

HALLIBURTON

ACOUSTIC CEMENT
BOND LOG

Company		URSA OPERATING CO., LLC.	
Well		YATER 21C-17-07-95	
Field		PARACHUTE	
County		GARFIELD	State CO

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API No.:	05045227480000	Serv #:	902697936	Other Services
Location:		SURFACE HOLE LOCATION: 1780' FSL & 1129' FWL		
Location:		BOTTOM HOLE LOCATION: 863' FNL & 1980' FWL		
Location:		GAUGE RING RMT		

Permanent Datum		GROUND LEVEL		Elevation	5519	Elevation
Log Measured From		KB		17 Ft. above perm. datum		K.B. 5536 D.F. 5535 G.L. 5519
Drilling Measured From		KB				

Date @ Time Logged		29 AUGUST 2015		Type Fluid in Hole	WATER
Run No.		ONE		Density of Fluid	8.4#
Depth - Driller		7540'		Fluid Level	FULL
Depth - Logger		7452'		Cement Top Est. Logged	N/A
Bottom - Logged Interval		7447'		Equipment / Location	10971668 / G.J.
Top - Log Interval		100'		Recorded by	B RIDDEL
Max. Recorded Temp.		212 DEG F		Witnessed by	D. COOLEY

CEMENTING DATA		Surface		Protection	Production	Liner
		String		String	String	
		N/A		N/A	N/A	N/A

Date / Time Cemented		N/A		N/A		N/A
Primary / Squeeze						
Expected Compressive Strength		psi@ hrs		psi@ hrs		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"	1868'	SURFACE	8.625"	32.0#	1868'	SURFACE
TWO	7.875"	7540'	SURFACE	4.5"	11.6#	7519'	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: 29 AUGUST 2015 IS THE PRIMARY DEPTH REFERENCE FOR THIS WELL

GR-CBL RAN IN COMBINATION.

LOG INTERVALS PER CUSTOMER REQUEST.

SHORT JOINTS @: 2990' - 3000', 6076' - 6086', AND 6965' - 6975'

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES.

Service Ticket No.	902697936	API No.	05045227480000	PGM Ver	WARRIOR 8
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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.		Run No.	
Serial No.	11495480	Serial No.	11794522	Serial No.		Serial No.	
Model No.	TTCU-U-002	Model No.	CBL-M	Model No.		Model No.	
Diameter	1.688"	Diameter	2.75"	Diameter		Diameter	

LOGGING DATA

General Data						
Pass	Depths		Well Head	Speed	Logging Run Comments	
No	From	To	Pressure	Ft/Min		

ONE	7447'	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			

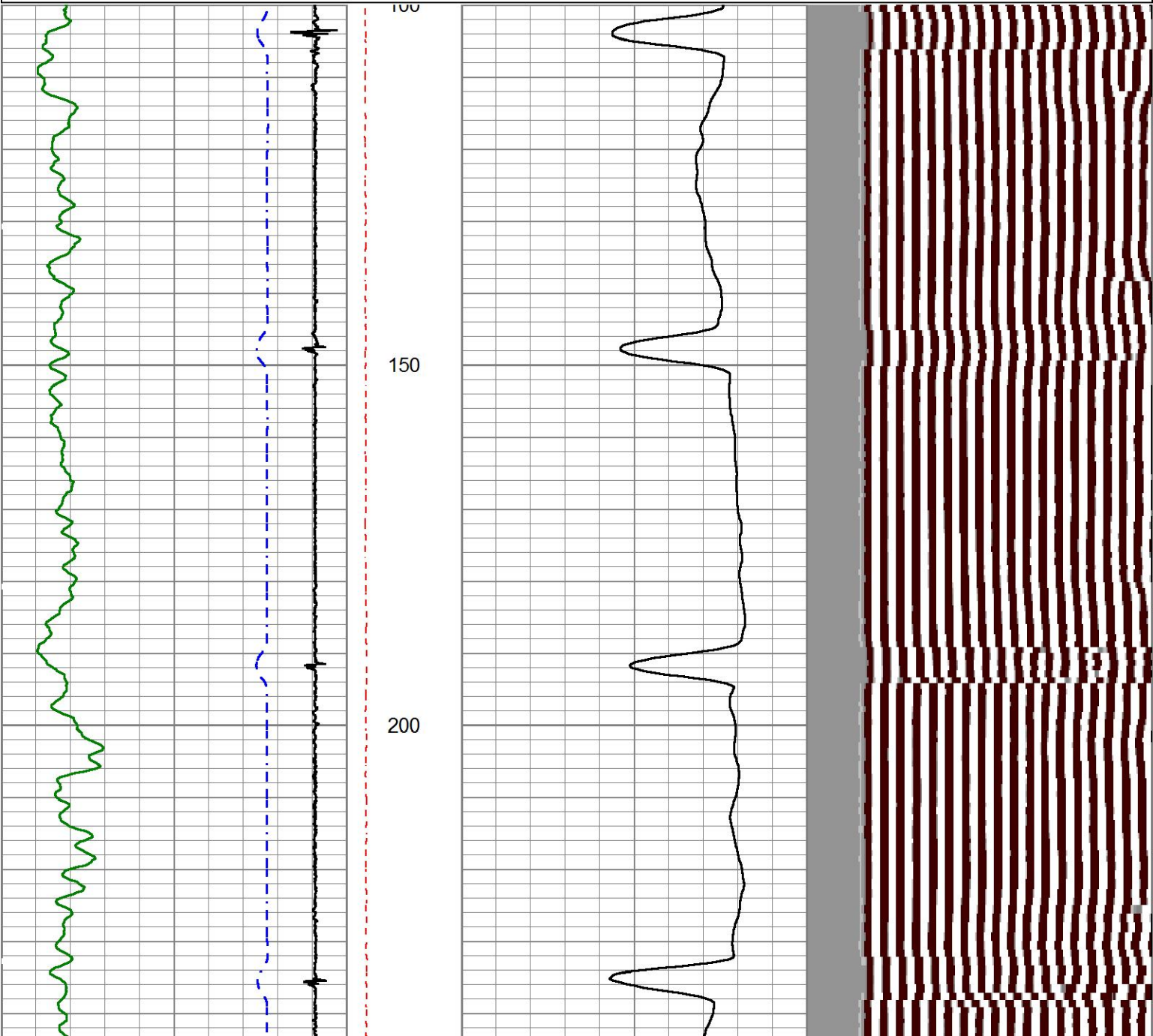
HALLIBURTON

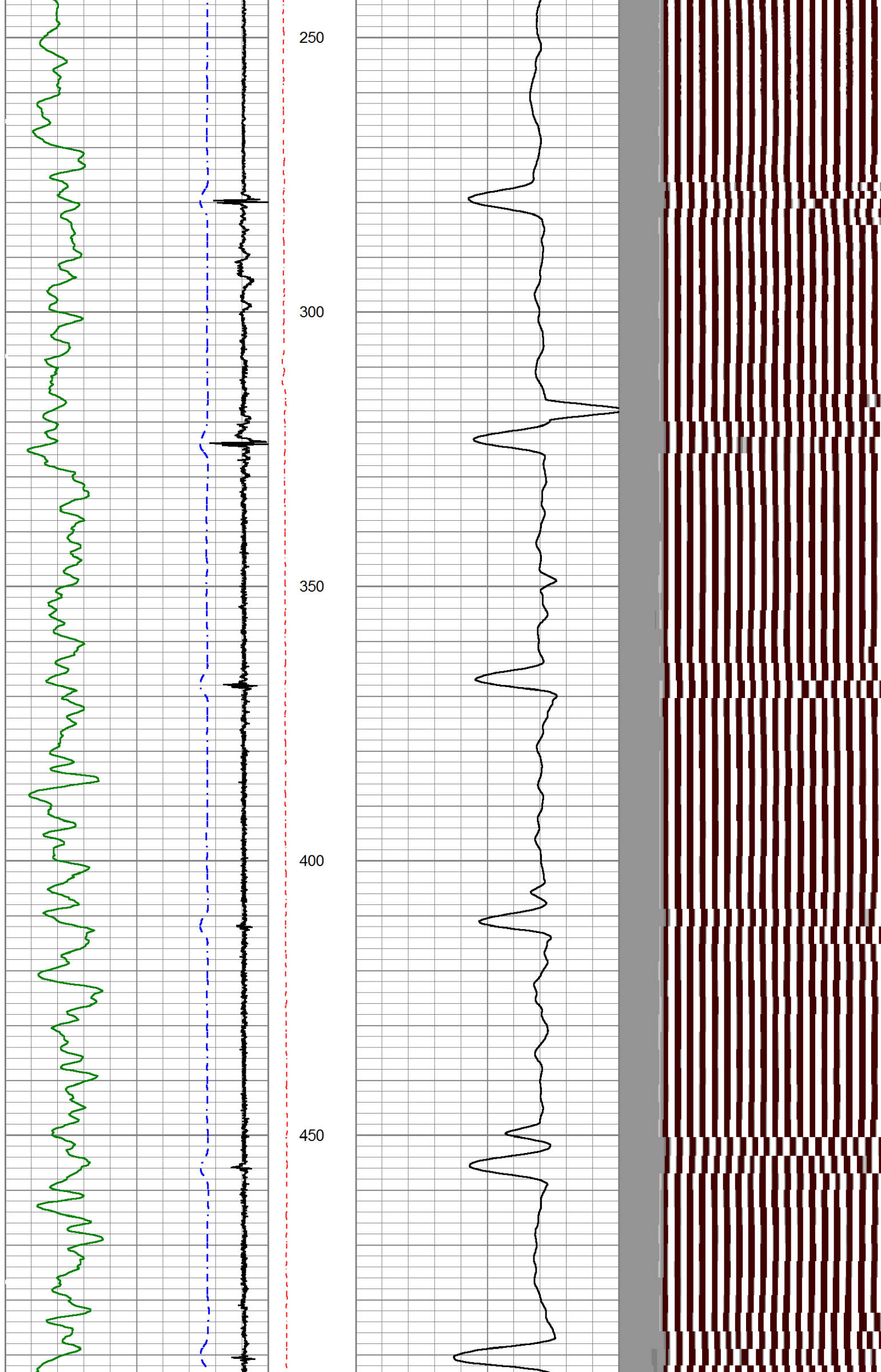
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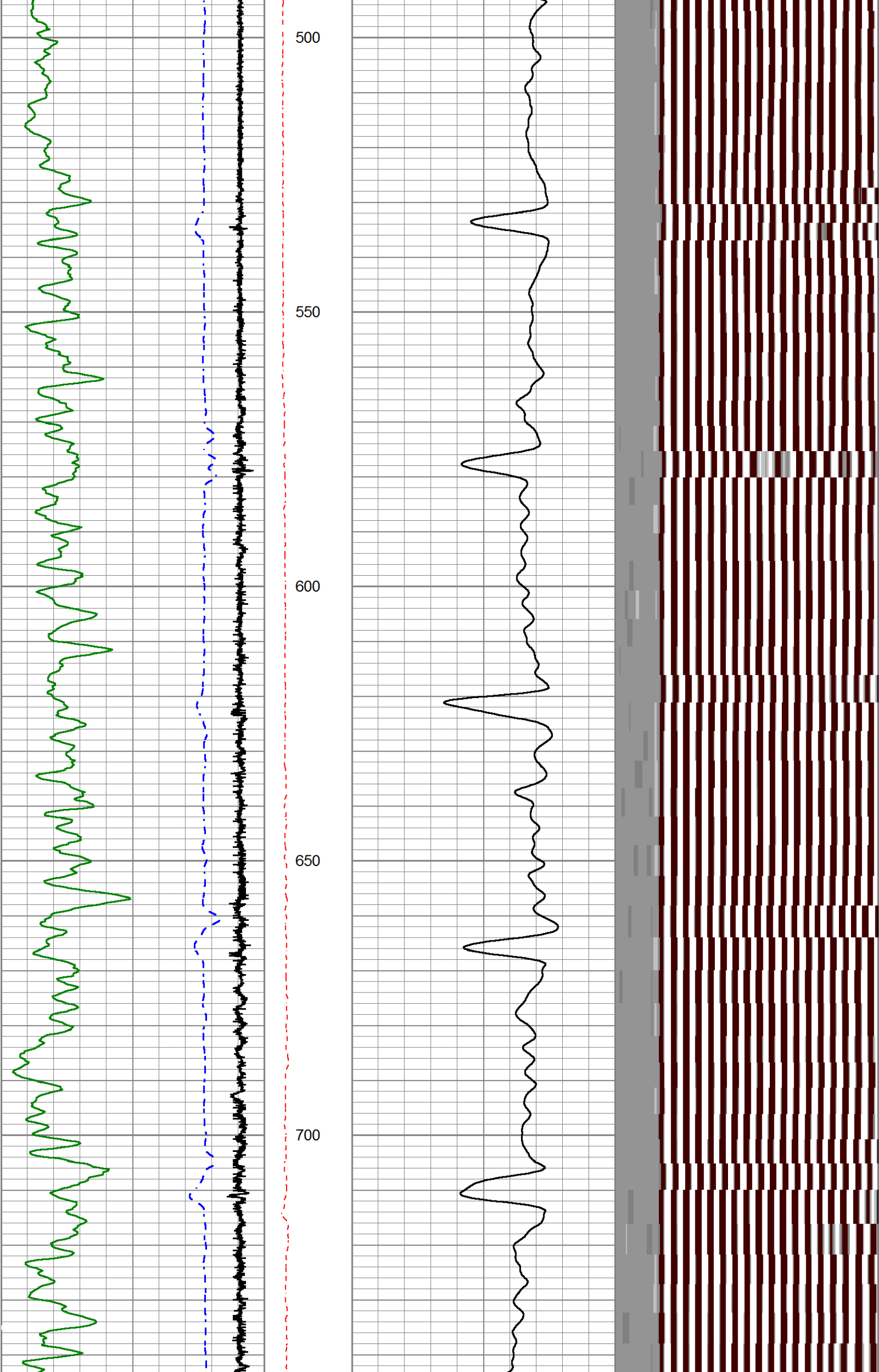
5" = 100'

