

Company URSA OPERATING CO., LLC. Well WATSON RANCH B 33A-17-07-95 Field PARACHUTE County GARFIELD State CO				Company URSA OPERATING CO., LLC. Well WATSON RANCH B 33A-17-07-95 Field PARACHUTE County GARFIELD State CO			
Permanent Datum GROUND LEVEL Elevation 5585' Log Measured From KB 17 Ft. above perm. datum Drilling Measured From KB				Sec: 17 Twp: 07S Rge: 95W BOTTOM HOLE LOCATION: 2396' FSL & 1971' FEL GAUGE RING RMT			
Date @ Time Logged 04 JUNE 2015				Type Fluid in Hole WATER			
Run No. ONE				Density of Fluid 8.4#			
Depth - Driller 7289'				Fluid Level FULL			
Depth - Logger 7094'				Cement Top Est. Logged SEE LOG			
Bottom - Logged Interval 7094'				Equipment / Location 10971668 / G.J.			
Top - Log Interval 1500'				Recorded by D. SOLIS			
Max. Recorded Temp. 218 DEG F				Witnessed by R. TOLLE			
CEMENTING DATA				R. TOLLE			
Surface				Protection			
String				String			
N/A				N/A			
Date / Time Cemented				Liner			
Primary / Squeeze				N/A			
Expected				N/A			
Compressive Strength				N/A			
Cement Volume				N/A			
Cement Type / Weight				N/A			
Formulation				N/A			
Mud Type / Mud Wgt.				N/A			
Borehole Record				Casing & Tubing Record			
Run Number				Run Number			
ONE				ONE			
TWO				TWO			
12.25"				12.25"			
7.875"				7.875"			
SURFACE				SURFACE			
1819'				1819'			
7289'				7289'			
8.625"				8.625"			
4.5"				4.5"			
32.0#				32.0#			
11.6#				11.6#			
SURFACE				SURFACE			
1819'				1819'			
7289'				7289'			

<<< 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 CBL LOG DATED: 04 JUNE 2015 IS THE PRIMARY DEPTH REFERENCE FOR THIS WELL.

GR-RMT-CBL RAN IN COMBINATION.

LOG INTERVALS PER CUSTOMER REQUEST.

SHORT JOINTS @: 4539' - 4549', 5570' - 5580', AND 6598' - 6608'.

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES.

Service Ticket No.		902453901		API No.		05-045-22800-0000		PGM Ver		14.11.12001	
The Well Name, Location, Borehole Description, and / or Cementing Data Furnished by Client											
EQUIPMENT DATA											
TELEMETRY			CEMENT BOND TOOL			RESERVOIR MONITOR TOOL					
Run No.	ONE		Run No.	ONE		Run No.	ONE		Run No.		
Serial No.	11224503		Serial No.	11002214		Serial No.	12095949		Serial No.		
Model No.	TTTC-U-002		Model No.	RBT-004		Model No.	RMTI-A		Model No.		
Diameter	1.688"		Diameter	3.125"		Diameter	2.125"		Diameter		
LOGGING DATA											
General Data											
Pass	Depths			Well Head		Speed		Logging Run Comments			
No	From		To		Pressure		Ft/Min				

No.	7094'	1500'	0	REC	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	370	170	0	100	200	1200
DIRECTIONAL INFORMATION								
Maximum Deviation		N/A	deg. @	N/A	KOP	N/A		

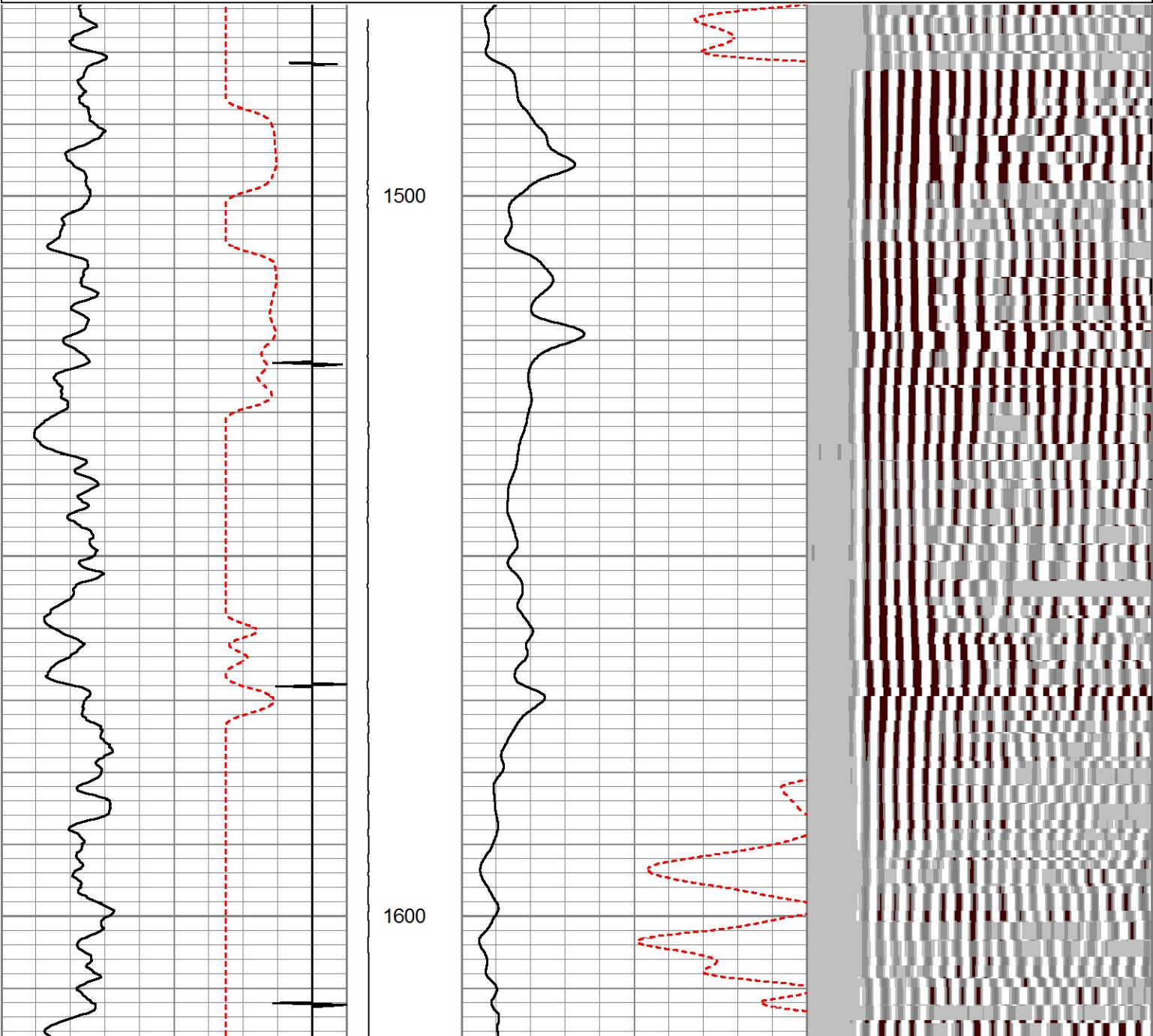
HALLIBURTON

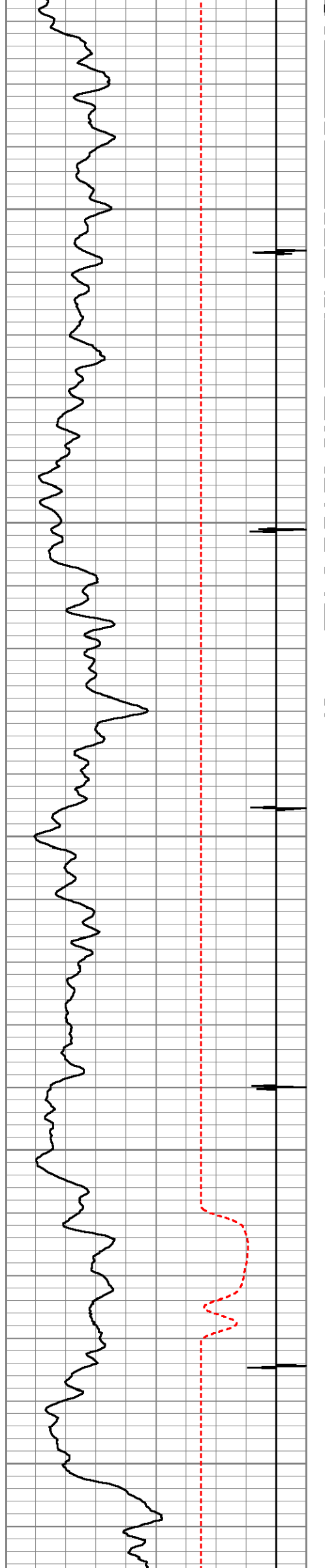
MAIN LOG SECTION

5" = 100'

Database File	watson_b_33a_combo.db
Dataset Pathname	MAIN1
Presentation Format	CBL_RB~1
Dataset Creation	Thu Jun 04 09:45:55 2015
Charted by	Depth in Feet scaled 1:240

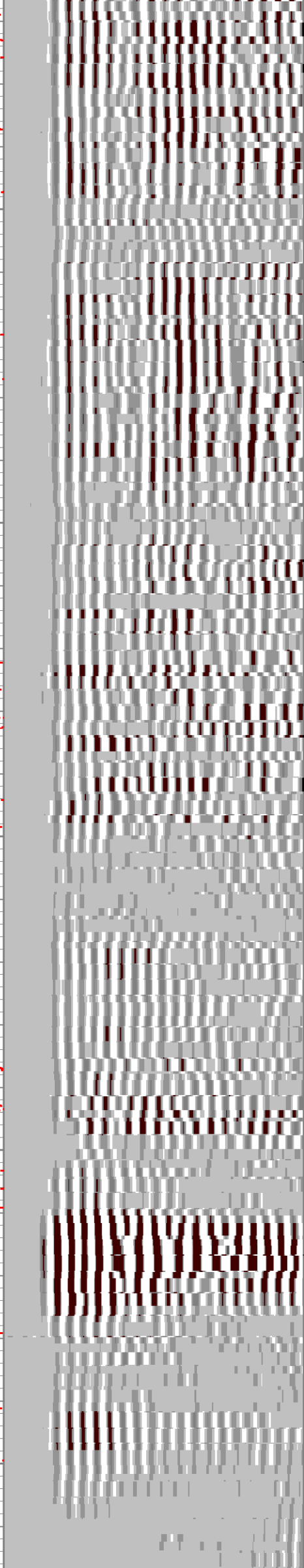
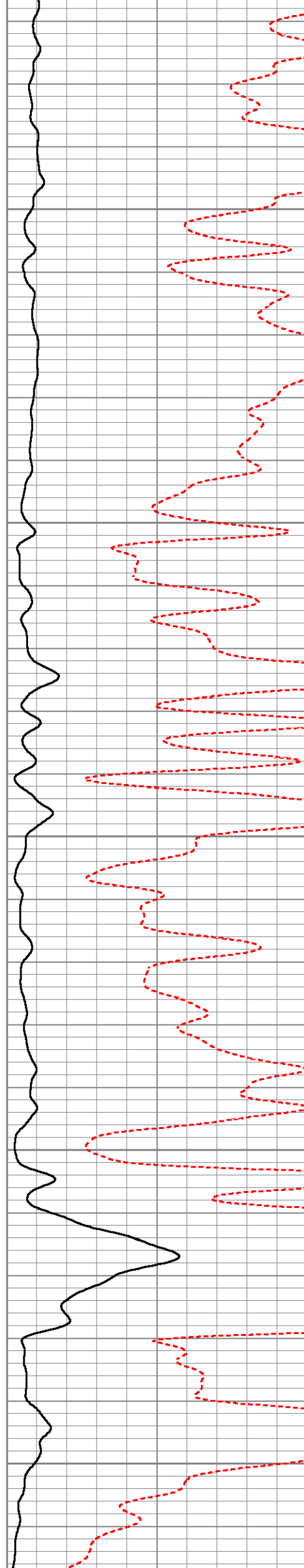
370	TRAVEL TIME (usec)	170	LTEN	0	AMP AMPLITUDE (mV)	10	200	MSG	1200
-5400	Collar Locator	600	0	(lb)3000	0	AMPLITUDE (mV)	100		
0	Gamma Ray (GAPI)	200							

