



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company		Noble Energy Inc.	
Well		Rampart A33-790	
Field		Wattenberg	
County		Weld	
State		Colorado	
Location:		API # : 05-123-50932	
SEC 20 TWP 6N RGE 64W		Other Services	
Permanent Datum		Ground Level	
Log Measured From		Kelly Bushing	
Drilling Measured From		Kelly Bushing	
Elevation		4707'	
Elevation		K.B. 4737'	
Elevation		D.F. ---	
Elevation		G.L. 4707'	

Date	07-OCT-2021	
Run Number	ONE	
Depth Driller	17064 FT	
Depth Logger	7246 FT	
Bottom Logged Interval	7232 FT	
Top Log Interval	Surface	
Open Hole Size	8.5"	
Type Fluid	Water	
Density / Viscosity	8.34 lb/gal	
Max. Recorded Temp.	239°F	
Estimated Cement Top	See Log	
Time Well Ready	ROA	
Time Logger on Bottom	12:25	
Equipment Number	HD-0324	
Location	Plateville, CO	
Recorded By	C. Sineros	
Witnessed By	C. Schendzielos	

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To

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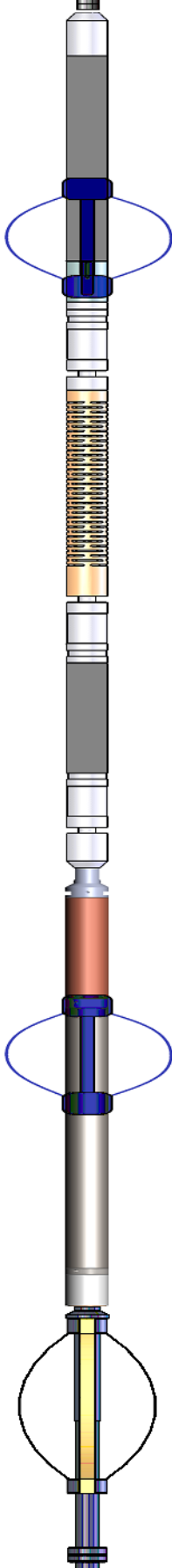

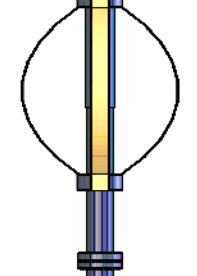
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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 6342.8 - 6362.8 FT
Adjusted -26 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	14.16		SO BS CENT-2750-4500 Slip Over 2-3/4" I.D. for 4-1/2" O.D. Casing Bow Spring Centralizer	1.33	3.25	10.00
WVFS8	11.93		Probe Radii-2750 RBT (071220) Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub	9.39	2.75	105.00
WVFS7	11.93					
WVFS6	11.93					
WVFS5	11.93					
WVFS4	11.93					
WVFS3	11.93					
WVFS2	11.93					
WVFS1	11.93					
WVFCAL	11.93					
WVF3FT	11.93					
WVF5FT	10.93					
CCL\$2	6.80		SO BS CENT-2750-4500 Slip Over 2-3/4" I.D. for 4-1/2" O.D. Casing Bow Spring Centralizer	1.33	3.25	10.00
CCL\$1	6.80		Probe GR-CCL-2750 6PB (FW1810-001) Probe 2-3/4" rev.1 Digital Scintillation Gamma Ray/CCL Combined with 6 Pin Bottom for CNT	4.80	2.75	55.00
GR	5.46					
LOCTIM UTCTIM	0.00		Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00
	0.00					
		Dataset: noble_rampart a33-790_rbl_10-07-21.db: field/well/run1/main.1 Total length: 18.10 ft Total weight: 203.60 lb O.D.: 3.25 in				

Calibration Report	
Database File	c:\programdata\warrior\data\chevron_noble\noble_rampart a33-790_rbl_10-07-21\noble_rampart a33-790_
Dataset Pathname	main.1

Gamma Ray Calibration Report

Serial Number: FW1810-001
 Tool Model: 2750 6PB
 Performed: Mon Oct 19 14:19:51 2020

 Calibrator Value: 637.0 GAPI

 Background Reading: 100.1 cps
 Calibrator Reading: 1264.5 cps

 Sensitivity: 0.5471 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: 071220
 Tool Model: 2750 RBT

 Calibration Casing Diameter: 5.500 in
 Calibration Depth: -71.812 ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	0.693	0.800	71.921	102.684	0.798
CAL	0.642	0.642				
5'	-0.001	0.595	0.800	71.921	119.395	0.885
SUM						
S1	0.000	0.677	0.000	100.000	147.823	-0.073
S2	0.000	0.681	0.000	100.000	146.848	-0.030
S3	0.000	0.713	0.000	100.000	140.349	-0.030
S4	0.001	0.707	0.000	100.000	141.603	-0.076
S5	0.001	0.716	0.000	100.000	139.830	-0.128
S6	0.001	0.709	0.000	100.000	141.204	-0.105
S7	0.000	0.703	0.000	100.000	142.347	-0.025
S8	0.001	0.690	0.000	100.000	145.106	-0.102

Air Zero Calibration, performed Wed Oct 6 10:24:53 2021:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.006	0.000	-0.000
5'	0.010	0.000	-0.001
SUM			
S1	0.007	0.000	0.000
S2	0.007	0.000	0.000
S3	0.009	0.000	0.000
S4	0.008	0.000	0.000
S5	0.008	0.000	0.001
S6	0.007	0.000	0.001
S7	0.008	0.000	0.000
S8	0.007	0.000	0.001

Temperature Calibration Report

Serial Number: 071220
 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	

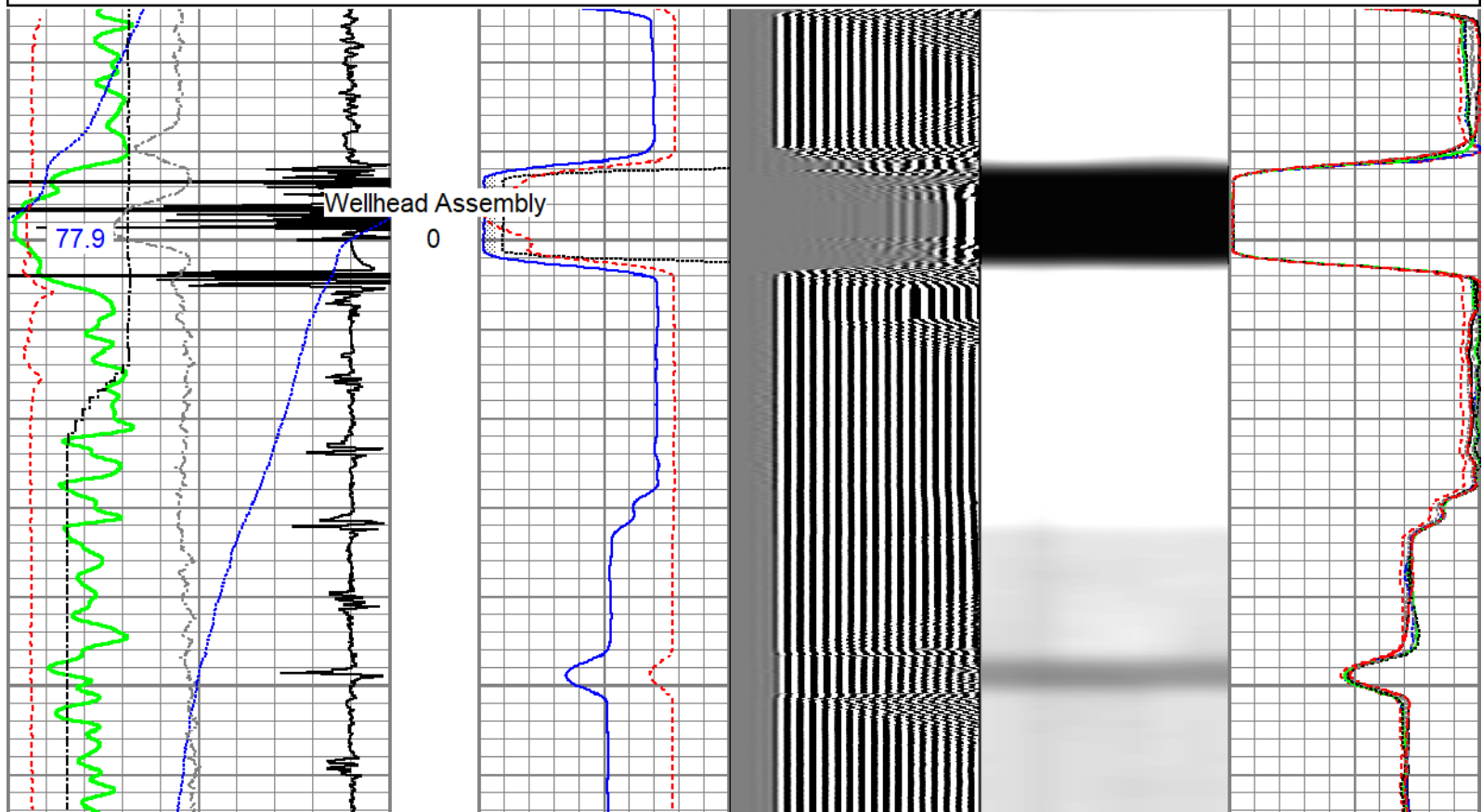


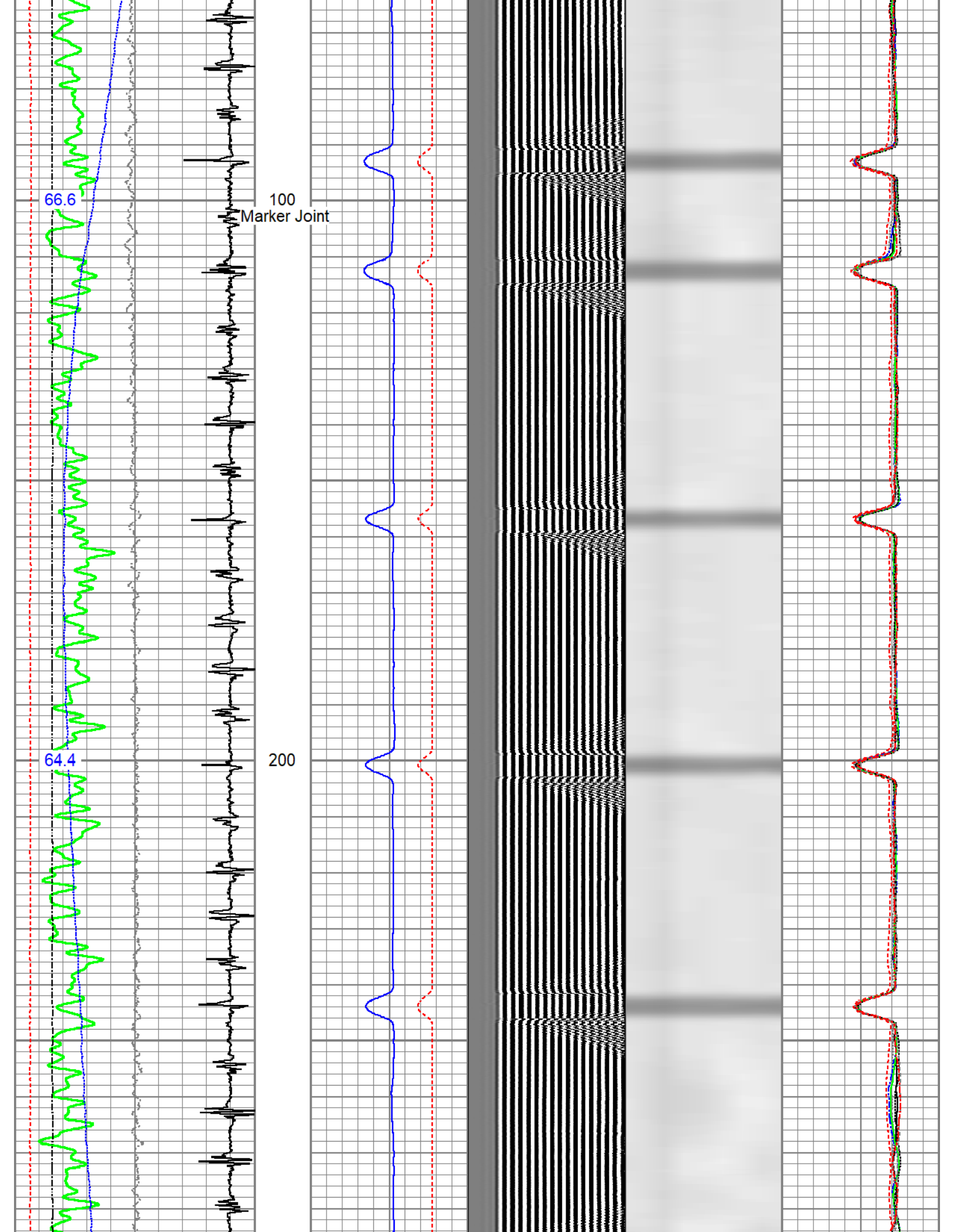
Main Pass

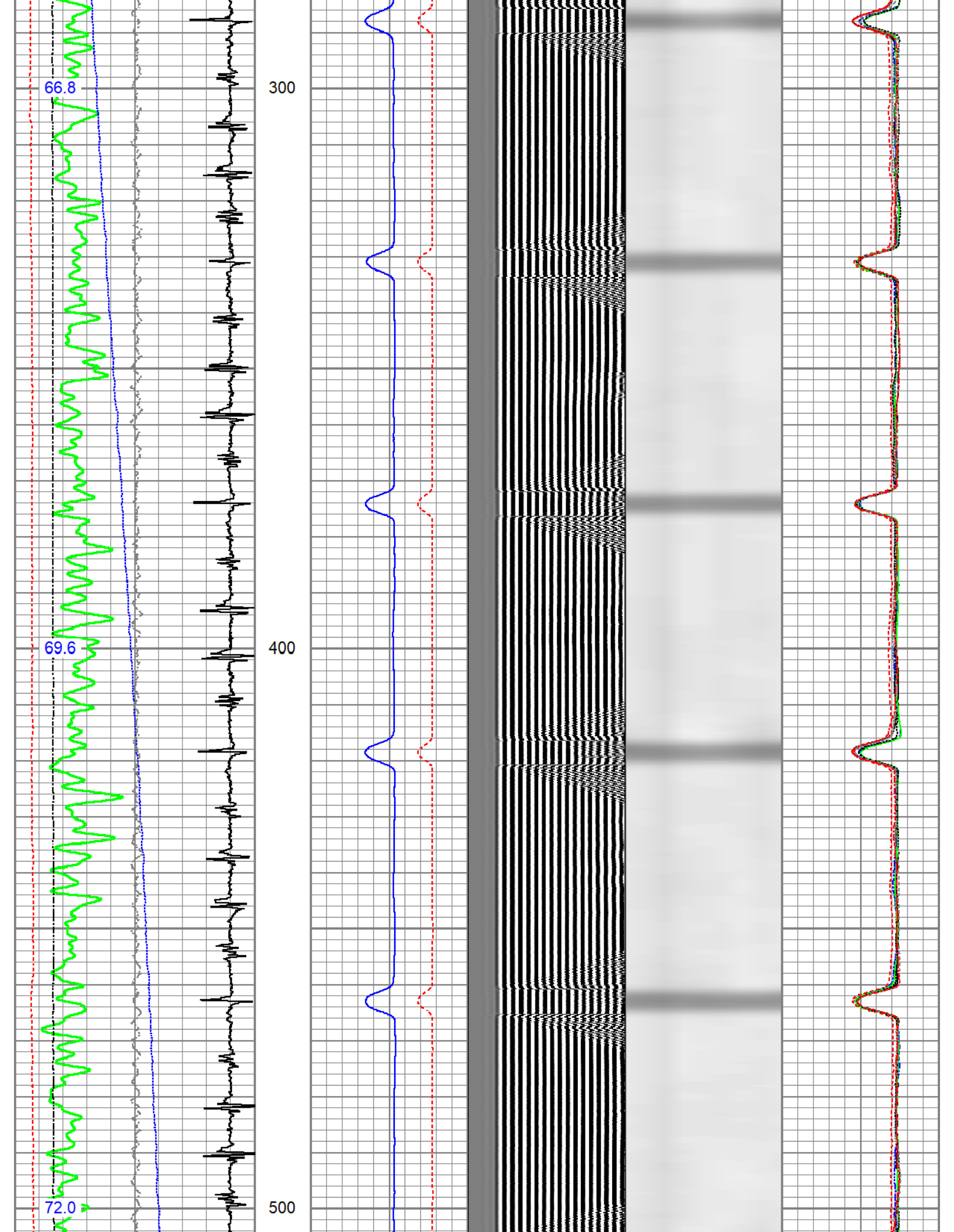
Recorded with 2500 PSI Surface Induced Pressure

