

HALLIBURTON

ACOUSTIC CEMENT BOND LOG

Company				URSA OPERATING CO., LLC.			
Well				YATER 42B-18-07-95			
Field				PARACHUTE			
County				GARFIELD State CO			
Company				URSA OPERATING CO., LLC.			
Well				YATER 42B-18-07-95			
Field				PARACHUTE			
County				GARFIELD State CO			
API No.: 05045228270000				Serv #: 902695258			
Location: SURFACE HOLE LOCATION: 1805' FSL & 1128' FWL				Other Services			
BOTTOM HOLE LOCATION: 1856' FNL & 660' FEL				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				7222'			
Depth - Logger				7100'			
Bottom - Logged Interval				7095'			
Top - Log Interval				100'			
Max. Recorded Temp.				211 DEG F			
CEMENTING DATA				Surface			
Date / Time Cemented				String			
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" 1850' SURFACE 8.625" 32.0# 1850' SURFACE			
TWO				7.875" 7222' SURFACE 4.5" 11.6# 7205' SURFACE			

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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 @: 2997' - 3007', 5765' - 5775', 6524' - 6534', AND 6665' - 6675'

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES.

Service Ticket No.	902695258	API No.	05045228270000	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.	FROM	TO	Pressure	Time	MAIN LOG SECTION
ONE	7095'	SURFACE	0	60	
	GAMMA RAY		TRAVEL TIME		AMPLITUDE
Pass	Scale		Scale		MSG
No.	L	R	L	R	L
ONE	0	200	400	200	0
					100
					100
					1100
DIRECTIONAL INFORMATION					
Maximum Deviation		deg. @		KOP	

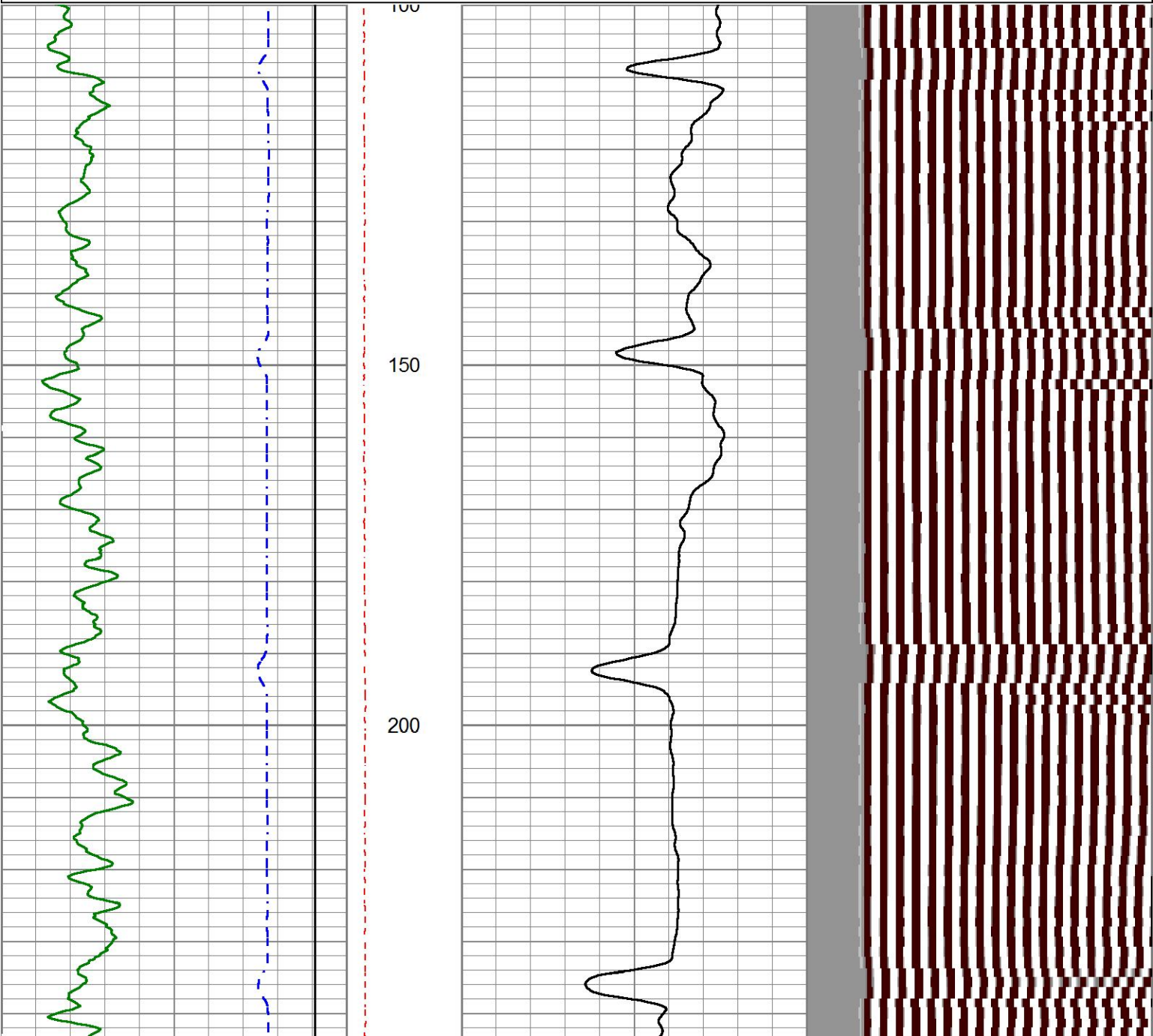
HALLIBURTON

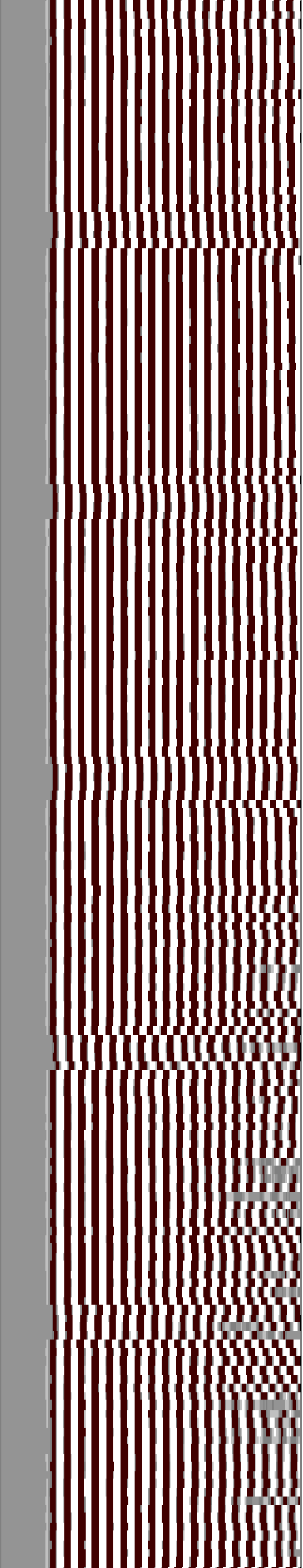
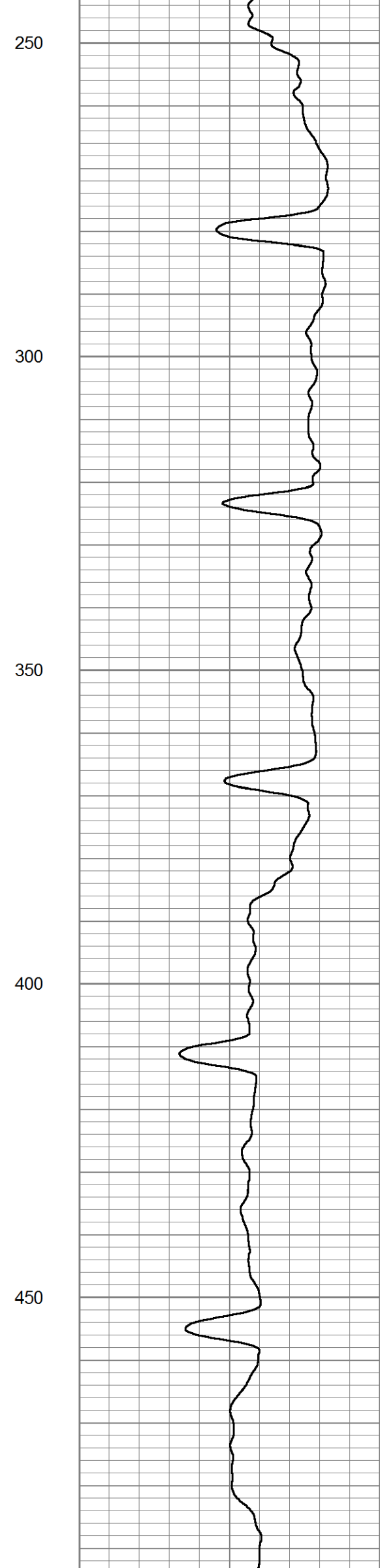
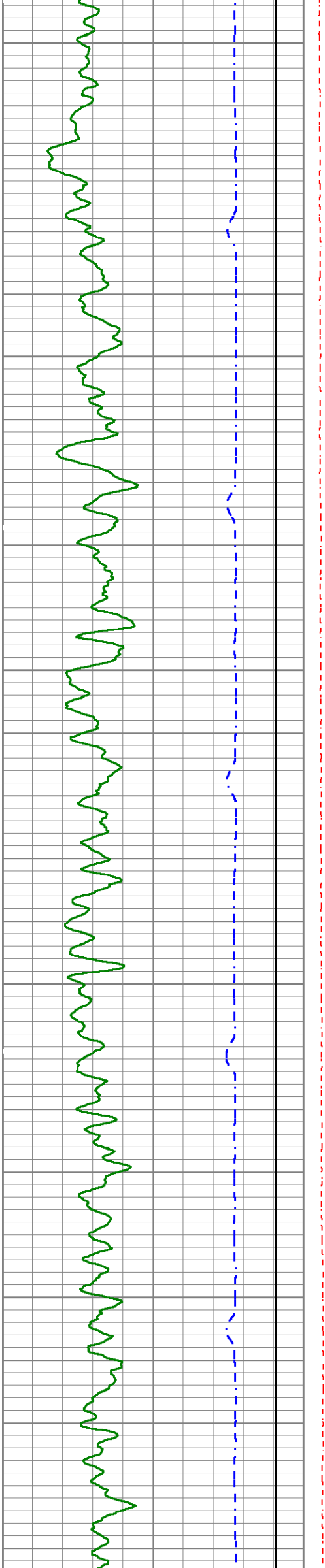
MAIN LOG SECTION

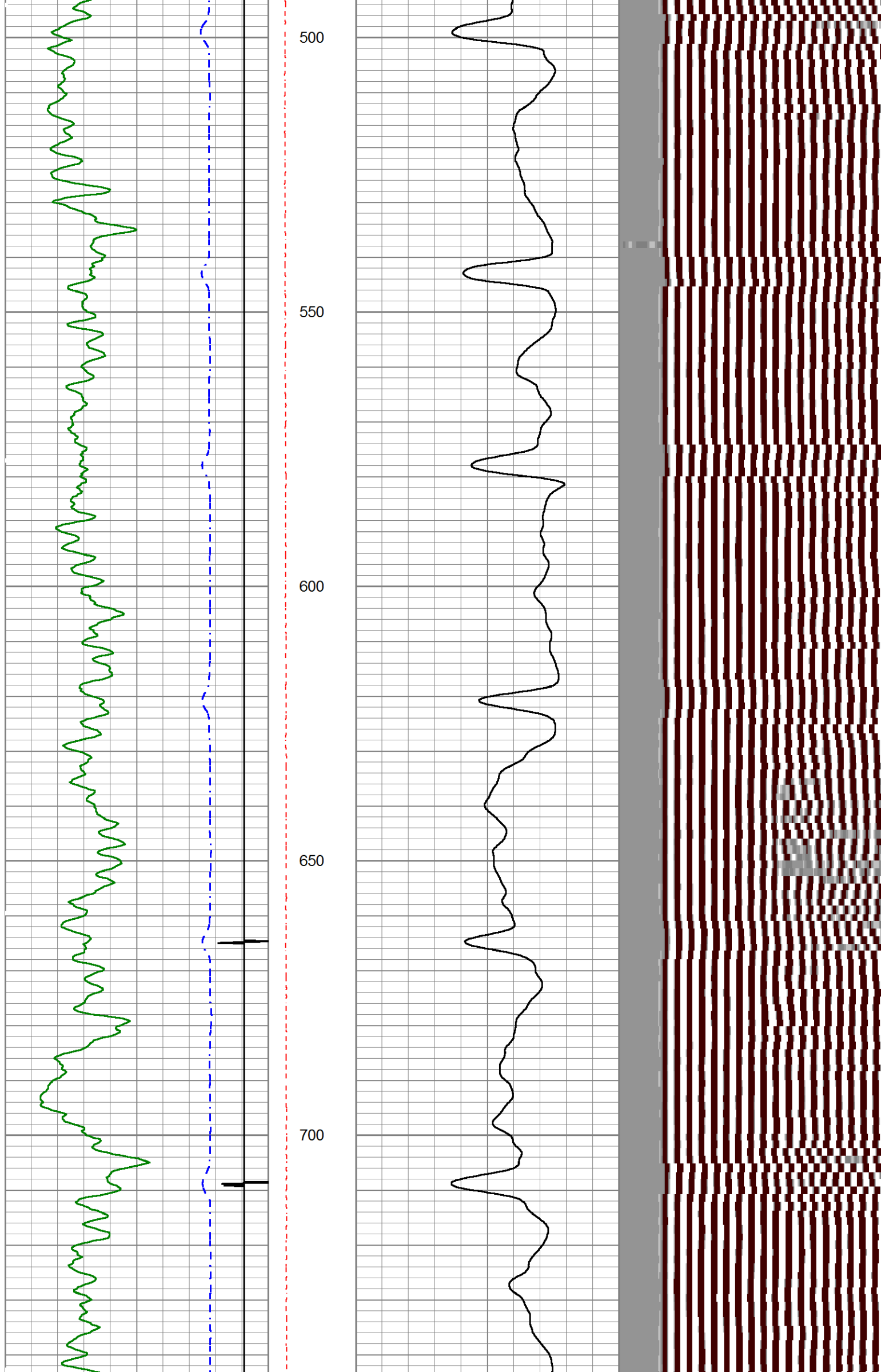
5" = 100'

