



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company		Noble Energy Inc.	
Well		Rampart A33-750	
Field		Wattenberg	
County		Weld	
State		Colorado	
Location:		API # : 05-123-50927	
Permanent Datum		Ground Level	
Log Measured From		Kelly Bushing	
Drilling Measured From		Kelly Bushing	
SEC 21 TWP 6N RGE 64W		Elevation 4727'	
Other Services		---	
Elevation		K.B. 4757'	
		D.F. ---	
		G.L. 4727'	
Date		08-SEP-2021	
Run Number		One	
Depth Driller		17110 FT	
Depth Logger		7386 FT	
Bottom Logged Interval		7372 FT	
Top Log Interval		Surface	
Open Hole Size		8.5"	
Type Fluid		Water	
Density / Viscosity		8.34 lb/gal	
Max. Recorded Temp.		240 °F	
Estimated Cement Top		See Log	
Time Well Ready		ROA	
Time Logger on Bottom		16:17	
Equipment Number		HD-0325	
Location		Platteville, CO	
Recorded By		Jason Morrison	
Witnessed By		Charlie Schnedzielos	
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		P-110	
		Top	
		Bottom	
		1948.9 FT	
		17099.7 FT	

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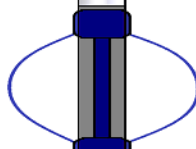


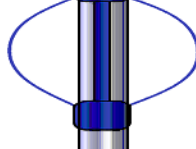

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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 Casing Tally reported Marker Joint at 6566.7 FT
Adjusted -2 FT to correlate with Marker Joint
Log ran with 2500 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!

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Titan CHD-14375 GO Titan 1-7/16" Assembled Electric Cable Head with 1" Fishing Neck	1.03	1.44	3.60

				Fishing Neck			
TEMP	13.87			SO BS CENT-2750-5500 Slip Over 2-3/4" I.D. for 5-1/2" O.D. Casing Bow Spring Centralizer	1.50	3.25	11.00
WVFS8	11.64			Probe Radii-2750 RBT (FW1305-096) Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub	9.39	2.75	105.00
WVFS7	11.64						
WVFS6	11.64						
WVFS5	11.64						
WVFS4	11.64						
WVFS3	11.64						
WVFS2	11.64						
WVFS1	11.64						
WVFCAL	11.64						
WVF3FT	11.64						
WVF5FT	10.64						
CCL\$2	6.51			SO BS CENT-2750-5500 Slip Over 2-3/4" I.D. for 5-1/2" O.D. Casing Bow Spring Centralizer	1.50	3.25	11.00
CCL\$1	6.51				4.51	2.75	55.00
GR	5.26			Probe GR-CCL-2750 GOB (FW1212-026) Probe 2-3/4" rev.2 Digital Scintillation Gamma Ray/CCL Combined with GO Bottom			
					2.88	2.75	20.00
LOCTIM	0.00			Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer			
UTCTIM	0.00						
Dataset: noble_rampart a33-750_rbl_09-08-21.db: field/well/run1/Main.1 Total length: 17.81 ft Total weight: 205.60 lb O.D.: 3.25 in							

Gamma Ray Calibration Report

Serial Number: FW1212-026
 Tool Model: 2750 GOB
 Performed: Mon Oct 19 14:19:51 2020

Calibrator Value: 637.0 GAPI

Background Reading: 113.7 cps
 Calibrator Reading: 1029.1 cps

Sensitivity: 0.6959 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: FW1305-096
 Tool Model: 2750 RBT

Calibration Casing Diameter: 5.500 in
 Calibration Depth: 10.848 ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.008	0.554	0.800	71.921	130.319	-0.229
CAL	0.006	0.669				
5'	0.008	0.523	0.800	71.921	138.276	-0.363
SUM						
S1	0.003	0.528	0.000	100.000	190.593	-0.639
S2	0.007	0.525	0.000	100.000	193.221	-1.356
S3	0.007	0.528	0.000	100.000	191.994	-1.360
S4	0.008	0.552	0.000	100.000	184.112	-1.548
S5	0.007	0.577	0.000	100.000	175.431	-1.225
S6	0.008	0.591	0.000	100.000	171.391	-1.286
S7	0.011	0.578	0.000	100.000	176.442	-1.951
S8	0.007	0.561	0.000	100.000	180.663	-1.340

Air Zero Calibration, performed Wed Sep 8 10:18:58 2021:

	Raw (v)		Calibrated (v)		Results
	Zero		Zero		Offset
3'	0.005		0.000		0.000
5'	0.006		0.000		0.000
SUM					
S1	0.006		0.000		-0.000
S2	0.005		0.000		-0.000
S3	0.006		0.000		-0.000
S4	0.006		0.000		0.000
S5	0.005		0.000		0.000
S6	0.005		0.000		0.000
S7	0.005		0.000		0.000
S8	0.005		0.000		0.000

Temperature Calibration Report

Serial Number: FW1305-096
 Tool Model: 2750 RBT

Tool Model: 2750 RBL
Performed: Mon Oct 19 14:19:51 2020

	Reference	Reading
Low Reference:	100.00 degF	109.43 degF
High Reference:	350.00 degF	405.87 degF
Gain:	0.84	
Offset:	7.72	
Delta Spacing	1	

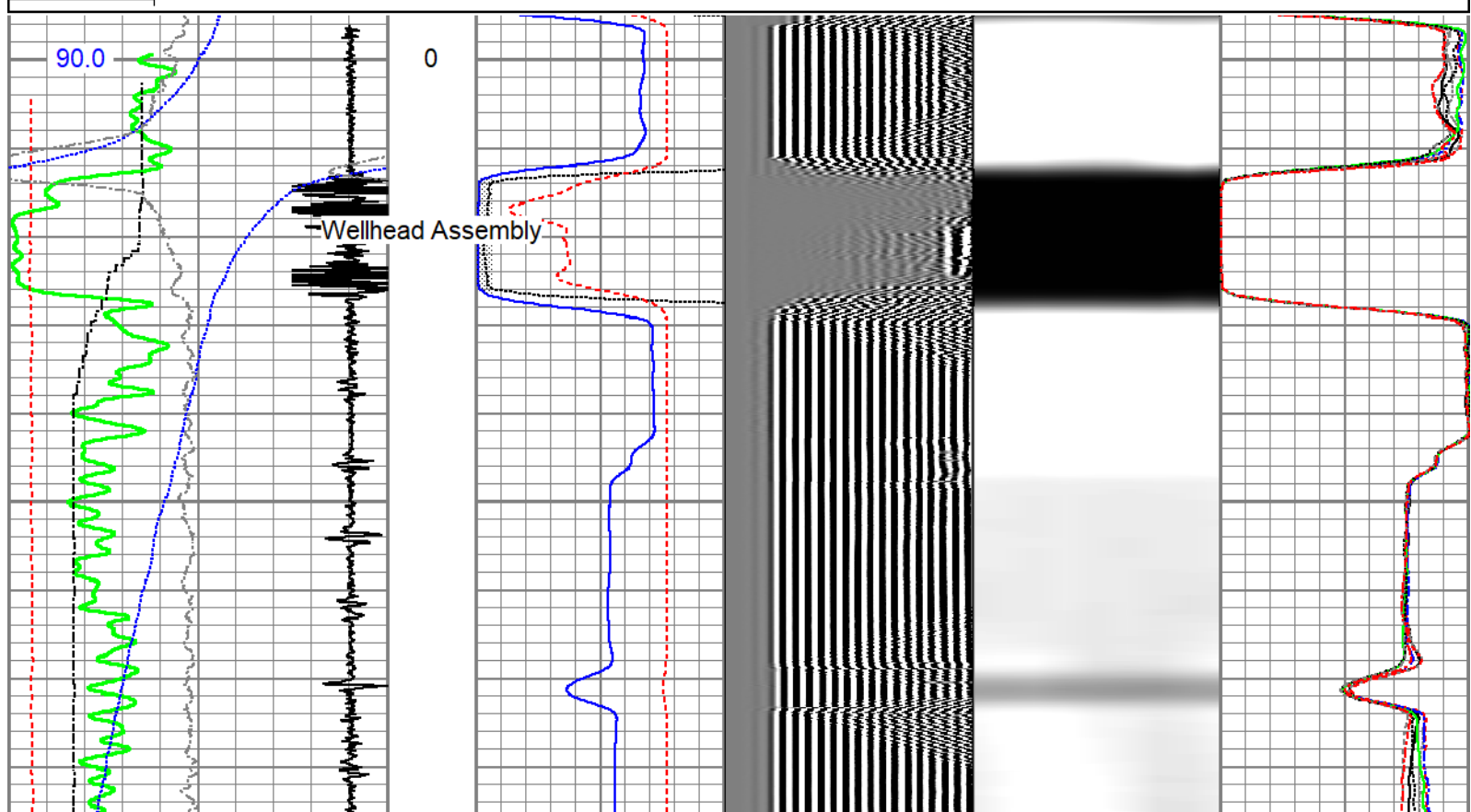


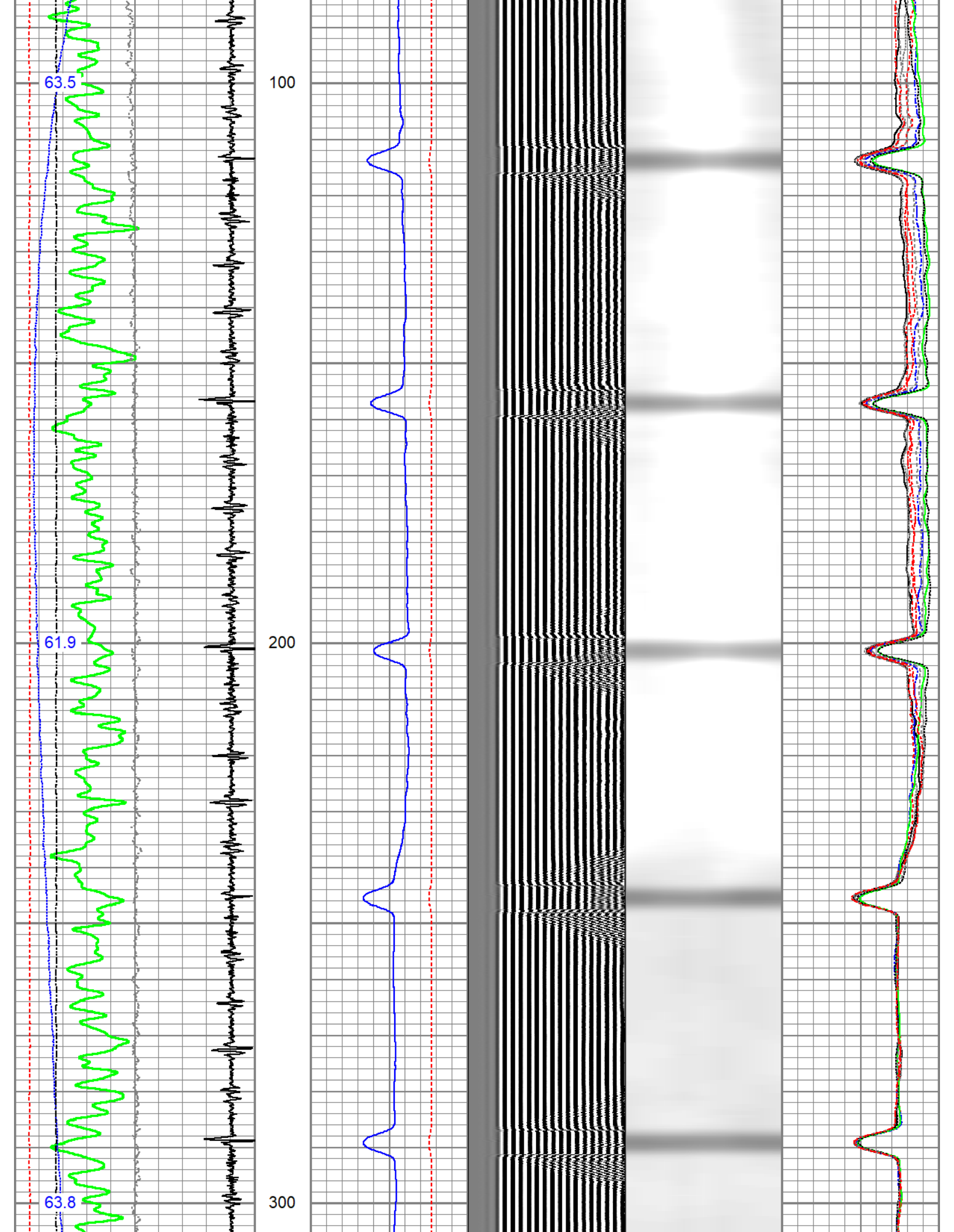
Main Pass

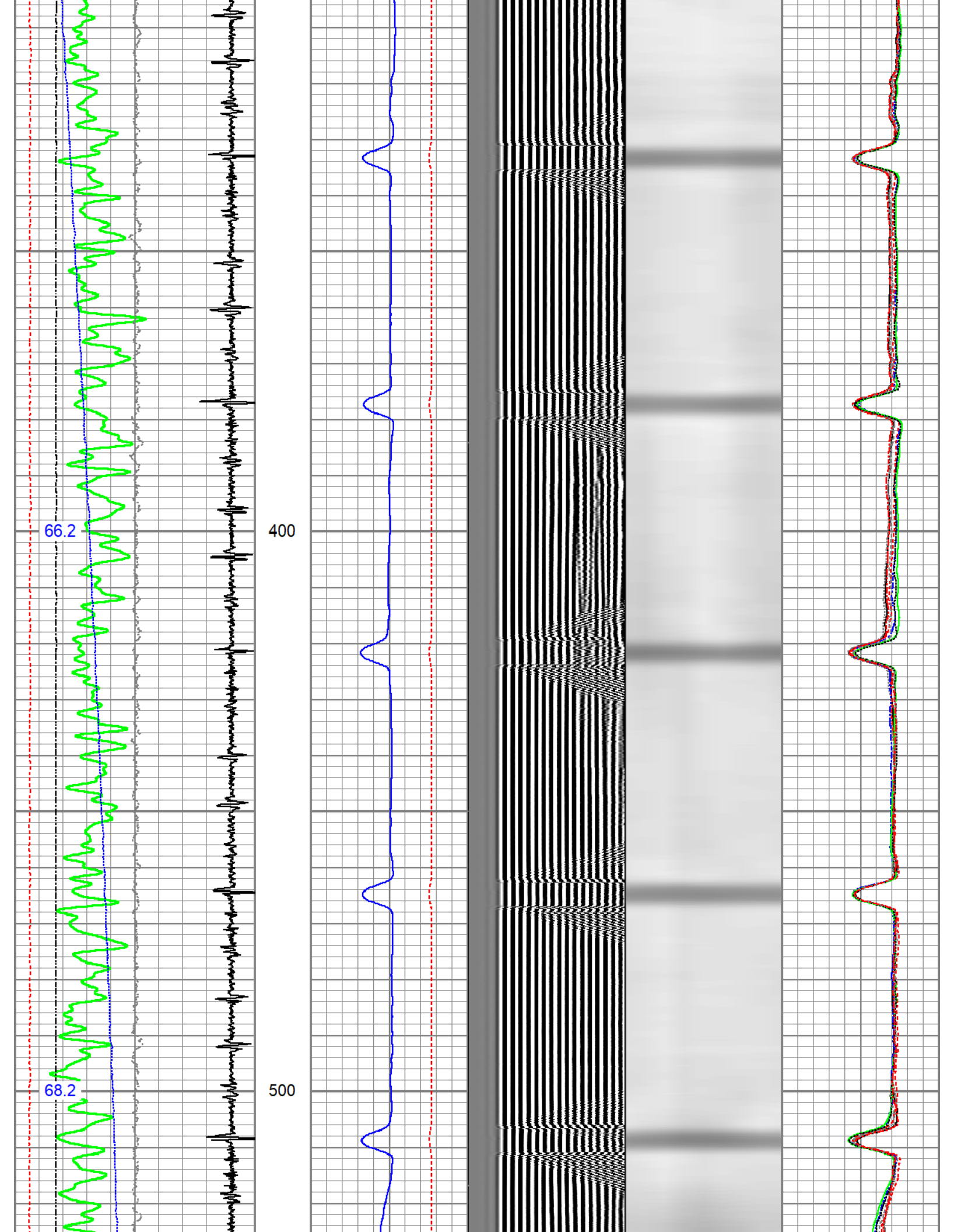
Recorded with 2500 PSI Surface Induced Pressure

