

HALLIBURTON

ACOUSTIC CEMENT  
BOND LOG

Company		URSA OPERATING CO., LLC.	
Well		YATER 11B-17-07-95	
Field		PARACHUTE	
County		GARFIELD	State CO
Company		URSA OPERATING CO., LLC.	
Well		YATER 11B-17-07-95	
Field		PARACHUTE	
County		GARFIELD	State CO
API No.: 05045228250000		Serv #: 902696032	
Location: SURFACE HOLE LOCATION: 1792' FSL & 1128' FWL		Other Services	
BOTTOM HOLE LOCATION: 392' FNL & 651' FWL		GAUGE RING RMT	
Sec: 17 Twp: 7S Rge: 95W			
Permanent Datum		GROUND LEVEL Elevation 5519	
Log Measured From		KB , 17 Ft. above perm. datum	
Drilling Measured From		KB	
Date @ Time Logged		28 AUGUST 2015	
Run No.		ONE	
Depth - Driller		7771'	
Depth - Logger		7688'	
Bottom - Logged Interval		7683'	
Top - Log Interval		100'	
Max. Recorded Temp.		211 DEG F	
CEMENTING DATA		Surface String	
Date / Time Cemented		N/A	
Primary / Squeeze		N/A	
Expected Compressive Strength		psi@ hrs	
Cement Volume		/	
Cement Type / Weight		/	
Formulation		/	
Mud Type / Mud Wgt.		/	
Borehole Record		Casing & Tubing Record	
Run Number		Bit From To Size Weight From To	
ONE		12.25" 1908" SURFACE 8.625" 32.0# 1908" SURFACE	
TWO		7.875" 7771' SURFACE 4.5" 11.6# 7748" SURFACE	

<<< Fold Here >>>

HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.

Comments

HES RMT LOG DATED: 28 AUGUST 2015 IS THE PRIMARY DEPTH REFERENCE FOR THIS WELL

GR-CBL RAN IN COMBINATION.

LOG INTERVALS PER CUSTOMER REQUEST.

SHORT JOINTS @: 2945' - 2955', 6326' - 6336', AND 7212' - 7222'

\*\*\*THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES.\*\*\*

Service Ticket No.	902696032	API No.	05045228250000	PGM Ver	WARRIOR 8
The Well Name, Location, Borehole Description, and / or Cementing Data Furnished by Client					
EQUIPMENT DATA					
TELEMTETRY		CEMENT BOND TOOL		RESERVOIR MONITOR TOOL	
Run No.	ONE	Run No.	ONE	Run No.	
Serial No.	11495480	Serial No.	11794522	Serial No.	
Model No.	TTCU-U-002	Model No.	CBL-M	Model No.	
Diameter	1.688"	Diameter	2.75"	Diameter	
LOGGING DATA					
General Data					
Pass	Depths		Well Head	Speed	Logging Run Comments
No	From	To	Pressure	Ft/Min	

No.	7683'	SURFACE	0	60	MAIN LOG SECTION			
	GAMMA RAY		TRAVEL TIME		AMPLITUDE		MSG	
Pass	Scale		Scale		Scale		Scale	
No.	L	R	L	R	L	R	L	L
ONE	0	200	400	200	0	100	100	1100
DIRECTIONAL INFORMATION								
Maximum Deviation			deg. @		KOP			

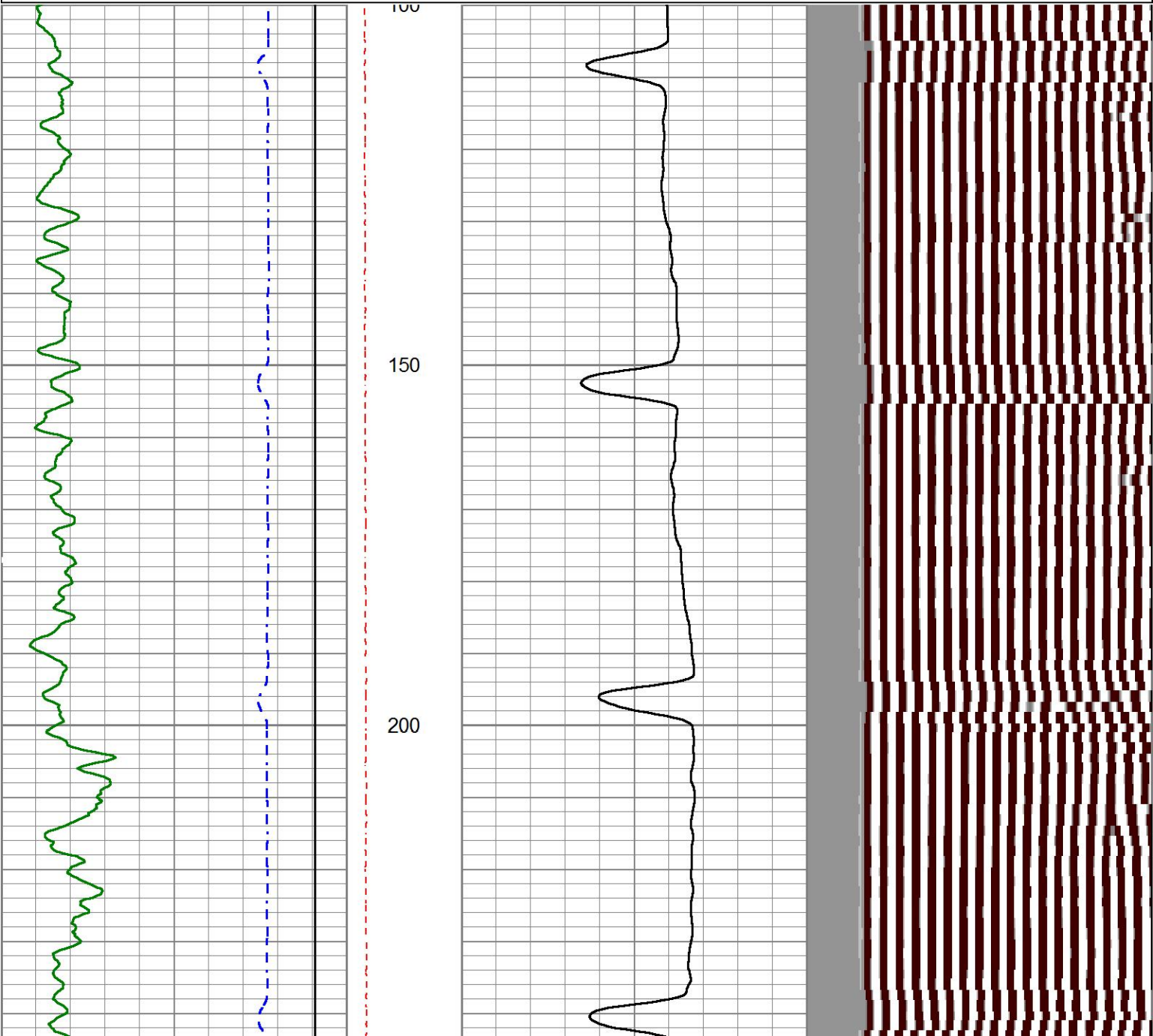
HALLIBURTON

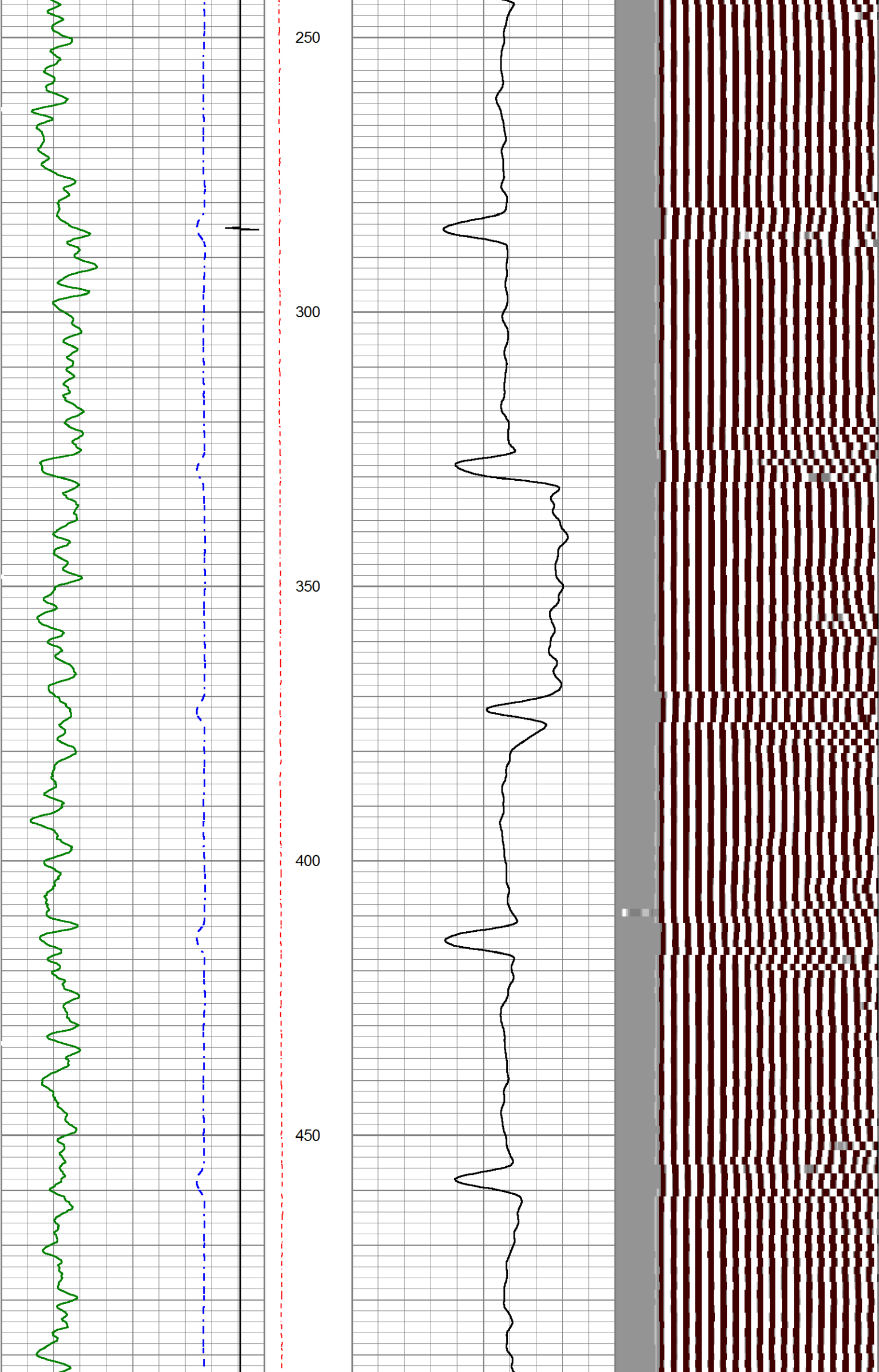
MAIN LOG SECTION

5" = 100'

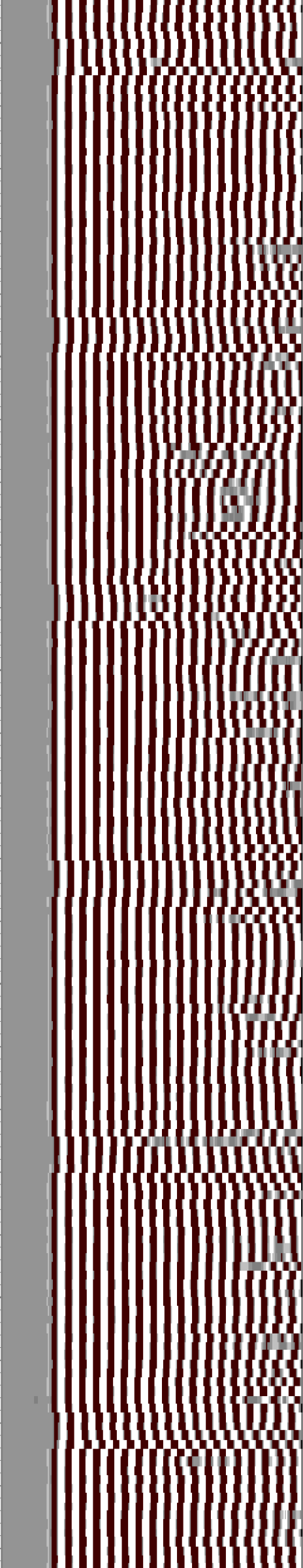
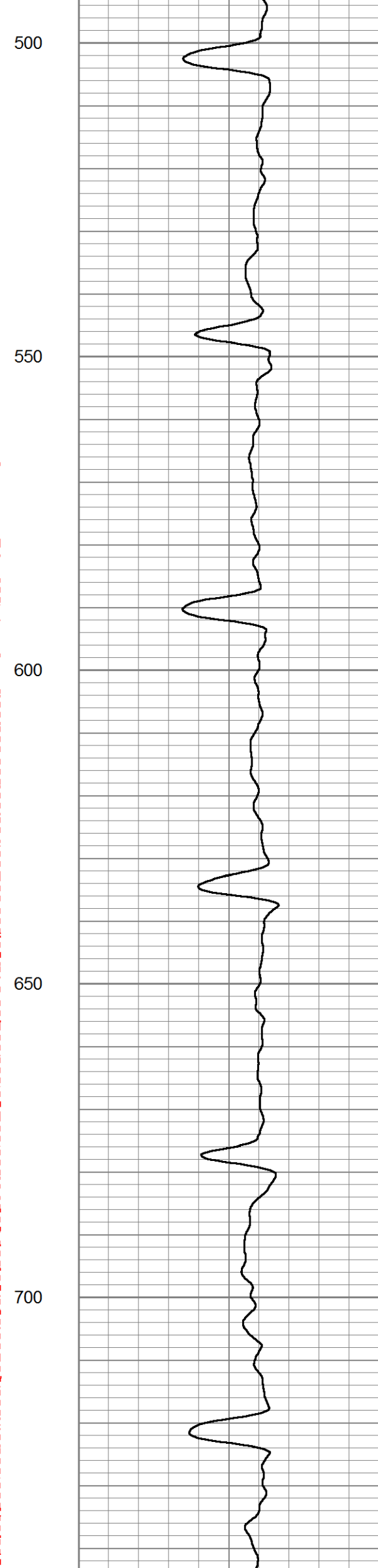
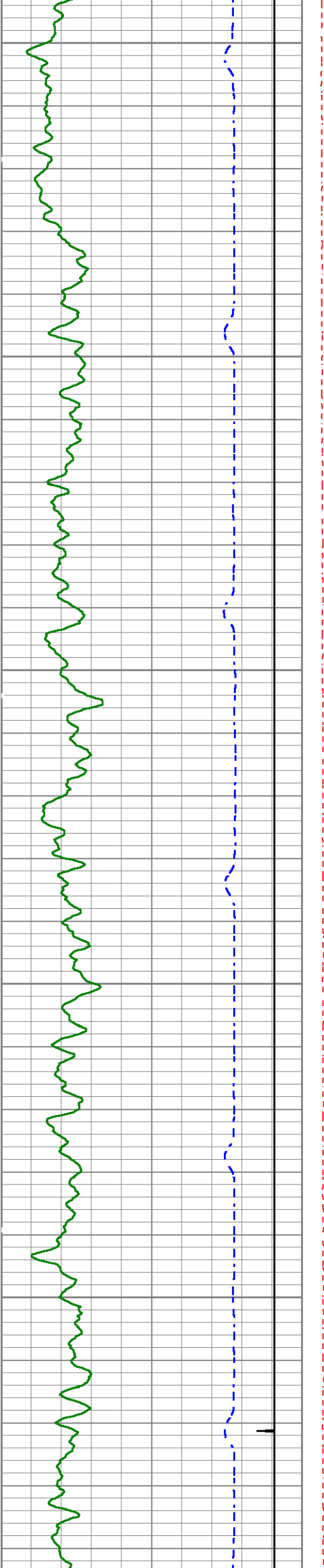
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Dataset Pathname	MAIN
Presentation Format	cbl_main
Dataset Creation	Sat Aug 29 23:57:19 2015
Charted by	Depth in Feet scaled 1:240