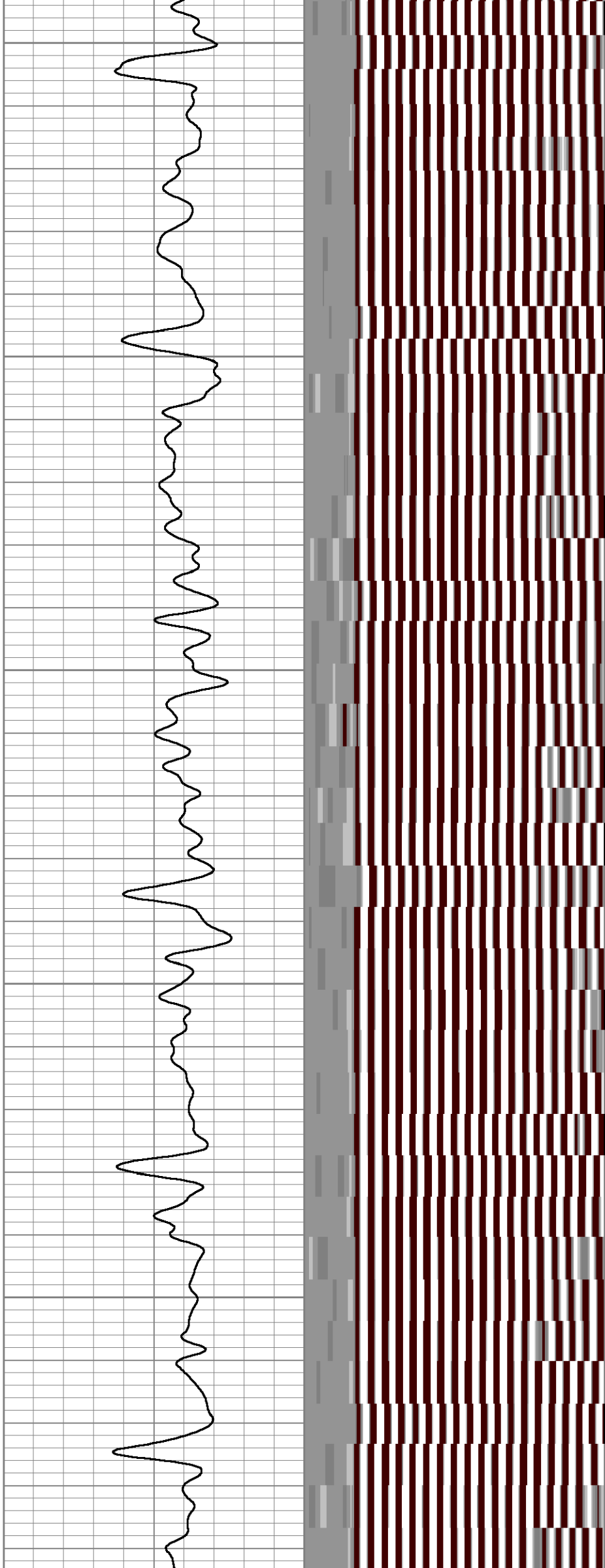
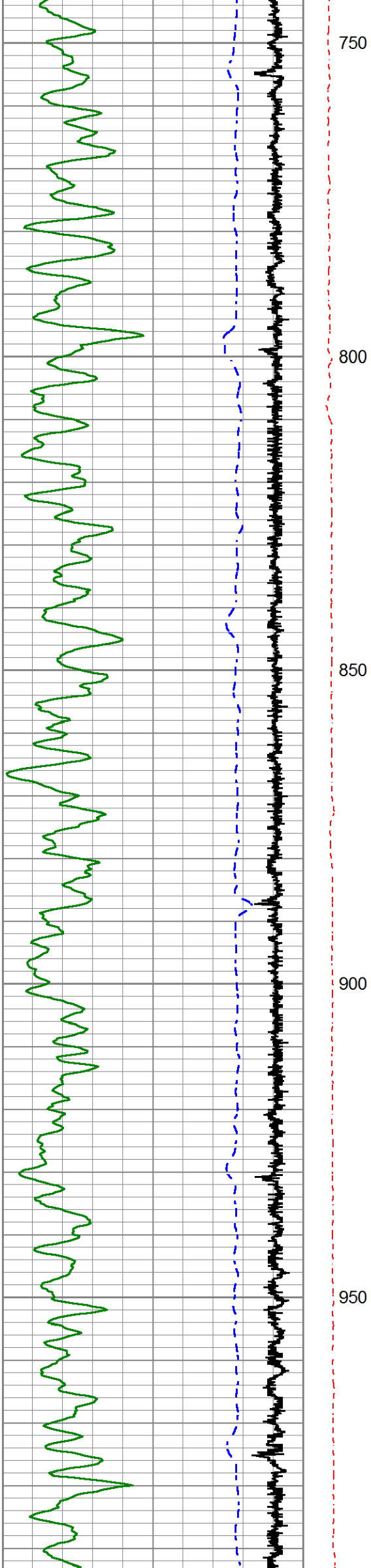
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Dataset Pathname	MAIN1
Presentation Format	cbl_main
Dataset Creation	Sun Aug 30 03:13:04 2015
Charted by	Depth in Feet scaled 1:240

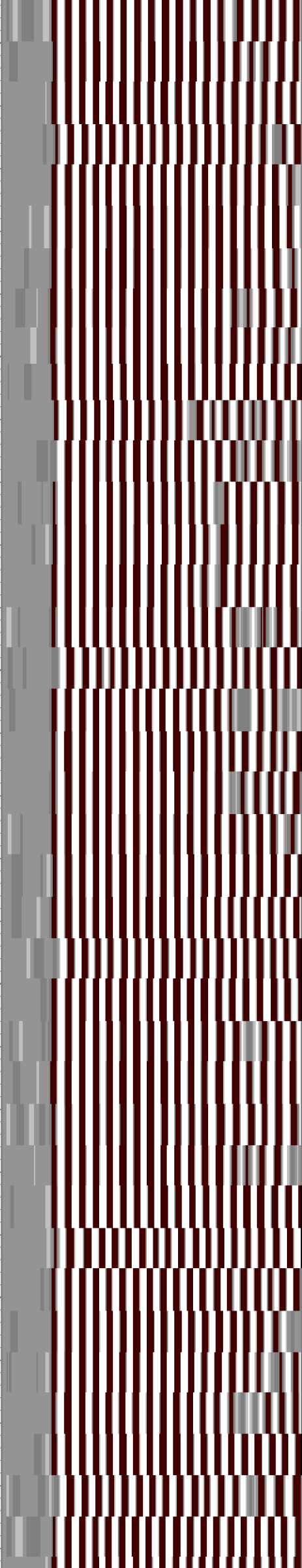
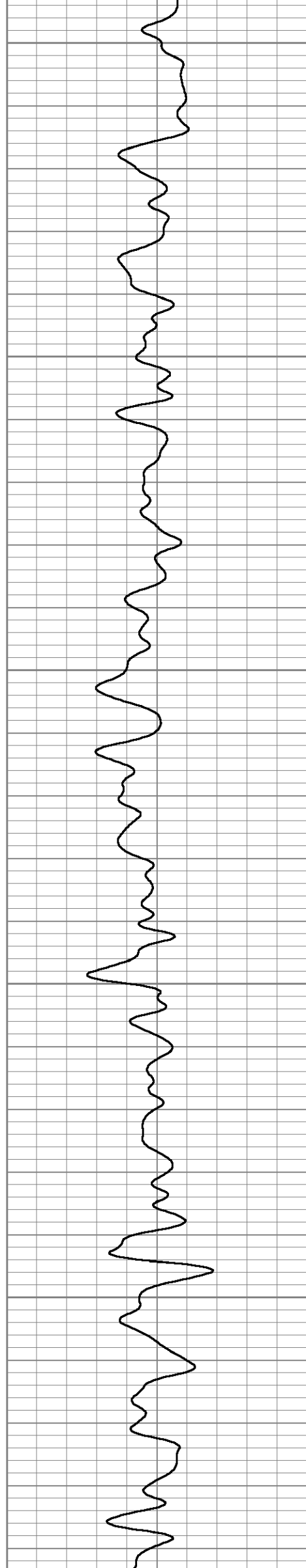
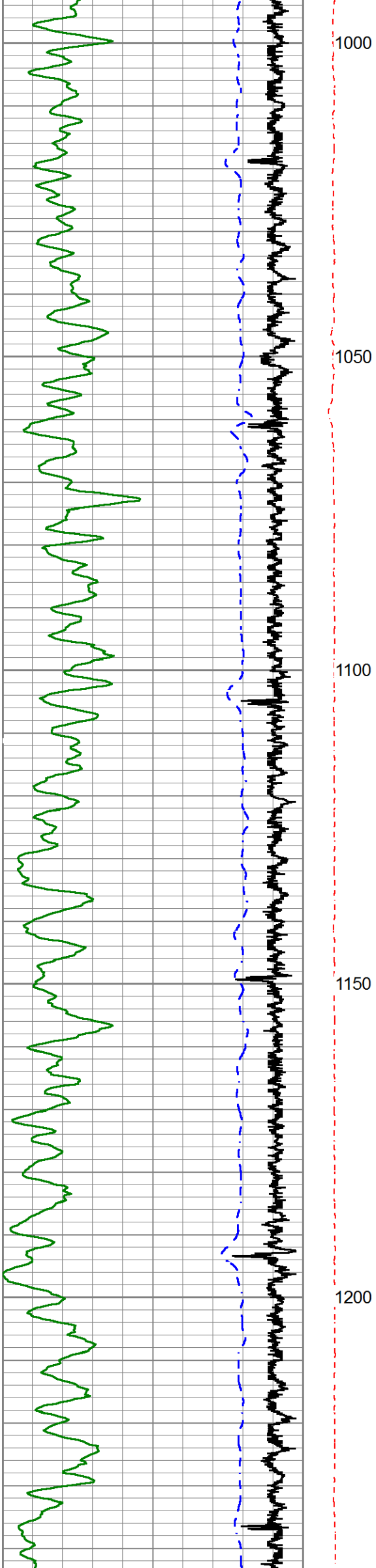
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-3500	CCL	350	0	(lb 1800	0	AMPLITUDE (mV)	100		
0	Gamma Ray (GAPI)	200							

