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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 6380.1 FT to 6400 FT Adjusted -19 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

	Depth	Description	Length	Weight	O.D.
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 (FW1305-096) 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				
CCL\$1	6.80				
GR	5.46	SO BS CENT-2750-4500 Slip Over 2-3/4" I.D. for 4-1/2" O.D. Casing Bow Spring Centralizer  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	1.33  4.80	3.25  2.75	10.00  55.00
		Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00
LOCTIM	0.00				
UTCTIM	0.00				
Dataset: noble_roth a32-770_rbl_11-18-21.db: field/well/run1/main.1					
Total length: 18.10 ft					
Total weight: 203.60 lb					
O.D.: 3.25 in					

## 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: FW1305-096  
 Tool Model: 2750 RBT  
  
 Calibration Casing Diameter: 5.500 in  
 Calibration Depth: 248.626 ft

## Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	0.527	0.800	71.921	135.033	0.795
CAL	0.676	0.678				
5'	0.000	0.501	0.800	71.921	142.103	0.794
SUM						
S1	0.000	0.521	0.000	100.000	191.989	-0.005
S2	0.000	0.516	0.000	100.000	193.722	-0.006
S3	0.000	0.533	0.000	100.000	187.575	-0.005
S4	0.000	0.539	0.000	100.000	185.395	-0.006
S5	0.000	0.553	0.000	100.000	180.691	-0.006
S6	0.000	0.565	0.000	100.000	176.977	-0.007
S7	0.000	0.546	0.000	100.000	183.081	-0.007
S8	-0.001	0.528	0.000	100.000	189.206	0.144

## Air Zero Calibration, performed Thu Nov 18 08:59:52 2021:

	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

## 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	

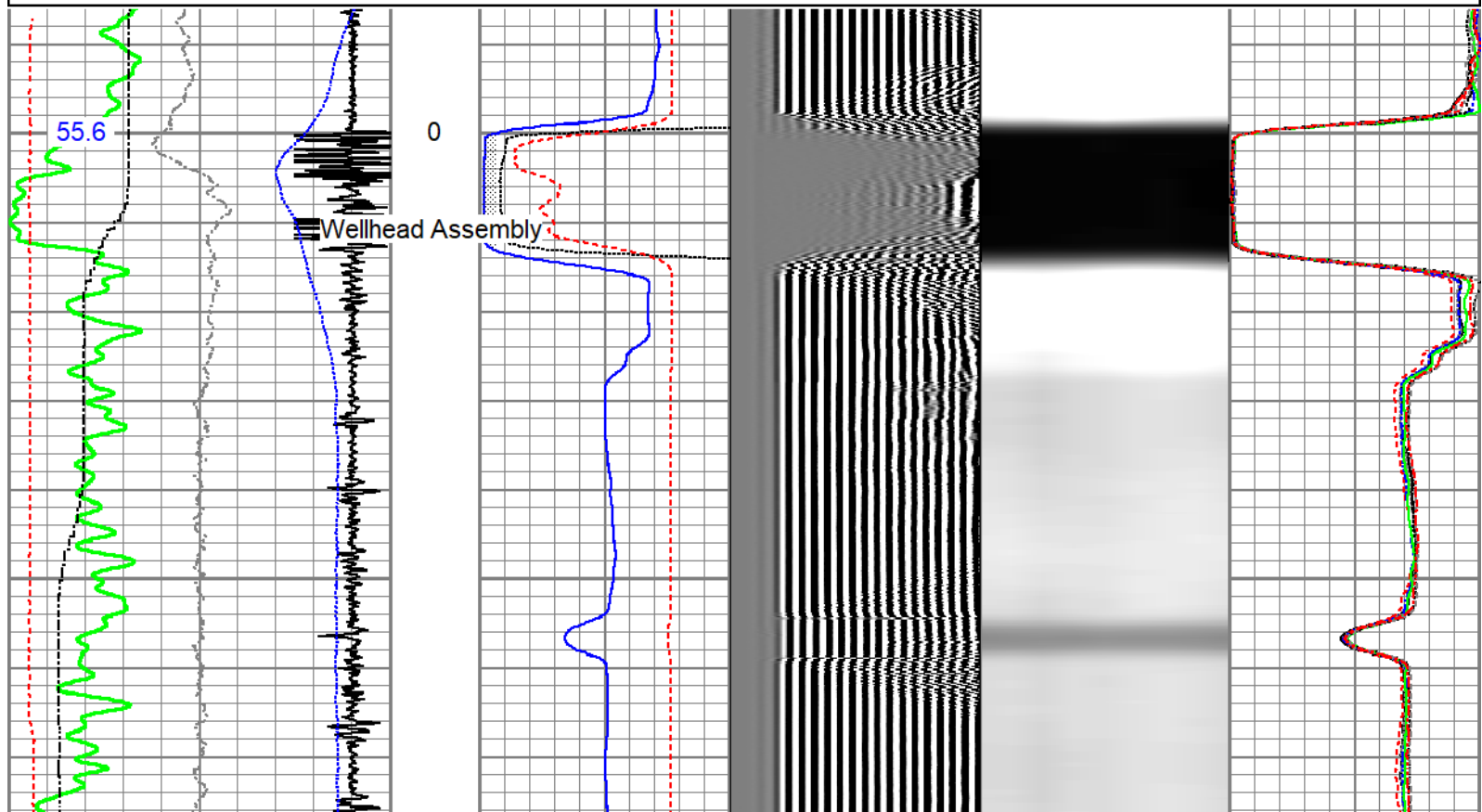


## Main Pass

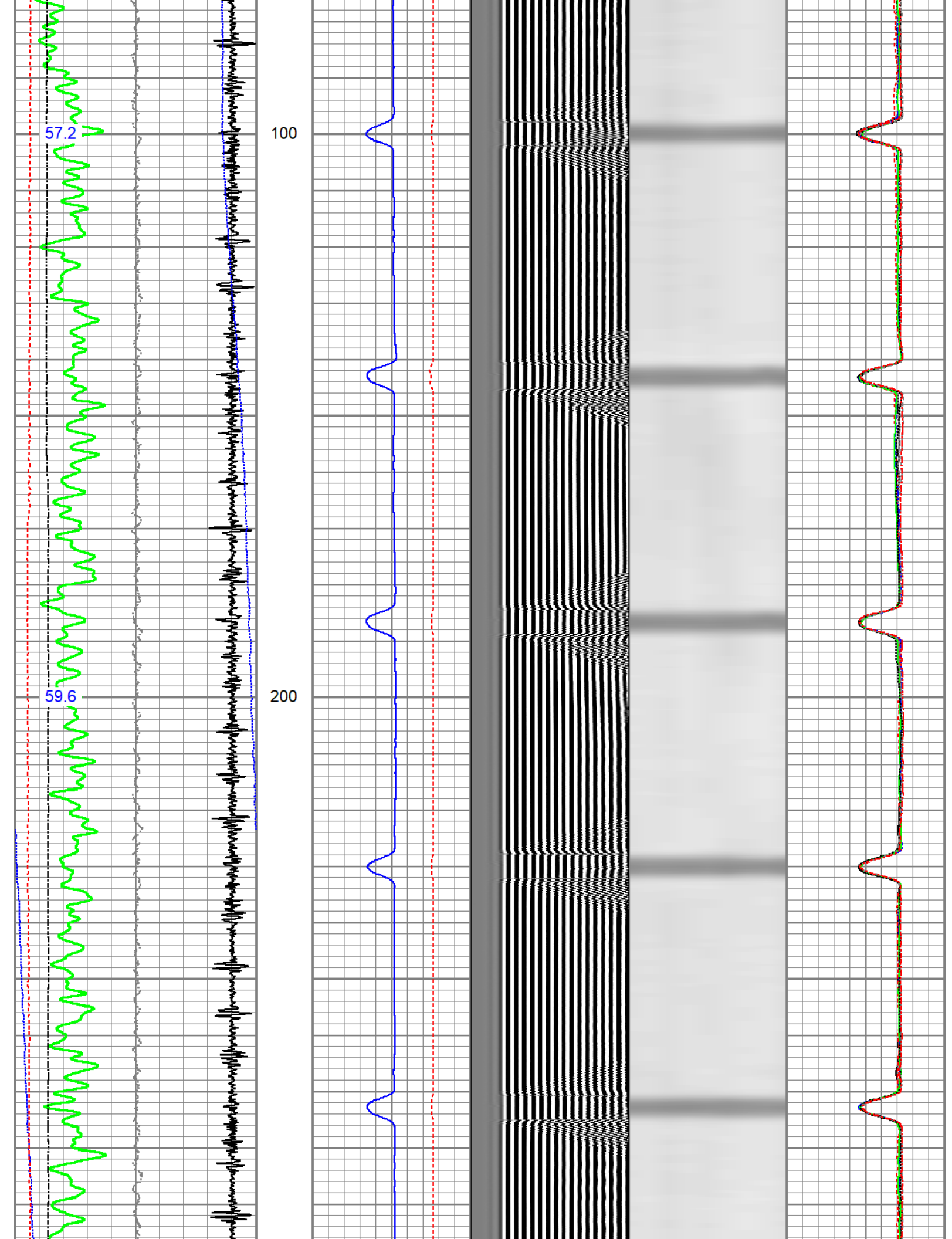
Recorded With 2500 PSI Surface Induced Pressure

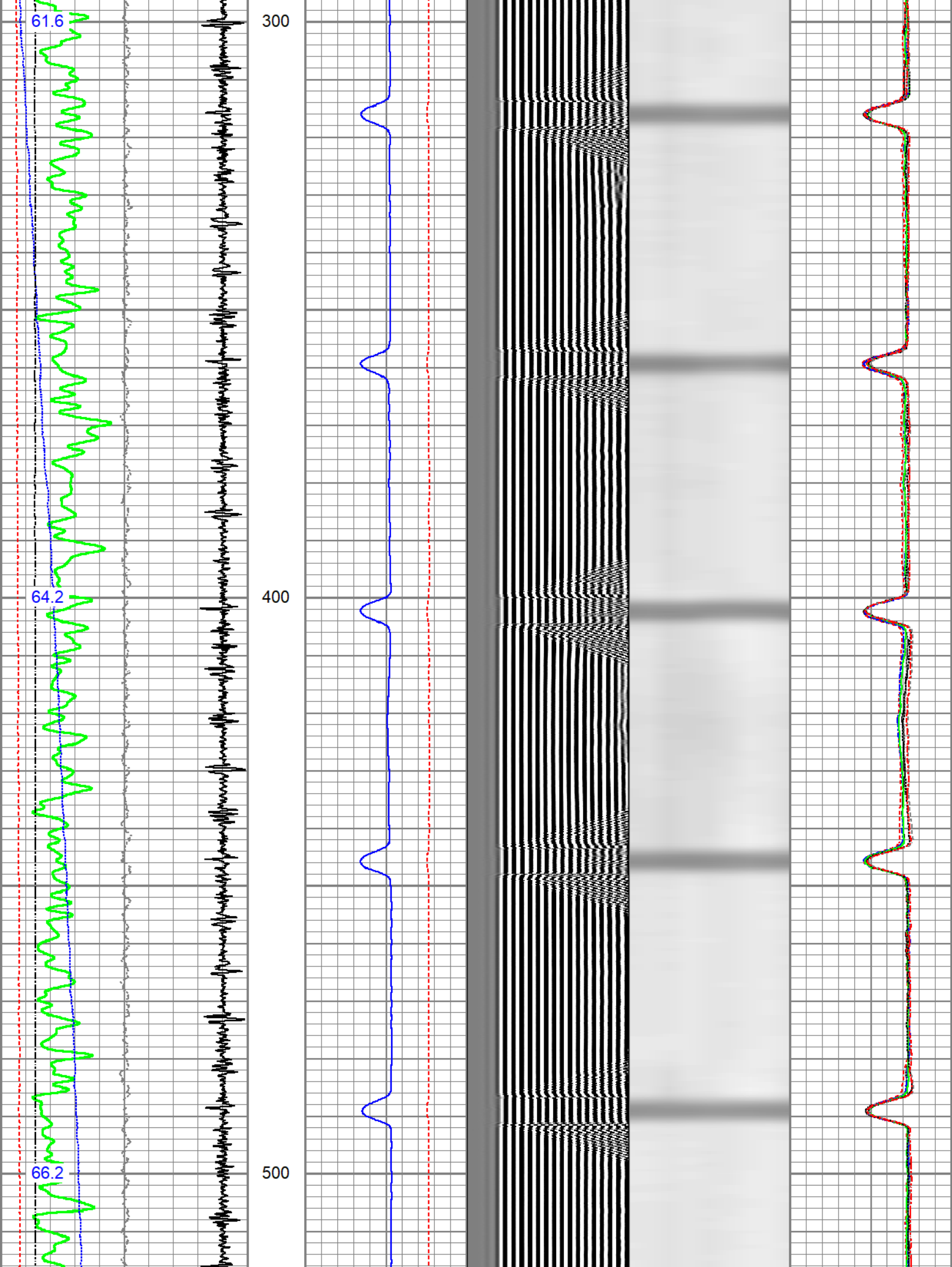
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Dataset Pathname	main.1
Presentation Format	edge_rbl_noble
Dataset Creation	Thu Nov 18 13:43:50 2021
Charted by	Depth in Feet scaled 1:240

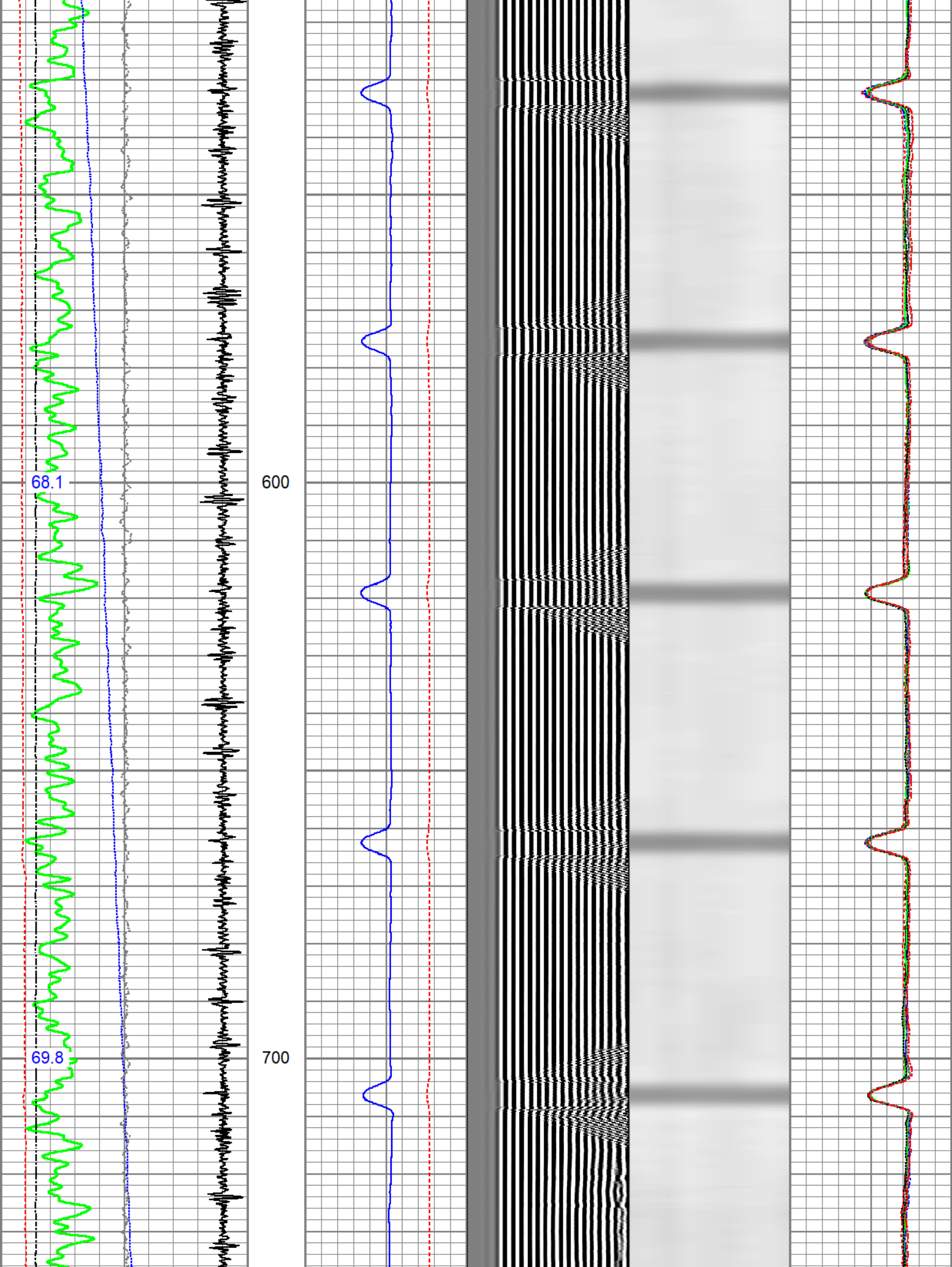
0	Gamma Ray (GAPI)	120	3' Amplitude	5' Variable Density	Sector Map	0	AMP S1	100
9	Casing Collar Locator	-1	0 (mV) 100	200 (usec) 1200		0	AMP S2	100
0	Temperature (degF)	20	3' Amplitude x 5			0	AMP S3	100
-150	Line Speed (ft/min)	150	0 (mV) 20			0	AMP S4	100
0	Line Tension (lb)	2000	3' Travel Time			0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

