



FILE NO: COMPANY TEP ROCKY MOUNTAIN LLC

WELL YOUBERG RU 614-7

API NO: FIELD RULISON

05045232600000 COUNTY GARFIELD STATE COLORADO

Ver. 4.06 LOCATION: SHL: 1912' FSL & 158' FWL BHL: 186' FSL & 862' FWL

SEC 7 TWP 7S RGE 93W

OTHER SERVICES RPM

PERMANENT DATUM GL ELEVATION 7357 FT
LOG MEASURED FROM KB 24 FT ABOVE P.D.
DRILL. MEAS. FROM KB

ELEVATIONS:
KB 7381 FT
DF
GL 7357 FT

DATE 03-DEC-2016

RUN TRIP 1 1

SERVICE ORDER US110267

DEPTH DRILLER 9673 FT

DEPTH LOGGER 9634 FT

BOTTOM LOGGED INTERVAL 9634 FT

TOP LOGGED INTERVAL 24 FT

TIME STARTED 09:00

TIME FINISHED 11:30

OPERATOR RIG TIME 2.5

TYPE OF FLUID IN HOLE WATER

FLUID DENSITY NA

FLUID SALINITY NA

FLUID LEVEL 58 FT

LOGGED CEMENT TOP SEE LOG

WELLHEAD PRESSURE 0 PSI

MAXIMUM HOLE DEVIATION NA

NOMINAL LOGGING SPEED 100 F/MN

MAX. RECORDED TEMP. 250 DEGF

REFERENCE LOG NA

REFERENCE LOG DATE NA

EQUIP. NO. LOCATION HL-6670 WOODWARD

RECORDED BY LOHANDLEY

WITNESSED BY MR. KYLE KOHL

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

CASING RECORD

SIZE	WEIGHT	GRADE	FROM	TO
9 5/8				1124 FT
4.5 IN			0 FT	9673 FT

REMARKS

RUN 1 TRIP 1: *2 OPERATIONS IN WELL*

OPERTION 1: RAL/GR/CCL RUN CENTRALIZED

WELL LOGGED WITH 0 PSI ON THE WELLHEAD

BHT: DEGF 250

SHORT JOINT: 6023'-6046'

CREW: K.NUTTER, R.HEATH

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 O PSI

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

Plotted: Sat Dec 3 13:26:05 2016

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/TEP_YOUBERG_RU_514_7/n012g02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 0.000 ft BOTTOM DEPTH: 9626.020 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*)	181	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	"	"

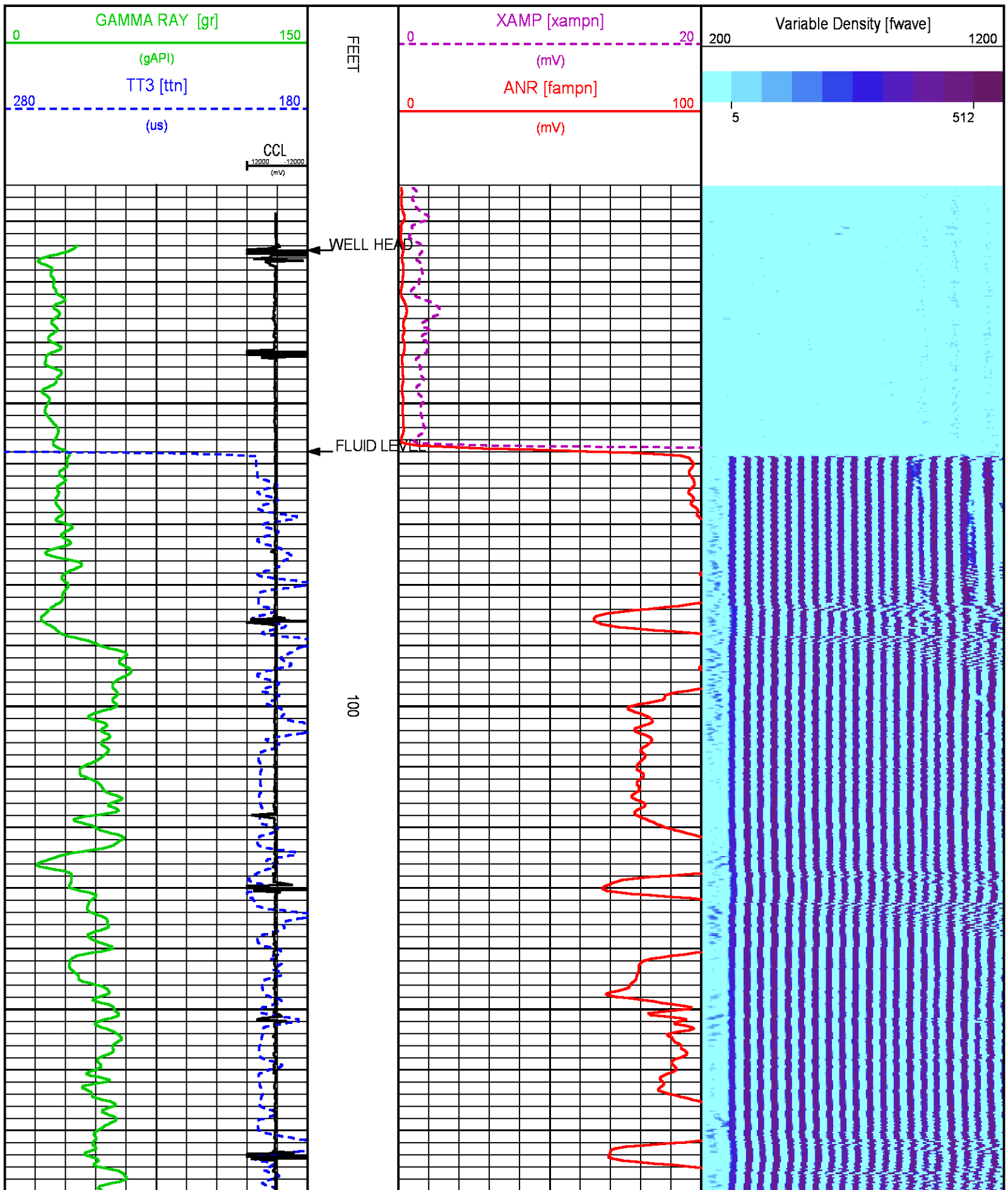
CURVE DESCRIPTION REPORT

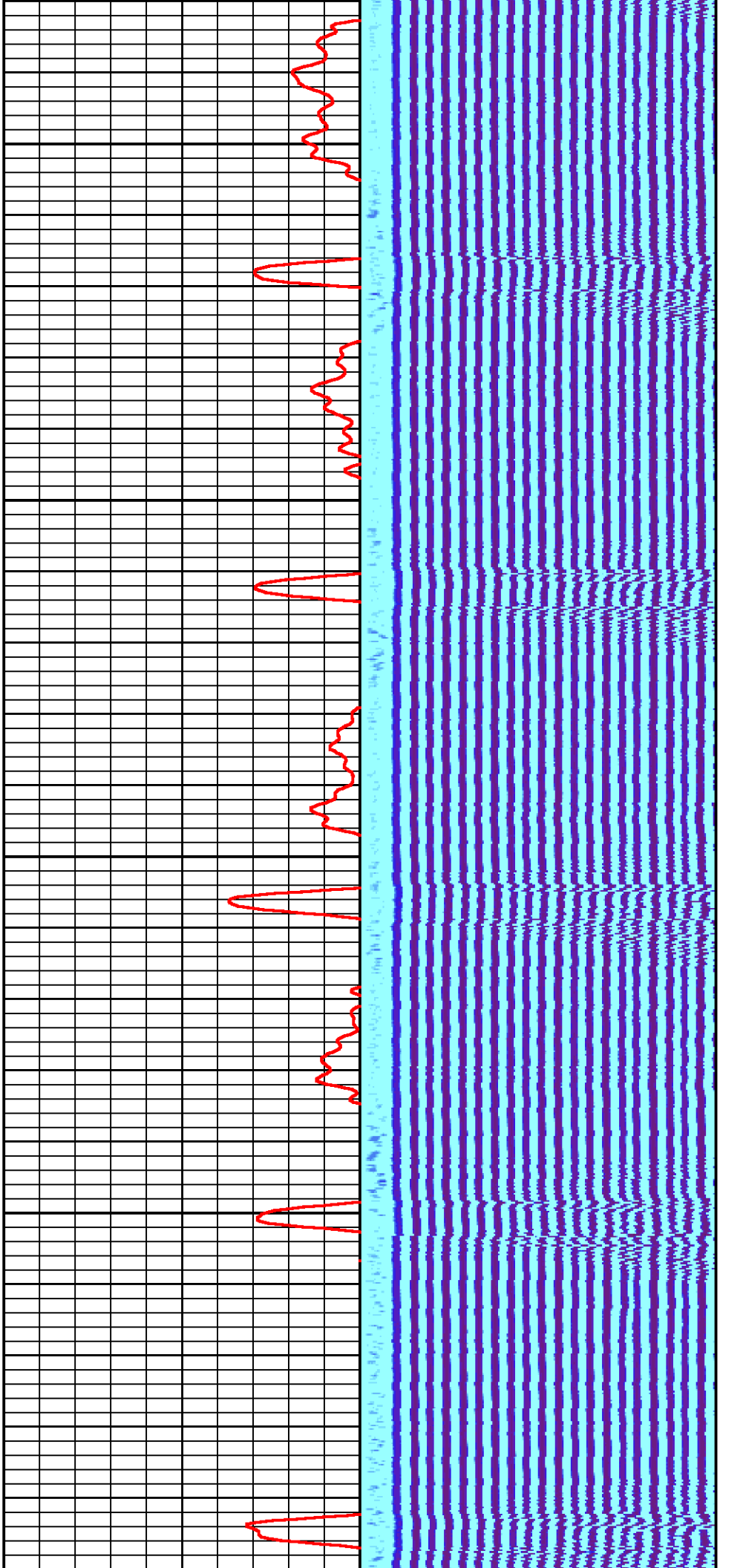
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Dec 3 09:57:29 2016	CASING COLLAR LOCATOR
F1:FAMPN	Dec 3 09:57:29 2016	FIXED GATE AMPLITUDE NEAR RECEIVER
F1:FWAVE	Dec 3 09:57:29 2016	FAR WAVE FORM
F1:GR	Dec 3 09:57:29 2016	GAMMA RAY
F1:TTN	Dec 3 09:57:29 2016	TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER
F1:XAMPN	Dec 3 09:57:29 2016	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	11.25		
FAMPN	11.25	TTN	11.25				

Presentation : cpu100:/dat1a/TEP_YOUBERG_RU_514_7/ral_cbl+01-MAIN-MNRAL-5.fvpdf [5"/100' Scale]
Plot Interval : 14.25 - 9650 Feet

Data File 1 : F1 : cpu100:/dat1a/TEP_YOUBERG_RU_514_7/MNRAL.xtf
Created On : Dec 3 09:57:29 2016
Company : TEP
Well : YOUBERG RU 514-7
Field : RULISON
File Interval : 0 - 9647.25 Feet
OCT : n012g

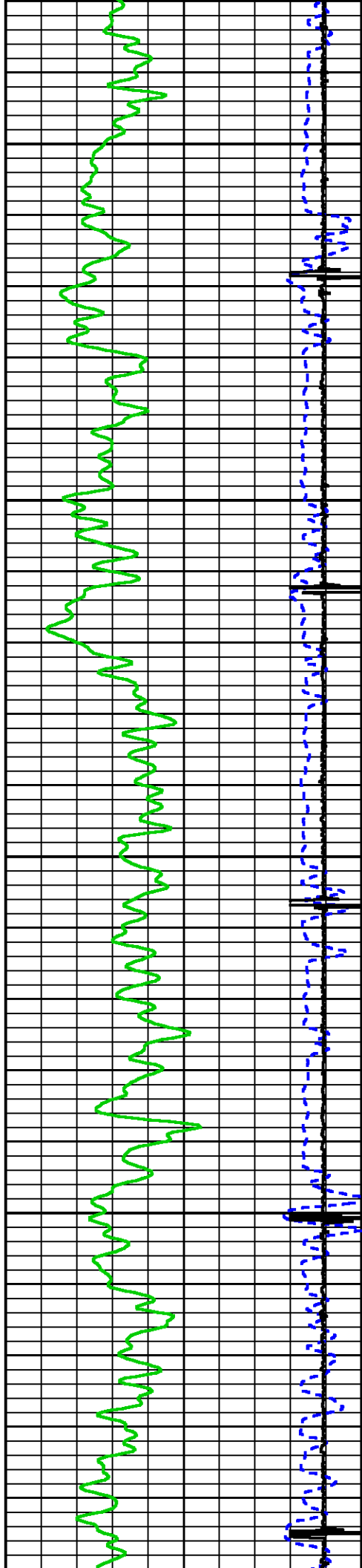


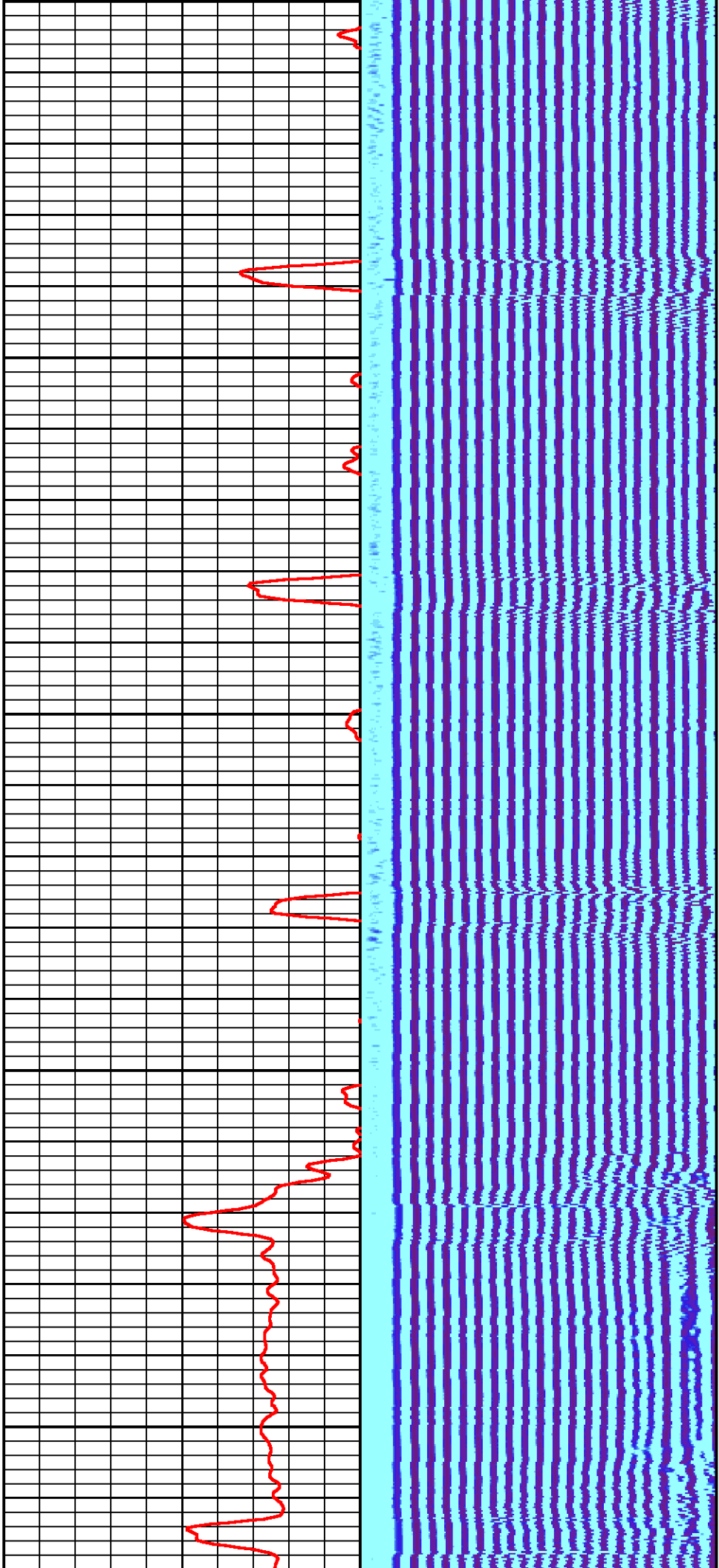


200

300

400

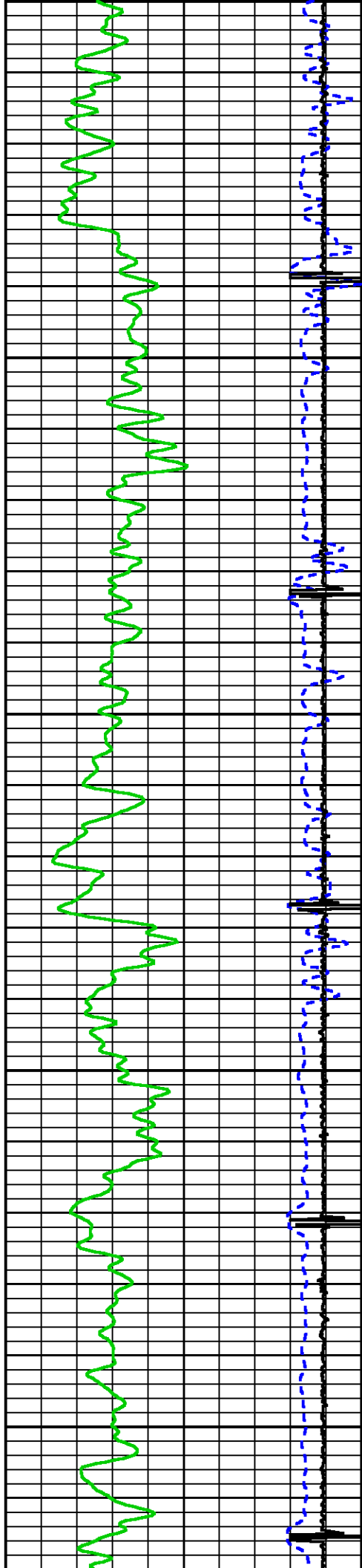


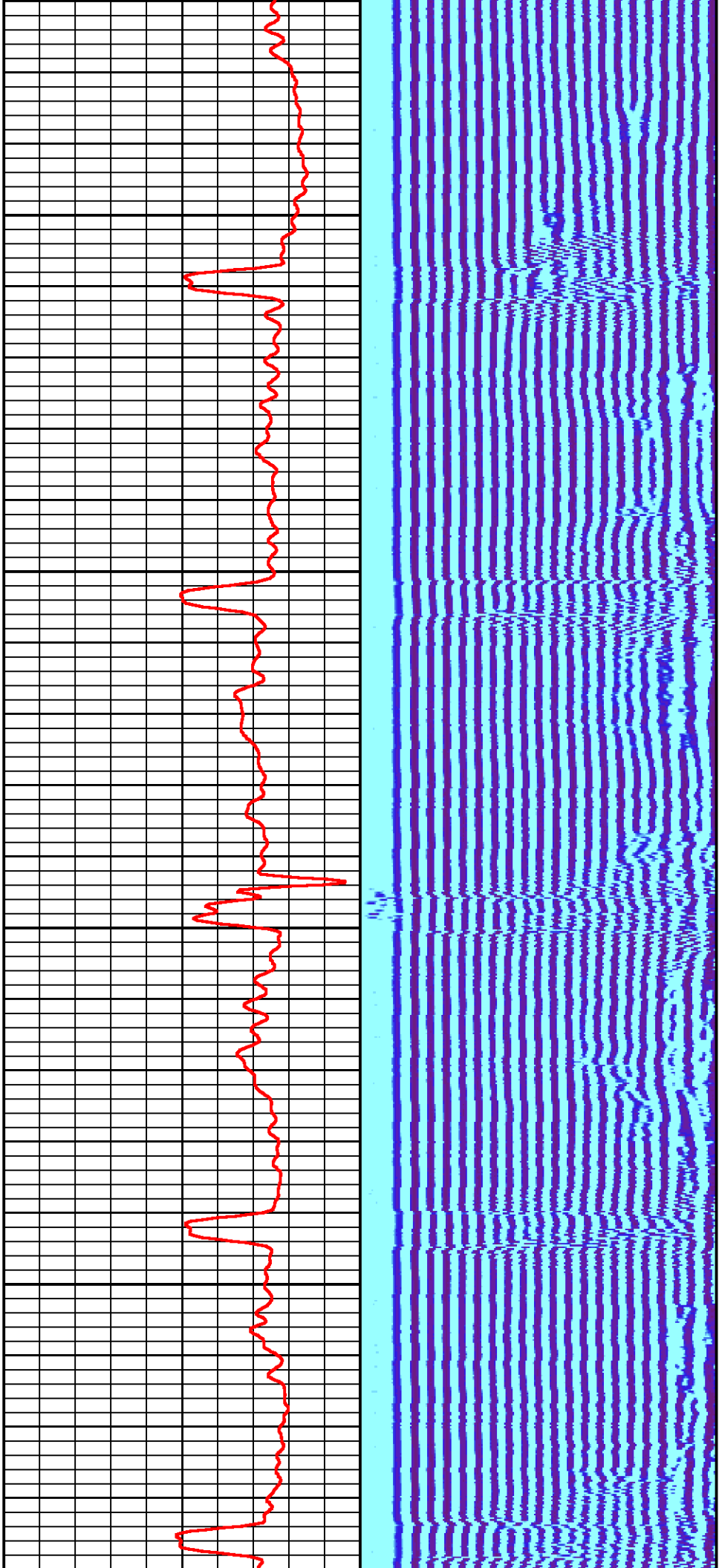


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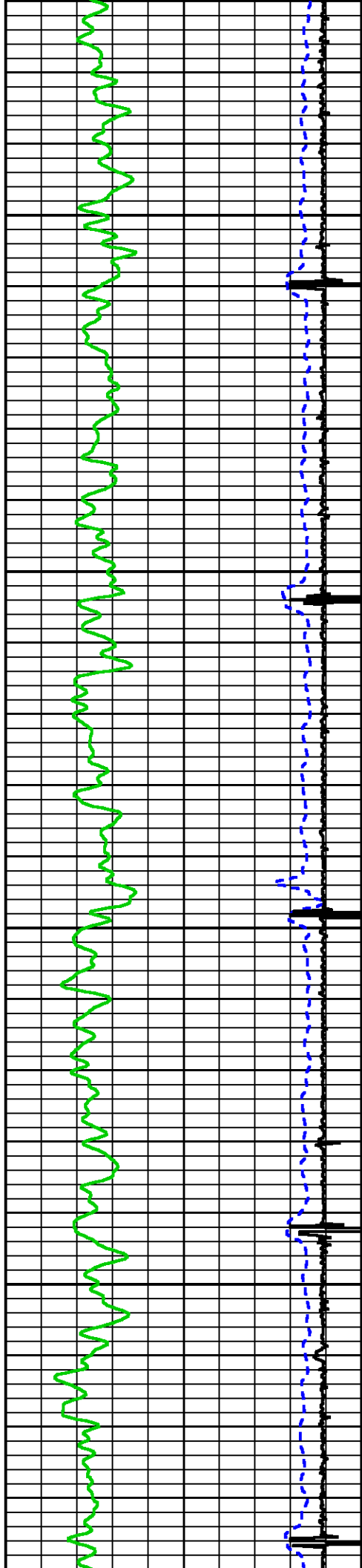
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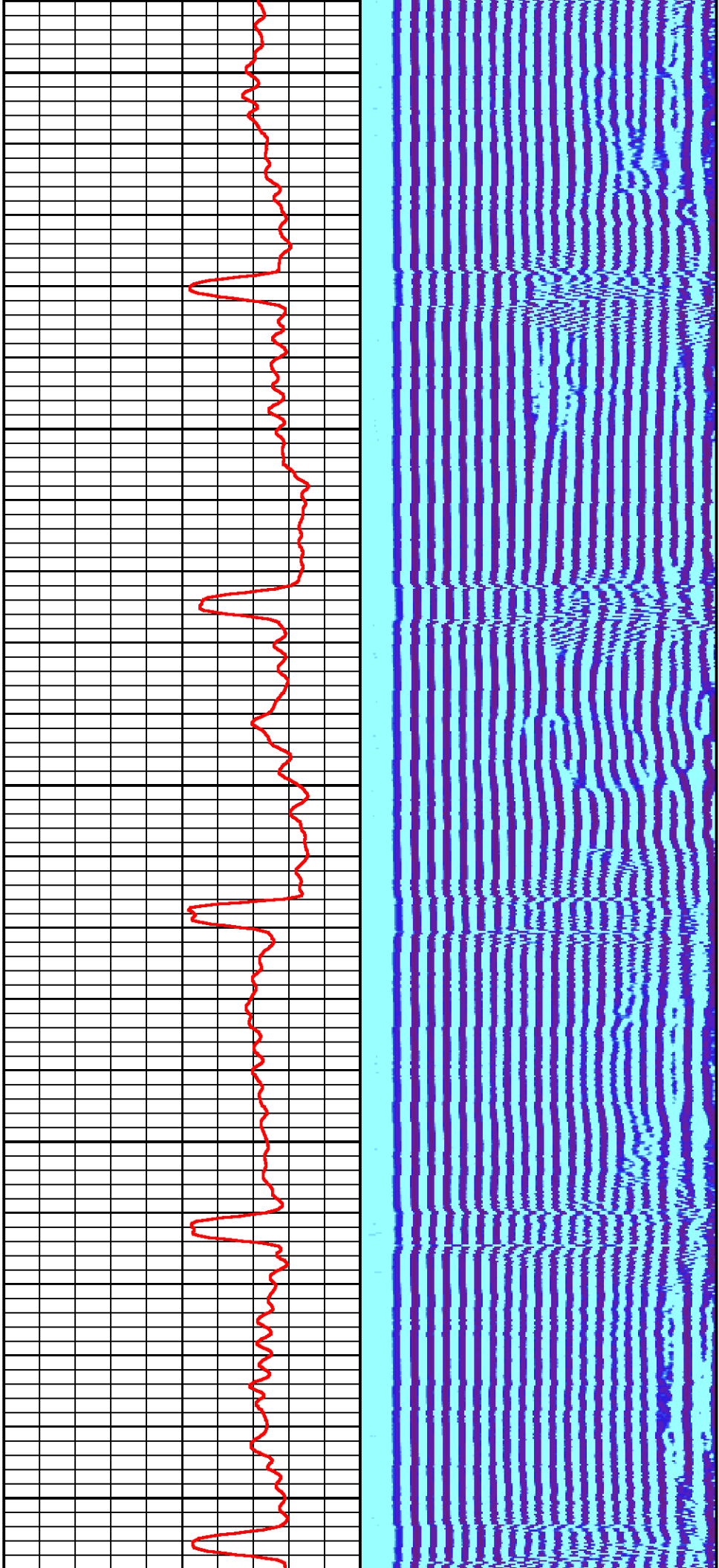




