

HALLIBURTON										CEMENT BOND LOG									
Company HIGHPOINT RESOURCES Well CRITTER CREEK 16-5807BW Field HEREFORD County WELD State CO										Company HIGHPOINT RESOURCES Well CRITTER CREEK 16-5807BW Field HEREFORD County WELD State CO									
API No.: 05-123-47308 Serv. #: 905445198 Location: SURFACE HOLE LOCATION LATITUDE: 40° 54' 58.64" N LONGITUDE: 104° 25' 55.744" W Sec: 16 Twp: 11N Rge: 63W CAST JUNK BASKET GUAGE RING										Other Services									
Permanent Datum Log Measured From Drilling Measured From										GROUND LEVEL Elevation 5252' KB , 20' Ft. above perm. datum KB									
Date @ Time Logged Run No. Depth - Driller Depth - Logger Bottom - Logged Interval Top - Log Interval Max. Recorded Temp. CEMENTING DATA										01/30/2019 @ 20:30 ONE 17804' 17678' 17669' 6390' 218 F Surface String									
Date / Time Cemented Primary / Squeeze Expected Compressive Strength Cement Volume Cement Type / Weight Formulation Mud Type / Mud Wgt.										Type Fluid in Hole Density of Fluid Fluid Level Cement Top Est. Logged Equipment / Location Recorded by Witnessed by Protection String Production String Liner									
psi@ hrs psi@ hrs psi@ hrs psi@ hrs																			
Borehole Record										Casing & Tubing Record									
Run Number Bit From To Size Weight From To										ONE 4.5" 4.5" 13.5# SURFACE 6911' TD									

ONE	17669'	6390'	0	40				
	GAMMA		AMPLITUDE		IMPEDANCE		THICKNESS	
Pass	Scale		Scale		Scale		Scale	
No.	L	R	L	R	L	R	L	L
ONE	0	150	0	100	0	10	0.19	0.29
DIRECTIONAL INFORMATION								
Maximum Deviation	90	deg. @	7993'	KOP	6856'			

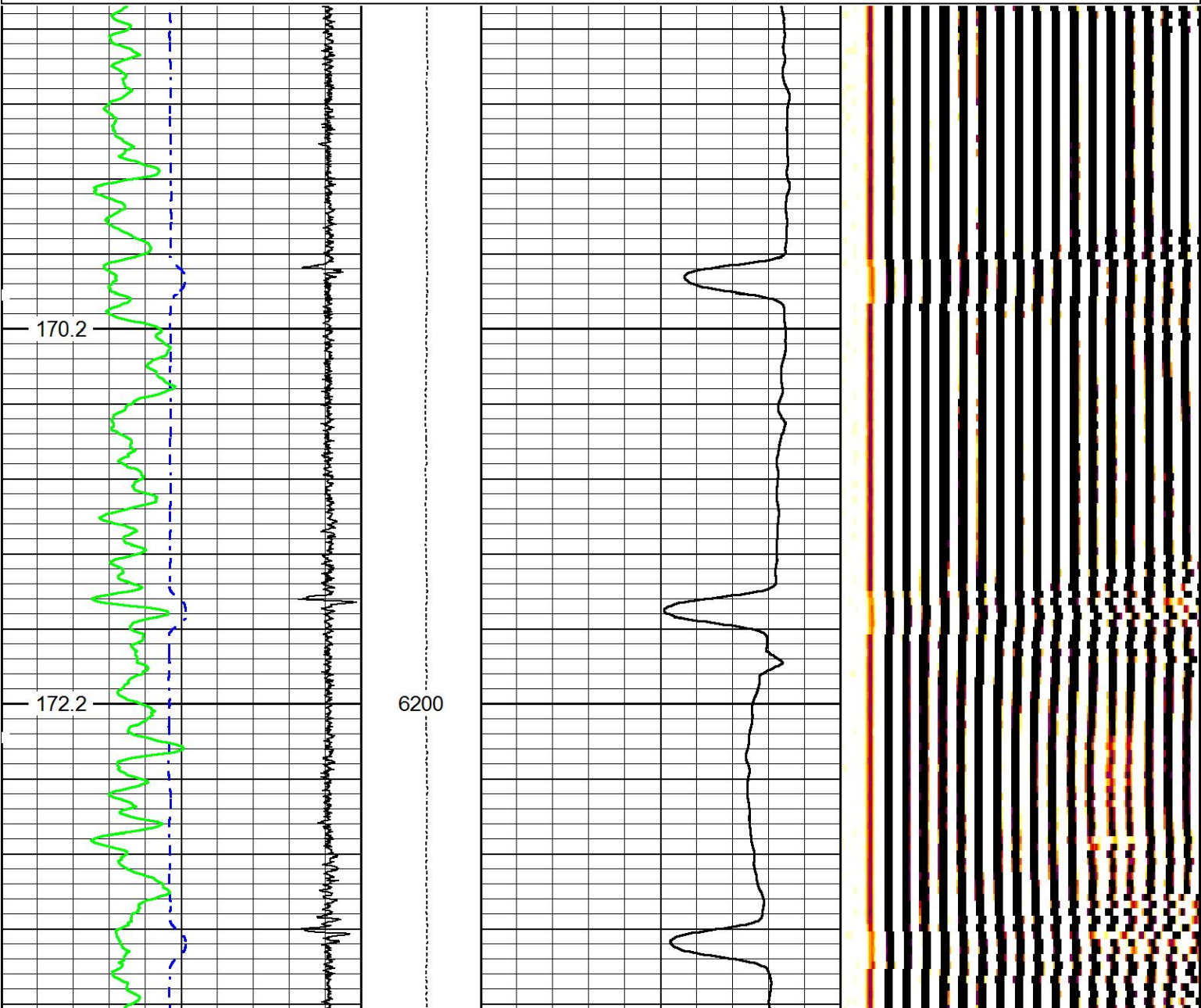
HALLIBURTON

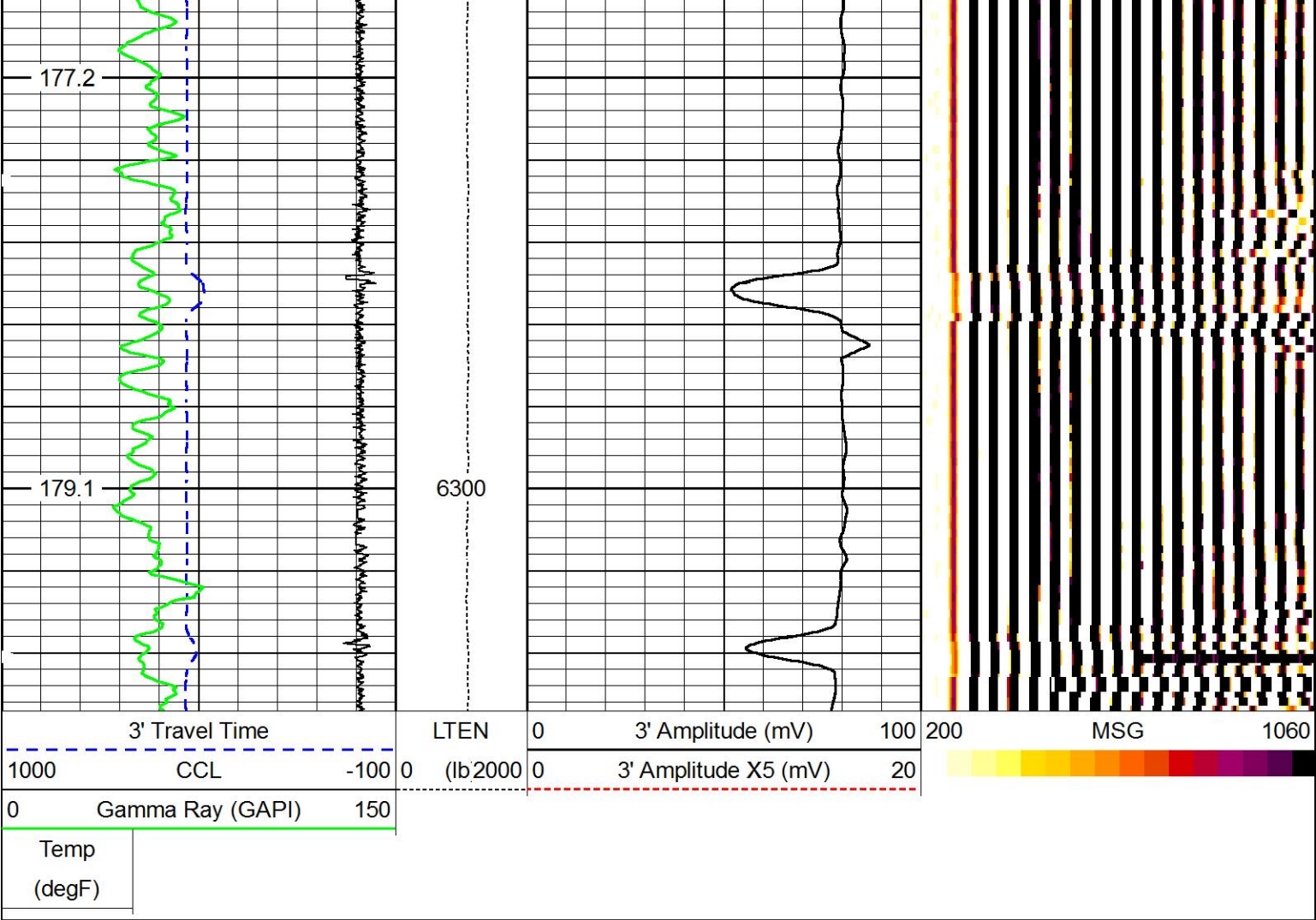
FREE PIPE PASS

5" = 100'

Database File	hp_16-5807bw.db
Dataset Pathname	CAST/RPT
Presentation Format	hcbl
Dataset Creation	Fri Feb 01 12:49:25 2019
Charted by	Depth in Feet scaled 1:240

3' Travel Time	LTEN	0	3' Amplitude (mV)	100	200	MSG	1060
1000	CCL	-100	0	3' Amplitude X5 (mV)	20		
0	Gamma Ray (GAPI)	150					
Temp							
(degF)							





FREE PIPE PASS

5" = 100'

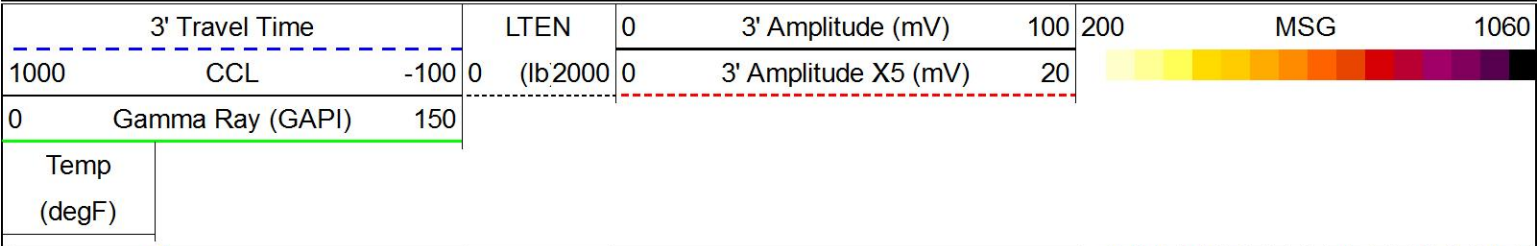
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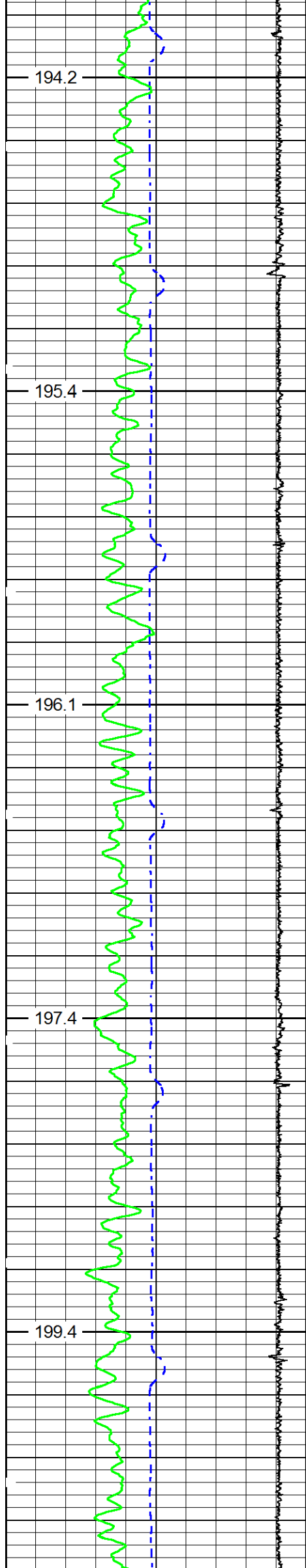
MAIN PASS

5" = 100'

HALLIBURTON

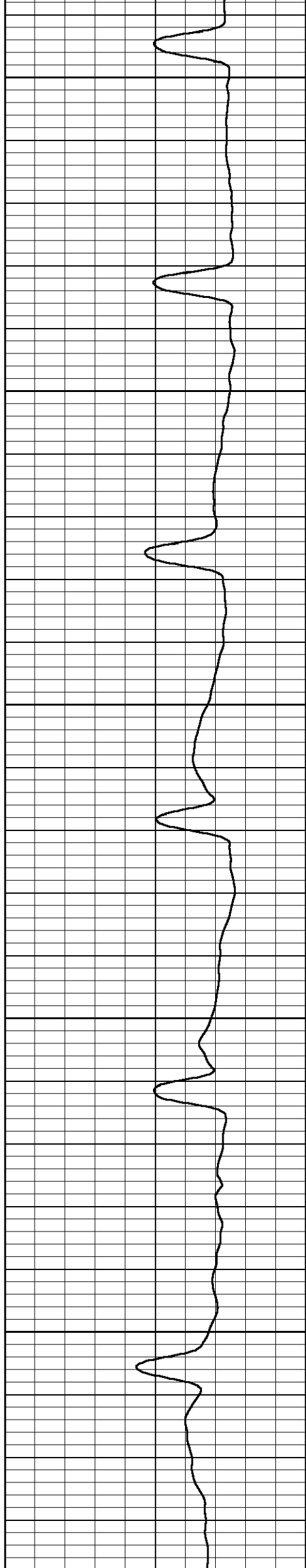
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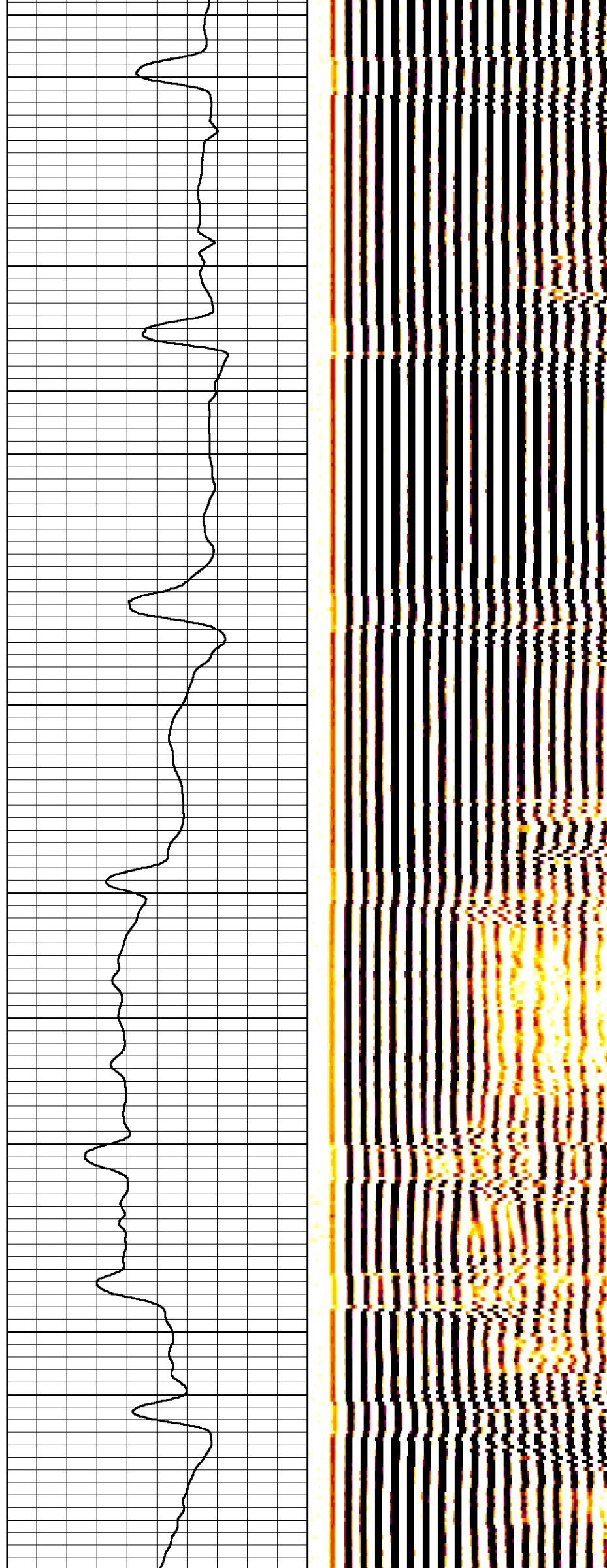
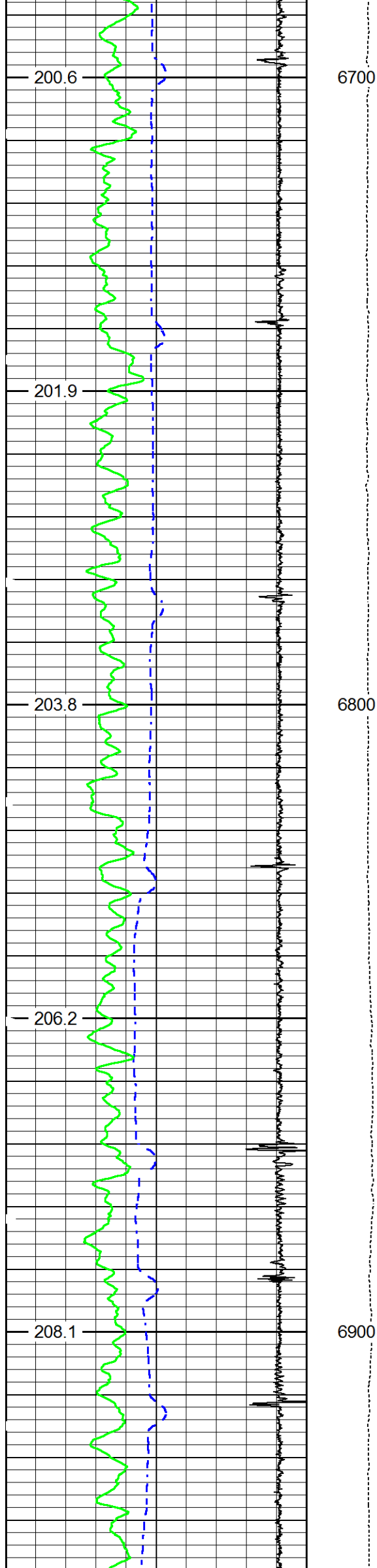


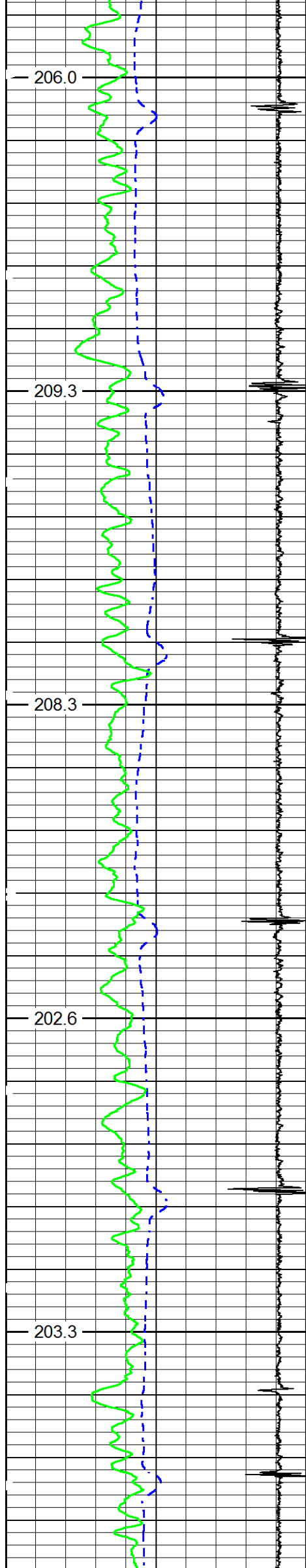


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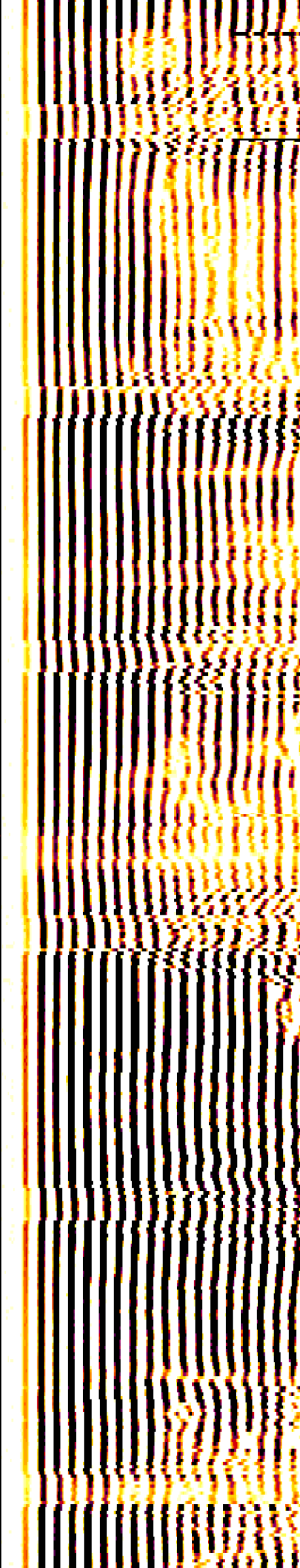
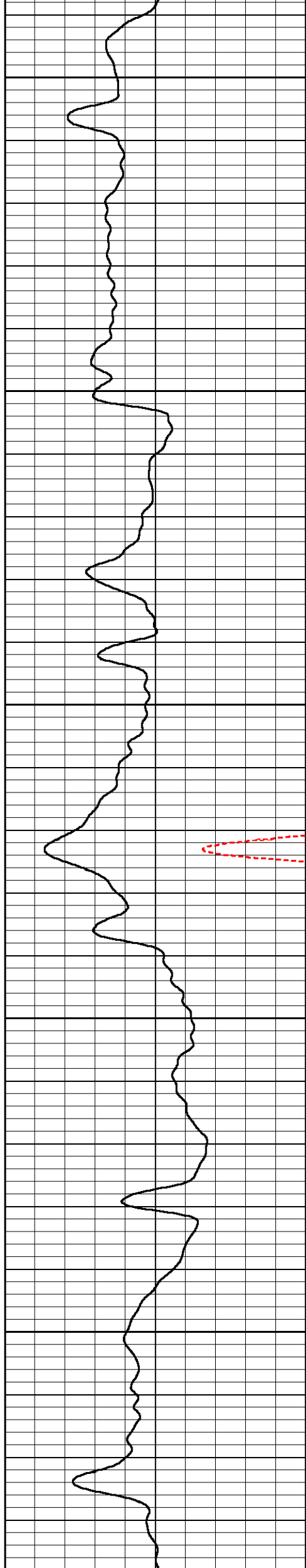


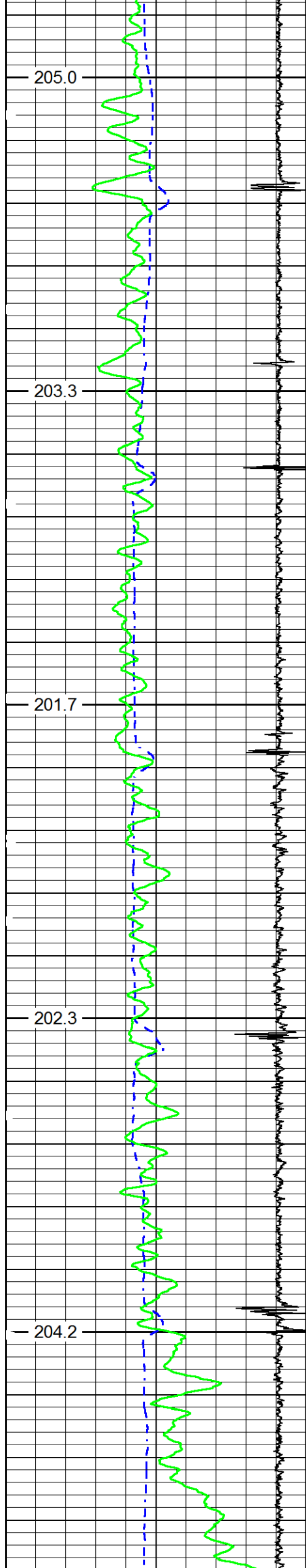




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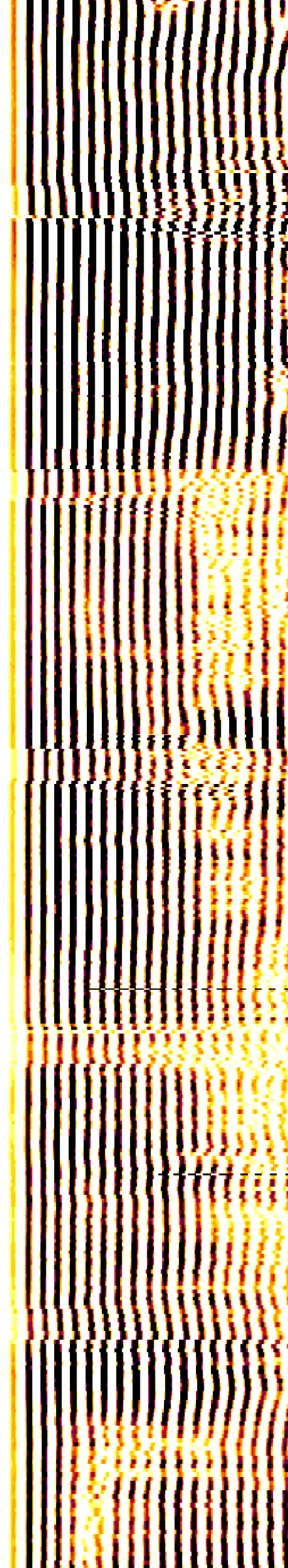
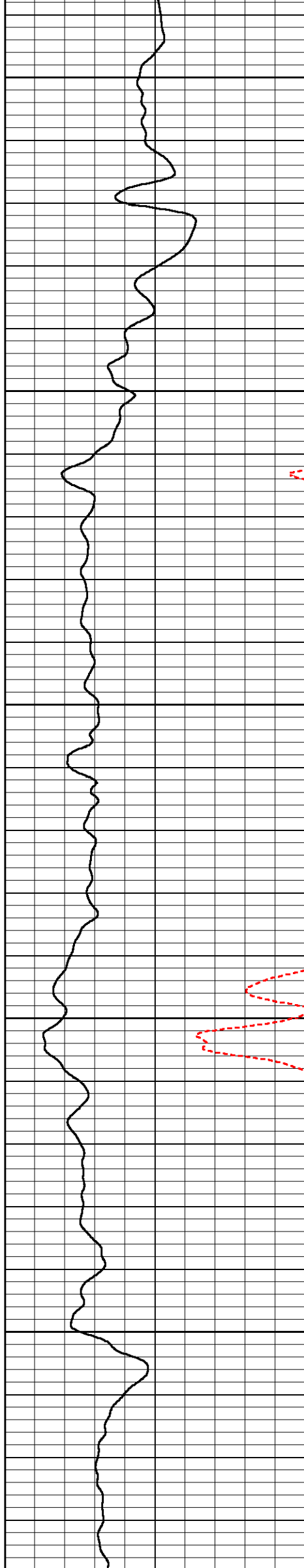


