



FILE NO:	COMPANY	TEP ROCKY MOUNTAIN LLC	
	WELL	YOUBERG RU 424-7	
API NO:	FIELD	RULISON	
05045232580000	COUNTY	GARFIELD STATE COLORADO	
Ver. 4.06	LOCATION:	OTHER SERVICES	
	SHL: 1947' FSL & 157' FWL	RPM	
	BHL: 350' FSL & 2248' FWL		
	SEC 7 TWP 7S RGE 93W		
PERMANENT DATUM	GL	ELEVATION	KB 7357 FT
LOG MEASURED FROM	KB	24 FT	DF 7380 FT
DRILL MEAS. FROM	KB		GL 7357 FT

DATE		02-JAN-2017			
RUN	TRIP	1	1		
SERVICE ORDER		US110704			
DEPTH DRILLER		9928 FT			
DEPTH LOGGER		9919 FT			
BOTTOM LOGGED INTERVAL		9919 FT			
TOP LOGGED INTERVAL		24 FT			
TIME STARTED		2:00			
TIME FINISHED		5:00			
OPERATOR RIG TIME		3 HRS			
TYPE OF FLUID IN HOLE		WATER			
FLUID DENSITY		NA			
FLUID SALINITY		NA			
FLUID LEVEL		52 FT			
LOGGED CEMENT TOP		SEE LOG			
WELLHEAD PRESSURE		0 PSI			
MAXIMUM HOLE DEVIATION		NA			
NOMINAL LOGGING SPEED		100 F/MIN			
MAX. RECORDED TEMP.		247 DEGF			
REFERENCE LOG		NA			
REFERENCE LOG DATE		NA			
EQUIP. NO.	LOCATION	HL-6670	WOODWARD		
RECORDED BY		L.OHANDLEY			
WITNESSED BY		MR. DUSTIN WELSH			

IN MAKING INTERPRETATIONS OF LOGS OUR EMPLOYEES WILL GIVE THE CUSTOMER THE BENEFIT OF THEIR BEST JUDGEMENT. BUT SINCE ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS, WE CANNOT, AND WE DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATION. WE SHALL NOT BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COST, DAMAGES, OR EXPENSES WHATSOEVER INCURRED OR SUSTAINED BY THE CUSTOMER RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR EMPLOYEES.

BOREHOLE RECORD		
BIT SIZE	FROM	TO
13.5 IN	0 FT	1124 FT
8.75 IN	1124 FT	9928 FT

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
9.25 IN			0 FT	1024 FT
4.5 IN			0 FT	9928 FT

REMARKS

RUN 1 TRIP 1: *2 OPERATIONS IN WELL*

OPERATION 1: RAL/GR/CCL RUN CENTRALIZED

WELL LOGGED WITH 0 PSI ON WELLHEAD

BHT: 247 DEGF

SHORT JOINT: 6161' - 6183'

CREW: D.HUTCHISON, J.PENA, M.MENTZER

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	RAL	1426 XA	10154957	CENTRALIZED
1	1	GR/CCL	1355 XA	12670180	CENTRALIZED

MAIN LOG 0 PSI

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013
Updates: 1 Patches: 9

Plotted: Mon Jan 2 14:06:38 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/TEP_YOUBERG_RU_424_7/n012g02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 15.500 ft BOTTOM DEPTH: 9925.222 ft

SYMMETRIC FILTER					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR	FILTER ()	medium (1)		TOP	BOTTOM
AMPLITUDE	FILTER ()	medium (1)		"	"
TRAVEL TIME	FILTER ()	medium (1)		"	"

RAL CCL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CCL FLOOR	CCL FLOOR	0		TOP	BOTTOM

ANALOG RAL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
AMPLITUDE WINDOW (NEAR)	AMP WINDOW START (fgpn*)	182	us	TOP	BOTTOM
	AMP WINDOW LENGTH	25	us	"	"
TRAVEL TIME WINDOW (NEAR)	TT WINDOW START (ttn*)	160	us	"	"
	TT WINDOW LENGTH	500	us	"	"
	FIRST BRK THRESHOLD (ttn*)	4	mV	"	"
RAL CASING PARAMETERS	PPT NEAR	200.391	us	"	"
RAL TOOL DELAY	TOOL DELAY (strn*)	-75	us	"	"
BASELINE NOISE (NEAR)	NOISE WINDOW START	125	us	"	"
	NOISE WINDOW LENGTH	25	us	"	"

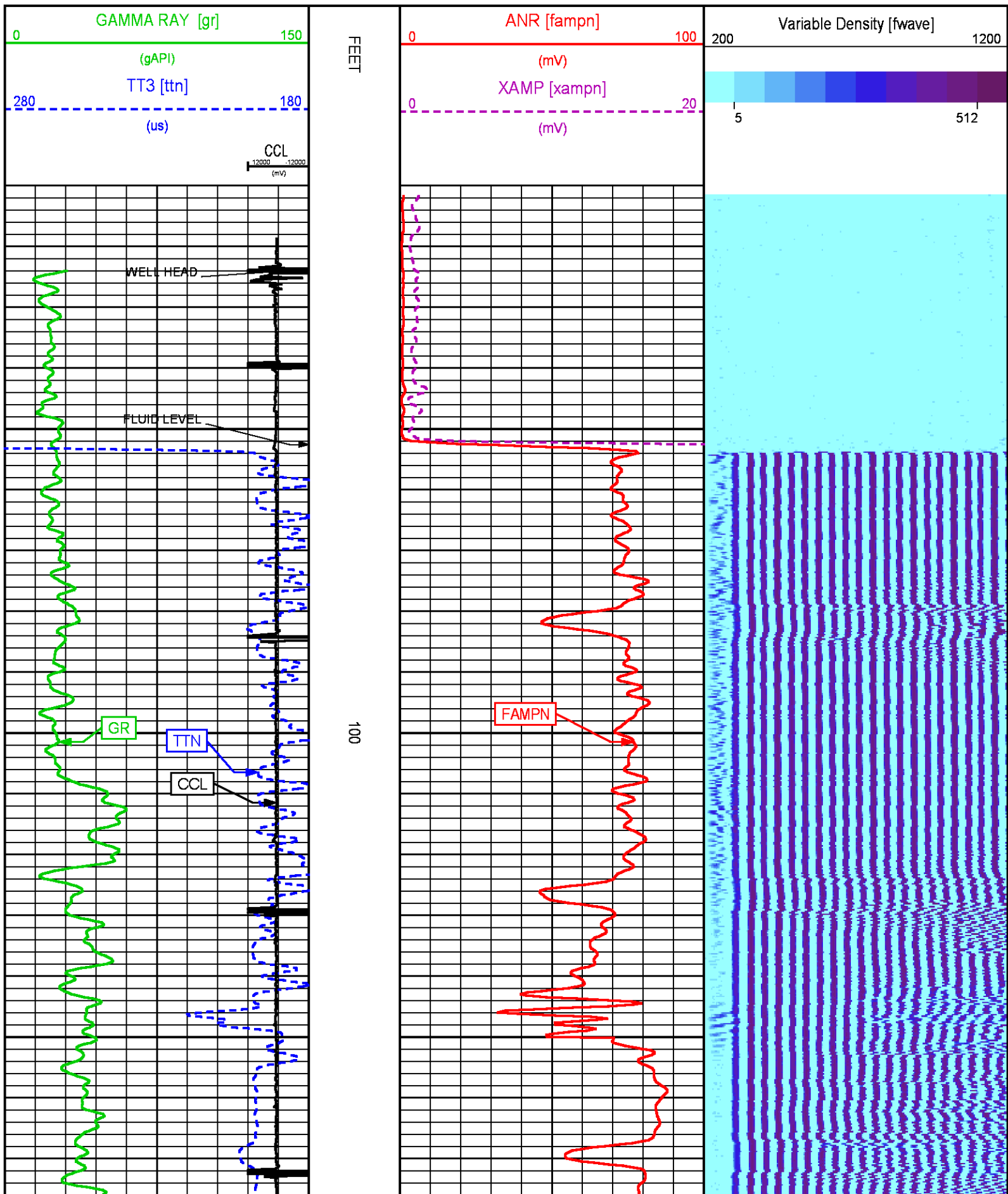
CURVE DESCRIPTION REPORT

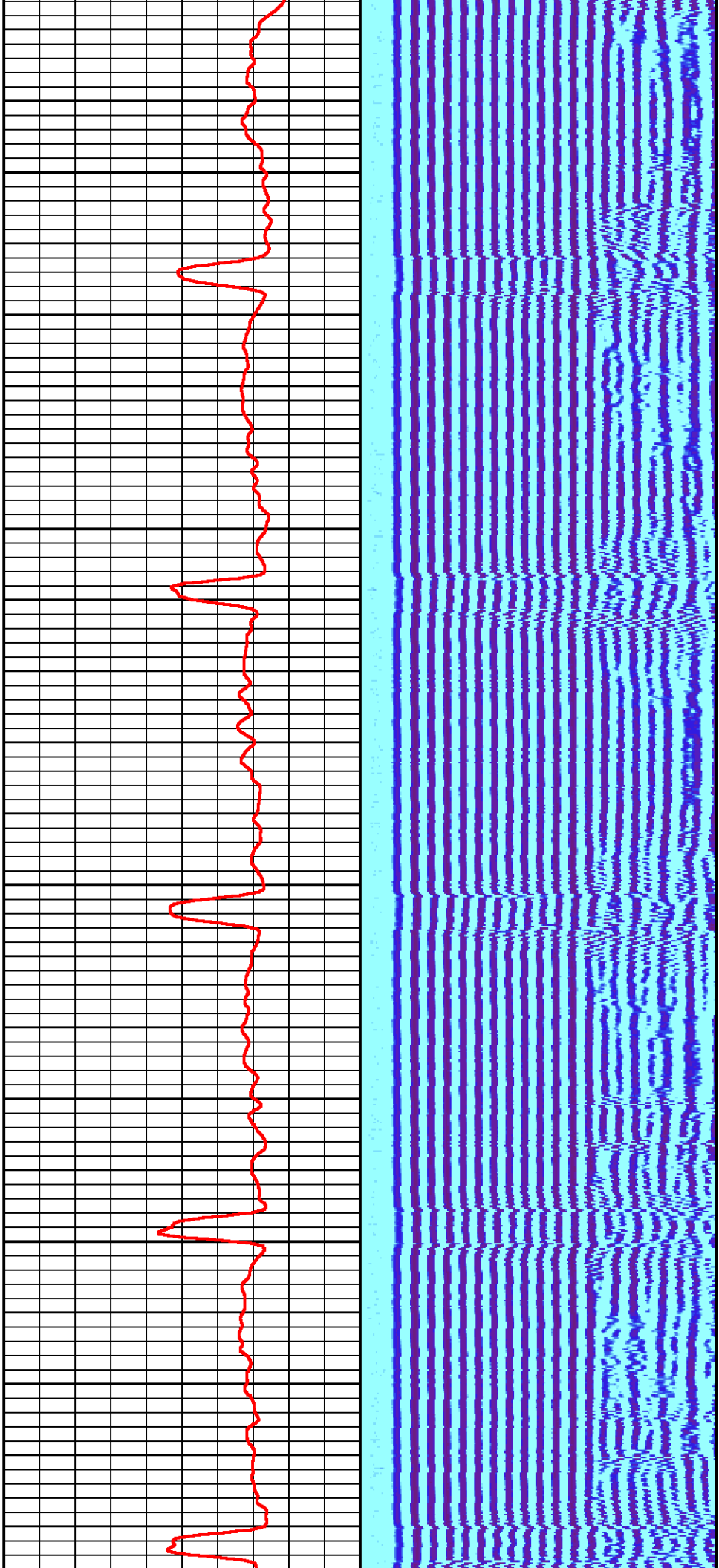
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Jan 2 02:41:04 2017	CASING COLLAR LOCATOR
F1:FAMPN	Jan 2 02:41:04 2017	FIXED GATE AMPLITUDE NEAR RECEIVER
F1:FWAVE	Jan 2 02:41:04 2017	FAR WAVE FORM
F1:GR	Jan 2 02:41:04 2017	GAMMA RAY
F1:TTN	Jan 2 02:41:04 2017	TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER
F1:XAMPN	Jan 2 02:41:04 2017	FIXED GATE AMPLITUDE NEAR RECEIVER TIMES FIVE

CURVE MEASURE POINT OFFSET							
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	5.75	GR	1.75	XAMPN	14.00		
FAMPN	14.00	TTN	14.00				

Presentation : cpu100:/dat1a/TEP_YOUBERG_RU_424_7/TERRA_ral_cbl+01-MAIN-RAL_MN-5.fvpdf [5"/100' Scale]
Plot Interval : 11.5 - 9932.5 Feet

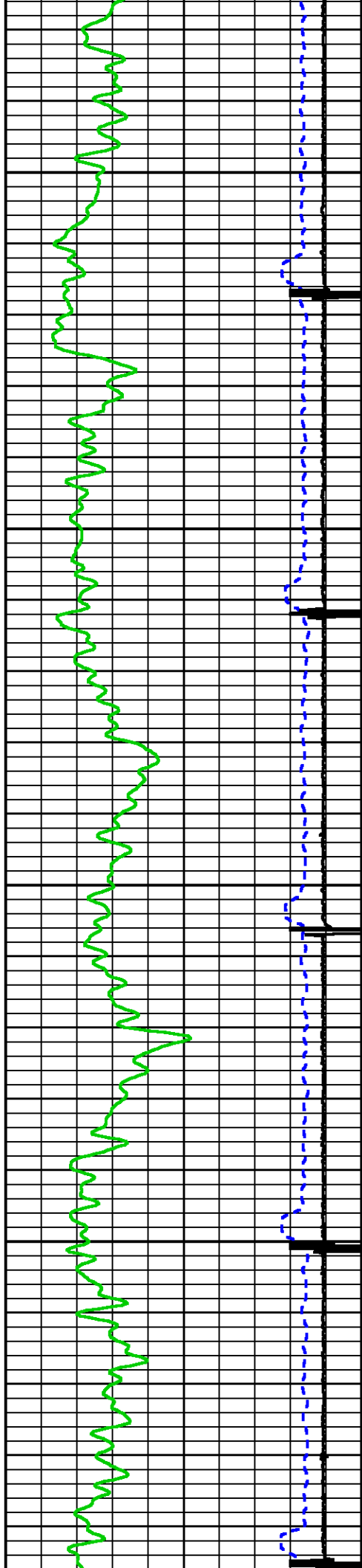
Data File 1 : F1 : cpu100:/dat1a/TEP_YOUBERG_RU_424_7/RAL_MN.xtf
Created On : Jan 2 13:53:56 2017
Company : TEP ROCKY MOUNTAIN LLC
Well : YOUNBERG RU 424-7
Field : RULISON
File Interval : 10.5 - 9934 Feet
OCT : n012g

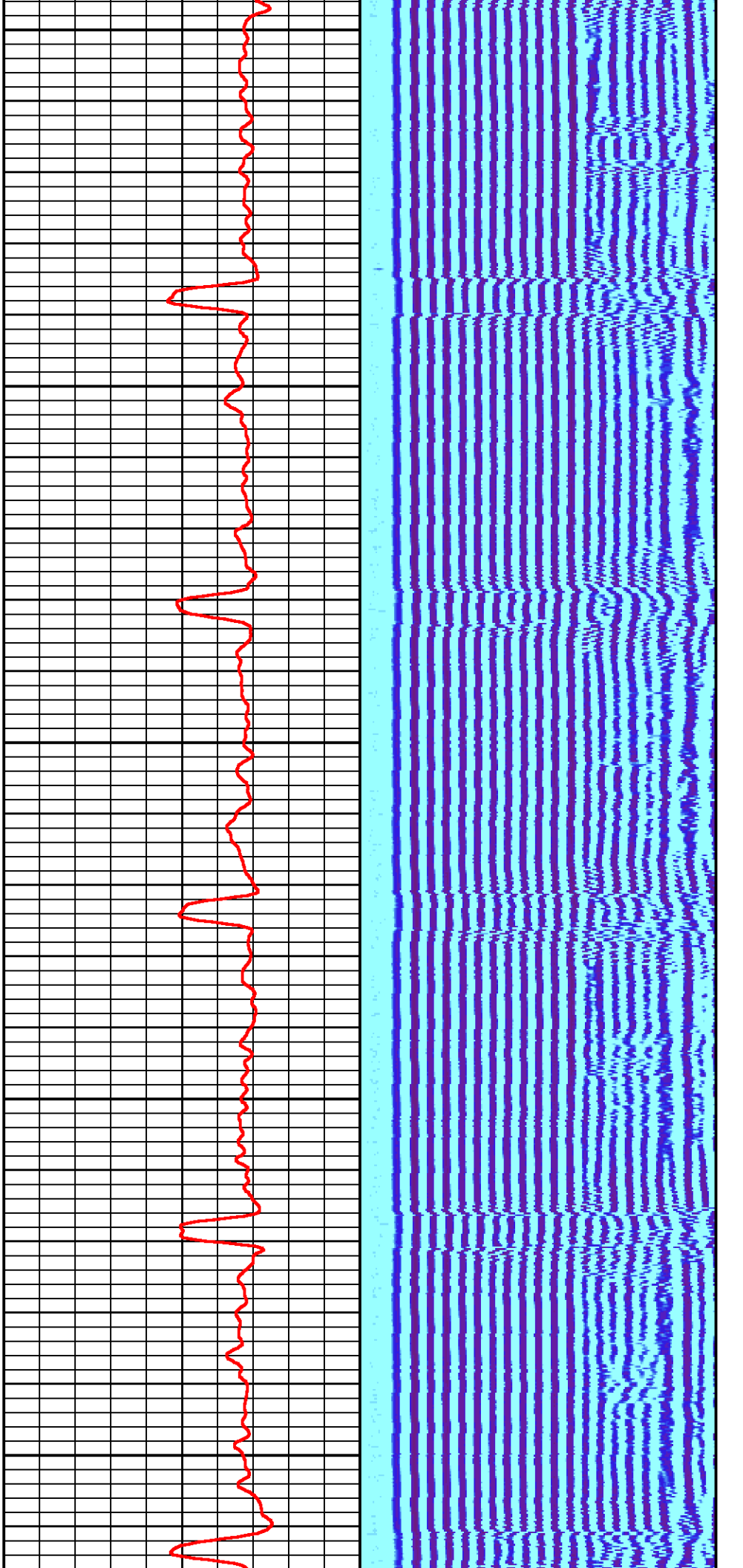




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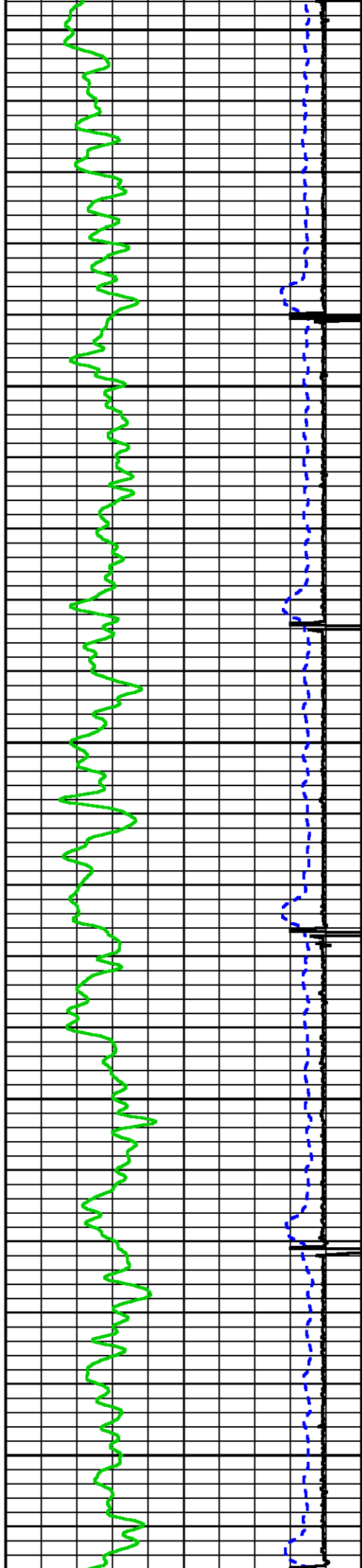


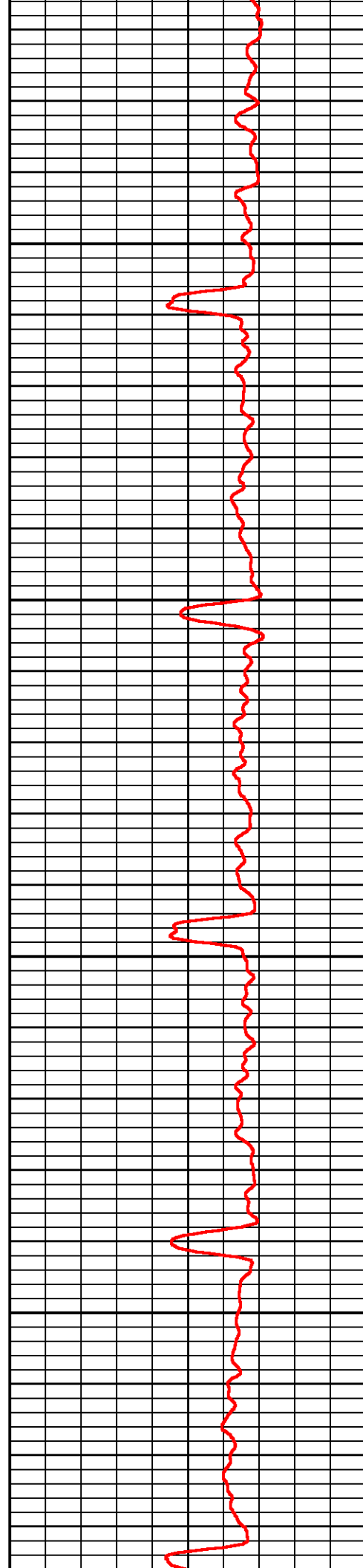
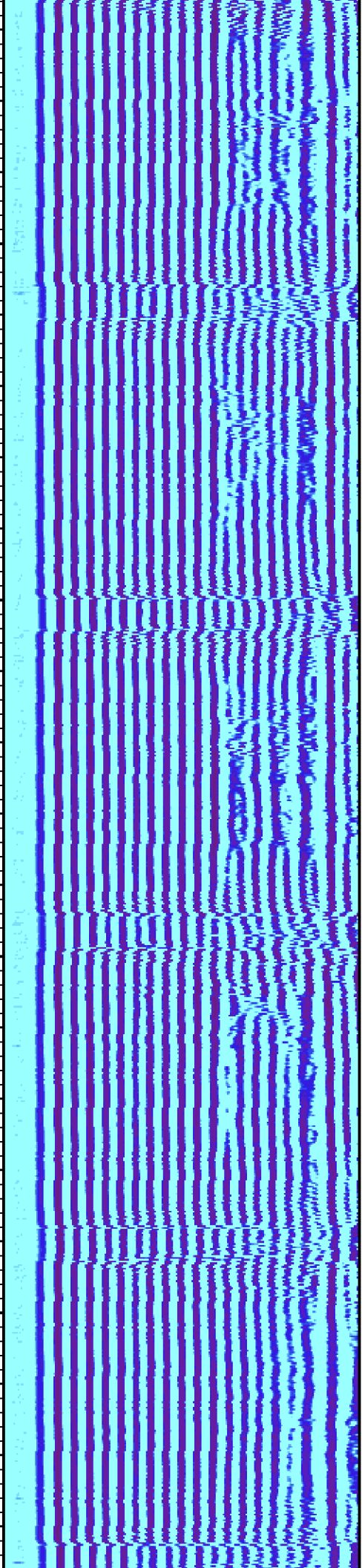


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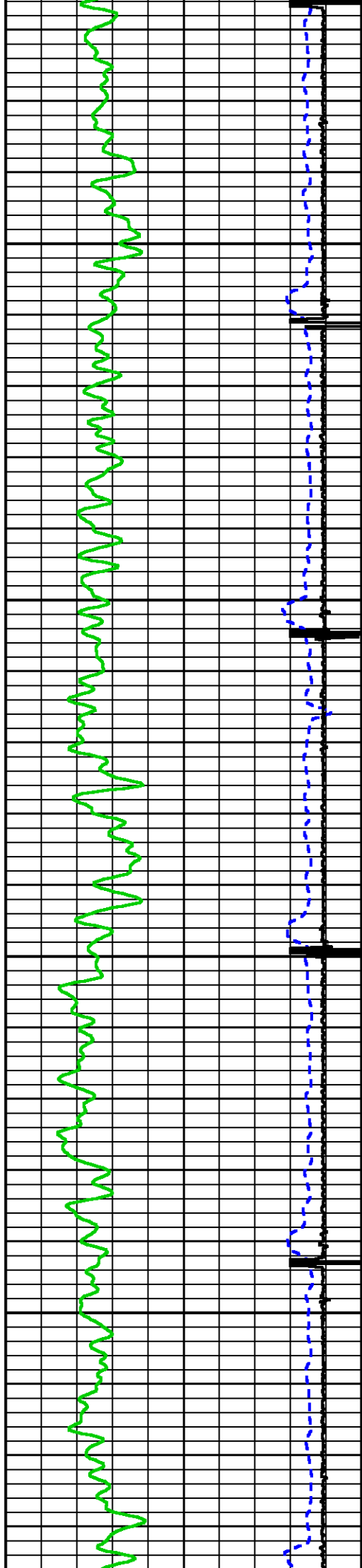
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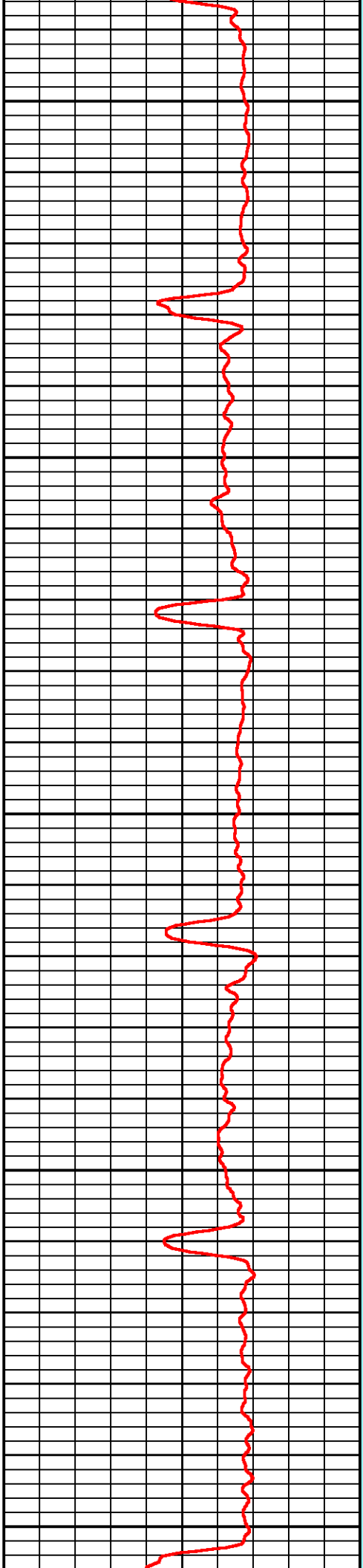
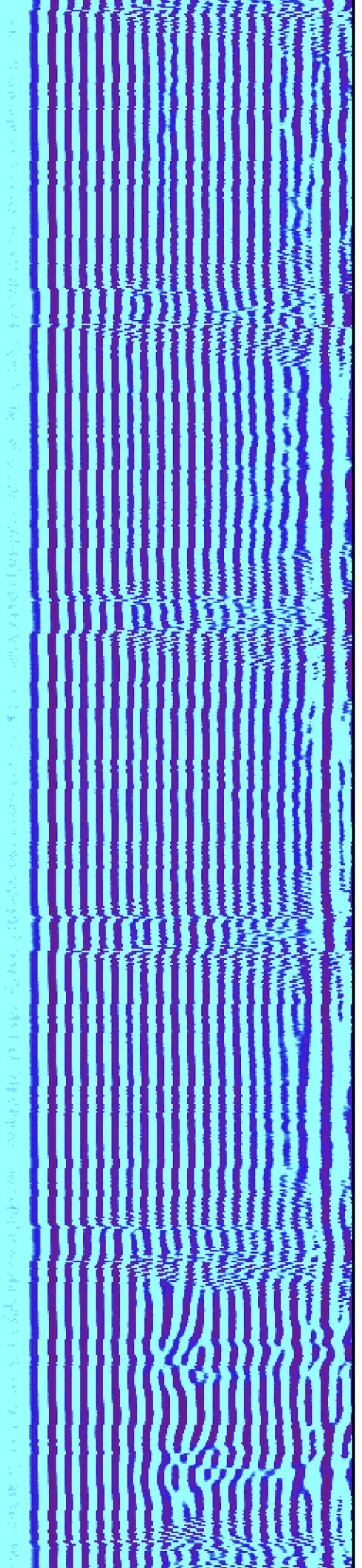




