



CEMENT BOND
CASING COLLAR
GAMMA LOG

Company	GREAT WESTERN OPERATING COMPANY	
Well	COLORADO STATE #2	
Field	BLACK HOLLOW	
County	WELD	
State	CO	
Location:	API # : 05-123-05454	
Permanent Datum	SEC 36 TWP 8N RGE 67W	SE/SE
Log Measured From	8750'	Elevation 5129'
Drilling Measured From	NA	Other Services GAGE RING RBP
Elevation	K.B. 5139' D.F. 5138' G.L. 5129'	

Date	05-09-2019
Run Number	3
Depth Driller	
Depth Logger	8750'
Bottom Logged Interval	8750'
Top Log Interval	SURFACE
Open Hole Size	
Type Fluid	WATER
Density / Viscosity	
Max. Recorded Temp.	
Estimated Cement Top	1450'
Time Well Ready	ROA
Time Logger on Bottom	11:00 AM
Equipment Number	73
Location	PLATTEVILLE
Recorded By	NAZARETH DIONNE
Witnessed By	BENELLIS

Borehole Record			Tubing Record				
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size	Mq/ft	Top	Bottom
Surface String	9.625"	36 LB	SURFACE	324'
Prot. String				
Production String	5.5"	17 LB	SURFACE	9022'
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/CCL/GAMMA RAN PER CUSTOMER REQUEST
LOG MEASURED FROM 8750' TO SURFACE
LOG RAN UNDER 0 PSI
ANOMALY 900' TO SURFACE
RAN REPEAT PASS TO VERIFY CORRECT OPERATION OF TOOL
VISUAL CONFORMATION OF FLUID TO SURFACE

THANK YOU FOR USING KLX ENERGY SERVICES

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			CHD-Titan Titan 1 7/16" GO Cablehead	1.00	1.44	5.00

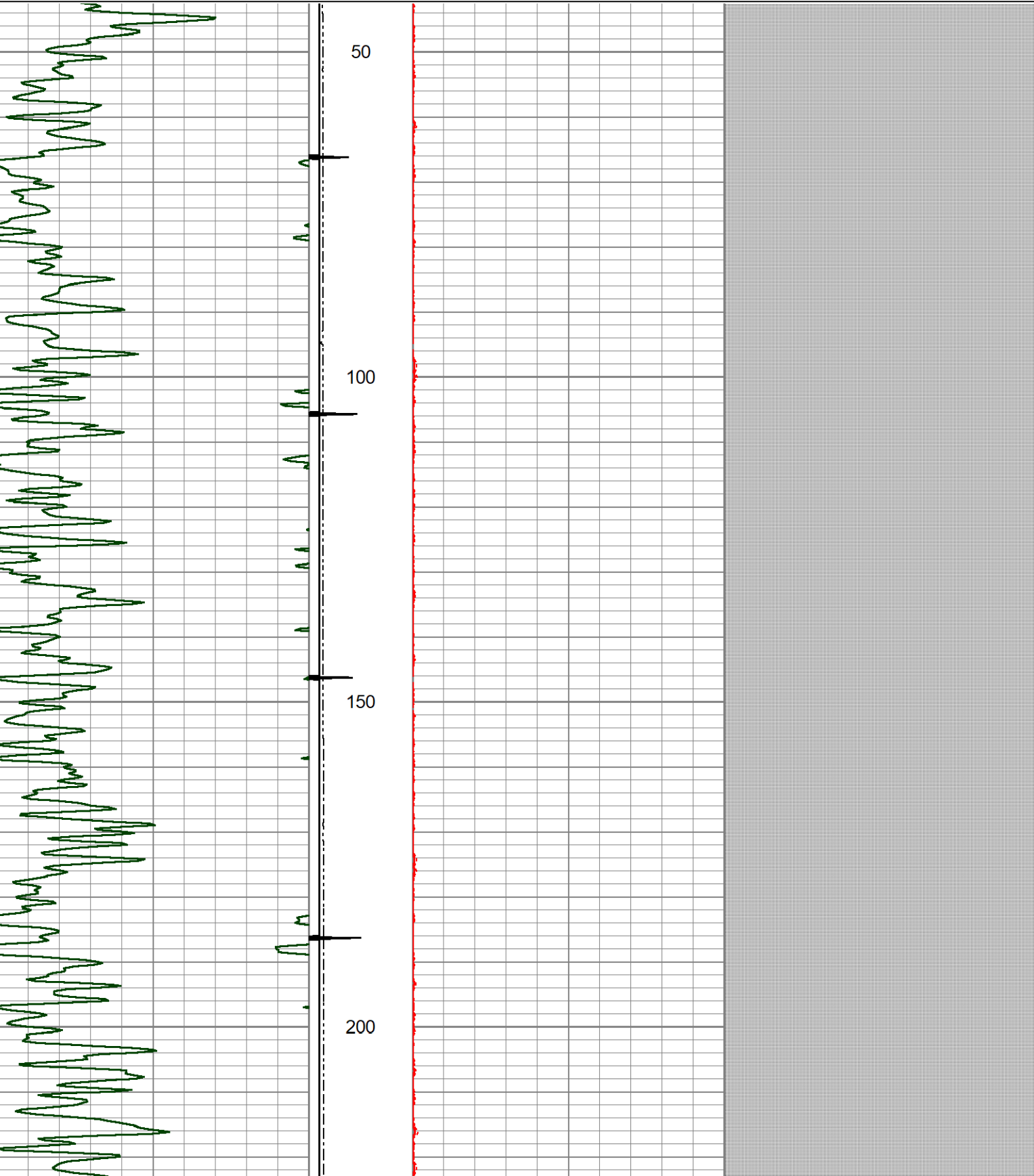


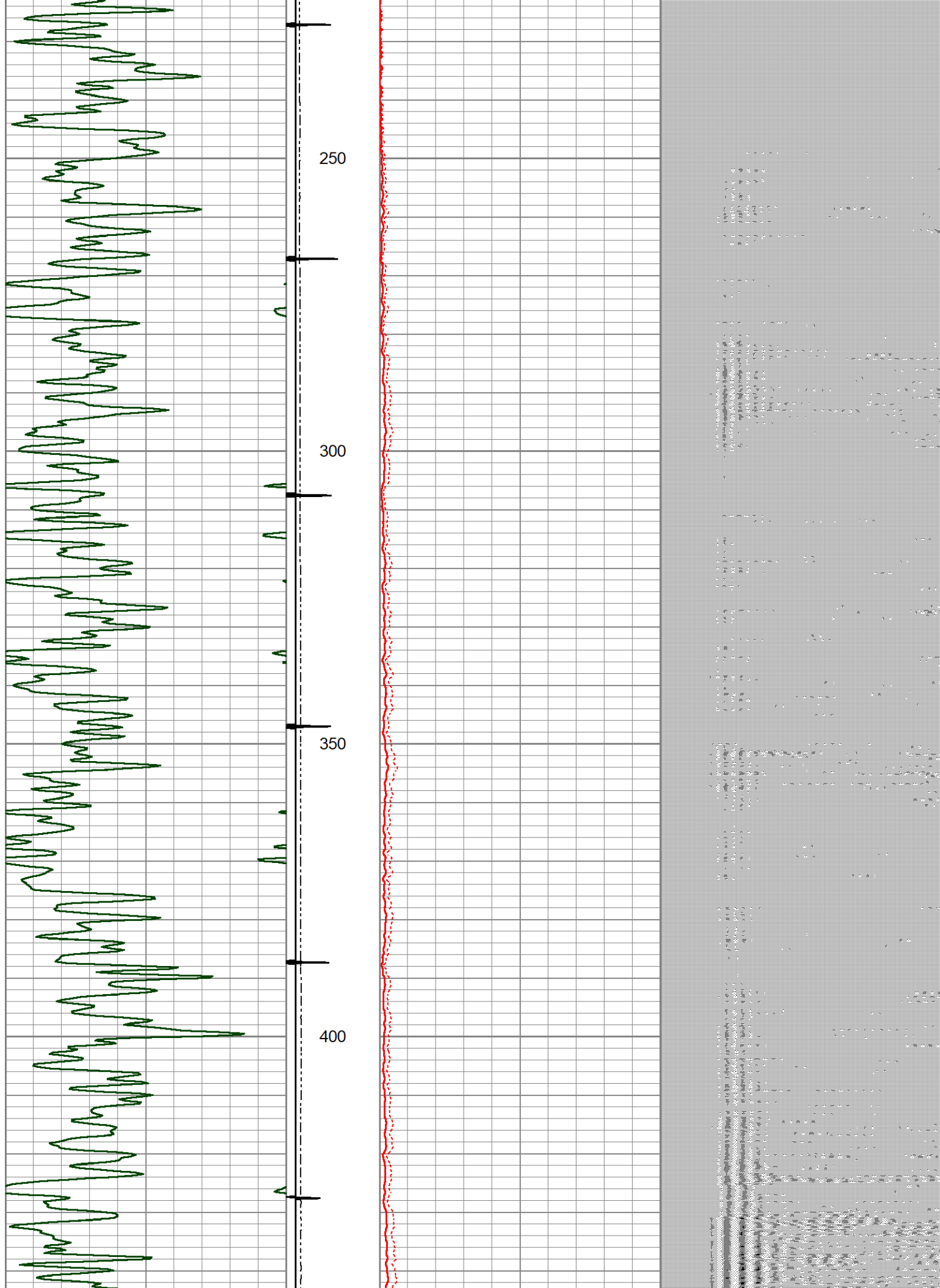
KLX
Energy Services

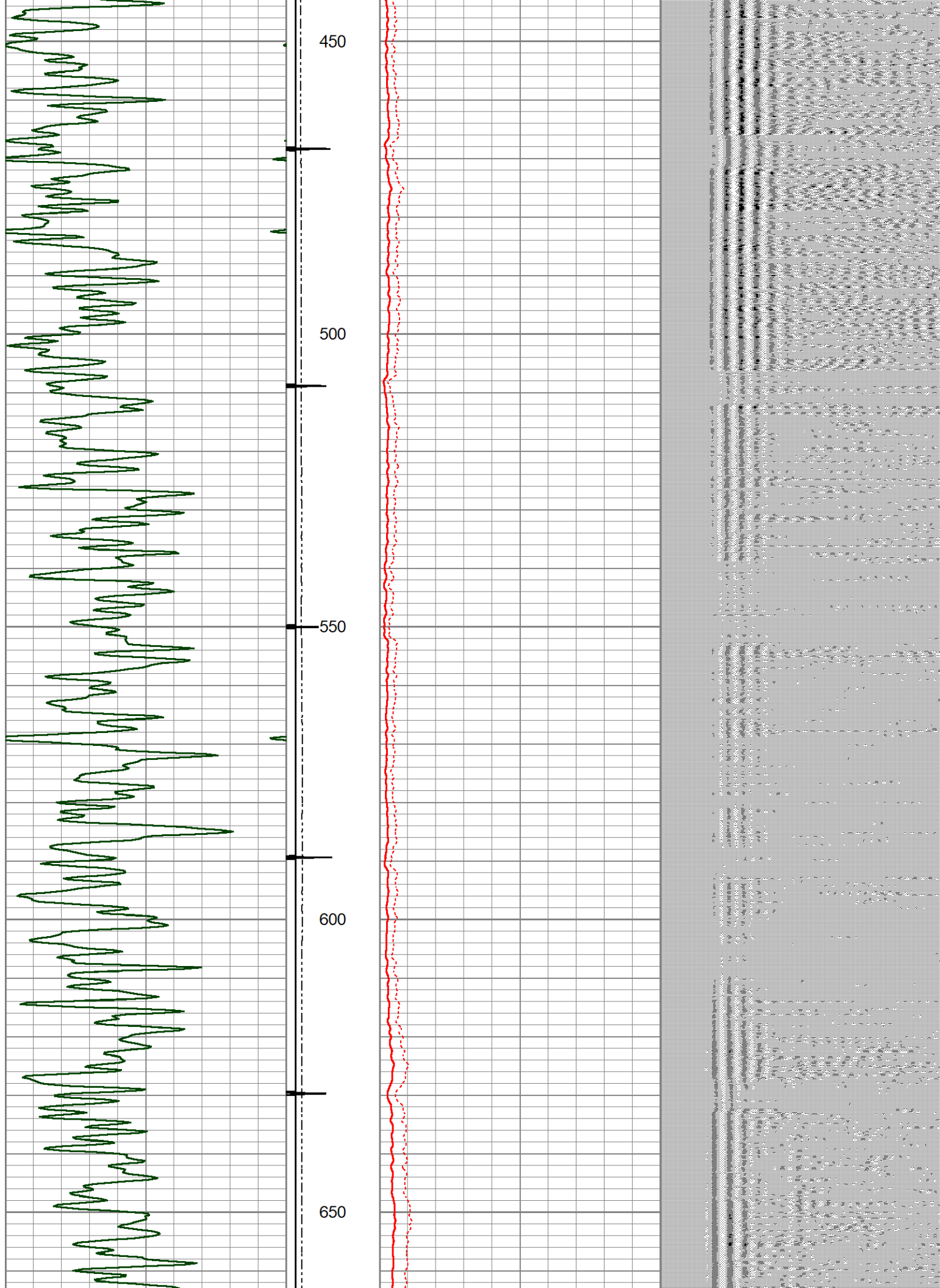
SURFACE REPEAT PASS

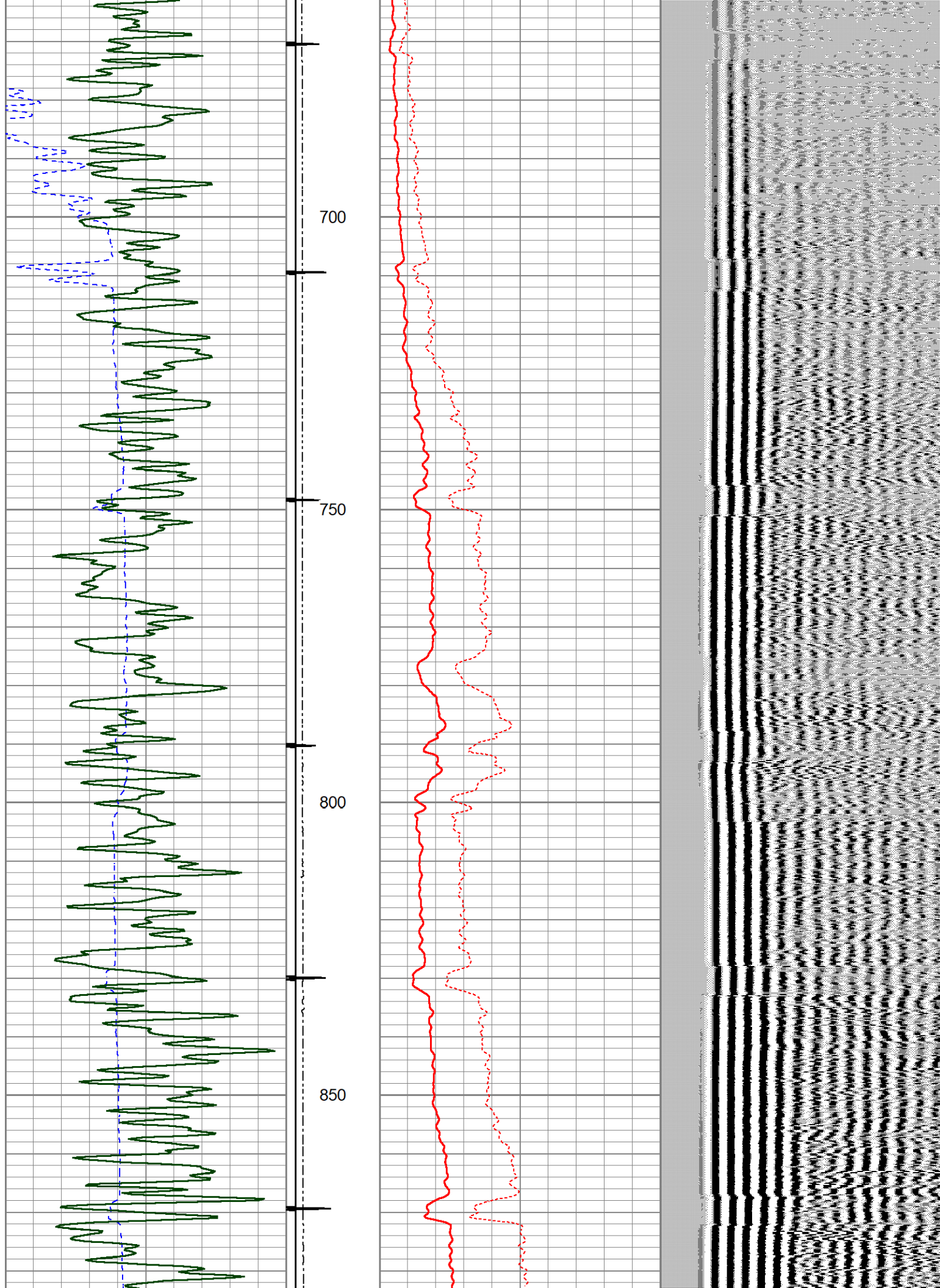
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Dataset Pathname pass20
Presentation Format cbl_drs
Dataset Creation Thu May 09 12:49:16 2019
Charted by Depth in Feet scaled 1:240

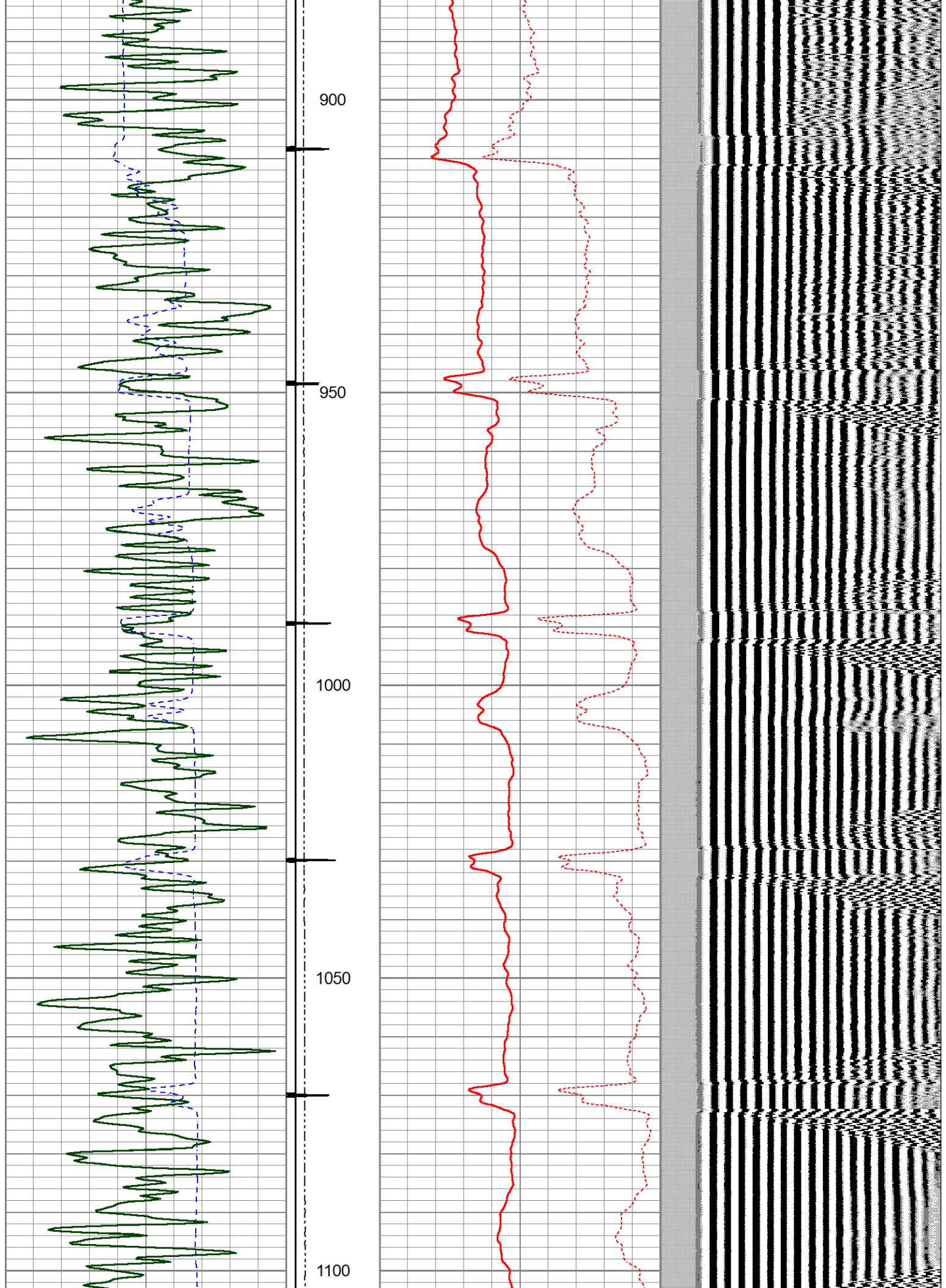
400	TRAVEL TIME (usec)	200	LTEN	0	AMP AMPLITUDE (mV)	50	200	VDL (usec)	1200
30	Gamma Ray (GAPI)	130	0 (lb2000	0	AMPLITUDE (mV)	100			
			-1 CCL	9					

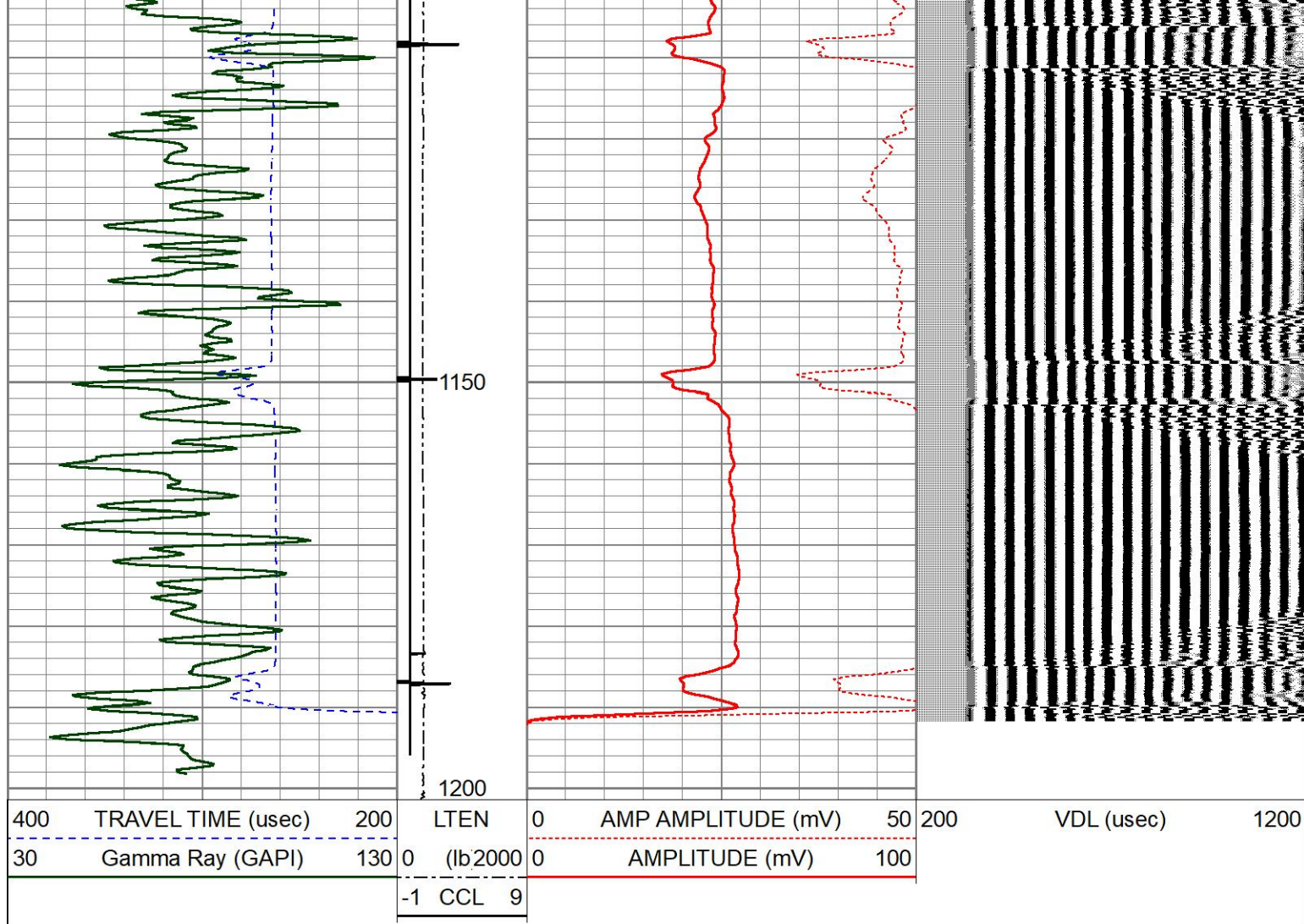






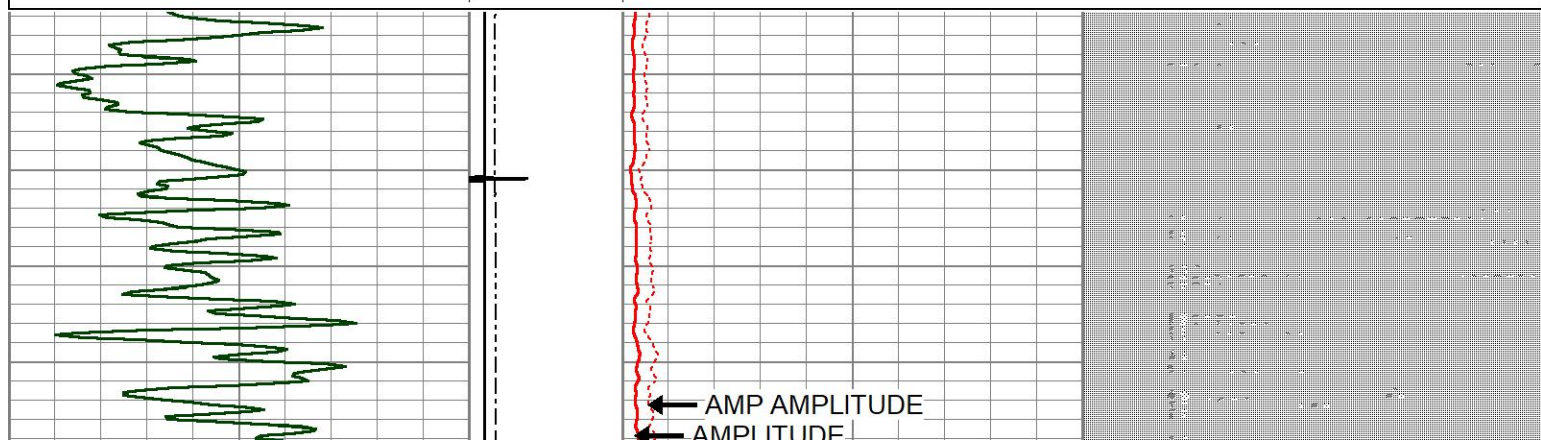
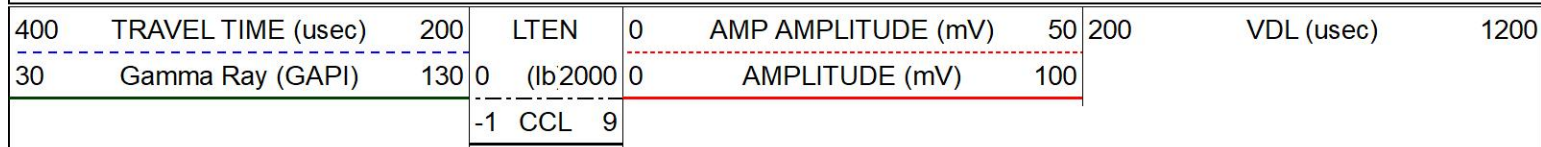