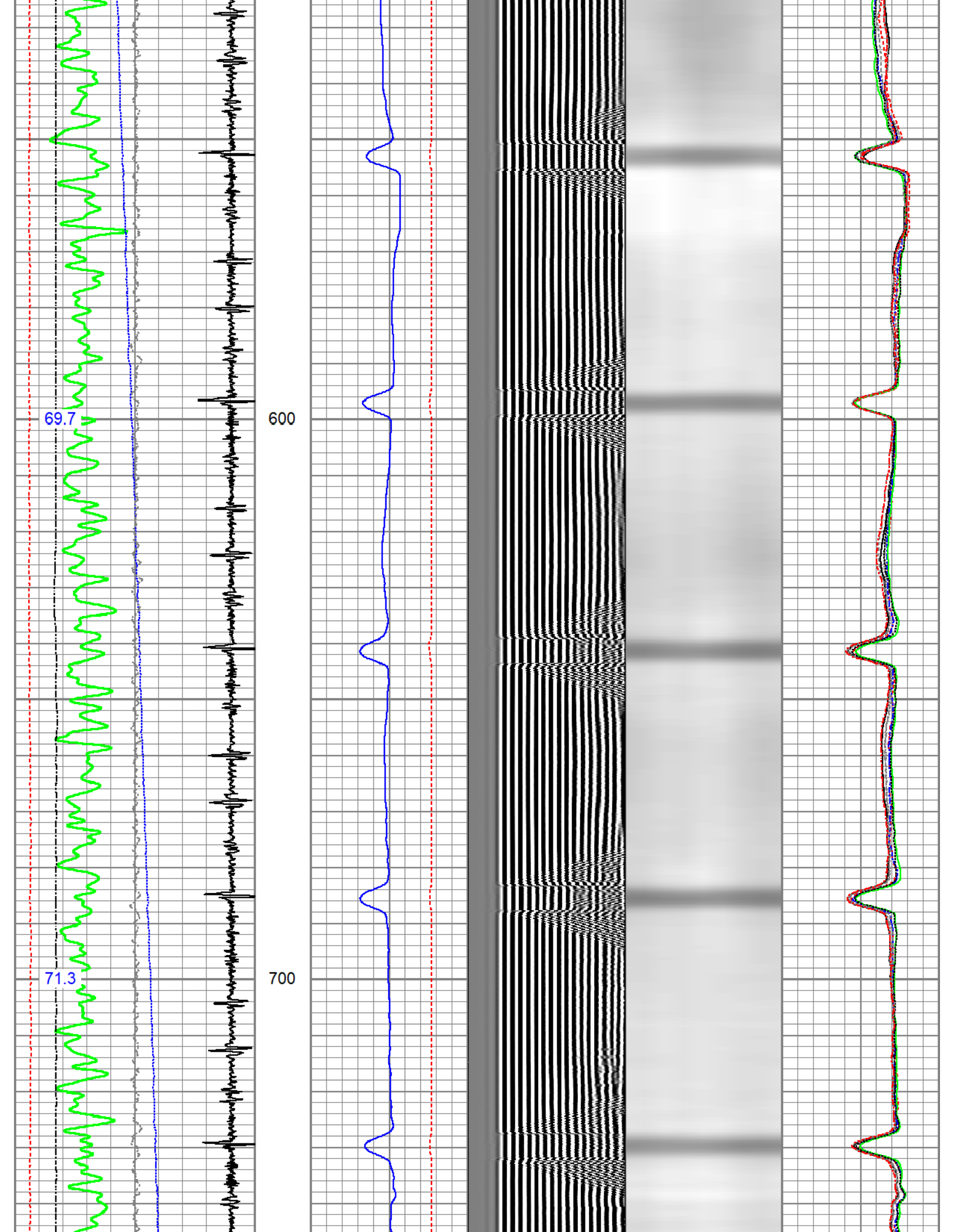
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Presentation Format	edge_rbl_noble
Dataset Creation	Fri Sep 10 12:42:41 2021
Charted by	Depth in Feet scaled 1:240

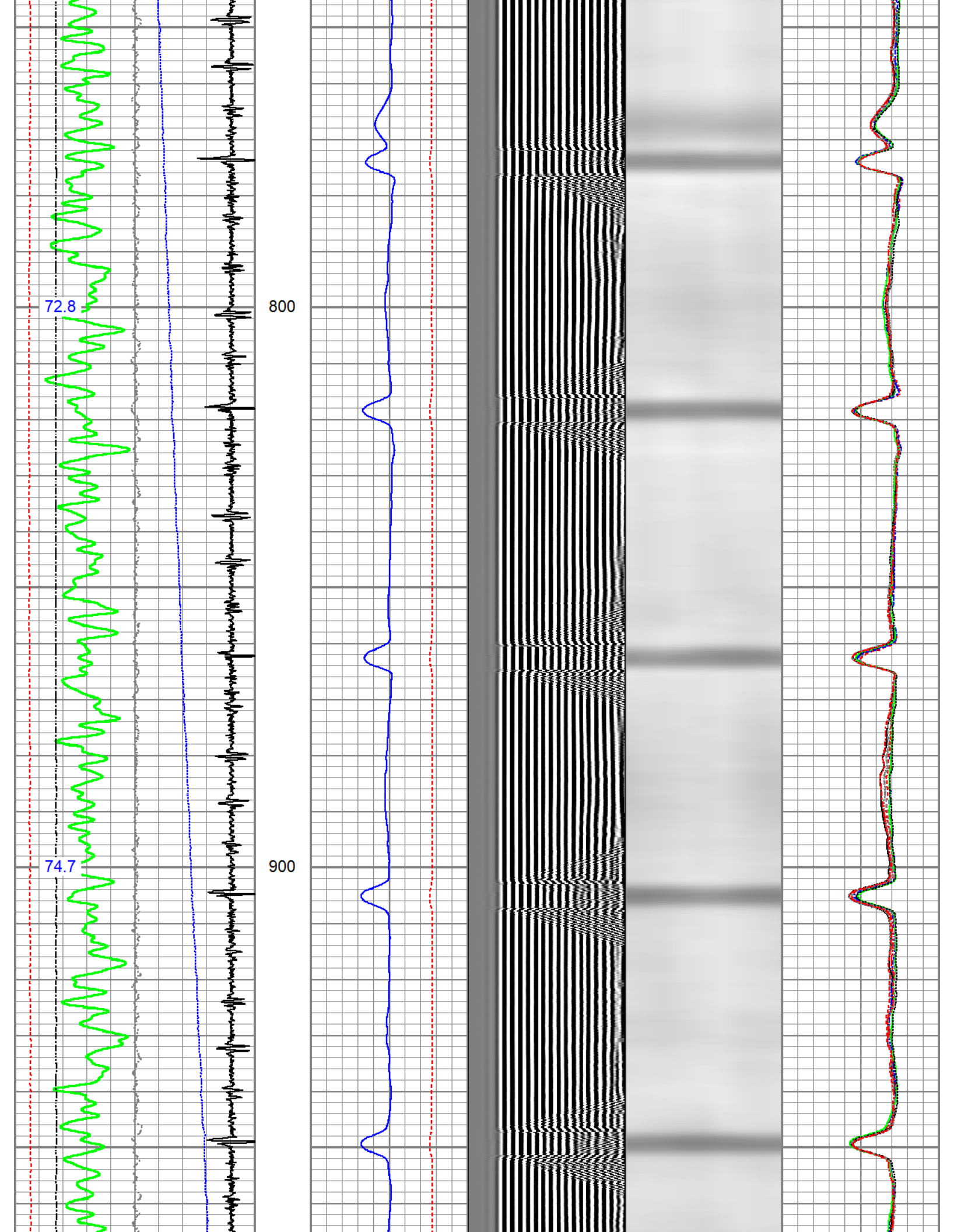
0	Gamma Ray (GAPI)	120	3' Amplitude	5' Variable Density	Sector Map	0	AMP S1	100
9	Casing Collar Locator	-1	0 (mV) 100	200 (usec) 1200		0	AMP S2	100
0	Temperature (degF)	20	3' Amplitude x 5			0	AMP S3	100
-150	Line Speed (ft/min)	150	0 (mV) 20			0	AMP S4	100
0	Line Tension (lb)	2000	3' Travel Time			0	AMP S5	100
	Differential Temperature		650 (usec) 150			0	AMP S6	100
-2	(degF)	2				0	AMP S7	100
Temperature						0	AMP S8	100
(degF)								