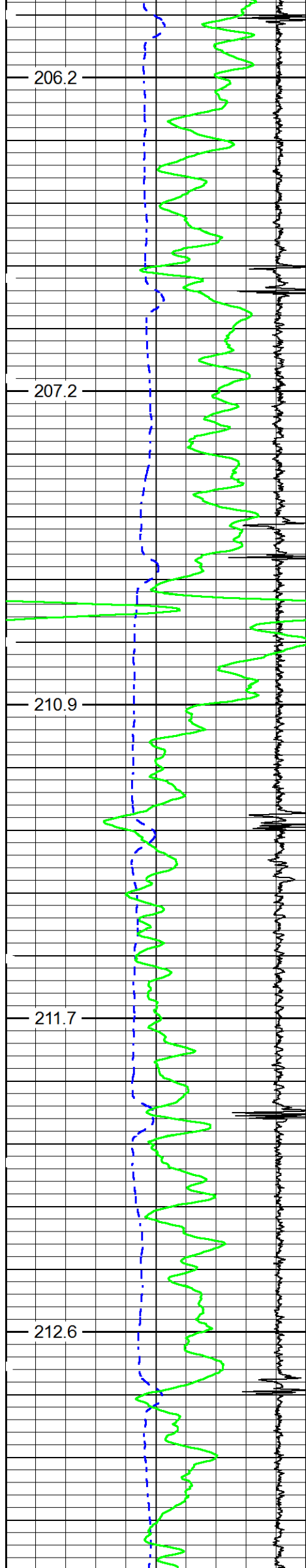


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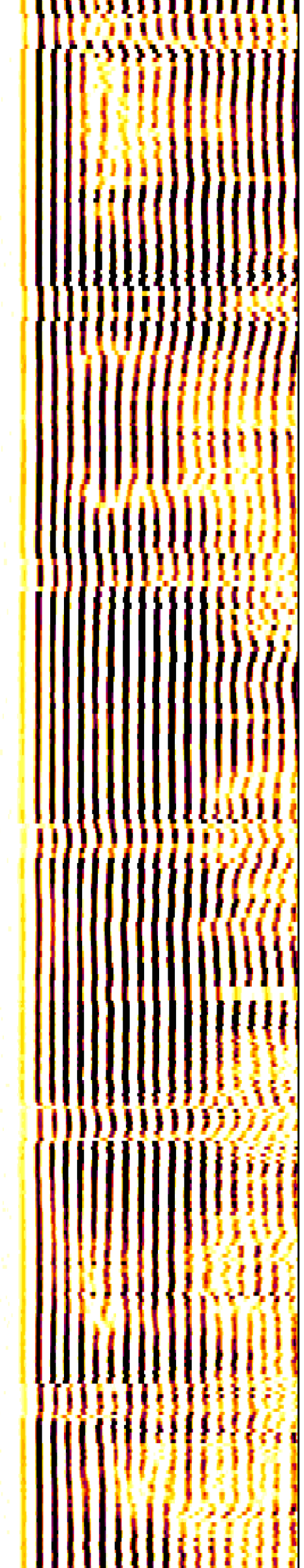
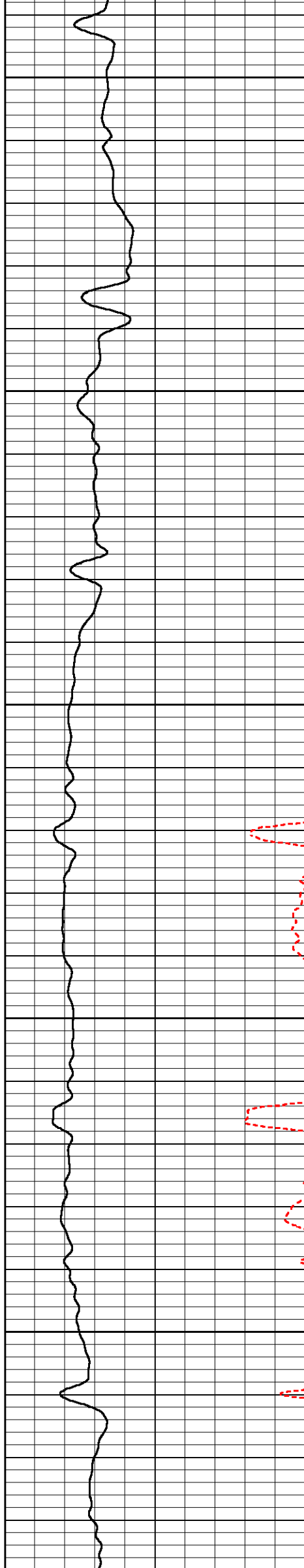
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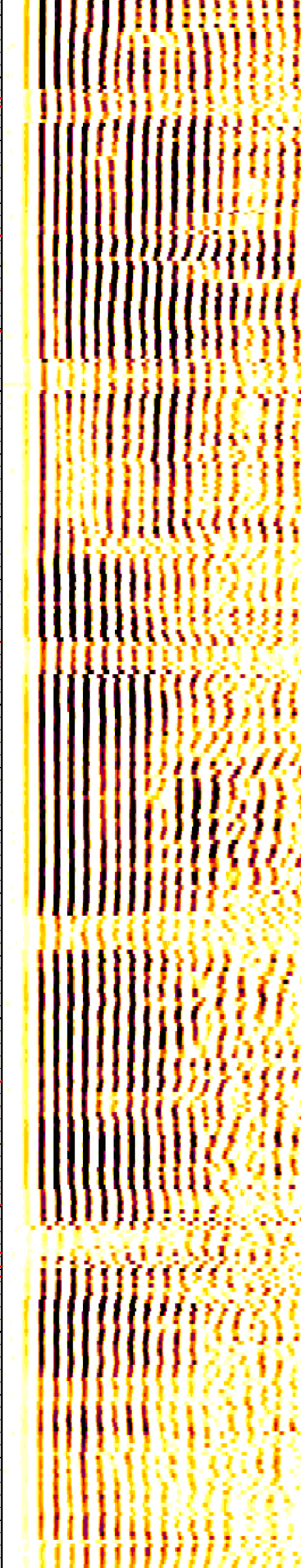
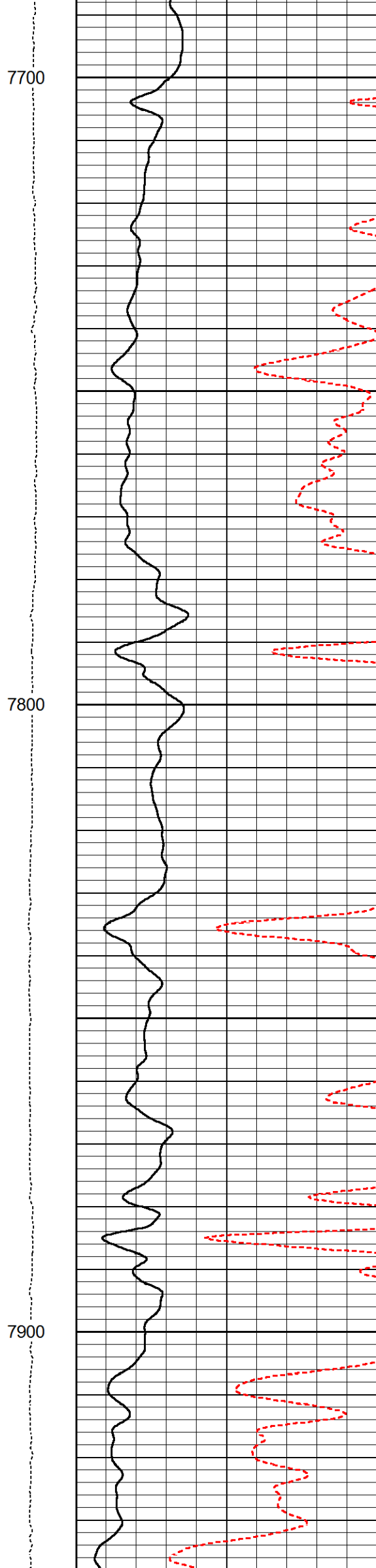
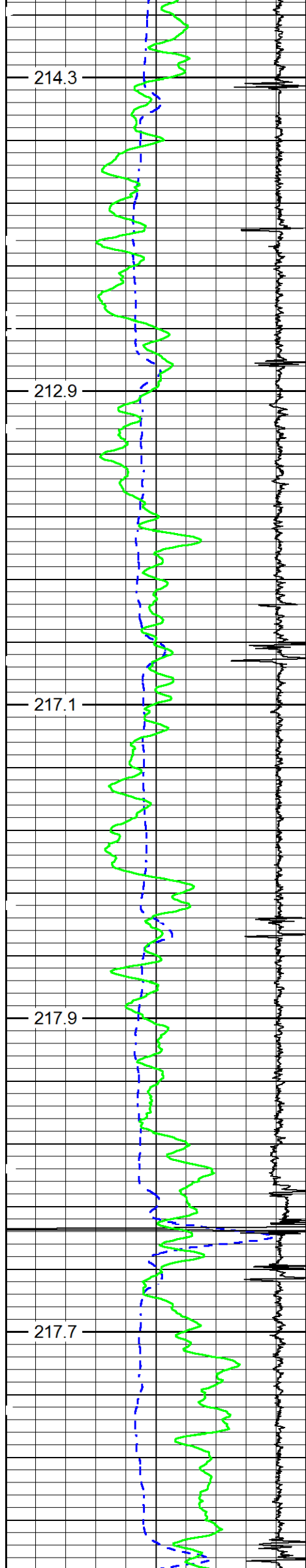


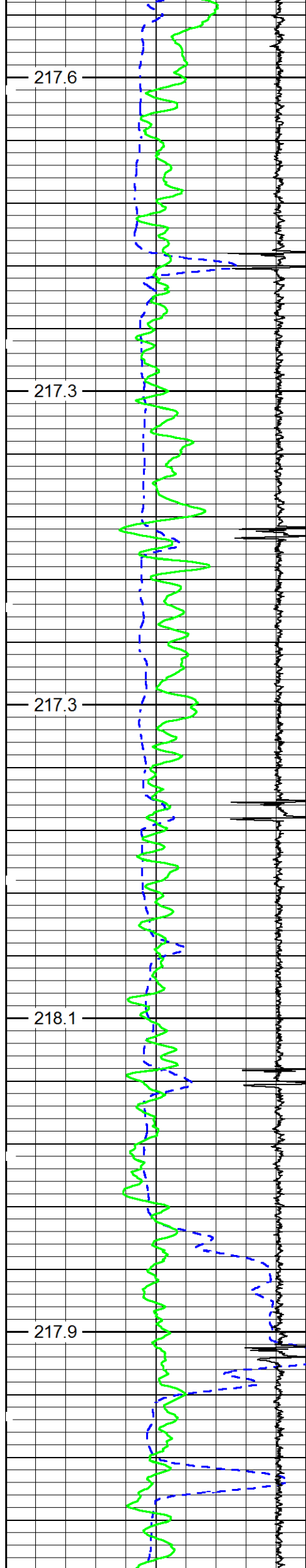


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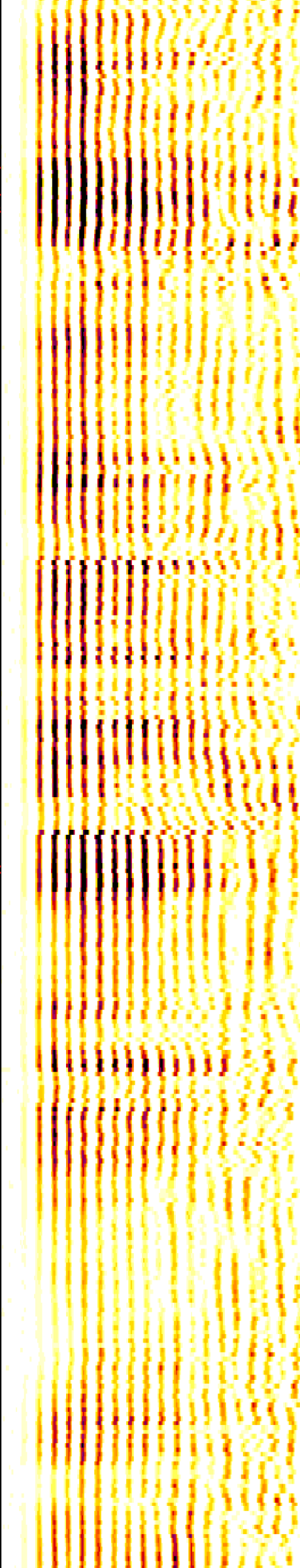
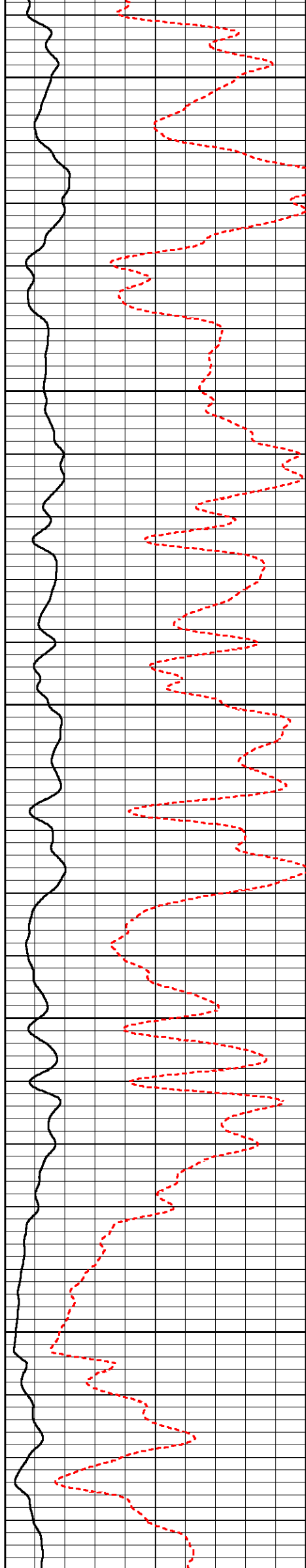


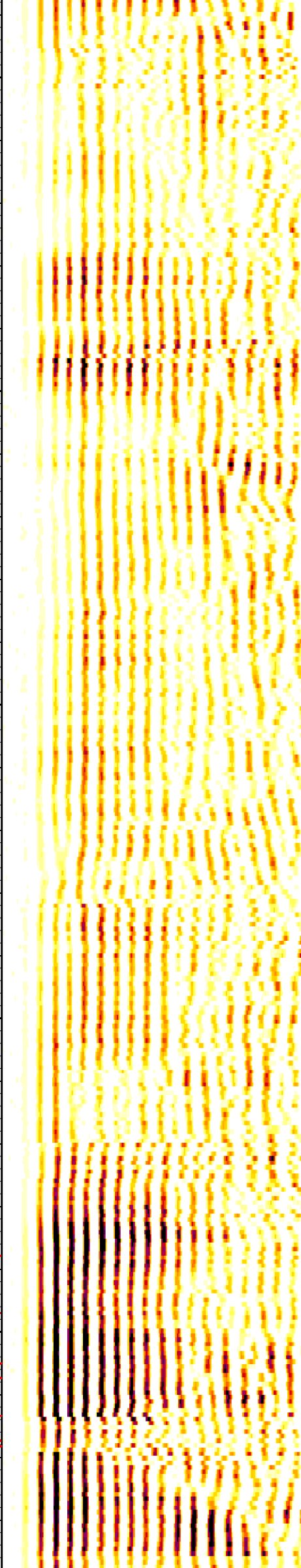
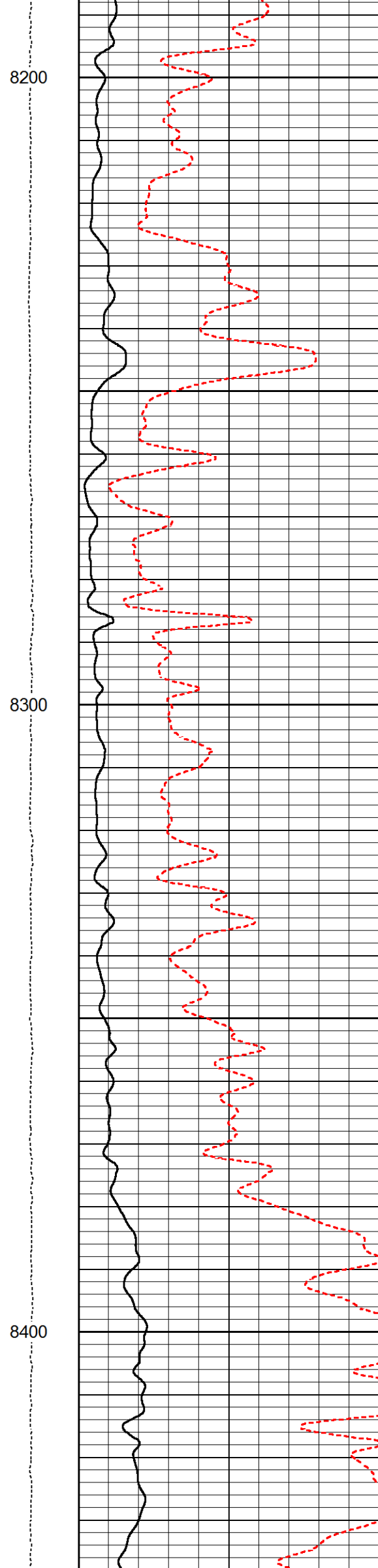
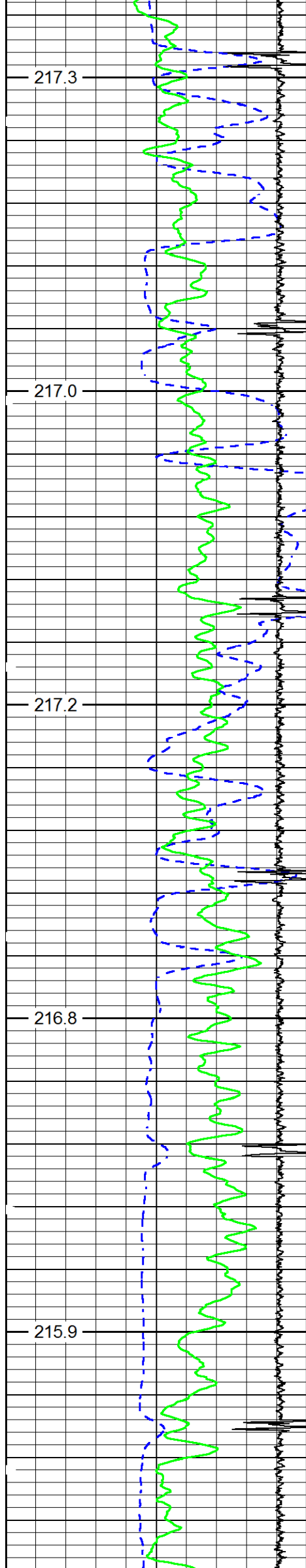


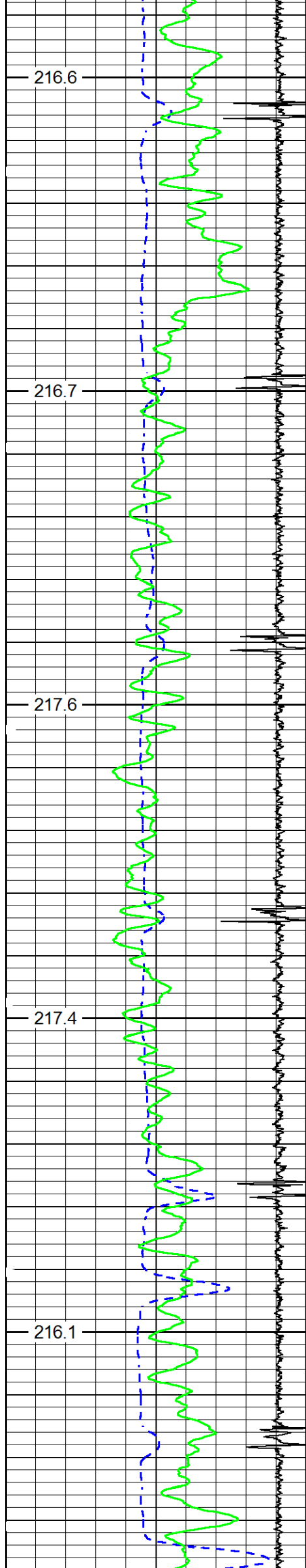


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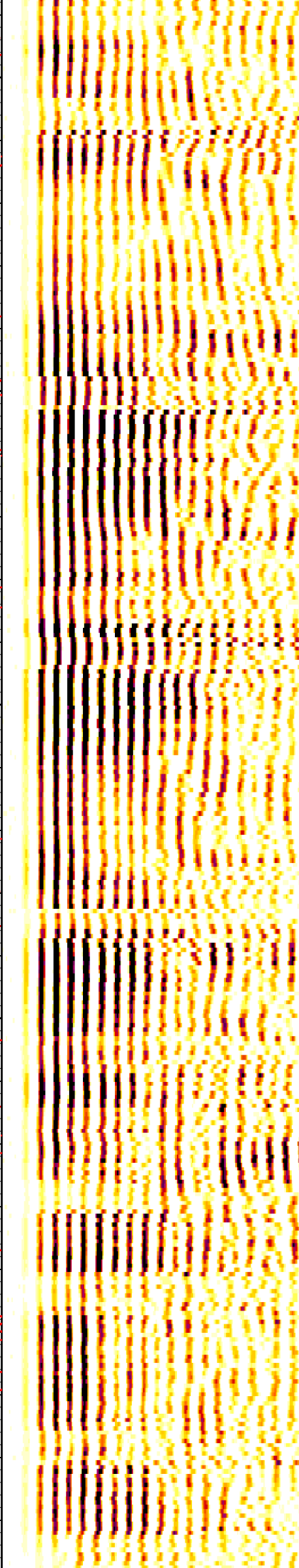
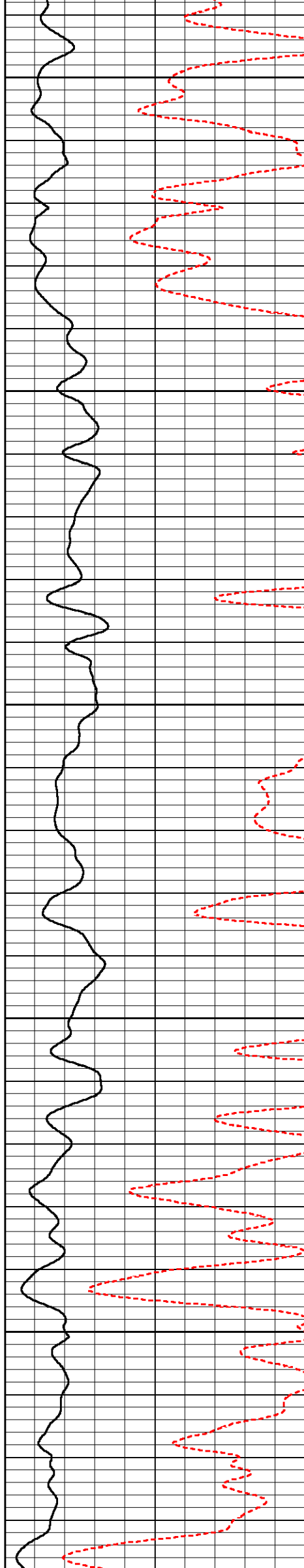


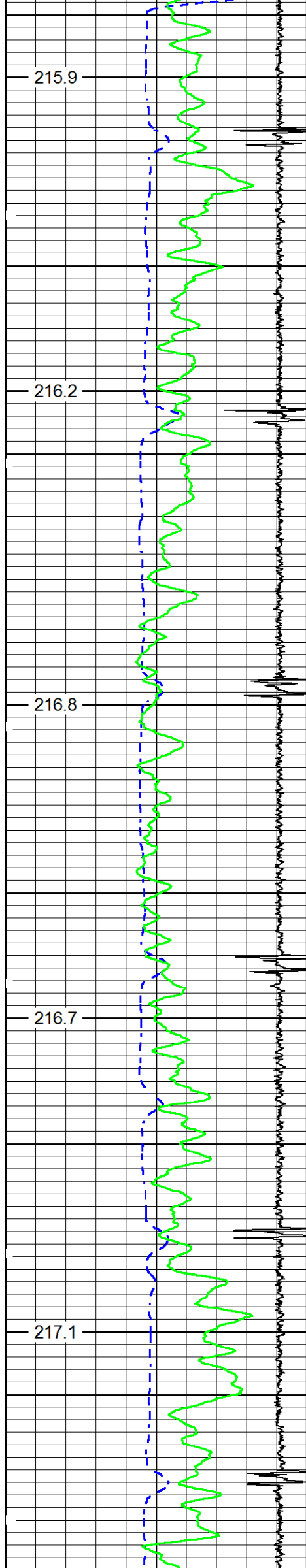




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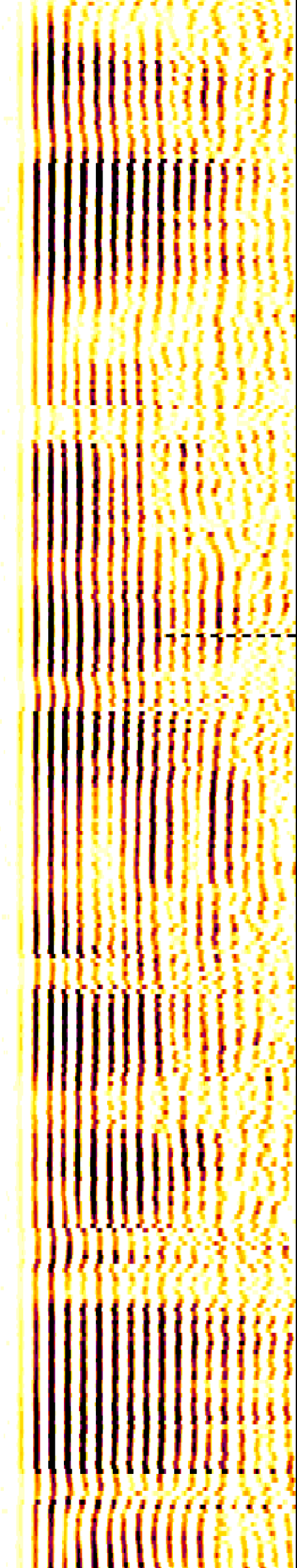
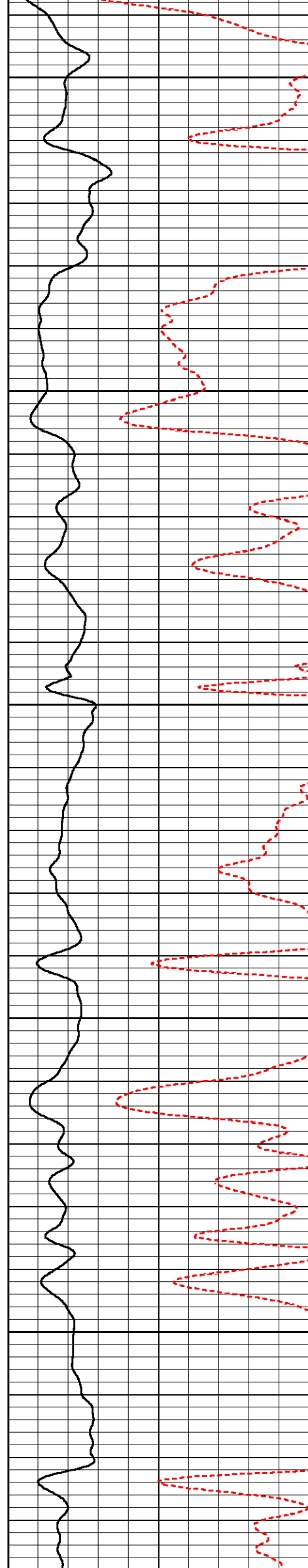