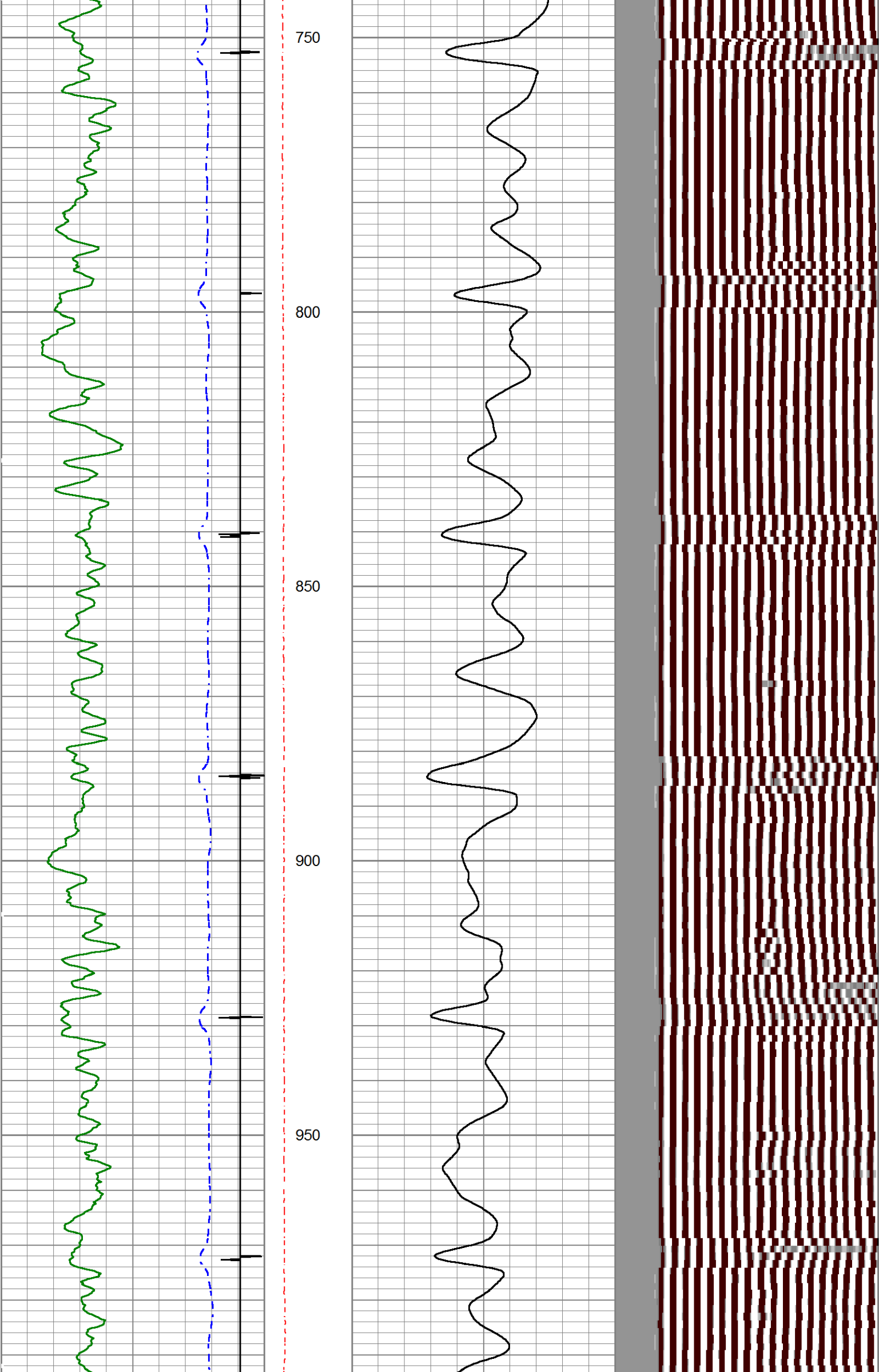
Database File	yater_42b_cbl.db
Dataset Pathname	CBL_MAIN
Presentation Format	cbl_main
Dataset Creation	Sat Aug 29 21:03:35 2015
Charted by	Depth in Feet scaled 1:240

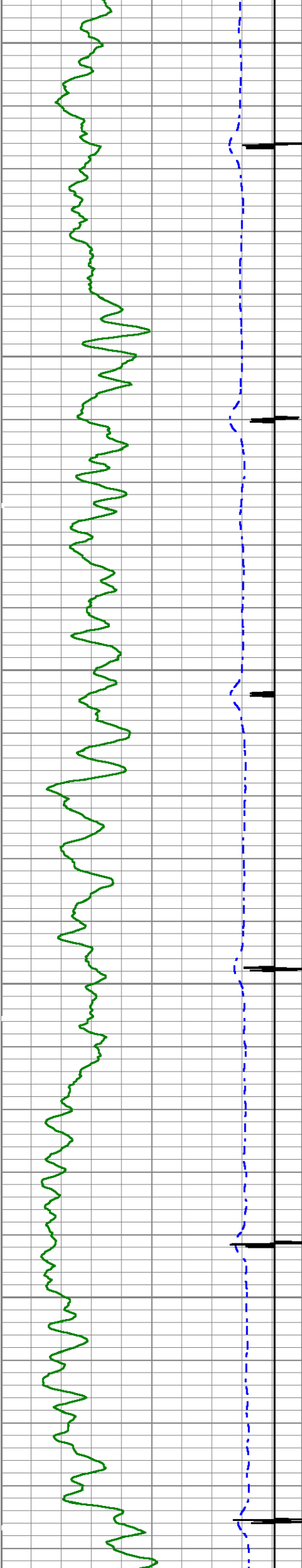
400	TRAVEL TIME (usec)	200	LTEN	0	AMP AMPLITUDE (mV)	10	100	MSG	1060
-3500	CCL	350	0	(lb)1800	0	AMPLITUDE (mV)	100		
0	Gamma Ray (GAPI)	150							











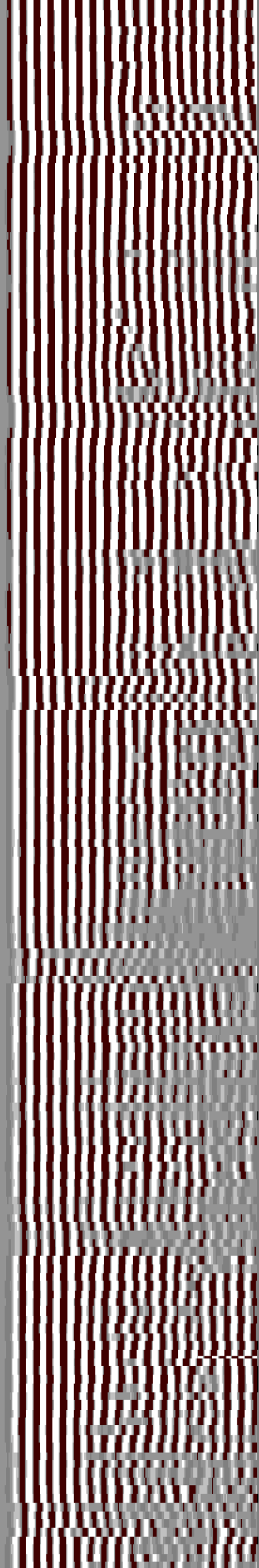
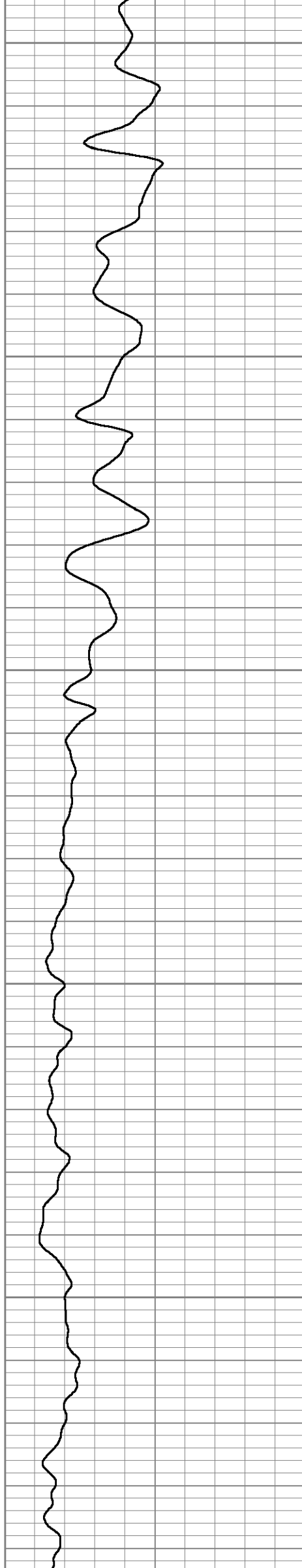
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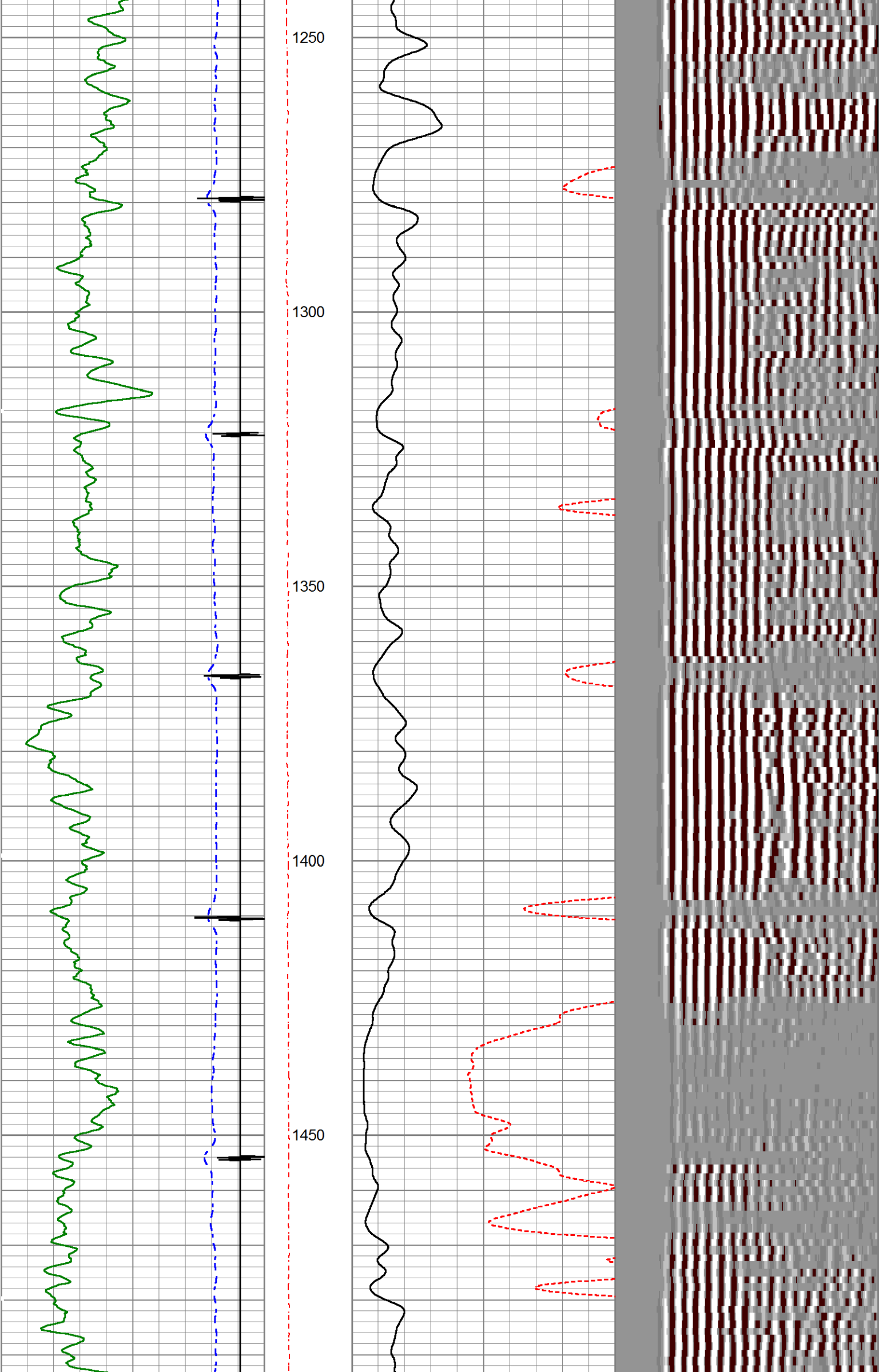
