



GAMMA-RAY / CCL
CEMENT BOND LOG

Company GREAT WESTERN OIL & GAS
Well GREIN 1
Field WATTENBURG
County ADAMS State CO.

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State CO.

Location: API #: 05-001-08315
NWNE S5-T15-R66W
2770' FNL 1650' FEL
Permanent Datum GROUND LEVEL
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING
Other Services
DUMP BALL
Elevation
K.B. 5030'
D.F. 5030'
G.L. 5019'

Date JAN-20-2019

Run Number ONE
Depth Driller 8240'
Depth Logger 8038'
Bottom Logged Interval 8038'
Top Log Interval SURFACE
Open Hole Size 7 7/8"
Type Fluid WATER
Density / Viscosity 8.3#
Max. Recorded Temp. N/A
Estimated Cement Top N/A
Time Well Ready 0700
Time Logger on Bottom 0900
Equipment Number TRK.40
Location PLATTEVILLE
Recorded By R.RODRIGUEZ
Witnessed By M.COLE

Borehole Record
Run Number Bit From To Size Weight From To


Casing Record
Size 8 5/8" Wgt/Ft 24# Top Bottom
Surface String 8 5/8" SURFACE 320'
Prot. String 4.5" 11.6# SURFACE 8240'
Production String
Liner

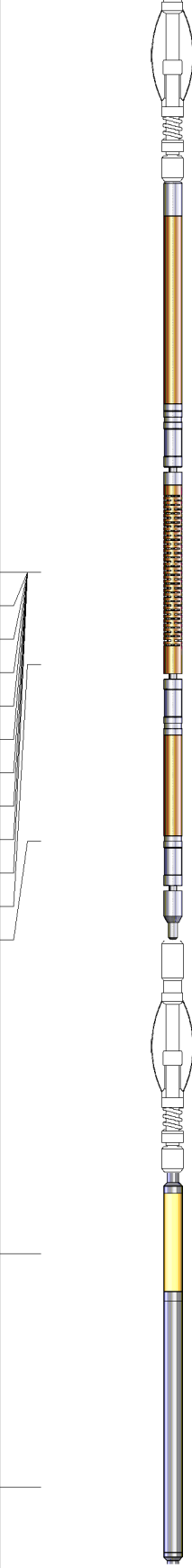
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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on 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

LOG CORRELATED TO BRIDGE PLUG @ 8038'
LOG RAN UNDER 0 PSI.
THANK FOR CHOSING KLX ENERGY SERVICES

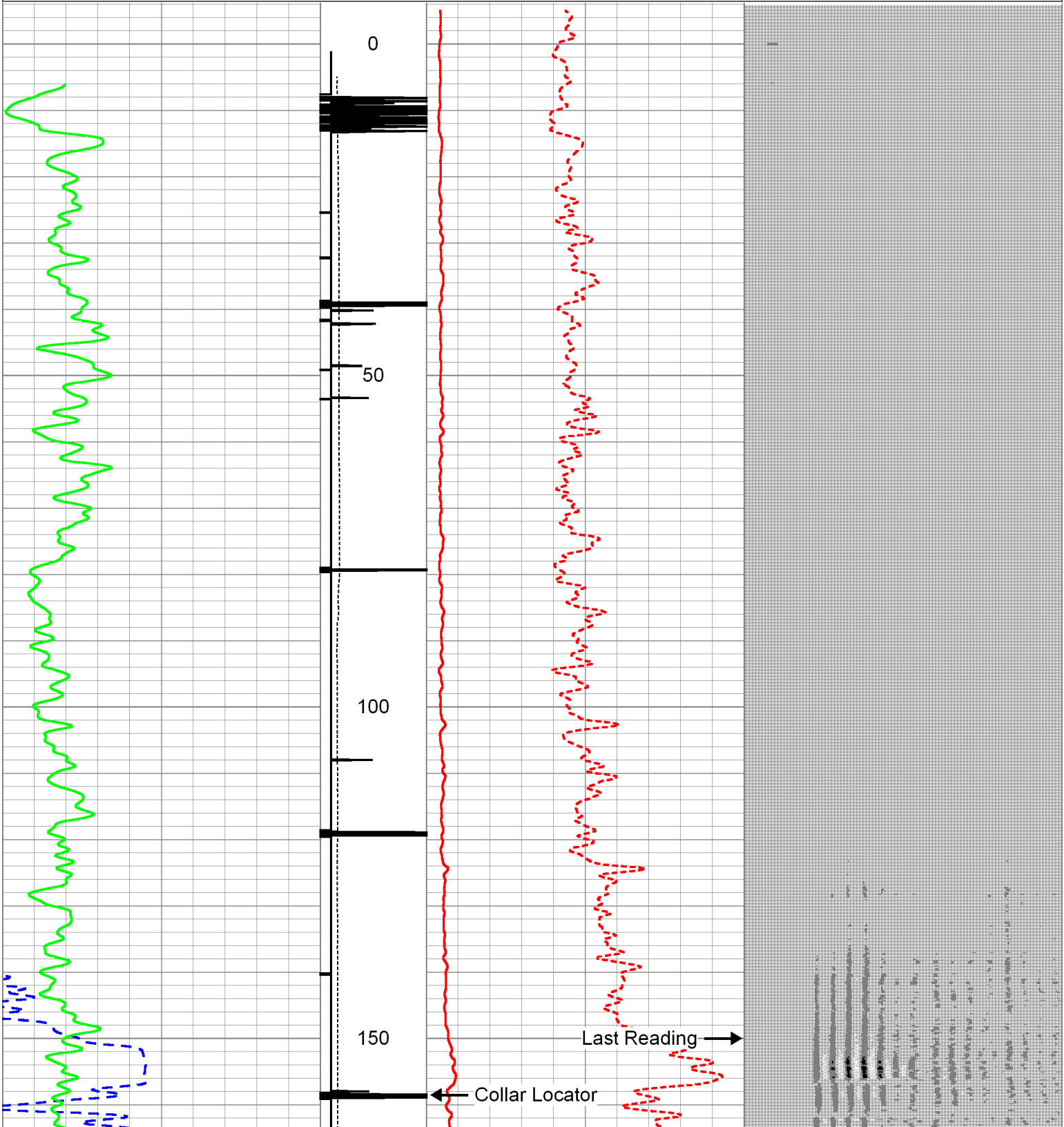
Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			1.4375 Titan 1 7/16 Cablehead	1.03	1.44	2.00

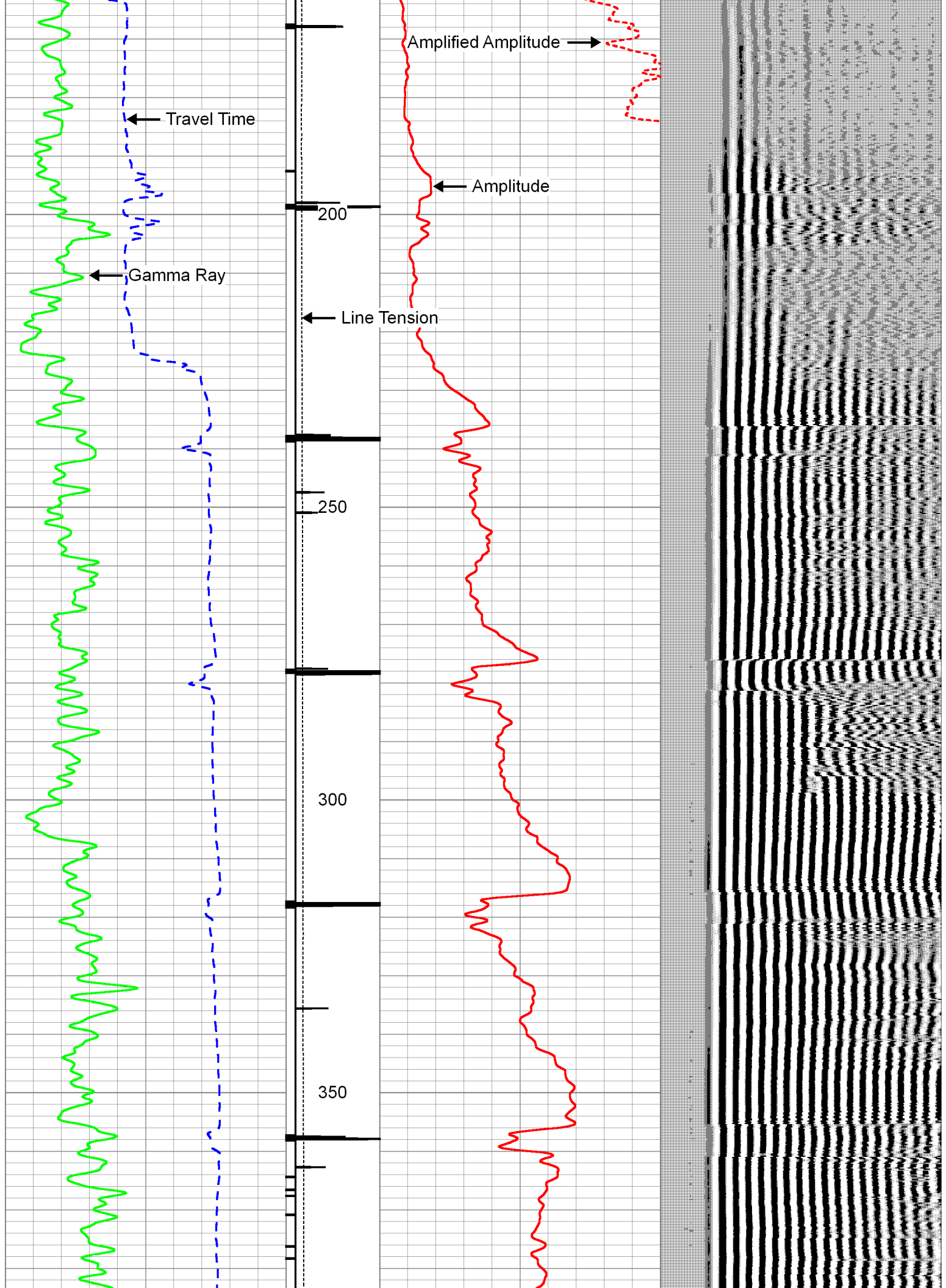
			2.75 2 3/4" Tekco Adjustable Centralizer	2.73	2.75	25.00
WVF3FT	11.65					
WVFCAL	11.65					
WVFS1	11.65					
WVFS2	11.65					
WVFS3	11.65					
WVFS4	11.65					
WVFS5	11.65					
WVFS6	11.65					
WVFS7	11.65					
WVFS8	11.65					
WVF5FT	10.56					
TEMP	8.48					
			RBT-Probe (080840) Probe Radii Bond Tool with Digital Telemetry	8.92	2.75	90.00
			2.75 2 3/4" Tekco Adjustable Centralizer	2.73	2.75	25.00
CCL	3.64					
			GR-Probe (080220) Probe 2.75" 4 Channel Pulse	4.58	2.75	30.00
GR	0.90					
Dataset: grein1cbl.db: field/well/run1/pass9						
Total Length: 19.99 ft						
Total Weight: 172.00 lb						
O.D. 2.75 in						

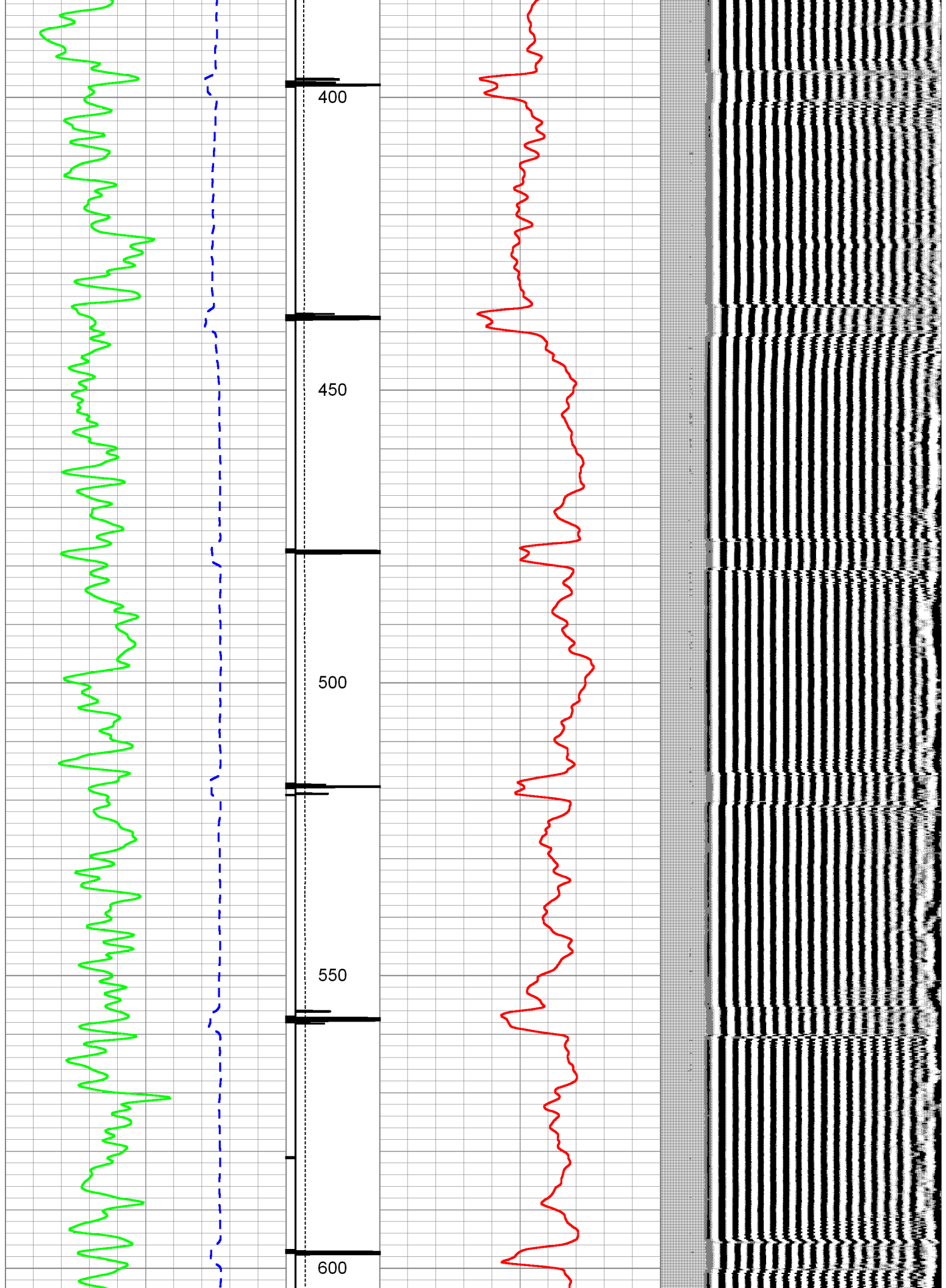
Database File: grein1cbl.db
Dataset Pathname: pass10
Presentation Format: cbl_cs
Dataset Creation: Sun Jan 20 09:17:53 2019 by Log 0
Charted by: Depth in Feet scaled 1:240

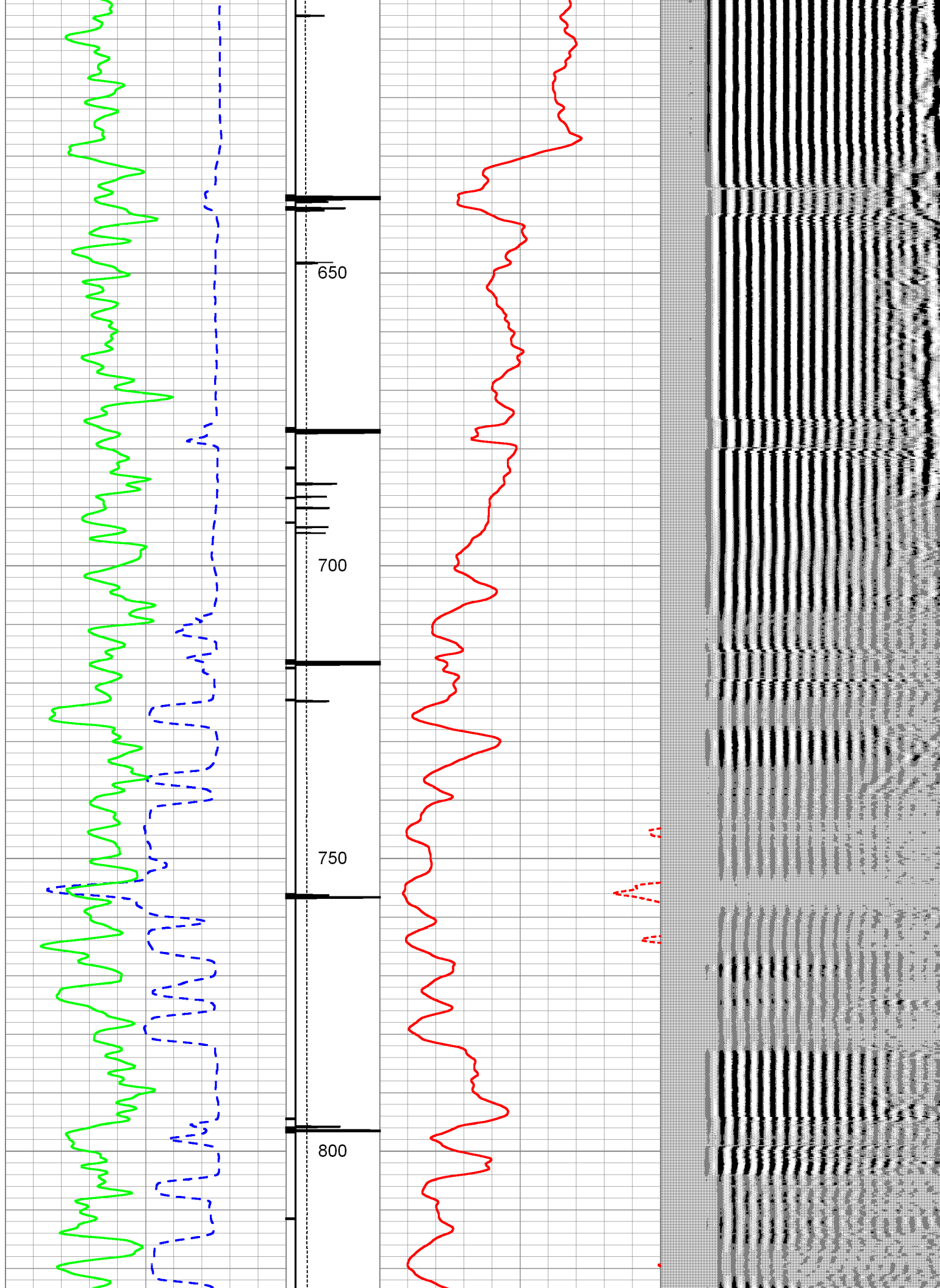
400	Travel Time (usec)	200	Collar Location	0	Amplified Amplitude (mV)	10	200	VDL	1200
0	Gamma Ray (GAPI)	150	-1	9	0	Amplitude (mV)	100		