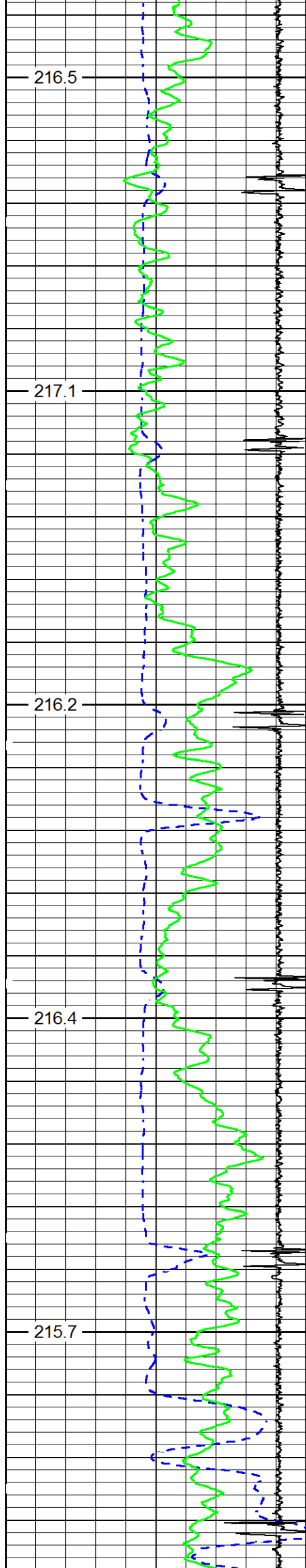


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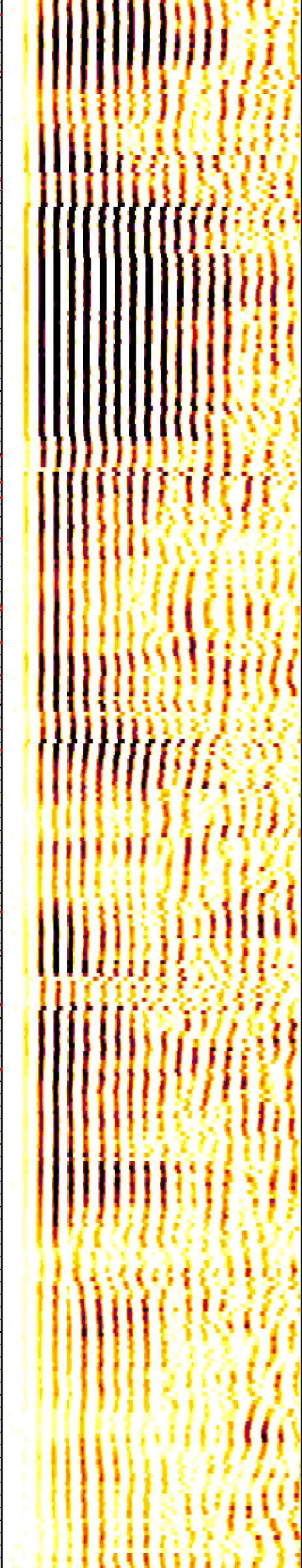
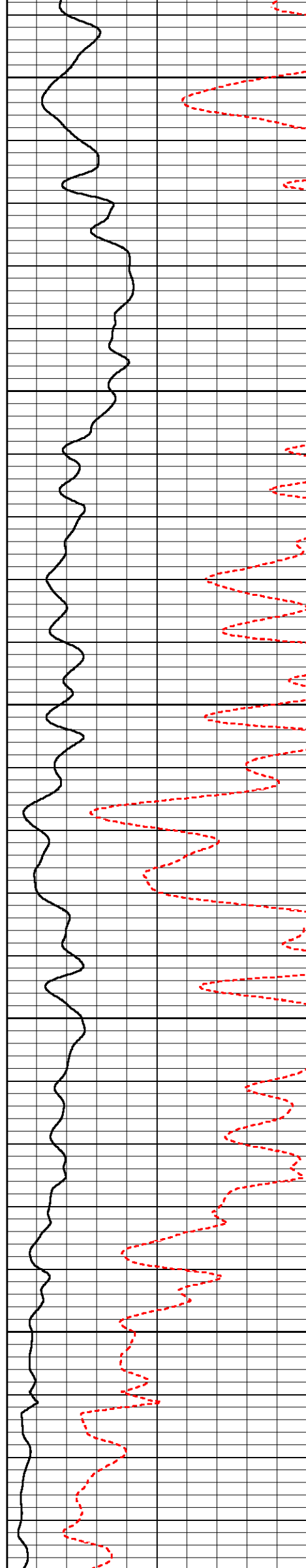
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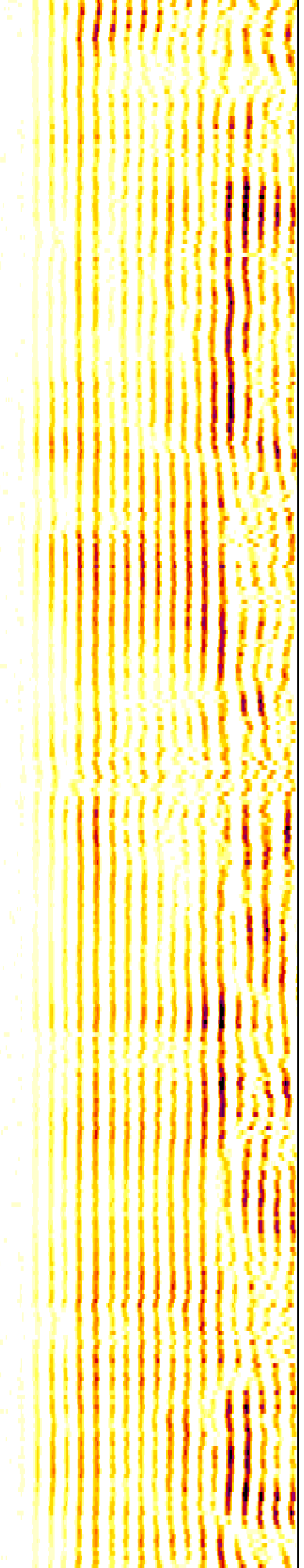
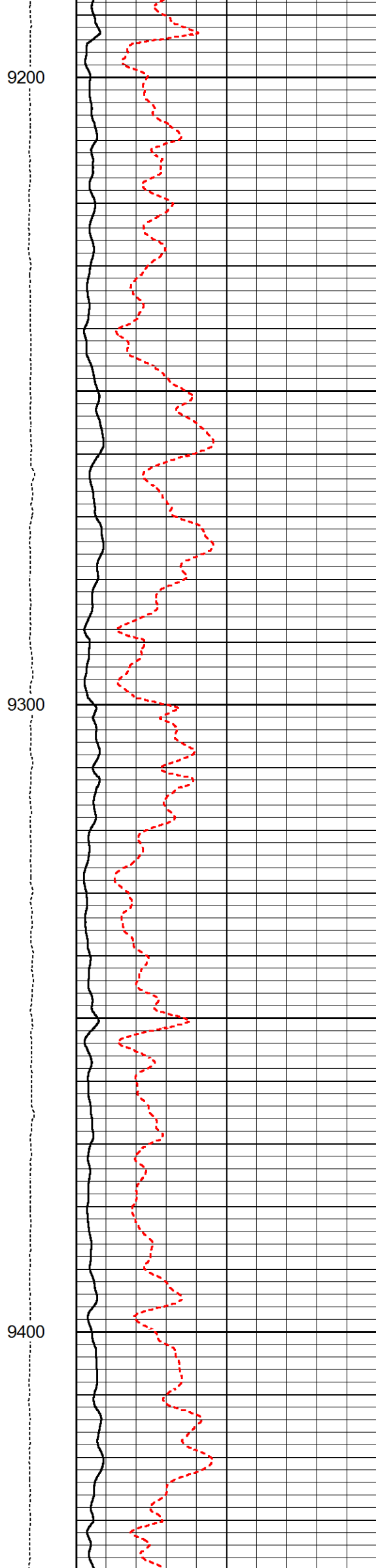
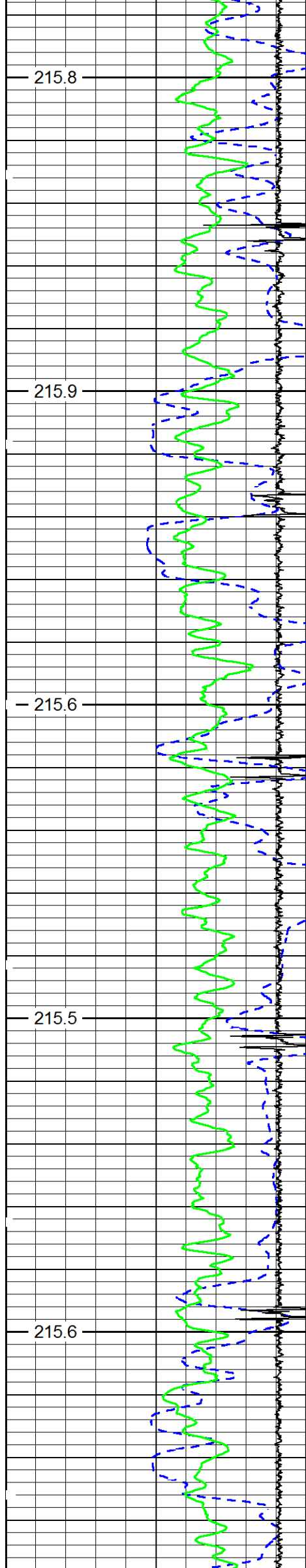


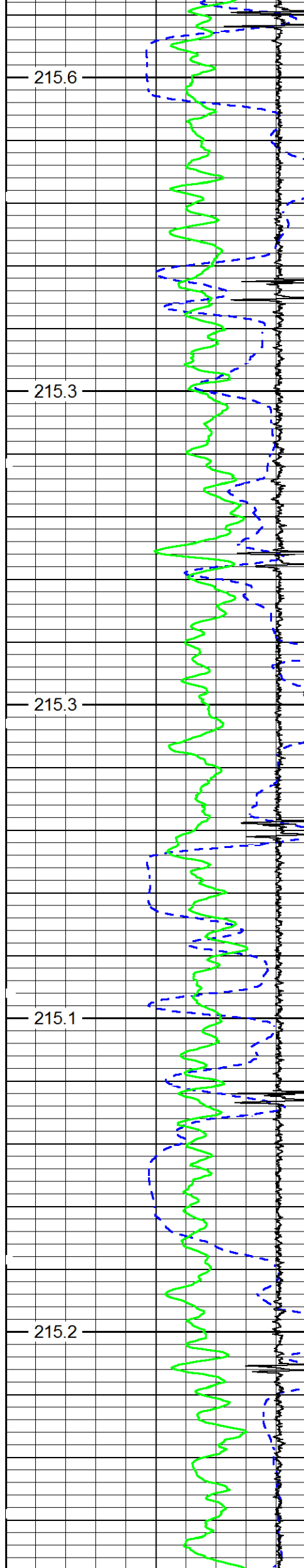


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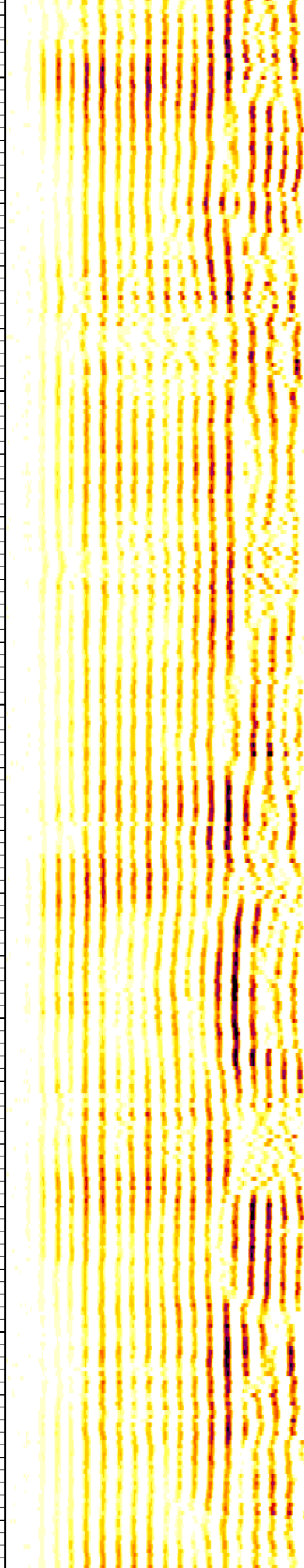
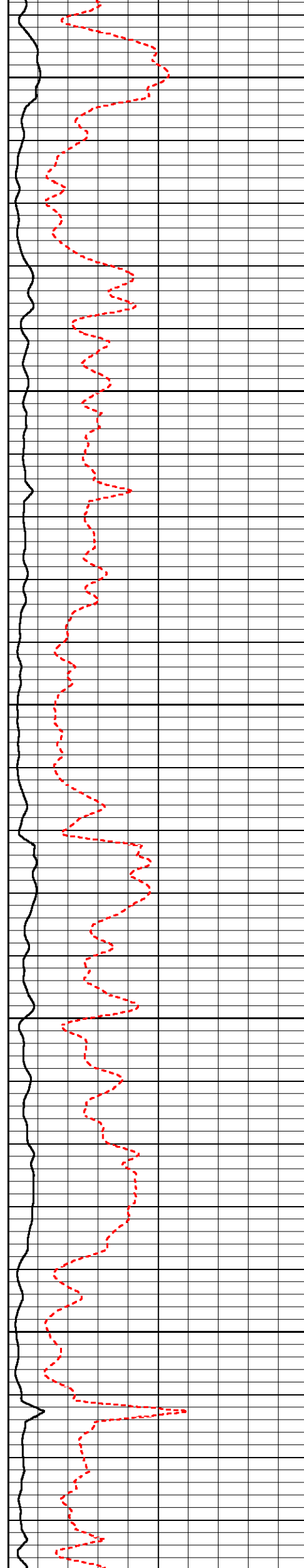


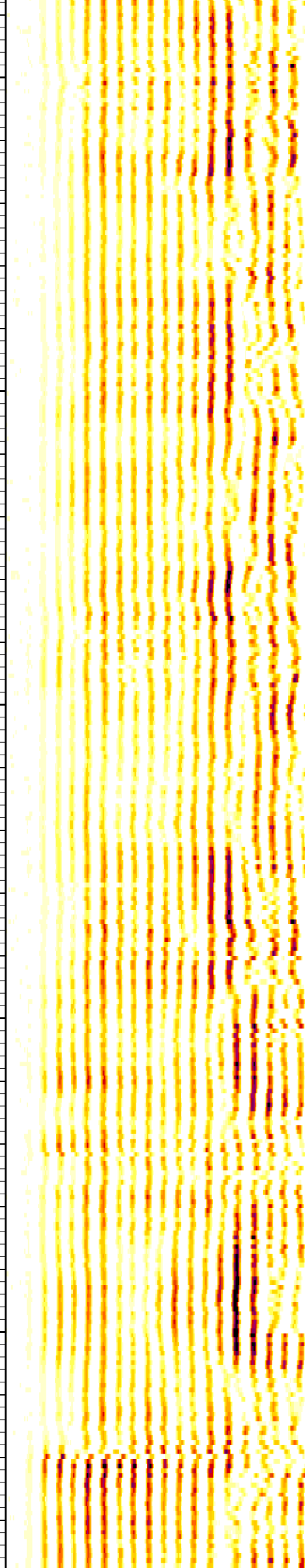
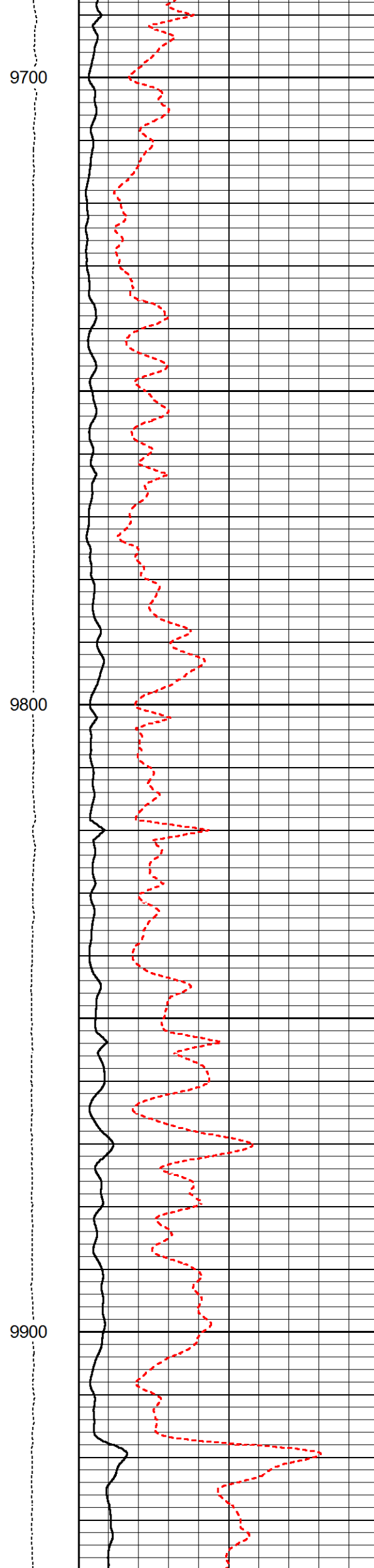
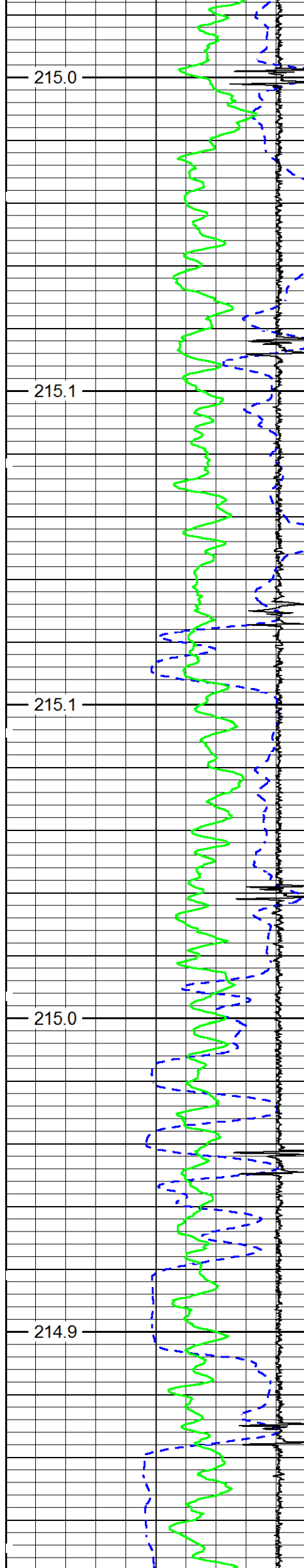


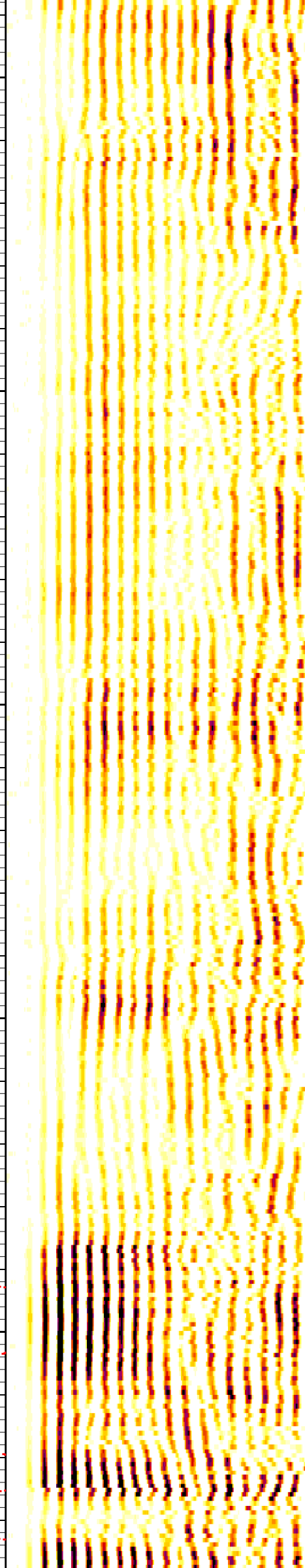
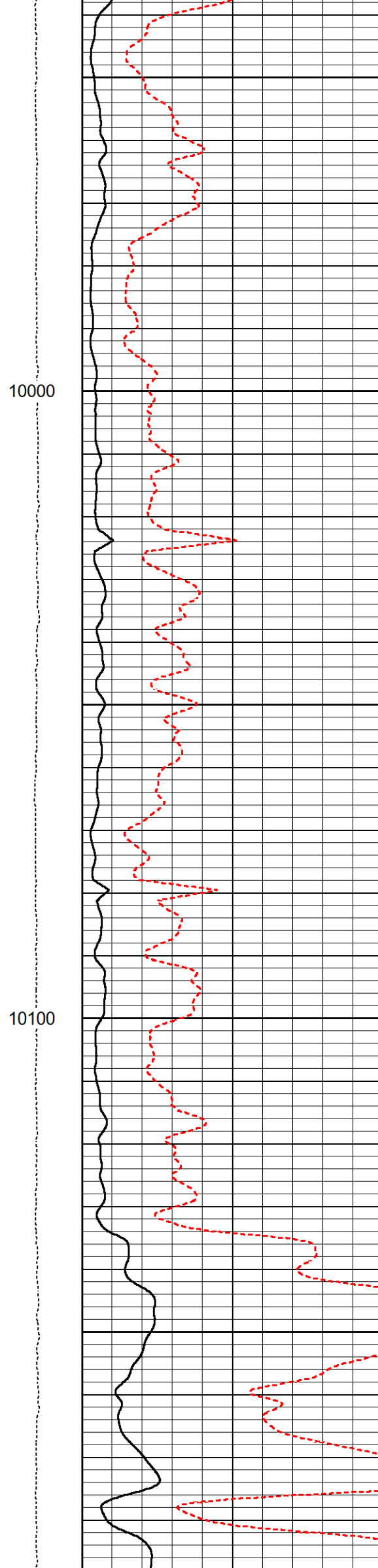
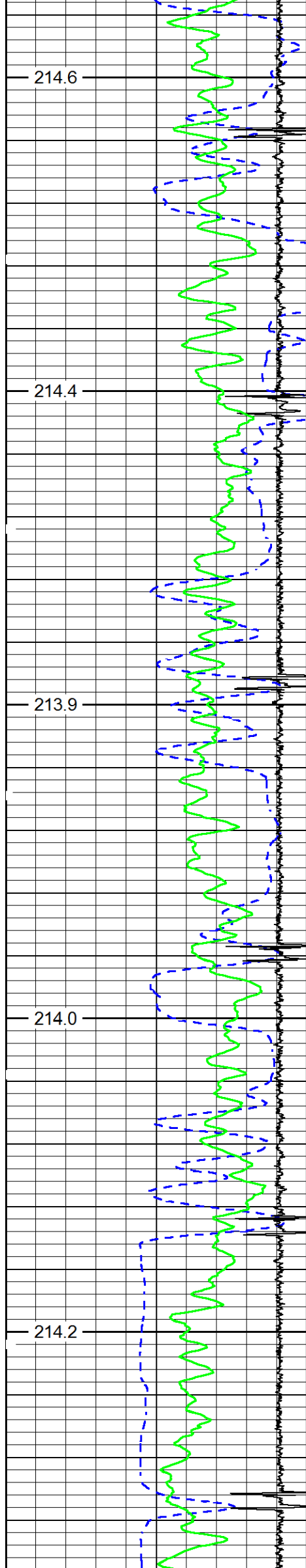