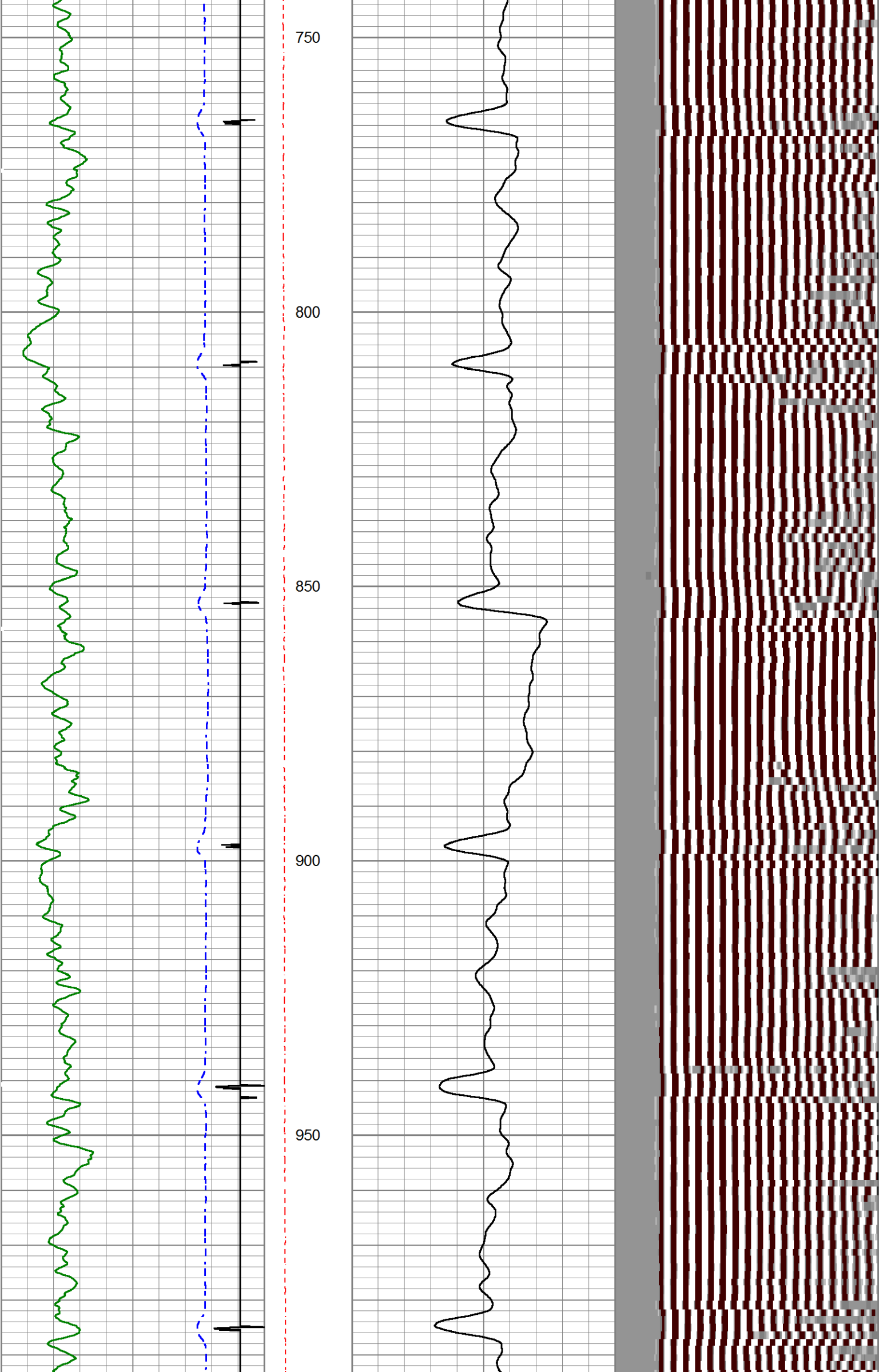
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-3500	CCL	350	0	(lb 1800	0	AMPLITUDE (mV)	100		
0	Gamma Ray (GAPI)	200							

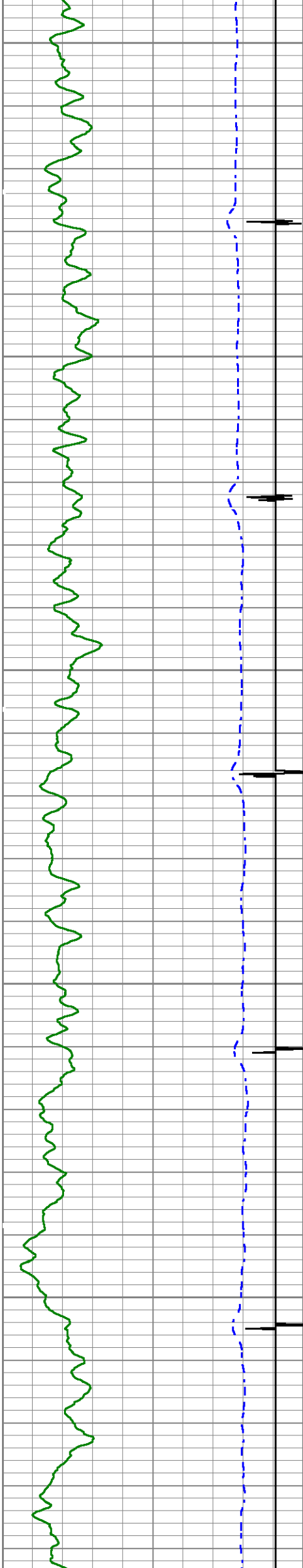












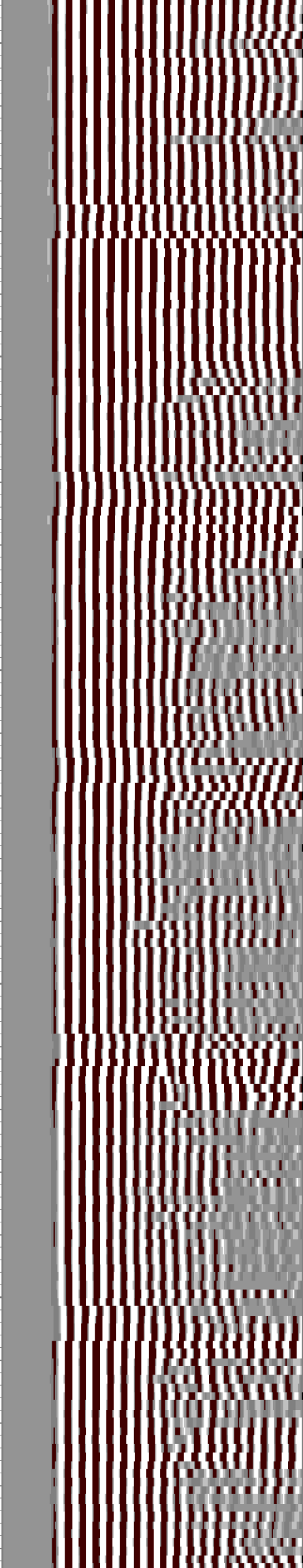
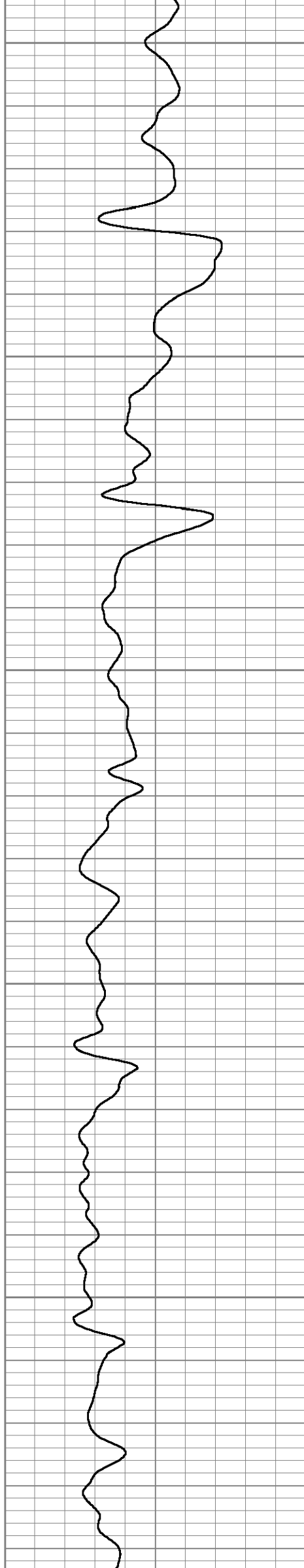
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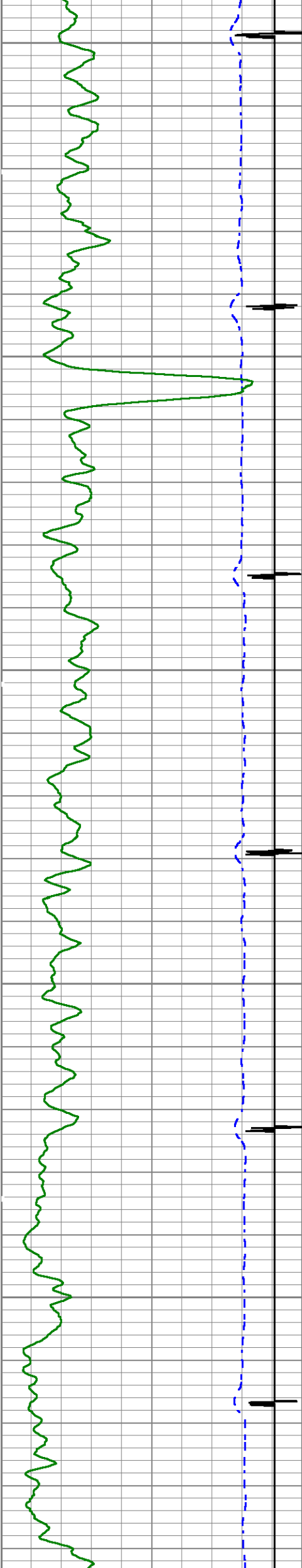
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1100

1150

1200





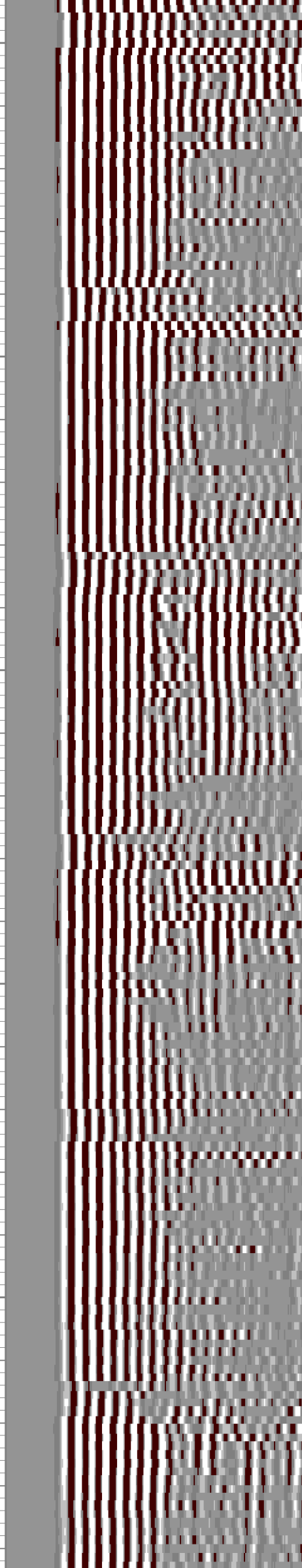
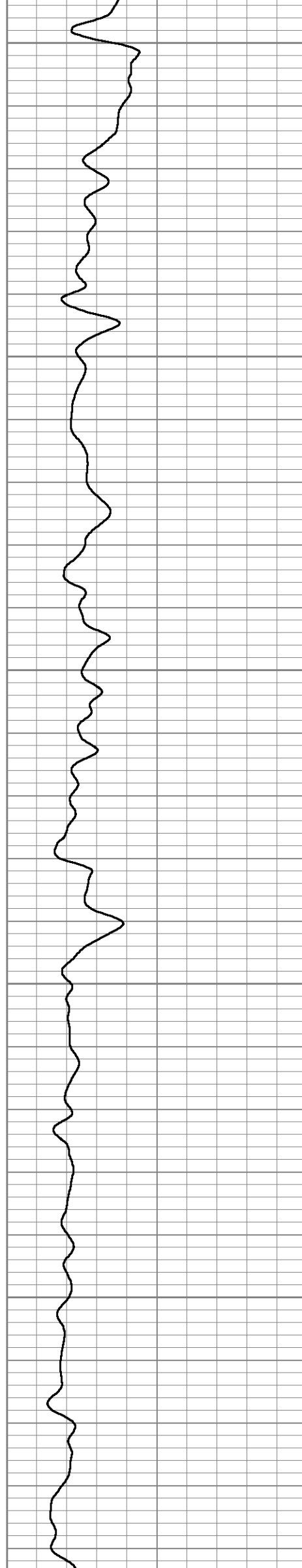
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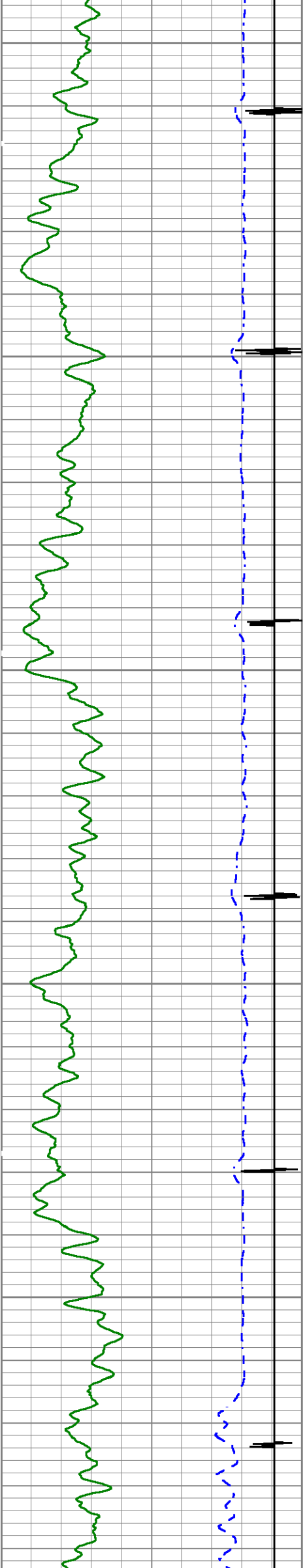
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1350

