

HALLIBURTON										ACOUSTIC CEMENT BOND LOG									
Company    URSA OPERATING CO., LLC. Well        YATER 21D-17-07-95 Field        PARACHUTE County      GARFIELD State    CO										Company    URSA OPERATING CO., LLC. Well        YATER 21D-17-07-95 Field        PARACHUTE County      GARFIELD        State    CO									
API No.:    05045227490000    Serv #:    902695399    Other Services										Location:    SURFACE HOLE LOCATION: 1755' FSL & 1129' FWL									
BOTTOM HOLE LOCATION: 1193' FNL & 1980' FWL										GAUGE RING RMT									
Sec: 17    Twp: 7S    Rge: 95W																			
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    30 AUGUST 2015										Type Fluid in Hole    WATER									
Run No.    ONE										Density of Fluid    8.4#									
Depth - Driller    7370'										Fluid Level    FULL									
Depth - Logger    7271'										Cement Top Est. Logged    N/A									
Bottom - Logged Interval    7265'										Equipment / Location    10971668    /    G.J.									
Top - Log Interval    100'										Recorded by    B. RIDDEL									
Max. Recorded Temp.    211 DEG F										Witnessed by    D. COOLEY									
CEMENTING DATA																			
Surface    String    Protection    String    Production    String    Liner																			
Date / Time Cemented    N/A										N/A									
Primary / Squeeze    N/A																			
Expected Compressive Strength    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"    1700'    SURFACE    8.625"    32.0#    1700'    SURFACE																			
TWO    7.875"    7370'    SURFACE    4.5"    11.6#    7345'    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 CBL-RMT LOG DATED: 30 AUGUST 2015 IS THE PRIMARY DEPTH REFERENCE FOR THIS V

GR-RMT-CBL RAN IN COMBINATION.

LOG INTERVALS PER CUSTOMER REQUEST.

SHORT JOINTS @: 2982' - 2992', 5918' - 5928' & 6794' - 6804'

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

ONE	7265'	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			

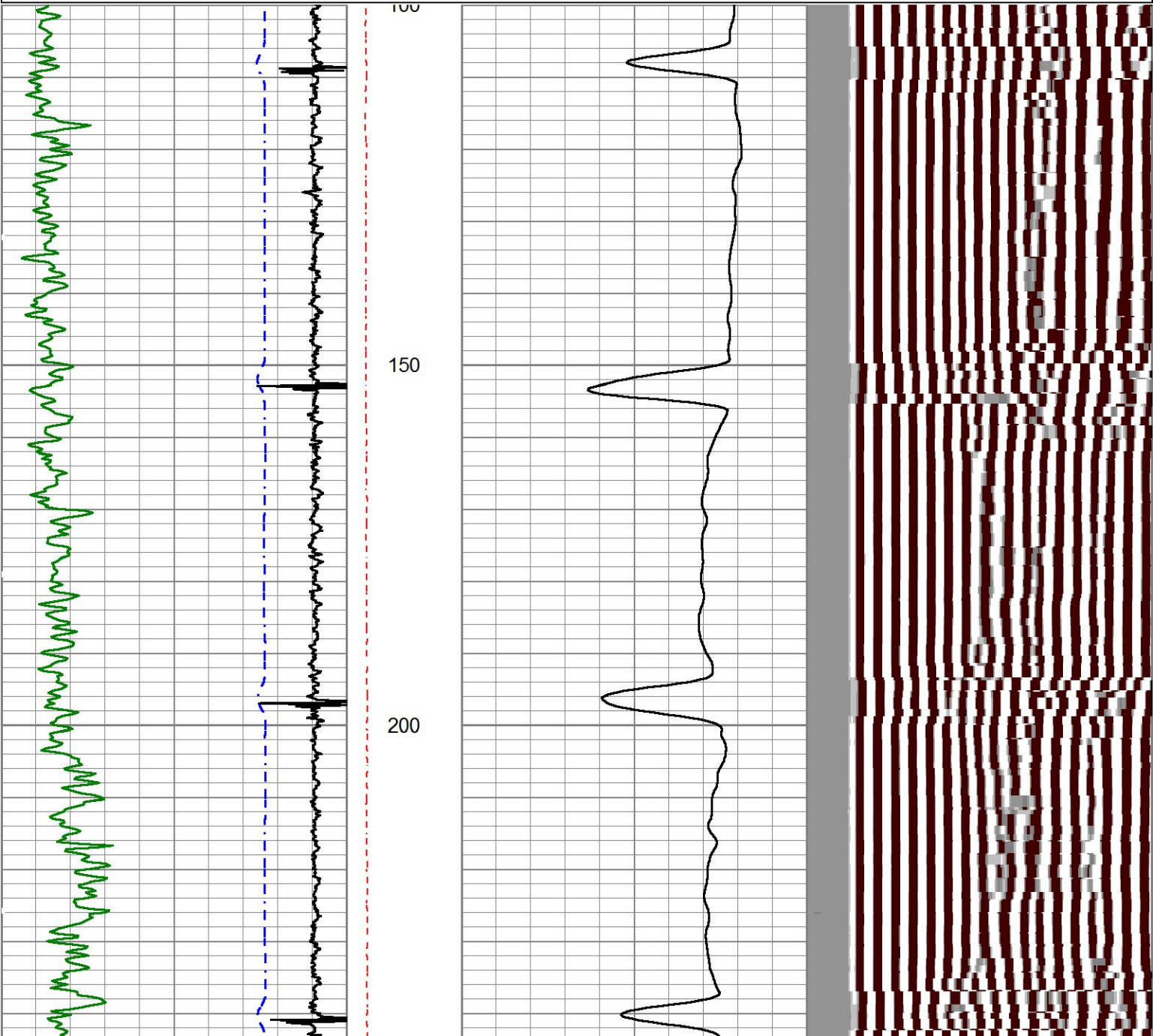
HALLIBURTON

MAIN LOG SECTION

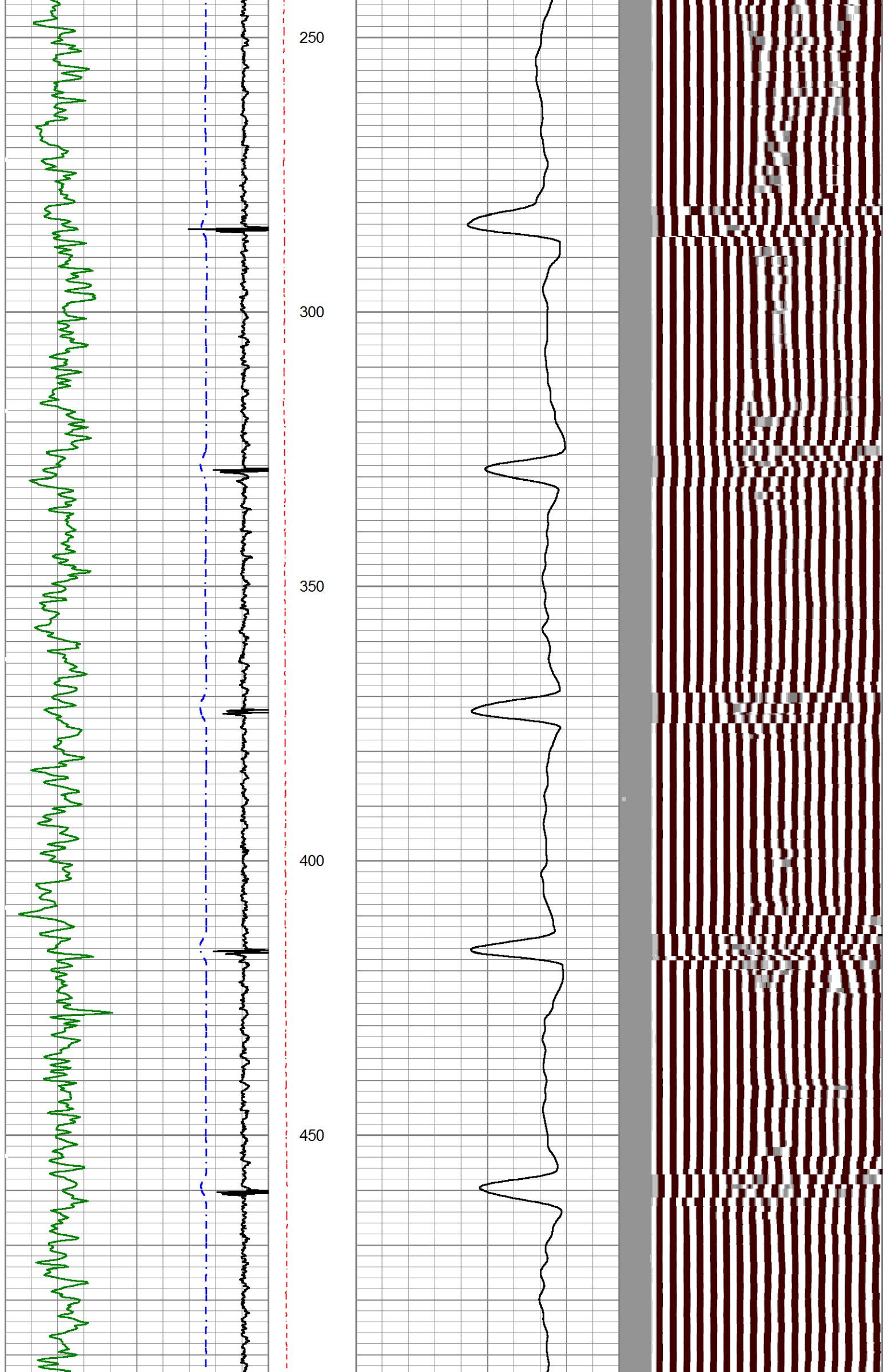
5" = 100'

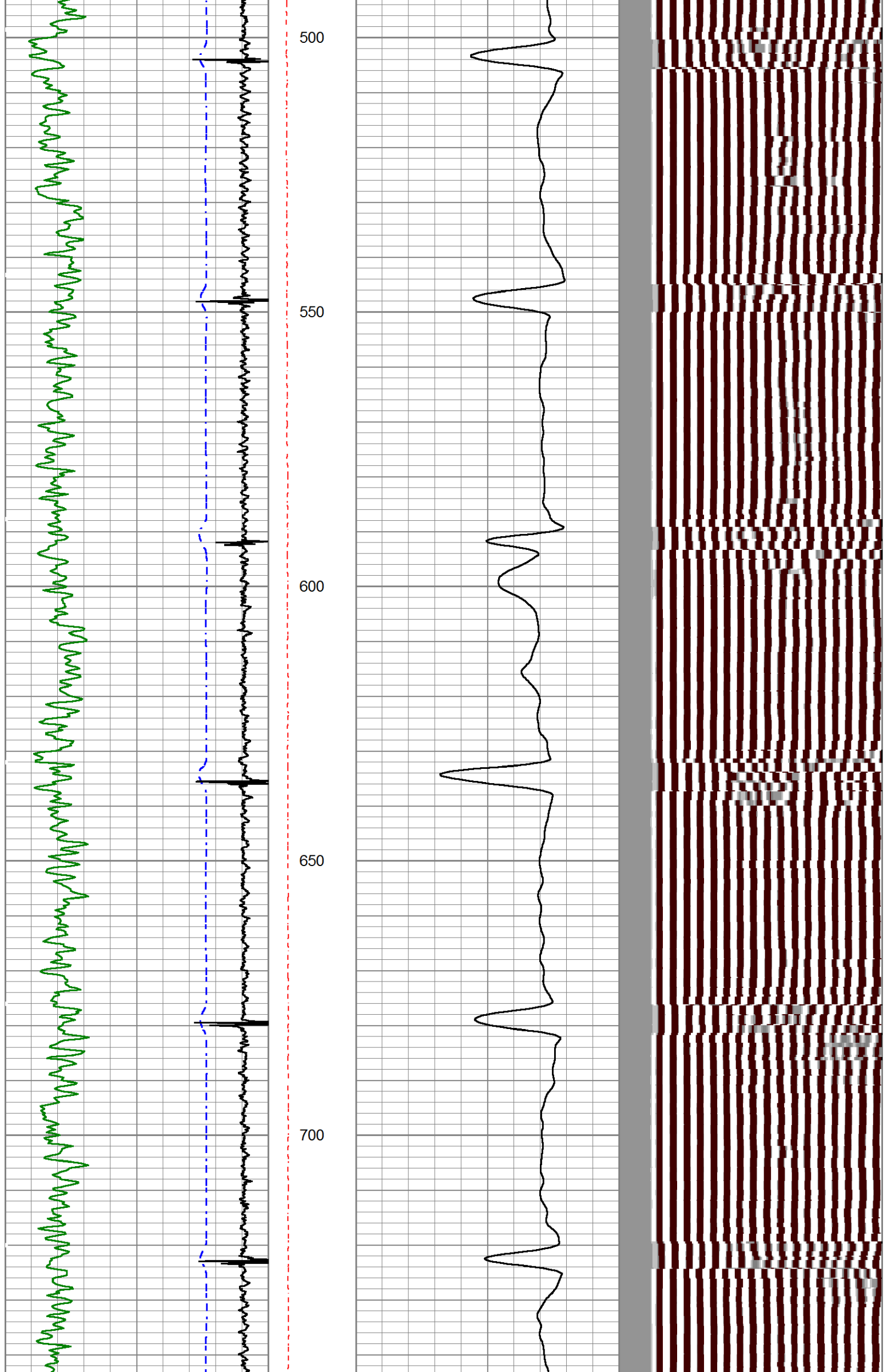
Database File	yater_21d.db
Dataset Pathname	MAIN.1
Presentation Format	cbl_main
Dataset Creation	Sun Aug 30 15:59:08 2015
Charted by	Depth in Feet scaled 1:240

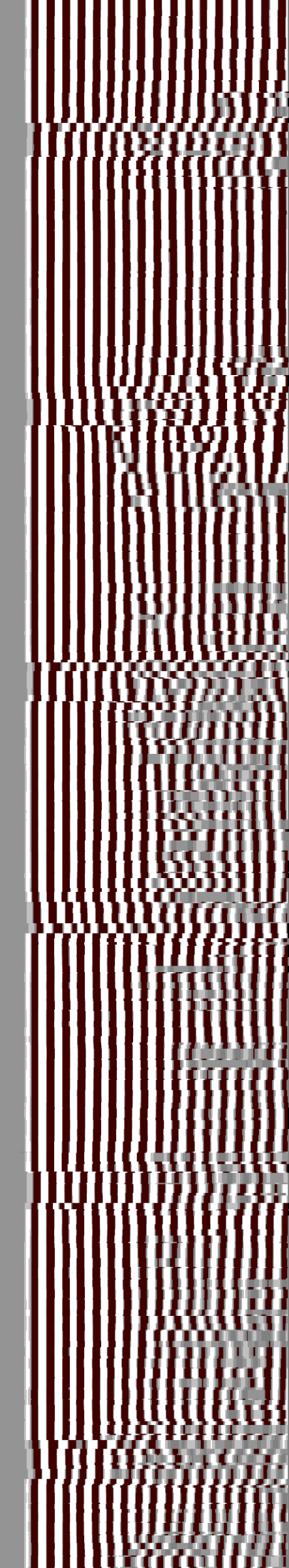
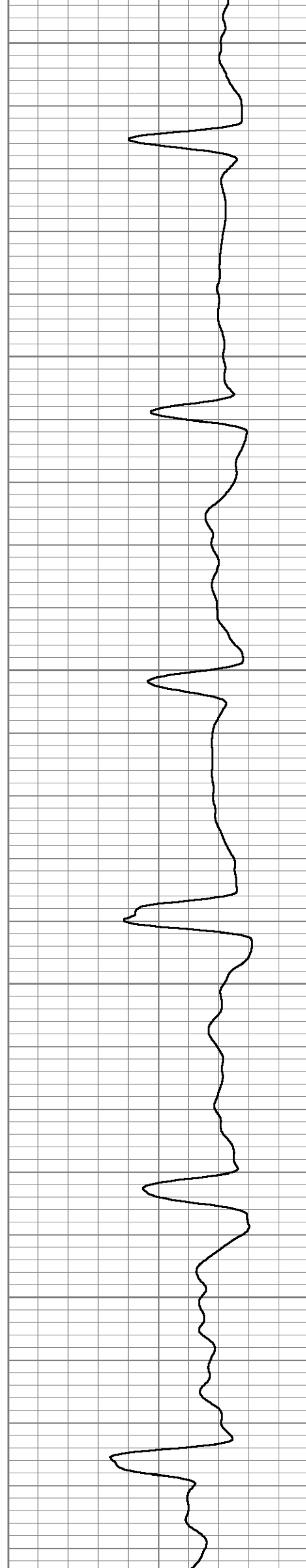
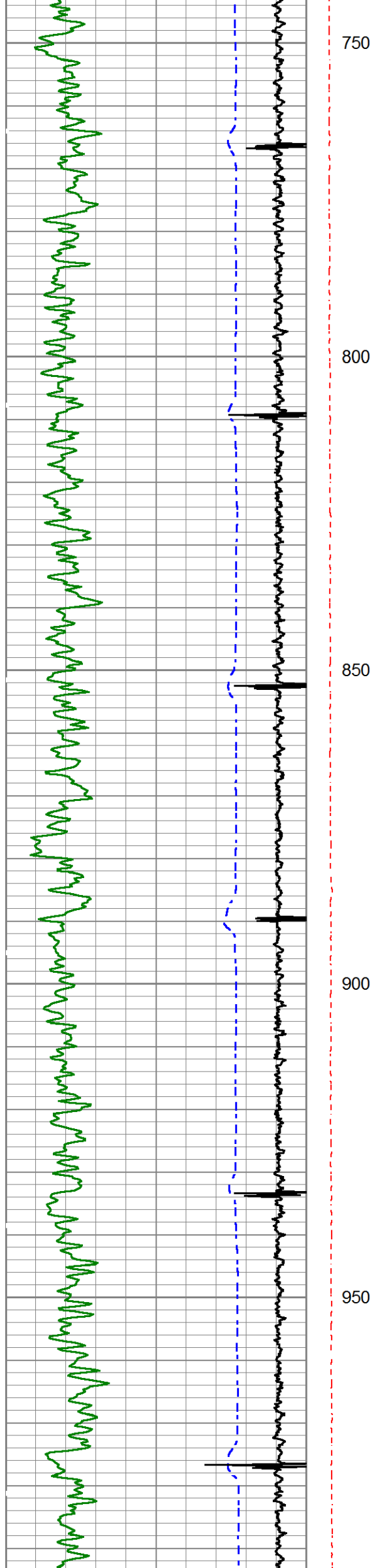
400	TRAVEL TIME (usec)	150	LTEN	0	AMP AMPLITUDE (mV)	10	200	MSG	1100
-3500	CCL	350	0	(lb) 1800	0	AMPLITUDE (mV)	100		
0	Gamma Ray (GAPI)	200							