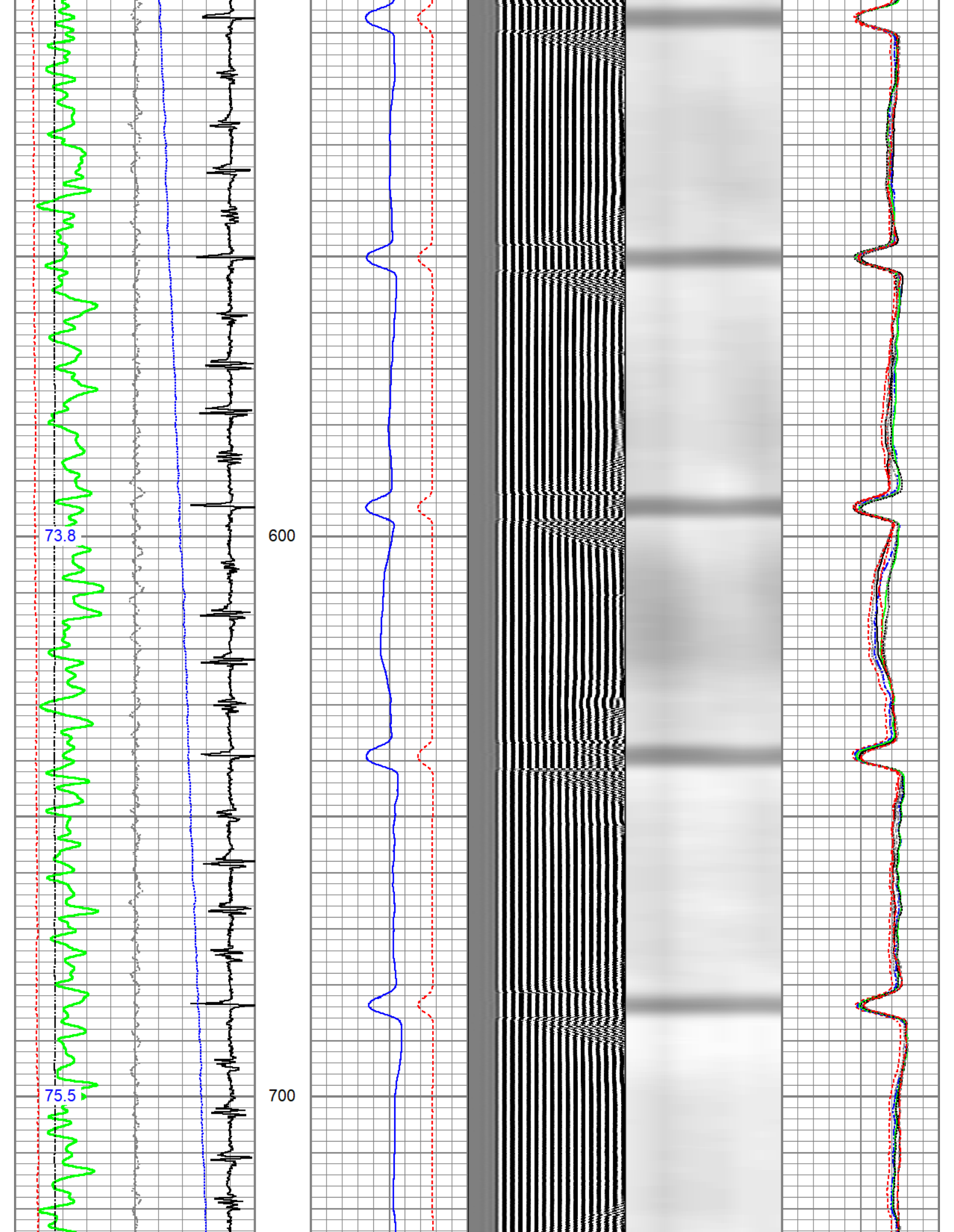
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Presentation Format	edge_rbl_noble
Dataset Creation	Thu Oct 07 13:47:21 2021
Charted by	Depth in Feet scaled 1:240

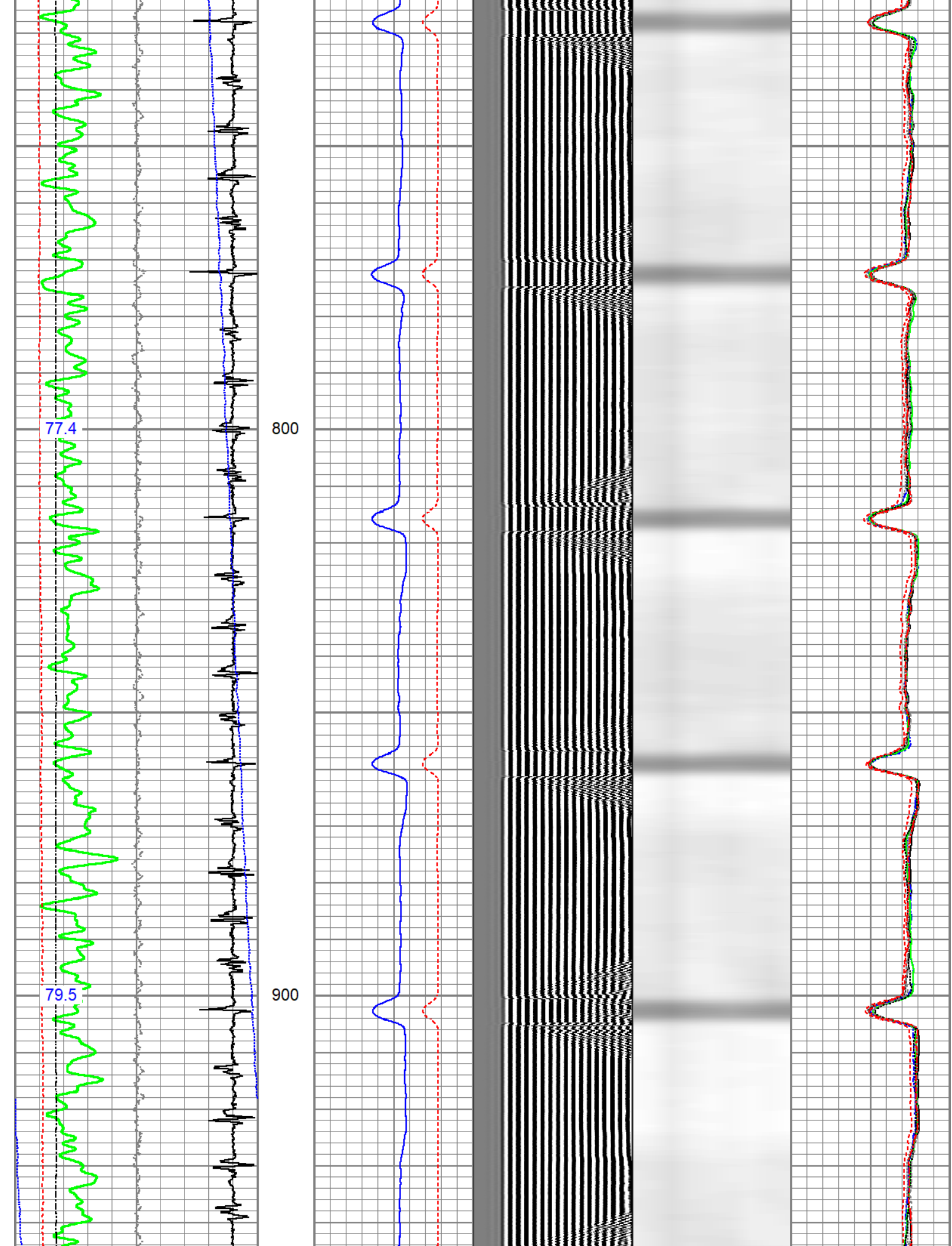
0	Gamma Ray (GAPI)	120	3' Amplitude	5' Variable Density	Sector Map	0	AMP S1	100
3.6	Casing Collar Locator	1.2	0 (mV) 100	200 (usec) 1200		0	AMP S2	100
0	Temperature (degF)	20	3' Amplitude x 5			0	AMP S3	100
-150	Line Speed (ft/min)	150	0 (mV) 20			0	AMP S4	100
0	Line Tension (lb)	2000	3' Travel Time			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)								

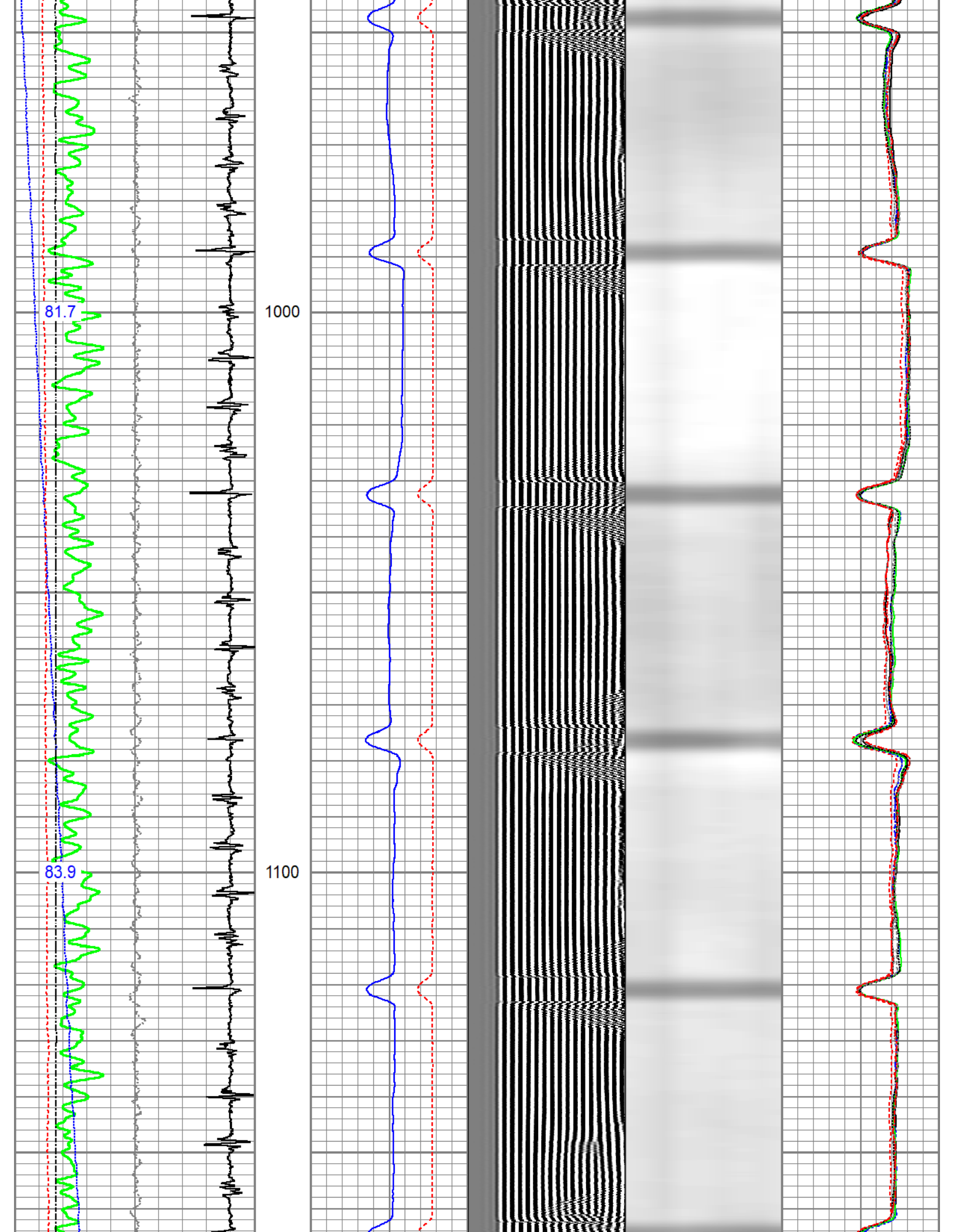


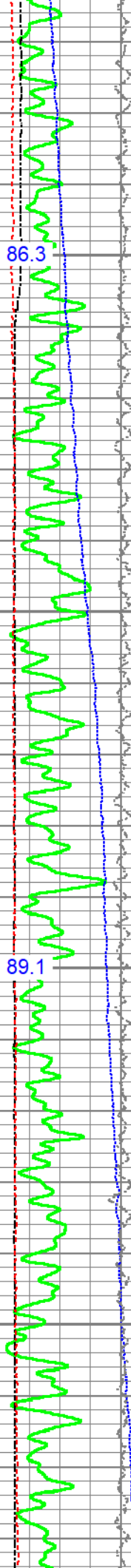






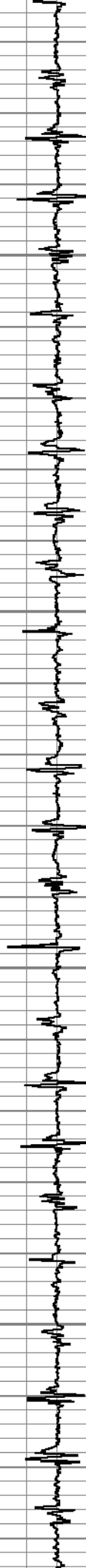






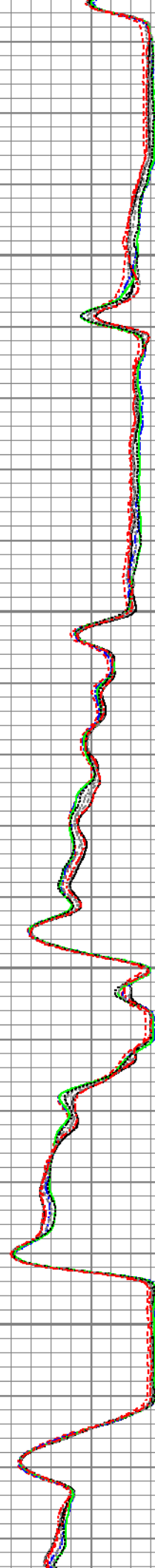
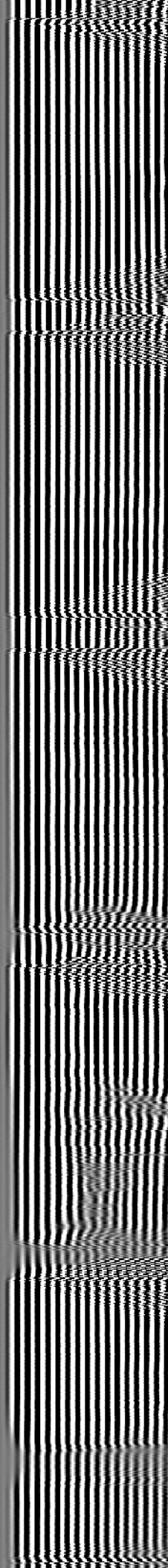
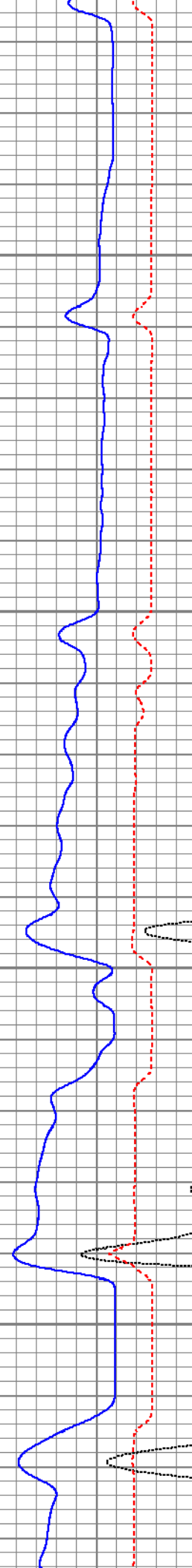
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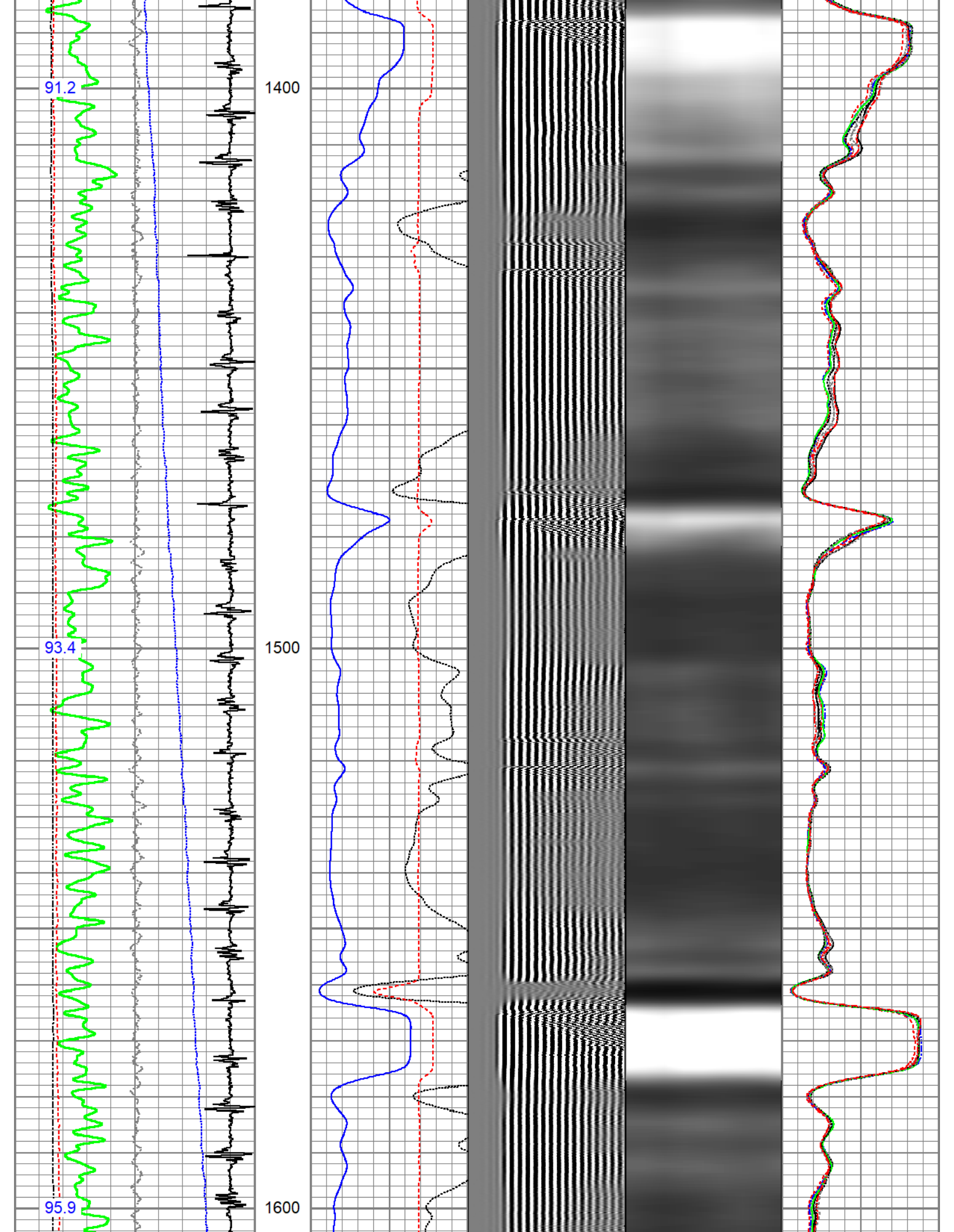
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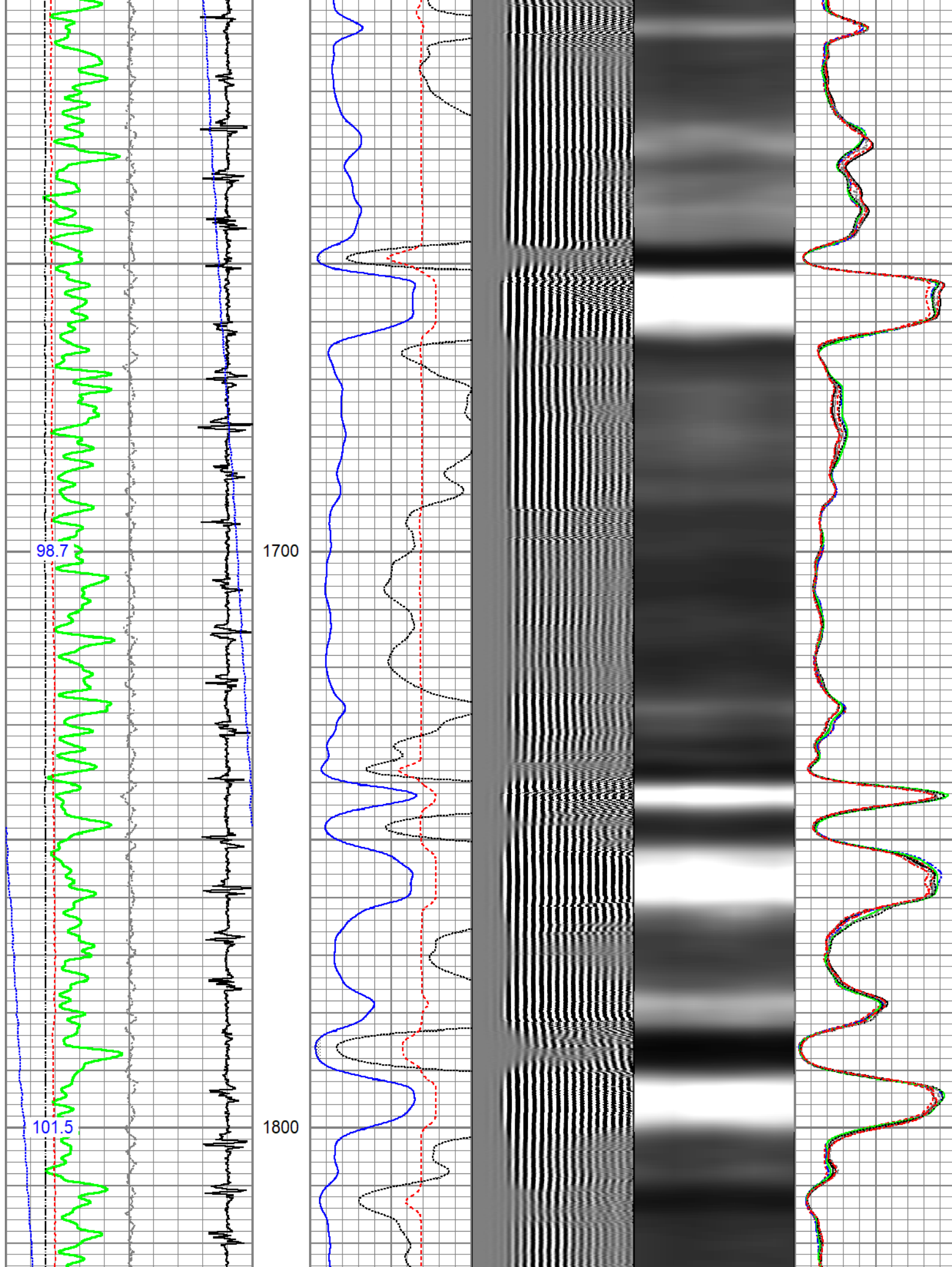