1400

1450





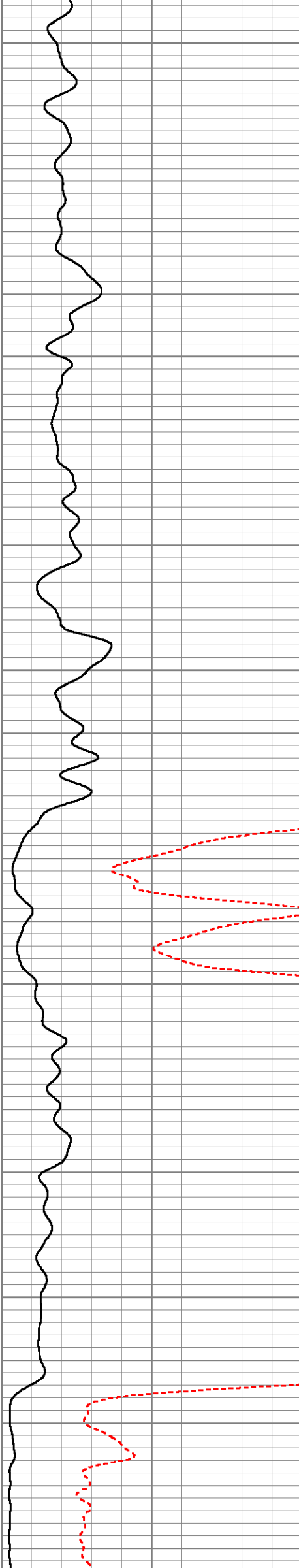
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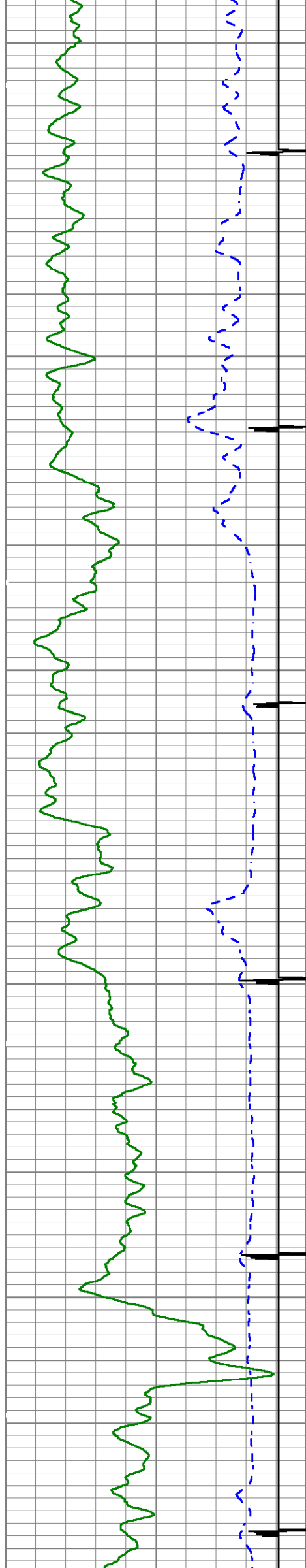
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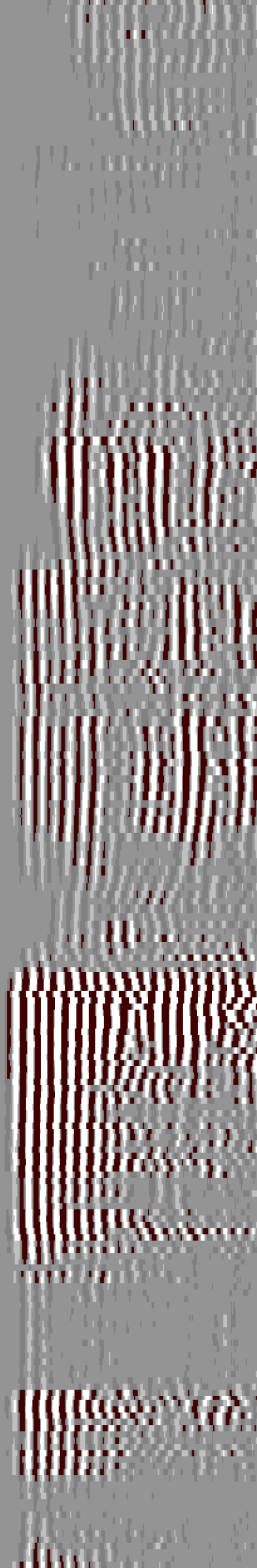
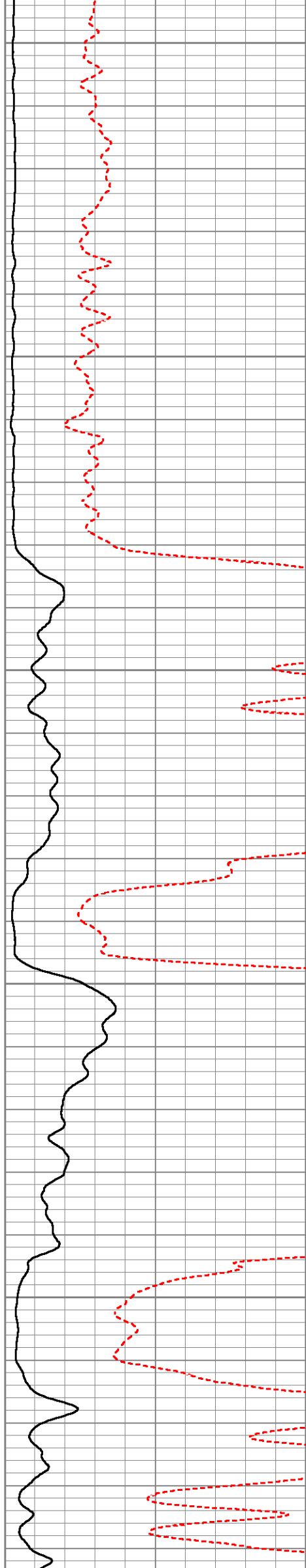
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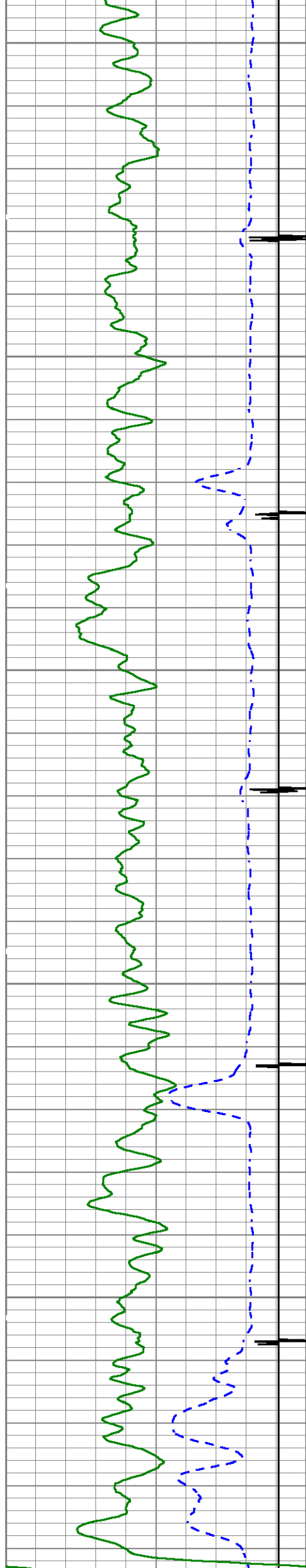
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1850

1900

1950





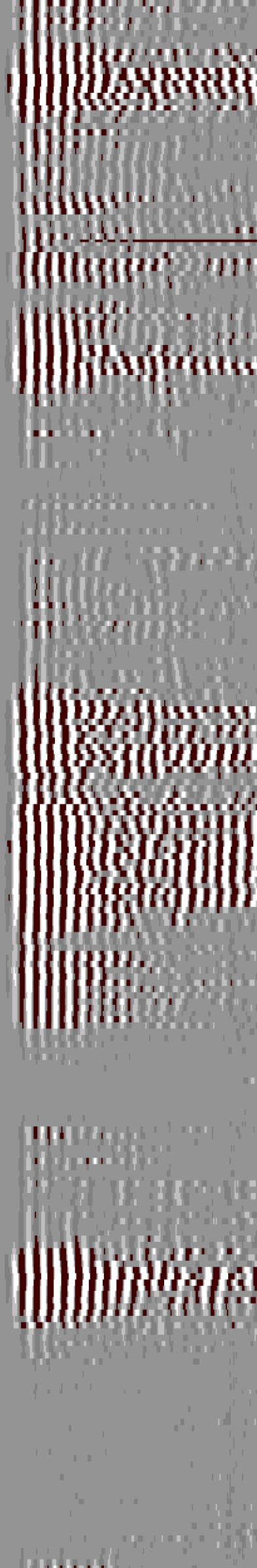
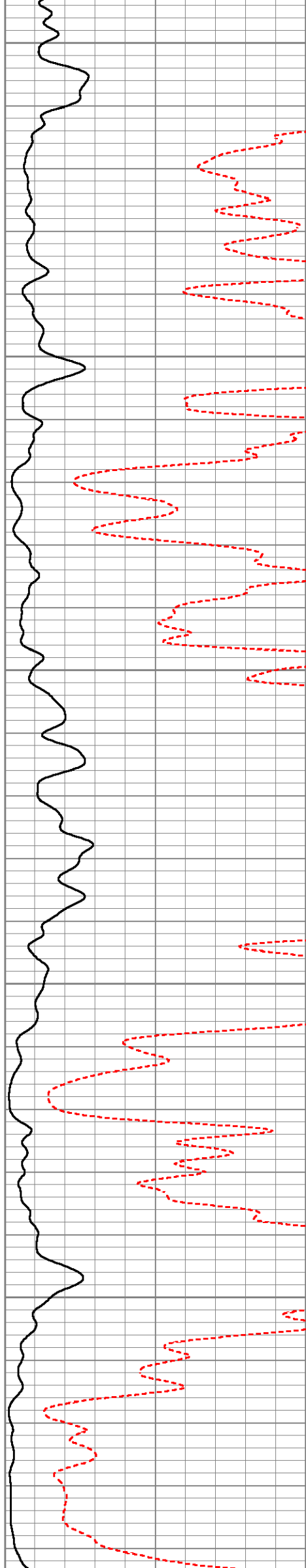
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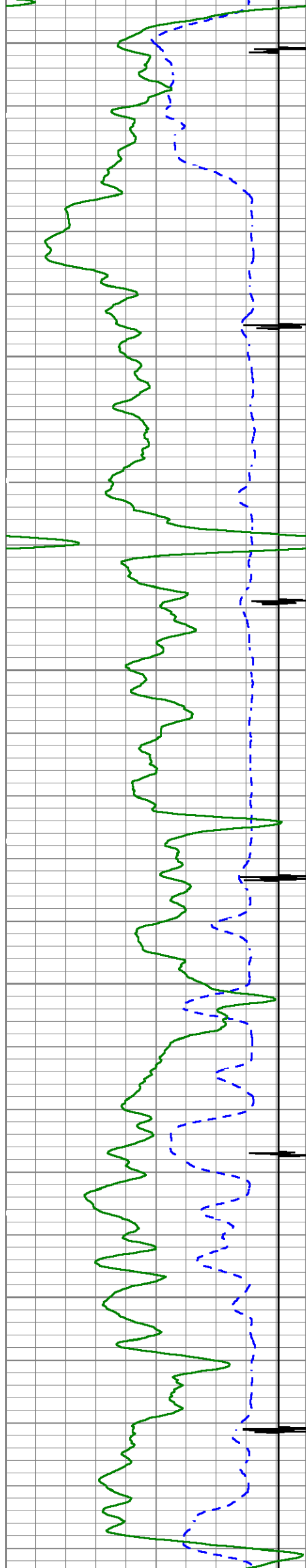
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2100

2150

2200





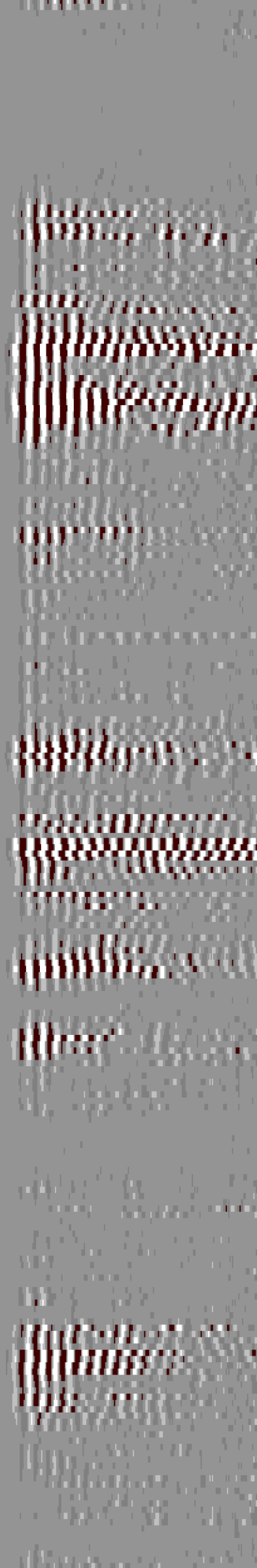
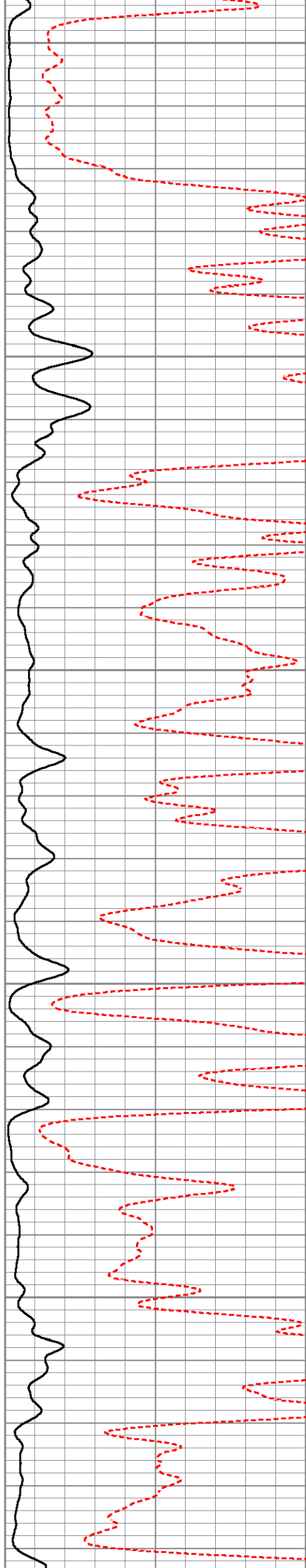
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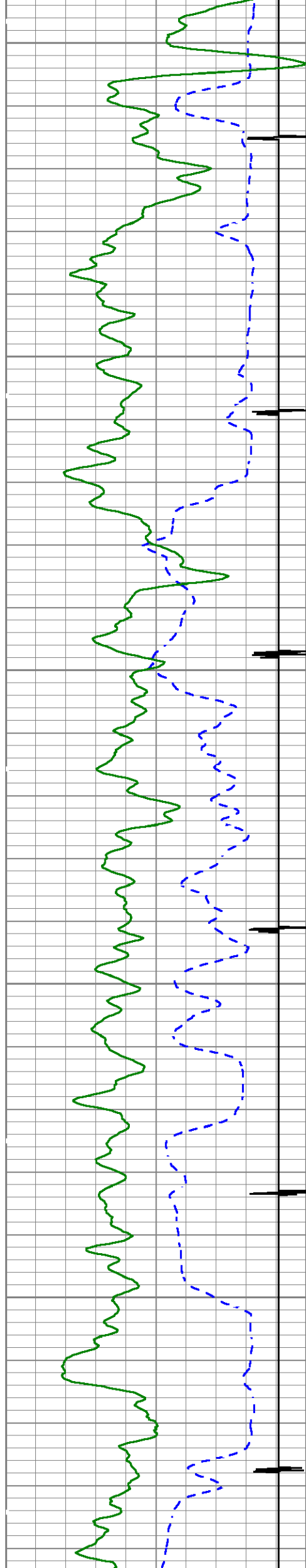
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2350

2400

2450





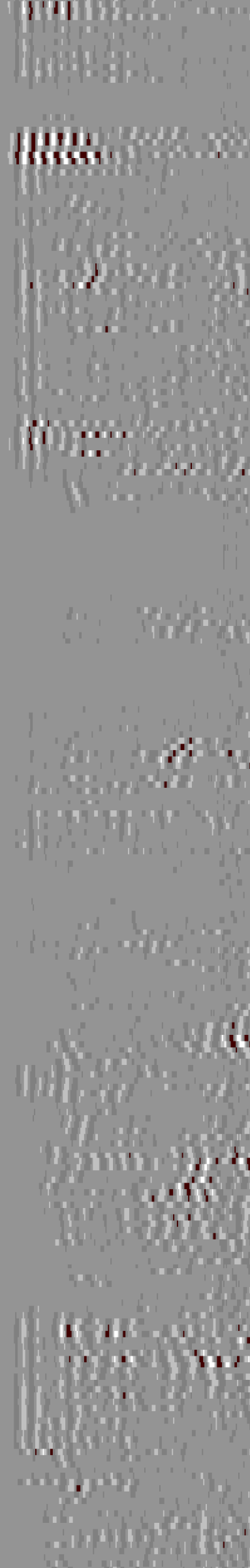
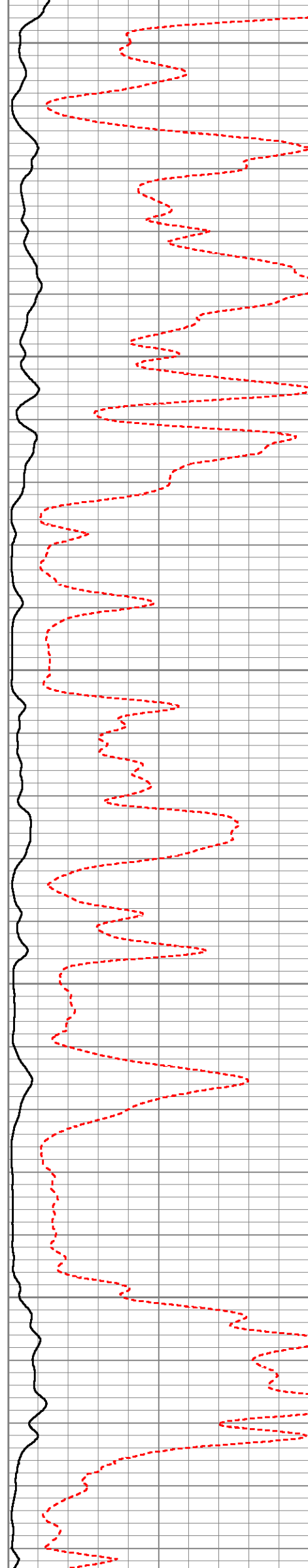
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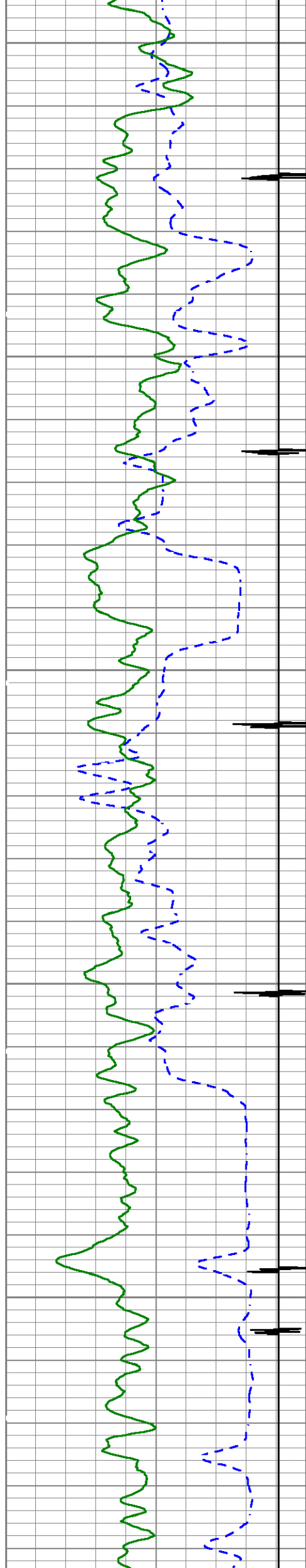
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2600

