



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

Company	TOM FENNO PRODUCTION LLC.		
Well	CLARKS LAKE MUDDY SAND G-1		
Field	CLARKS FIELD		
County	LARIMER	State	CO
Location:	API # : 05-69-05152		Other Services
	LAT. 40.741472 / LONG. -104.991911		Cement Baller
	SESW SEC15 9N 68W		Squeeze Gun
Permanent Datum	SEC 15 TWP 9N RGE 68W	Elevation	
Log Measured From	GROUND LEVEL	K.B. ----	
Drilling Measured From	KELLY BUSHING	D.F. ----	
		G.L. 5323'	

Date	17-MAY-2019	Run Number	ONE	
Depth Driller	5939'			
Depth Logger	5701'			
Bottom Logged Interval	5700'			
Top Log Interval	Surface			
Open Hole Size				
Type Fluid	WATER			
Density / Viscosity				
Max. Recorded Temp.	163			
Estimated Cement Top	SEE LOG			
Time Well Ready	ROA			
Time Logger on Bottom	17:49PM			
Equipment Number	28			
Location	PLATTEVILLE 680			
Recorded By	R. EMMERLING		J. FRESQUEZ	
Witnessed By	MR. CAM GRACEY			
Borehole Record				
Run Number	Bit	From	To	Size
				Weight
				From
				To
Tubing Record				
Casing Record	Size		Wgt/Ft	Top
Surface String	10-3/4"		40.5#	SURFACE
Prot. String	5-1/2"		15.5#	SURFACE
Production String				
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
Log Recorded From 5,700' to Surface
Correlated to Wellhead at Surface
Dump 2 sacks on top of plug, as per customers request.
4 shot perforation @ 390 ft., as per customer request.
Bridge plug previously set at 5,776'

Thank You for Choosing KLX Energy Services!!

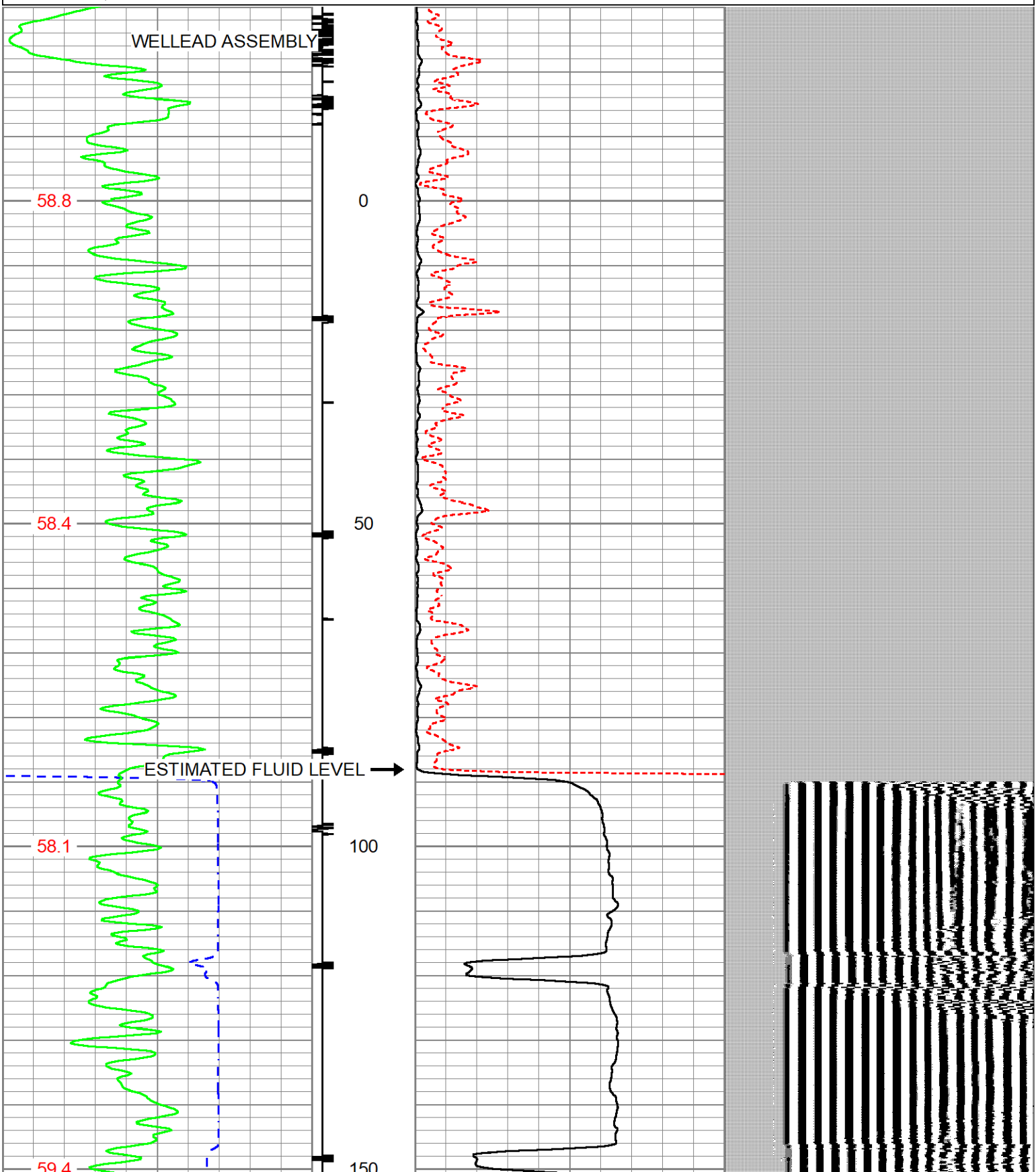


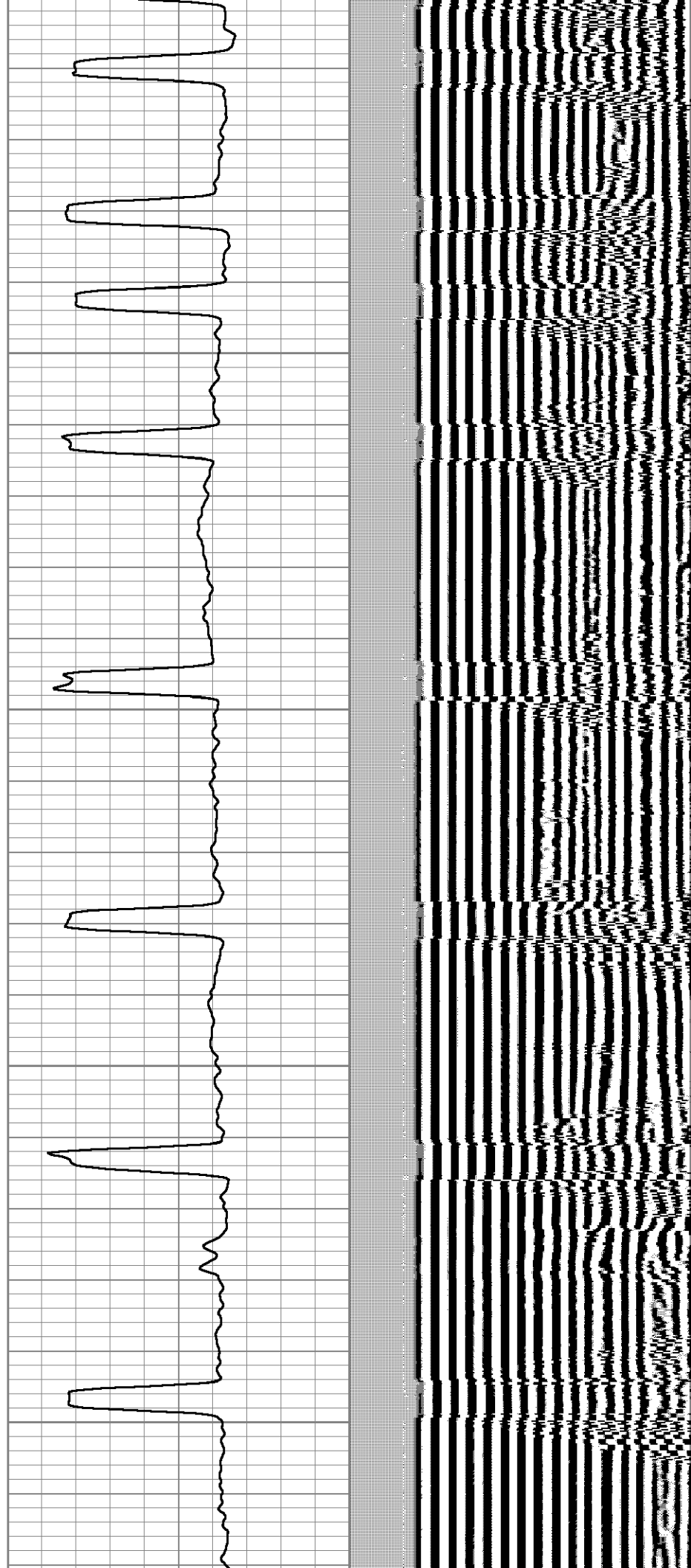
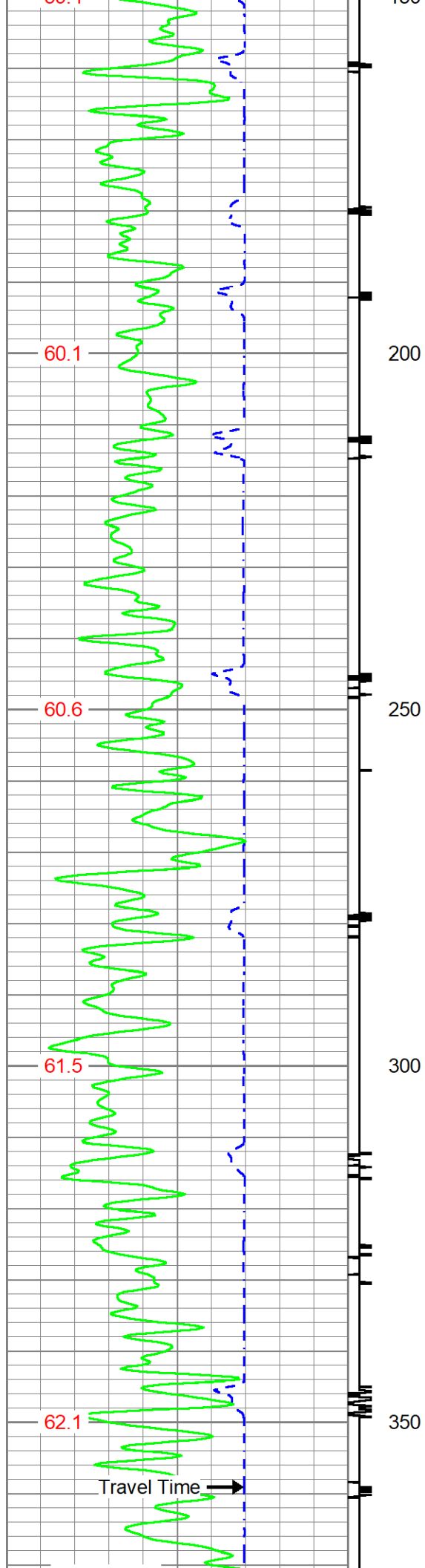
MAIN PASS

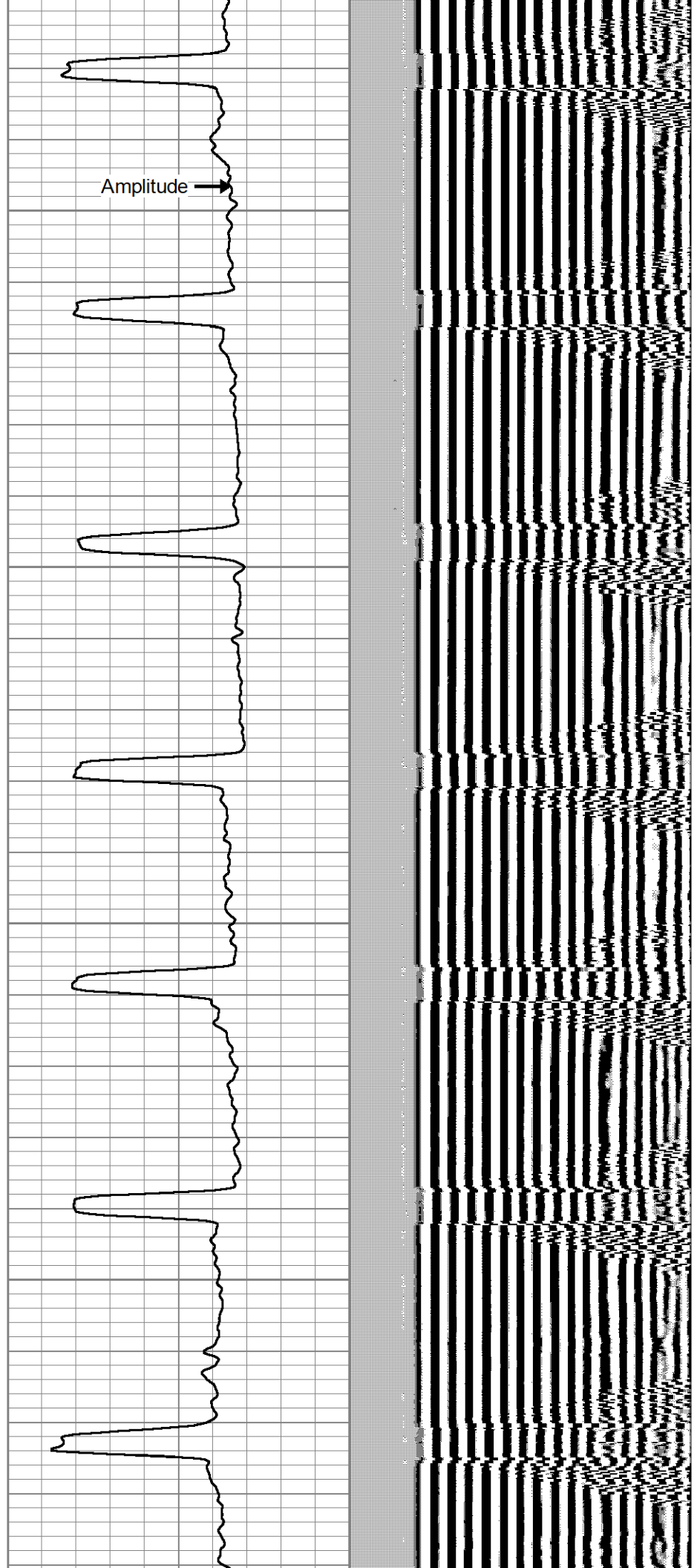
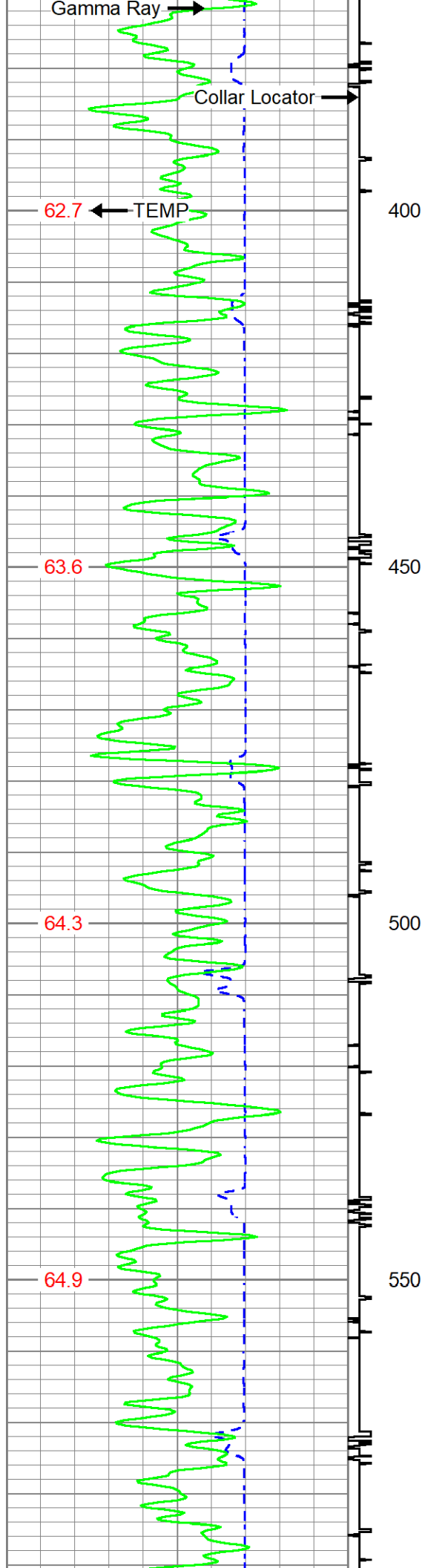
RECORDED WITH 0 PSI SURFACE INDUCED PRESSURE.

