



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company		Kerr-McGee Oil & Gas Onshore, L.P.	
Well		Land Fed 3N-32HZ	
Field		Wattenberg	
County		Weld	
State		Colorado	
Location:		API # : 05-123-42390	
SEC 32 TWP 2N RGE 66W		Other Services	
Permanent Datum		Ground Level	
Log Measured From		Kelly Bushing	
Drilling Measured From		Kelly Bushing	
Elevation		4899'	
Gauge Ring		Elevation	
K.B. 4919'		D.F. 4918'	
G.L. 4899'			
Date		16-AUG-2016	
Run Number		Two	
Depth Driller		13036 FT	
Depth Logger		7617 FT	
Bottom Logged Interval		7550 FT	
Top Log Interval		Surface	
Open Hole Size		7.875"	
Type Fluid		Water	
Density / Viscosity		8.34 lbm/gal	
Max. Recorded Temp.		236°F	
Estimated Cement Top		130 FT	
Time Well Ready		ROA	
Time Logger on Bottom		11:09	
Equipment Number		HD-0343	
Location		Fort Lupton, CO	
Recorded By		Robert Fogarty	
Witnessed By		Chris Hayes	
Borehole Record		Tubing Record	
Run Number		Bit	
From		To	
Size		Weight	
From		To	
Casing Record		Size (in)	
Surface Casing		9 5/8	
Intermediate #1		5 1/2	
Intermediate #2		17	
Liner		36	
Grade		JD BTC	
HCP 110		Surface	
Bottom		1872 FT	
13025 FT			

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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 Top at 6841 FT
Adjusted log -6 FT to correlate with Marker Joint Top
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

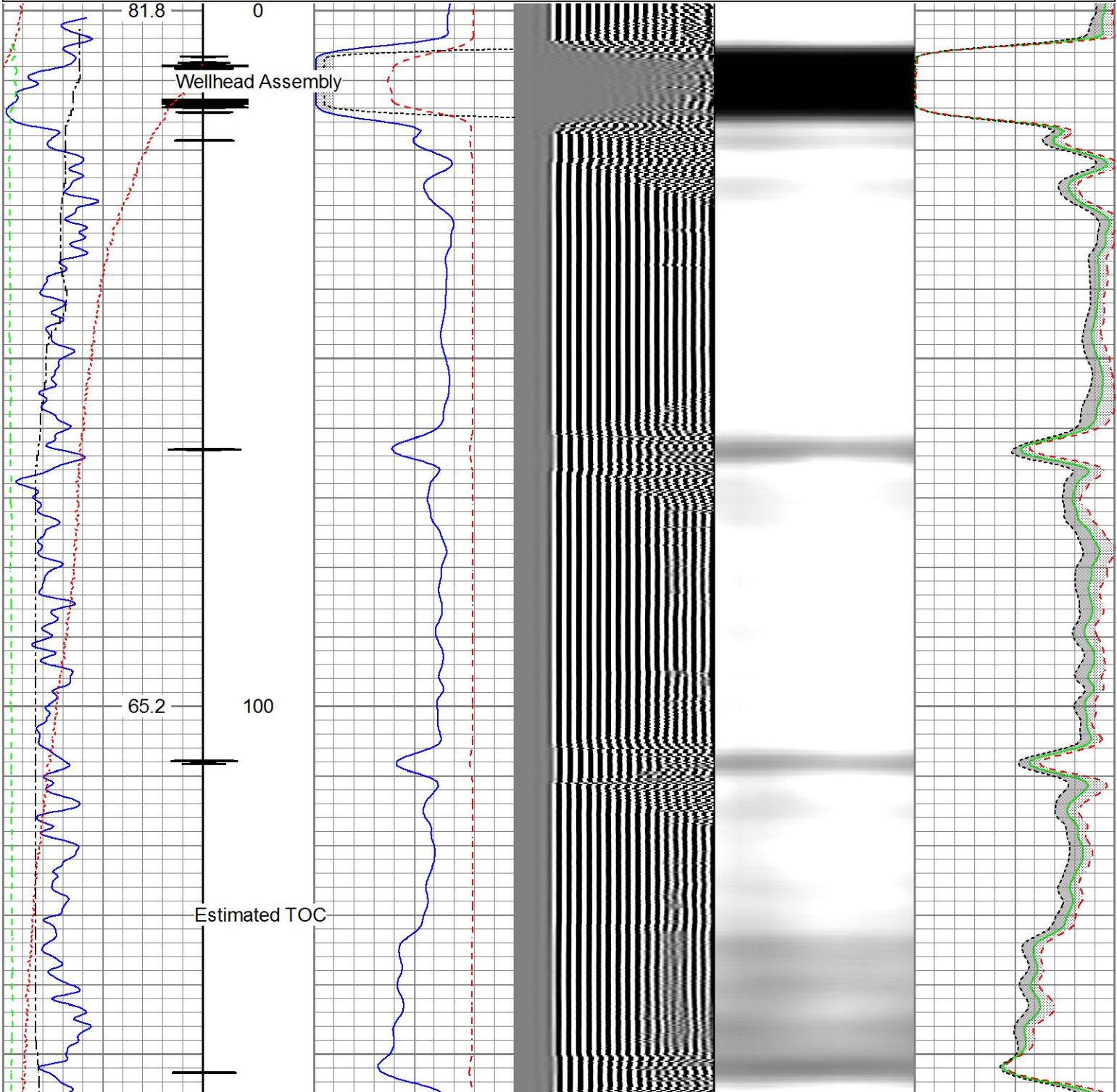
Thank you for choosing Reliance Oilfield Services, LLC!!

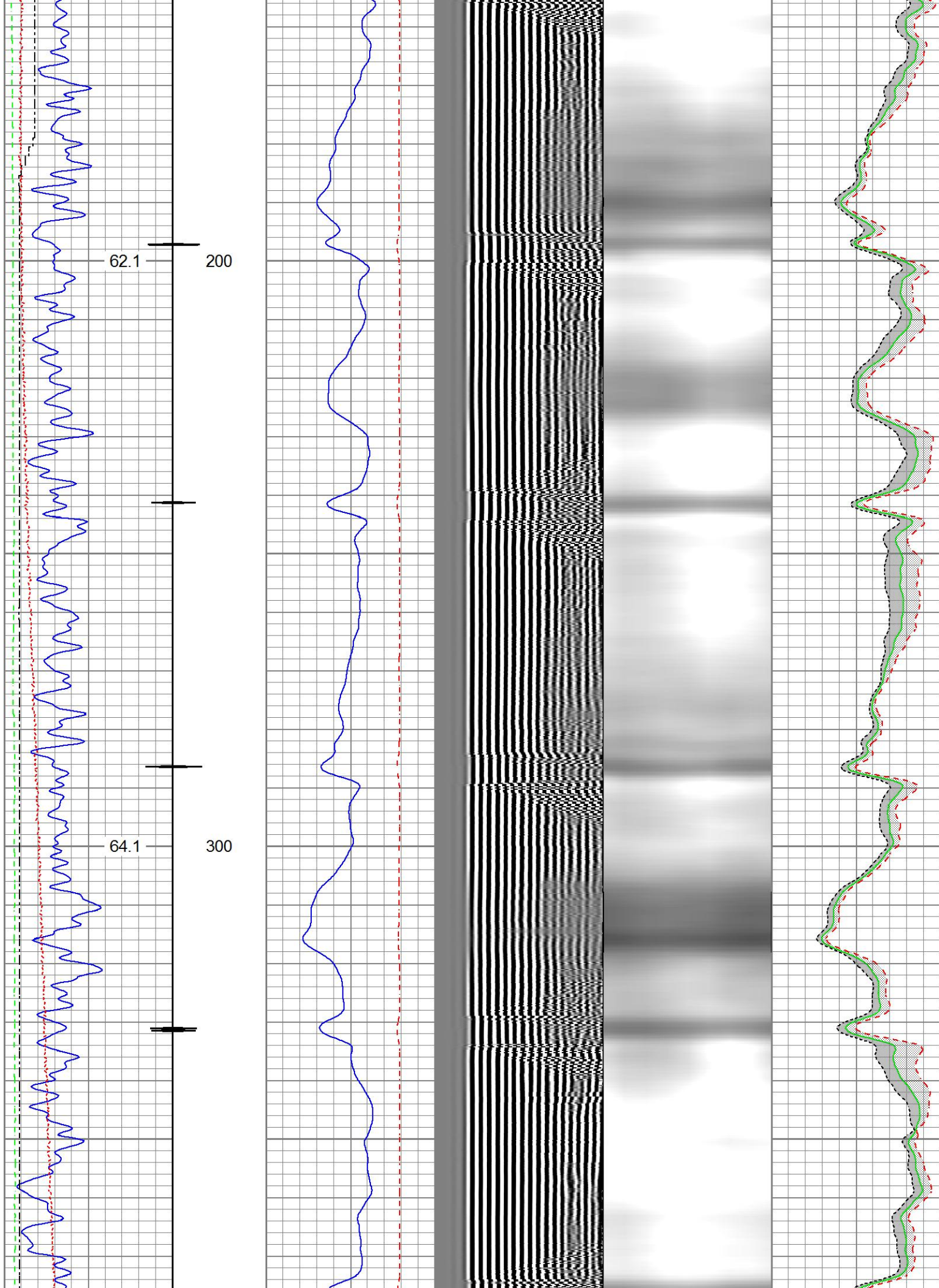


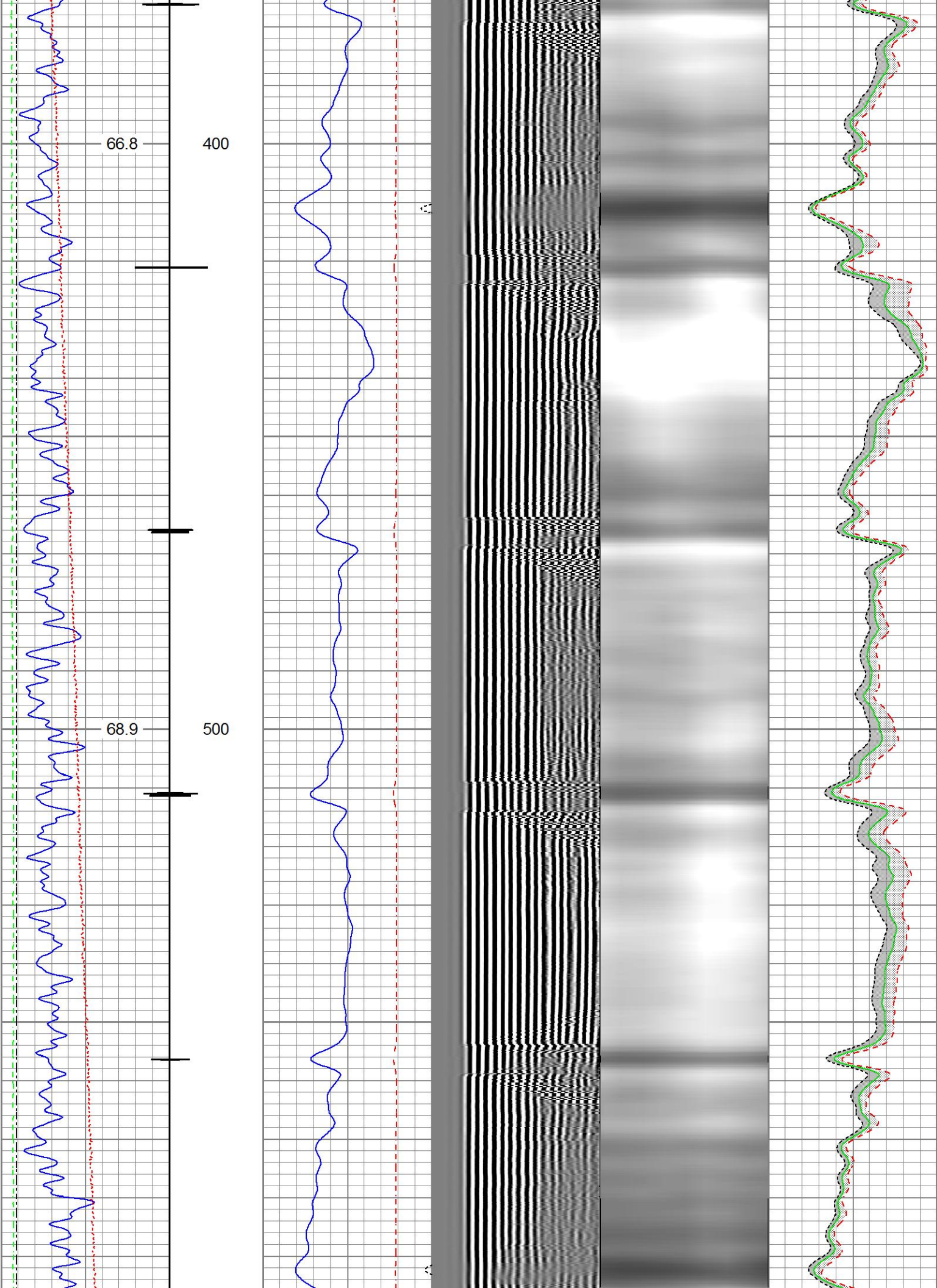
Main Pass

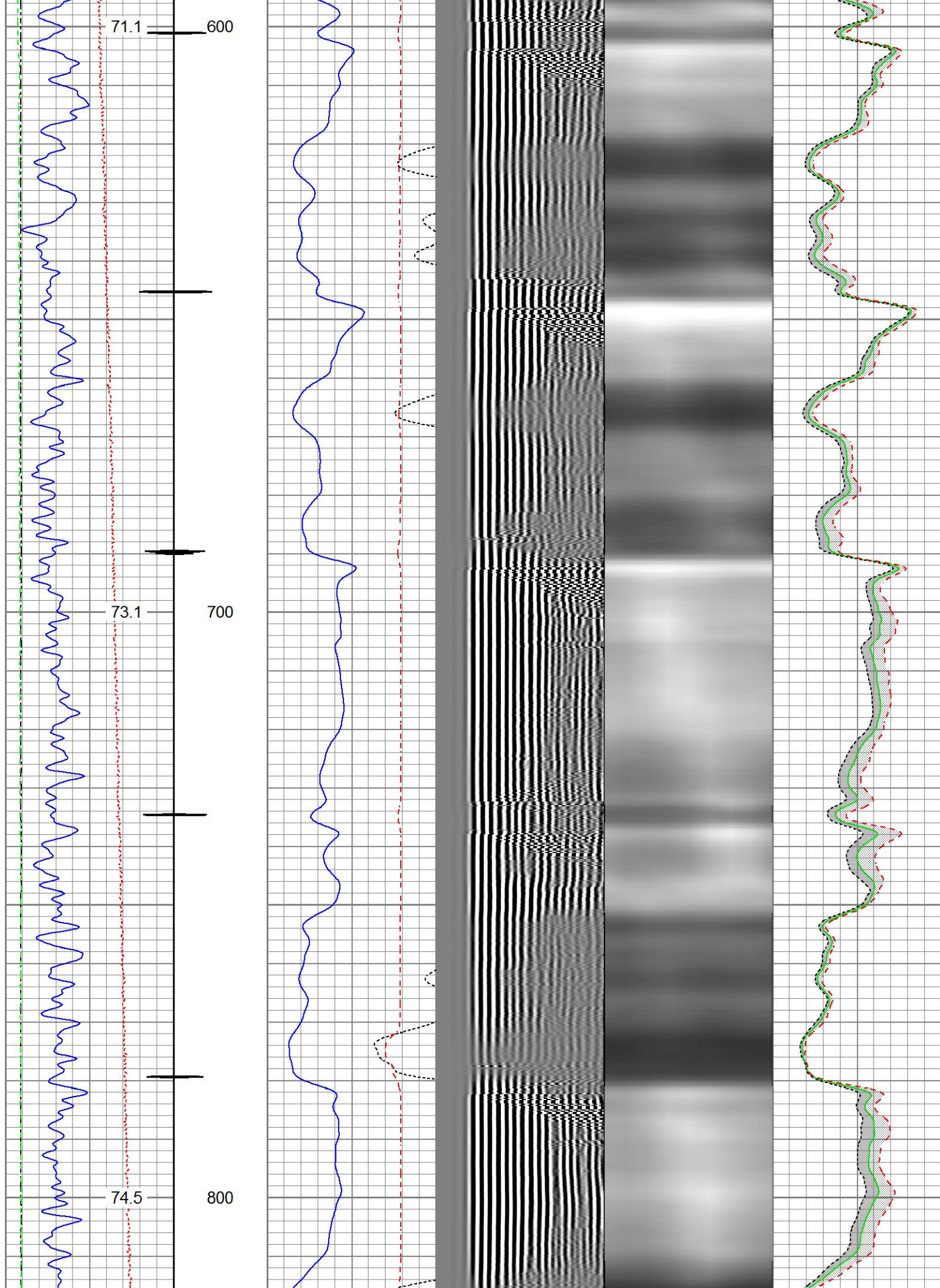
Recorded with 2800 PSI Surface Induced Pressure