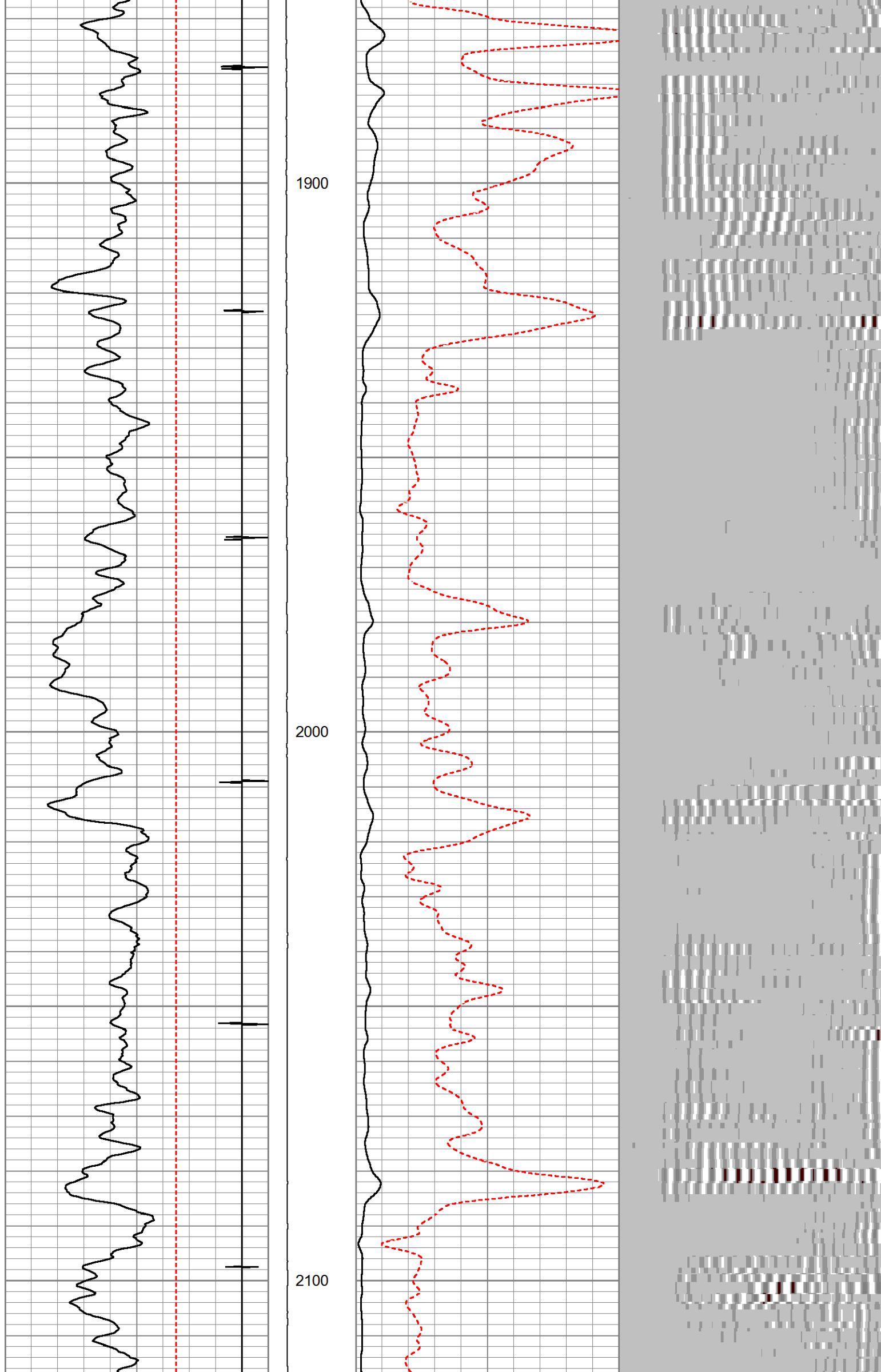


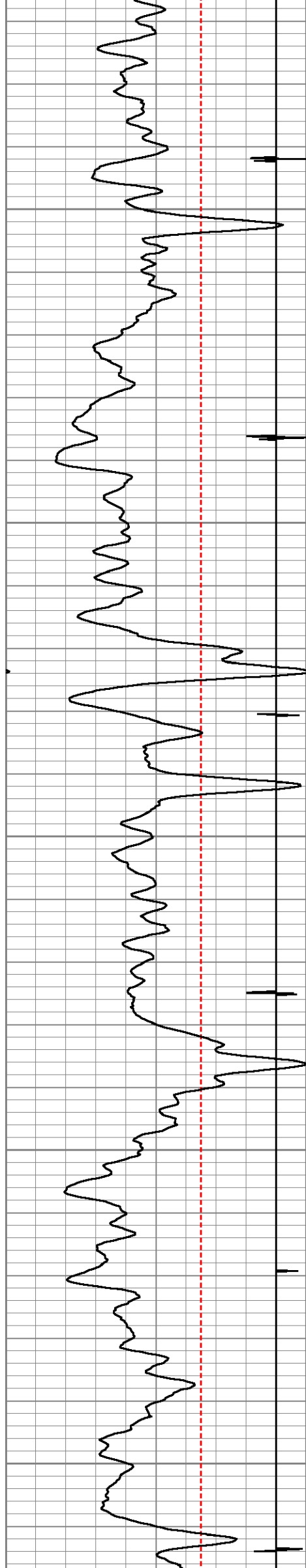


1700

1800

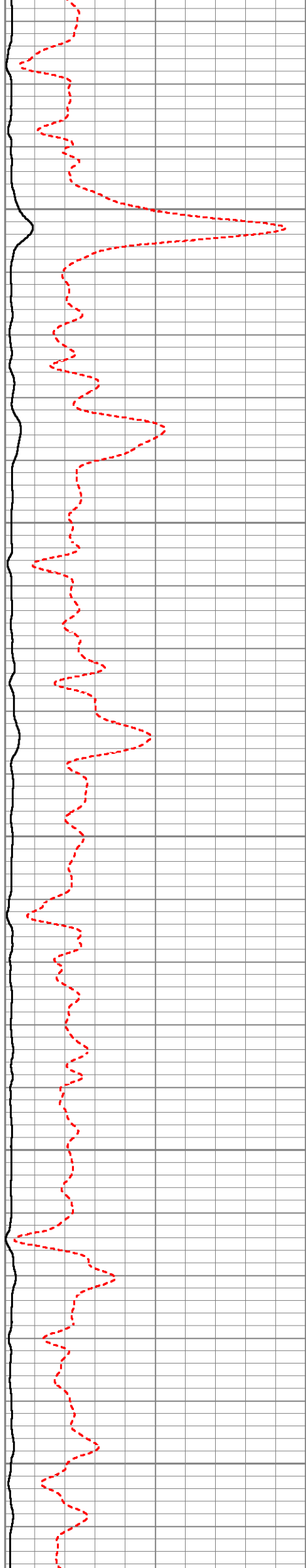


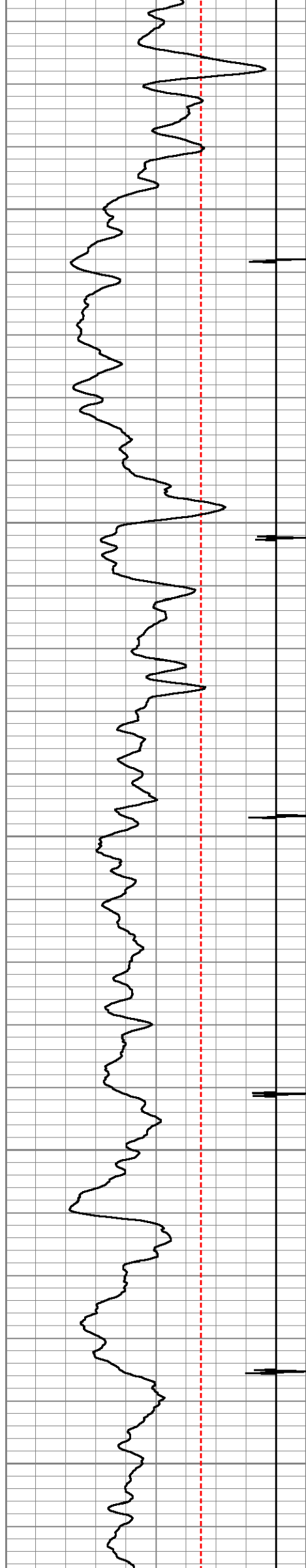




2200

2300

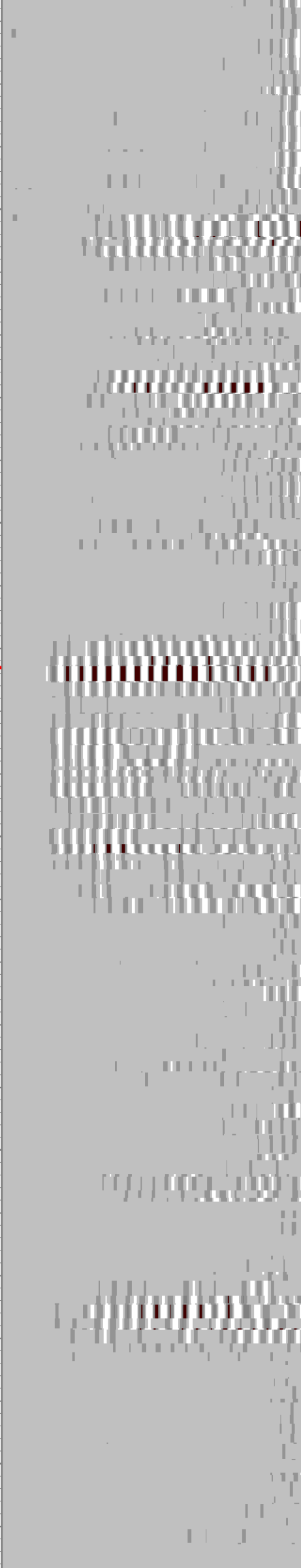
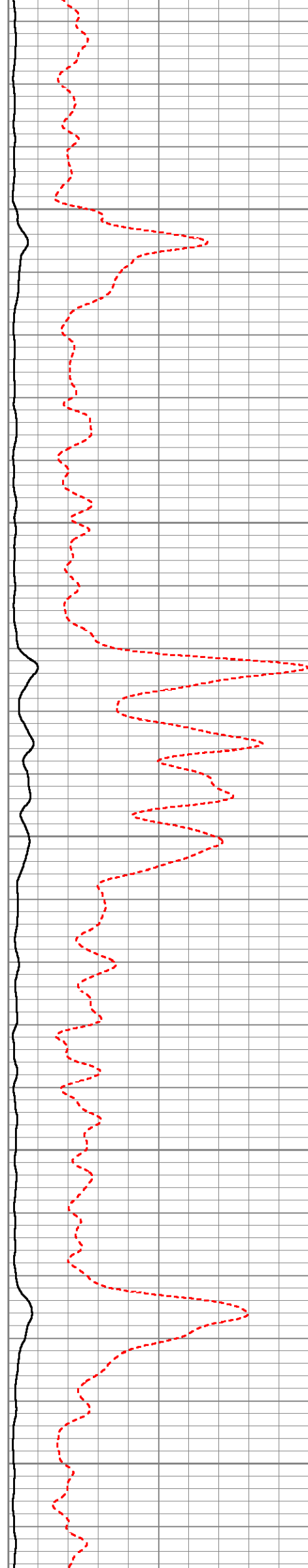