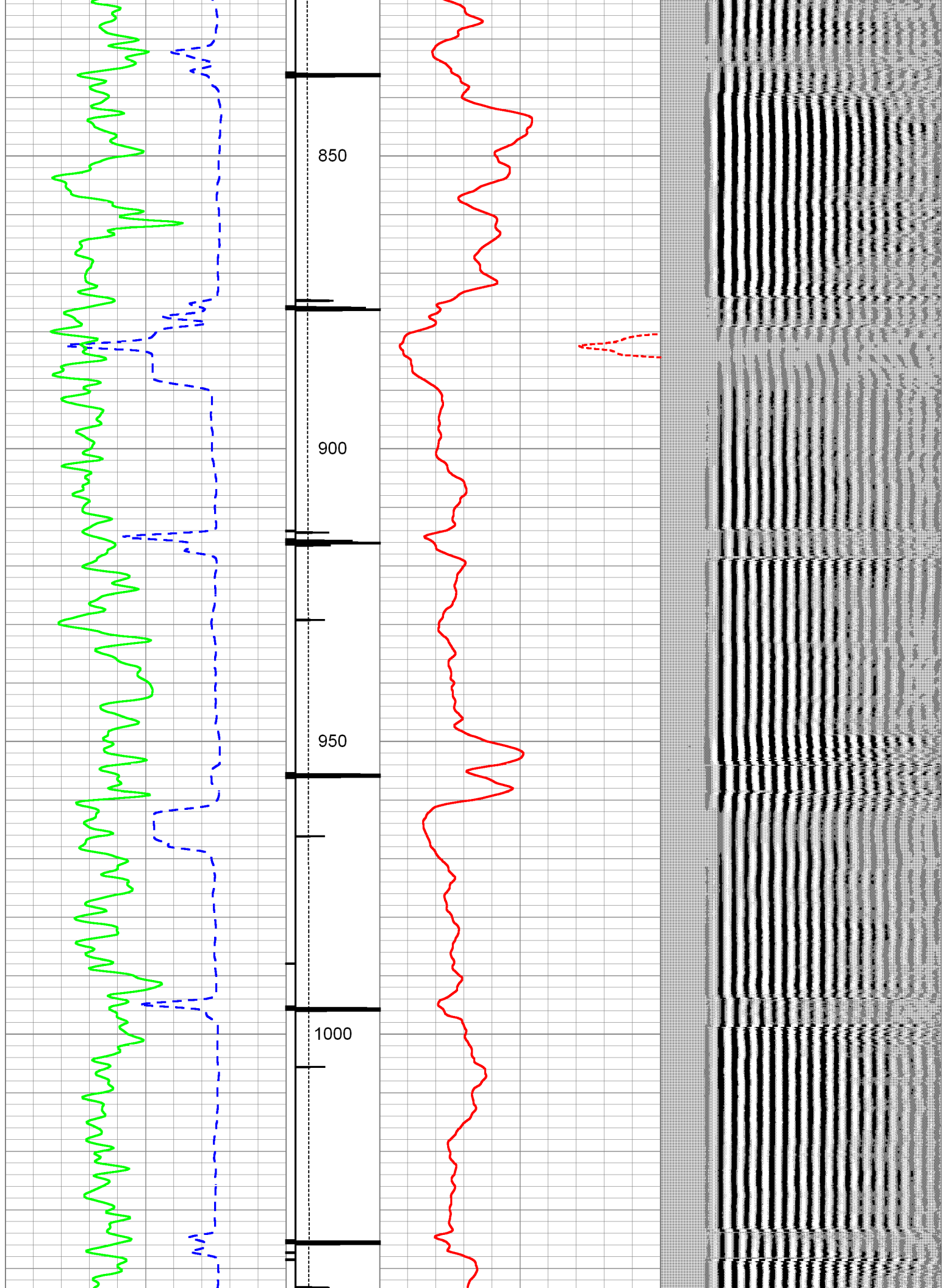
Line Tension
(lb)
0 1500

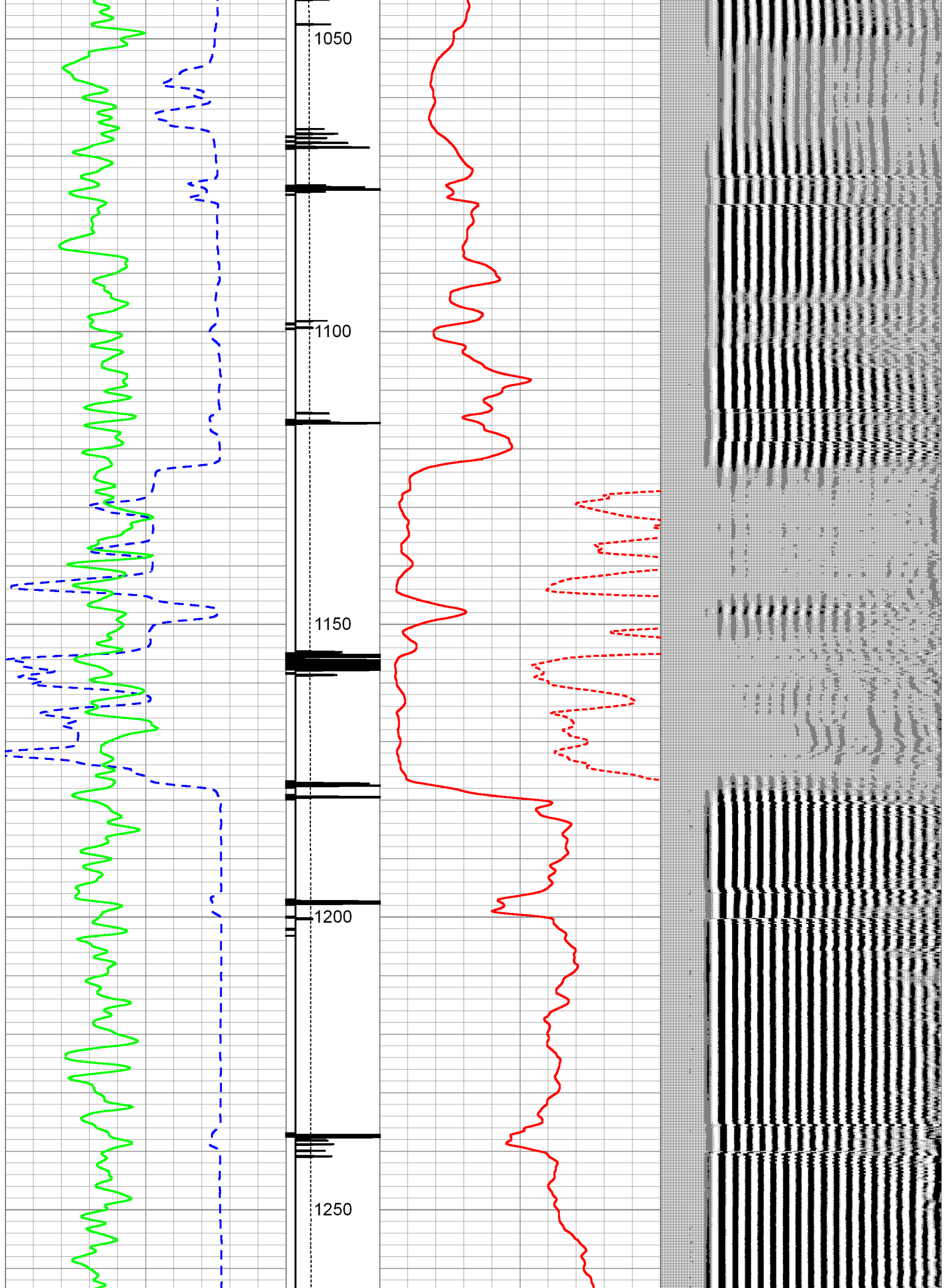


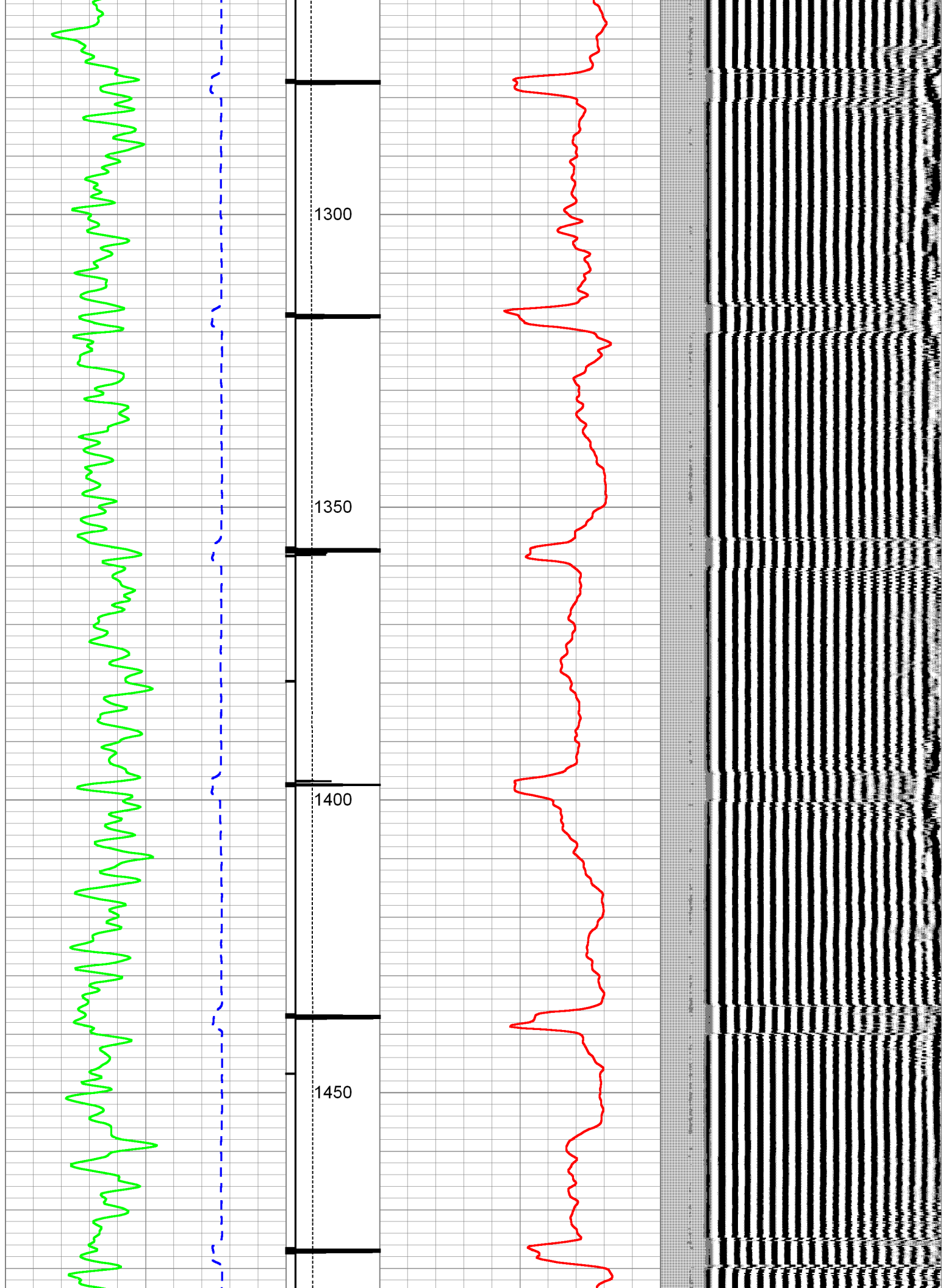


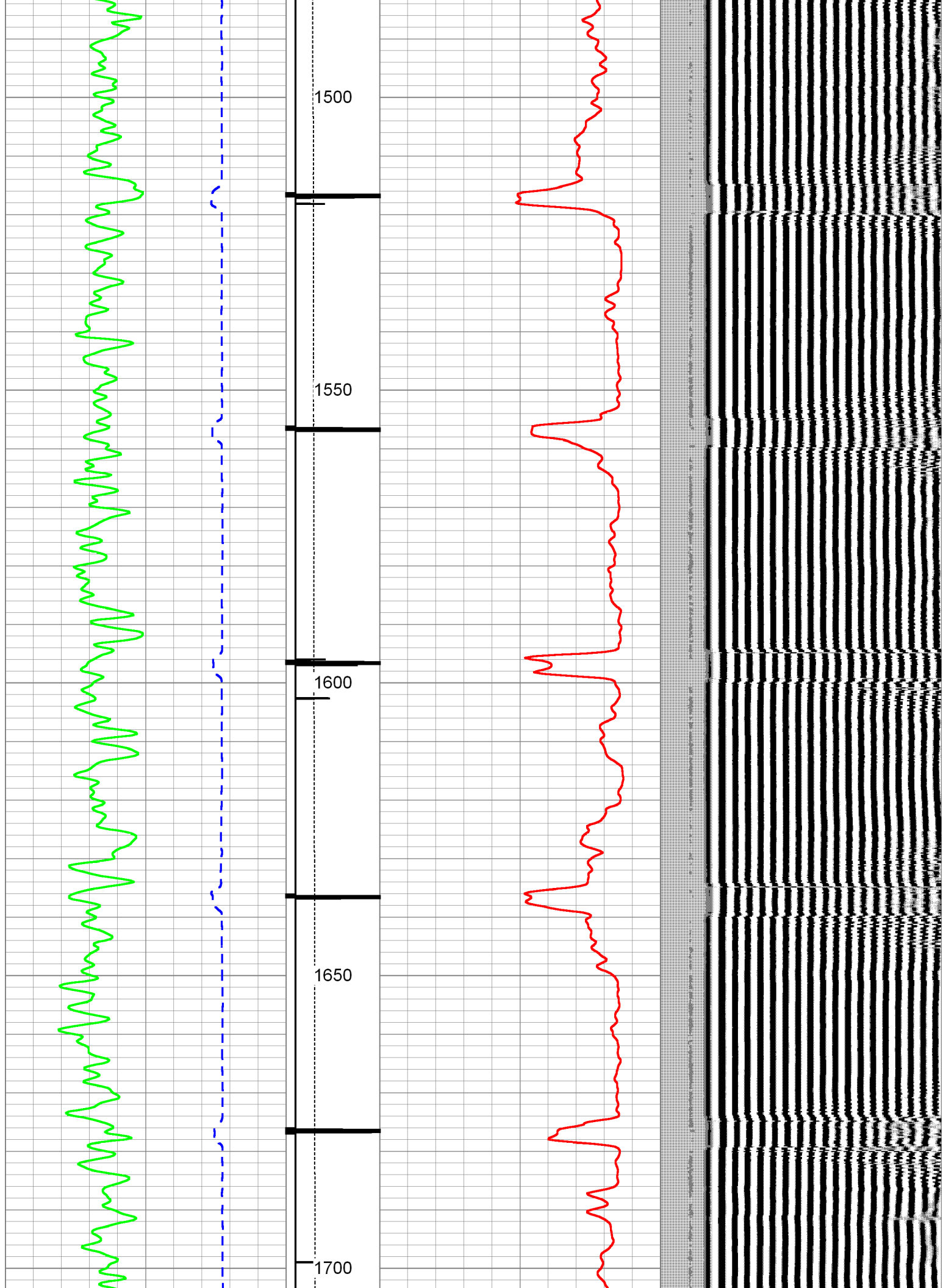


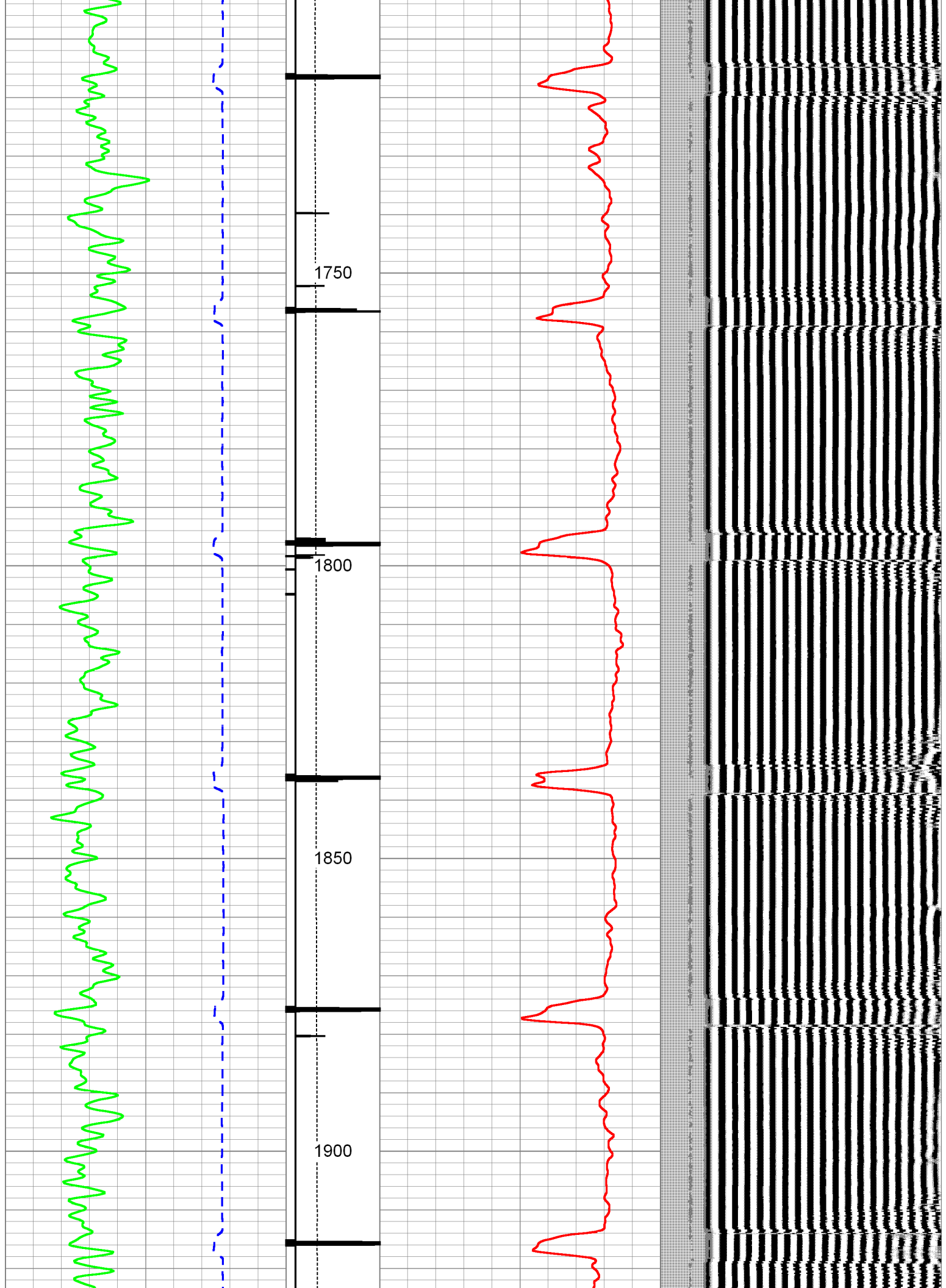


