

HALLIBURTON										ACOUSTIC CEMENT BOND LOG																								
Company URSA OPERATING CO., LLC.					Company URSA OPERATING CO., LLC.					Well BAT 24B-18-07-95					Field PARACHUTE					County GARFIELD State CO														
Well BAT 24B-18-07-95					Field PARACHUTE					County GARFIELD					State CO					API No.: 05-045-22836-0000 Serv #: 902509208														
Field PARACHUTE					County GARFIELD					State CO					Location: SURFACE HOLE LOCATION: 0256' FSL & 0824' FEL					Other Services														
County GARFIELD					State CO					Bottom Hole Location: 0846' FSL & 1950' FWL					RMT GAUGE RING																			
Permanent Datum					GROUND LEVEL Elevation 5441'					Elevation																								
Log Measured From KB					17 Ft. above perm. datum					K.B. 5458'					D.F. 5457'					G.L. 5441'														
Drilling Measured From KB										WATER																								
Date @ Time Logged 20 JUNE 2015					Type Fluid in Hole																													
Run No. ONE					Density of Fluid					8.4#																								
Depth - Driller 7174'					Fluid Level					FULL																								
Depth - Logger 6909'					Cement Top Est. Logged					SEE LOG																								
Bottom - Logged Interval 6909'					Equipment / Location					10971668 / G.J.																								
Top - Log Interval 1500'					Recorded by					D. SOLIS																								
Max. Recorded Temp. 227 DEG F					Witnessed by					UNATTENDED																								
CEMENTING DATA					Surface					Protection					Production					Liner														
Primary / Squeeze					String					String					String					N/A														
Date / Time Cemented					N/A					N/A					N/A					N/A														
Expected Compressive Strength					psi@ hrs					psi@ hrs					psi@ hrs					psi@ hrs														
Cement Volume					/					/					/					/														
Cement Type / Weight					/					/					/					/														
Formulation					/					/					/					/														
Mud Type / Mud Wgt.					/					/					/					/														
Borehole Record					From					To					Size					Weight					From					To				
Run Number ONE					12.25" SURFACE					1885' 7174'					8.625" 4.5"					32.0# 11.6#					SURFACE SURFACE					1885' 7174'				
Run Number TWO					7.875" 1885'					7174'					4.5"					11.6#					SURFACE SURFACE					7174'				

ONE	6909'	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	405	205	0	100	200	1060
DIRECTIONAL INFORMATION								
Maximum Deviation		N/A	deg. @		N/A	KOP		N/A

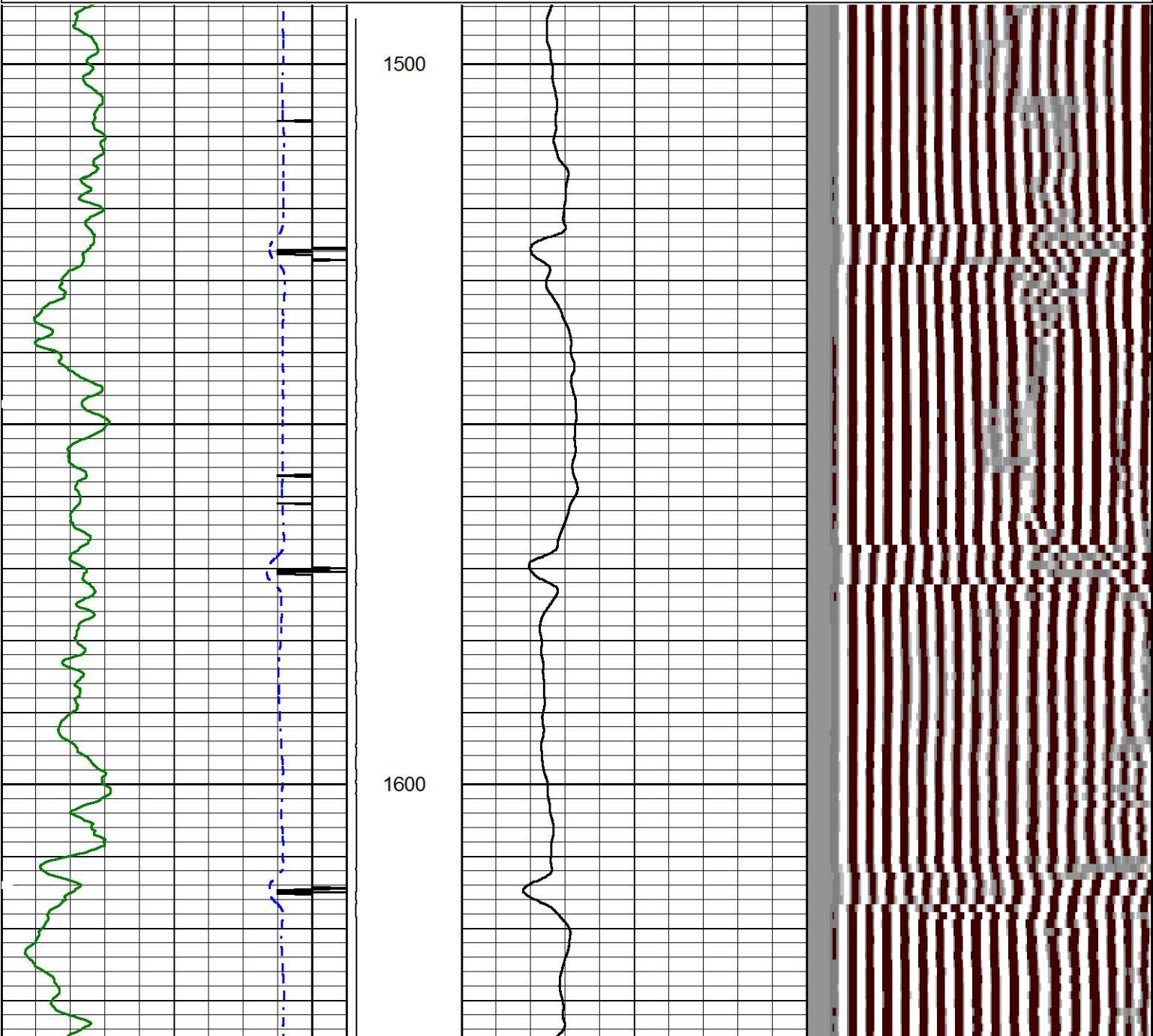
HALLIBURTON

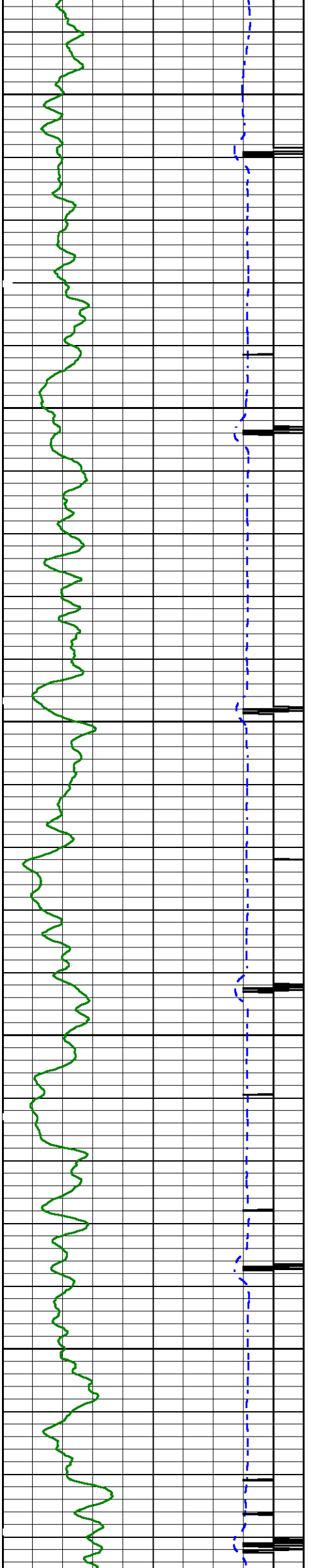
MAIN LOG SECTION

5" = 100'

Database File	bat_24b_cmb.db
Dataset Pathname	MAIN1
Presentation Format	hcb1g
Dataset Creation	Sat Jun 20 08:08:28 2015
Charted by	Depth in Feet scaled 1:240

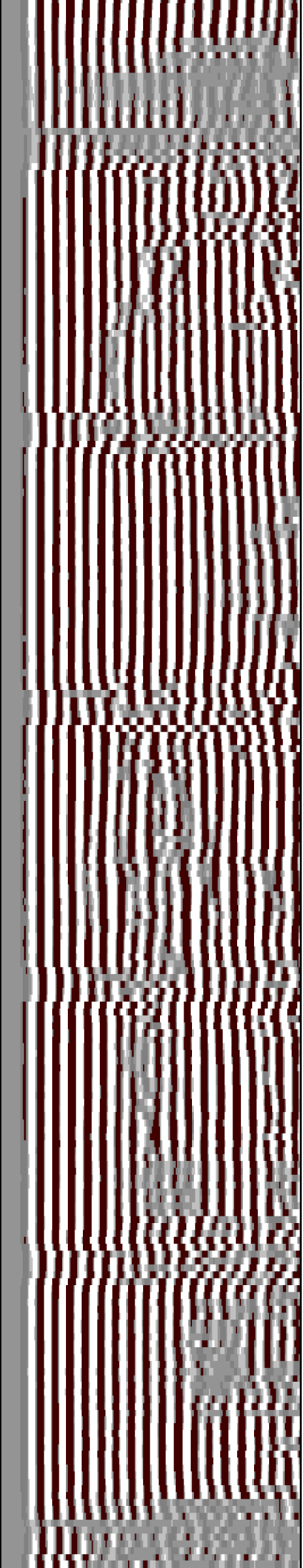
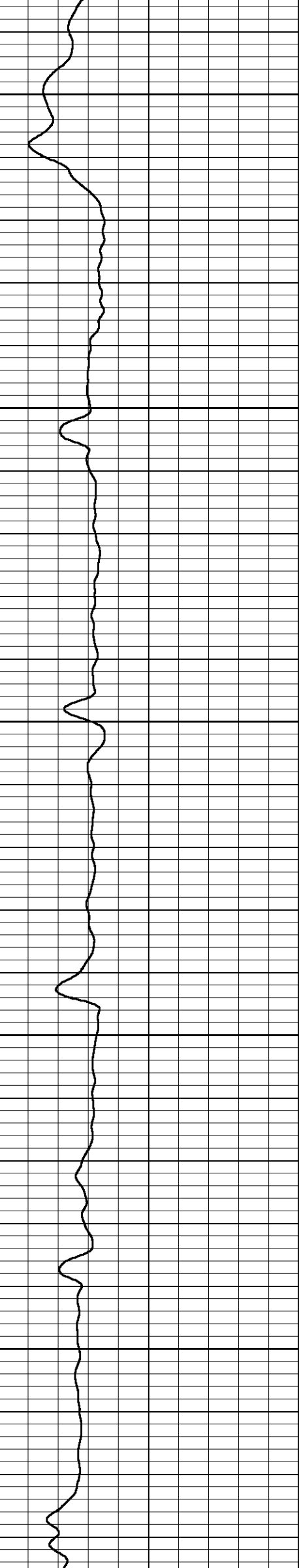
405	3' Travel Time (usec)	205	LTEN	0	3' Amplitude (mV)	100	200	MSG	1060
-540	CCL	60	0	(lb)6000	0	3' Amplitude X5 (mV)	10		
0	GR (GAPI)	200							

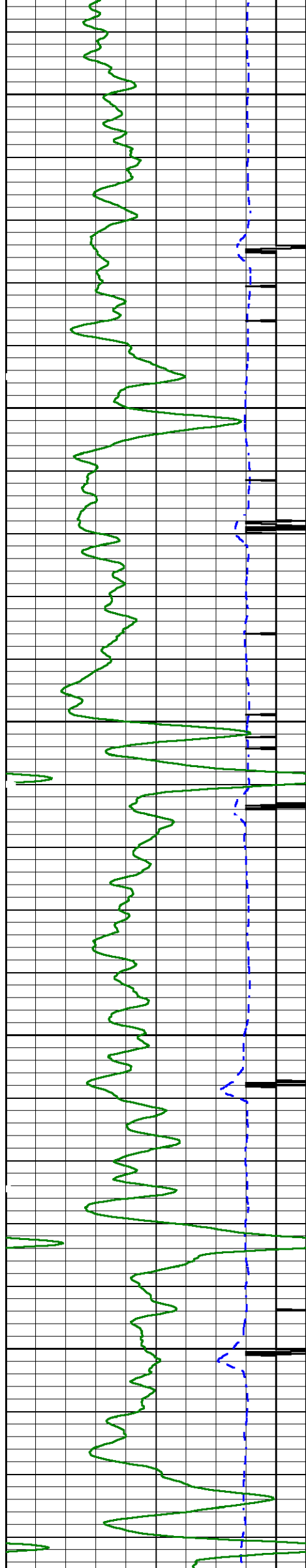




1700

1800

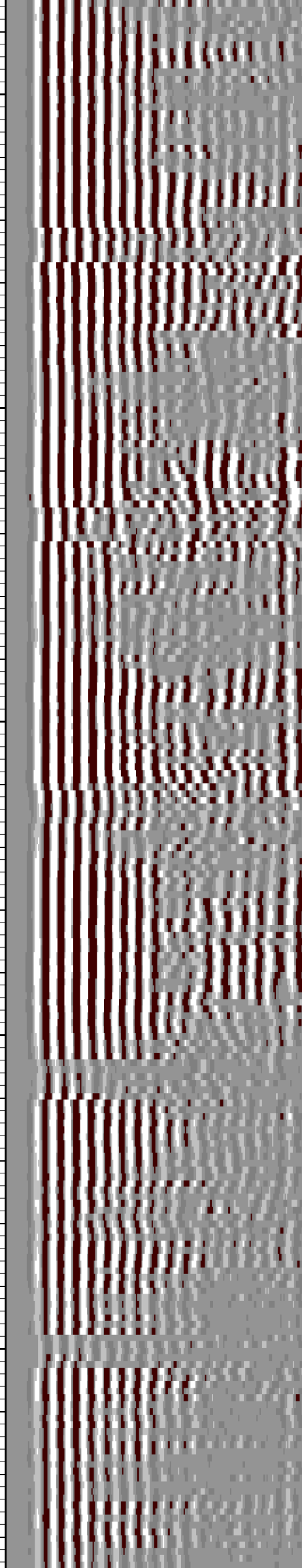
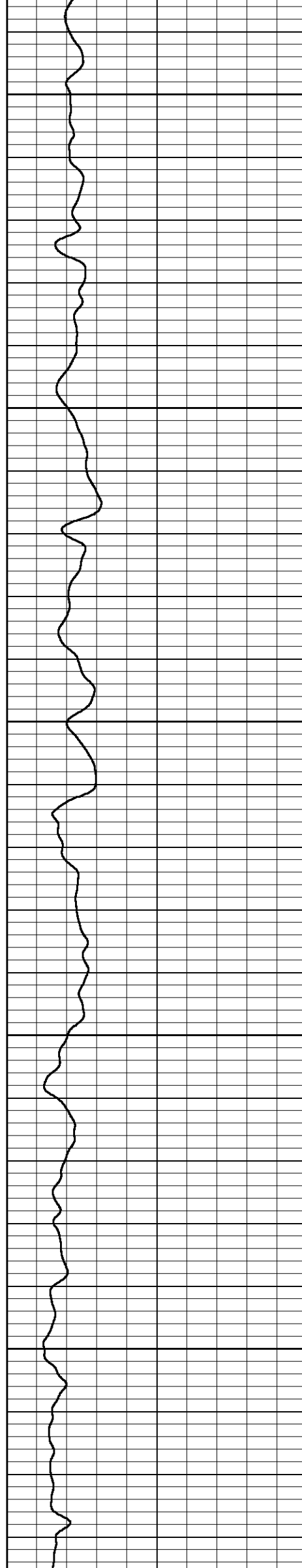