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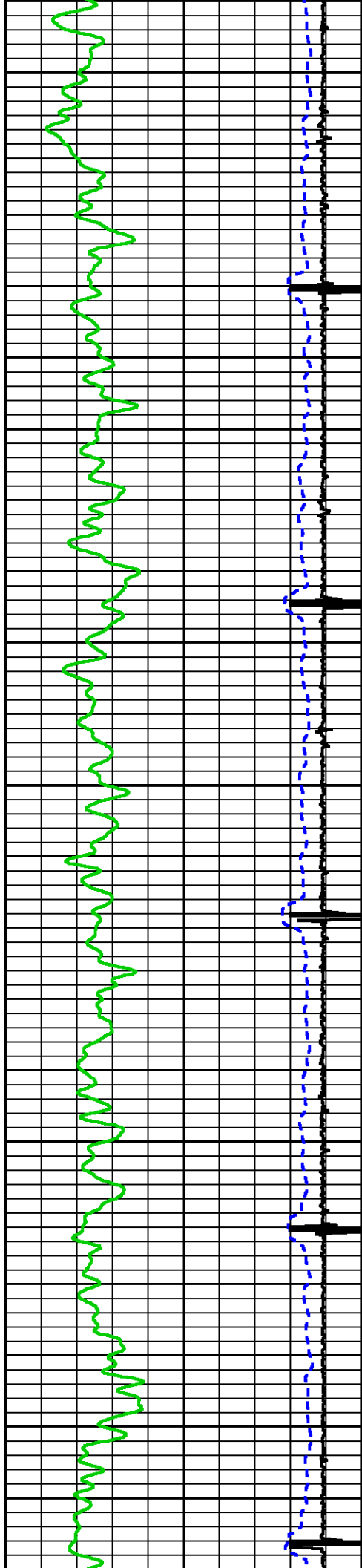
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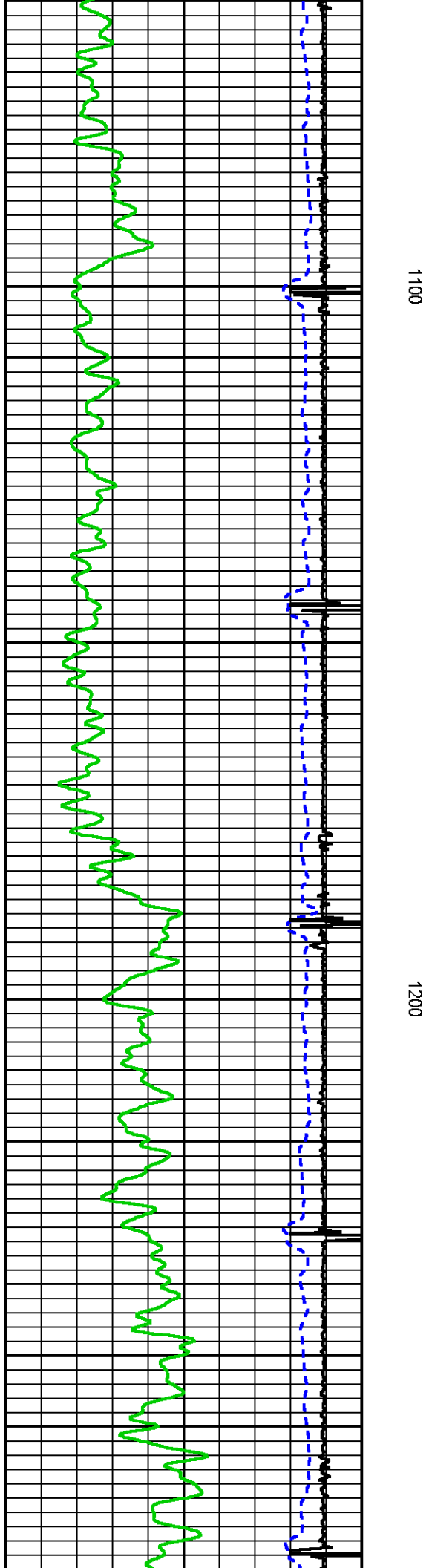
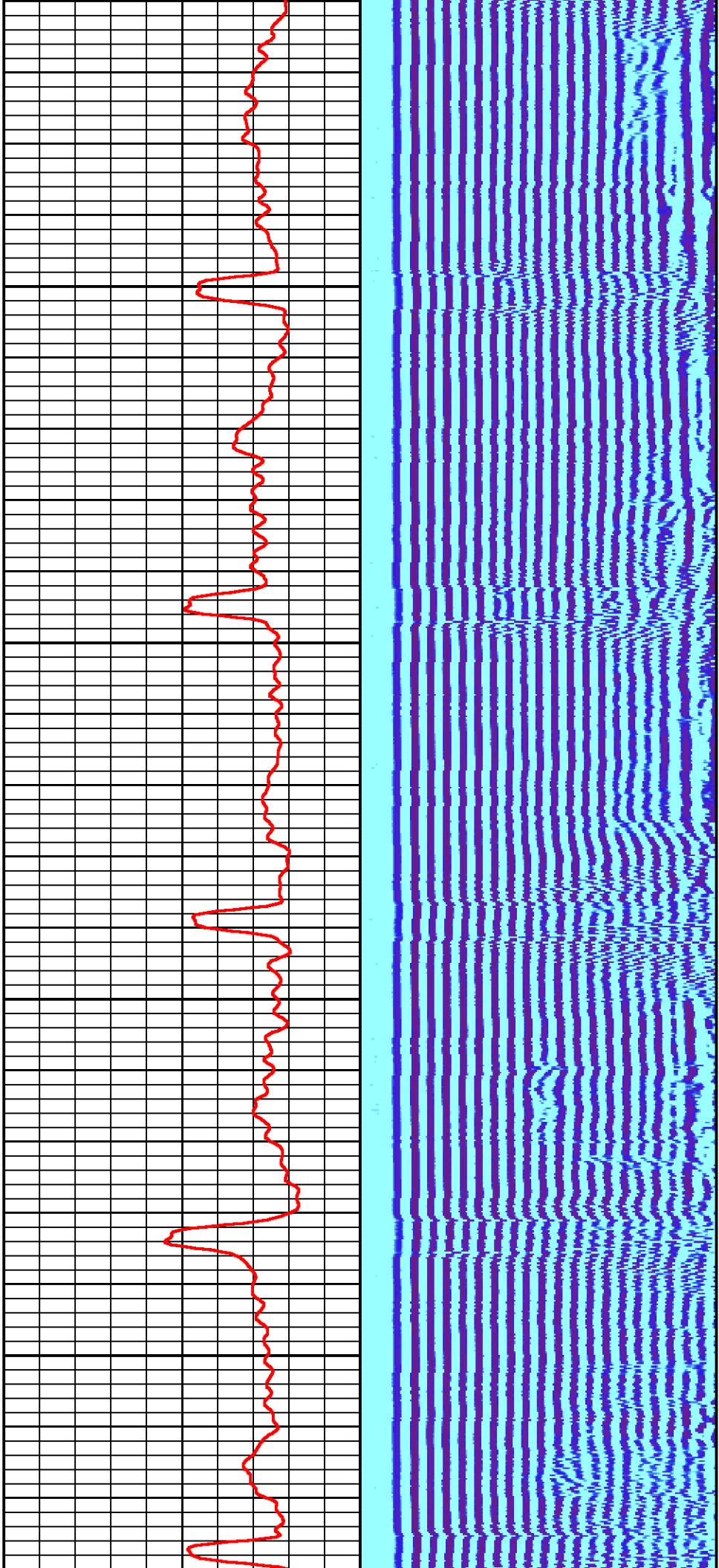


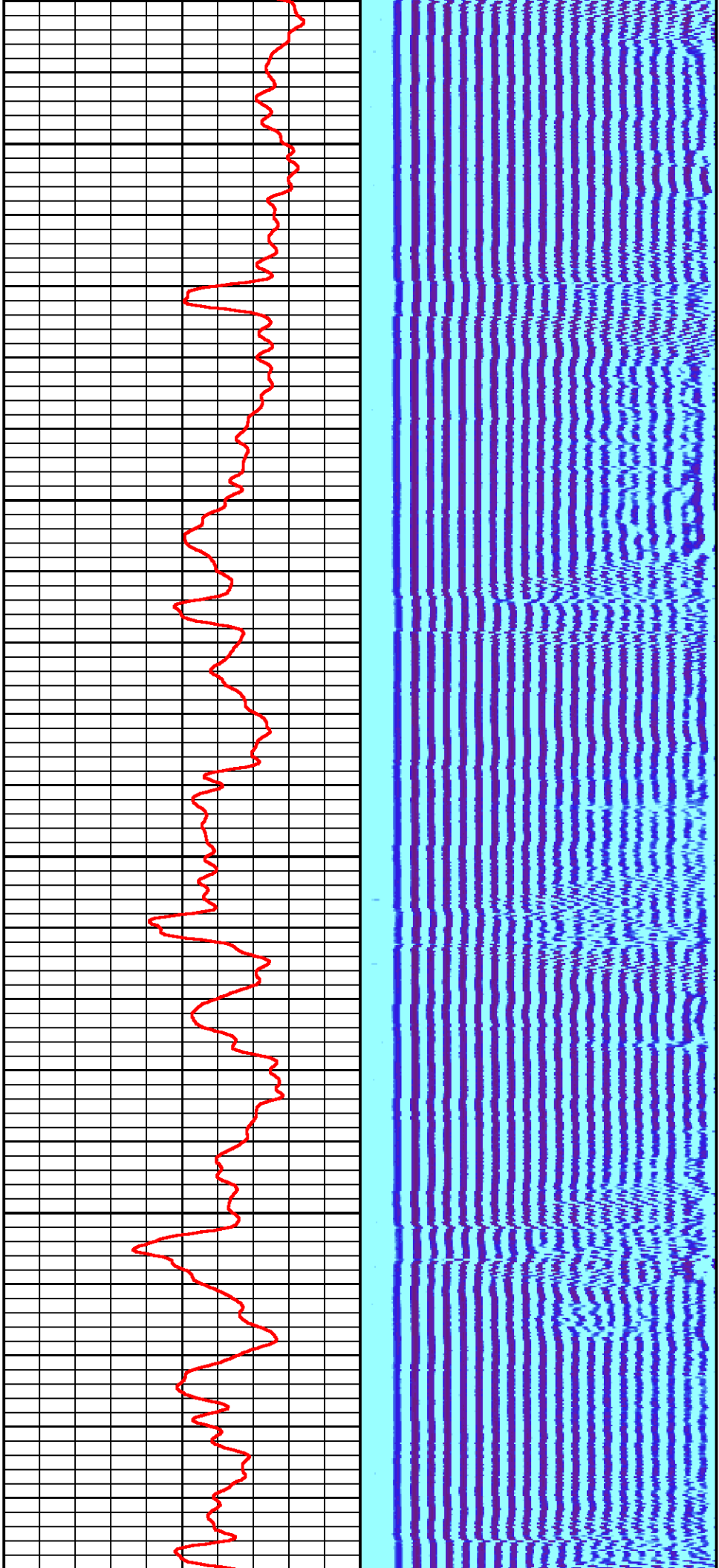


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1000



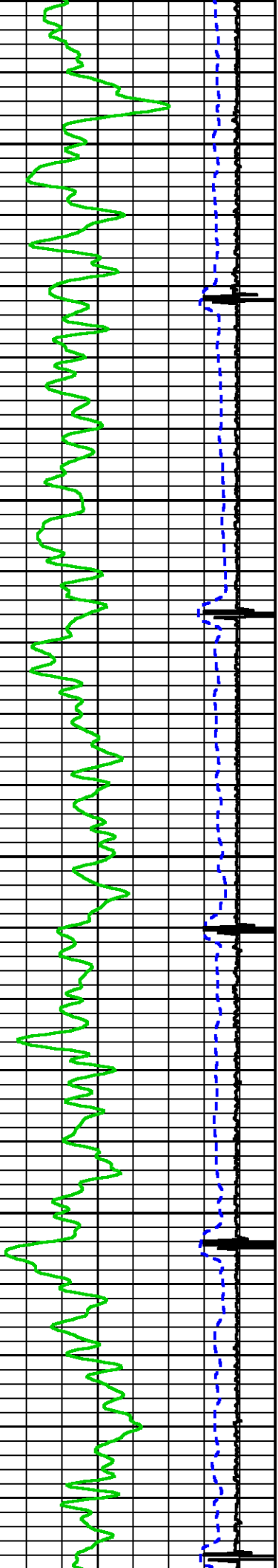


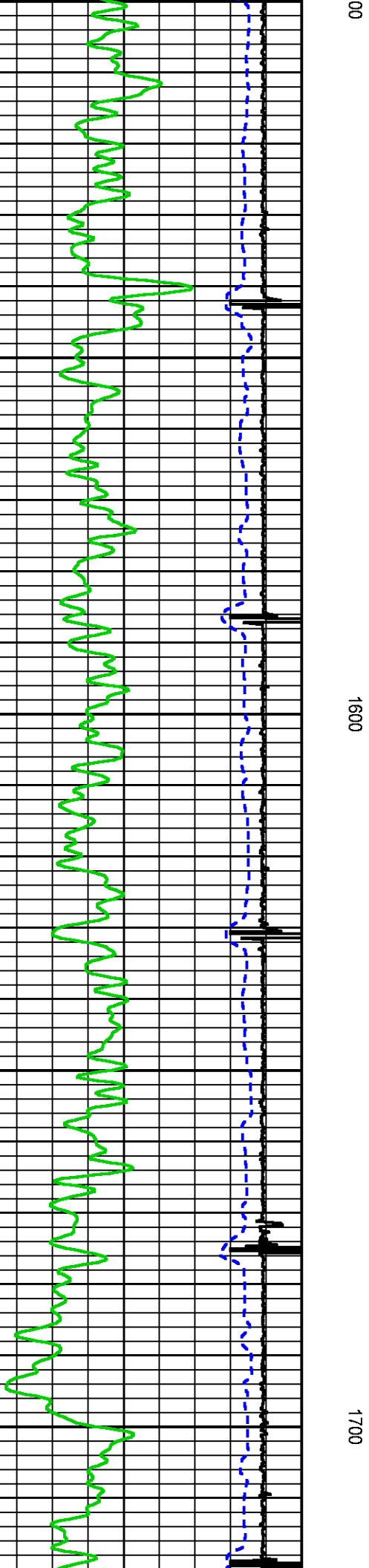
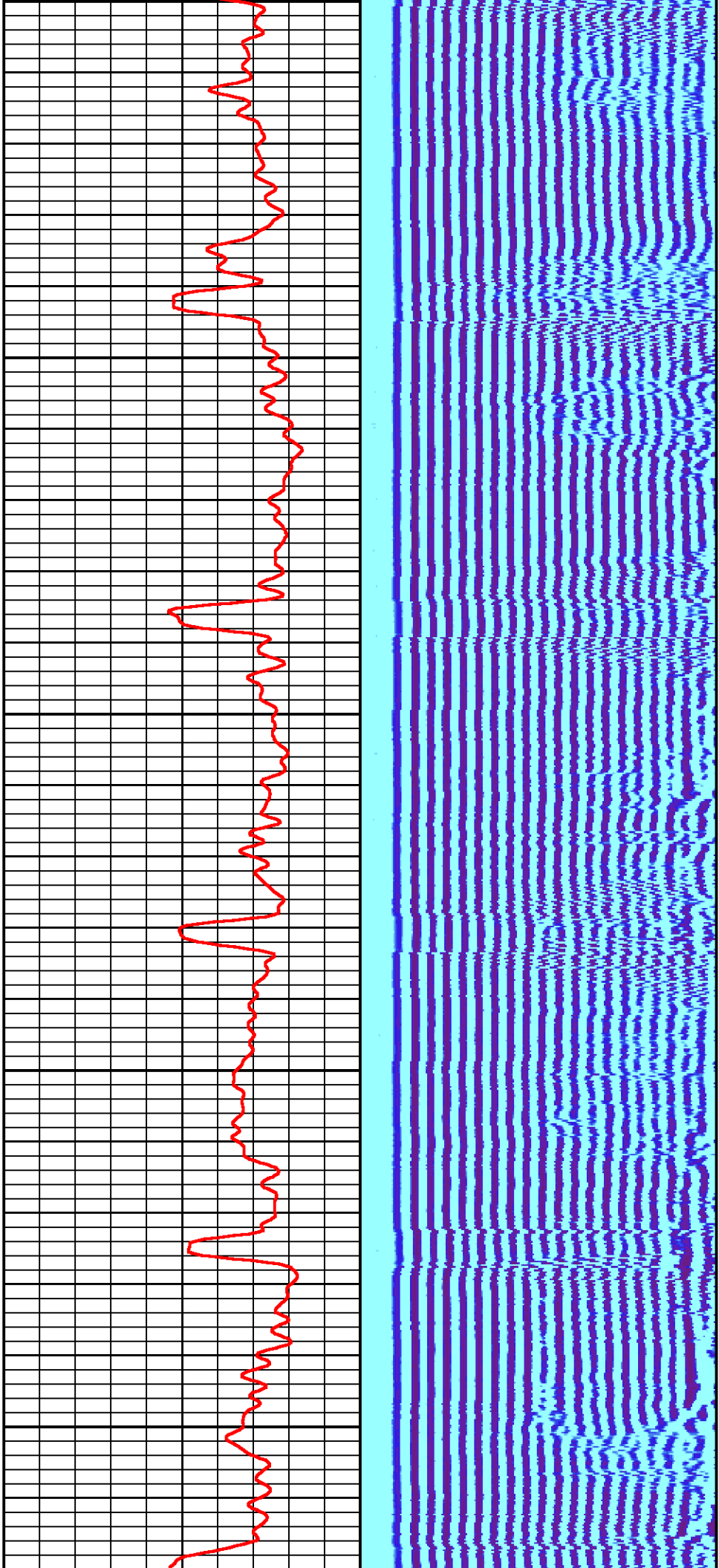


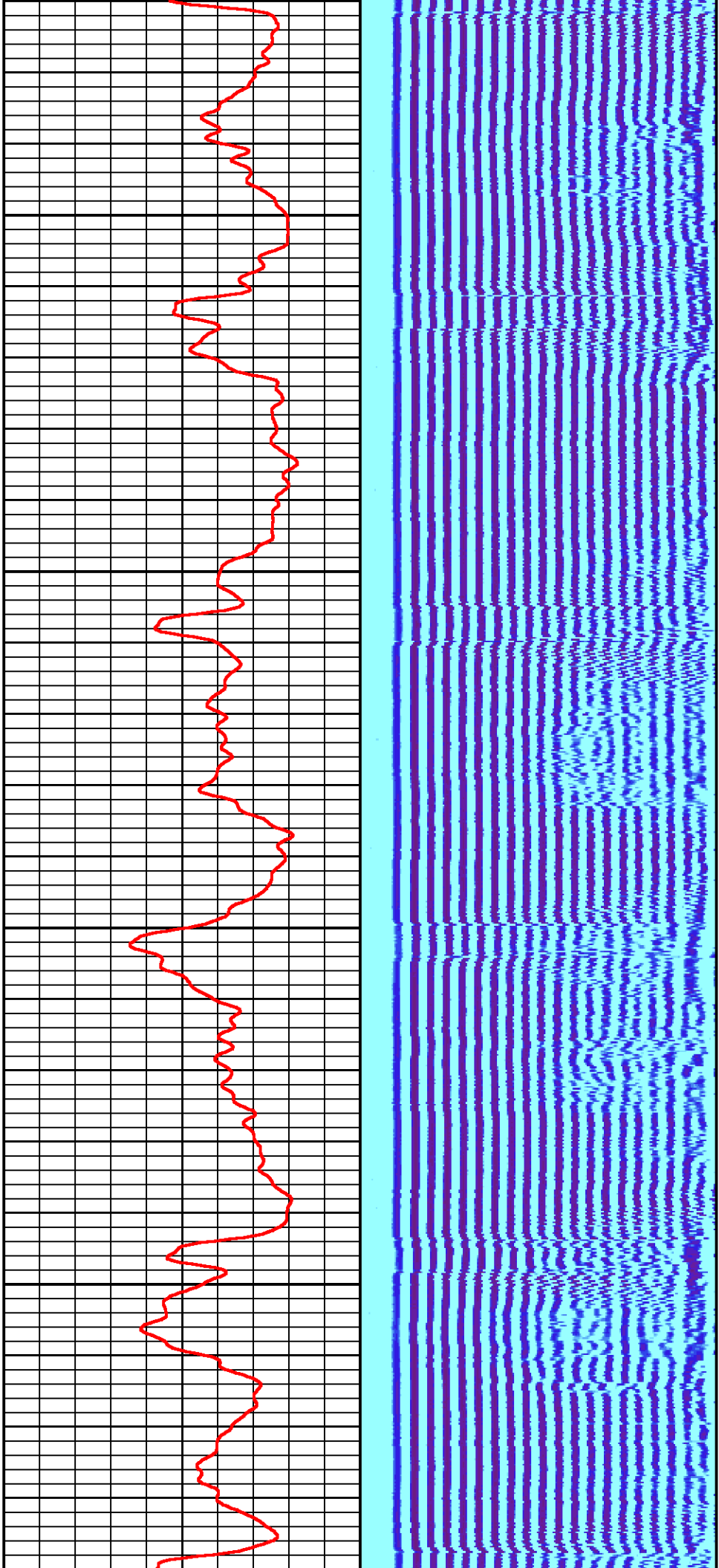
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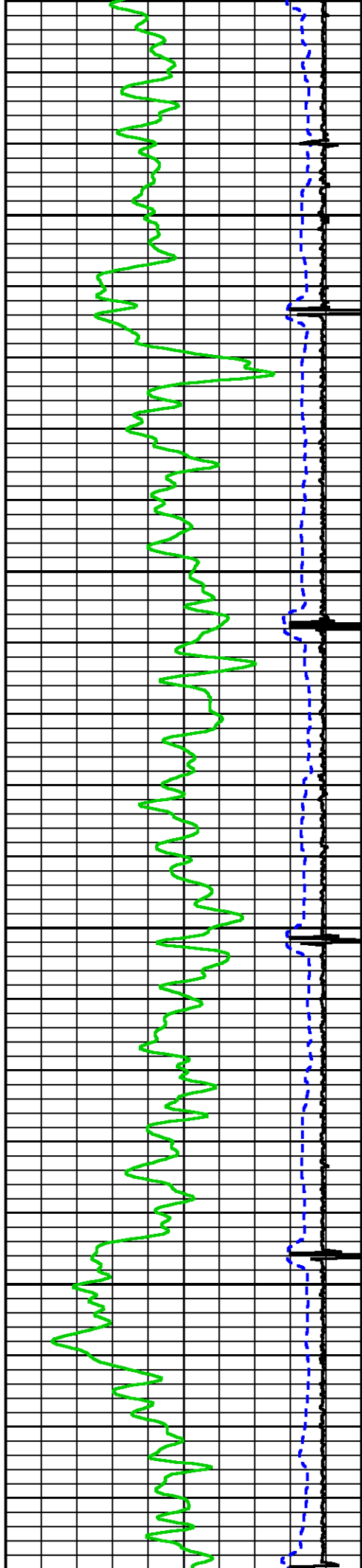


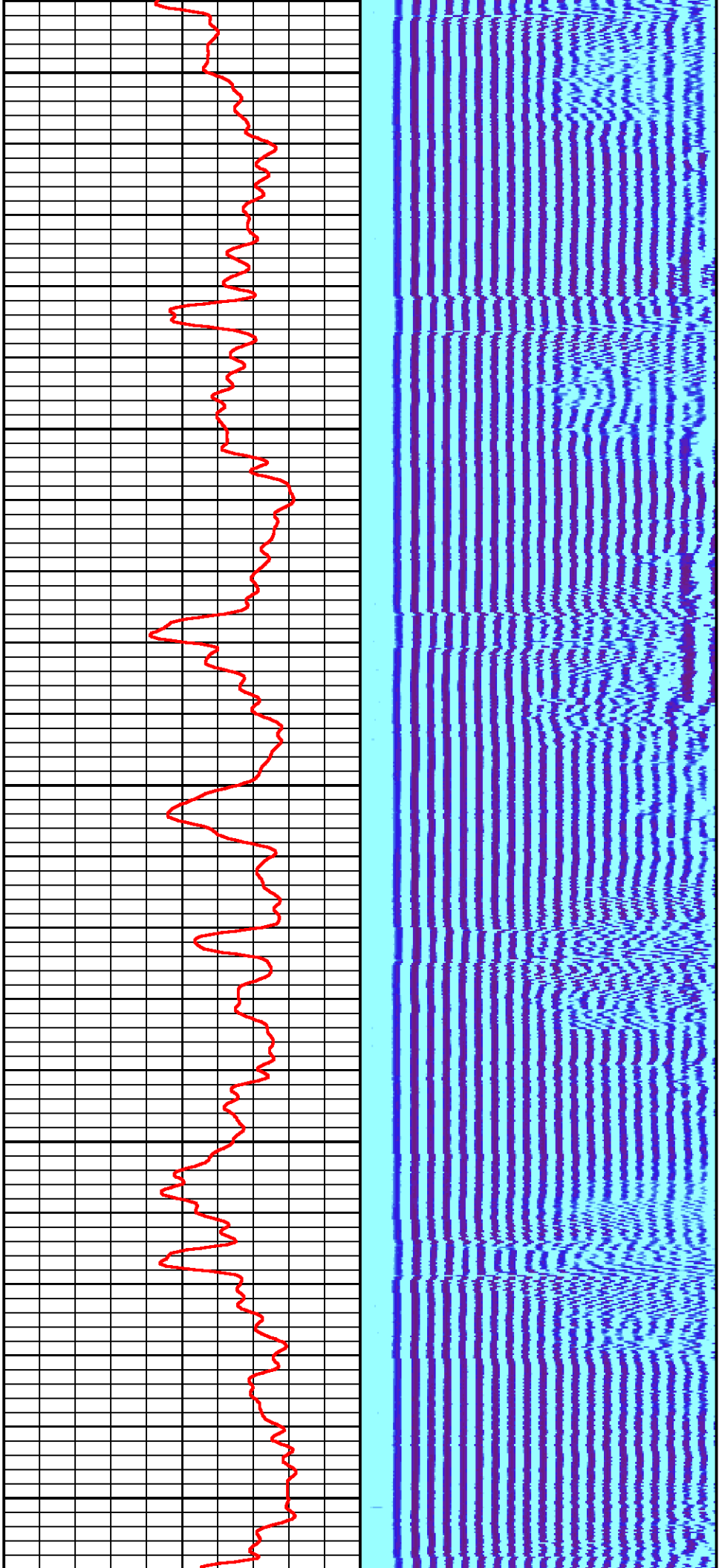




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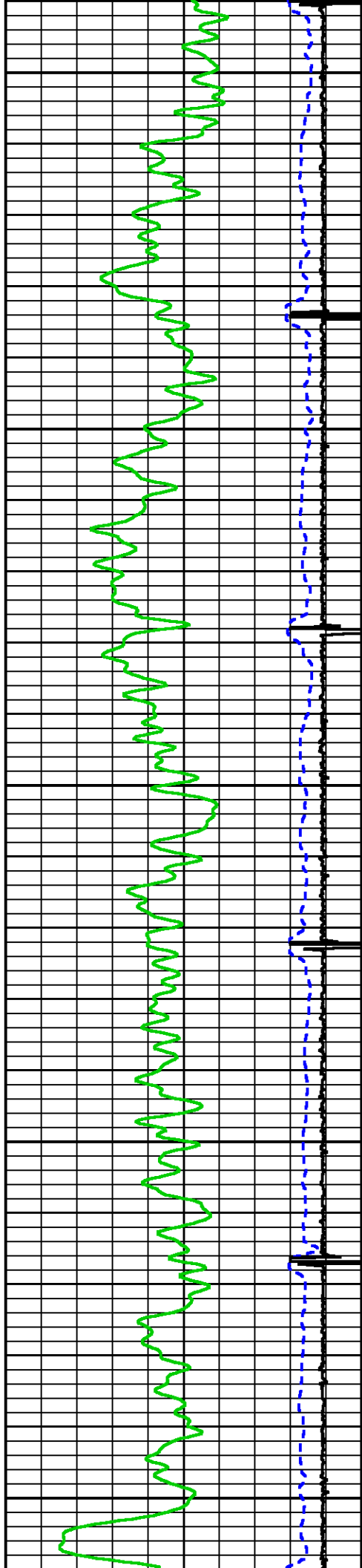
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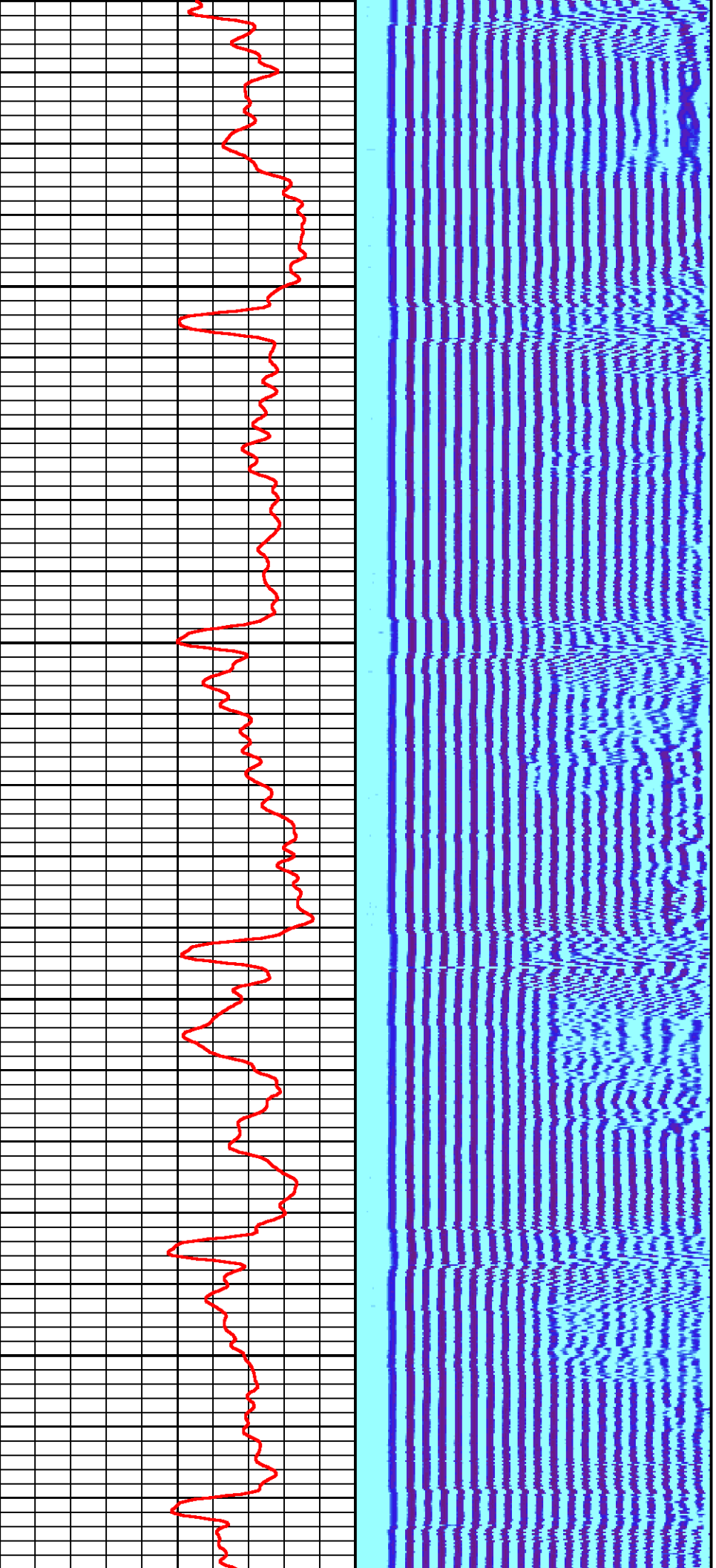