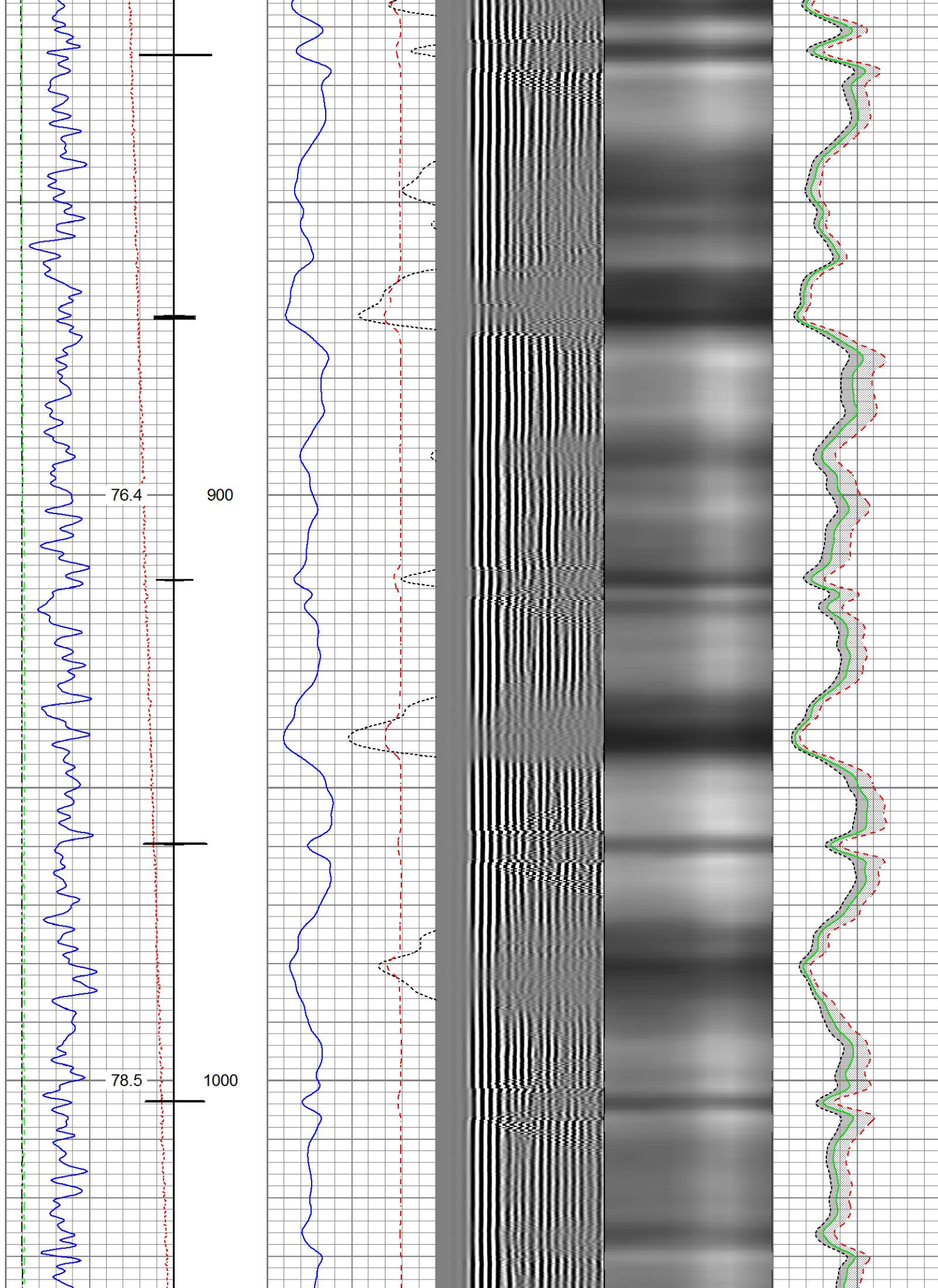
Gamma Ray			3' Amplitude			5' Variable Density Log		Sector Map	Average Amplitude	
0	(GAPI)	120	0	(mV)	100	200	1200		0	100
Casing Collar Locator			3' Amplitude x 5						Minimum Amplitude	
Temperature			0 (mV) 20						0 100	
0	(degF)	20	3' Travel Time						Maximum Amplitude	
Line Speed			650 (usec) 150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