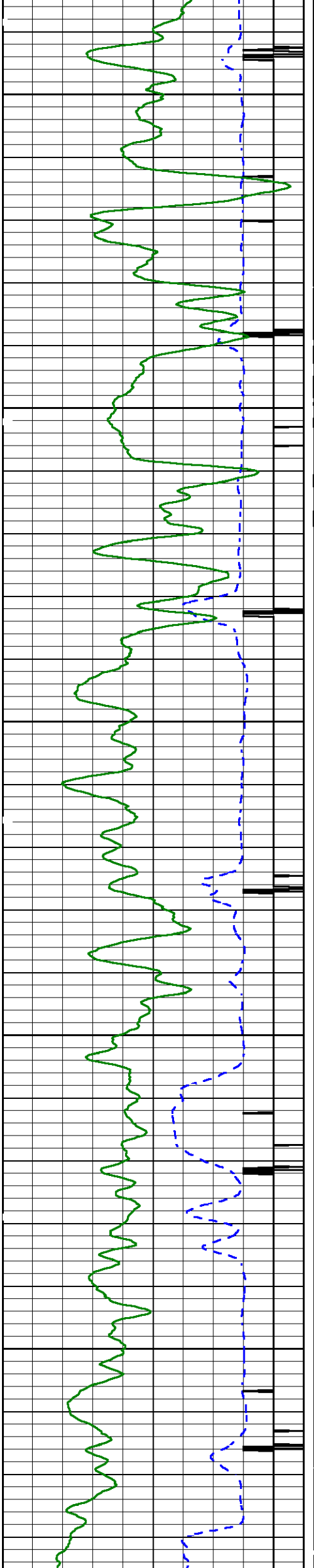


1900

2000

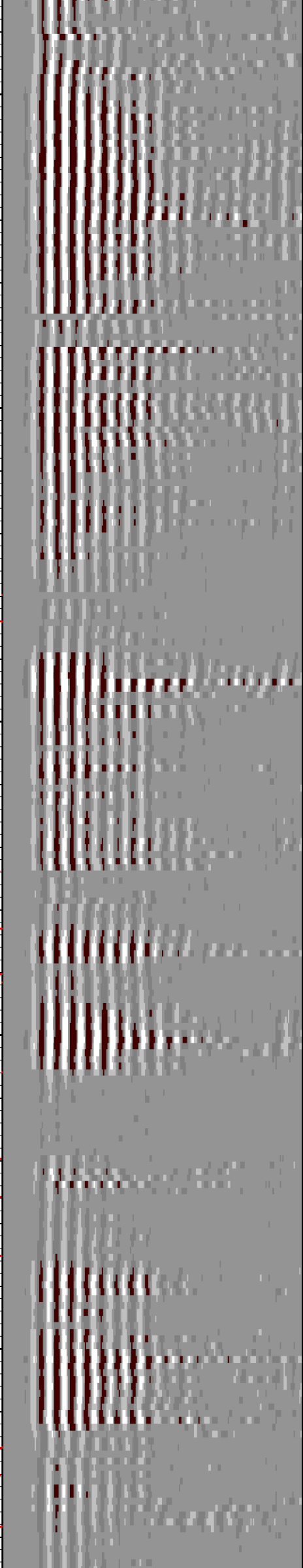
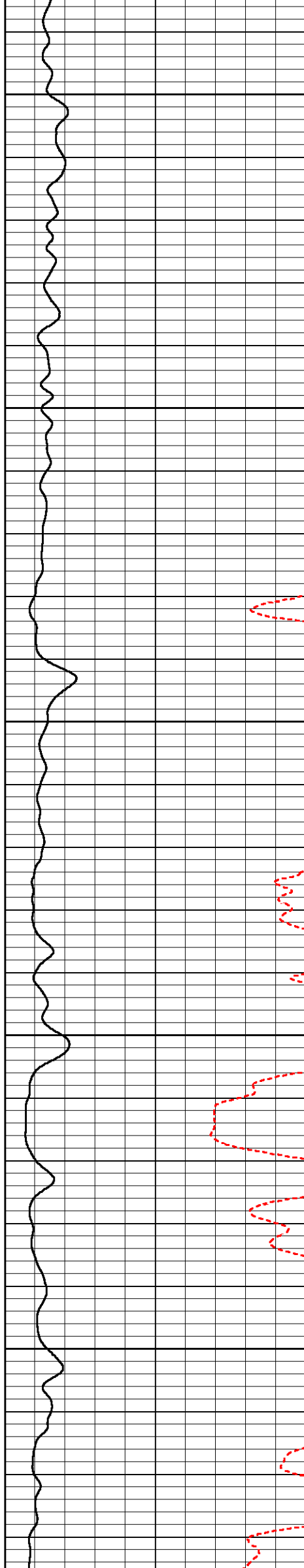
2100

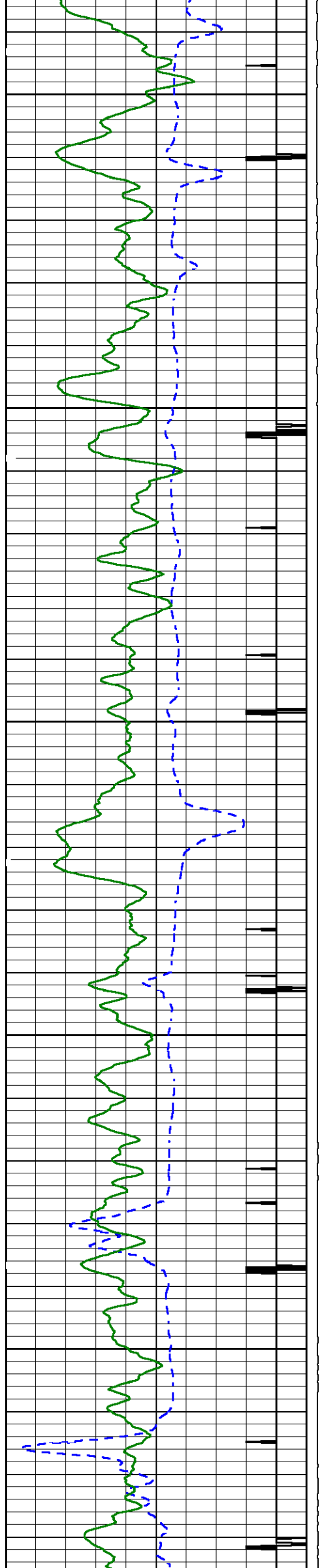




2200

2300

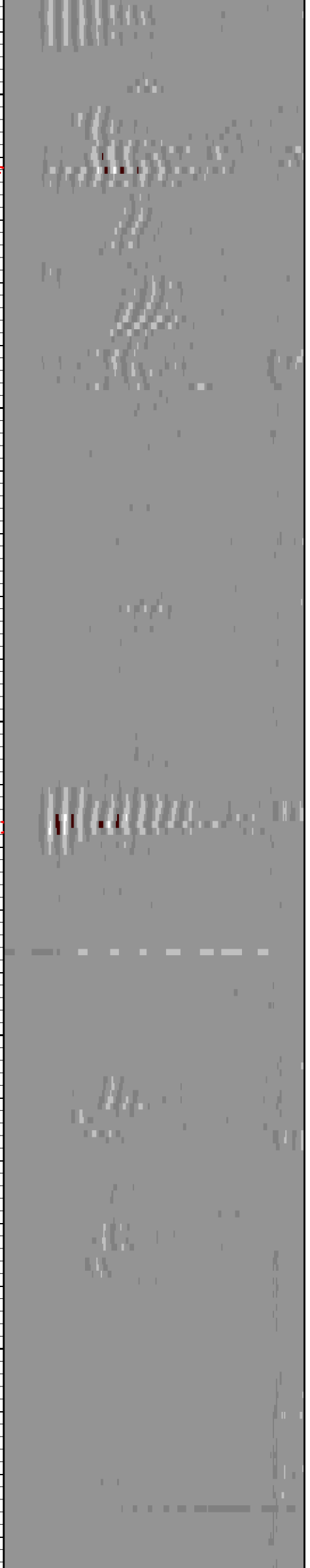
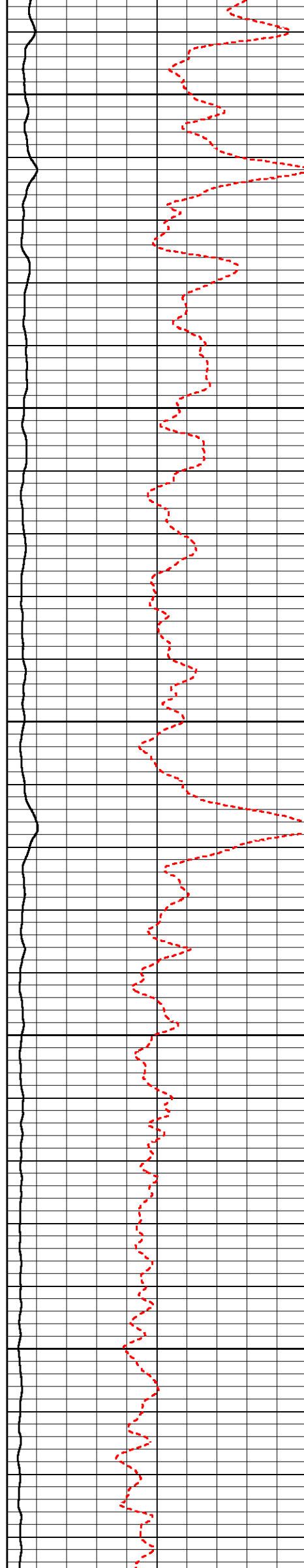