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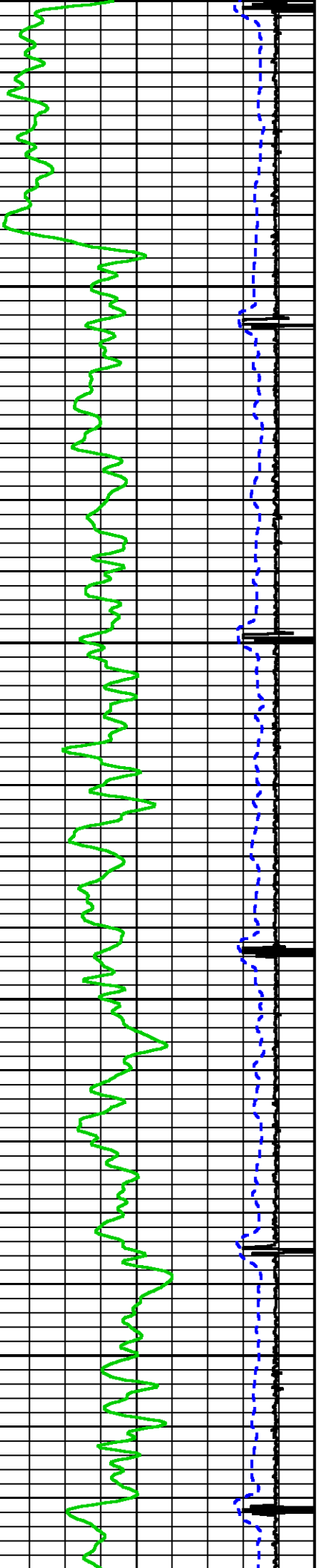
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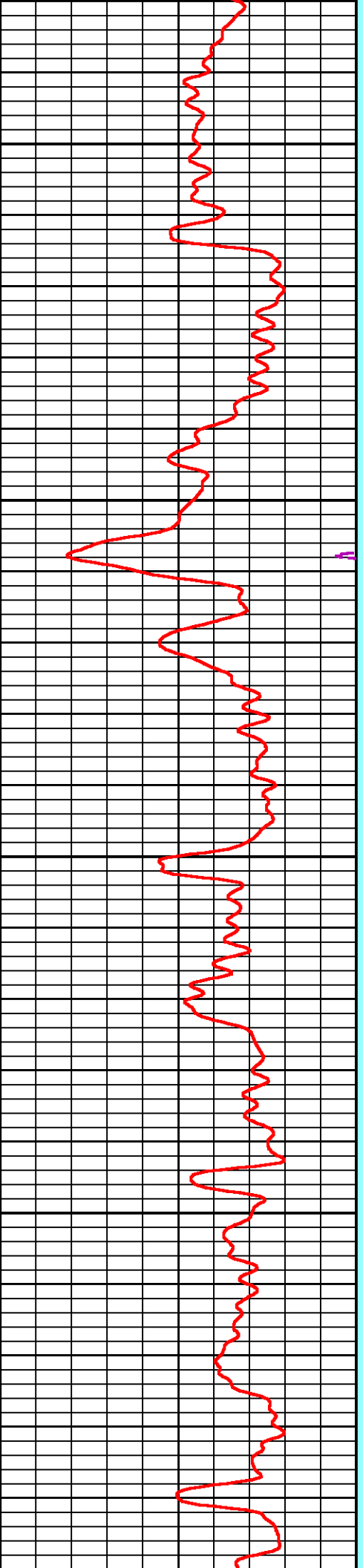
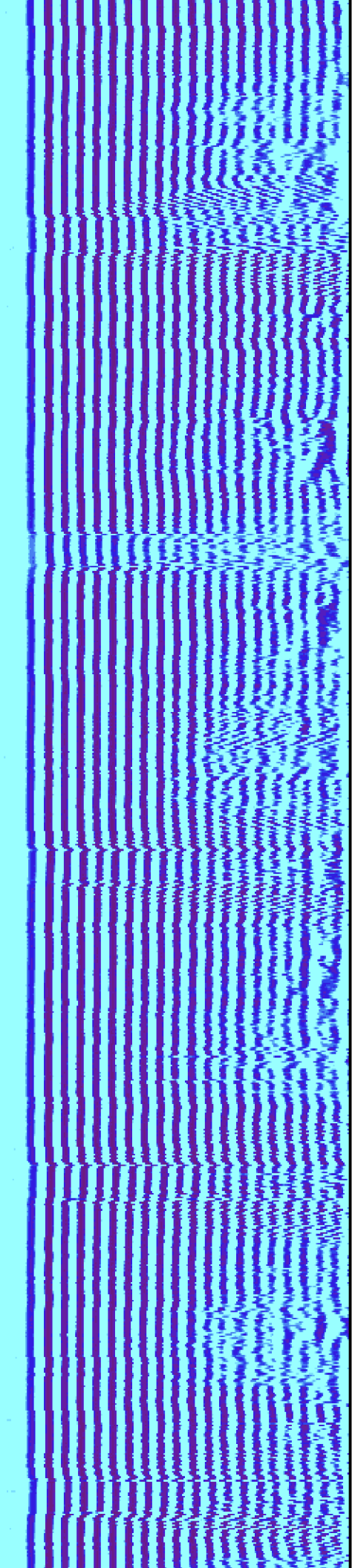




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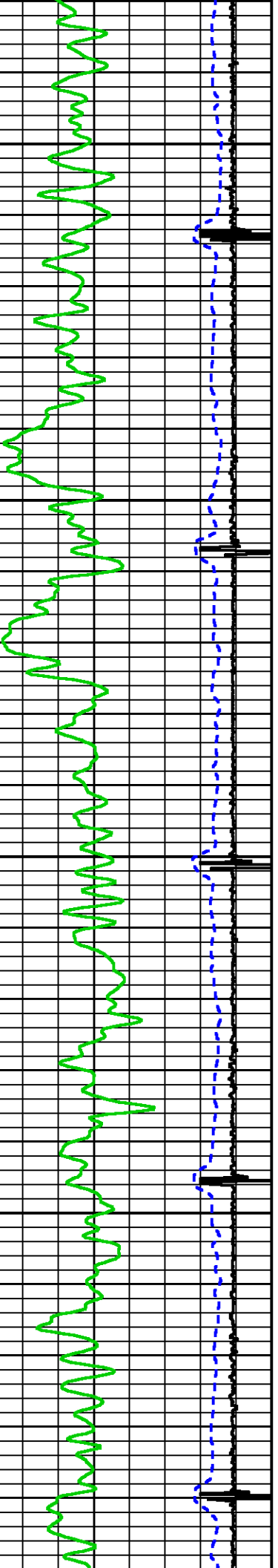


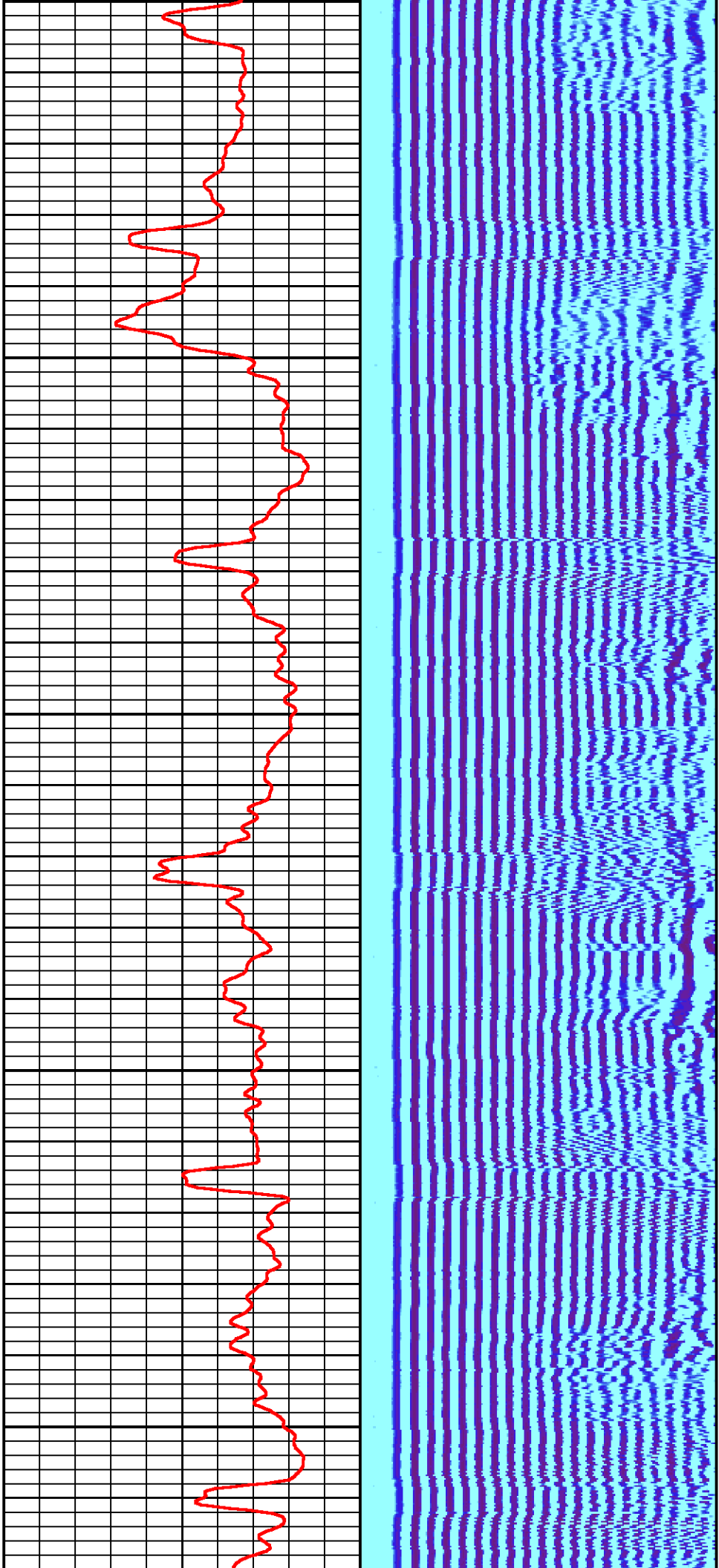


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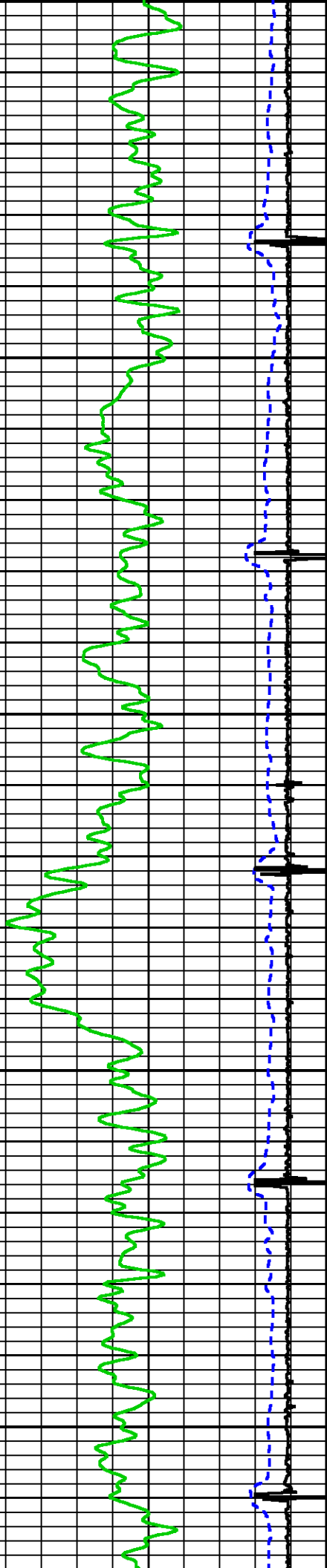


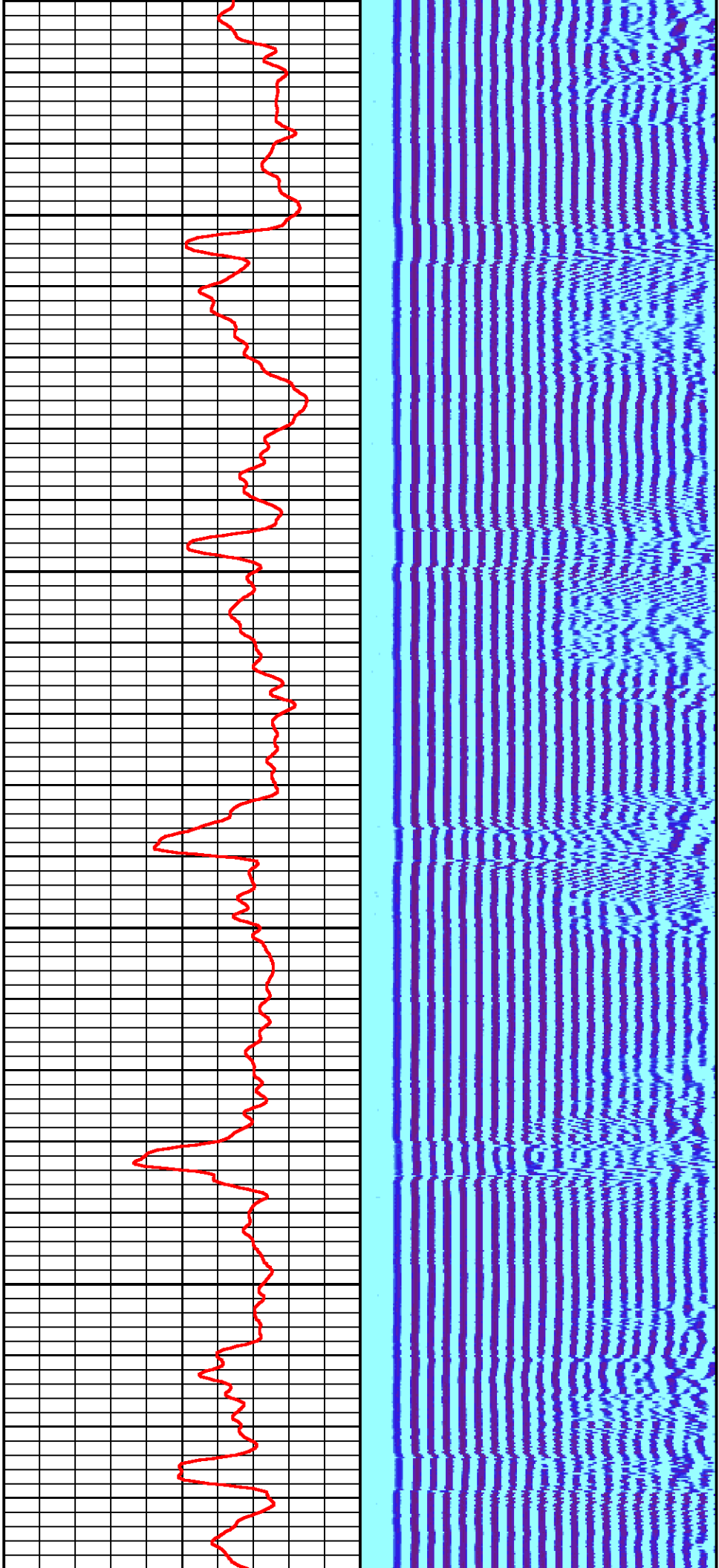


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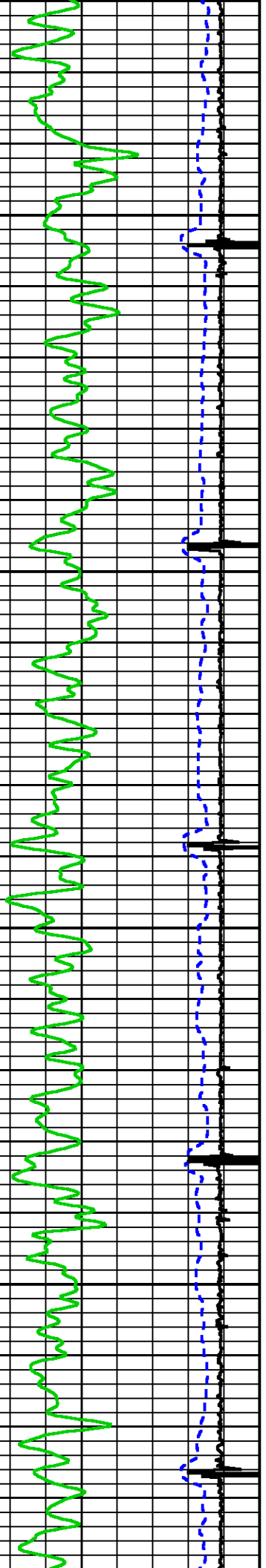
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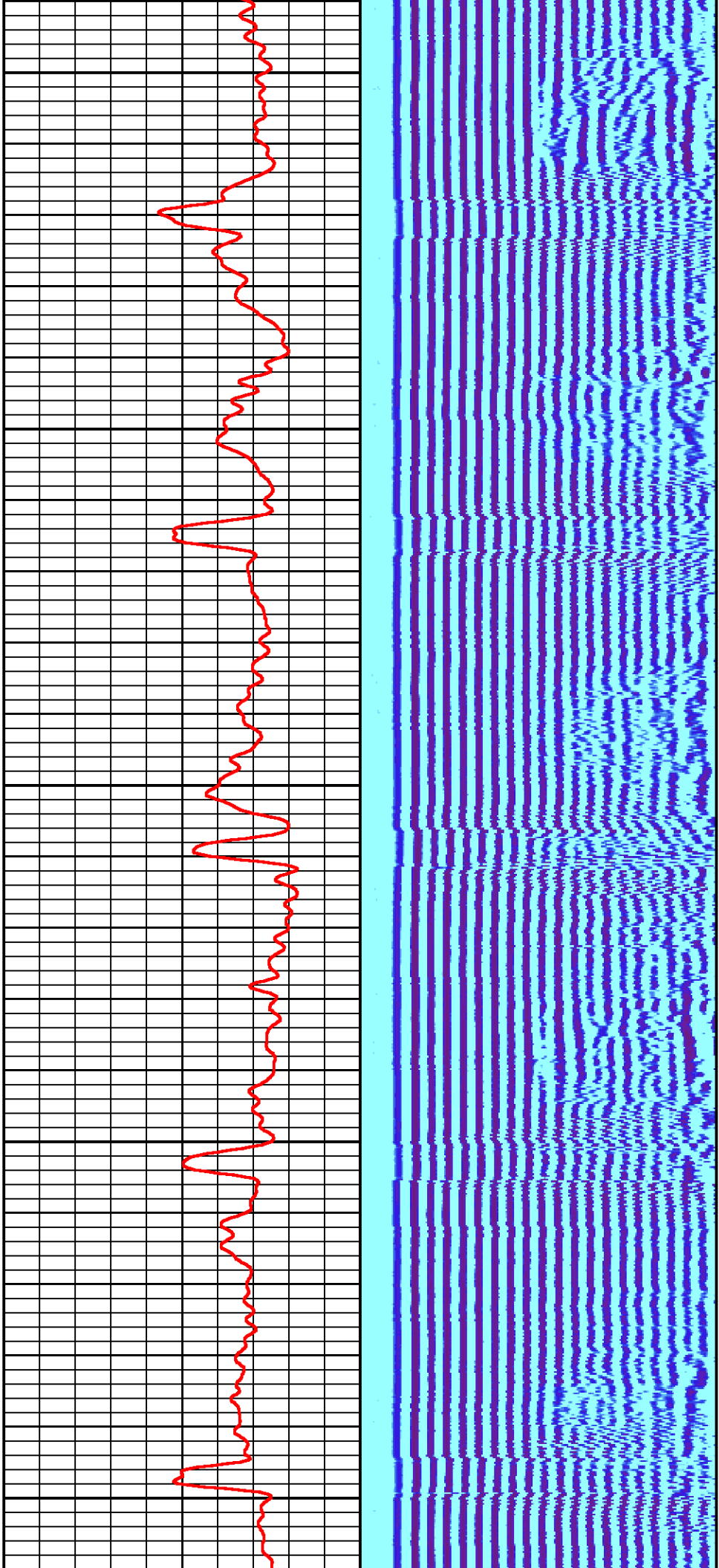




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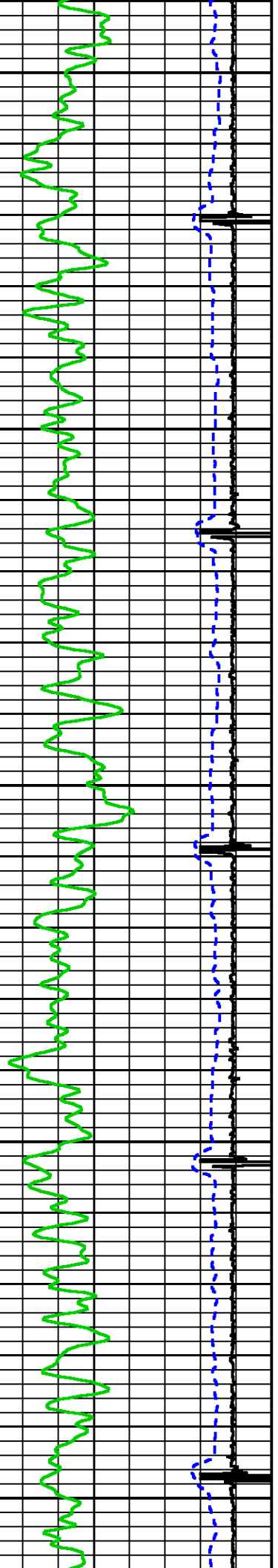
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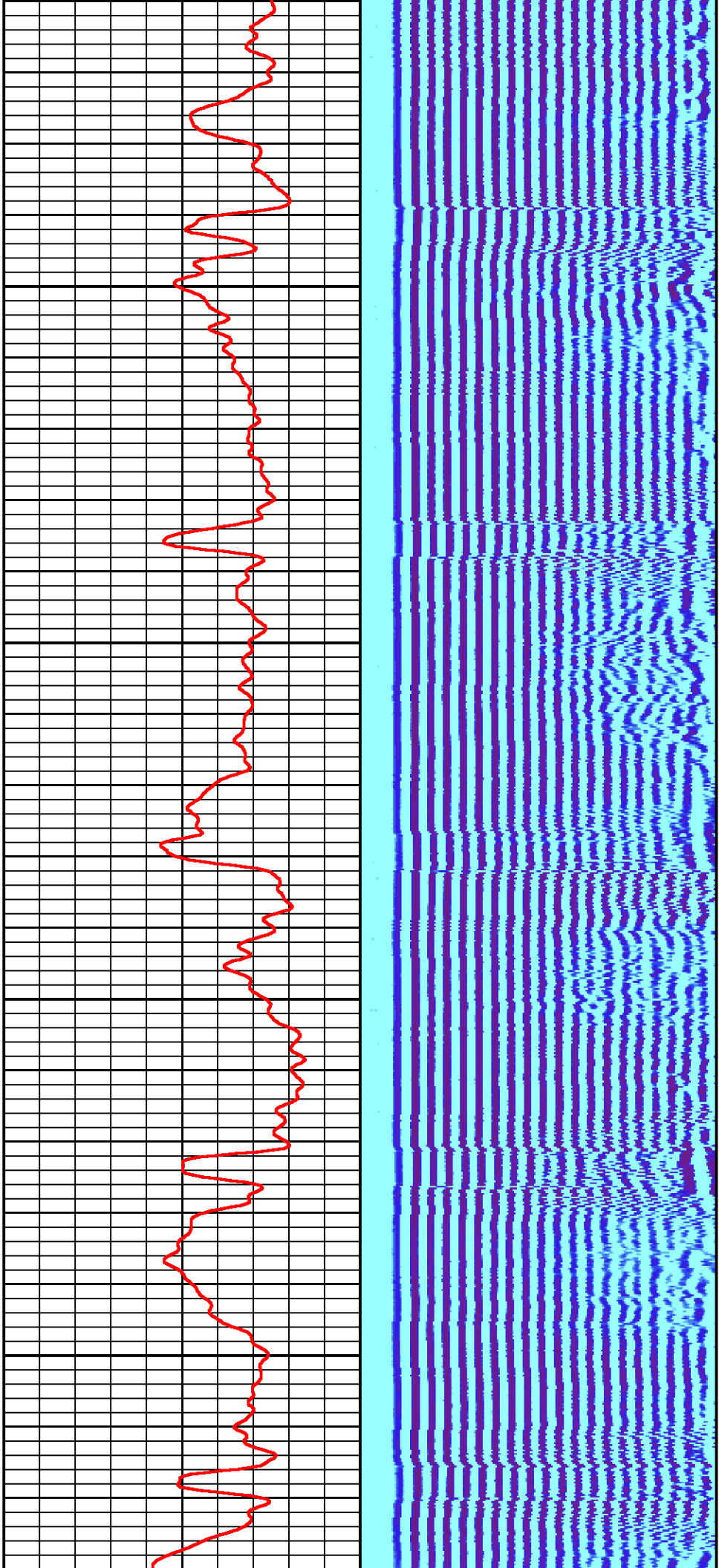




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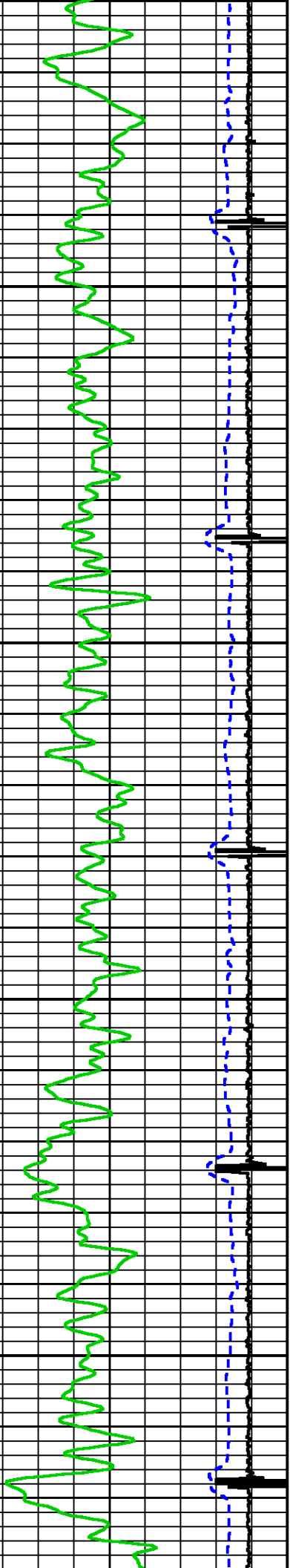
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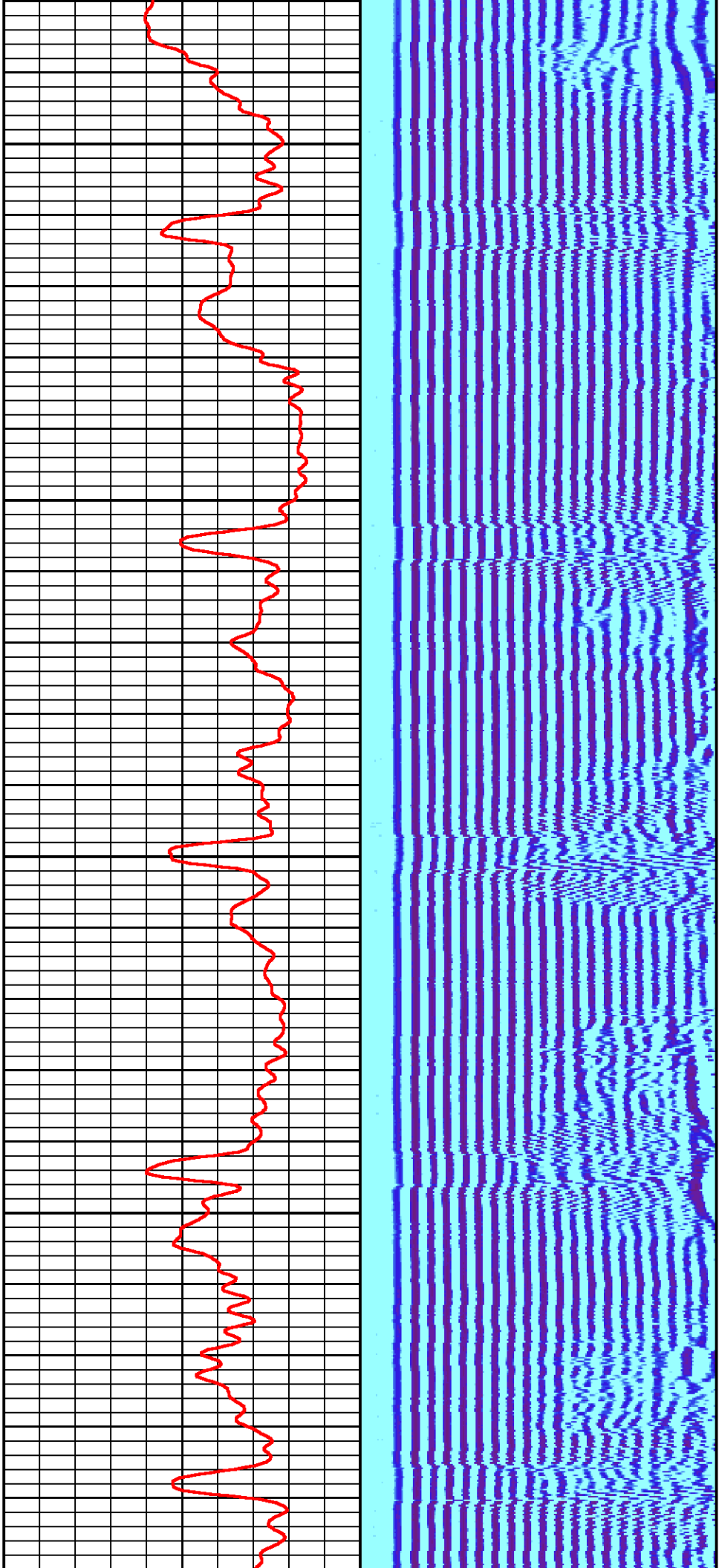




