



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

Company		Great Western	
Well		OTTESEN LE 06-311HC	
Field		Wattenberg	
County		Weld	
State		Colorado	
Location:		API # : 05-123-44337	
Permanent Datum		GL	
Log Measured From		KB	
Drilling Measured From		KB	
SEC 33 TWP 1N RGE 66W		NWSE 33 1N66W	
Elevation		5076.5'	
Other Services		J.B. / G.R.	
Date		25-JAN-2019	
Run Number		TWO	
Depth Driller		18174'	
Depth Logger		10,100'	
Bottom Logged Interval		10095'	
Top Log Interval		Surface	
Open Hole Size		8 5/8"	
Type Fluid		Fresh Water	
Density / Viscosity		8.4	
Max. Recorded Temp.		253	
Estimated Cement Top		SEE LOG	
Time Well Ready		ROA	
Time Logger on Bottom		08:29 AM	
Equipment Number		25	
Location		Platteville, CO	
Recorded By		JOSEPH FRESQUEZ	
Witnessed By		ETHAN SAVOYA	
JAMES VALENTINE			
Run Number		Bit	
From		To	
Size		Weight	
From		To	
Casing Record		Size	
Surface String		9-5/8"	
Prot. String		5-1/2"	
Production String		17#	
Liner			

<<< Fold Here >>>

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 @ 9867 FT
Adjusted log +19 FT to correlate with Marker Joint
Gauge Ring/Junk Basket ran to 10235 FT with no debris
Log ran from 10,100 FT to surface
Log ran with 0 PSI Surface Induced Pressure.

Thank you for choosing KLX Energy Services!!

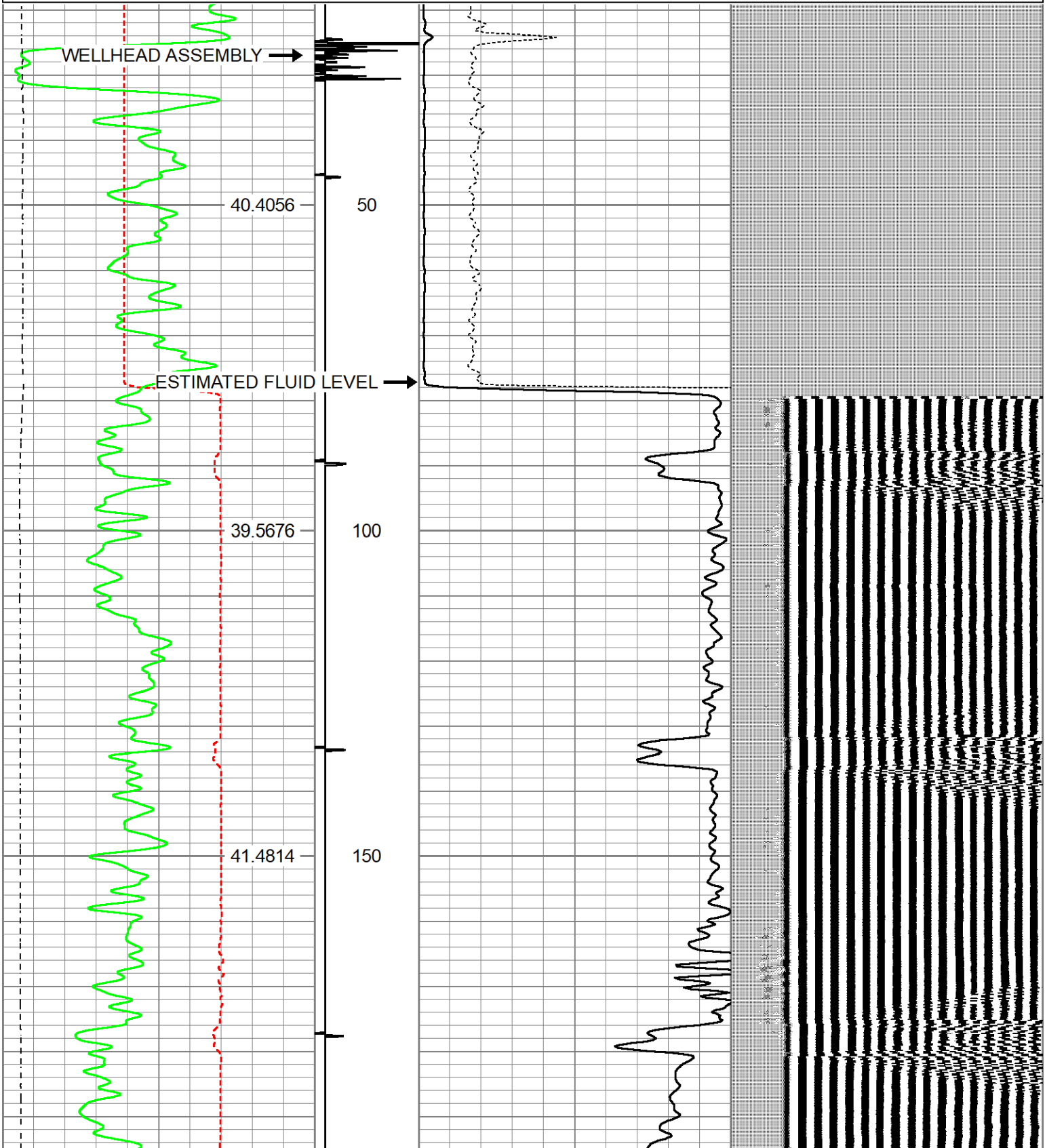


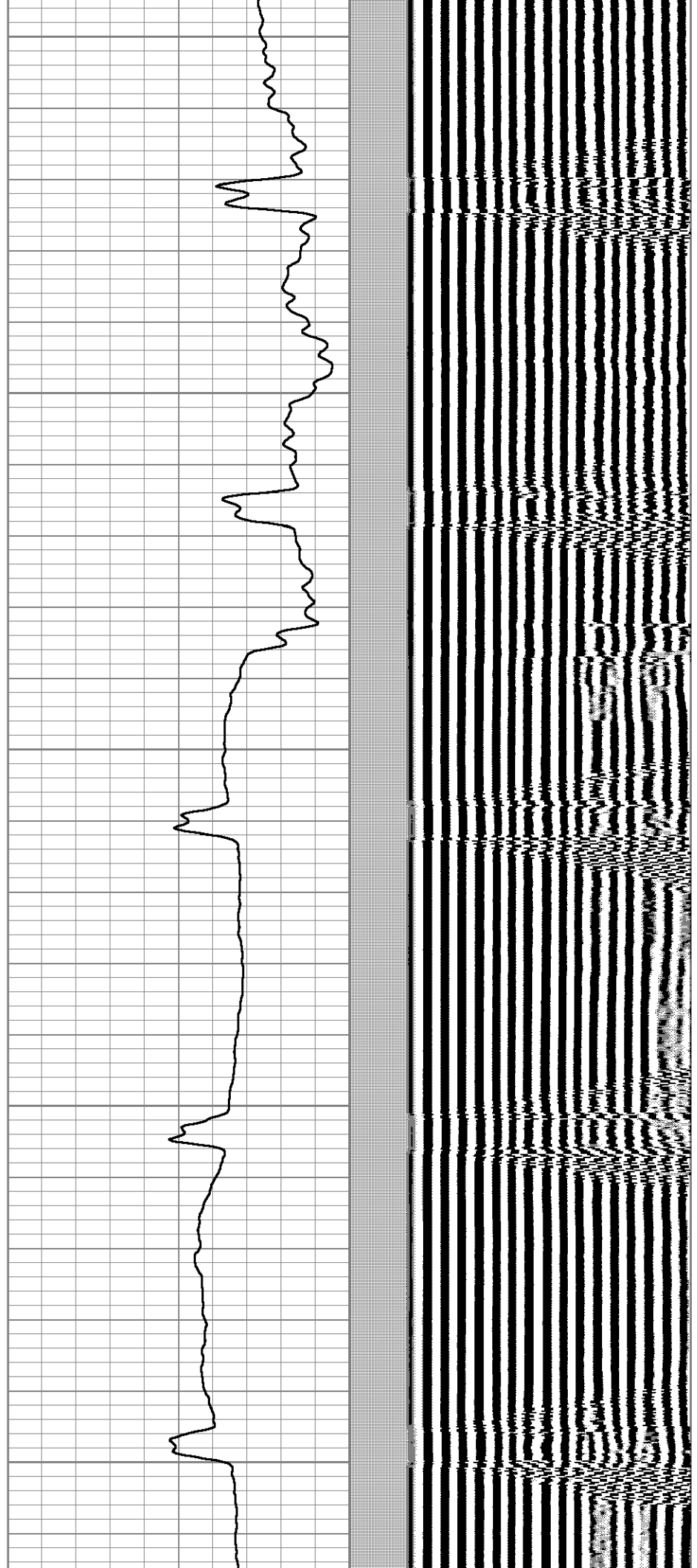
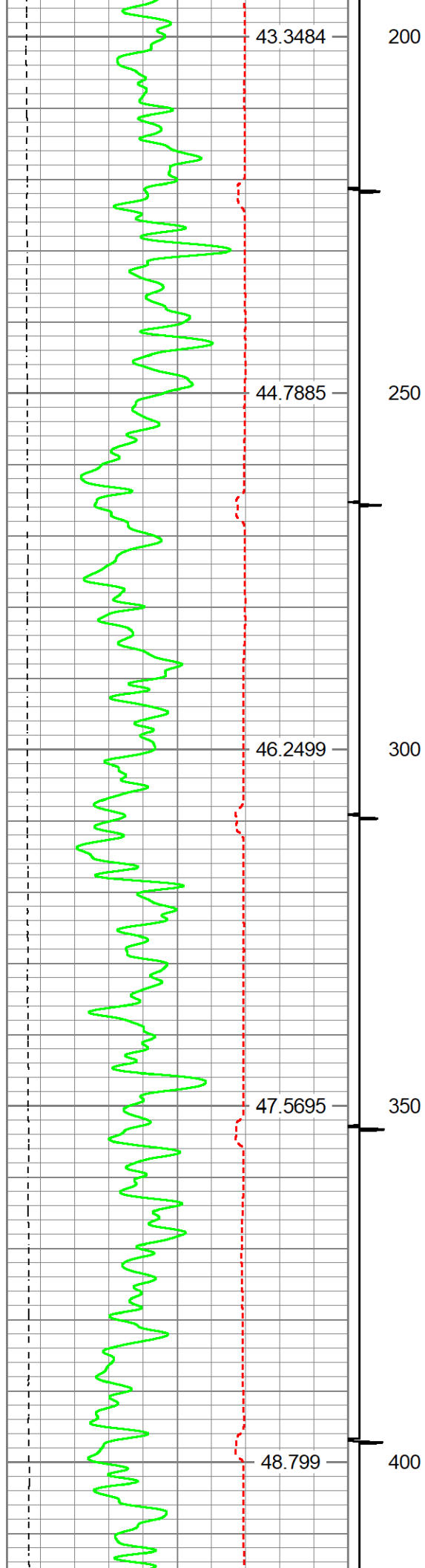
MAIN PASS

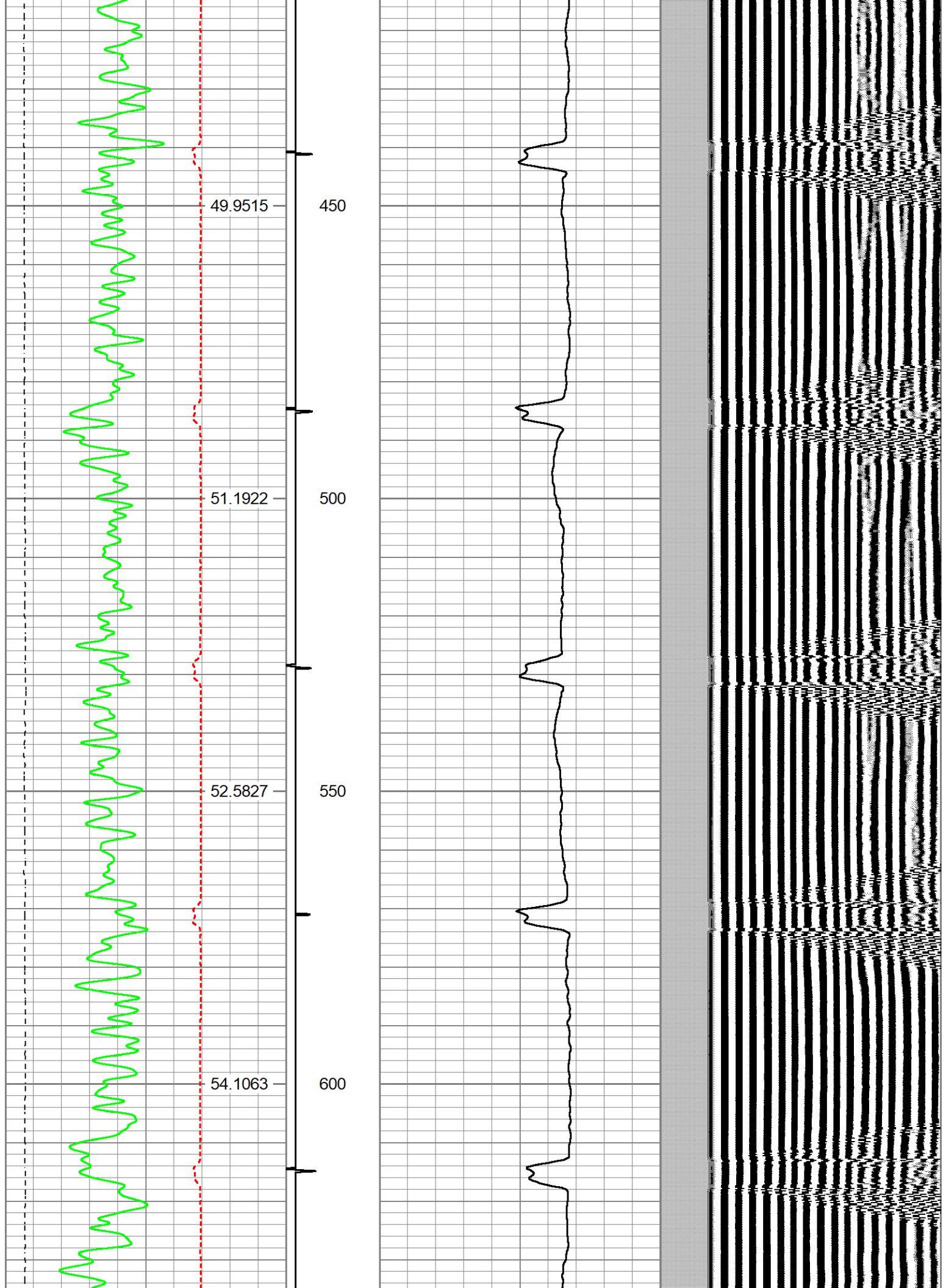
RECORDED WITH 0 PSI SURFACE INDUCED PRESSURE.

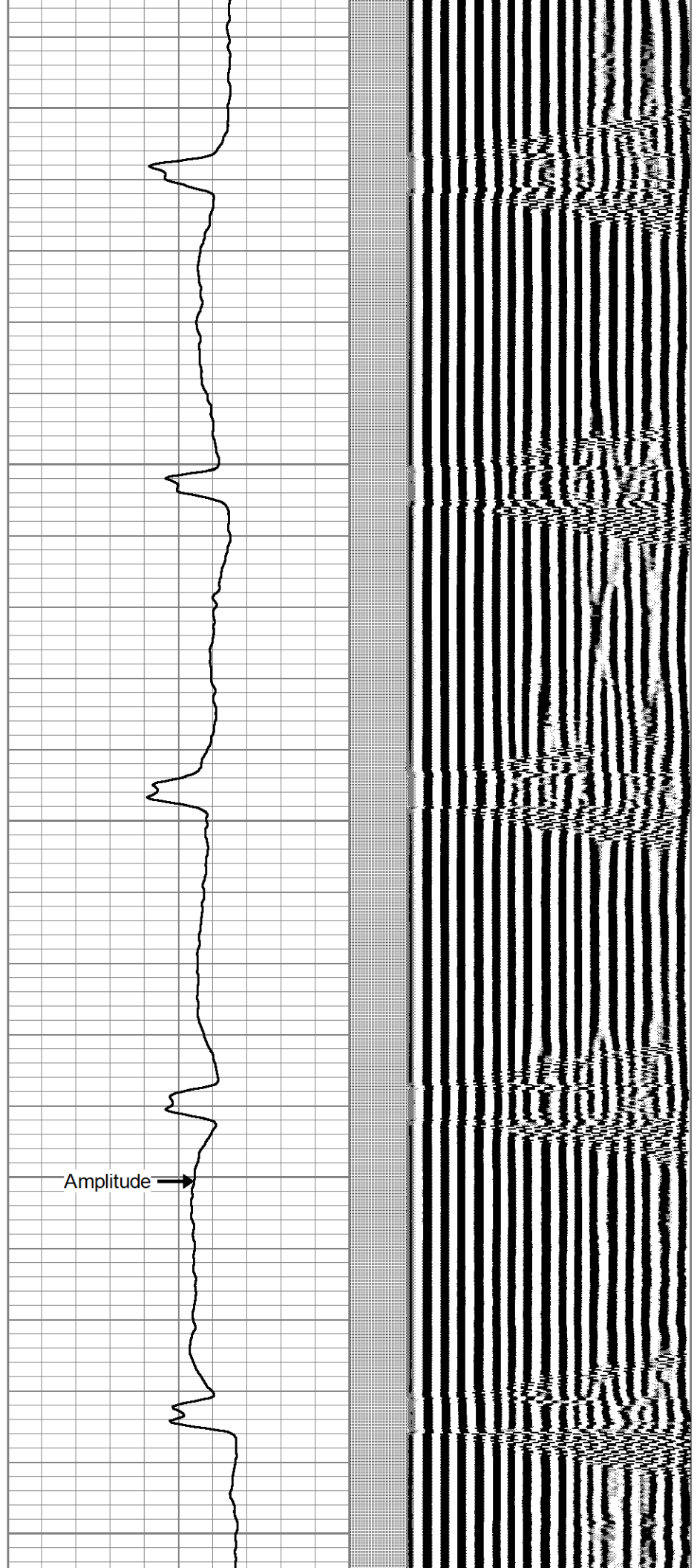
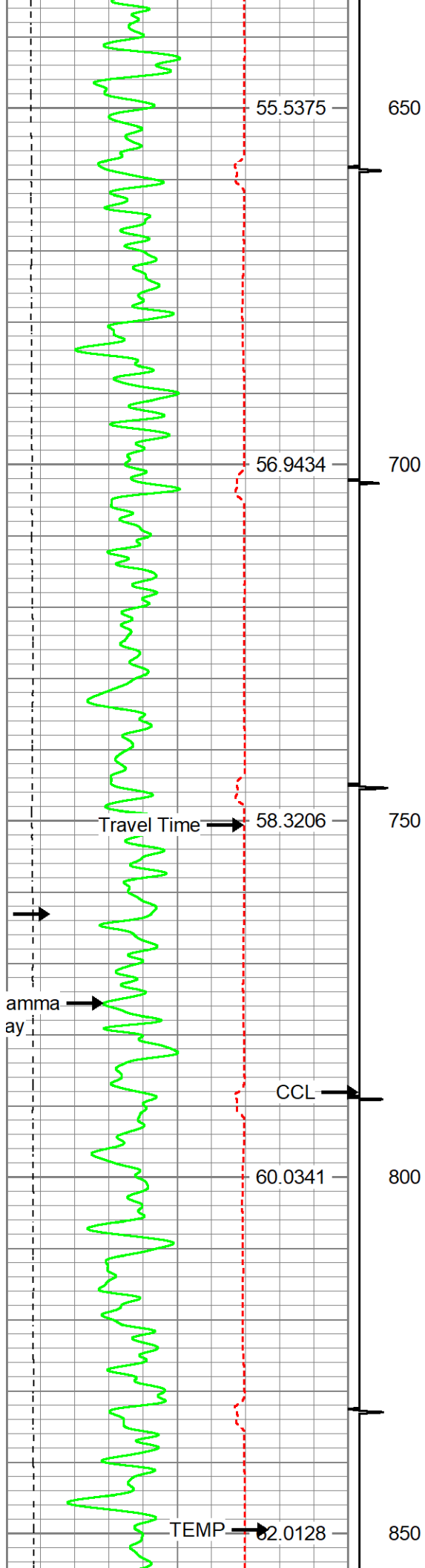
Database File	archived db files\gw_ottesen_le06311hc_26_jan_2019.db
Dataset Pathname	well3/run1/pass6.3
Presentation Format	cblgct
Dataset Creation	Sat Jan 26 14:07:08 2019
Charted by	Depth in Feet scaled 1:240

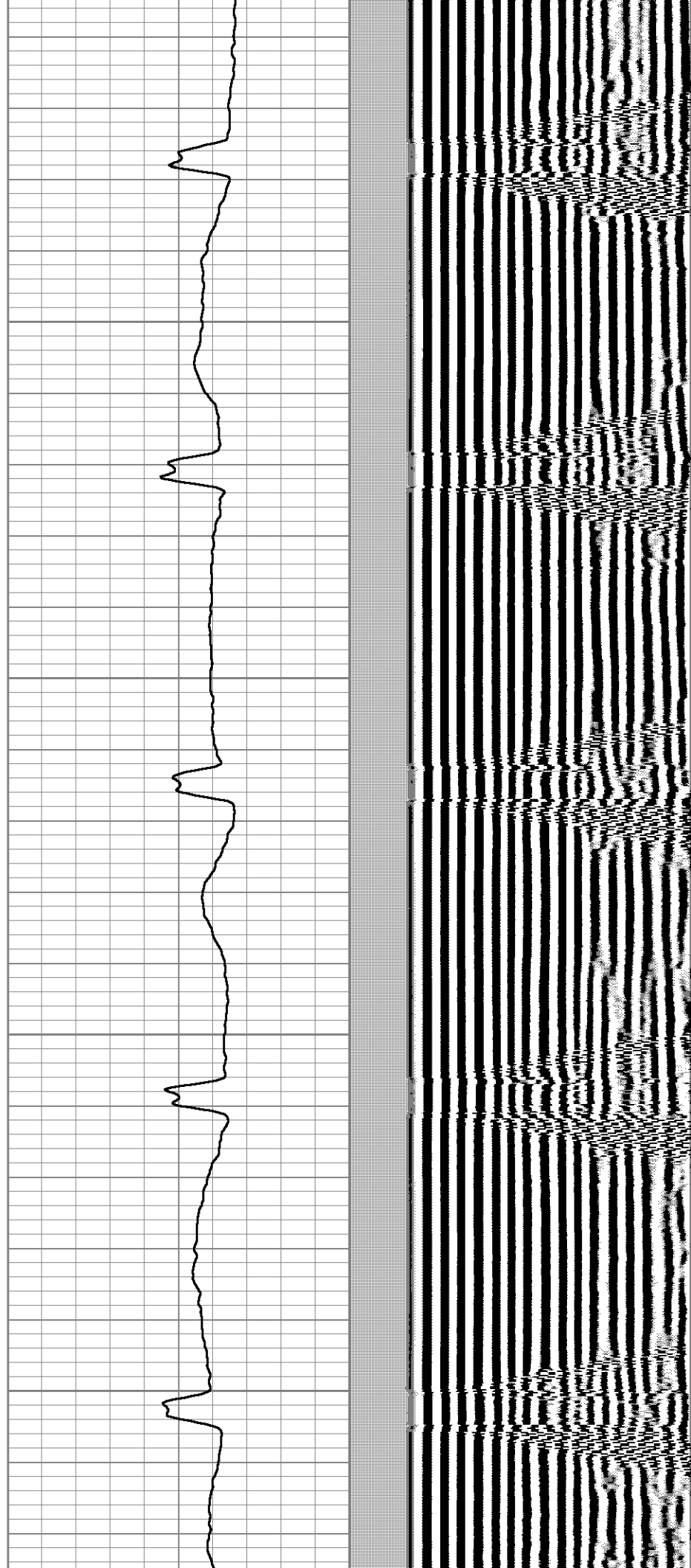
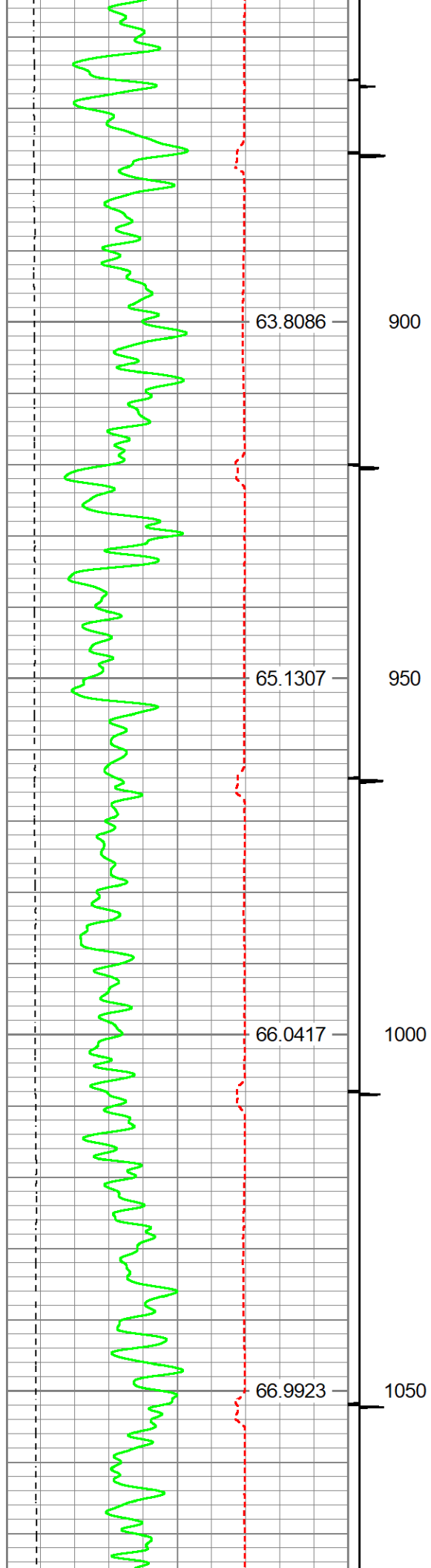
400	Travel Time (usec)	200	CCL	0	Amplitude (mV)	100	200	Variable Density (usec)	1200
0	Gamma Ray (GAPI)	150		0	Amplified Amplitude (mV)	10			
0	Line Tension (lb)	4000							
	TEMP								
	(degF)								