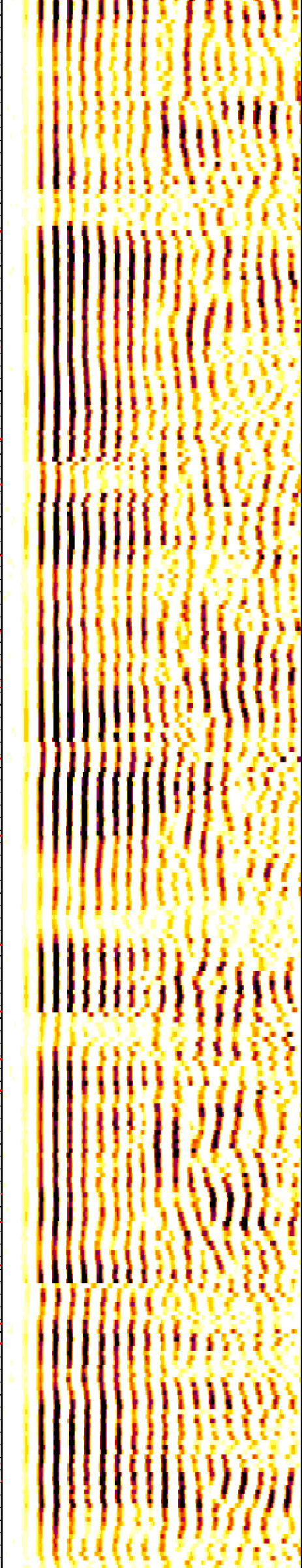
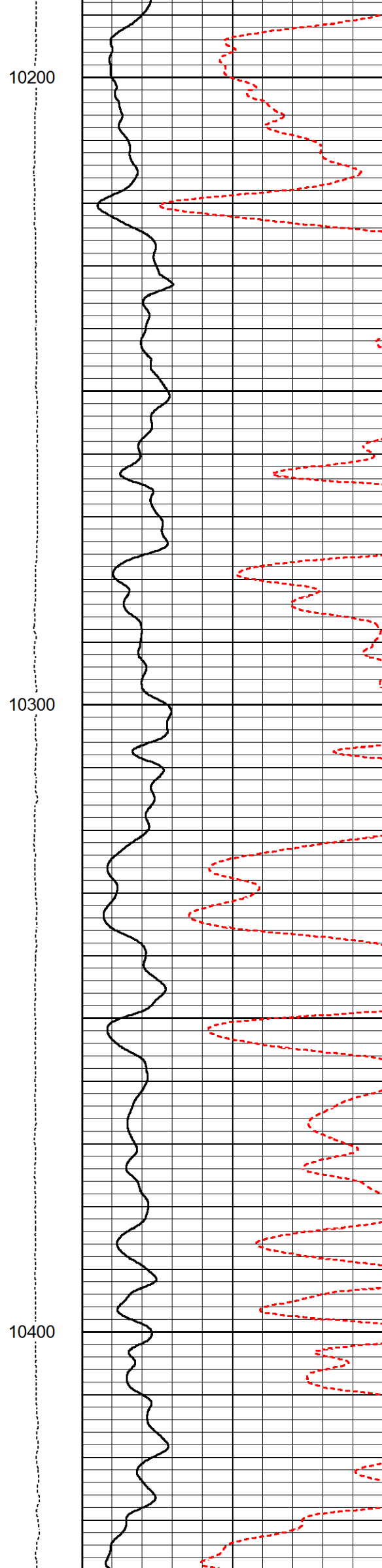
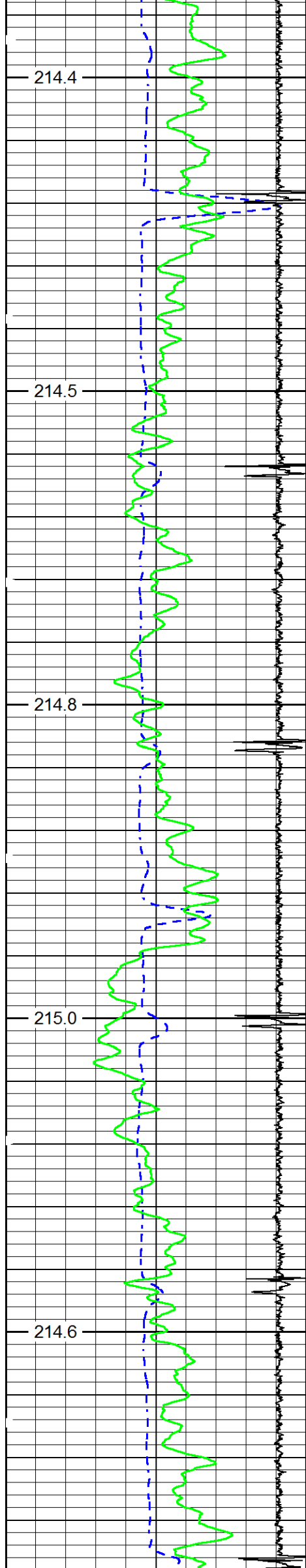
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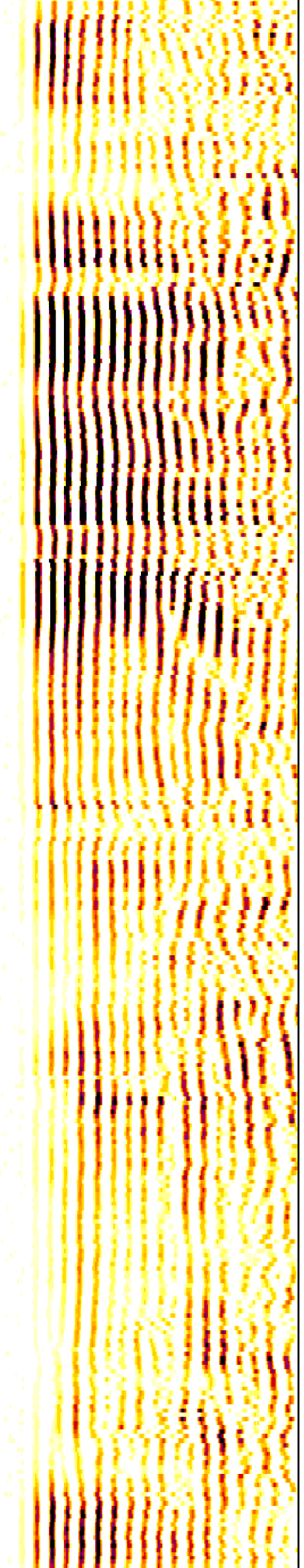
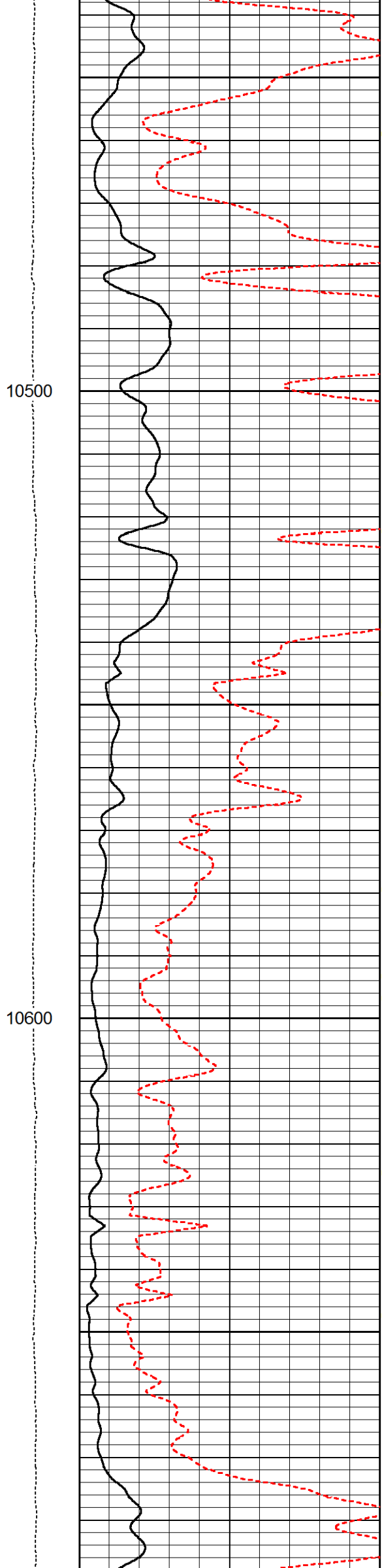
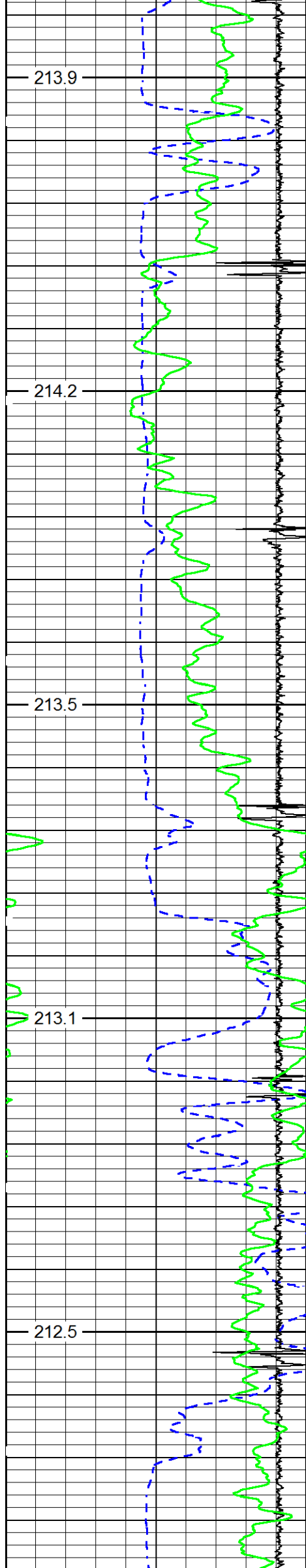
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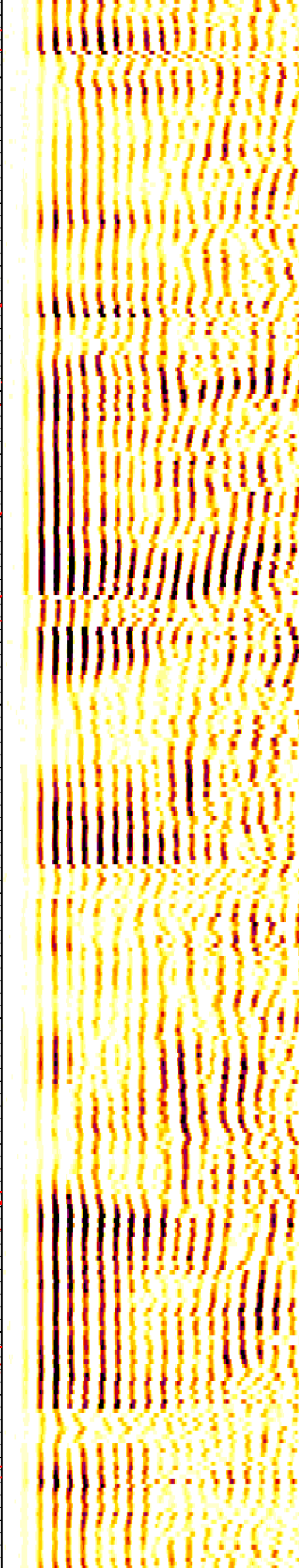
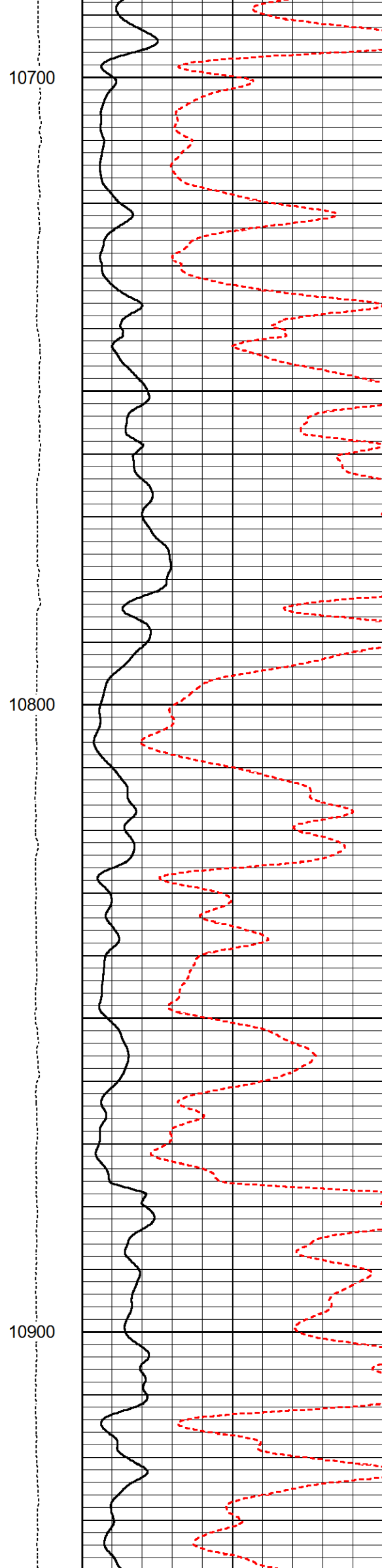
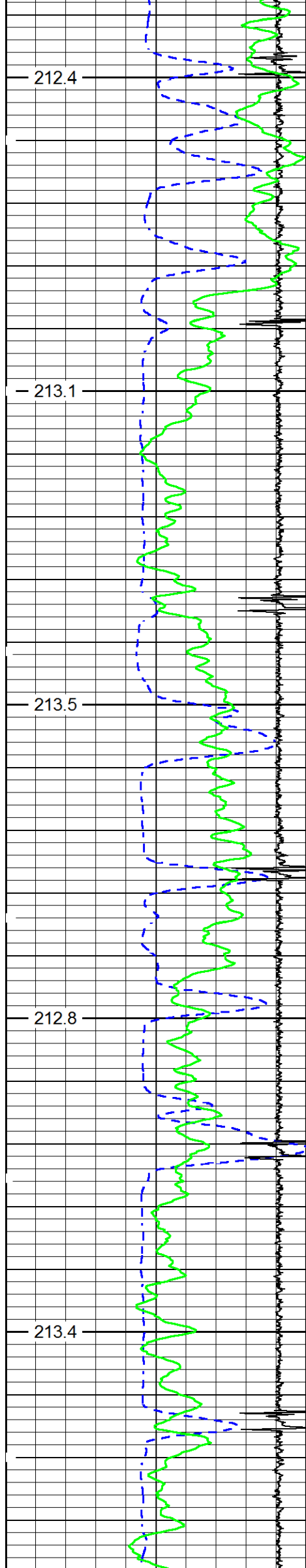


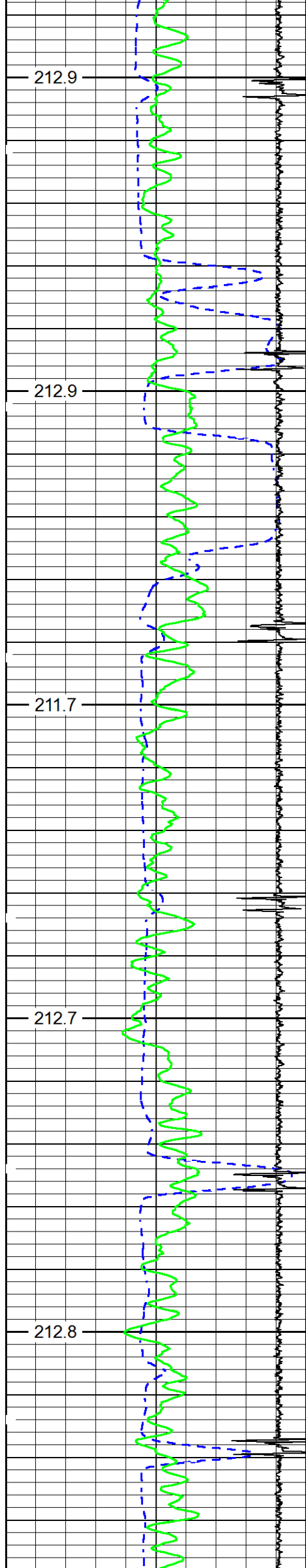






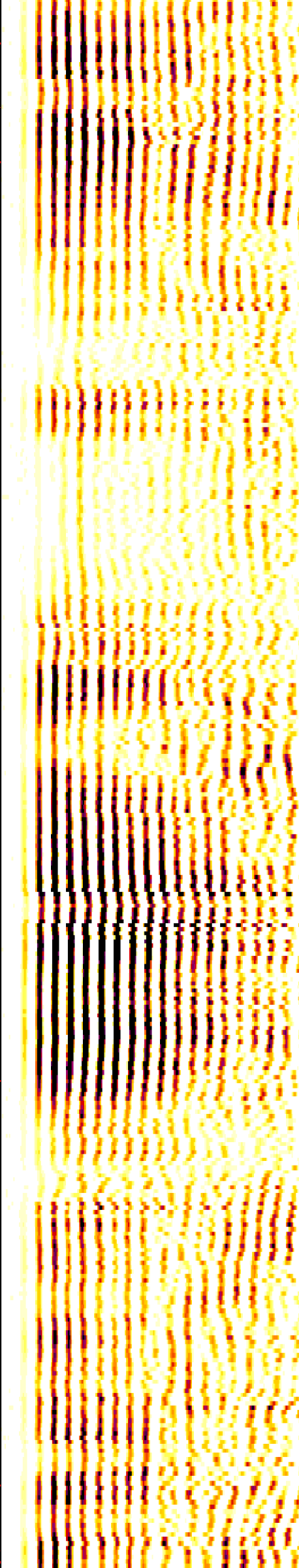
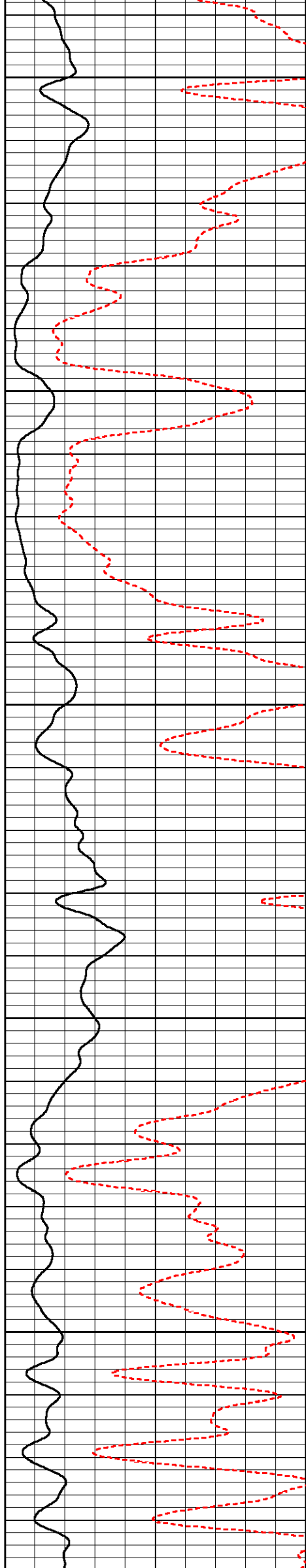


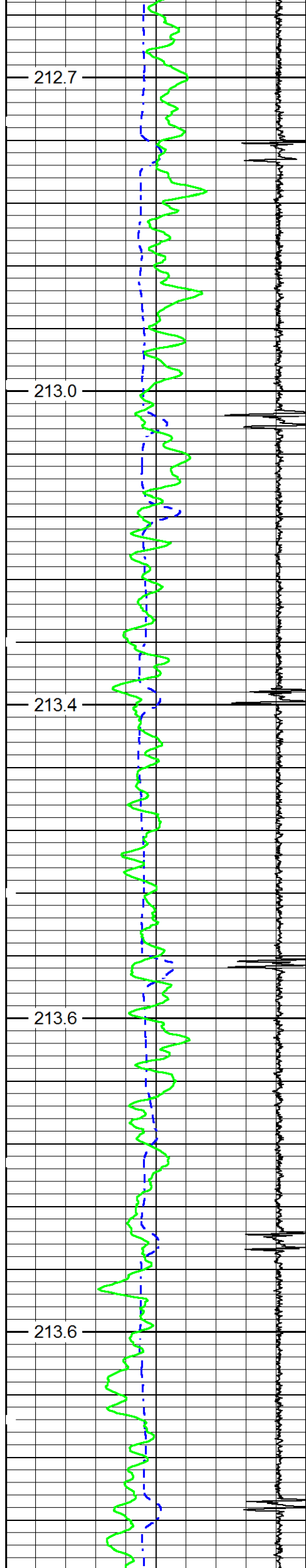




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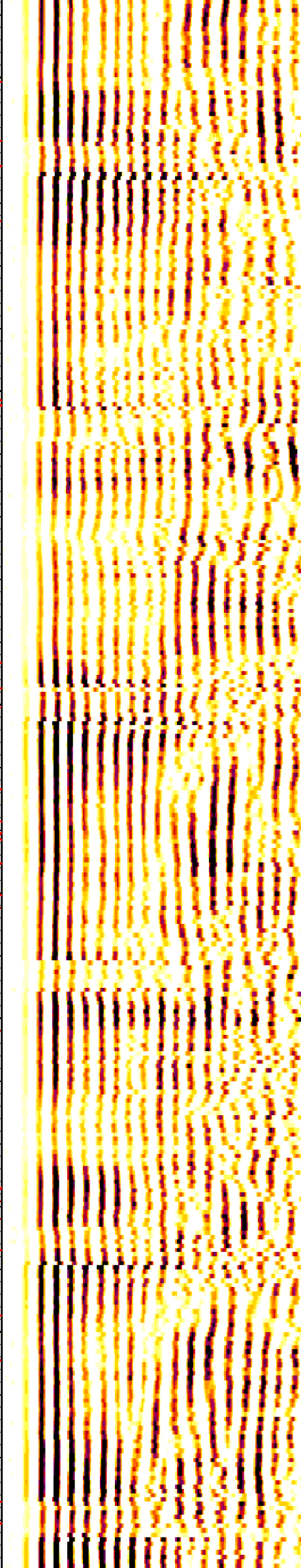
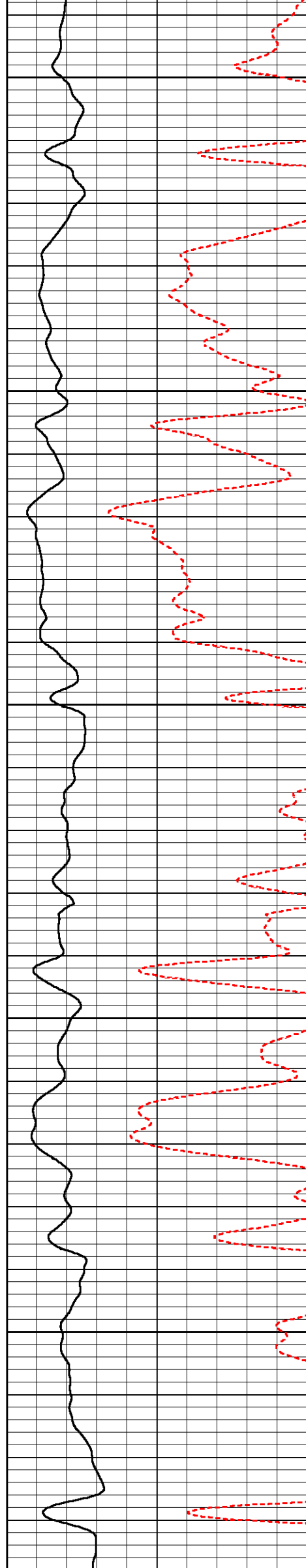


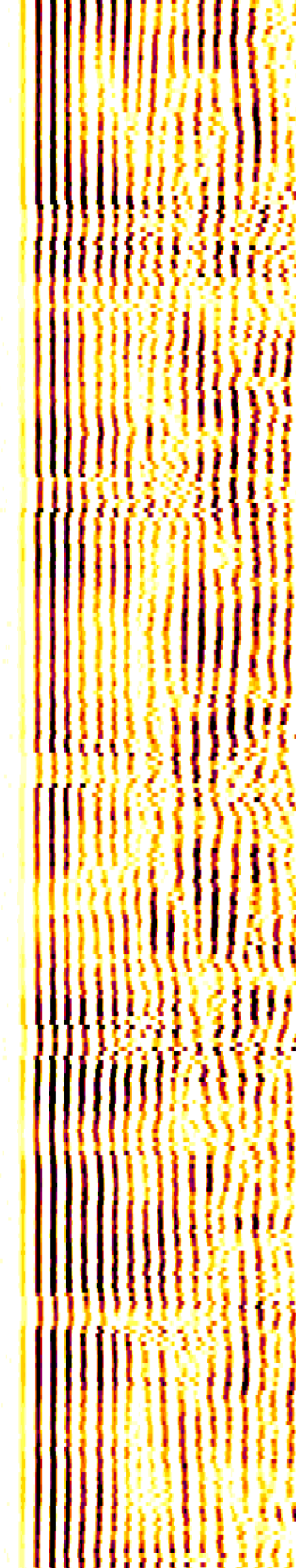
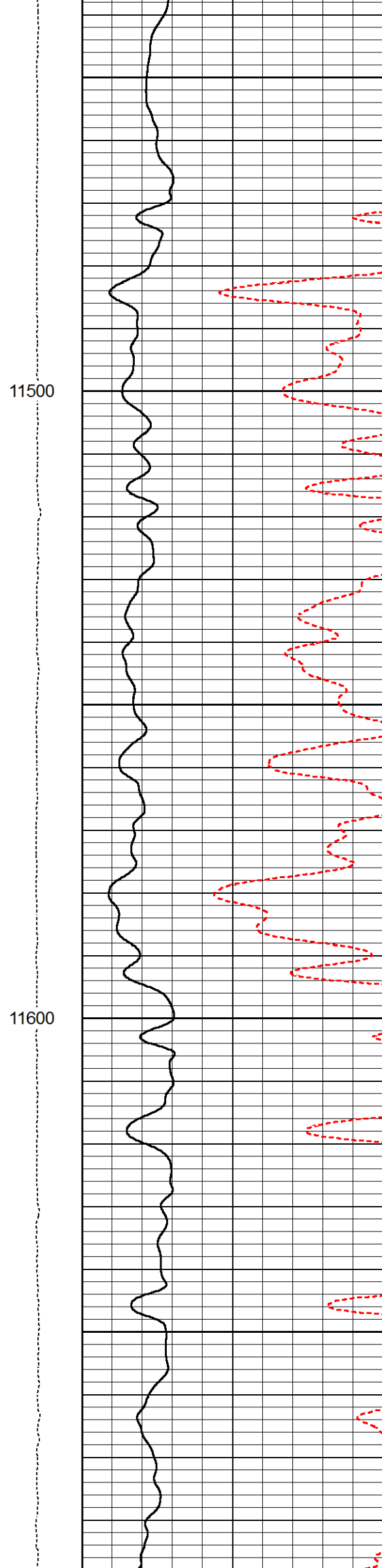
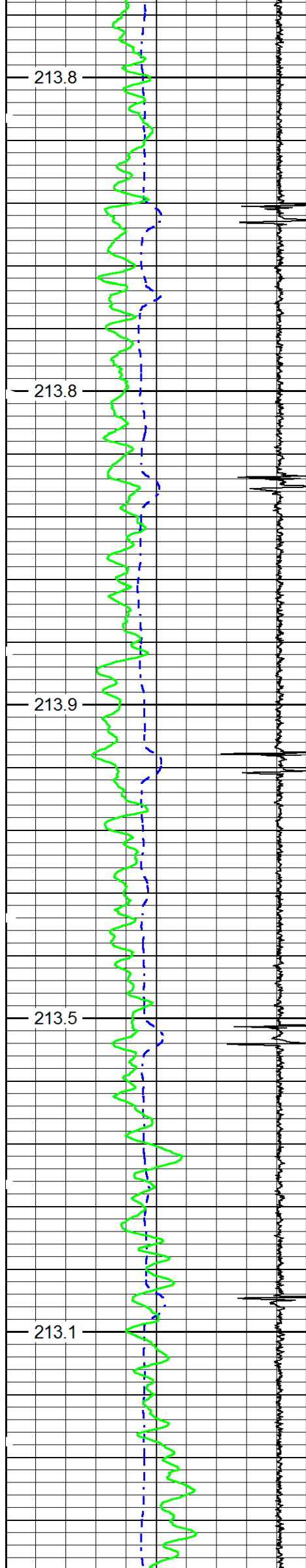