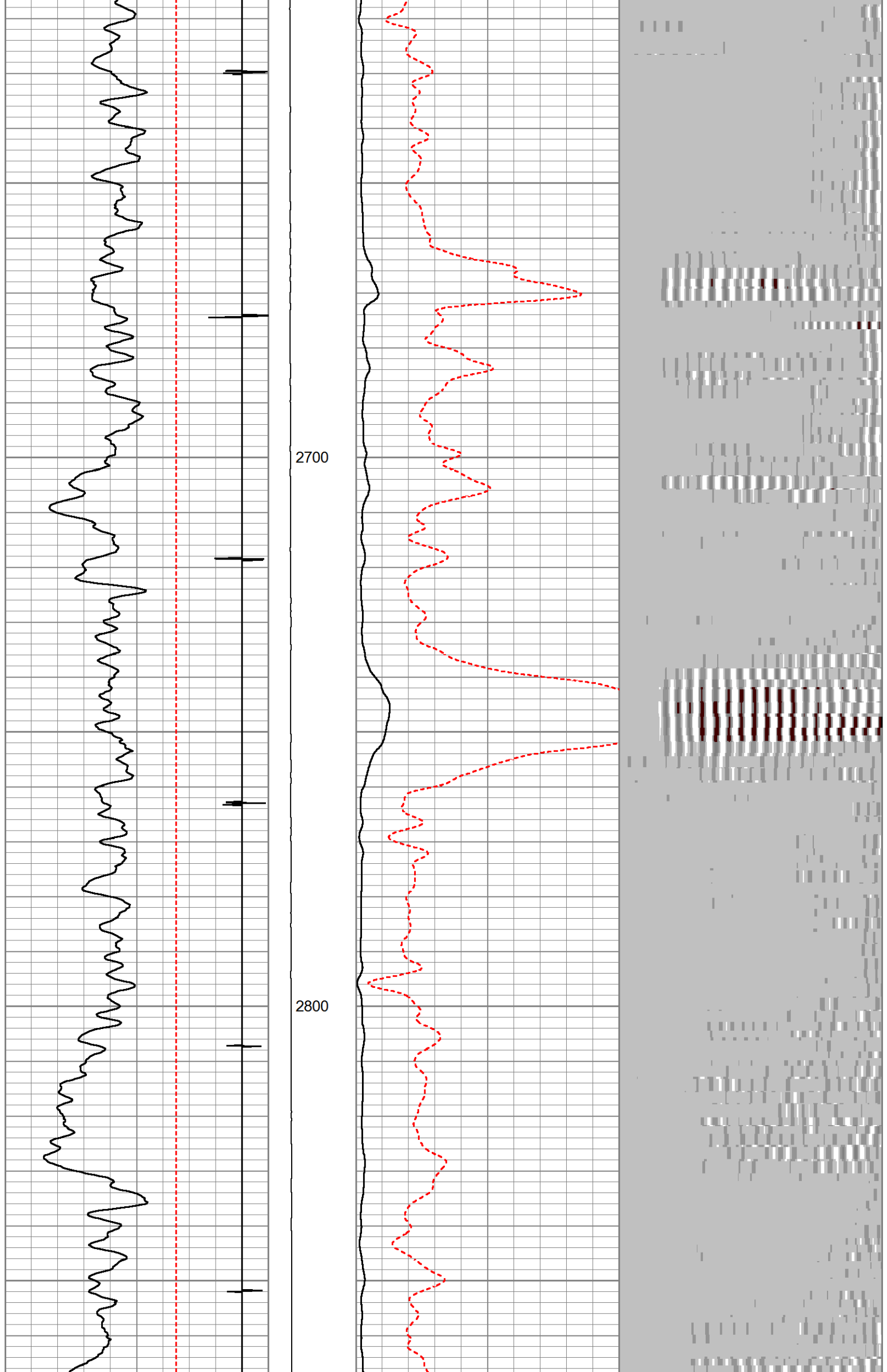


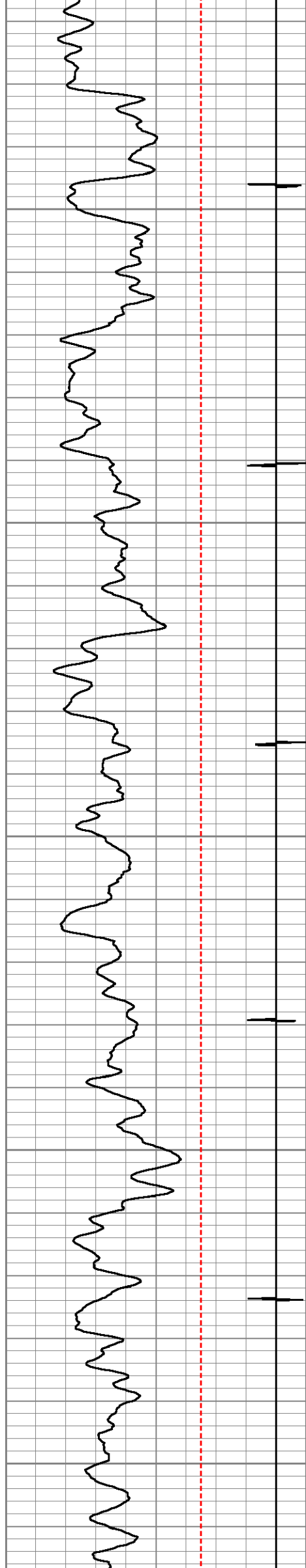
2400

2500

2600



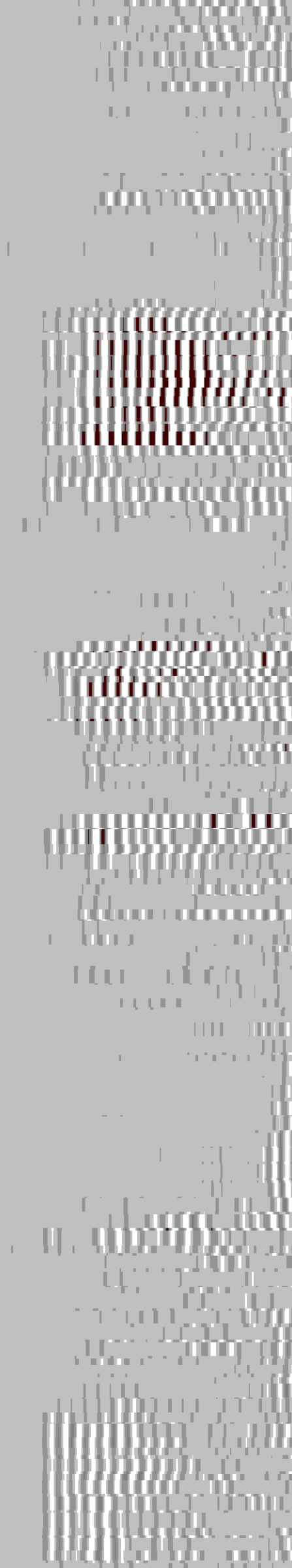
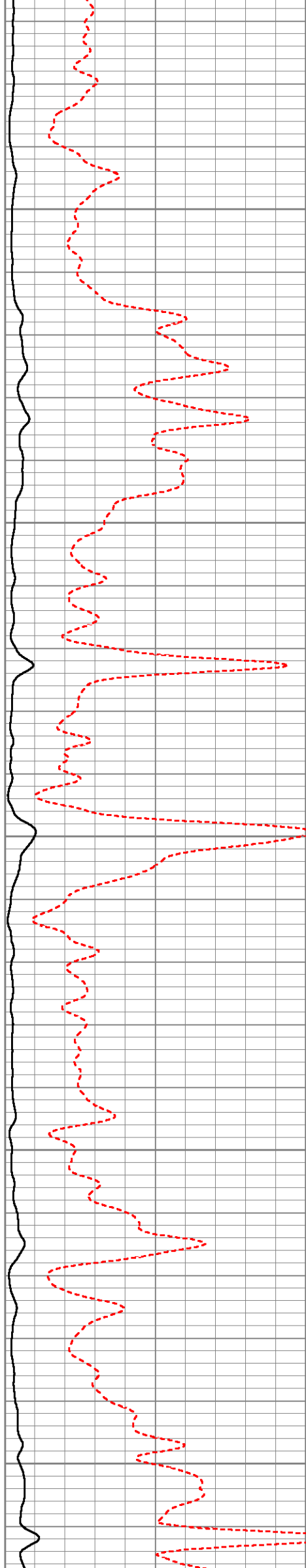


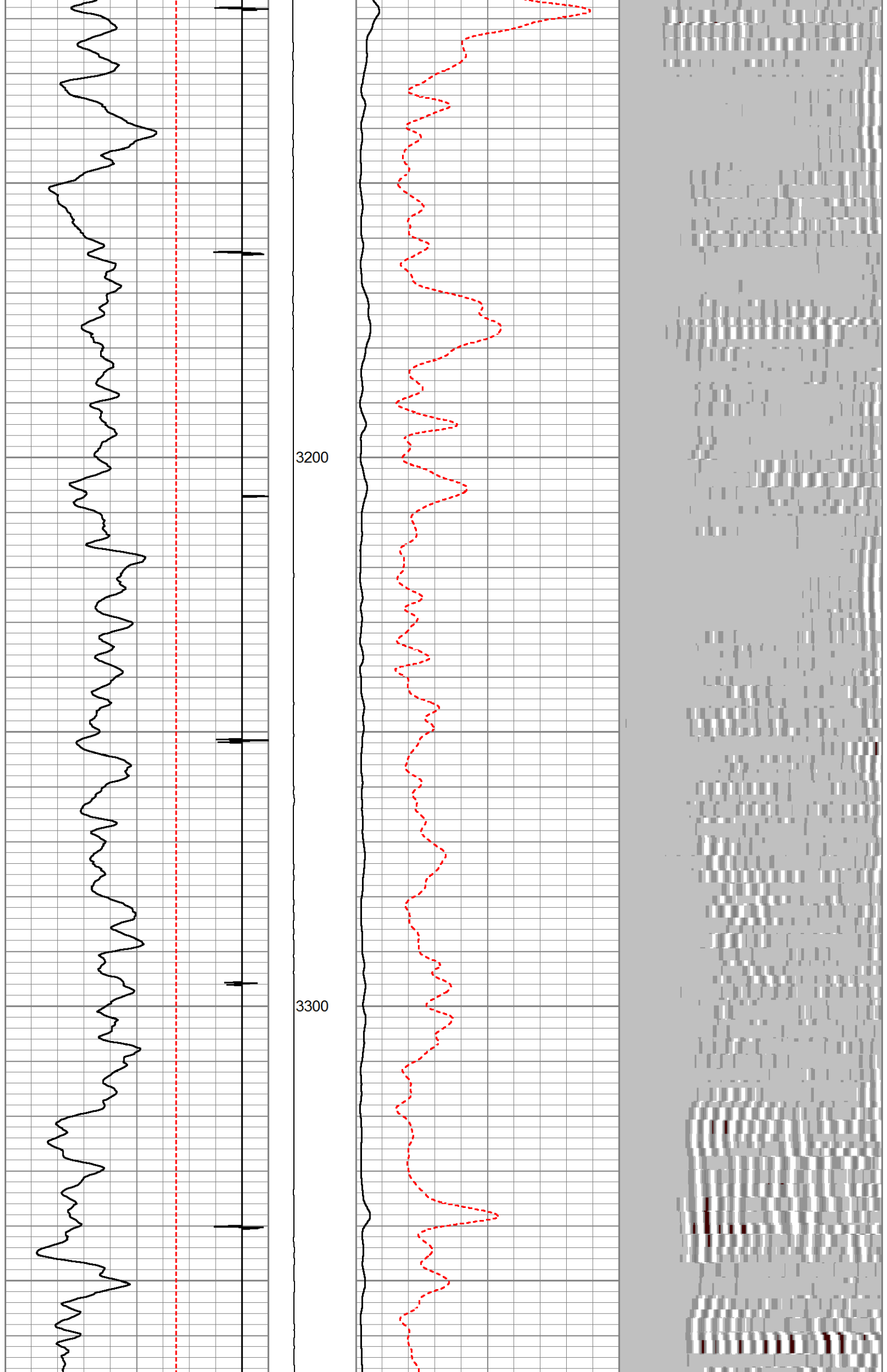


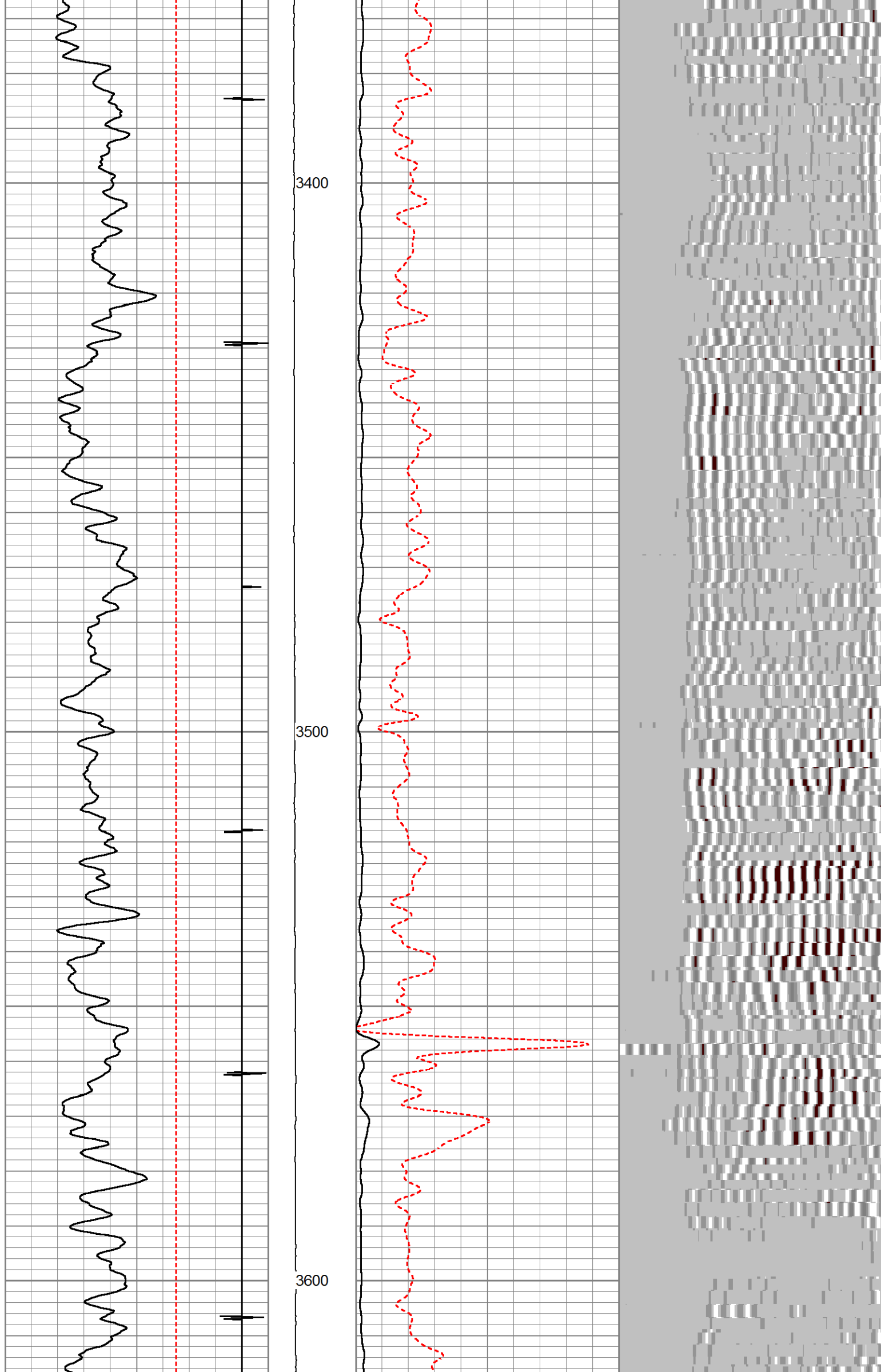
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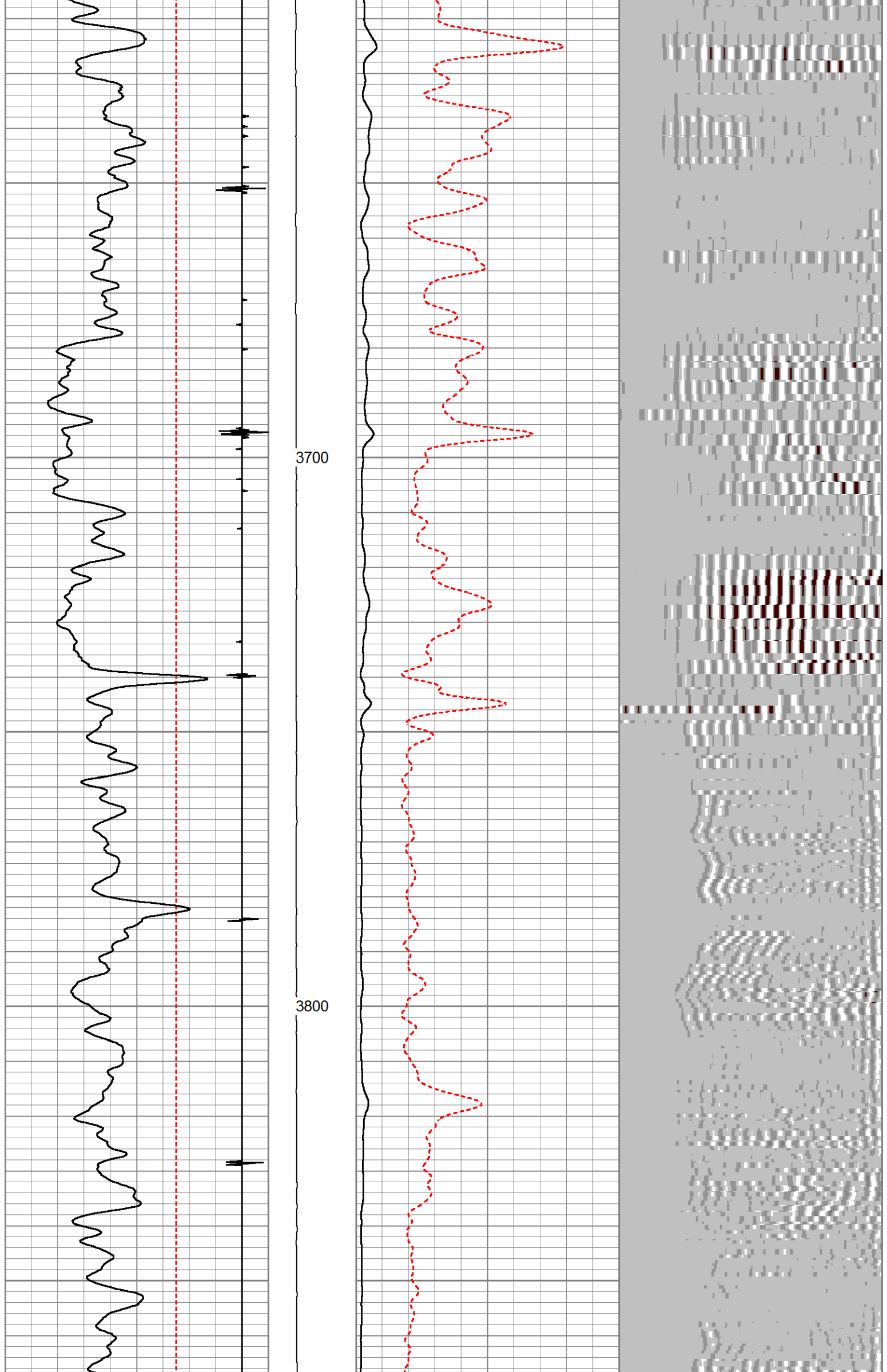
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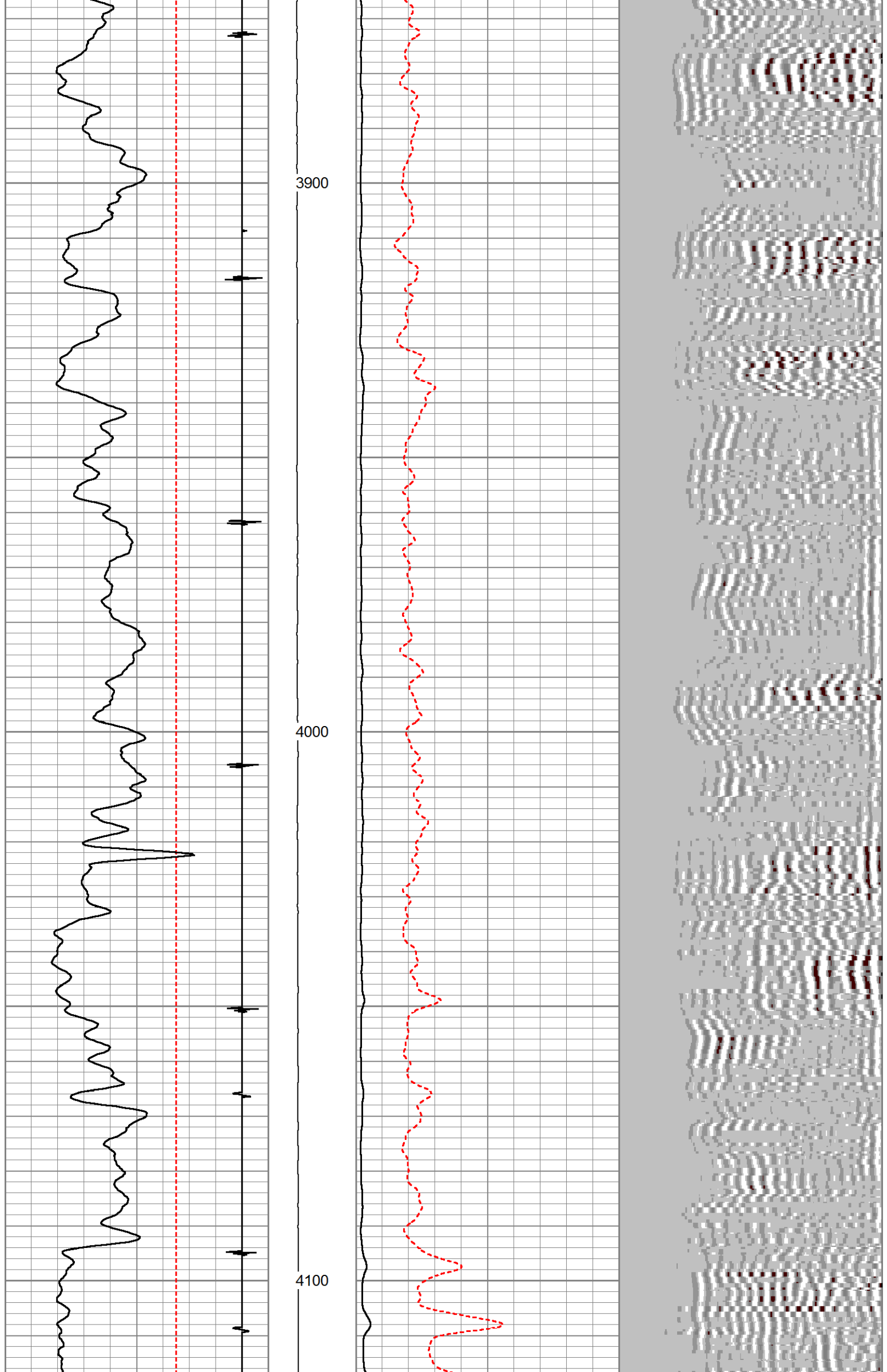
3100