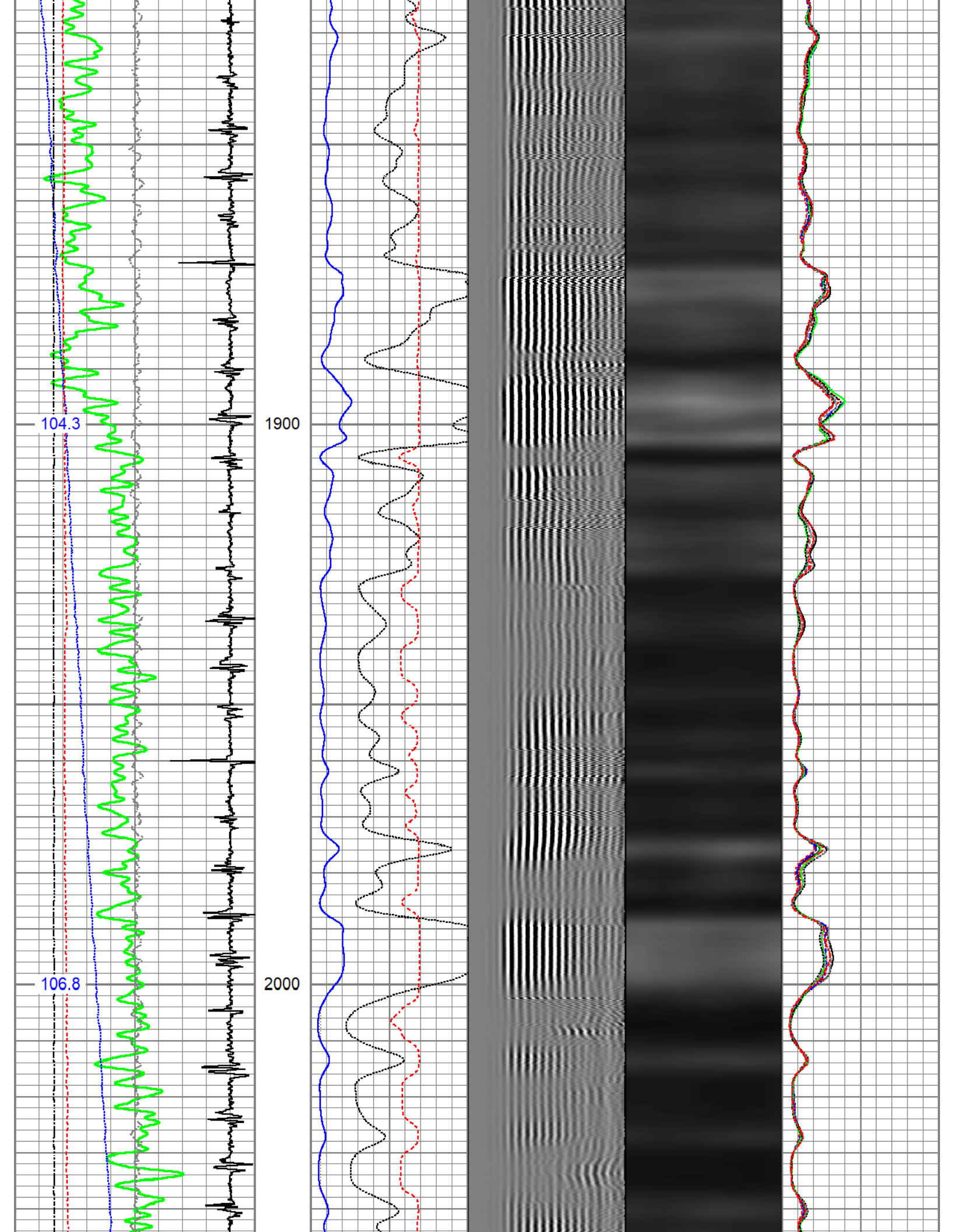
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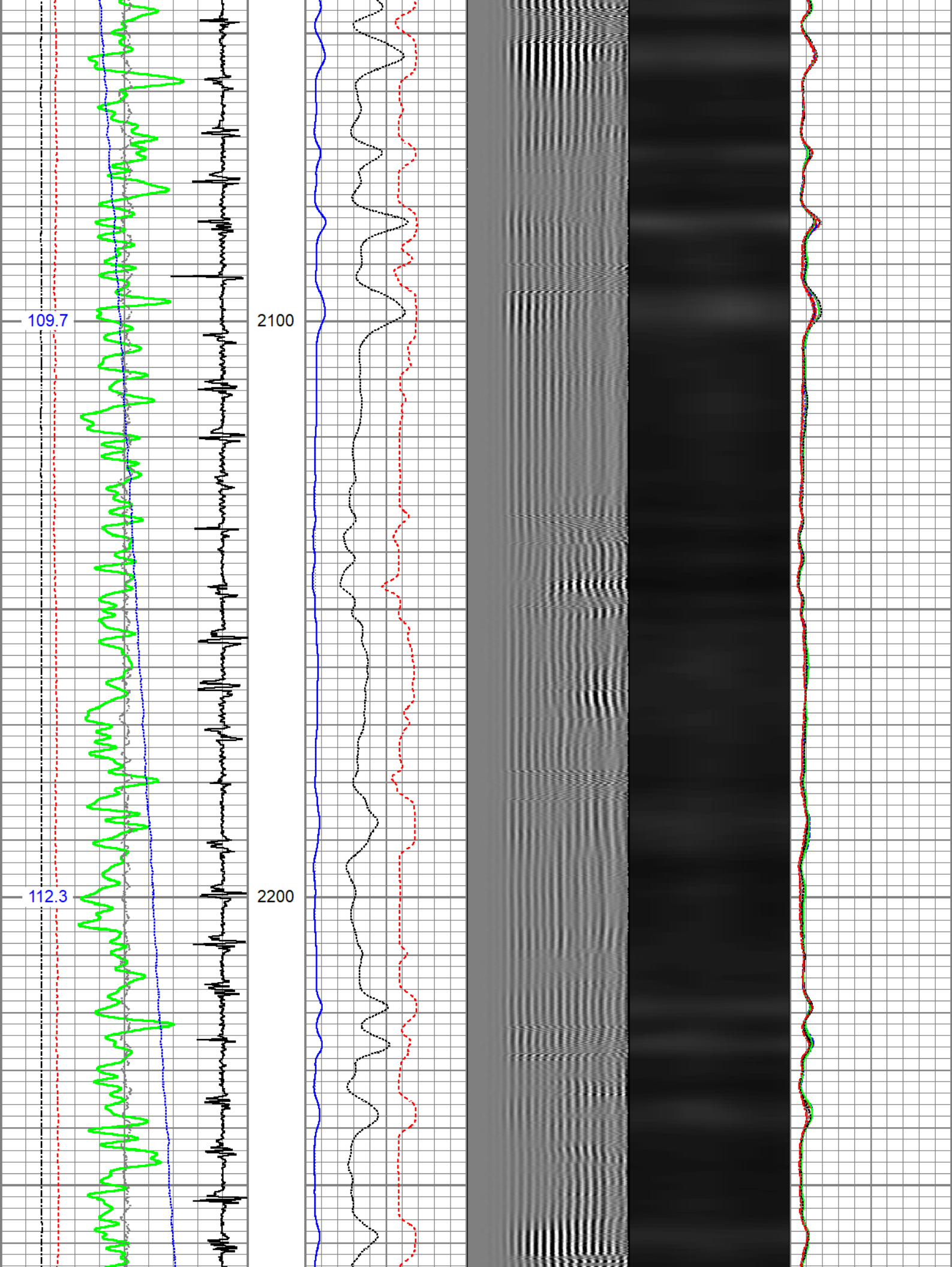
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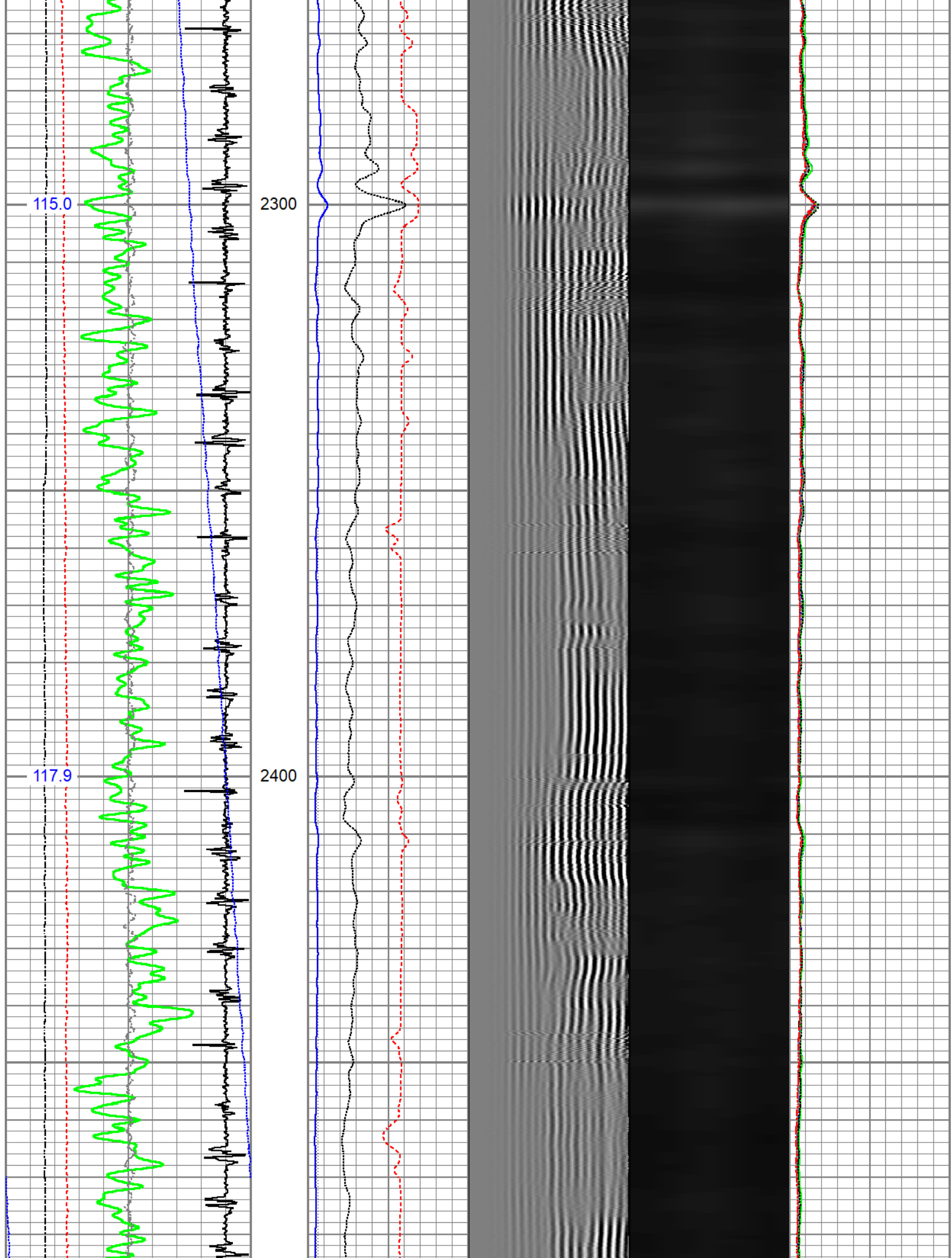


