



**CEMENT BOND LOG W/
VARIABLE DENSITY,
GAMMA RAY, CCL, TEMP**

Company		Great Western					
Well		OTTESEN LE 06-311HN					
Field		Wattenberg					
County		Weld					
State		Colorado					
Location:		API # : 05-123-44345					
Permanent Datum		GL					
Log Measured From		KB					
Drilling Measured From		KB					
SEC 33 TWP 1N RGE 66W		NWSE 33 1N66W					
J.B. / G.R.		Other Services					
Elevation		5076.5'					
K.B. 5096.5'		D.F. ----					
G.L. 5076.5'							
Date		26-JAN-2019					
Run Number		TWO					
Depth Driller		18034'					
Depth Logger		9850'					
Bottom Logged Interval		9845'					
Top Log Interval		Surface					
Open Hole Size		8 5/8"					
Type Fluid		Fresh Water					
Density / Viscosity		8.4					
Max. Recorded Temp.		246					
Estimated Cement Top		SEE LOG					
Time Well Ready		ROA					
Time Logger on Bottom		11:24 AM					
Equipment Number		25					
Location		Platteville, CO					
Recorded By		JOSEPH FRESQUEZ					
Witnessed By		ETHAN SAVOYA					
Borehole Record		Tubing Record					
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record	Size		Wgt/Ft		Top		Bottom
Surface String	9-5/8"		36#		Surface		1818'
Prot. String							
Production String	5-1/2"		17#		SURFACE		18034'
Liner							

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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

Cement Bond Log ran as per customer request
Depth Correlated to Casing Tally reported Marker Joint @ 9694 FT
Adjusted log +21 FT to correlate with Marker Joint
Gauge Ring/Junk Basket ran to 9930 FT with no debris
Log ran from 9845 FT to surface
Log ran with 0 PSI Surface Induced Pressure.

Thank you for choosing KLX Energy Services!!

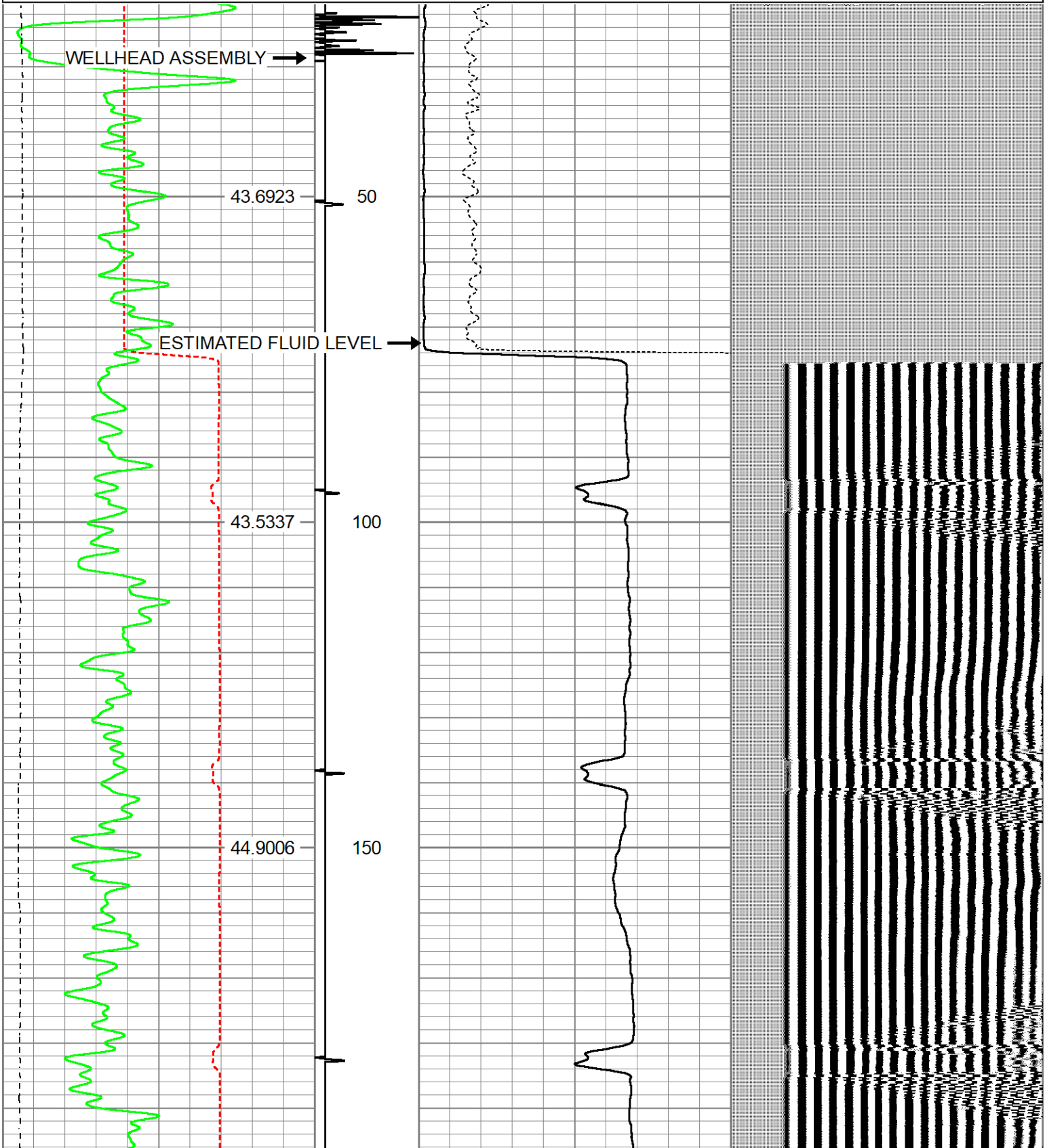


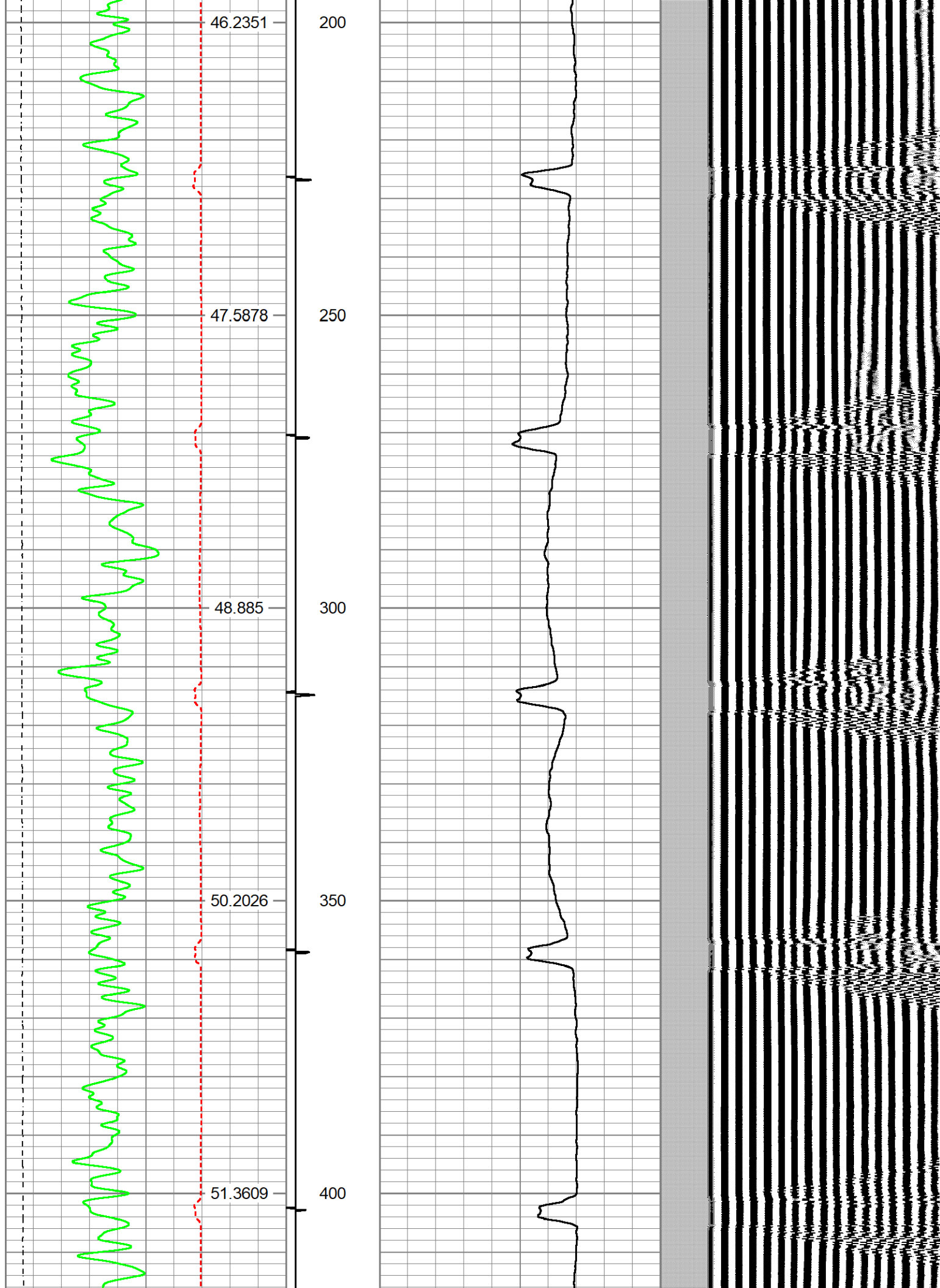
MAIN PASS

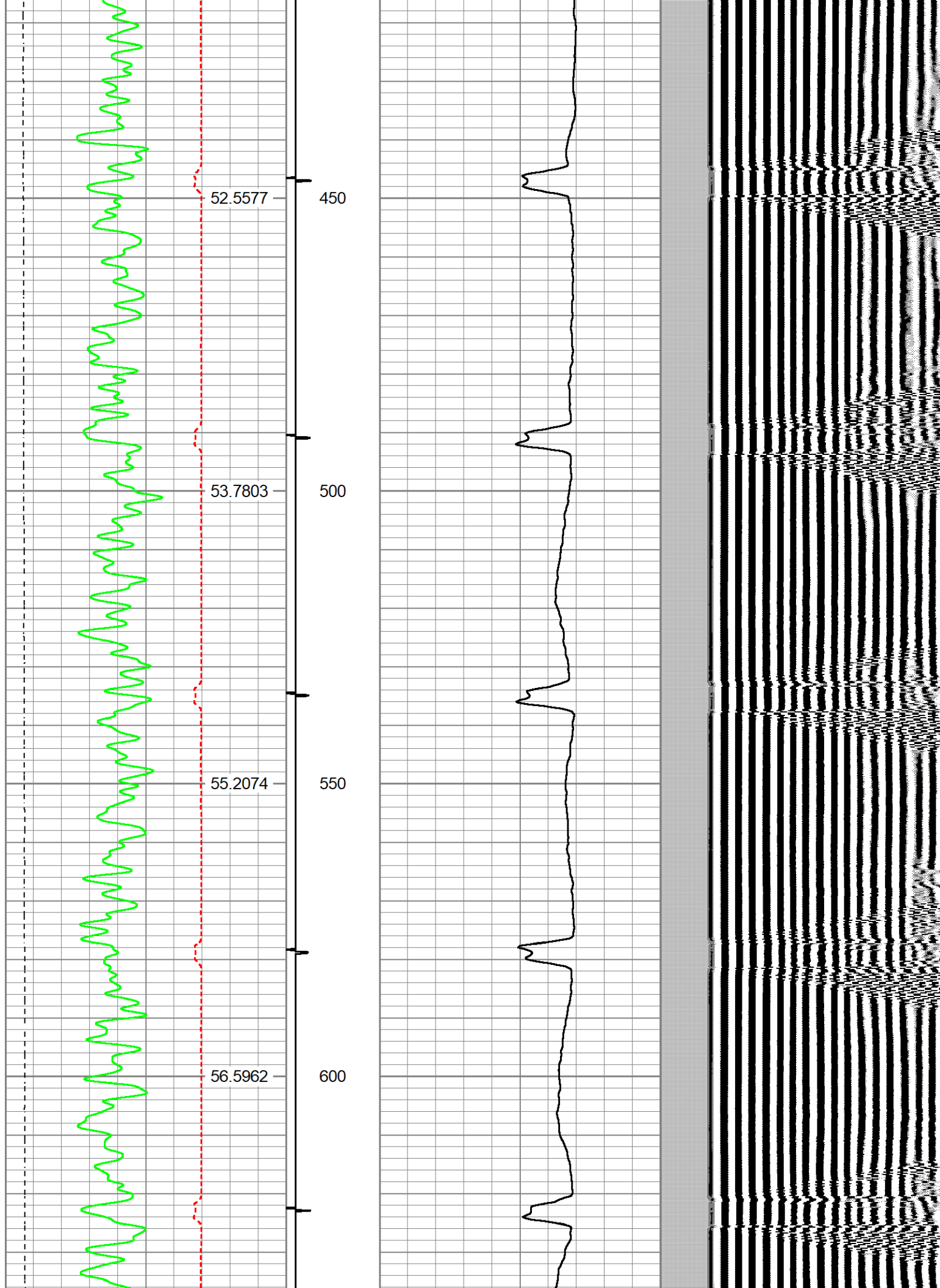
RECORDED WITH 0 PSI SURFACE INDUCED PRESSURE.

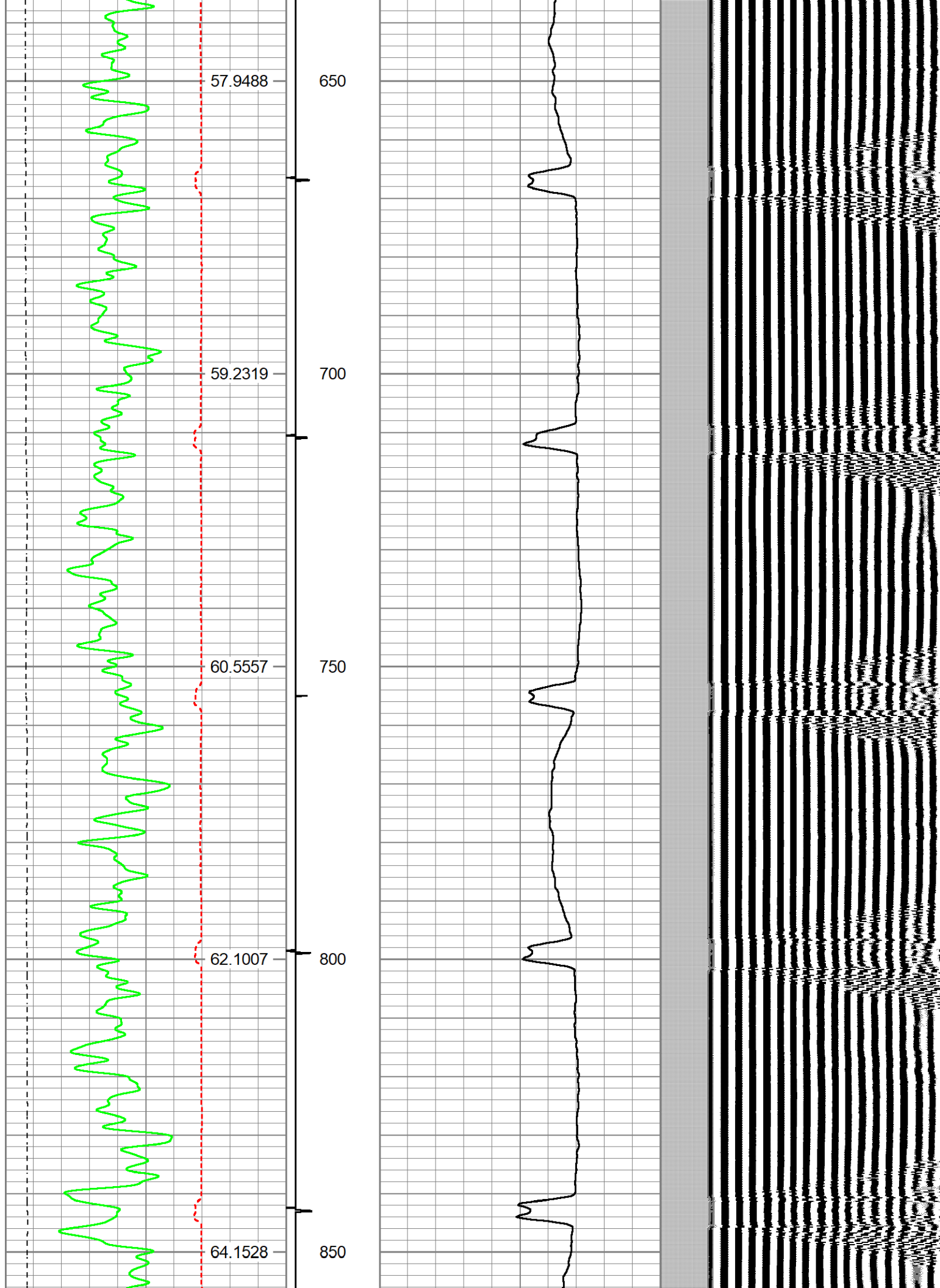
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Dataset Pathname	well4/run1/pass4.1
Presentation Format	cblgct
Dataset Creation	Sat Jan 26 13:41:28 2019
Charted by	Depth in Feet scaled 1:240

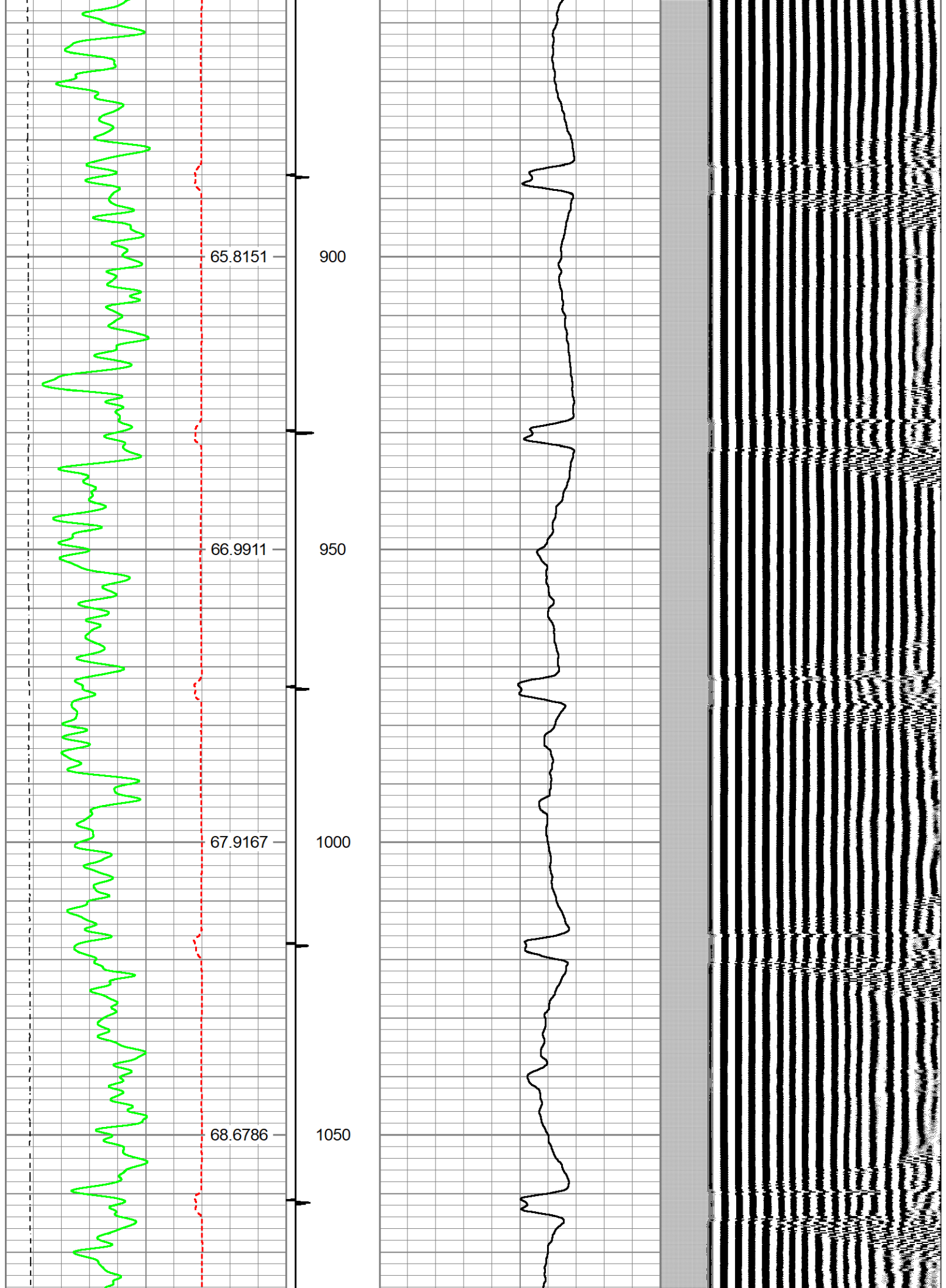
400	Travel Time (usec)	200	CCL	0	Amplitude (mV)	100	200	Variable Density (usec)	1200
0	Gamma Ray (GAPI)	150		0	Amplified Amplitude (mV)	10			
0	Line Tension (lb)	4000							
	TEMP								
	(degF)								

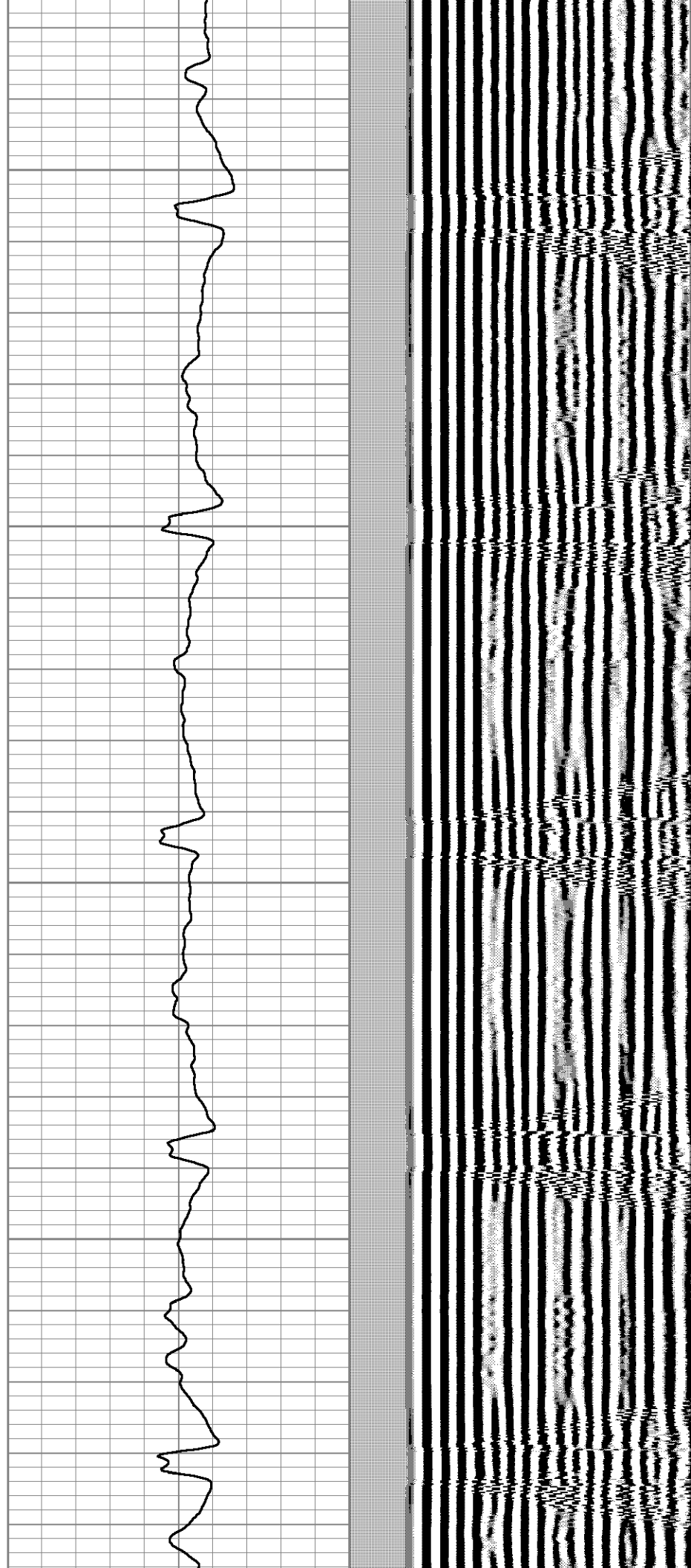
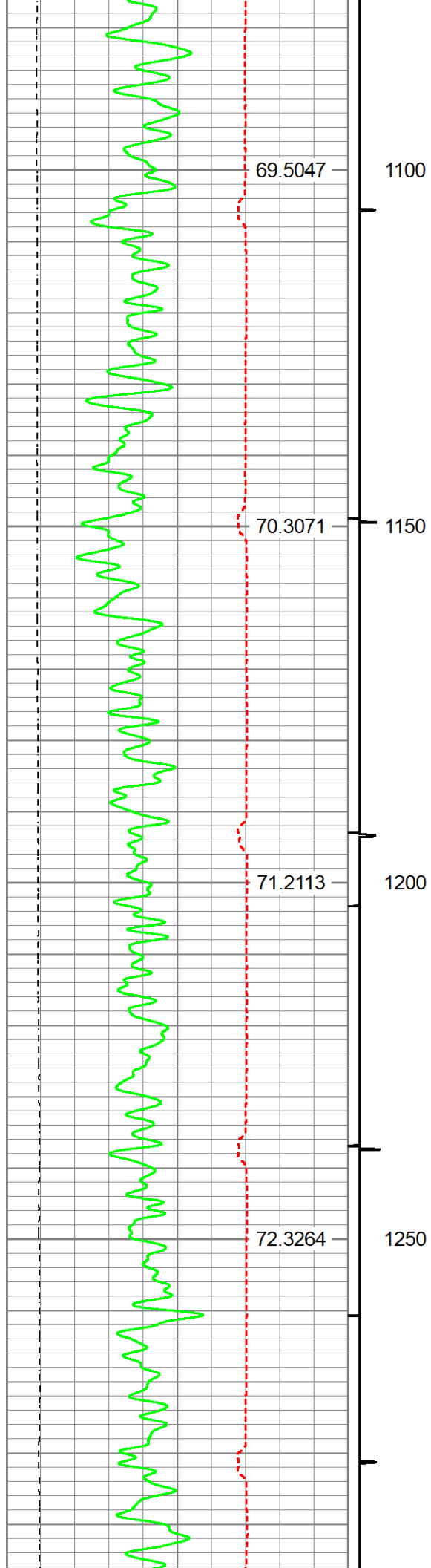