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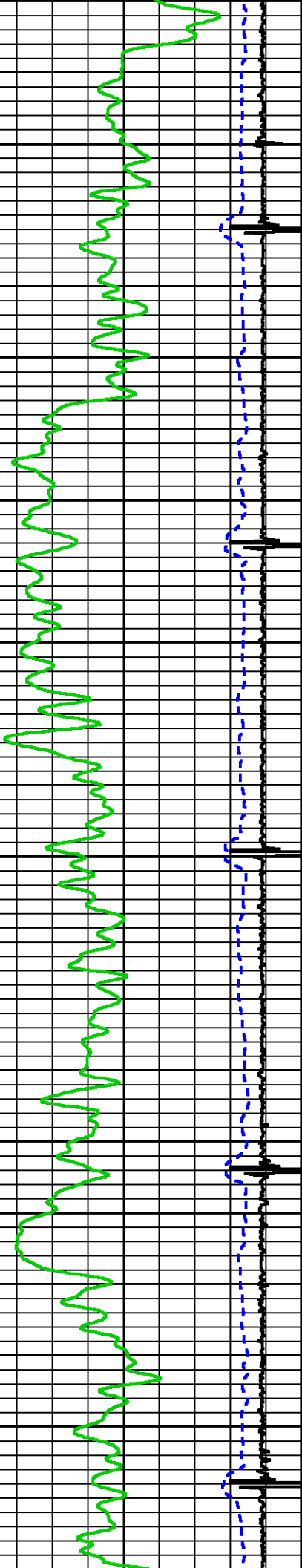


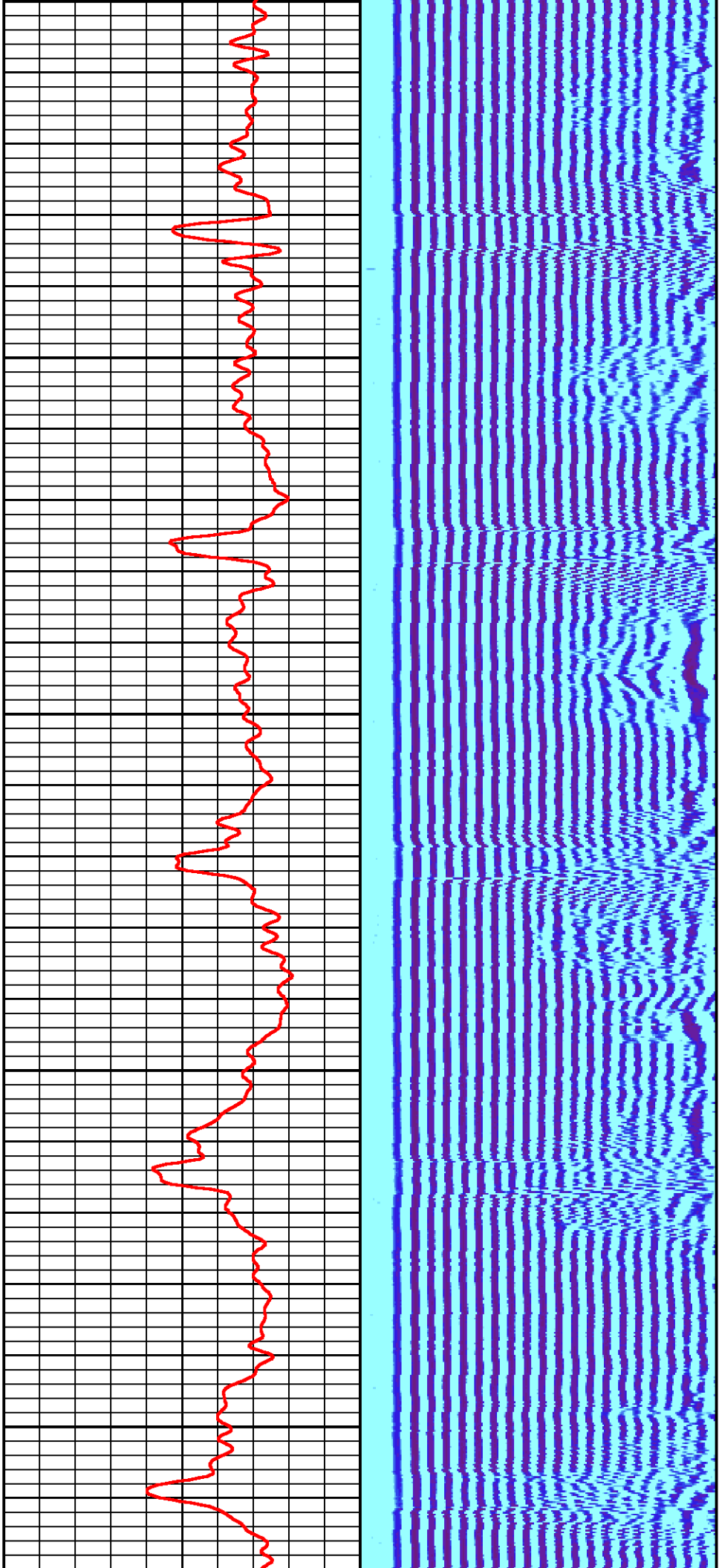


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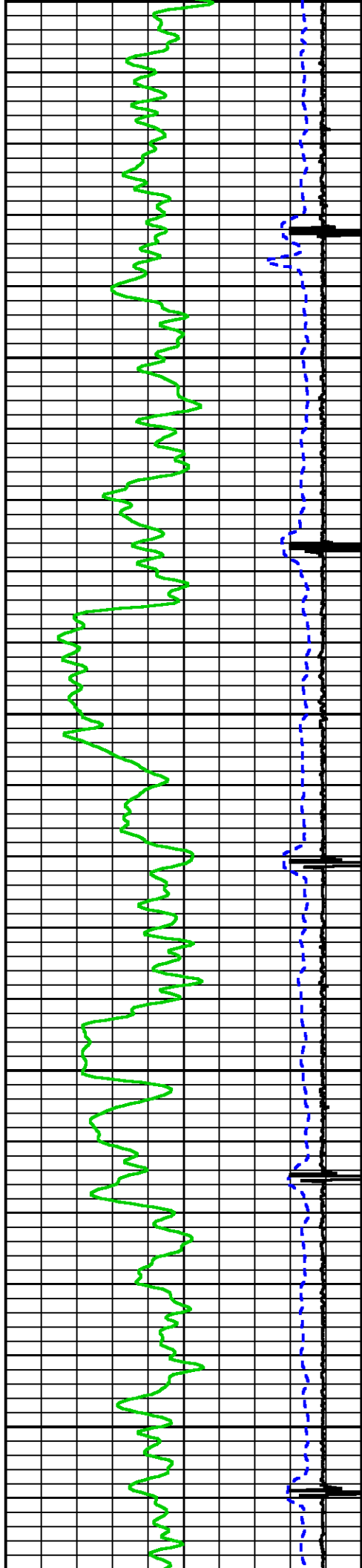


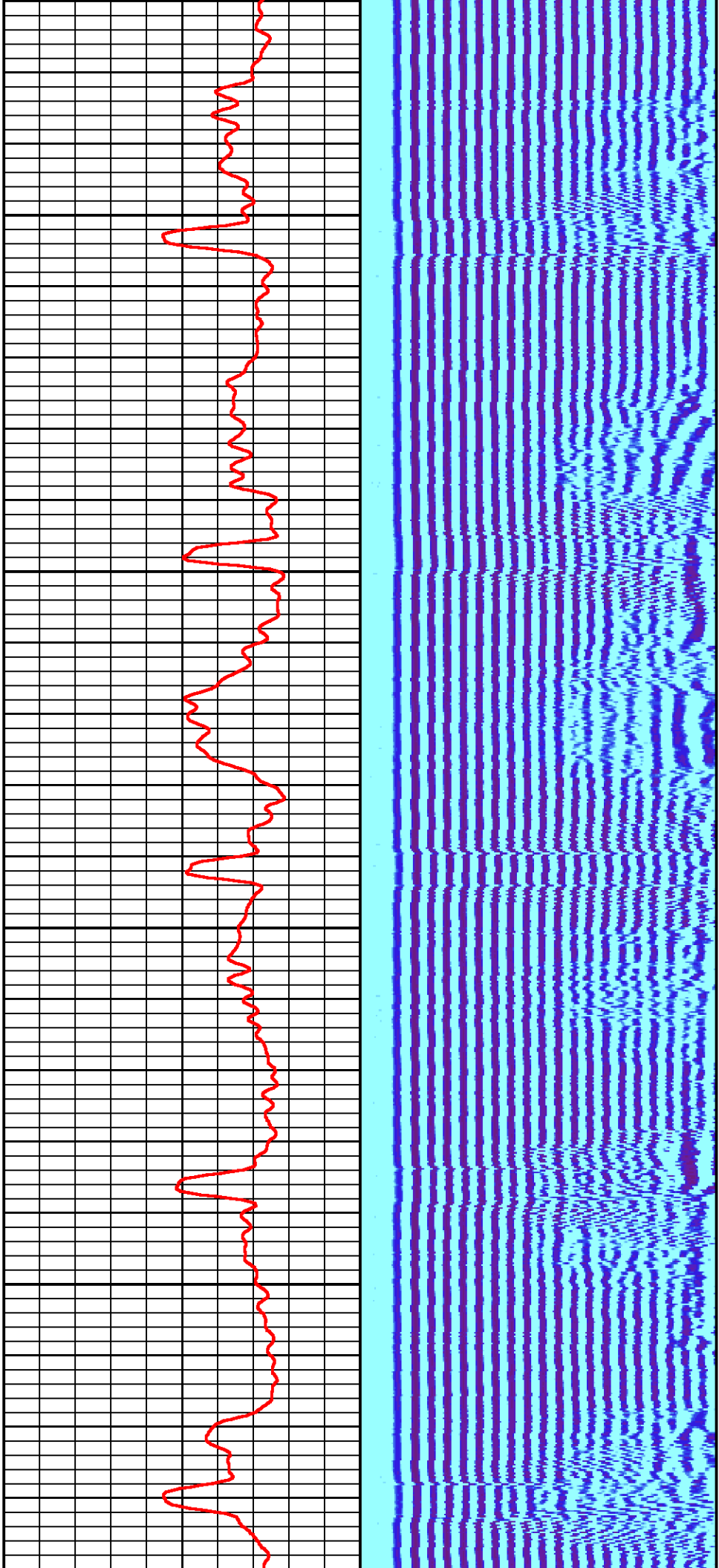


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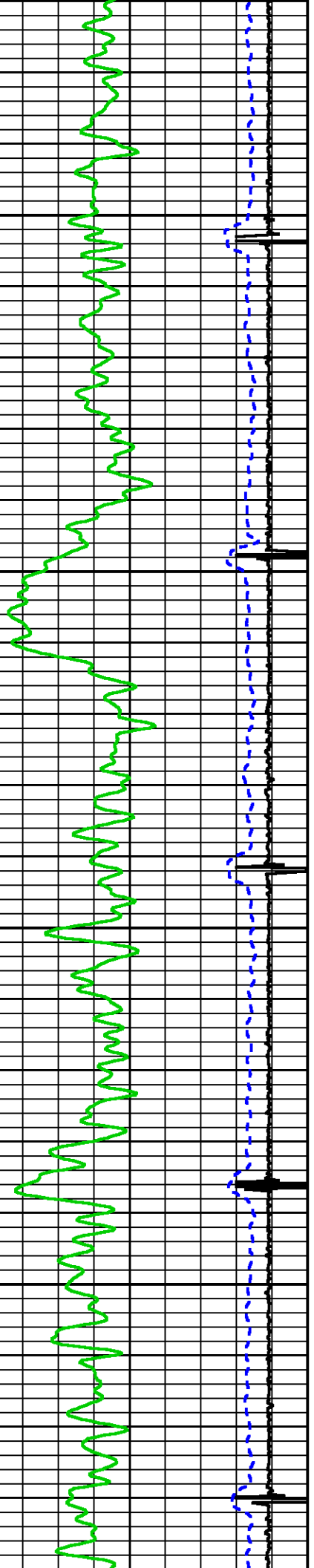
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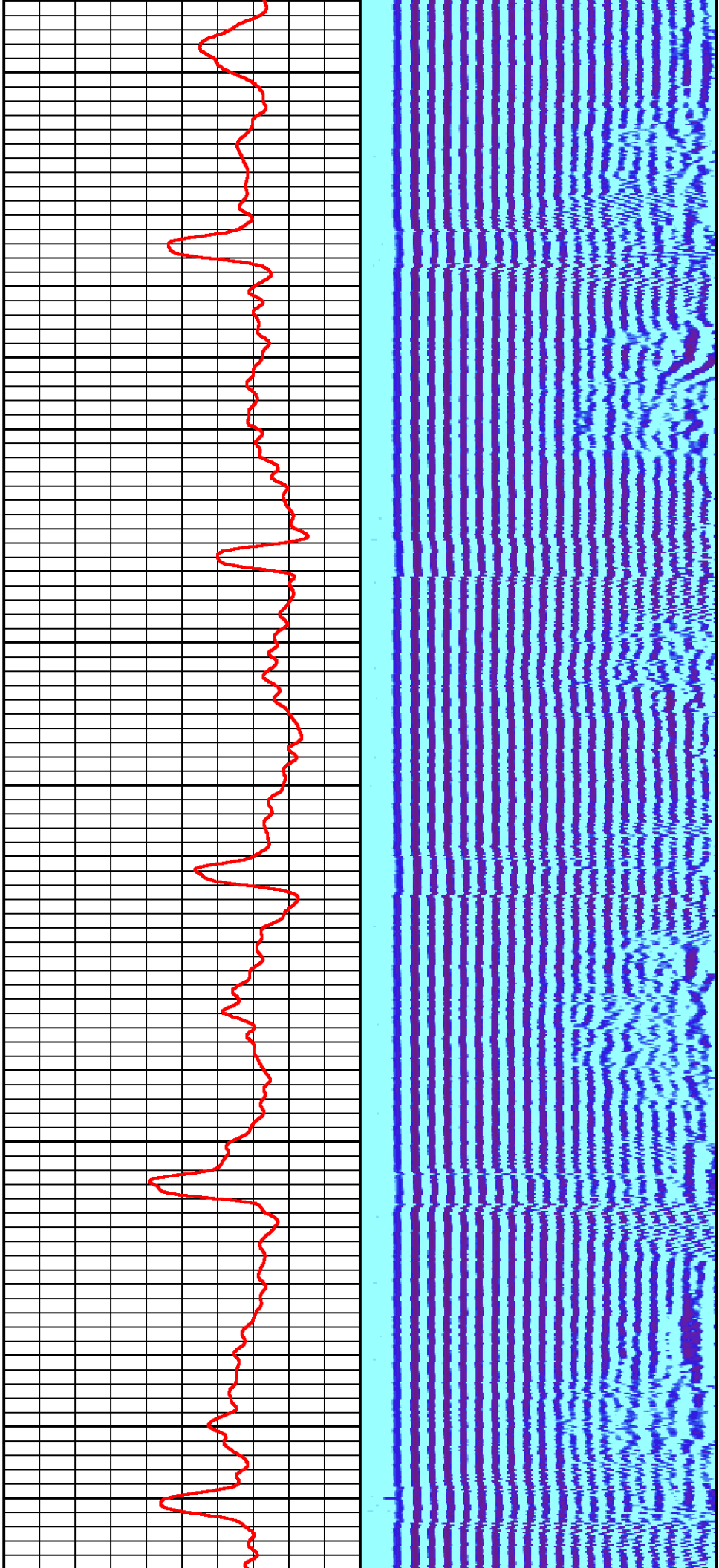




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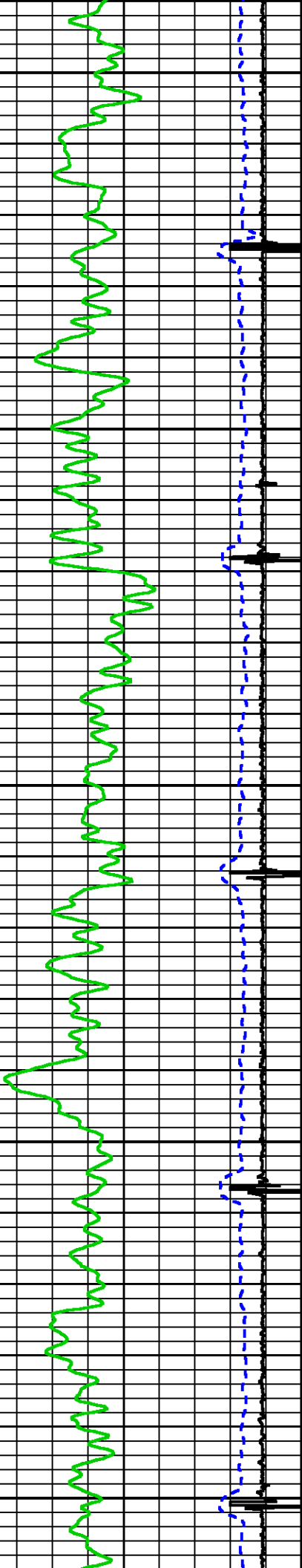
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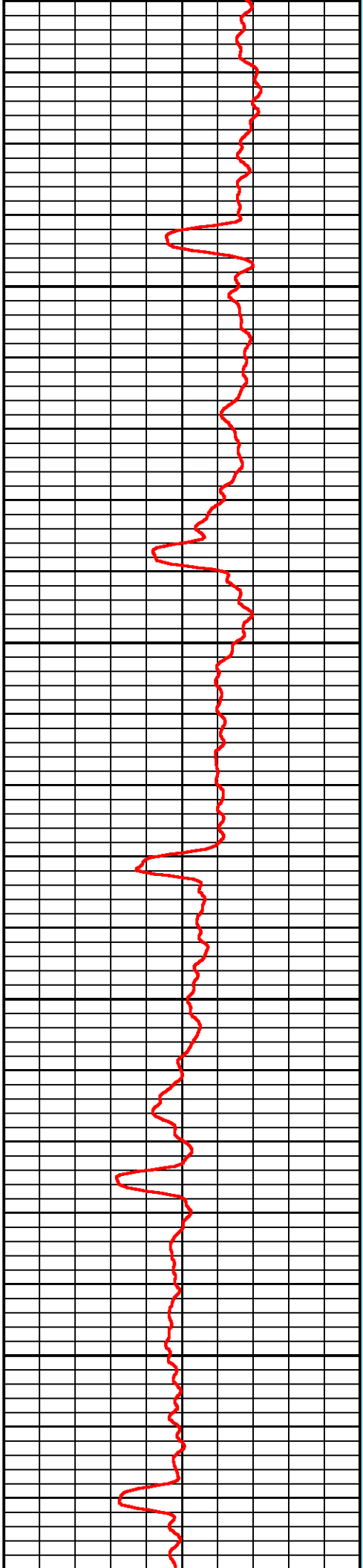
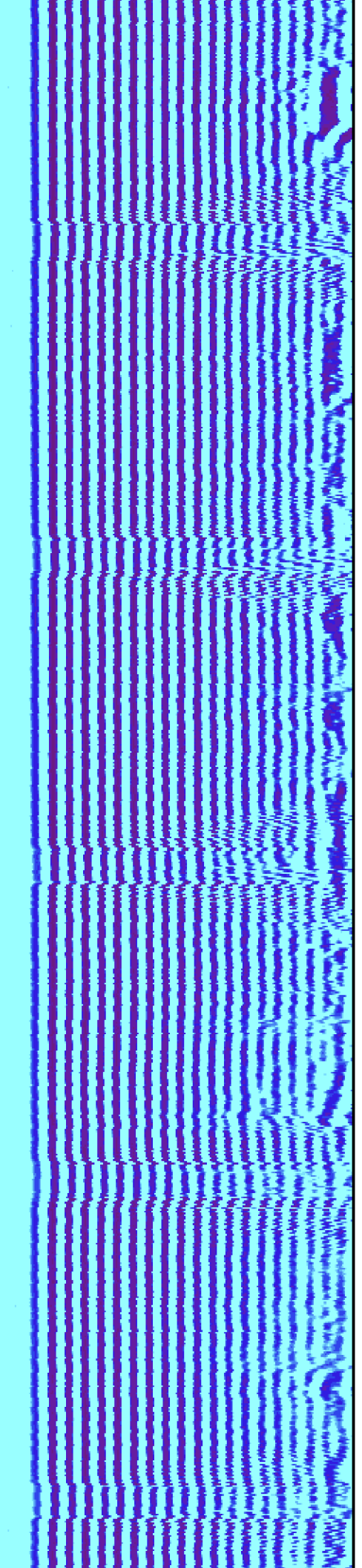




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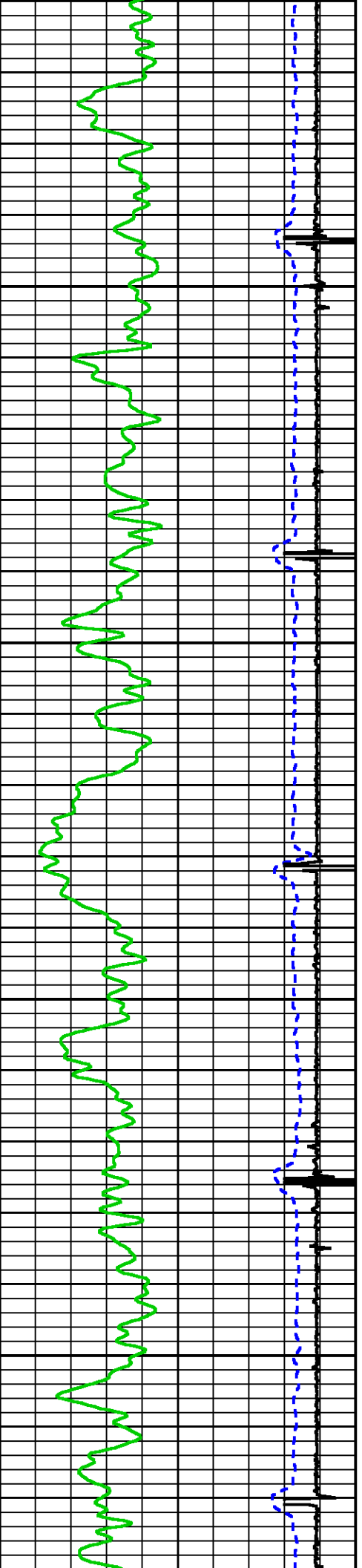
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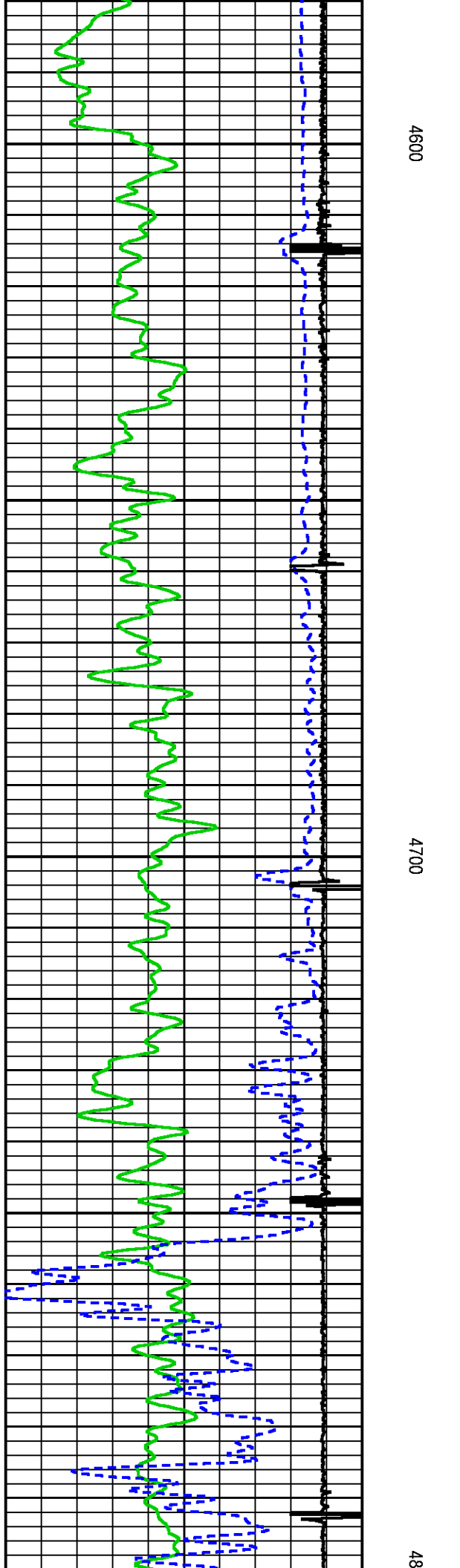
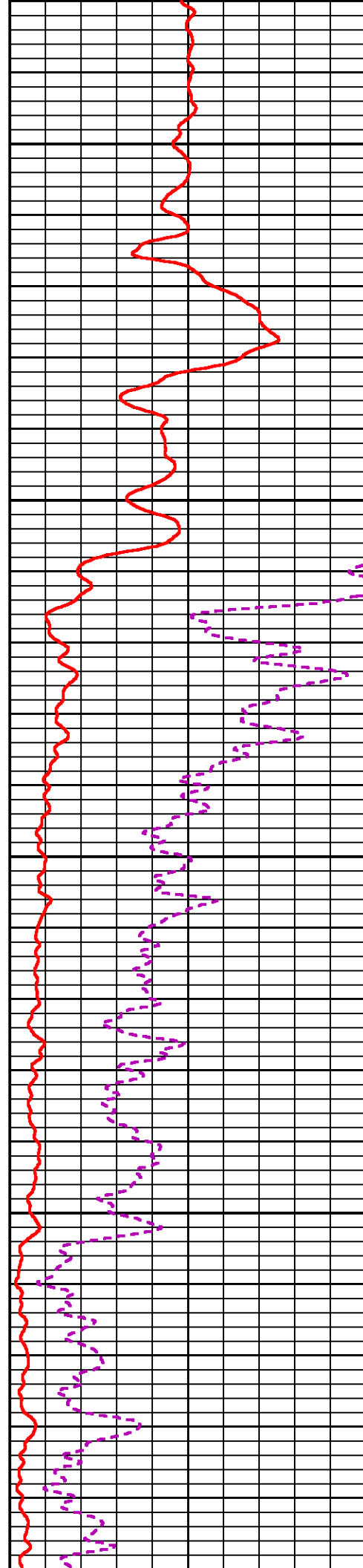
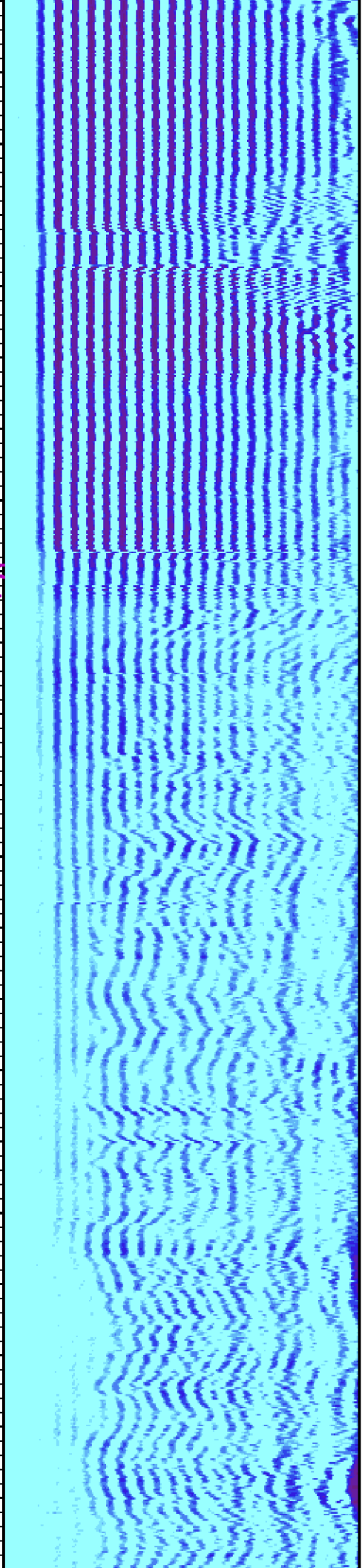