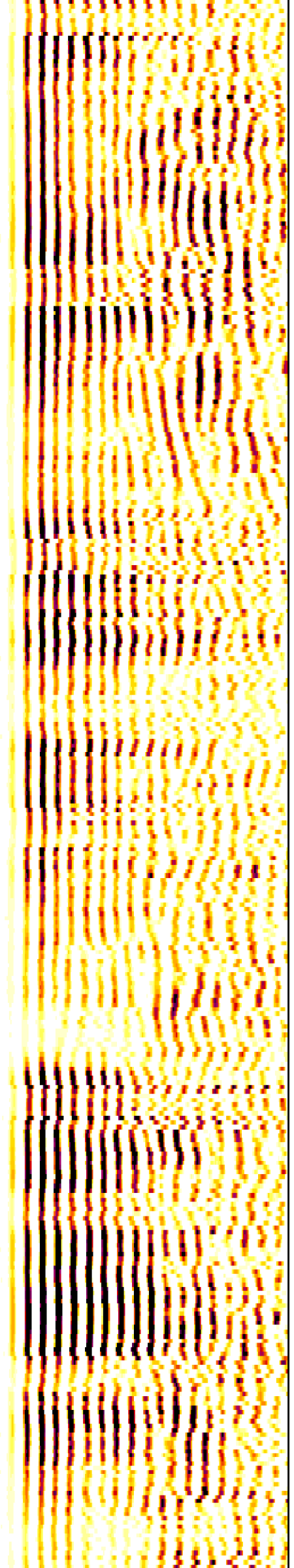
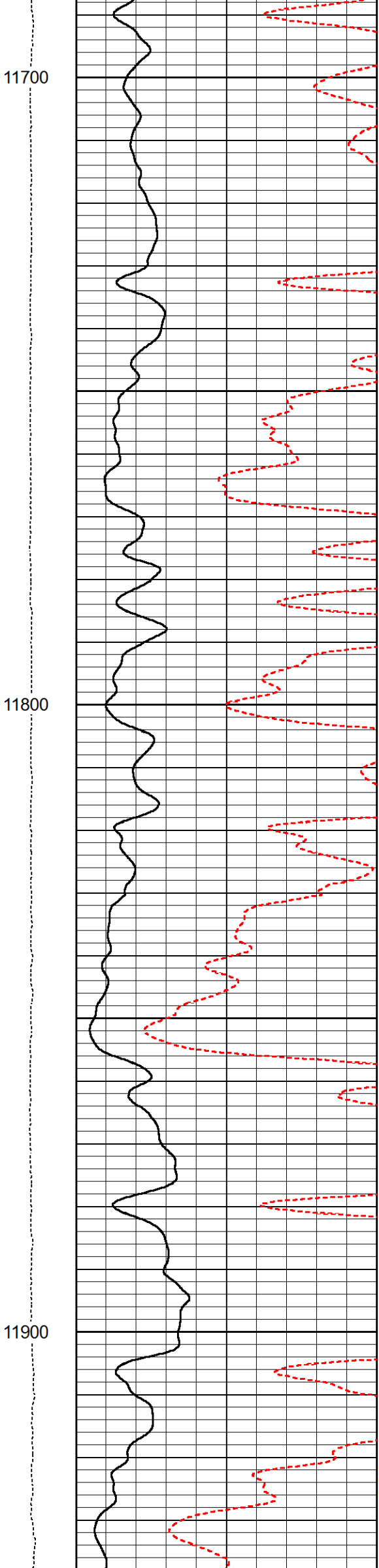
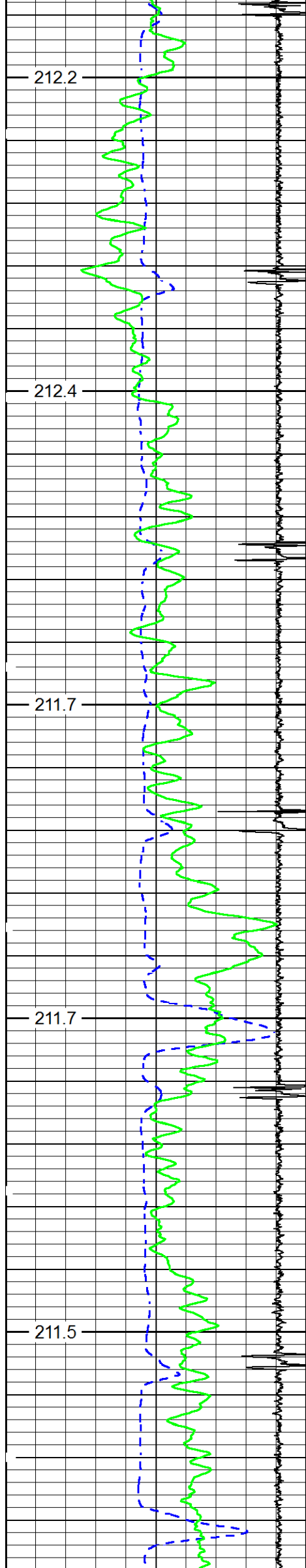
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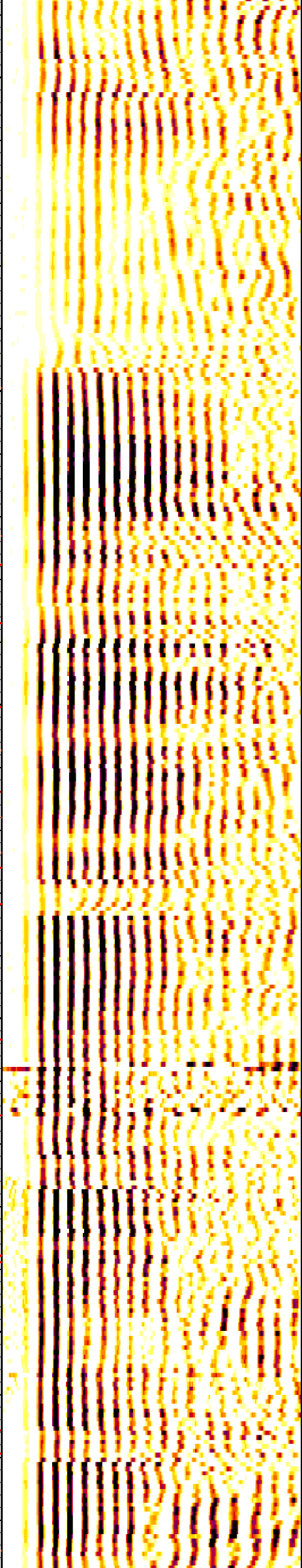
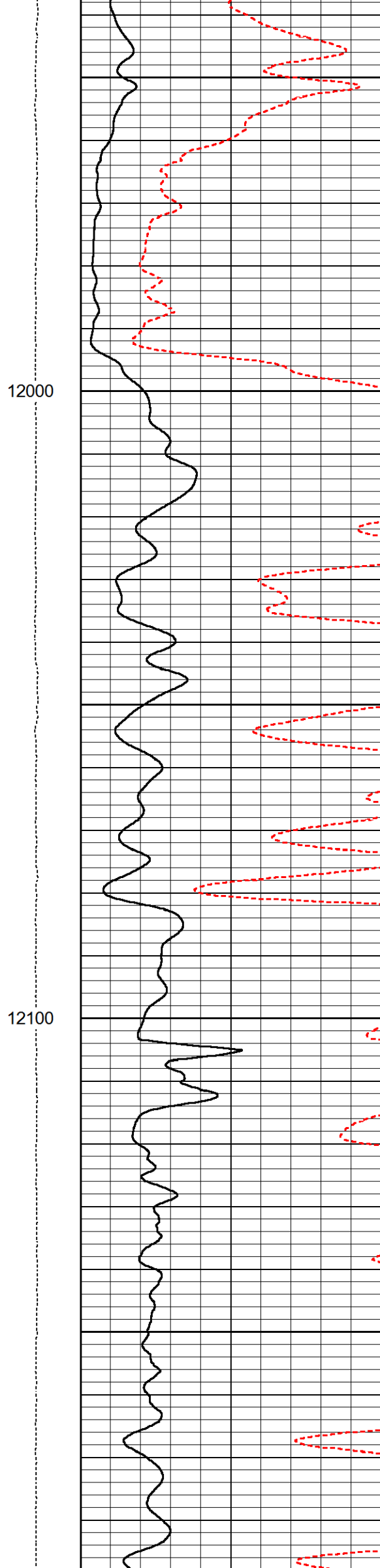
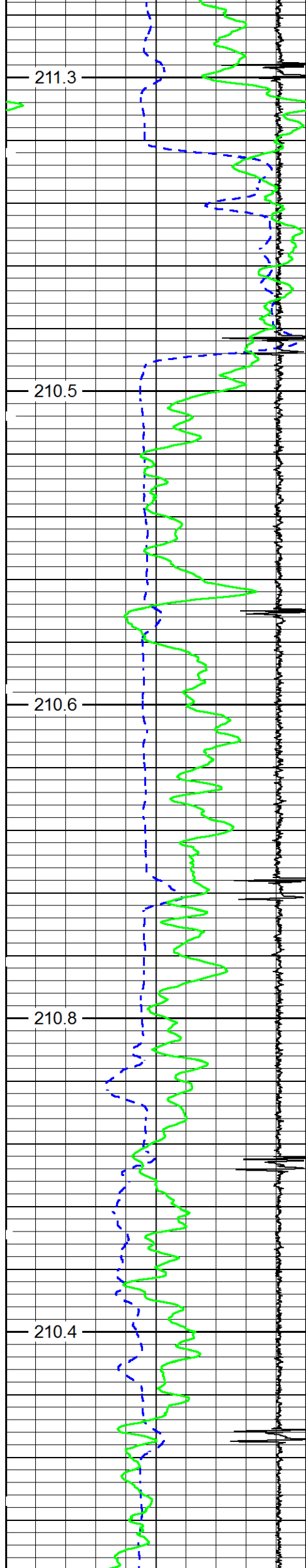
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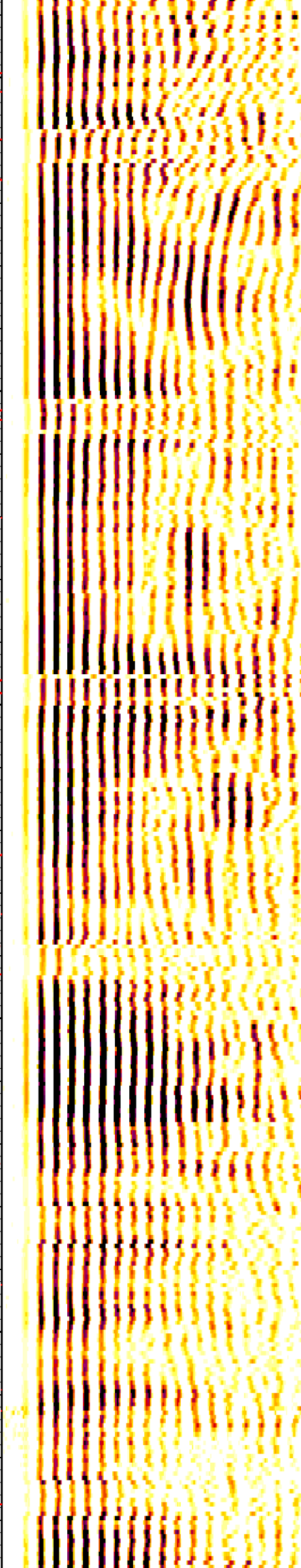
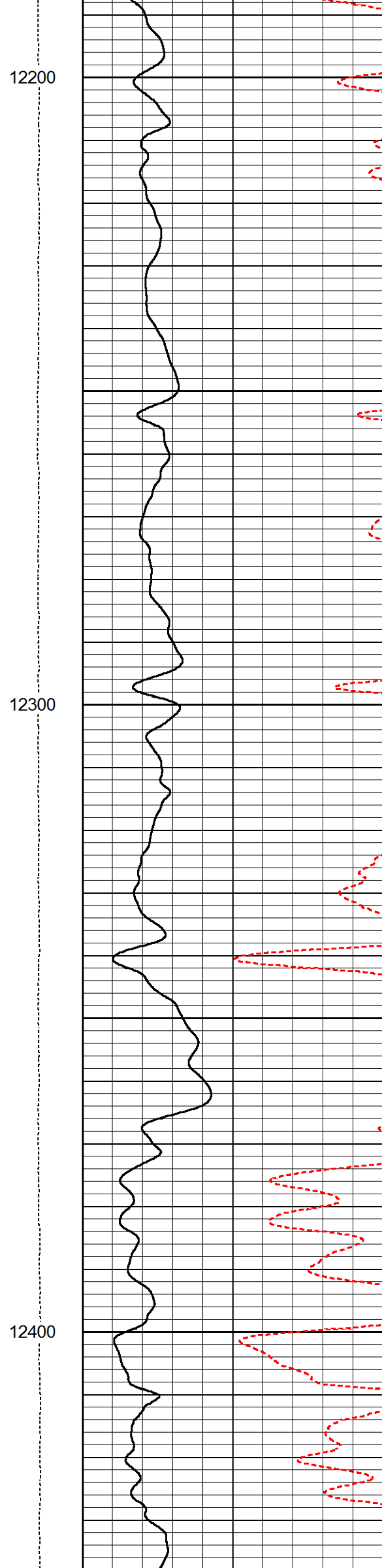
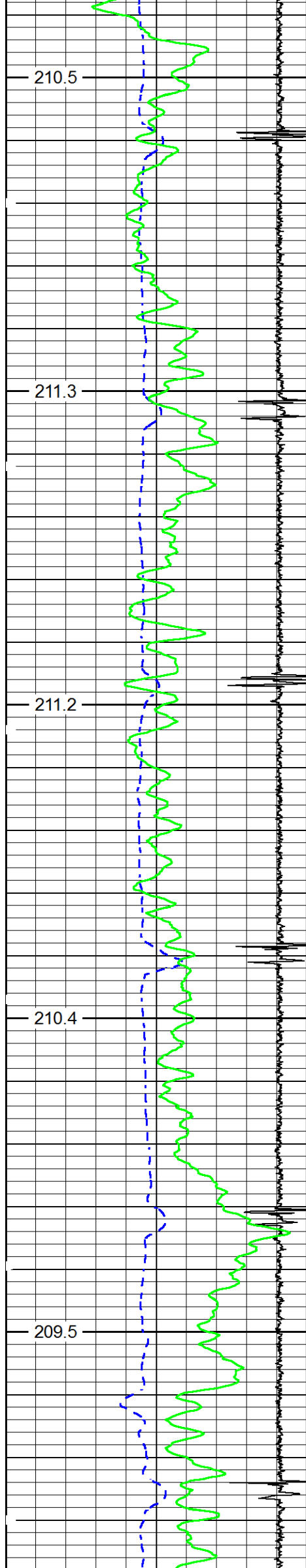
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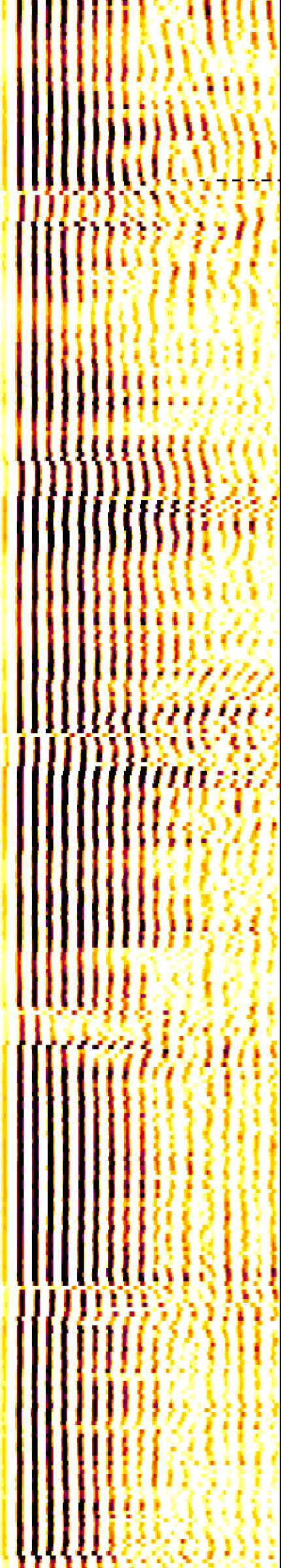
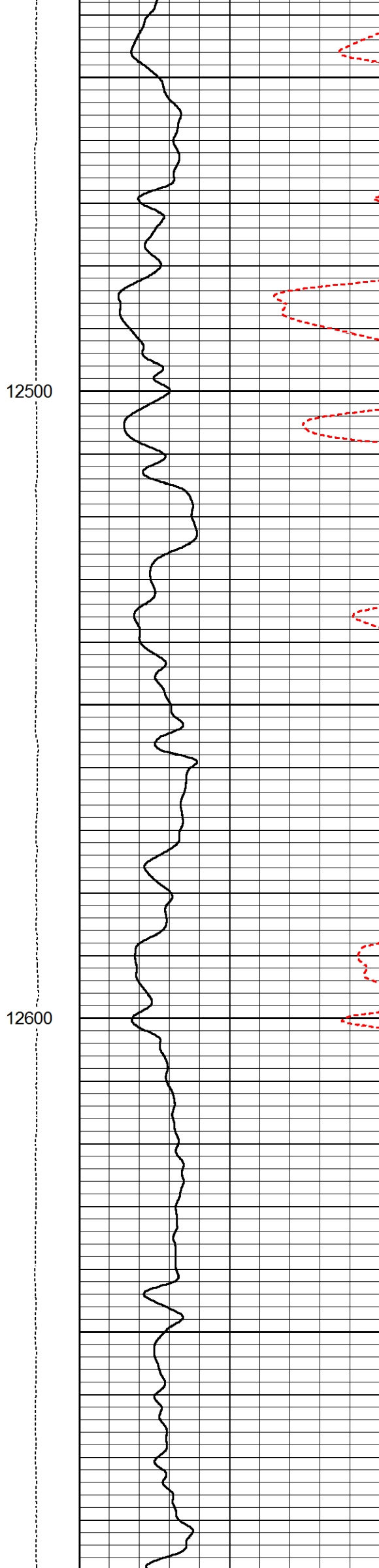
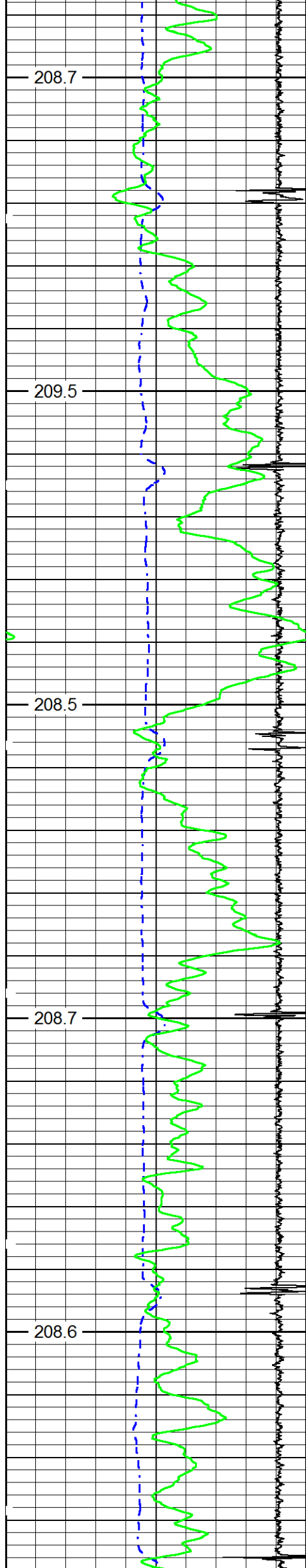


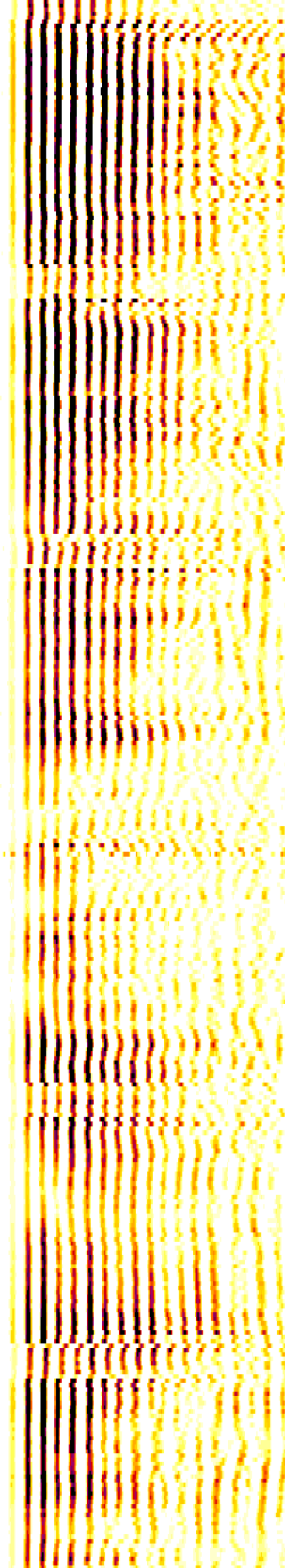
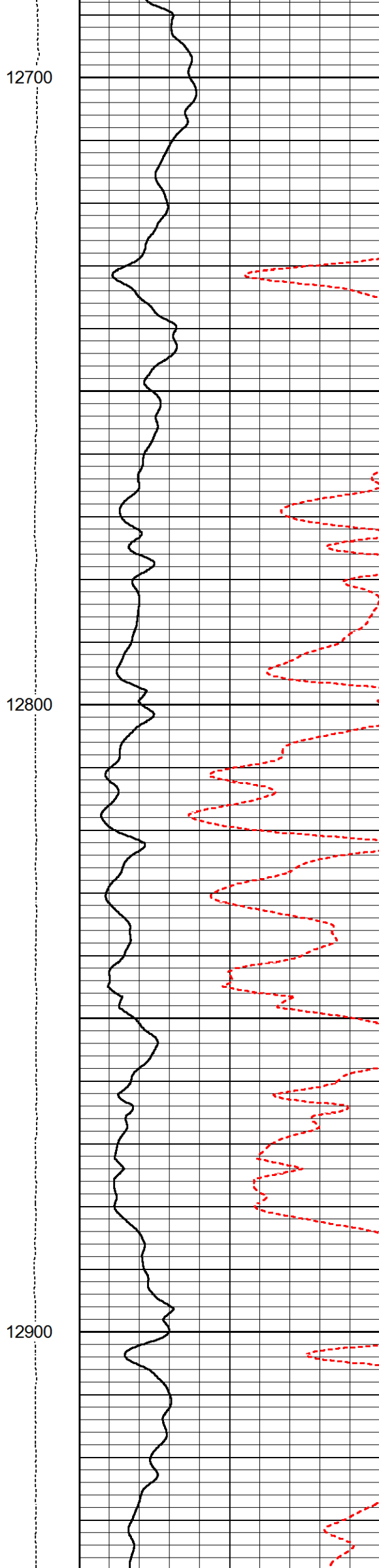
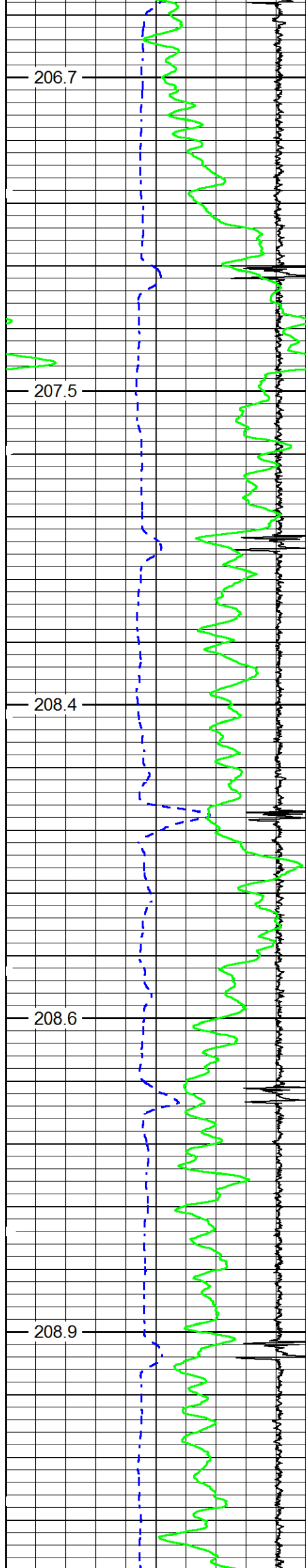


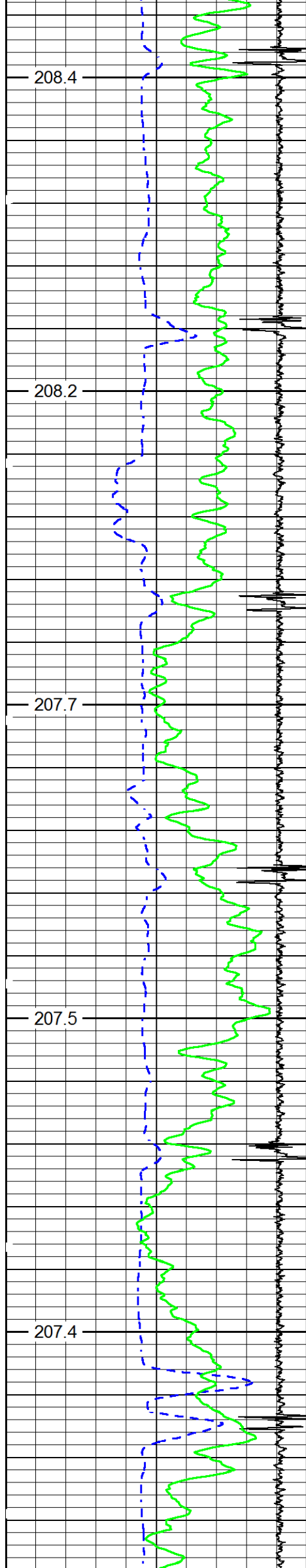






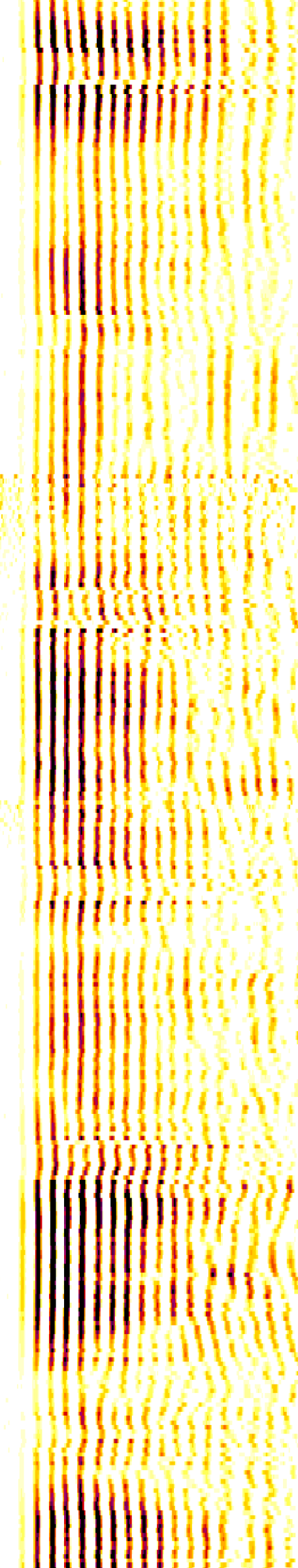
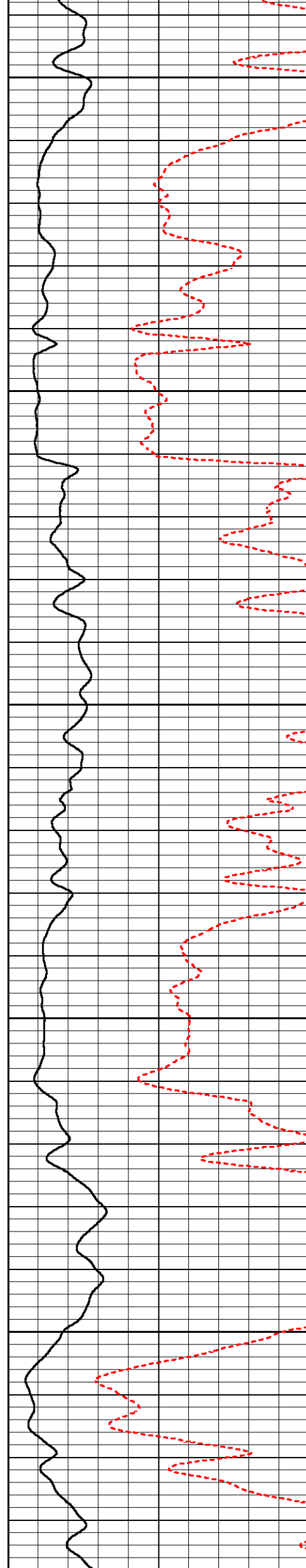


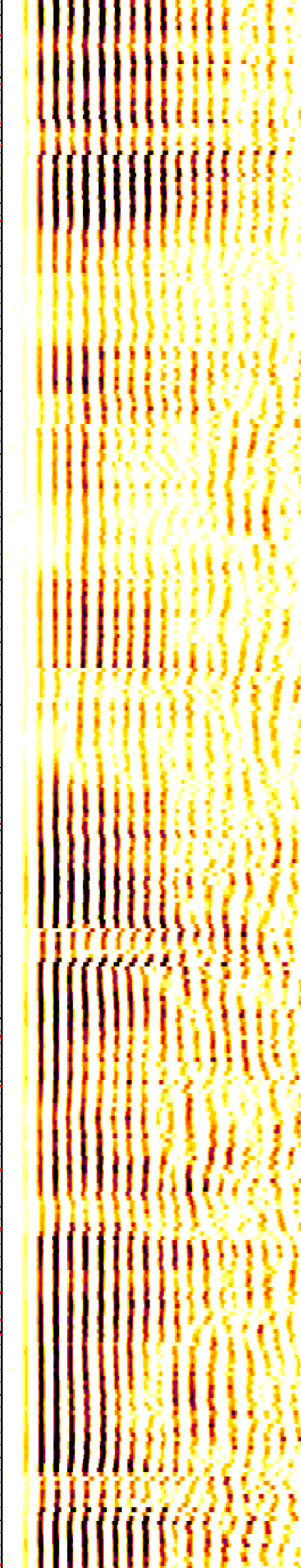
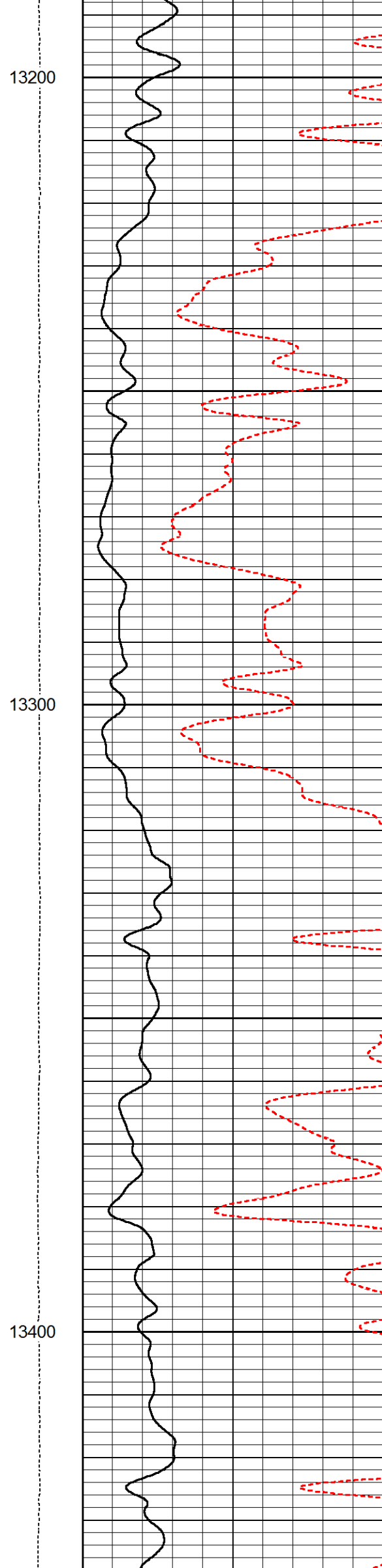
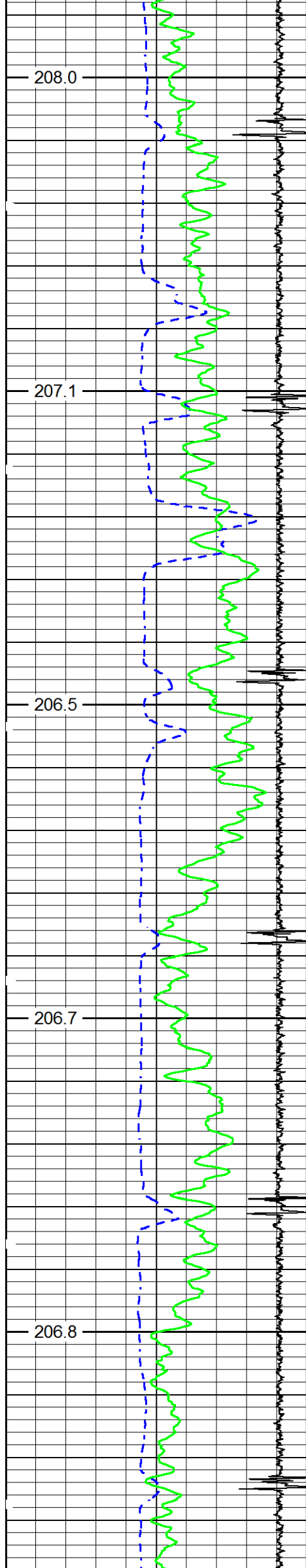