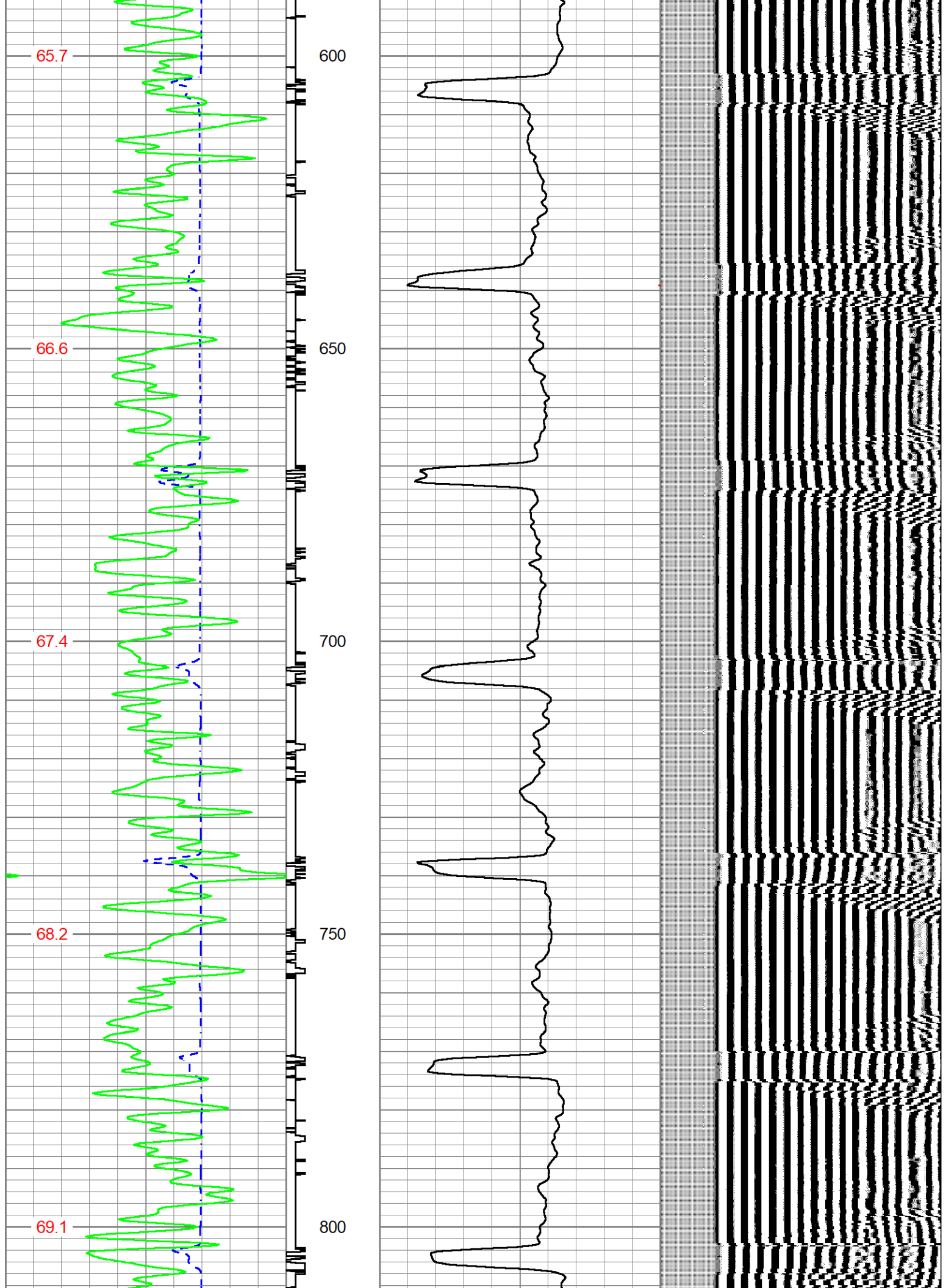
Database File	tom_fenno_production_clmsug1_17_may_2019_cbl.db
Dataset Pathname	pass12
Presentation Format	cbl 7in
Dataset Creation	Fri May 17 17:57:29 2019
Charted by	Depth in Feet scaled 1:240

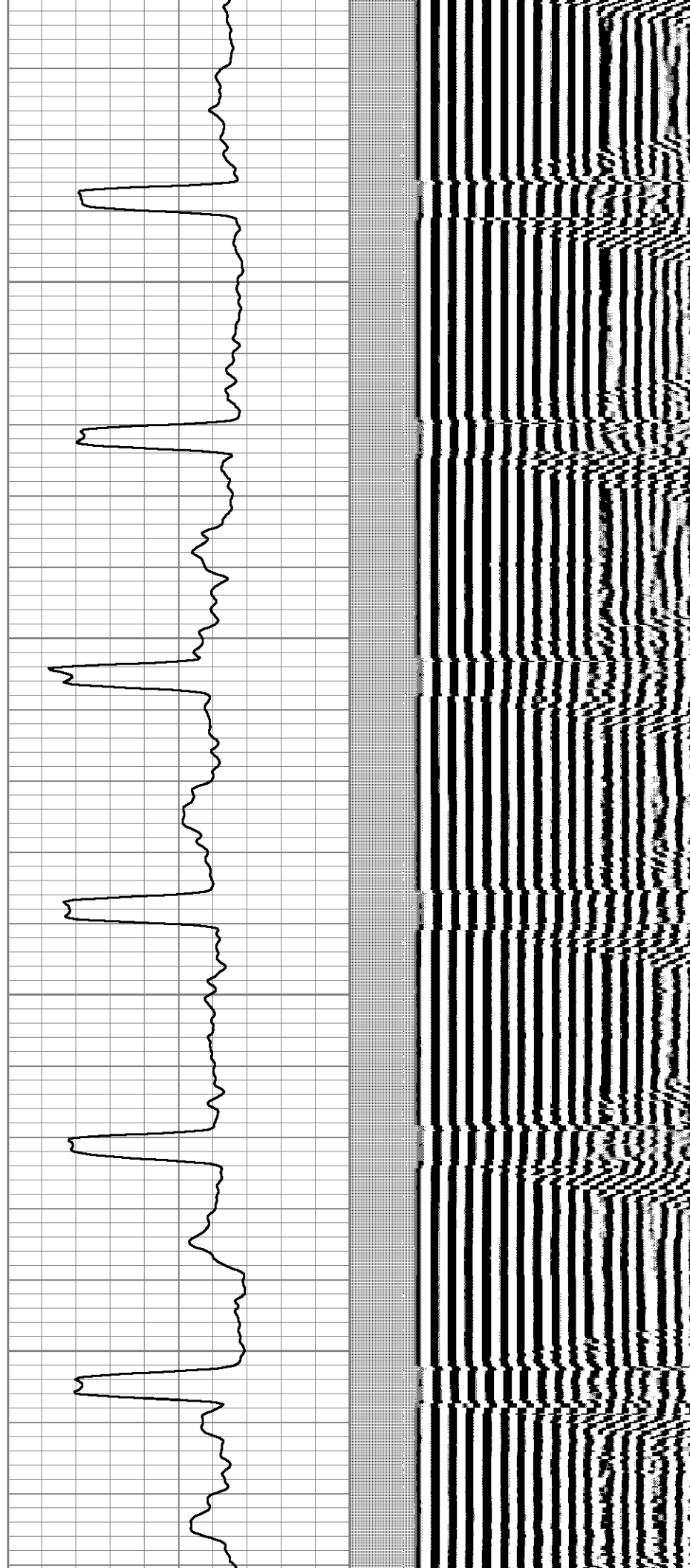
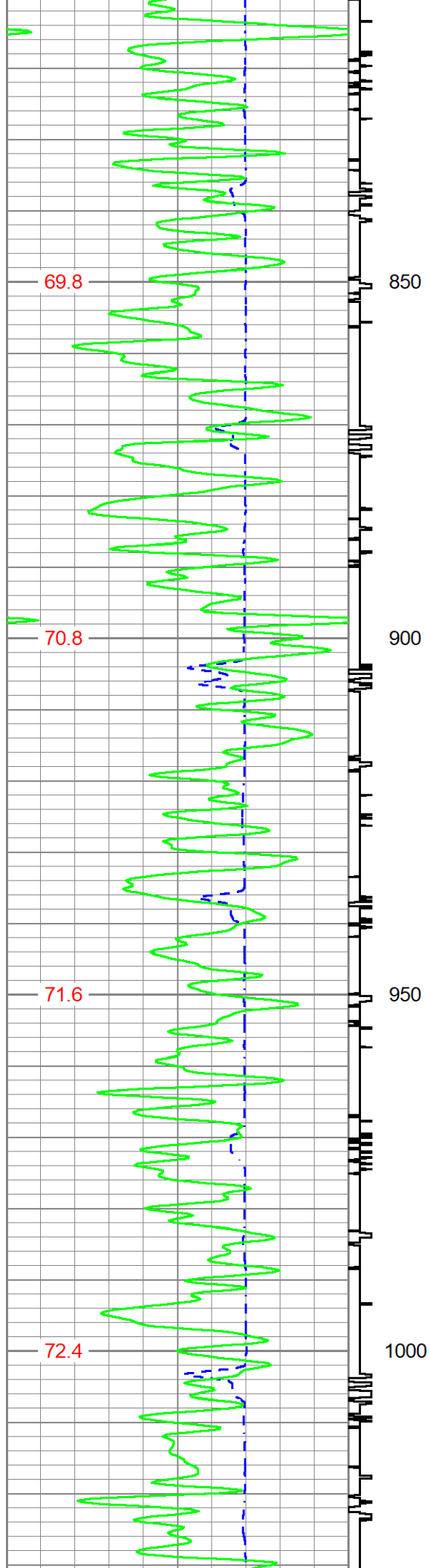
420	Travel Time (usec)	220	Collar Locato	0	Amplified Amplitude (mV)	10	200	VDL (usec)	1200
0	Gamma Ray (GAPI)	150	-1	9	0	Amplitude (mV)	100		
TEMP									
(degF)									

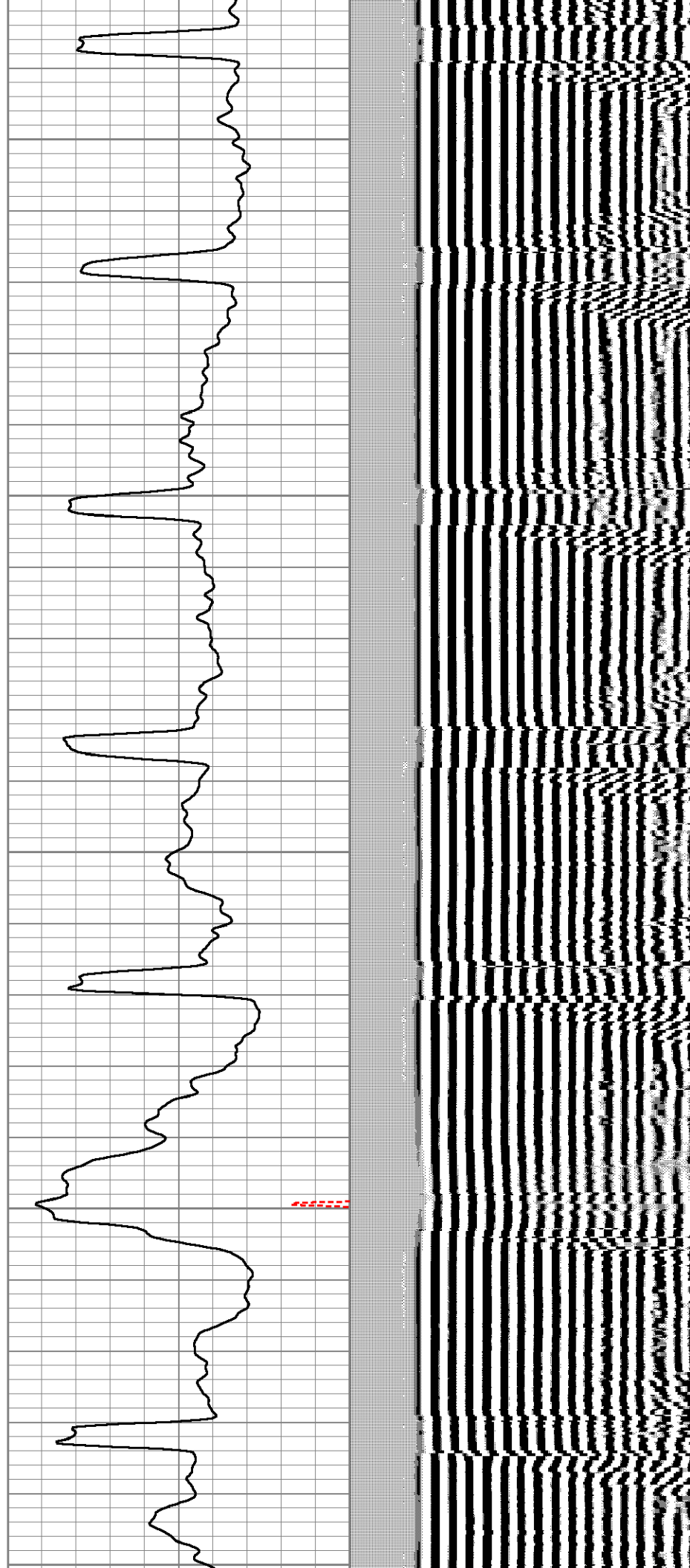
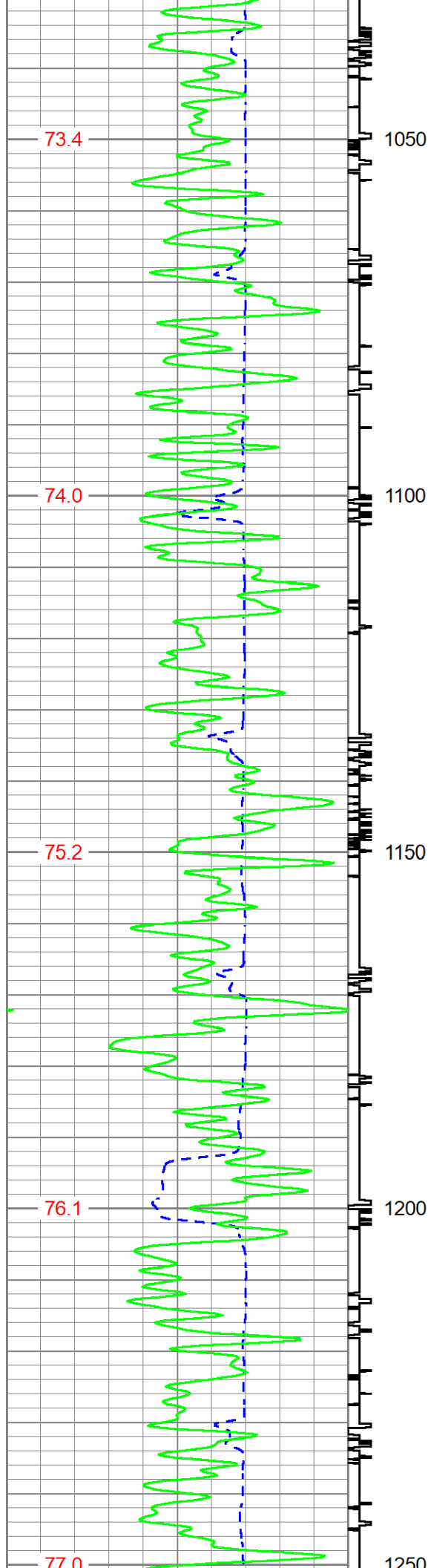


