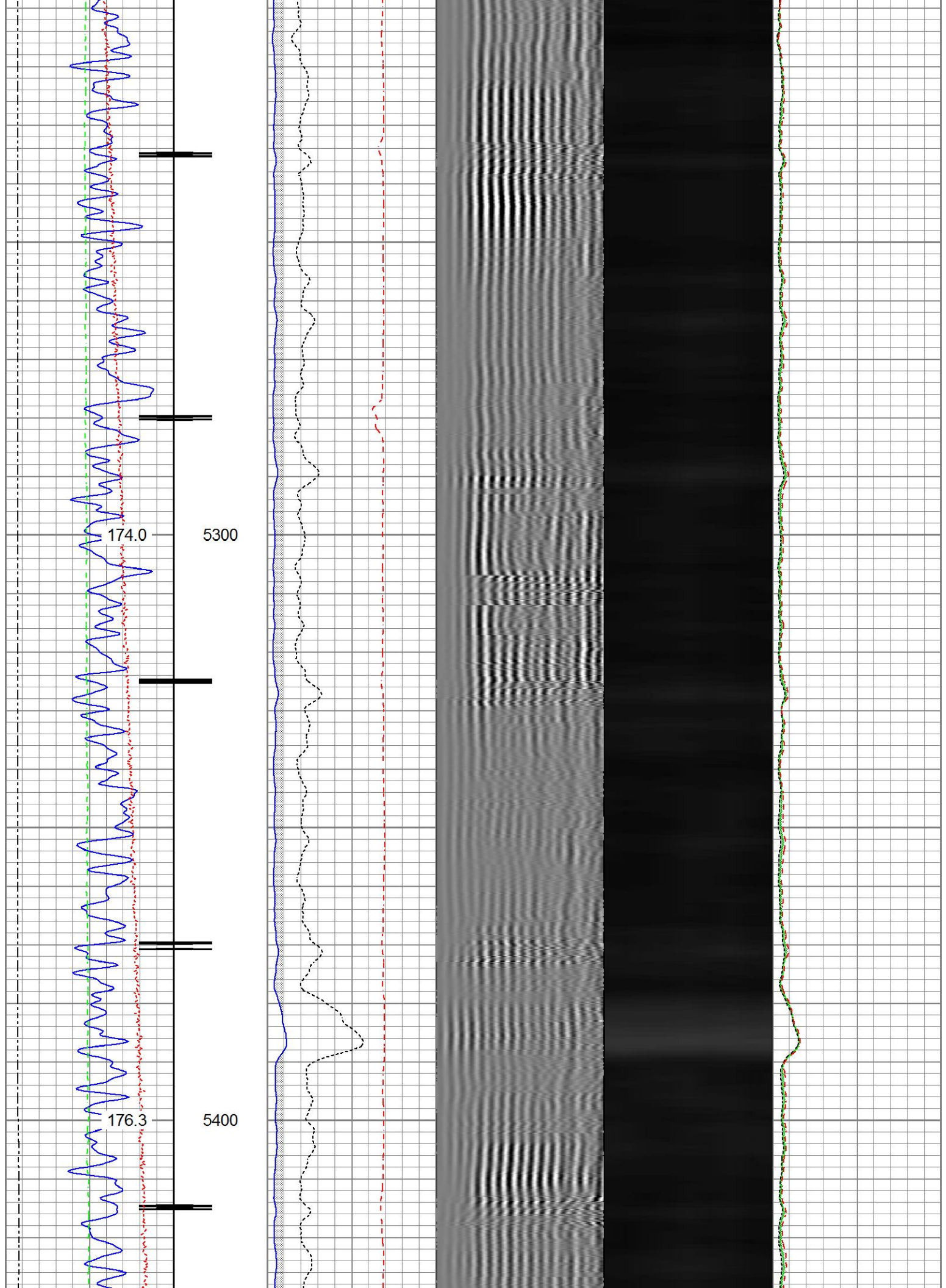




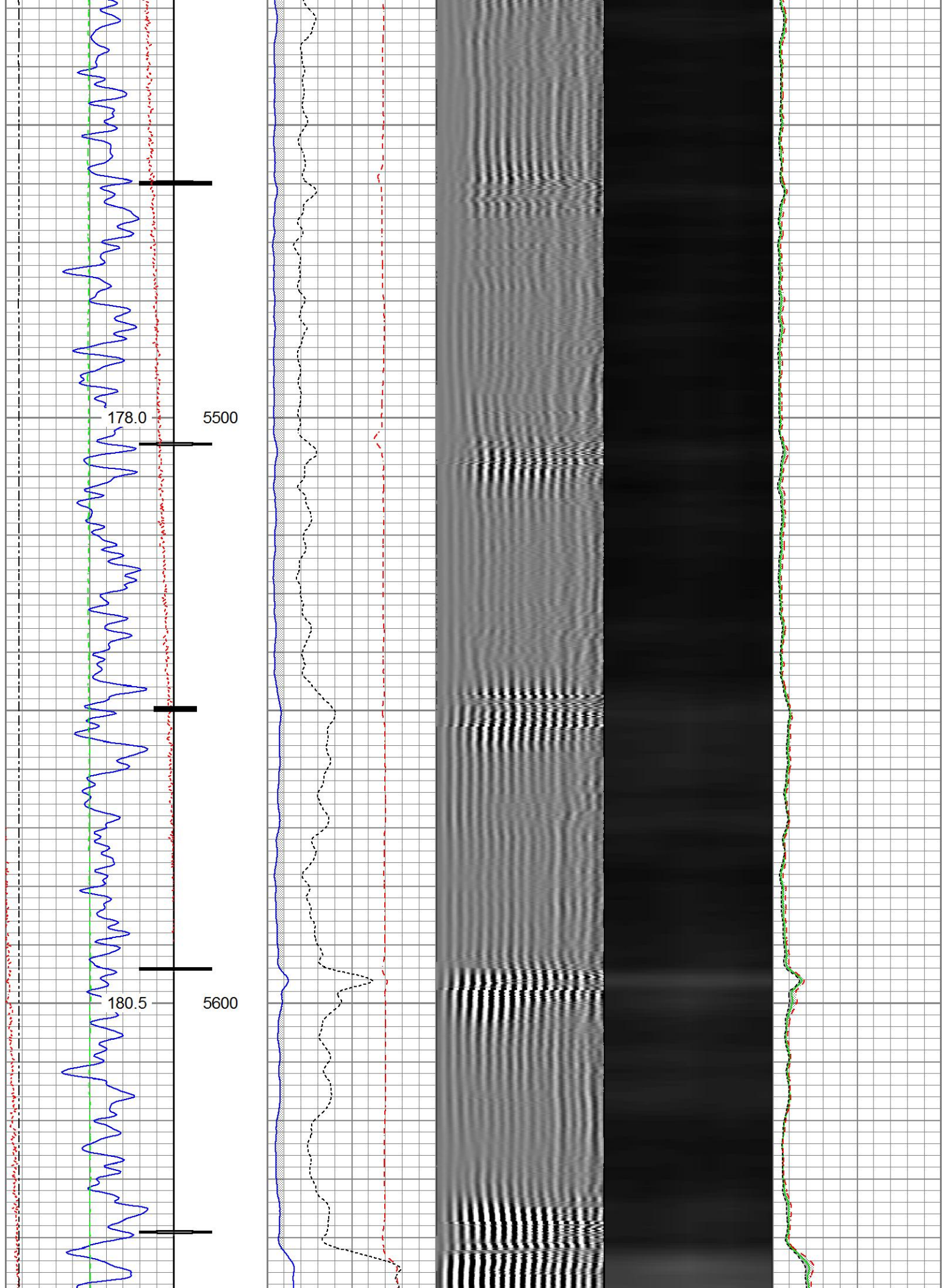


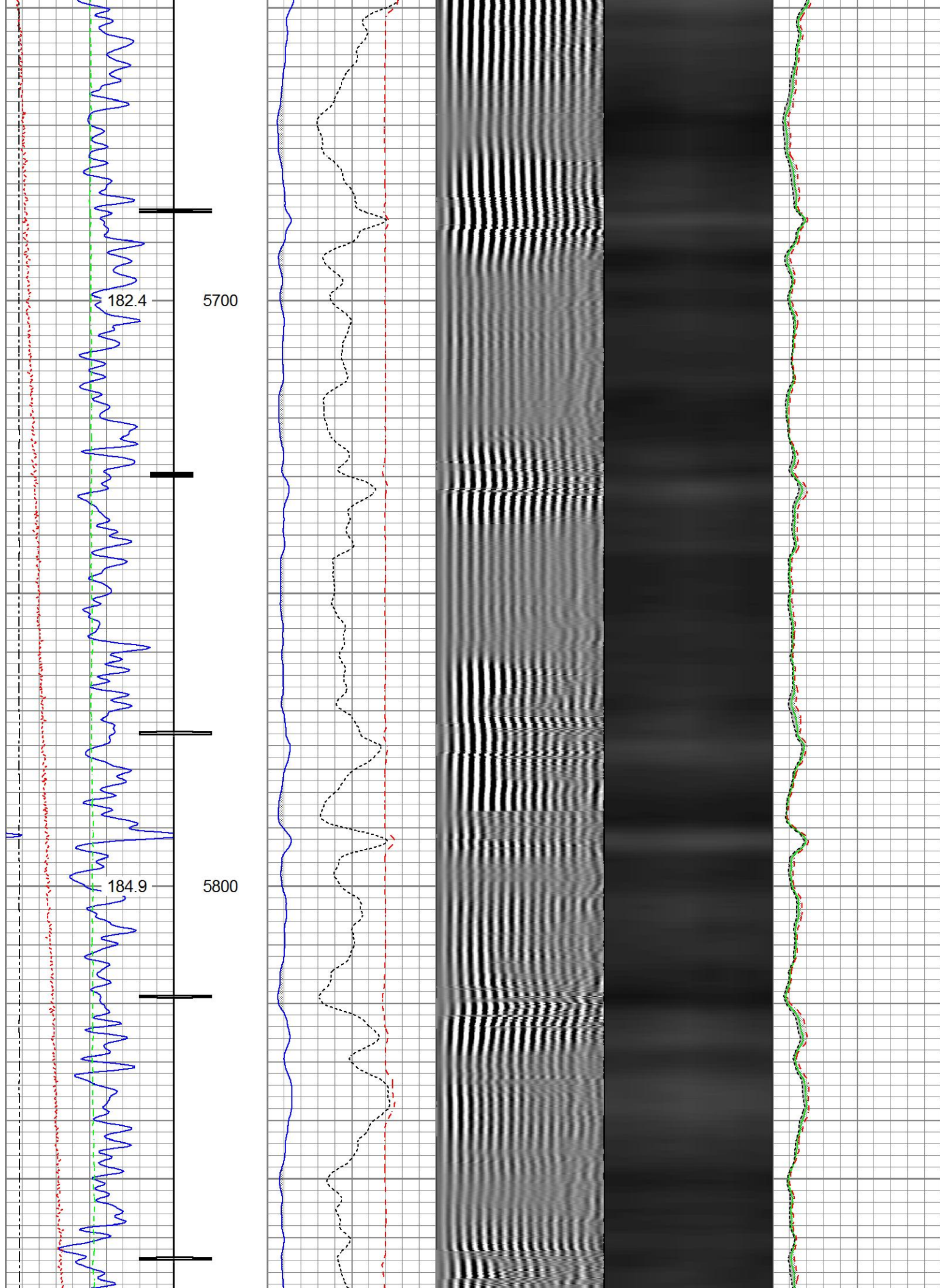