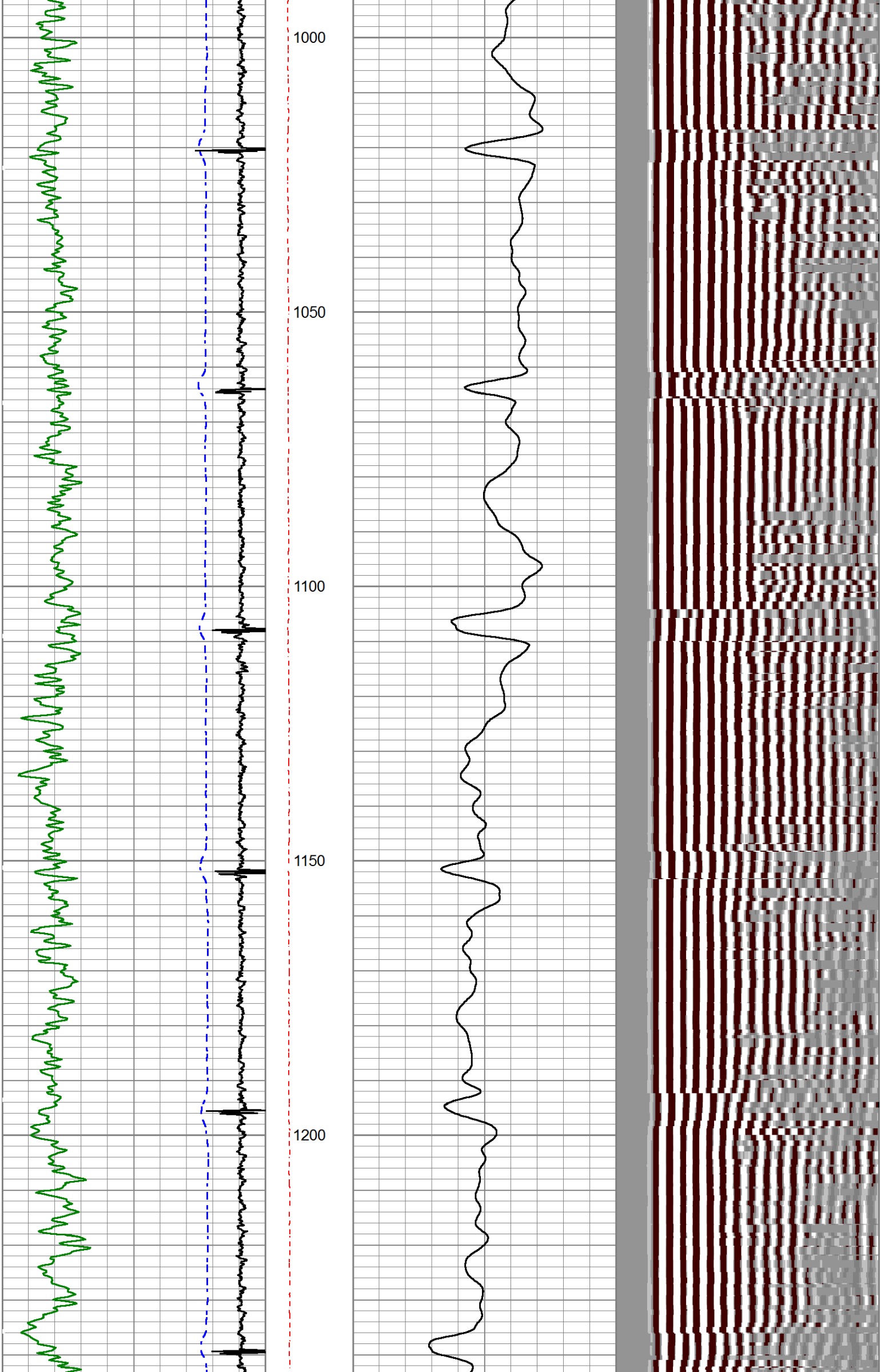


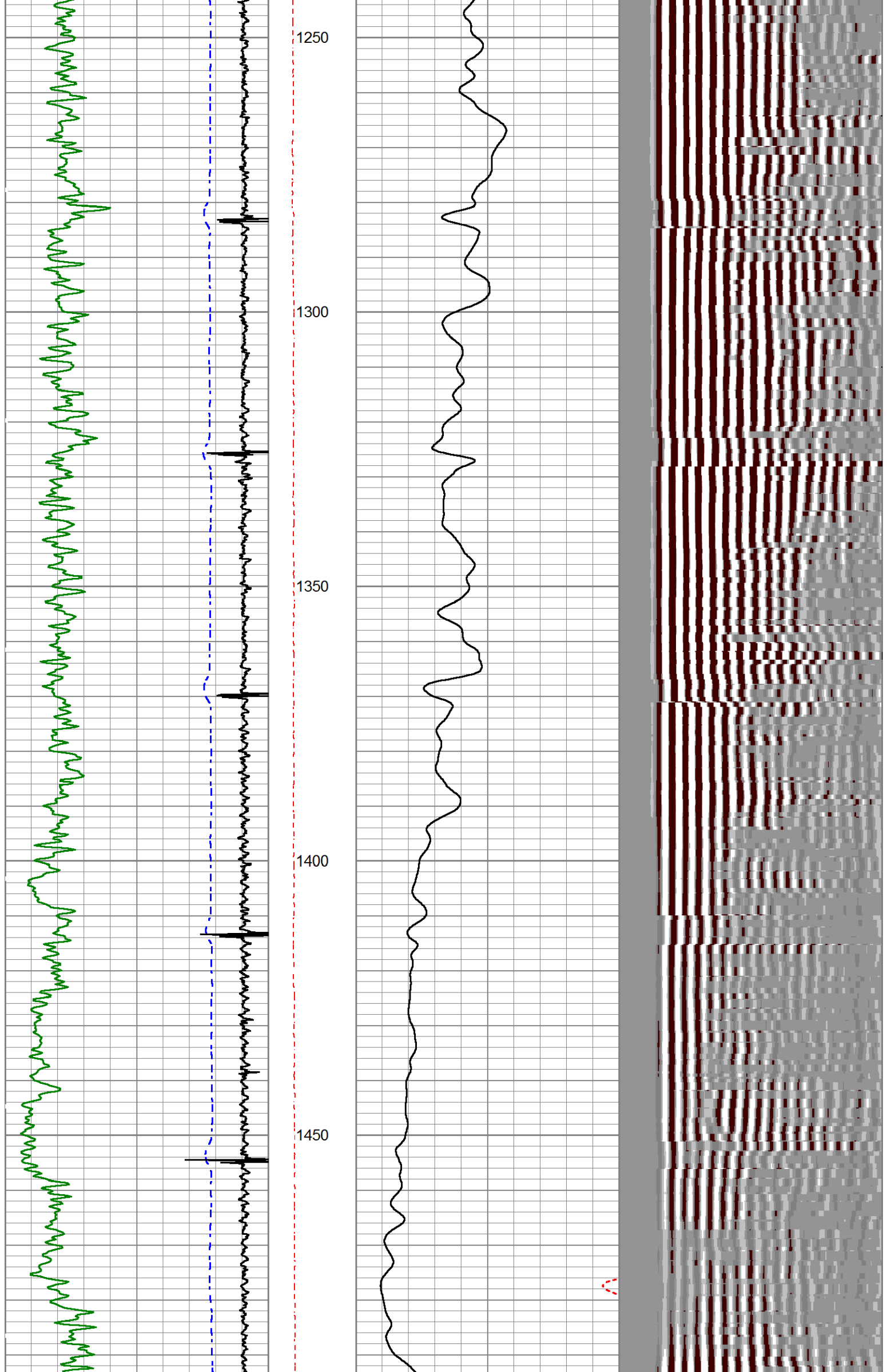


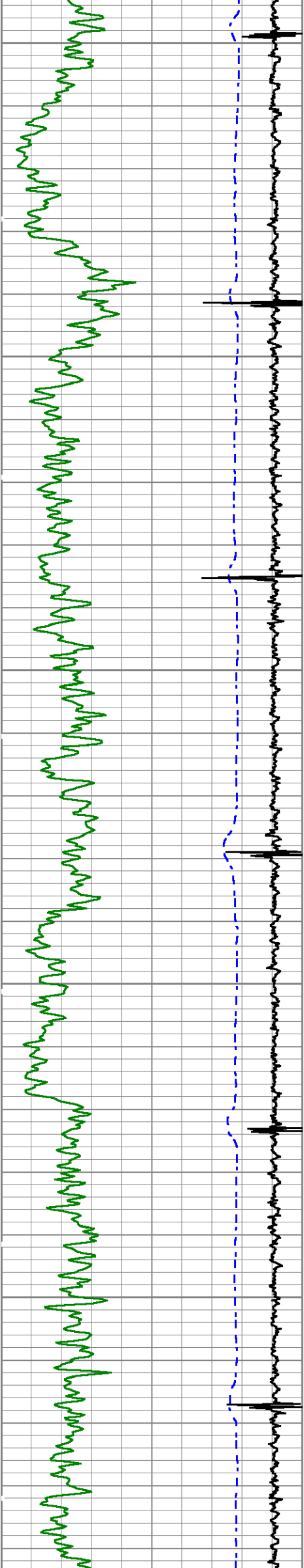












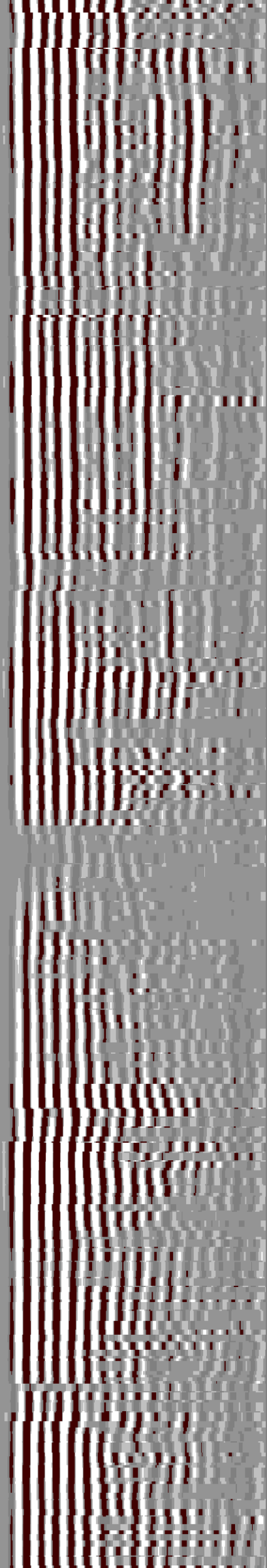
1500

1550

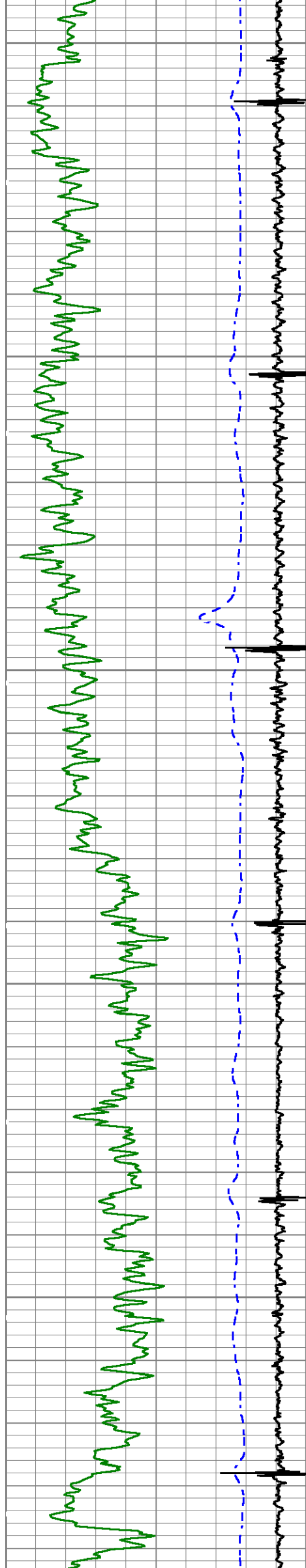
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1650