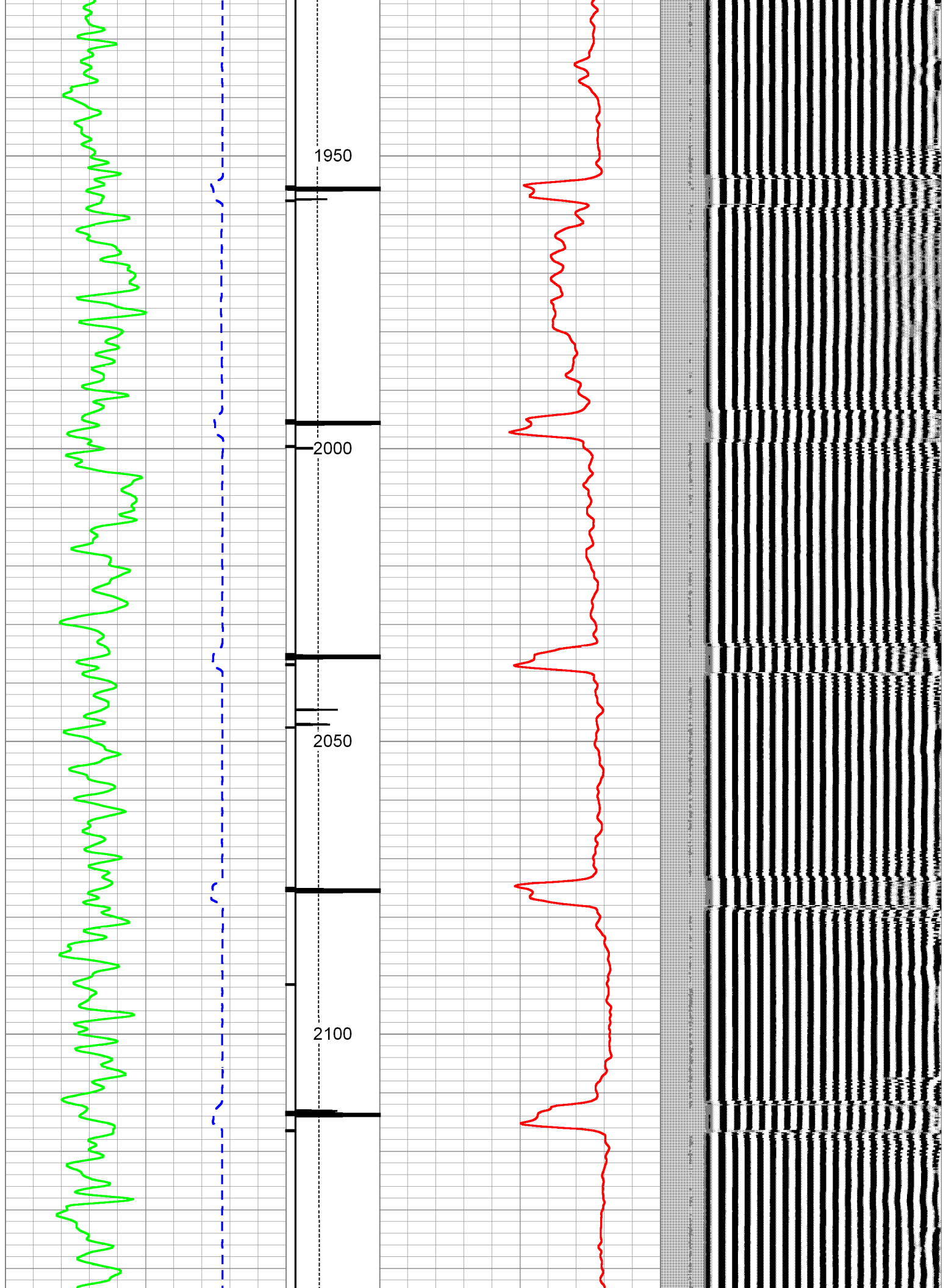


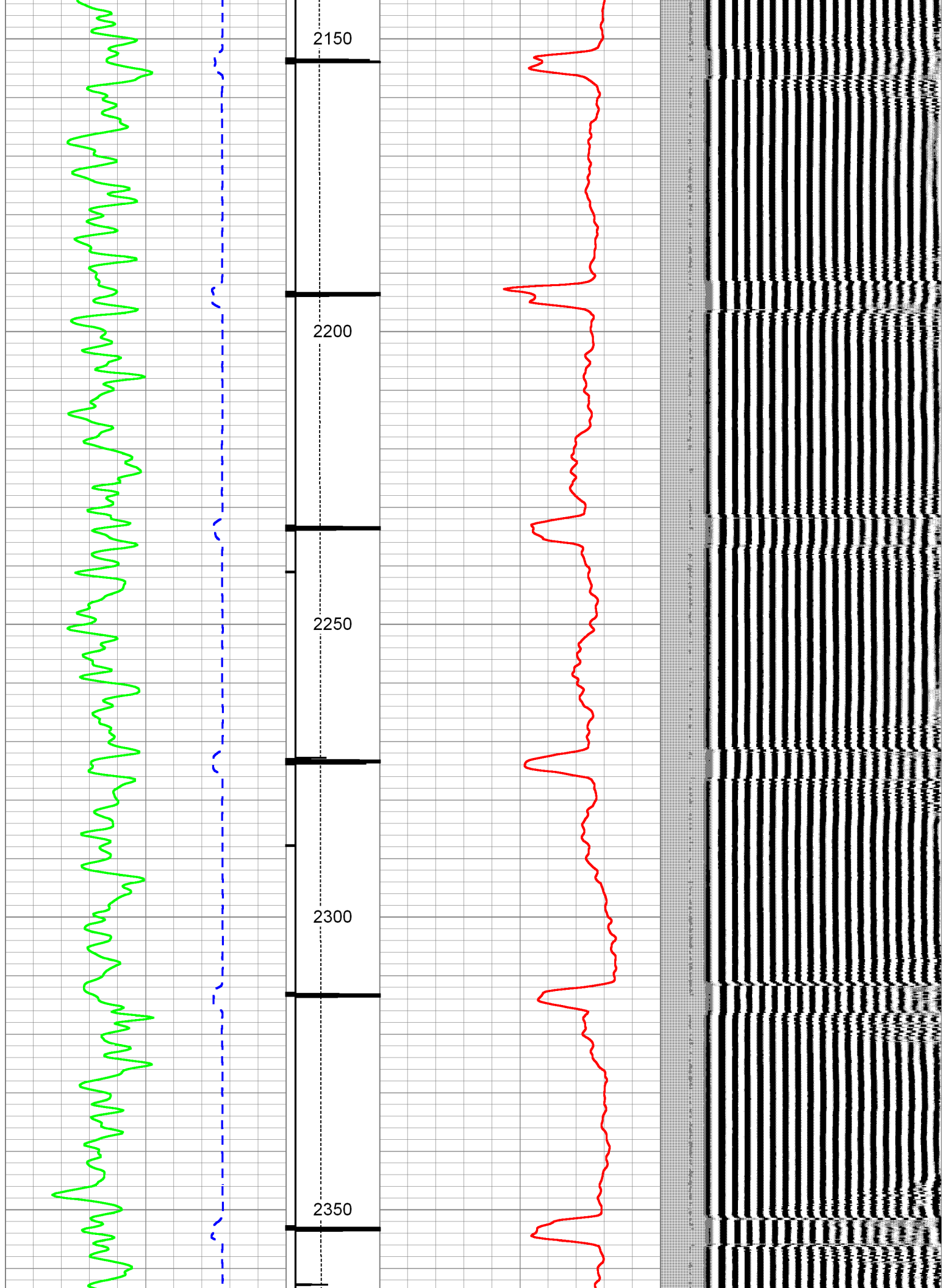


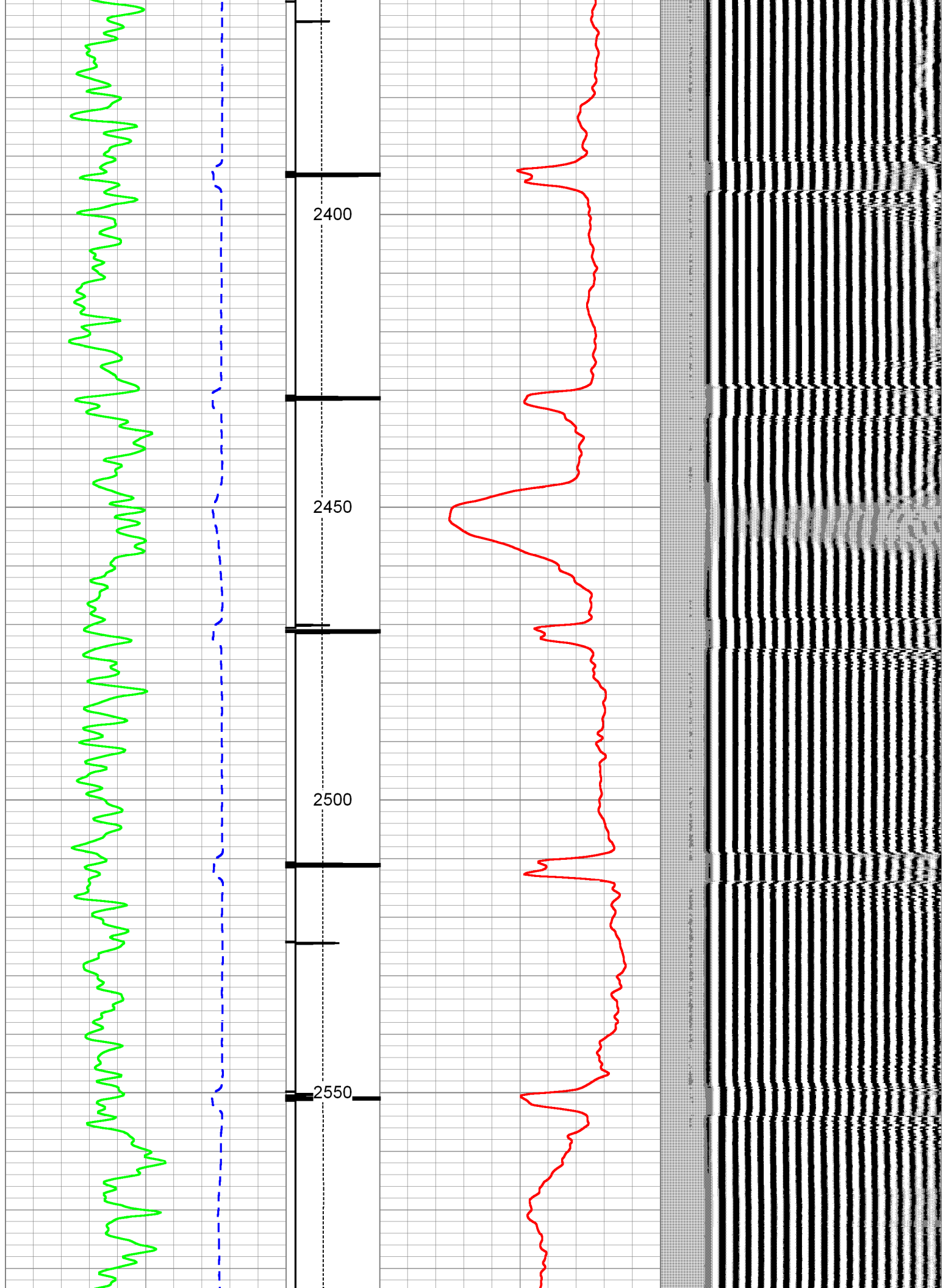


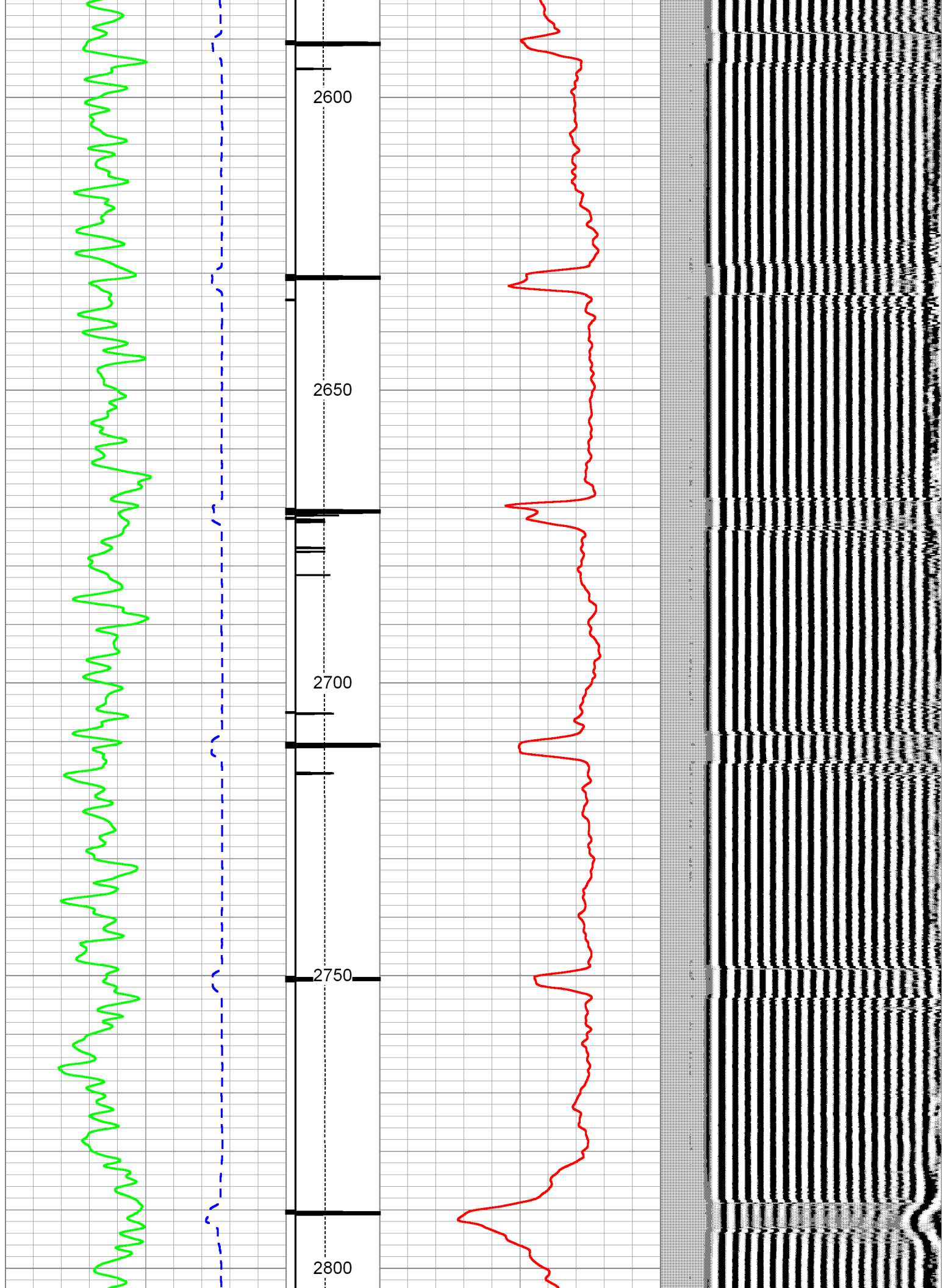


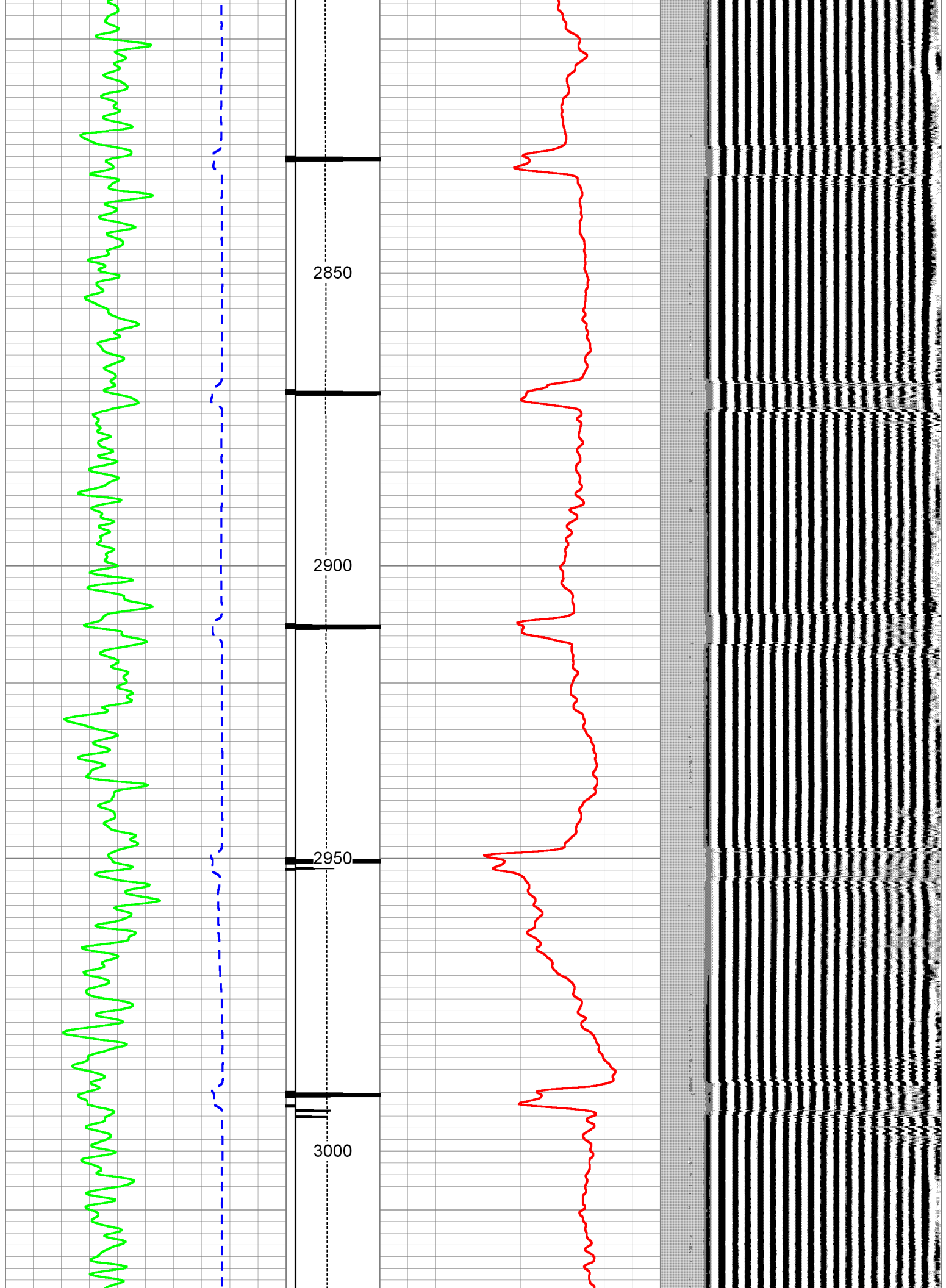


