

HALLIBURTON

CEMENT BOND LOG

Company URSA OPERATING COMPANY							
Well B&V 23C-07-07-95							
Field WILDCAT							
County GARFIELD State CO							
API No.: 05045227070000 Serv #: 903923007 Location: SHL: 1952' FSL & 577 FWL BHL: 1733' FSL & 1900 FWL						Other Services	
Sec: 7 Twp: 7S Rge: 9SW						JB GR RMTI	
Permanent Datum							
Log Measured From KB , 17 Ft. above perm. datum				Elevation 5084'			
Drilling Measured From KB				K.B. 5101' D.F. 5101' G.L. 5084'			
Date @ Time Logged	3/26/2017 @ 03:00			Type Fluid in Hole	FRESH WATER		
Run No.	ONE			Density of Fluid	8.4#		
Depth - Driller	6358'			Fluid Level	SURFACE		
Depth - Logger	6414'			Cement Top Est. Logged	1786'		
Bottom - Logged Interval	6381'			Equipment / Location	11703208 / BRIGHTON		
Top - Log Interval	1777'			Recorded by	J.SCHMIDT		
Max. Recorded Temp.	198 F			Witnessed by	L. GEIGER		
CEMENTING DATA				Surface	Protection	Production	Liner
				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							
Run Number	Bit	From	To	Size	Casing & Tubing Record		
					Weight	From	To

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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

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.	903923007	API No.	05045227070000	PGM Ver	WARRIOR 8.0
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
Serial No.	12159411	Serial No.	11836468	Serial No.	12376244
Model No.	TTTCU-002	Model No.	CBL-M	Model No.	RMTi
Diameter	1.69"	Diameter	2.75"	Diameter	2.75"
LOGGING DATA					
General Data					
Pass	Depths		Well Head	Speed	Logging Run Comments
No	From	To	Pressure	Ft/Min	

No.	TD	SURFACE CSG	14.7 PSI	20			
ONE							
	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			

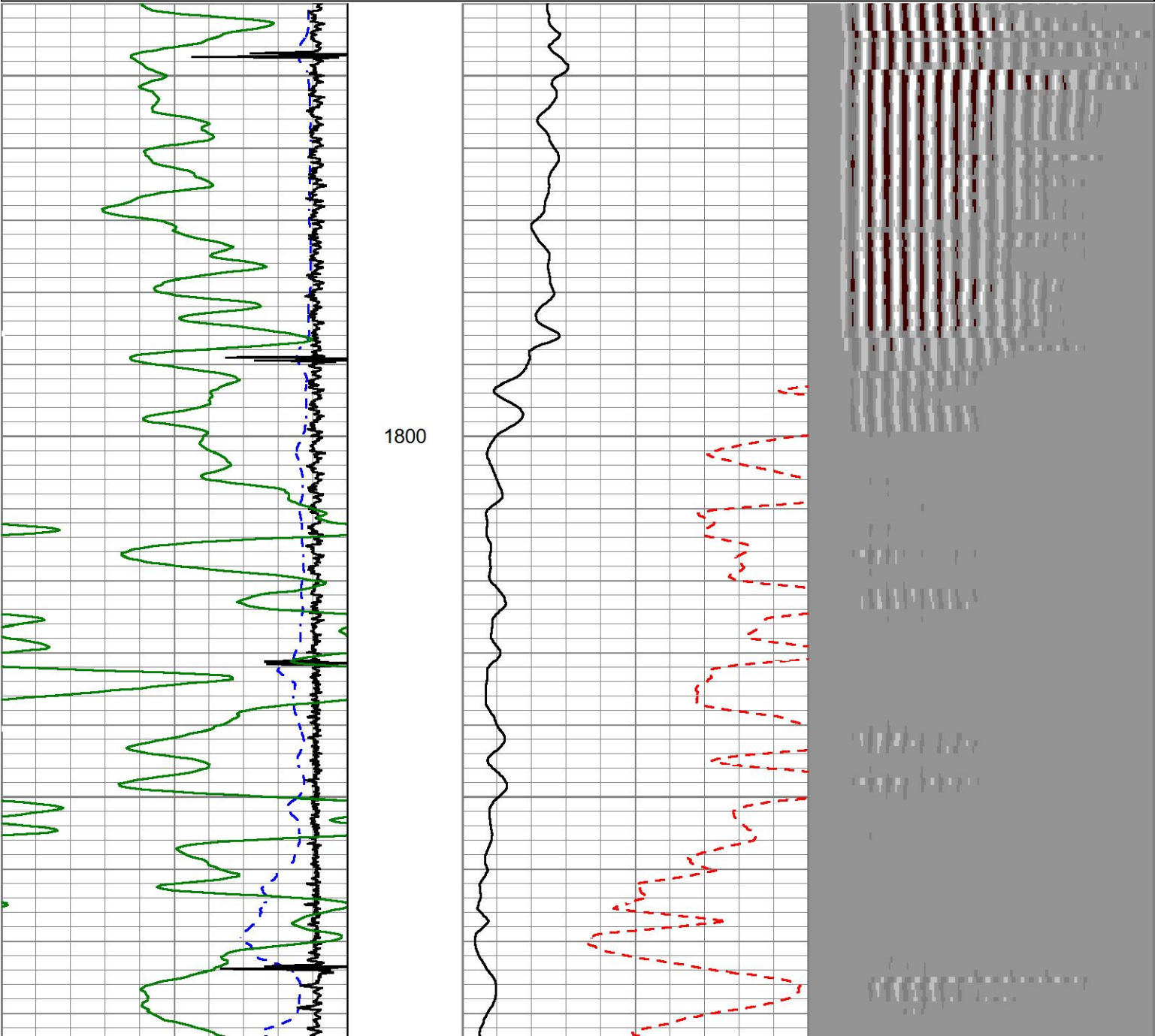
MAIN PASS

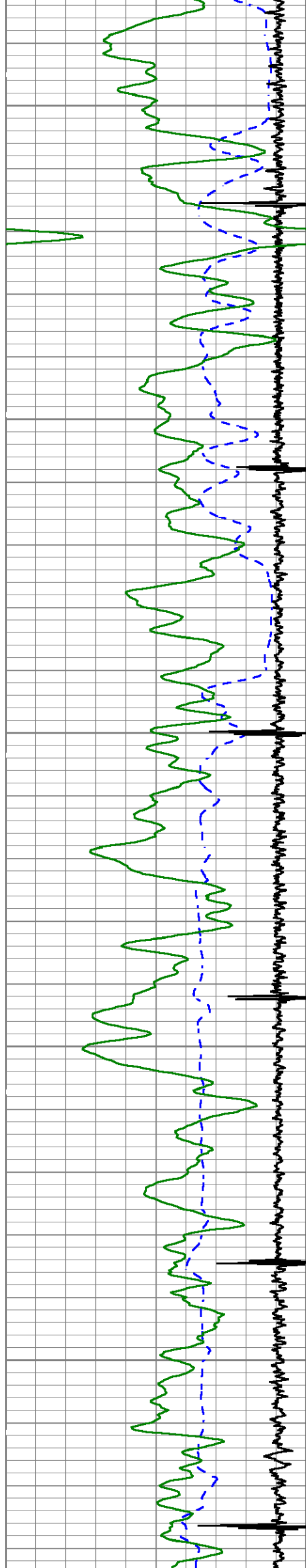
HALLIBURTON

5" = 100'

Database File f:\ursa\b&v 23c-07-07-95\23c.db
Dataset Pathname MAIN
Presentation Format ICBL_M~1
Dataset Creation Sun Mar 26 04:10:20 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	(lb)3000	0	AMPLITUDE (mV)	100		
0	Gamma Ray (GAPI)	150							