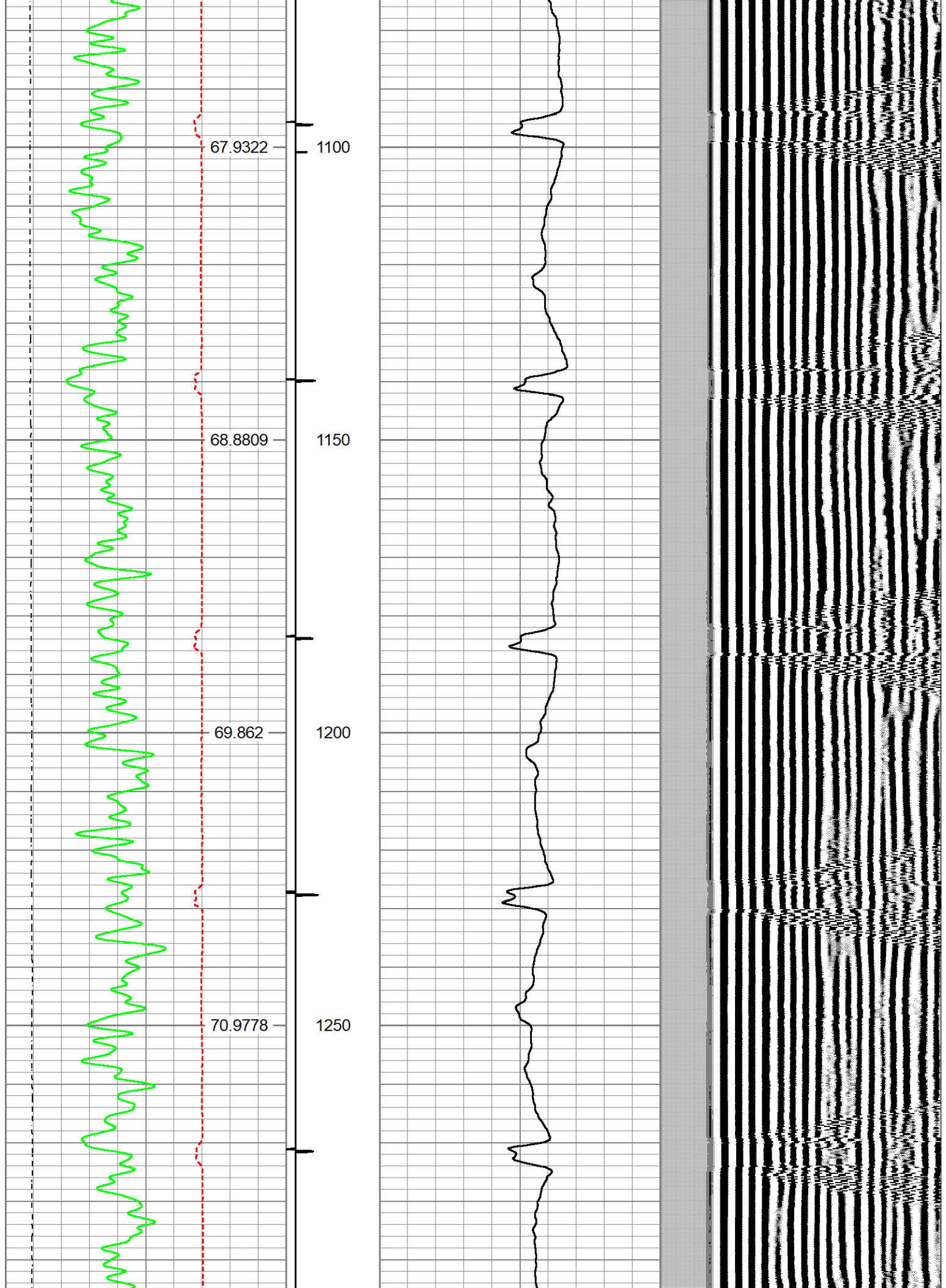


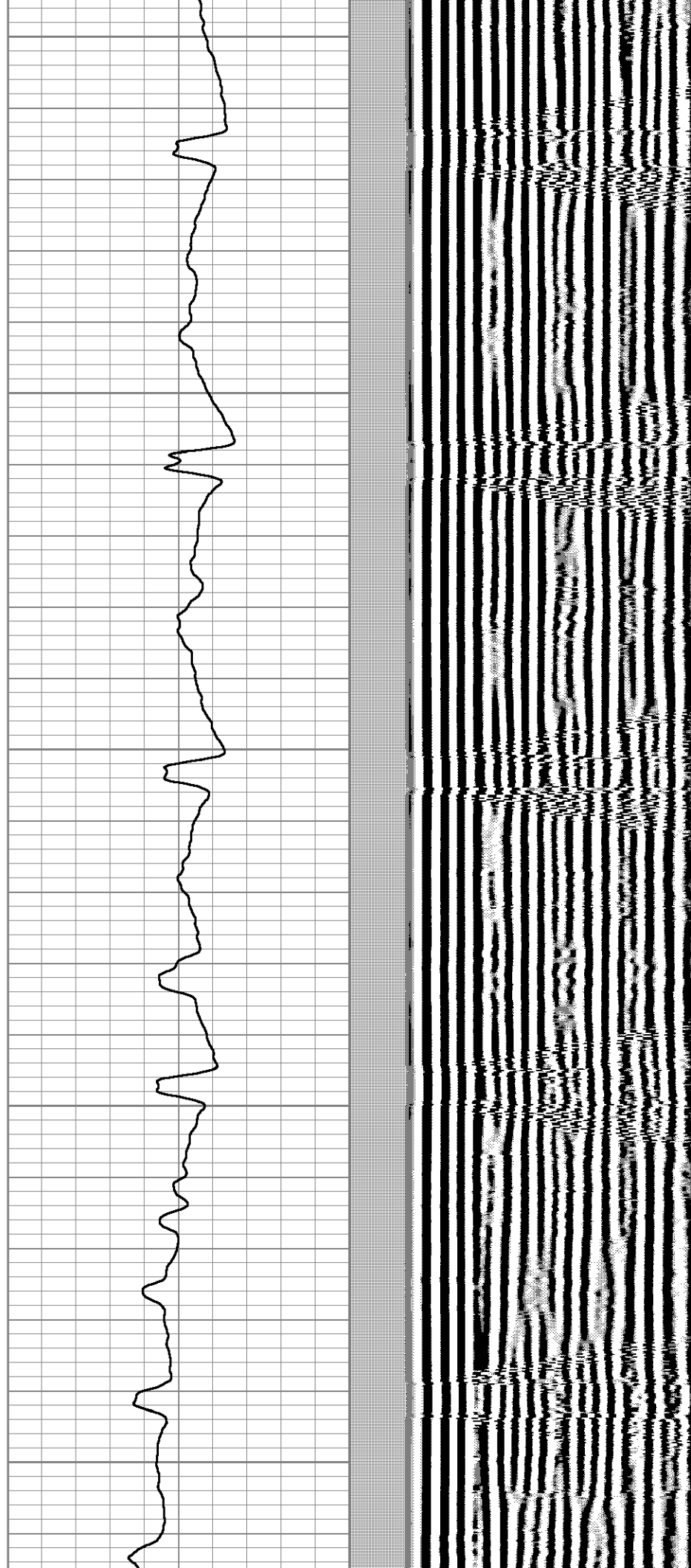
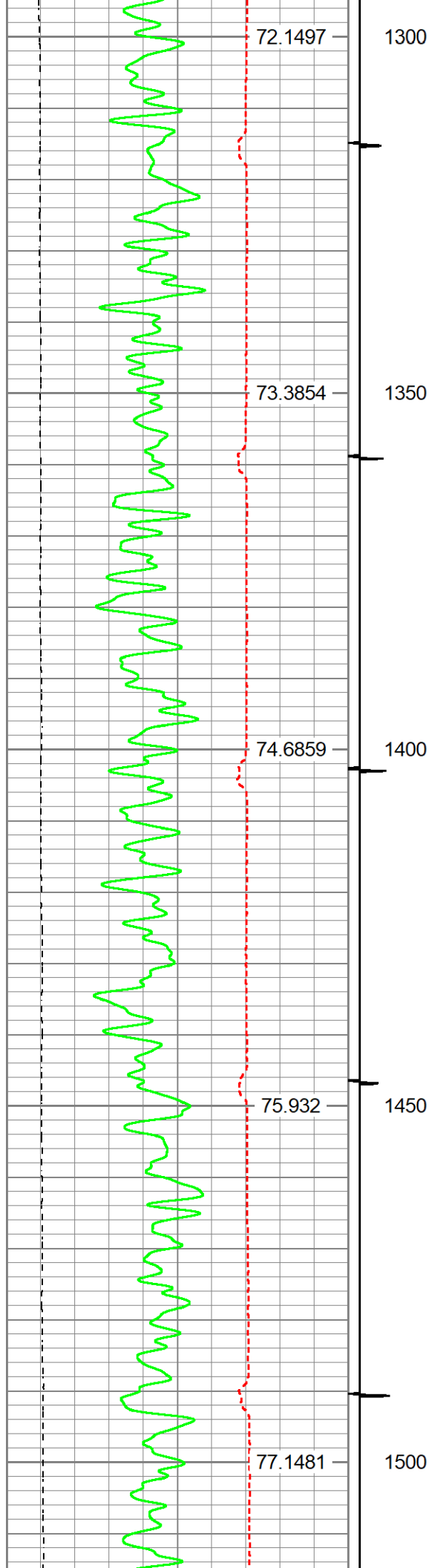


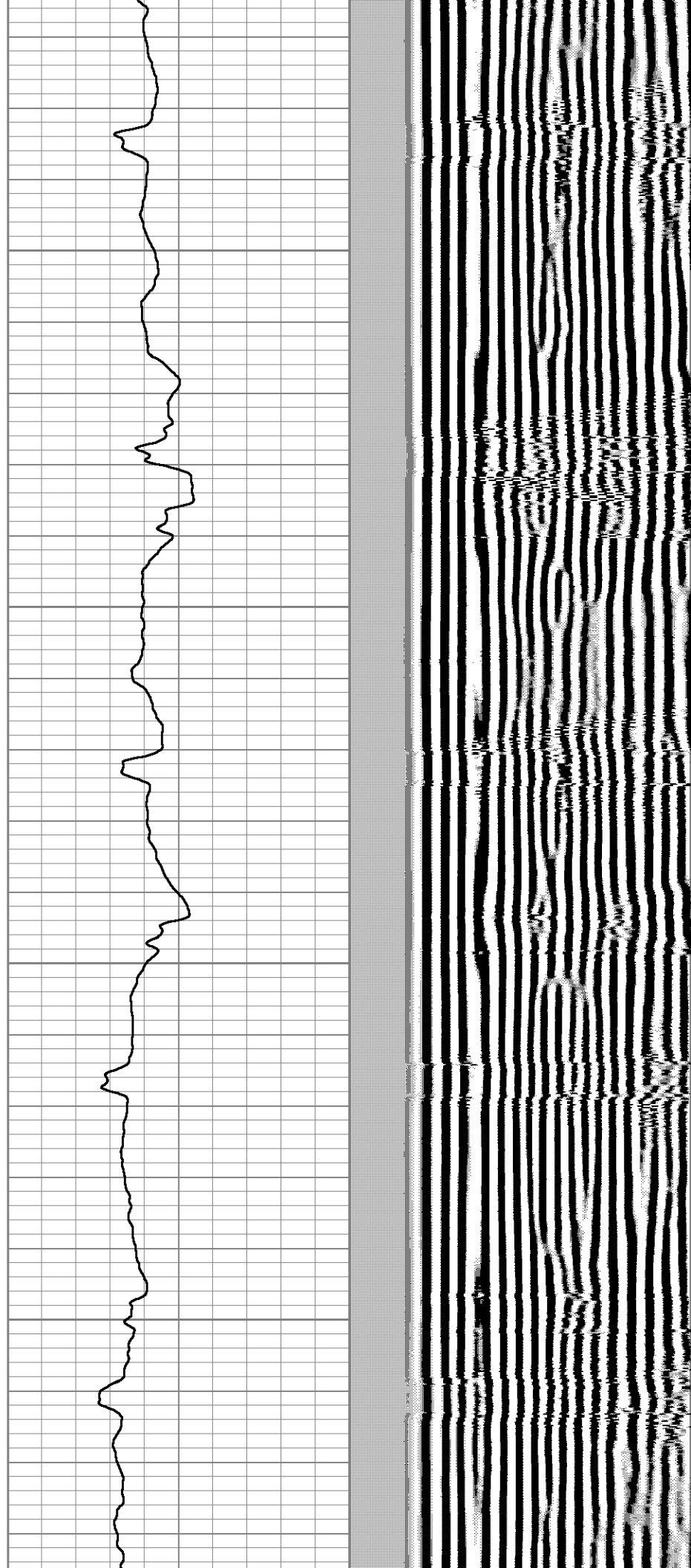
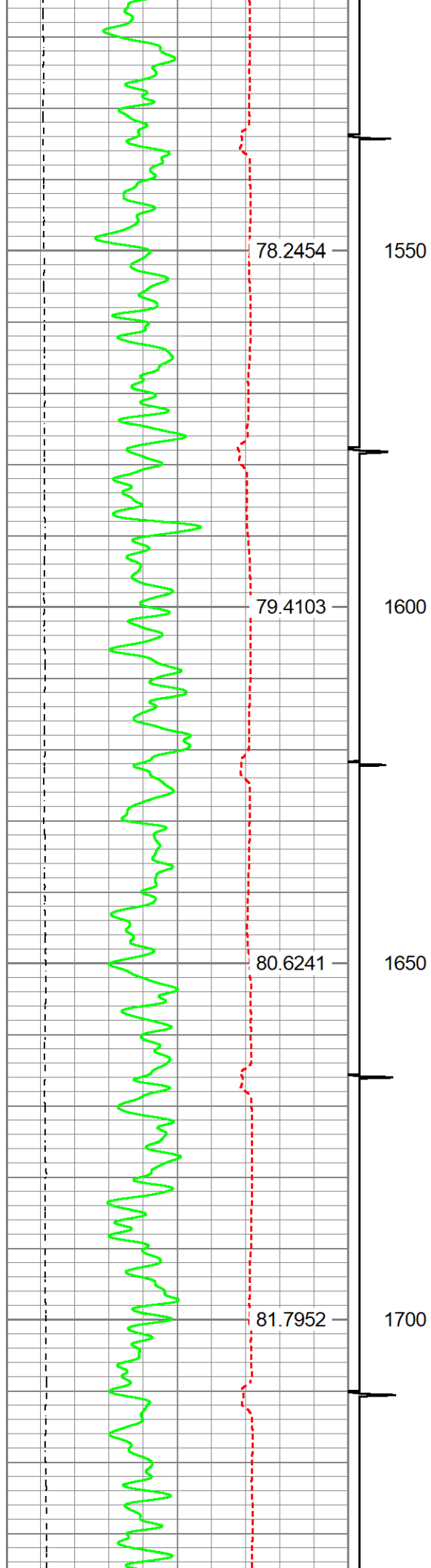


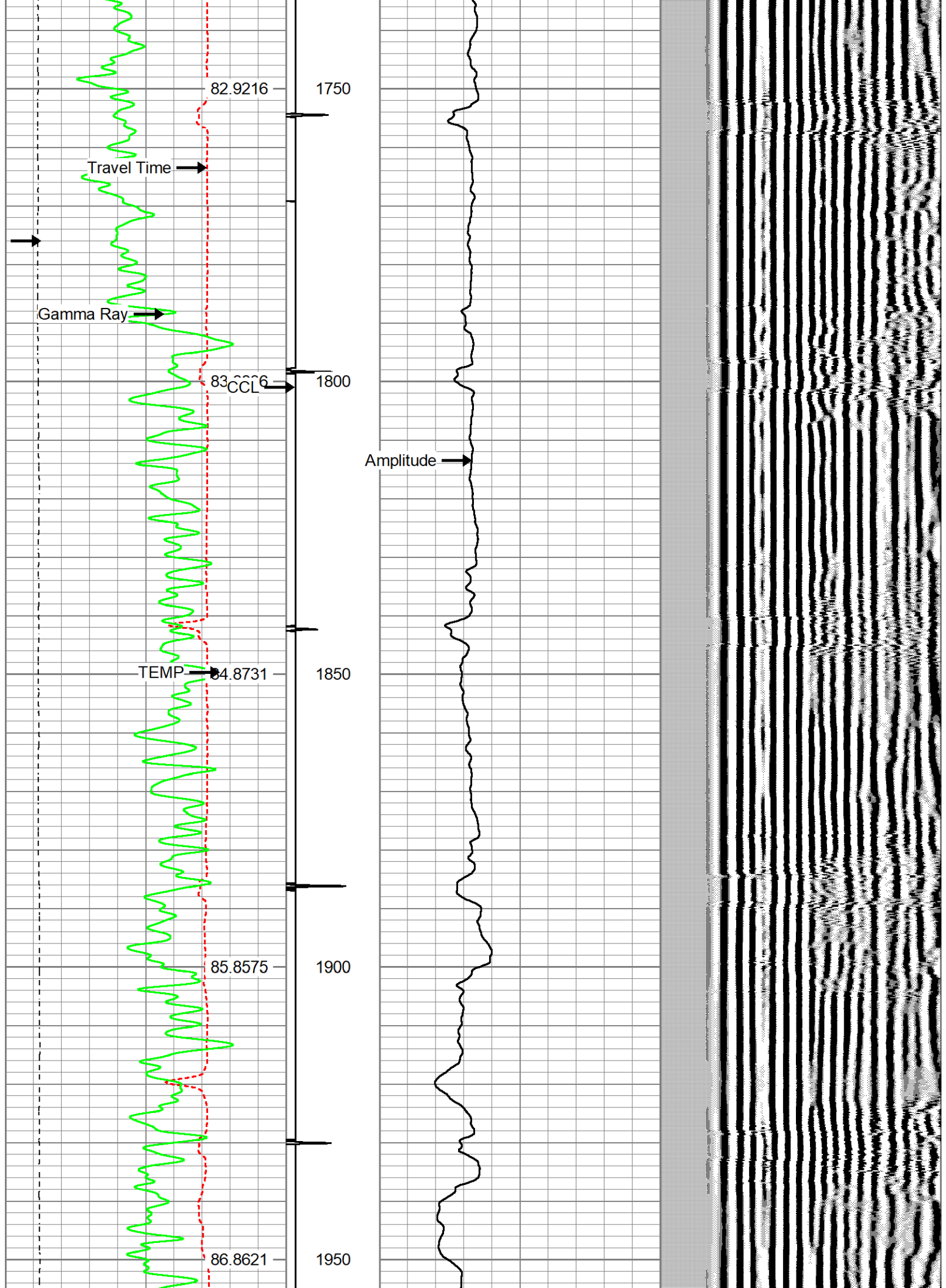


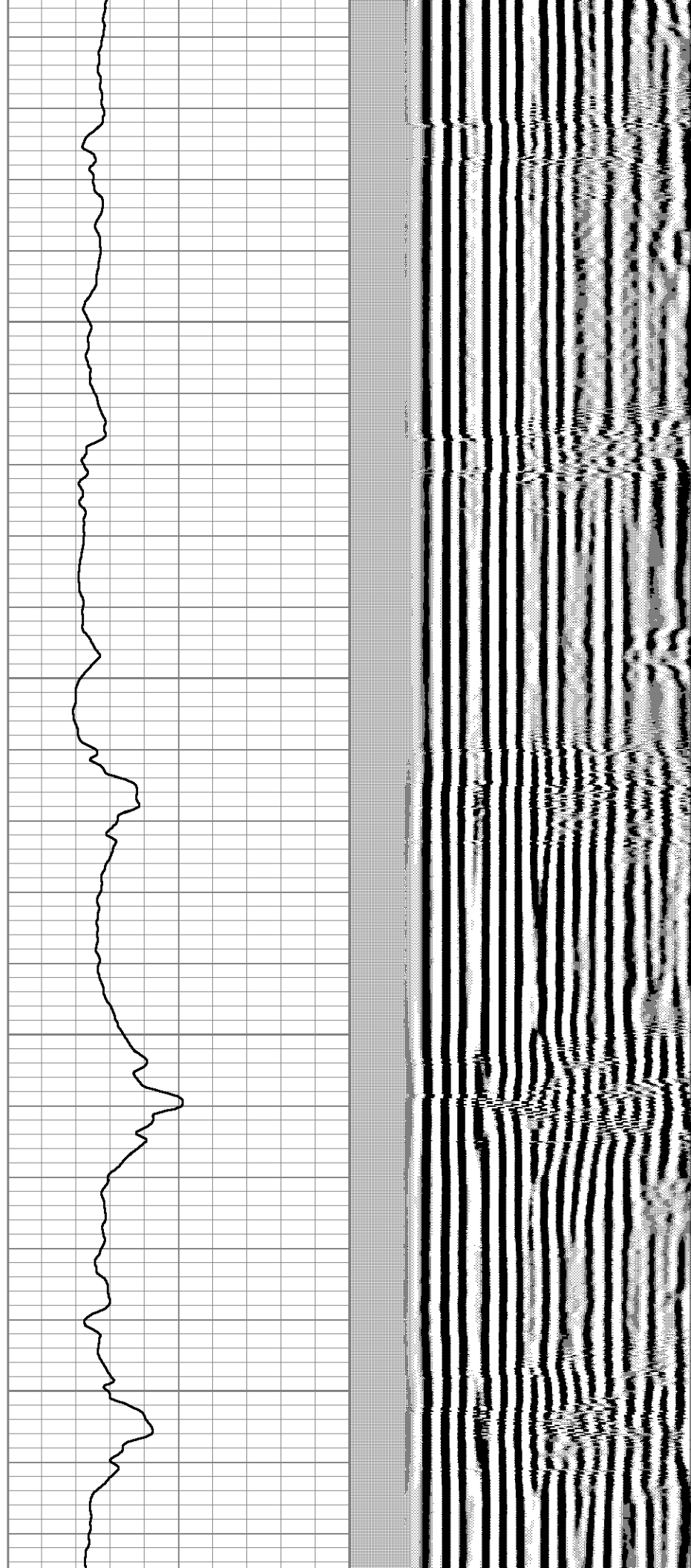
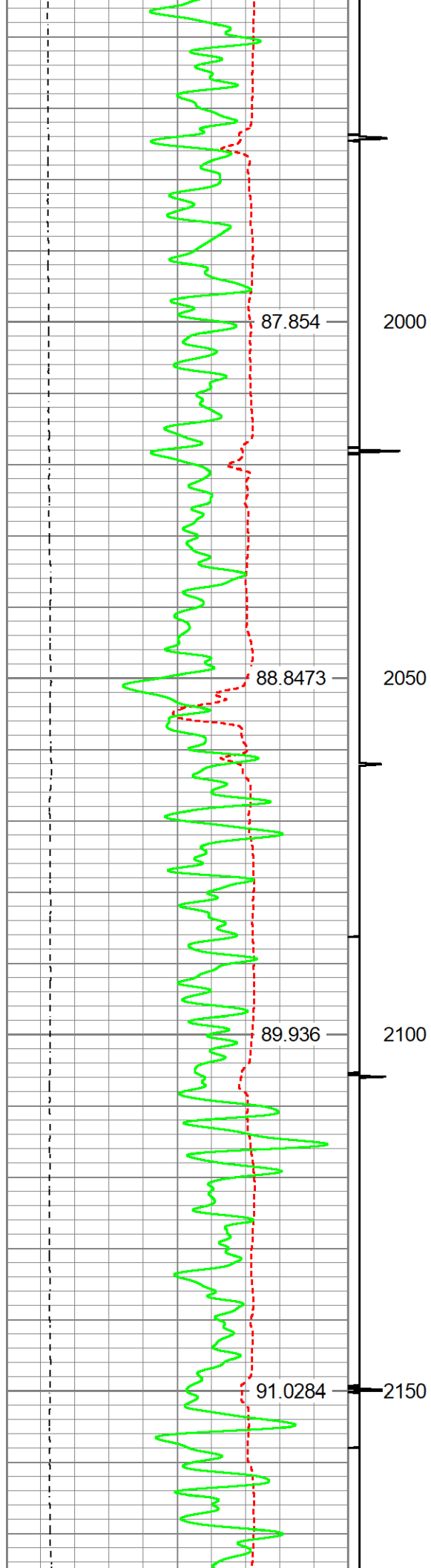


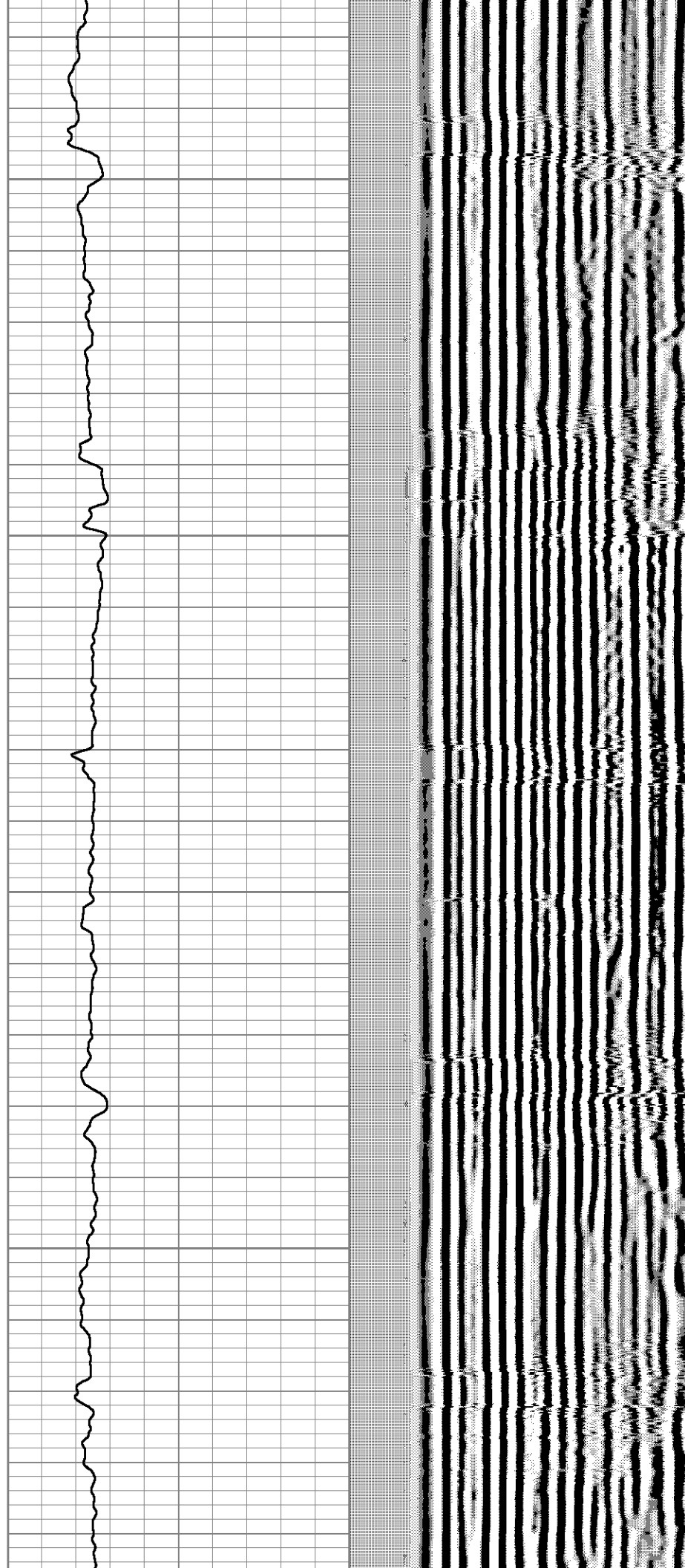
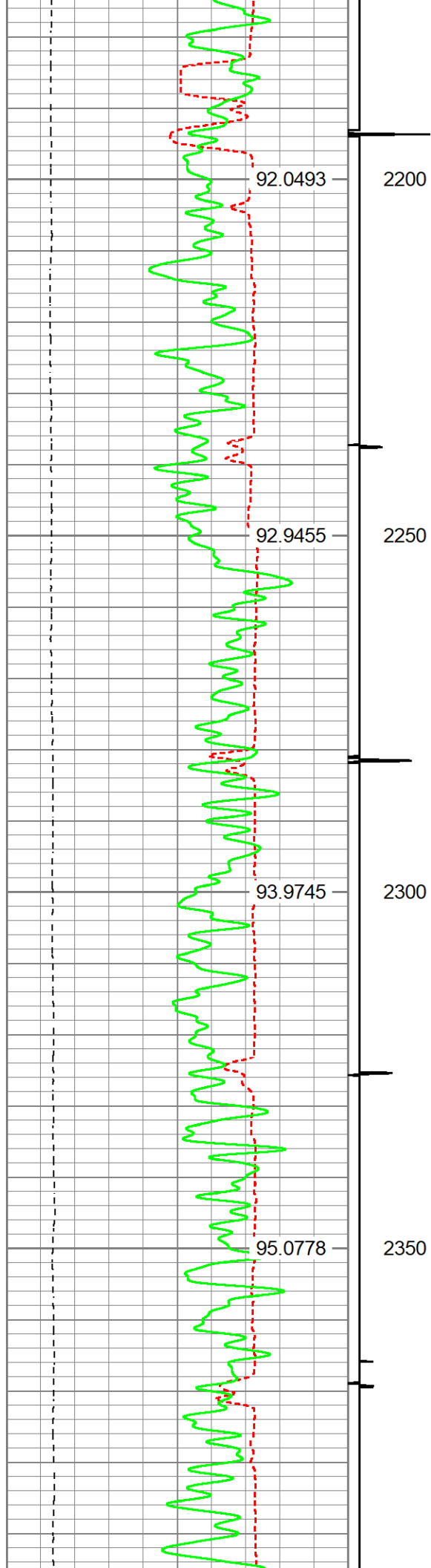