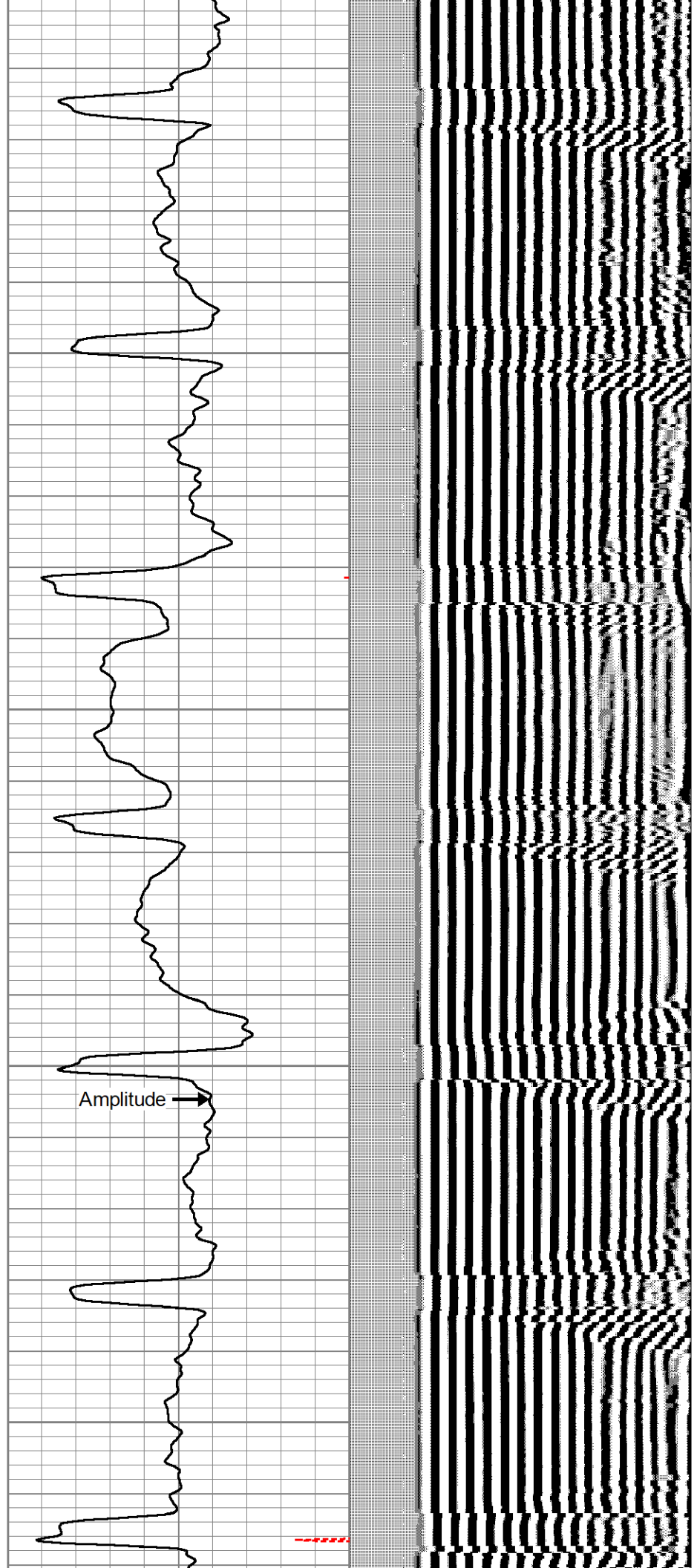
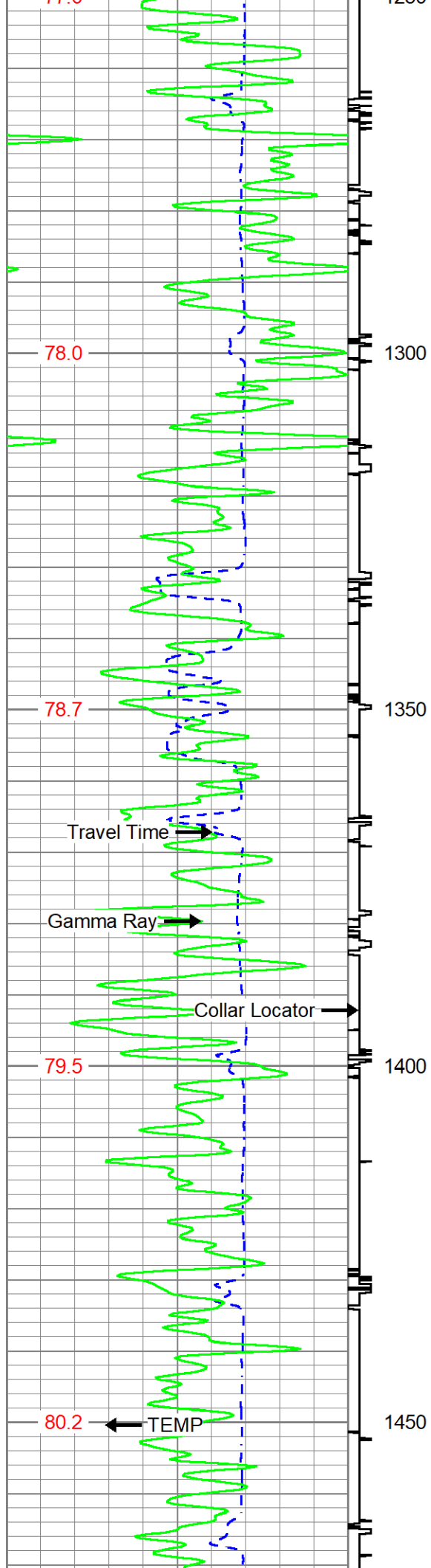


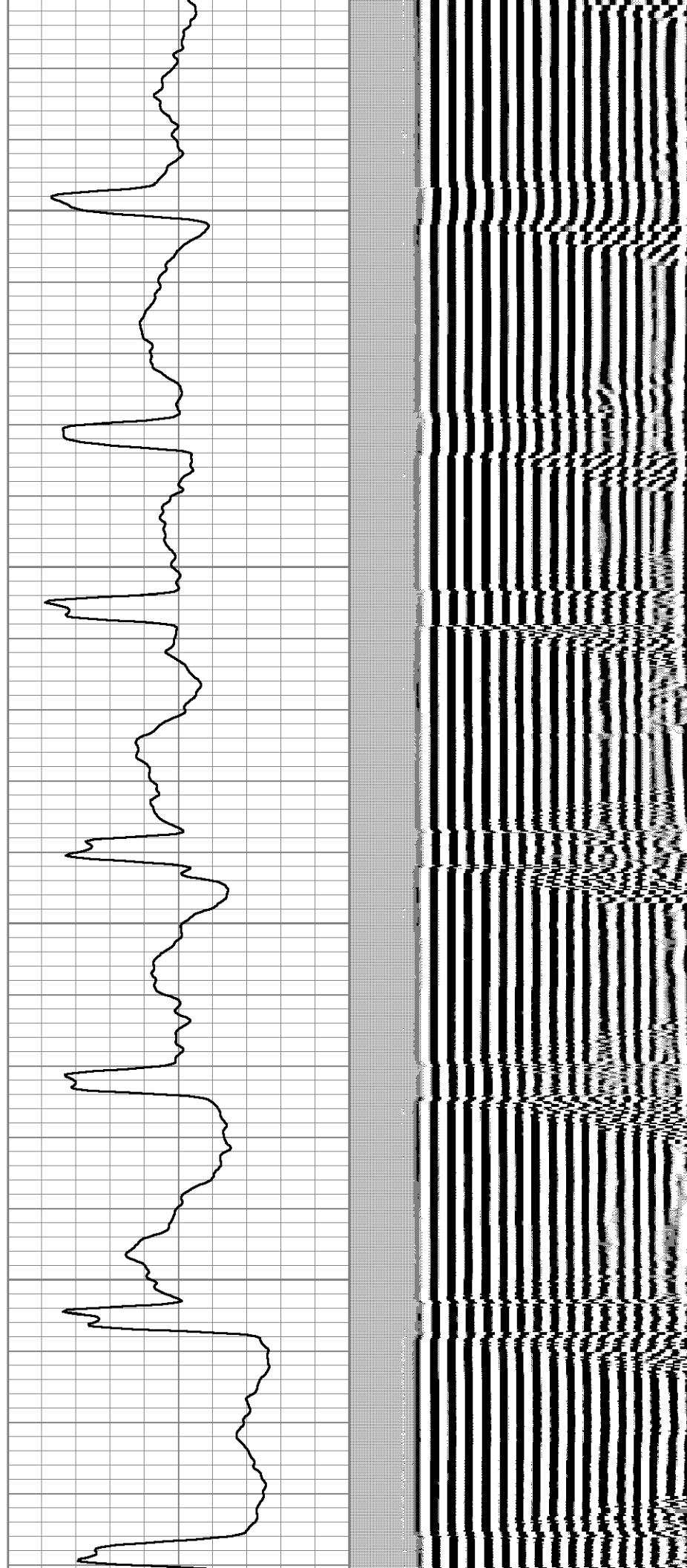
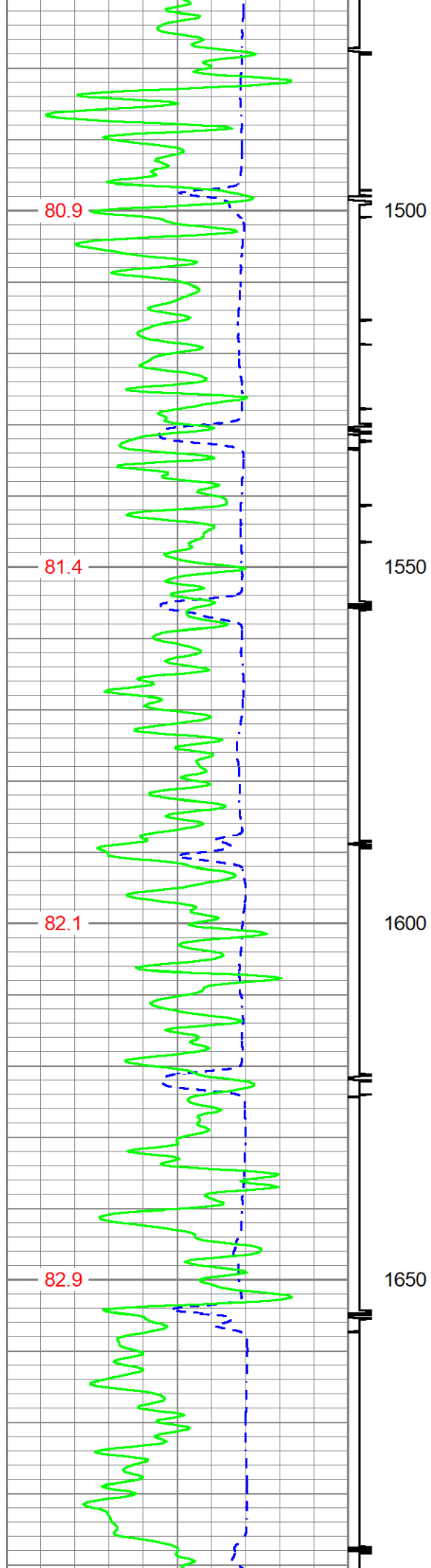


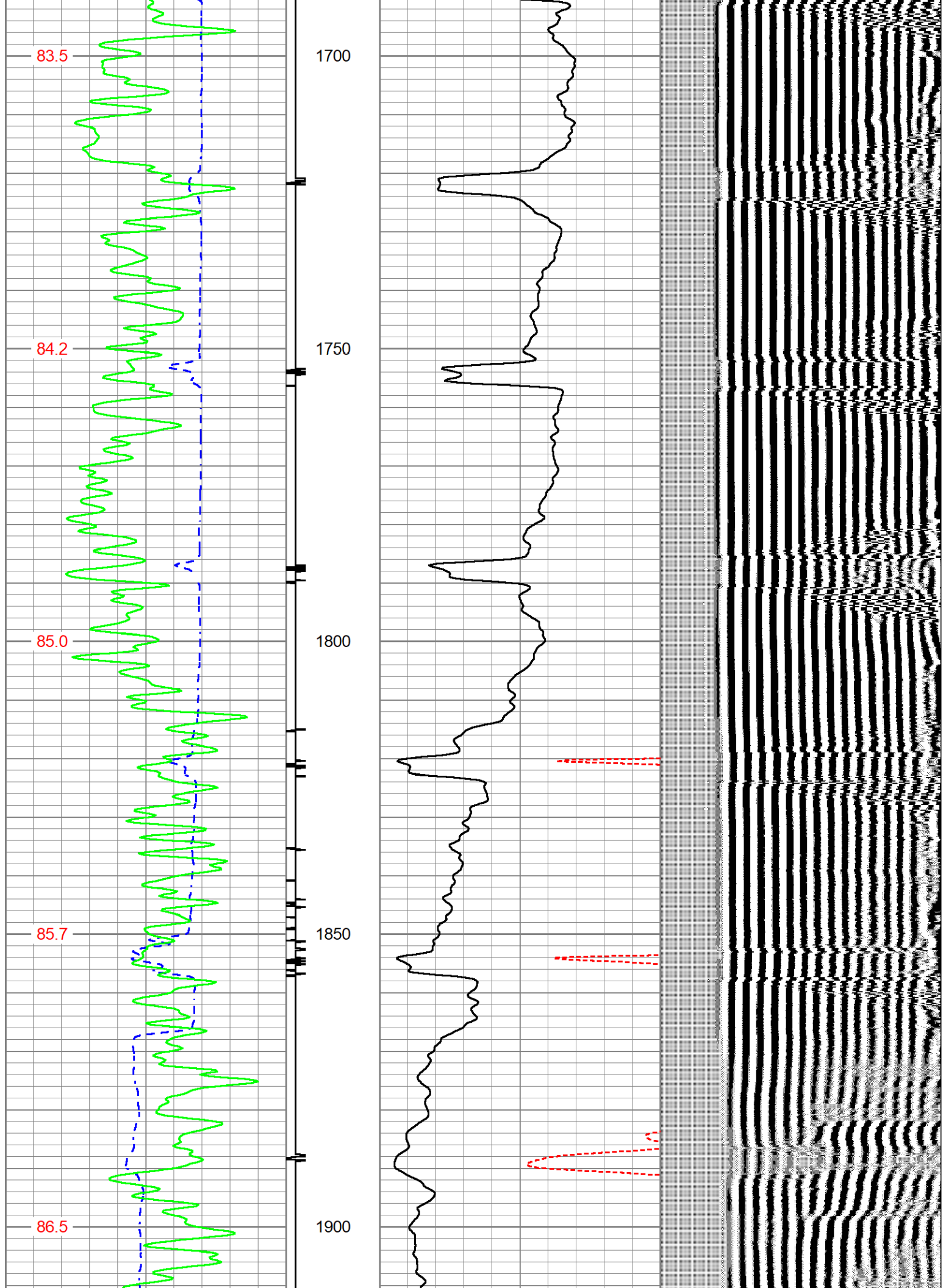


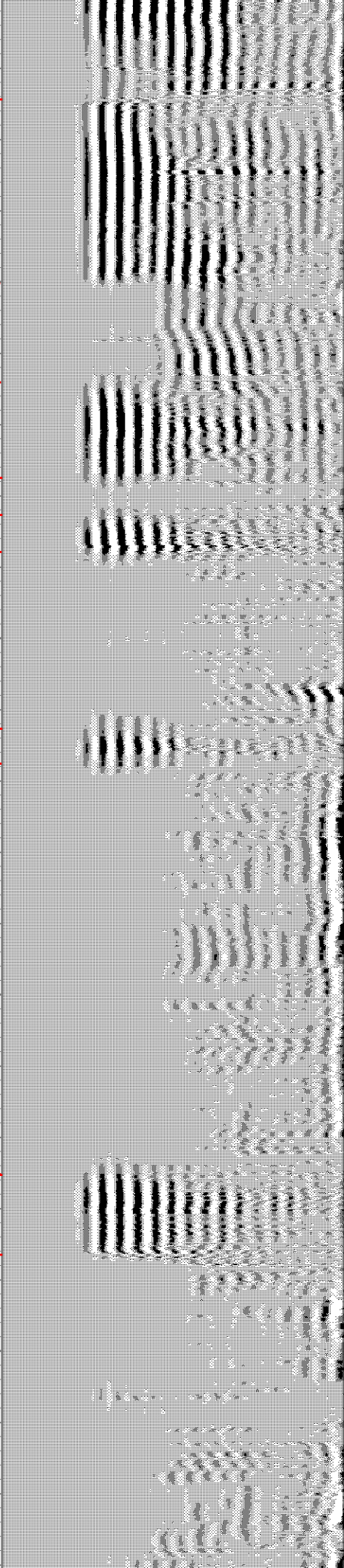
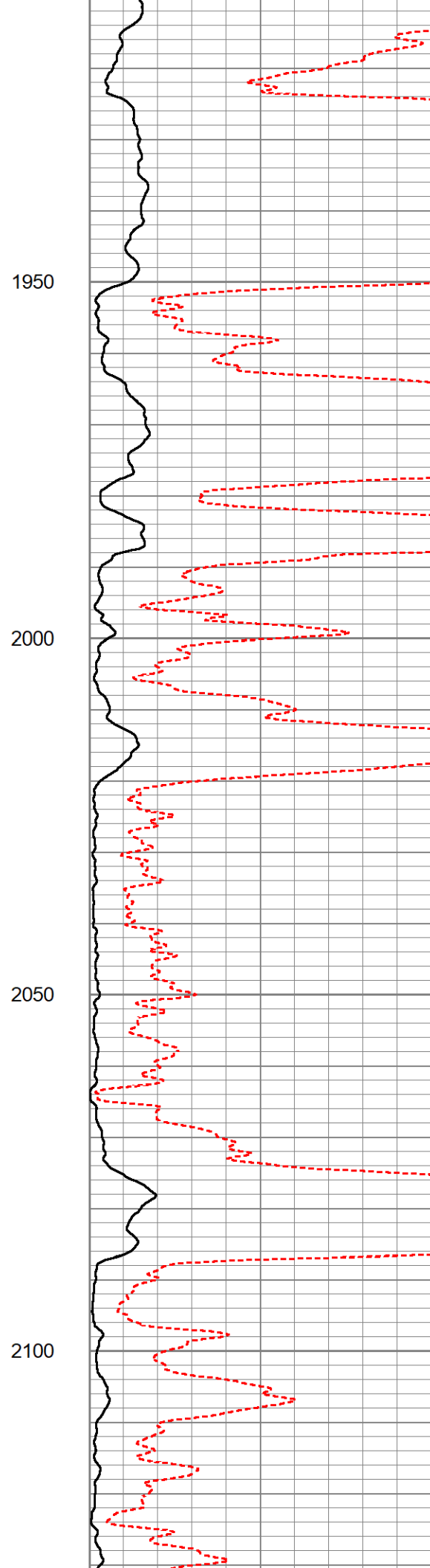
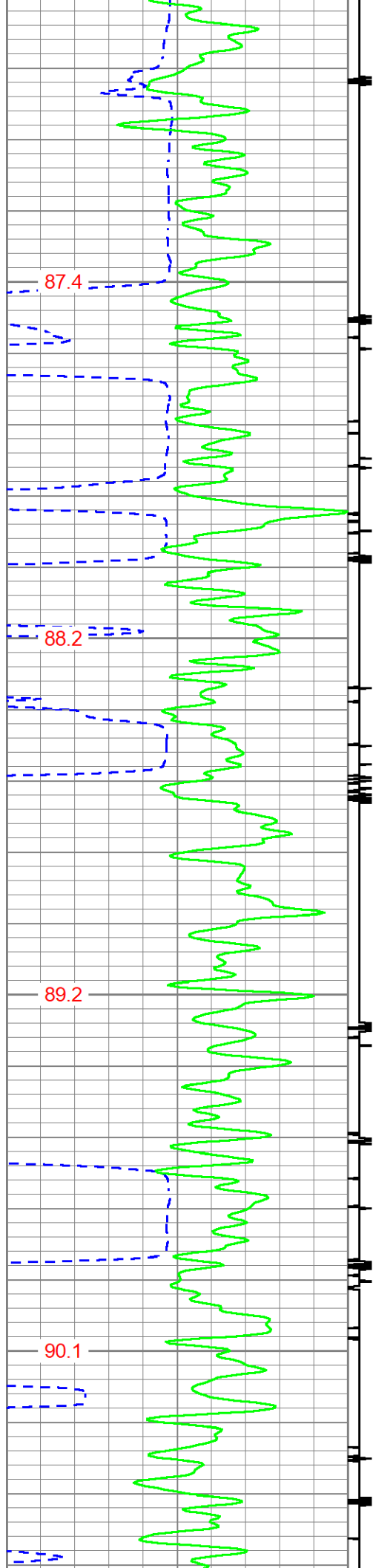


