

HALLIBURTON

CEMENT
BOND LOG

Company		URSA OPERATING COMPANY	
Well	B&V 33A-07-07-95		
Field	WILDCAT		
County	GARFIELD	State	CO

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Well	B&V 33A-07-07-95		
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API No.:	05045228470000	Serv #:	903920044	Other Services
Location:	SHL: 1975' FSL & 643' FWL BHL: 2562' FSL & 1996' FWL			

Permanent Datum		Elevation 5084'		Elevation	
Log Measured From	KB	17	Ft. above perm. datum	KB.	5101'
Drilling Measured From	KB			D.F.	5101'
				G.L.	5084'

Date @ Time Logged	3/27/2017 @ 21:00	Type Fluid in Hole	FRESH WATER
Run No.	ONE	Density of Fluid	8.4#
Depth - Driller	6417'	Fluid Level	SURFACE
Depth - Logger	7005'	Cement Top Est. Logged	1900'
Bottom - Logged Interval	6970'	Equipment / Location	11703208 / BRIGHTON
Top - Log Interval	1904'	Recorded by	J.SCHMIDT
Max. Recorded Temp.	198 F	Witnessed by	L. GEIGER

CEMENTING DATA		Protection		Production		Liner	
	Surface String		String		String		

Date / Time Cemented							
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

<<< 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

TOOLS WERE RAN IN 4.5" 11.6# CASING.

RMT RAN IN SIGMA MODE WITH A GENERATOR VOLTAGE OF 86V.

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES

Service Ticket No.	903920044	API No.	05045228470000	PGM Ver	WARRIOR 8.0
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The Well Name, Location, Borehole Description, and / or Cementing Data Furnished by Client

EQUIPMENT DATA							
GAMMA		CBL		RMT			
Run No.	ONE	Run No.	ONE	Run No.	ONE	Run No.	
Serial No.	12159411	Serial No.	11836468	Serial No.	12376244	Serial No.	
Model No.	TTTCU-002	Model No.	CBL-M	Model No.	RMTi	Model No.	
Diameter	1.69"	Diameter	2.75"	Diameter	2.75"	Diameter	

LOGGING DATA

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

ONE	TD	SURFACE CSG	14.7 PSI	20			
	GAMMA		CBL		RMTI		
Pass	Scale		Scale		Scale		Scale
No.	L	R	L	R	L	R	L L
ONE	0	150	0	100	60	0	
DIRECTIONAL INFORMATION							
Maximum Deviation			deg. @		KOP		

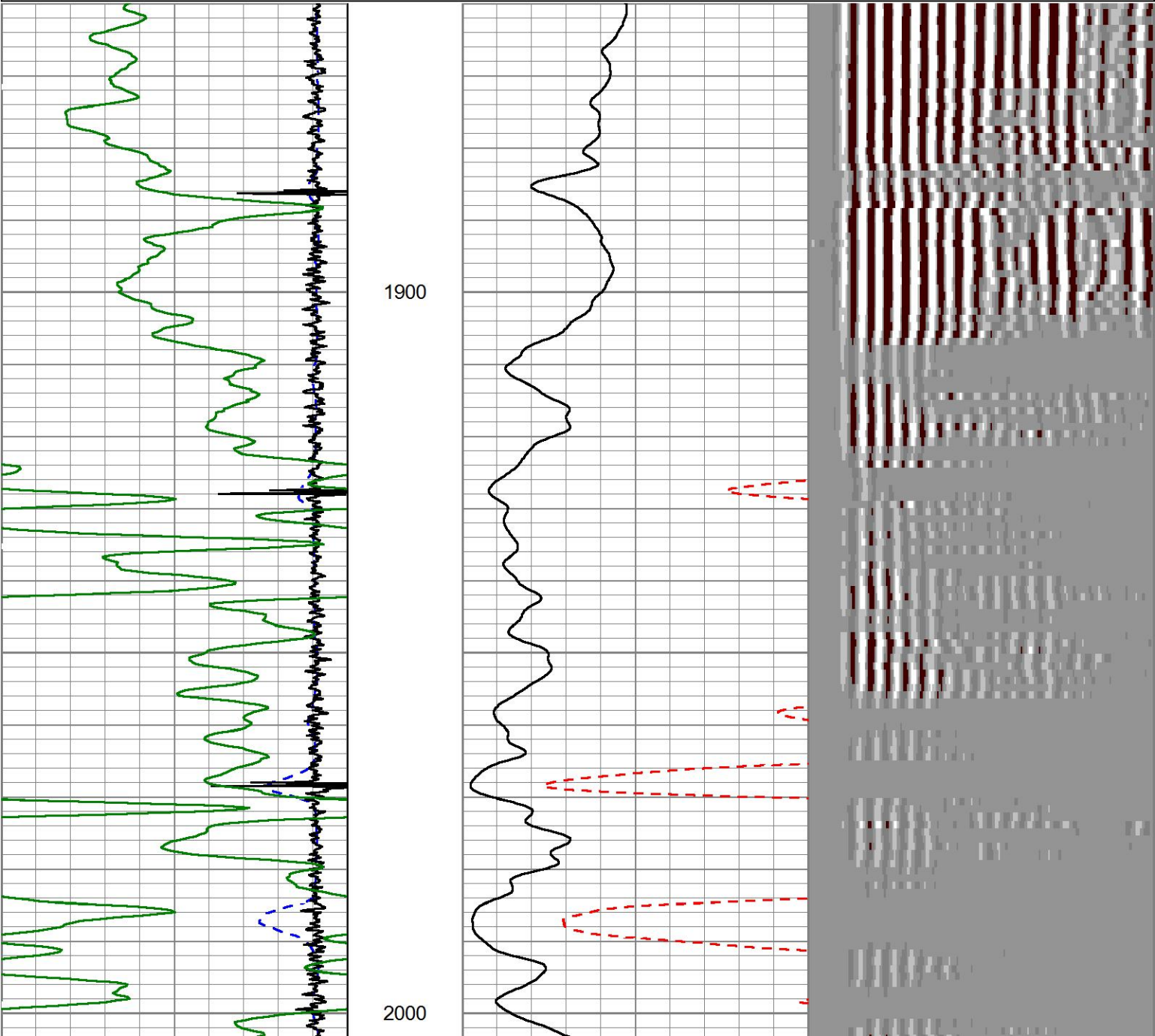
HALLIBURTON

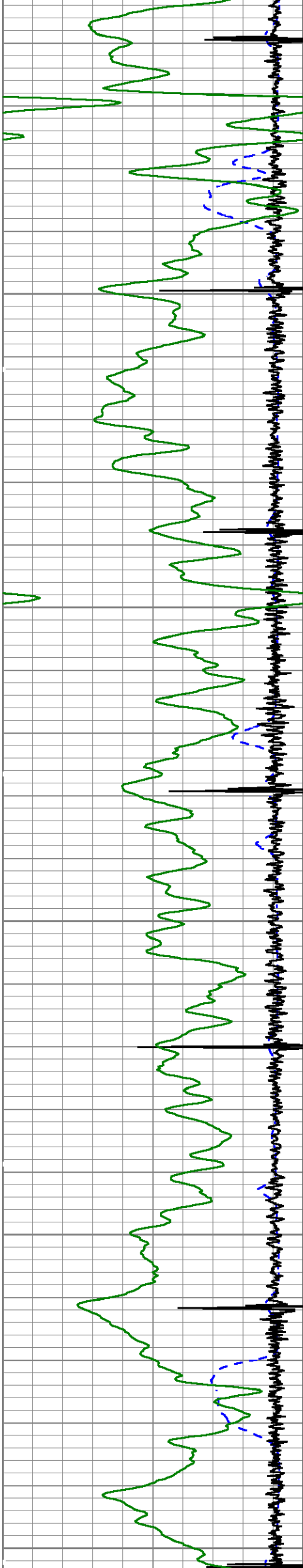
MAIN PASS

5" = 100'

Database File g:\ursa\b&v 33a-07-07-95\33a.db
Dataset Pathname MAIN
Presentation Format ICBL_M~1
Dataset Creation Mon Mar 27 20:53:19 2017
Charted by Depth in Feet scaled 1:240

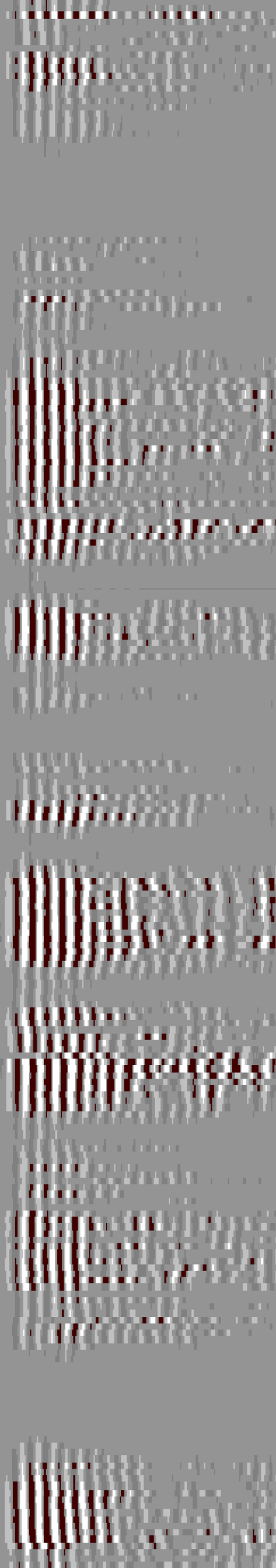
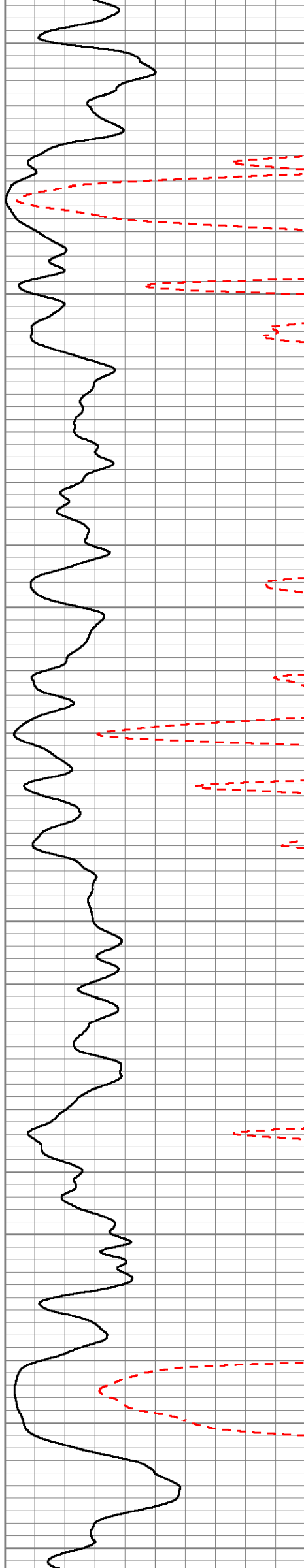
420	TRAVEL TIME (usec)	220	LTEN	0	AMP AMPLITUDE (mV)	10	200	MSG	1060
-3500	Collar Locator	350	0 (lb3000	0	AMPLITUDE (mV)	100			
0	Gamma Ray (GAPI)	150							