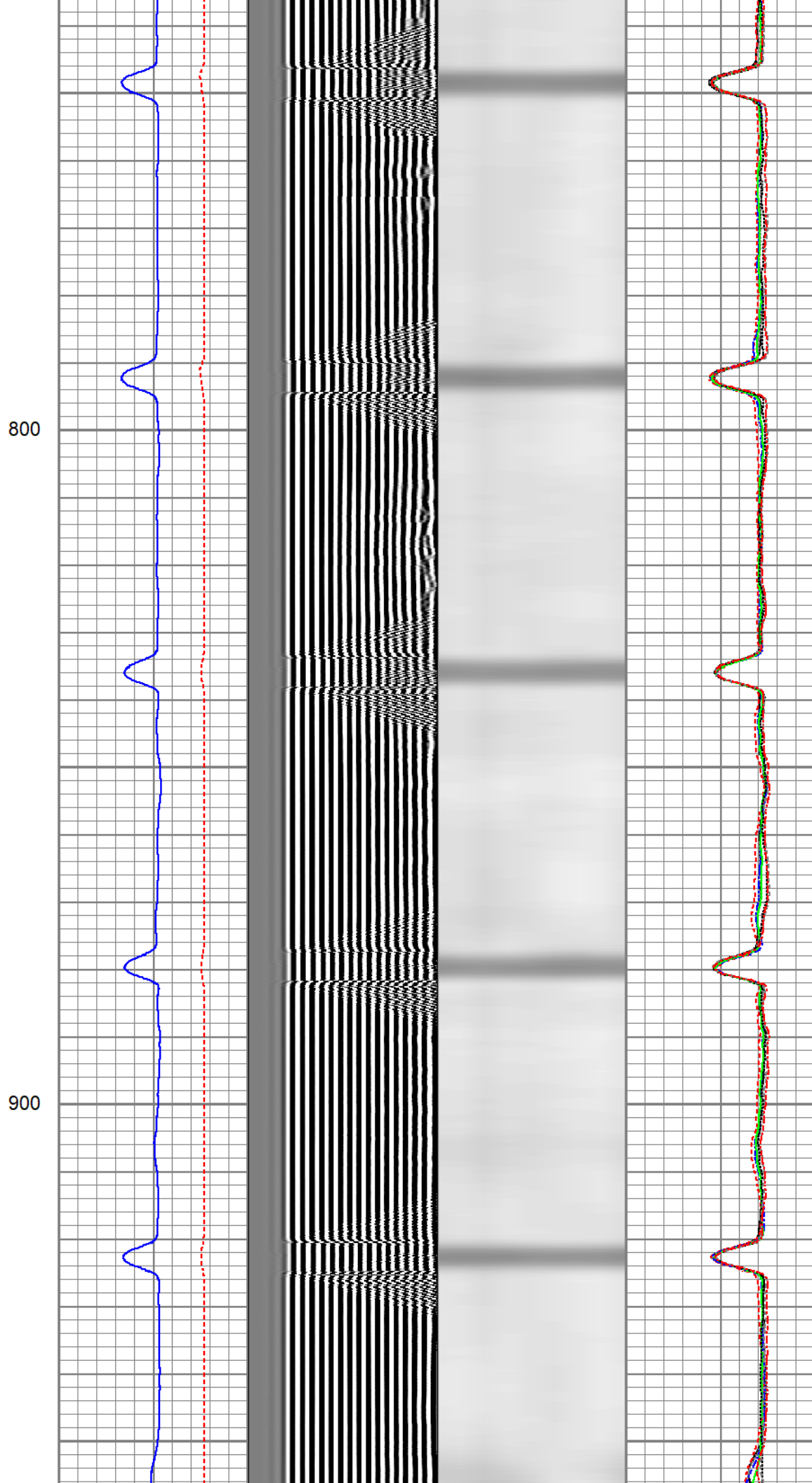
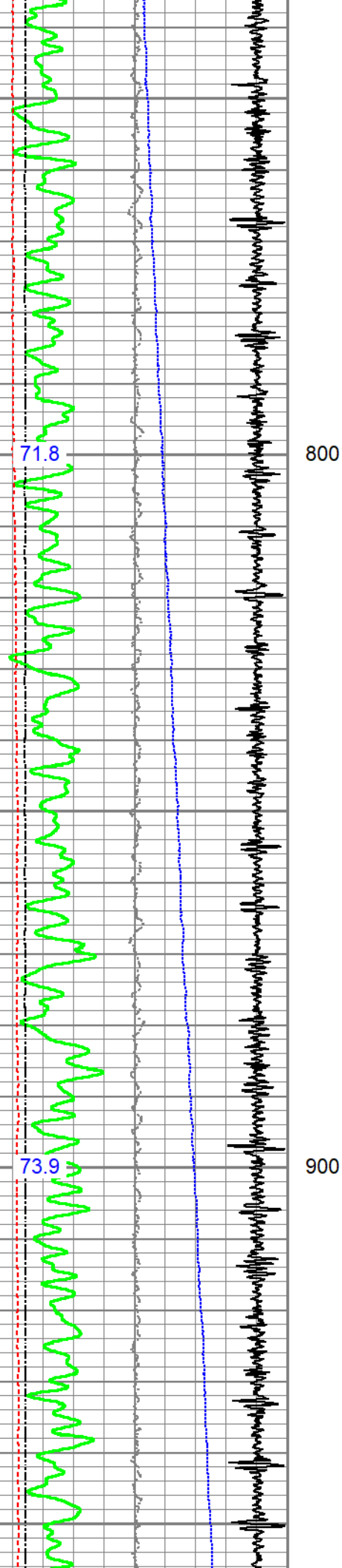