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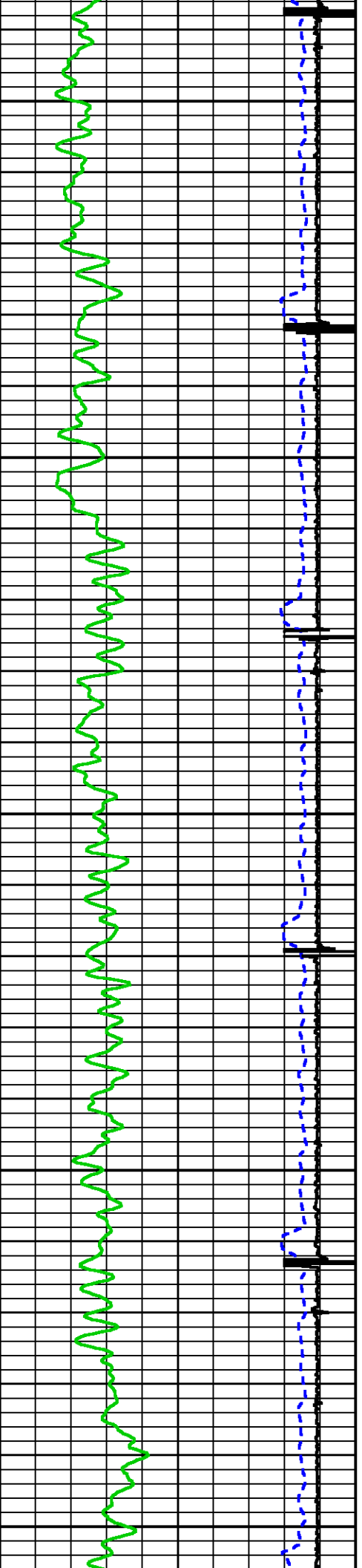
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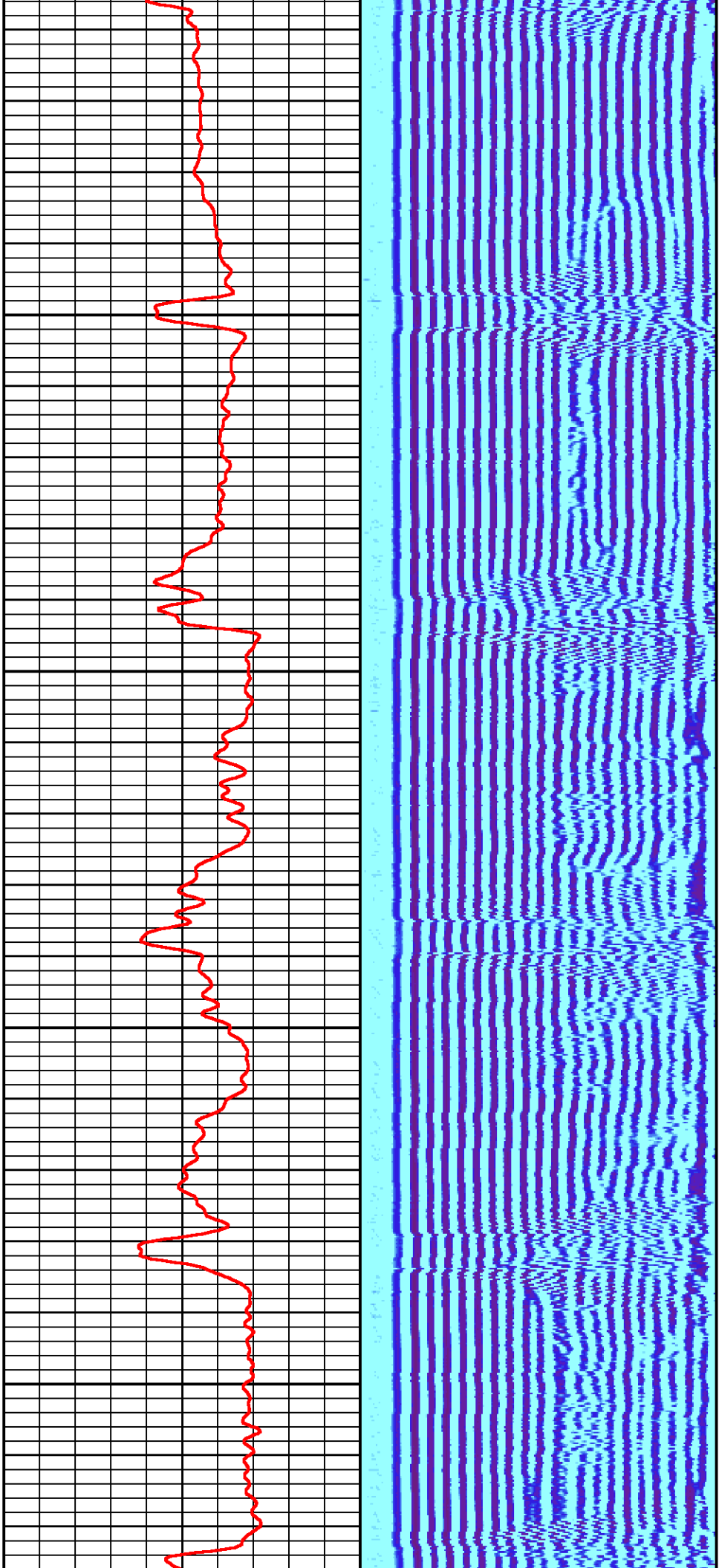




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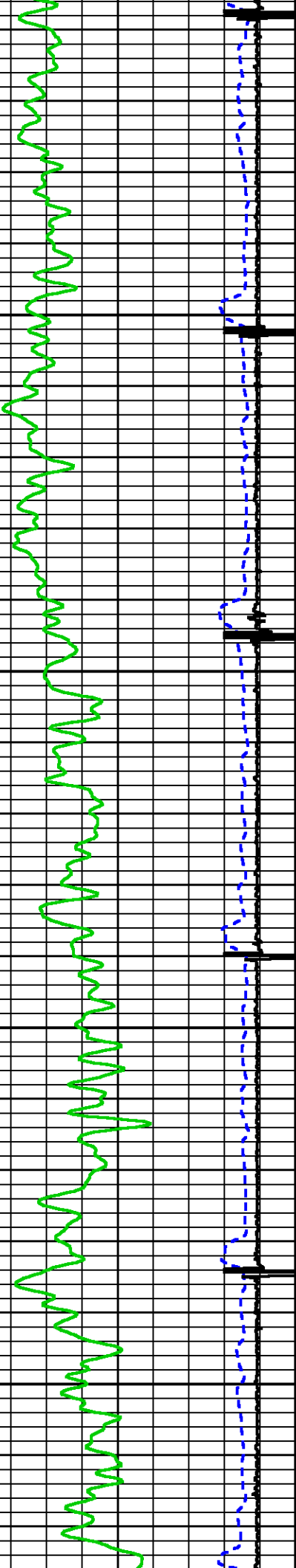
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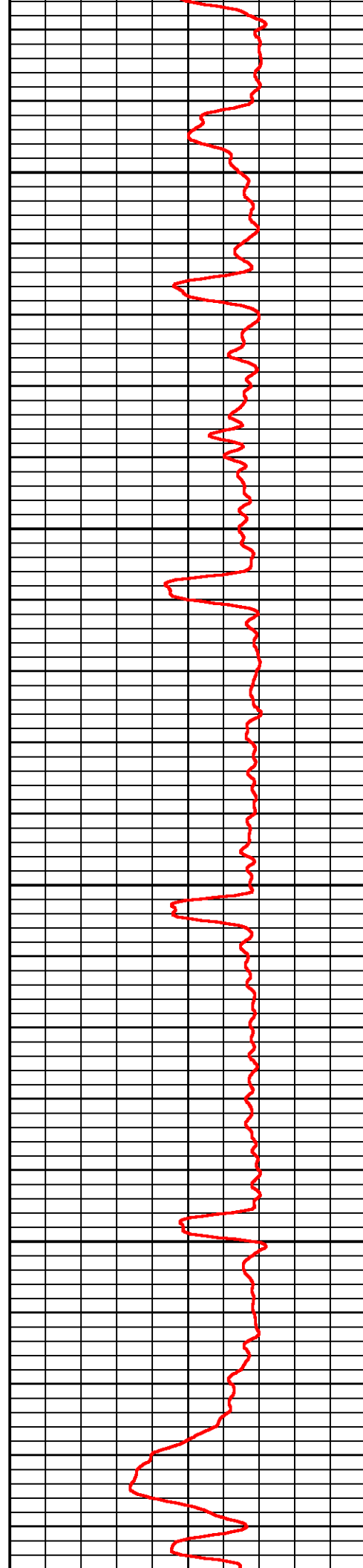
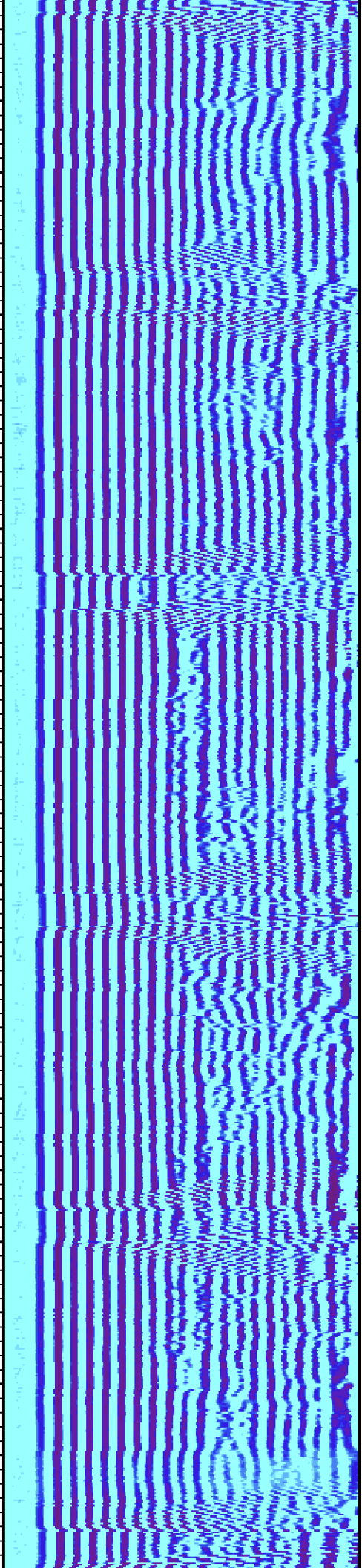




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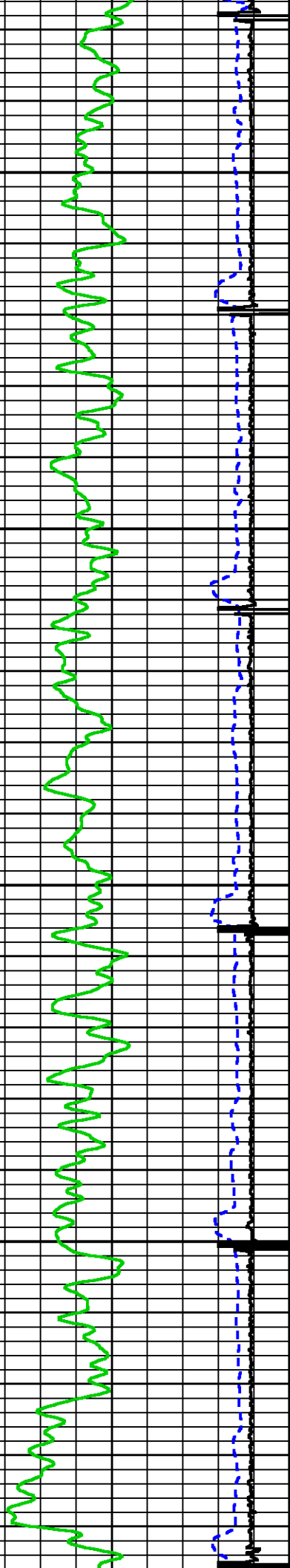
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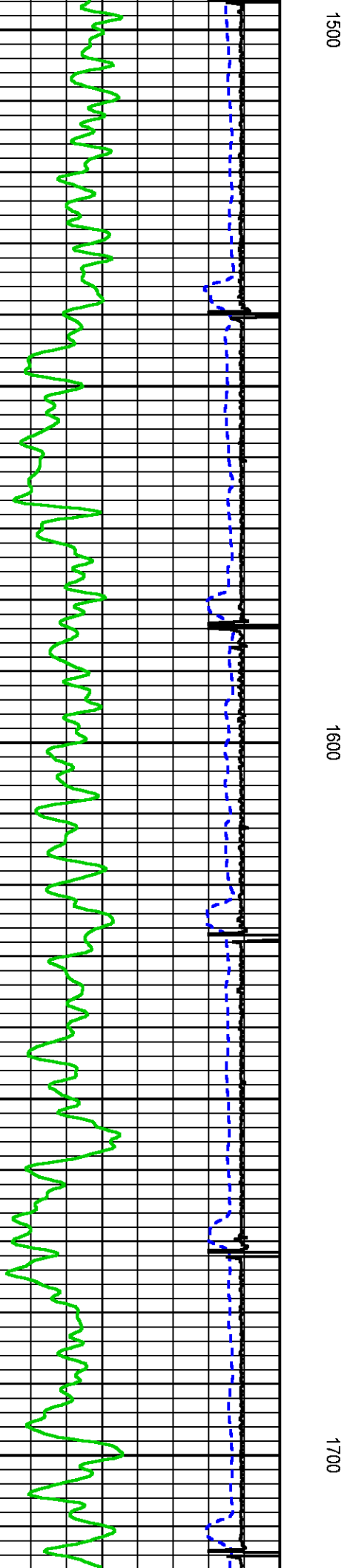
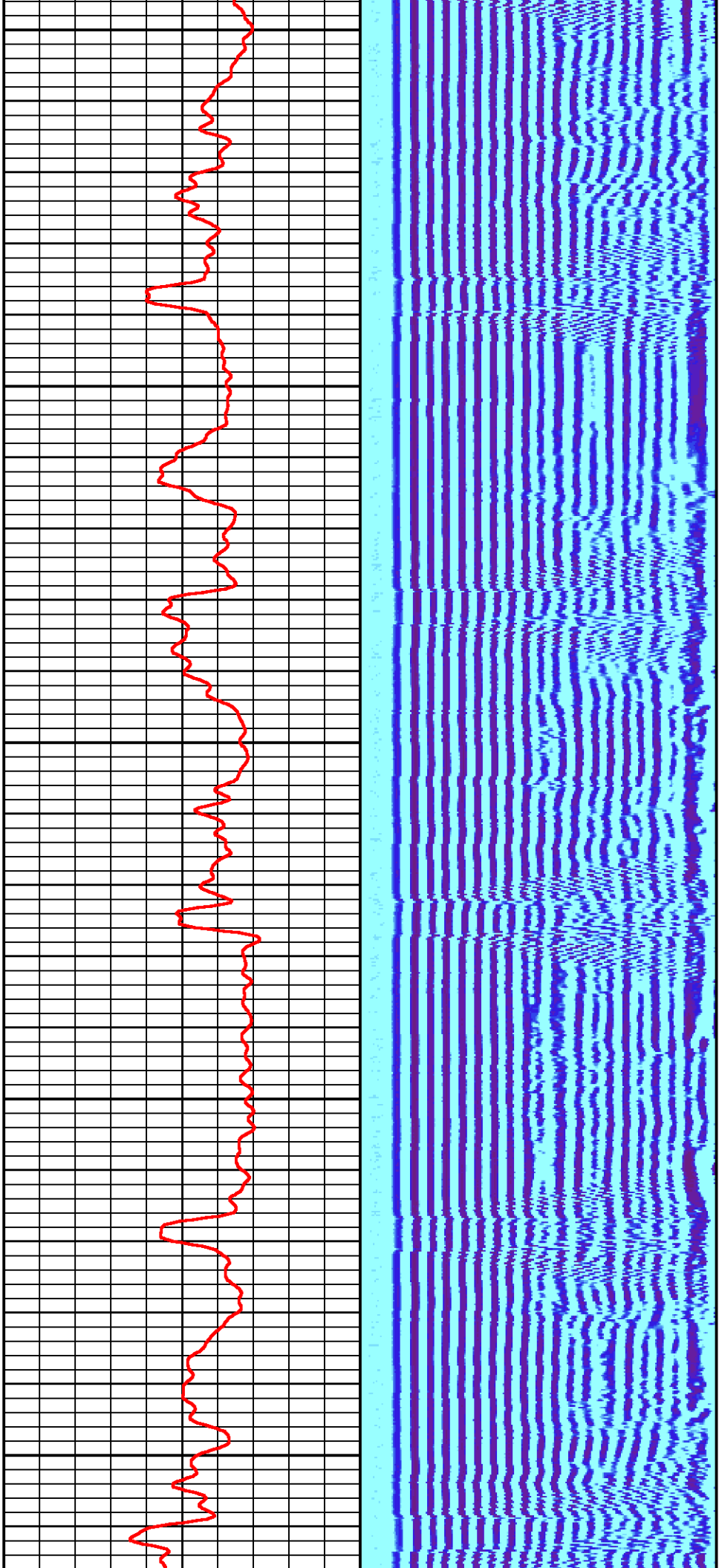


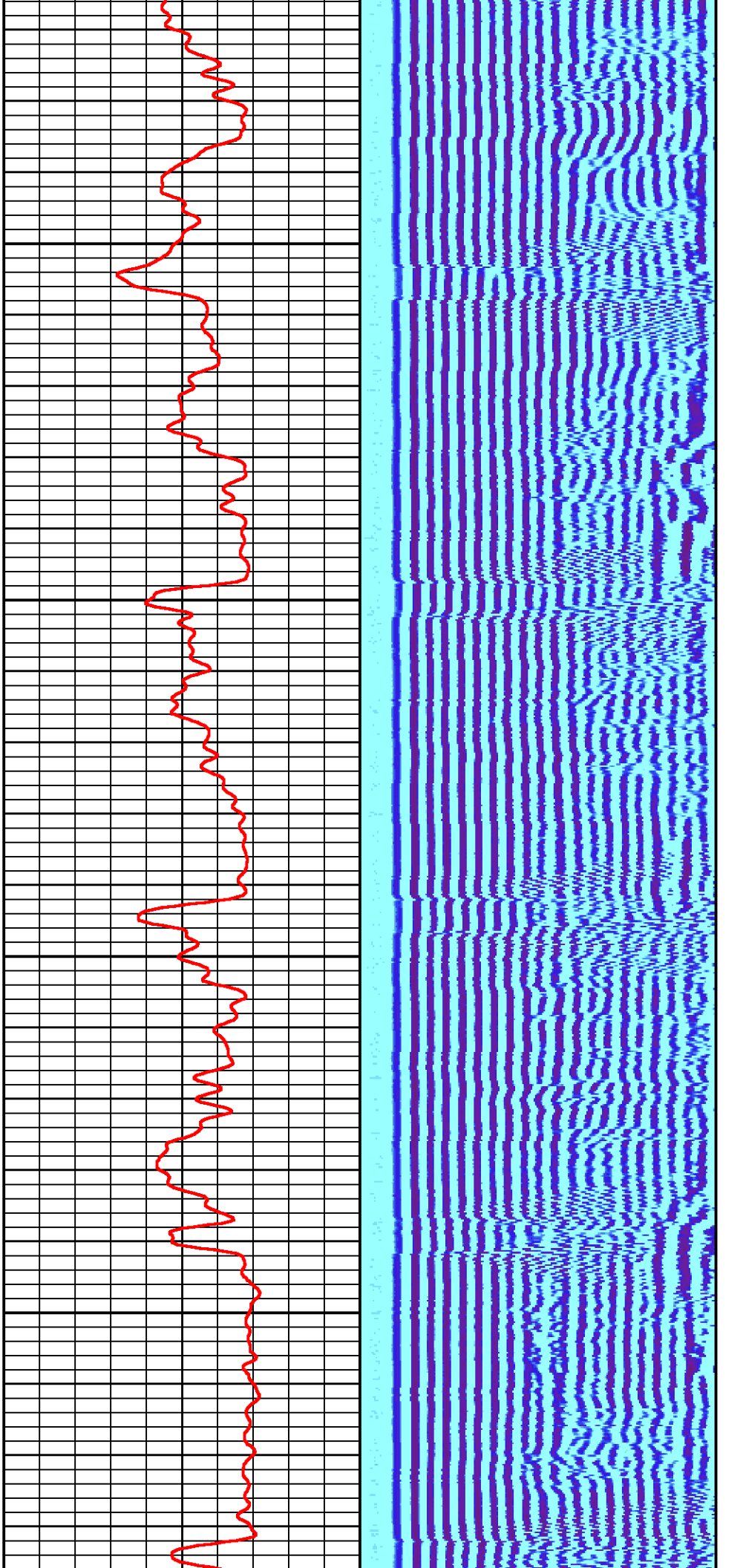


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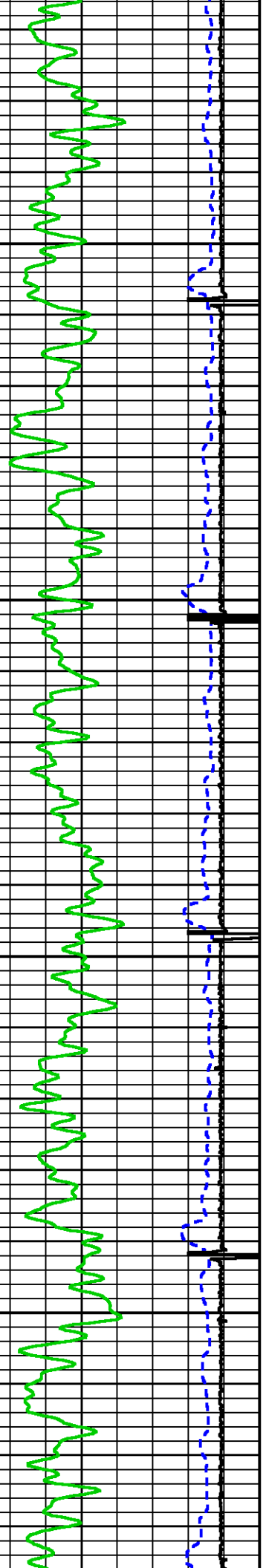


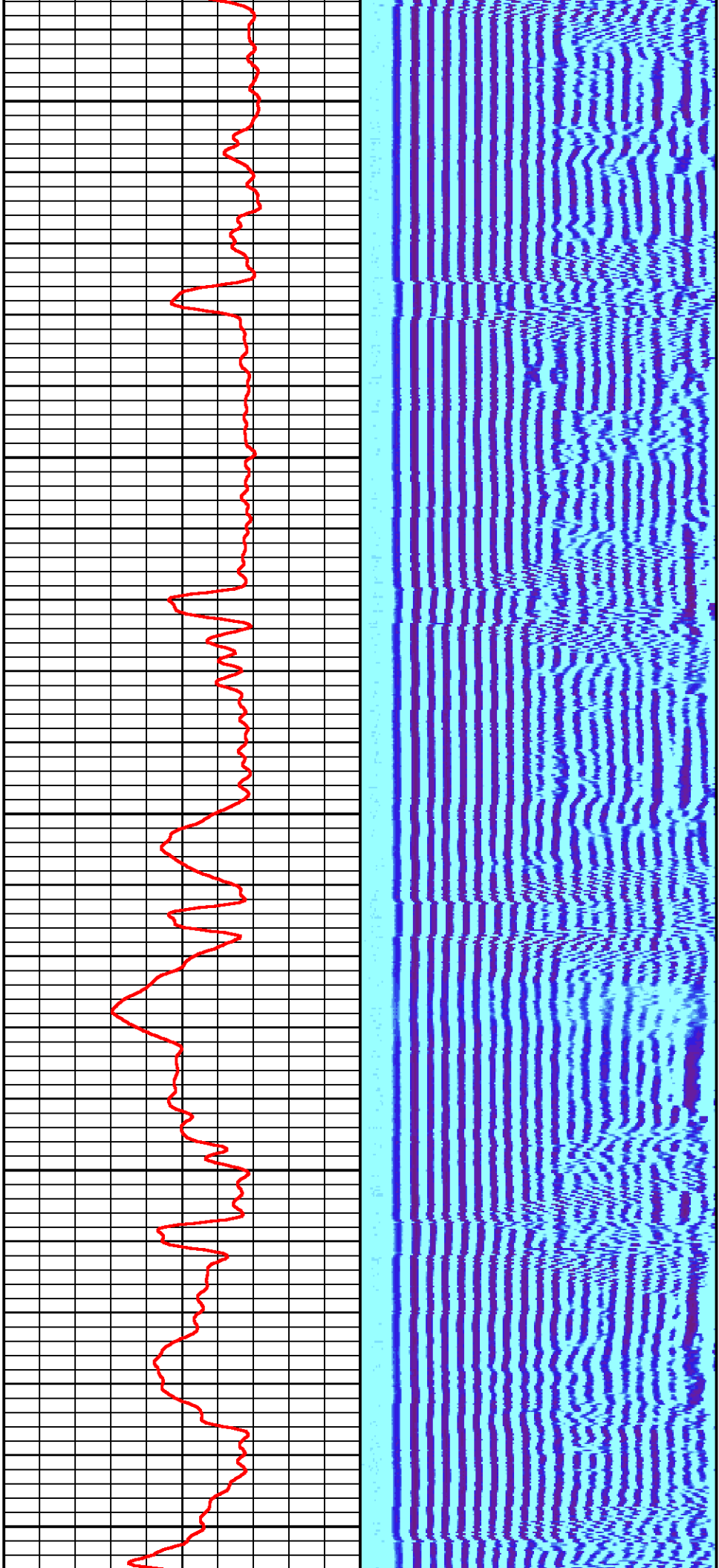




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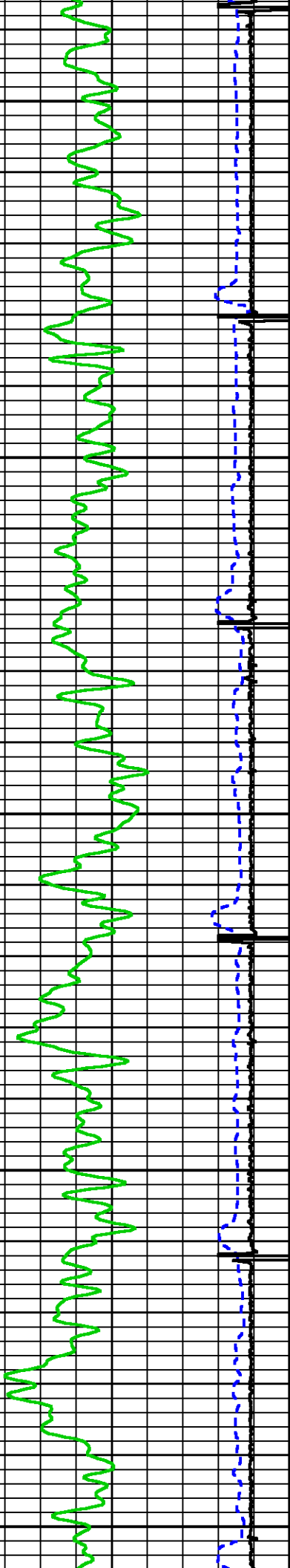
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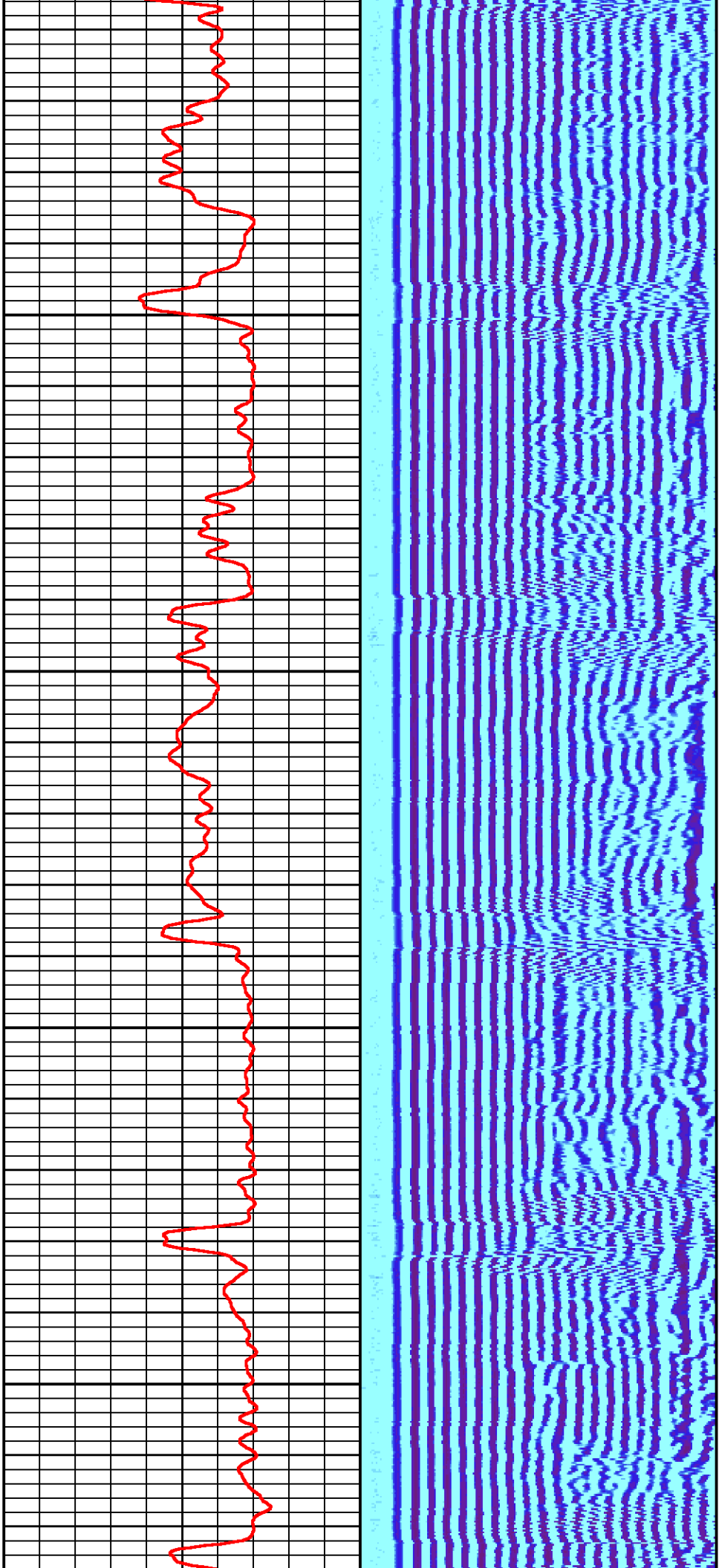