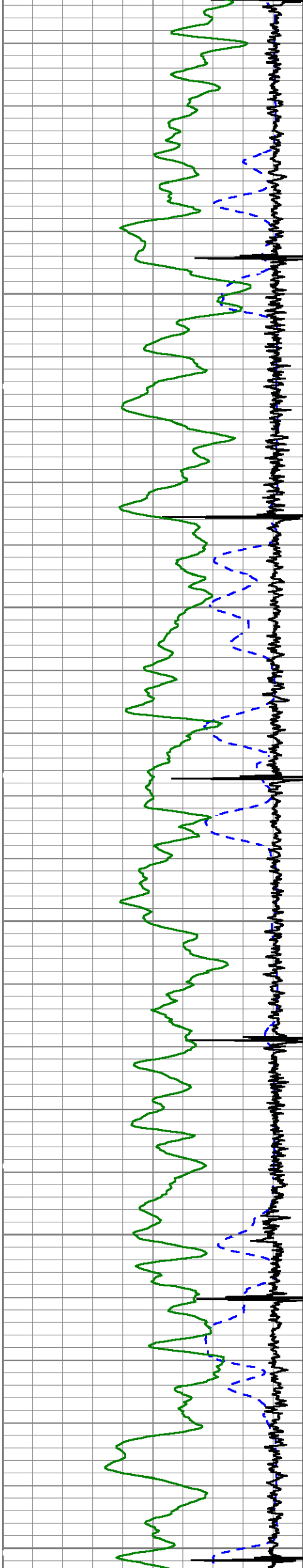




2100

2200

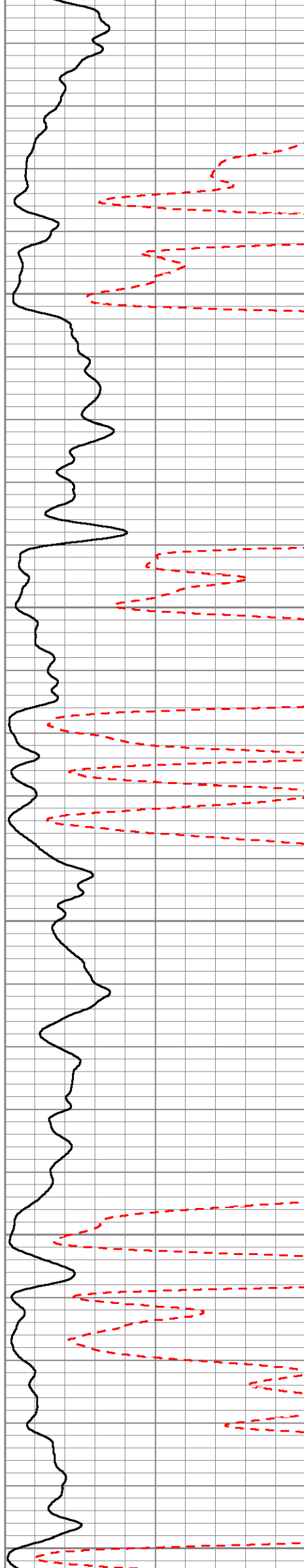


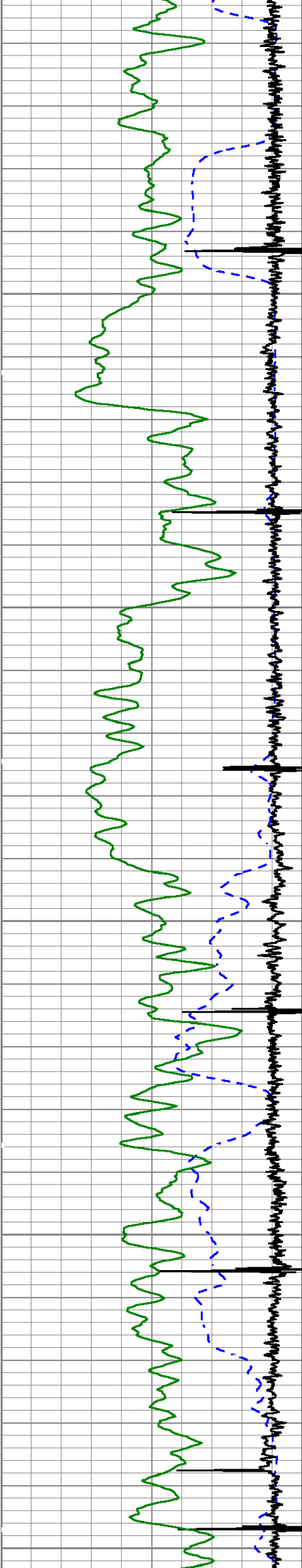


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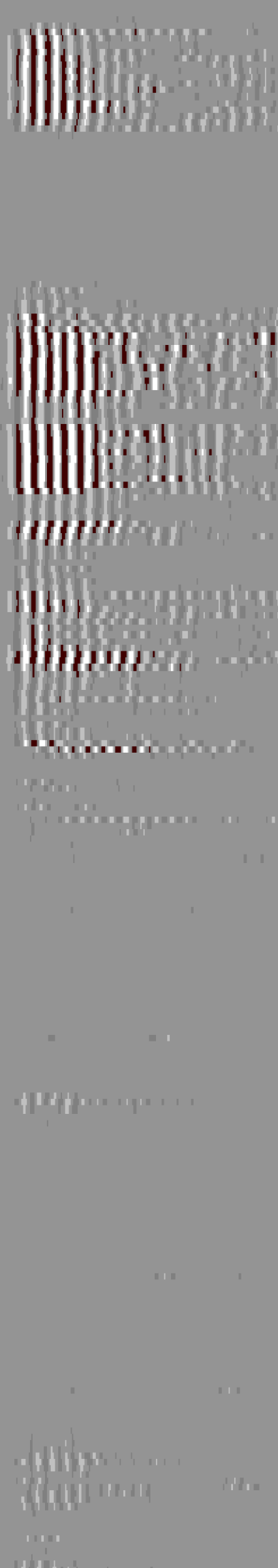
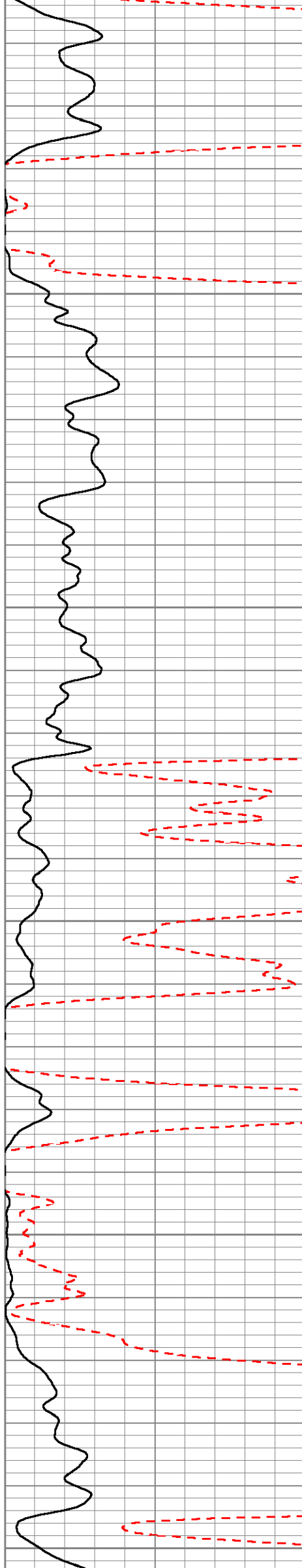
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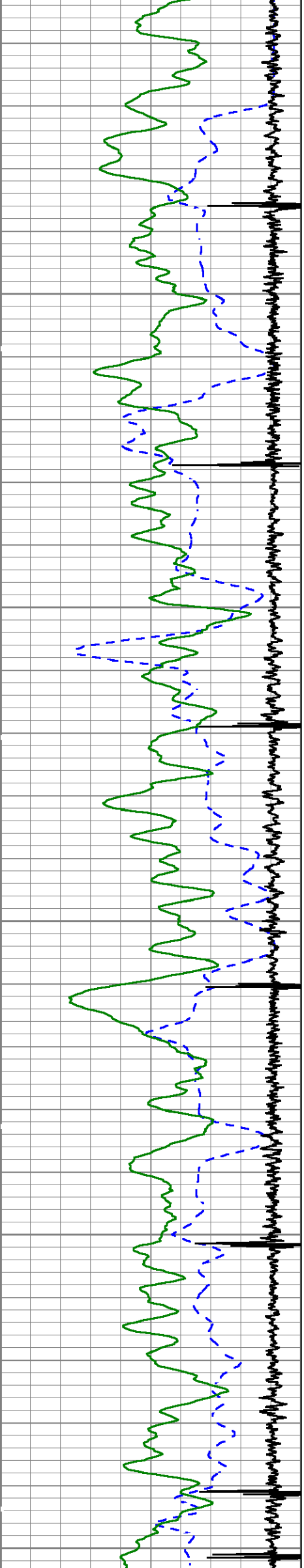




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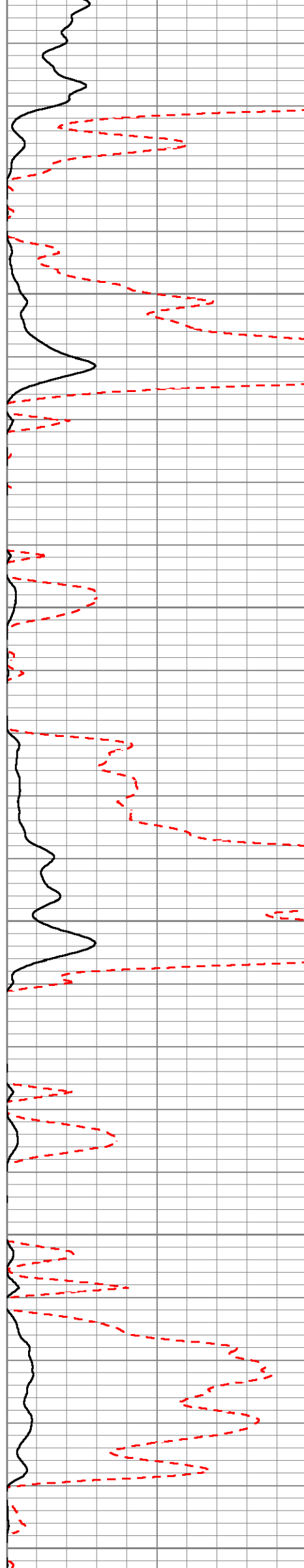