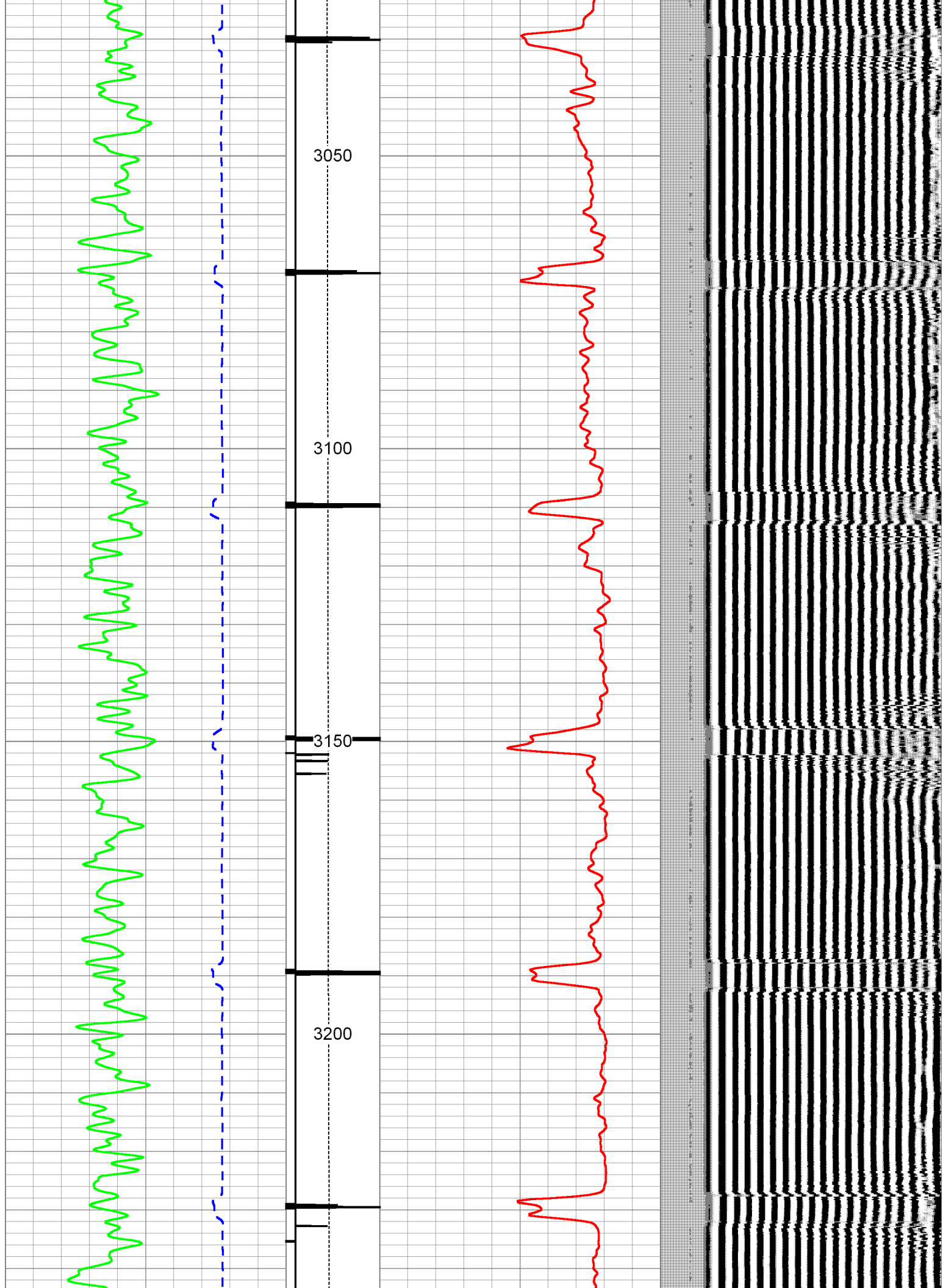


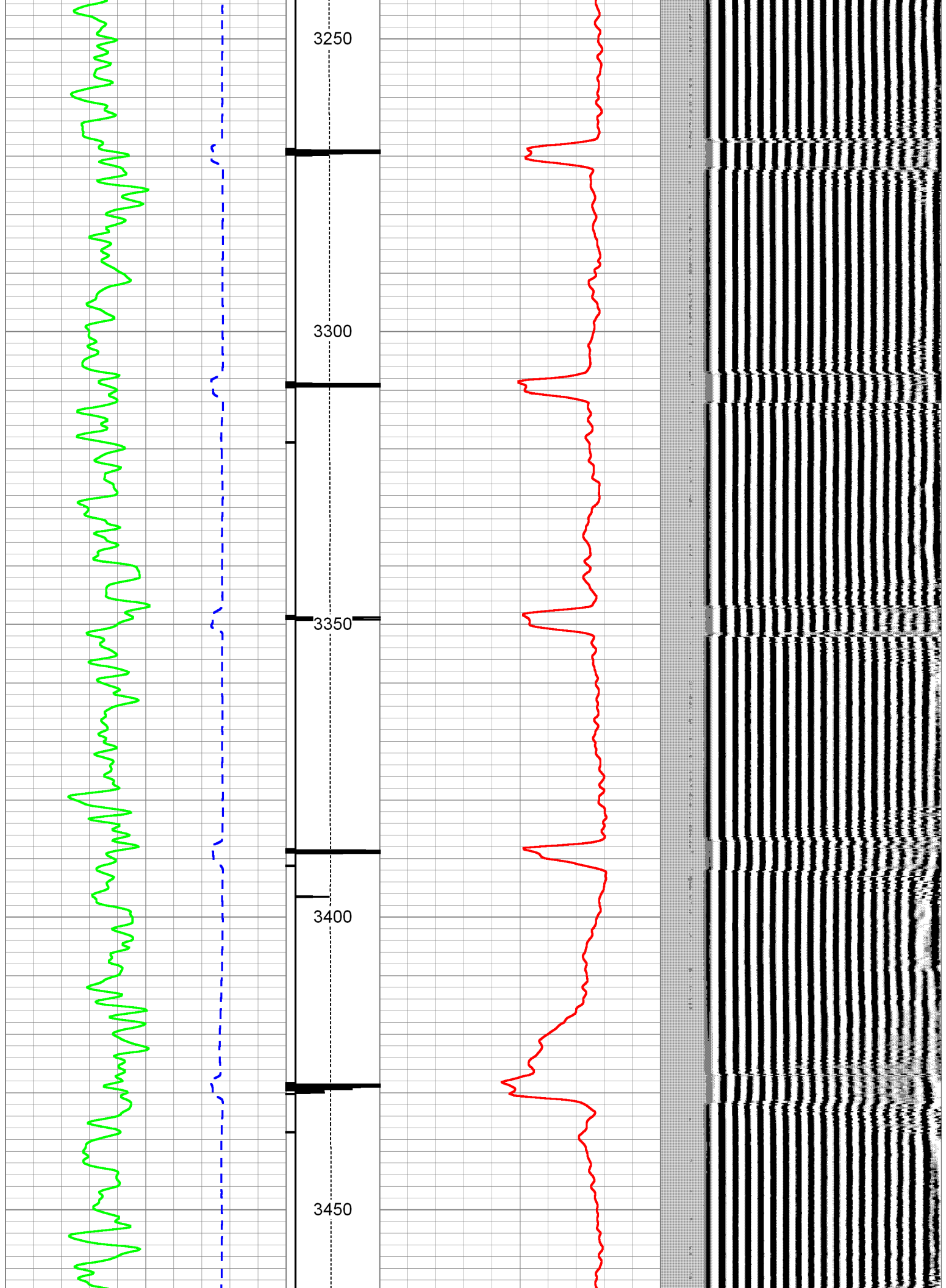


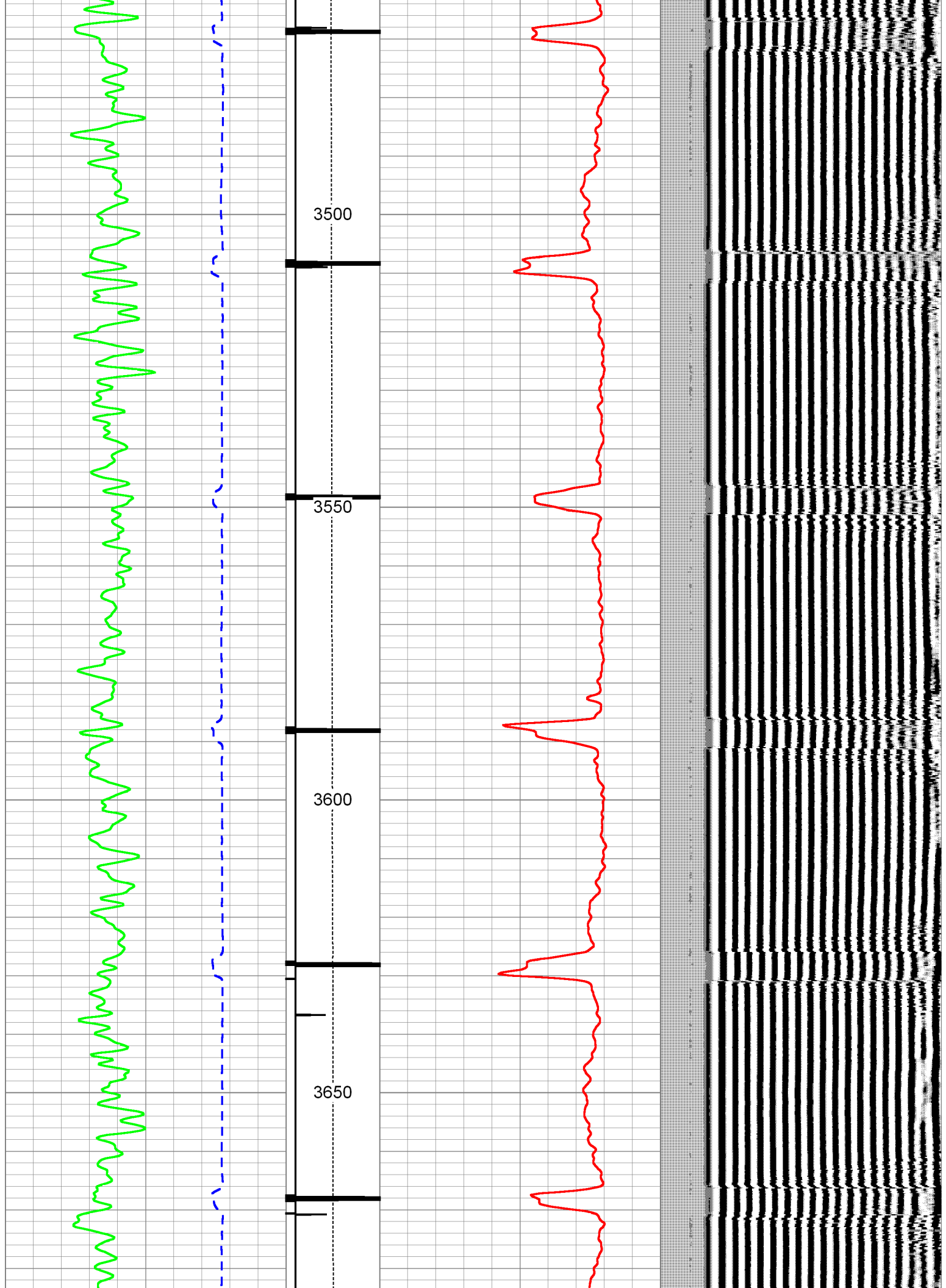


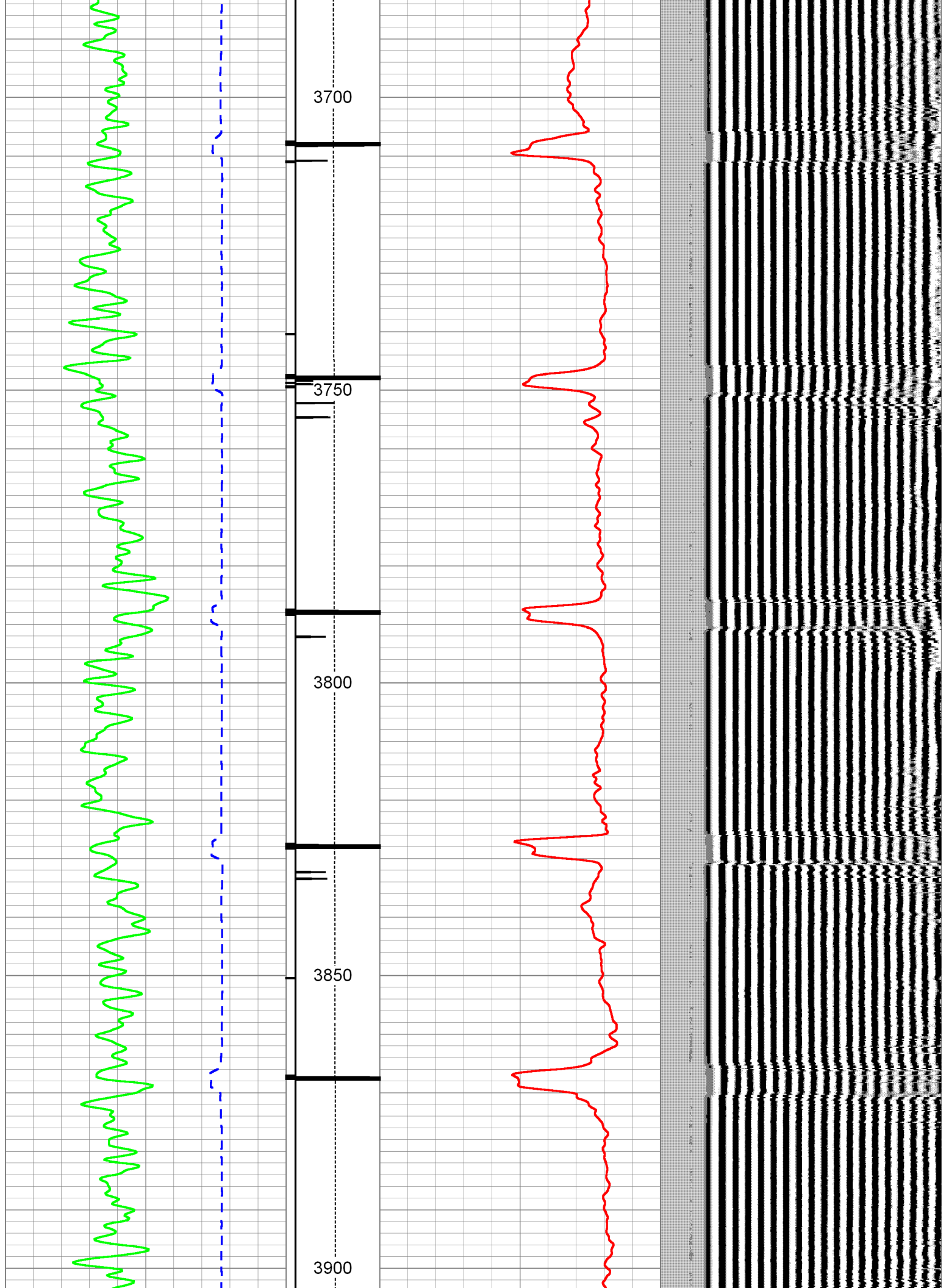


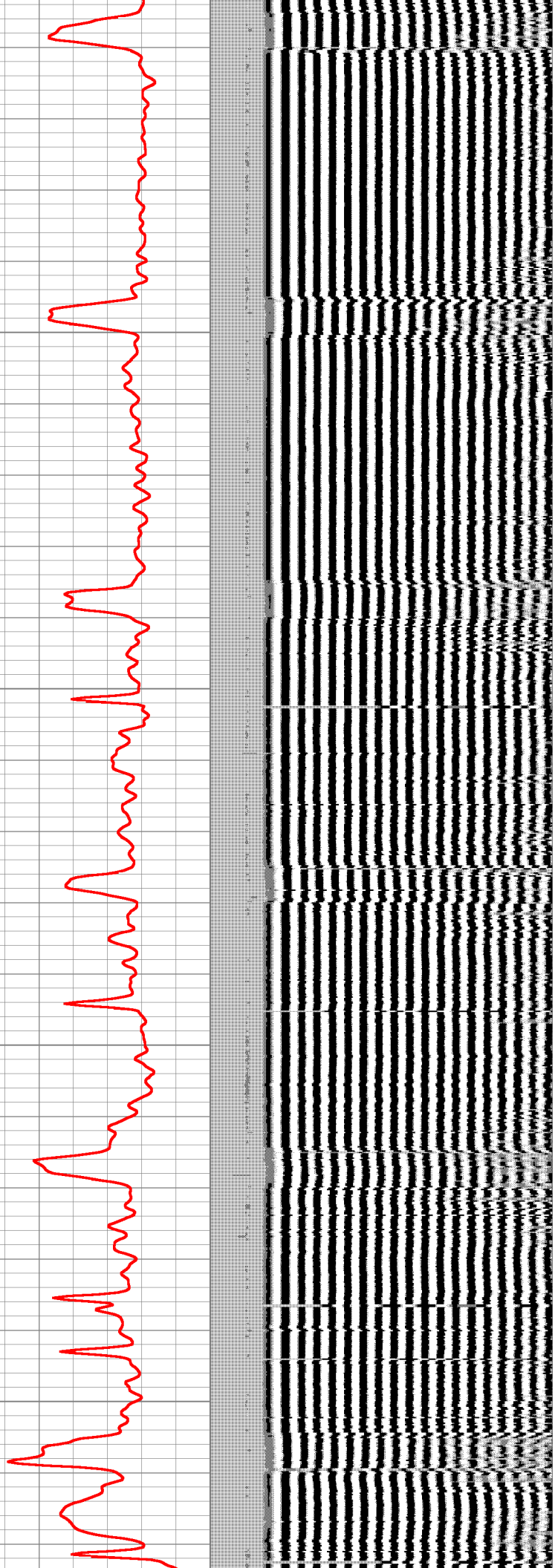
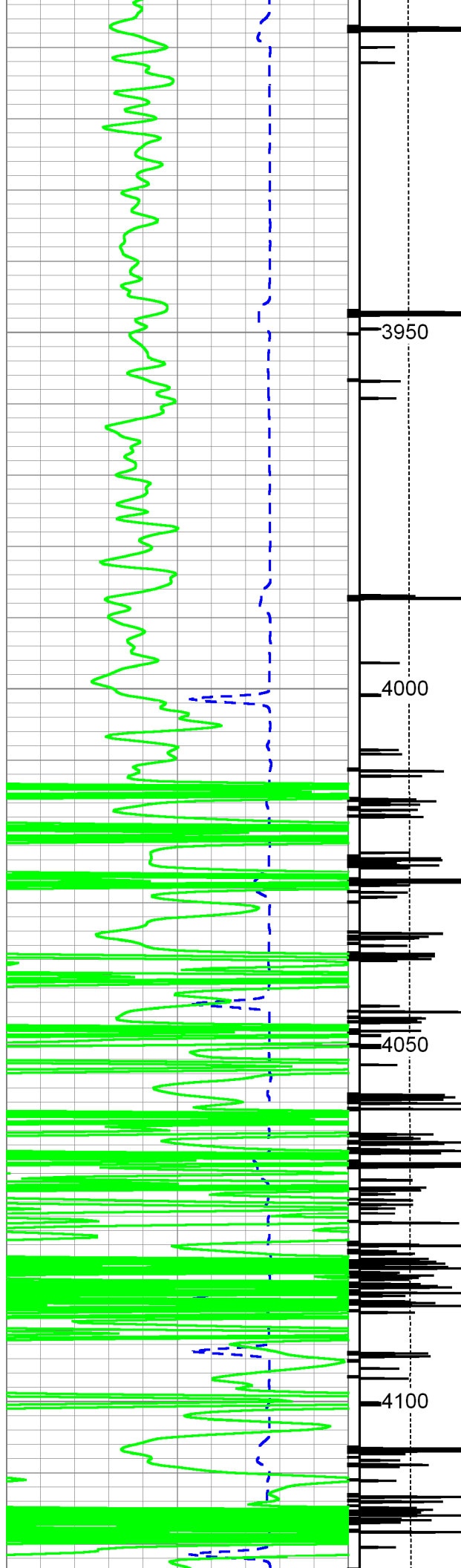