2650

2700





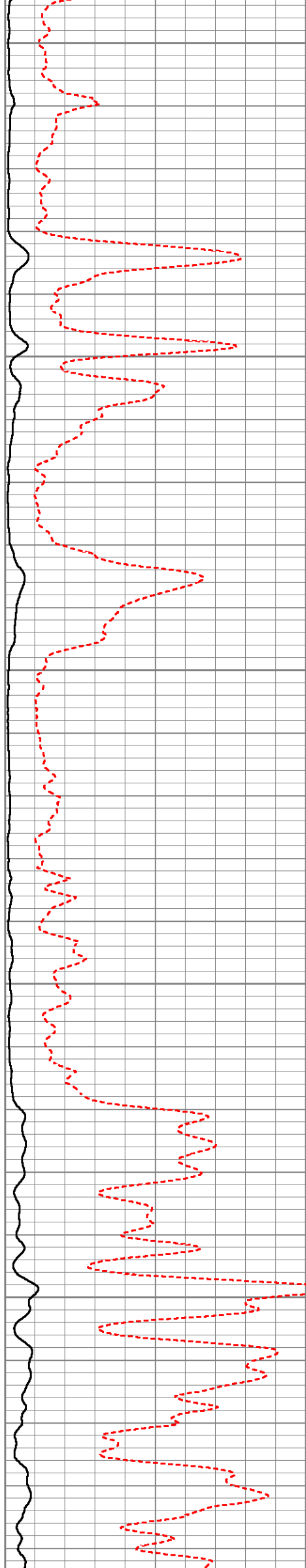
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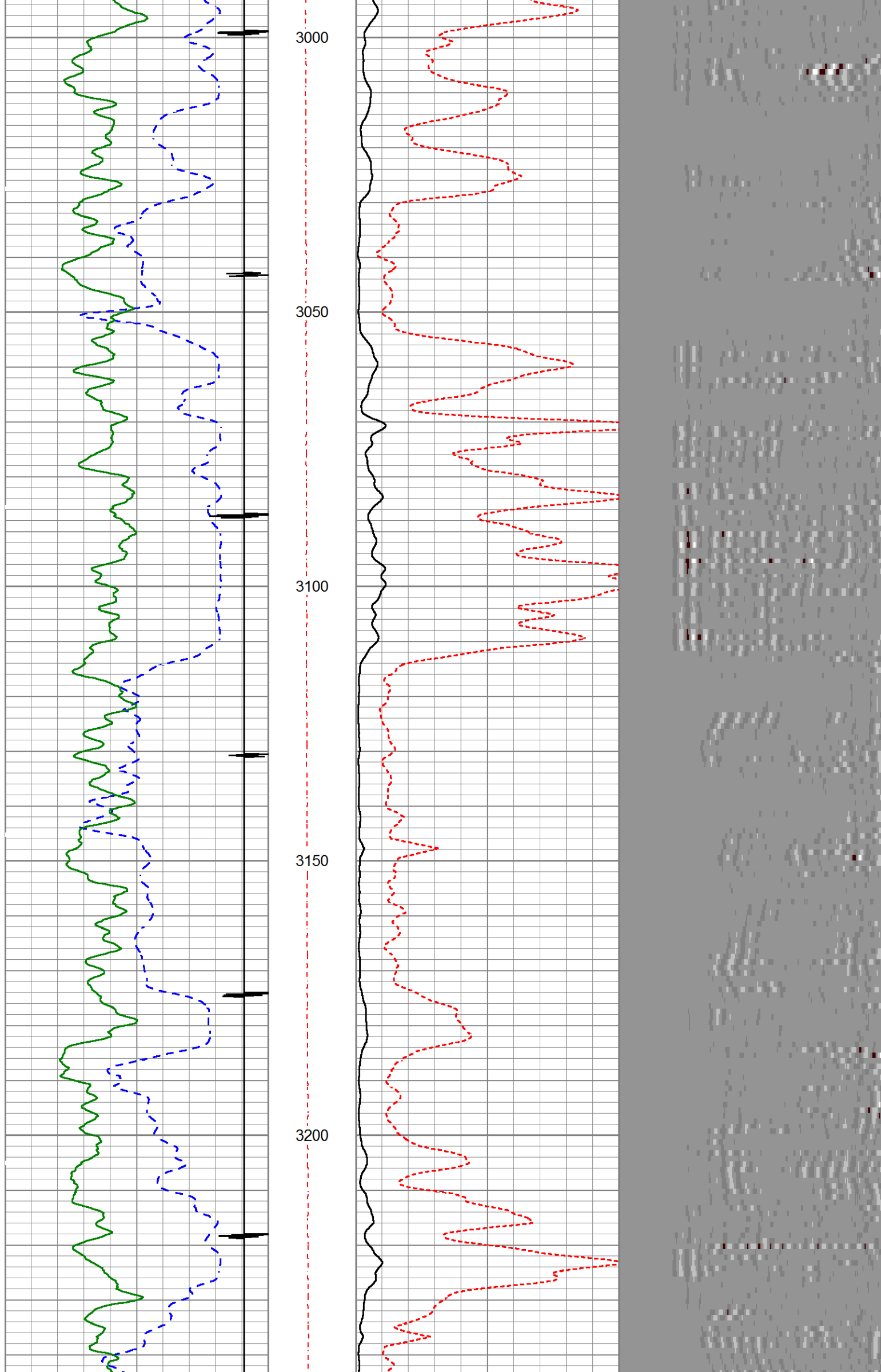
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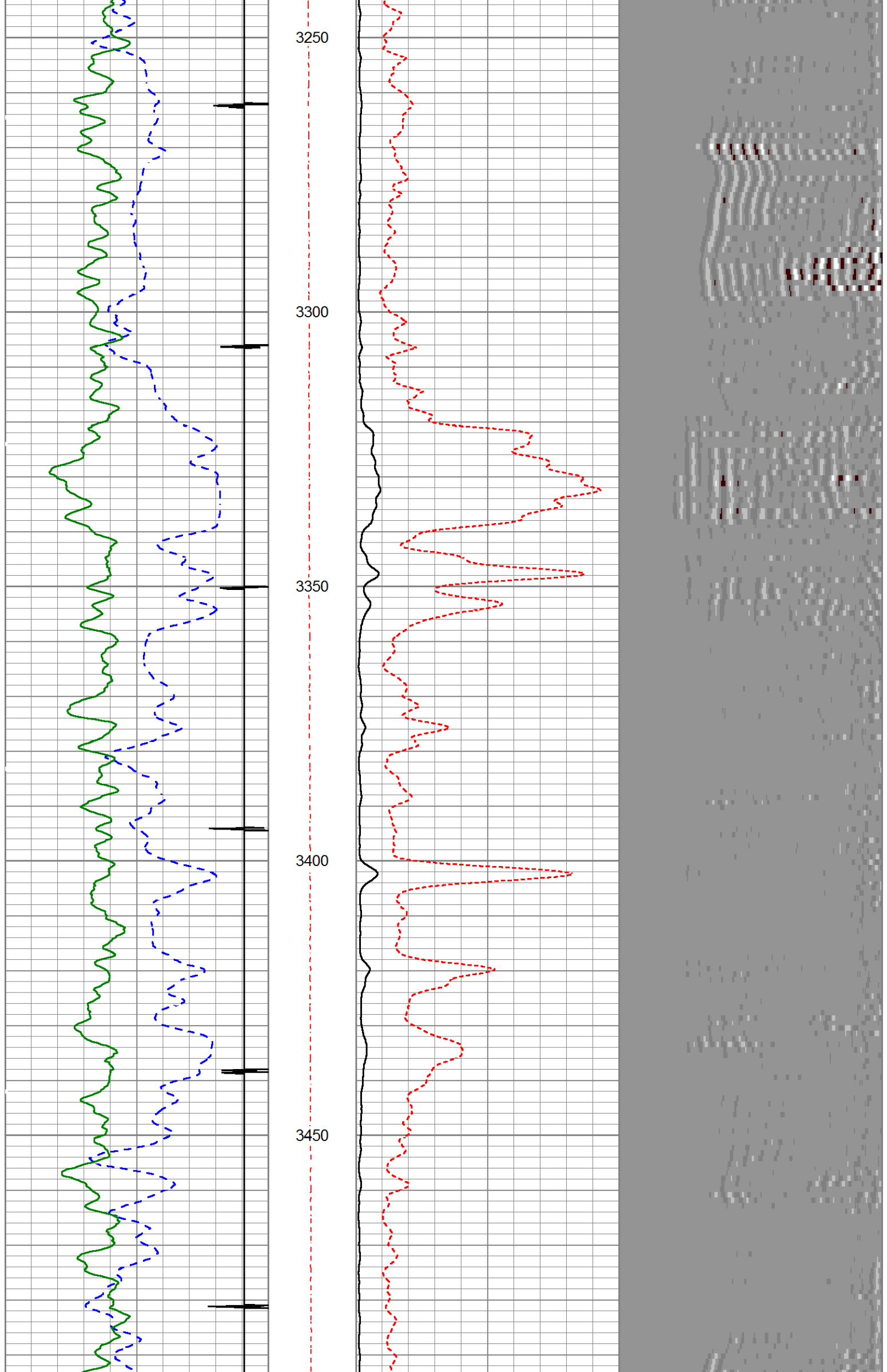
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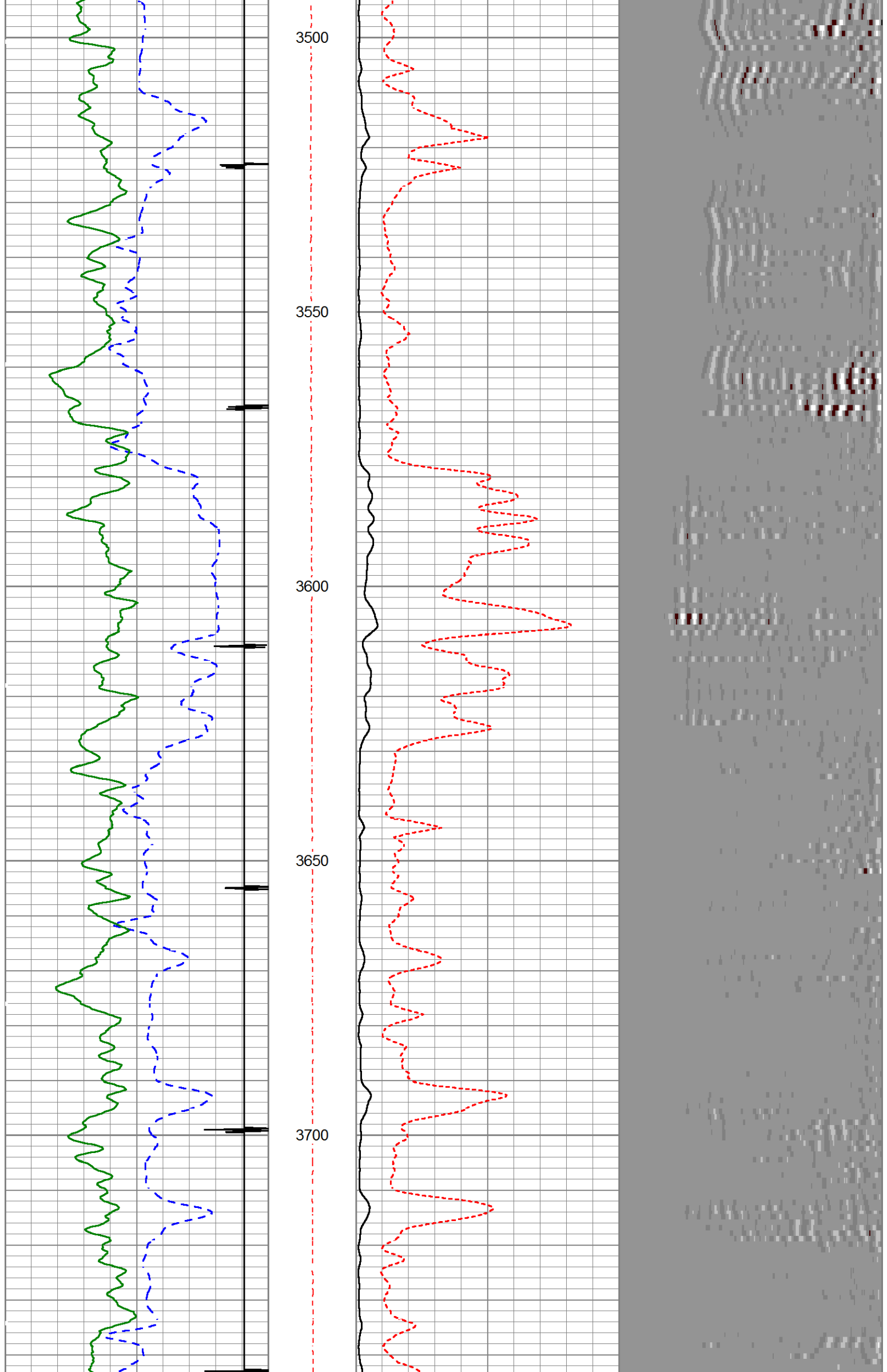
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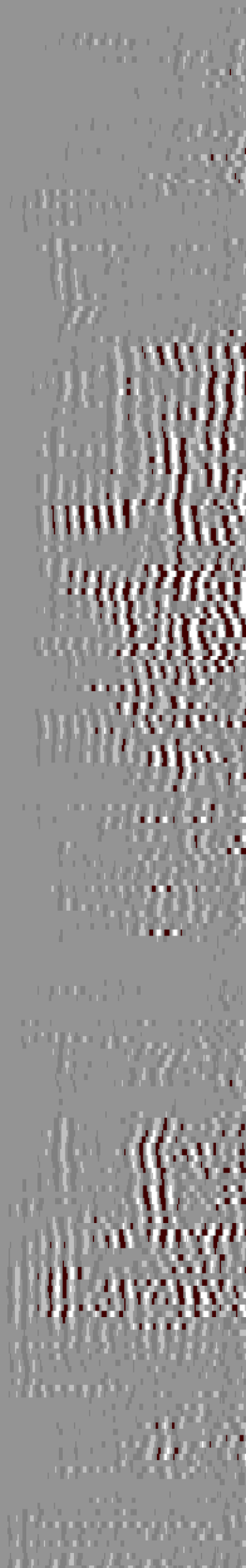
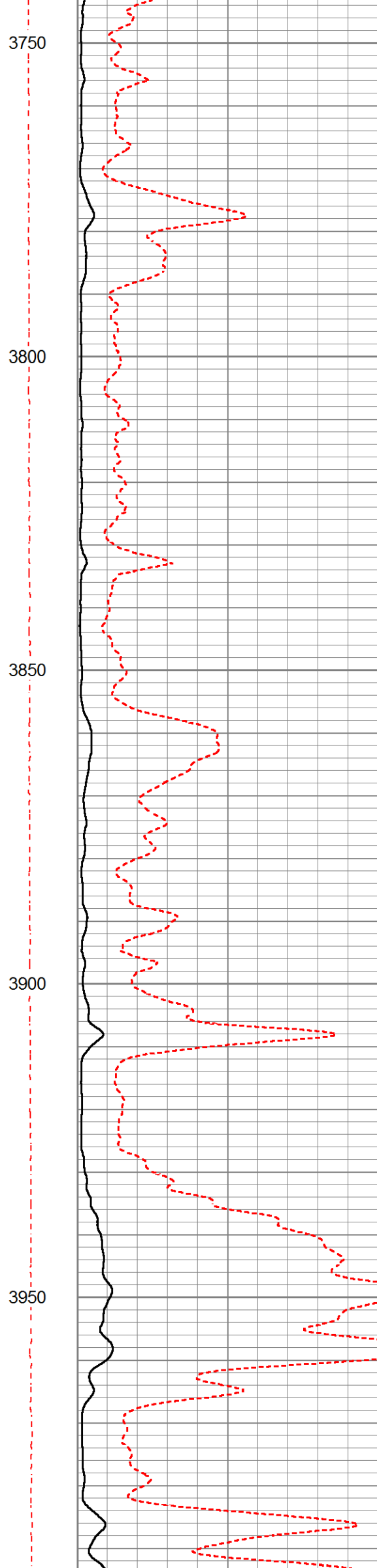
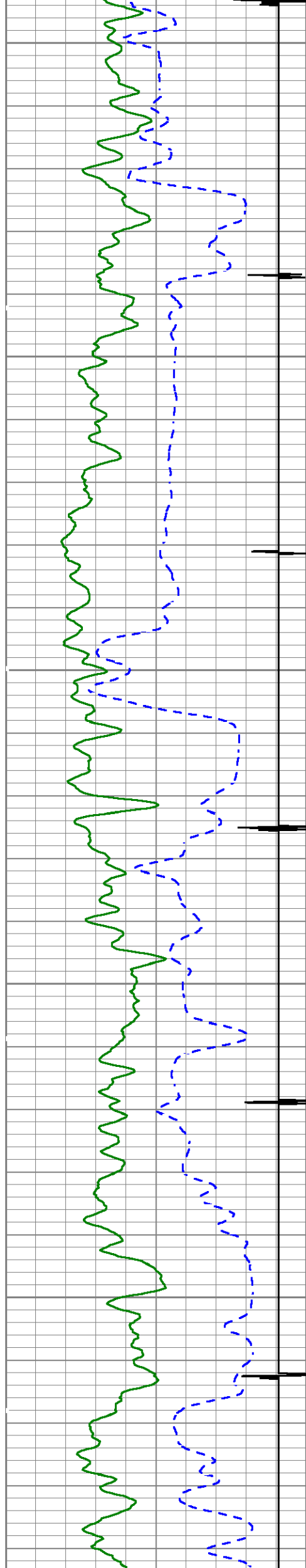