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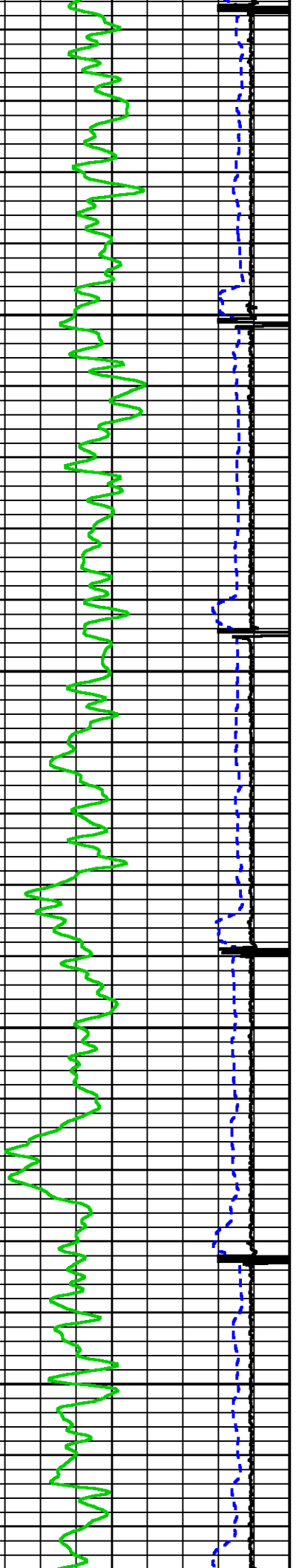
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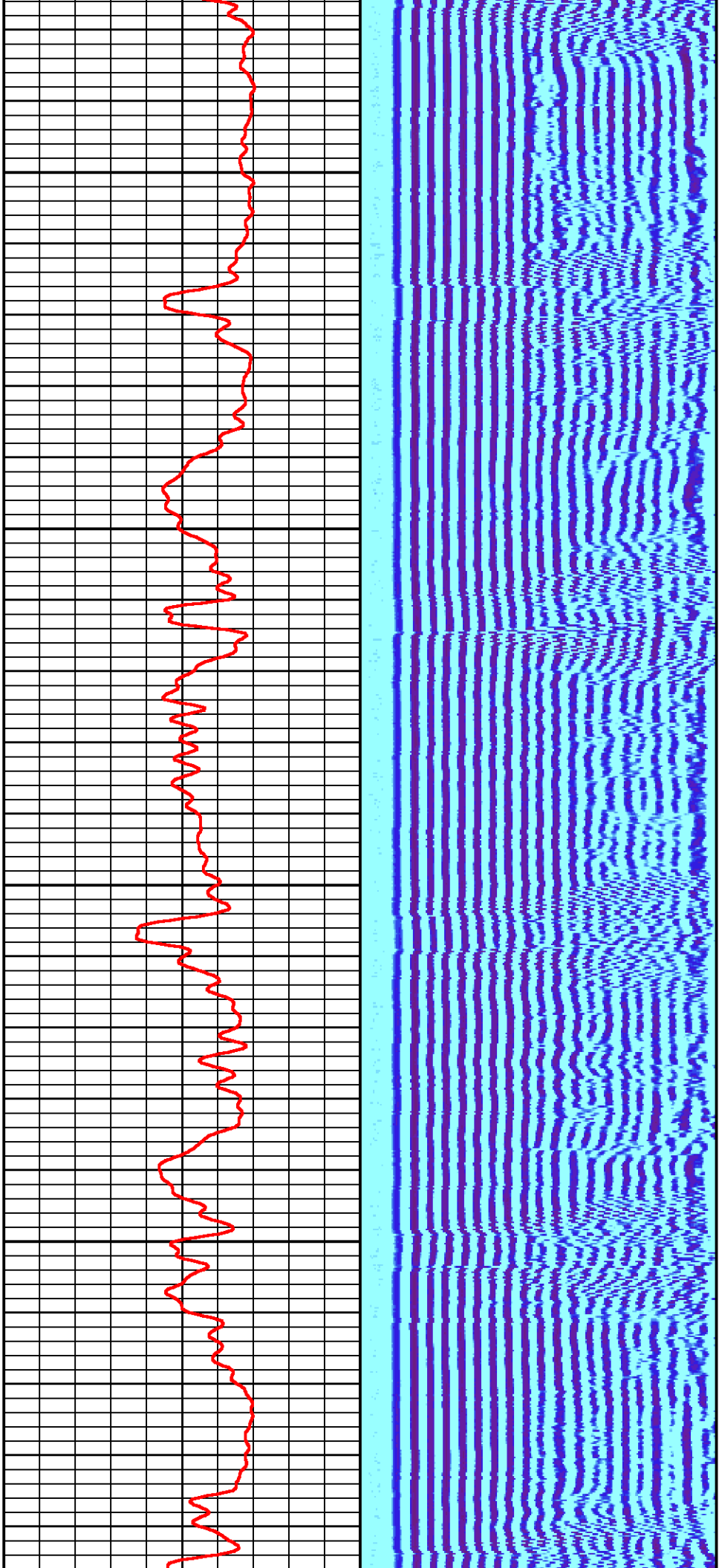




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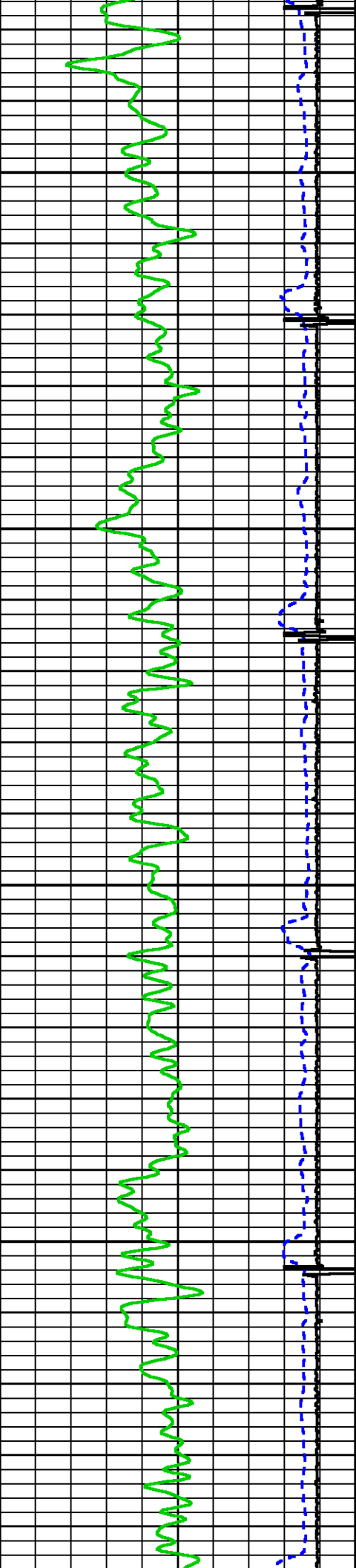
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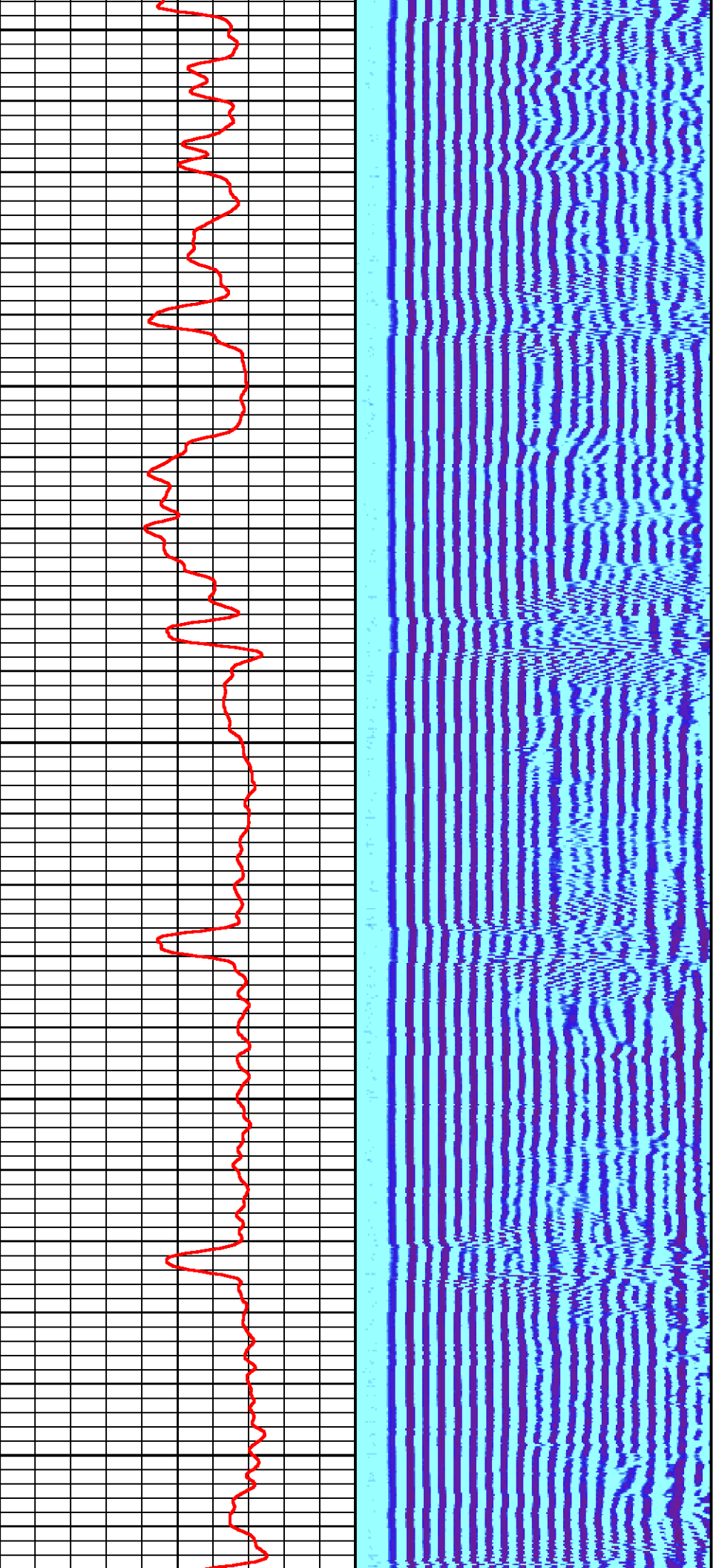




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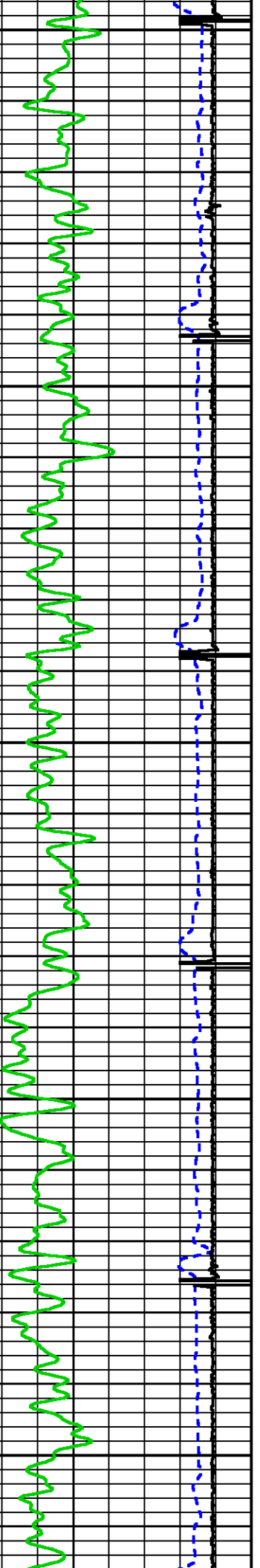


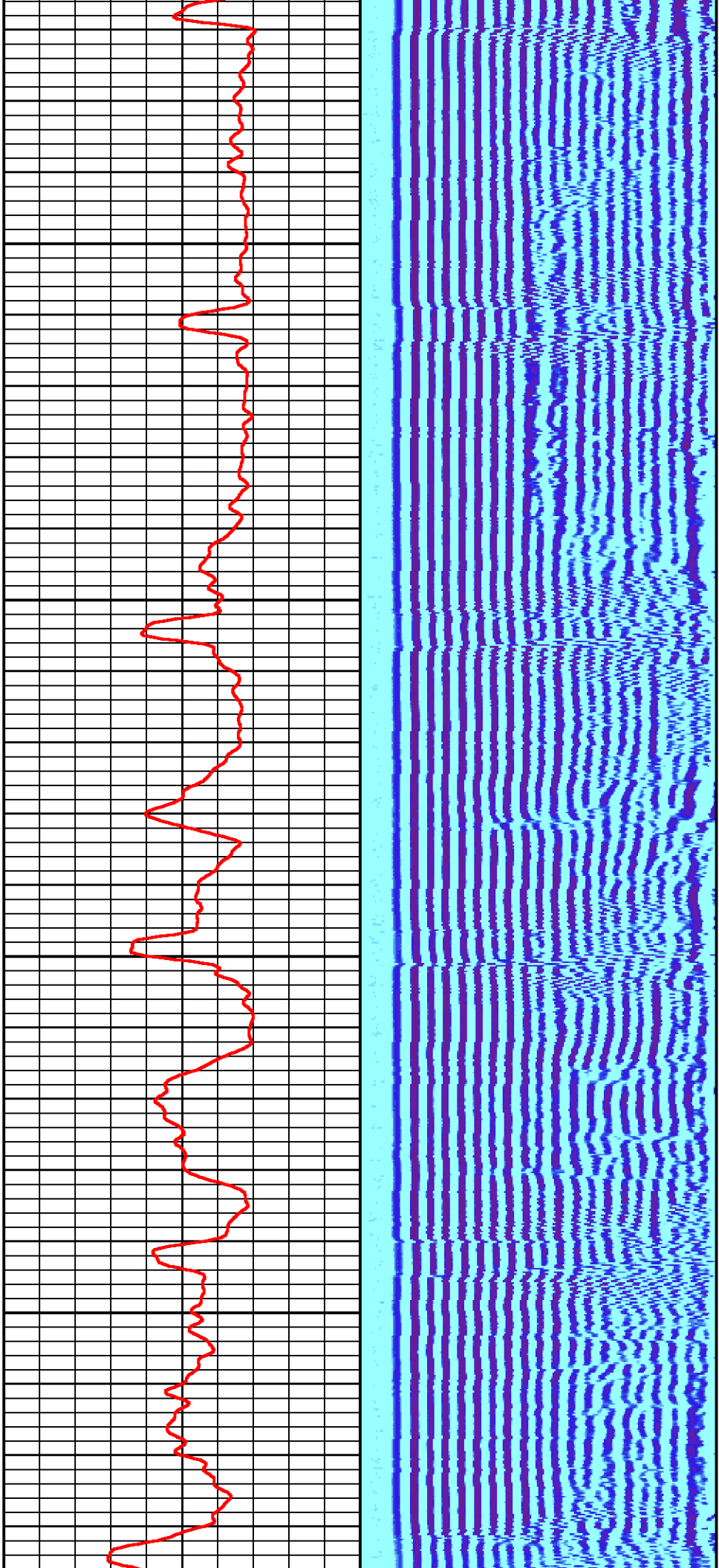


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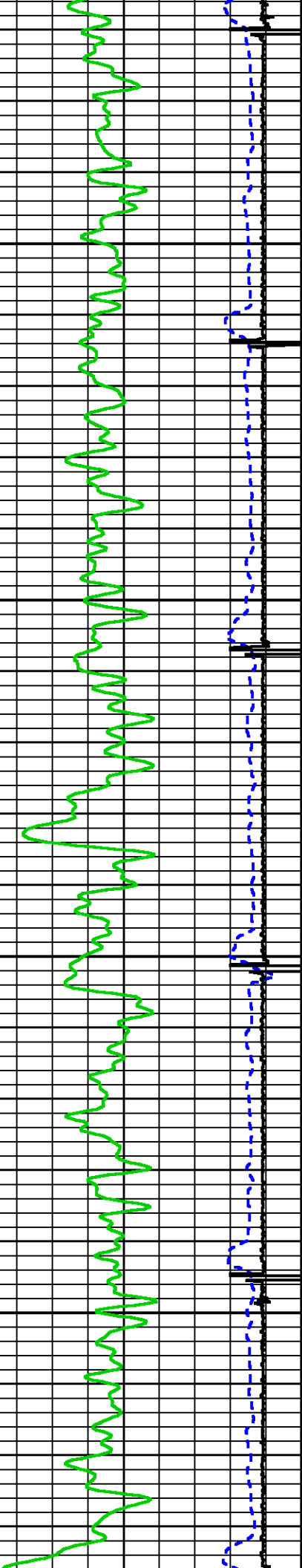
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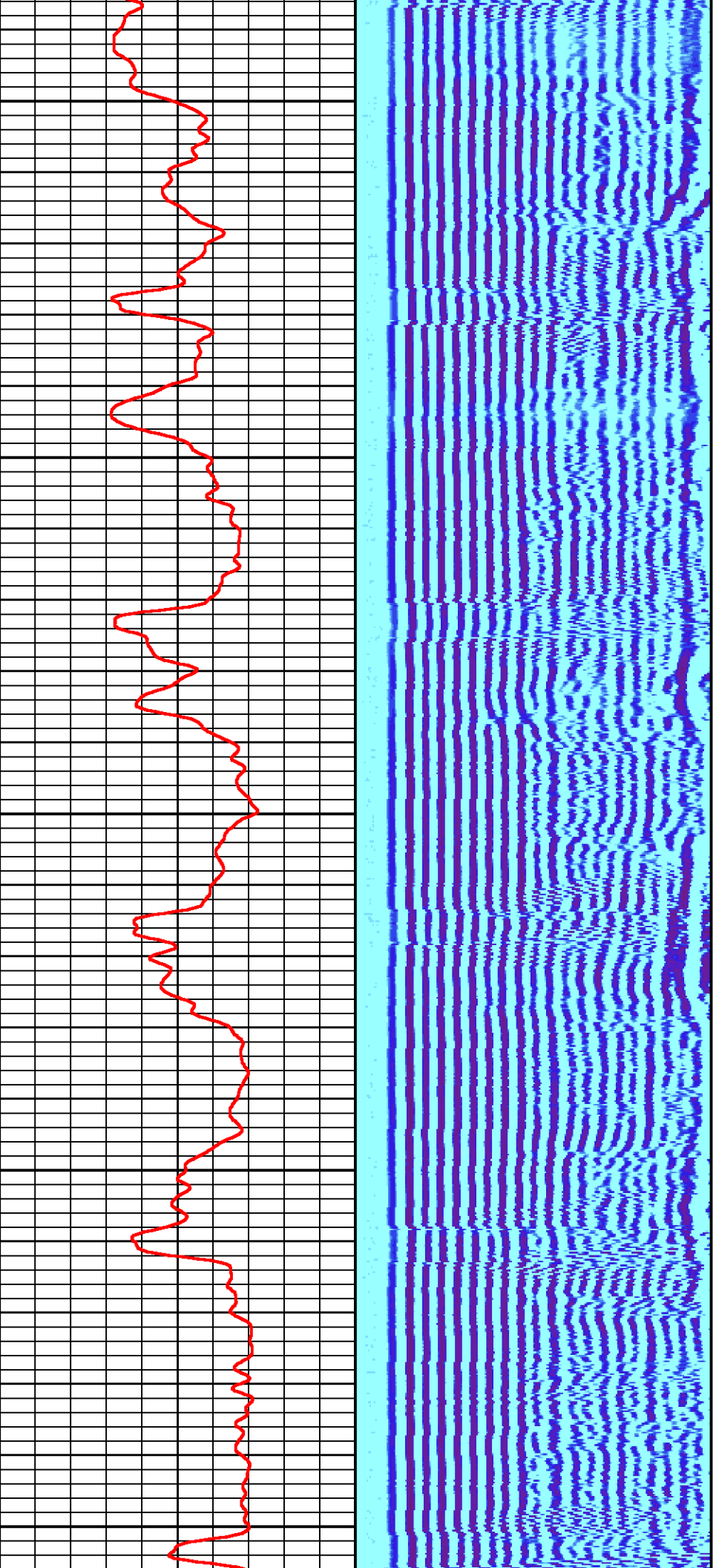




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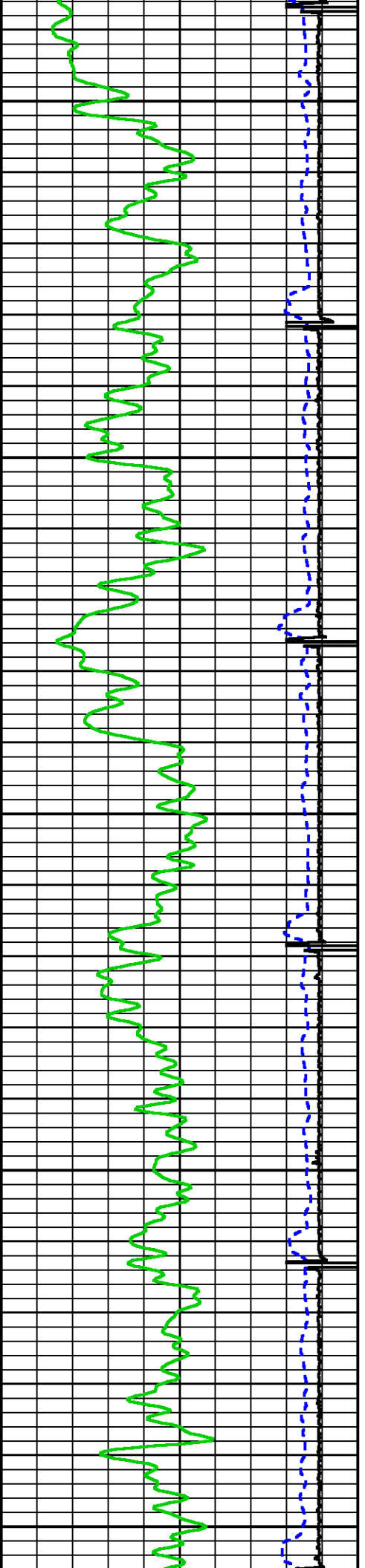
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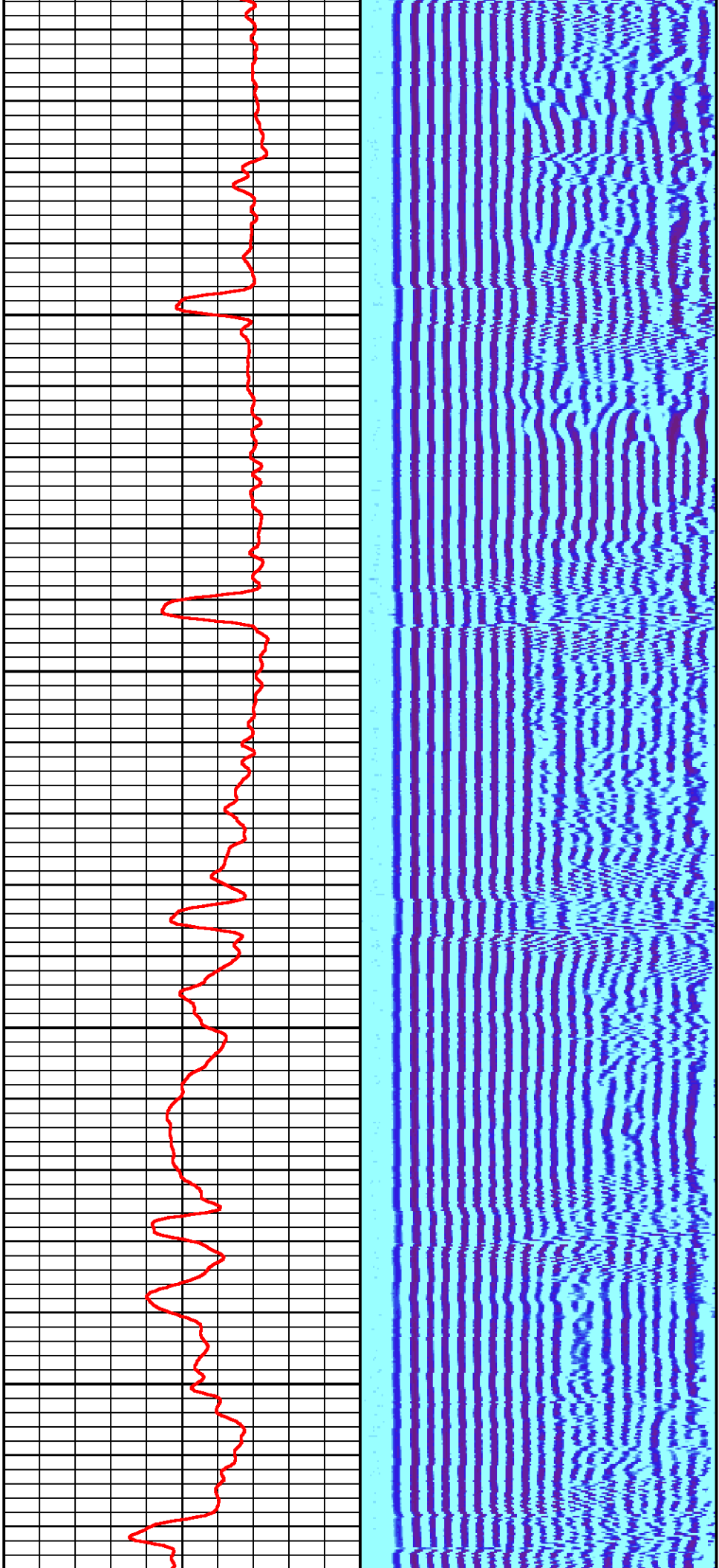




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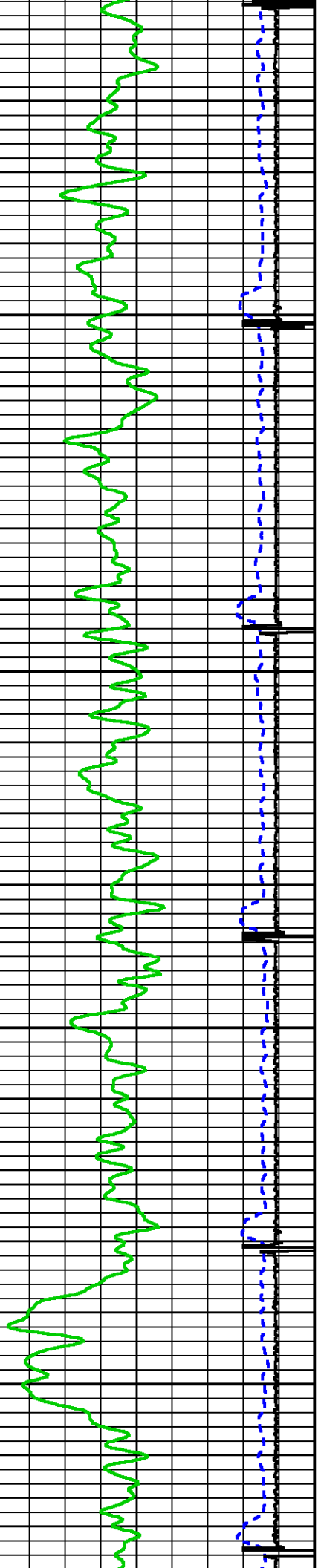
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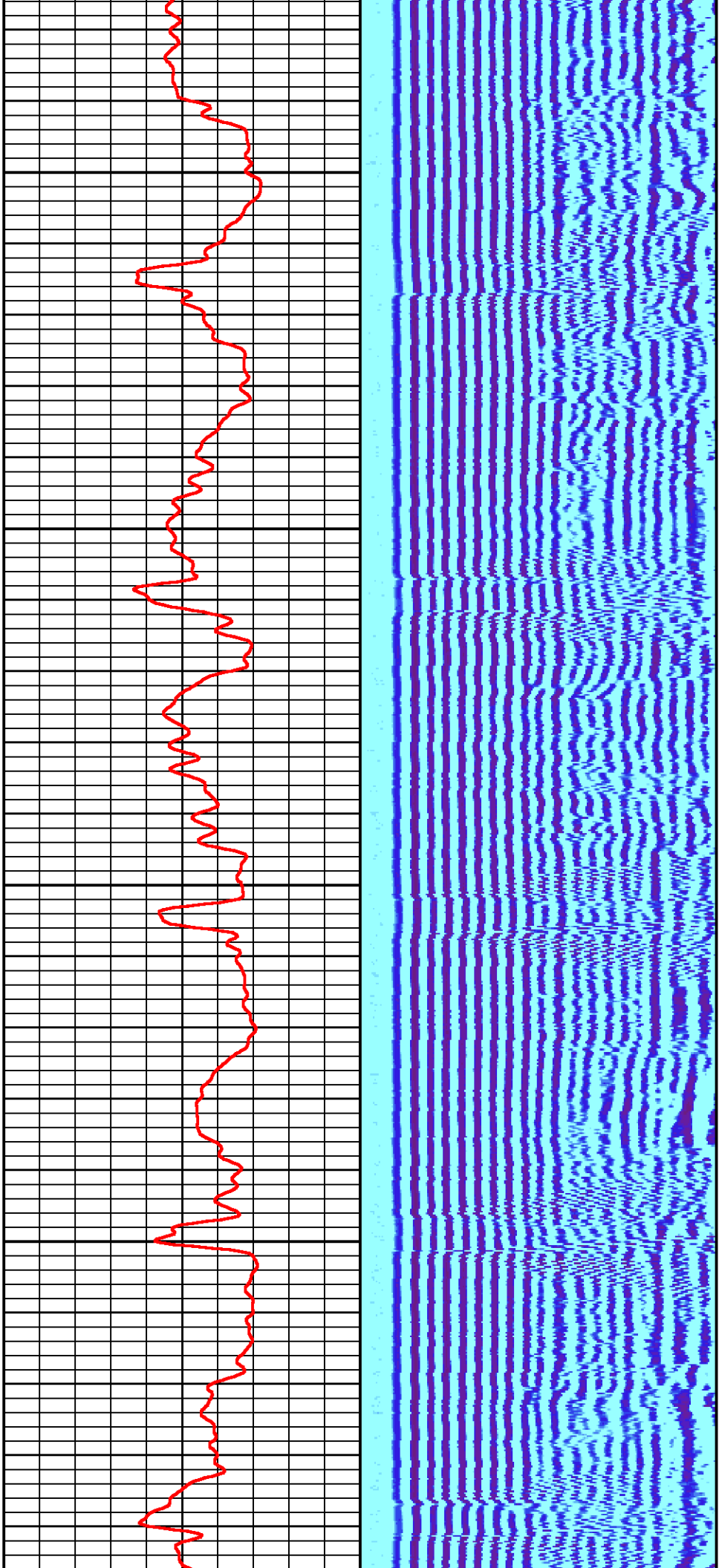




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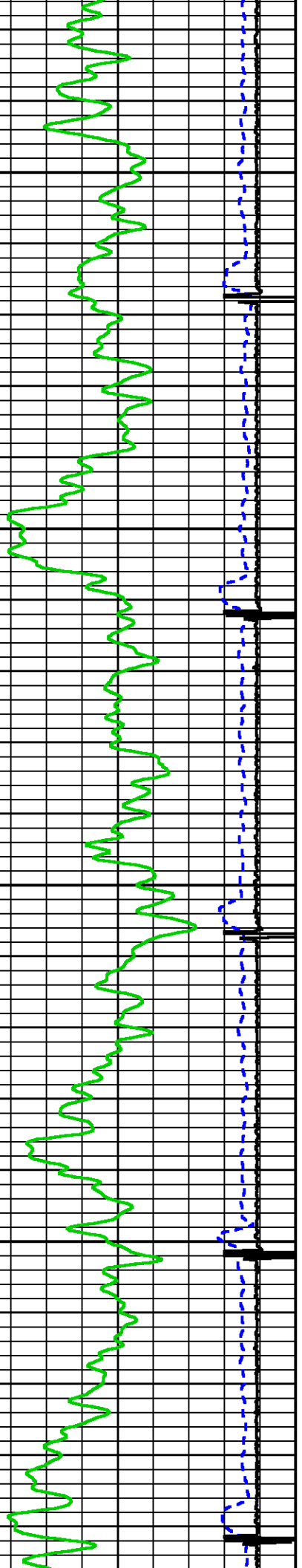
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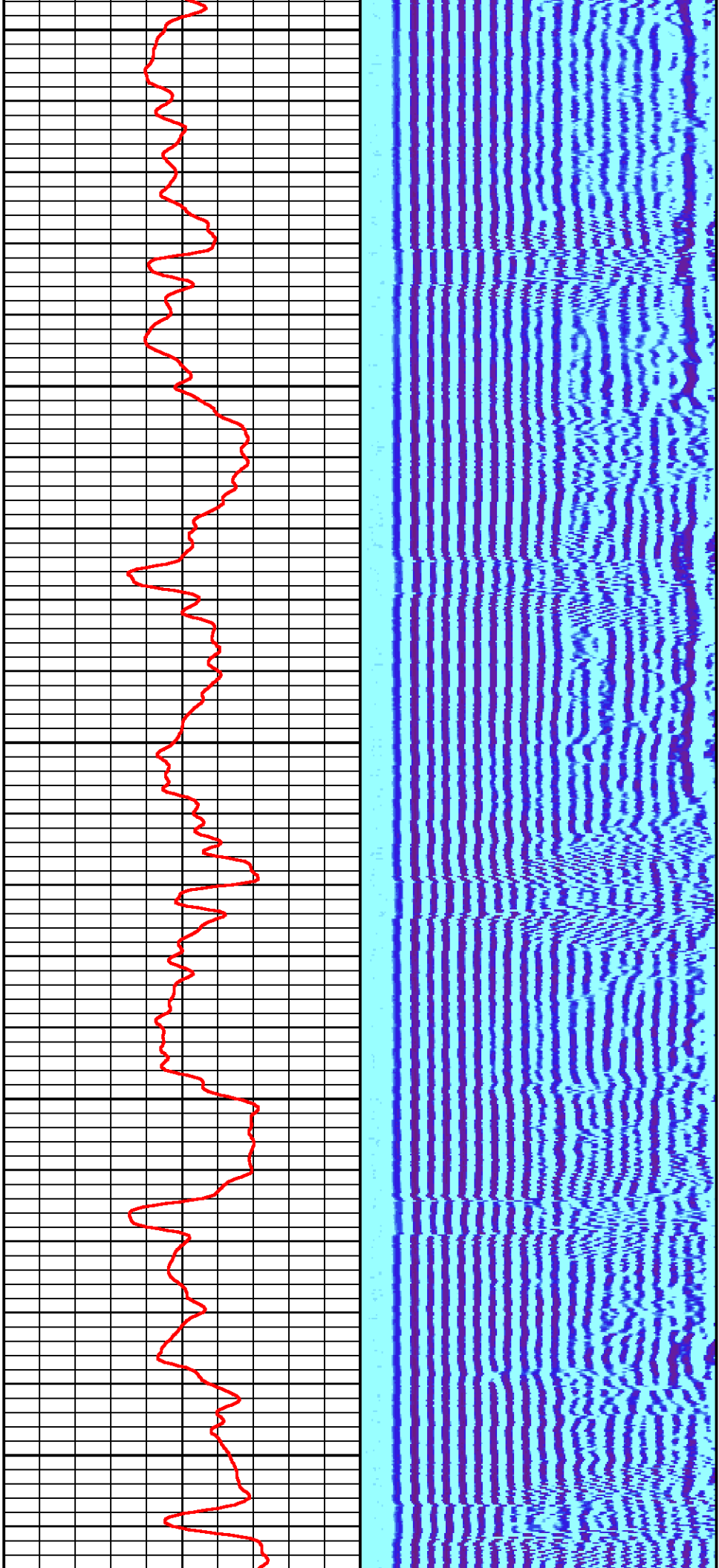




