



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company		Kerr-McGee Oil & Gas Onshore, L.P.	
Well		Land Fed 35N-29HZ	
Field		Wattenberg	
County		Weld	
State		Colorado	
Company		Kerr-McGee Oil & Gas Onshore, L.P.	
Well		Land Fed 35N-29HZ	
Field		Wattenberg	
County		Weld	
State		Colorado	
Location:		API # : 05-123-42392	
Permanent Datum		SEC 32 TWP 2N RGE 66W	
Log Measured From		Ground Level	
Drilling Measured From		Kelly Bushing	
		Elevation 4899'	
		Elevation Gauge Ring	
		K.B. 4919'	
		D.F. 4918'	
		G.L. 4899'	
Date		16-AUG-2016	
Run Number		Two	
Depth Driller		12905 FT	
Depth Logger		7450 FT	
Bottom Logged Interval		7378 FT	
Top Log Interval		Surface	
Open Hole Size		7.875"	
Type Fluid		Water	
Density / Viscosity		8.34 lbm/gal	
Max. Recorded Temp.		234°F	
Estimated Cement Top		576 FT	
Time Well Ready		ROA	
Time Logger on Bottom		13.18	
Equipment Number		HD-0343	
Location		Fort Lupton, CO	
Recorded By		Robert Fogarty	
Witnessed By		Chris Hayes	
Run Number		Borehole Record	
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			
		Wgt (lbs/ft)	
		36	
		Grade	
		JD BTC	
		HCP 110	
		Top	
		Surface	
		Bottom	
		1861 FT	
		12894 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 6636 FT
Adjusted log -1.8 FT to correlate with Marker JointTop
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!!

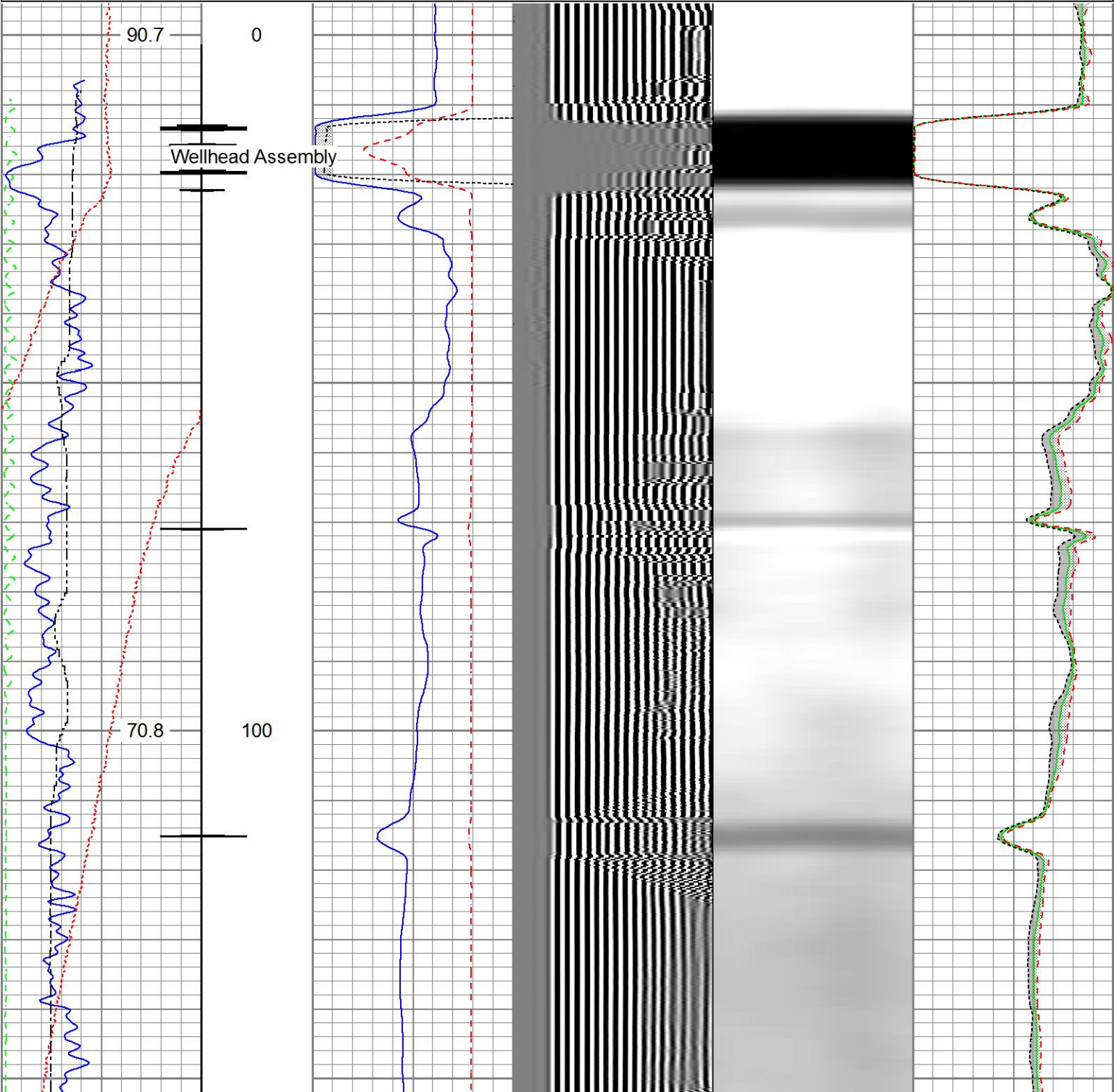


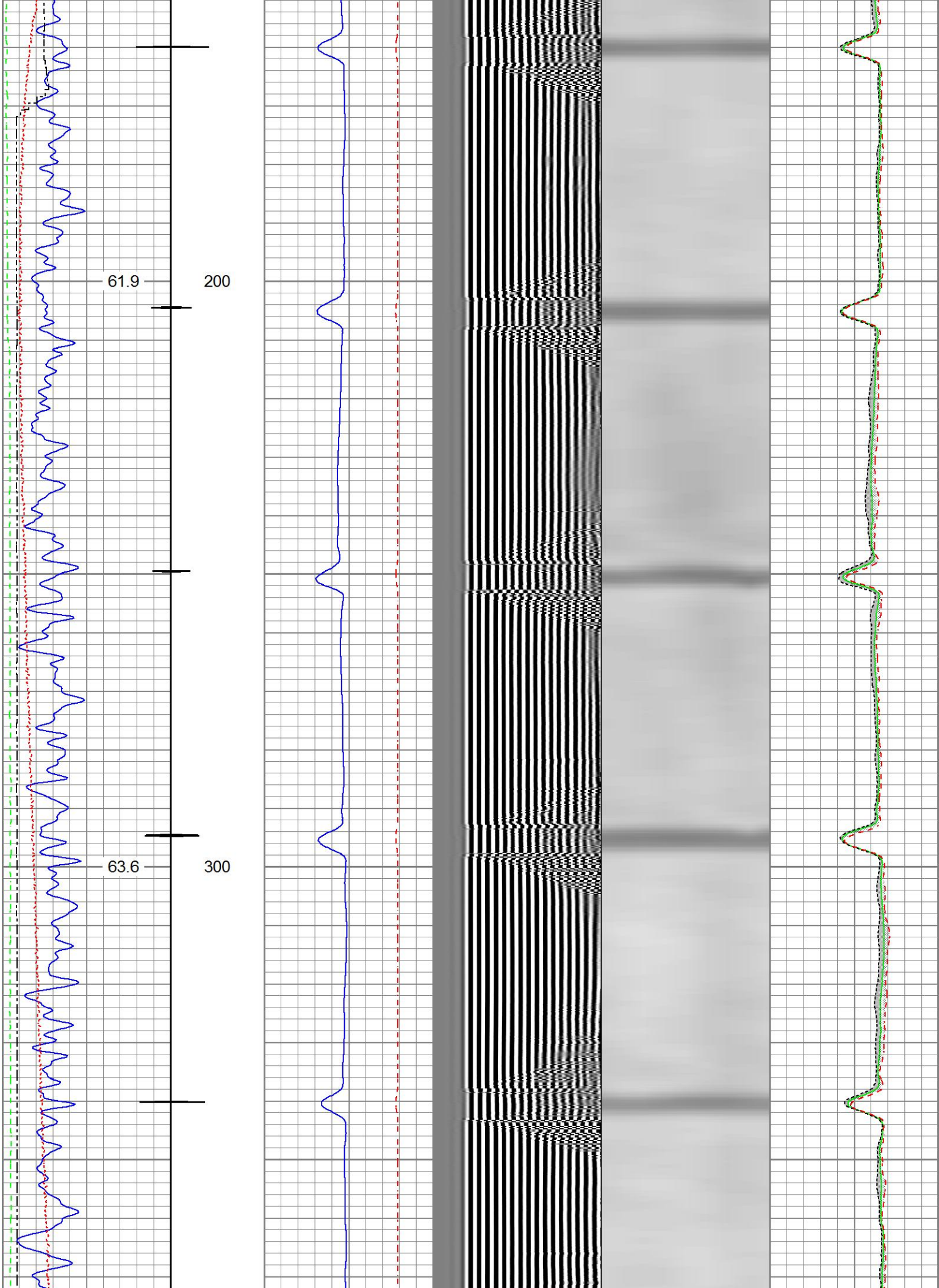
Main Pass

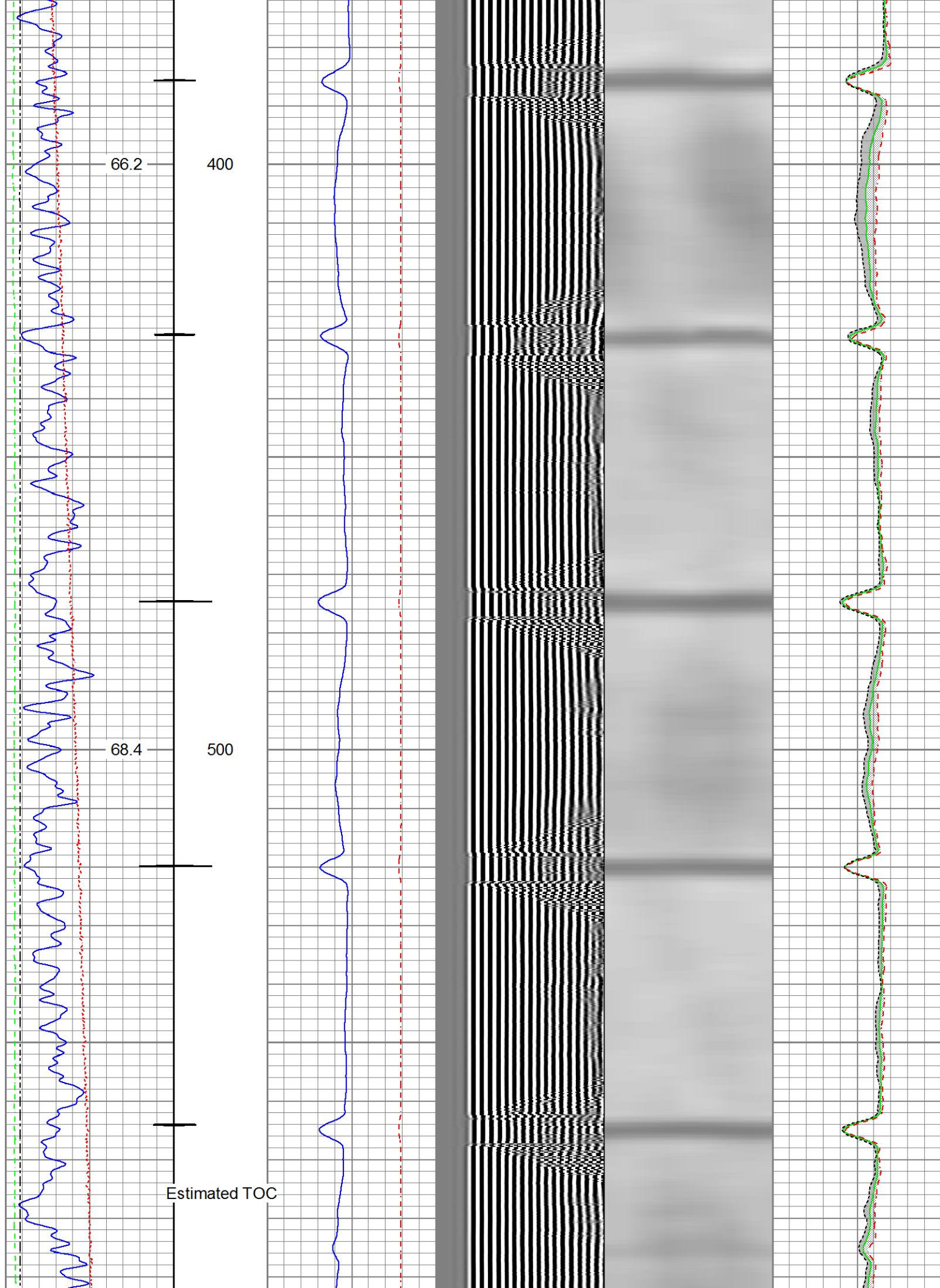
Recorded with 2800 PSI Surface Induced Pressure

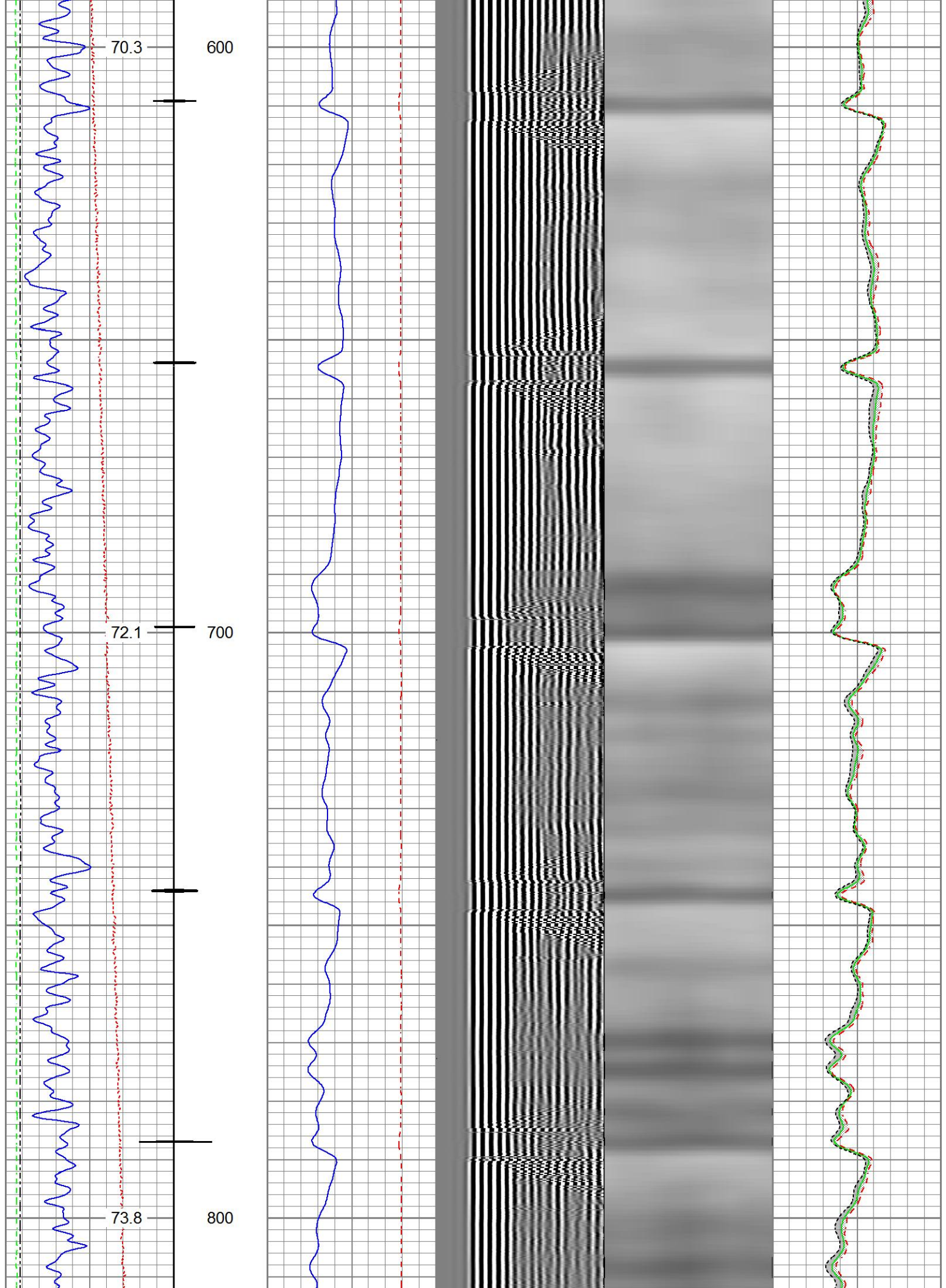
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Dataset Pathname	main
Presentation Format	ros_radrii
Dataset Creation	Tue Aug 16 14:22:08 2016
Charted by	Depth in Feet scaled 1:240