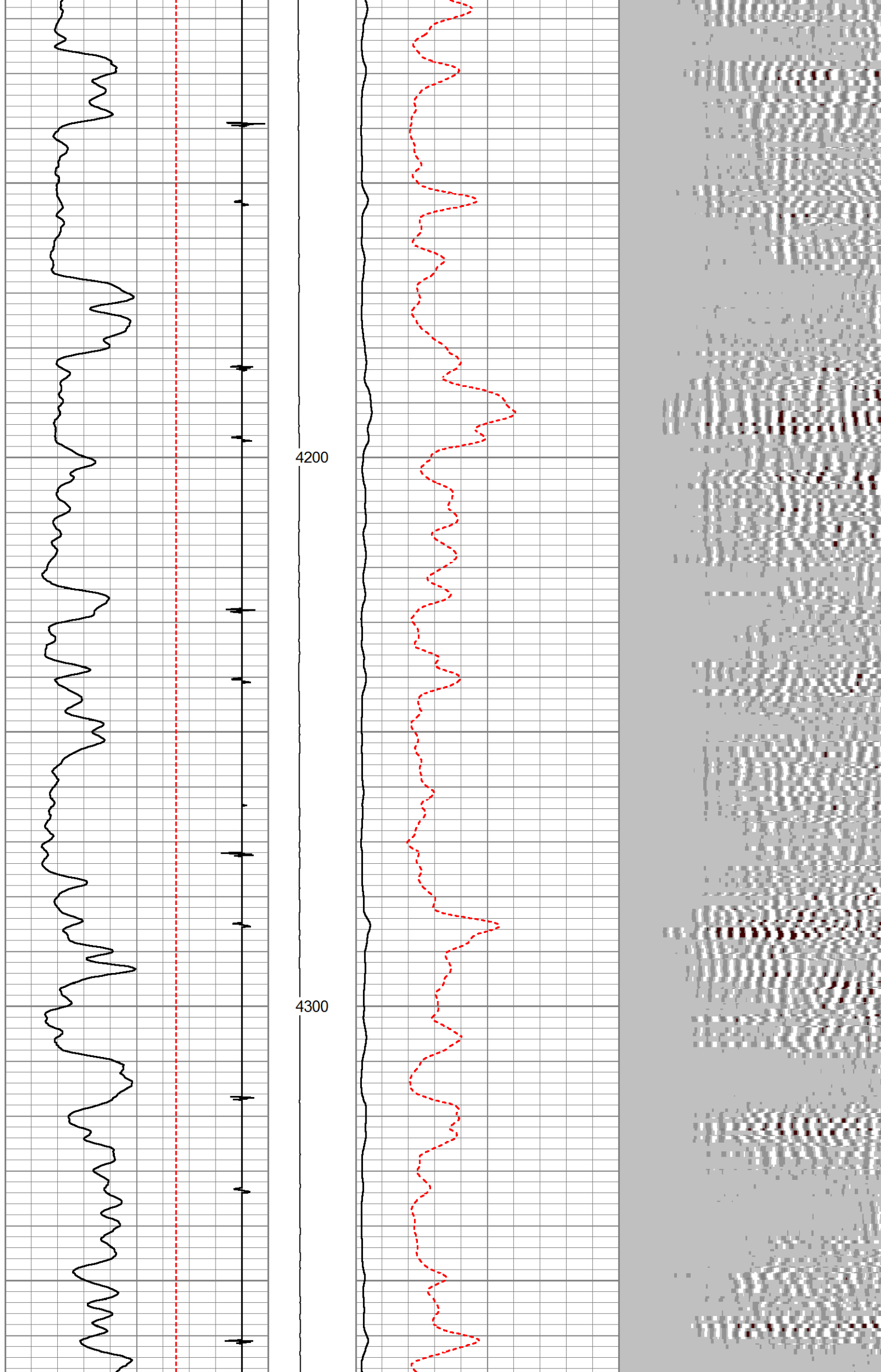


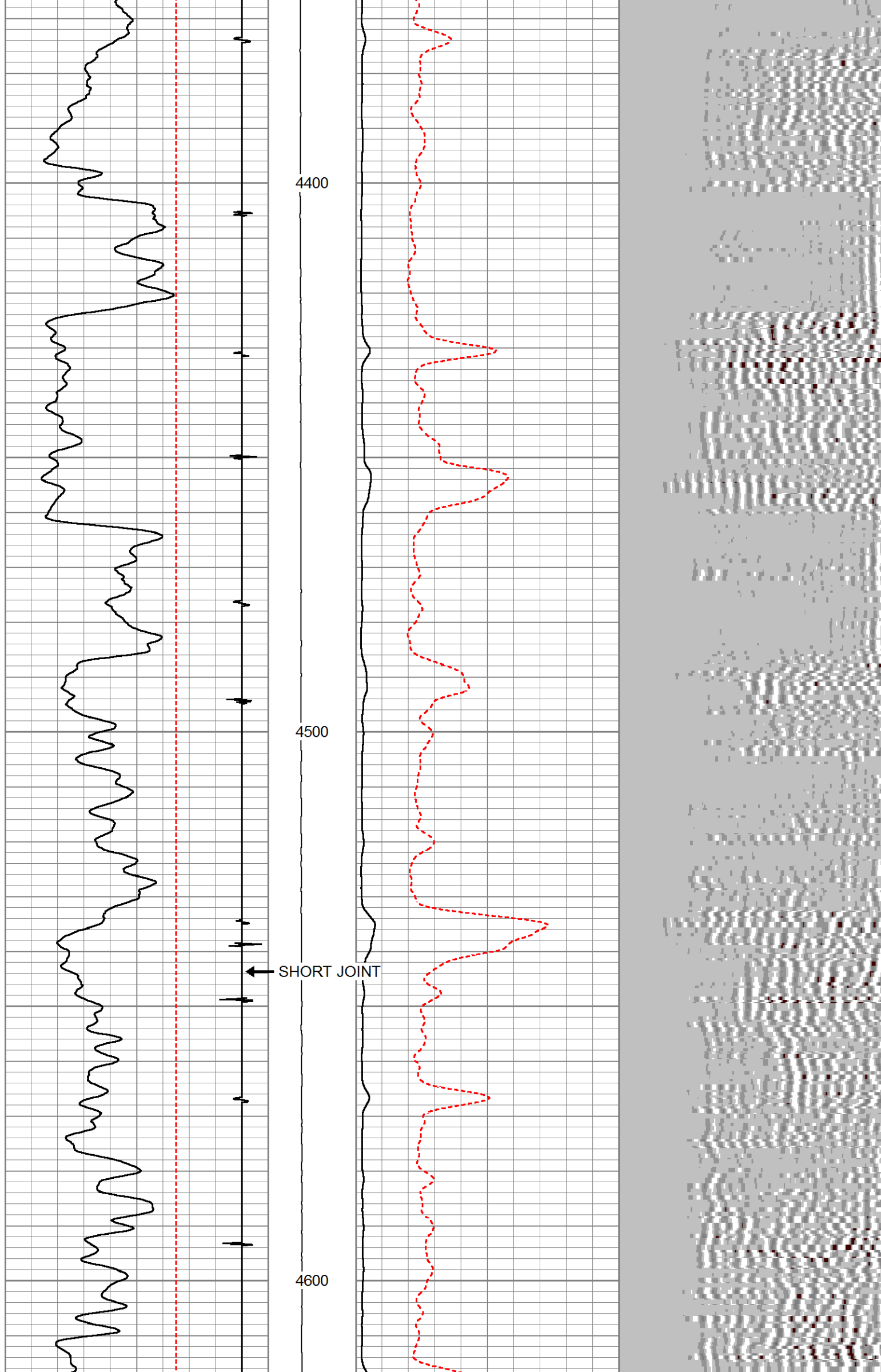


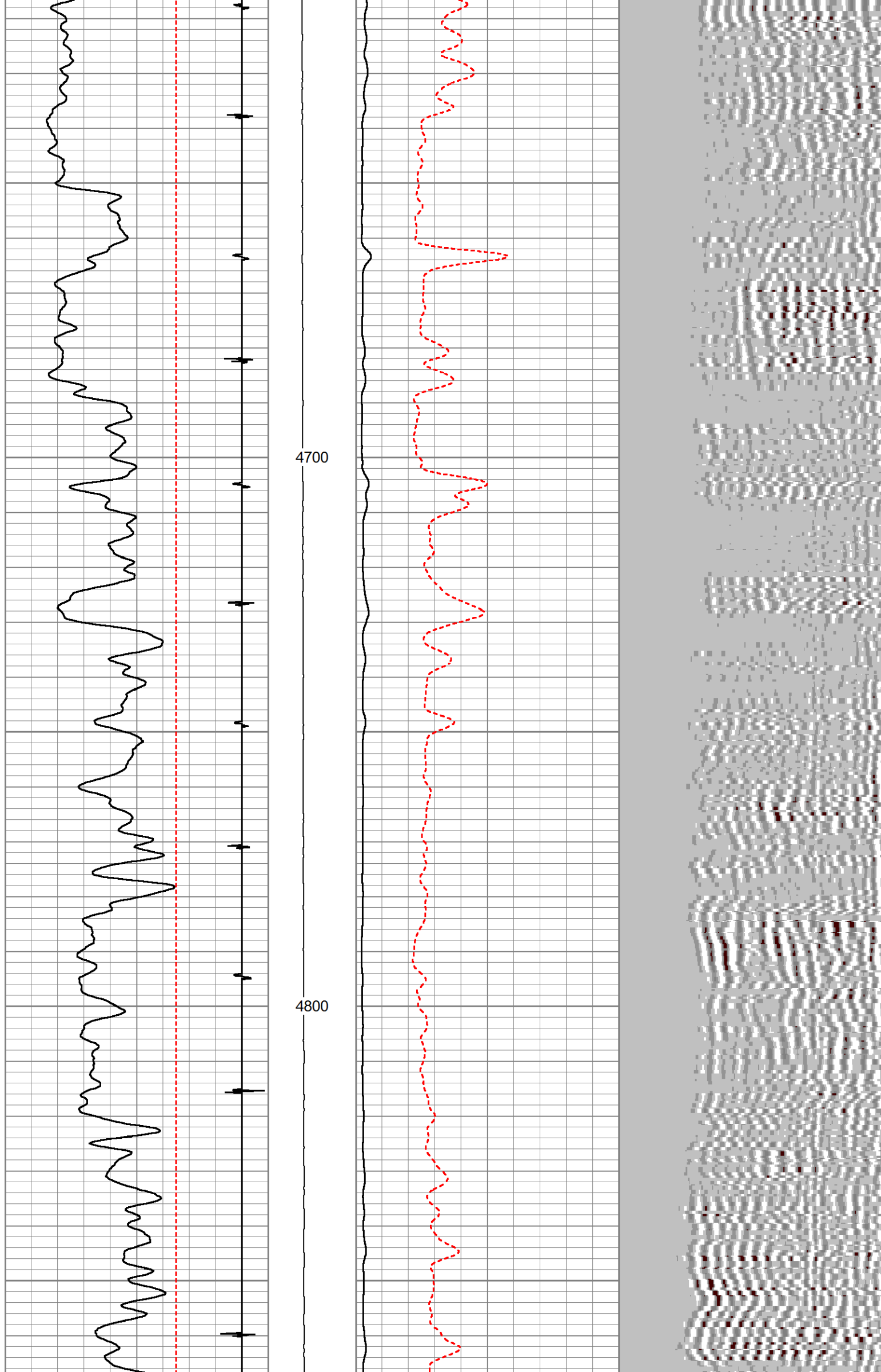


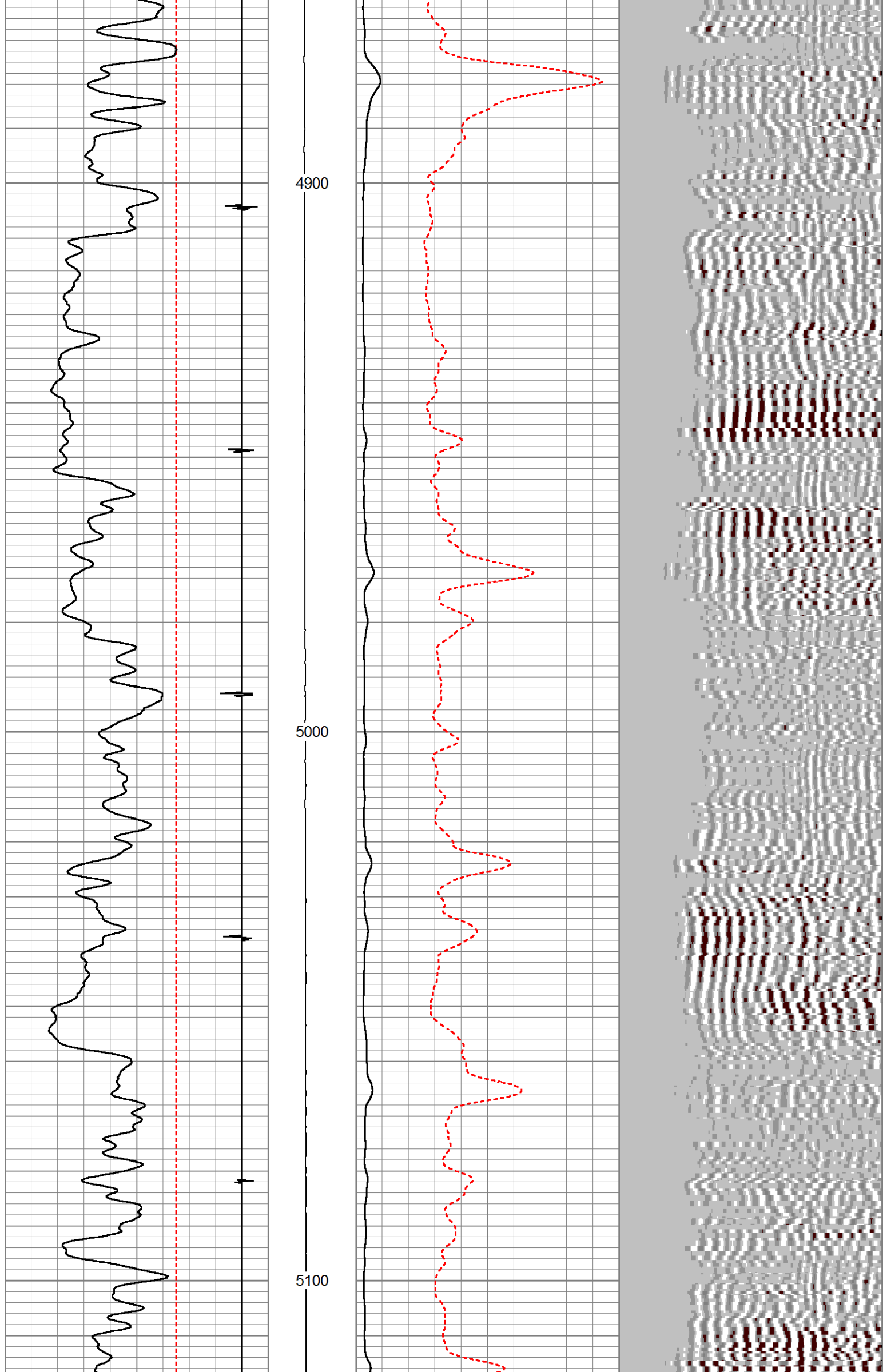


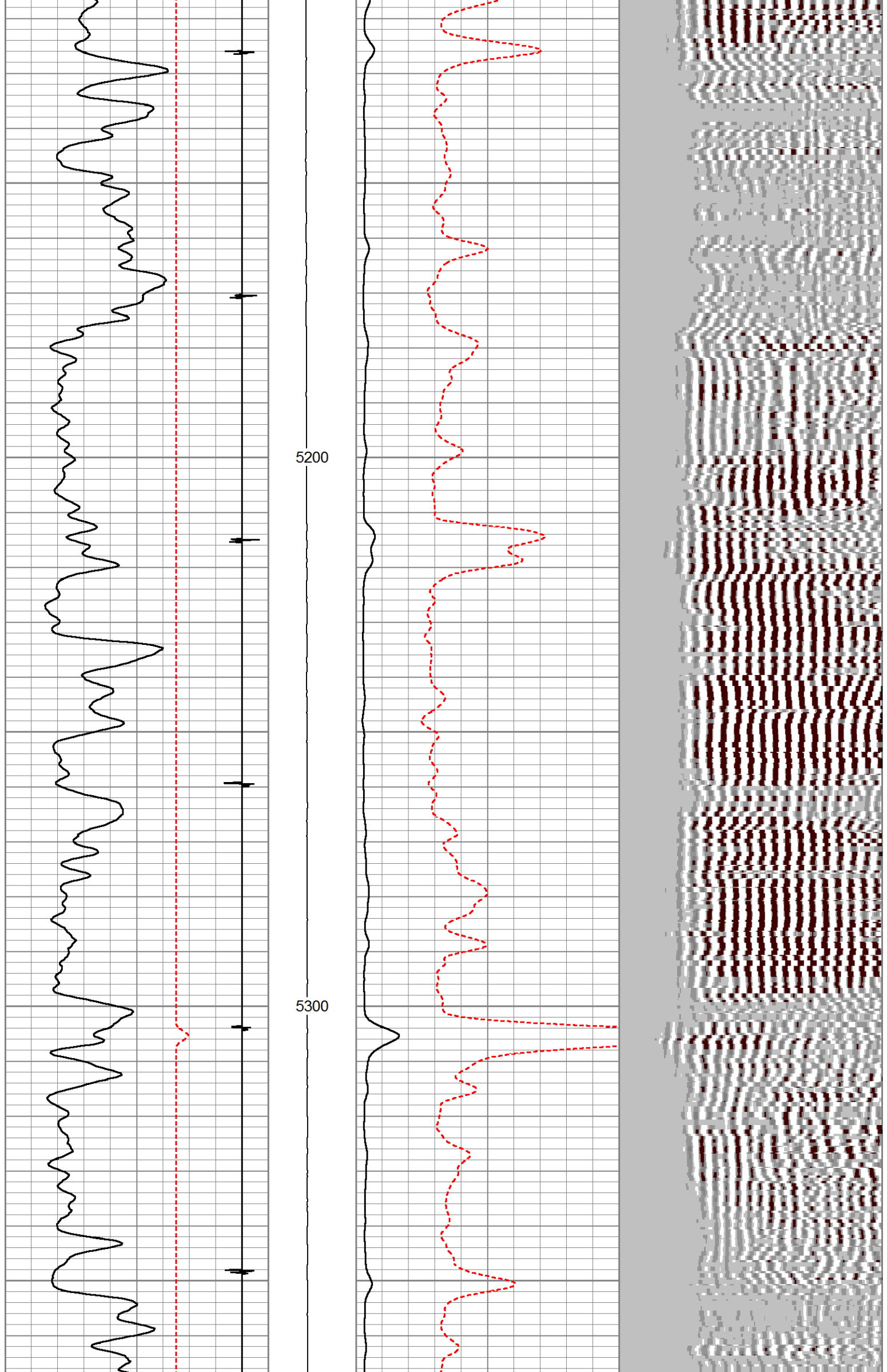


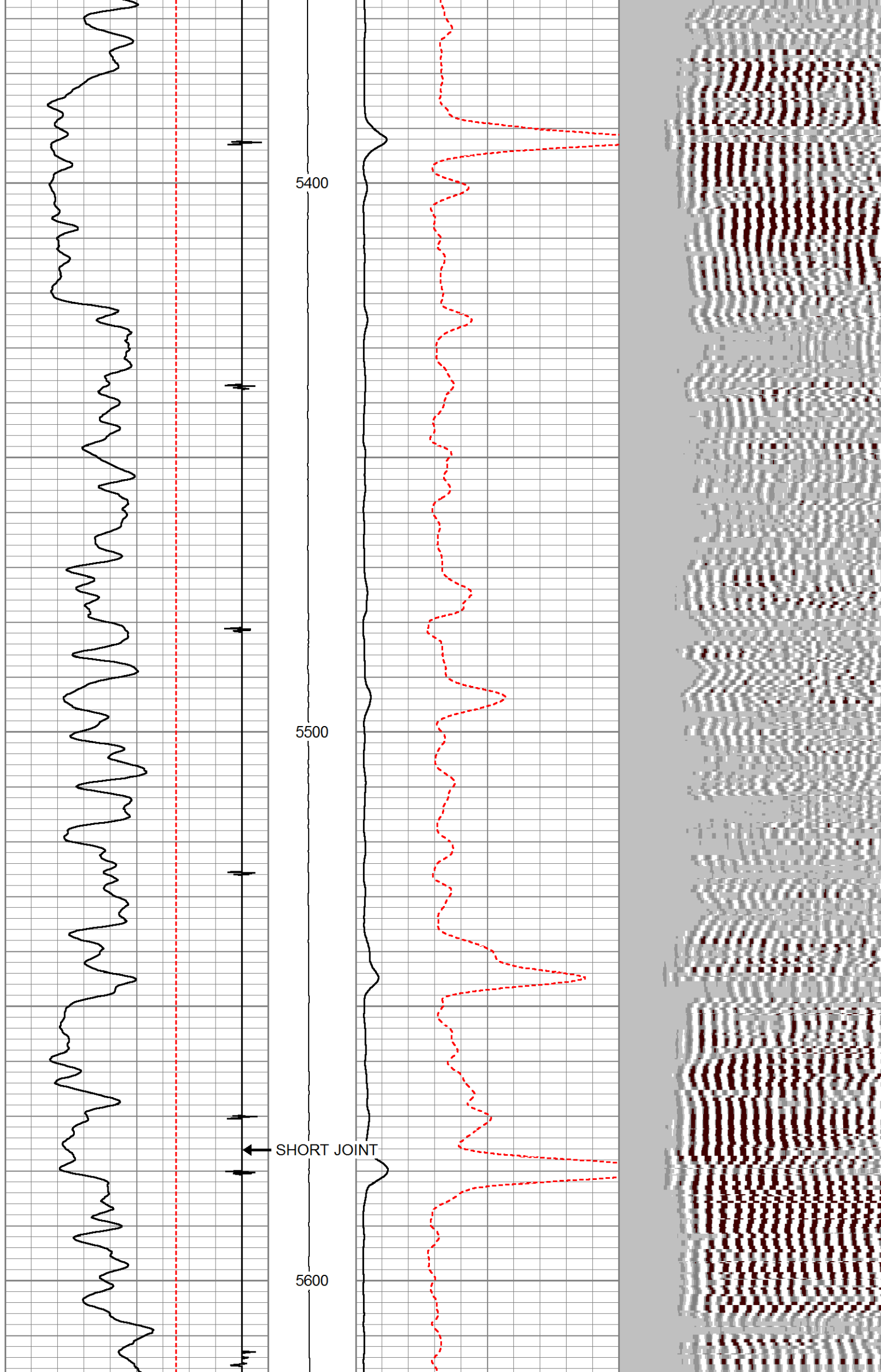