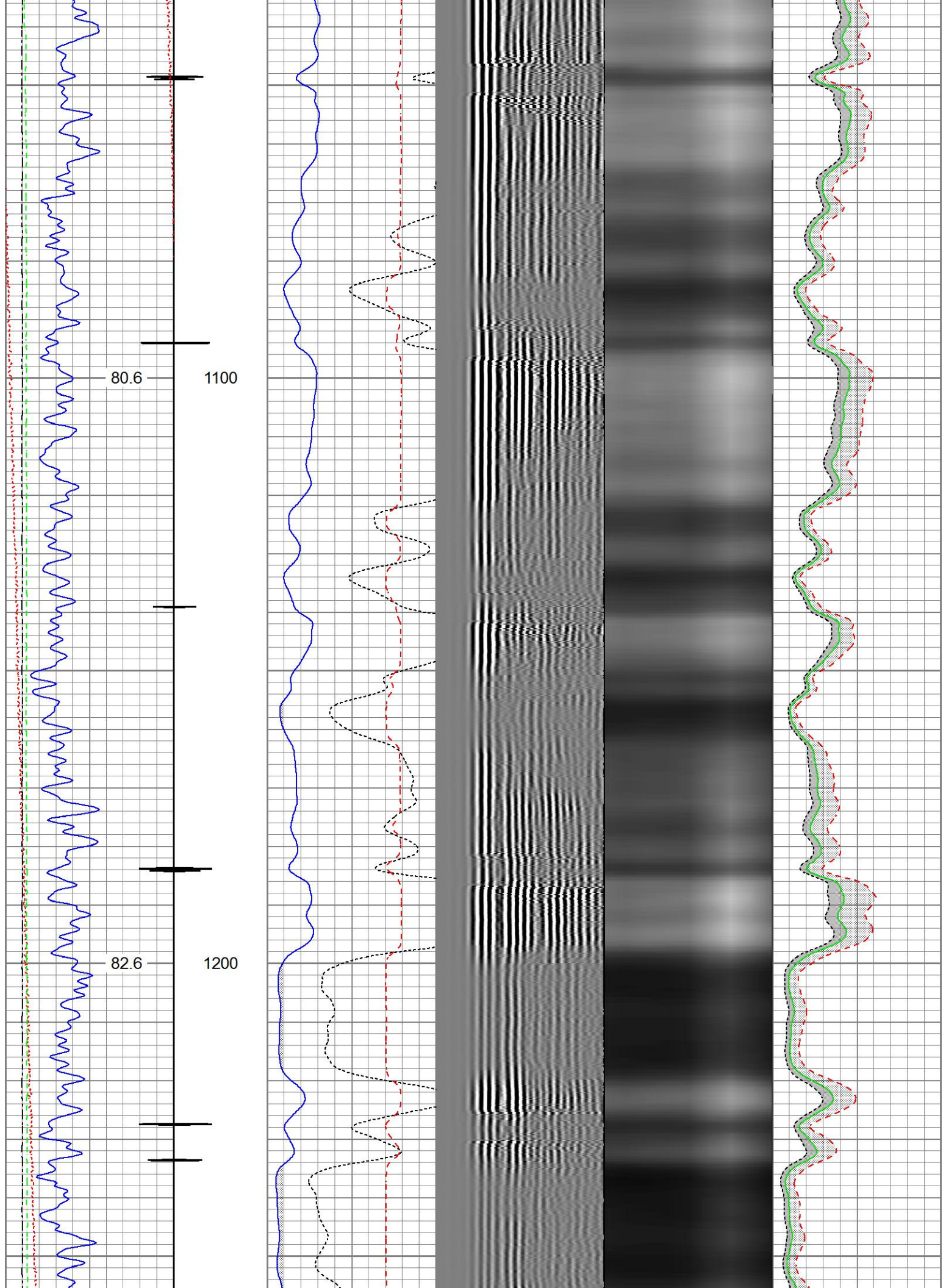


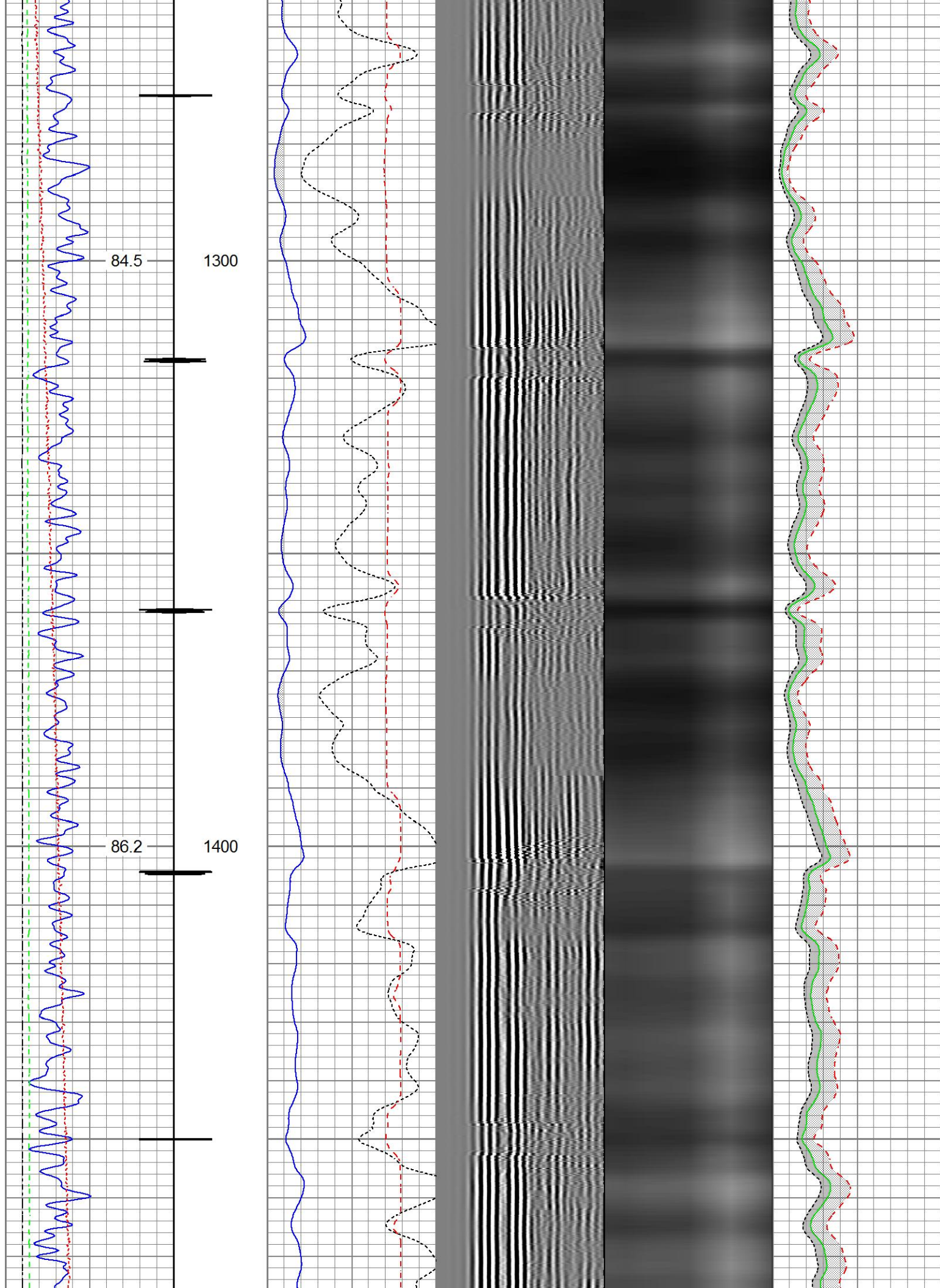


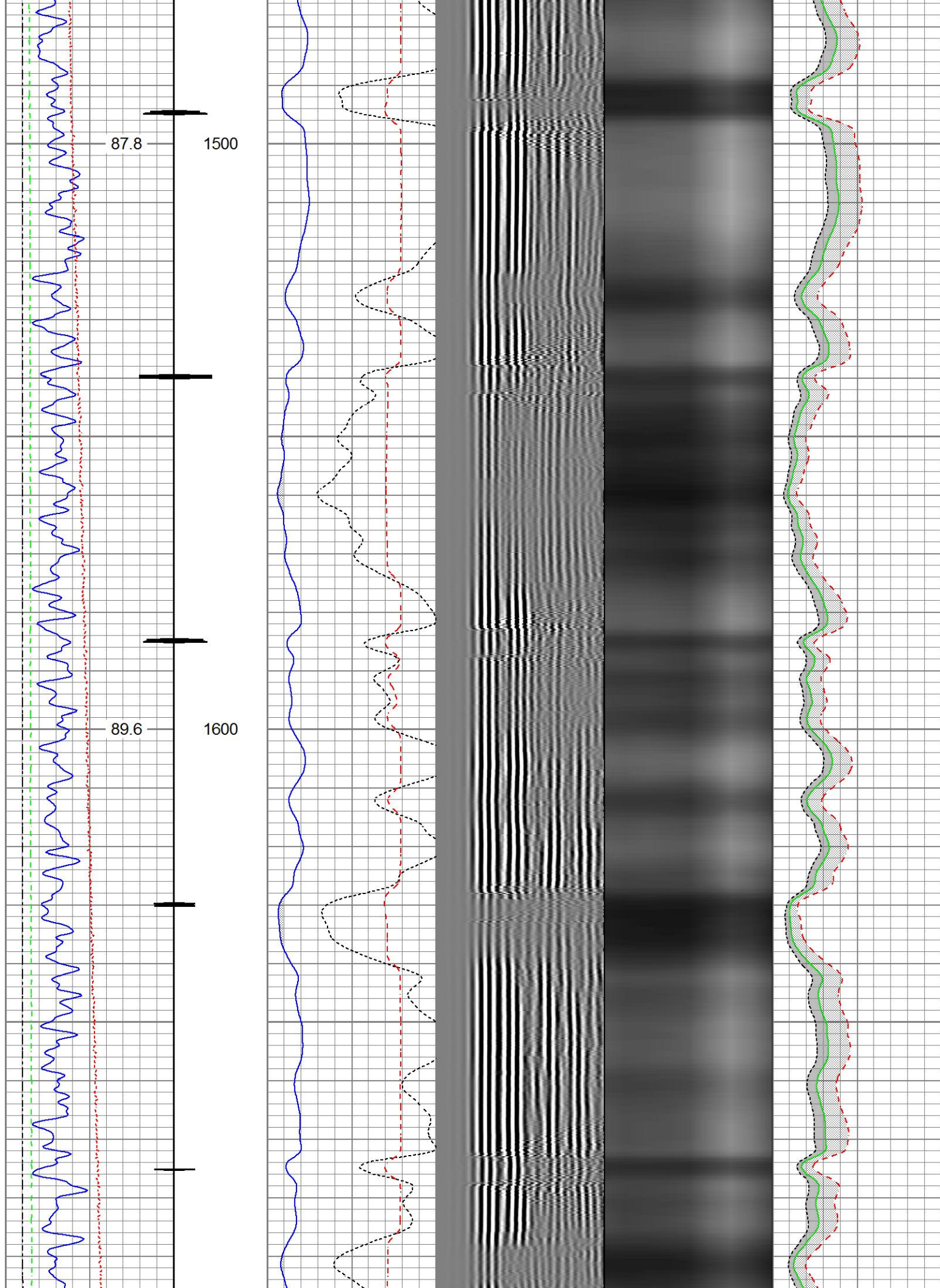


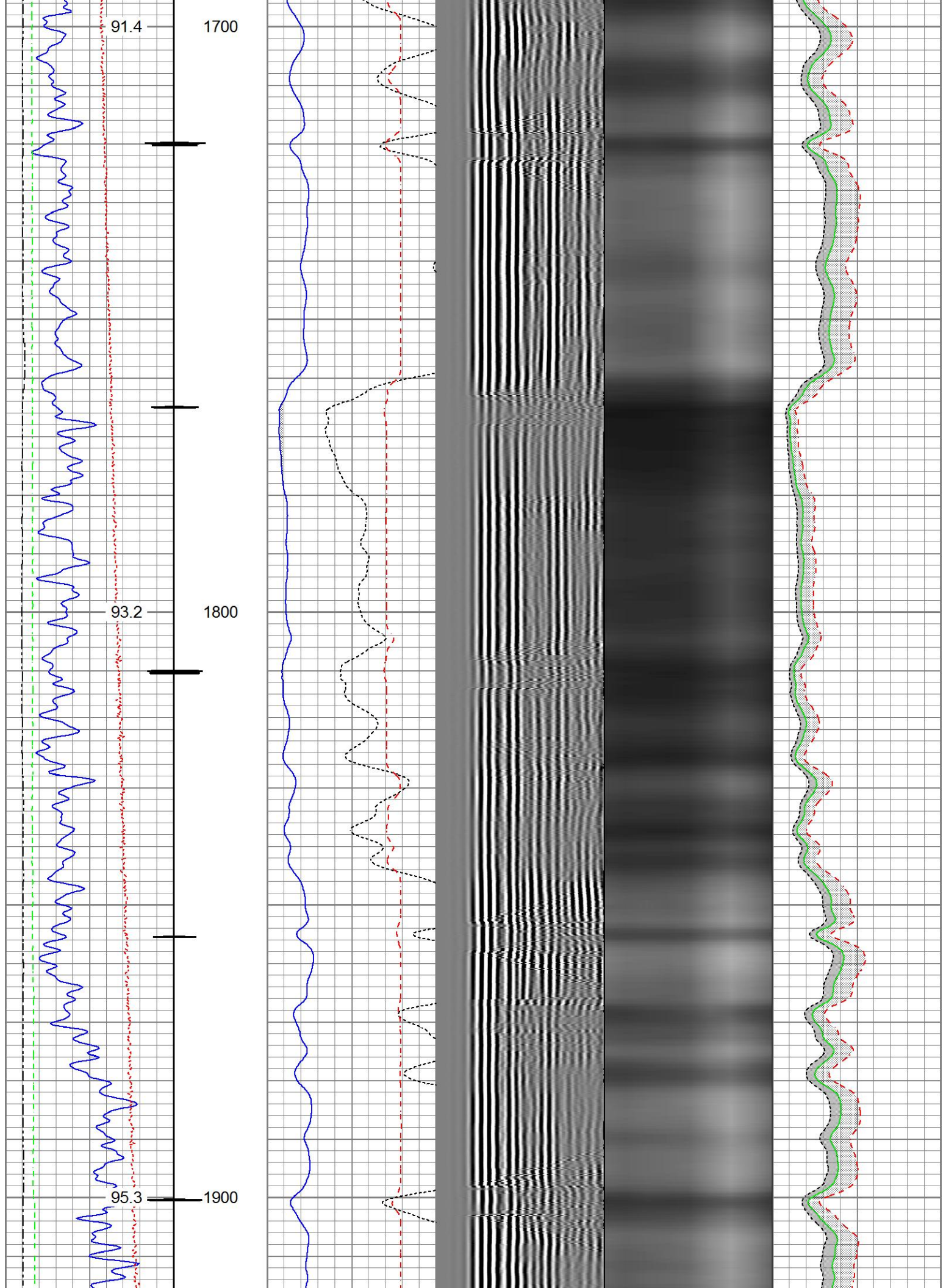


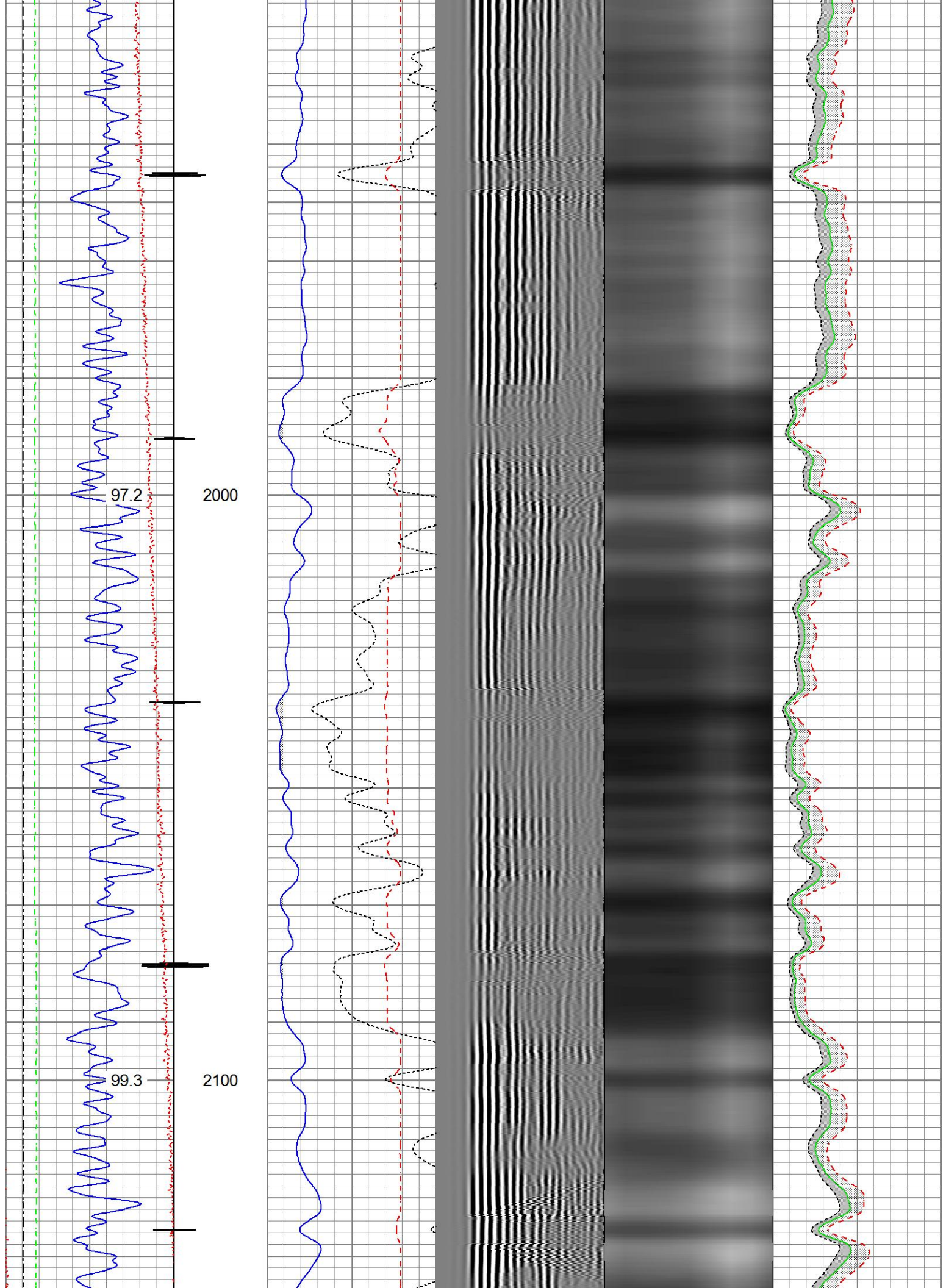


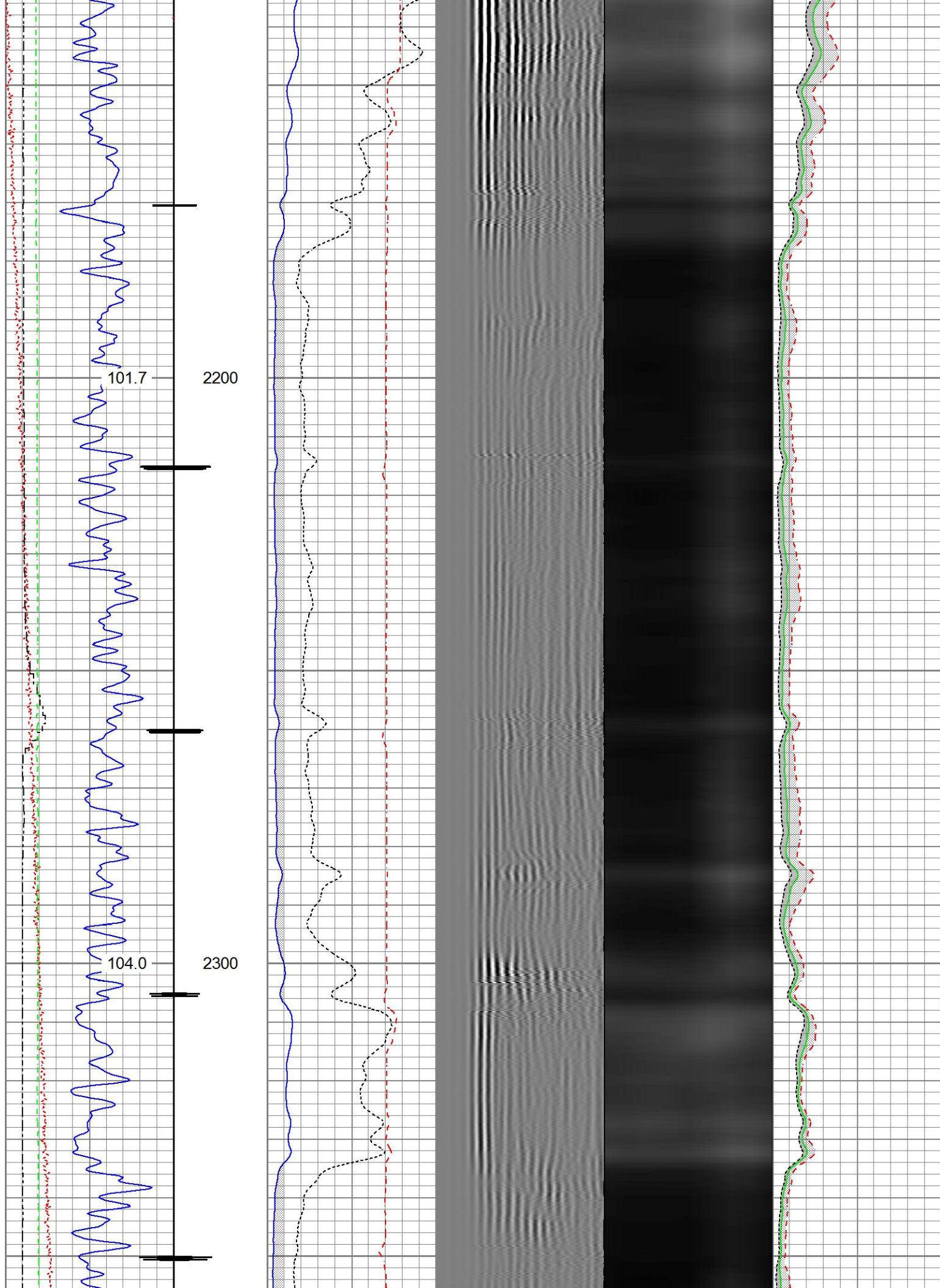


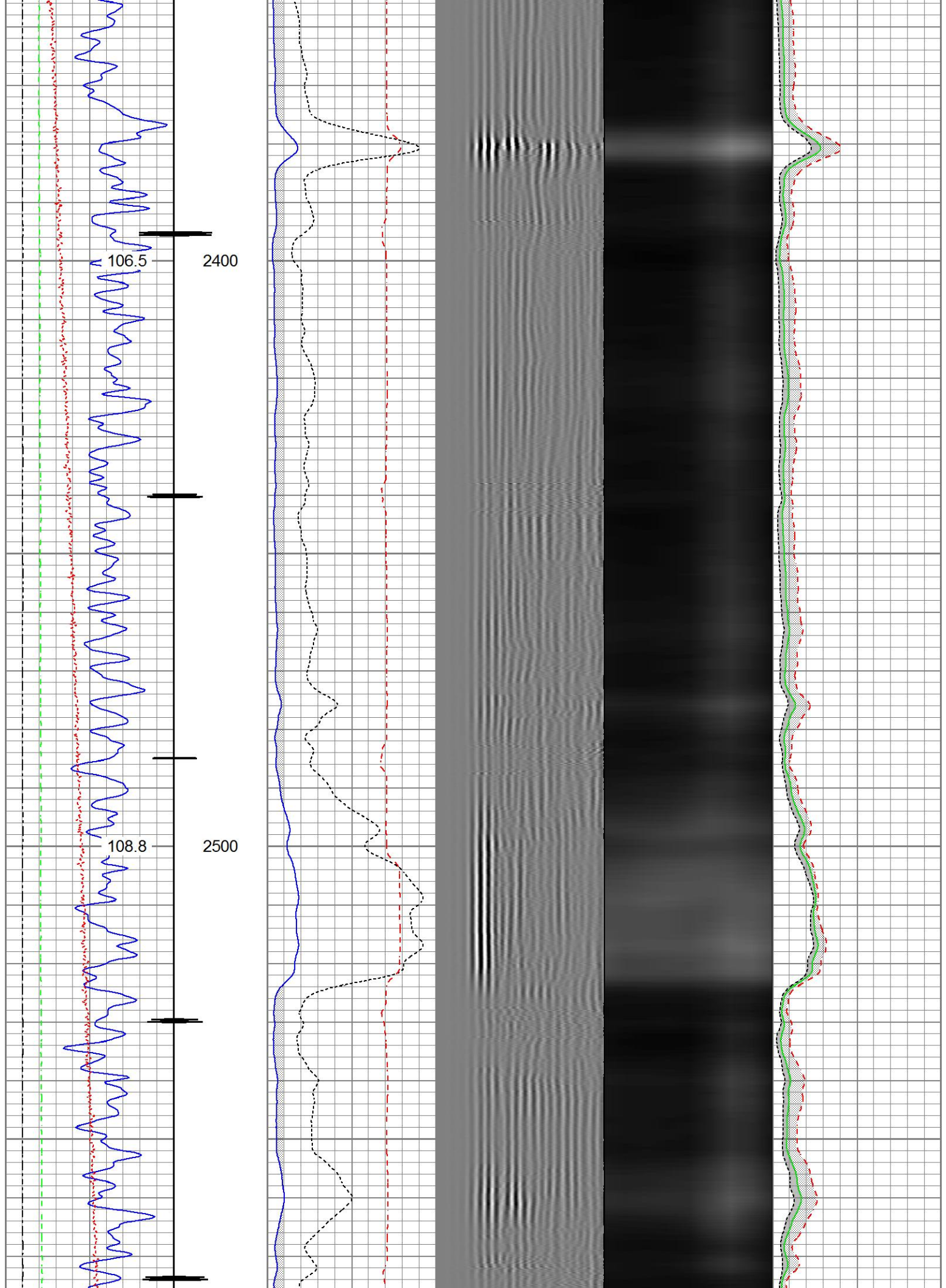


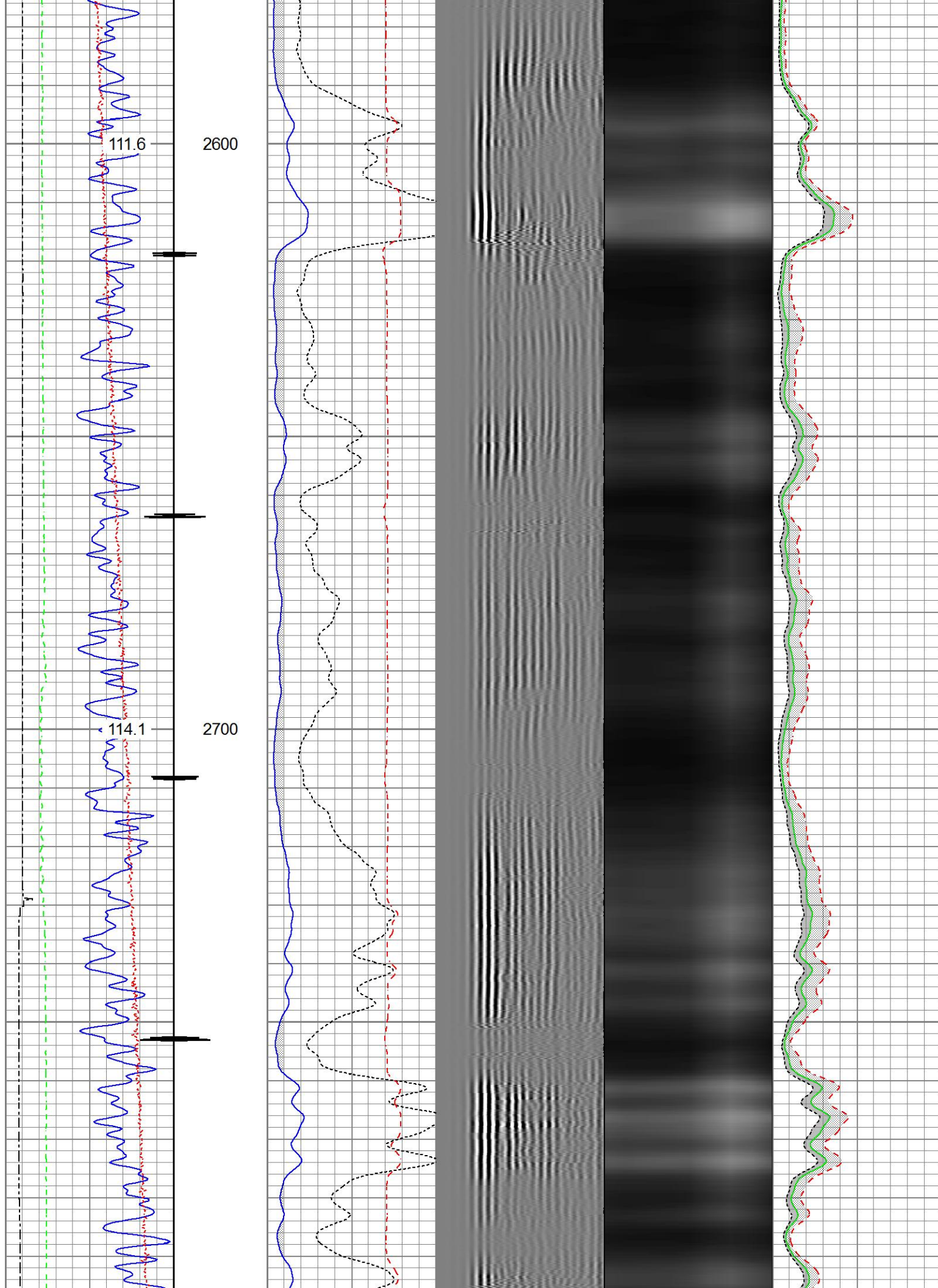


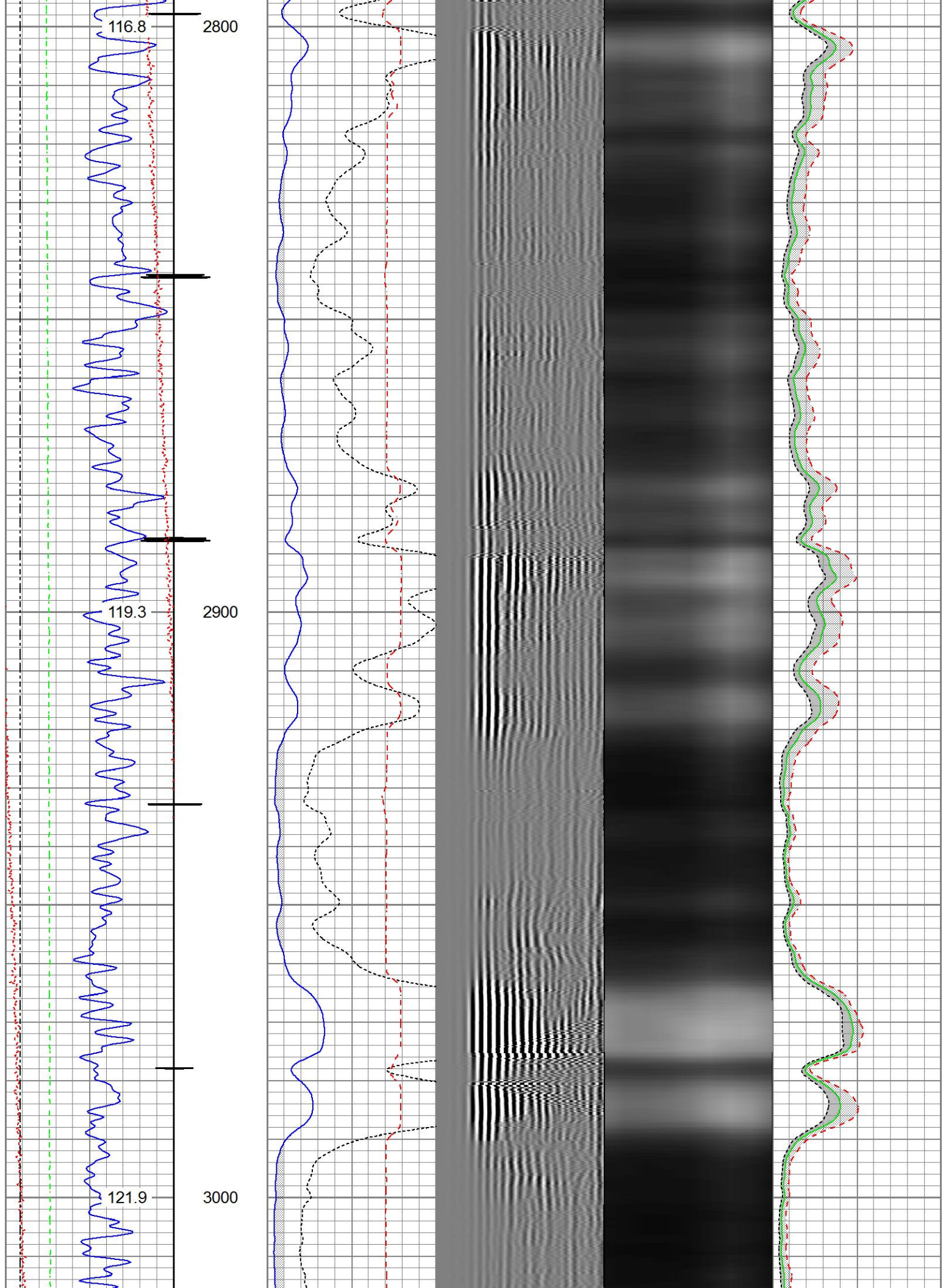


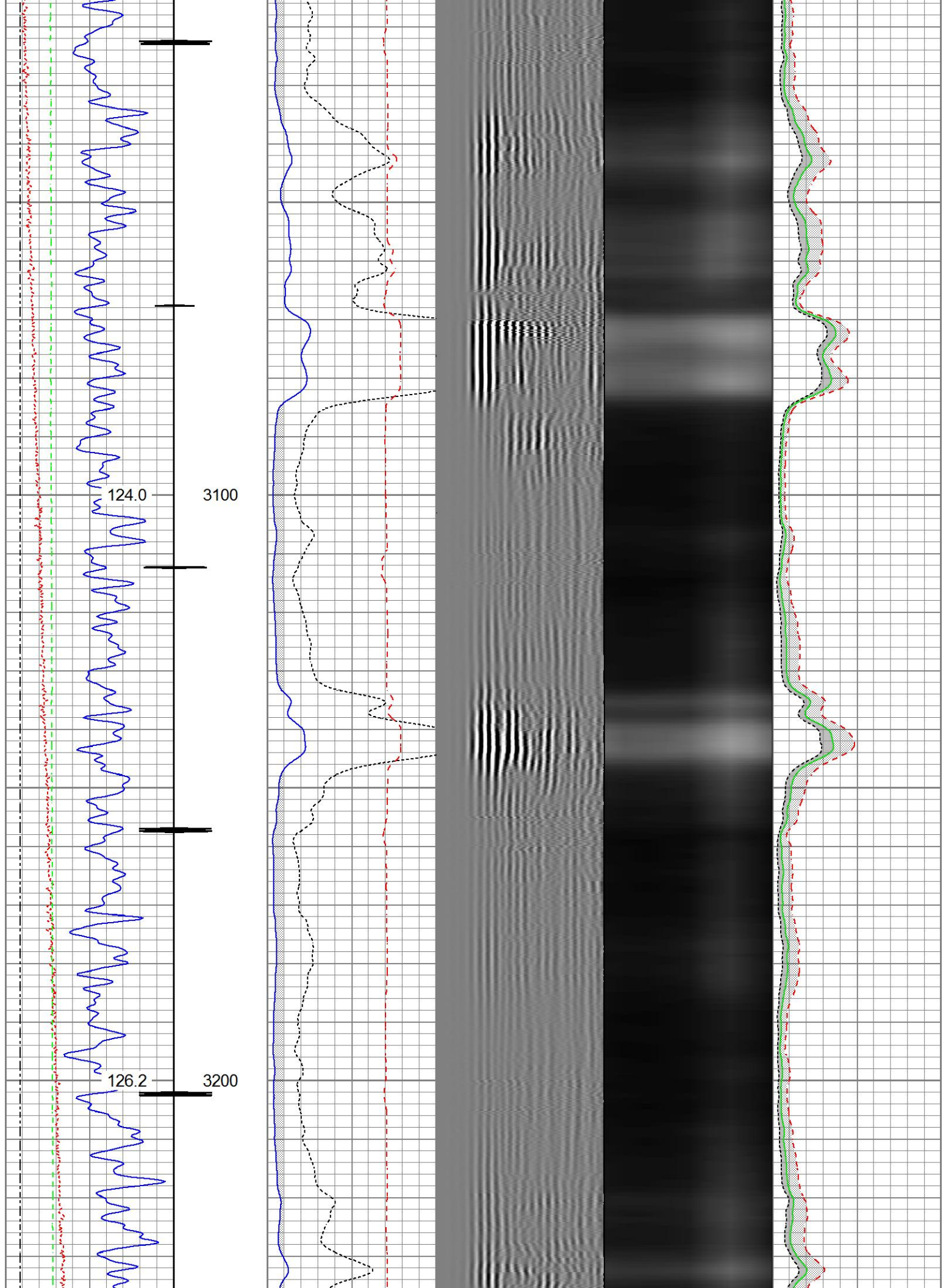


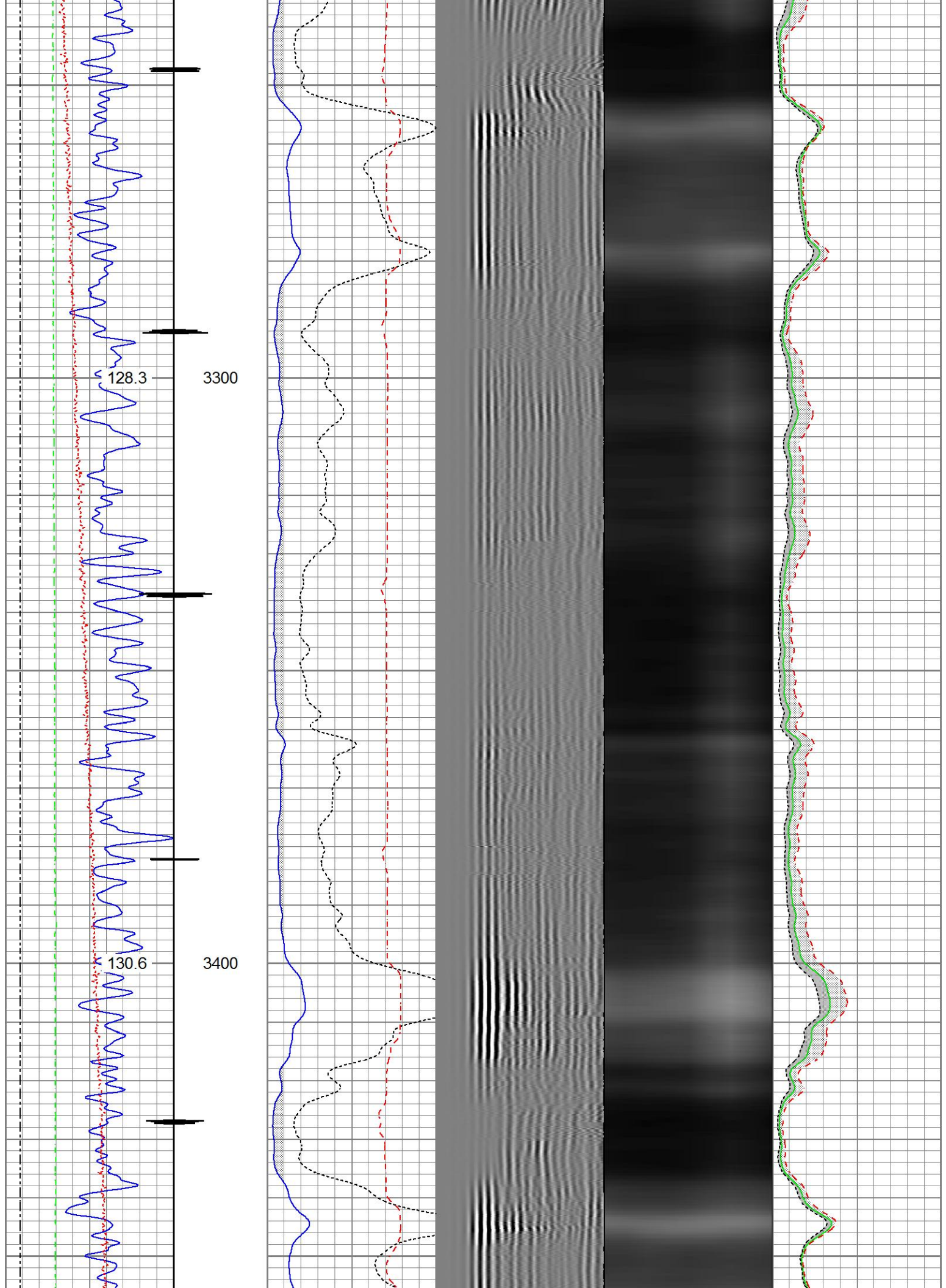


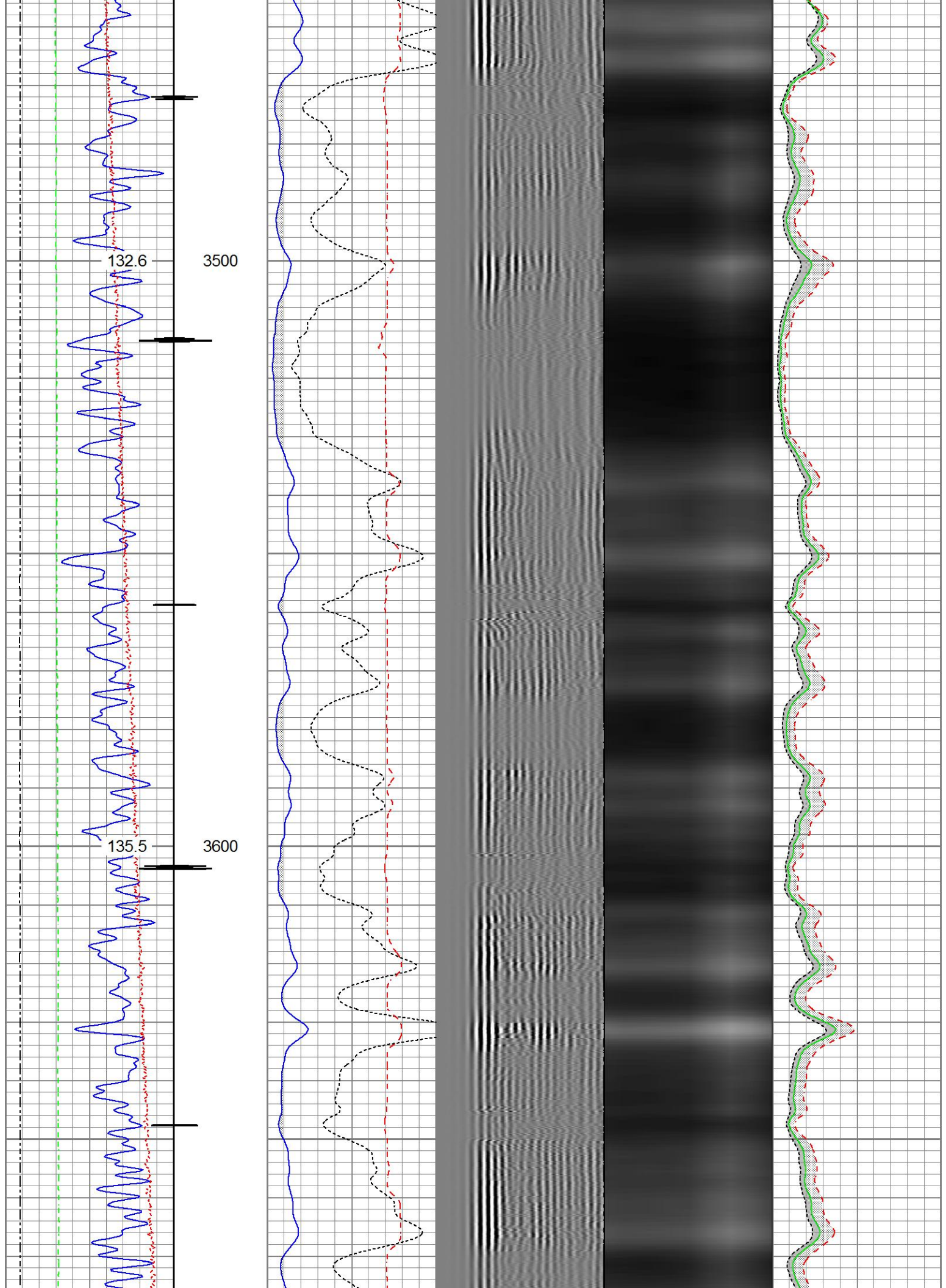


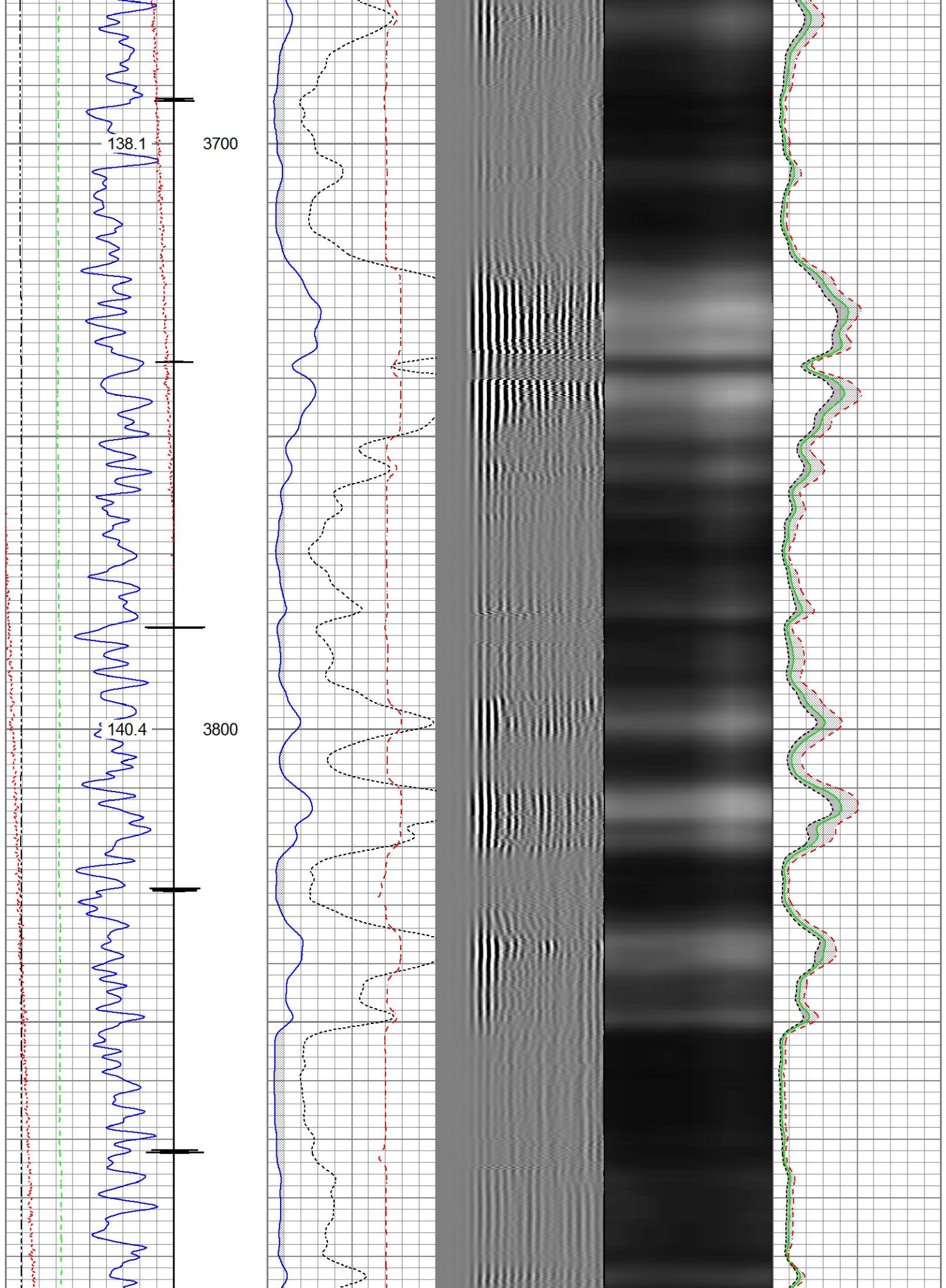


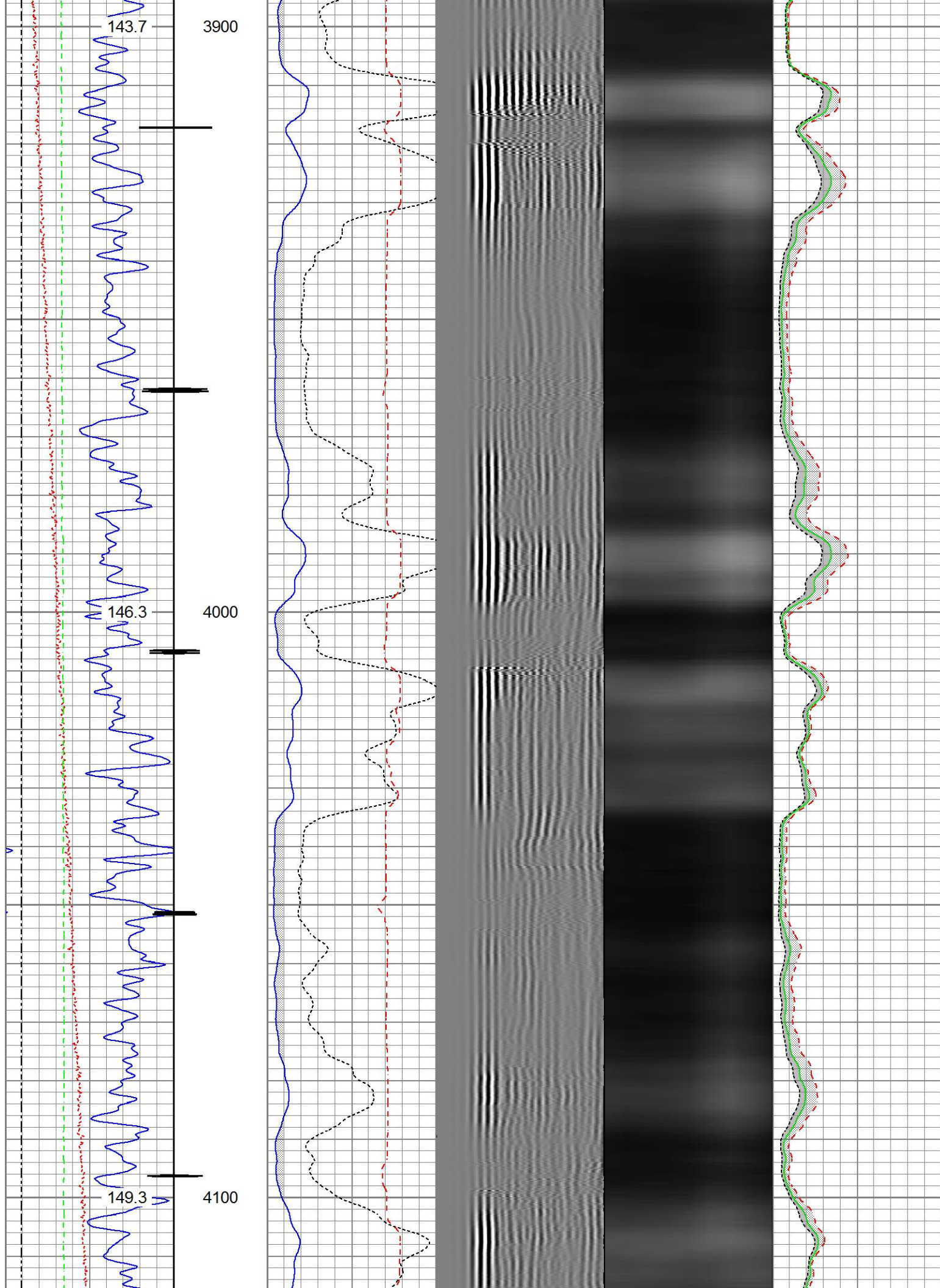


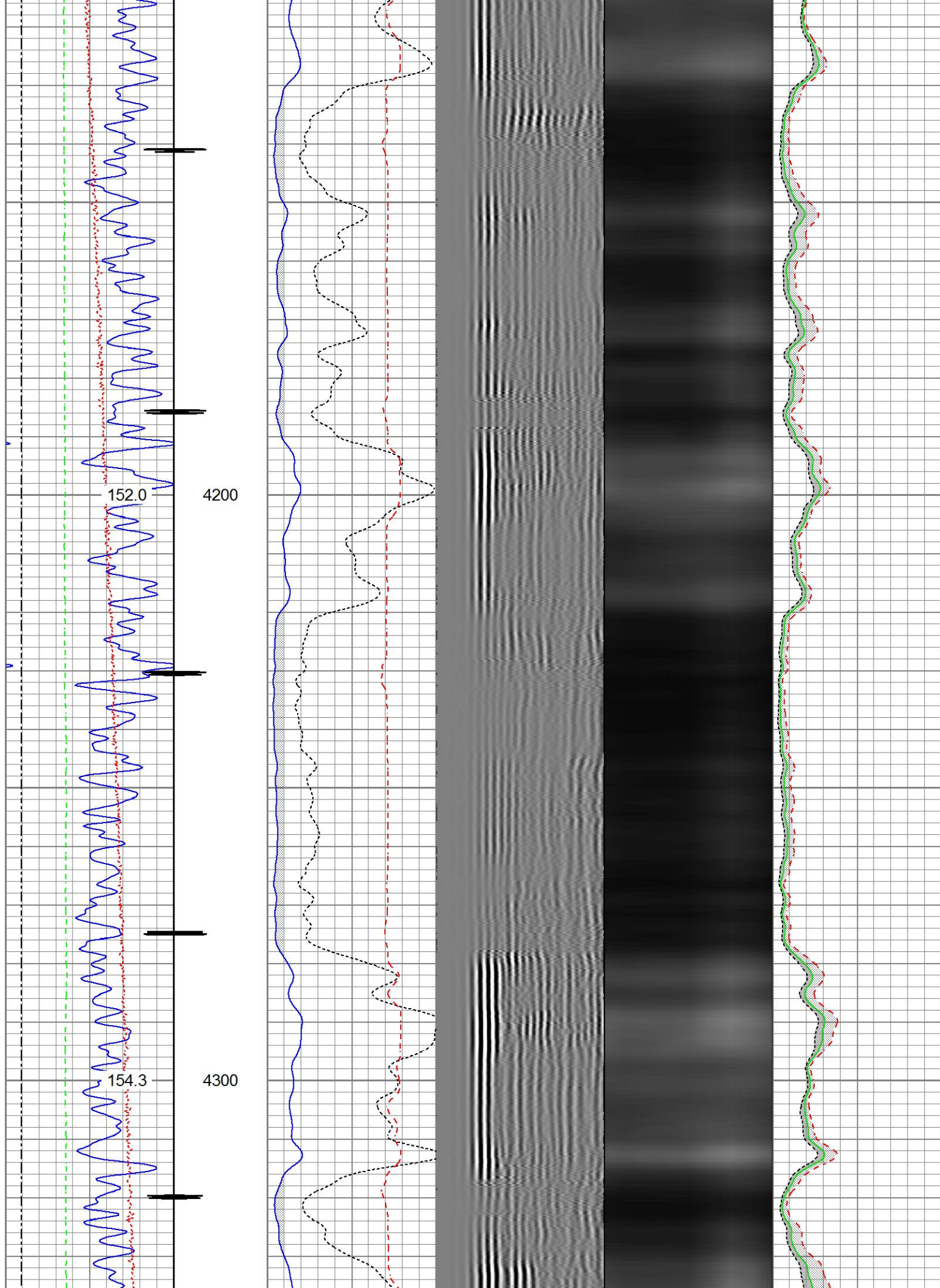


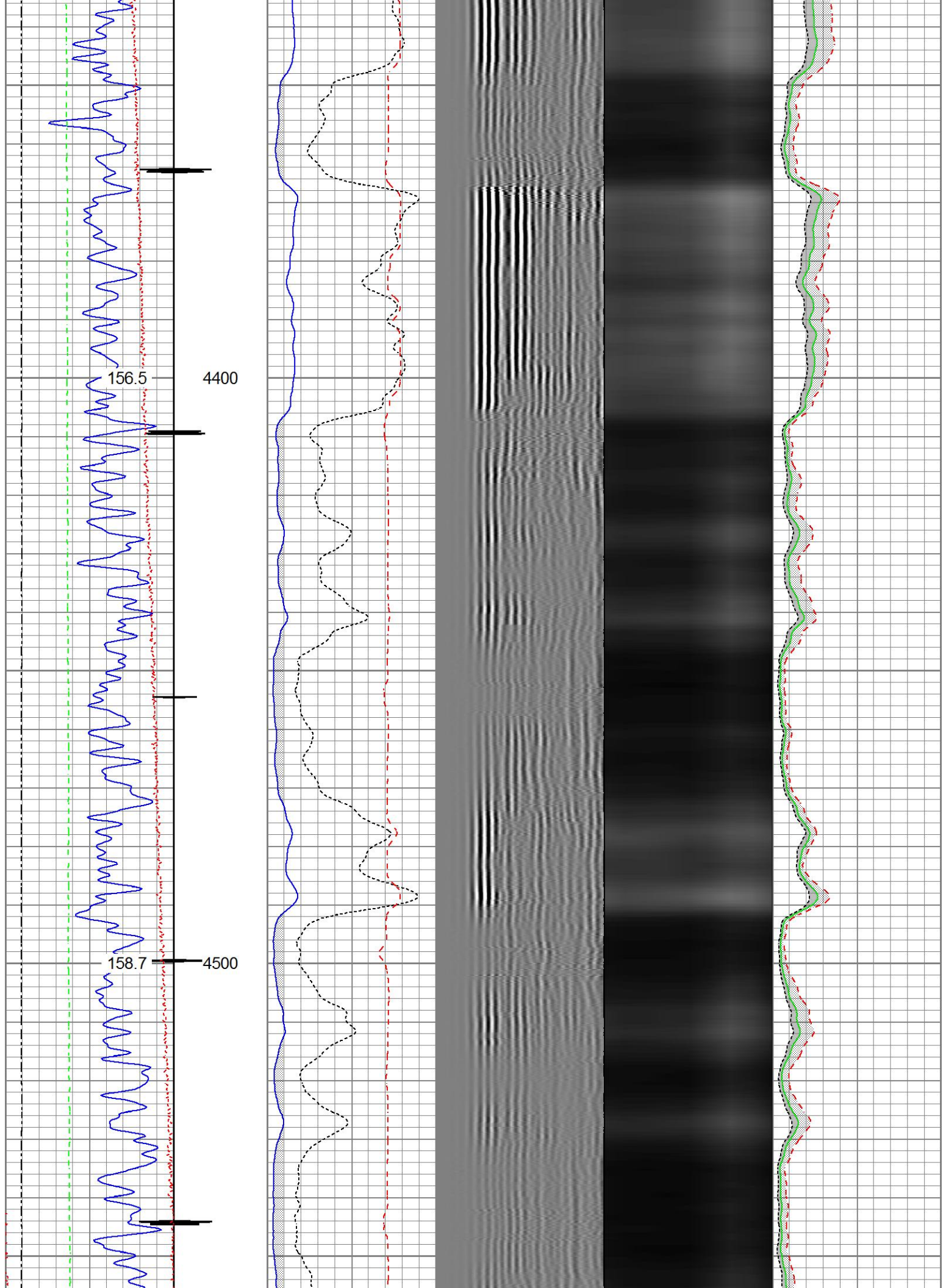


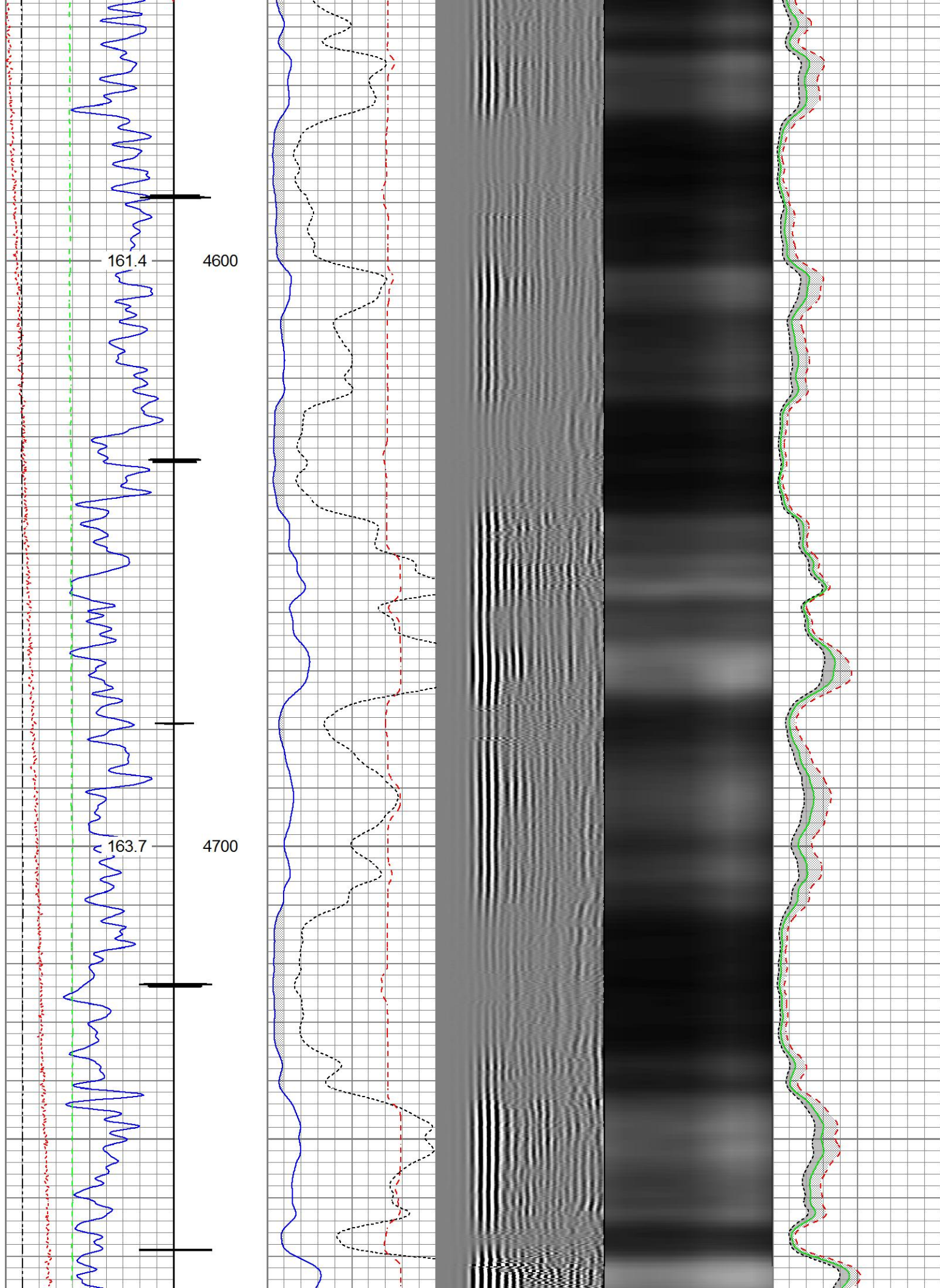