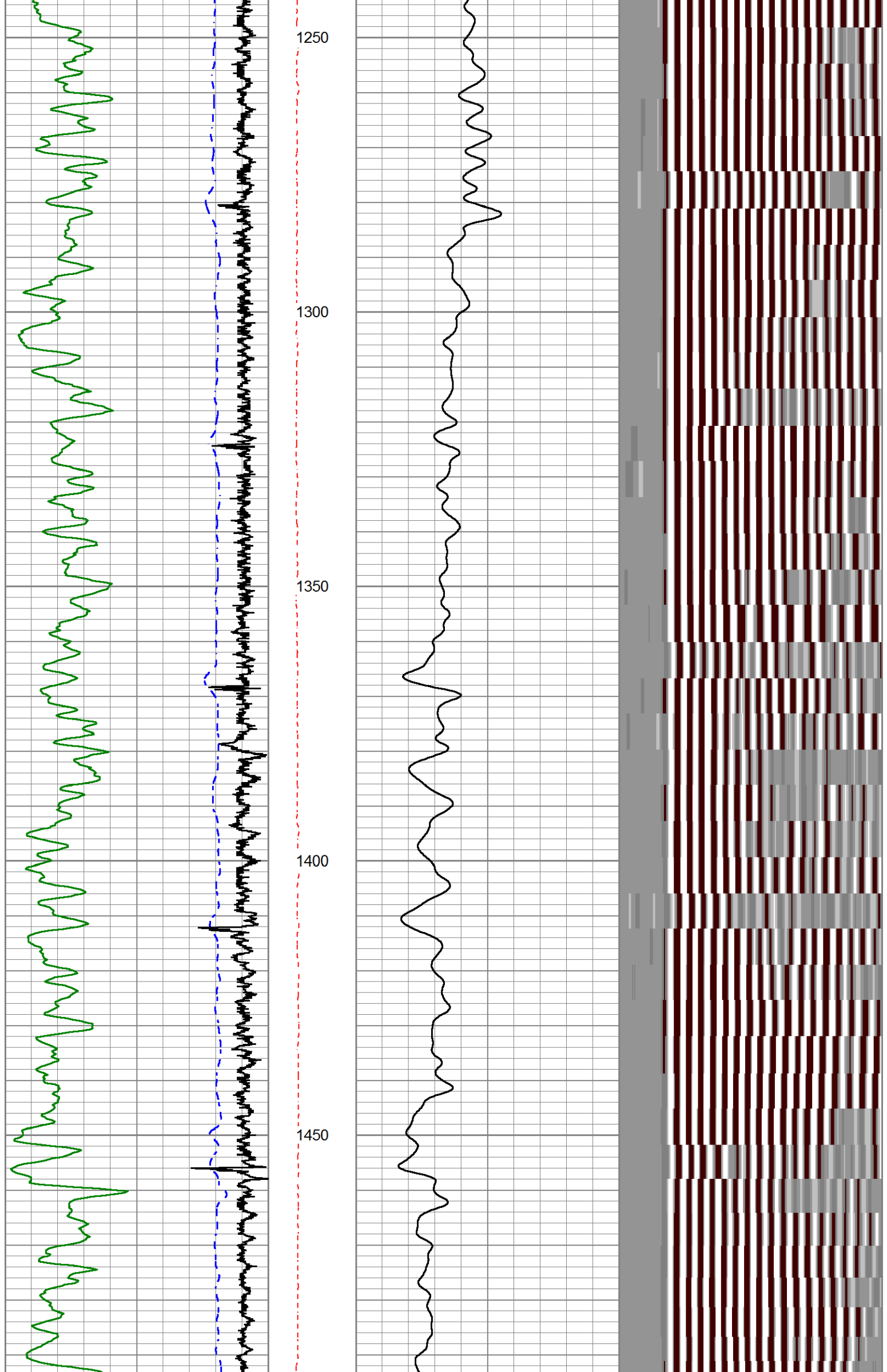


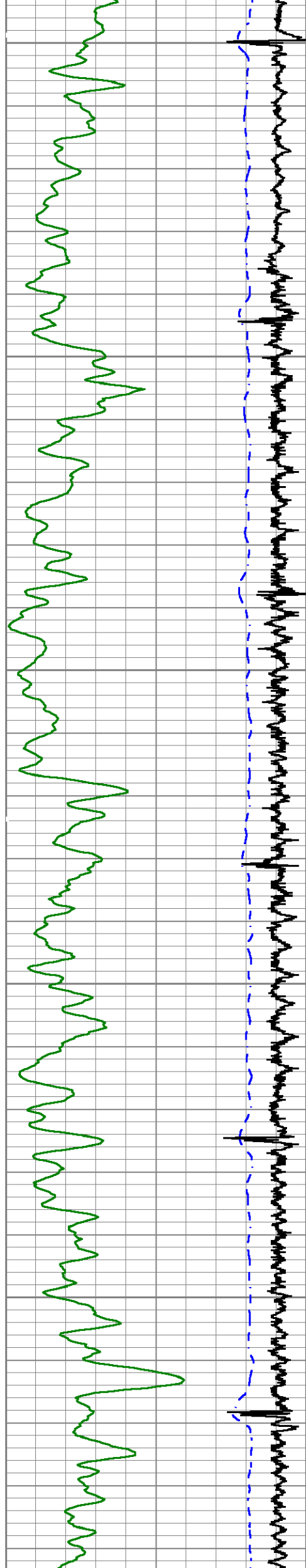












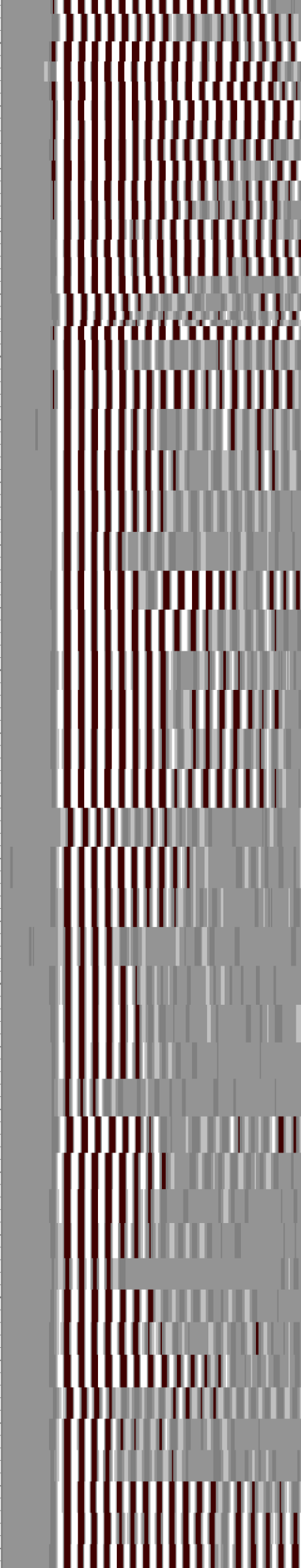
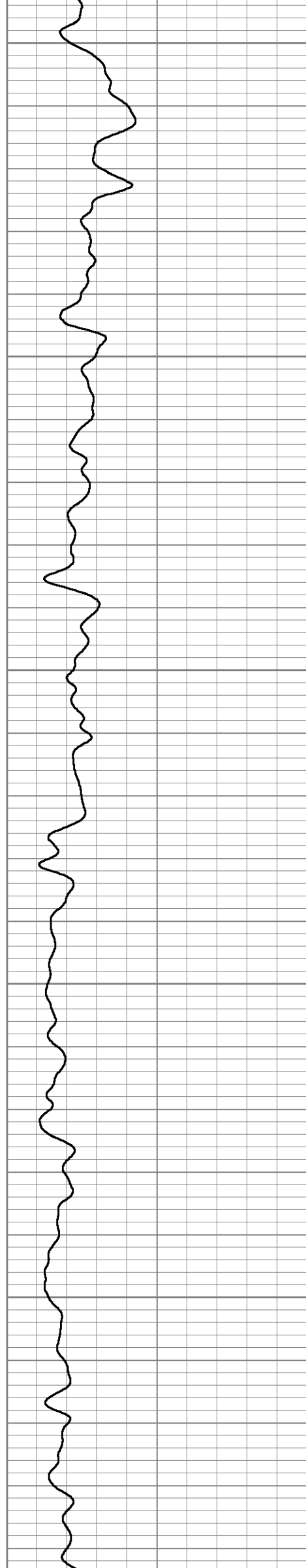
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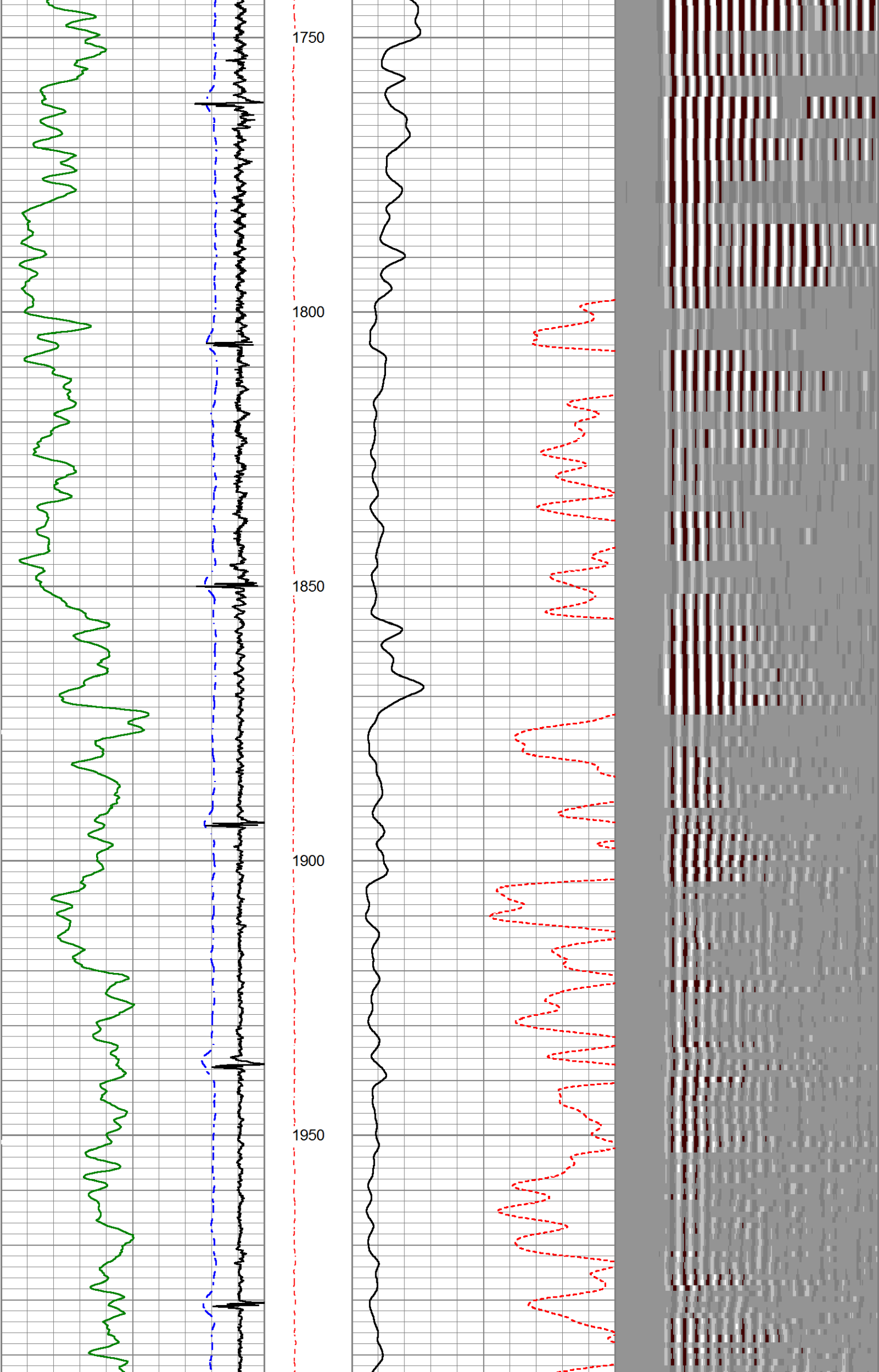
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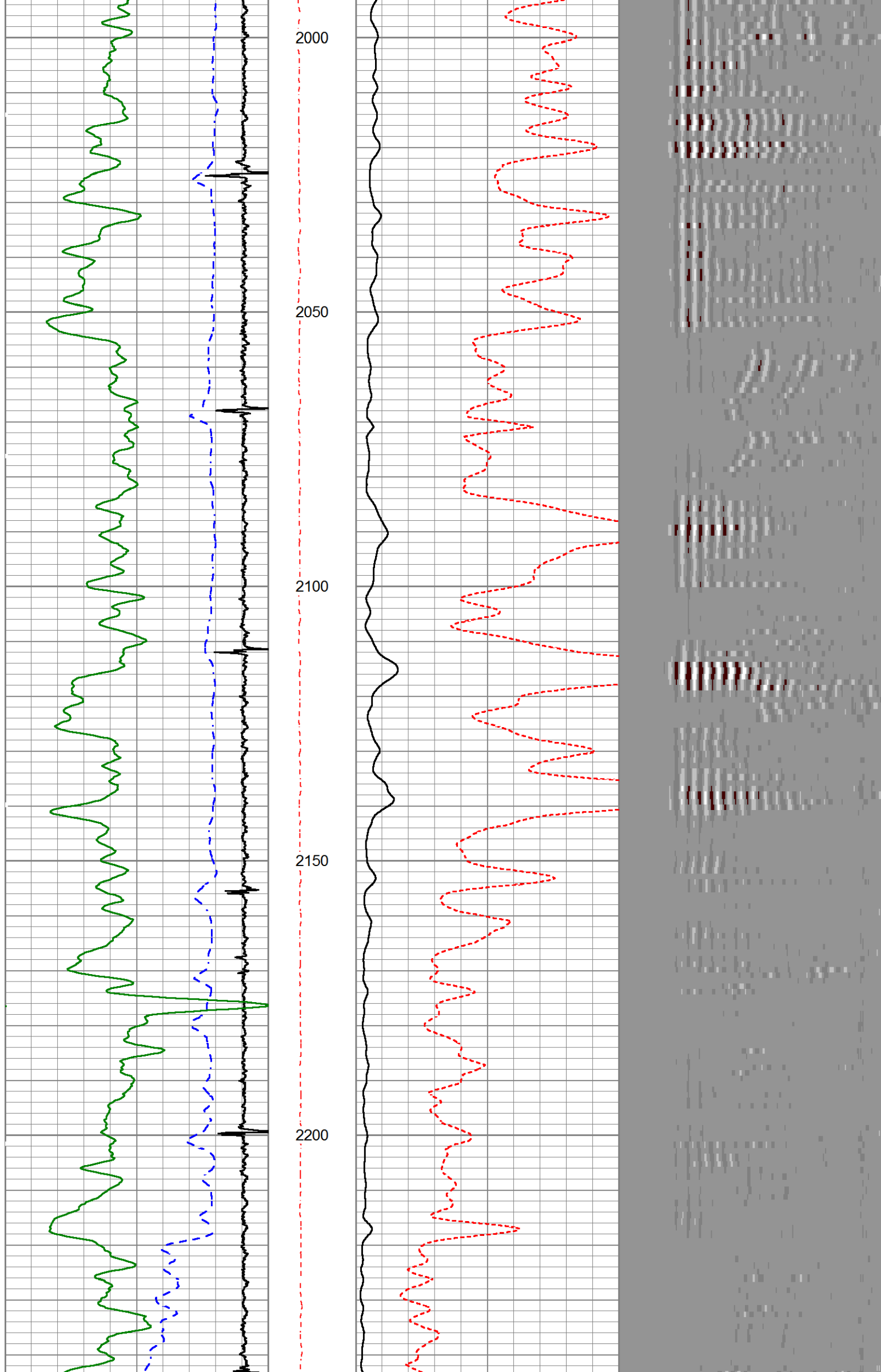
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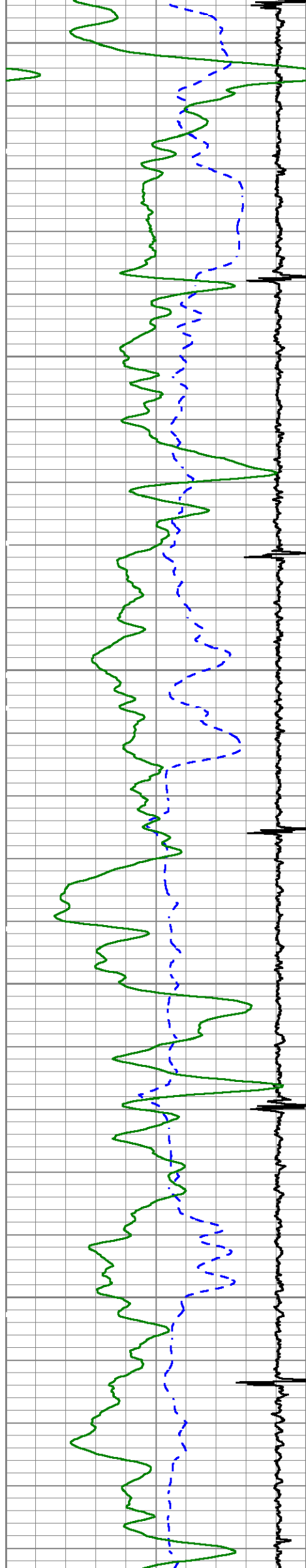
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1700









