



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

Company GREAT WESTERN OIL & GAS

Well OTTESEN LE 06-351HNX

Field WATTENBERG

County WELD State COLO

Location: API #: 05-123-48287 Other Services

SEC 33 TWP 1N RGE 66W NWSE Elevation

Permanent Datum GL KB KB Elevation 5076.5'

Log Measured From KB KB KB Elevation 5096.5'

Drilling Measured From KB KB KB Elevation 5095.5'

Date FEB-23-2019

Run Number ONE

Depth Driller 17750

Depth Logger 10042

Bottom Logged Interval 10046

Top Log Interval 6000

Open Hole Size NA

Type Fluid WATER

Density / Viscosity 8.34 PPG

Max. Recorded Temp. 190

Estimated Cement Top SEE LOG

Time Well Ready ROA

Time Logger on Bottom 3:00

Equipment Number 72

Location STERLING, CO

Recorded By KYLE GIRDLER

Witnessed By DAVE POZAS

Run Number

Bit From To Size Weight From To

Casing Record

Surface String 9 5/8 36 Wgt/Ft Top Bottom

Prod. String 5.5 17 SURFACE 17691

Production String

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

TOOL RUN AS PER CUSTOMER REQUEST
TOOL STRING CENTRALIZED WITH 3 GEMCO CENTRALIZERS
LOG CORRELATED TO MARKER JOINT @ 9647-9657

THANK YOU FOR USING KLX ENERGY SERVICES



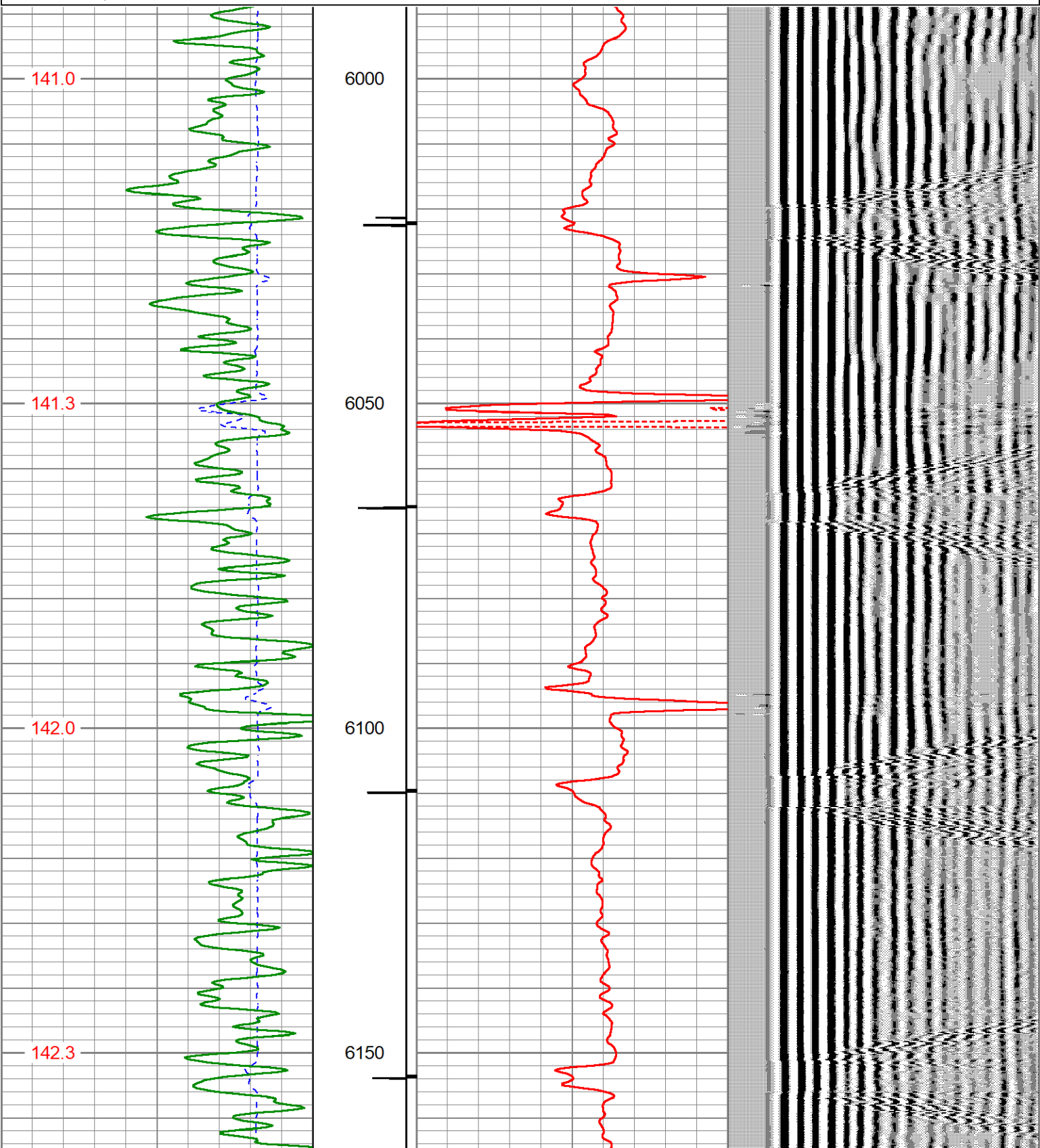
THIRD PASS

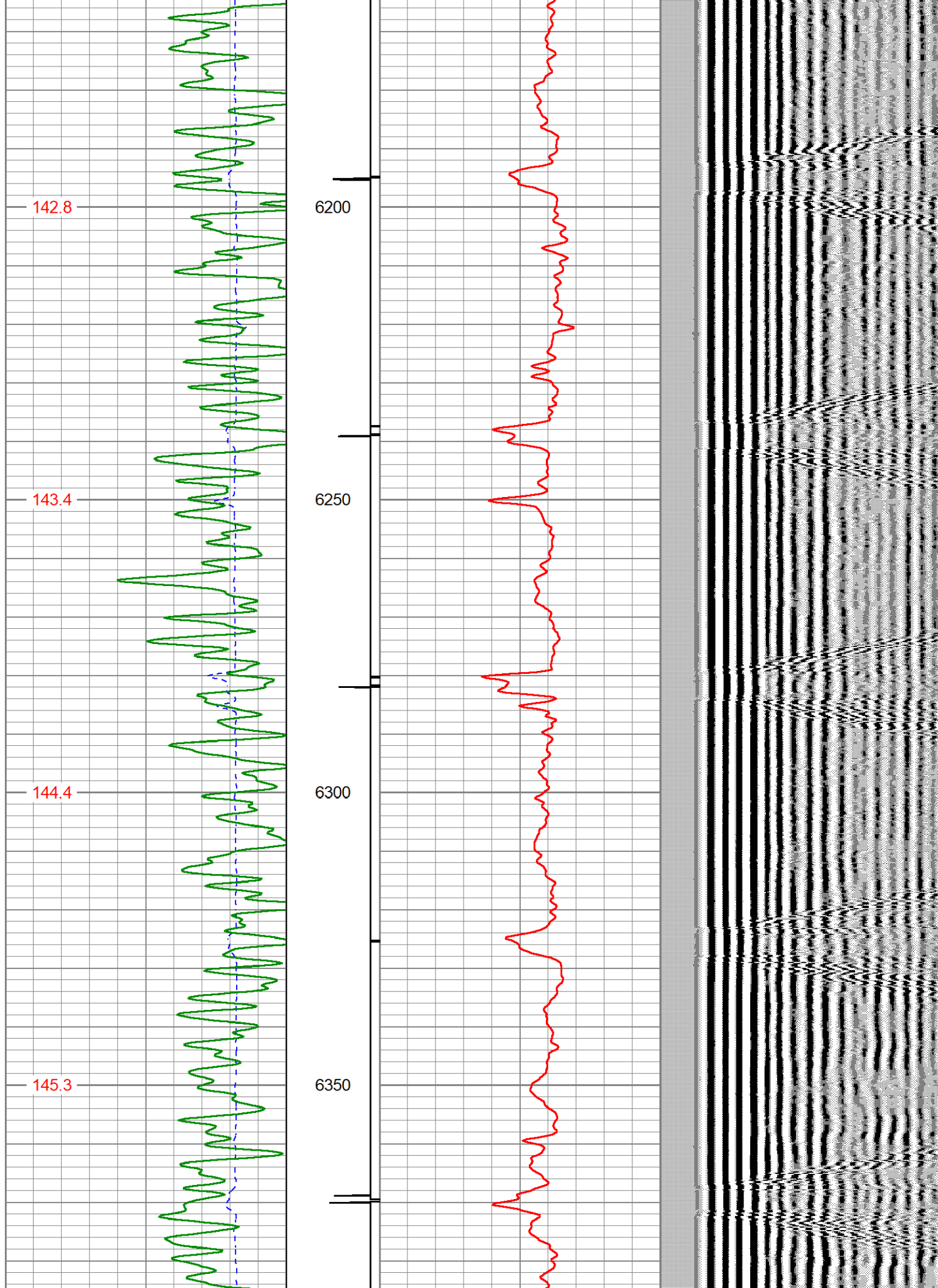
2700 INDUCED WELLHEAD PRESSURE

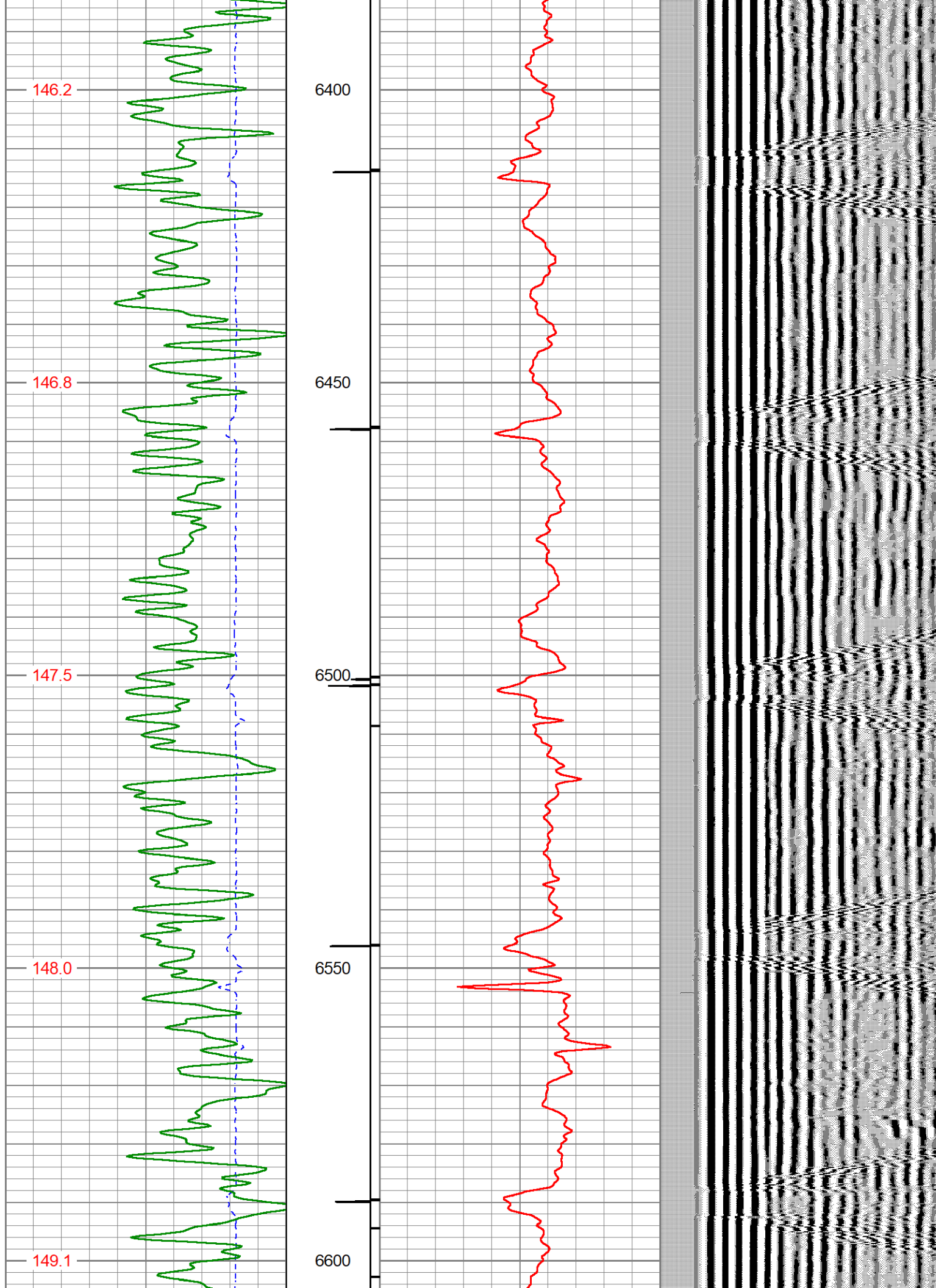
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Dataset Pathname	pass10
Presentation Format	cbl_kggw
Dataset Creation	Sat Feb 23 09:15:56 2019
Charted by	Depth in Feet scaled 1:240

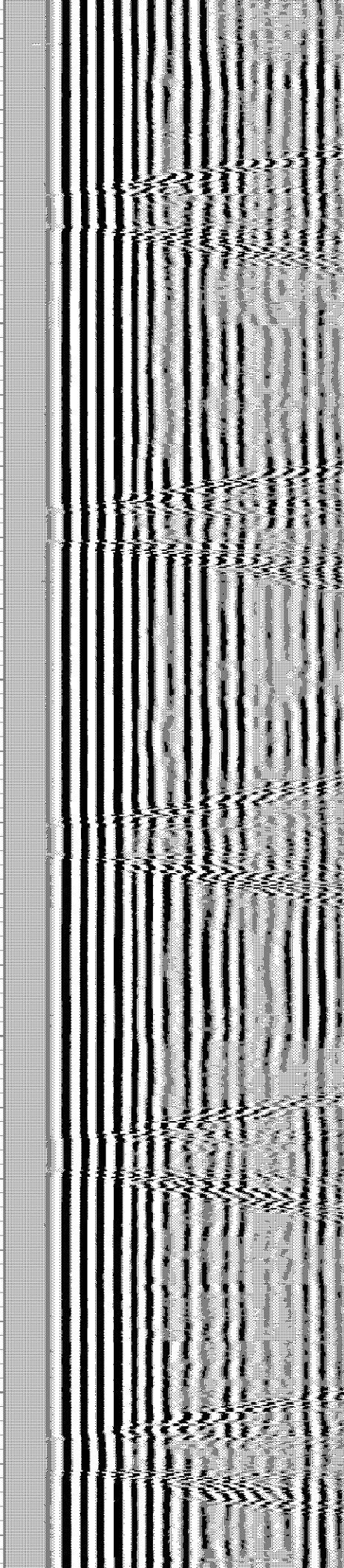
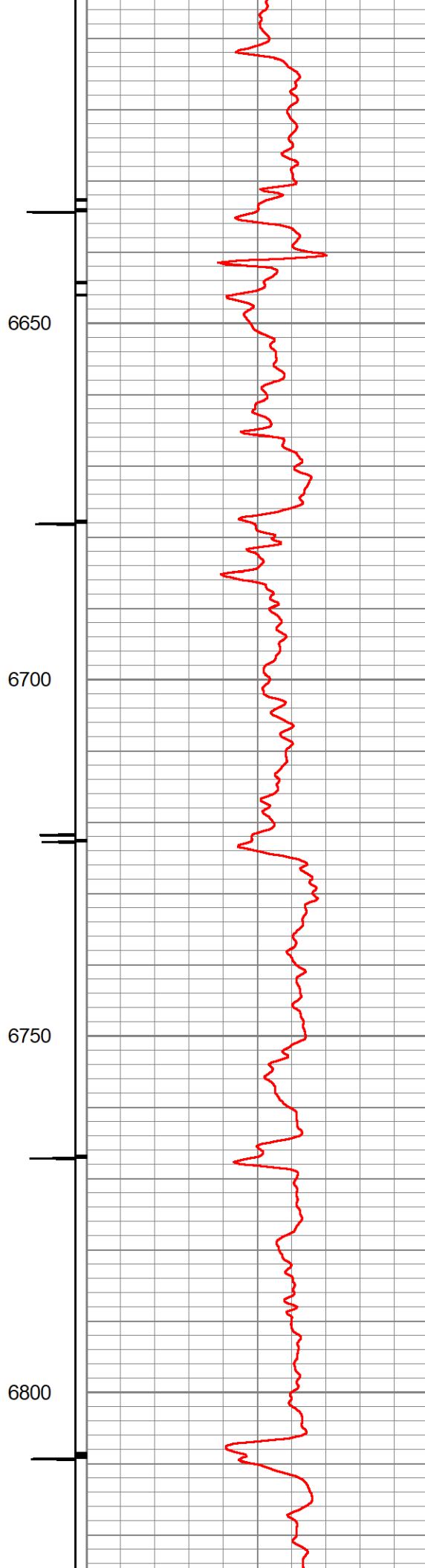
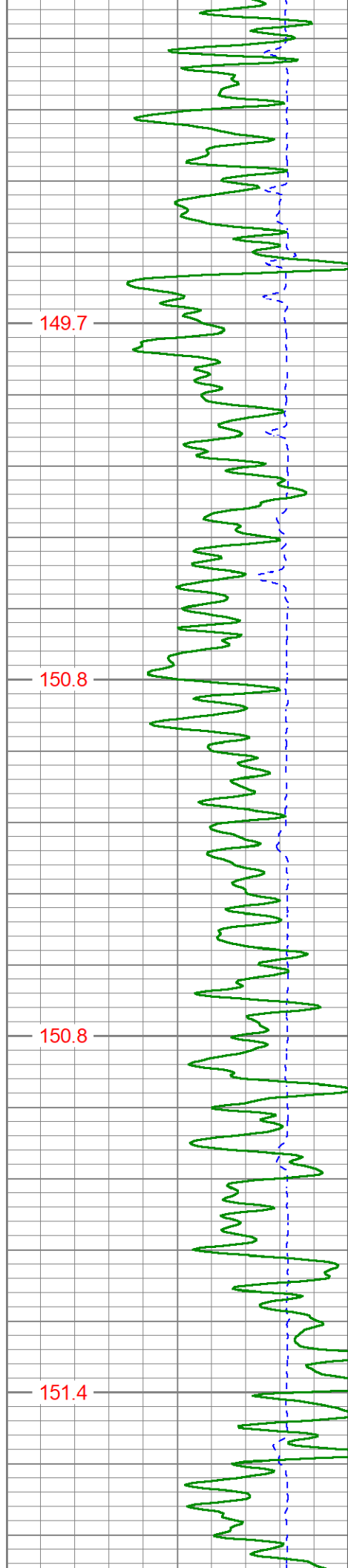
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0	Gamma Ray (GAPI)	150	9	-1	0	AMPLITUDE (mV)	100		
0	Line Speed (ft/min)	100							