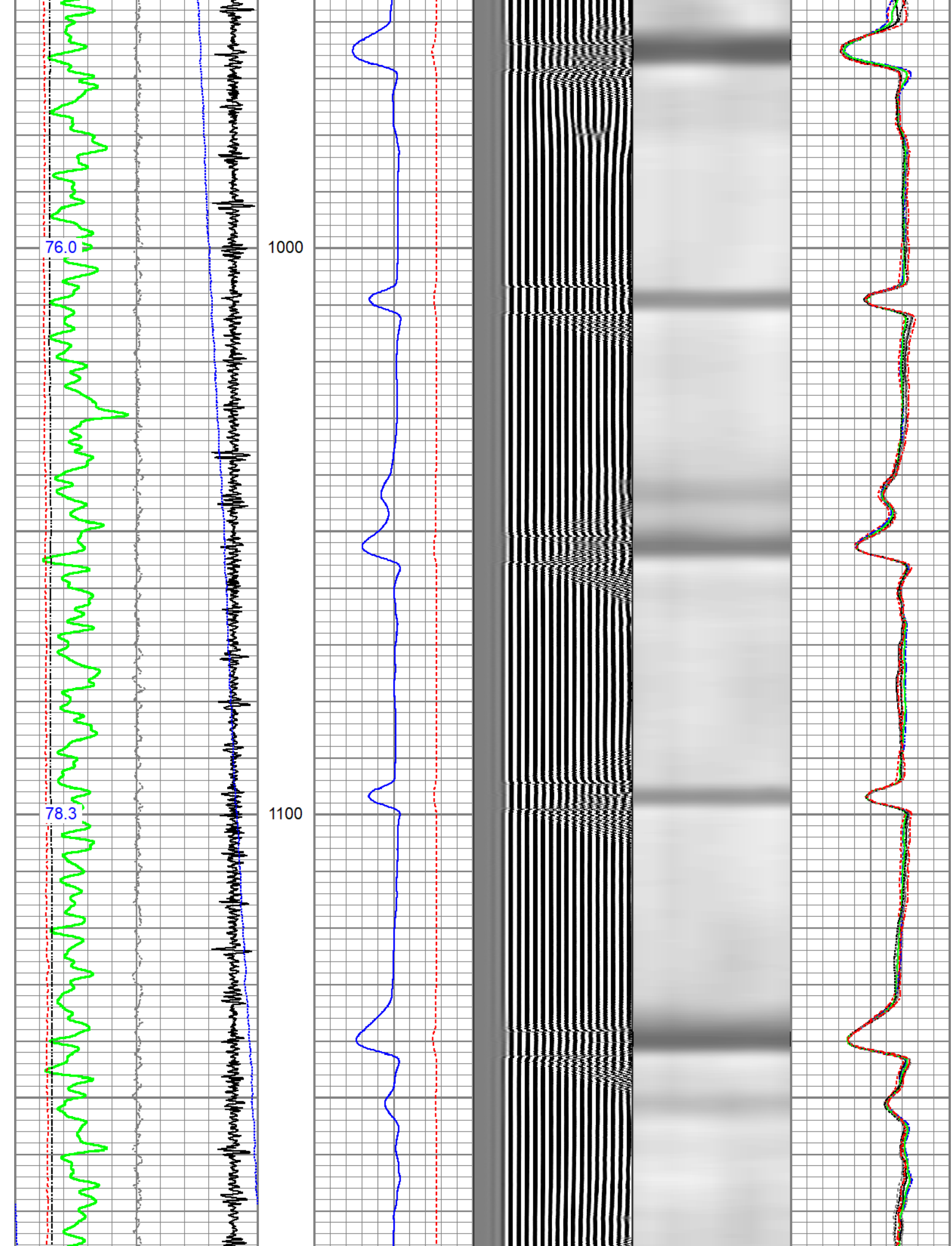


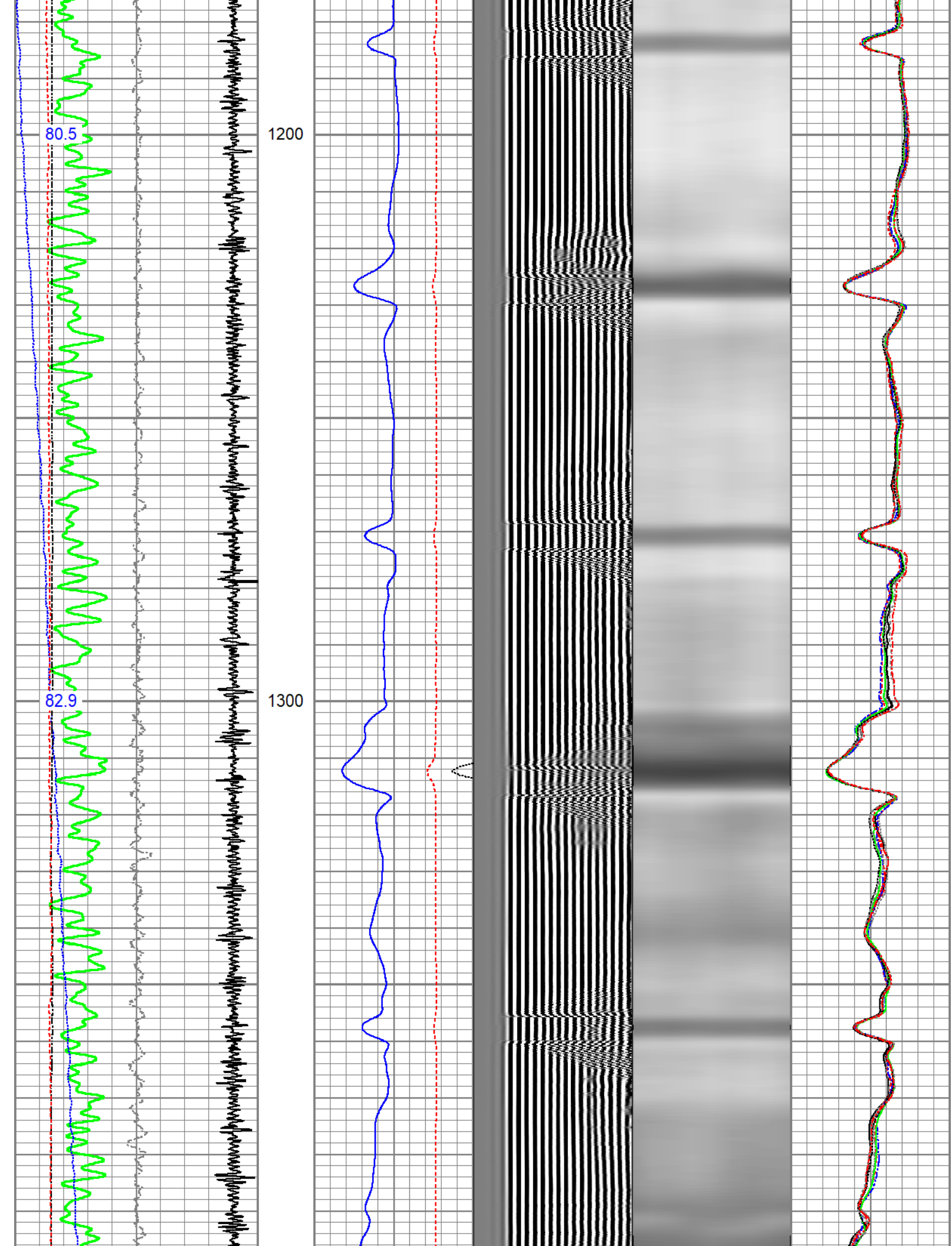




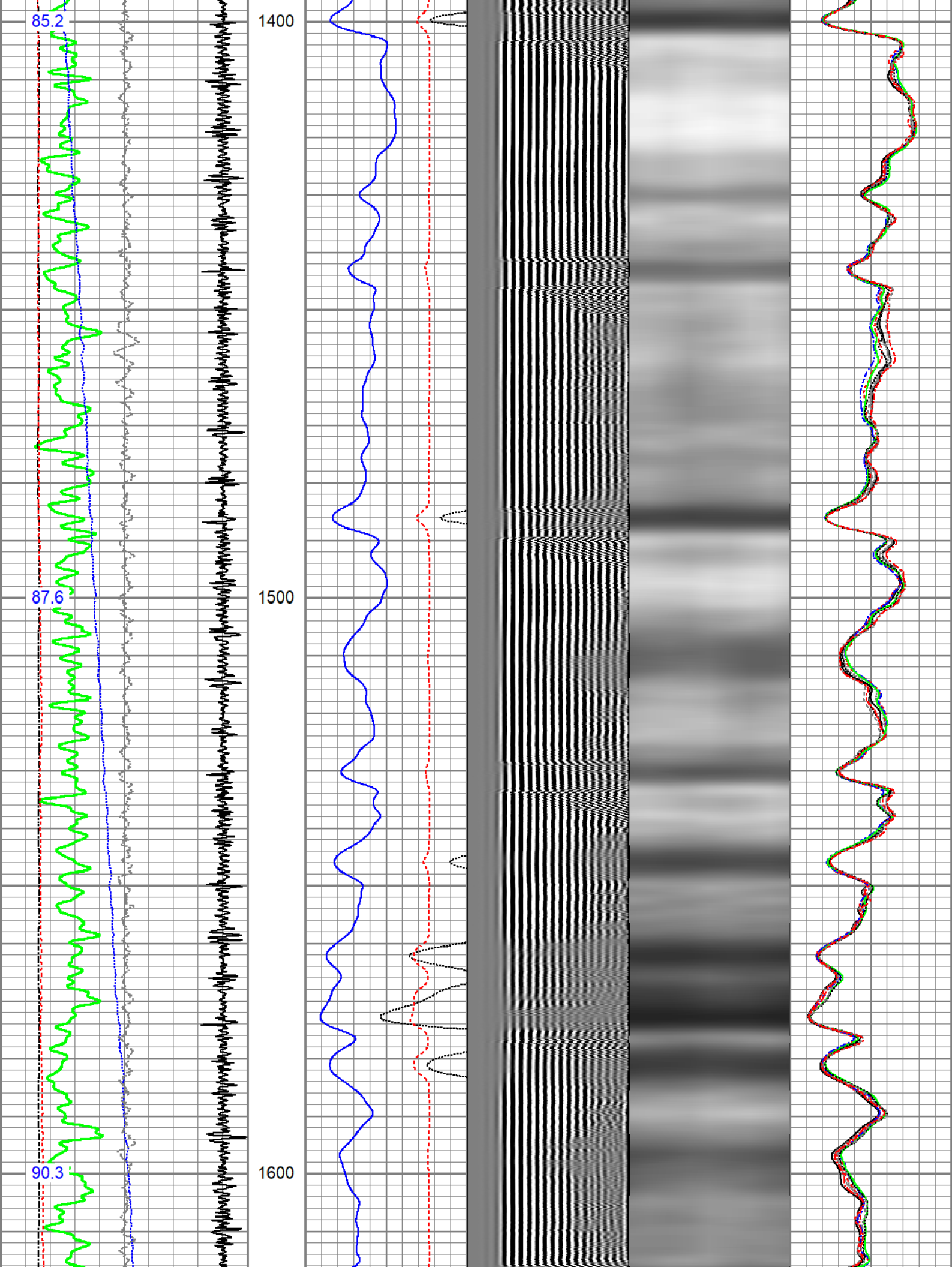


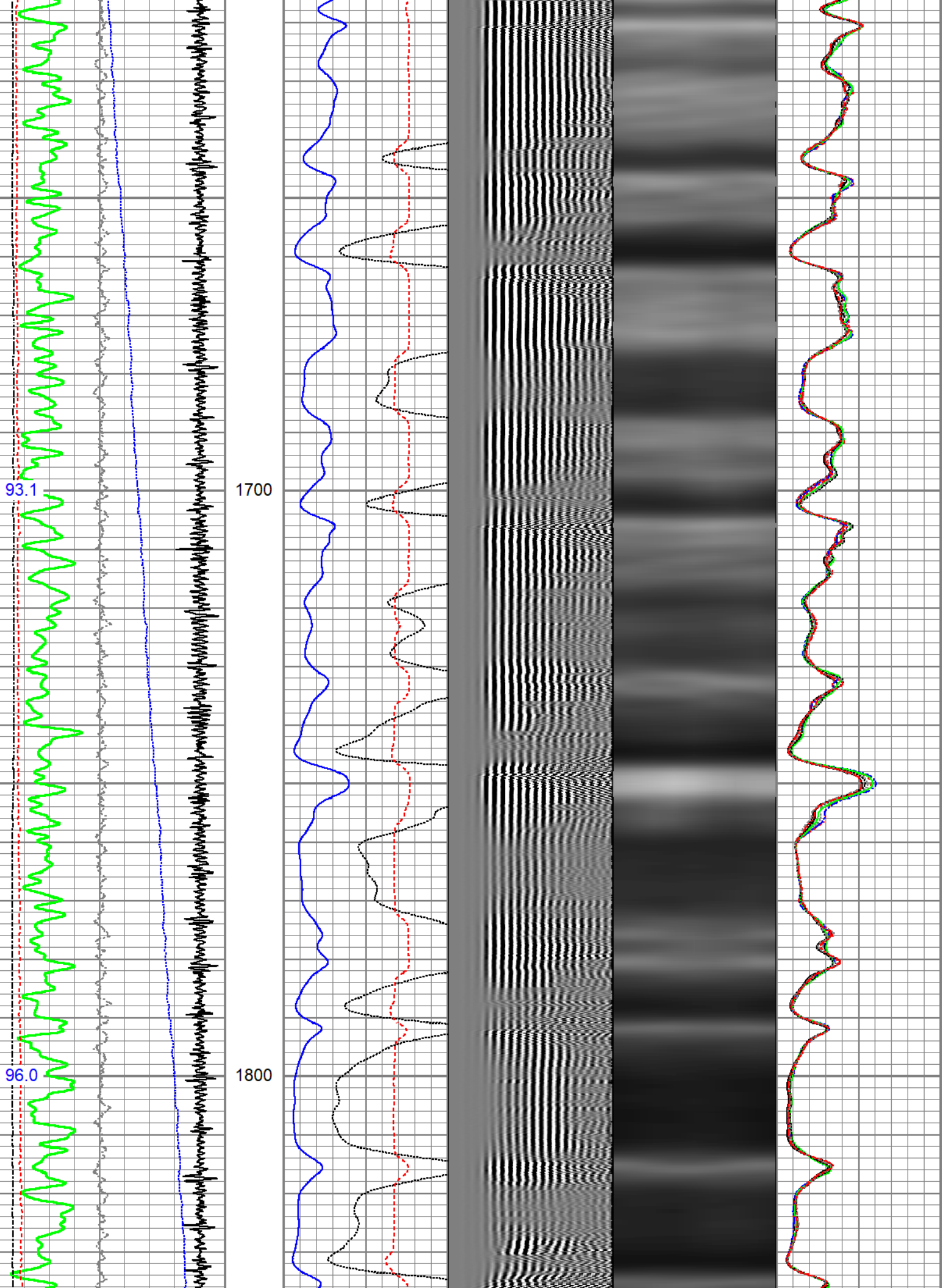


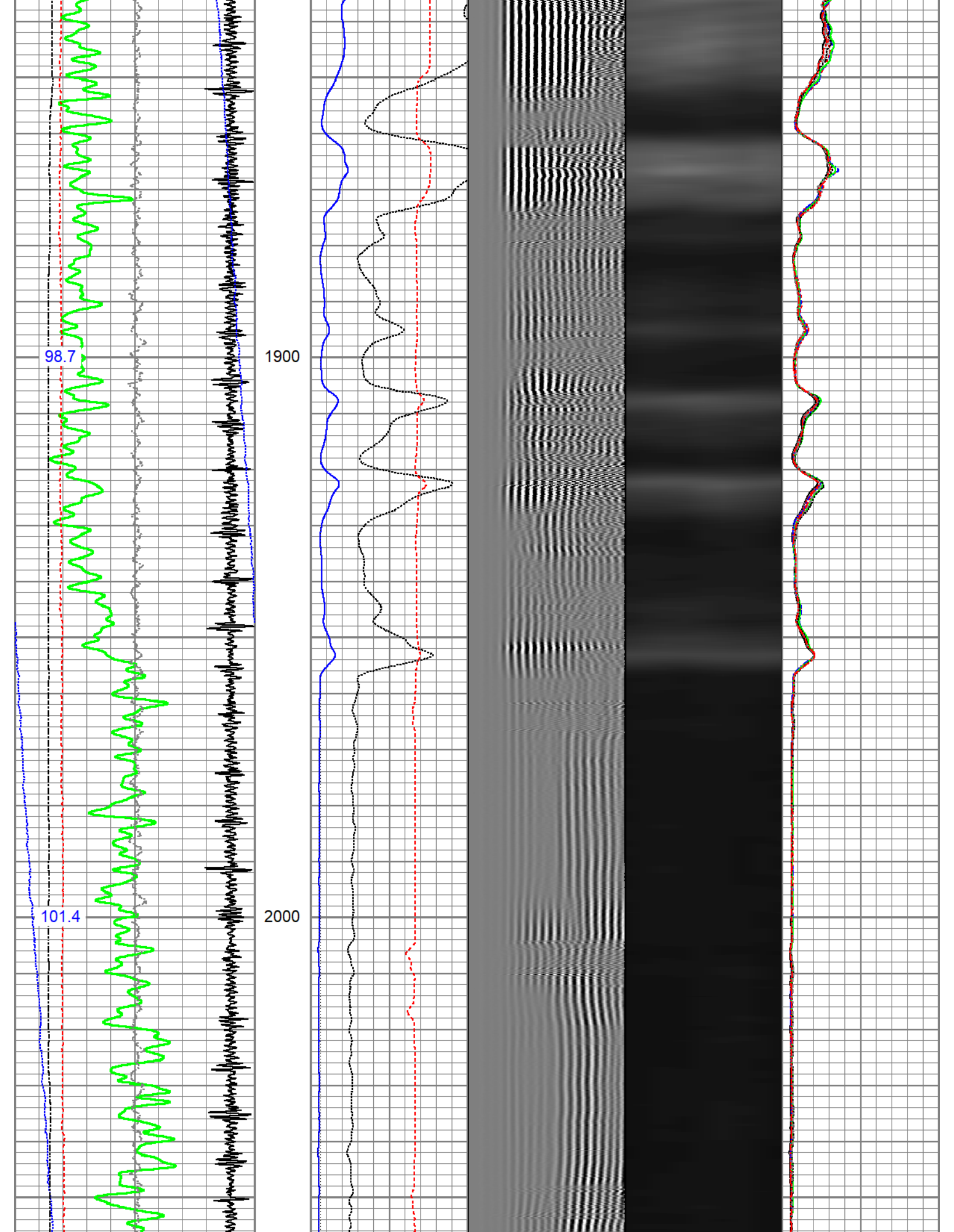




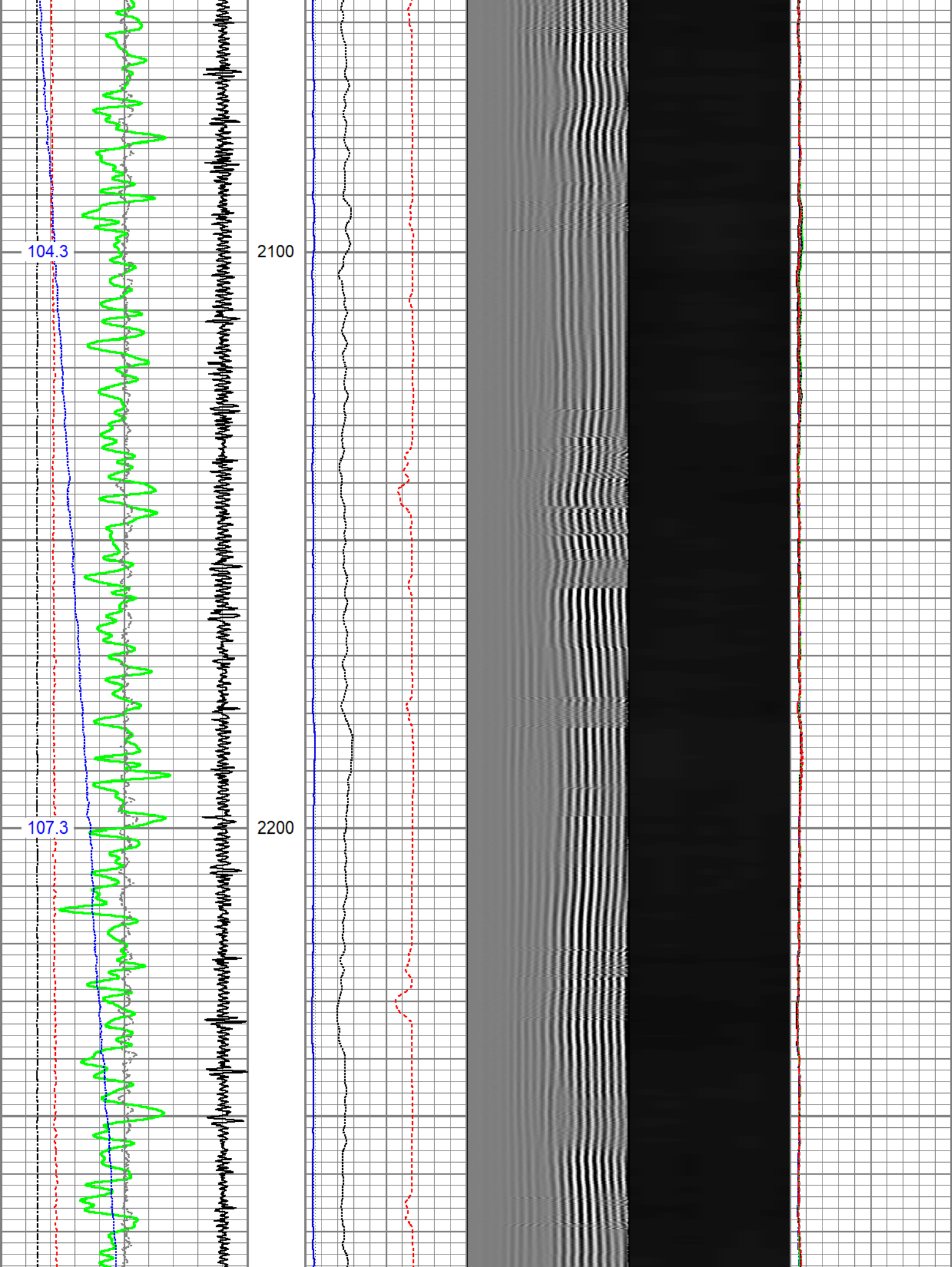


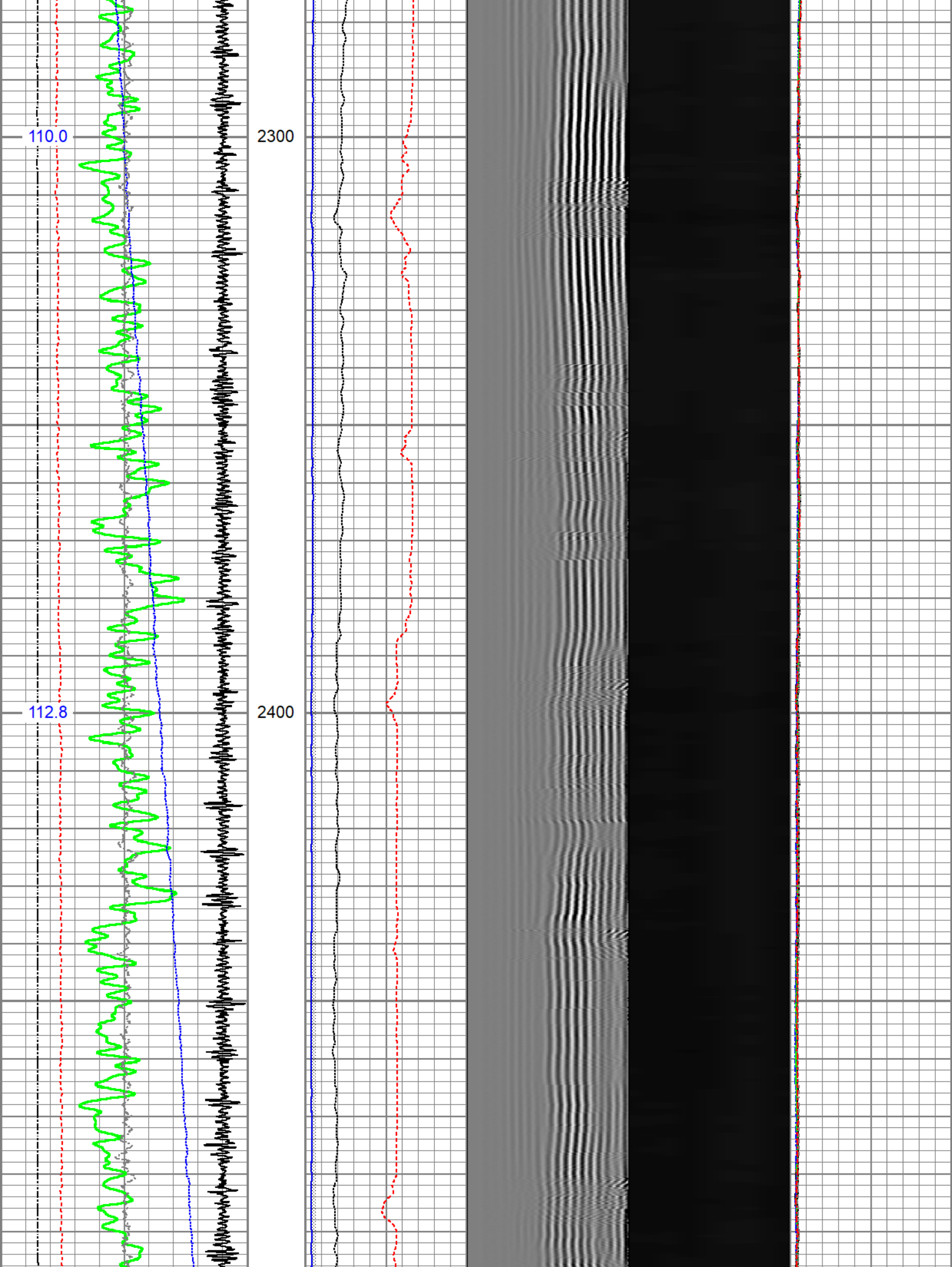