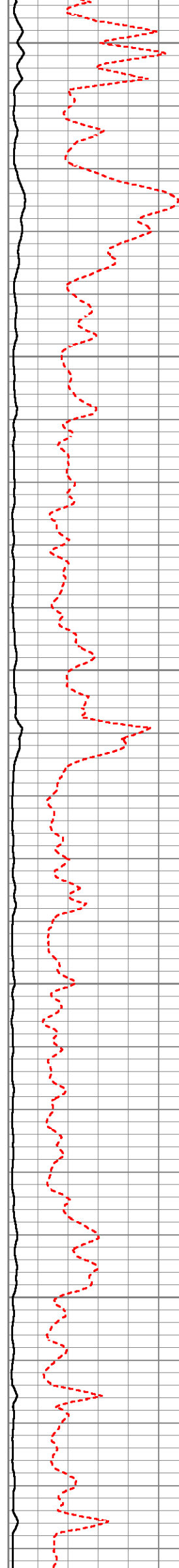
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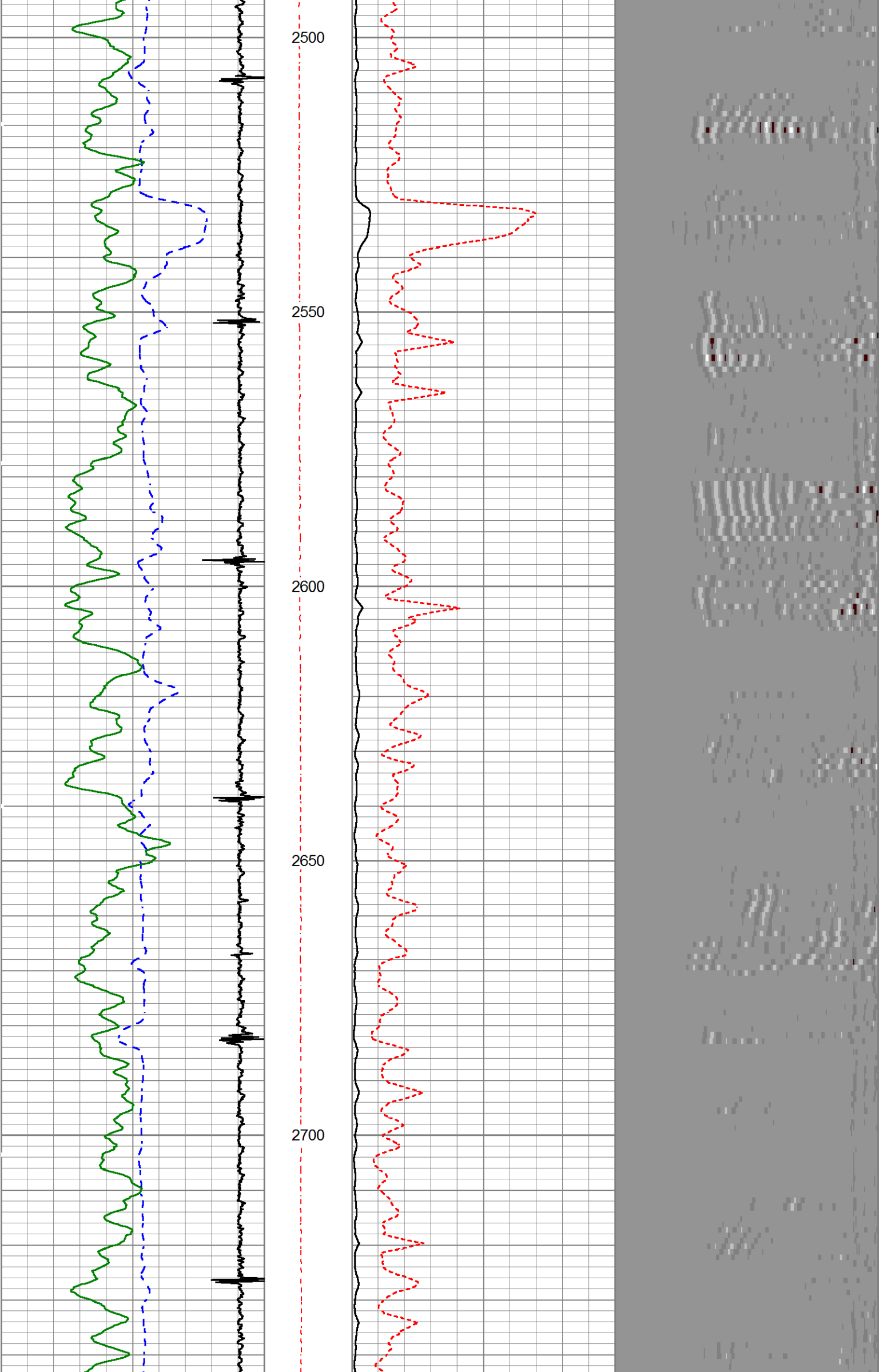
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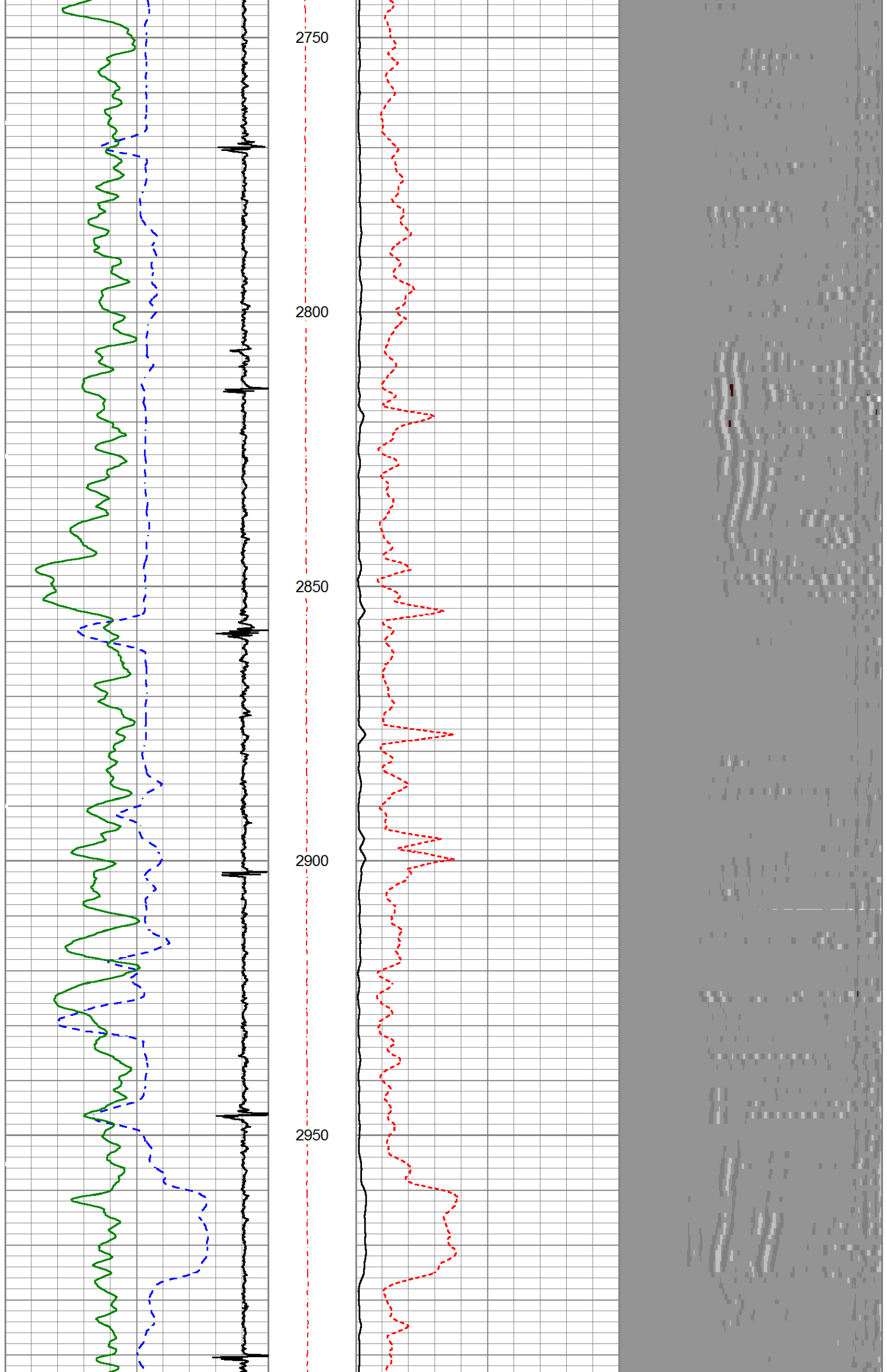
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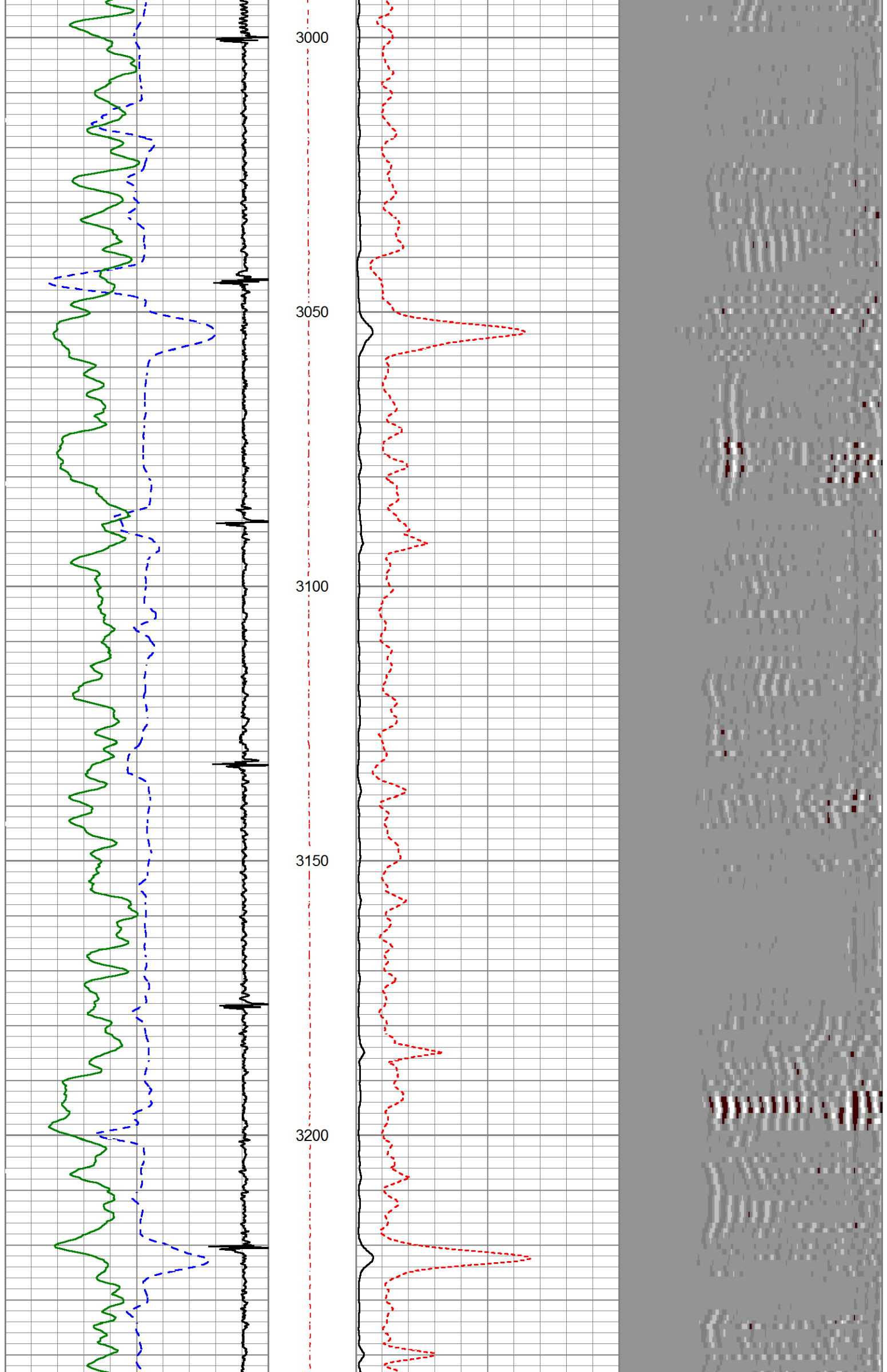
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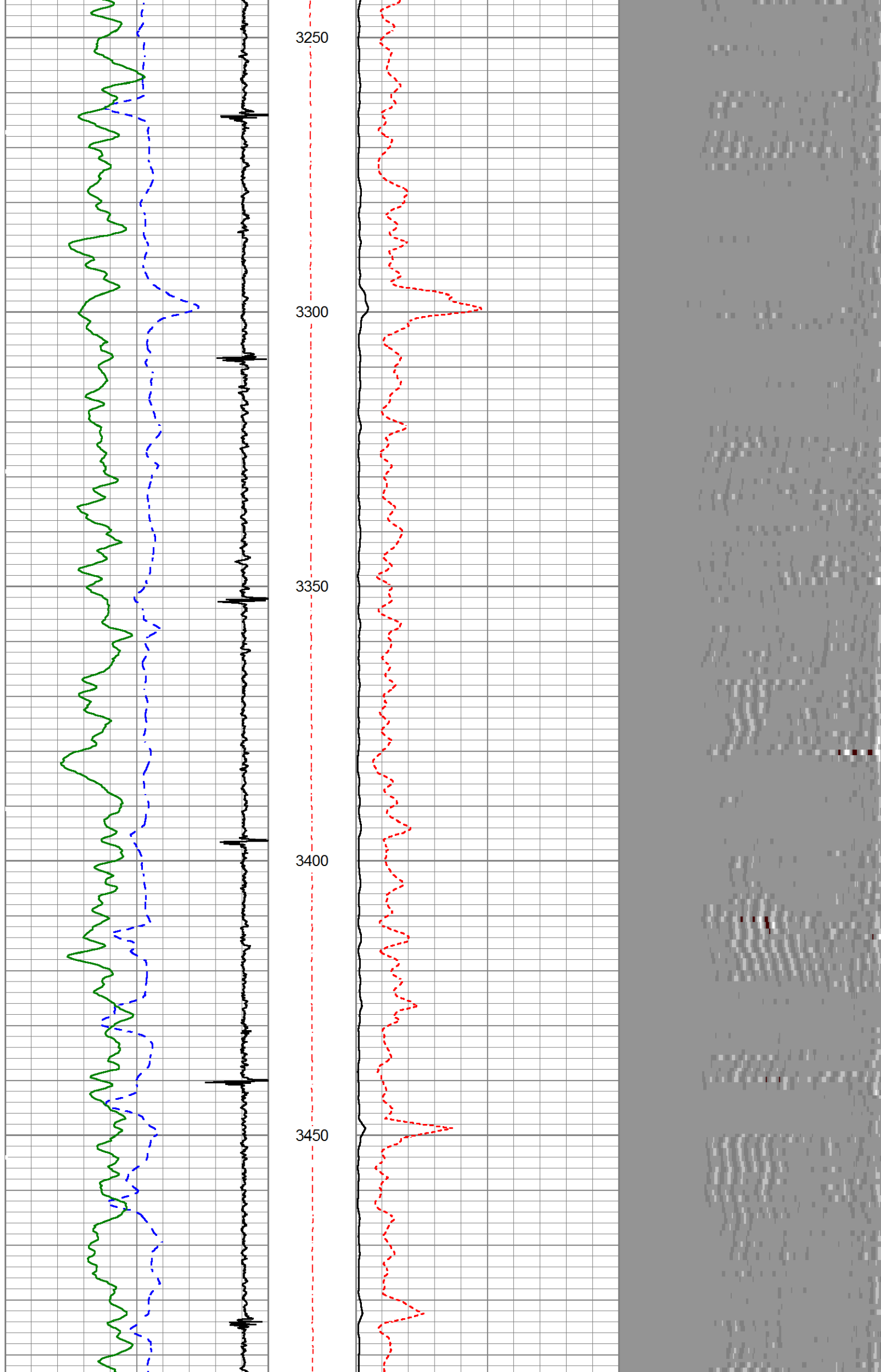
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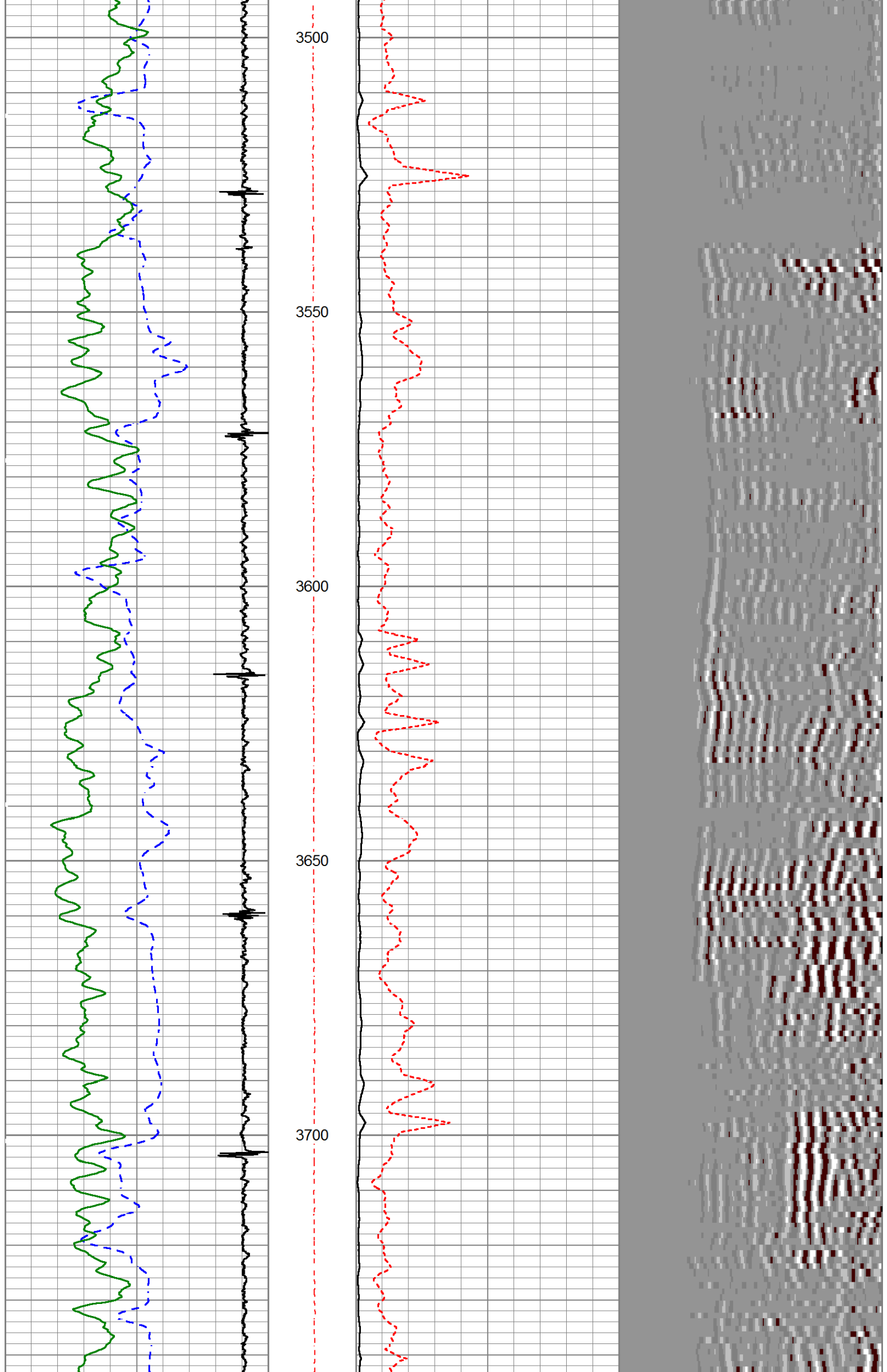