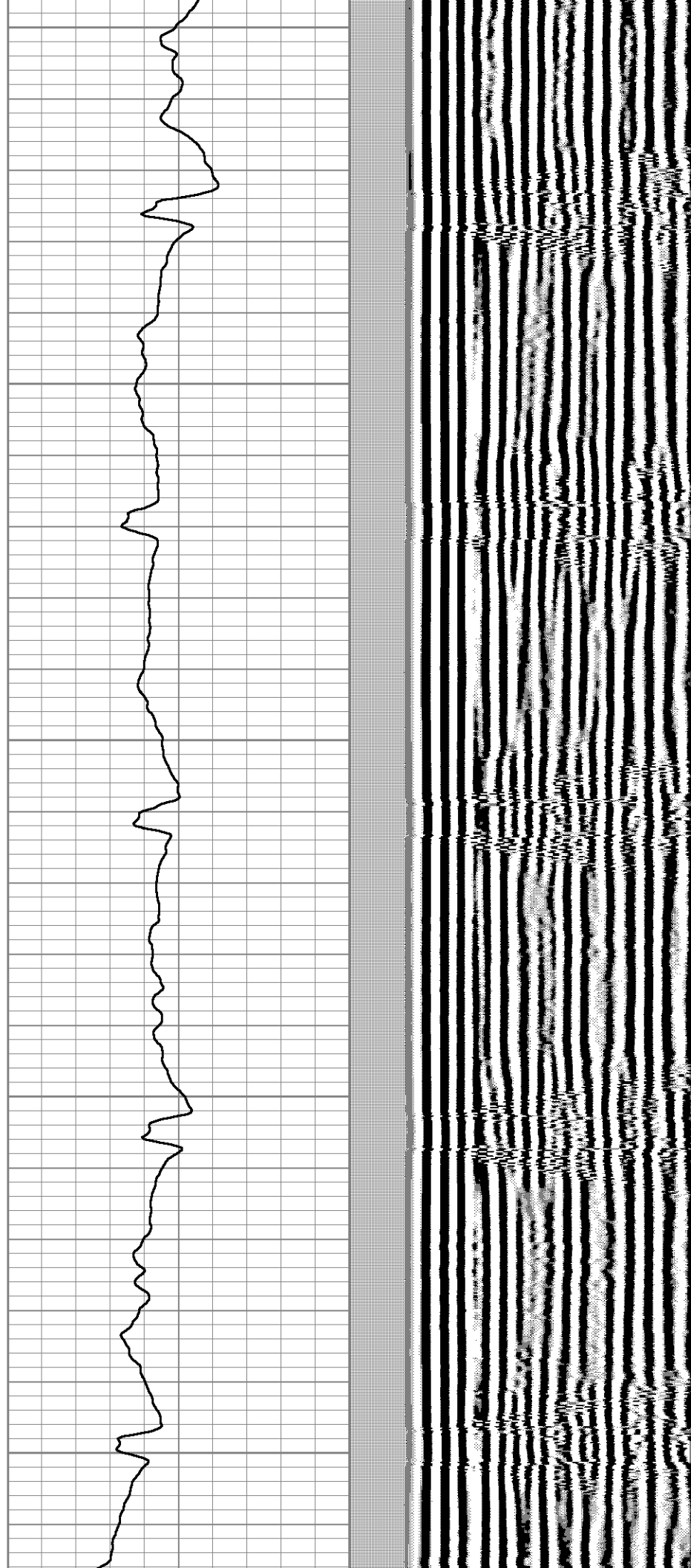
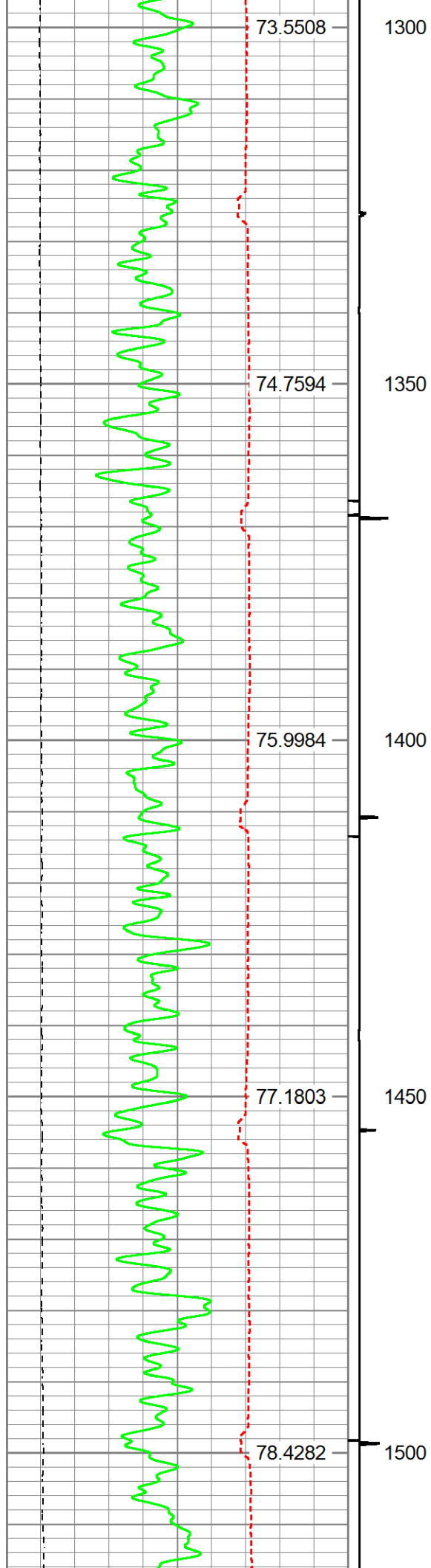


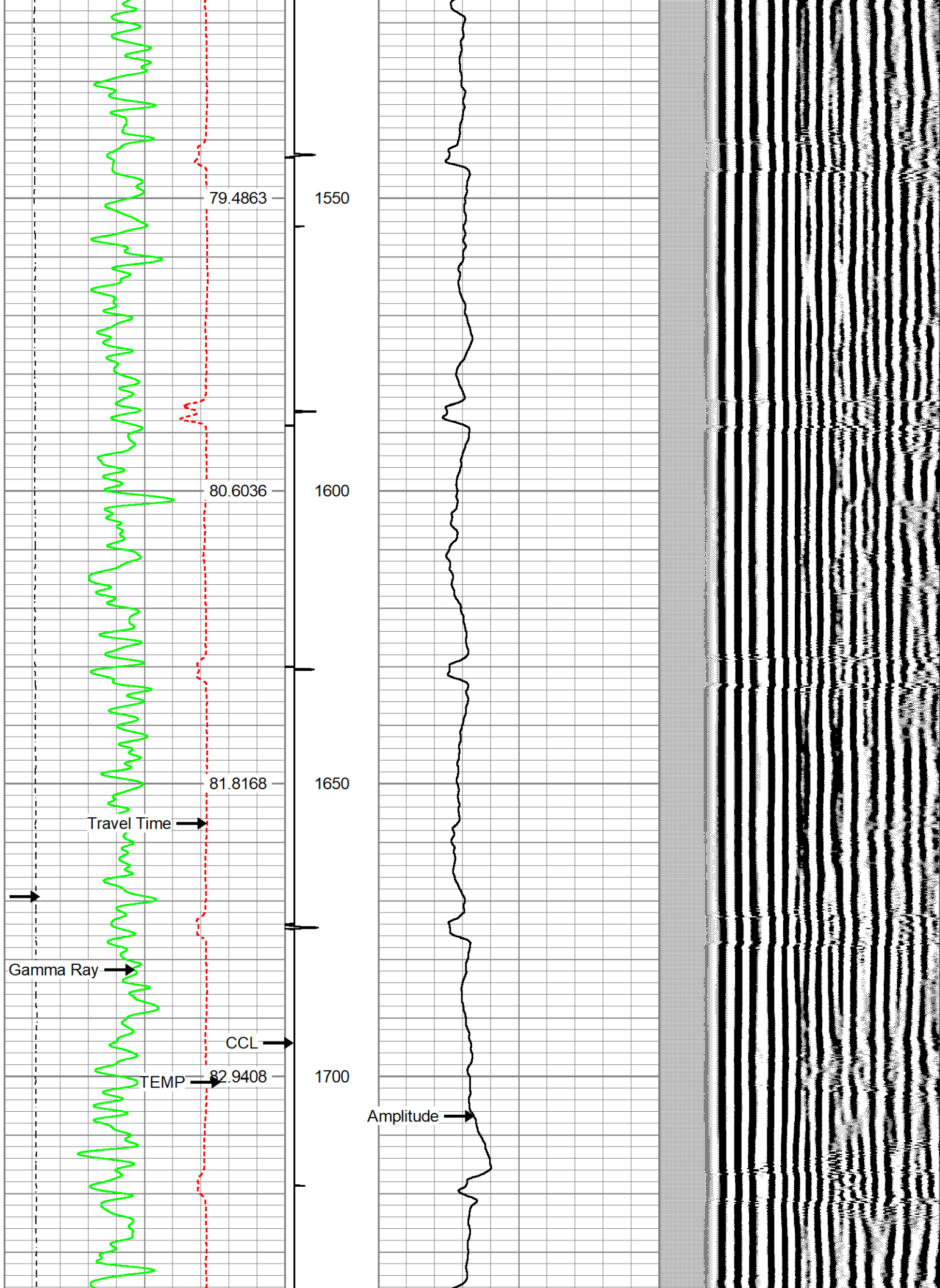


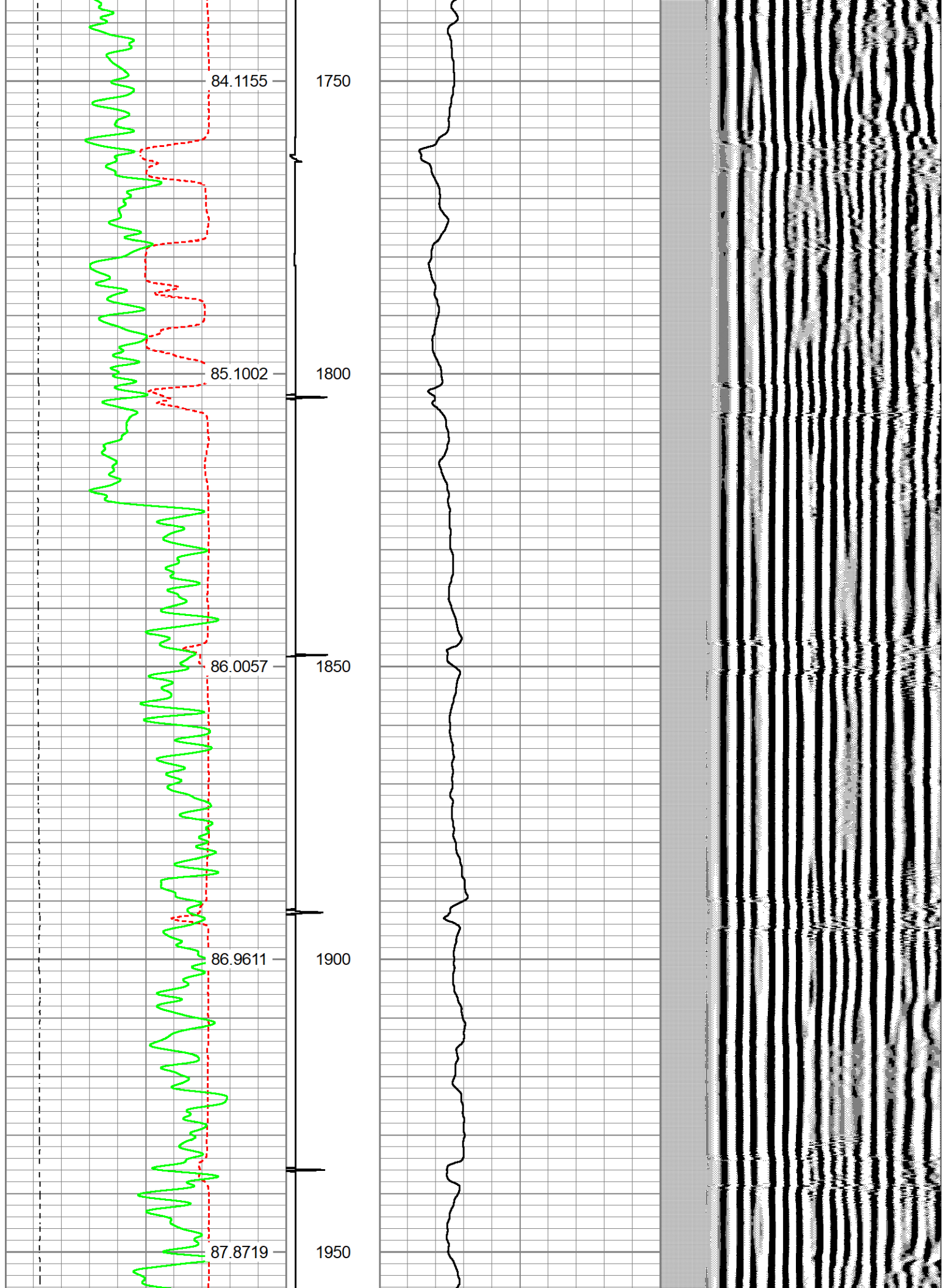


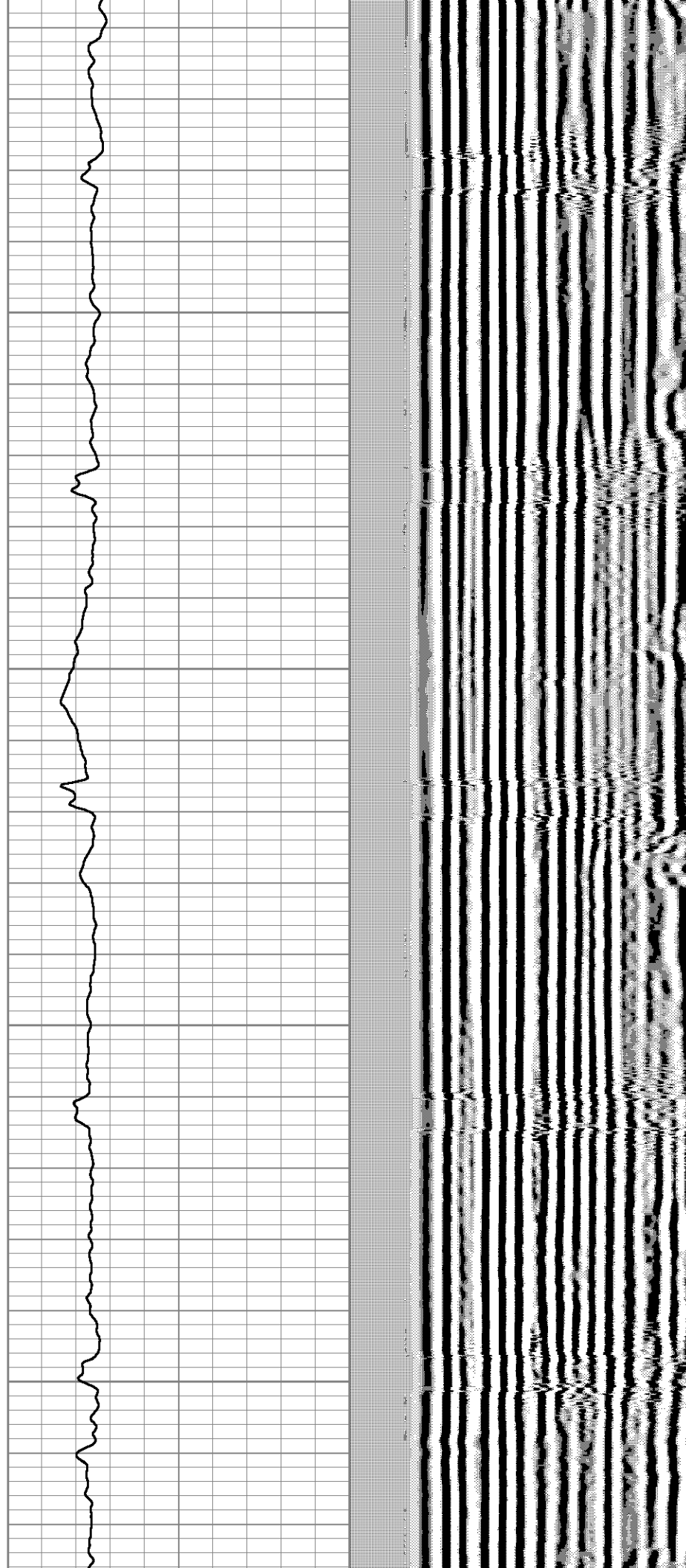
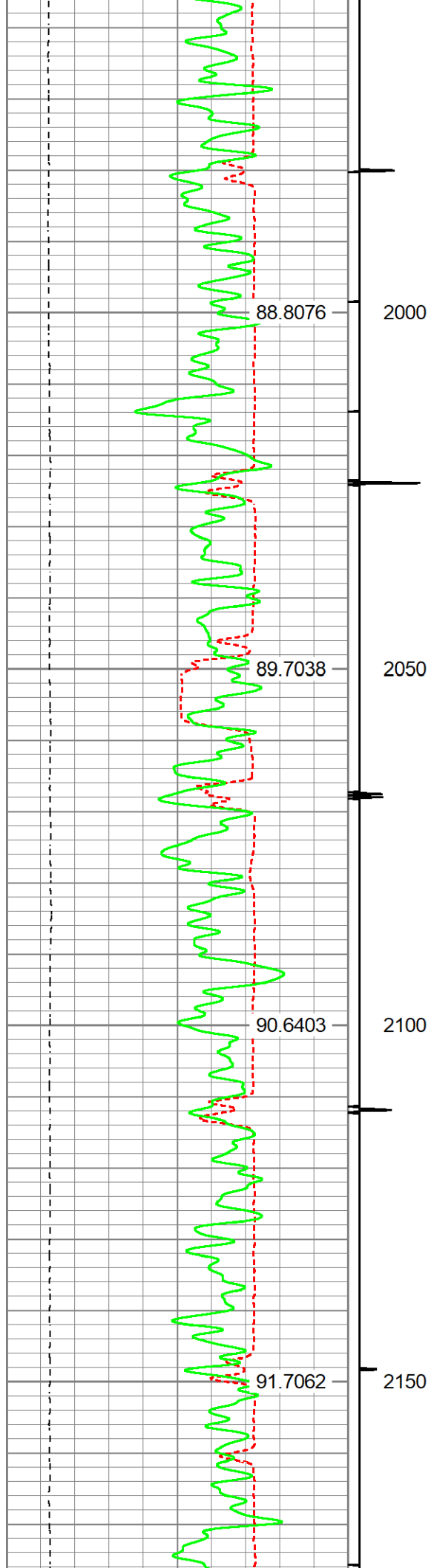


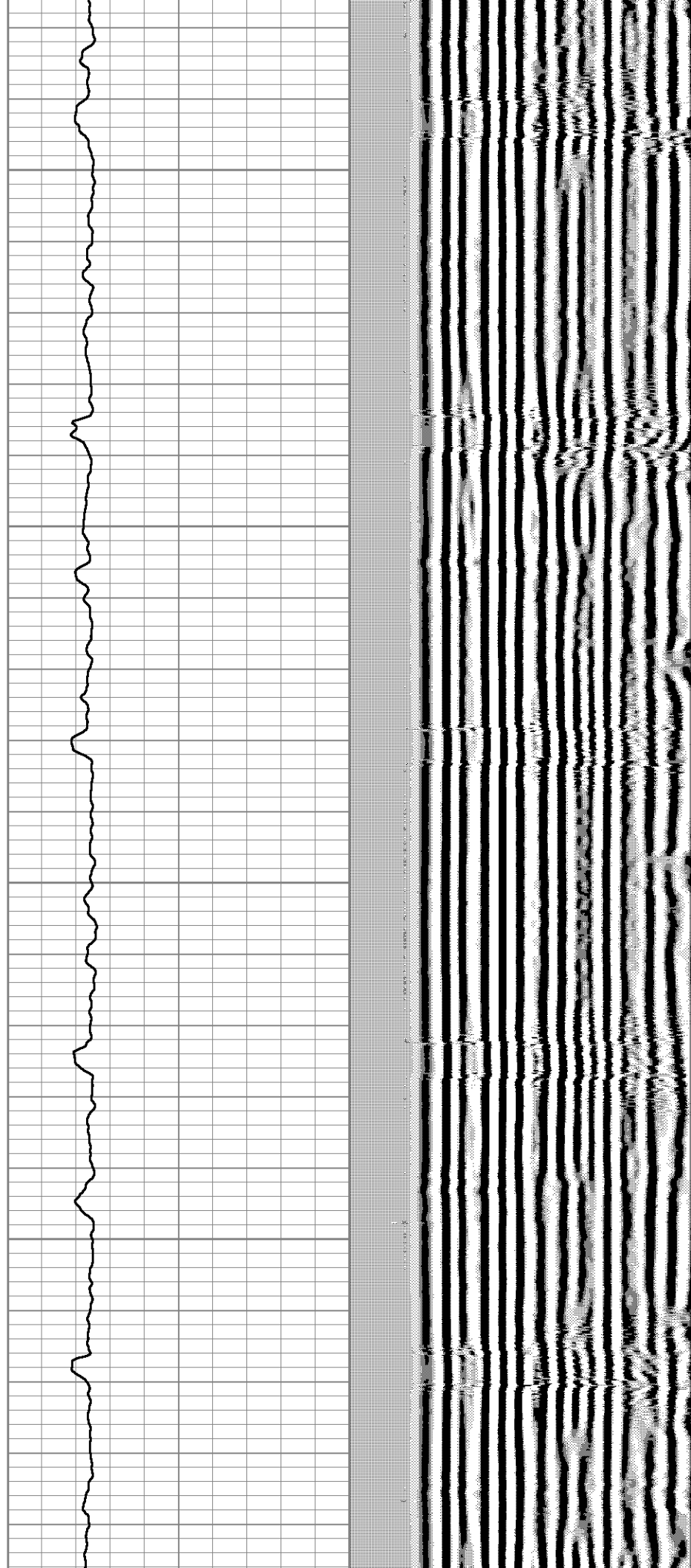
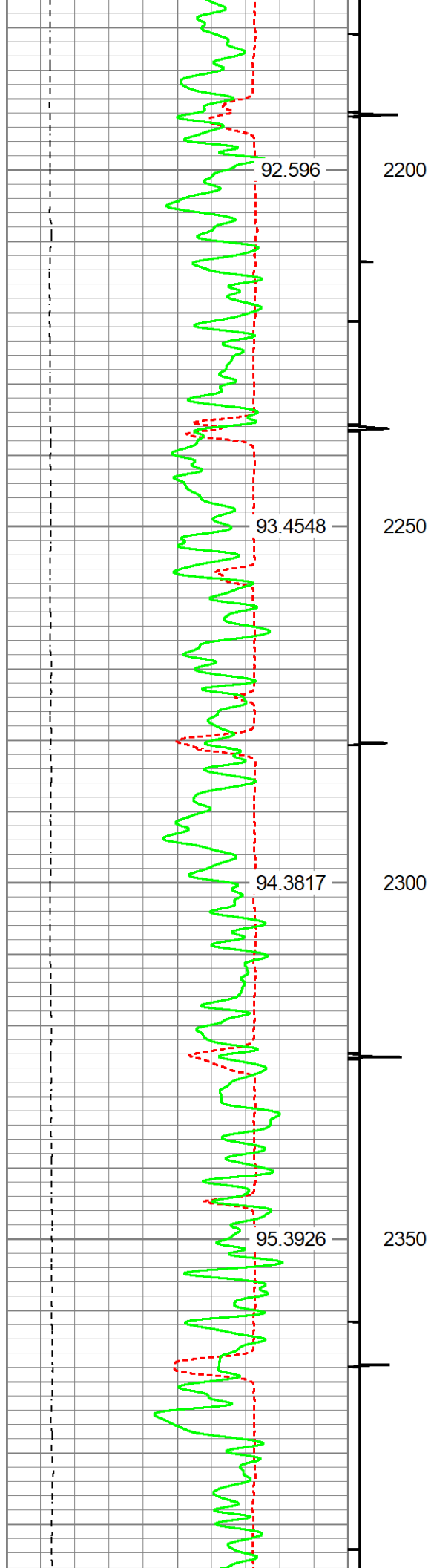