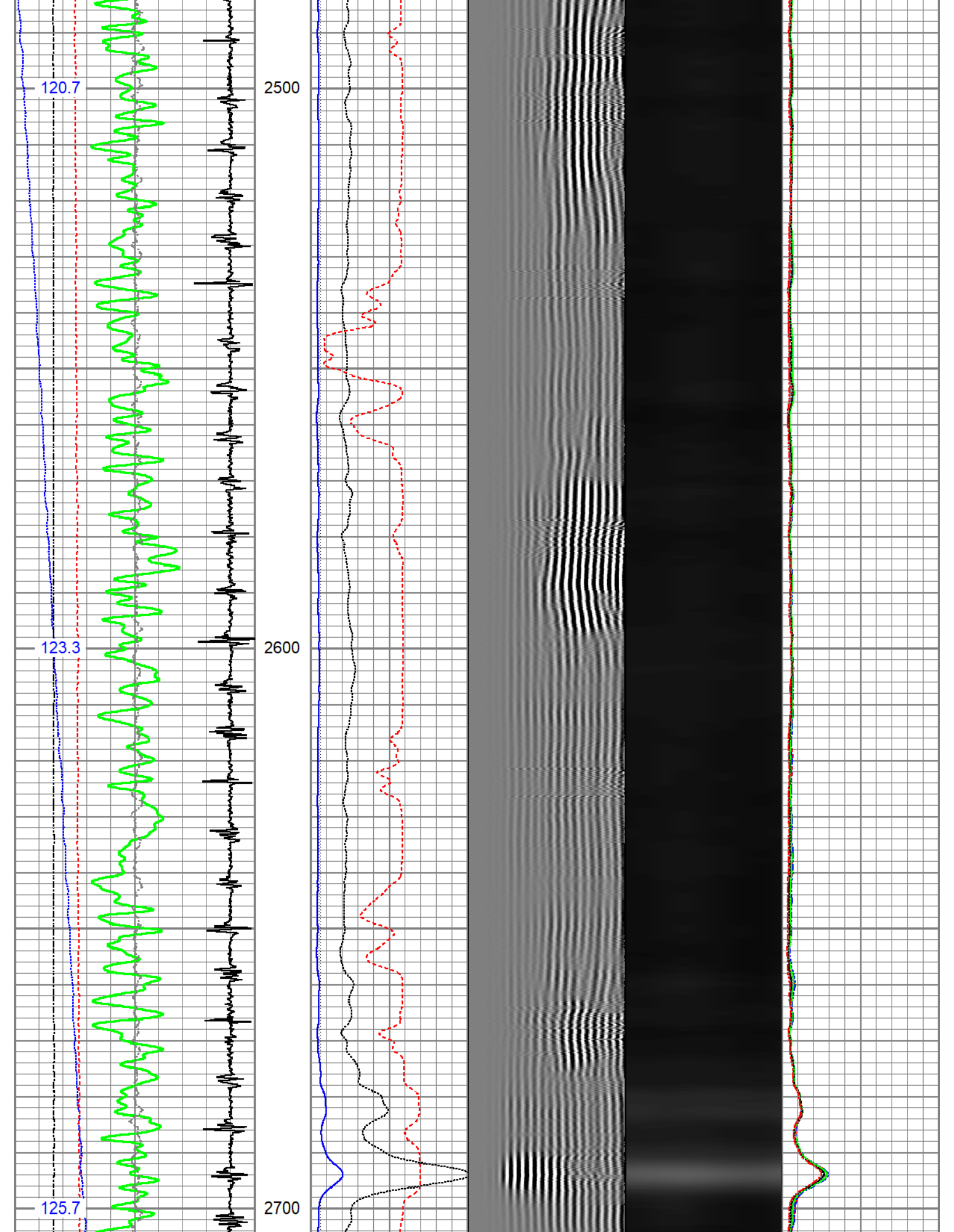


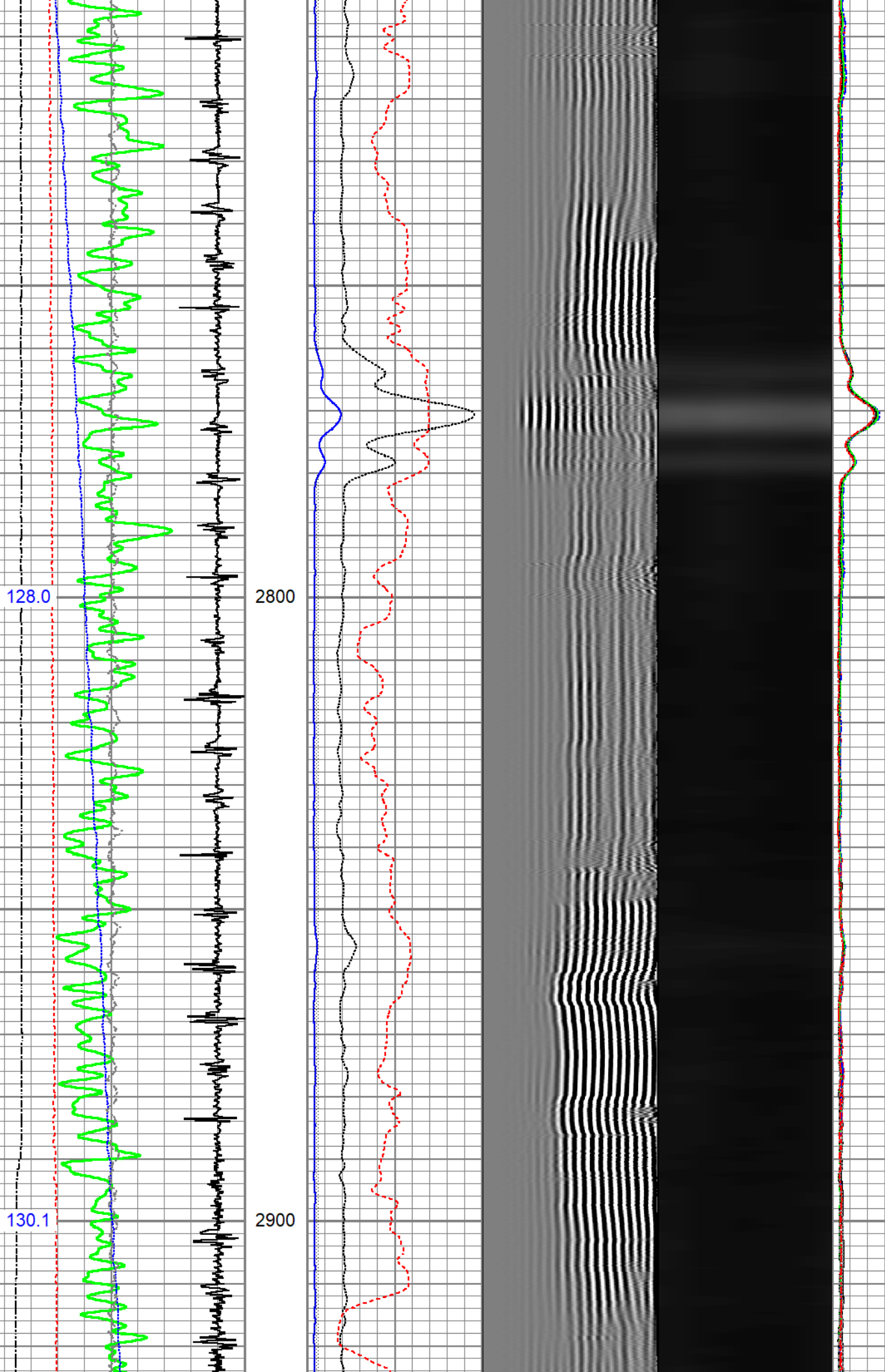


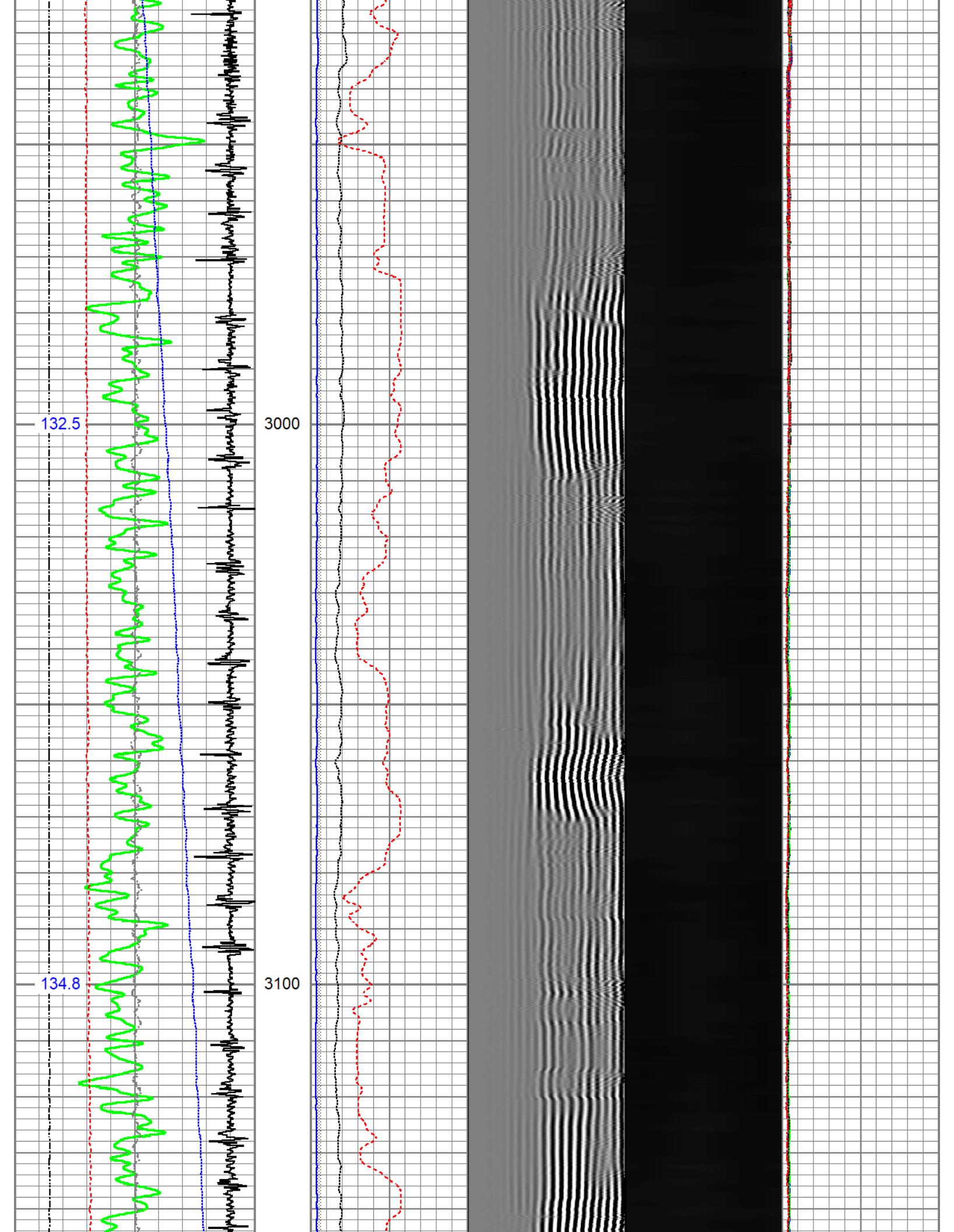


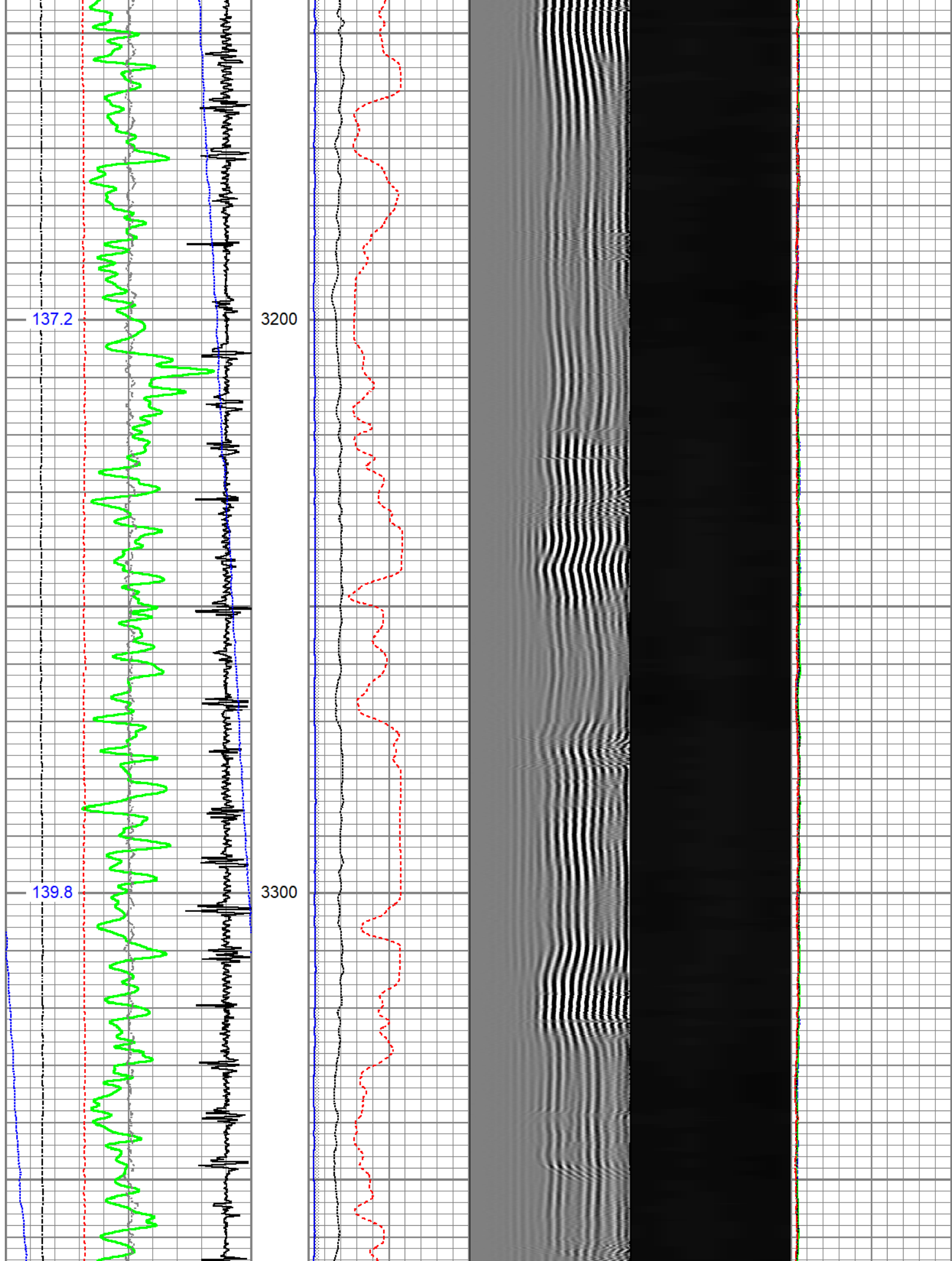


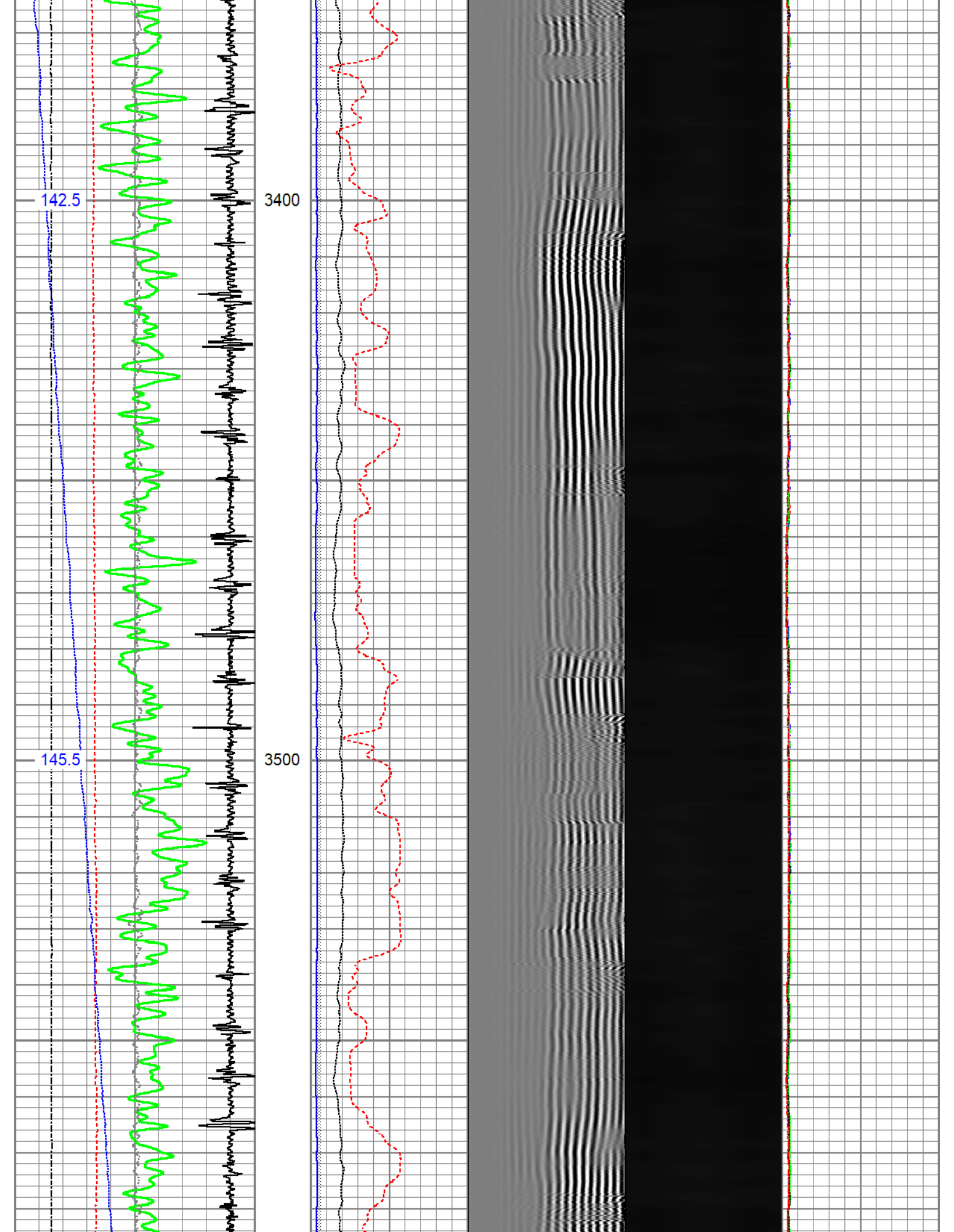


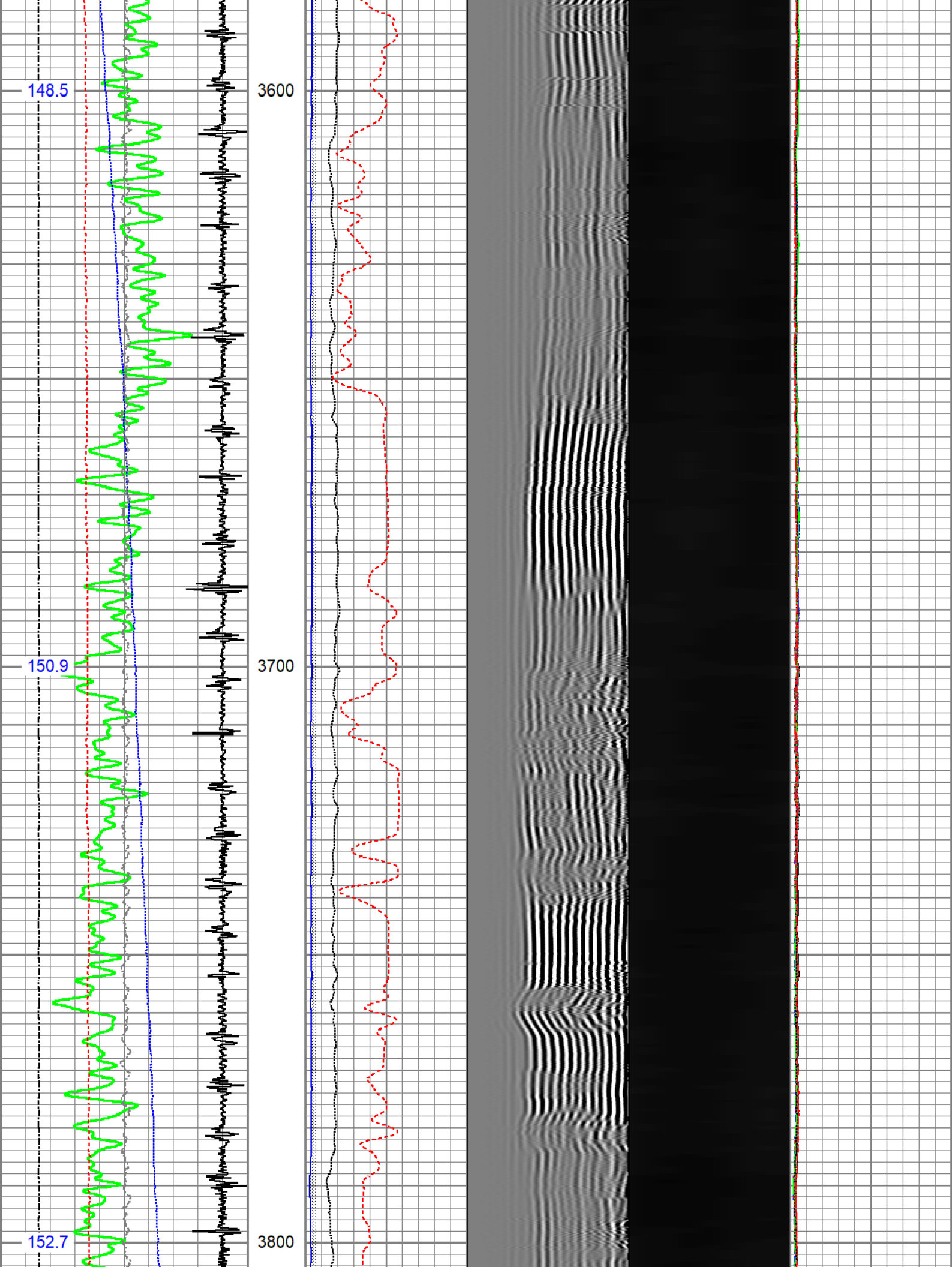


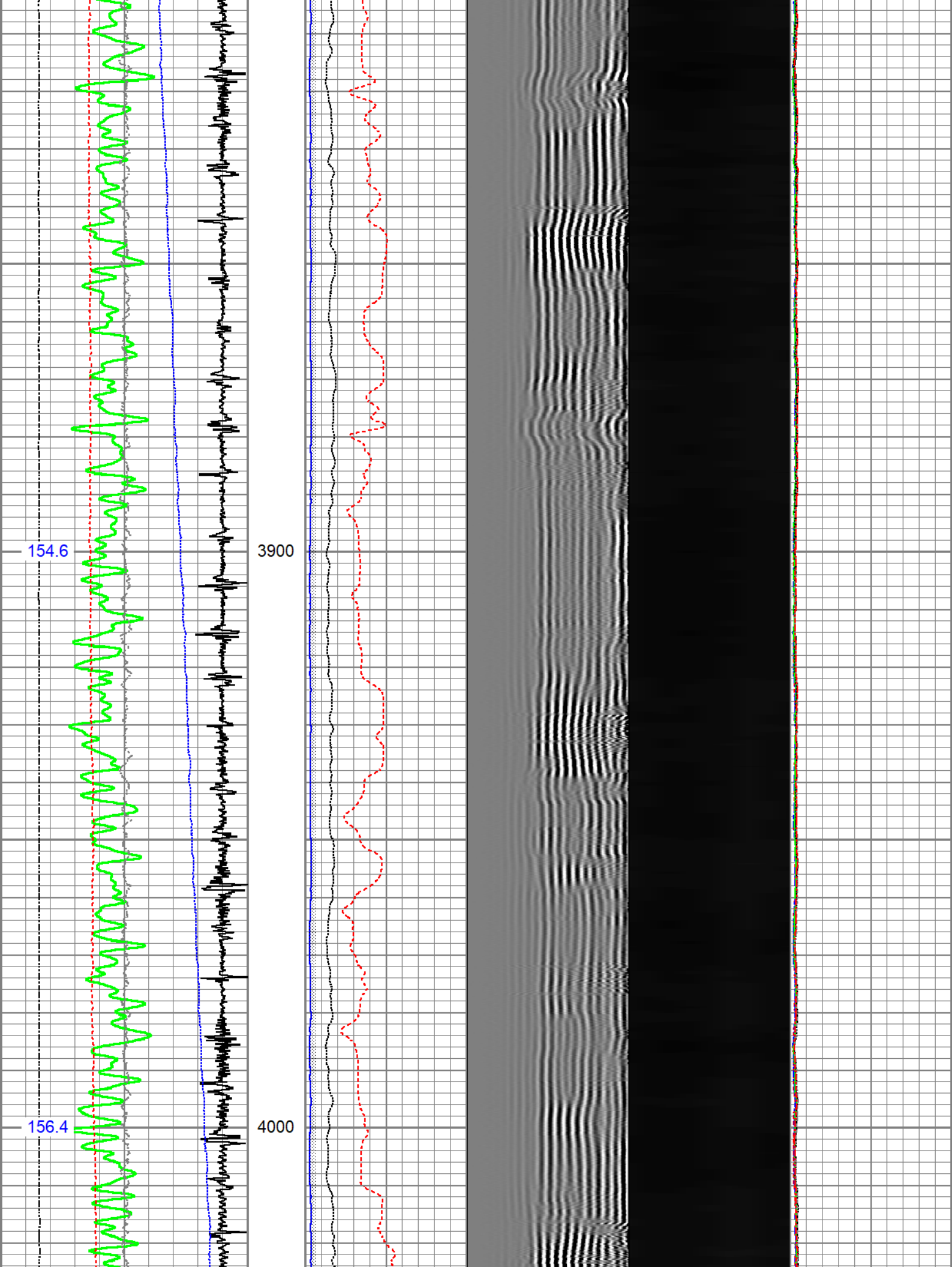