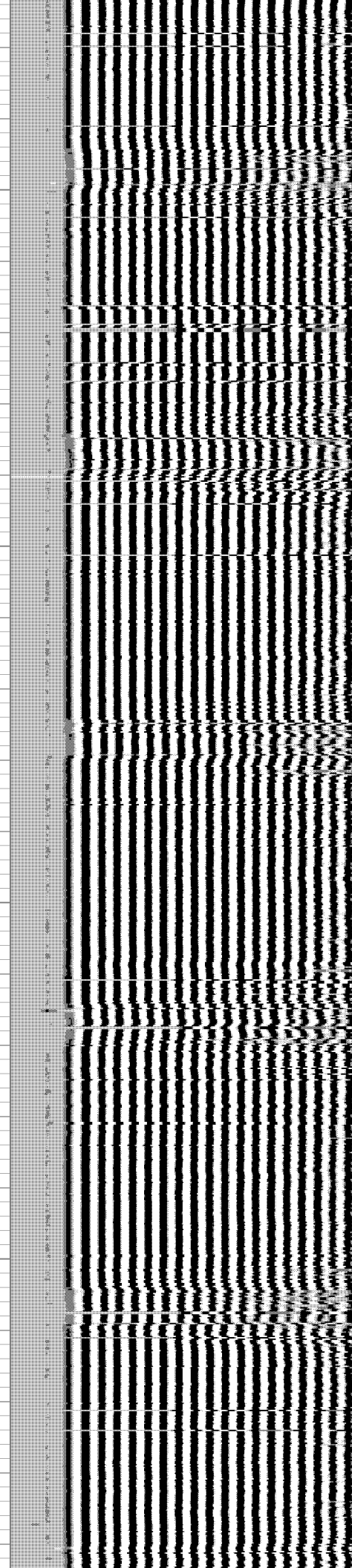
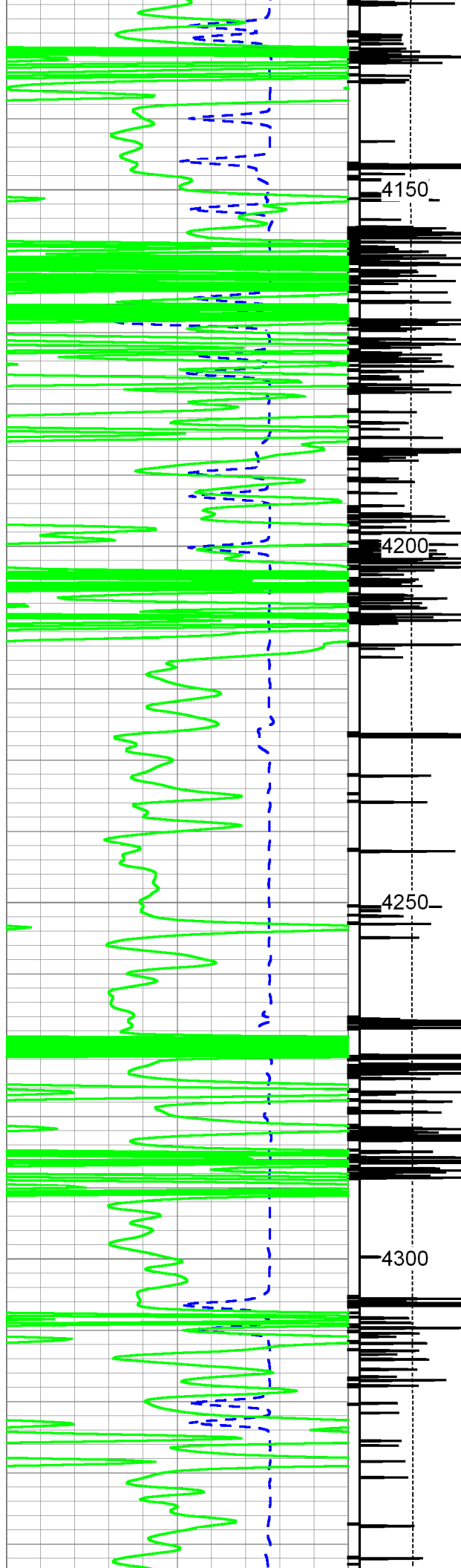