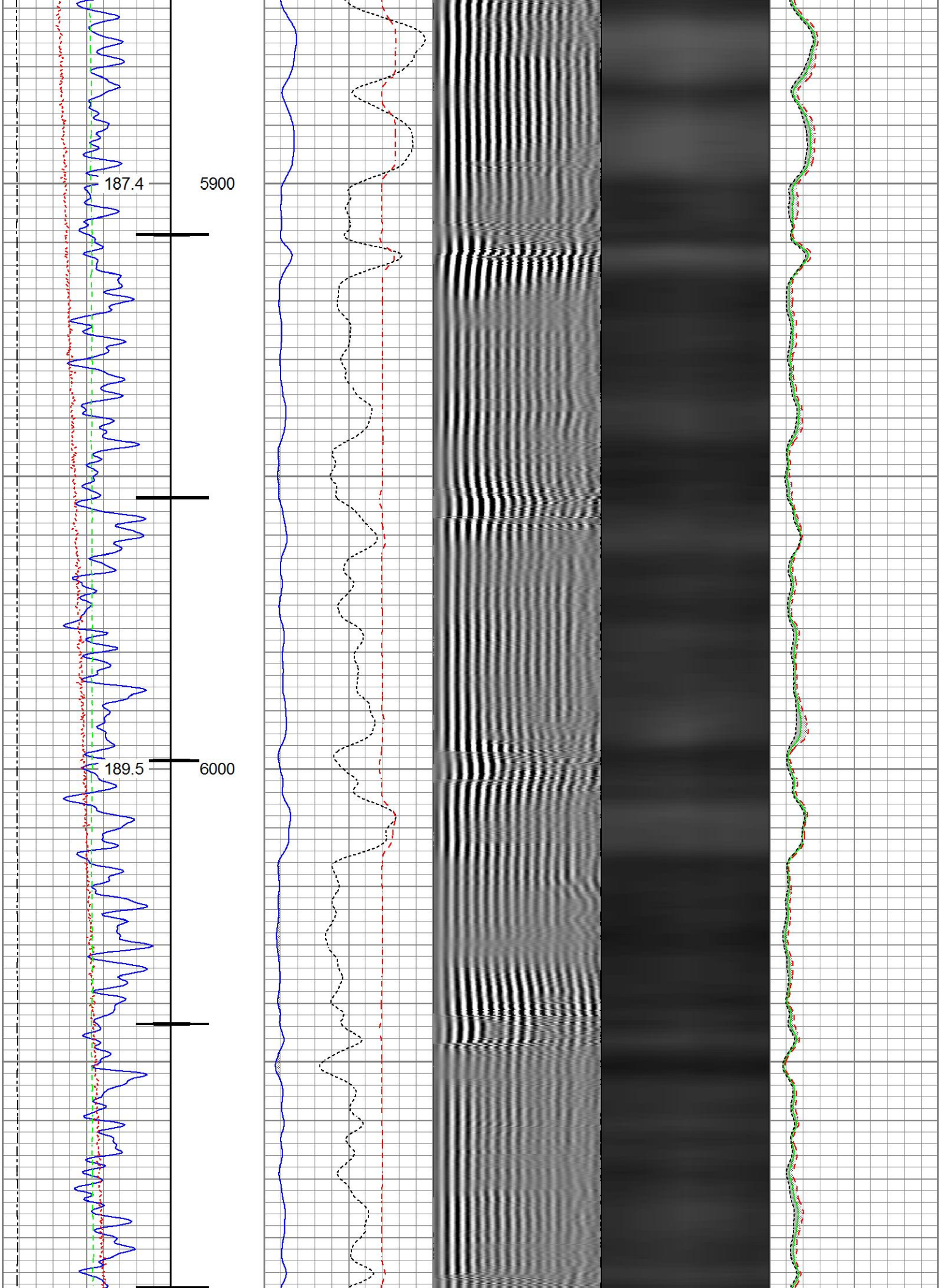


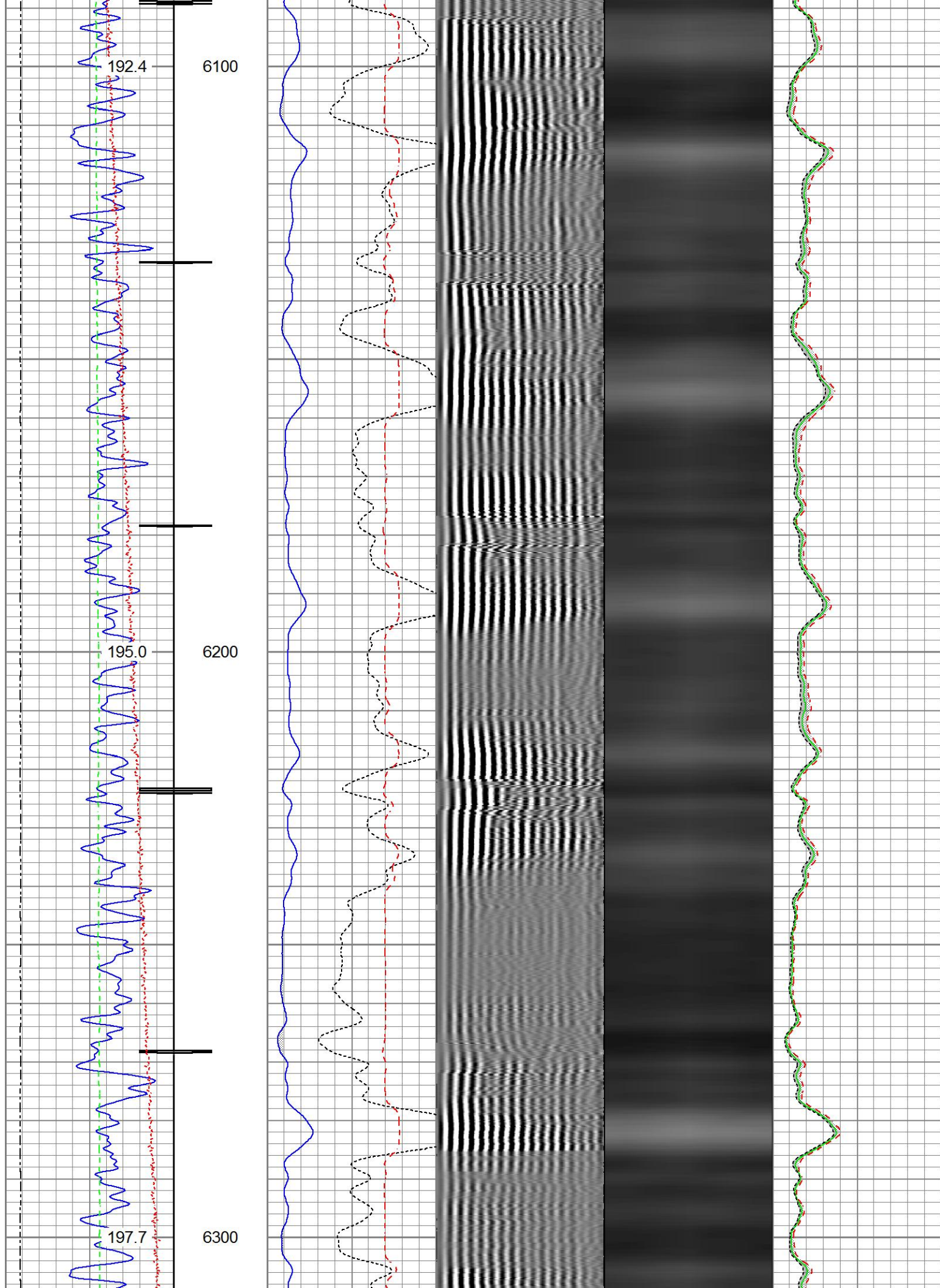




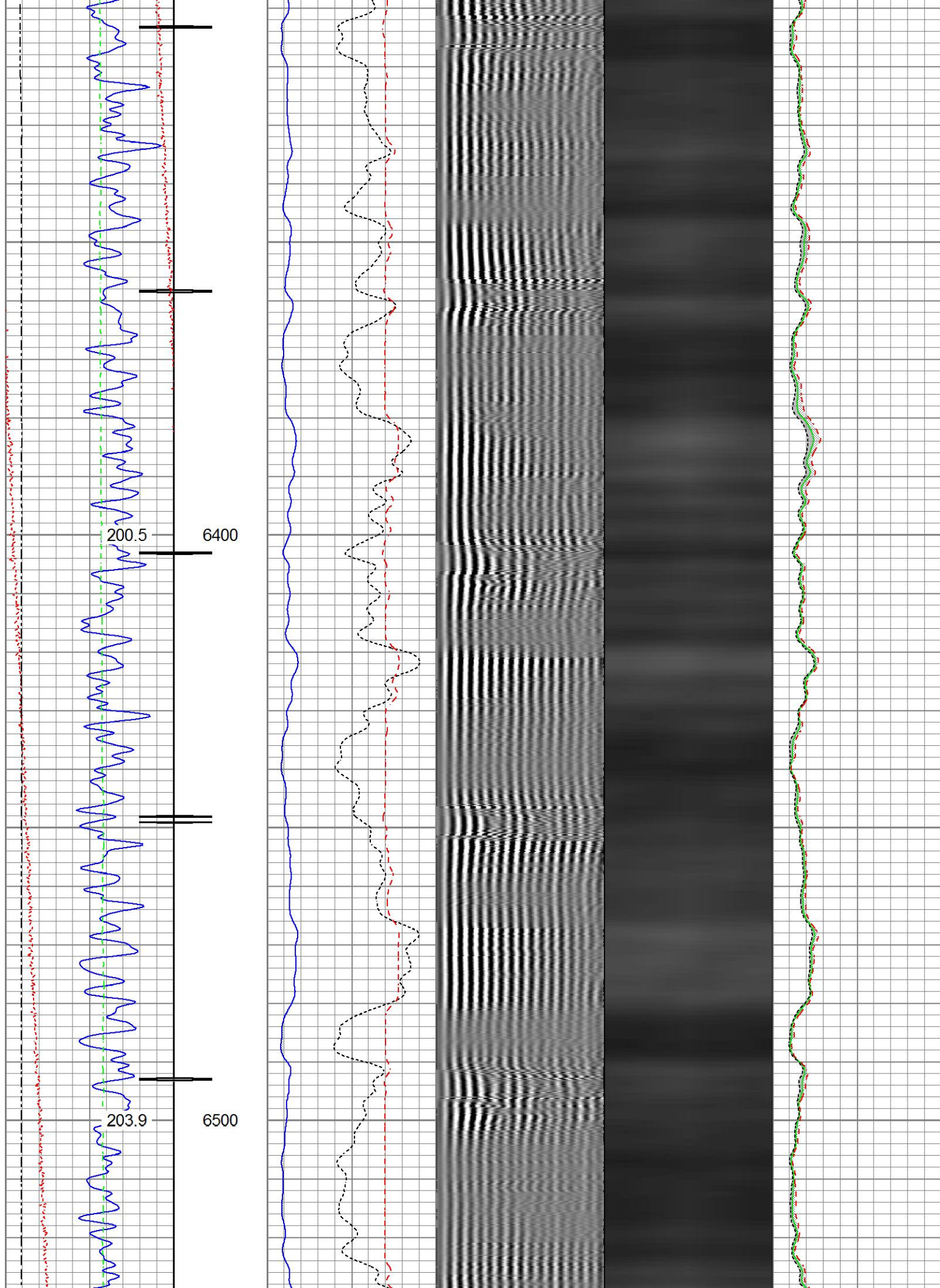