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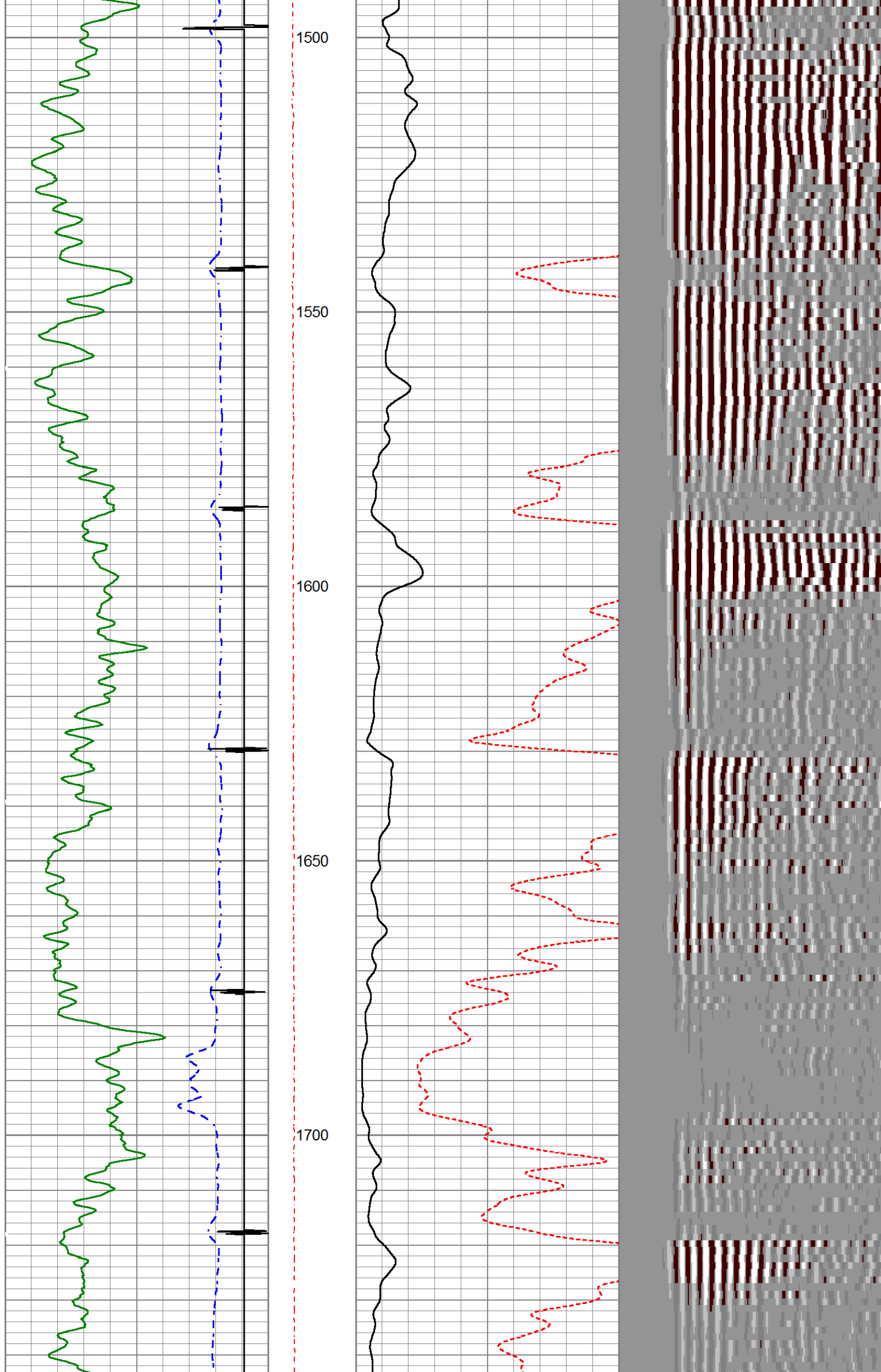
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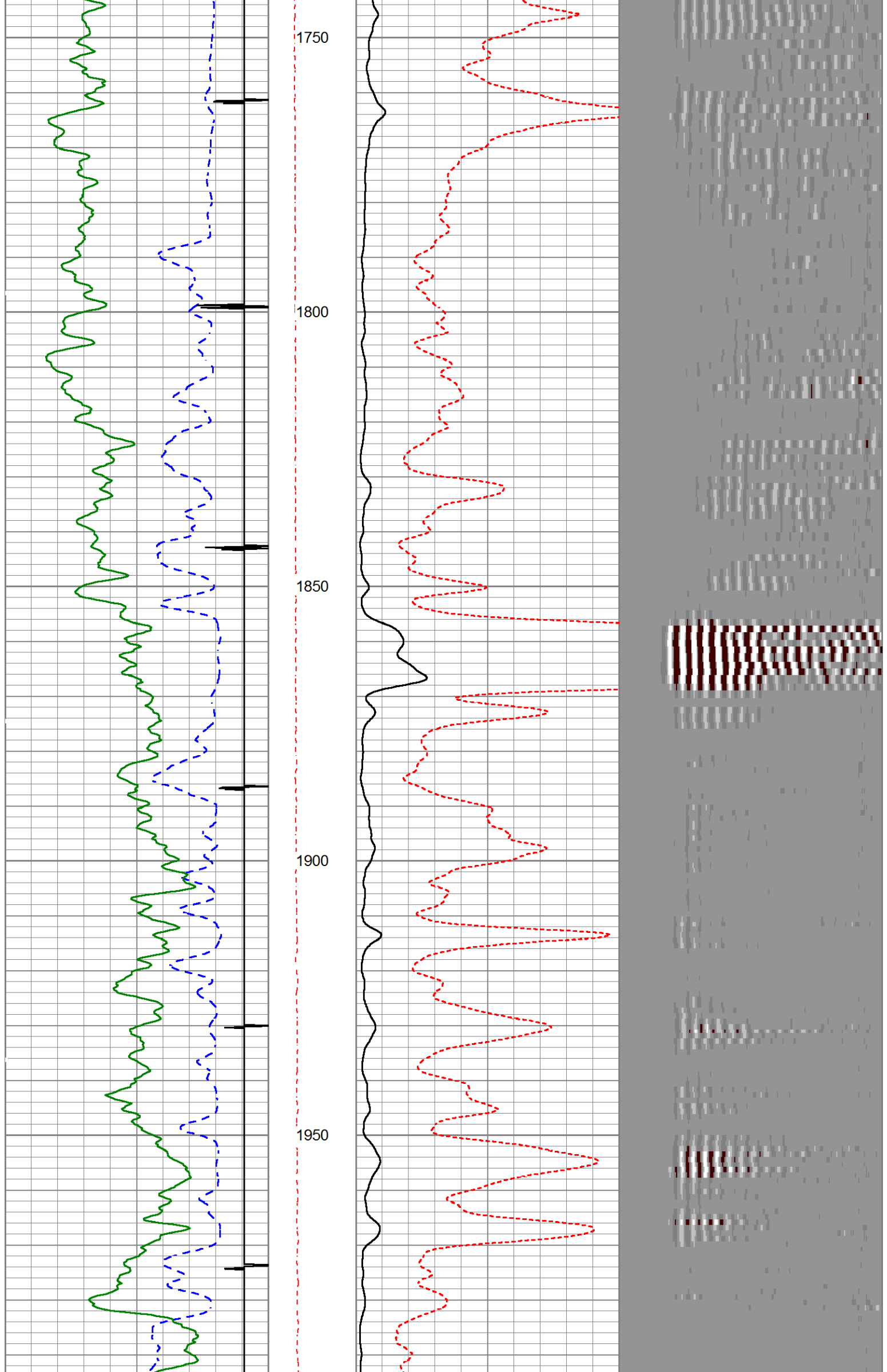
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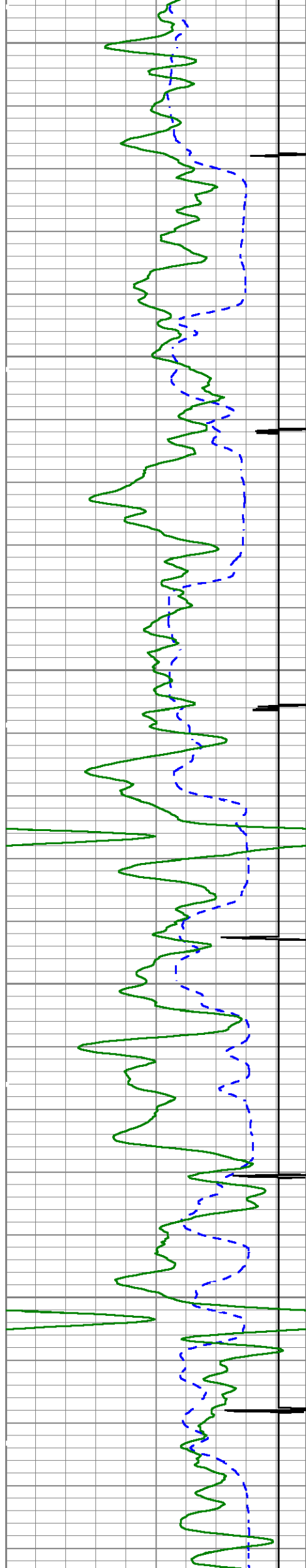
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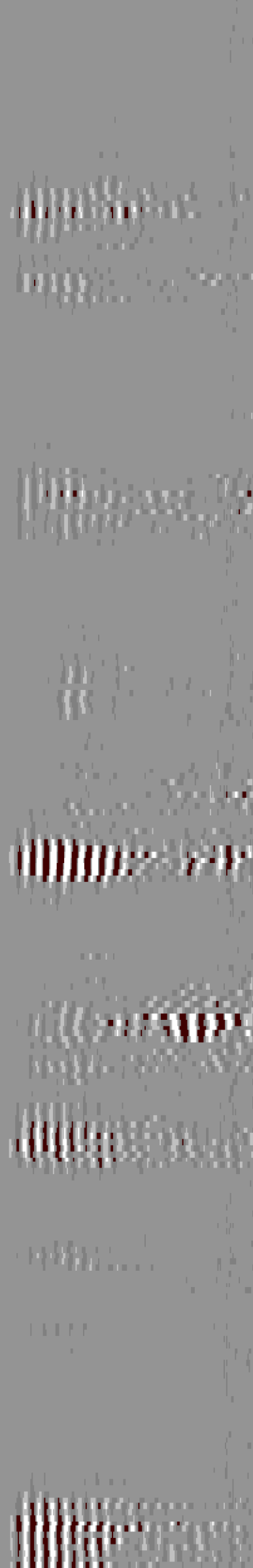
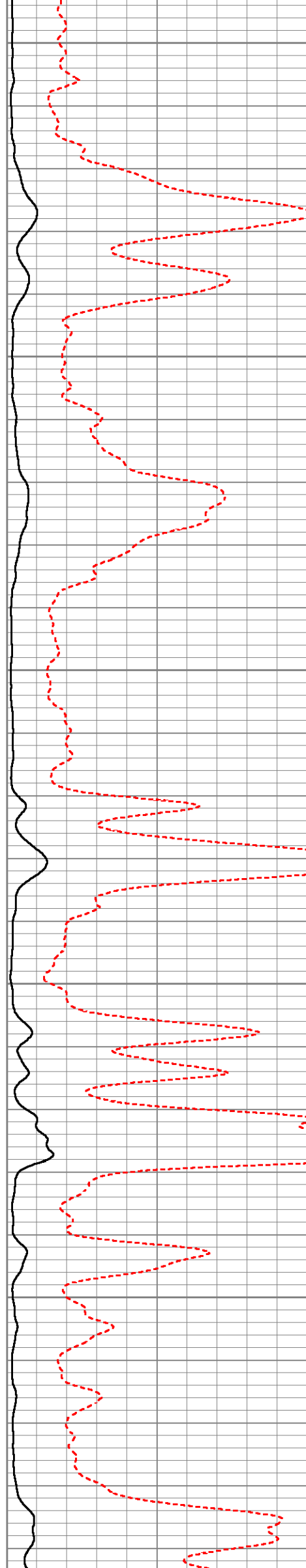
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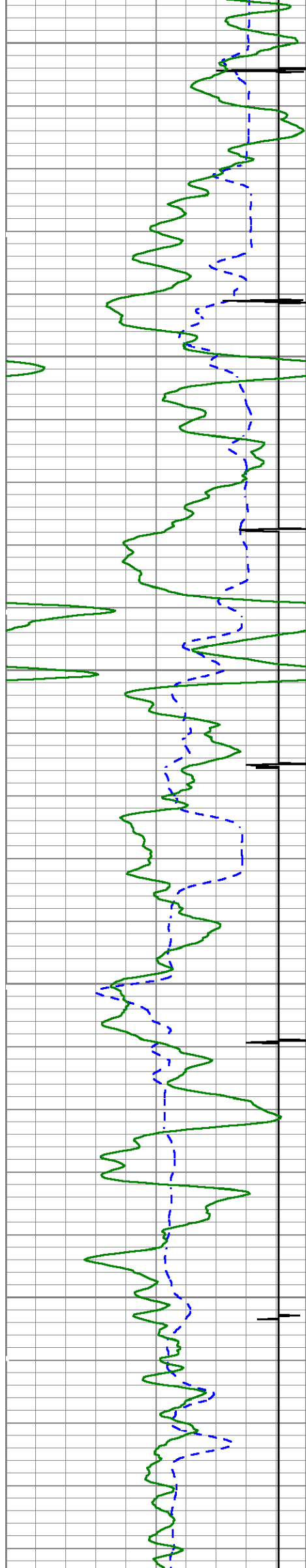
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2100

