



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company Noble Energy Inc
Well Guttersen YY06-766
Field Wattenberg
County Weld State Colorado

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Field Wattenberg
County Weld
State Colorado

Location: API #: 05-123-48643
SEC 30 TWP 3N RGE 63W
Permanent Datum Ground Level Elevation 4790'
Log Measured From Kelly Bushing 30 FT
Drilling Measured From Kelly Bushing
Other Services
Elevation
K.B. 4820'
D.F. ---
G.L. 4790'

Date	01-SEP-2020
Run Number	One
Depth Driller	17354 FT
Depth Logger	6846 FT
Bottom Logged Interval	6834 FT
Top Log Interval	Surface
Open Hole Size	8.5"
Type Fluid	Water
Density / Viscosity	8.34 lb/gal
Max. Recorded Temp.	223°F
E. estimated Cement Top	See Log
Time Well Ready	ROA
Time Logger on Bottom	10:30
E equipment Number	HD-361
Location	Platteville, CO
Recorded By	G. Lueck
Witnessed By	Andy Dawkins
Borehole Record	
Run Number	Bit From To Size Weight From To
Casing Record	Size (in) Wgt (lbs/ft) Grade Top Bottom
Surface Casing	9 5/8 36 J-55 Surface 1933.6 FT
Intermediate #1	5 1/2 17 P-110 CYHP Surface 17342.7 FT
Intermediate #2	
Inner	

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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 6182.9 FT
Adjusted -40 FT to correlate to Marker Joint
Log ran with 2500 PSI Surface Induced Pressure
Logging tools were clean and free of debris upon completion of operations
Thank you for choosing Reliance Oilfield Services, LLC!!

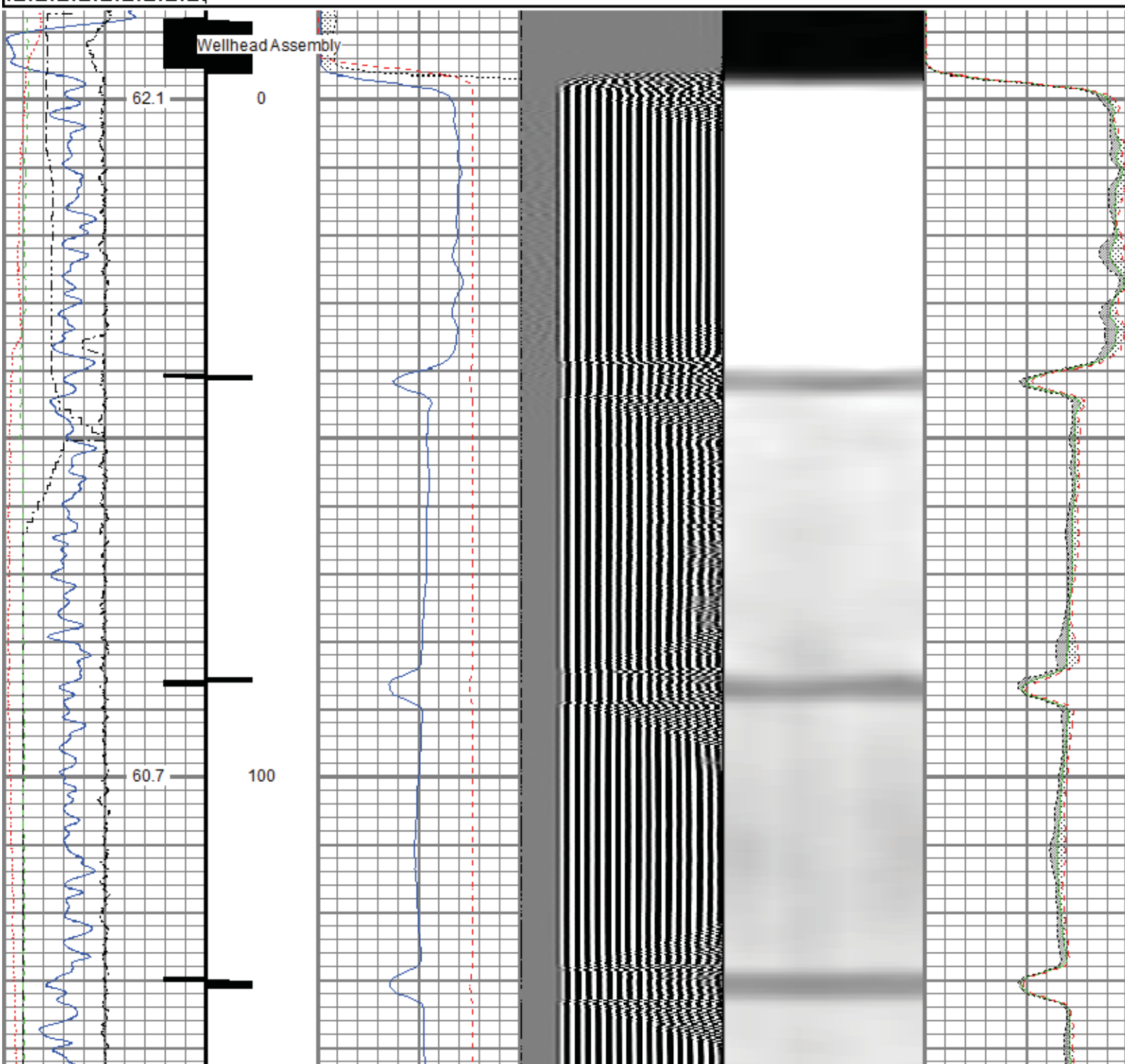
Main Pass

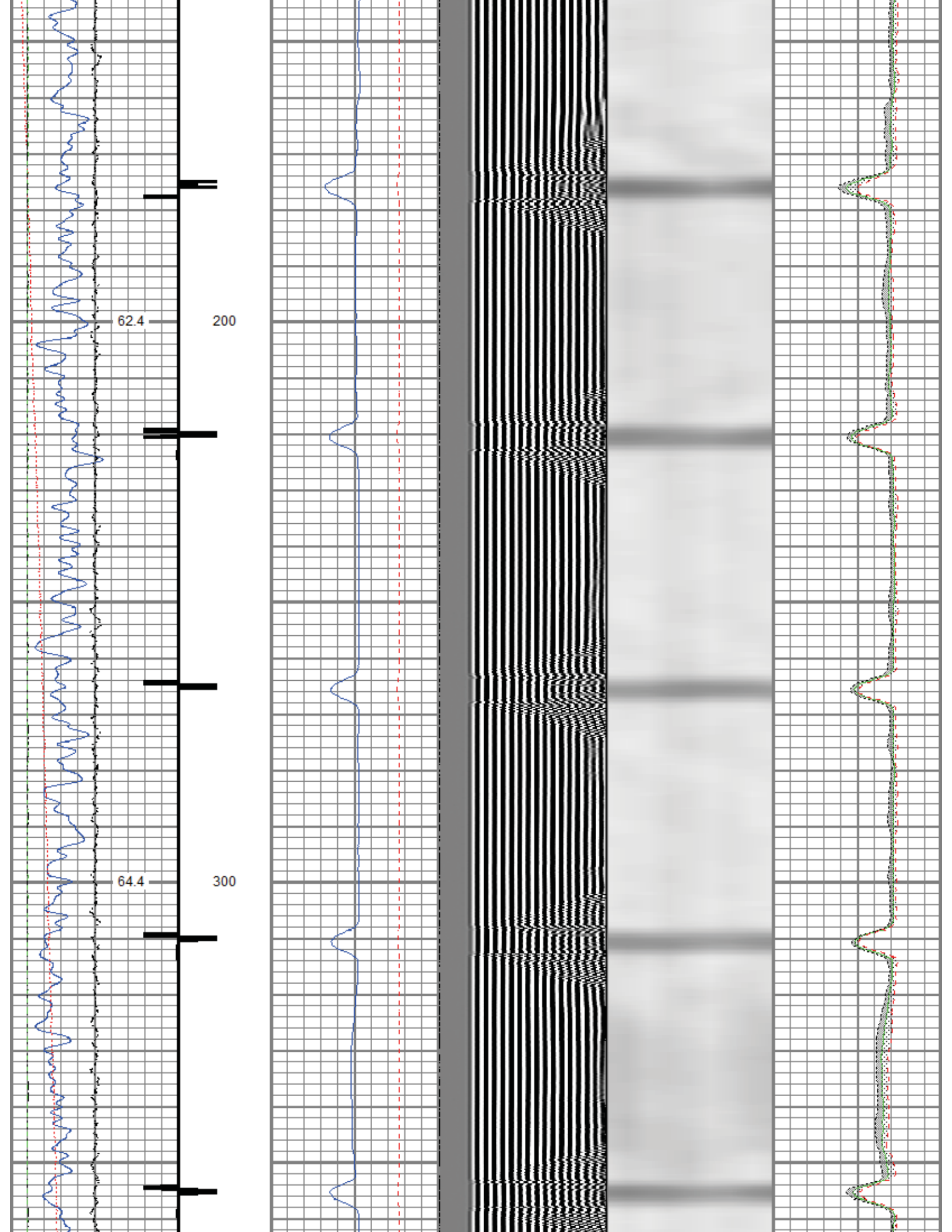


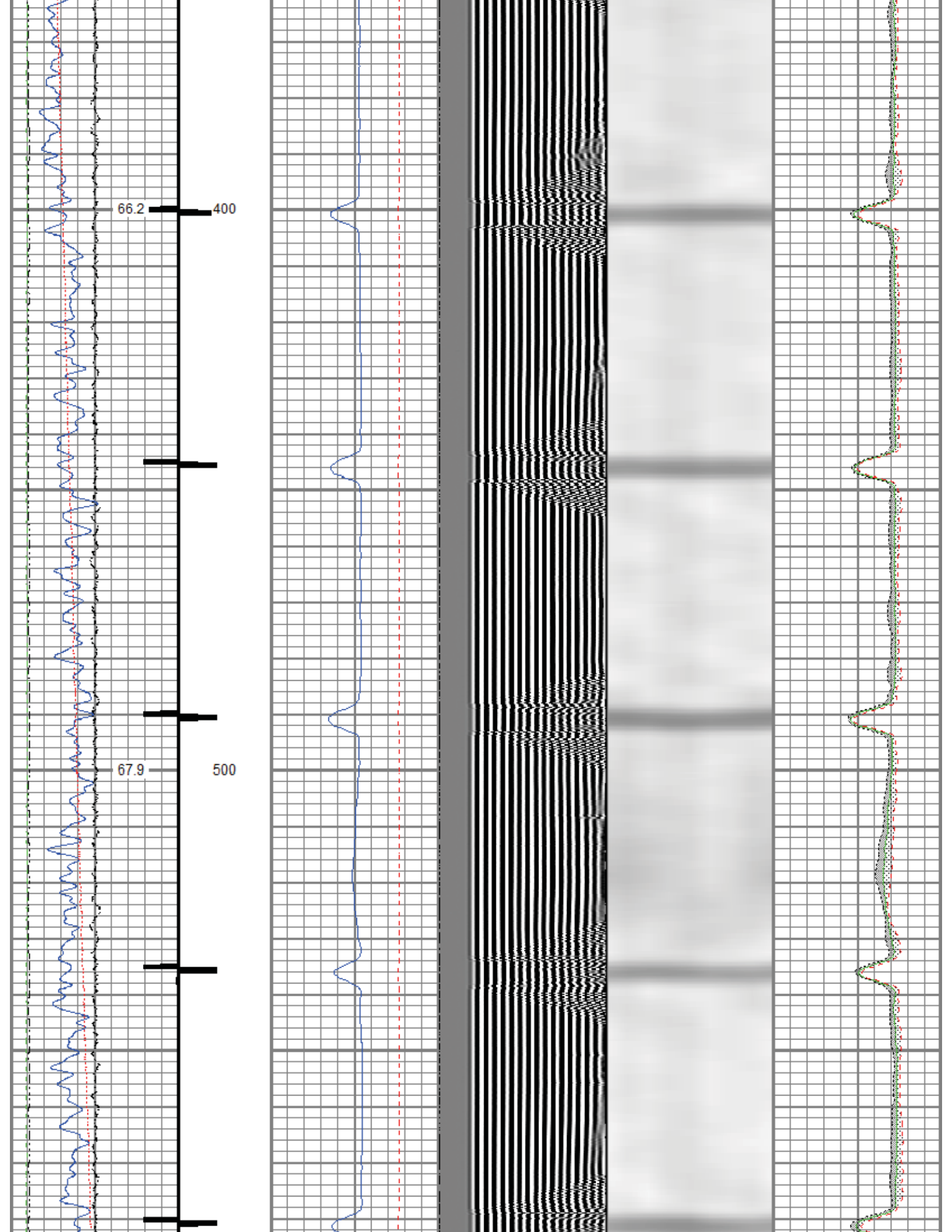
Recorded With 2500 PSI Surface Induced Pressure

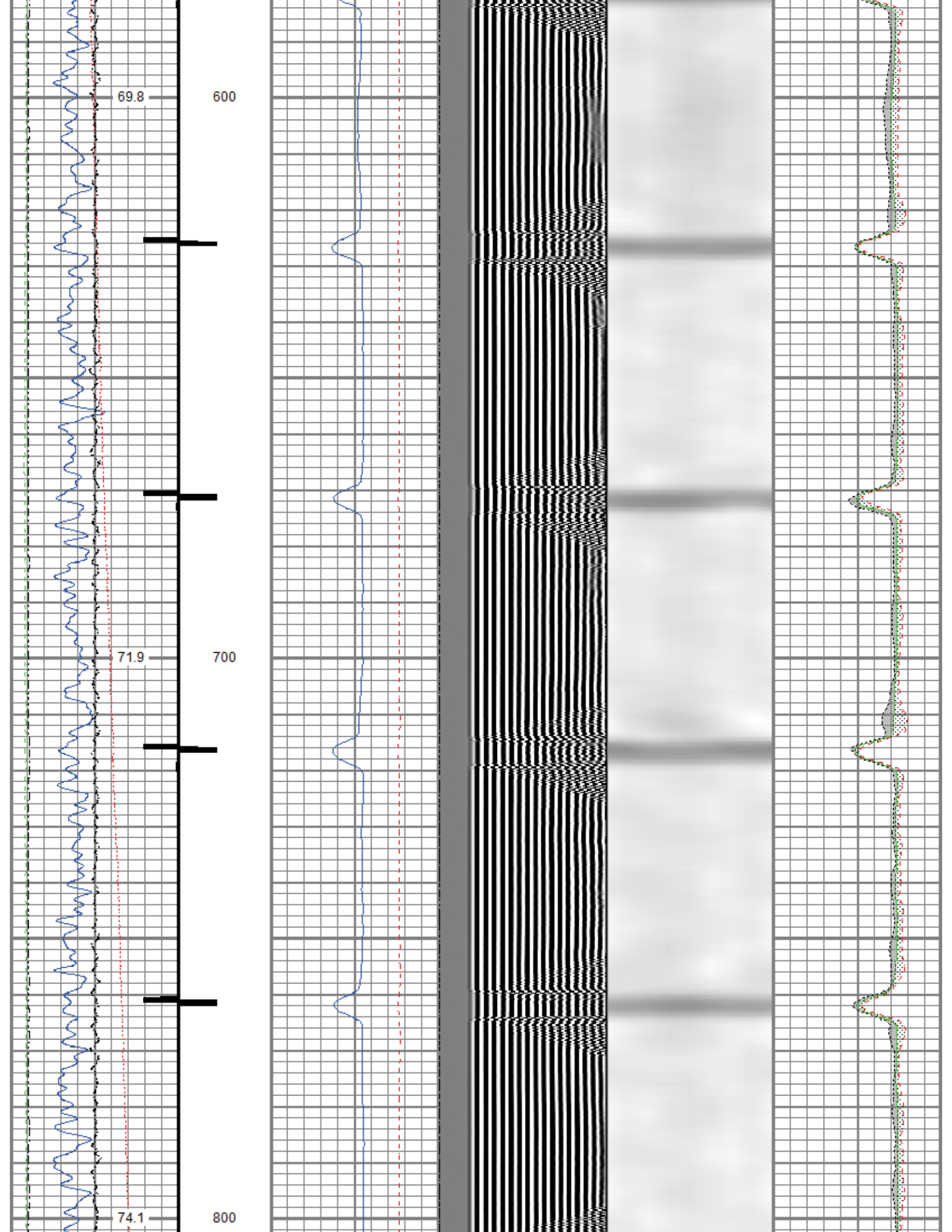
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 Dataset Pathname pass8.1
 Presentation Format ros_radri_noble
 Dataset Creation Tue Sep 01 11:41:43 2020
 Charted by Depth in Feet scaled 1:240