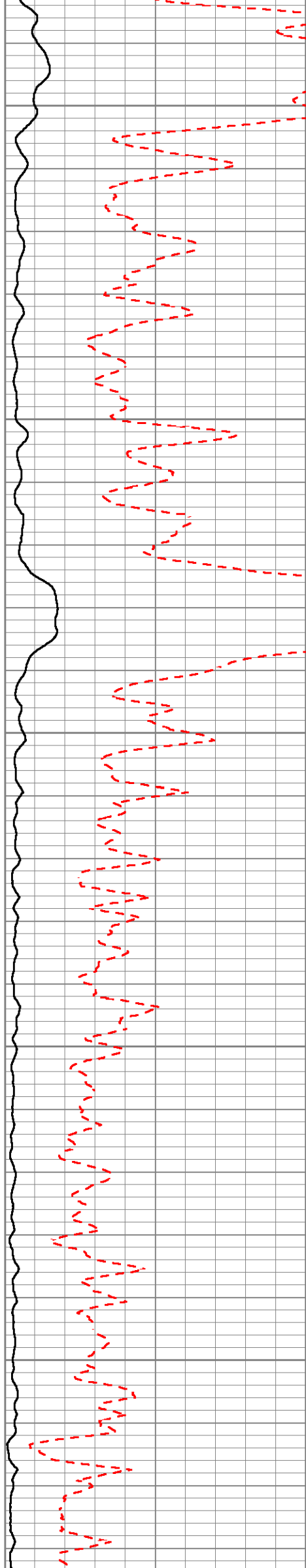


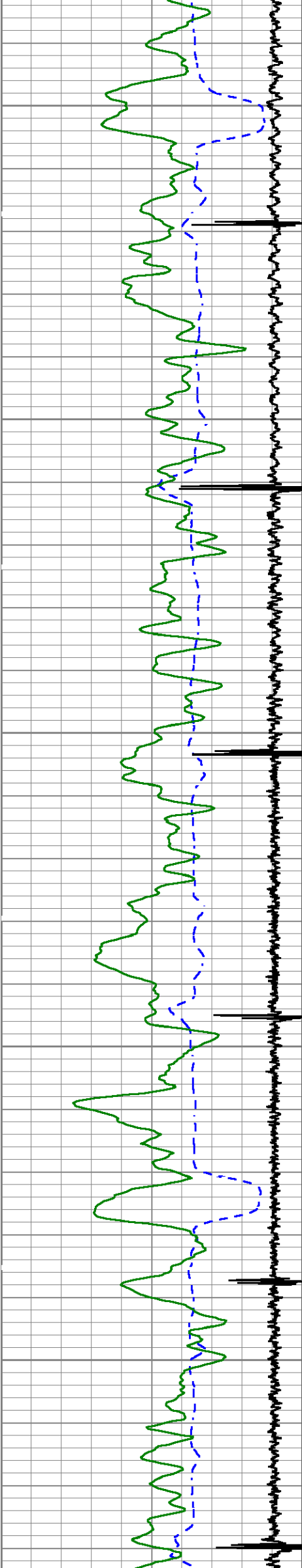


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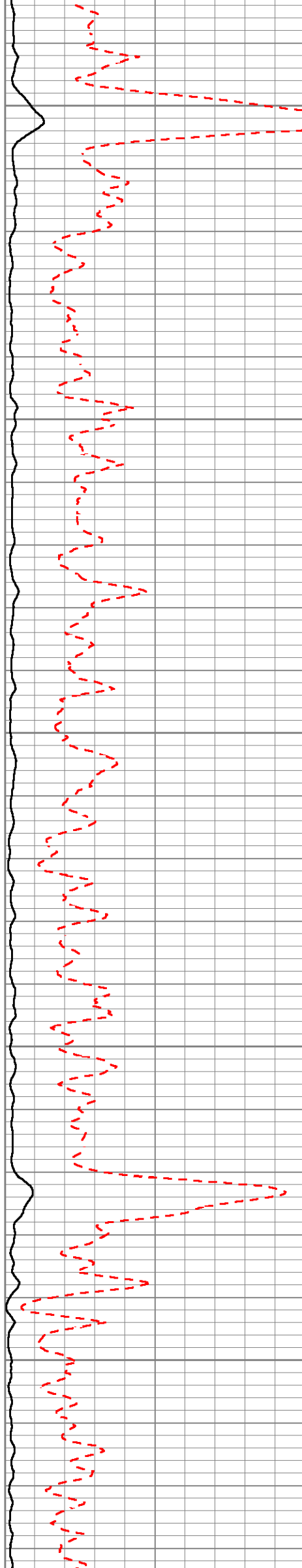
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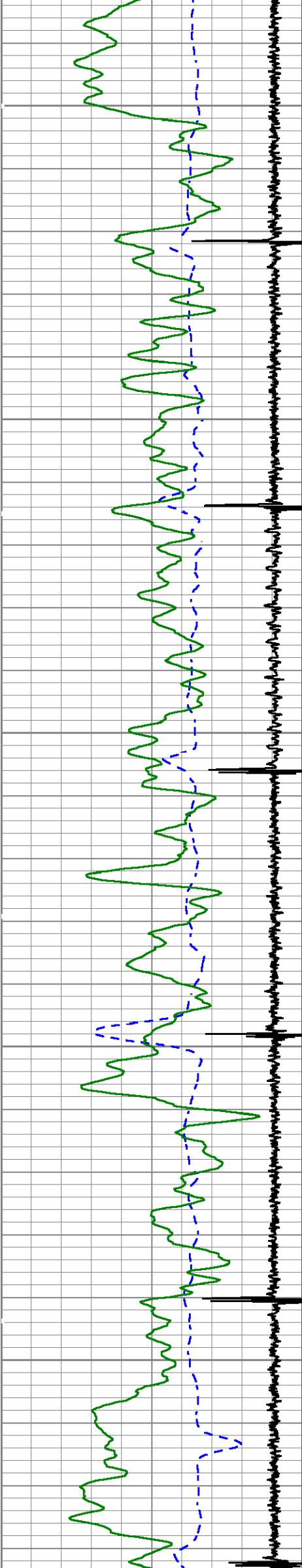




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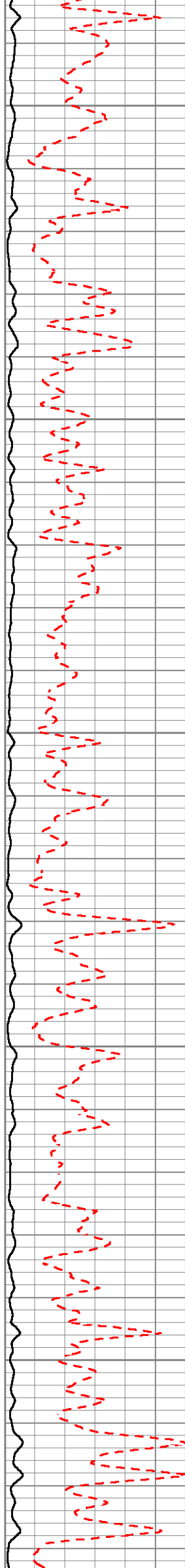


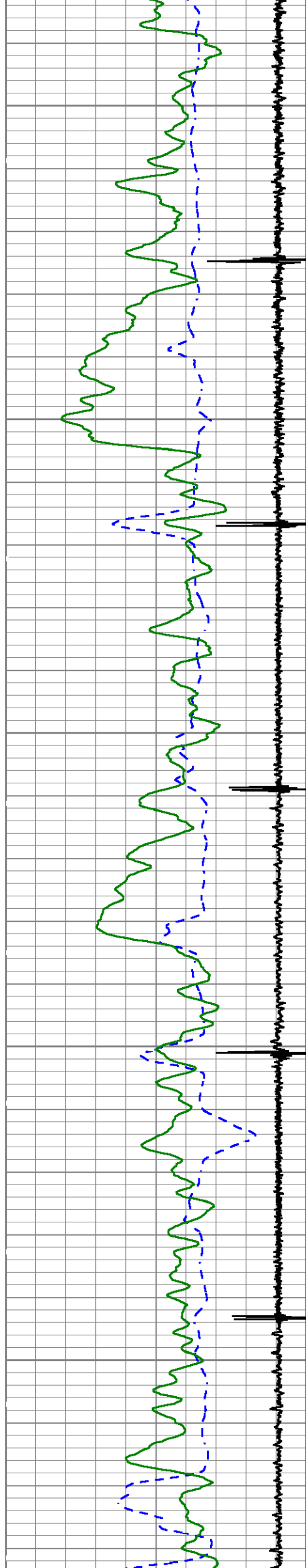


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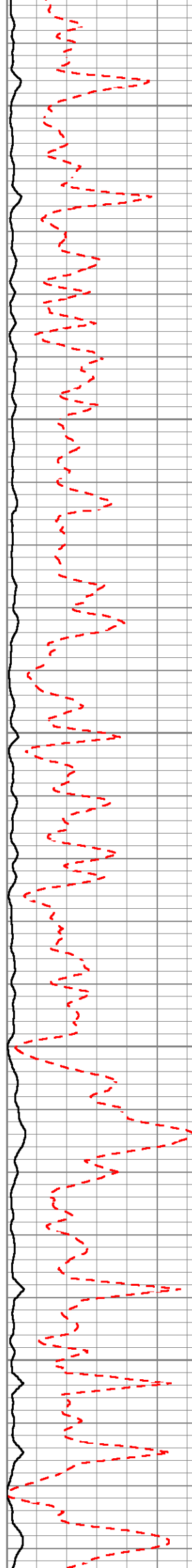
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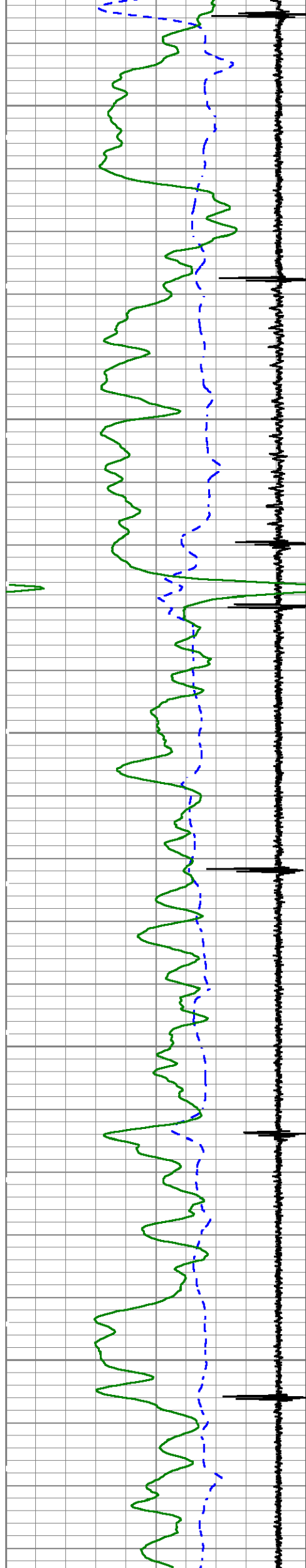




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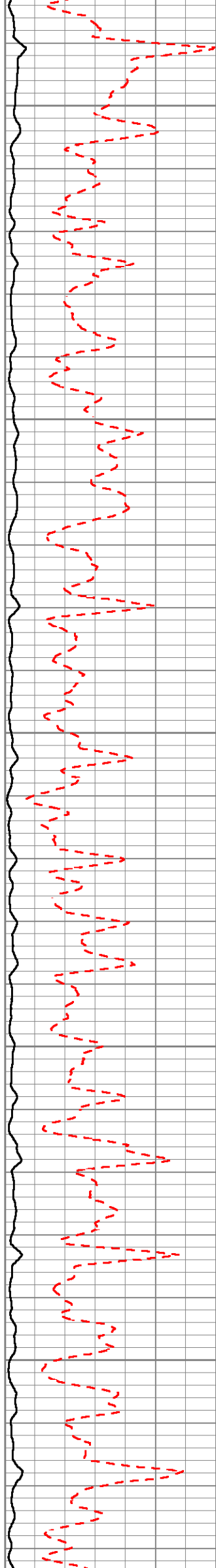