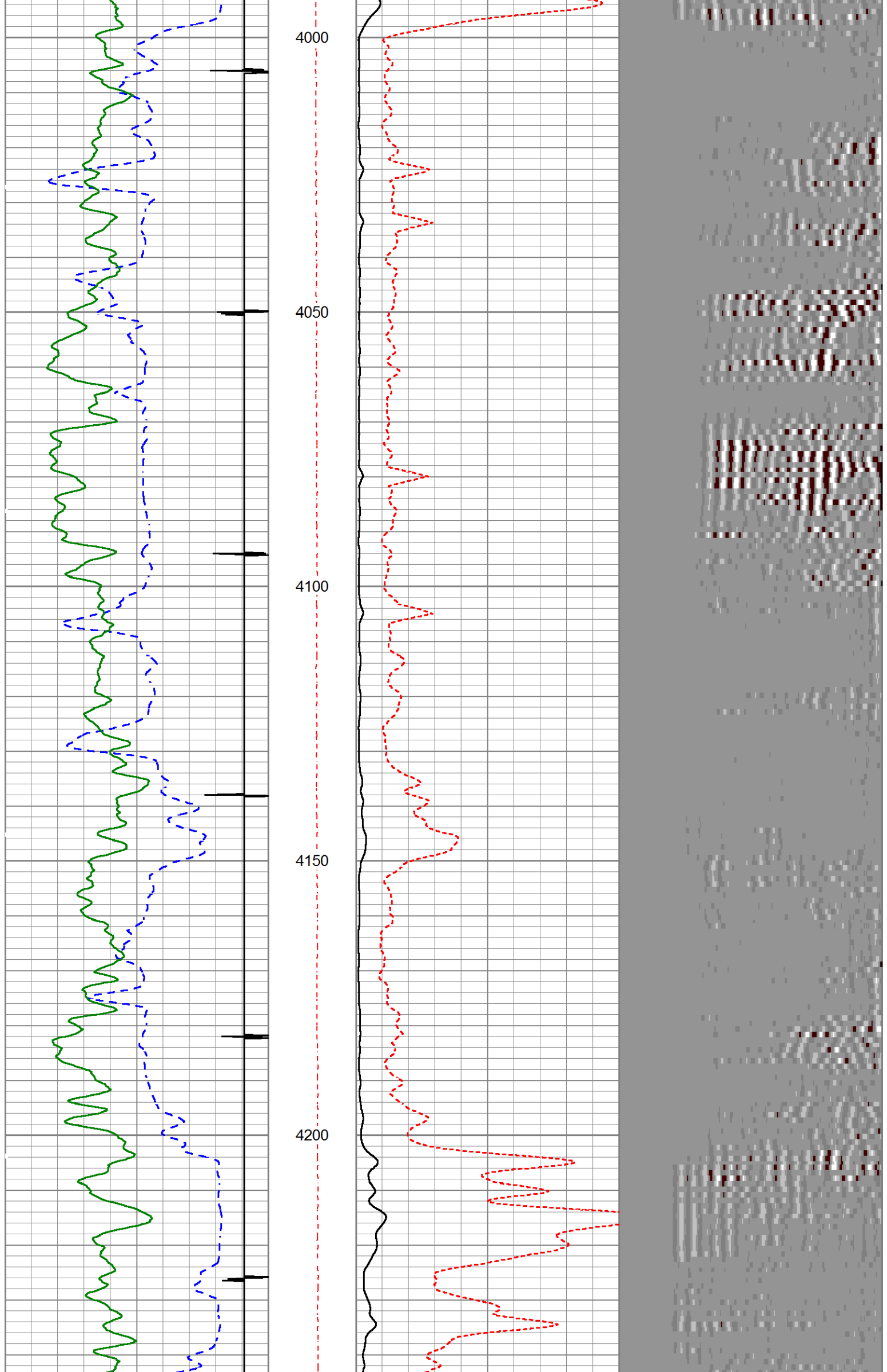




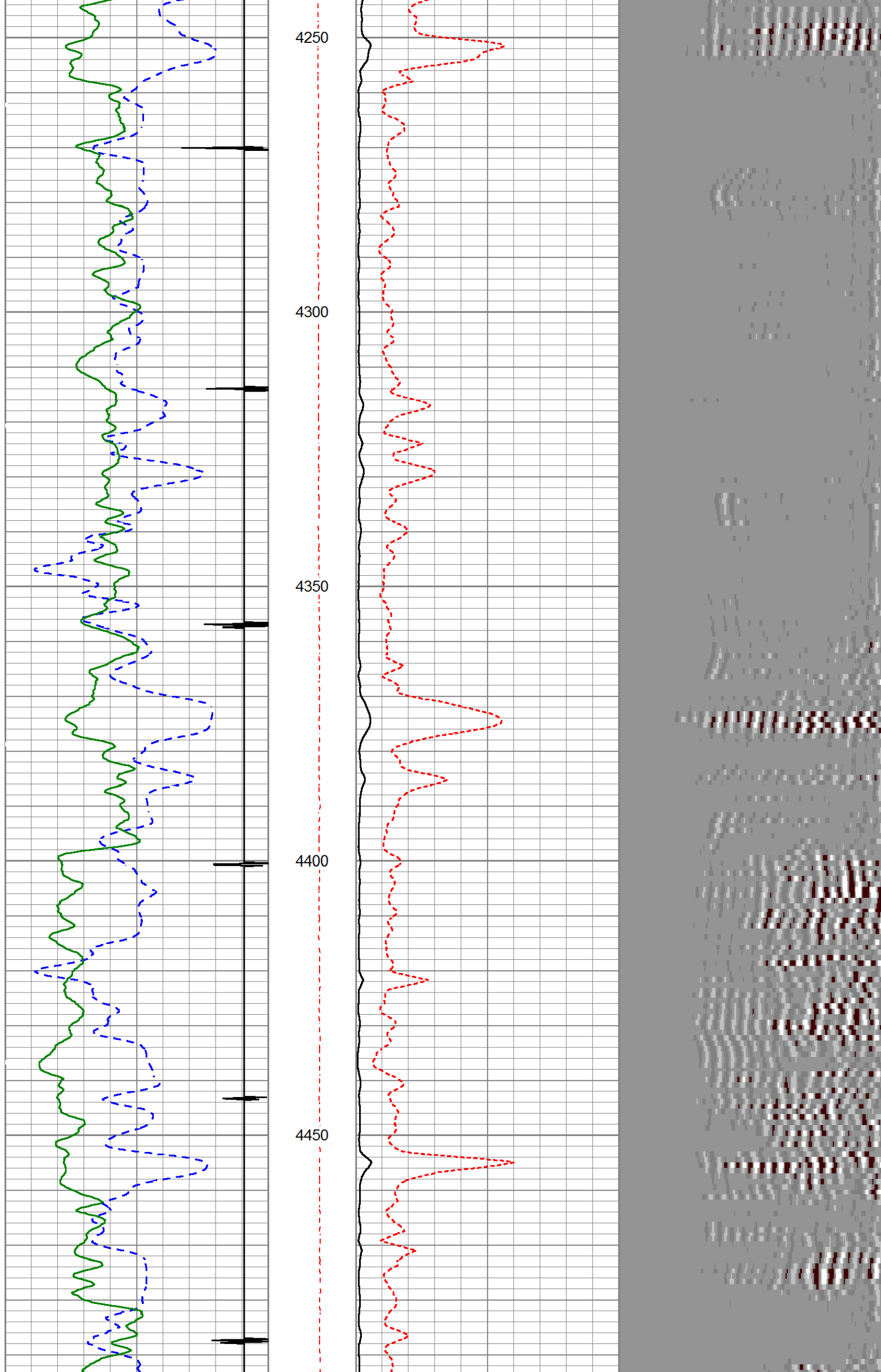


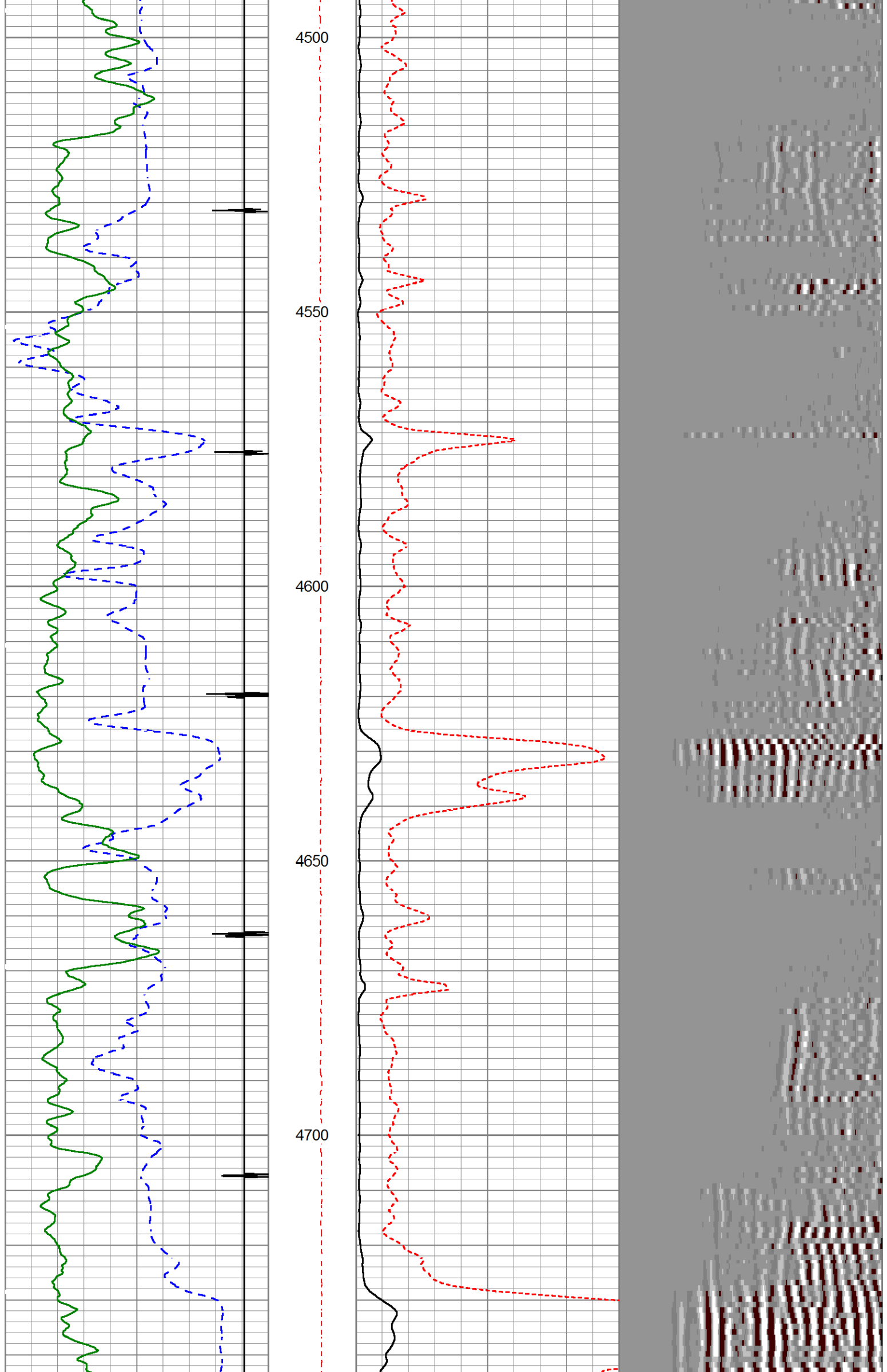


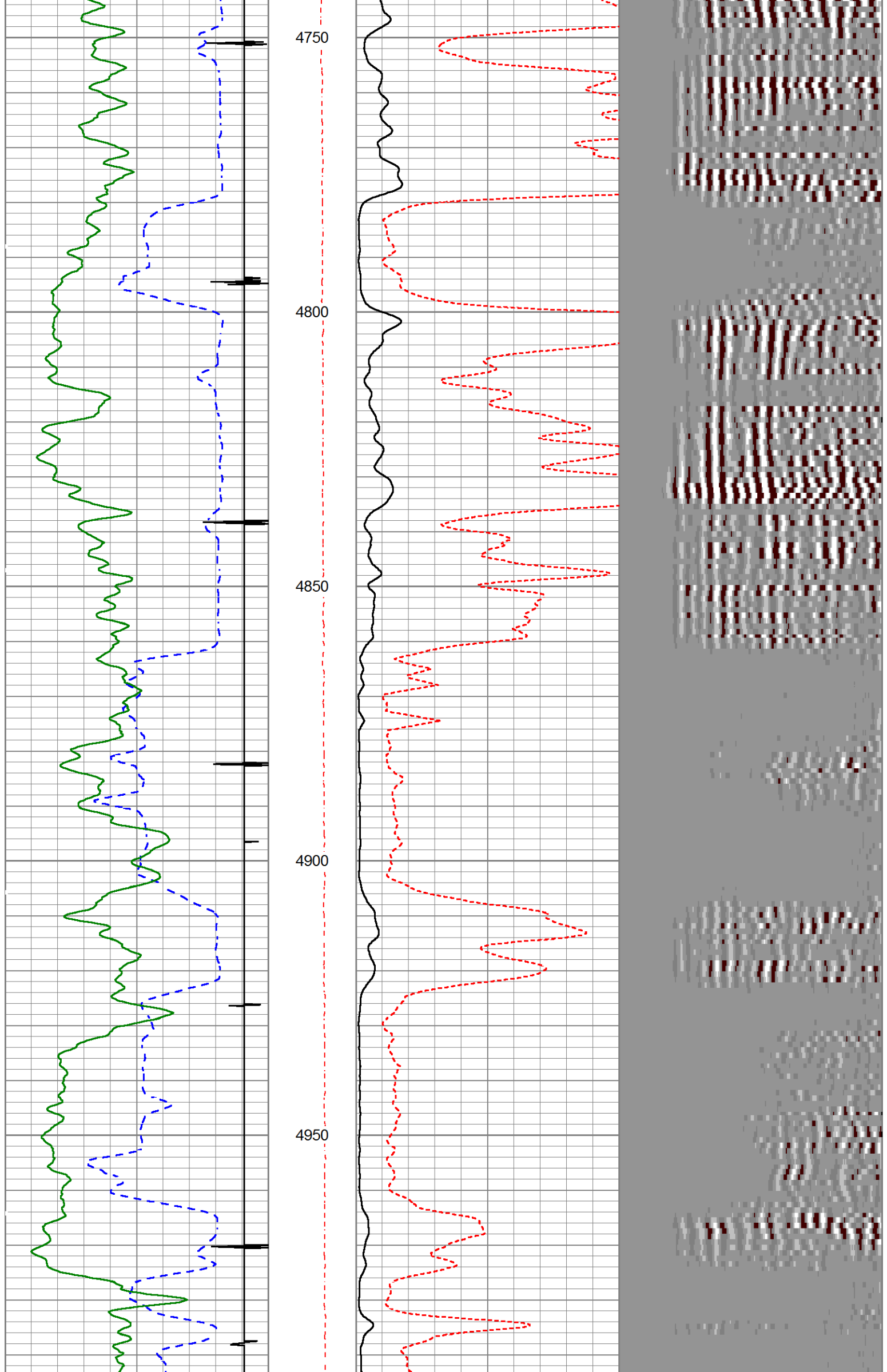


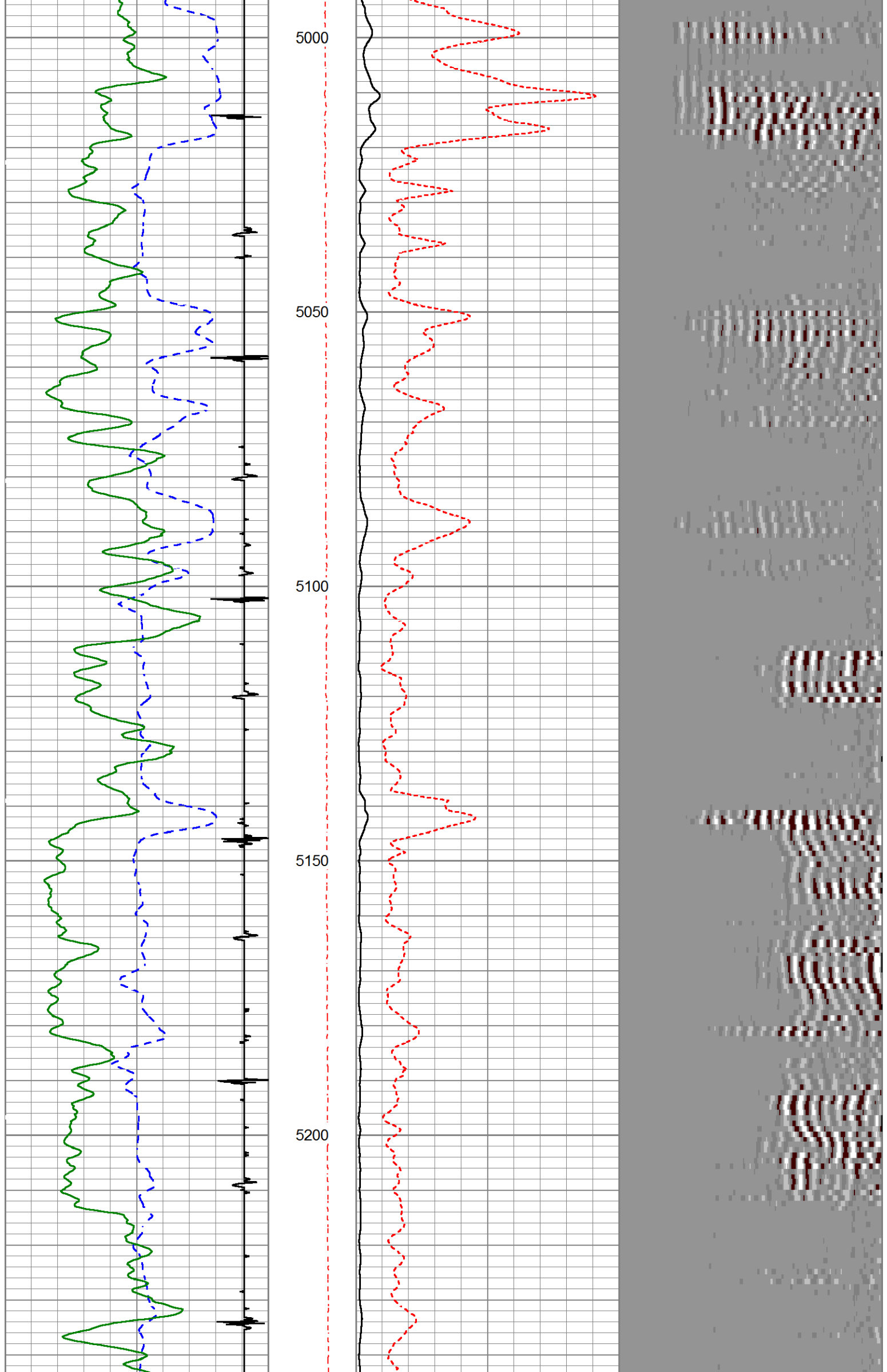


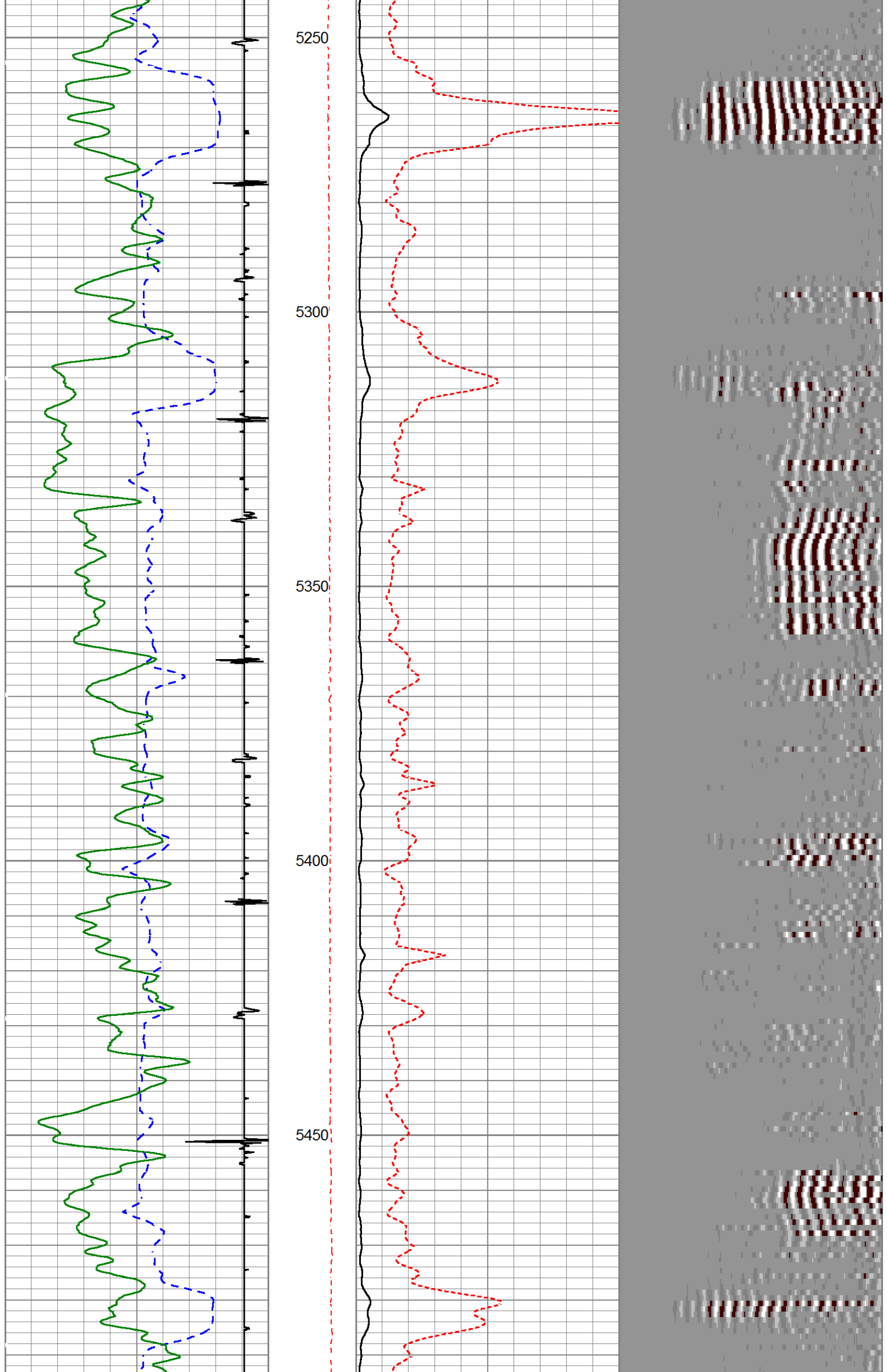




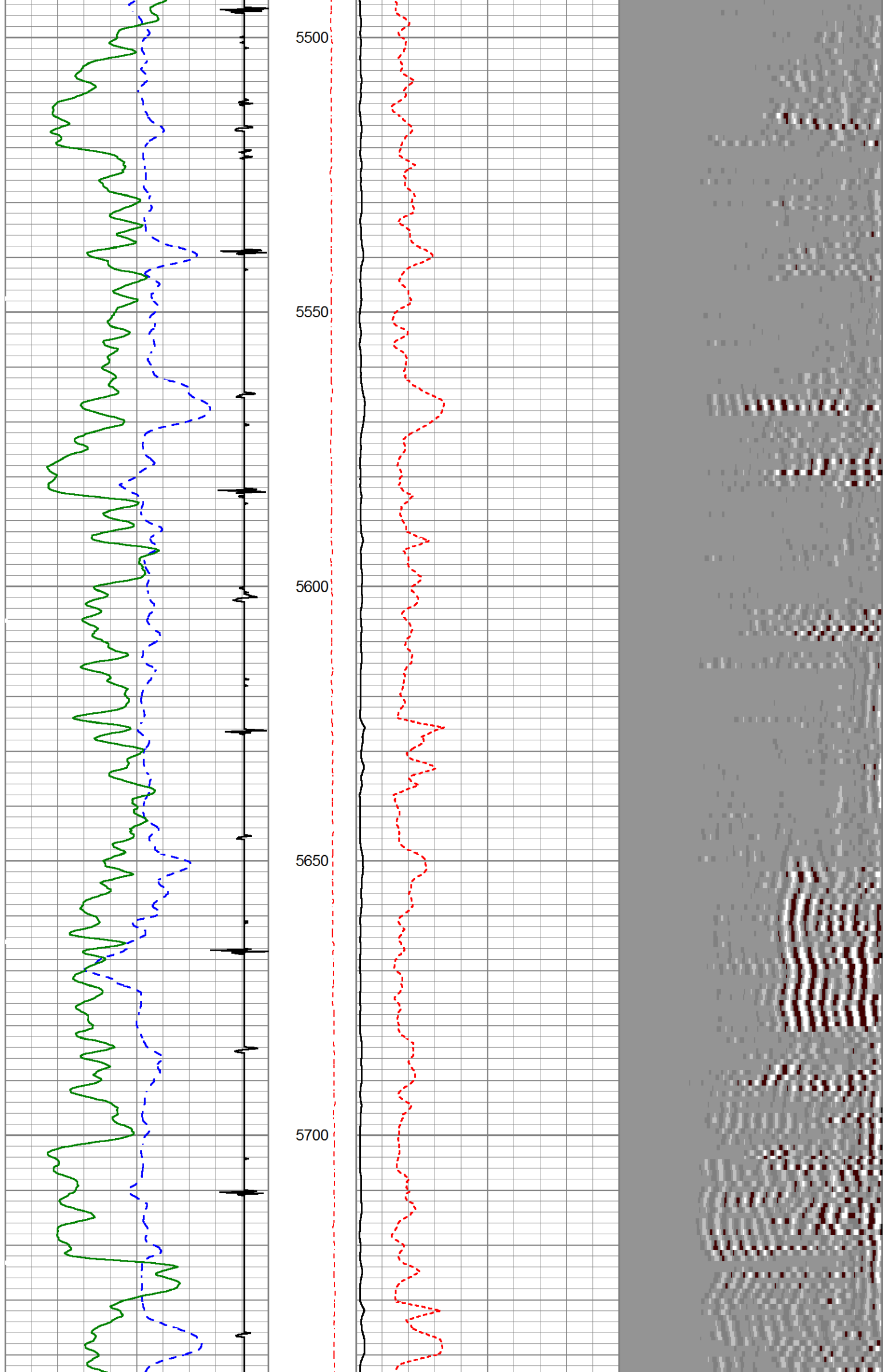


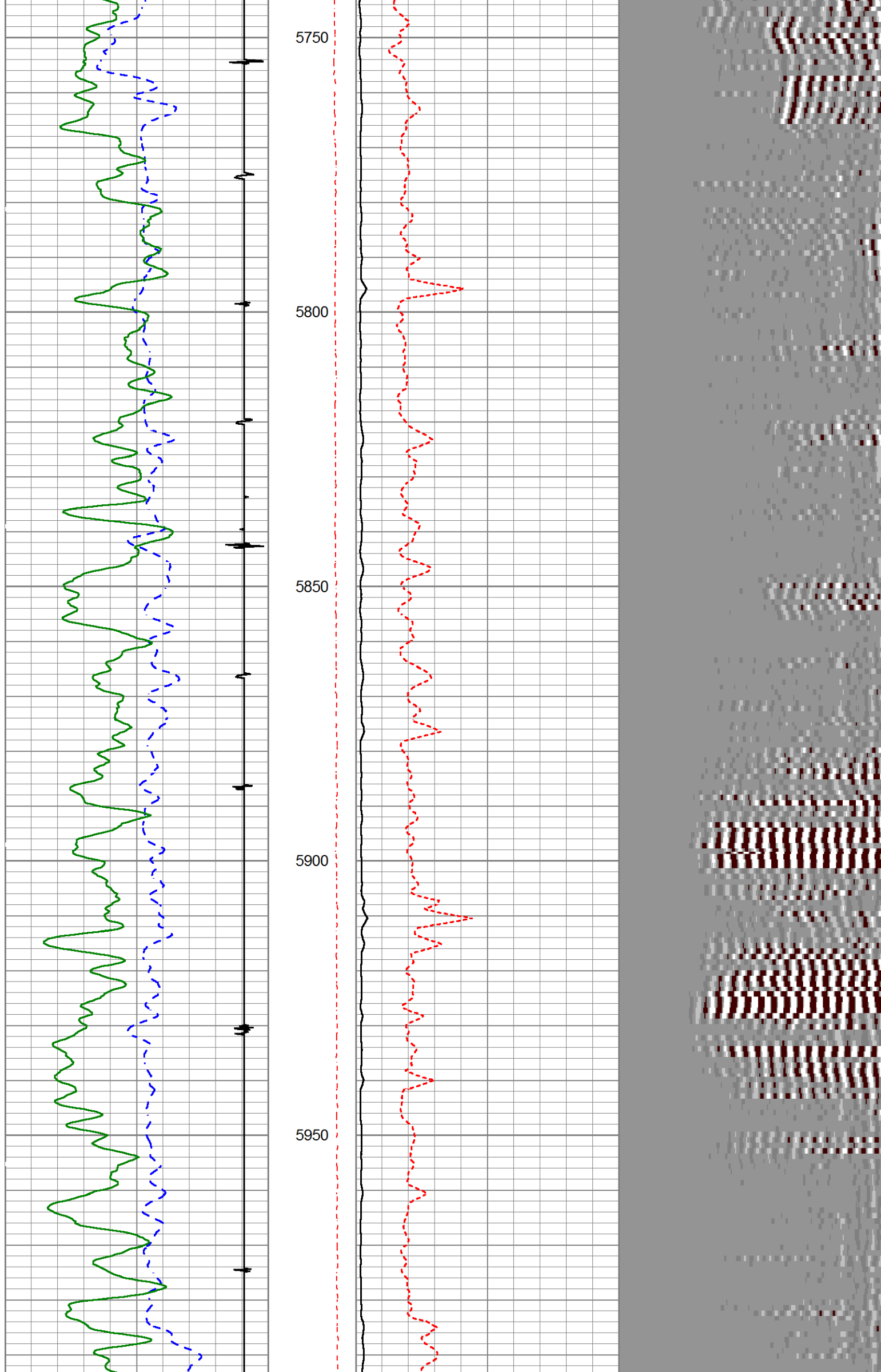


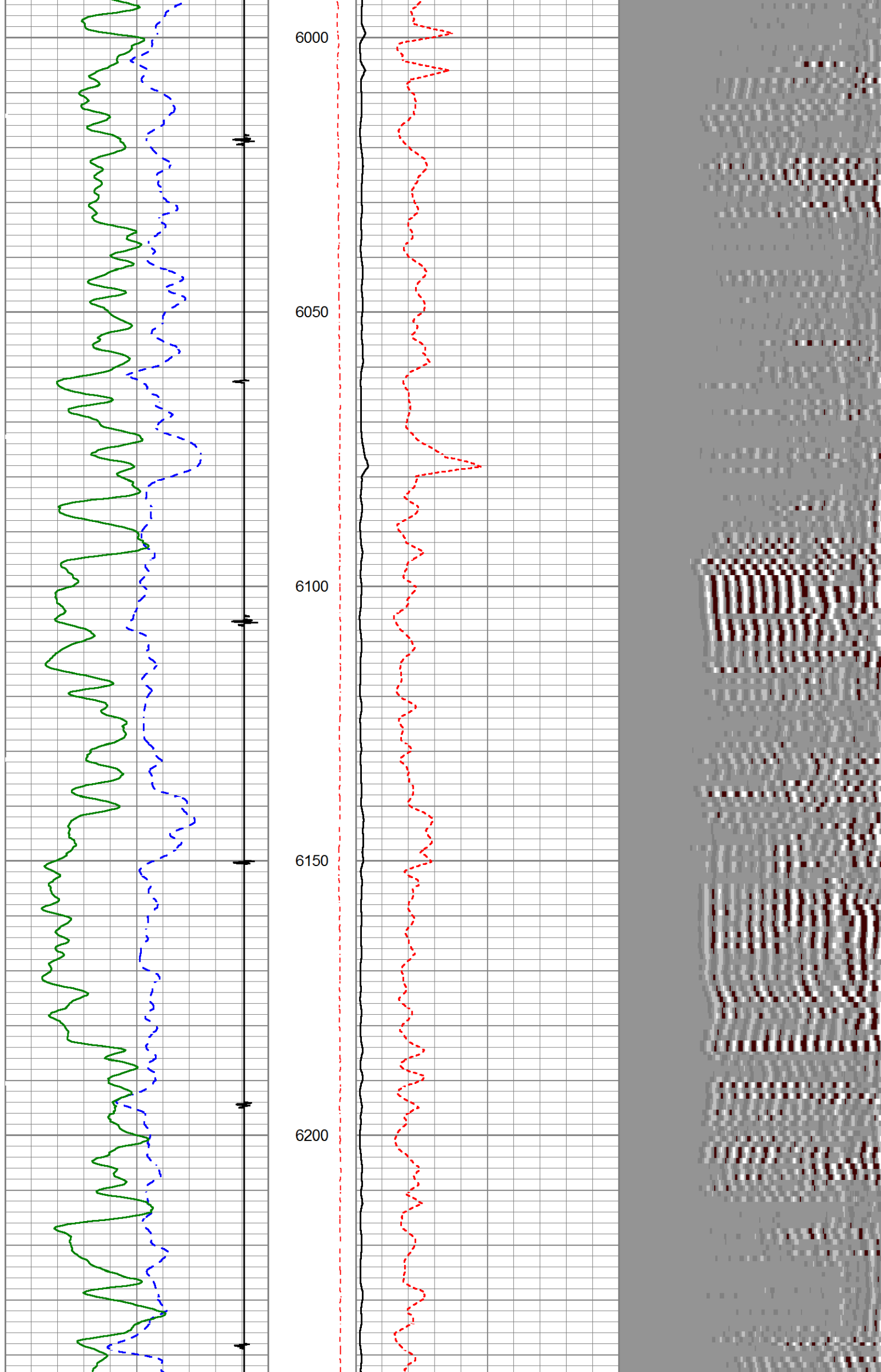


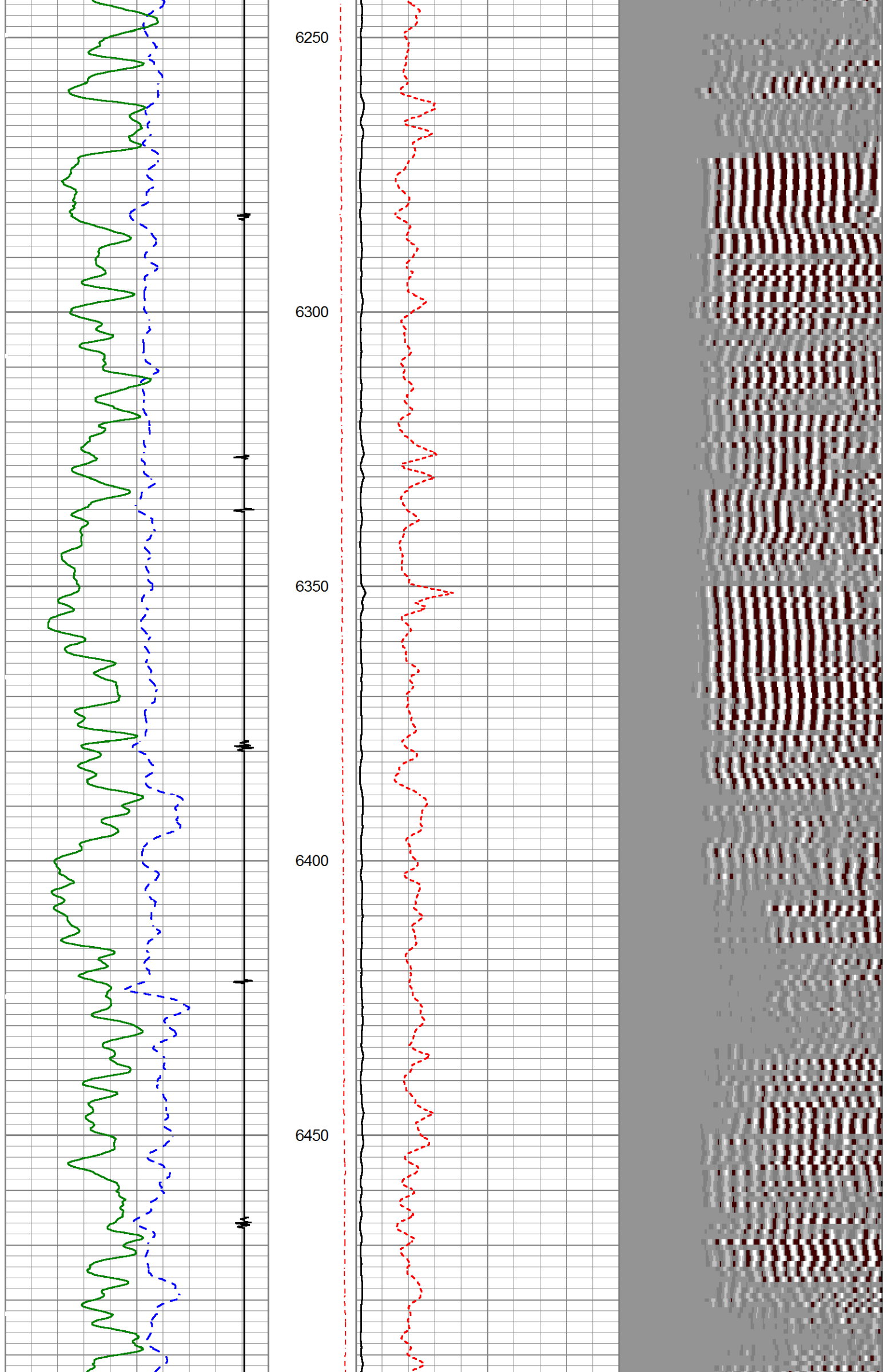


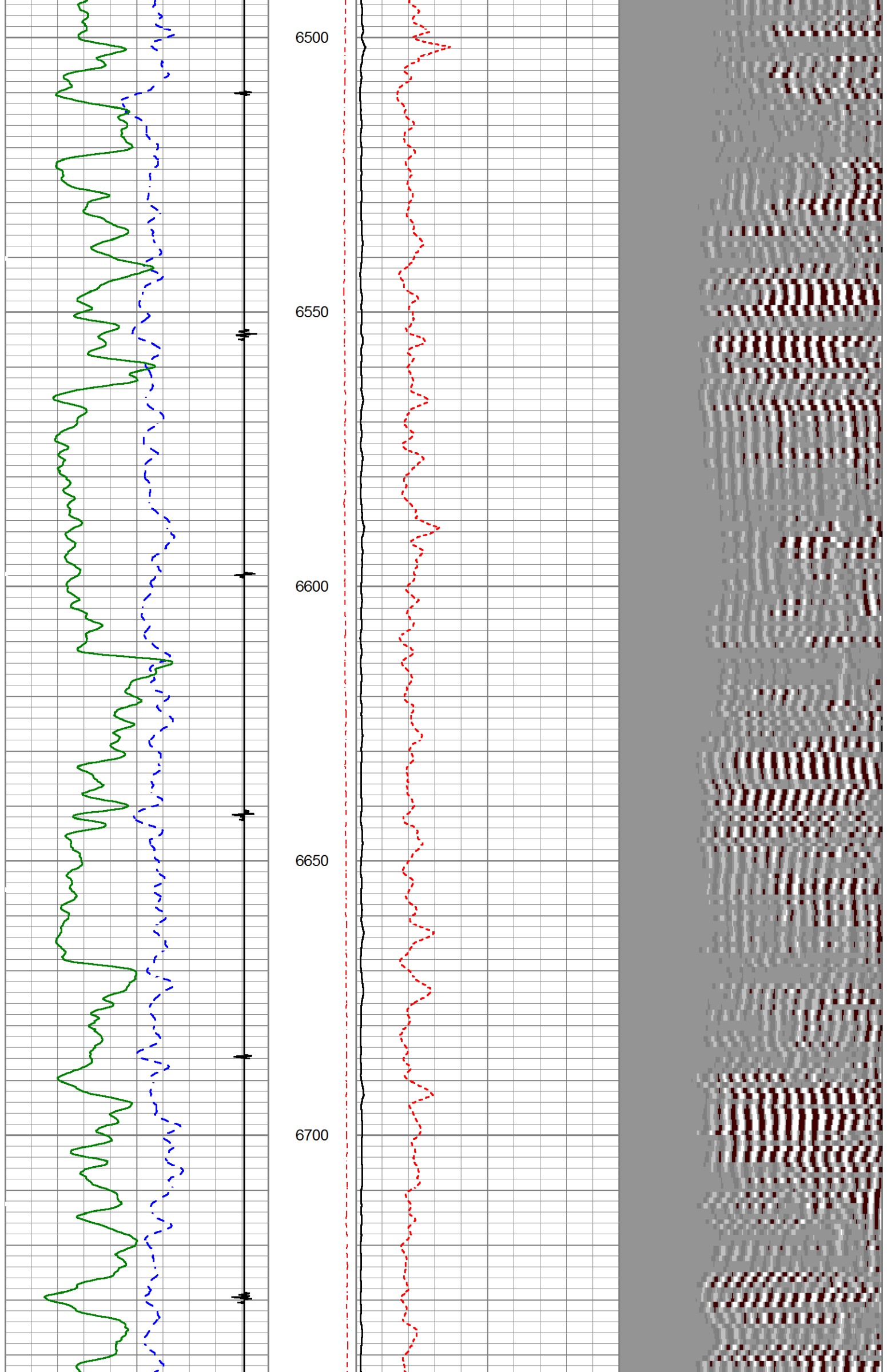




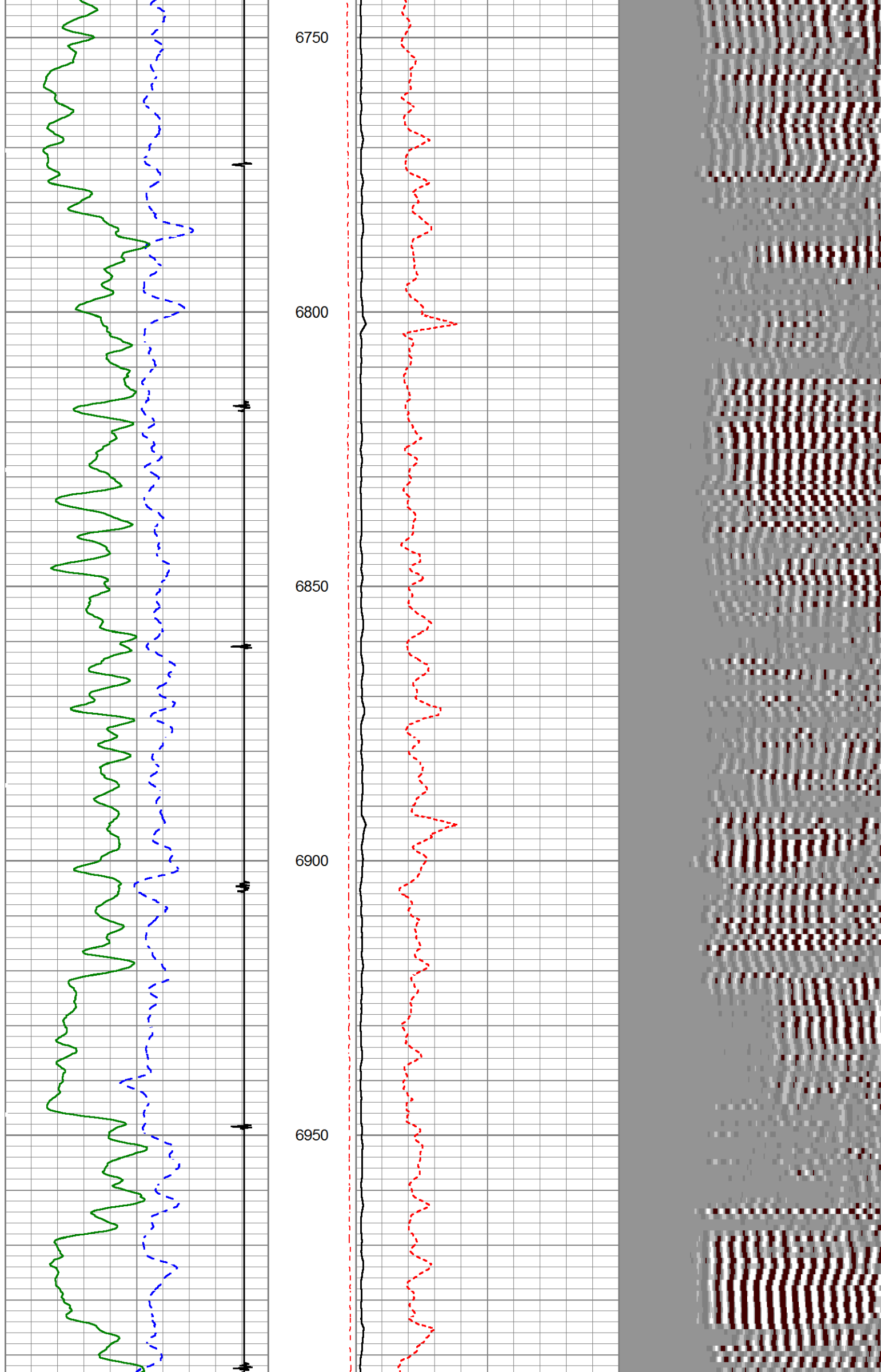


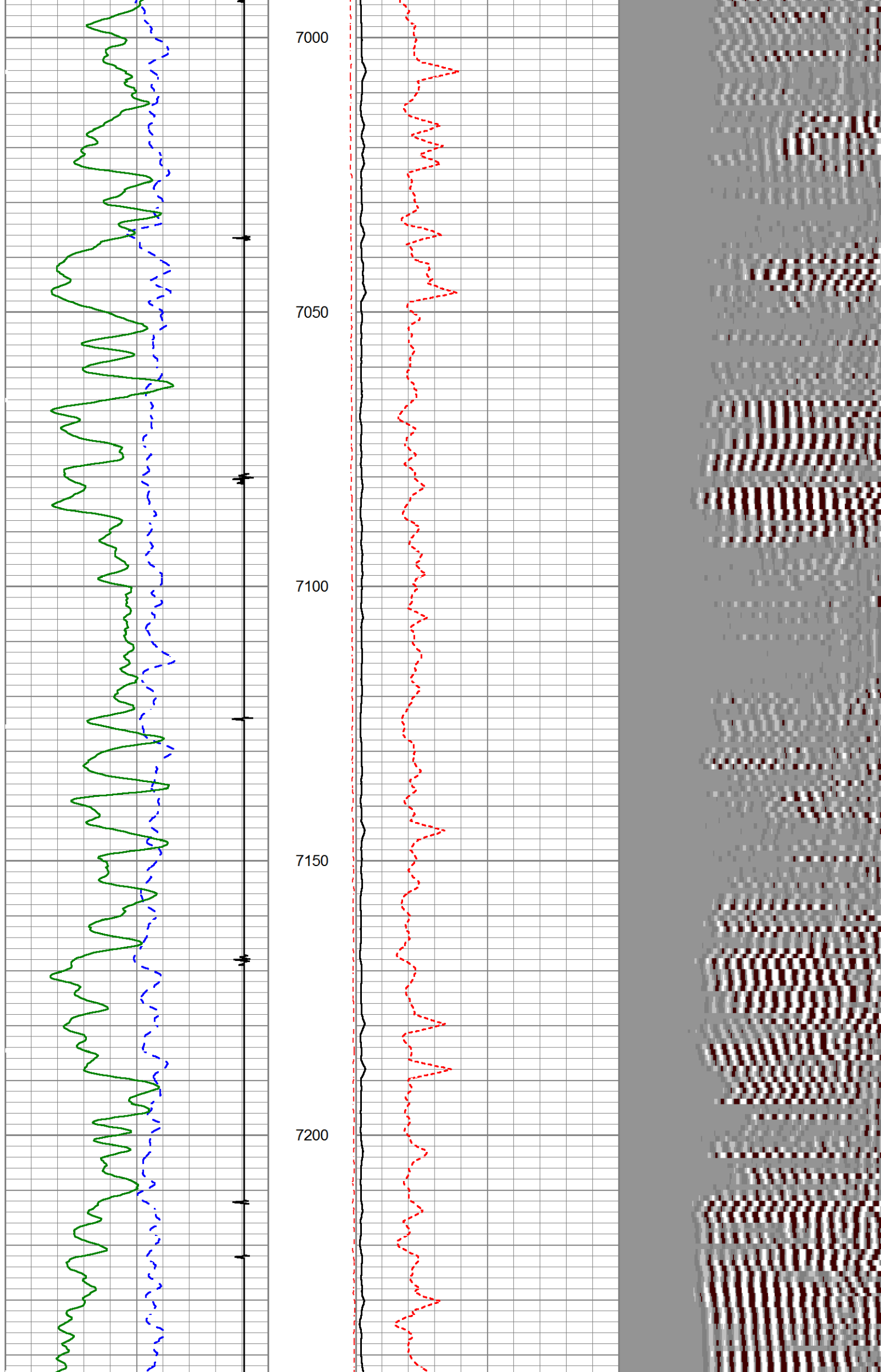


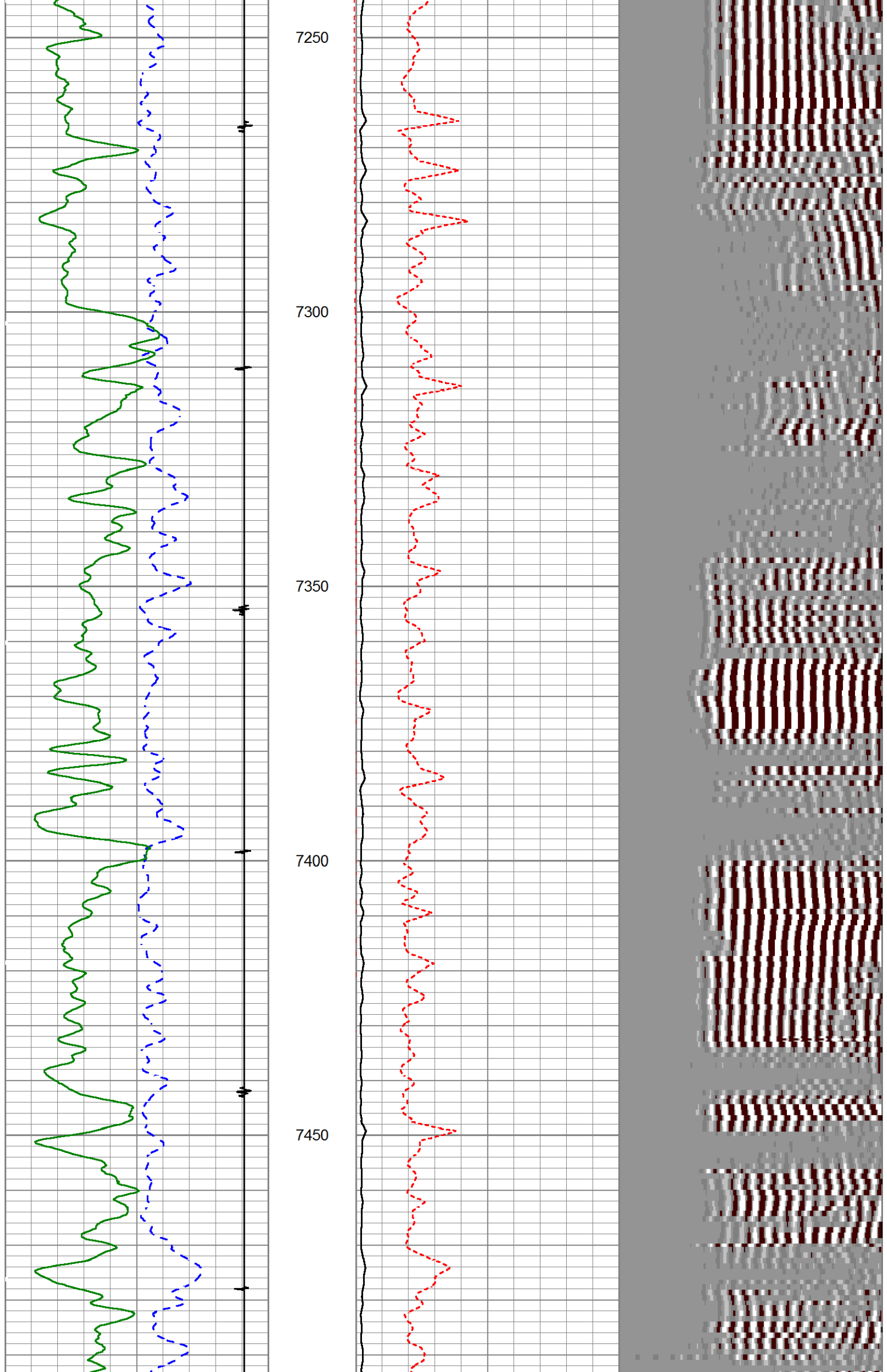


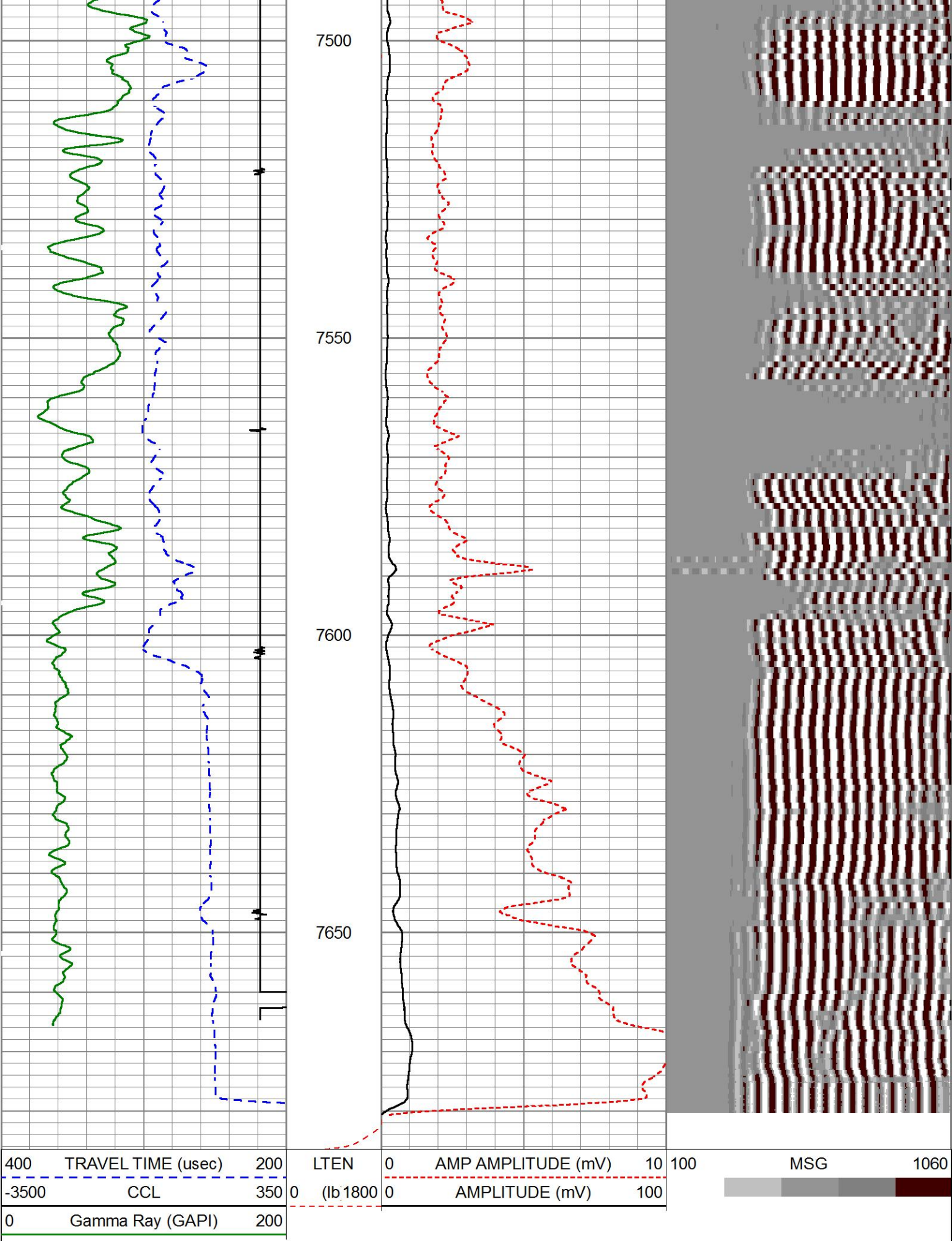












MAIN LOG SECTION

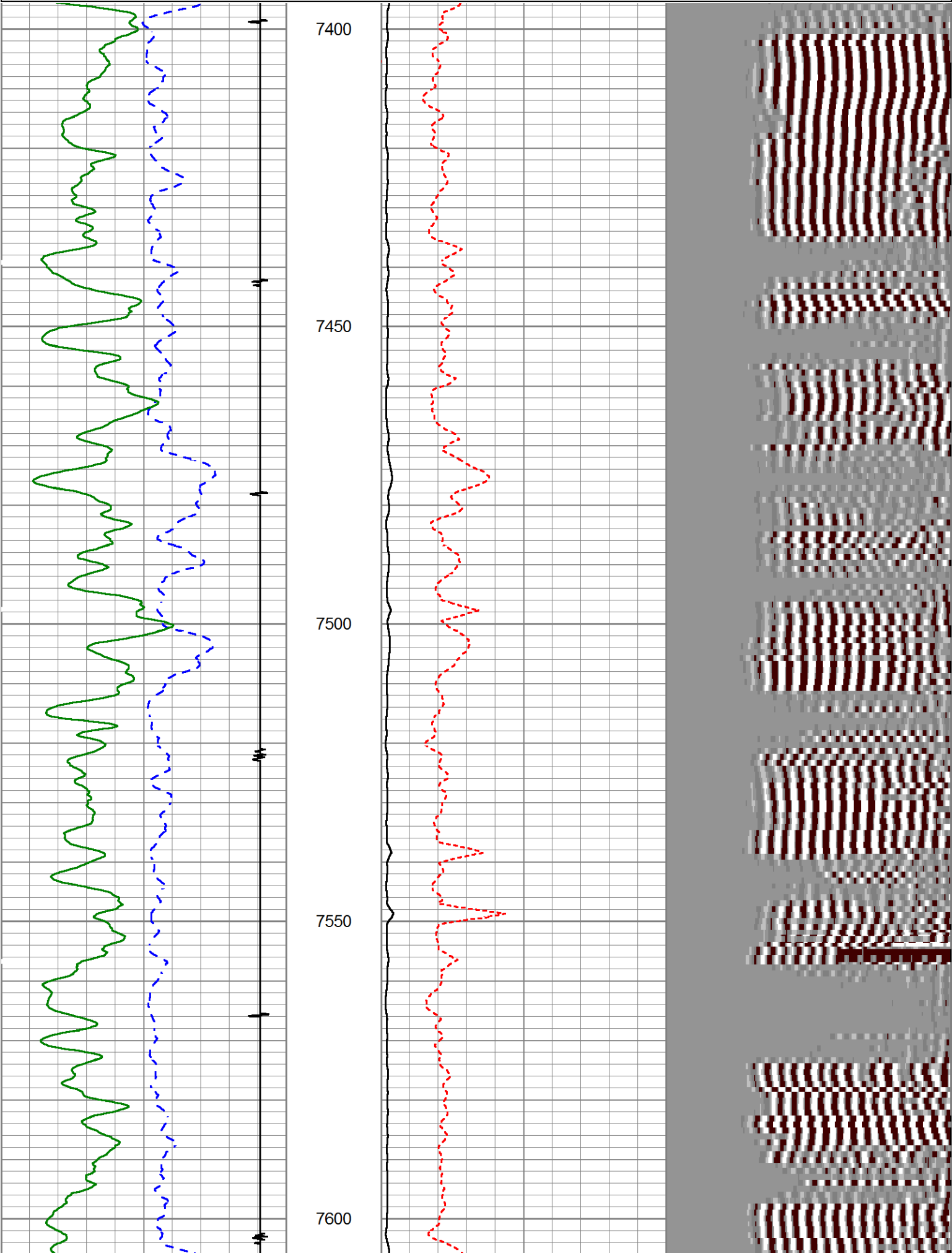
5" = 100'

REPEAT LOG SECTION

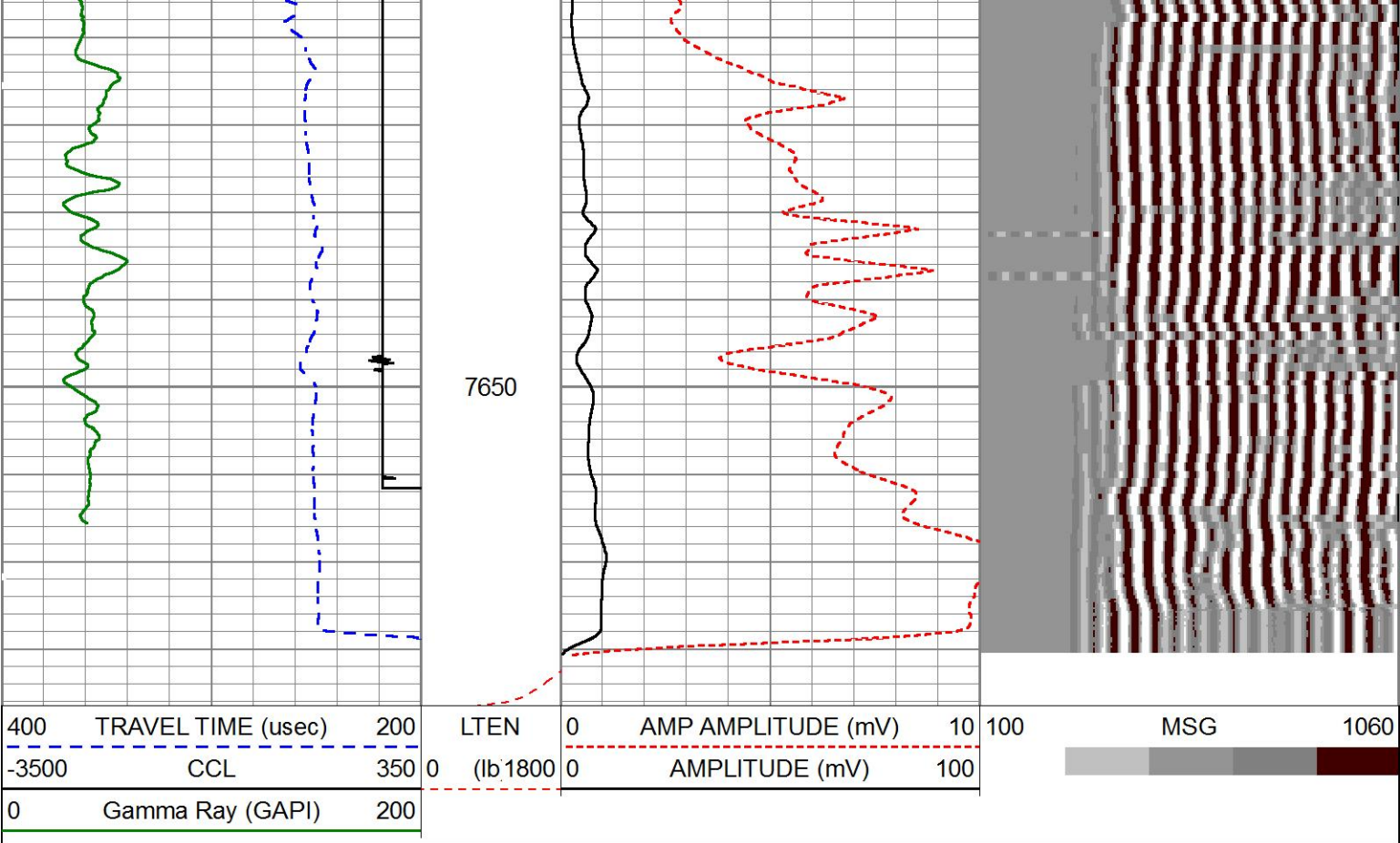
5" = 100'

Database File	yater_11b_cbl.db