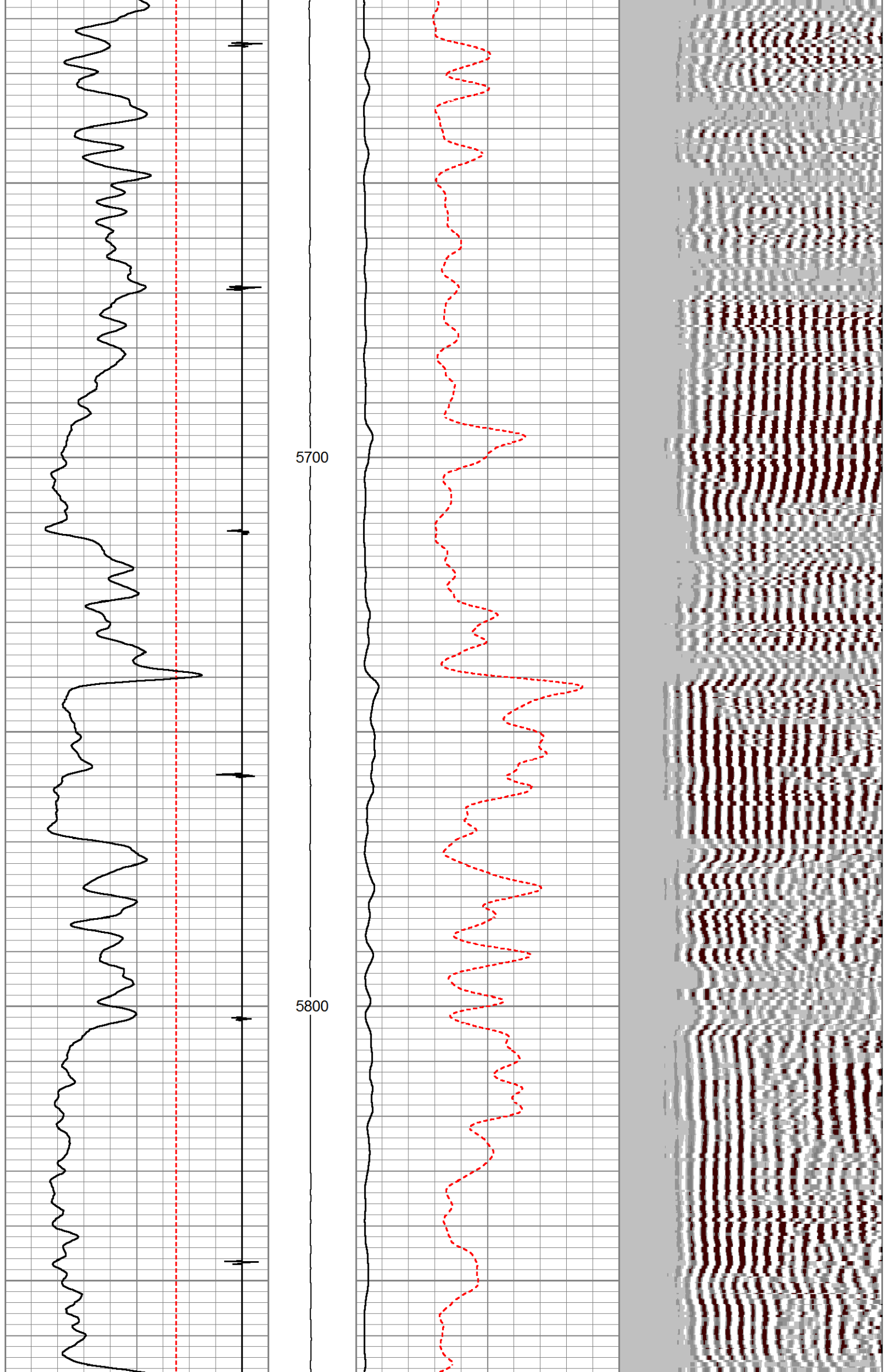


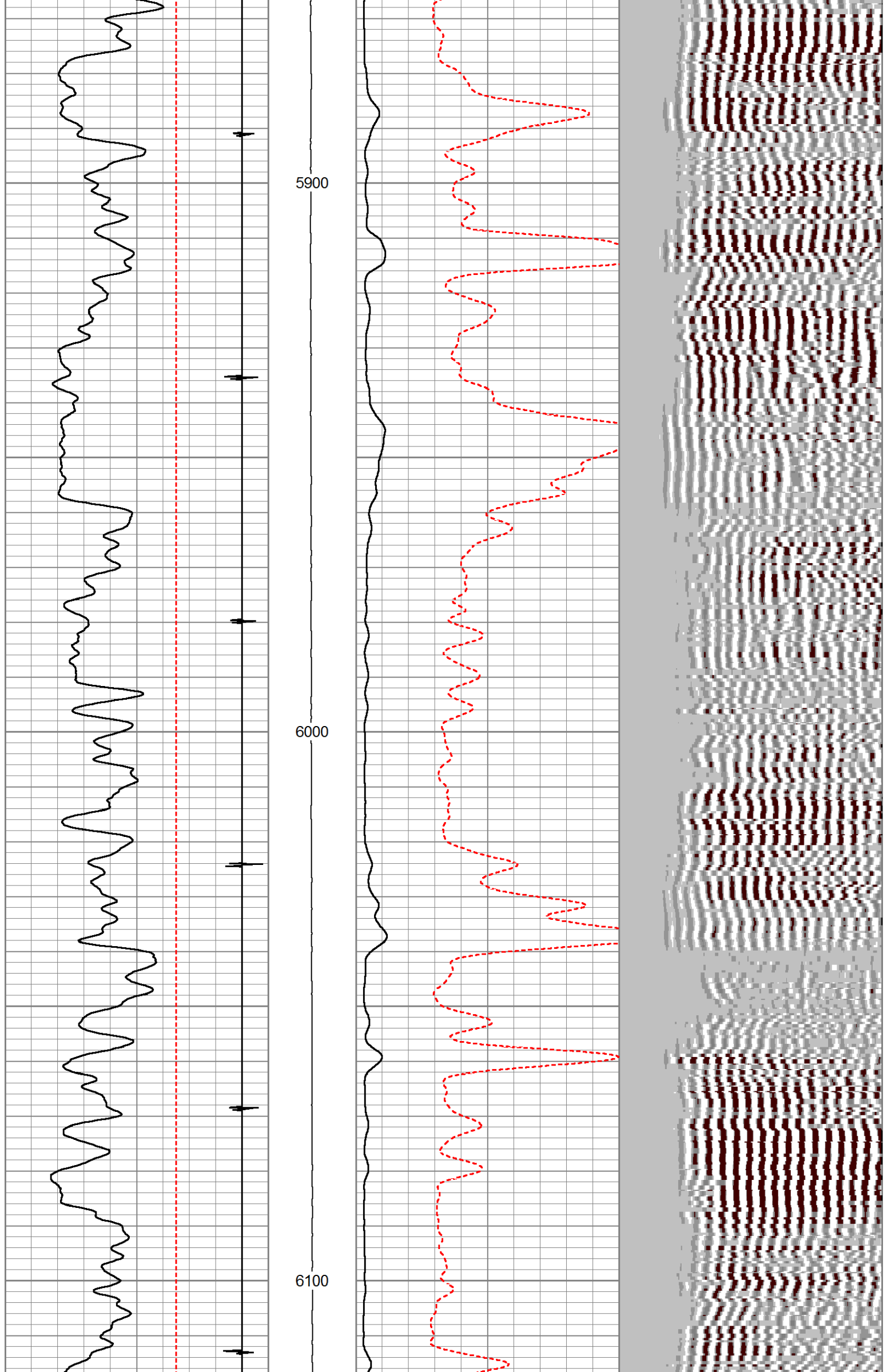


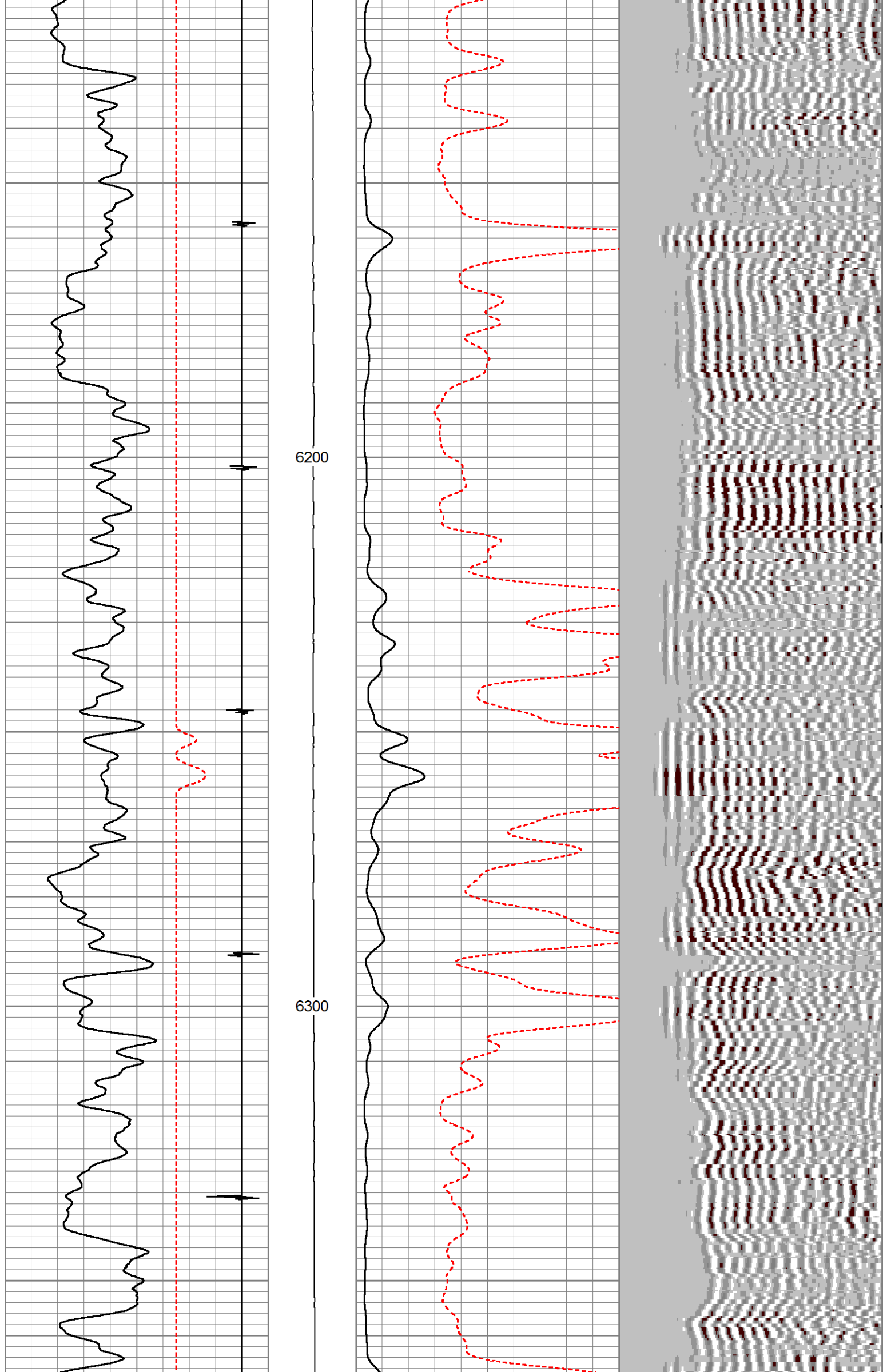


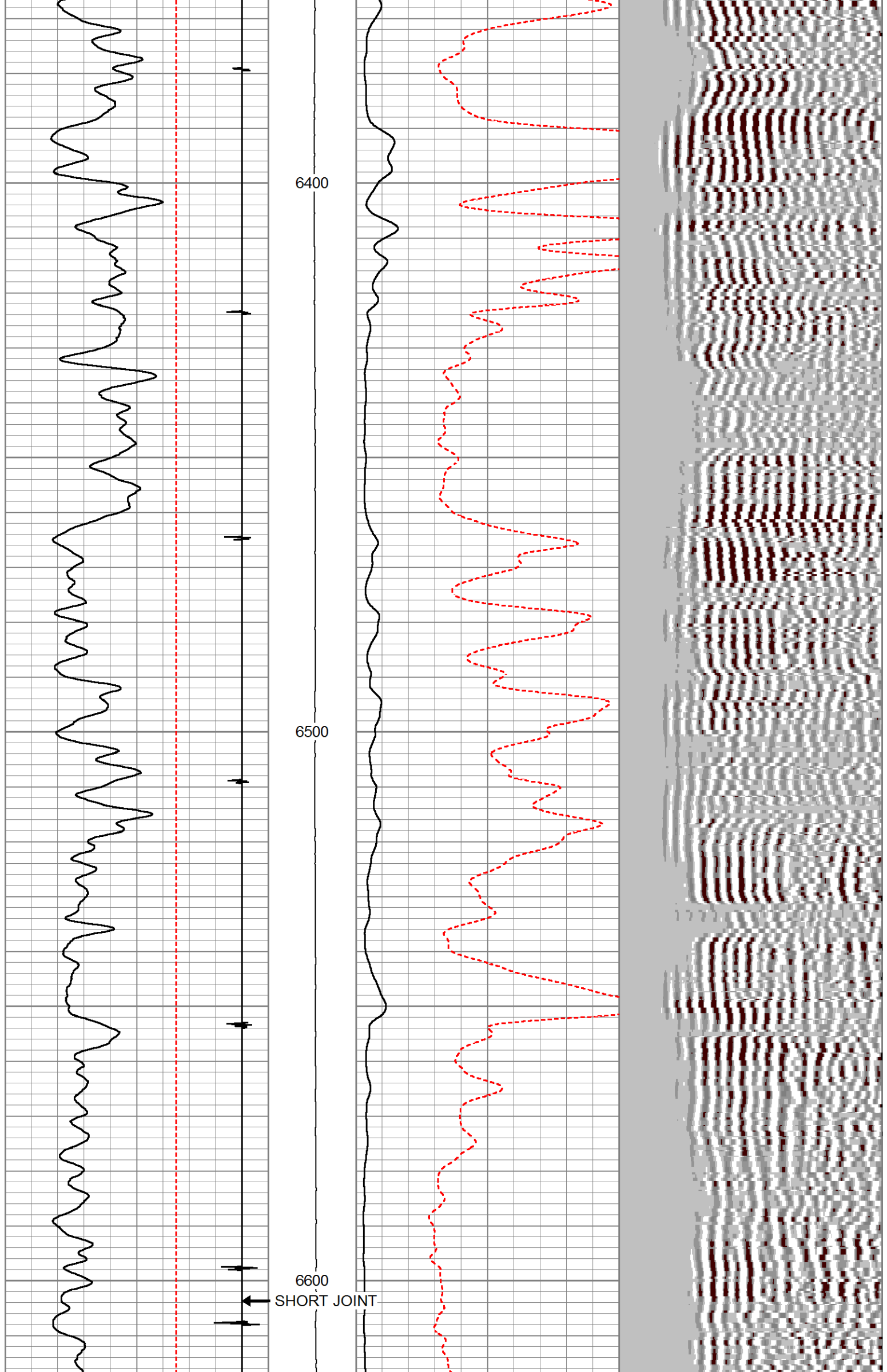


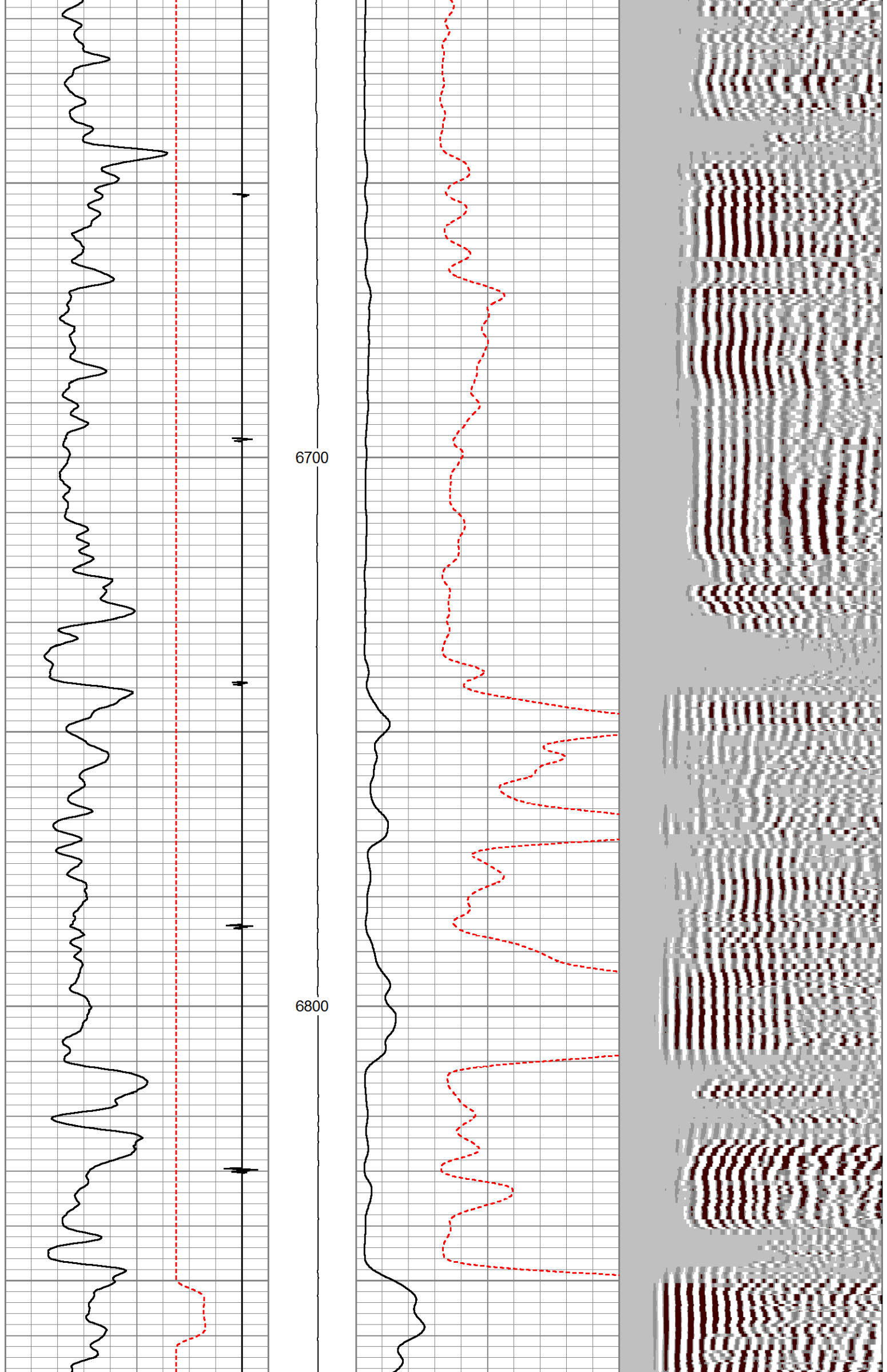