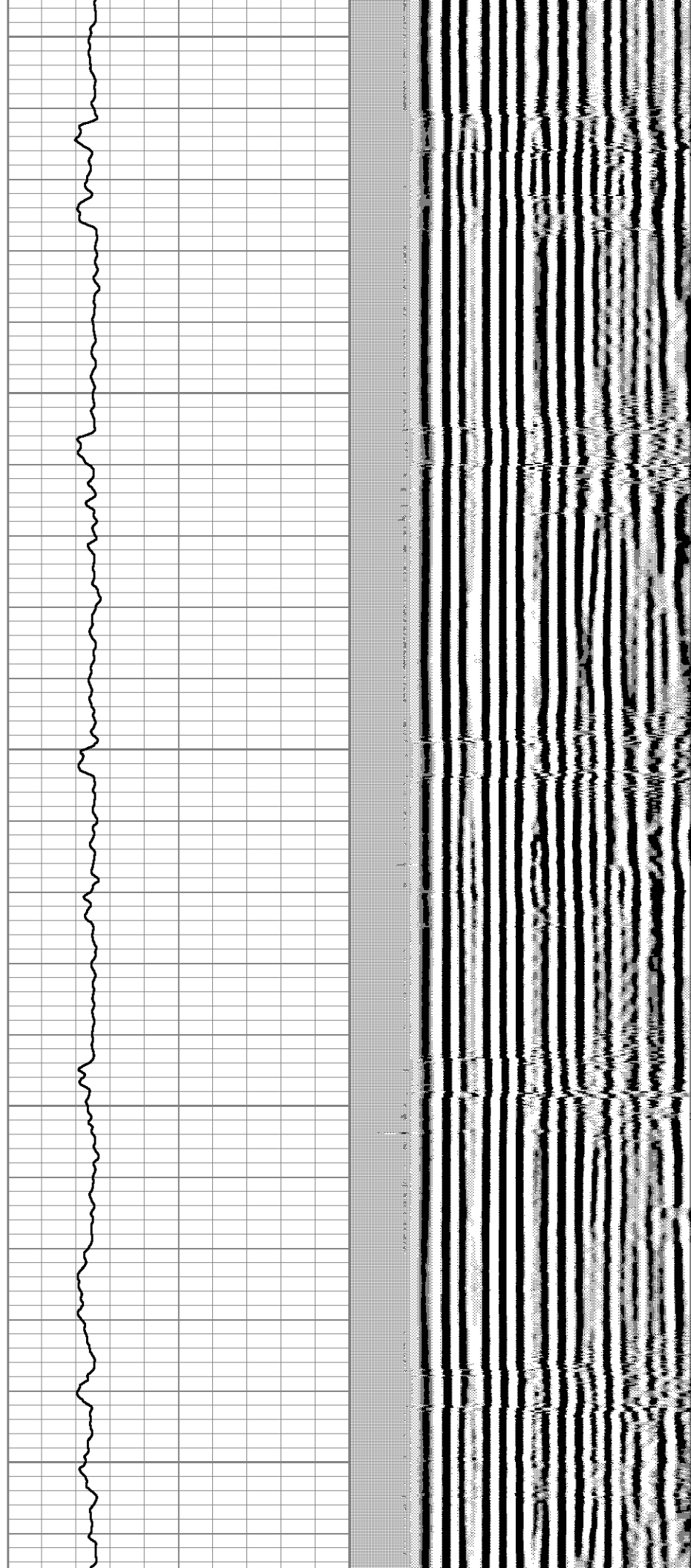
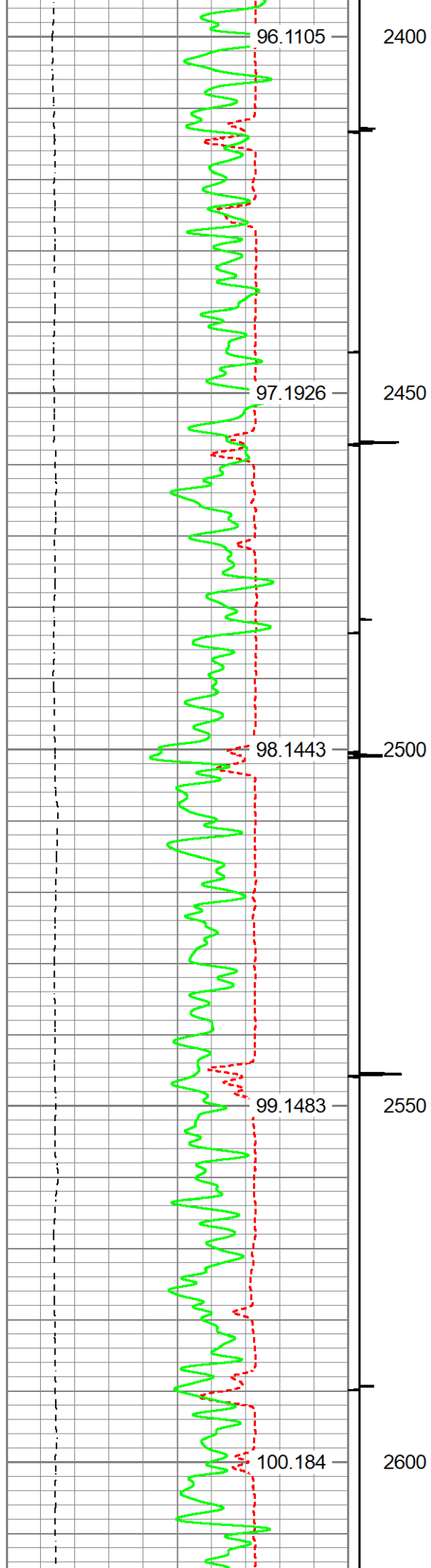


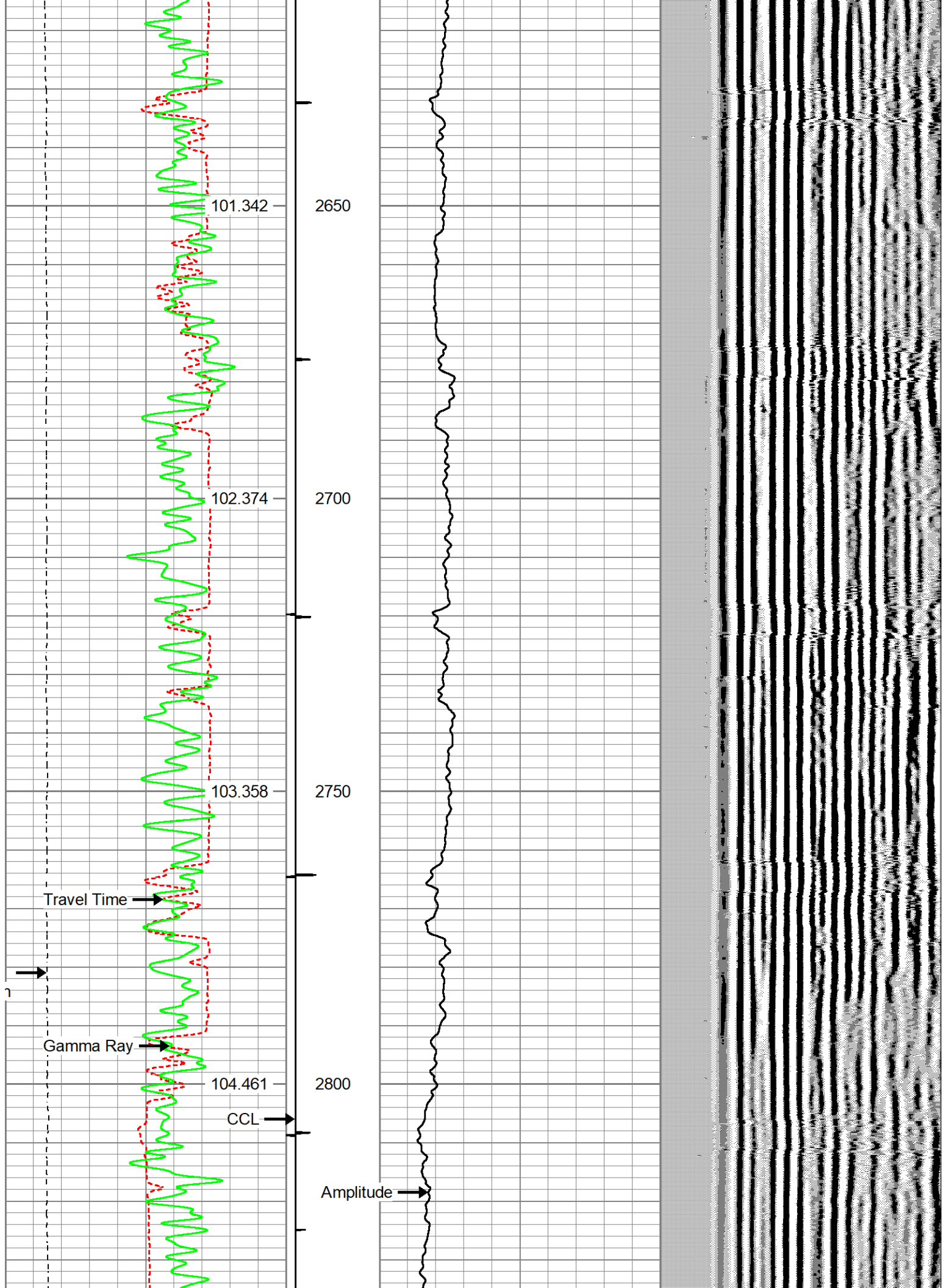


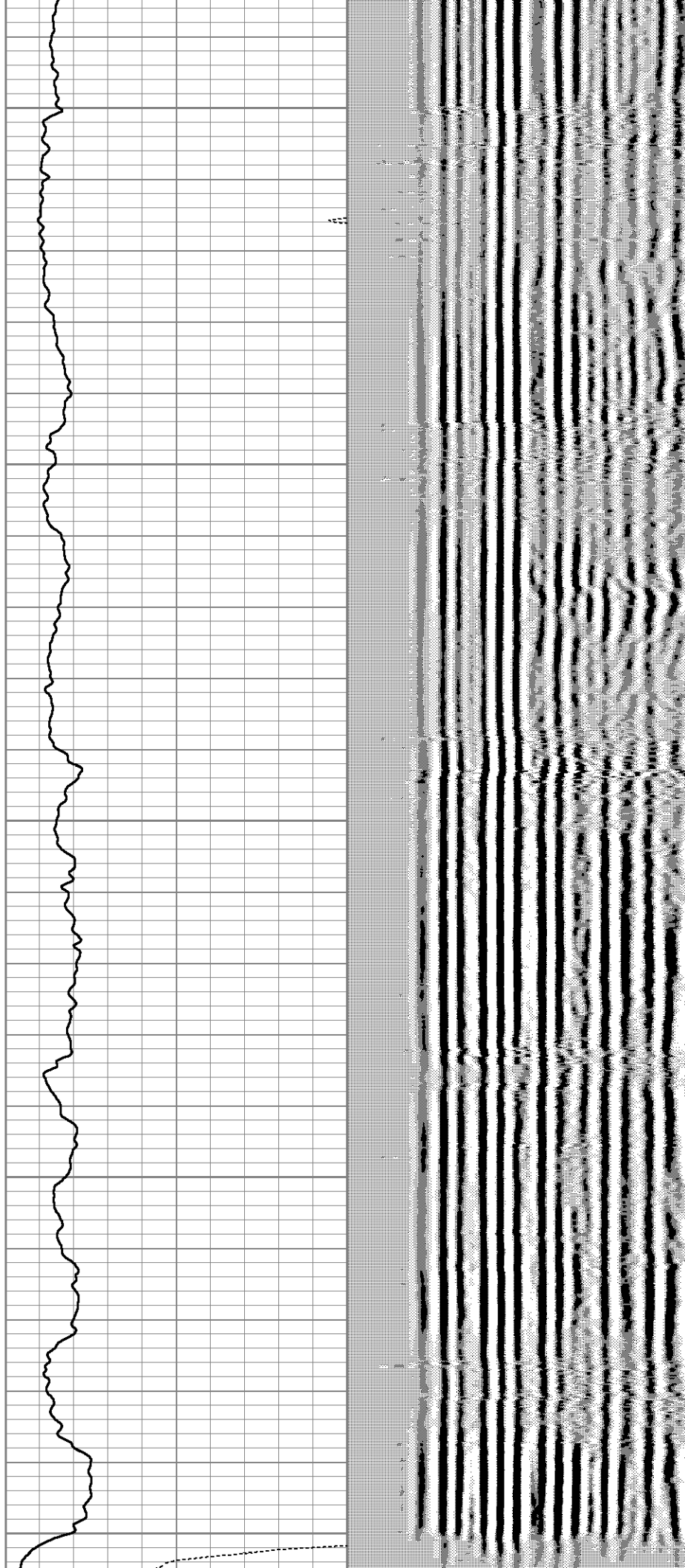
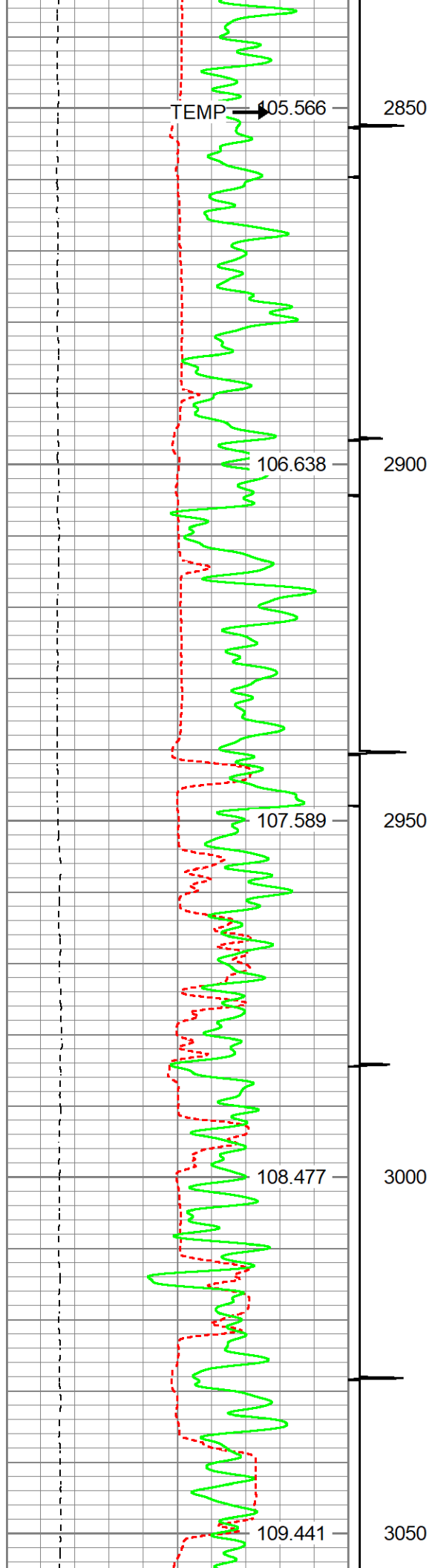


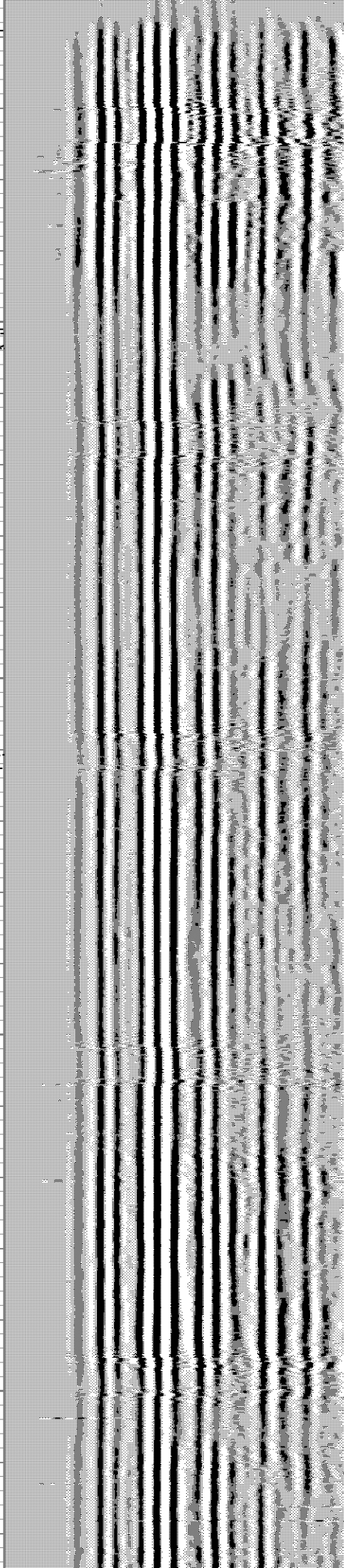
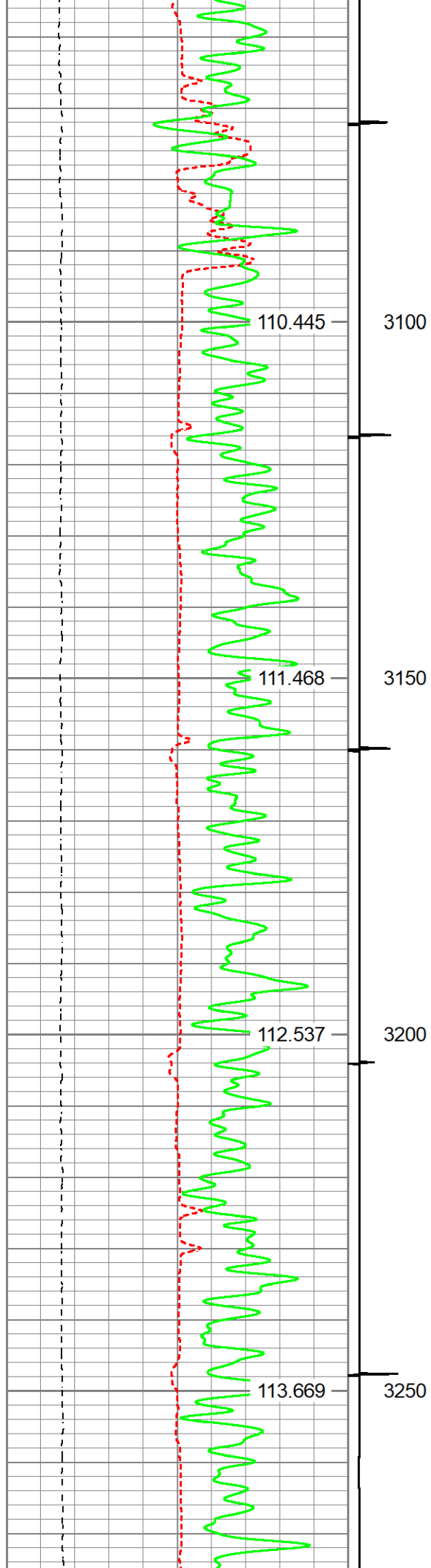


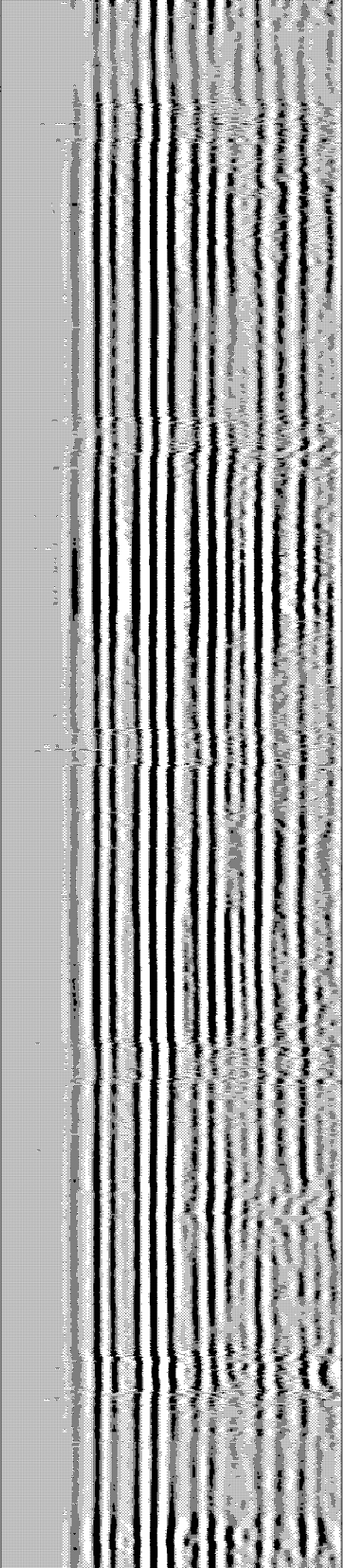
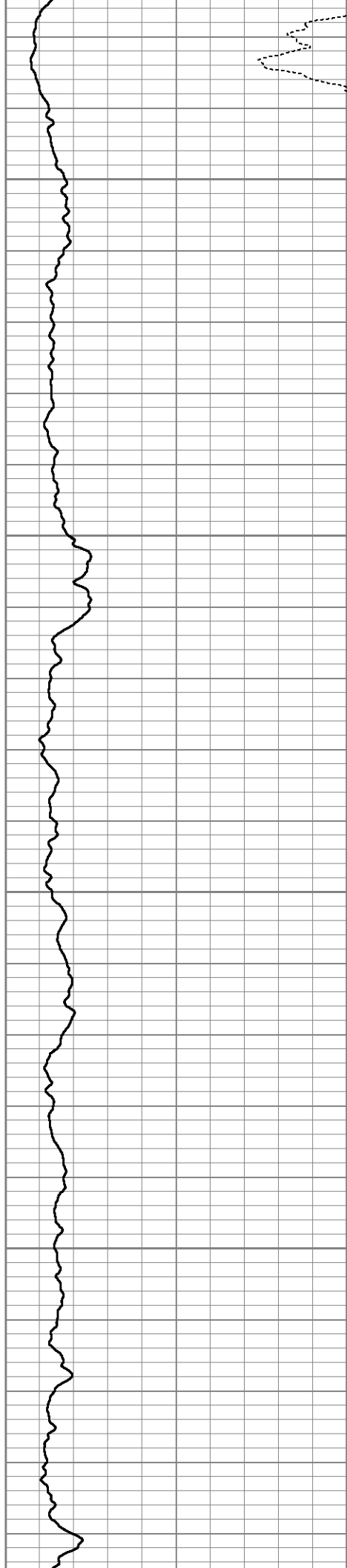
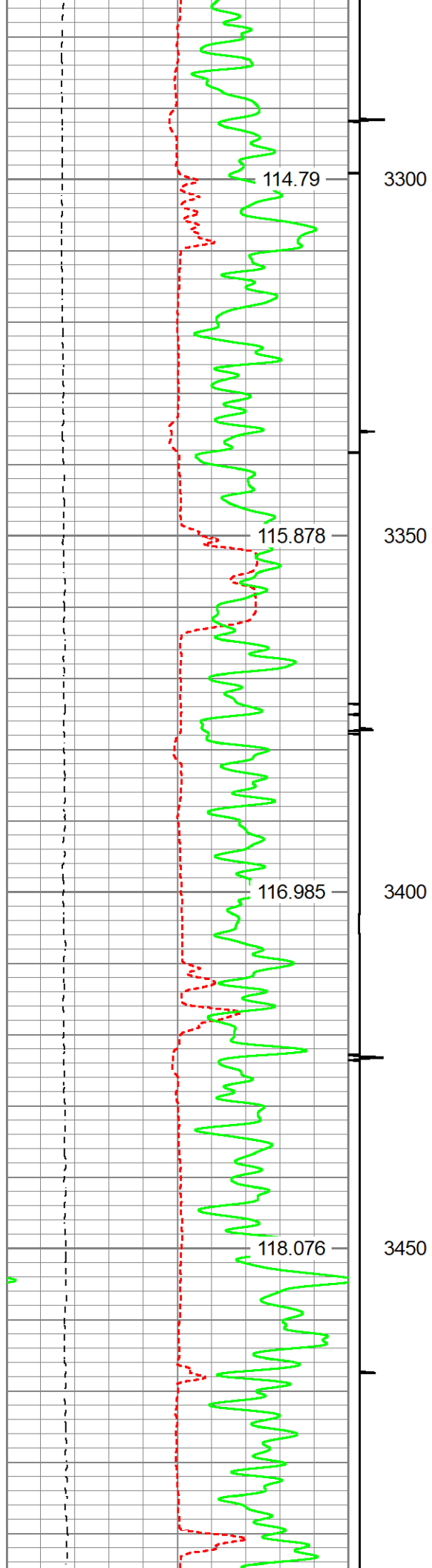


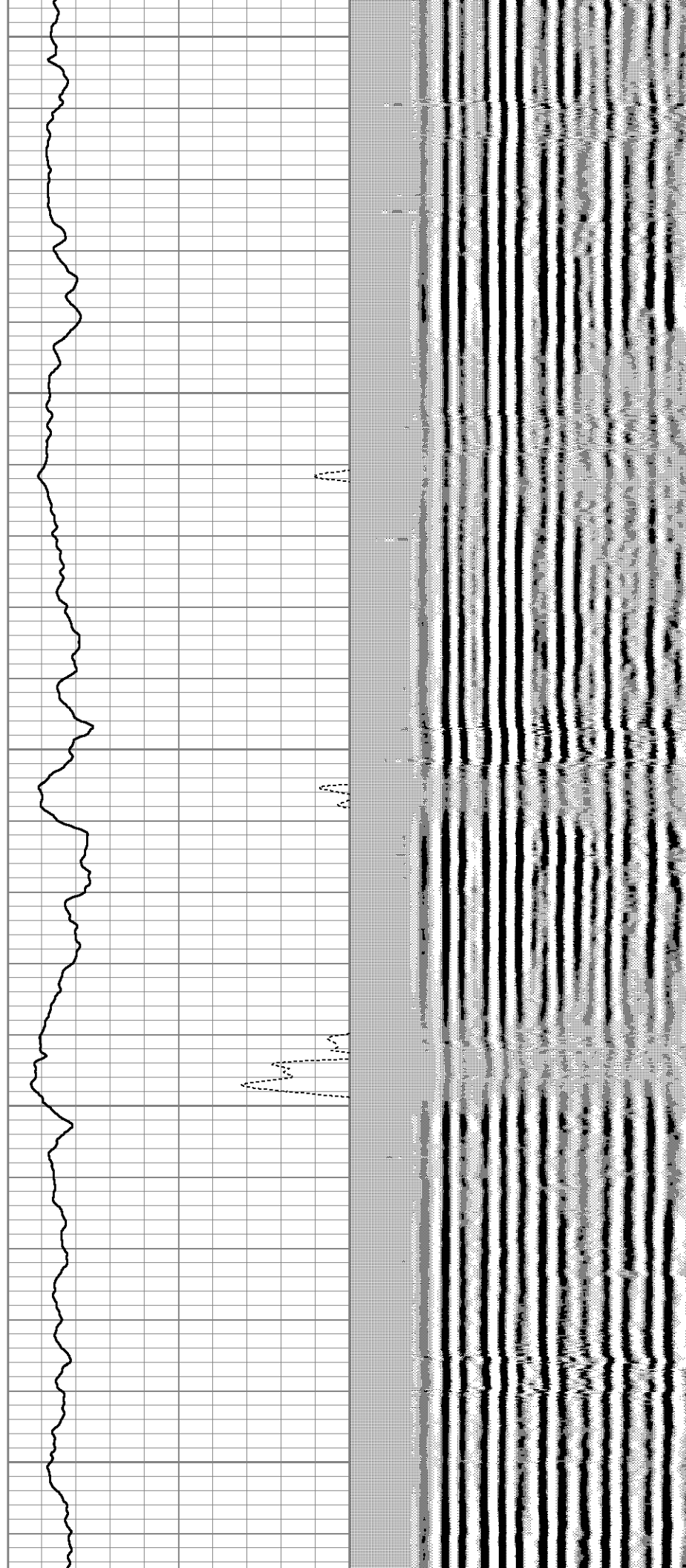
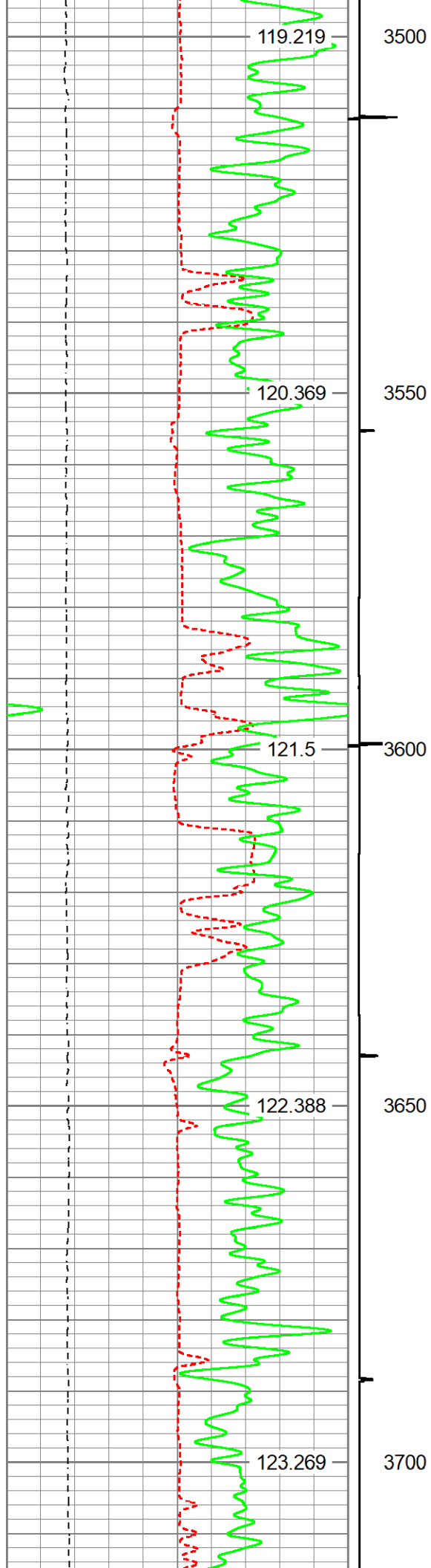