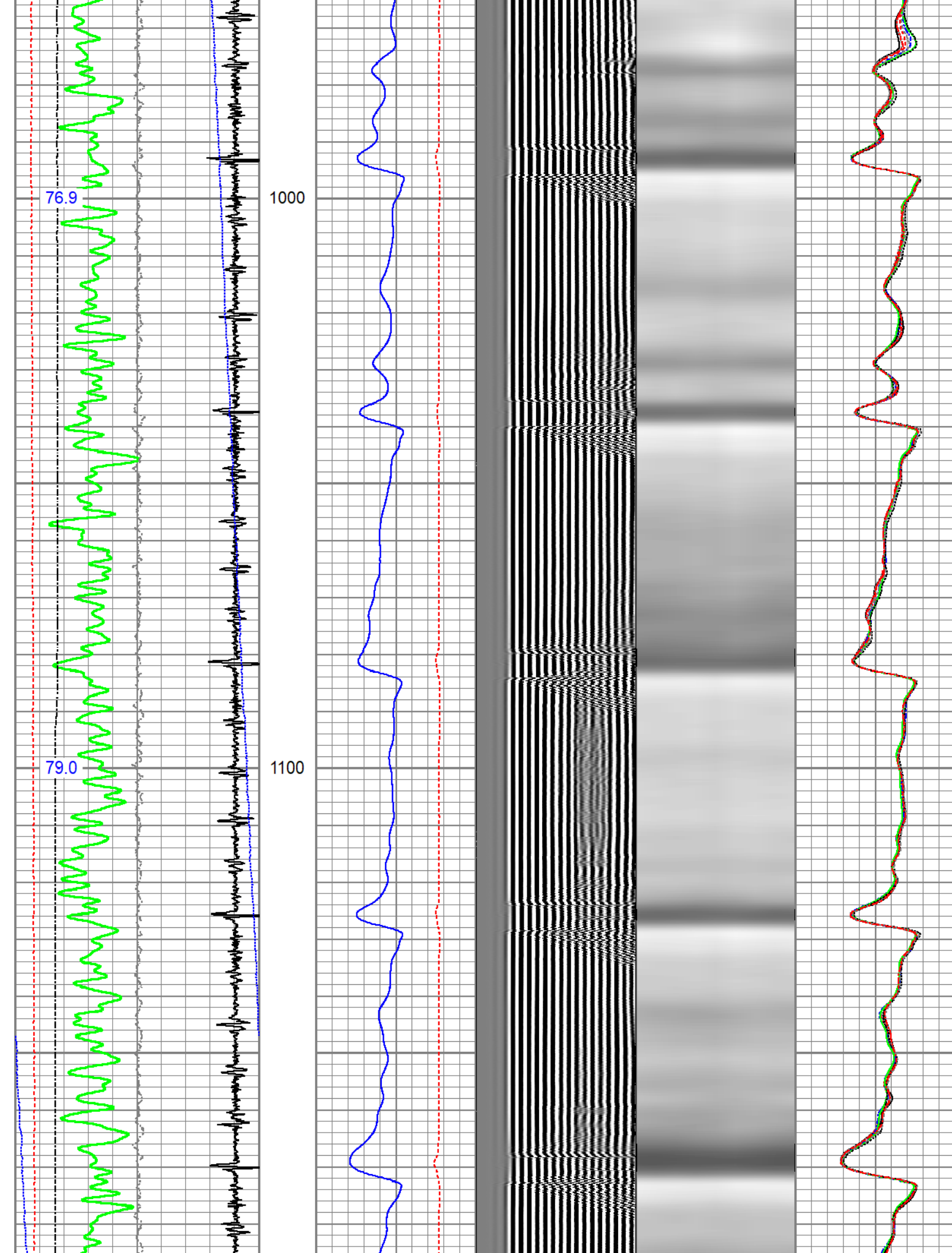


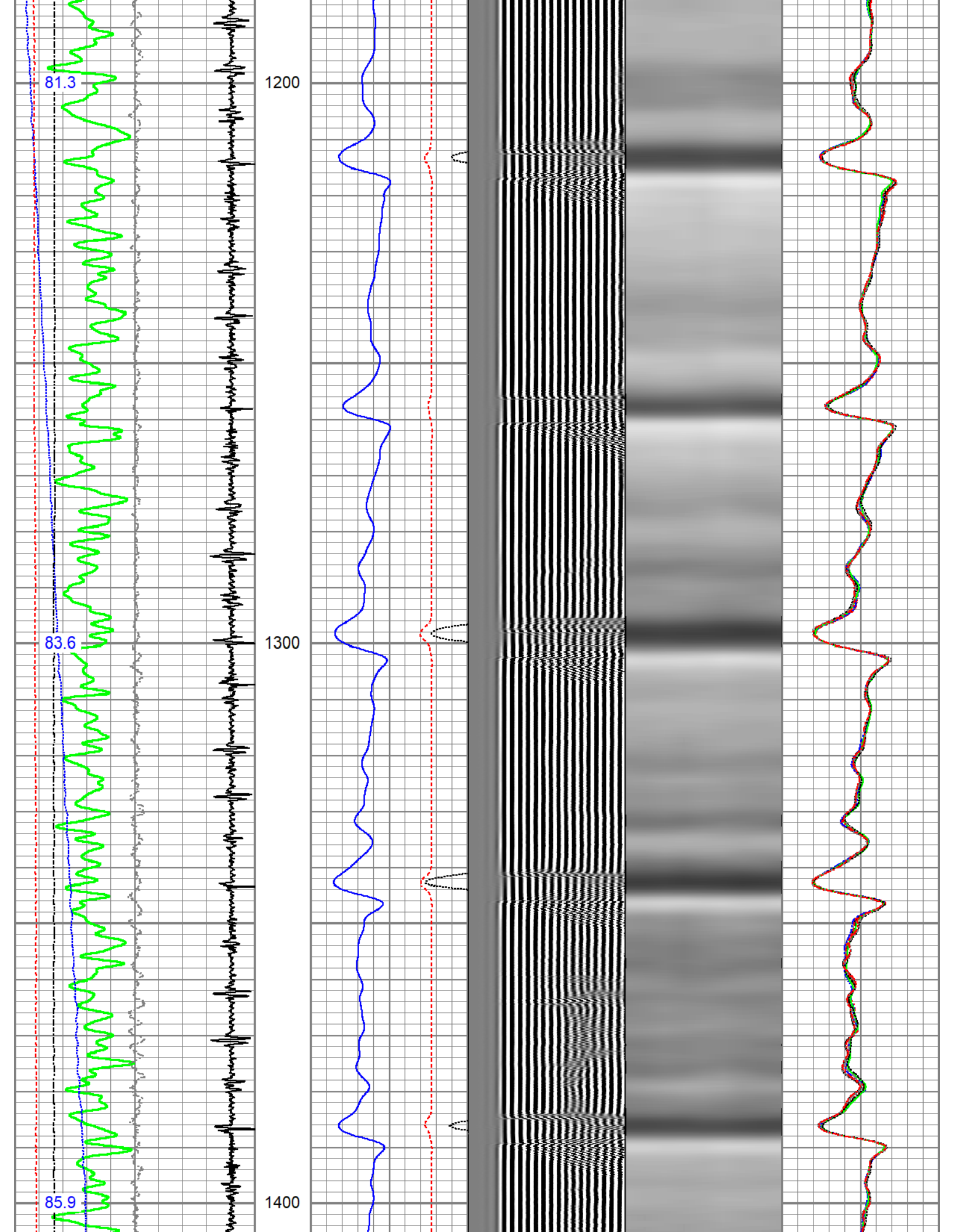


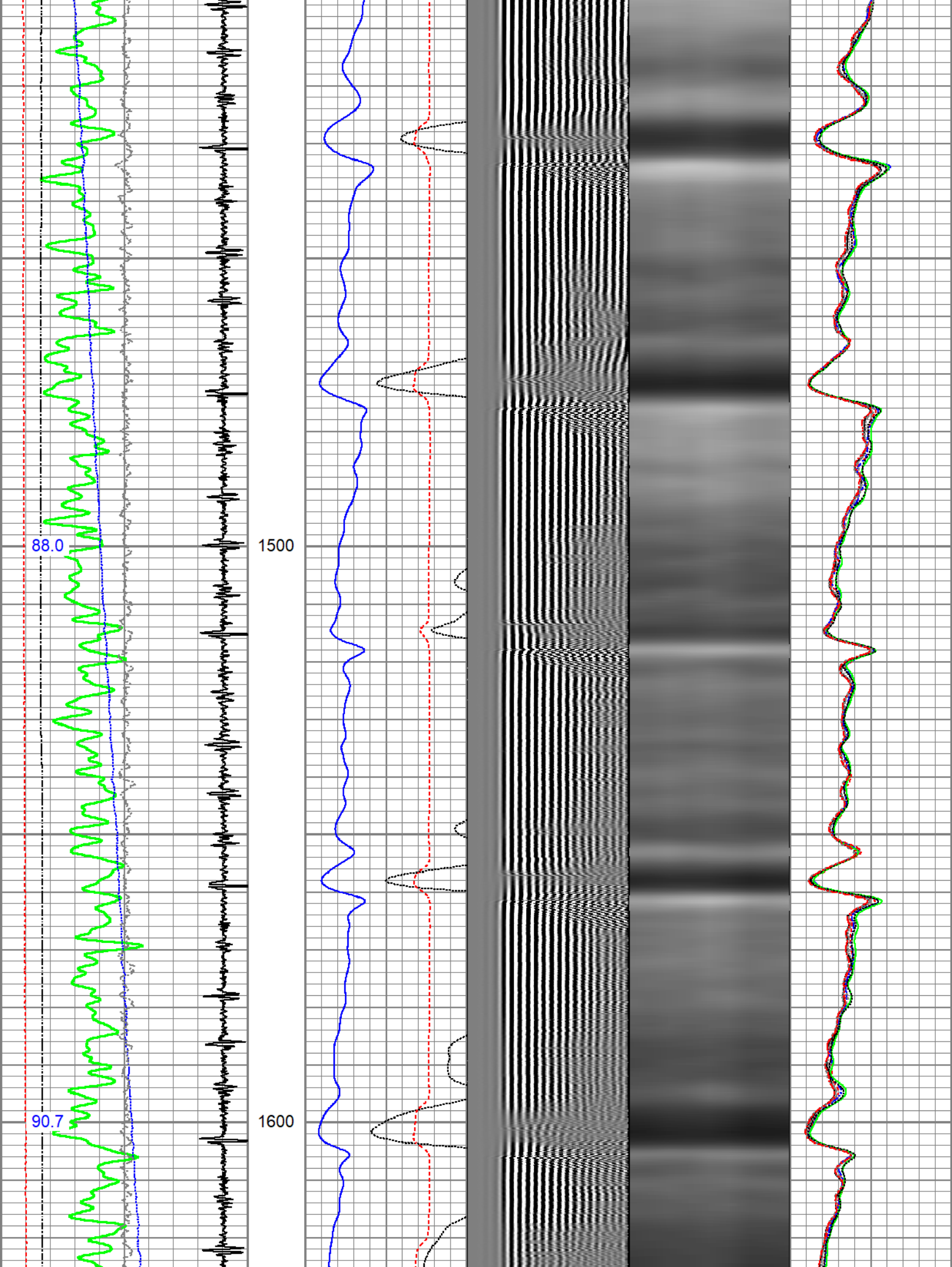


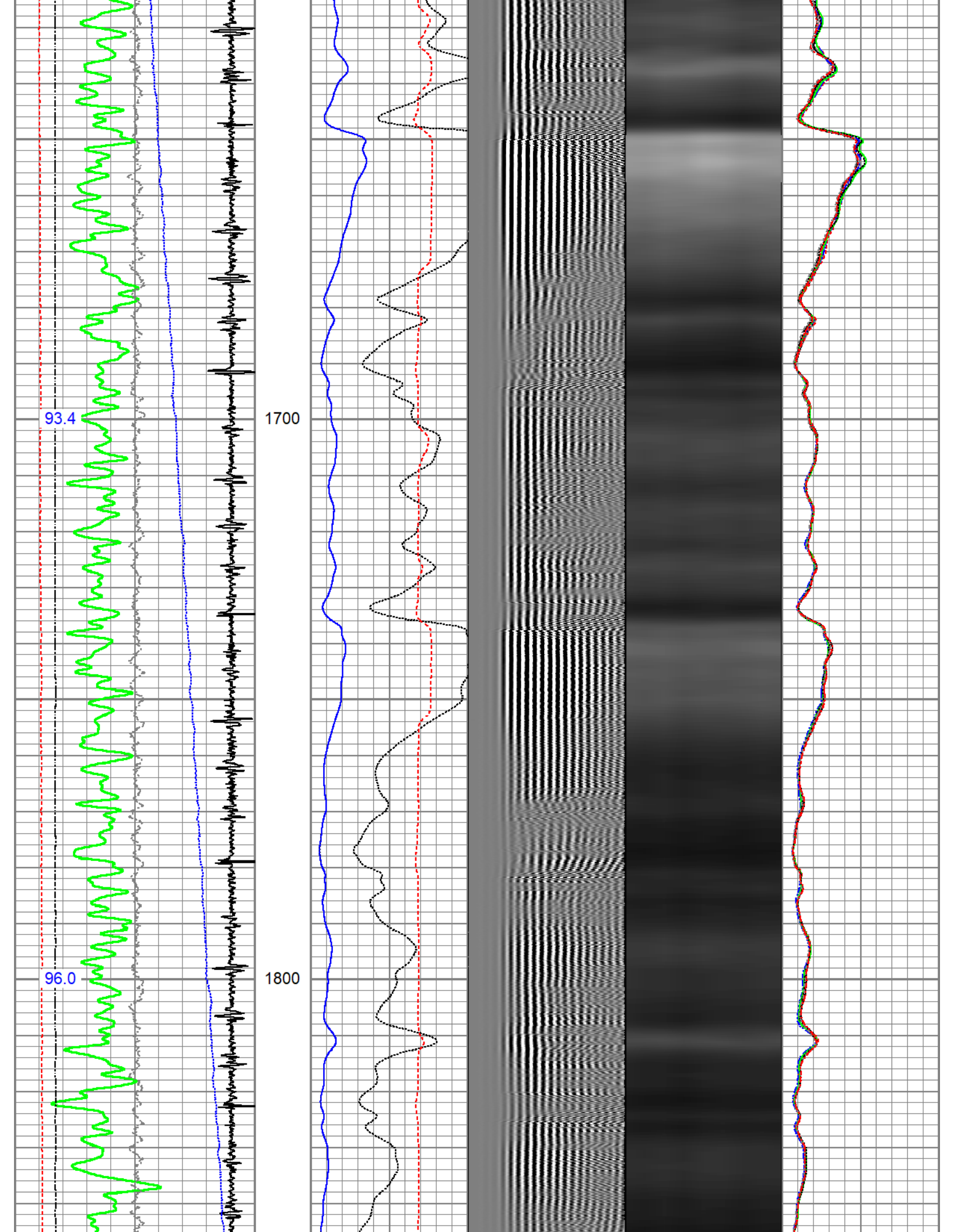


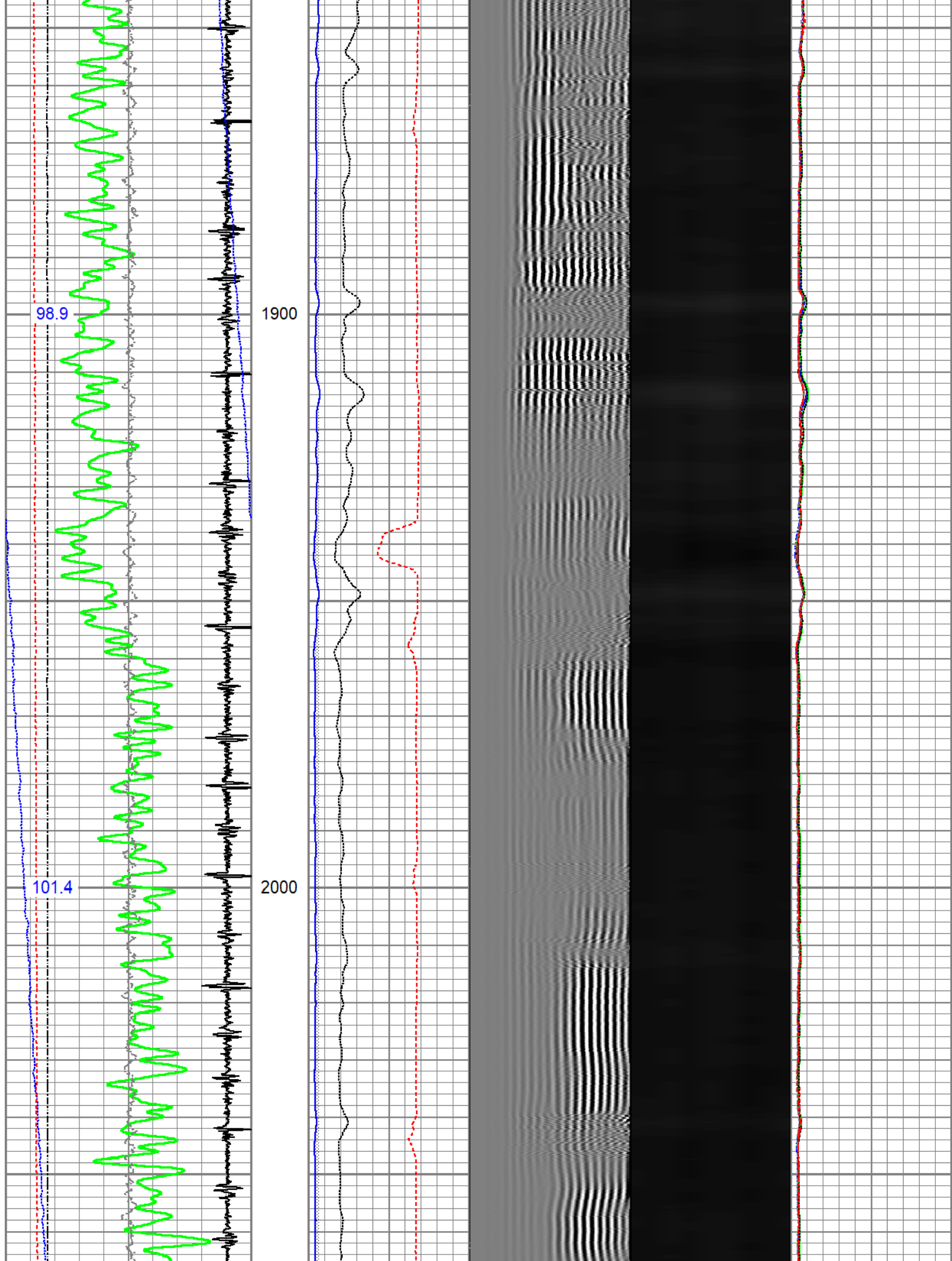


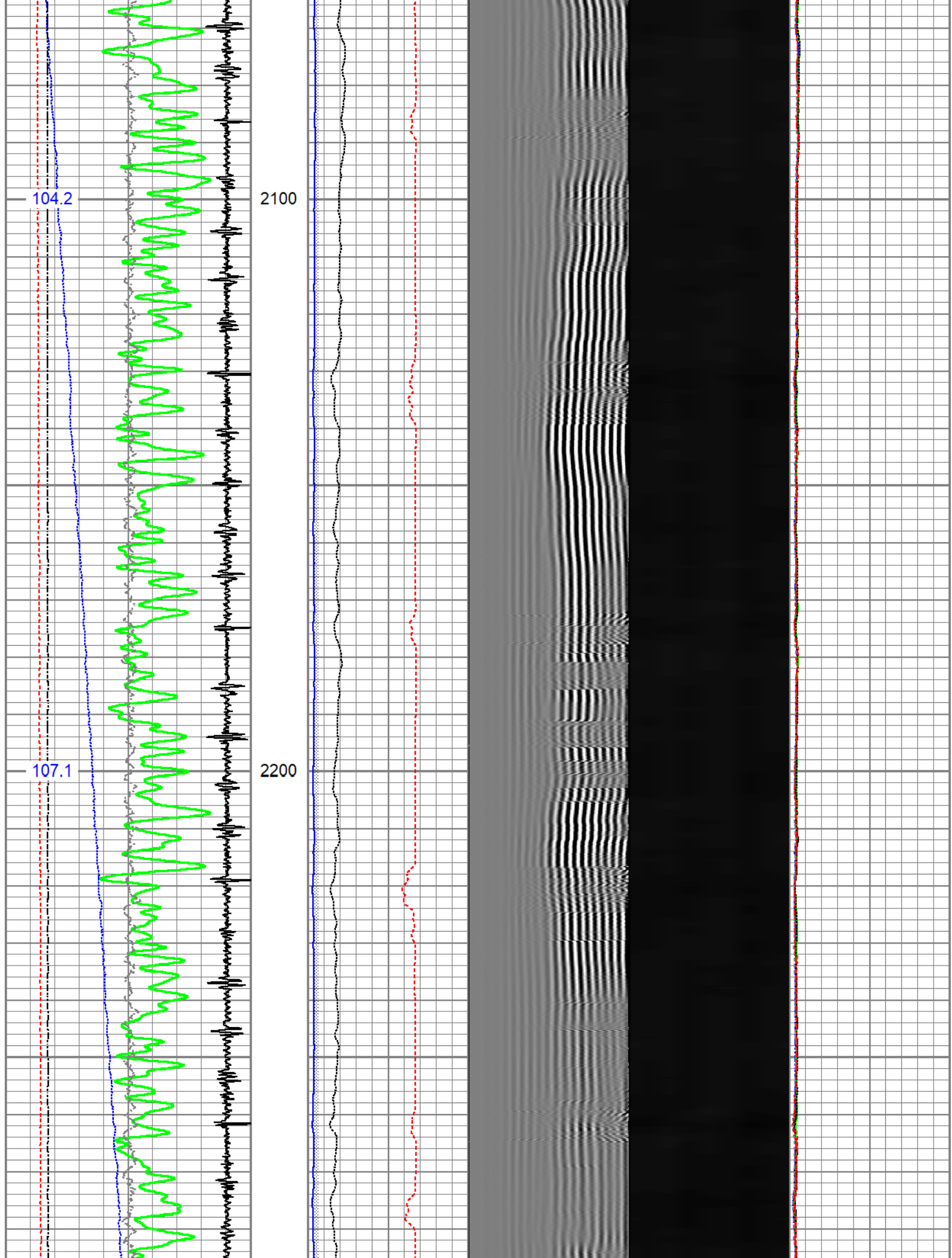


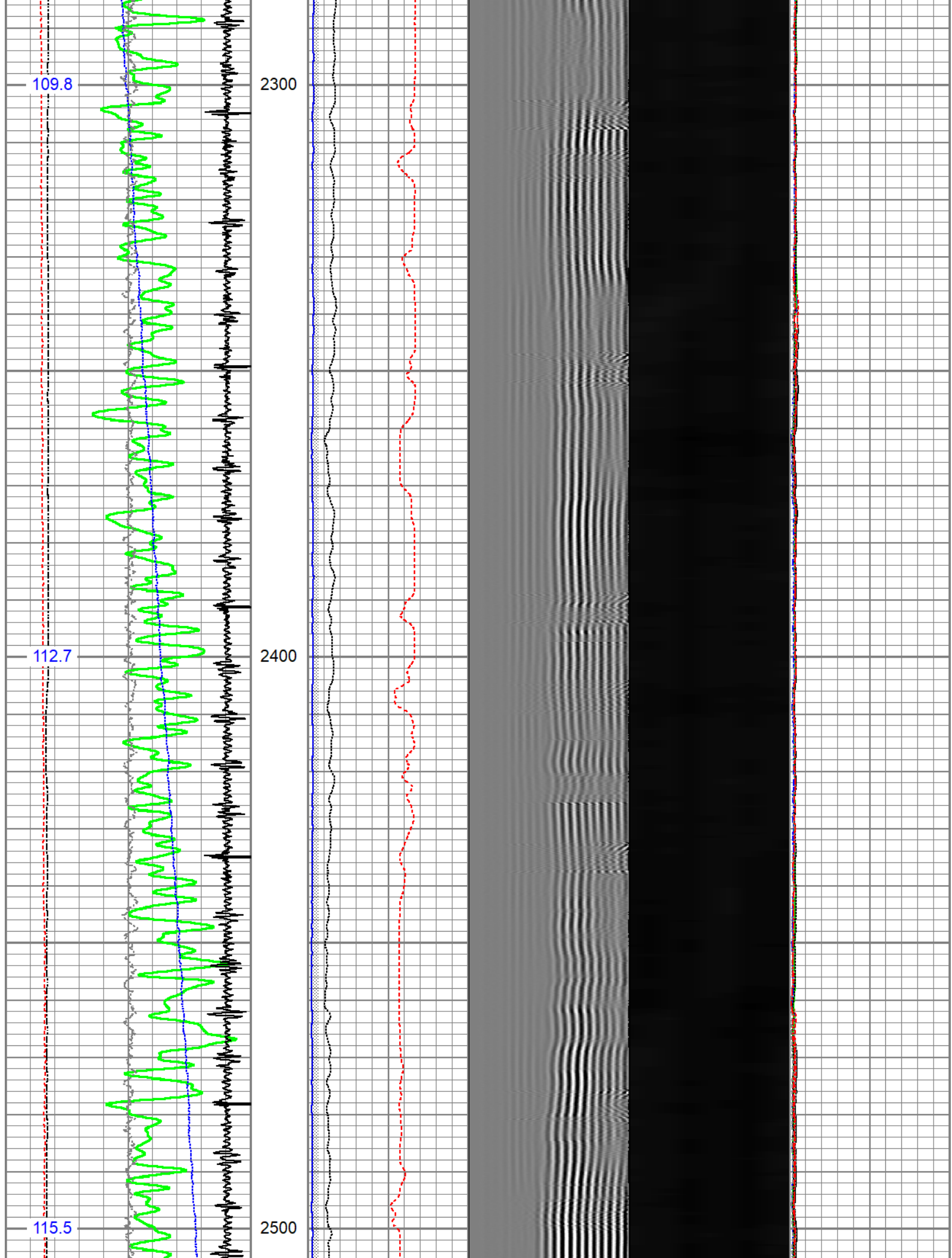


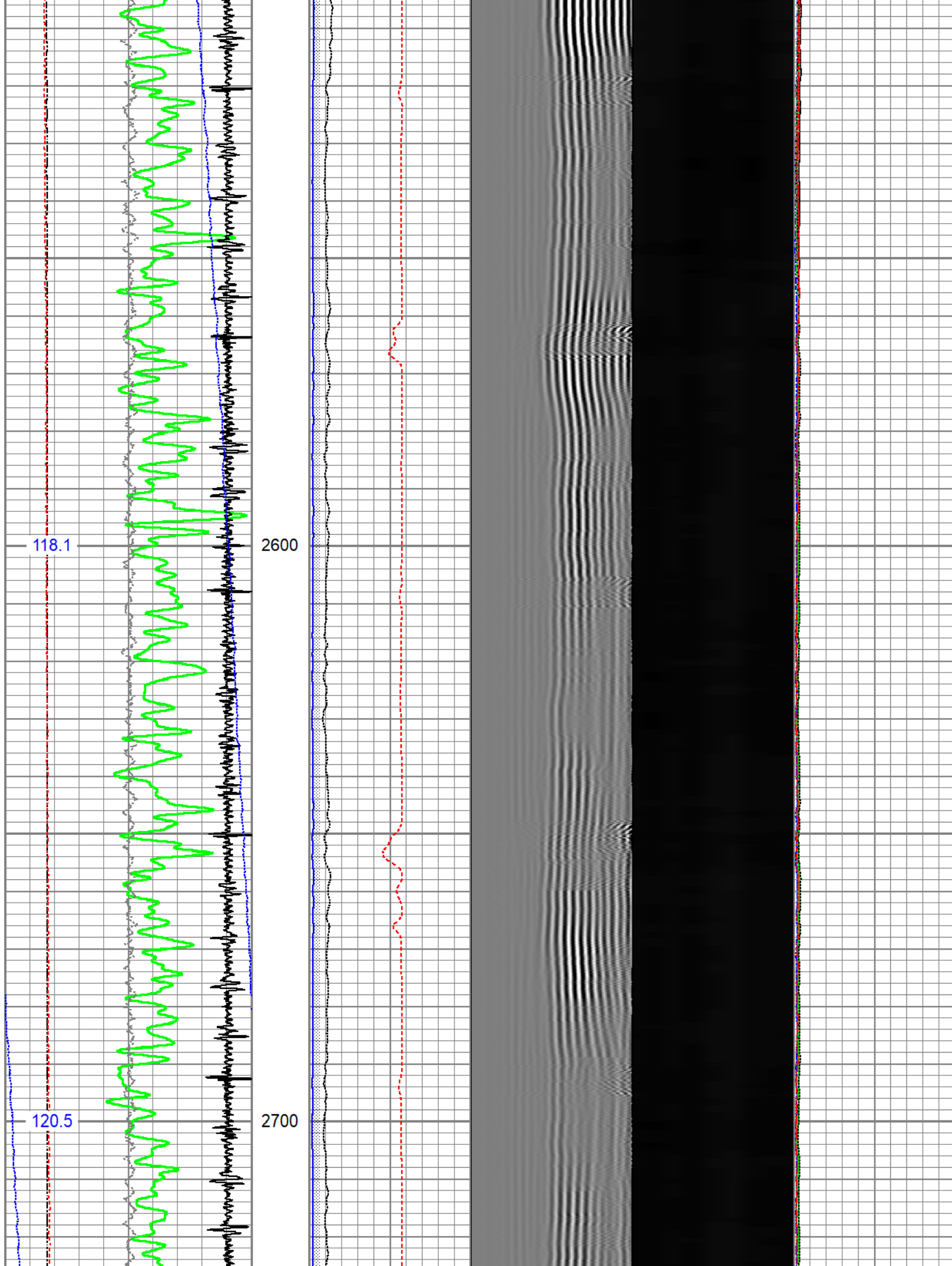


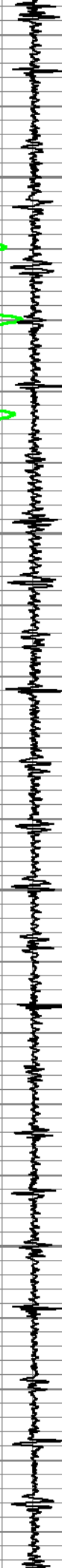