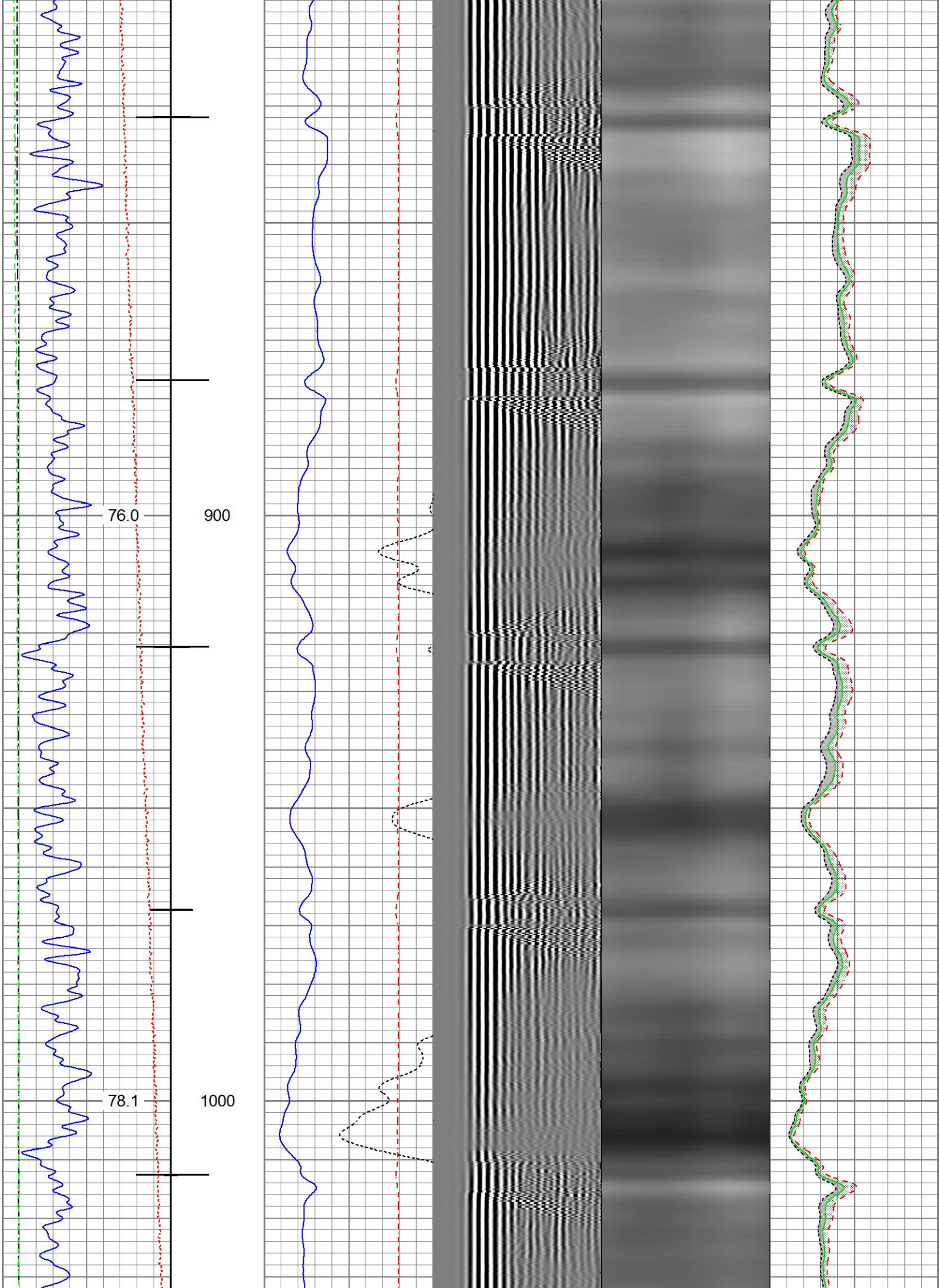
Gamma Ray		3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120		0 (mV) 100	200 1200		0 100
Casing Collar Locator		3' Amplitude x 5			Mimimum Amplitude
Temperature		0 (mV) 20			0 100
0 (degF) 20		3' Travel Time			Maximum Amplitude
Line Speed		650 (usec) 150			0 100
-150 (ft/min)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