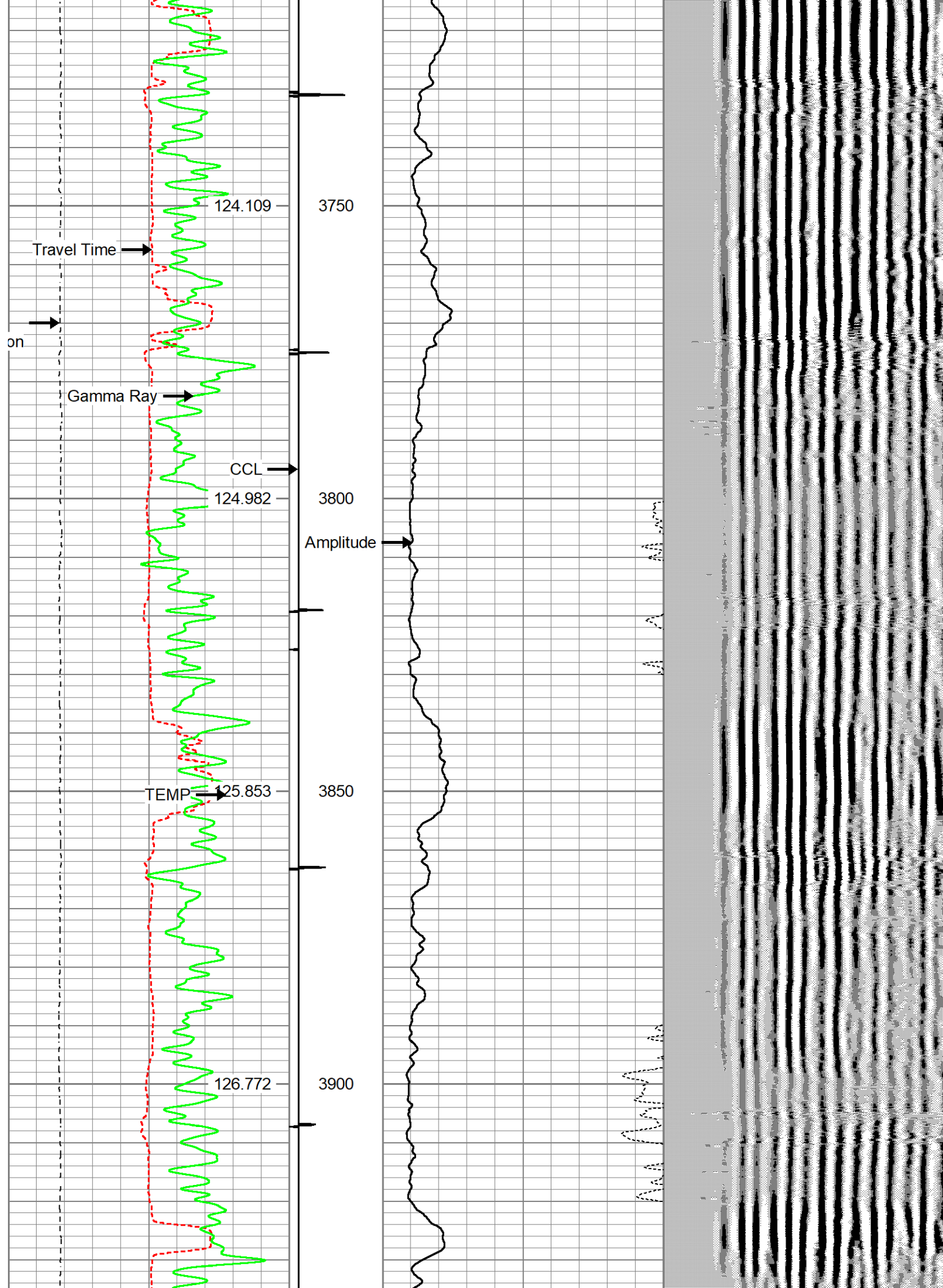


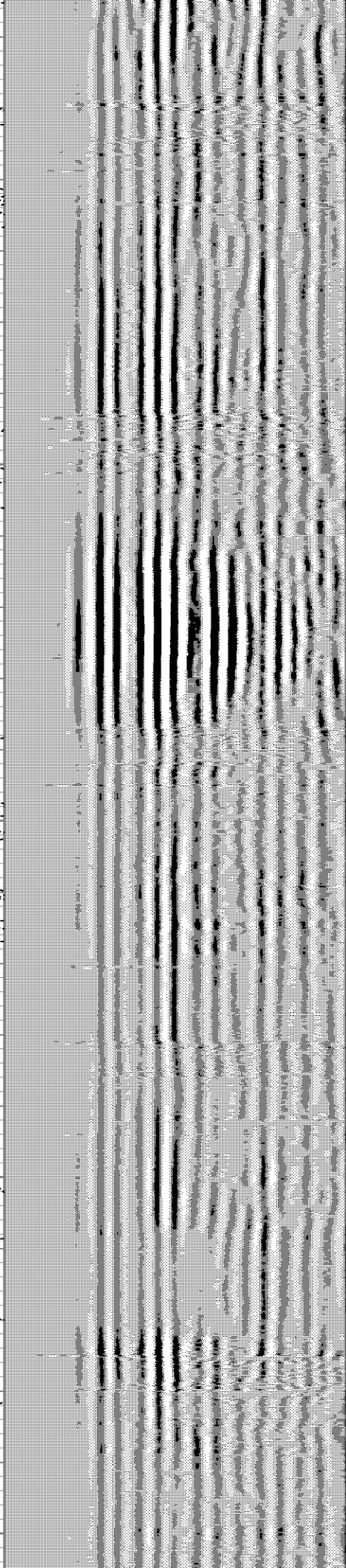
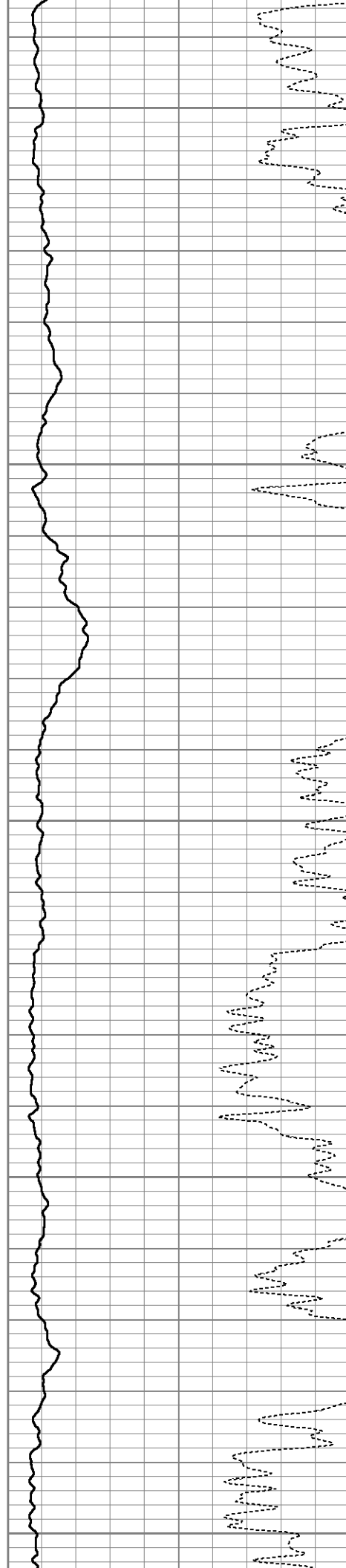
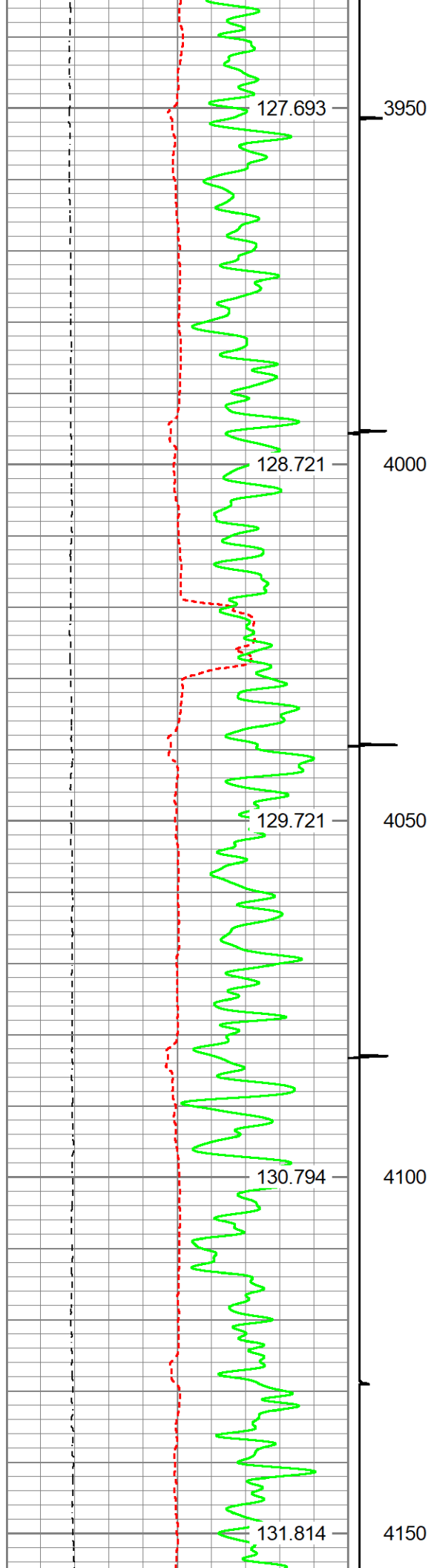


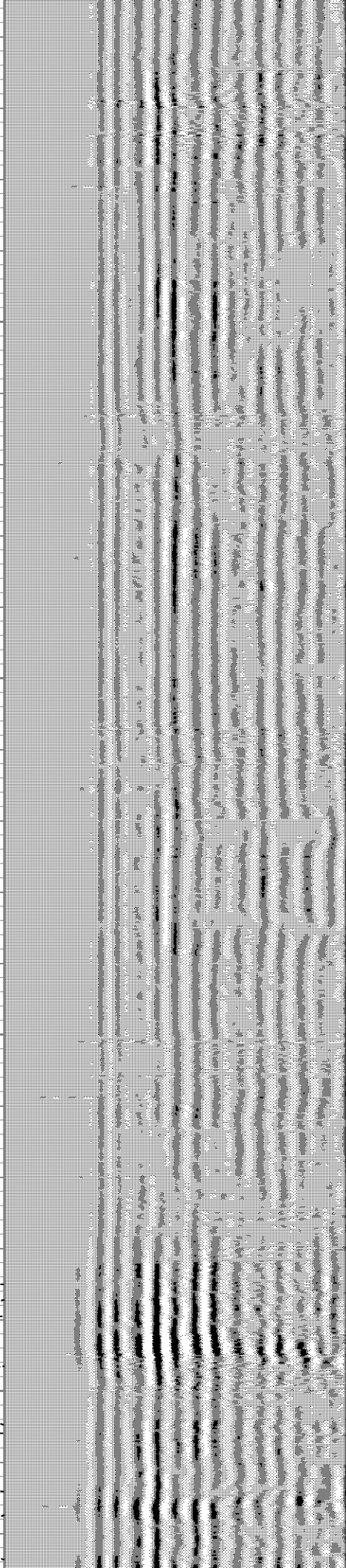
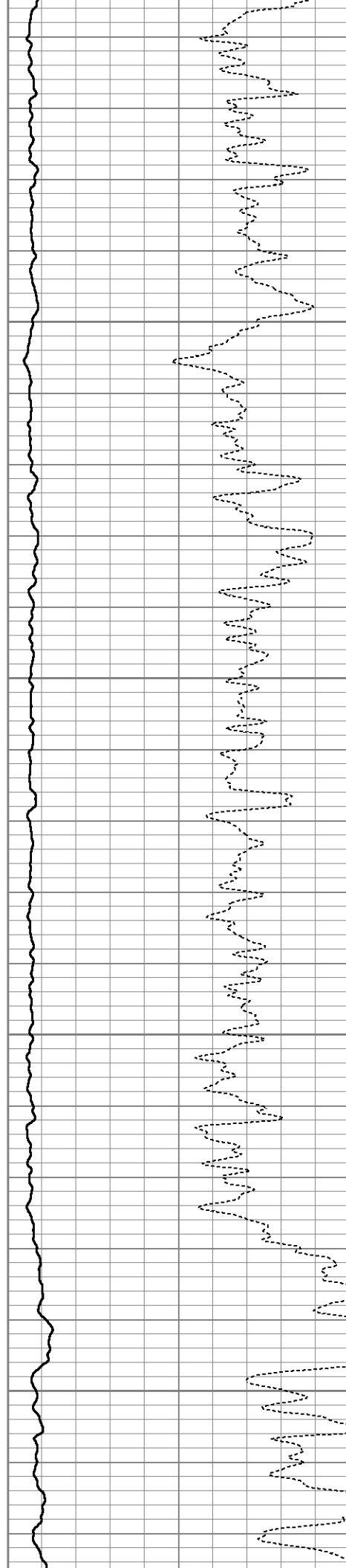
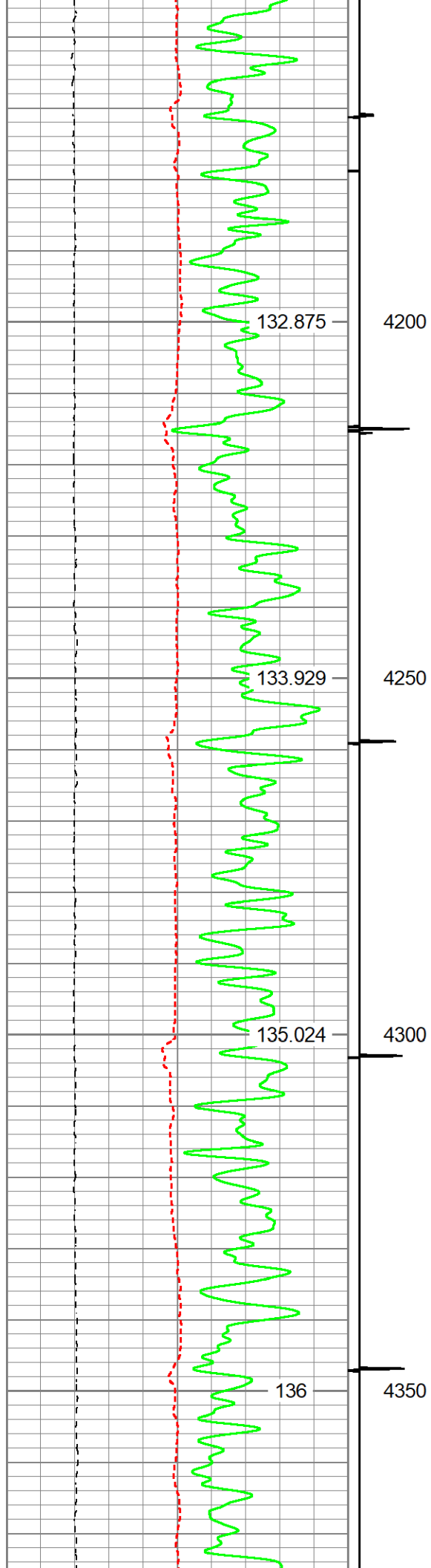


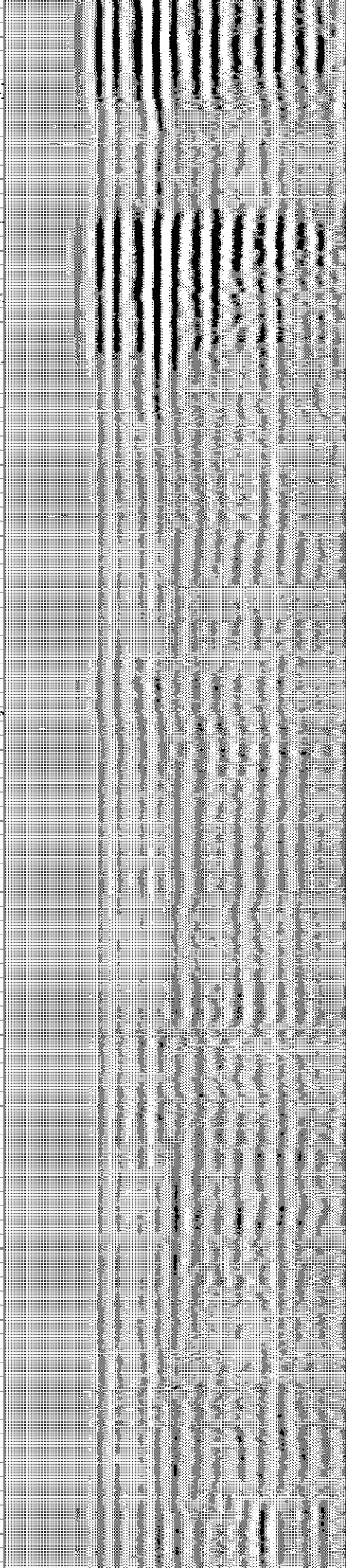
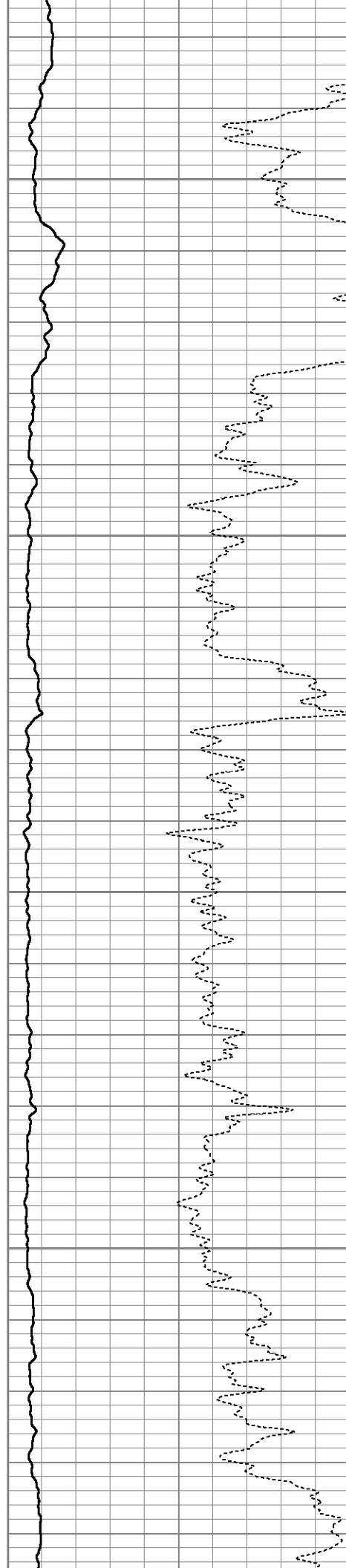
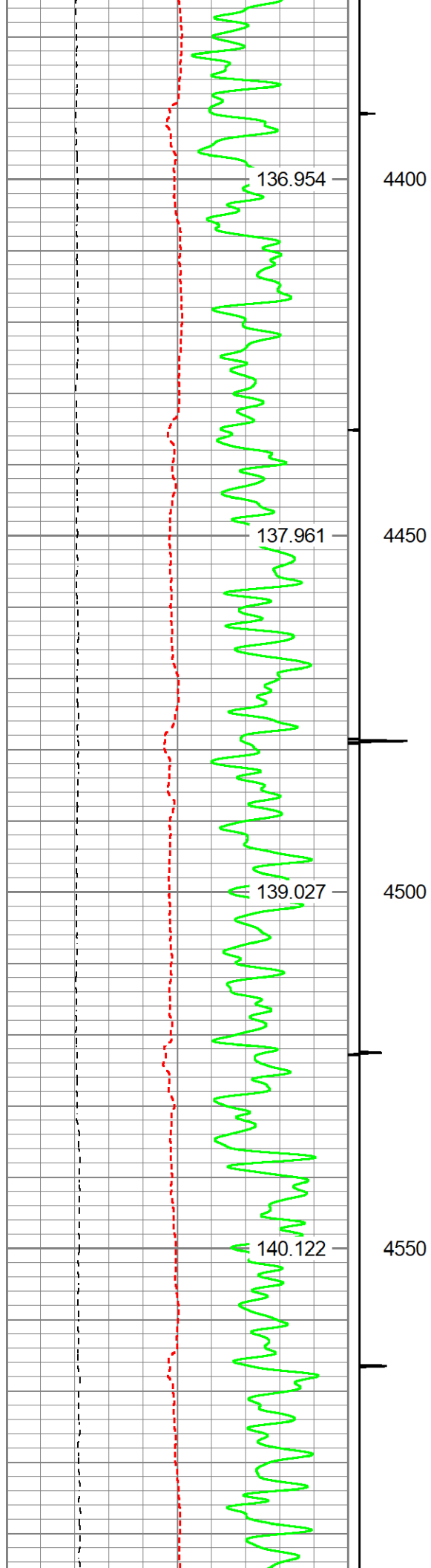