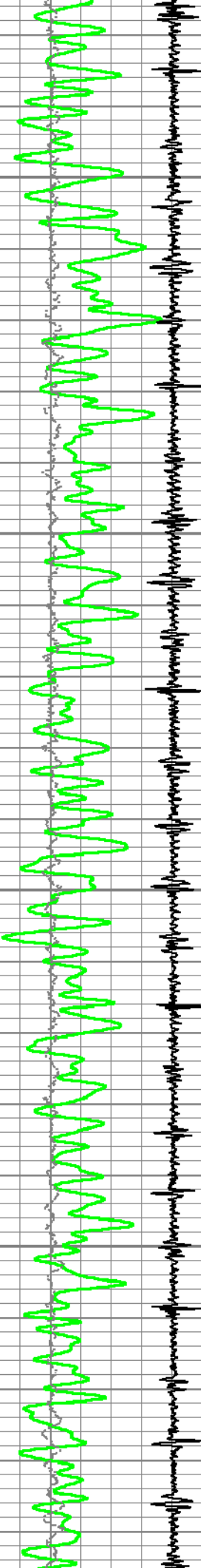






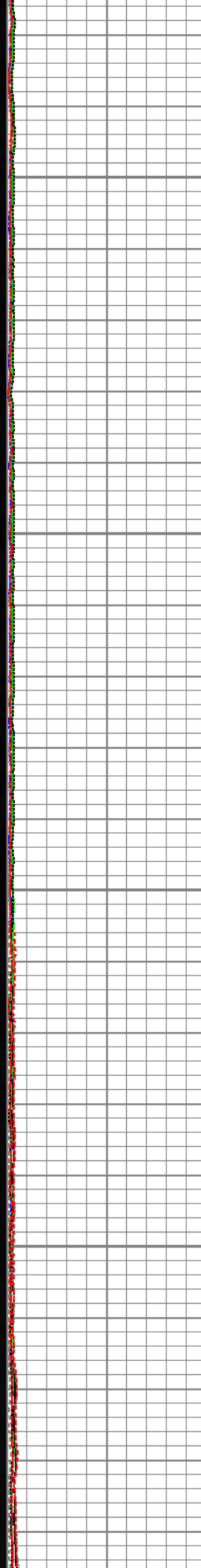
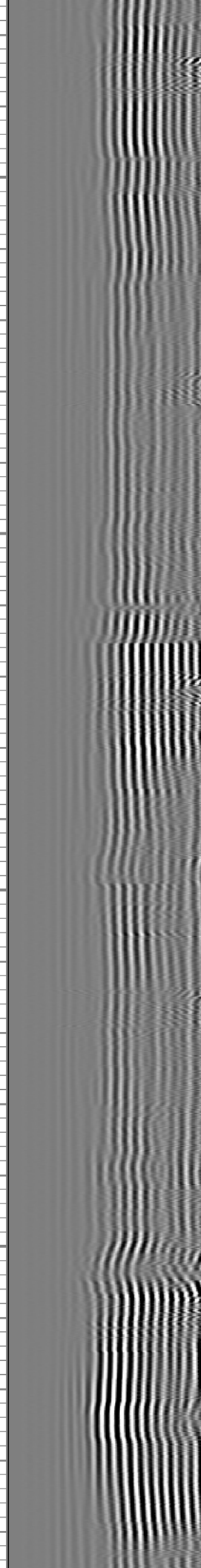
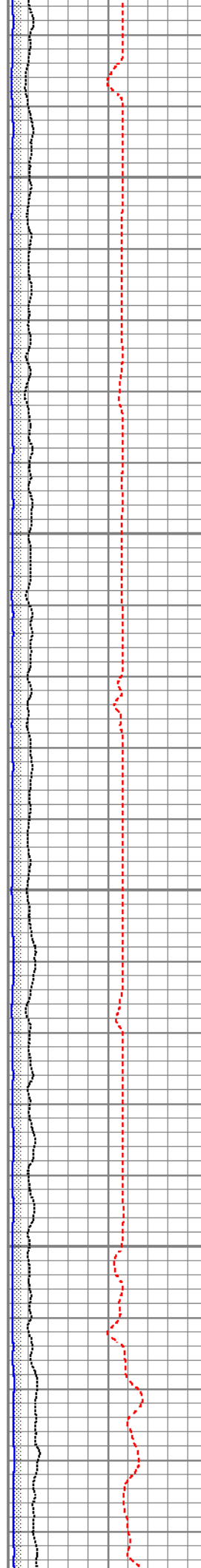






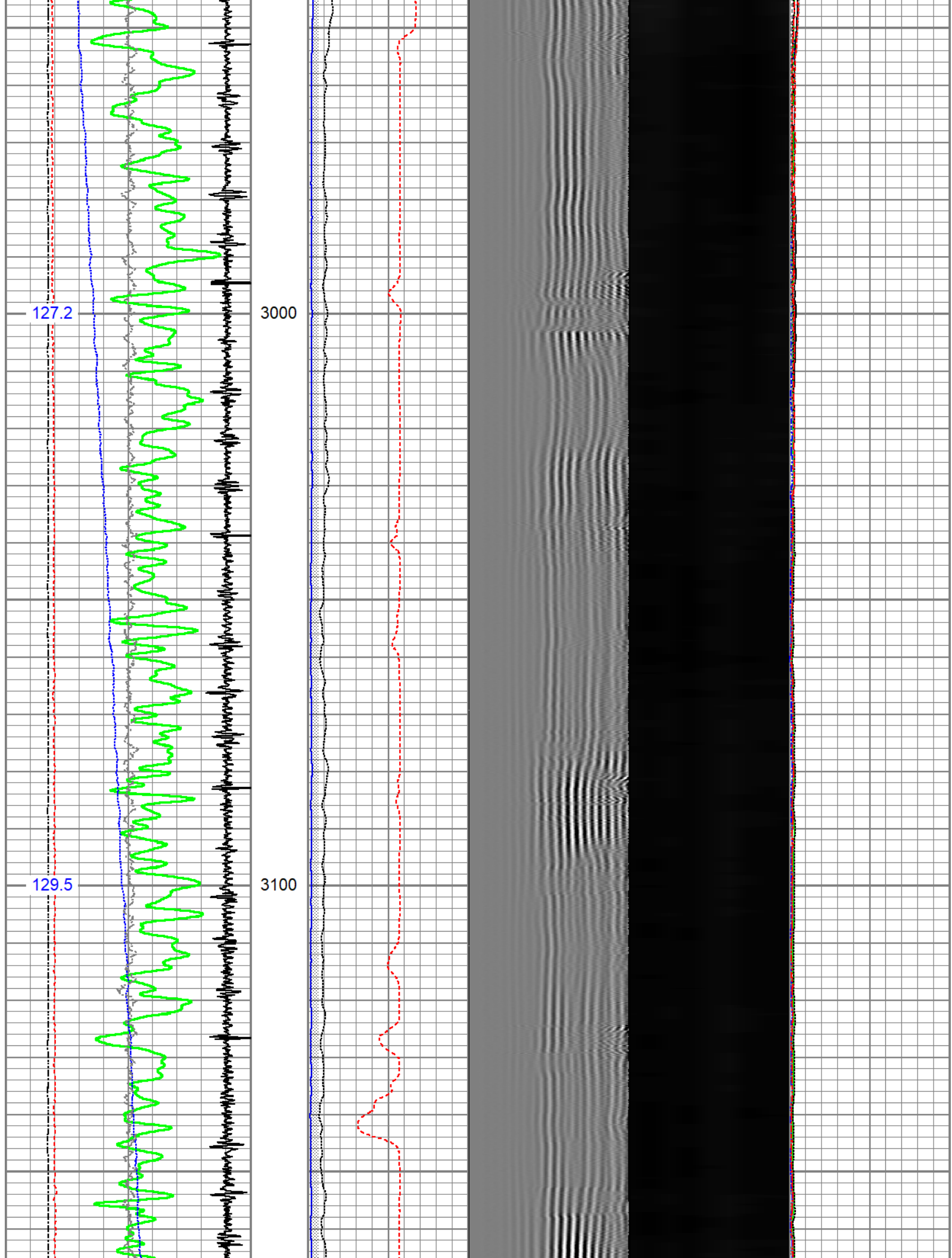
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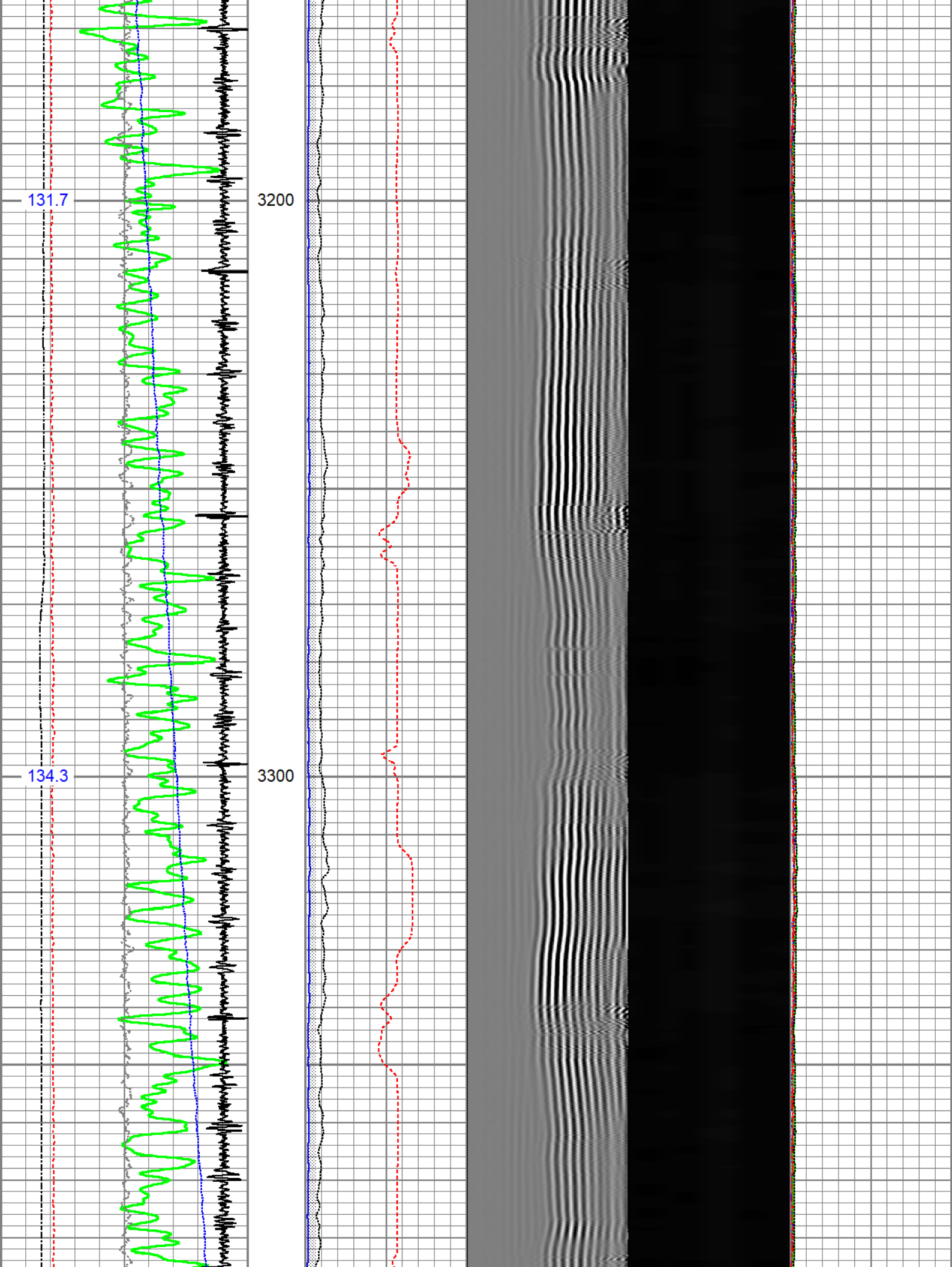
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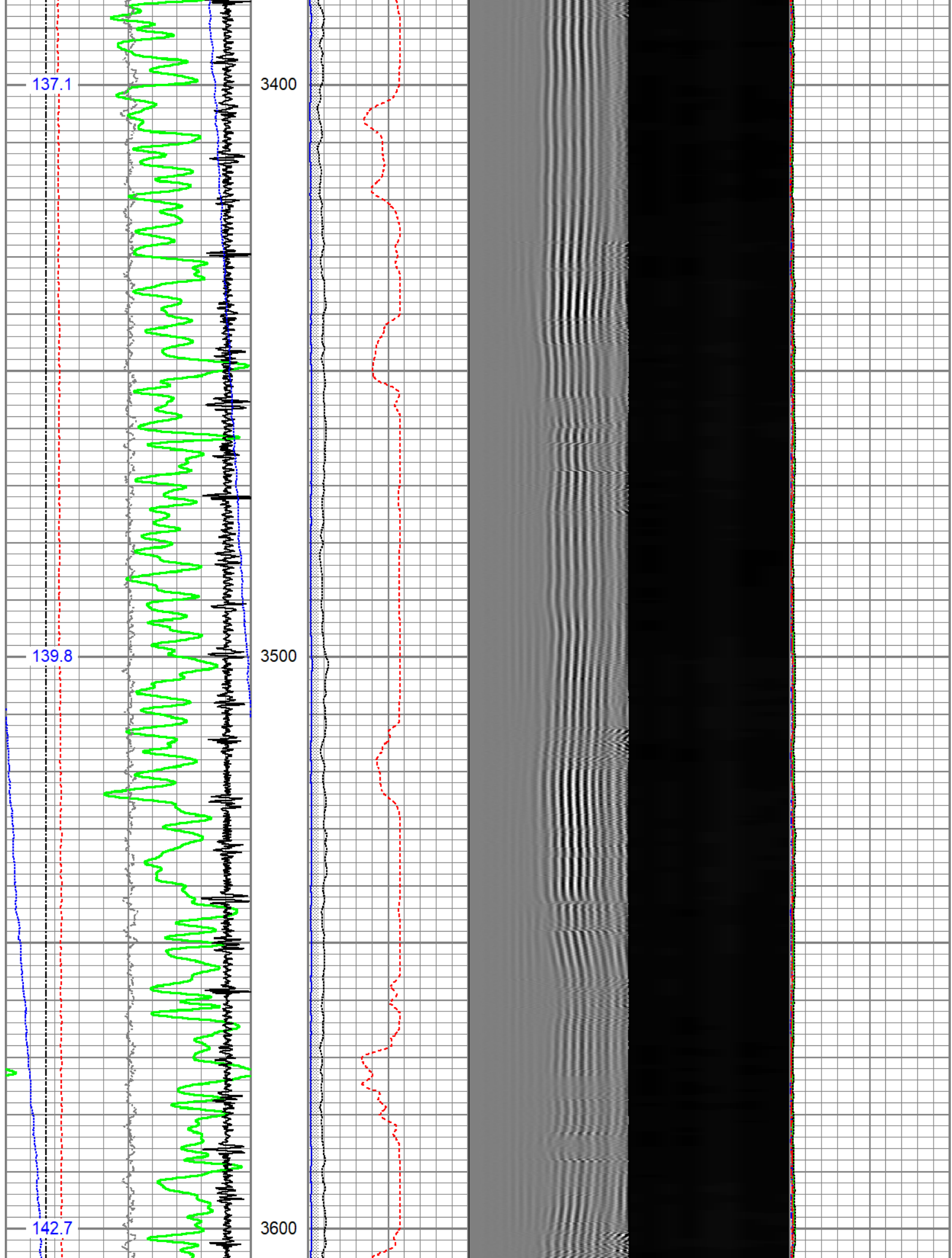