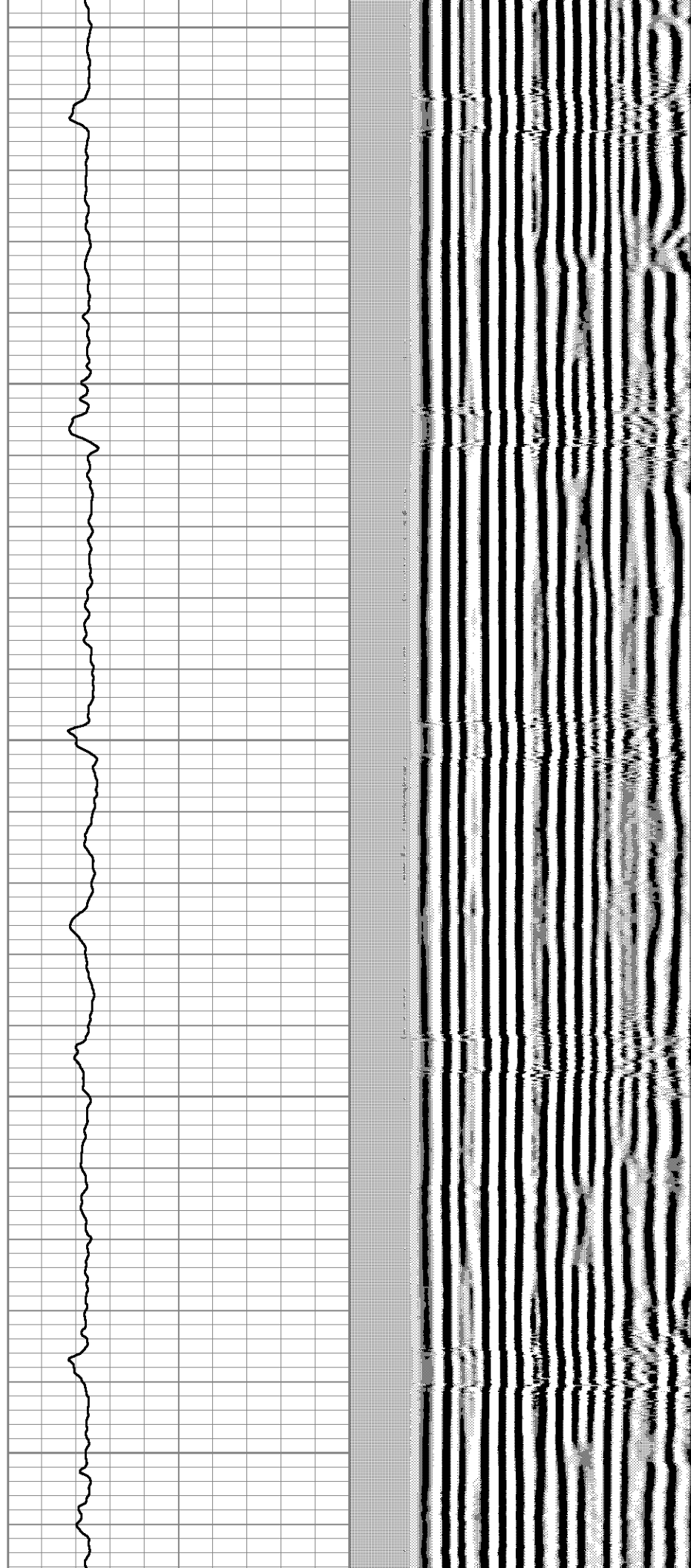
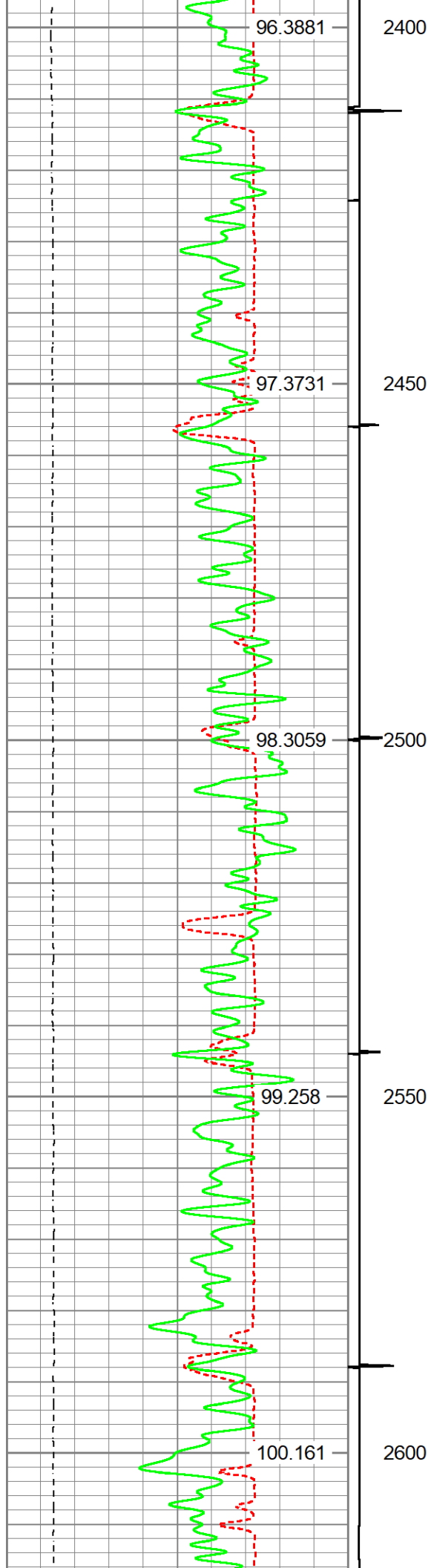


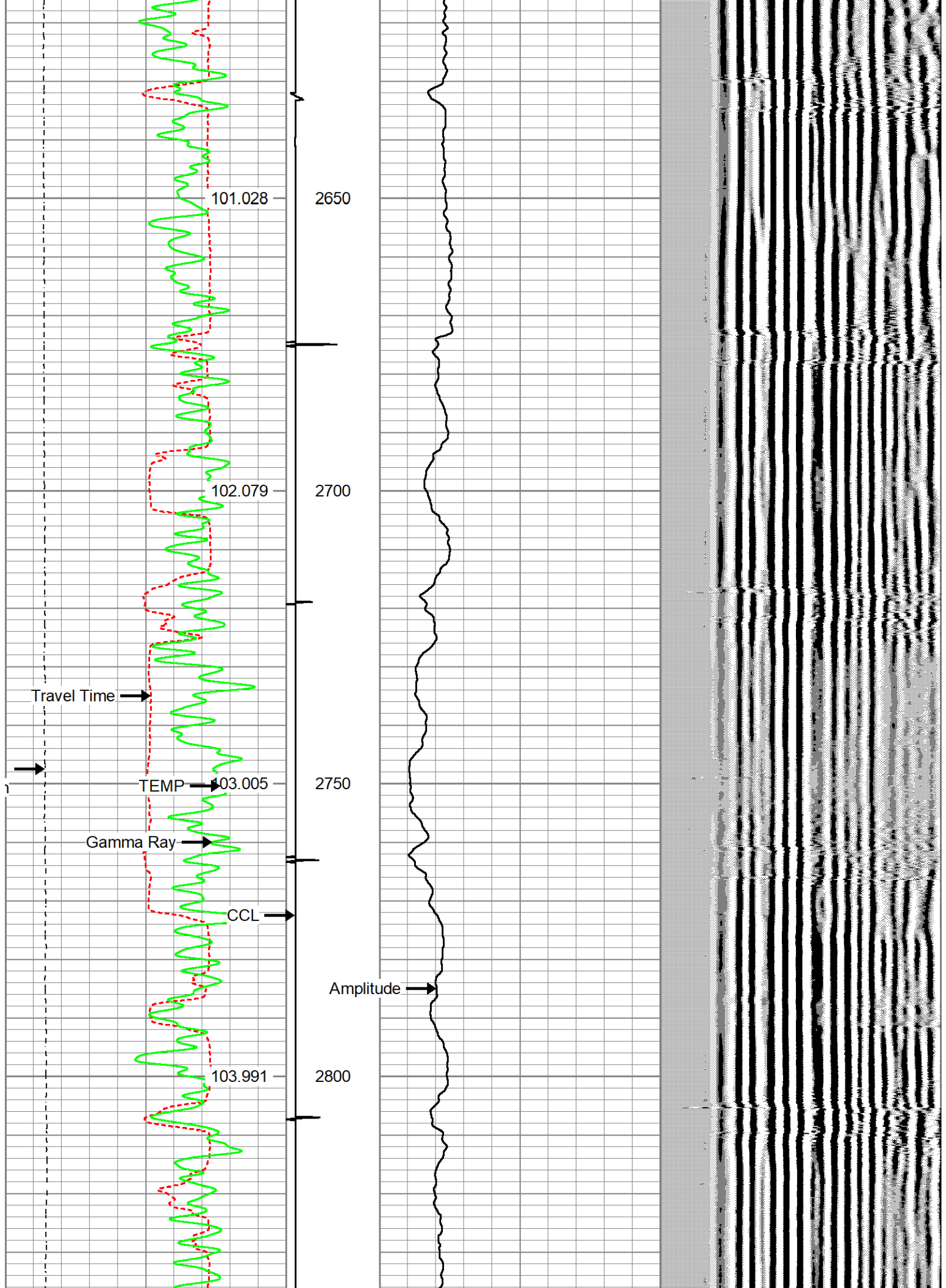


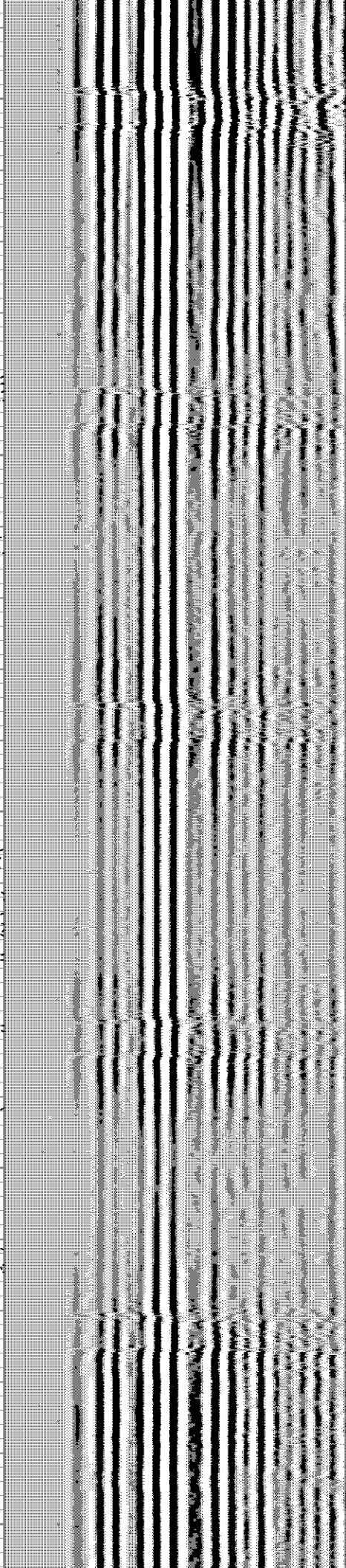
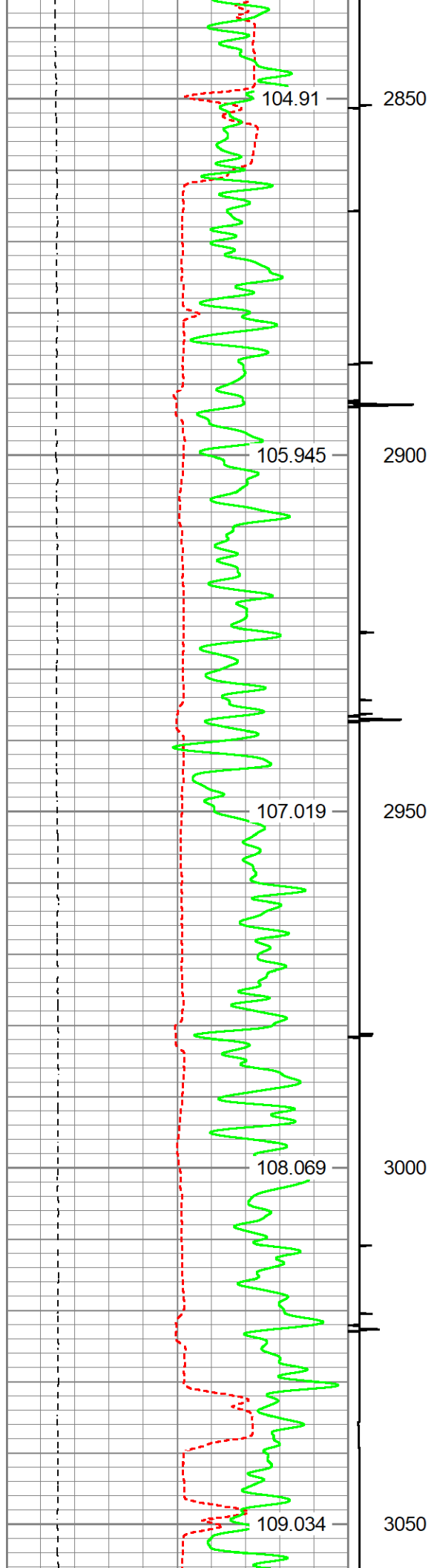


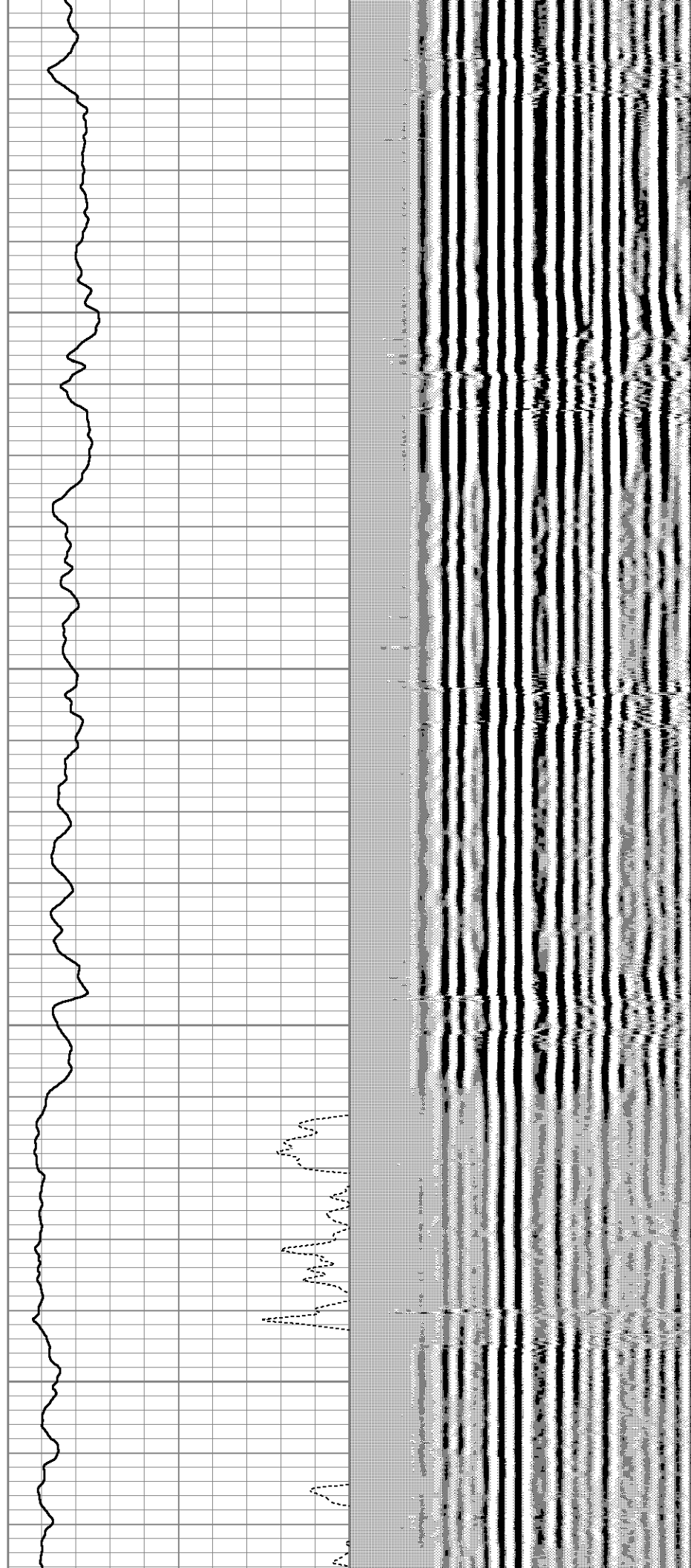
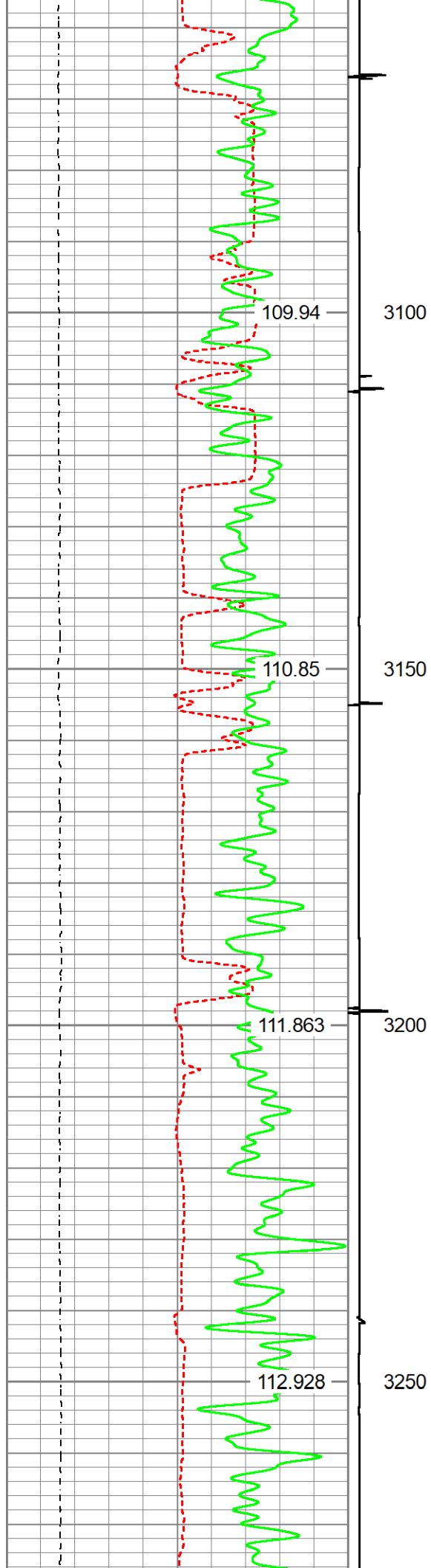


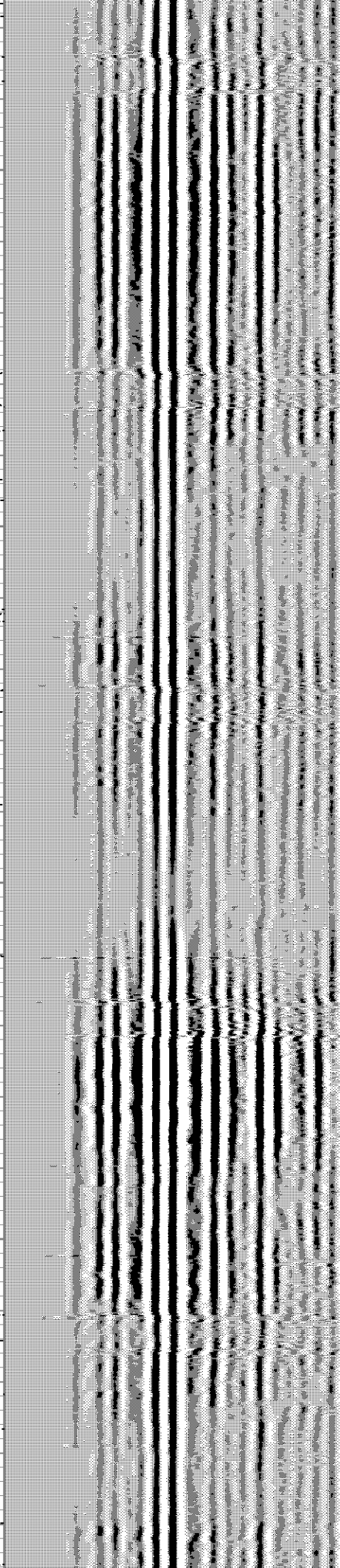
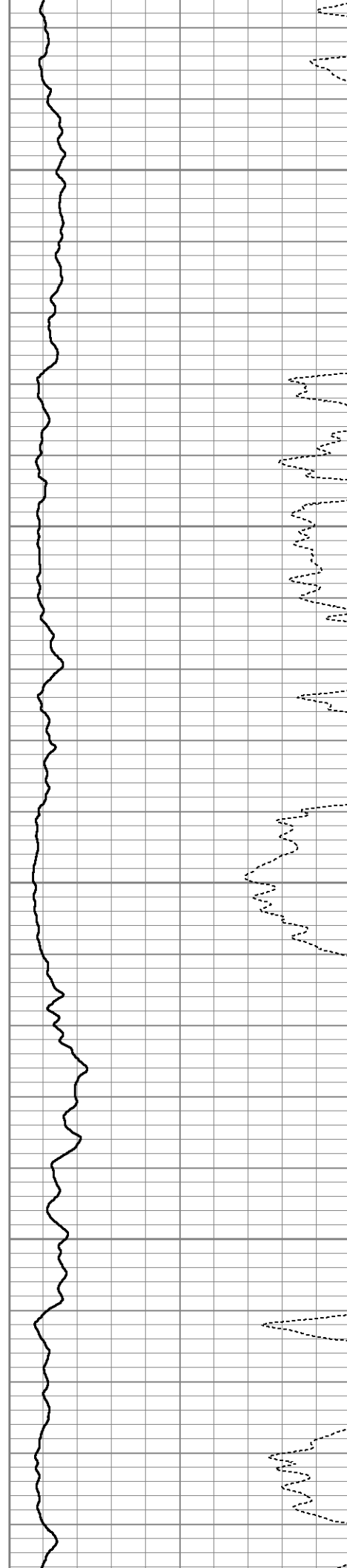
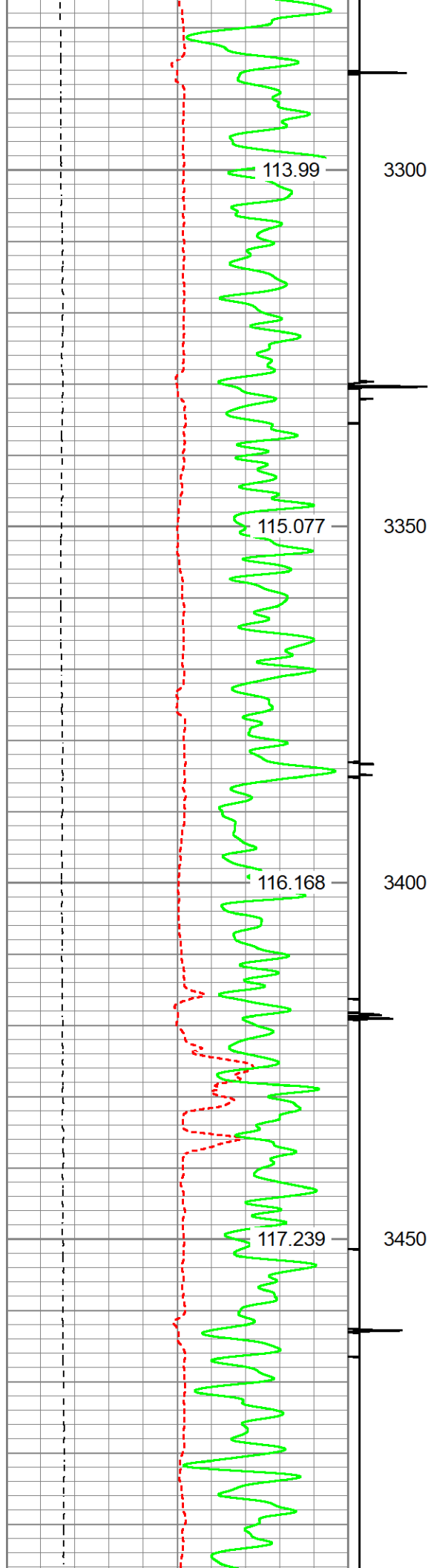


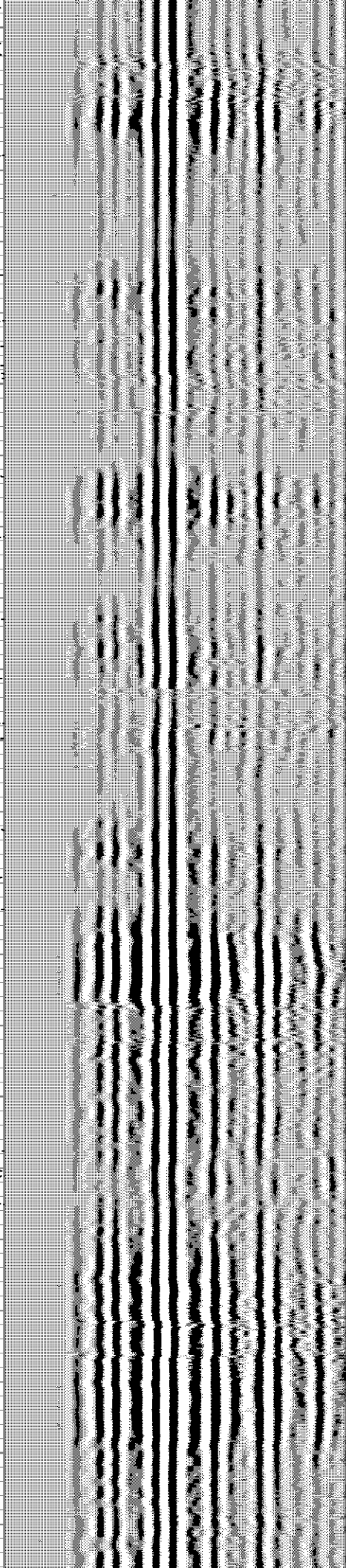
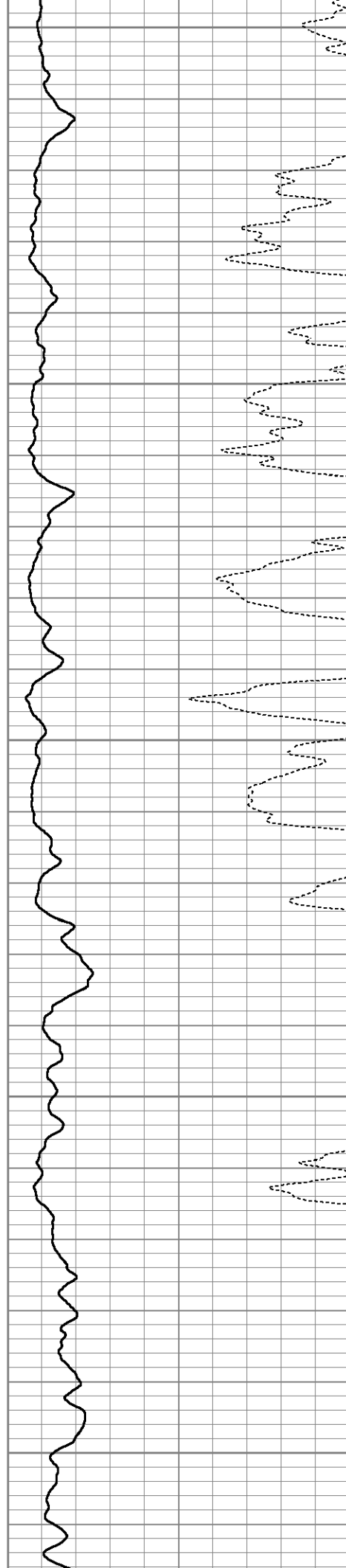
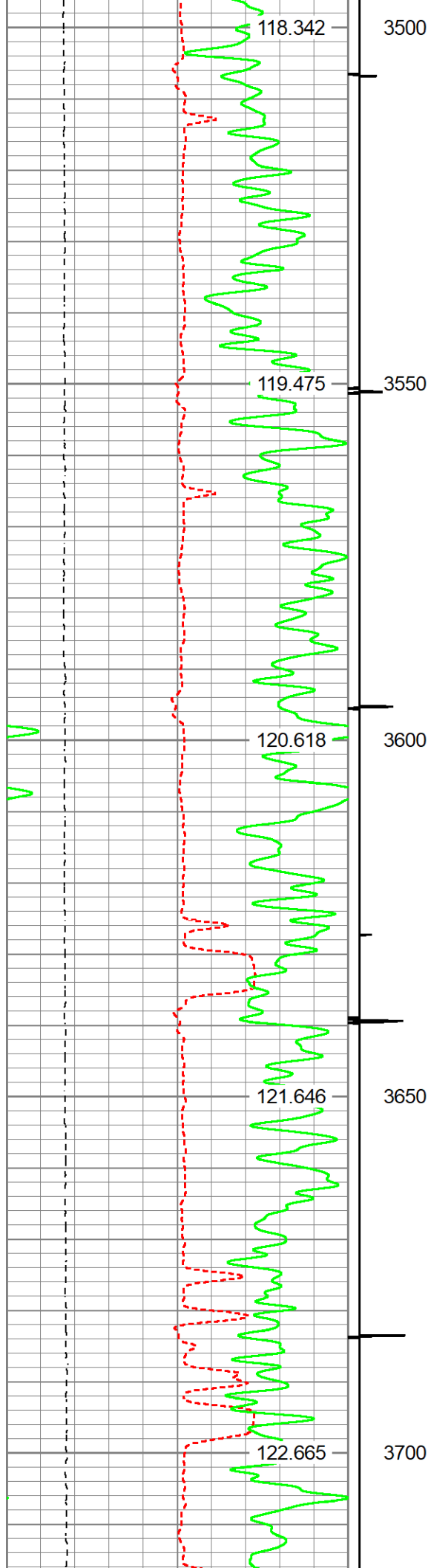