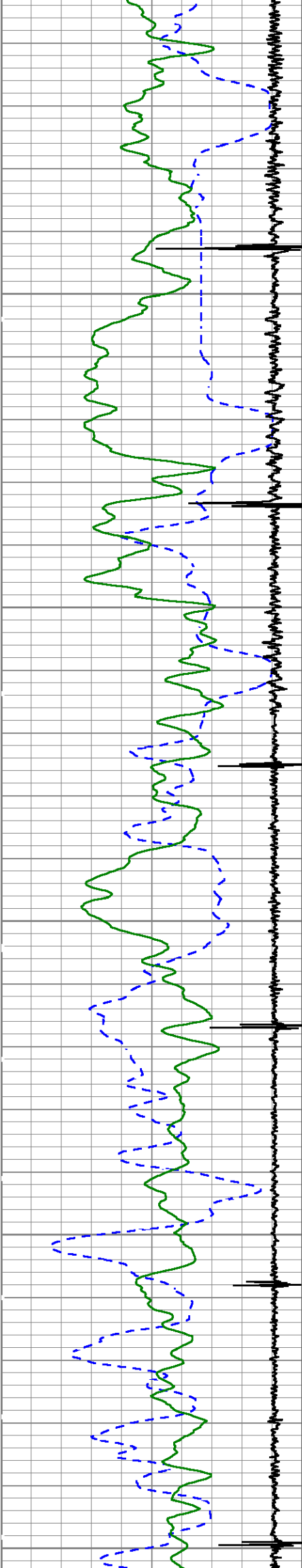


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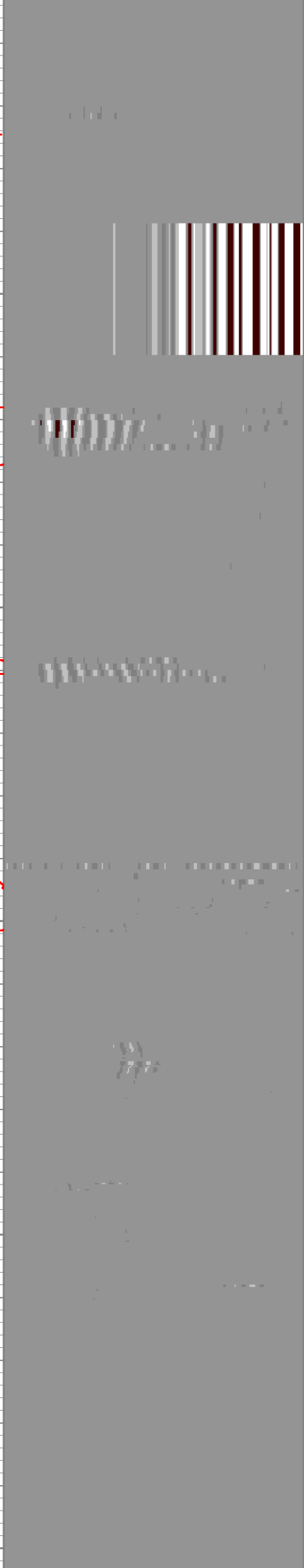
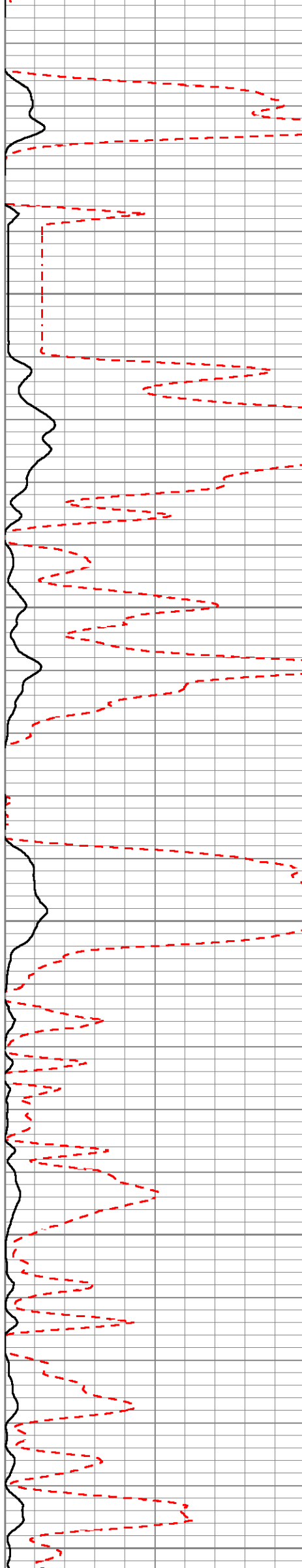
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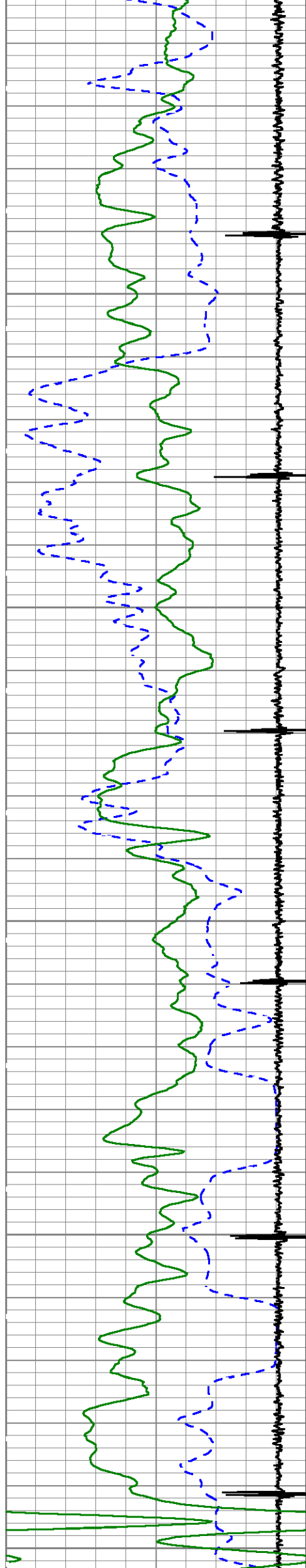




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3200

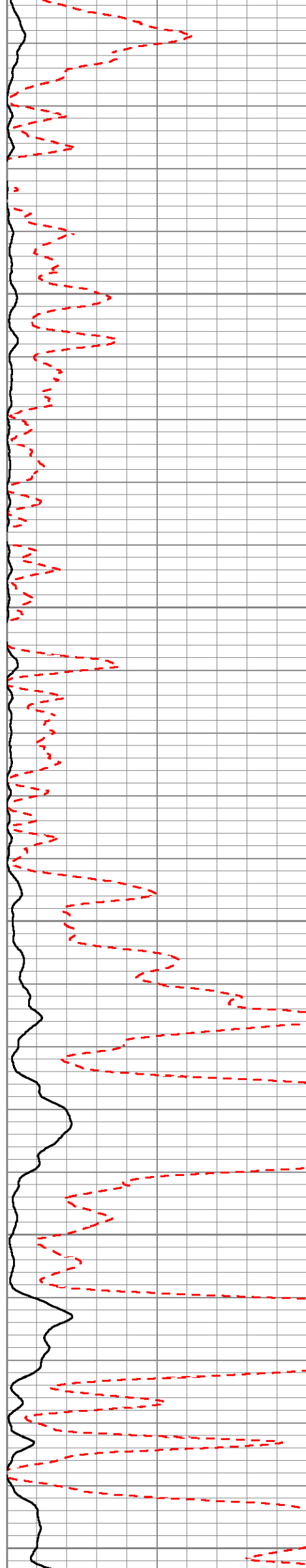


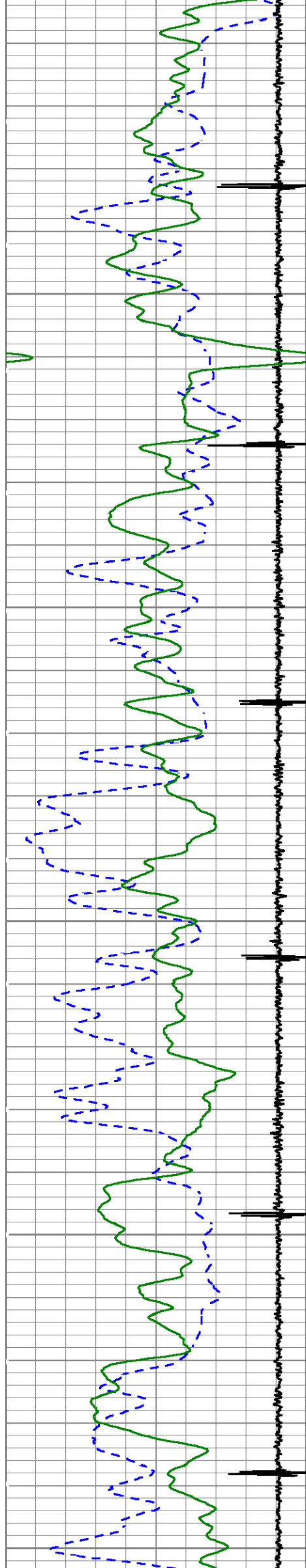


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3400

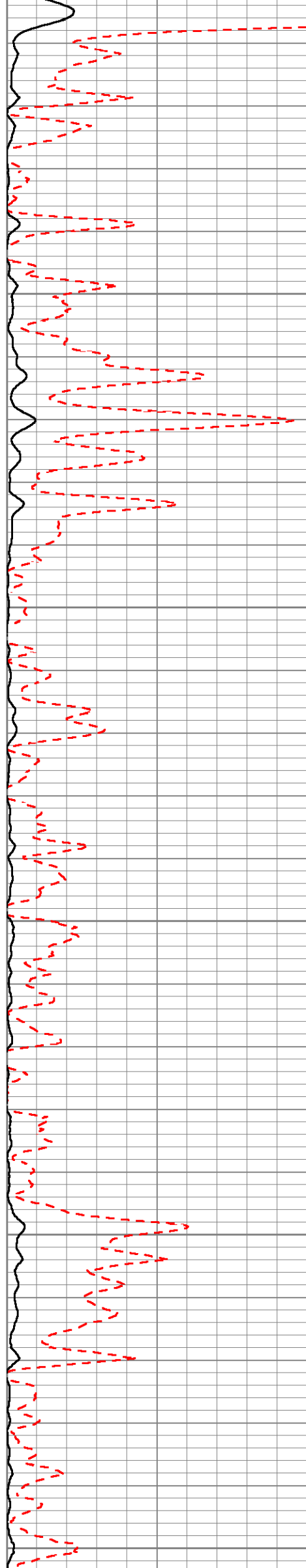
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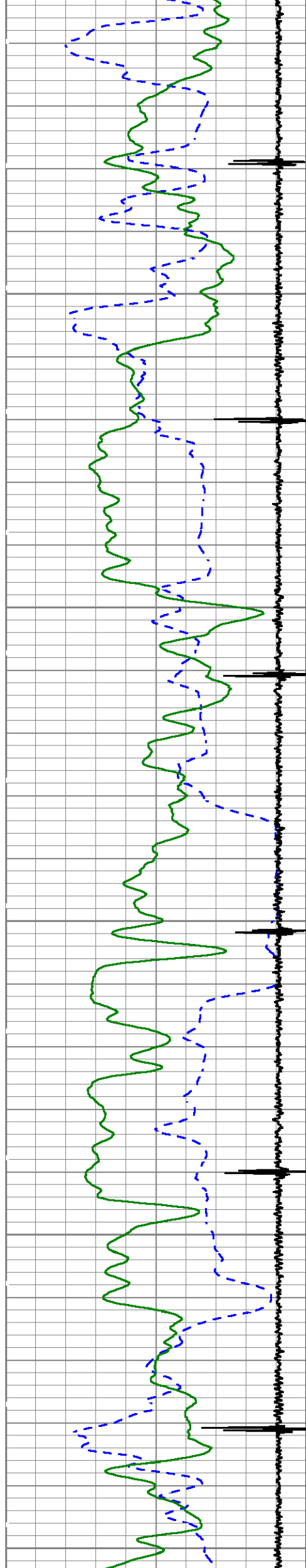