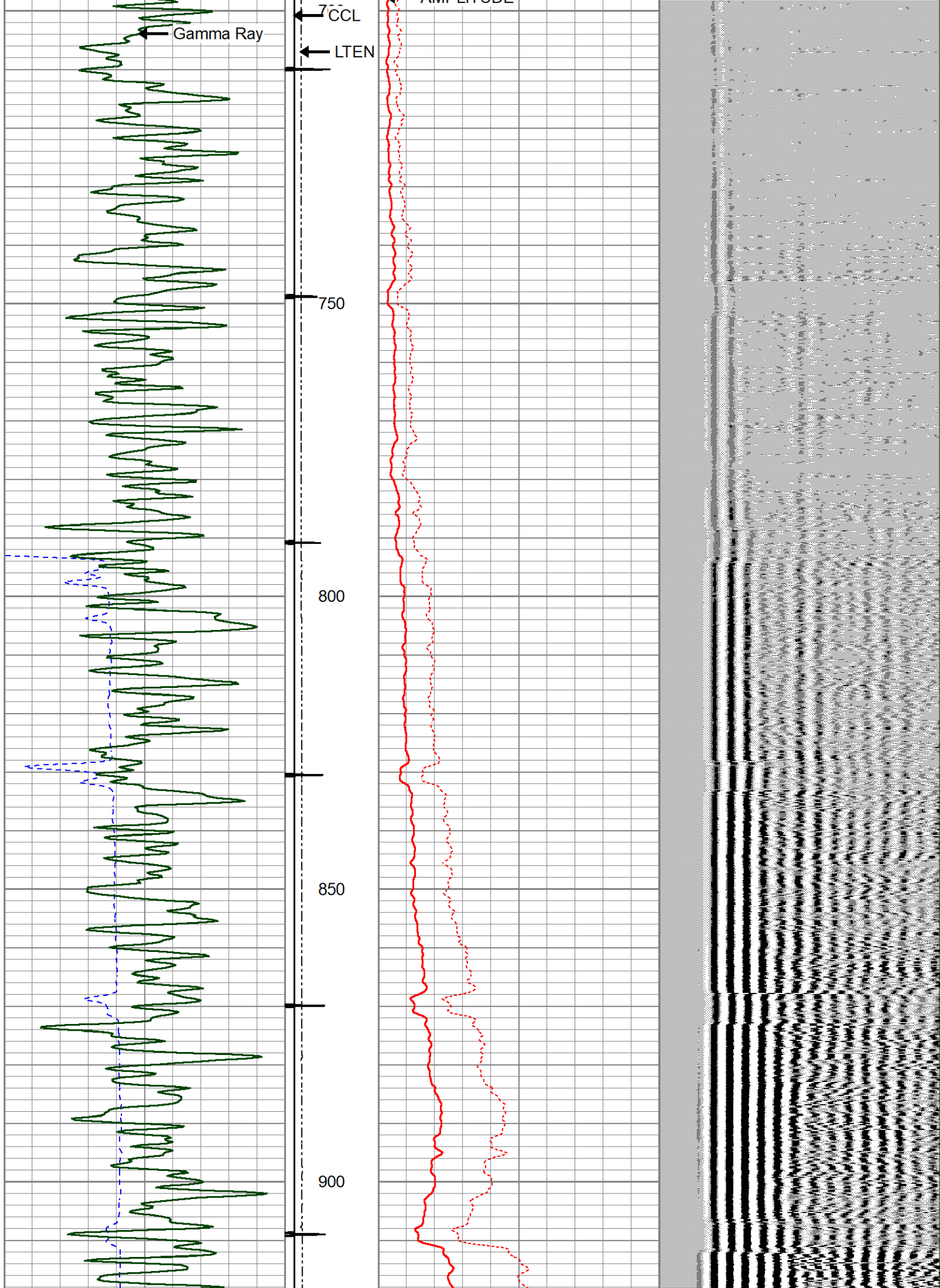


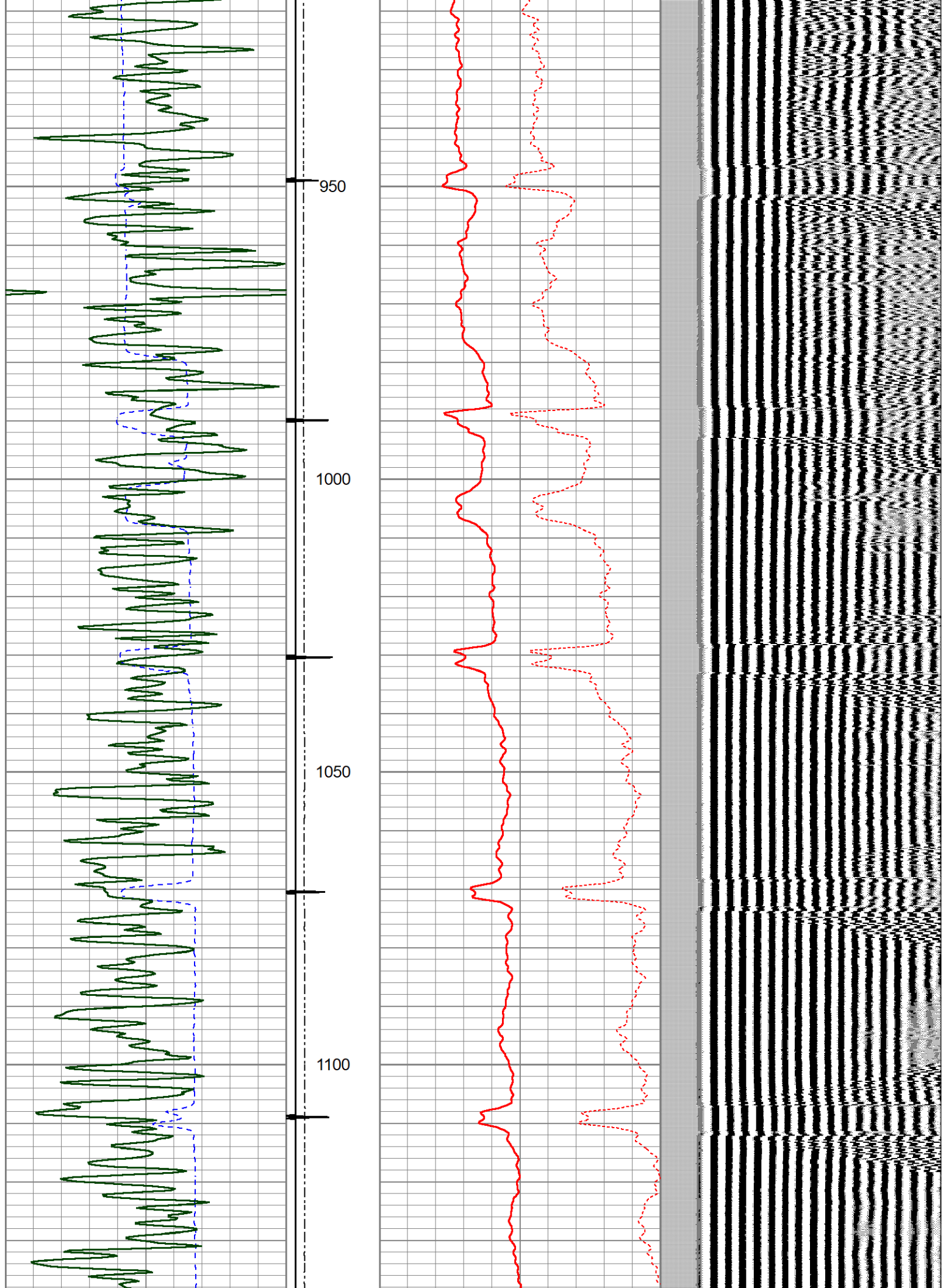


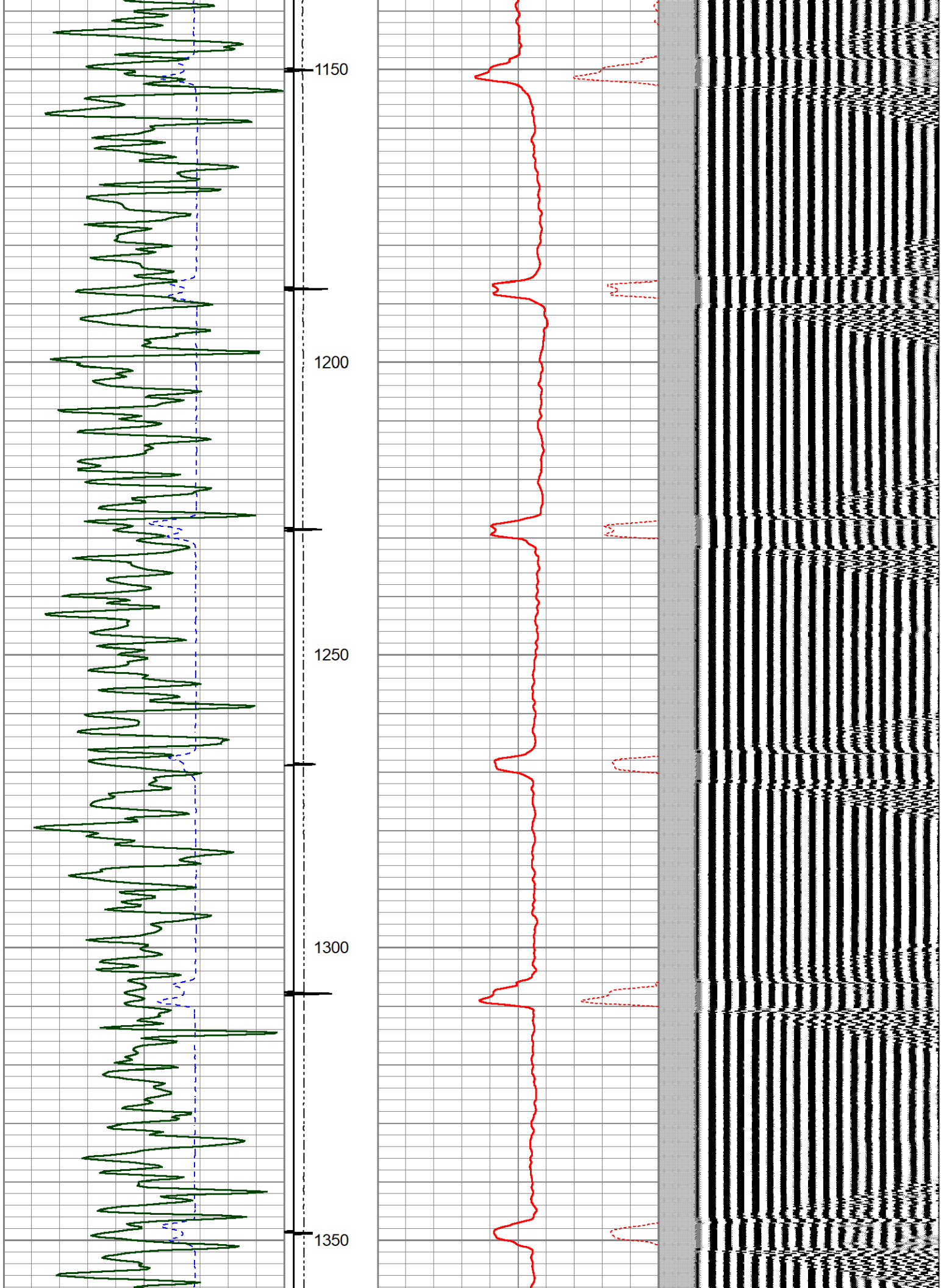
MAIN PASS LOGGED @ 0 PSI

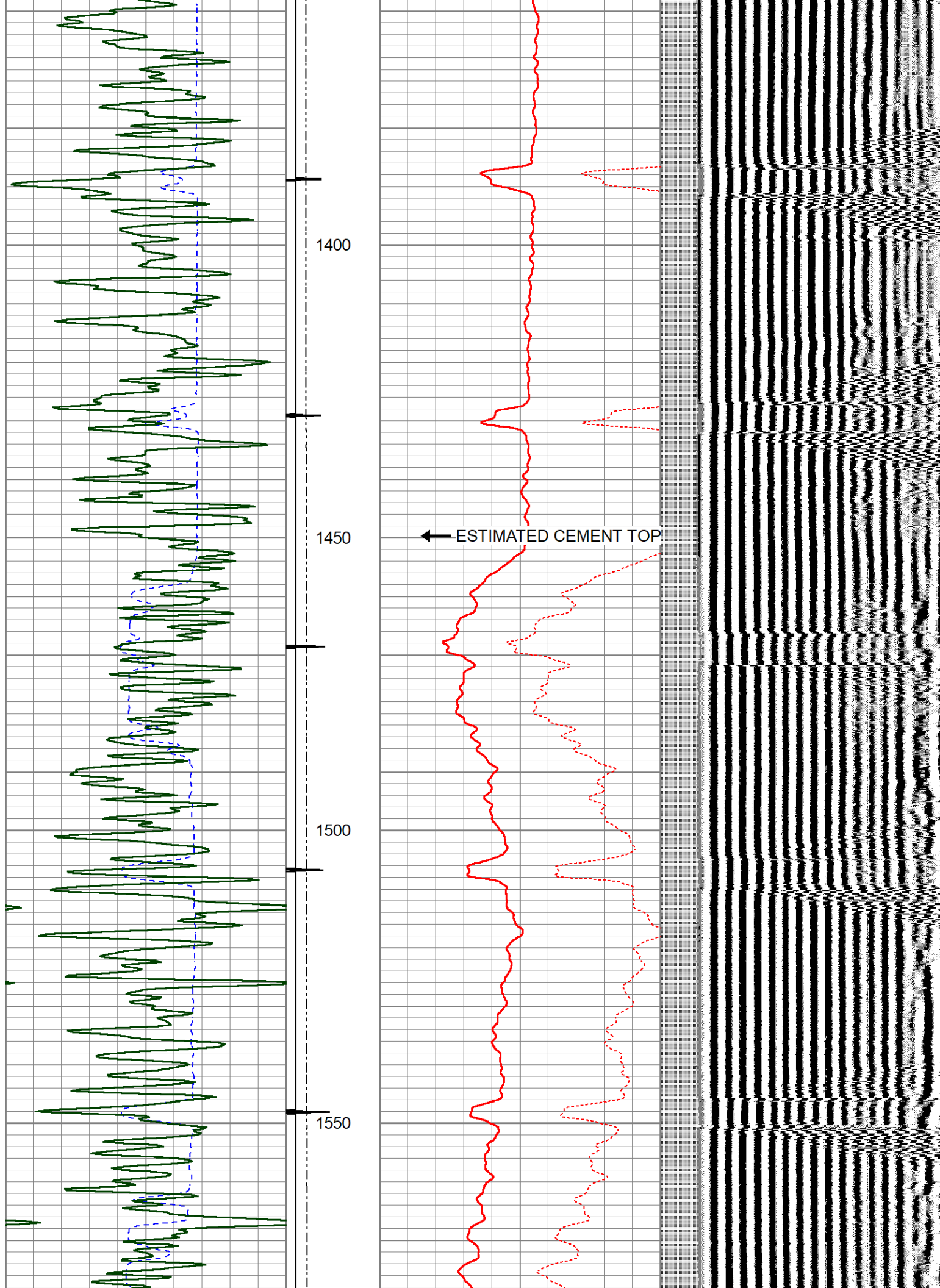
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 Dataset Pathname pass19
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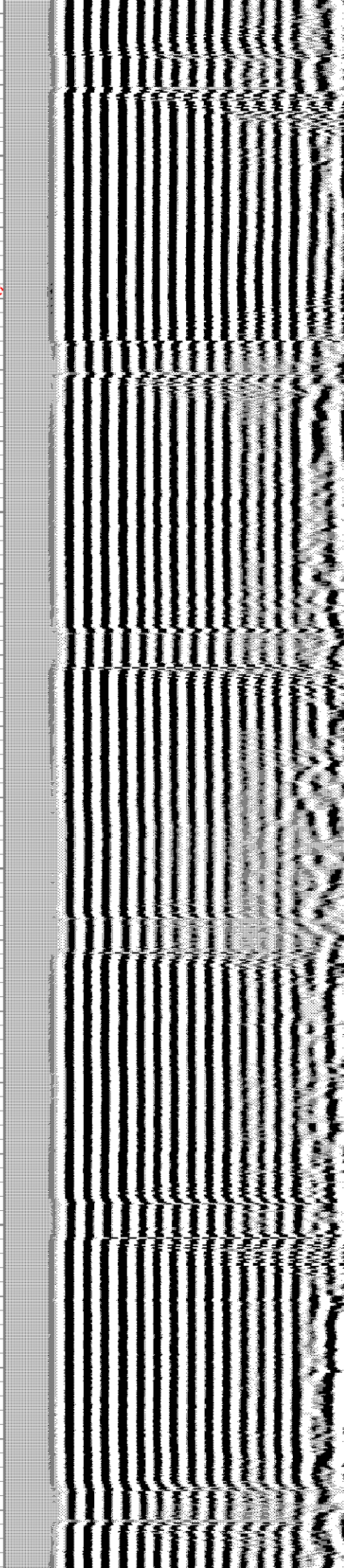
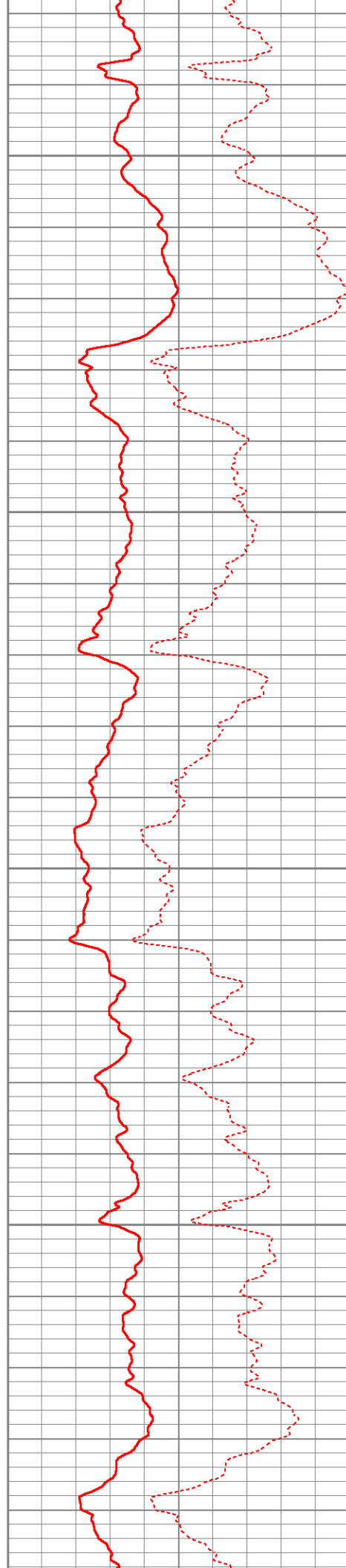
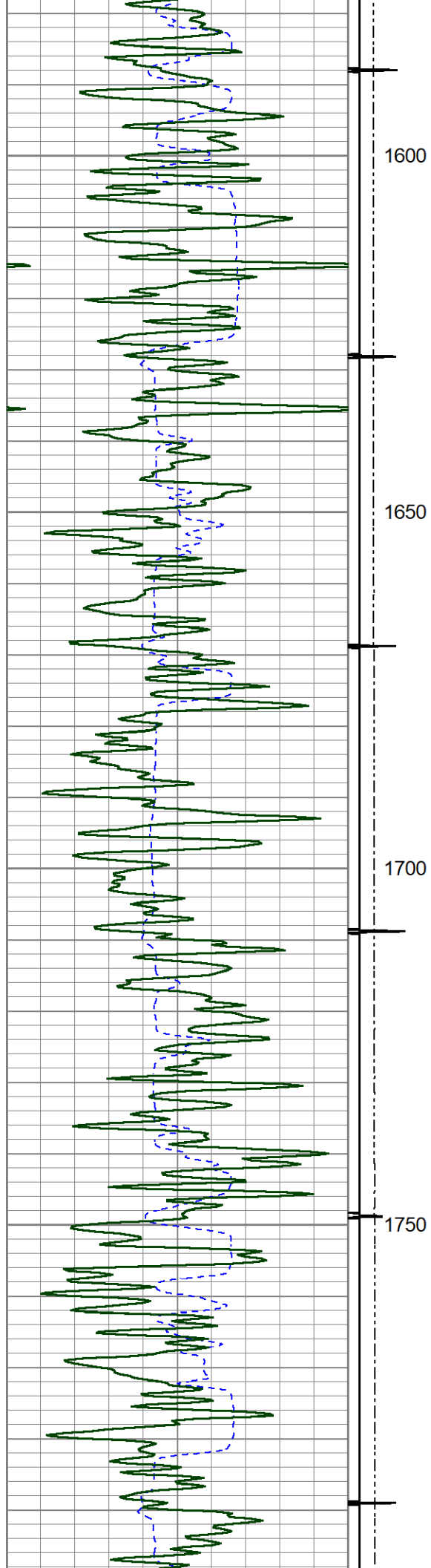


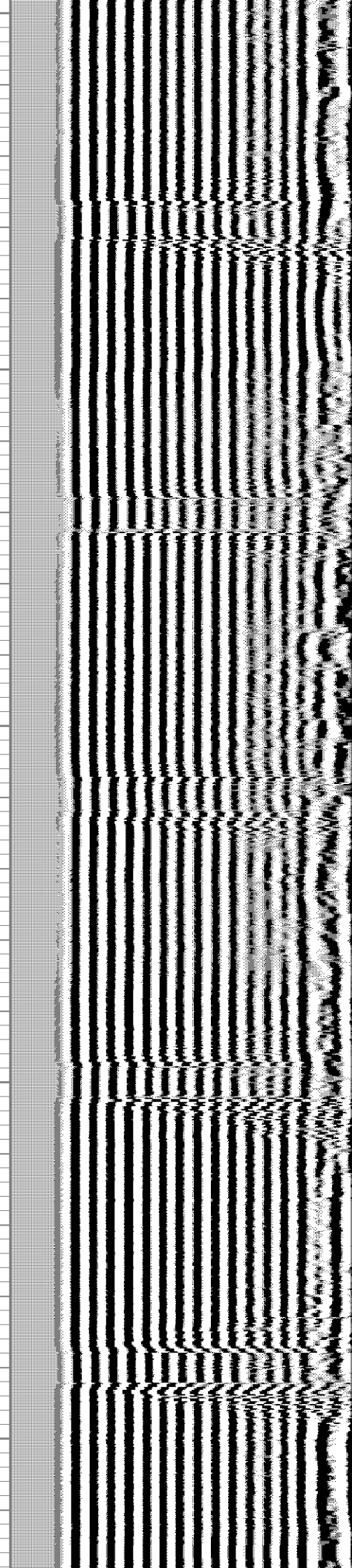
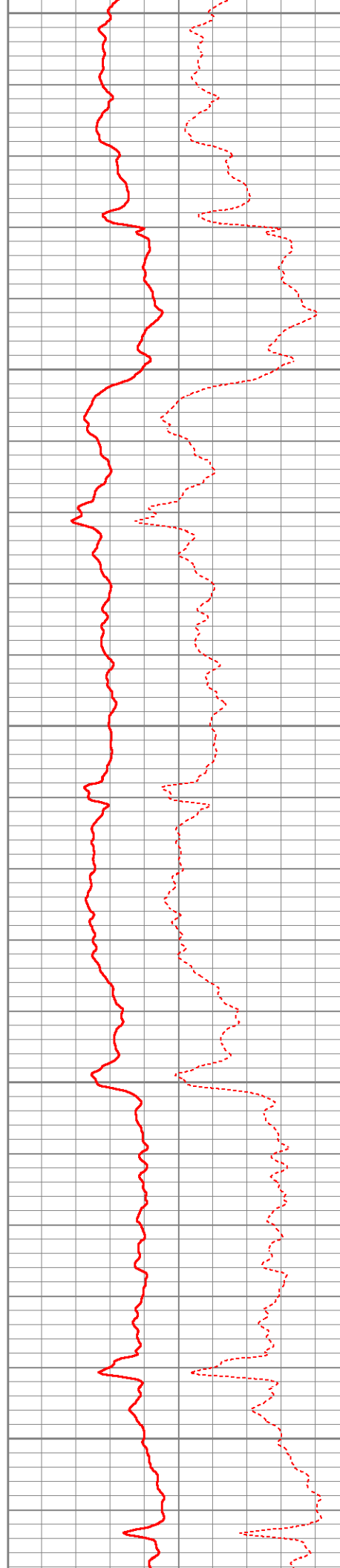
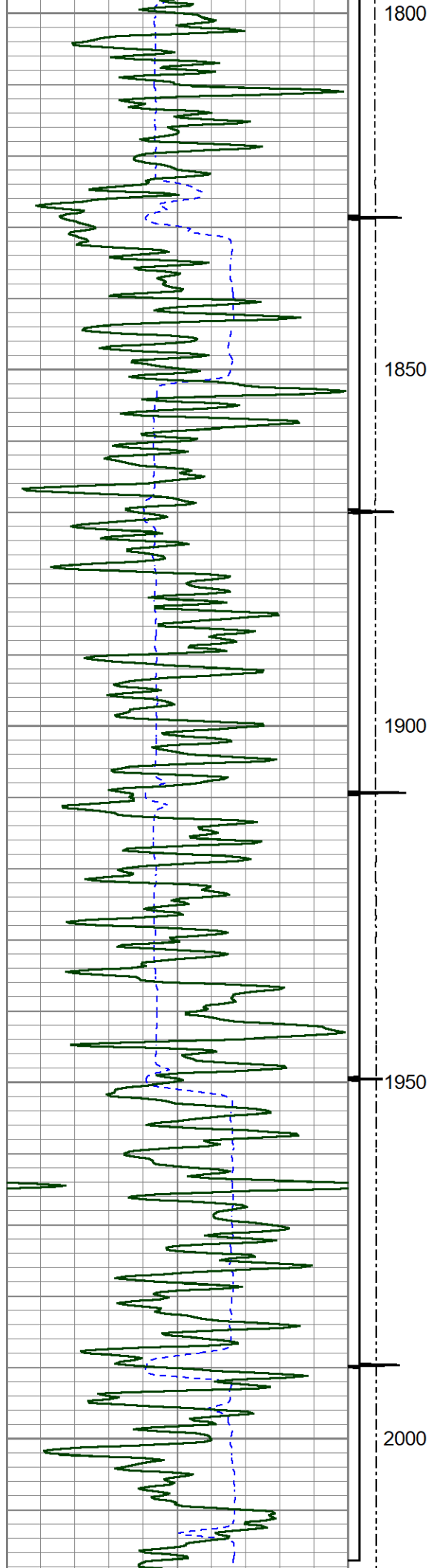