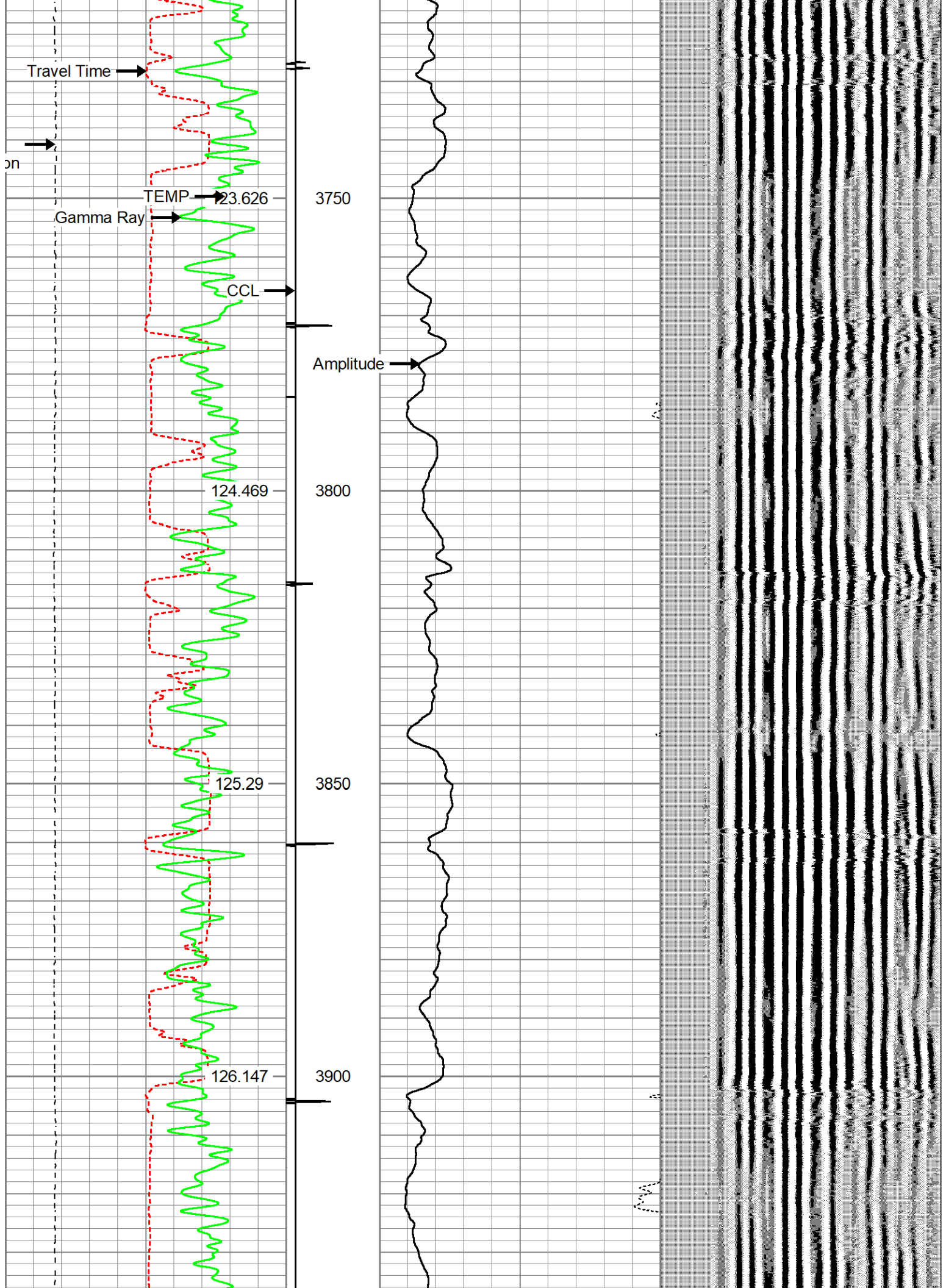


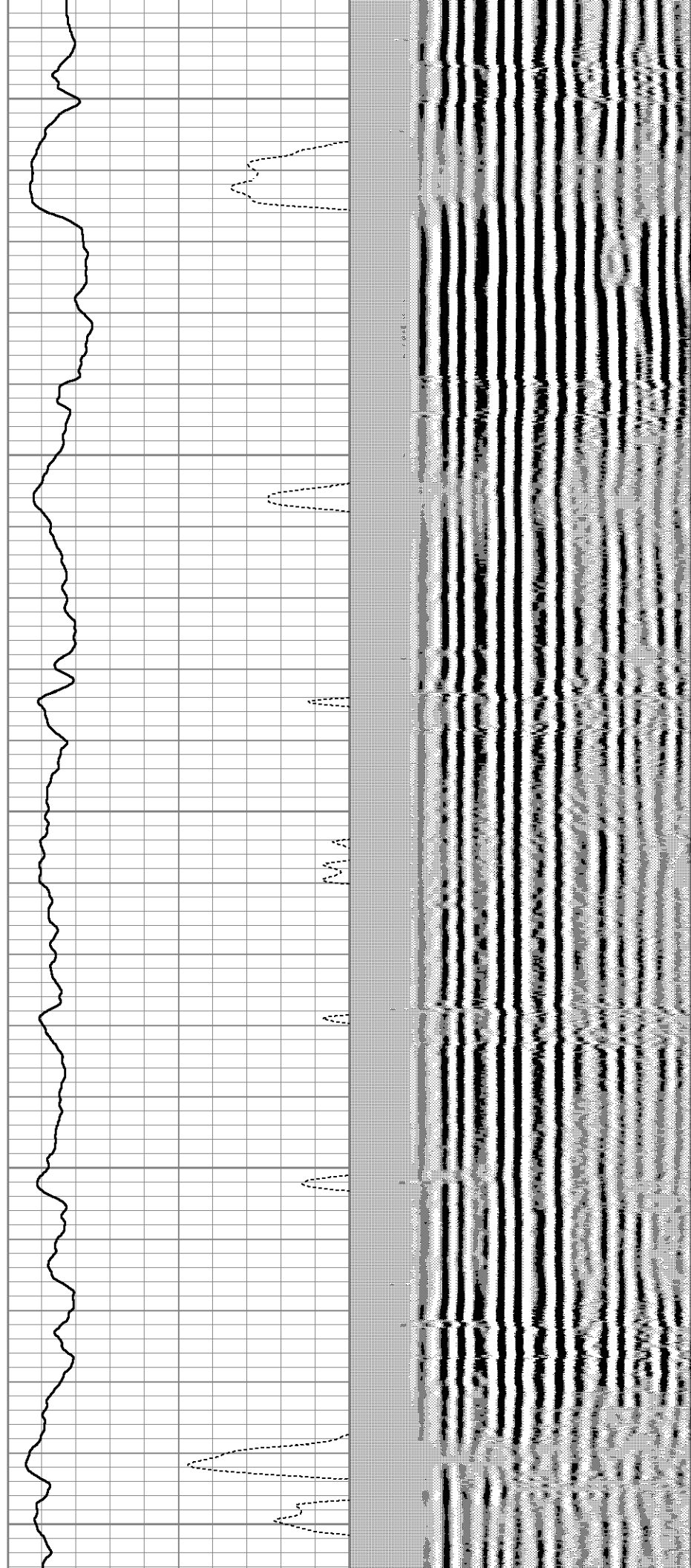
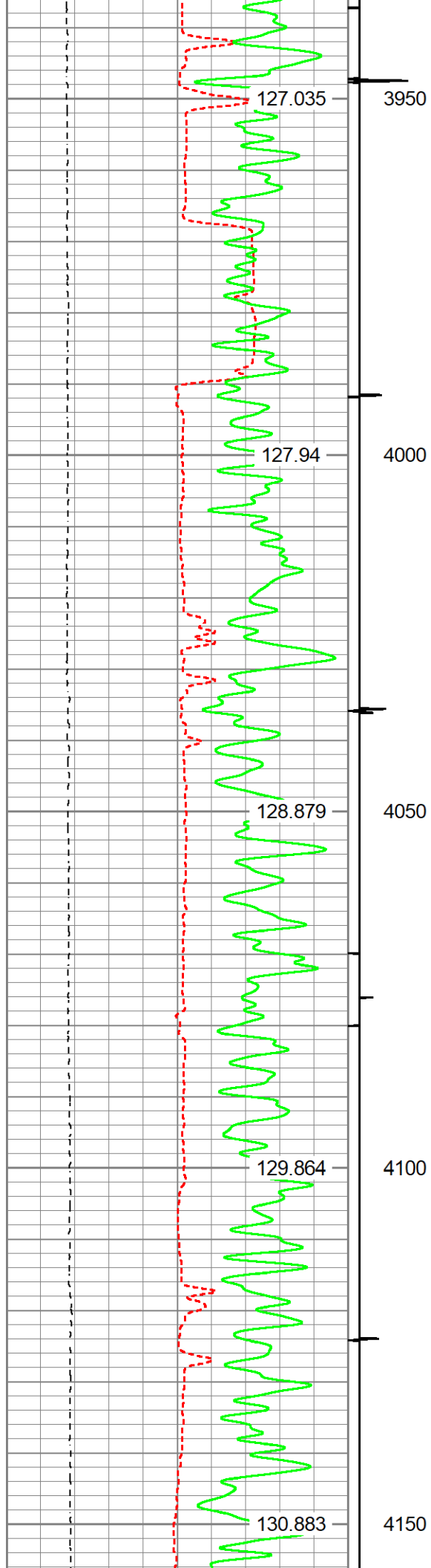


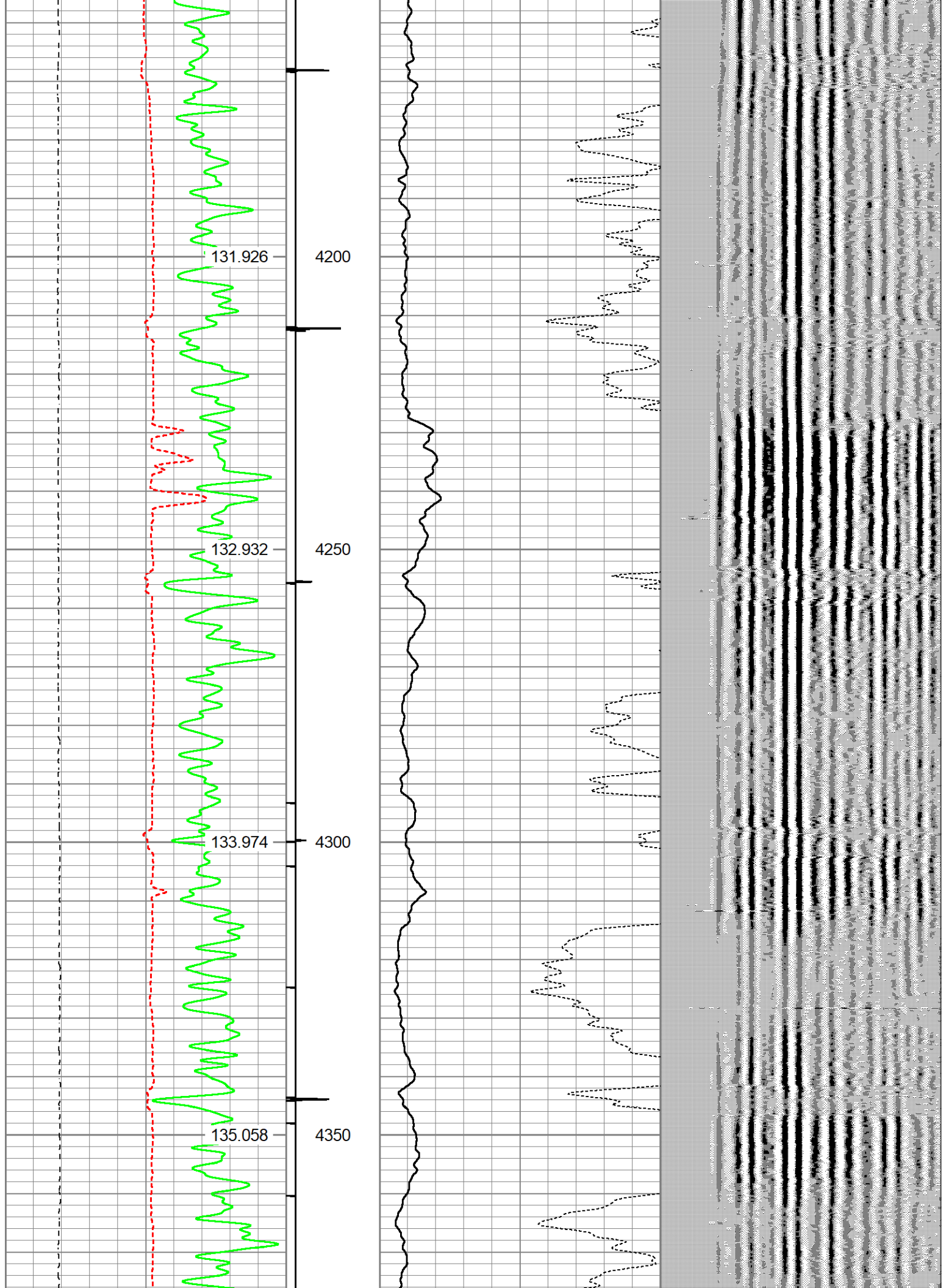


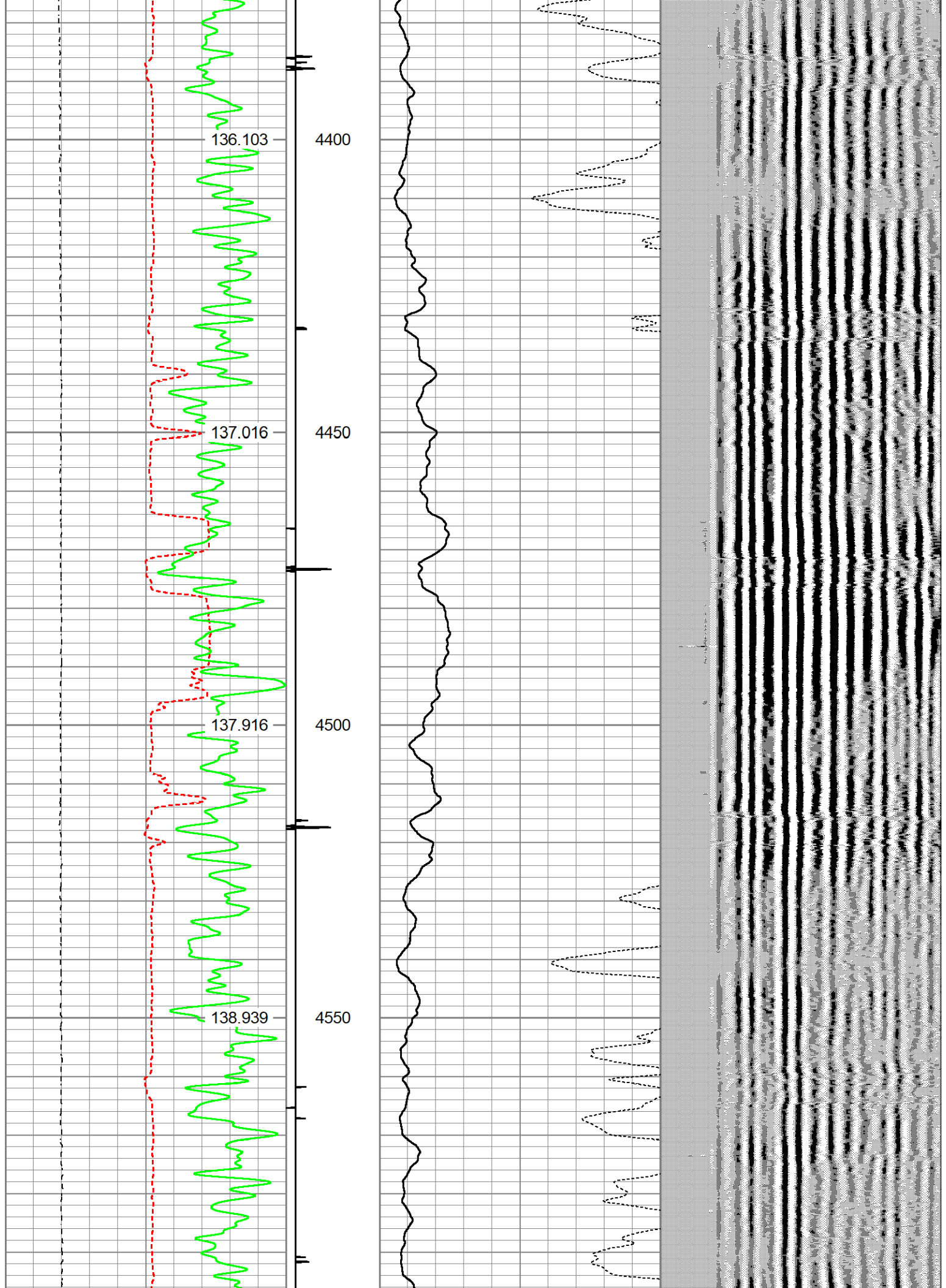


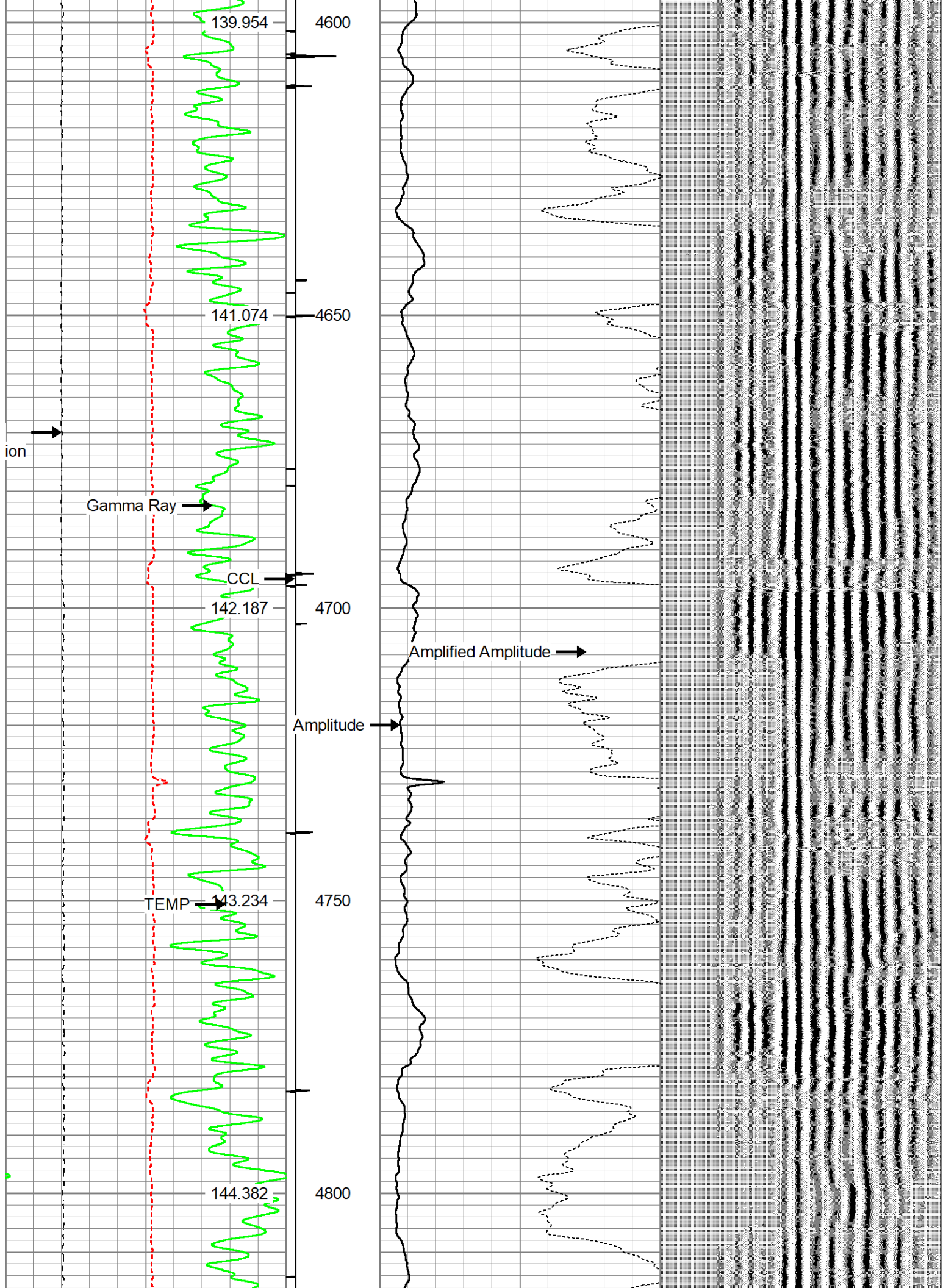


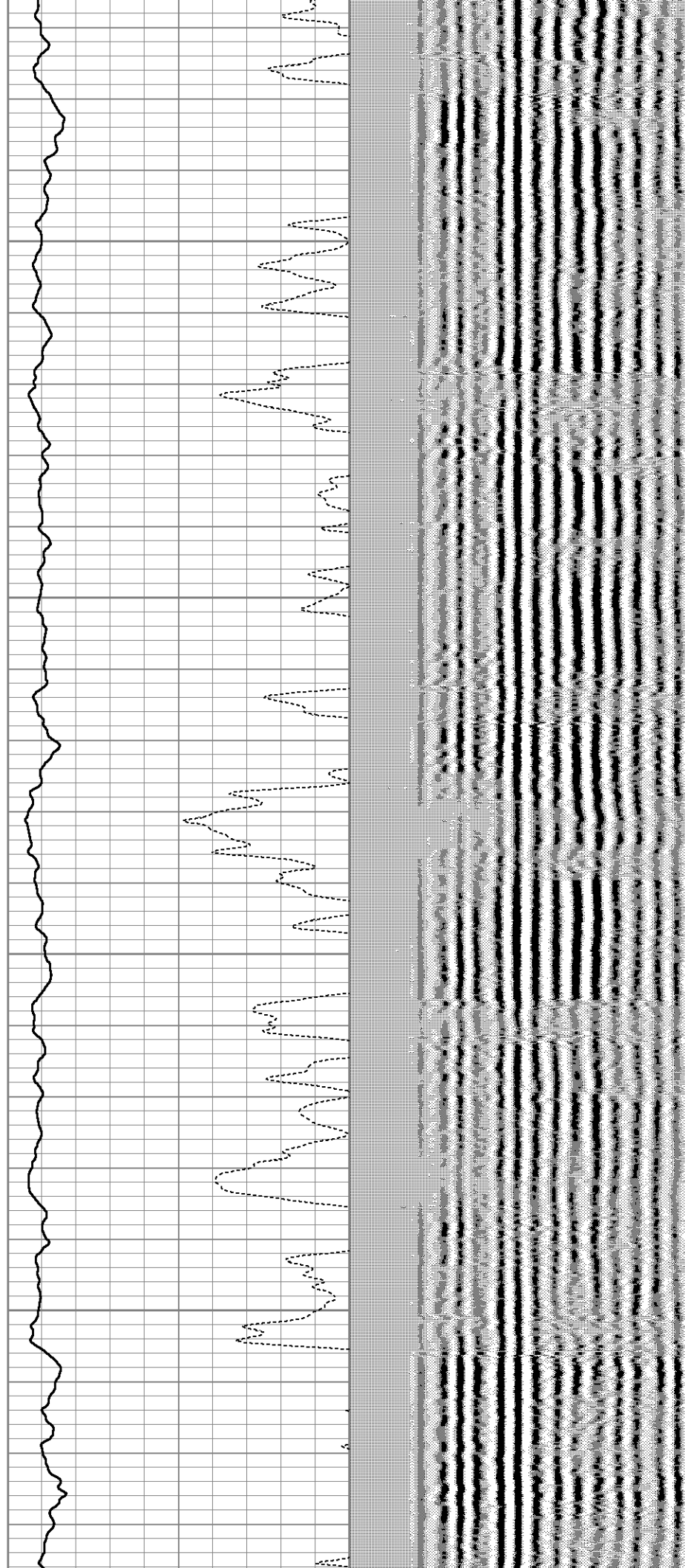
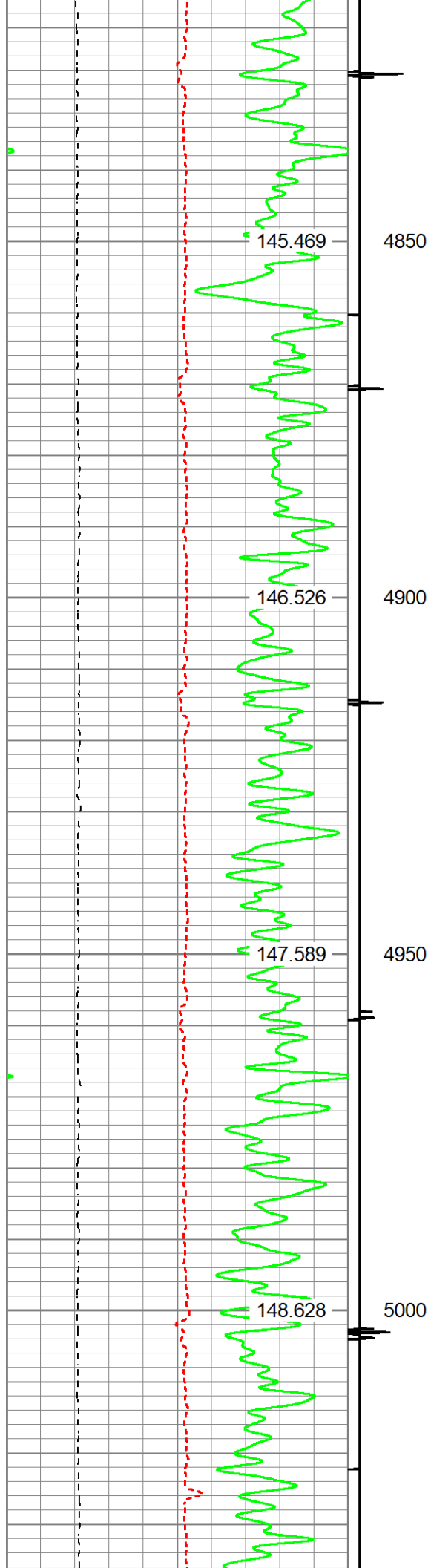