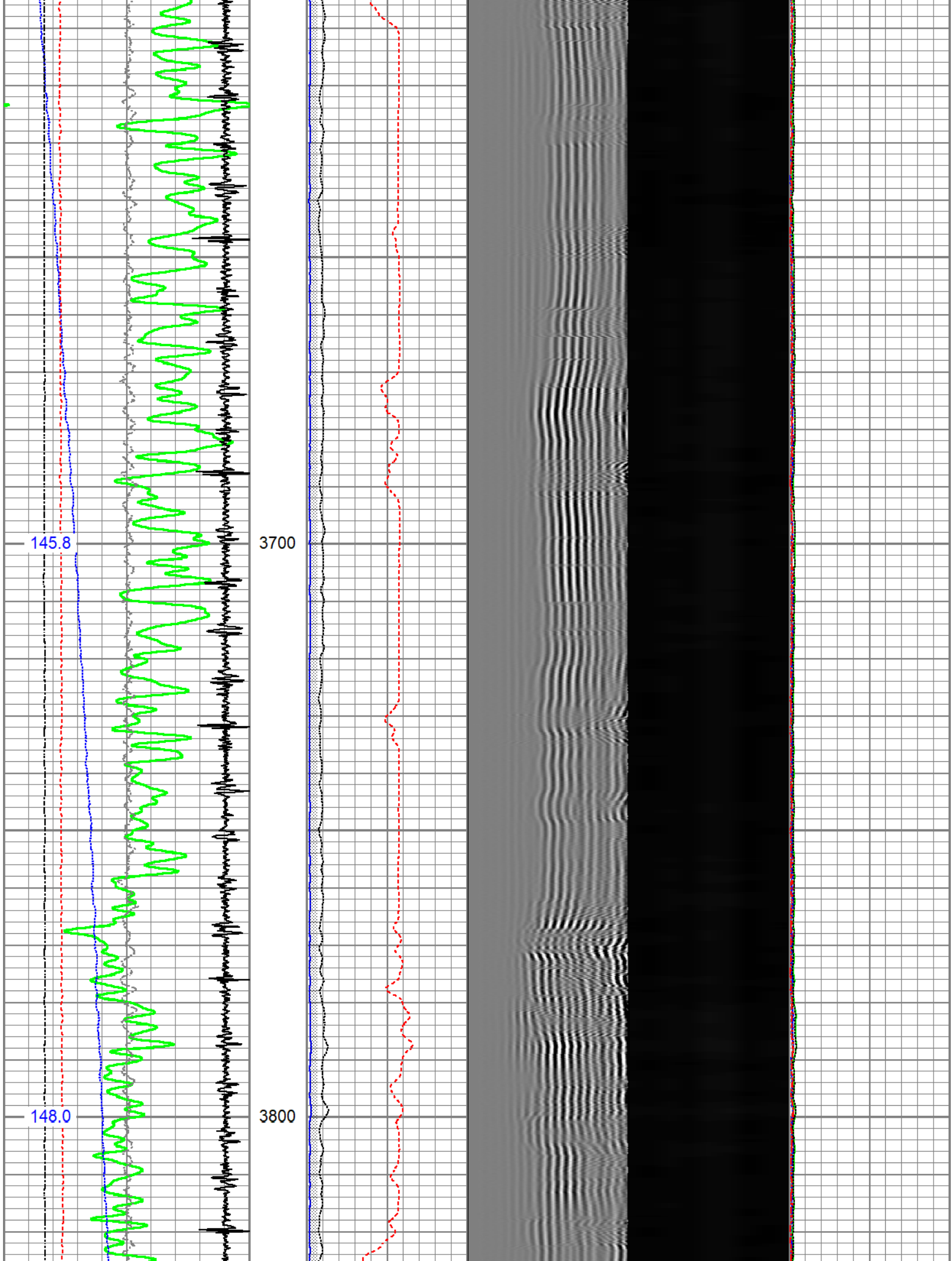
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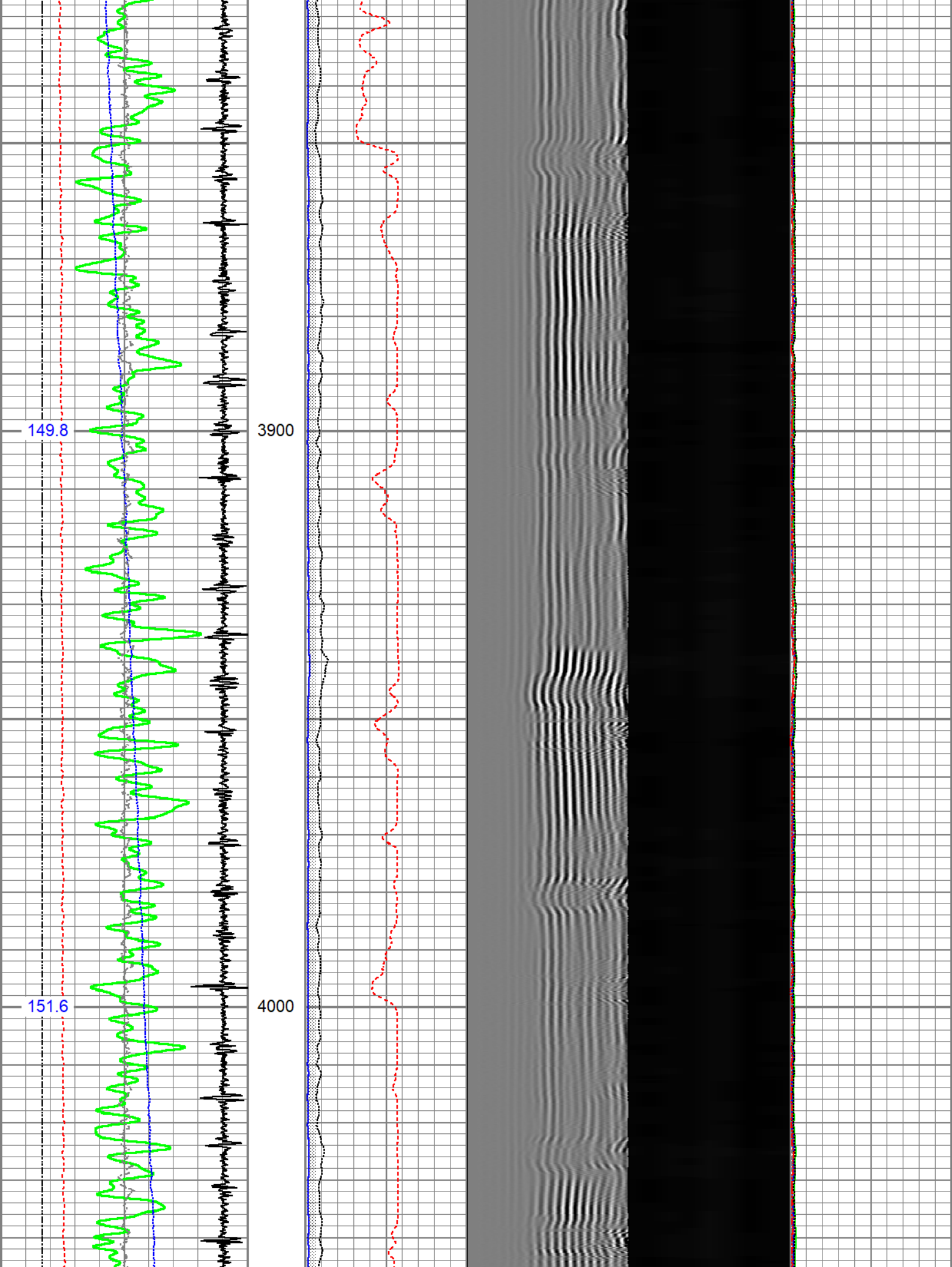
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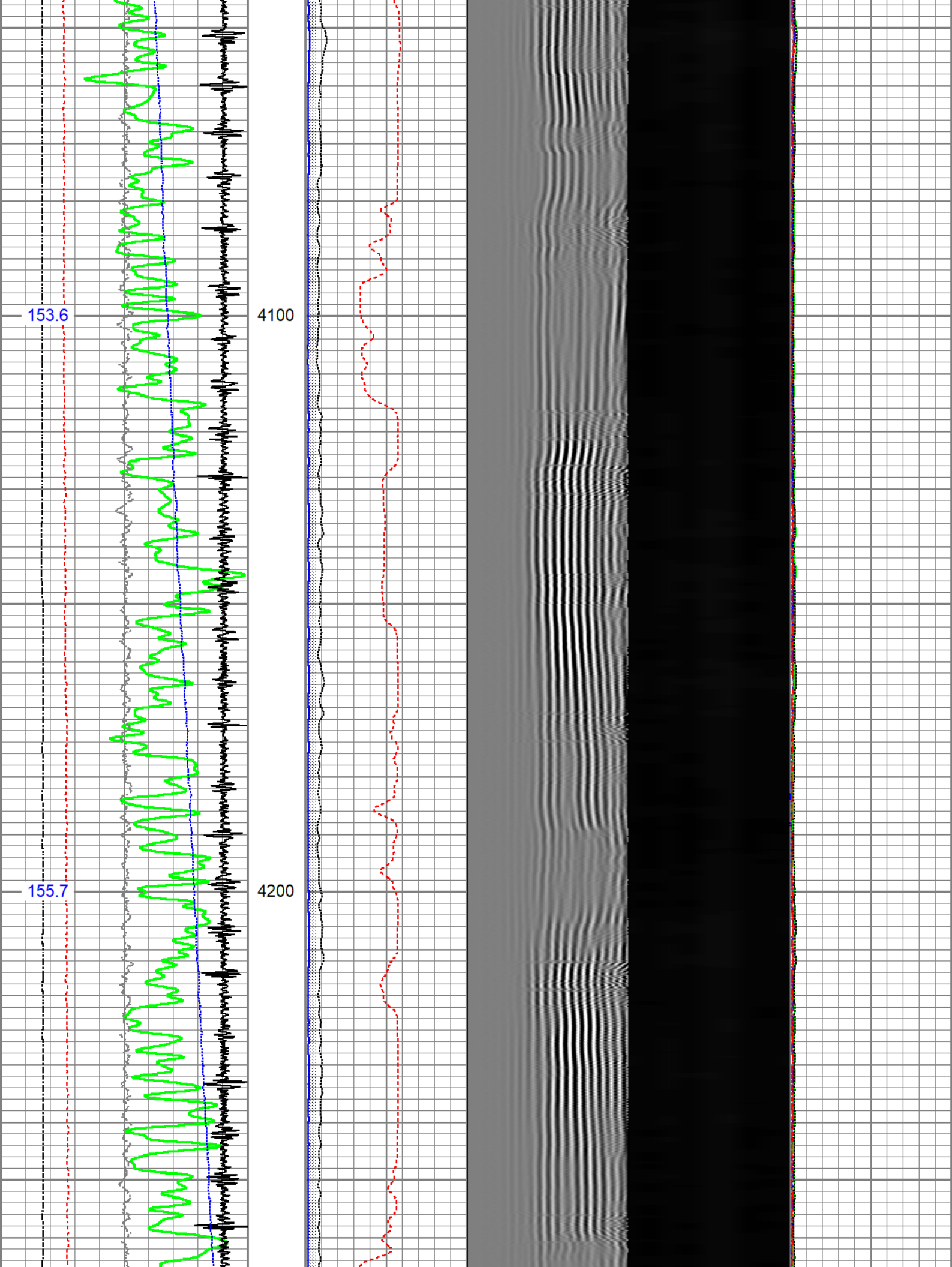