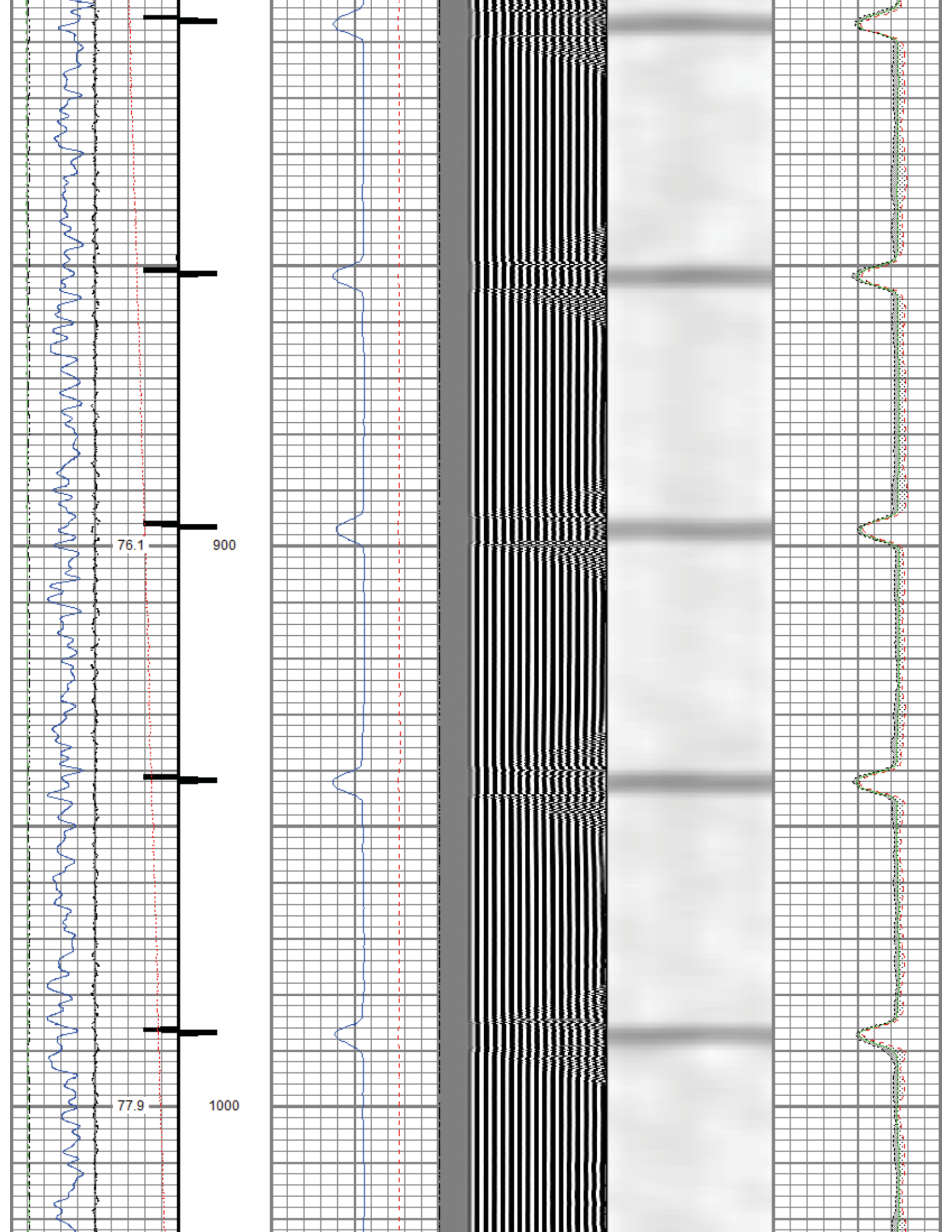
Gamma Ray	0	3' Amplitude (mV)	100	5' Variable Density Log	Sector Map	0	Average Amplitude	100
(GAPI)	120	3' Amplitude x 5	200	(usec)	1200		Minimum Amplitude	
Casing Collar Locator		0	(mV)	20		0	100	
0 Temperature (degF)	20	3' Travel Time					Maximum Amplitude	
Line Speed		650	(usec)	150		0	100	
-150 (ft/min)	150							
0 Line Tension (lb)	2000							
Differential Temperature								
-2 (degF)	2							