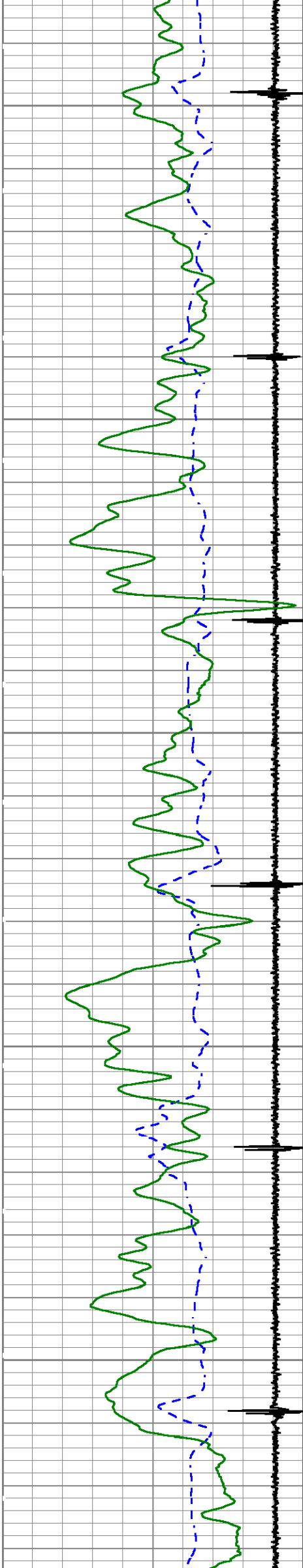


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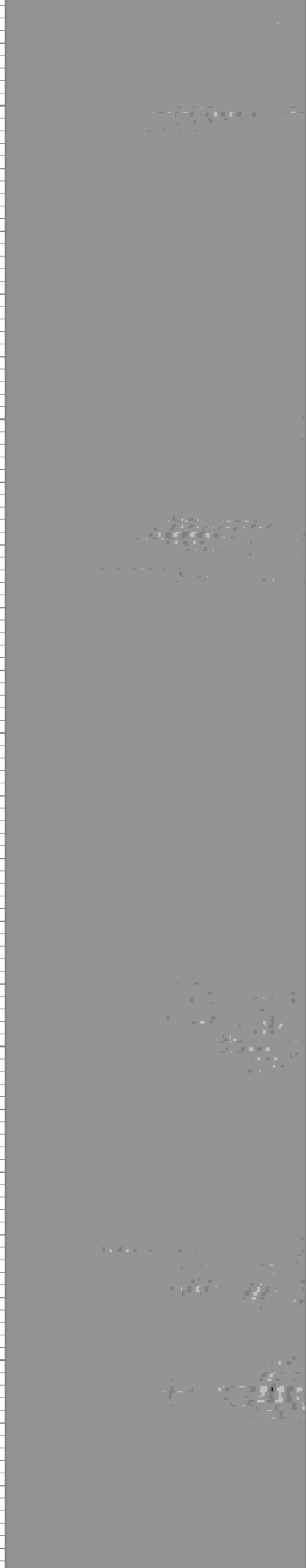
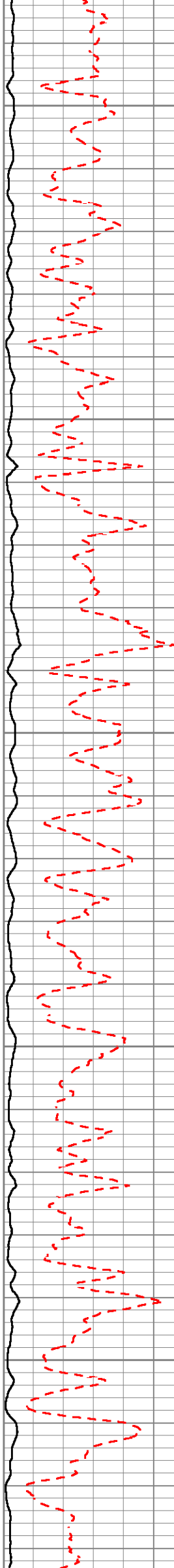
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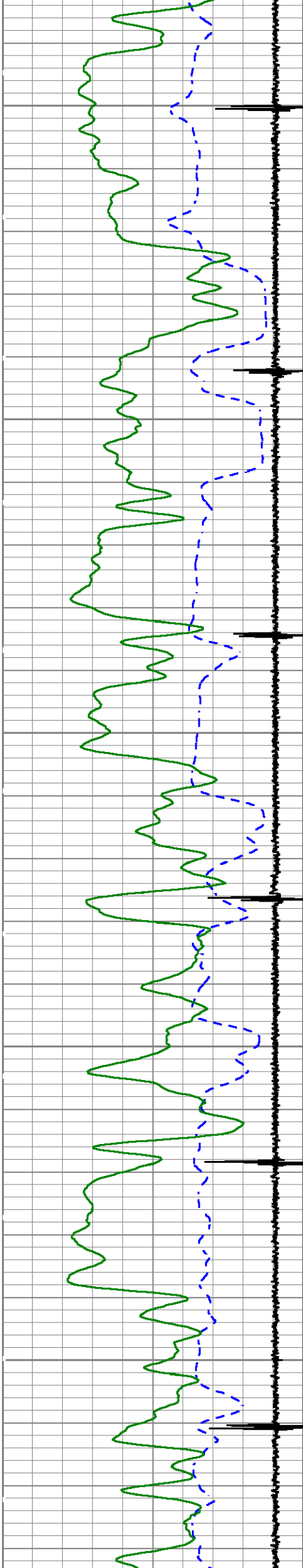




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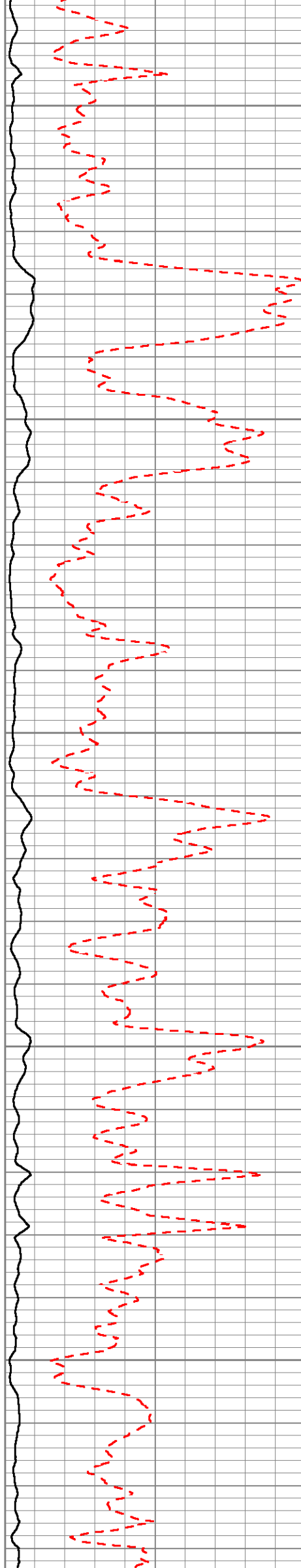


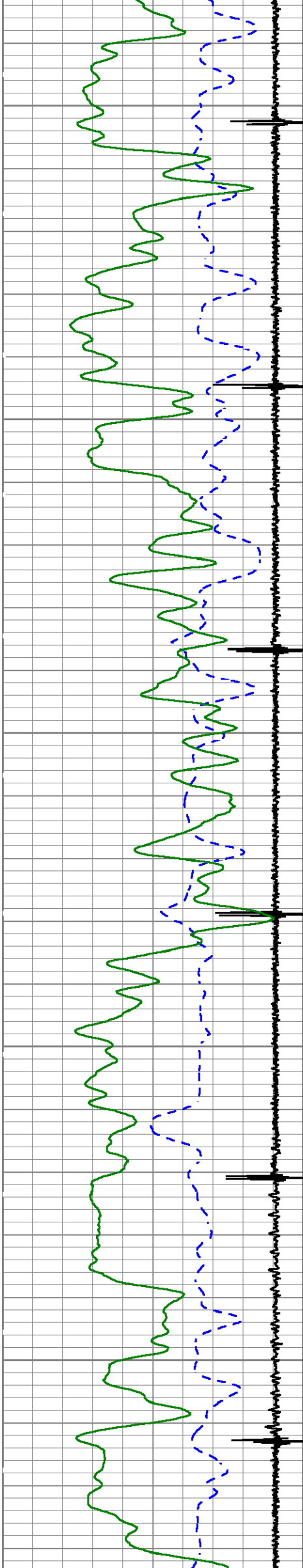


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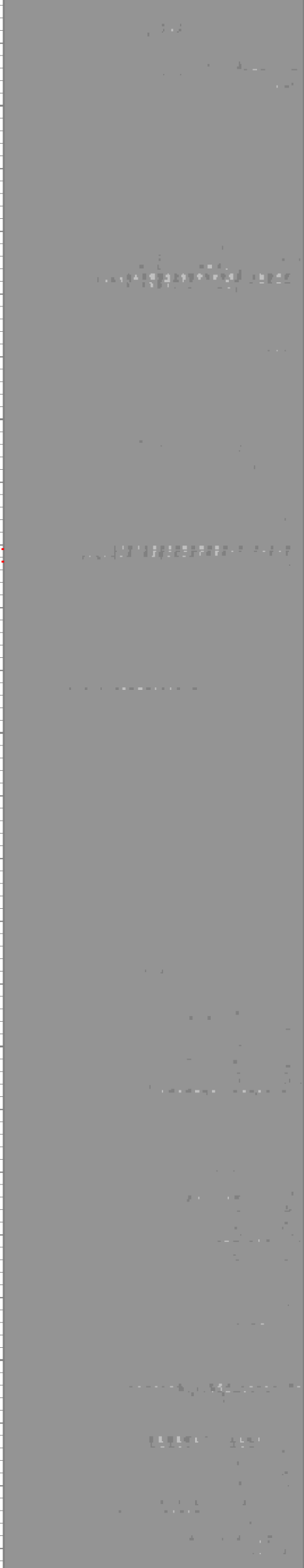
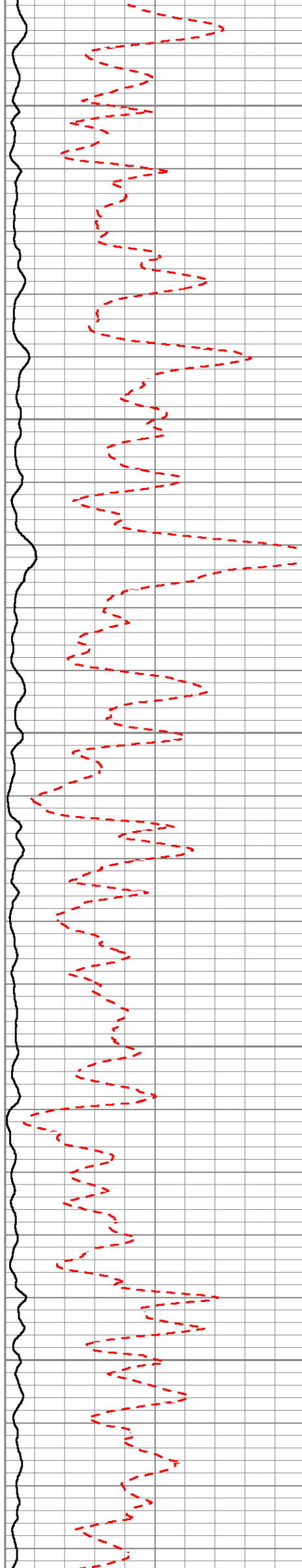
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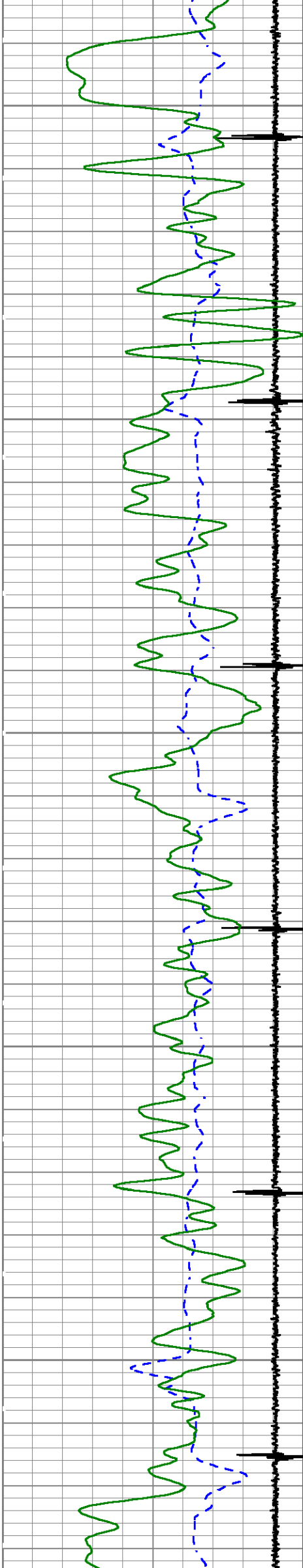