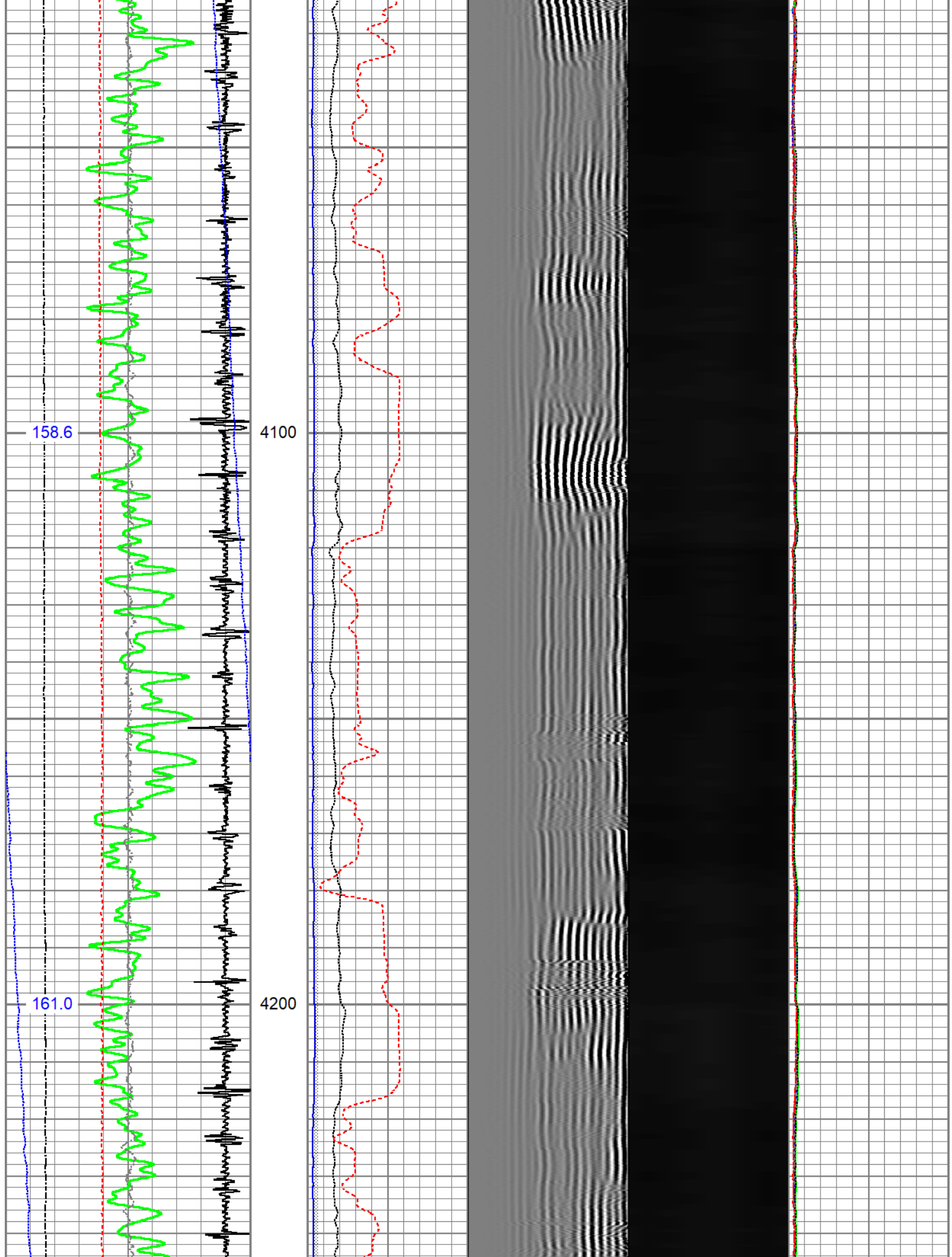










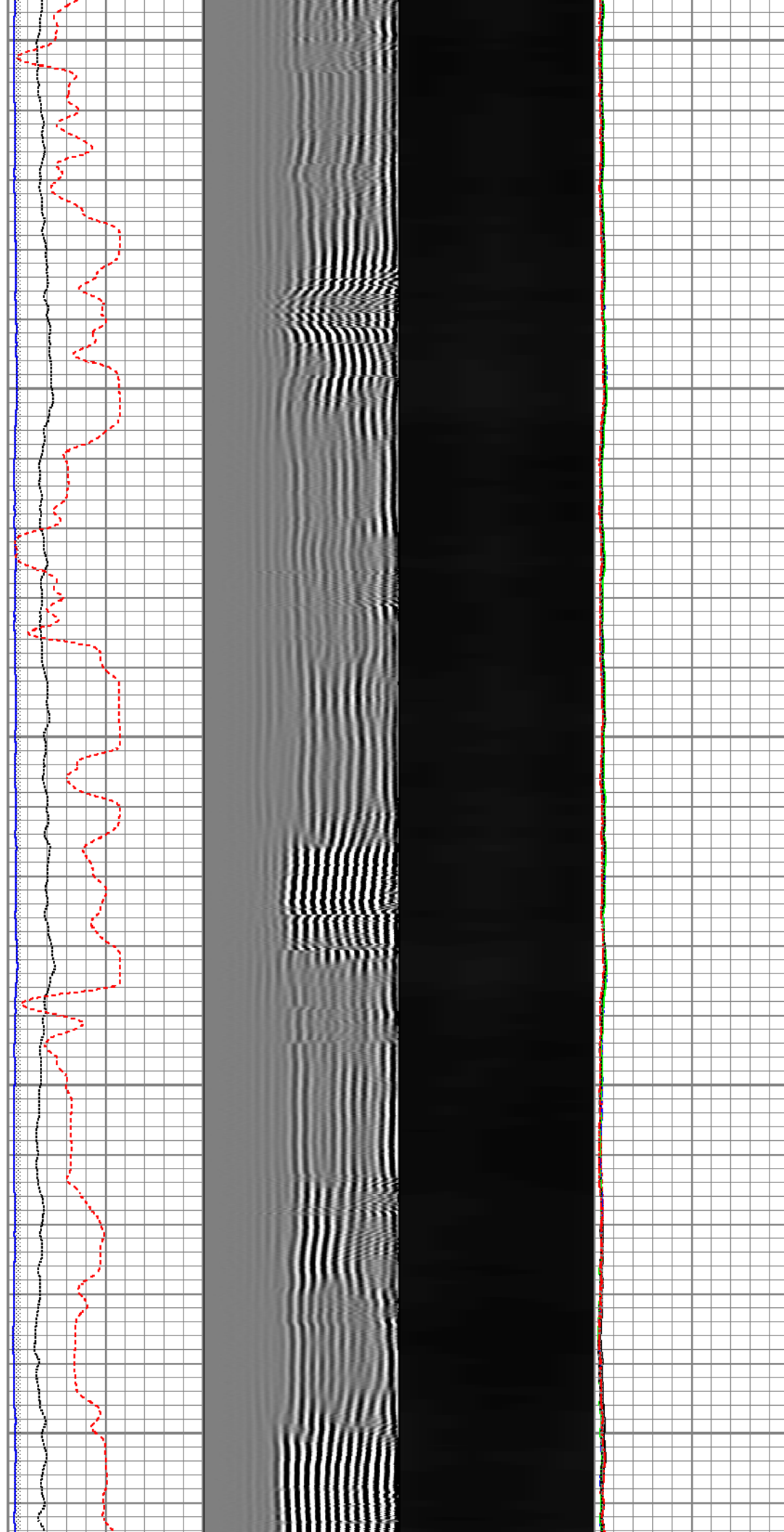


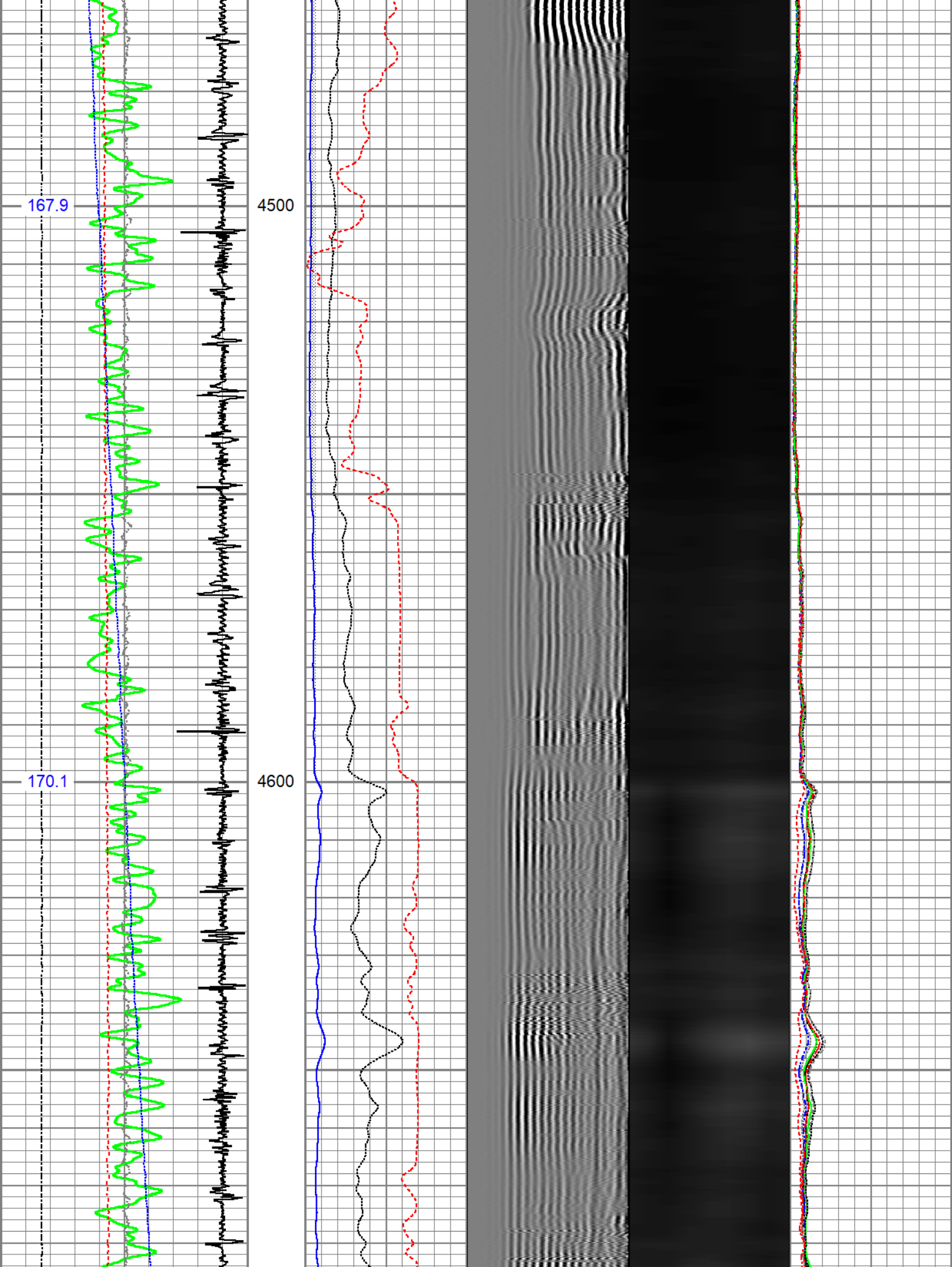
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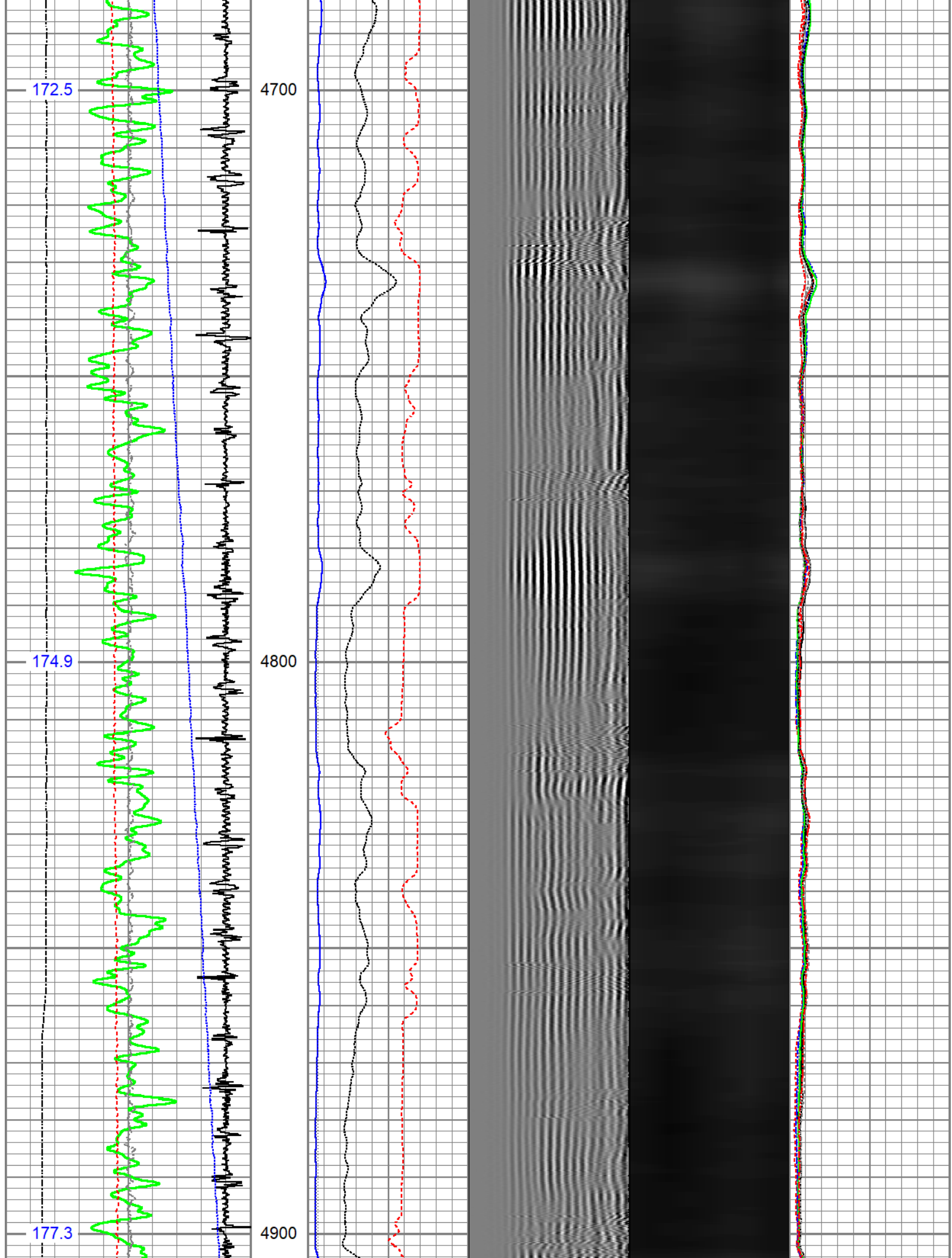
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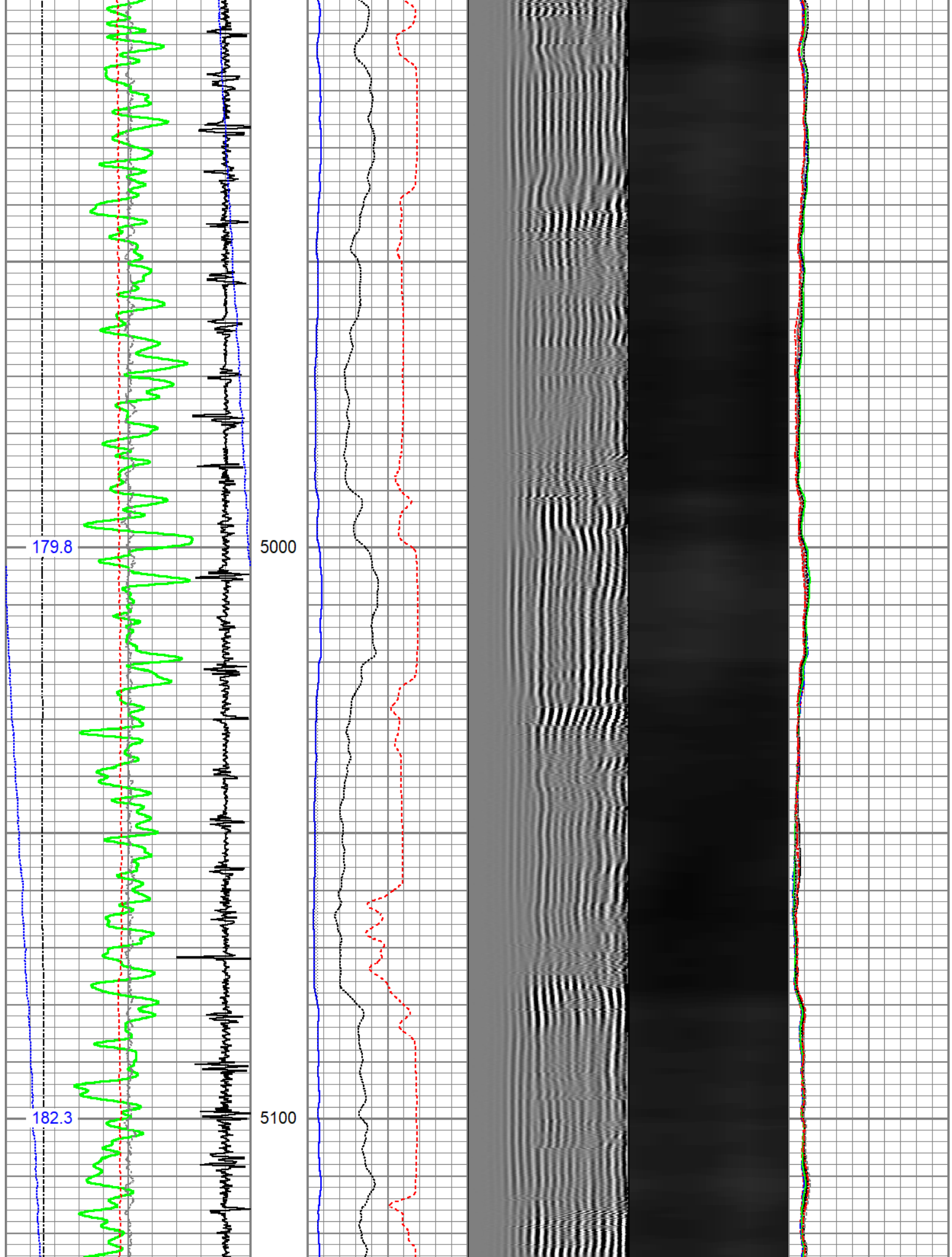