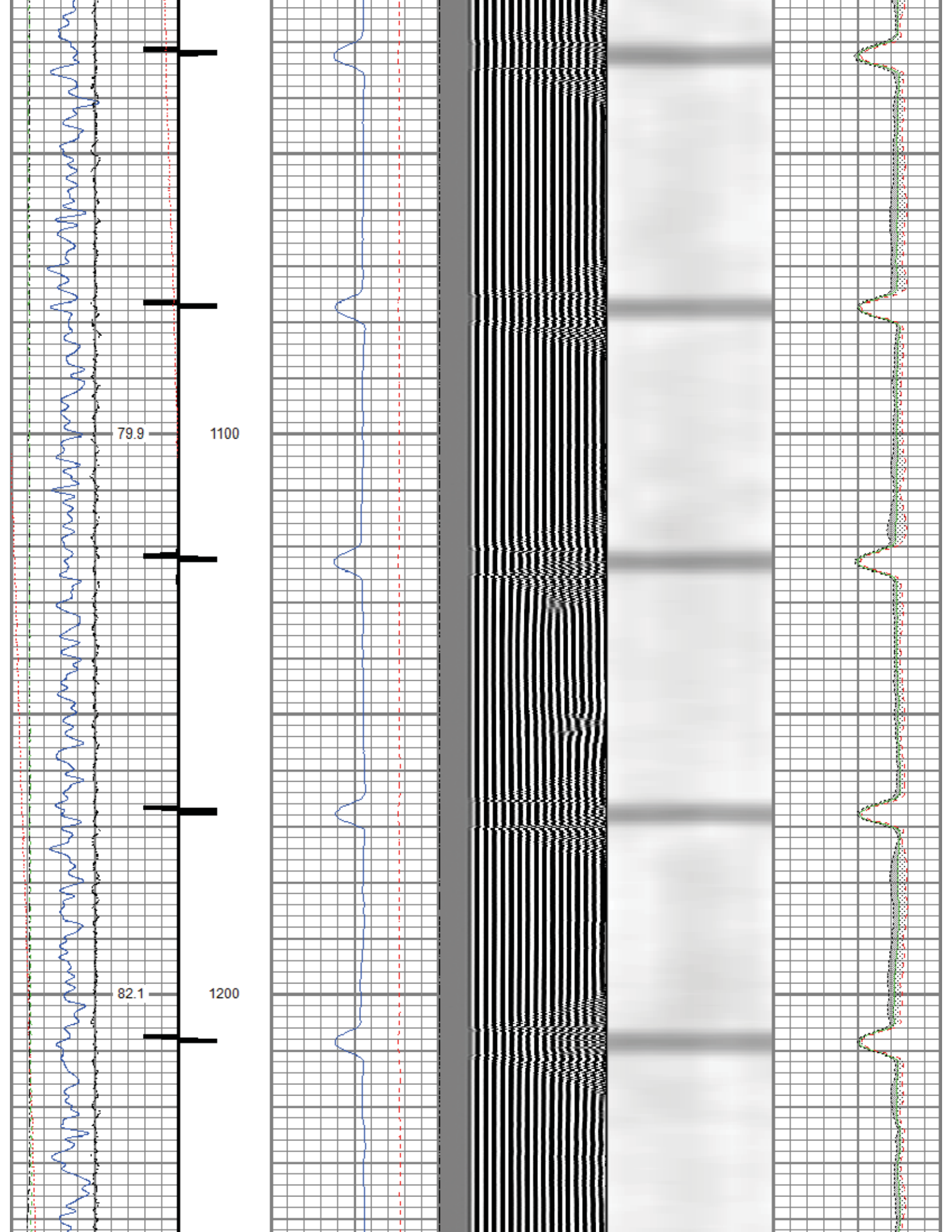


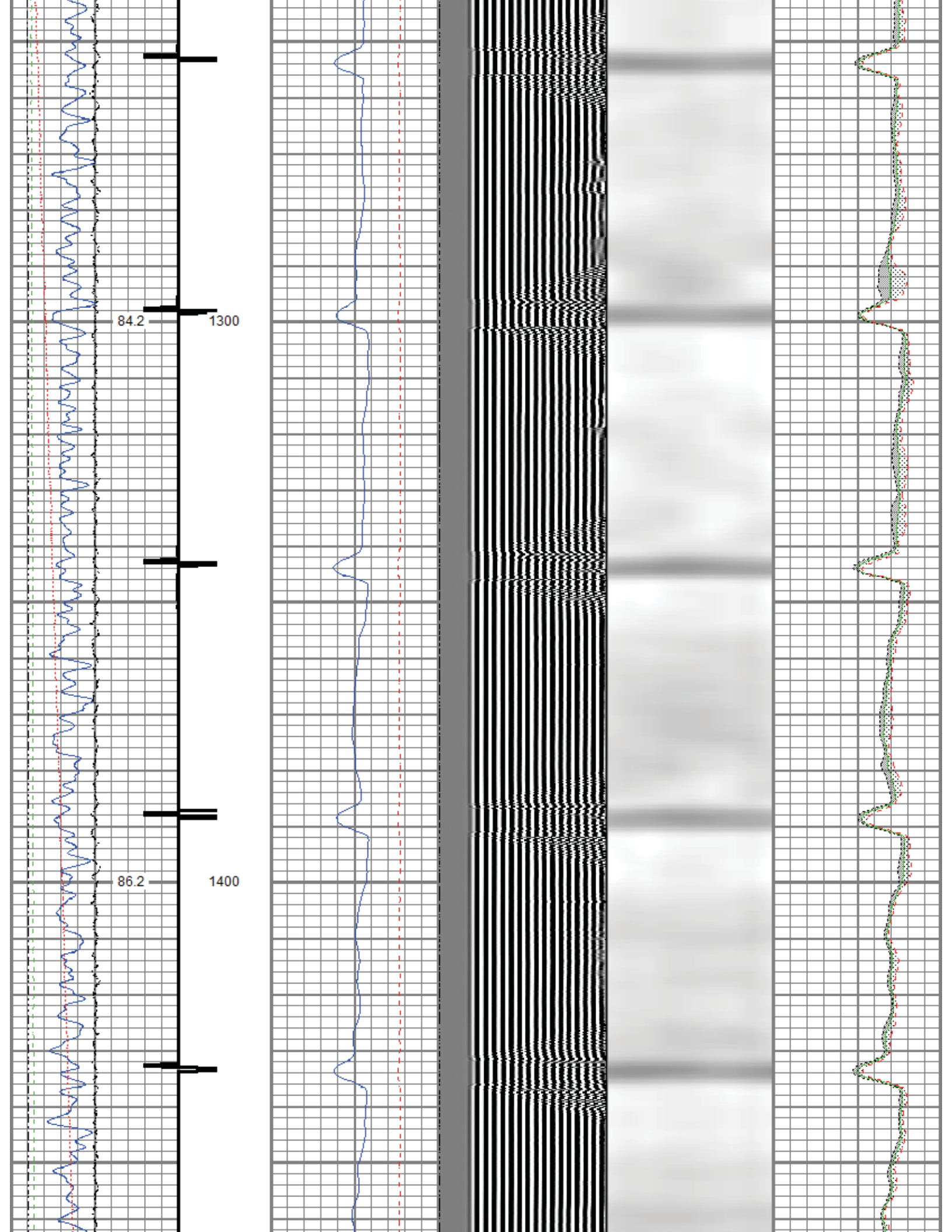


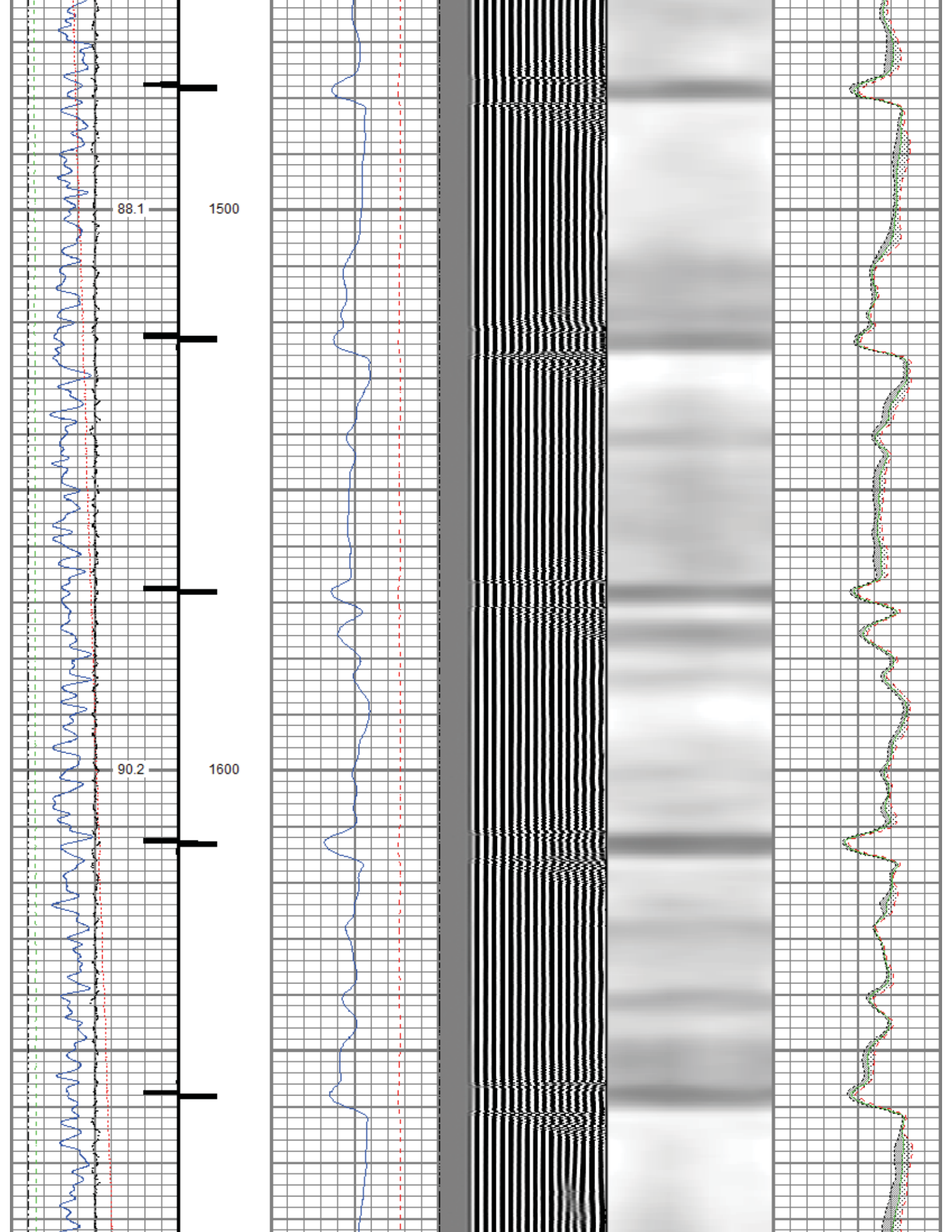


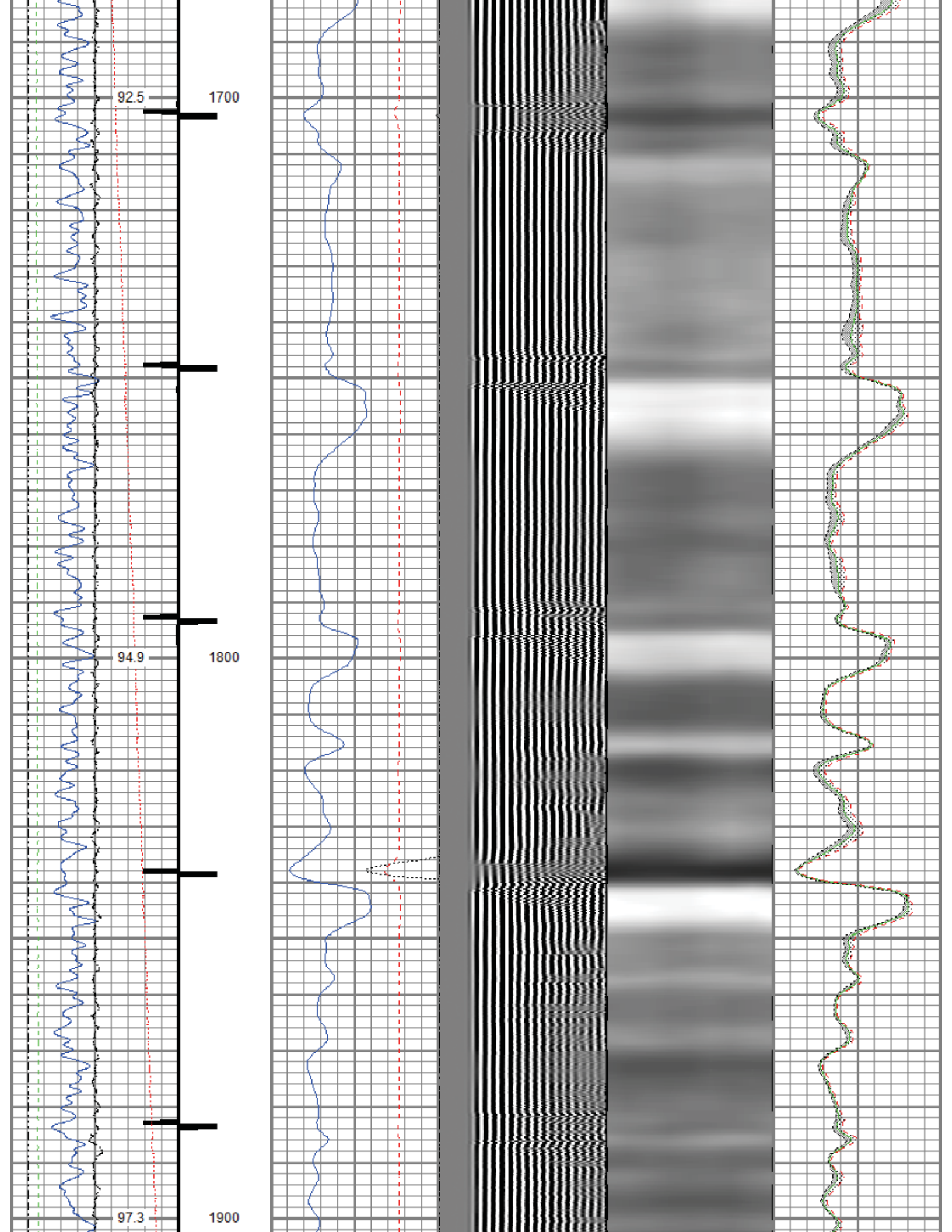


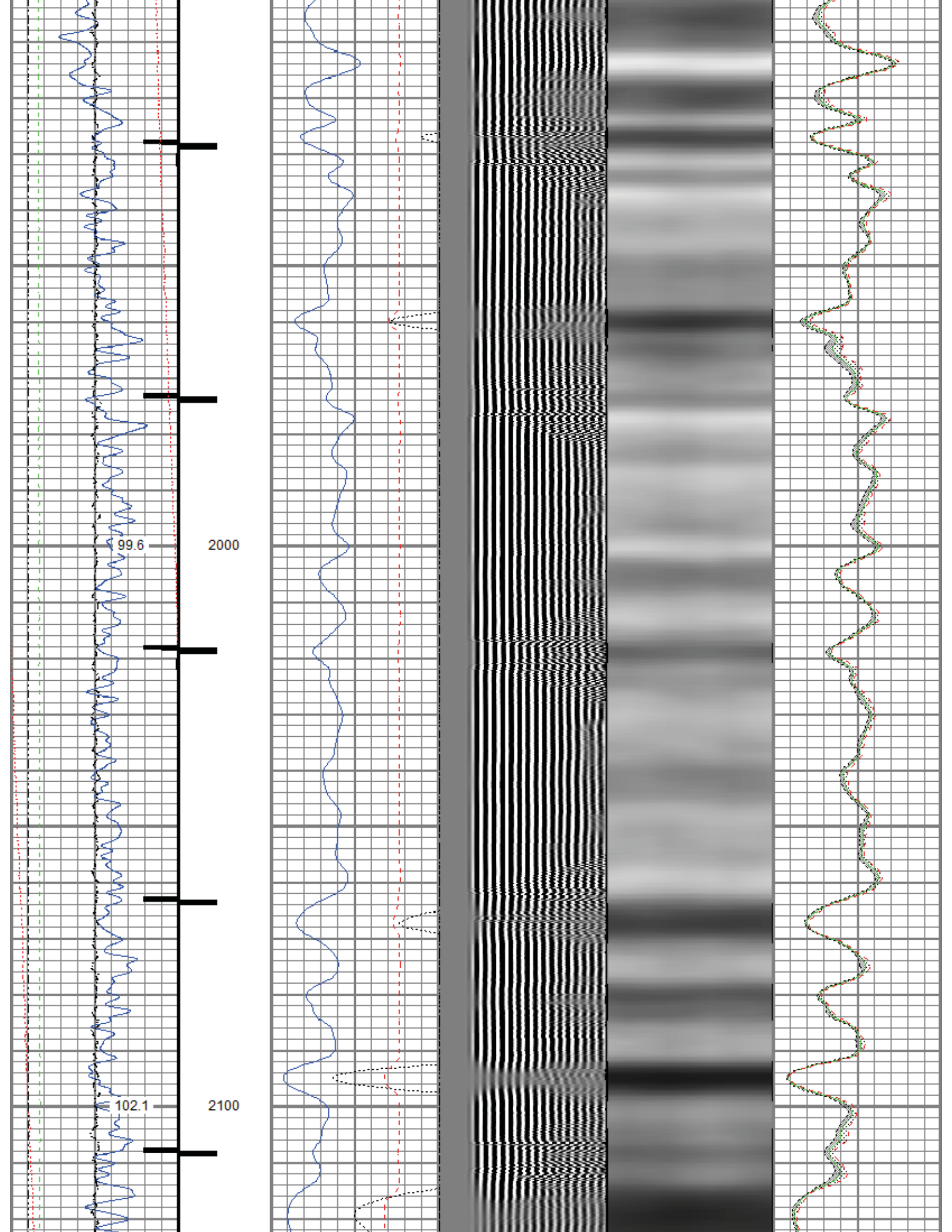


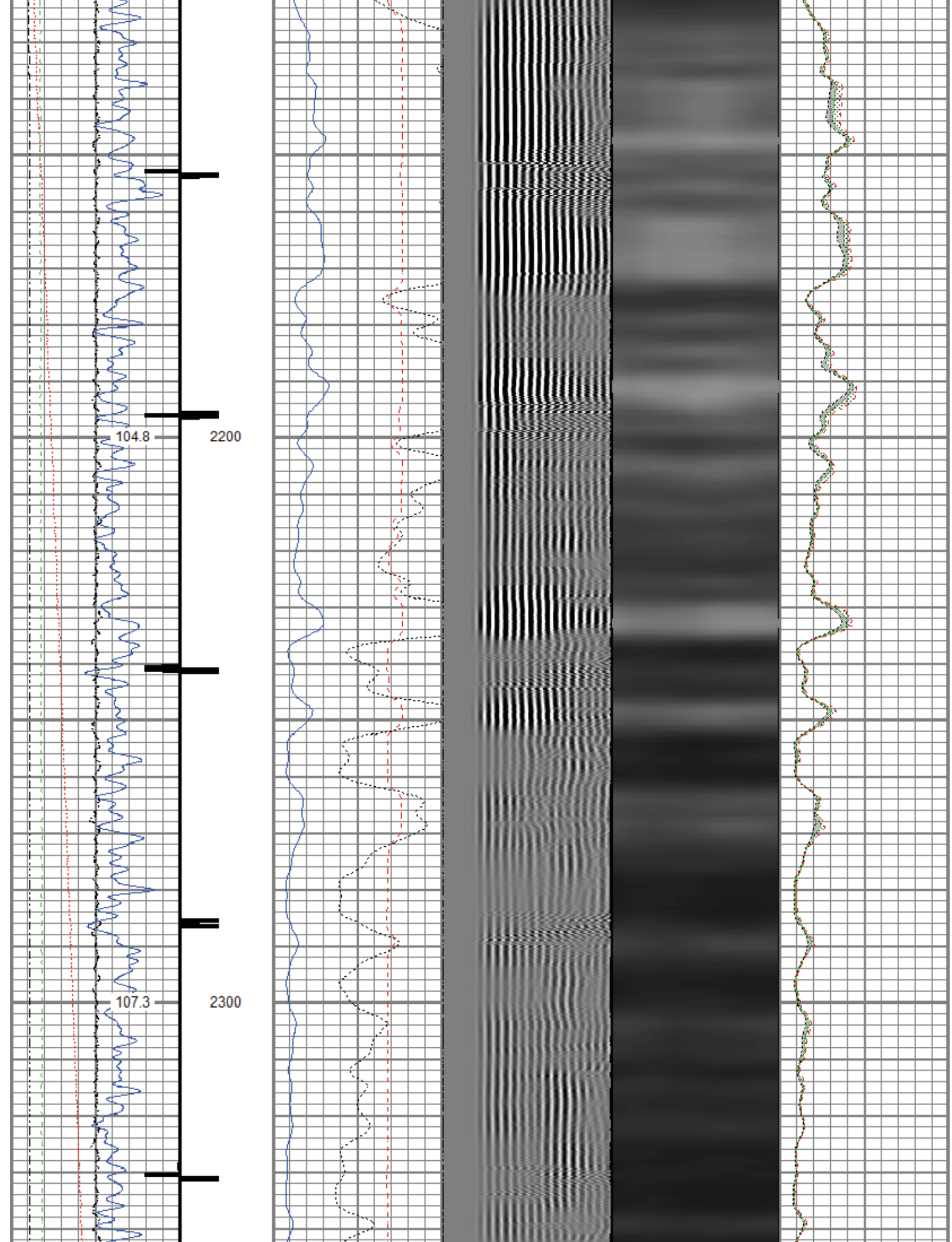


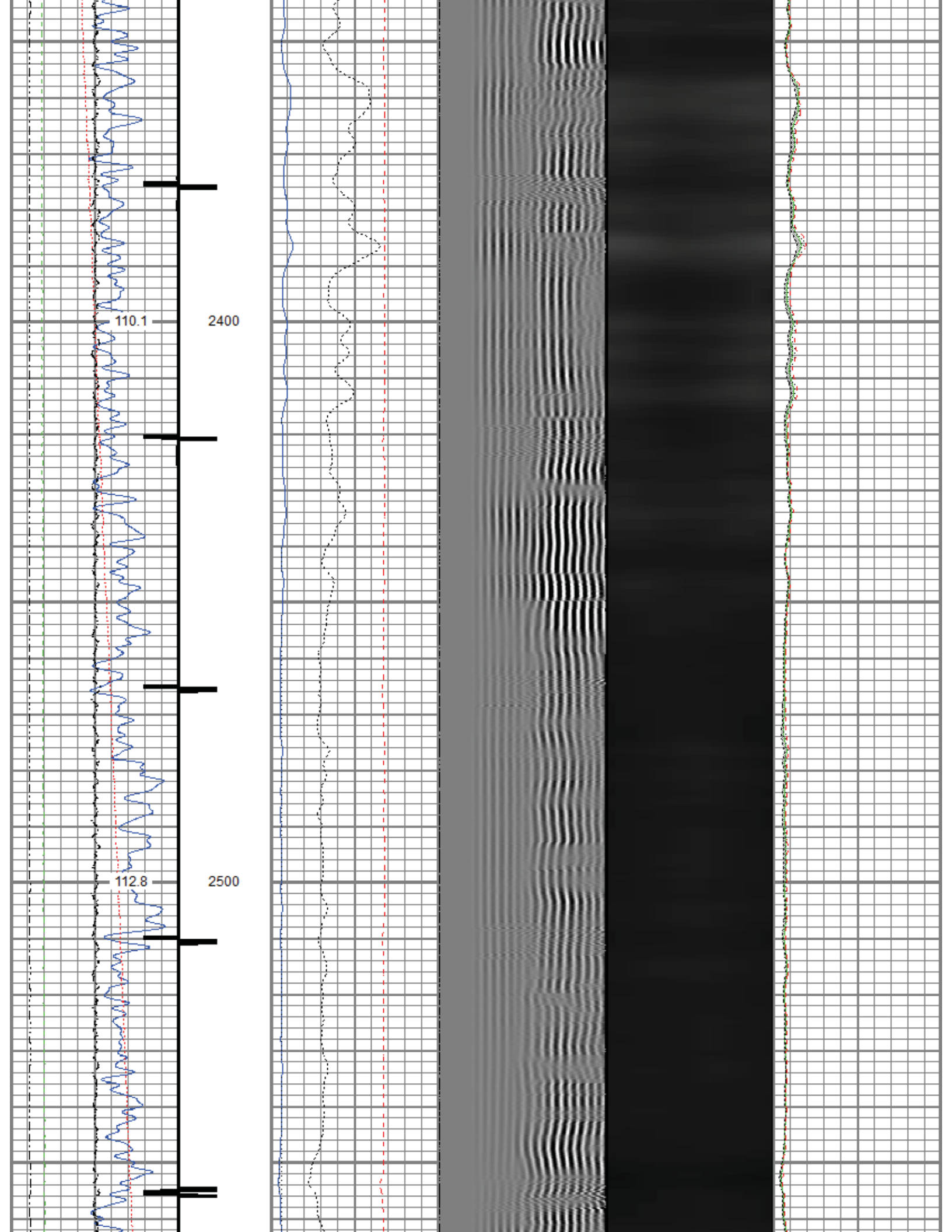


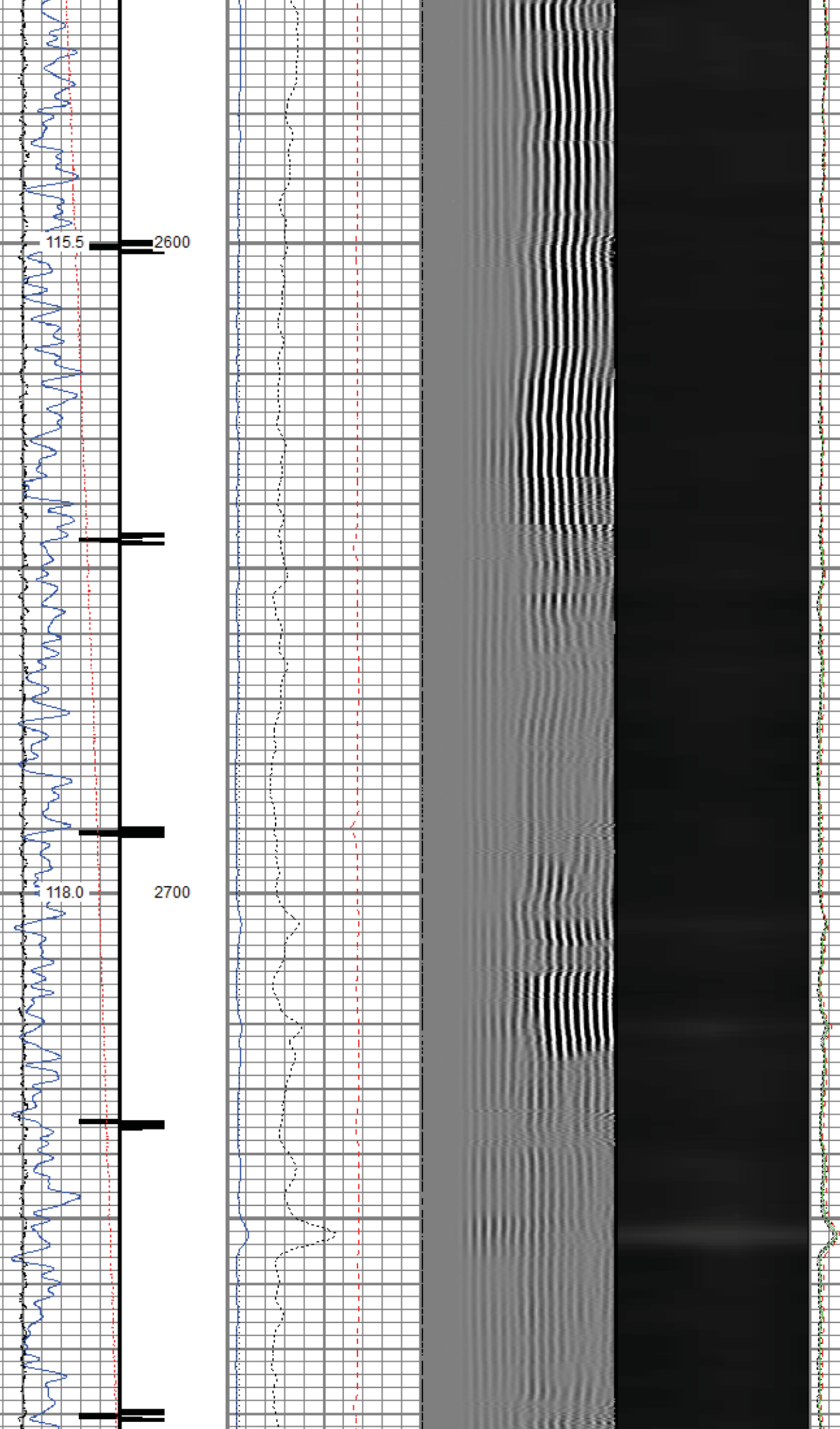


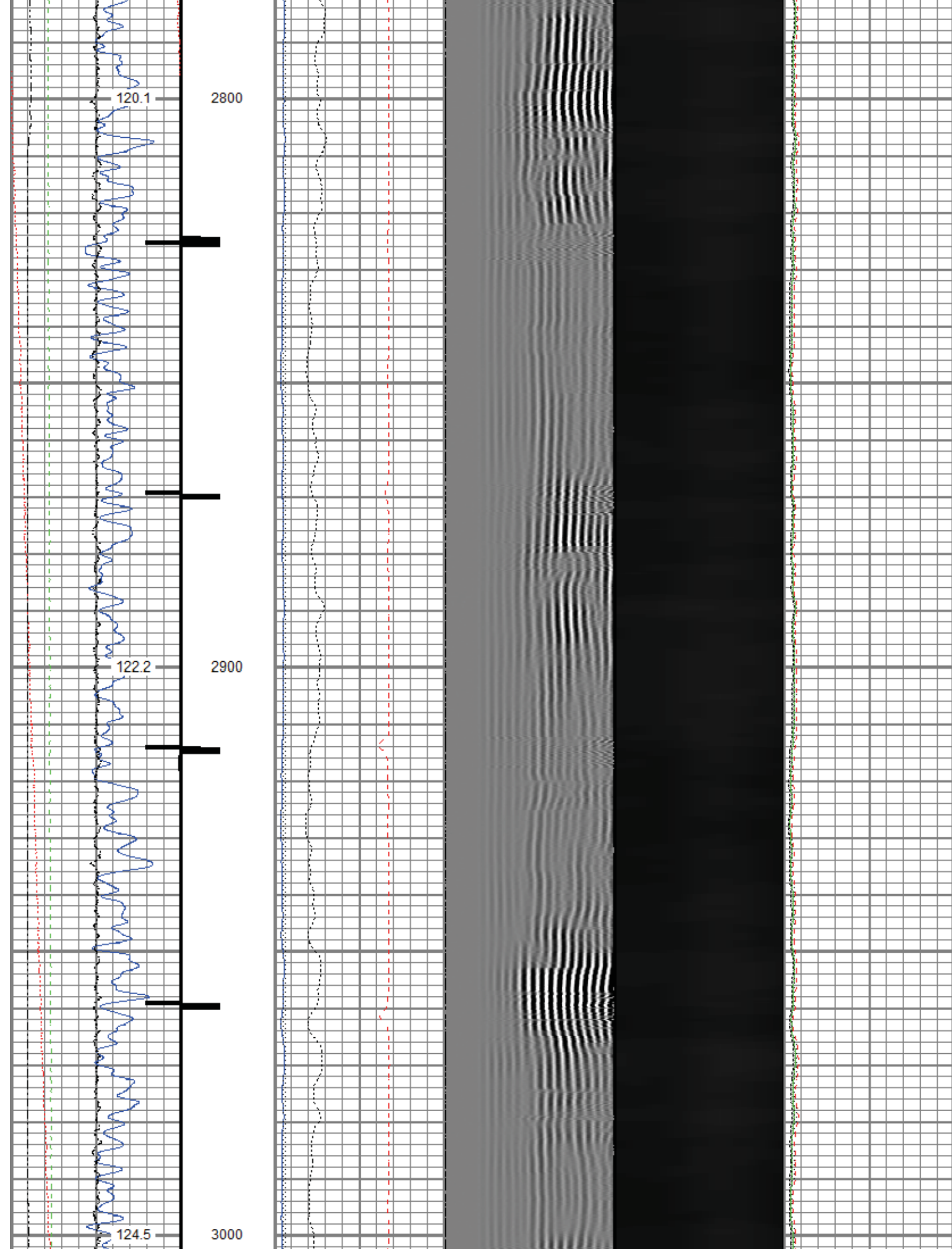


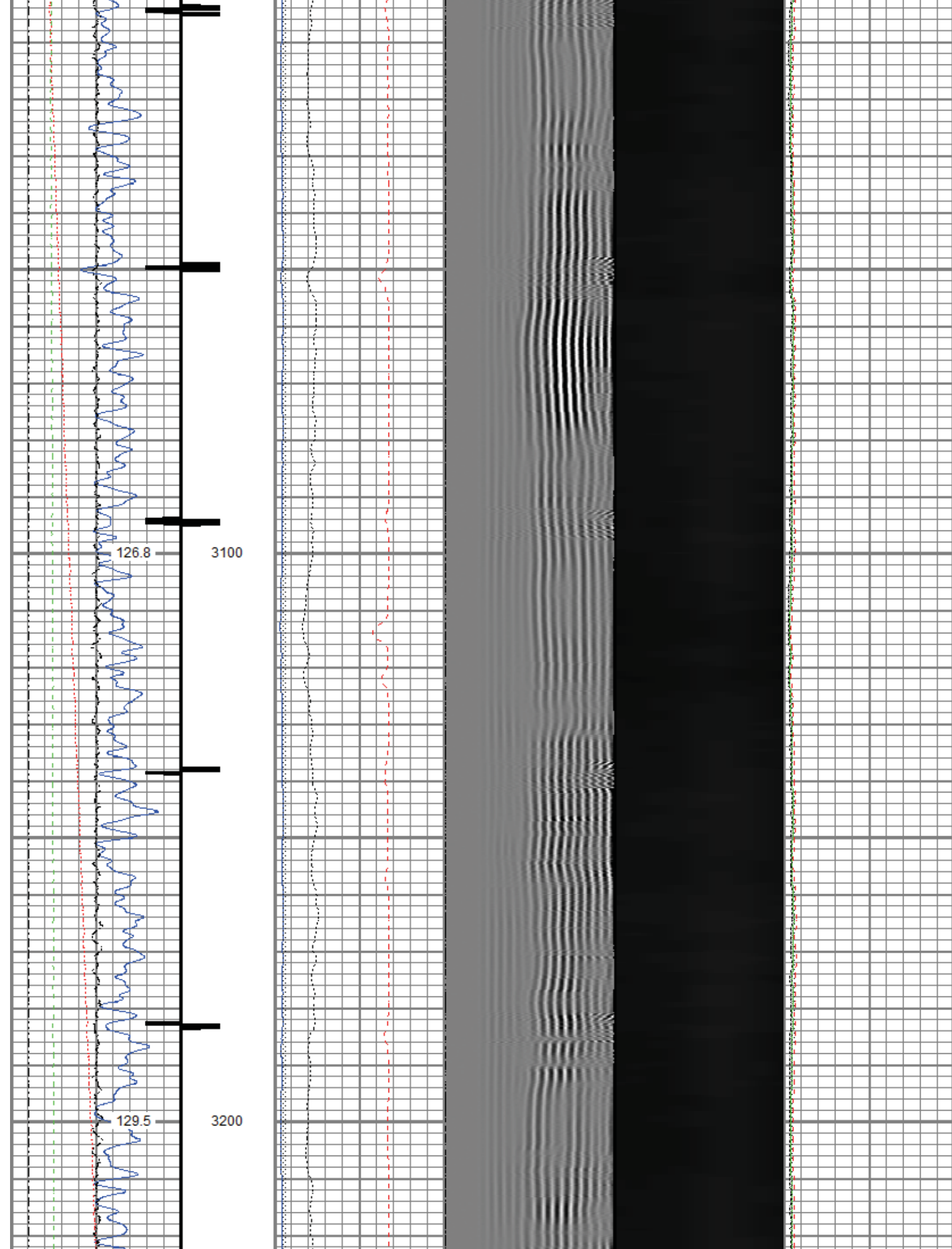


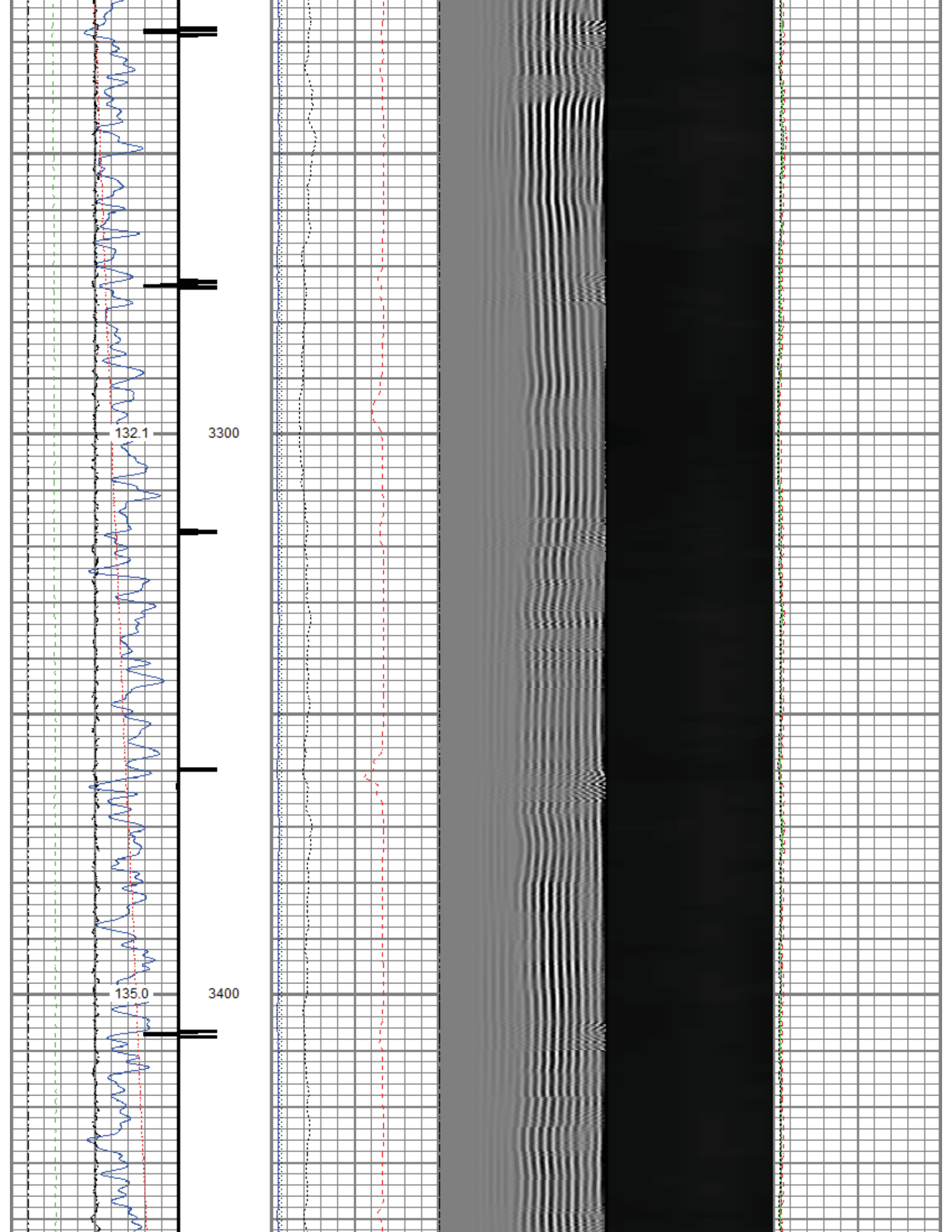


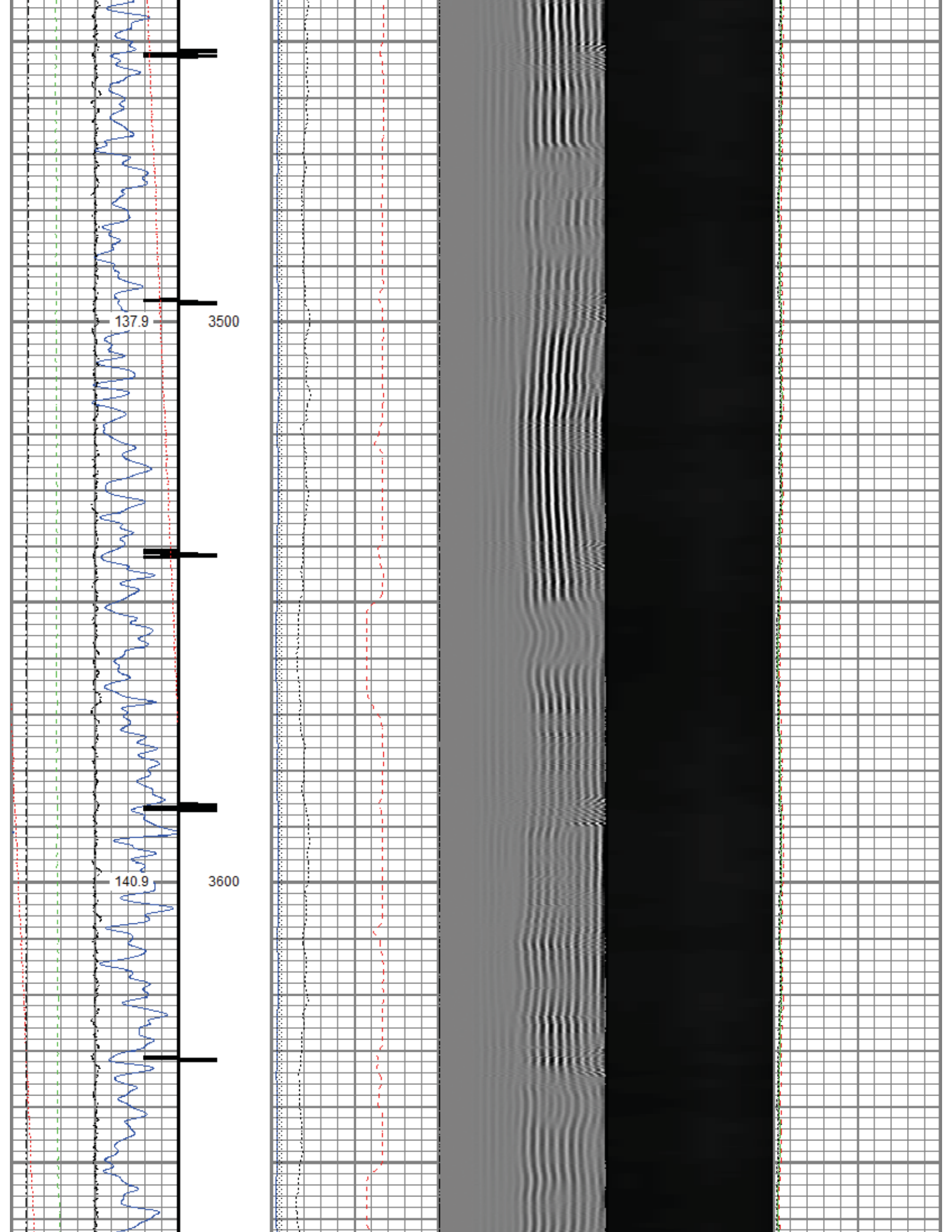


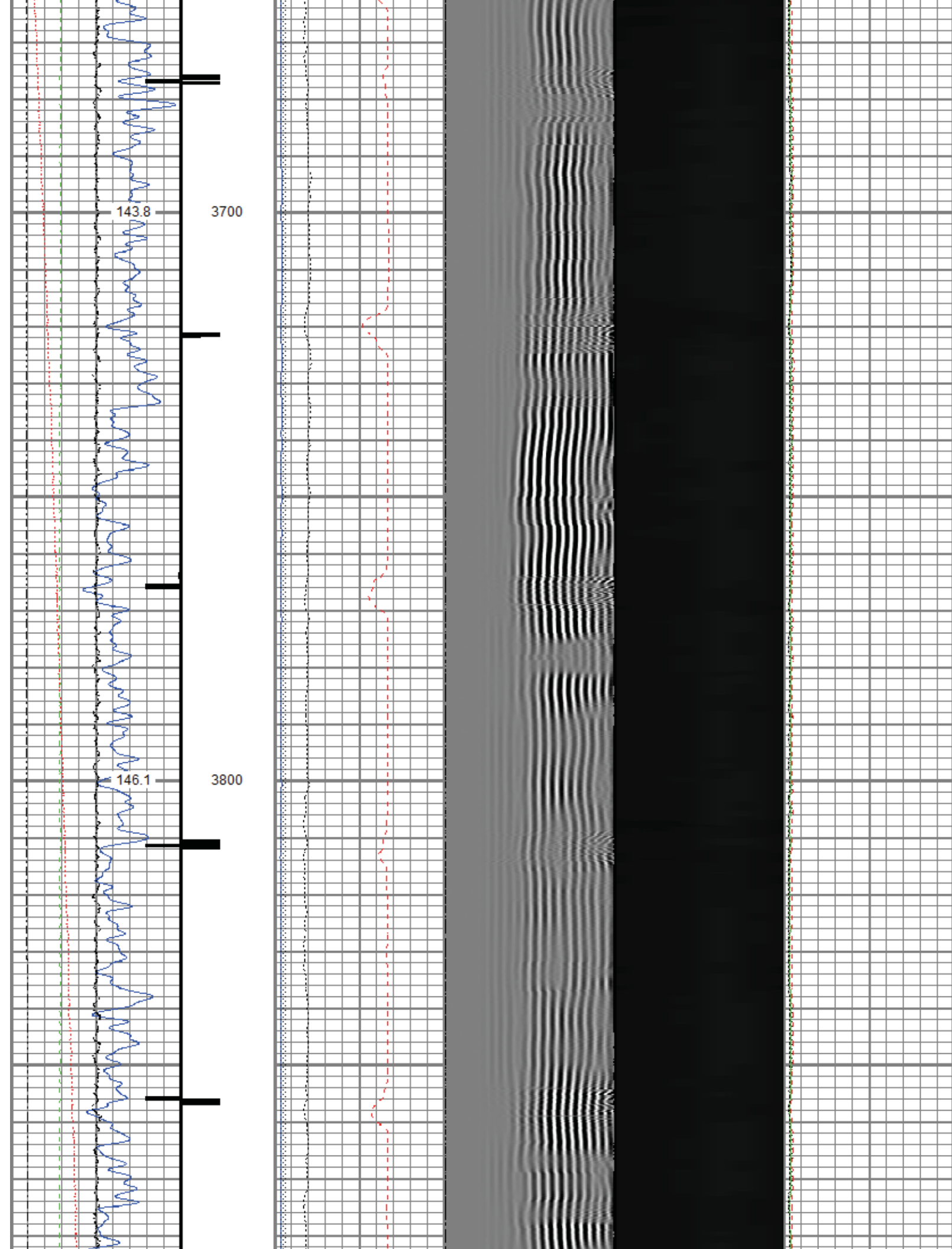


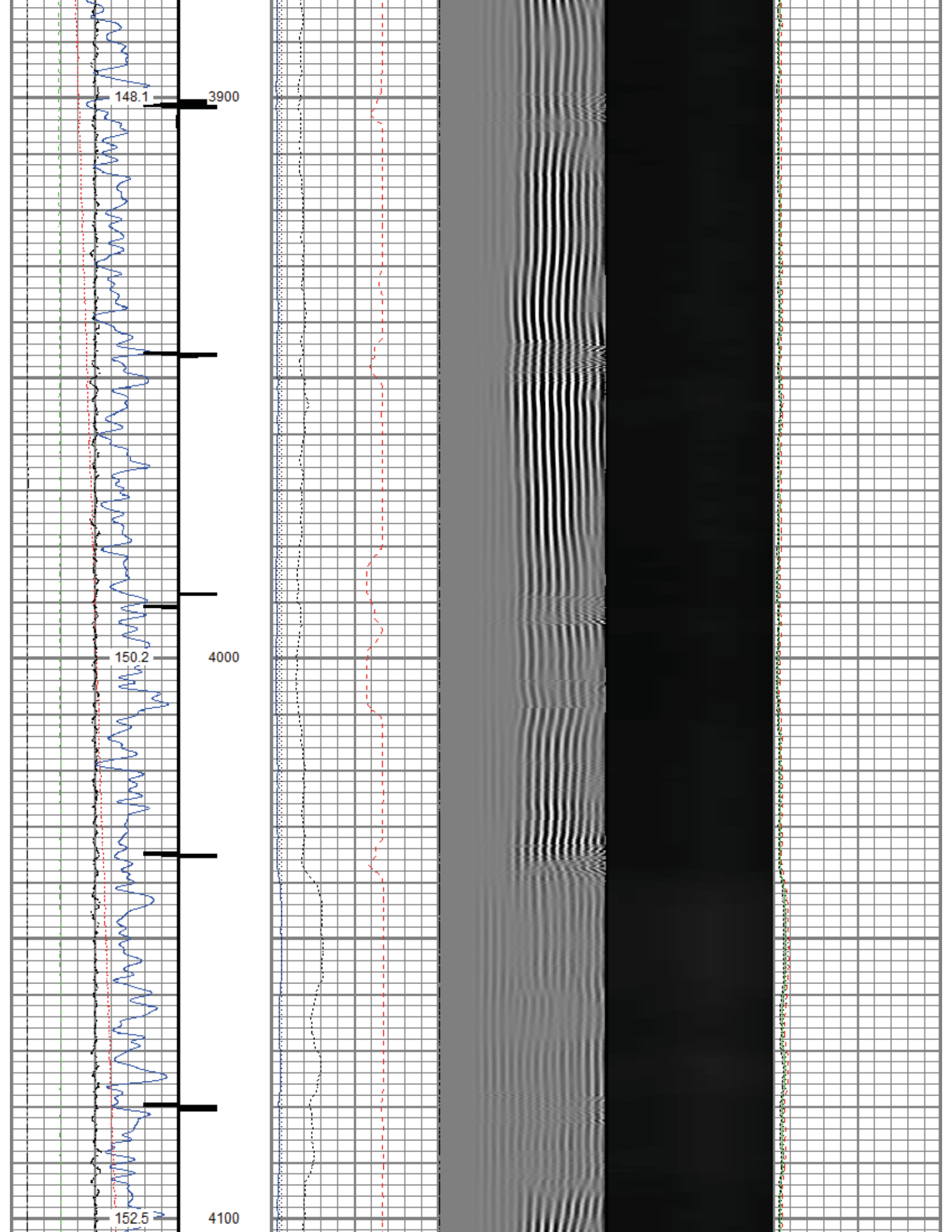


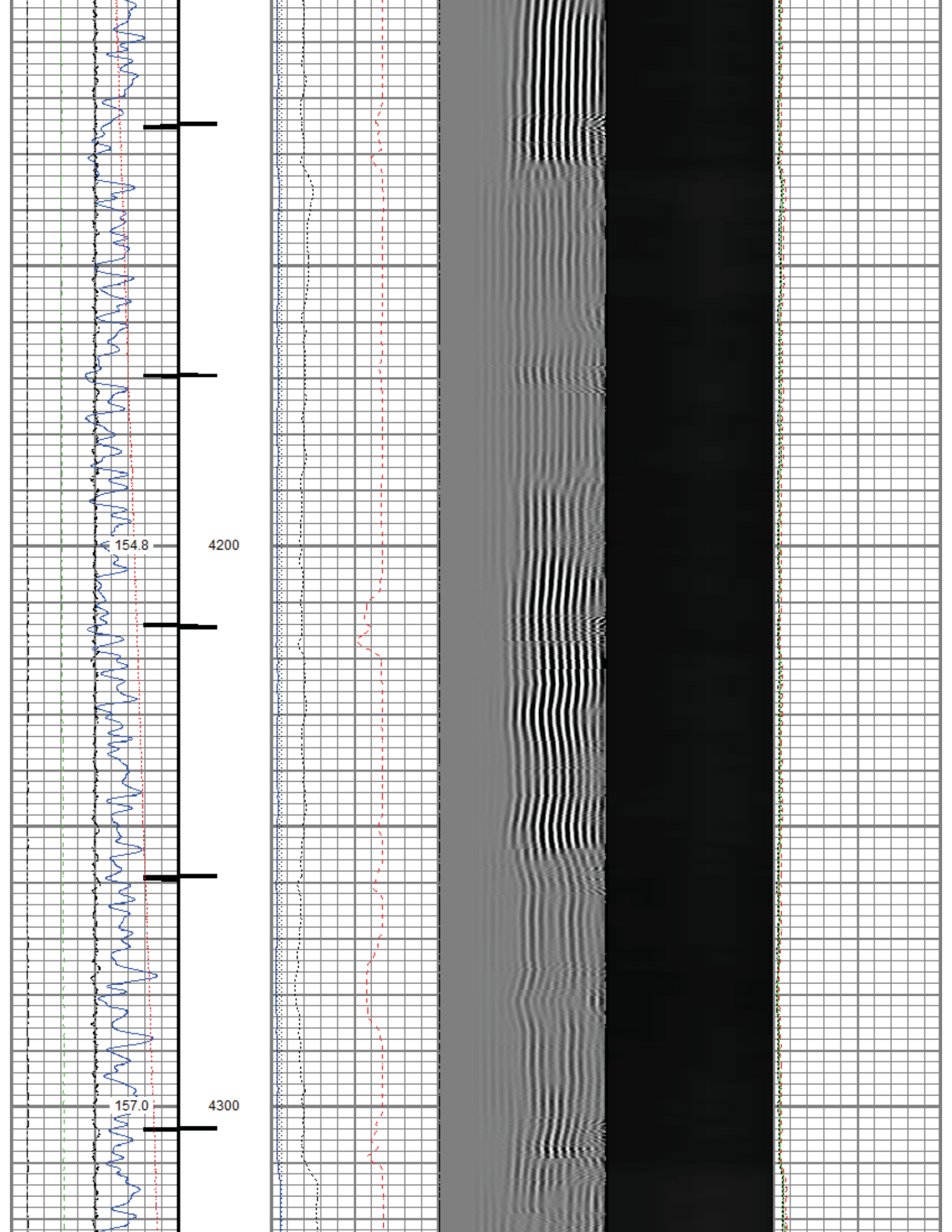


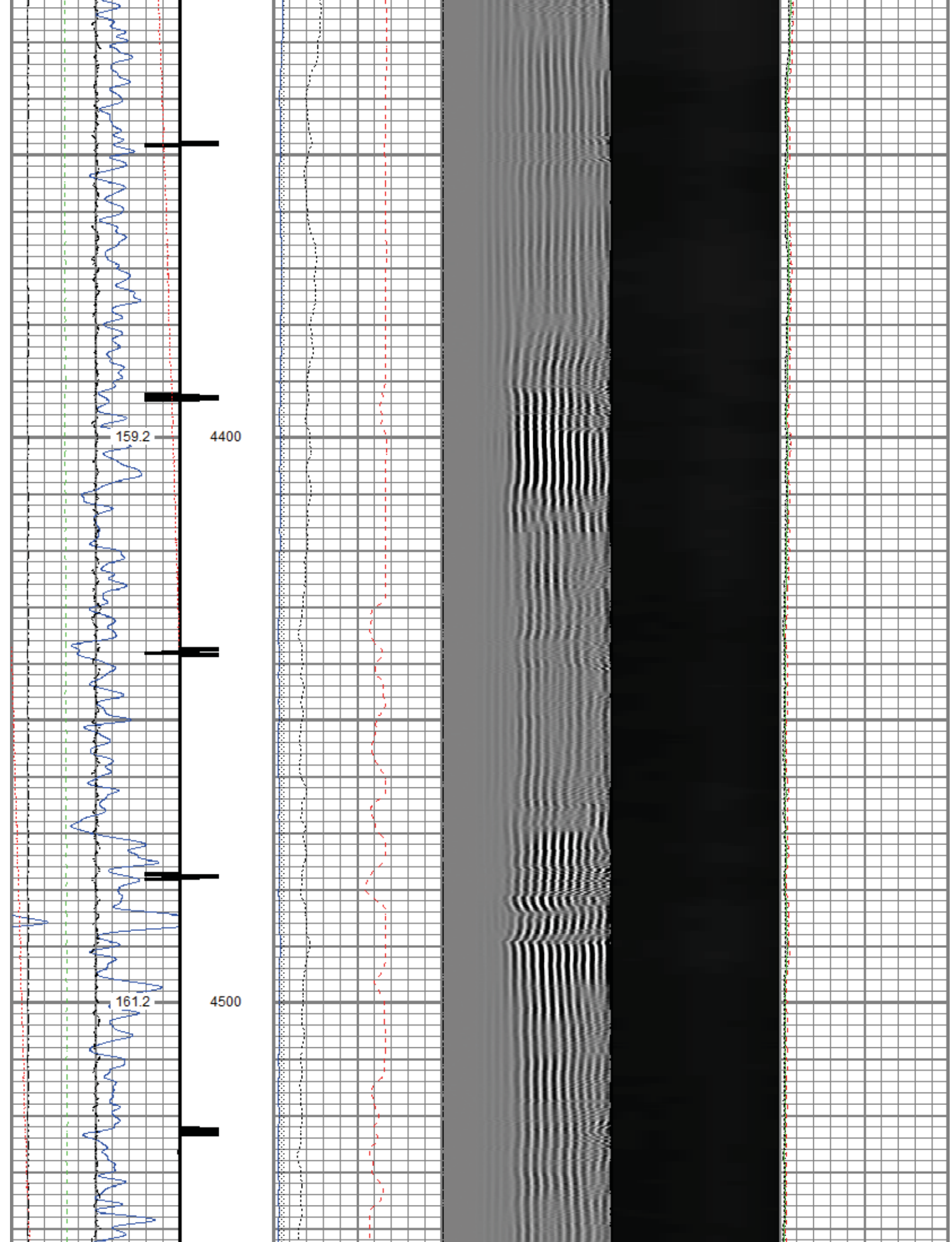


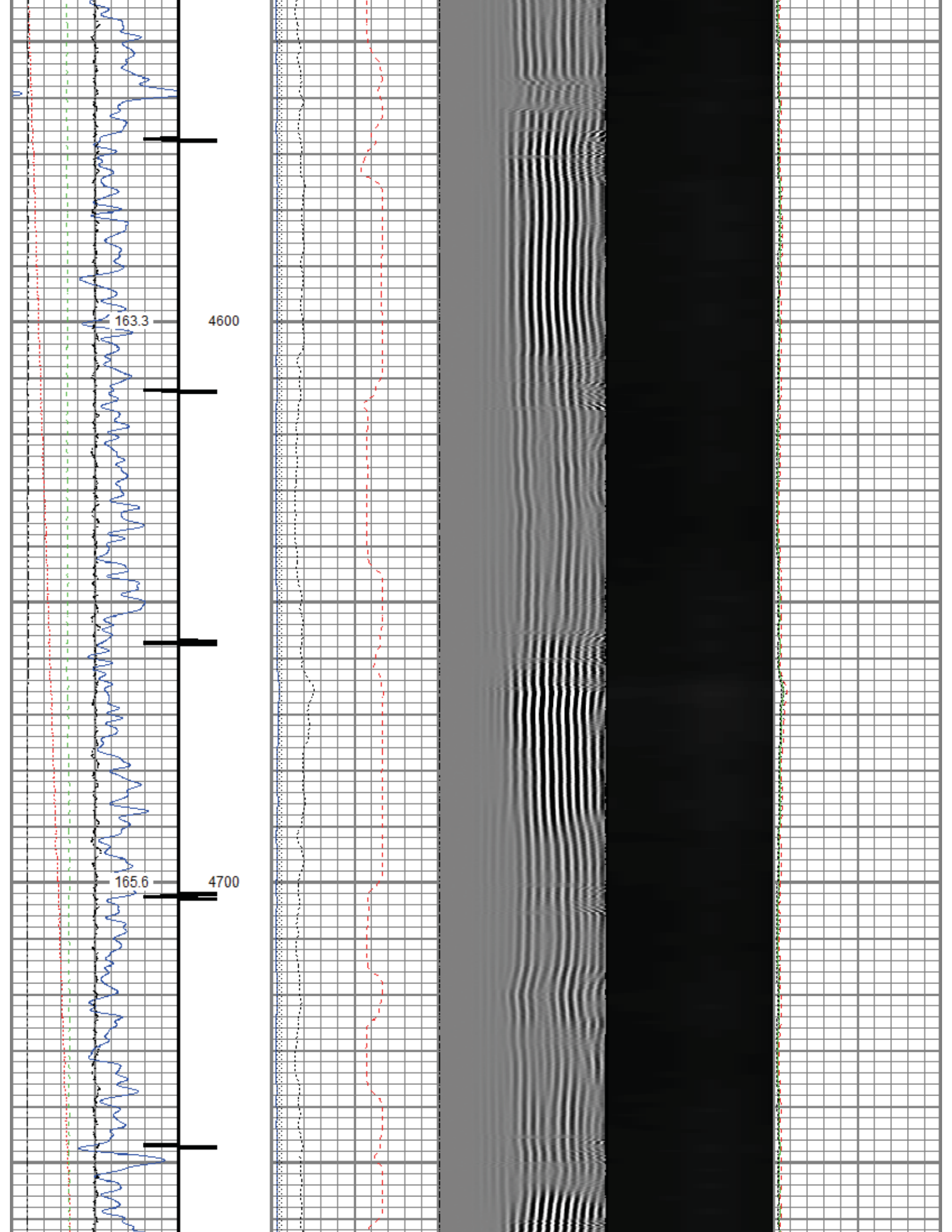


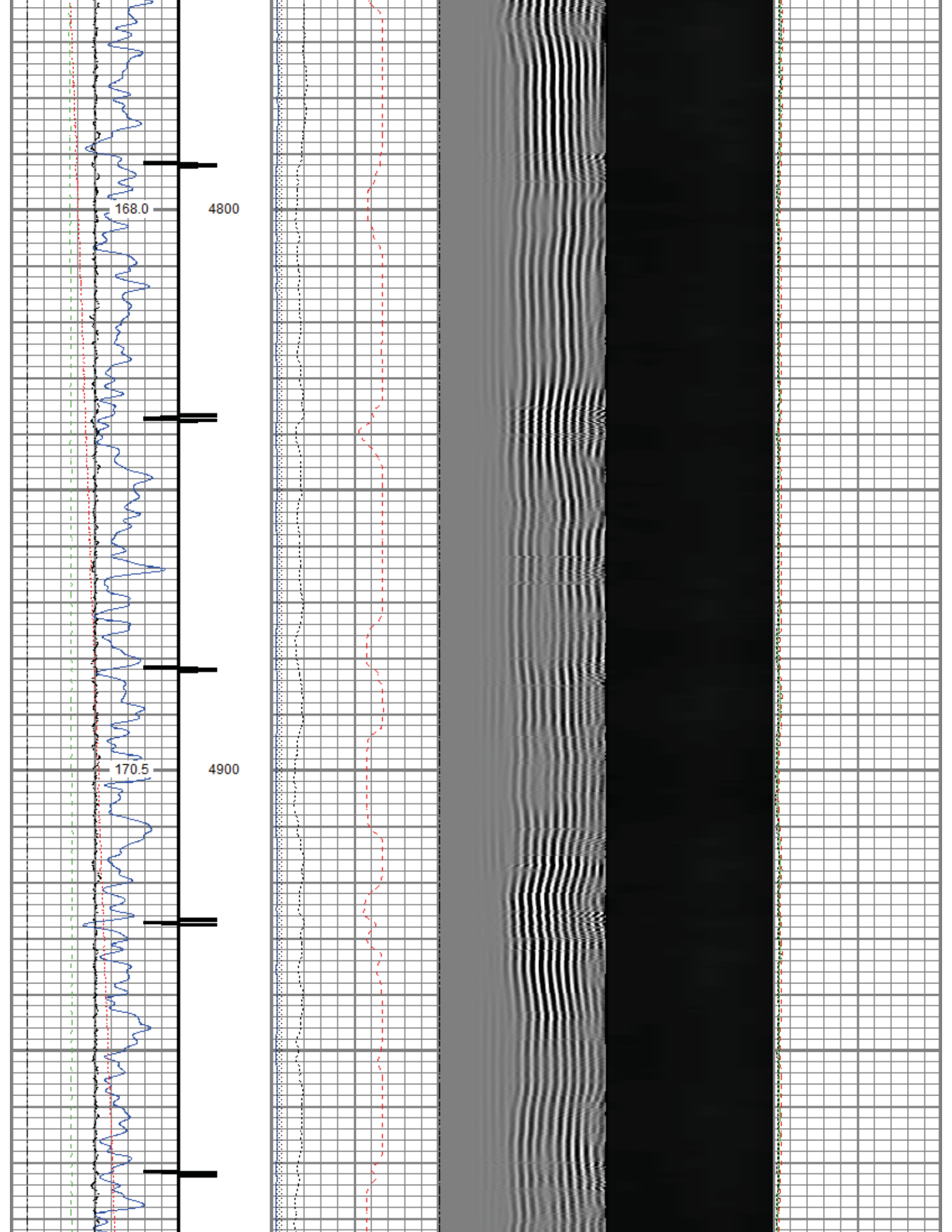