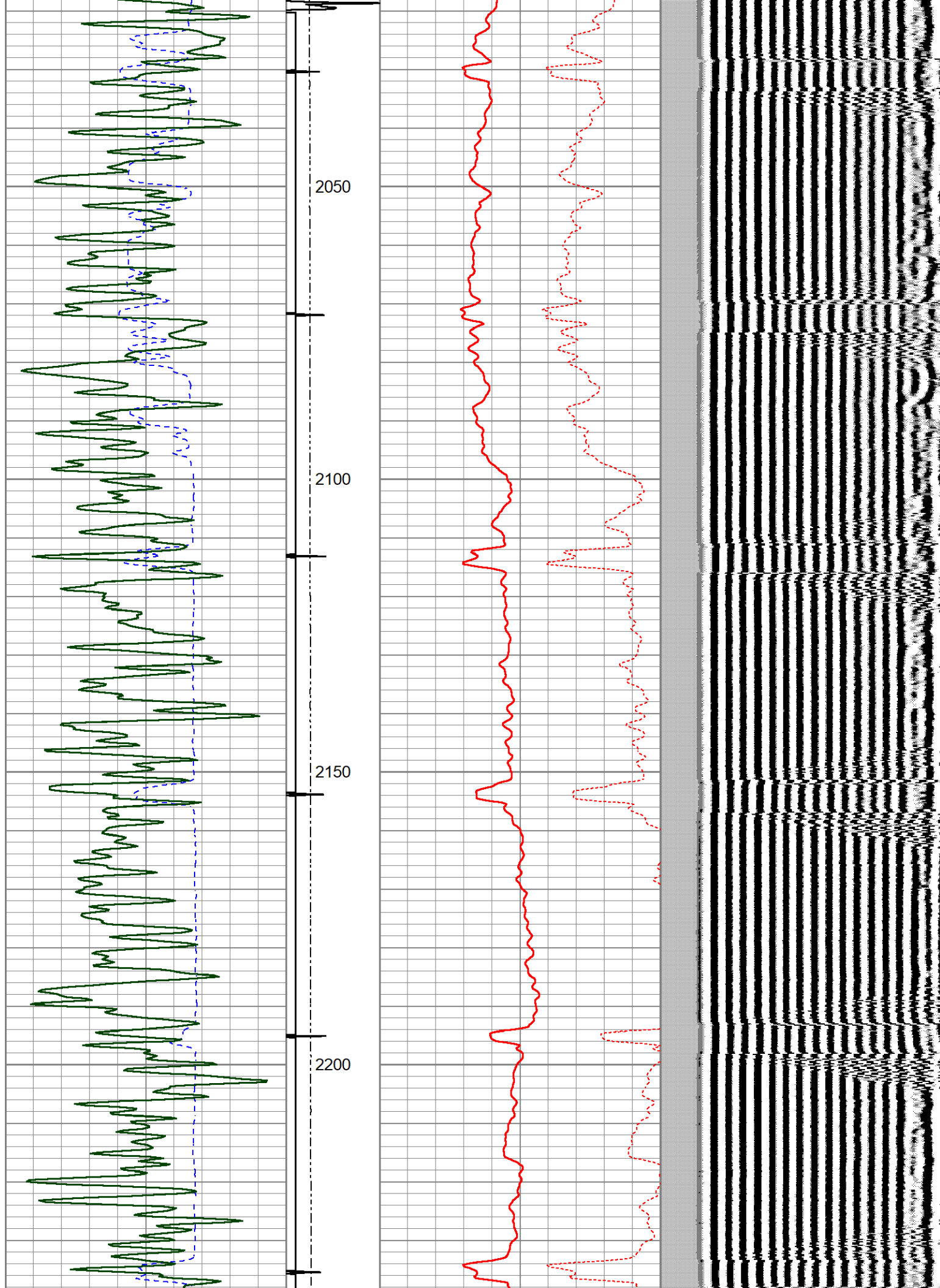


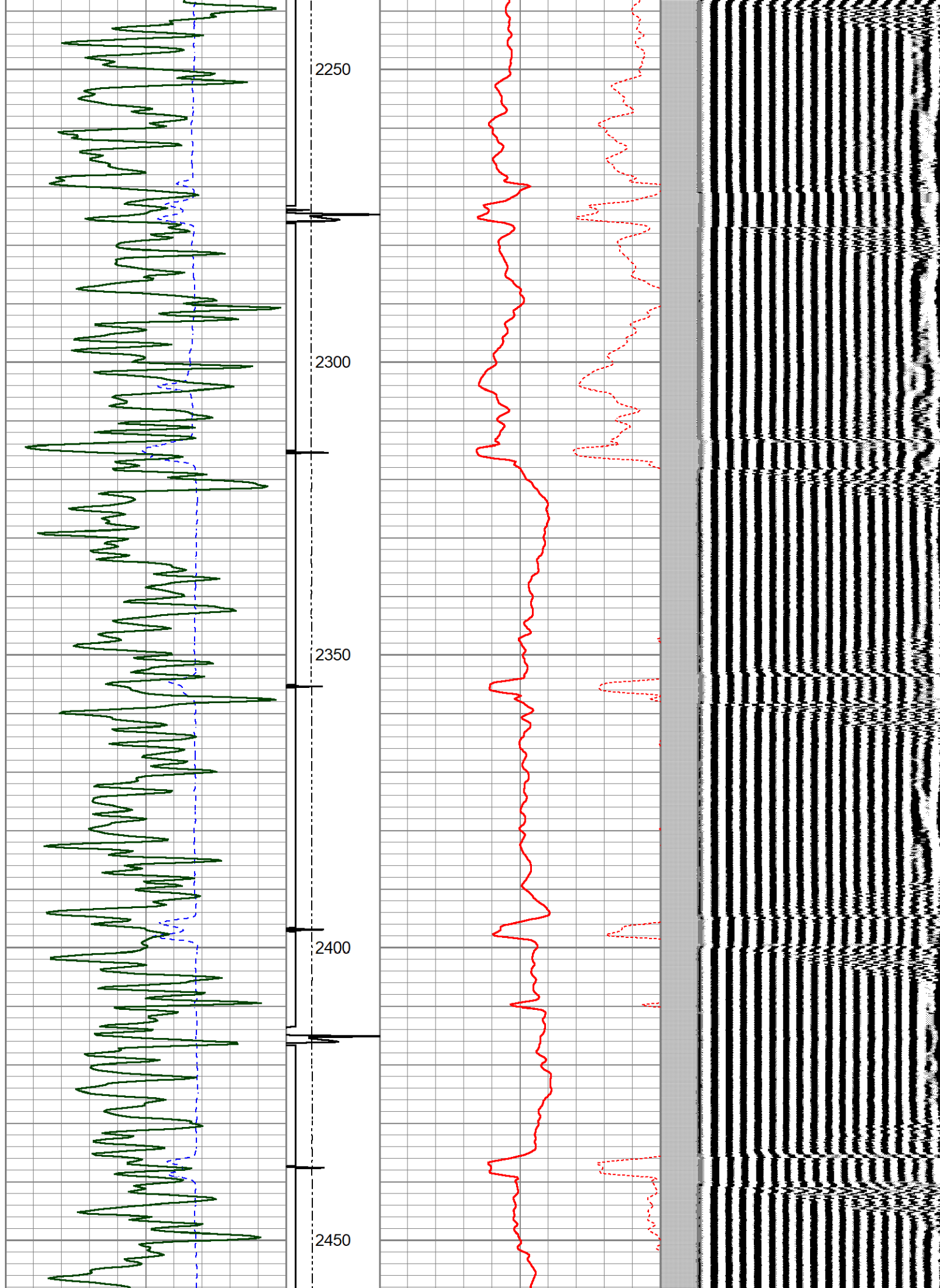


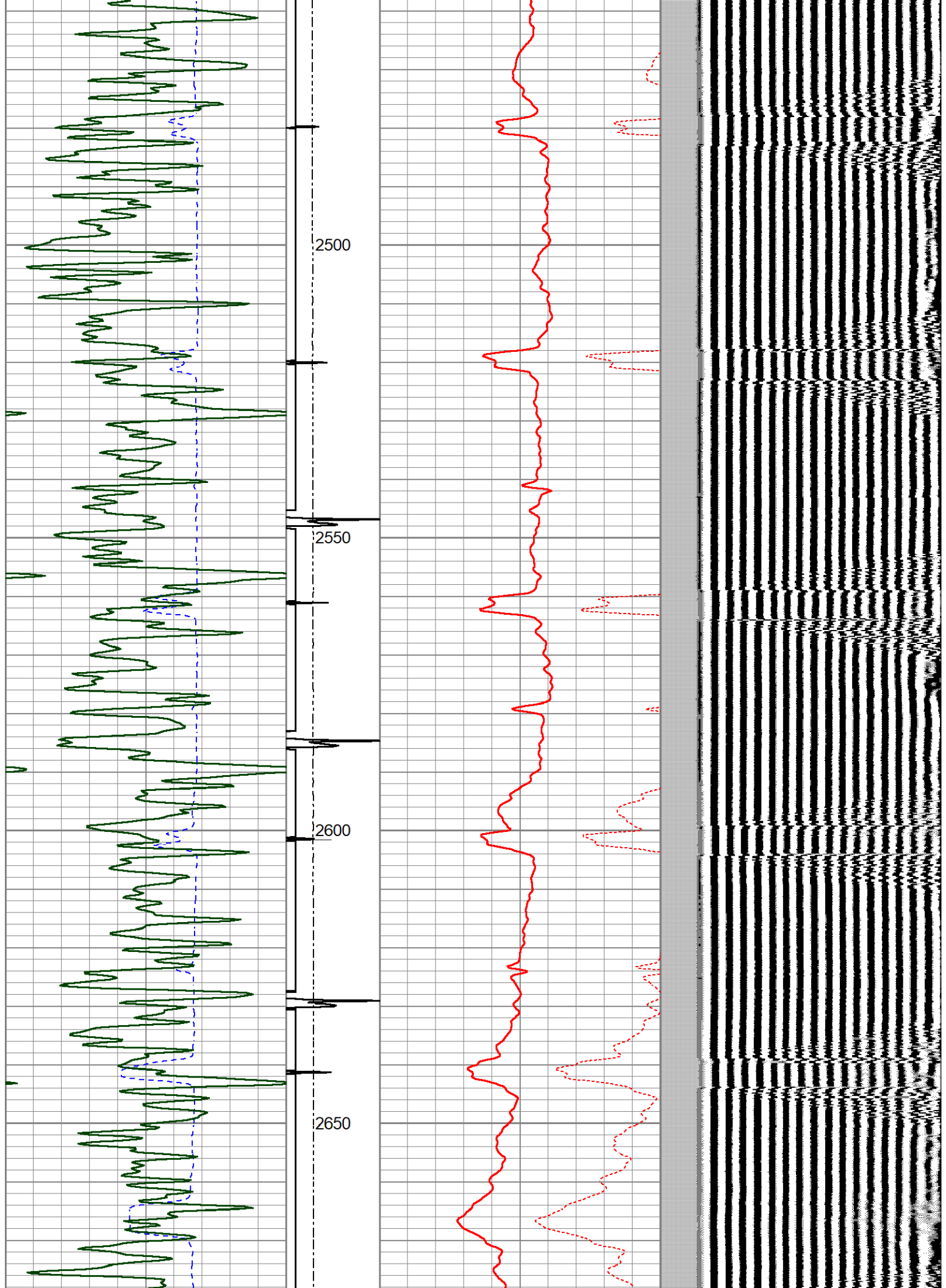


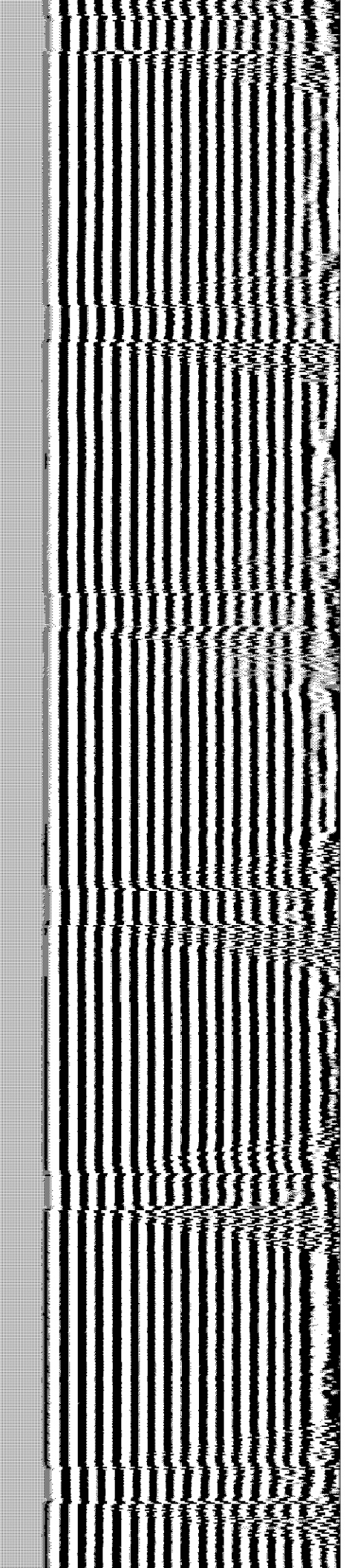
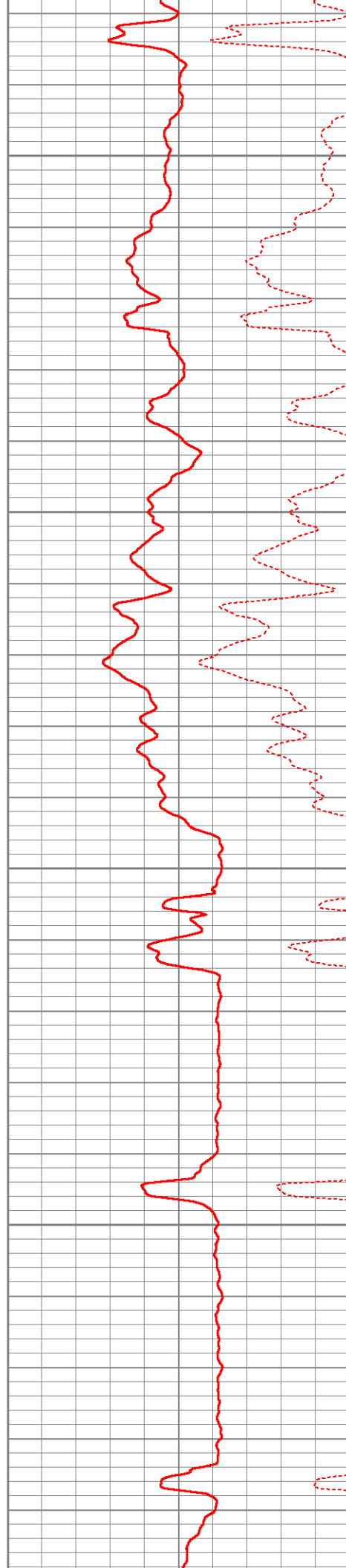
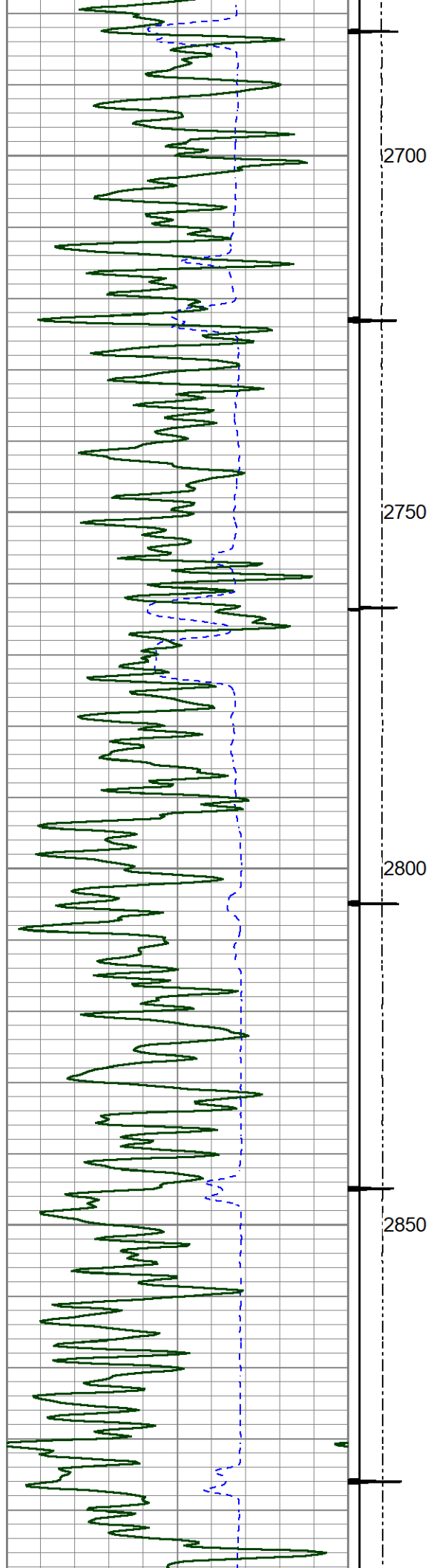