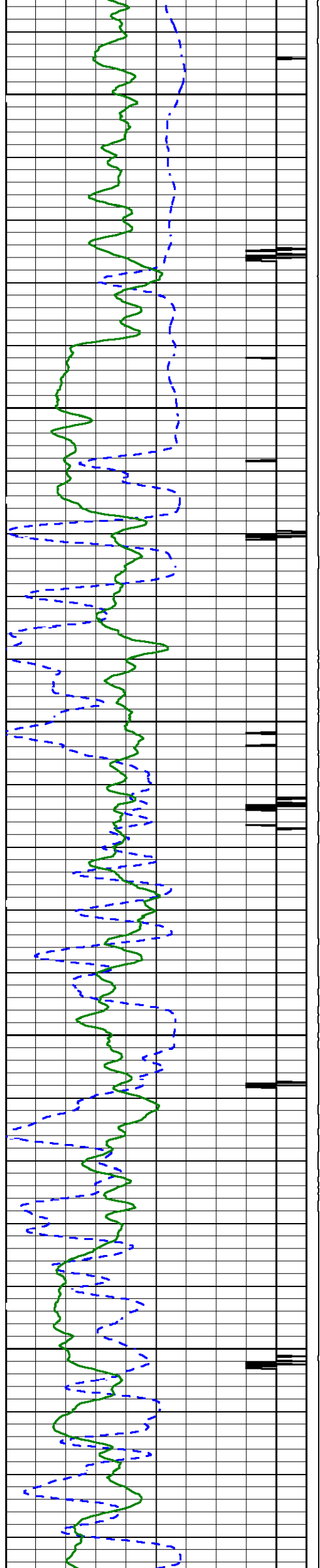


2400

2500

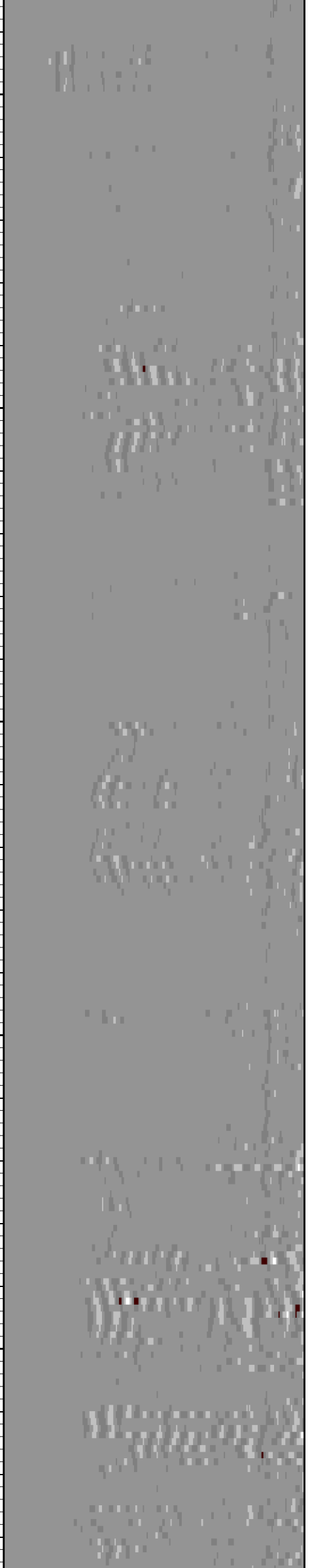
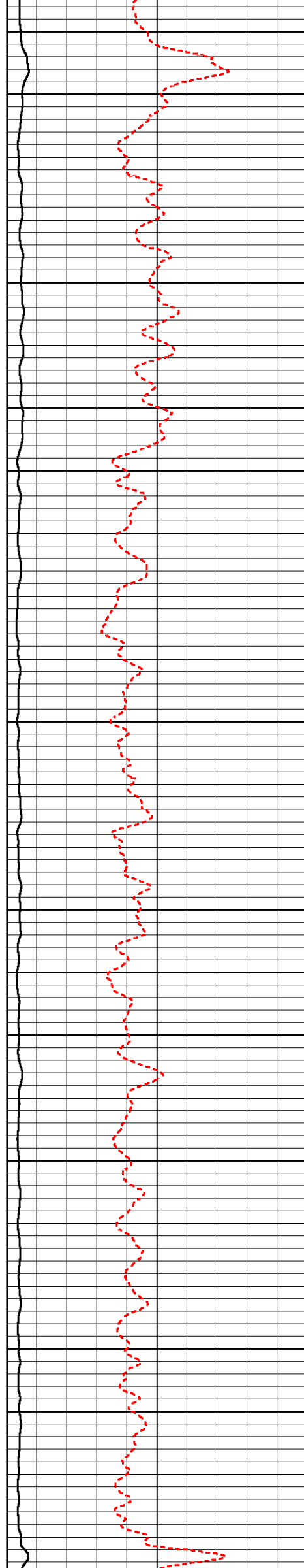
2600

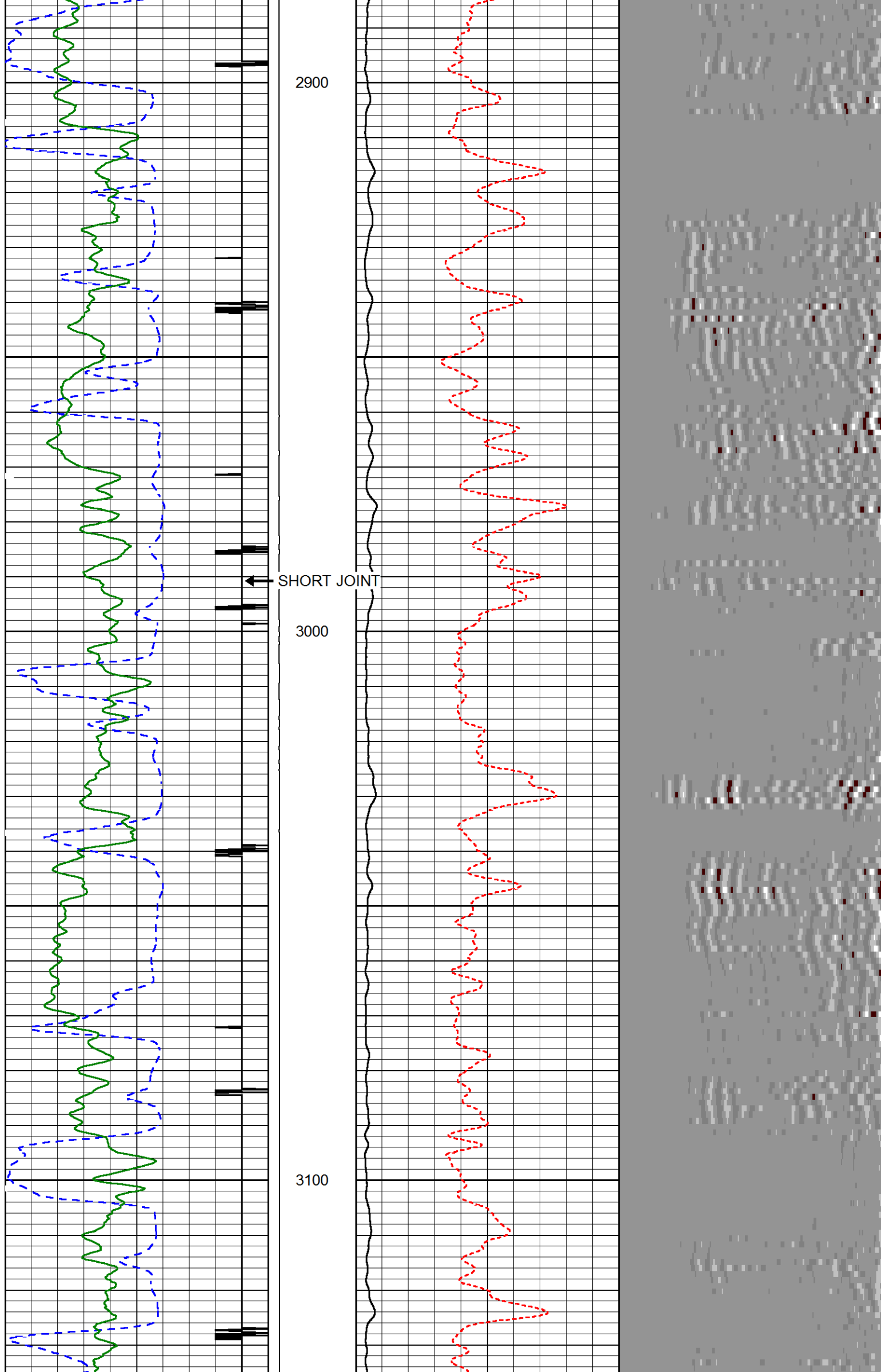


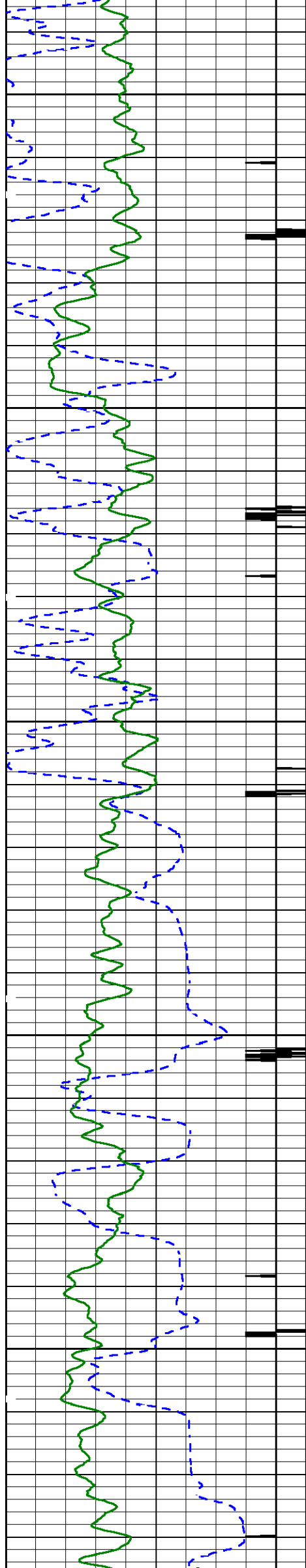


2700

2800

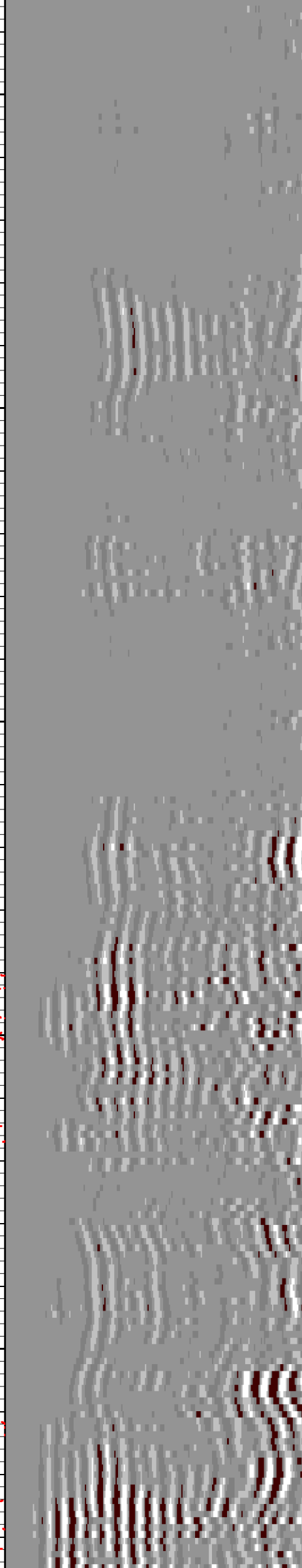
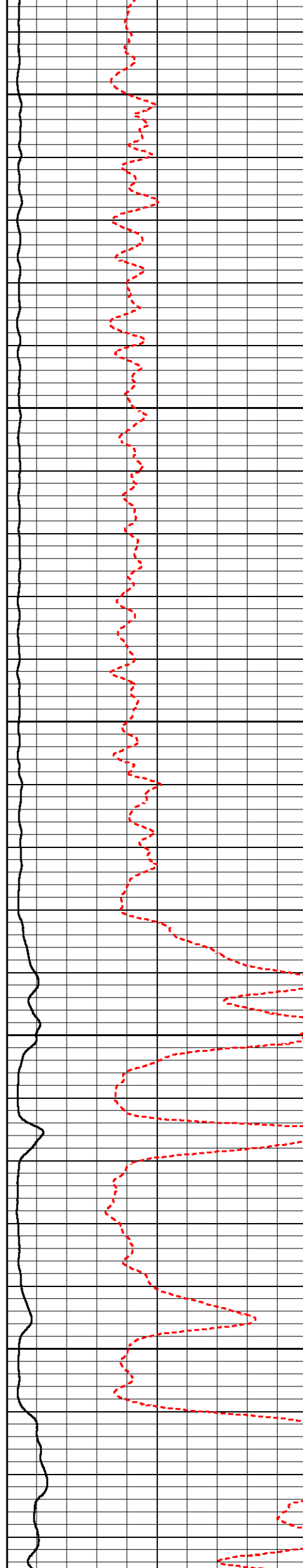


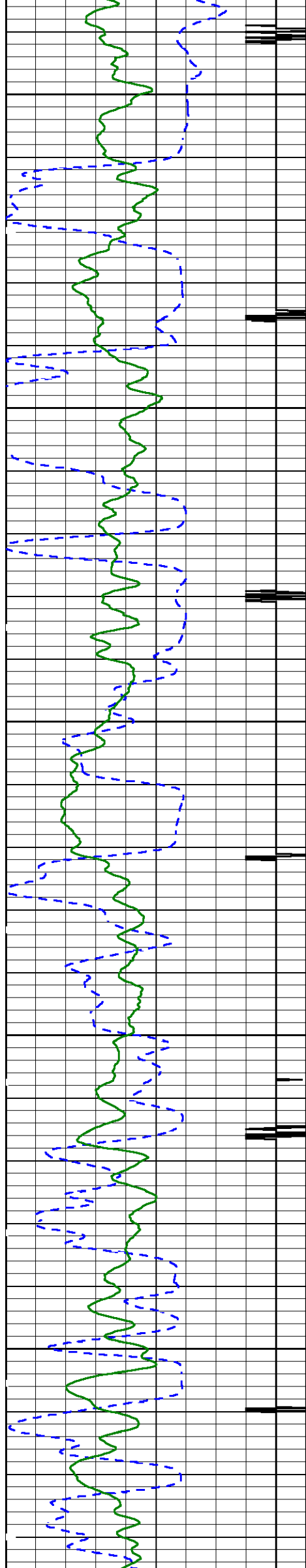




3200

3300

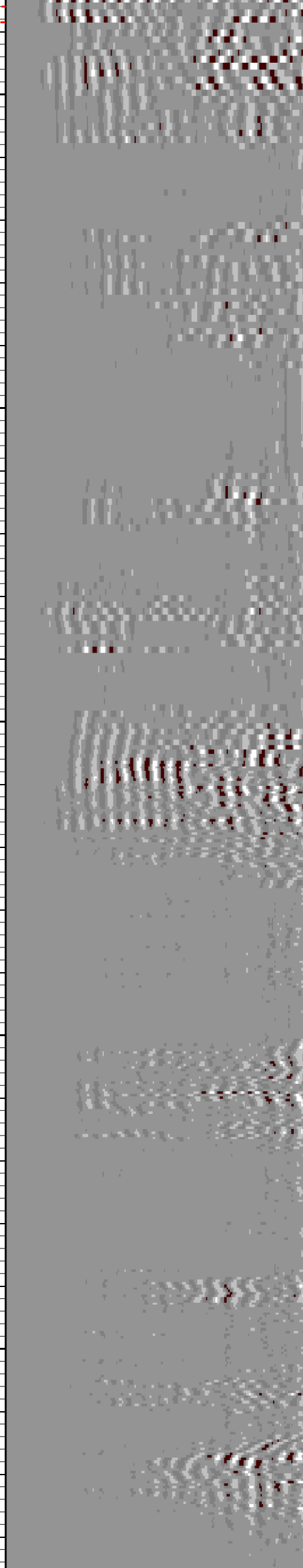
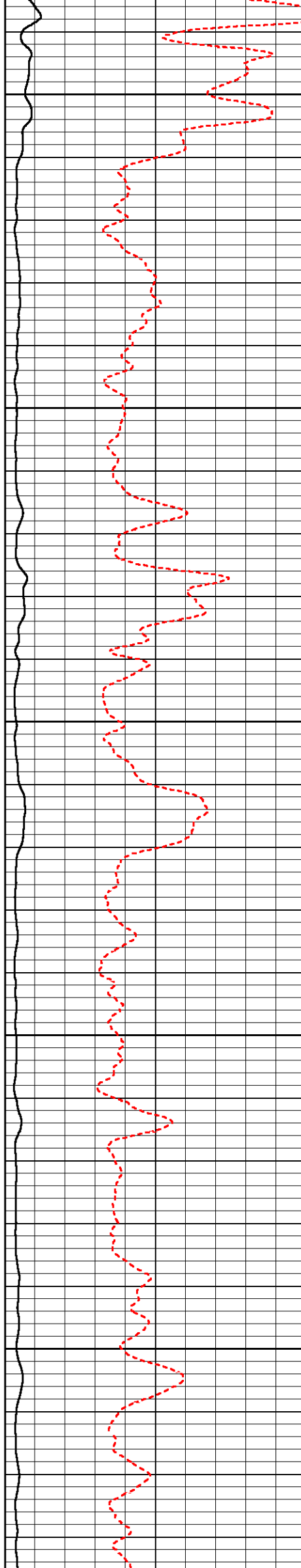