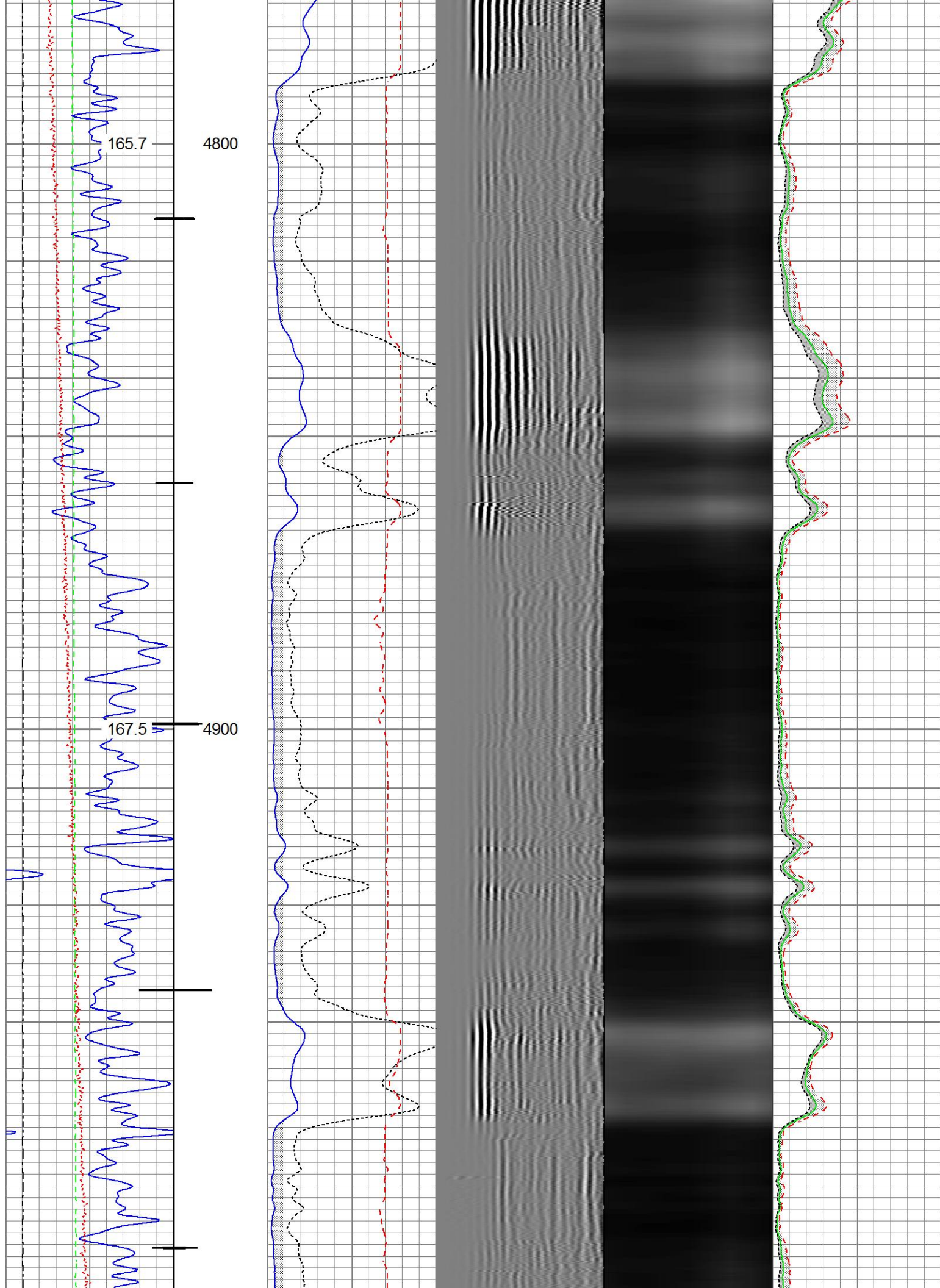


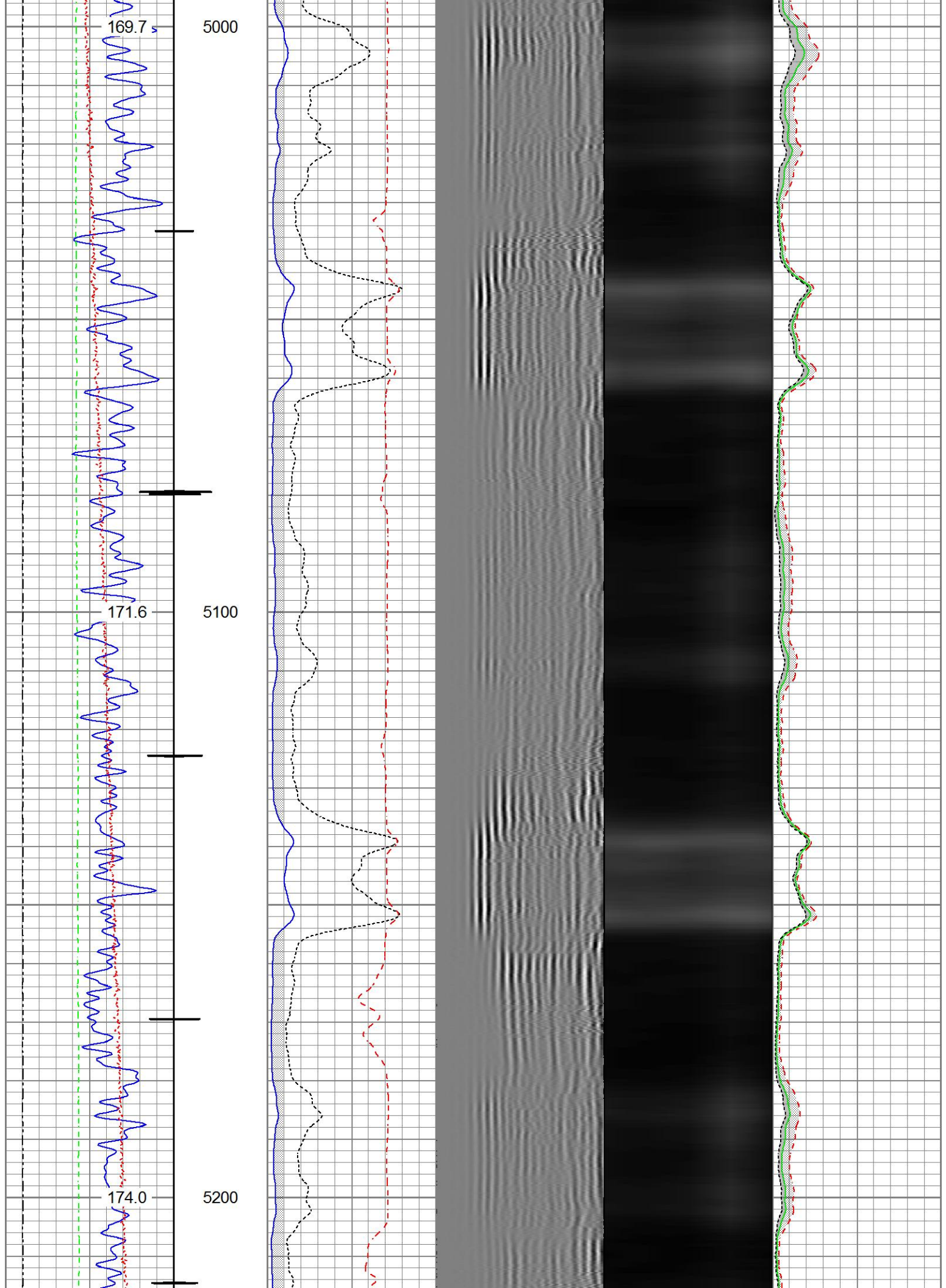


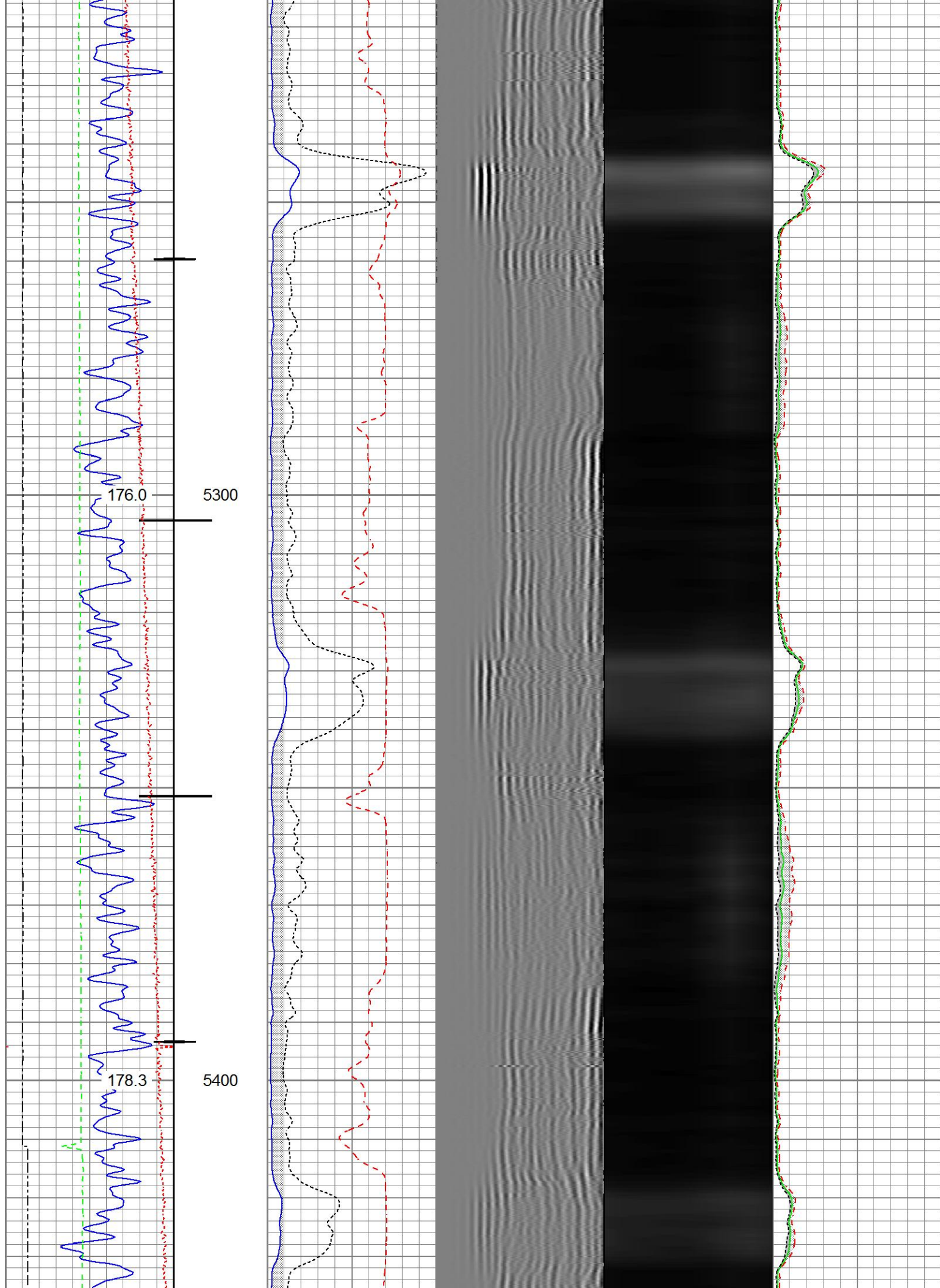


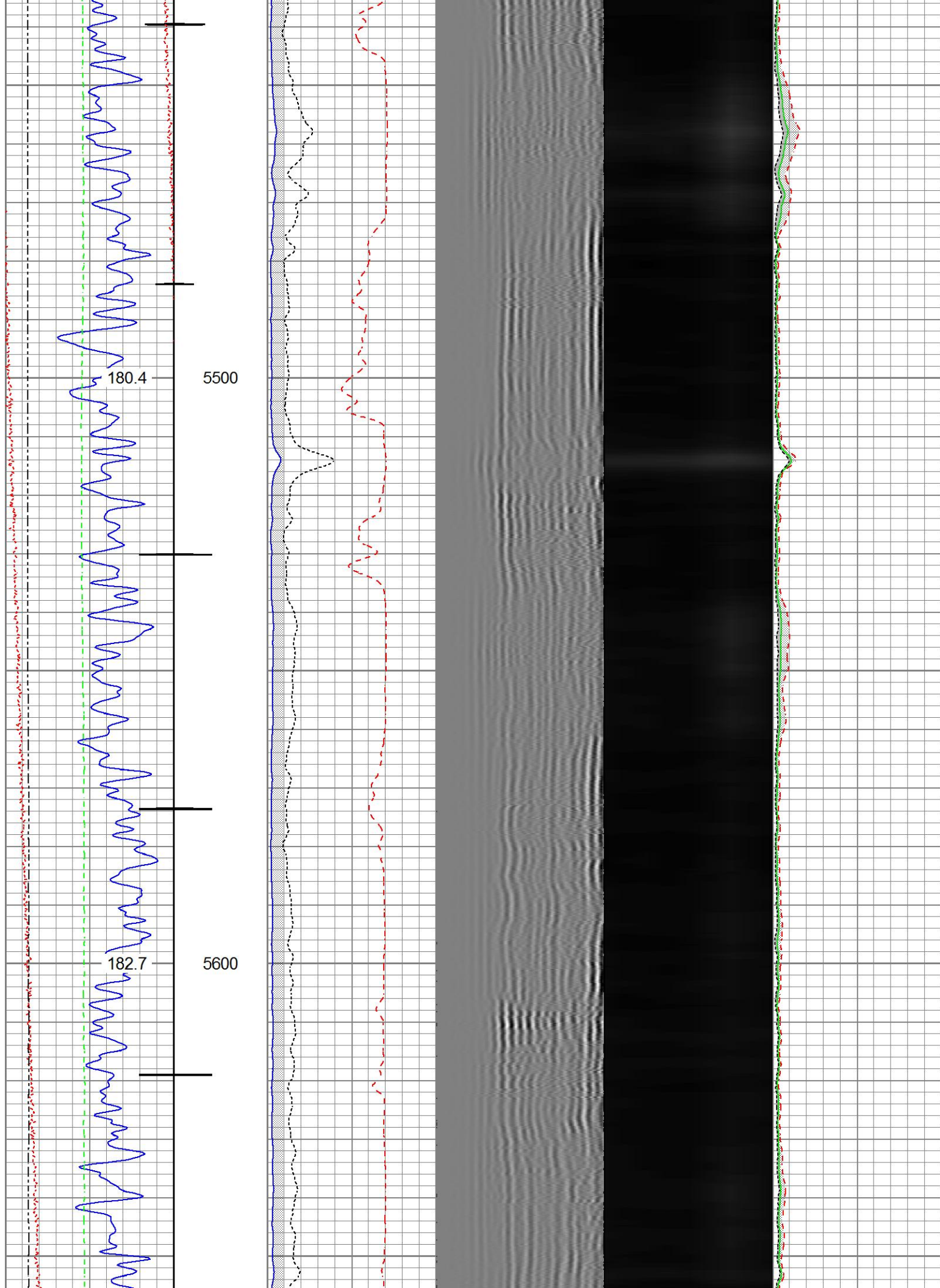


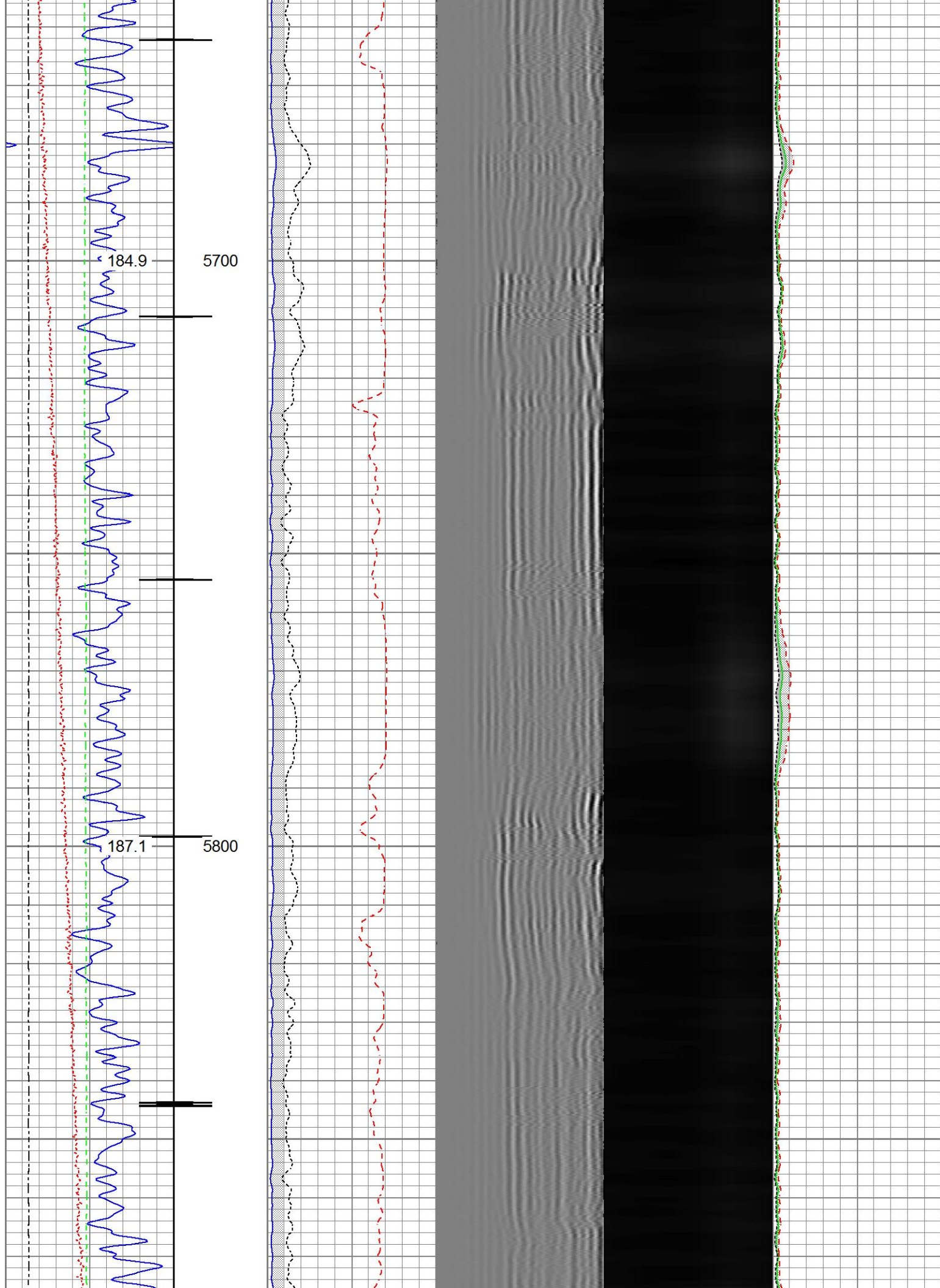


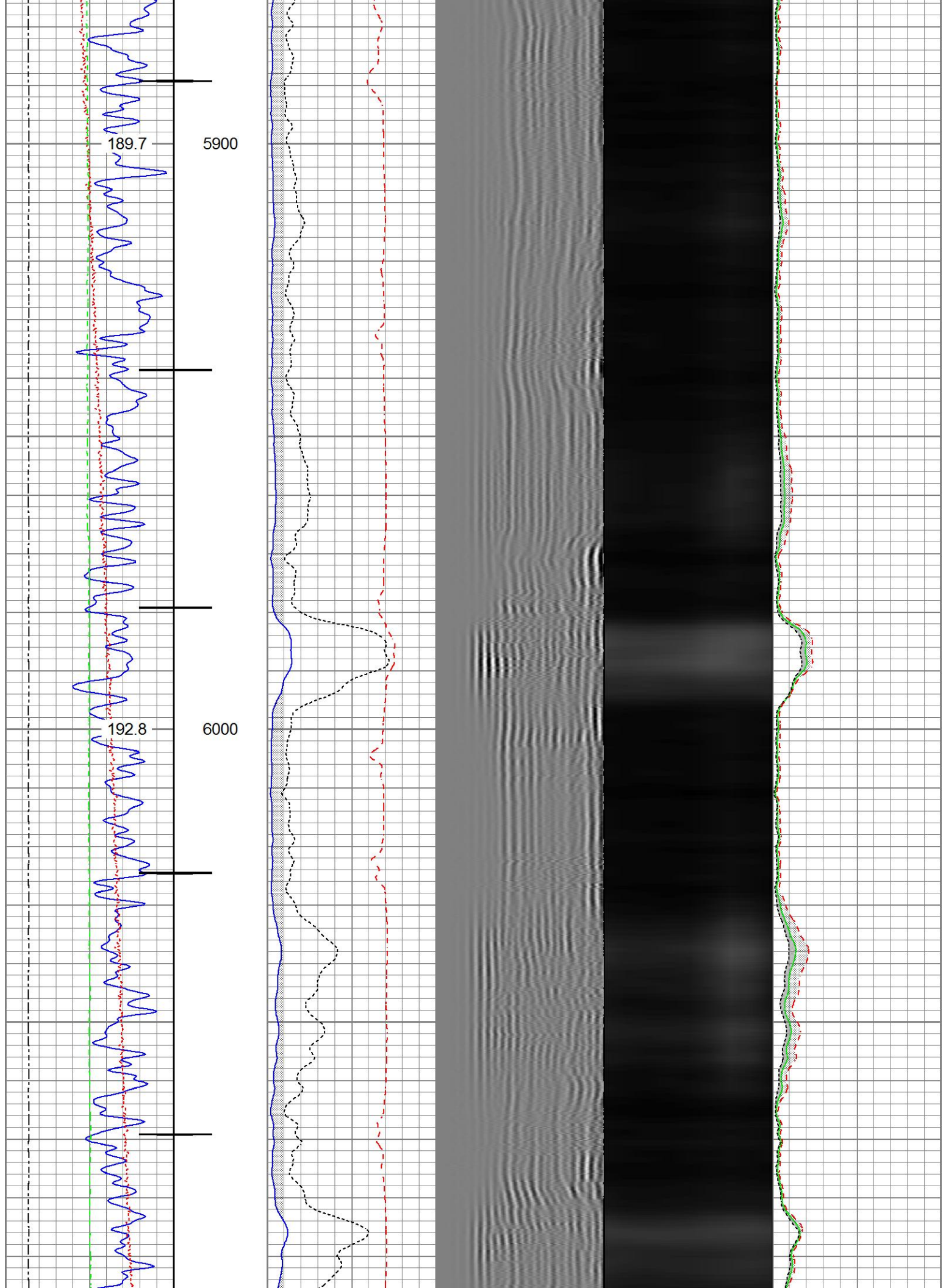


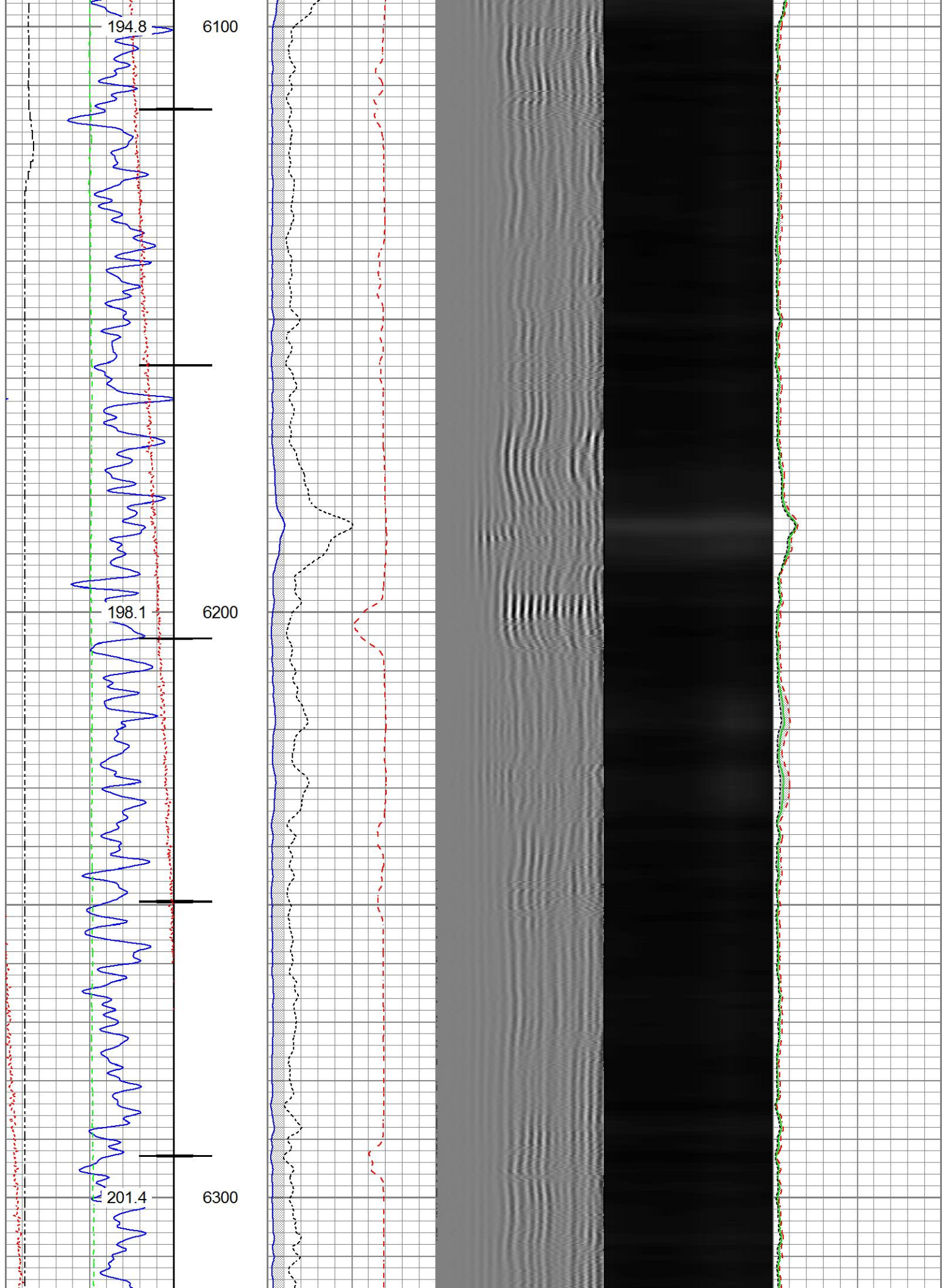


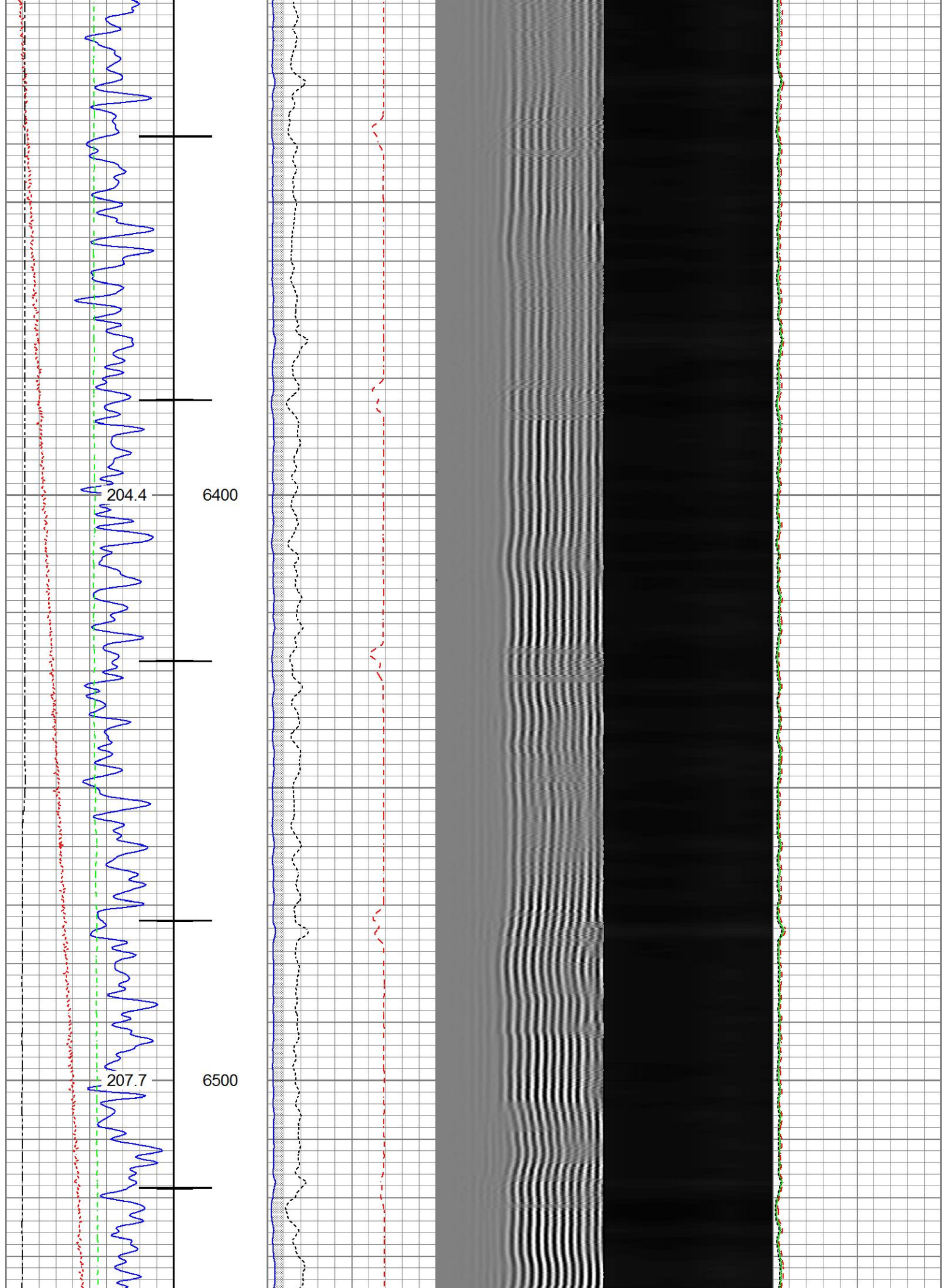


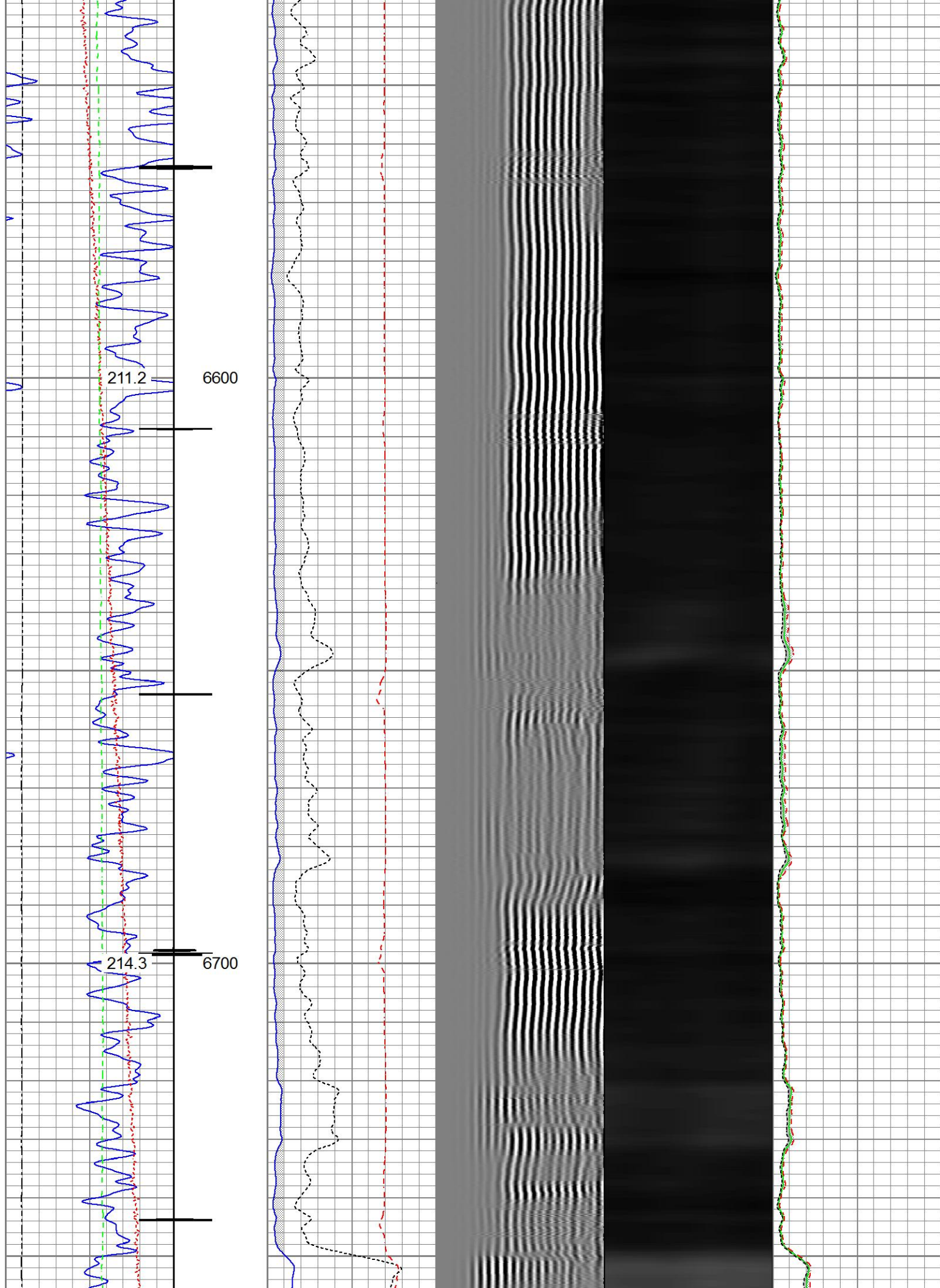


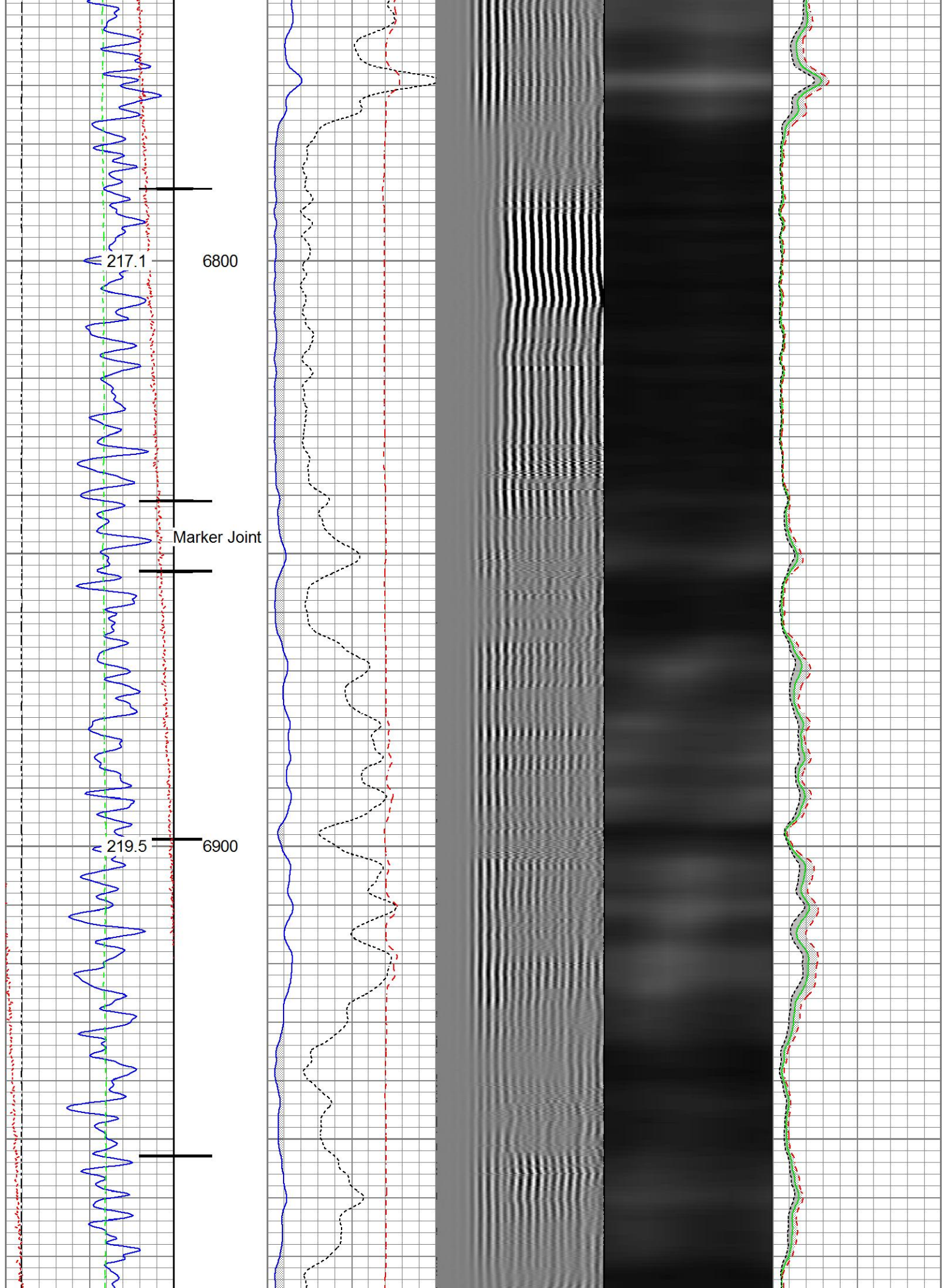


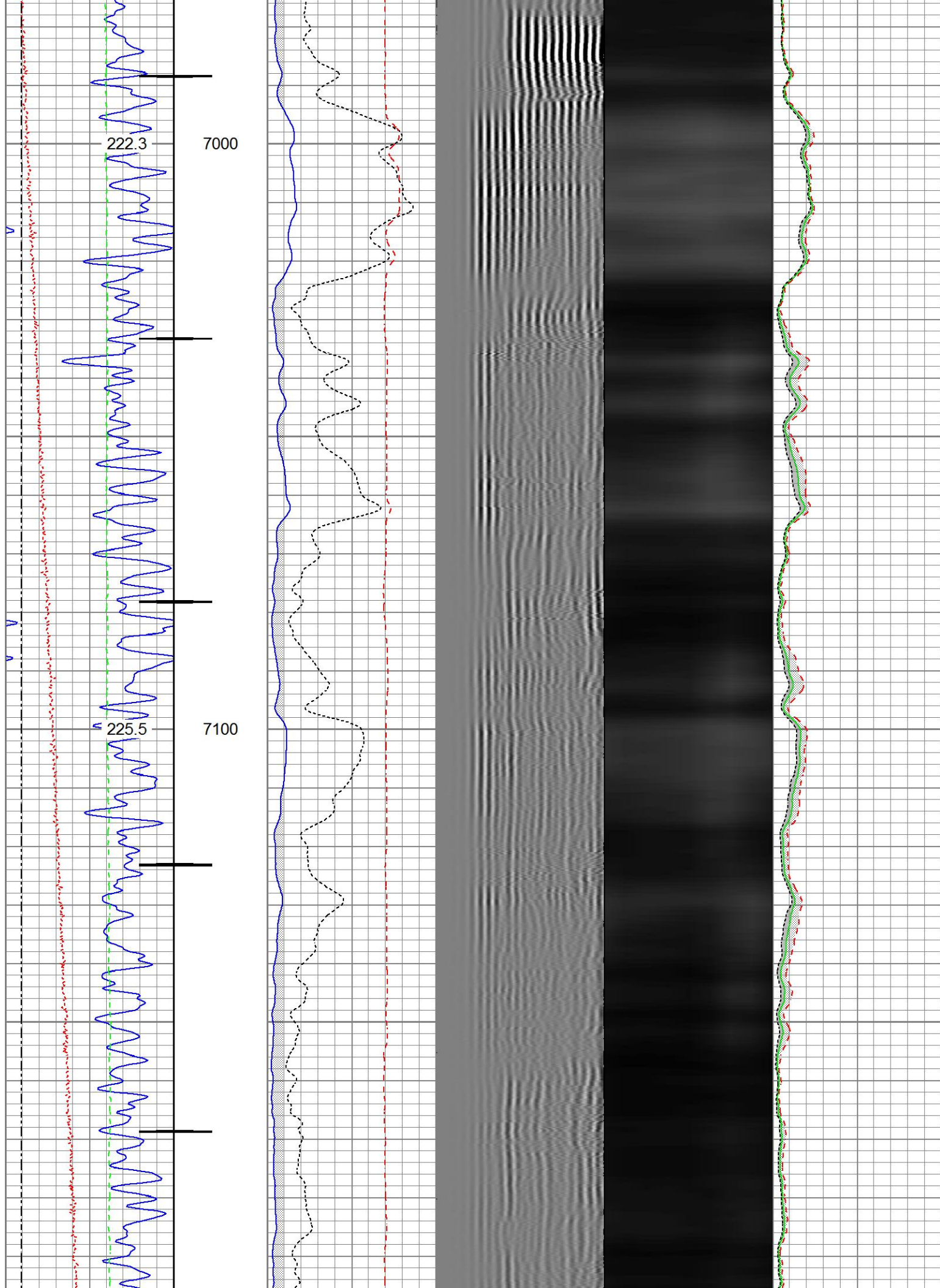


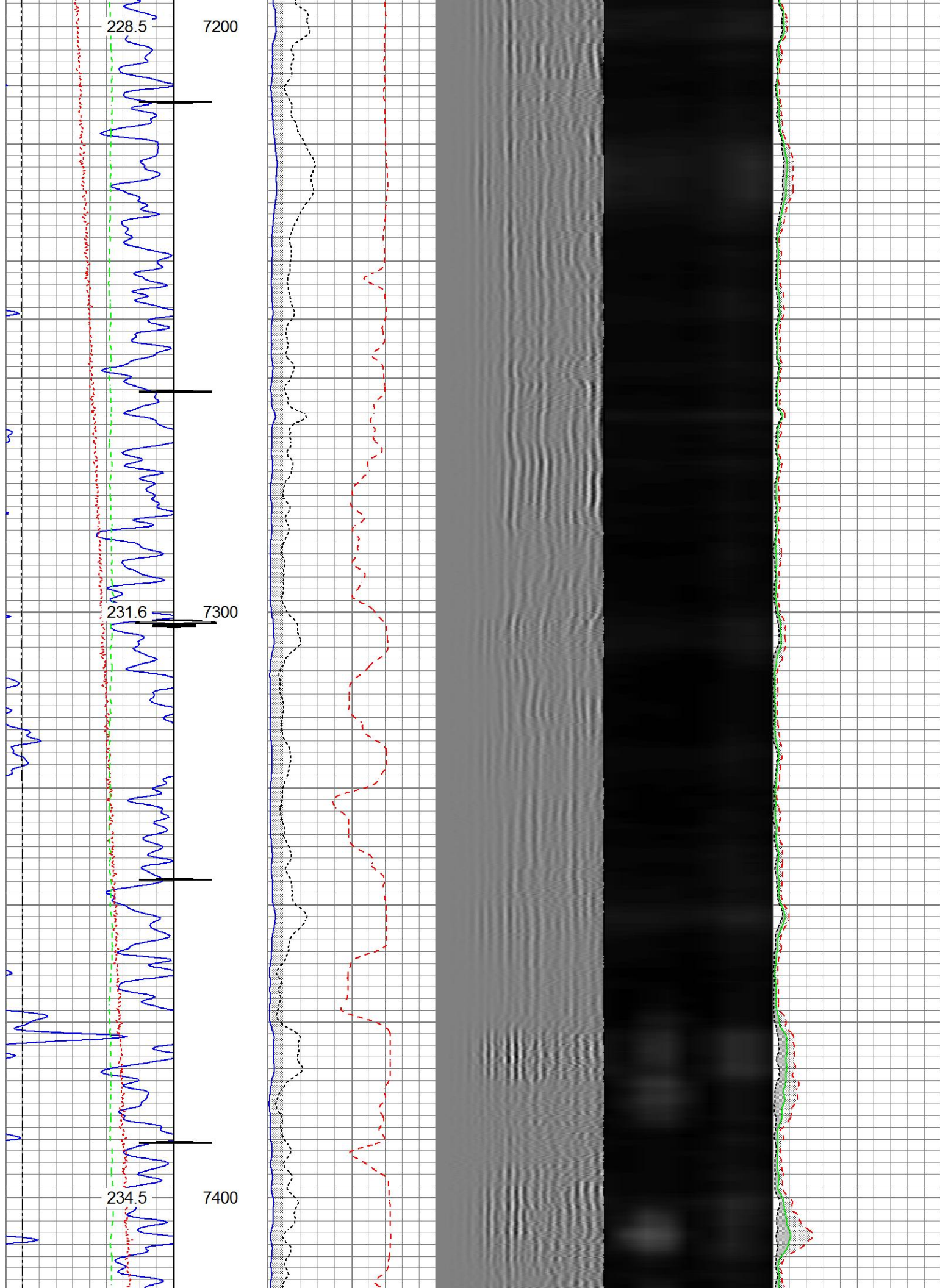


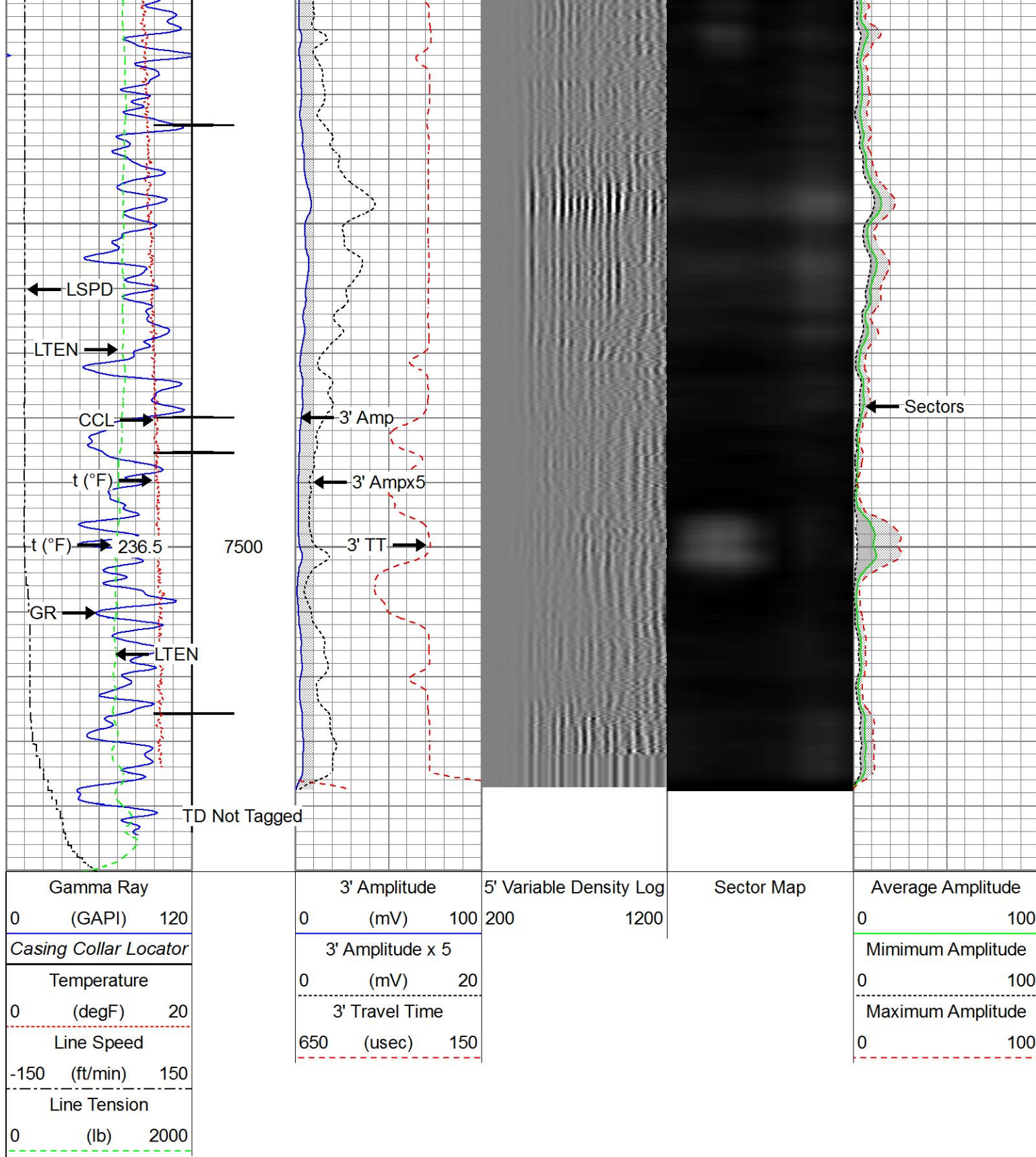










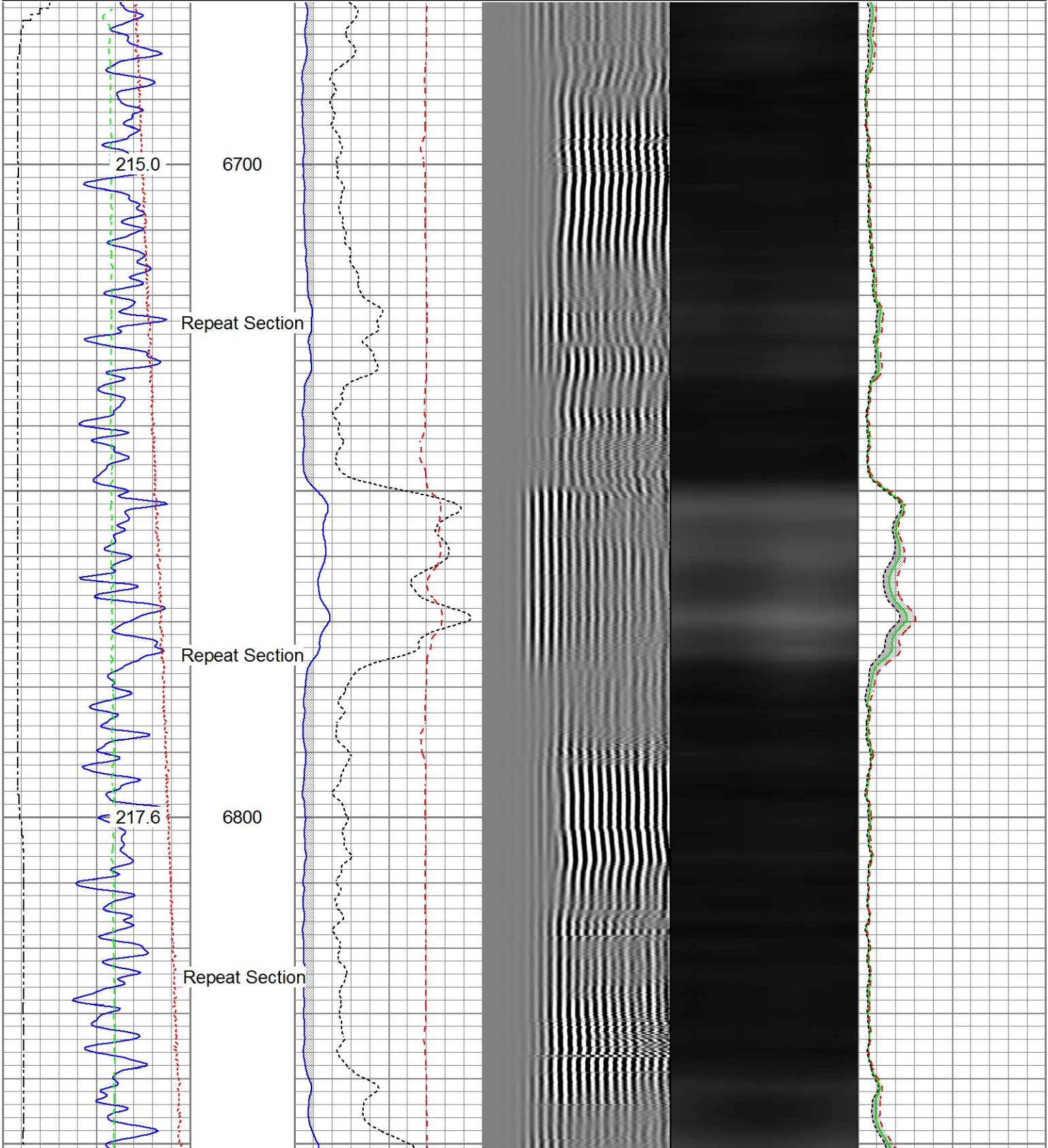


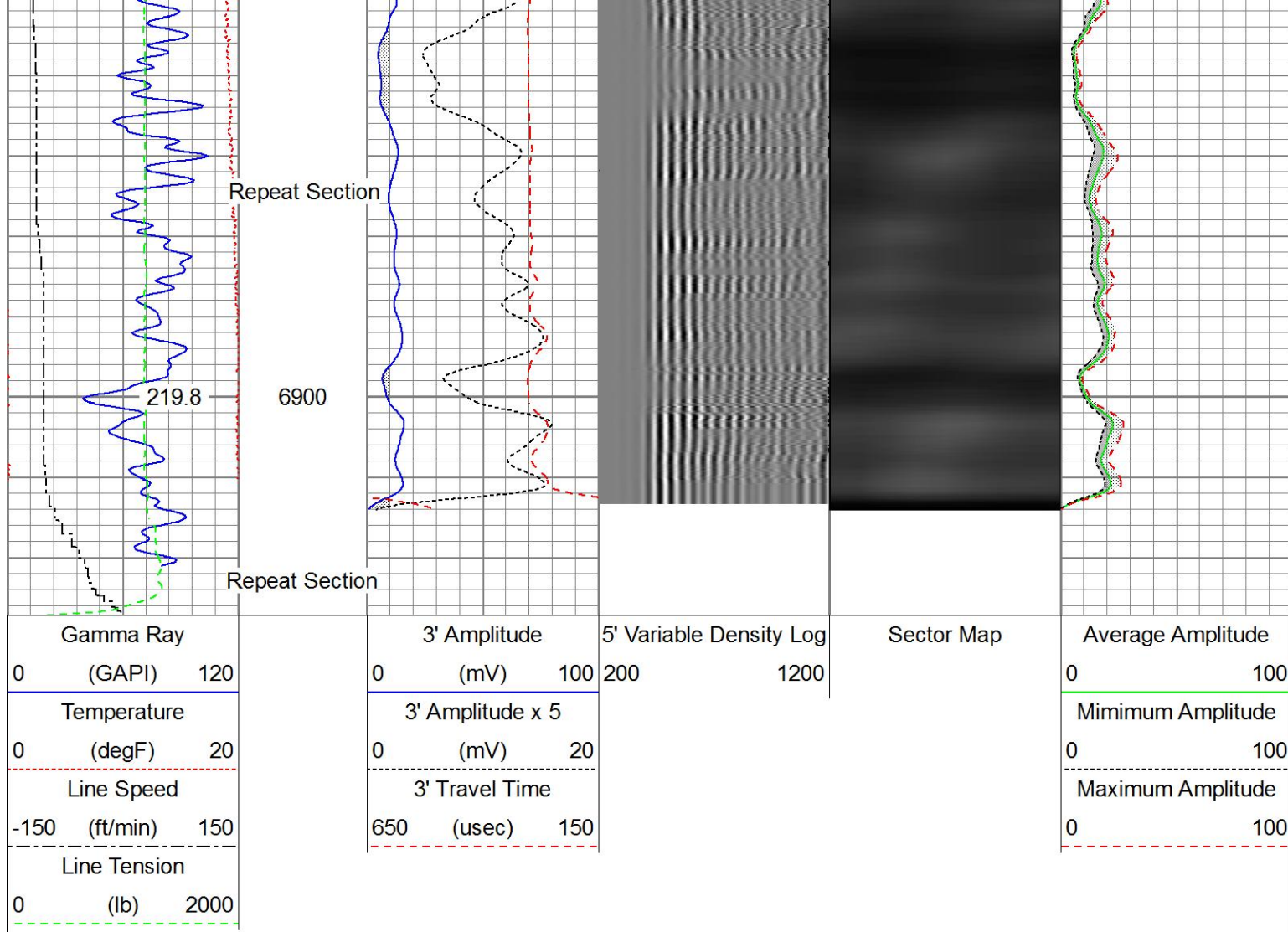
Repeat Pass



Log Recorded with 2800 PSI Surface Induced Pressure