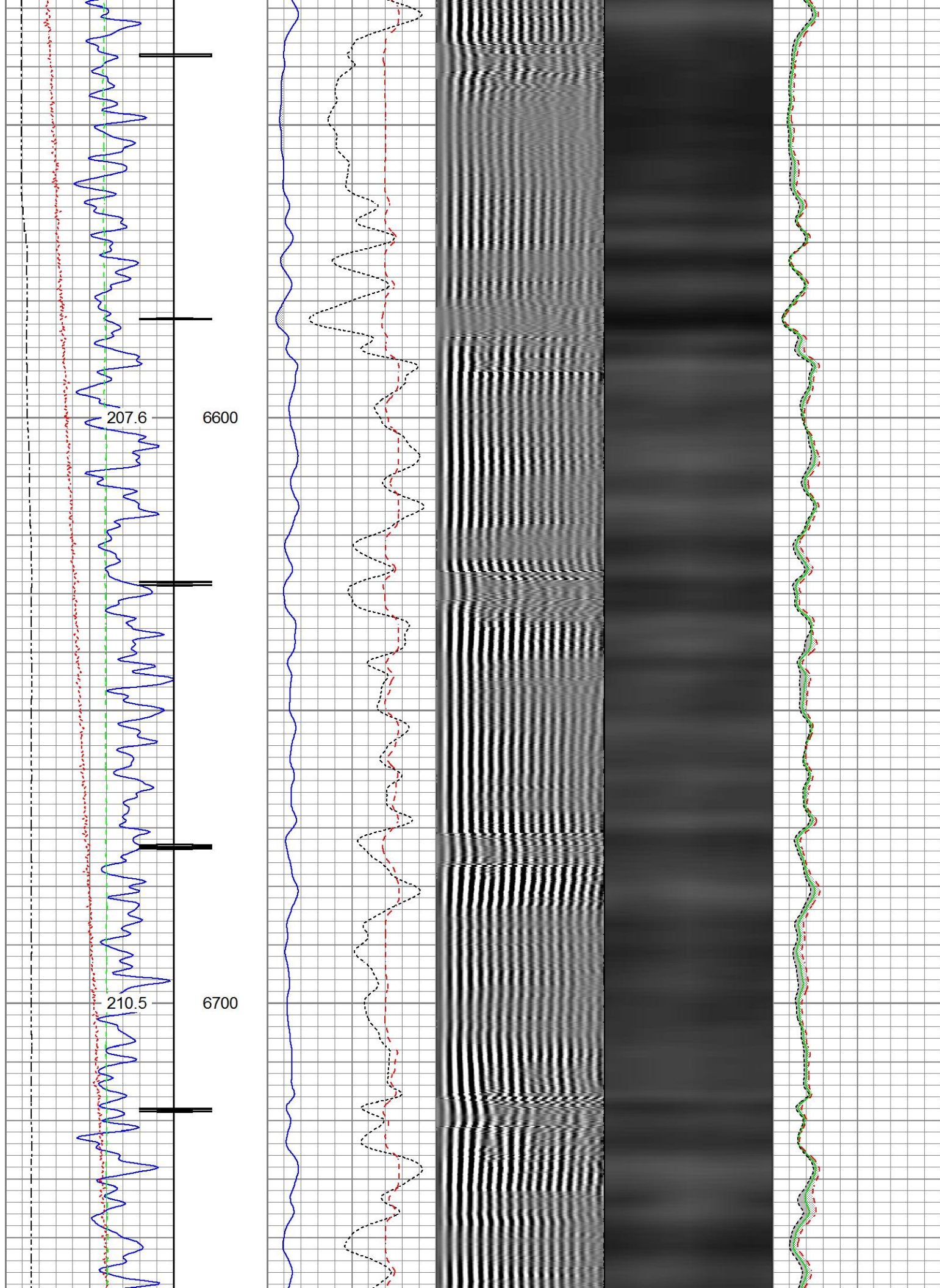




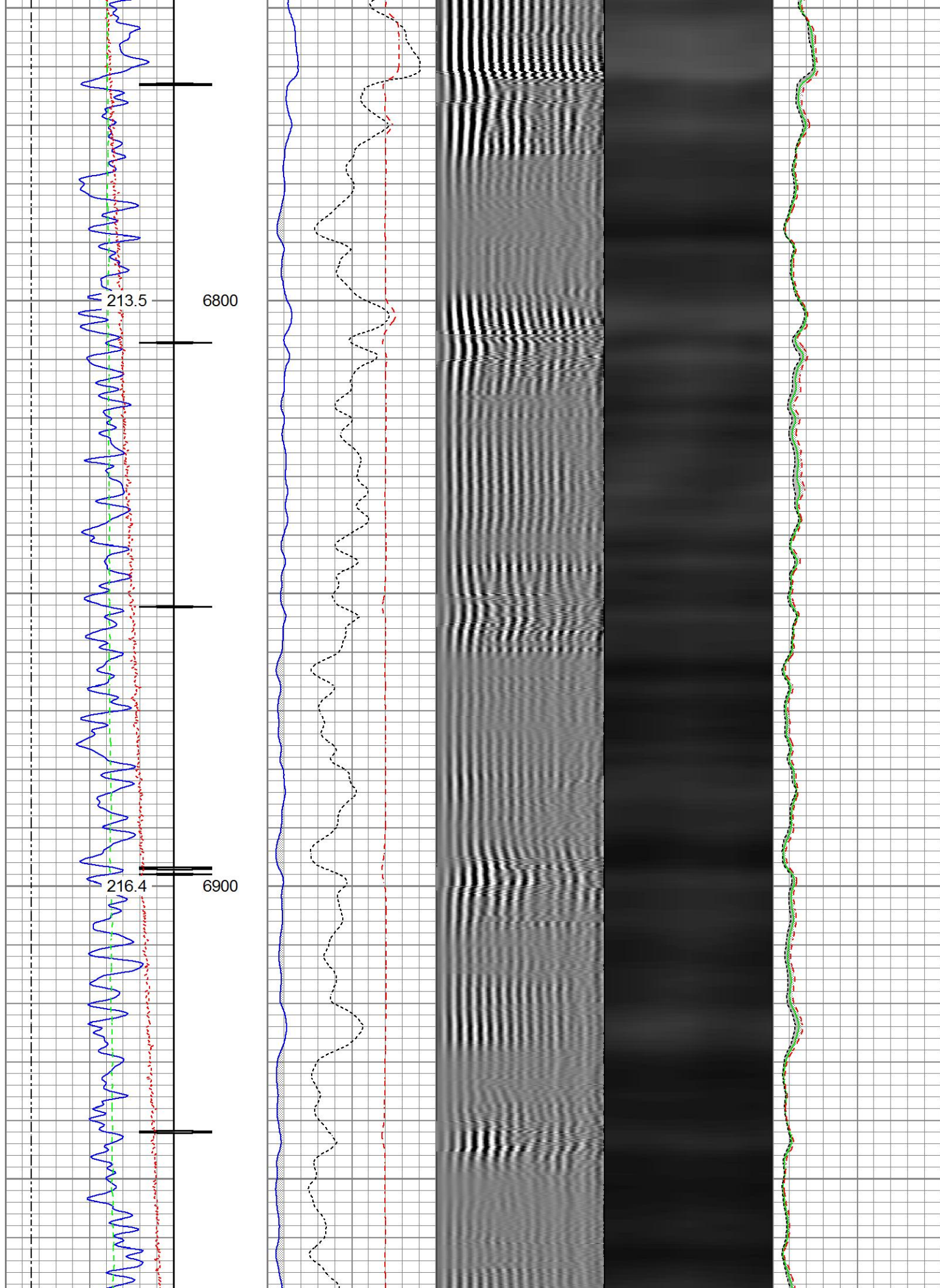