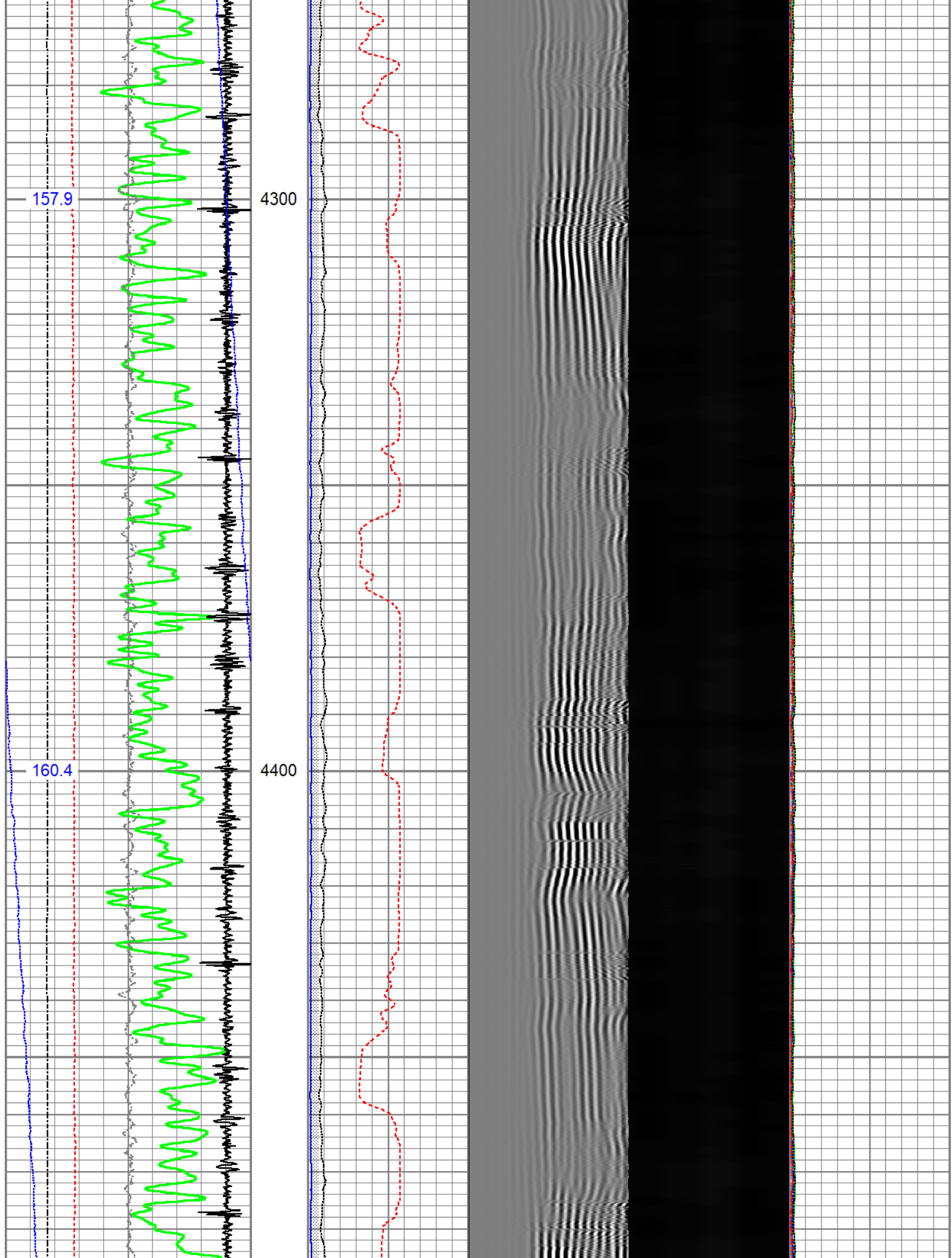


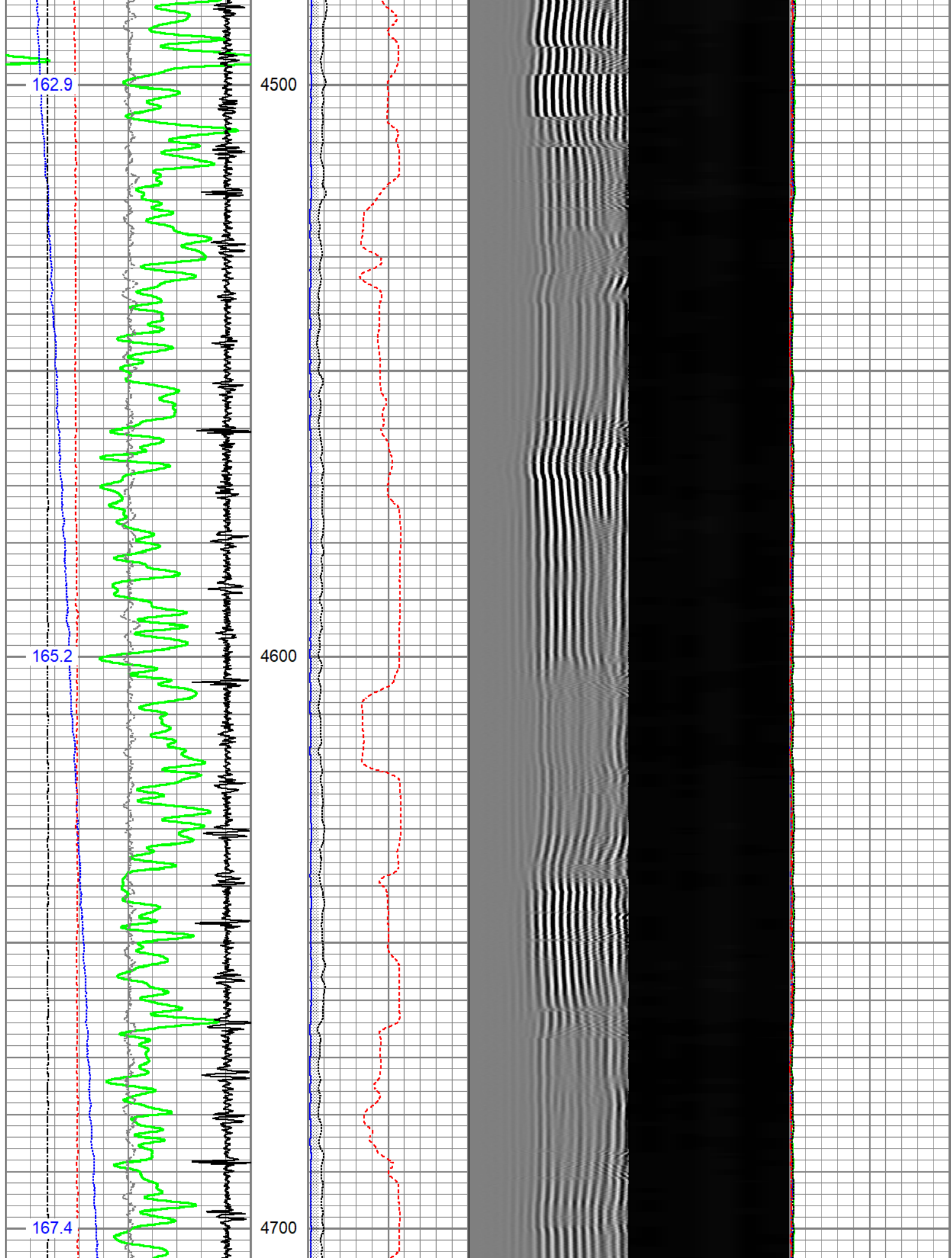


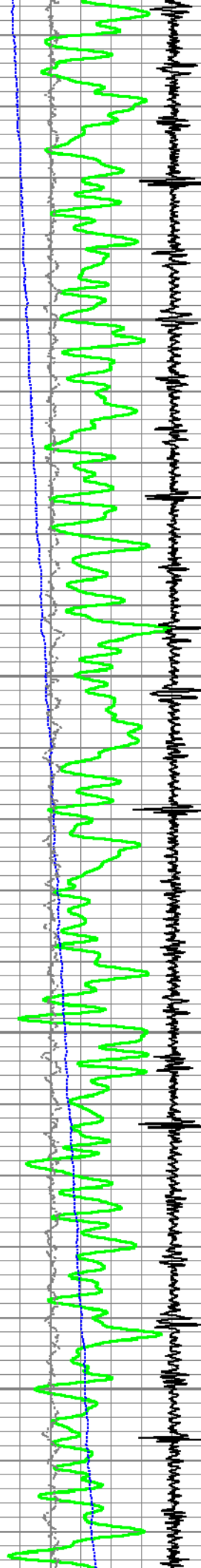










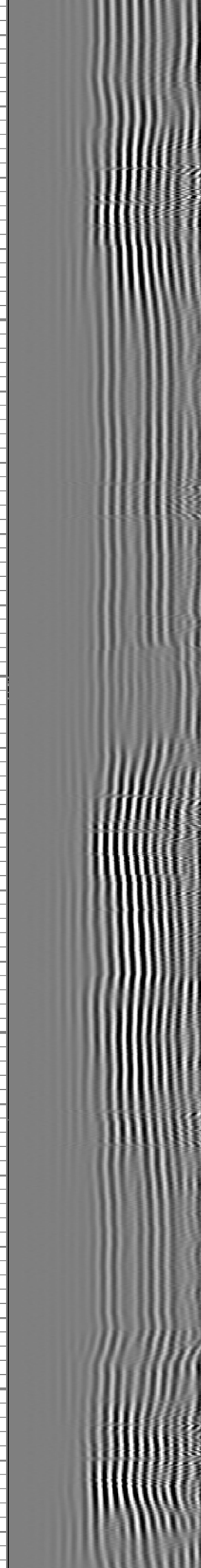
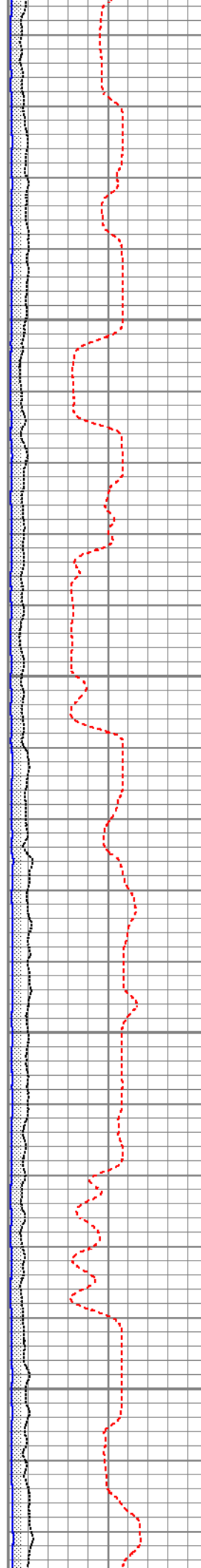


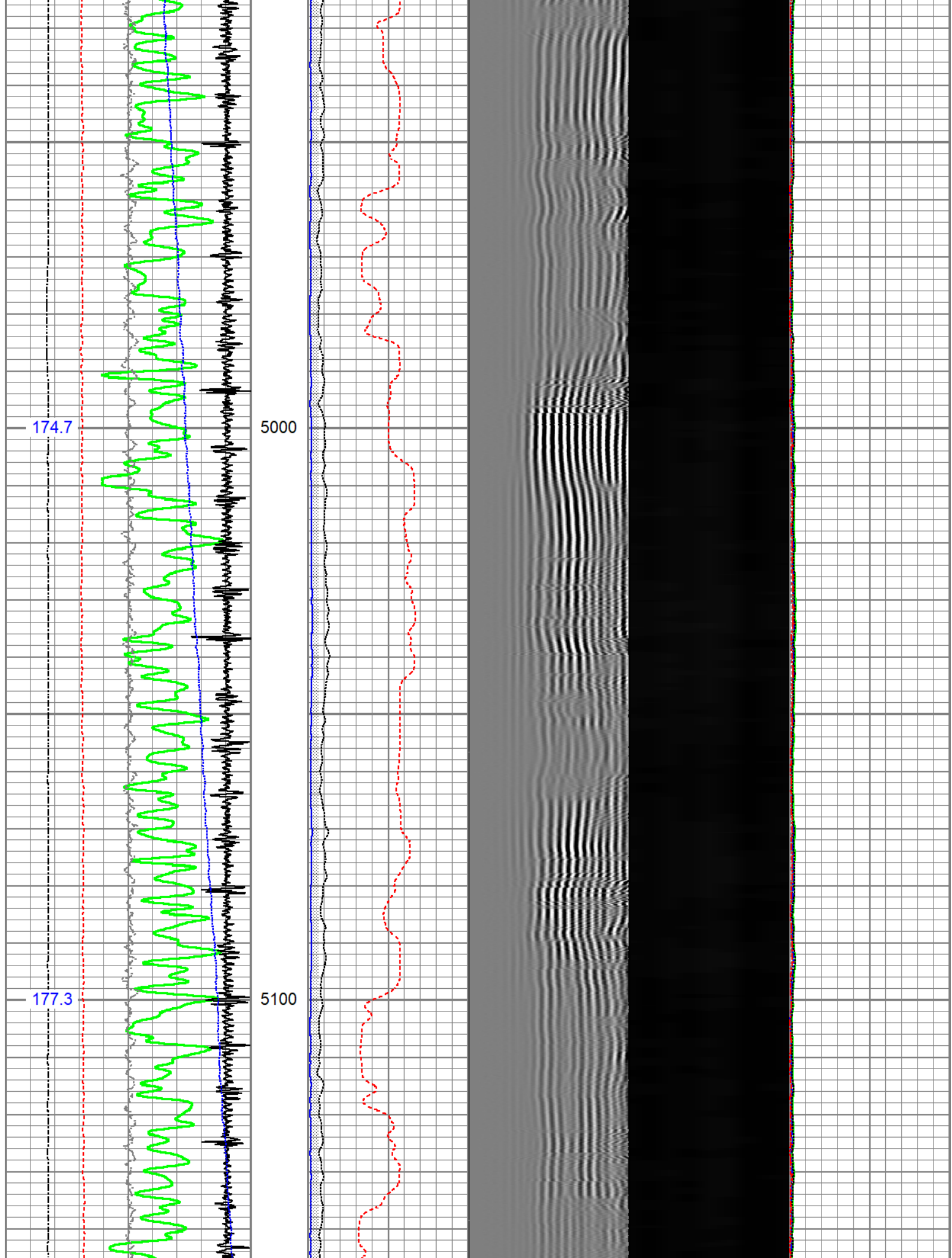
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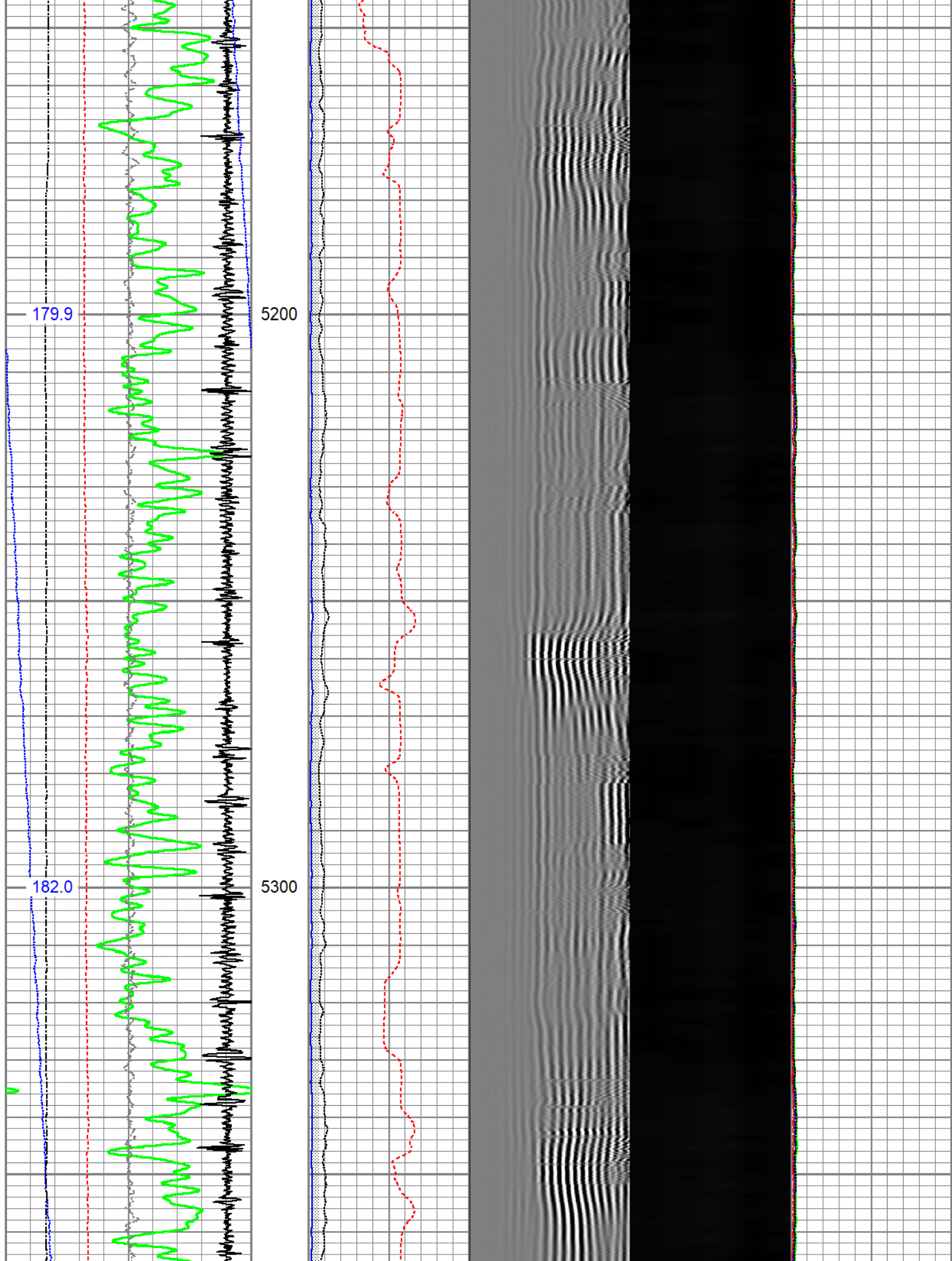