1700







1750

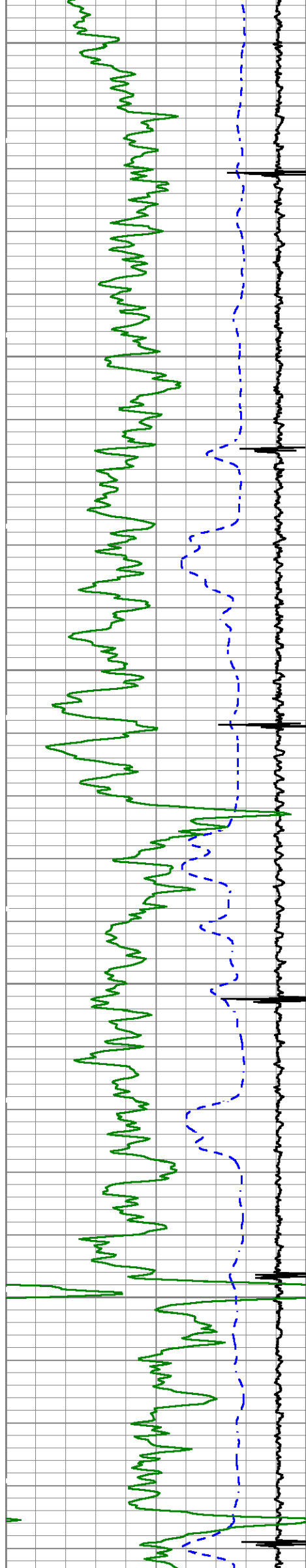
1800

1850

1900

1950





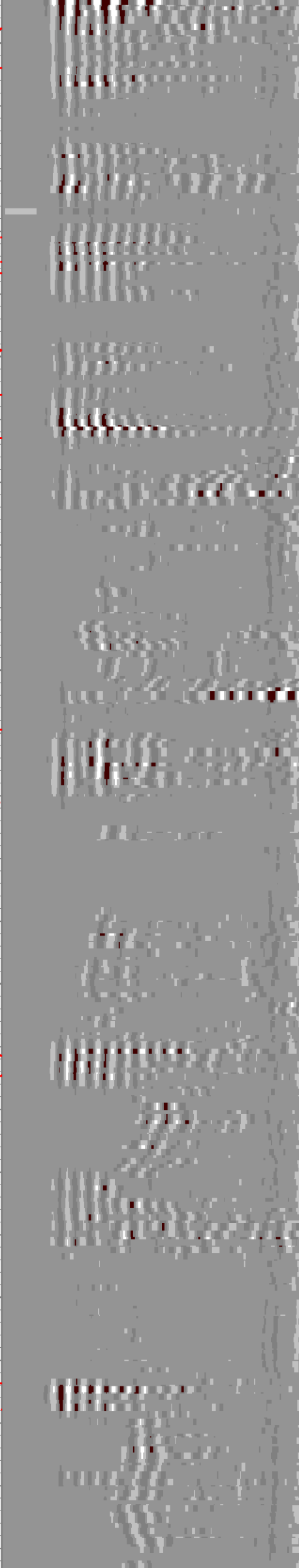
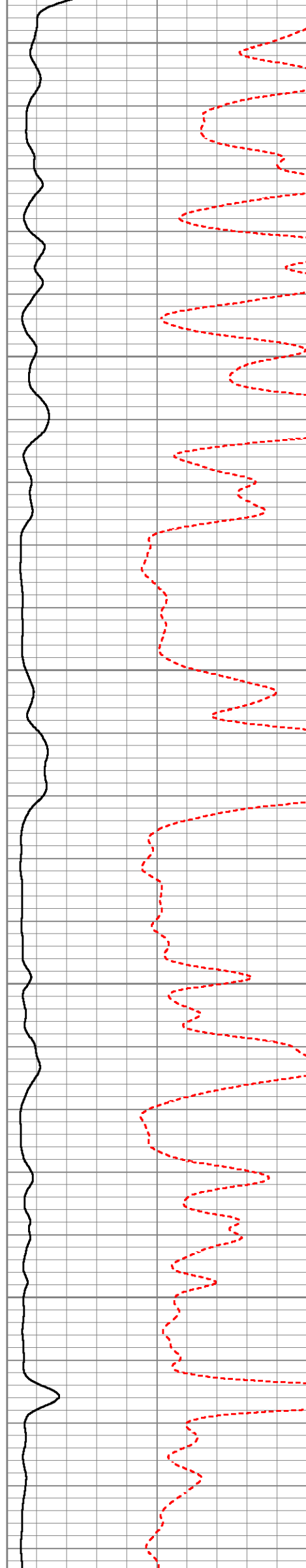
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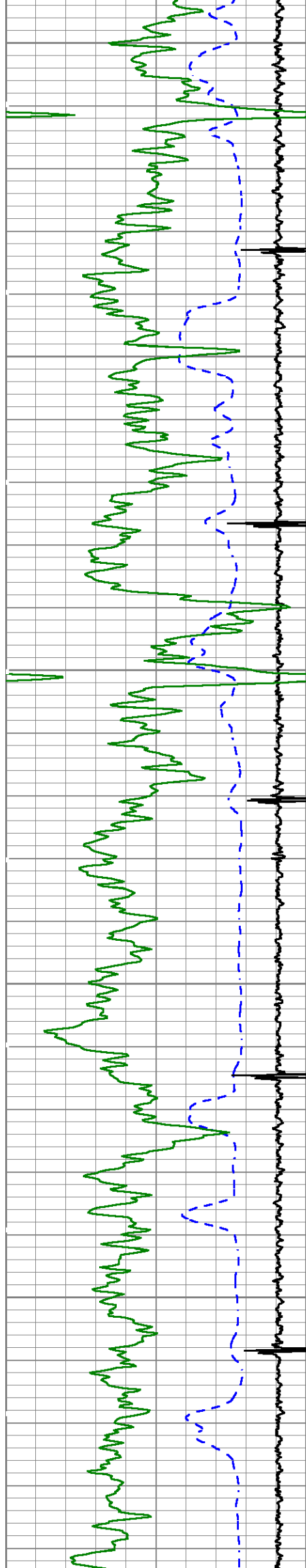
2050

2100

2150

2200





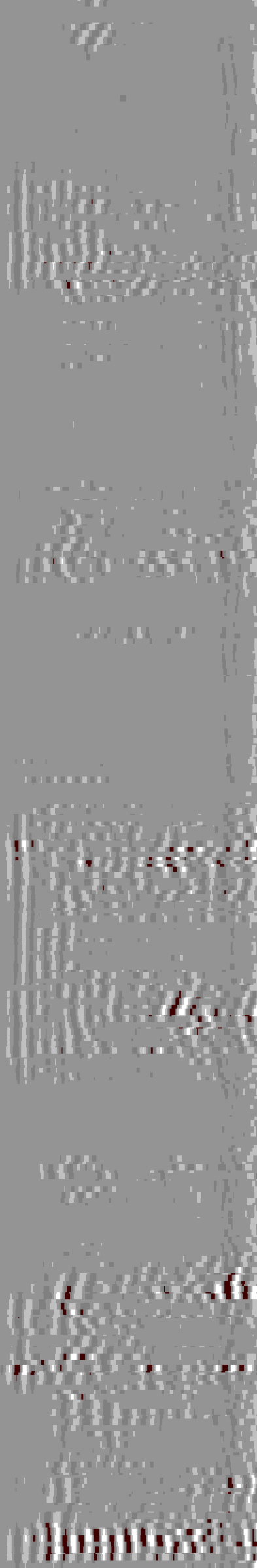
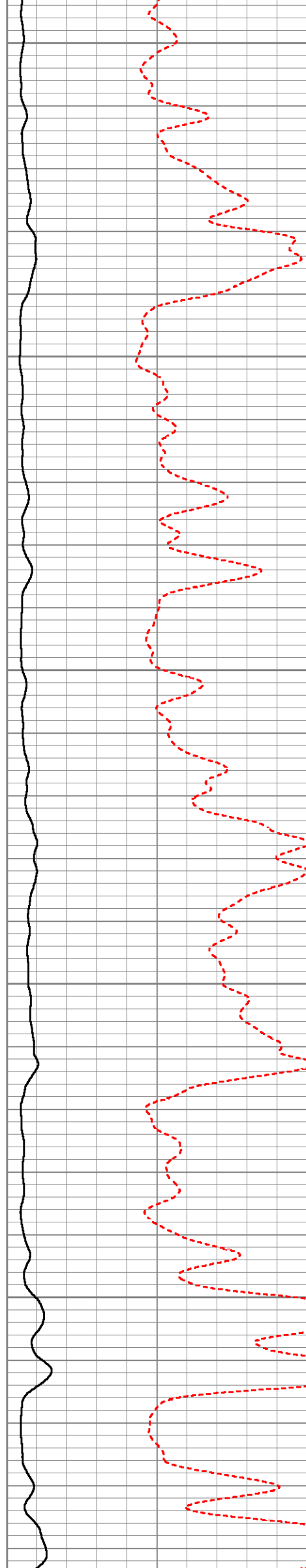
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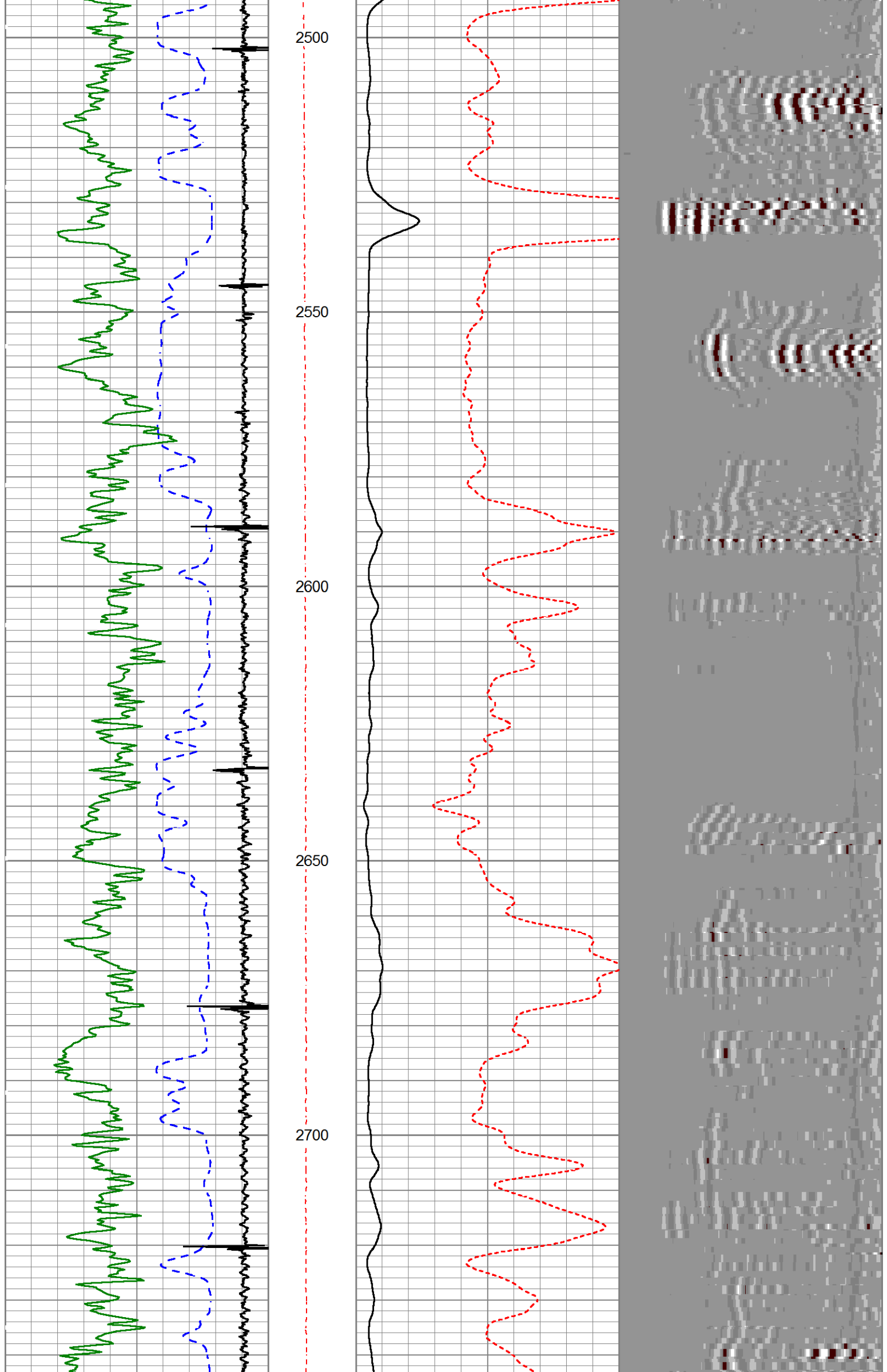
2300