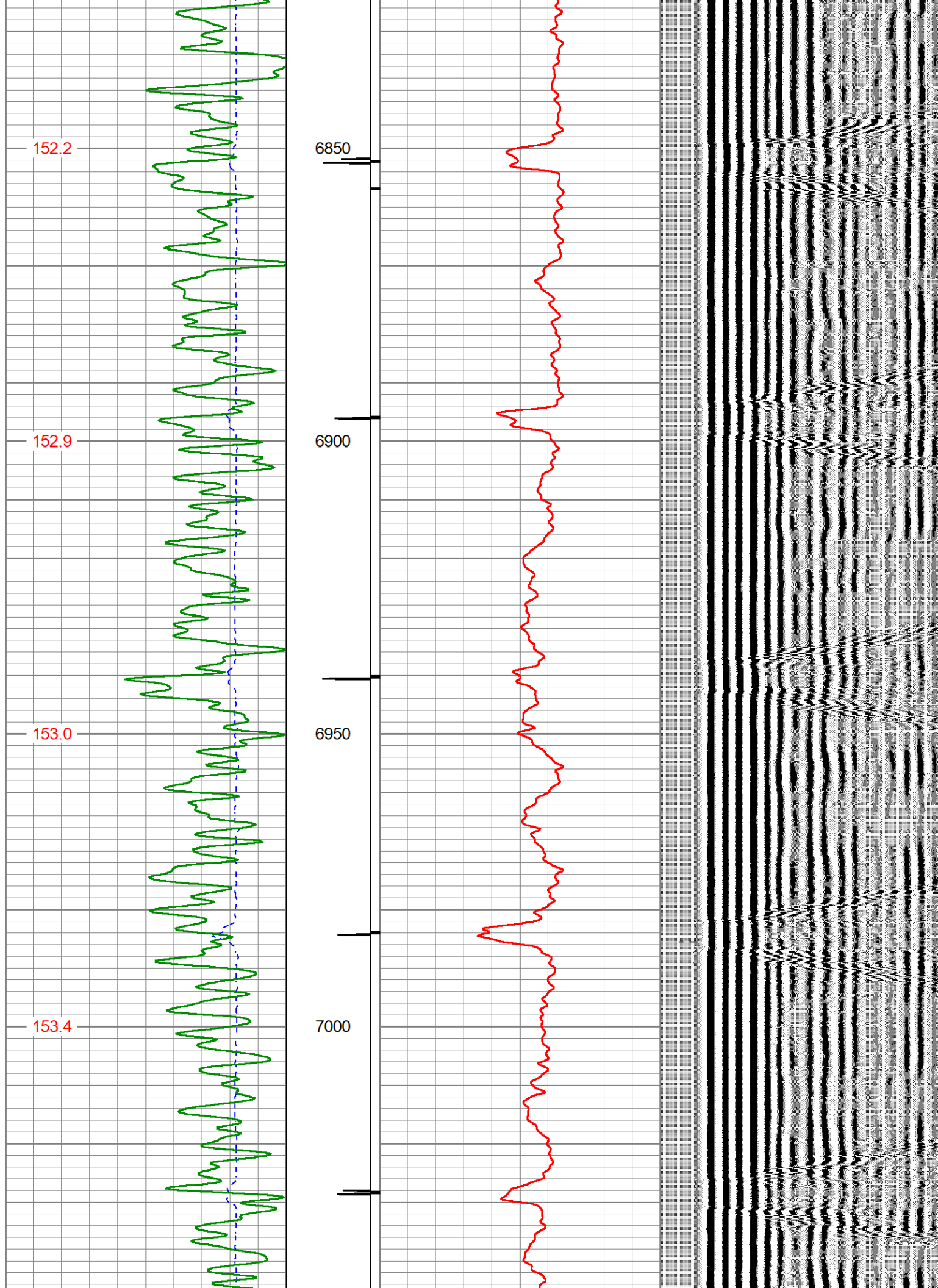
TEMP
(degF)

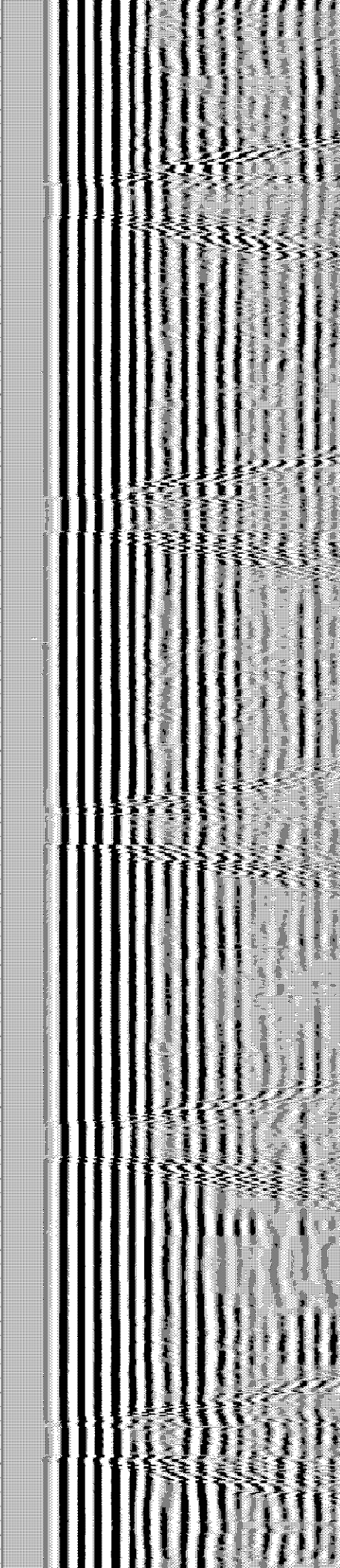
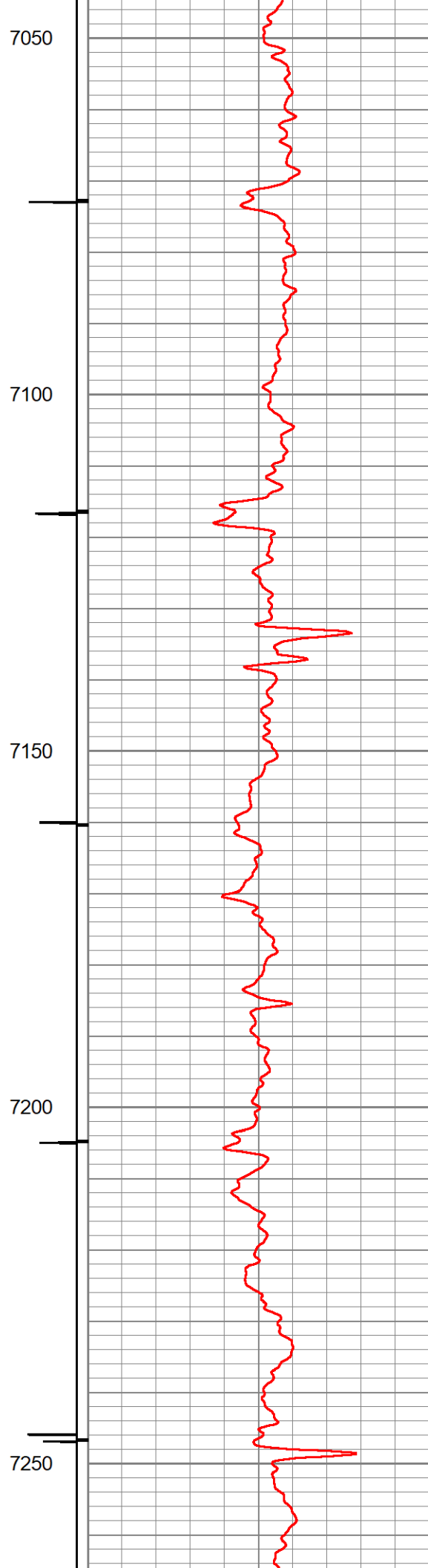
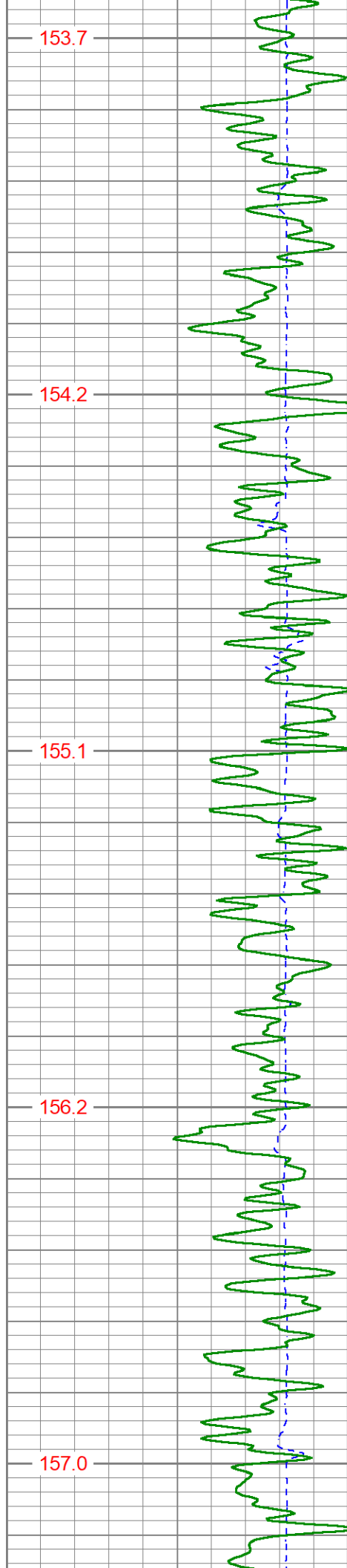


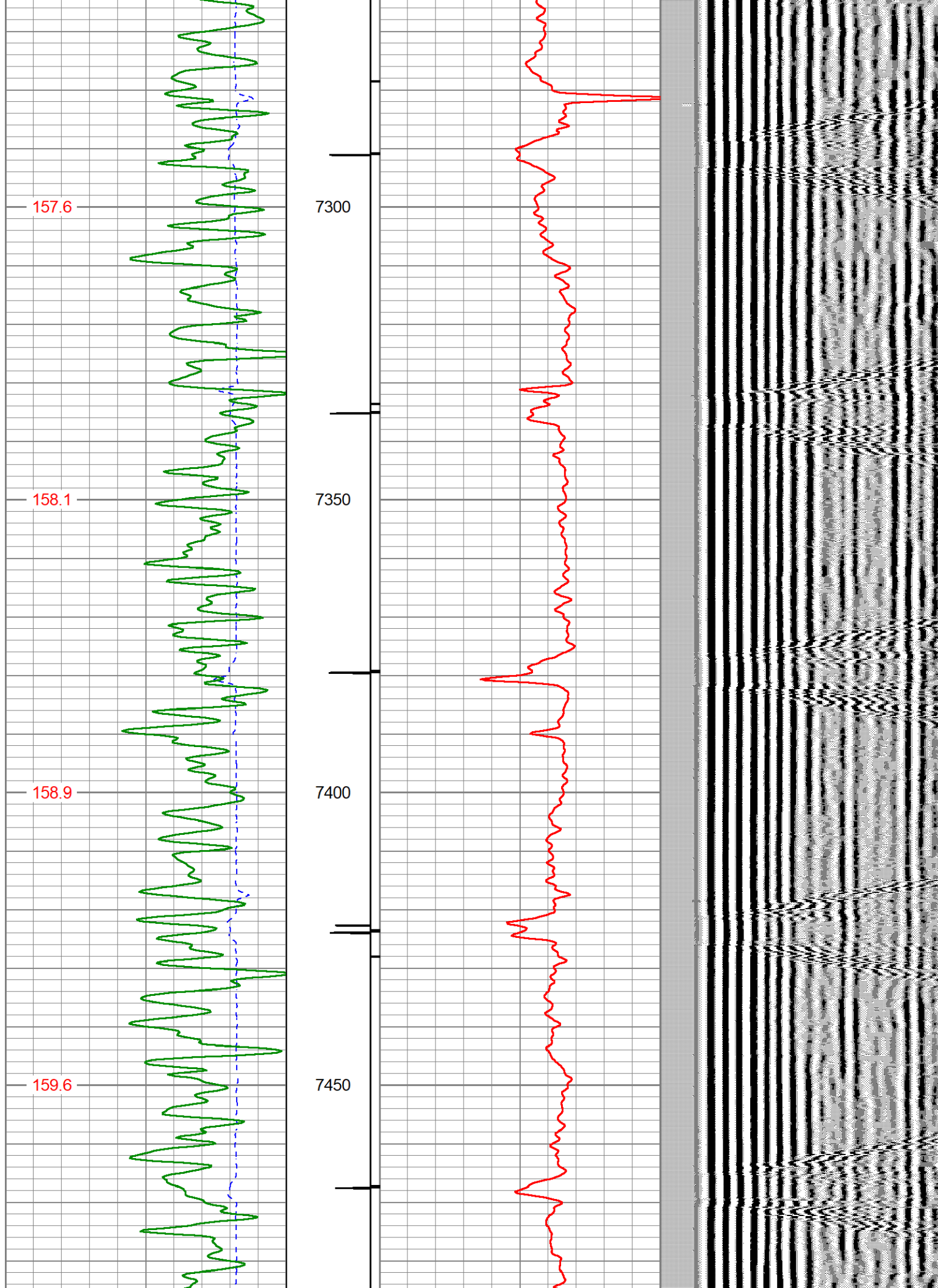


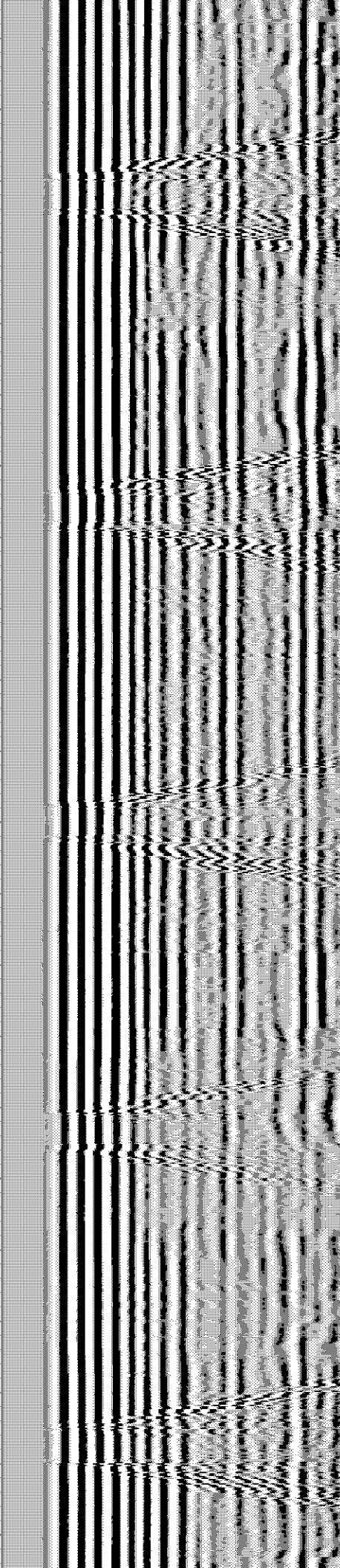
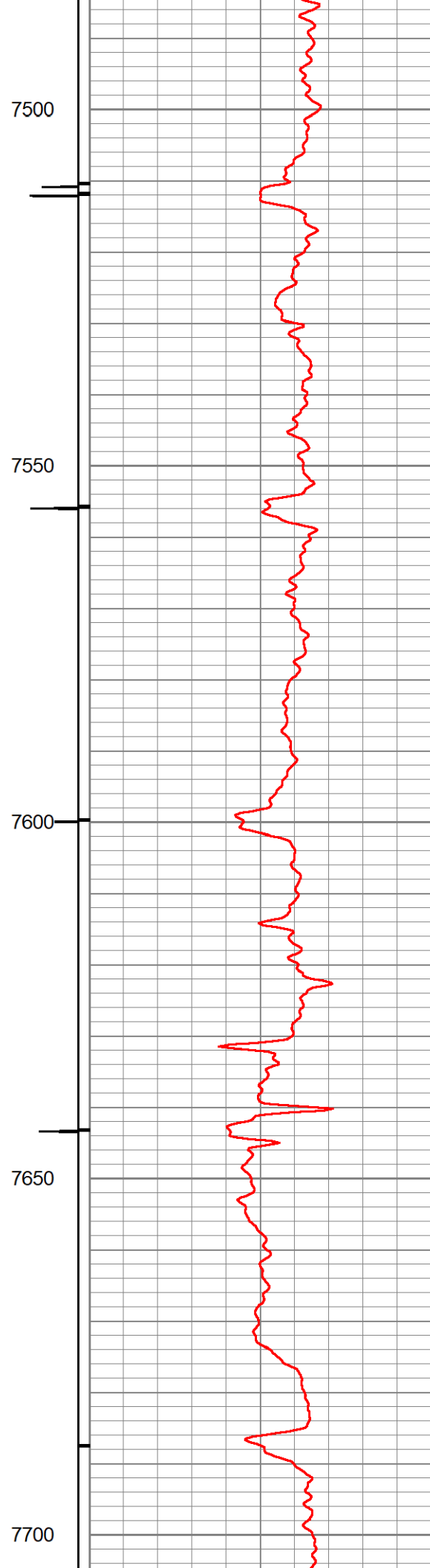
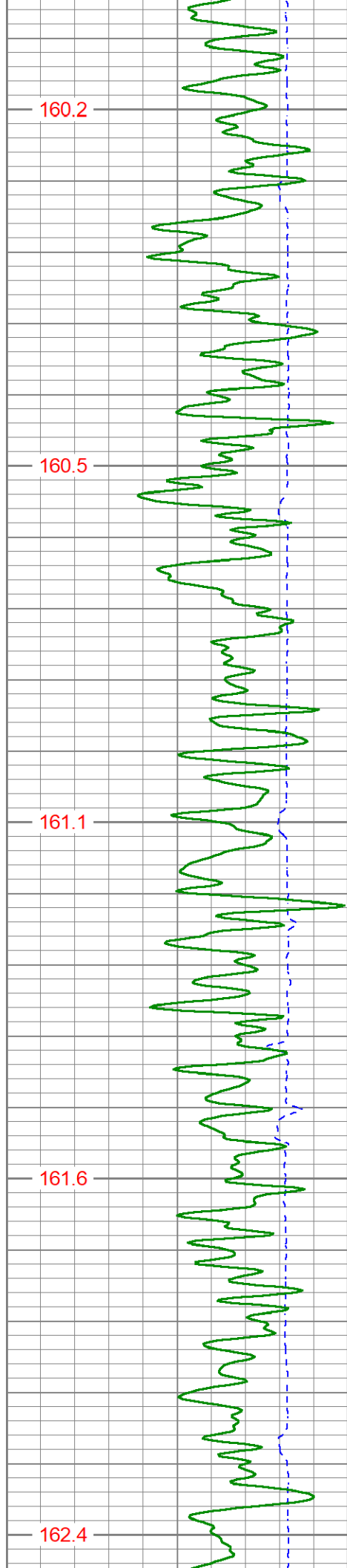