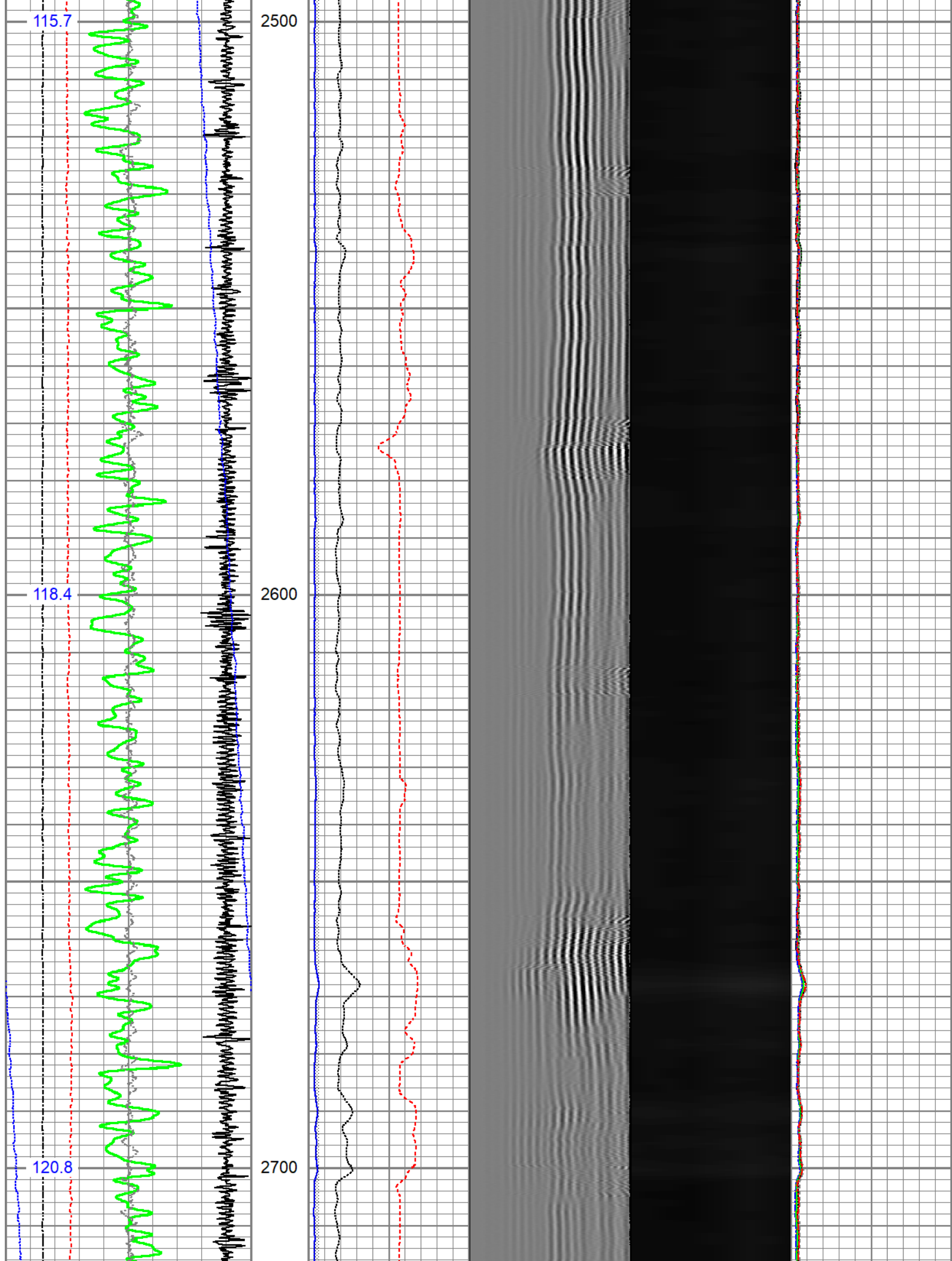




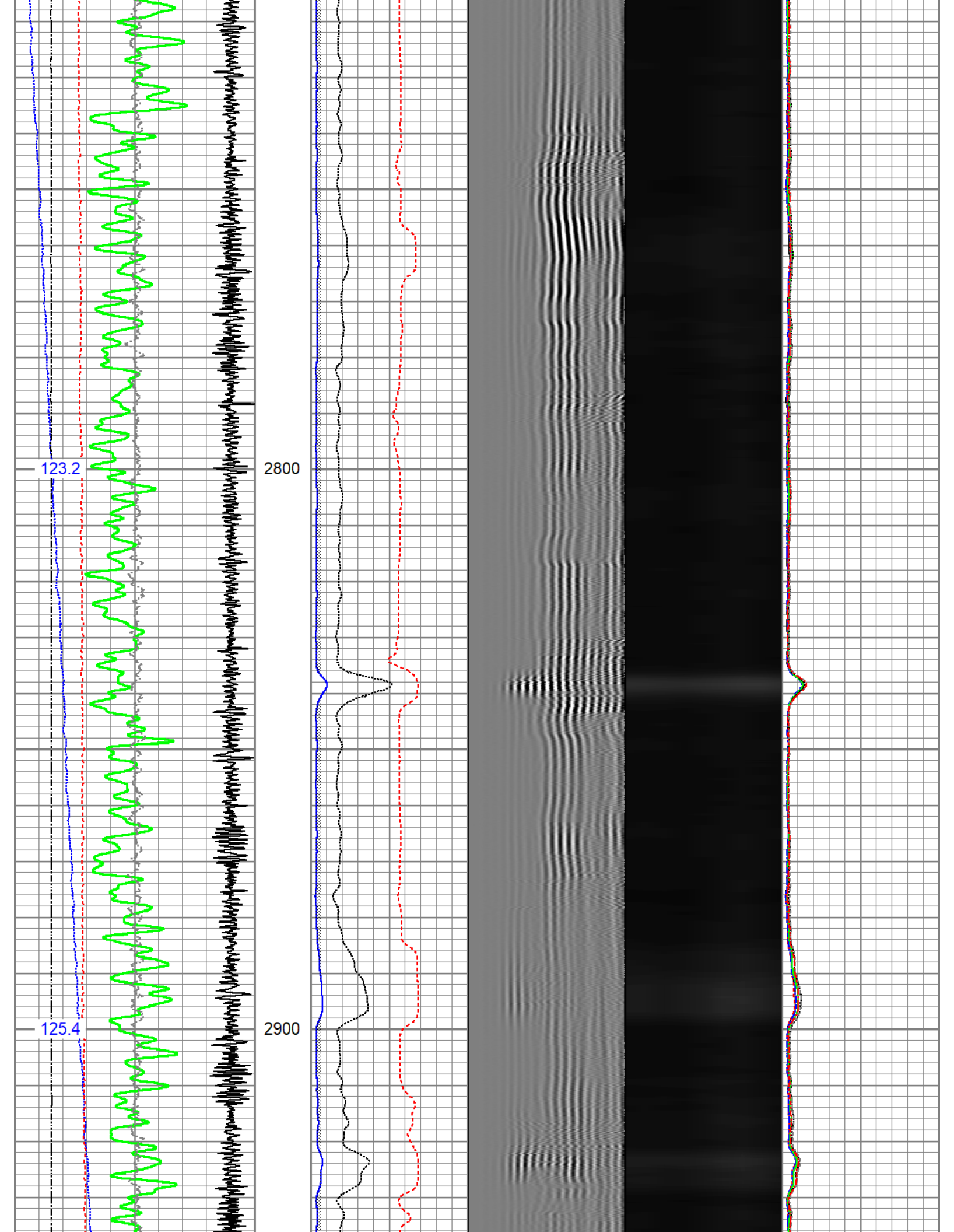


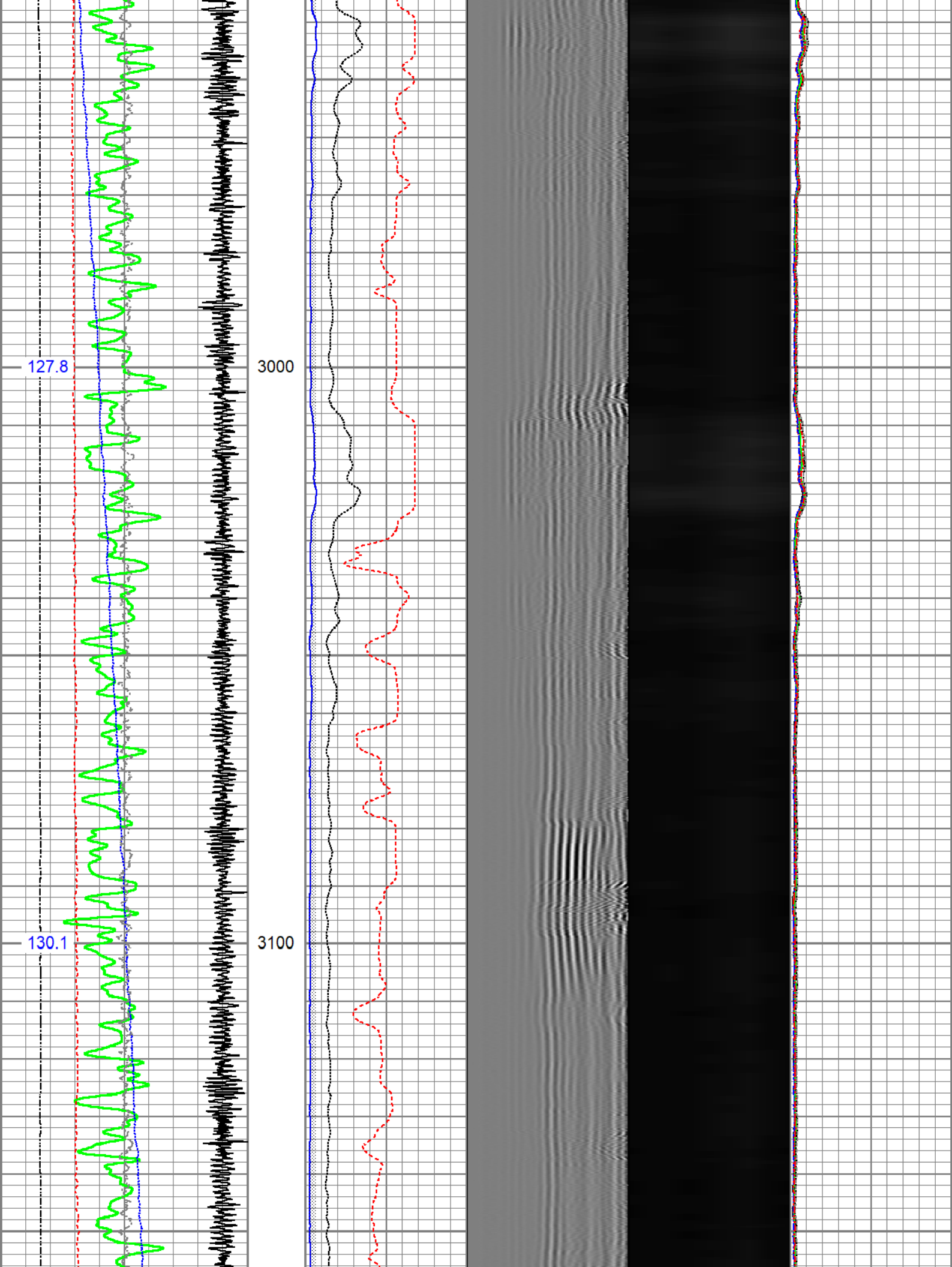


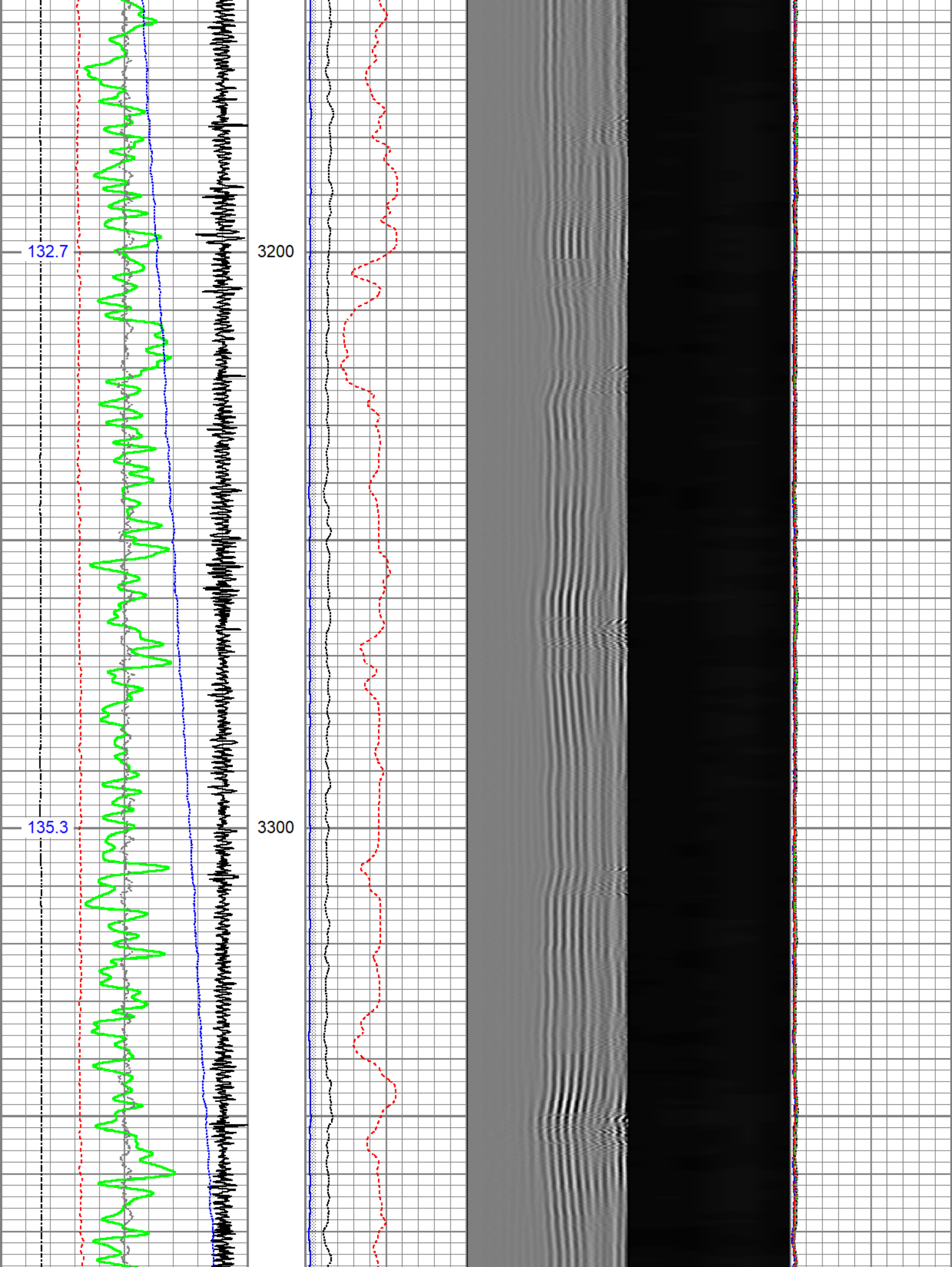


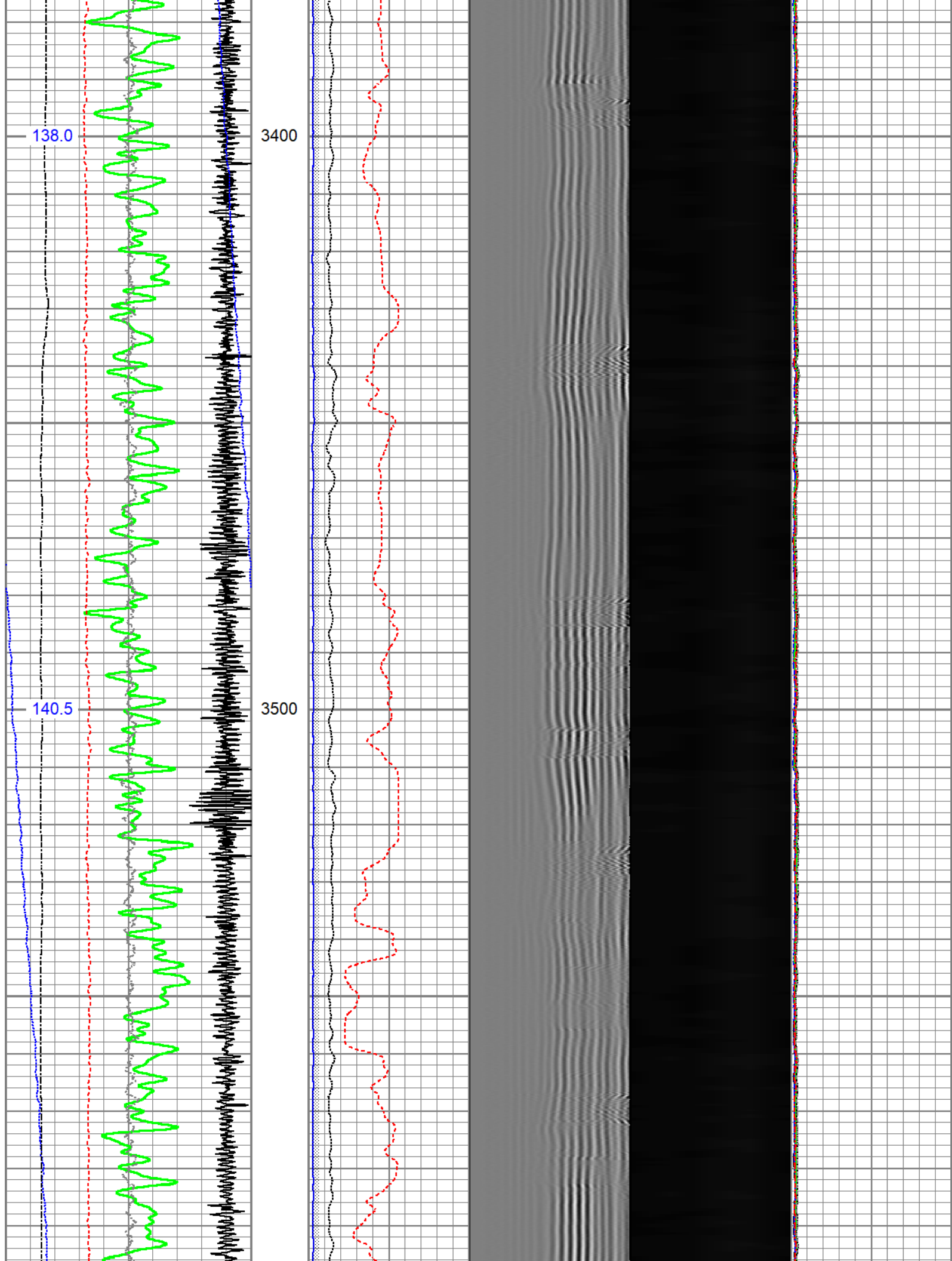




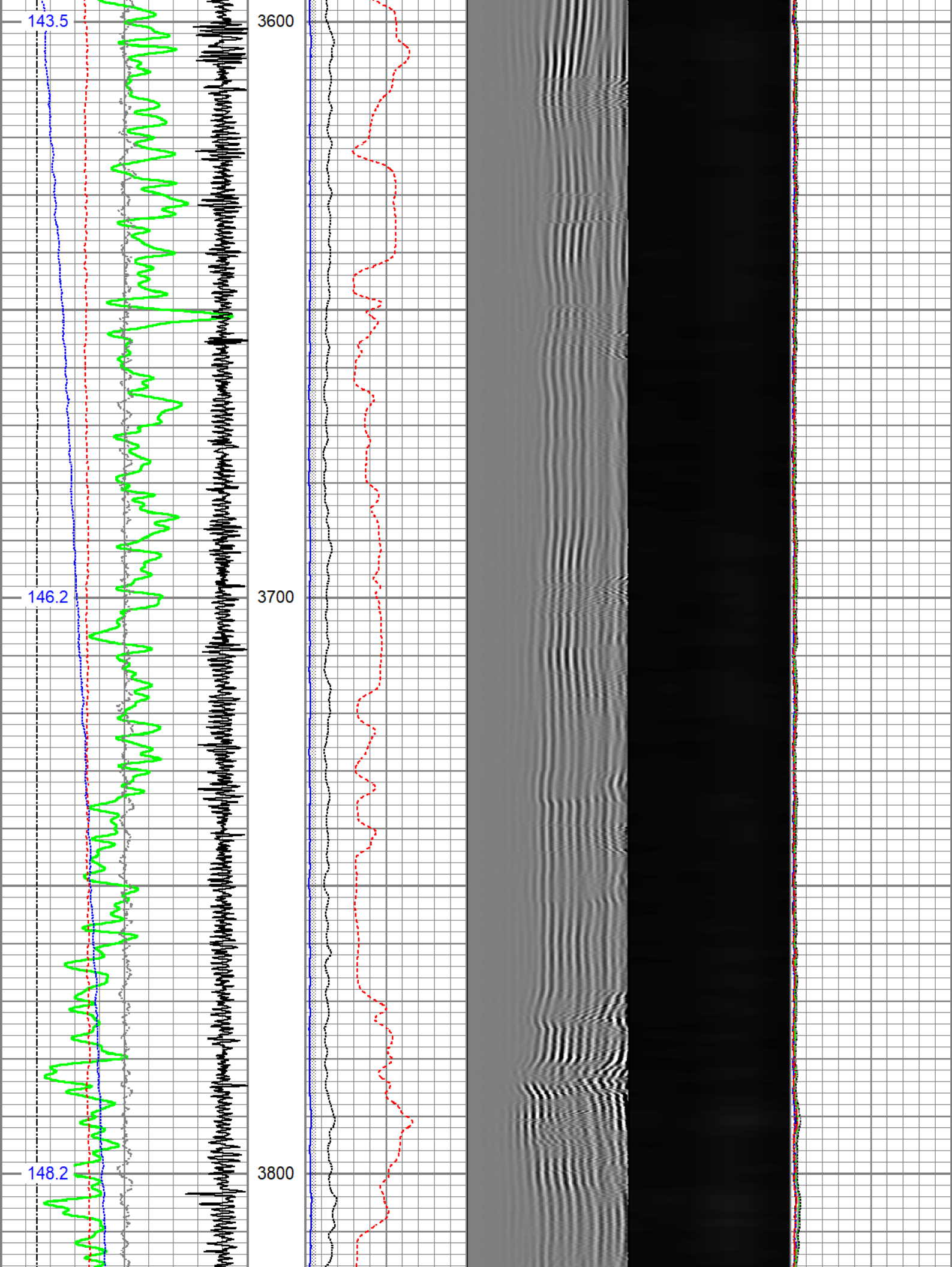


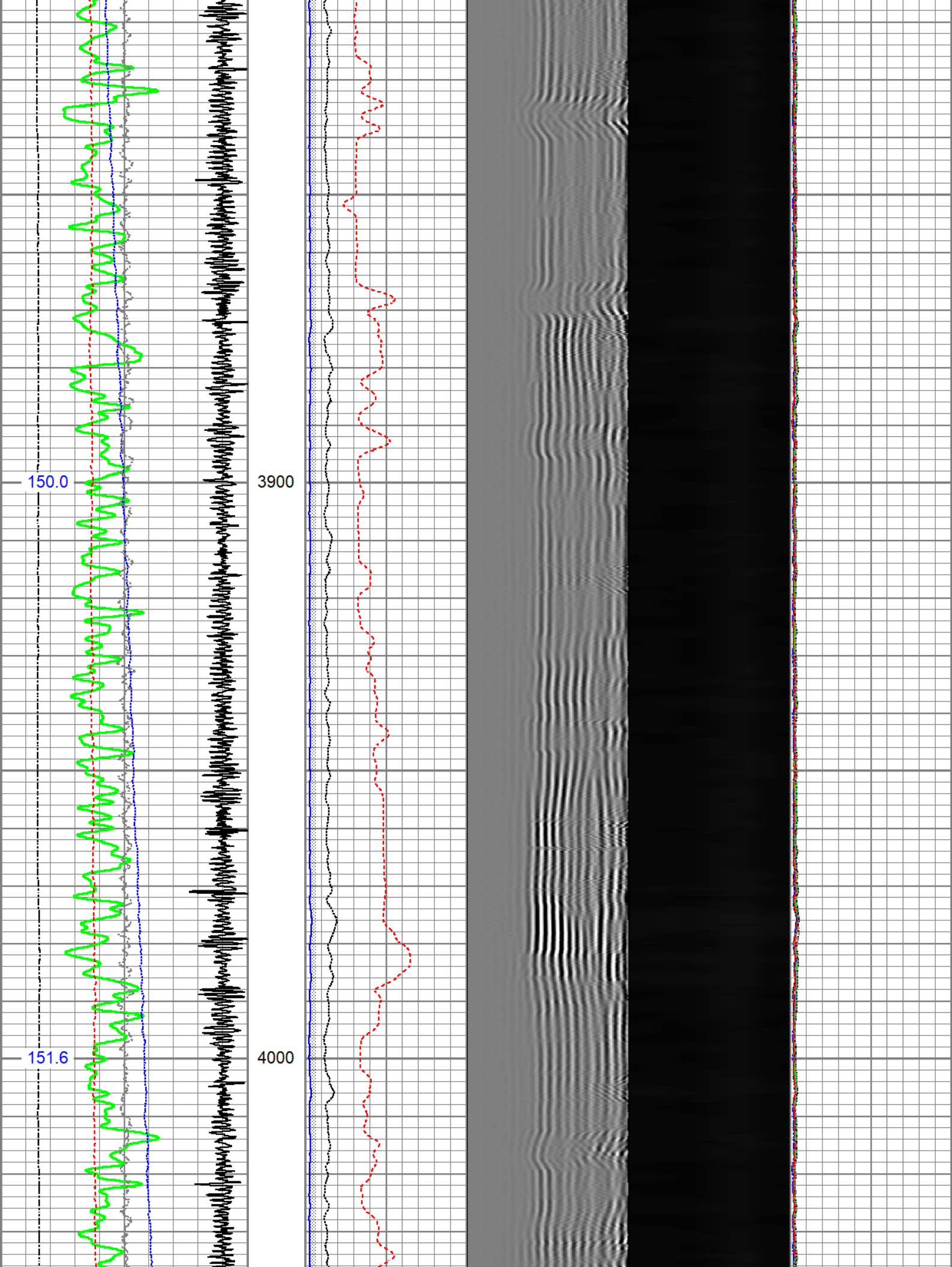




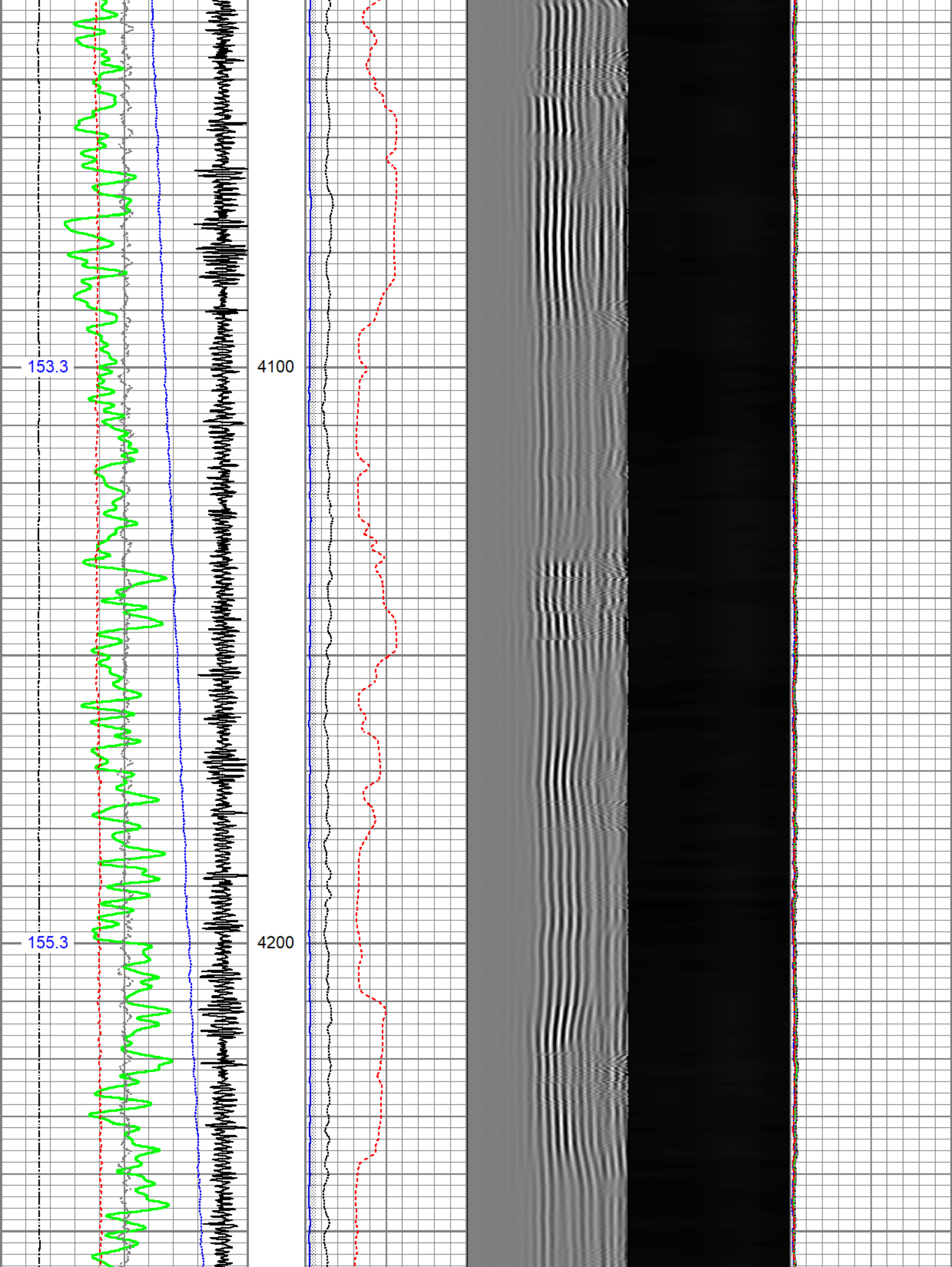