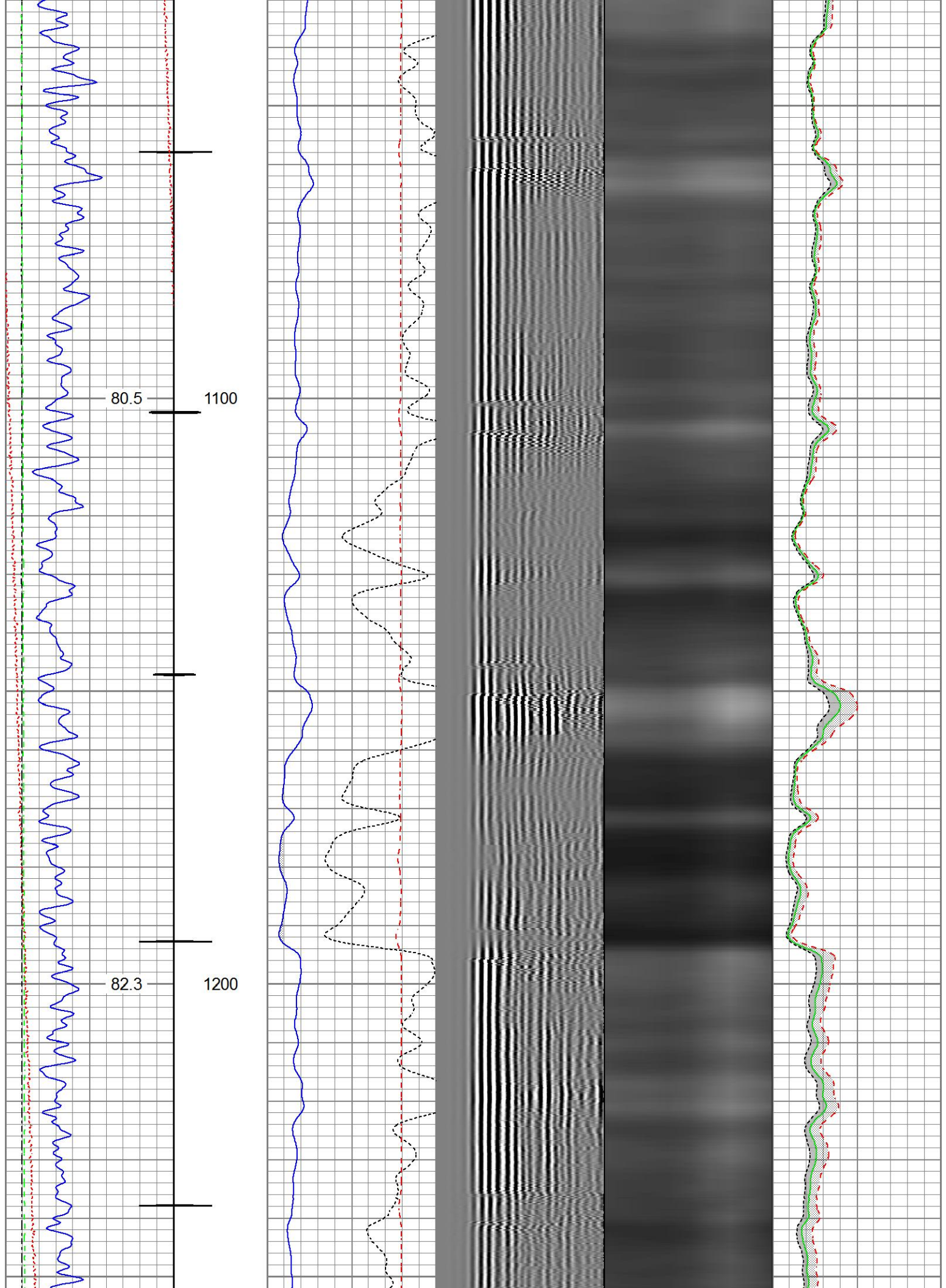


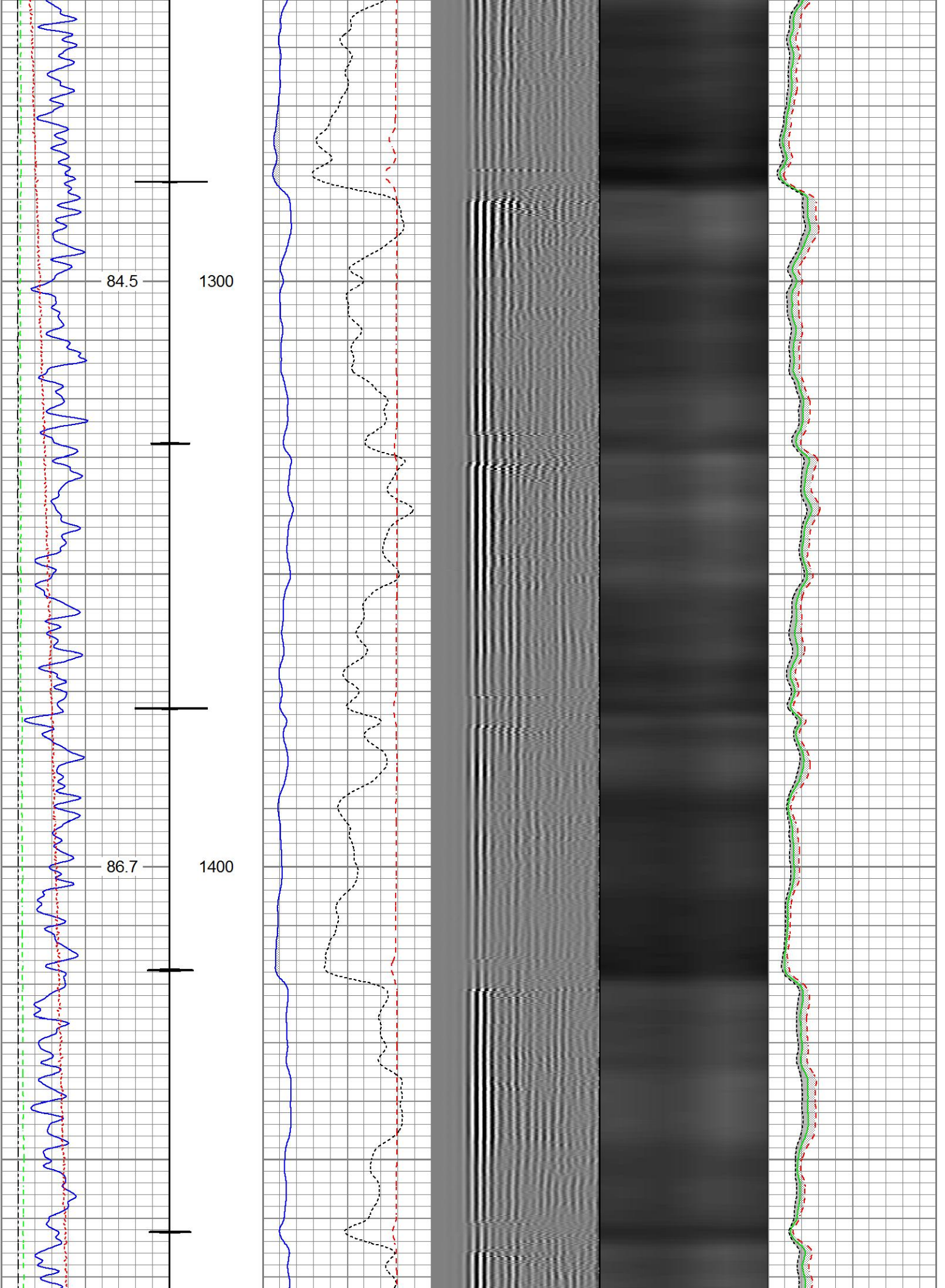


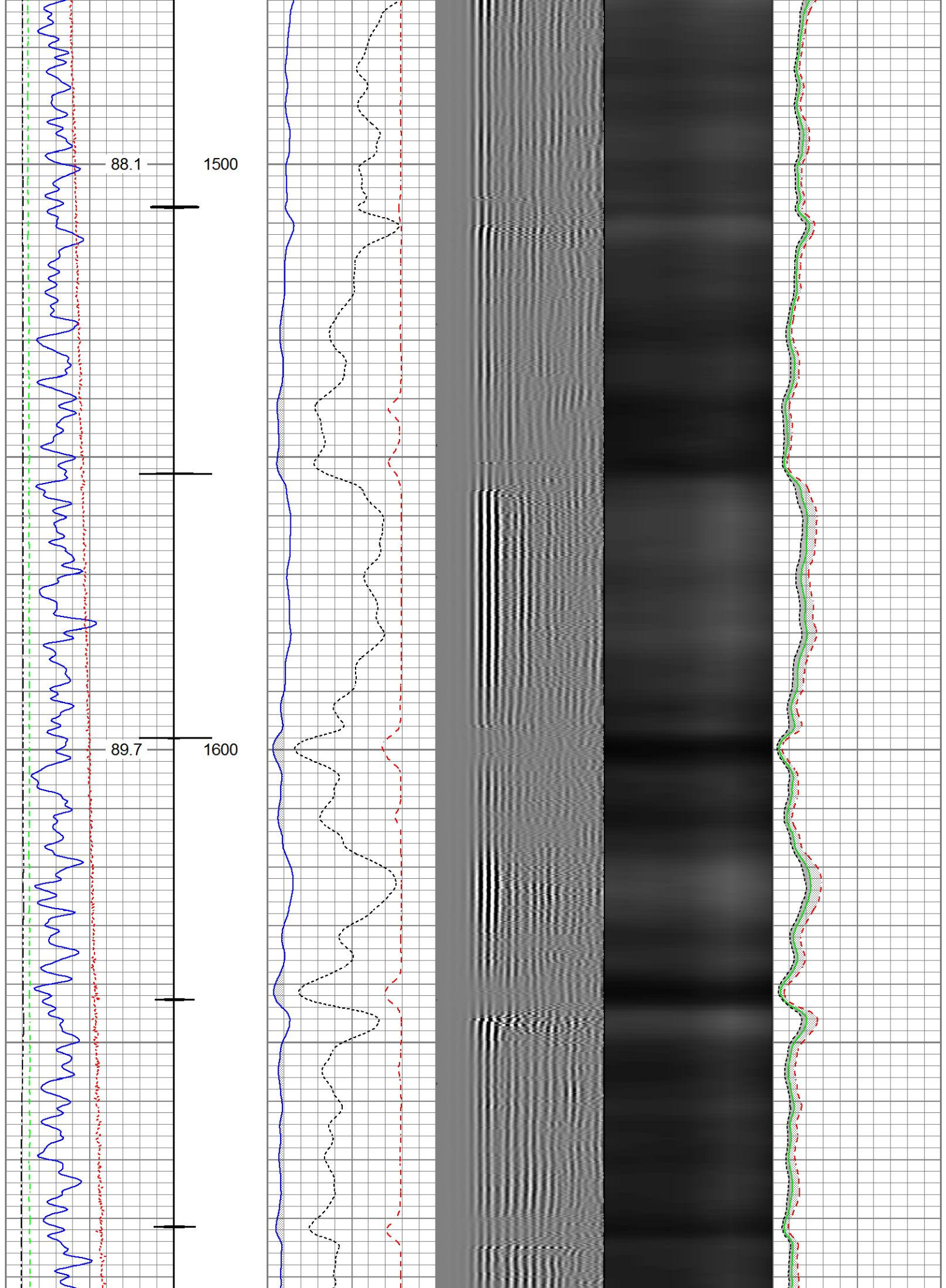


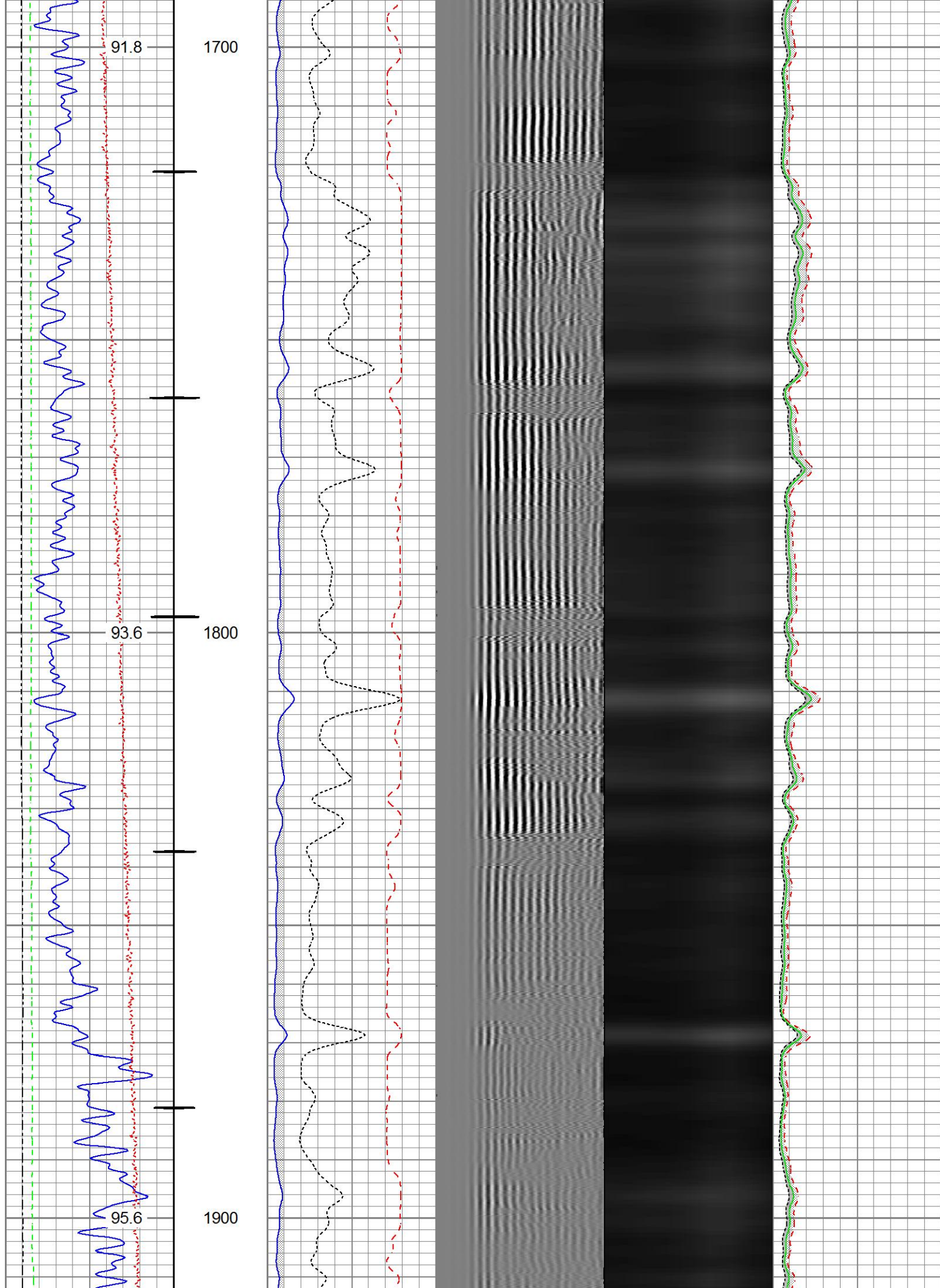


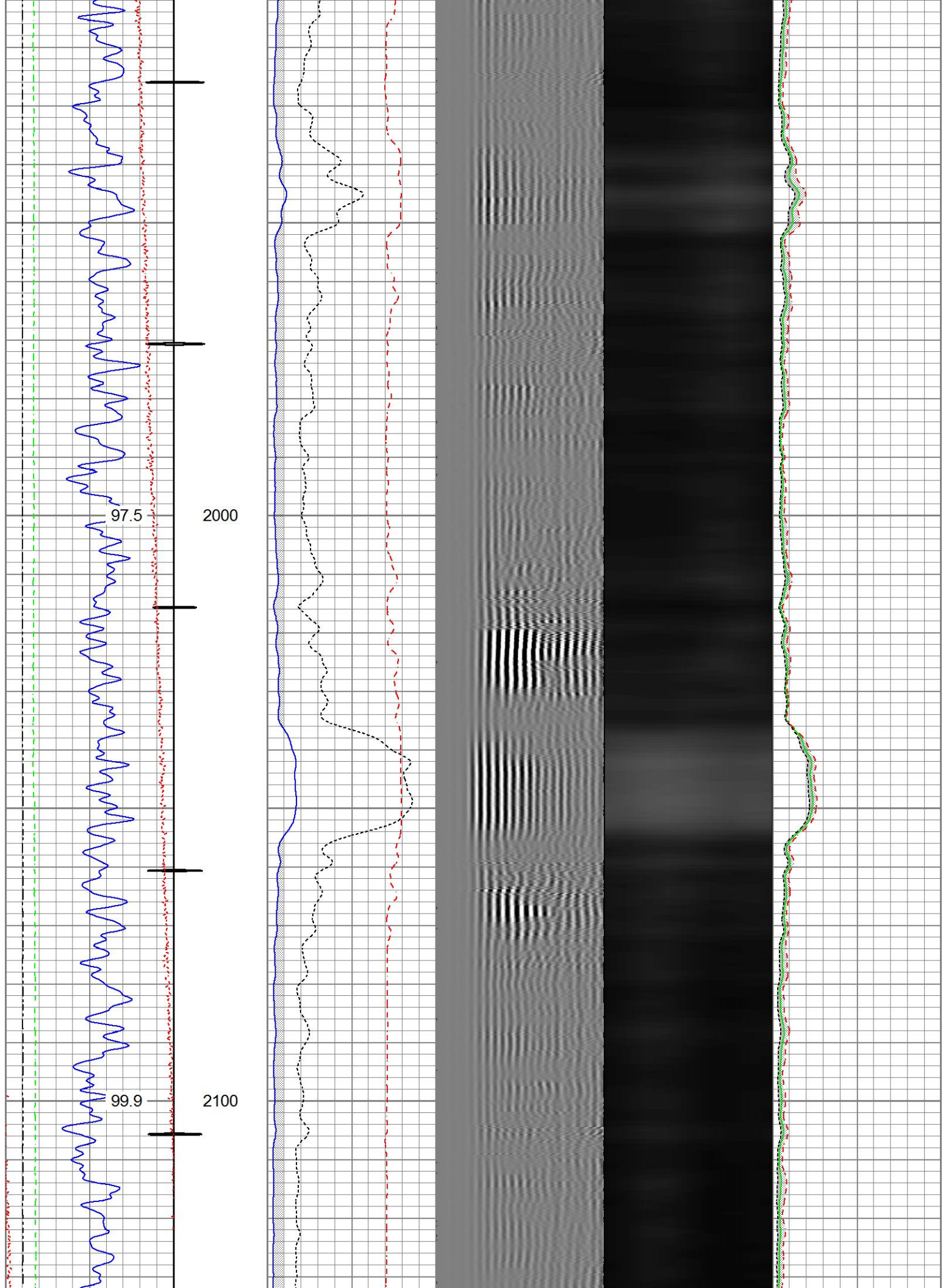


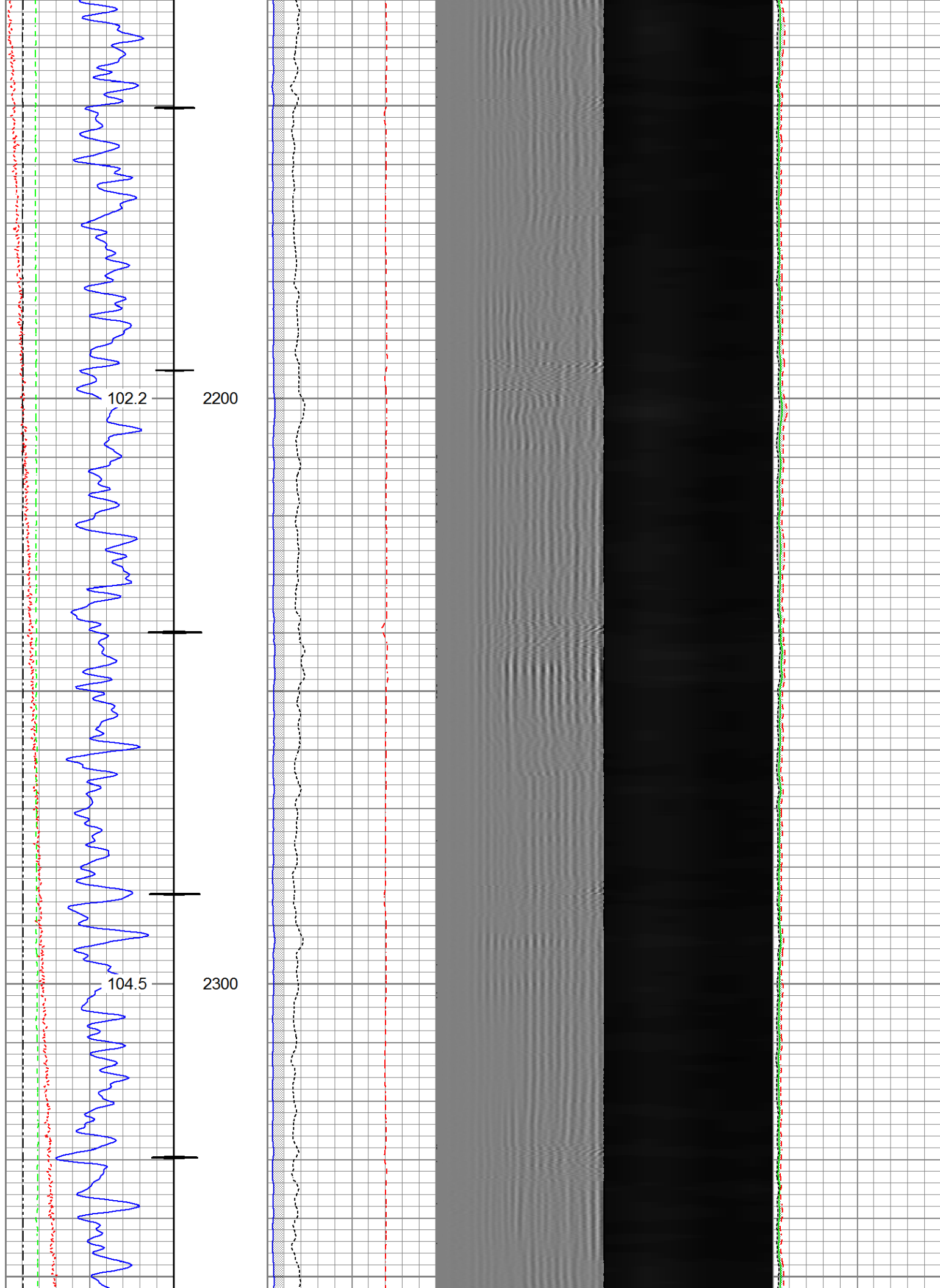


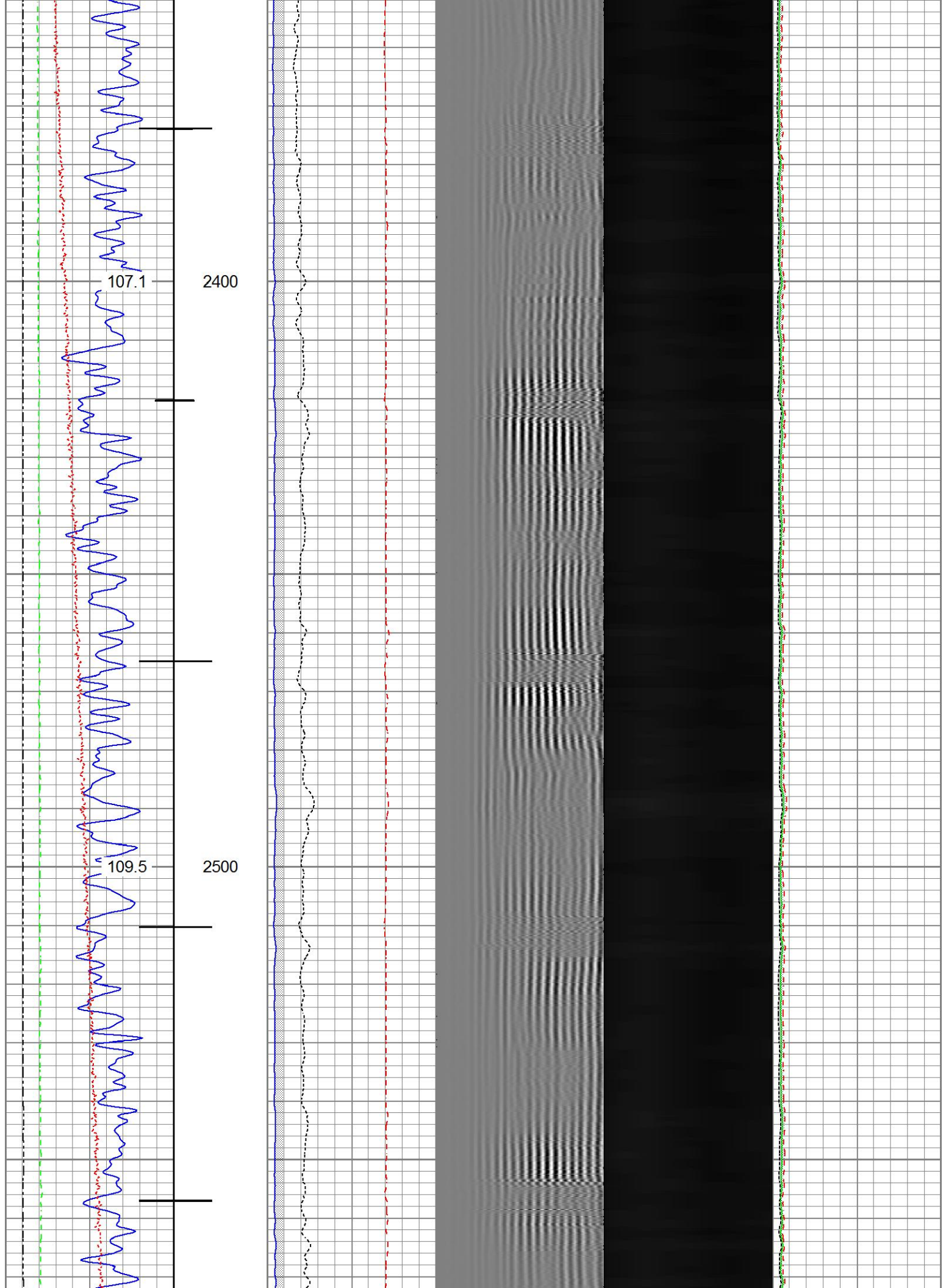


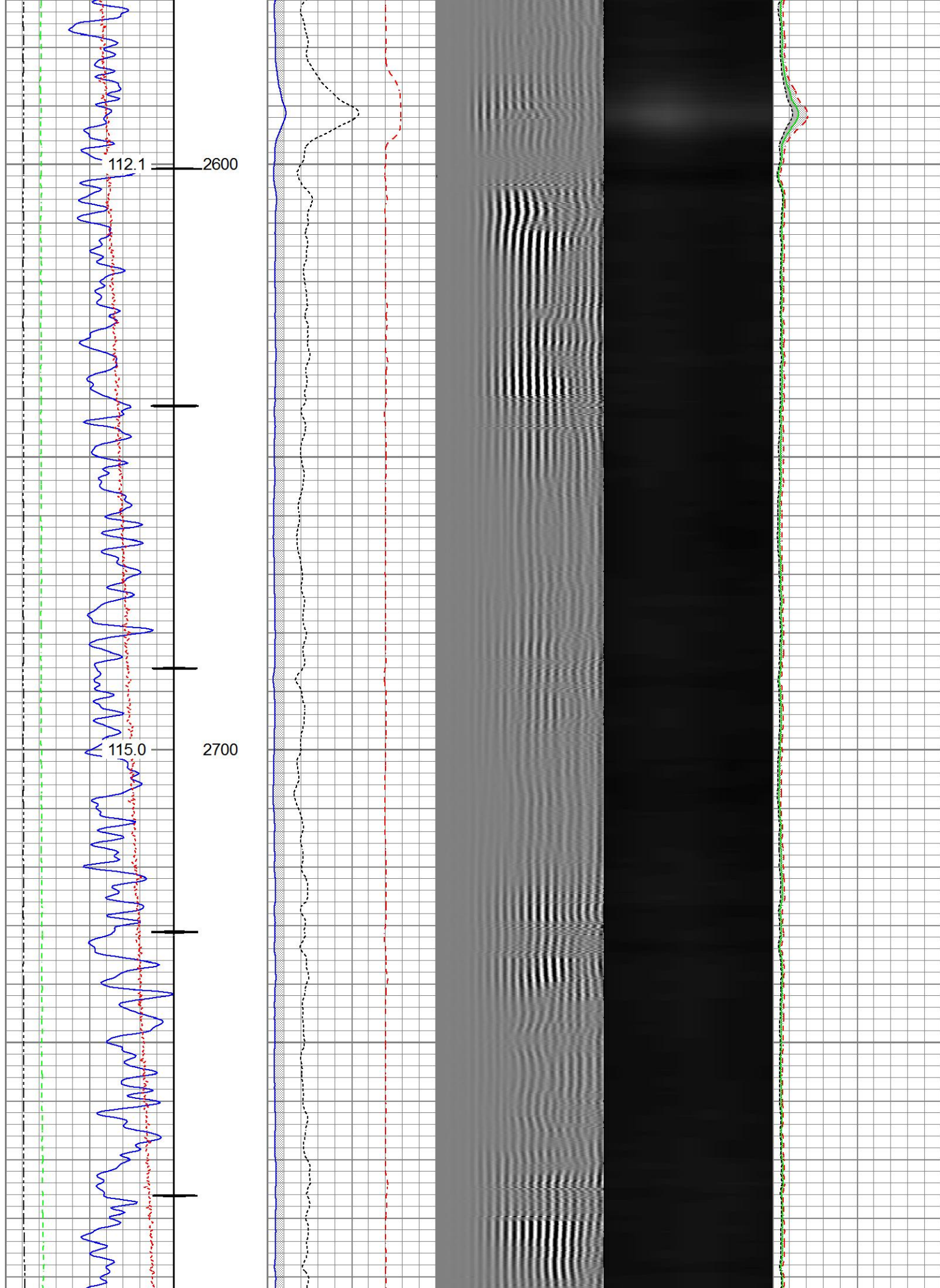


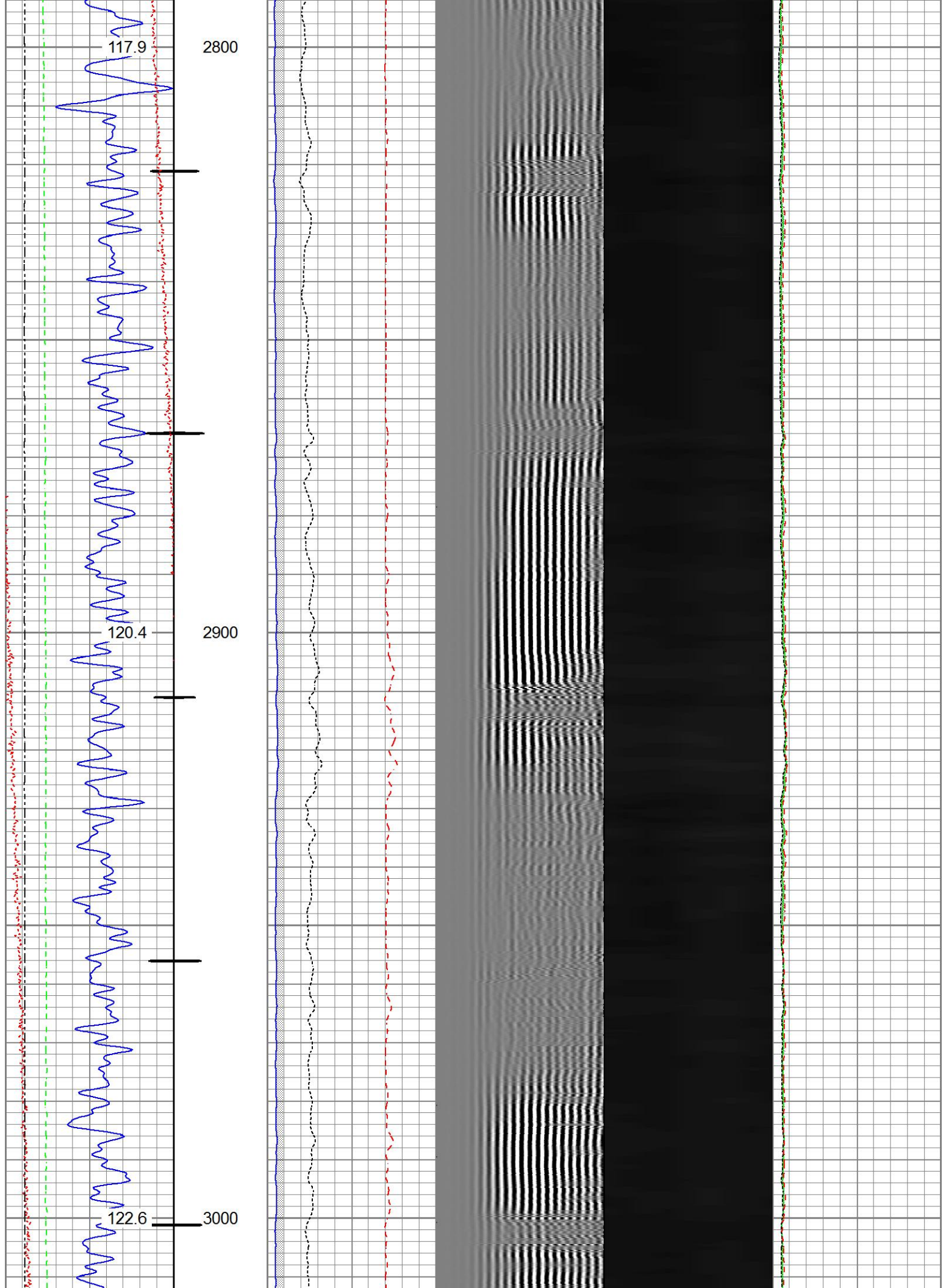


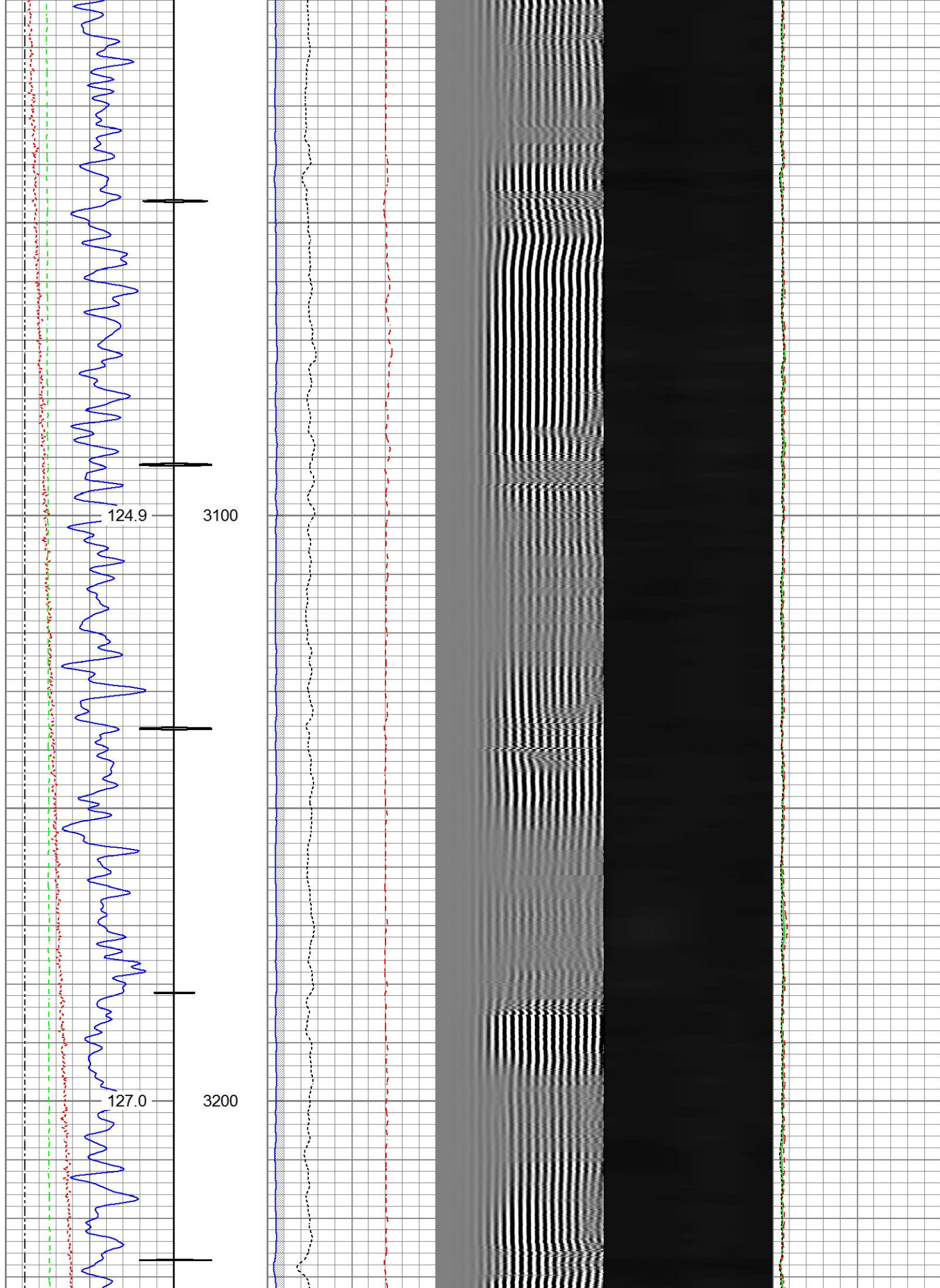


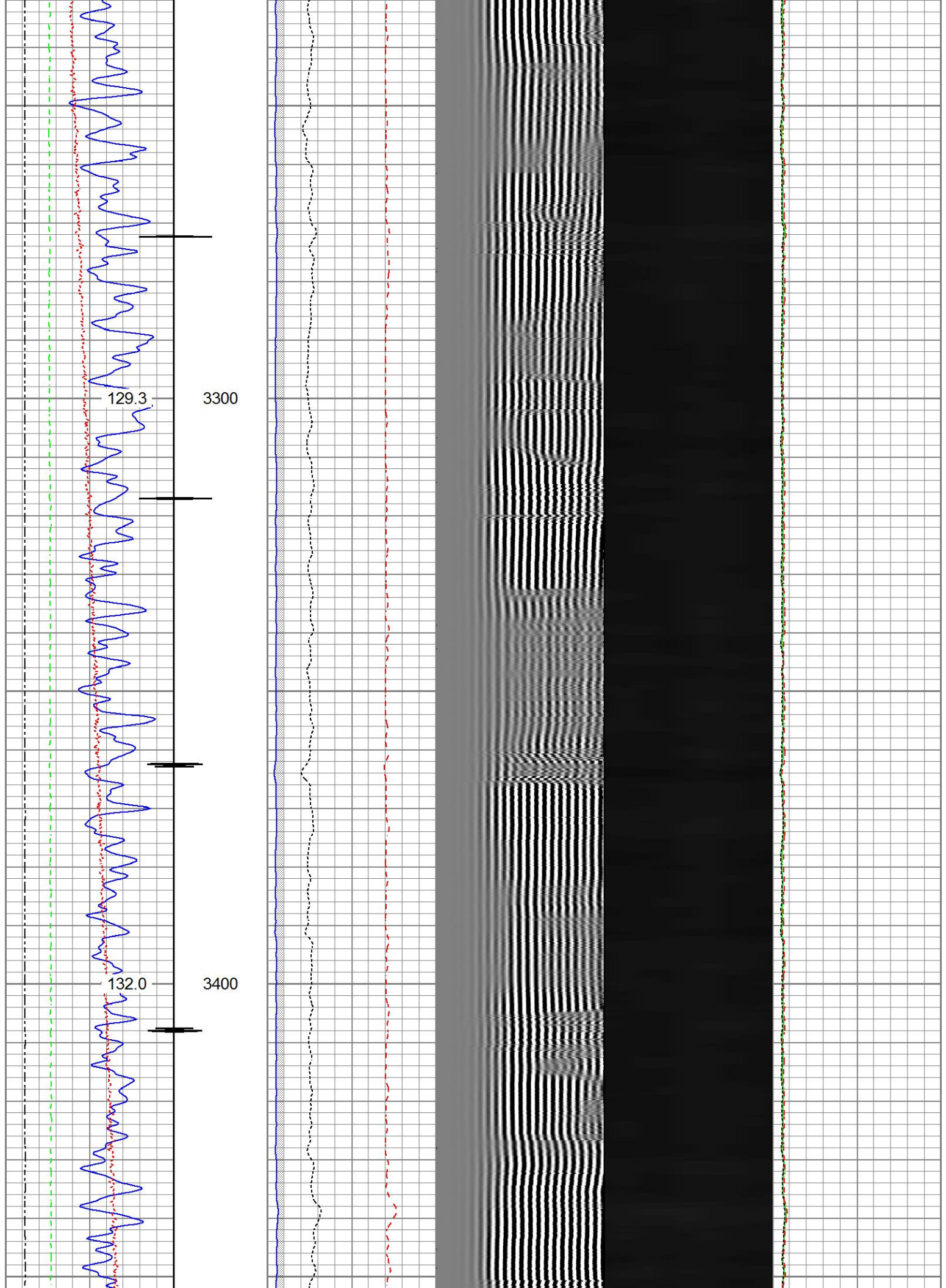


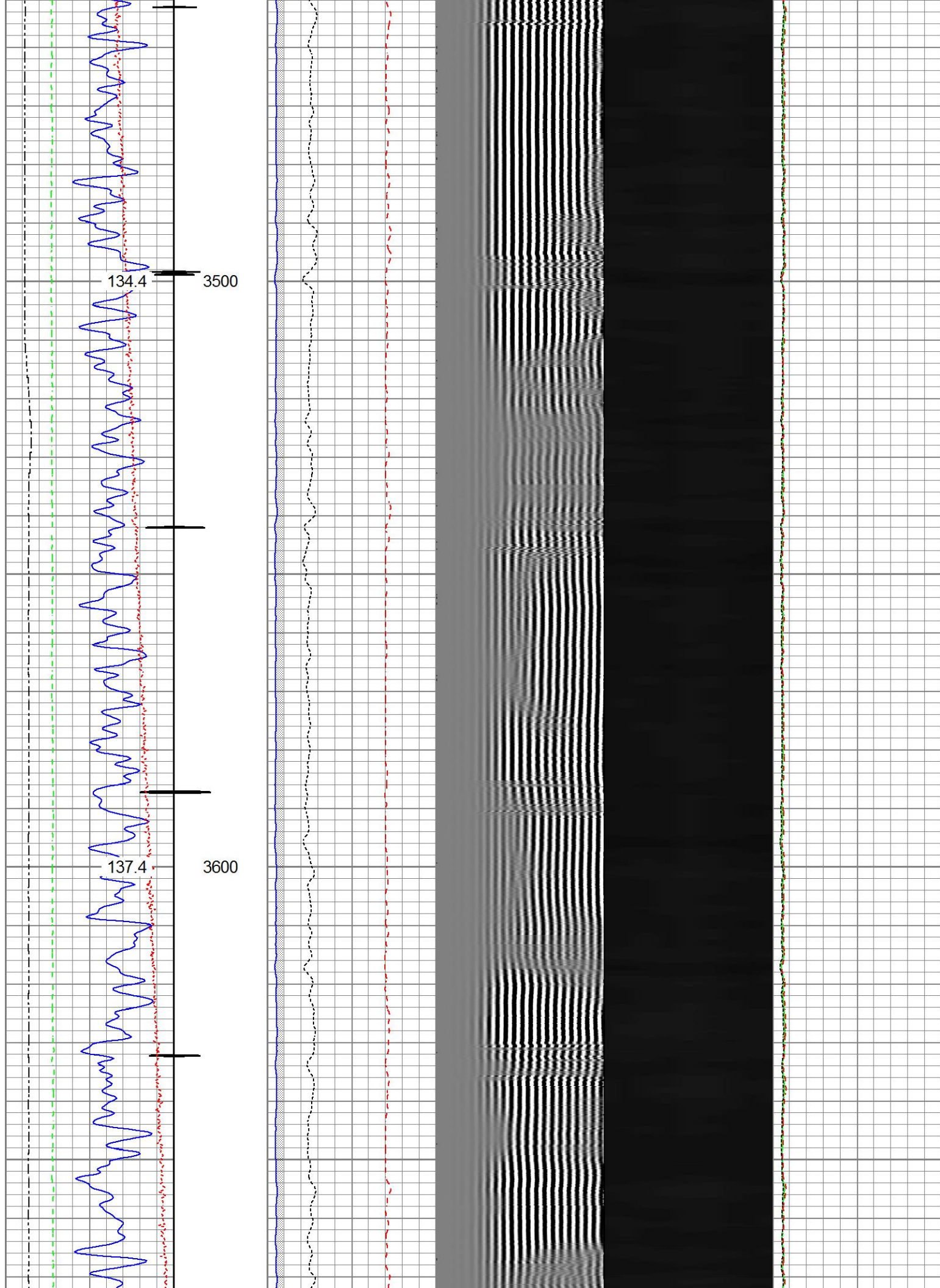


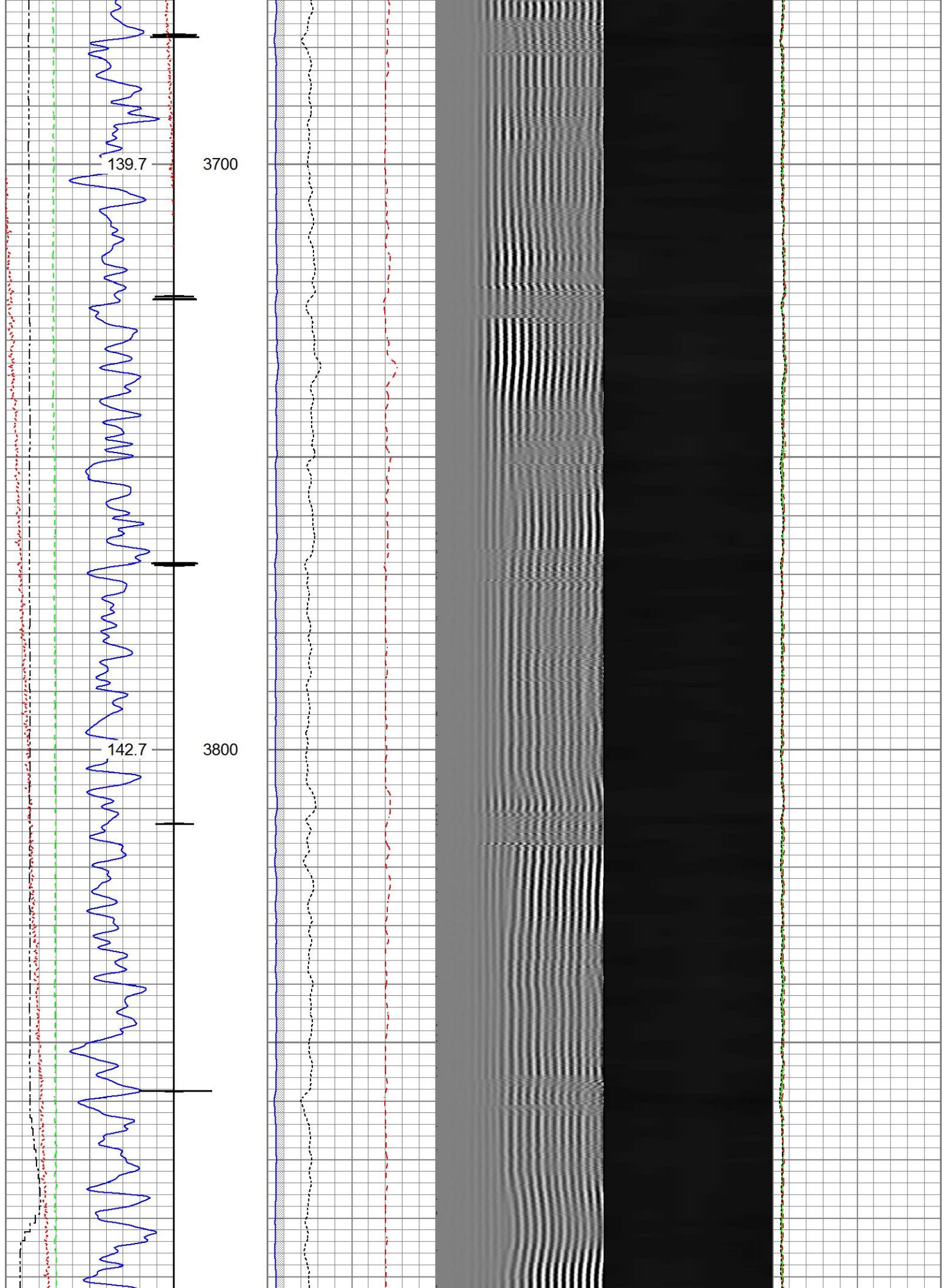


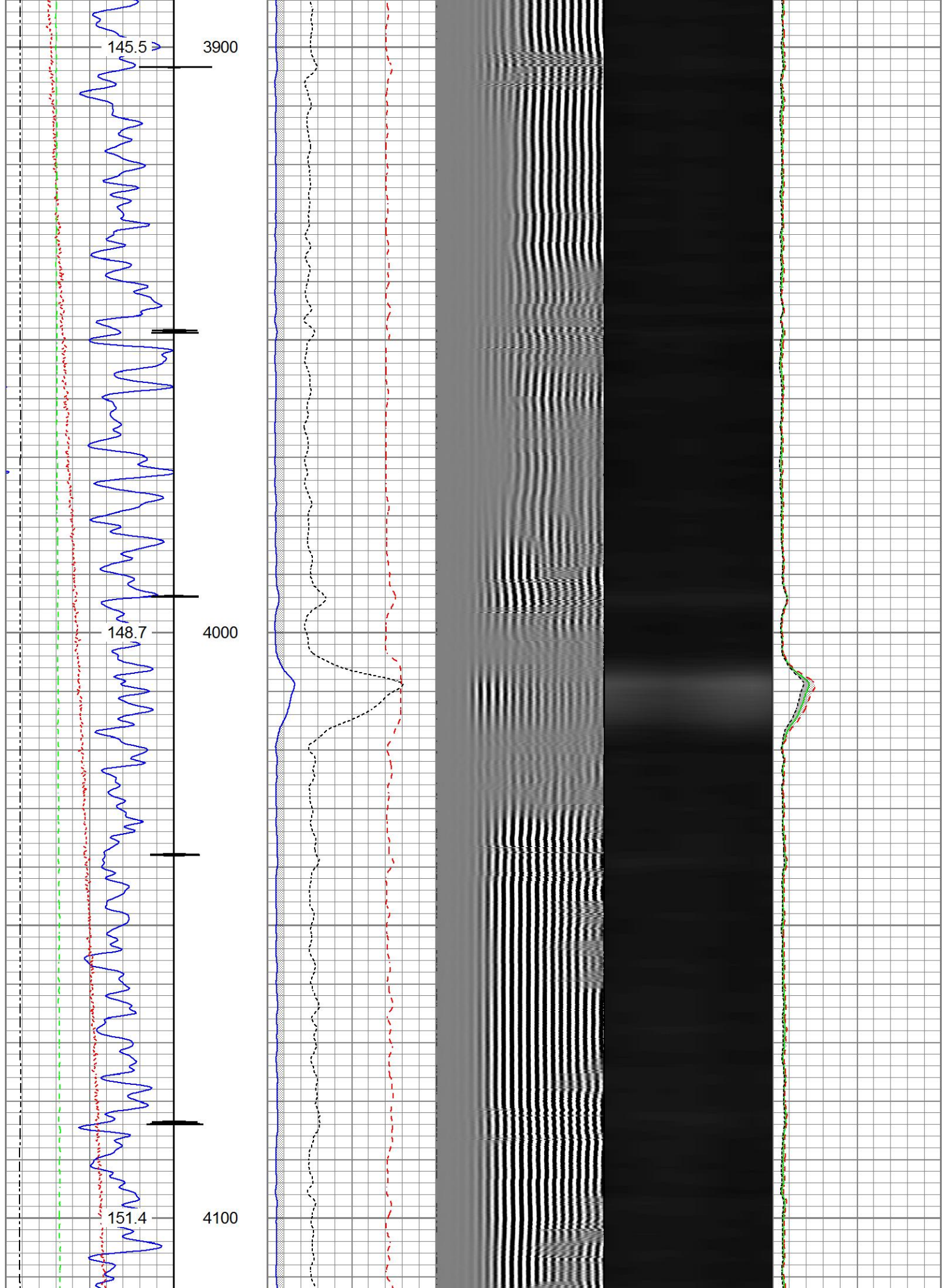


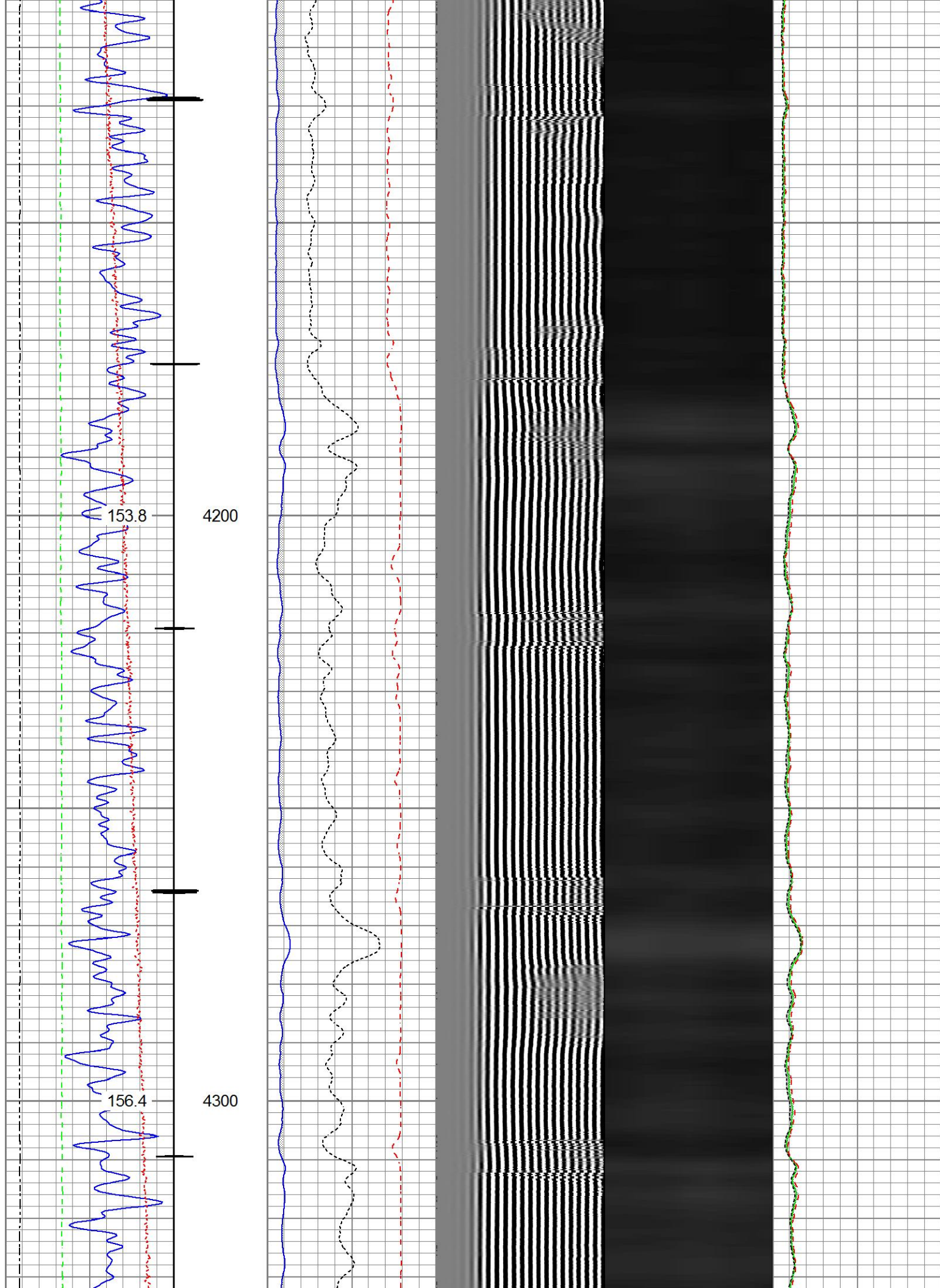