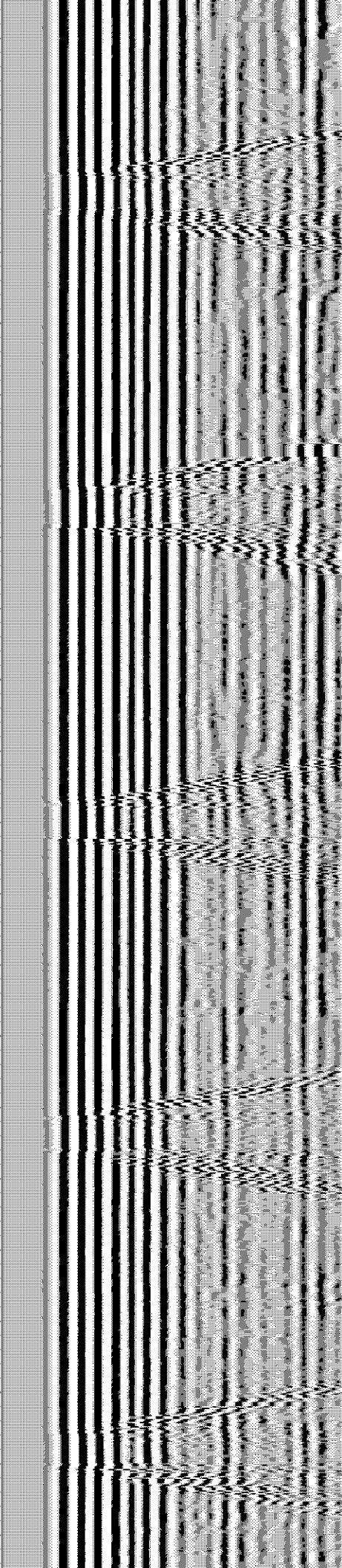
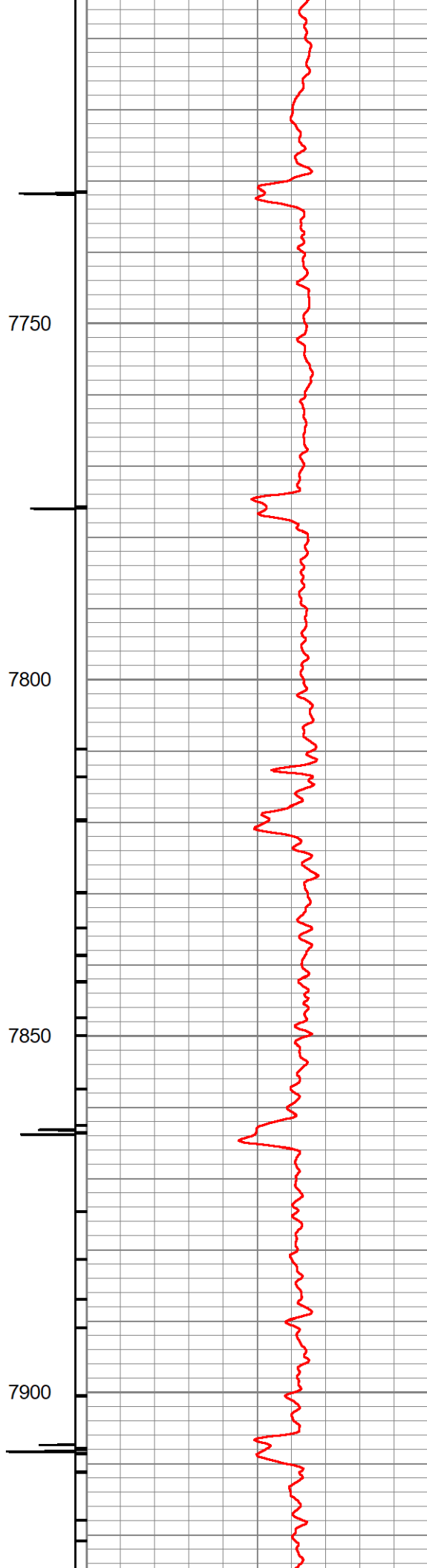
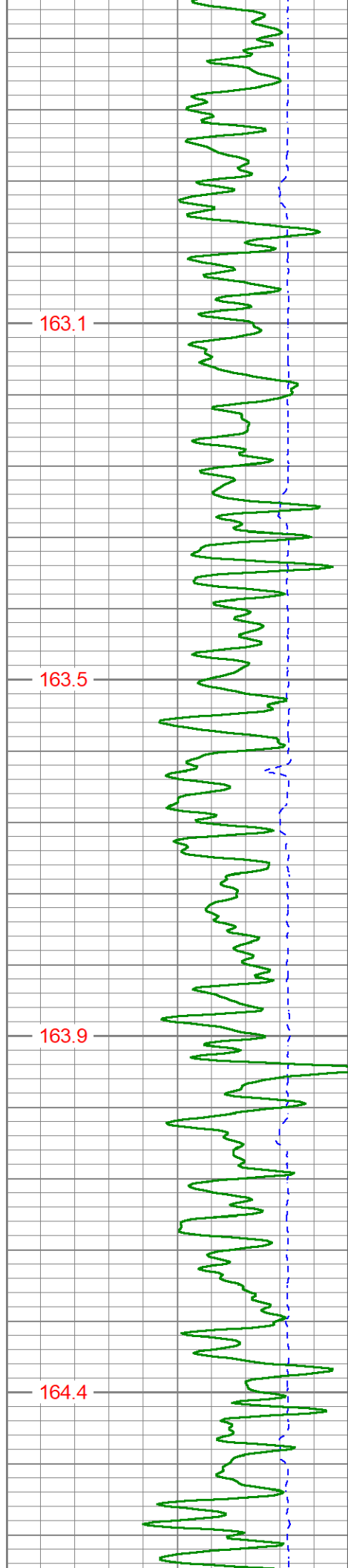


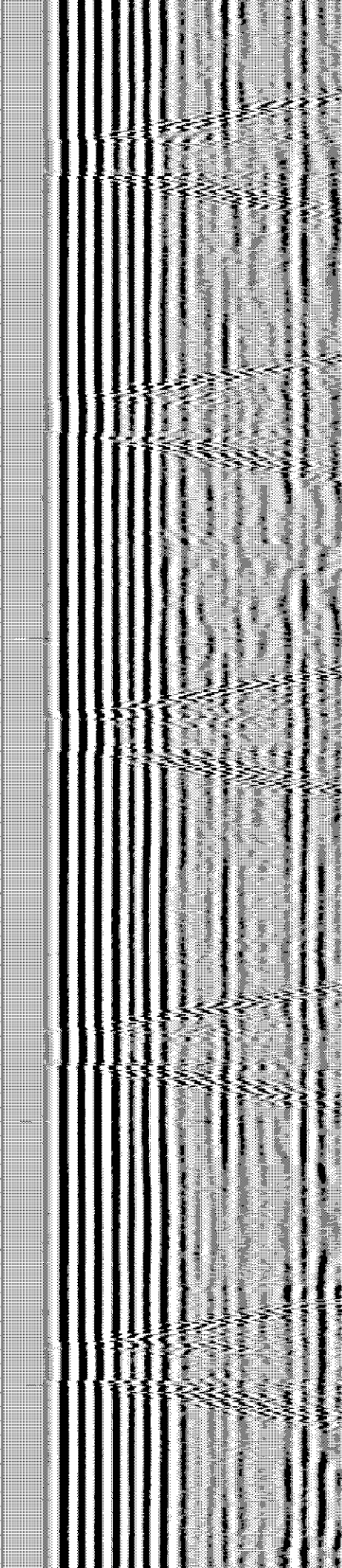
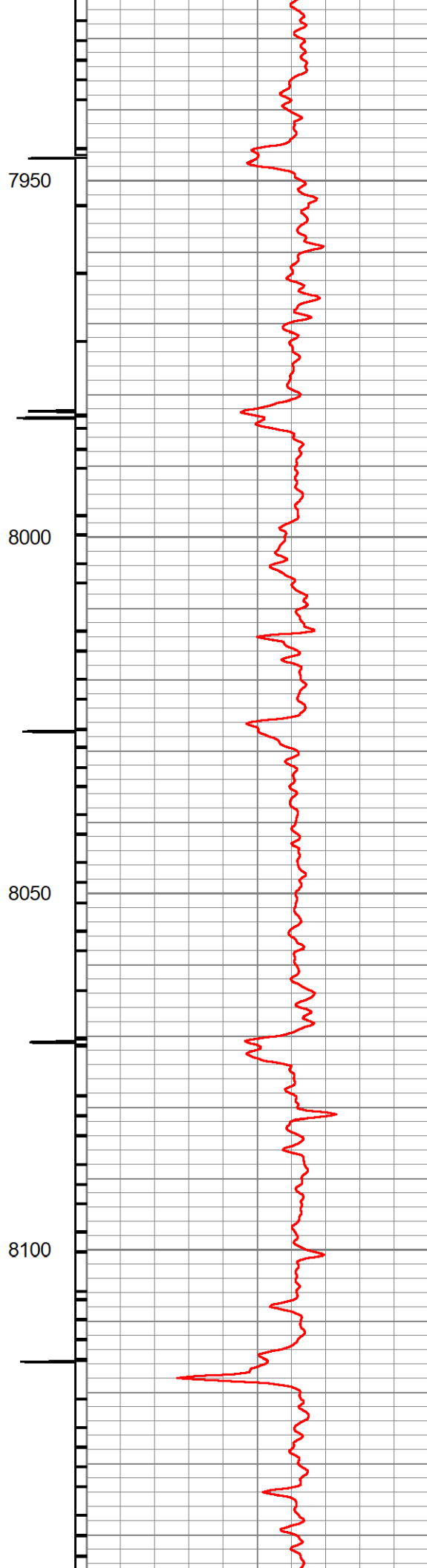
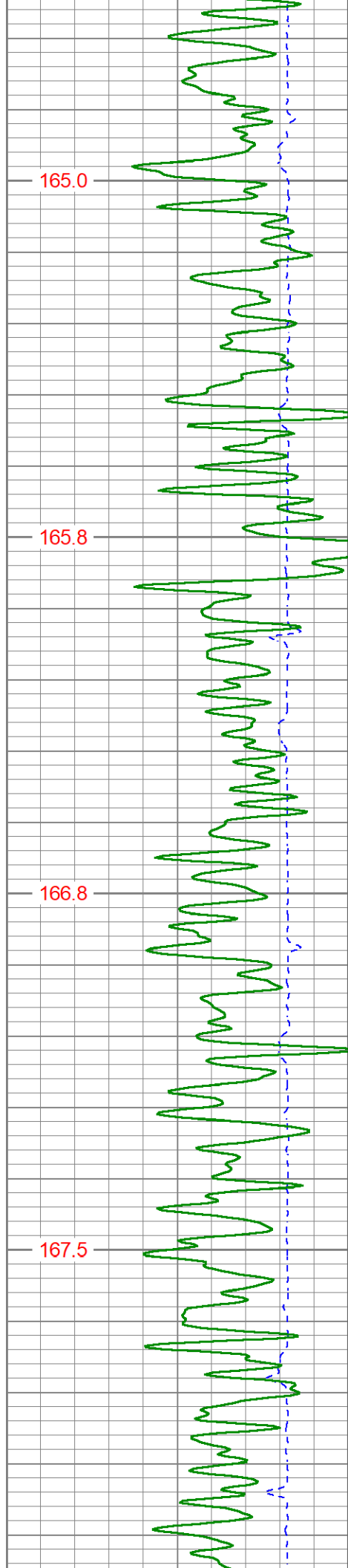


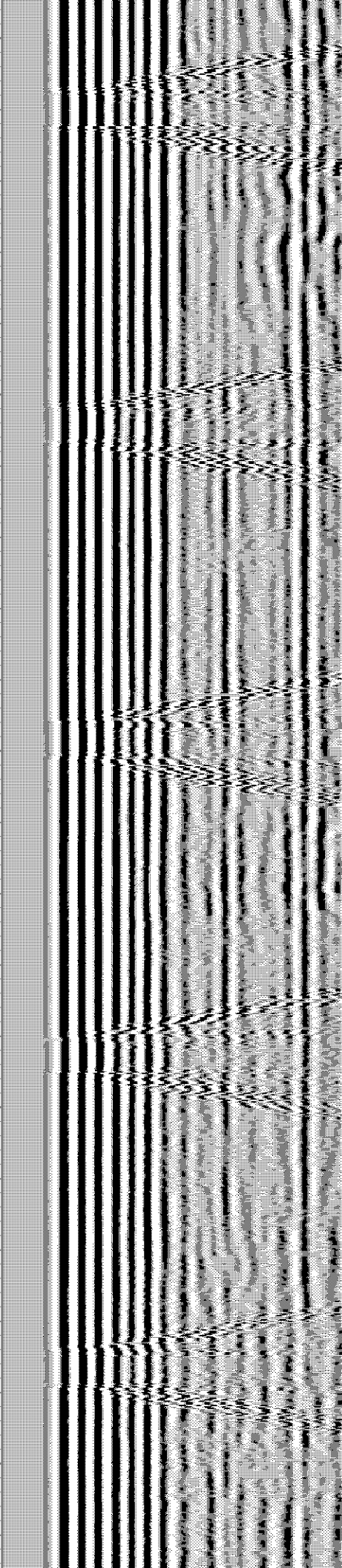
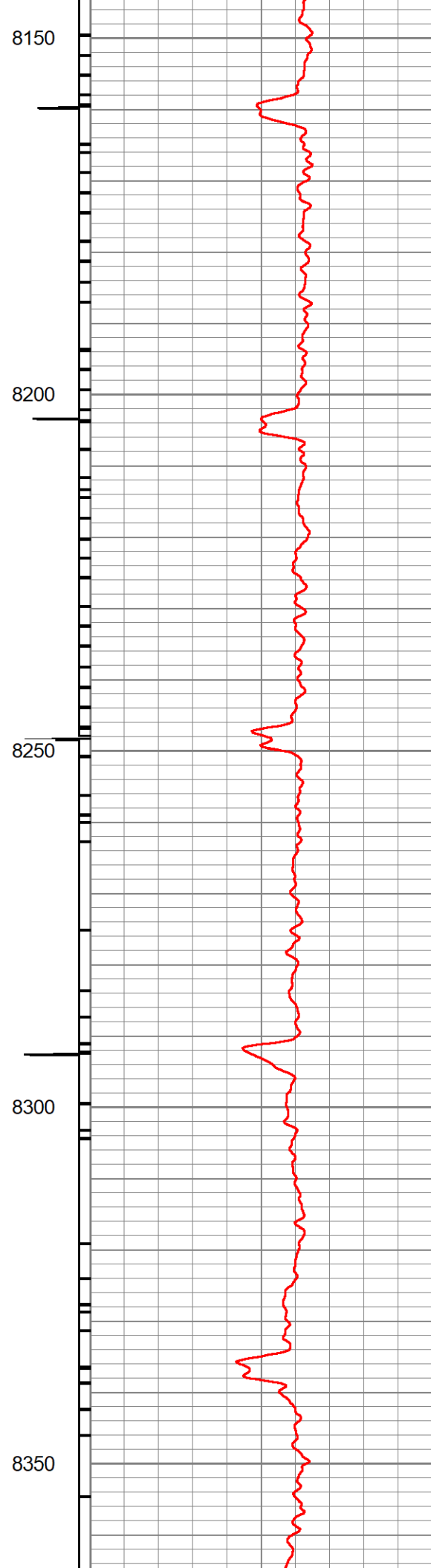
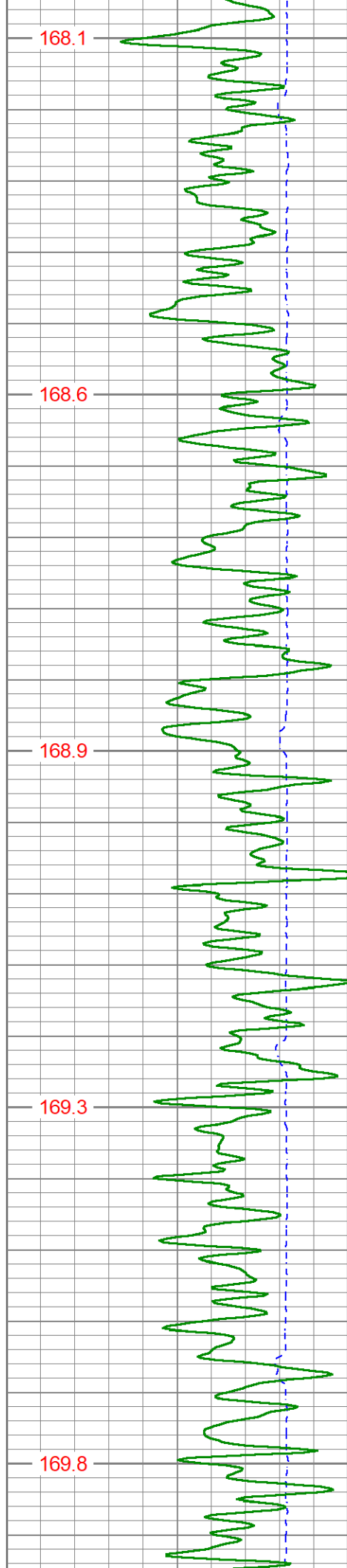