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3700

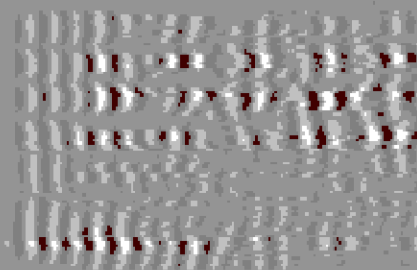
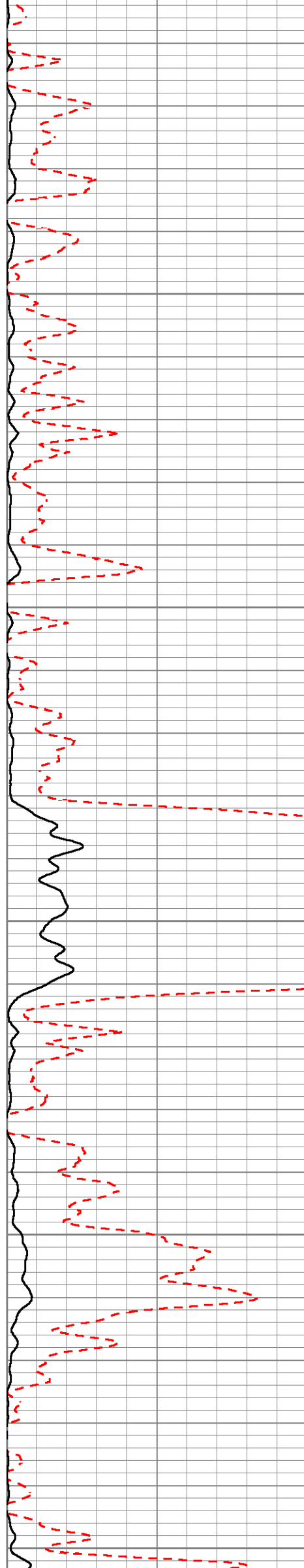


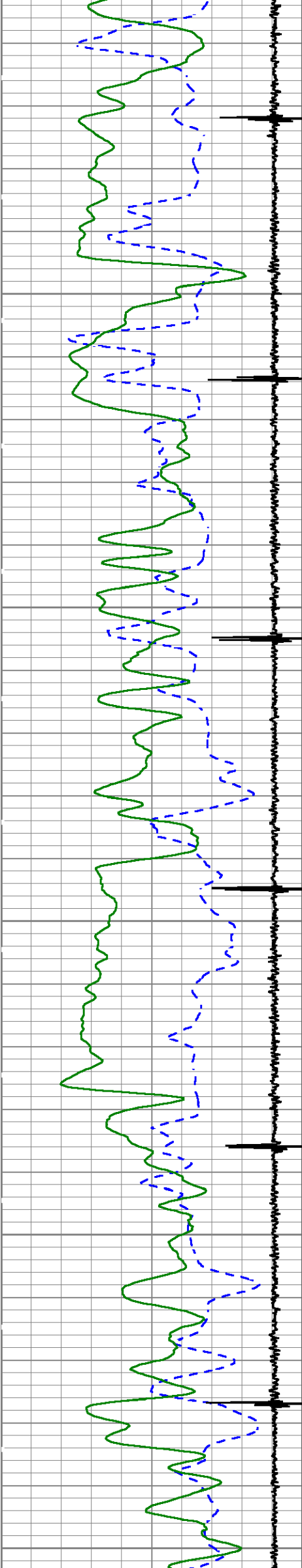


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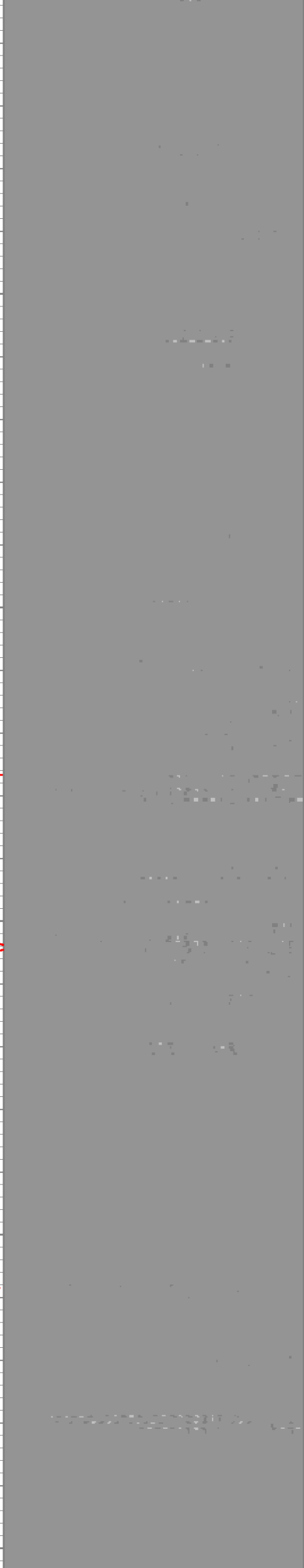
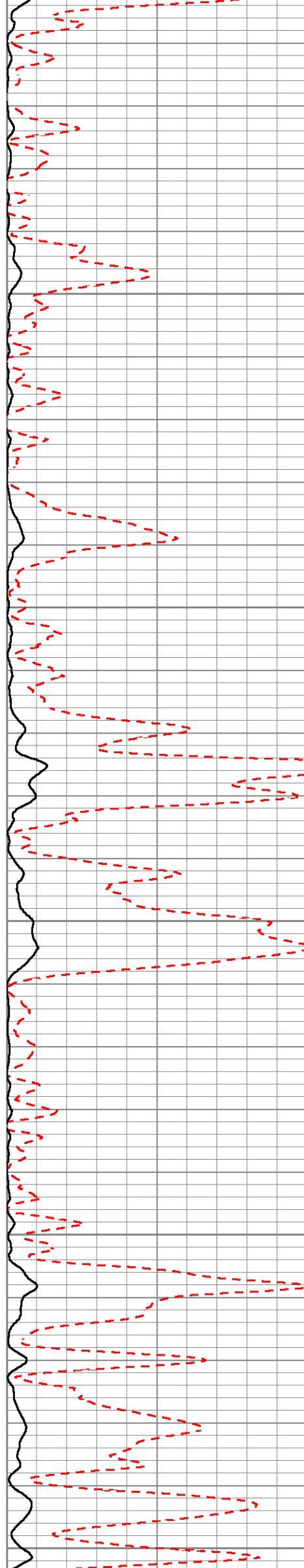
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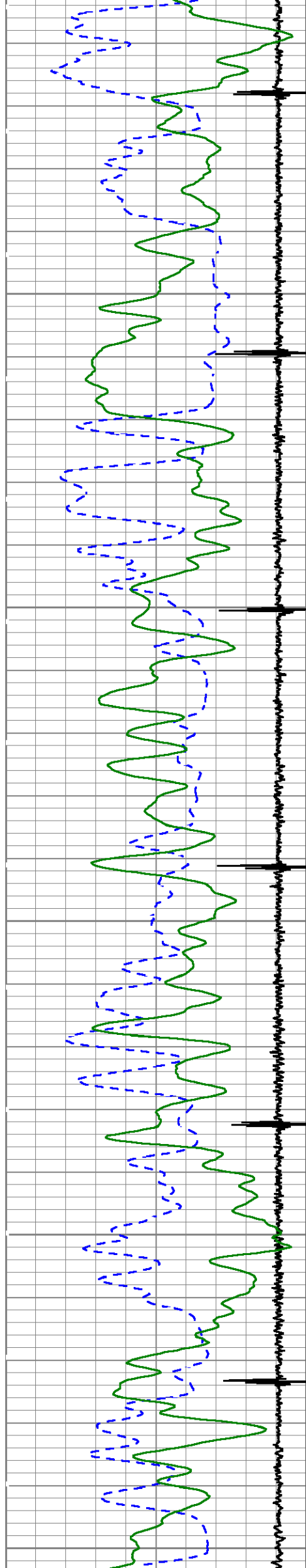