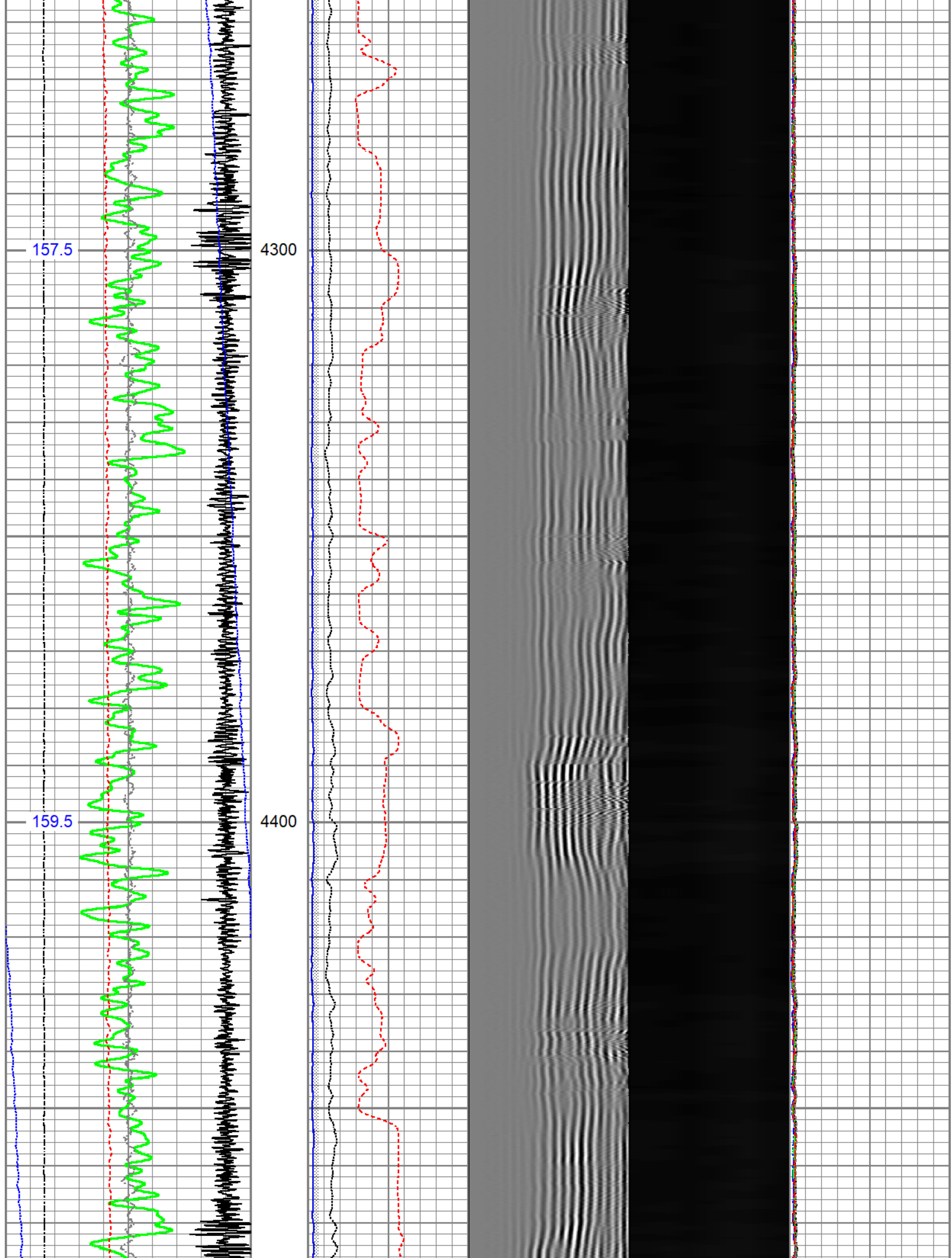


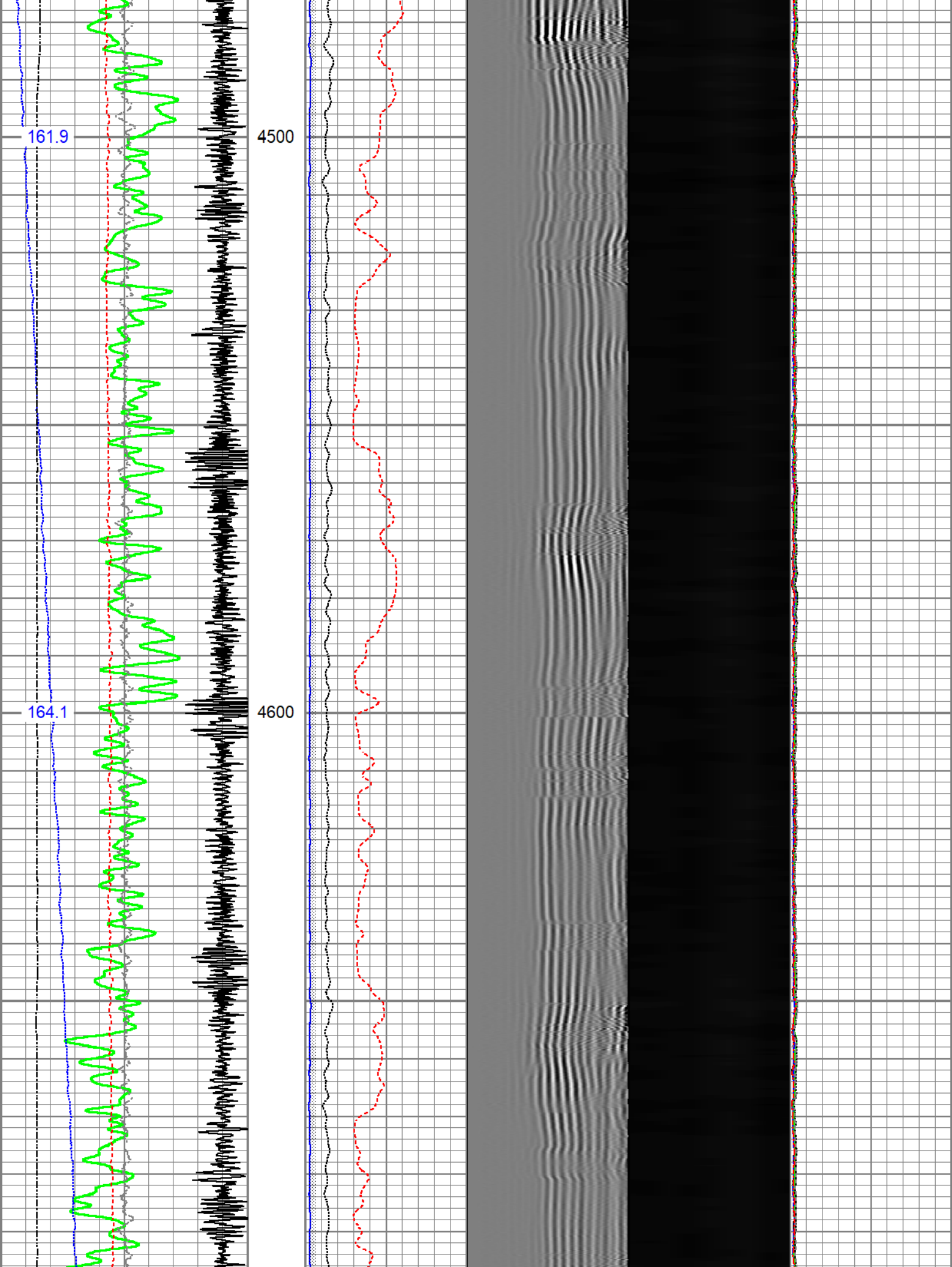


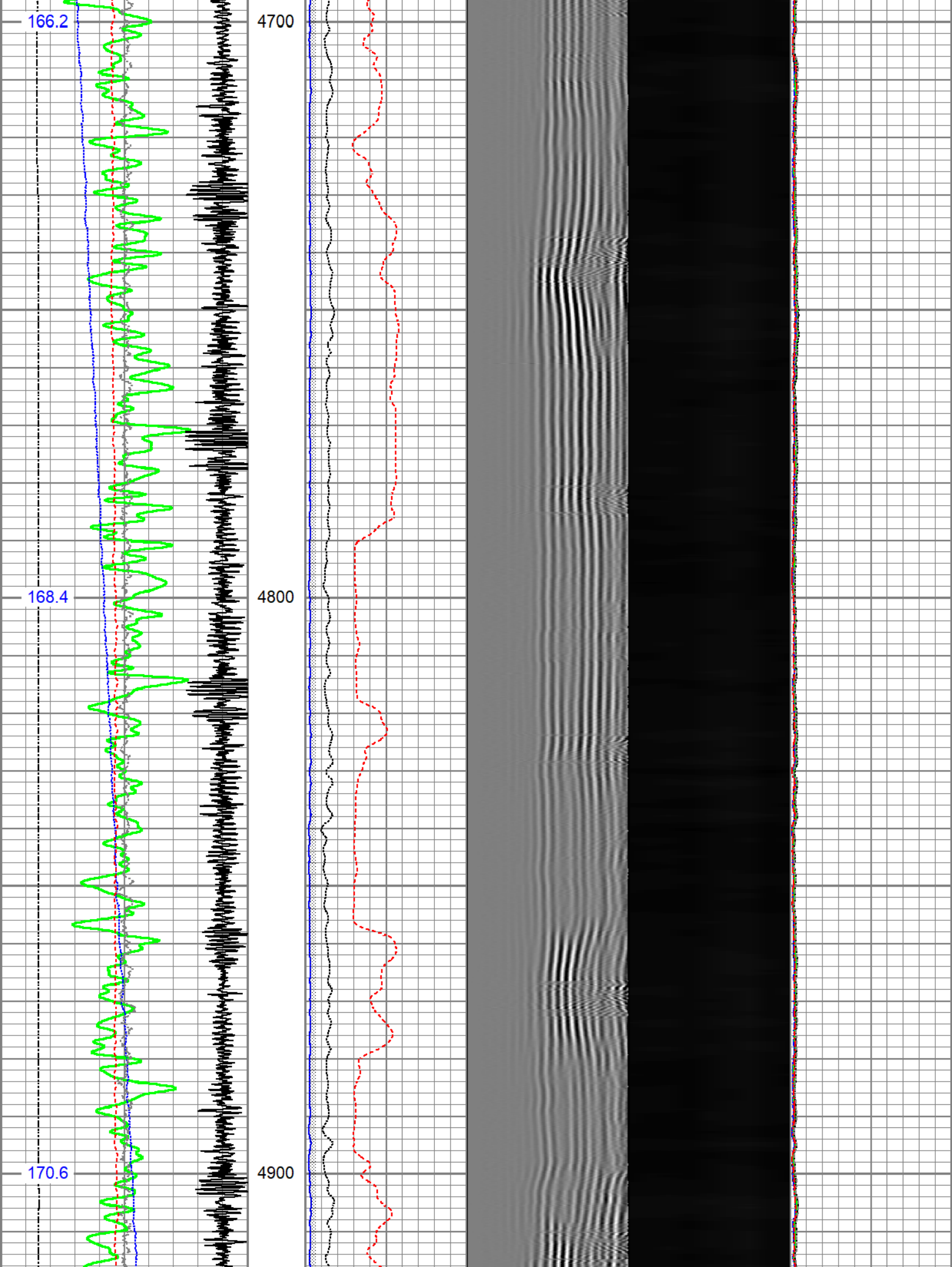




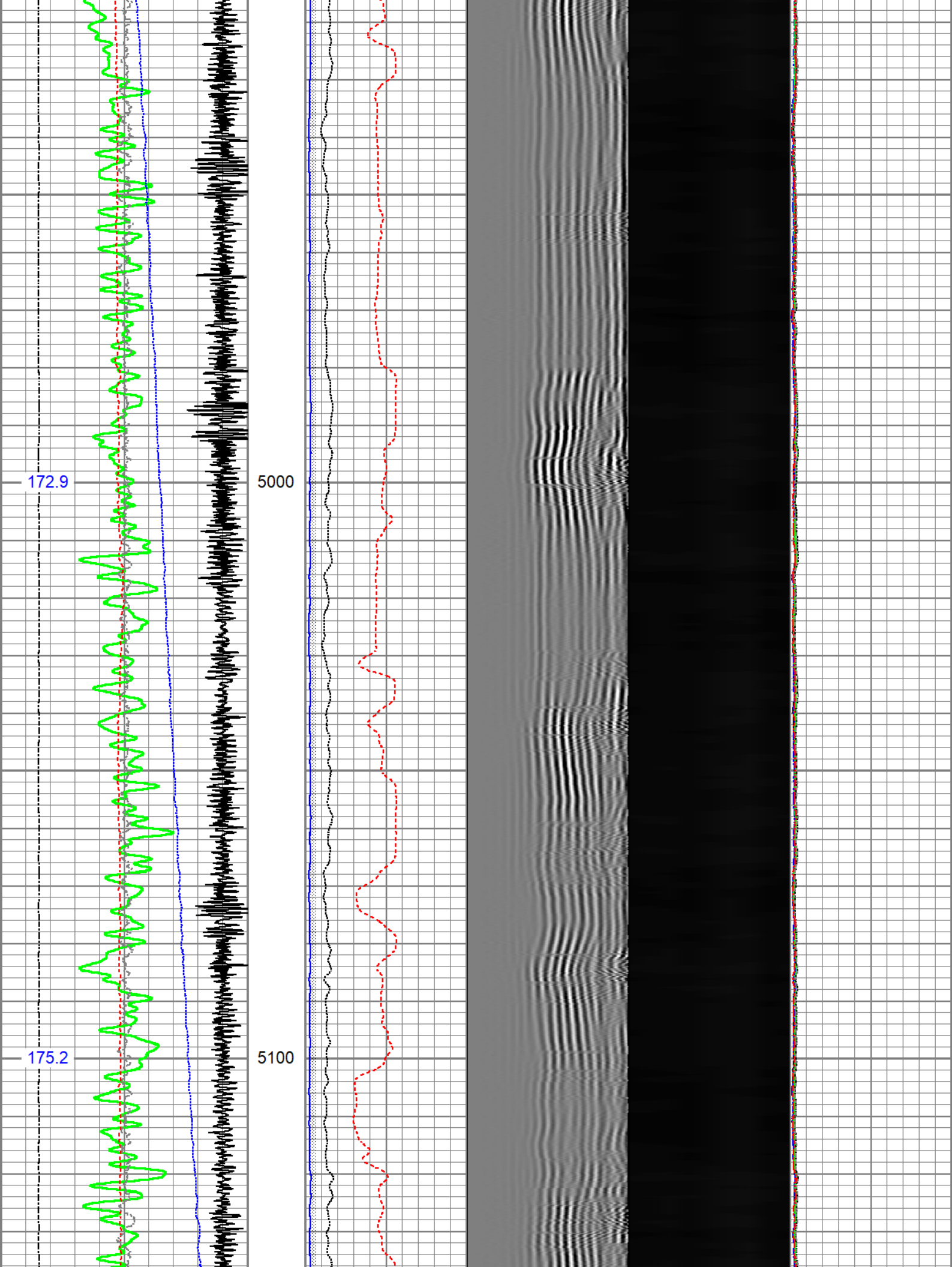


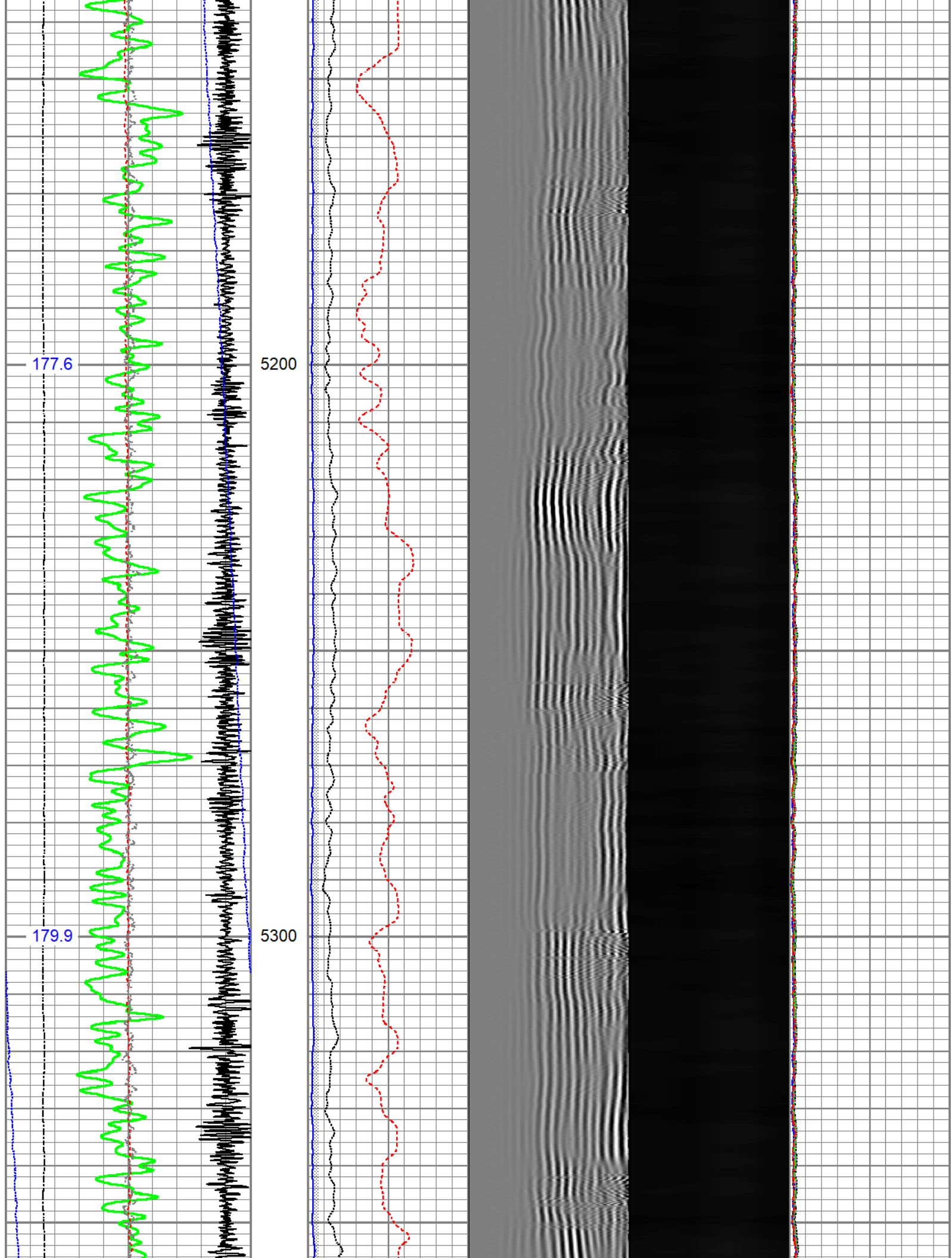




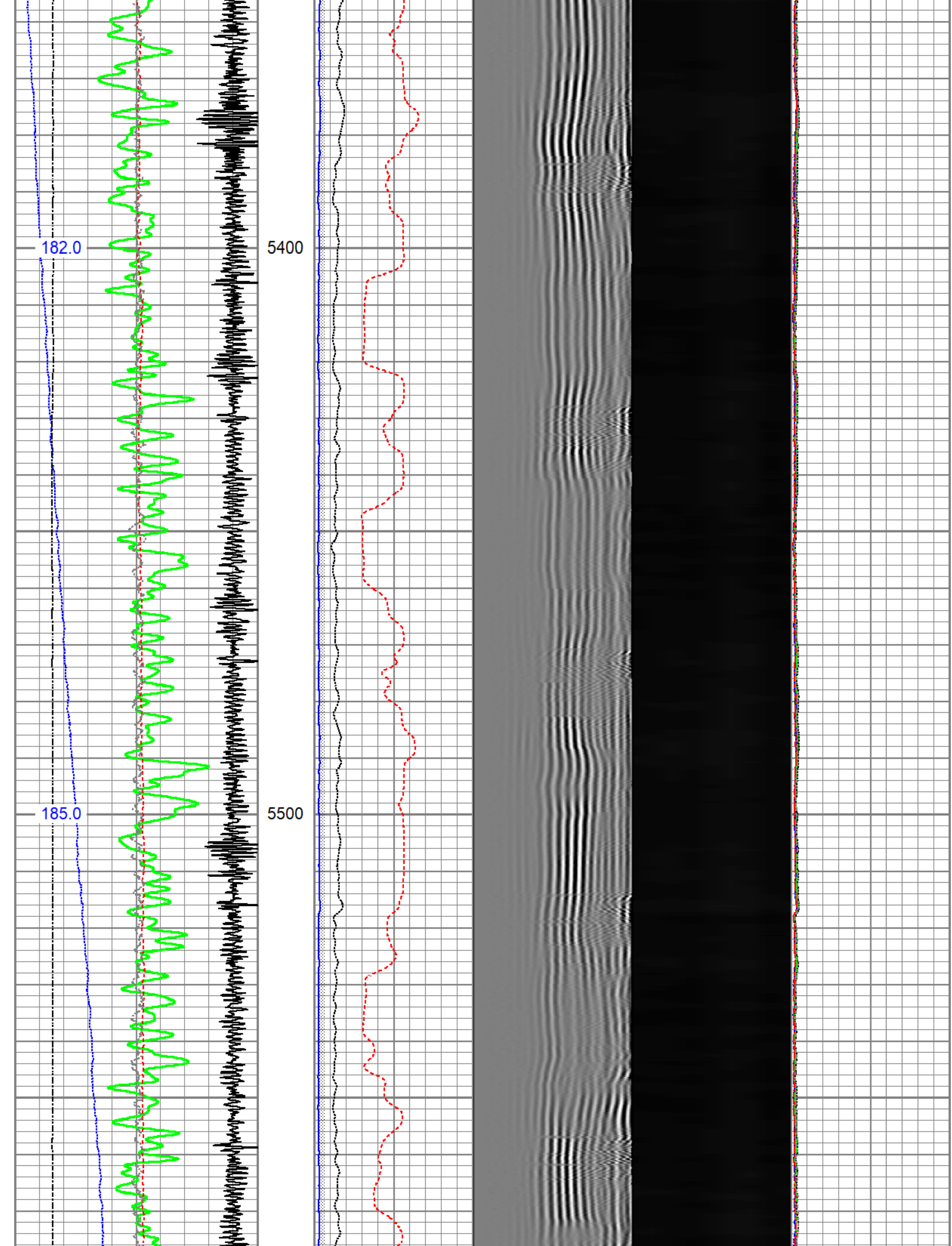


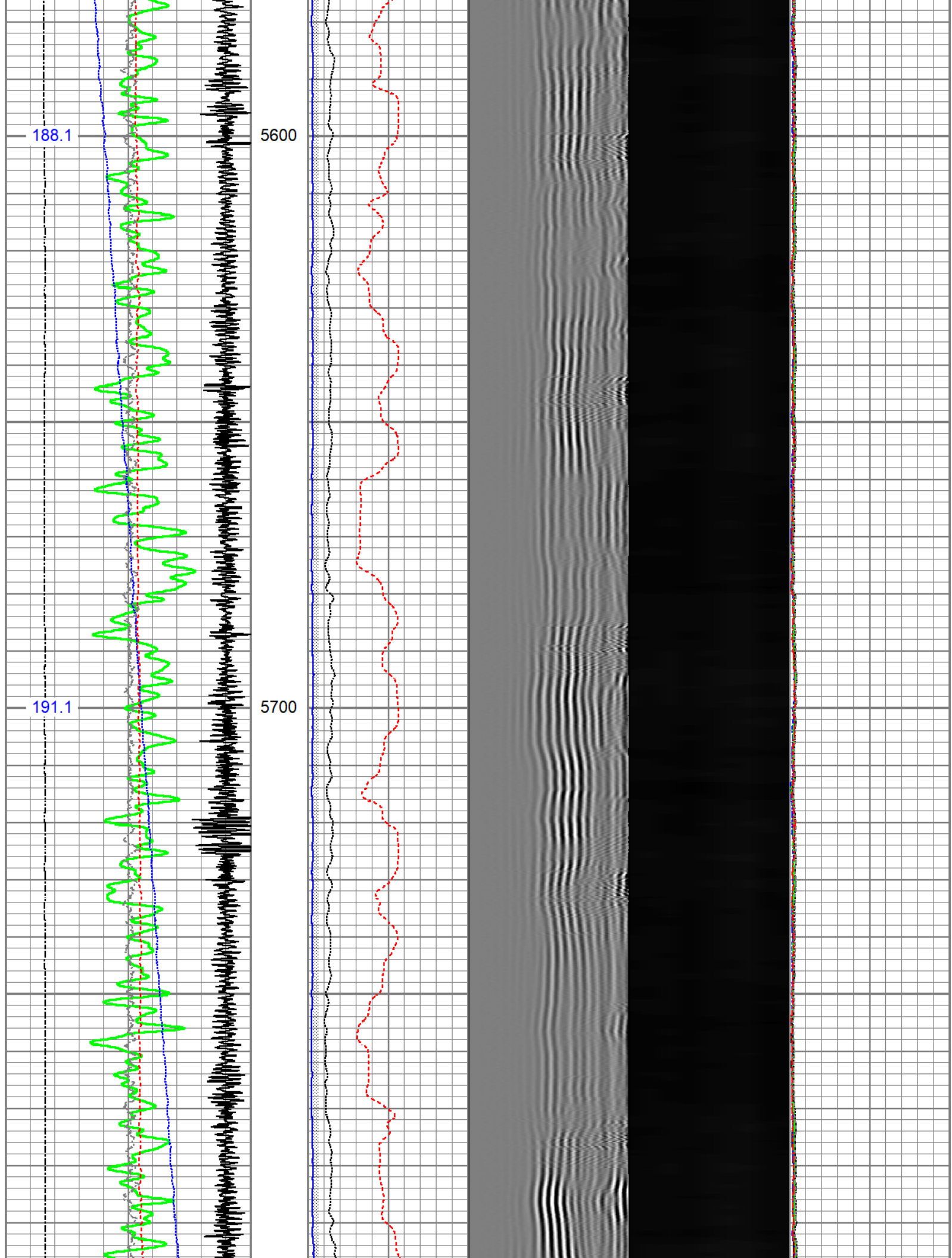