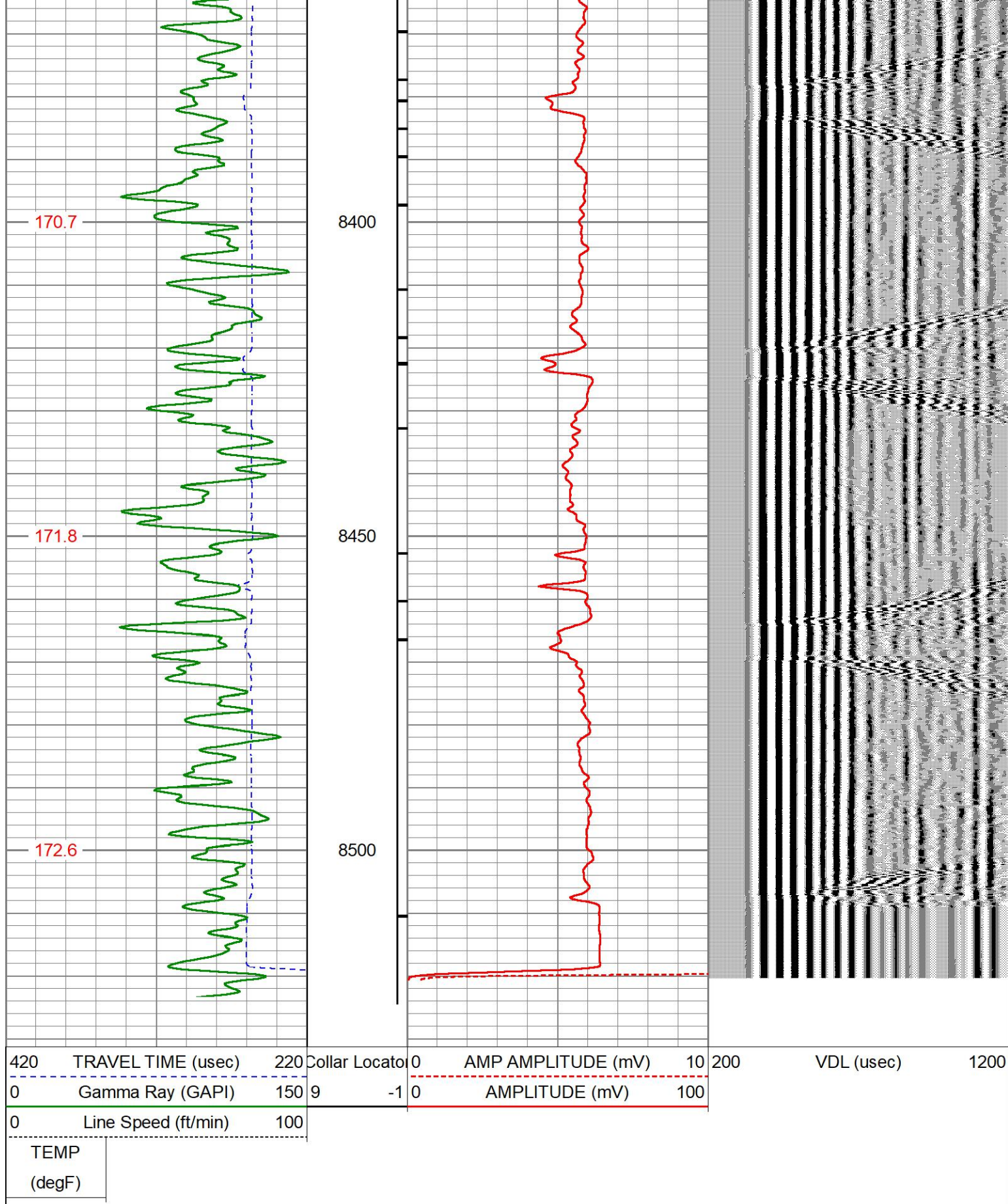










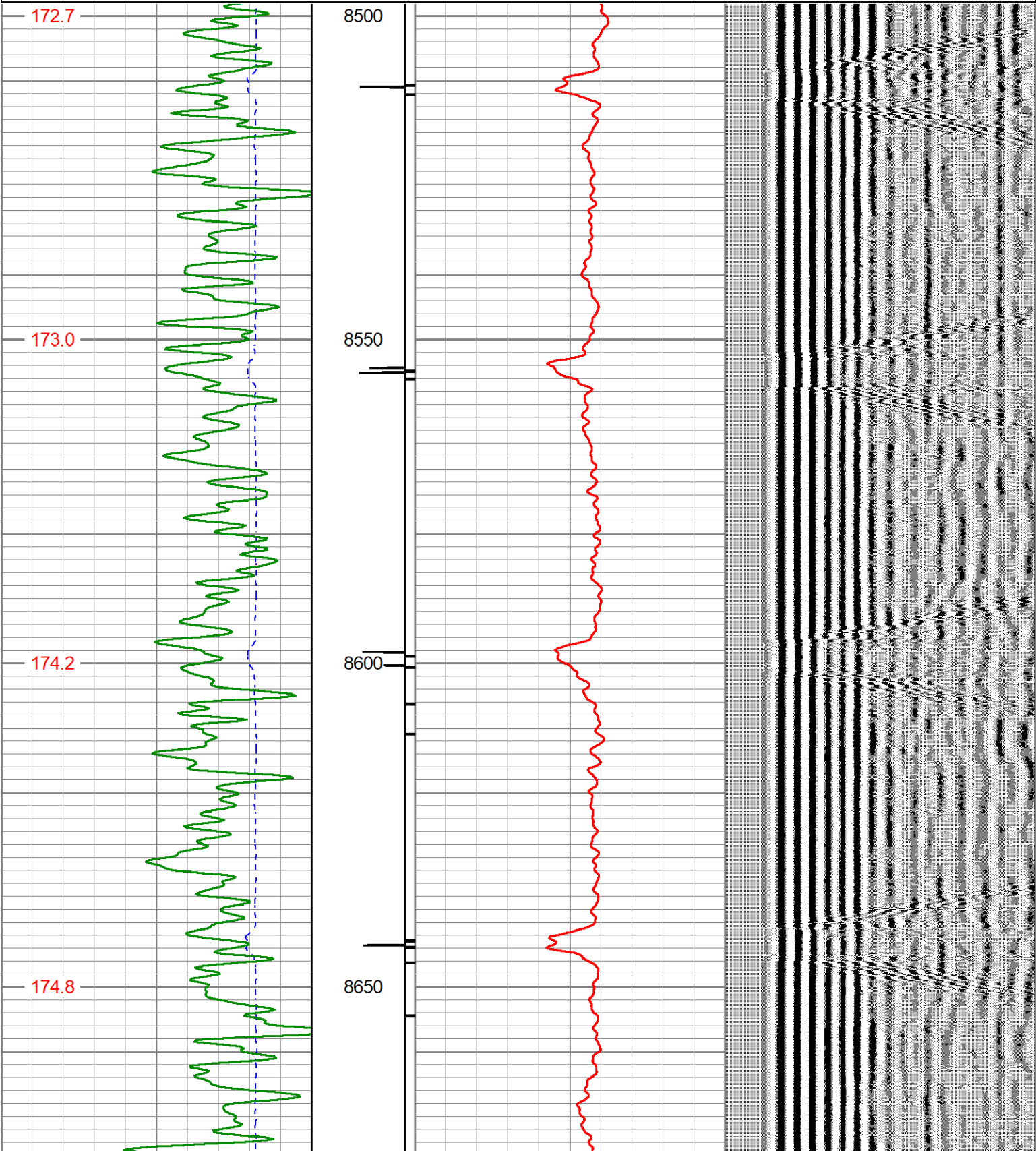


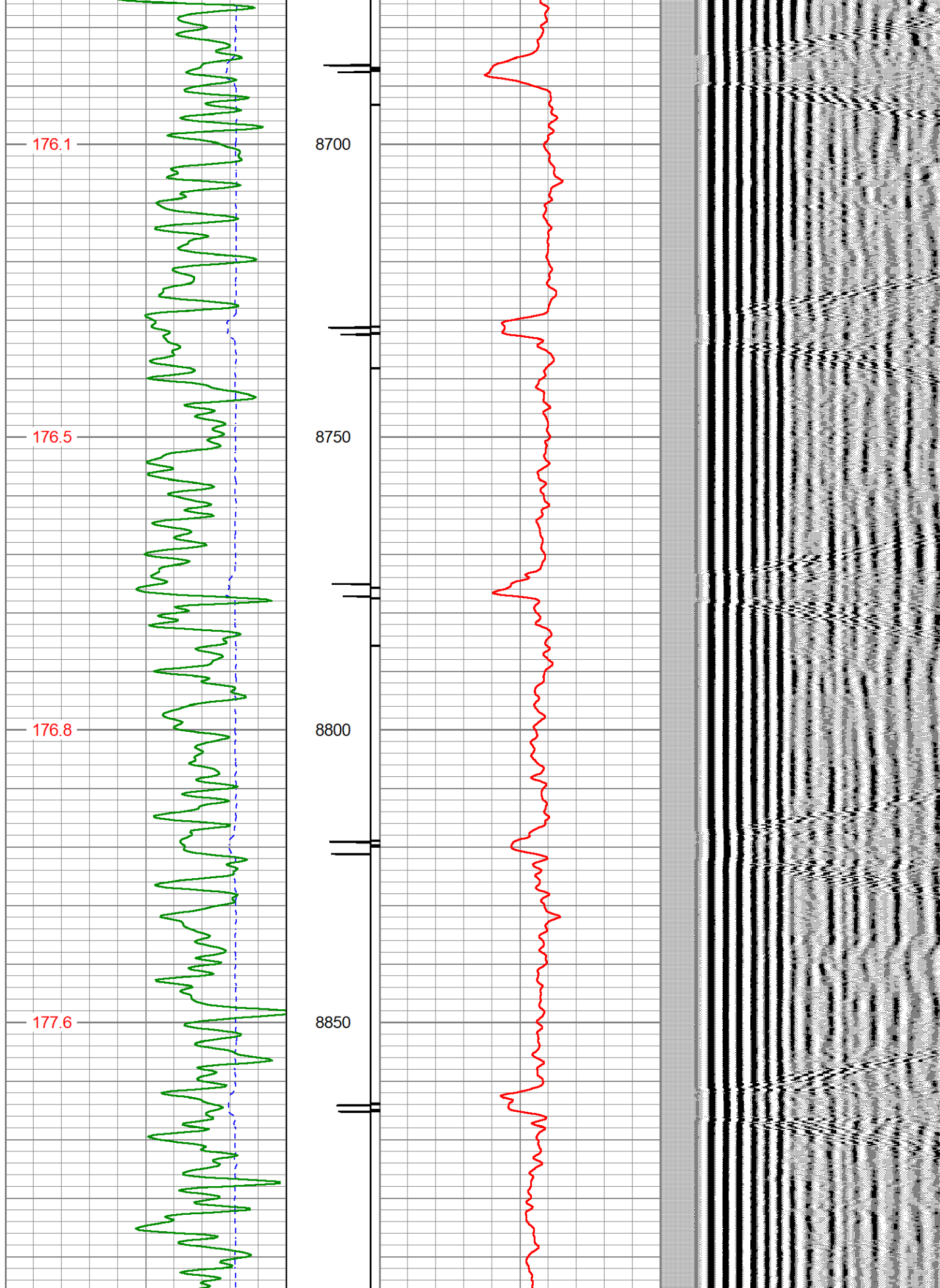
SECOND PASS

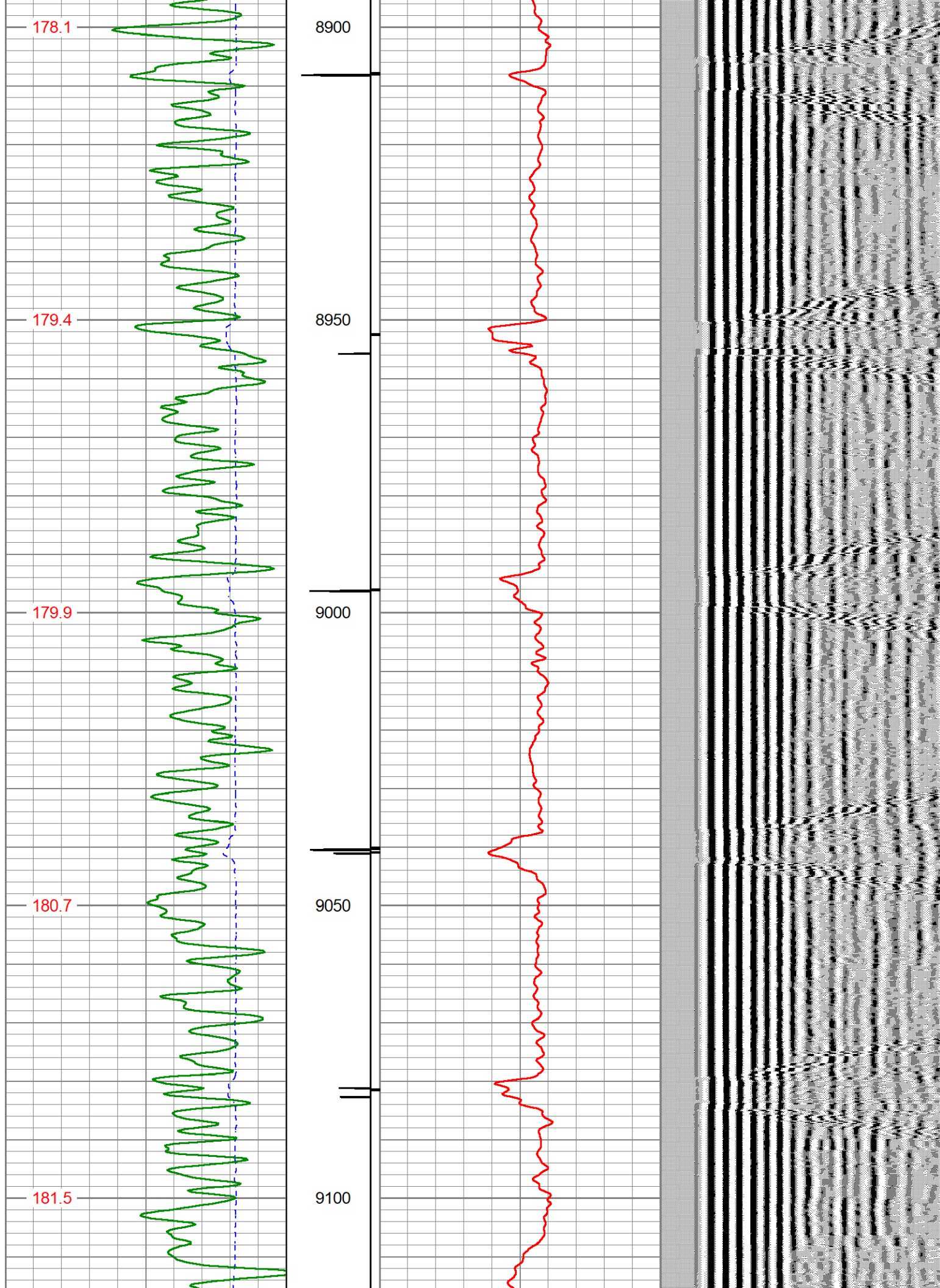
2700 INDUCED WELLHEAD PRESSURE

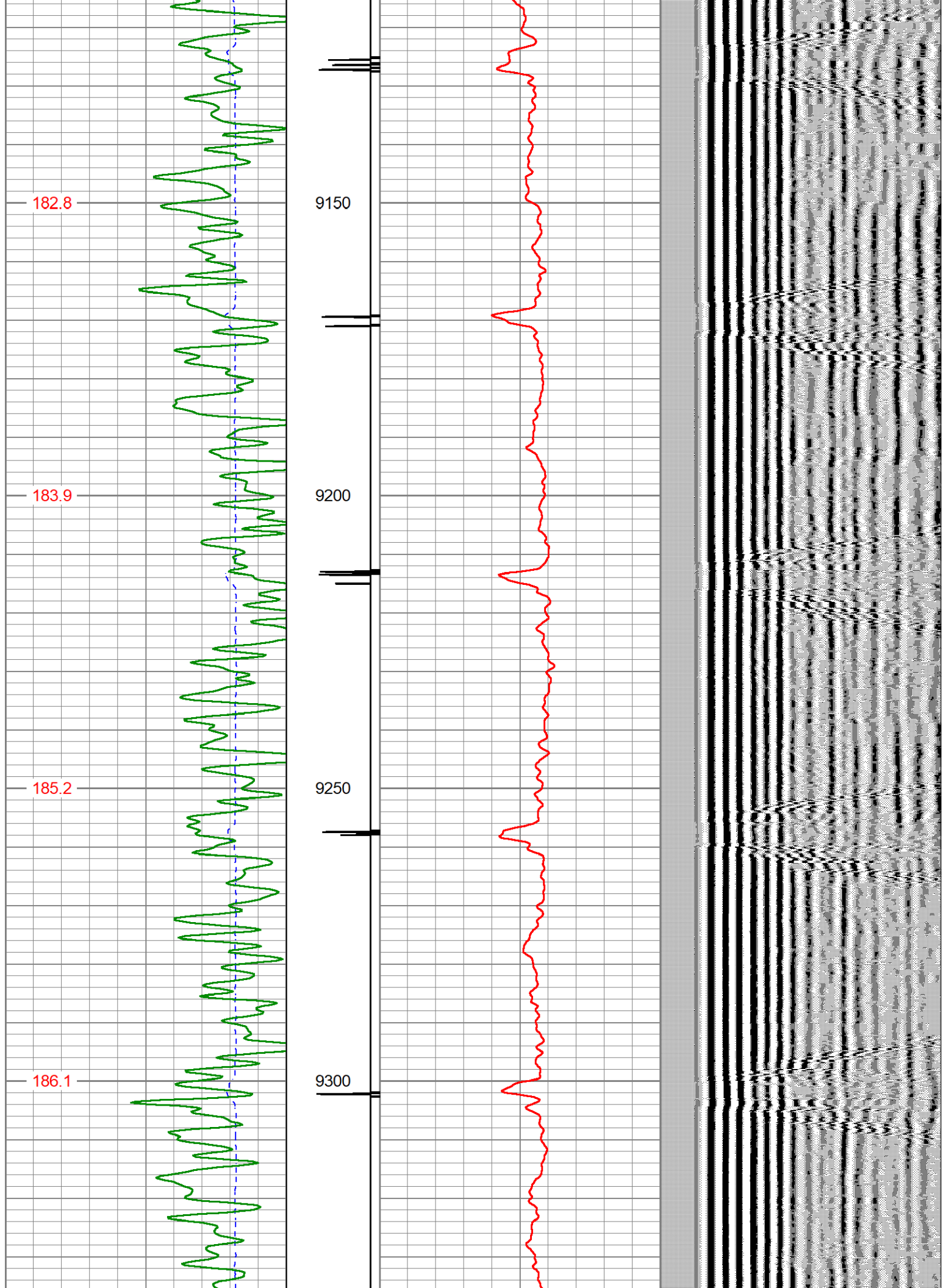
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Presentation Format	cbl_kggw
Dataset Creation	Sat Feb 23 08:49:19 2019
Charted by	Depth in Feet scaled 1:240

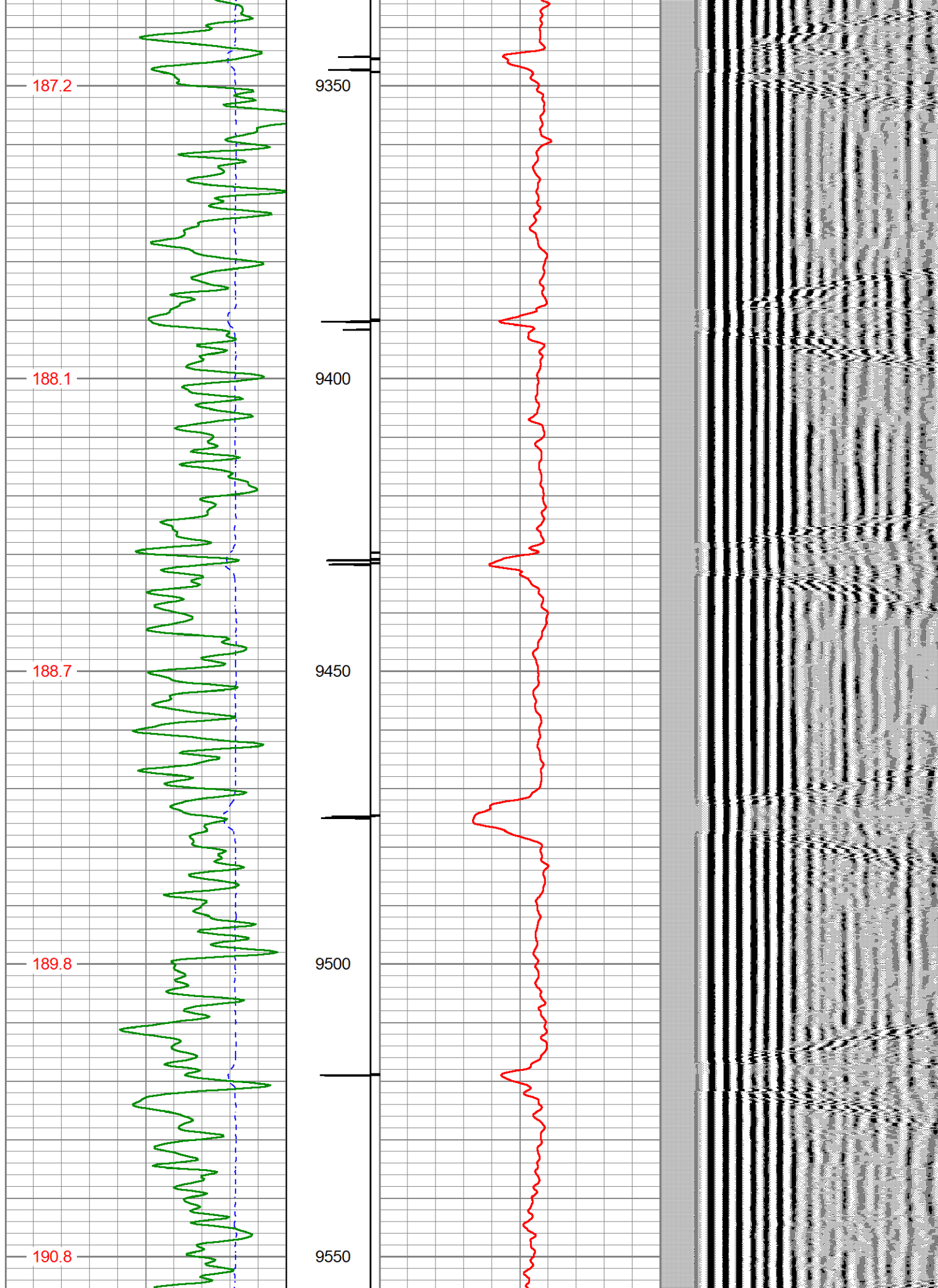
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0	Gamma Ray (GAPI)	150	9	-1	0	AMPLITUDE (mV)	100		
0	Line Speed (ft/min)	100							
TEMP									
(degF)									