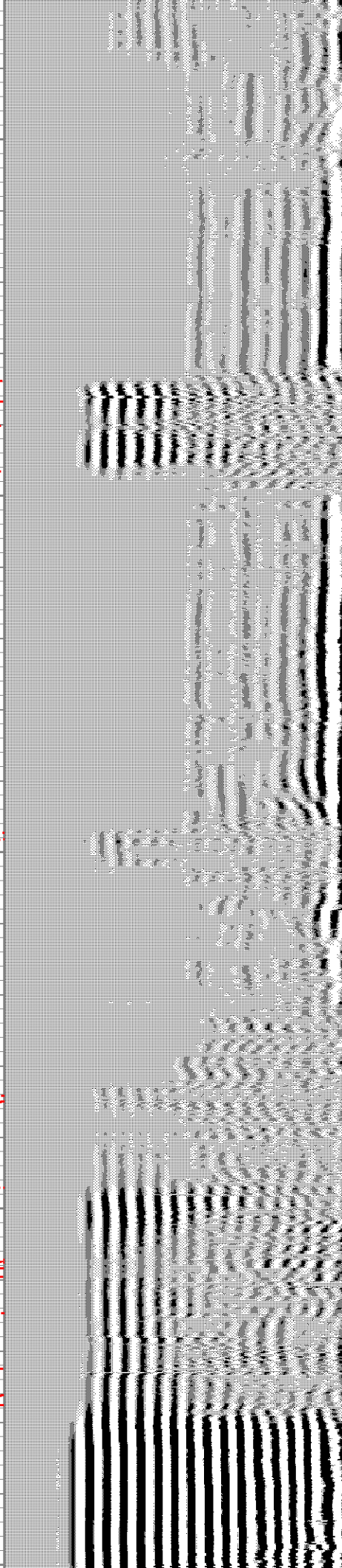
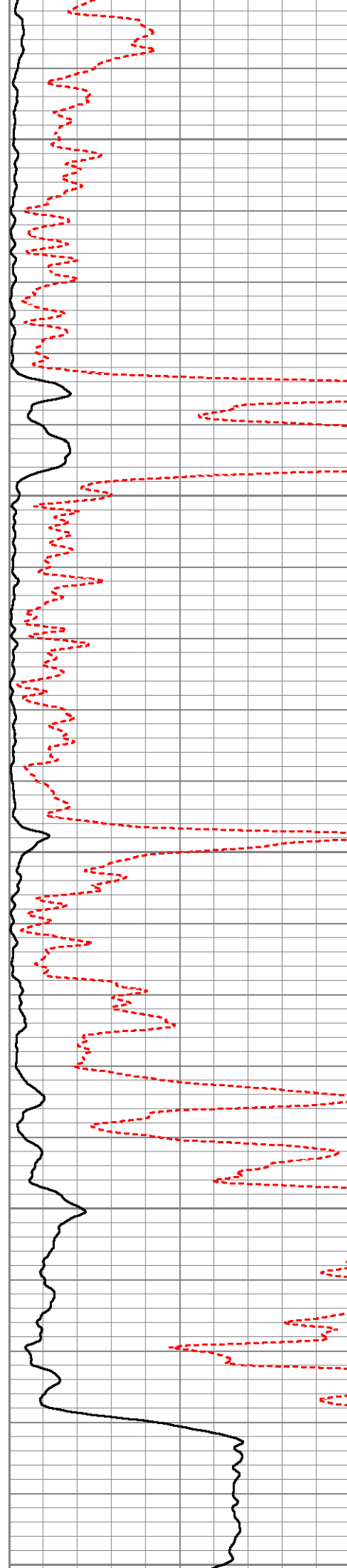
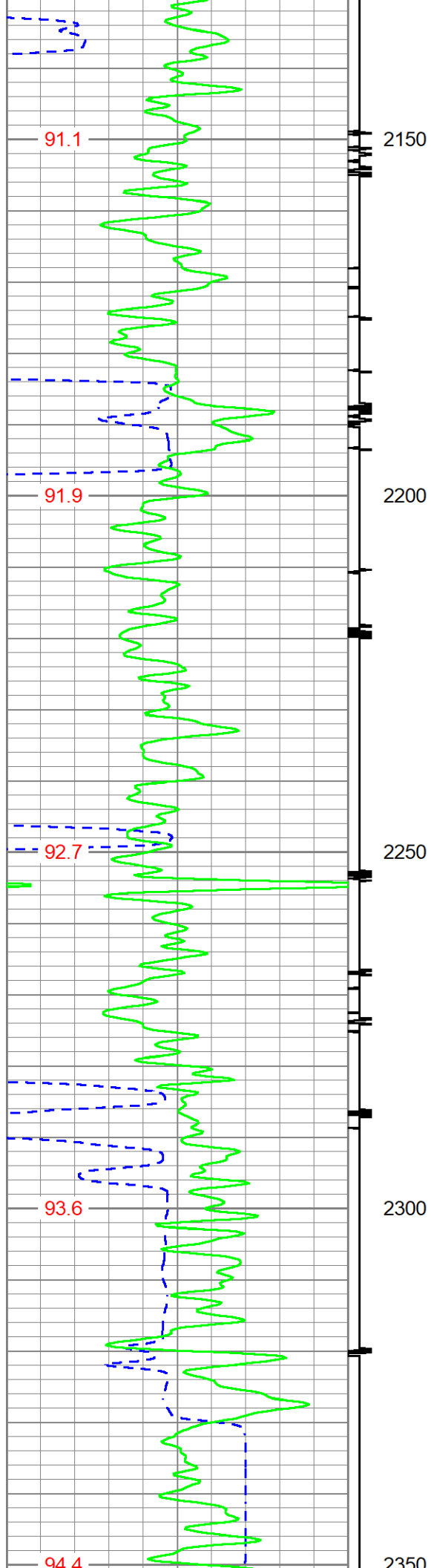