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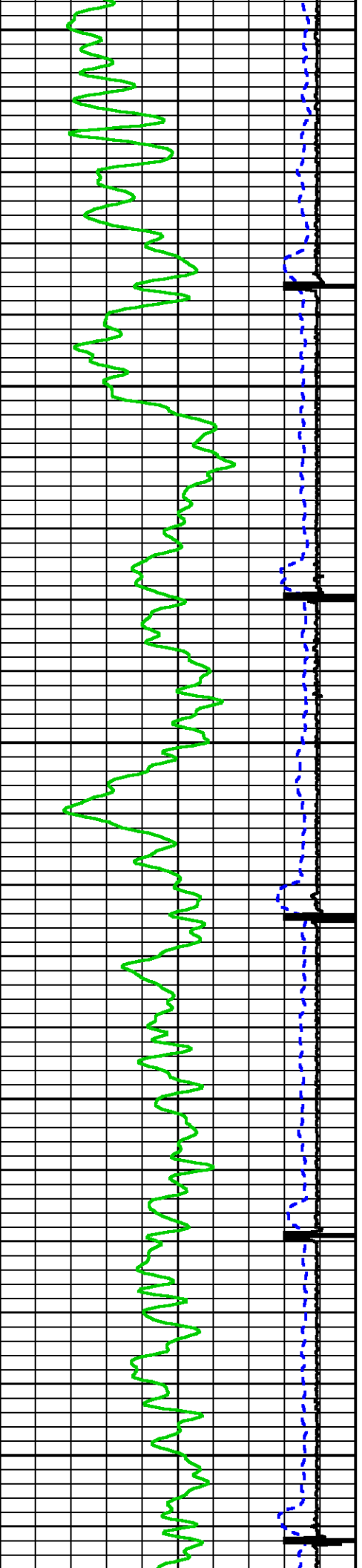


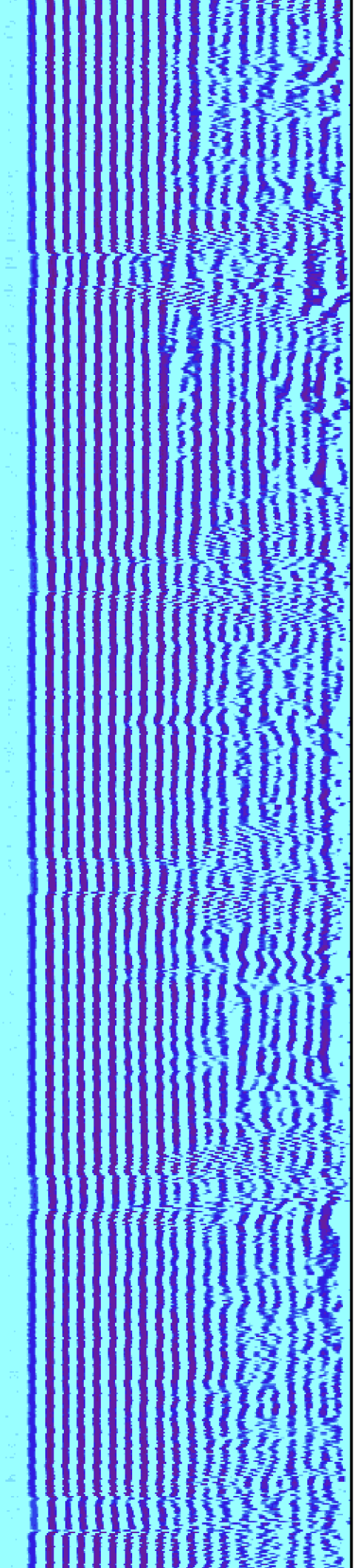


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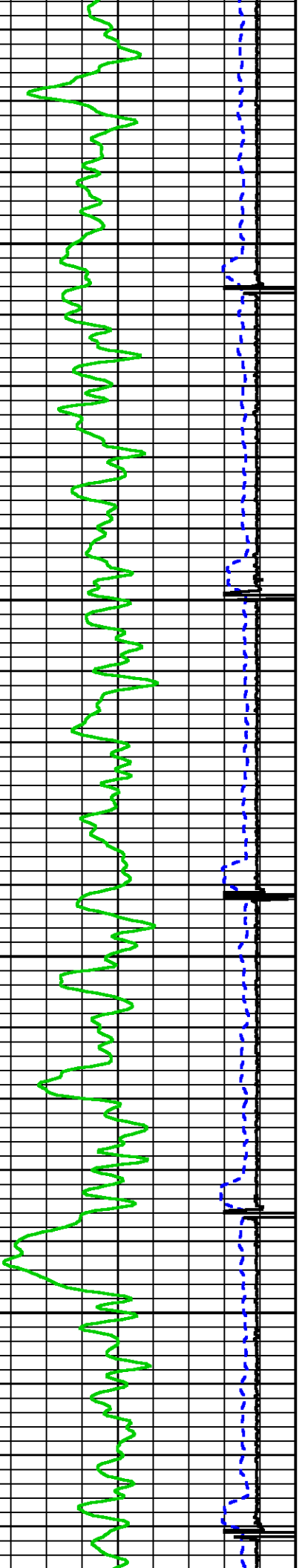
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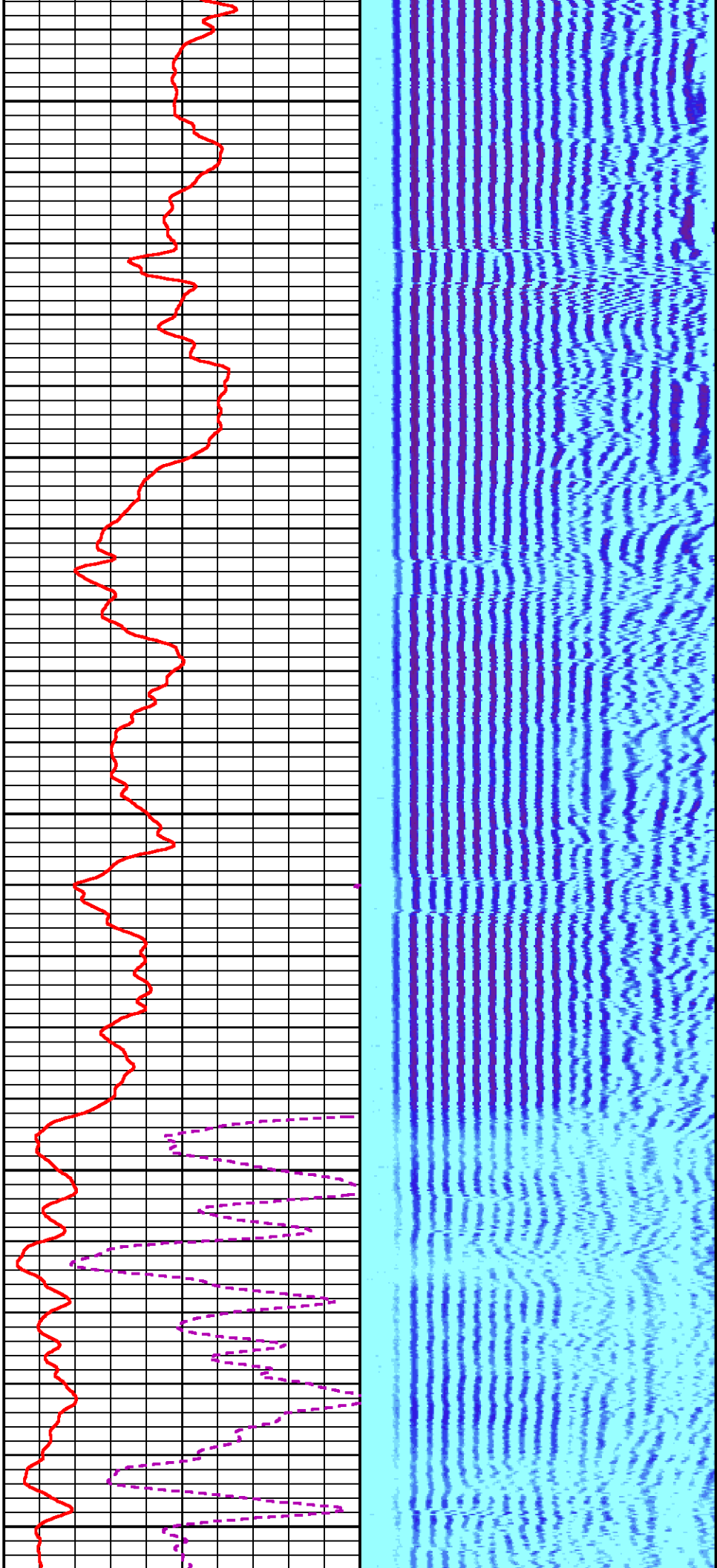




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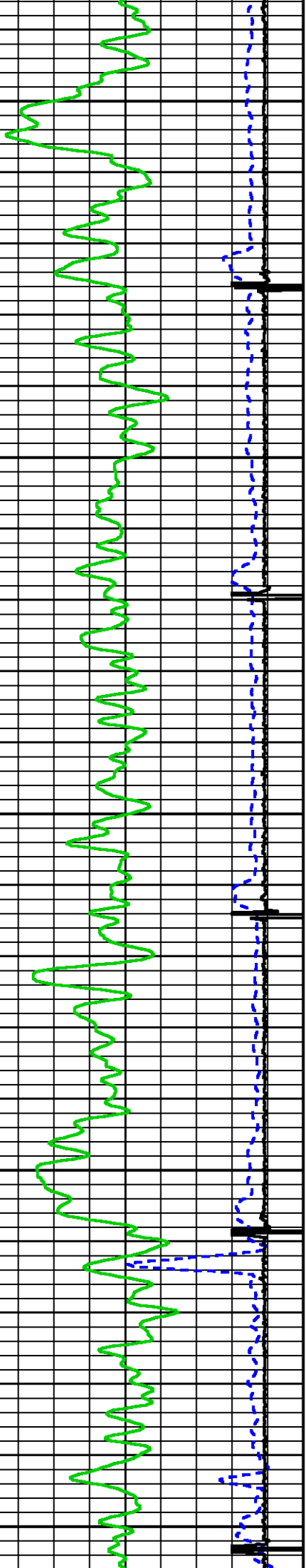
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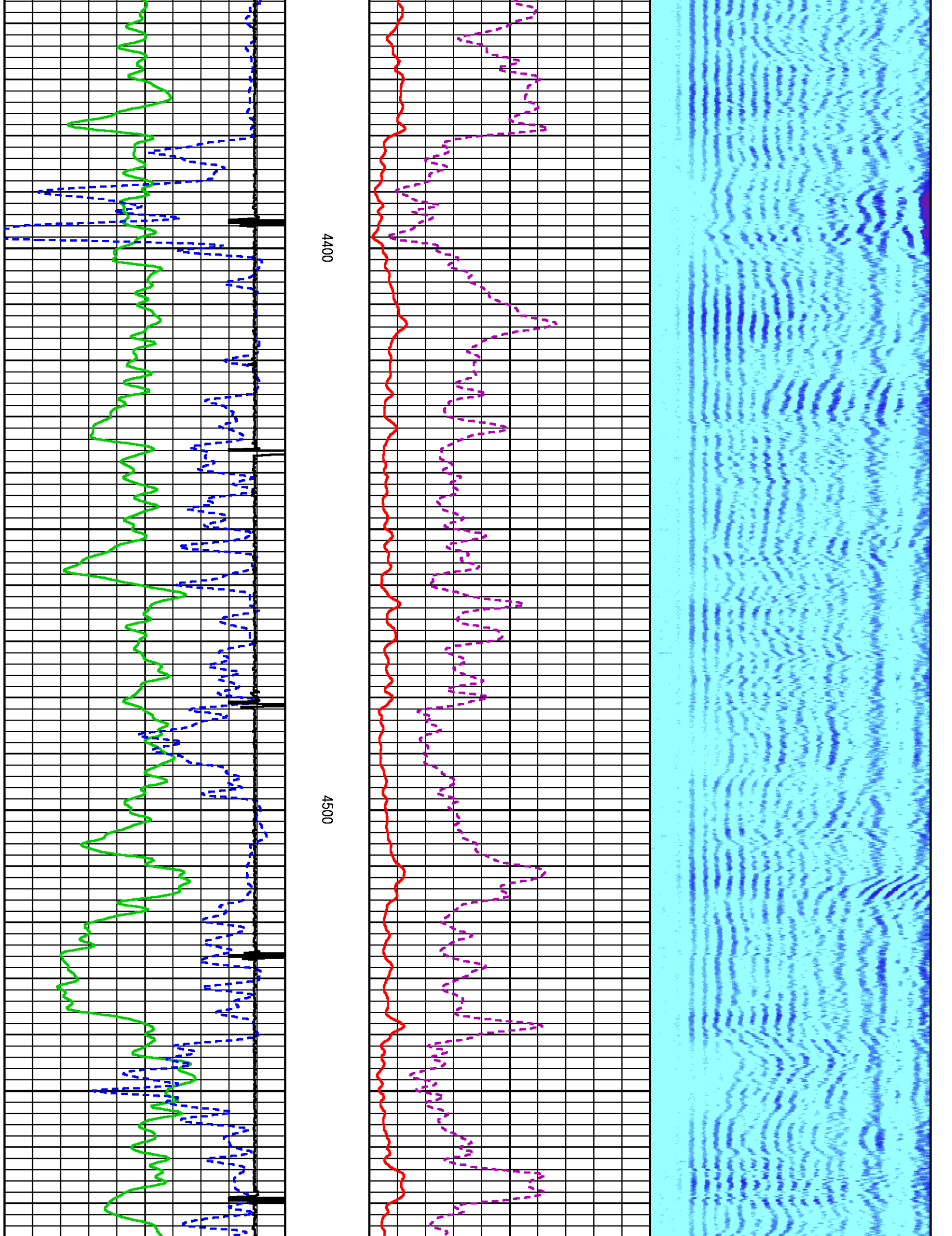


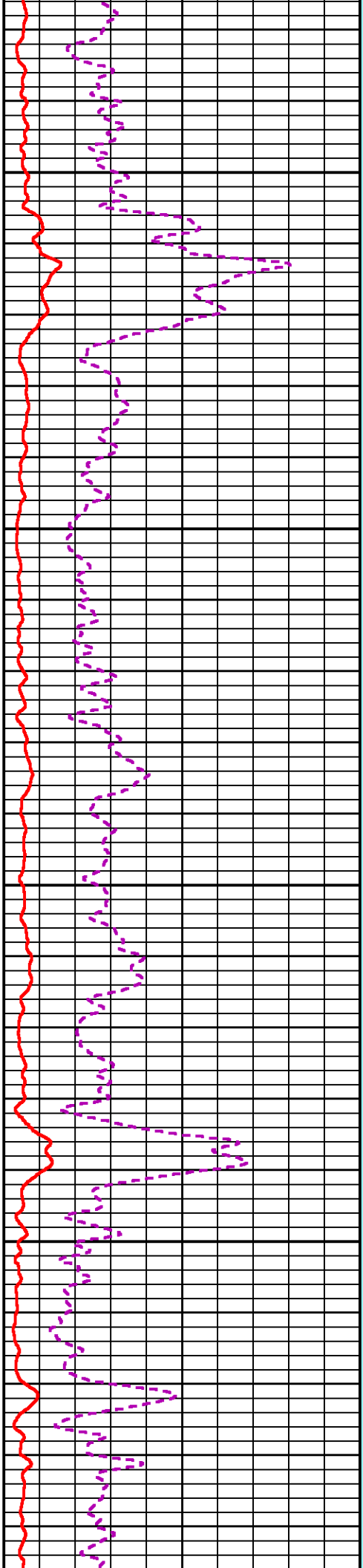
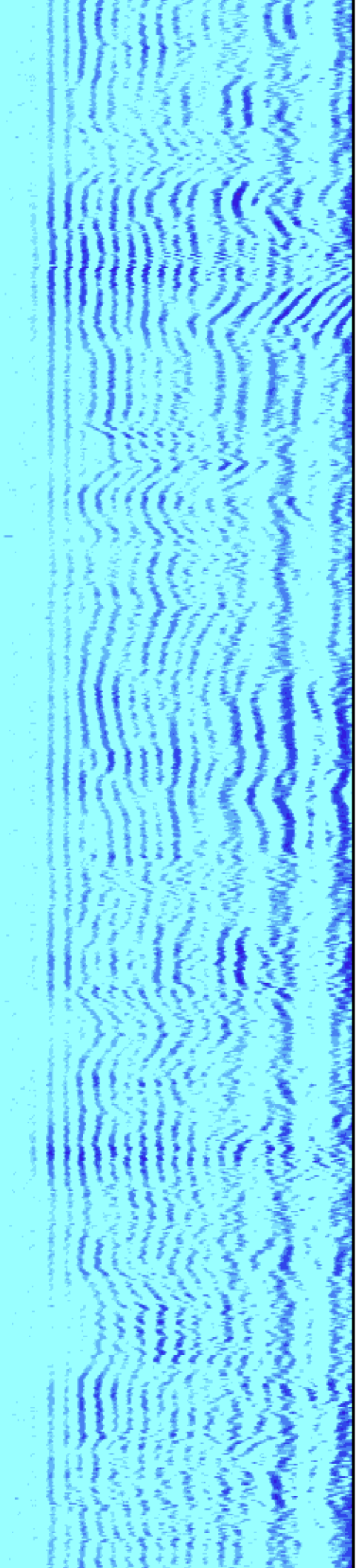


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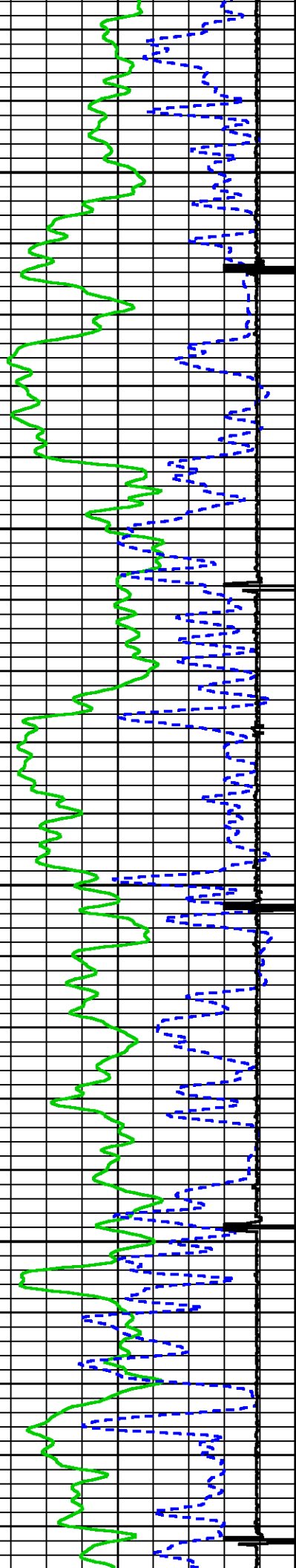


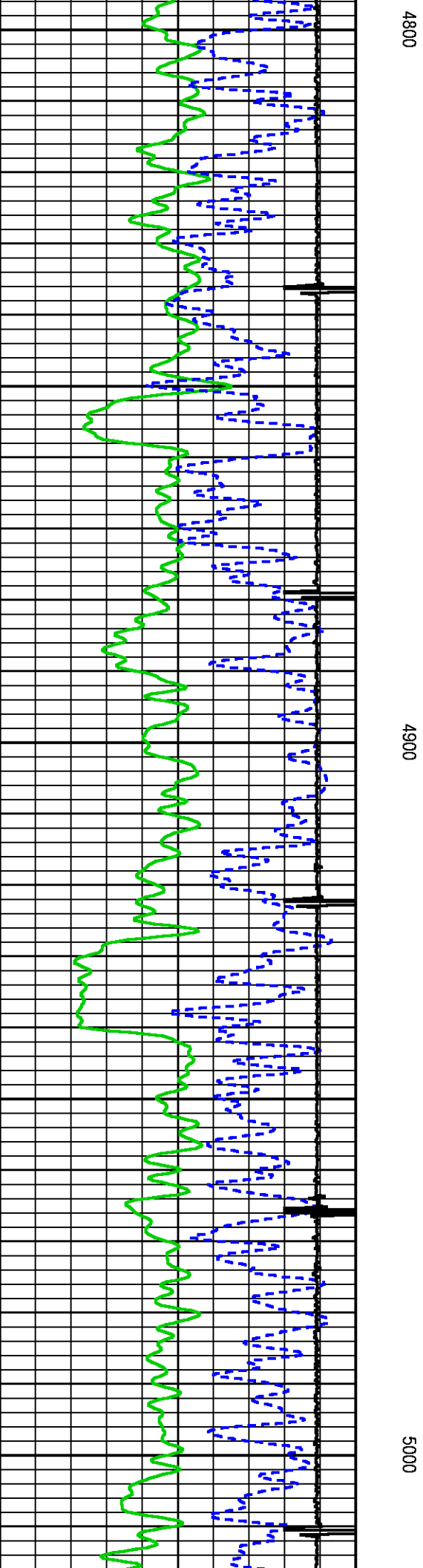
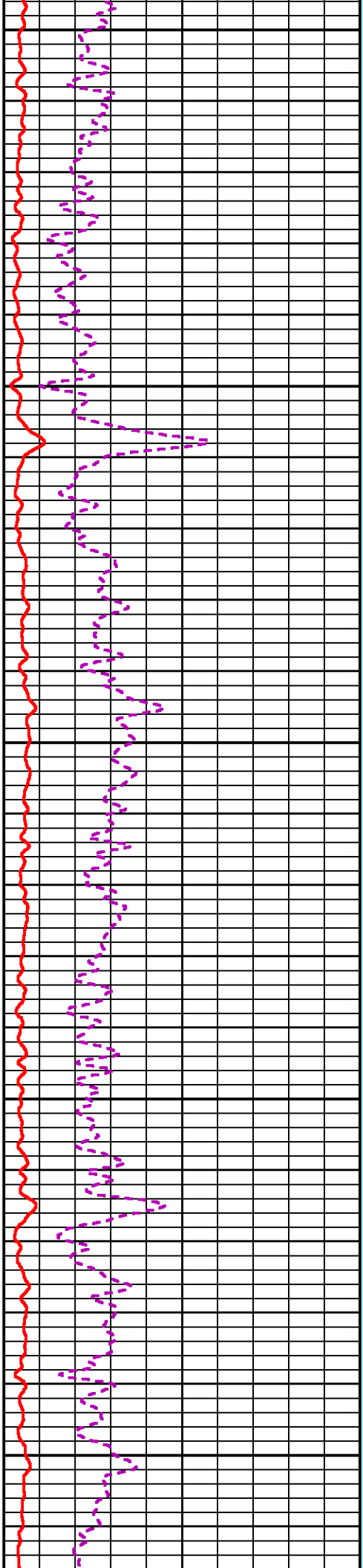
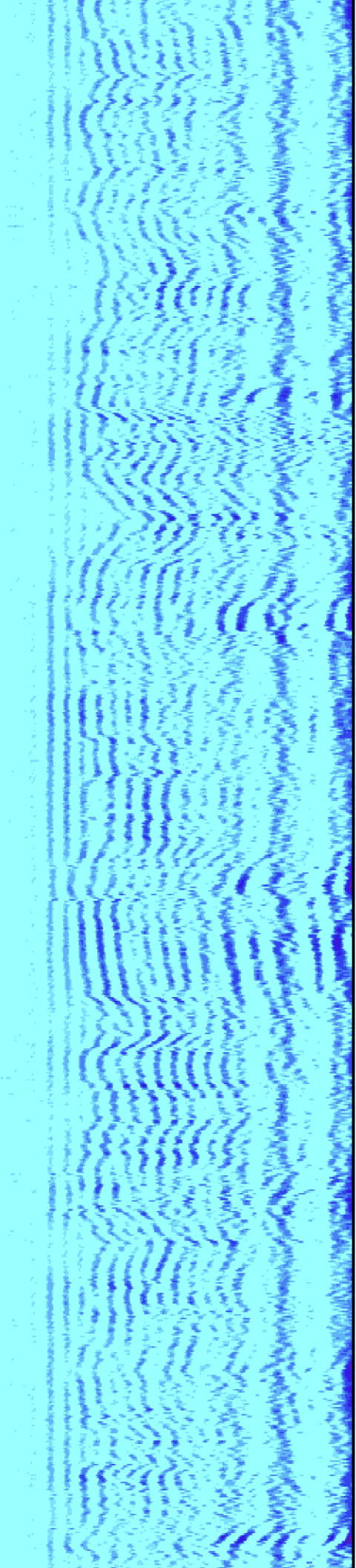


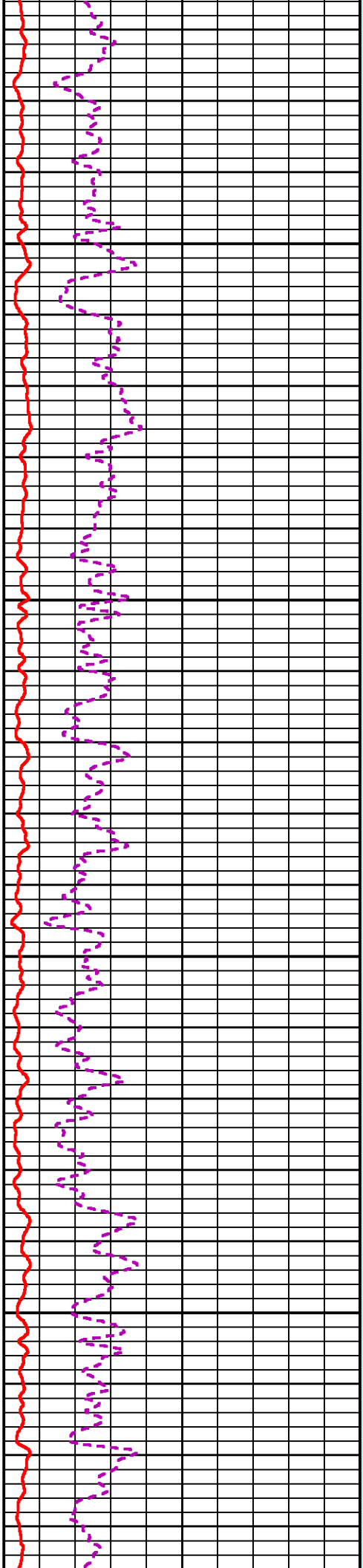
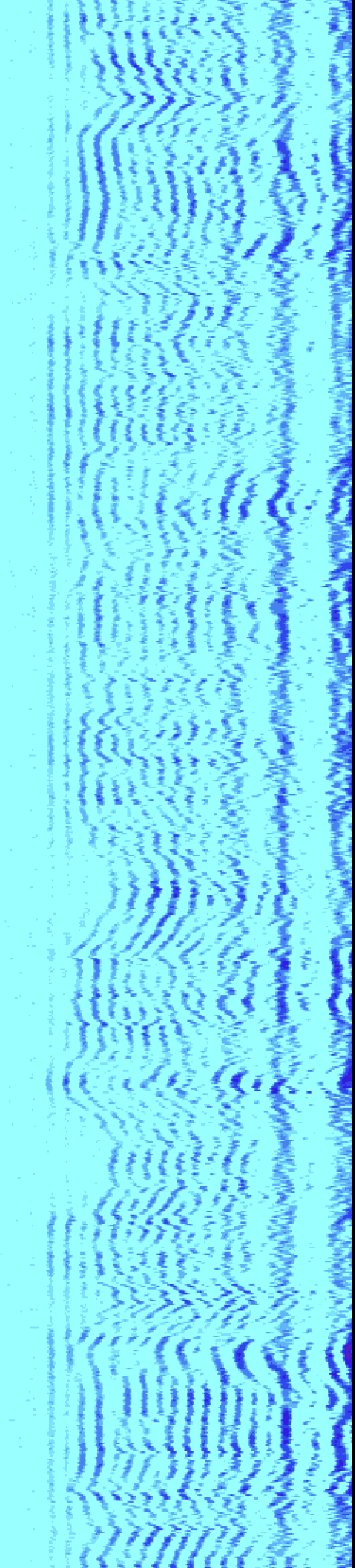