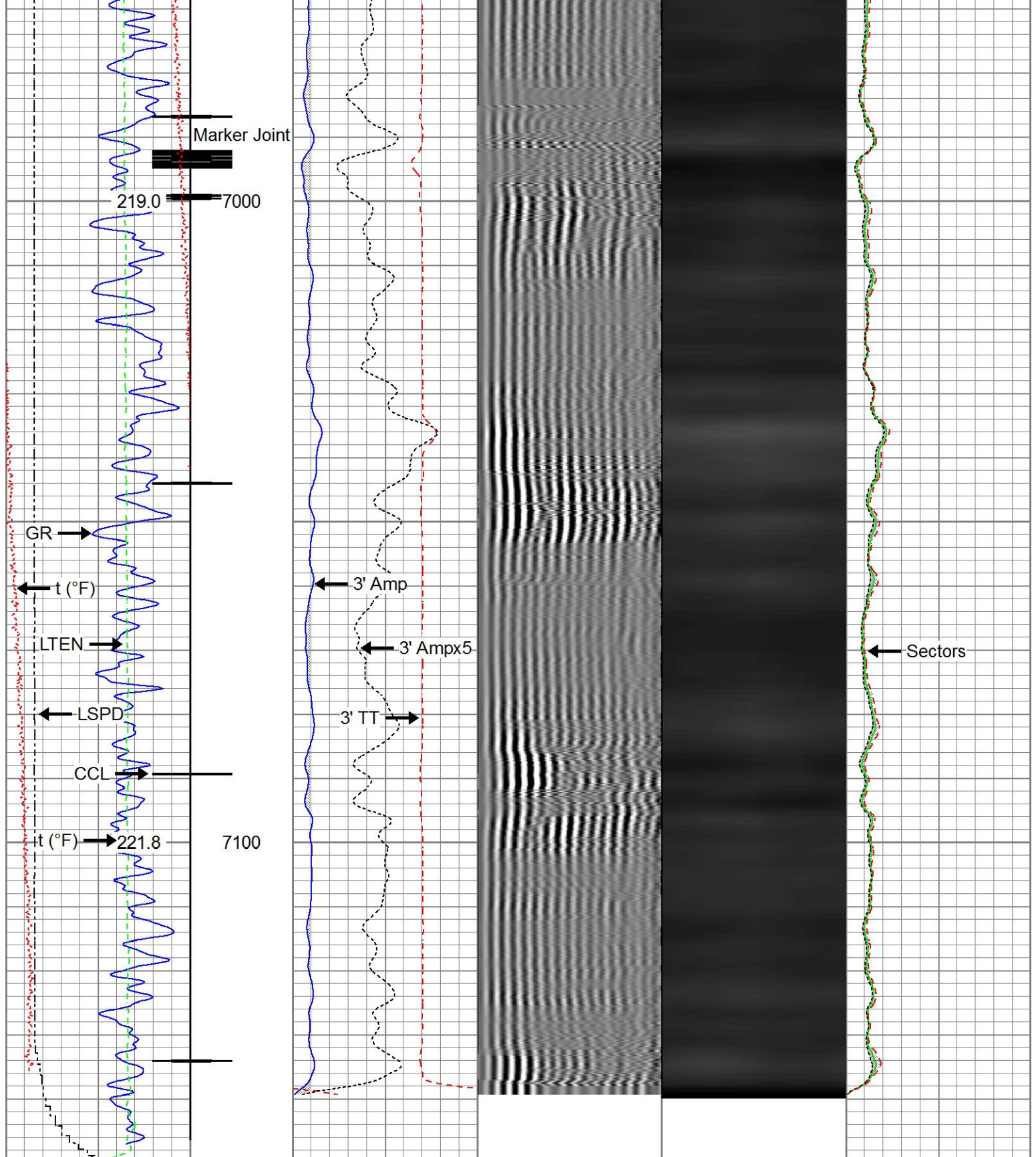













Gamma Ray 0 (GAPI) 120	3' Amplitude 0 (mV) 100	5' Variable Density Log 400 1200	Sector Map	Average Amplitude 0 100
Casing Collar Locator	3' Amplitude x 5 0 (mV) 20			Minimum Amplitude 0 100
Temperature 0 (degF) 20	3' Travel Time 650 (uSec) 150			Maximum Amplitude 0 100
Line Speed -150 (ft/min) 150				
Line Tension				