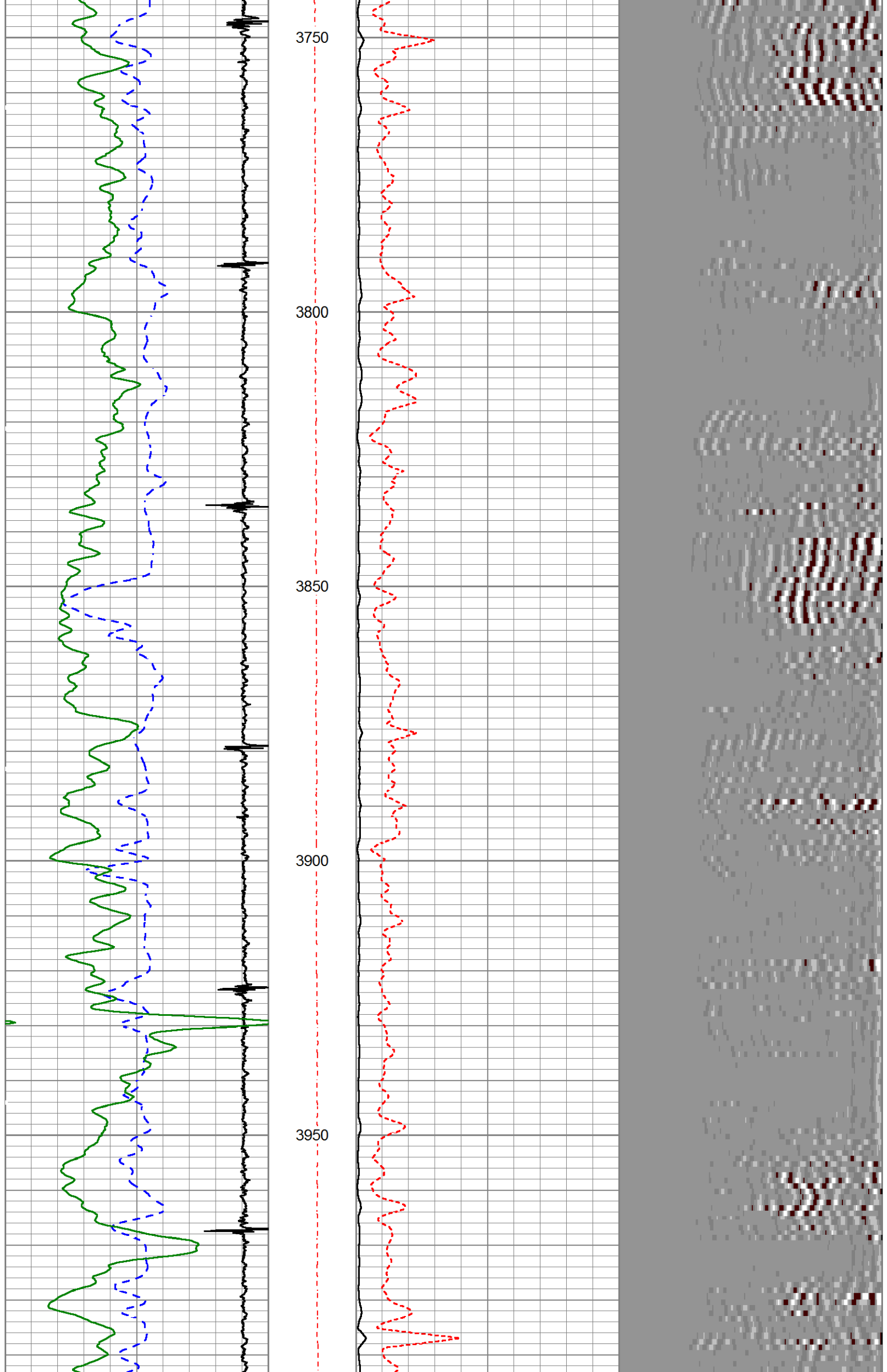


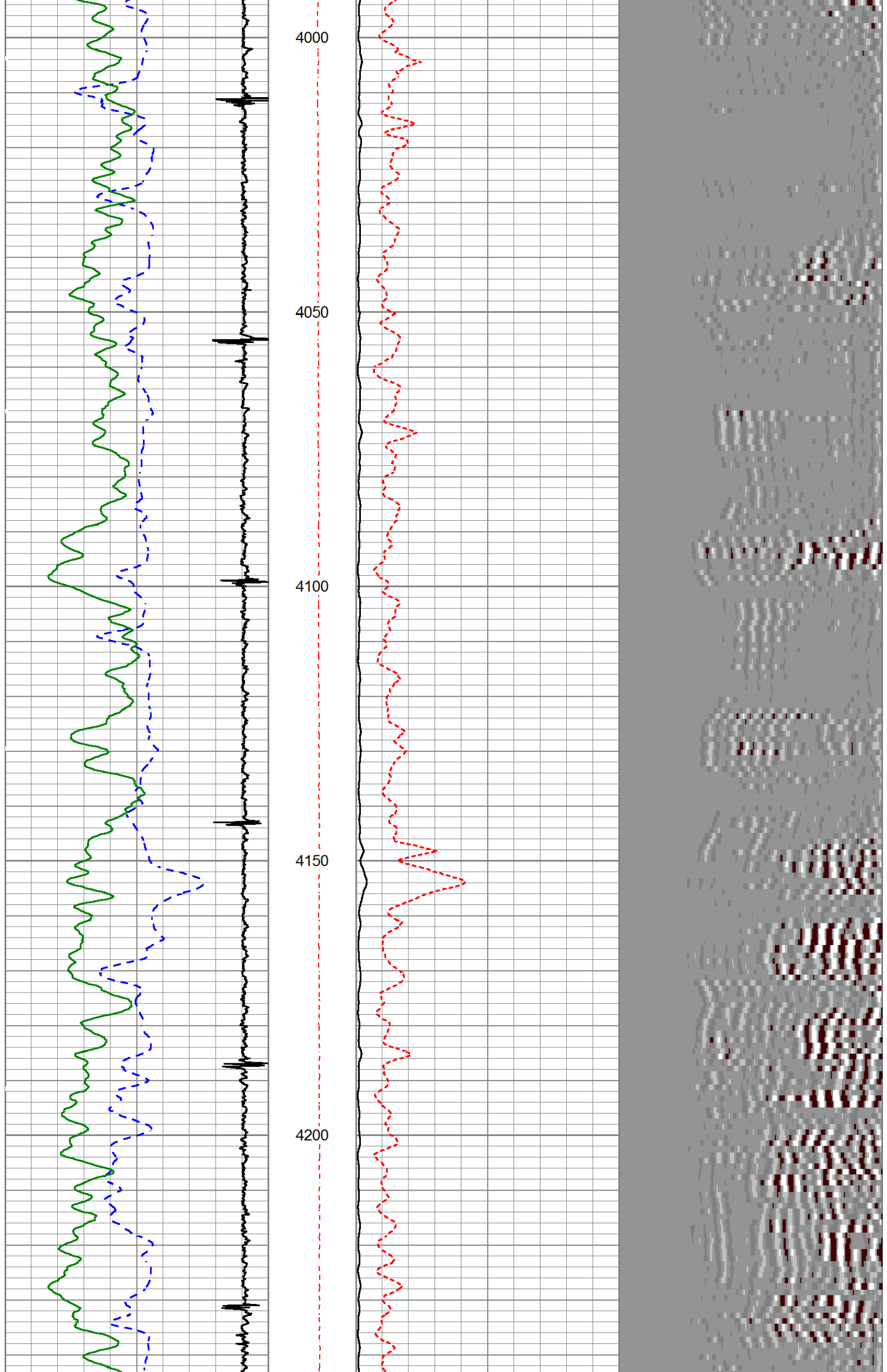


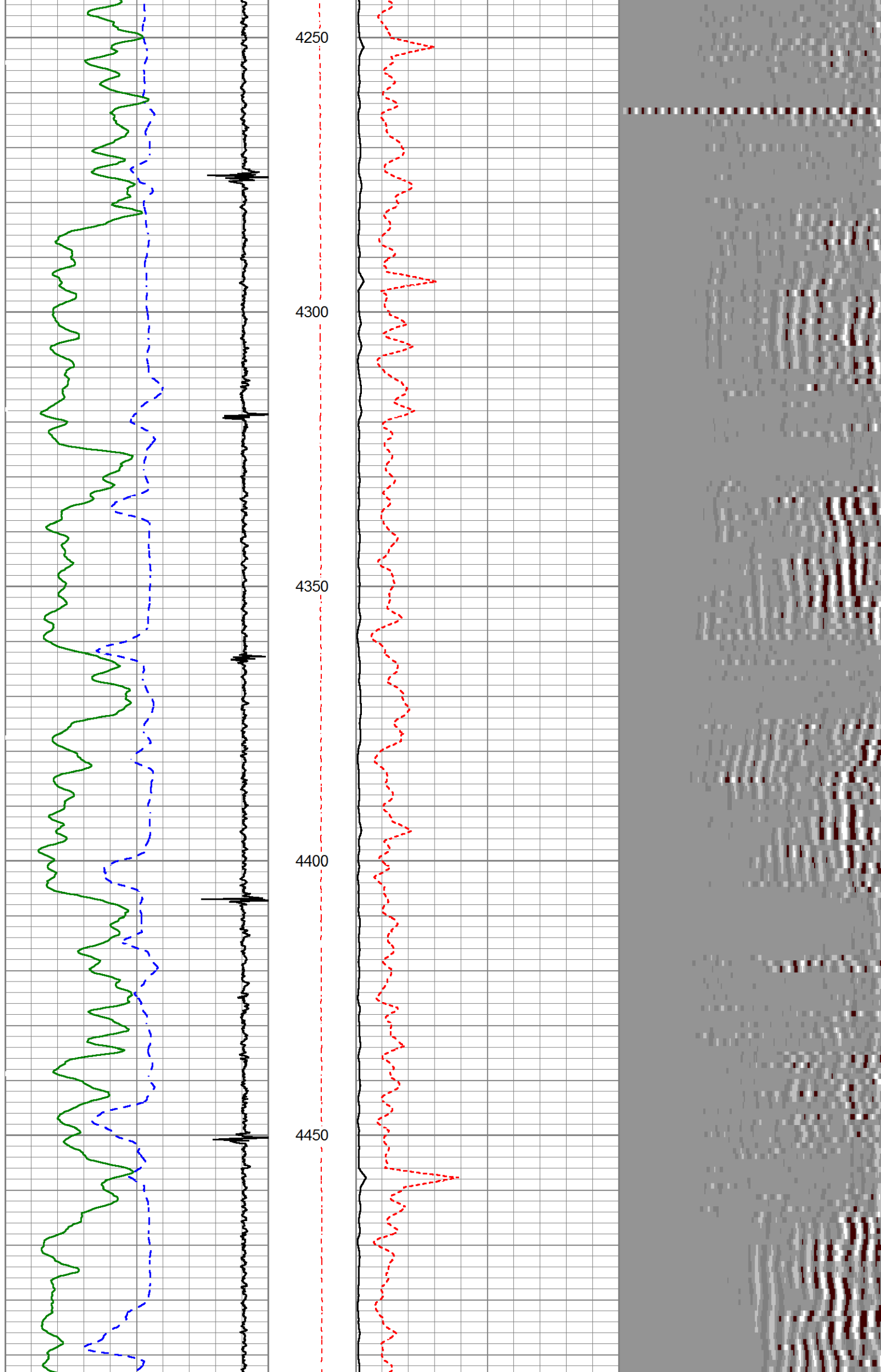


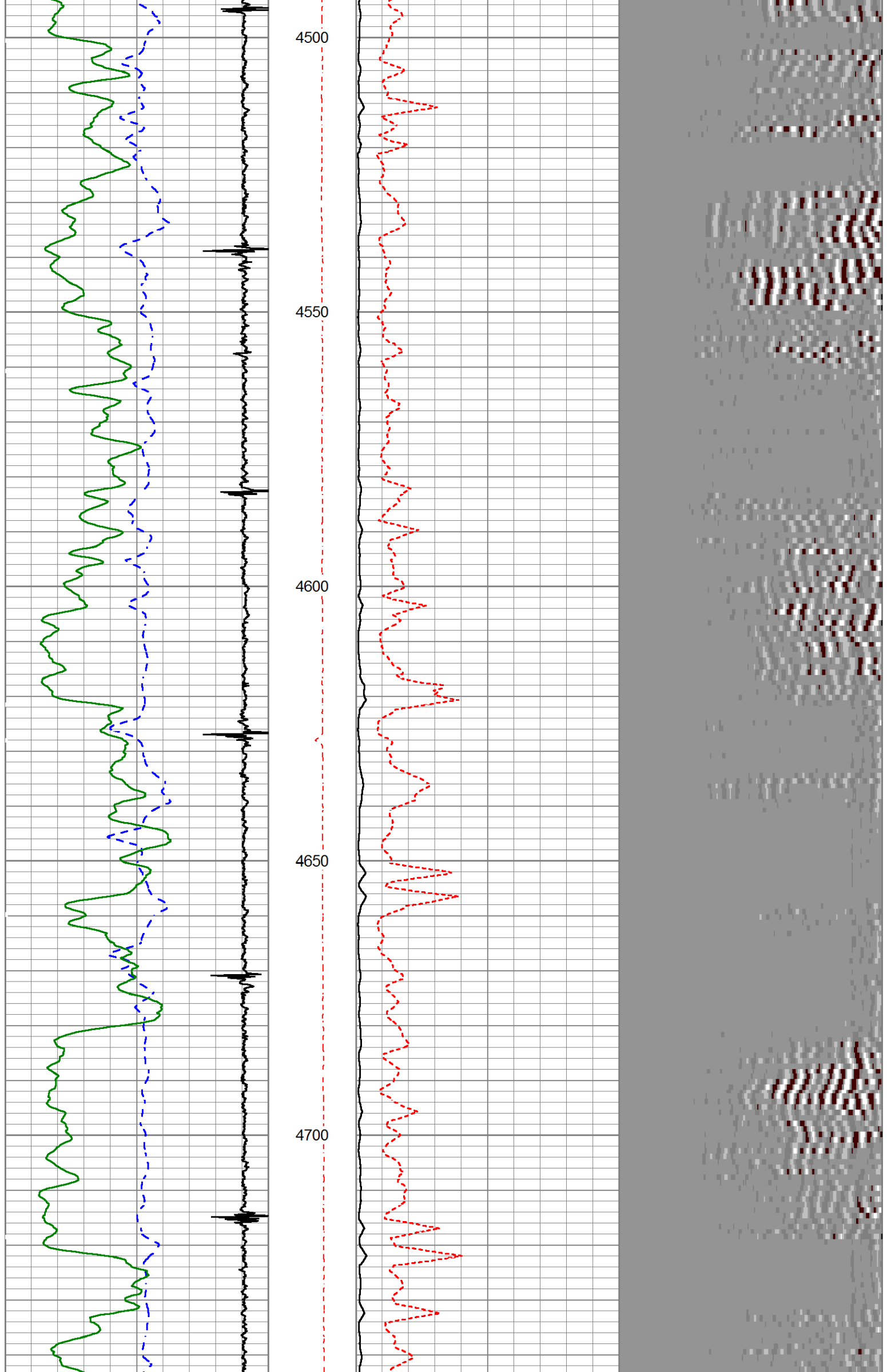


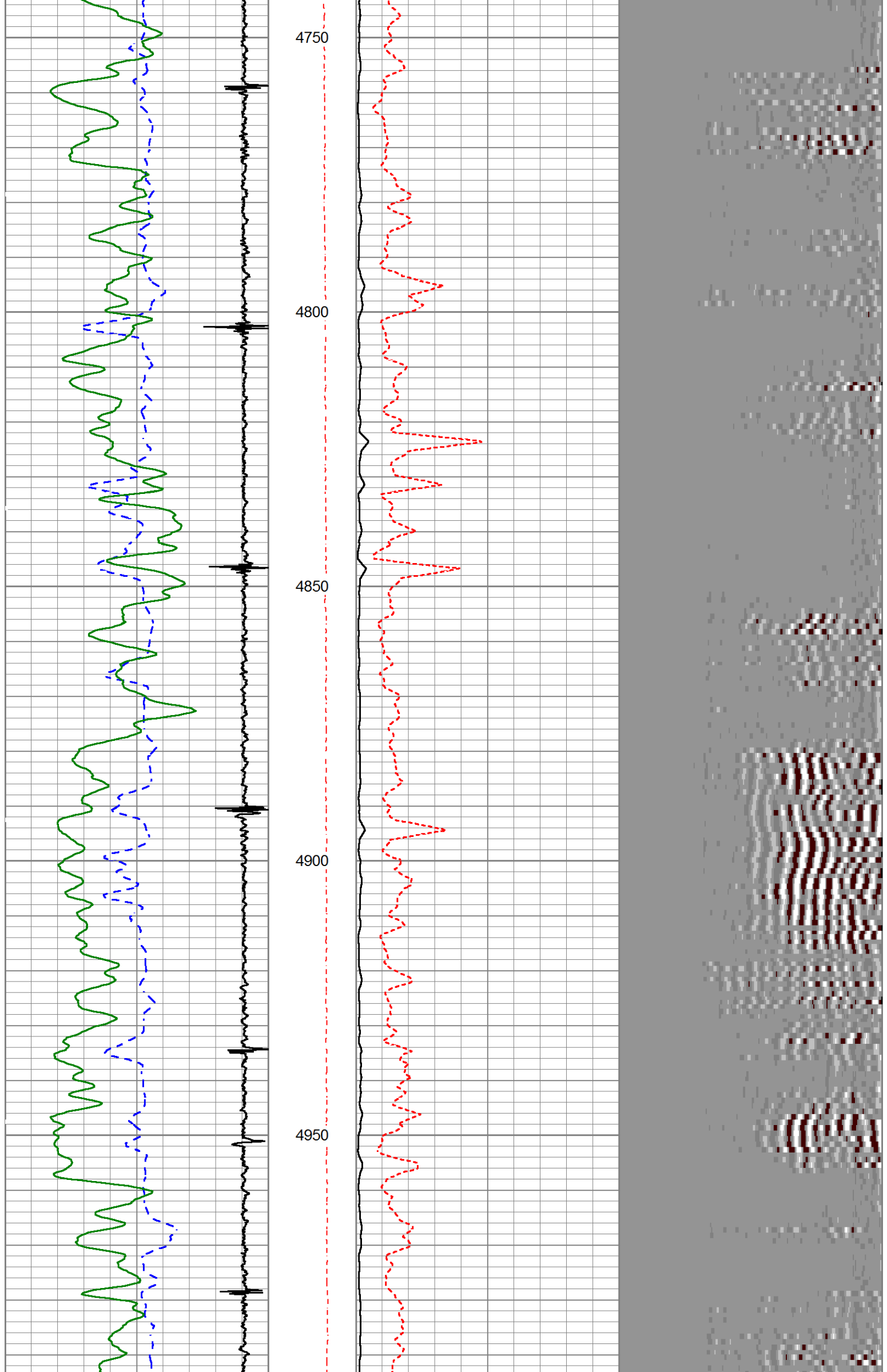


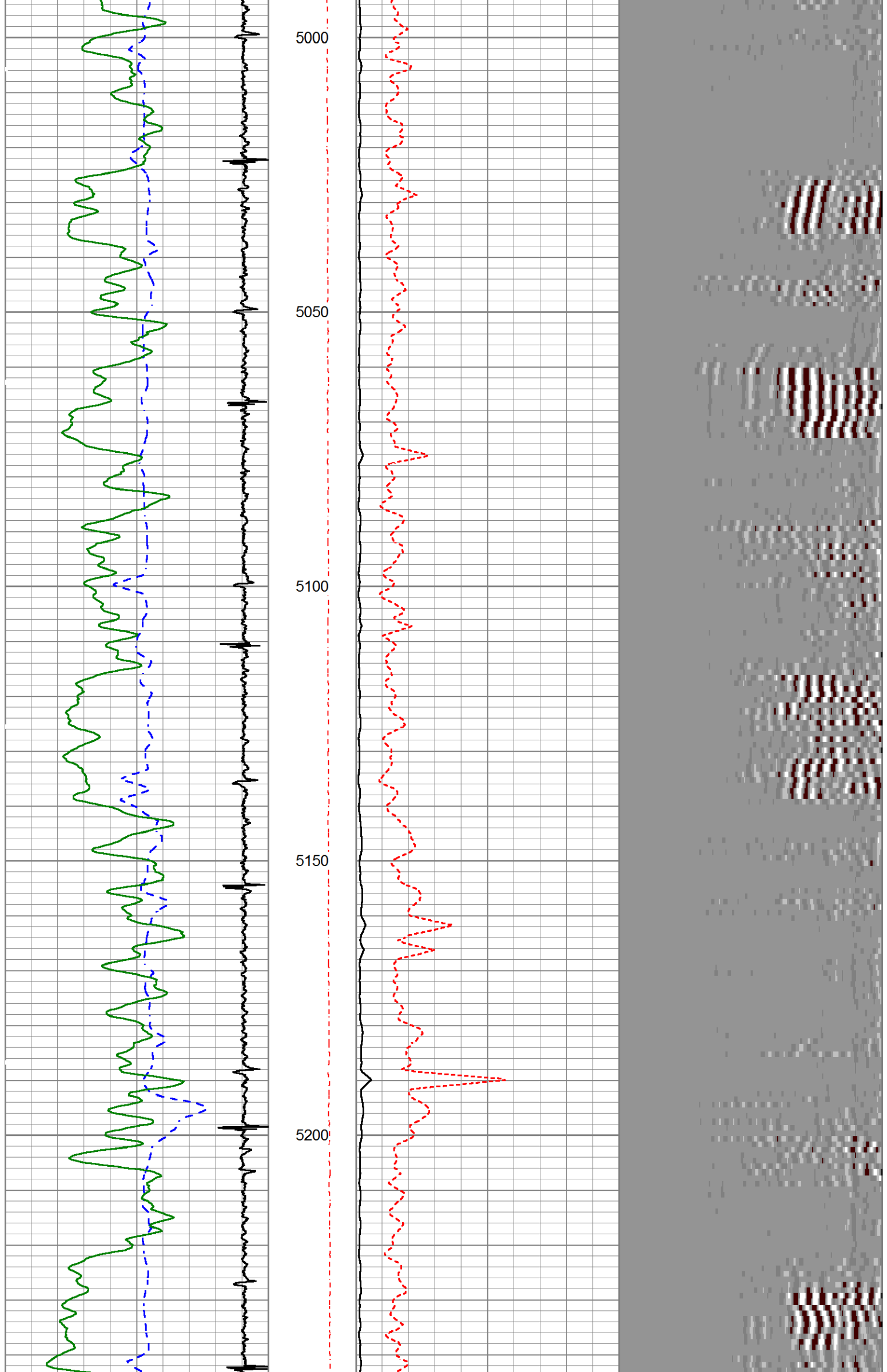


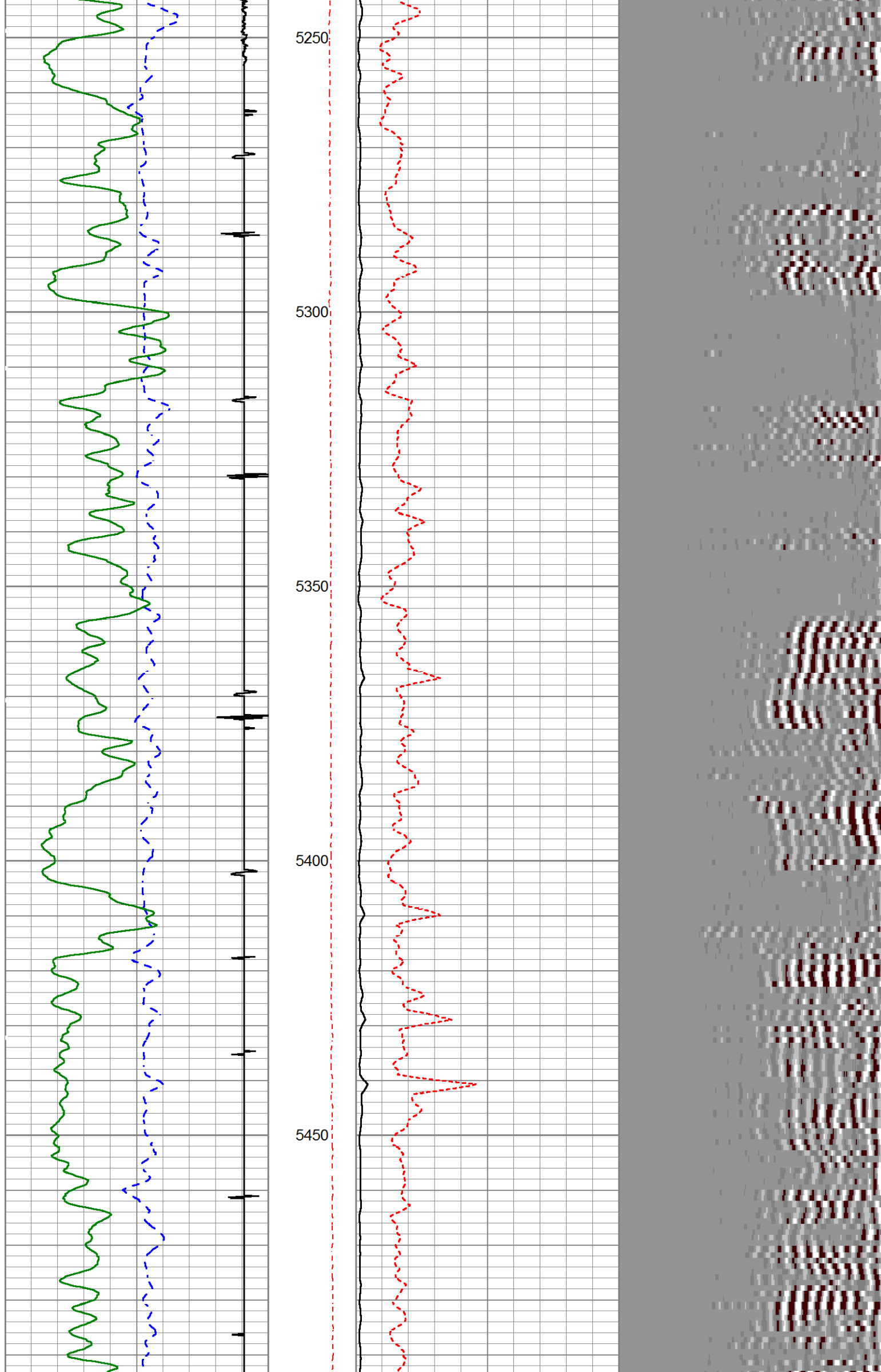


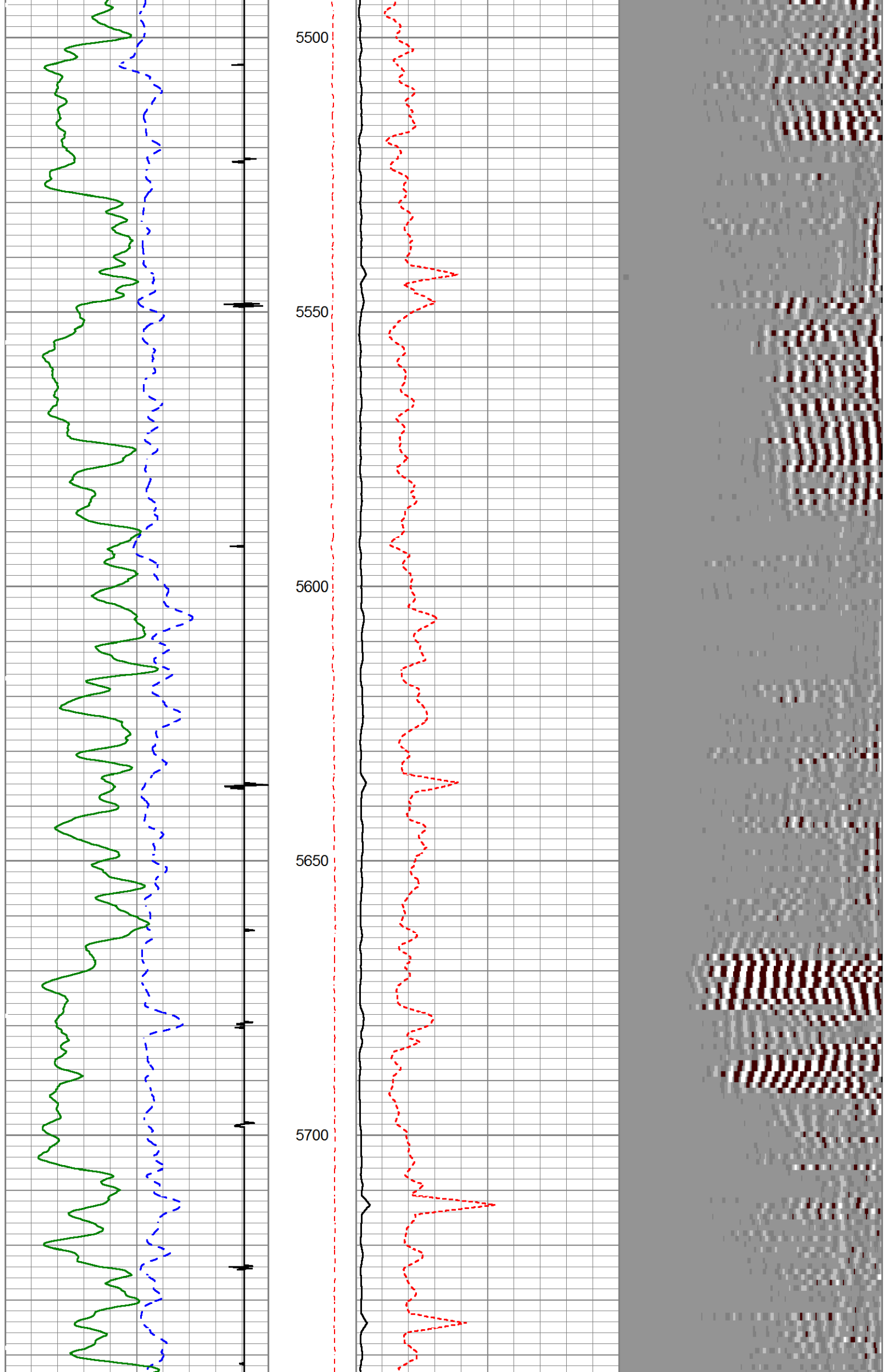


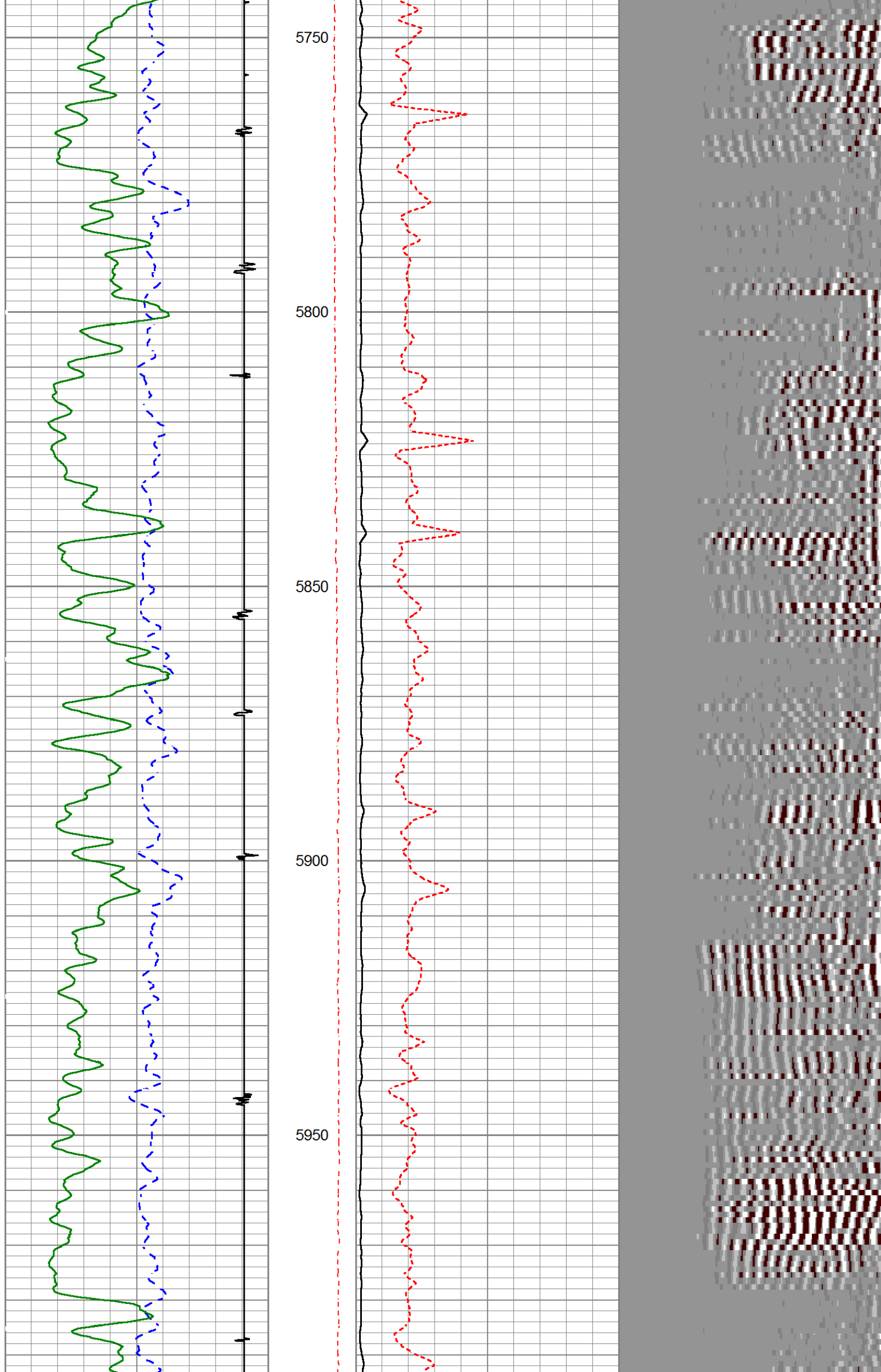


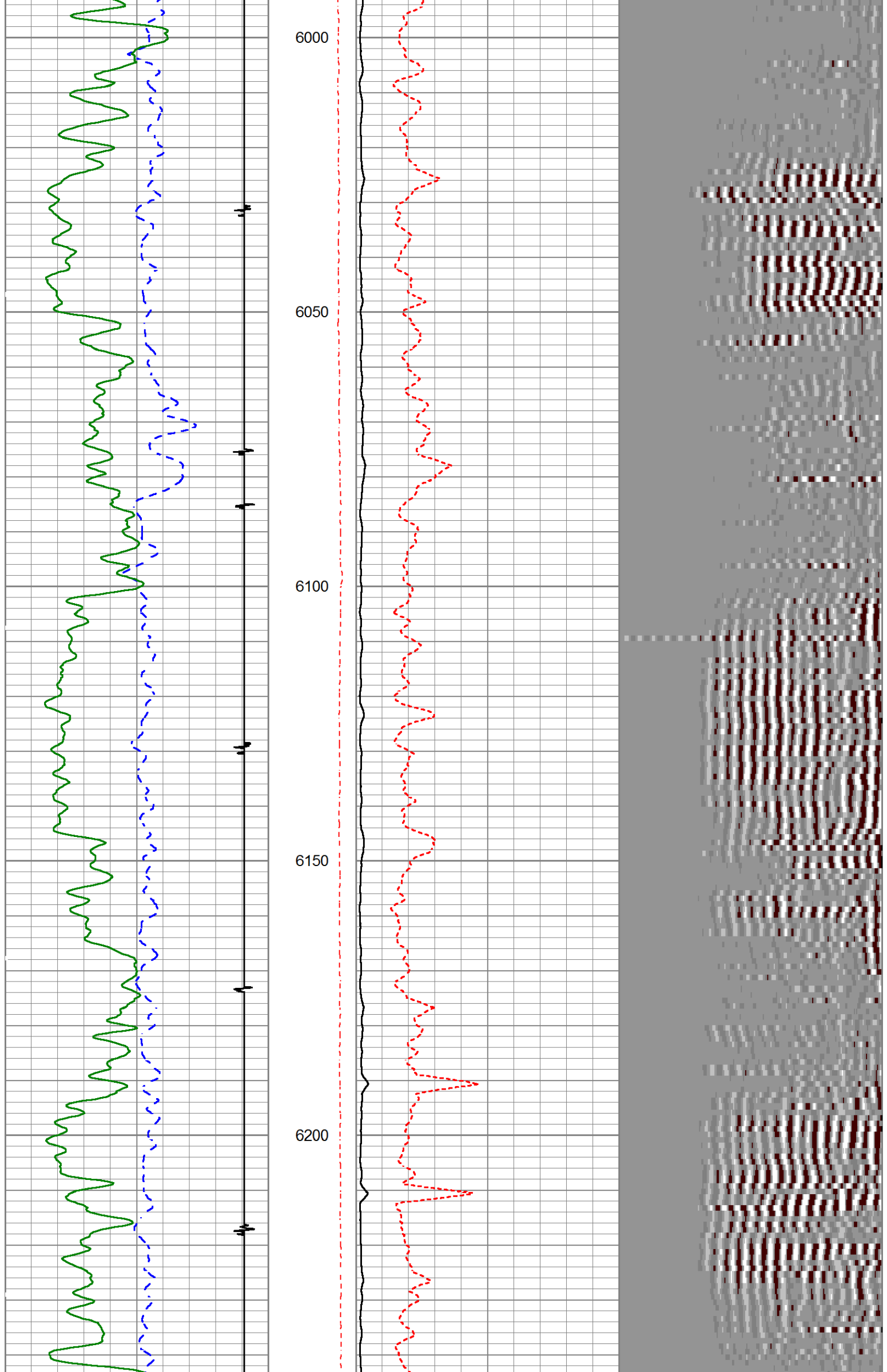


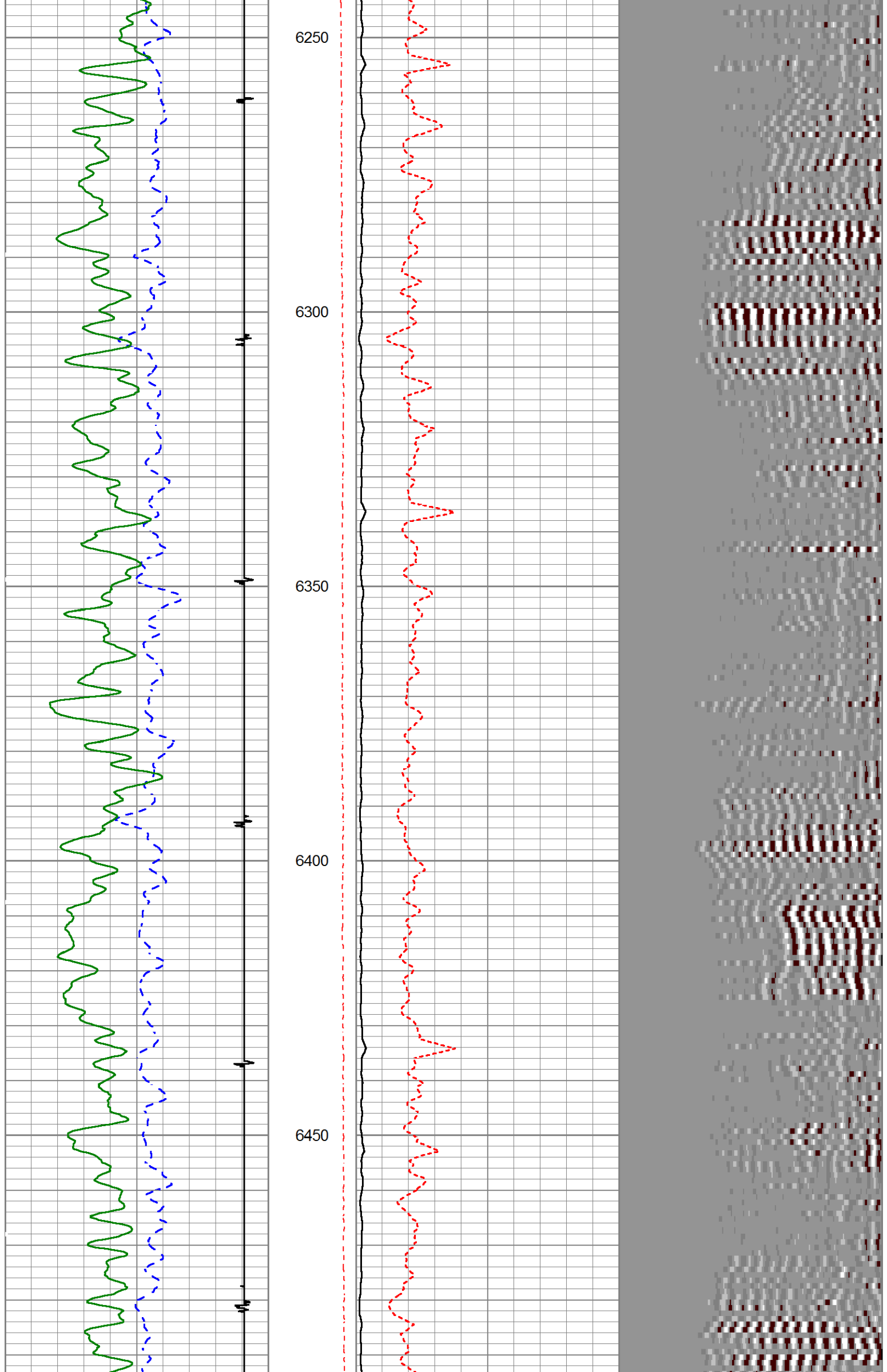


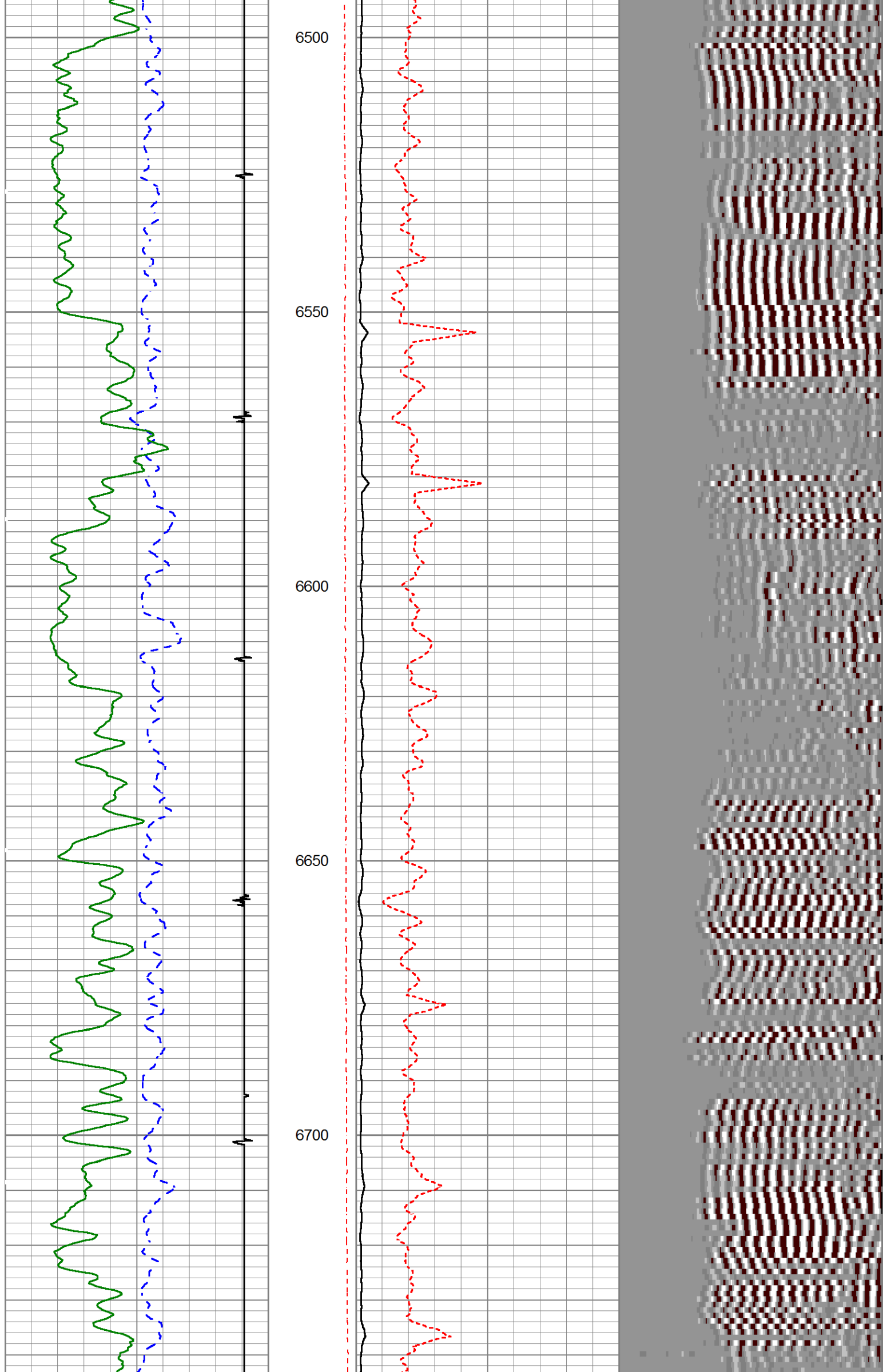