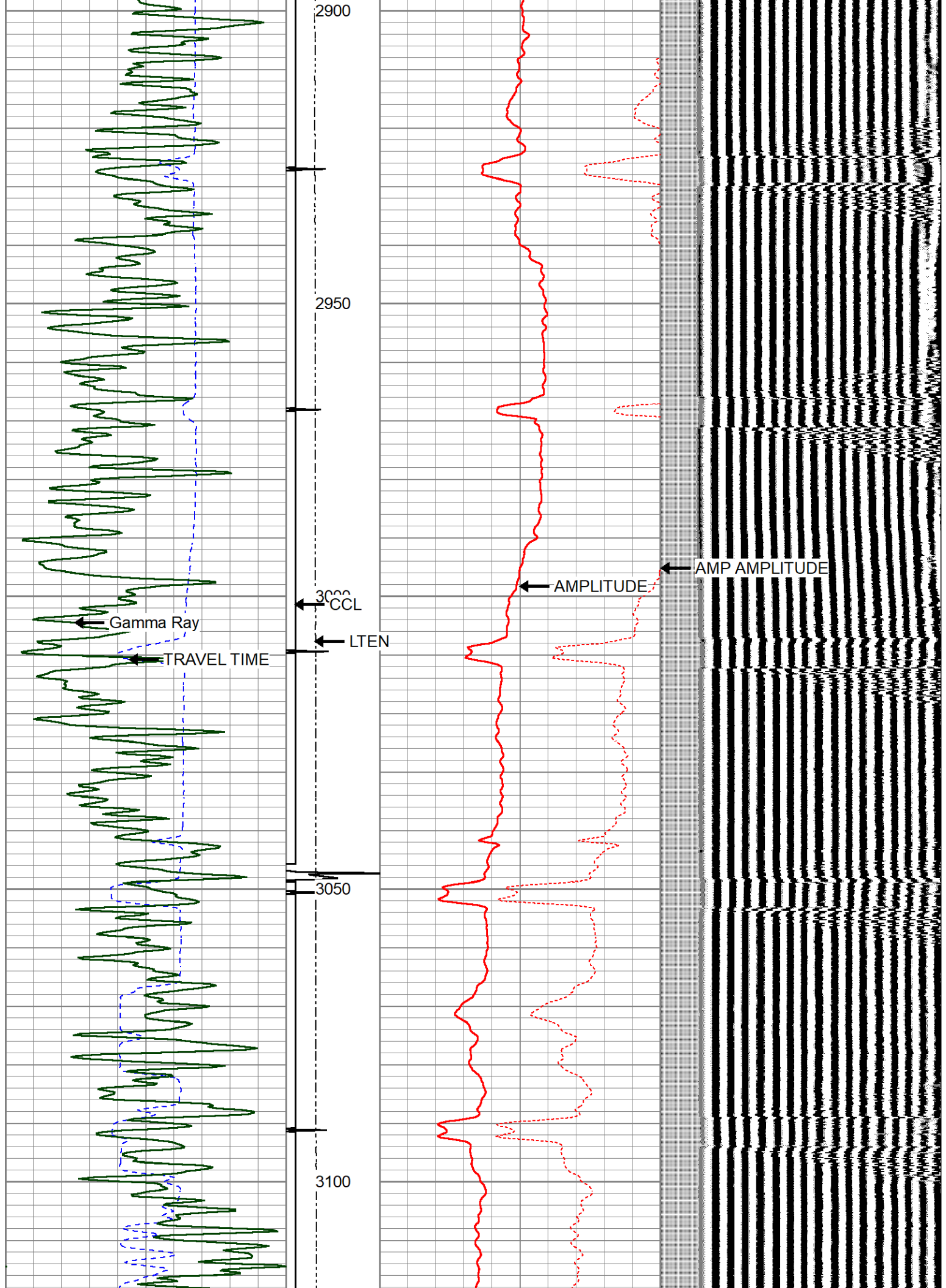


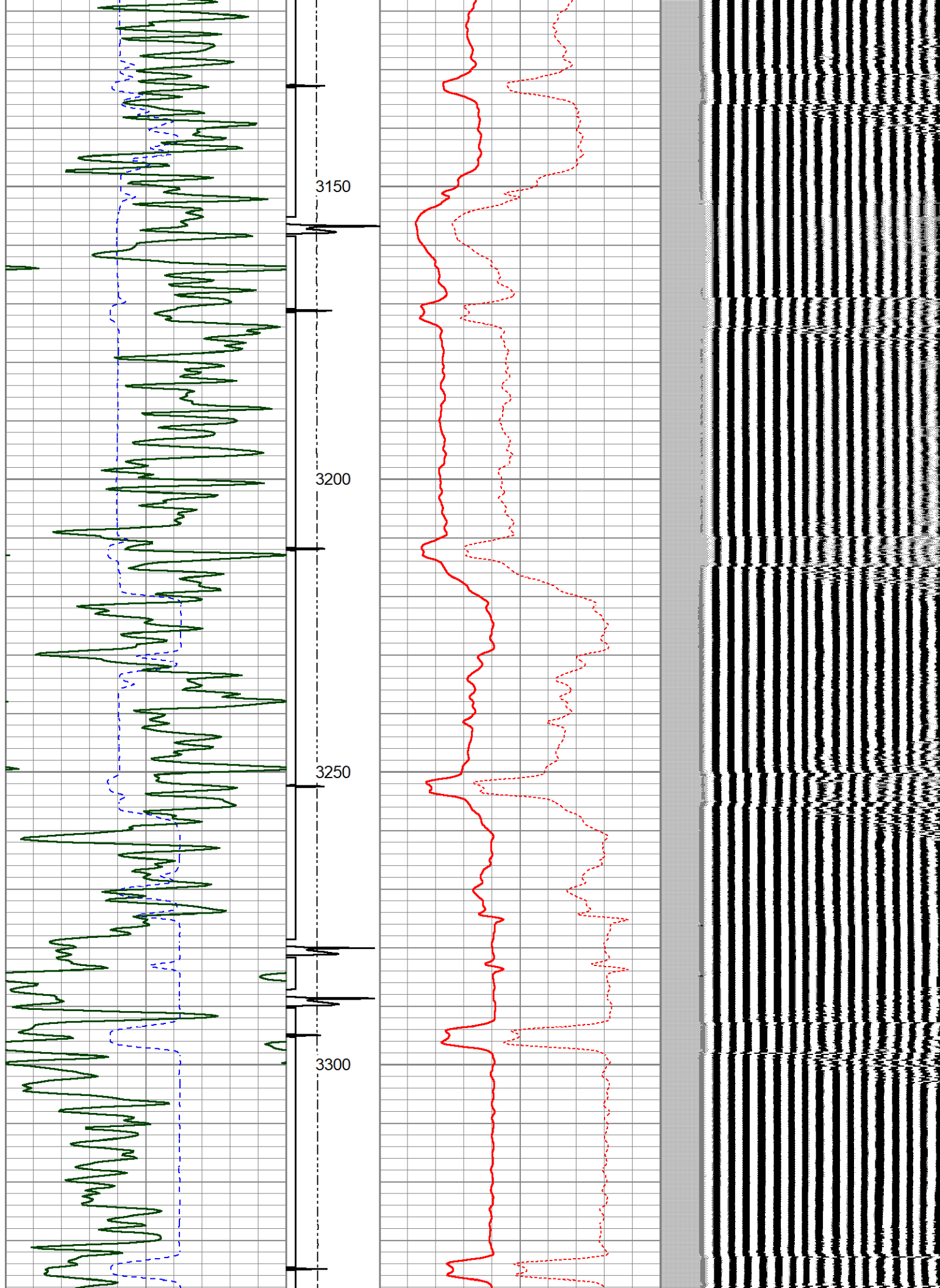


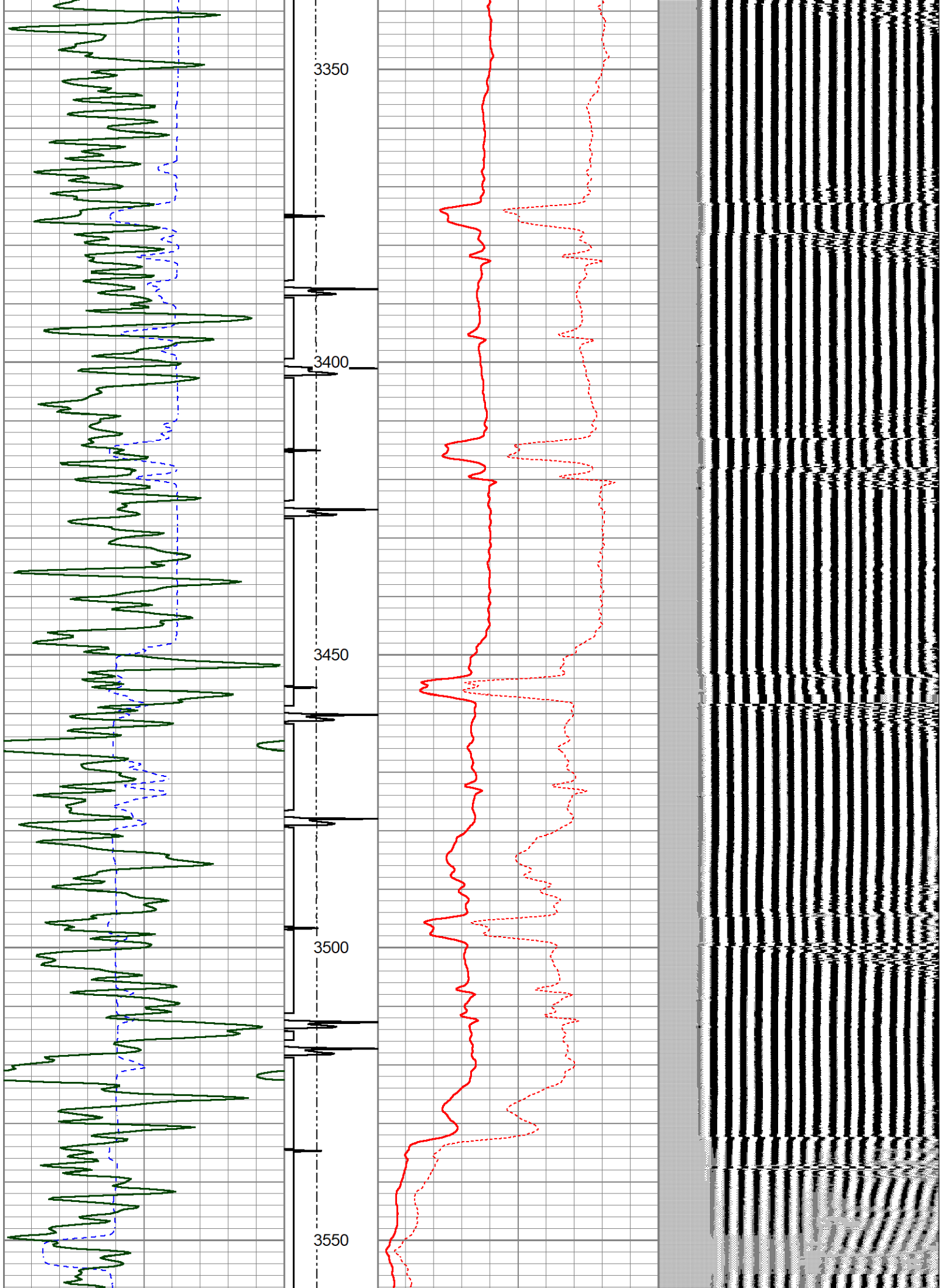


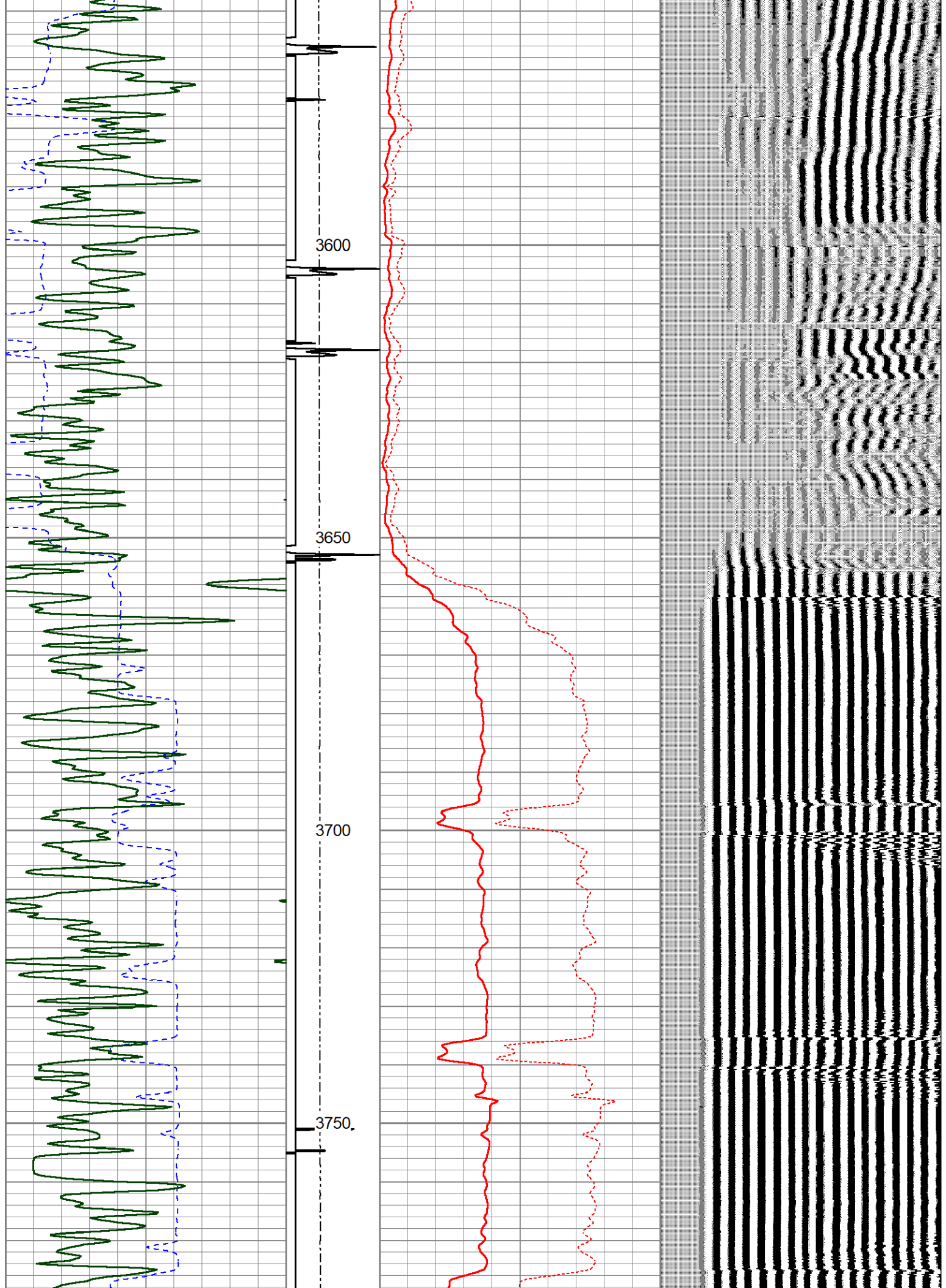


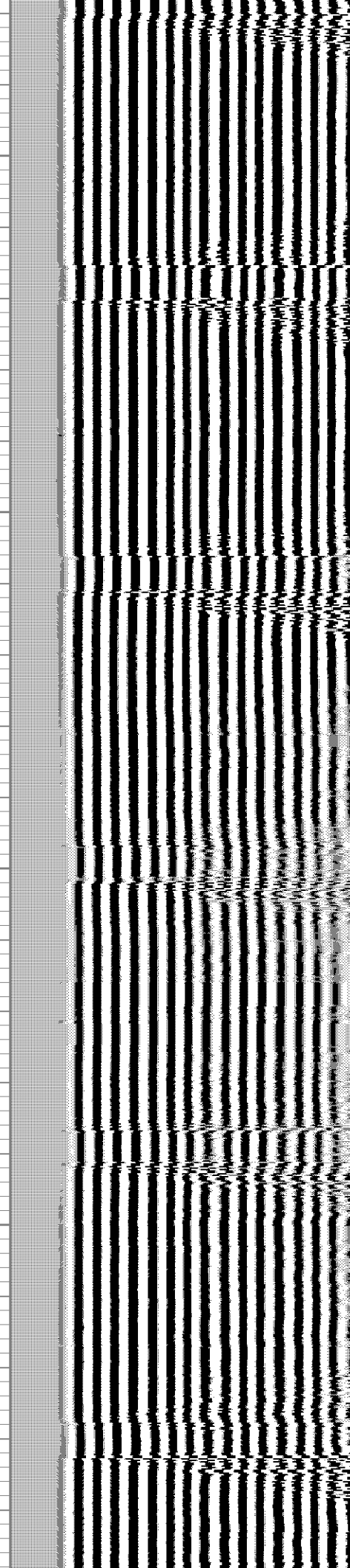
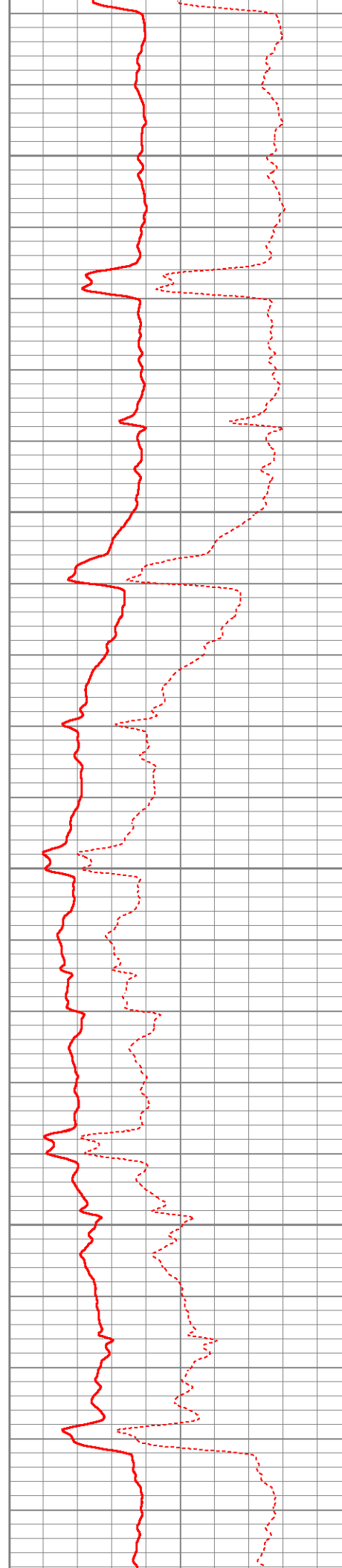
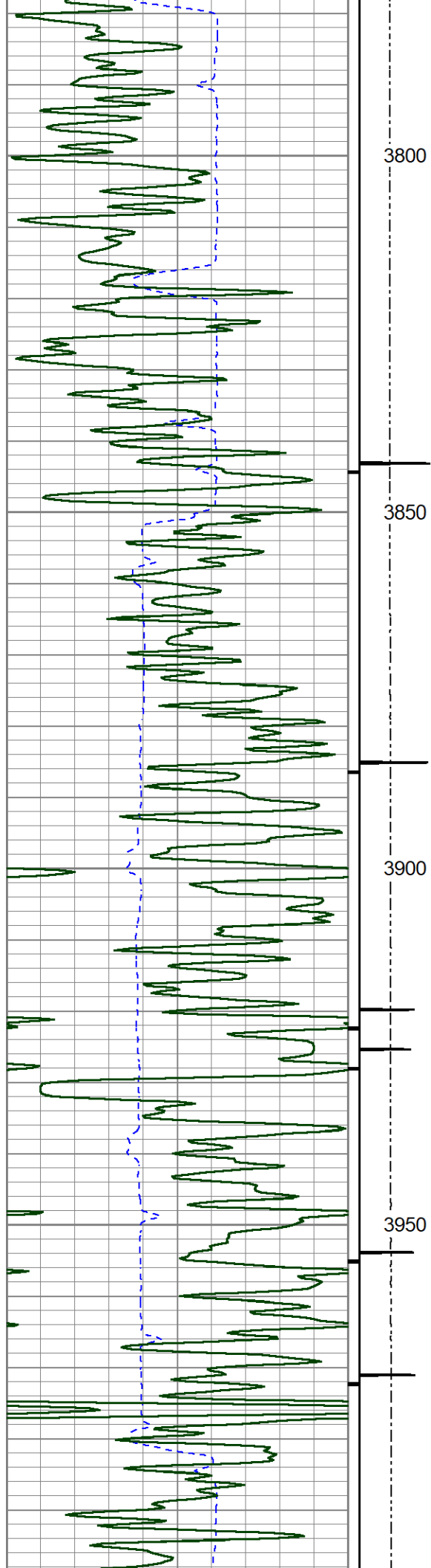


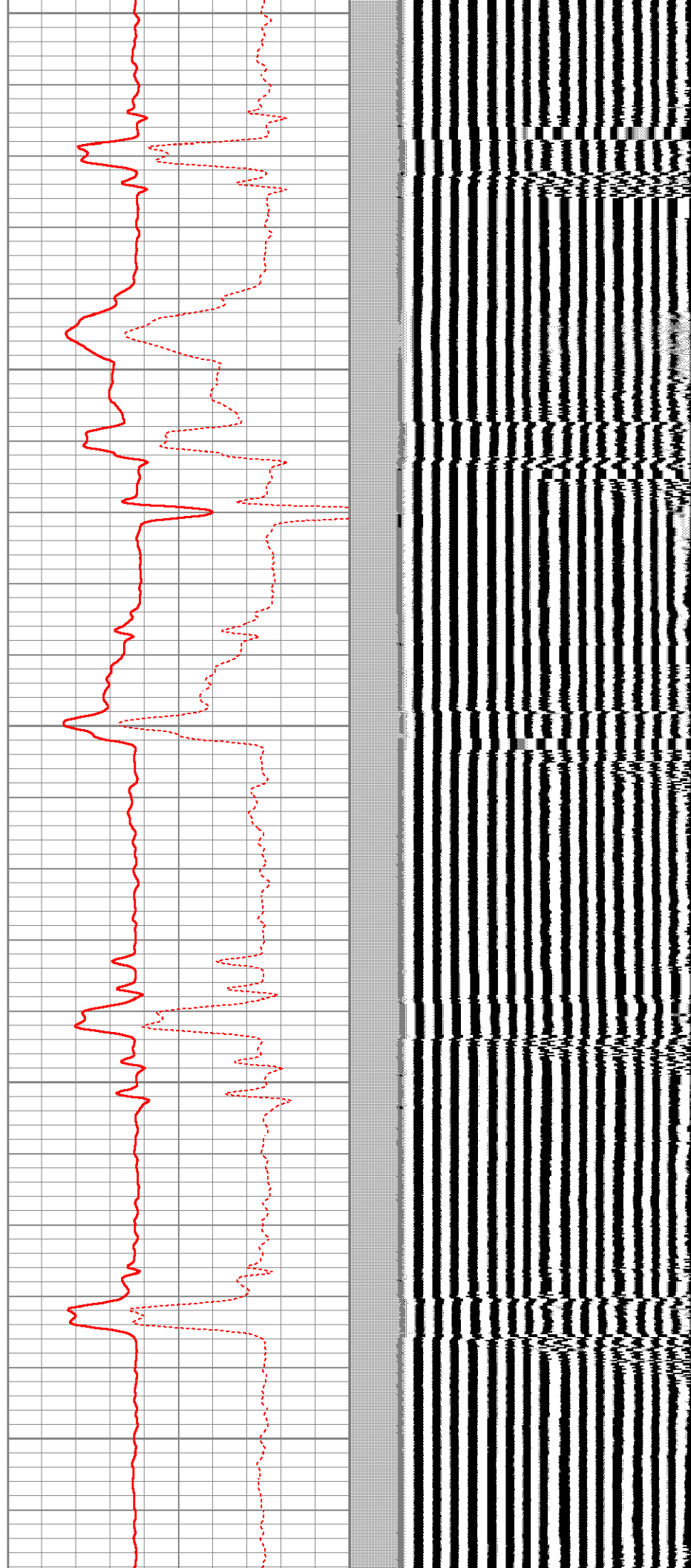
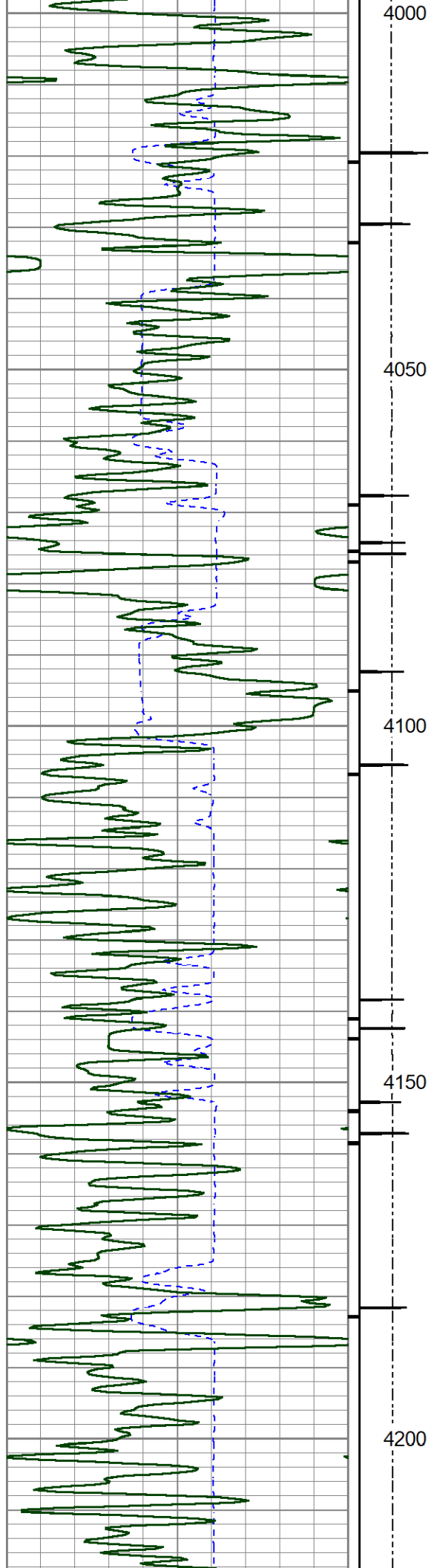


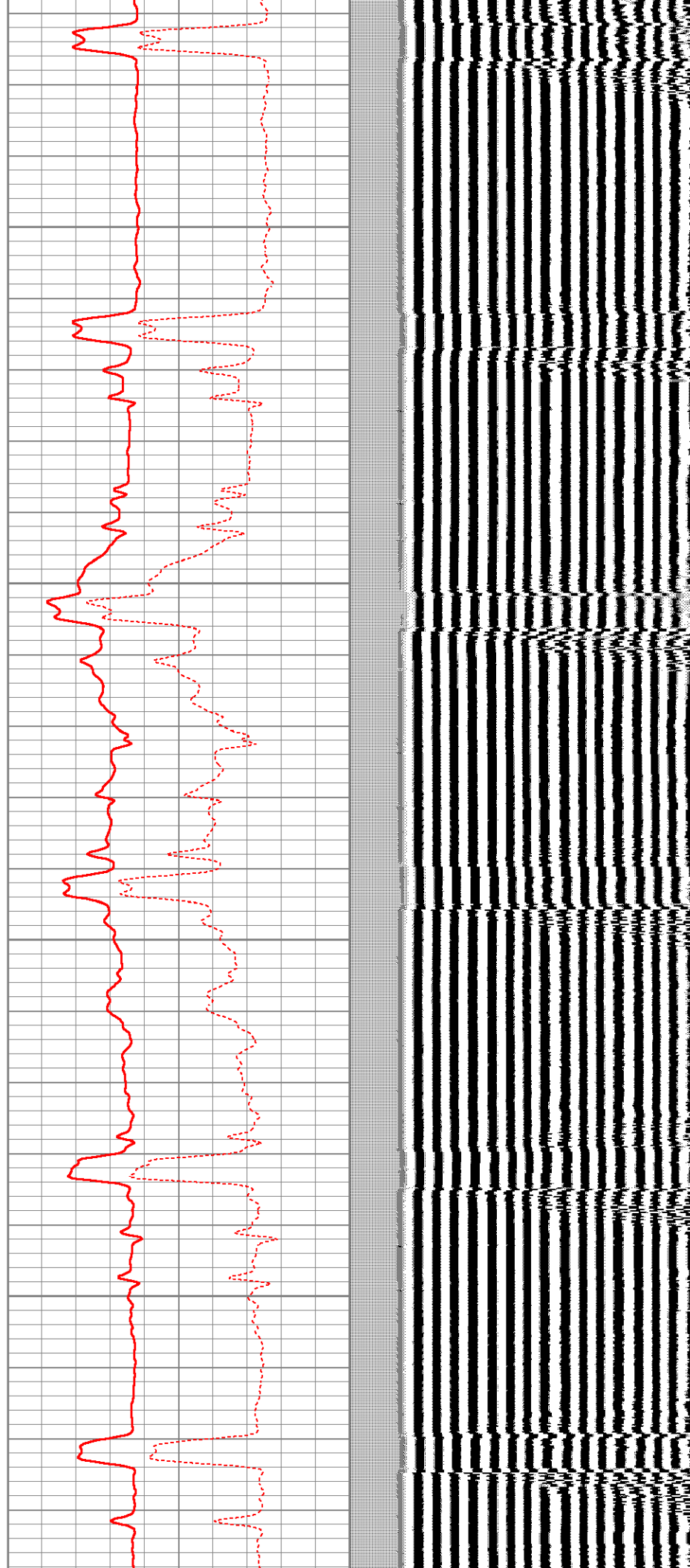
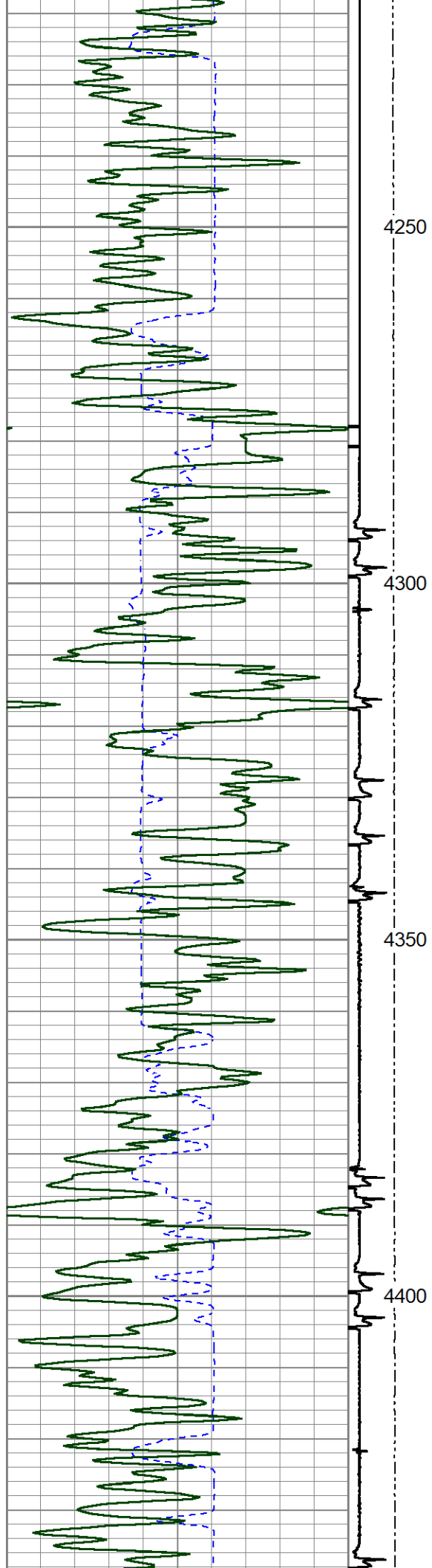


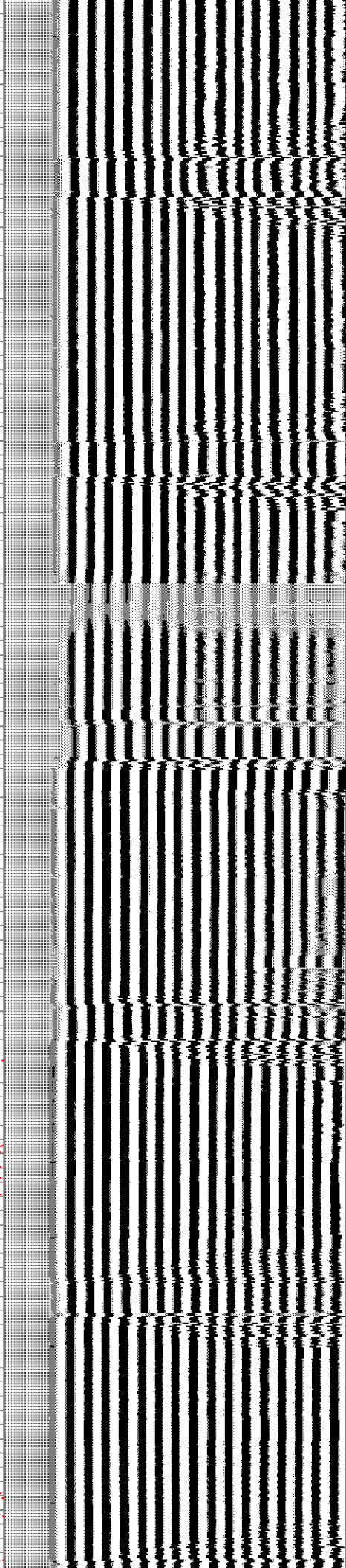
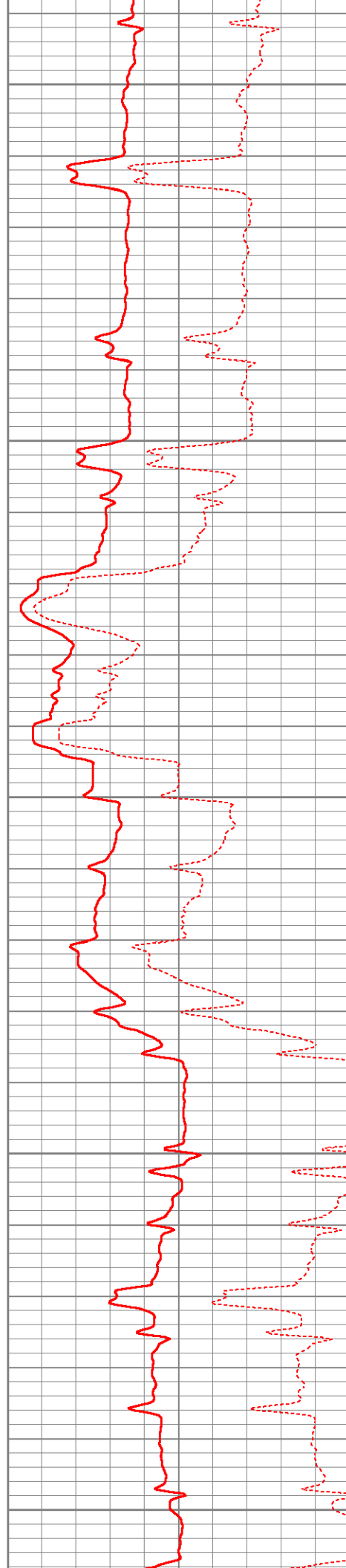
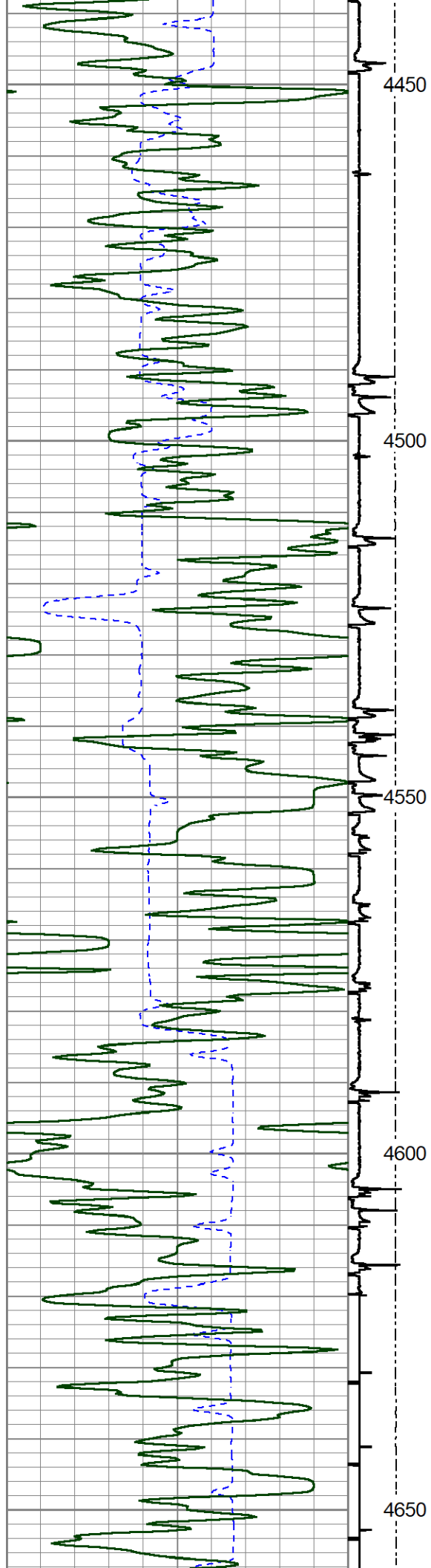