2350

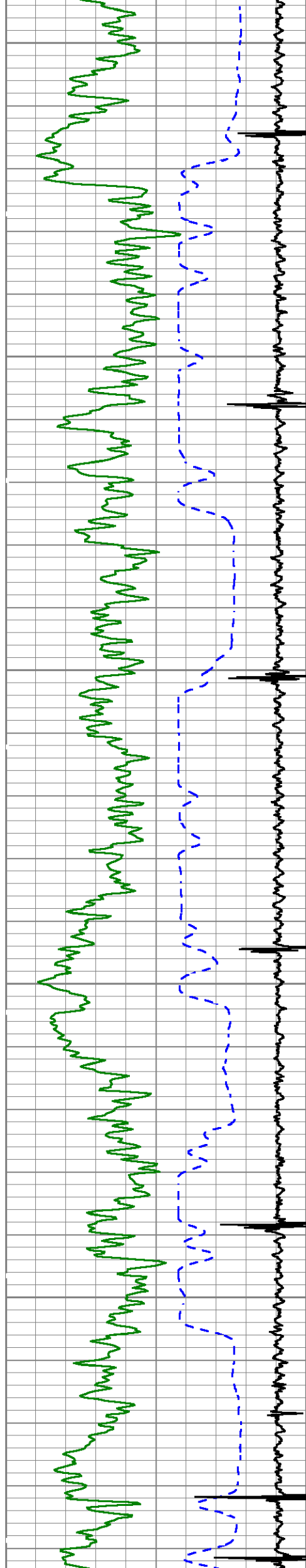
2400

2450









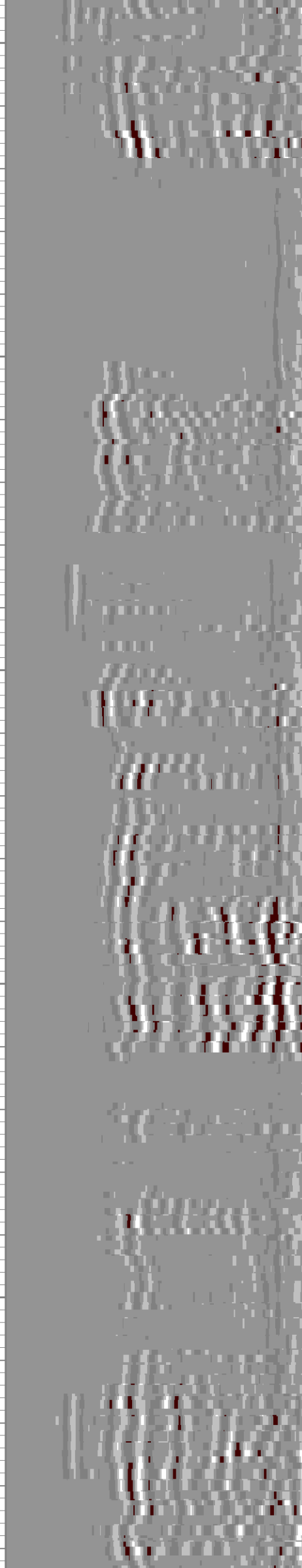
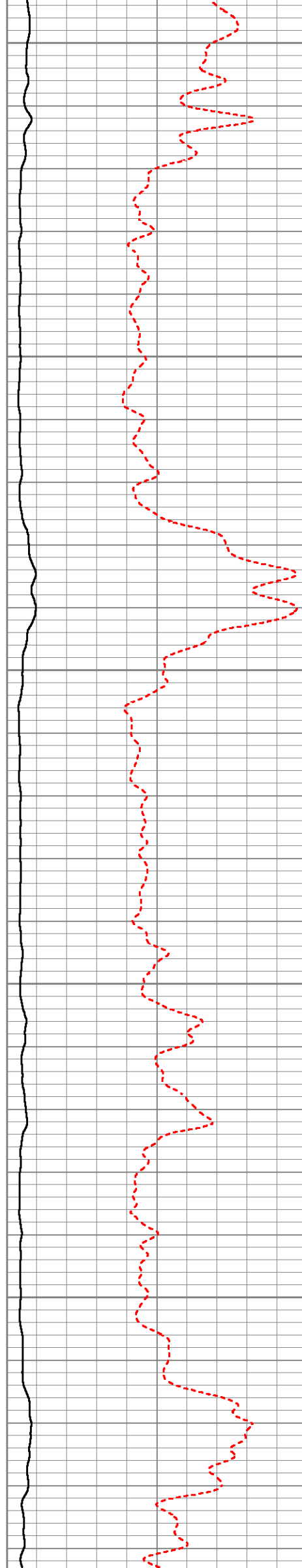
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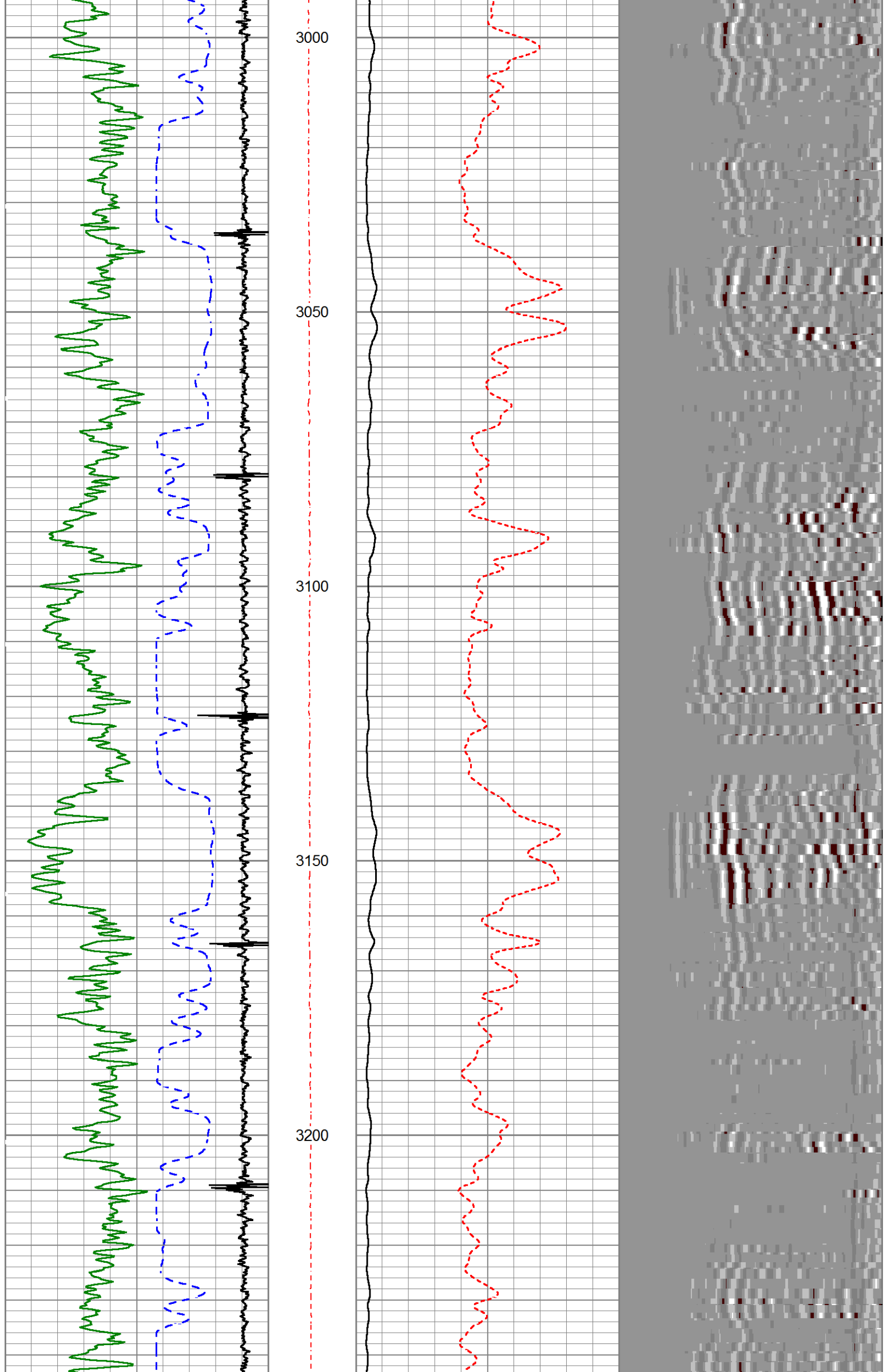
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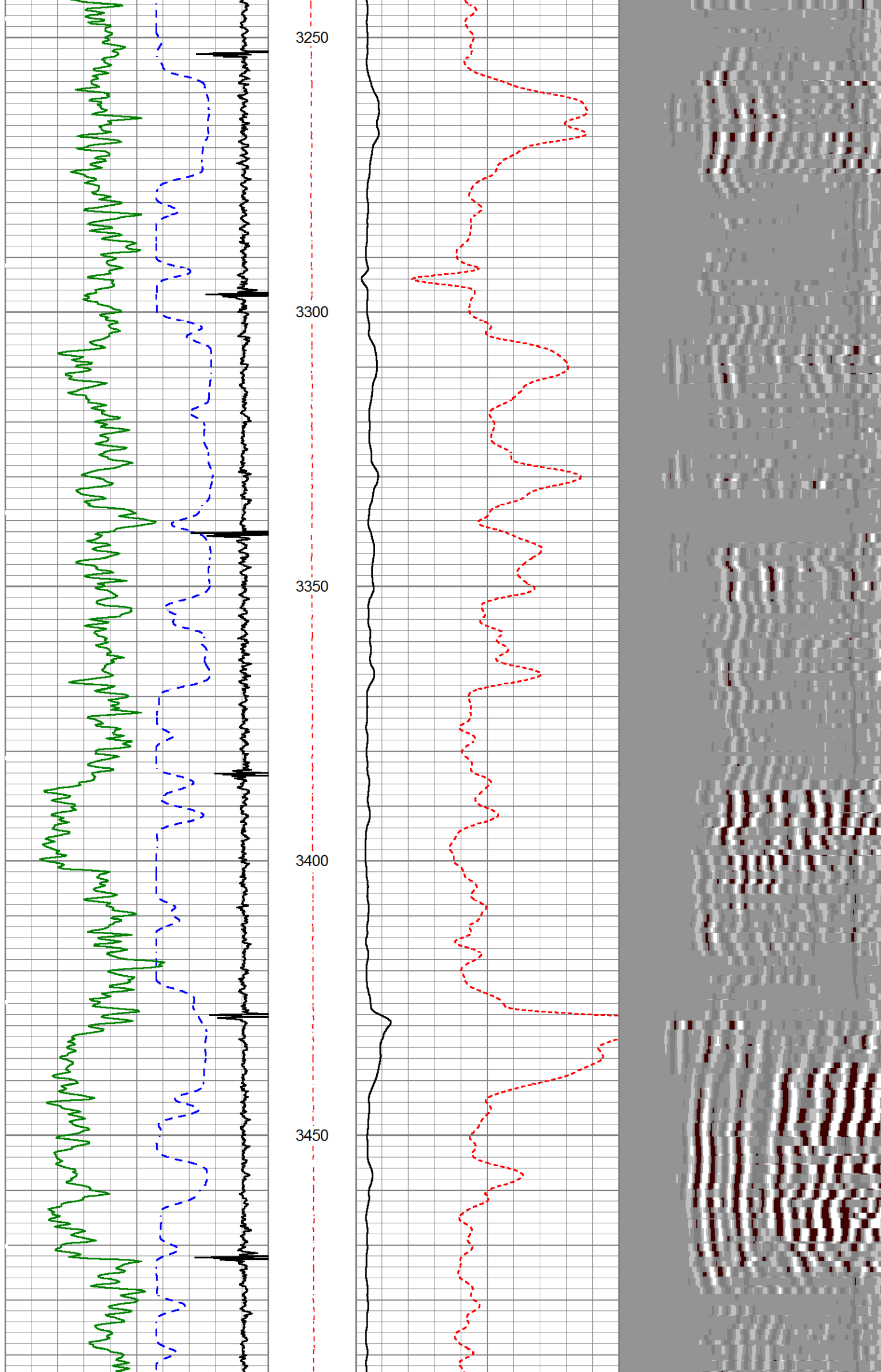
2850