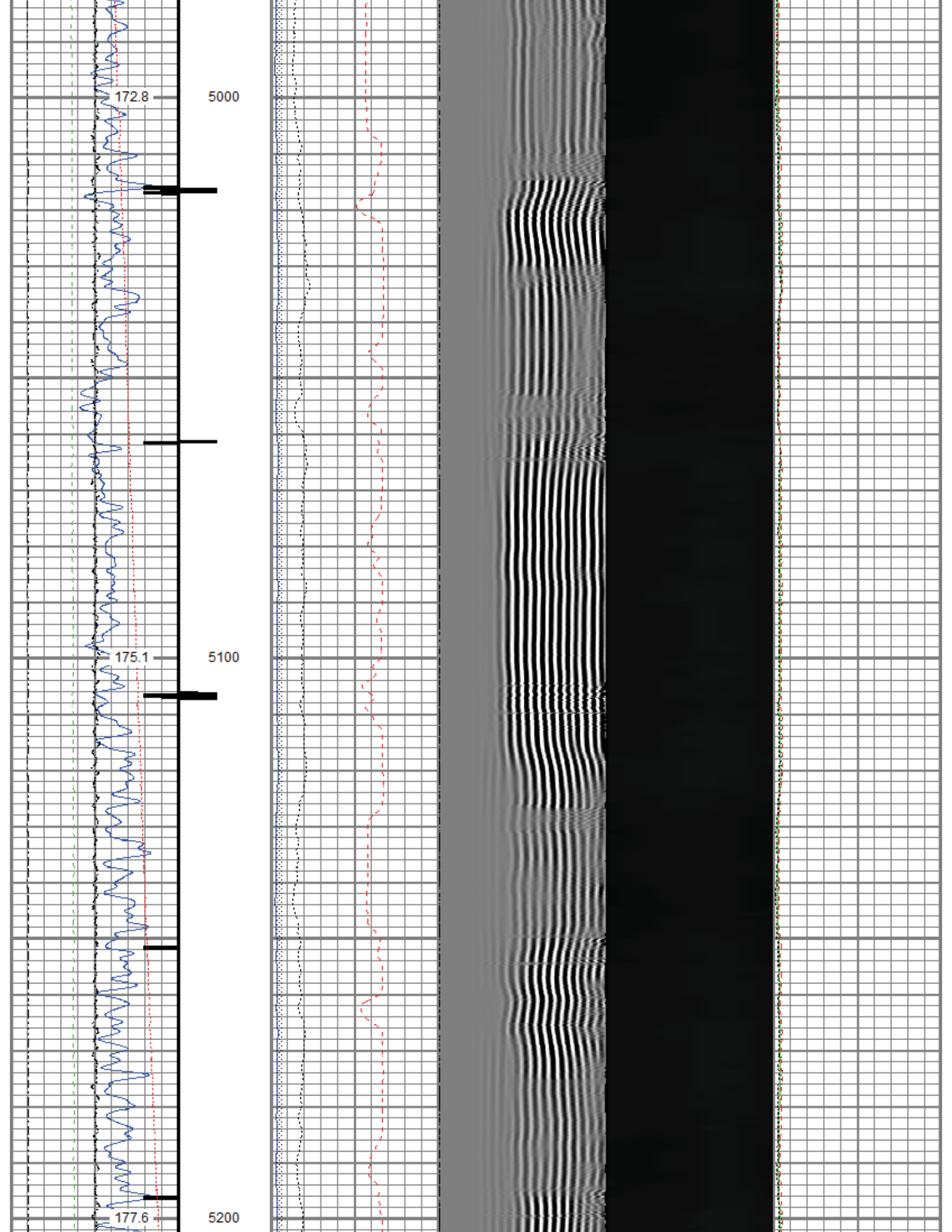


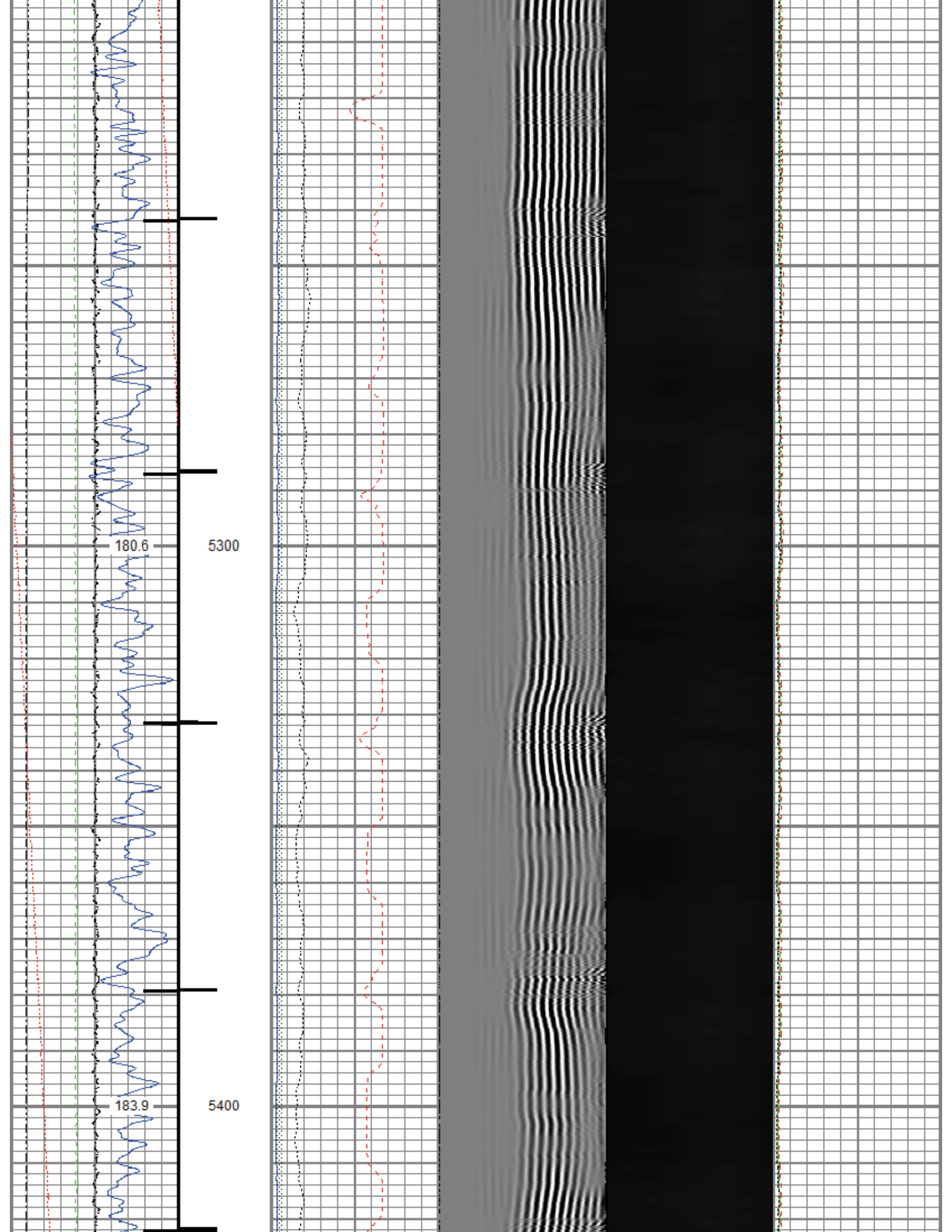


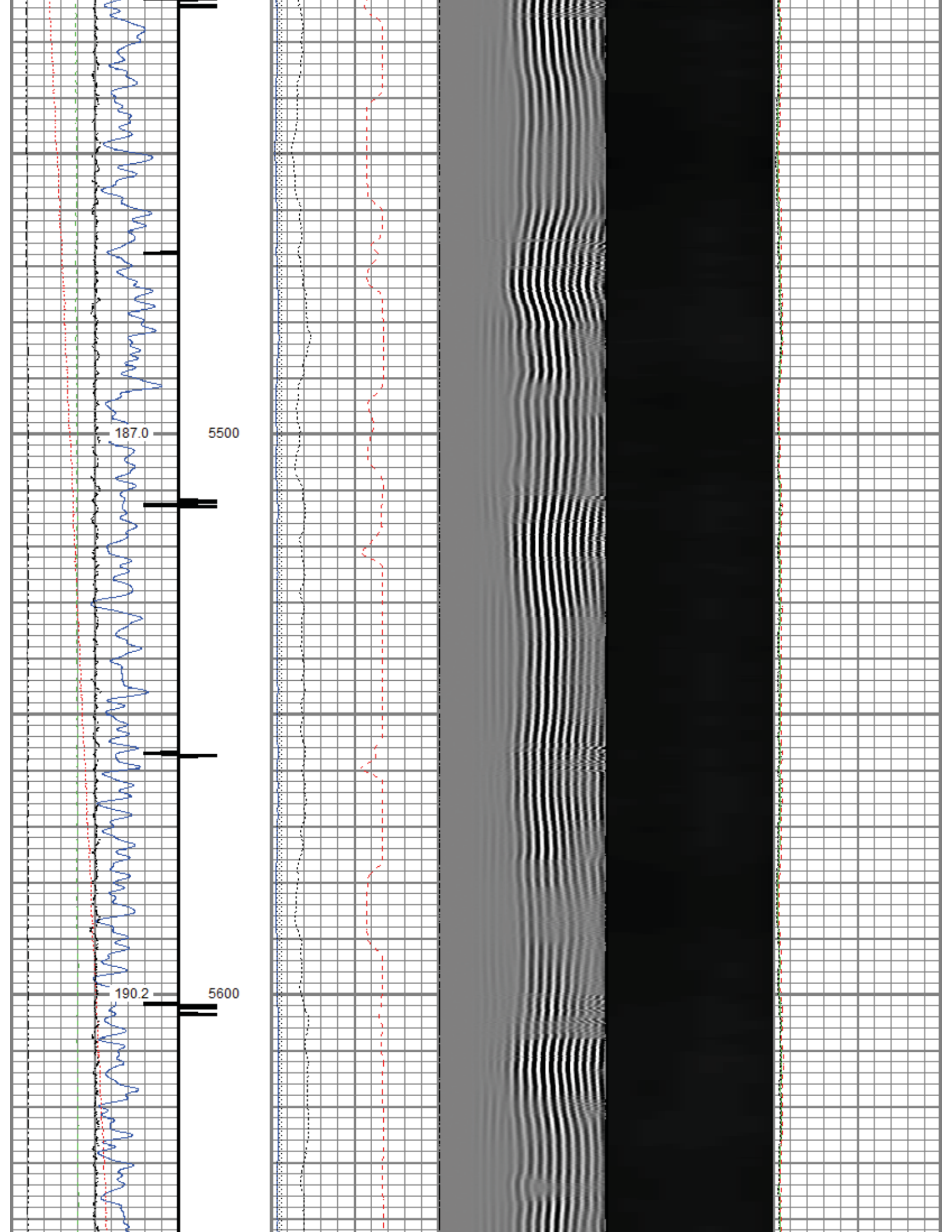


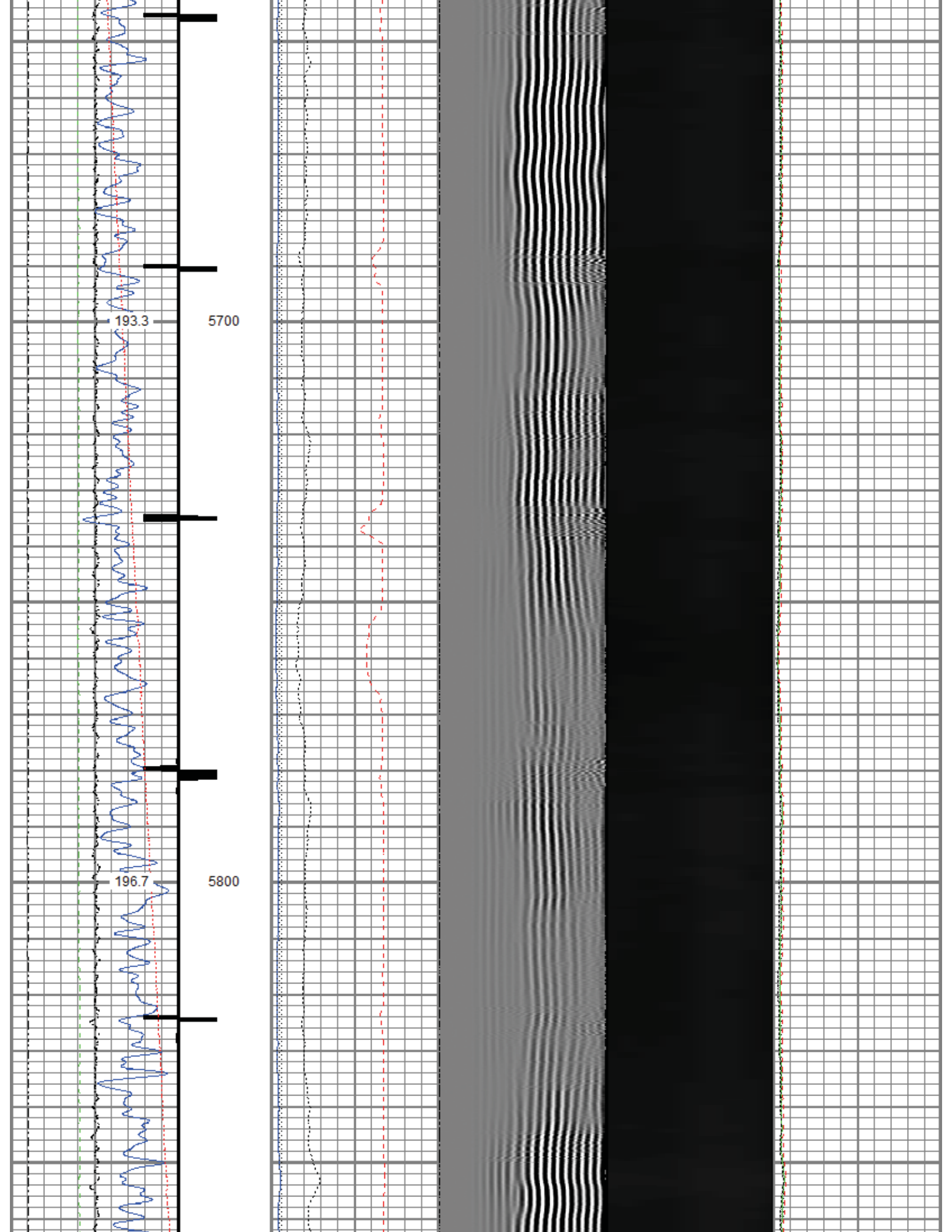


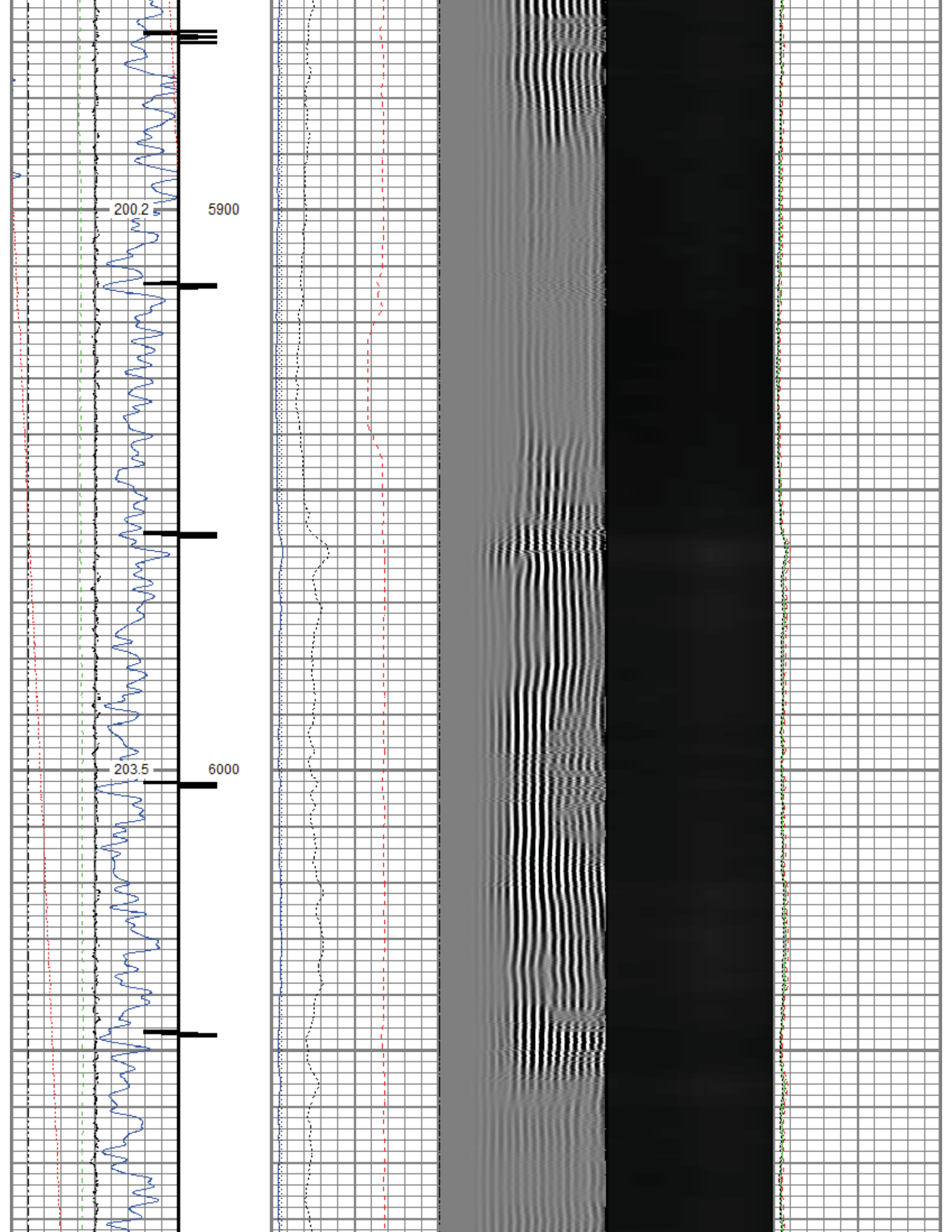


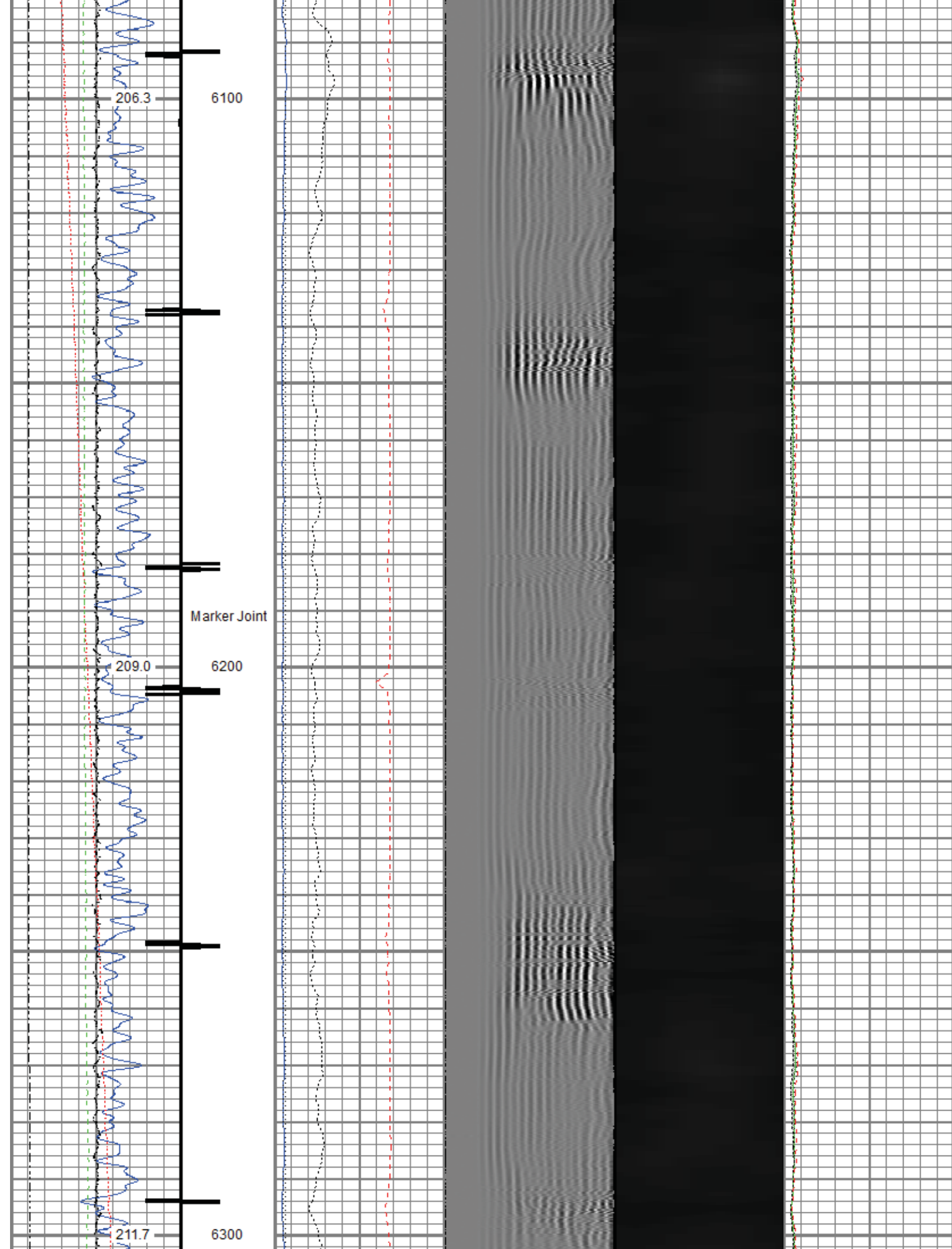


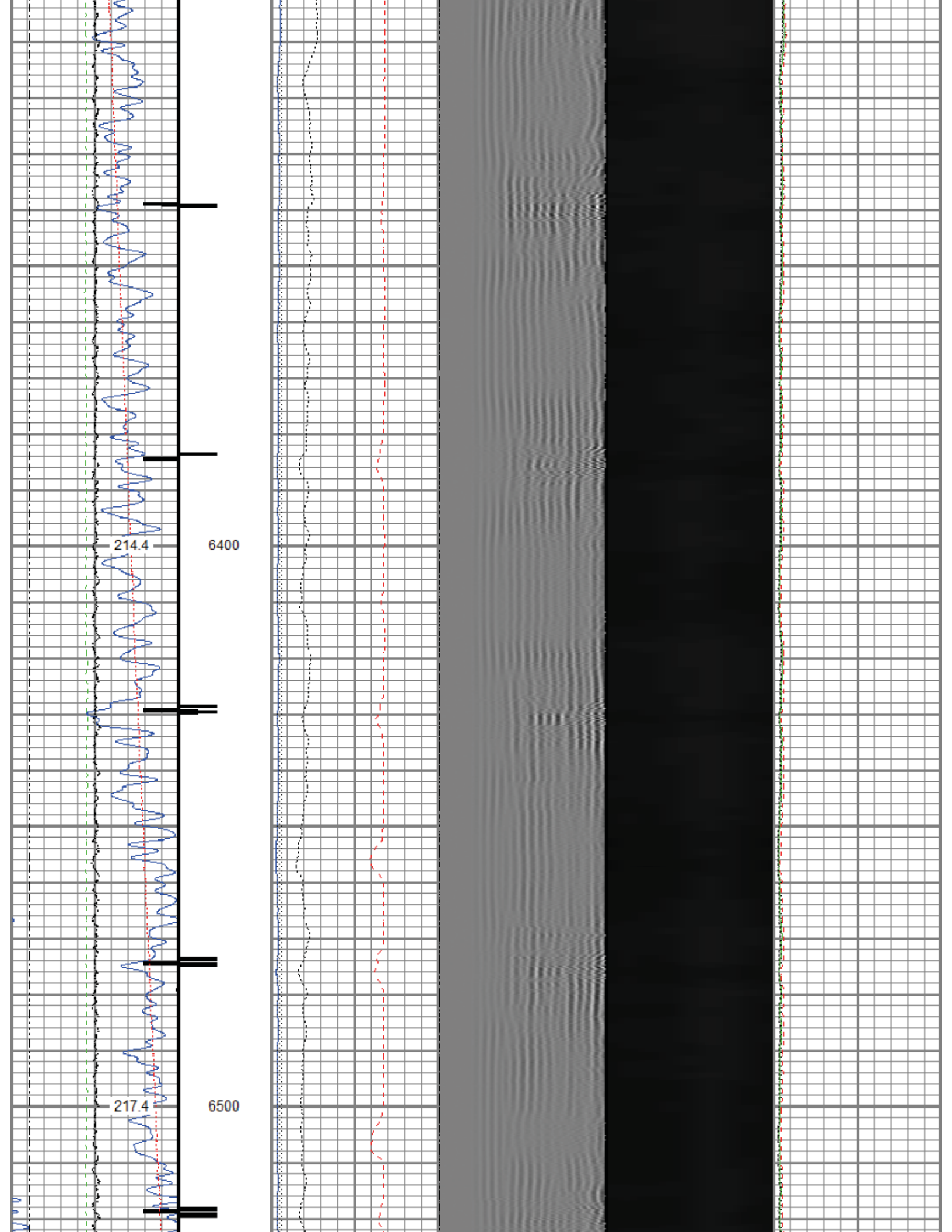


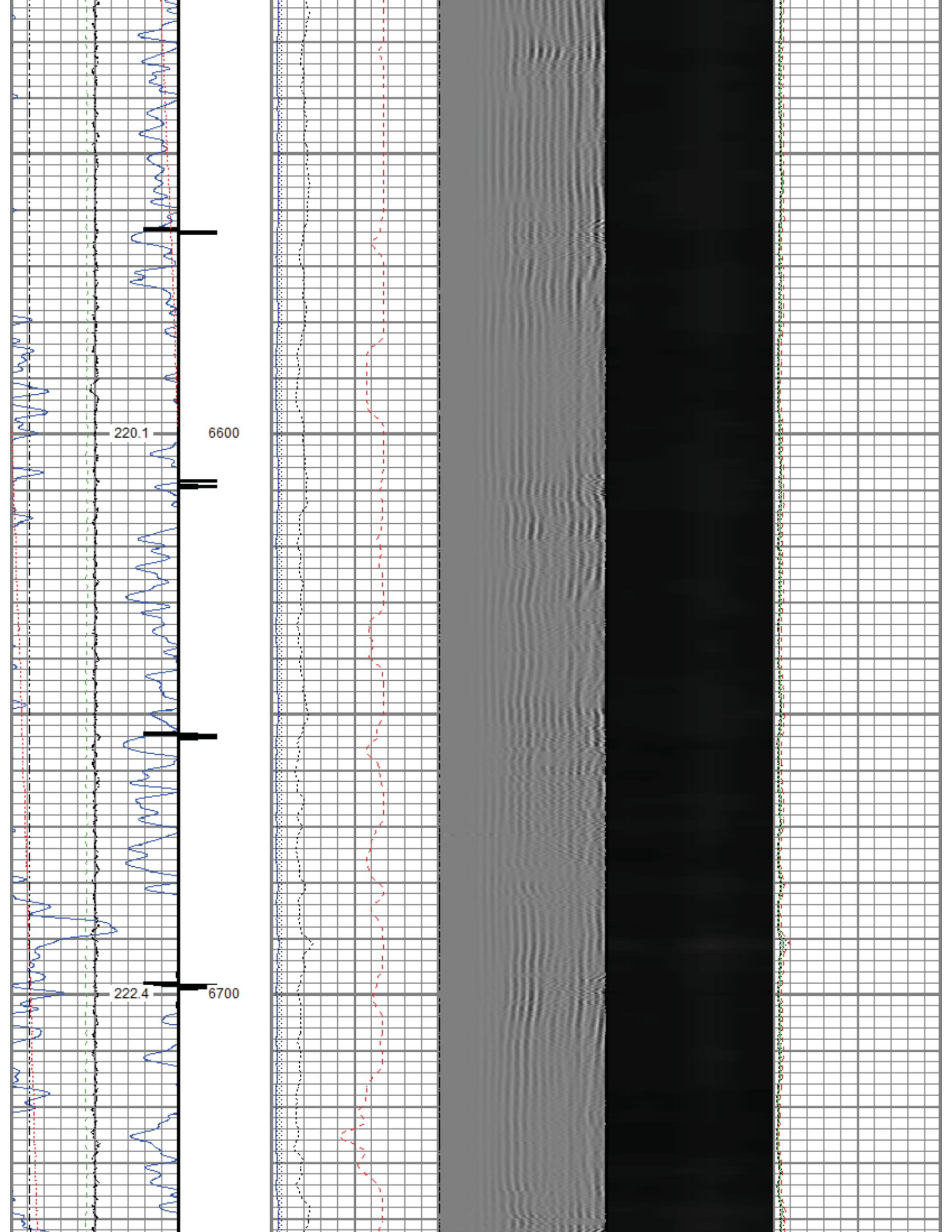


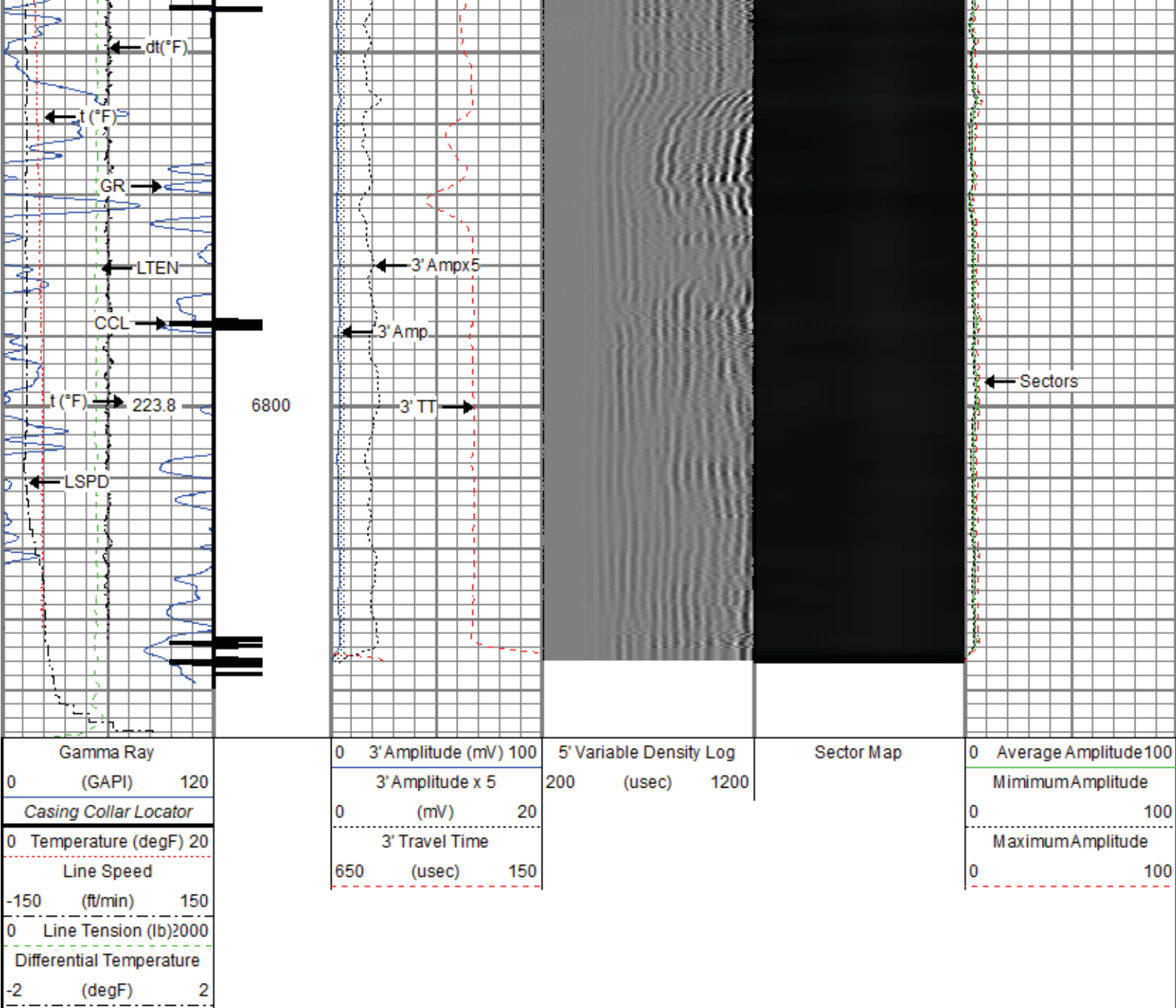












Repeat Pass

Recorded With 2500 PSI Surface Induced Pressure

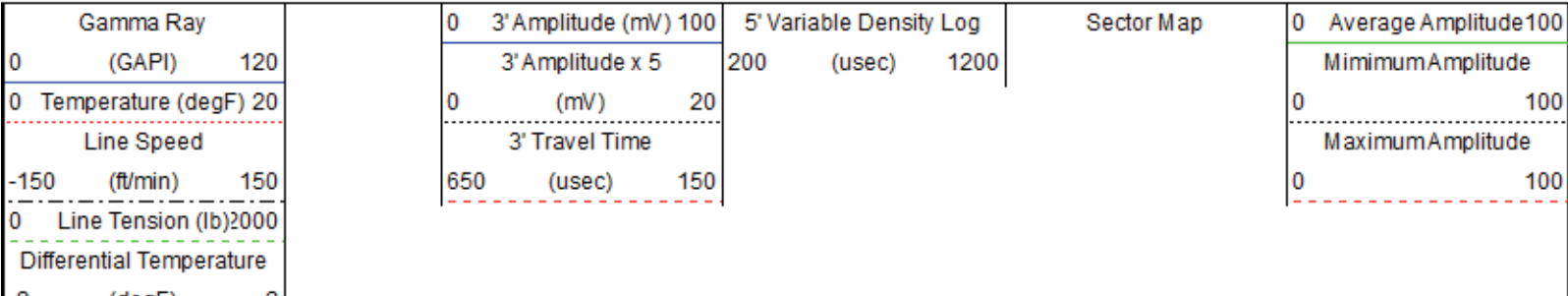
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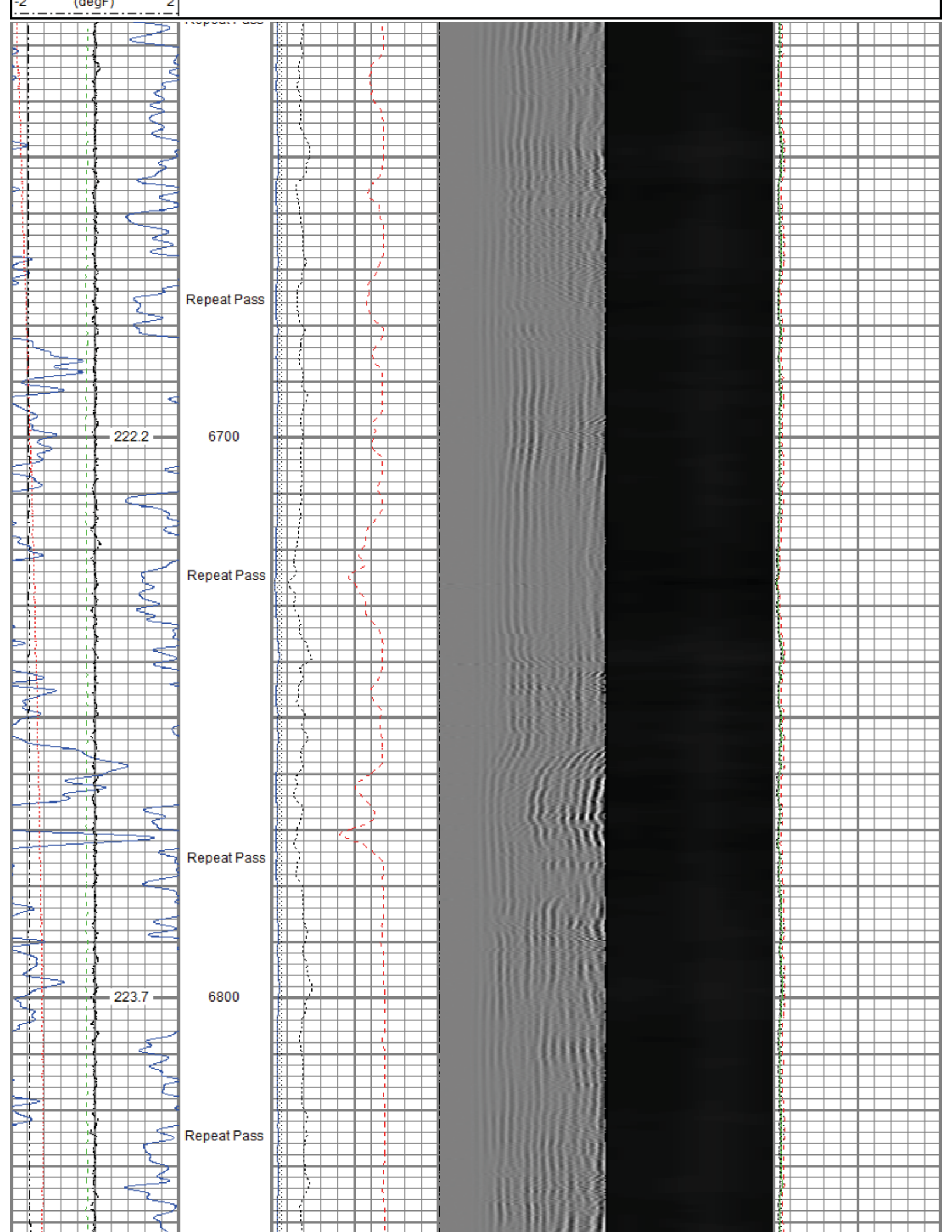
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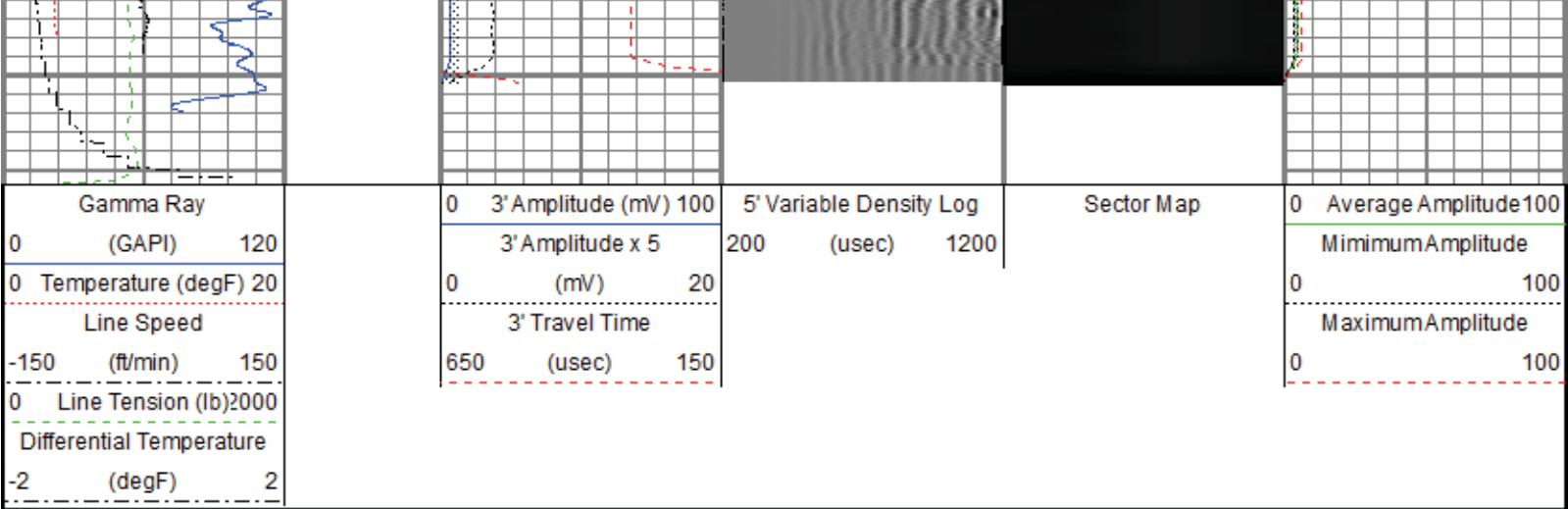
Presentation Format ros_radri_noble

Dataset Creation Wed Sep 02 12:56:56 2020