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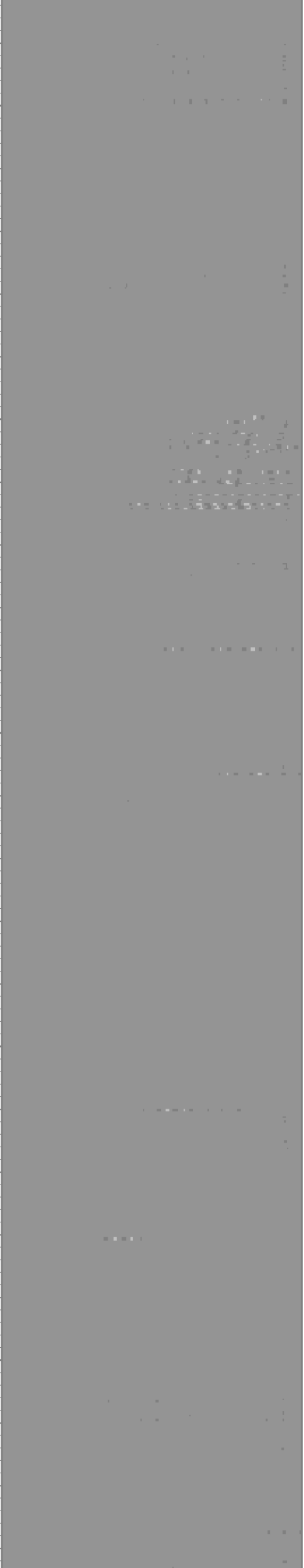
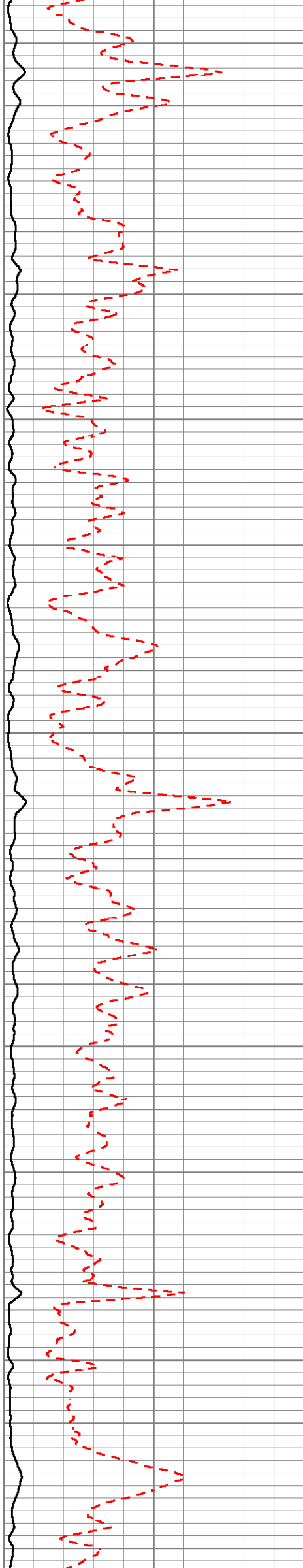


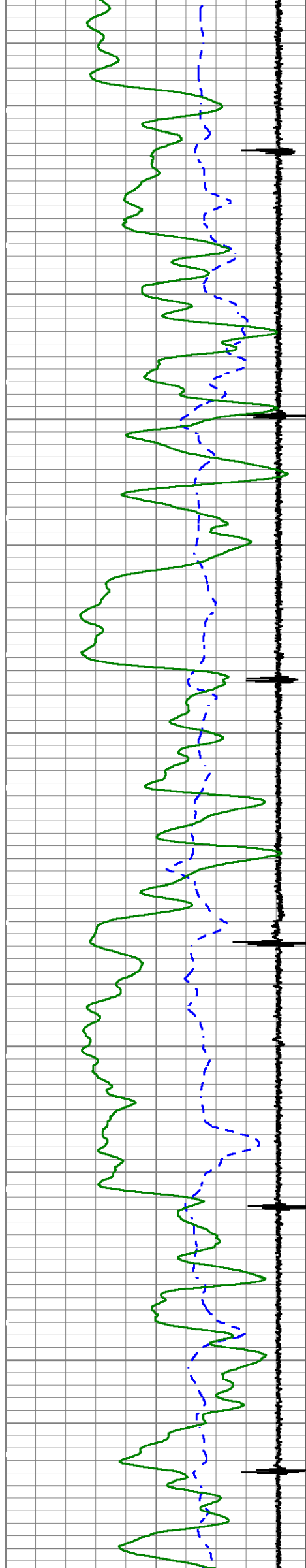


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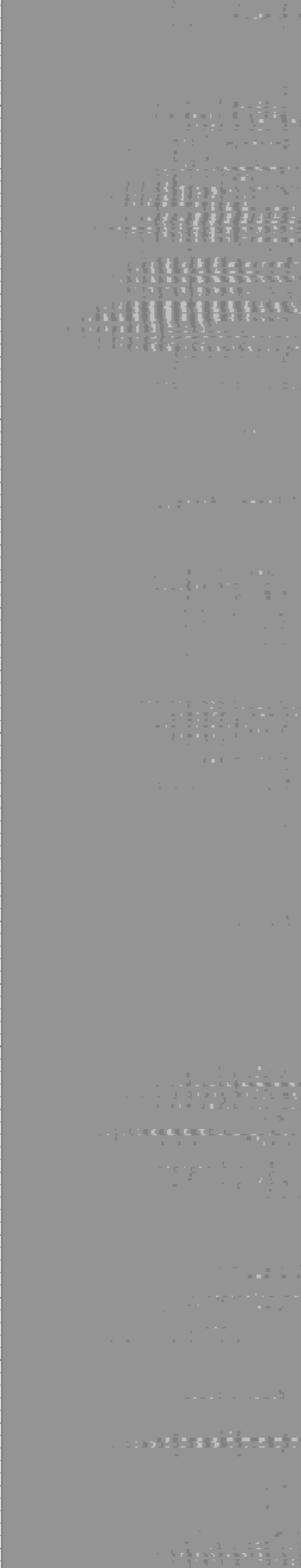
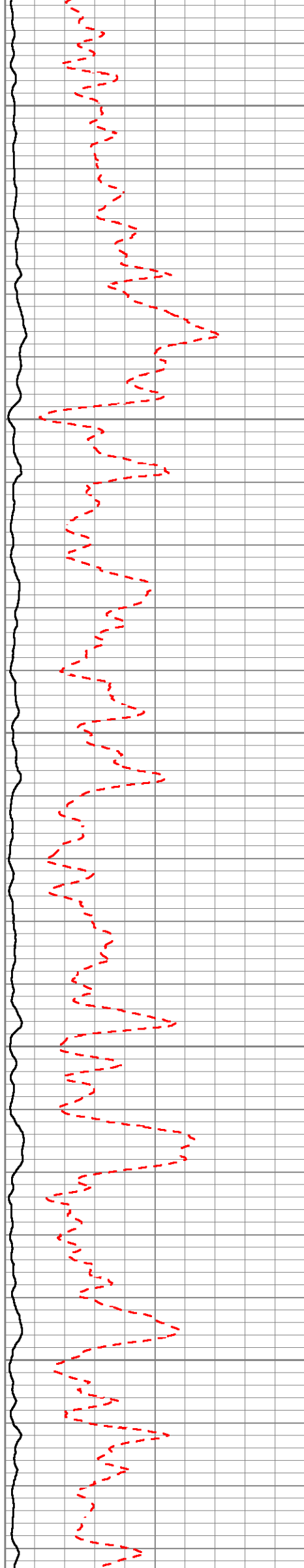
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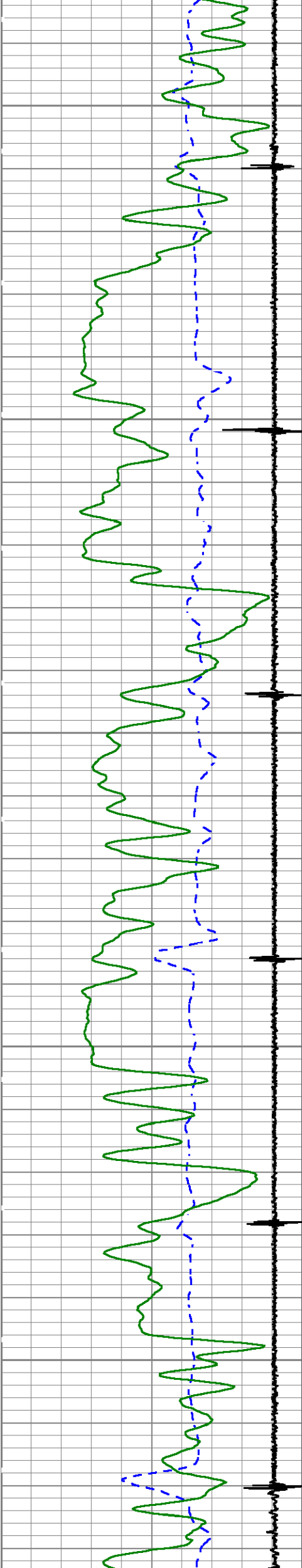




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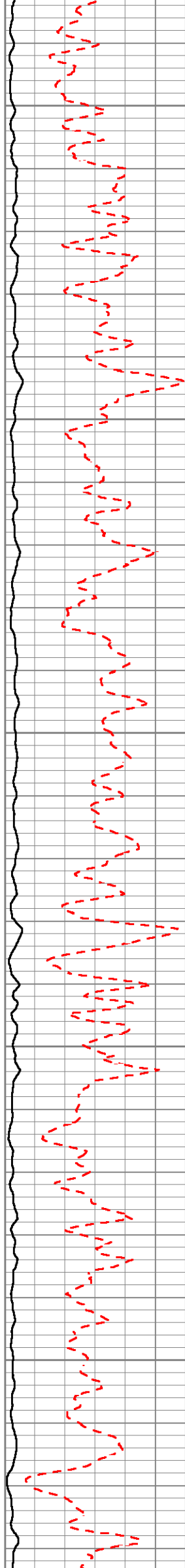