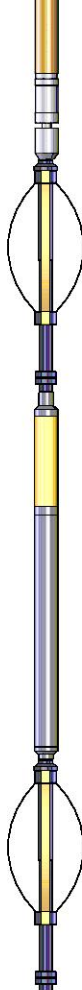
Database File 0512342390_anadarko_land fed 3n-32hz_08-16-16-rbl_w8.db
Dataset Pathname pass1.4
Presentation Format ros_radrii
Dataset Creation Tue Aug 16 11:00:57 2016
Client Name

Charted by		Depth in Feet scaled 1:240			
Gamma Ray		3' Amplitude		5' Variable Density Log	
0	(GAPI) 120	0	(mV) 100	200	1200
Temperature		3' Amplitude x 5		Sector Map	
0	(degF) 20	0	(mV) 20	Average Amplitude	
Line Speed		3' Travel Time		Minimum Amplitude	
-150	(ft/min) 150	650	(usec) 150	0	100
Line Tension				Maximum Amplitude	
0	(lb) 2000			0	100





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
HeadVolt	19.54		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	16.75					
WVFS8	14.58					
WVFS7	14.58					
WVFS6	14.58					
WVFS5	14.58					
WVFS4	14.58					

WVFS3	14.58					
WVFS2	14.58					
WVFS1	14.58					
WVFCAL	14.58					
WVF3FT	14.58					
WVF5FT	13.58					
HEADVOLT	10.33					
			Probe_ELine_BowSpring_Centralizer-P	EE2.88,275	2.75	20.00
			Probe 2-3/4" Electric Inline Bowspring Centralizer			
DCCL	6.51					
CCL	6.51					
			Probe_GR_CCL-P_CGR_2750_S (FW1304.573)		2.75	55.00
			Probe 2-3/4" Digital CCL / Gamma Ray Combined			
GR	3.77					
			Probe_ELine_BowSpring_Centralizer-P	EE2.88,275	2.75	20.00
			Probe 2-3/4" Electric Inline Bowspring Centralizer			
Dataset: 0512342390_Anadarko_Land Fed 3N-32HZ_08-16-16-RBL_w8.db: field/well/run1/pass1.1						
Total length: 23.43 ft						
Total weight: 225.40 lb						