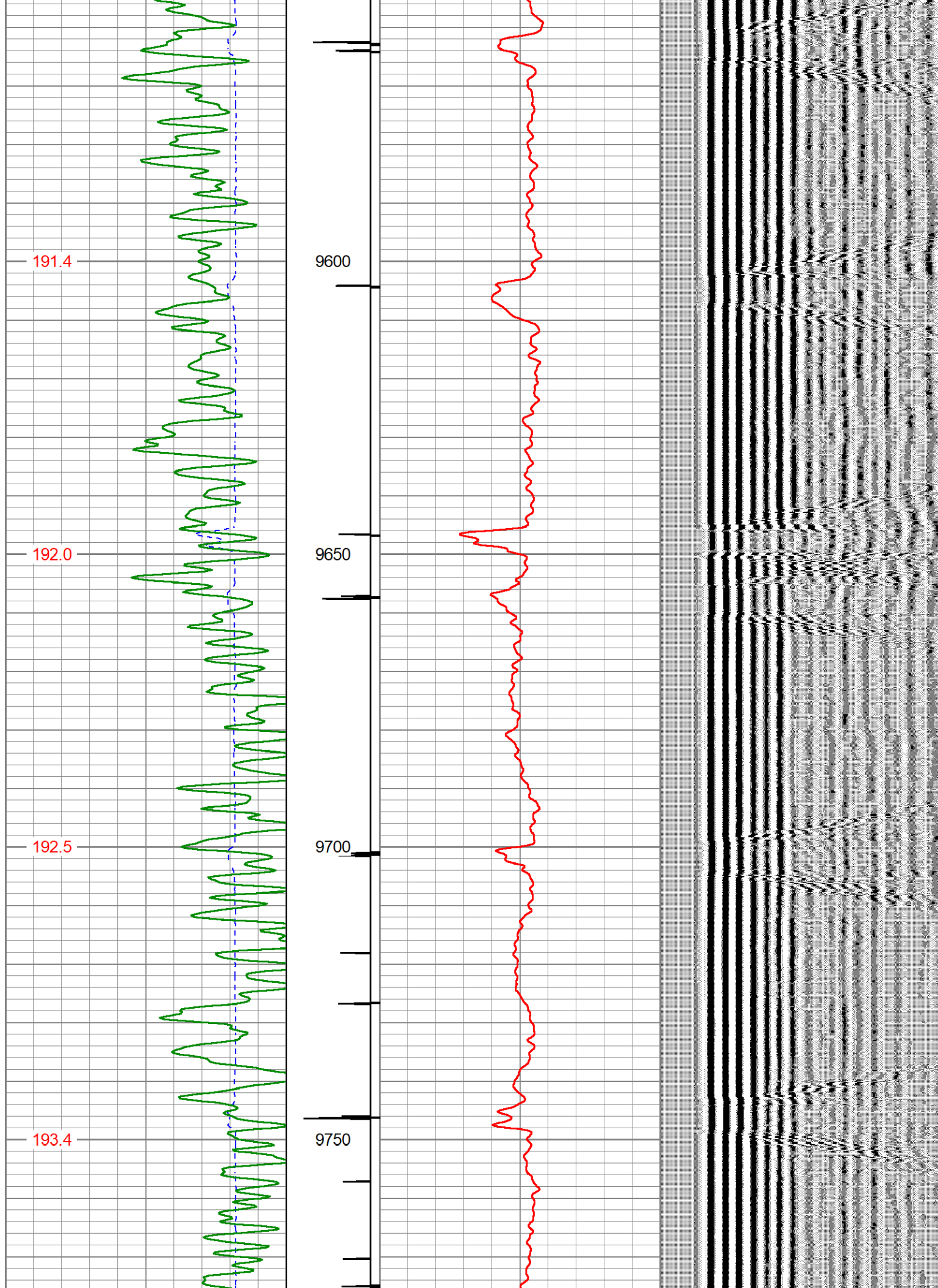


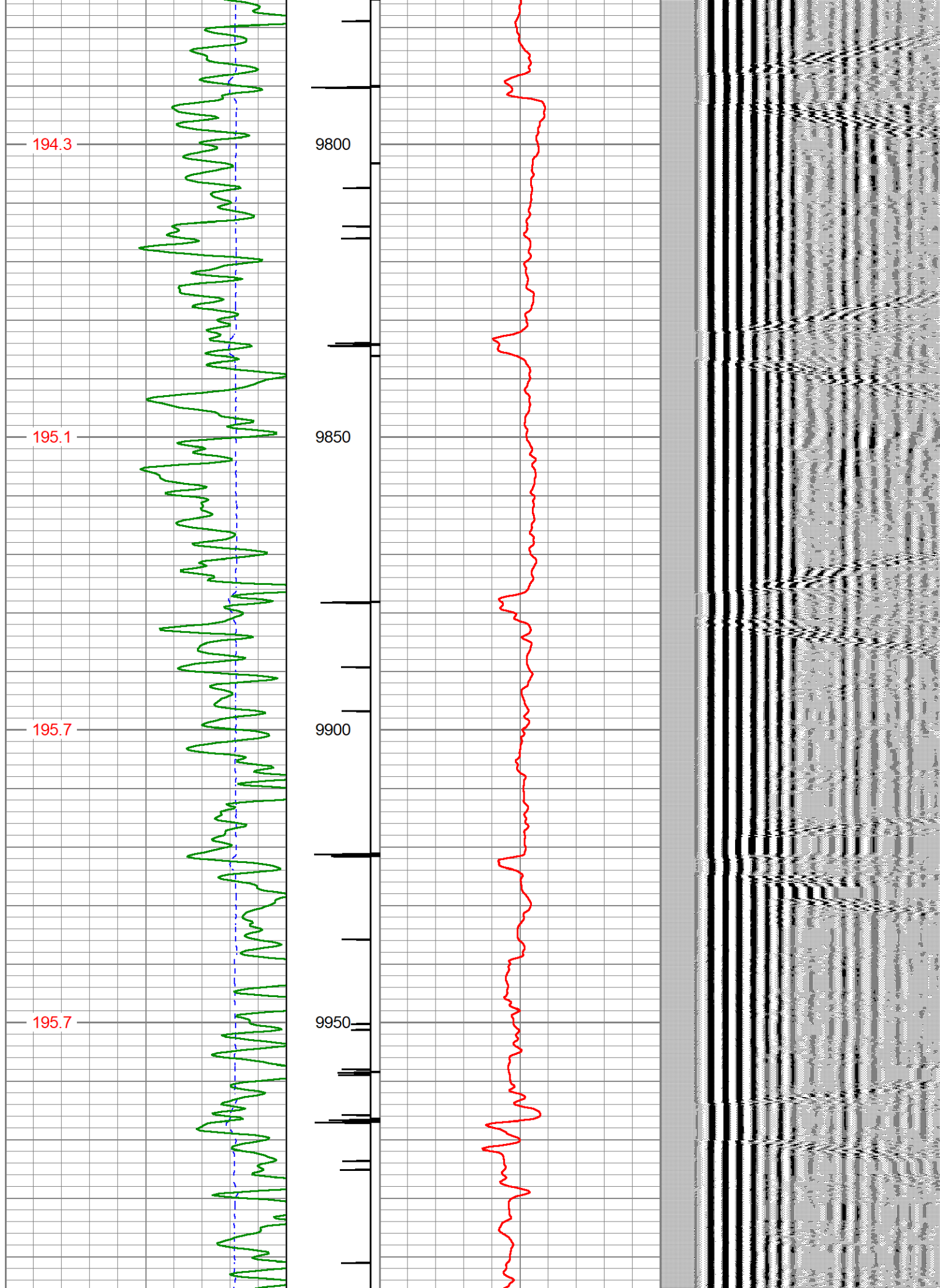


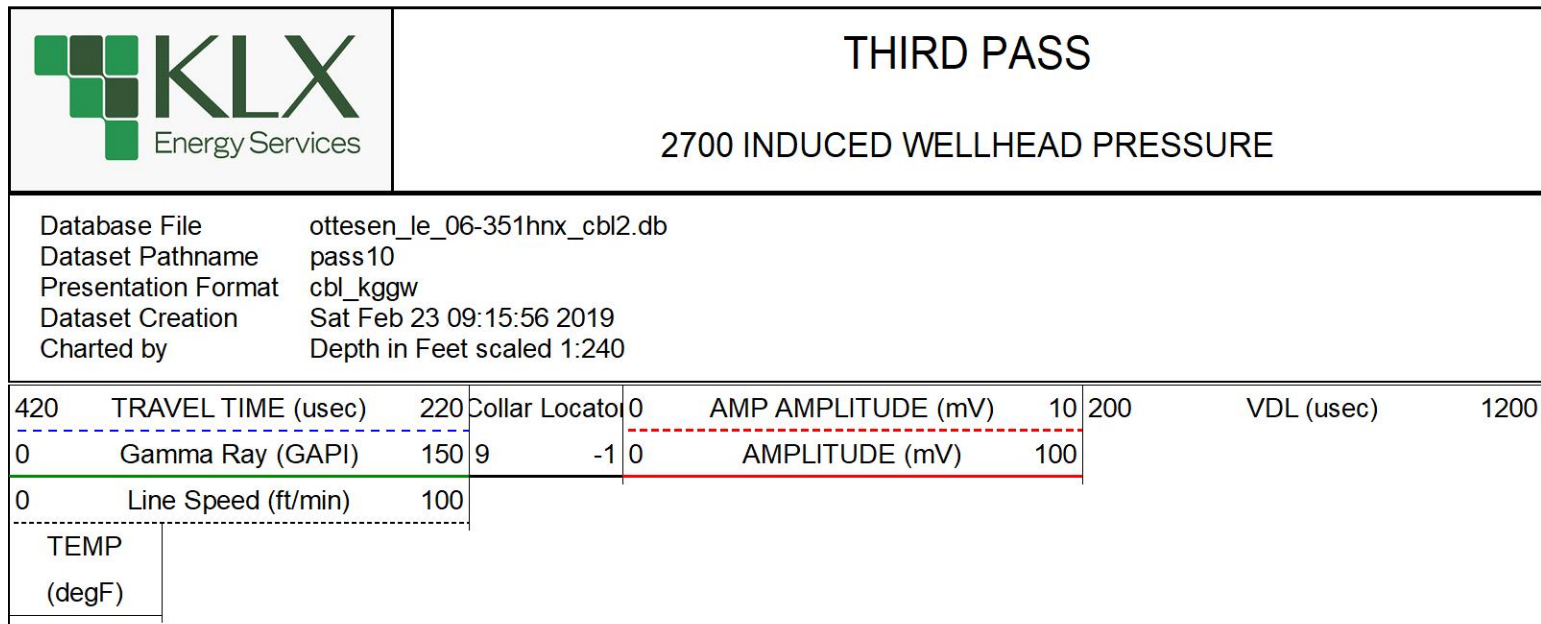
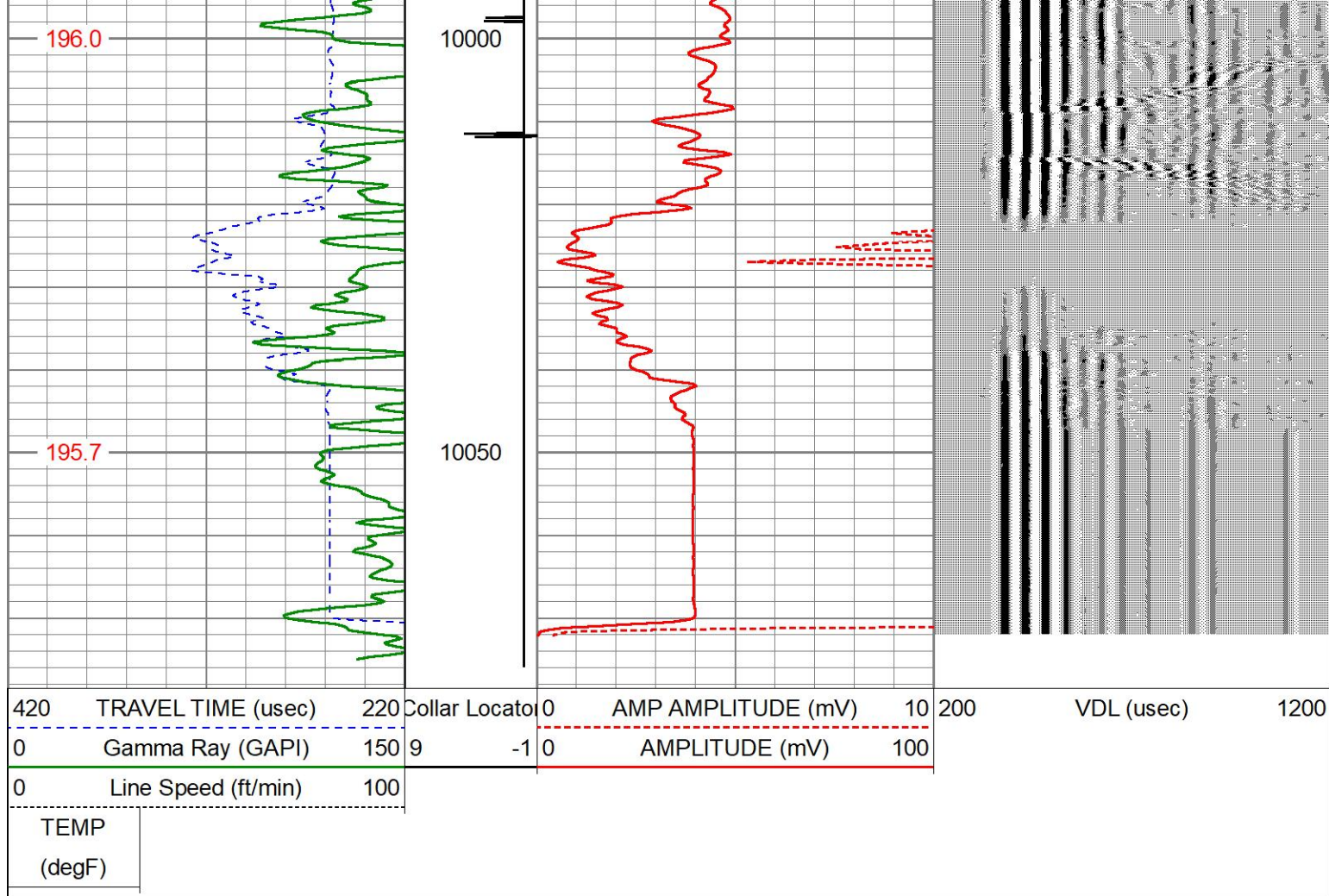


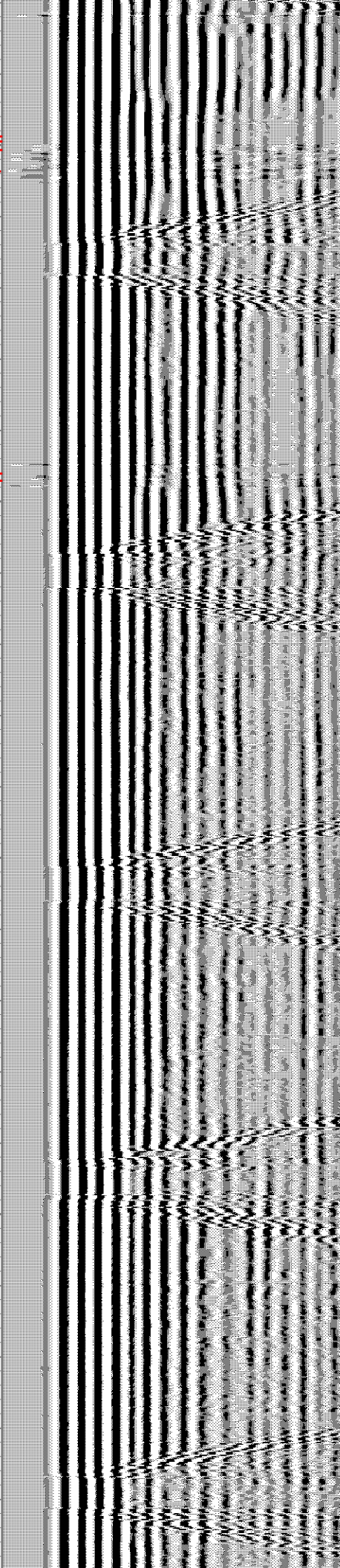
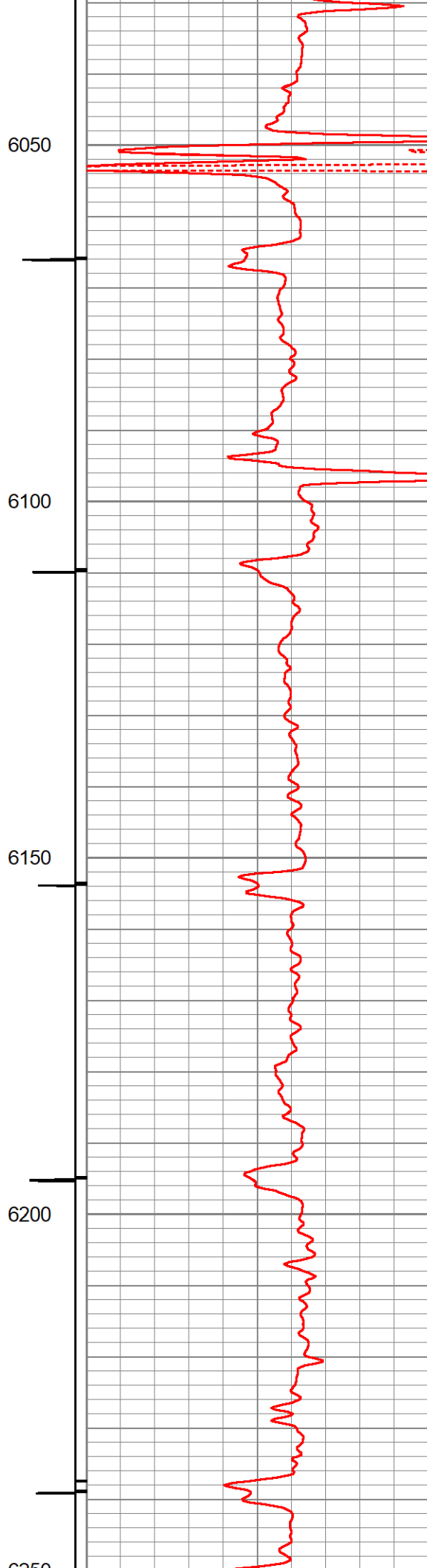
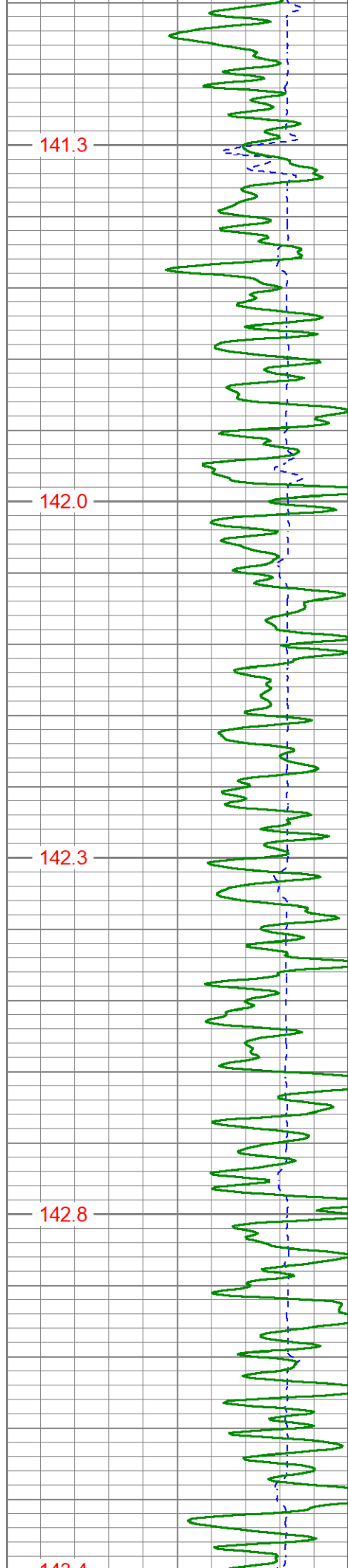