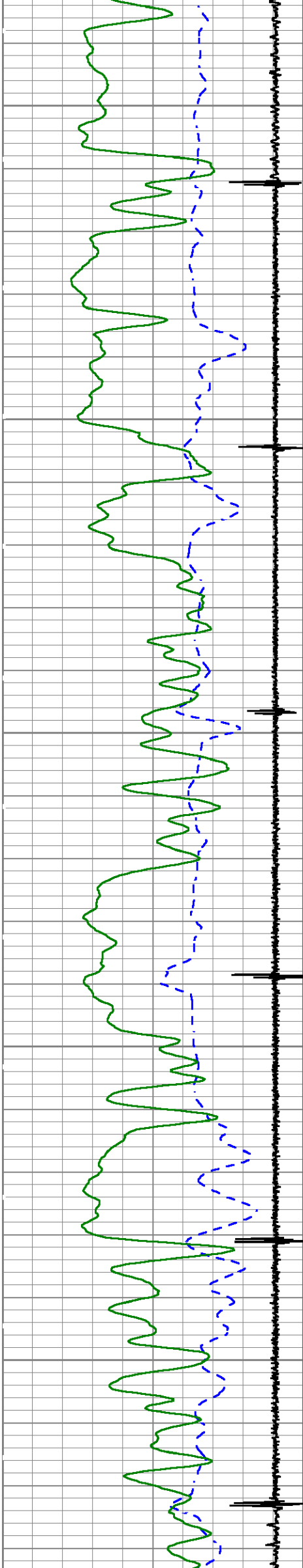


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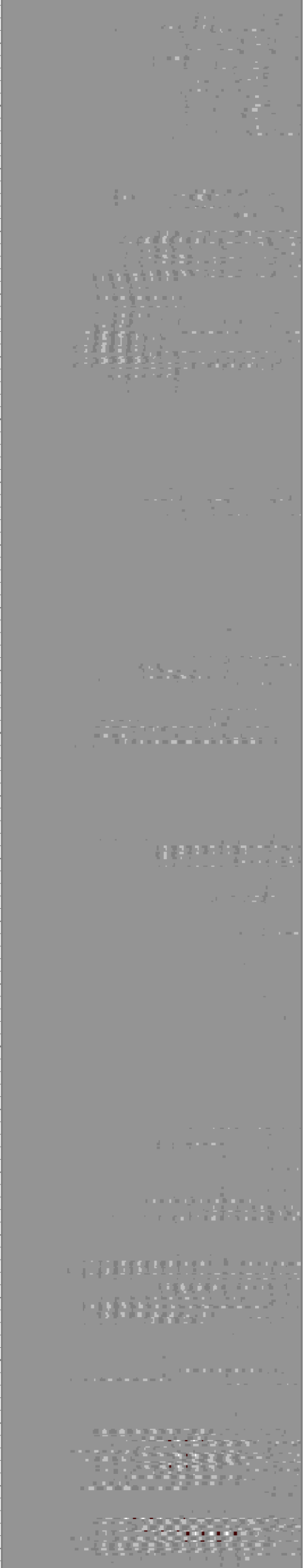
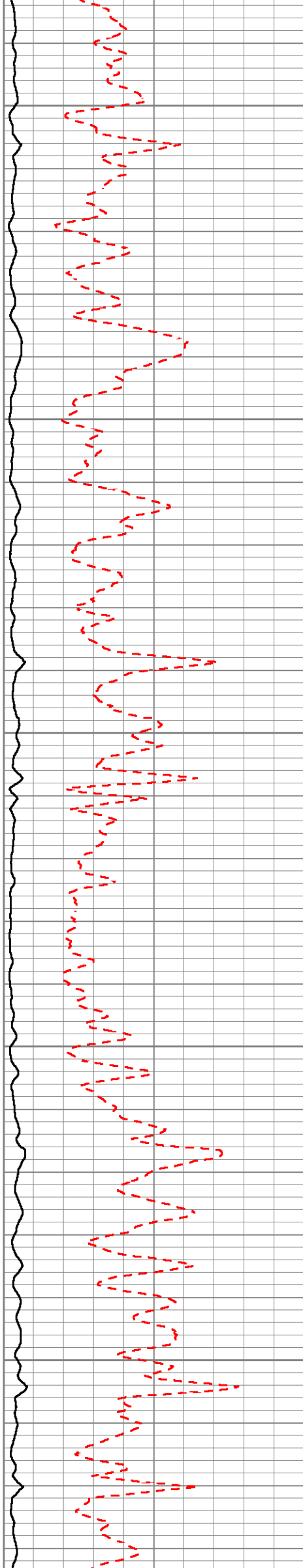
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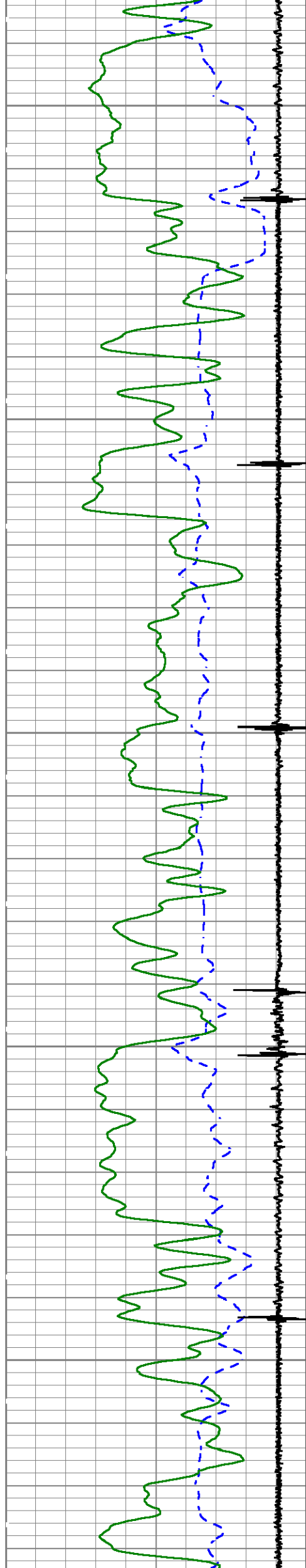




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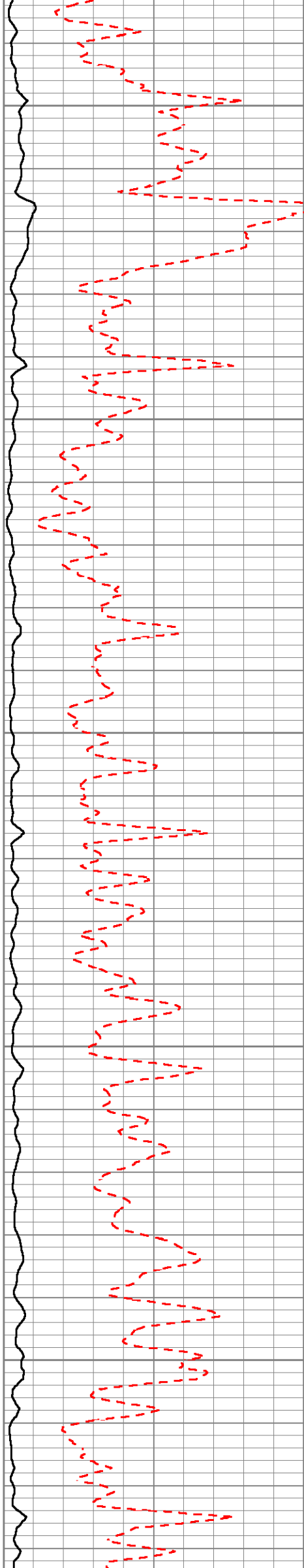