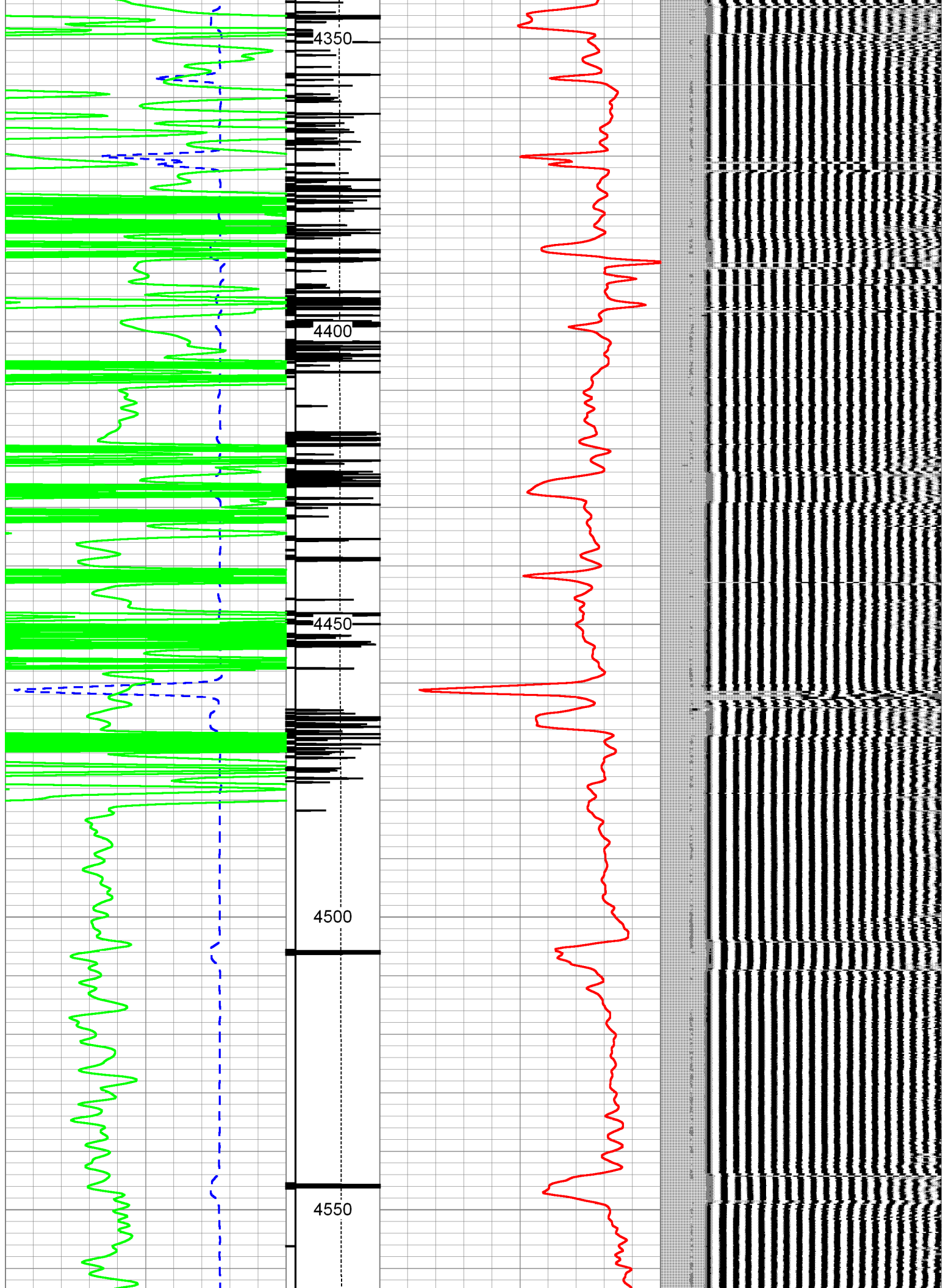


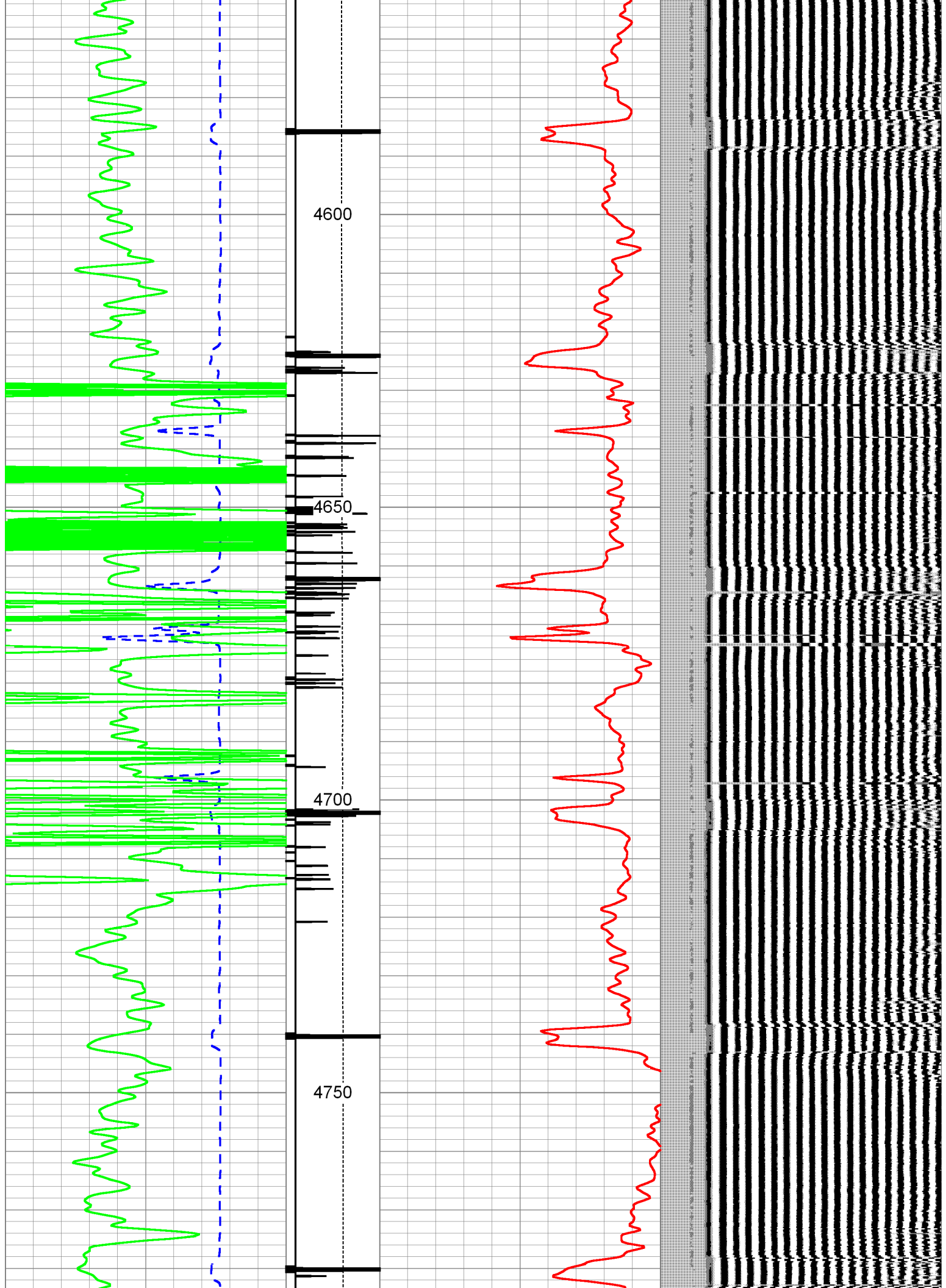


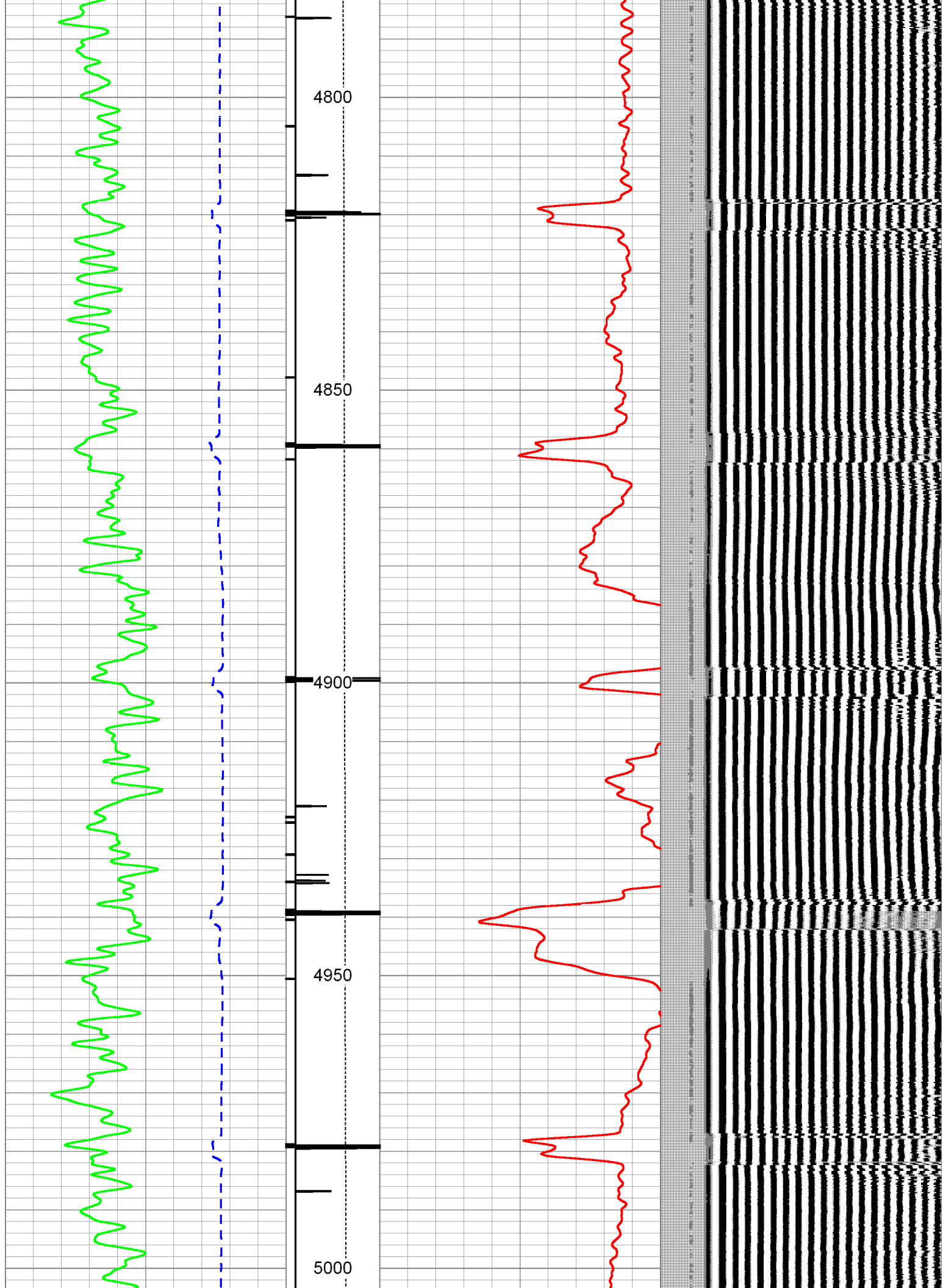


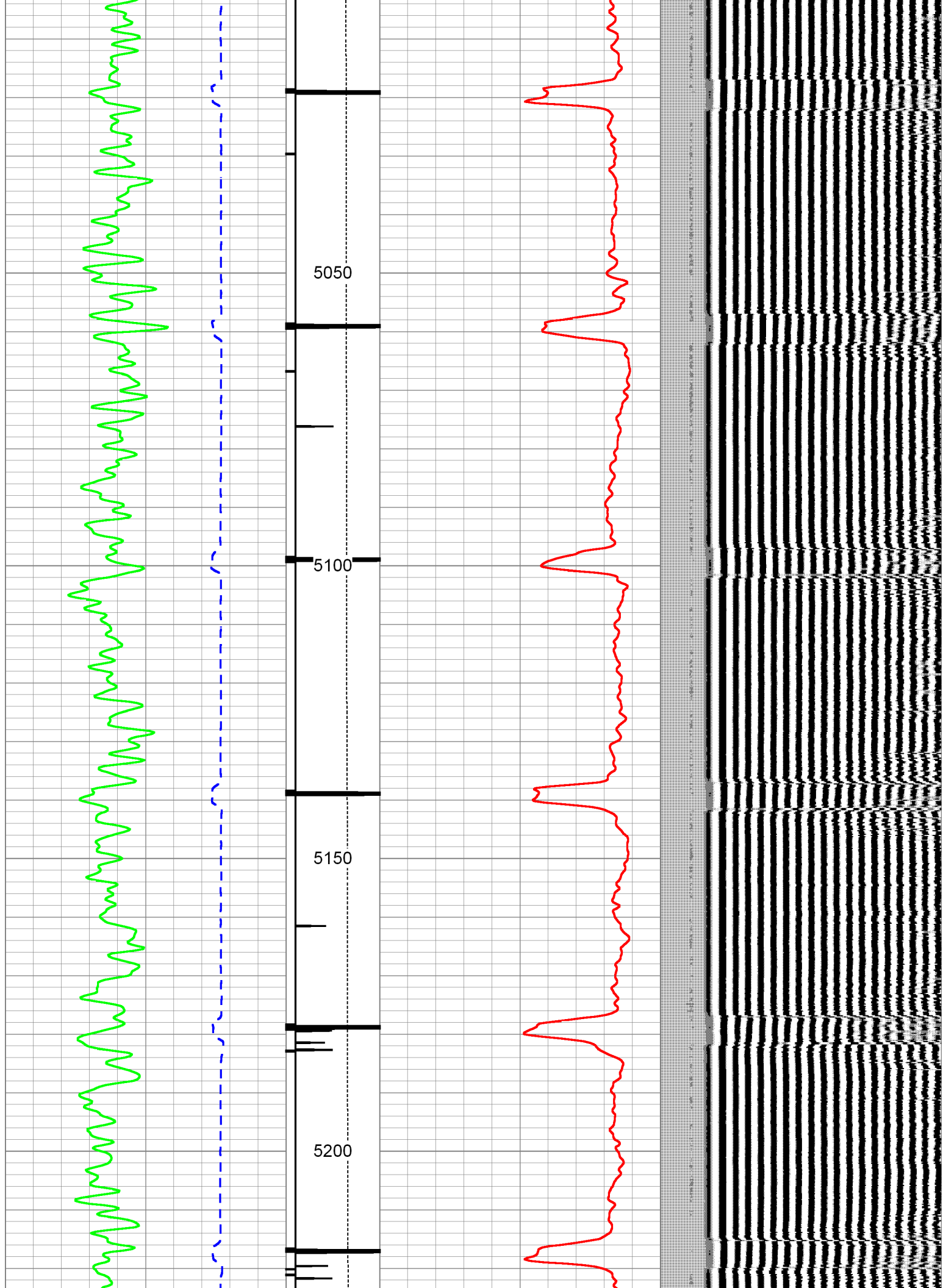


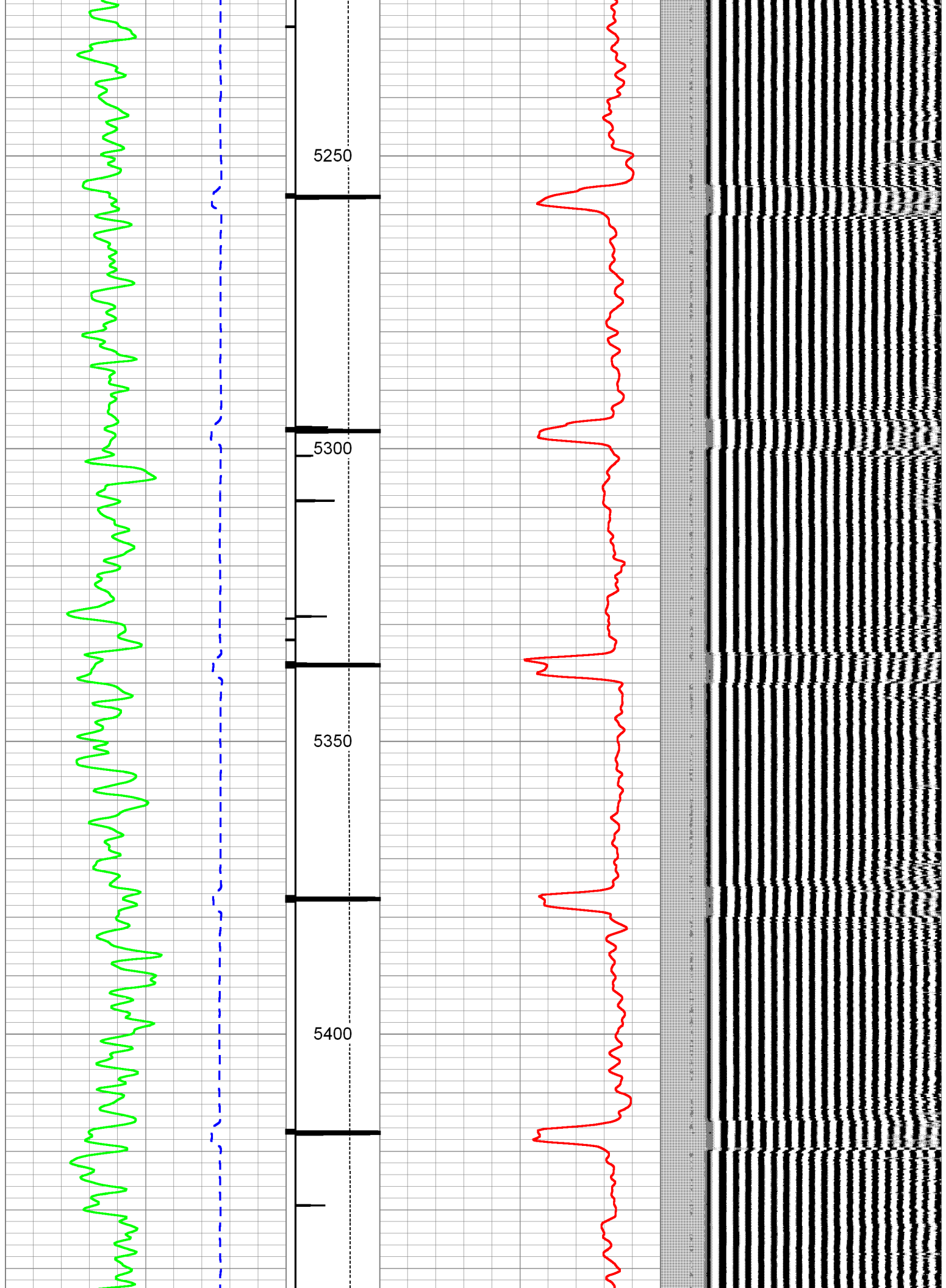


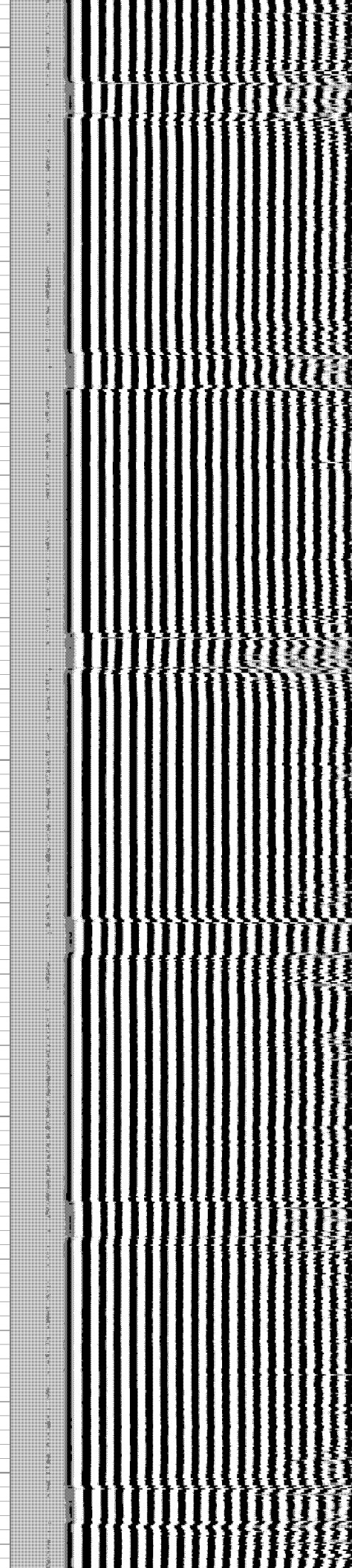
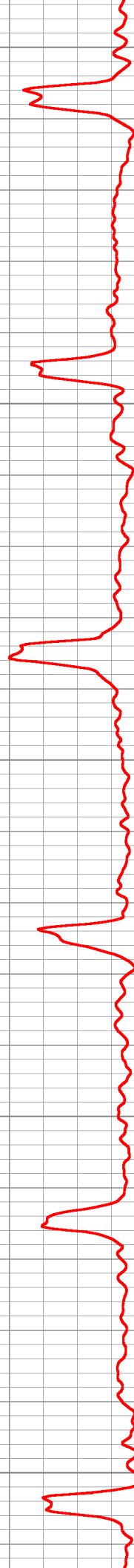
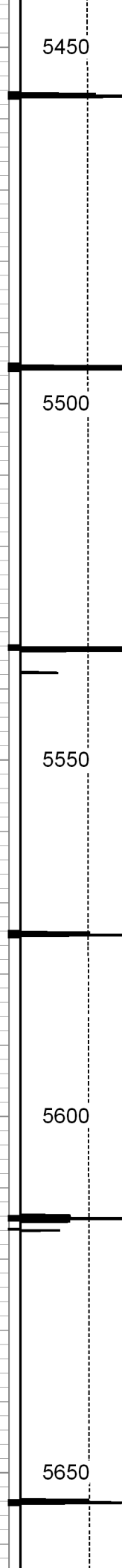