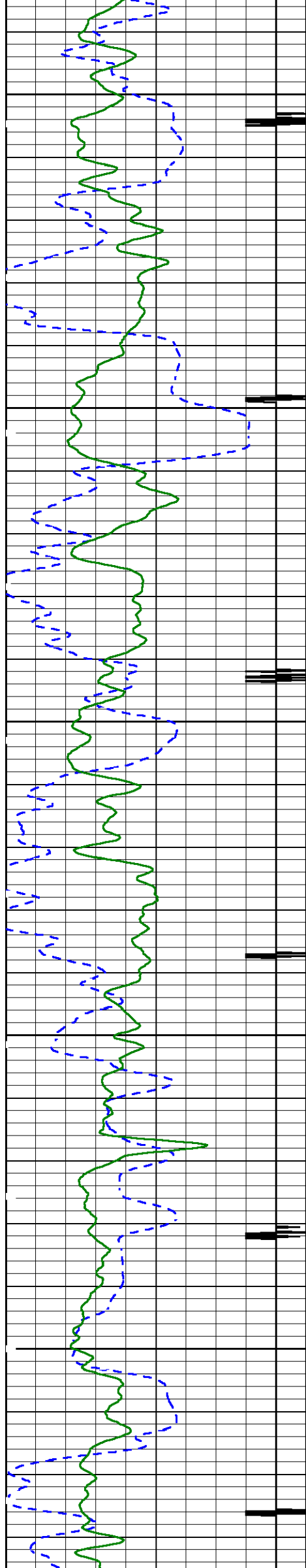


3400

3500

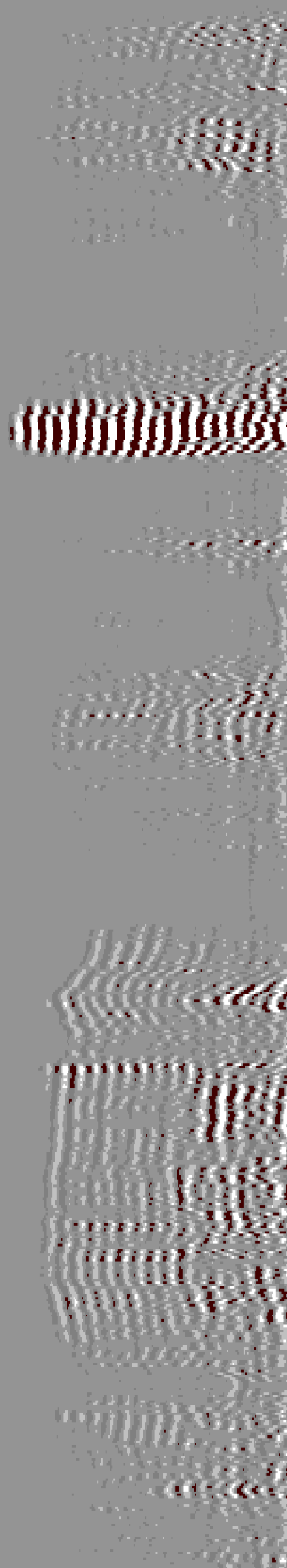
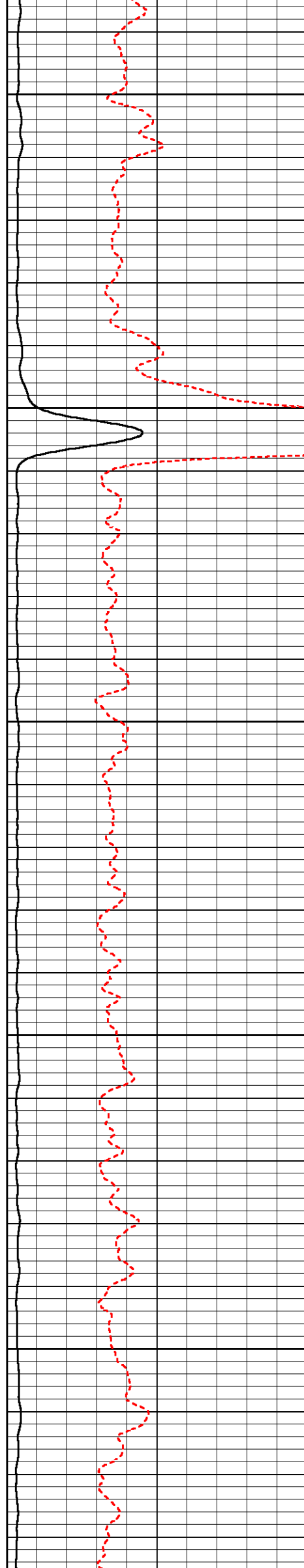
3600

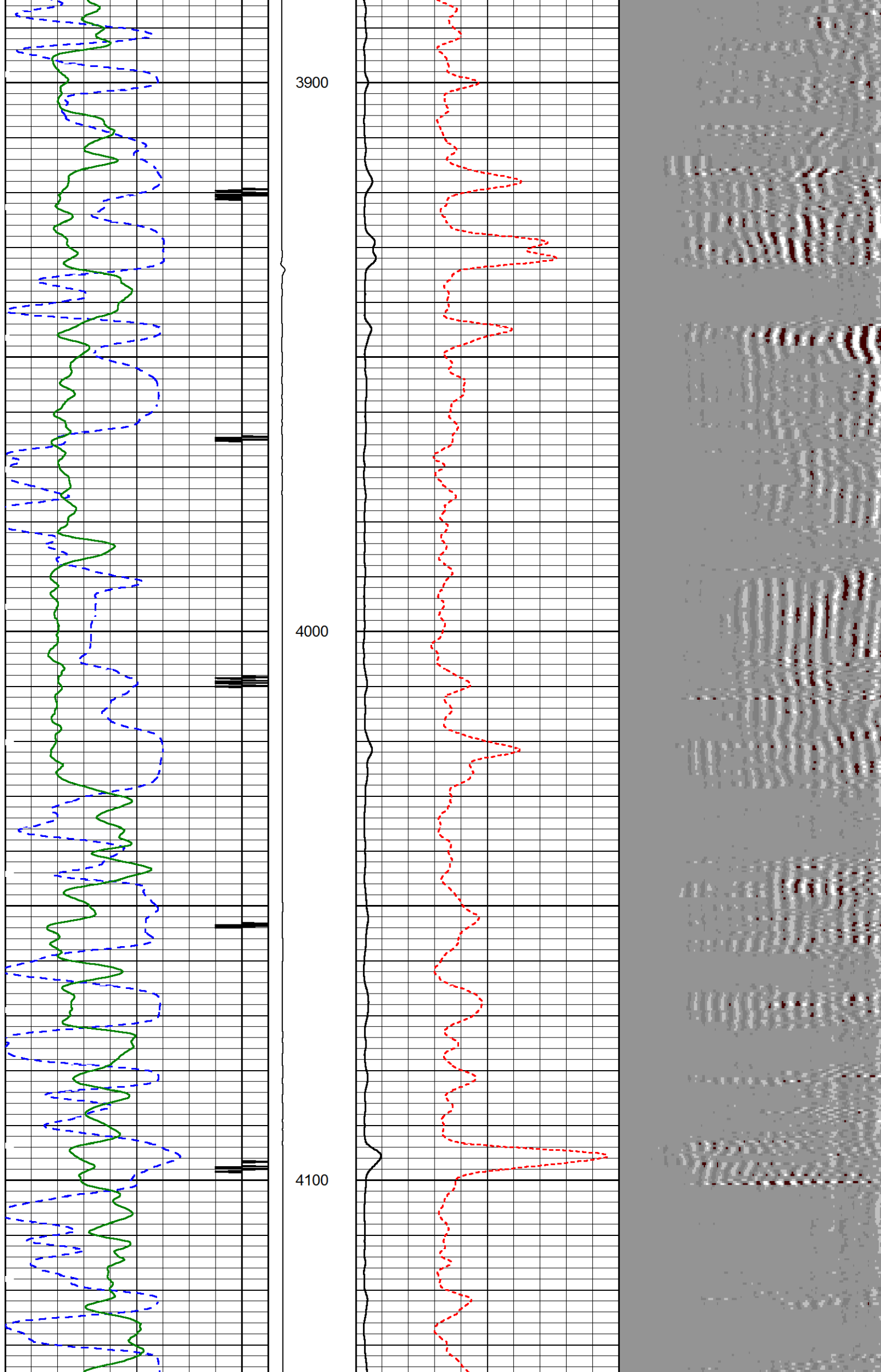


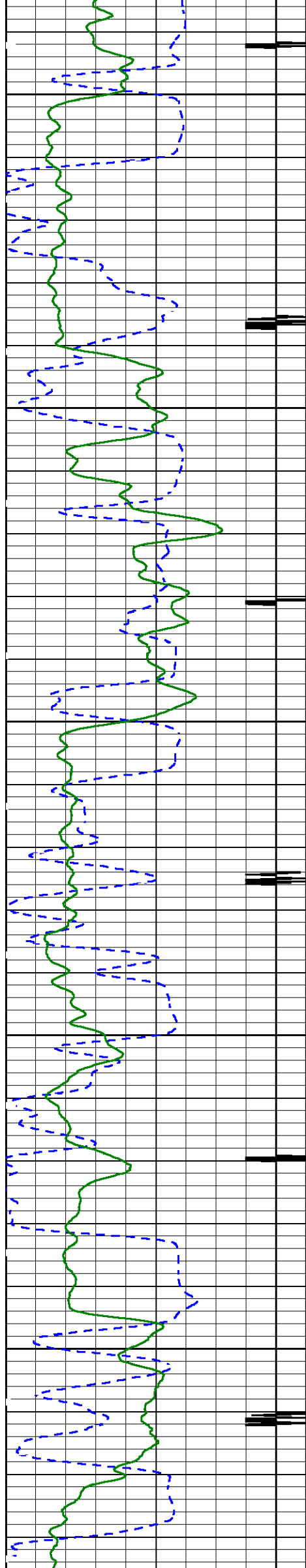


3700

3800

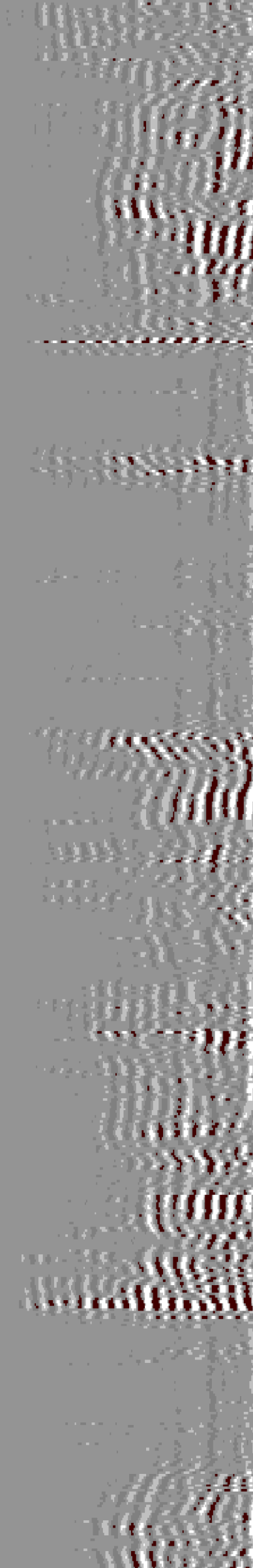
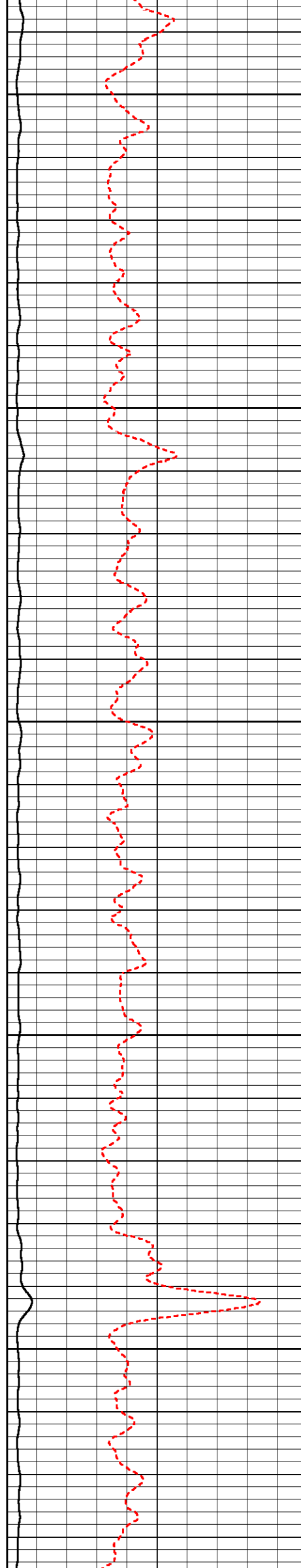