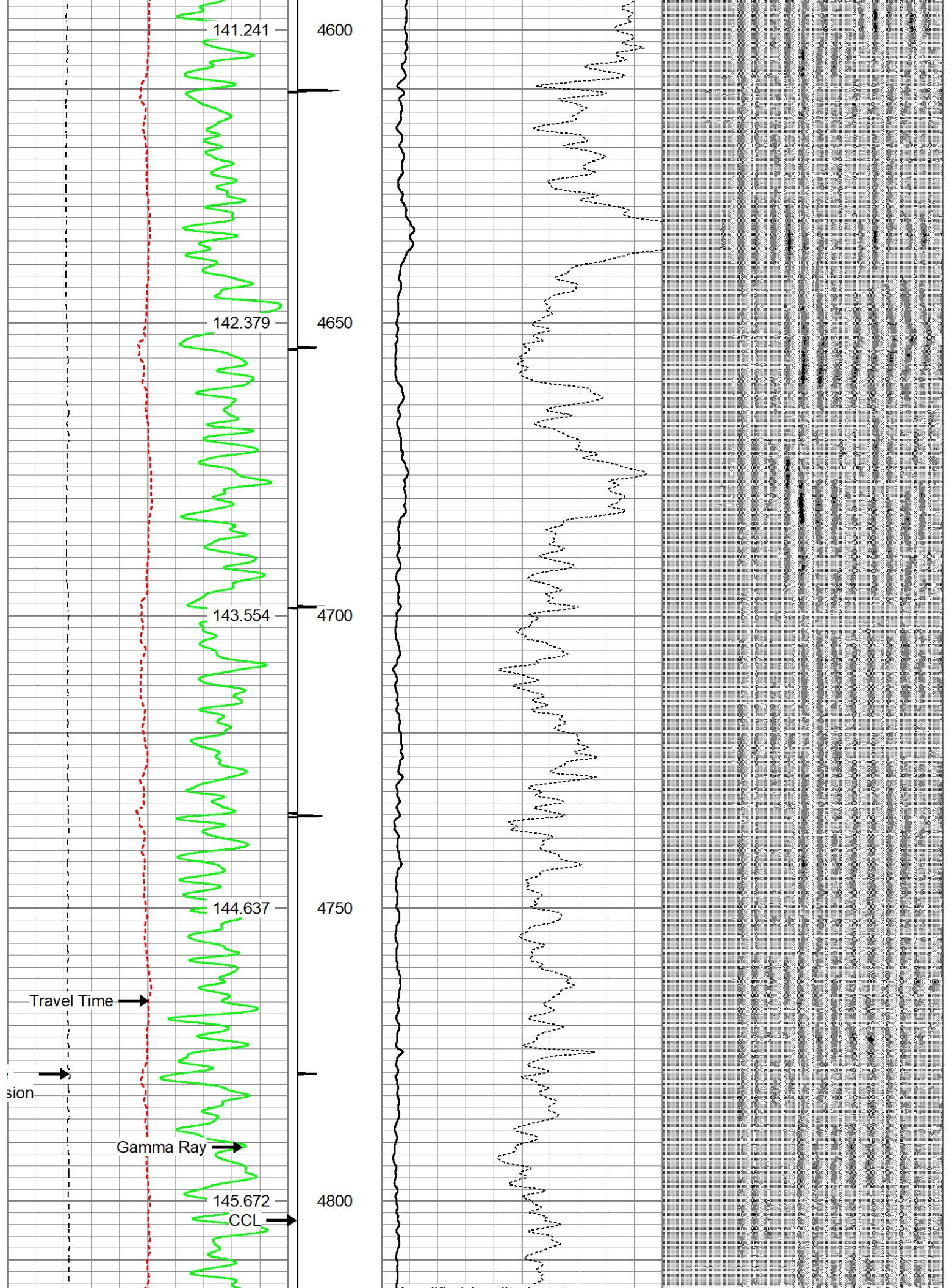


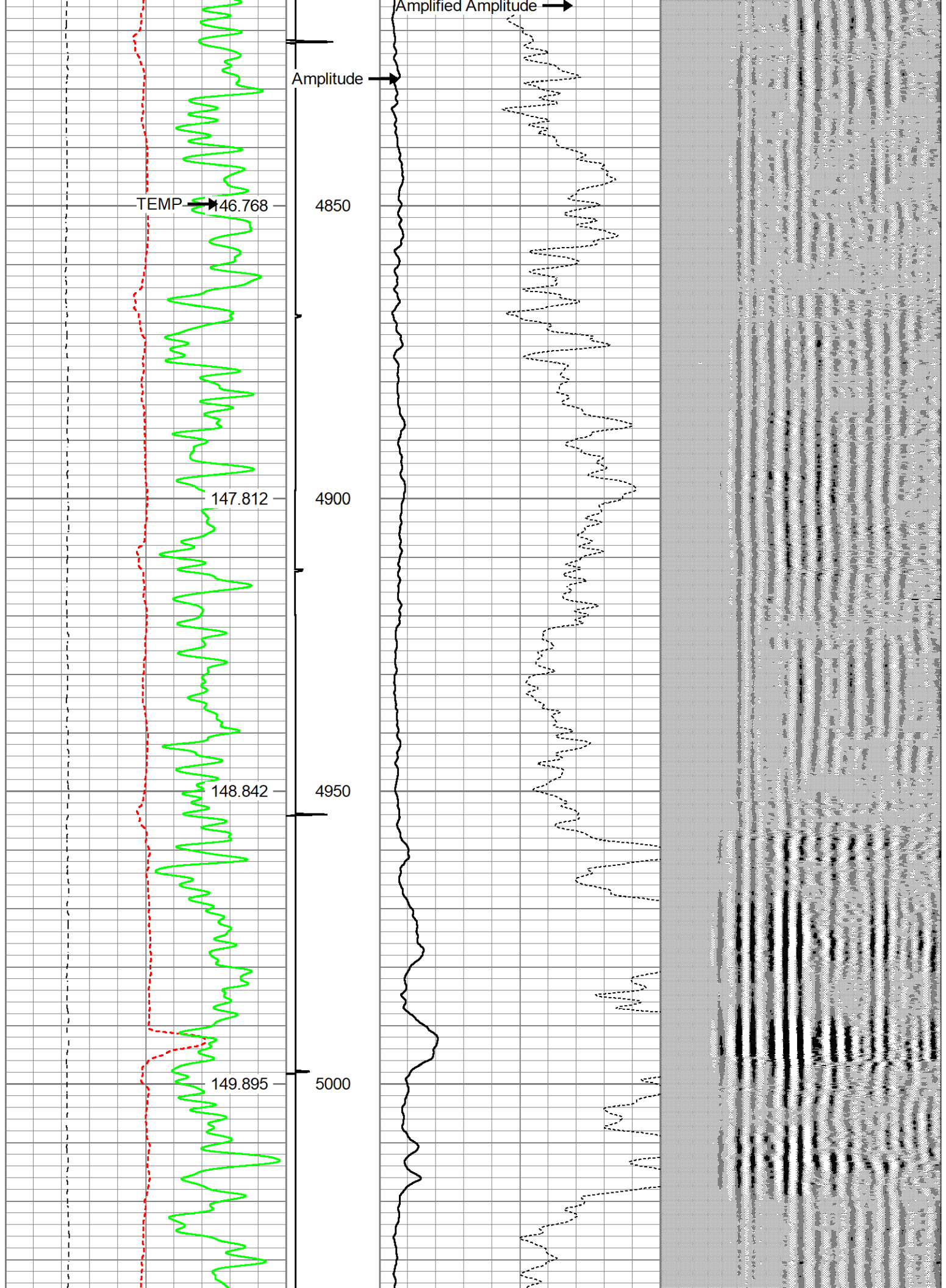


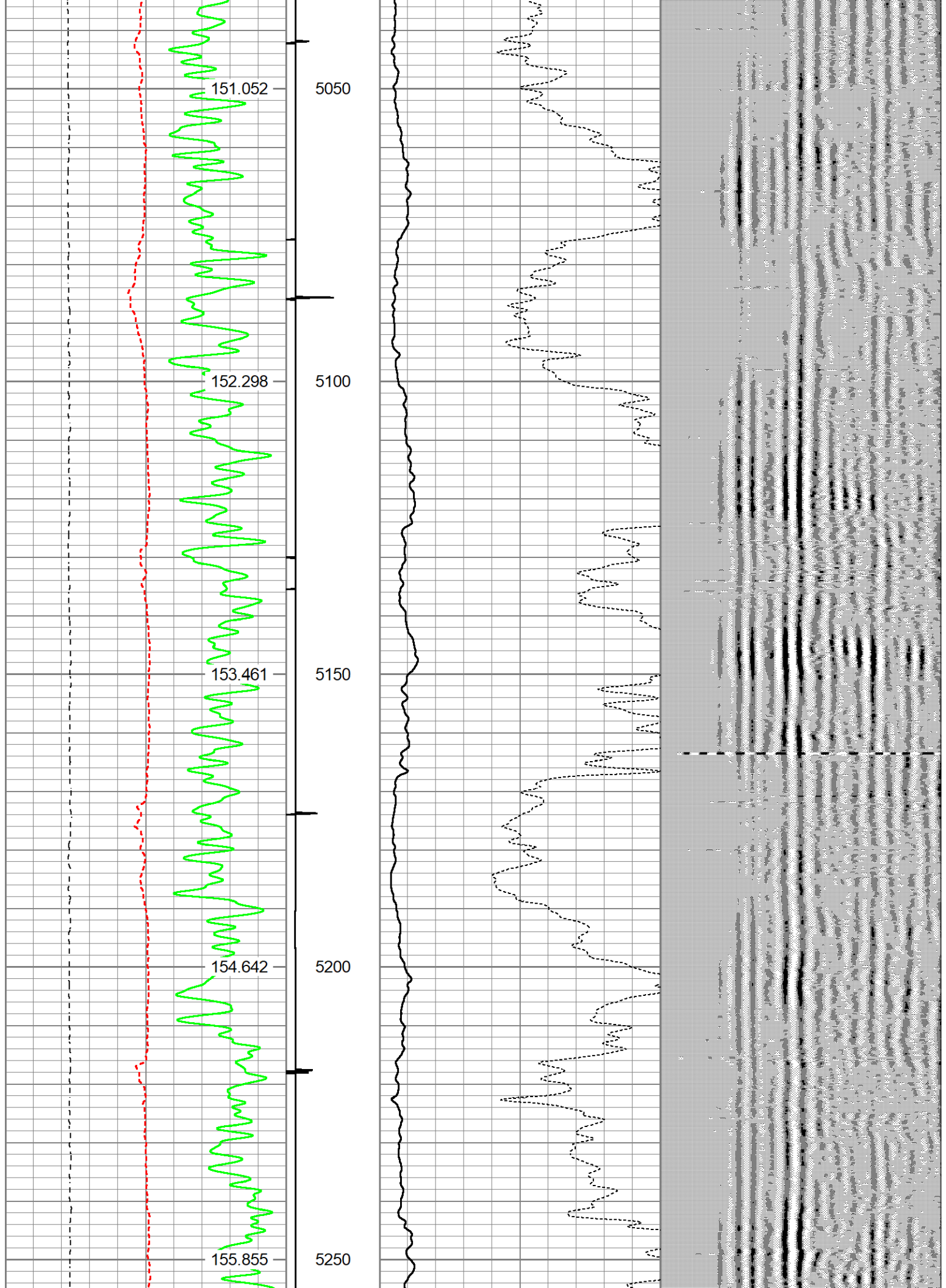


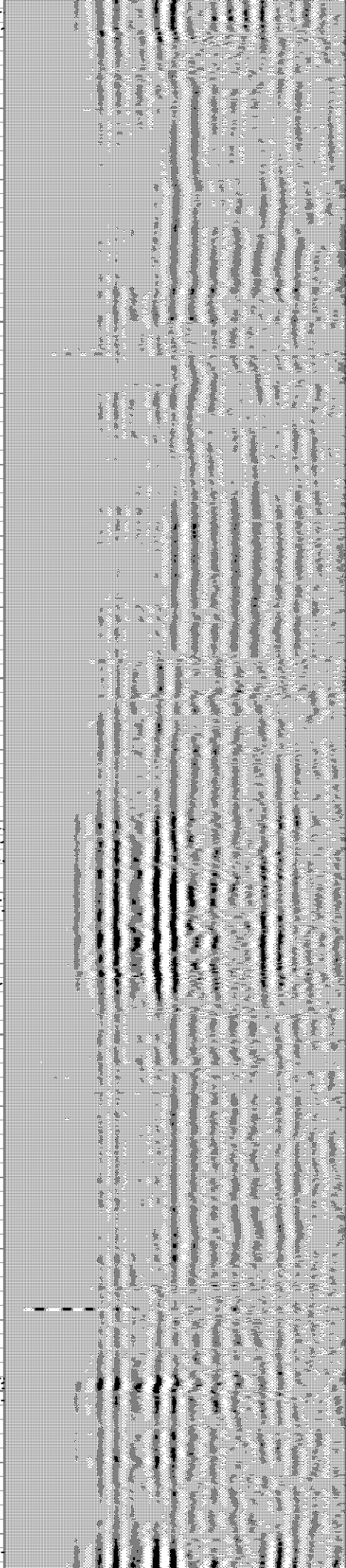
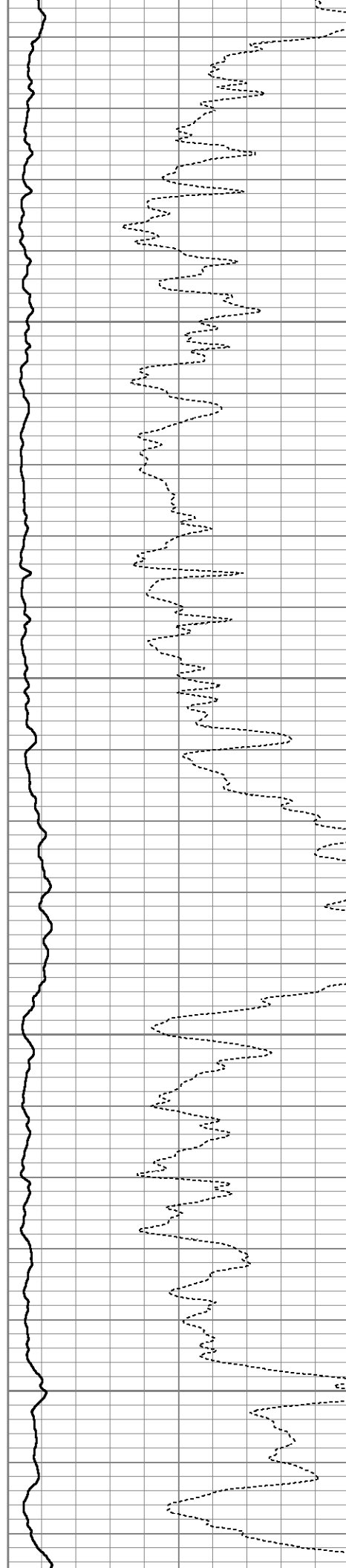
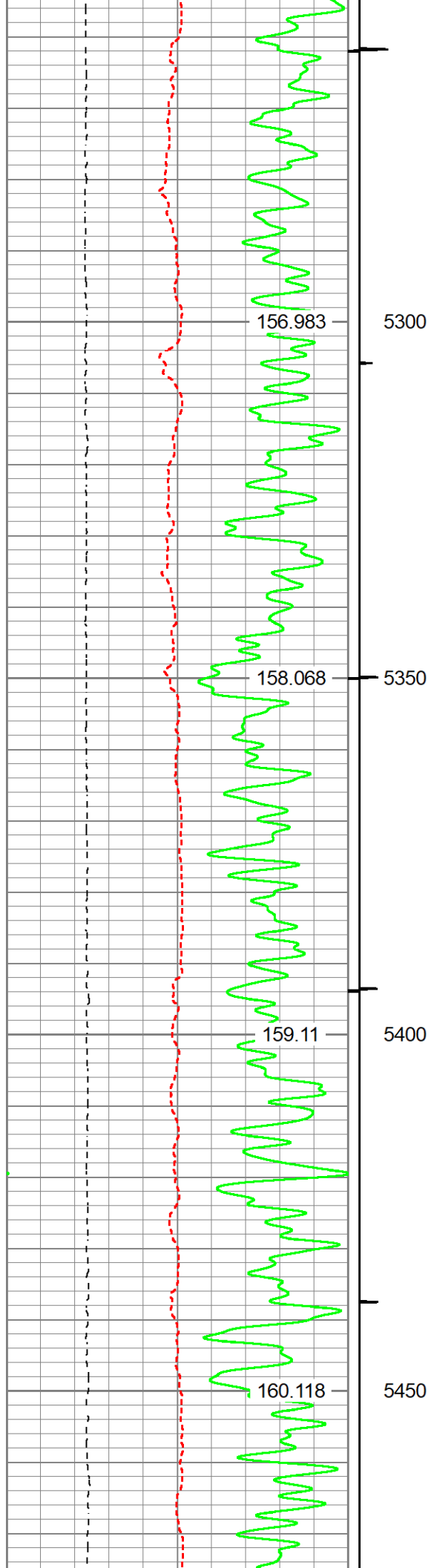


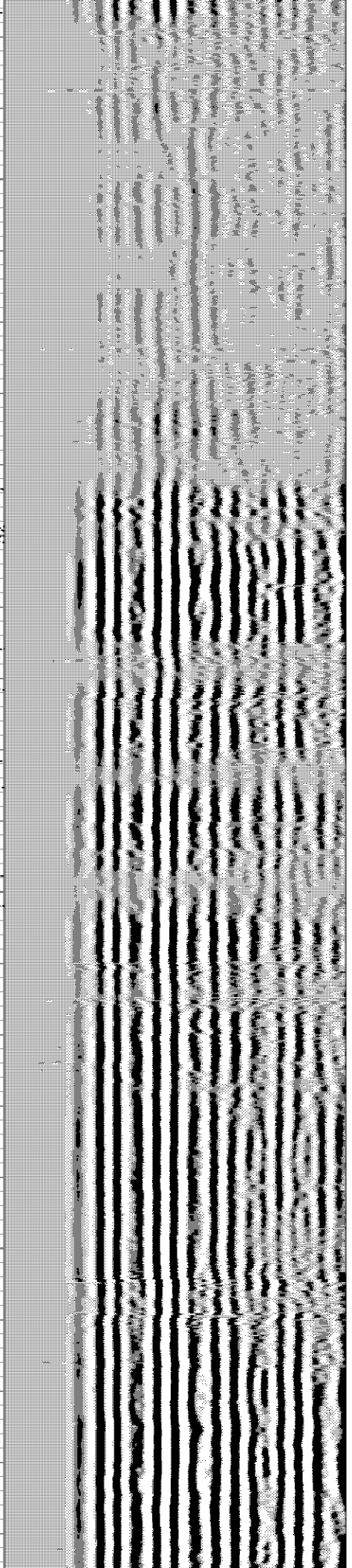
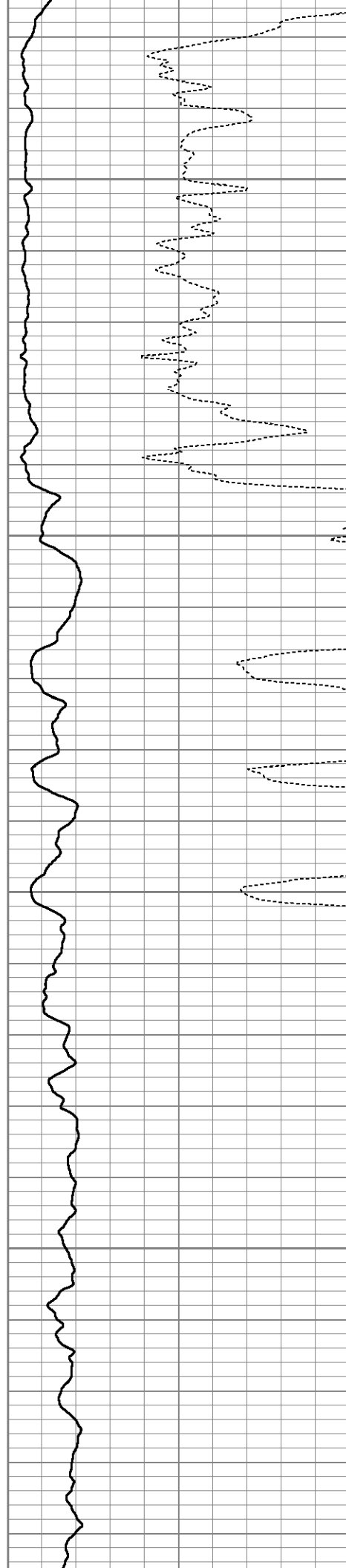
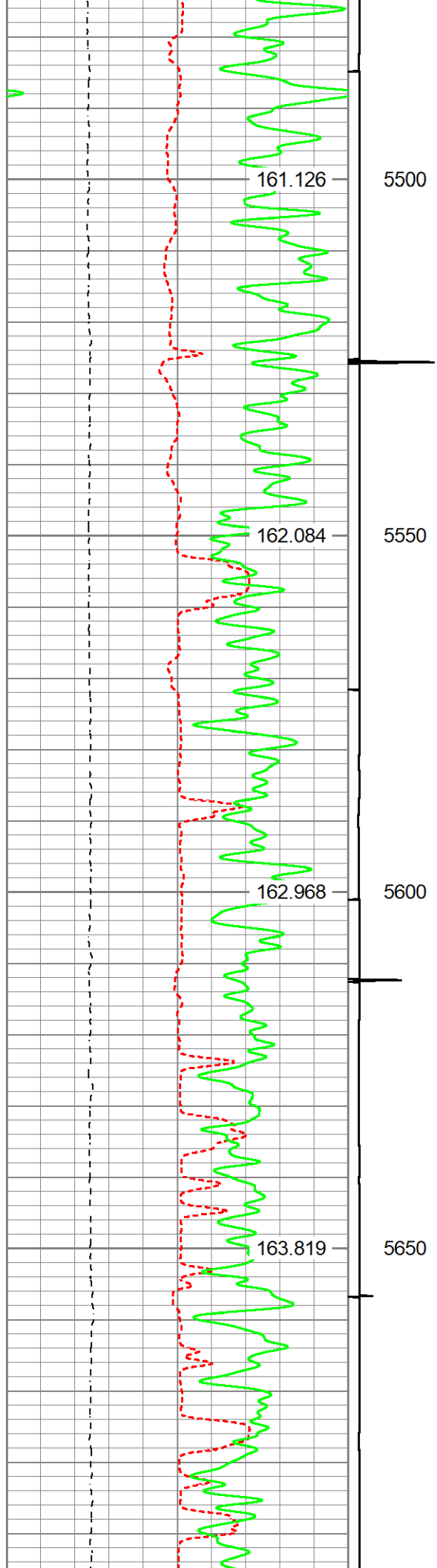


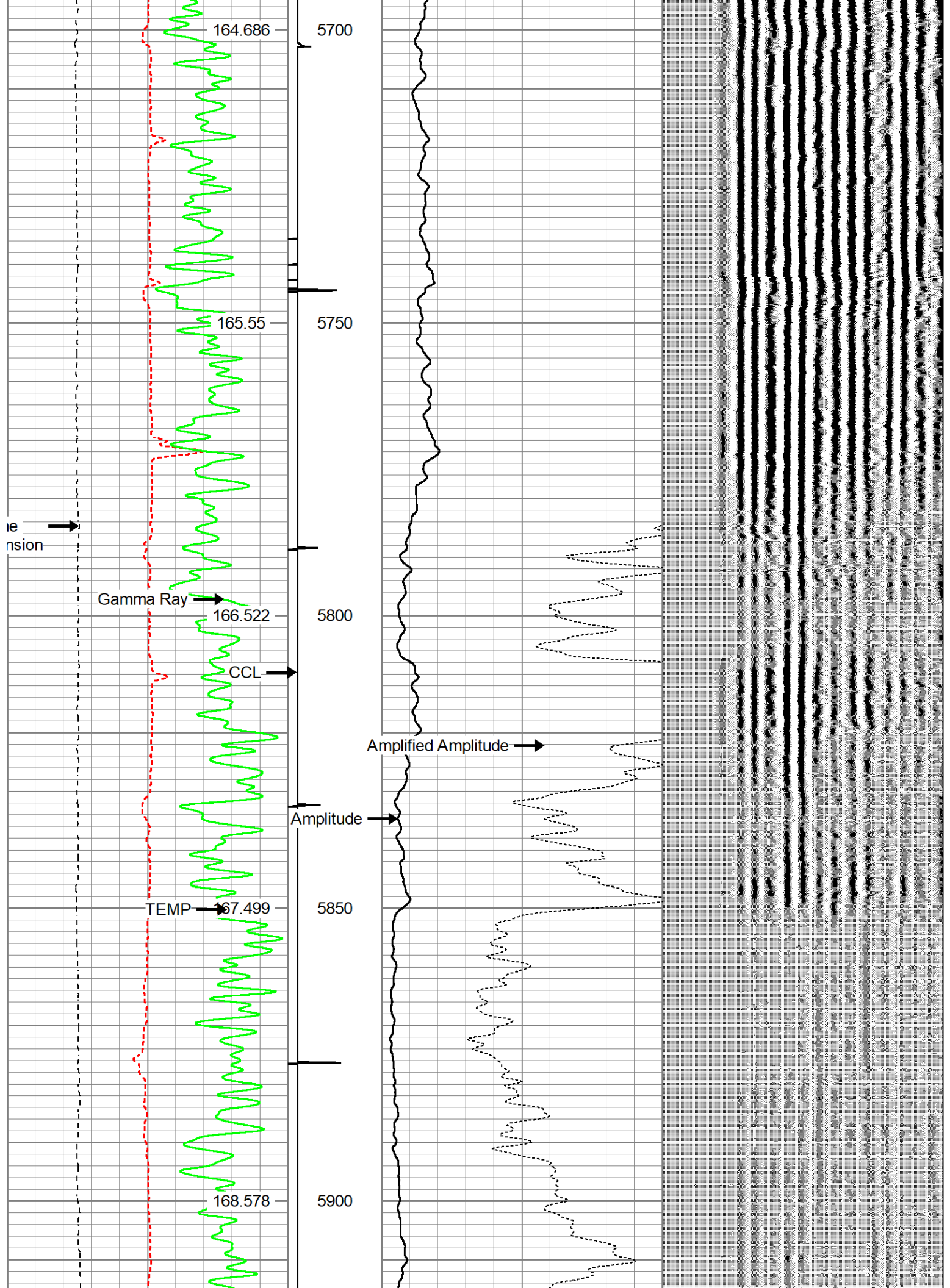


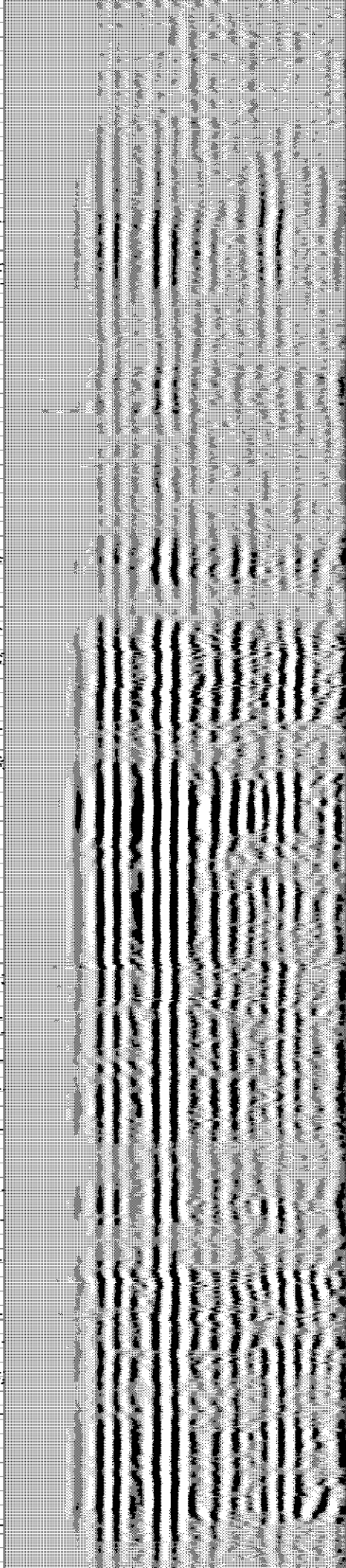
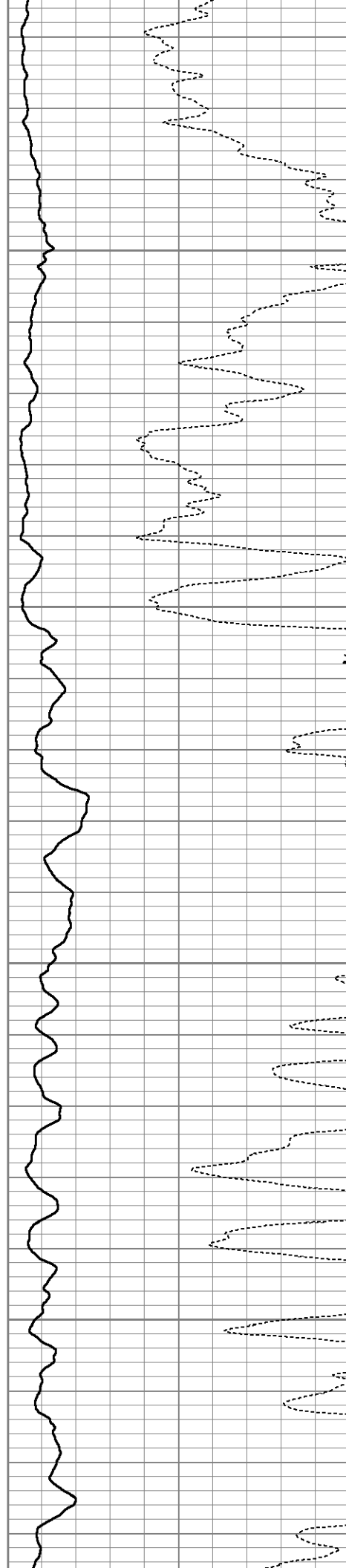
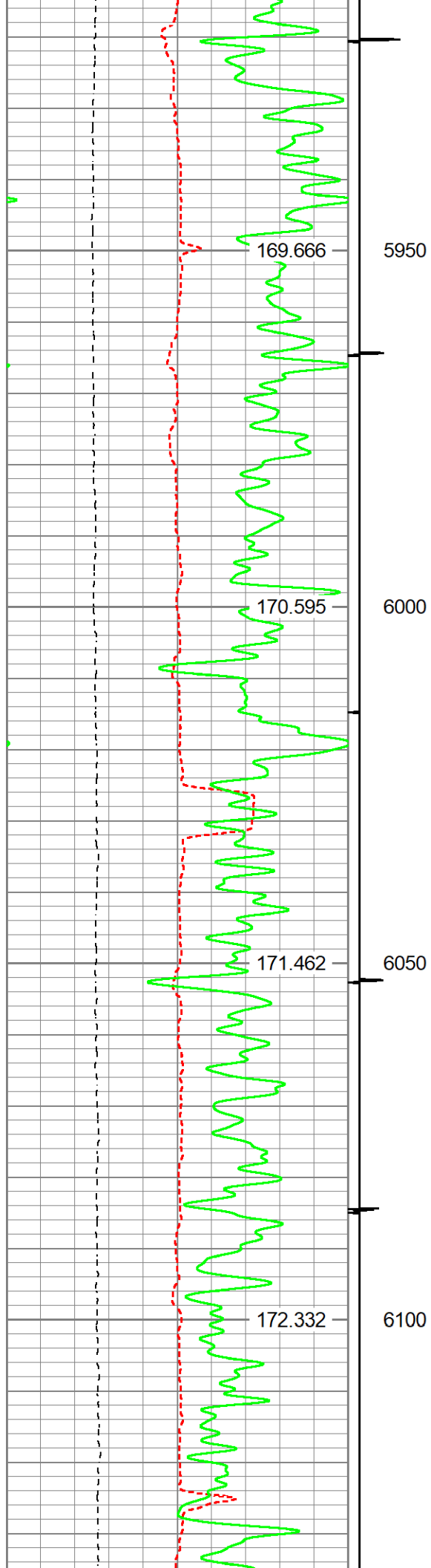