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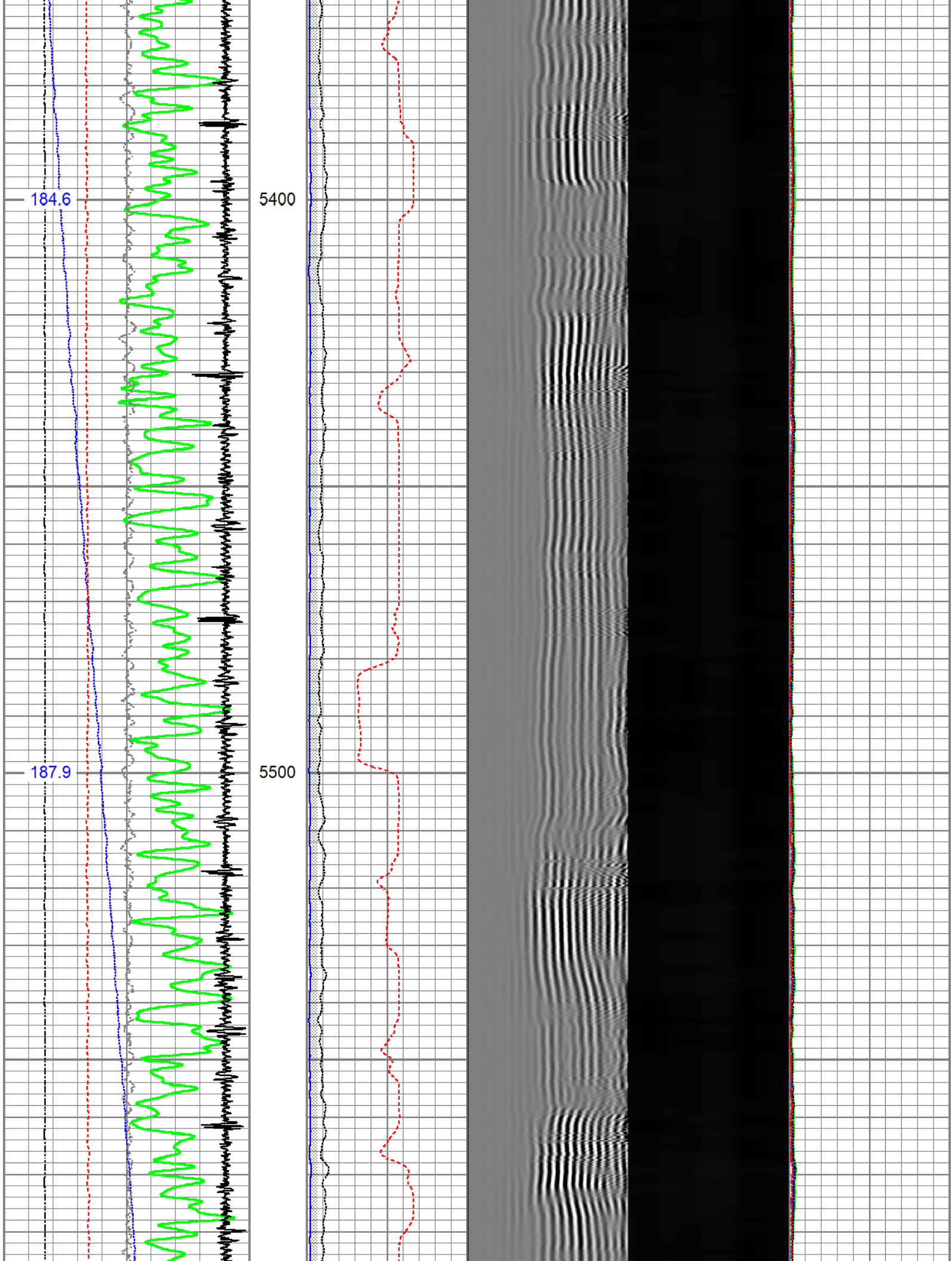
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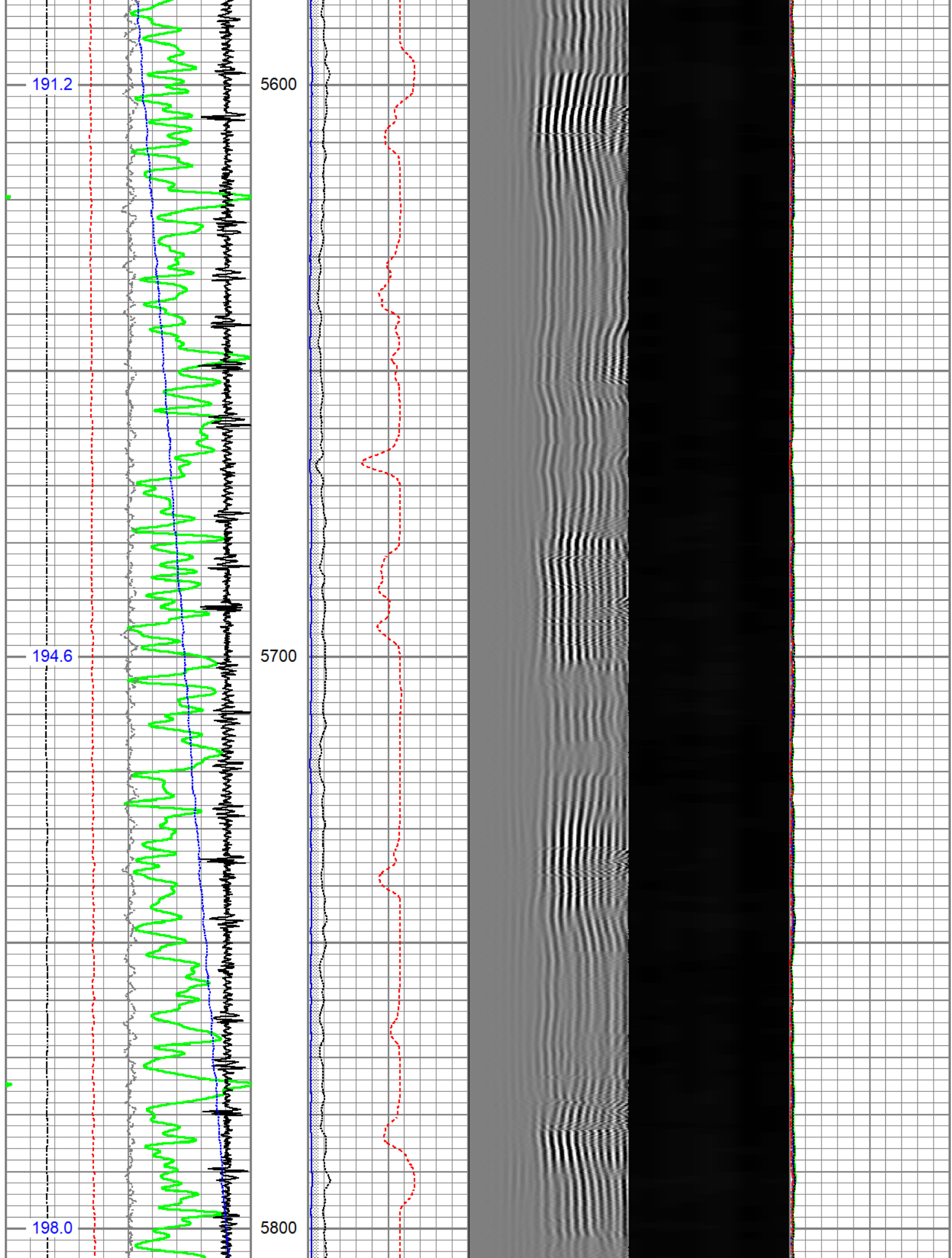
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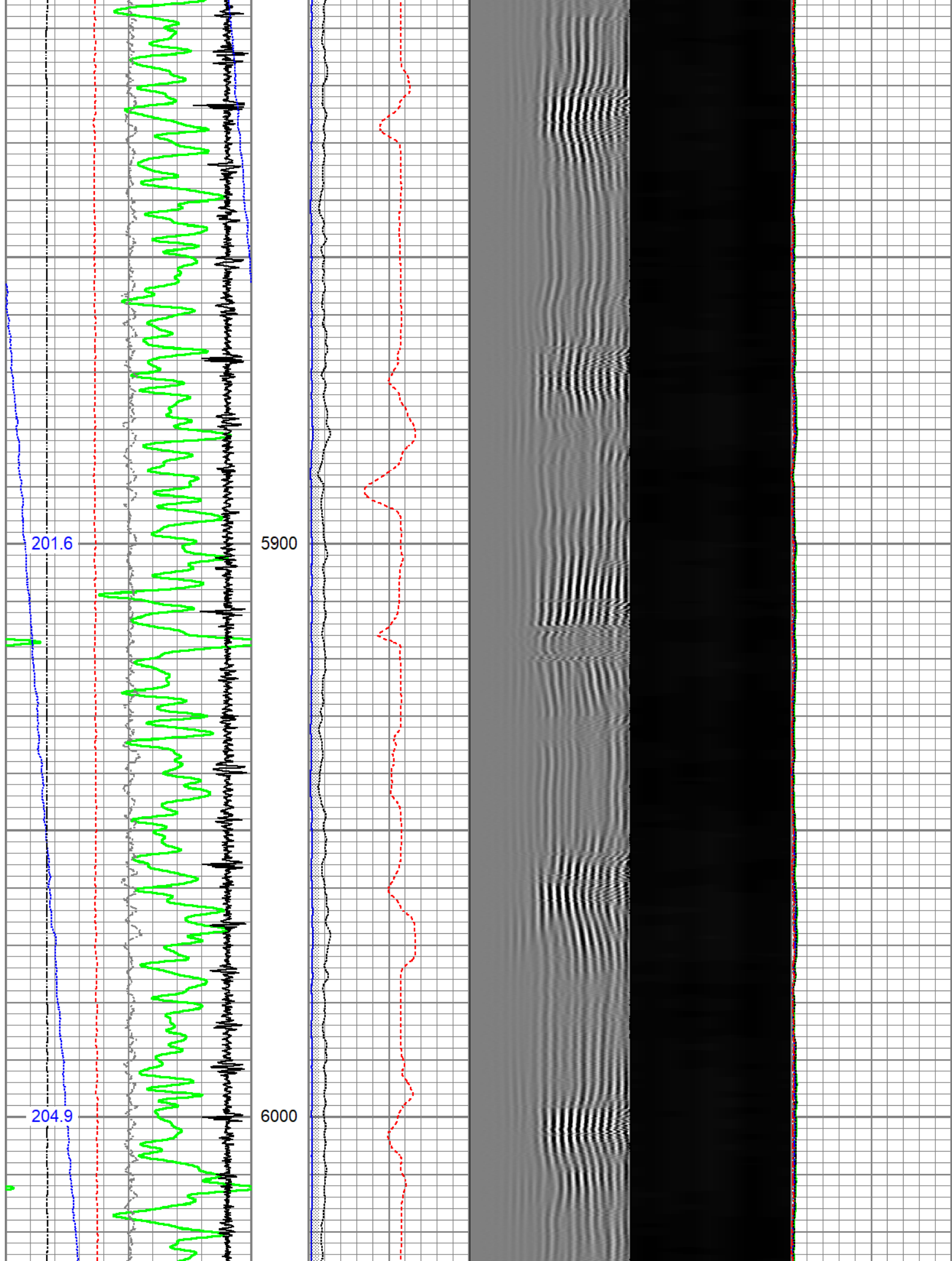