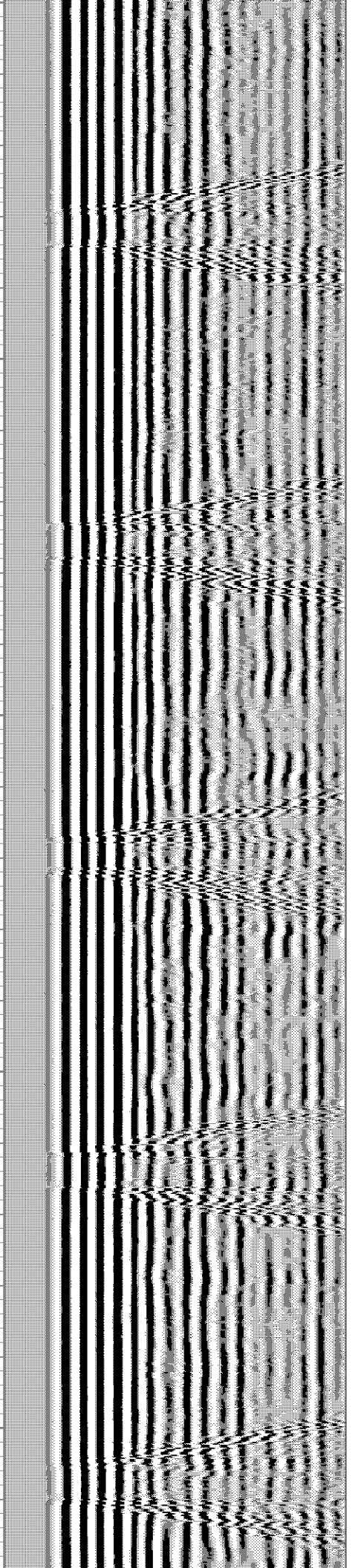
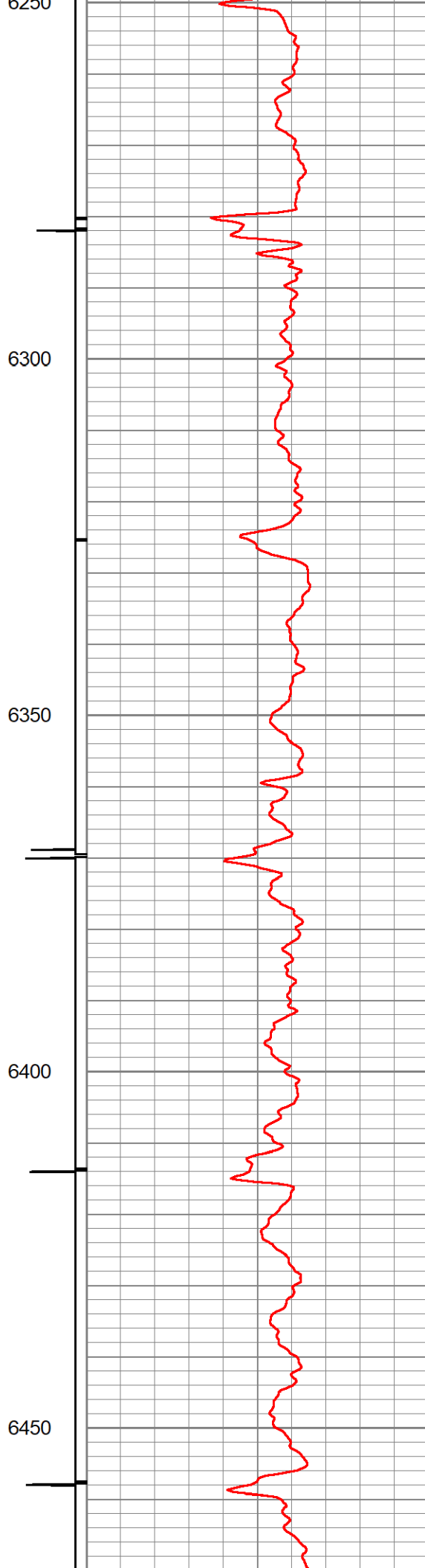
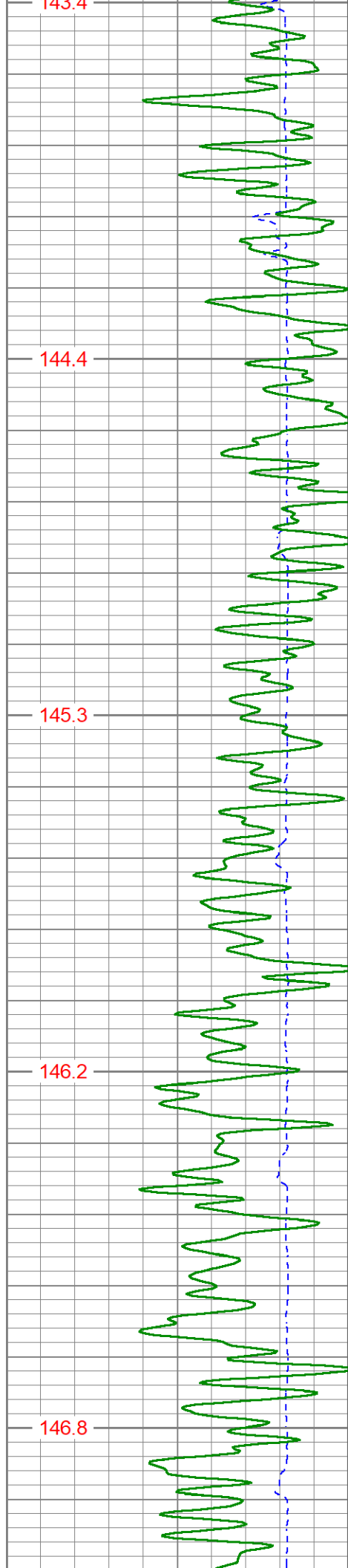


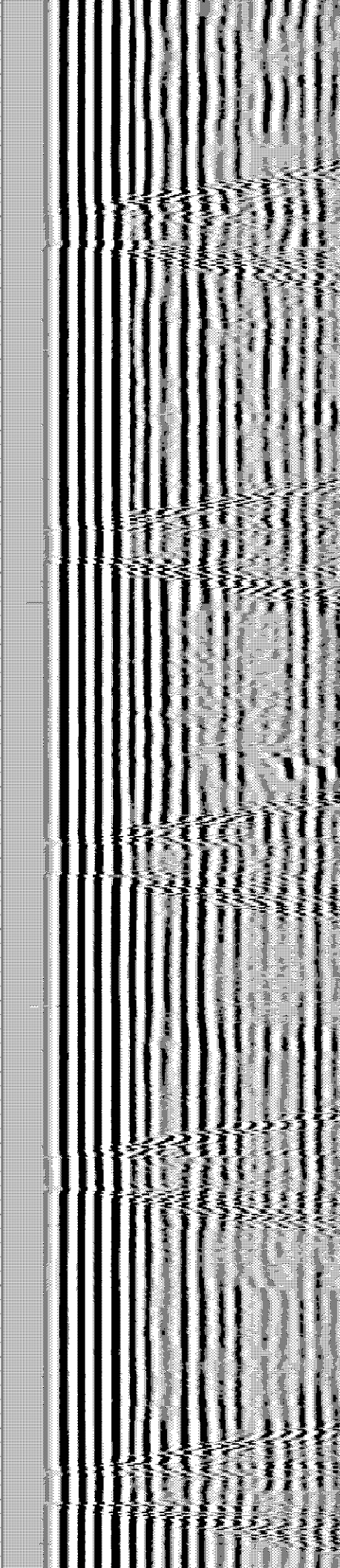
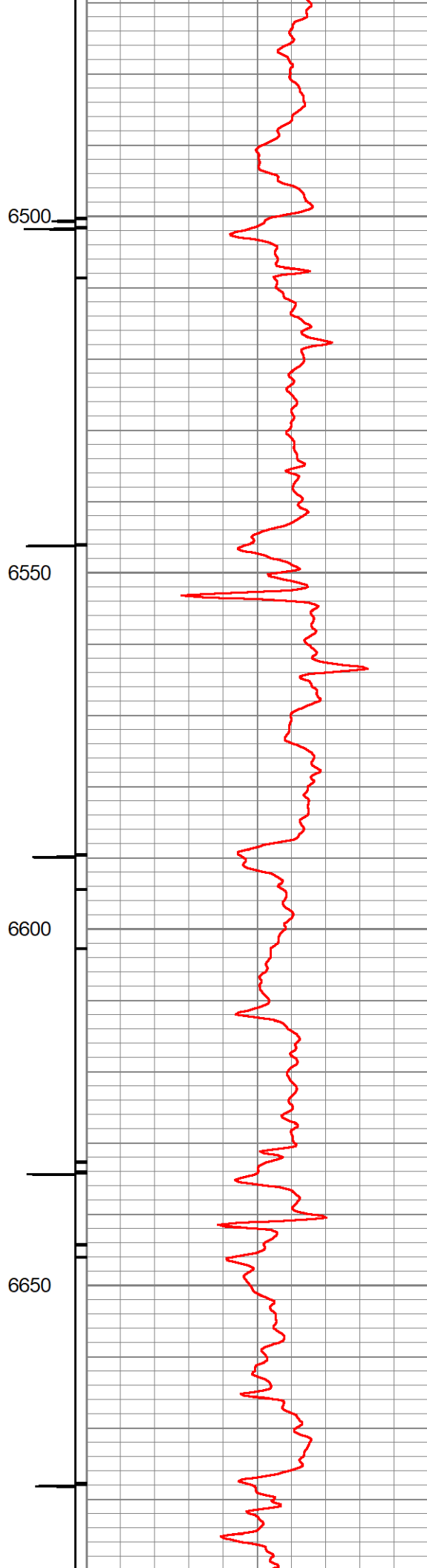
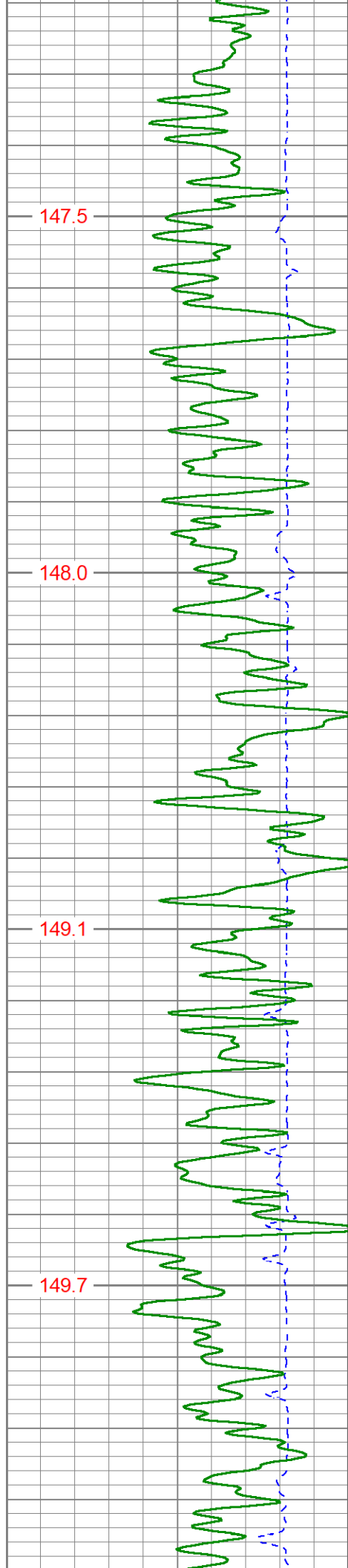


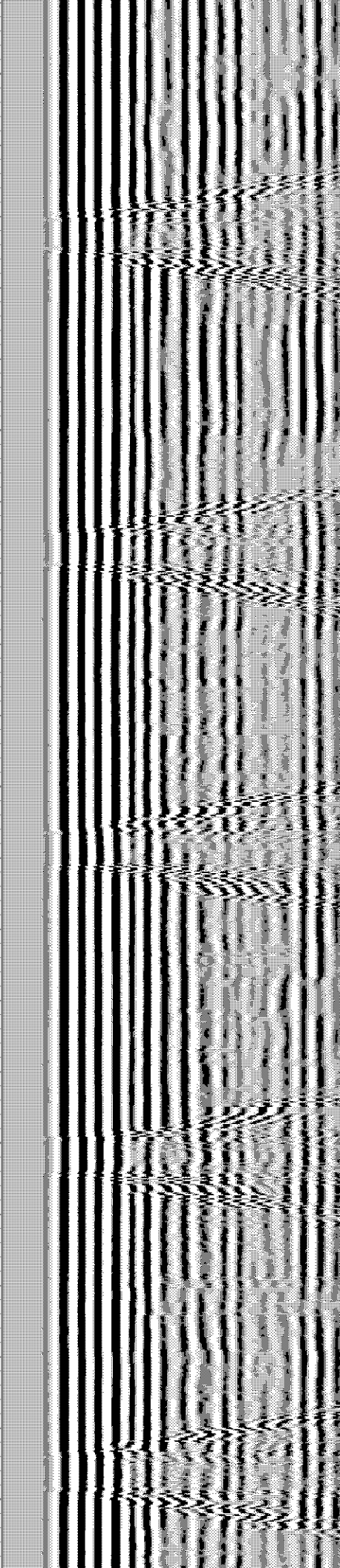
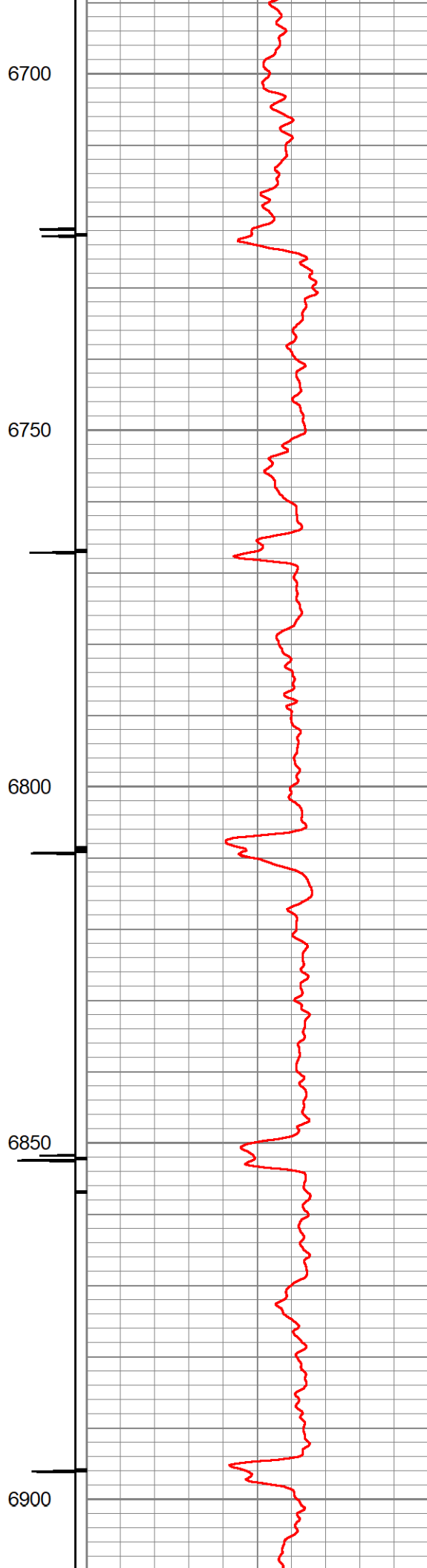
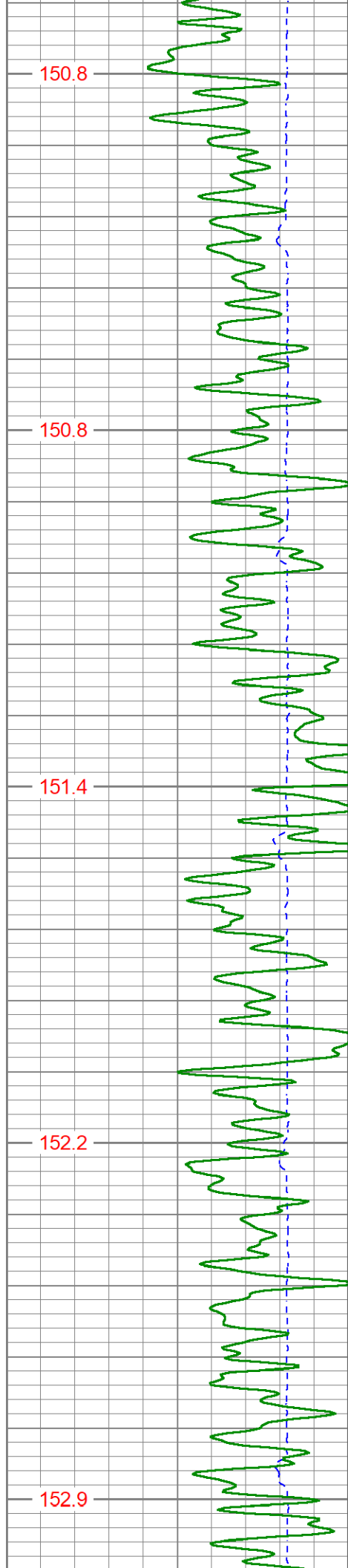