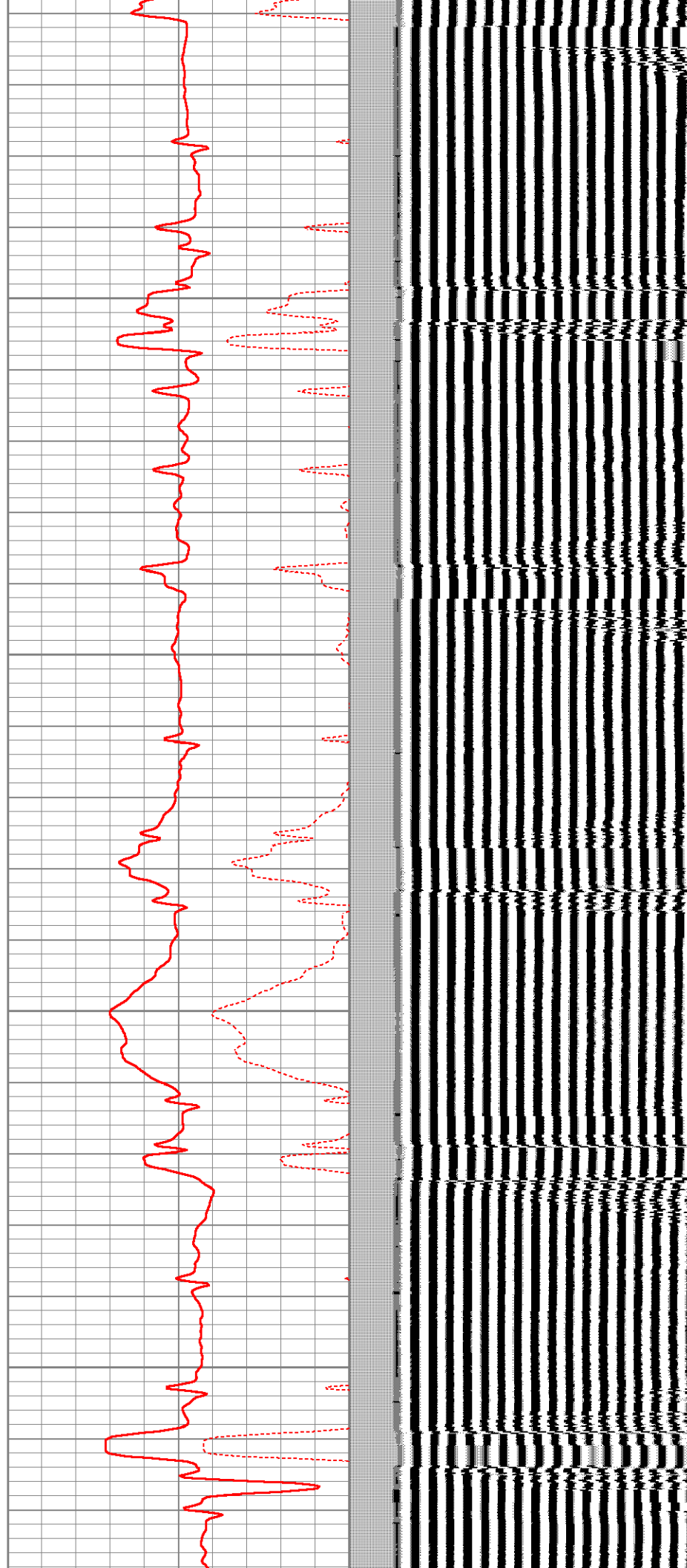
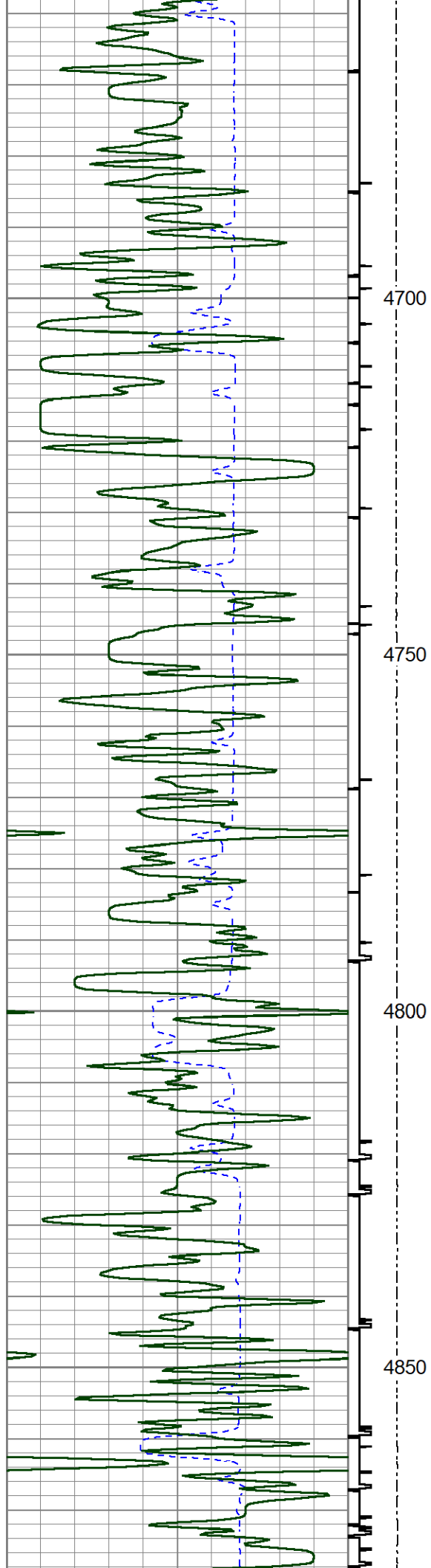


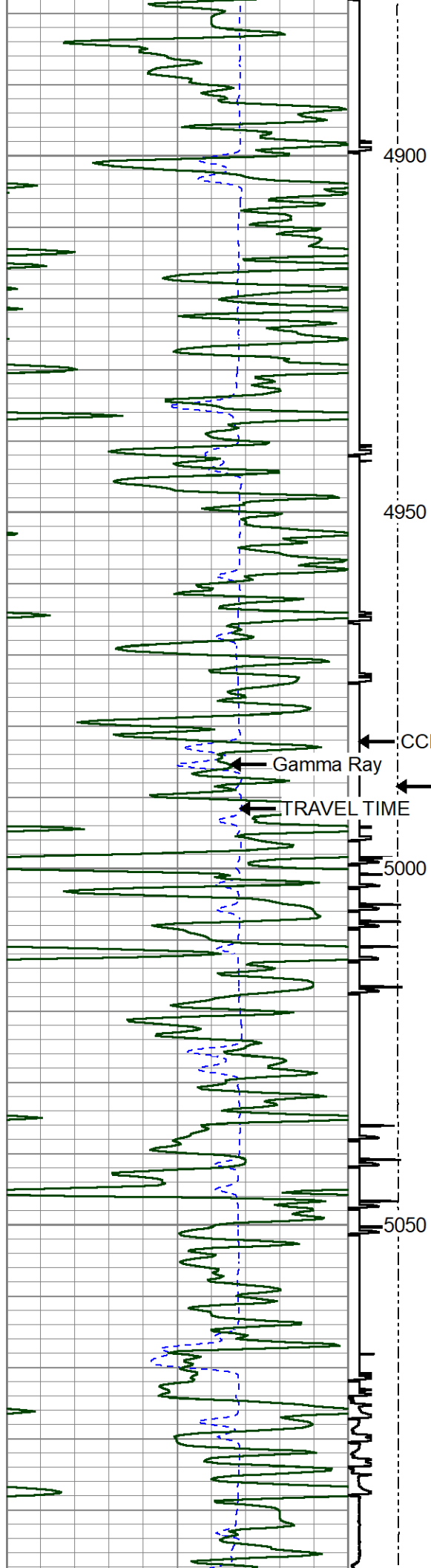












4900

4950

CCL

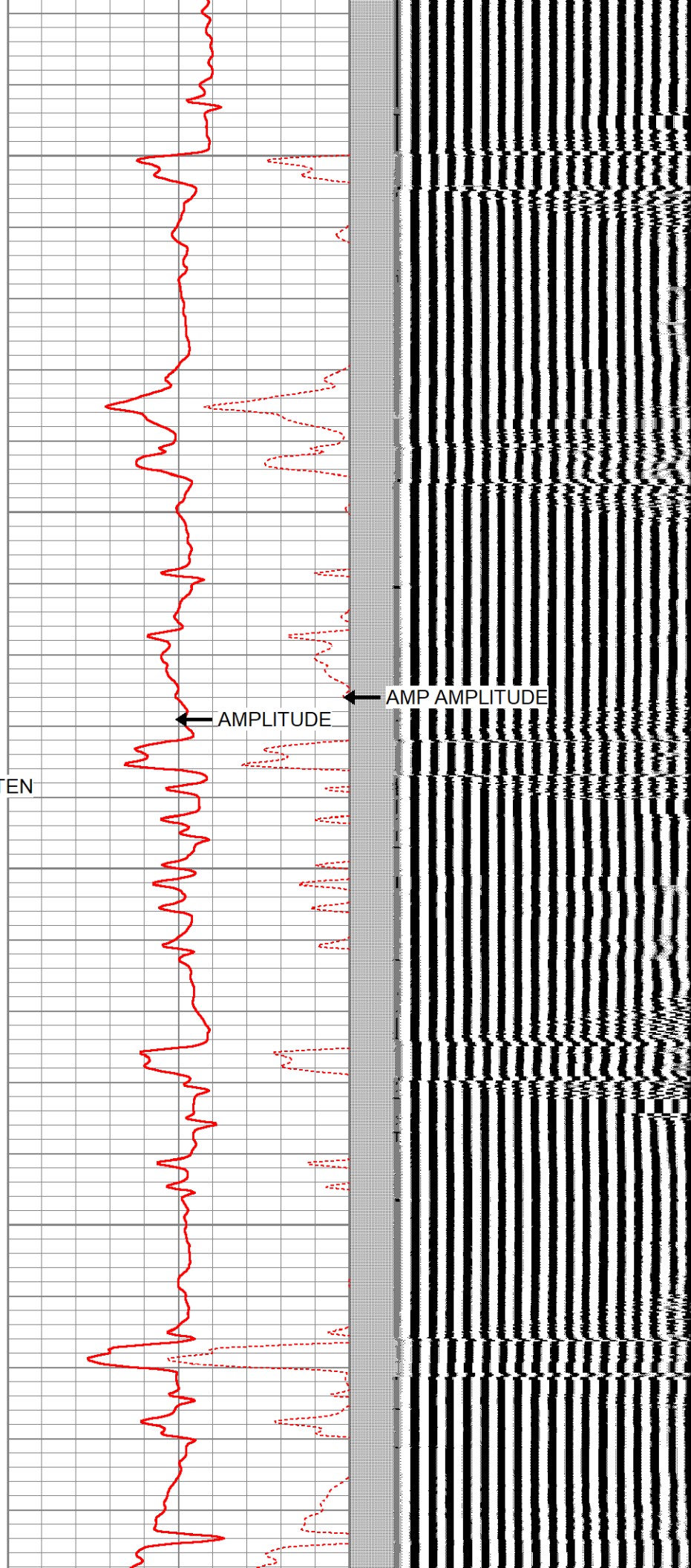
Gamma Ray

TRAVEL TIME

5000

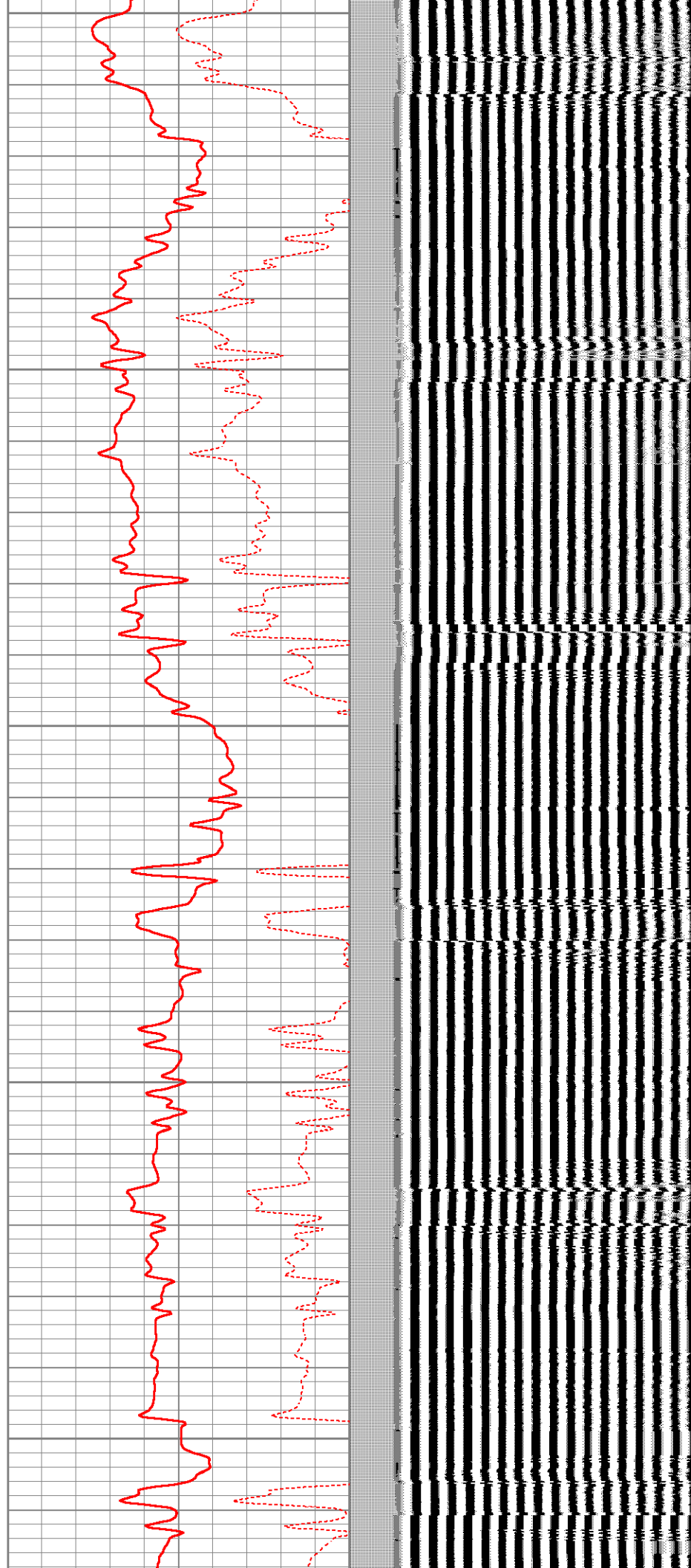
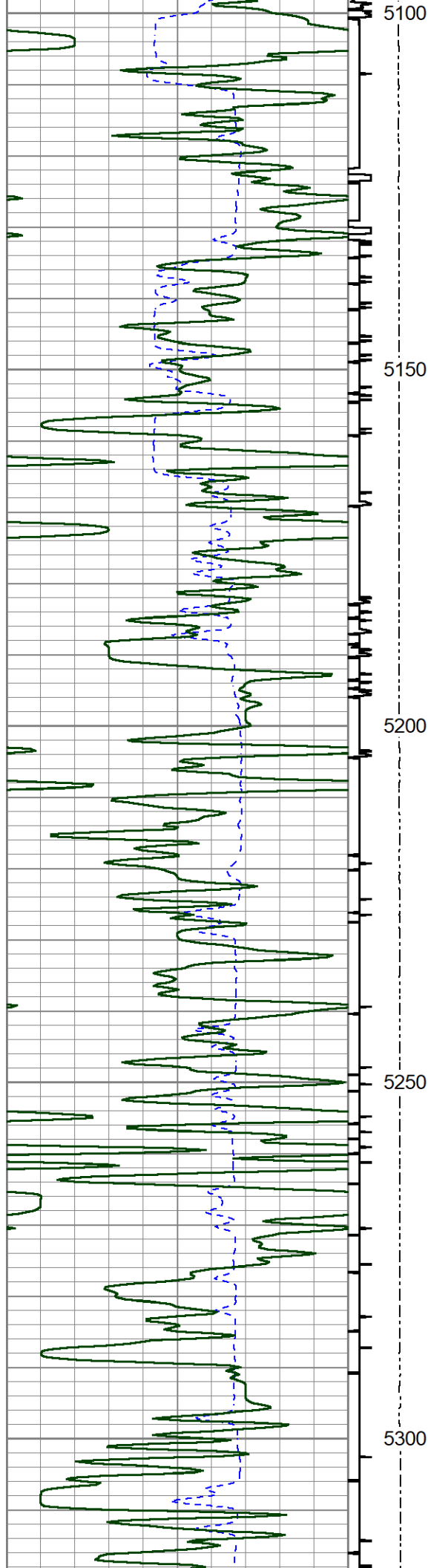
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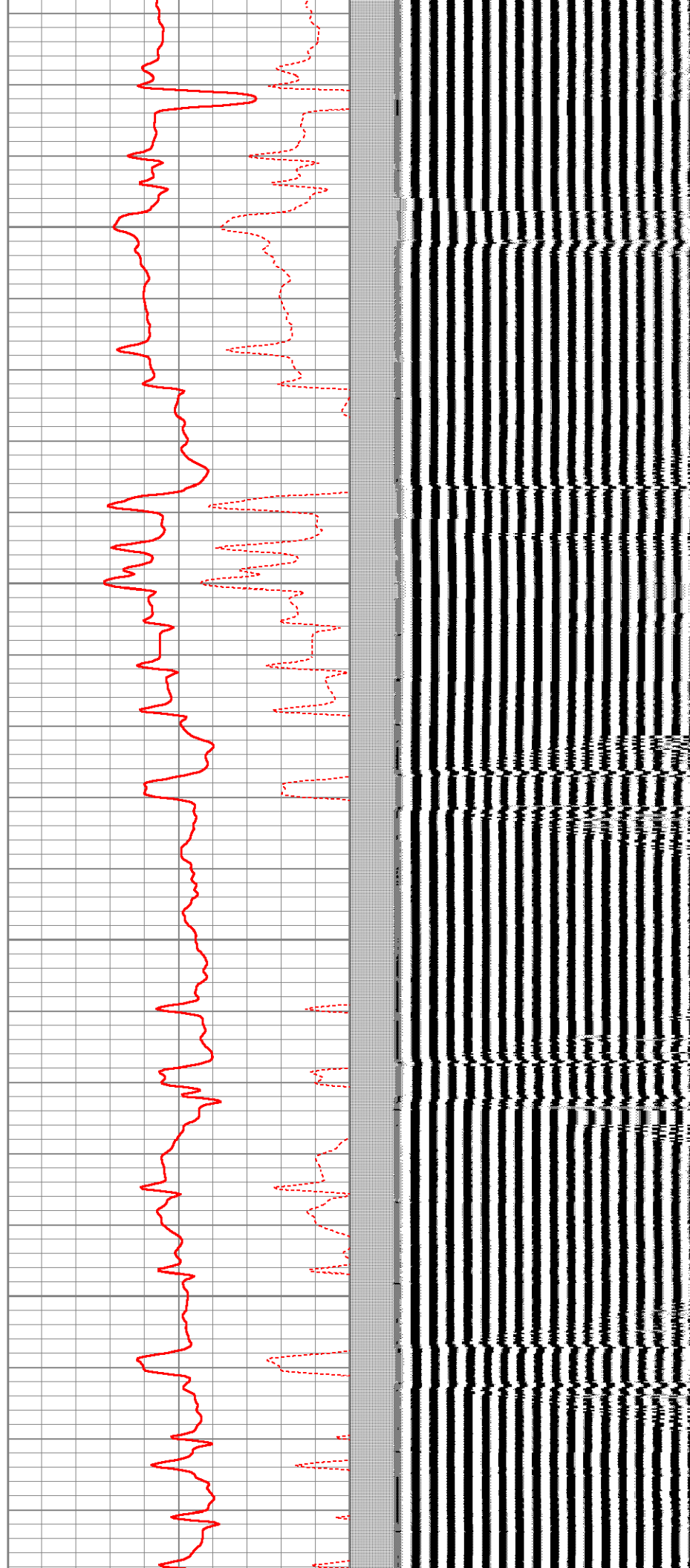
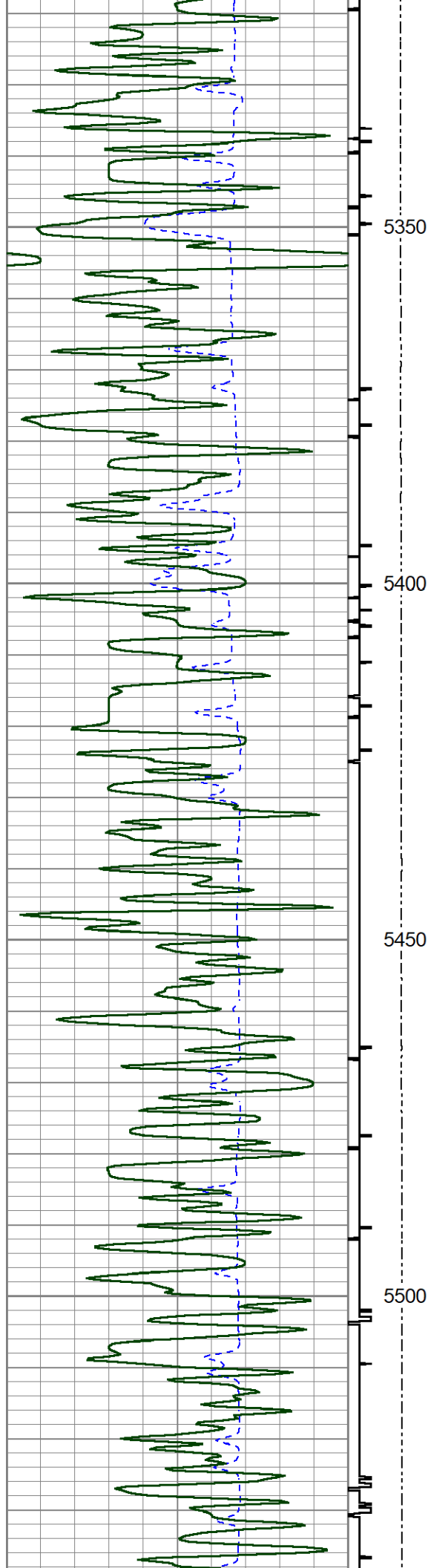
LTEN

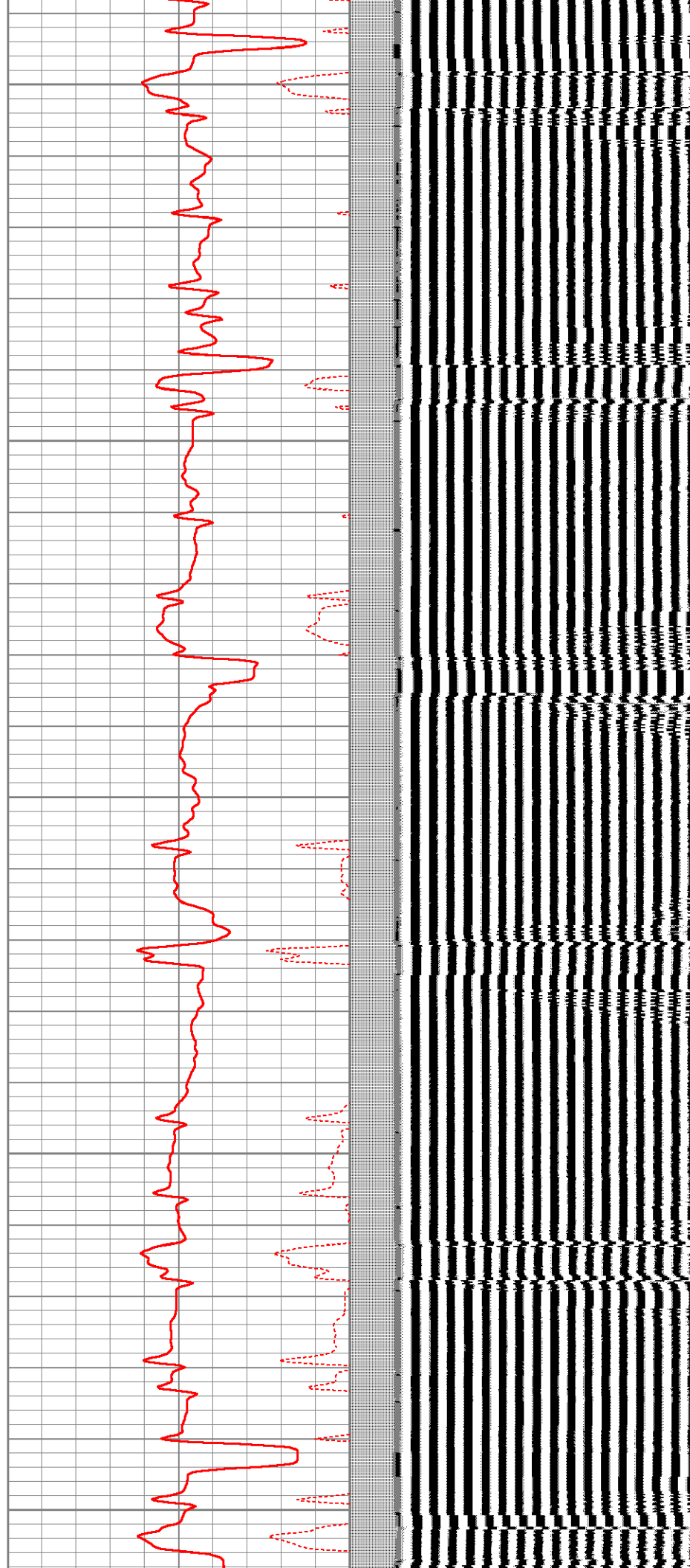
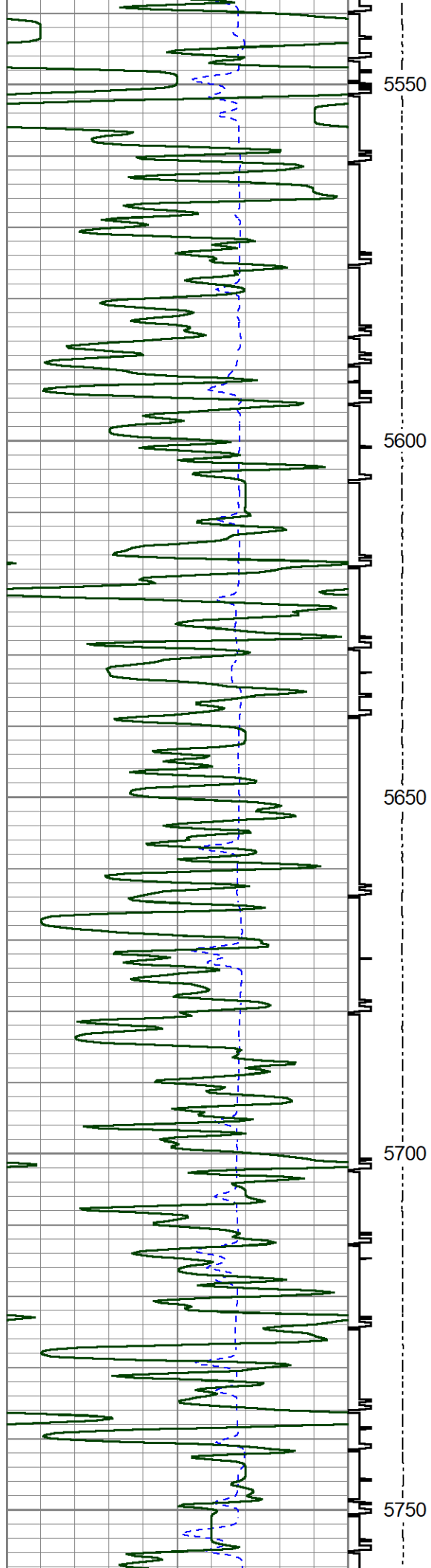