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4200

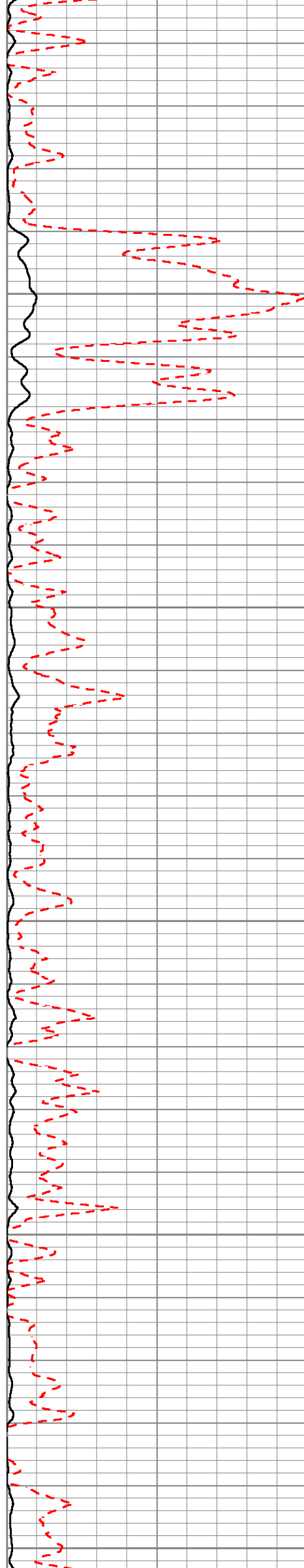


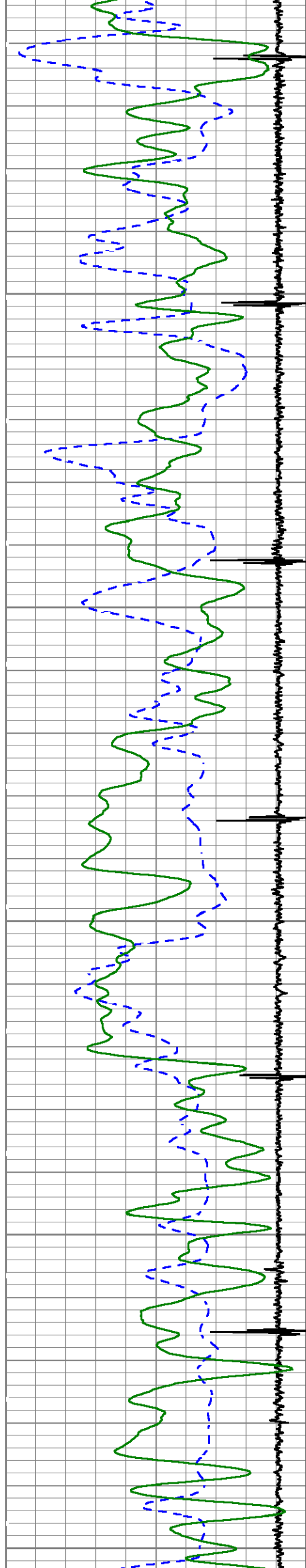


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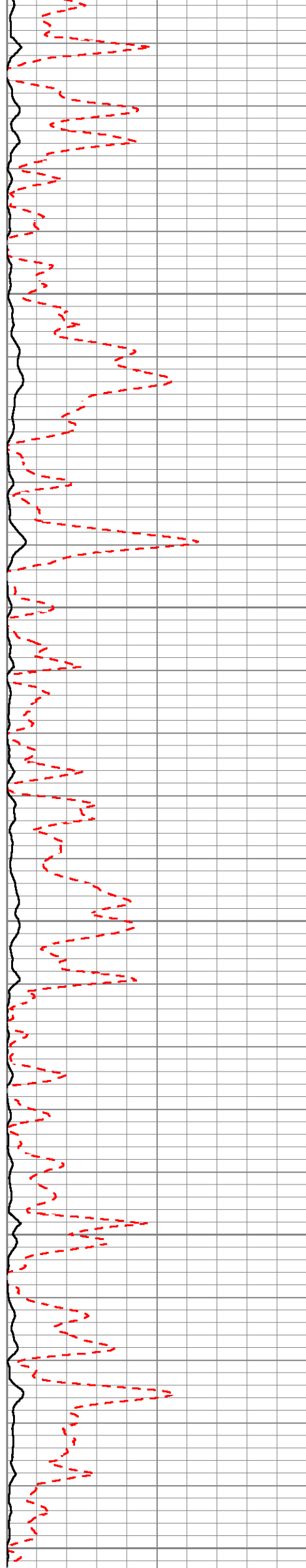
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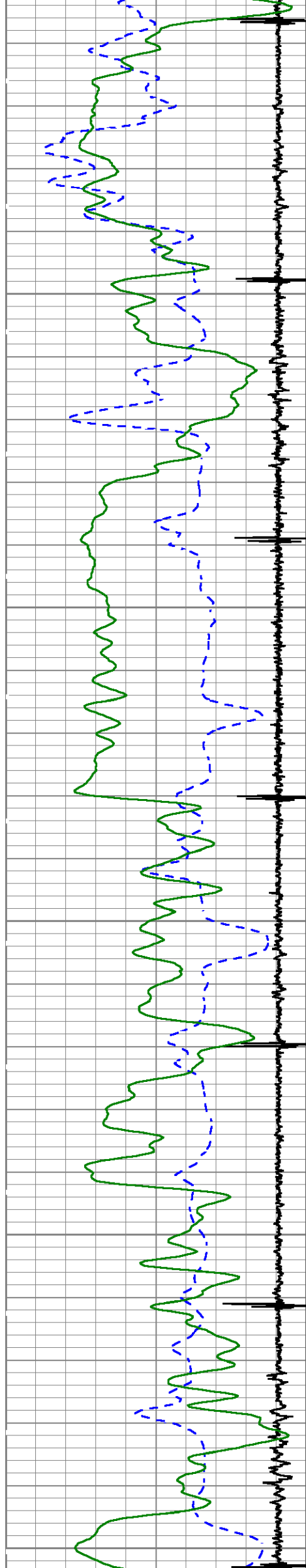




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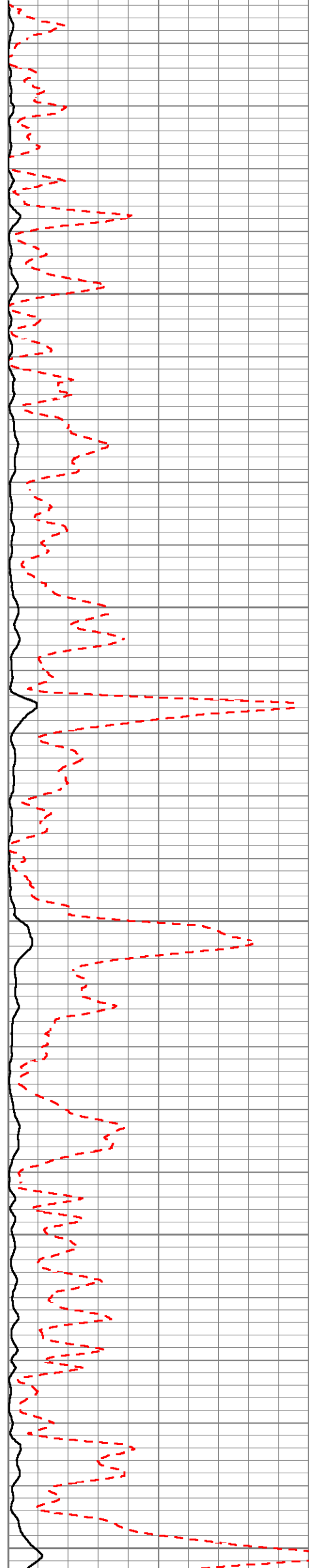


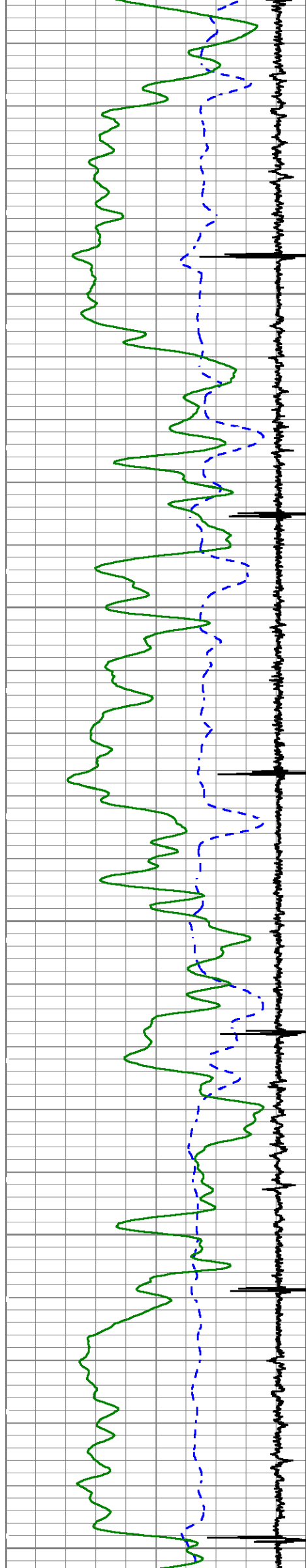


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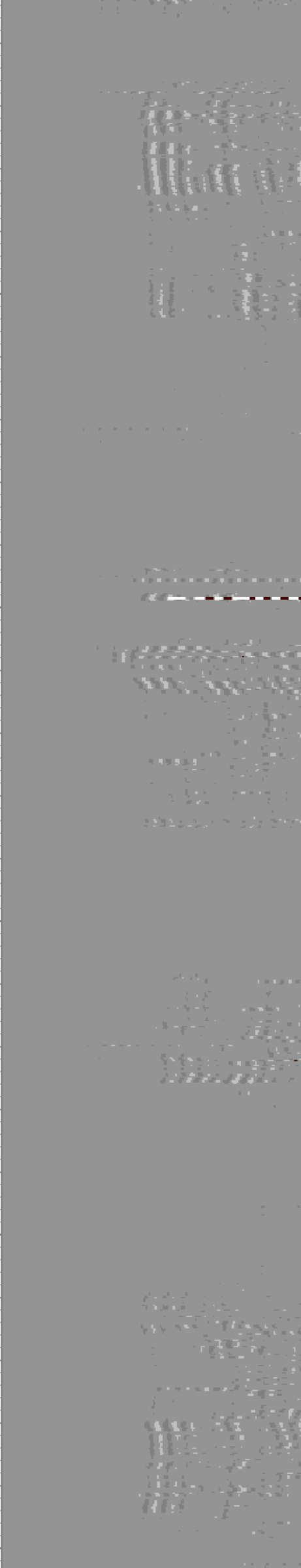
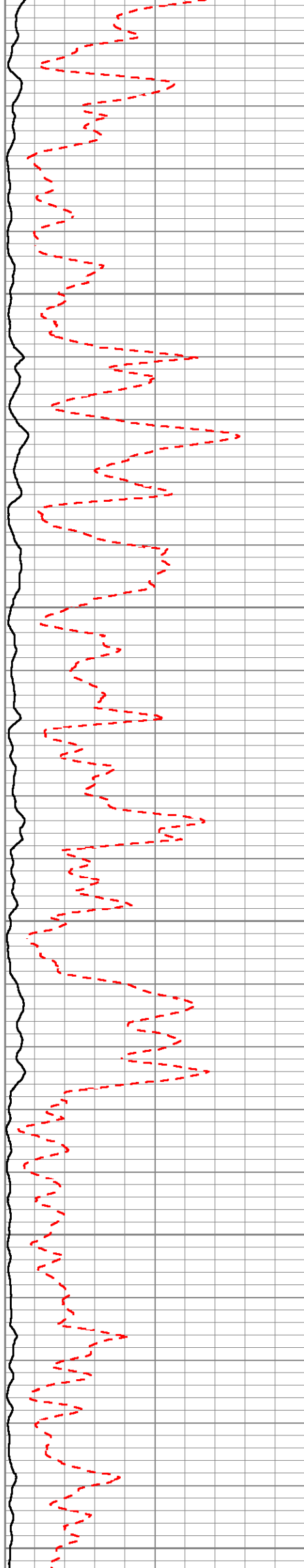
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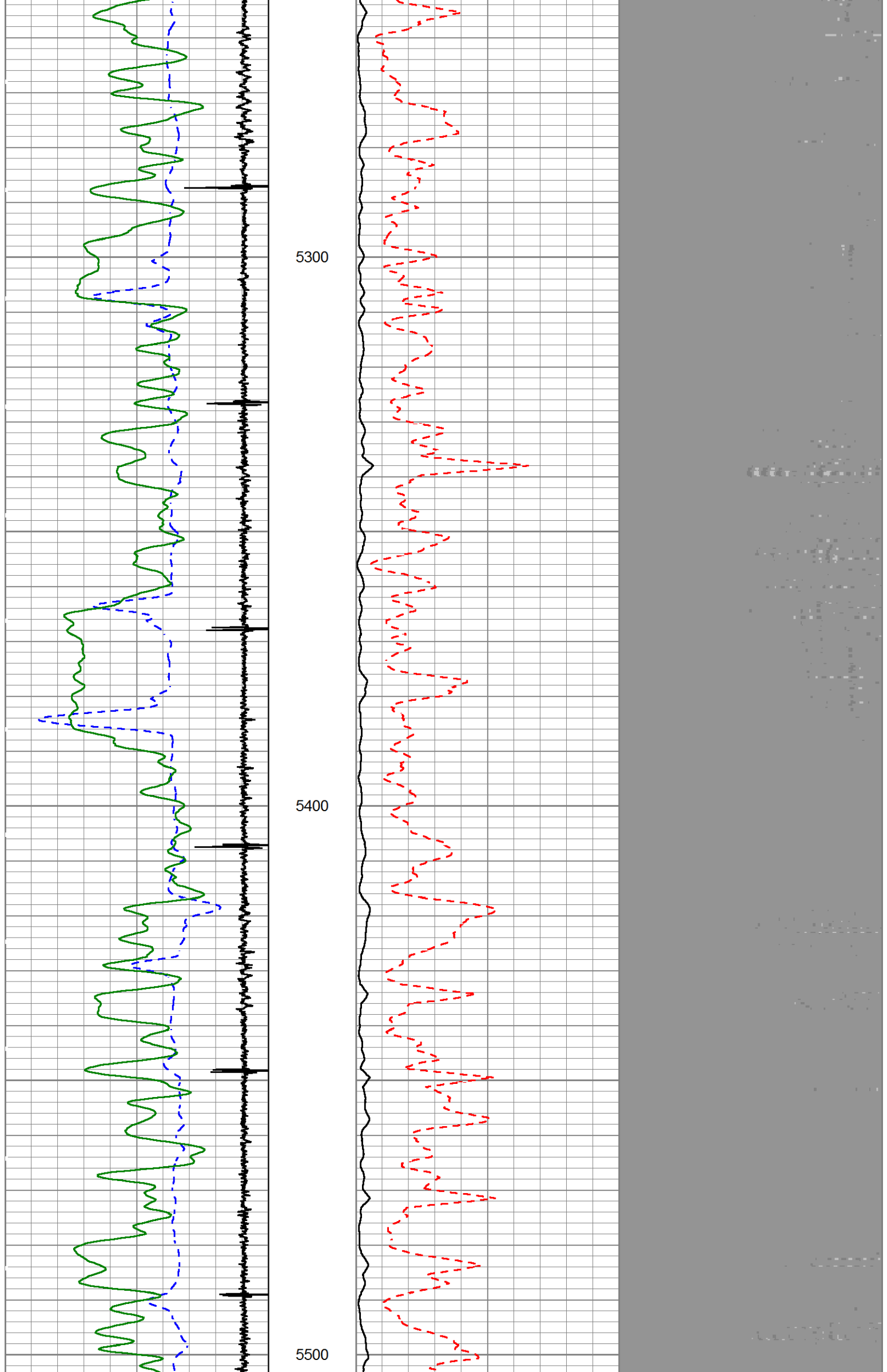