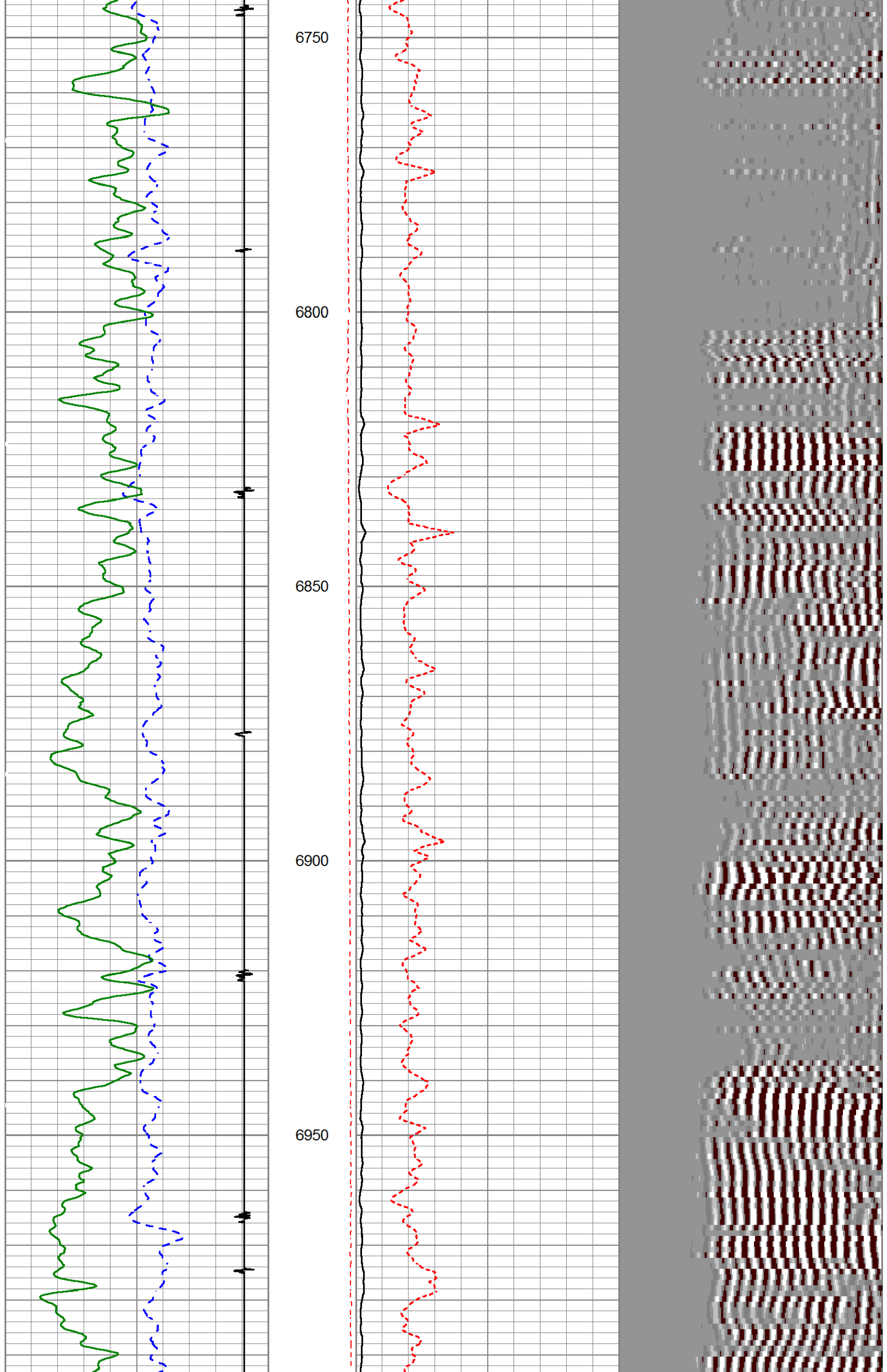


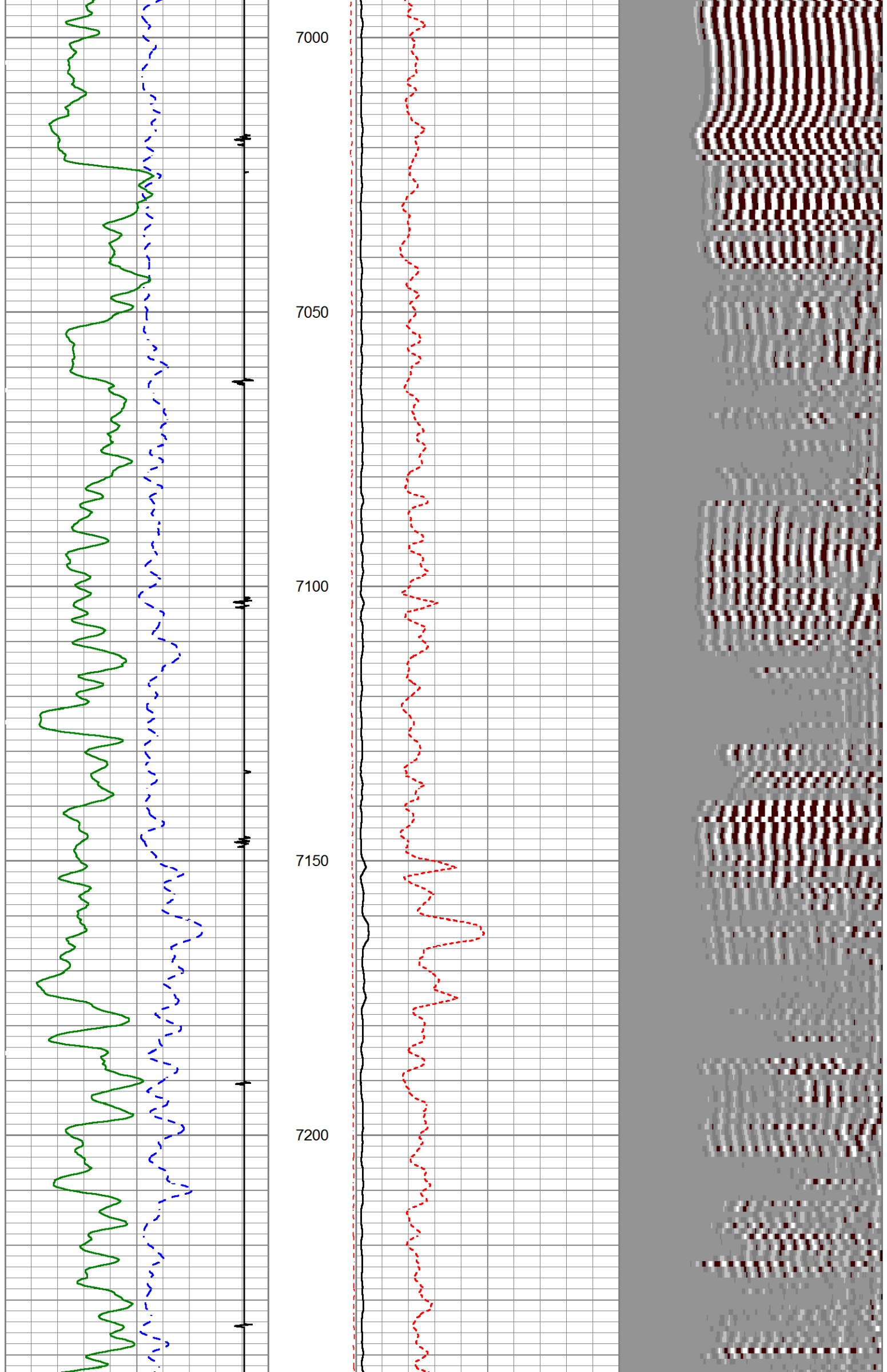


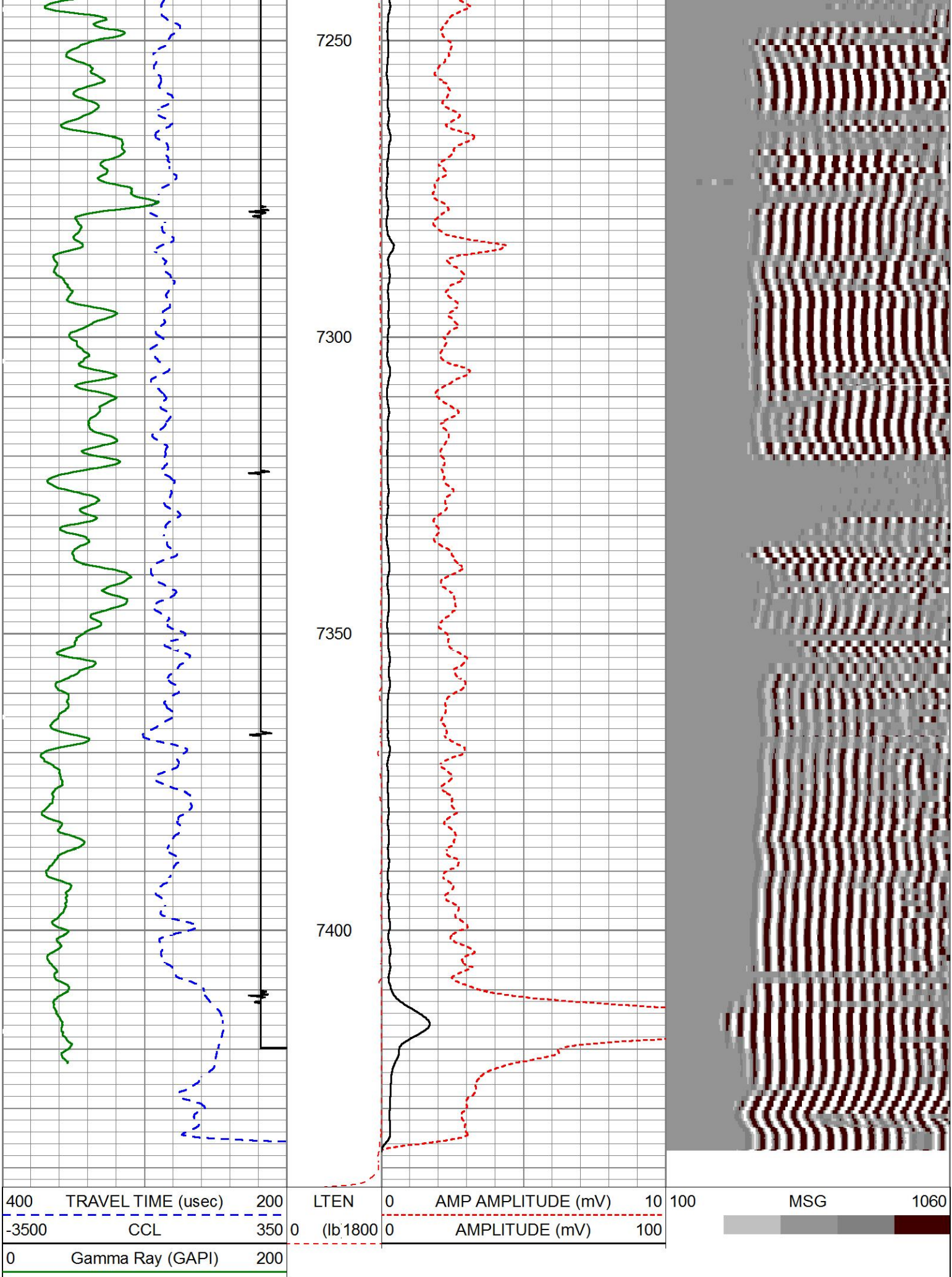












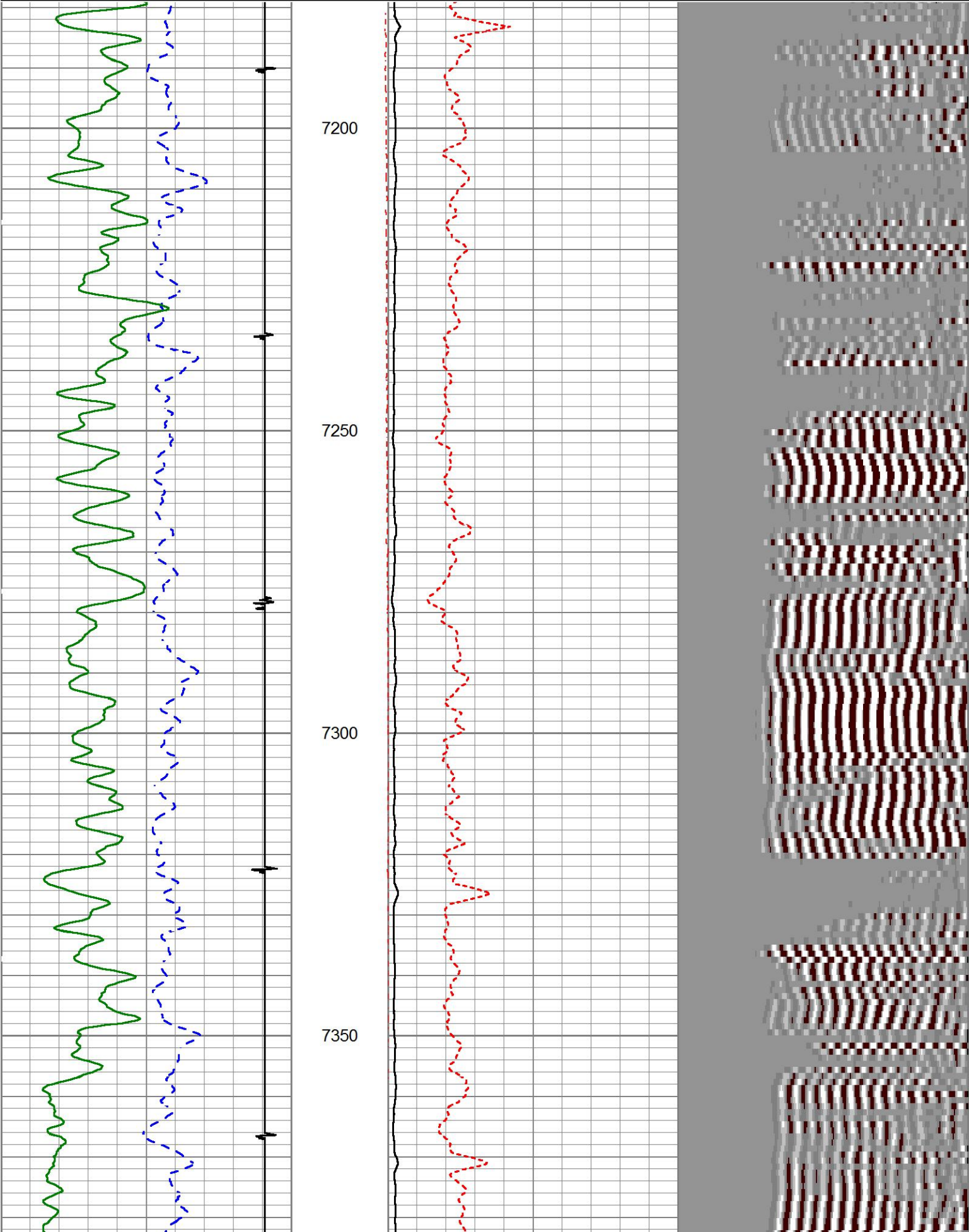
MAIN LOG SECTION

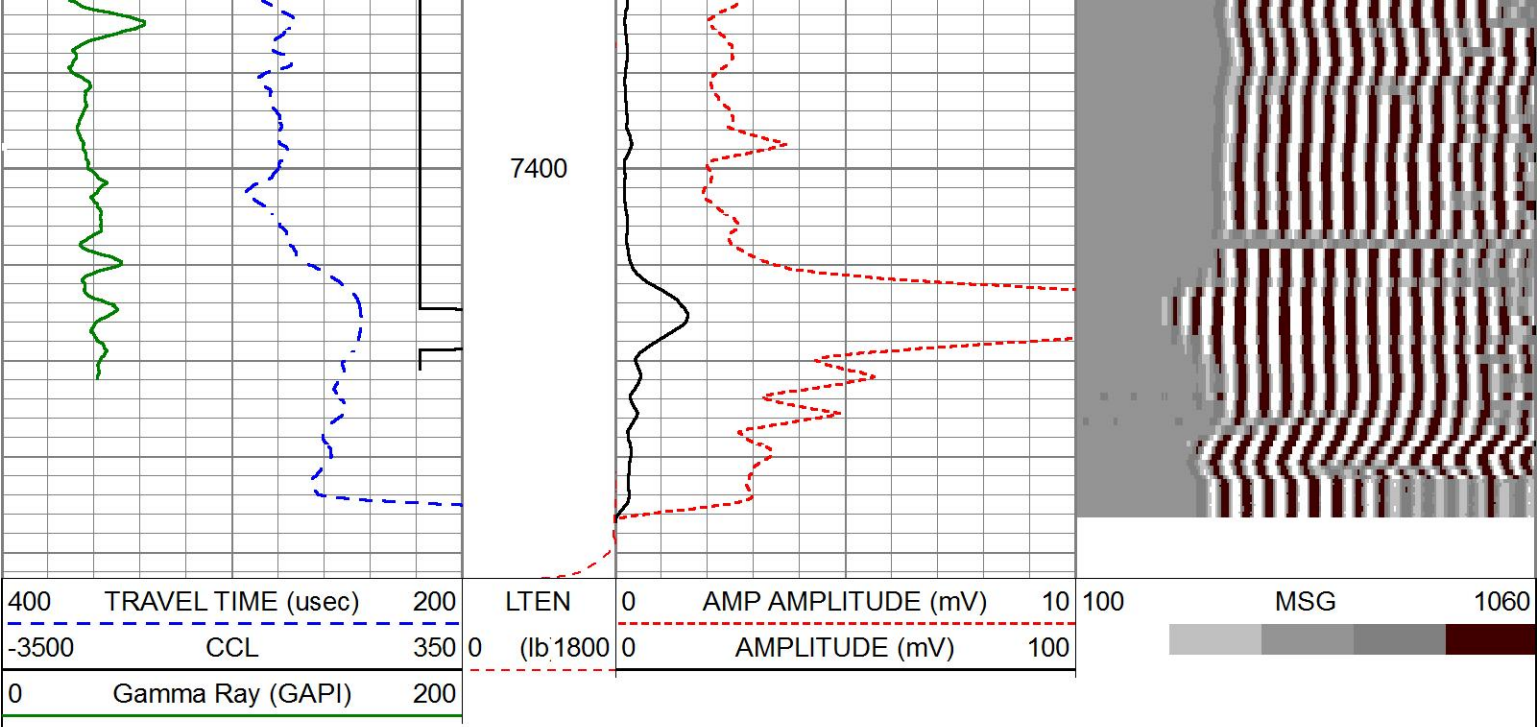
5" = 100'

REPEAT LOG SECTION

Database File yater_21c_cbl.db
Dataset Pathname REPEAT
Presentation Format cbl_main
Dataset Creation Sun Aug 30 03:05:20 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

DatabaseD:\Warrior_data\yater_21c_cbl.db
Dataset field/well/run1/MAIN1/_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�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_21c_cbl.db
Dataset Pathname MAIN1
Dataset Creation Sun Aug 30 03:13:04 2015

Cement Bond Log Shop Calibration Report


Serial-Model: 11794522-A
Calibration Performed: Sun Aug 30 02:16:45 2015


Free Pipe Calibration

TT	Measured	Units
Amplitude	245.7	uSec
	667.4	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	0.122	

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	7.24		HCBLM-A (11794522) Halliburton HCBLM Tool	9.38	2.75	116.00
AMP3FT	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
			BUL-006 (000002) Bullnose Terminator	0.22	1.69	1.20
LLMTEN	0.00					
Dataset: yater_21c_cbl.db: field/well/run1/MAIN1 Total length: 24.62 ft Total weight: 278.20 lb O.D.: 3.13 in						

Company	URSA OPERATING CO., LLC.				
Well	YATER 21C-17-07-95				
Field	PARACHUTE				
County	GARFIELD		State	CO	
HALLIBURTON	ACOUSTIC CEMENT BOND LOG				