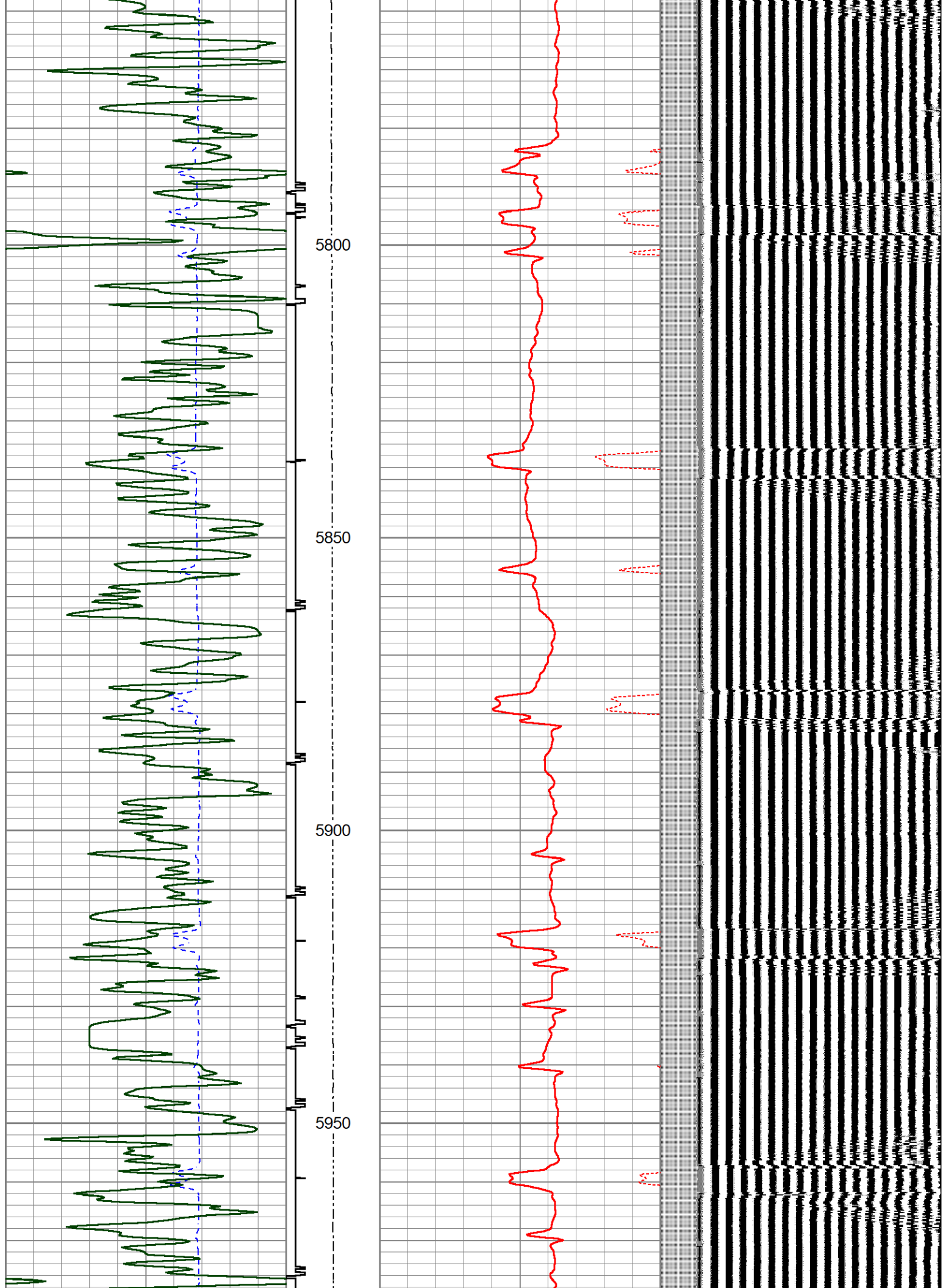
AMPLITUDE

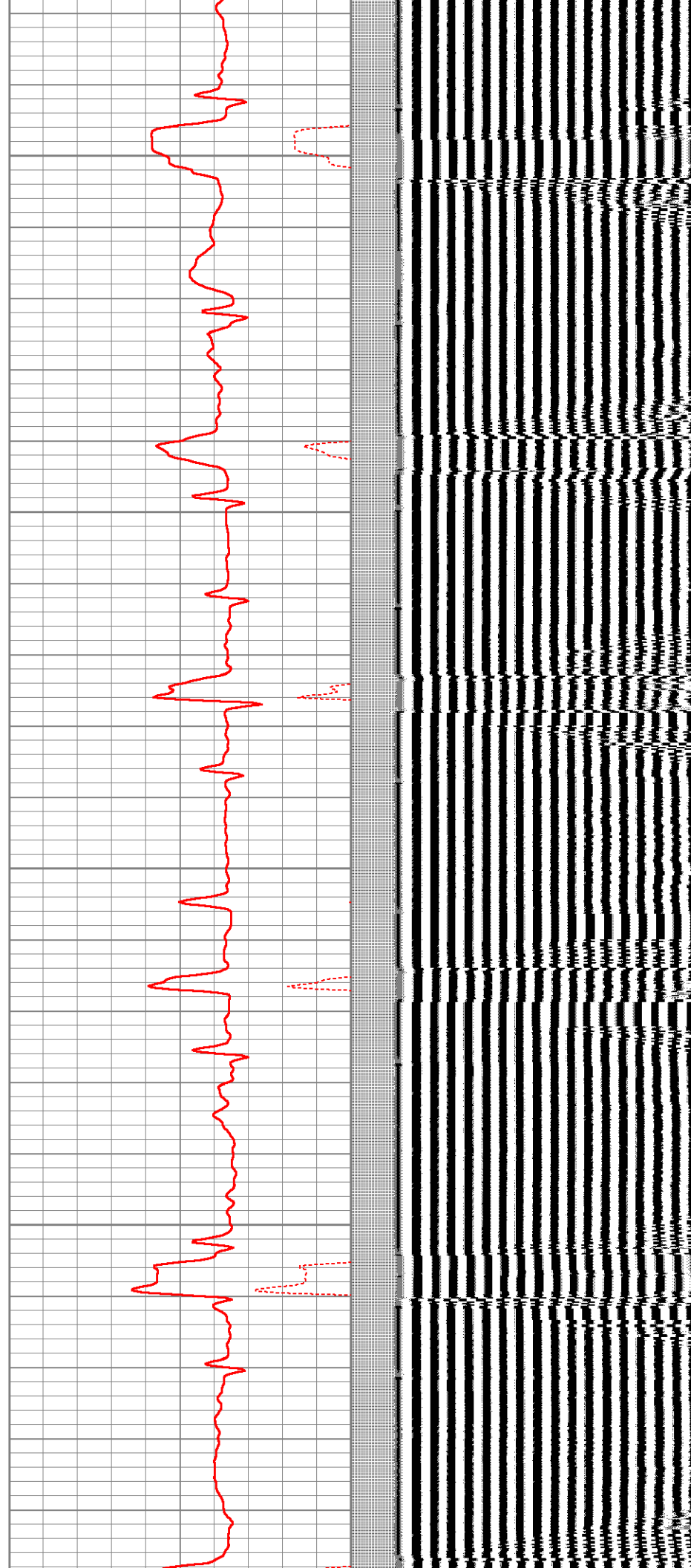
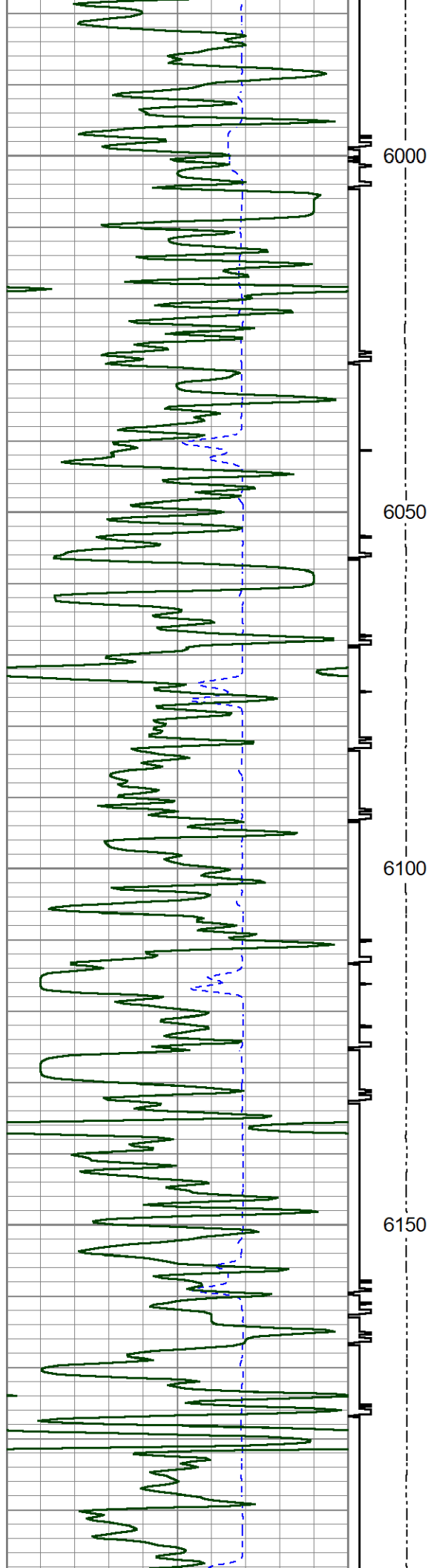
AMP AMPLITUDE

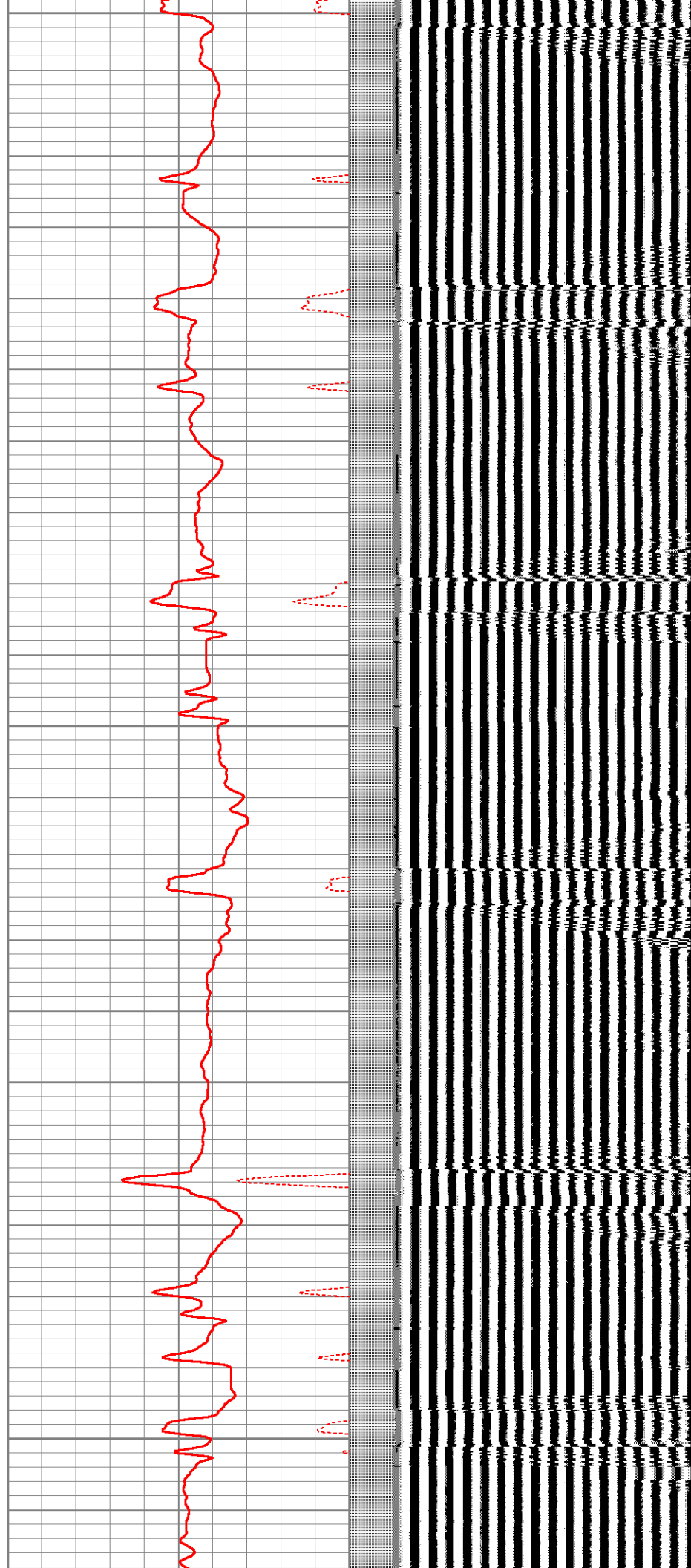
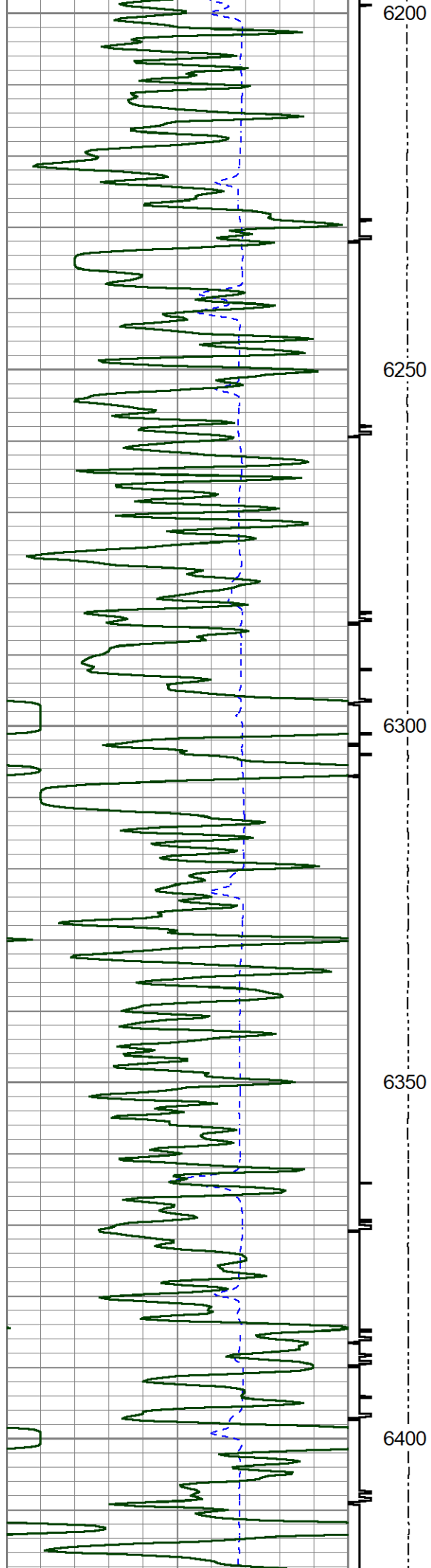


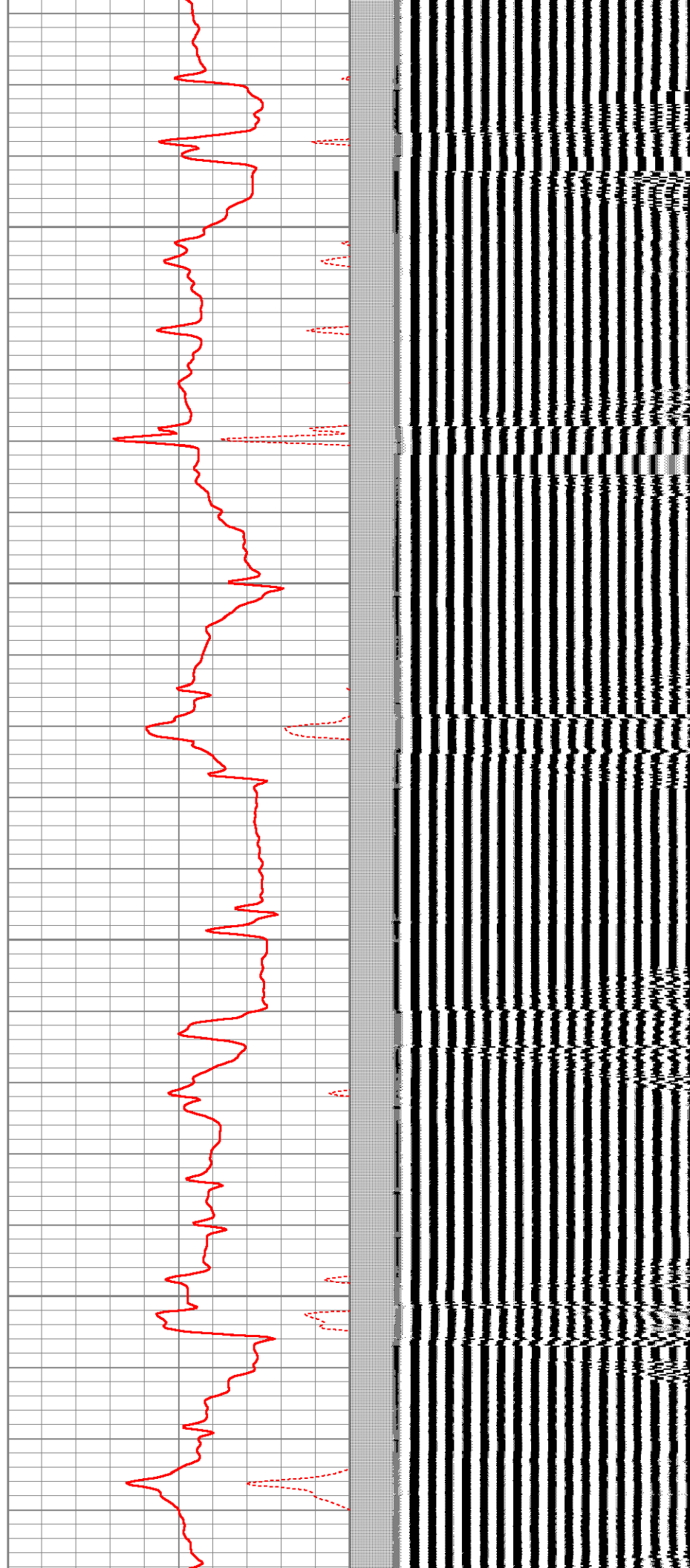
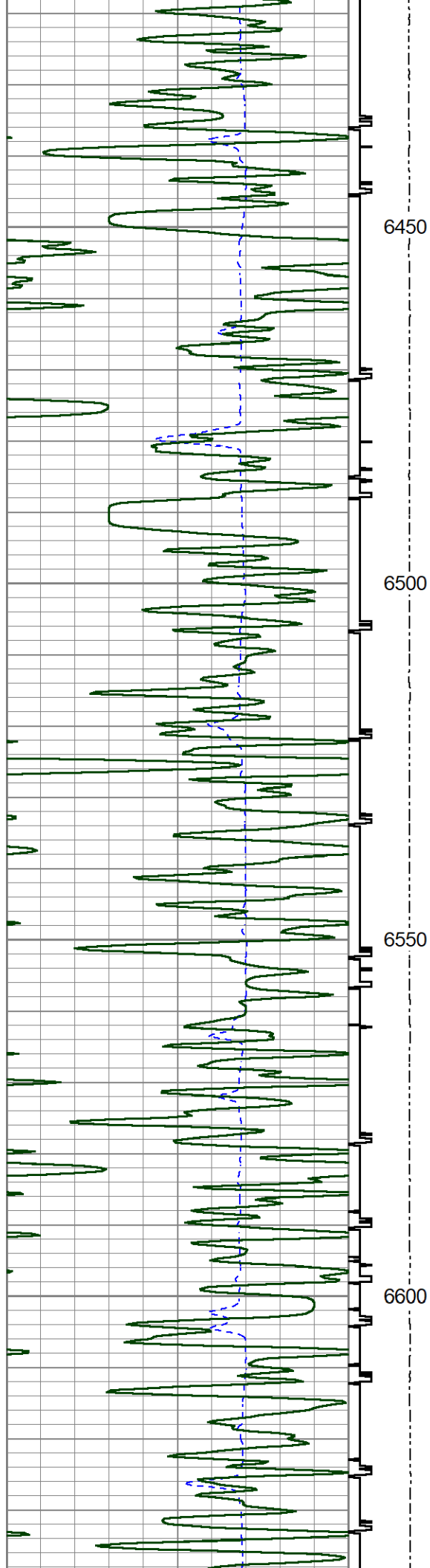


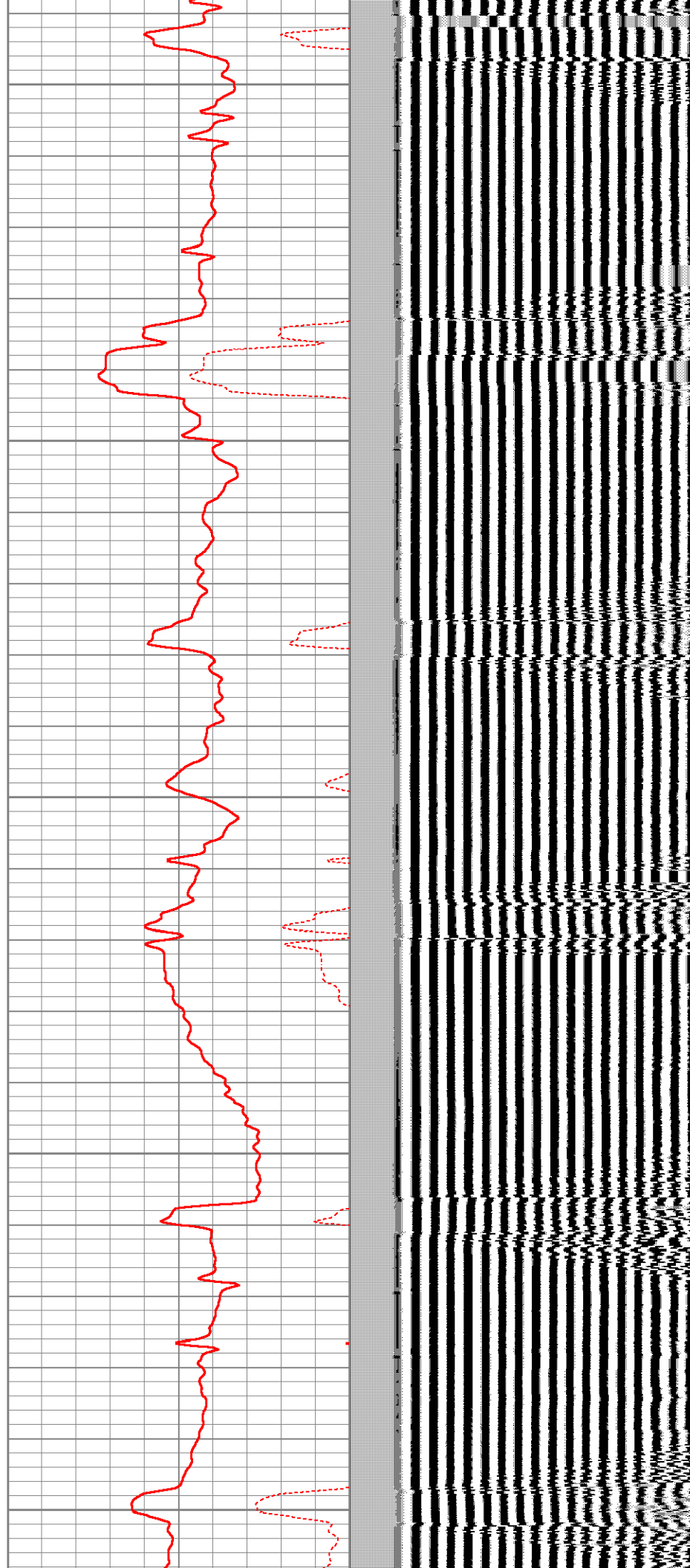
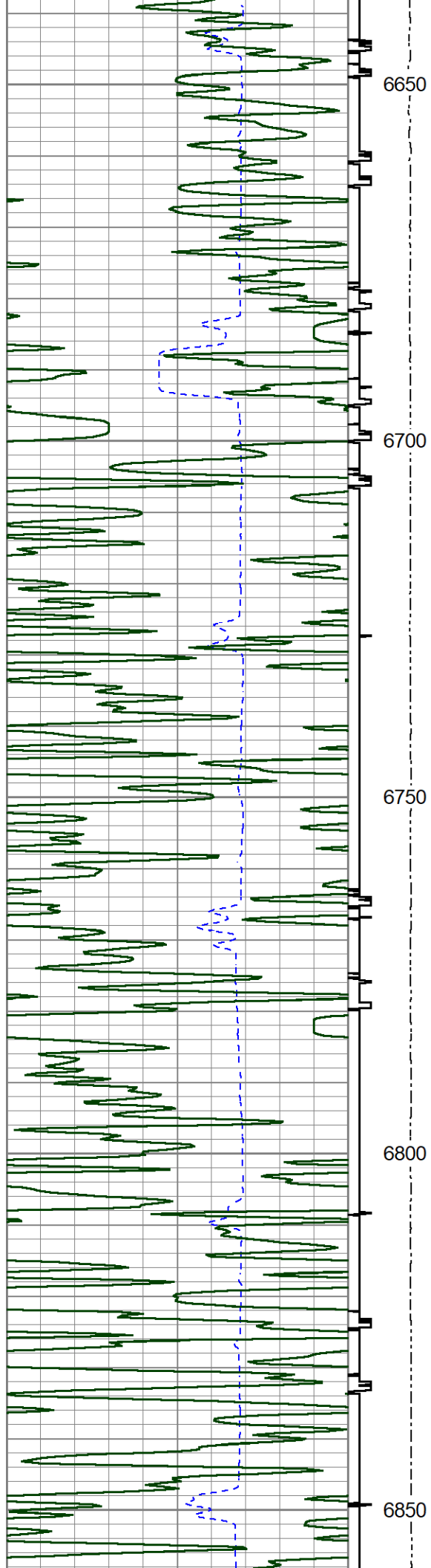