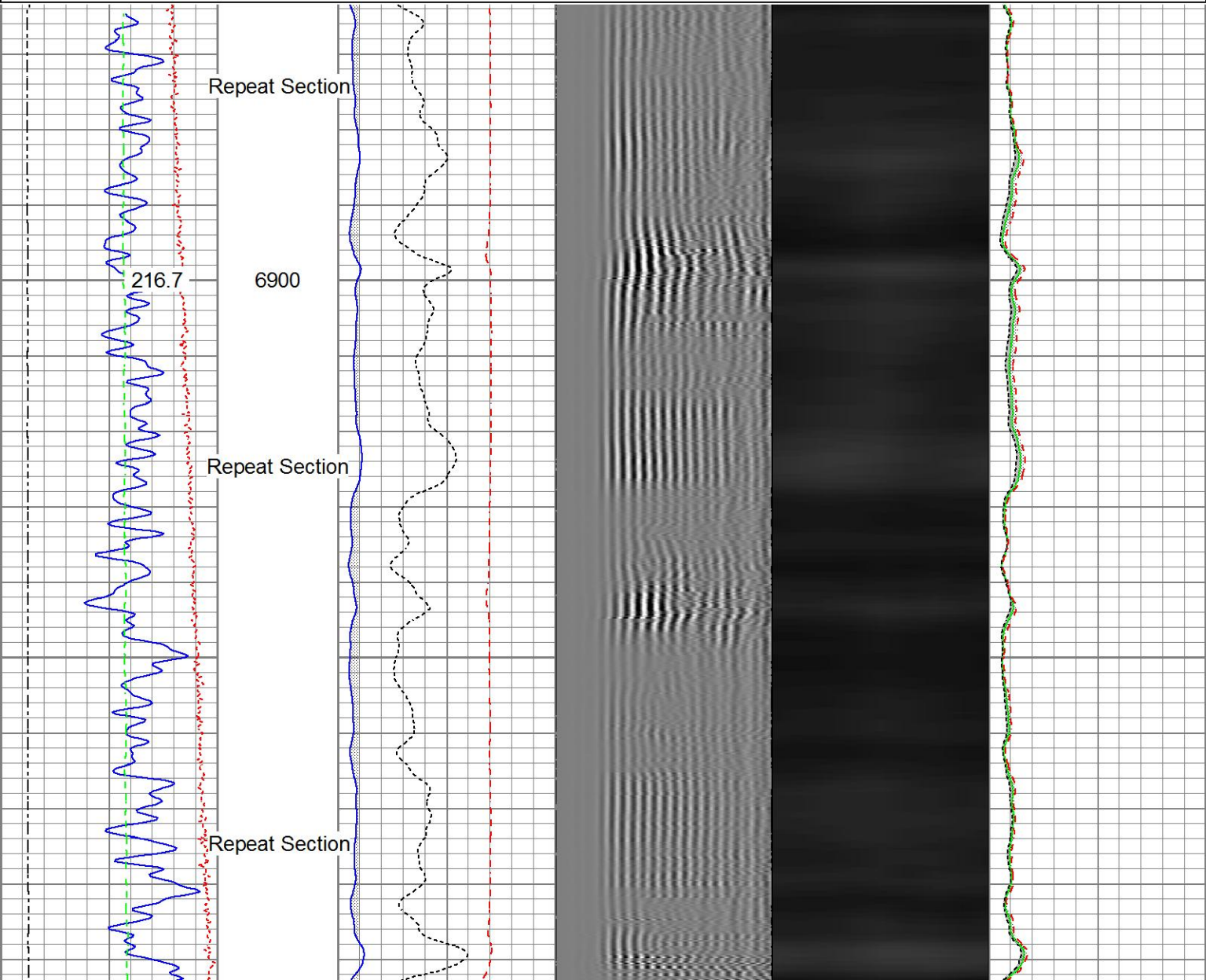


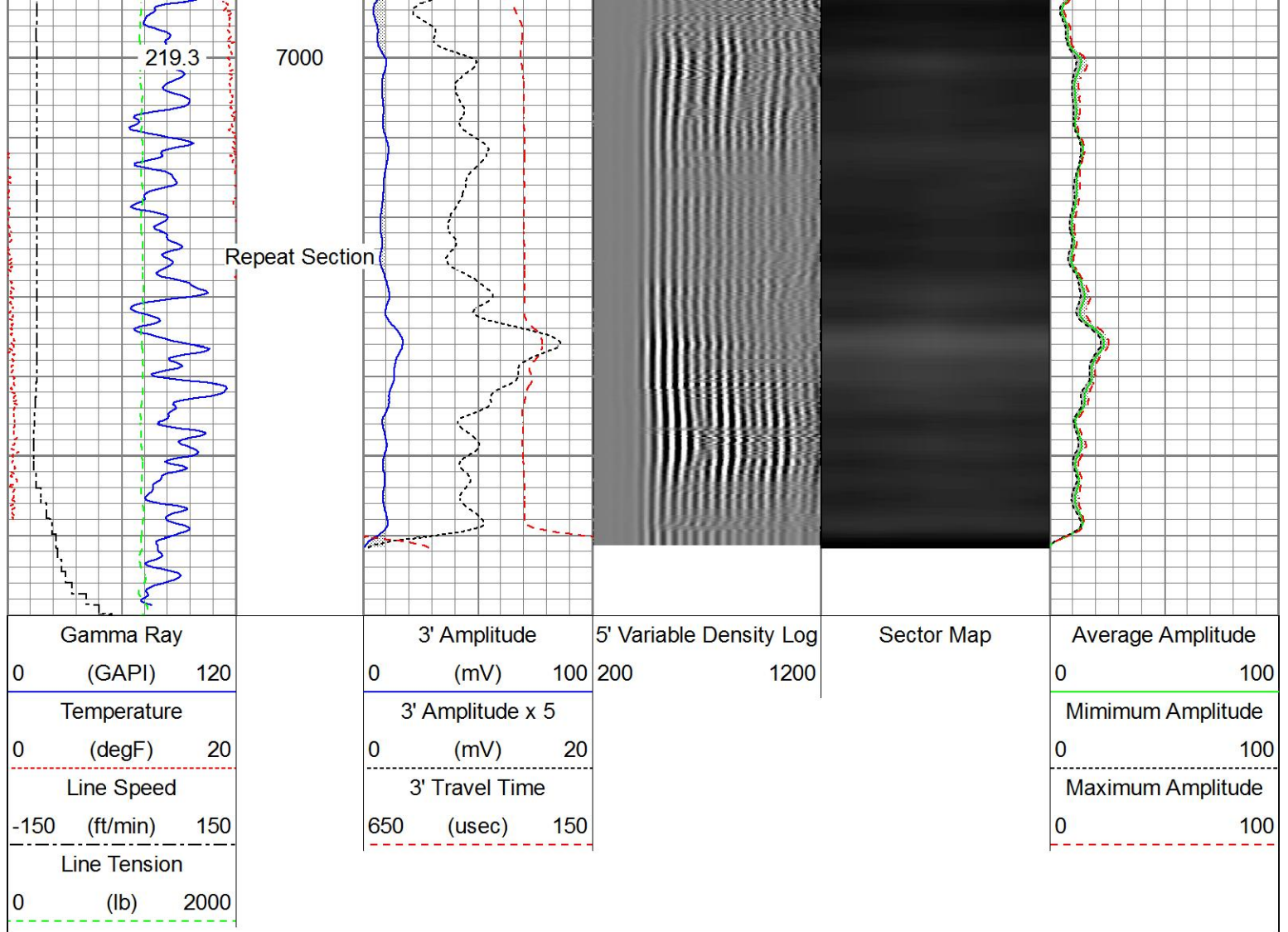
# Repeat Pass

Recorded with 2800 PSI Surface Induced Pressure

Database File	anadarko_jaguar 36c-35hz\0512342624_anadarko_jaguar 36c-35hz_02-28-17_rbl.db
Dataset Pathname	repeat
Presentation Format	ros_radrii
Dataset Creation	Tue Feb 28 14:29:33 2017
Charted by	Depth in Feet scaled 1:240

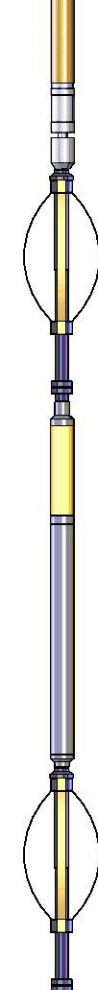
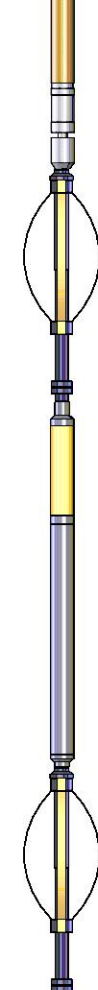
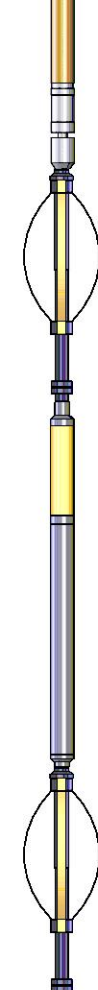
Gamma Ray		3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120		0 (mV) 100	200 1200		0 100
Temperature		3' Amplitude x 5			Minimum Amplitude
0 (degF) 20		0 (mV) 20			0 100
Line Speed		3' Travel Time			Maximum Amplitude
-150 (ft/min) 150		650 (usec) 150			0 100
Line Tension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





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
HeadVolt	19.51		Titan_Electric_Cable_Heads-Titan_1-11/161.03 Electric Cable Head with 1" Fishing Neck	1.69	1.69	5.40
			Probe_ELine_BowSpring_Centralizer-P_EE2.88_275 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.75	2.75	20.00
			Probe_RADII-C-P_RBT_2750 (FW1305-099.19 Probe 2-3/4" Sector Cement Bond Tool with Temperature Probe	2.75	2.75	105.00
Temp	16.72					
WVFS8	14.55					
WVFS7	14.55					
WVFS6	14.55					
WVFS5	14.55					
WVFS4	14.55					



WVFS3	14.55		Probe_ELine_BowSpring_Centralizer-P Probe 2-3/4" Electric Inline Bowspring Centralizer	EE2.88,275	2.75	20.00
WVFS2	14.55					
WVFS1	14.55					
WVFCAL	14.55					
WVF3FT	14.55					
WVF5FT	13.55					
HEADVOLT	10.30					
DCCL	6.51		Probe_GR_CCL-P_CGR_2750_S (FW1214.543) Probe 2-3/4" Digital CCL / Gamma Ray Combined	214.543	2.75	55.00
CCL	6.51					