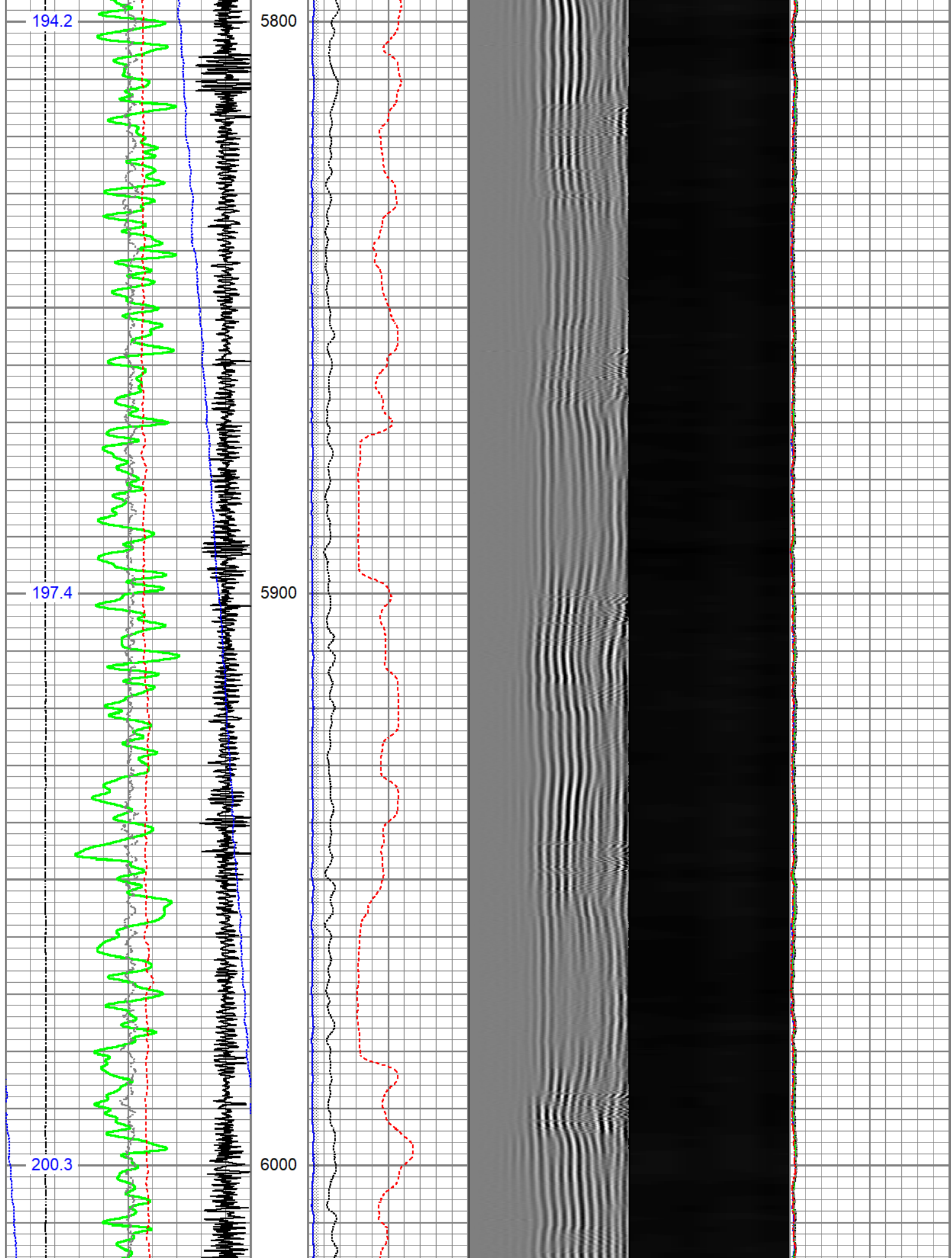


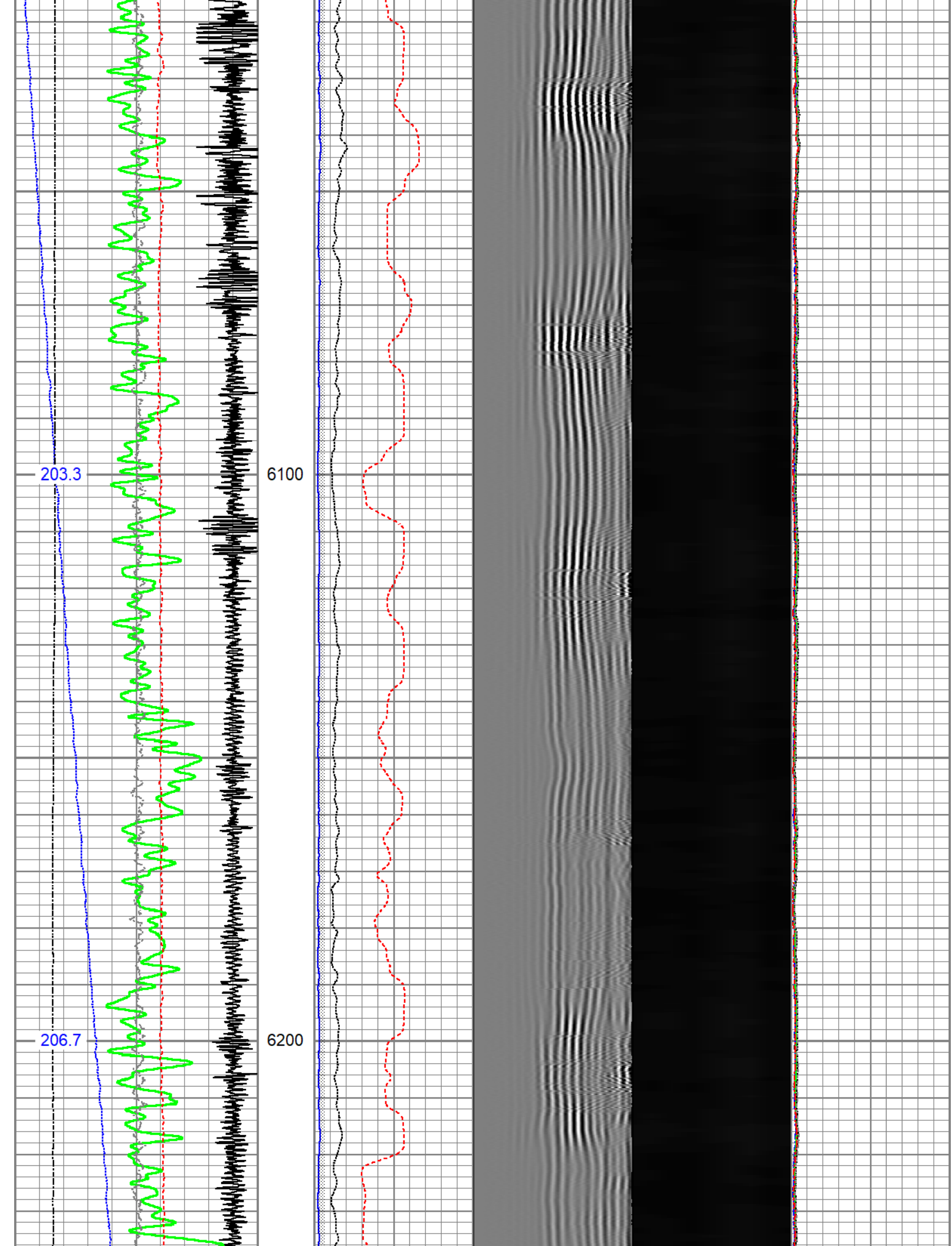




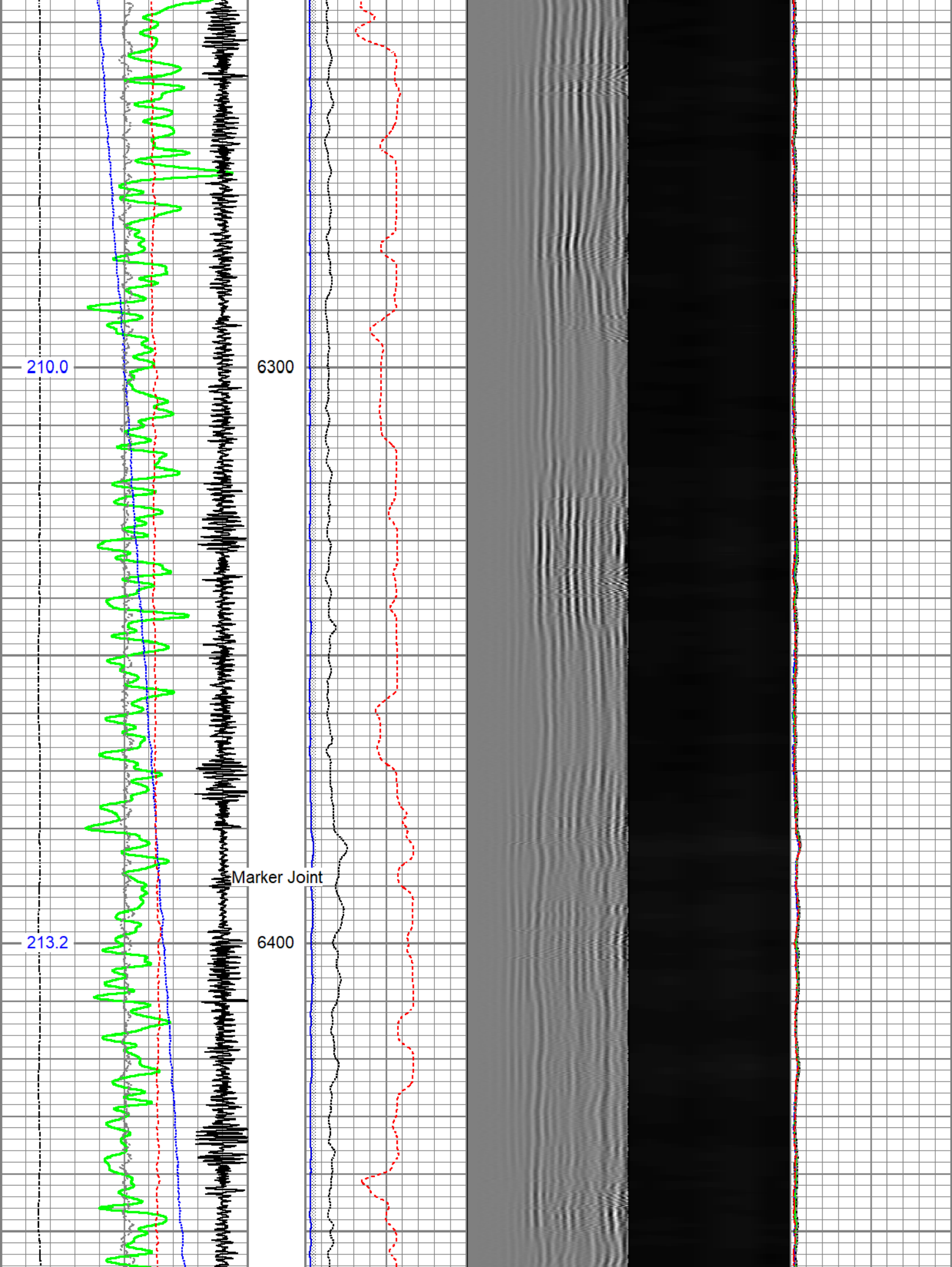


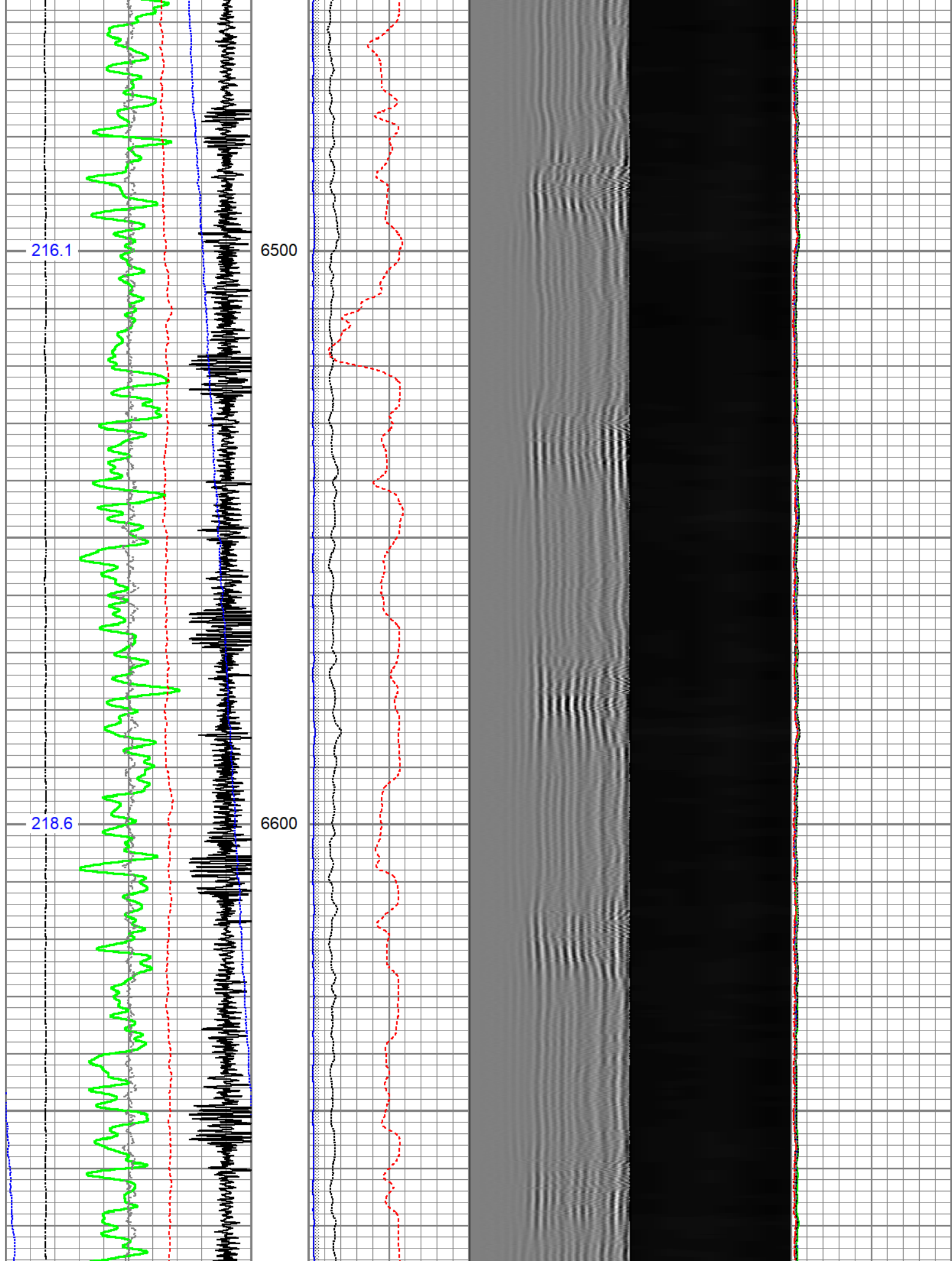


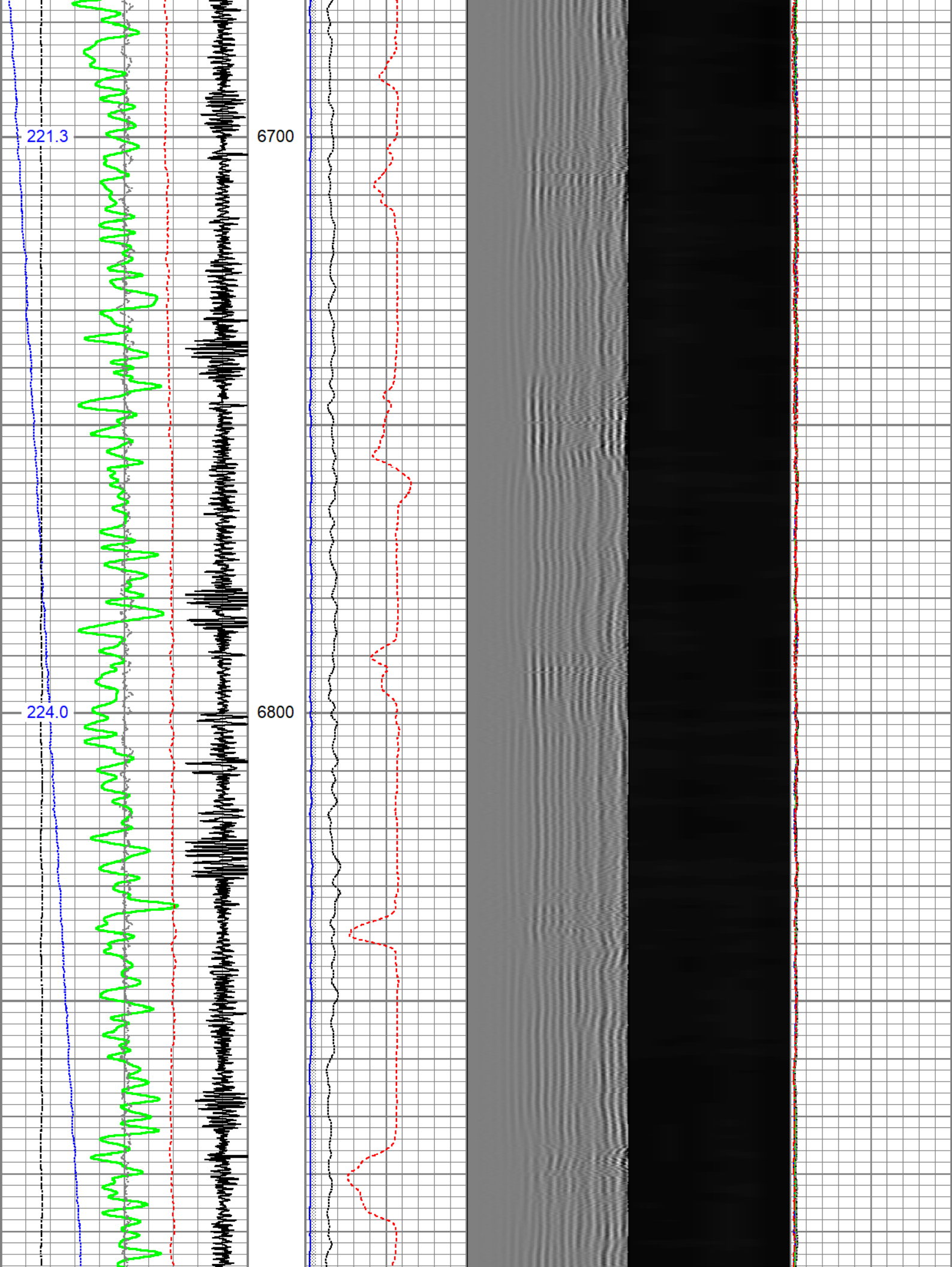


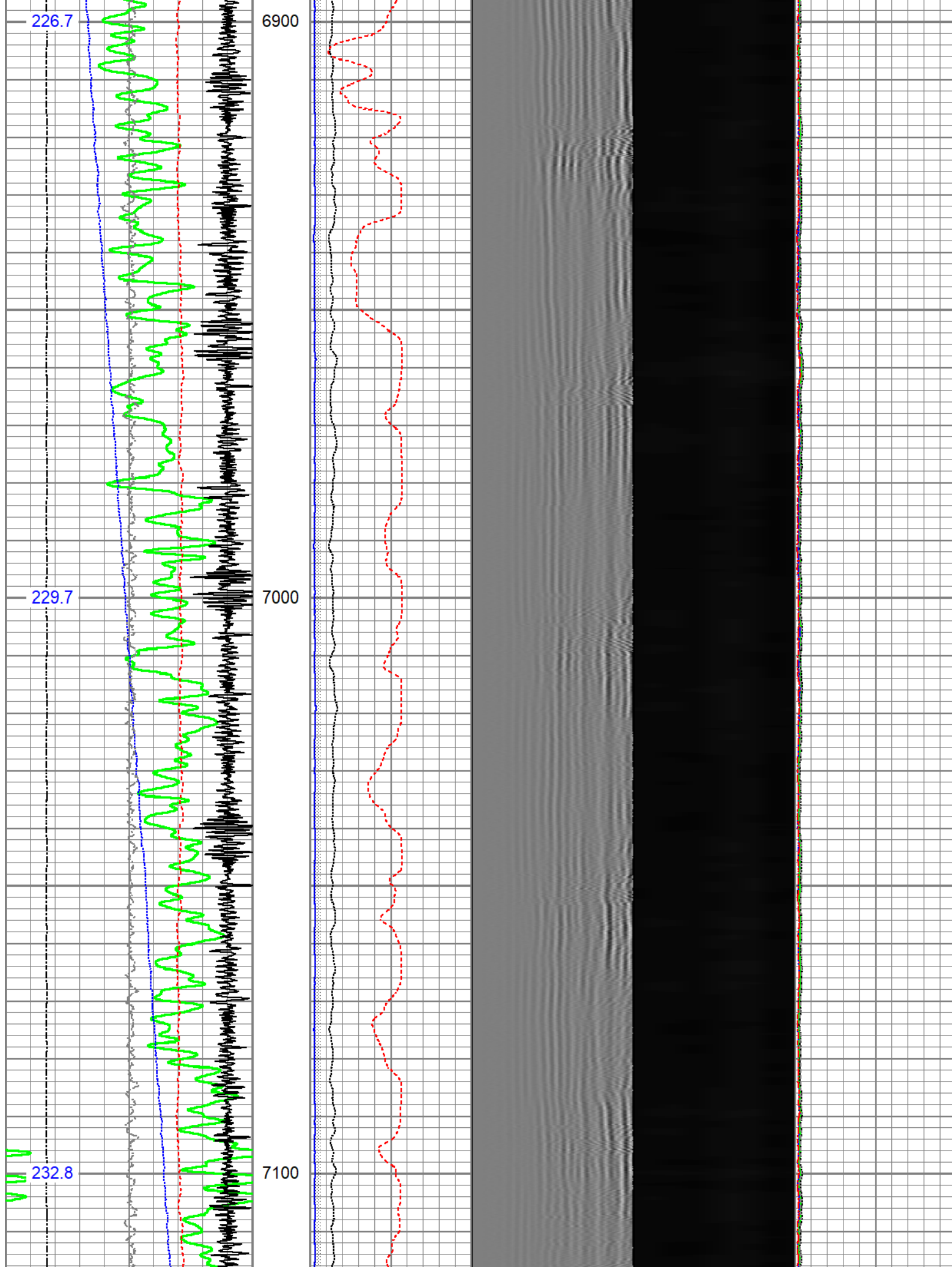




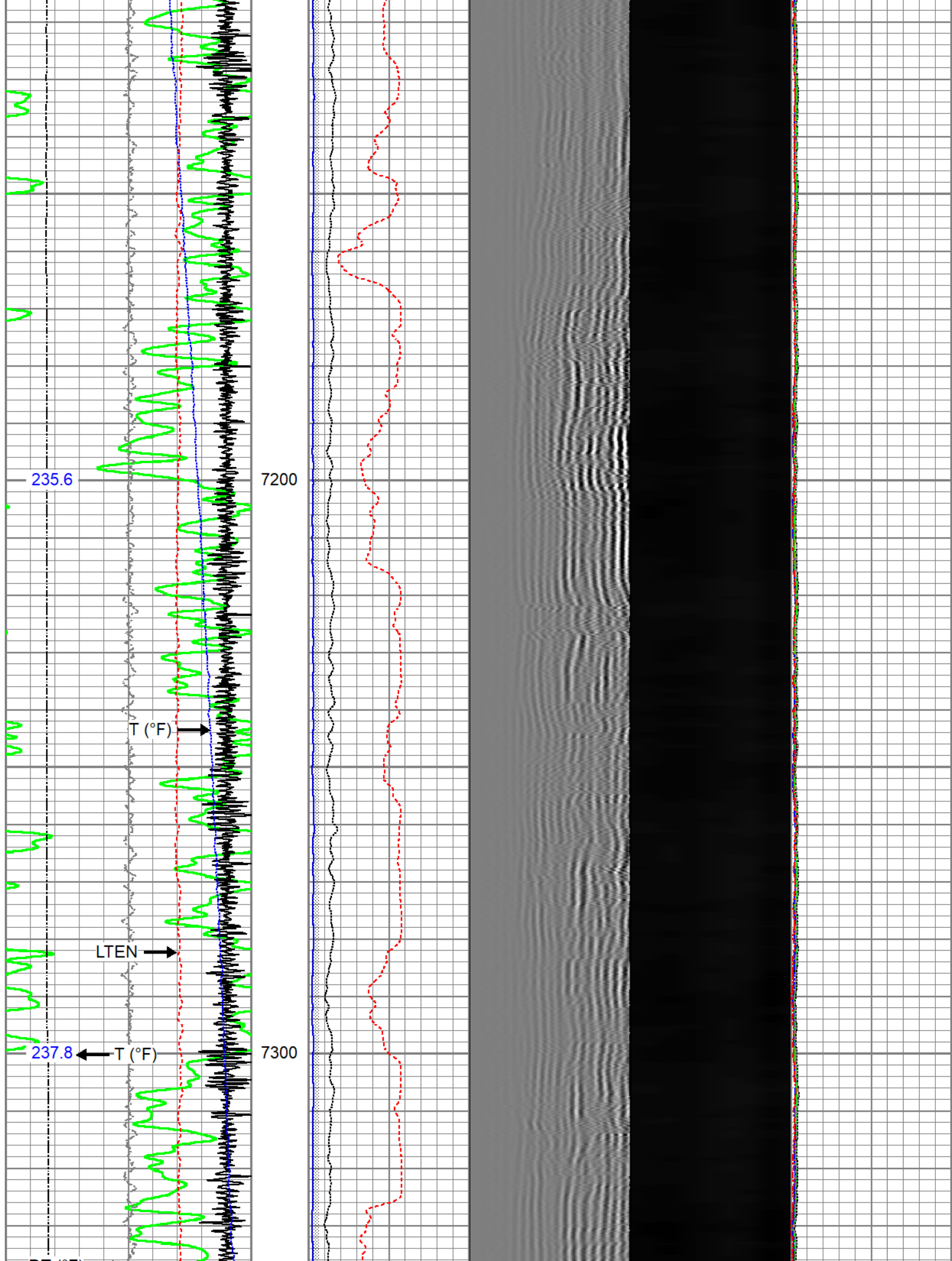


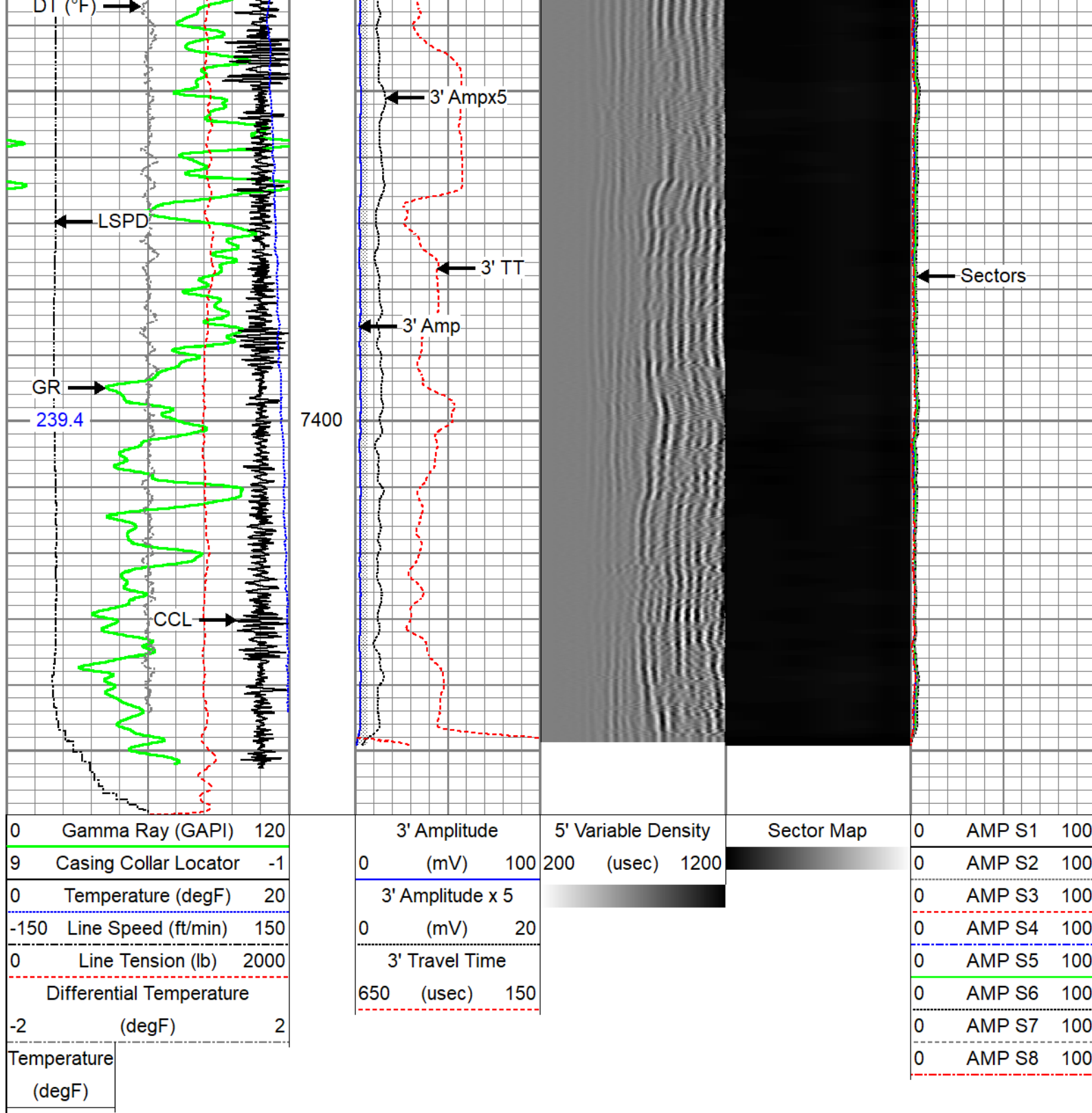