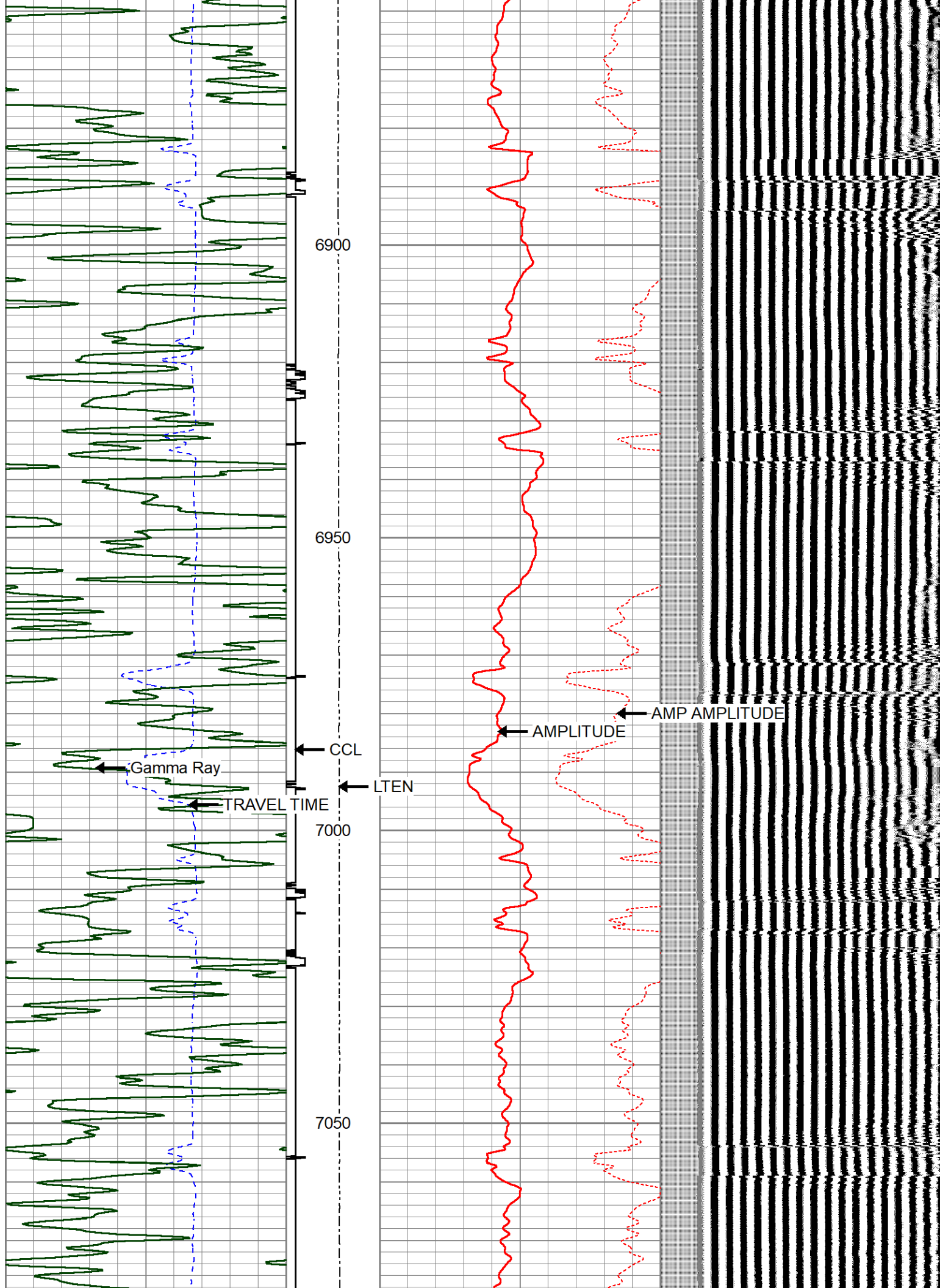


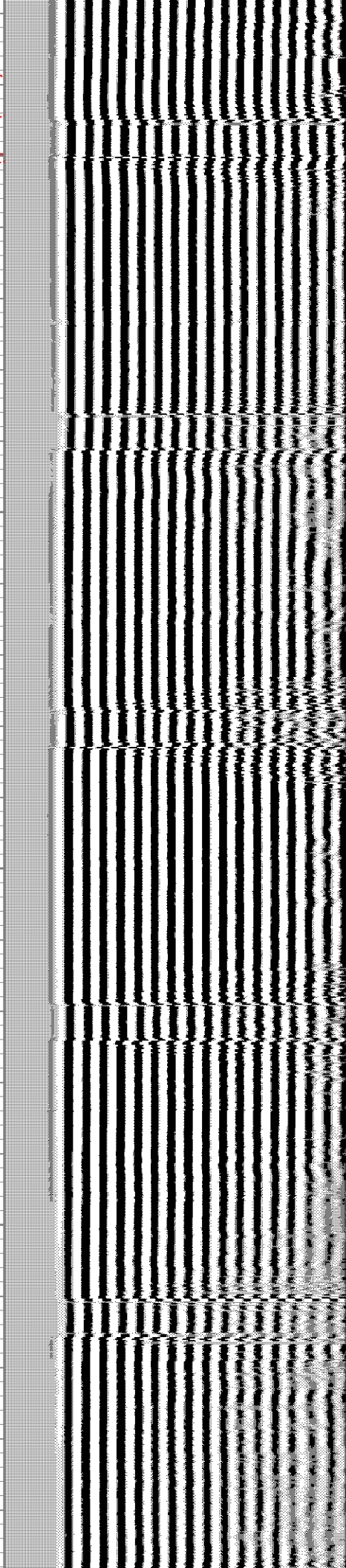
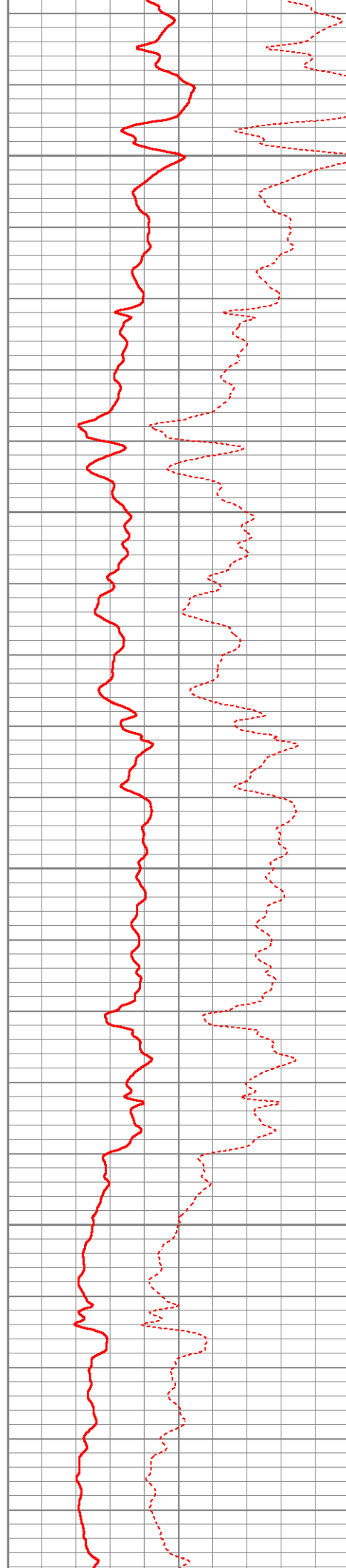
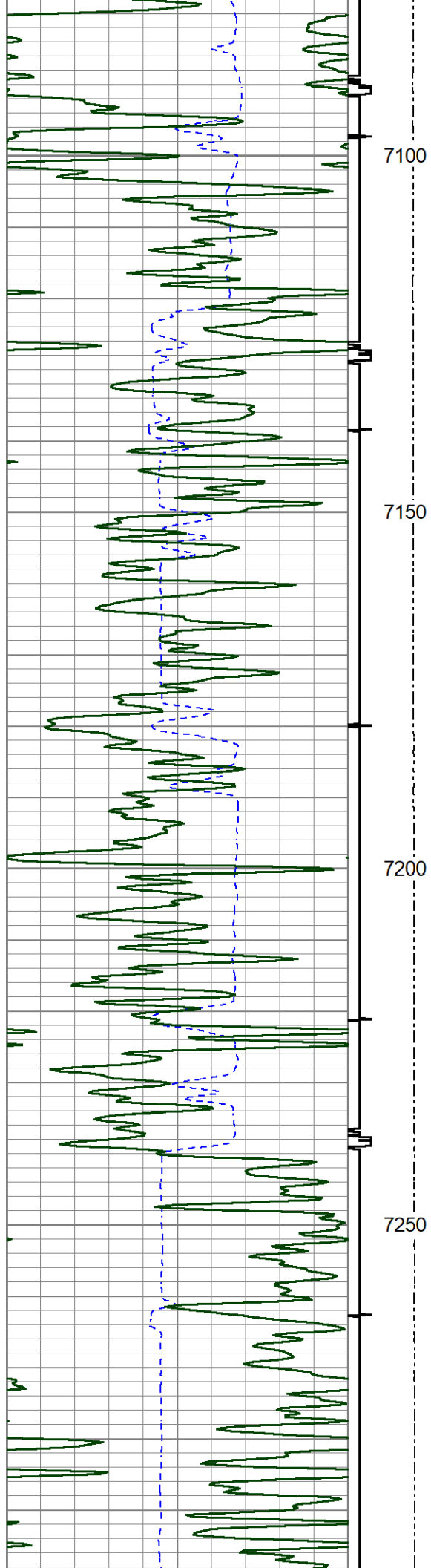


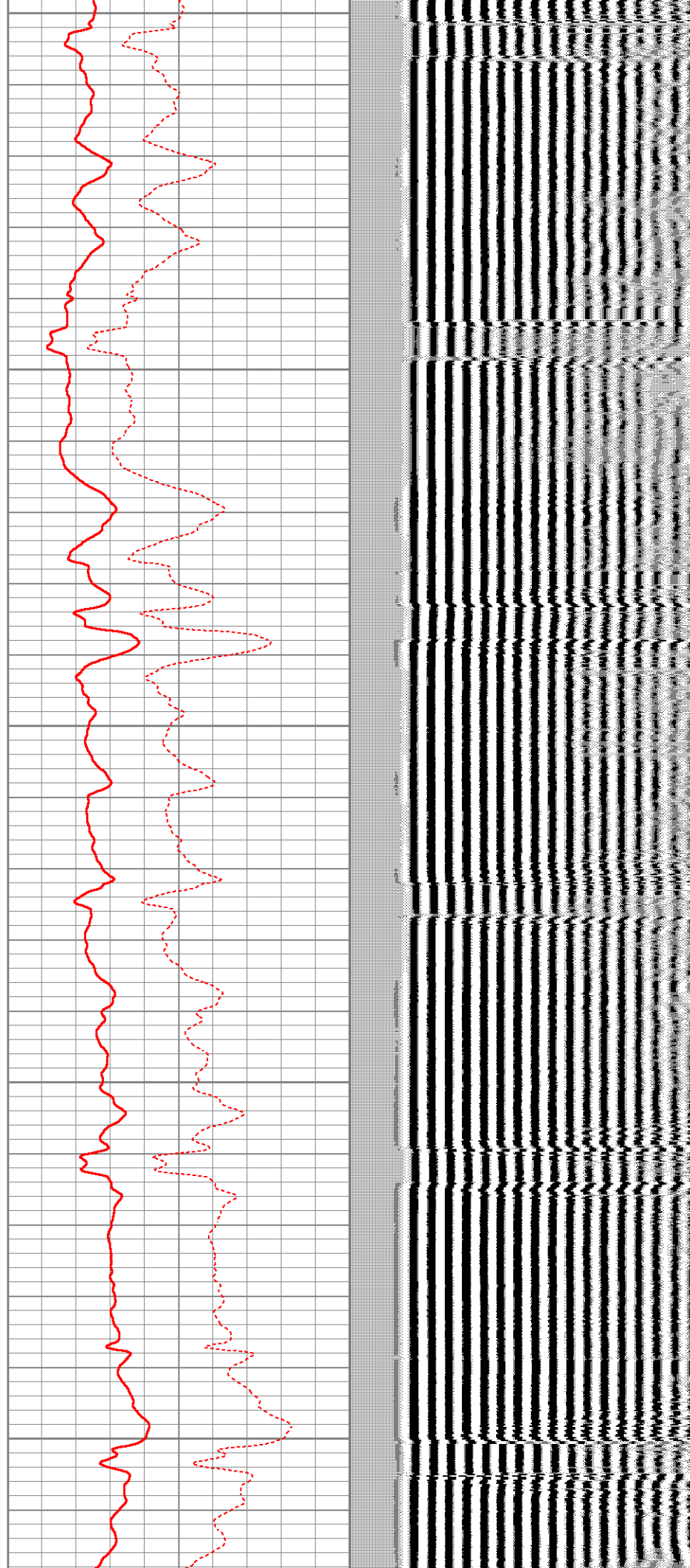
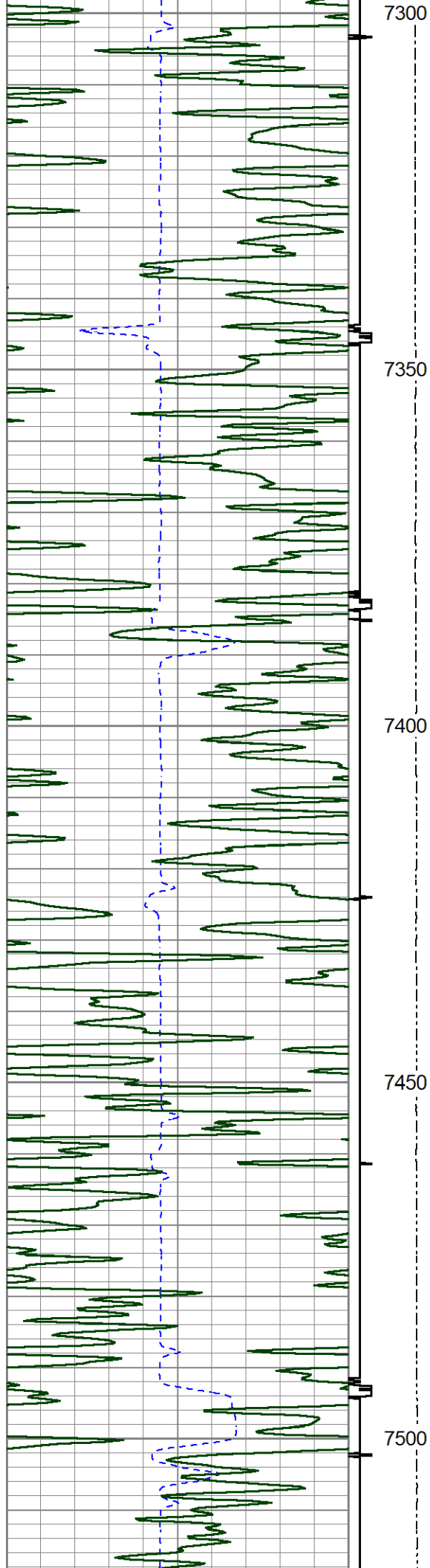


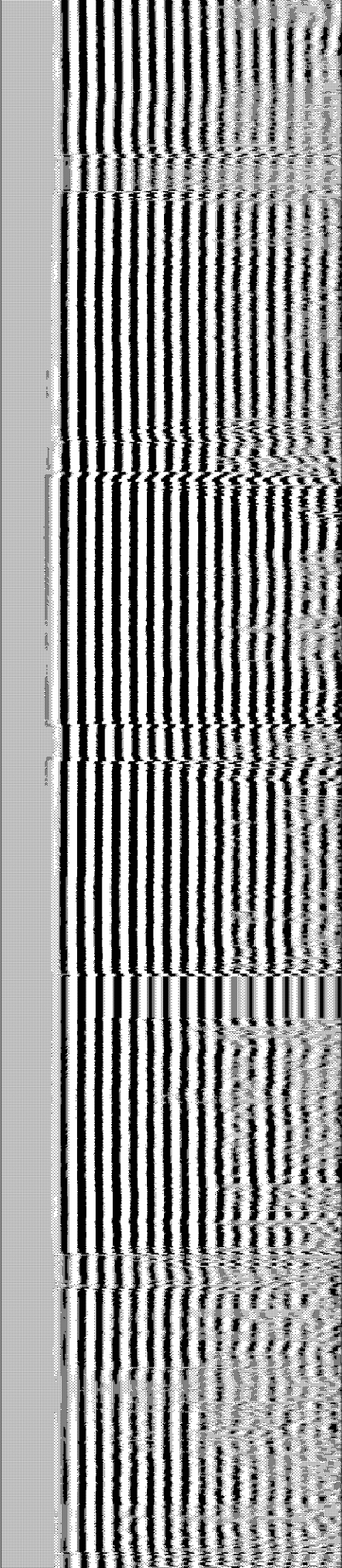
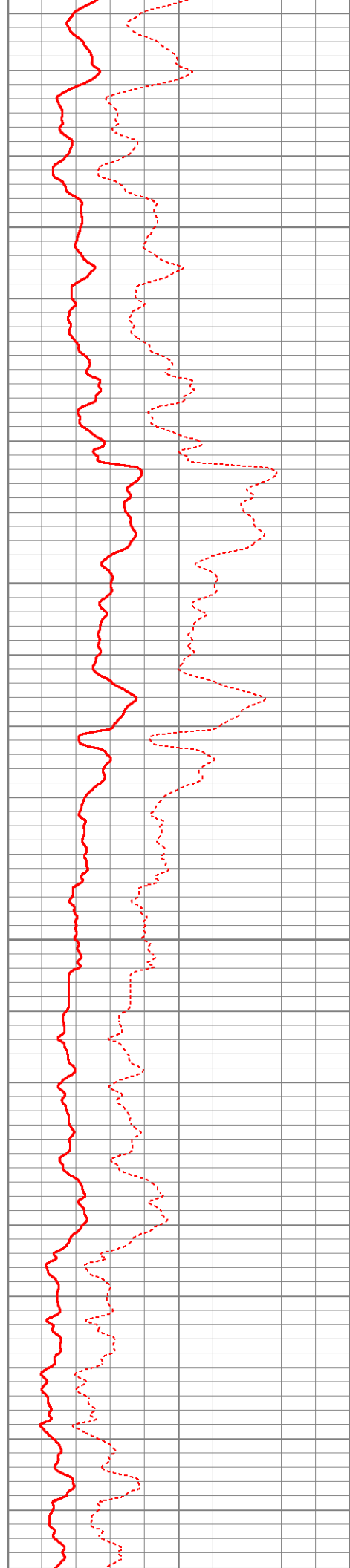
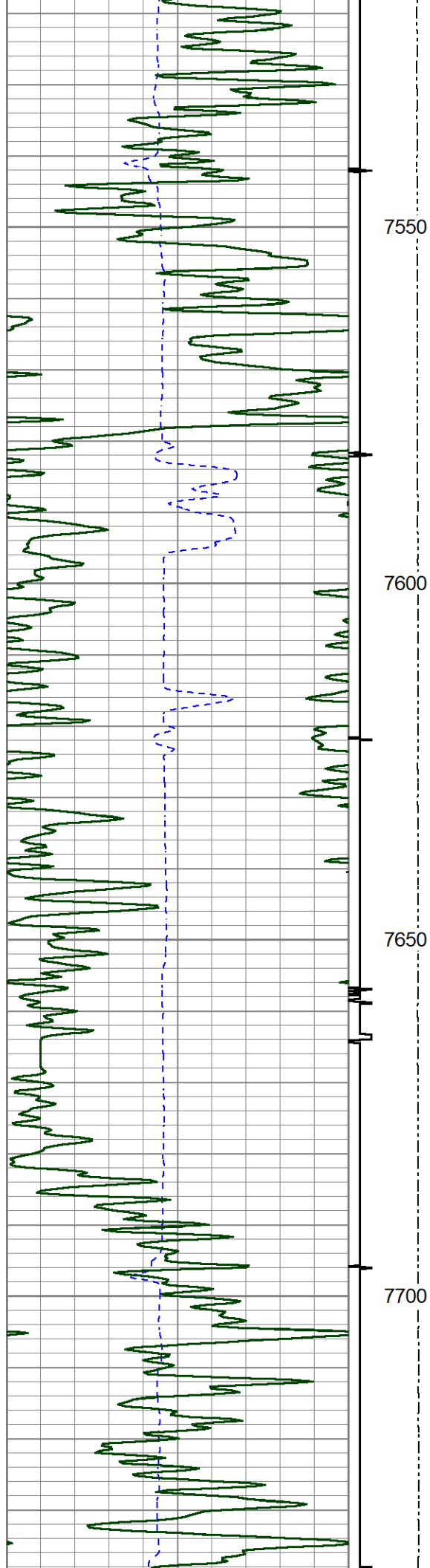


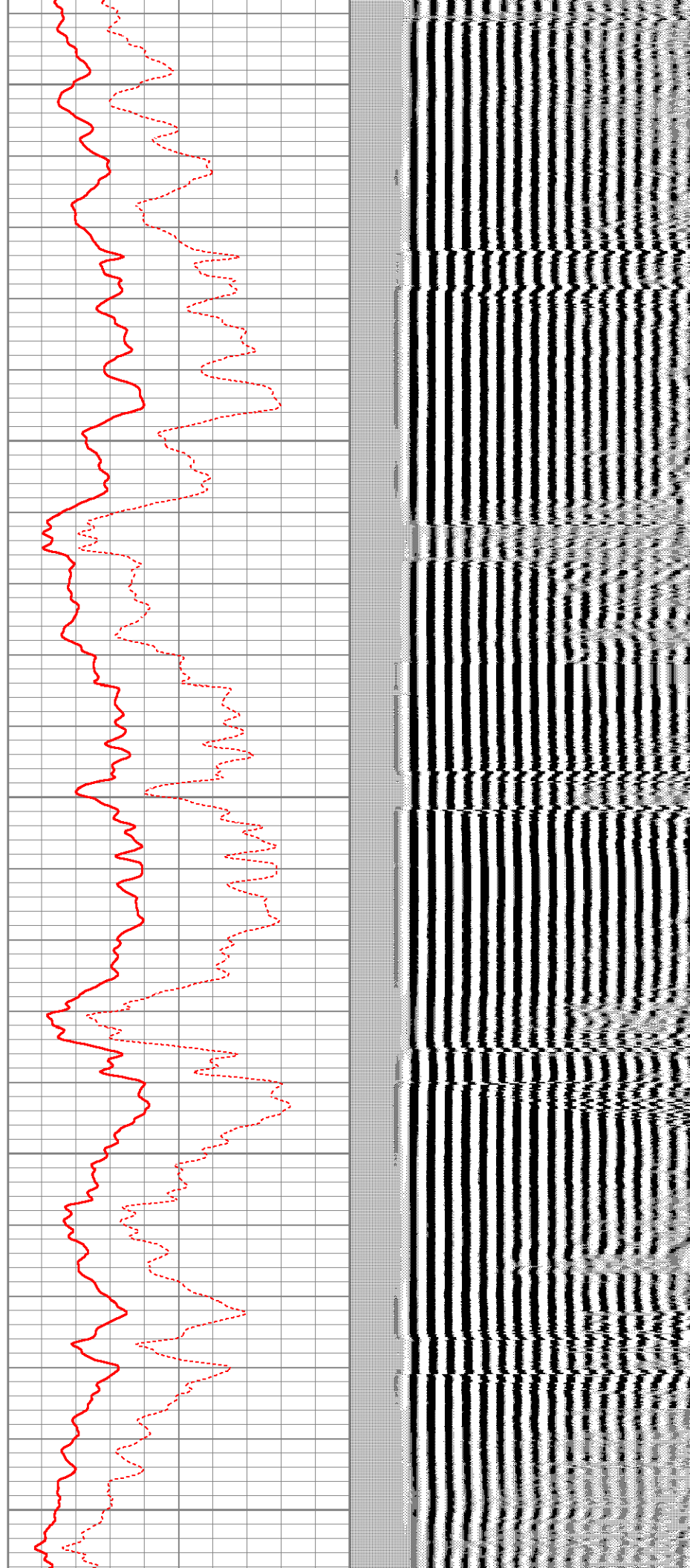
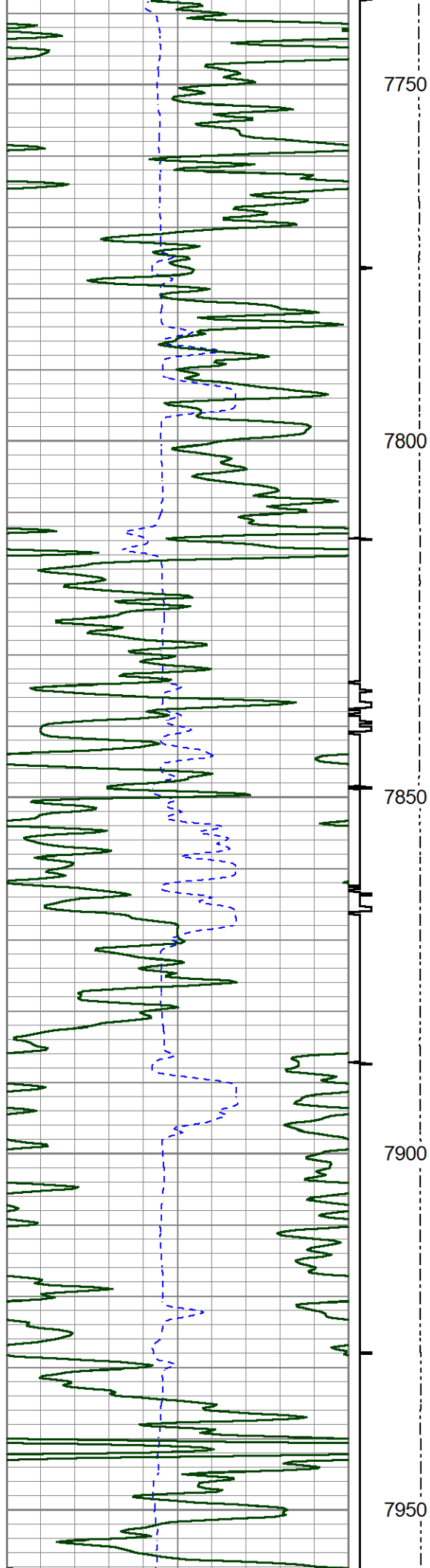