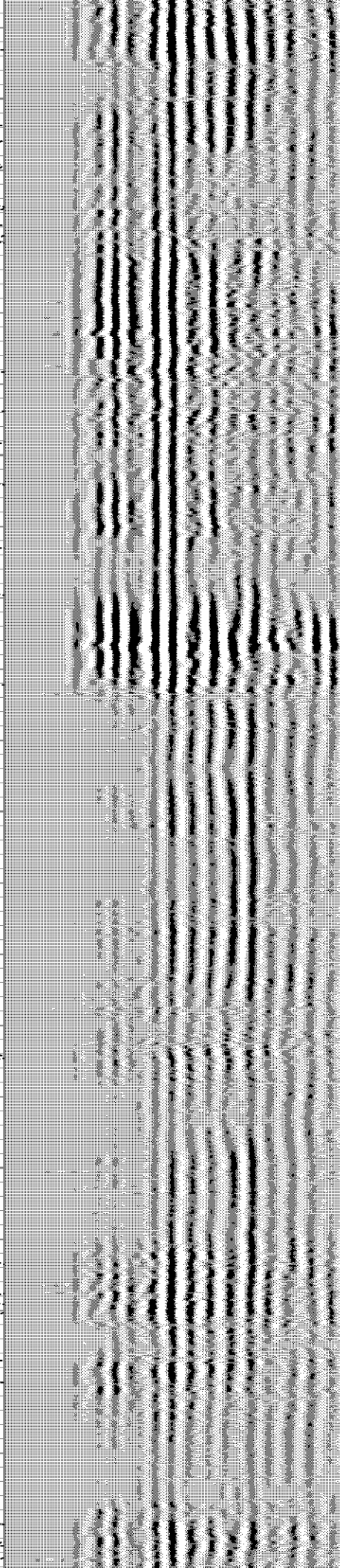
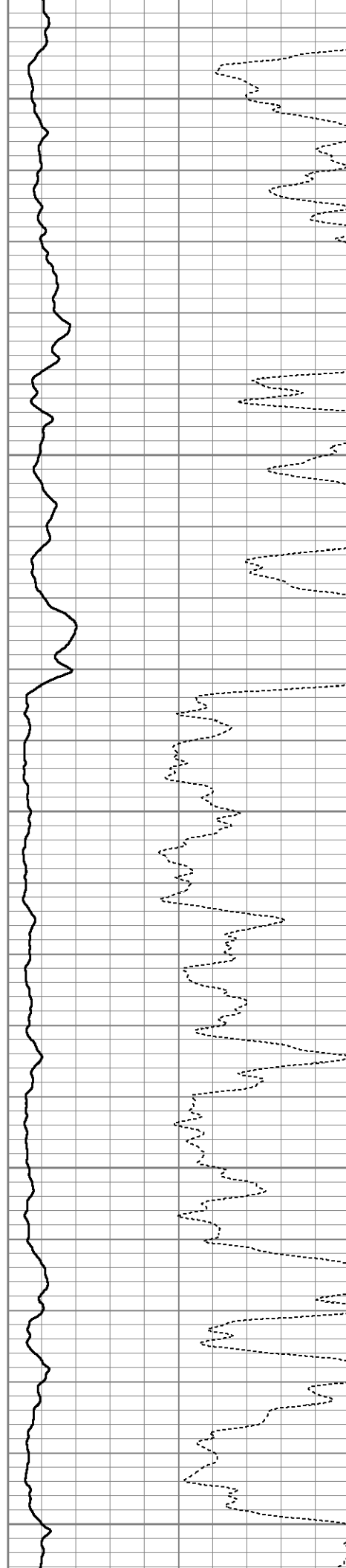
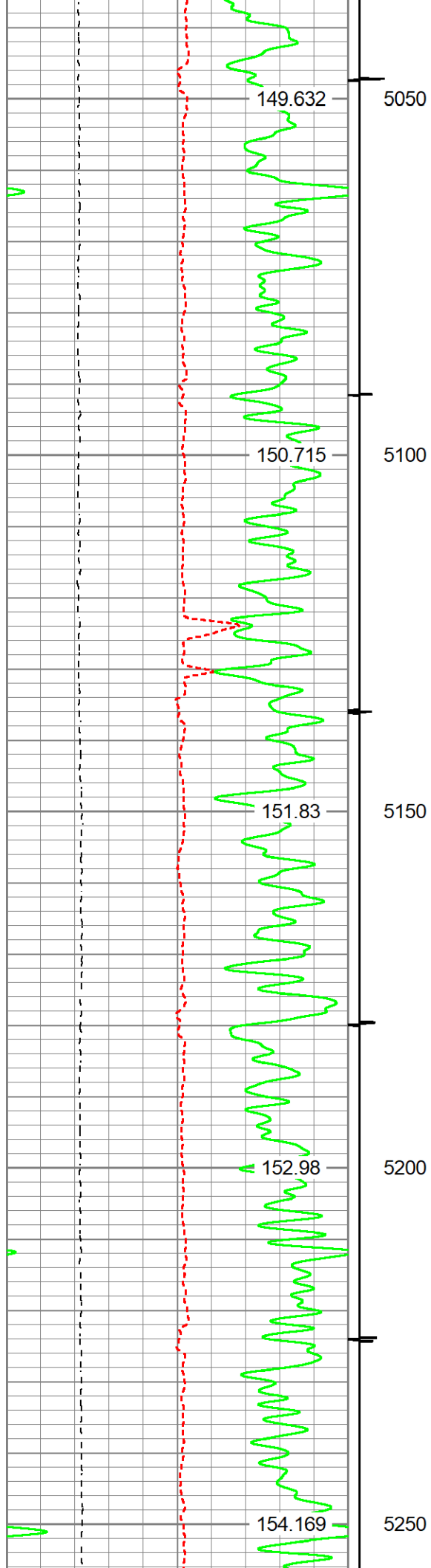


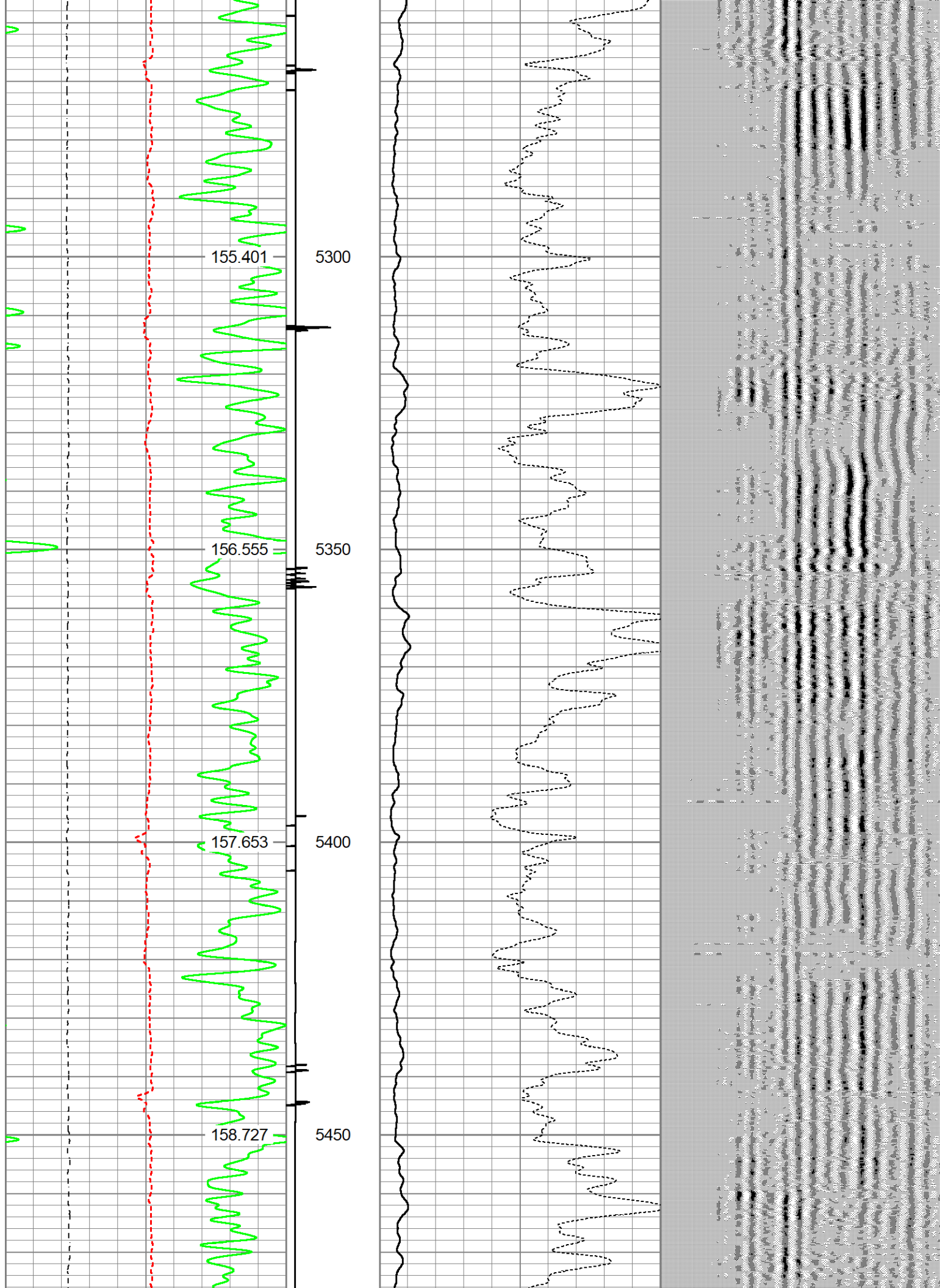


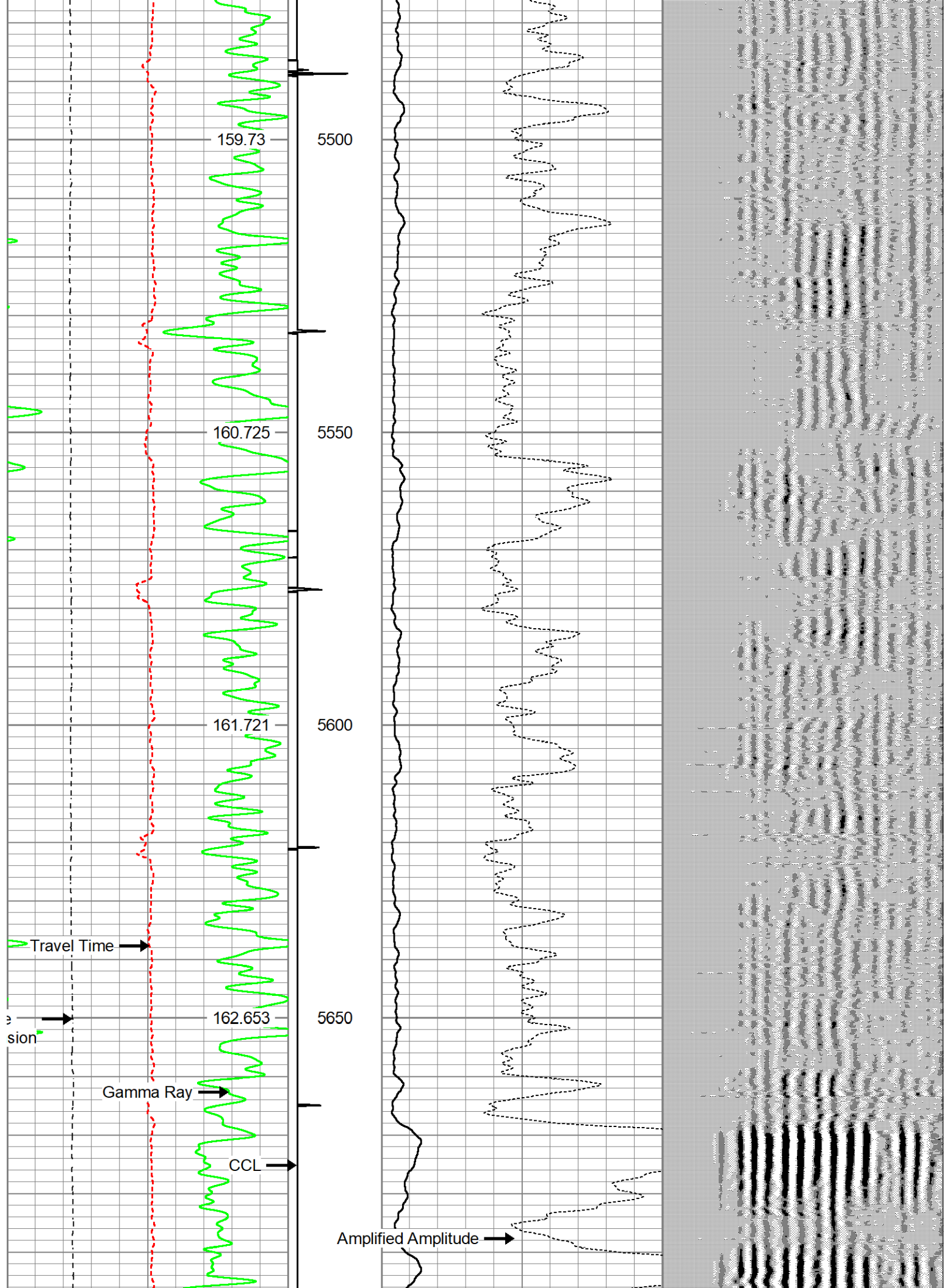


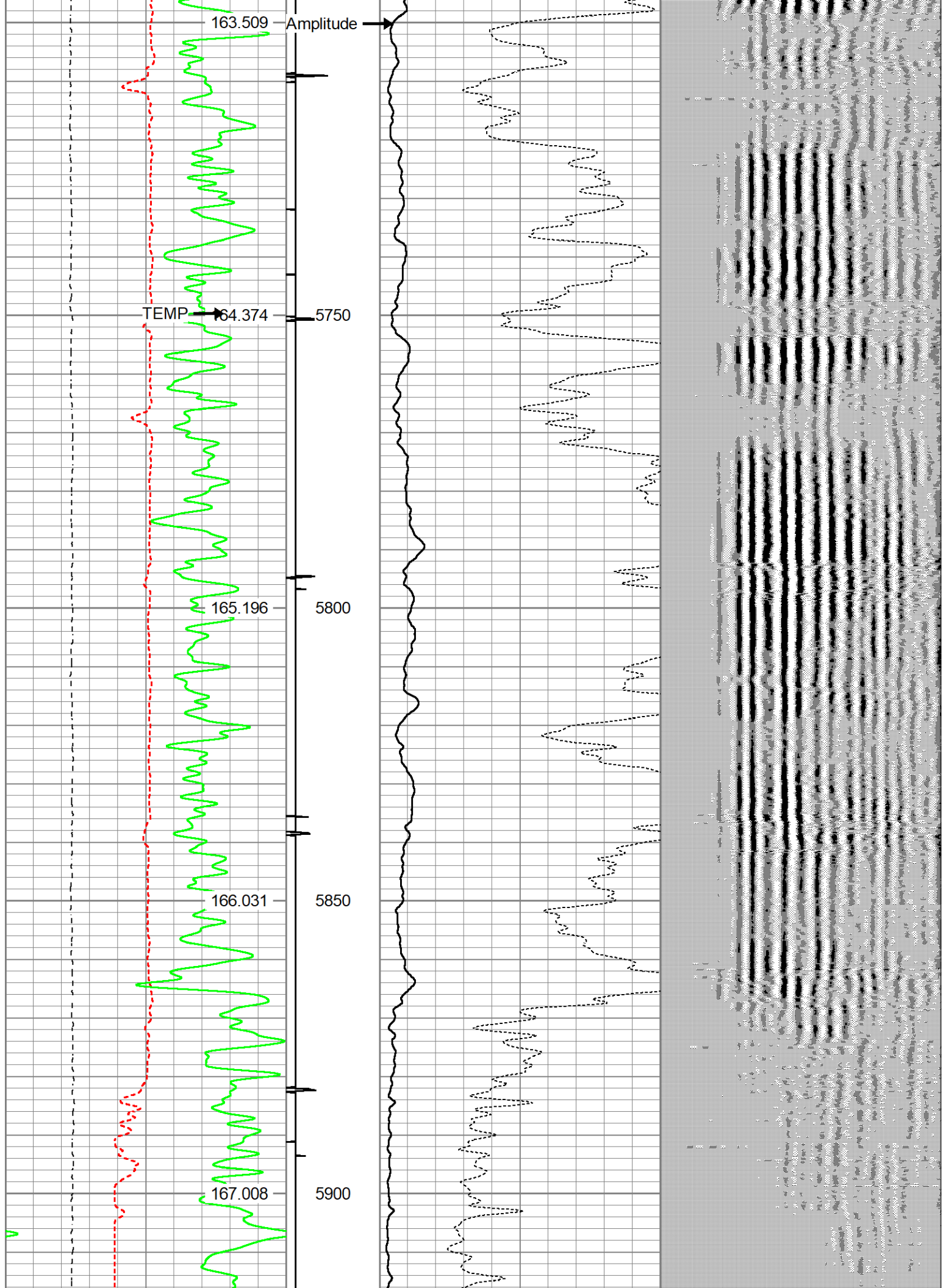


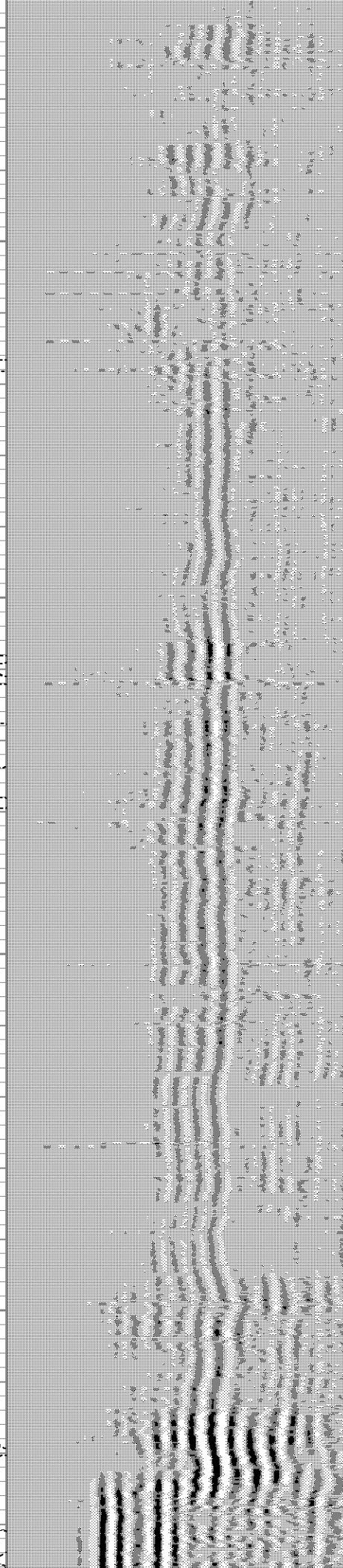
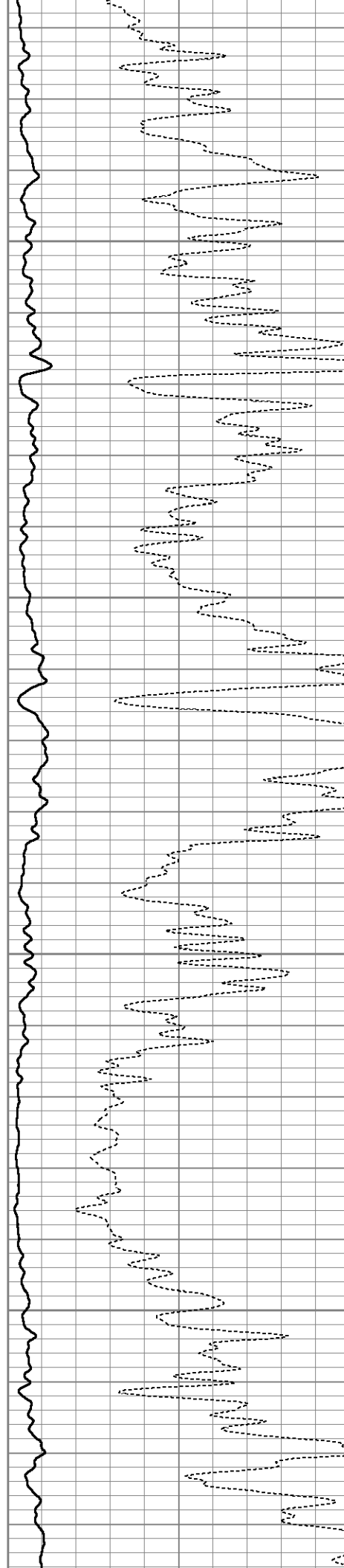
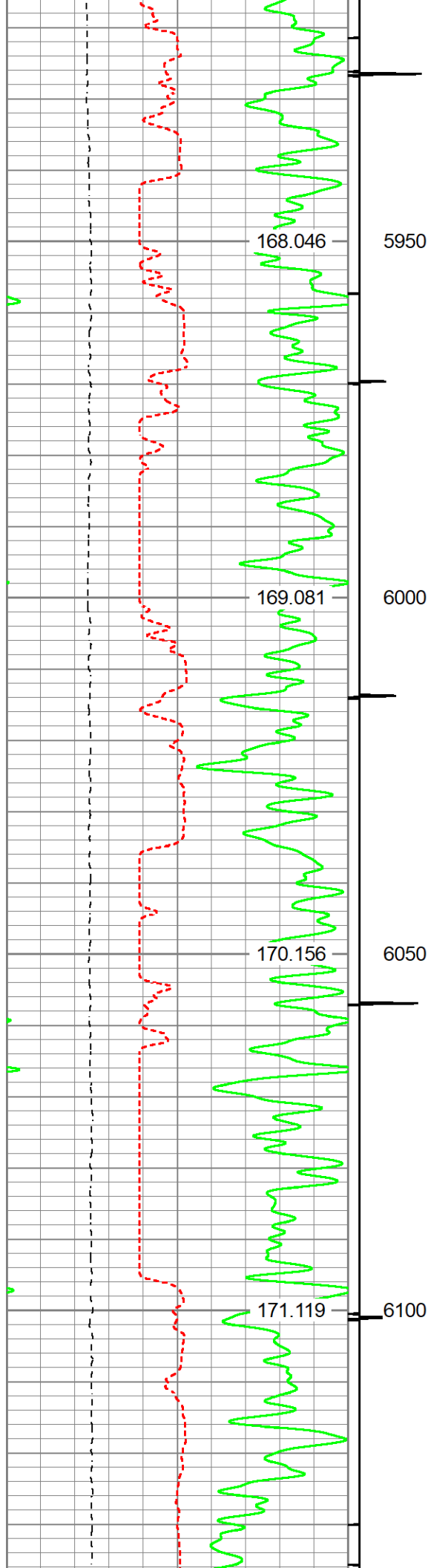