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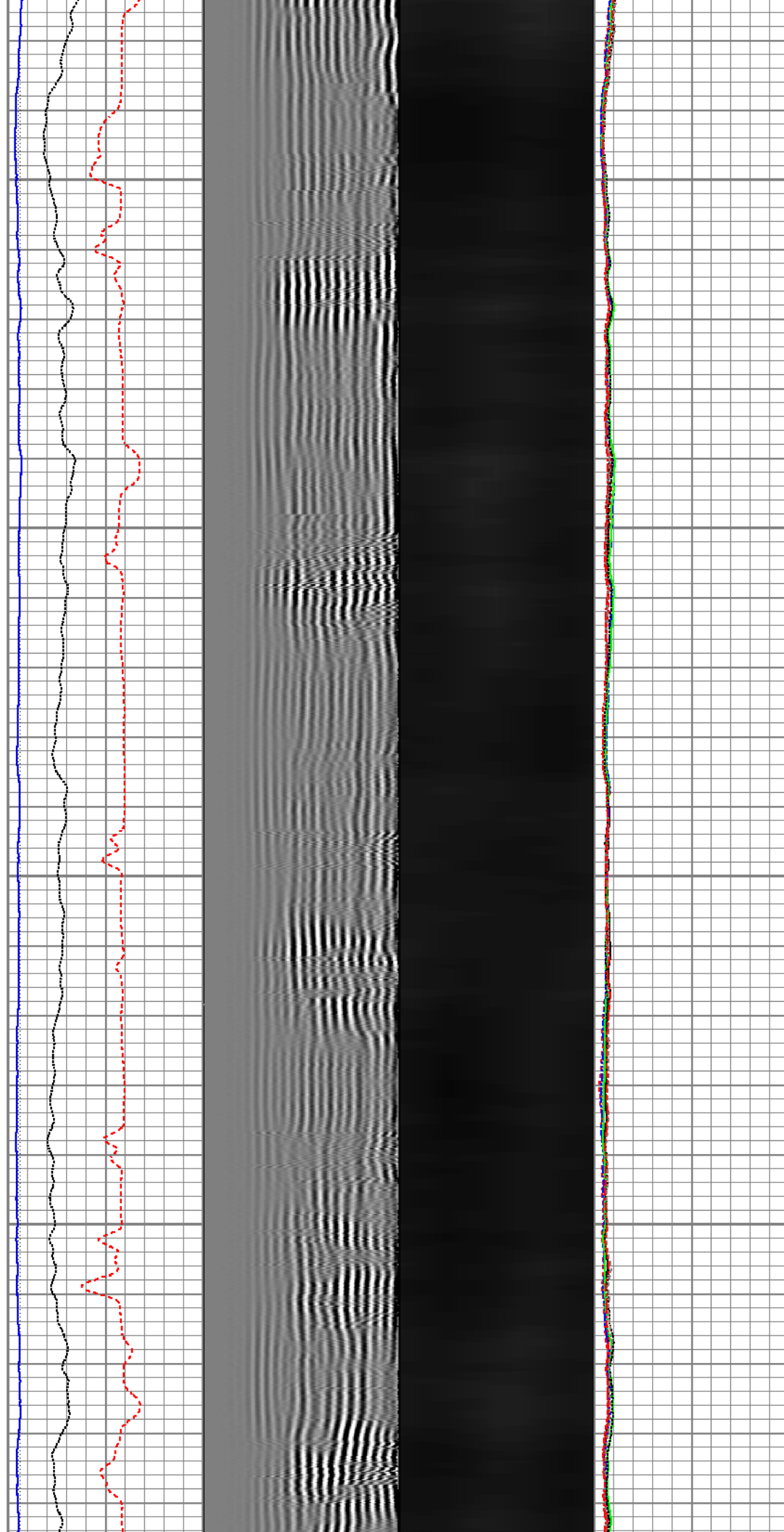


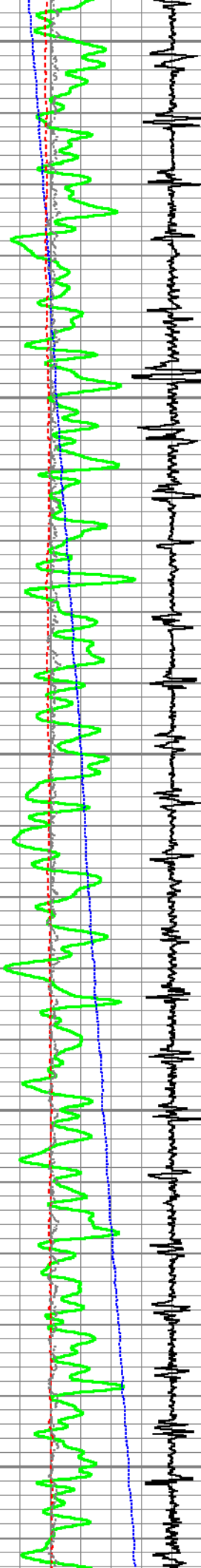
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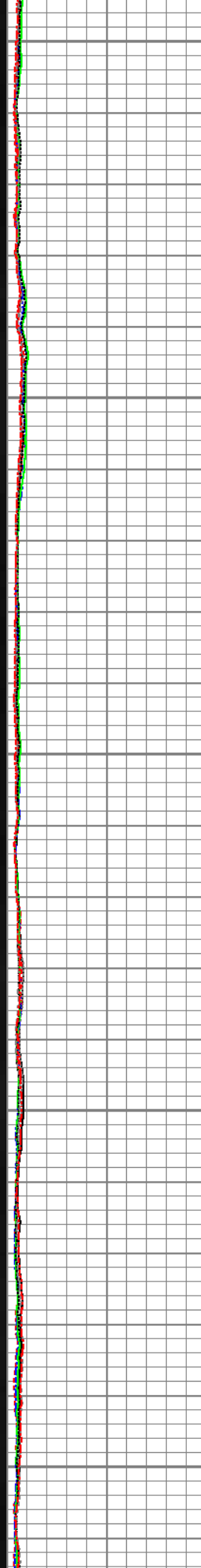
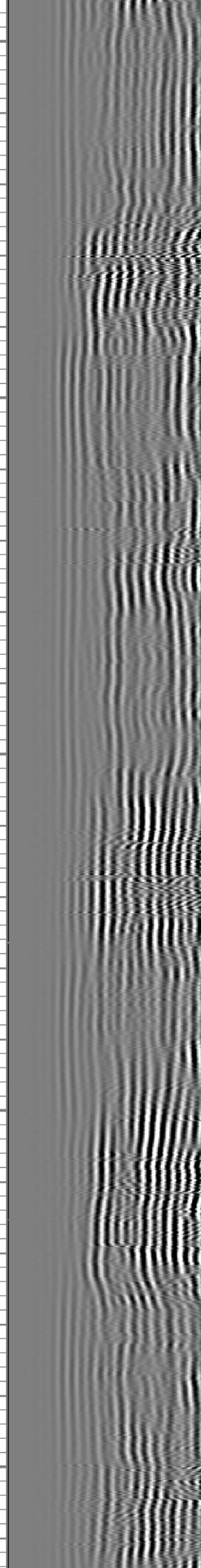
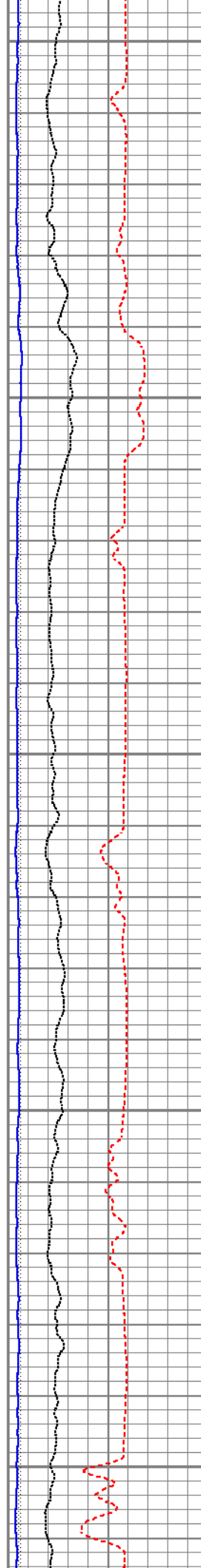