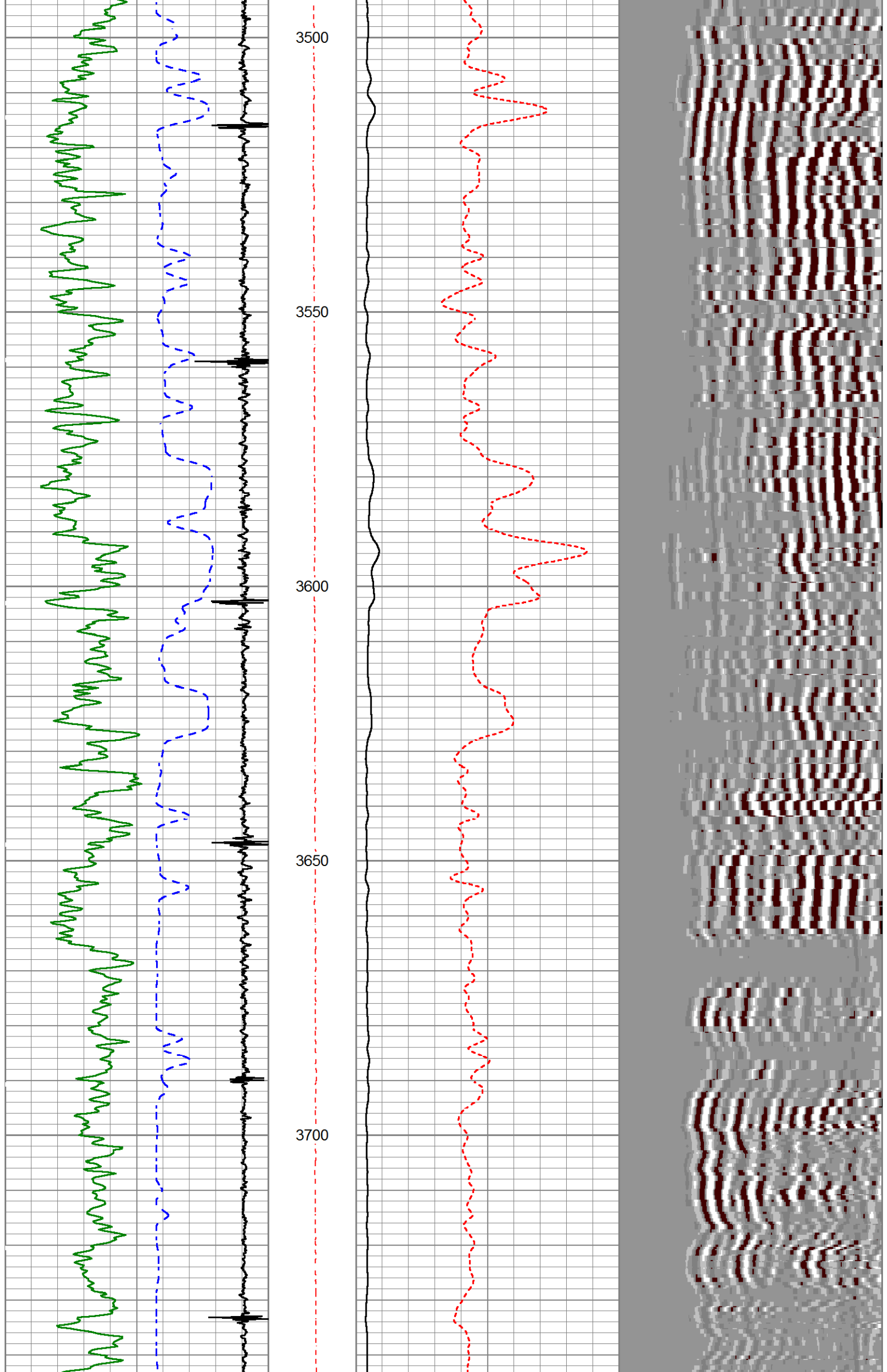
2900

2950

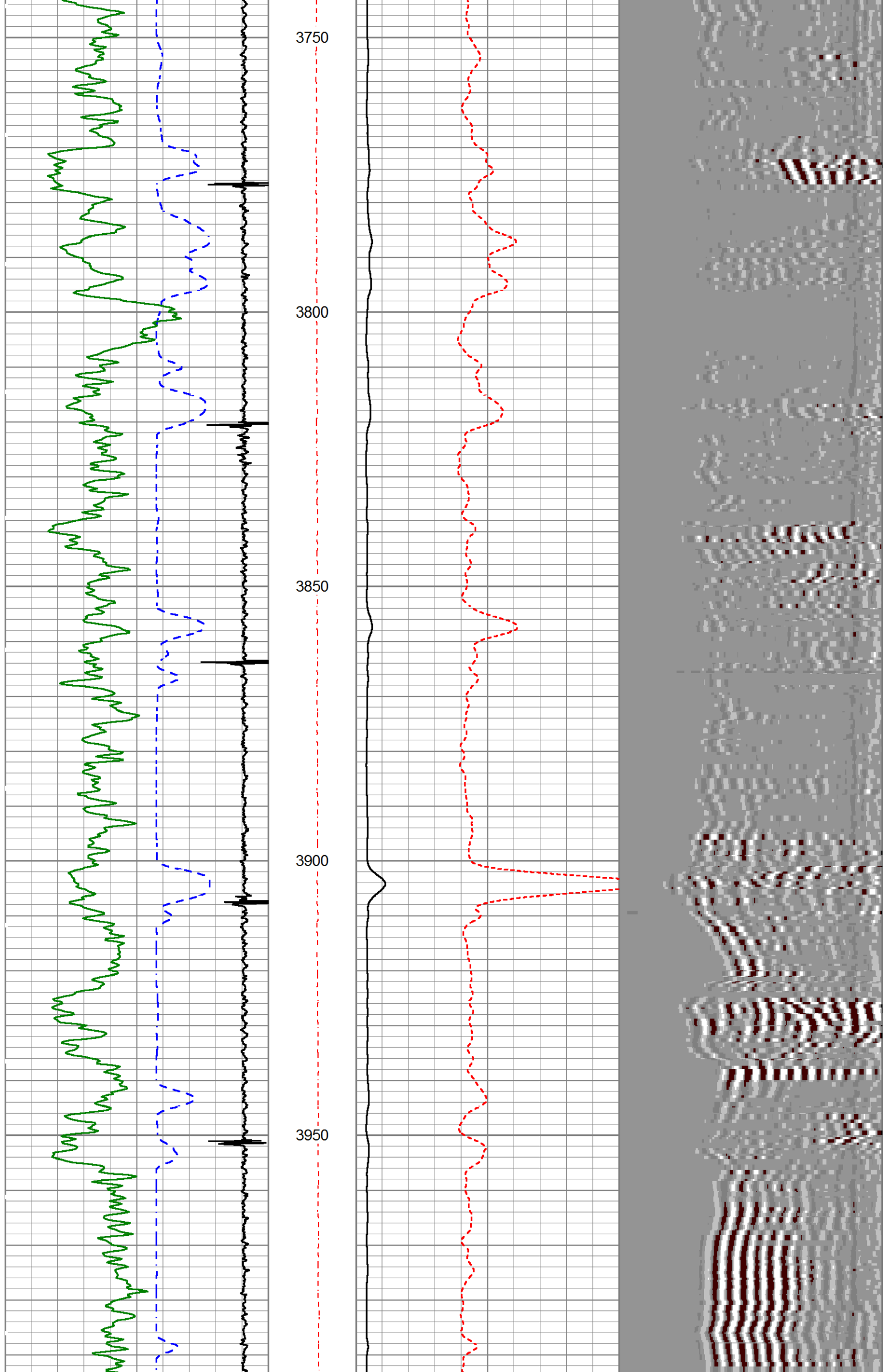


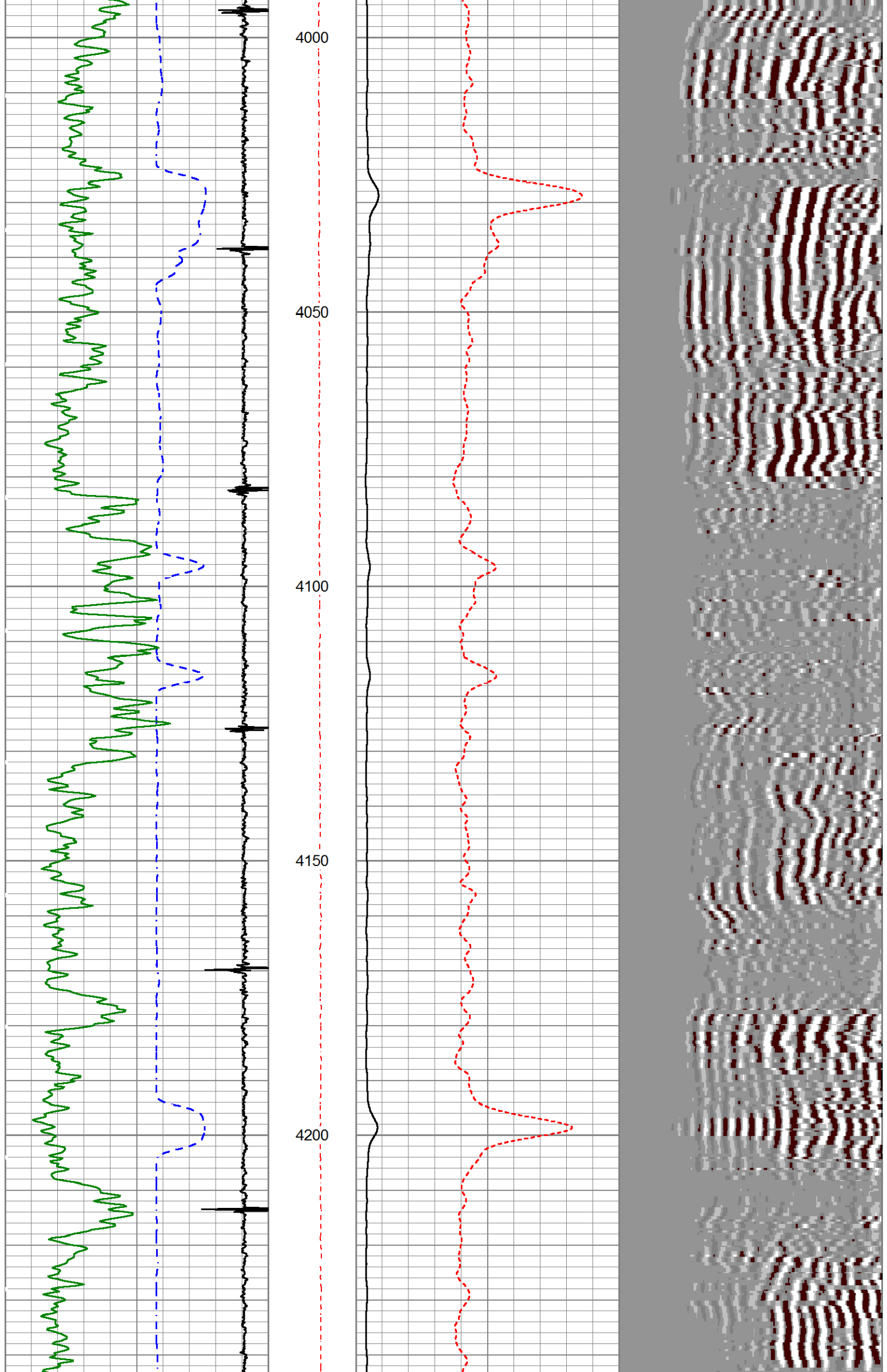


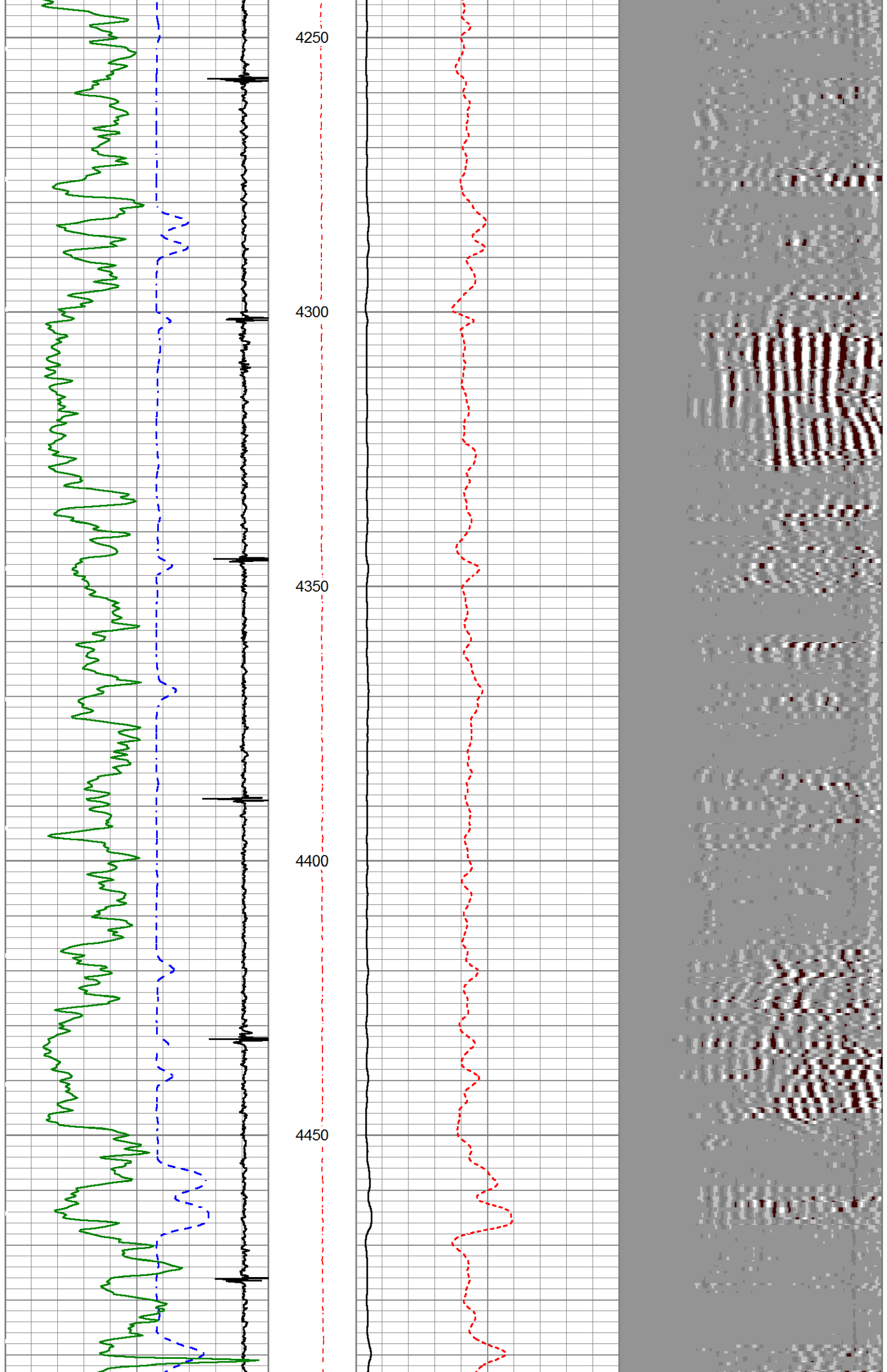


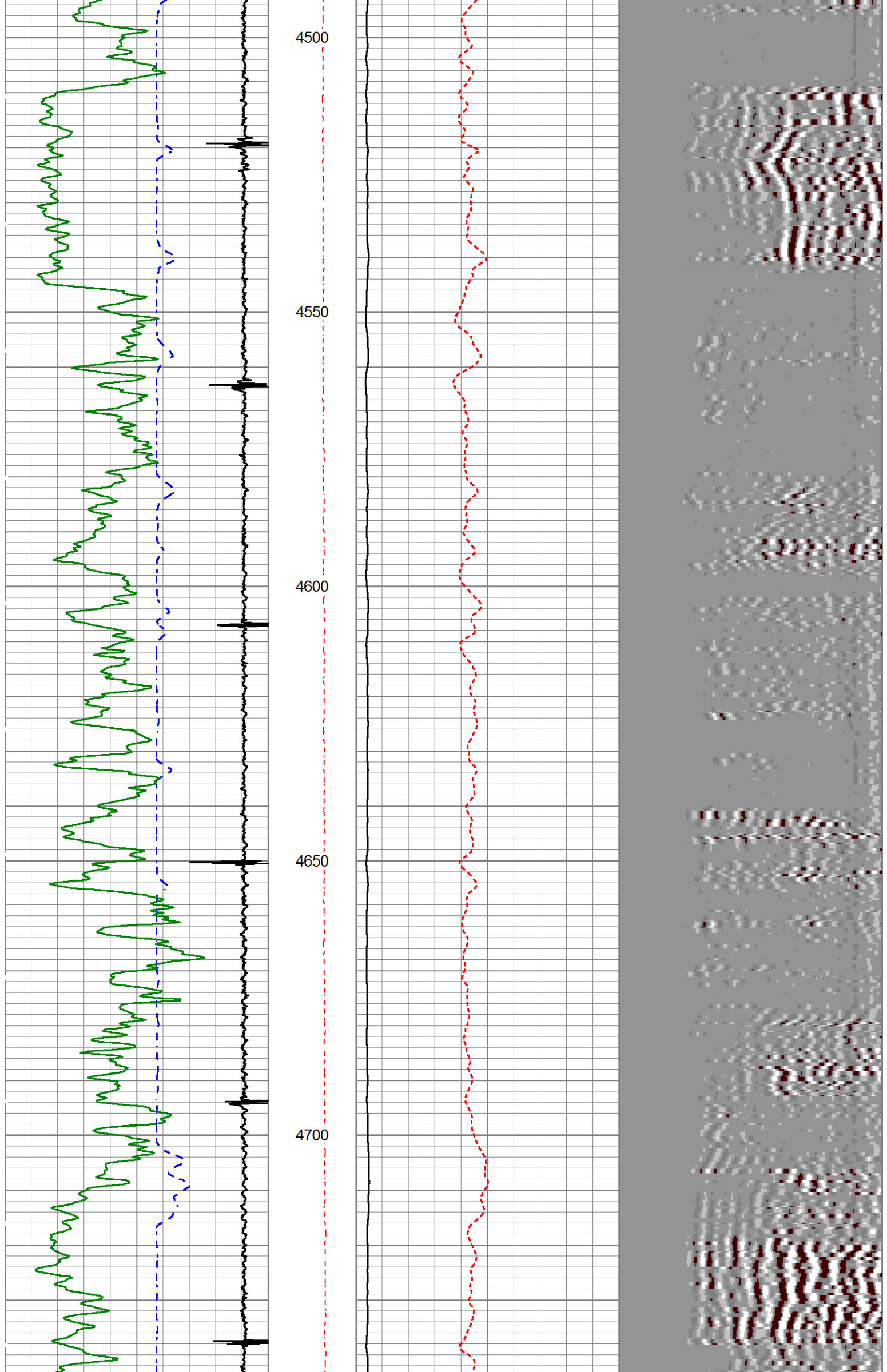