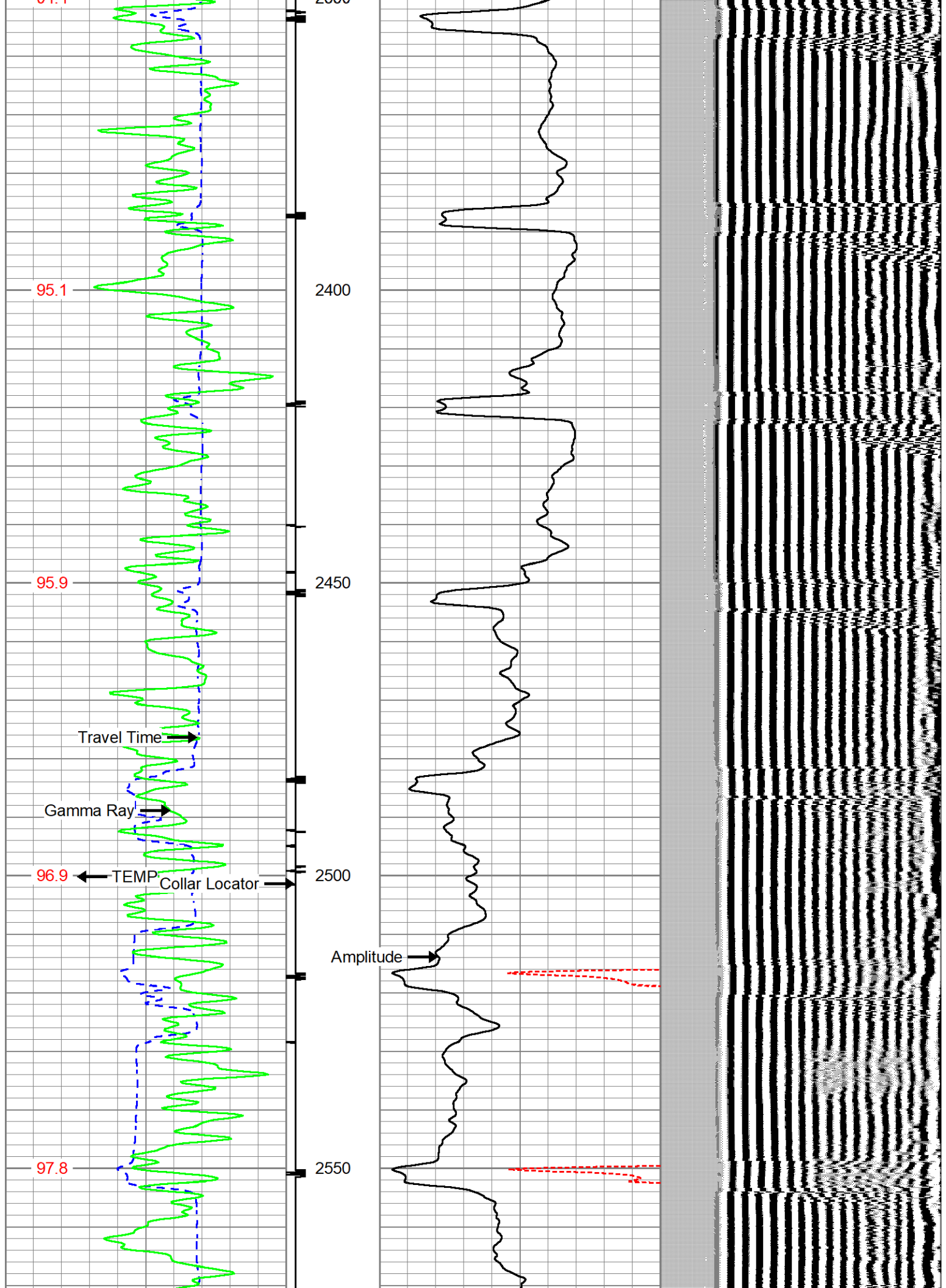


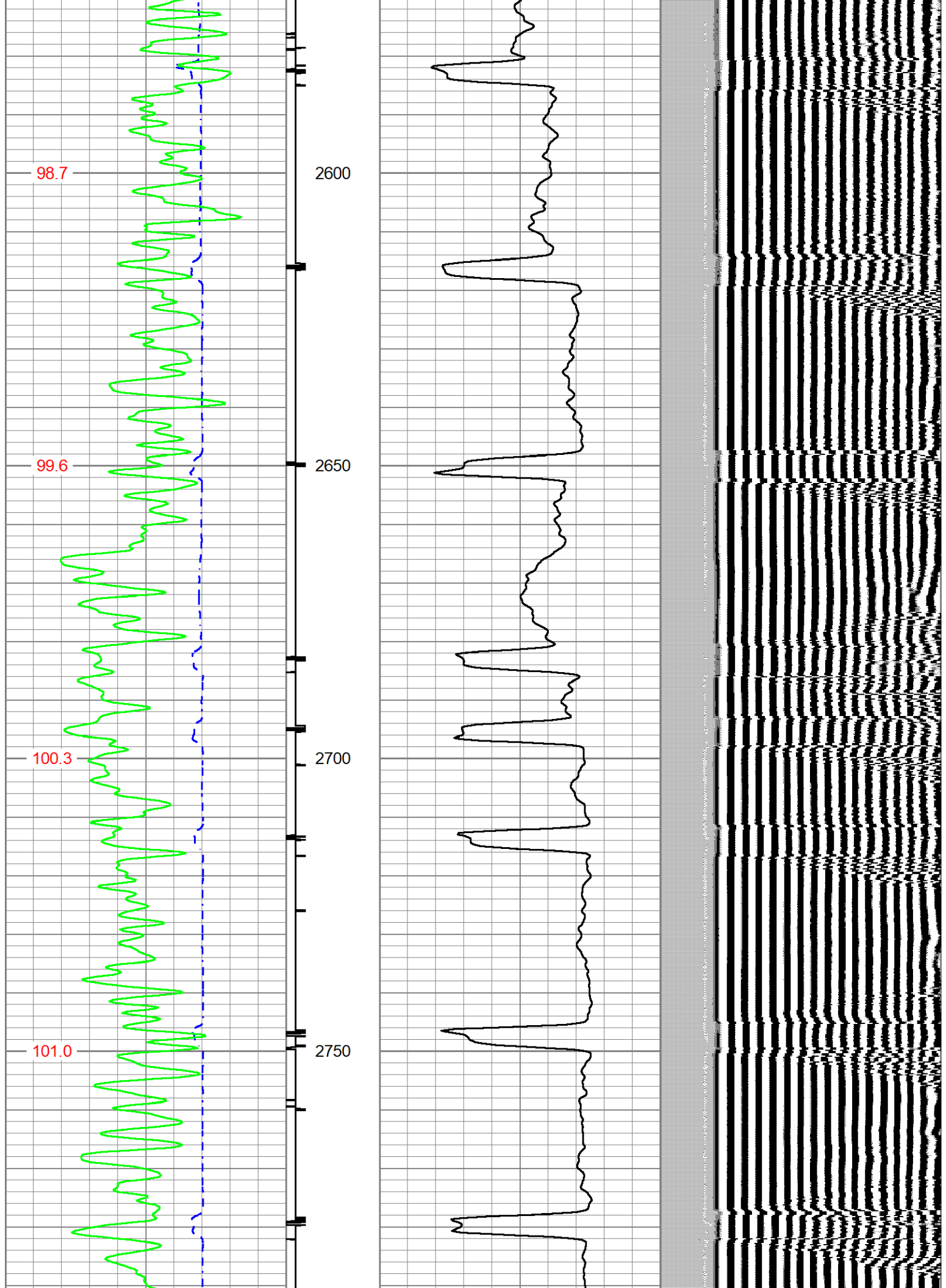


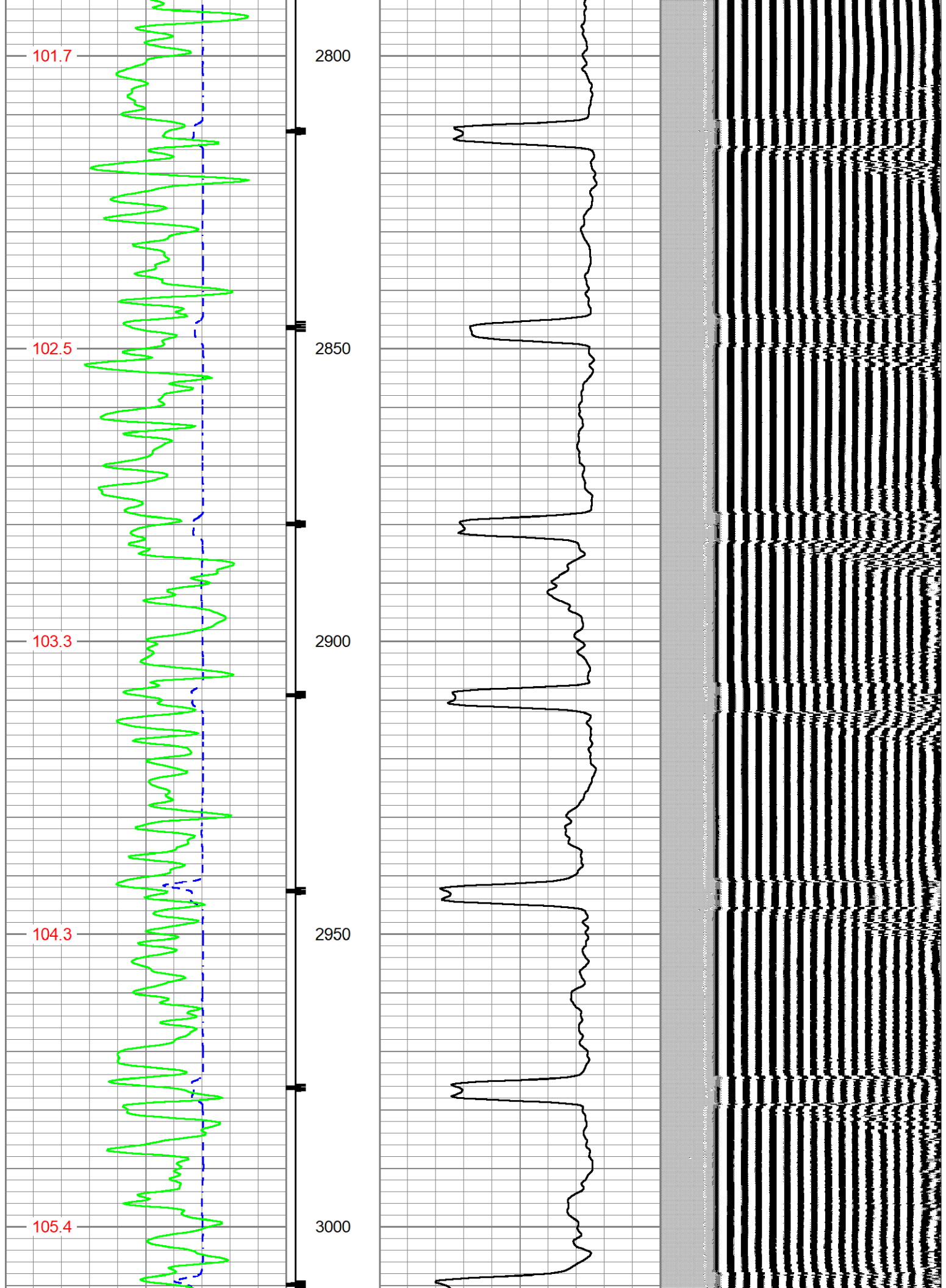


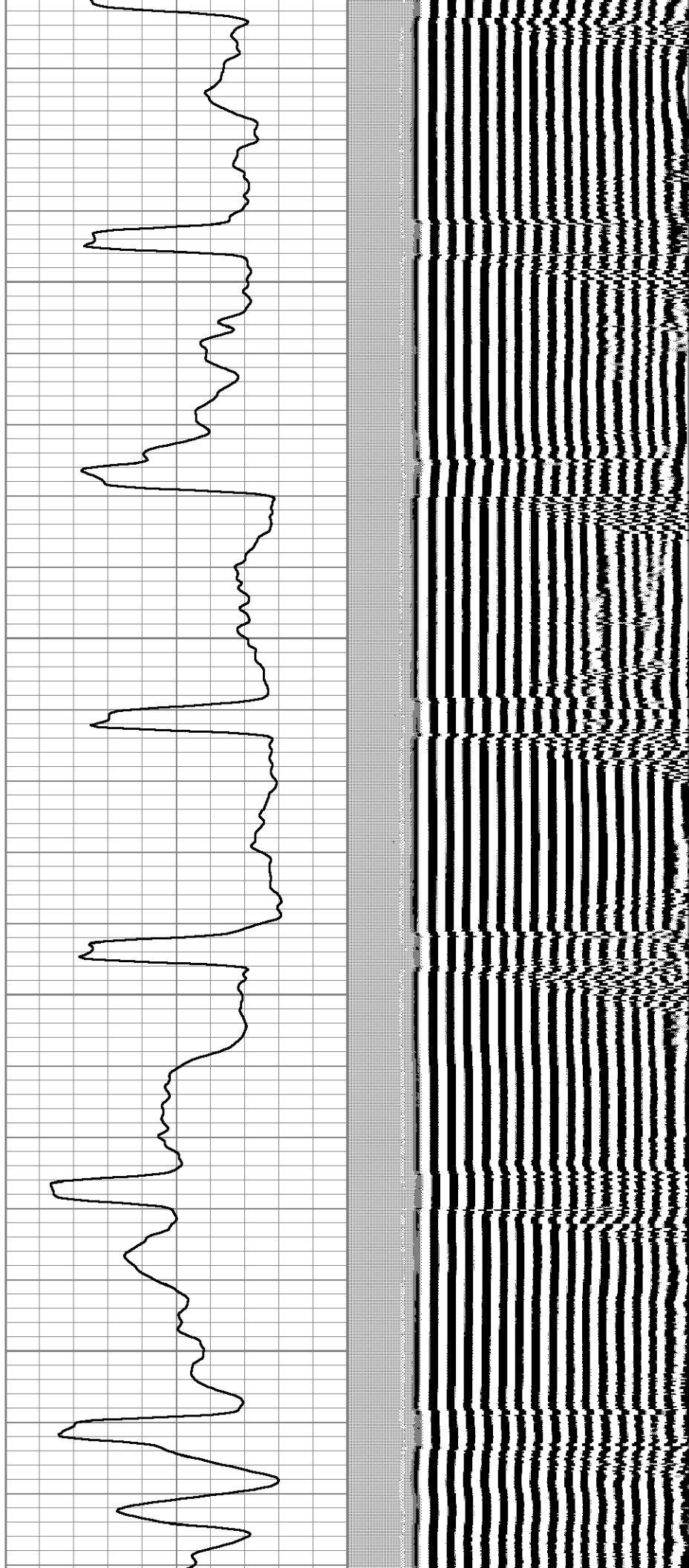
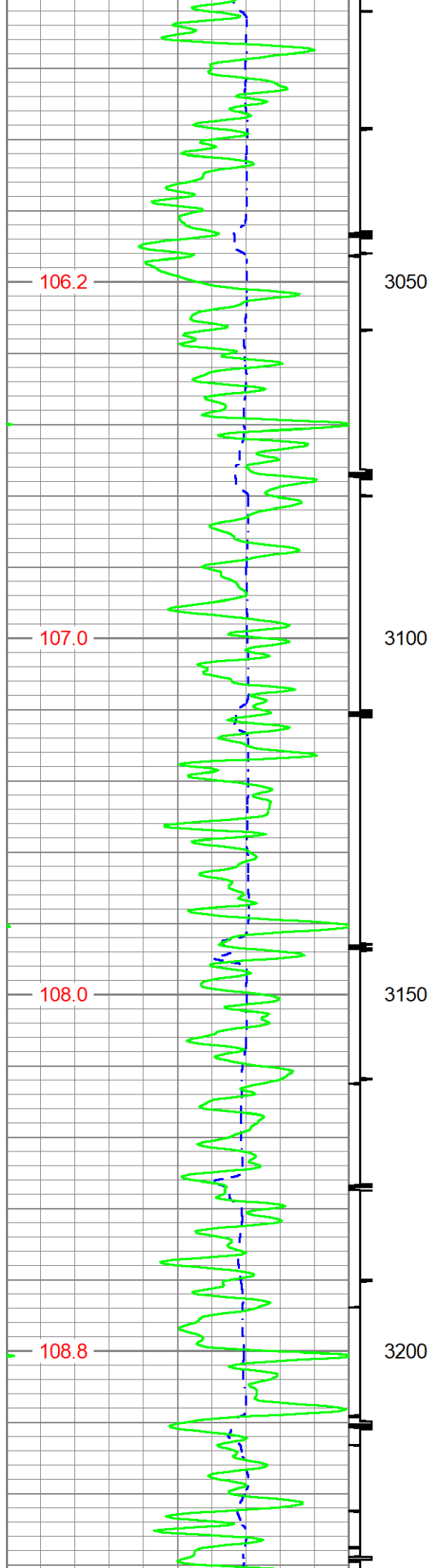


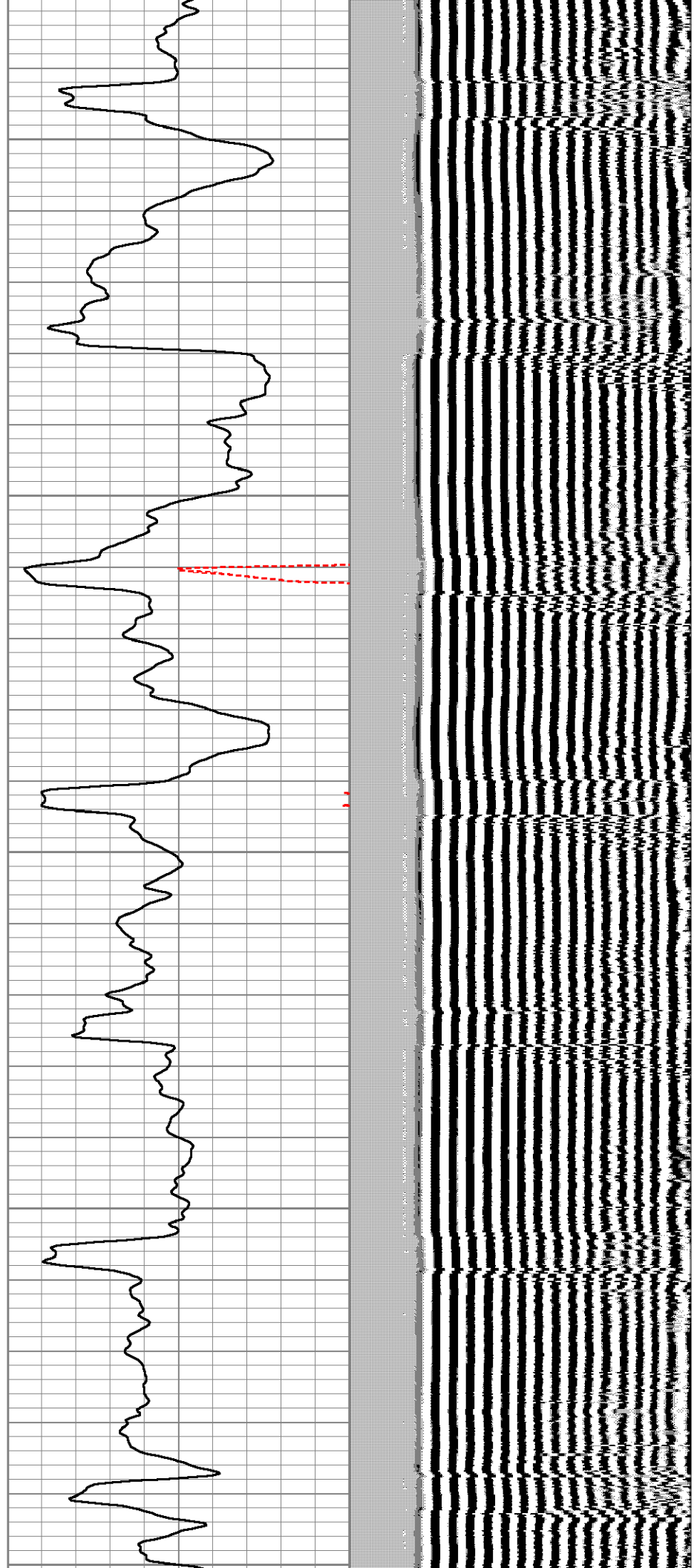
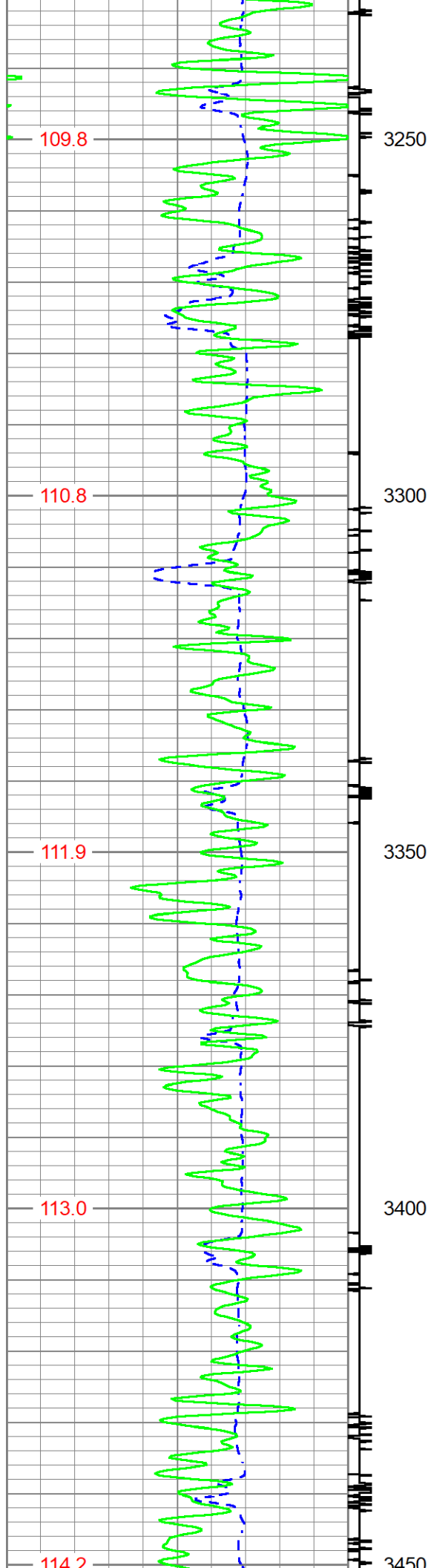