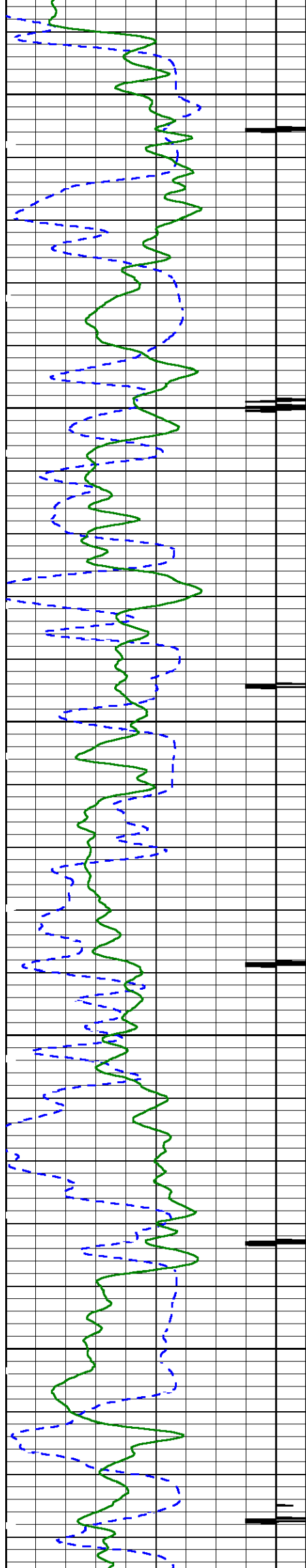




4200

4300

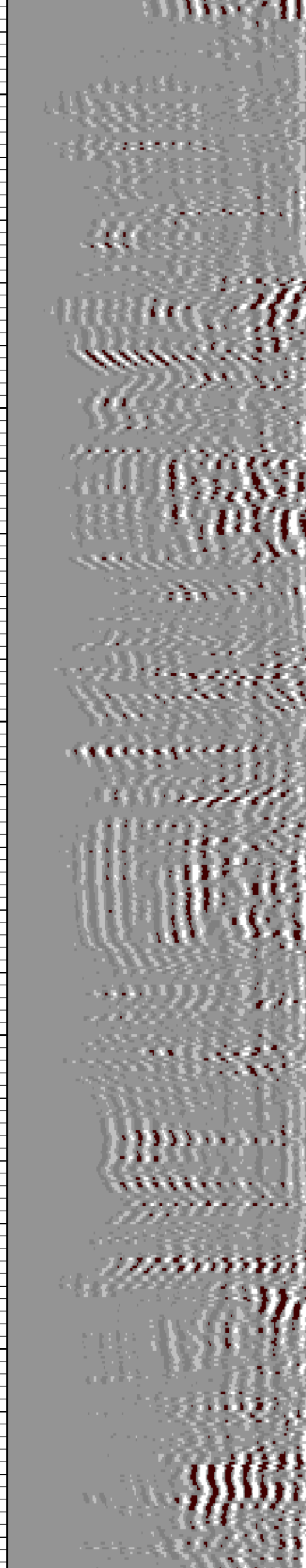
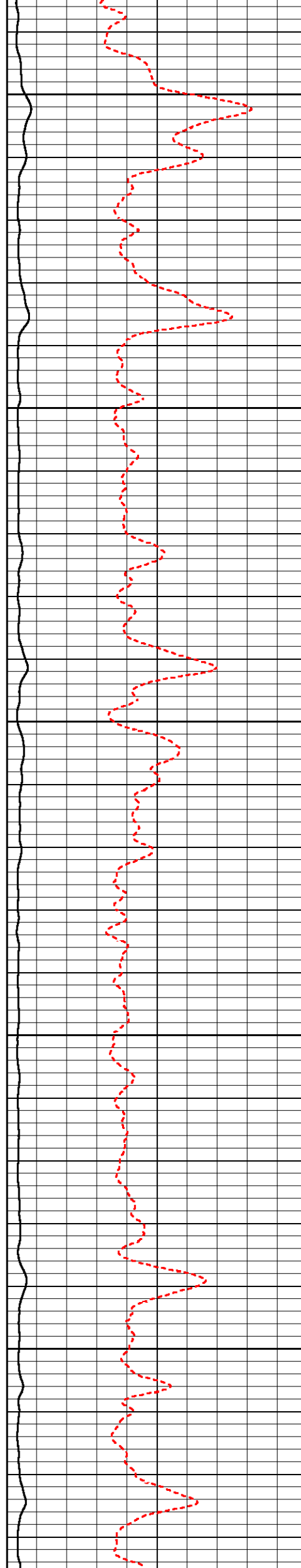


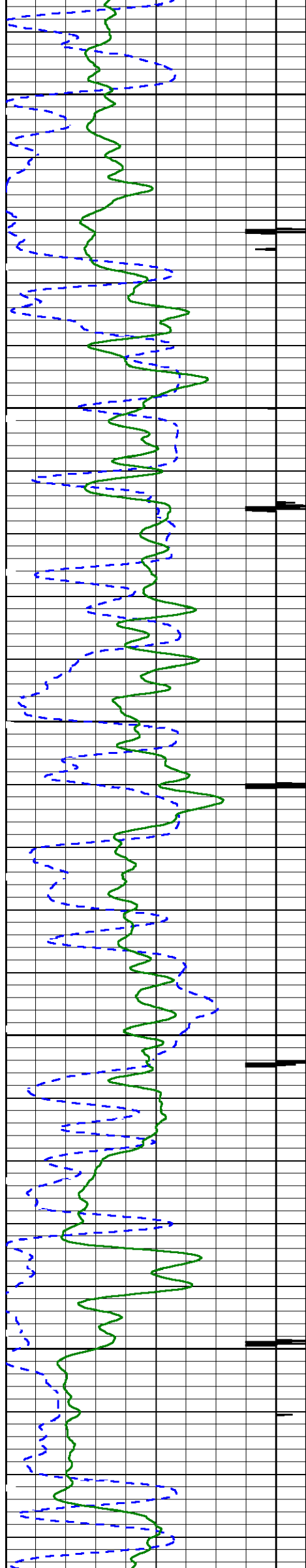


4400

4500

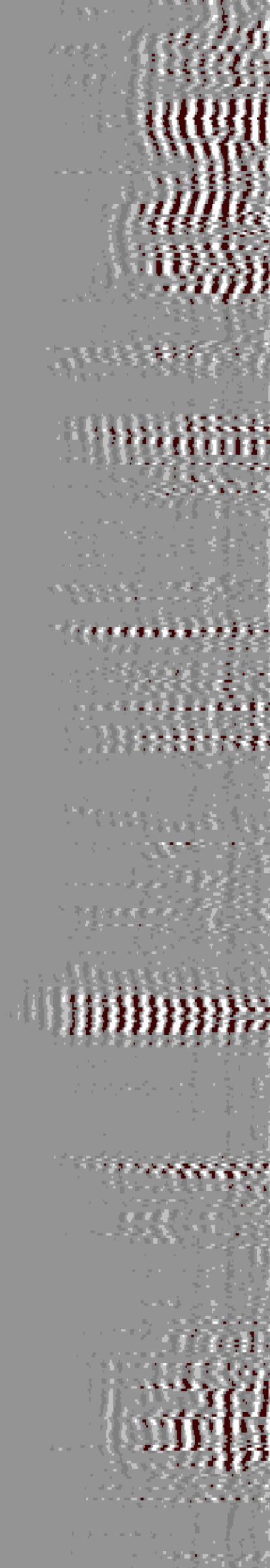
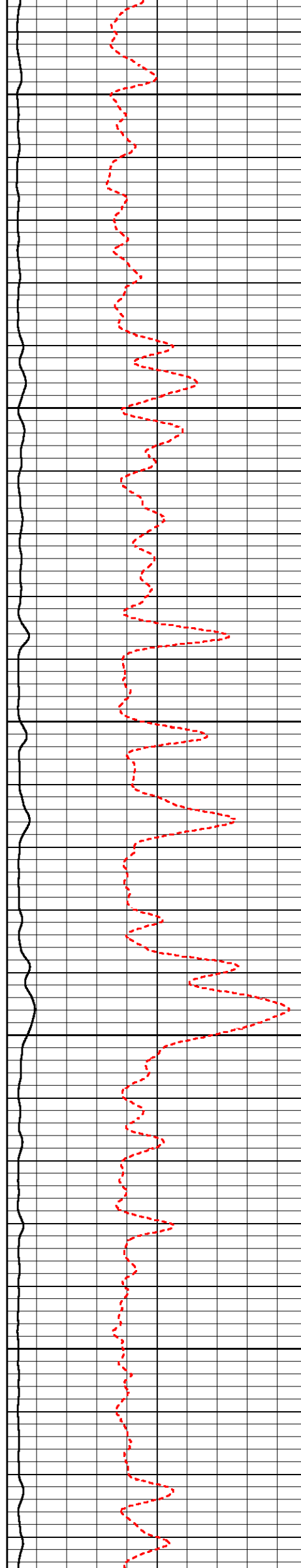
4600