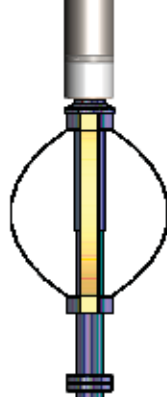
Charted by Depth in Feet scaled 1:240







Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
ErrCt	18.10		Titan CHD-16875 GO	1.03	1.69	5.40
RBT_HV	17.07		Titan 1-11/16" Assembled Electric Cable Head with 1" Fishing Neck			
			SO BS CENT-2750-5500	1.50	3.25	11.00
			Slip Over 2-3/4" I.D. for 5-1/2" O.D. Casing Bow Spring Centralizer			
TEMP	14.16					
			Probe Radii ACC-2750 RBTa (FW1302-002)	9.39	2.75	105.00
RBT_ACCZ	11.93		Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub and Accelerometer			
RBT_ACCY	11.93					
RBT_ACCX	11.93					
WVFSYNC	11.93					
WVFS8	11.93					
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-2750-5500	1.50	3.25	11.00
			Slip Over 2-3/4" I.D. for 5-1/2" O.D. Casing Bow Spring Centralizer			
			Probe GR-CCL-2750 6PB (101001)	4.80	2.75	55.00
			Probe 2-3/4" rev.1 Digital Scintillation Gamma Ray/CCL Combined with 6 Pin Bottom for CNT			



Probe CENT-2750
Probe 2-3/4" Electric Inline Bowspring Centralizer

2.88

2.75

20.00

LOCTIM

0.00

UTCTIM

0.00

Dataset: PROCESSED_Noble_Guttersen YY06-766_RBL_09-01-20.db: field/well/run1/pass8.1
Total length: 18.10 ft
Total weight: 229.40 lb
O.D.: 3.25 in

Calibration Report

Database File C:\ProgramData\Warrior\Data\Noble\Noble_Guttersen YY06-766_RBL_09-01-20\PROCESSED_Noble_Guttersen YY06-766_RBL_09-01-20
Dataset Pathname pass8.1
Dataset Creation Tue Sep 01 11:41:43 2020

Gamma Ray Calibration Report

Serial Number: 101001
Tool Model: 2750 6PB
Performed: Tue Dec 03 09:24:53 2019

Calibrator Value: 637.0 GAPI

Background Reading: 100.6 cps