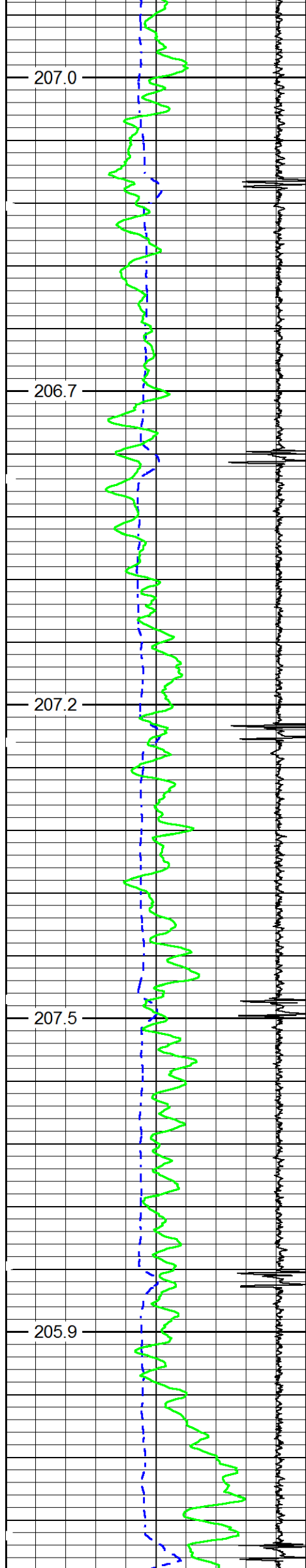


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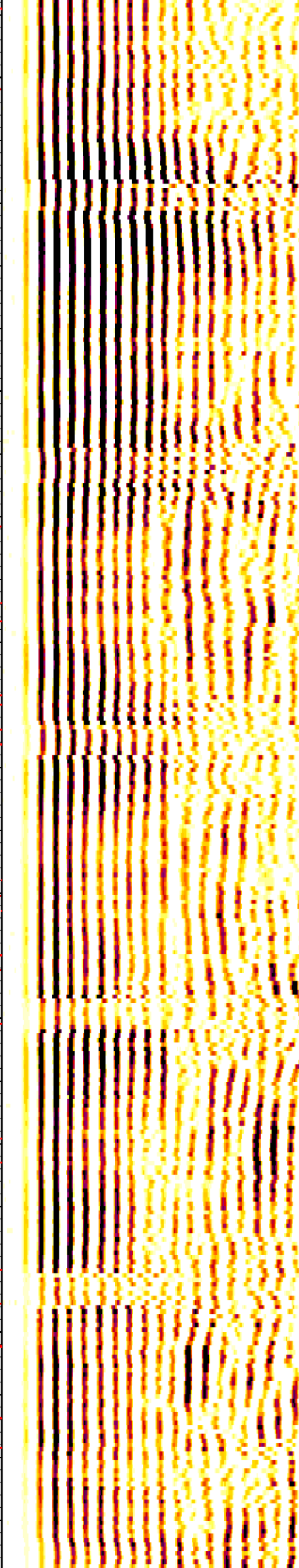
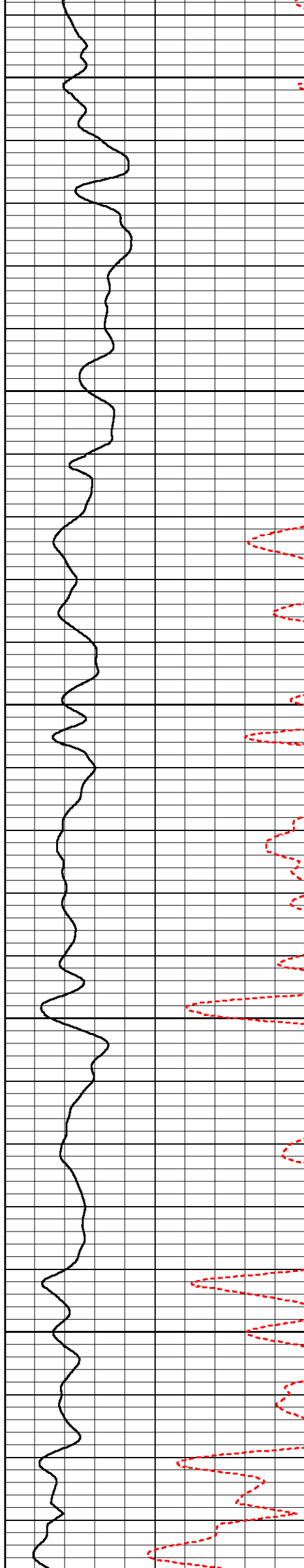


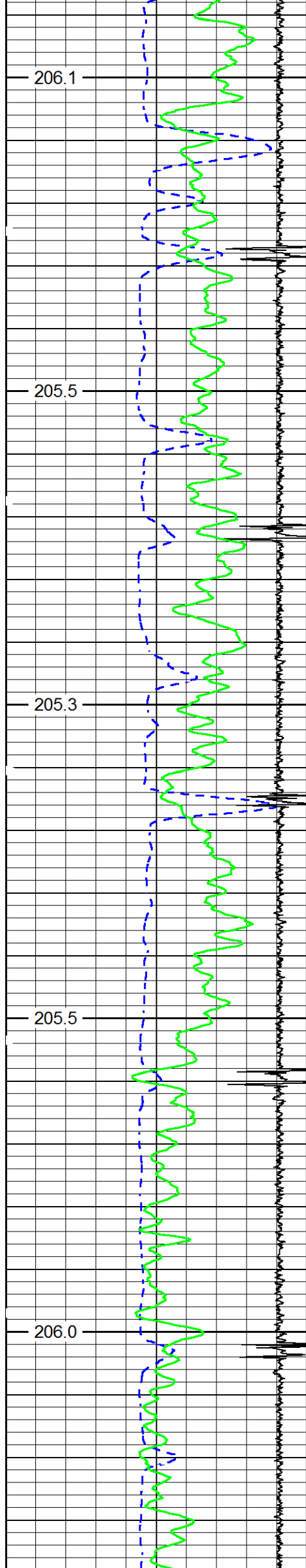




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13600

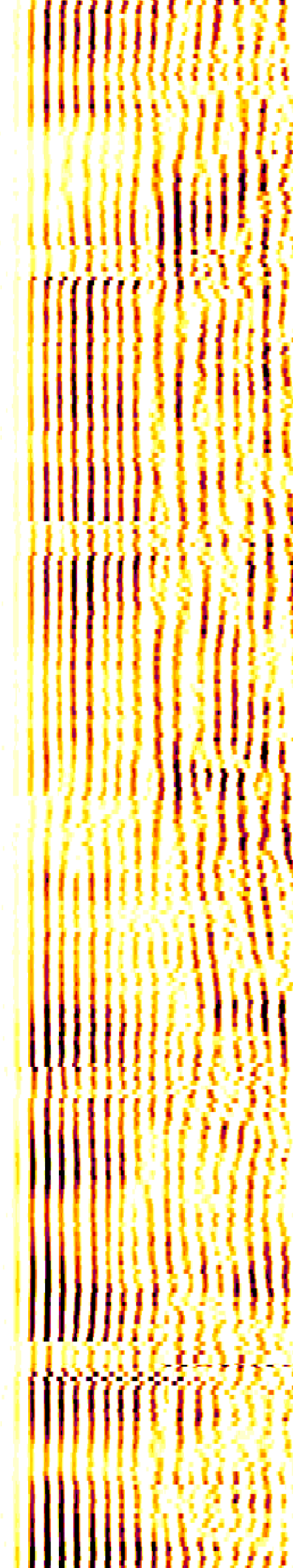
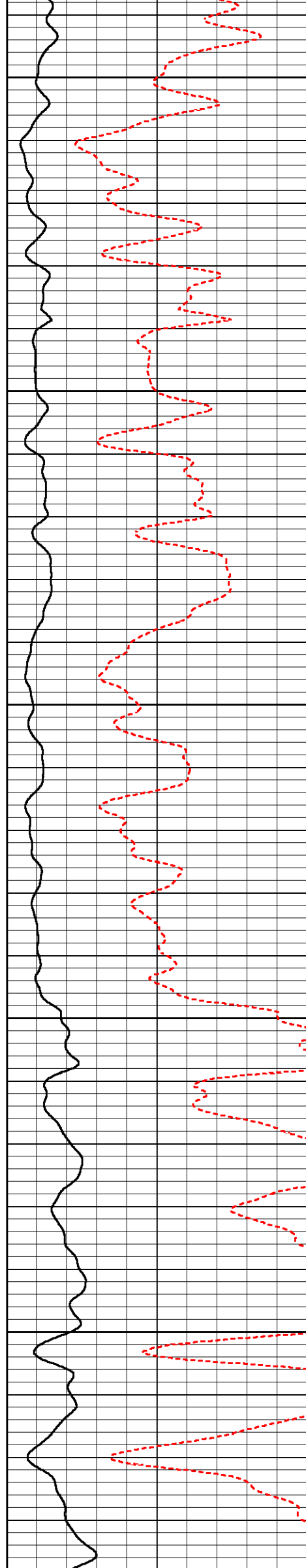


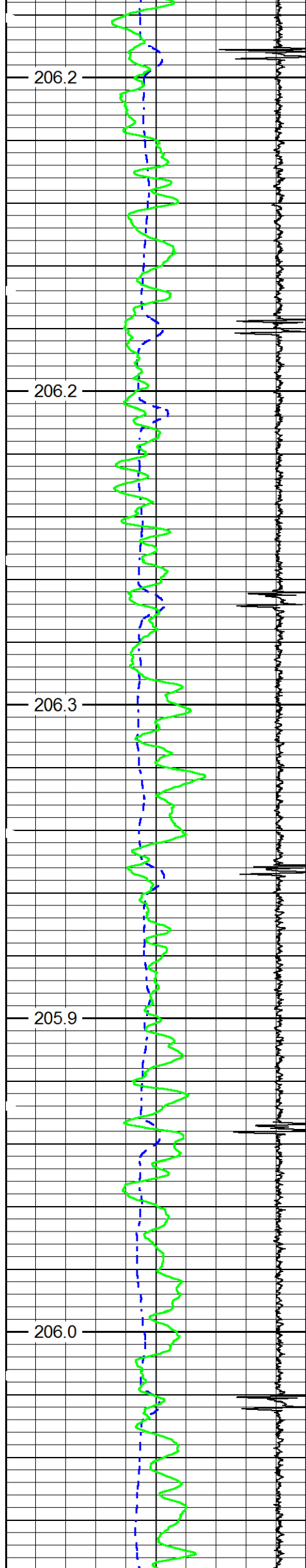


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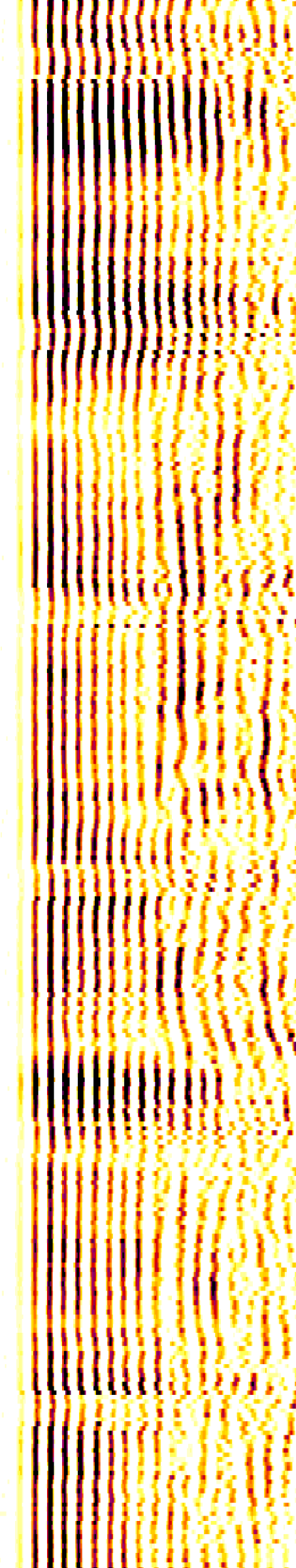
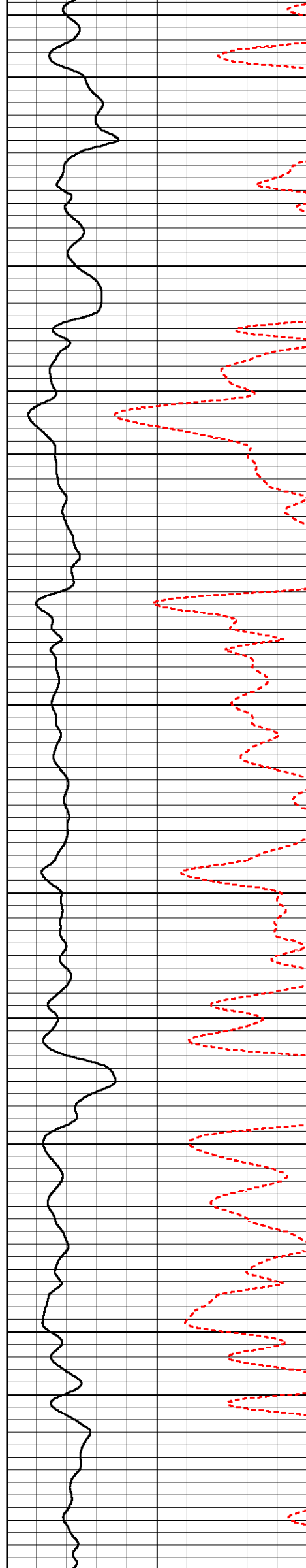
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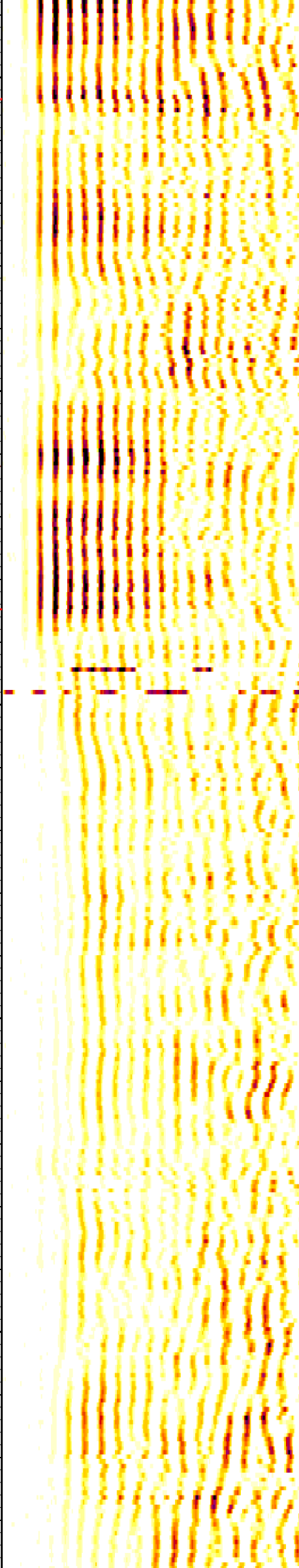
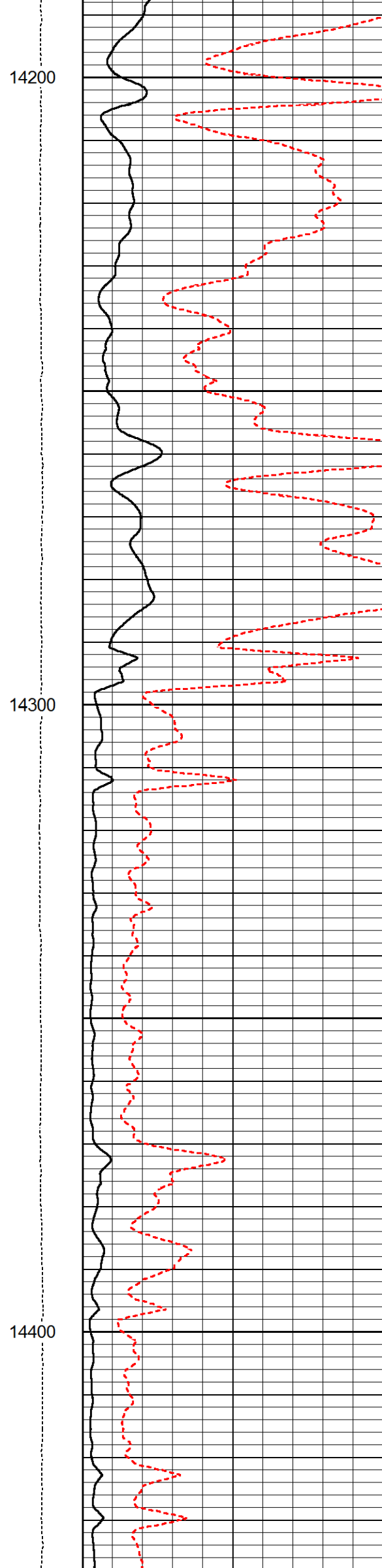
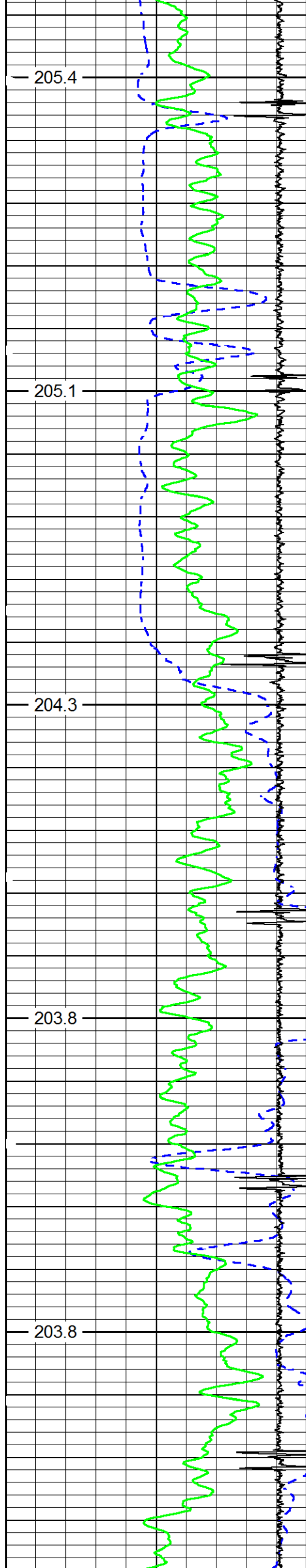


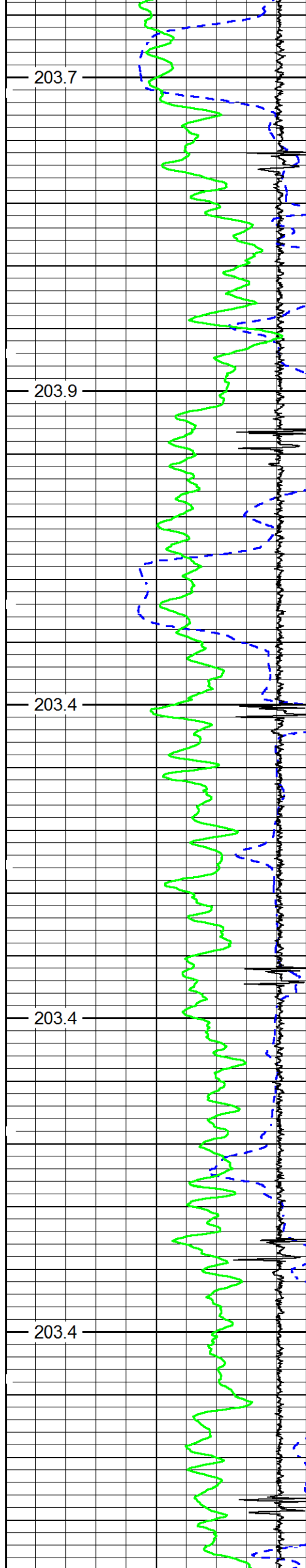


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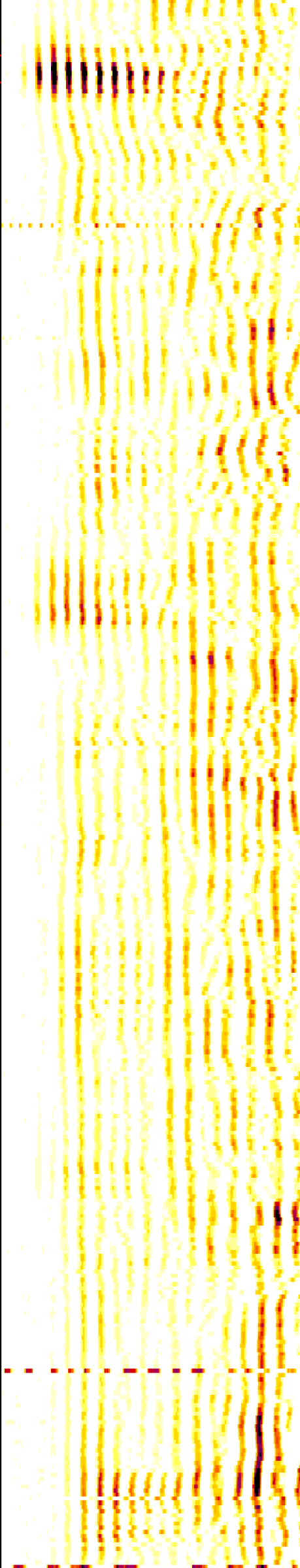
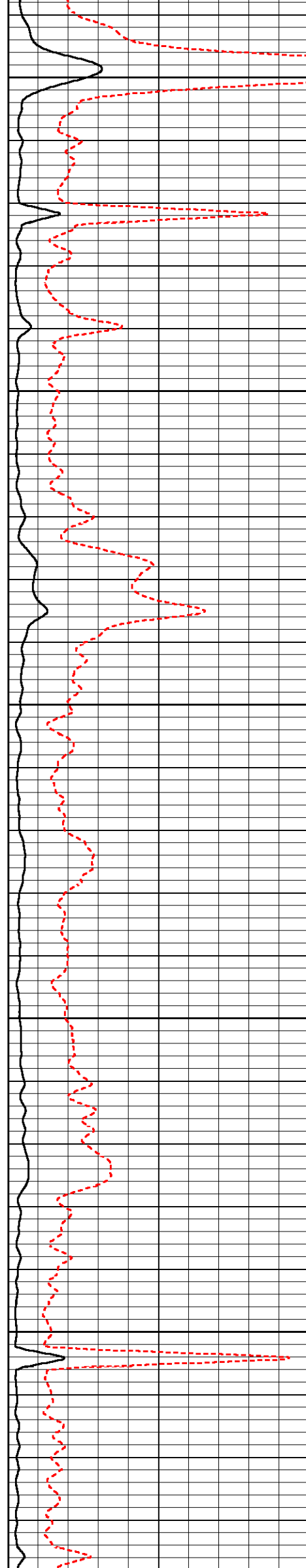


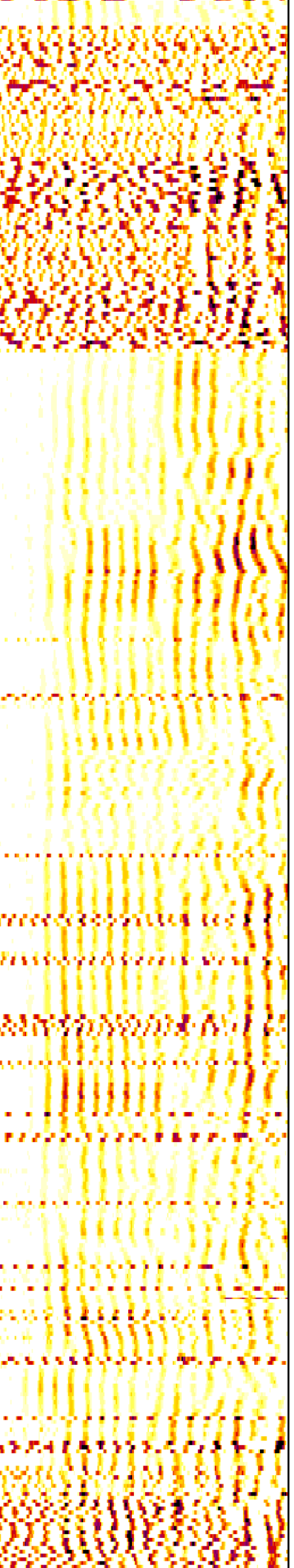
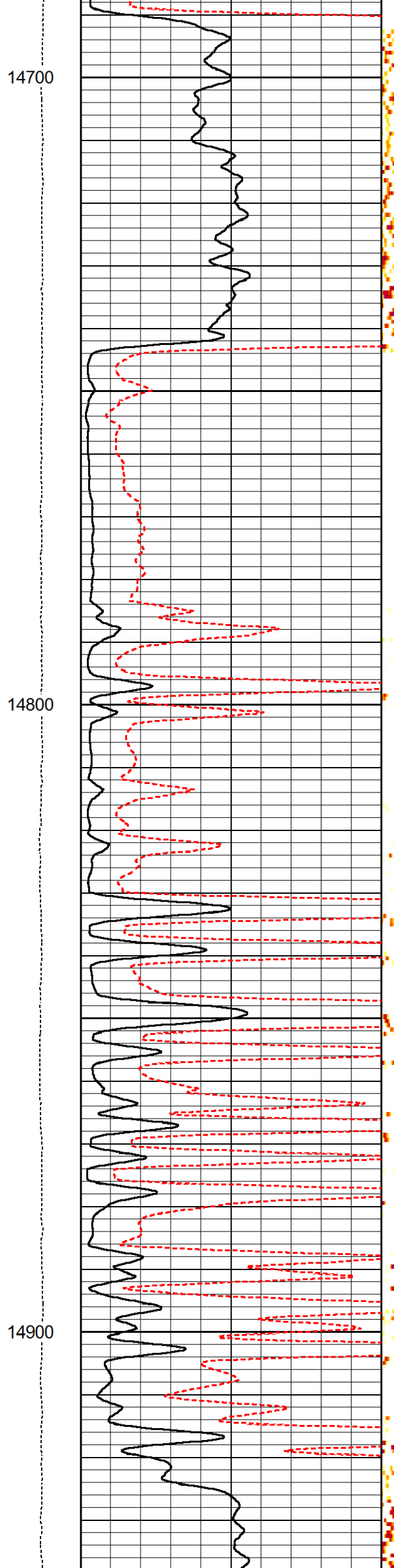
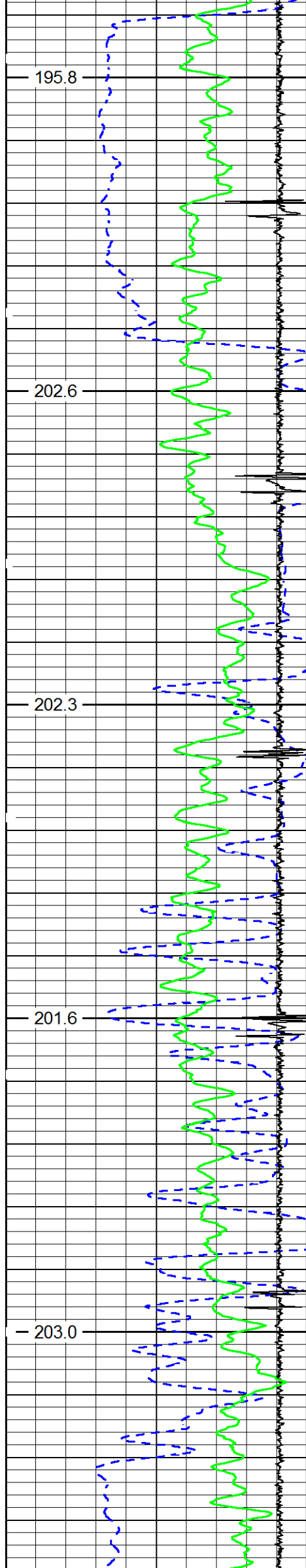