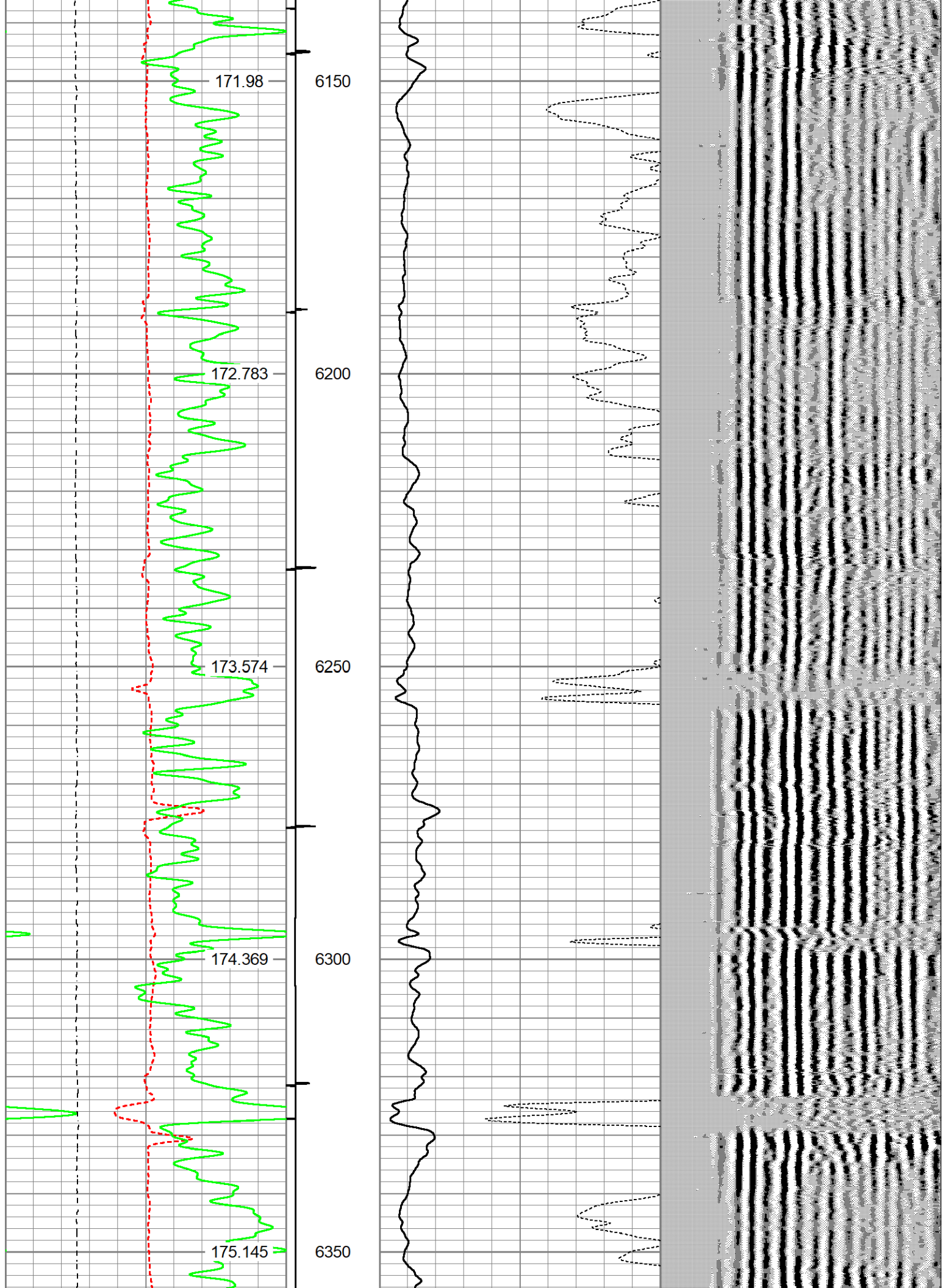


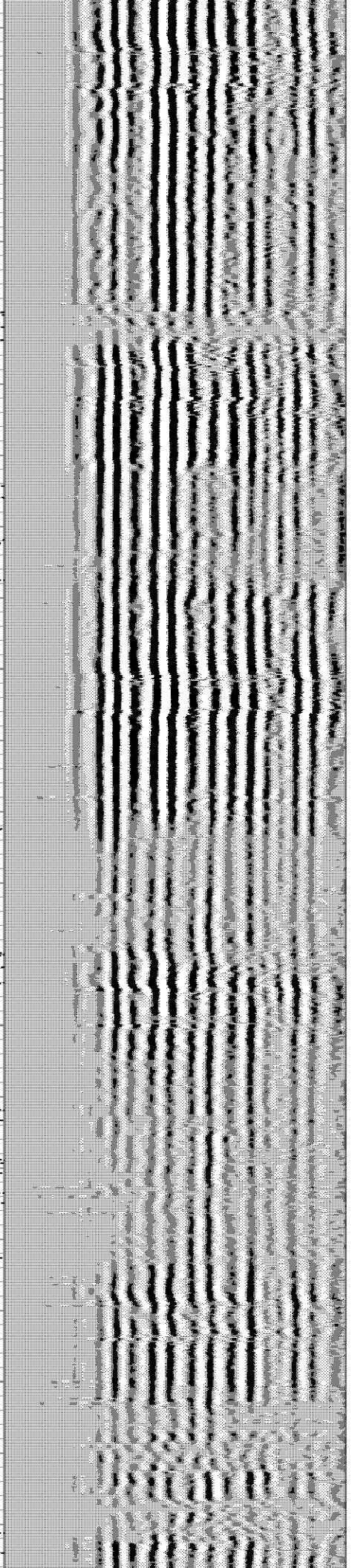
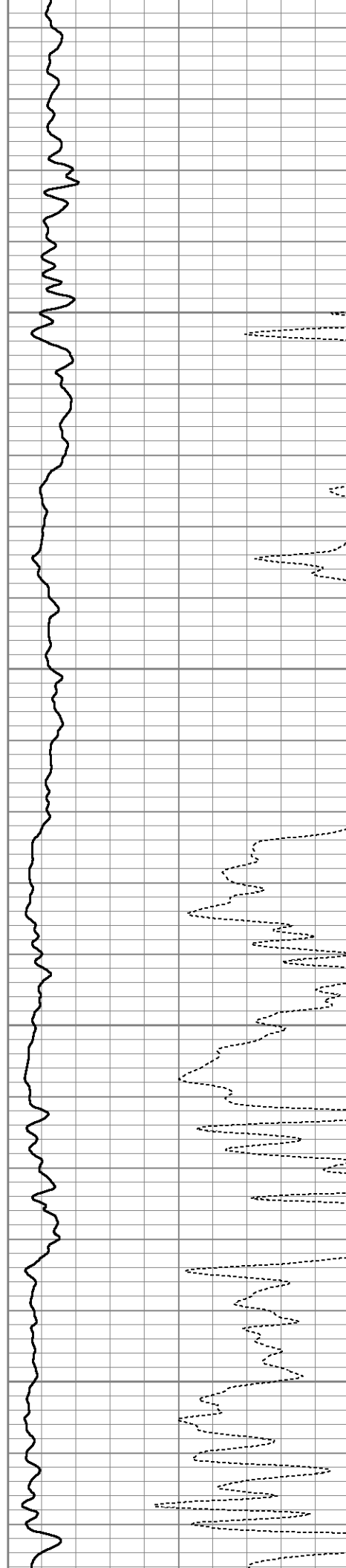
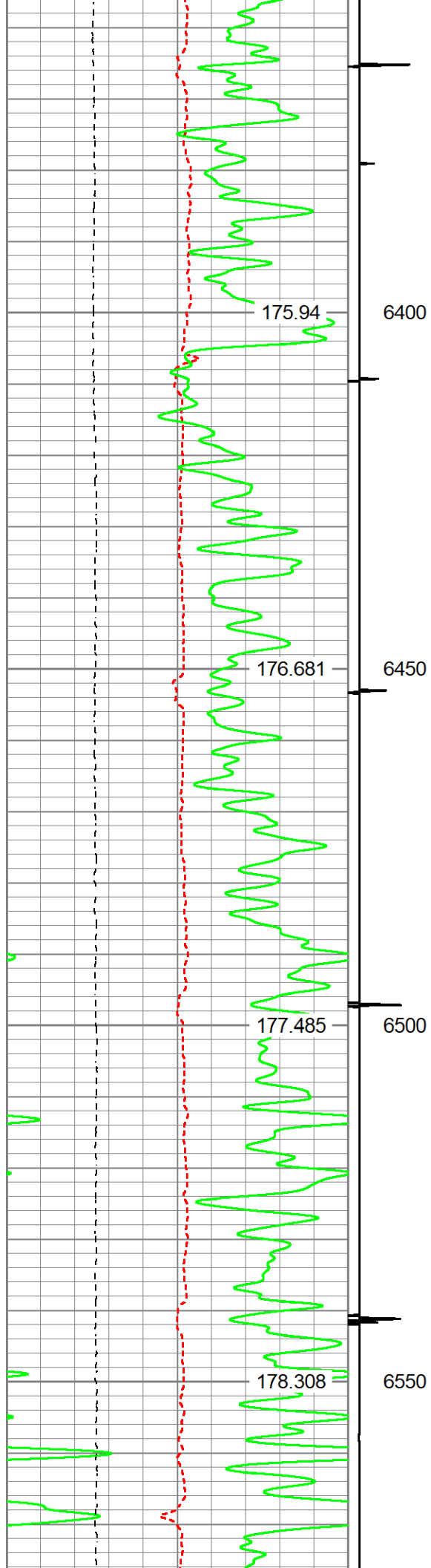


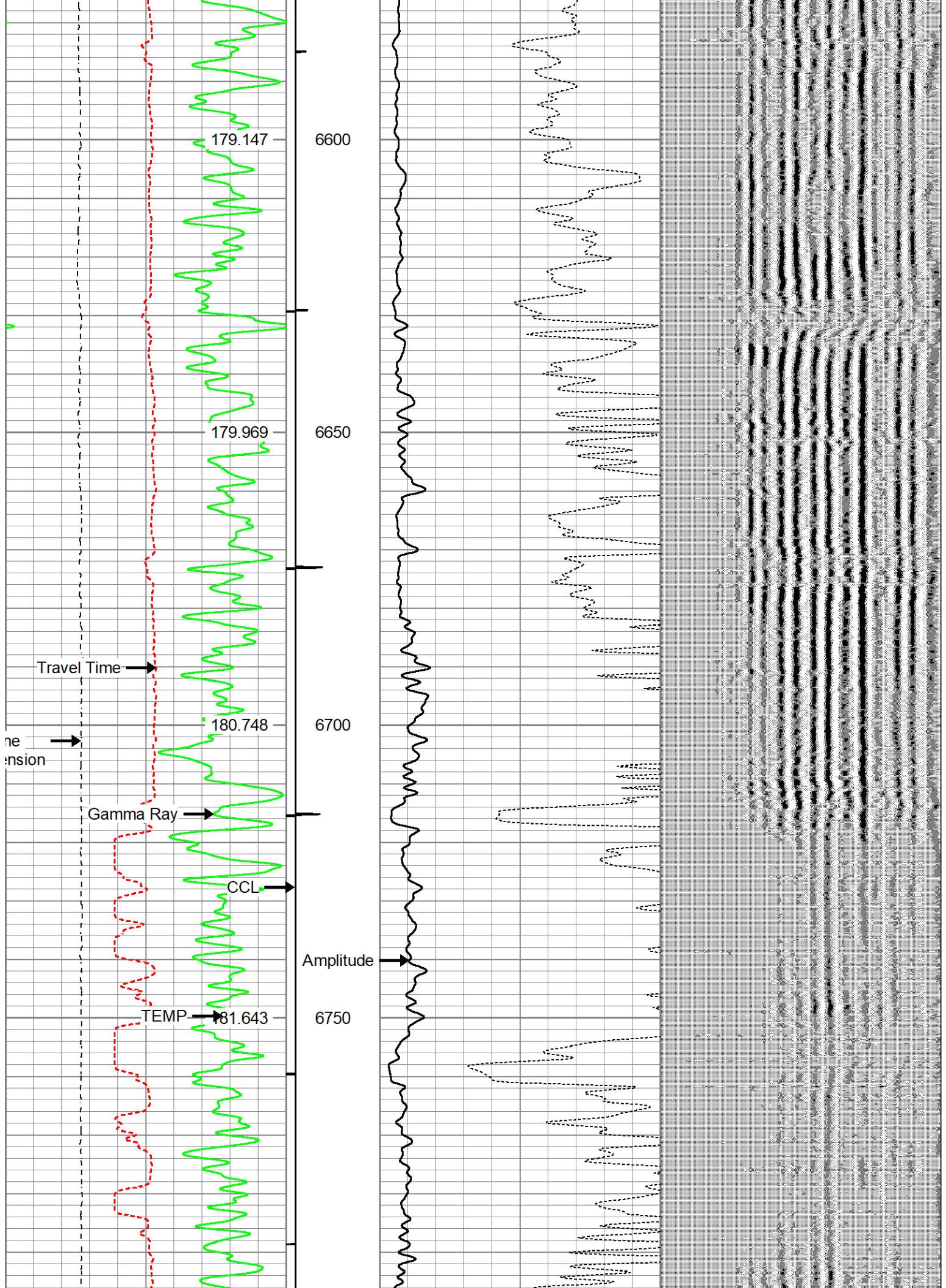


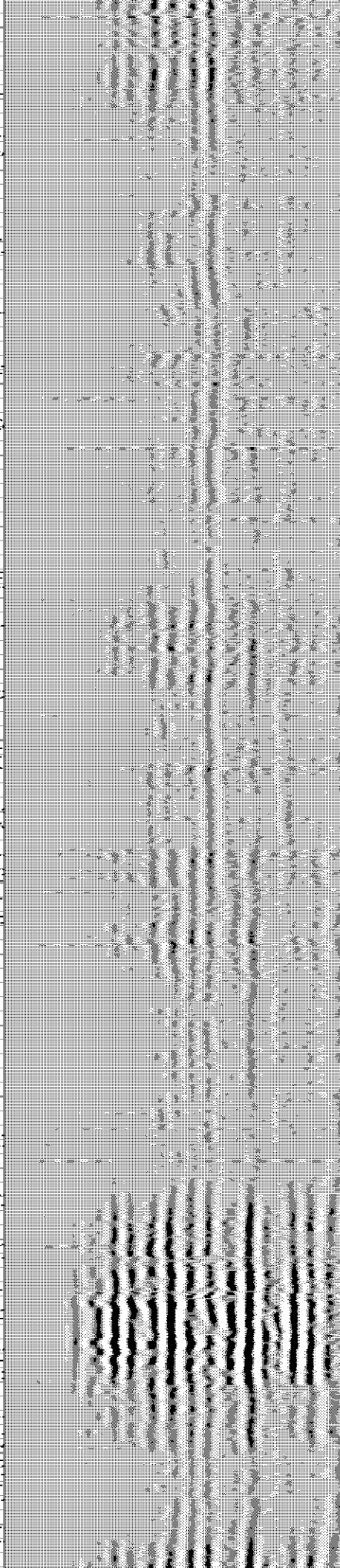
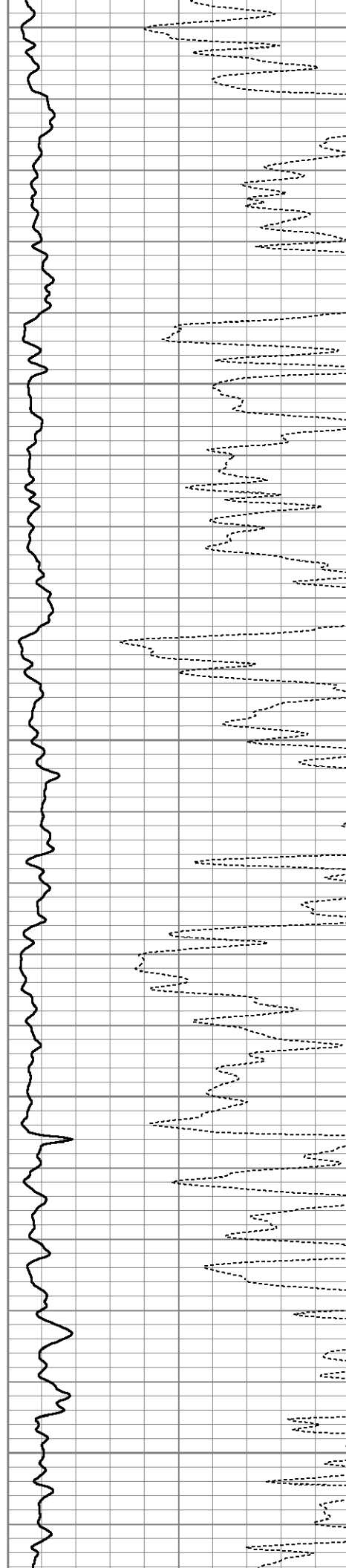
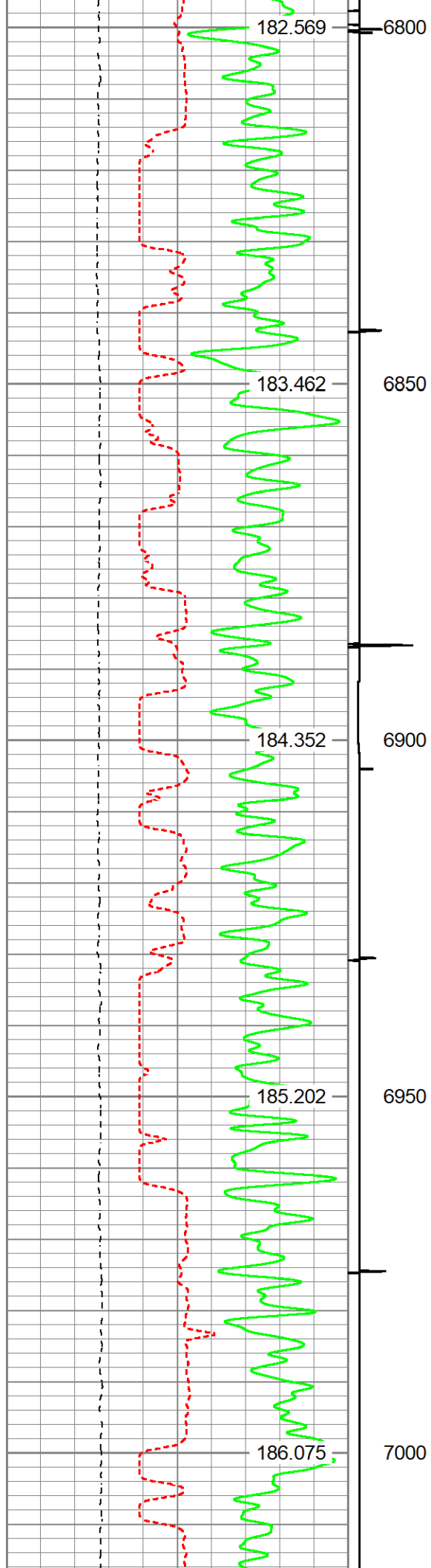


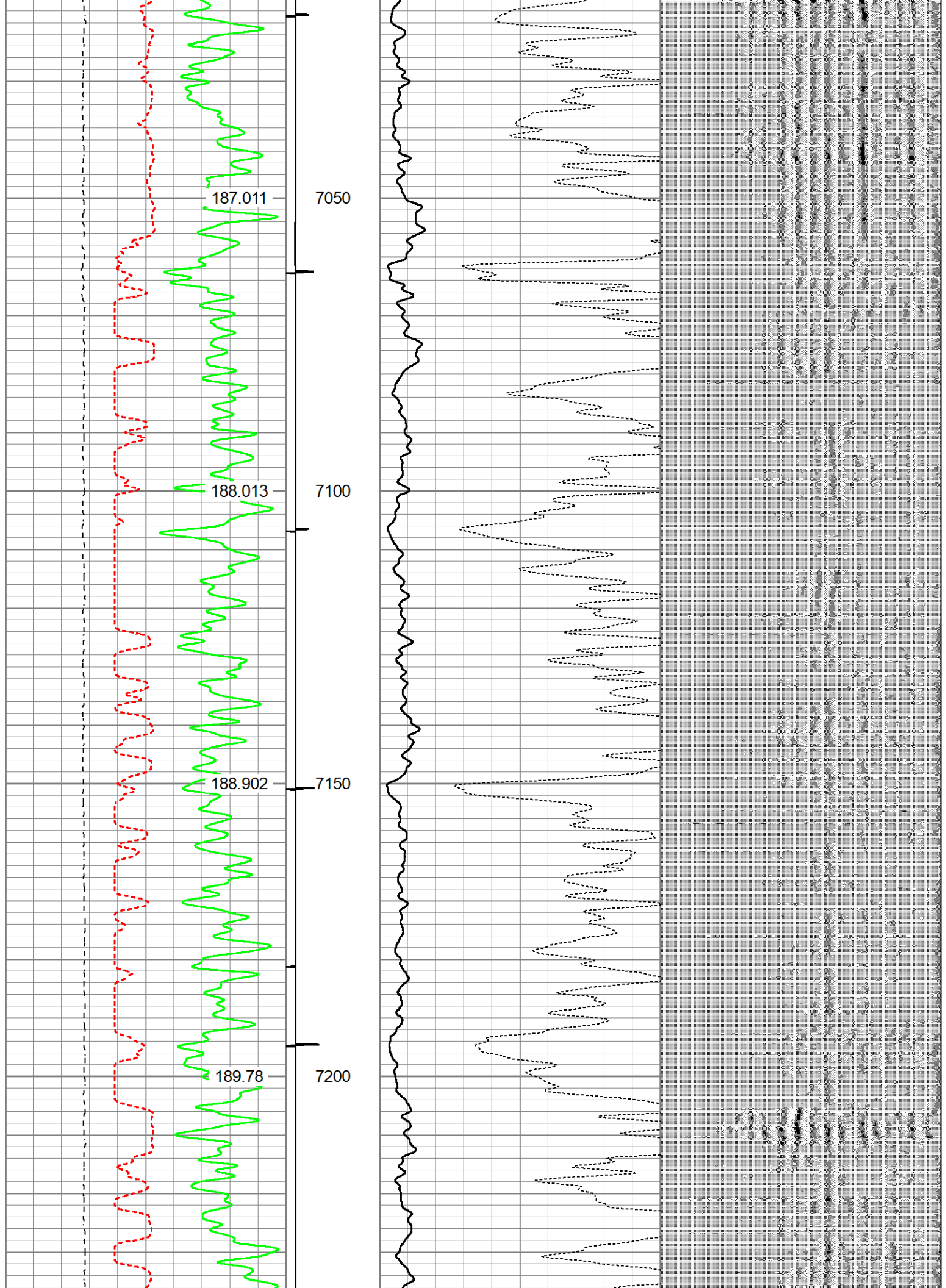


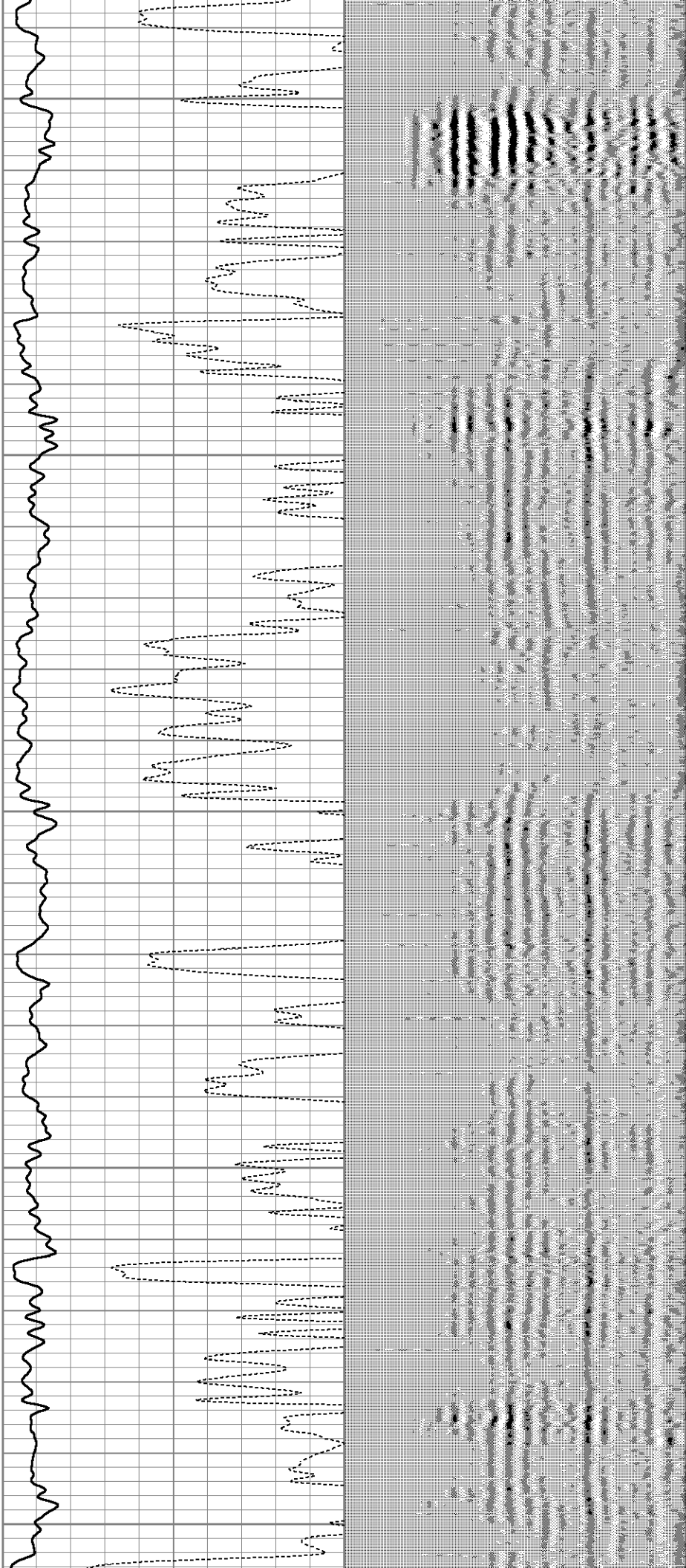
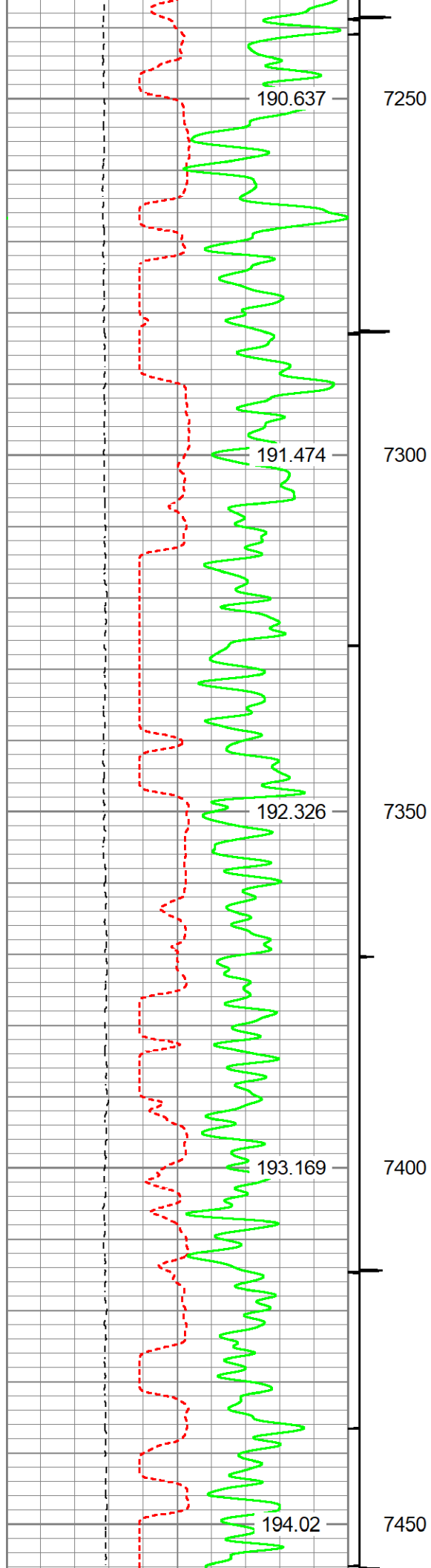