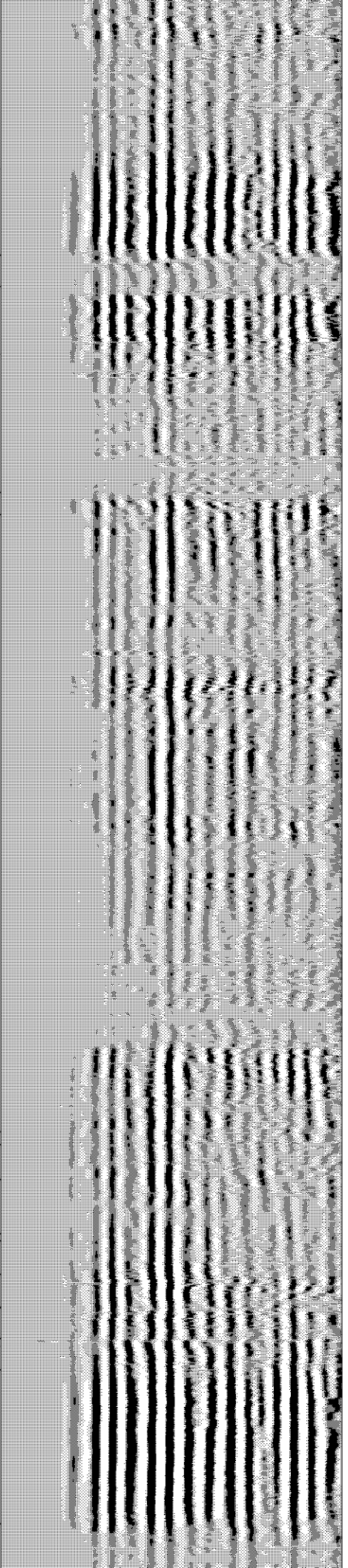
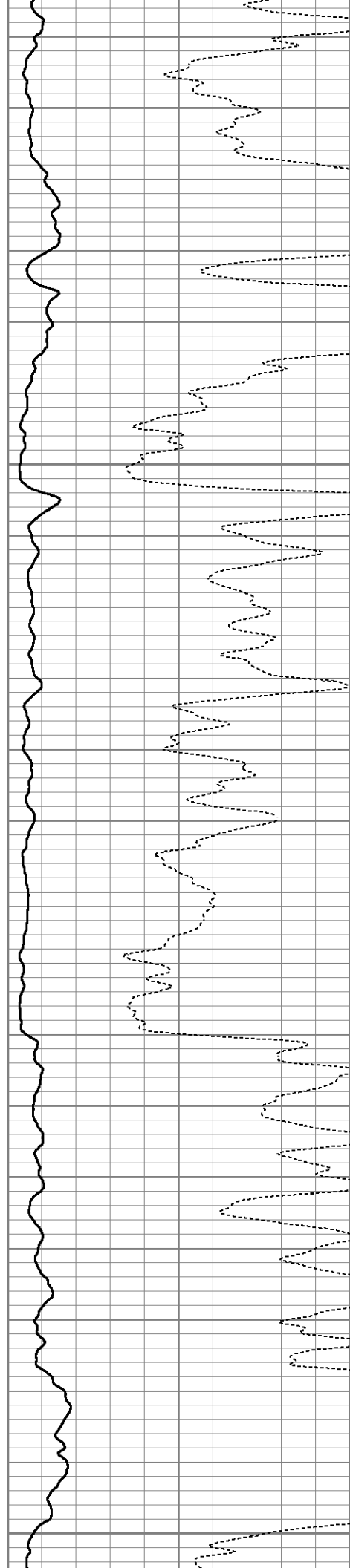
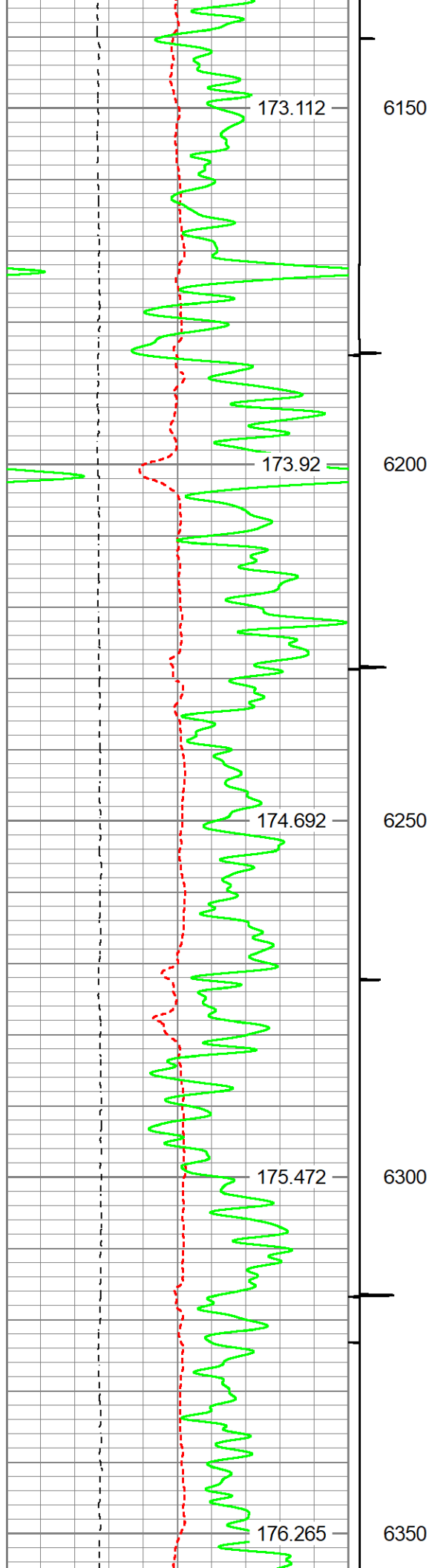


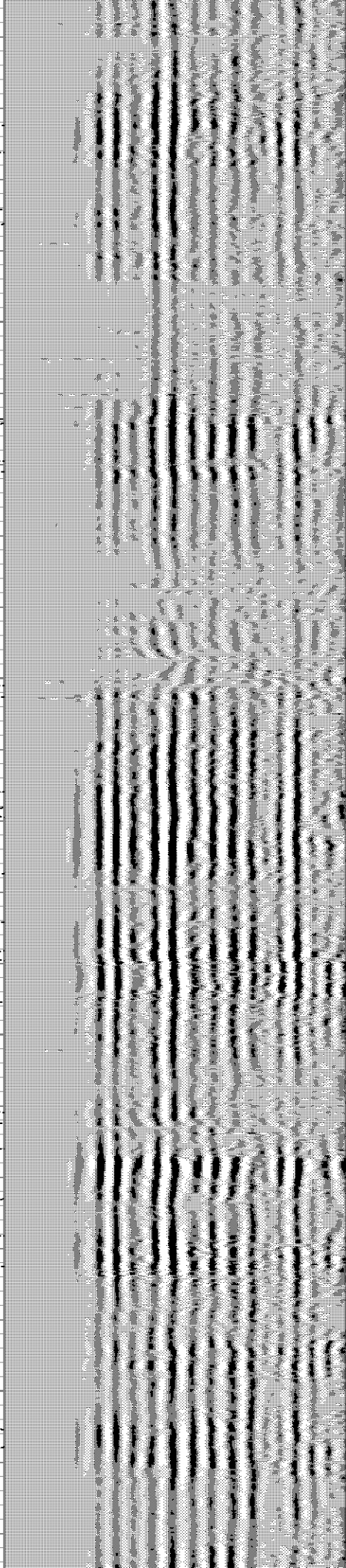
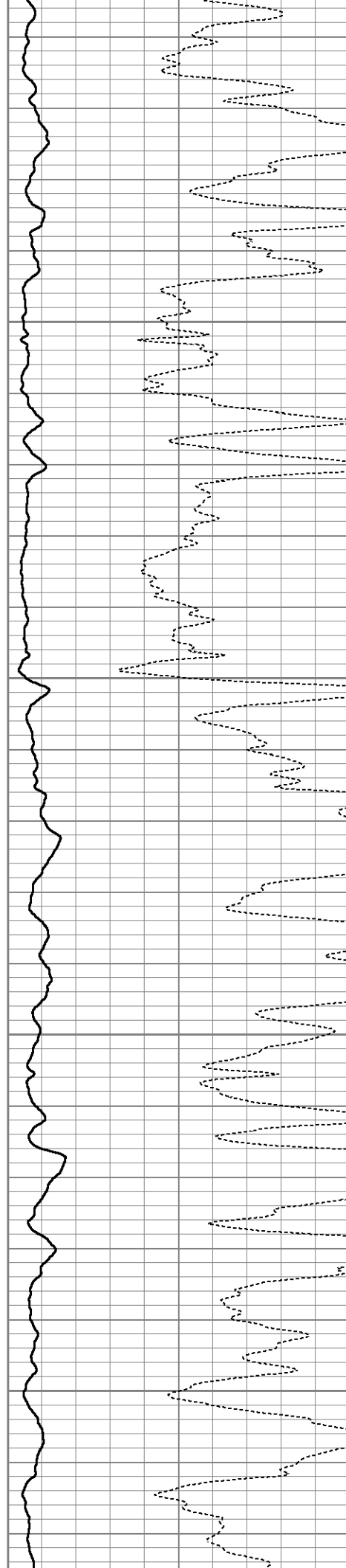
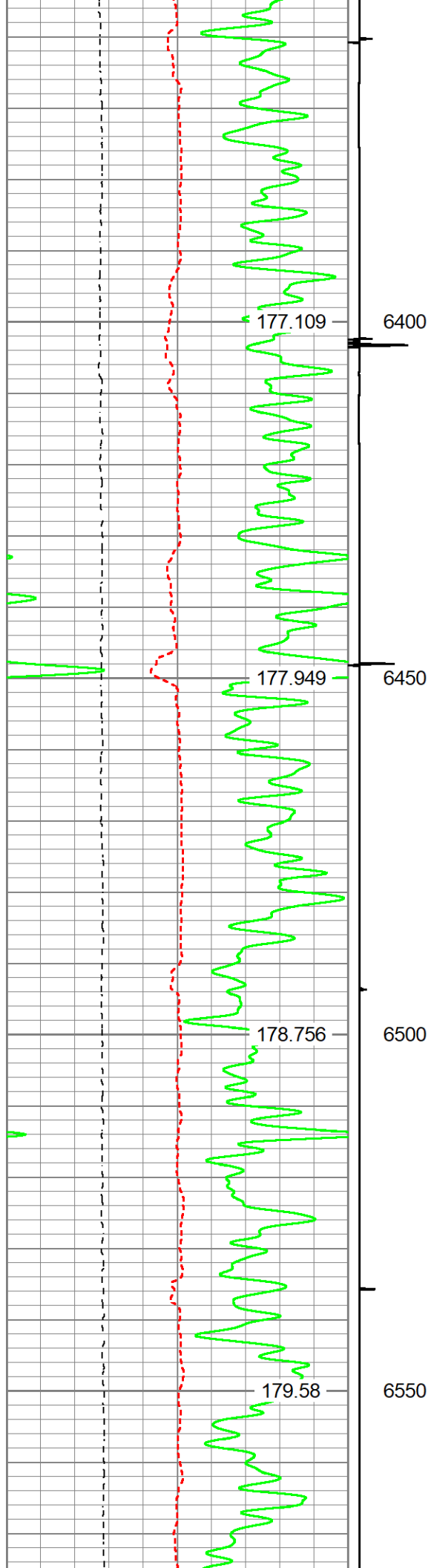