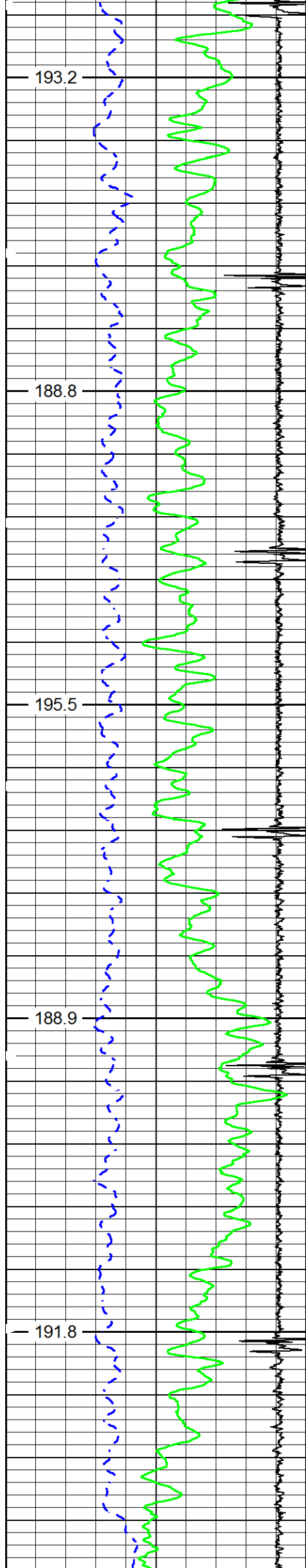


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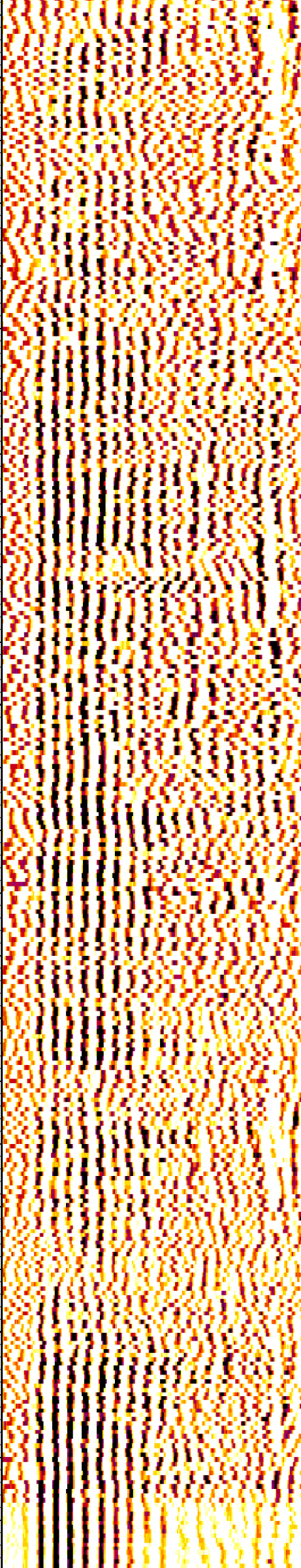
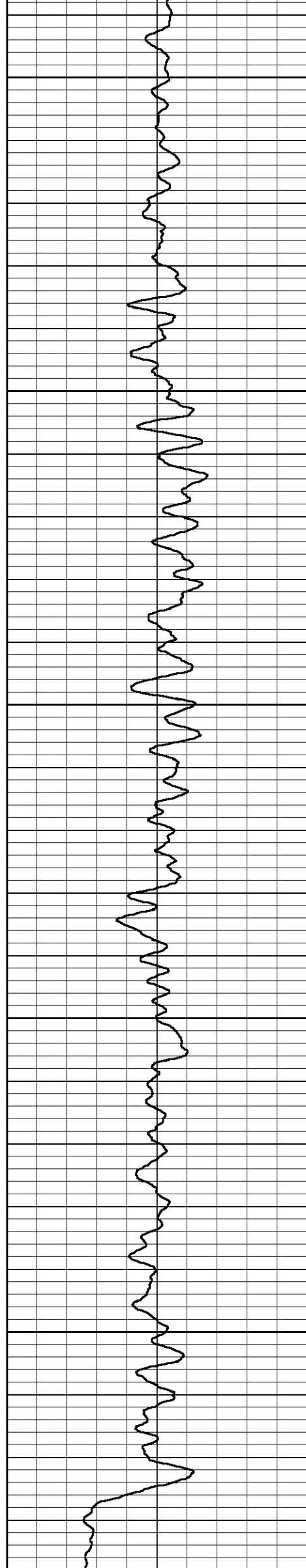


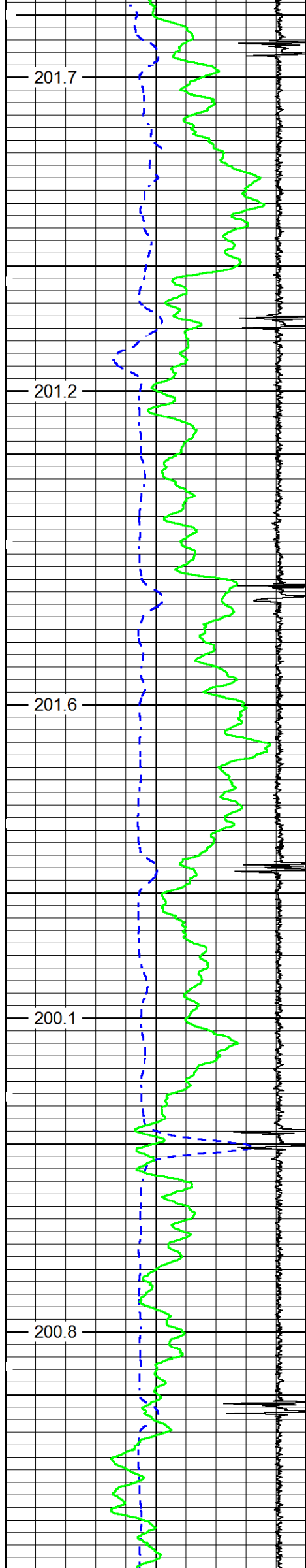




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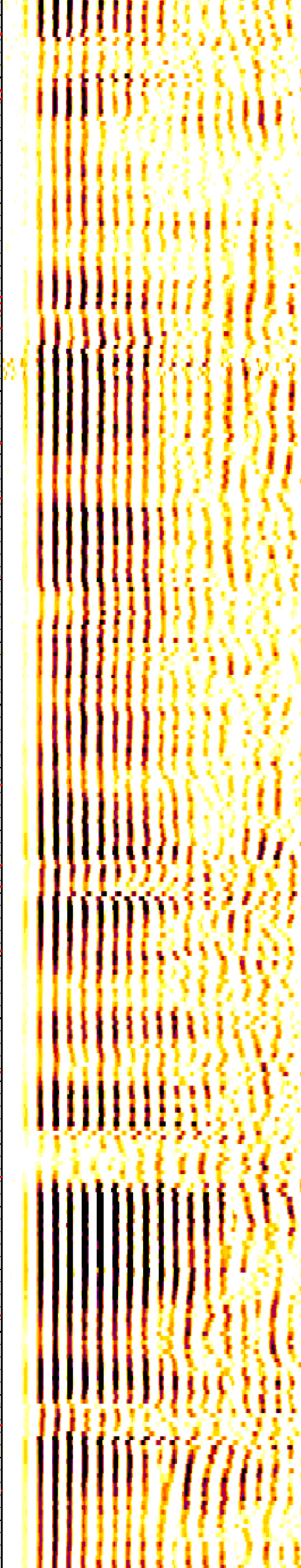
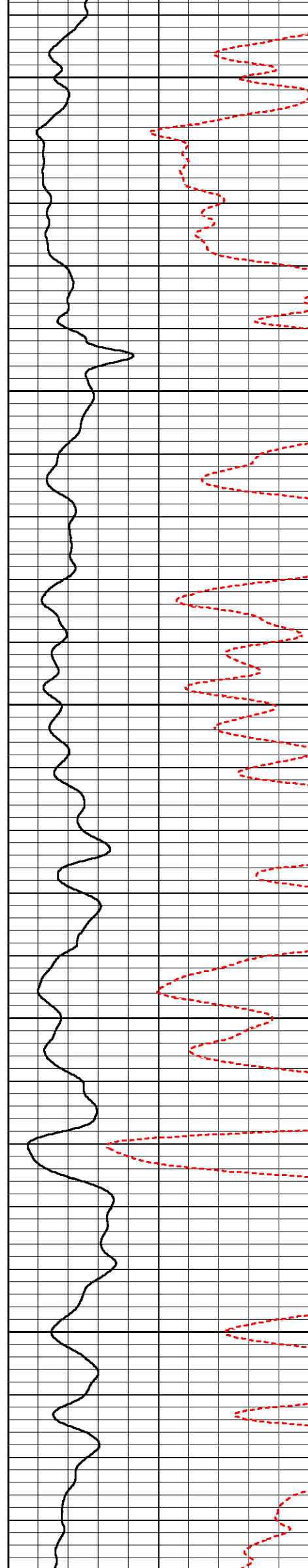


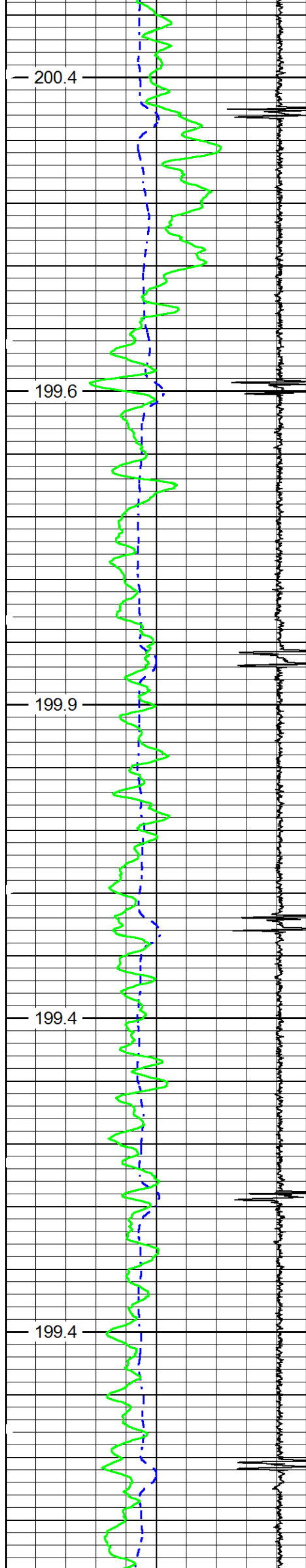


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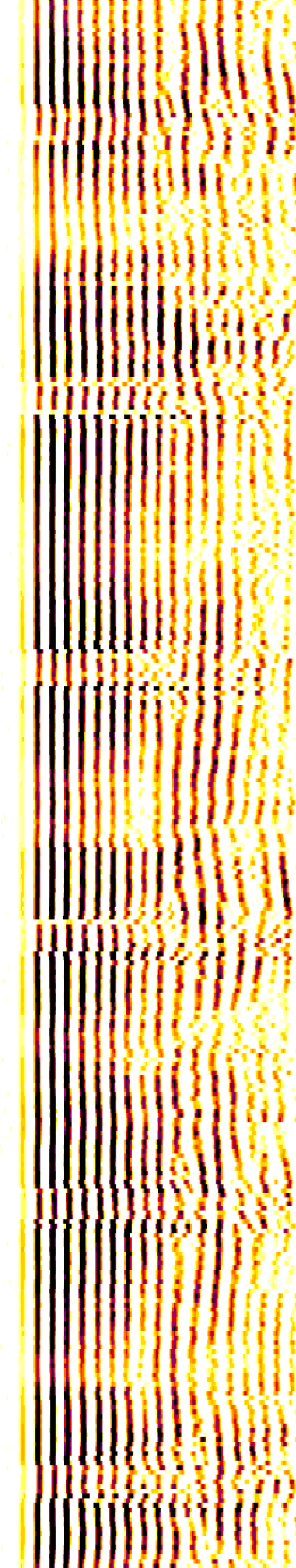
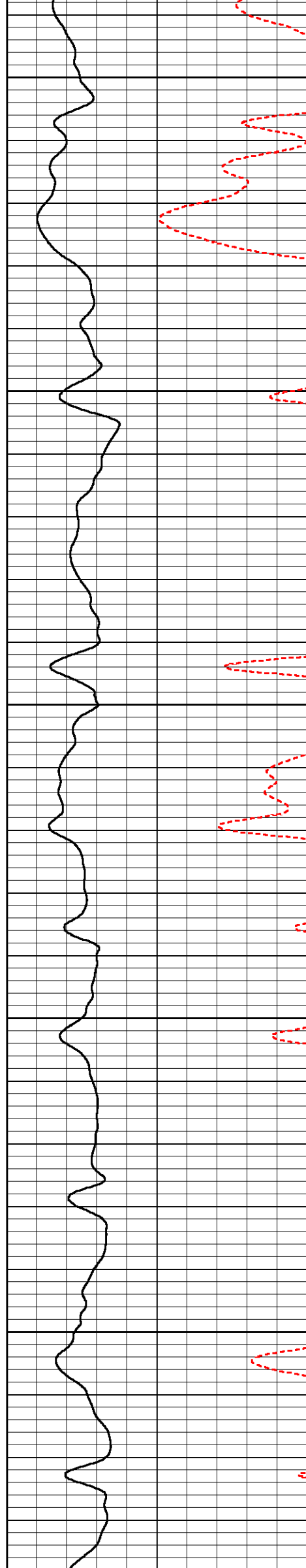
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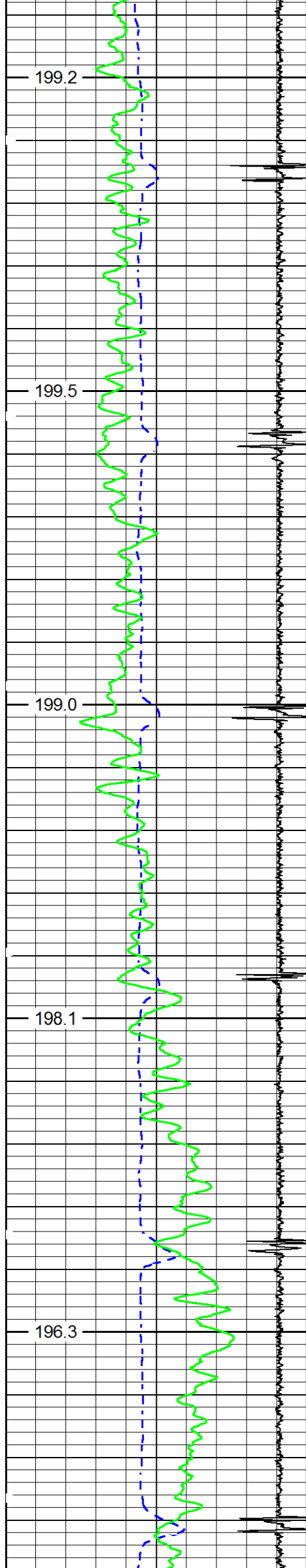




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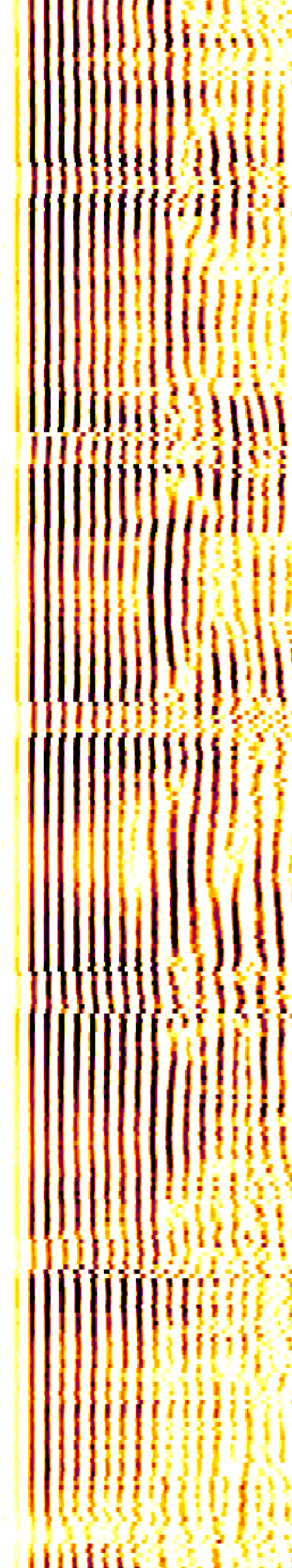


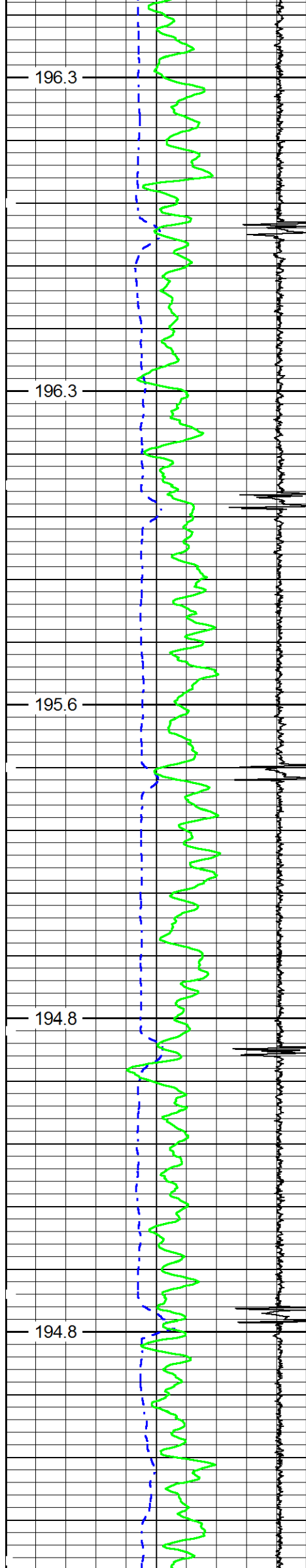


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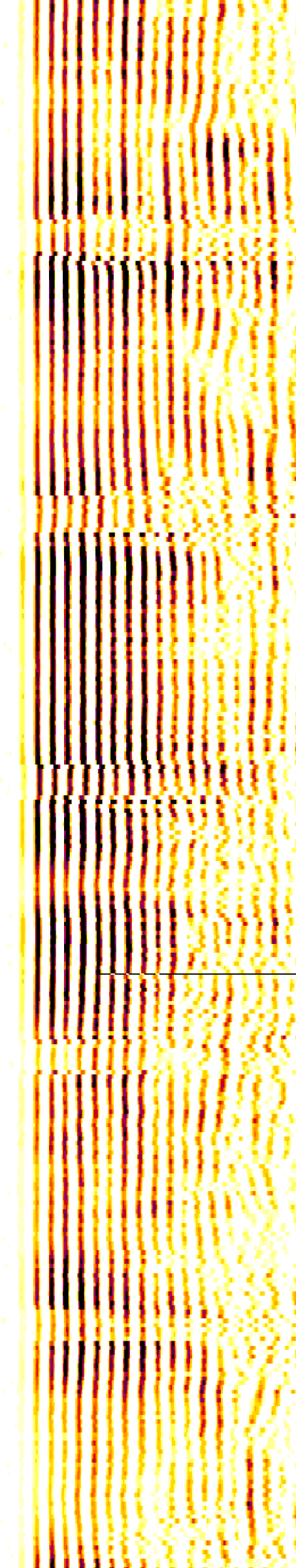
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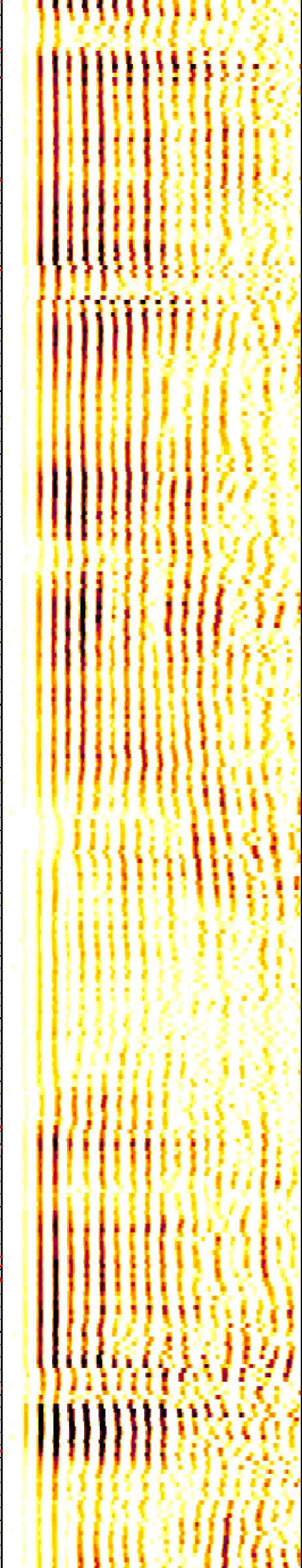
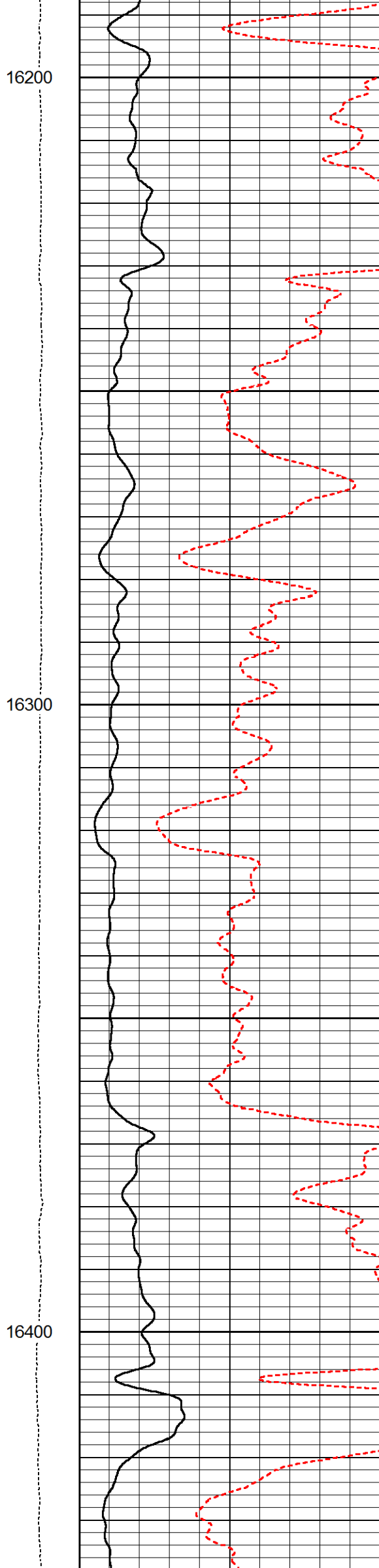
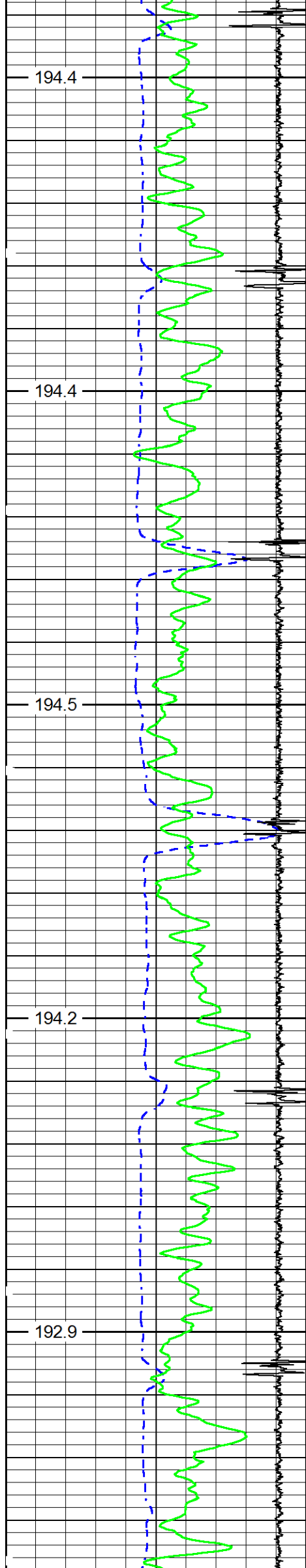


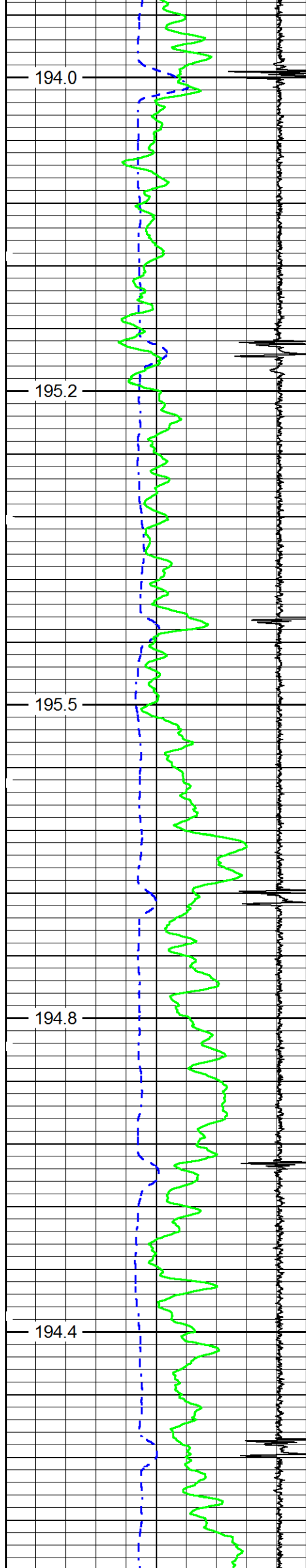


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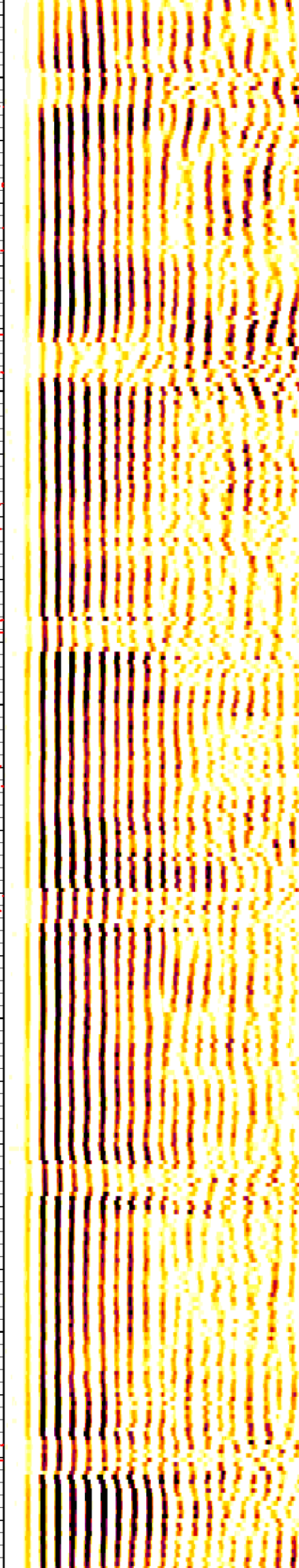
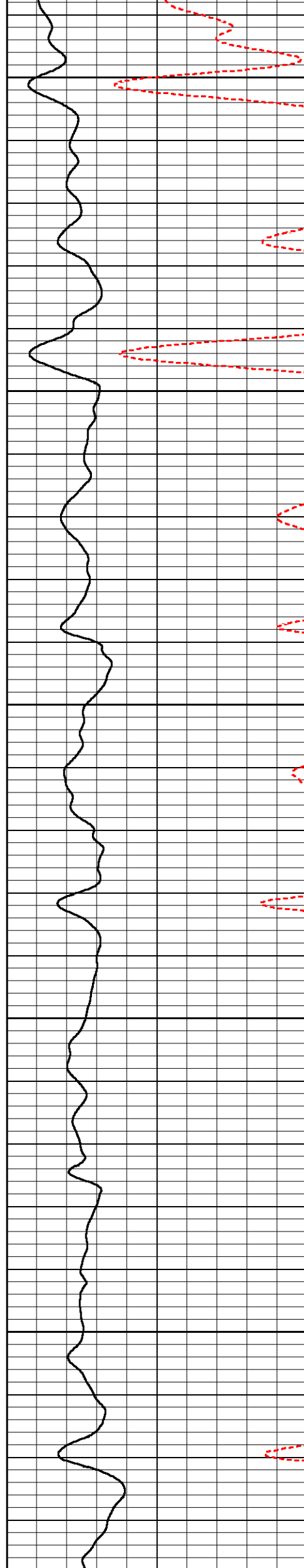