2150

2200





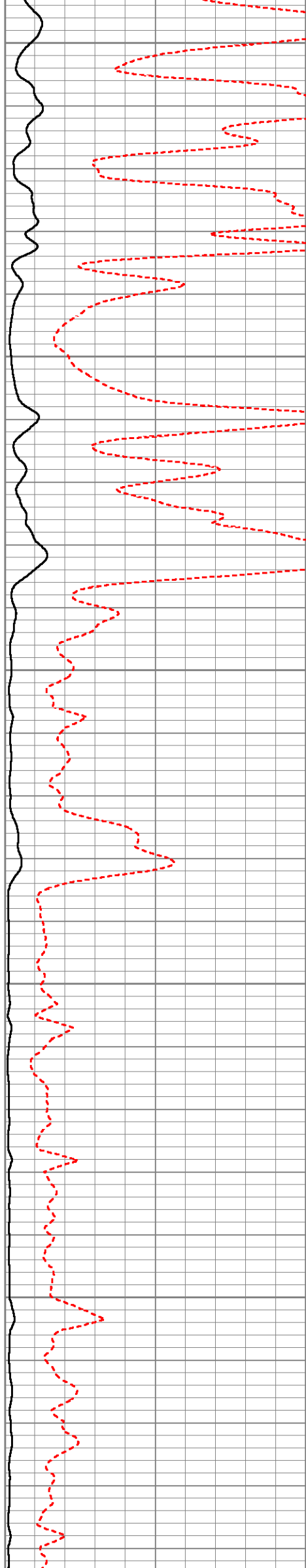
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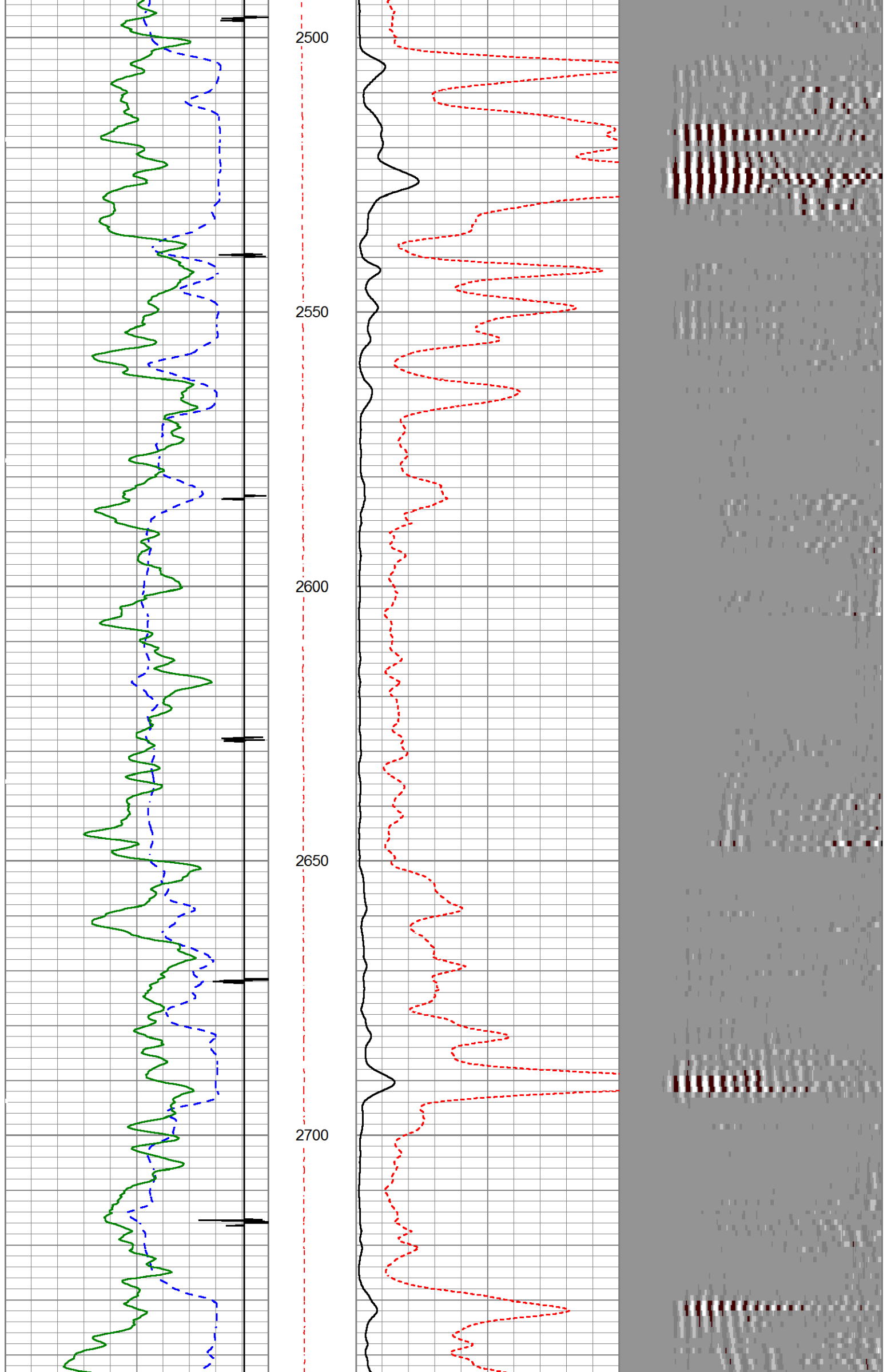
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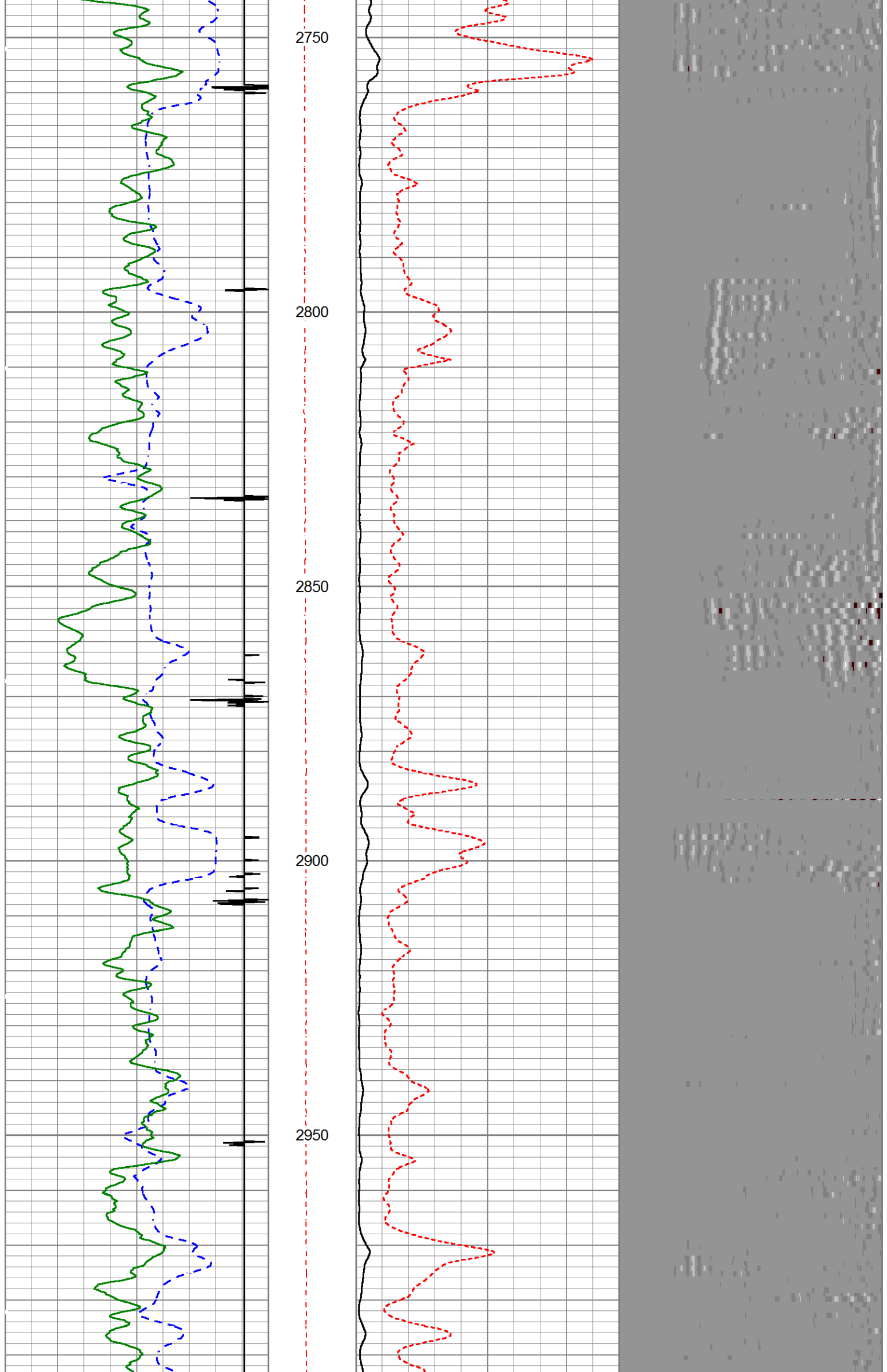
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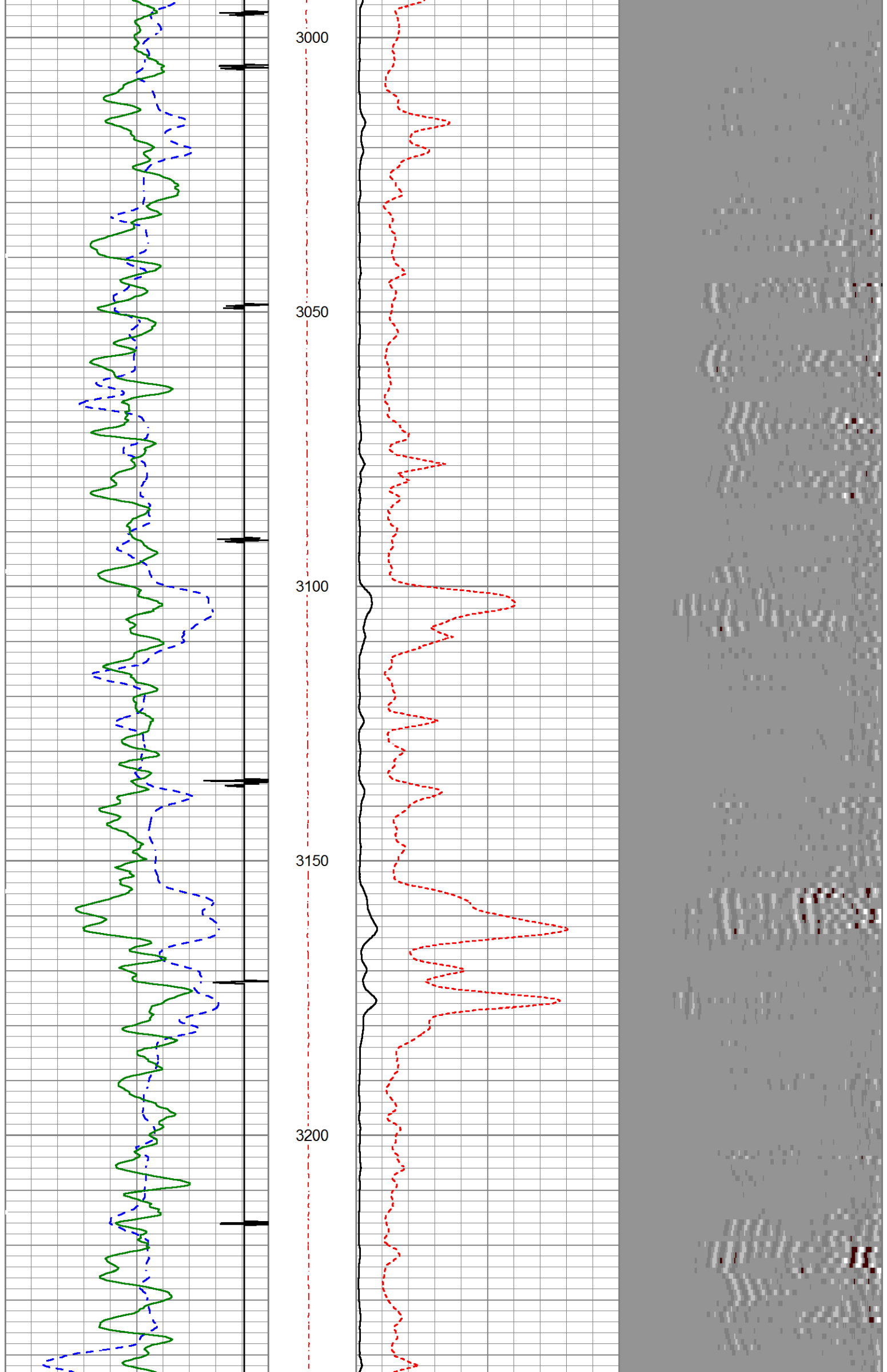
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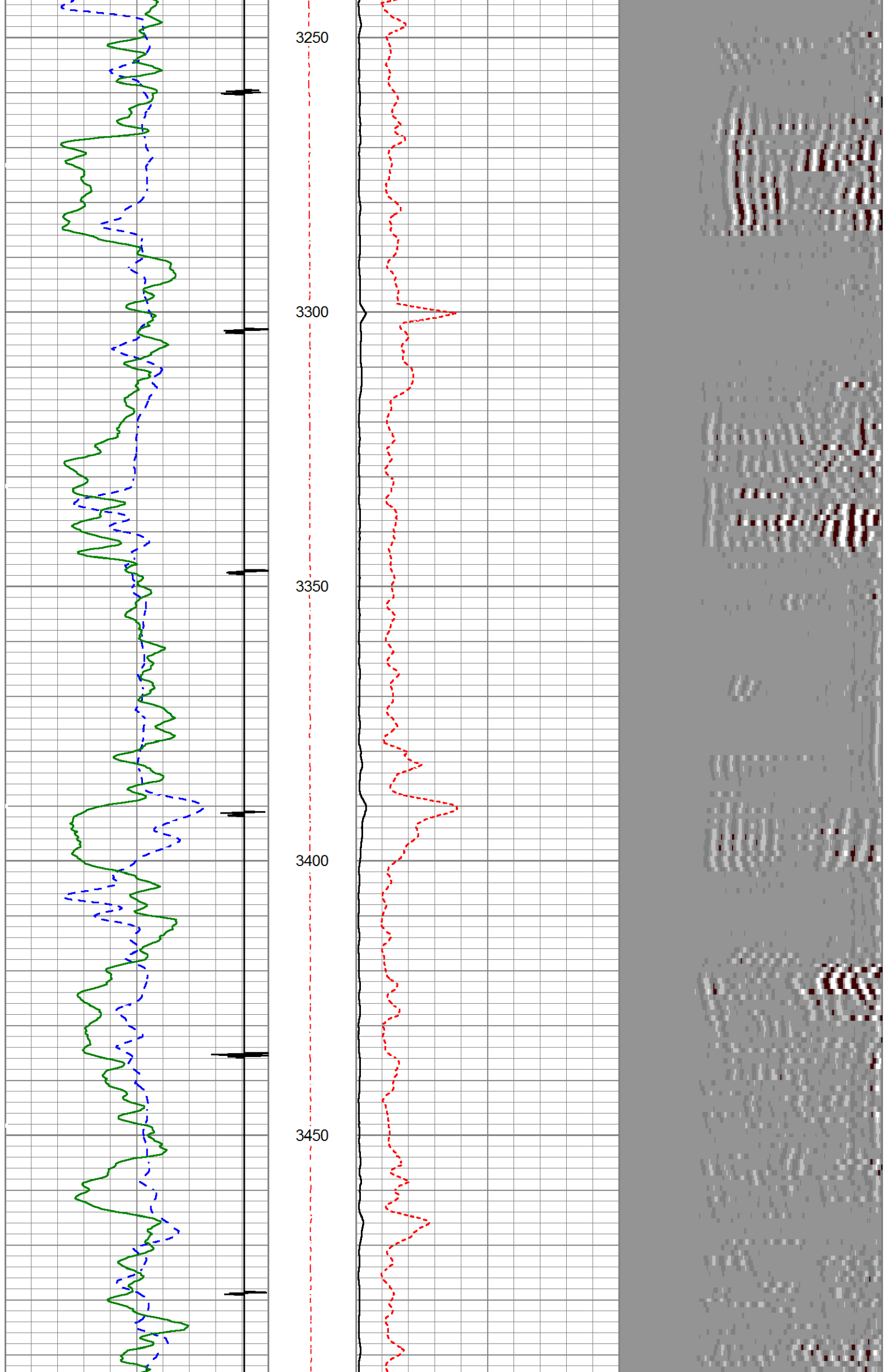
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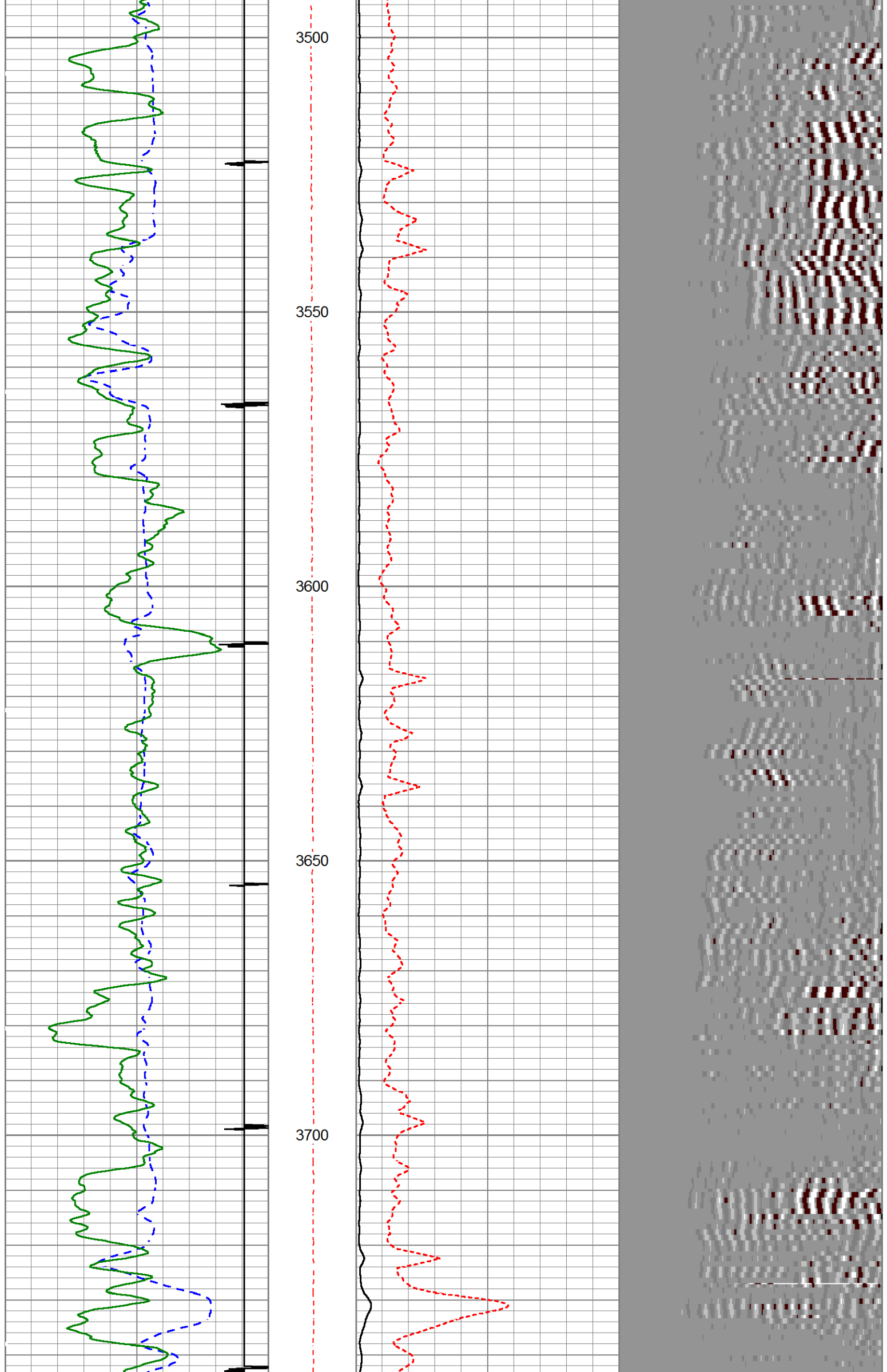