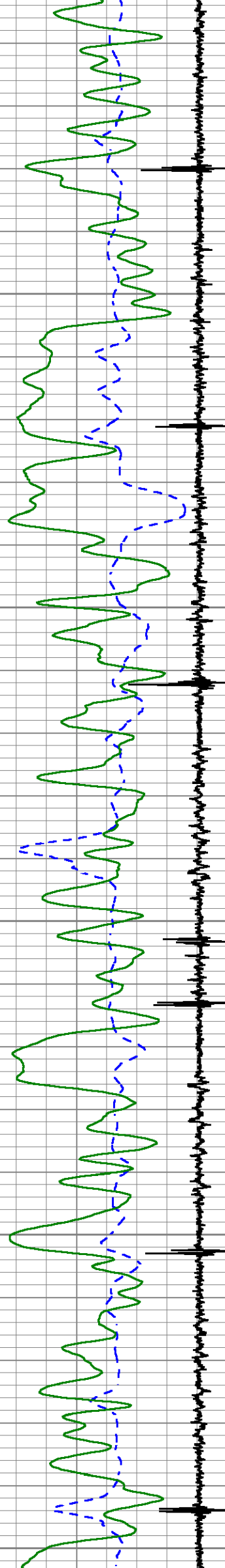


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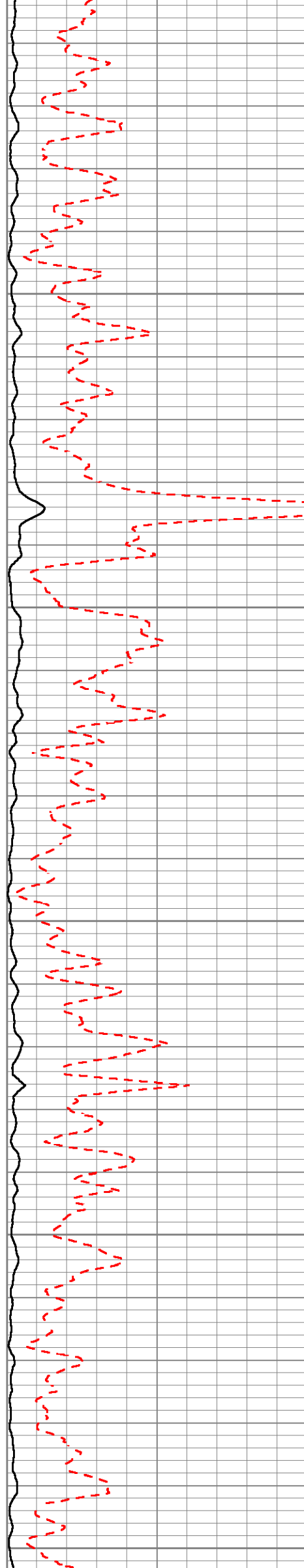


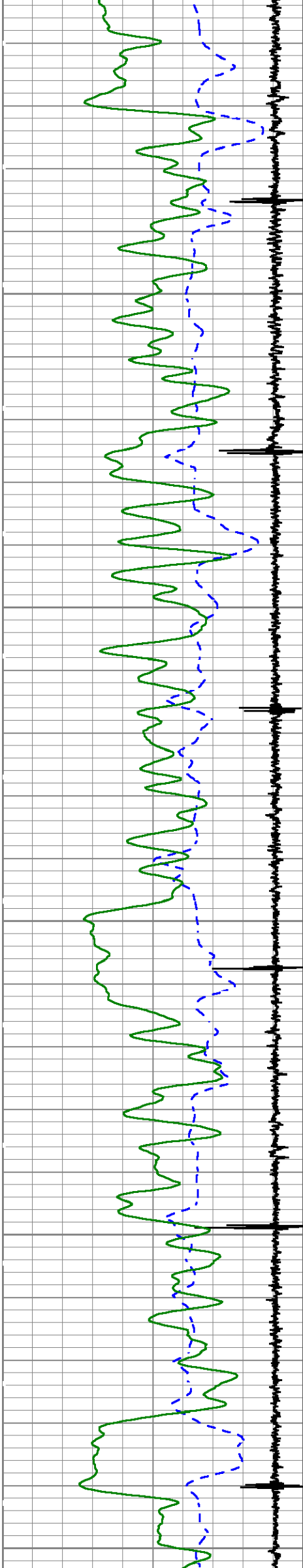




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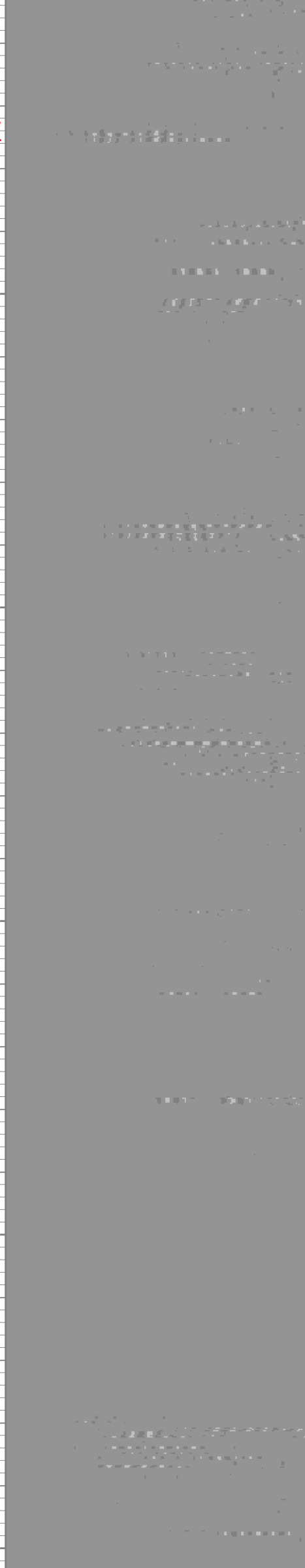
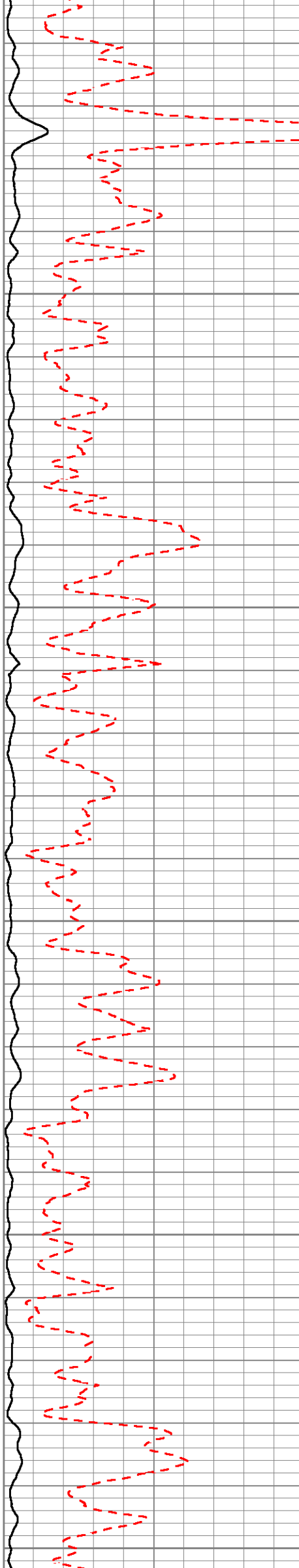