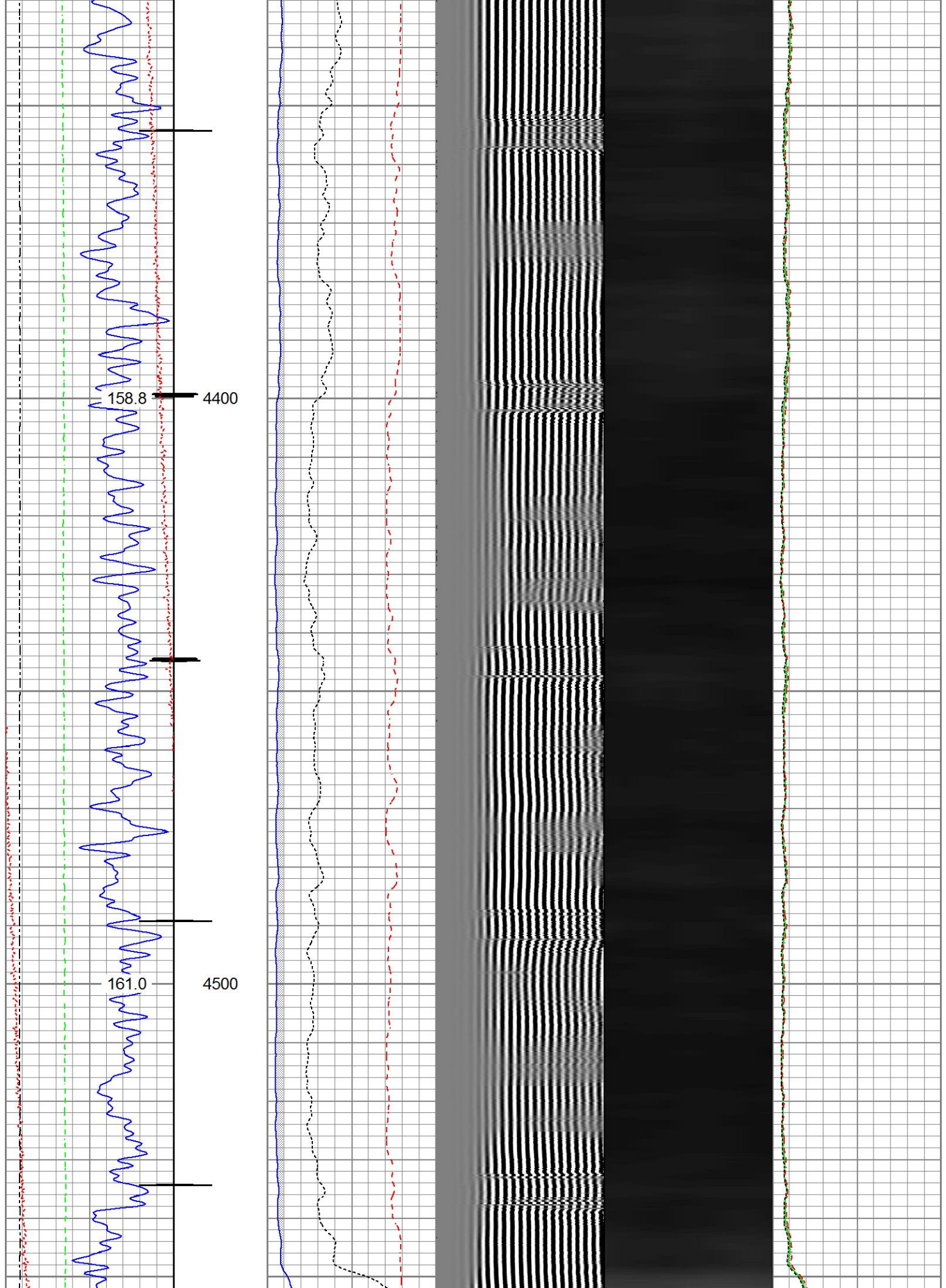


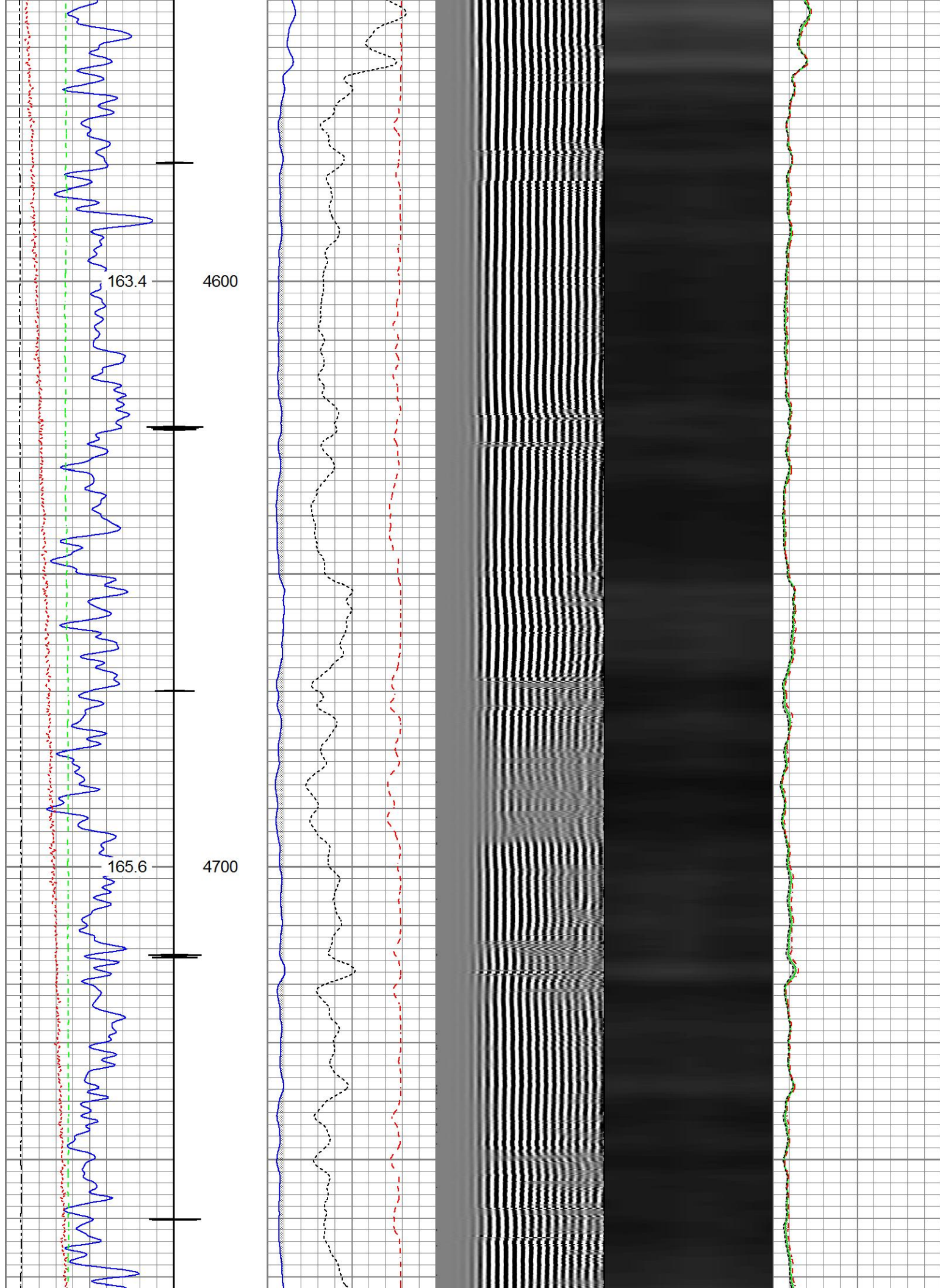


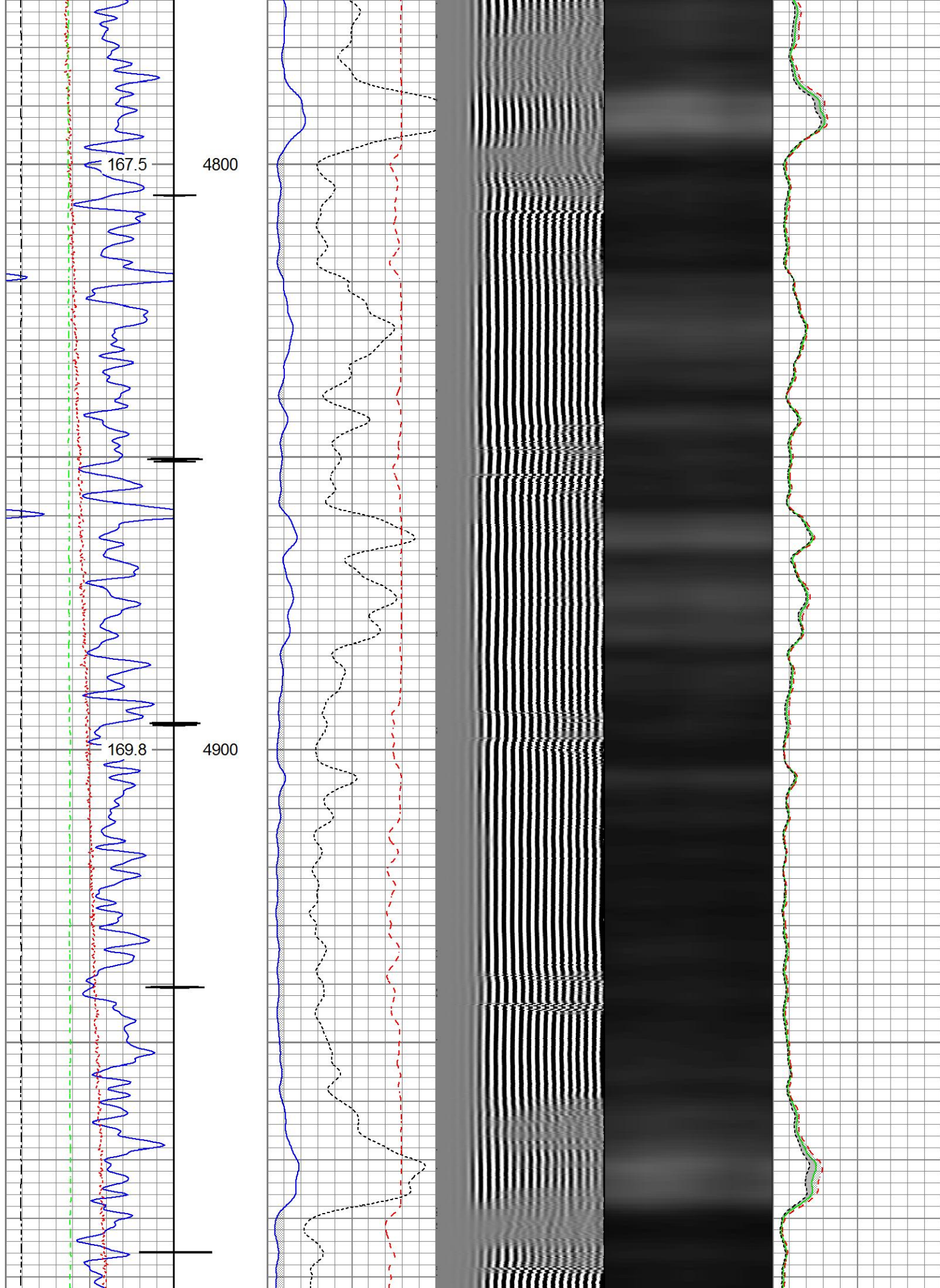


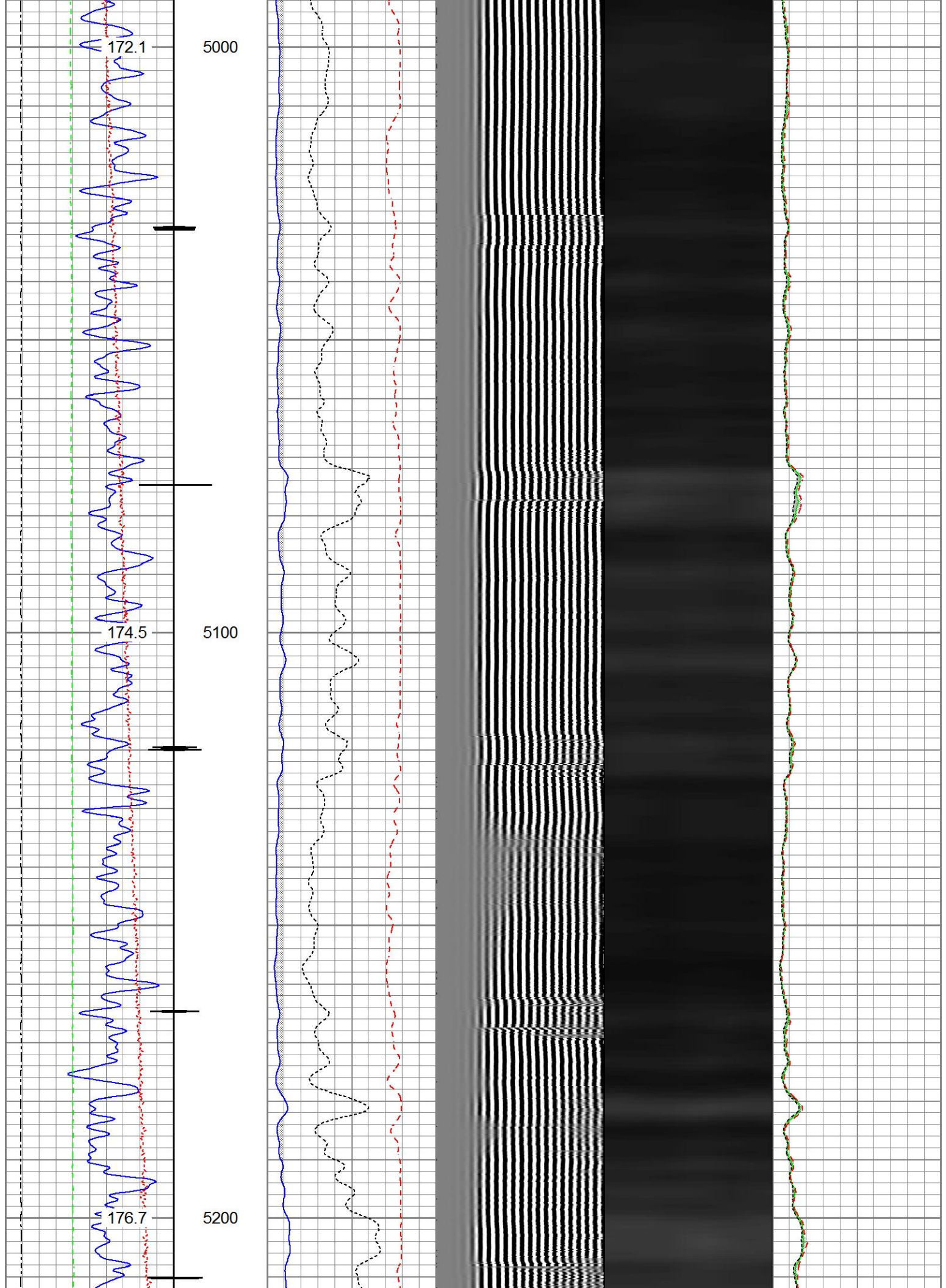


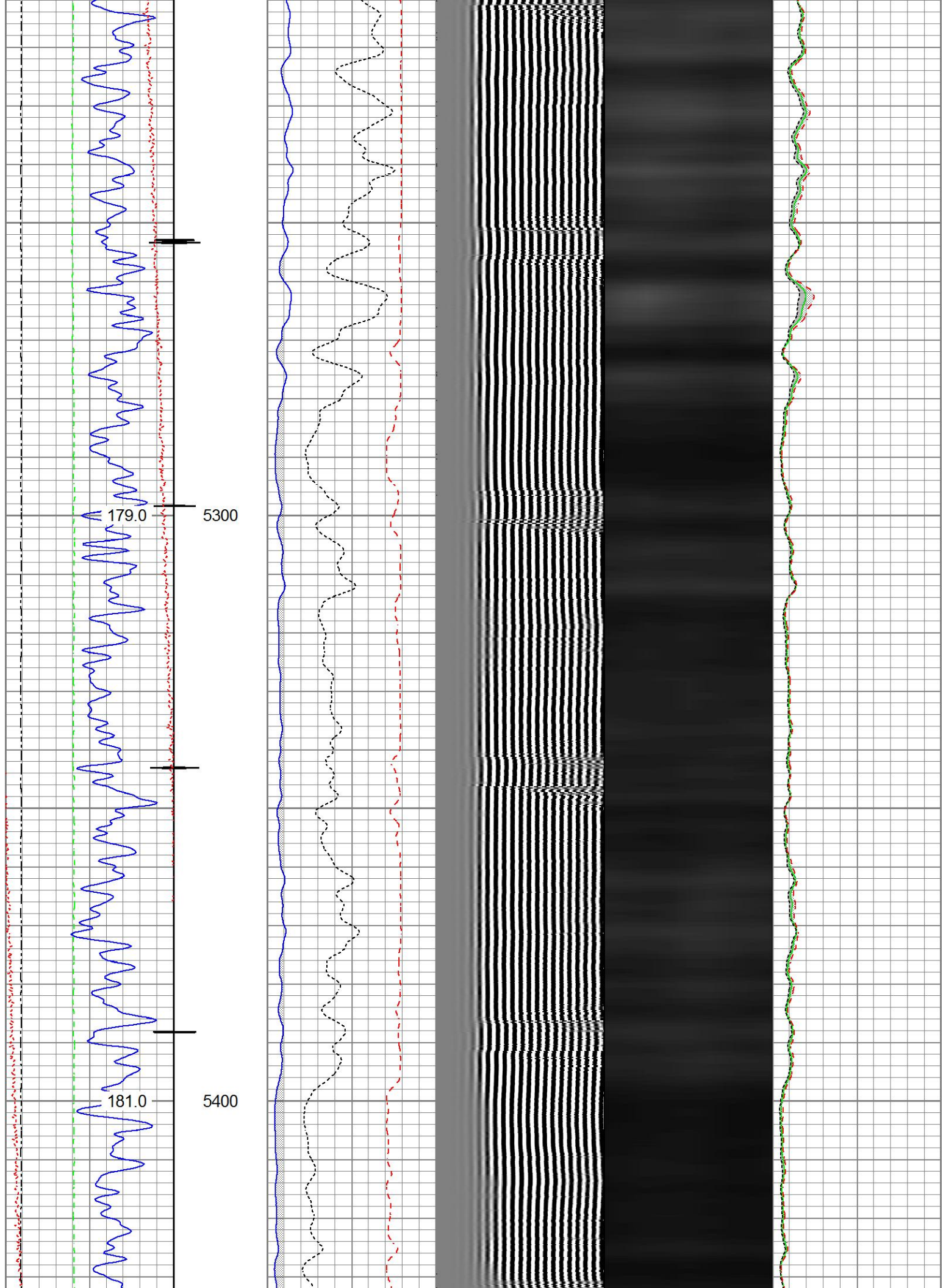


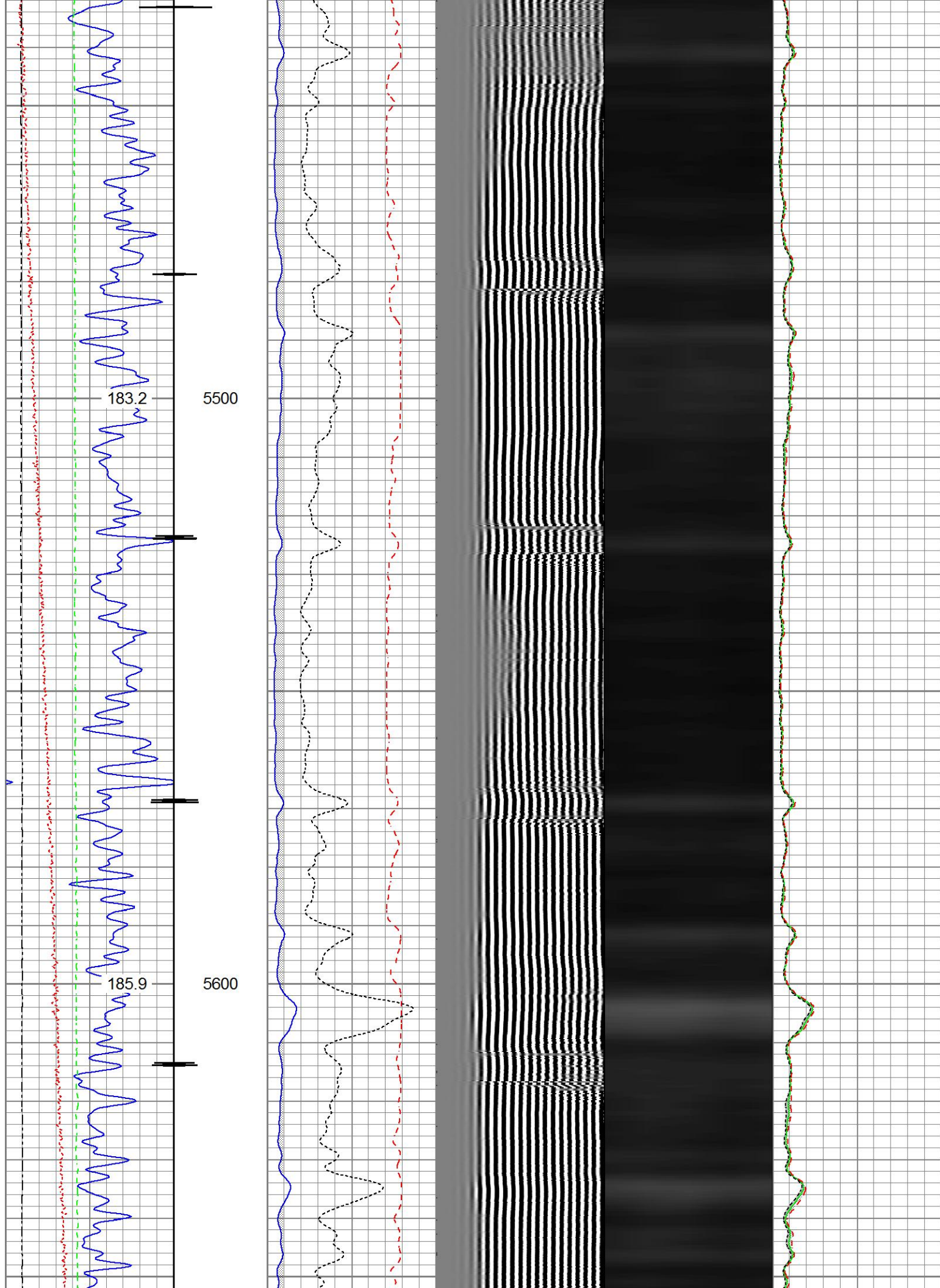


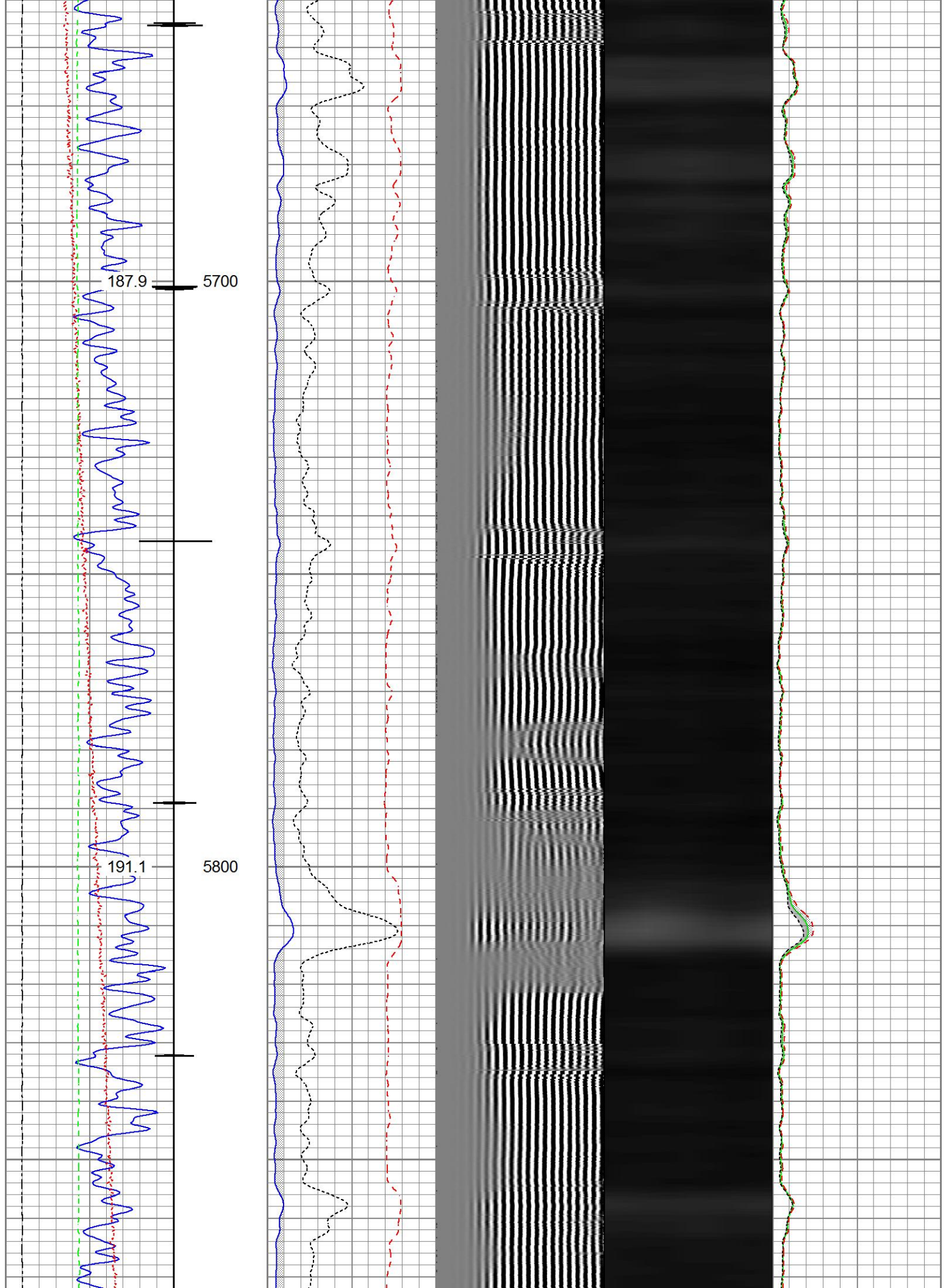


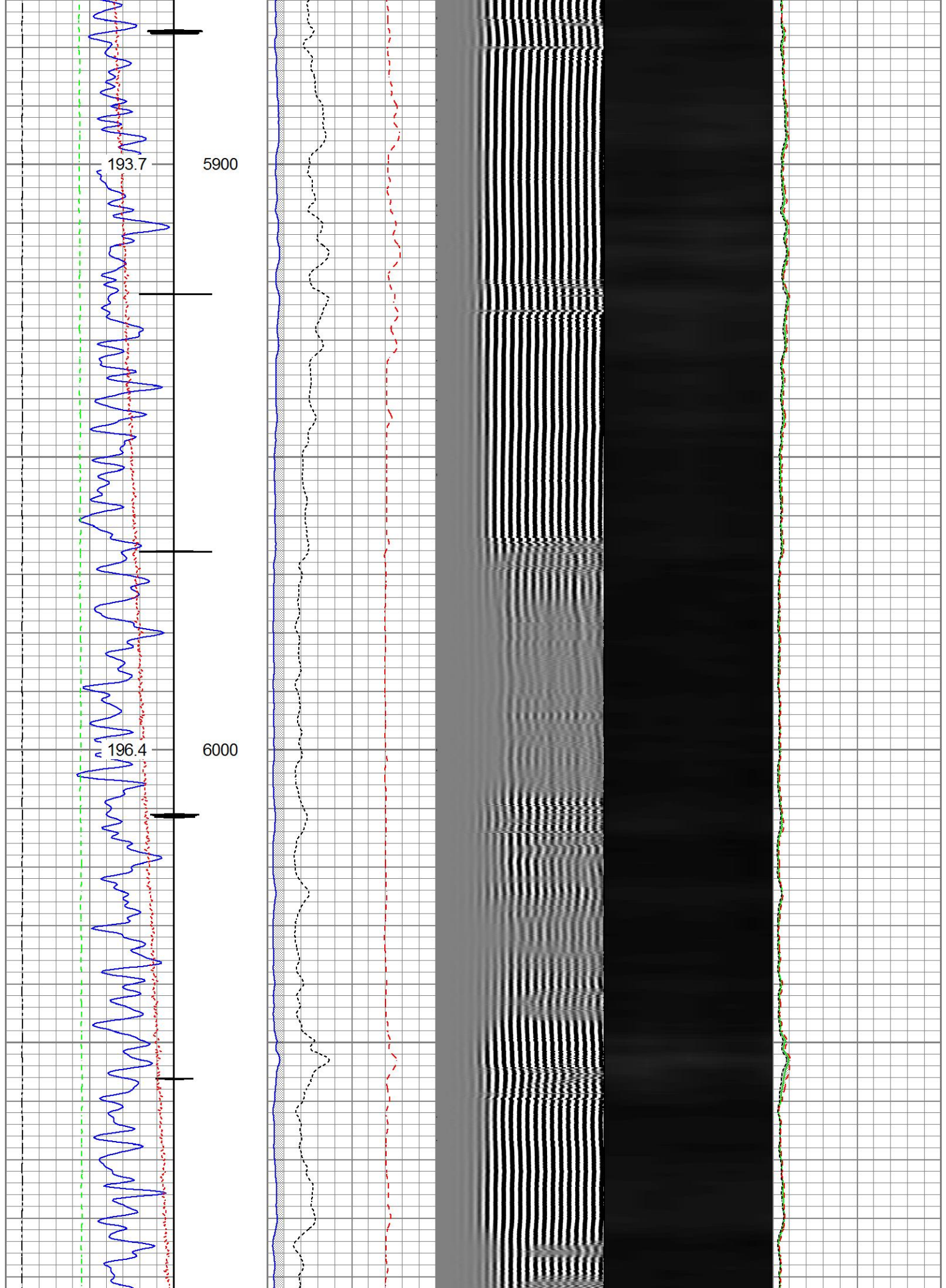


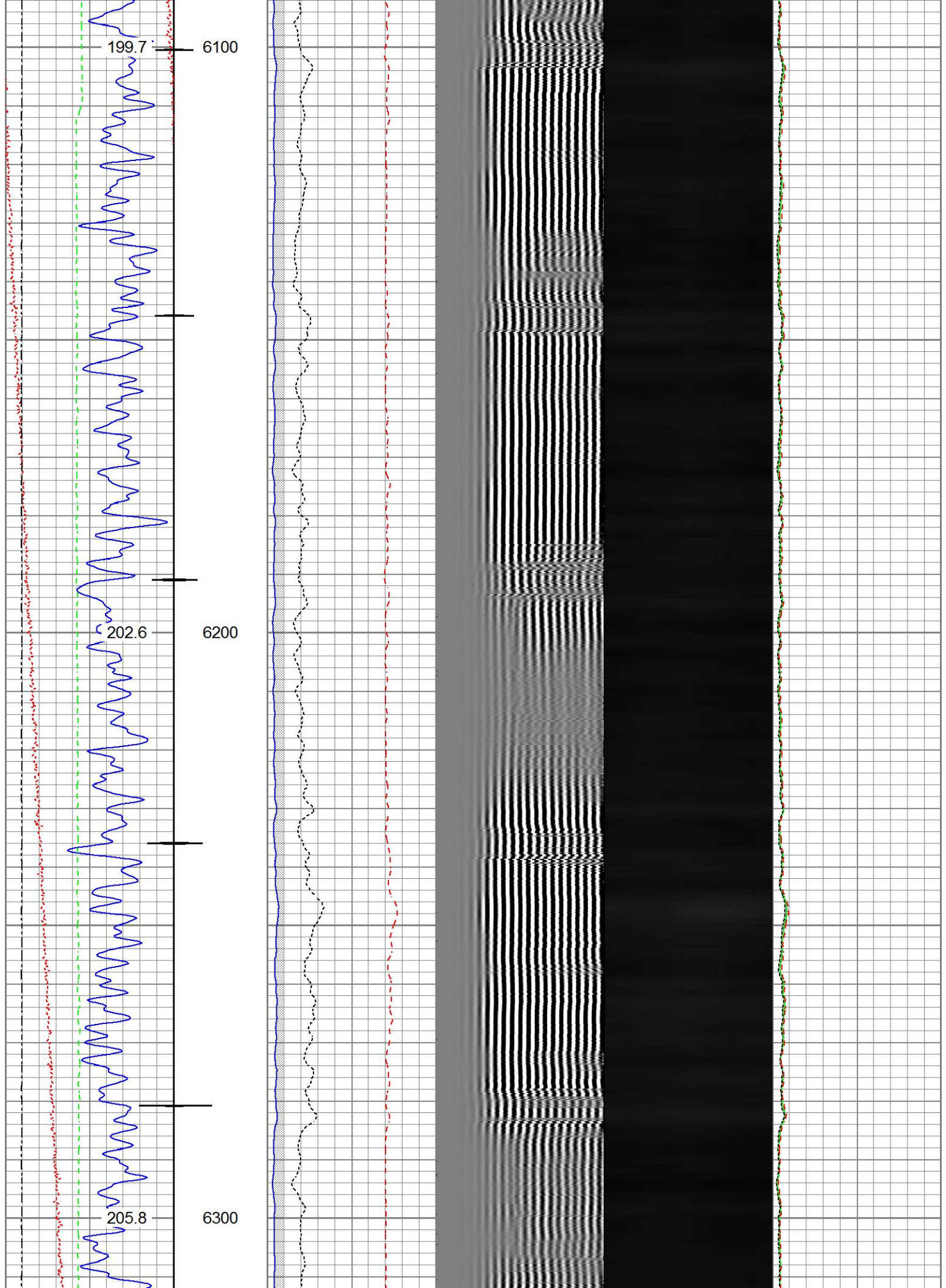


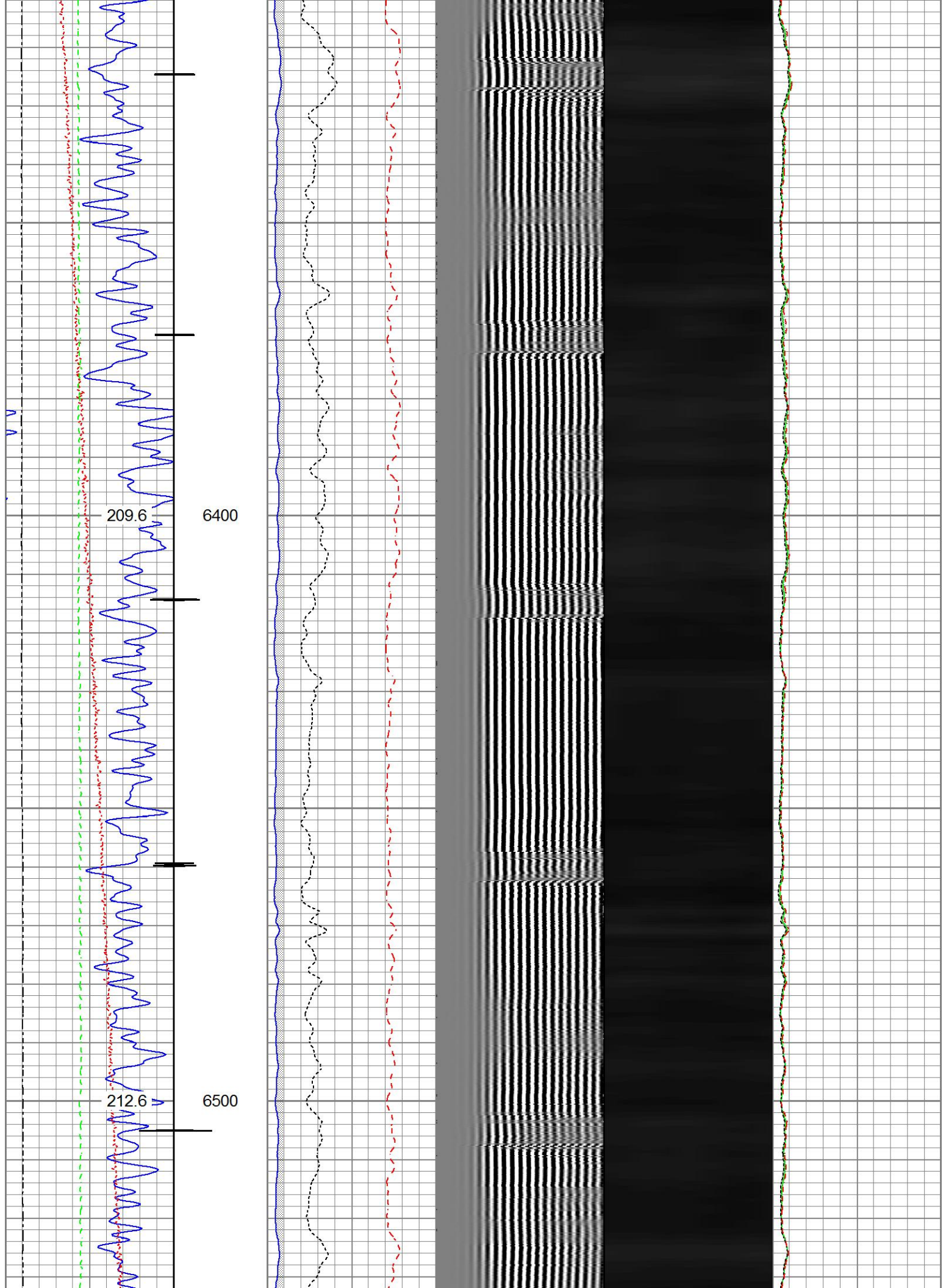


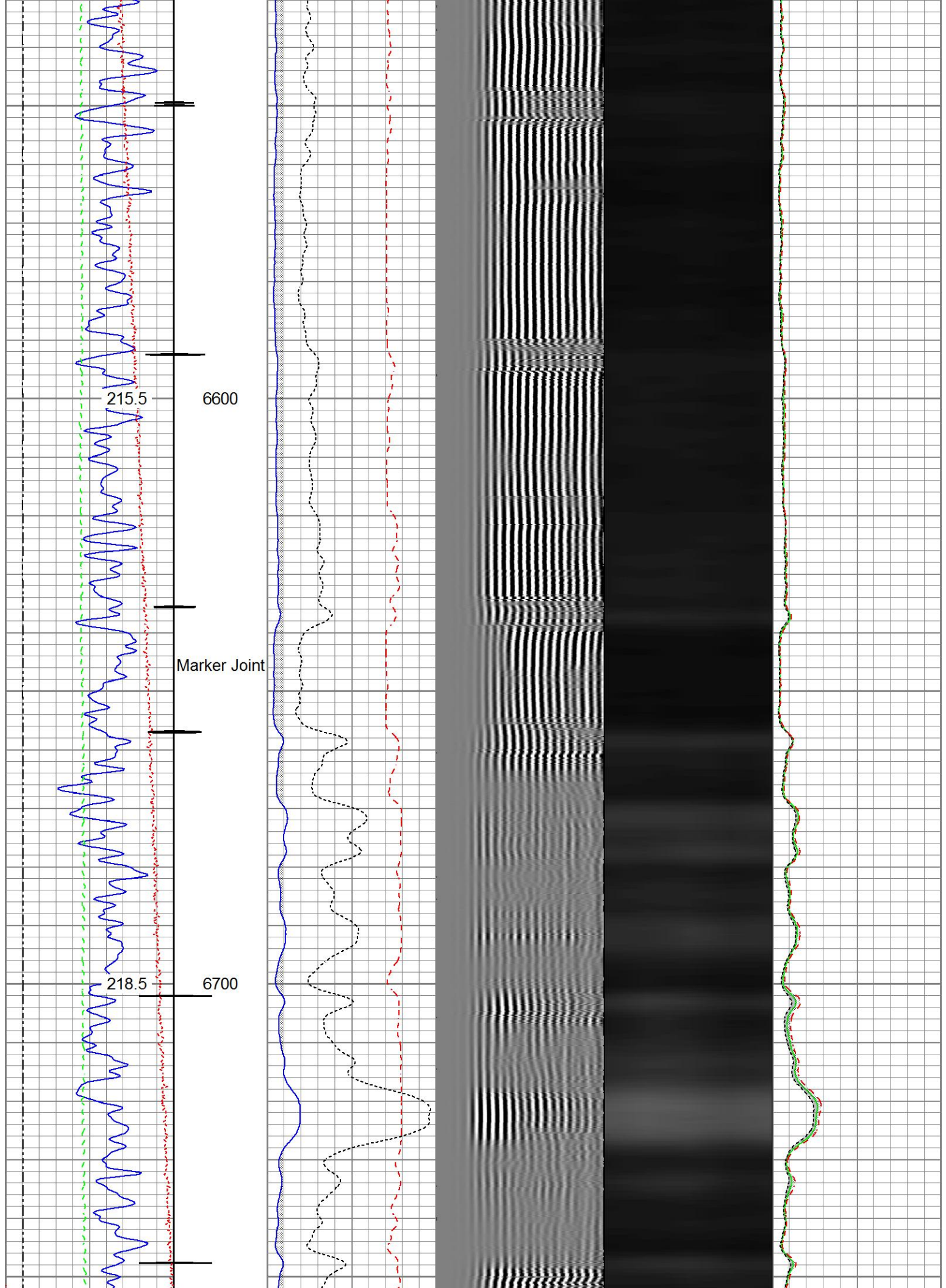


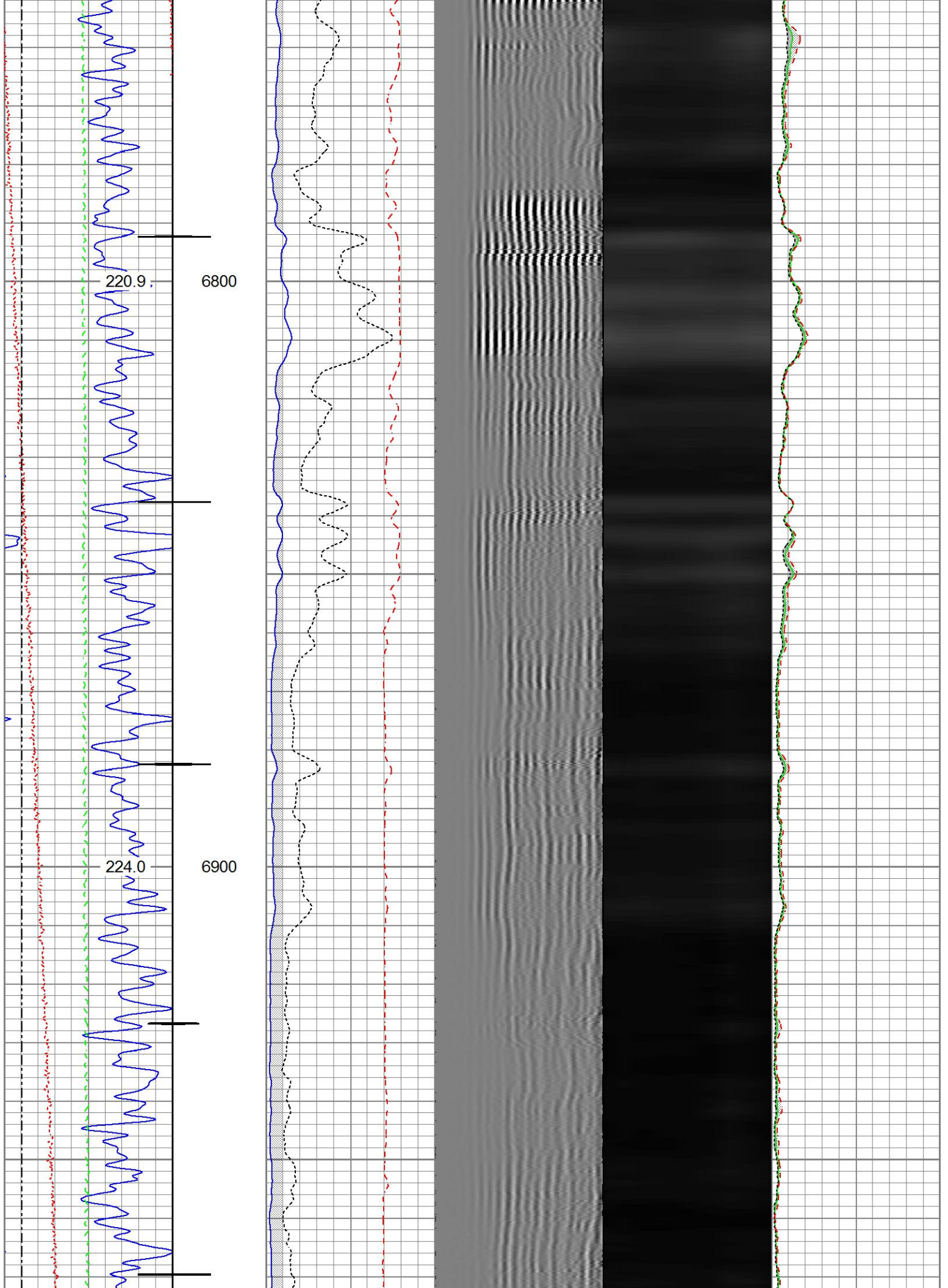


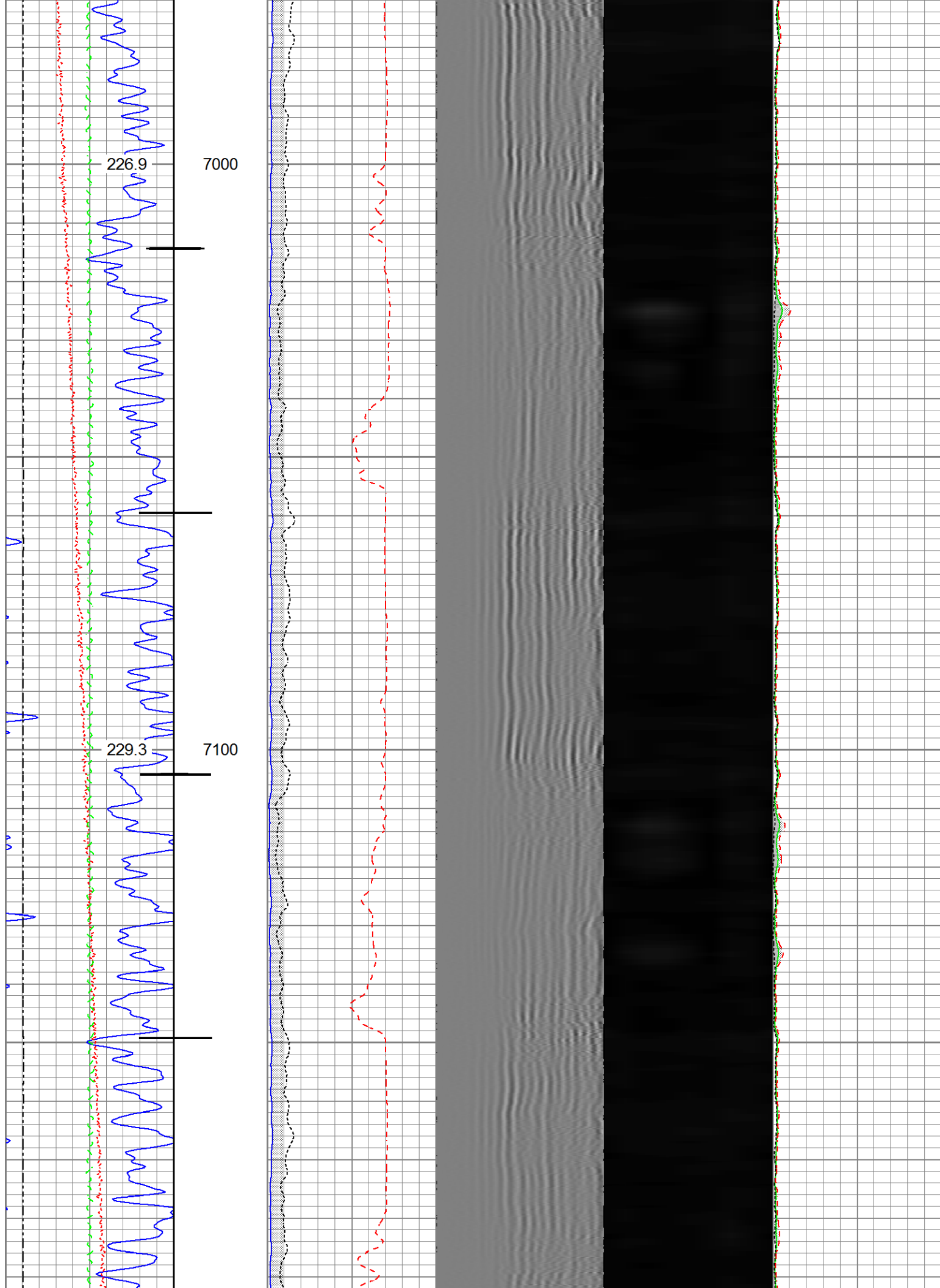


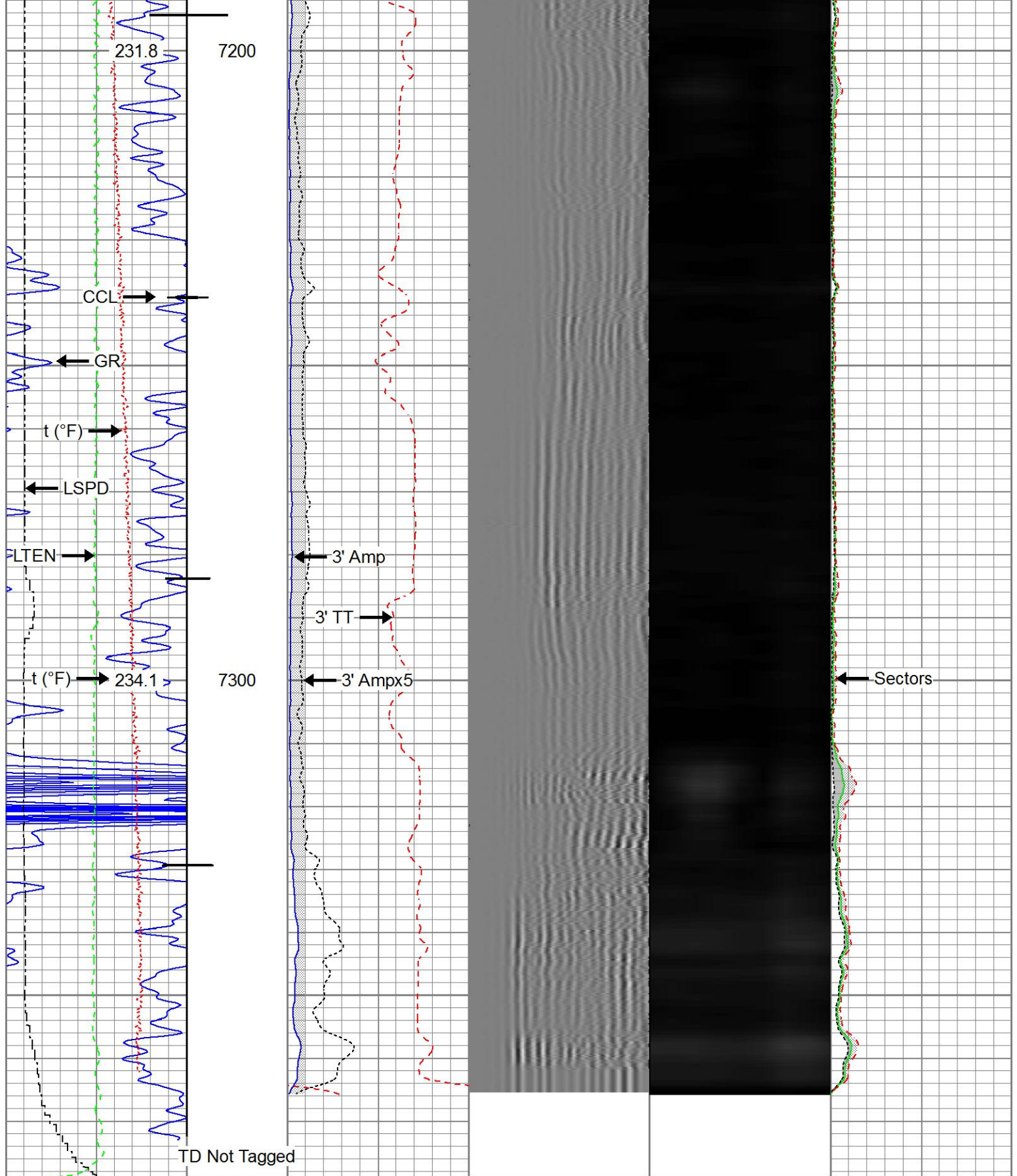












Gamma Ray		