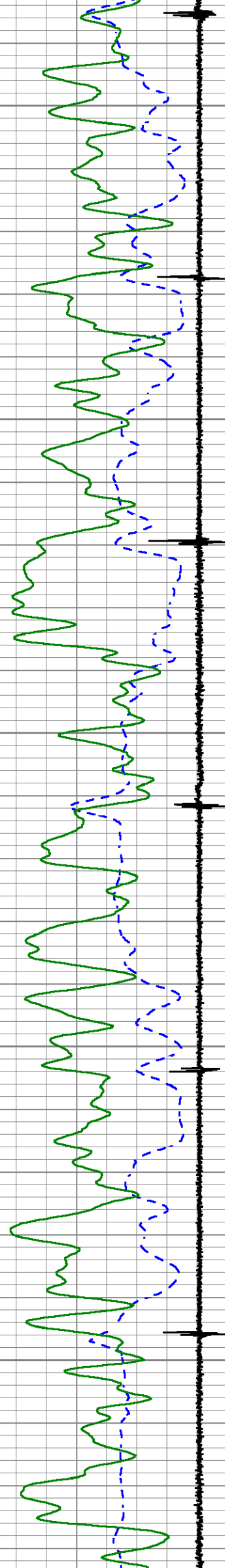


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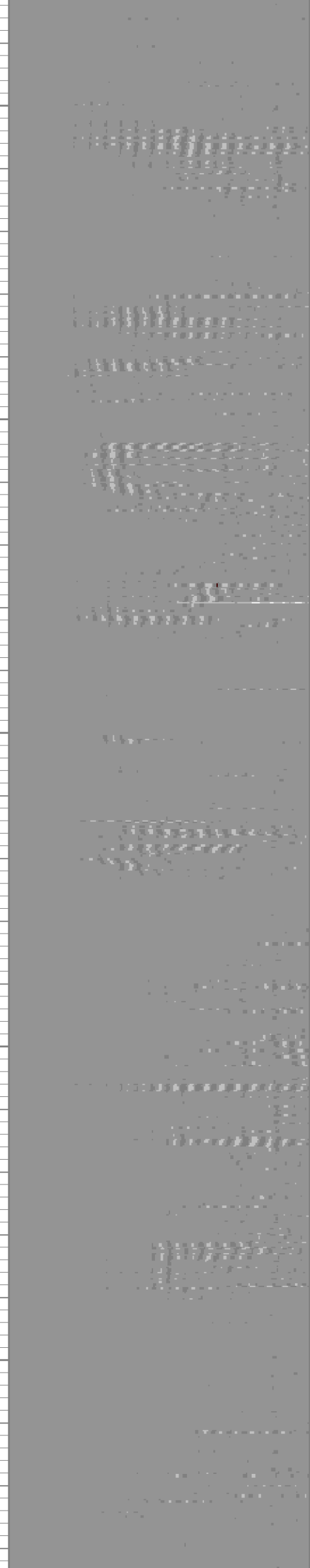
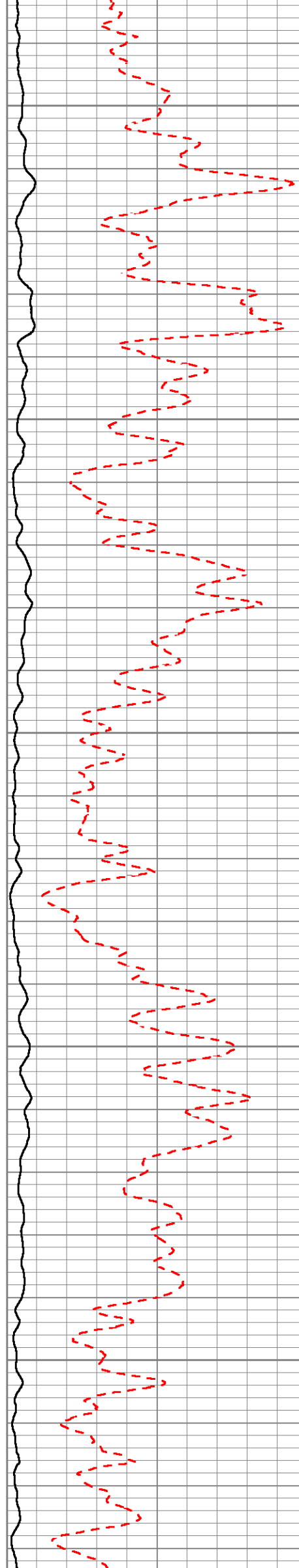
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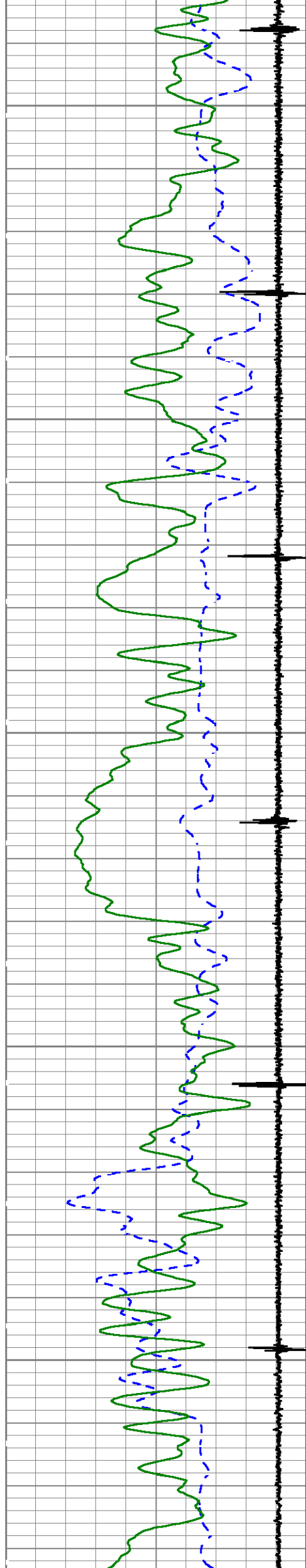




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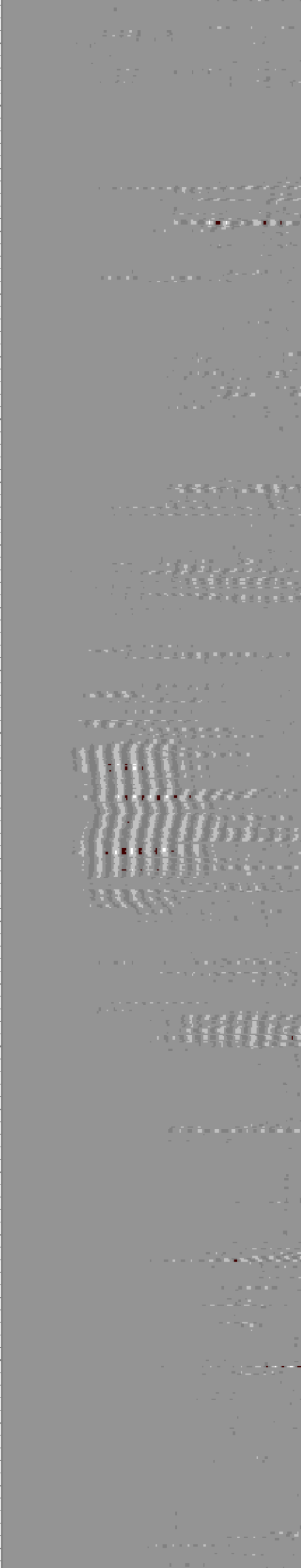
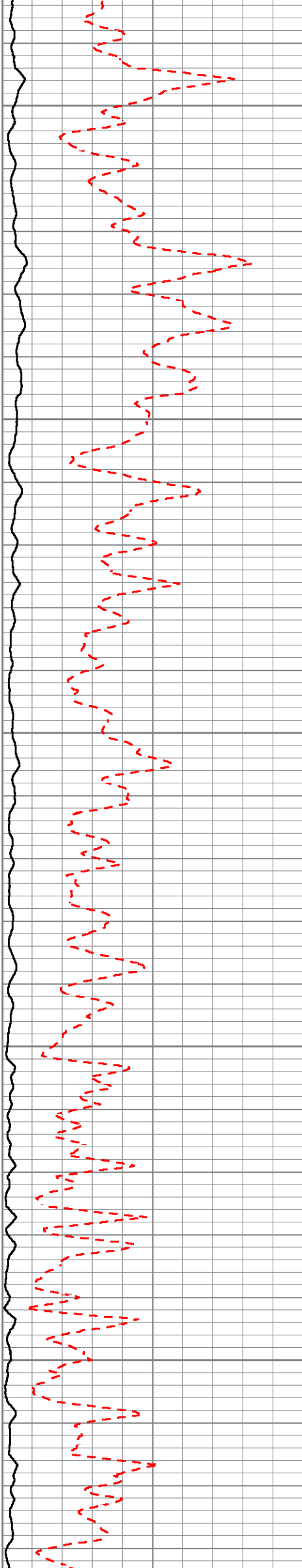


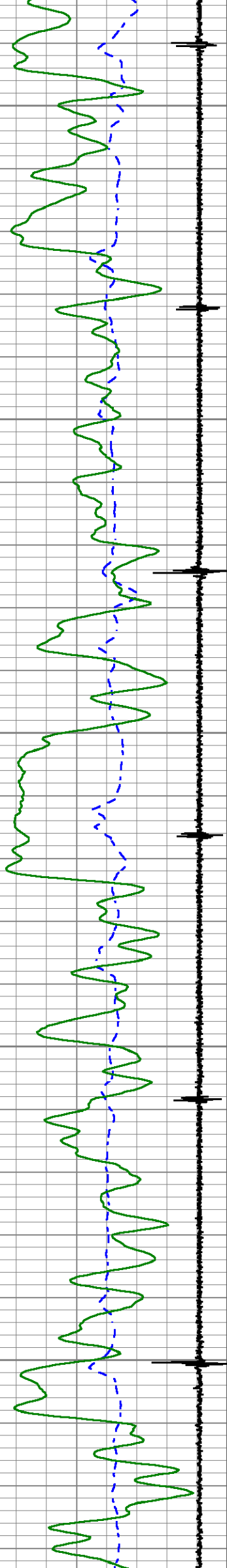


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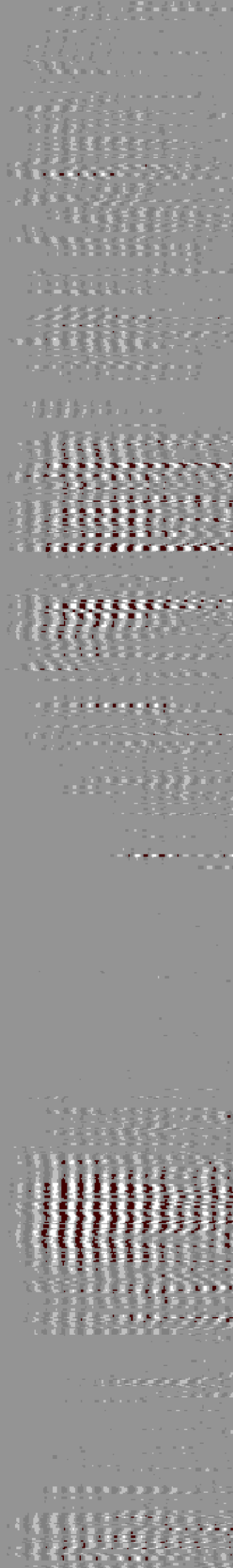
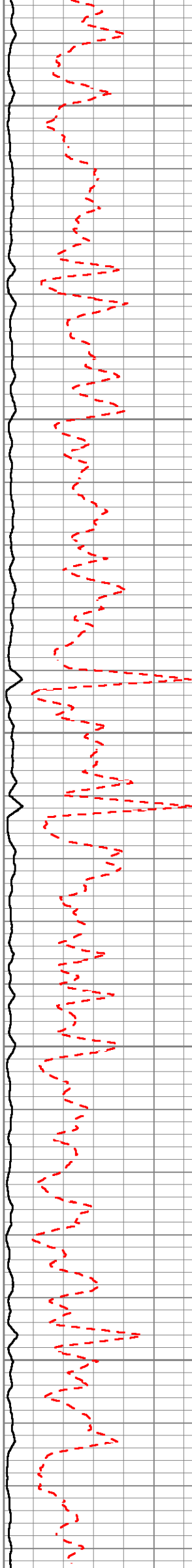
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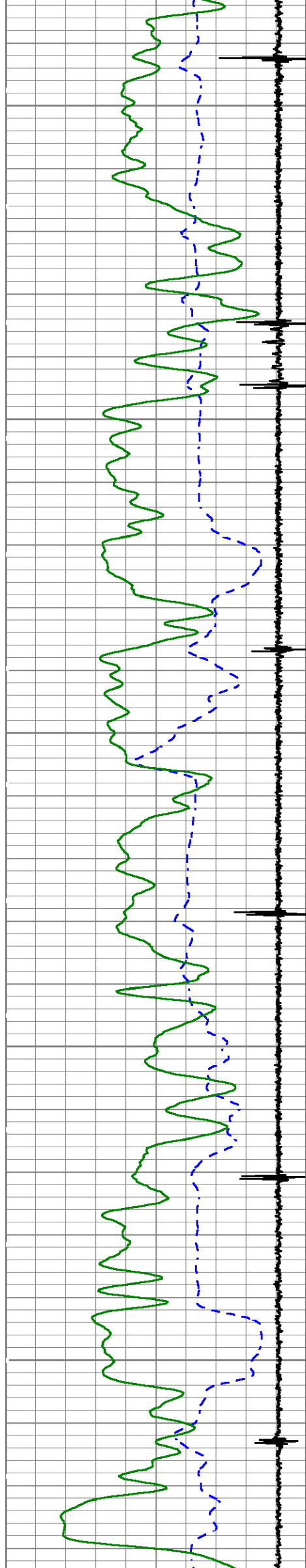