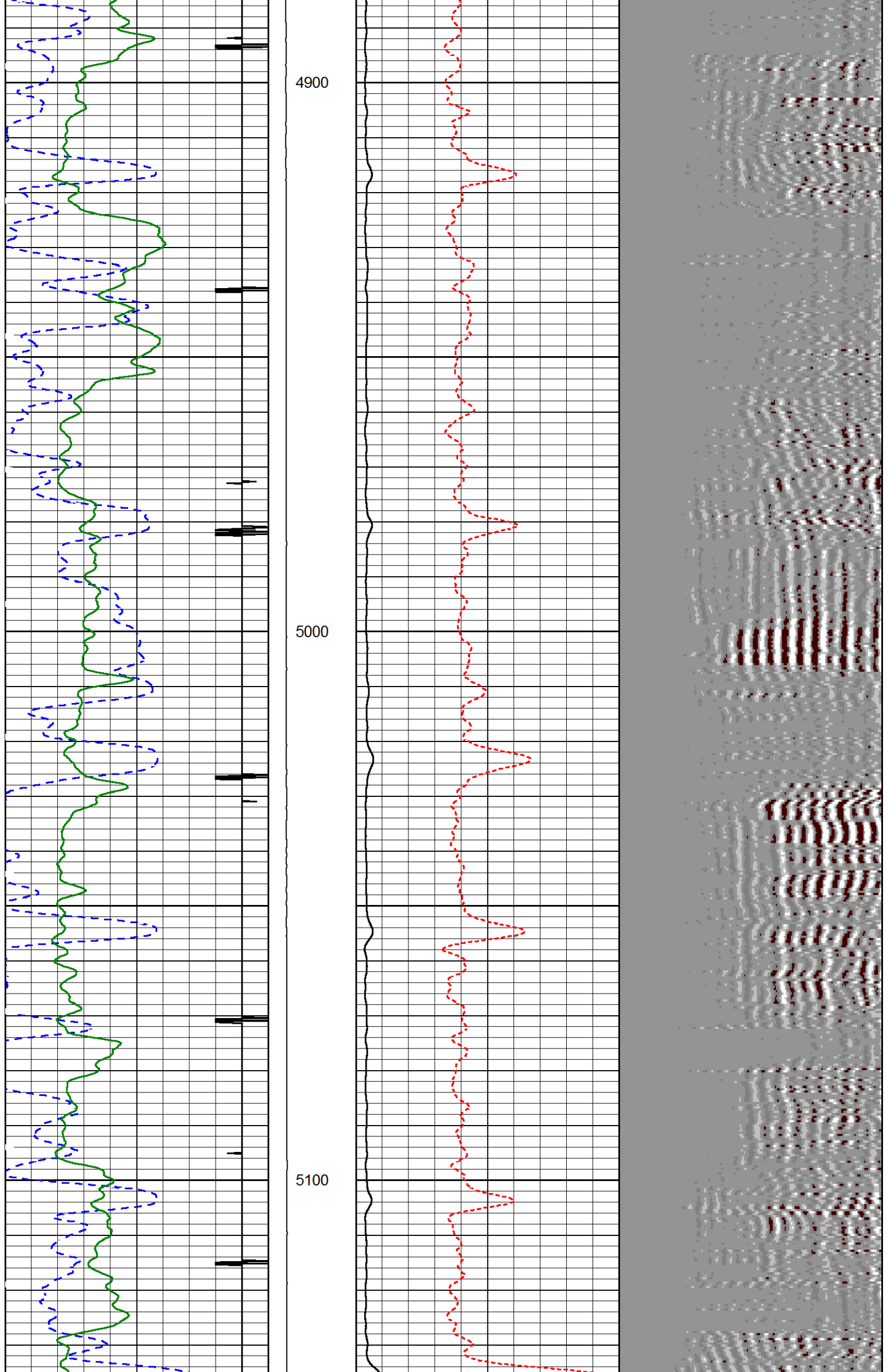


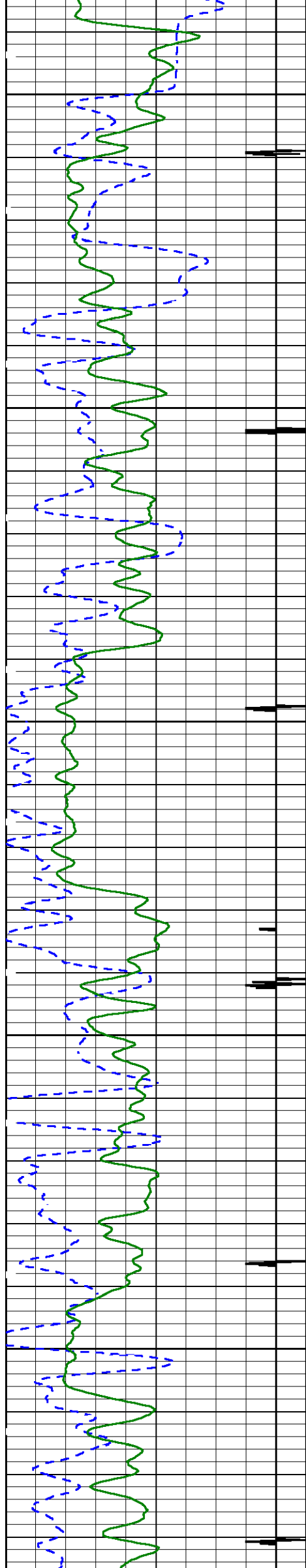


4700

4800

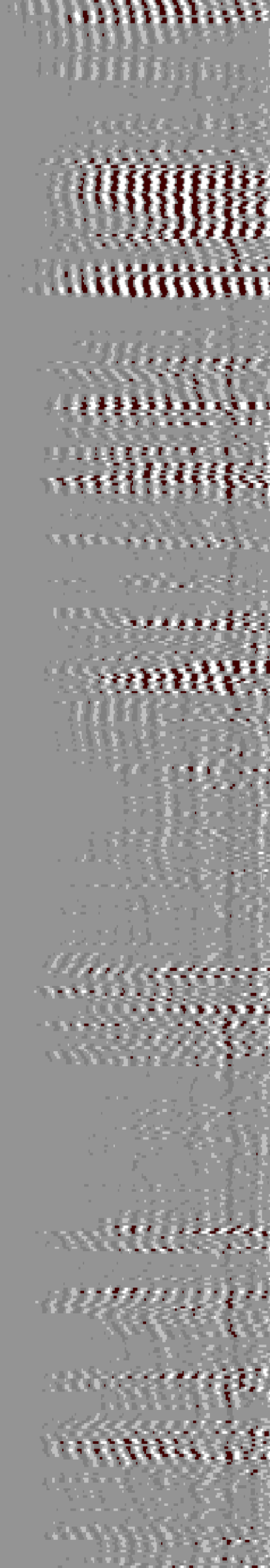
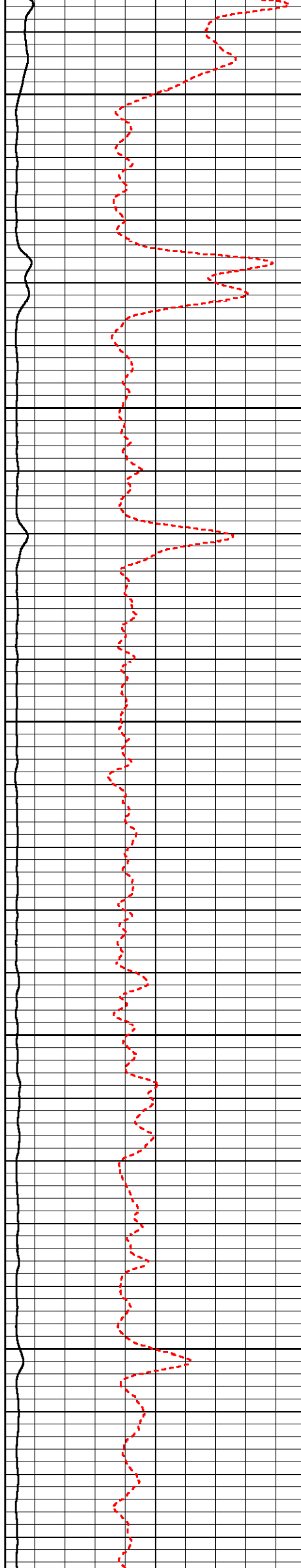


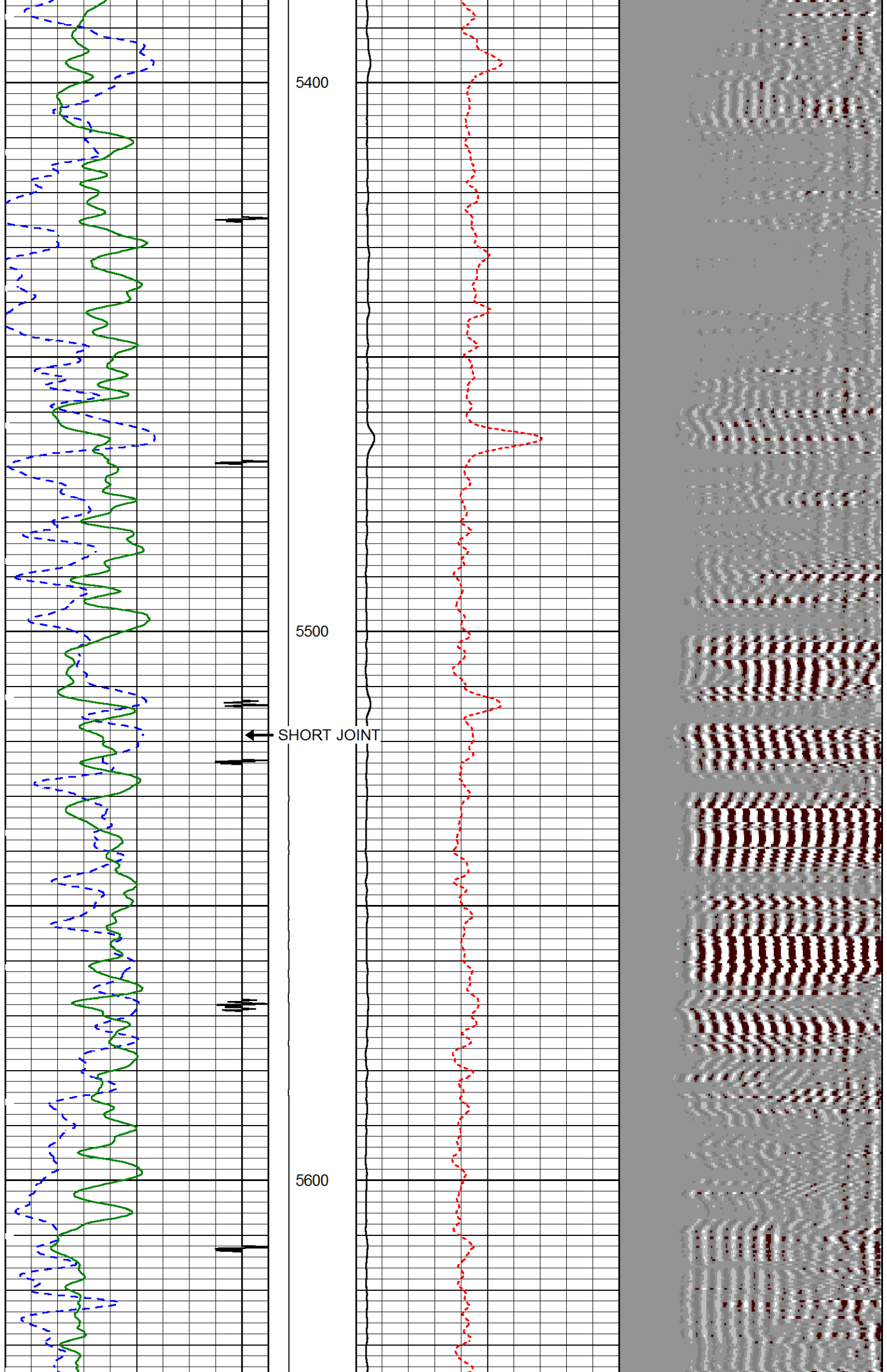


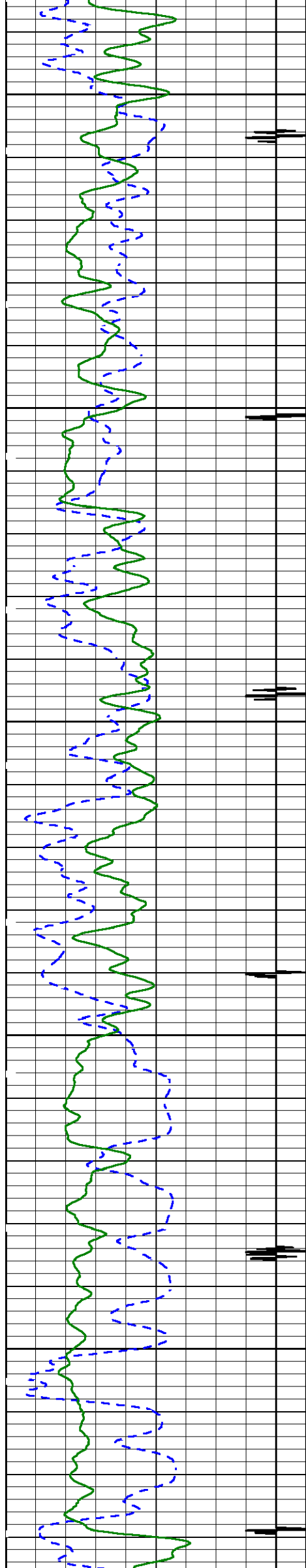


5200

5300

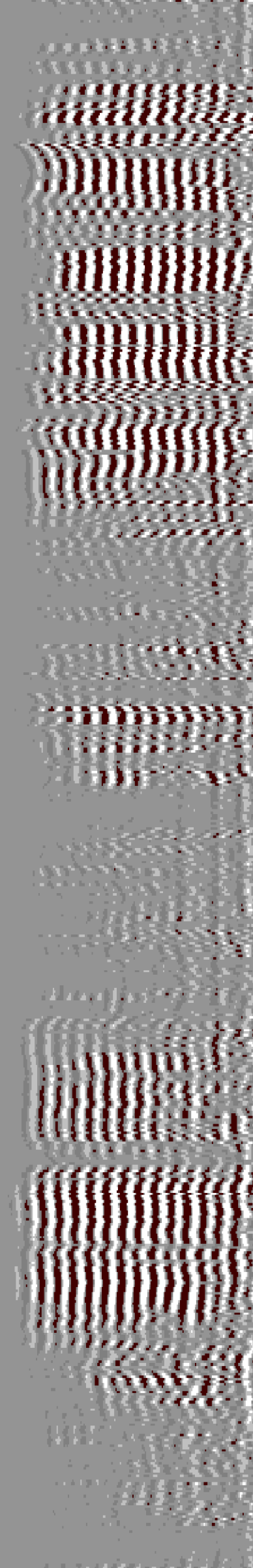
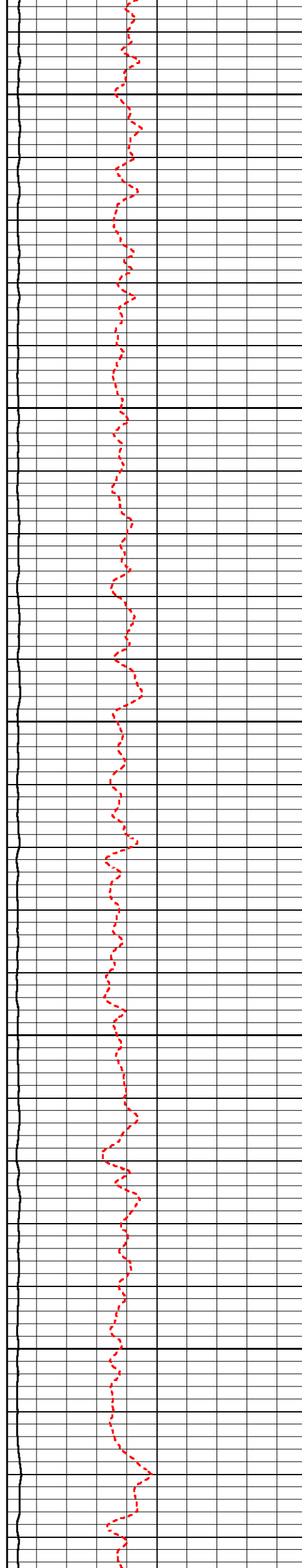


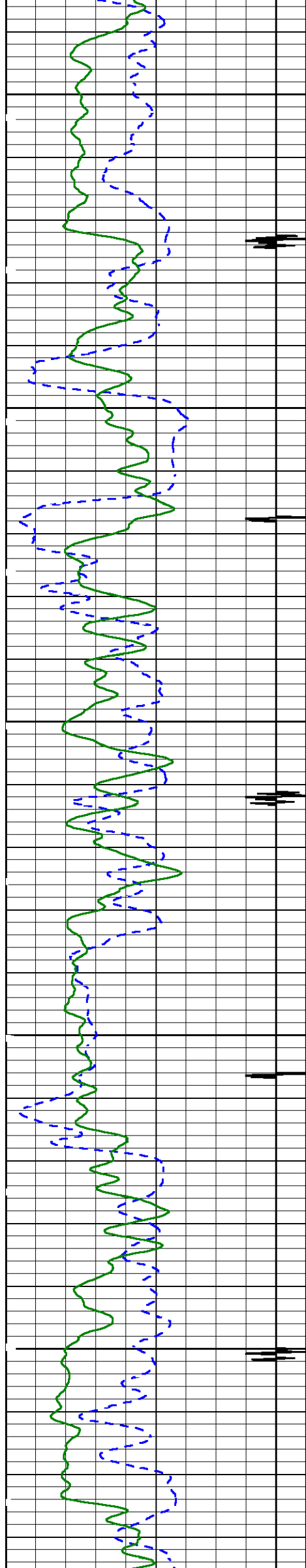




5700

5800

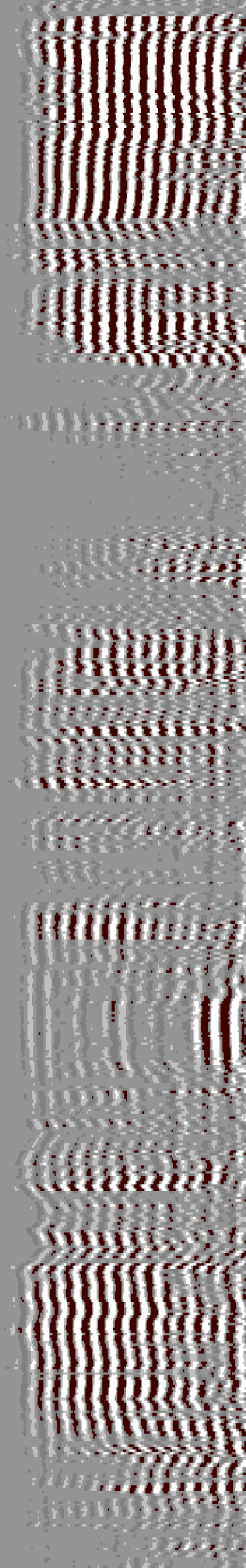
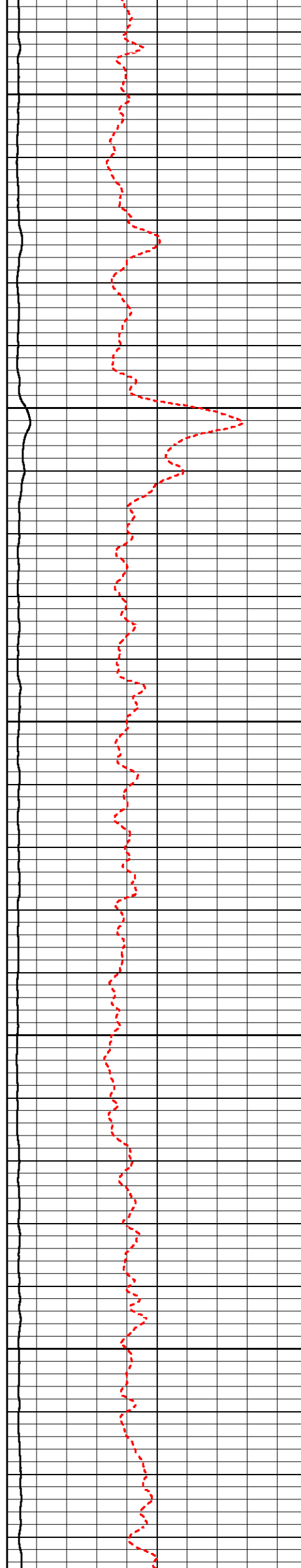