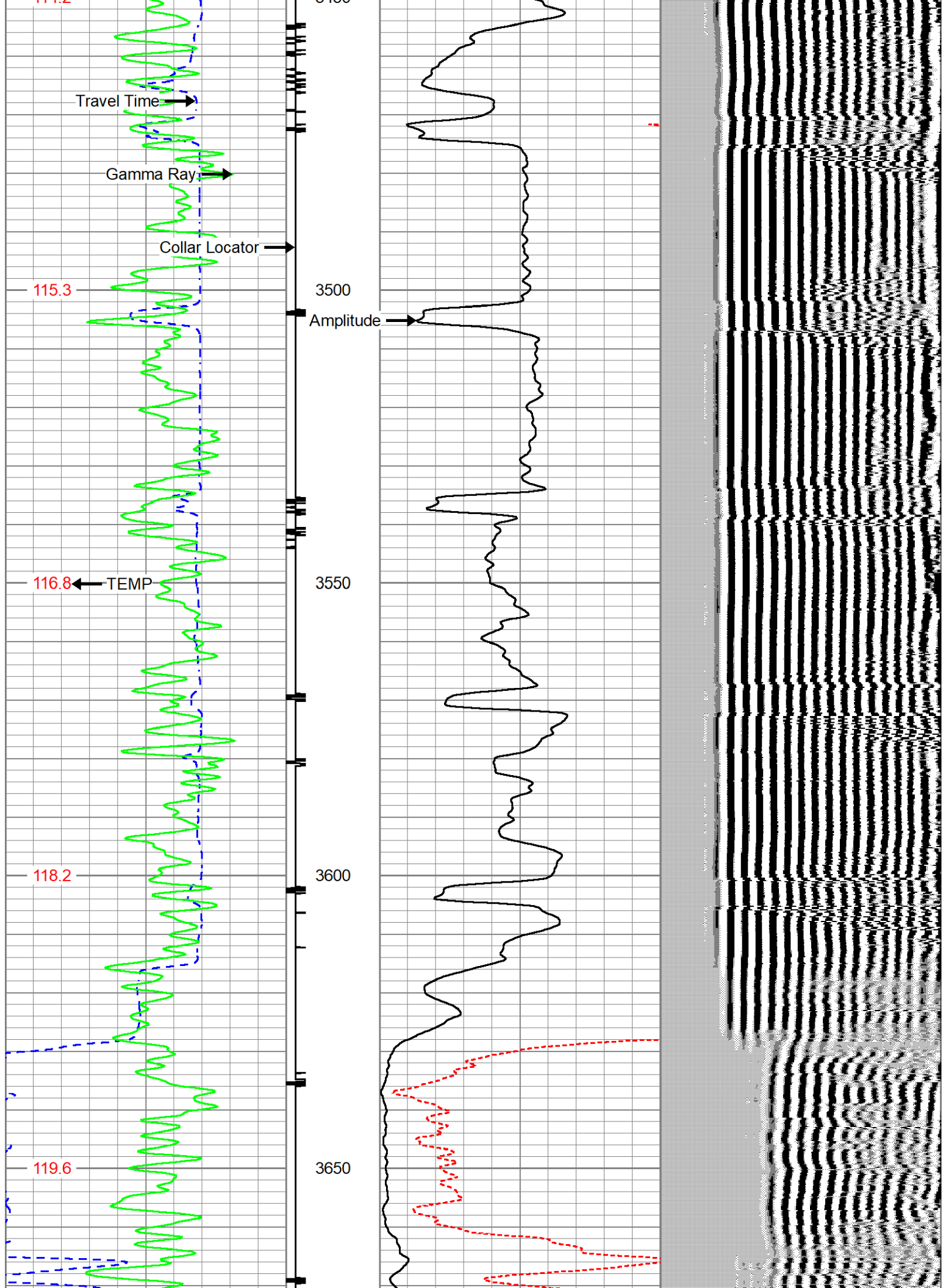


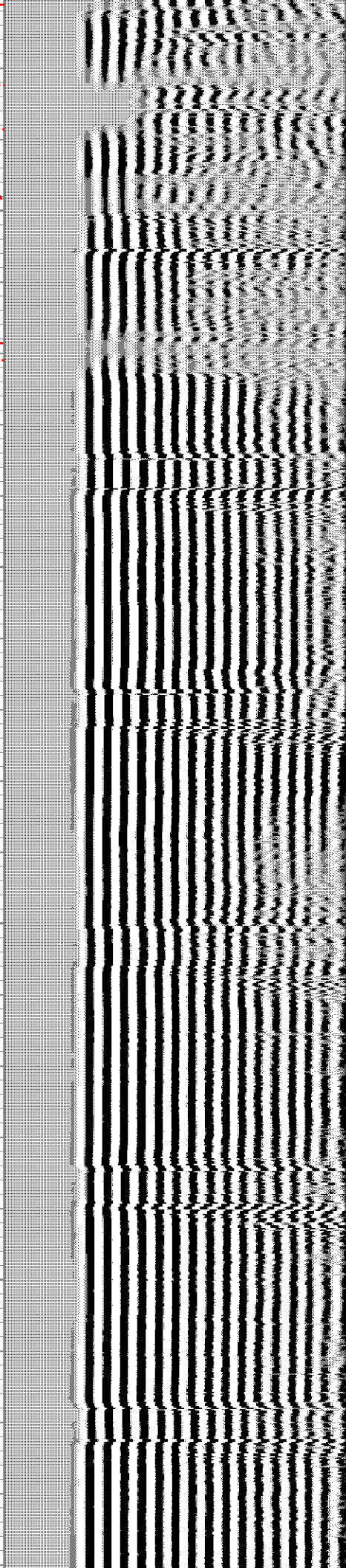
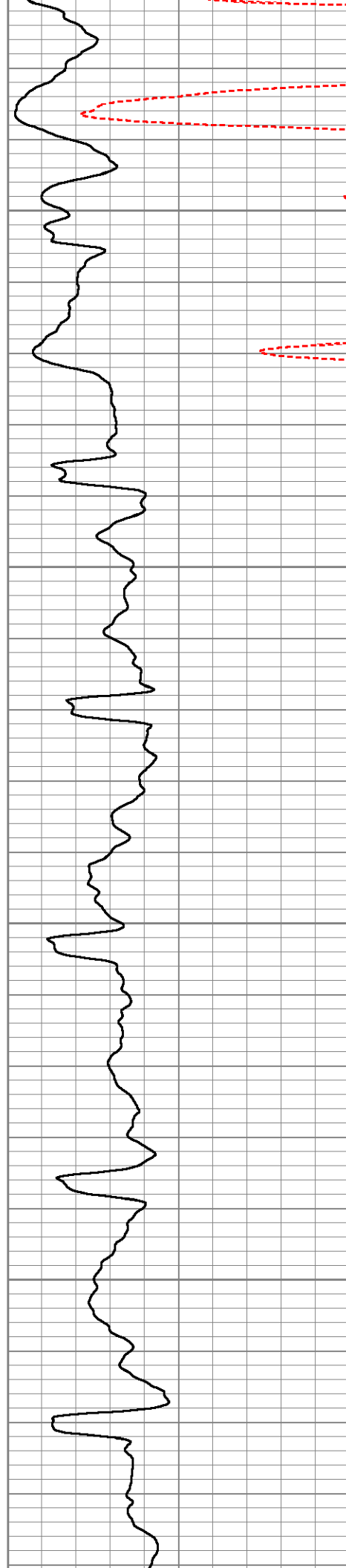
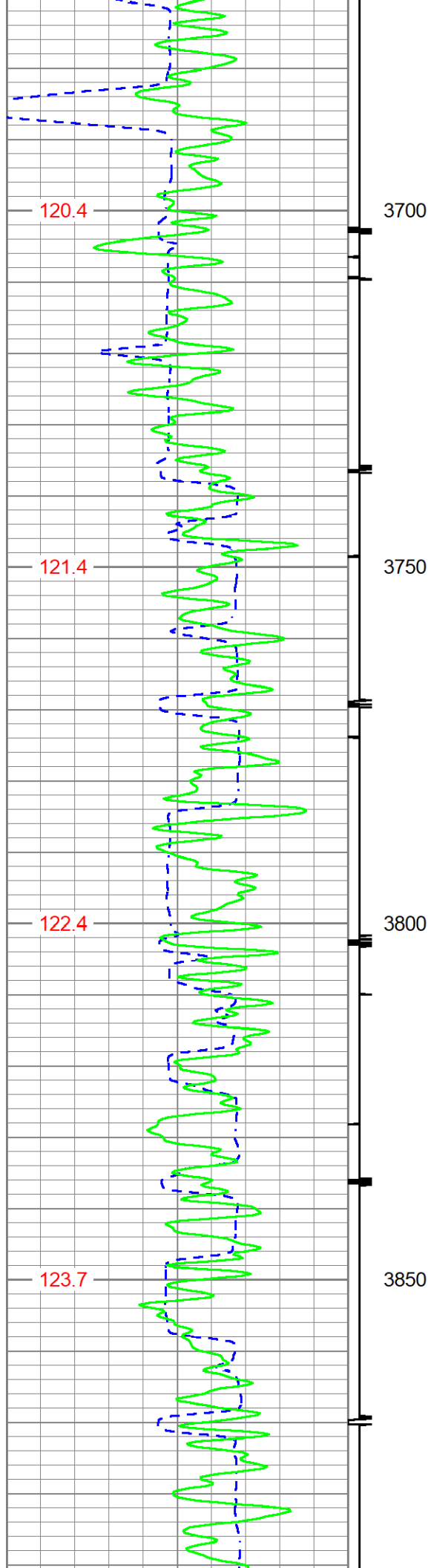