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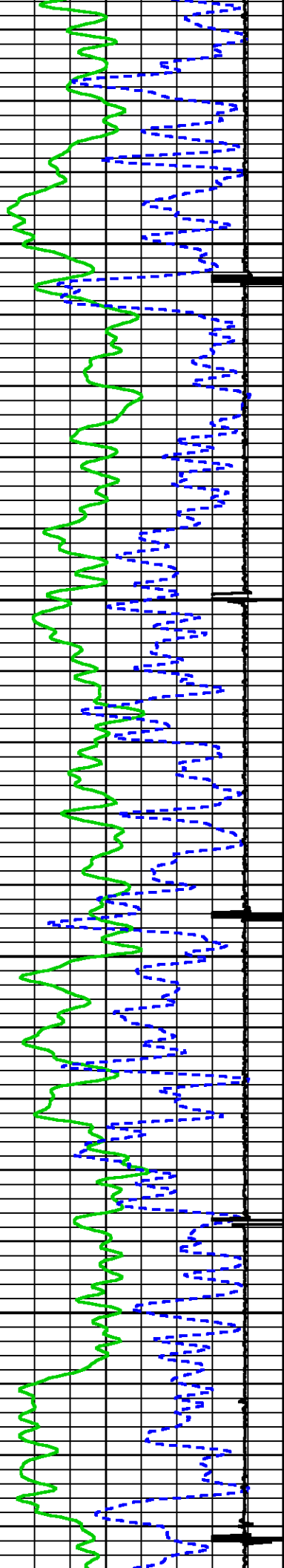


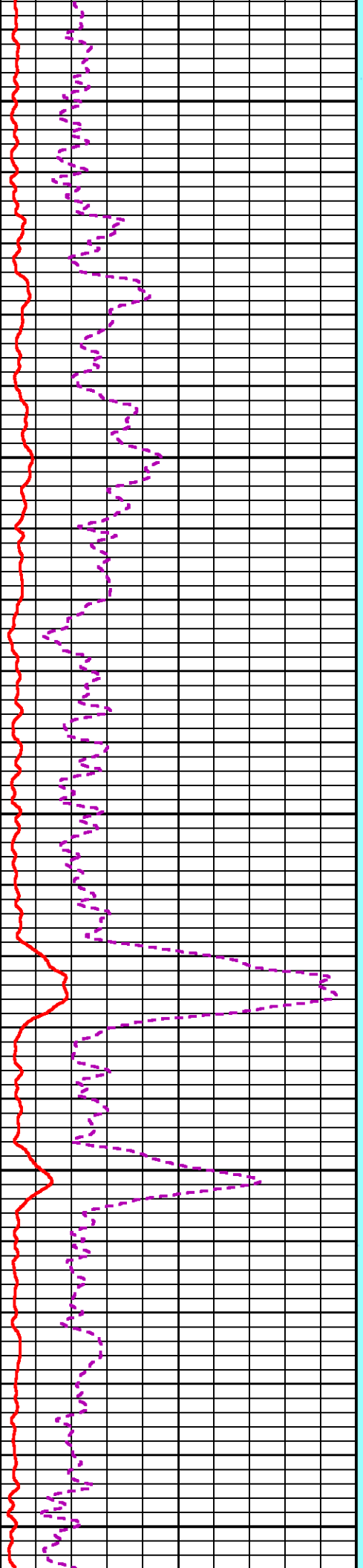
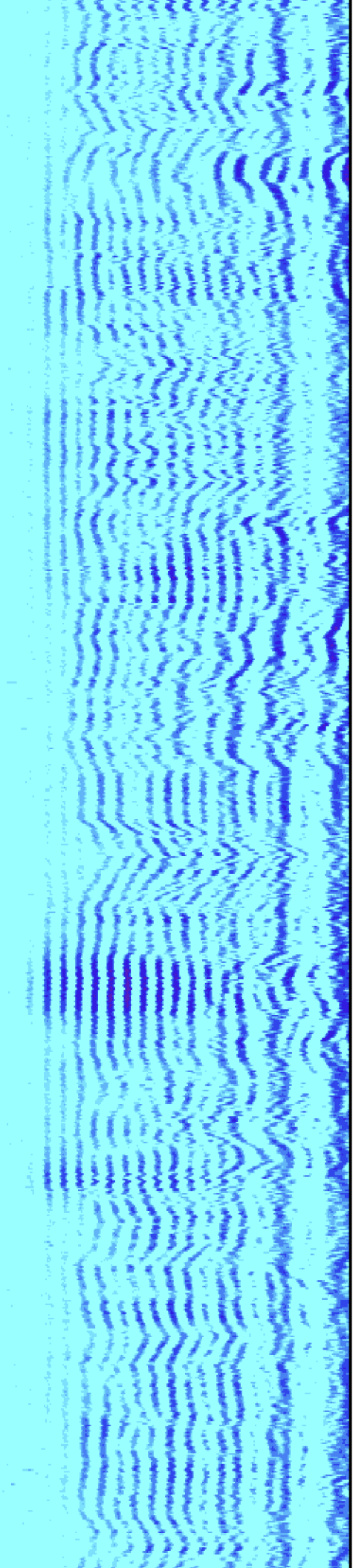




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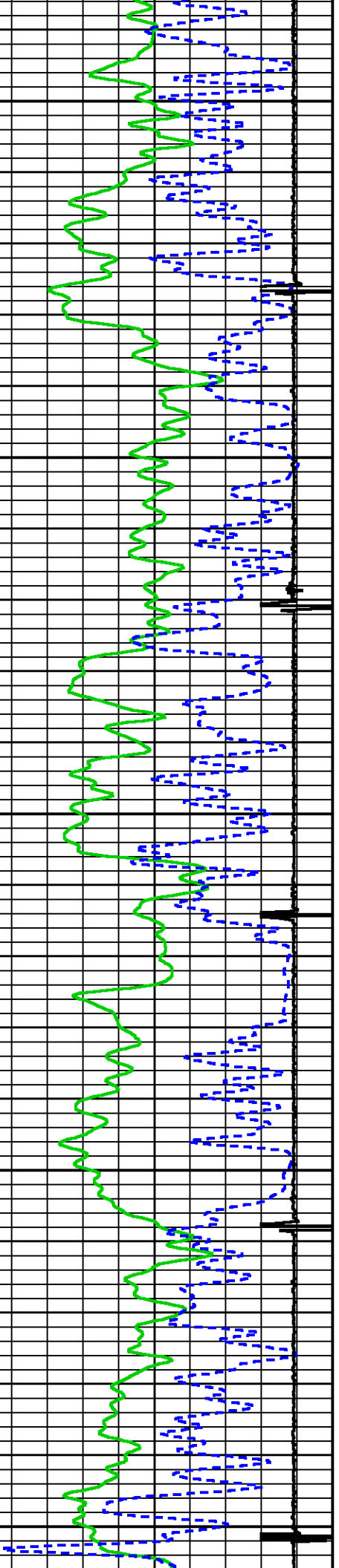
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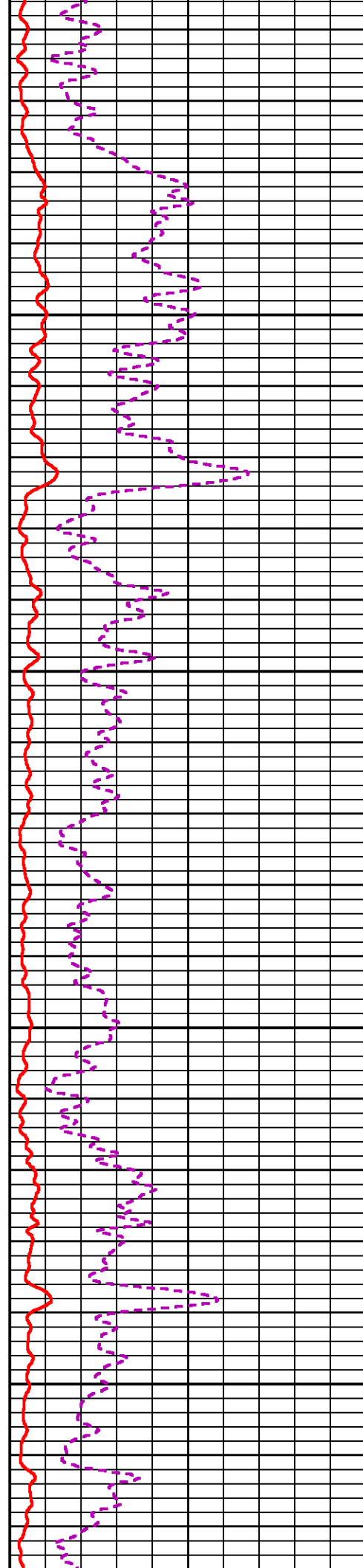
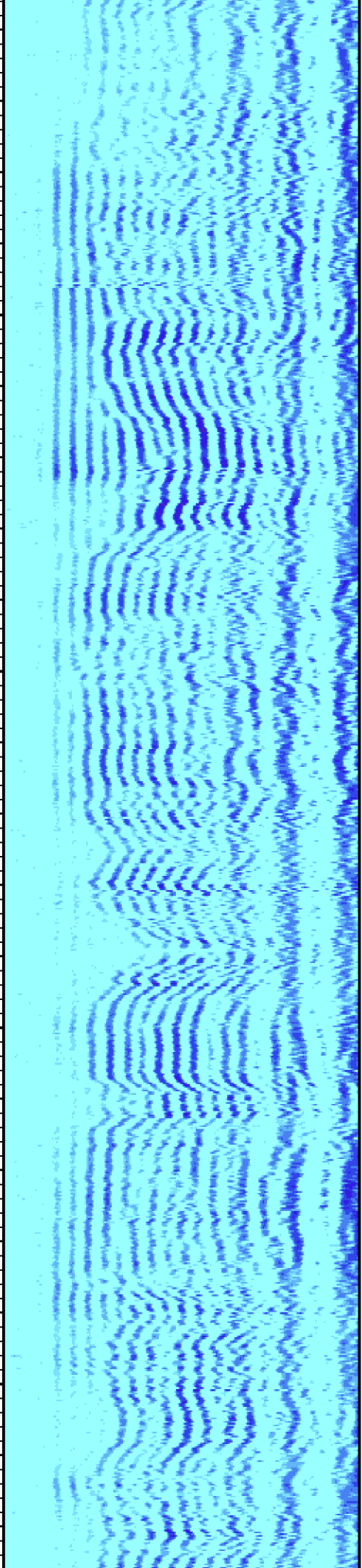




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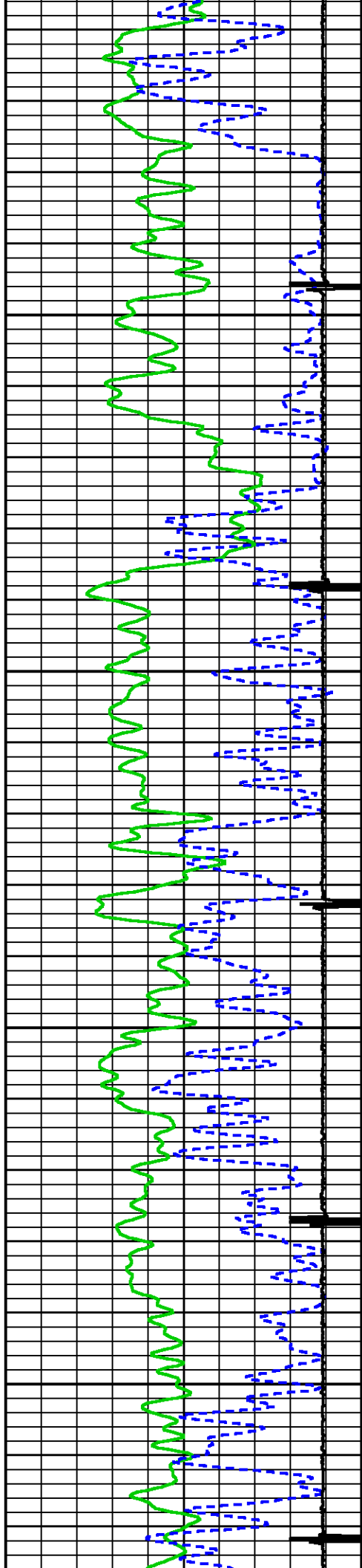
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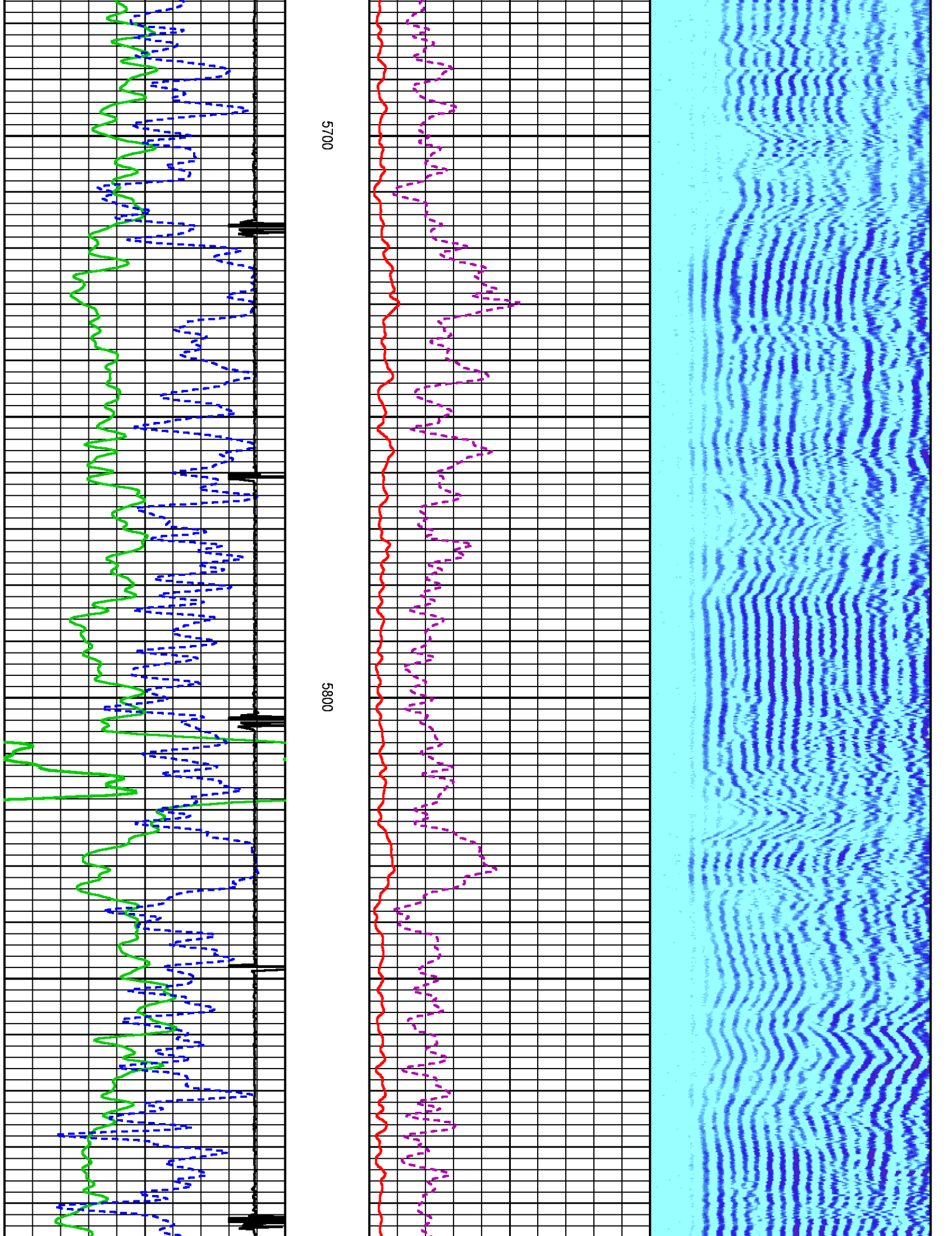


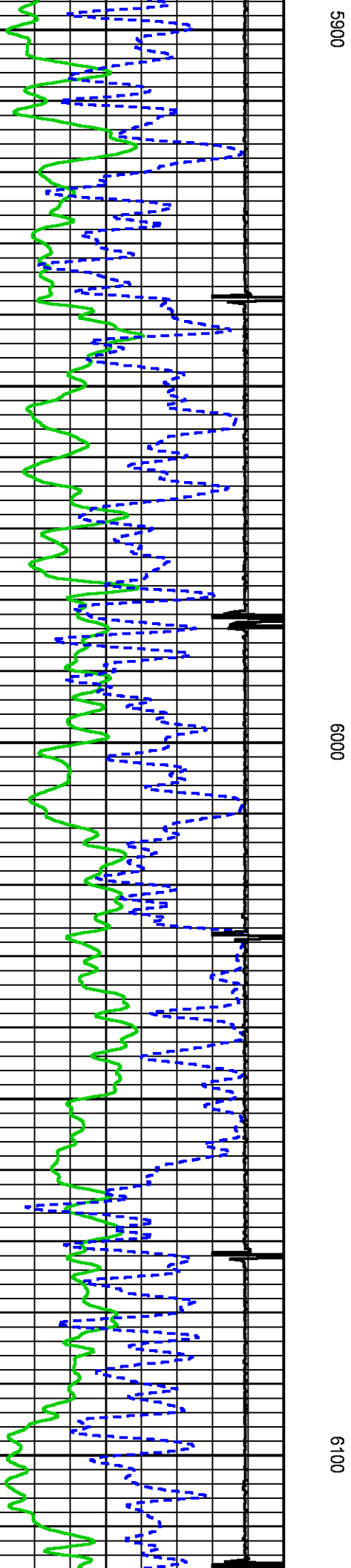
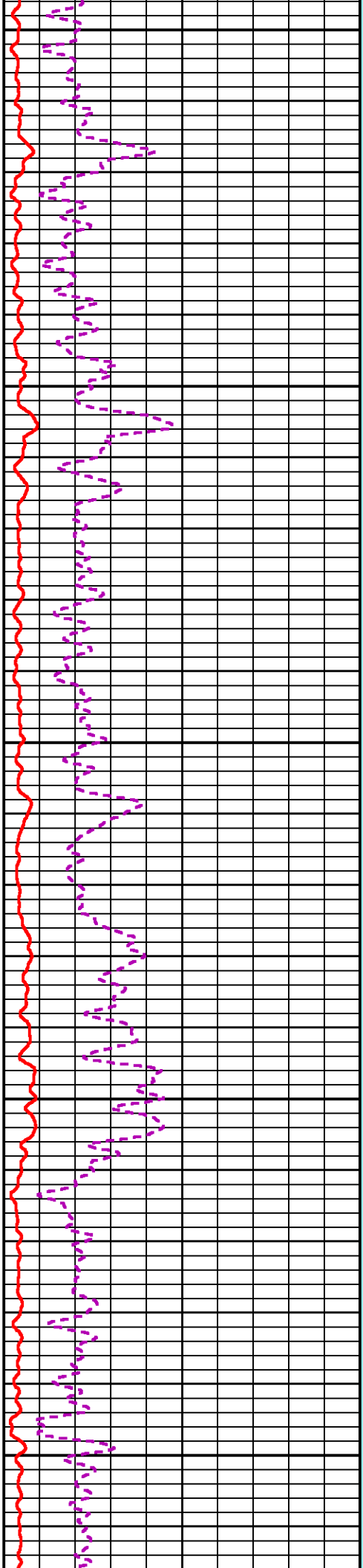
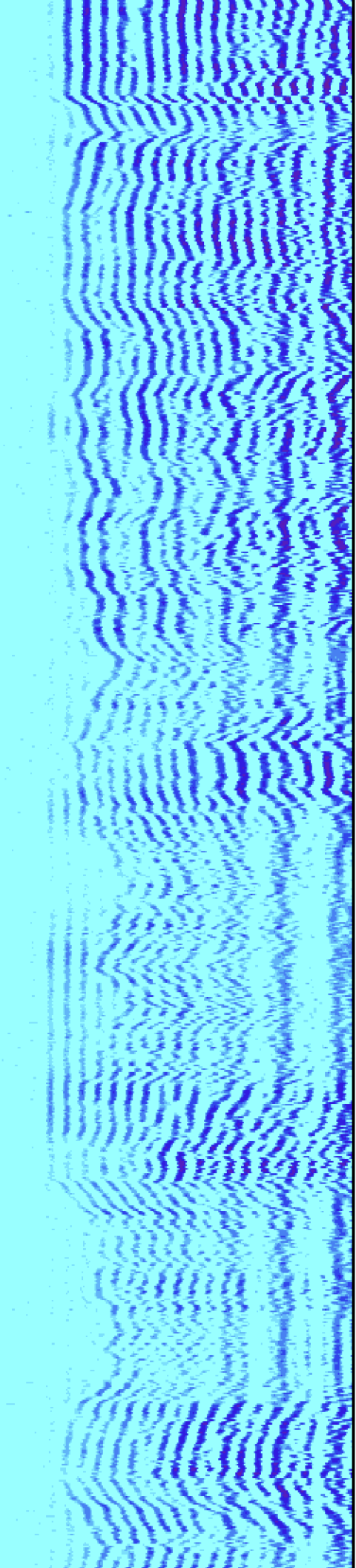


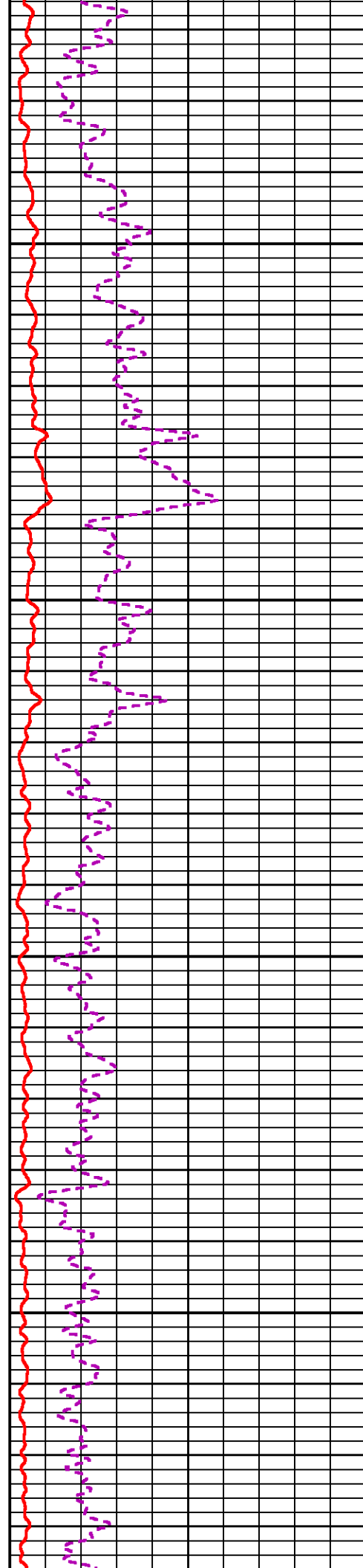
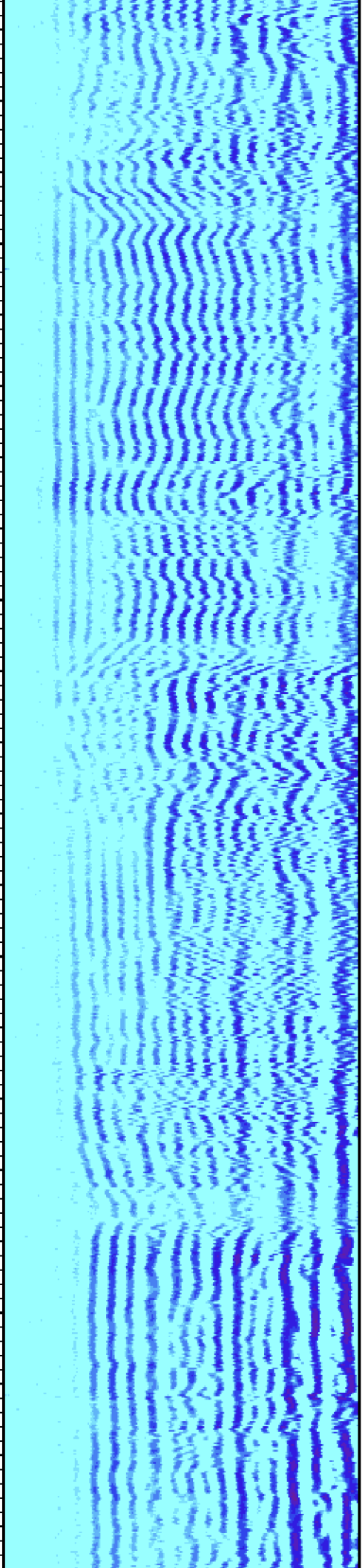
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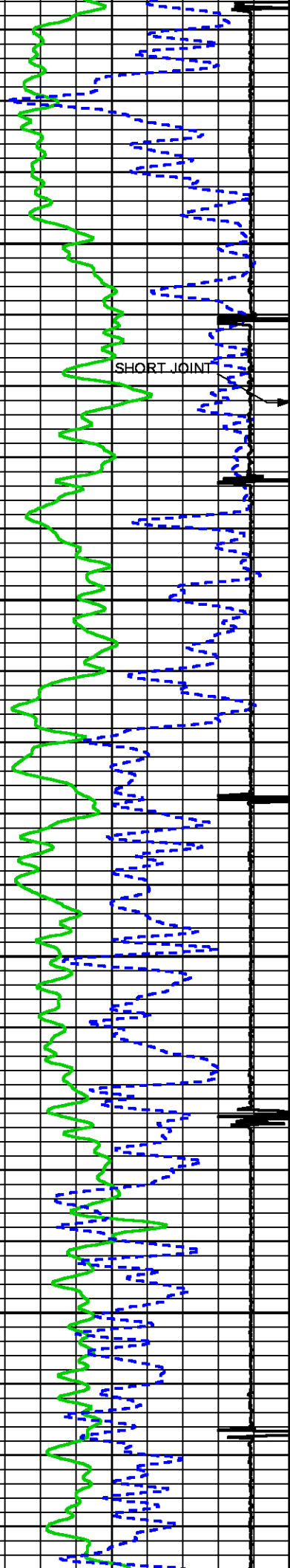


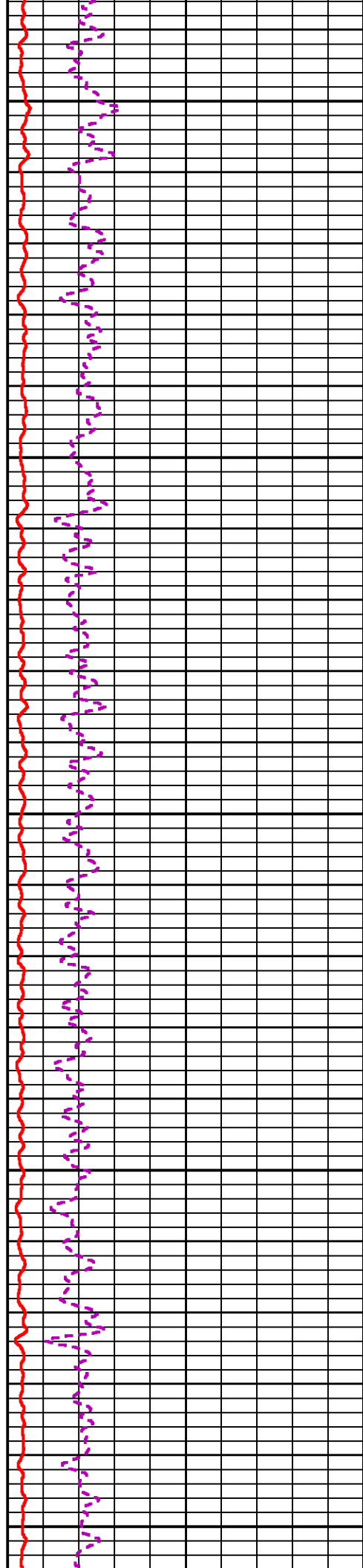
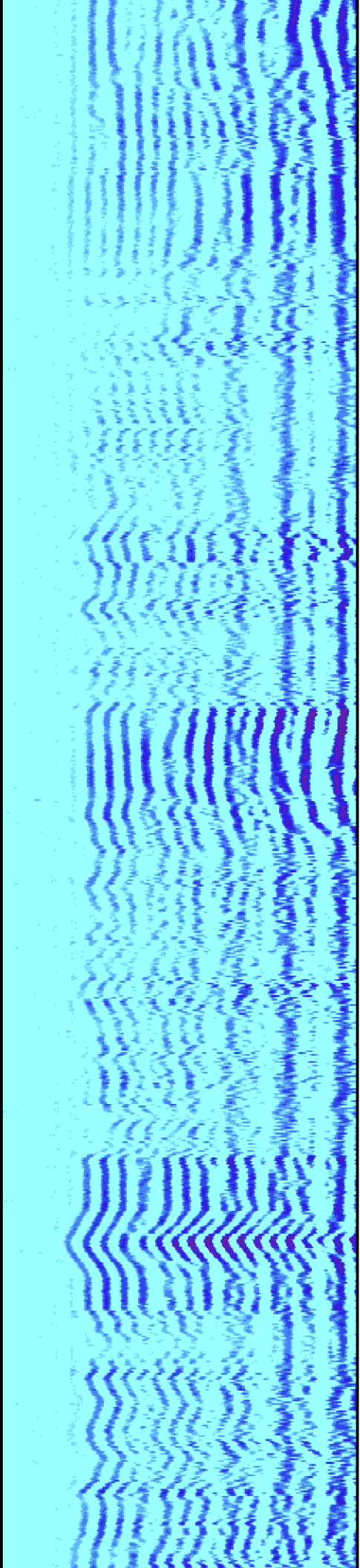


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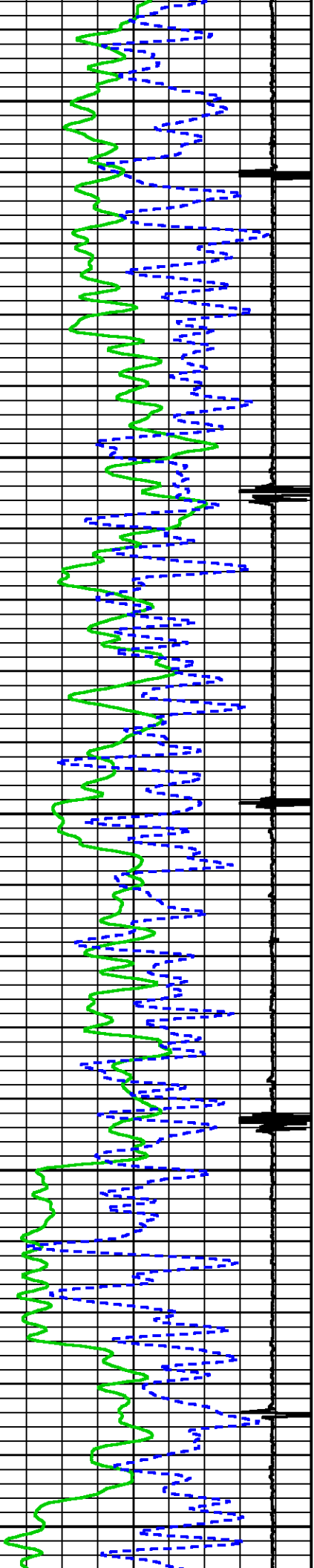
SHORT JOINT