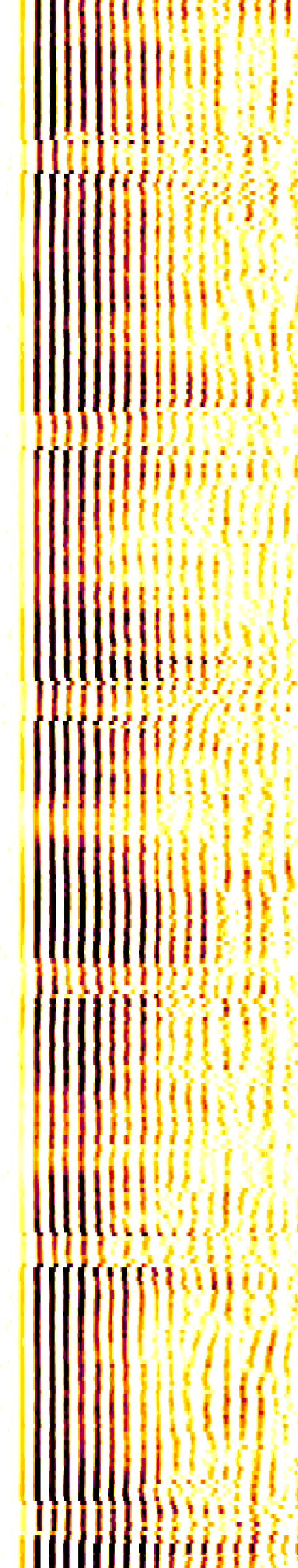
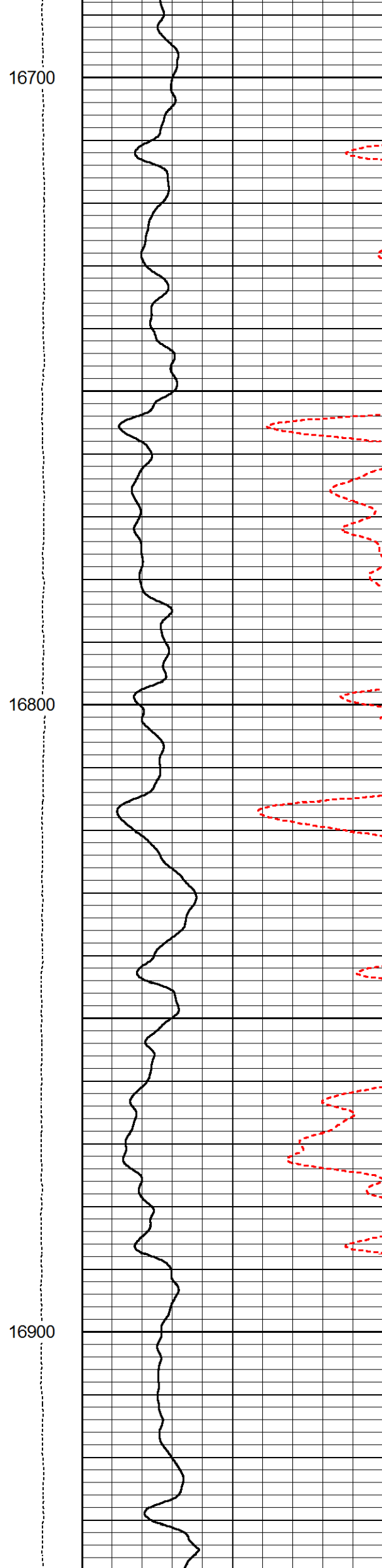
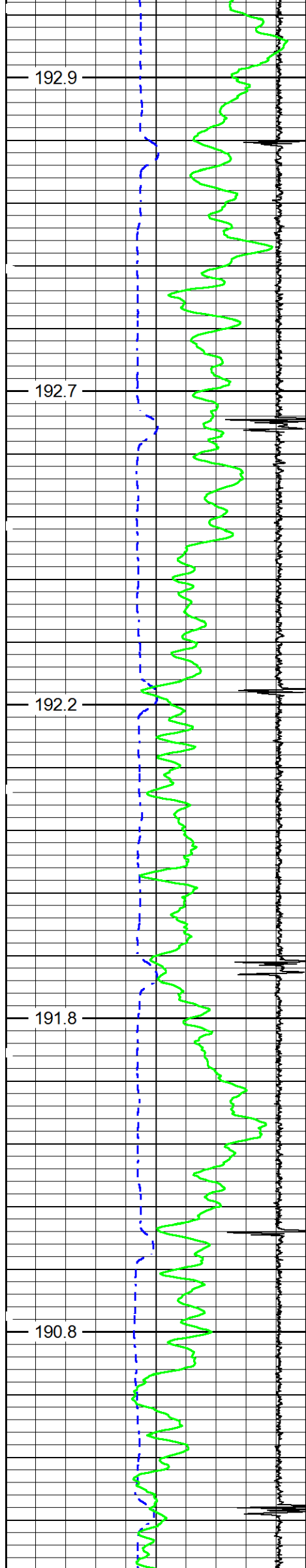


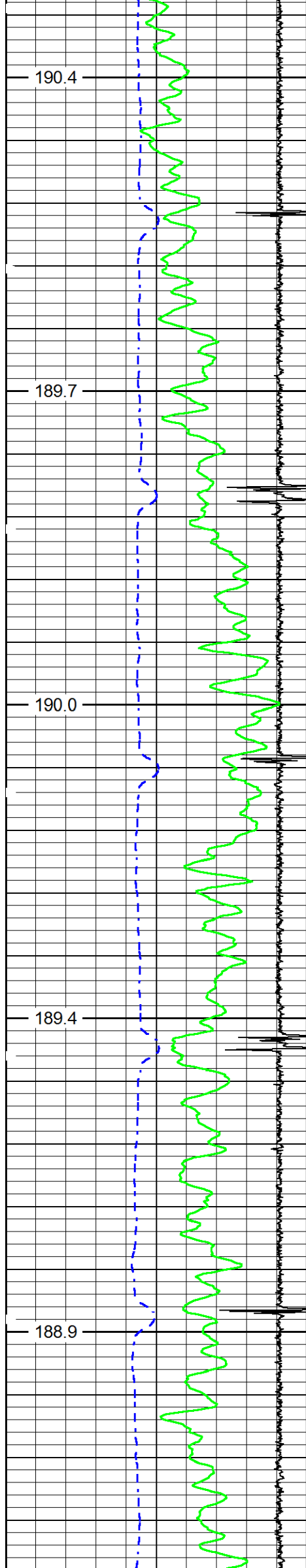


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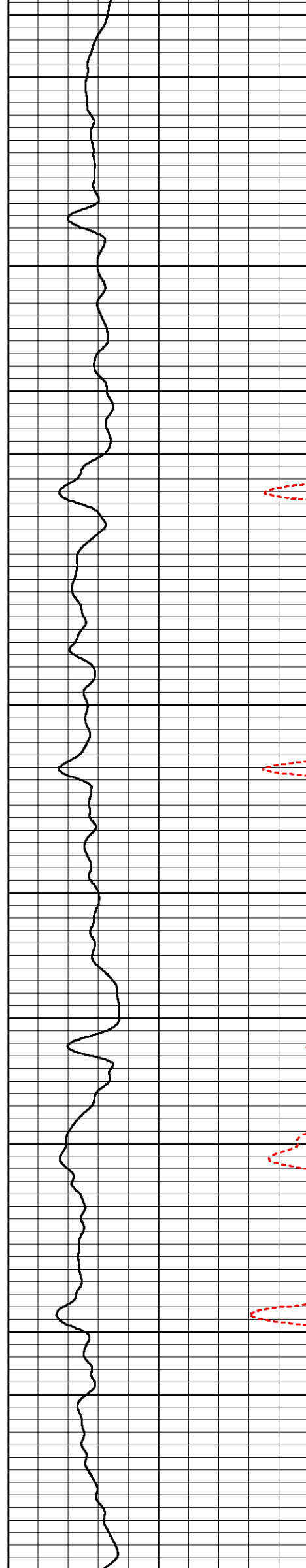


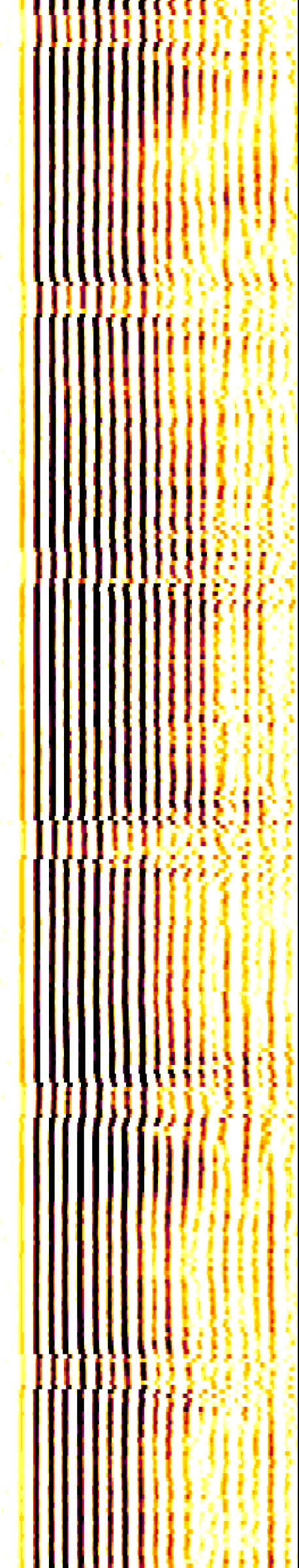
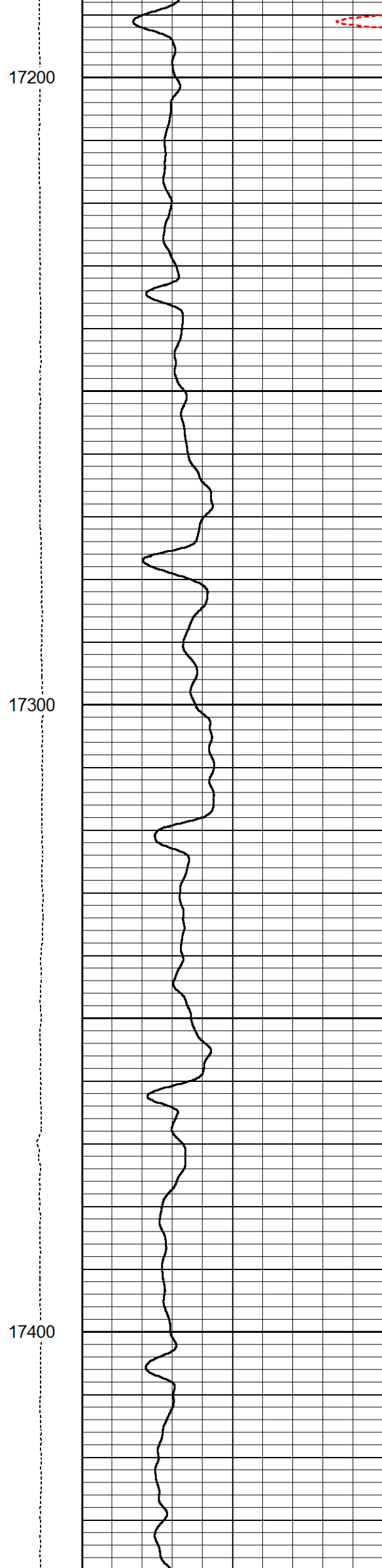
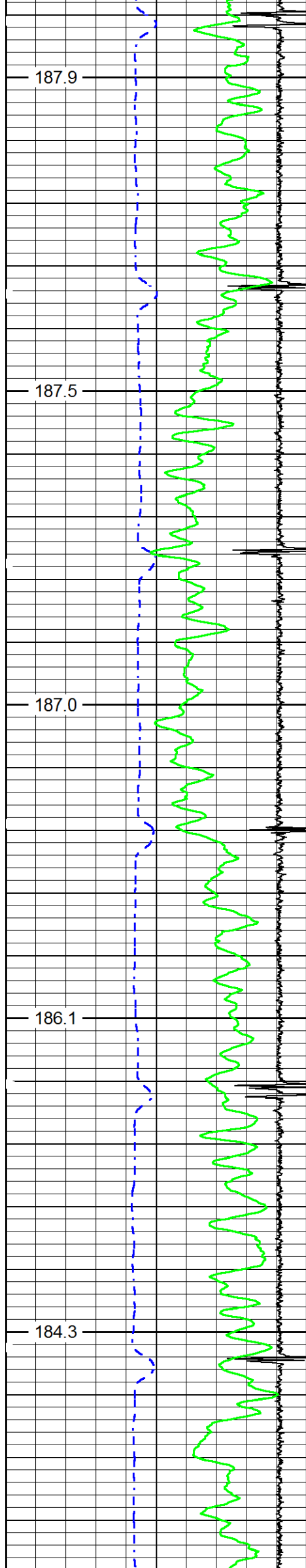


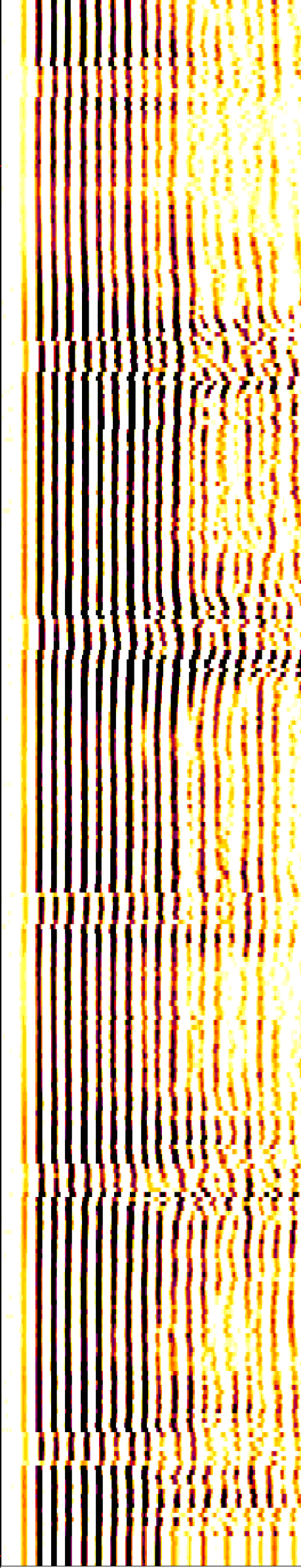
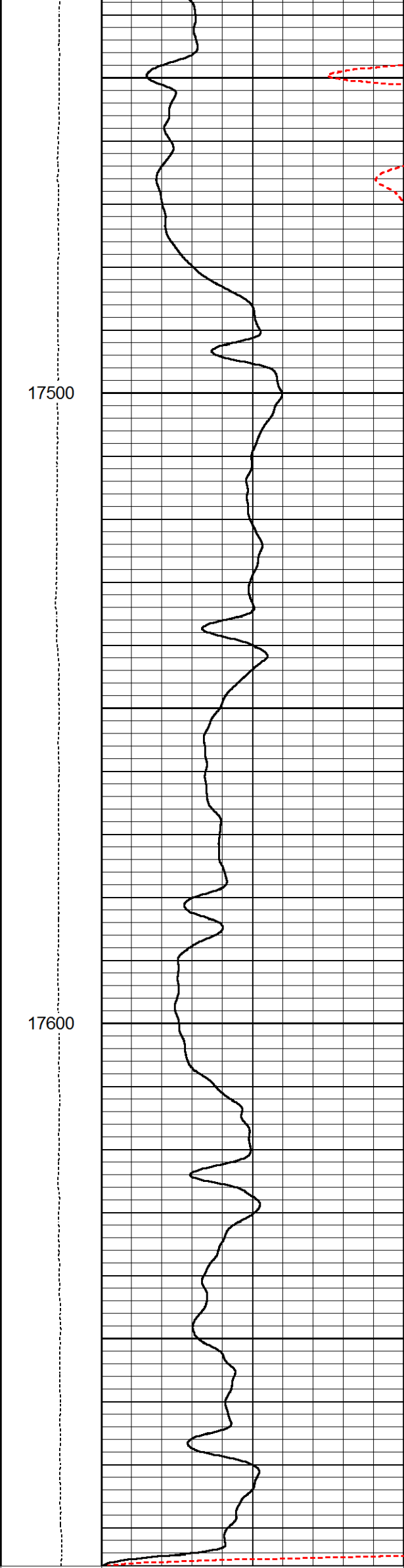
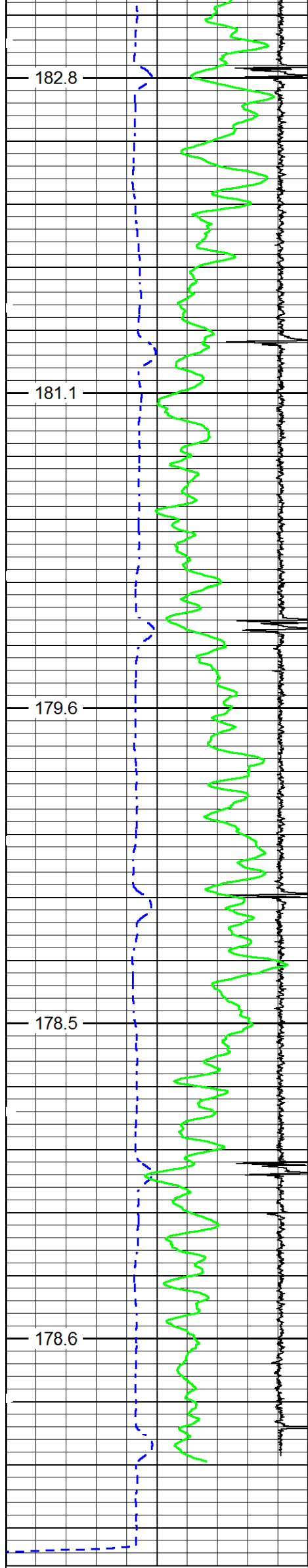


17000

17100







3' Travel Time			LTEN	0	3' Amplitude (mV)	100	200	MSG	1060
1000	CCL	-100	0	(lb2000	0	3' Amplitude X5 (mV)	20		
0	Gamma Ray (GAPI)	150							
Temp									
(degF)									

MAIN PASS

HALLIBURTON

5" = 100'

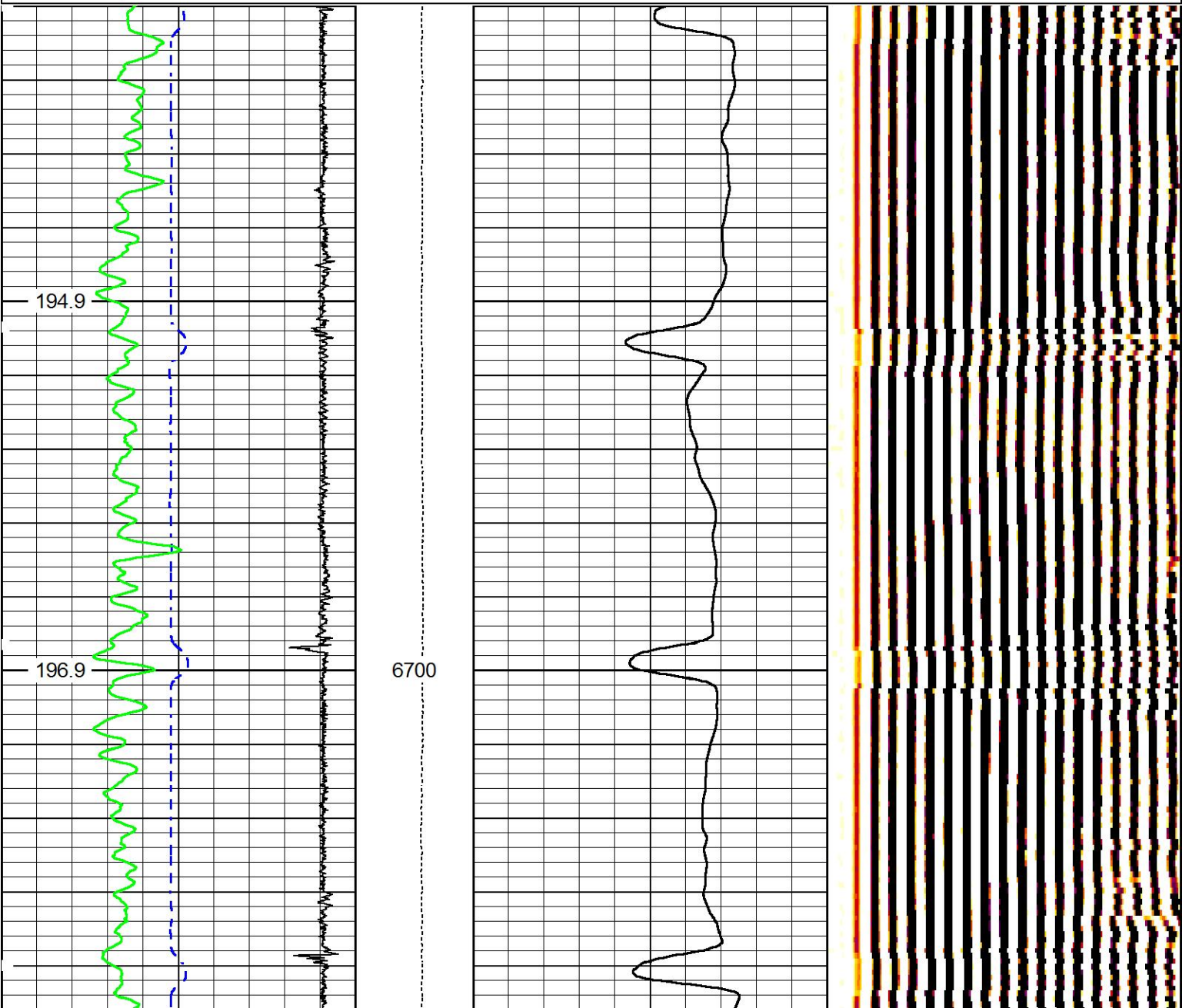
REPEAT PASS

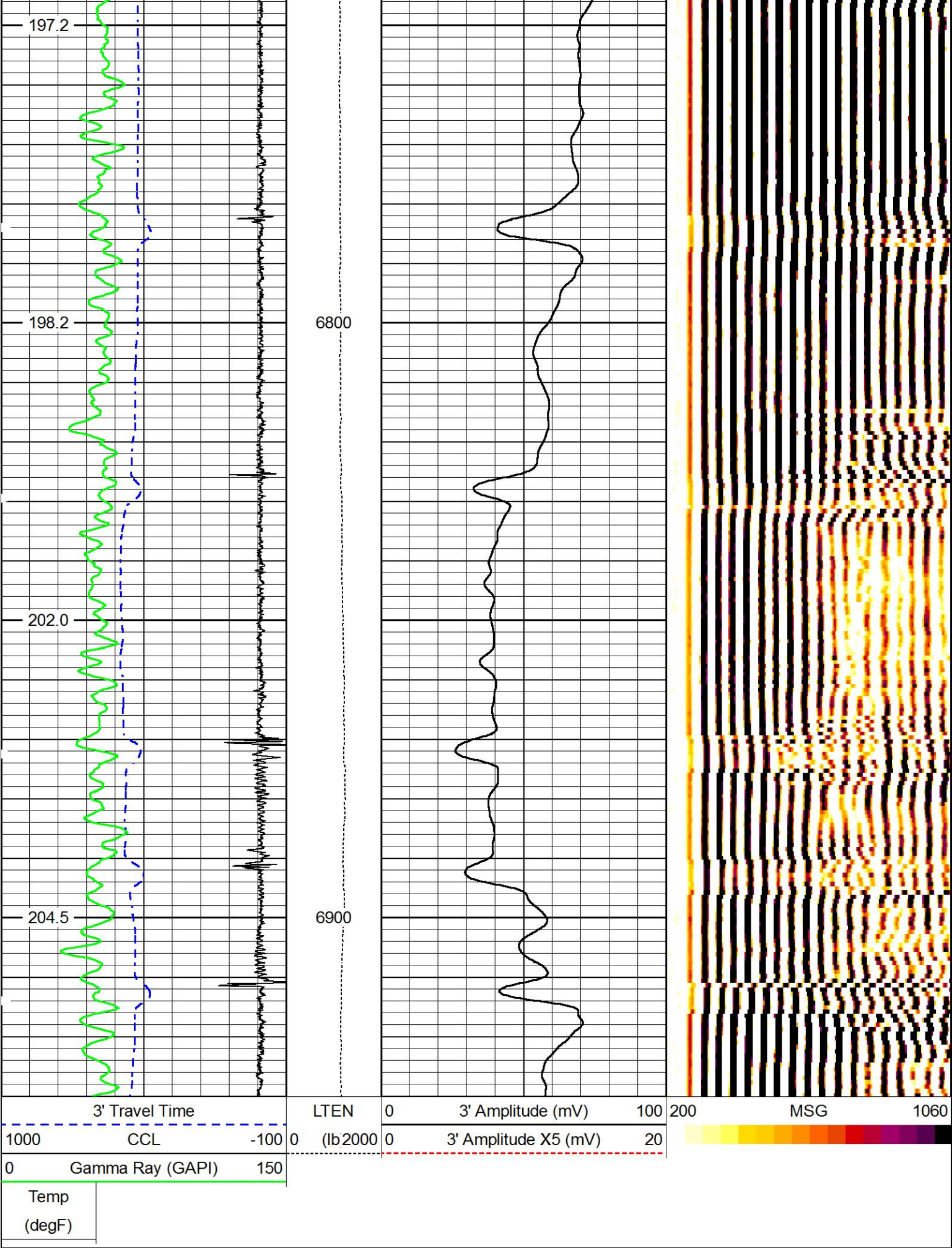
HALLIBURTON

5" = 100'

Database File	hp_16-5807bw.db
Dataset Pathname	CAST/RPT1
Presentation Format	hcbl
Dataset Creation	Fri Feb 01 13:14:21 2019
Charted by	Depth in Feet scaled 1:240

3' Travel Time			LTEN	0	3' Amplitude (mV)	100	200	MSG	1060
1000	CCL	-100	0	(lb2000	0	3' Amplitude X5 (mV)	20		
0	Gamma Ray (GAPI)	150							
Temp									
(degF)									





REPEAT PASS

HALLIBURTON

5" = 100'

Log Variables


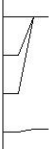
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Dataset field/well/CAST/MAIN/_vars_


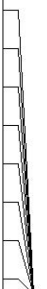

Top - Bottom

BHTEMP_Src	BITSIZE in	BOTTEMP degF	CASEOD in	CASETHCK in	CASEWGHT lb/ft	MSGGN	MudWgt lb/gal
TEMP	6.125	200	4.5	0.25	11.6	1	8.4
PERFS	SRFTEMP degF	TDEPTH ft	USERFTT usec/ft	ZREF MRayl			
0	0	0	0	1.7			

Calibration Report						
Database File		hp_16-5807bw.db				
Dataset Pathname		CAST/MAIN				
Dataset Creation		Fri Feb 01 14:09:39 2019				
Circumferential Acoustic Scanning Tool Shop Calibration Report						
Serial-Model:		11488892a-3 1/8 SCAN				
Calibration Performed:		Tue Jan 29 17:49:54 2019				
Mudcell Transducer						
		Measured	Expected	Main Transducer		
W/O Calibrator		49.99	44.00	Measured	Expected	Units
W Calibrator		40.82	35.00	N/A	N/A	usec
Calibrated Offsets						
Name		Value	Units			
TCAL		7.0900	usec			
MCAL		4.1435	usec			
XY Accelerometers Calibration Report						
Performed:		(Not Performed)				
		Low Read.	High Read.	Low Ref.	High Ref.	
X Accelerometer		0.000	1.000	gee	0.000	1.000
						gee
Y Accelerometer		0.000	1.000	gee	0.000	1.000
						gee
Cement Bond Log Shop Calibration Report						
Serial-Model:		11923474-A				
Calibration Performed:		Tue Jan 29 18:51:42 2019				
Free Pipe Calibration						
		Measured	Units			
TT		245.4	usec			
Amplitude		458.8	mV			
Log Base Line		-1.8	mV			
Calibration References and Gain						
Name		Value	Units			
Pipe O.D.		4.500	in			
Pipe Weight		11.6	lb/ft			
Pipe Ref. Amp.		81.0	mV			
Amp. Gain		0.176				
Gamma Ray Calibration Report						
Type / Serial:		002 / 11527445				
SHOP CALIBRATION		Wed Jul 26 16:57:09 2017				

Background	Counts/Sec.	Gain	Offset	Jig	Units
Calibrator	22.9				cps
	244.7	1.6587			cps
					GAPI/cps
PRIMARY VERIFICATION					
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	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	35.08		STNDCH-1_11_16_CH 1.6875 IN CABLE HEAD	1.50	1.44	1.00	
			TTTCU-002 (11527445) Through Tubing Telemetry Cartridge - Ultrawire	7.65	1.69	100.00	
GR	32.82		XHU-003 (11890311) 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	23.10		HCBLM-A (11923474) Halliburton HCBLM Tool	9.38	2.75	116.00	
WVF3FT	19.37						
TT3FT	19.37						
AMP3FT	19.37						
WVF5FT	17.37						
				CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00
				HAL-CAST-M-ELECT-CAST-M-Elect (11927.573)		2.75	30.00

				CAST M ELECTRONIC				
AccY2	0.00			HAL-CAST-M-3 1/8 SCAN (11488892a) 3 1/8 SCAN CASTM	6.64	3.13	276.00	
AccX2	0.00							
AccY1	0.00							
AccX1	0.00							
SCAN	0.00							
LOCTIM	0.00							
UTCTIM	0.00							
LLMTEN	0.00							
		Dataset: hp_16-5807bw.db: field/well/CAST/MAIN						
		Total length: 38.65 ft						
		Total weight: 580.00 lb						
		O.D.: 3.13 in						

Company	HIGHPOINT RESOURCES				
Well	CRITTER CREEK 16-5807BW				
Field	HEREFORD				
County	WELD	State	CO		
HALLIBURTON		CEMENT BOND LOG			