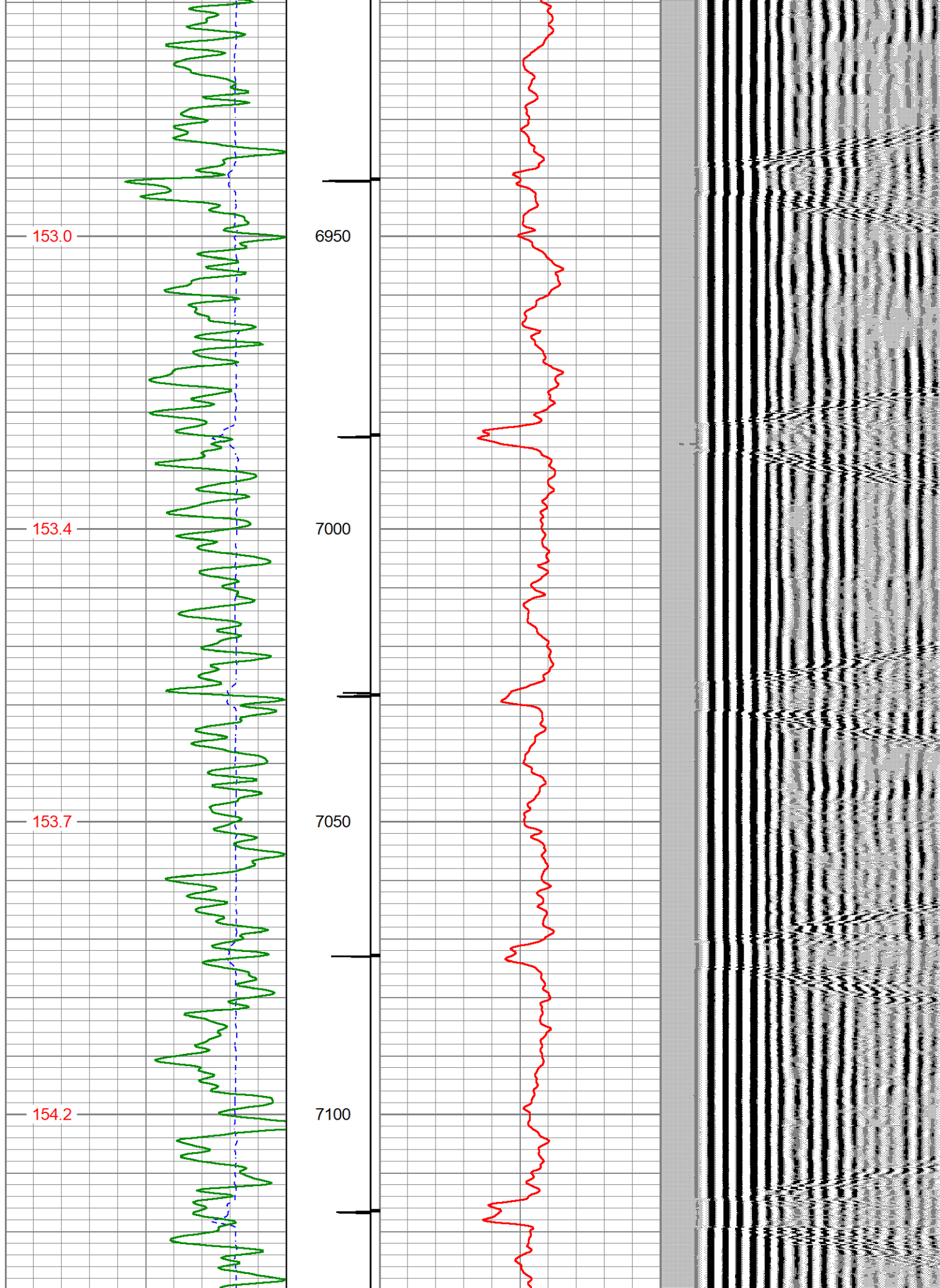


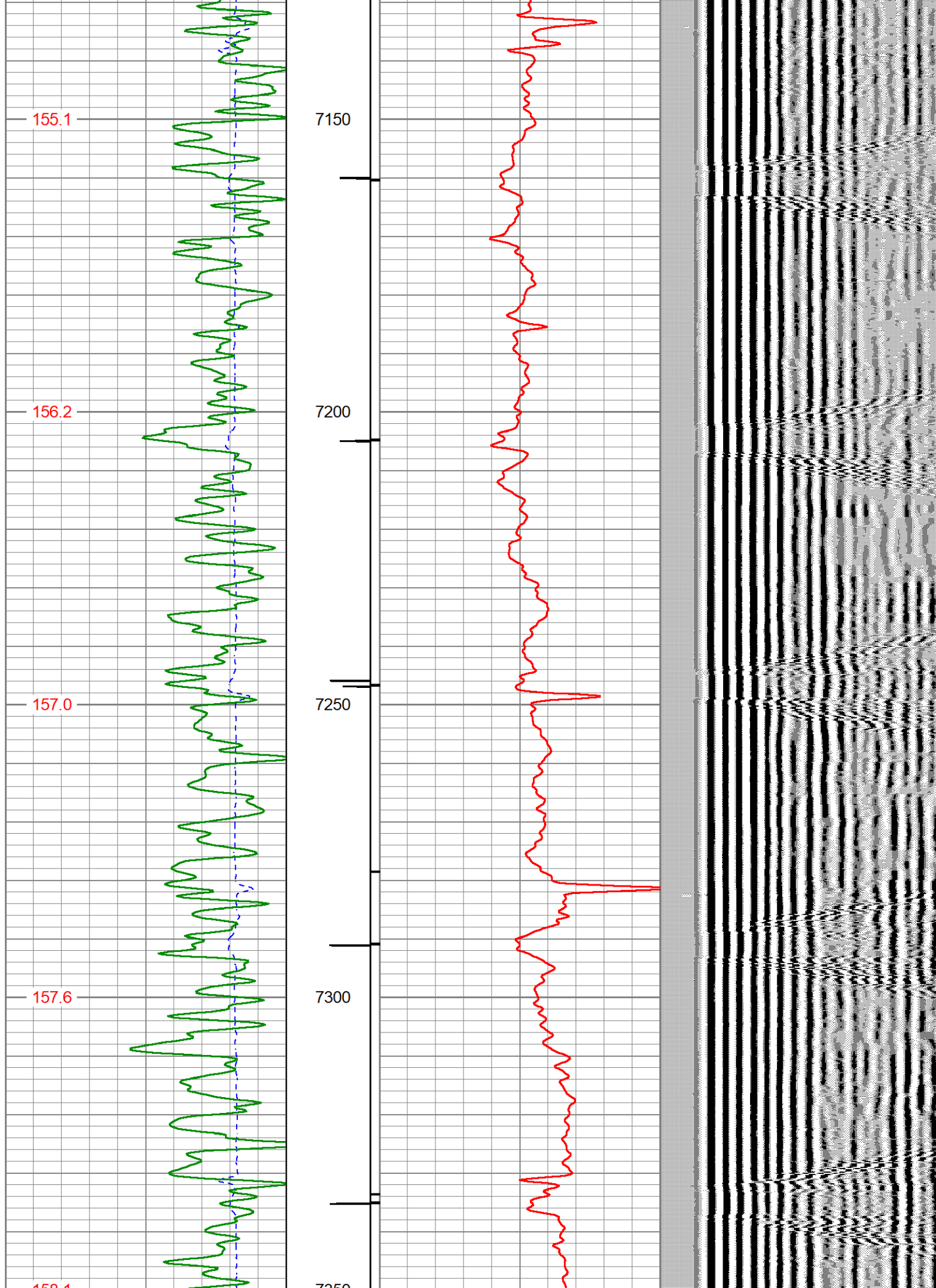


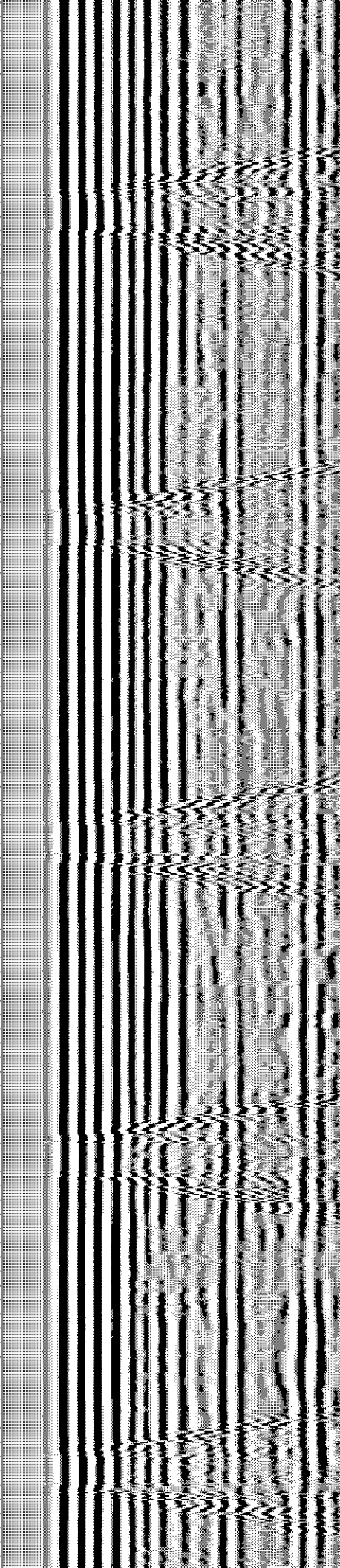
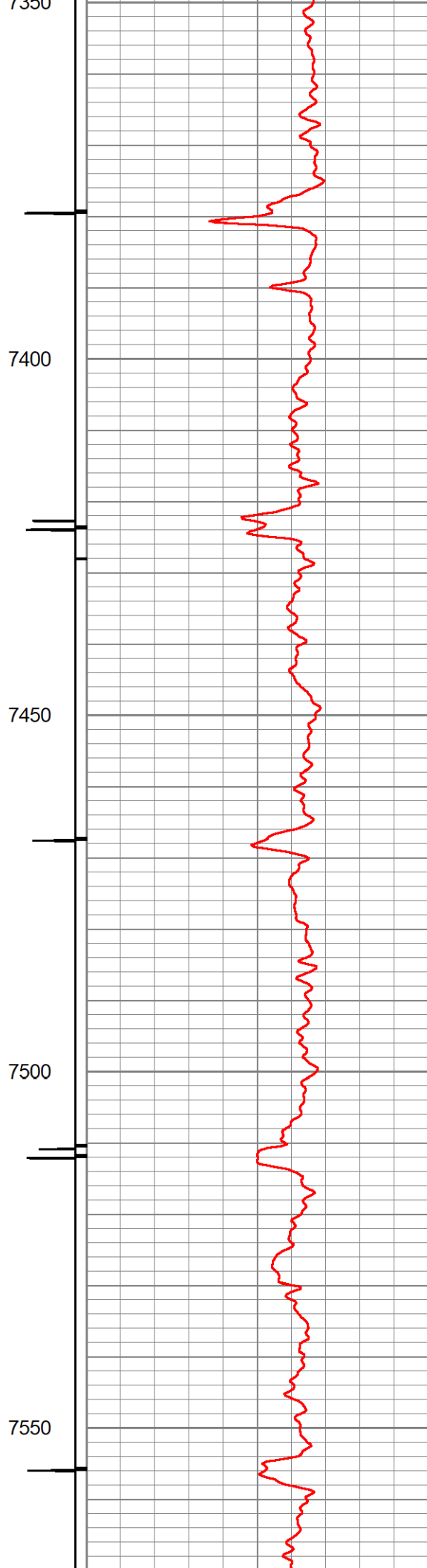
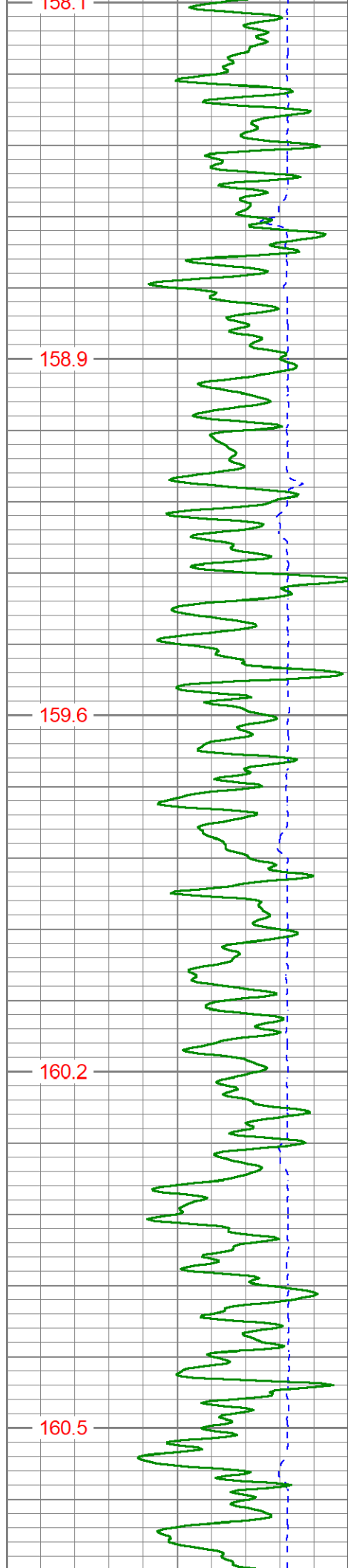


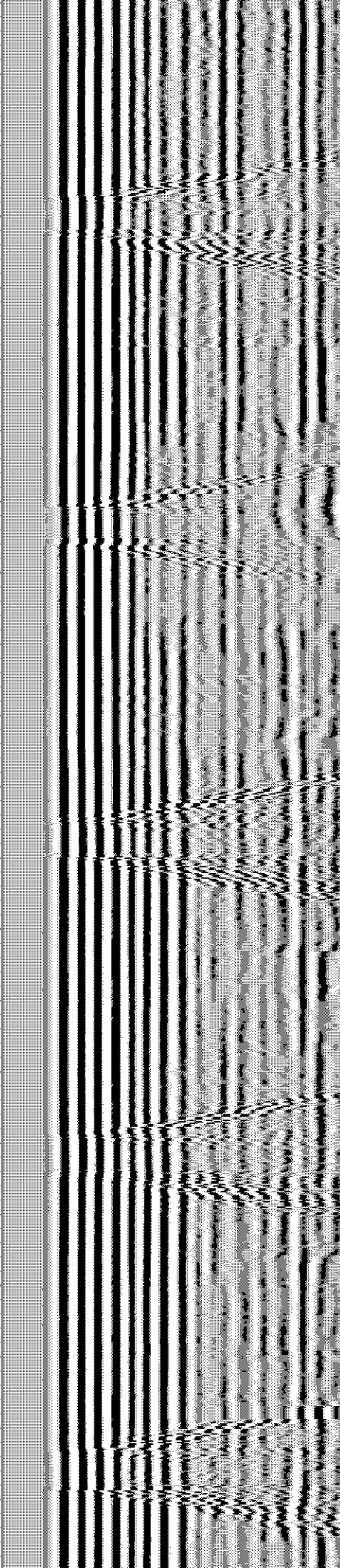
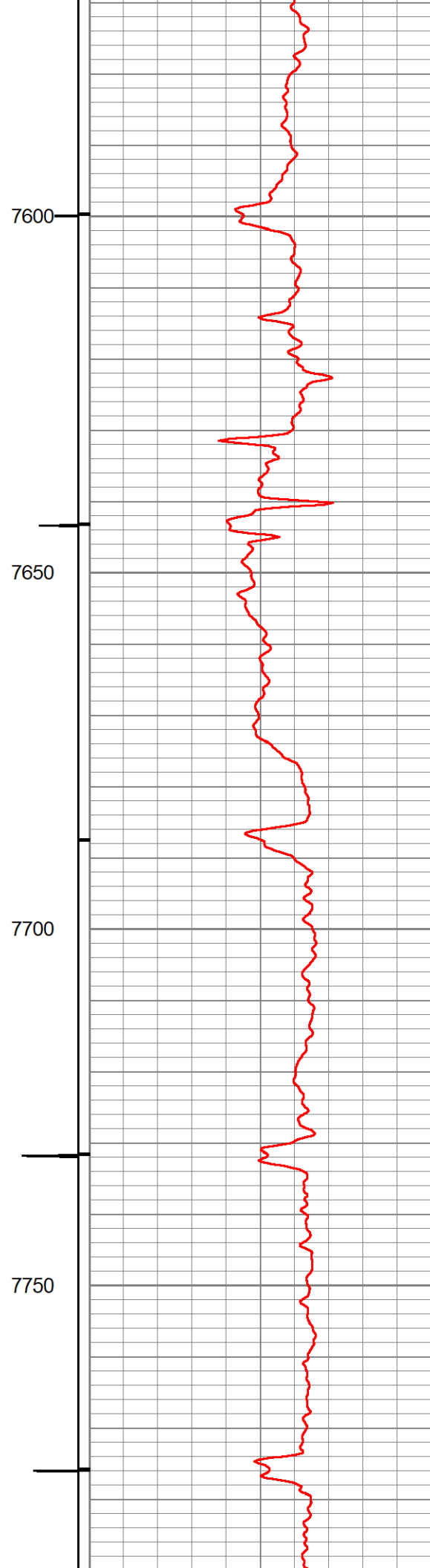
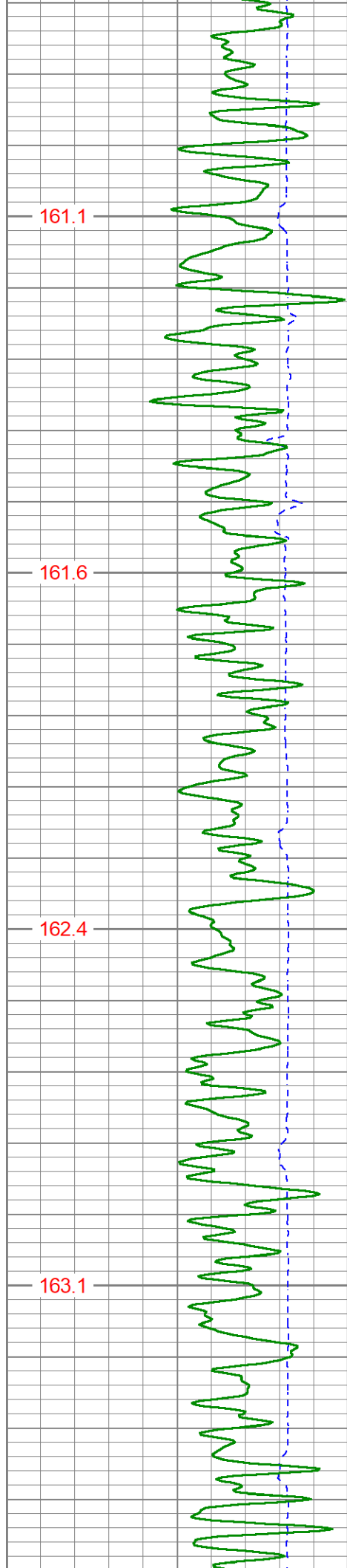


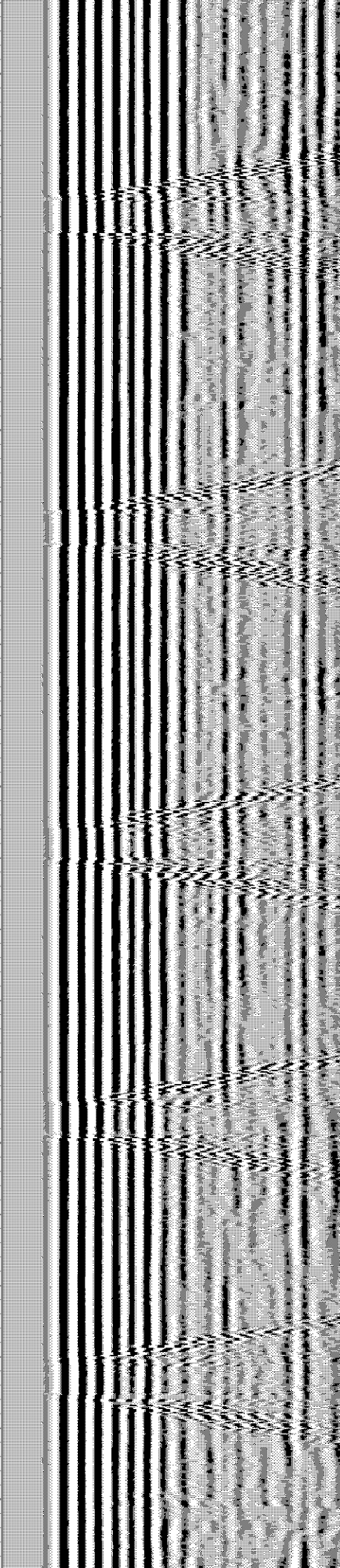
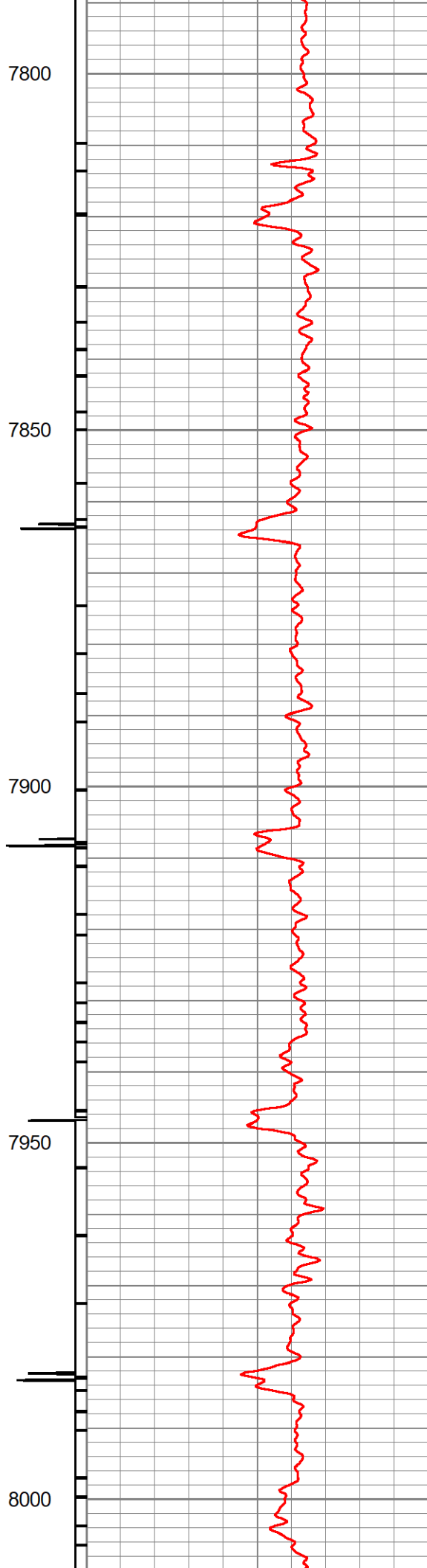
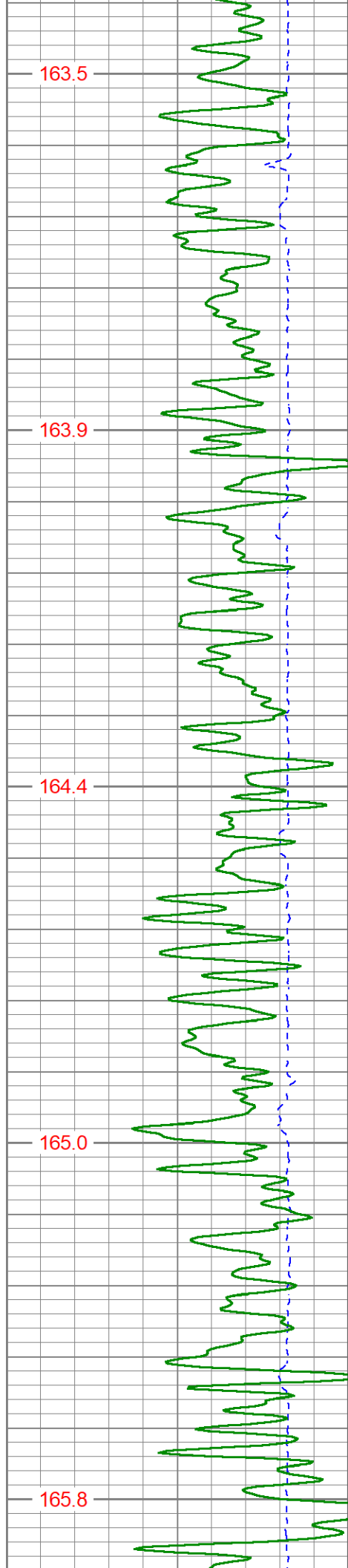