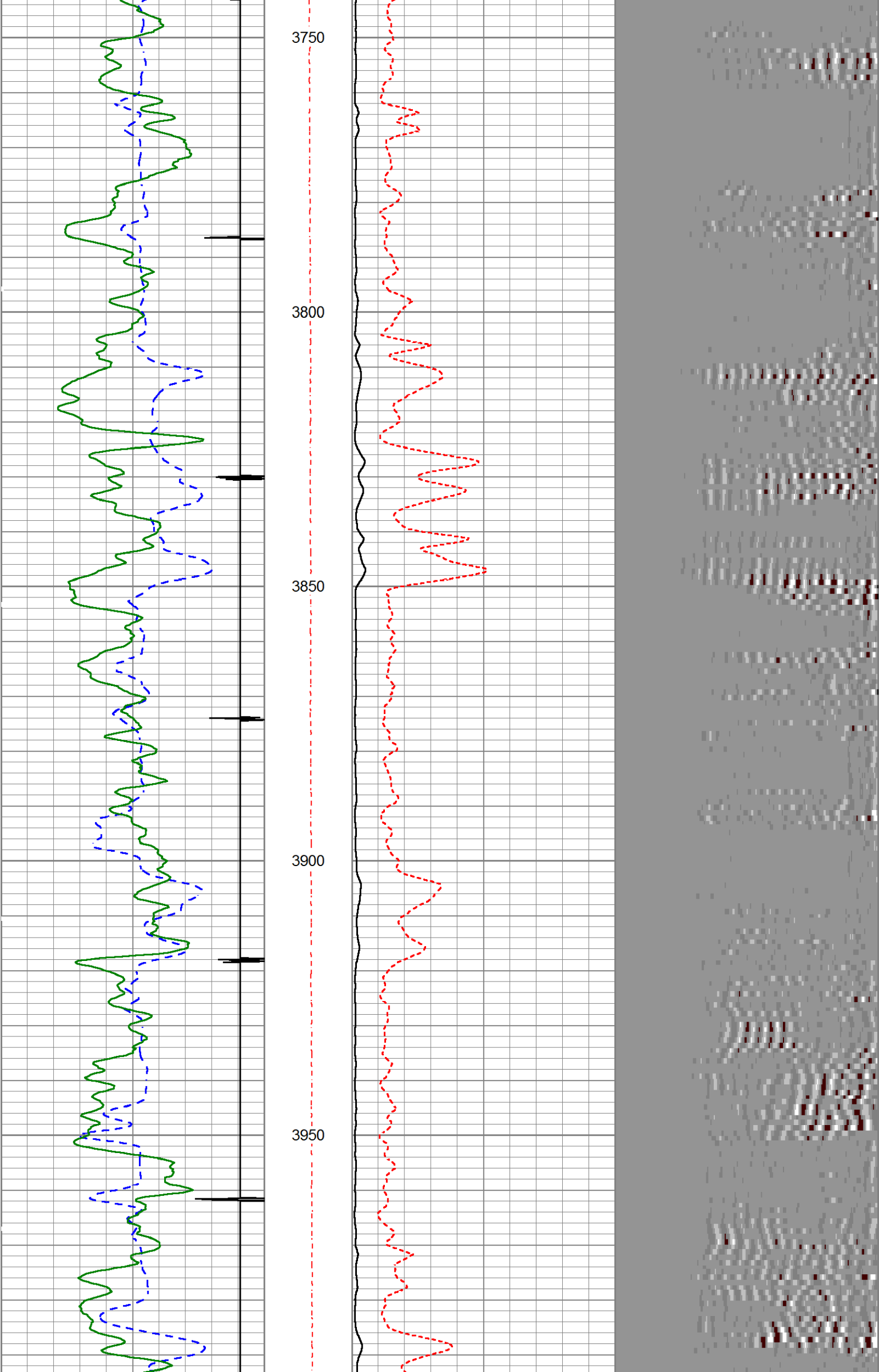


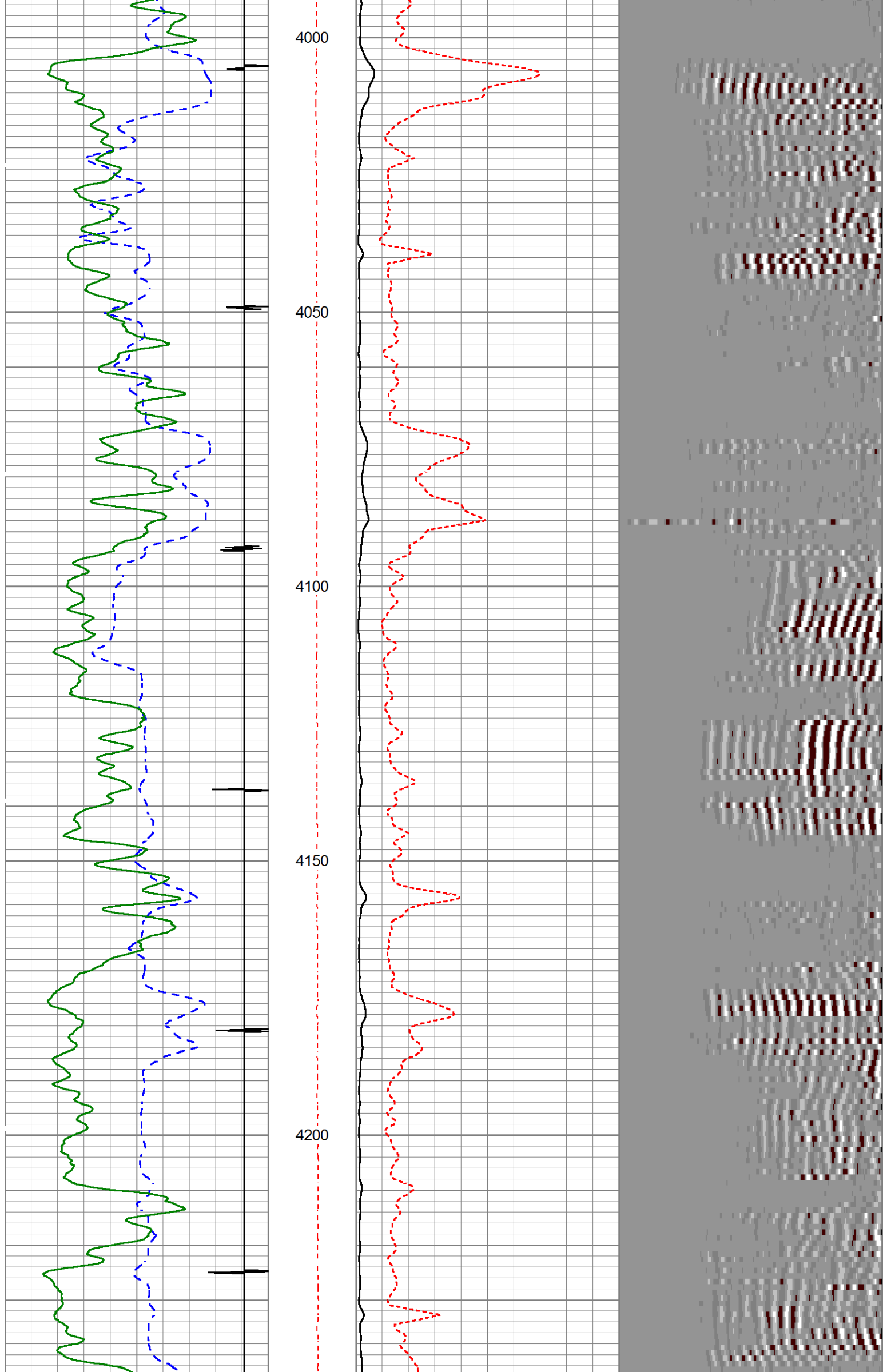


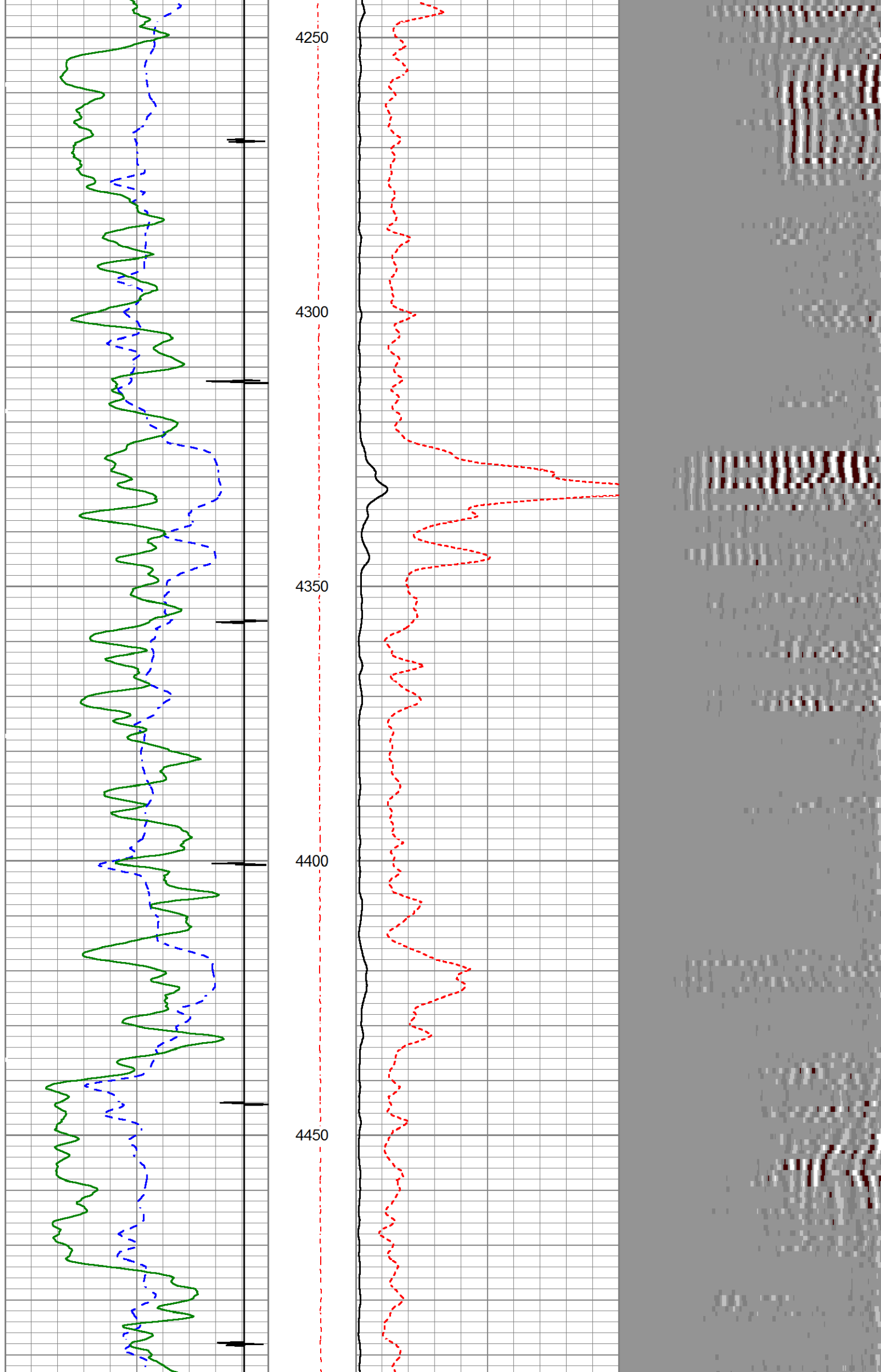


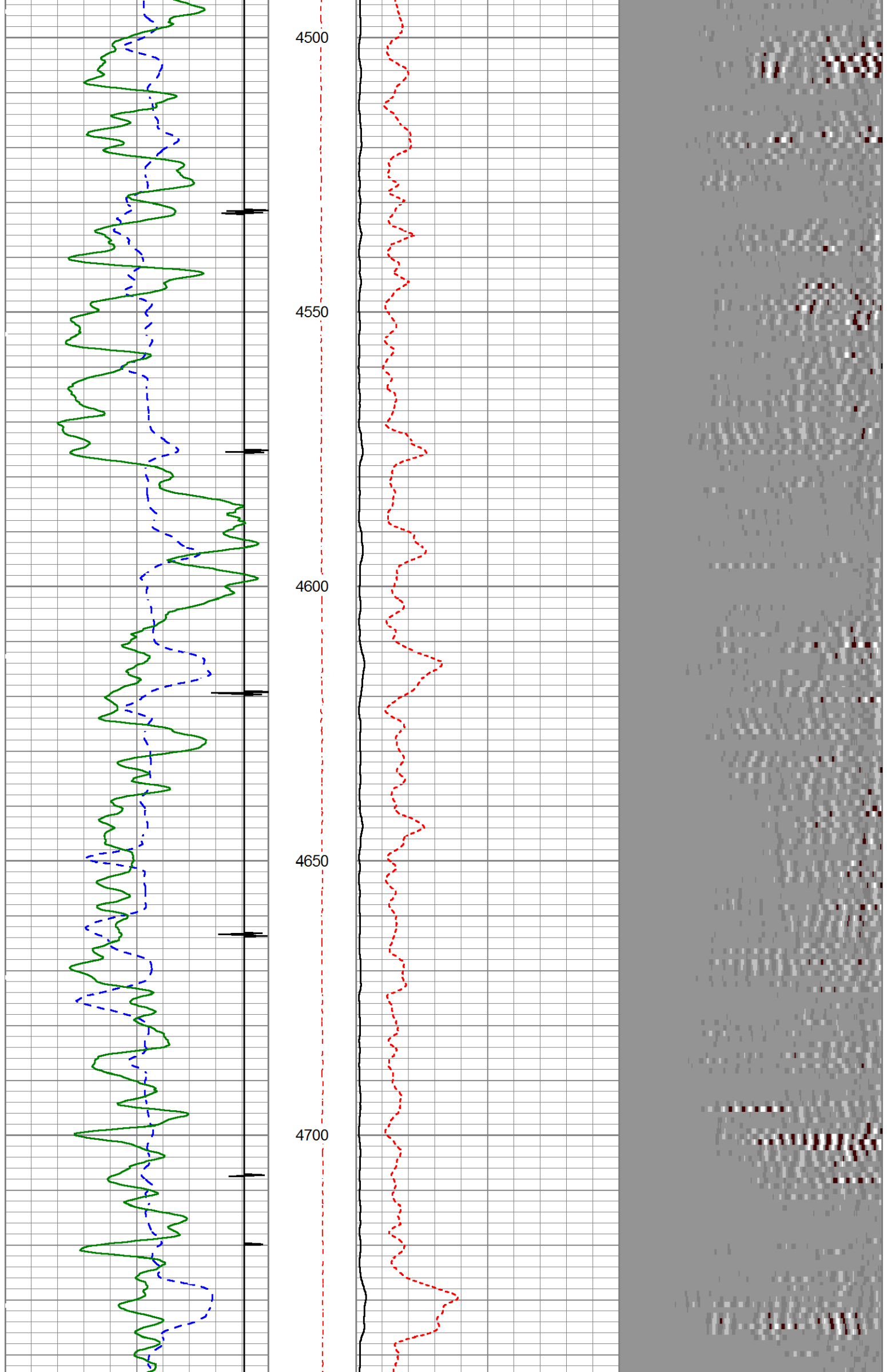


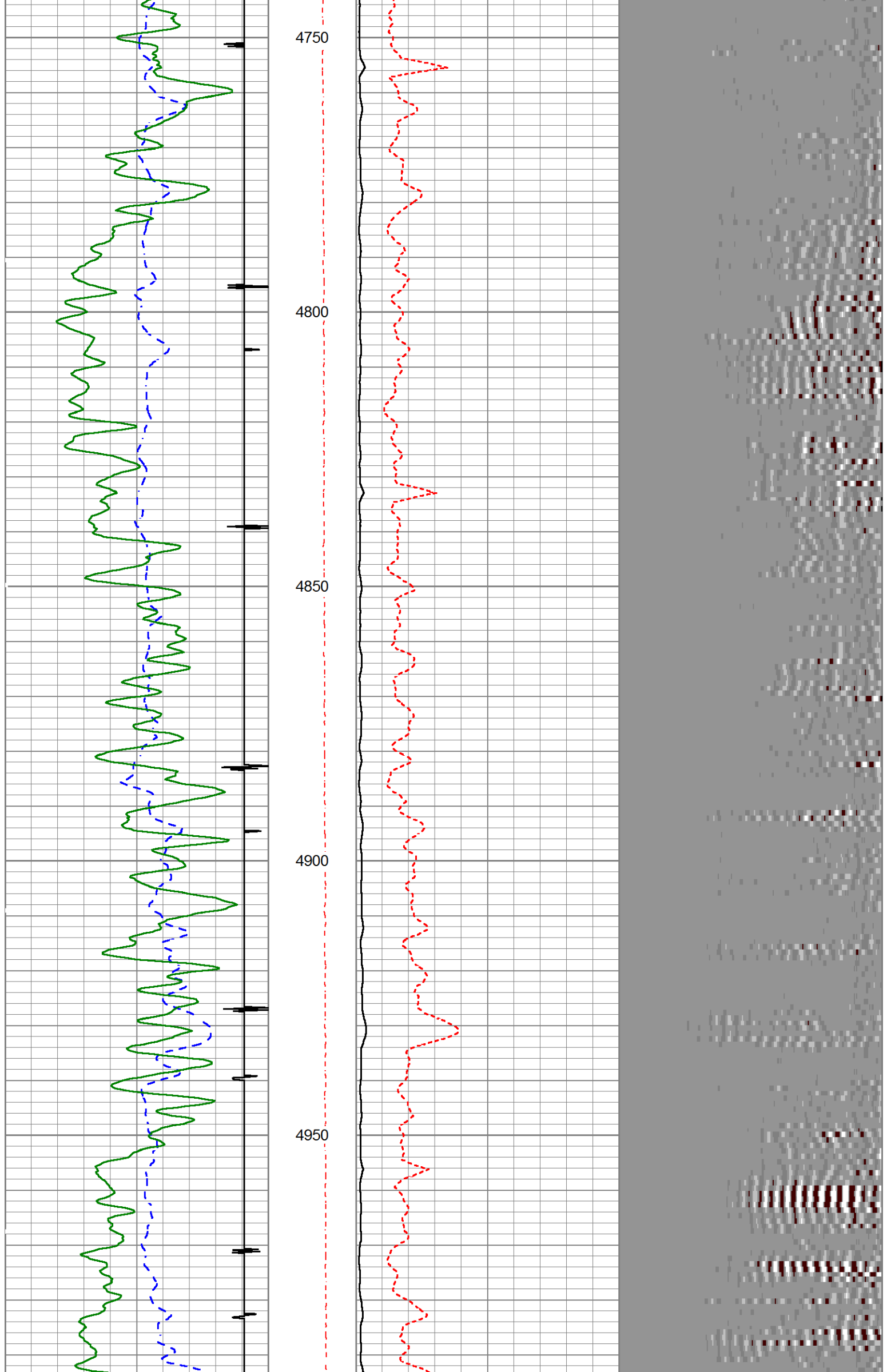


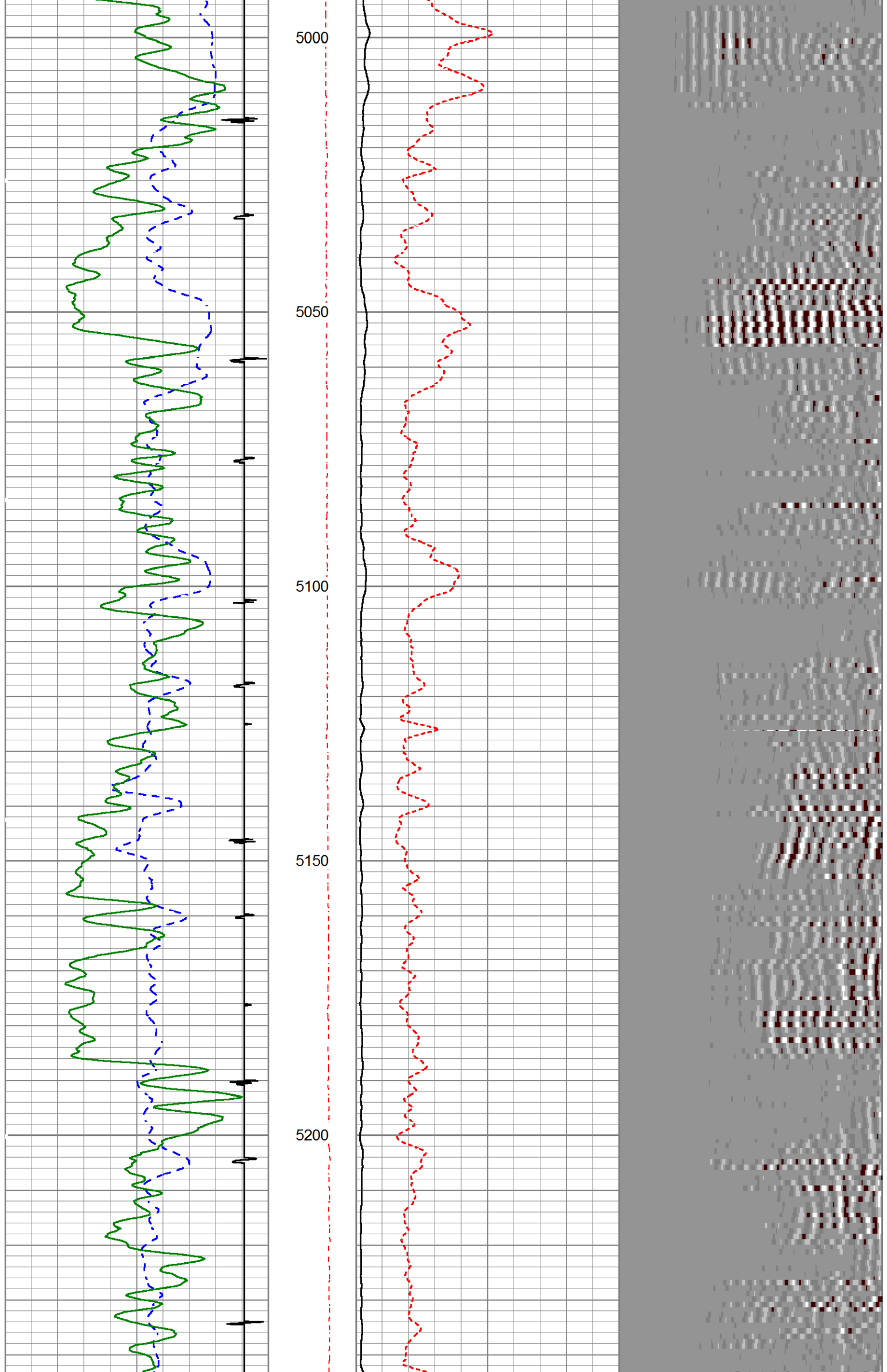


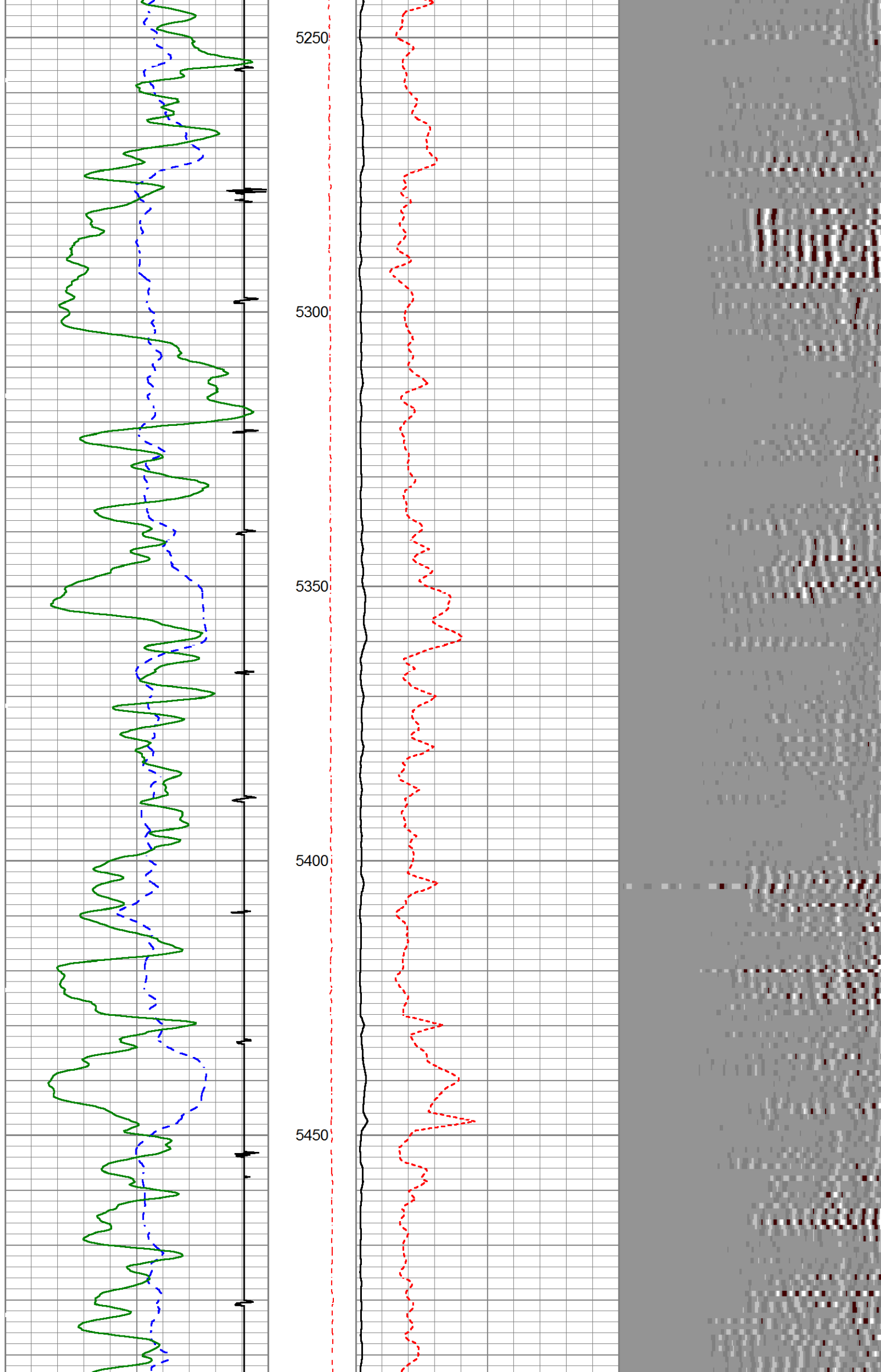


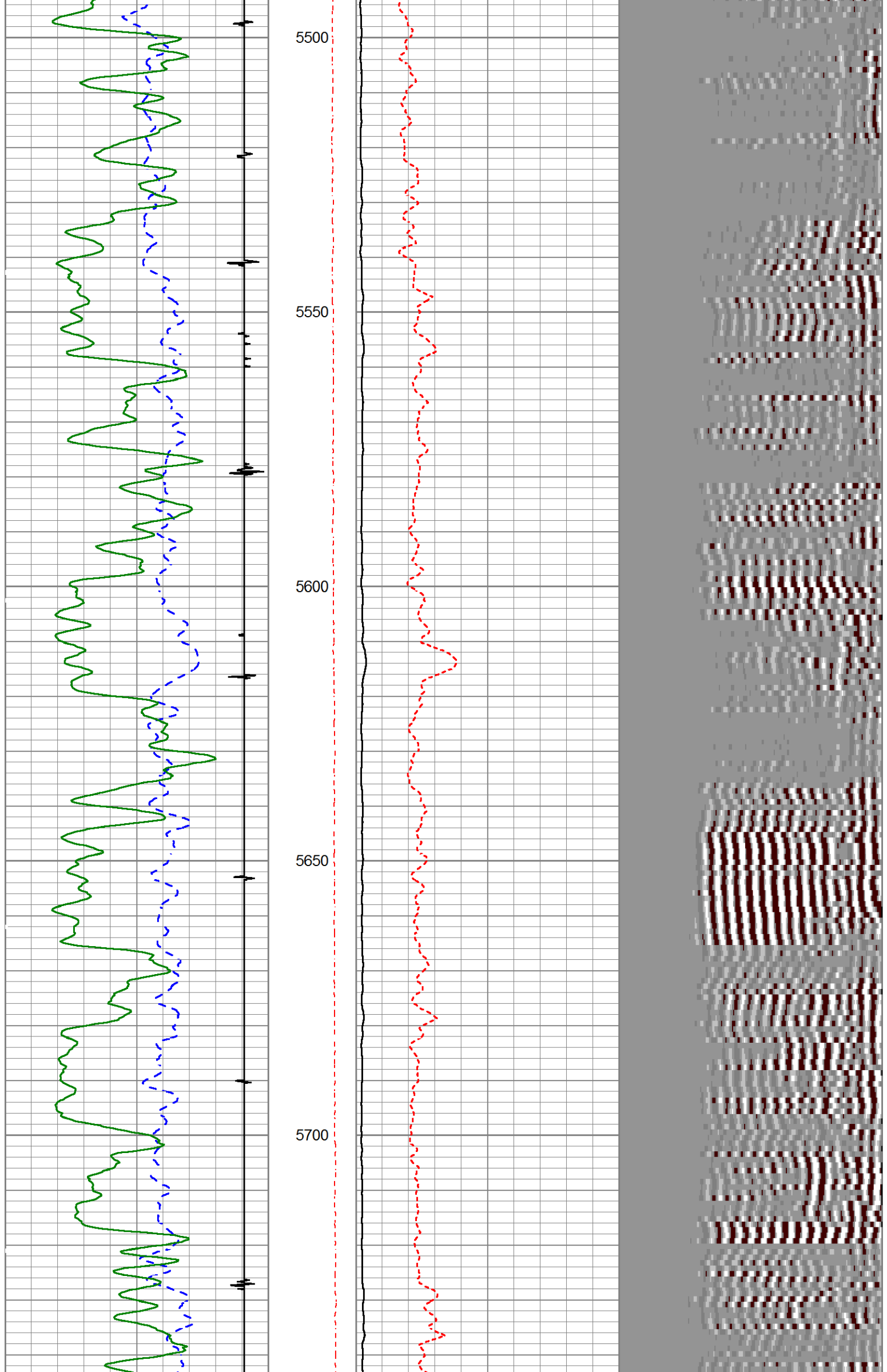


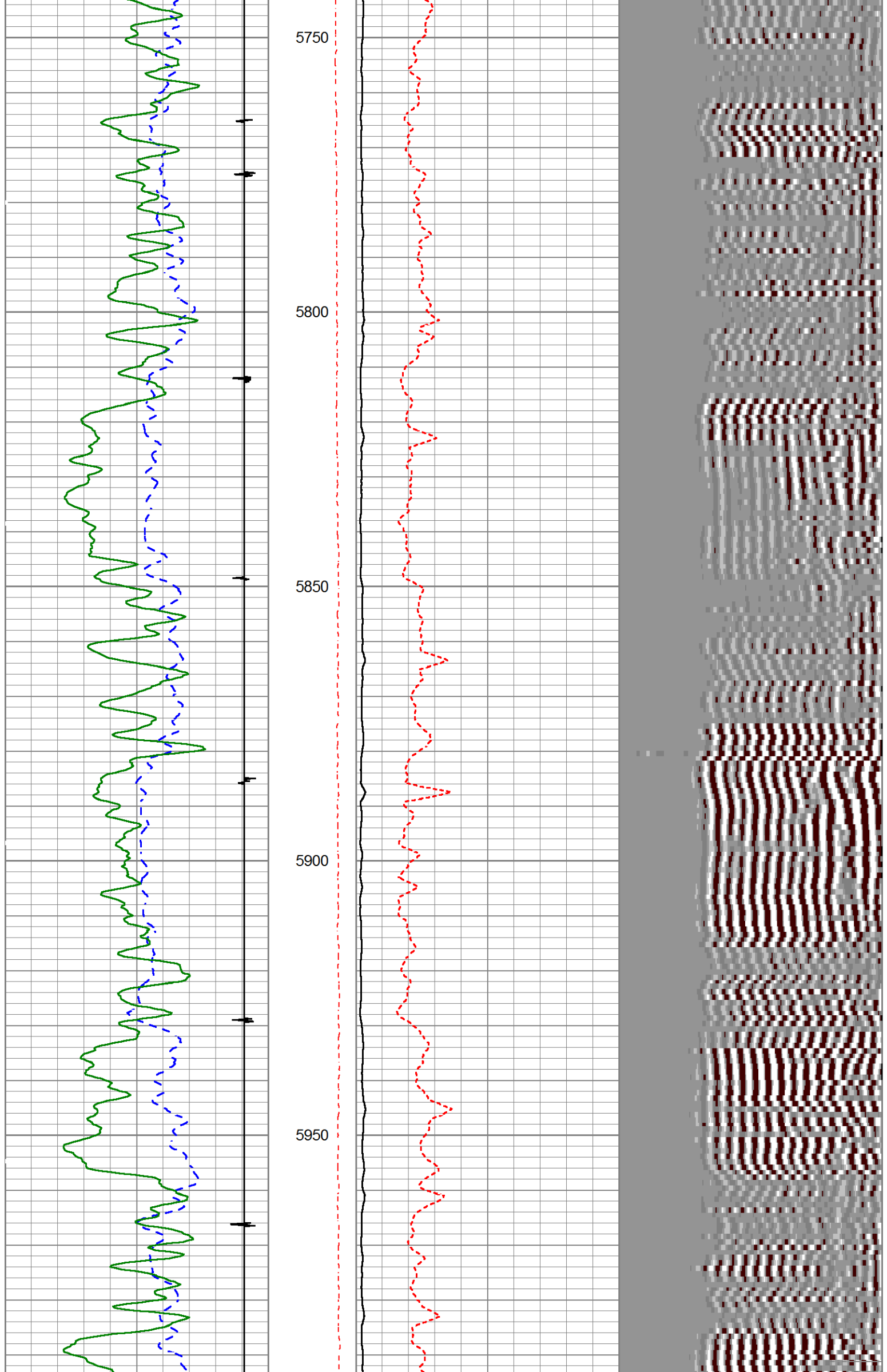


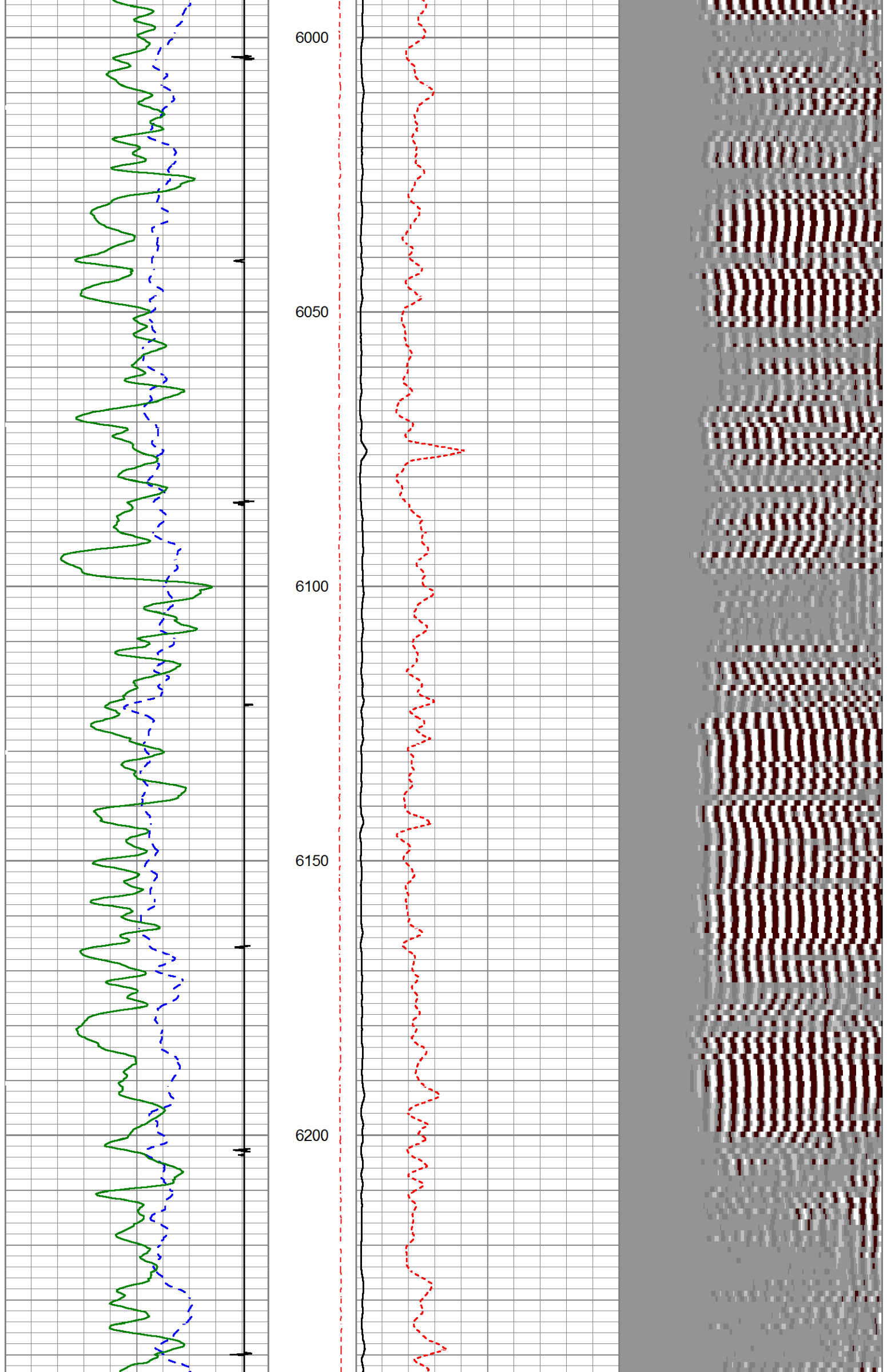


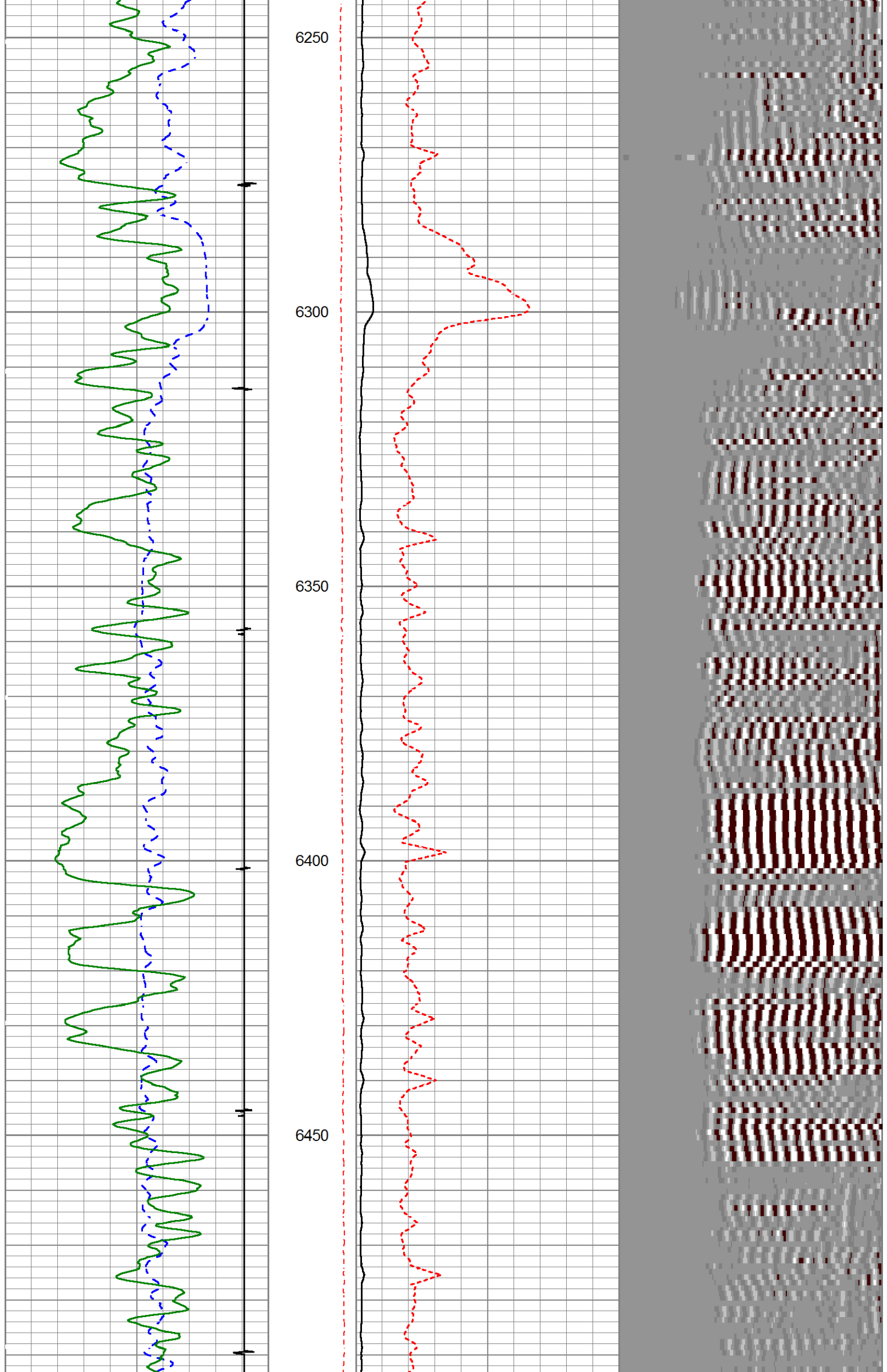


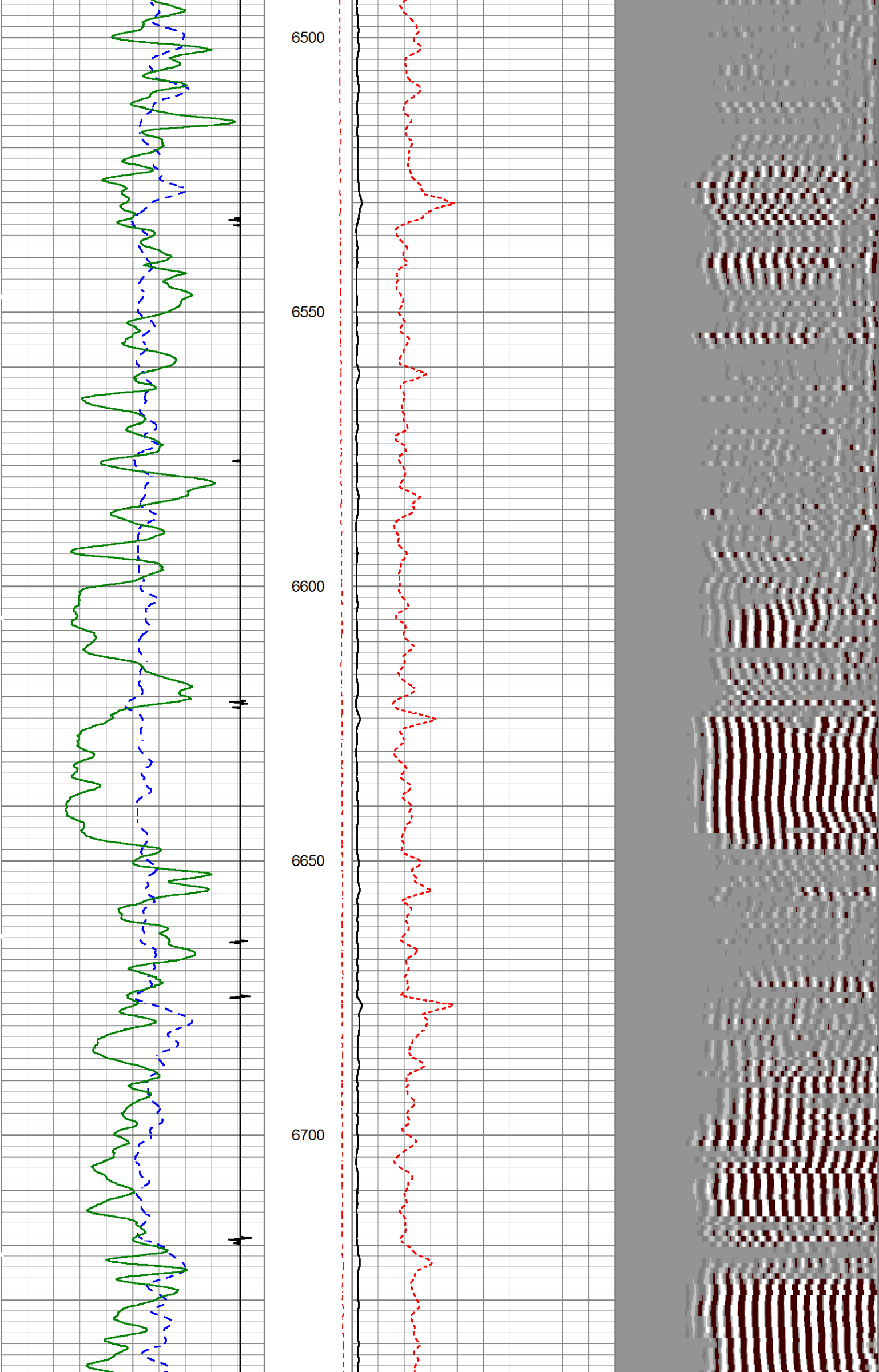