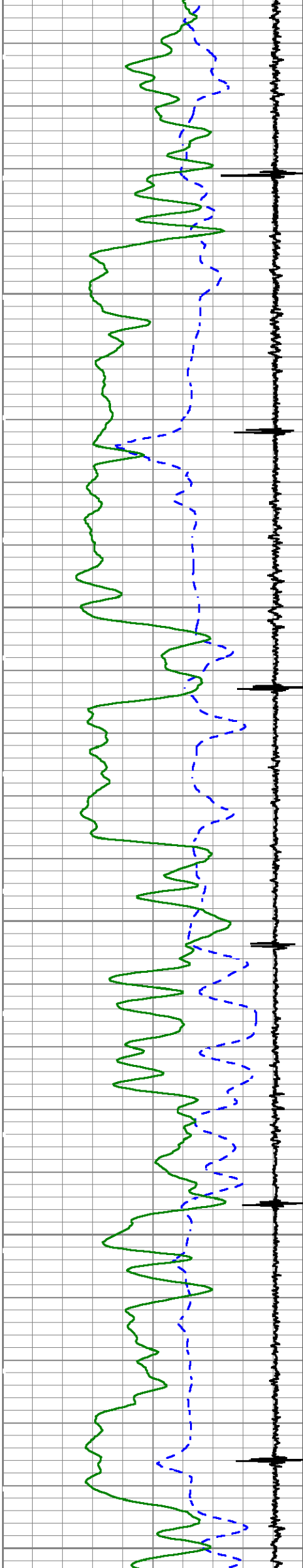


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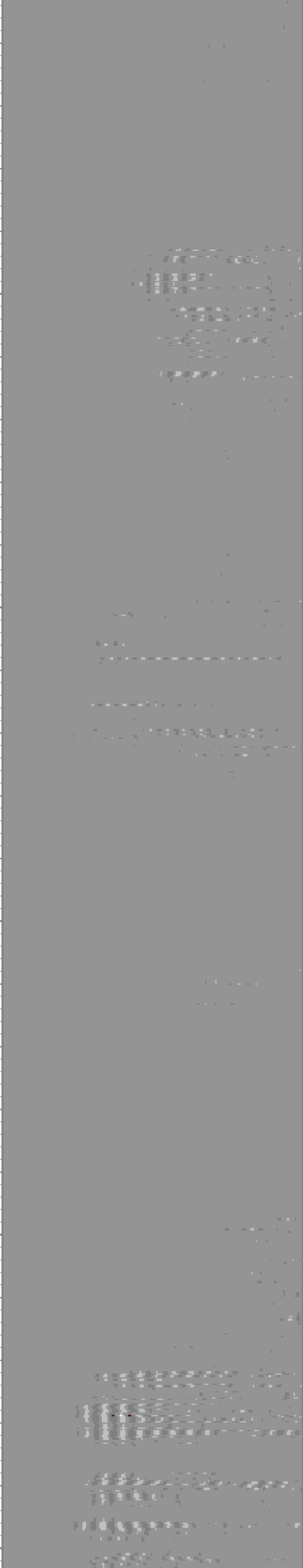
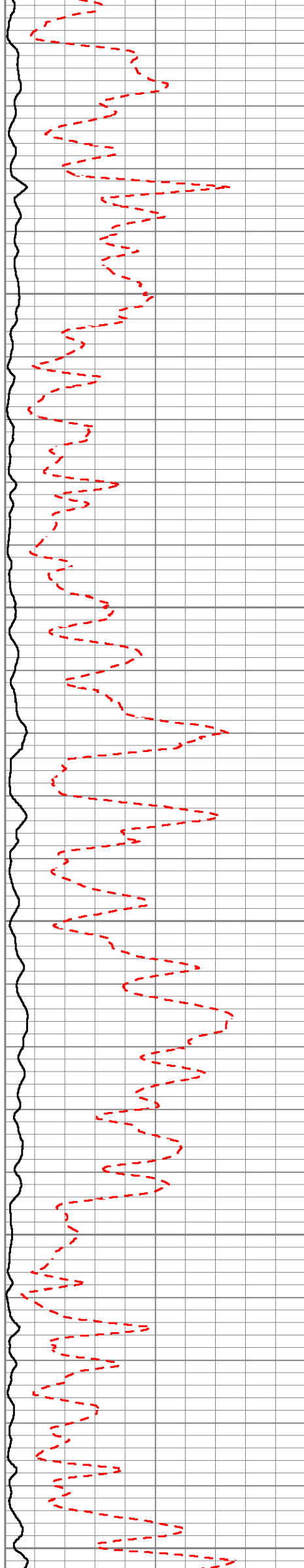
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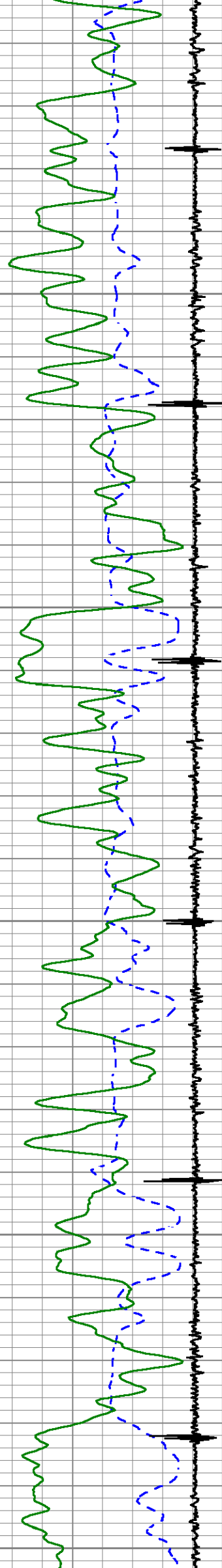




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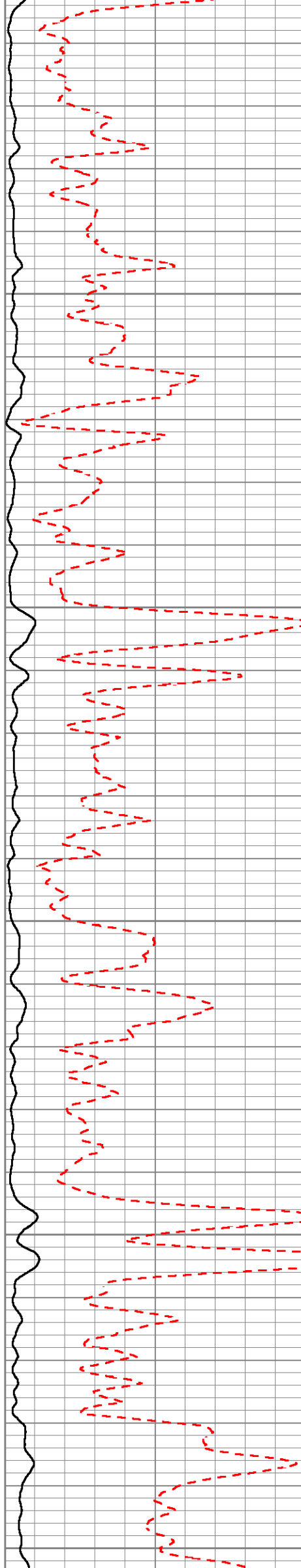


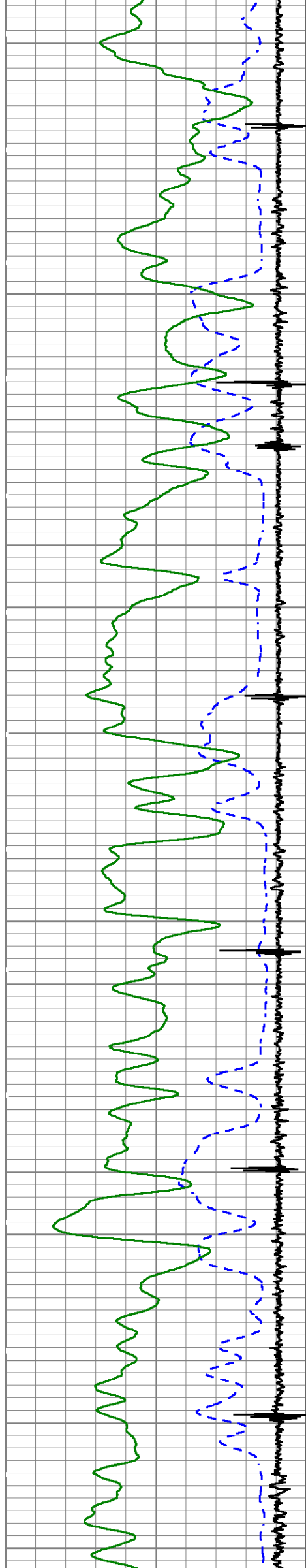


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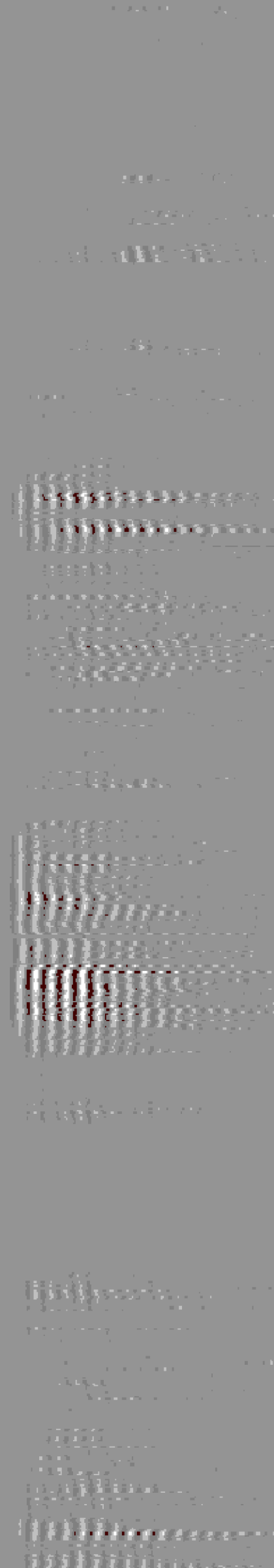
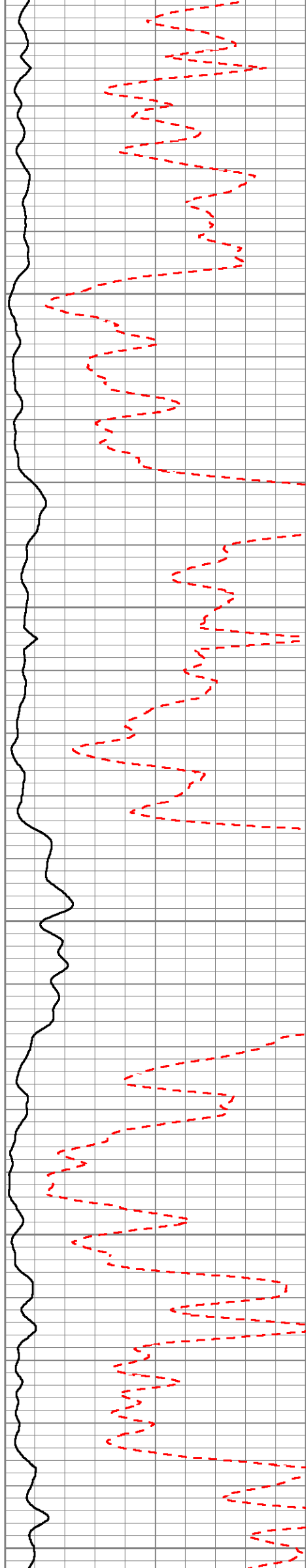
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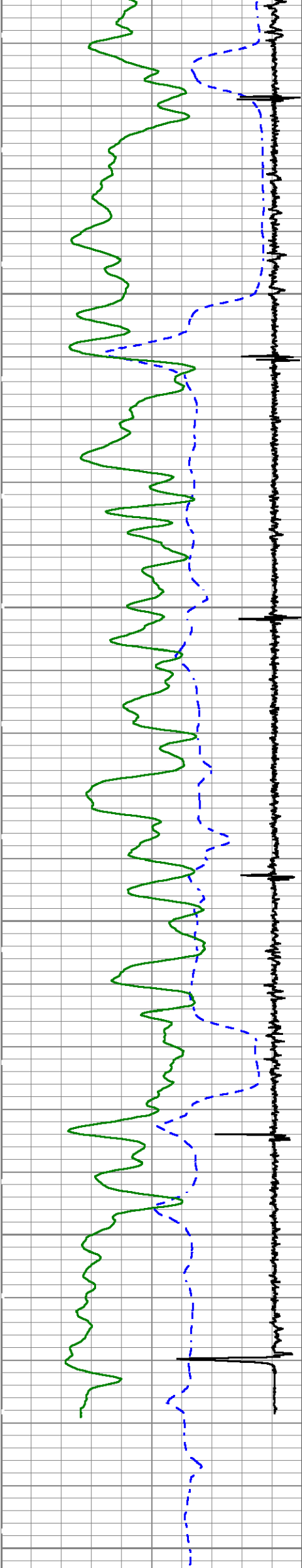