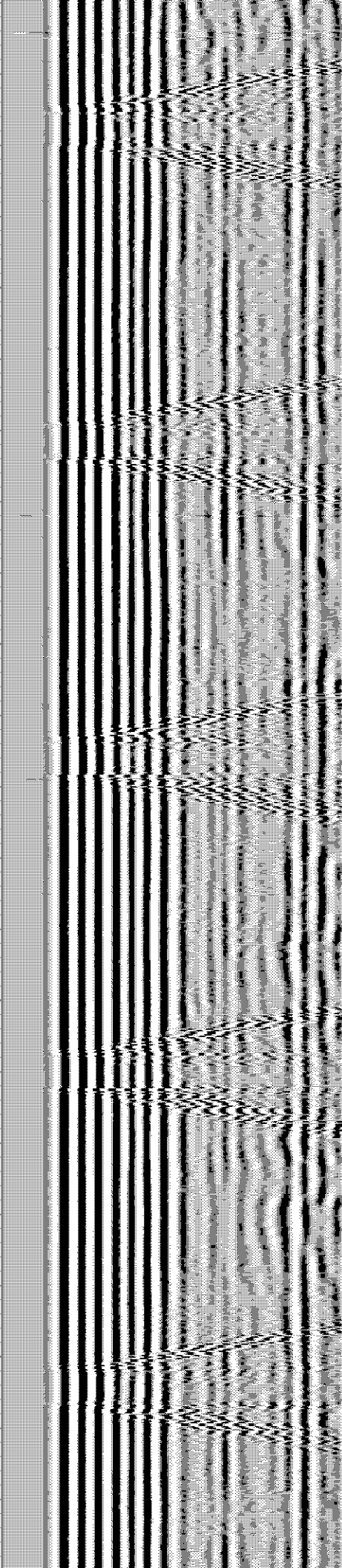
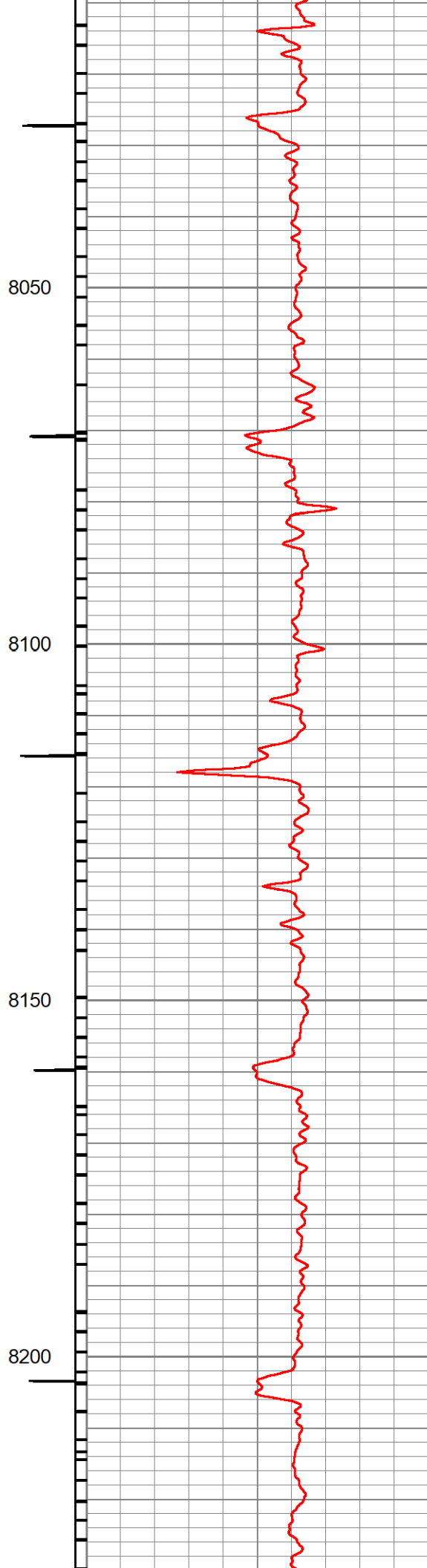
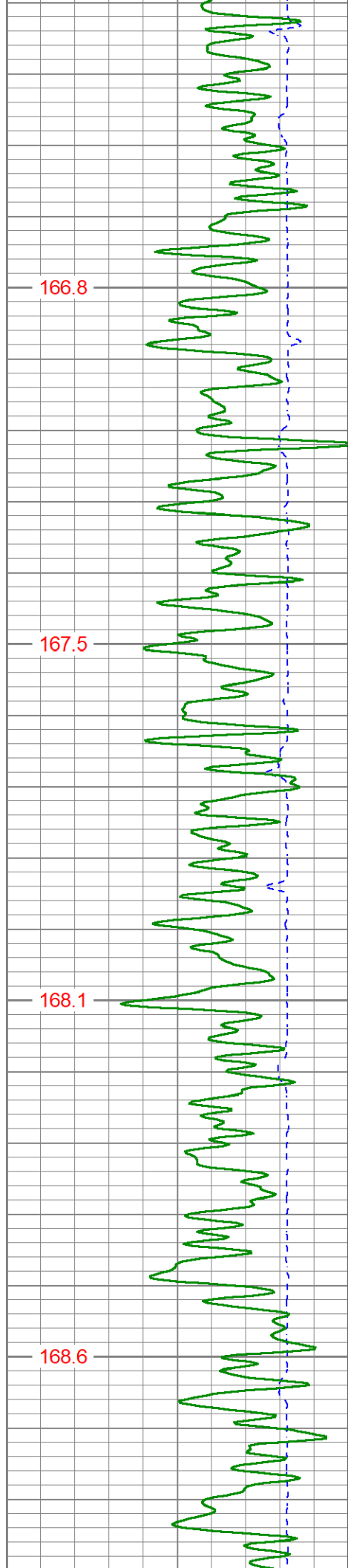


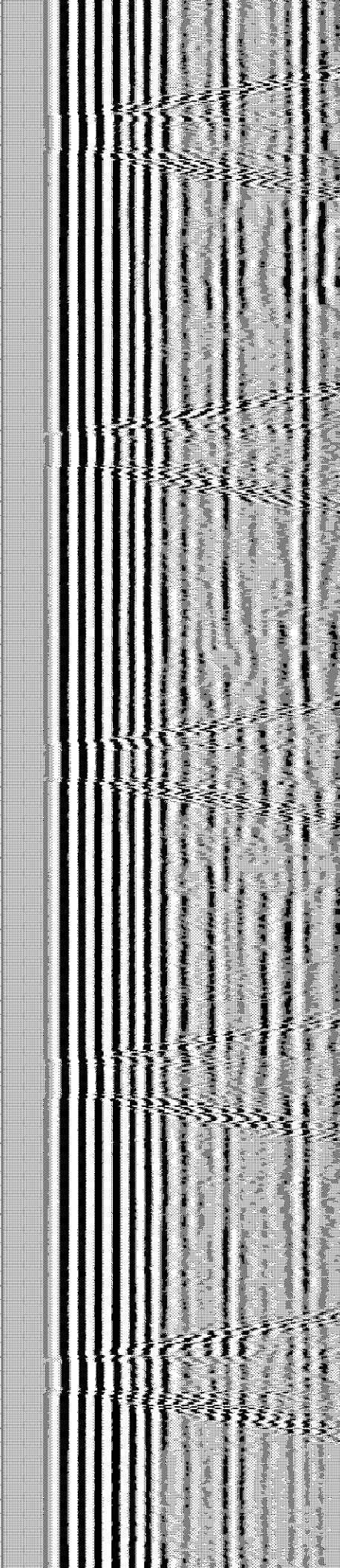
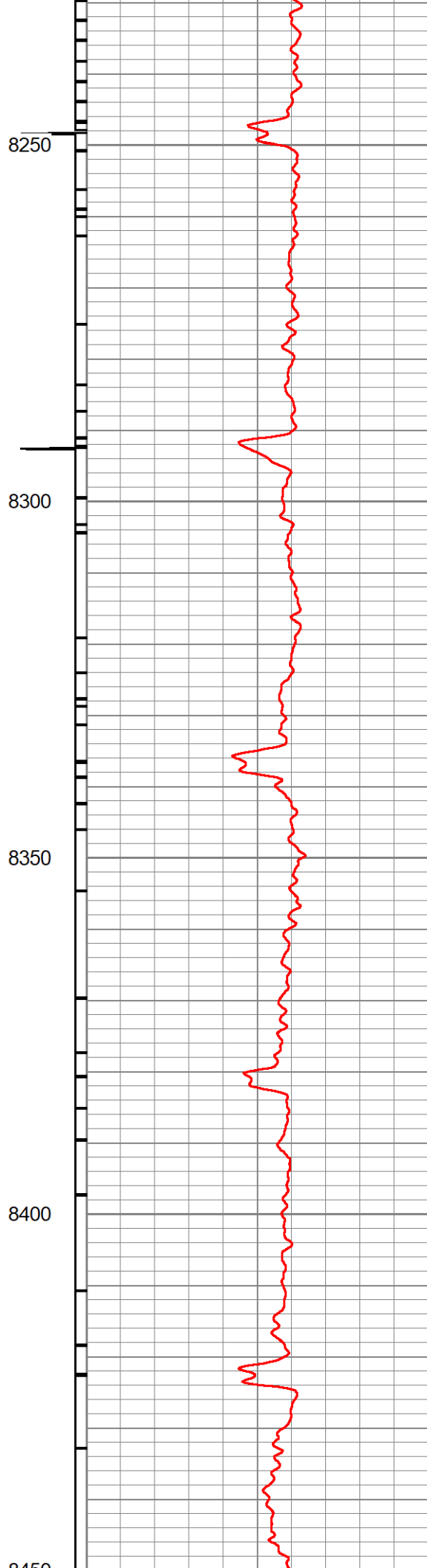
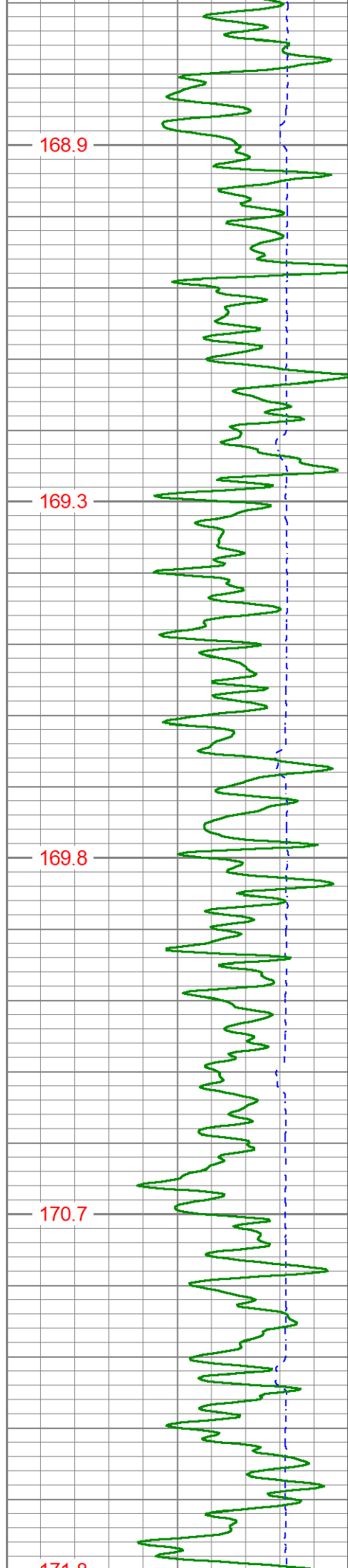


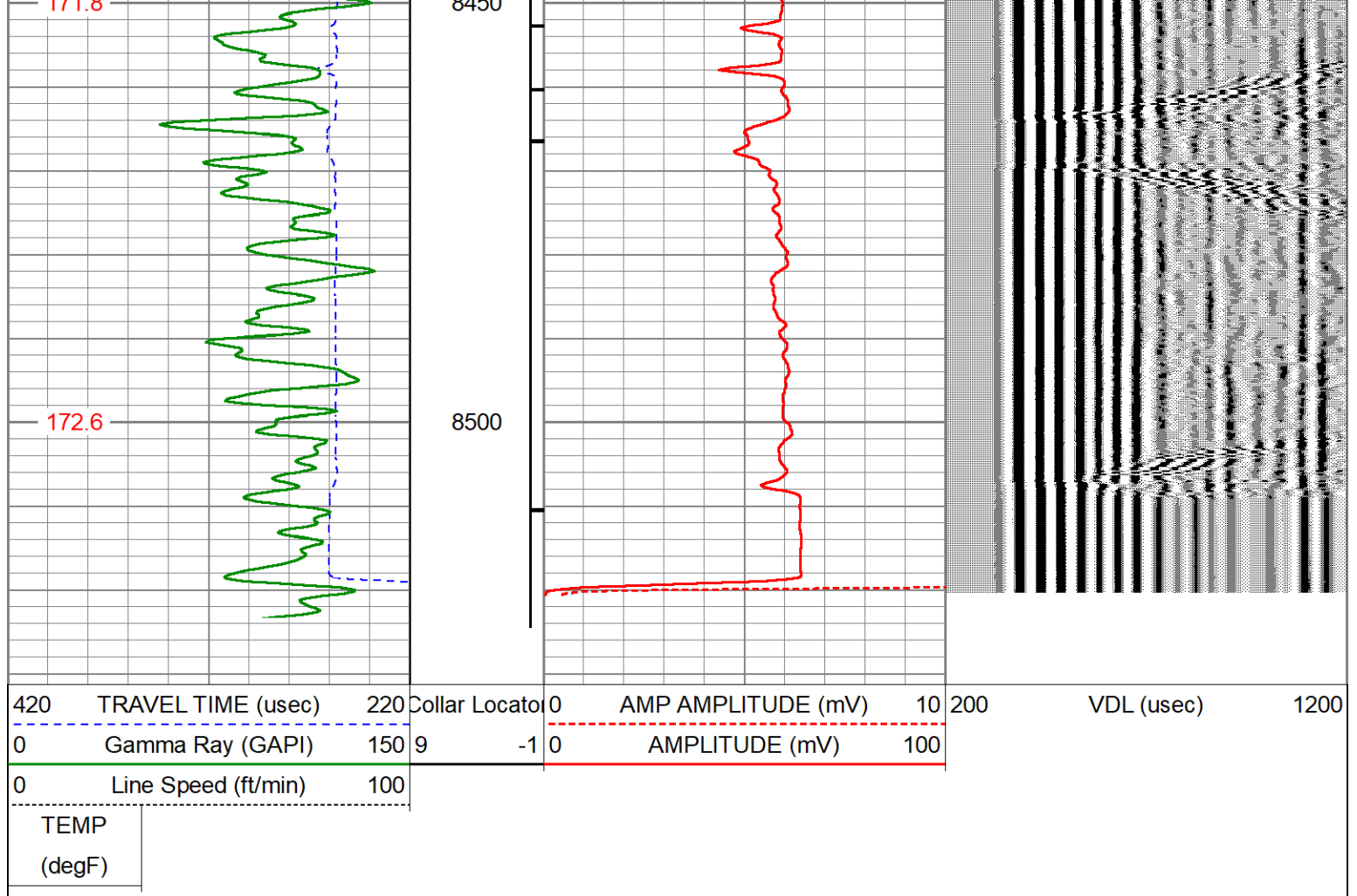












Calibration Report						
Database File	ottesen_le_06-351hnx_cbl2.db					
Dataset Pathname	pass10					
Dataset Creation	Sat Feb 23 09:15:56 2019					
Gamma Ray Calibration Report						
Serial Number:	FW1304-44					
Tool Model:	Probe275					
Performed:	(Not Performed)					
Calibrator Value:	1.0		GAPI			
Background Reading:	0.0		cps			
Calibrator Reading:	1.0		cps			
Sensitivity:	1.0000		GAPI/cps			
Segmented Cement Bond Log Calibration Report						
Serial Number:	121043					
Tool Model:	Probe 2.75 Radii W/Temp					
Calibration Casing Diameter:	5.500		in			
Calibration Depth:	578.817		ft			
Master Calibration, performed Sat Feb 23 07:34:06 2019:						
Raw (v)		Calibrated (mv)		Results		
Zero	Cal	Zero	Cal	Gain	Offset	

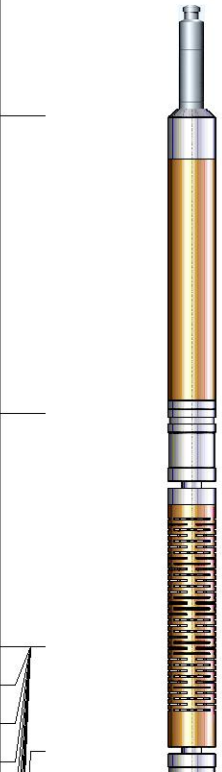
3'	0.003	0.351	1.000	71.921	203.740	0.413
CAL	0.003	0.656				
5'	0.005	0.324	1.000	71.921	222.140	-0.098
SUM						
S1	0.005	0.364	0.000	71.921	199.917	-0.910
S2	-0.006	0.306	0.000	71.921	231.077	1.281
S3	-0.000	0.320	0.000	71.921	224.560	0.069
S4	-0.000	0.339	0.000	71.921	212.110	0.039
S5	0.001	0.358	0.000	71.921	201.621	-0.175
S6	0.003	0.353	0.000	71.921	205.031	-0.521
S7	0.002	0.351	0.000	71.921	206.013	-0.370
S8	0.003	0.332	0.000	71.921	218.416	-0.587

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.003	0.656	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	

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
HeadVolt	16.99		CHD-Titan Titan 1 7/16" GO Cablehead	1.00	1.44	5.00
Temp	14.14					
WVFS8	11.91		RBT-Probe 2.75 Radii W/Temp (121043) Probe 2.75" Radial with Integral Temperature Sub	9.39	2.75	90.00
WVFS7	11.91					
WVFS6	11.91					
WVFS5	11.91					

Tool Joint	Tool Joint Depth (ft)	Tool Joint Description	Tool Joint Weight (lb)	Tool Joint Length (ft)	Tool Joint O.D. (in)
WVFS4	11.91				
WVFS3	11.91				
WVFS2	11.91				
WVFS1	11.91				
WVFCAL	11.91				
WVF3FT	11.91				
WVF5FT	10.91				
HEADVOLT	7.66				
CCL	6.78				
GR	5.44	GR-Probe275 (FW1304-44) Probe 2 3/4" Logging Gamma Ray 6 Pin	4.80	2.75	57.00
		CENT-Titn275Adj Titan 2 3/4" Adjustable Centralizer	2.86	2.75	35.00

Dataset: ottesen_le_06-351hnx_cbl2.db: field/well/run1/pass10

Total length: 18.05 ft

Total weight: 187.00 lb

O.D.: 2.75 in