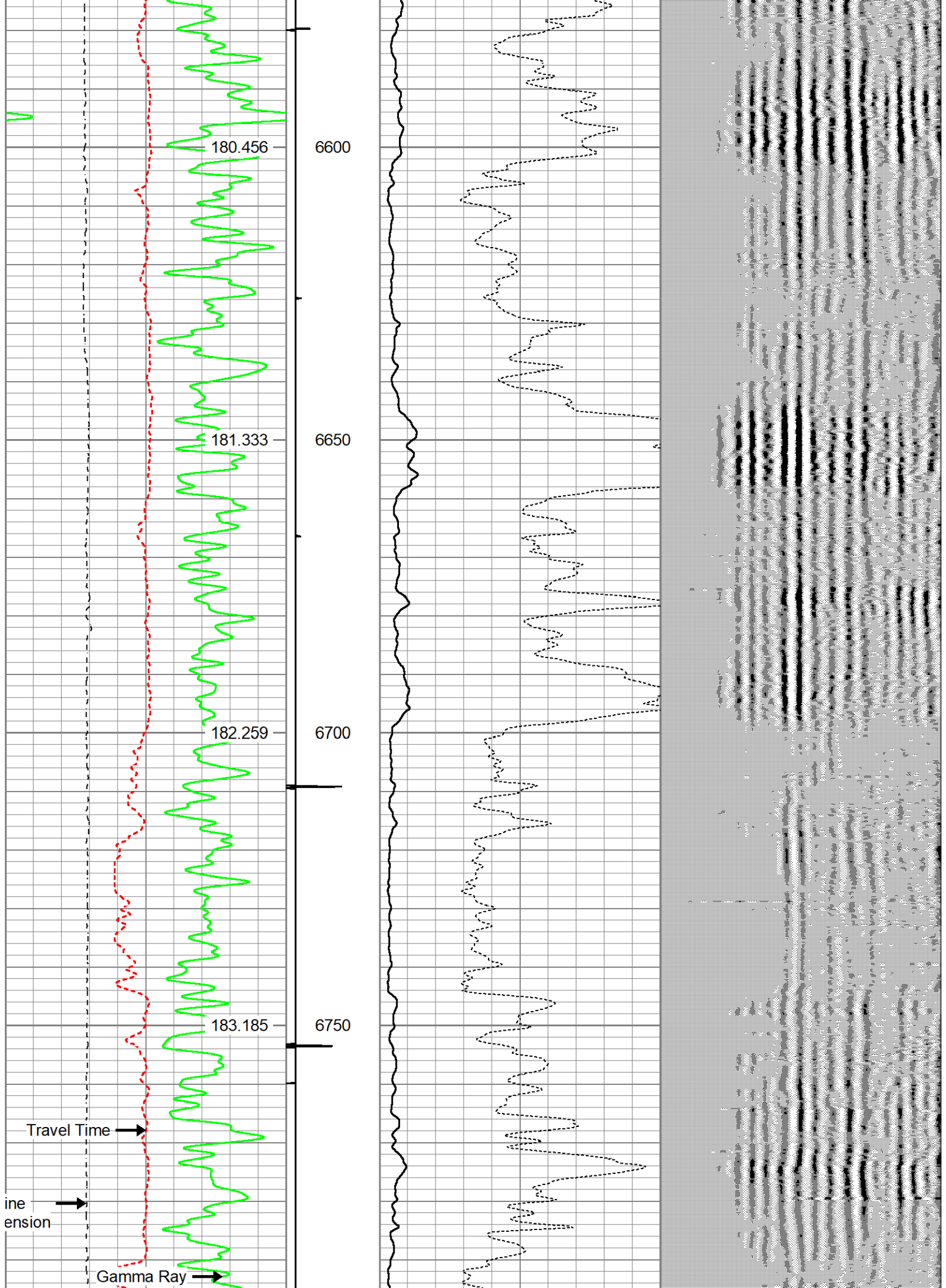


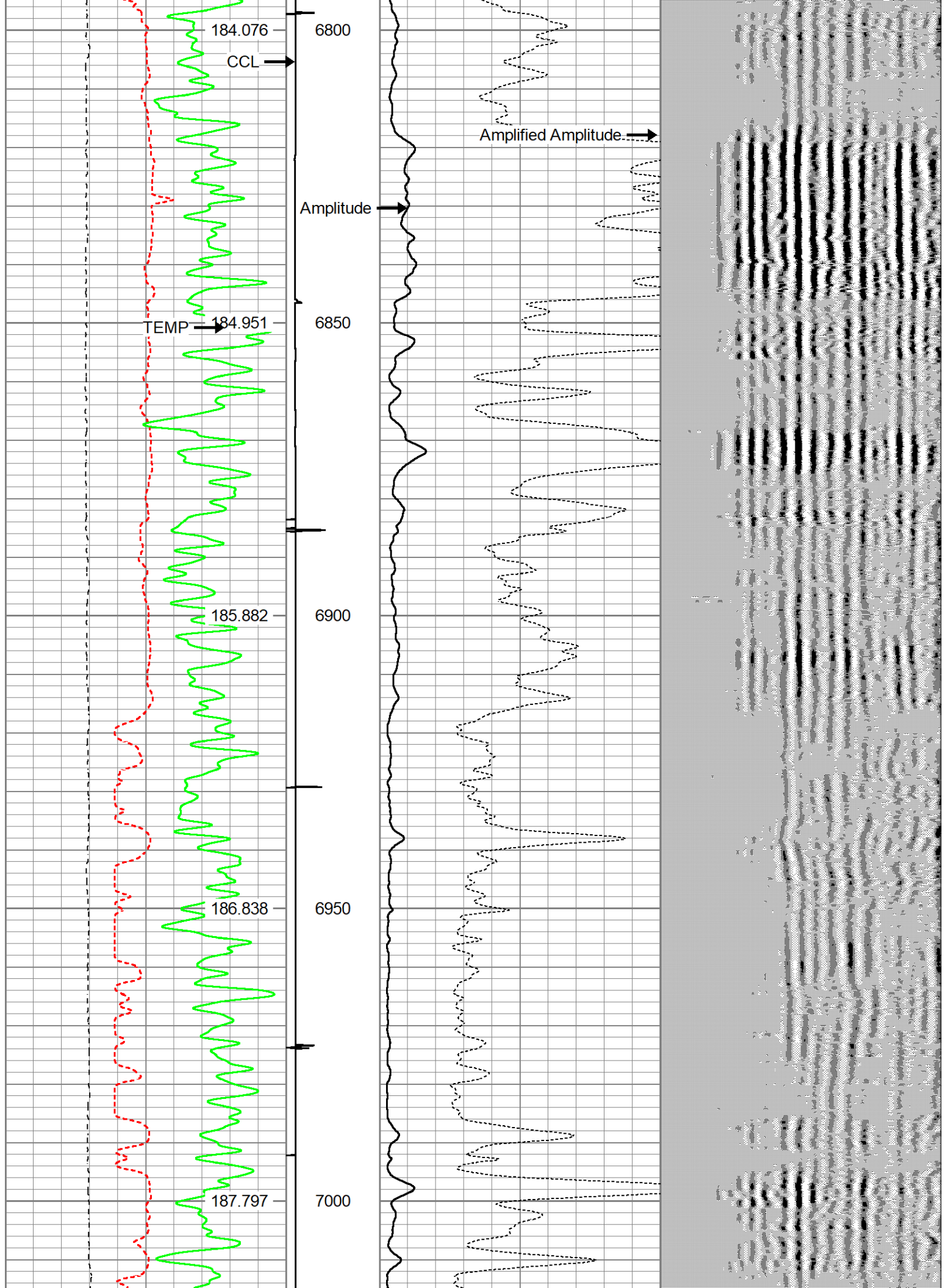


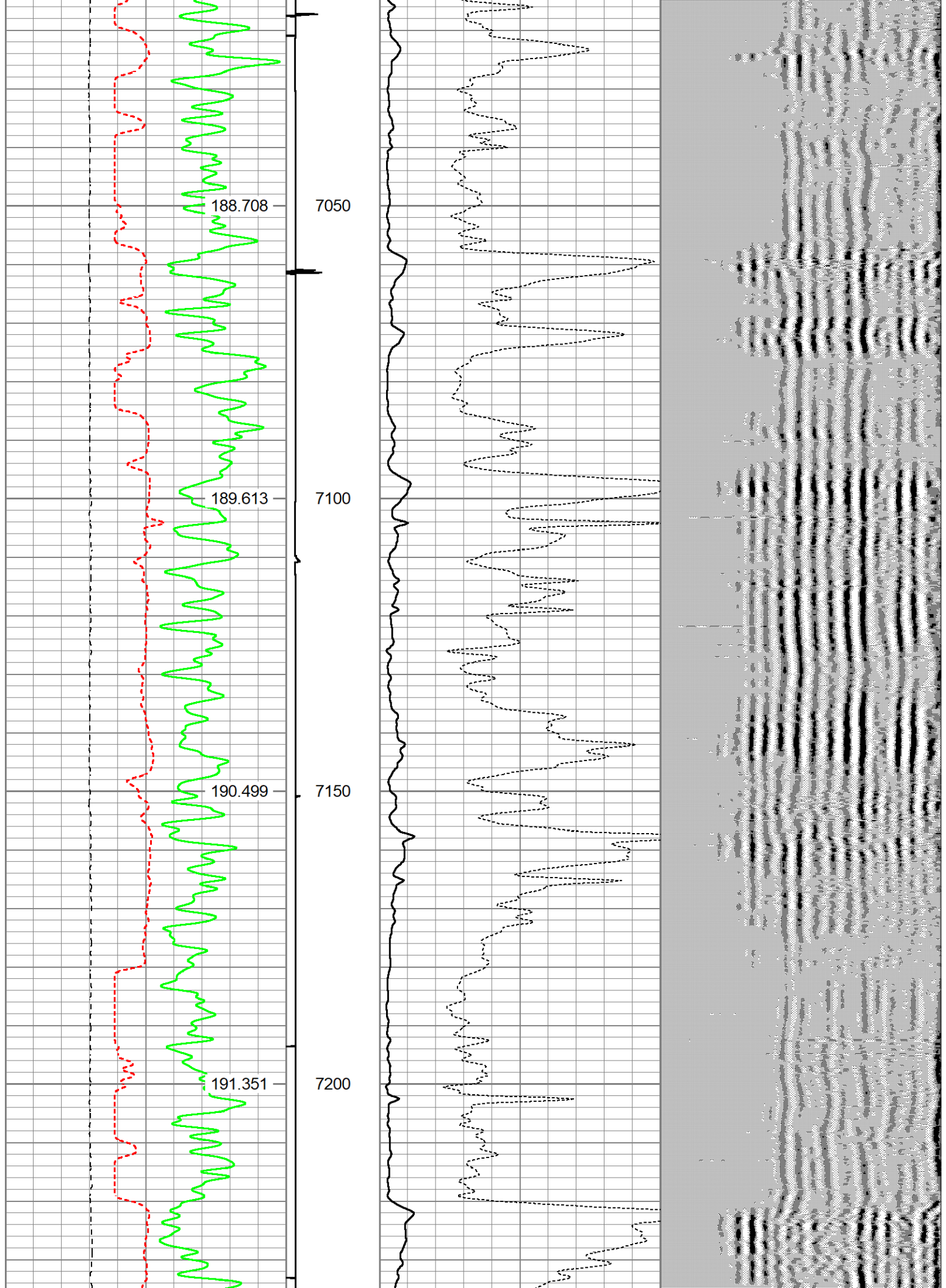


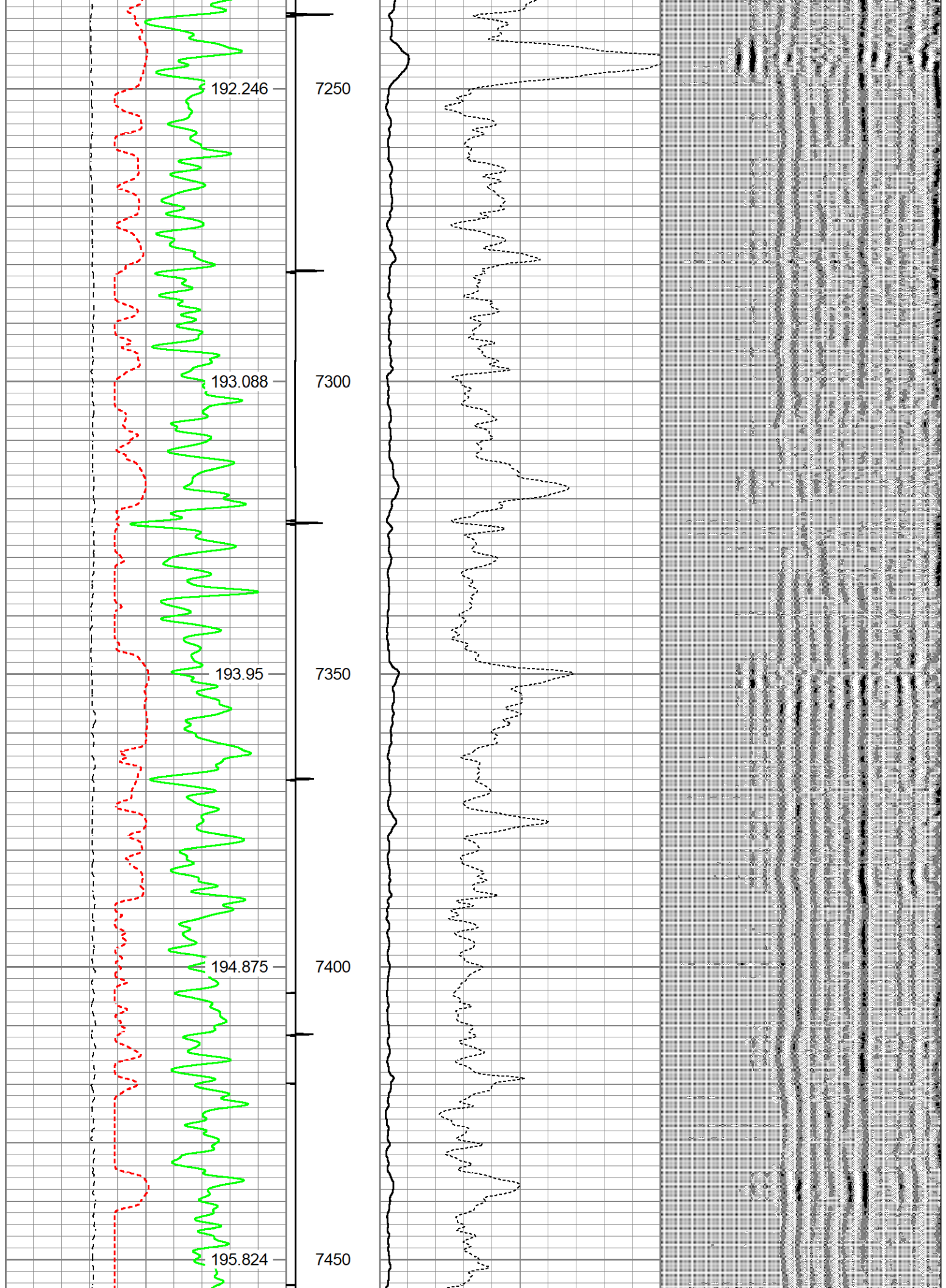


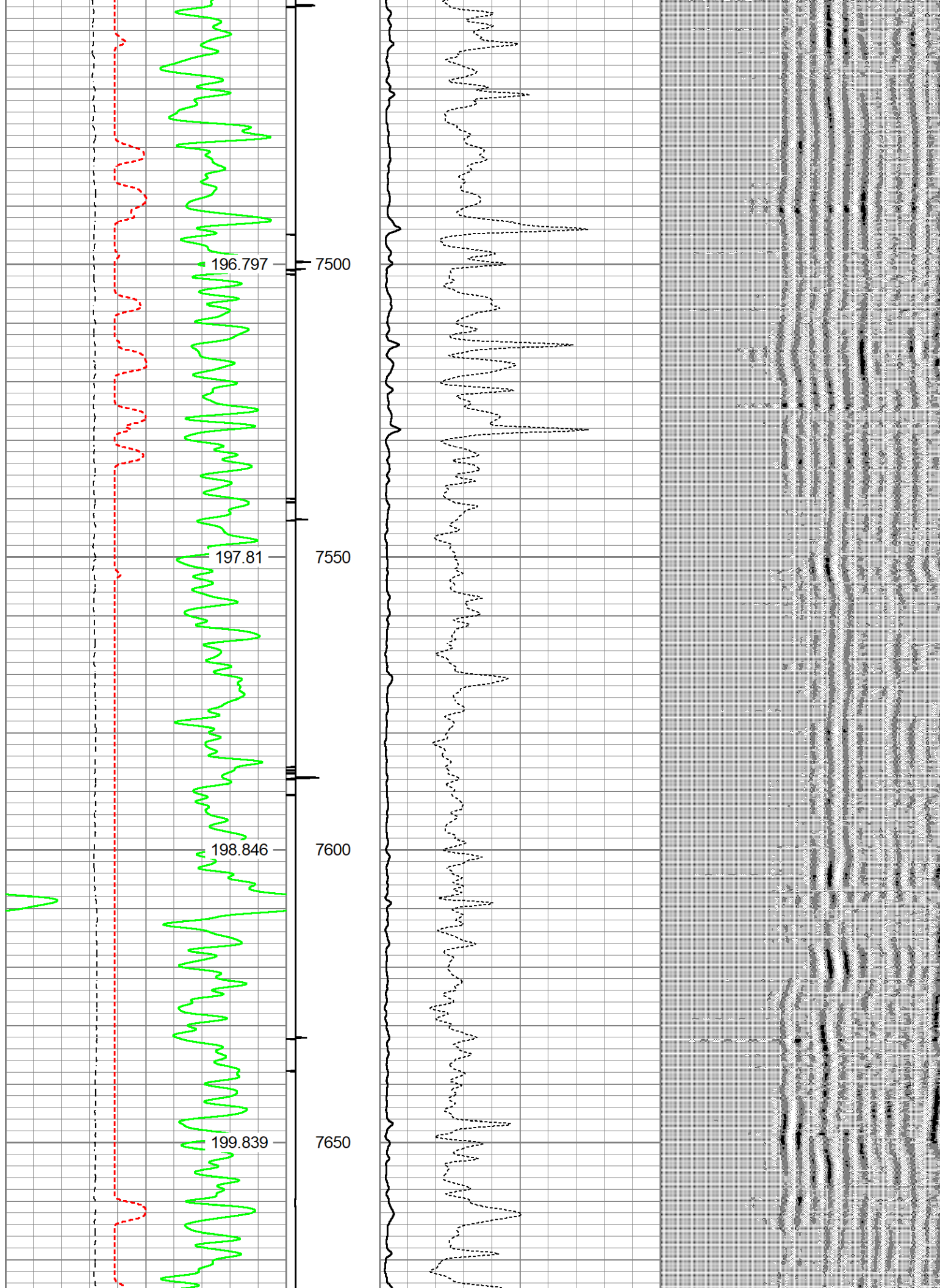


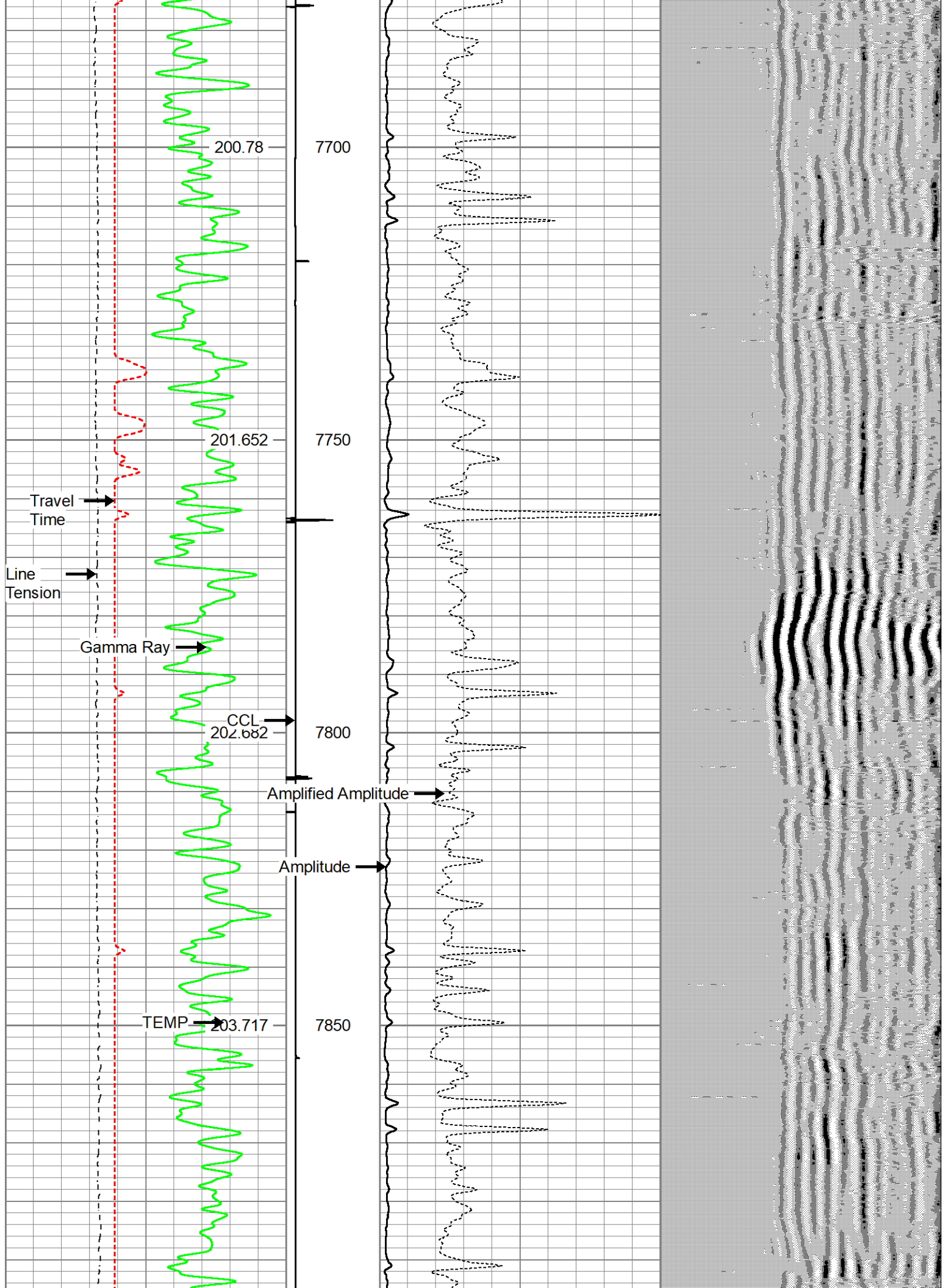


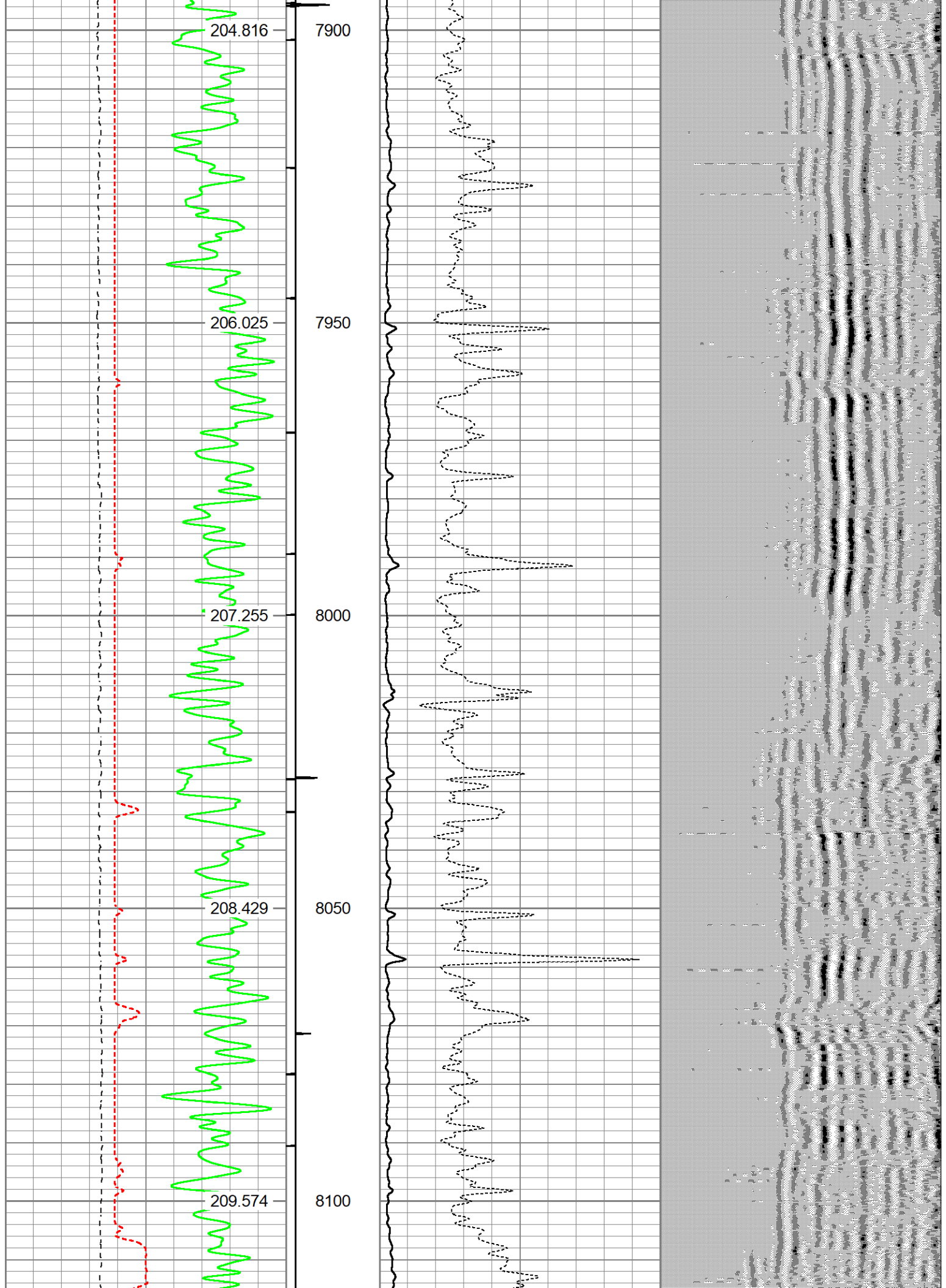


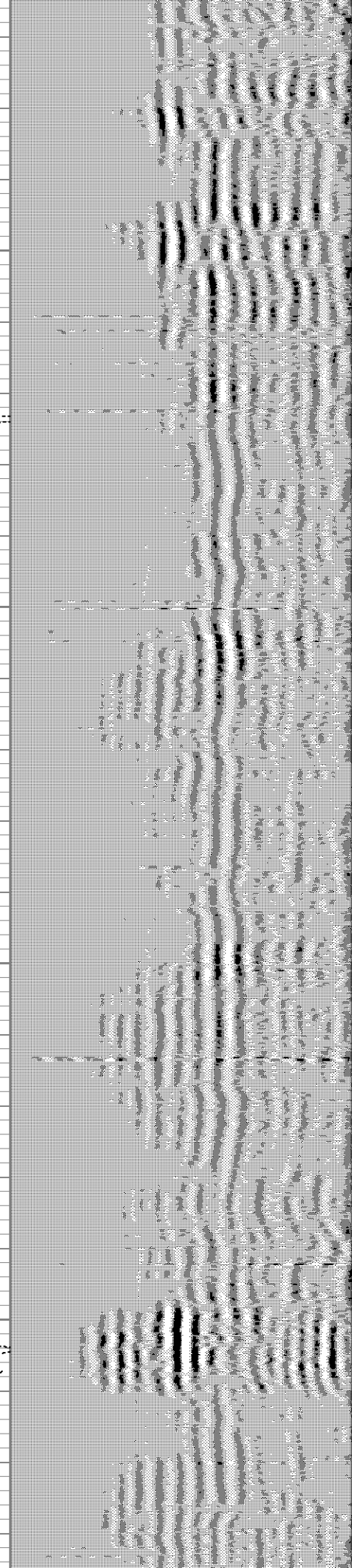
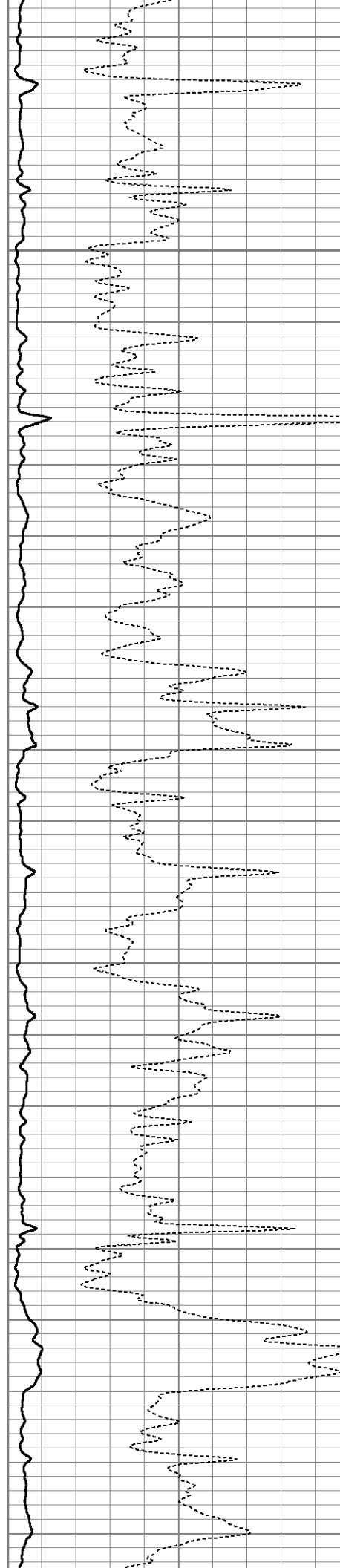
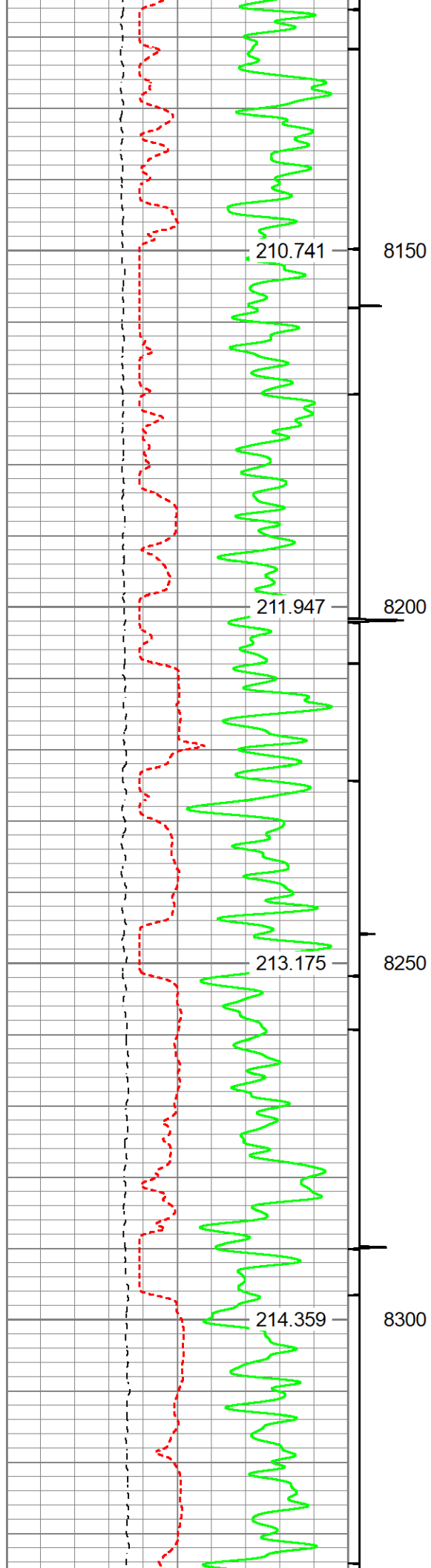


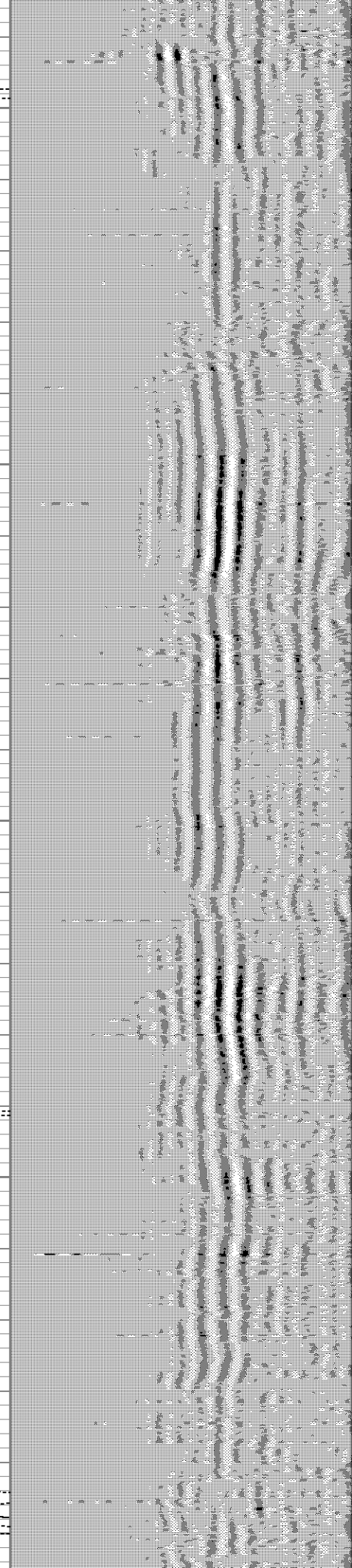
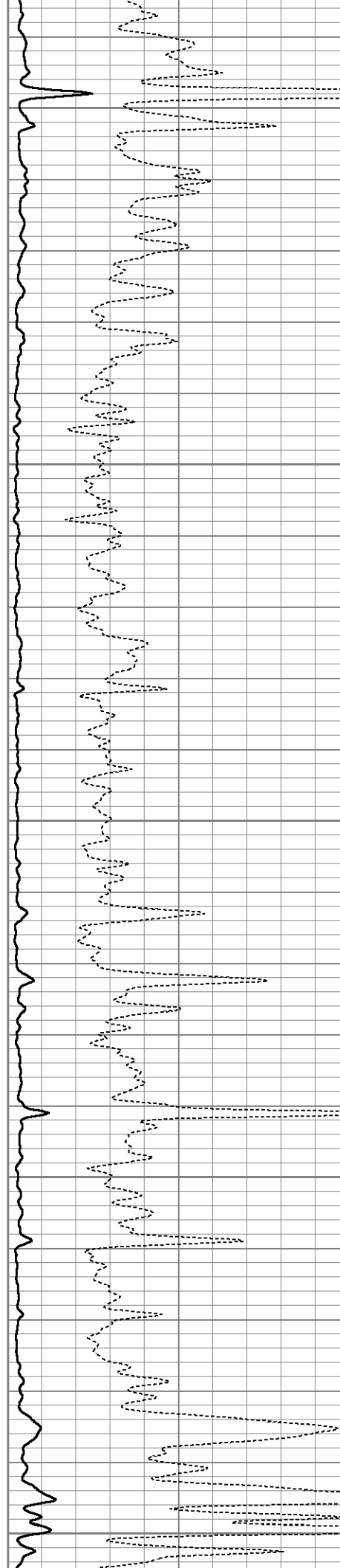
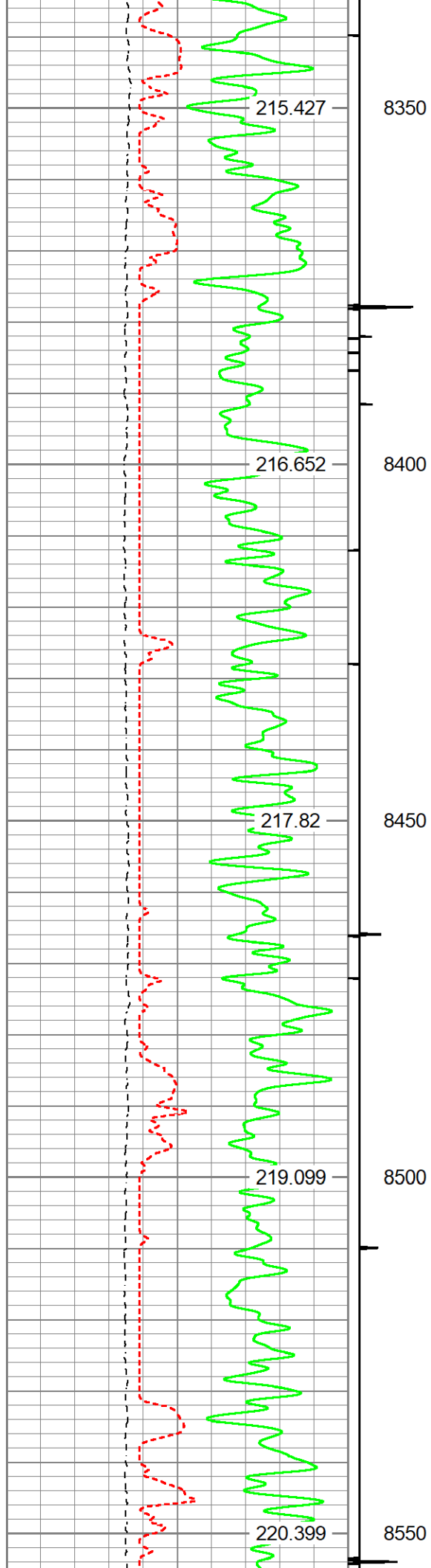


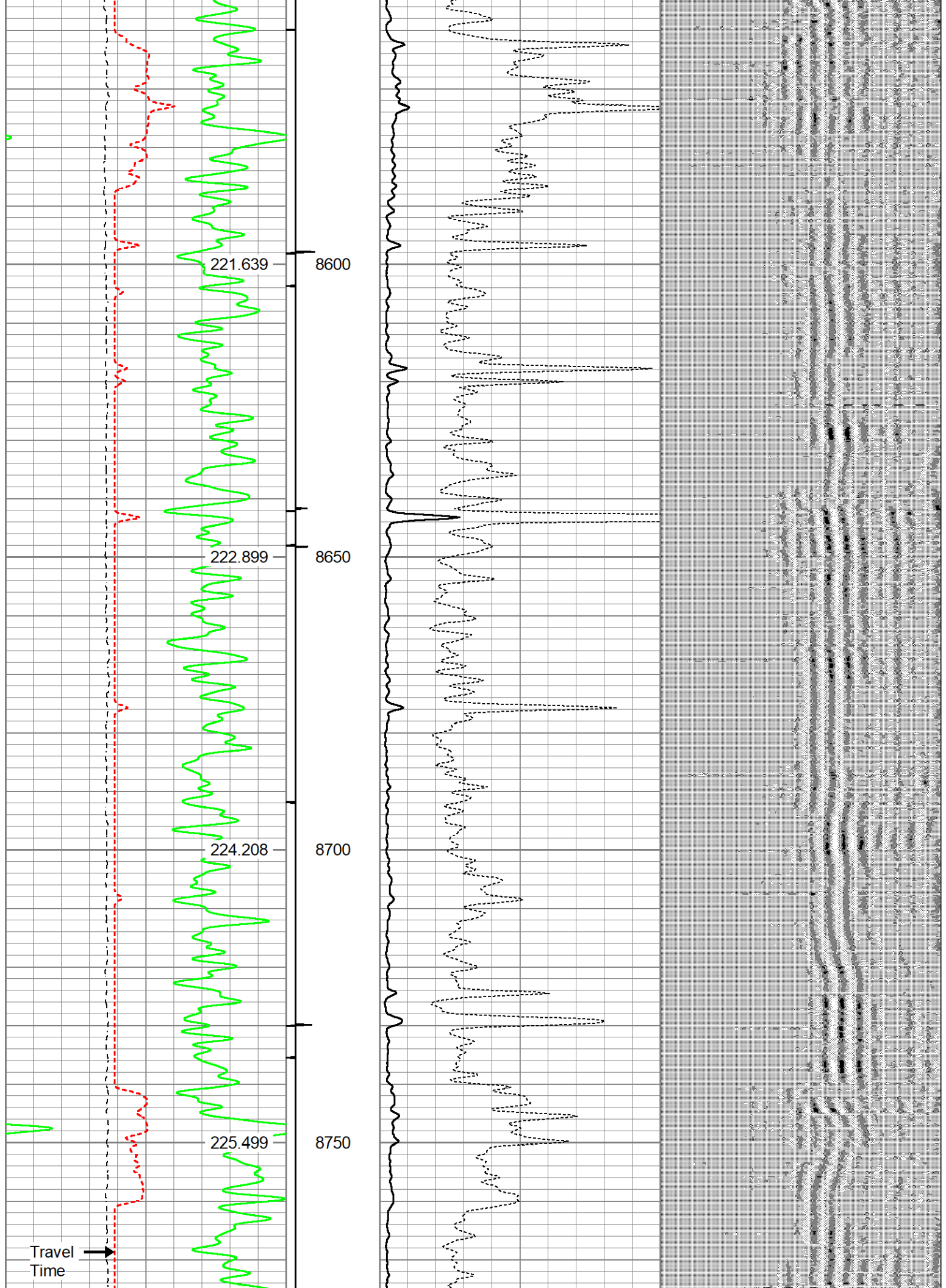


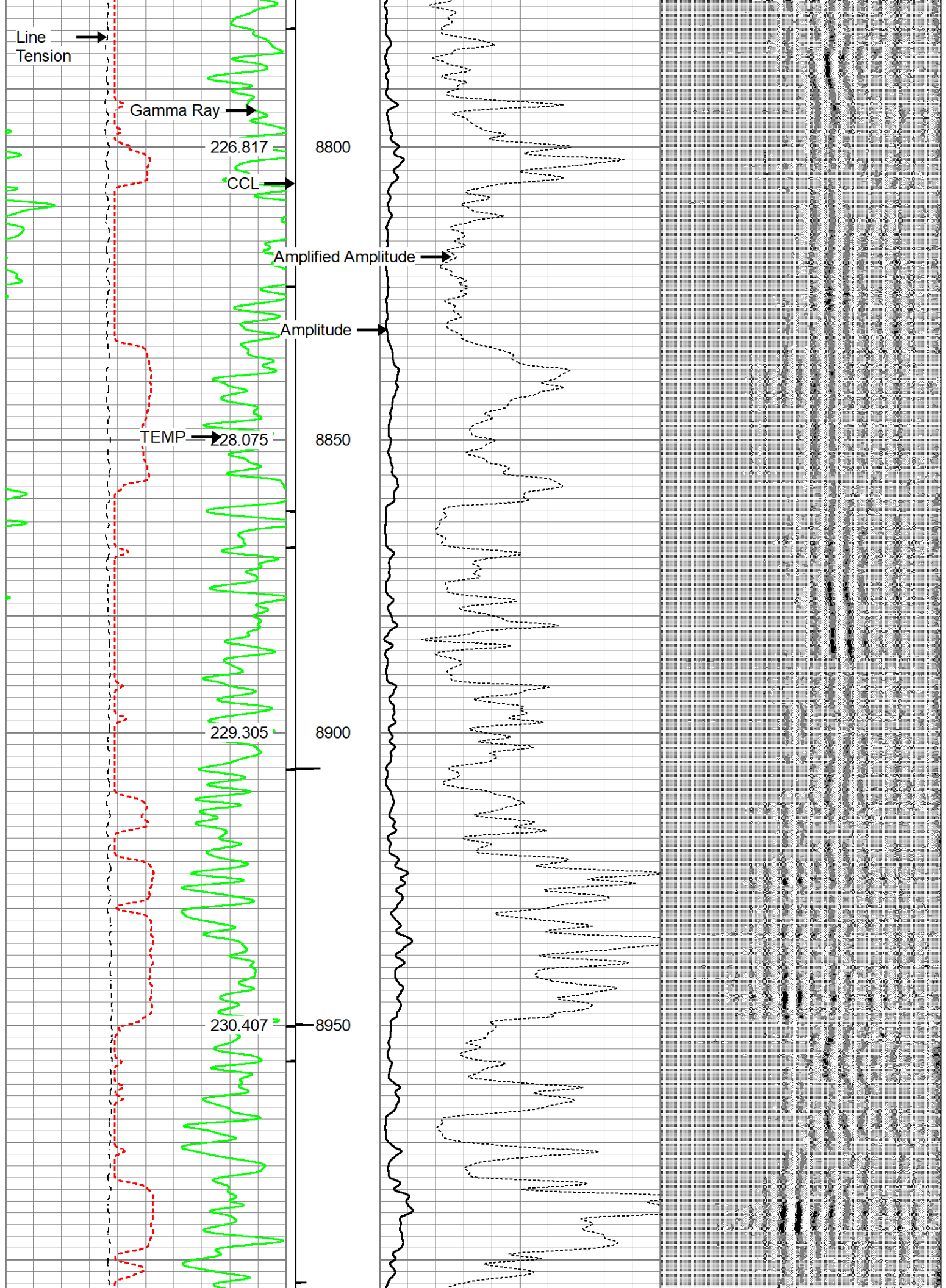


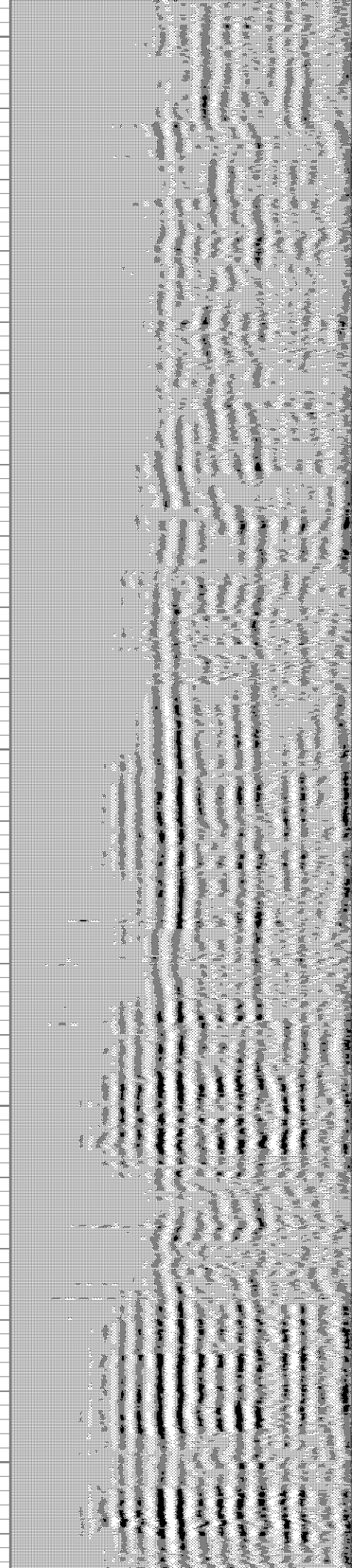
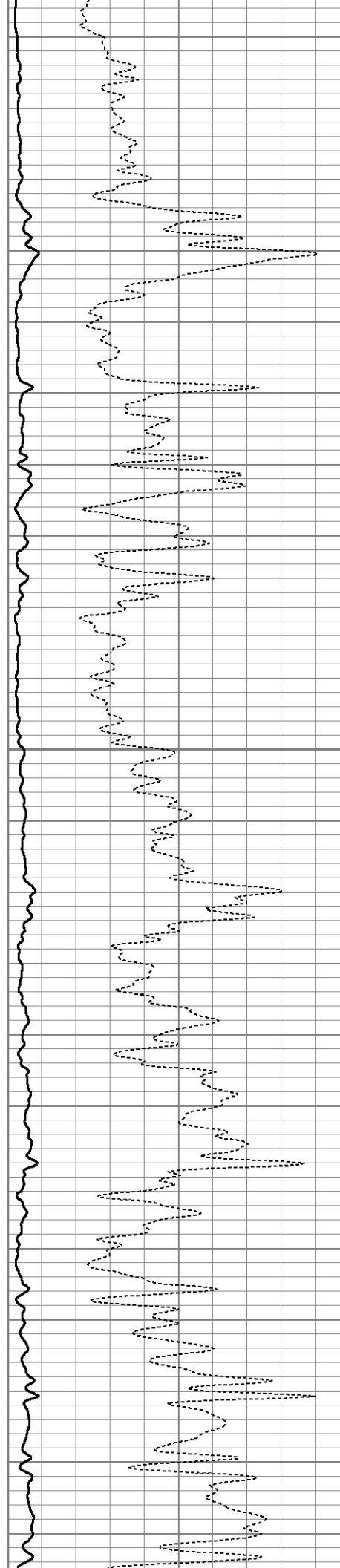
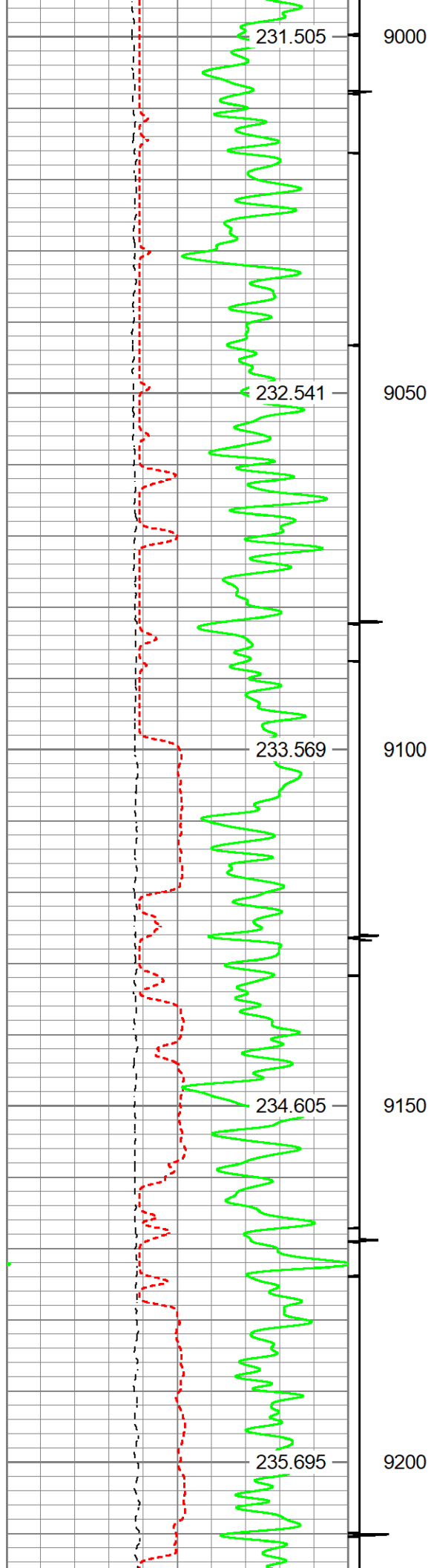