Dataset Pathname	REPEAT
Presentation Format	cbl_main
Dataset Creation	Sat Aug 29 23:48:18 2015
Charted by	Depth in Feet scaled 1:240

400	TRAVEL TIME (usec)	200	LTEN	0	AMP AMPLITUDE (mV)	10	100	MSG	1060
-3500	CCL	350	0	(lb 1800	0	AMPLITUDE (mV)	100		
0	Gamma Ray (GAPI)	200							







## REPEAT LOG SECTION

HALLIBURTON

5" = 100'

## Log Variables

Database: D:\Warrior\_data\yater\_11b\_cbl.db  
Dataset: field/well/run1/MAIN/\_vars\_

### Top - Bottom

GAINCO	RINOR	RTF	RTN	RNOR	PPT u sec	MAXAMPL mV	MINAMPL mV
0	0	0	0	0	0	82	2
MINATTN db/ft	MSGGN	USERFTT u sec/ft	ZREF MRayl	BHTEMP_Src	BHSAL2	BHSAL1	POROS2
0.8	1	0	1.7	TEMP	0	1	0
POROS1	CASEWGHT lb/ft	LTH	UHSGC	RHO�F	SO in	BORSAL kppm	CASED?
1	11.6	Sandstone	NONE	0.25	0	150	Yes
SRFTEMP degF	MudWgt lb/gal	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BITSIZE in