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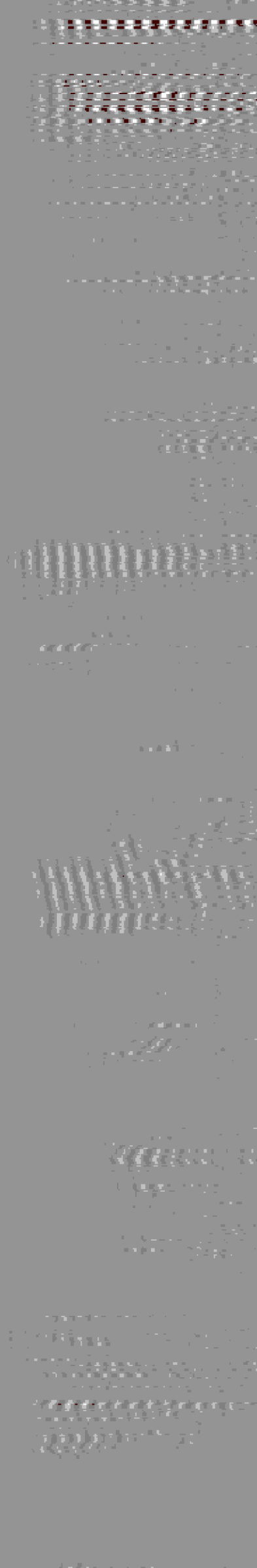
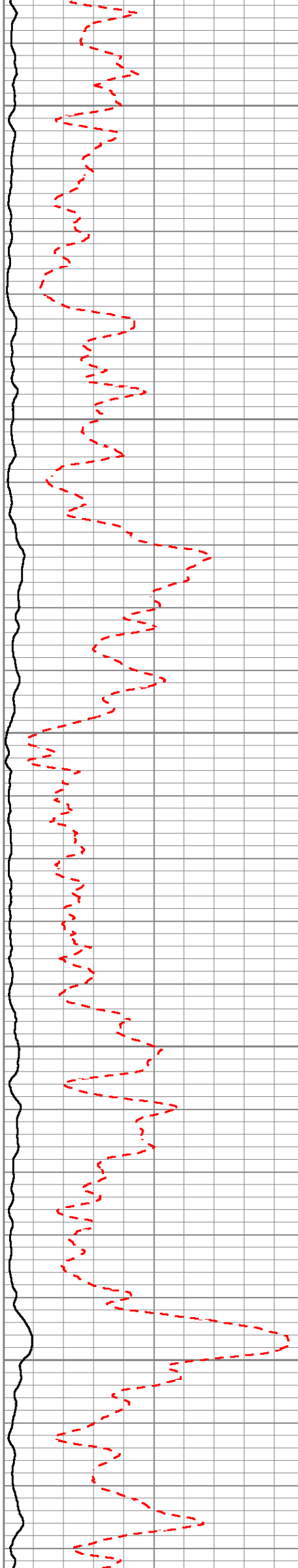


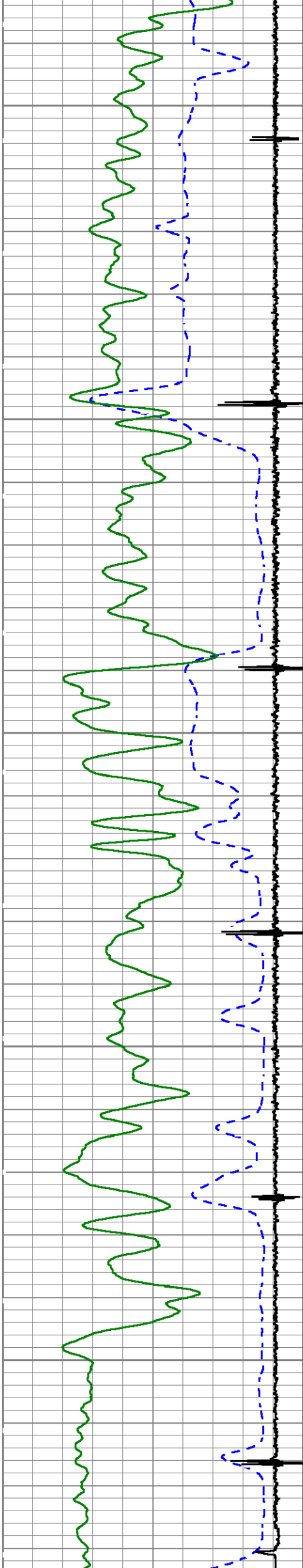


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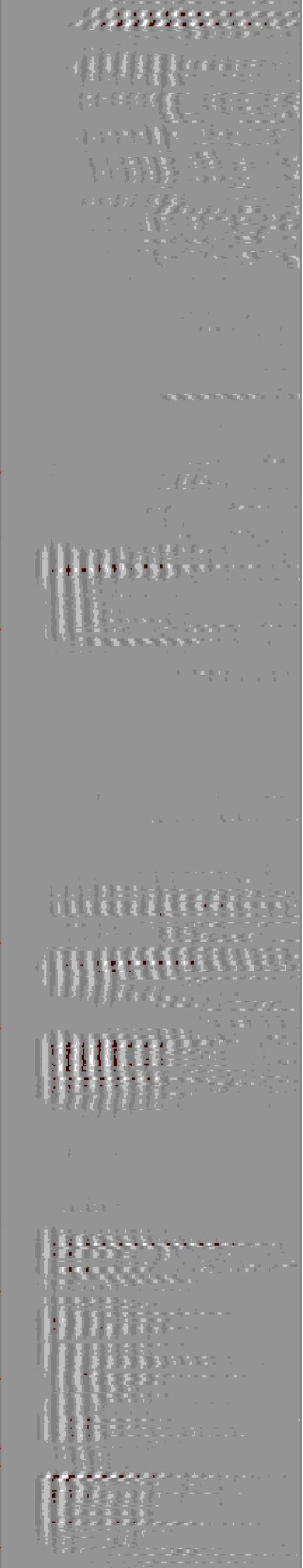
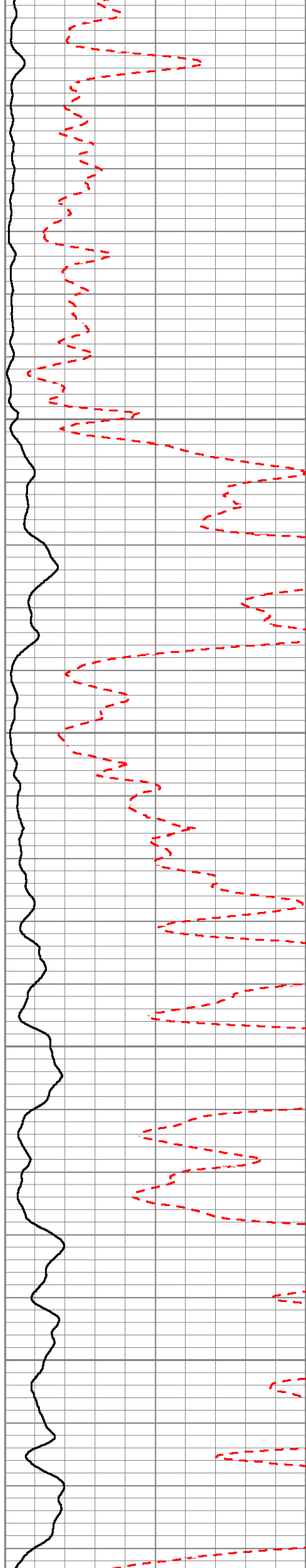
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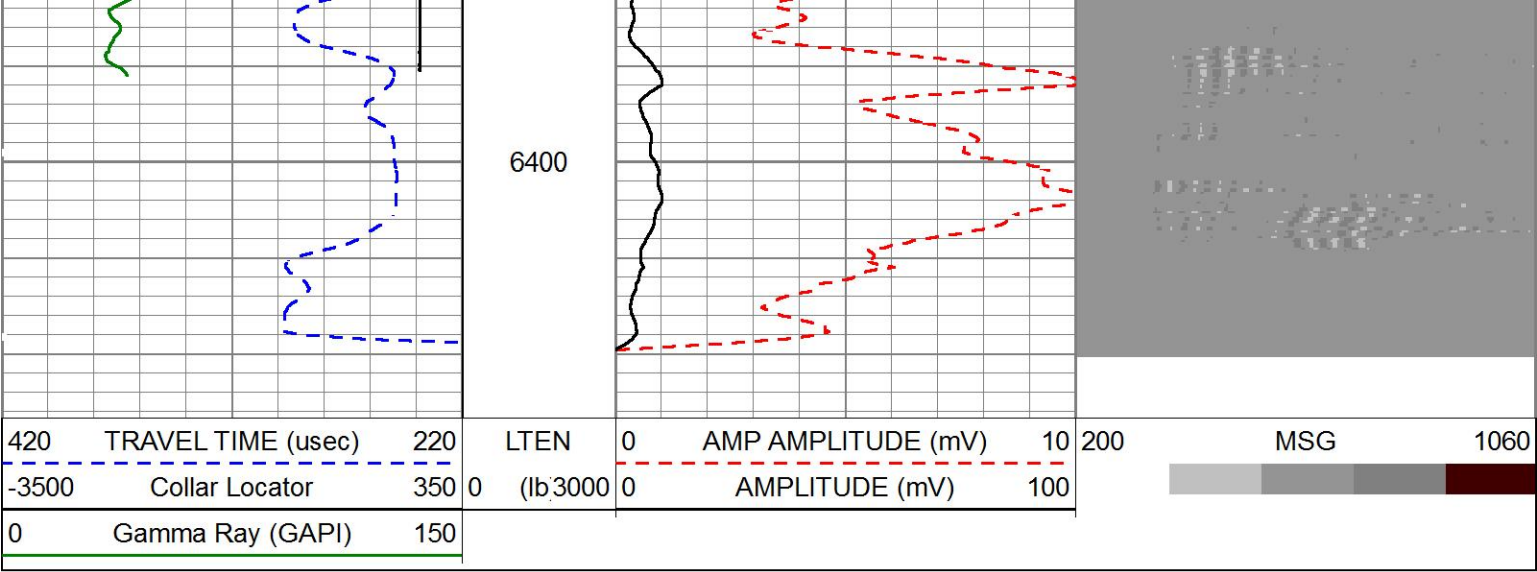