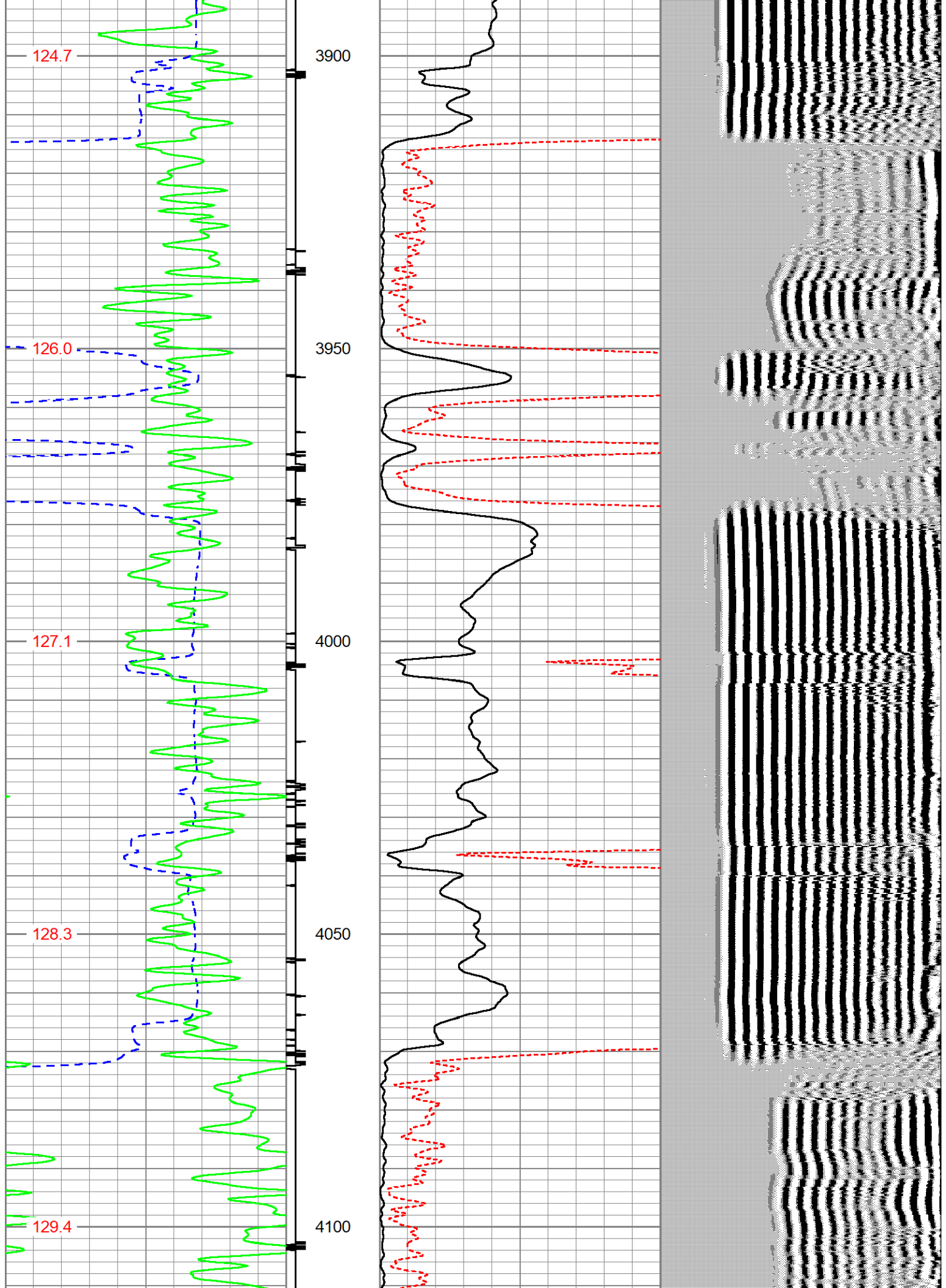


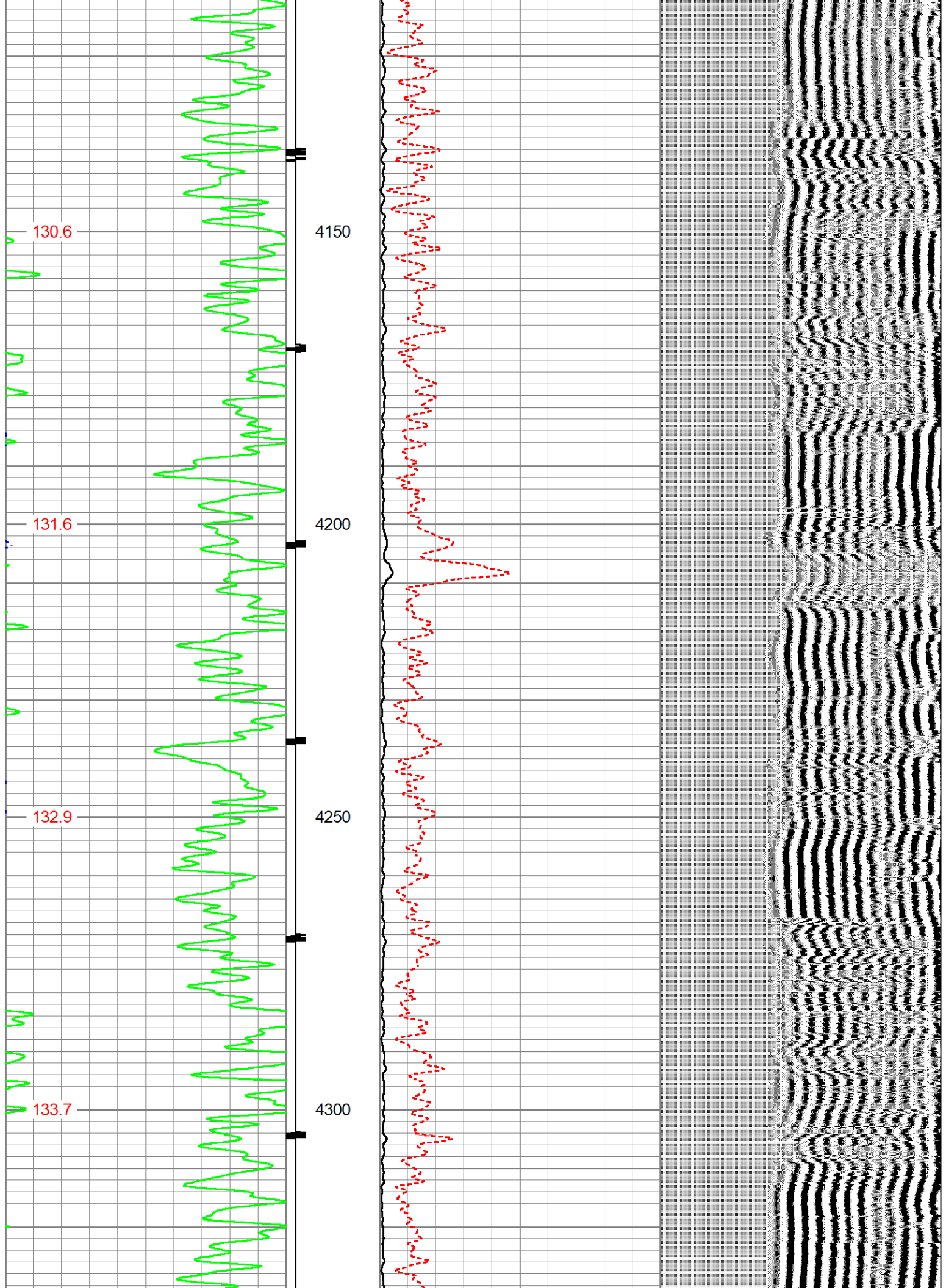


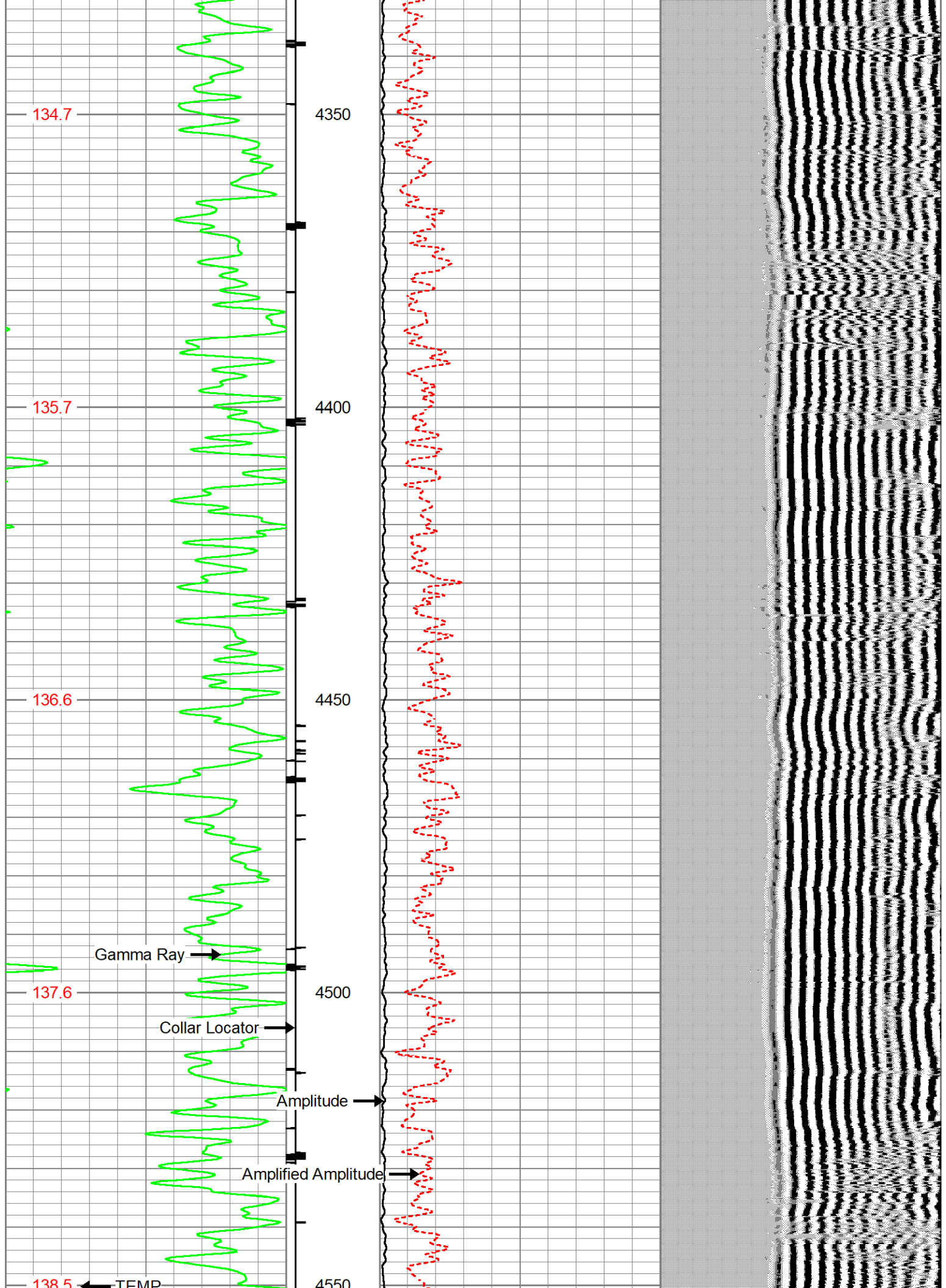


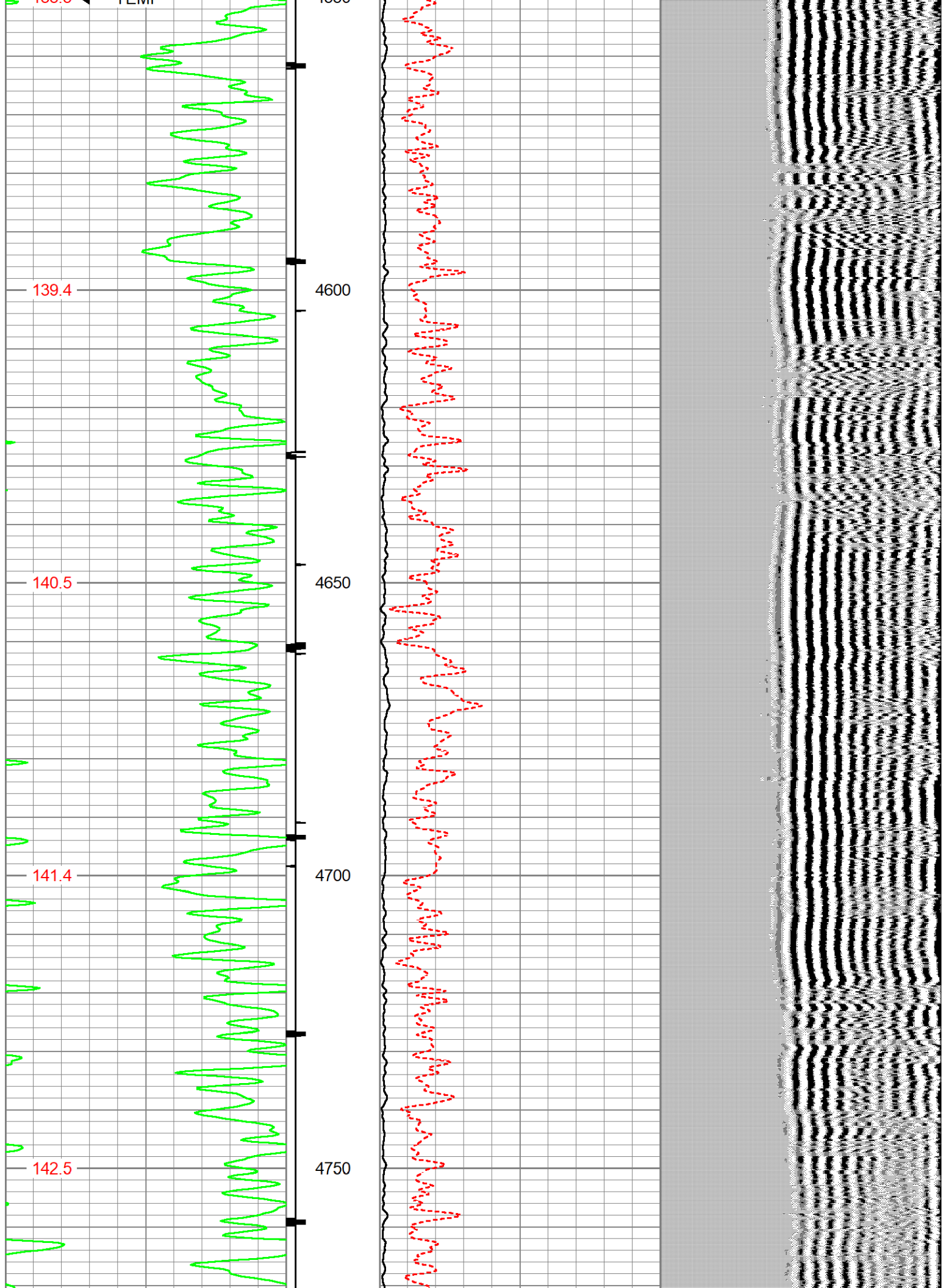


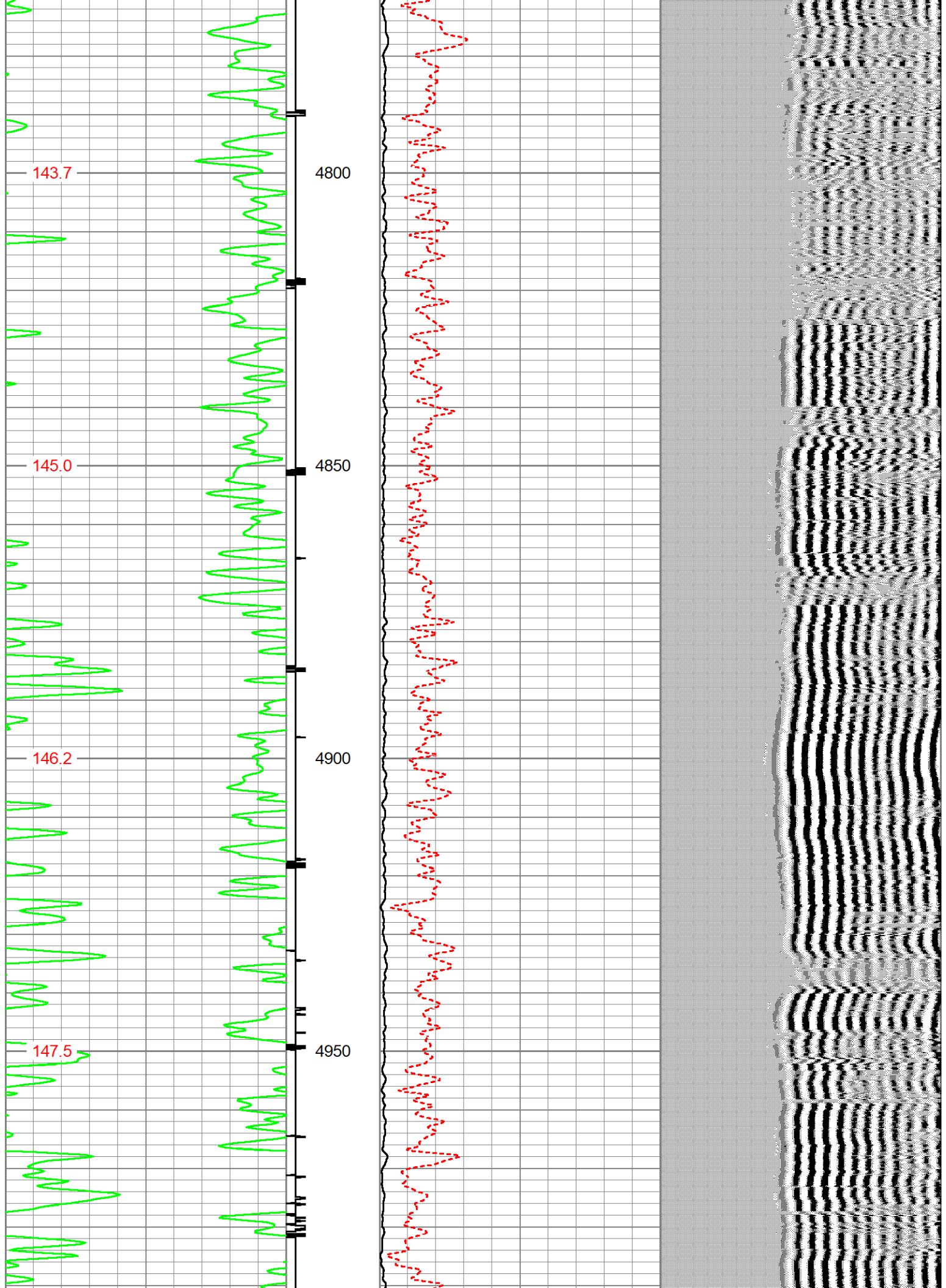


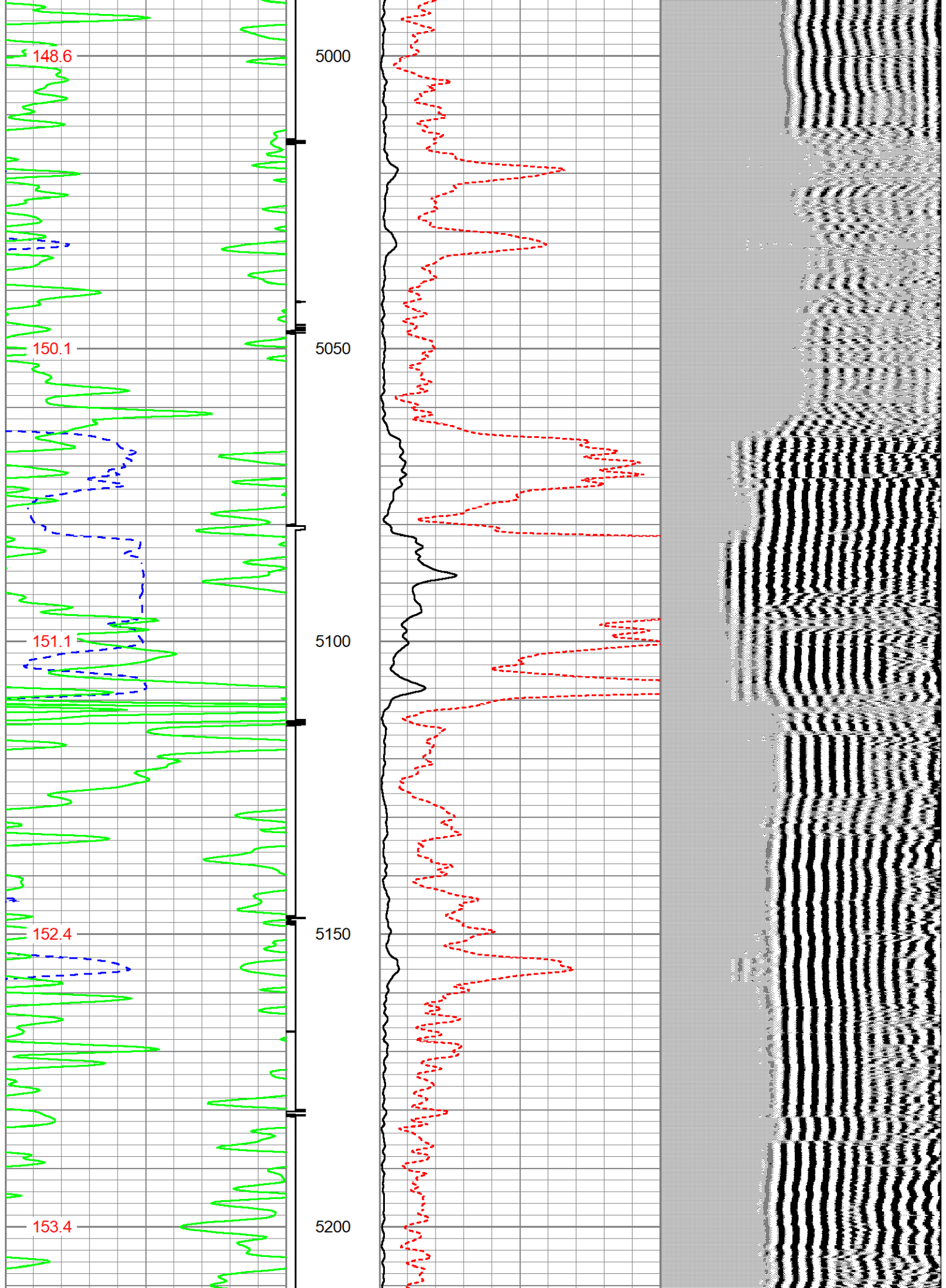


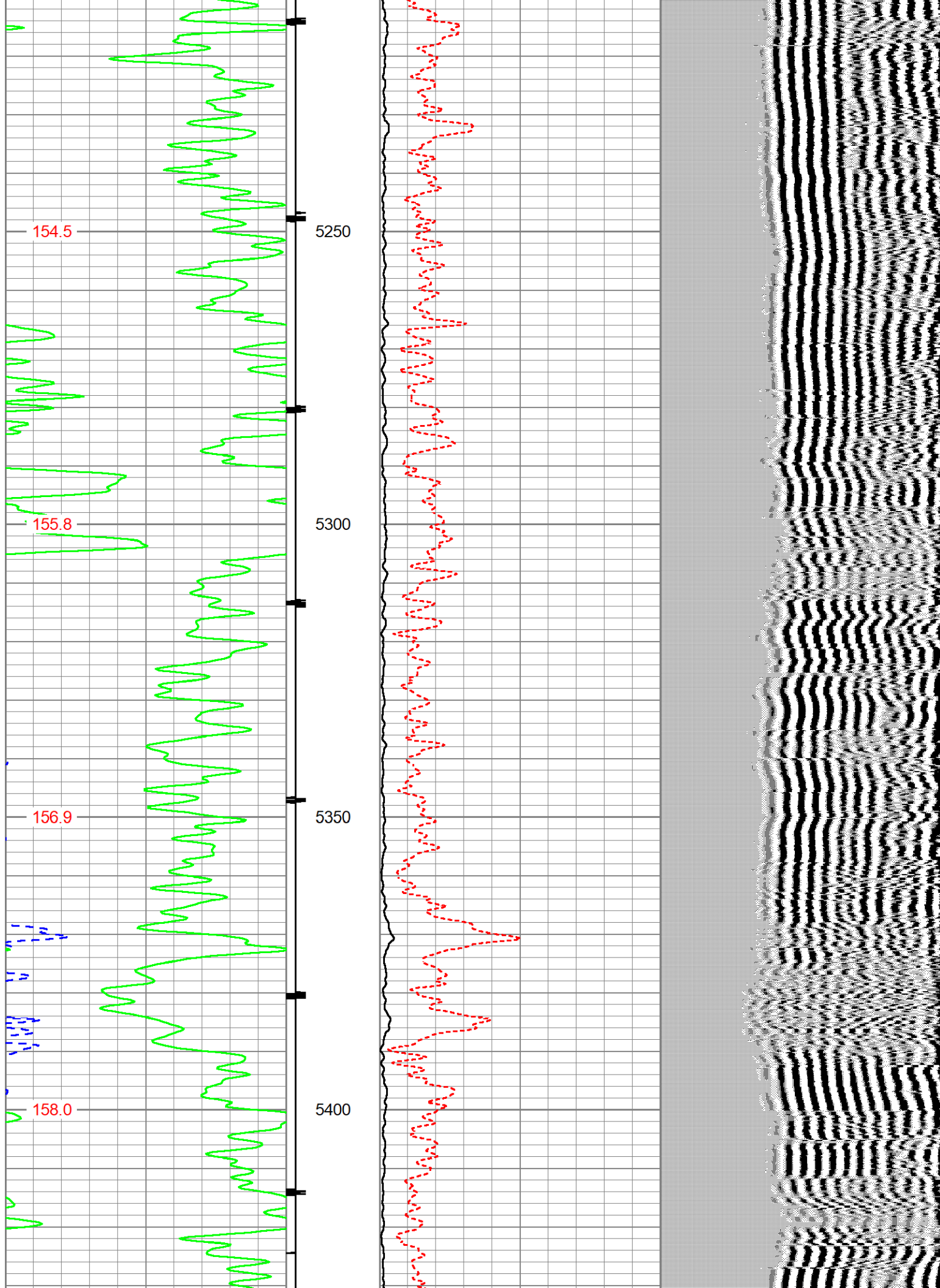


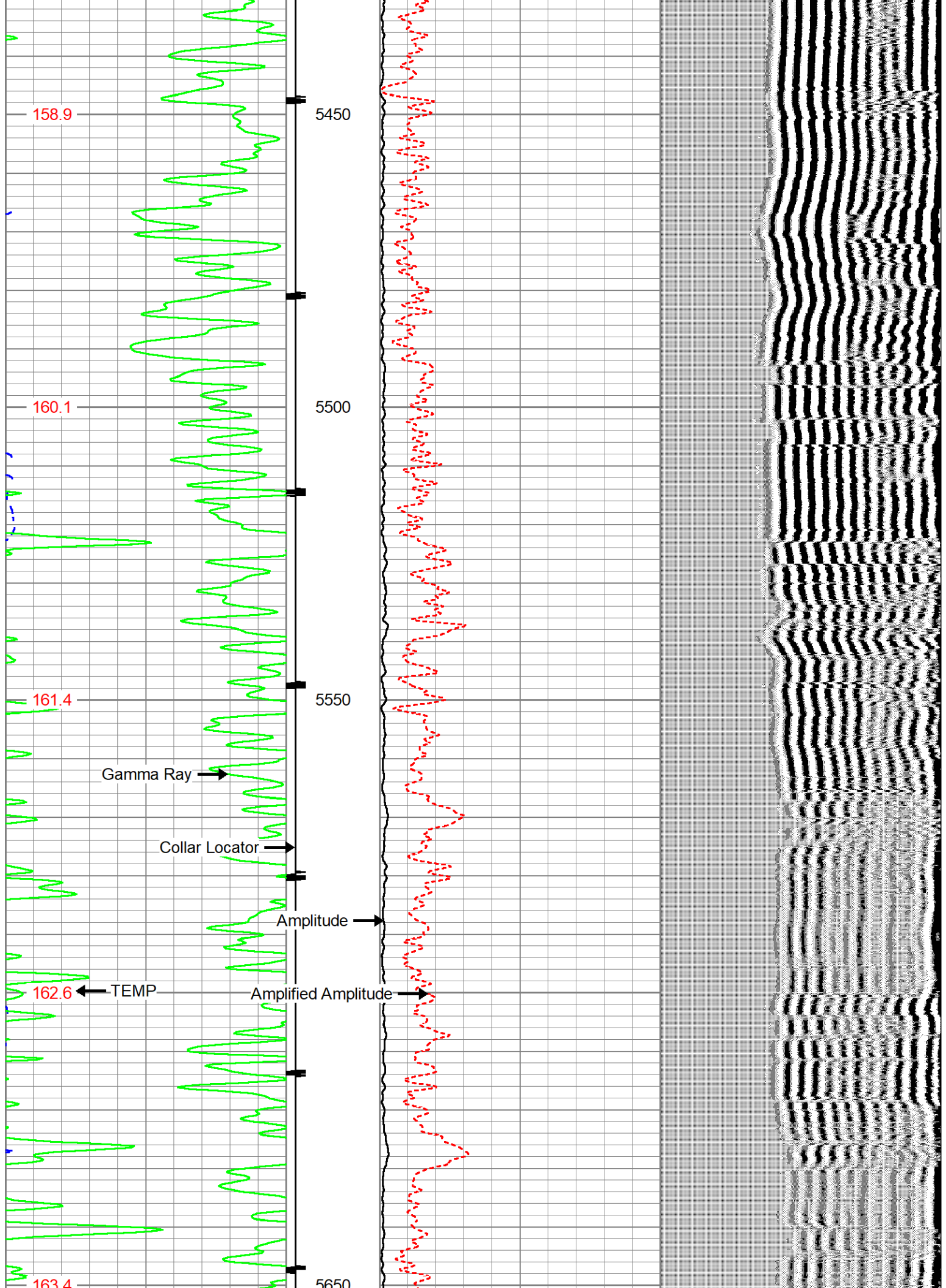


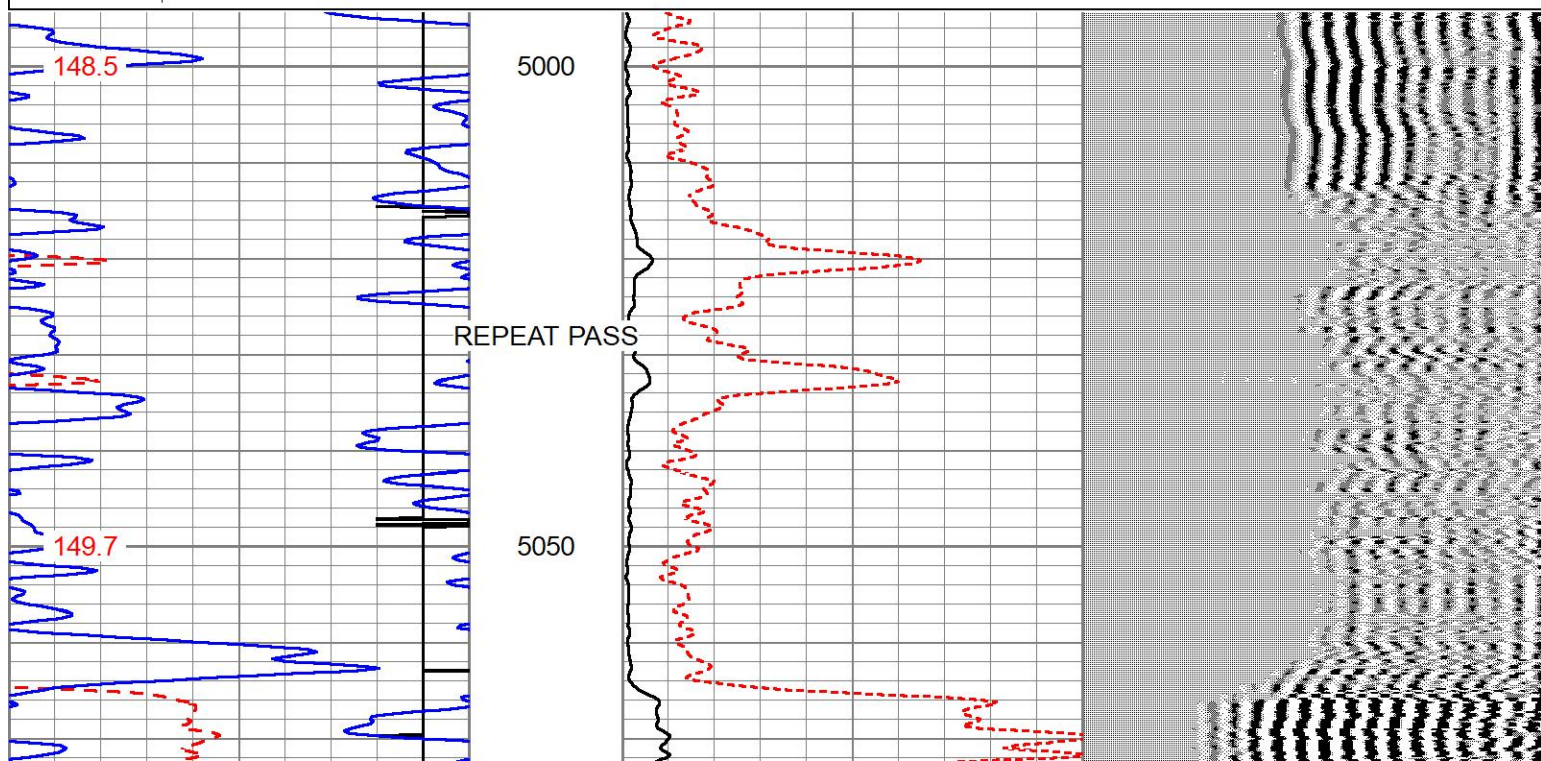
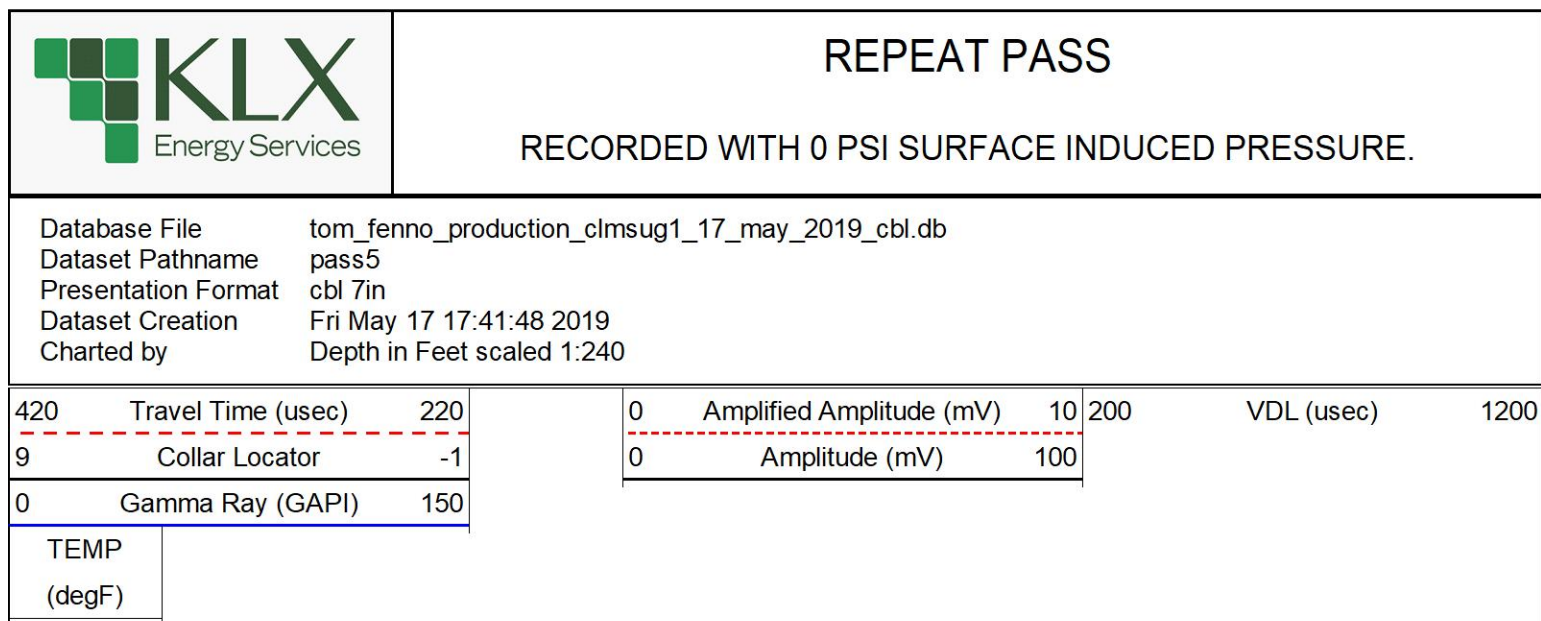
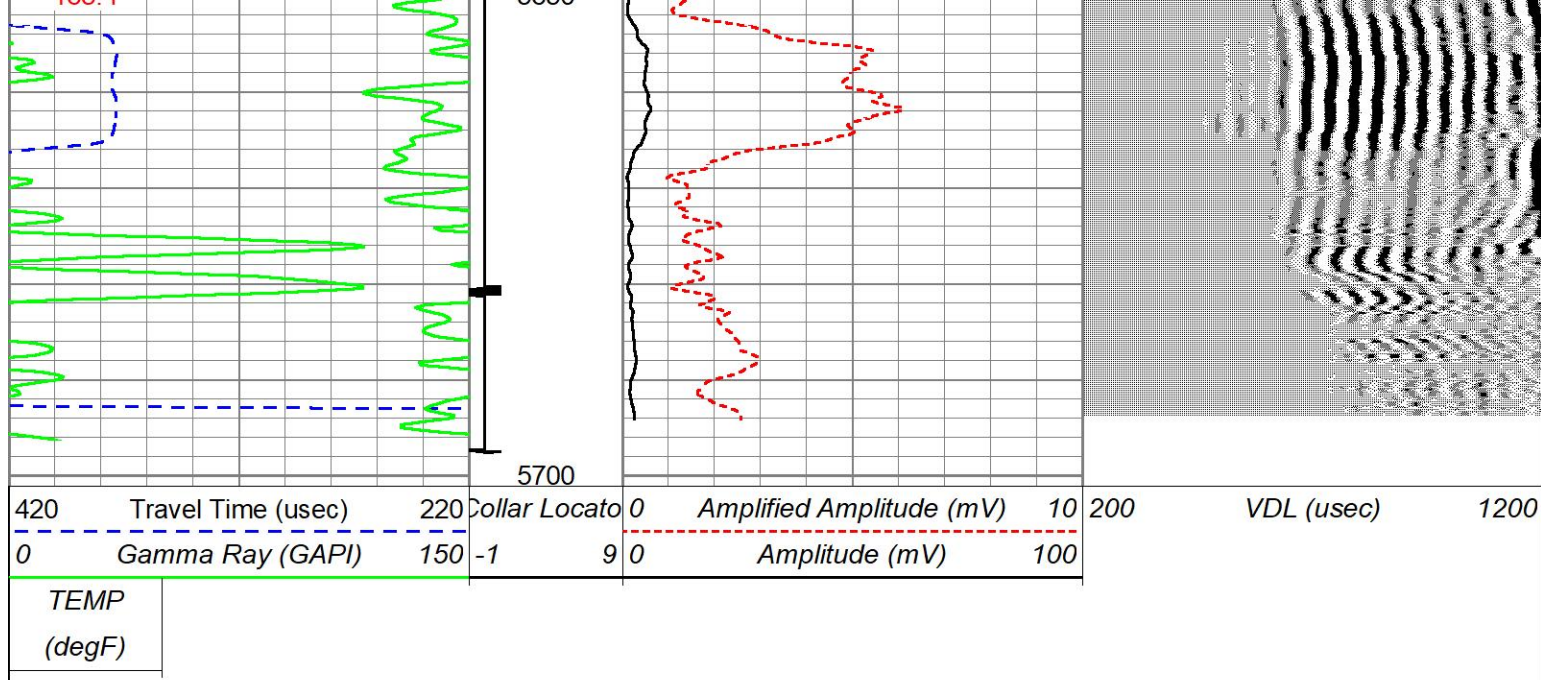


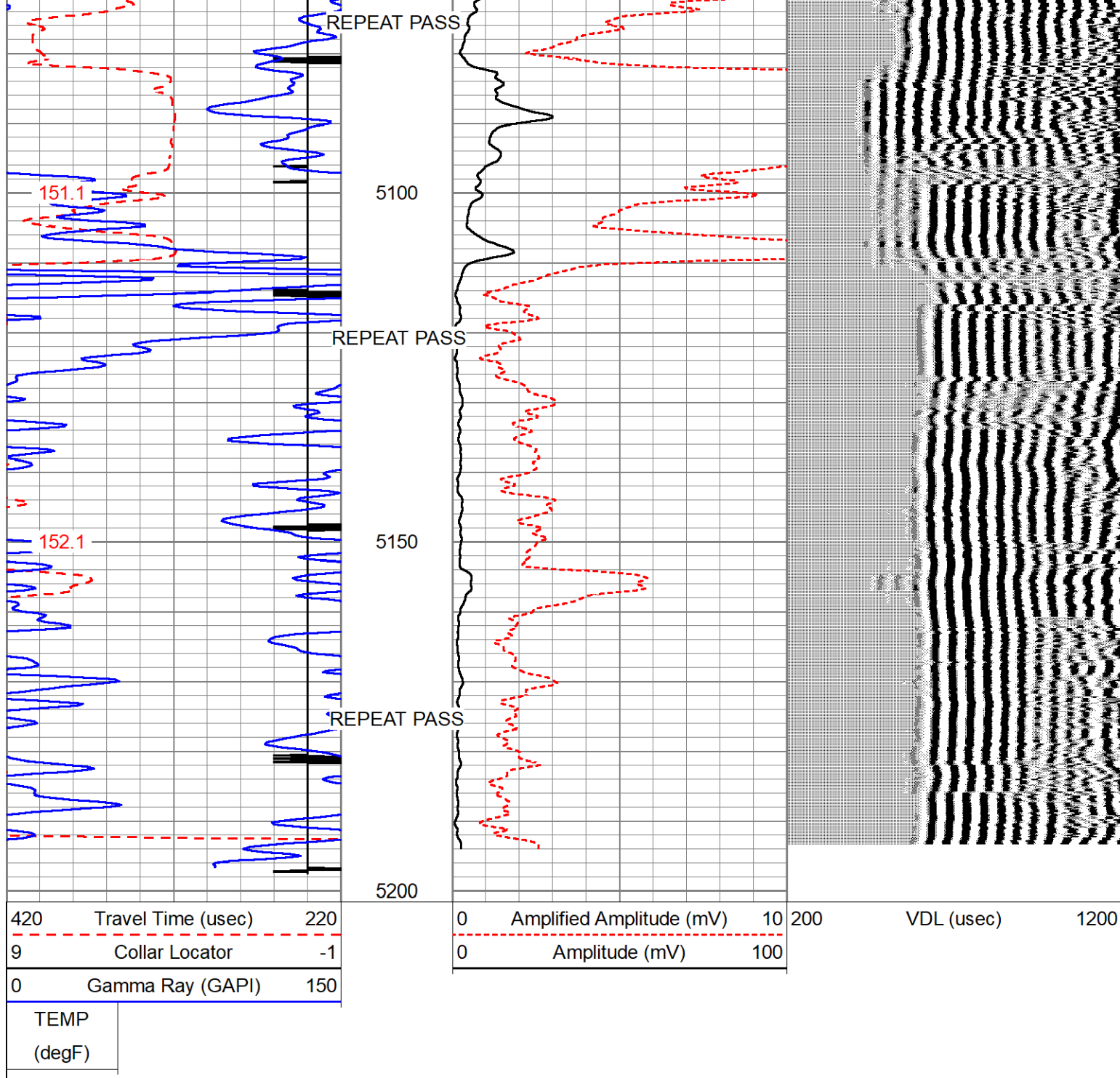












Log Variables

Database: C:\ProgramData\Warrior\Data\atom_fenno_production_clmsug1_17_may_2019_cbl.db
 Dataset: field/well/run1/pass12/_vars_

Top - Bottom

BHTEMP_Src TEMP	BOREID in 7.875	BOTTEMP degF 220	CASEOD in 5.5	CASETHCK in 0	CASEWGHT lb/ft 15.5	MAXAMPL mV 0	MINAMPL mV 1
MINATTN db/ft 0.8	PERFS No	PPT uSec 263	SRFTEMP degF 0	TDEPTH ft 0			

Variable Description

BHTEMP_Src : BHTEMP Input Source Selector
 BOREID : Borehole I.D.
 BOTTEMP : Bottom Hole Temperature

MINAMPL : Minimum Amplitude
 MINATTN : Minimum Attenuation
 PERFS : Perforation Flag

BOTTEMP : Bottom Hole Temperature
 CASEOD : Casing O.D.
 CASETHCK : Casing Thickness
 CASEWGHT : Casing Weight
 MAXAMPL : Maximum Amplitude

PERFS : Perforation Flag
 PPT : Predicted Pipe Time
 SRFTEMP : Surface Temperature
 TDEPTH : Total Depth

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
HeadVolt	14.13		CHD-Titan Titan 1 7/16" GO Cablehead	1.00	1.44	5.00
Temp	11.28					
WVFS8	9.05		RBT-Probe 2.75 Radii W/Temp (121043) Probe 2.75" Radial with Integral Temperature Sub	9.39	2.75	90.00
WVFS7	9.05					
WVFS6	9.05					
WVFS5	9.05					
WVFS4	9.05					
WVFS3	9.05					