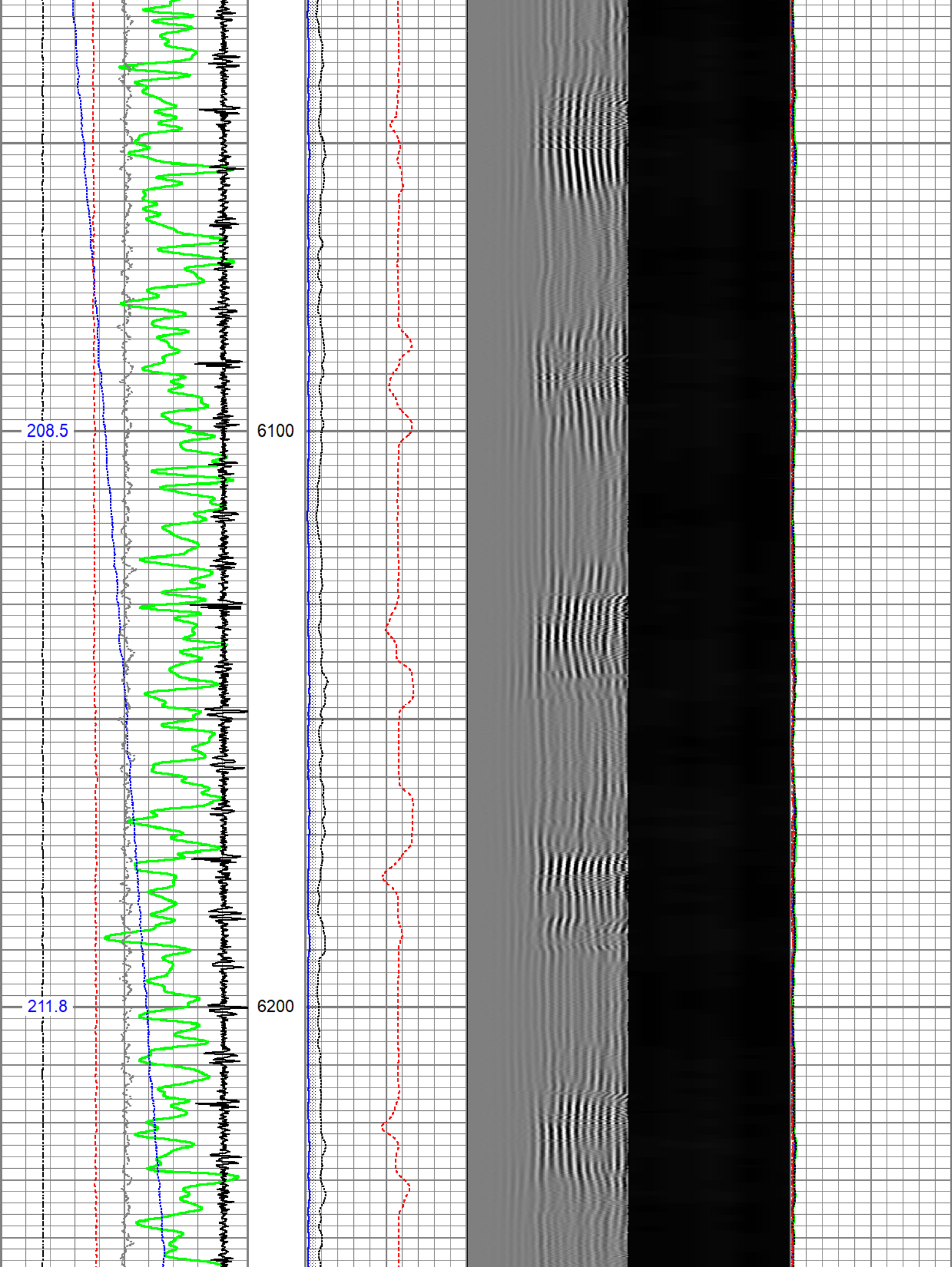


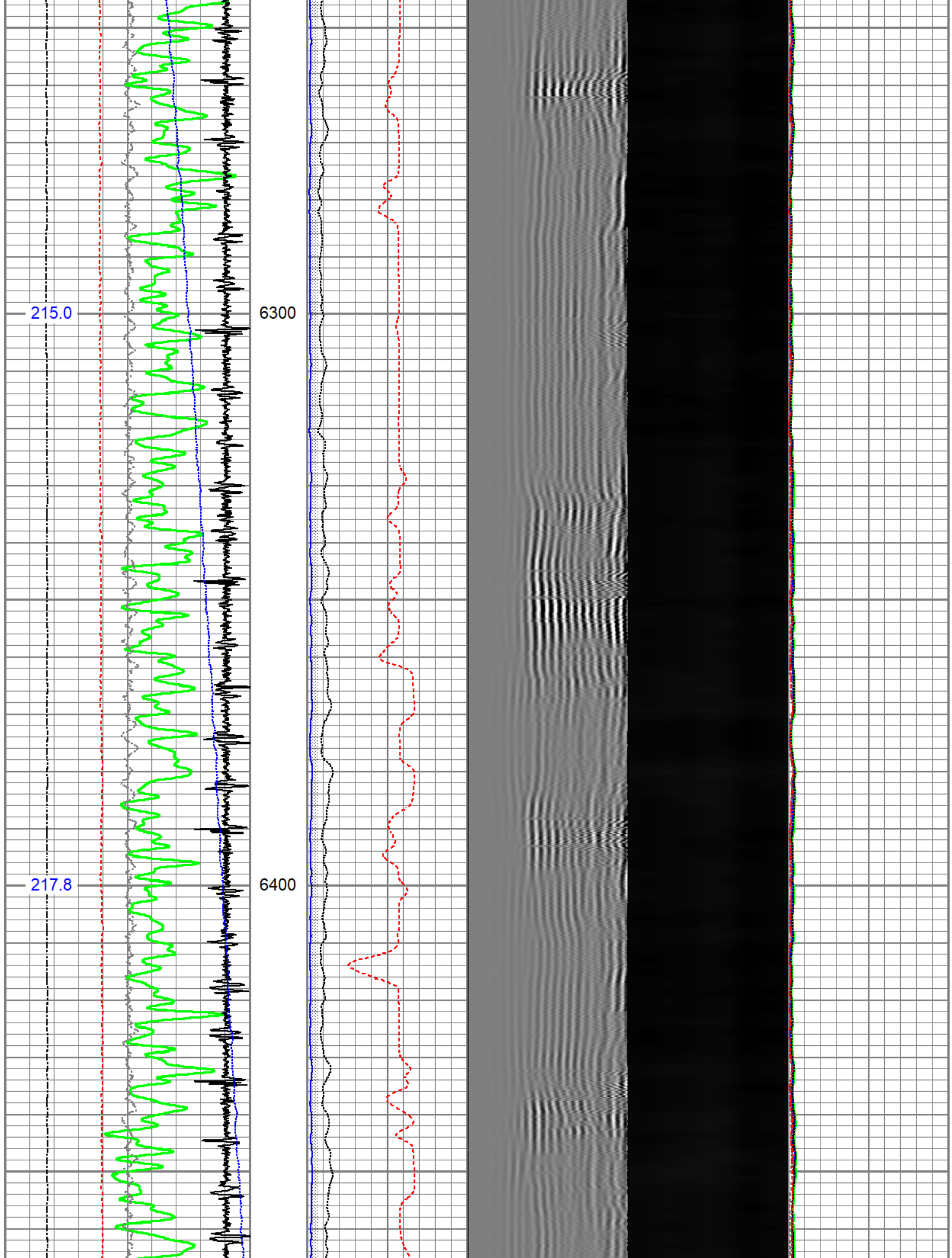


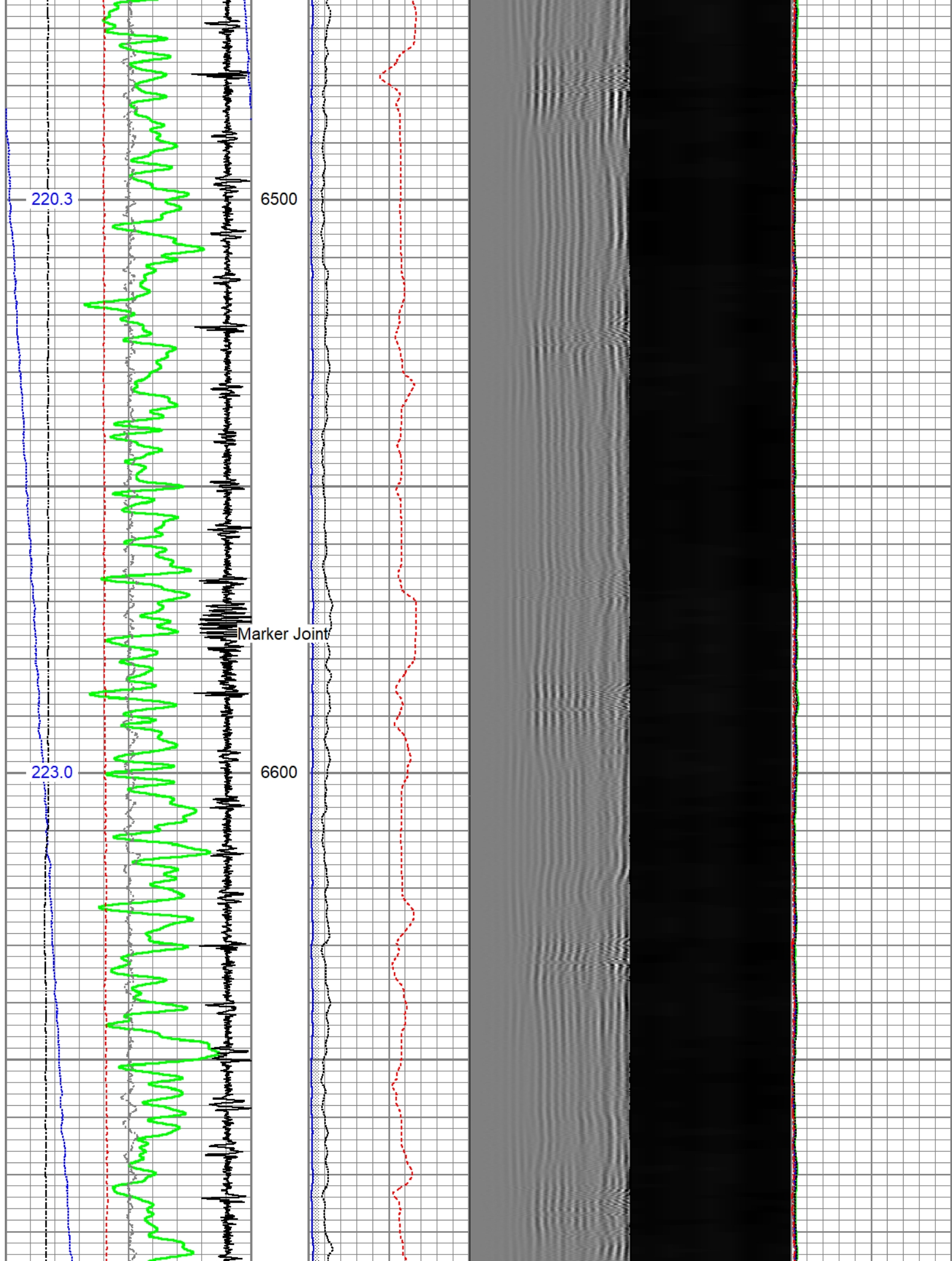


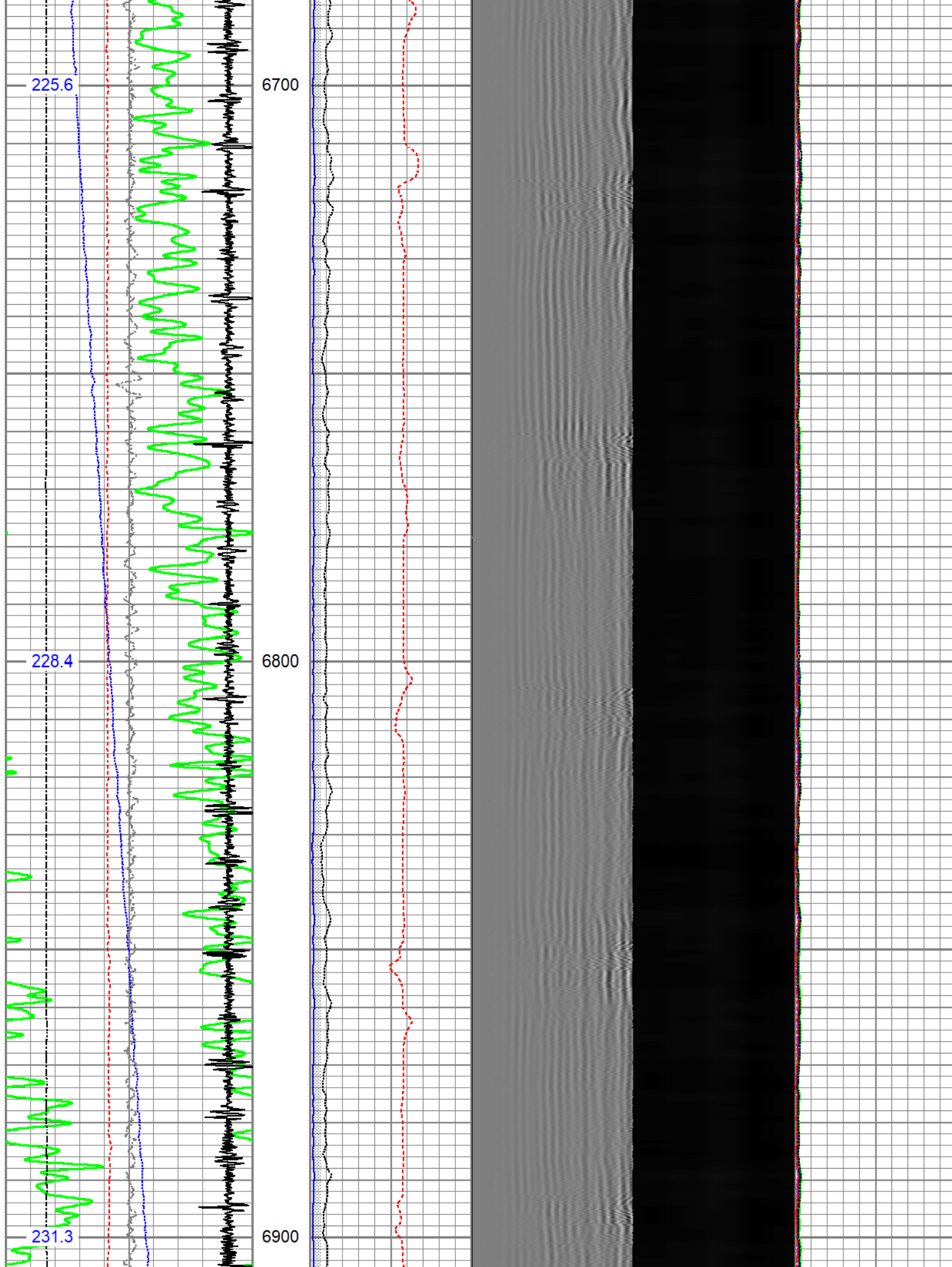


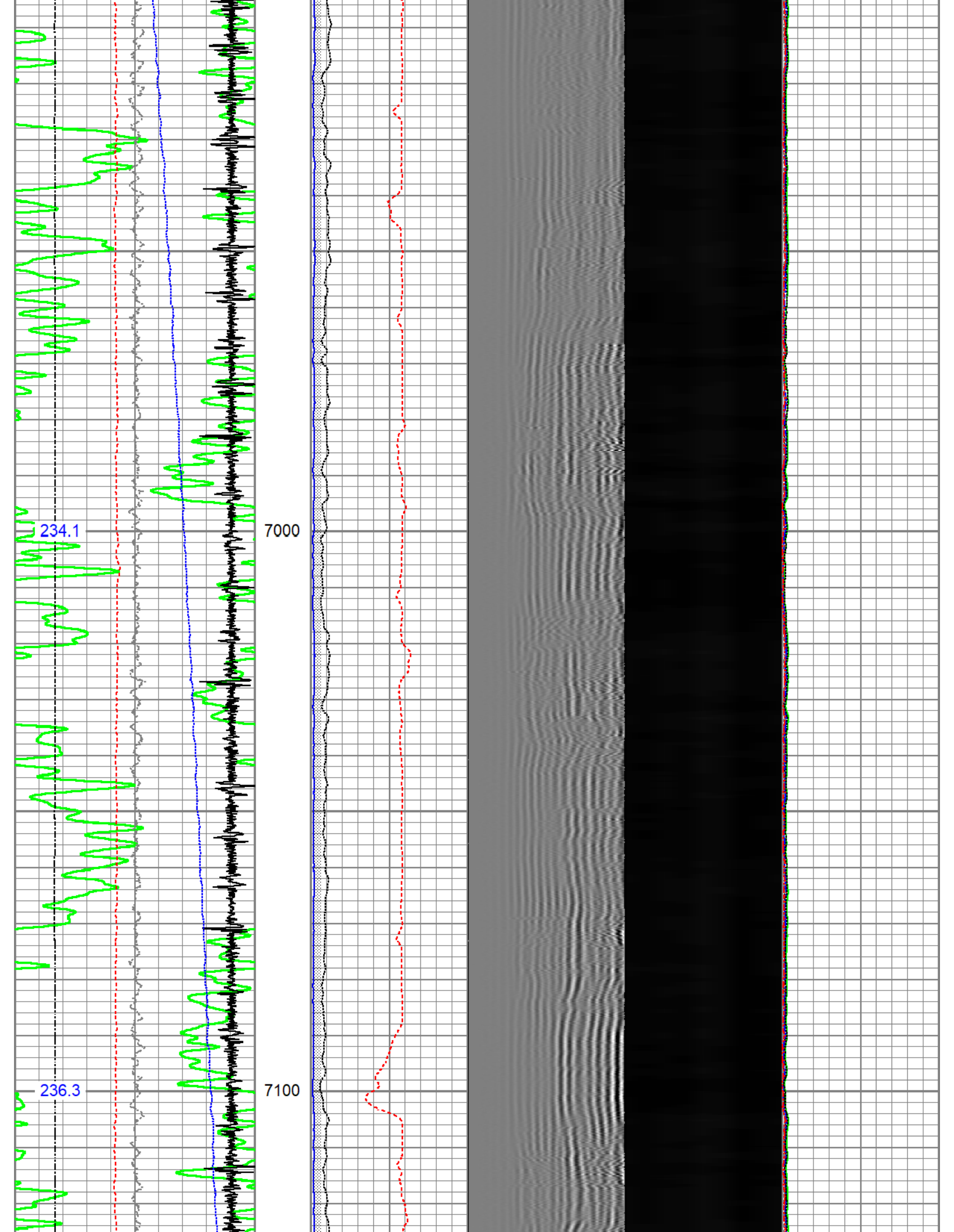


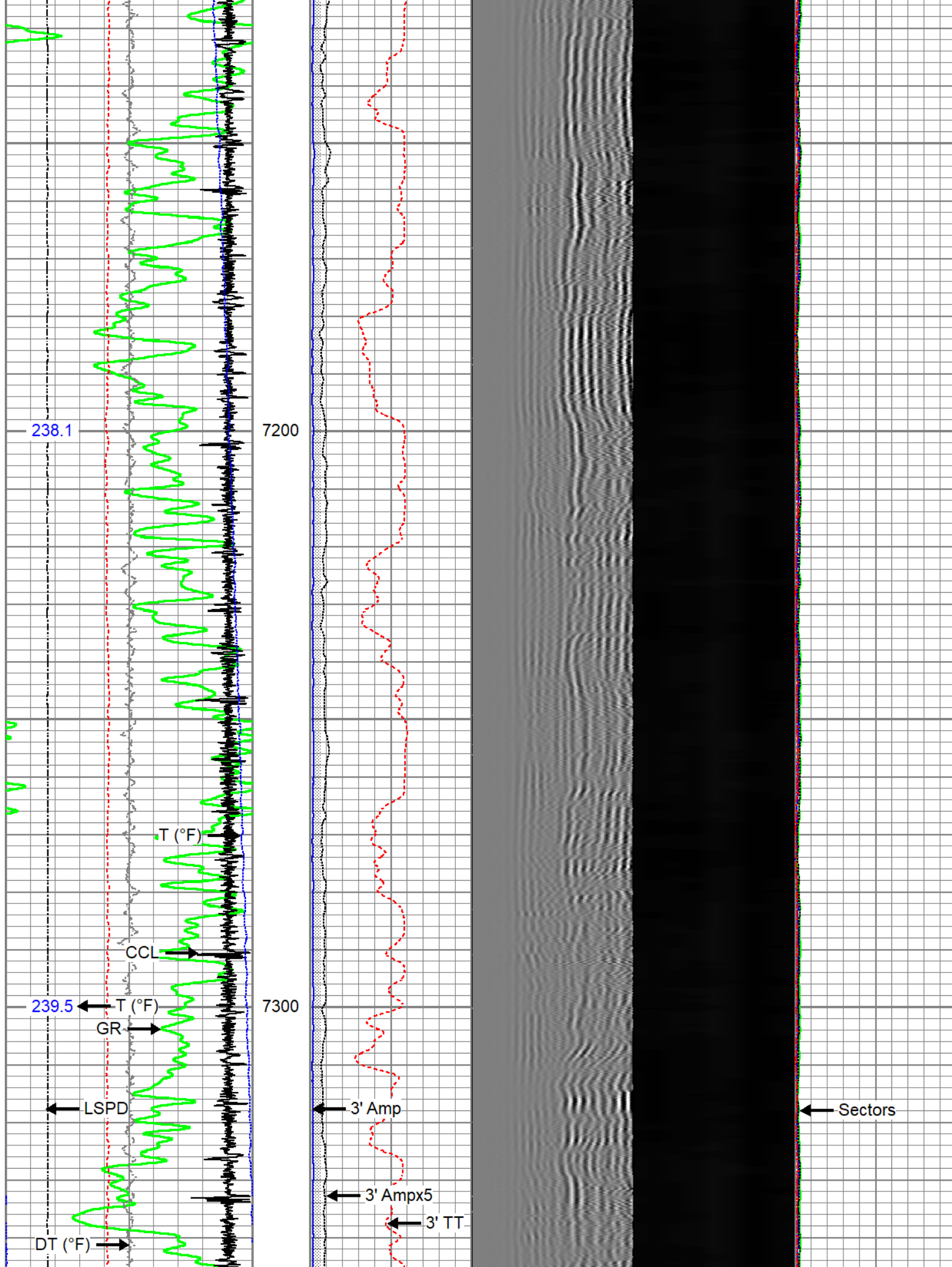


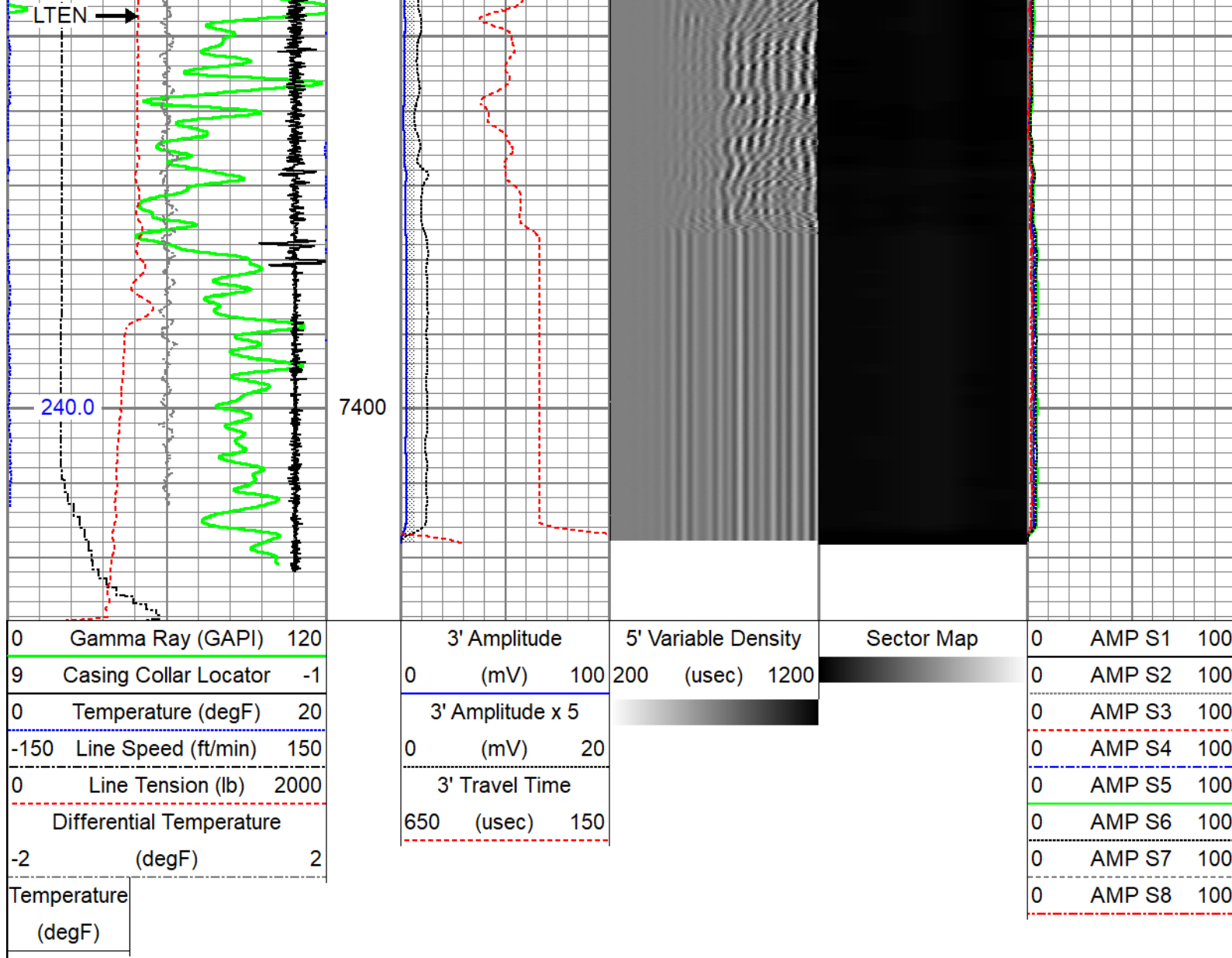












Repeat Pass

Recorded with 2500 PSI Surface Induced Pressure

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 Presentation Format edge_rbl_noble
 Dataset Creation Fri Sep 10 12:55:39 2021
 Charted by Depth in Feet scaled 1:240