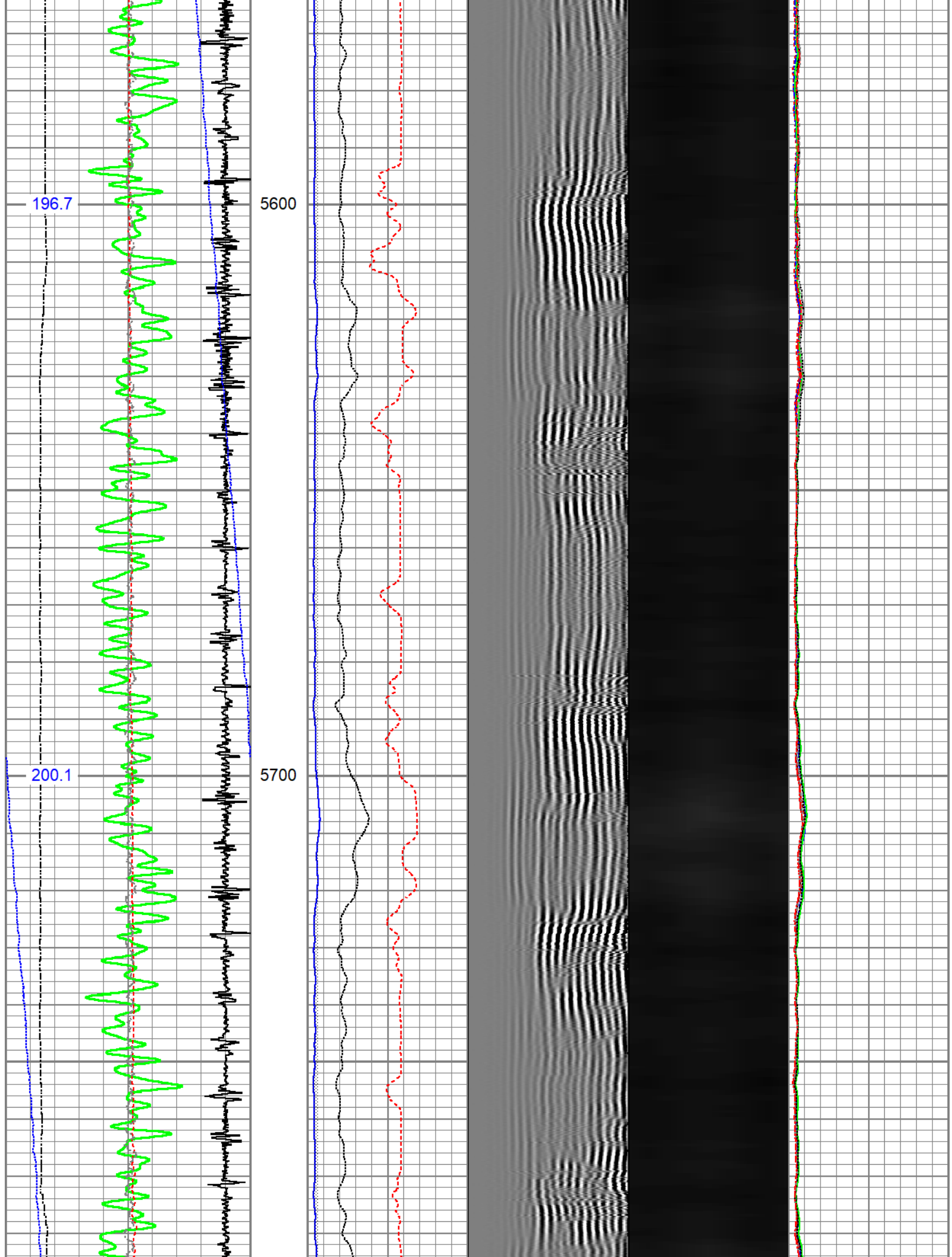
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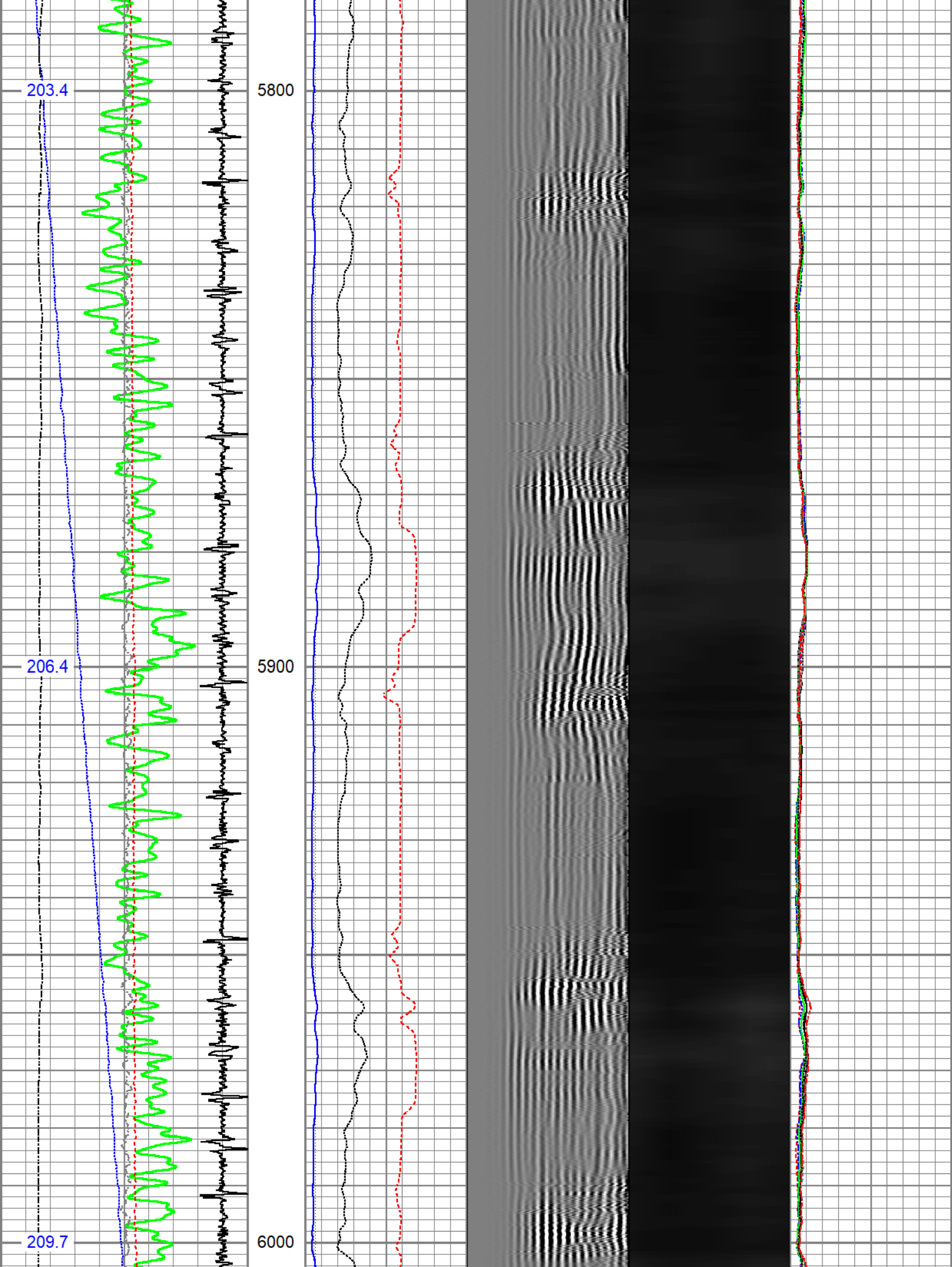
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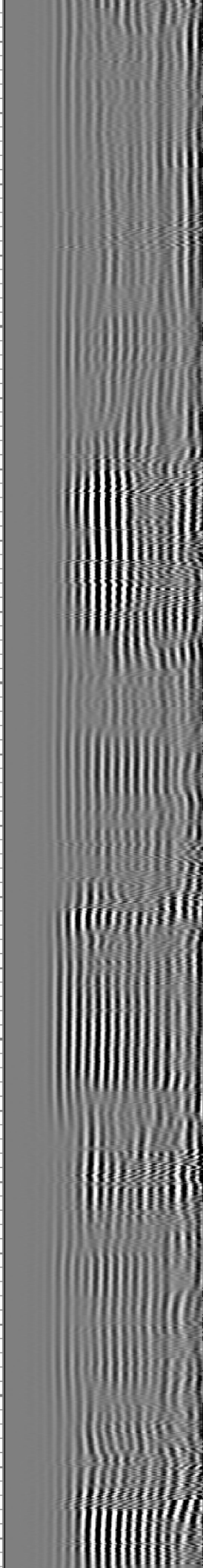
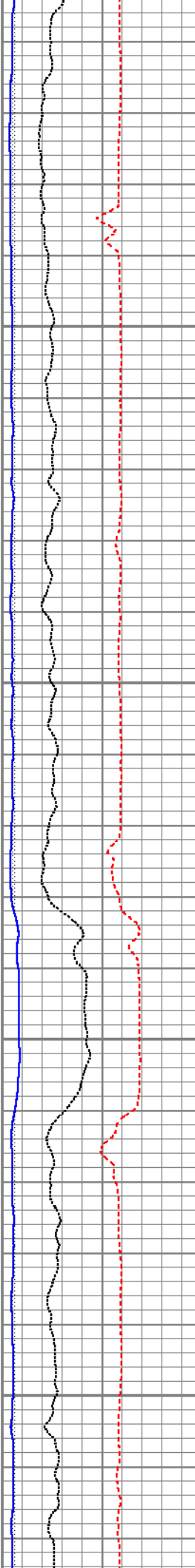
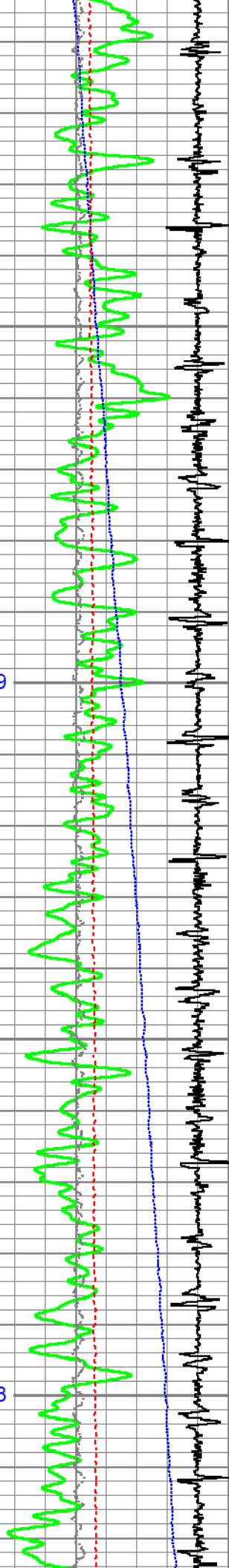


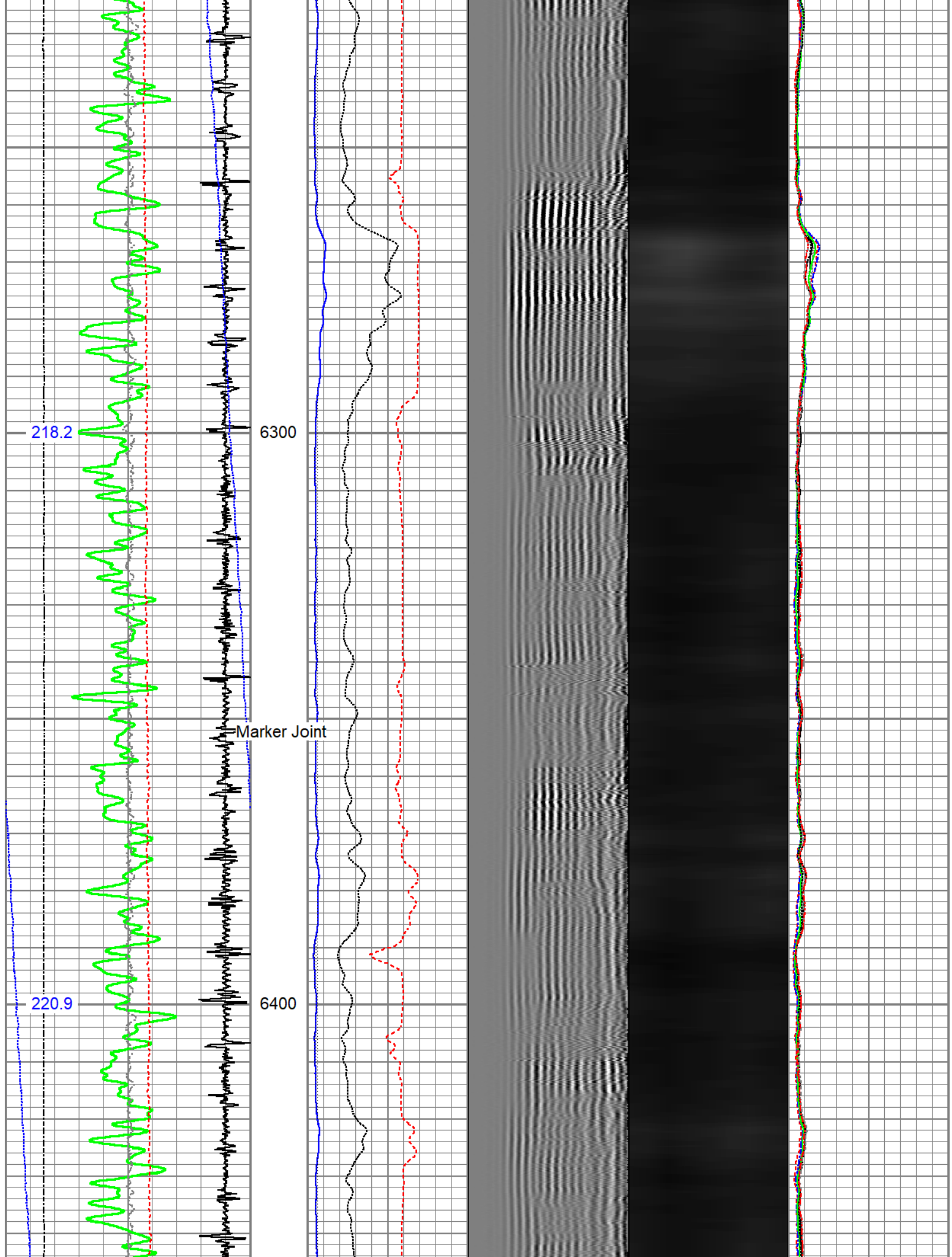
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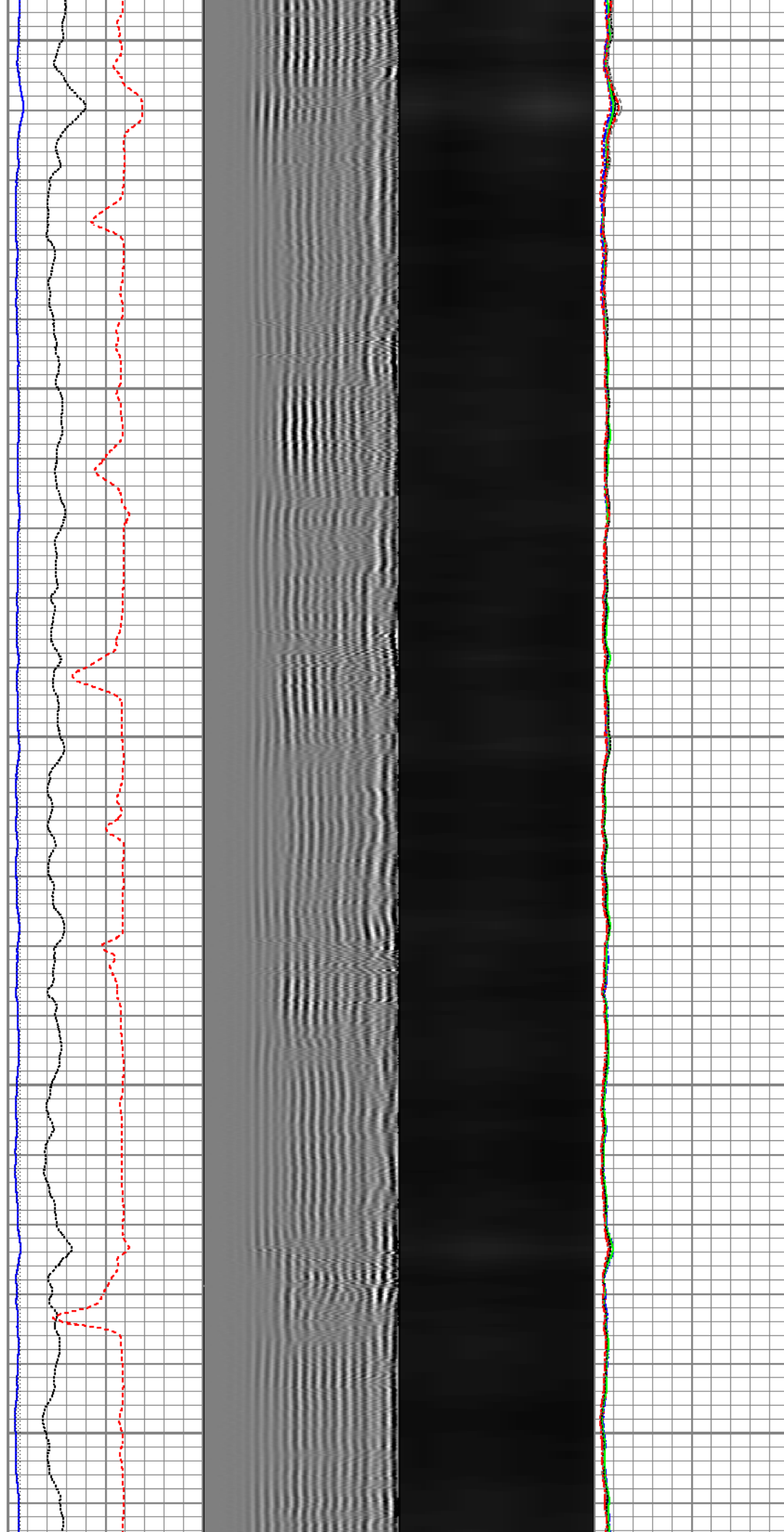