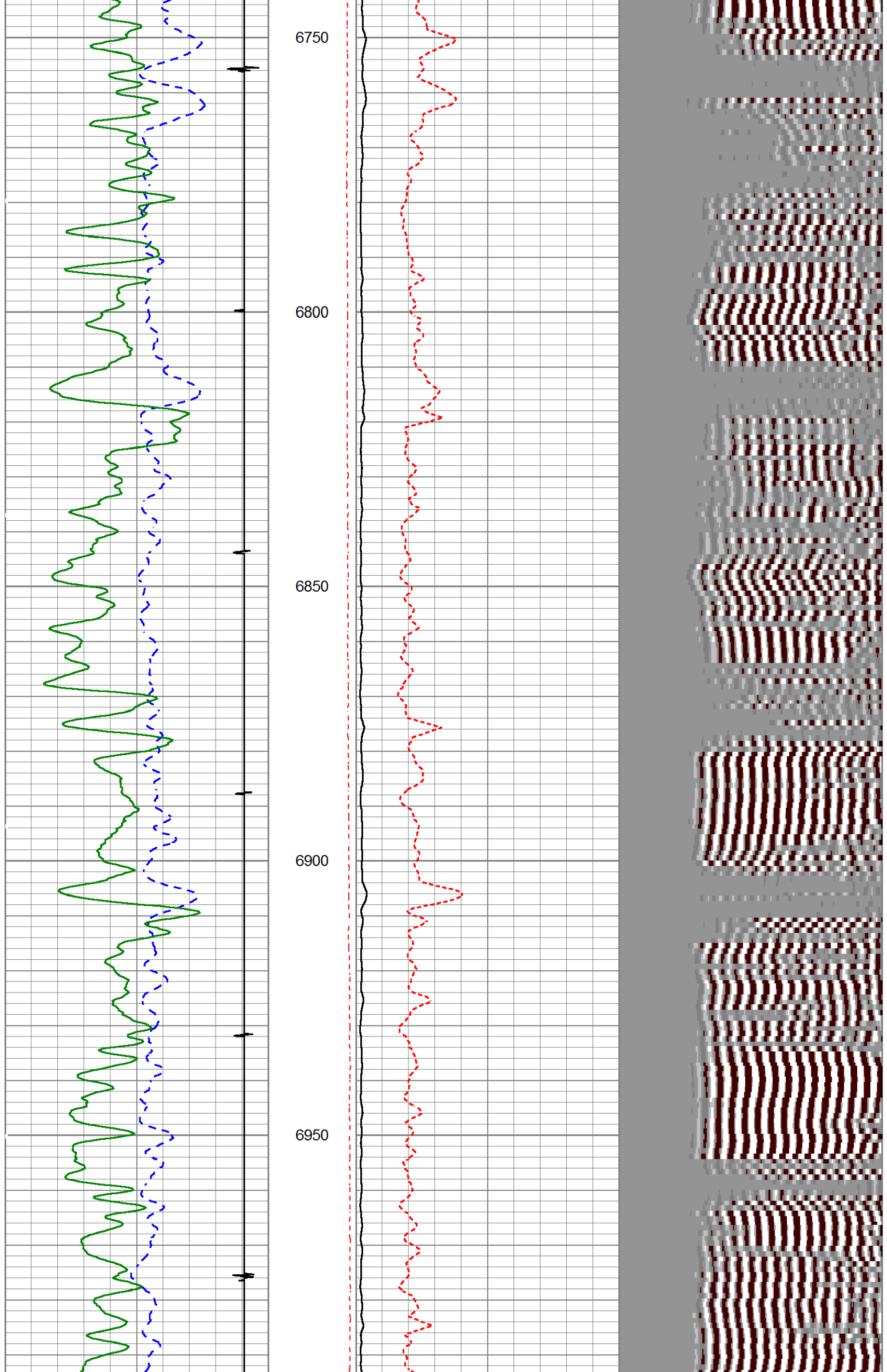


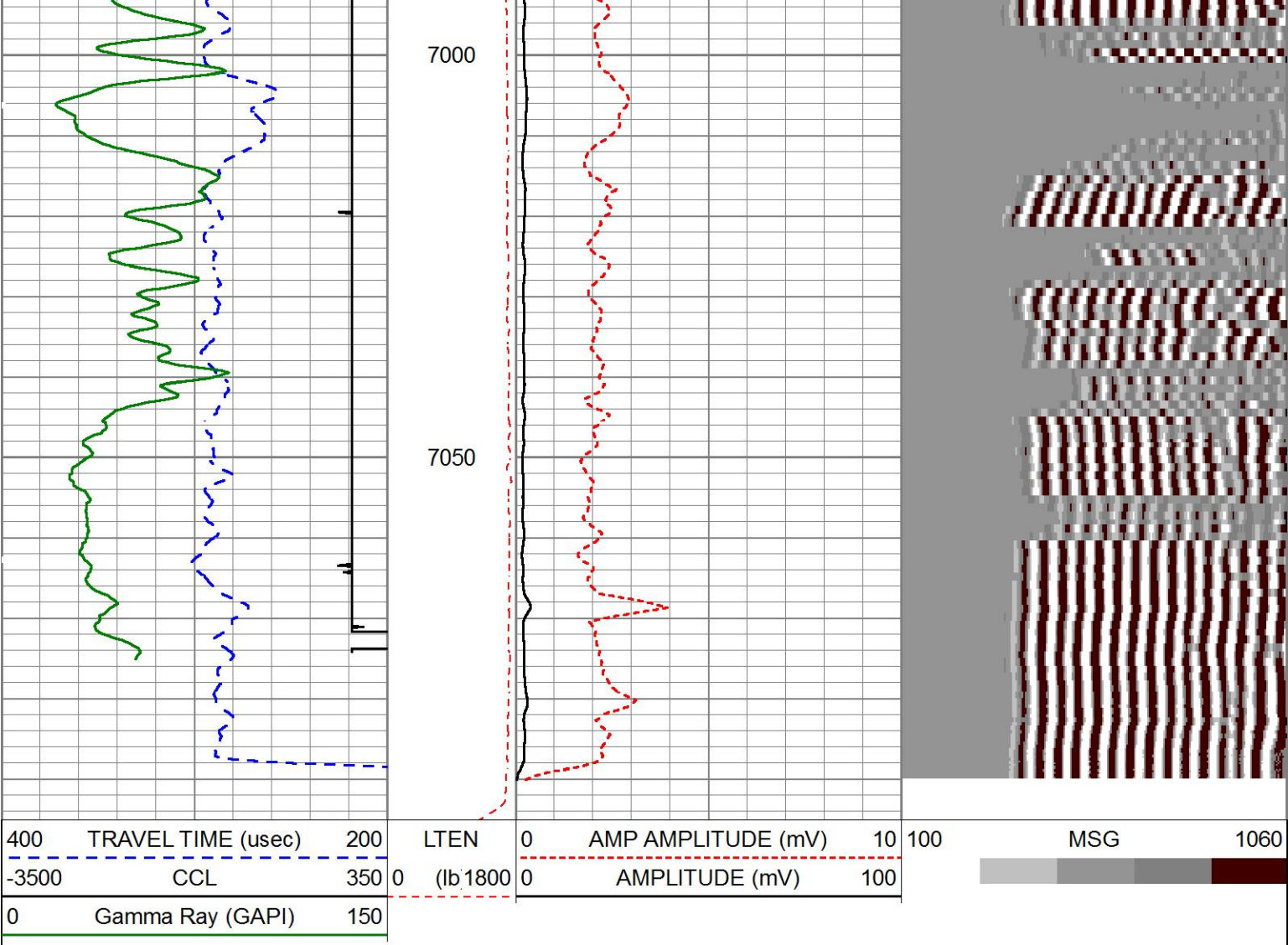






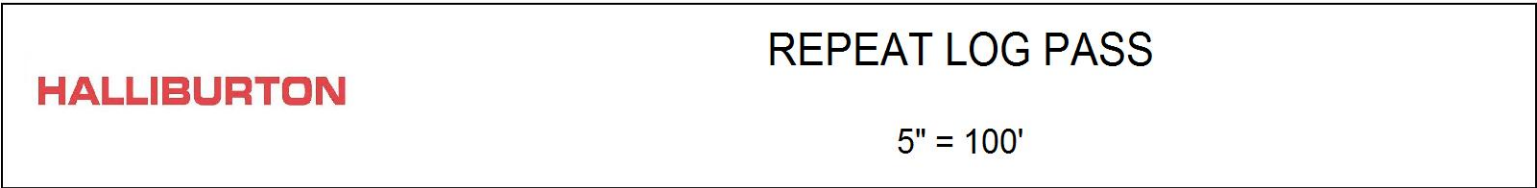






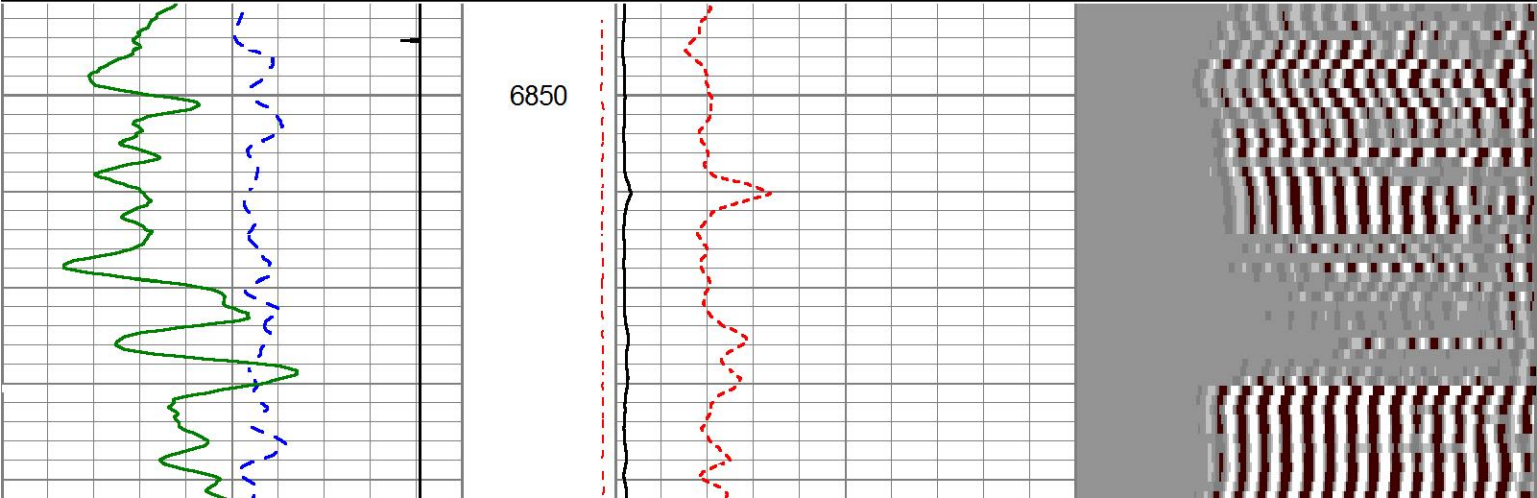
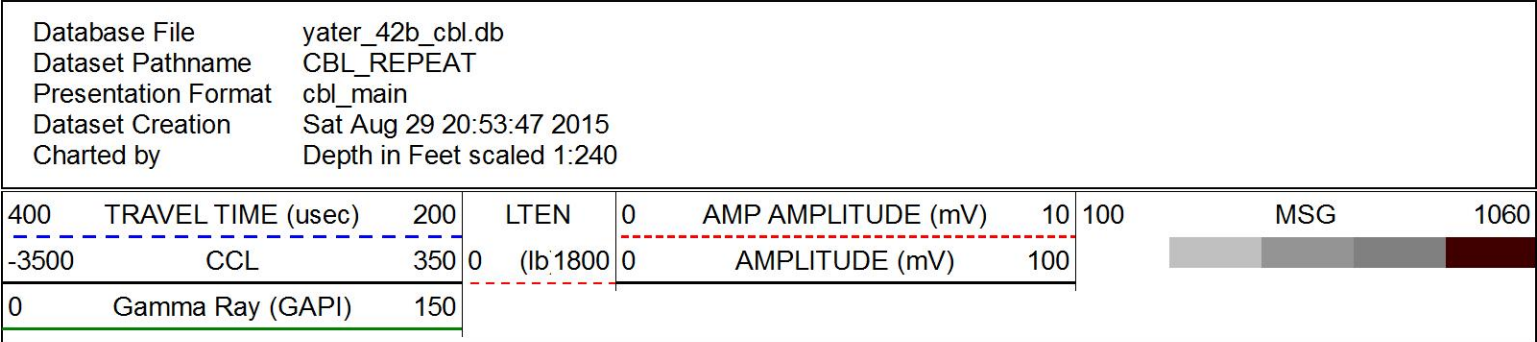
MAIN LOG SECTION

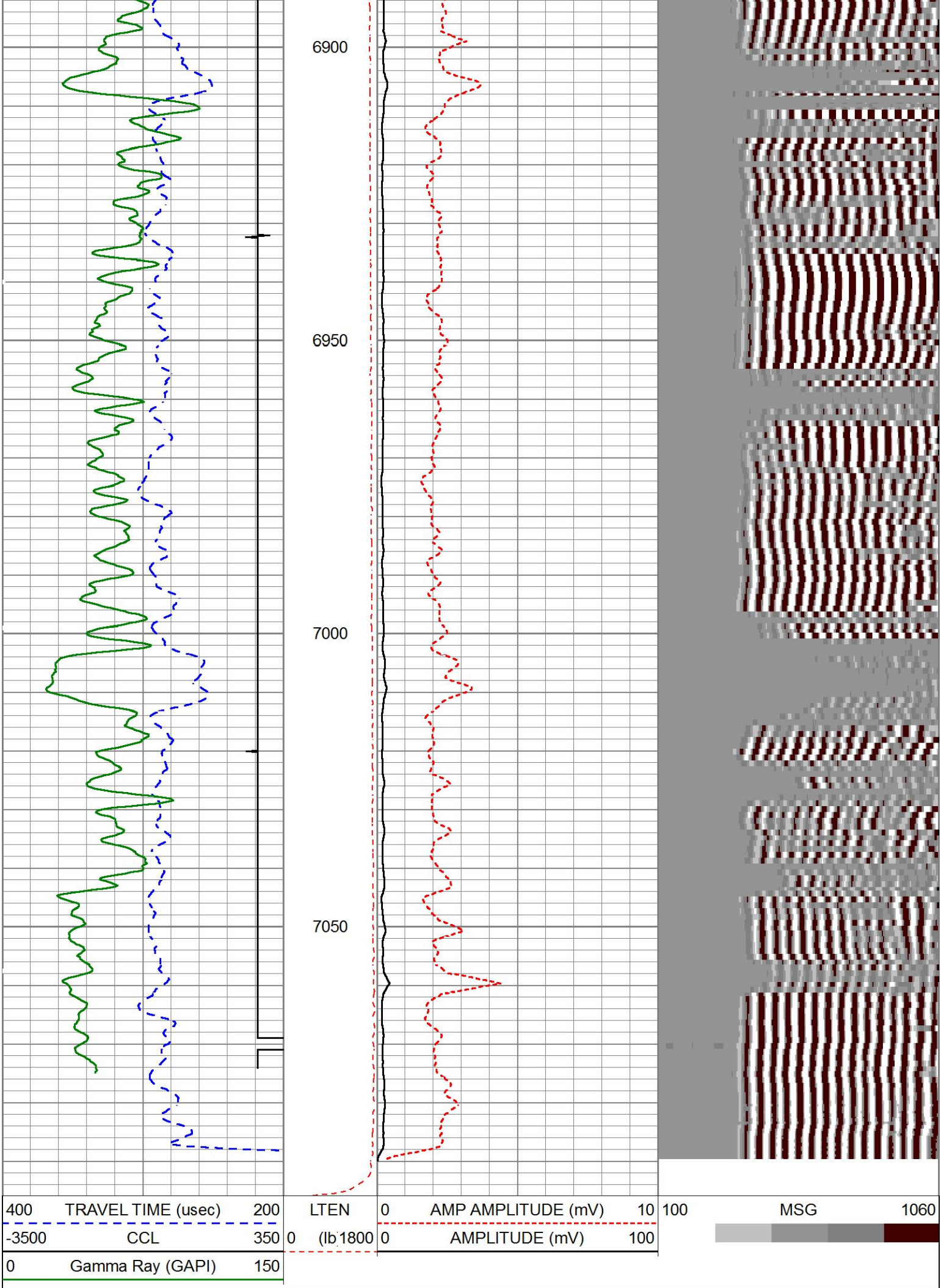
5" = 100'



REPEAT LOG PASS

5" = 100'





HALLIBURTON

REPEAT LOG PASS



5" = 100'


Log Variables Dataset field/well/run1/CBL_MAIN/_vars_							
Top - Bottom							
GAINCO	RINOR	RTF	RTN	RNOR	PPT usec	MAXAMPL mV	MINAMPL mV
0	0	0	0	0	0	82	2
MINATTN db/ft	MSGGN	USERFTT usec/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�CF	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_42b_cbl.db	
Dataset Pathname	CBL_MAIN	
Dataset Creation	Sat Aug 29 21:03:35 2015	
Cement Bond Log Shop Calibration Report		
Serial-Model:	11794522-A	
Calibration Performed:	Sat Aug 29 20:20:21 2015	
Free Pipe Calibration		
TT	Measured	Units
	245.0	usec
Amplitude	853.8	mV
Log Base Line	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	0.095	

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	
			CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00	
Temp	9.49						
TT3FT AMP3FT	7.24		HCBLM-A (11794522) Halliburton HCBLM Tool	9.38	2.75	116.00	
	7.24						
			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	

LLMTEN	0.00		BUL-006 (000002) Bullnose Terminator	0.22	1.69	1.20
Dataset: yater_42b_cbl.db: field/well/run1/CBL_MAIN Total length: 24.62 ft Total weight: 278.20 lb O.D.: 3.13 in						

Company	URSA OPERATING CO., LLC.				
Well	YATER 42B-18-07-95				
Field	PARACHUTE				
County	GARFIELD		State	CO	
HALLIBURTON	ACOUSTIC CEMENT BOND LOG				