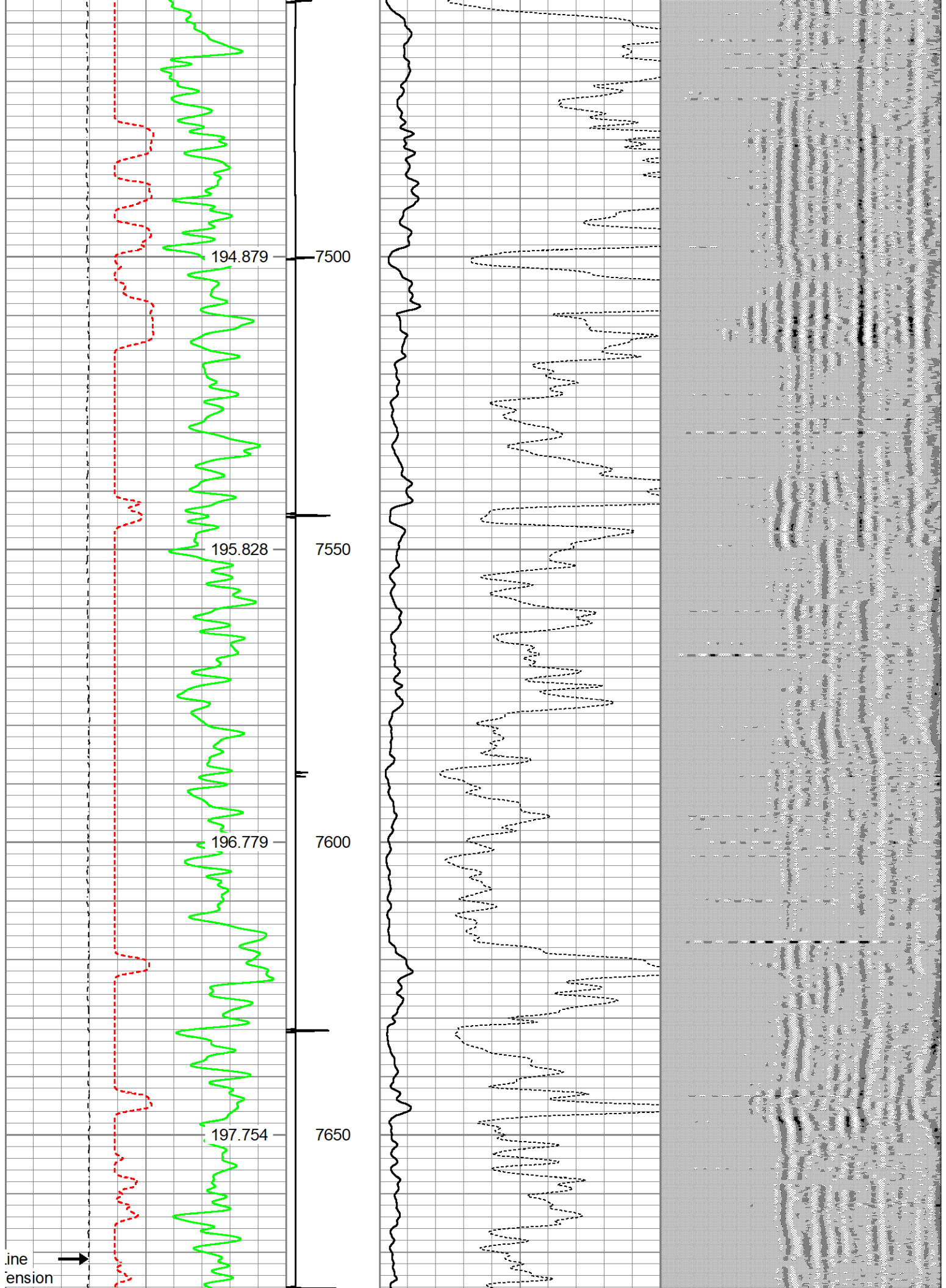


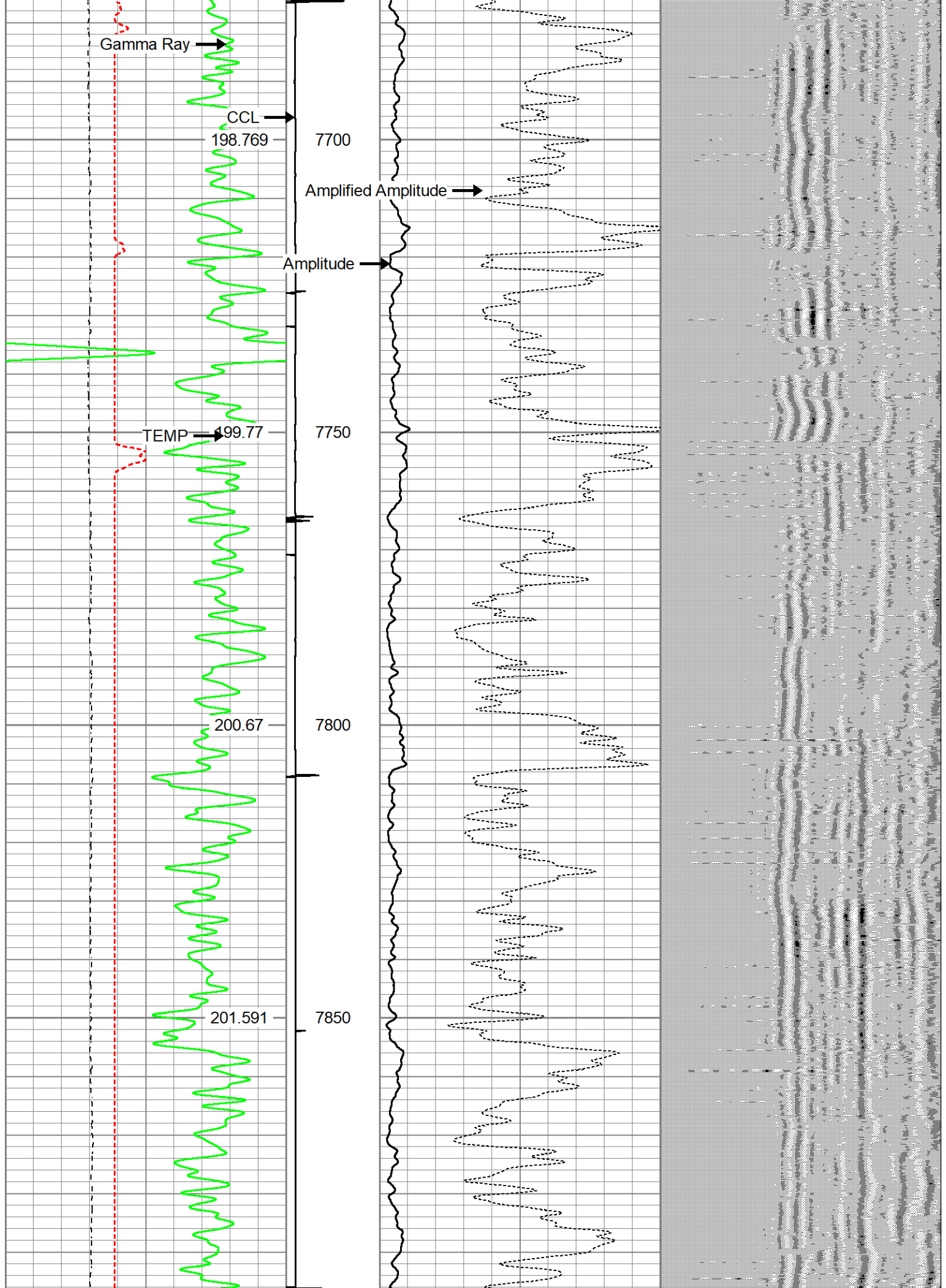


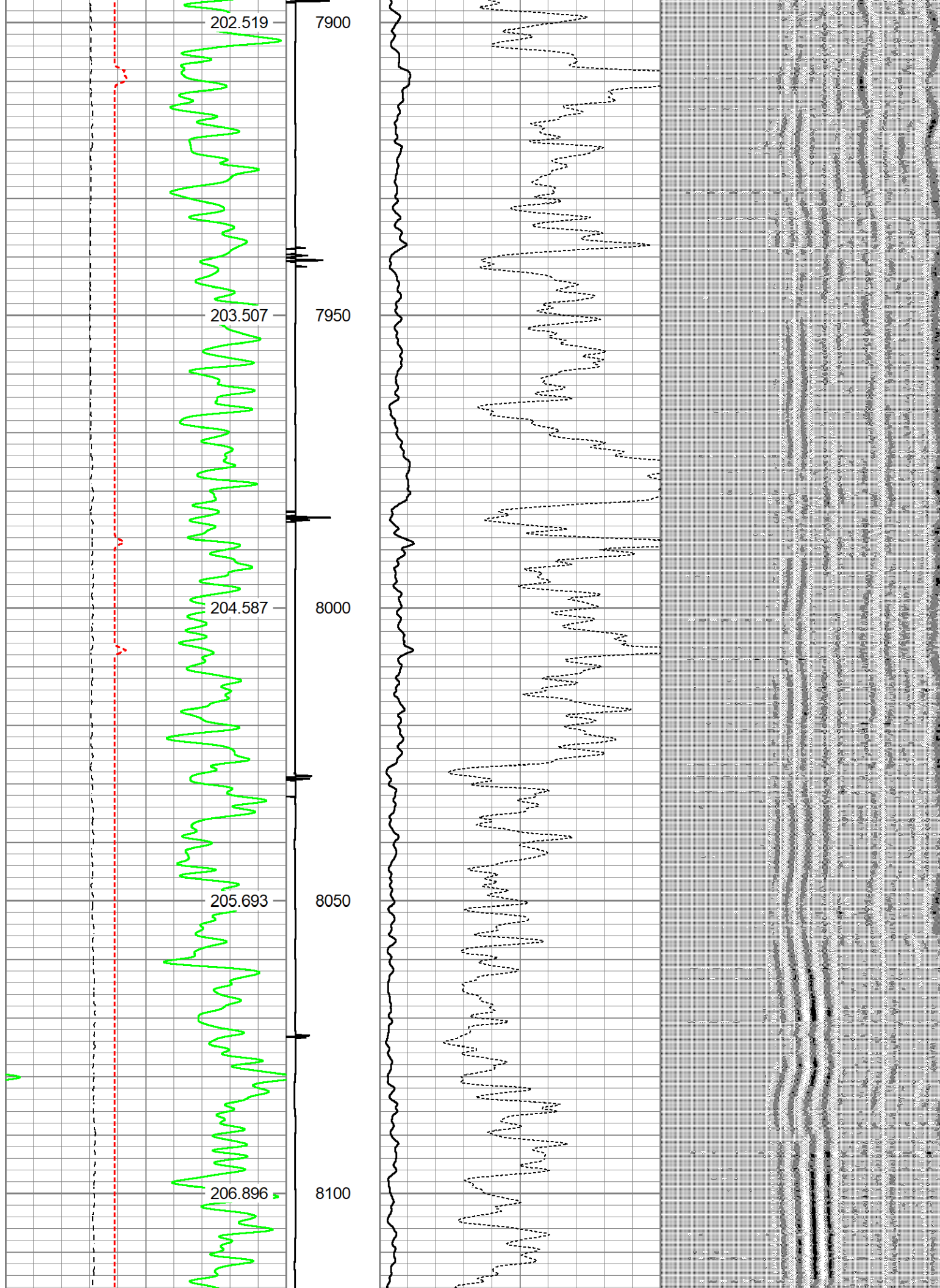


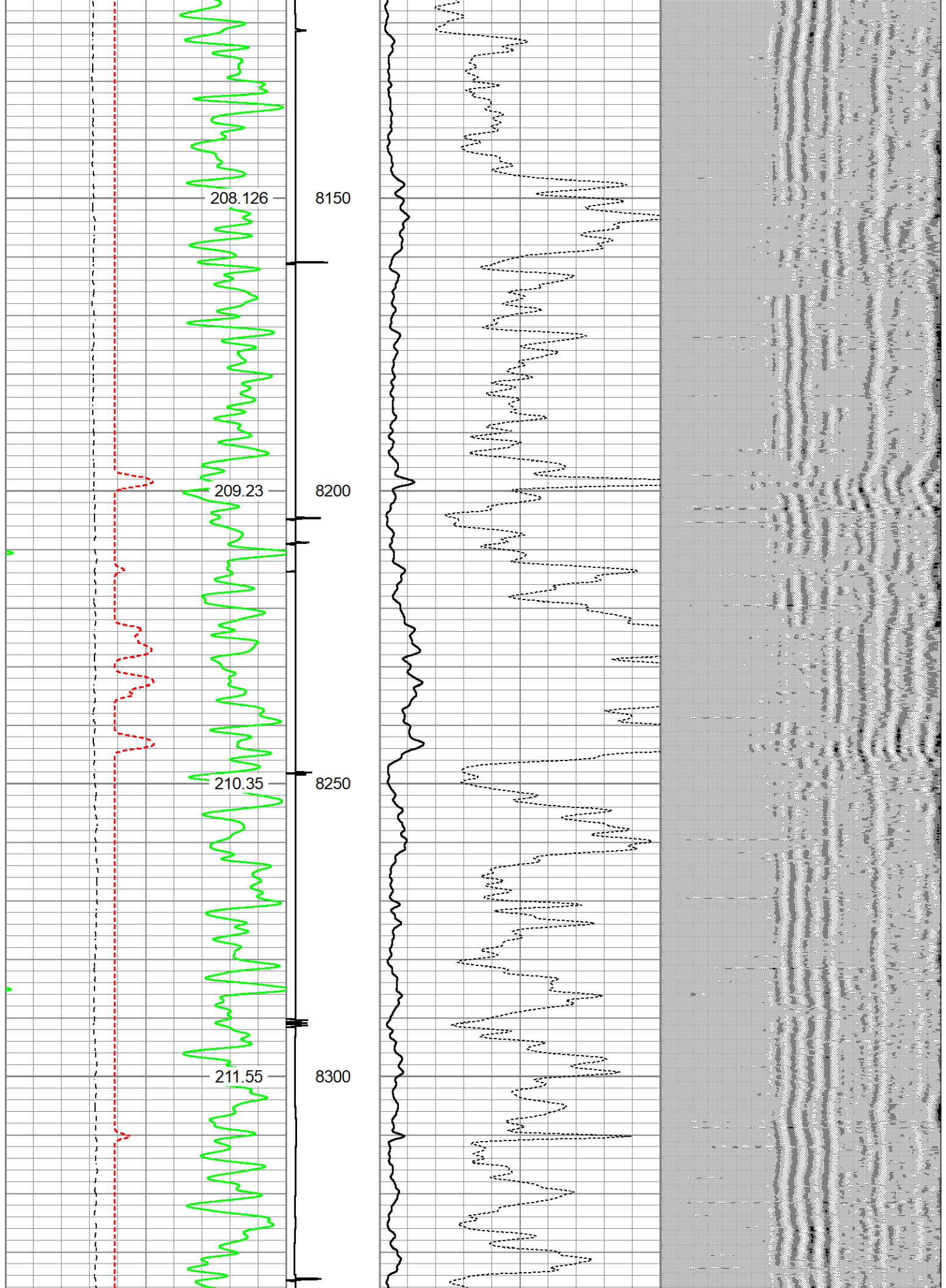


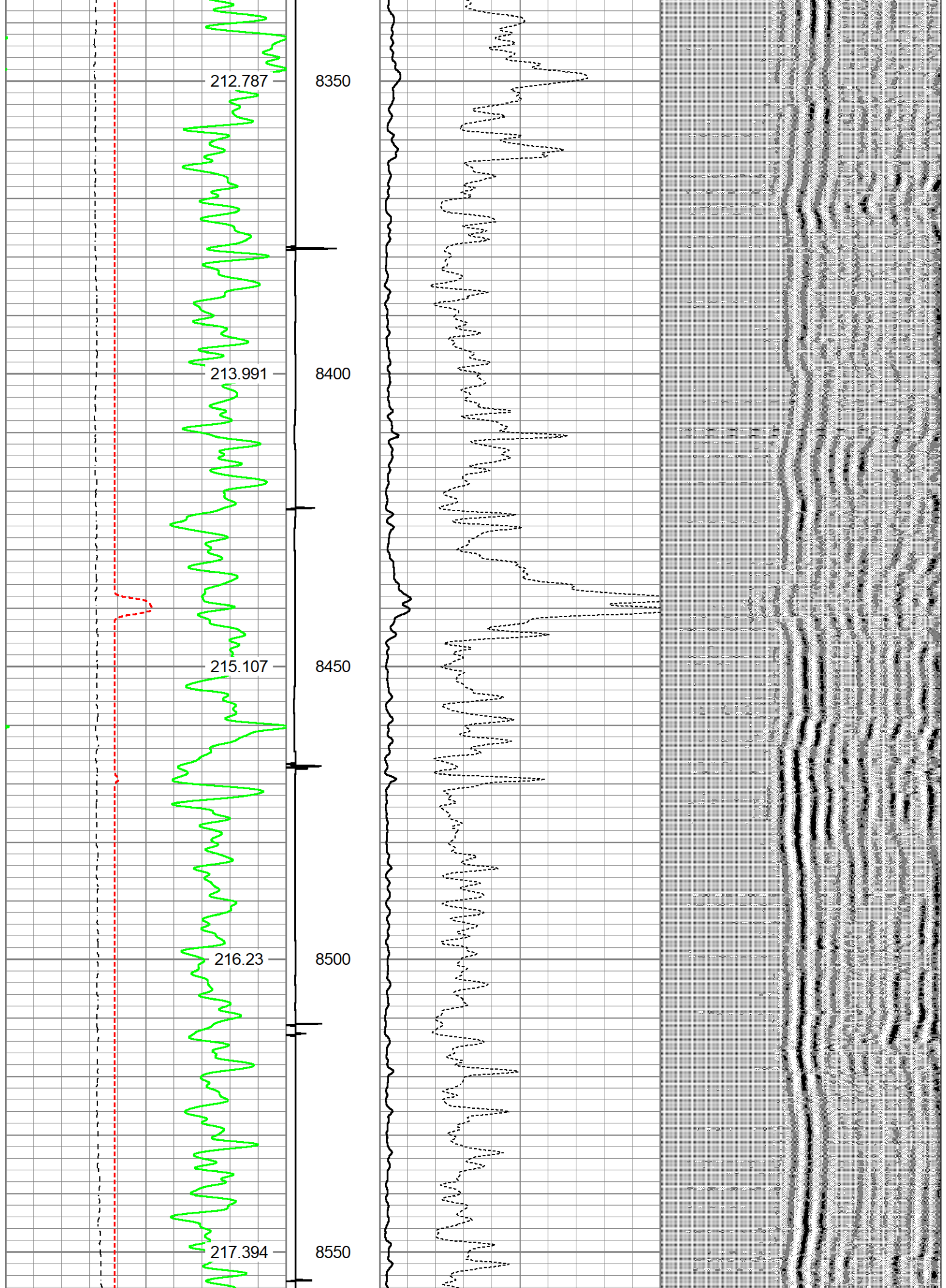


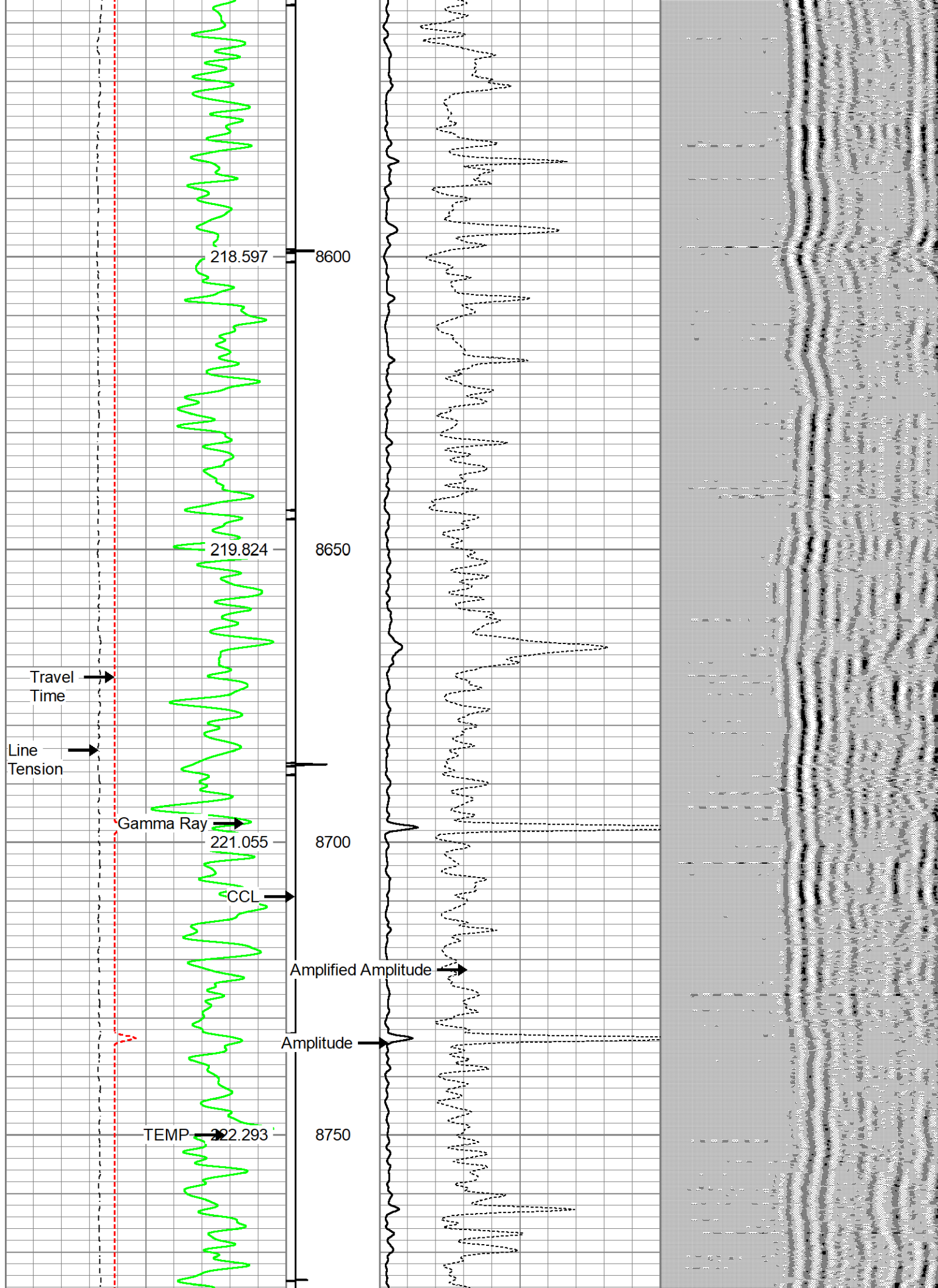


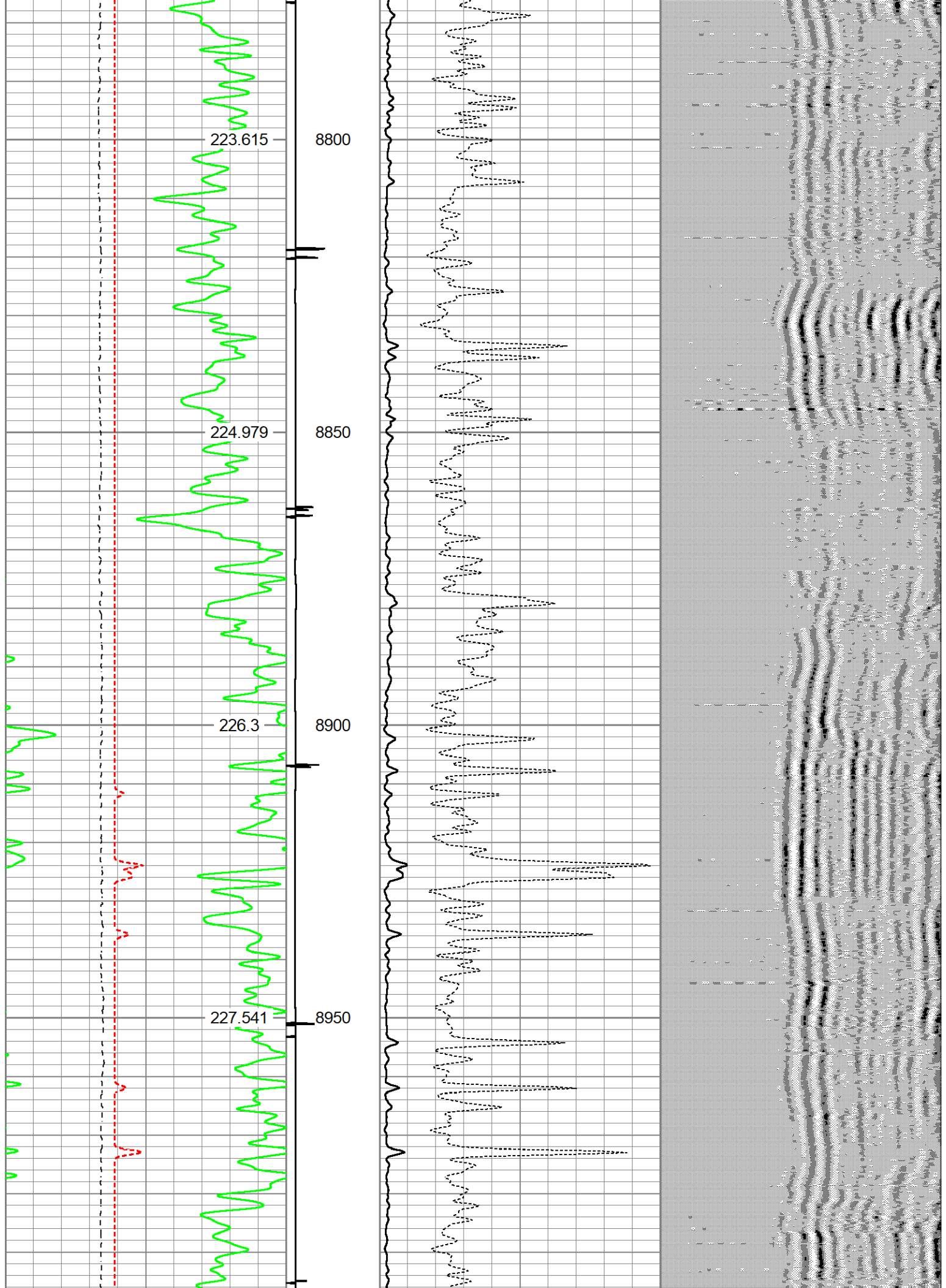


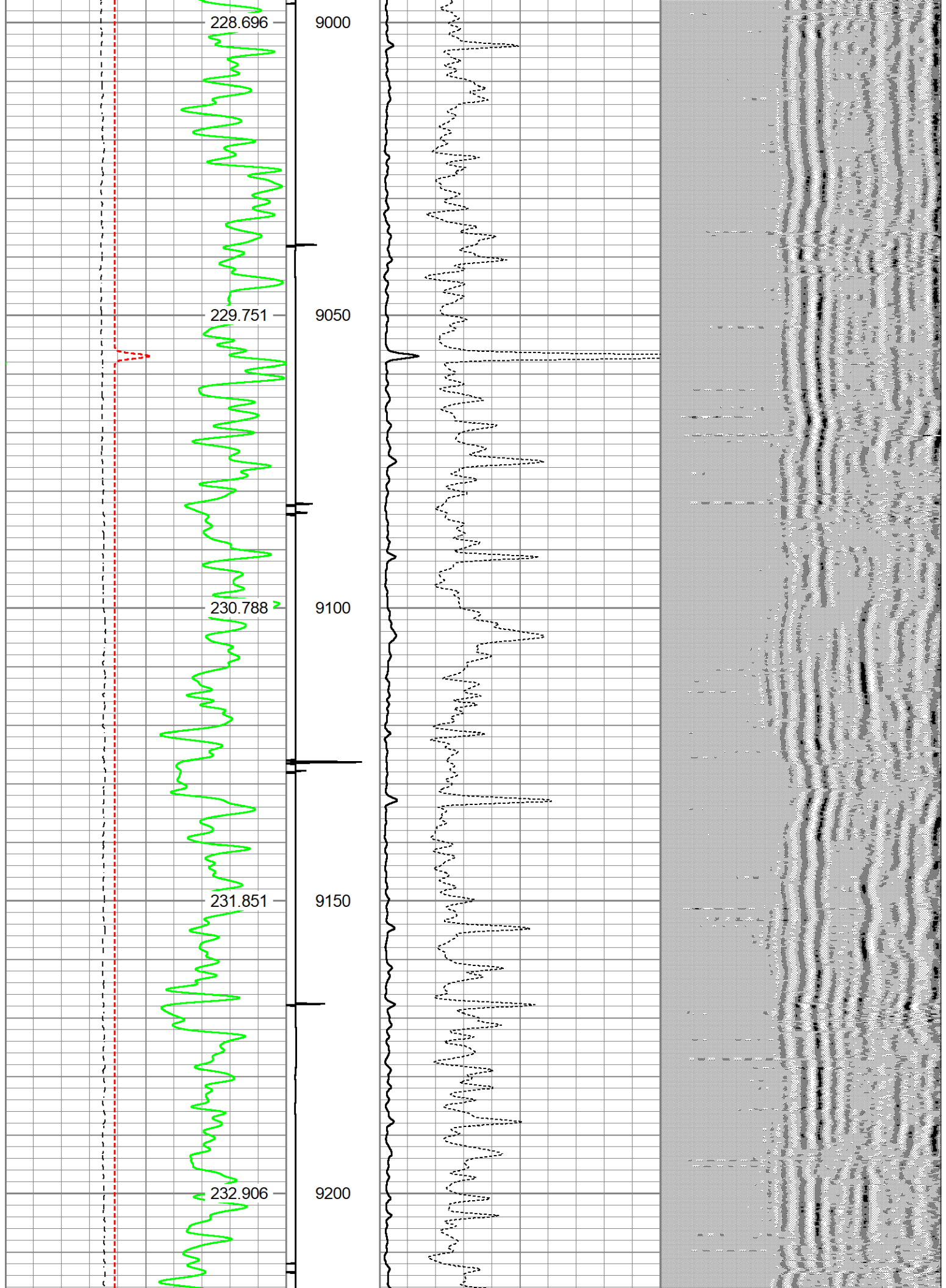


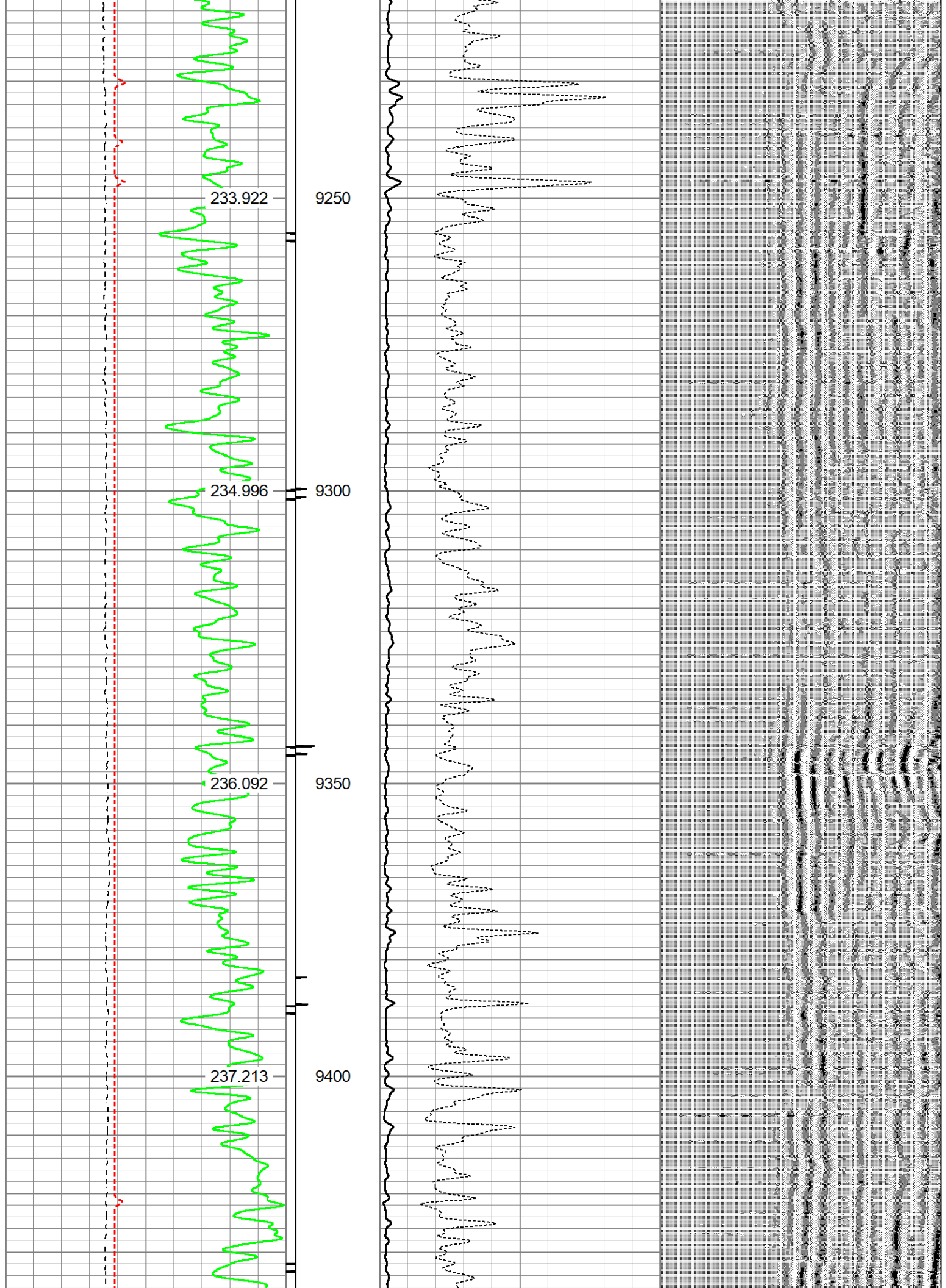


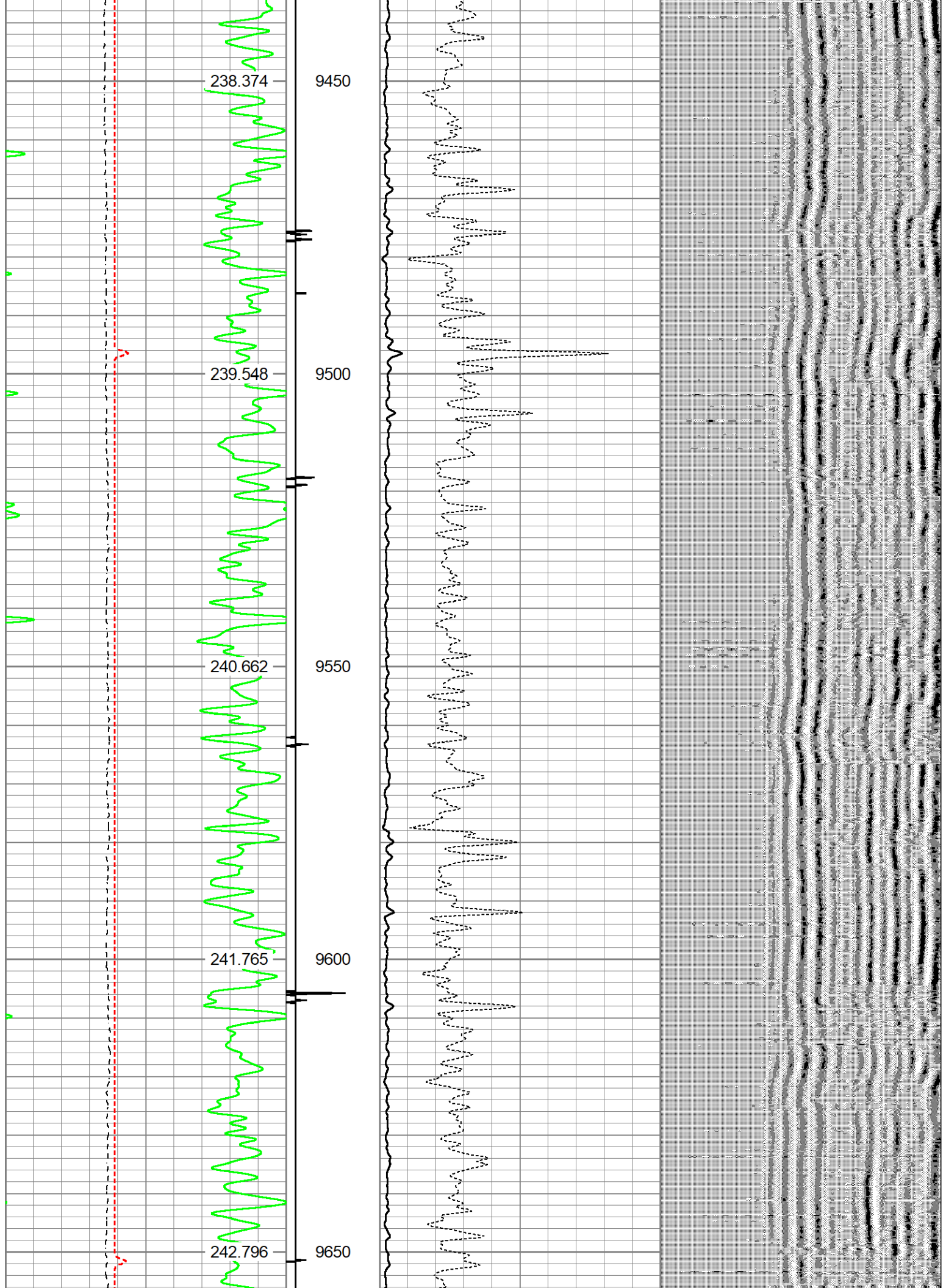


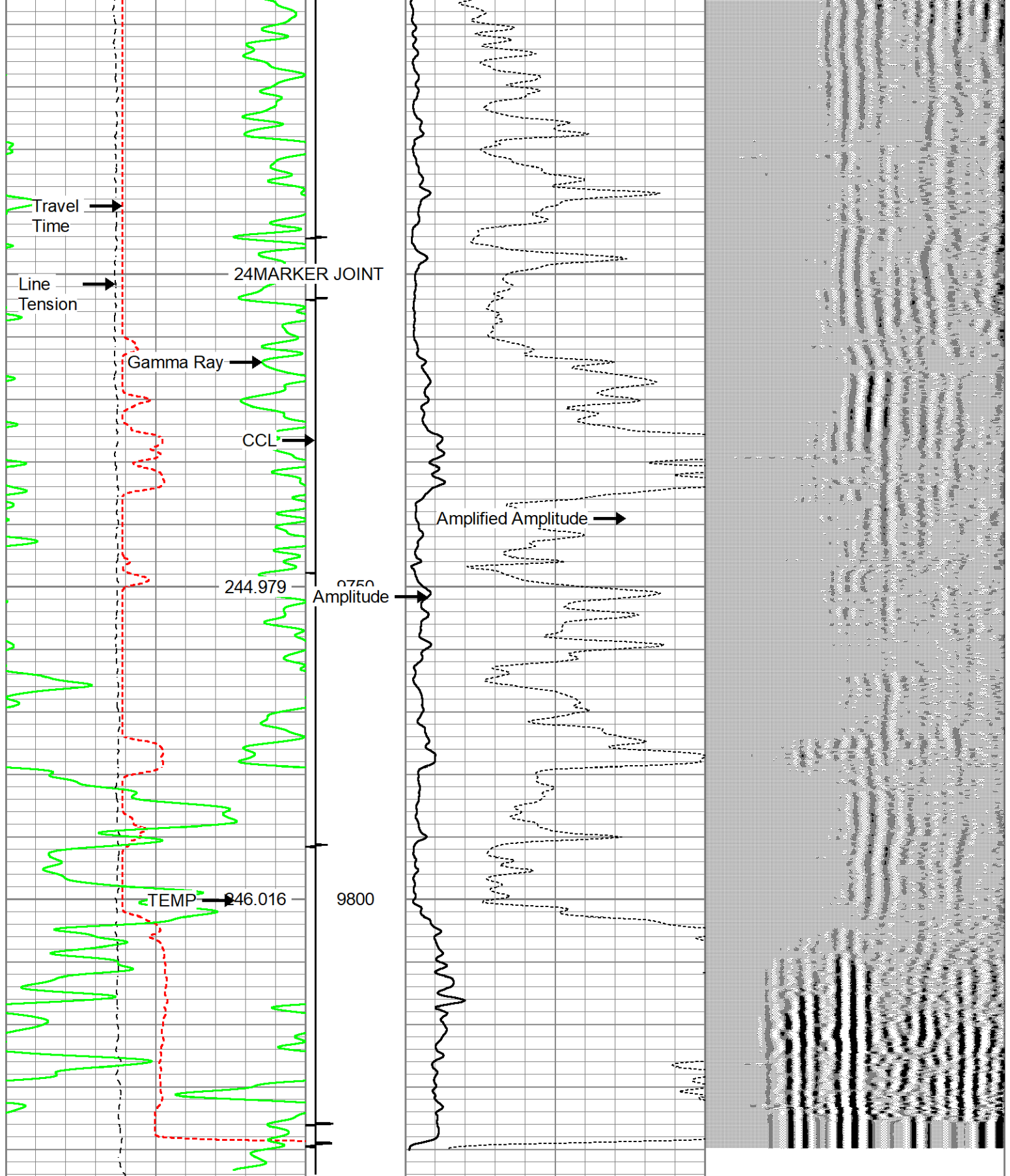












400	Travel Time (usec)	200	9850	0	Amplitude (mV)	100	200	Variable Density (usec)	1200
0	Gamma Ray (GAPI)	150	CCL	0	Amplified Amplitude (mV)	10			
0	Line Tension (lb)	4000							
	TEMP								
	(degF)								



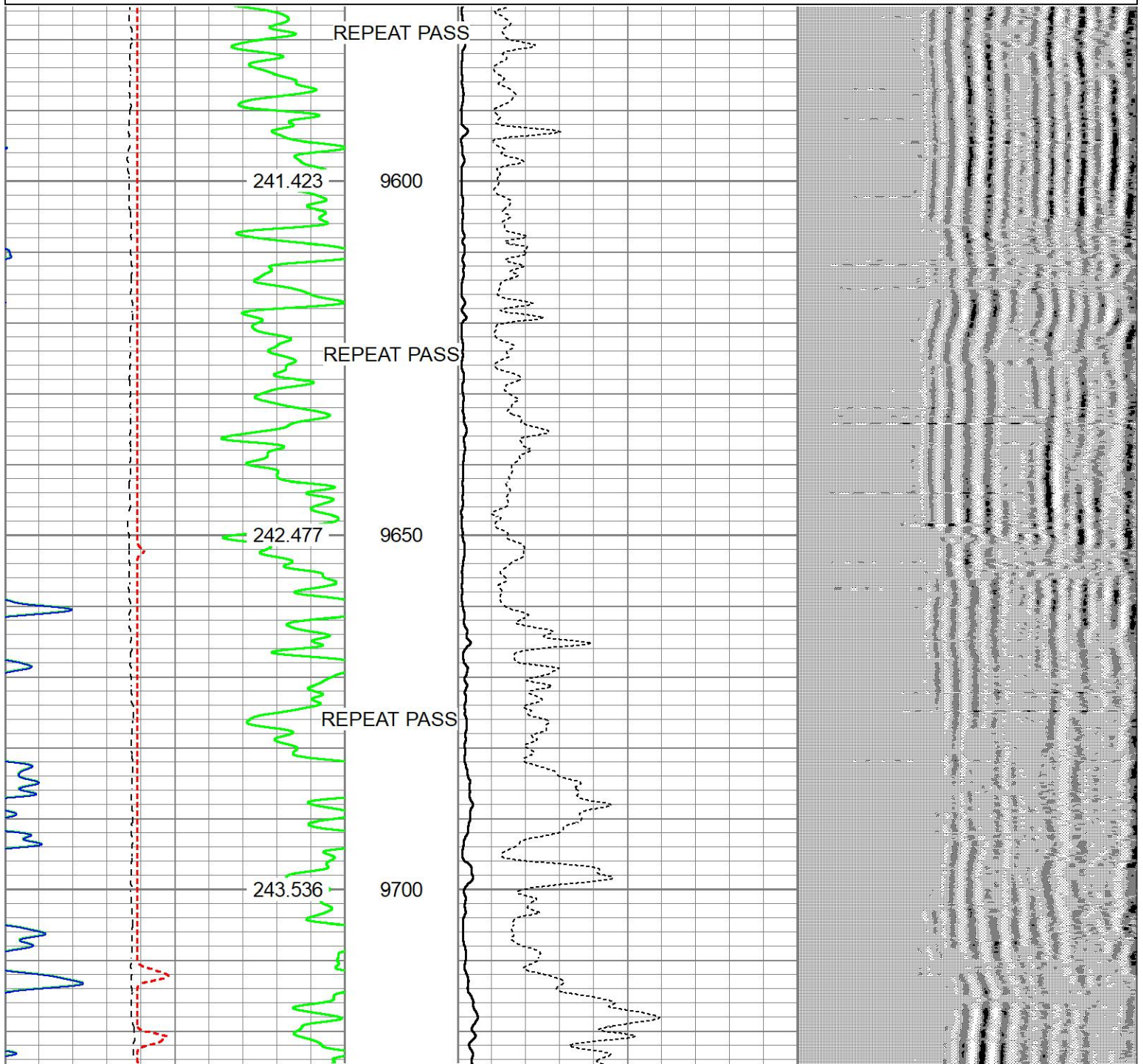
REPEAT PASS

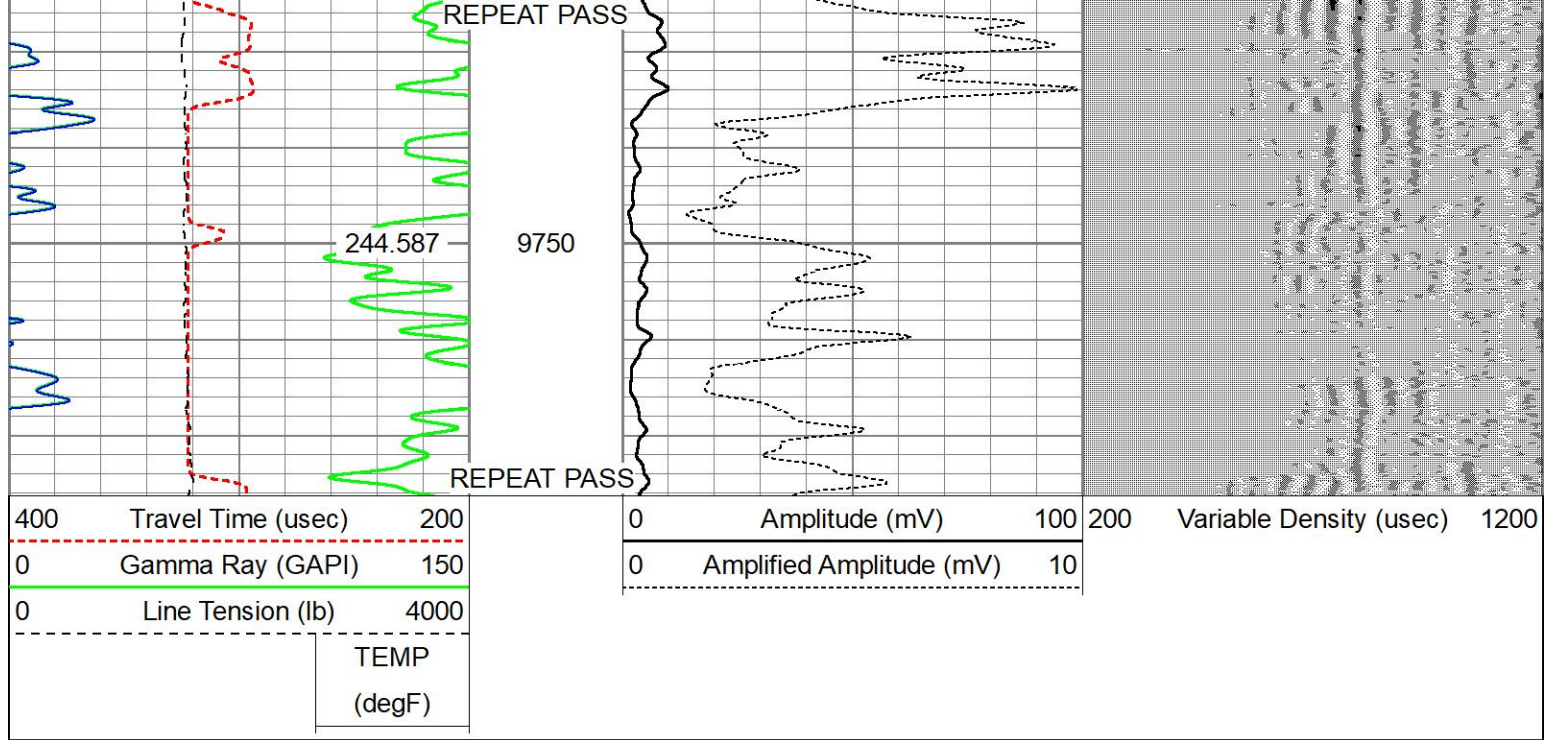
RECORDED WITH 0 PSI SURFACE INDUCED PRESSURE.

Database File archived db files\gw_ottesen_le06311hn_26_jan_2019.db
Dataset Pathname well4/run1/pass2
Presentation Format cblgct
Dataset Creation Sat Jan 26 11:16:37 2019
Charted by Depth in Feet scaled 1:240

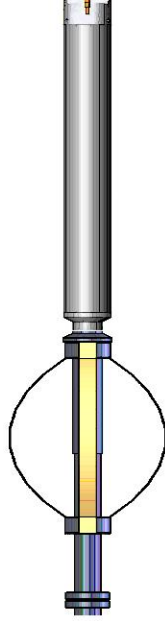
400	Travel Time (usec)	200
0	Gamma Ray (GAPI)	150
0	Line Tension (lb)	4000
TEMP		
(degF)		

0	Amplitude (mV)	100	200	Variable Density (usec)	1200
0	Amplified Amplitude (mV)	10			





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
ErrCt	18.89					
			RBT-Probe 2.75 Radii HT (FW1307-48) RADII HT	11.28	2.75	130.00
WVFS8	11.79					
WVFS7	11.79					
WVFS6	11.79					
WVFS5	11.79					
WVFS4	11.79					
WVFS3	11.79					
WVFS2	11.79					
WVFS1	11.79					
WVFCAL	11.79					
WVF3FT	11.79					
WVF5FT	10.79					
CCL\$2	6.64					
CCL\$1	6.64					