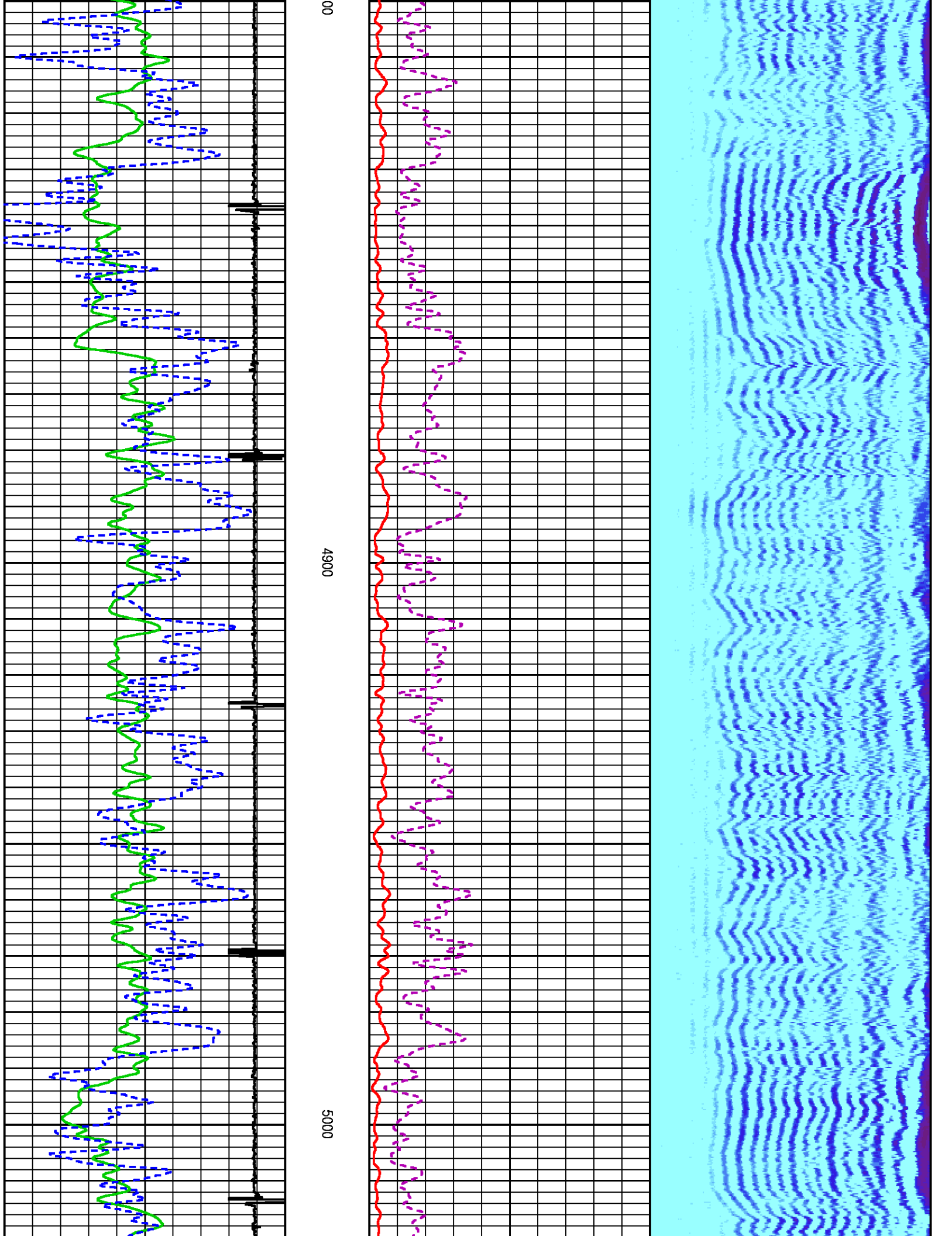


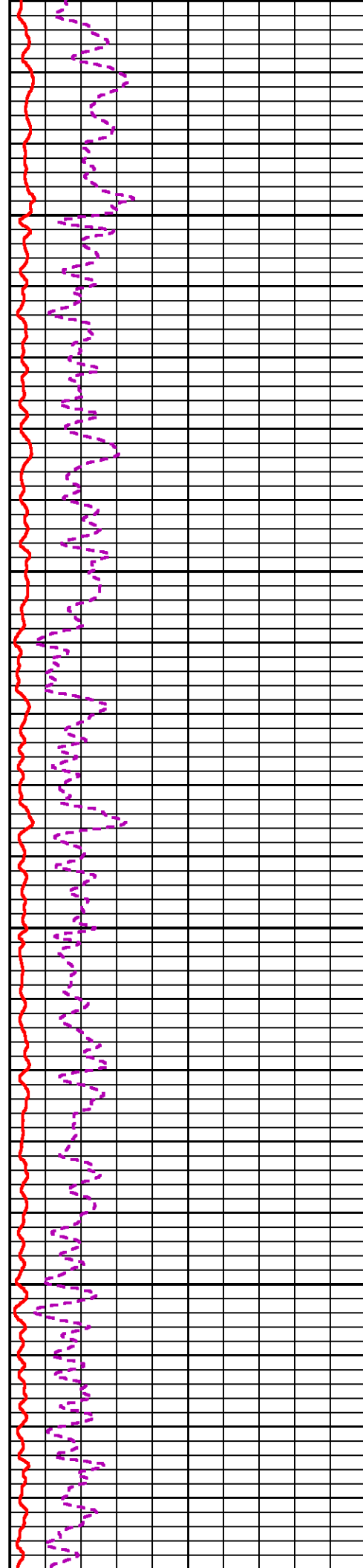
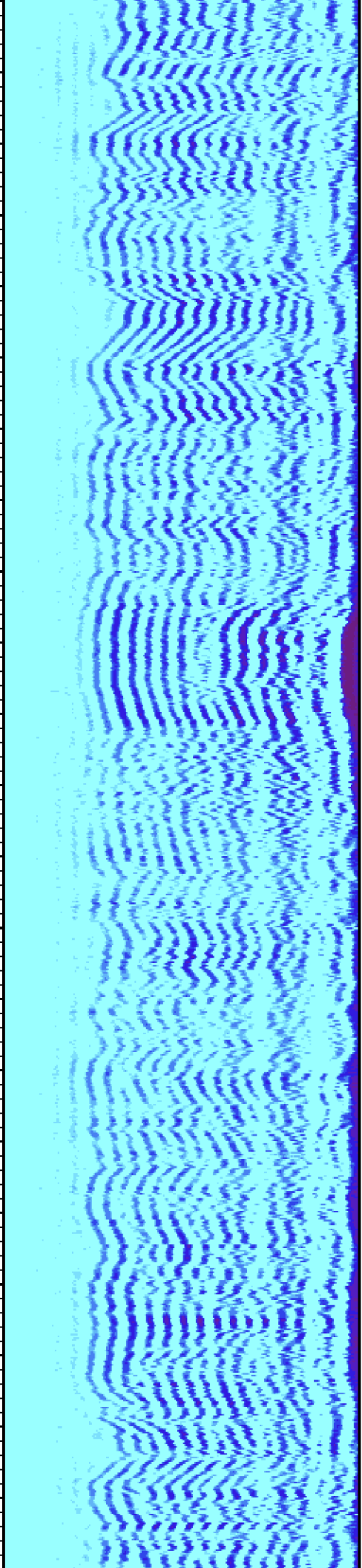
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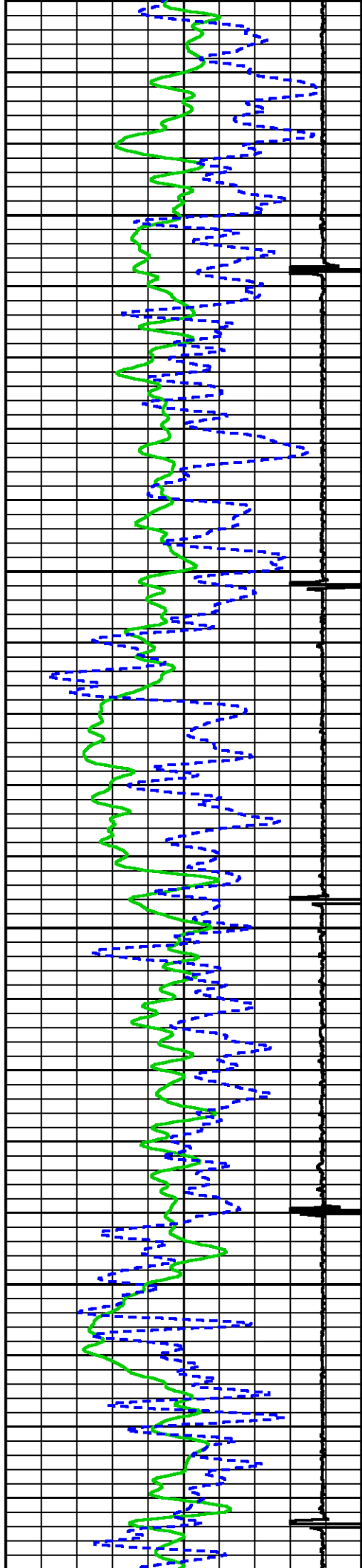


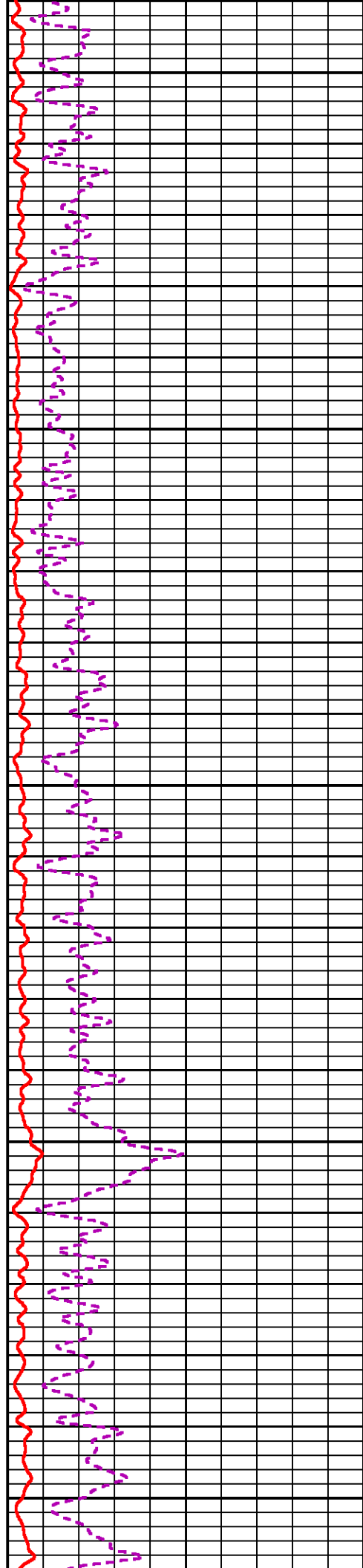
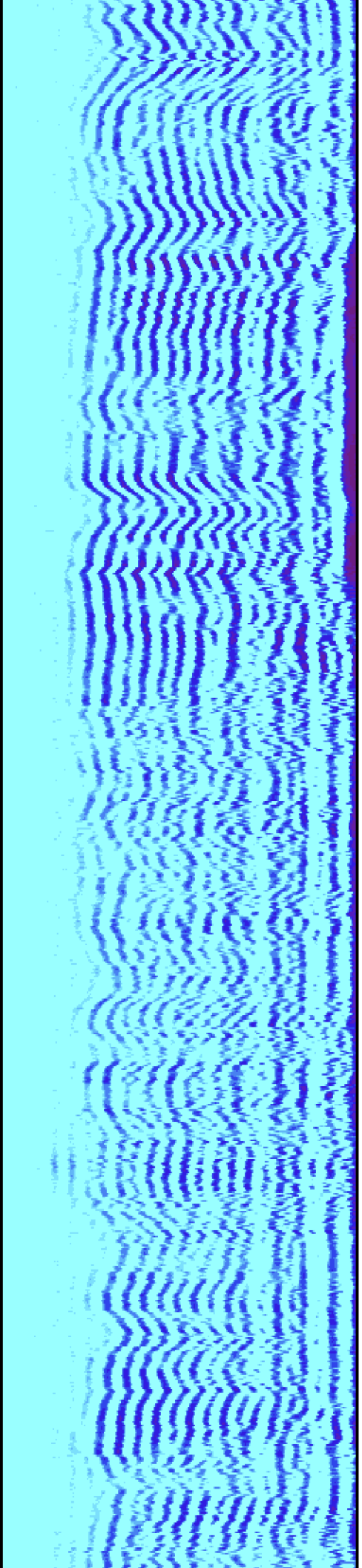




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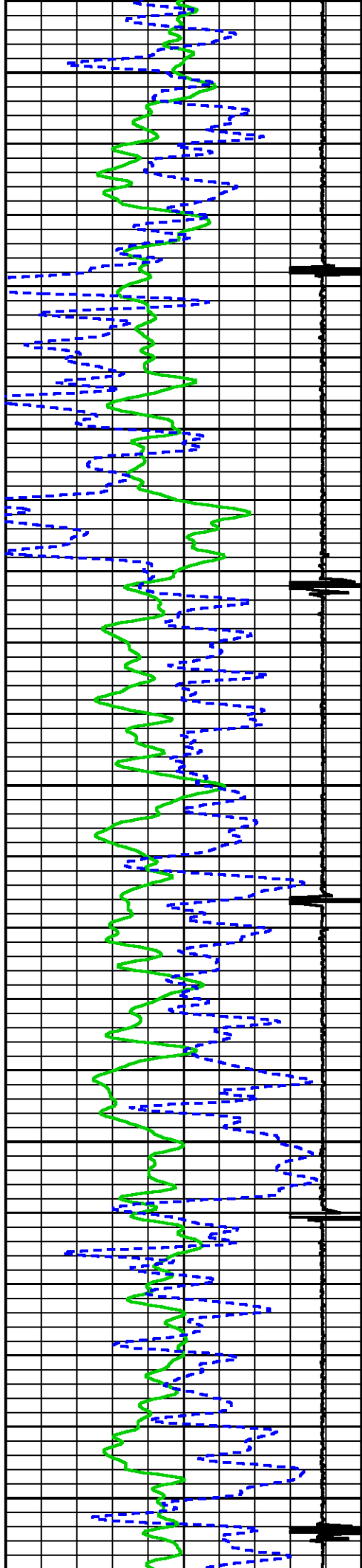
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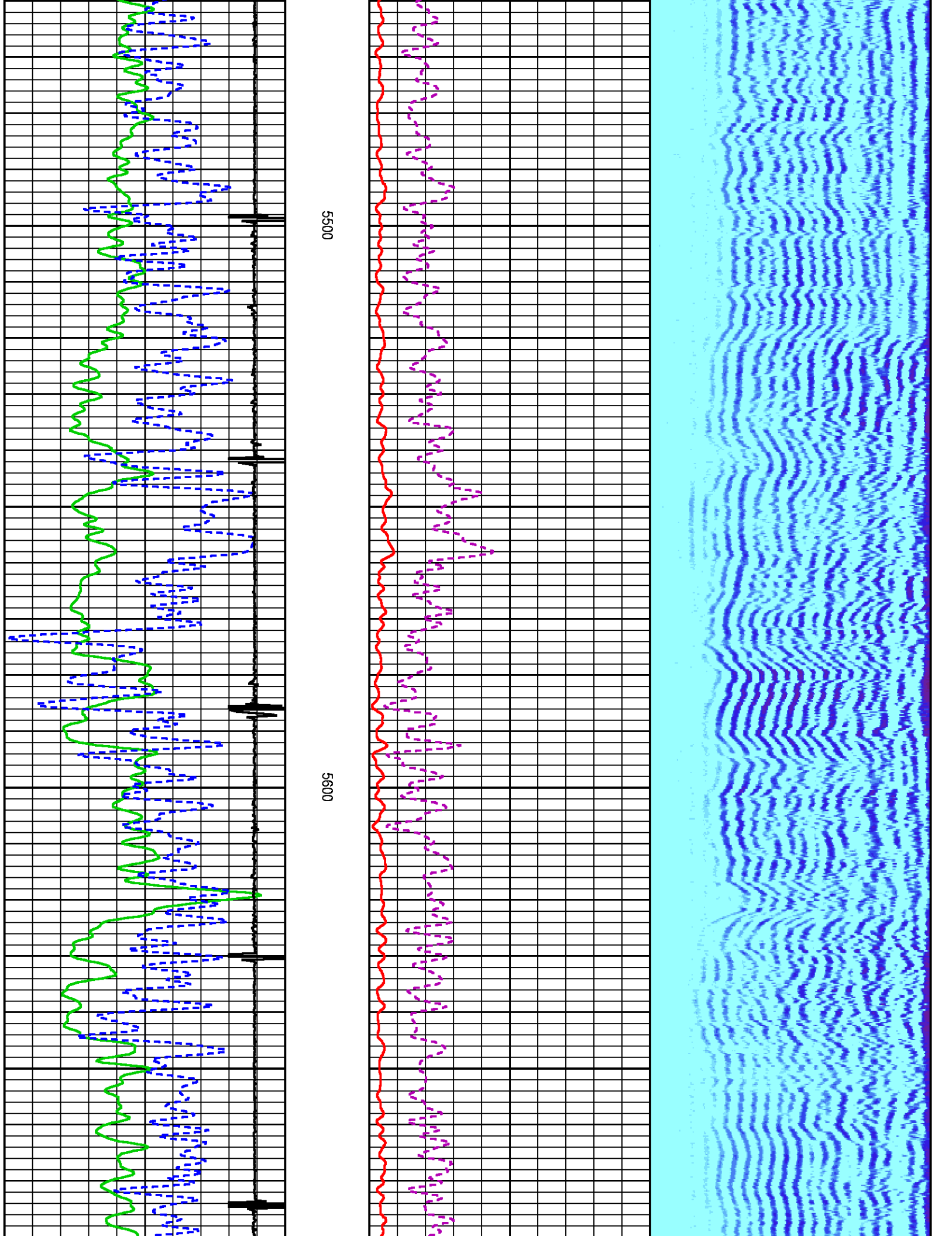


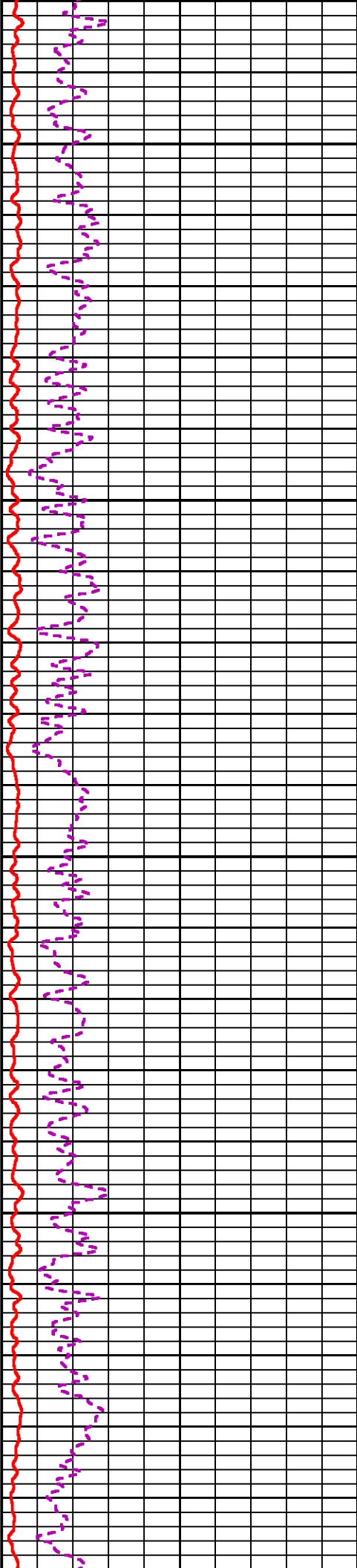
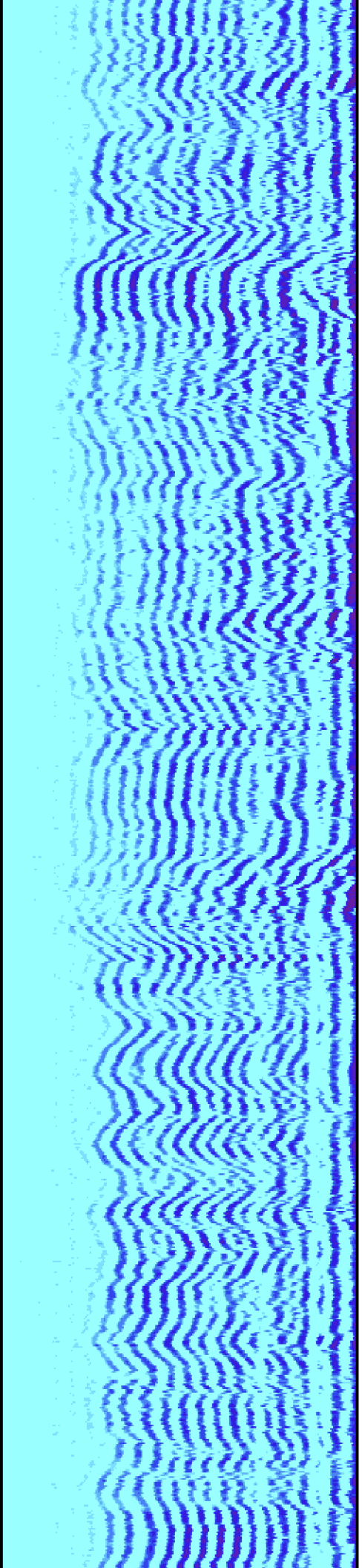


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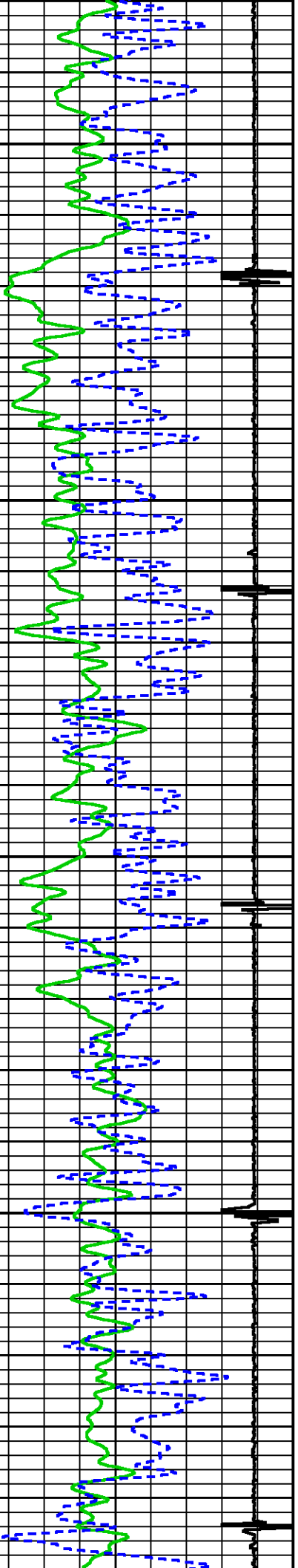