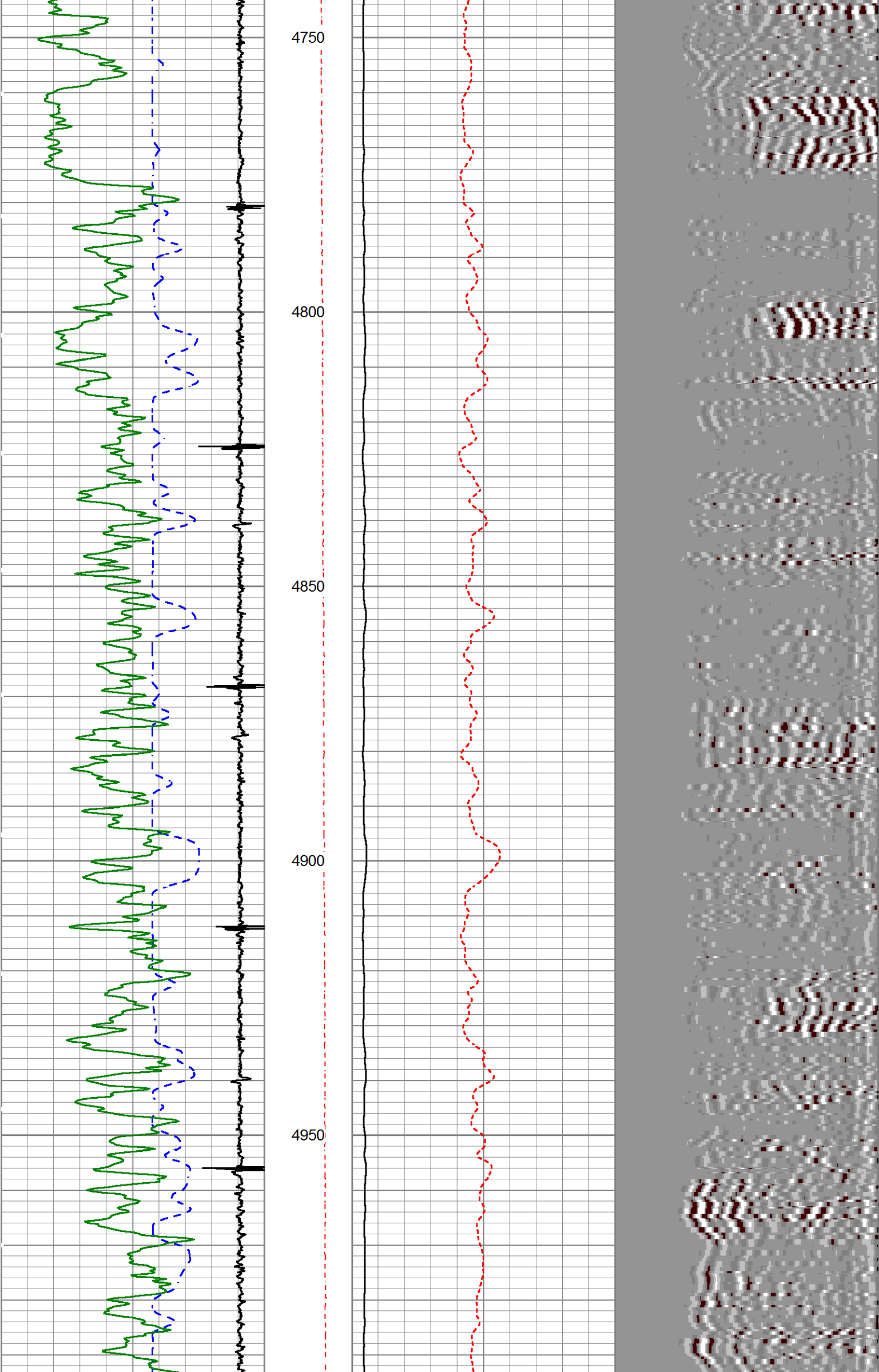


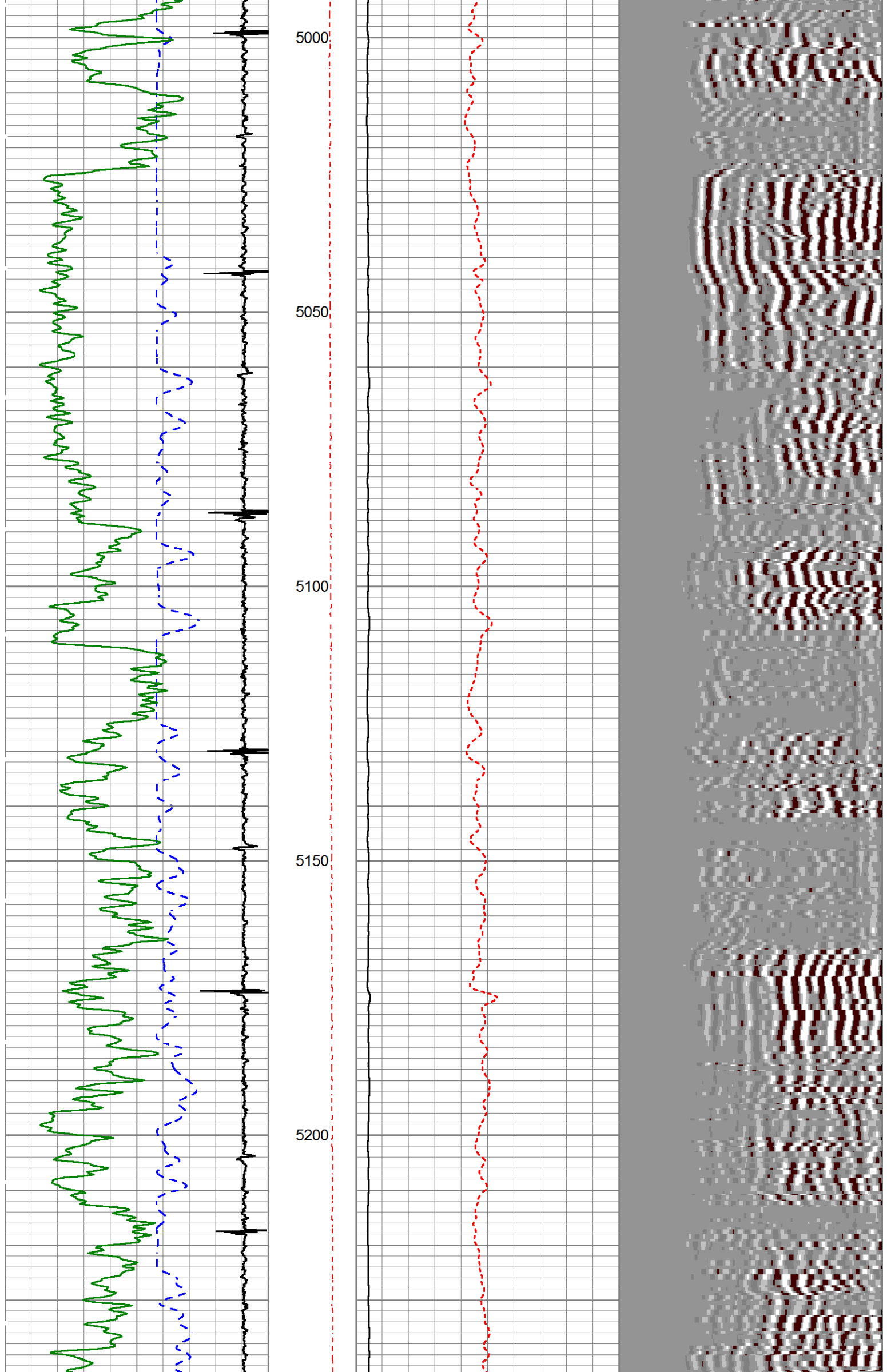


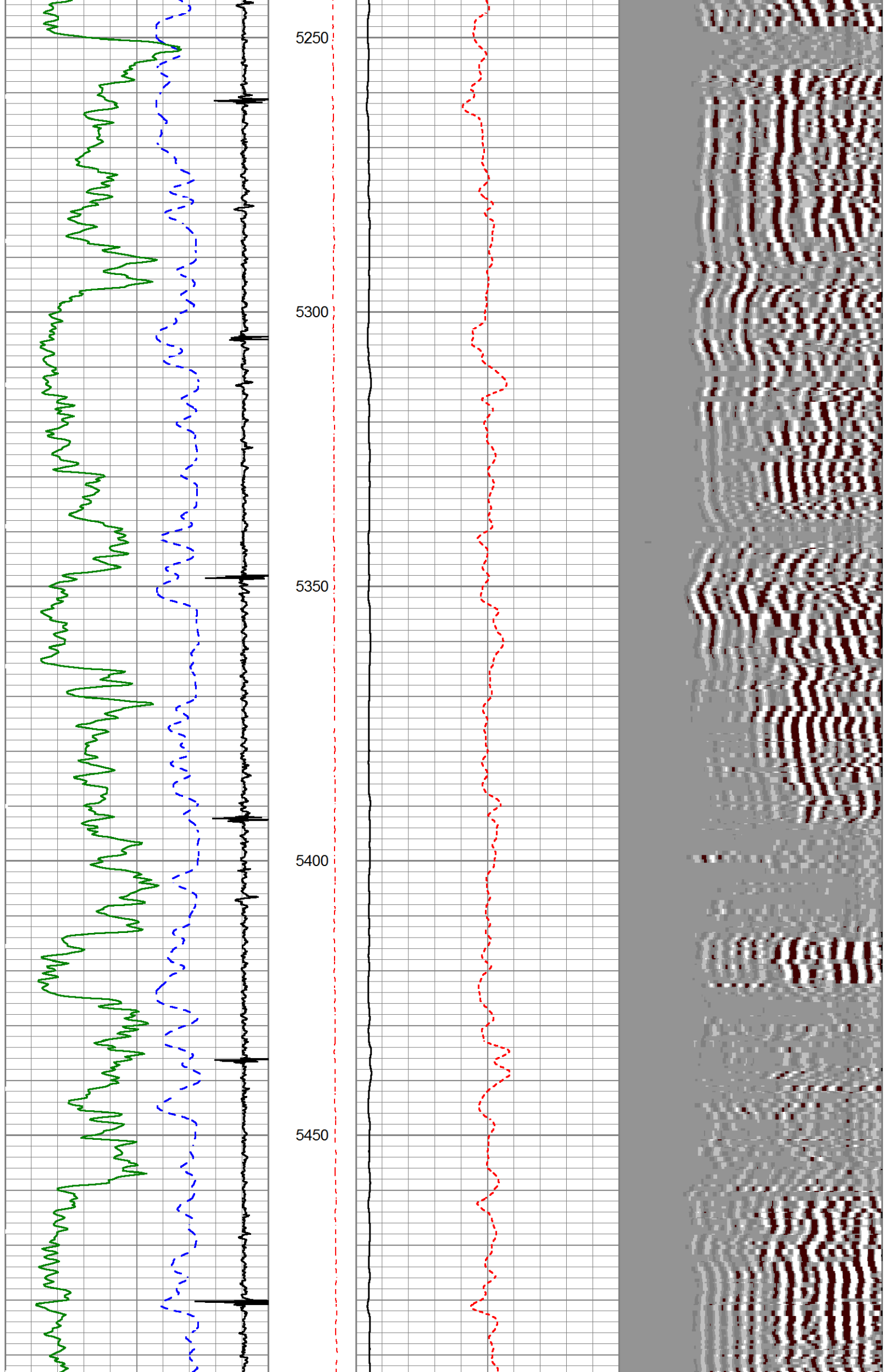


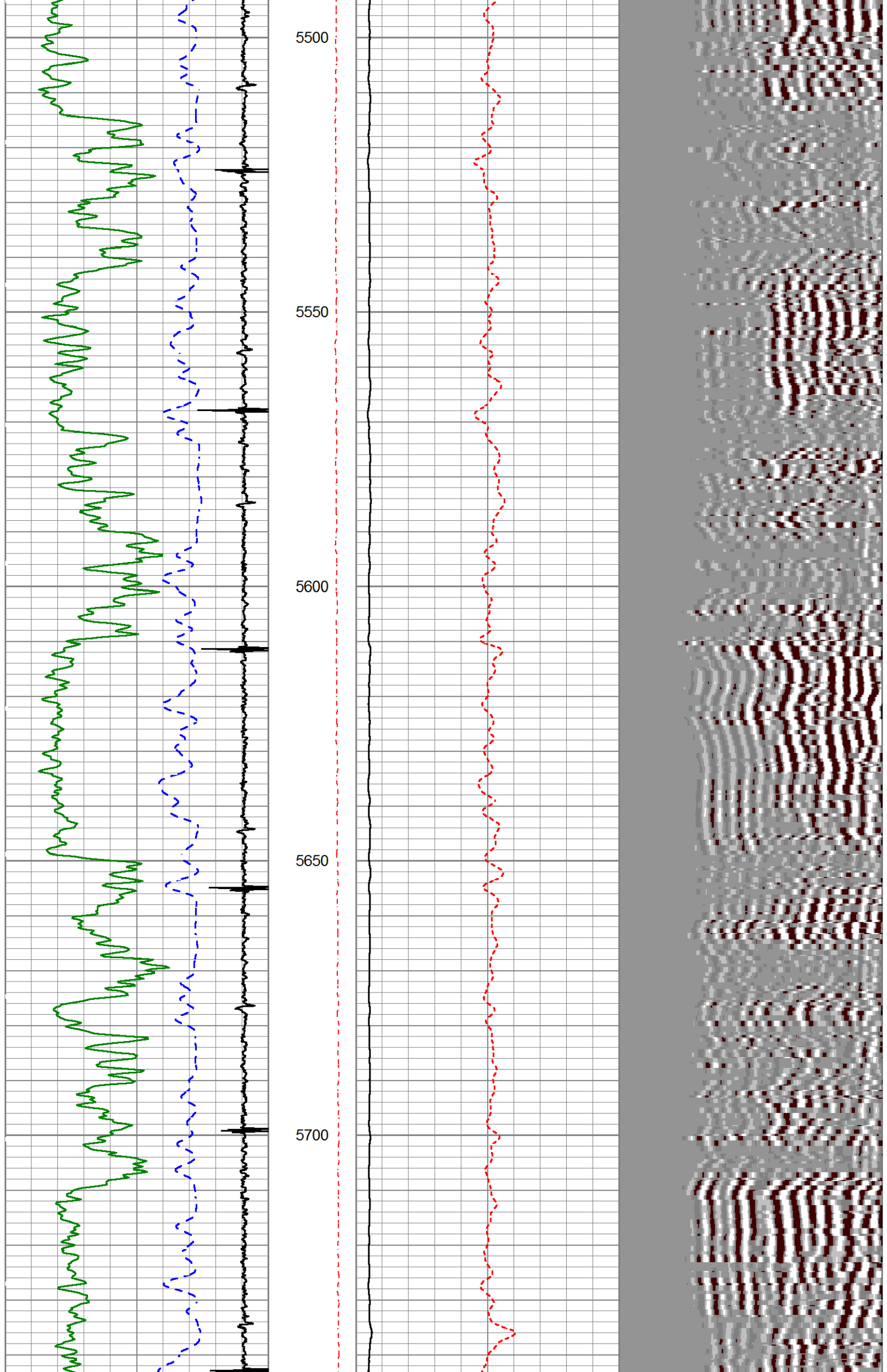




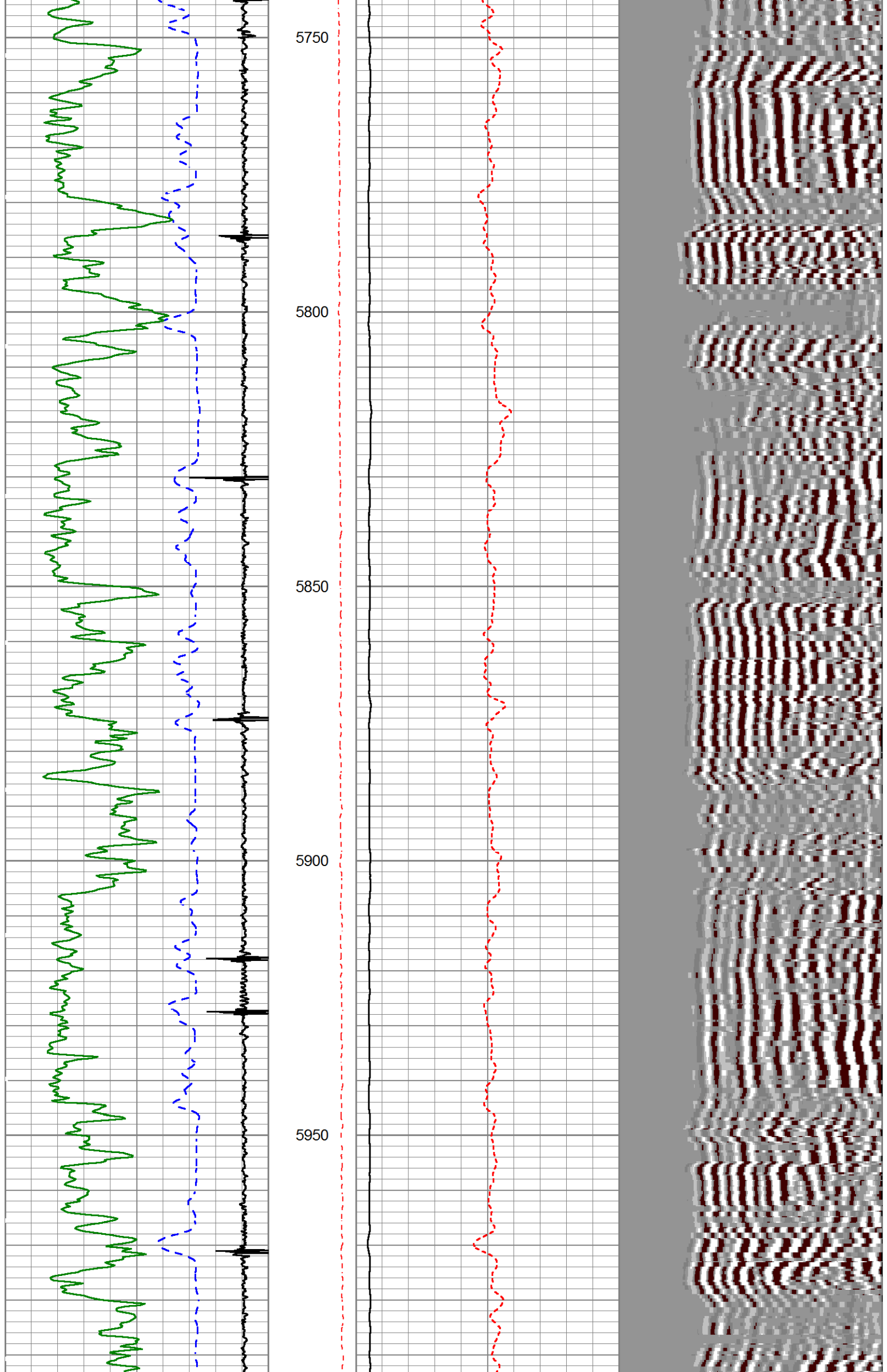


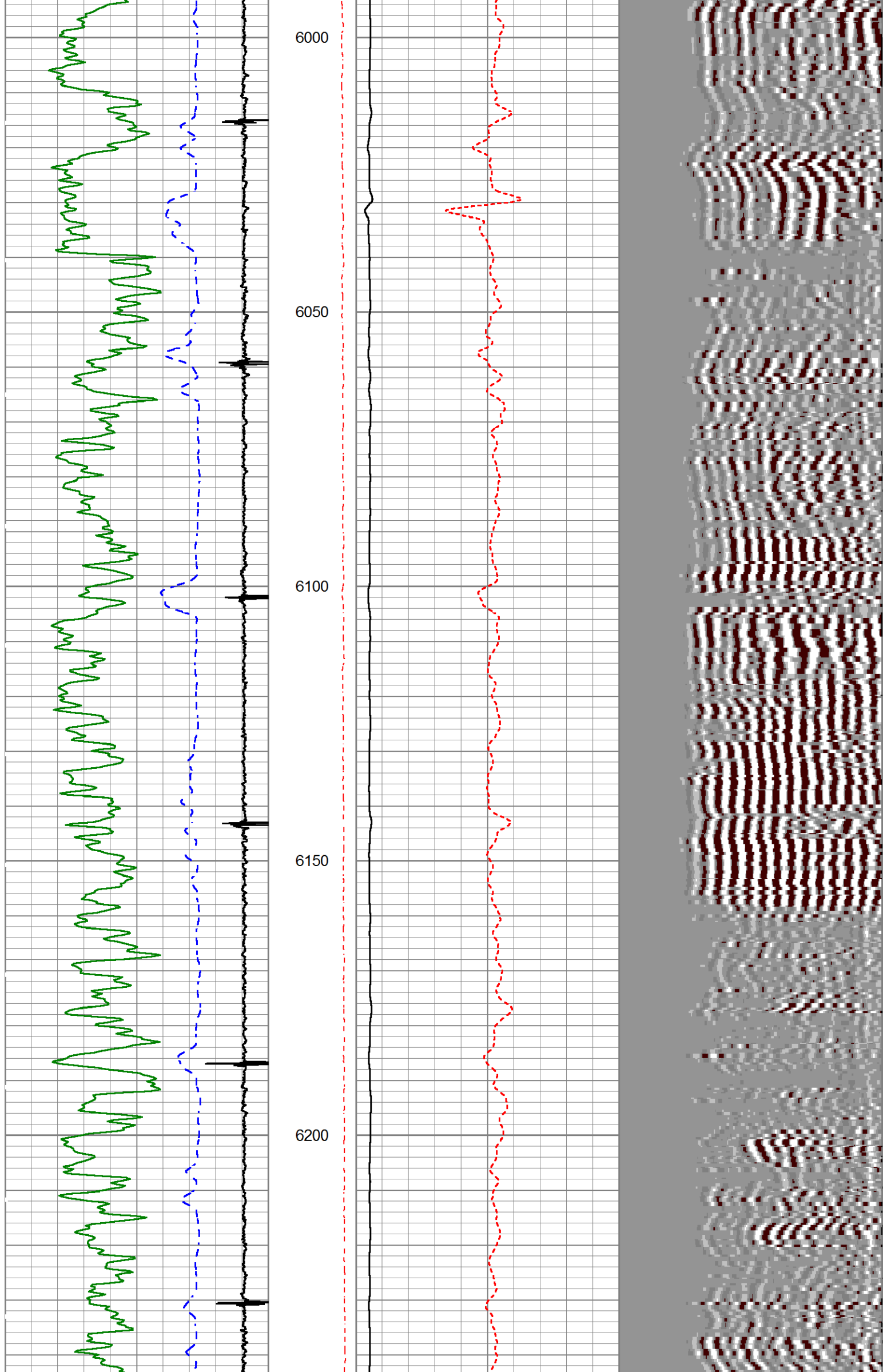