6200

6300





MAIN PASS

HALLIBURTON

5" = 100'

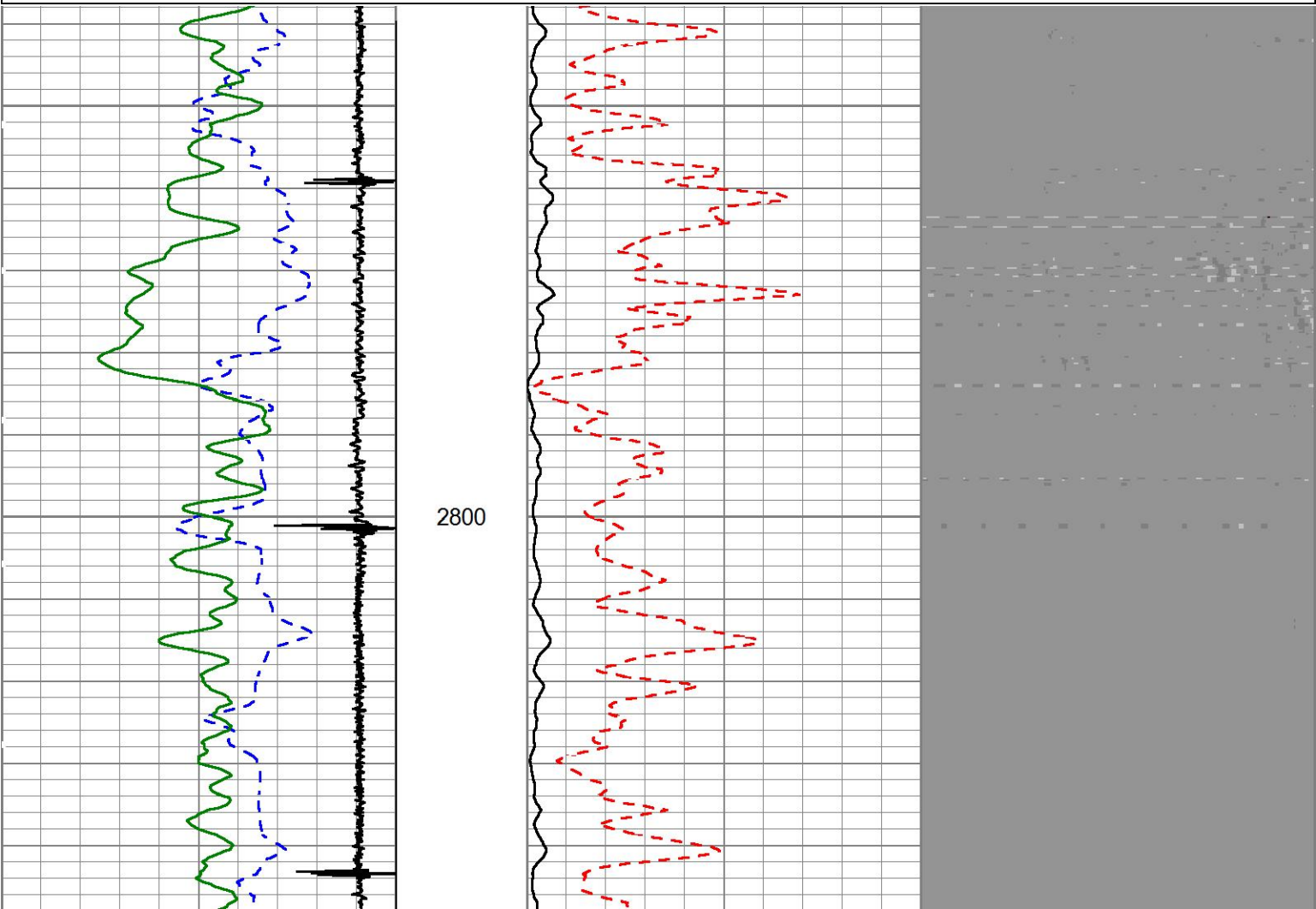
REPEAT PASS

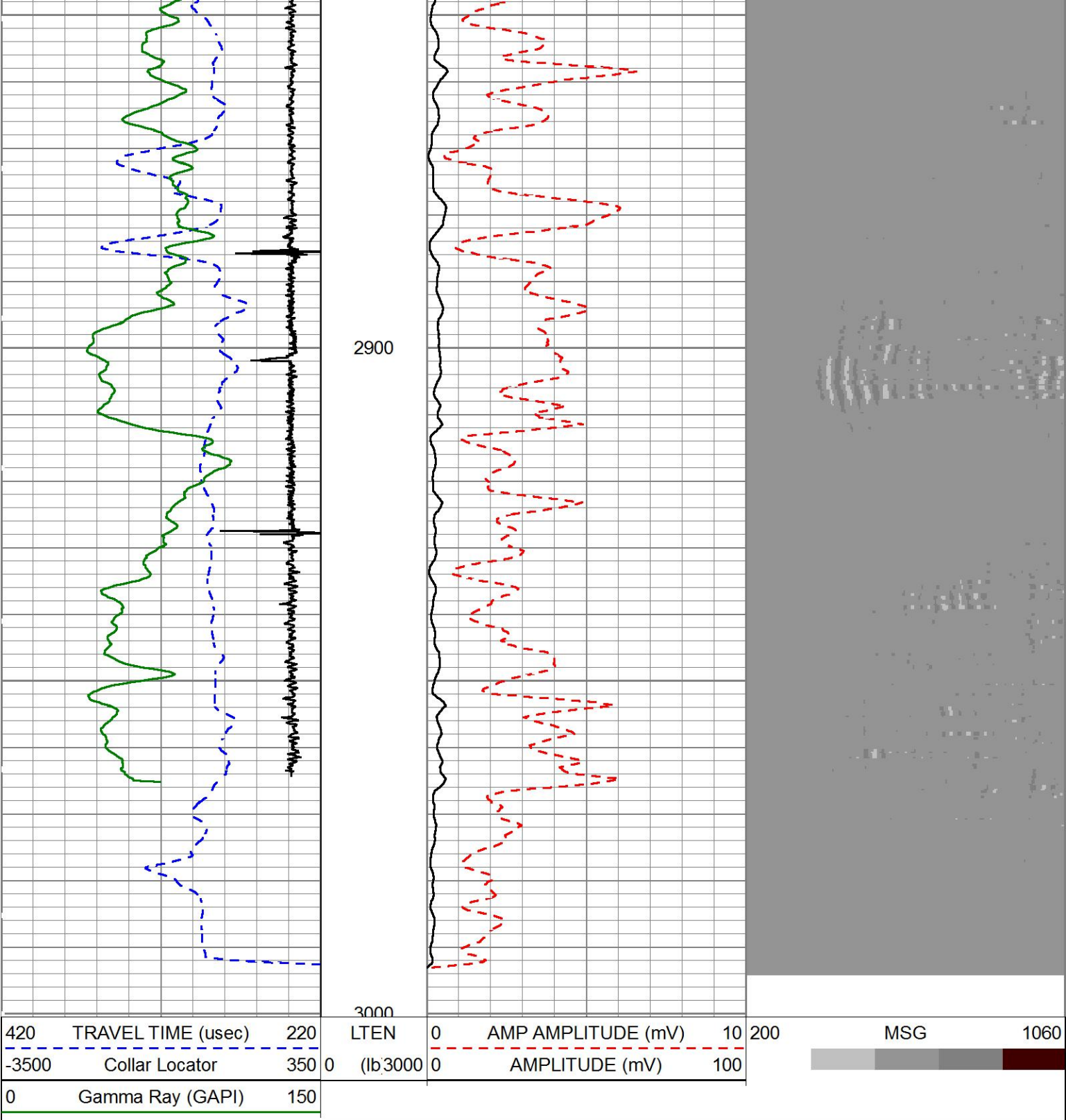
HALLIBURTON

5" = 100'

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Dataset Pathname	RPT
Presentation Format	ICBL_M~1
Dataset Creation	Sun Mar 26 03:36:03 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							





REPEAT PASS

HALLIBURTON

5" = 100'

Log Variables

Database:\ursa\b&v 23c-07-07-95\23c.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 100	Yes	in 5.5
CASETHCK	CASEWGHT	LIRISHFTF	LIRISHFTN	LTH	MAXAMPL	MINAMPL	MINATTN
in 0	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 9.5	0	1	0	uSec 0	0.25	in 0

SRFTEMP degF 0	TDEPTH ft 0	UHSGC NONE	USERFTT usec/ft 0	ZREF MRayl 1.7	
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Database File		Calibration Report			
Dataset Pathname		f:\ursa\b&v 23c-07-07-95\23c.db			
Dataset Creation		MAIN			
		Sun Mar 26 04:10:20 2017			

Cement Bond Log Shop Calibration Report					
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Serial-Model:			11836468-A		
Calibration Performed:			Sat Mar 25 21:14:04 2017		

Free Pipe Calibration		
	Measured	Units
TT	245.9	usec
Amplitude	408.4	mV
Log Base Line	17.6	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	0.207	

Gamma Ray Calibration Report					
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Type / Serial:			002 / 12159411		
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SHOP CALIBRATION			Mon Feb 20 15:54:04 2017		
		Counts/Sec.	Gain	Offset	Jig
Background		27.6			
Calibrator		317.4			
			1.4943		
PRIMARY VERIFICATION					
Background		0.0			
Calibrator		0.0			
Difference				0.0	
BEFORE SURVEY VERIFICATION					
Background		0.0			
Calibrator		0.0			
Difference				0.0	
AFTER SURVEY VERIFICATION					
Background		0.0			
Calibrator		0.0			
Difference				0.0	

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 RmtTNGT	22.95 22.45		RMTI-A (12376244) Halliburton RMTI Tool	14.00	2.13	77.00
RmtFP5V RmtNFwvMcsP RmtCommFWa	14.70 14.70 14.70		X-OVER-SondexxGo Sondex Box x Go Pin Cross Over	0.31	1.69	1.00
			CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00
Temp	9.57					
TT3FT AMP3FT WVF5FT	7.32 7.32 6.36		HCBLM-A (11836468) Halliburton HCBLM Tool	9.38	2.75	116.00
WVF3FT	2.84		CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00
			AUH-001 (11072111) Adaptor Ultrawire/Halliburton	0.38	1.69	3.00
LLMTEN	0.00		BUL-001 (000001) Bullnose	0.30	1.69	1.50
<div>Dataset: 23c.db: field/well/run1/MAIN</div> <div>Total length: 39.43 ft</div> <div>Total weight: 293.50 lb</div> <div>O.D.: 3.13 in</div>						

Company	URSA OPERATING COMPANY					
Well	B&V 23C-07-07-95					
Field	WILDCAT					
County	GARFIELD	State	CO			