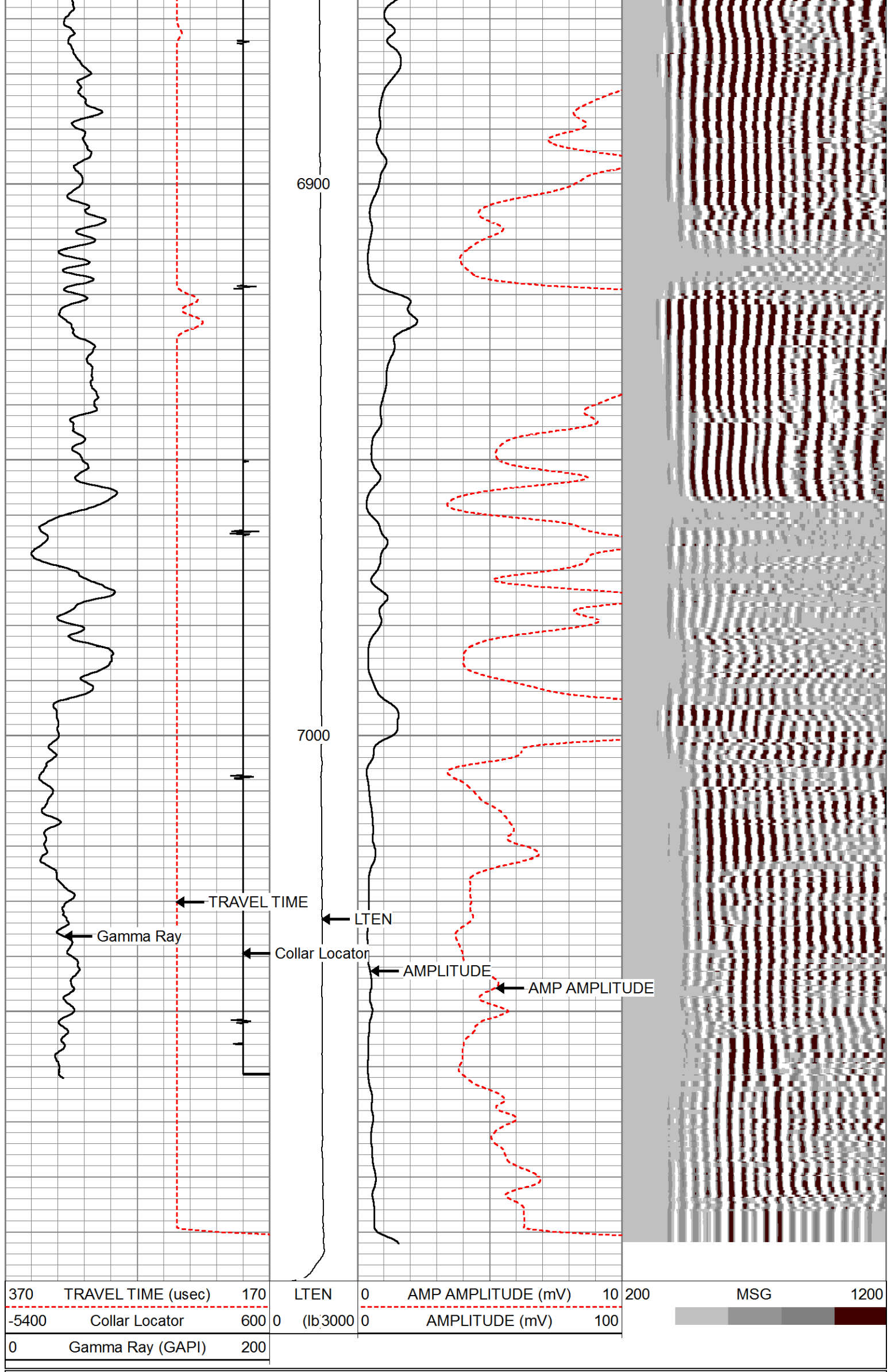










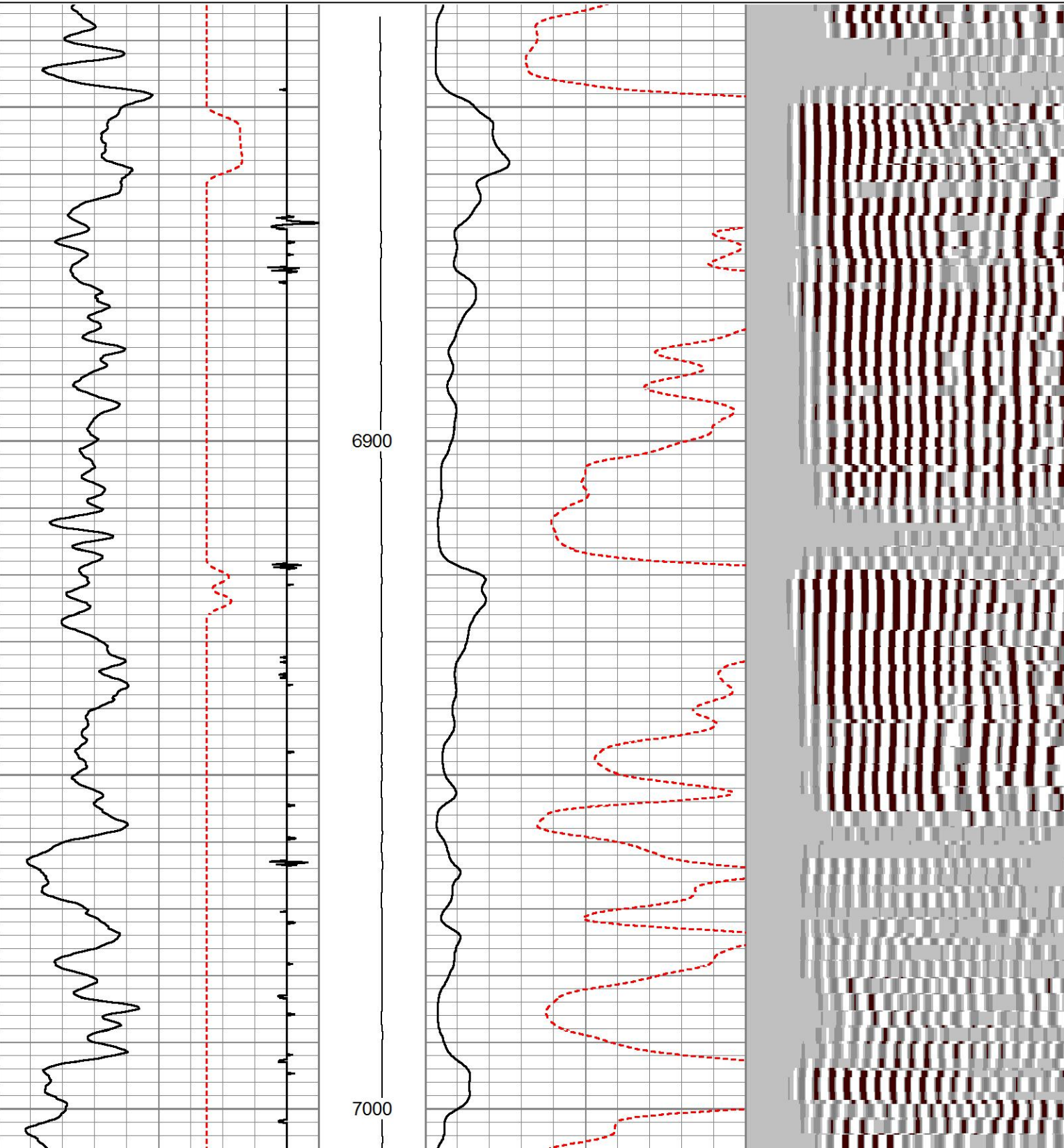


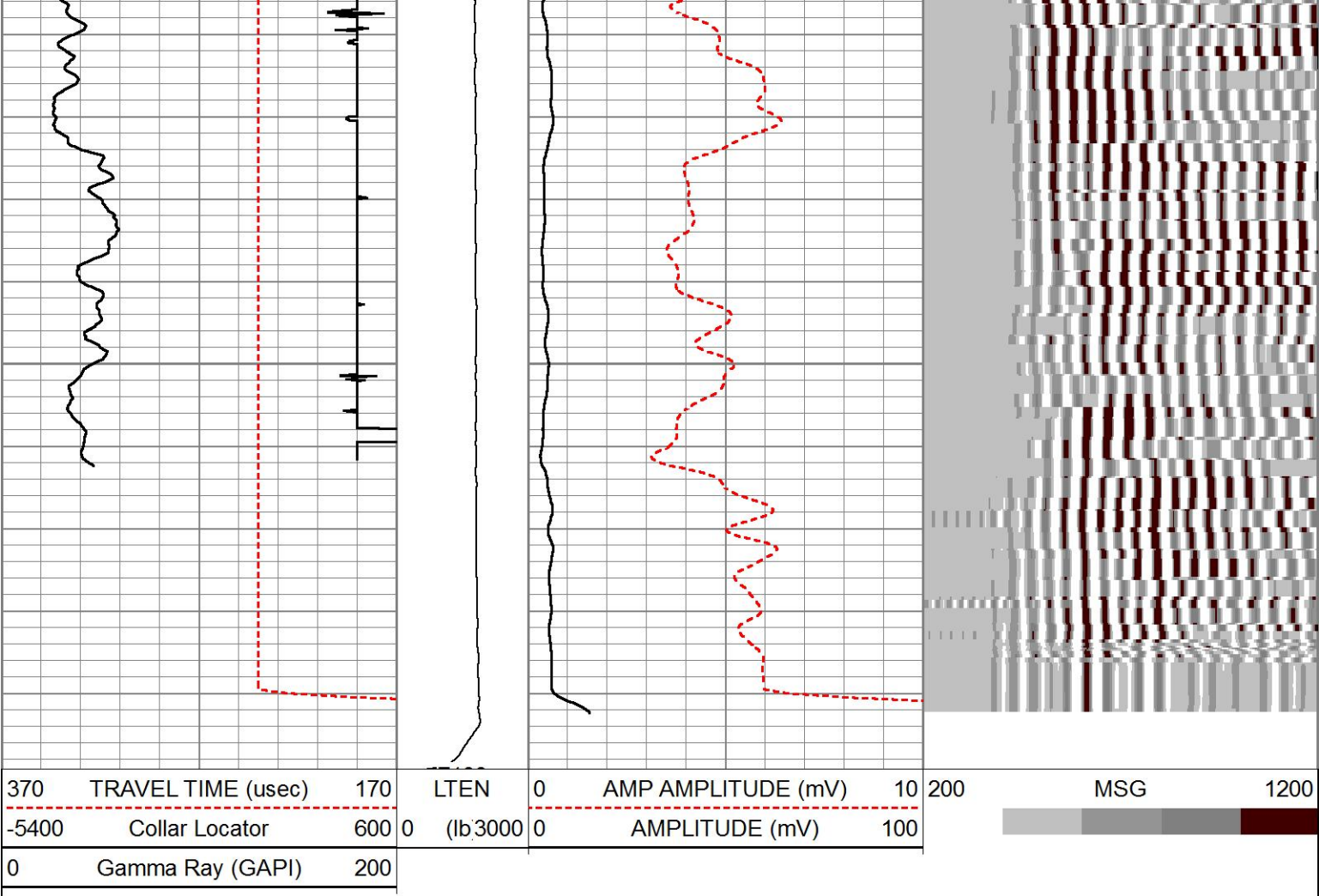
5" = 100'

5" = 100'

Database File watson_b_33a_combo.db
Dataset Pathname CBLRPT1
Presentation Format cbl_rbt_1
Dataset Creation Thu Jun 04 09:35:09 2015
Charted by Depth in Feet scaled 1:240

370	TRAVEL TIME (usec)	170	LTEN	0	AMP AMPLITUDE (mV)	10	200	MSG	1200
-5400	Collar Locator	600	0	(lb.3000	0	AMPLITUDE (mV)	100		
0	Gamma Ray (GAPI)	200							