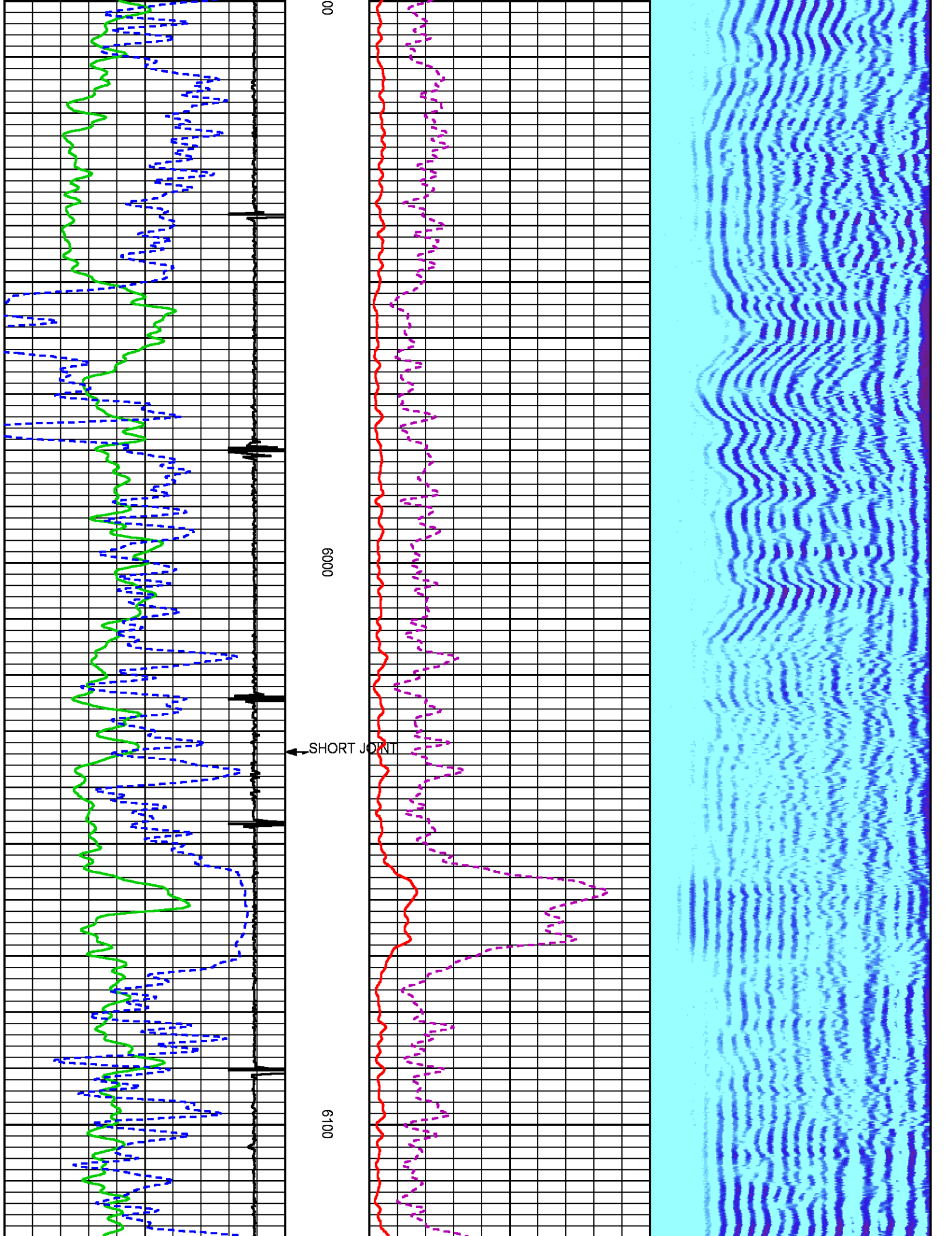


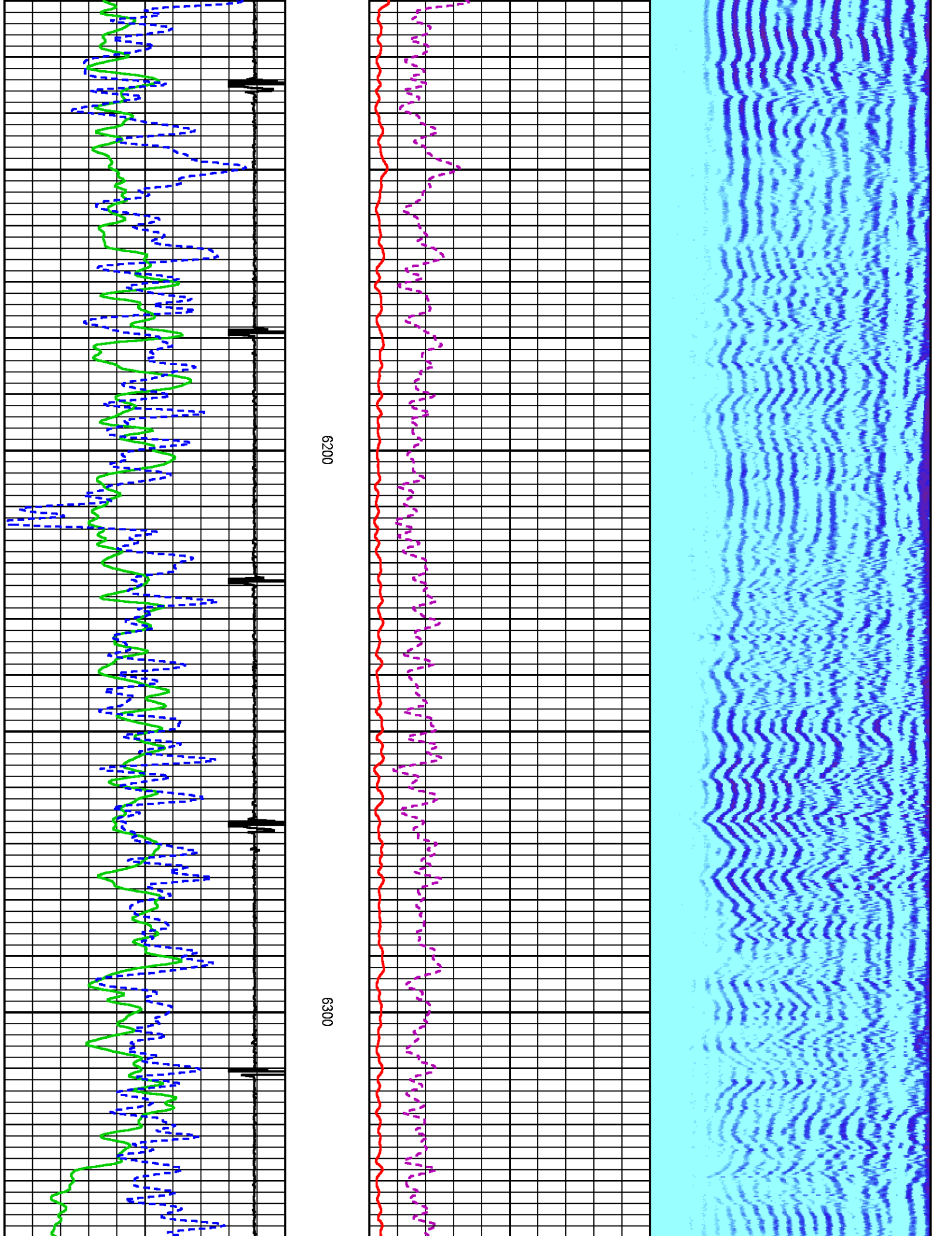
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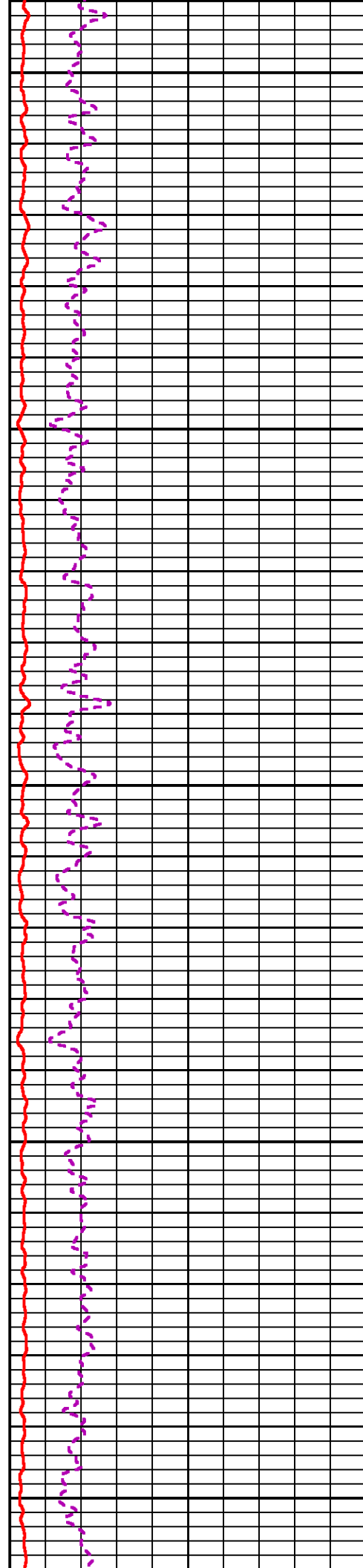
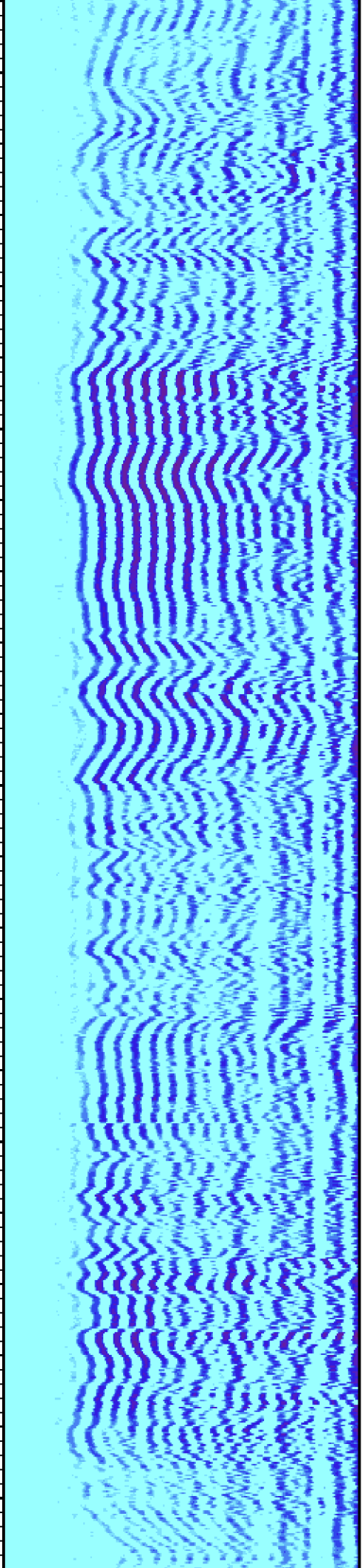
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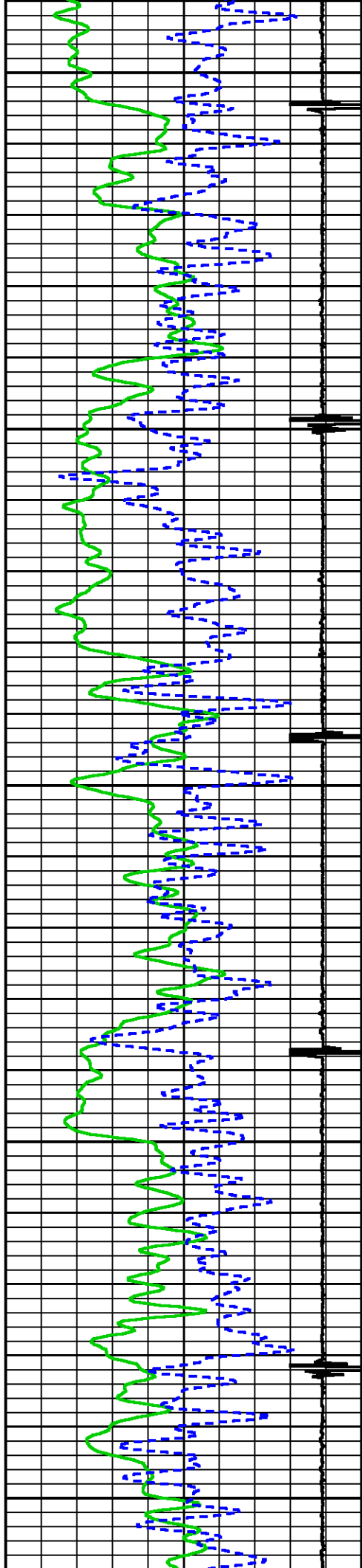


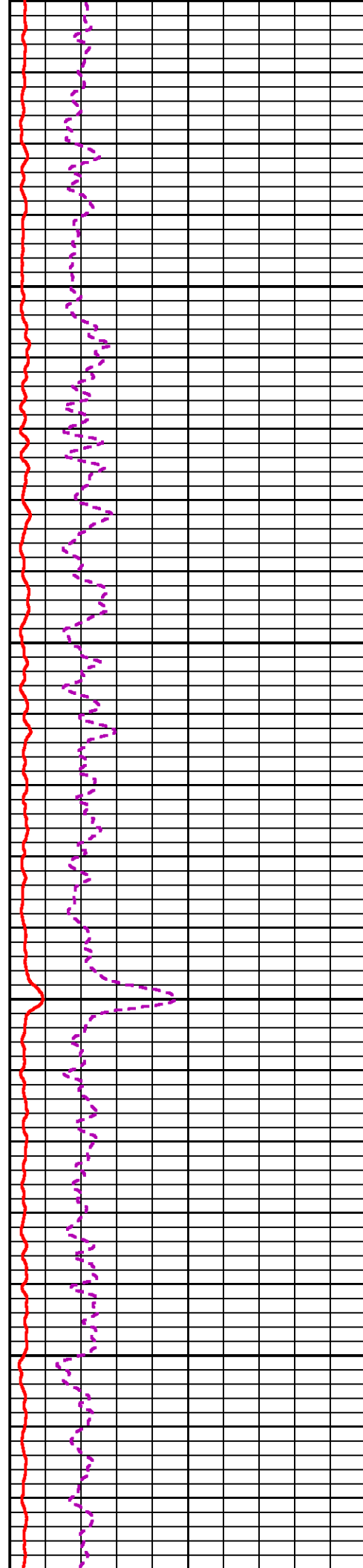
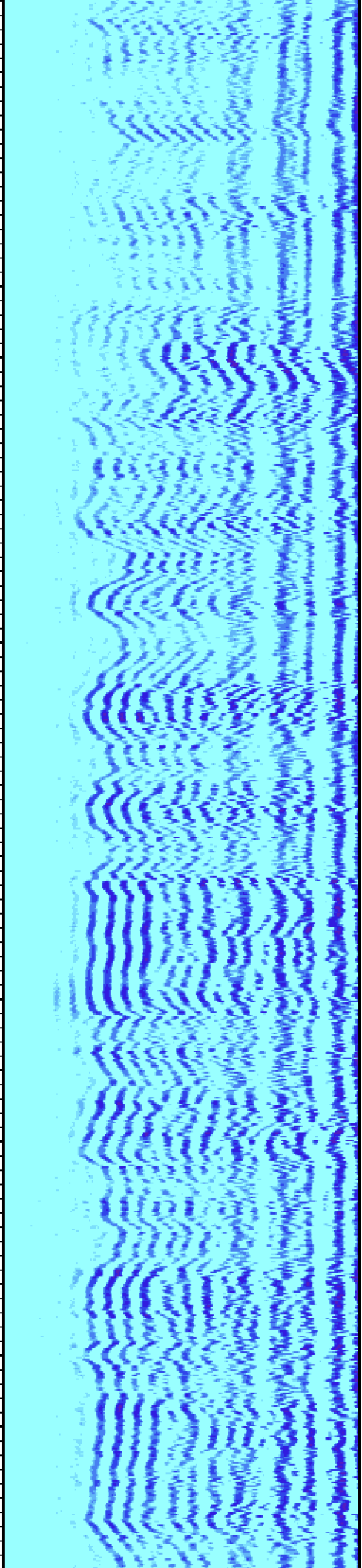




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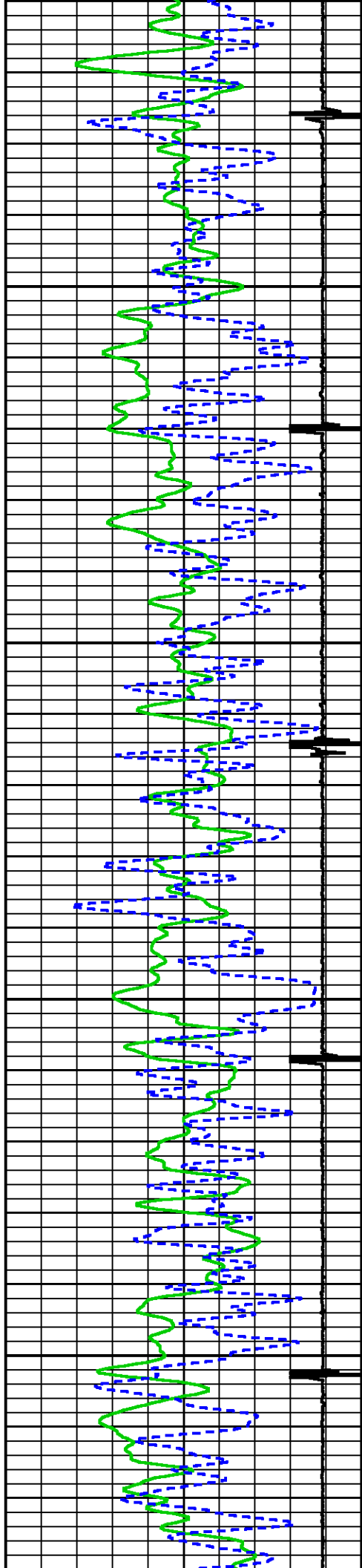
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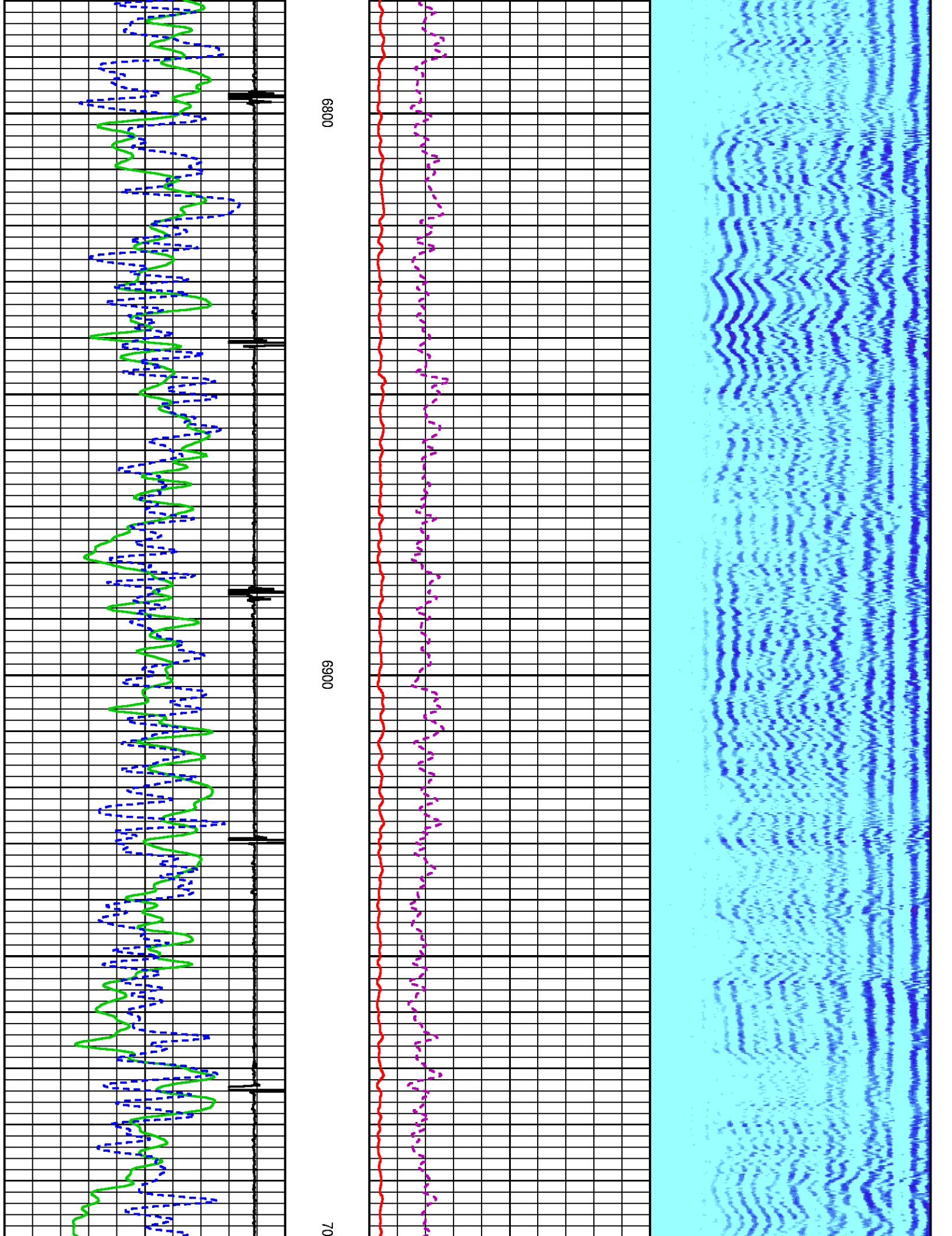


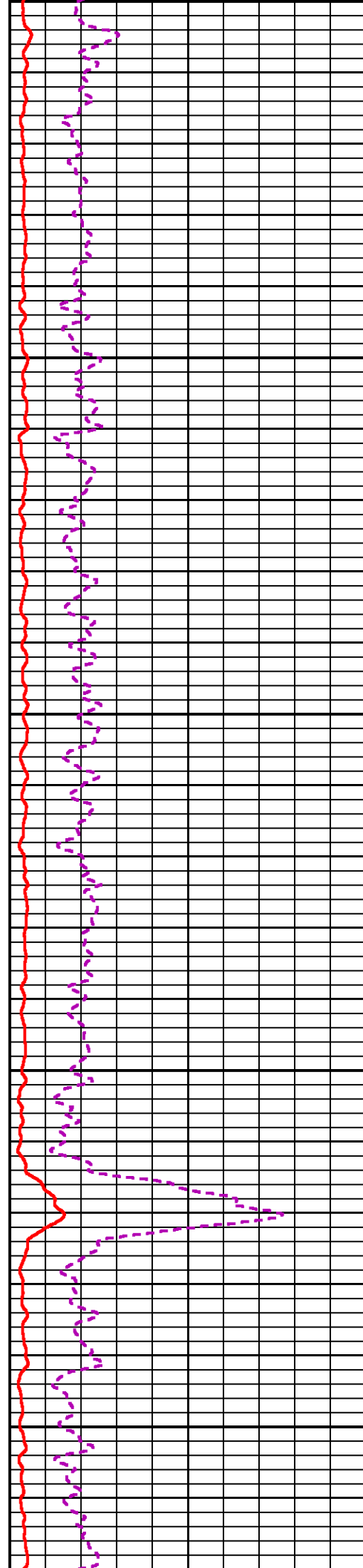
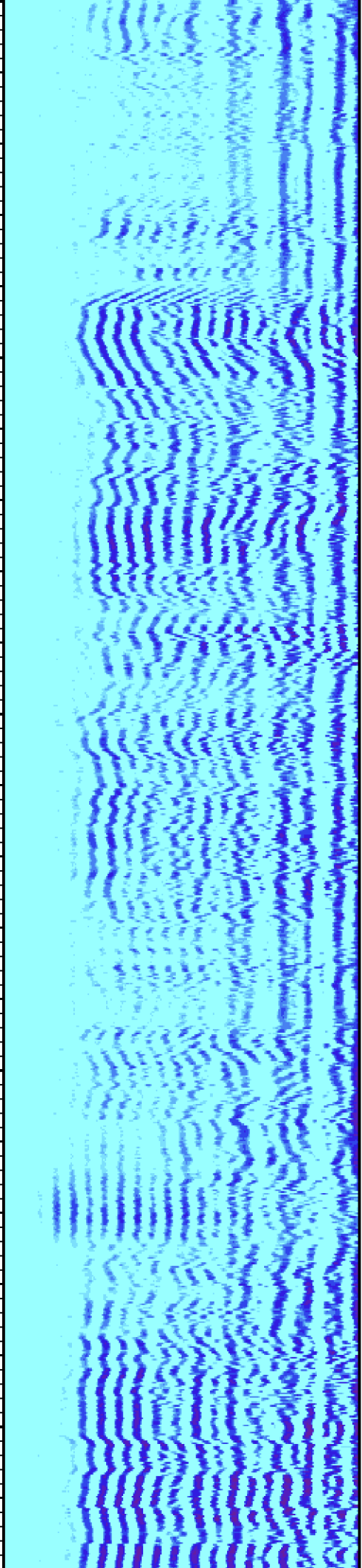


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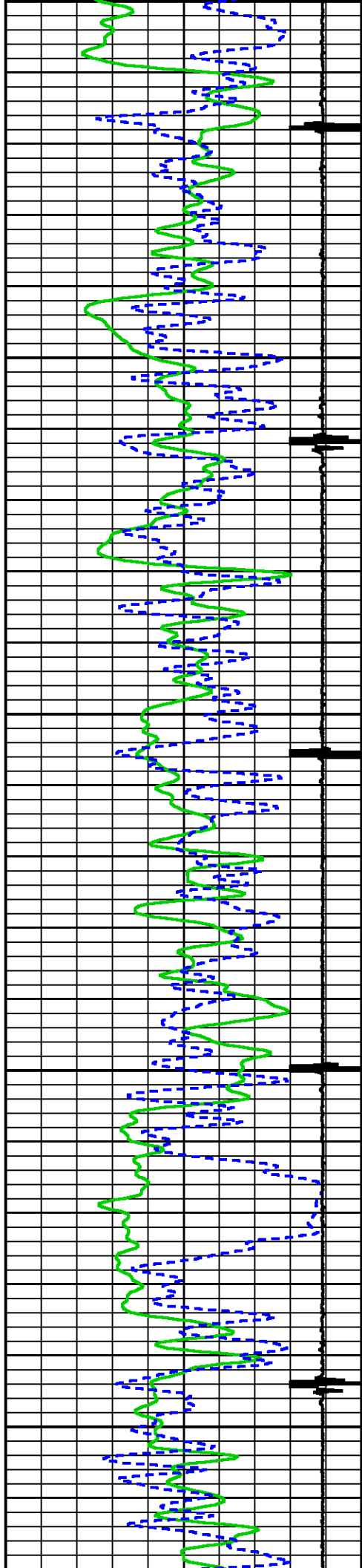


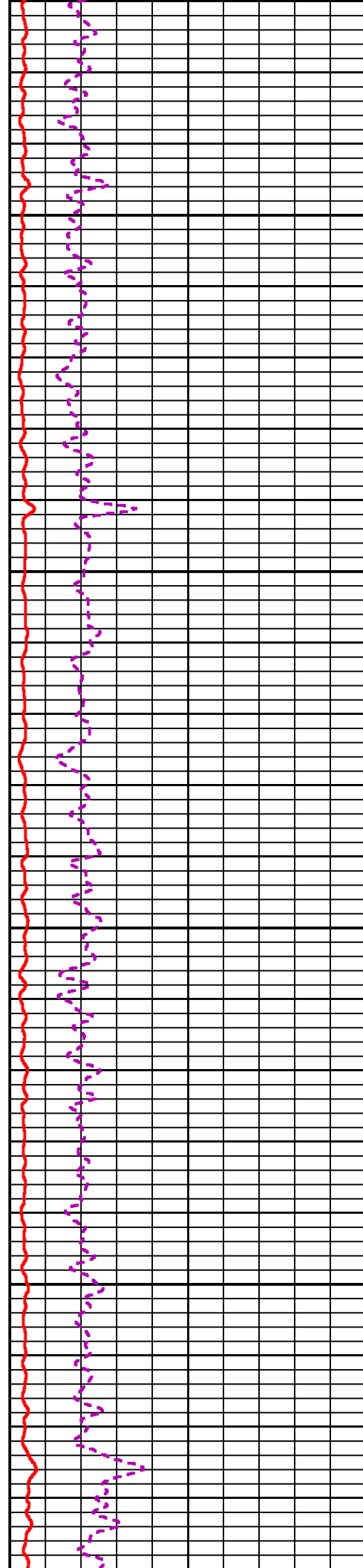
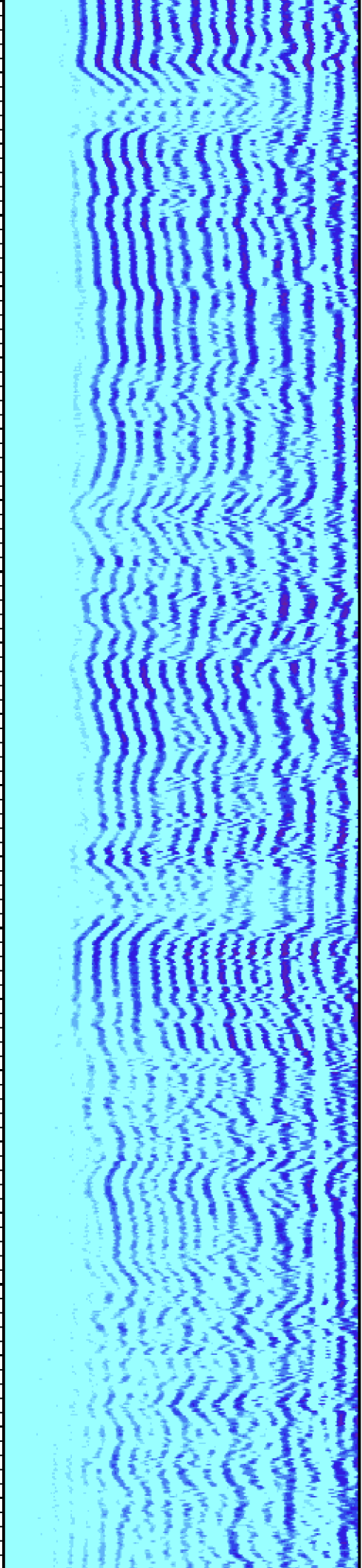


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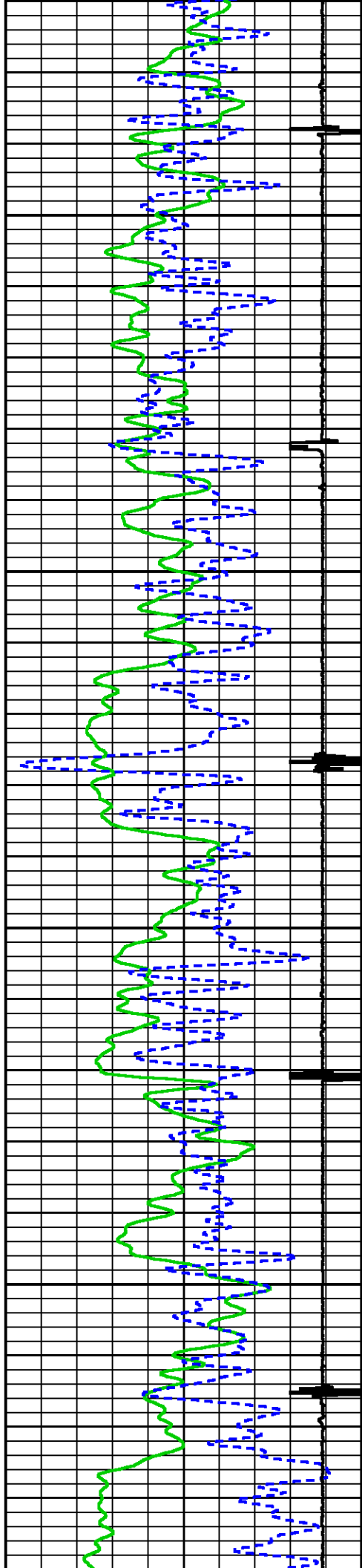
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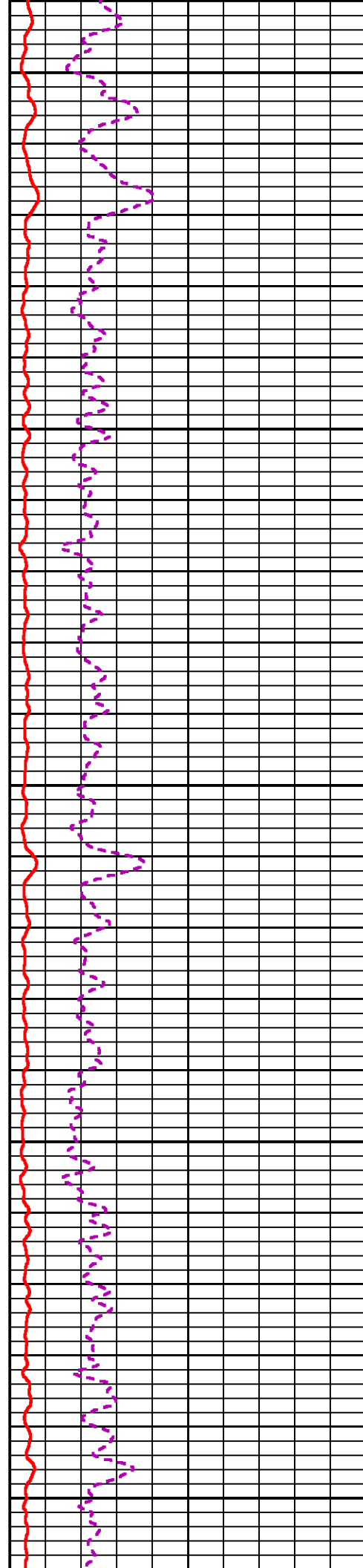
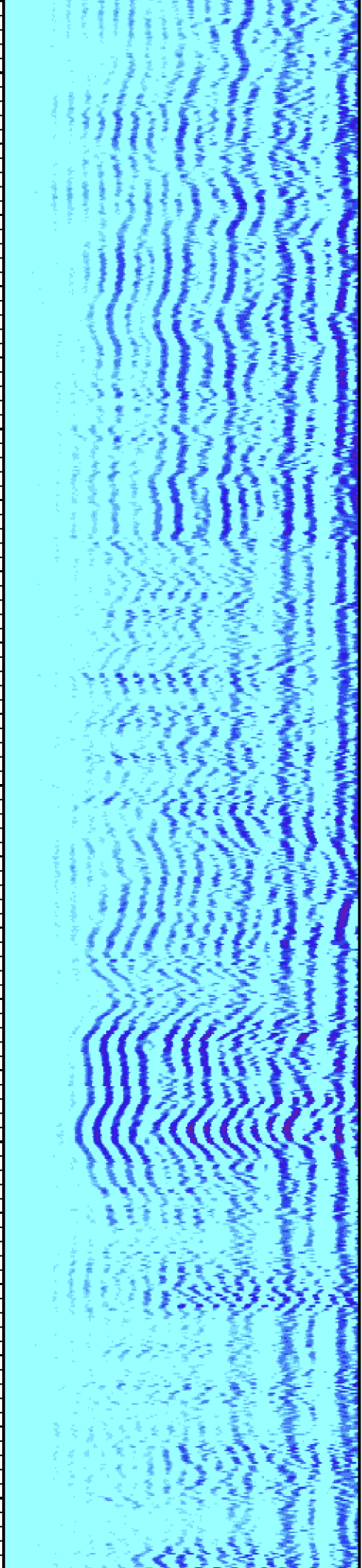