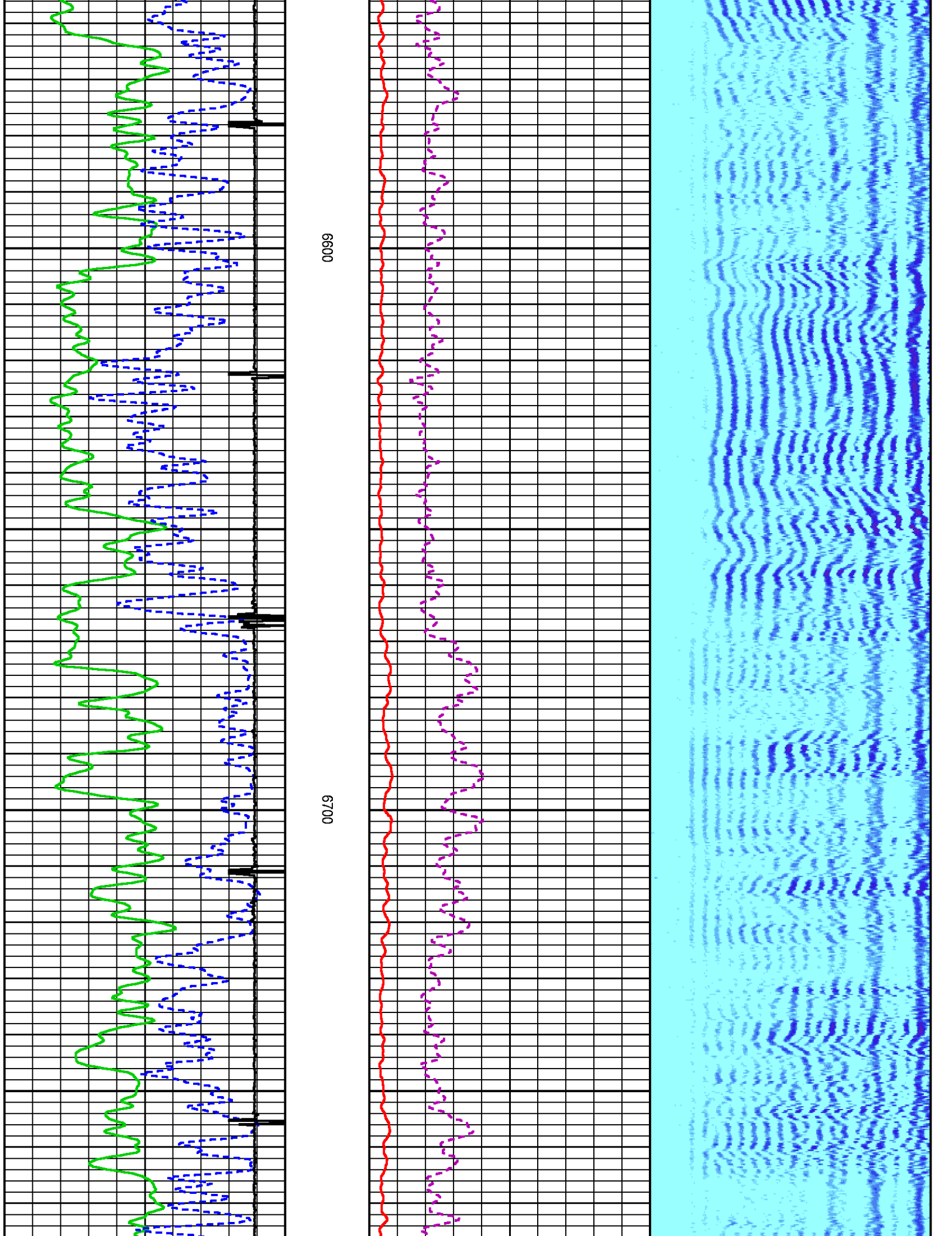


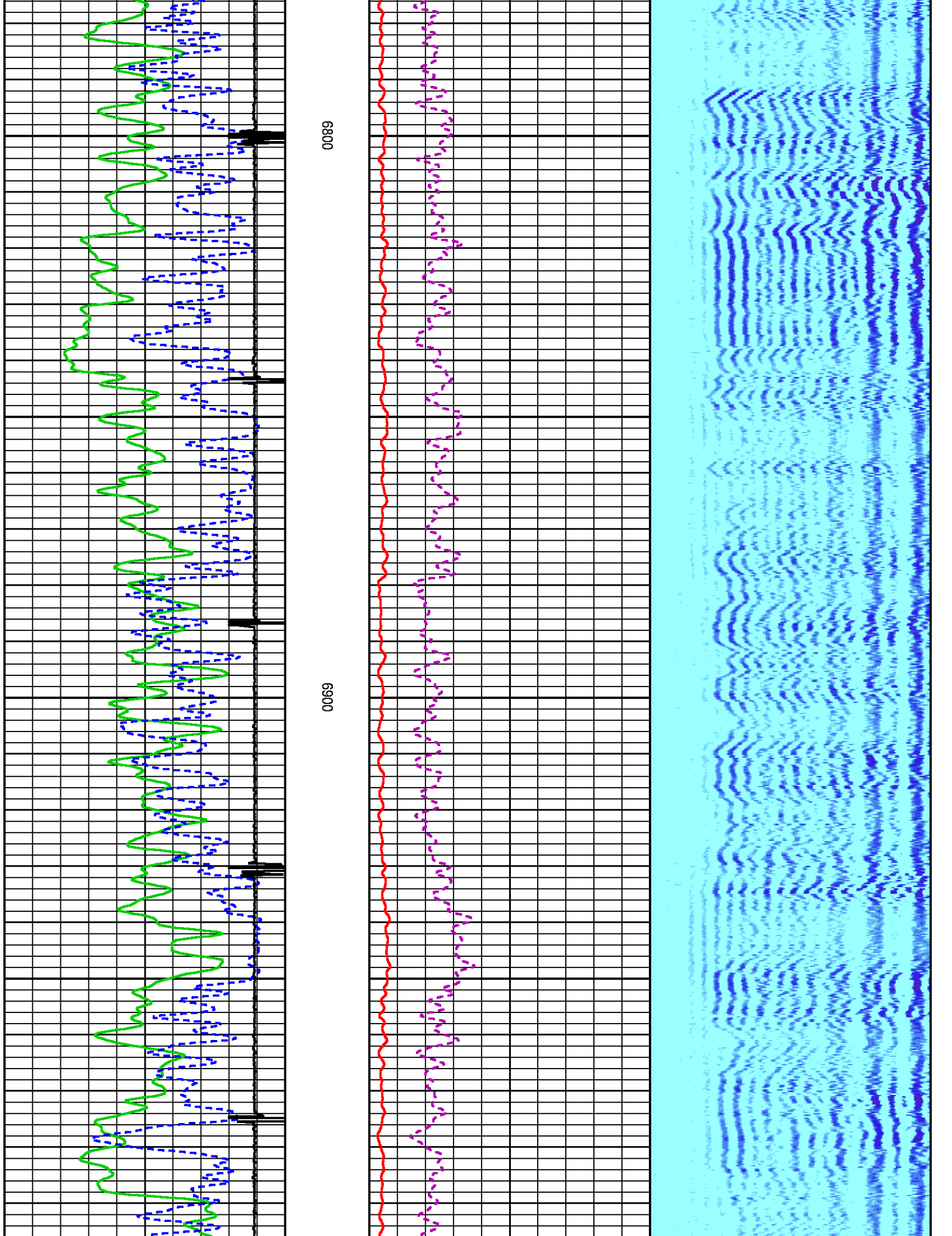


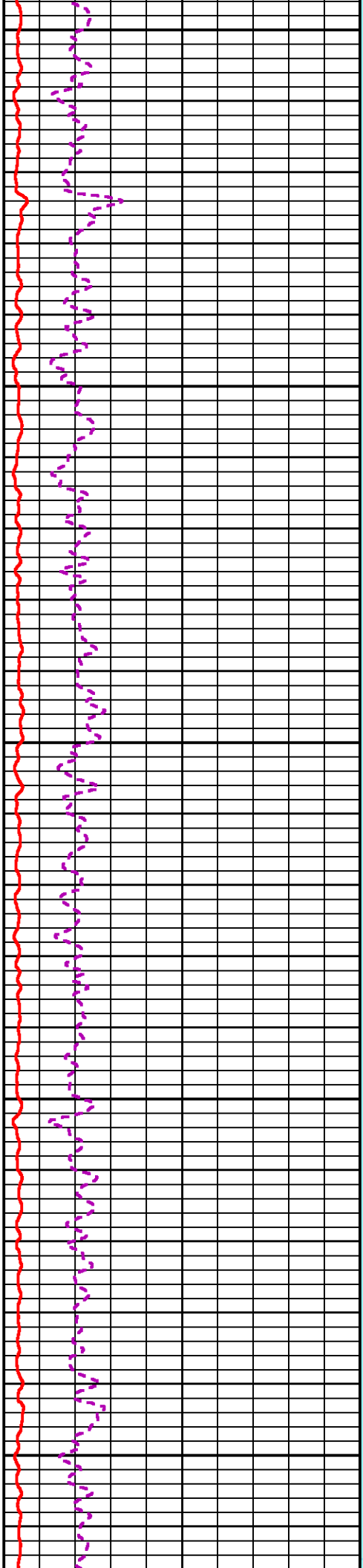
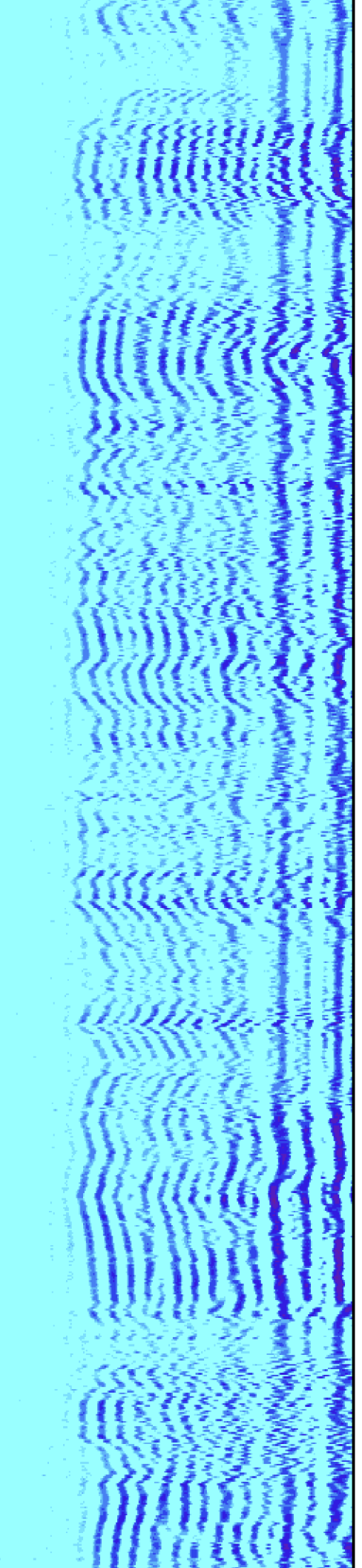
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6500





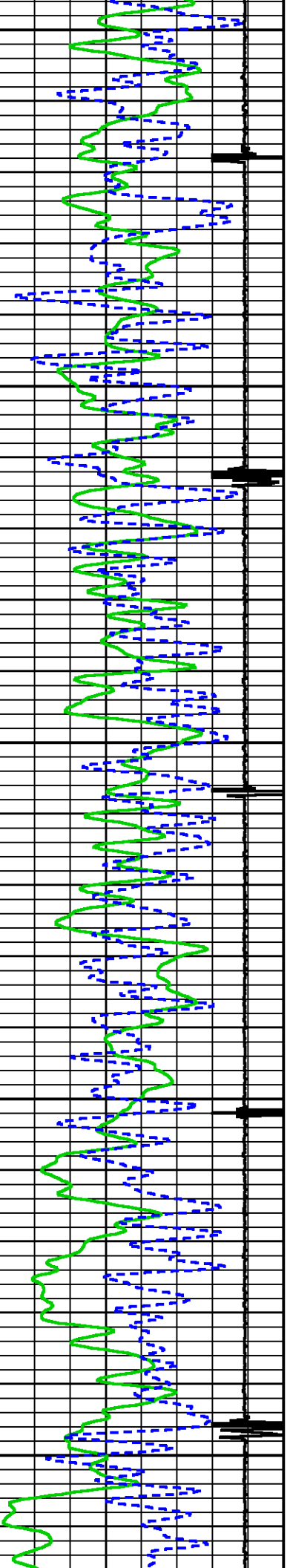


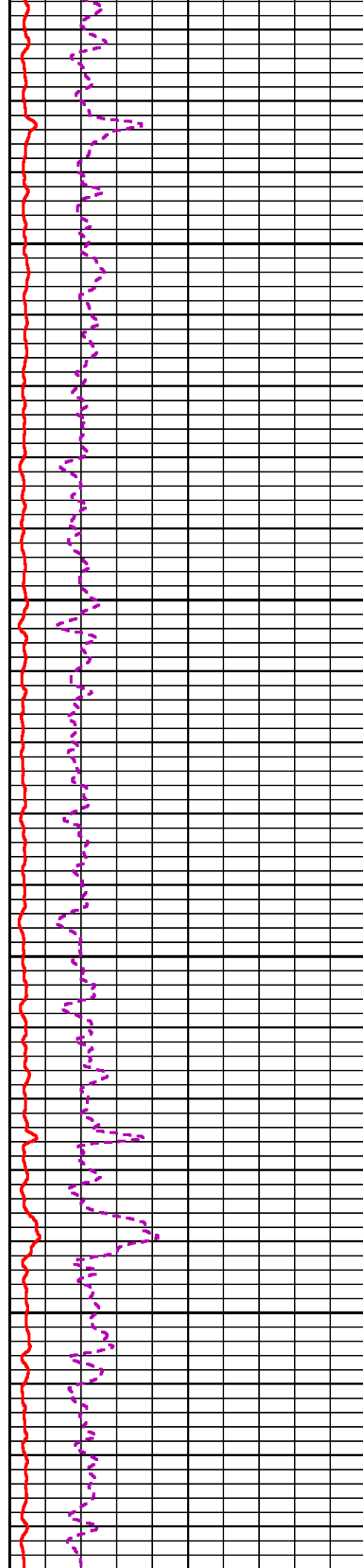
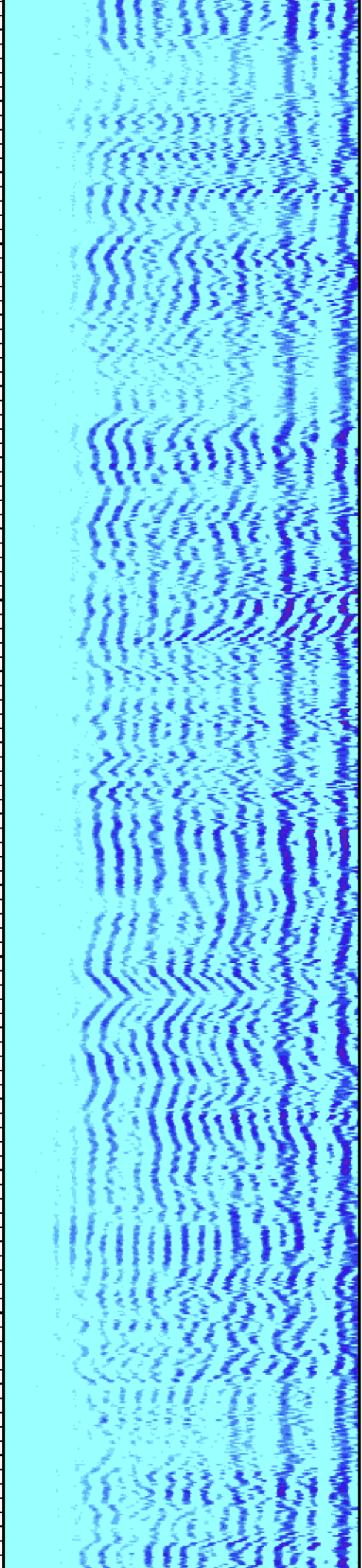


7000

7100

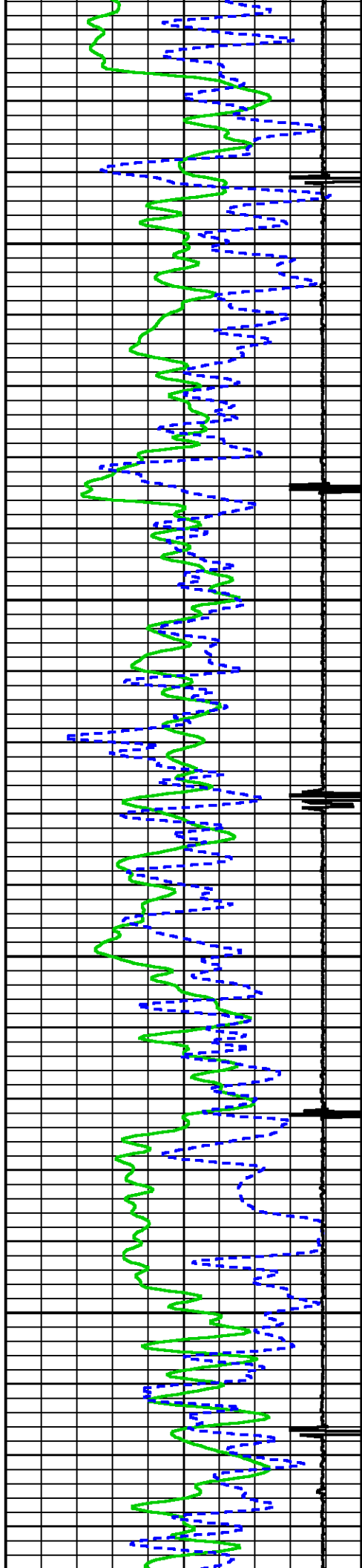
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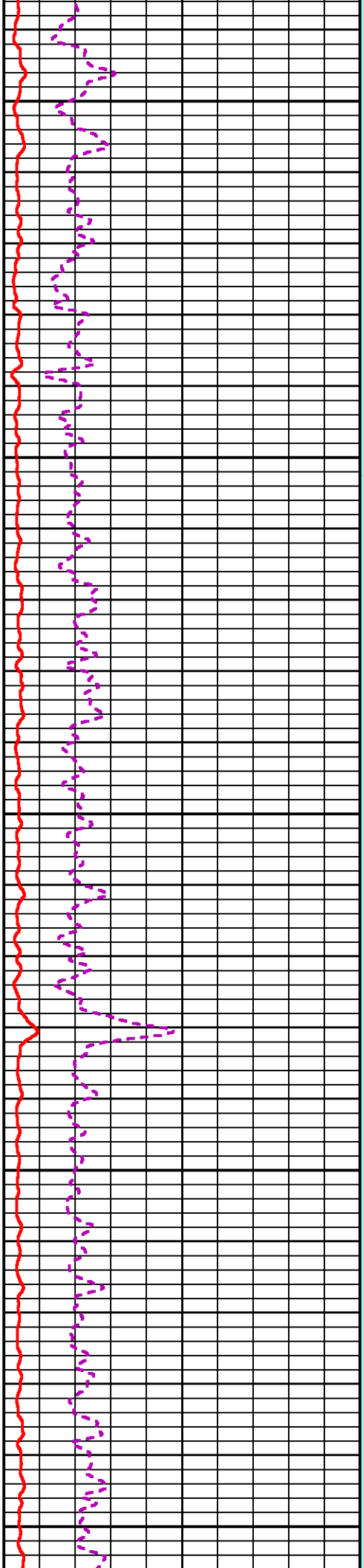
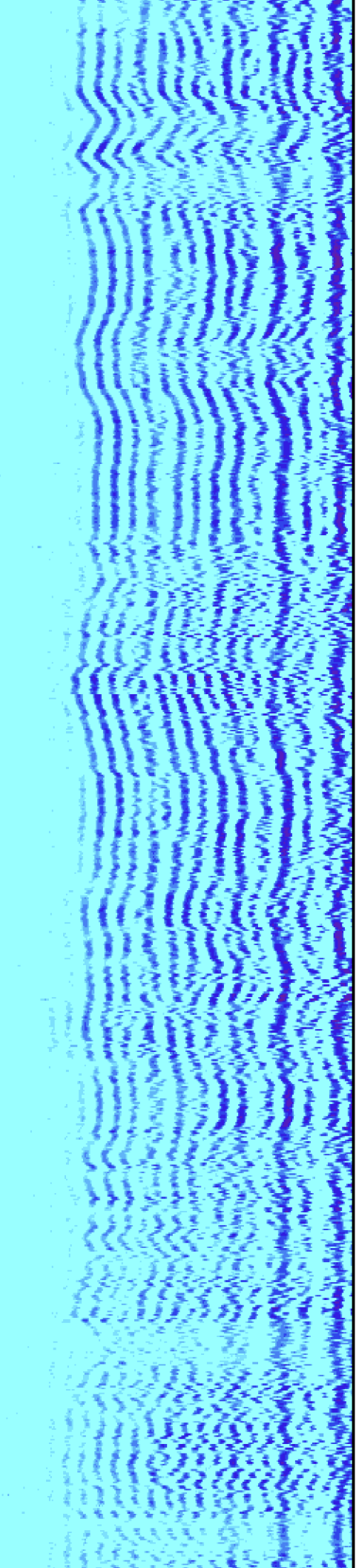




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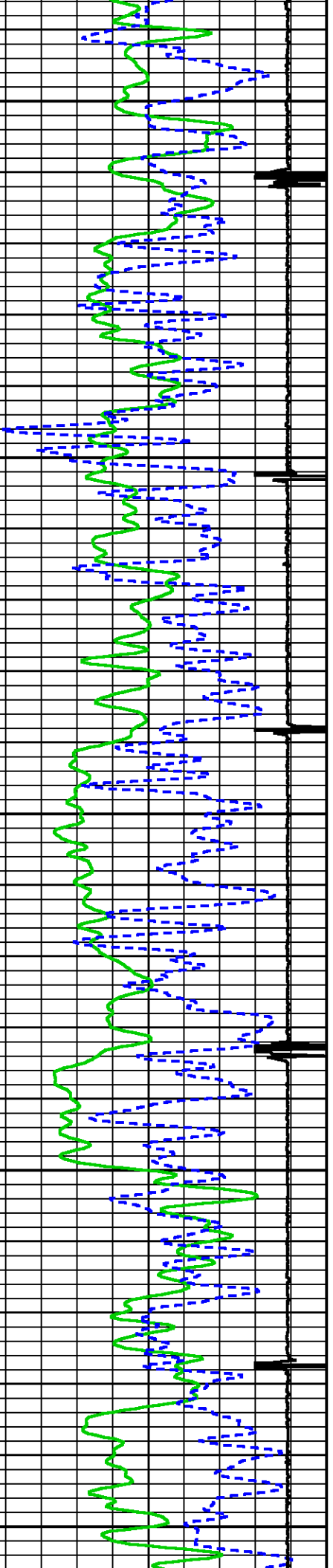
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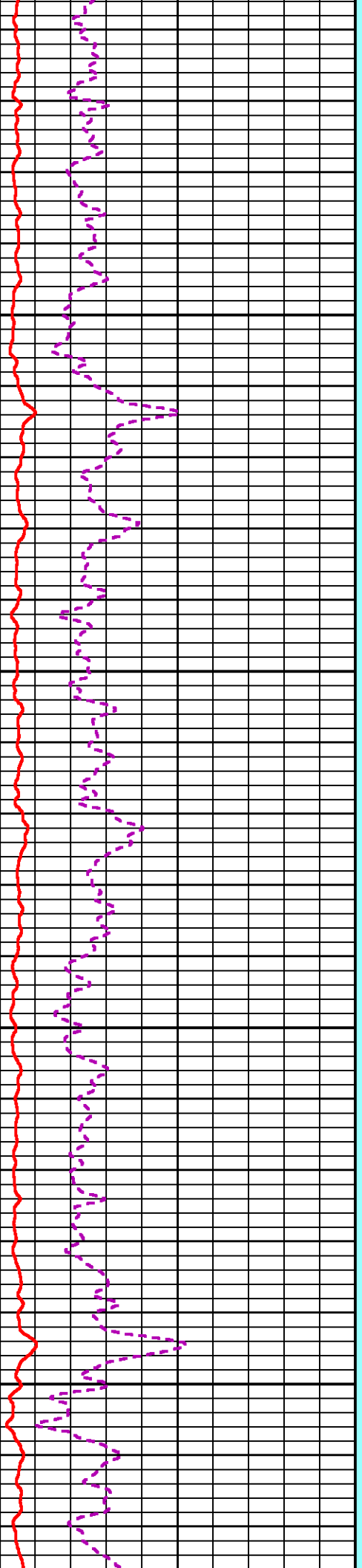
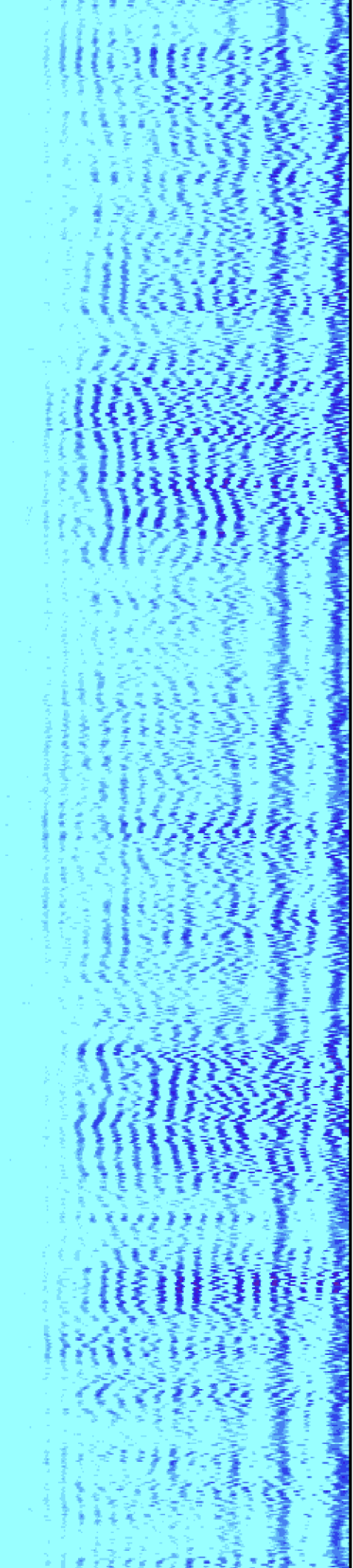




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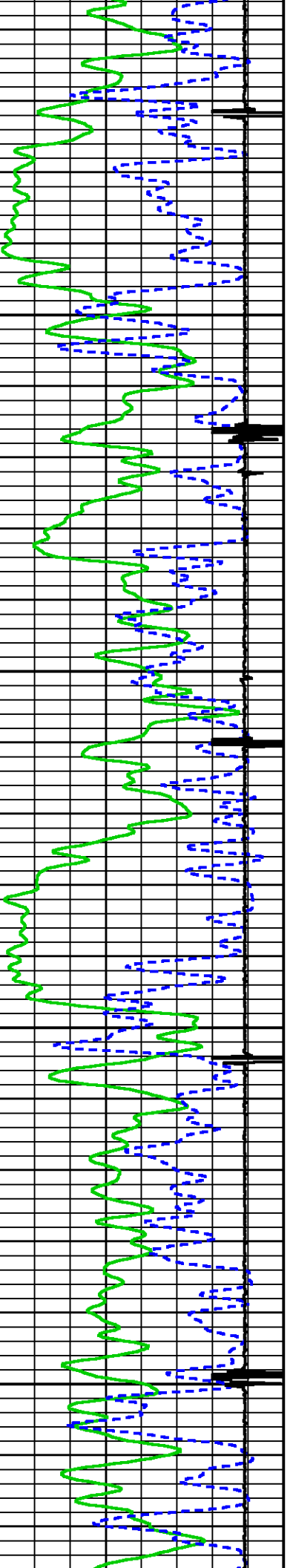
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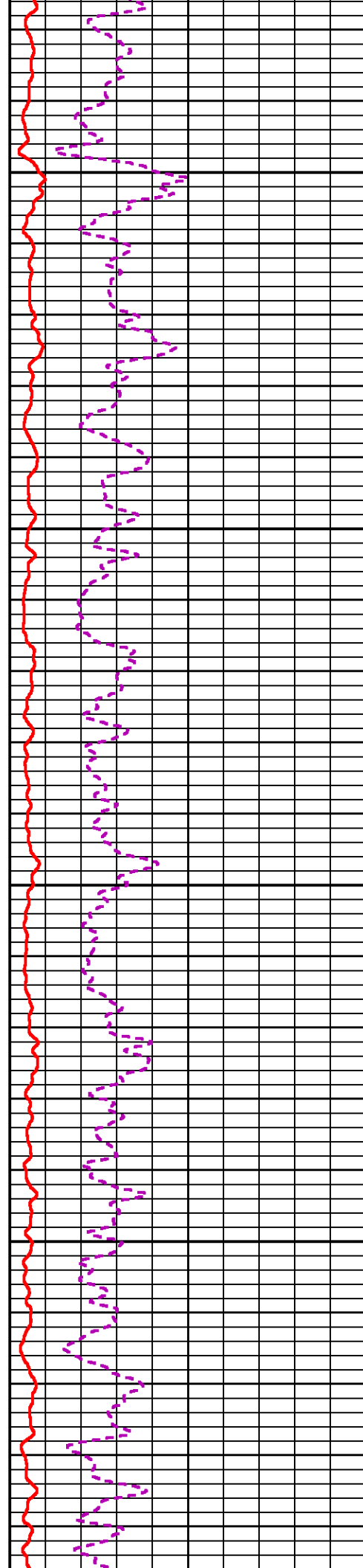
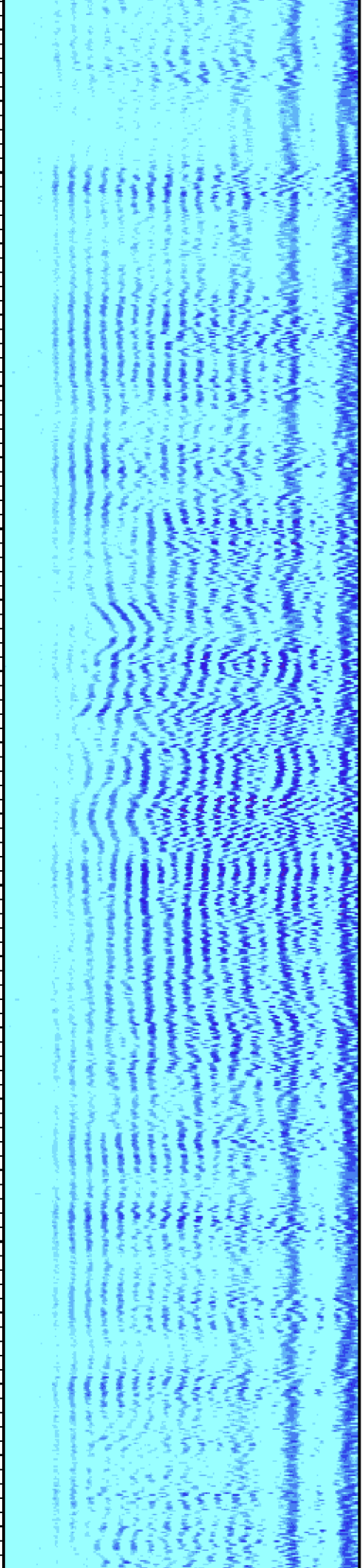