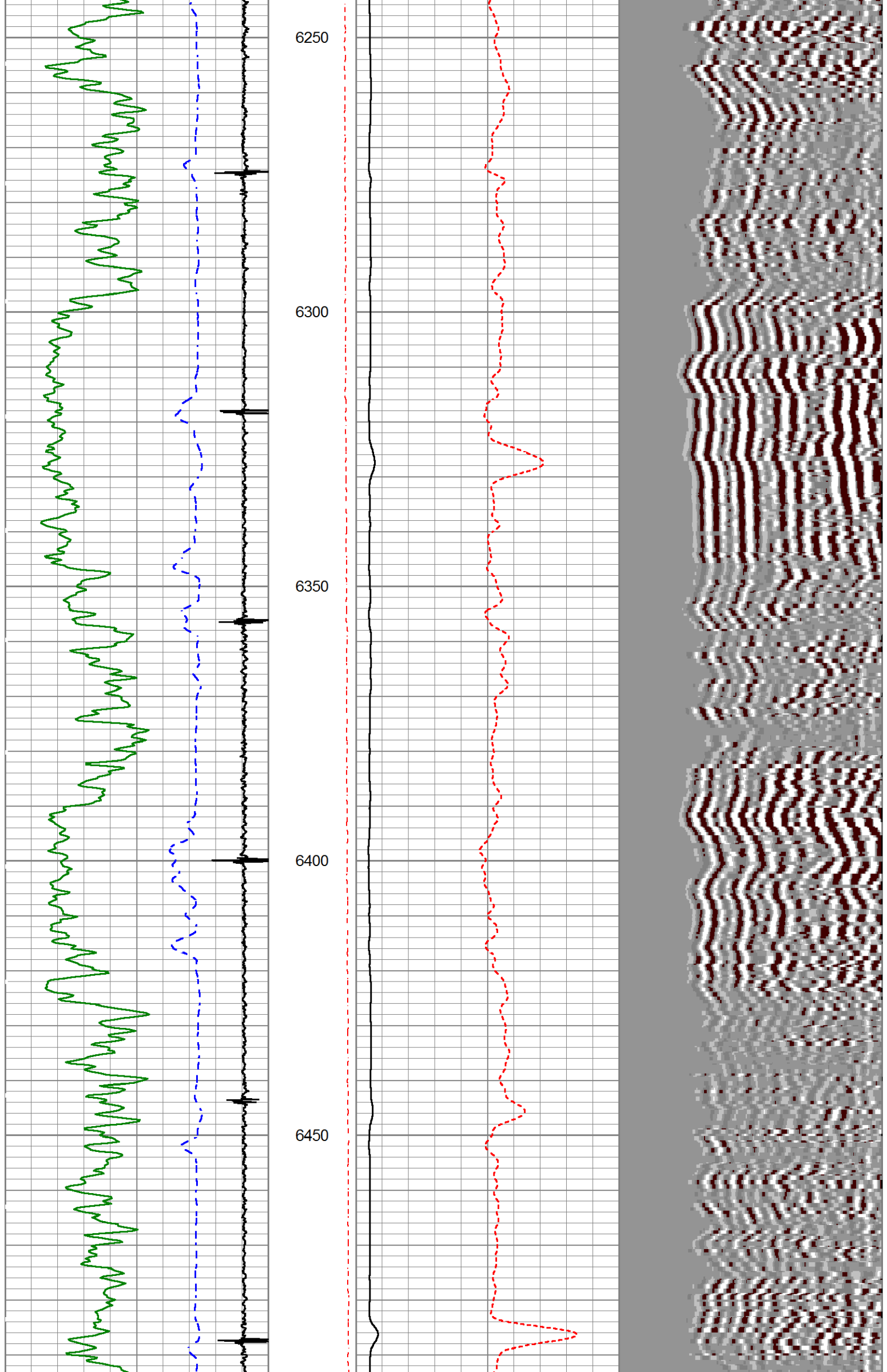


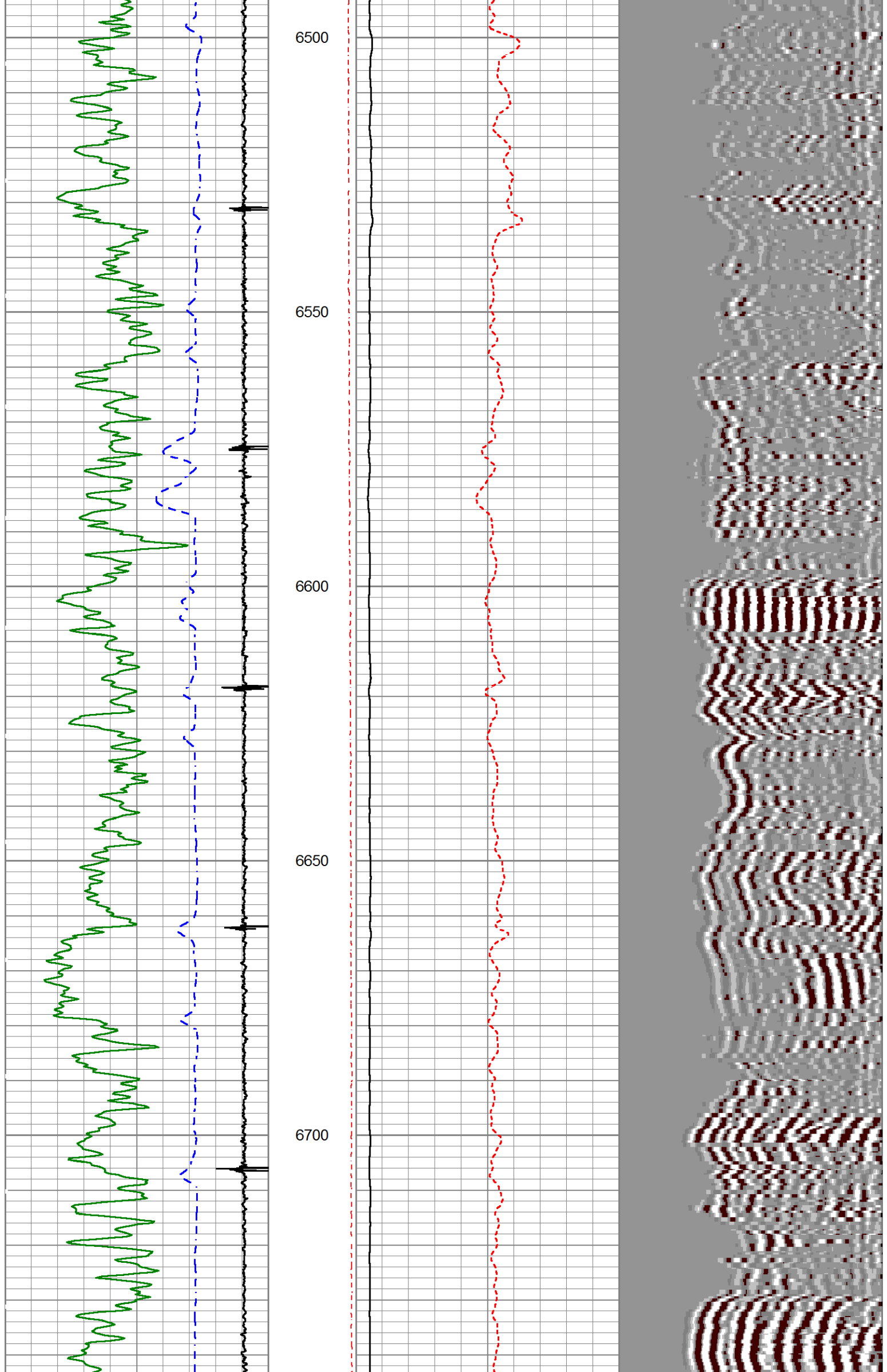


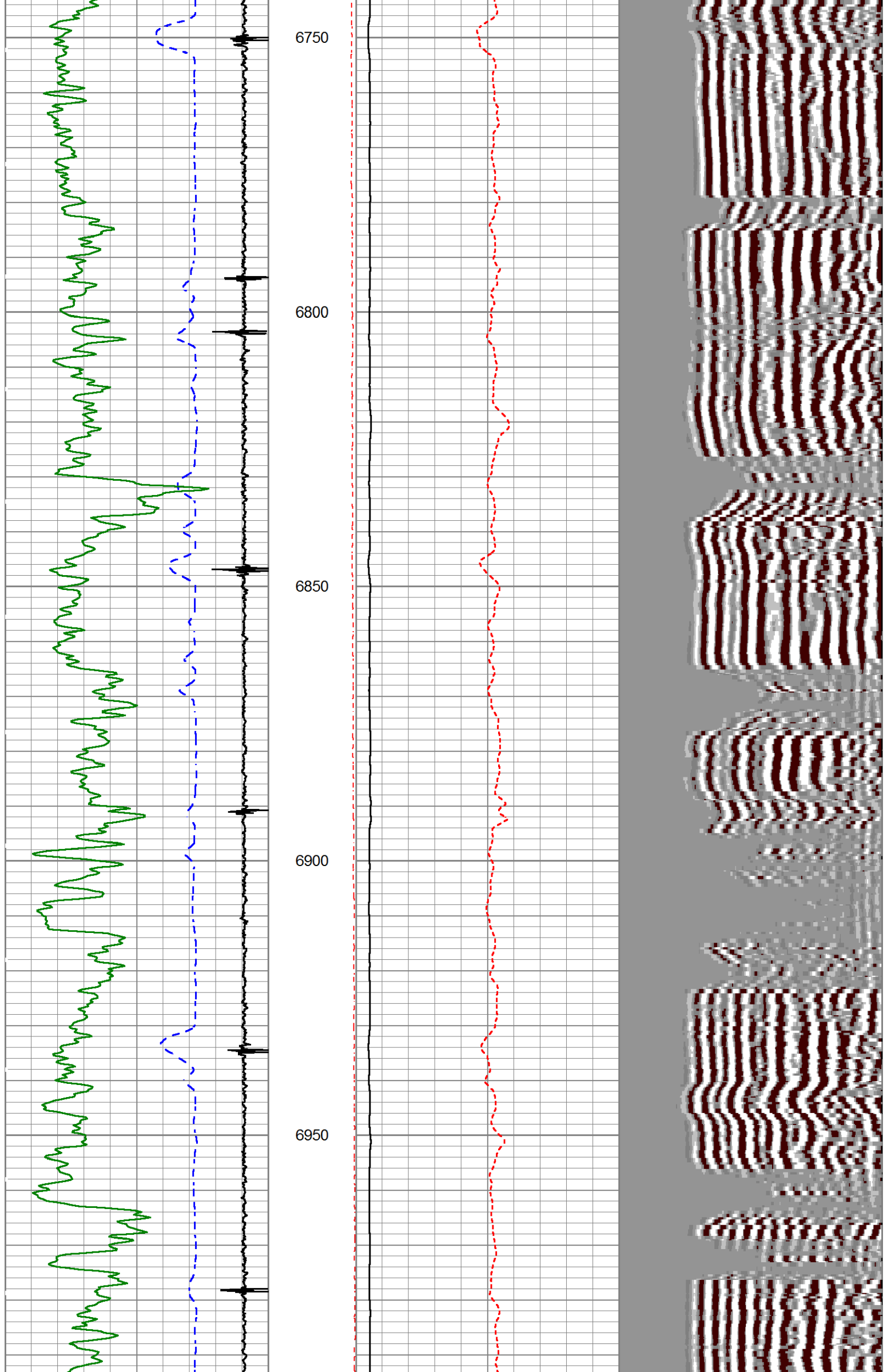


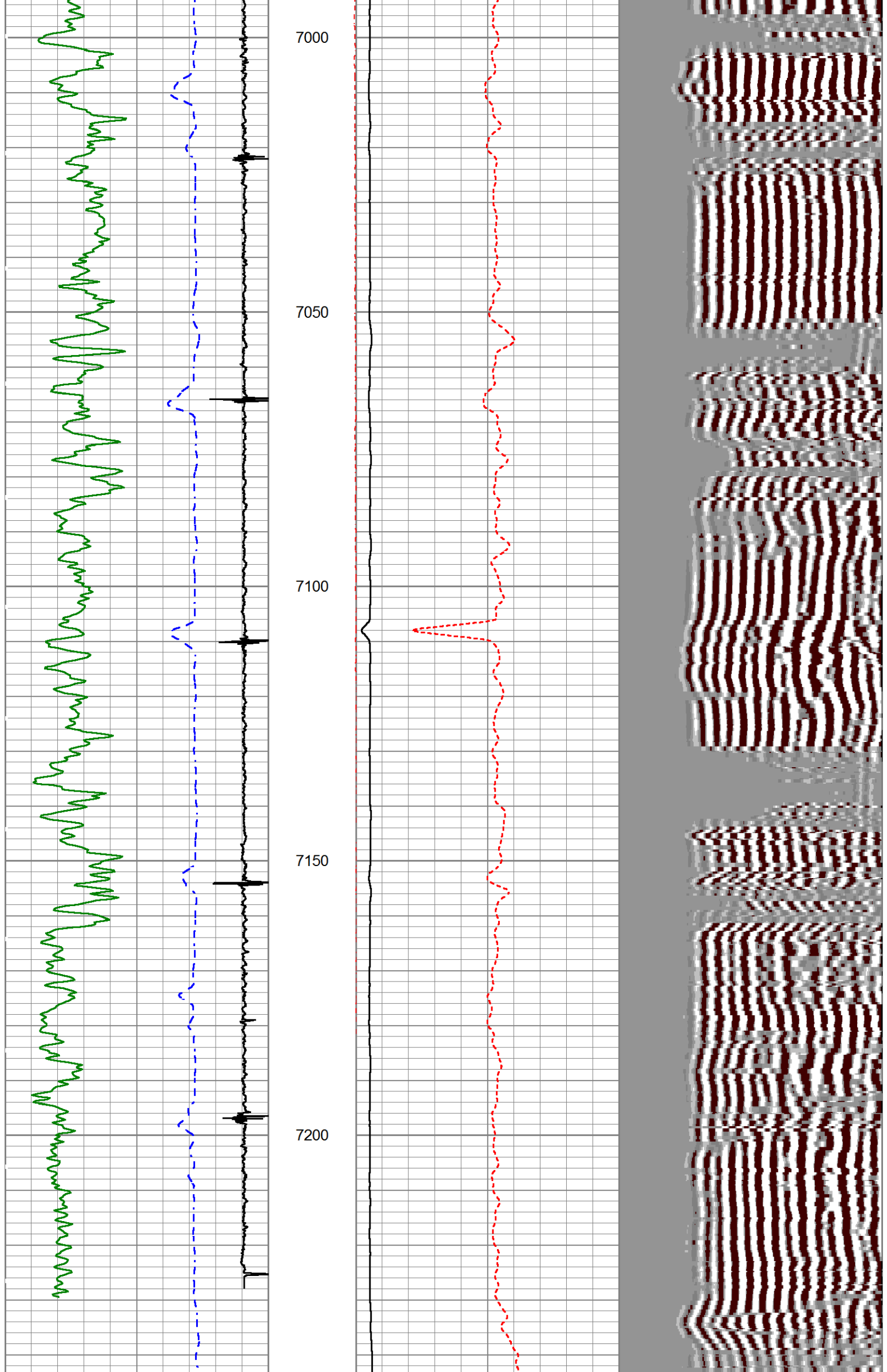




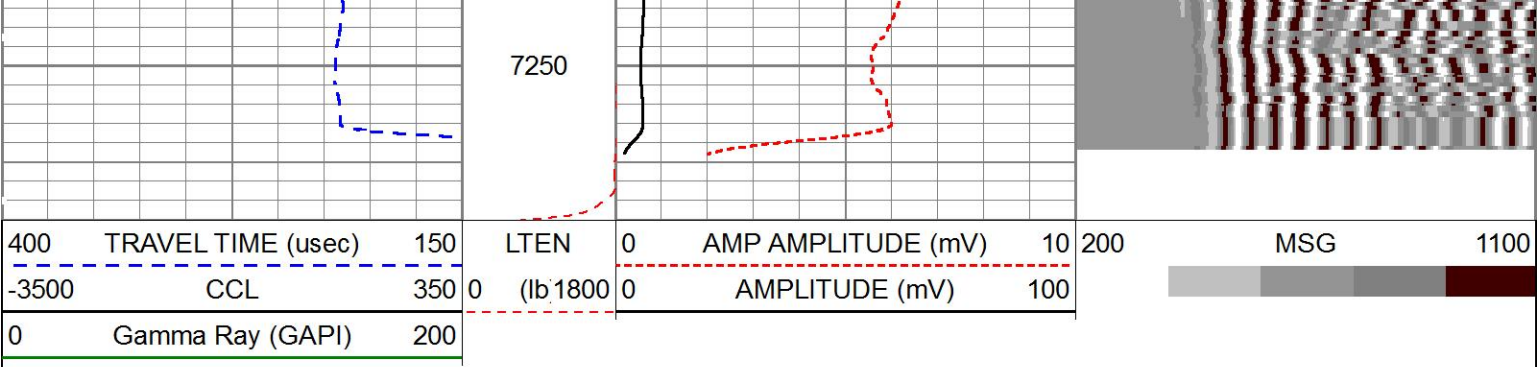












MAIN LOG SECTION

5" = 100'