7300

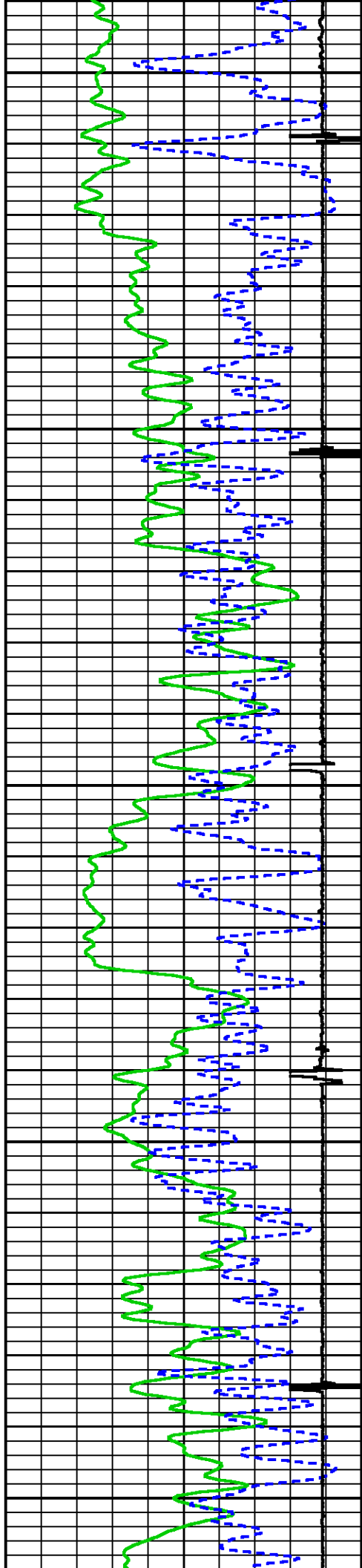
7400

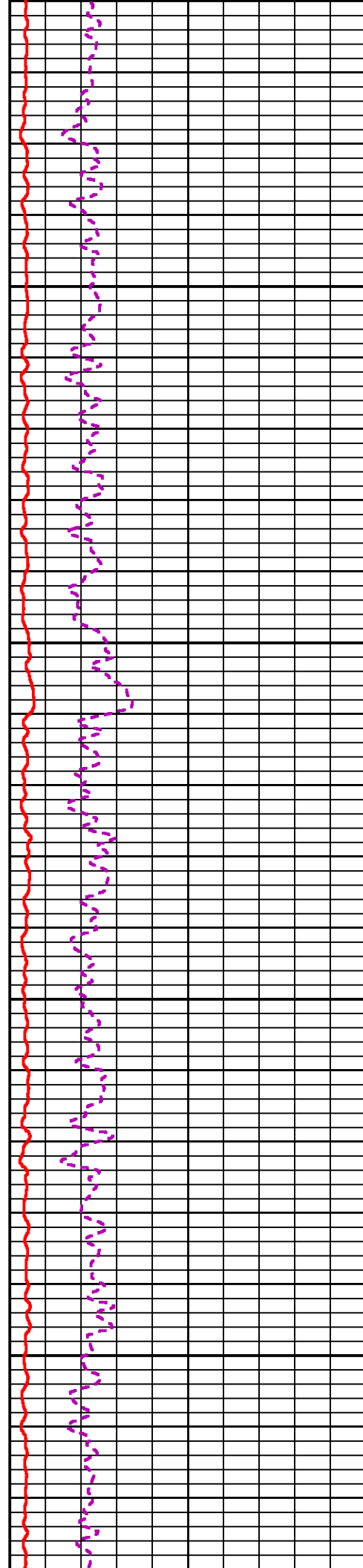
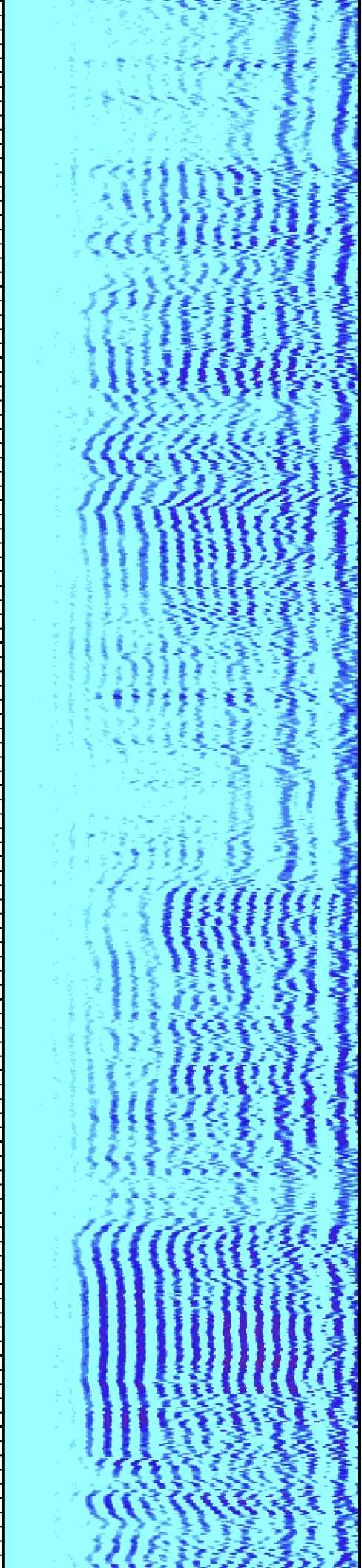




7500

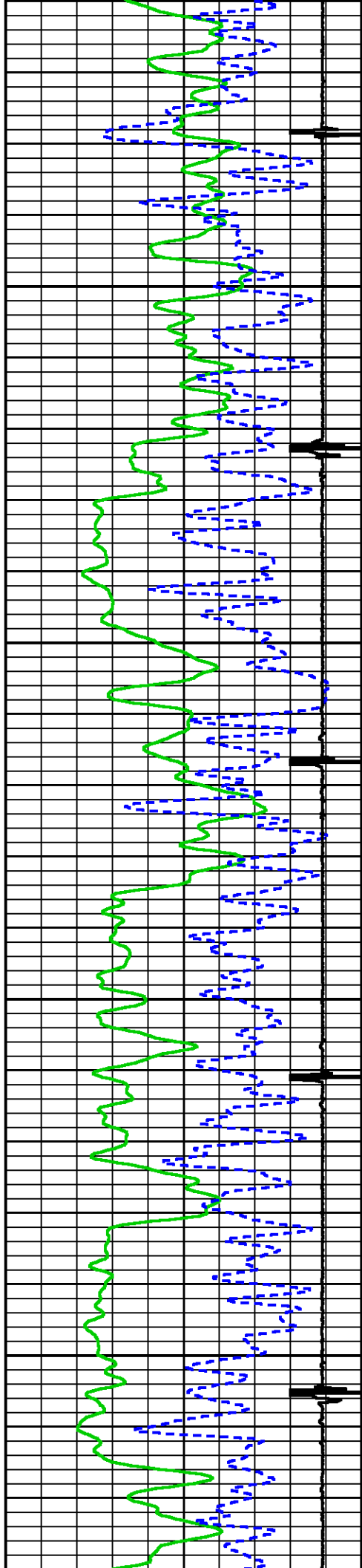
7600

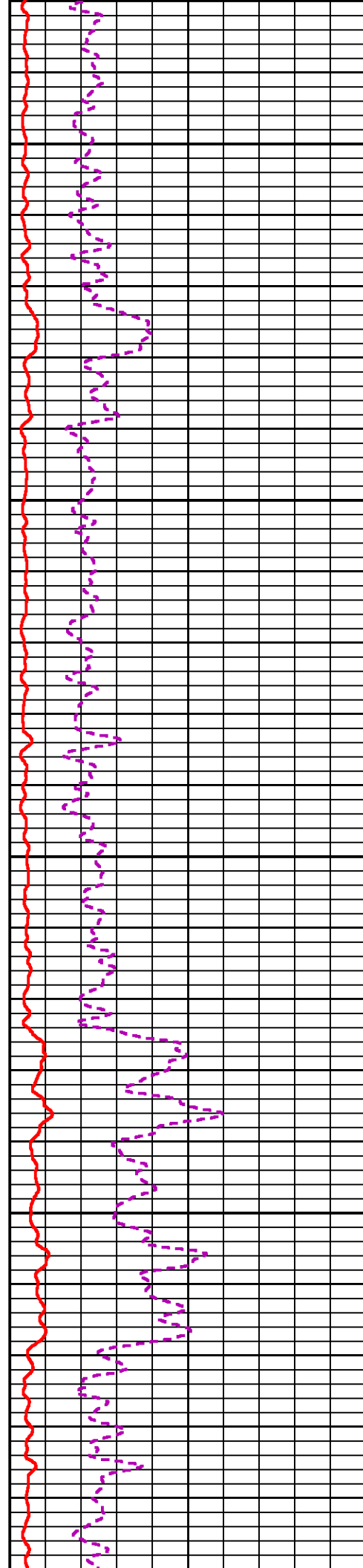
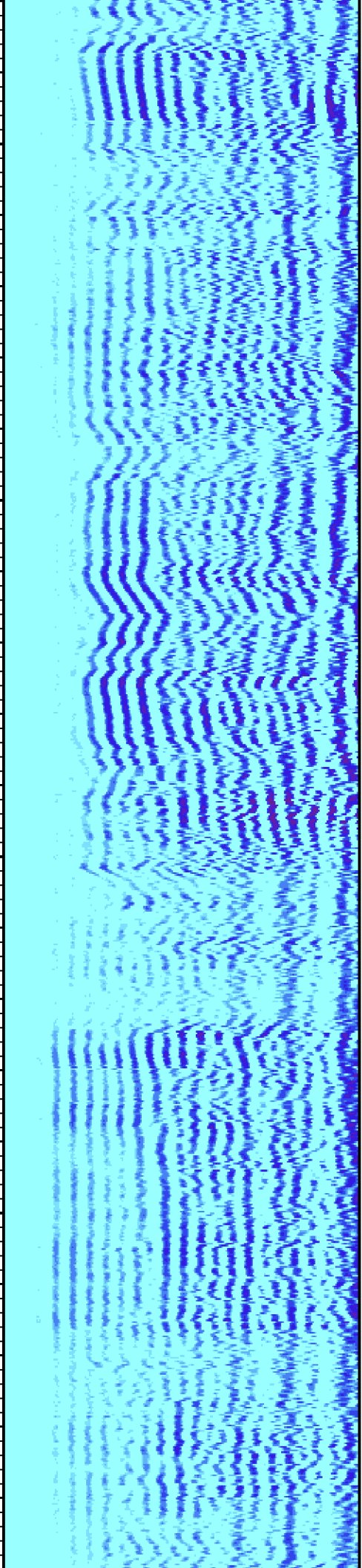




7700

7800

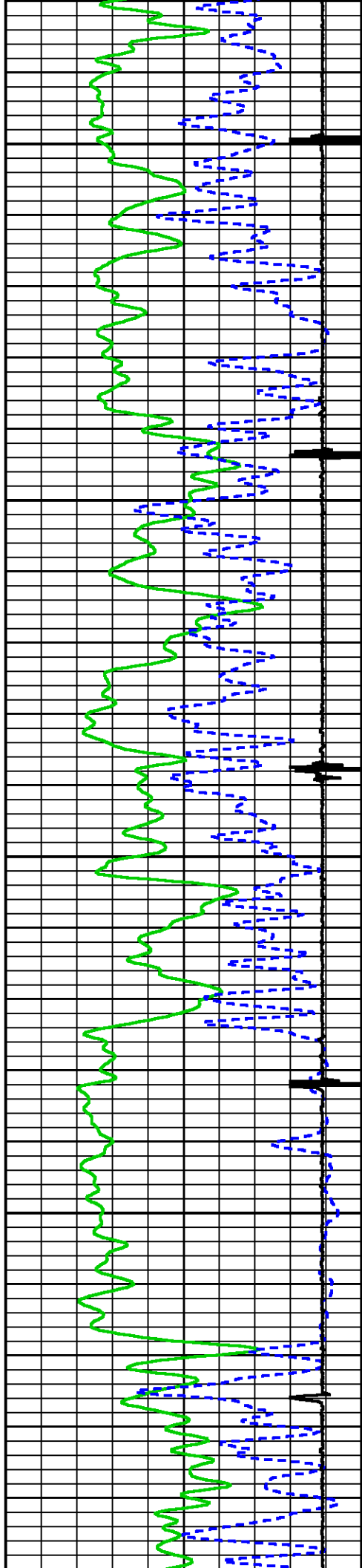


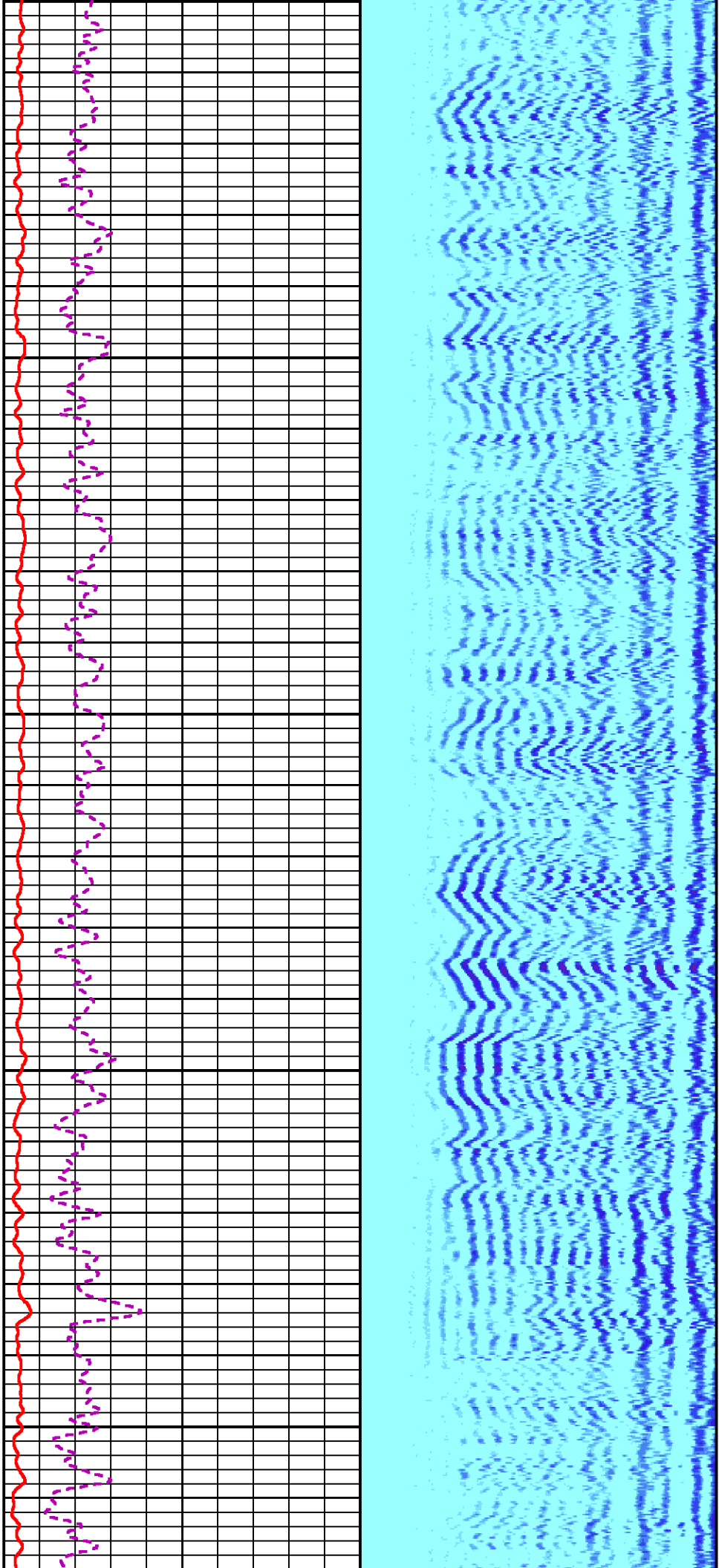


7900

8000

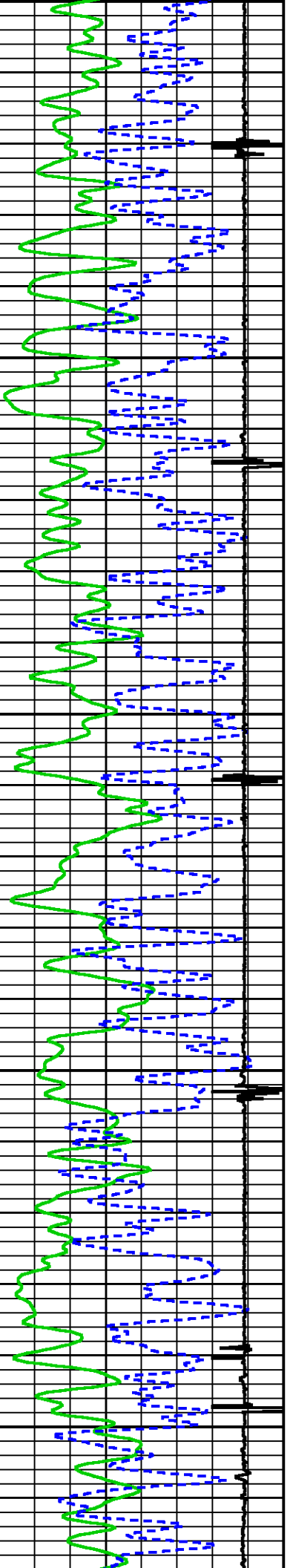
81

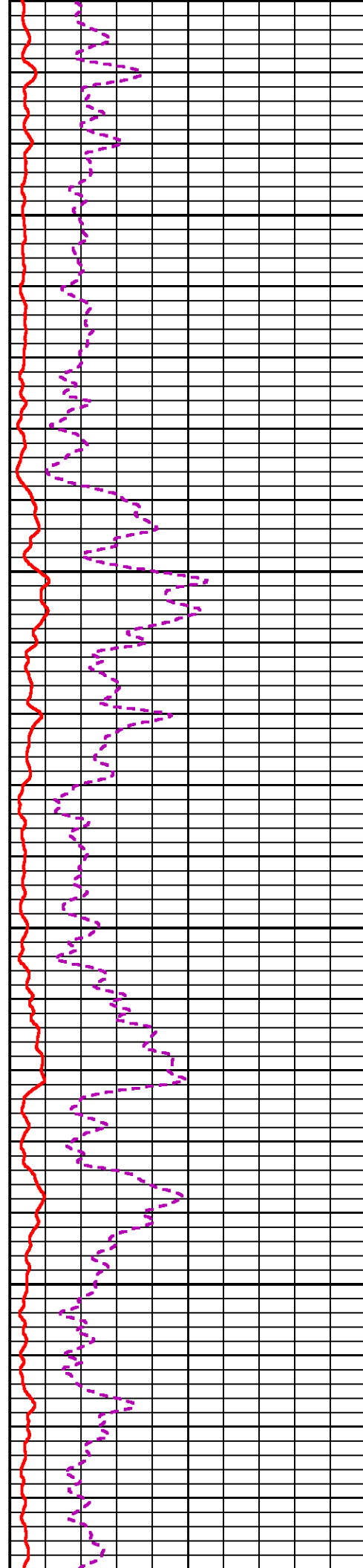
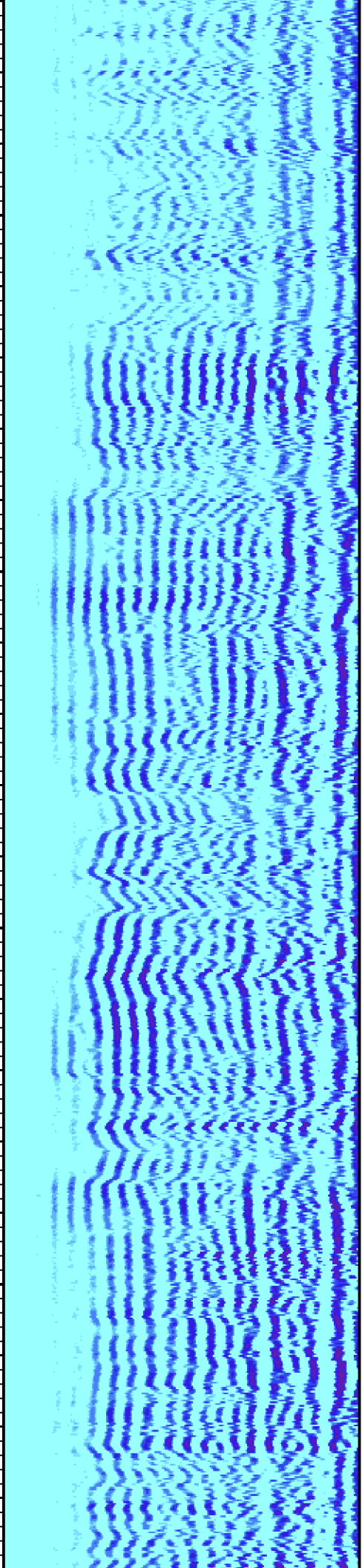




8200

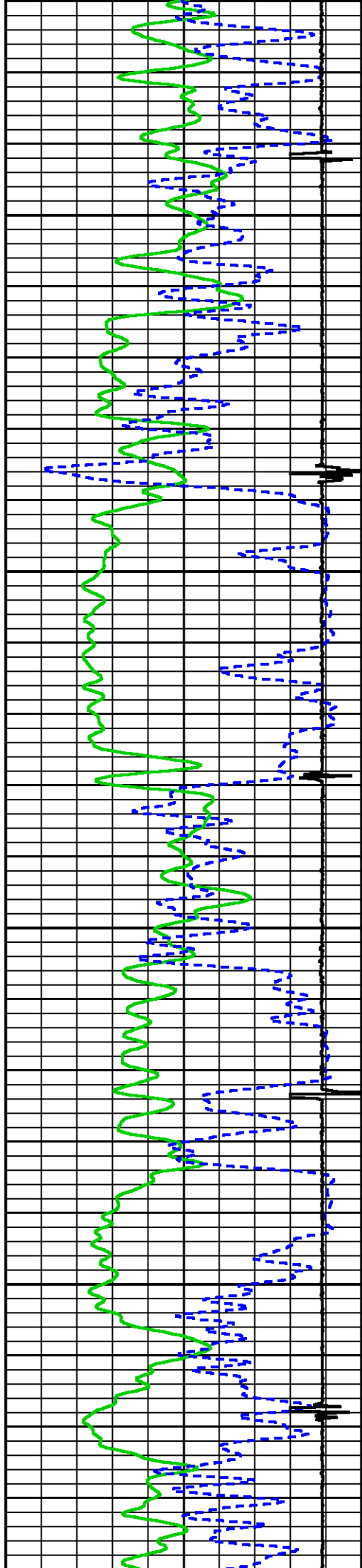
8300

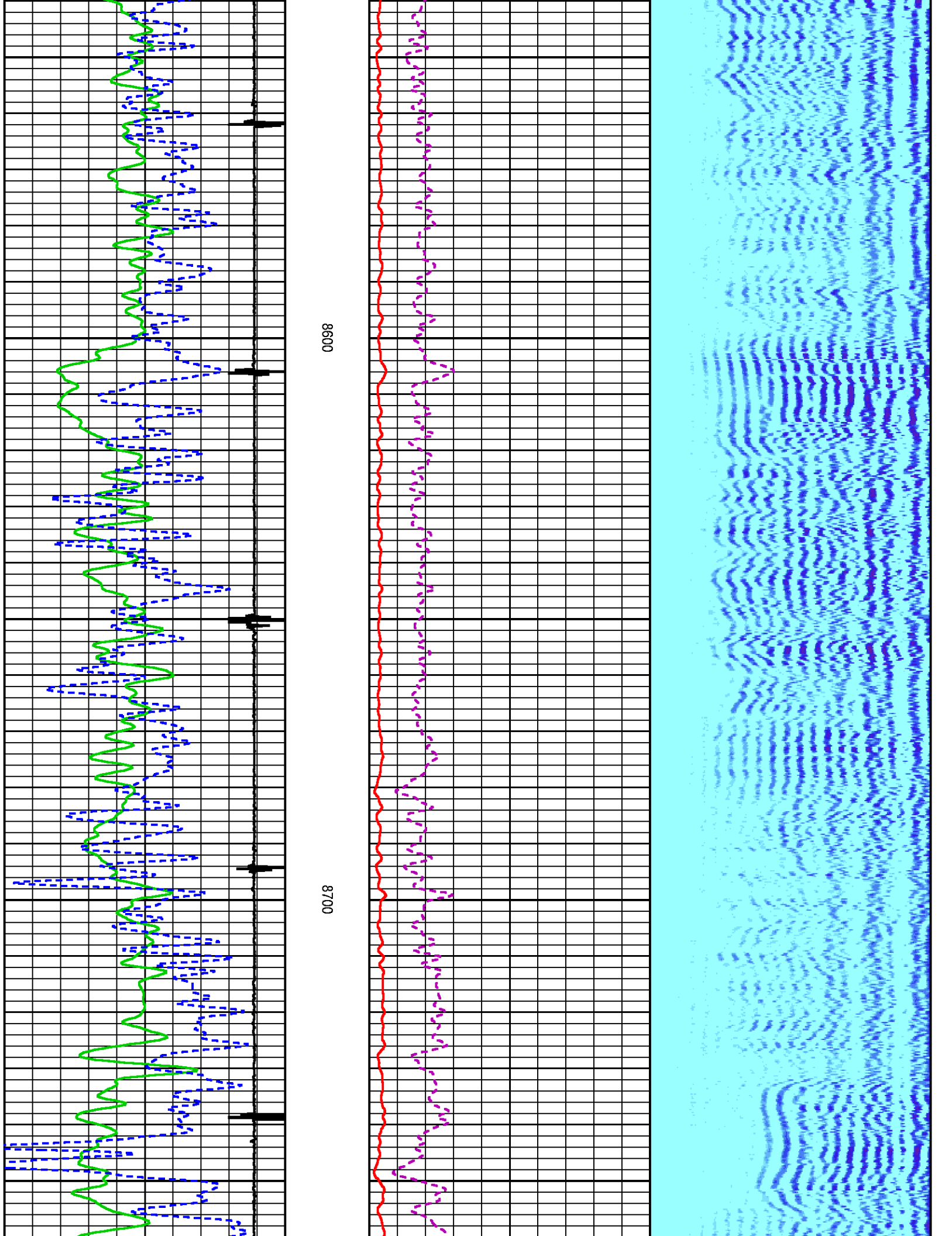


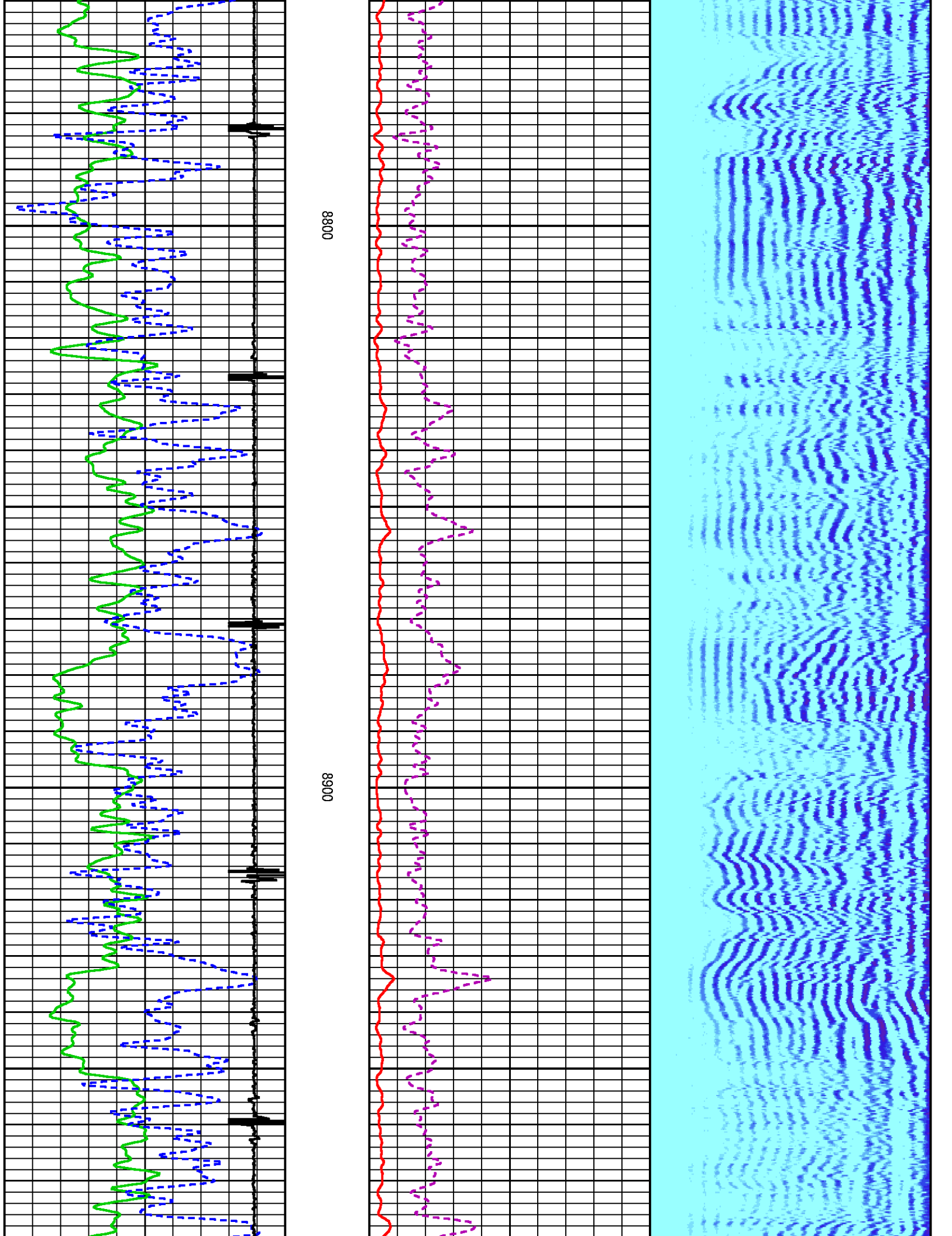


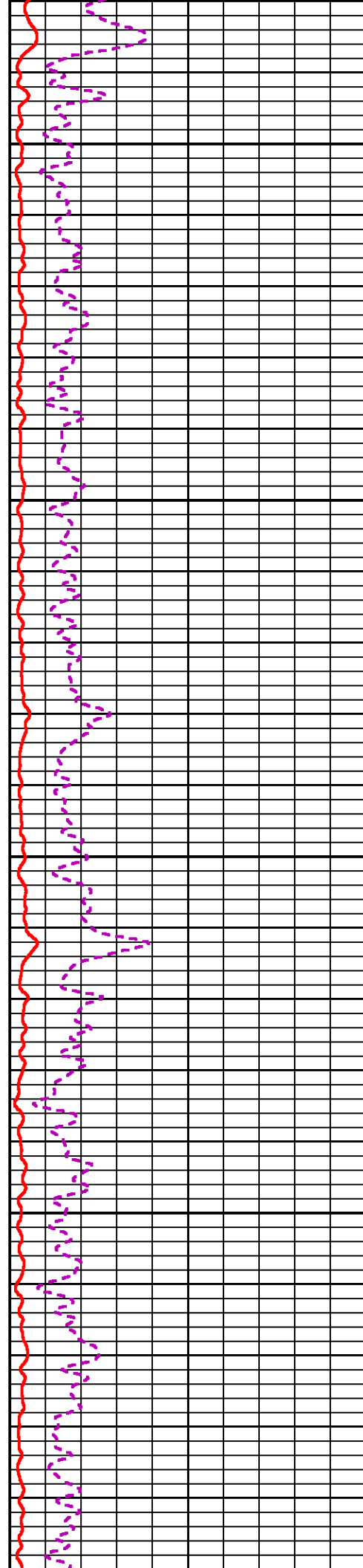
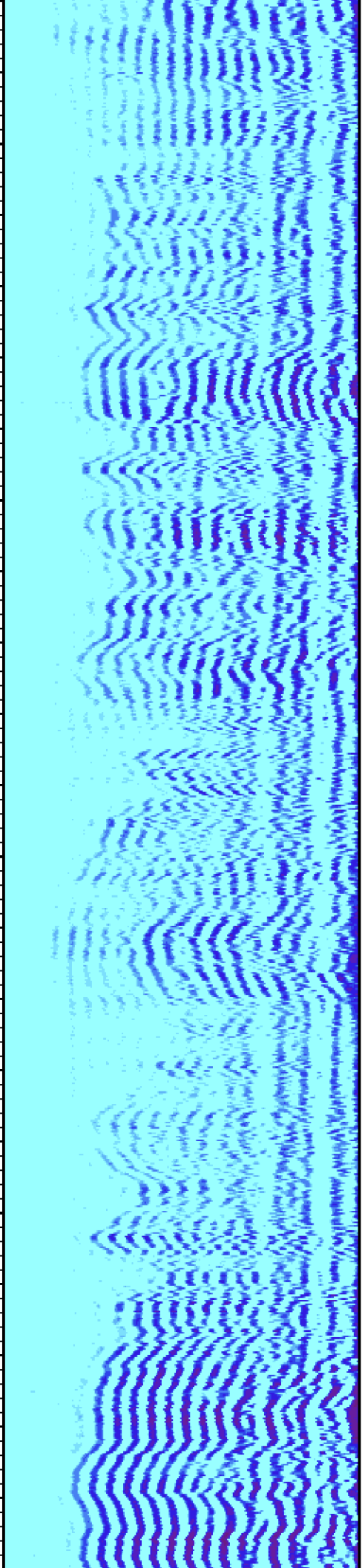
8400