0	8.33	0.25	4.5	0	7688	210	10

### Calibration Report

Database File: yater\_11b\_cbl.db  
Dataset Pathname: MAIN  
Dataset Creation: Sat Aug 29 23:57:19 2015

### Cement Bond Log Shop Calibration Report

Serial-Model: 11794522-A  
Calibration Performed: Sat Aug 29 23:15:01 2015

Free Pipe Calibration		
TT	Measured	Units
Amplitude	245.0	usec
Log Base Line	808.1	mV
	19.1	mV
Calibration References and Gain		
Name	Value	Units
Pipe O.D.	4.500	in
Pipe Weight	11.6	lb/ft
Pipe Ref. Amp.	81.2	mV
Amp. Gain	0.100	

Gamma Ray Calibration Report						
Type / Serial:			002 / 11495480			
SHOP CALIBRATION		Thu Aug 27 12:29:28 2015				
	Counts/Sec.	Gain	Offset	Jig	Units	
Background	38.0				cps	
Calibrator	333.5				cps	
		1.3806			GAPI/cps	
PRIMARY VERIFICATION						
Background	51.9				cps	
Calibrator	471.0				cps	
Difference				419.0	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	





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
CCL	21.47		STNDCH-STND_CH 1.4375 IN CABLE HEAD	1.08	1.44	1.00
GR	19.21		TTTCU-002 (11495480) Through Tubing Telemetry Cartridge - Ultrawire	7.65	1.69	100.00
			XHU-003 (000001) Crossover Halliburton 1553 to Ultrawire	1.58	1.69	7.00



		Diagram		Tool Data		
						
		CENT-CASTM-CENT CAST M INLINE CENTRALIZER		2.16	3.13	25.00
		HCBLM-A (11794522) Halliburton HCBLM Tool		9.38	2.75	116.00
		CENT-CASTM-CENT CAST M INLINE CENTRALIZER		2.16	3.13	25.00
		AUH-001 (11072111) Adaptor Ultrawire/Halliburton		0.38	1.69	3.00
		BUL-006 (000002) Bullnose Terminator		0.22	1.69	1.20
Temp	9.49					
TT3FT AMP3FT	7.24 7.24					
LLMTEN	0.00					
		Dataset: yater_11b_cbl.db: field/well/run1/MAIN Total length: 24.62 ft Total weight: 278.20 lb O.D.: 3.13 in				