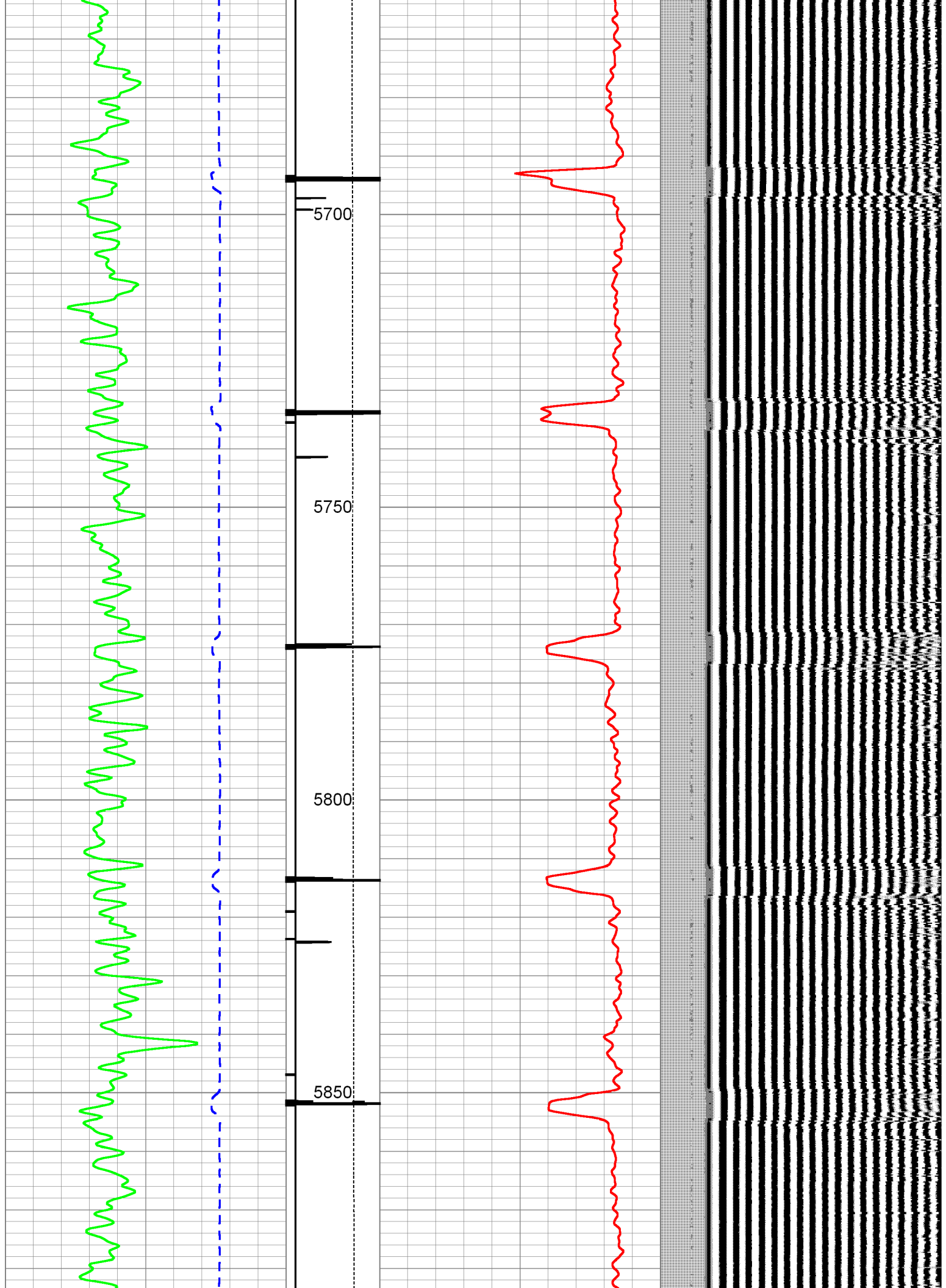


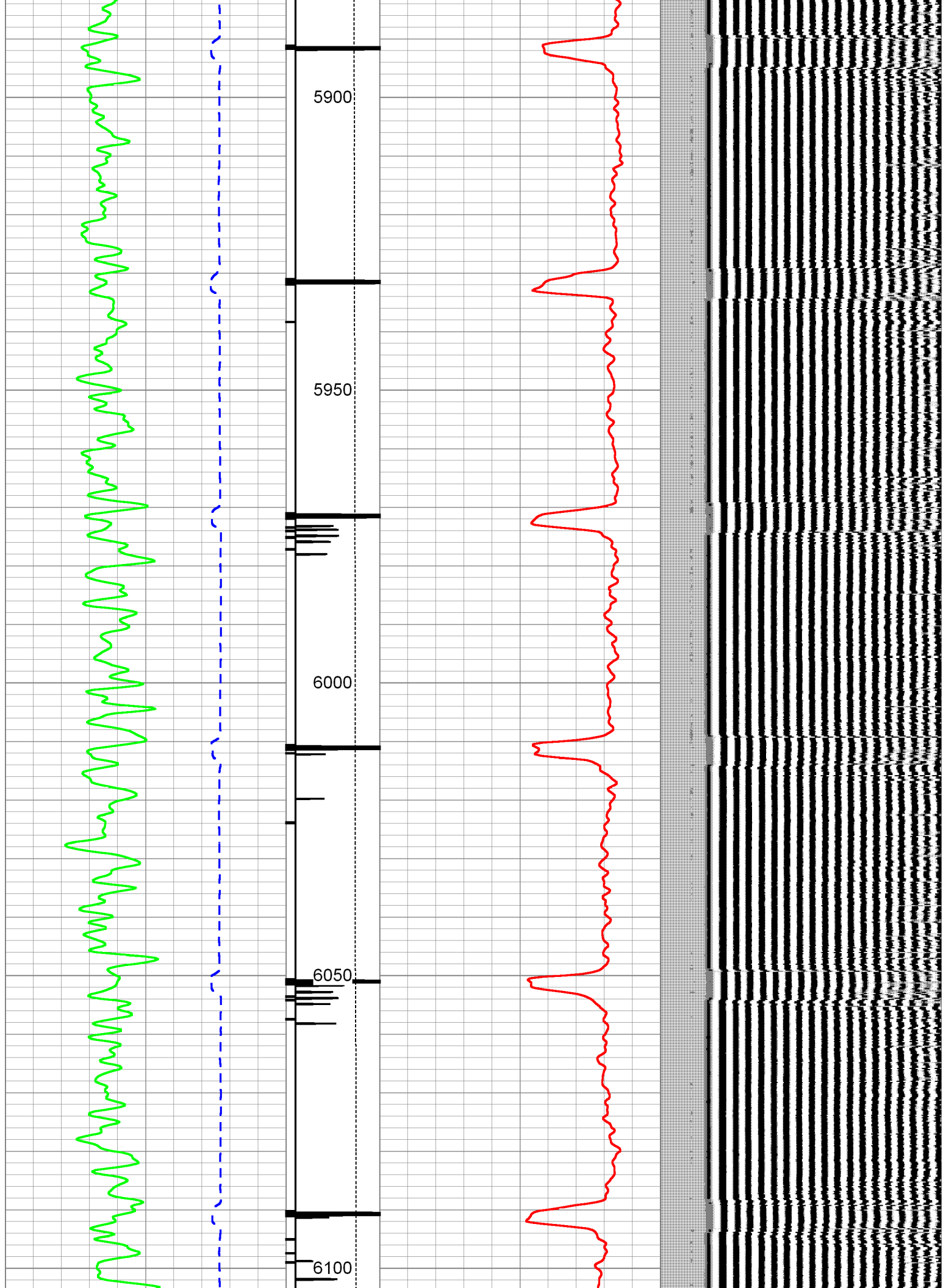


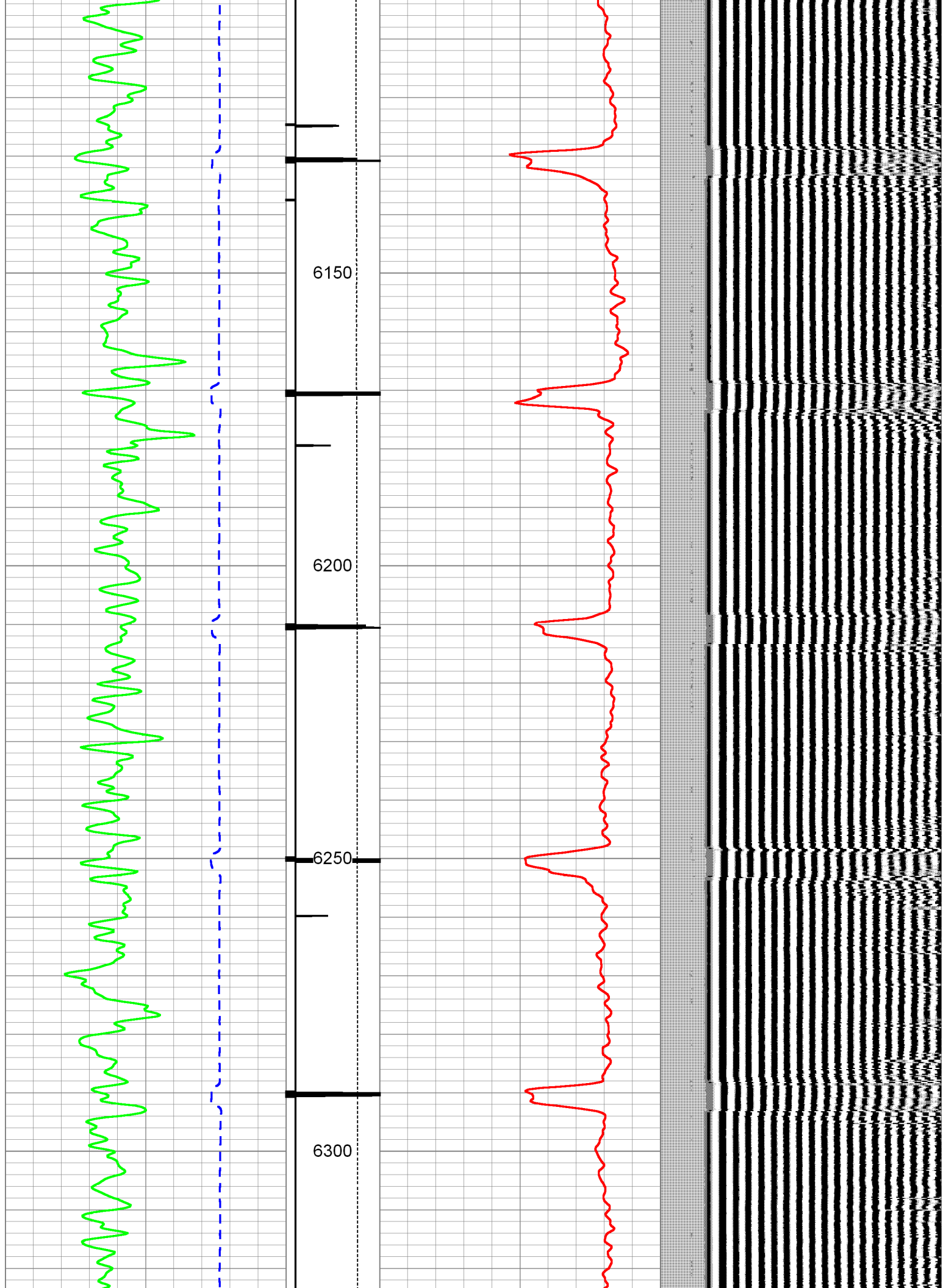


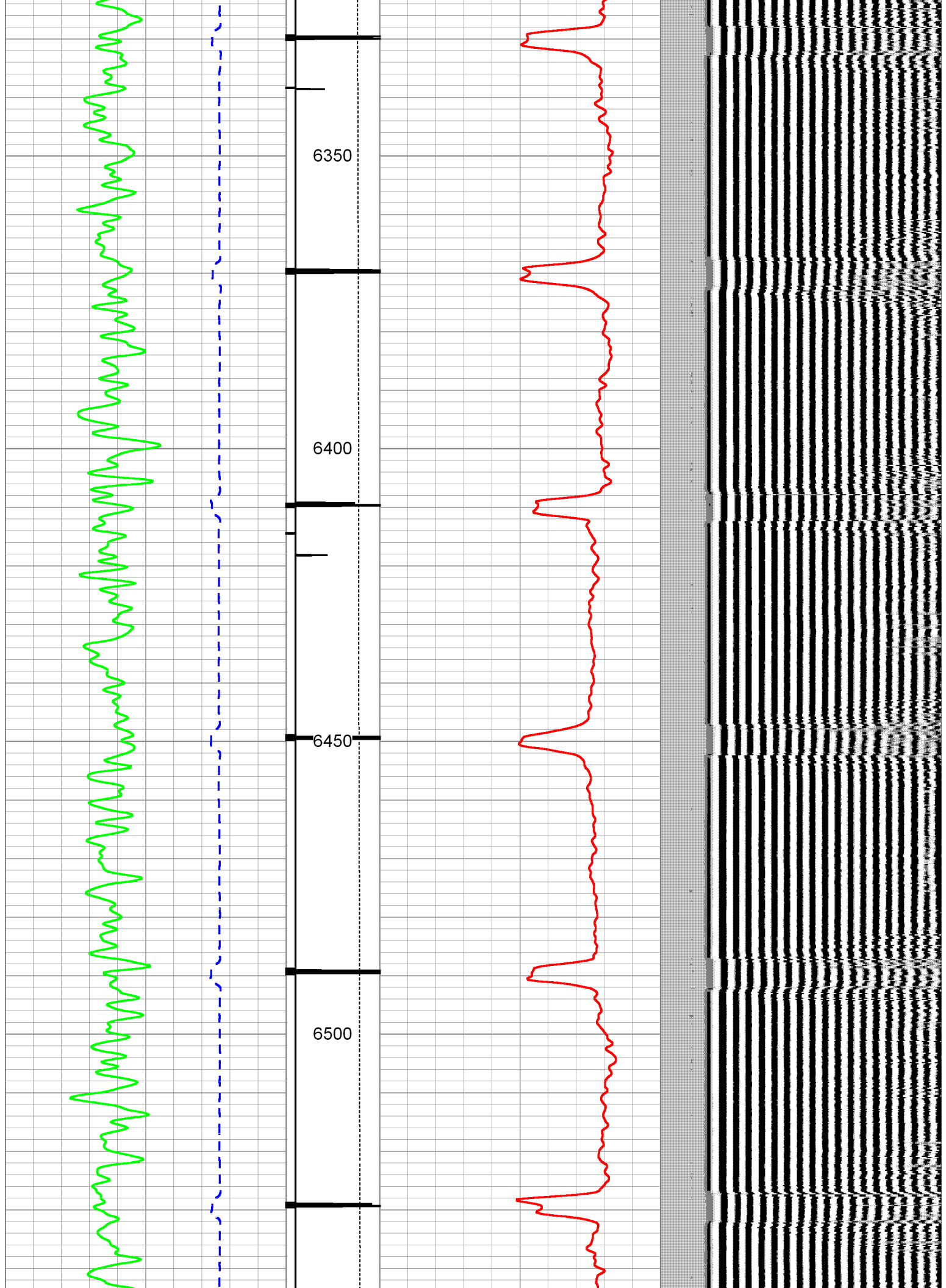


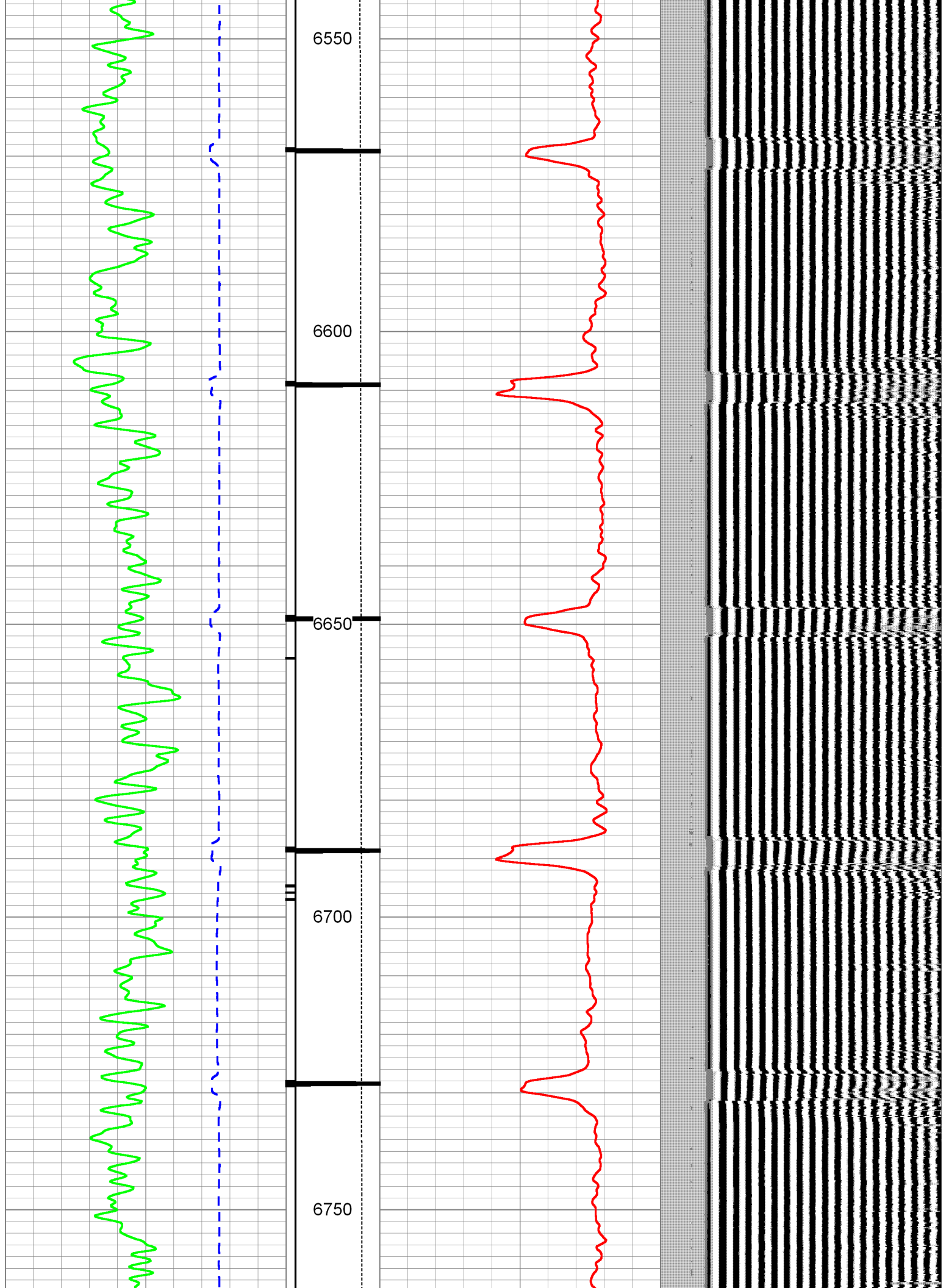


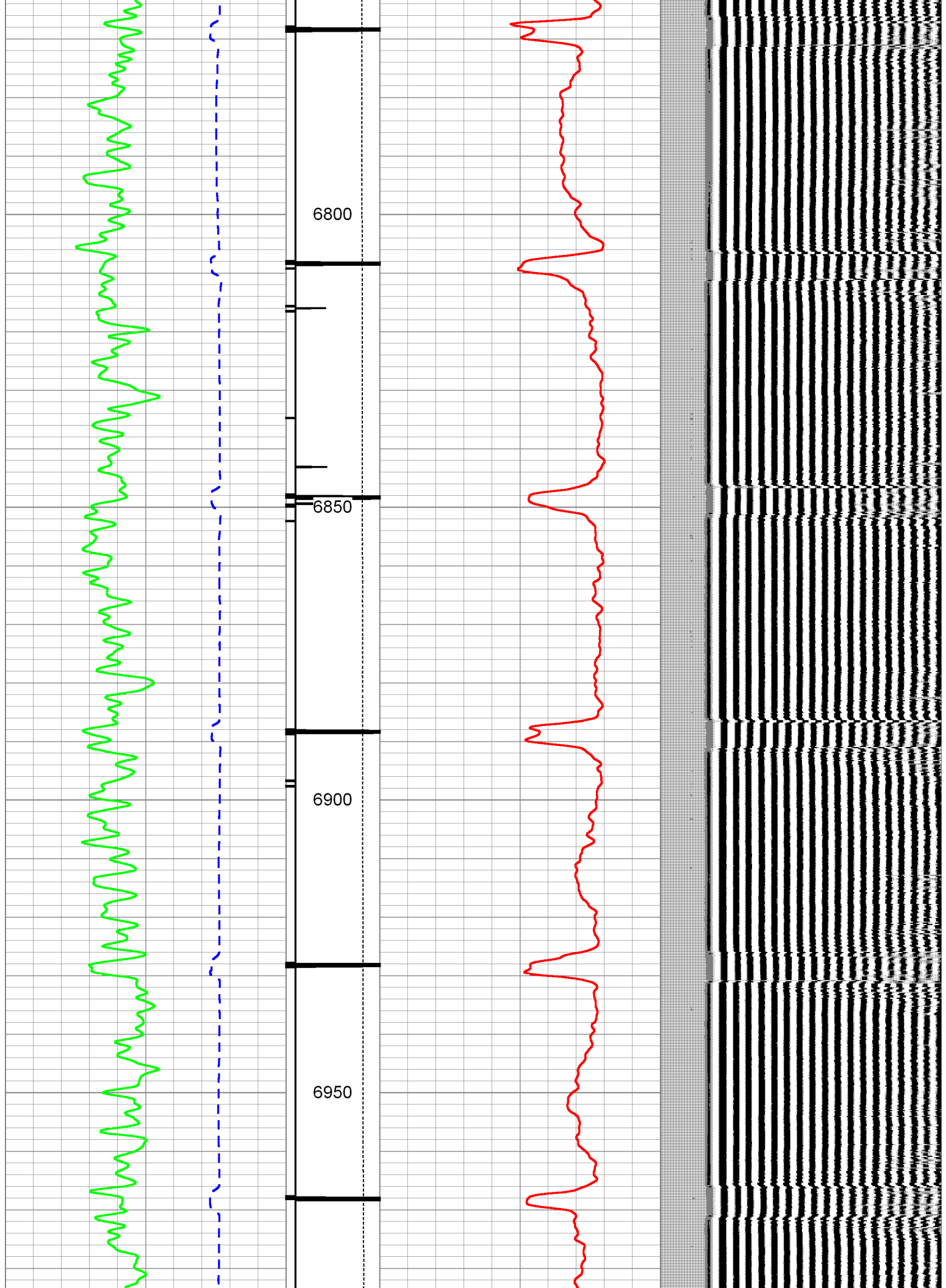


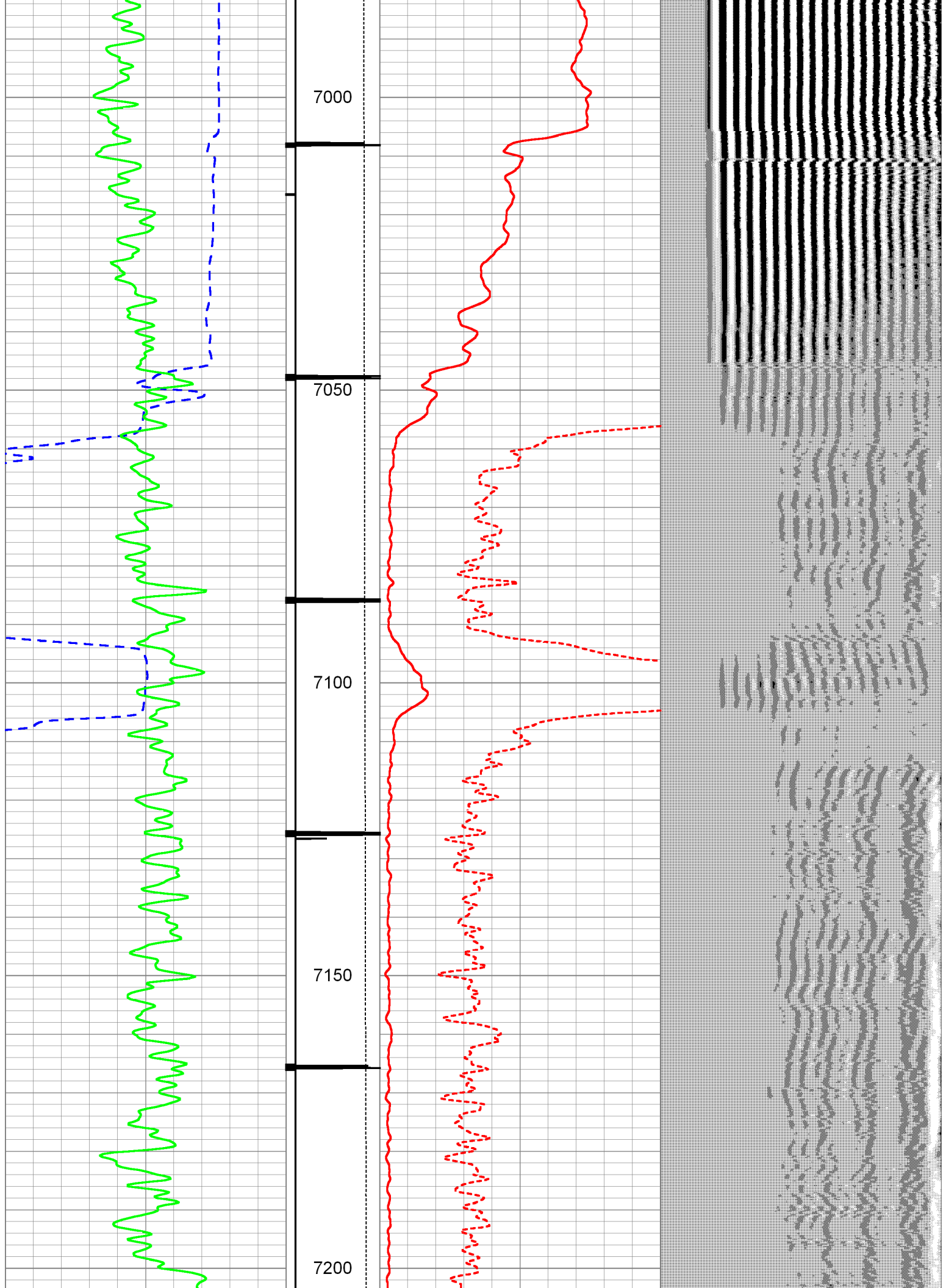


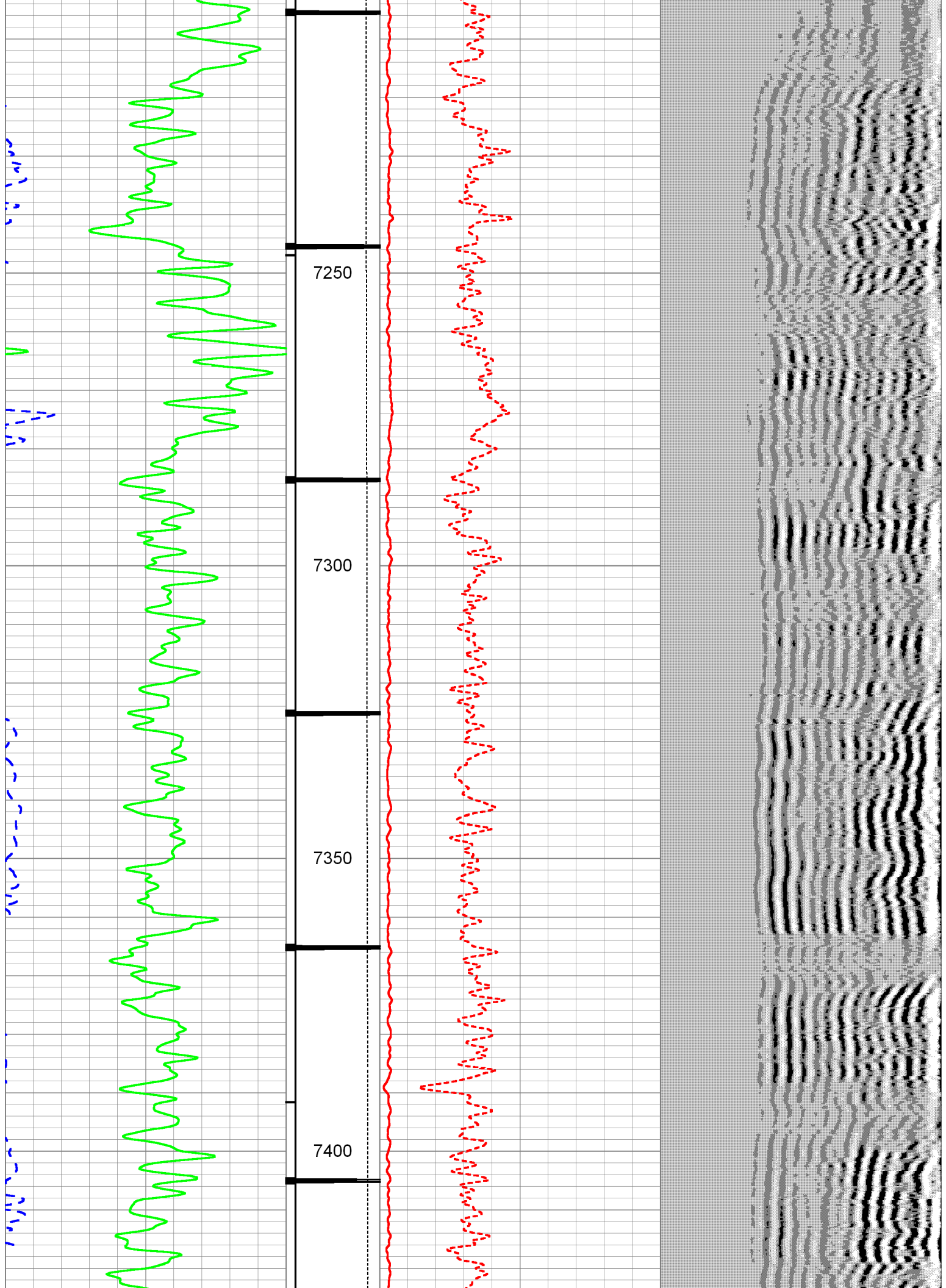


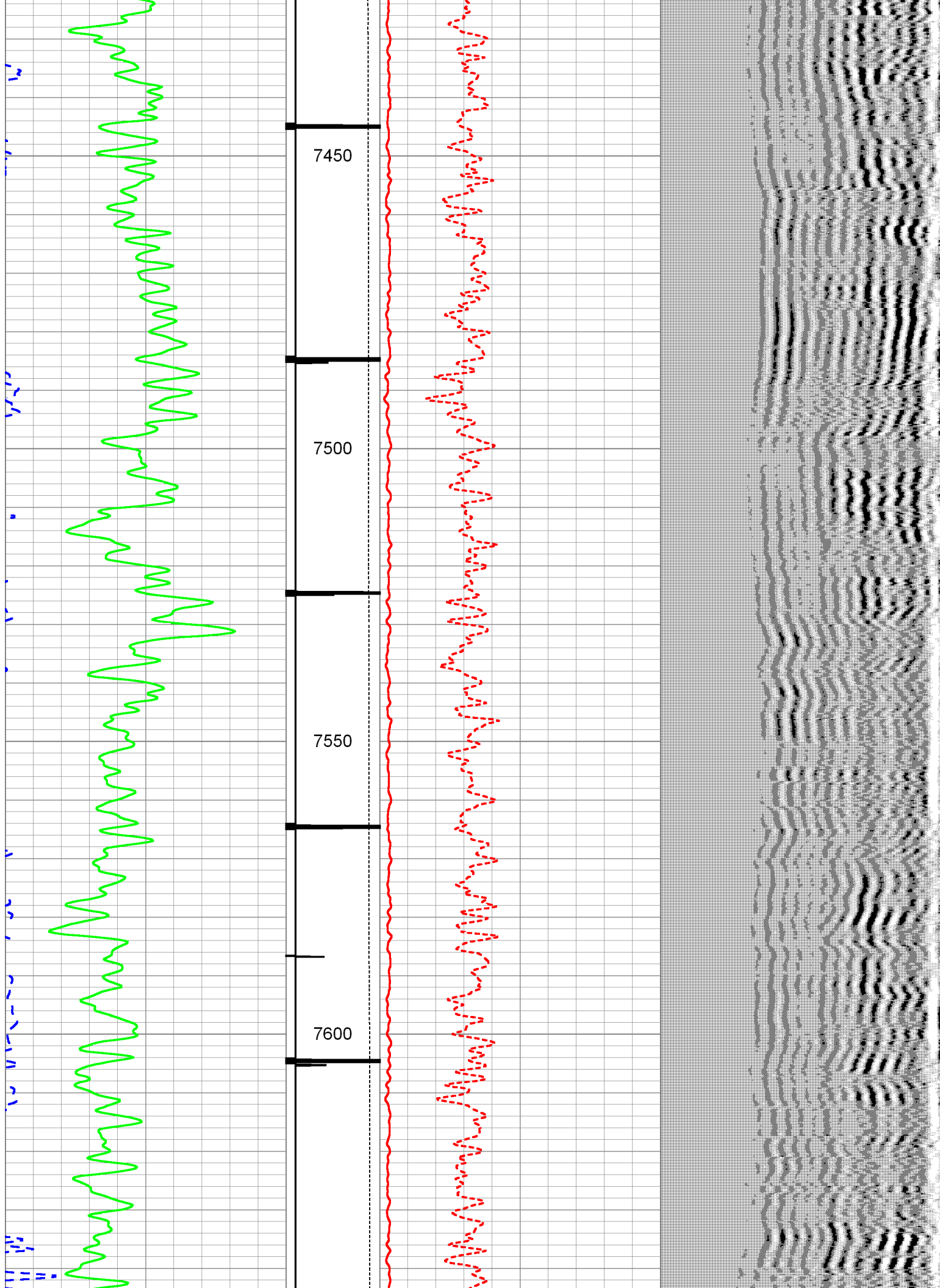


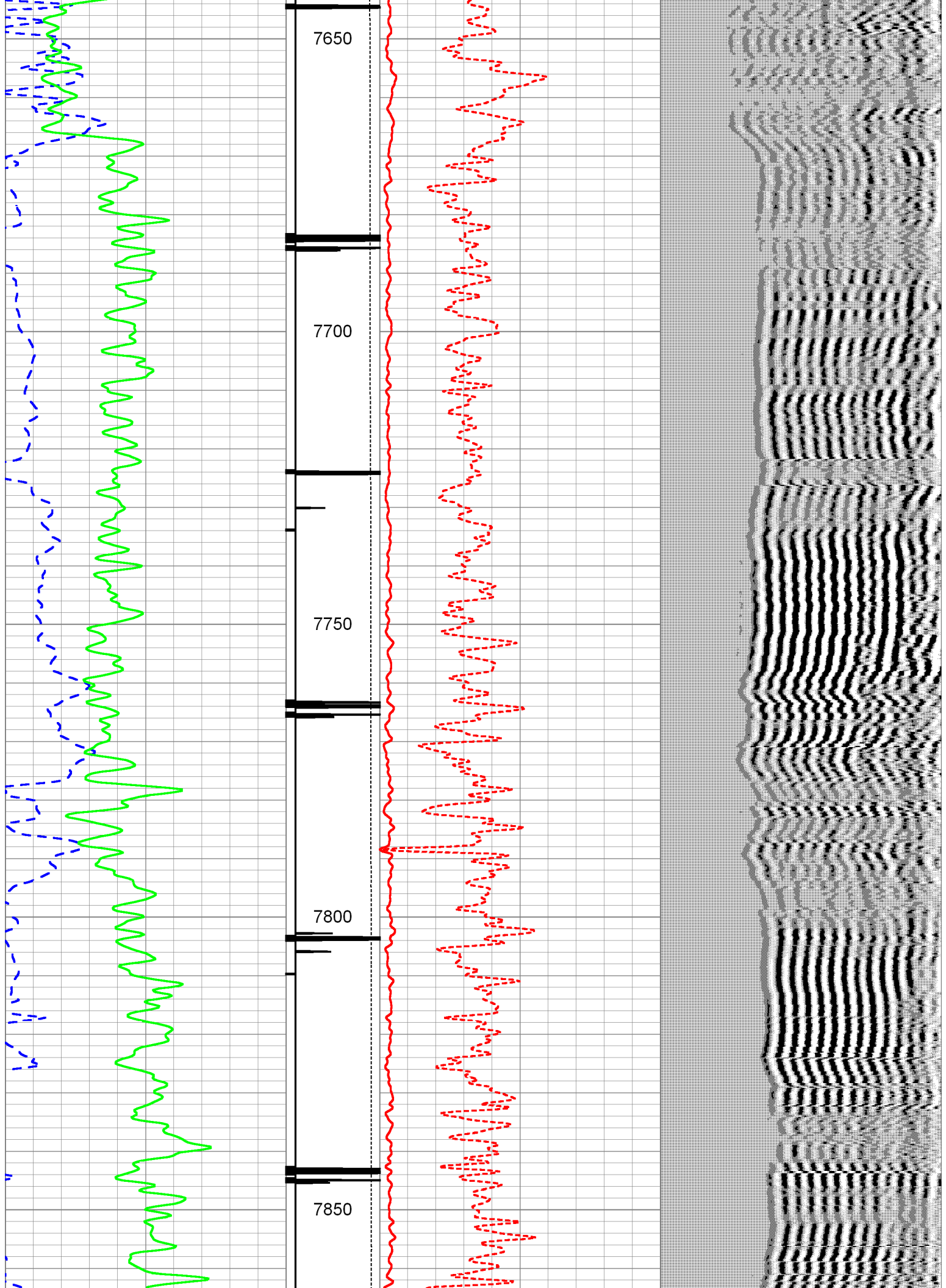


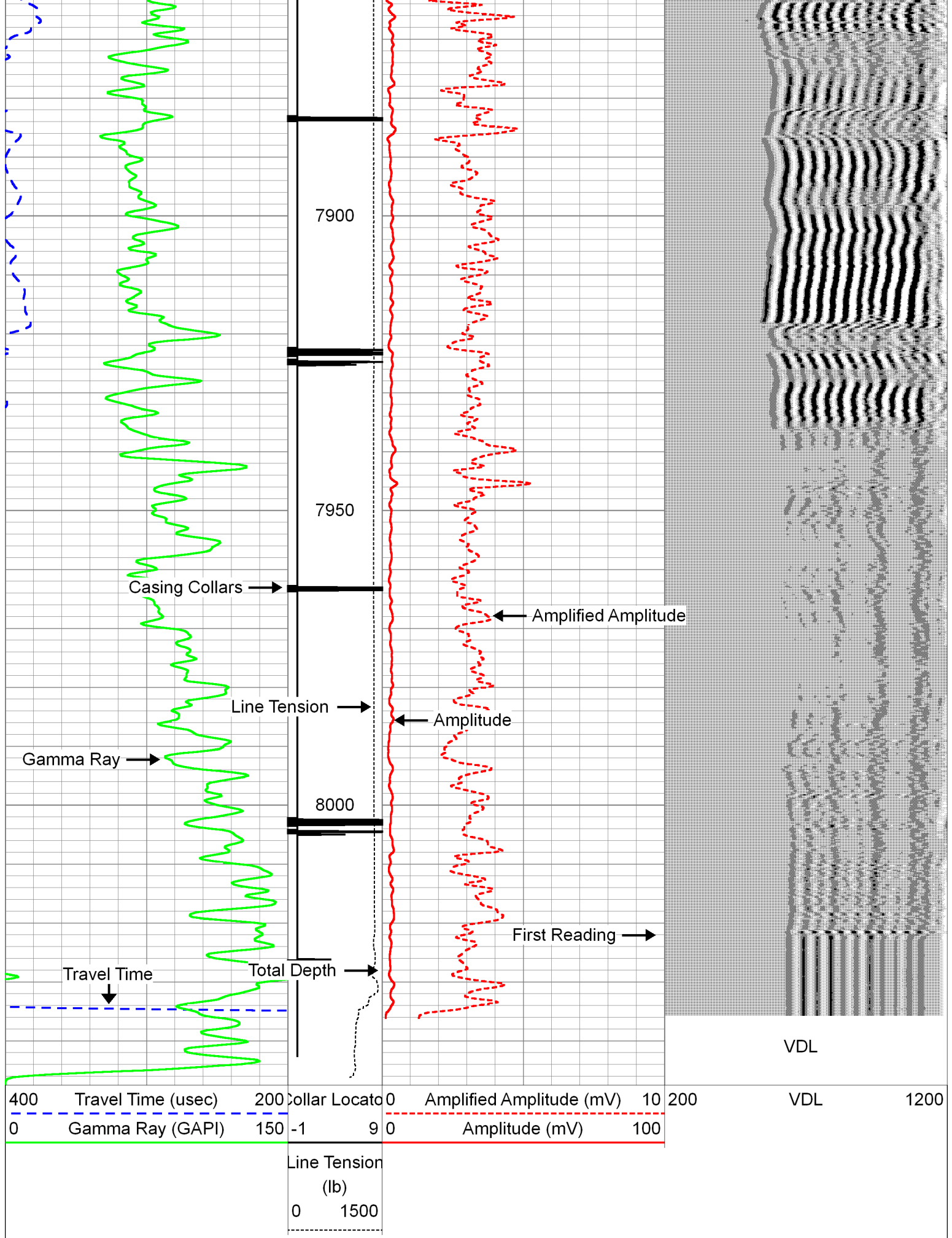






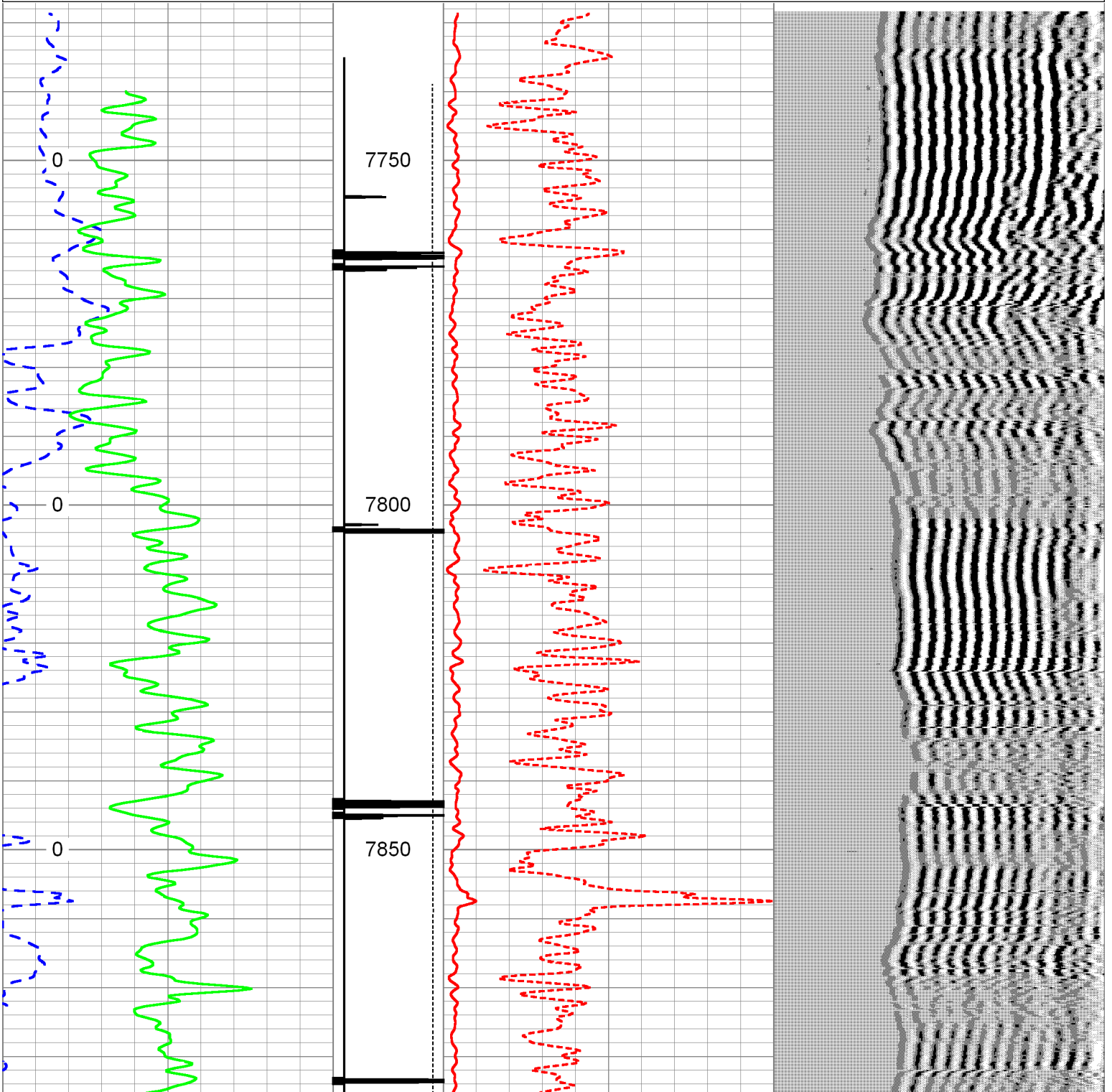


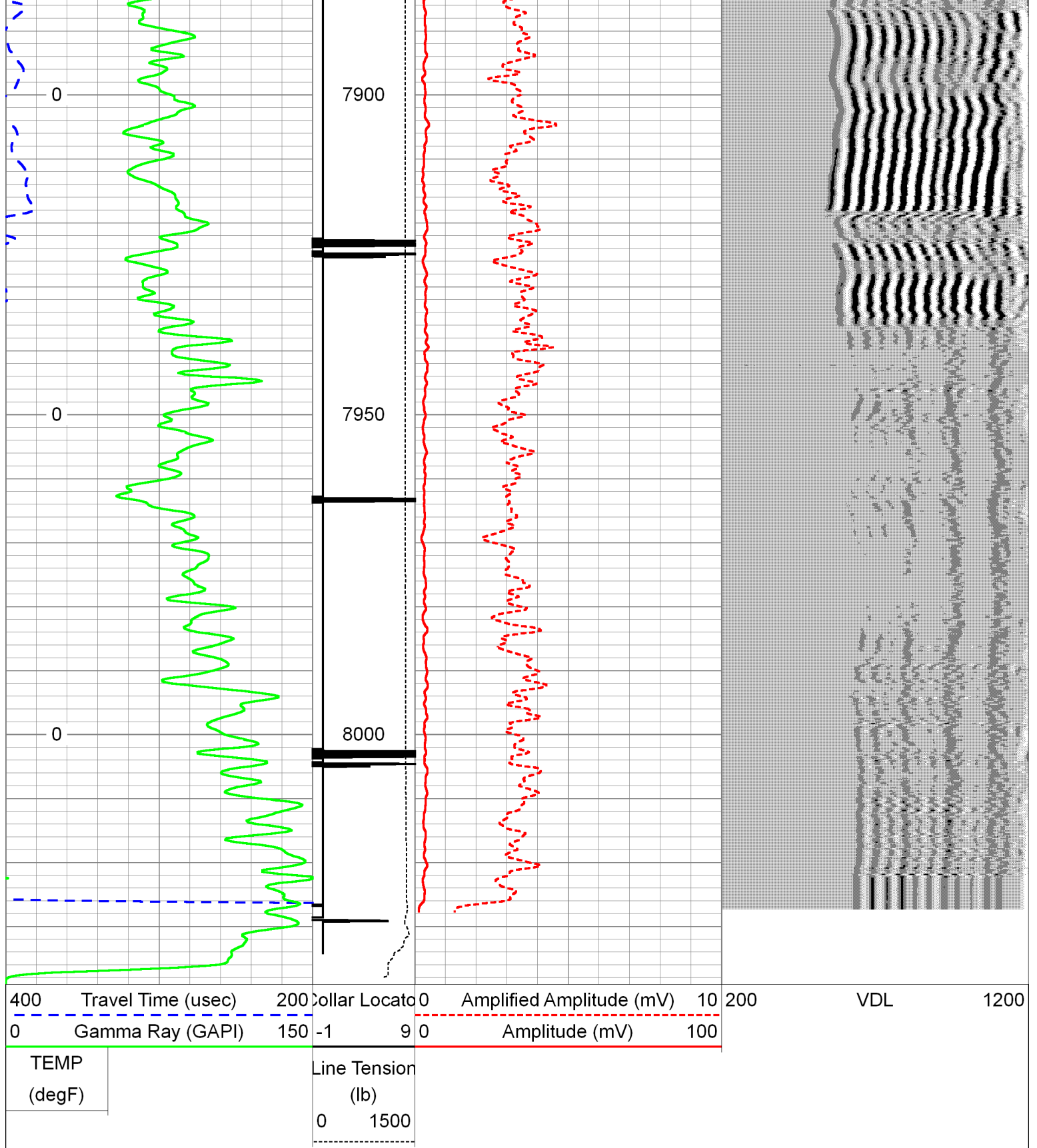




Database File: grein1cbl.db
 Dataset Pathname: pass9
 Presentation Format: cbl_cs
 Dataset Creation: Sun Jan 20 09:10:40 2019 by Log 0
 Charted by: Depth in Feet scaled 1:240

400	Travel Time (usec)	200	Collar Locato	0	Amplified Amplitude (mV)	10	200	VDL	1200
0	Gamma Ray (GAPI)	150	-1	9	0	Amplitude (mV)	100		
TEMP			Line Tension						
(degF)			(lb)						
			0	1500					





Calibration Report

Database File: grein1cbl.db
Dataset Pathname: pass9
Dataset Creation: Sun Jan 20 09:10:40 2019 by Log 0

Gamma Ray Calibration Report

Serial Number: 080220
Tool Model: Probe
Performed: Sun Jan 20 09:04:24 2019

Calibrator Value:	450.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	250.0	cps