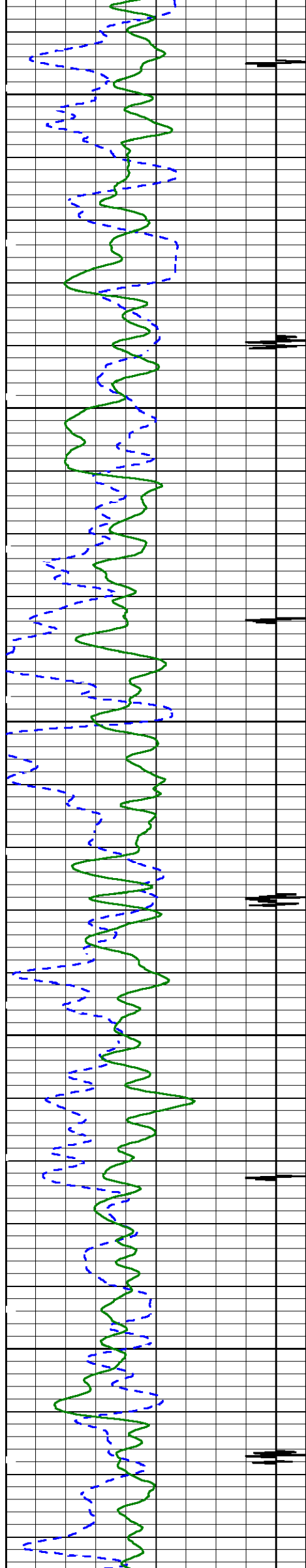


5900

6000

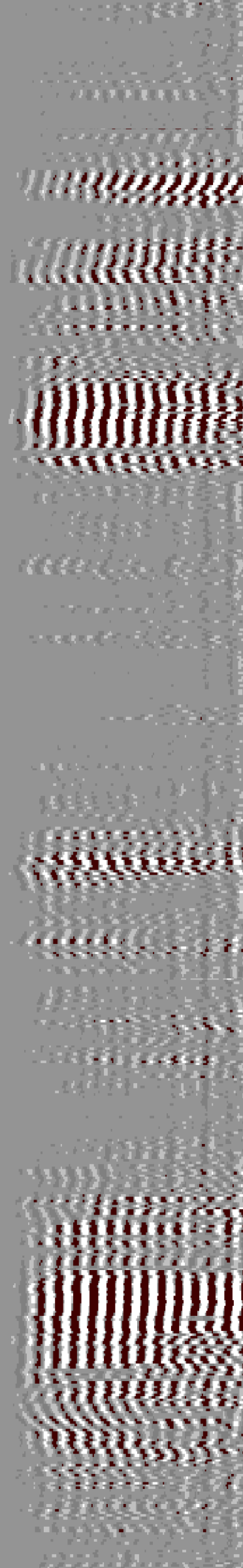
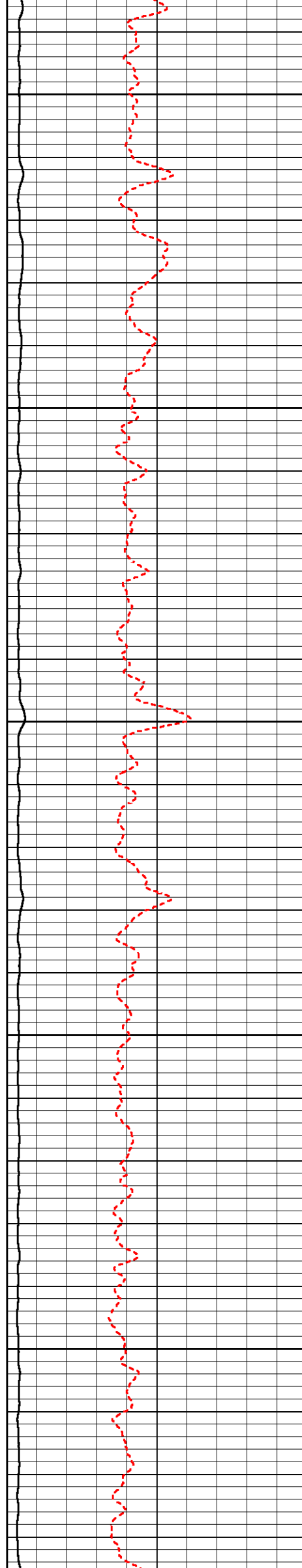
6100

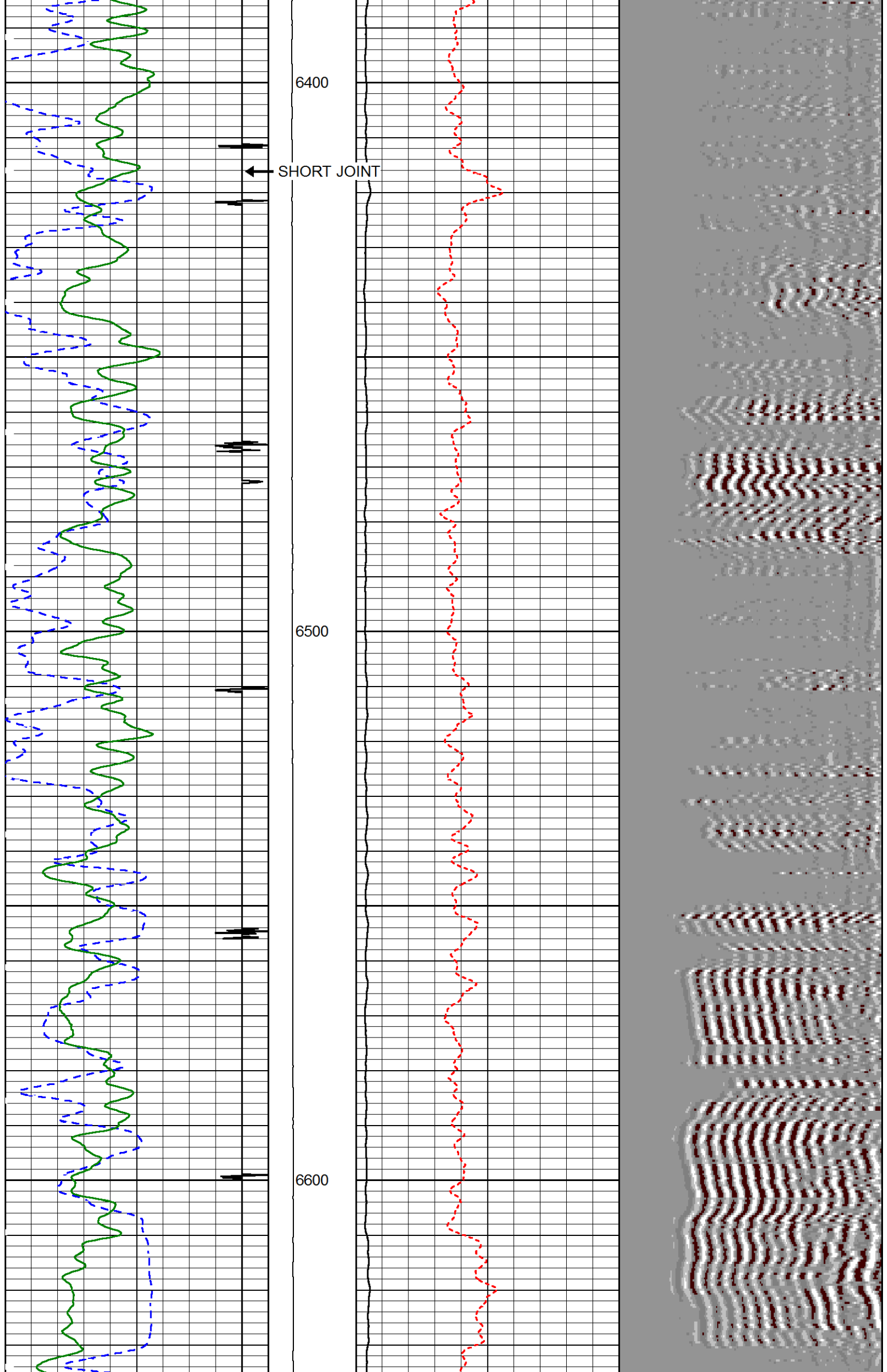


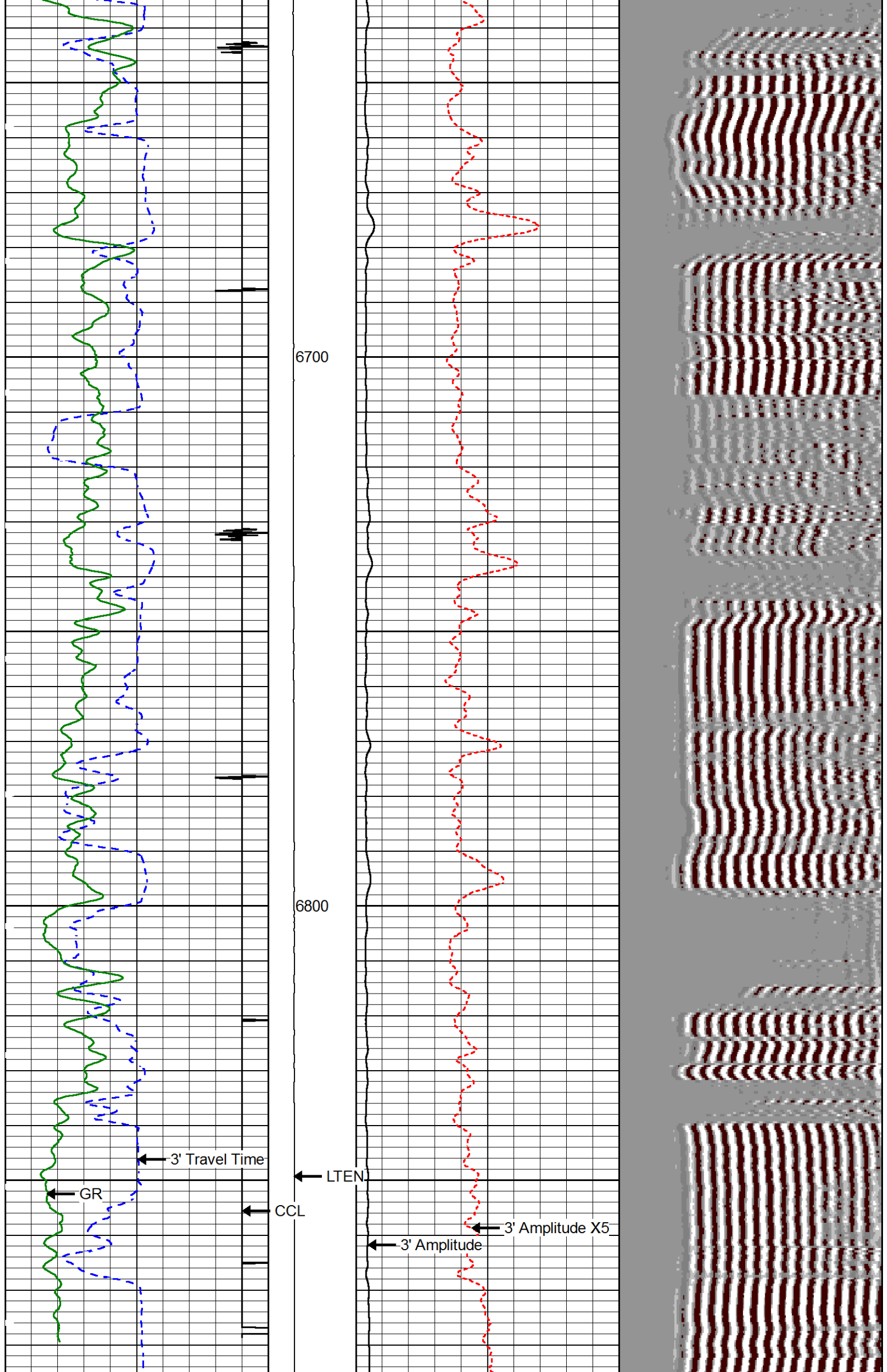


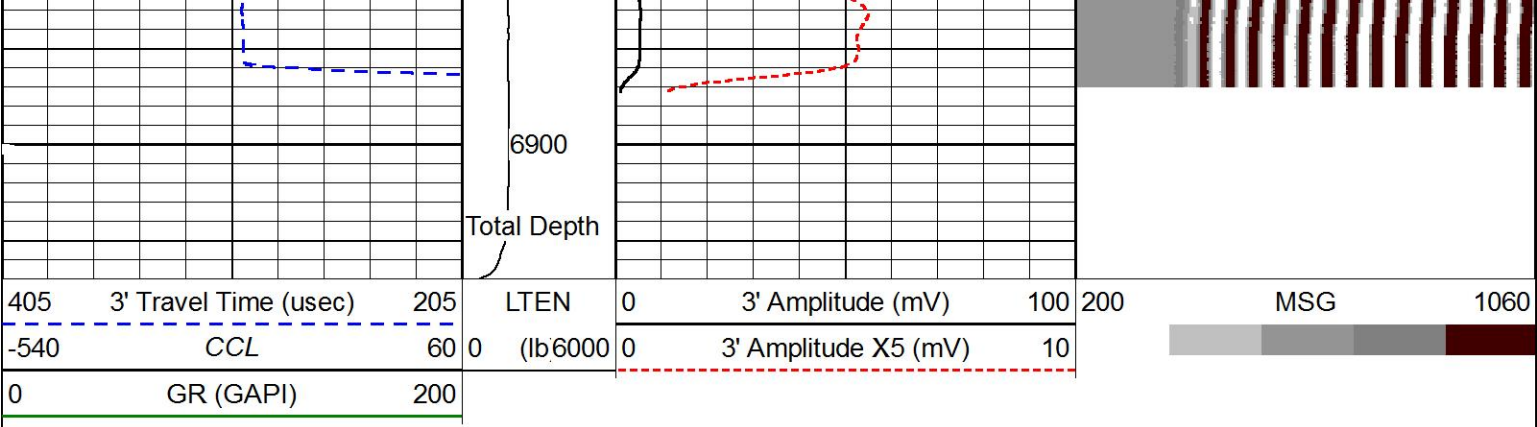
6200

6300









MAIN LOG SECTION

5" = 100'