GR	3.77		Probe_ELine_BowSpring_Centralizer-P Probe 2-3/4" Electric Inline Bowspring Centralizer	EE2.88,275	2.75	20.00
Dataset: 0512342624_anadarko_jaguar 36c-35hz_02-28-17_rbl.db: field/well/run1/main_tool Total length: 23.40 ft Total weight: 225.40 lb O.D.: 2.75 in						

Calibration Report			
Database File	d:\warrior\data\anadarko_jaguar 36c-35hz\0512342624_anadarko_jaguar 36c-35hz_02-28-17_rbl.db		
Dataset Pathname	main		
Dataset Creation	Tue Feb 28 14:33:30 2017		
Gamma Ray Calibration Report			
Serial Number:	FW1212-026		
Tool Model:	P_CGR_2750_S		
Performed:	Sat Feb 06 11:32:54 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:	FW1305-098		
Tool Model:	P_RBT_2750		
Calibration Casing Diameter:	5.500	in	
Calibration Depth:	18.551	ft	
Master Calibration, performed Mon Feb 27 13:48:43 2017:			

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.006	0.679	0.800	71.921	105.820	0.121
CAL	0.007	0.722				
5'	0.006	0.629	0.800	71.921	114.153	0.074
SUM						
S1	0.006	0.678	0.000	100.000	148.872	-0.960
S2	0.006	0.681	0.000	100.000	148.167	-0.951
S3	0.007	0.679	0.000	100.000	148.767	-0.968
S4	0.007	0.676	0.000	100.000	149.407	-0.974
S5	0.007	0.673	0.000	100.000	150.006	-0.981
S6	0.007	0.673	0.000	100.000	150.023	-1.000
S7	0.006	0.675	0.000	100.000	149.680	-0.968
S8	0.006	0.674	0.000	100.000	149.749	-0.963

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.007	0.722	1.000	0.000

Air Zero Calibration, performed Mon Feb 27 13:49:04 2017:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.006		0.000		0.000	
5'	0.006		0.000		-0.000	
SUM						
S1	0.006		0.000		0.000	
S2	0.006		0.000		0.000	
S3	0.006		0.000		0.000	
S4	0.007		0.000		0.000	
S5	0.006		0.000		0.000	
S6	0.007		0.000		0.000	
S7	0.006		0.000		0.000	
S8	0.007		0.000		-0.000	



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