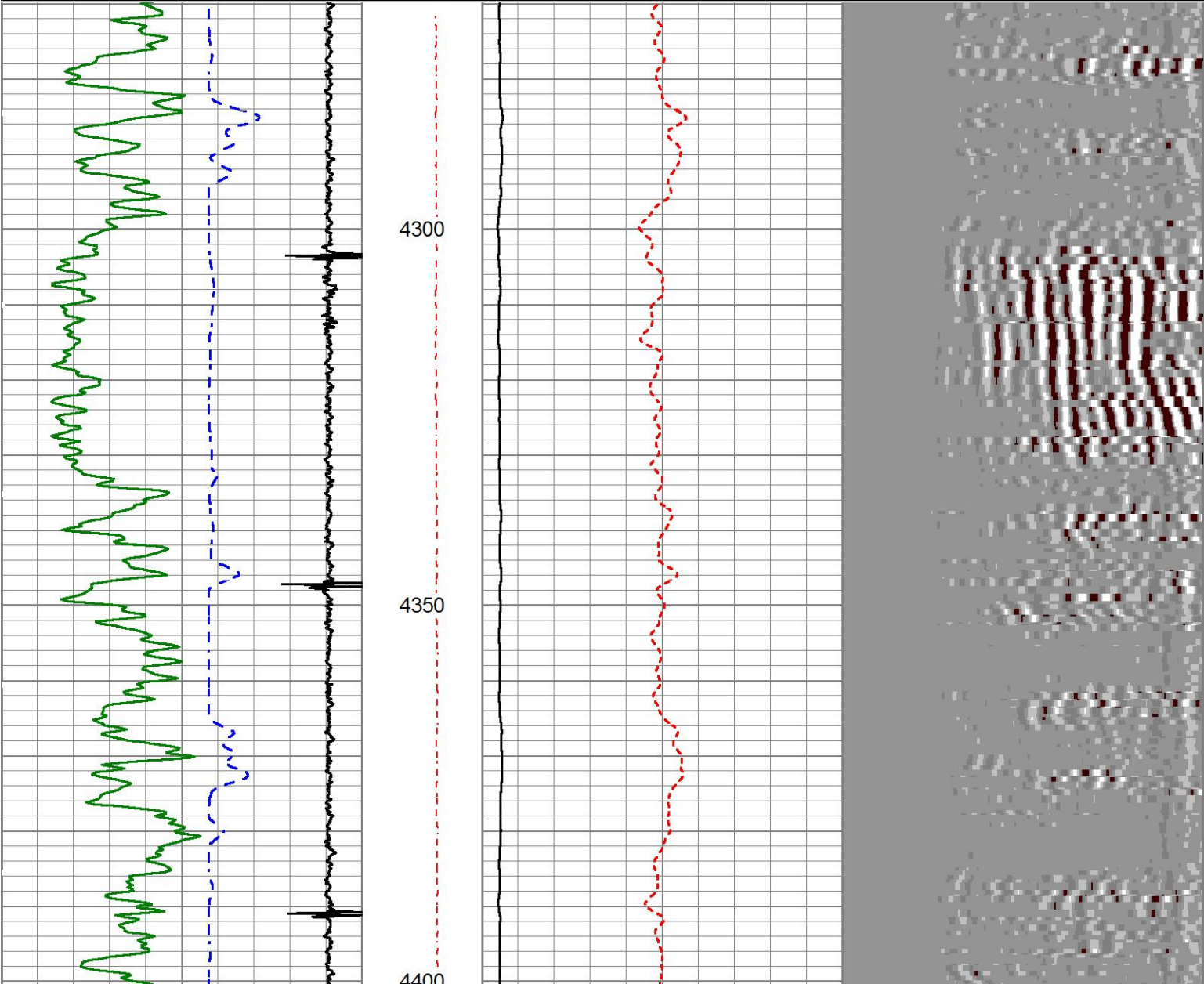
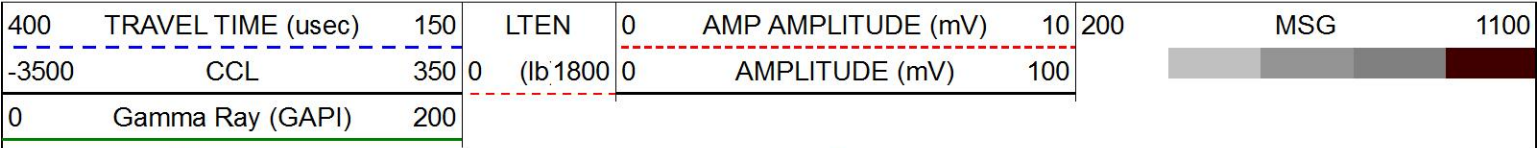
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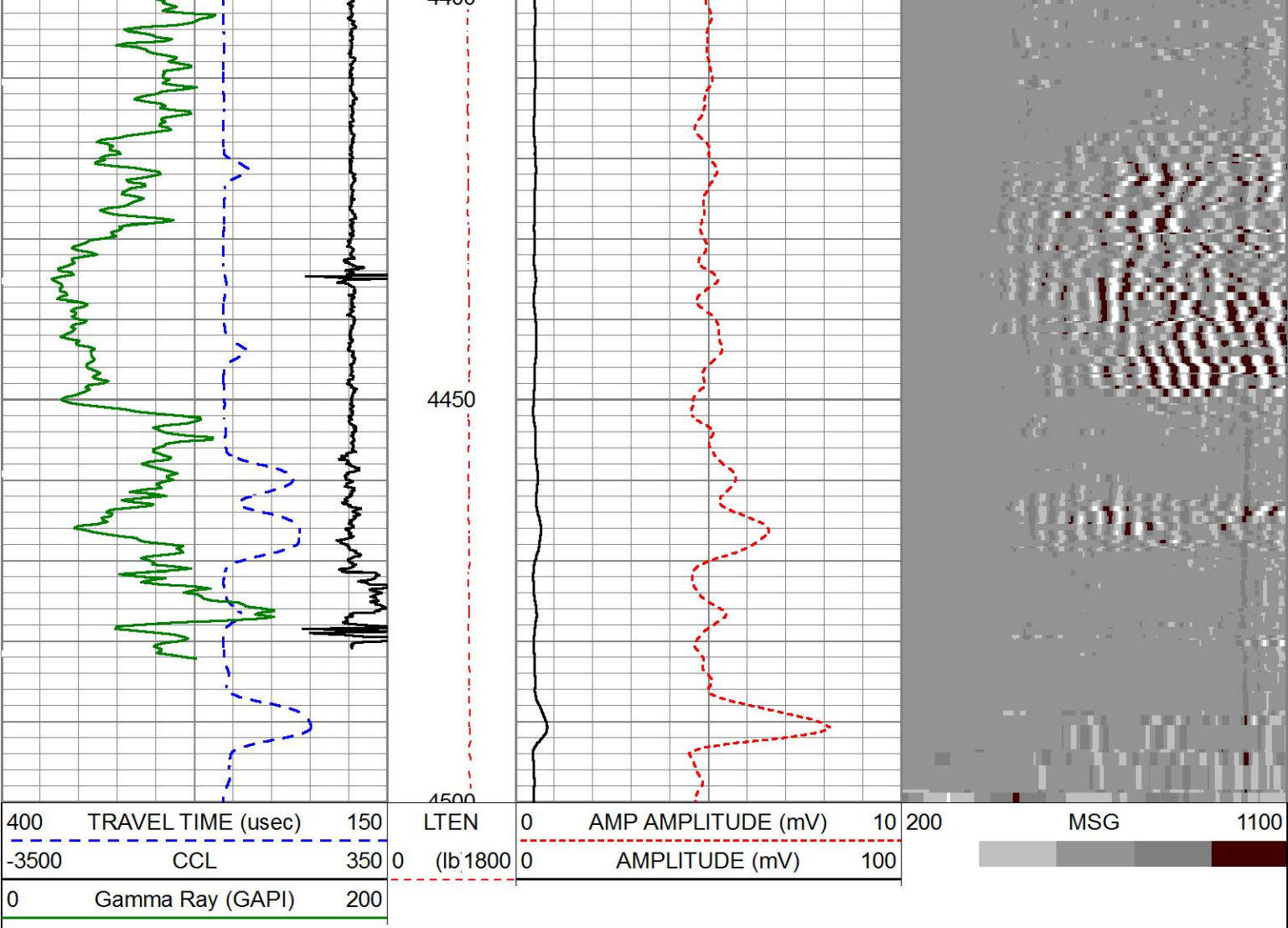
REPEAT LOG SECTION

5" = 100'

HALLIBURTON

Database File yater\_21d.db  
Dataset Pathname REPEAT  
Presentation Format cbl\_main  
Dataset Creation Sun Aug 30 11:05:20 2015  
Charted by Depth in Feet scaled 1:240





REPEAT LOG SECTION

HALLIBURTON

5" = 100'

Log Variables

DatabaseD:\Warrior\_data\yater\_21d.db  
Dataset field\well\run1\MAIN.1\\_vars\_

Top - Bottom

GAINCO 0	RINOR 0	RTF 0	RTN 0	RNOR 0	PPT uSec 0	MAXAMPL mV 82	MINAMPL mV 2
MINATTN db/ft 0.8	MSGGN 1	USERFTT uSec/ft 0	ZREF MRayl 1.7	BHTEMP_Src ITEMPX	BHSAL2 0	BHSAL1 1	POROS2 0
POROS1 1	CASEWGHT lb/ft 11.6	LTH Sandstone	UHSGC NONE	RHO�F 0.25	SO in 0	BORSAL kppm 150	CASED? Yes
SRFTEMP degF 0	MudWgt lb/gal 8.33	CASETHCK in 0.25	CASEOD in 4.5	PERFS 0	TDEPTH ft 7271	BOTTEMP degF 210	BITSIZE in 7.875

Calibration Report

Database File yater\_21d.db  
Dataset Pathname MAIN.1  
Dataset Creation Sun Aug 30 15:59:08 2015

Segmented Cement Bond Log Calibration Report						
Serial Number:		11002212				
Tool Model:		004				
Calibration Casing Diameter:		4.500	in			
Calibration Depth:		129.148	ft			

Master Calibration, performed (Derived):						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	0.001	0.736	2.000	81.196	107.661	1.920
5FT	-0.011	1.082	2.000	81.196	72.456	2.791
S1	-0.009	0.382	2.000	100.000	251.155	4.146
S2	-0.011	0.837	2.000	100.000	115.575	3.270
S3	-0.009	0.813	2.000	100.000	119.289	3.019
S4	-0.010	0.804	2.000	100.000	120.455	3.176
S5	-0.009	0.825	2.000	100.000	117.478	3.040
S6	-0.009	0.849	2.000	100.000	114.123	3.078
S7	-0.008	0.875	2.000	100.000	110.946	2.940
S8	-0.009	0.883	2.000	100.000	109.880	2.935

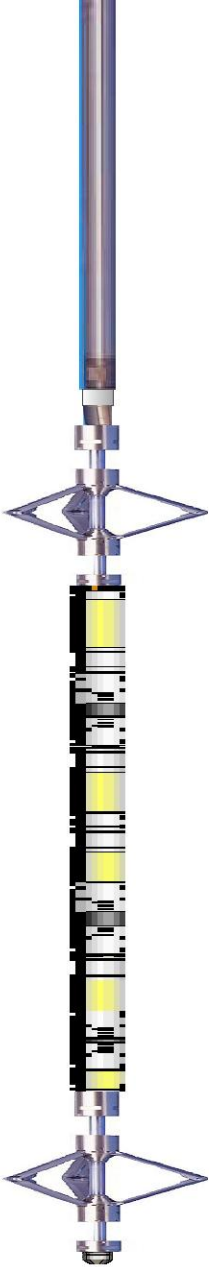
Reservoir Monitor Tool I Calibration Report						
Serial-Model:		12095949-A				
Shop Calibration Performed:		Tue Aug 25 14:40:09 2015				

Carbon/Oxygen Mode					
Stabilization					
Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	89.00	80.00	9.00	+/-15.00	V
ITCR2	3303	3250	53	+/-250	cps
Near Detector					
	Channel	Expected Value	Amplitude	FWHM	Tol.
H	60	60 +/-2	0.0259	5.42	<6.00
Fe	206	206 +/-2	0.0969	-----	-----
NGAIN = 0.994	NZOFF = 0.7				
Far Detector					
	Channel	Expected Value	Amplitude	FWHM	Tol.
H	60	60 +/-2	0.0354	5.76	<6.50
Fe	209	208 +/-2	0.0914	-----	-----
FGAIN = 0.992	FZOFF = 0.5				
Flask Temperature	66.3 degF				
Result	Logged	Expected Value	Diff.	Tol.	Units
COIR2	0.45	0.45	-0.00	+/-0.02	
LIRI2	1.36	1.36	0.00	+/-0.05	
TCCR2	5298	5000	298	+/-1000	cps
ITCR2	3236	3200	36	+/-250	cps

Sigma Mode						
Stabilization						
Result	Logged	Expected Value	Diff.	Tol.	Units	
GENV	88.00	80.00	8.00	+/-15.00	V	
ITCR2	3303	3200	103	+/-250	cps	



FCAP	10073	10000	73	+/-500	cps
Horizontal Water Tank					
Result	Logged	Expected Value	Diff.	Tol.	Units
N/F Normalizer	0.90	0.95	-0.05		
N/F Inel Norm	0.58	0.61	-0.03		
RNF	1.11	1.07	0.04	+/-0.12	
RINC	1.73	1.64	0.09	+/-0.18	
SGFN	24.12	24.00	0.12	+/-0.50	cu
SGFF	22.92	22.85	0.07	+/-0.50	cu
FSIN	24271	24000	271	+/-2000	cps
FCAP	10228	10000	228	+/-1000	cps
NFTR	0.85			<5.00	
FFTR	0.82			<5.00	
NBKG	219			<500	cps
FBKG	108			<500	cps
RTN	0.40	0.40	-0.00	+/-0.10	usec
RTF	0.42	0.40	0.02	+/-0.10	usec
Calibration Software Modules					
HRMTI Module	2015.5.4.0				
RMTI Module	2015.5.15.1				
Log Data Acquisition Software Modules					
HRMTI Module	2013.11.14.0				
RMTI Module	2014.8.28.1				
Gamma Ray Calibration Report					
Serial Number:	11495480				
Tool Model:	002				
Performed:	Thu Aug 27 12:29:28 2015				
Calibrator Value:	408.0	GAPI			
Background Reading:	38.0	cps			
Calibrator Reading:	333.5	cps			
Sensitivity:	1.3806	GAPI/cps			

			RMTI-A (12095949) Halliburton RMTI Tool	14.00	2.13	77.00
RmtFP5V	16.39		X-OVER-SondexxGo	0.31	1.69	1.00
RmtCommFWa	16.39		Sondex Box x Go Pin Cross Over			
			AUH-001 (11072111) Adaptor Ultrawire/Halliburton	0.38	1.69	3.00
			PRC-022 (01) Production Roller Centralizer 6 Arm	3.00	2.75	35.00
CBLTEMP	8.35		RBT-004 (11002212) Radial Bond Tool (UW 3 1/8)	9.48	3.13	140.00
			PRC #2 -022 (02) Production Roller Centralizer 6 Arm	3.00	2.75	35.00
LLMTEN	0.00		BUL-006 (000002) Bullnose Terminator	0.22	1.69	1.20
Dataset: yater_21d.db: field/well/run1/MAIN.1 Total length: 40.70 ft Total weight: 400.20 lb O.D.: 3.13 in						

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