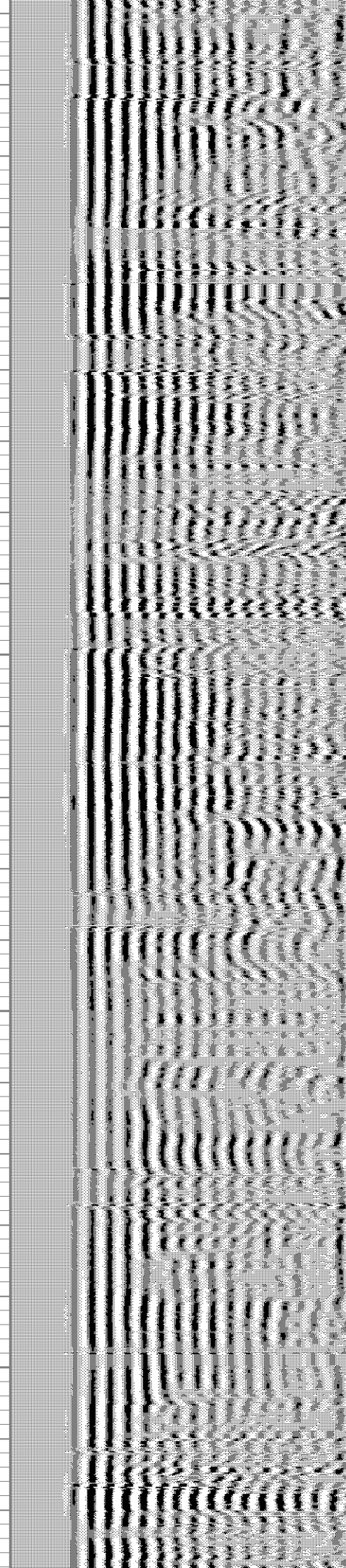
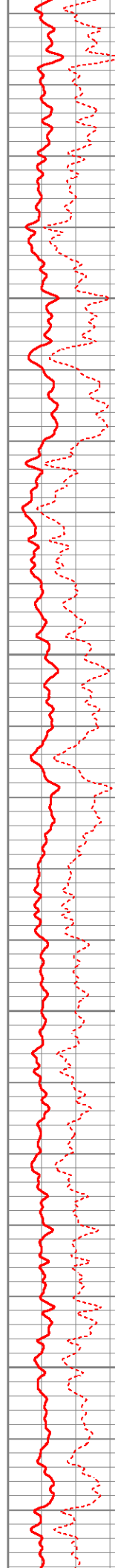
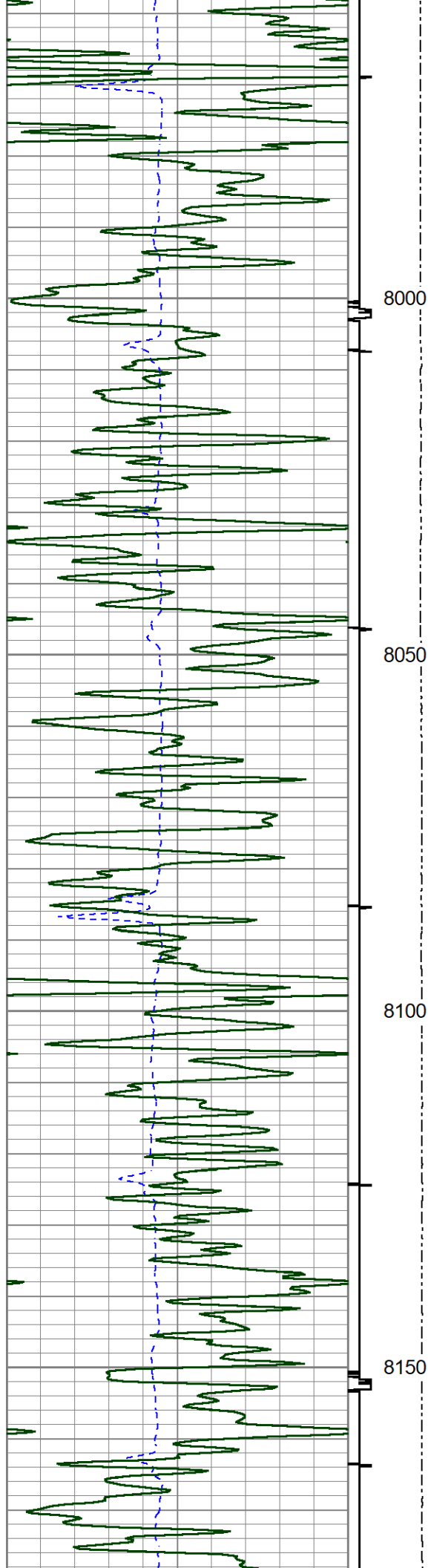


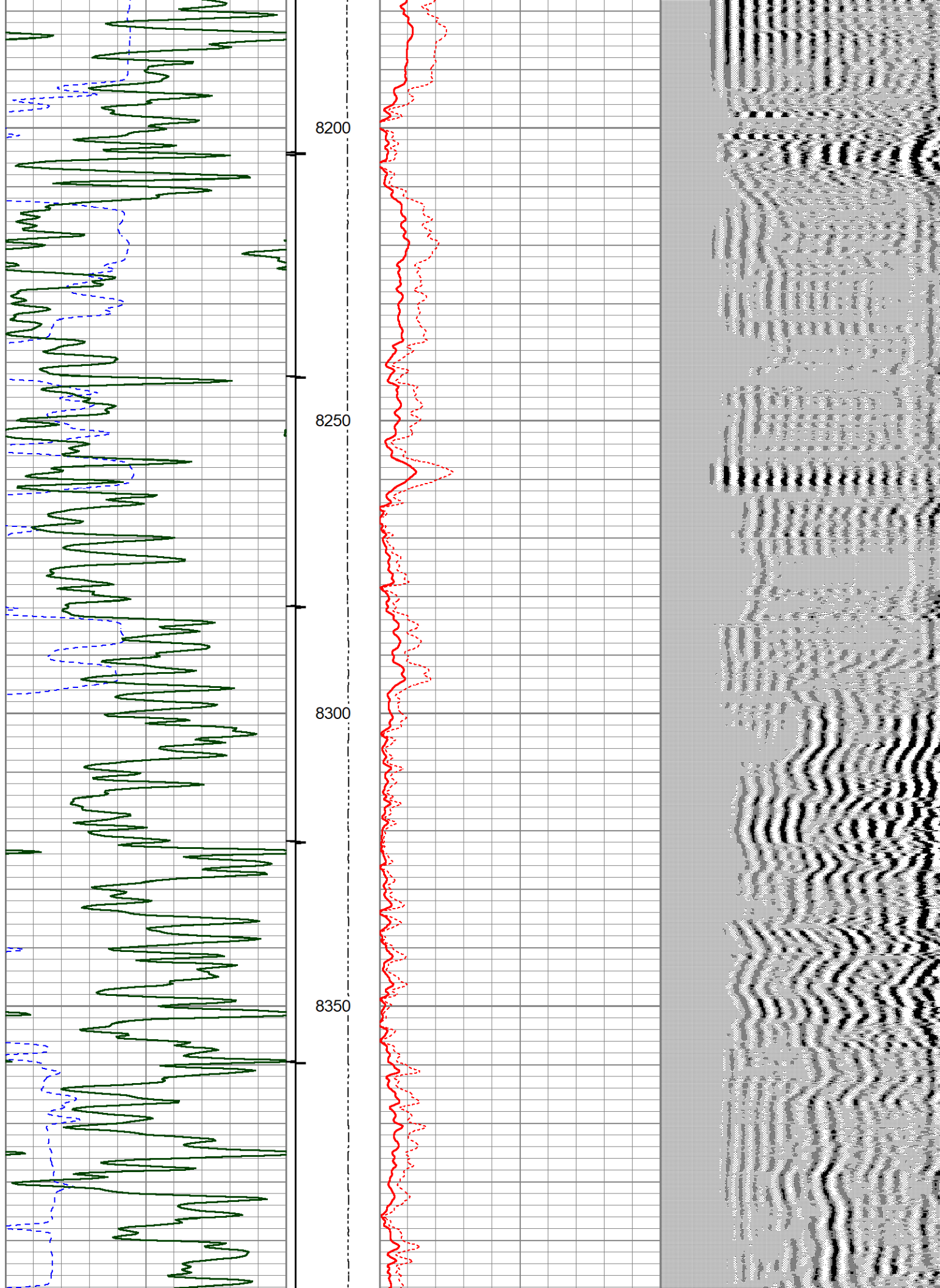


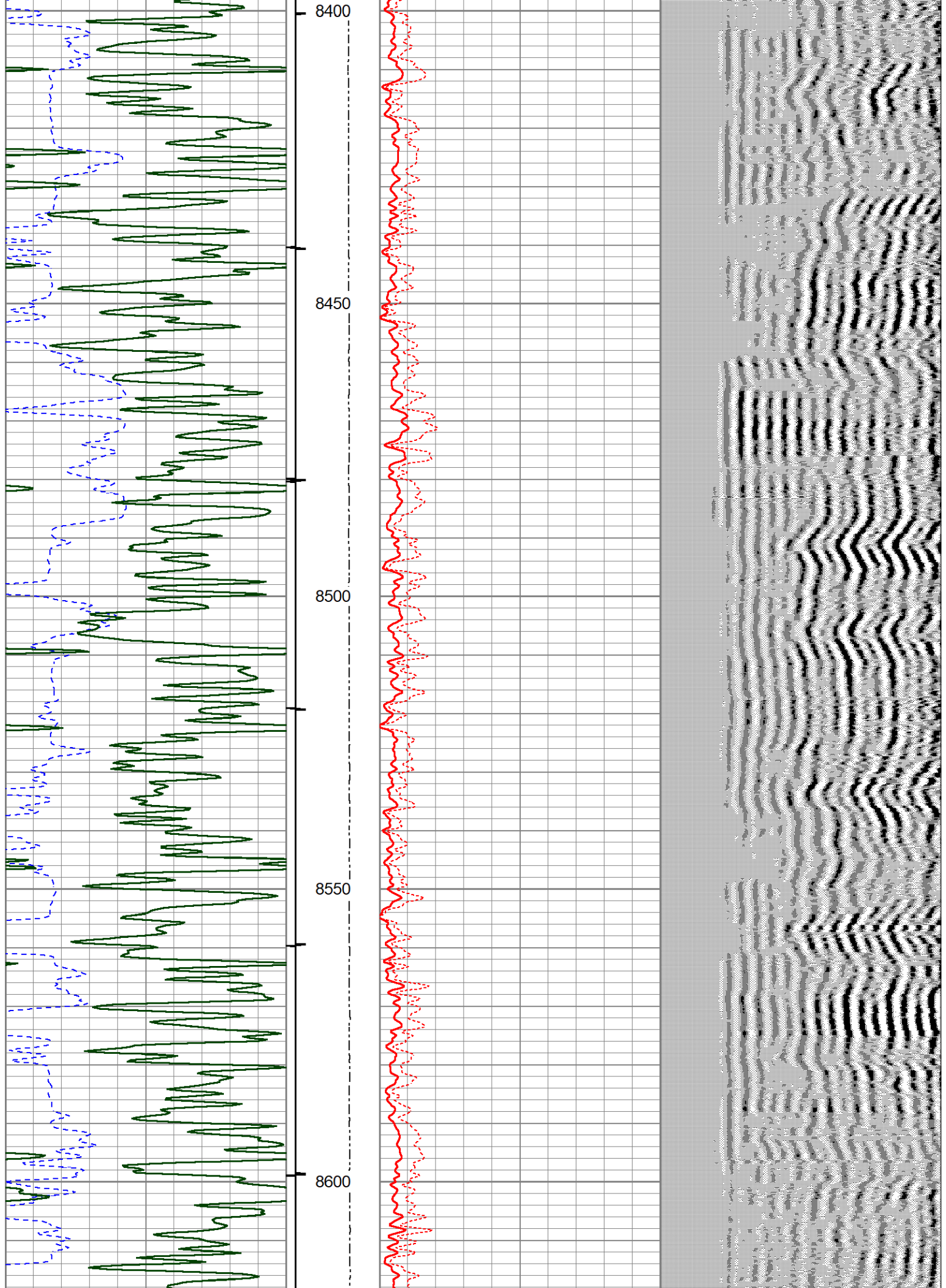


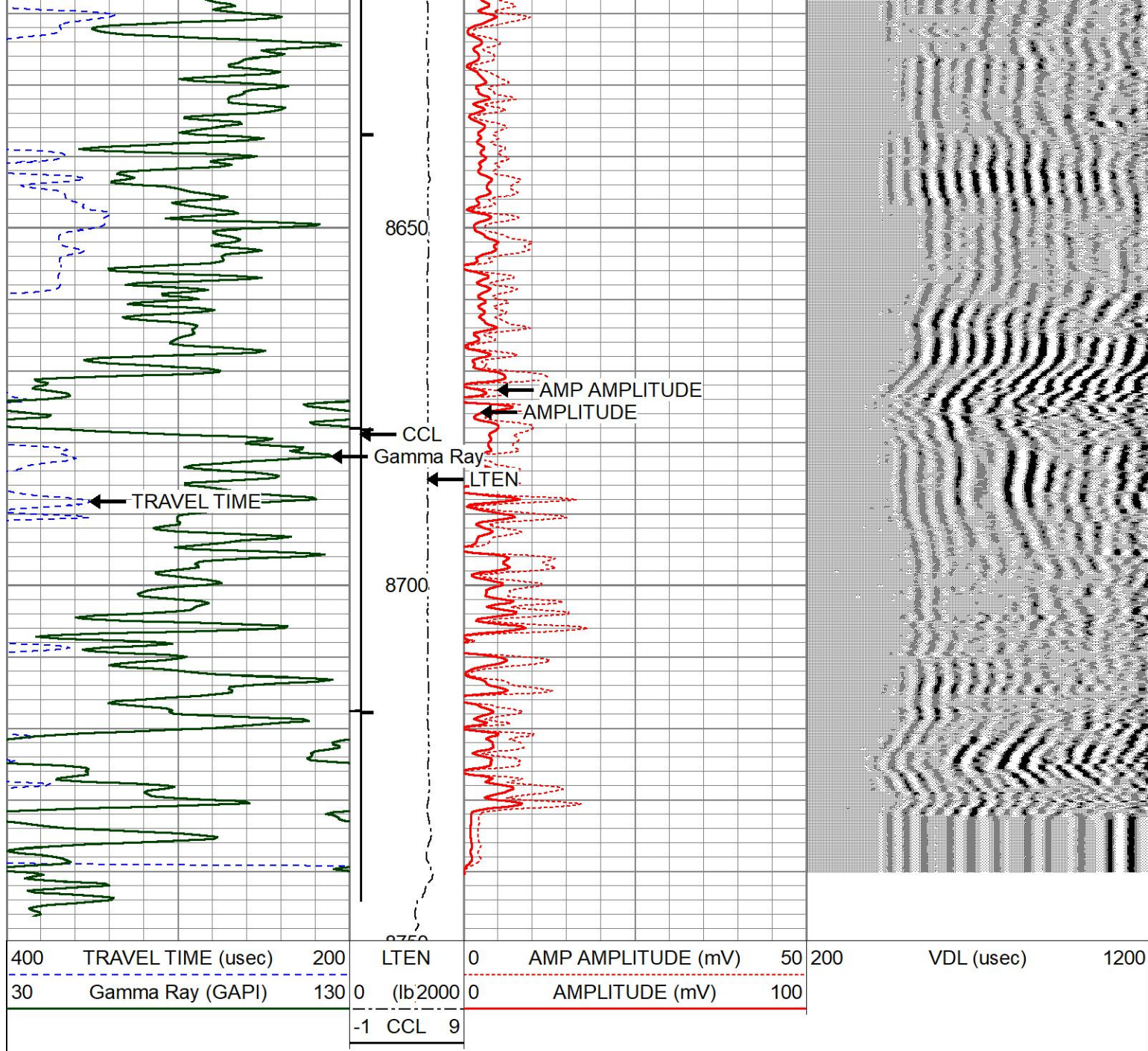








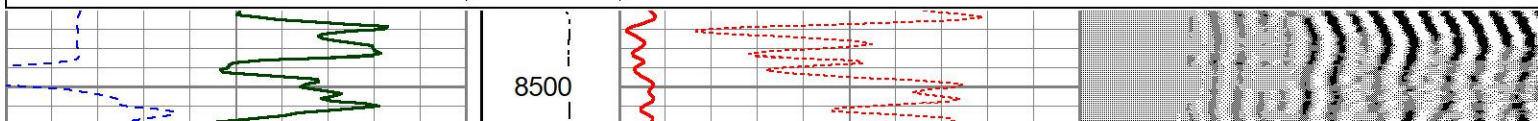


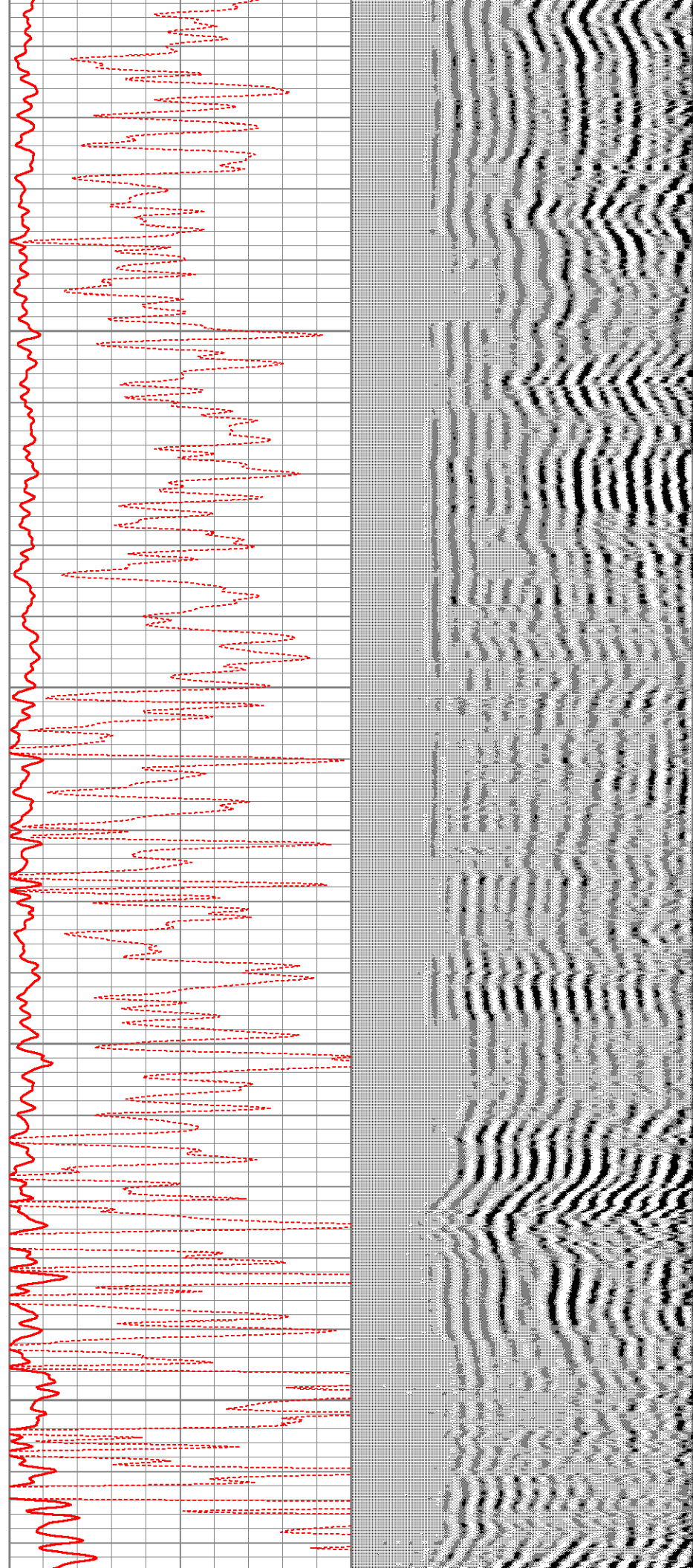
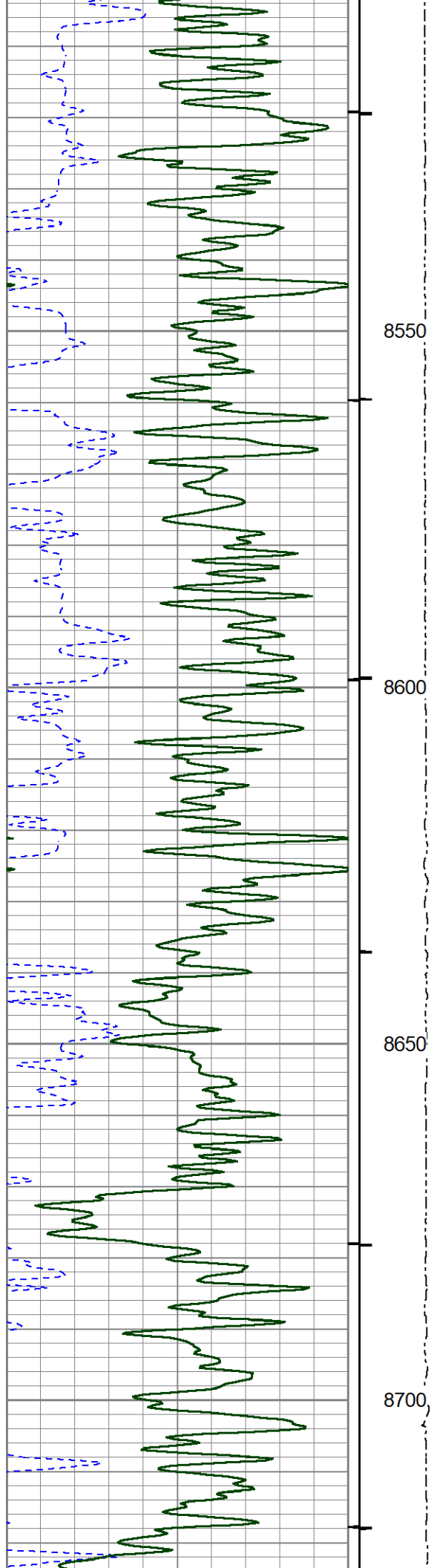


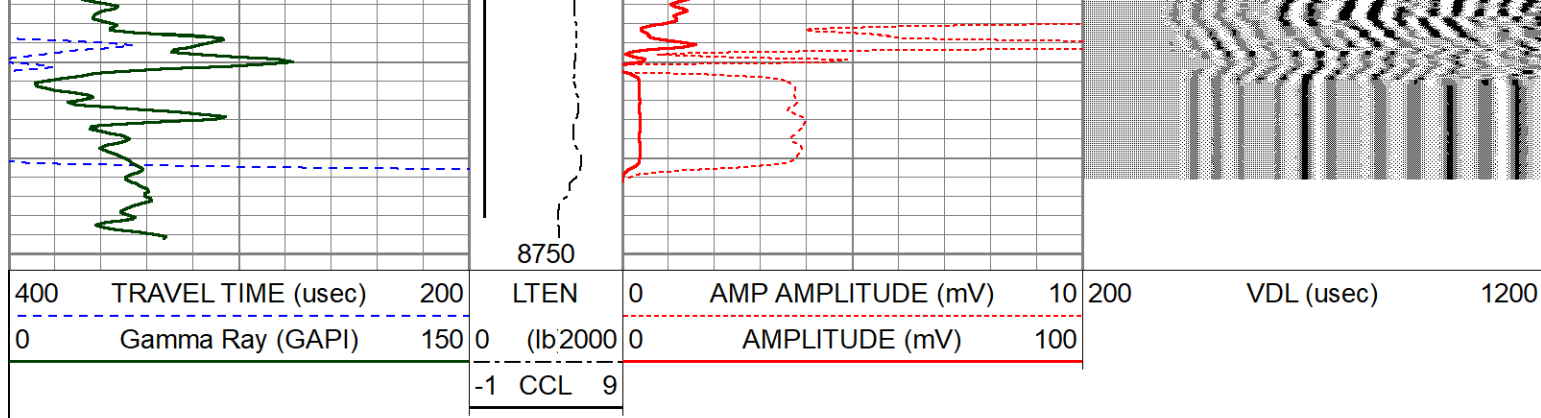
REPEAT PASS

Database File great western colorado state log 5-9-19.db
 Dataset Pathname pass17
 Presentation Format cbl_drs
 Dataset Creation Thu May 09 11:16:59 2019
 Charted by Depth in Feet scaled 1:240

400	TRAVEL TIME (usec)	200	LTEN	0	AMP AMPLITUDE (mV)	10	200	VDL (usec)	1200
0	Gamma Ray (GAPI)	150	0	(lb2000)	0	AMPLITUDE (mV)	100		
			-1	CCL	9				







Calibration Report						
Database File	great western colorado state log 5-9-19.db					
Dataset Pathname	pass20					
Dataset Creation	Thu May 09 12:49:16 2019					
Gamma Ray Calibration Report						
Type / Serial:			Probe275dig / 080828			
SHOP CALIBRATION (Not Performed)						
	Counts/Sec.	Gain	Offset	Jig	Units	
Background	0.0				cps	
Calibrator	1.0	1.0000			cps	
					GAPI/cps	
PRIMARY VERIFICATION						
Background	0.0				cps	
Calibrator	0.0				cps	
Difference				0.0	GAPI	
BEFORE SURVEY VERIFICATION						
Background	0.0				cps	
Calibrator	0.0				cps	
Difference				0.0	GAPI	
AFTER SURVEY VERIFICATION						
Background	0.0				cps	
Calibrator	0.0				cps	
Difference				0.0	GAPI	

Segmented Cement Bond Log Calibration Report				
Serial Number:	080840			
Tool Model:	Probe 2.75 Radii HT			
Calibration Casing Diameter:	5.500	in		
Calibration Depth:	6550.025	ft		

Master Calibration, performed Thu May 09 11:03:59 2019:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.001	0.690	0.000	71.921	104.042	0.104
CAL	-0.001	0.672				
5'	-0.001	0.501	0.000	71.921	143.286	0.156
SUM						

SUM						
S1	-0.001	0.665	0.000	100.000	150.169	0.156
S2	-0.001	0.689	0.000	100.000	144.960	0.165
S3	-0.001	0.696	0.000	100.000	143.447	0.173
S4	-0.001	0.706	0.000	100.000	141.390	0.155
S5	-0.001	0.712	0.000	100.000	140.221	0.130
S6	-0.001	0.693	0.000	100.000	144.197	0.130
S7	-0.001	0.685	0.000	100.000	145.726	0.125
S8	-0.001	0.680	0.000	100.000	146.773	0.125

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.001	0.672	1.000	0.000

Air Zero Calibration, performed (Not Performed):

	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	