WVFS2	9.05					
WVFS1	9.05					
WVFCAL	9.05					
WVF3FT	9.05					
WVF5FT	8.05					
HEADVOLT	4.80					
CCL	3.92					
GR	2.58		GR-Probe275 (121037) Probe 2 3/4" Logging Gamma Ray 6 Pin	4.80	2.75	57.00

Dataset: tom_fenno_production_clmsug1_17_may_2019_cbl.db: field/well/run1/pass12
 Total length: 15.19 ft
 Total weight: 152.00 lb
 O.D.: 2.75 in

Calibration Report

Database File tom_fenno_production_clmsug1_17_may_2019_cbl.db
 Dataset Pathname pass12
 Dataset Creation Fri May 17 17:57:29 2019

Gamma Ray Calibration Report

Serial Number: 121037
 Tool Model: Probe275
 Performed: Fri May 17 12:30:16 2019

 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: 121043
 Tool Model: Probe 2.75 Radii W/Temp

 Calibration Casing Diameter: 5.500 in
 Calibration Depth: 731.694 ft

Master Calibration, performed Fri May 17 17:34:13 2019:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.019	0.506	0.000	71.921	136.970	2.585
CAL	-0.017	0.619				
5'	-0.018	0.064	0.000	71.921	884.252	15.716
SUM						
S1	0.505	0.198	0.000	71.900	-233.871	118.189
S2	-0.016	0.295	0.000	71.900	231.136	3.792
S3	0.597	0.436	0.000	71.900	-447.742	267.109
S4	-0.017	0.434	0.000	71.900	159.466	2.760
S5	0.418	0.415	0.000	71.900	-21734.318	9091.430
S6	-0.018	0.389	0.000	71.900	176.380	3.258
S7	0.534	0.469	0.000	71.900	-1105.282	590.662
S8	-0.018	0.499	0.000	71.900	139.061	2.458


Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.017	0.619	1.000	0.000

Air Zero Calibration, performed Sat Sep 29 06:43:31 2018:

	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	TOM FENNO PRODUCTION LLC.
	Well	CLARKS LAKE MUDDY SAND G-1
	Field	CLARKS FIELD
	County	
	State	Country