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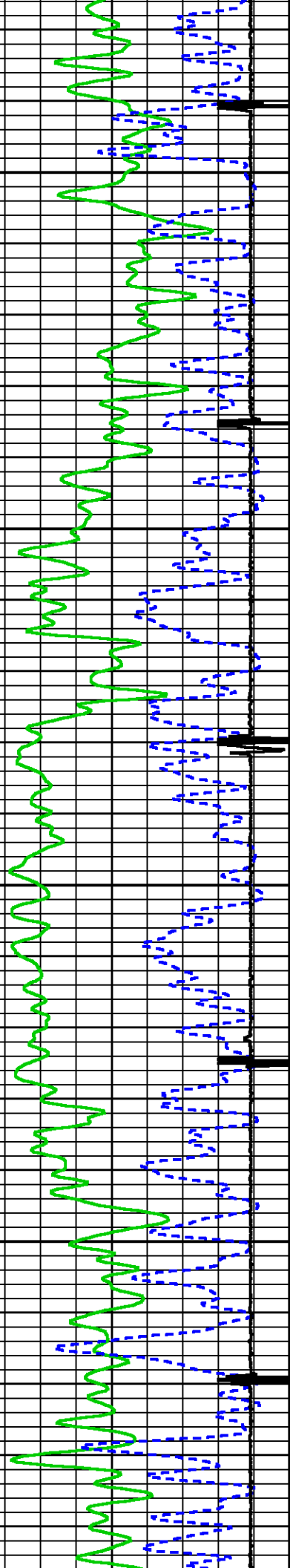
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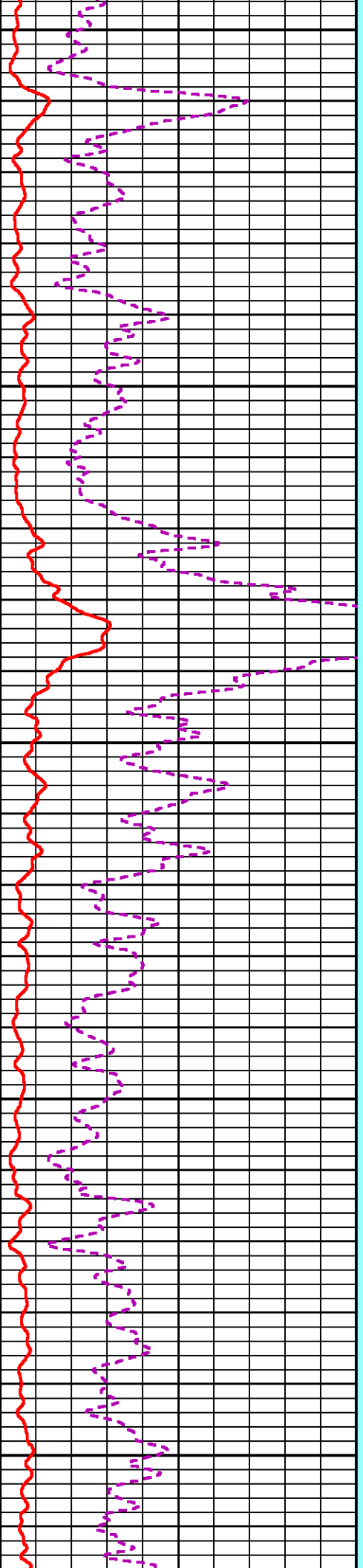
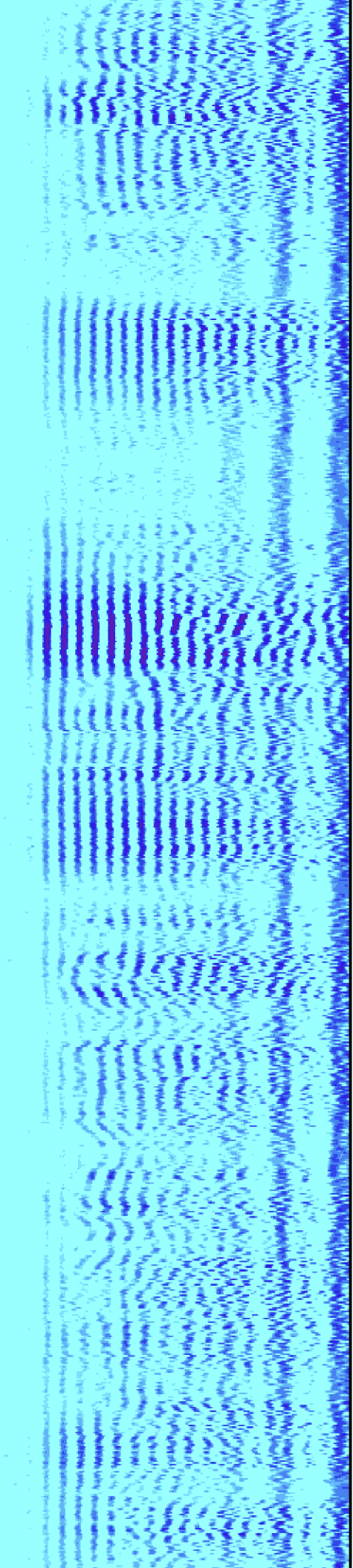




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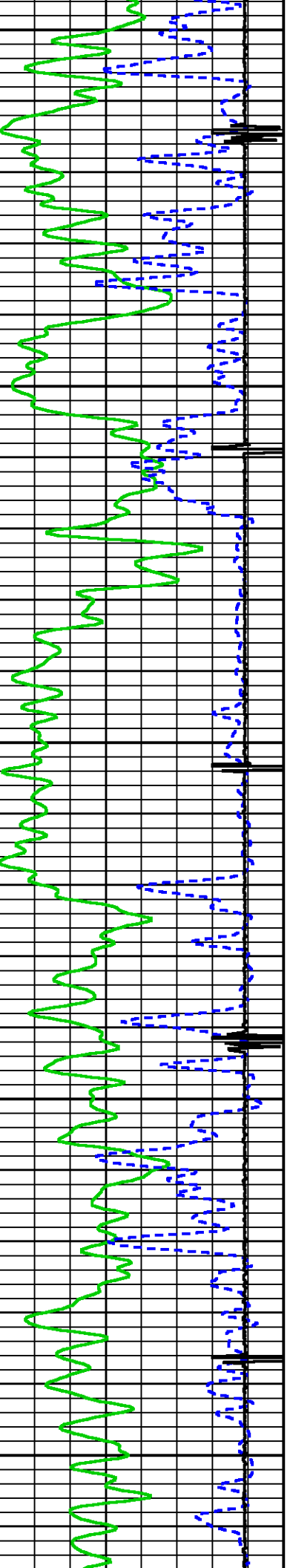


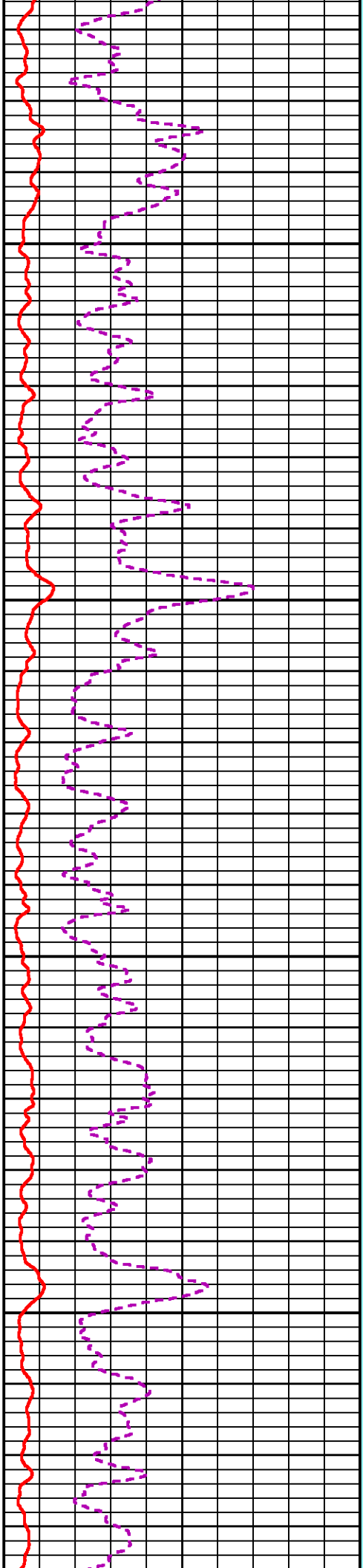
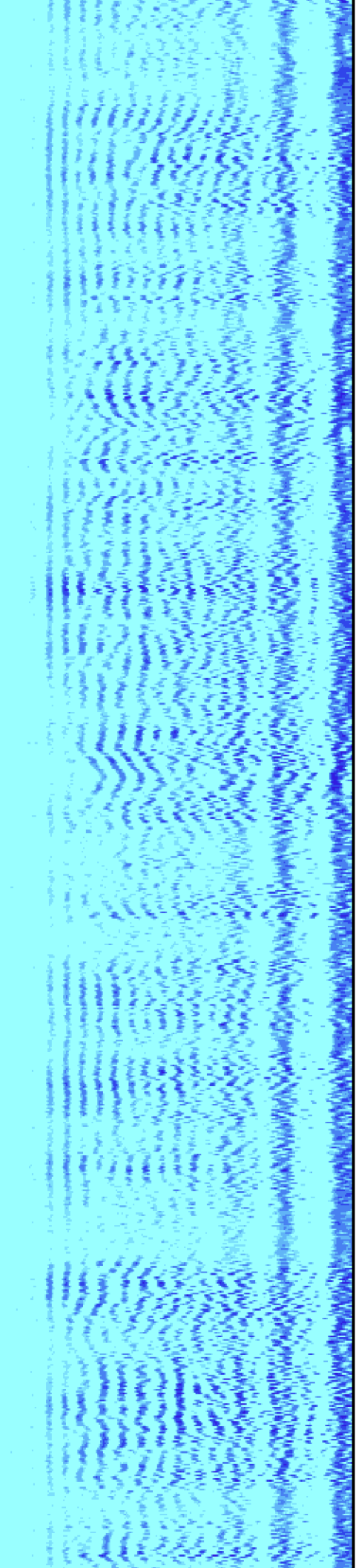


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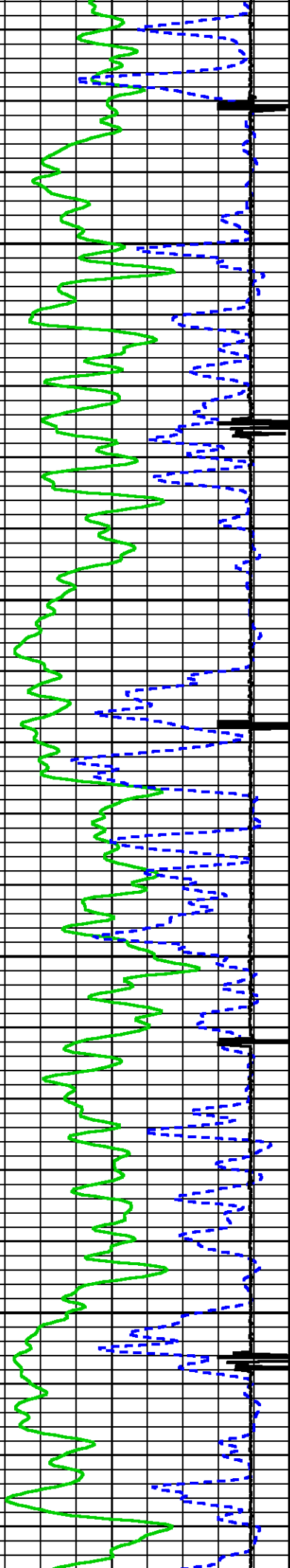
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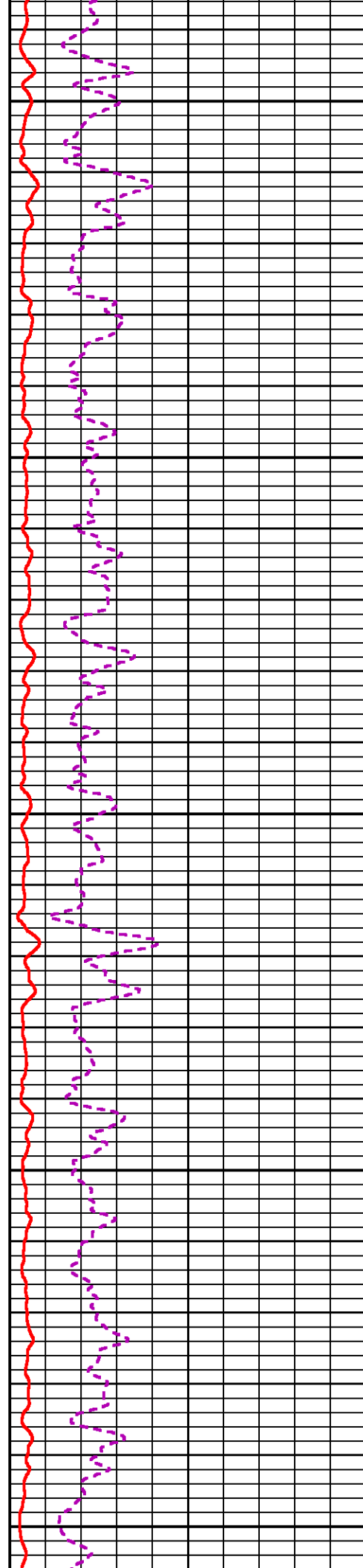
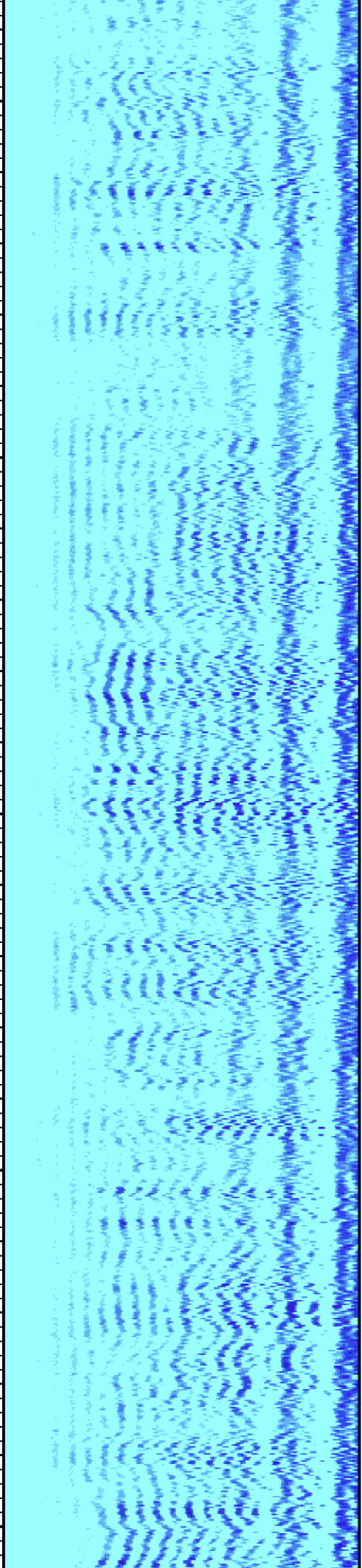




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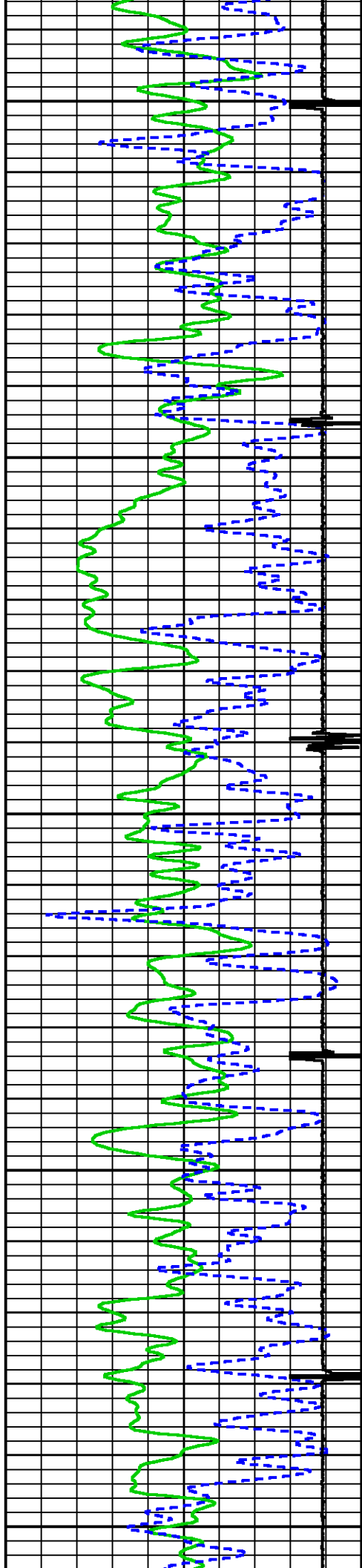
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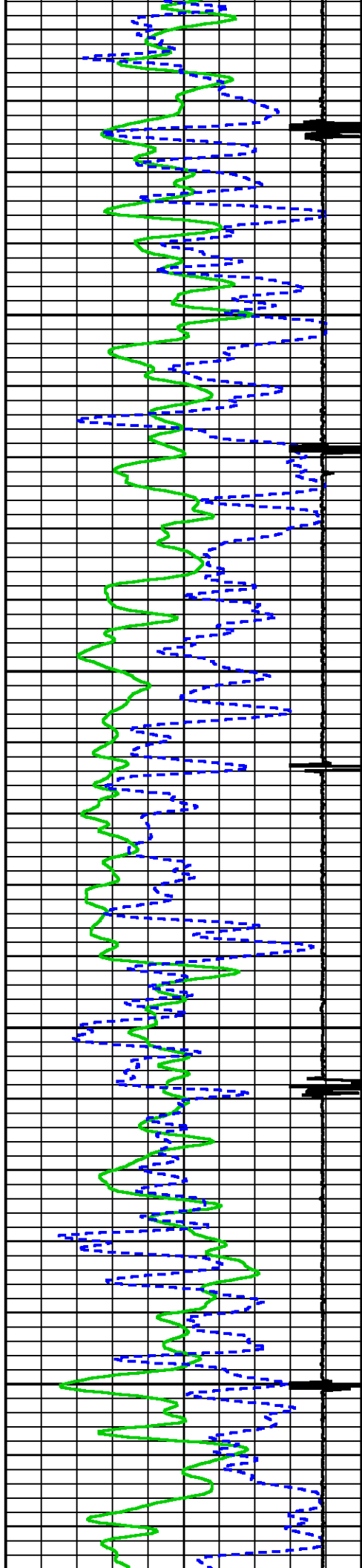




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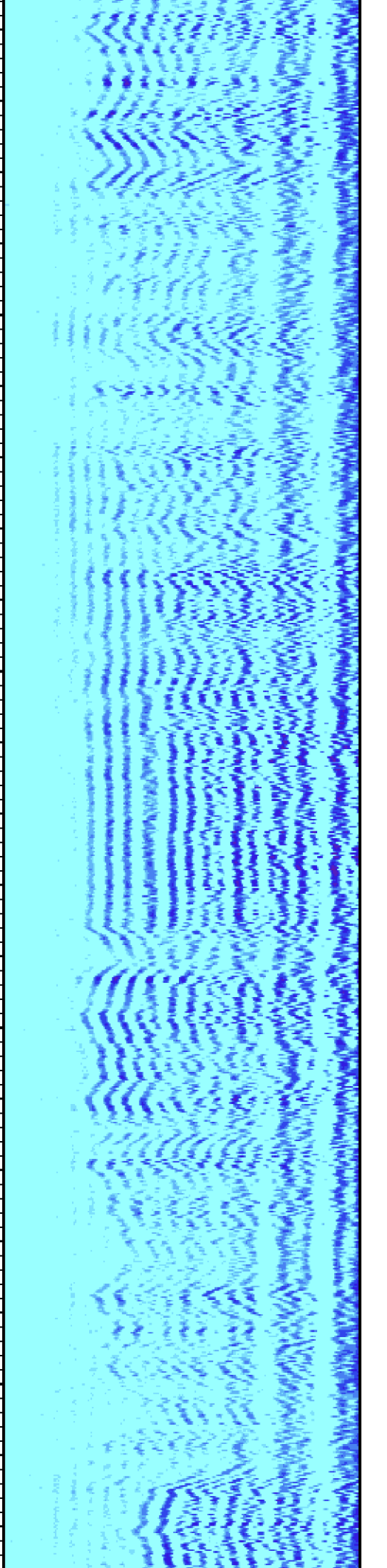
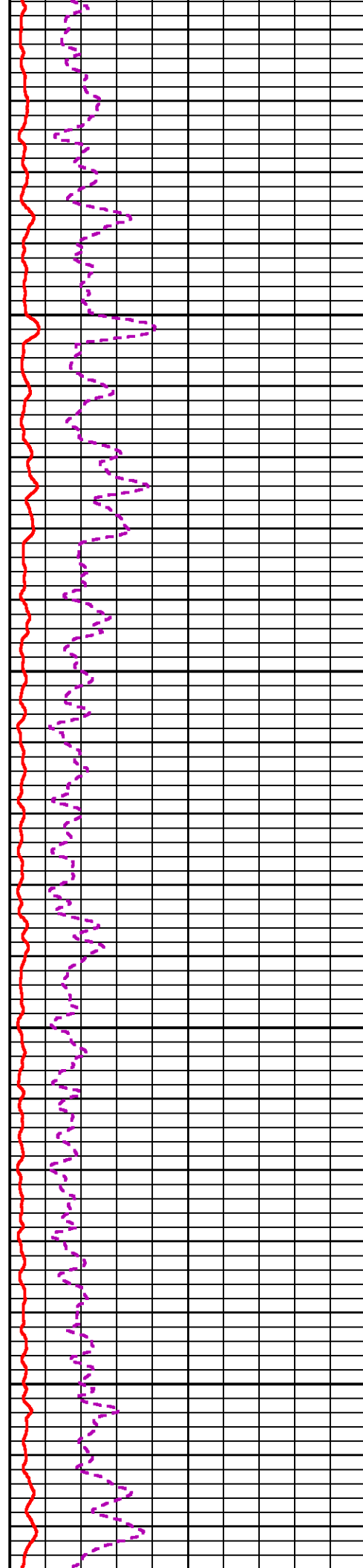
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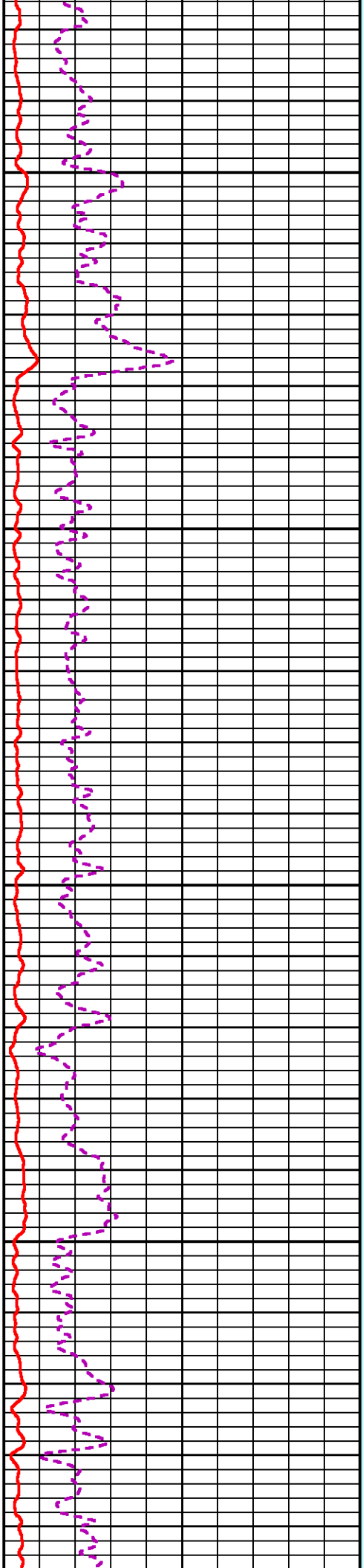
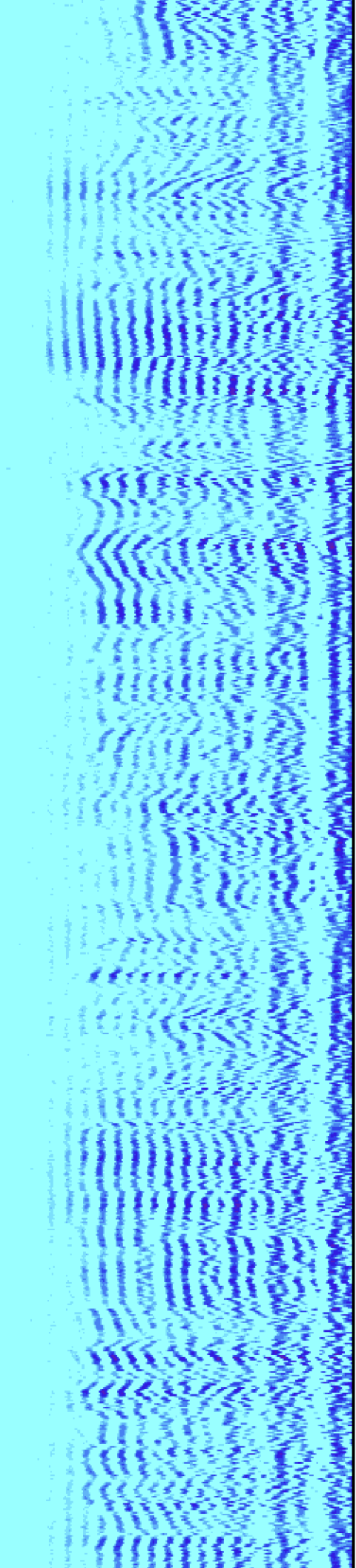




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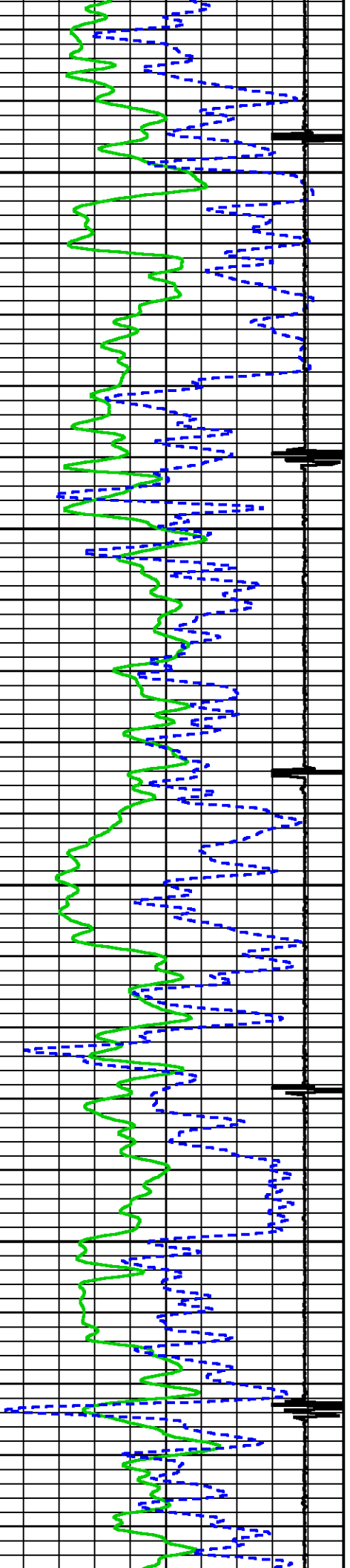
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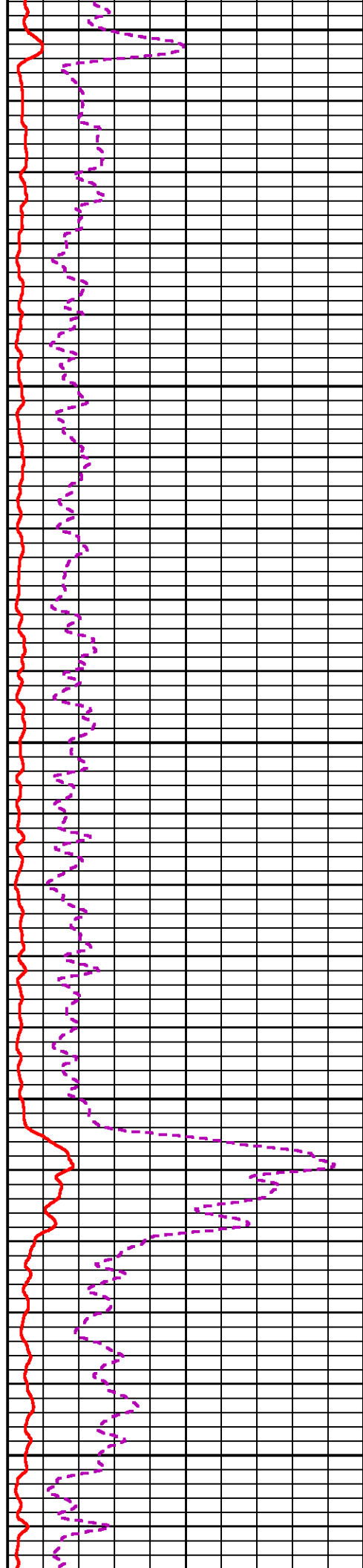
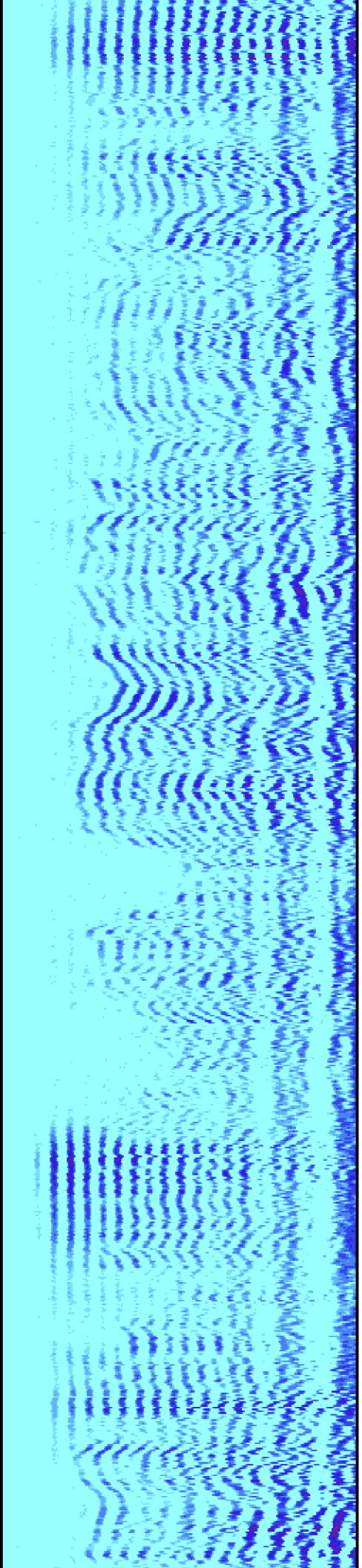