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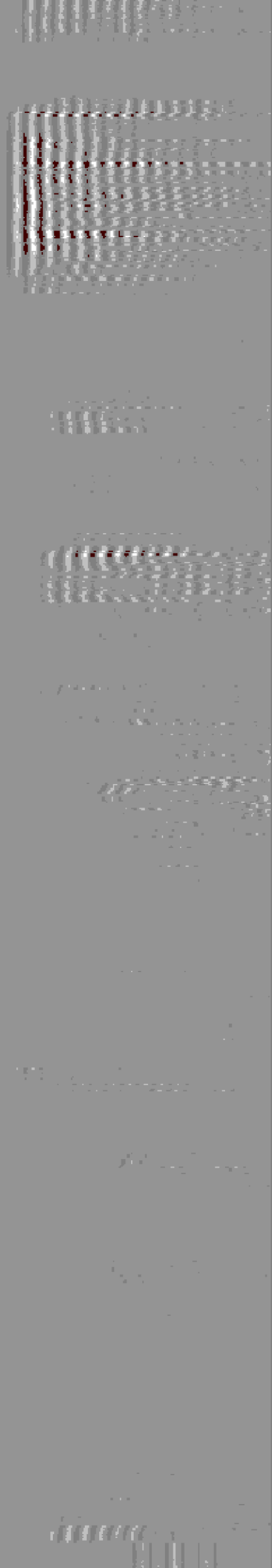
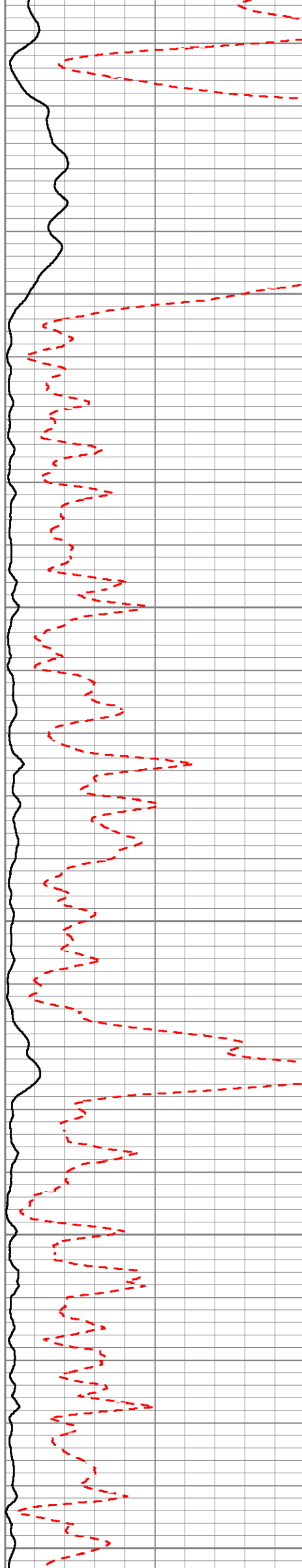


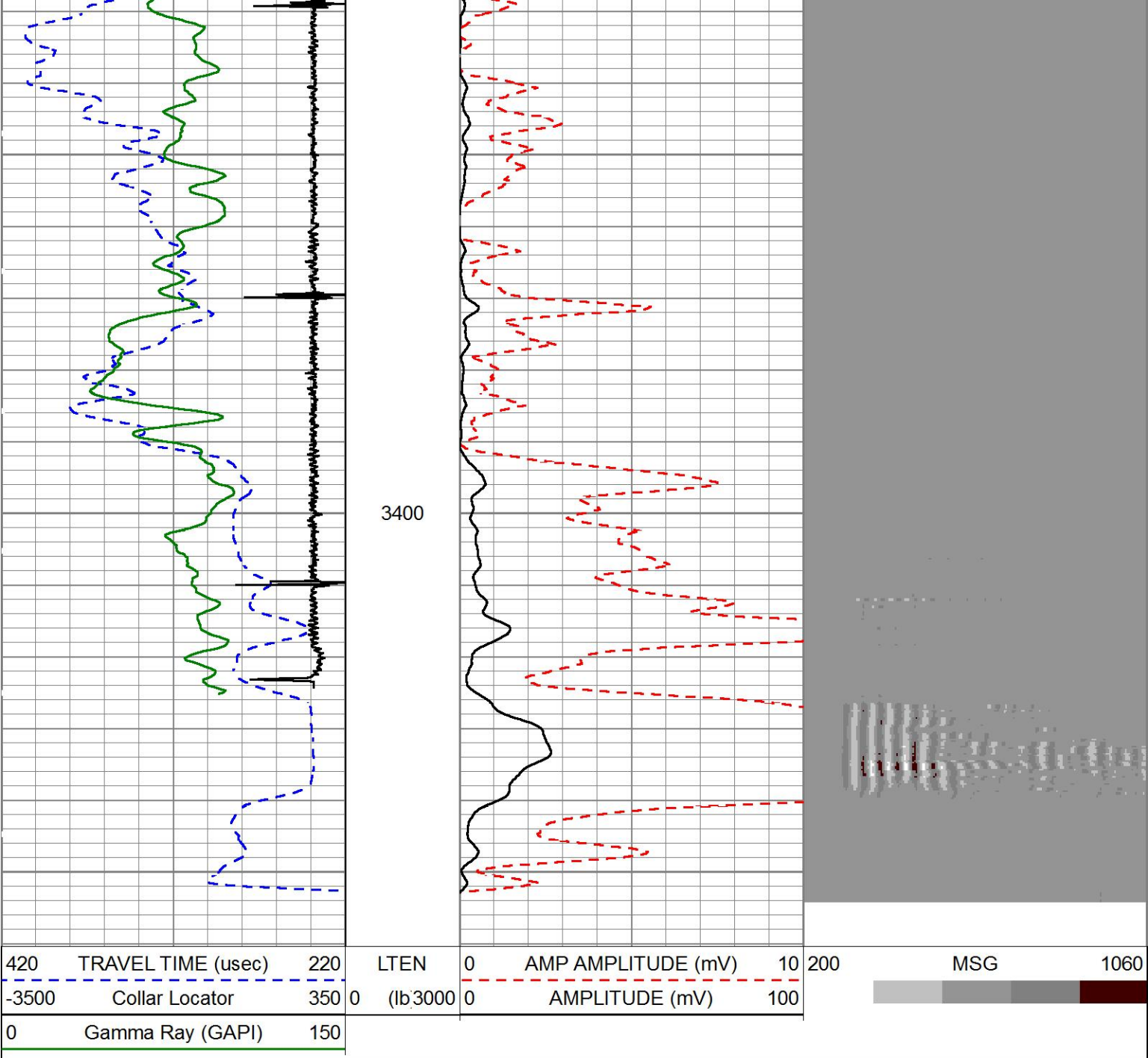


6800

6900

7000





REPEAT PASS

HALLIBURTON

5" = 100'



Log Variables

Database: \ursa\b&v 33a-07-07-95\33a.db
Dataset field/well/run1/MAIN/_vars_

Top - Bottom

BHSAL1	BHSAL2	BHTEMP_Src	BITSIZE	BORSAL	BOTTEMP	CASED?	CASEOD
1	0	TEMP	in 7.875	kppm 150	degF 200	Yes	in 4.5
CASETHCK	CASEWGHT	LIRISHFTF	LIRISHFTN	LTH	MAXAMPL	MINAMPL	MINATTN
in 0.25	lb/ft 11.6	0	0	Sandstone	mV 82	mV 1	db/ft 0.8
MSGGN	MudWgt	PERFS	POROS1	POROS2	PPT	RHO�F	SO
1	lb/gal 8.4	0	1	0	uSec 0	0.25	in 0
SRFTEMP	TDEPTH	UHSGC	USERFTT	ZREF			
degF 50	ft 6500	NONE	uSec/ft 0	MRayl 1.7			

Database File		g:\ursa\b&v 33a-07-07-95\33a.db			
Dataset Pathname		MAIN			
Dataset Creation		Mon Mar 27 20:53:19 2017			
Cement Bond Log Shop Calibration Report					
Serial-Model:		11836468-A			
Calibration Performed:		Sun Mar 26 19:34:08 2017			
Free Pipe Calibration					
TT	Measured	245.6	Units	usec	
Amplitude		408.0		mV	
Log Base Line		19.3		mV	
Calibration References and Gain					
Name	Value		Units		
Pipe O.D.	4.500		in		
Pipe Weight	11.6		lb/ft		
Pipe Ref. Amp.	82.0		mV		
Amp. Gain	0.208				
Gamma Ray Calibration Report					
Type / Serial:		002 / 12159411			
SHOP CALIBRATION		Mon Feb 20 15:54:04 2017			
	Counts/Sec.	Gain	Offset	Jig	Units
Background	27.6				cps
Calibrator	317.4				cps
		1.4943			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	35.86		STNDCH-STND_CH	1.50	1.44	1.00
			1.4375 IN CABLE HEAD			
GR	33.60		TTTCU-002 (12159411) Through Tubing Telemetry Cartridge - Ultrawire	7.65	1.69	37.00

				XHU-003 (000001) Crossover Halliburton 1553 to Ultrawire	1.58	1.69	7.00
RmtTFGT	22.95						
RmtTNGT	22.45			RMTI-A (12376244) Halliburton RMTI Tool	14.00	2.13	77.00
RmtFP5V	14.70			X-OVER-SondexxGo Sondex Box x Go Pin Cross Over	0.31	1.69	1.00
RmtNFwvMcsPI	14.70			CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00
RmtCommFWa	14.70						
Temp	9.57						
TT3FT	7.32			HCBLM-A (11836468) Halliburton HCBLM Tool	9.38	2.75	116.00
AMP3FT	7.32						
WVF5FT	6.36						
WVF3FT	2.84			CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00
LLMTEN	0.00			AUH-001 (11072111) Adaptor Ultrawire/Halliburton	0.38	1.69	3.00
				BUL-001 (000001) Bullnose	0.30	1.69	1.50
Dataset: 33a.db: field/well/run1/MAIN Total length: 39.43 ft Total weight: 293.50 lb O.D.: 3.13 in							

Company	URSA OPERATING COMPANY				
Well	B&V 33A-07-07-95				
Field	WILDCAT				
County	GARFIELD		State	CO	
HALLIBURTON	CEMENT BOND LOG				