## Repeat Pass

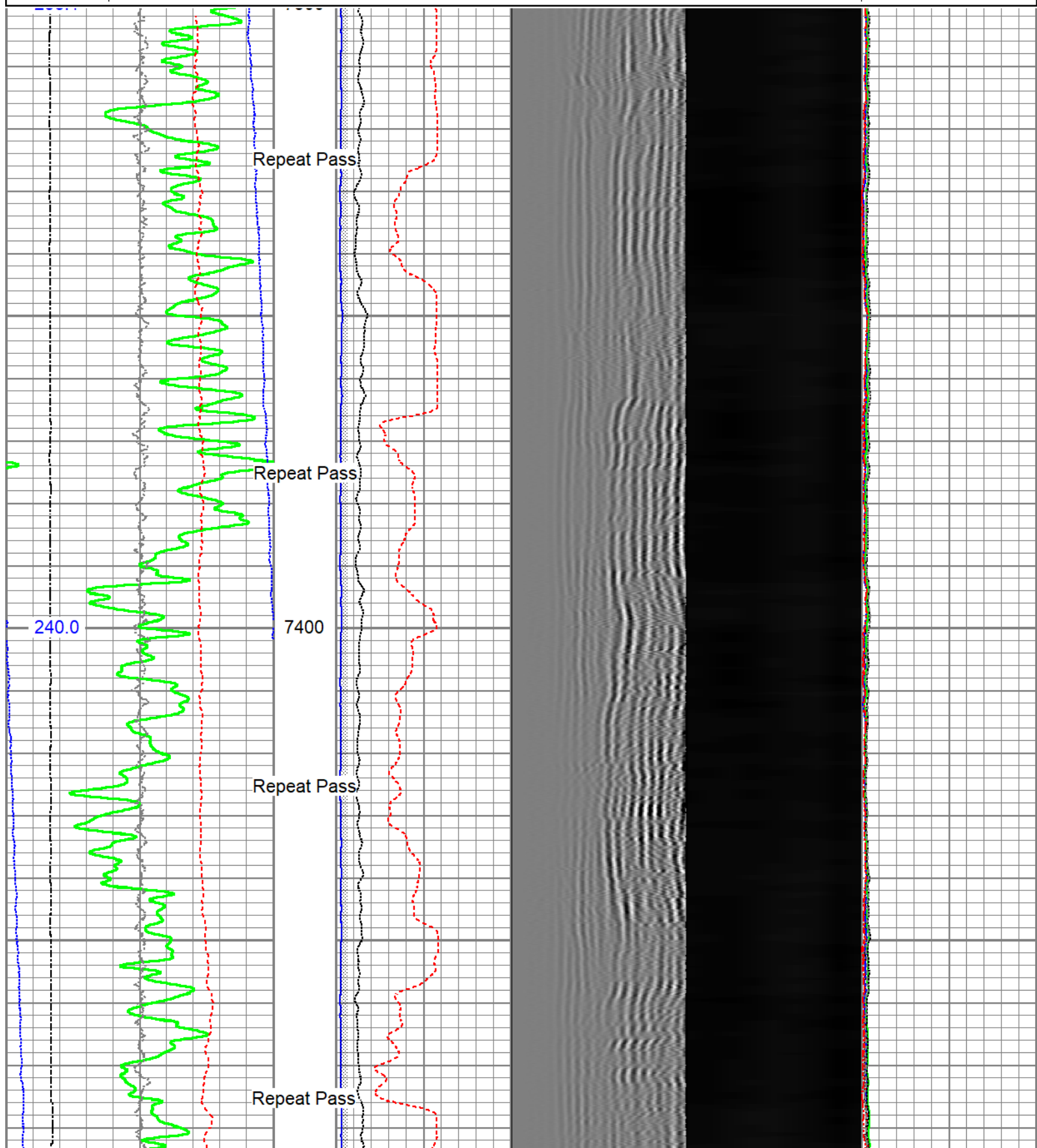
Recorded With 2500 PSI Surface Induced Pressure

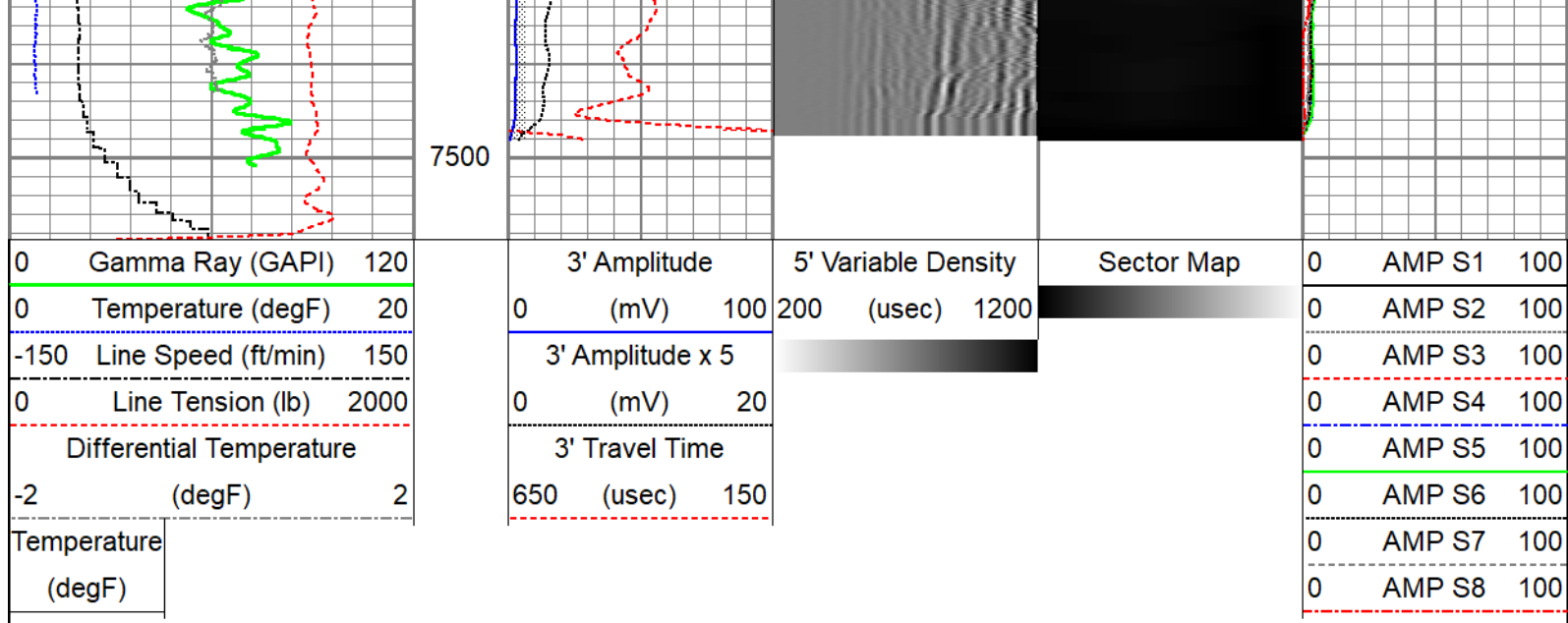



Database File noble energy\roth a32-770\noble\_roth a32-770\_rbl\_11-18-21.db  
 Dataset Pathname repeat.3  
 Presentation Format edge\_rbl\_noble  
 Dataset Creation Fri Nov 19 09:27:09 2021  
 Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	120	3' Amplitude	5' Variable Density	Sector Map	0	AMP S1	100
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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	Roth A32-770
	Field	Wattenberg
	County	Weld
	State	Colorado