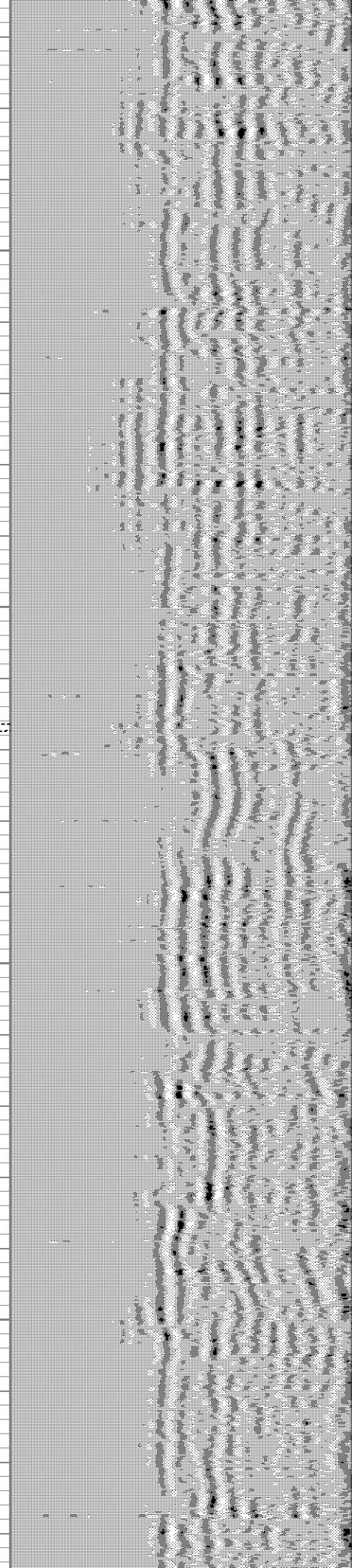
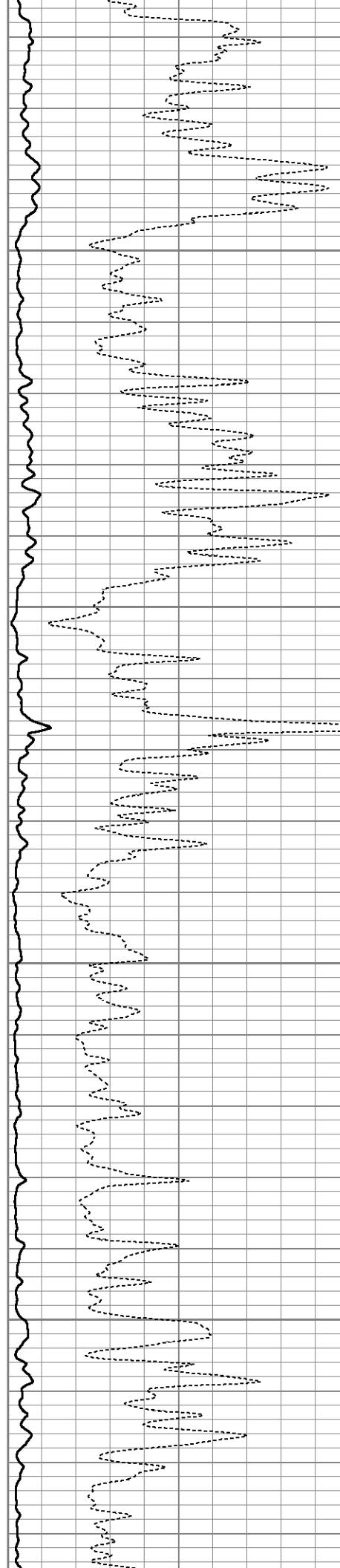
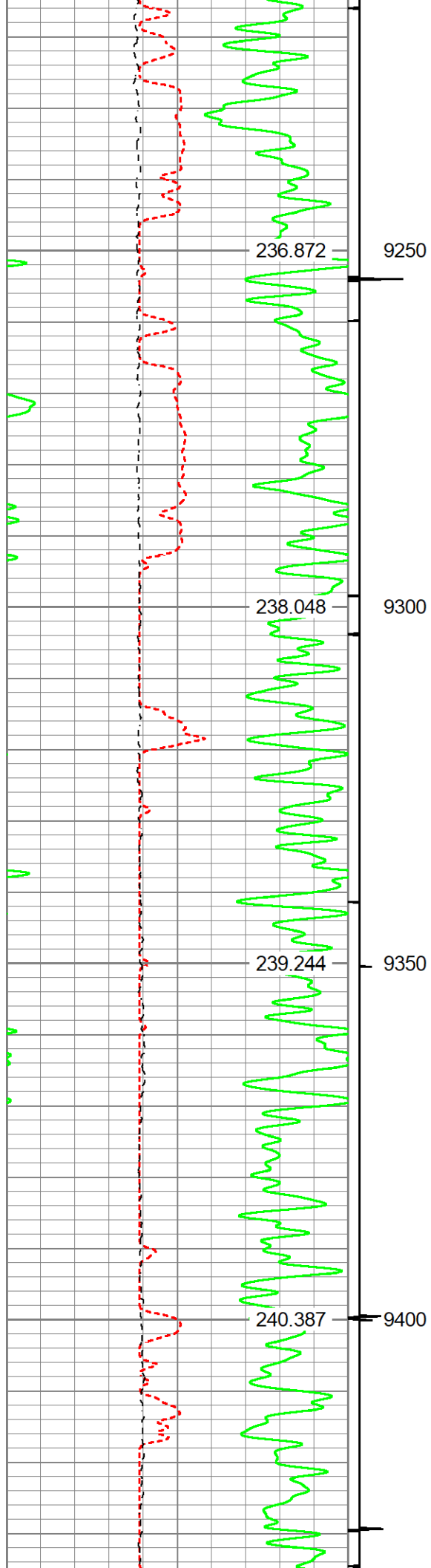


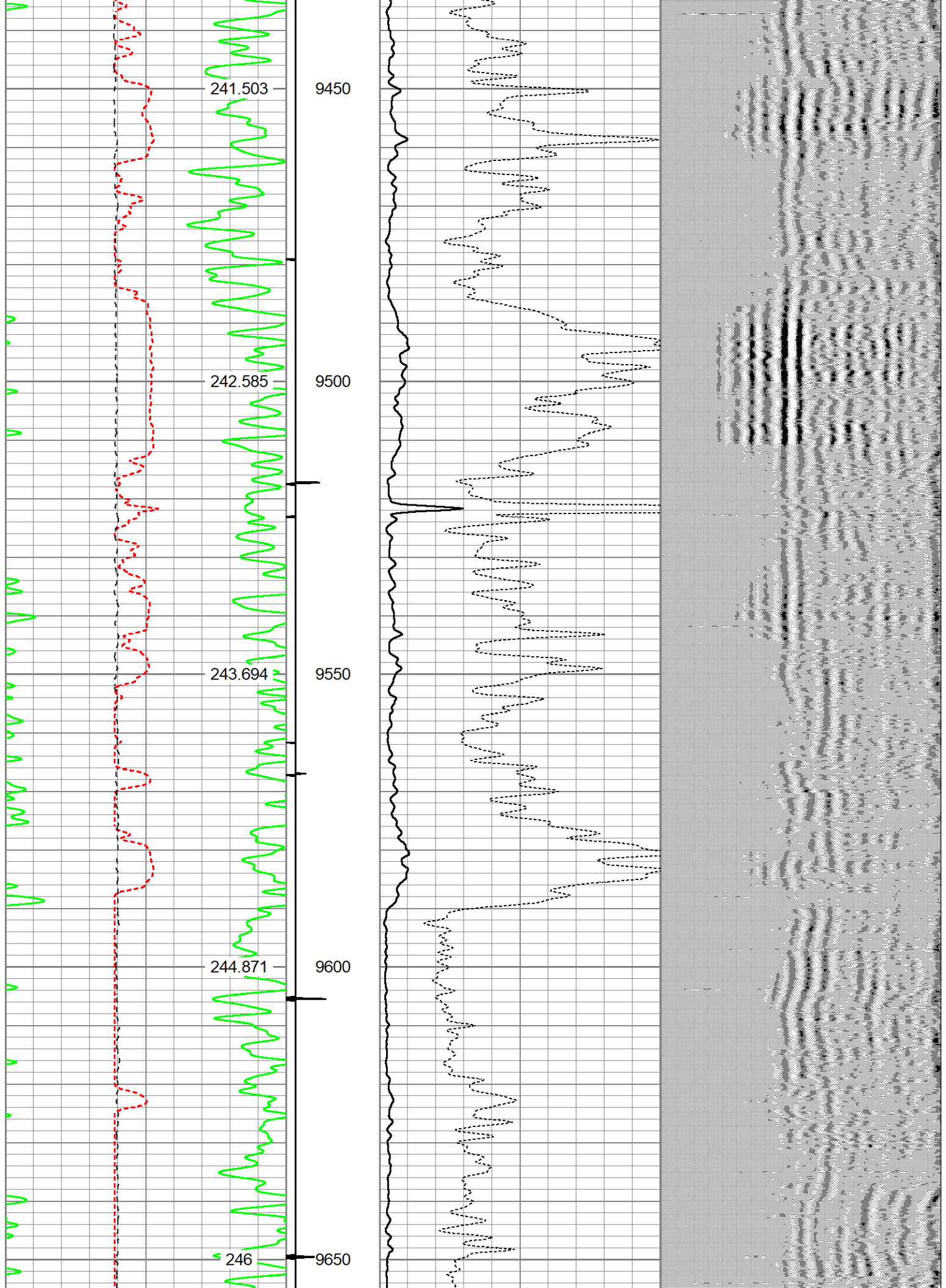


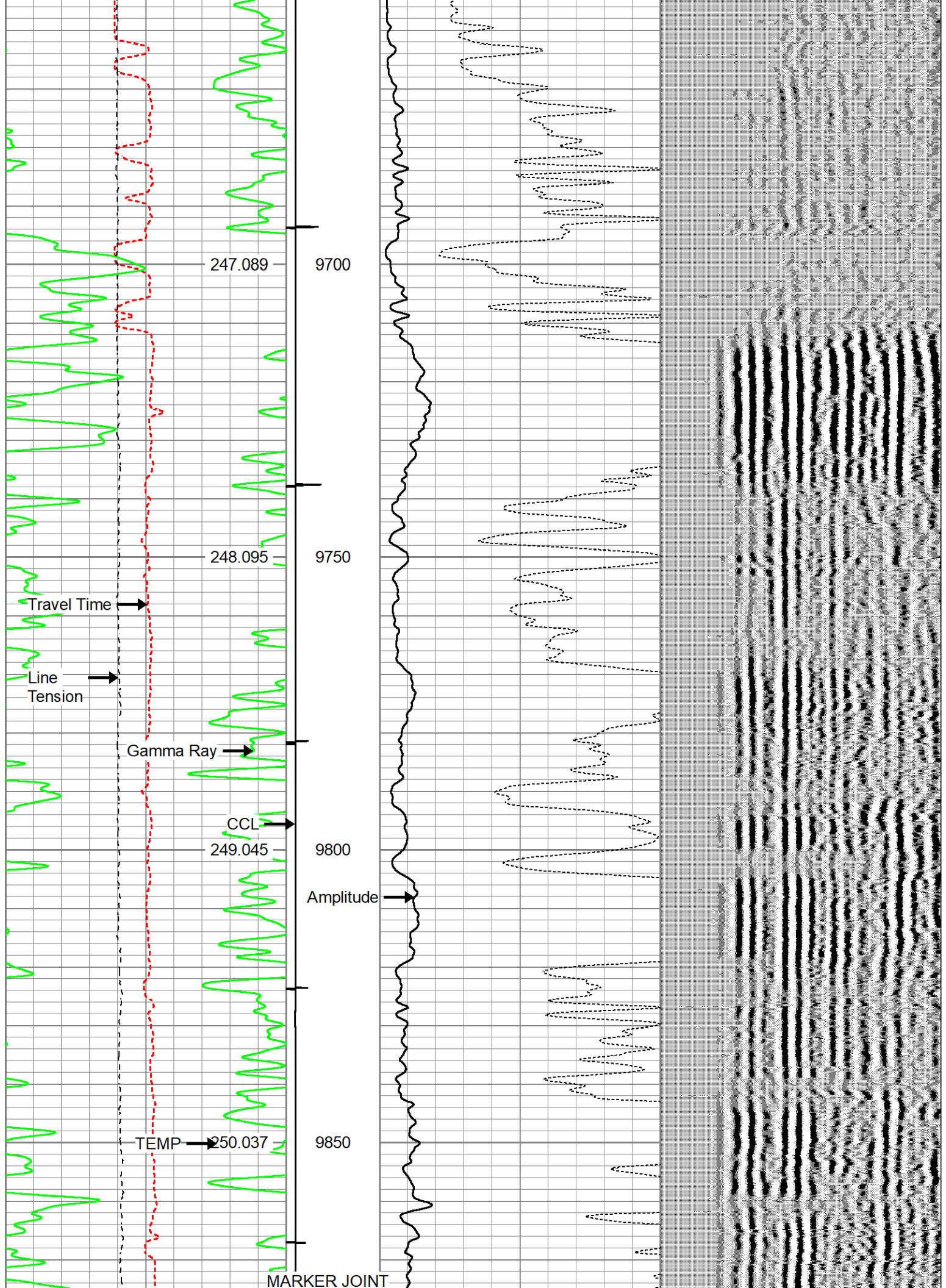


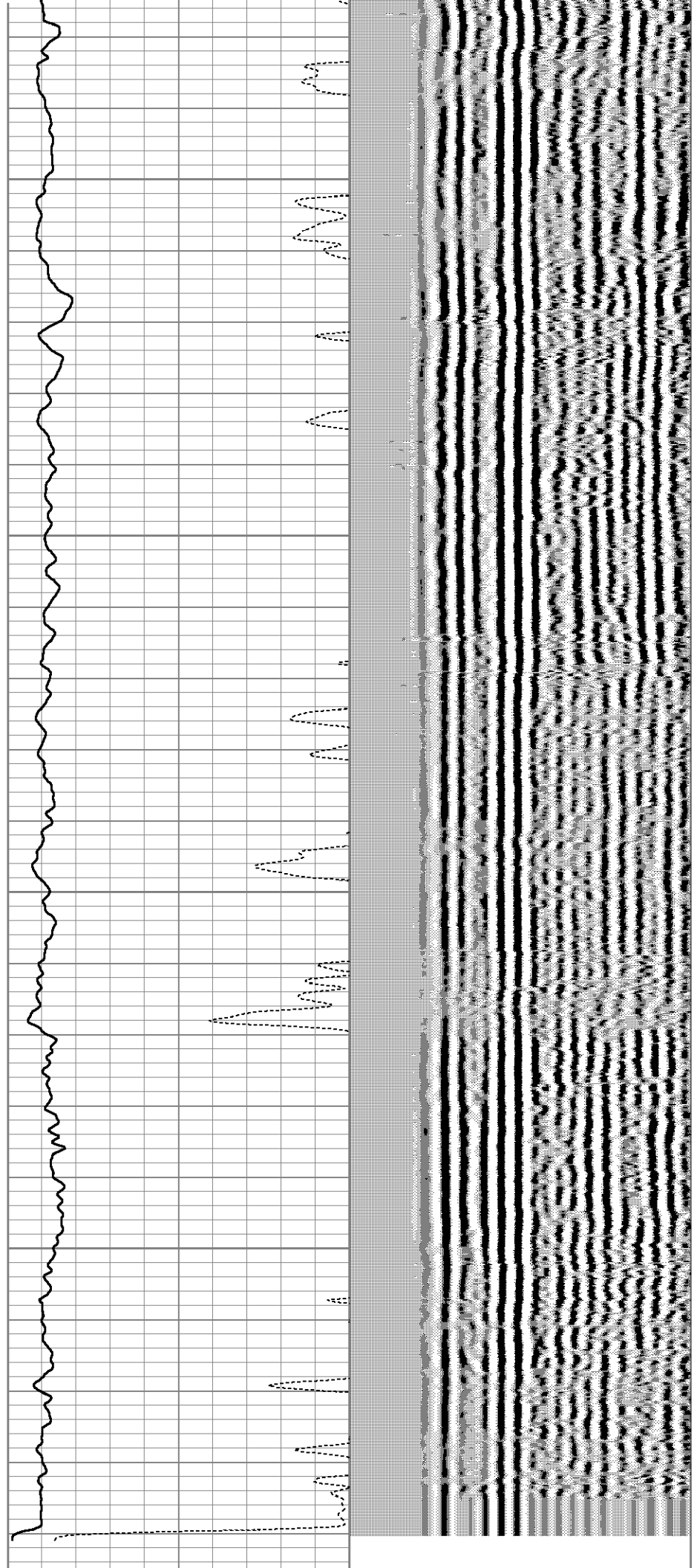
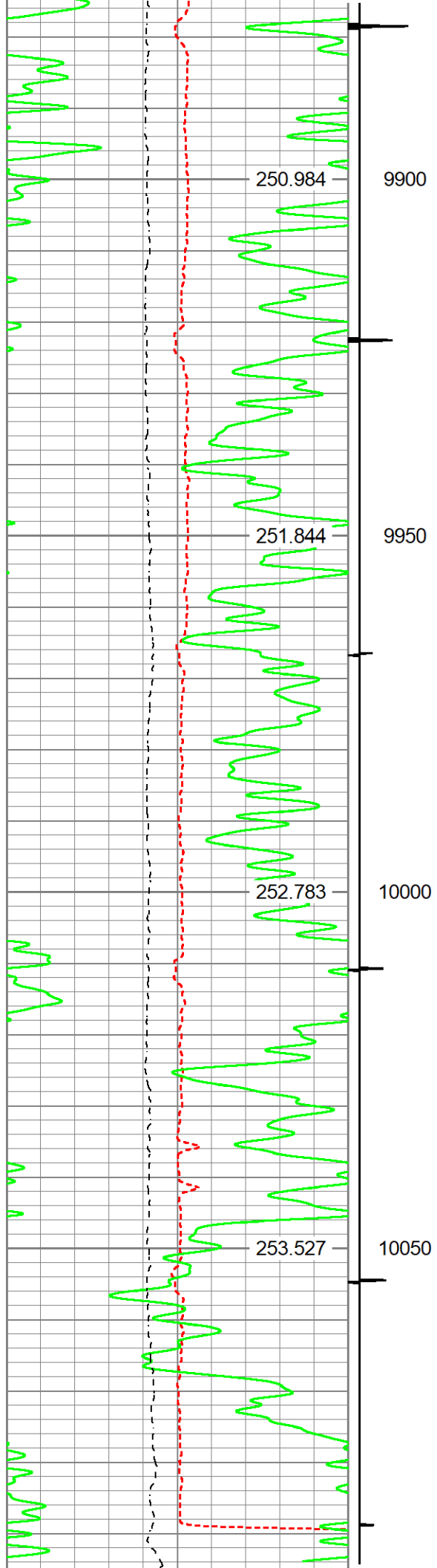


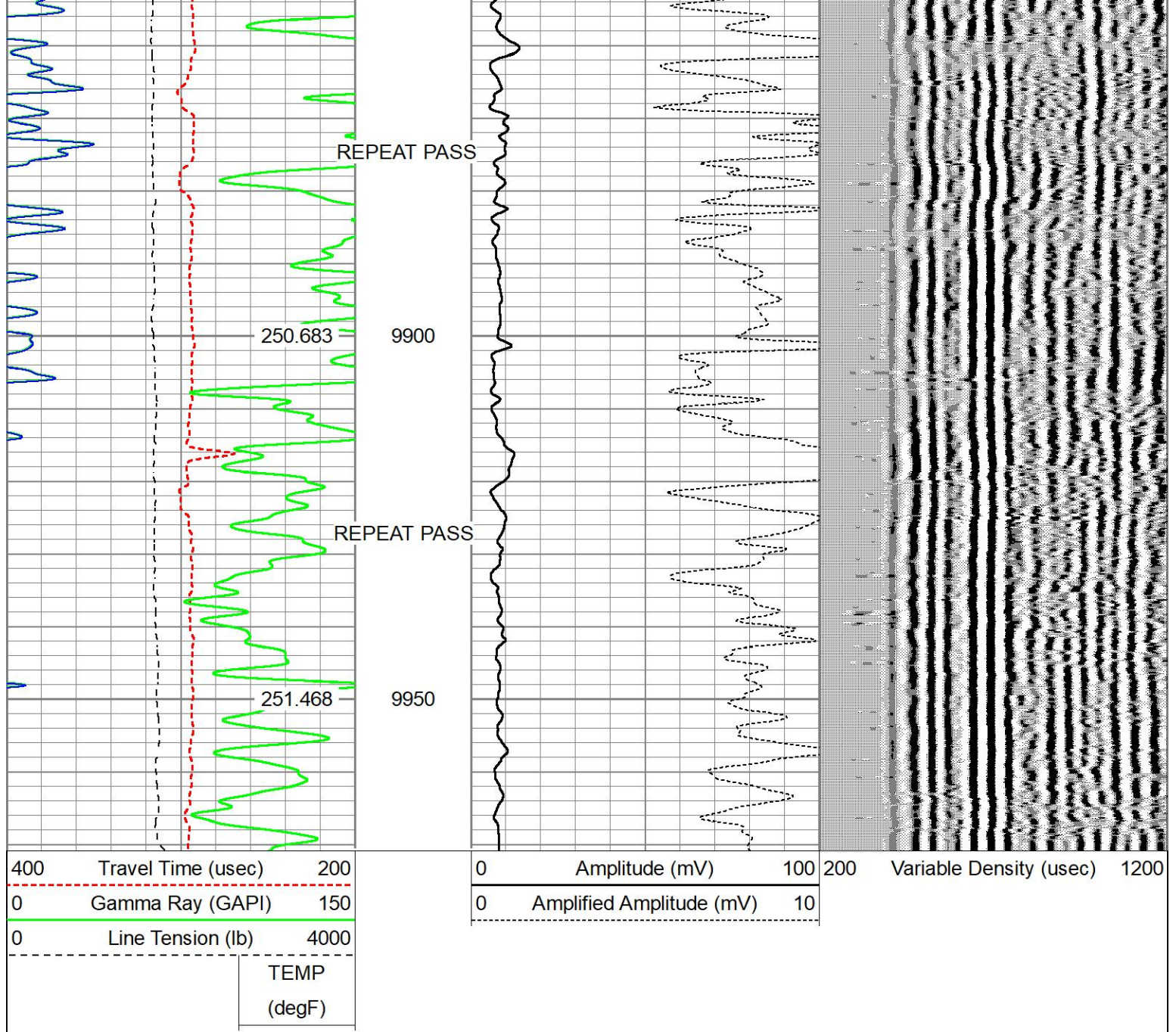





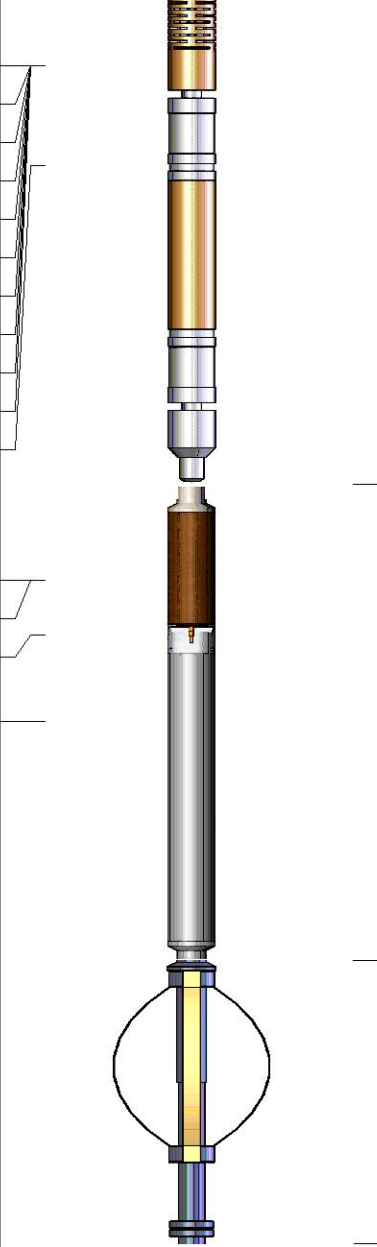








Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
ErrCt	18.89		RBT-Probe 2.75 Radii HT (FW1307-48) RADII HT	11.28	2.75	130.00

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				
GR	5.22	GC-GCT275-0000 (GCT275 0000_base) Probe GCT275-0000 w/Temp	4.77	2.75	55.00
		CENT-PTS275 BC275-0000 Centralizer	2.83	2.75	24.00
Dataset: gw_ottesen_le06311hc_26_jan_2019.db: field/well3/run1/pass6.3 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_le06311hc_26_jan_2019.db		
Dataset Pathname	well3/run1/pass6.3		
Dataset Creation	Sat Jan 26 14:07:08 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'	-0.001	0.590	1.000	71.921	194.386	1.376
CAL	0.517	0.497				
5'	-0.000	0.482	1.000	71.921	219.259	1.000
SUM						
S1	-0.013	0.587	0.000	100.000	166.823	2.102
S2	-0.049	0.575	0.000	100.000	160.298	7.888
S3	-0.016	0.560	0.000	100.000	173.640	2.755
S4	-0.133	0.571	0.000	100.000	142.063	18.858
S5	-0.004	0.592	0.000	100.000	167.818	0.723
S6	-0.003	0.628	0.000	100.000	158.413	0.475
S7	-0.012	0.636	0.000	100.000	154.281	1.840
S8	-0.002	0.616	0.000	100.000	161.988	0.294

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 06-311HC
Field Wattenberg
County Weld
State Colorado

Country