GCT_Temp	6.09		GC-GCT275-0000 (GCT275 0000_base) Probe GCT275-0000 w/Temp	4.77	2.75	55.00
GR	5.22		CENT-PTS275 BC275-0000 Centralizer	2.83	2.75	24.00
Dataset: gw_ottesen_le06311hn_26_jan_2019.db: field/well4/run1/pass4.1 Total length: 18.89 ft Total weight: 209.00 lb O.D.: 2.75 in						

Calibration Report	
Database File	c:\programdata\warrior\data\archived db files\gw_ottesen_le06311hn_26_jan_2019.db
Dataset Pathname	well4/run1/pass4.1
Dataset Creation	Sat Jan 26 13:41:28 2019

Gamma Ray Calibration Report		
Serial Number:	GCT275-0000_base	
Tool Model:	GCT275-0000	
Performed:	(Not Performed)	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.0000	GAPI/cps

Segmented Cement Bond Log Calibration Report		
Serial Number:	FW1307-48	
Tool Model:	Probe 2.75 Radii HT	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	-90.440	ft

Master Calibration, performed (Derived):						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.002	0.363	1.000	71.921	194.386	1.376
CAL	0.517	0.497				
5'	0.000	0.323	1.000	71.921	219.259	1.000
SUM						
S1	-0.007	0.345	0.000	100.000	283.920	1.960
S2	-0.007	0.355	0.000	100.000	276.373	1.803
S3	-0.012	0.356	0.000	100.000	272.368	3.171
S4	-0.008	0.373	0.000	100.000	262.724	2.133

S5	-0.000	0.391	0.000	100.000	255.795	0.004
S6	-0.002	0.400	0.000	100.000	249.033	0.421
S7	-0.029	0.390	0.000	100.000	238.771	6.985
S8	-0.002	0.367	0.000	100.000	270.901	0.662

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.517	0.497	1.000	0.000

Air Zero Calibration, performed Sat Jan 26 07:46:32 2019:

	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	



Company	Great Western	
Well	OTTESEN LE 03-311HN	
Field	Wattenberg	
County	Weld	
State	Colorado	Country