Sensitivity:	0.5000	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	080840	
Tool Model:	Probe	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	1599.517	ft

Master Calibration, performed Sun Jan 20 07:56:44 2019:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.002	0.500	1.000	81.000	159.358	1.305
CAL	1.161	0.718				
5'	-0.002	0.433	1.000	81.000	184.183	1.319
SUM						
S1	0.034	0.545	1.000	70.000	135.049	-3.571
S2	0.005	0.483	1.000	70.000	144.292	0.287
S3	0.000	0.486	1.000	70.000	142.194	0.960
S4	0.002	0.482	1.000	70.000	143.697	0.718
S5	0.001	0.480	1.000	70.000	144.056	0.891
S6	0.001	0.473	1.000	70.000	146.153	0.886
S7	0.000	0.474	1.000	70.000	145.652	1.000
S8	0.001	0.464	1.000	70.000	149.020	0.898

Internal Reference Calibration, performed Wed Dec 31 17:00:00 1969:						
	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	1.161	0.718	1.000	0.000

Air Zero Calibration, performed Sun Jan 20 07:43:26 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	

Temperature Calibration Report

Serial Number: 080840
Tool Model: Probe
Performed: Sun Jun 13 13:33:21 1993

	Reference	Reading
Low Reference:	0.00 degF	0.00 cps
High Reference:	1.00 degF	1.00 cps
Gain:	1.00	
Offset:	0.00	
Delta Spacing	1	



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