0	(GAPI)	120
Casing Collar Locator		
Temperature		
0	(degF)	20
Line Speed		
-150	(ft/min)	150


3' Amplitude		
0	(mV)	100
3' Amplitude x 5		
0	(mV)	20
3' Travel Time		
650	(usec)	150

5' Variable Density Log		
200		1200

Sector Map		

Average Amplitude		
0		100
Minimum Amplitude		
0		100
Maximum Amplitude		
0		100

Line Tension		
0	(lb)	2000

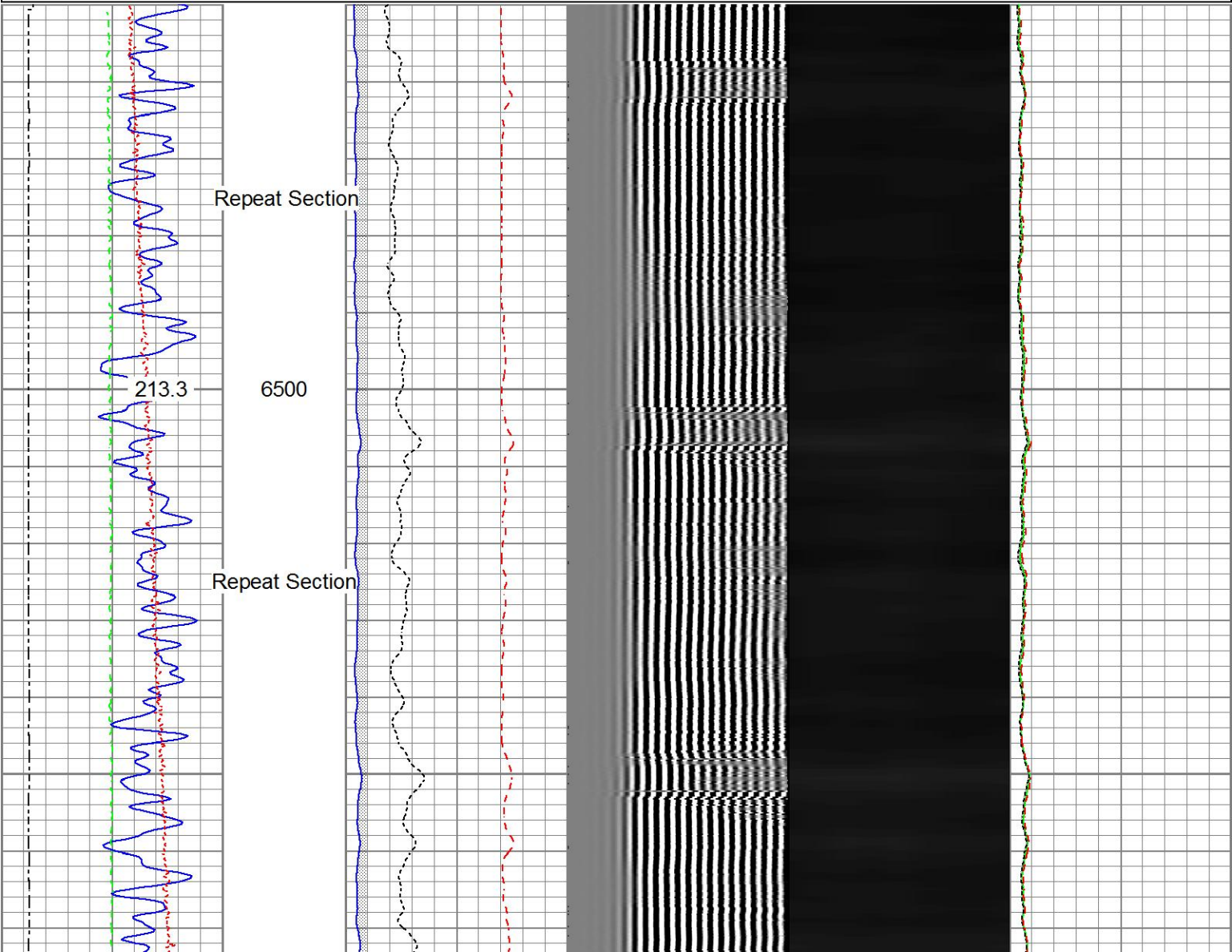


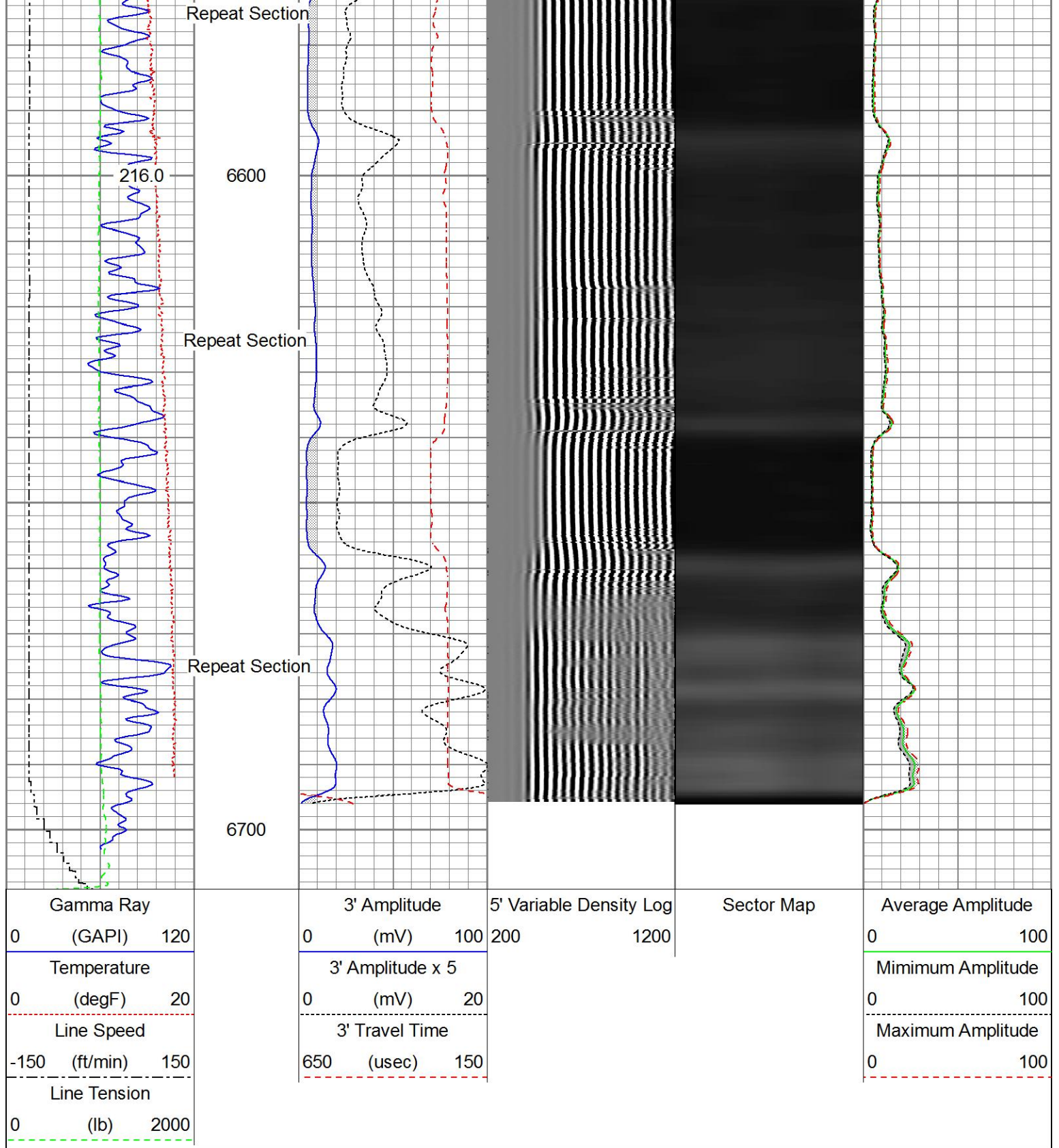
Repeat Pass

Recorded with 2800 PSI Surface Induced Pressure

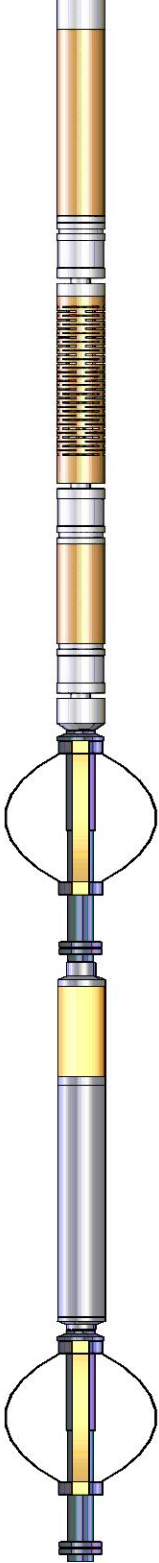
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Dataset Pathname	pass1.5
Presentation Format	ros_radrii