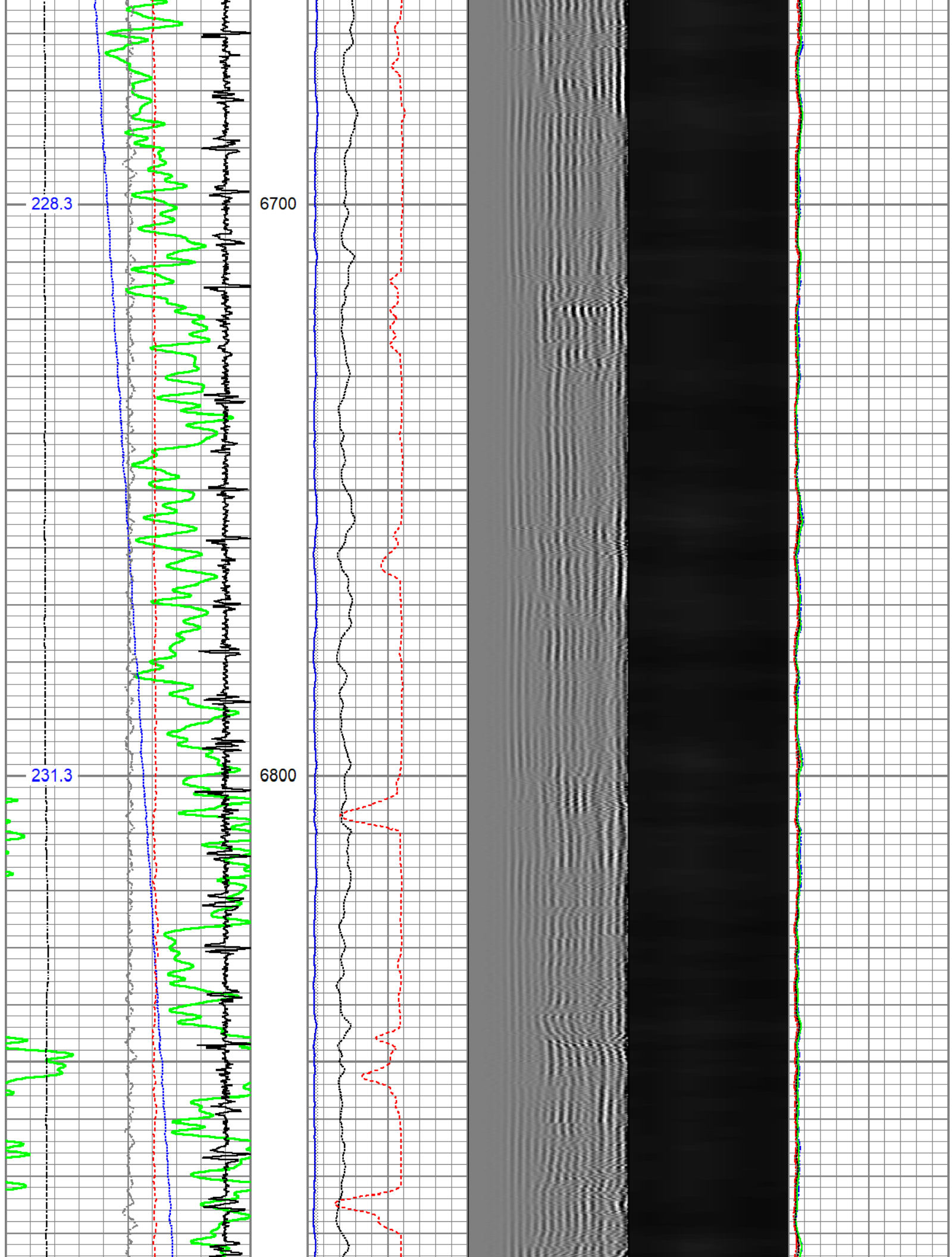
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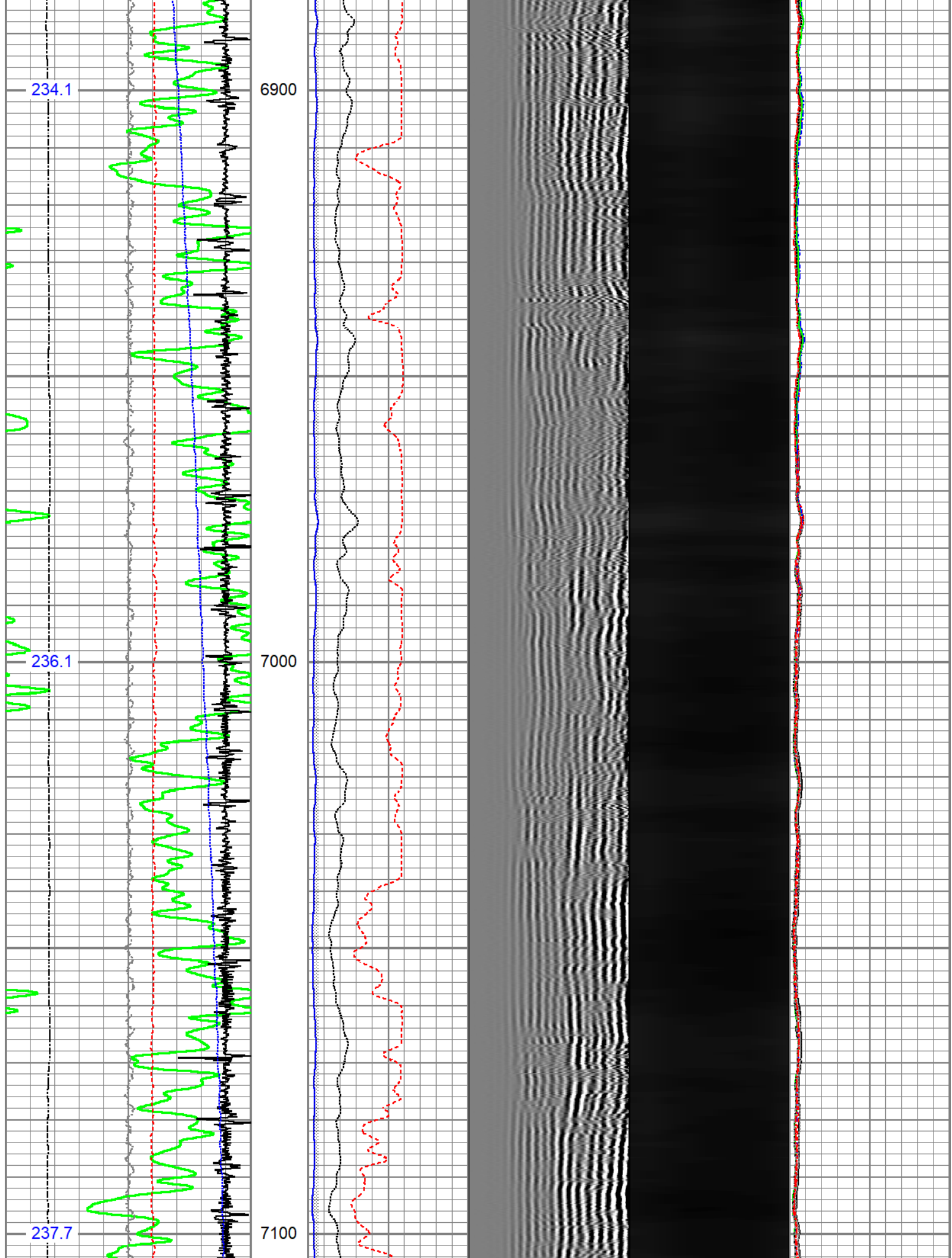
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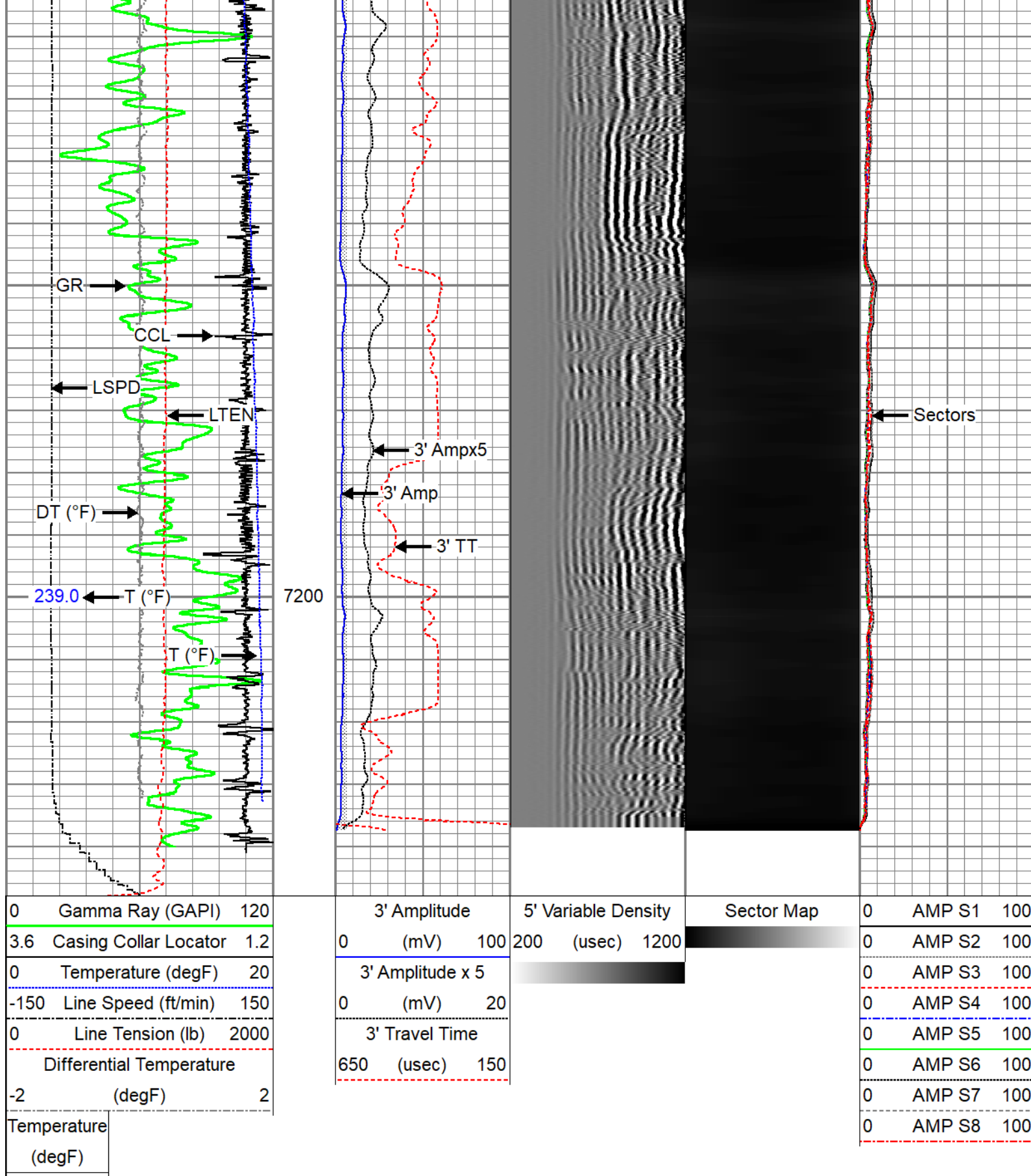
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6600









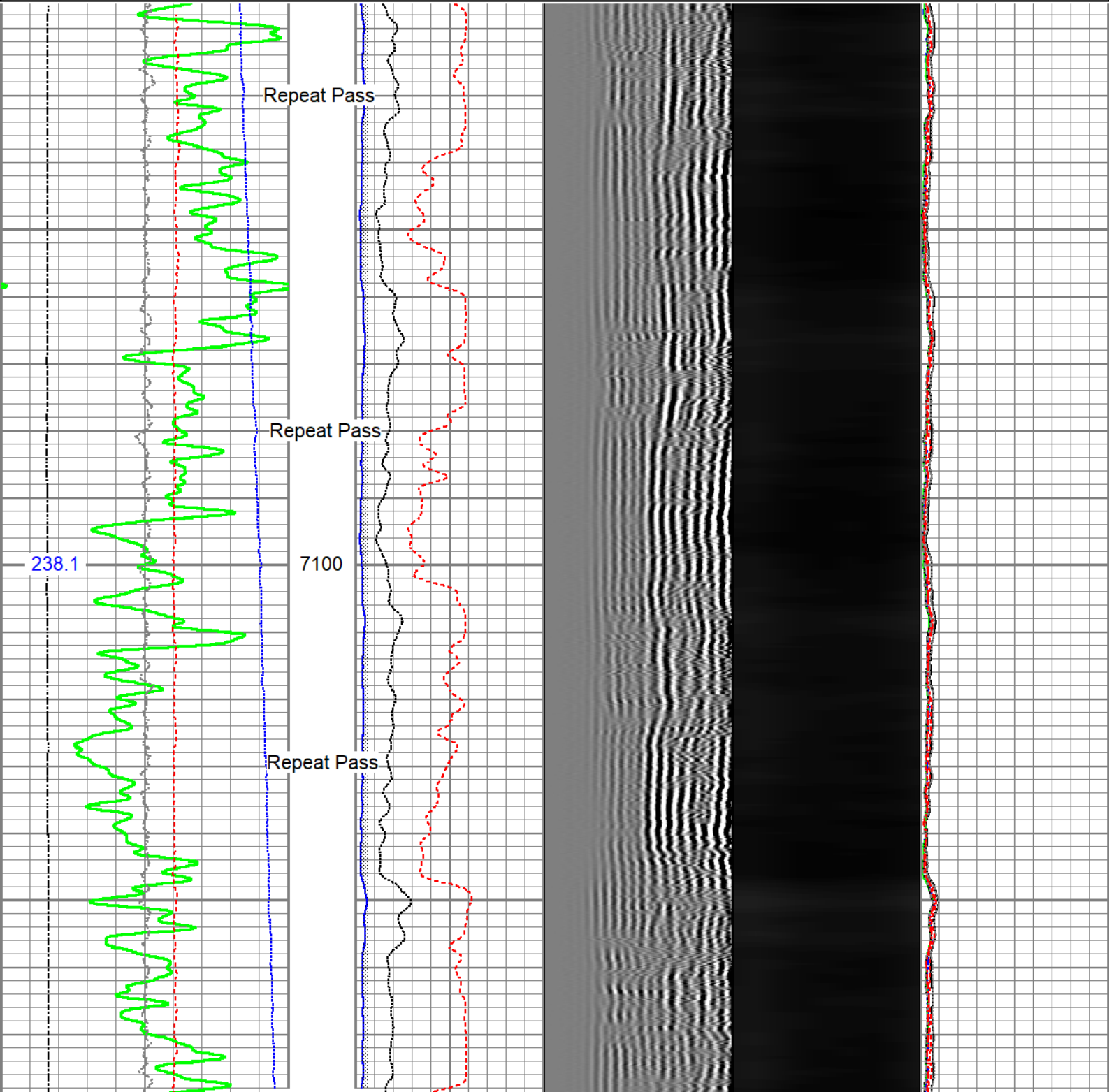
Repeat Pass

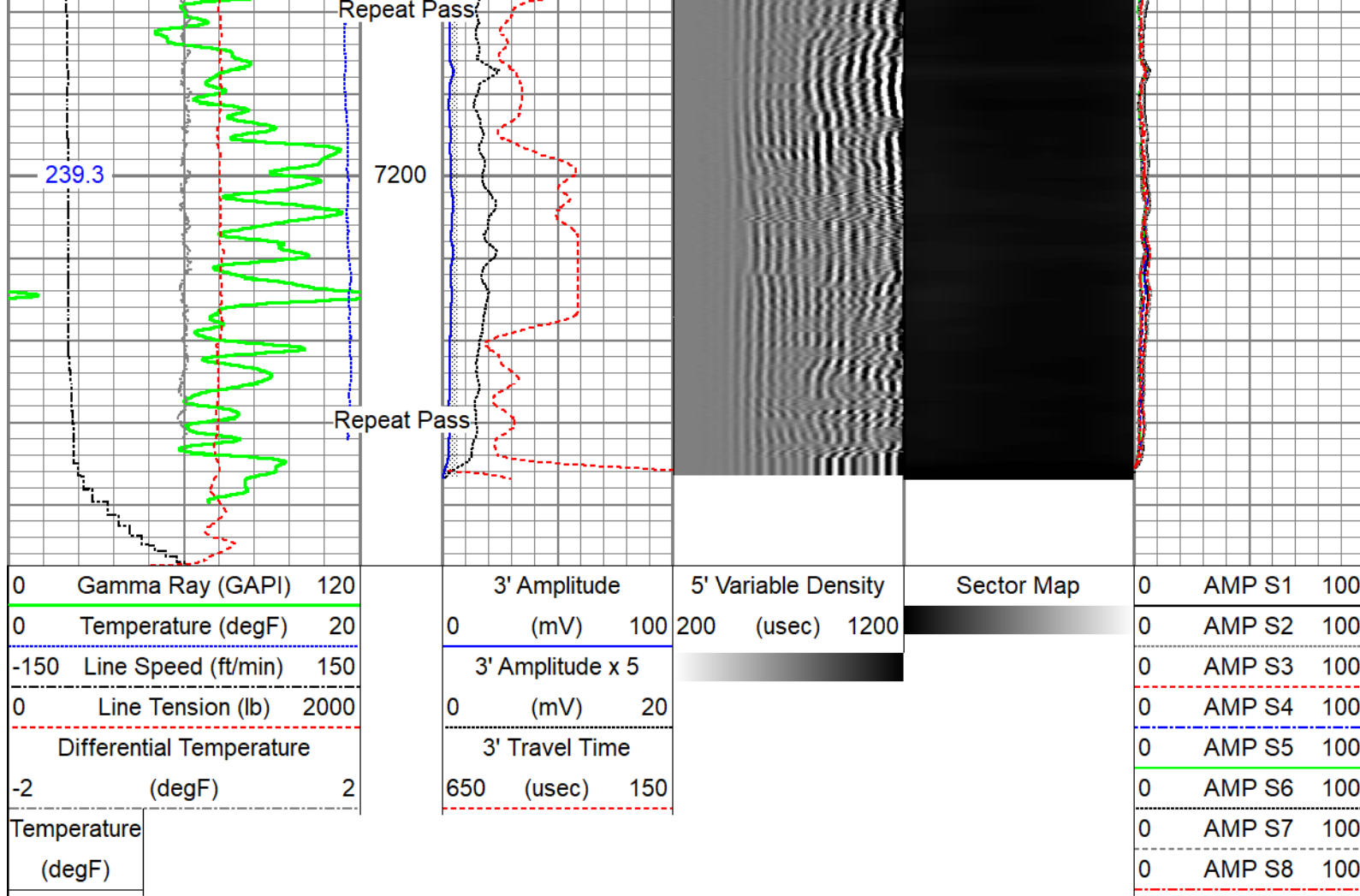


Recorded with 2500 PSI Surface Induced Pressure

Dataset Pathname	repeat
Presentation Format	edge_rbl_noble
Dataset Creation	Thu Oct 07 12:30:45 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	
0	Temperature (degF)	20			0 (mV)	100 200 (usec)	1200		0	AMP S2	100
-150	Line Speed (ft/min)	150			3' Amplitude x 5				0	AMP S3	100
0	Line Tension (lb)	2000			0 (mV)	20			0	AMP S4	100
Differential Temperature					3' Travel Time				0	AMP S5	100
-2	(degF)	2			650 (usec)	150			0	AMP S6	100
Temperature									0	AMP S7	100
(degF)									0	AMP S8	100





Company Noble Energy Inc.
Well Rampart A33-790
Field Wattenberg
County Weld
State Colorado