O.D.: 2.75 in						

Calibration Report			
Database File	0512342390_Anadarko_Land Fed 3N-32HZ_08-16-16-RBL_w8.db		
Dataset Pathname	pass1.1		
Dataset Creation	Tue Aug 16 11:08:35 2016		
Gamma Ray Calibration Report			
Serial Number:	FW1307-038		
Tool Model:	P_CGR_2750_S		
Performed:	Wed Aug 10 15:05:44 2016		
Calibrator Value:	1.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	1.6	cps	
Sensitivity:	0.6300	GAPI/cps	
Segmented Cement Bond Log Calibration Report			
Serial Number:	FW1305-096		
Tool Model:	P_RBT_2750		
Calibration Casing Diameter:	5.500	in	
Calibration Depth:	27.374	ft	
Master Calibration, performed Tue Aug 16 10:42:39 2016:			

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.004	0.681	0.800	71.921	104.968	0.417
CAL	0.739	0.747				
5'	0.005	0.577	0.800	71.921	124.476	0.136
SUM						
S1	0.000	0.674	0.000	100.000	148.516	-0.045
S2	0.003	0.702	0.000	100.000	143.262	-0.498
S3	0.005	0.703	0.000	100.000	143.284	-0.691
S4	0.005	0.687	0.000	100.000	146.799	-0.794
S5	0.006	0.677	0.000	100.000	148.926	-0.884
S6	0.004	0.664	0.000	100.000	151.535	-0.633
S7	0.004	0.661	0.000	100.000	152.124	-0.579
S8	0.004	0.664	0.000	100.000	151.530	-0.557

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.739	0.747	1.000	0.000

Air Zero Calibration, performed Tue Aug 16 10:42:22 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	



Company Kerr-McGee Oil & Gas Onshore, L.P.
 Well Land Fed 3N-32HZ
 Field Wattenberg
 County Weld
 State Colorado