Dataset Creation	Wed Aug 17 14:04:16 2016
Charted by	Depth in Feet scaled 1:240

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





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			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

Temp	16.75				
WVFS8	14.58		Probe_RADII-C-P_RBT_2750 (FW1305-099.19) Probe 2-3/4" Sector Cement Bond Tool with Temperature Probe	2.75	105.00
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				
DCCL	6.51		Probe_ELine_BowSpring_Centralizer-P Probe 2-3/4" Electric Inline Bowspring Centralizer	2.75	20.00
CCL	6.51				
GR	3.77		Probe_GR_CCL-P_CGR_2750_S (FW1304.573) Probe 2-3/4" Digital CCL / Gamma Ray Combined	2.75	55.00
			Probe_ELine_BowSpring_Centralizer-P Probe 2-3/4" Electric Inline Bowspring Centralizer	2.75	20.00
Dataset: 0512342392_Anadarko_Land Fed 35N-29HZ_08-16-16_RBL_w8.db: field/well/run1/main Total length: 23.43 ft Total weight: 225.40 lb O.D.: 2.75 in					

Calibration Report	
Database File	0512342392_Anadarko_Land Fed 35N-29HZ_08-16-16_RBL_w8.db
Dataset Pathname	main
Dataset Creation	Tue Aug 16 14:22:08 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:	20.000	ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.000	0.752	0.800	71.921	94.506	0.816
CAL	0.742	0.747				
5'	0.001	0.635	0.800	71.921	112.021	0.736
SUM						
S1	0.000	0.720	0.000	100.000	138.977	-0.066
S2	0.001	0.720	0.000	100.000	139.045	-0.159
S3	0.001	0.737	0.000	100.000	135.900	-0.159
S4	0.001	0.756	0.000	100.000	132.447	-0.155
S5	0.000	0.775	0.000	100.000	129.099	-0.003
S6	0.001	0.784	0.000	100.000	127.768	-0.131
S7	0.002	0.772	0.000	100.000	129.771	-0.200
S8	0.001	0.753	0.000	100.000	132.995	-0.195

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.742	0.747	1.000	0.000

Air Zero Calibration, performed Tue Aug 16 12:47:47 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



Field	Wattenberg
County	Weld
State	Colorado