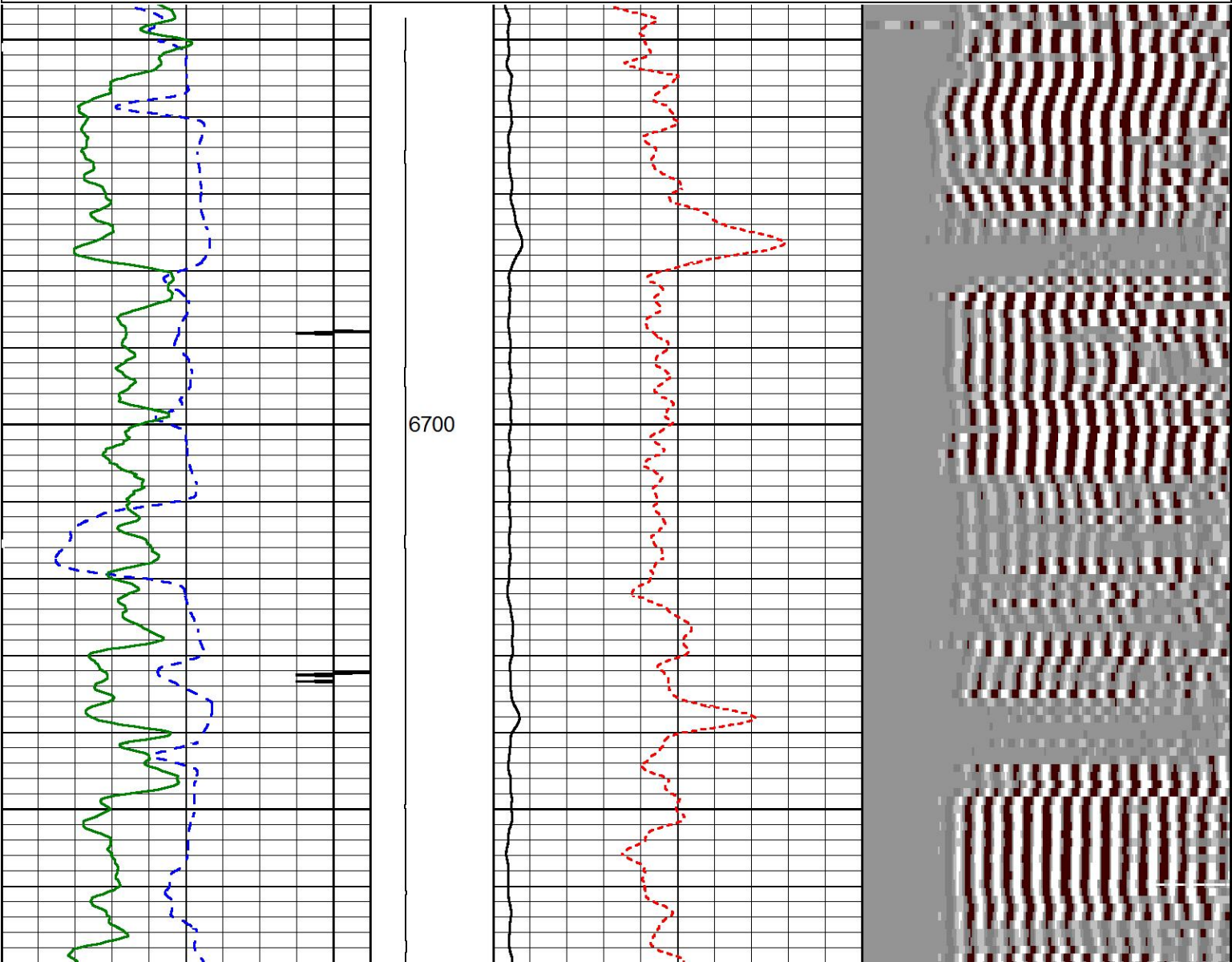
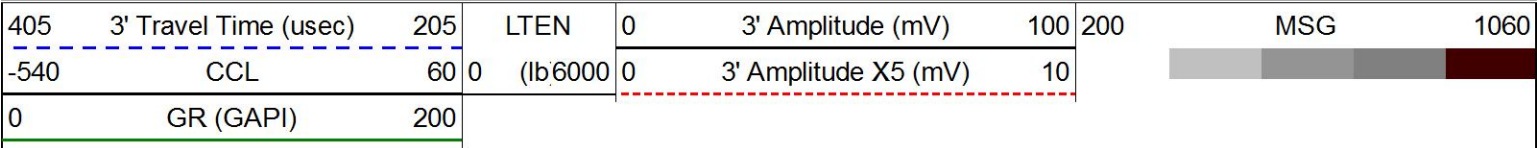
HALLIBURTON

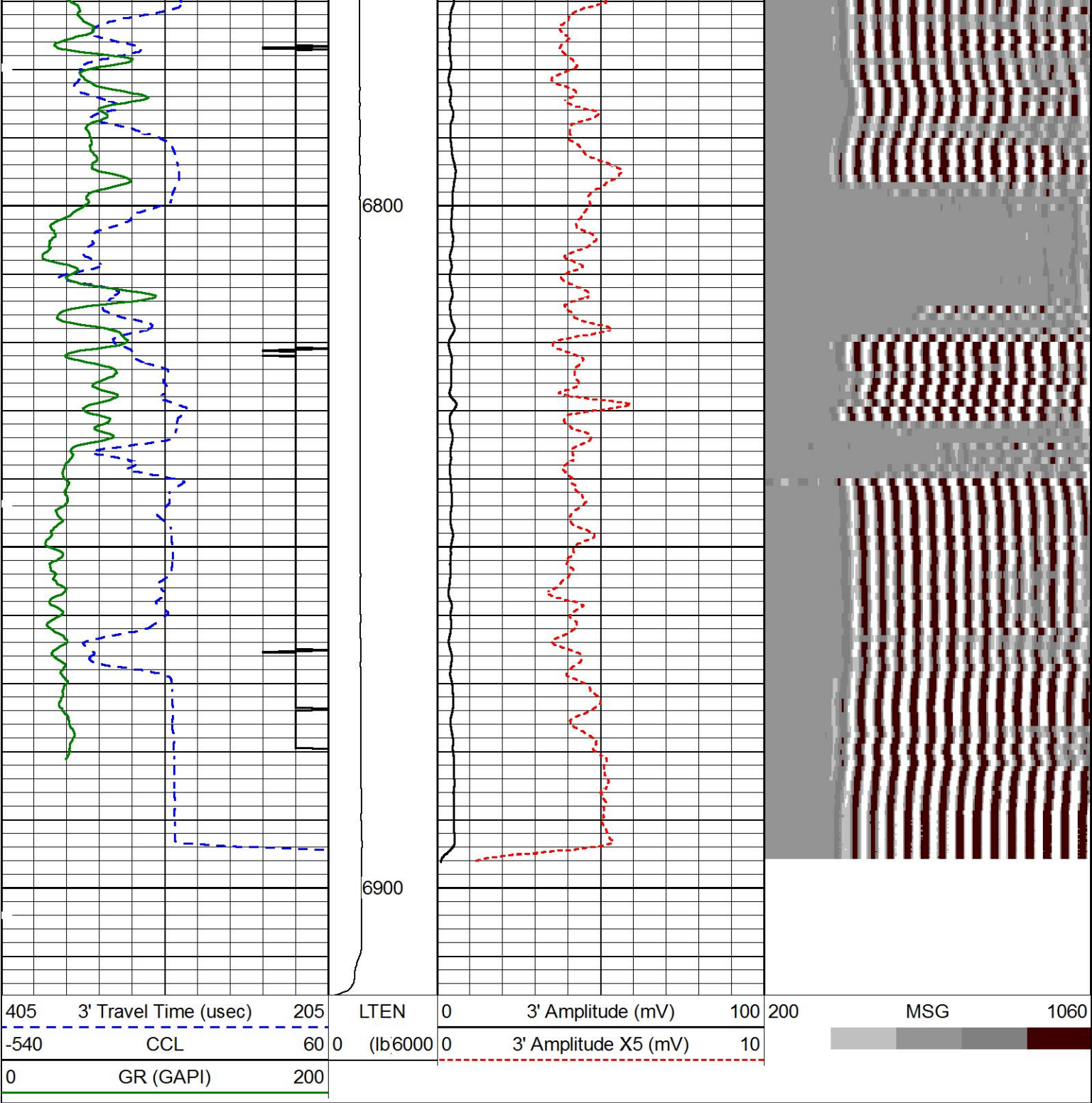
REPEAT LOG SECTION

5" = 100'

HALLIBURTON

Database File bat_24b_cmb.db
Dataset Pathname CBLRPT1
Presentation Format hcbtg
Dataset Creation Sat Jun 20 07:57:24 2015
Charted by Depth in Feet scaled 1:240





Log Variables DatabaseD:\Warrior_data\bat_24b_cmb.db
Dataset field\well\run1\MAIN1_vars_

Top - Bottom

BHTEMP_Src	BHSAL2	BHSAL1	POROS2	POROS1	LTH	UHSGC	RHO�F
TEMP	0	1	0	1	Sandstone	NONE	0.25
SO in 0	BORSAL kppm 150	CASED? Yes	MSGGN 1	USERFTT uSec/ft 0	ZREF MRayl 1.7	CASEWGHT lb/ft 11.6	SRFTEMP degF 0
MudWgt lb/gal 804	CASETHCK in 0.25	CASEOD in 4.5	PERFS 0	TDEPTH ft 0	BOTTEMP degF 100	BITSIZE in 7.875	


Database File		bat_24b_cmb.db				
Dataset Pathname		MAIN1				
Dataset Creation		Sat Jun 20 08:08:28 2015				
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	82.00	80.00	2.00	+/-15.00	V	
ITCR2	3281	3250	31	+/-250	cps	
Near Detector						
	Channel	Expected Value	Amplitude	FWHM	Tol.	
H	60	60 +/-2	0.0270	5.32	<6.00	
Fe	207	206 +/-2	0.0961	-----	-----	
NGAIN = 0.993		NZOFF = 0.7				
Far Detector						
	Channel	Expected Value	Amplitude	FWHM	Tol.	
H	60	60 +/-2	0.0360	5.72	<6.50	
Fe	209	208 +/-2	0.0918	-----	-----	
FGAIN = 0.991		FZOFF = 0.5				
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

Cement Bond Log Shop Calibration Report	
Serial-Model:	11817843-A
Calibration Performed:	Wed Jun 17 01:49:39 2015

Free Pipe Calibration		
TT	Measured	Units
Amplitude	246.9	usec
Log Base Line	574.2	mV
	-7.6	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	0.140	

Gamma Ray Calibration Report						
Type / Serial:		002 / 11495480				
SHOP CALIBRATION		Sat Jun 20 07:02:20 2015				
	Counts/Sec.	Gain	Offset	Jig	Units	
Background	43.9				cps	
Calibrator	341.5				cps	
		1.3711			GAPI/cps	
PRIMARY VERIFICATION		Sat Jun 20 07:04:41 2015				
Background	58.7				cps	
Calibrator	472.4				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	35.09		STNDCH-STND_CH	1.50	1.44	1.00
			1.4375 IN CABLE HEAD			
GR	32.83		TTTCU-002 (11495480)	7.65	1.69	100.00
			Through Tubing Telemetry Cartridge - Ultrawire			

				XHU-003 (12461939) 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	23.11						
TT3FT	20.86			HCBLM-A (11817843) Halliburton HCBLM Tool	9.38	2.75	116.00
AMP3FT	20.86						
				CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00
RmtTFGT	8.47						
RmtTNGT	7.97			RMTI-A (12095949) Halliburton RMTI Tool	14.00	2.13	77.00
RmtFP5V	0.22						
RmtCommFWar	0.22						
LOCTIM	0.00						
UTCTIM	0.00						
LLMTEN	0.00			BUL-006 (000002) Bullnose Terminator	0.22	1.69	1.20
Dataset: bat_24b_cmb.db: field/well/run1/MAIN1 Total length: 38.66 ft Total weight: 352.20 lb O.D.: 3.13 in							

Company	URSA OPERATING CO., LLC.		
Well	BAT 24B-18-07-95		
Field	PARACHUTE		
County	GARFIELD	State	CO
HALLIBURTON	ACOUSTIC CEMENT BOND LOG		

[illegible]