Calibrator Reading: 981.1 cps

Sensitivity: 0.7235 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: FW1302-002
Tool Model: 2750 RBTa

Calibration Casing Diameter: 5.500 in
Calibration Depth: 5.882 ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.001	0.652	0.800	71.921	109.151	0.713
CAL	0.006	0.667				
5'	0.000	0.672	0.800	71.921	105.798	0.776
SUM						
S1	0.001	0.630	0.000	100.000	158.835	-0.107
S2	0.001	0.689	0.000	100.000	145.280	-0.094
S3	0.001	0.725	0.000	100.000	138.164	-0.107
S4	0.001	0.729	0.000	100.000	137.271	-0.113
S5	0.001	0.707	0.000	100.000	141.740	-0.145
S6	0.001	0.664	0.000	100.000	150.849	-0.143
S7	0.001	0.645	0.000	100.000	155.212	-0.124
S8	0.001	0.640	0.000	100.000	156.488	-0.109


Air Zero Calibration, performed Mon Aug 31 10:03:14 2020:

Raw (v)	Calibrated (v)	Results
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	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

Inclinometer Calibration Report					
Performed:	Tue Dec 03 09:24:53 2019				
	Low Read.	High Read.	Low Ref.	High Ref.	
X Accelerometer	-891.00	891.00	-1.00	1.00	gee
Y Accelerometer	-899.00	877.00	-1.00	1.00	gee
Z Accelerometer	-7.47	873.36	0.00	1.00	gee

Temperature Calibration Report					
Serial Number:	FW1302-002				
Tool Model:	2750 RBTa				
Performed:	Tue Dec 03 09:24:53 2019				
	Reference		Reading		
Low Reference:	100.00	degF	110.72	degF	
High Reference:	350.00	degF	409.18	degF	
Gain:	0.84				
Offset:	7.26				
Delta Spacing	1				

	Company	Noble Energy Inc
	Well	Guttersen YY06-766
	Field	Wattenberg
	County	Weld
	State	Colorado