REPEAT LOG SECTION

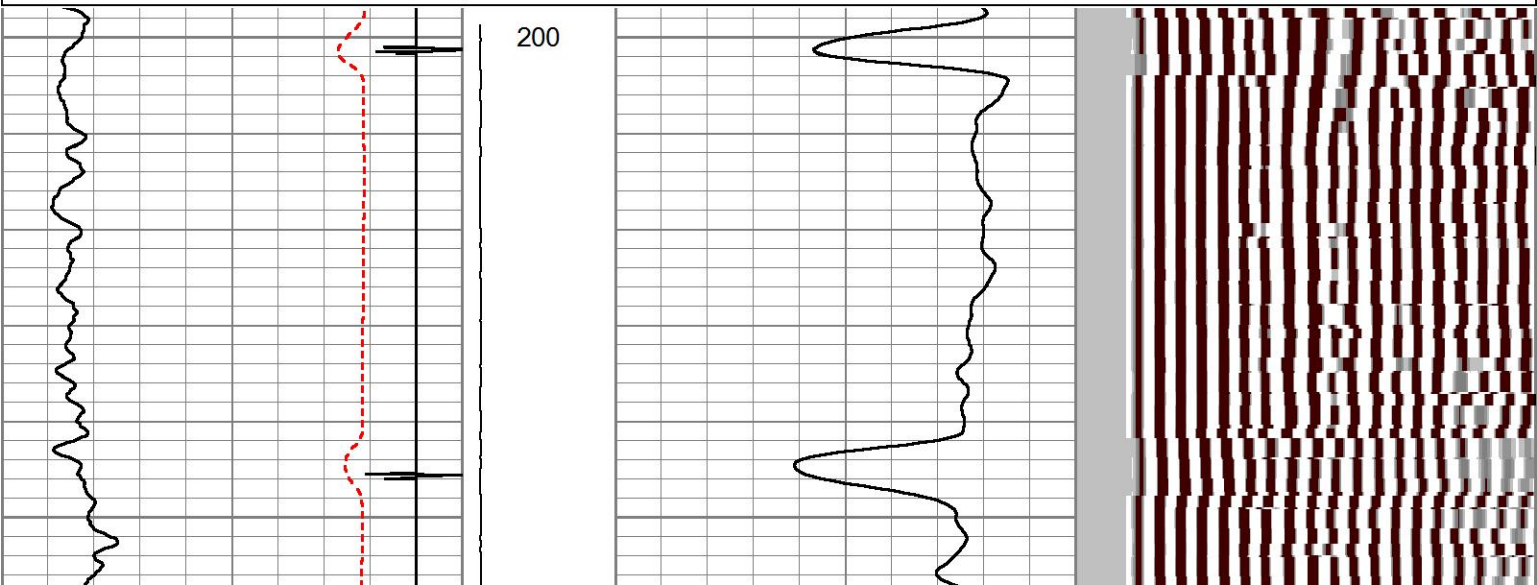
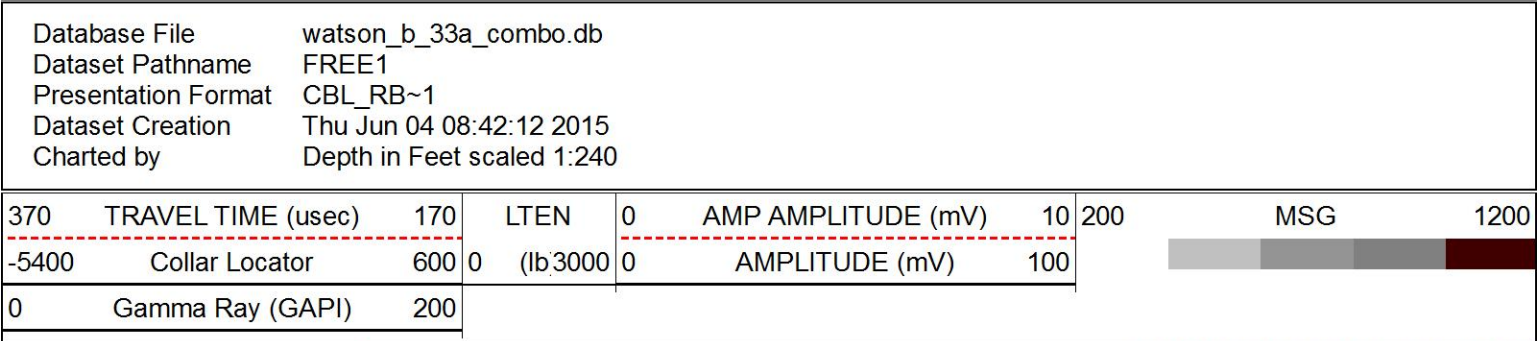
HALLIBURTON

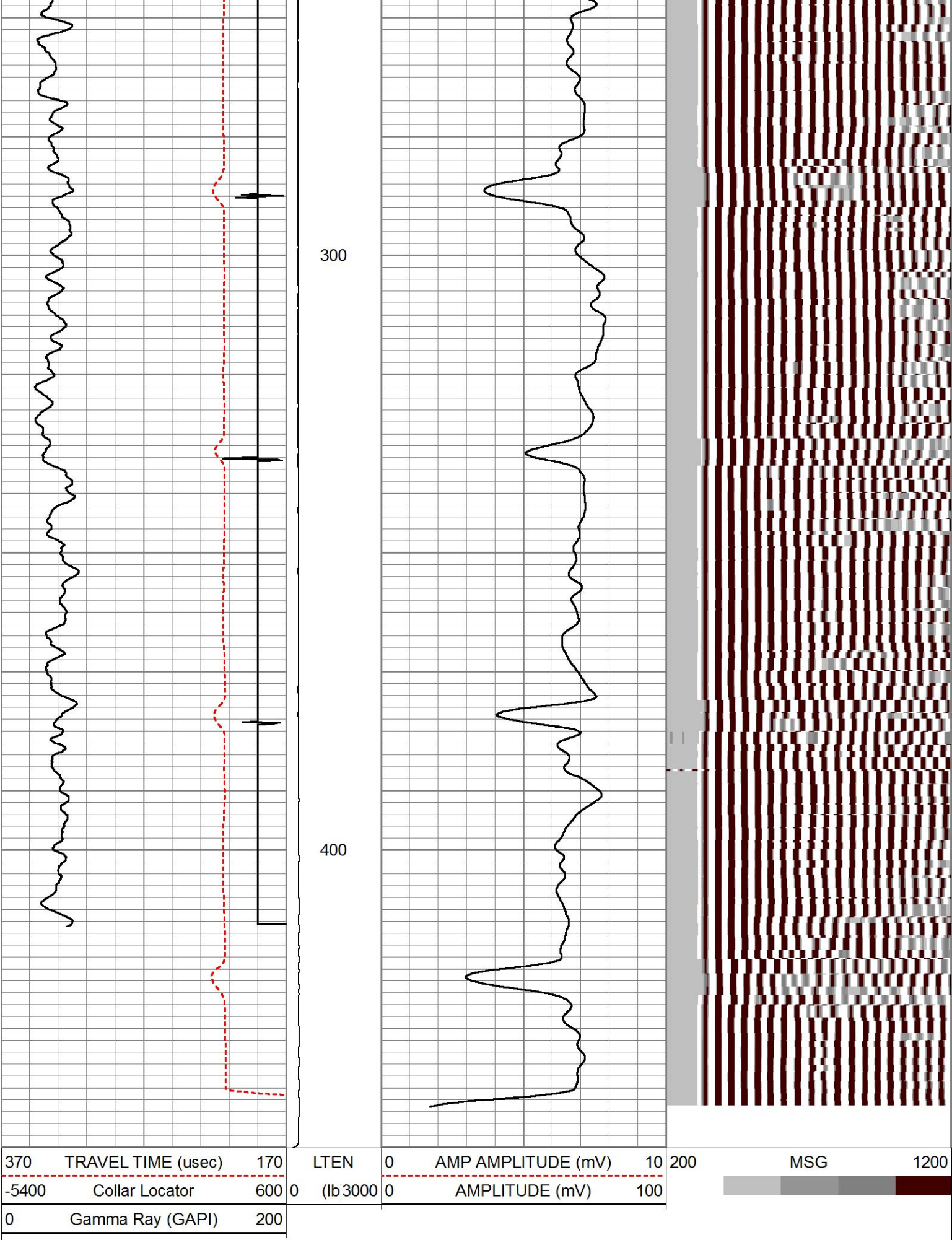
5" = 100'

FREE PIPE LOG SECTION

HALLIBURTON

5" = 100'





HALLIBURTON

FREE PIPE LOG SECTION

5" = 100'

Log Variables DatabaseD:\Warrior_data\watson_b_33a_combo.db
Dataset field/well/run1/MAIN1/_vars_

Top - Bottom

DATE	TIME	USER	LOG	LOG	LOG	LOG	LOG	LOG
------	------	------	-----	-----	-----	-----	-----	-----

BHTEMP_Src	BHSAL2	BHSAL1	POROS2	POROS1	LTH	UHS GC	RHO CF
ITEMPX	0	1	0	1	Sandstone	NONE	0.25
SO in 0	BORSAL kppm 150	CASED? Yes	PPT usec 0	CASEWGHT lb/ft 11.6	MAXAMPL mV 0	MINAMPL mV 1	MINATTN db/ft 0.8
SRFTEMP degF 0	MudWgt lb/gal 8.4	CASETHCK in 0.25	CASEOD in 4.5	PERFS 0	TDEPTH ft 0	BOTTEMP degF 100	BITSIZE in 7.875

Calibration Report

Database File watson_b_33a_combo.db
Dataset Pathname MAIN1
Dataset Creation Thu Jun 04 09:45:55 2015

Segmented Cement Bond Log Calibration Report

Serial Number: 11002214
Tool Model: 004

Calibration Casing Diameter: 4.500 in
Calibration Depth: 206.907 ft

Master Calibration, performed Thu Jun 04 08:40:05 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	-0.195	0.877	1.500	81.196	74.313	16.017
5FT	-0.205	0.490	1.500	81.196	114.642	25.010
S1	-0.193	0.992	0.000	100.000	84.421	16.282
S2	-0.197	0.785	0.000	100.000	101.902	20.027
S3	-0.195	1.048	0.000	100.000	80.455	15.706
S4	-0.197	0.919	0.000	100.000	89.610	17.670
S5	-0.194	0.811	0.000	100.000	99.423	19.323
S6	-0.197	0.743	0.000	100.000	106.389	20.918
S7	-0.196	0.673	0.000	100.000	115.056	22.588
S8	-0.197	0.693	0.000	100.000	112.289	22.148

Calibration Report

Serial Number: 11002214
Tool Model: 004
Performed:

Reference (degF) Reading ()
Low: 0.000 0.000
High: 1.000 1.000
Gain = 1.000 Offset = 0.000

Reservoir Monitor Tool I Calibration Report

Serial-Model: 12095949-A

Shop Calibration Performed: Wed May 27 10:12:02 2015

Carbon/Oxygen Mode

Stabilization

Result Logged Expected Value Diff. Tol. Units

GENV ITCR2	82.00 3281	80.00 3250	2.00 31	+/-15.00 +/-250	V cps
Near Detector					
H Fe NGAIN = 0.993	Channel 60 207 NZOFF = 0.7	Expected Value 60 +/-2 206 +/-2	Amplitude 0.0270 0.0961	FWHM 5.32 -----	Tol. <6.00 -----
Far Detector					
H Fe FGAIN = 0.991	Channel 60 209 FZOFF = 0.5	Expected Value 60 +/-2 208 +/-2	Amplitude 0.0360 0.0918	FWHM 5.72 -----	Tol. <6.50 -----
Flask Temperature	63.5 degF				
Result	Logged	Expected Value	Diff.	Tol.	Units
COIR2	0.45	0.45	-0.00	+/-0.02	
LIRI2	1.65	1.64	0.01	+/-0.05	
TCCR2	5061	5000	61	+/-1000	cps
ITCR2	3240	3200	40	+/-250	cps

Sigma Mode					
Stabilization					
Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	82.00	80.00	2.00	+/-15.00	V
FCAP	10080	10000	80	+/-500	cps
Horizontal Water Tank					
Result	Logged	Expected Value	Diff.	Tol.	Units
N/F Normalizer	0.91	0.95	-0.04		
N/F Inel Norm	0.58	0.61	-0.03		
RNF	1.10	1.07	0.03	+/-0.12	
RINC	1.71	1.64	0.07	+/-0.18	
SGFN	24.09	24.00	0.09	+/-0.50	cu
SGFF	22.90	22.85	0.05	+/-0.50	cu
FSIN	24192	24000	192	+/-2000	cps
FCAP	10177	10000	177	+/-1000	cps
NFTR	0.84			<5.00	
FFTR	0.88			<5.00	
NBKG	179			<500	cps
FBKG	93			<500	cps
RTN	0.40	0.40	0.00	+/-0.10	usec
RTF	0.43	0.40	0.03	+/-0.10	usec






Calibration Software Modules	
HRMTI Module	2013.11.14.0
RMTI Module	2014.8.28.1
Log Data Acquisition Software Modules	
HRMTI Module	2013.11.14.0
RMTI Module	2014.8.28.1


Gamma Ray Calibration Report

Type / Serial:002 / 11224503

SHOP CALIBRATION		Thu Jun 04 08:32:15 2015			
Background	Counts/Sec.	Gain	Offset	Jig	Units
Calibrator	36.8				cps
	322.4				cps

Calibrator	522.4	1.4100	cps GAPI/cps
PRIMARY VERIFICATION			
Background	53.3		cps
Calibrator	467.2		cps
Difference		413.8	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	37.31		STNDCH-STND_CH 1.4375 IN CABLE HEAD	1.50	1.44	1.00
GR	35.05		TTTCU-002 (11224503) Through Tubing Telemetry Cartridge - Ultrawire	7.65	1.69	100.00
			XHU-003 (12461939) Crossover Halliburton 1553 to Ultrawire	1.58	1.69	7.00
RmtTFGT	24.39		RMTI-A (12095949) Halliburton RMTI Tool	14.00	2.13	77.00
RmtTNGT	23.89					
RmtFP5V	16.14		X-OVER-SondexxGo Sondex Box x Go Pin Cross Over	0.31	1.69	1.00
RmtCommFWa	16.14		AUH-001 (11072111) Adaptor Ultrawire/Halliburton	0.38	1.69	3.00
			CENT-Probe_275 Probe 2 3/4 Centralizer	2.88	2.75	20.00

CBLTEMP	8.23		RBT-004 (11002214) Radial Bond Tool (UW 3 1/8) 20K Rated	9.48	3.13	140.00
			CENT-Probe_275 Probe 2 3/4 Centralizer	2.88	2.75	20.00
LLMTEN	0.00		BUL-006 (000002) Bullnose Terminator	0.22	1.69	1.20
Dataset: watson_b_33a_combo.db: field/well/run1/MAIN1 Total length: 40.88 ft Total weight: 370.20 lb O.D.: 3.13 in						

Company	URSA OPERATING CO., LLC.				
Well	WATSON RANCH B 33A-17-07-95				
Field	PARACHUTE				
County	GARFIELD		State	CO	
HALLIBURTON	ACOUSTIC CEMENT BOND LOG				