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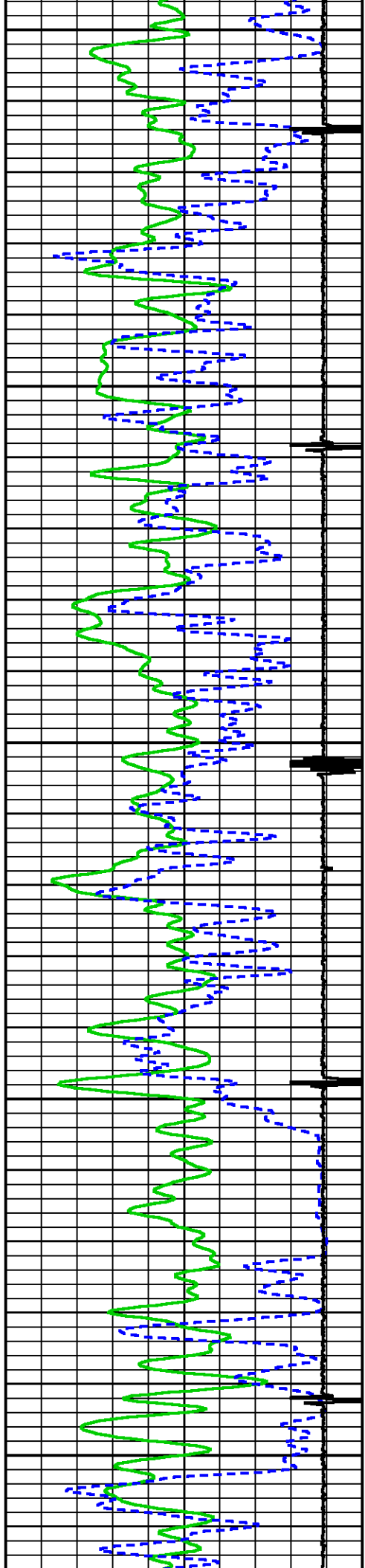


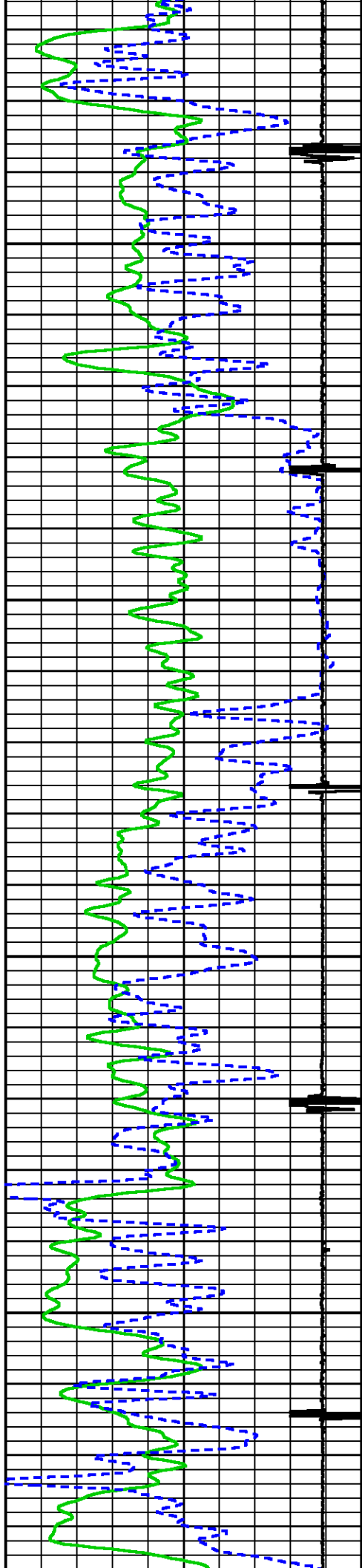


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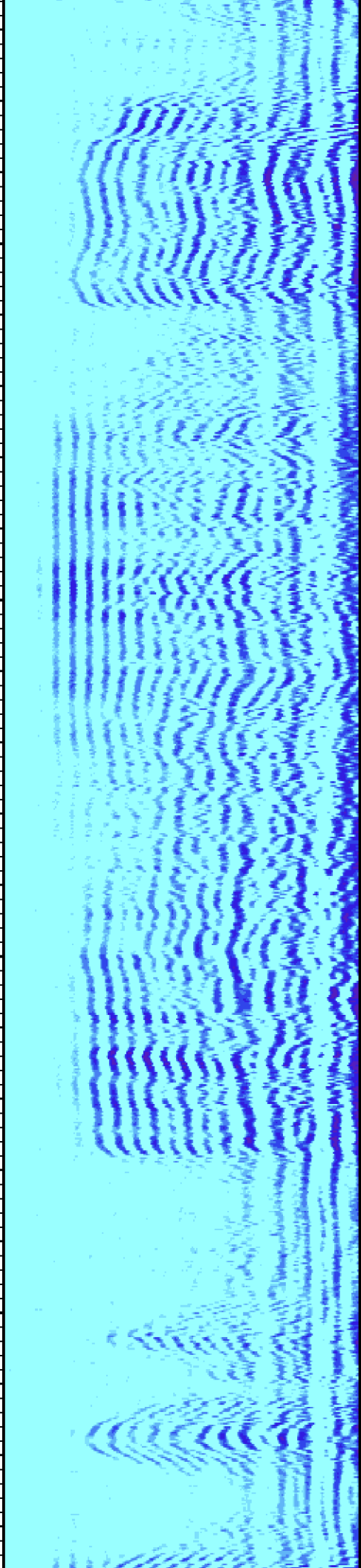
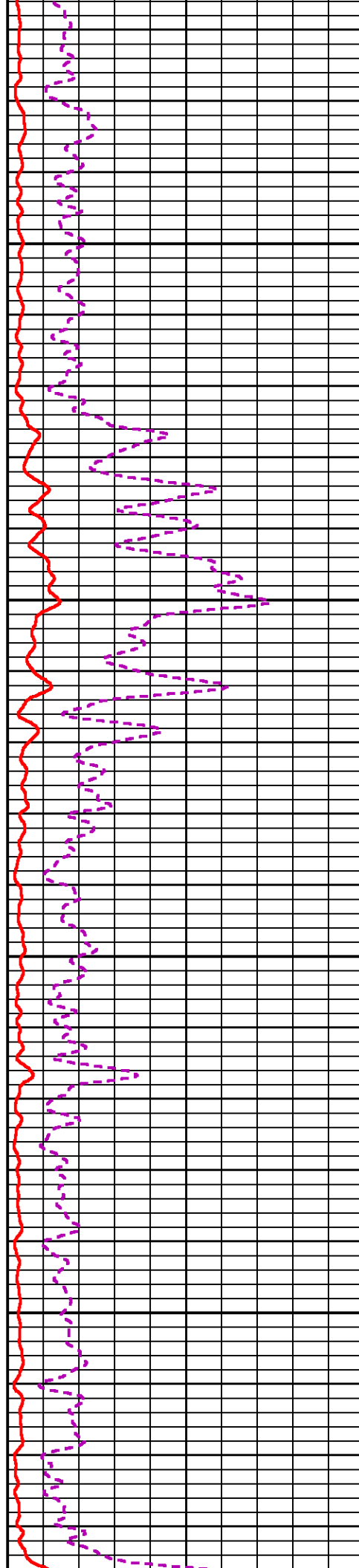
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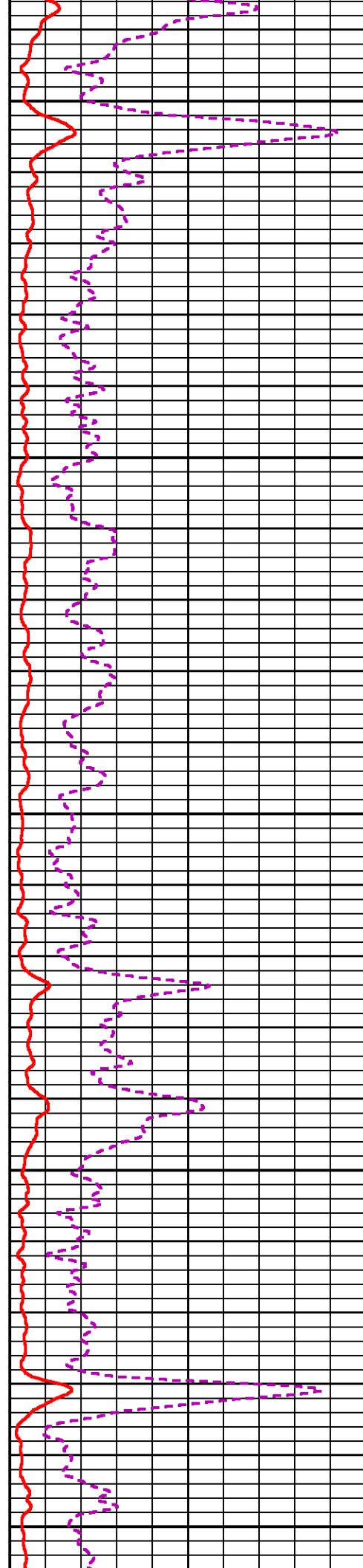
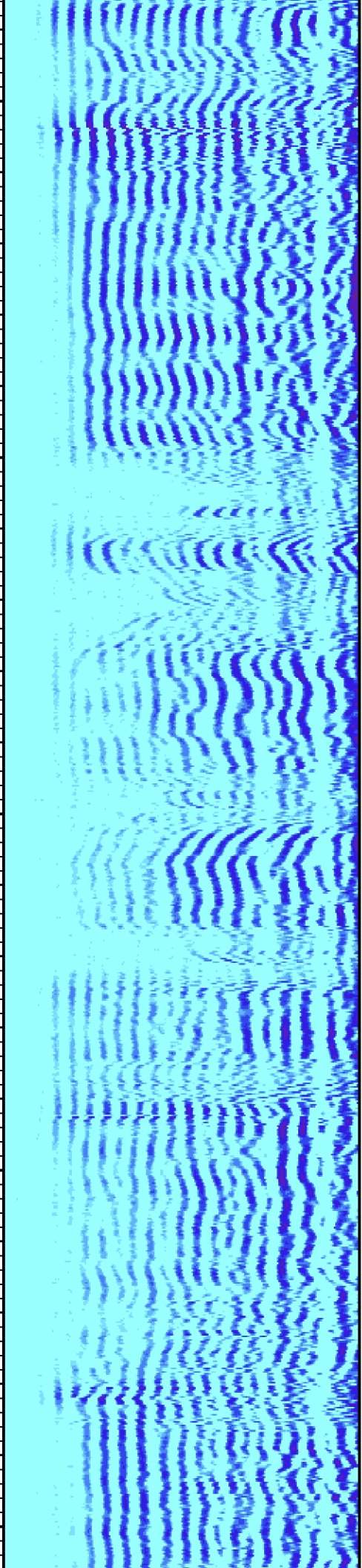




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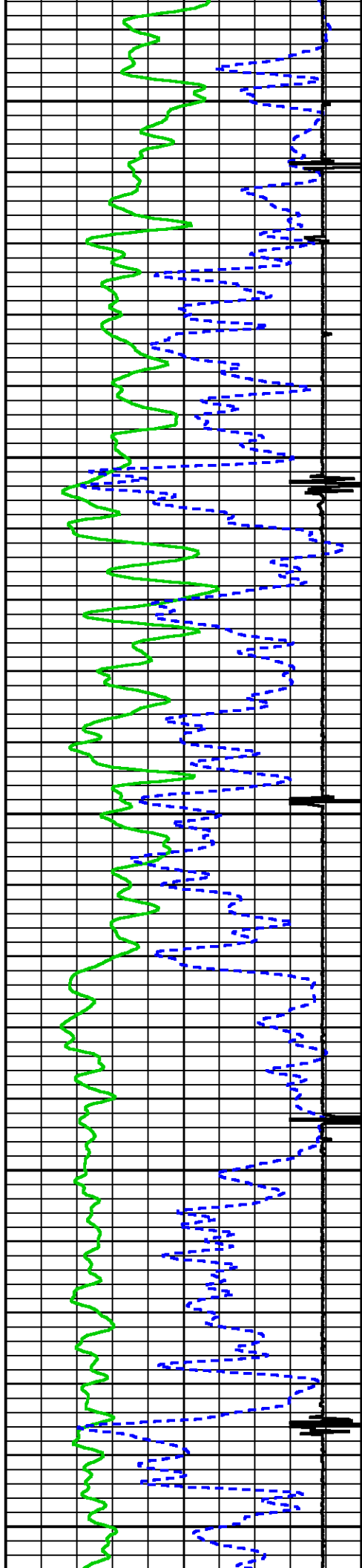
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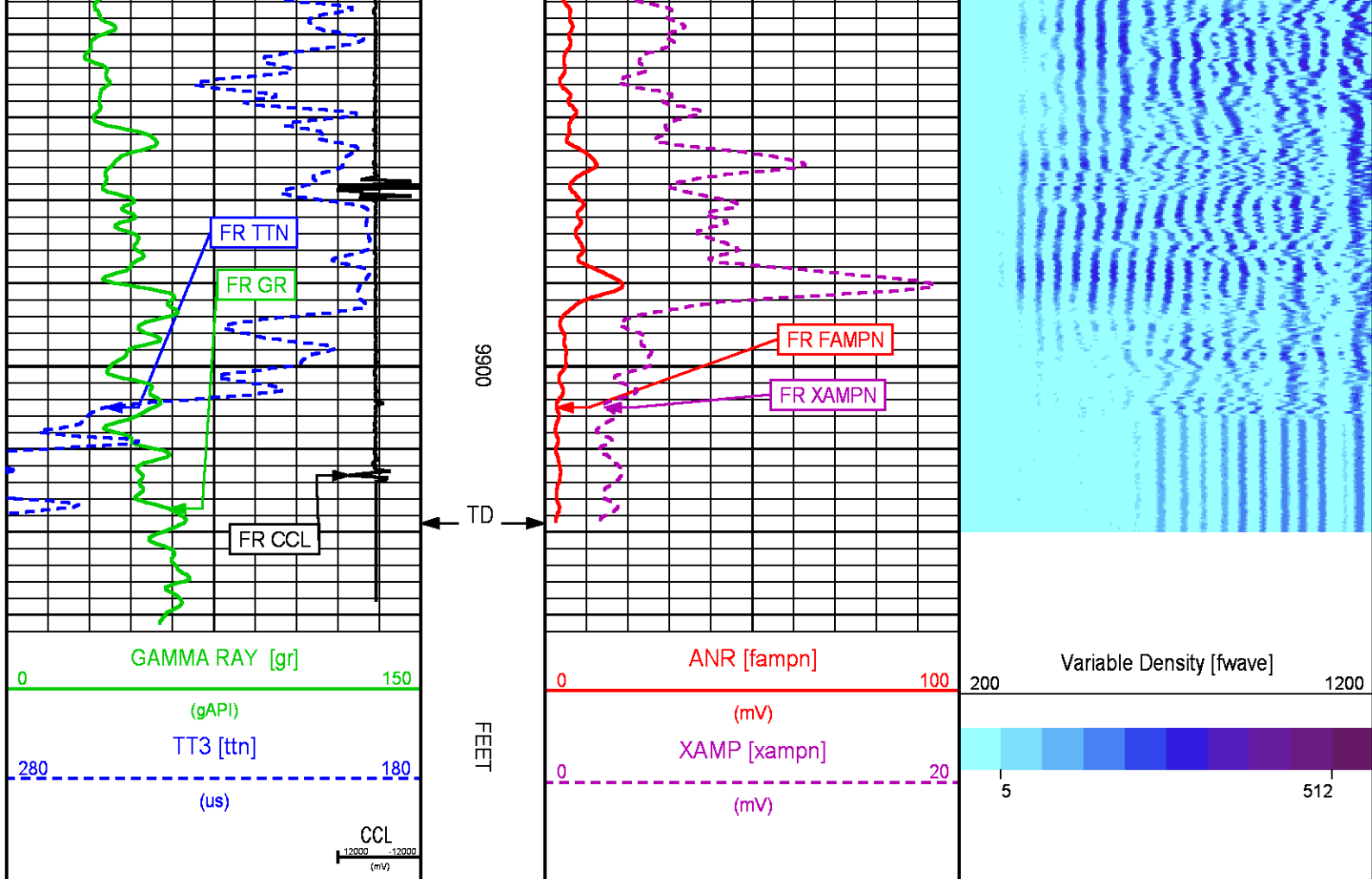




9700

9800





REPEAT LOG 0 PSI

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013

Updates: 1 Patches: 9

Plotted: Mon Jan 2 14:00:19 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/TEP_YOUBERG_RU_424_7/n012g01.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 9670.750 ft BOTTOM DEPTH: 9918.000 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR	FILTER ()	medium (1)		TOP	BOTTOM
AMPLITUDE	FILTER ()	medium (1)		"	"
TRAVEL TIME	FILTER ()	medium (1)		"	"

RAL CCL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CCL FLOOR	CCL FLOOR	0		TOP	BOTTOM

ANALOG RAL PROCESSING

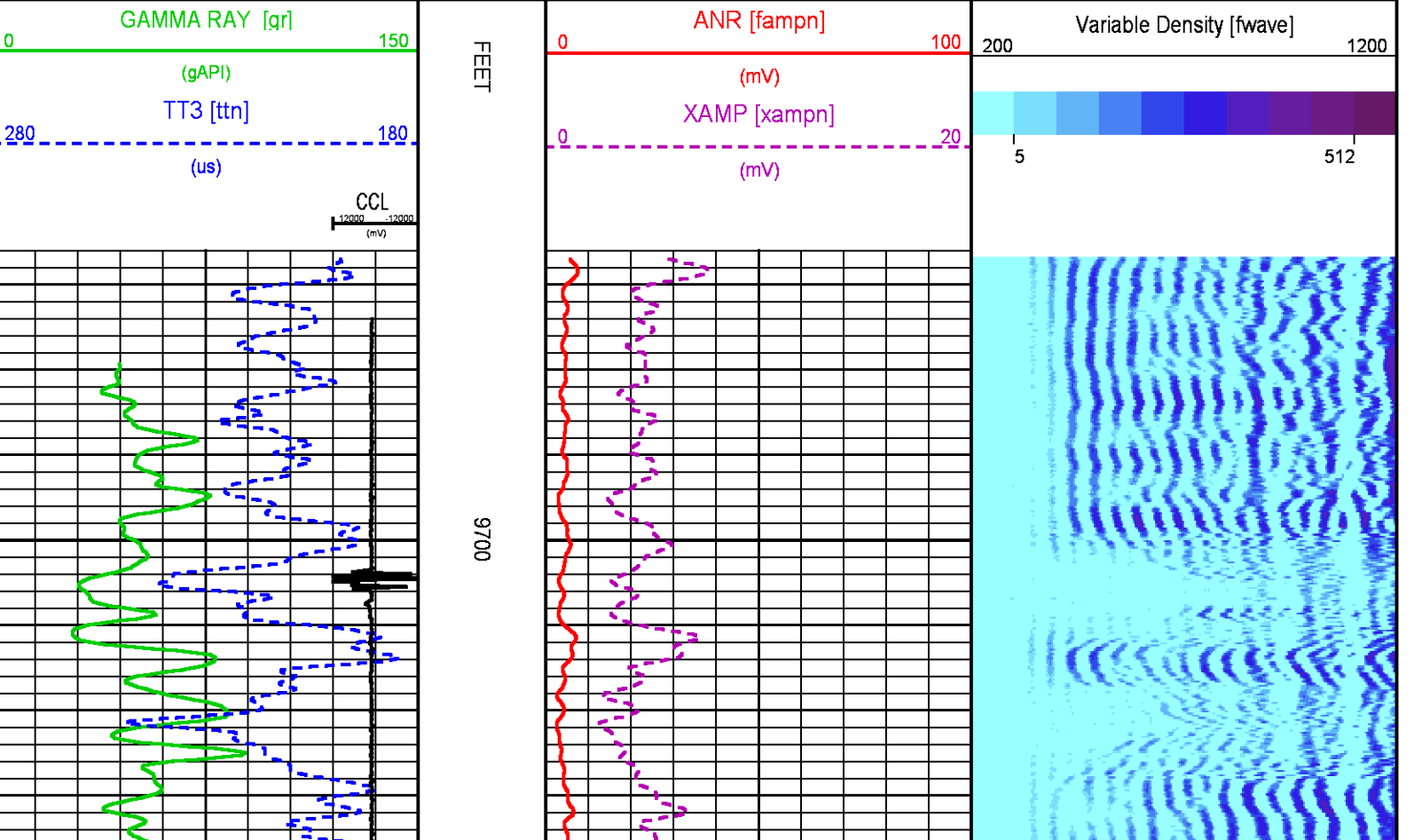
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
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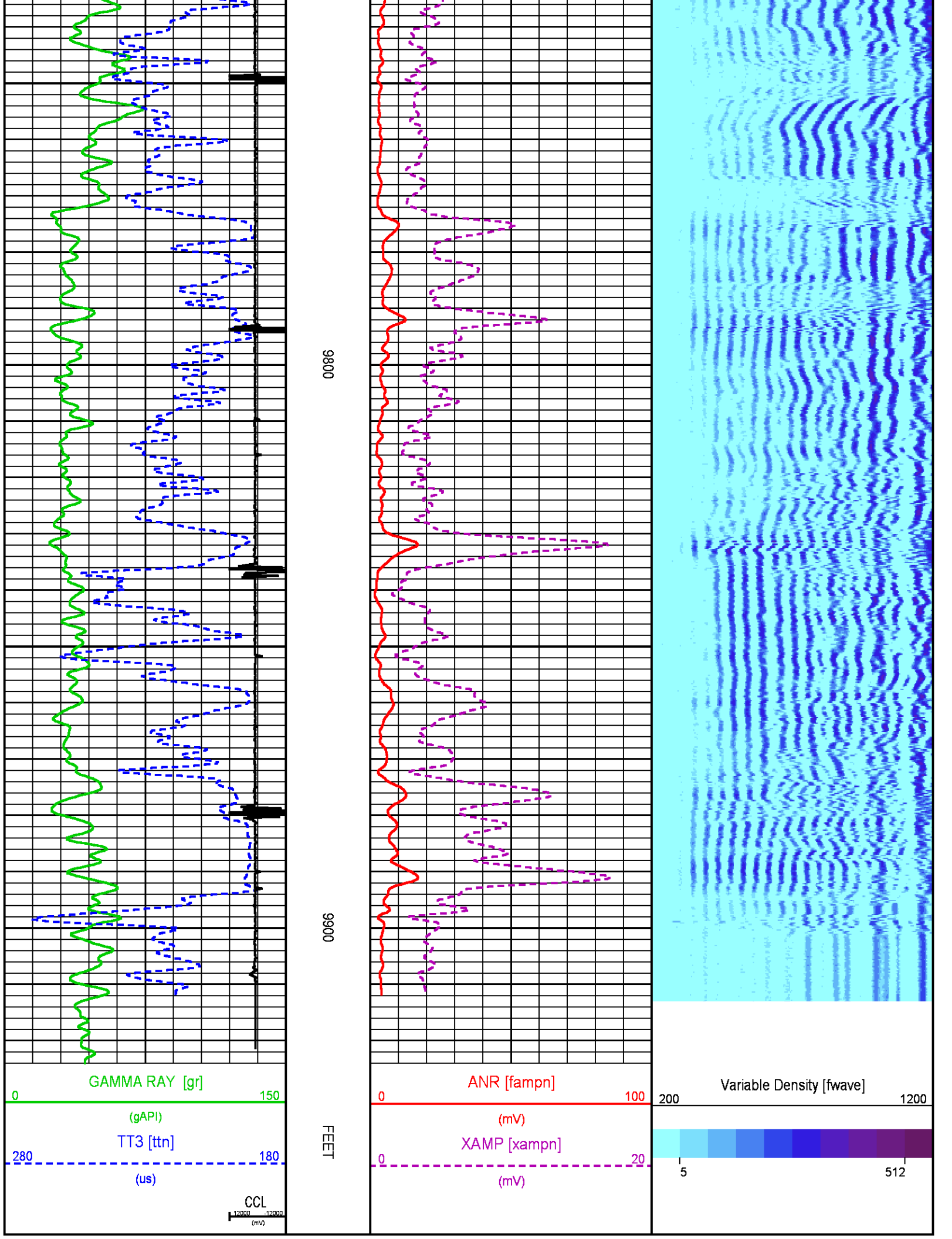
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
AMPLITUDE WINDOW (NEAR)	AMP WINDOW START (fgpn*)	182	us	TOP	BOTTOM
	AMP WINDOW LENGTH	25	us	"	"
TRAVEL TIME WINDOW (NEAR)	TT WINDOW START (ttn*)	160	us	"	"
	TT WINDOW LENGTH	500	us	"	"
	FIRST BRK THRESHOLD (ttn*)	4	mV	"	"
RAL CASING PARAMETERS	PPT NEAR	200.391	us	"	"
RAL TOOL DELAY	TOOL DELAY (strn*)	-75	us	"	"
BASELINE NOISE (NEAR)	NOISE WINDOW START	125	us	"	"
	NOISE WINDOW LENGTH	25	us	"	"

CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Jan 2 02:35:19 2017	CASING COLLAR LOCATOR
F1:FAMPN	Jan 2 02:35:19 2017	FIXED GATE AMPLITUDE NEAR RECEIVER
F1:FWAVE	Jan 2 02:35:19 2017	FAR WAVE FORM
F1:GR	Jan 2 02:35:19 2017	GAMMA RAY
F1:TTN	Jan 2 02:35:19 2017	TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER
F1:XAMPN	Jan 2 02:35:19 2017	FIXED GATE AMPLITUDE NEAR RECEIVER TIMES FIVE

CURVE MEASURE POINT OFFSET							
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	5.75	GR	1.75	XAMPN	14.00		
FAMPN	14.00	TTN	14.00				

Presentation	: cpu100:TERRA_ral_cbl+01-REPEAT-RAL_REP-5.fvpdf [5"/100' Scale]
Plot Interval	: 9666.75 - 9925.5 Feet
Data File 1	: F1 : cpu100:/dat1a/TEP_YOUBERG_RU_424_7/RAL_REP.xtf
Created On	: Jan 2 13:54:01 2017
Company	: TEP ROCKY MOUNTAIN LLC
Well	: YOUBERG RU 424-7
Field	: RULISON
File Interval	: 9665.75 - 9927 Feet
OCT	: n012g





CALIBRATION / VERIFICATION SUMMARY

Source File: Adat1a/TEP_YOUBERG_RU_424_7h012g.lp1

RAL PRIMARY CALIBRATION SUMMARY

TOOL #: 1426XA10154957		DATE/TIME PERFORMED: Mon Jan 2 01:40:24 2017	
UNIT #: 3880TA HL6670			
	NEAR (mV)	RADIAL (mV)	FAR (mV)
TARGETS	100.00	100.00	150.00
	NEAR	R1	R2
ZERO (mV)	1.83	2.82	2.61
	R3	R4	R5
AMP FLUID (mV)	87	87	86
	R6	R7	R8
TT (us)	214	214	213
	FAR	CAL	
M FACTOR	1.18	1.19	1.11

RAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 1426XA10154957		DATE/TIME PERFORMED: Mon Jan 2 01:44:07 2017		DAYS SINCE CAL: 0	
UNIT #: 3880TA HL6670		CABLE #: ML6670 6670SML			
	NEAR (mV)	R1 (mV)	R2 (mV)	R3 (mV)	R4 (mV)
ZERO	0.14	0.42	0.25	0.28	0.26
	R5 (mV)	R6 (mV)	R7 (mV)	R8 (mV)	FAR (mV)
AMP AIR	1.61	1.68	1.46	1.96	1.30
	R9 (mV)	R10 (mV)	R11 (mV)	R12 (mV)	CAL (mV)
M FACTOR	1.82	1.87	1.49	1.82	0.25
	WIRELINE FACTOR	1.11	0.00	1.00	

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 1355XA12670180		DATE/TIME PERFORMED: Tue Nov 15 11:53:22 2016	
UNIT #: 3880TA HL6670		CALB JIG #: 4702NK DA_228	
	BACKGROUND (cts)	CALBTR ON (cts)	GR DIFF (cts/s)
GR	75.82	247.07	171.2
	MULT	BACKGROUND (gAPI)	CALBTR ON (gAPI)
GR	0.584	44.28	144.28

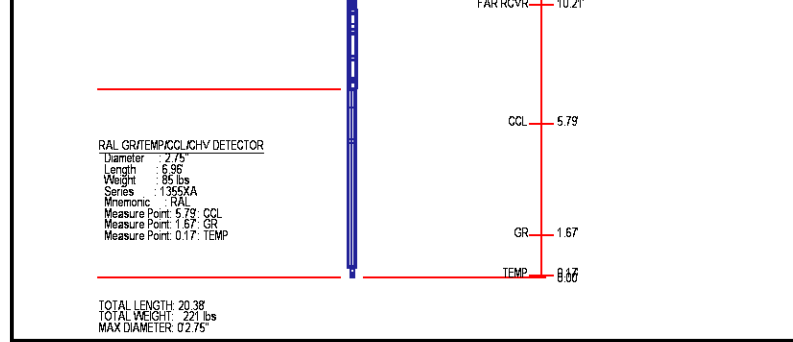
GR PRIMARY VERIFICATION SUMMARY


TOOL #: 1355XA12670180		DATE/TIME PERFORMED: Tue Nov 15 11:54:47 2016	
UNIT #: 3880TA HL6670		VERI JIG #: 4702NK DA_228	
	BACKGROUND (cts)	CALBTR ON (cts)	MULT
GR	77.11	254.76	0.584
	BACKGROUND (gAPI)	CALBTR ON (gAPI)	DIFF. (gAPI)
GR	45.03	148.77	103.74

INSTRUMENT CONFIGURATION

Source File: Adat1a/TEP_YOUBERG_RU_424_7h012g-ldg

<p>CABLEHEAD</p> <p>Diameter : 2.75" Length : 2.25' Weight : 10 lbs Series : CABL234</p> <p>RADIAL BOND TOOL</p> <p>Diameter : 2.75" Length : 11.17' Weight : 126 lbs Series : 1426XA Mnemonic : RAL Measure Point: 4.21' NEAR RCVR Measure Point: 3.25' FAR RCVR</p>	<p style="text-align: right;">20.38'</p> <p style="text-align: right;">NEAR RCVR : 11.17'</p> <p style="text-align: right;">FAR RCVR : 10.21'</p>
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	COMPANY	<u>TEP ROCKY MOUNTAIN LLC</u>		FILE NO:	
	WELL	<u>YOUBERG RU 424-7</u>		API NO:	
	FIELD	<u>RULISON</u>			
	COUNTY	<u>GARFIELD</u>	STATE	<u>COLORADO</u>	<u>05045232580000</u>
	LOCATION:	SHL:1947' FSL &157' FWL BHL:350' FSL &2248' FWL		ELEVATIONS:	
		SEC <u>7</u> TWP <u>7S</u> RGE <u>93W</u>		KB 7381 FT DF 7380 FT GL 7357 FT	
				DATE	<u>02-JAN-2017</u>