8500





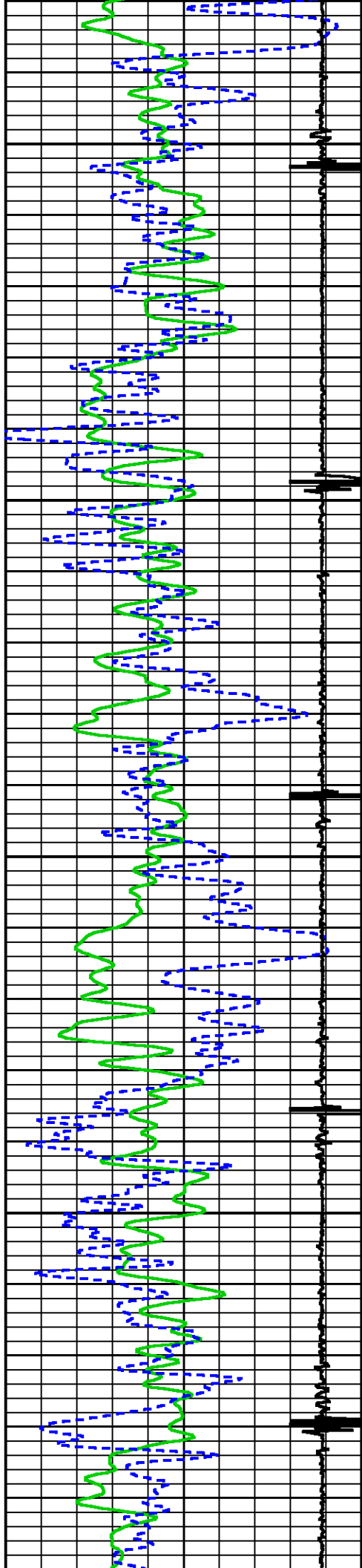


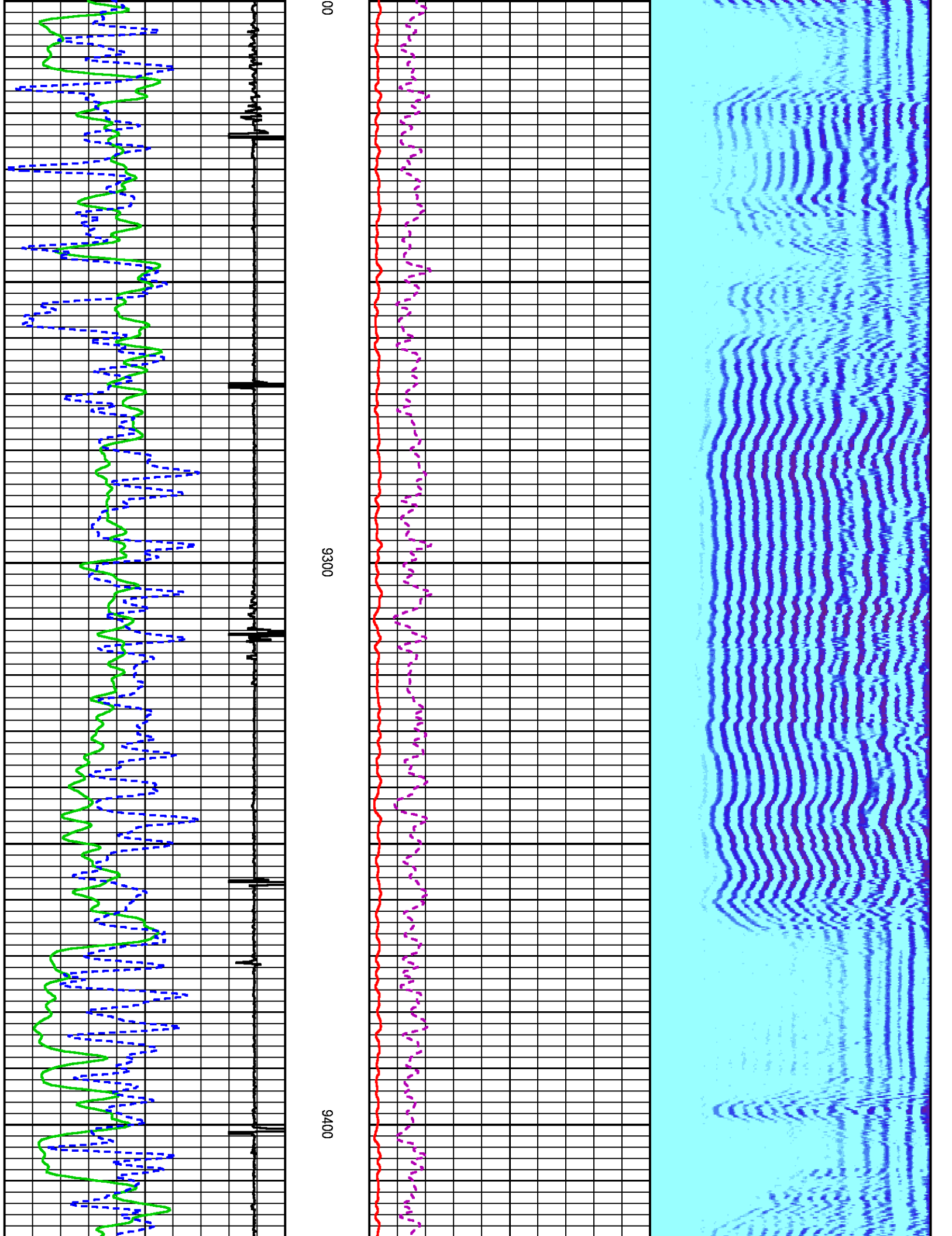


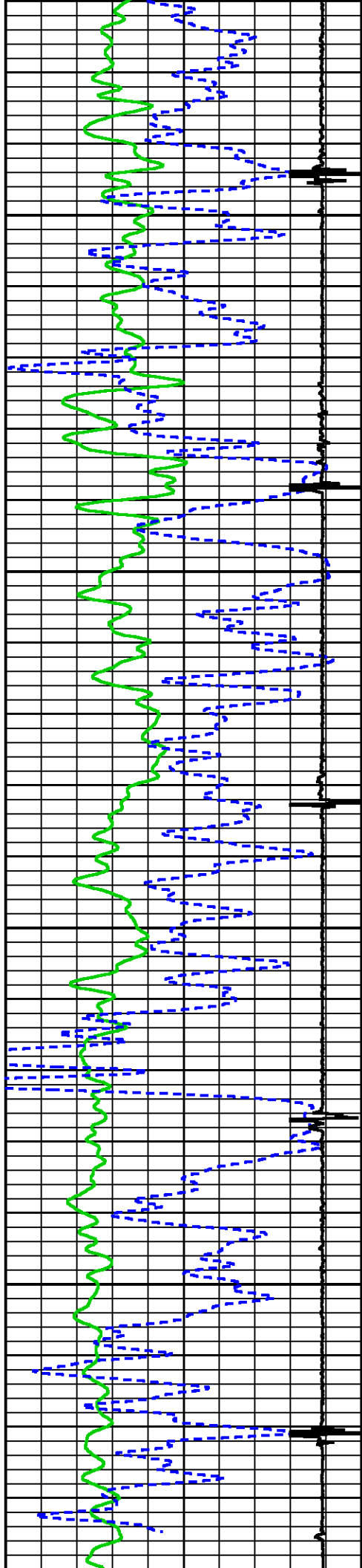
9000

9100

92



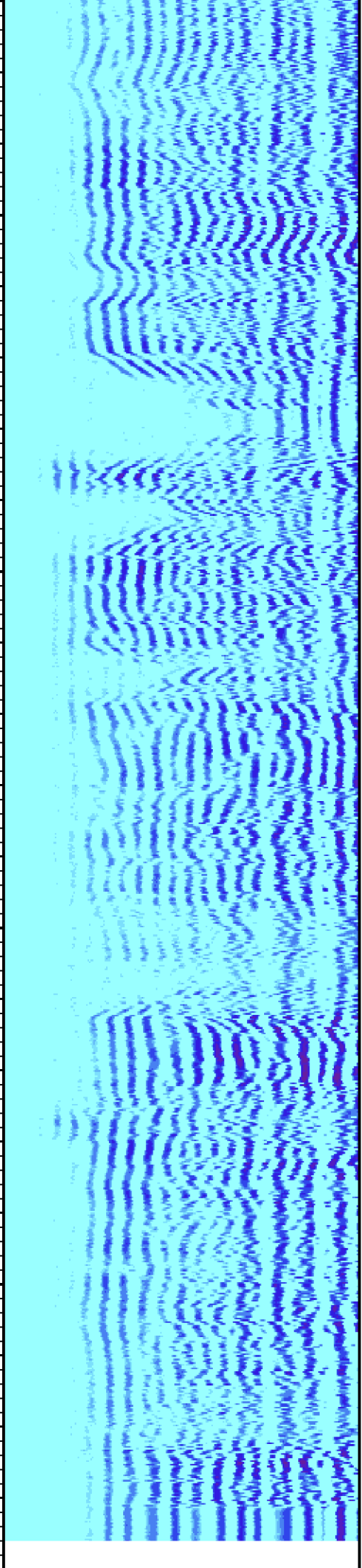
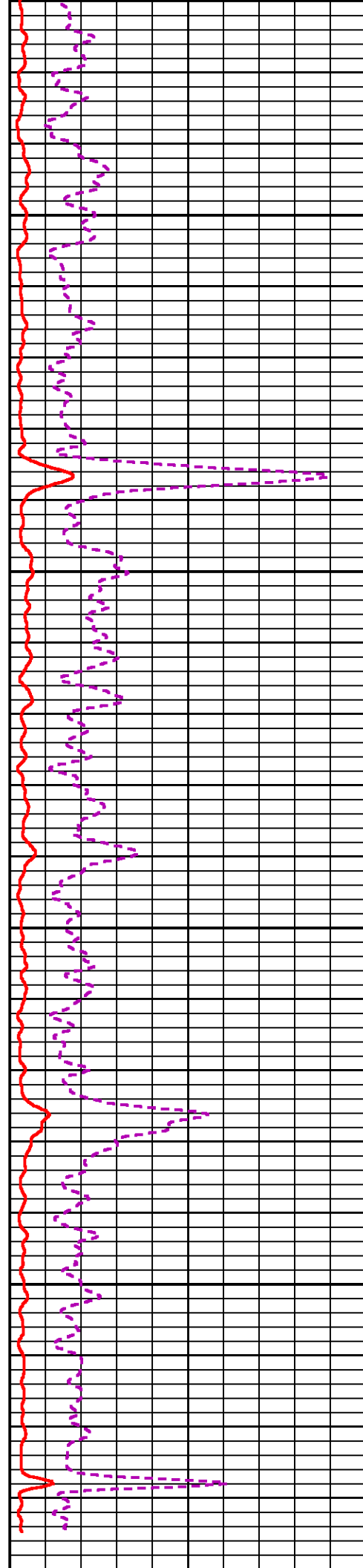


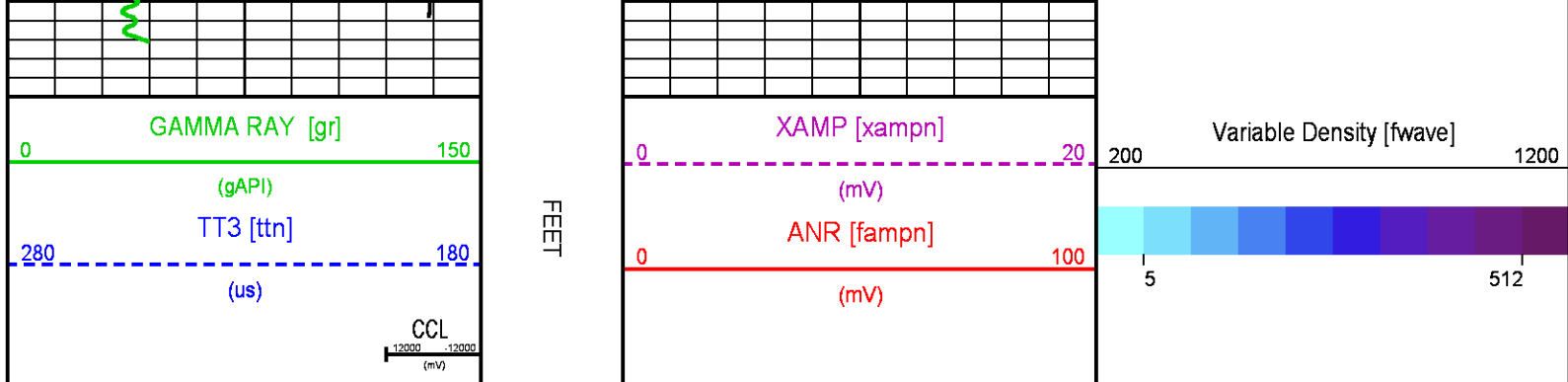


9500

9600

TD





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: Sat Dec 3 13:26:25 2016

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/TEP_YOUBERG RU 514_7/n012g01.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 9358.750 ft BOTTOM DEPTH: 9690.250 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*)	181	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	Dec 3 09:48:51 2016	CASING COLLAR LOCATOR
F1:FAMPN	Dec 3 09:48:51 2016	FIXED GATE AMPLITUDE NEAR RECEIVER
F1:FWAVE	Dec 3 09:48:51 2016	FAR WAVE FORM
F1:GR	Dec 3 09:48:51 2016	GAMMA RAY
F1:TTN	Dec 3 09:48:51 2016	TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER
F1:XAMPN	Dec 3 09:48:51 2016	FIXED GATE AMPLITUDE NEAR RECEIVER TIMES FIVE

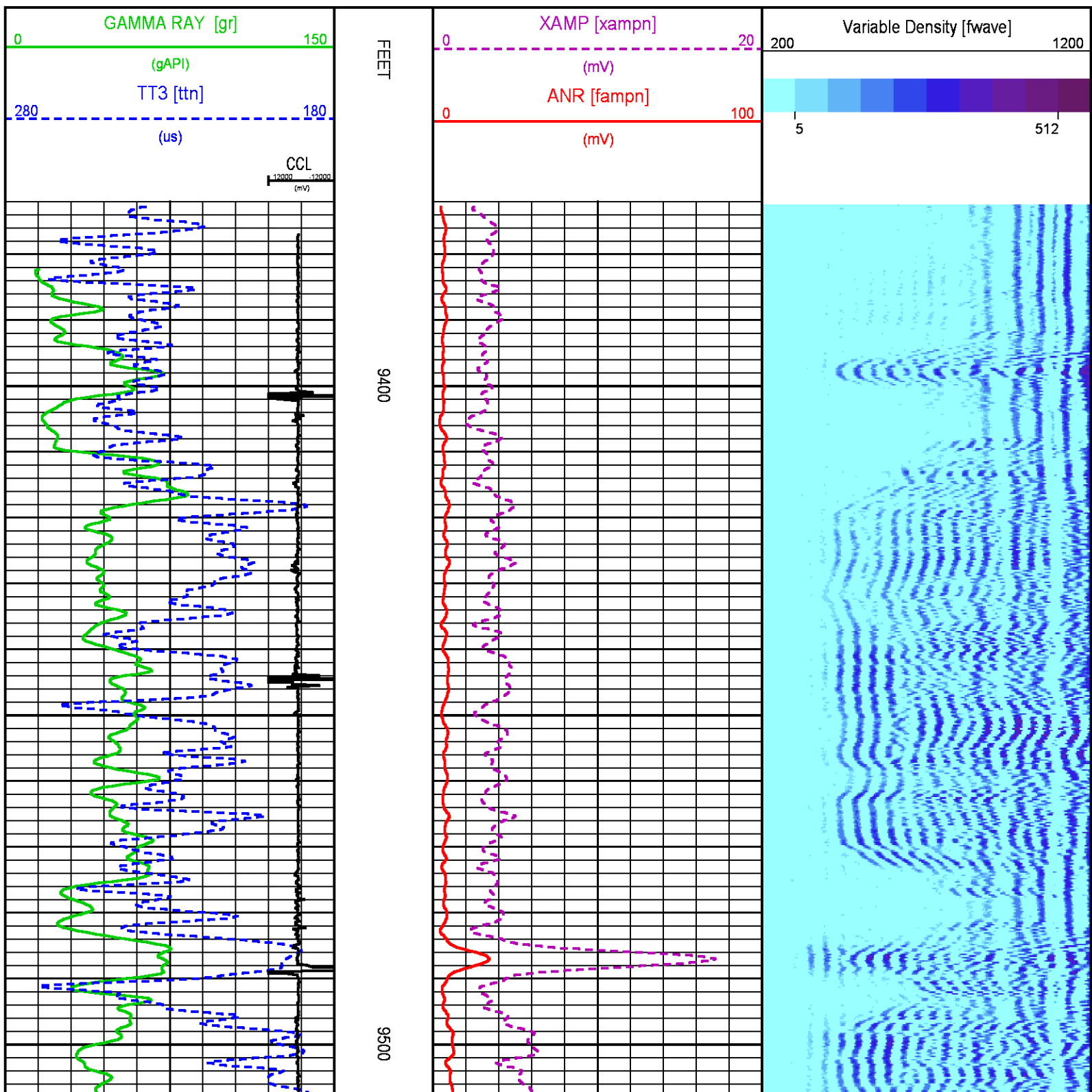
CURVE MEASURE POINT OFFSET

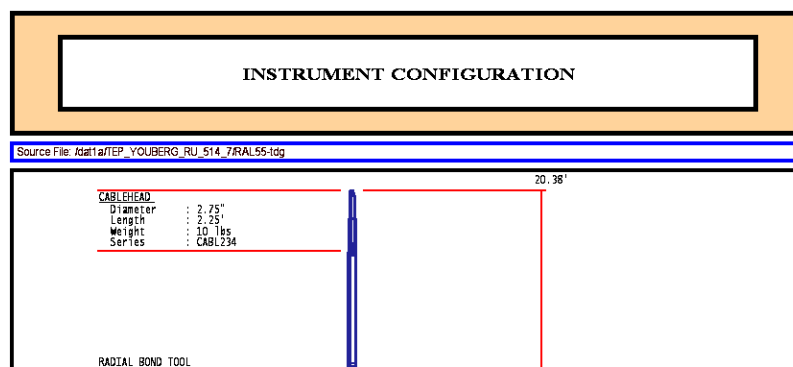
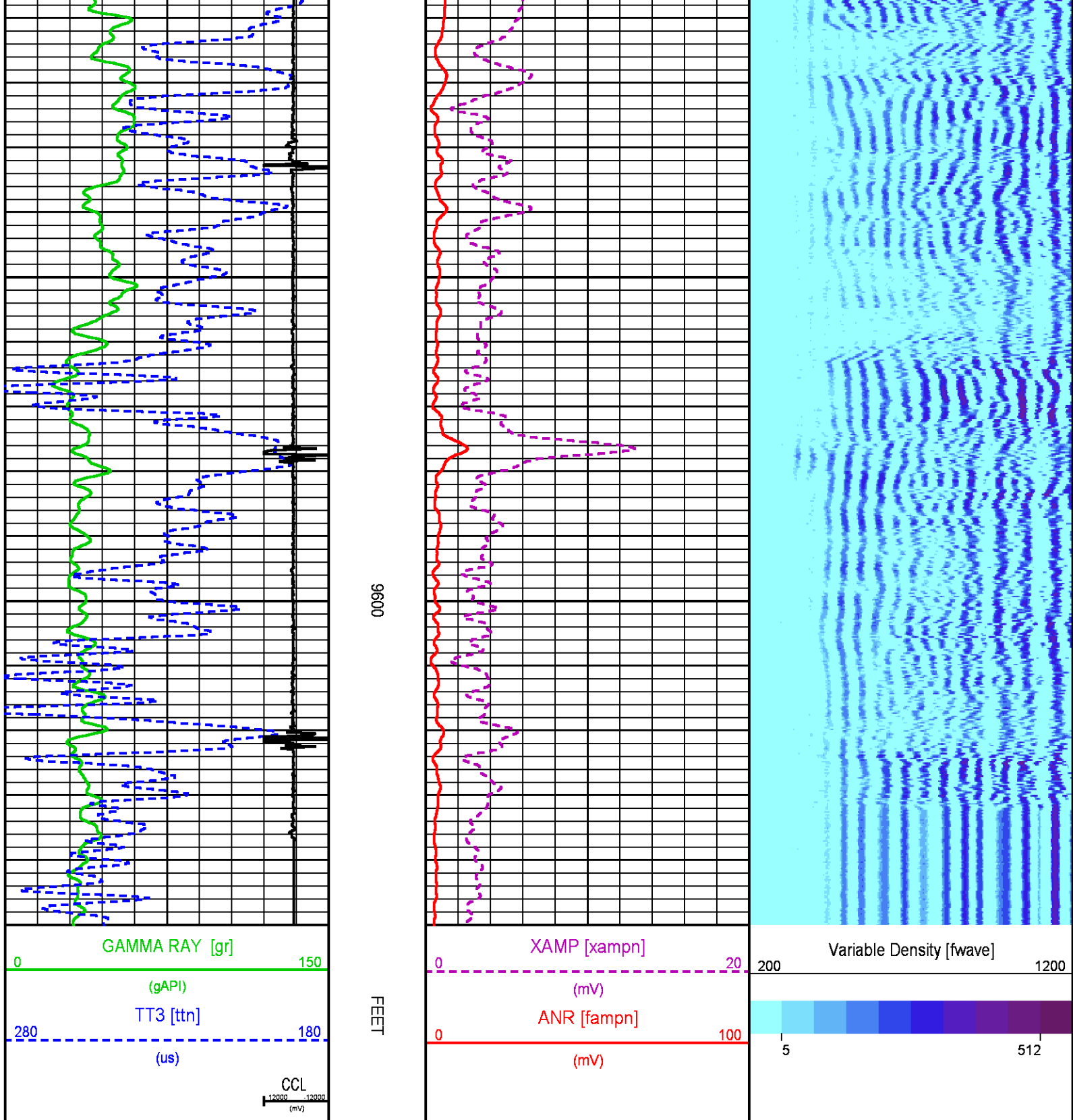
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
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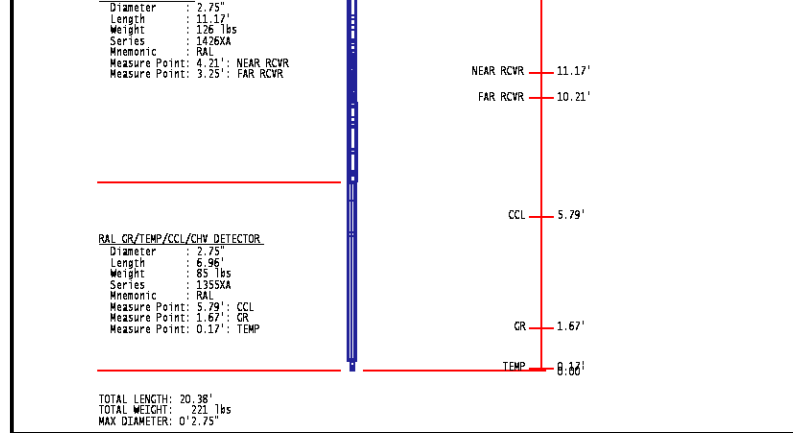
CCL	5.75	GR	1.75	XAMPN	11.25		
FAMPN	11.25	TTN	11.25				

Presentation : cpu100:/dat1a/TEP_YOUBERG_RU_514_7/ral_cbl+01-REPEAT-REPRAL-5.fvpdf [5"/100' Scale]
Plot Interval : 9372.5 - 9650 Feet

Data File 1 : F1 : cpu100:/dat1a/TEP_YOUBERG_RU_514_7/REPRAL.xtf
Created On : Dec 3 09:48:51 2016
Company : TEP
Well : YOUBERG RU 514-7
Field : RULISON
File Interval : 9358.75 - 9714.25 Feet
OCT : n012g







CALIBRATION / VERIFICATION SUMMARY

Source File: kdat1a/EP_YOUBERG_RU_514_7#012g.tp1

RAL PRIMARY CALIBRATION SUMMARY

TOOL #:	1426XA10154957	DATE/TIME PERFORMED:	Sat Dec 3 08:59:09 2016								
UNIT #:	3880TA HL6670										
	NEAR (mV)	RADIAL (mV)	FAR (mV)								
TARGETS	100.00	100.00	150.00								
	NEAR	R1	R2	R3	R4	R5	R6	R7	R8	FAR	CAL
ZERO (mV)	1.97	3.07	2.76	2.58	2.47	2.44	2.30	2.47	2.42	6.18	0.44
AMP FLUID (mV)	84	85	86	85	86	84	83	82	82	107	88
TT (us)	213	212	212	212	212	213	213	212	214	320	213
M FACTOR	1.22	1.22	1.21	1.21	1.20	1.22	1.24	1.26	1.25	1.49	1.14

RAL BEFORE LOG VERIFICATION SUMMARY


TOOL #:	1426XA10154957	DATE/TIME PERFORMED:	Sat Dec 3 09:02:44 2016	DAYS SINCE CAL:	0						
UNIT #:	3880TA HL6670	CABLE #:	6670SM SMALL6670								
	NEAR (mV)	R1 (mV)	R2 (mV)	R3 (mV)	R4 (mV)	R5 (mV)	R6 (mV)	R7 (mV)	R8 (mV)	FAR (mV)	CAL (mV)
ZERO	-0.01	-0.80	-0.82	-0.77	-0.87	-0.78	-0.96	-0.84	-0.80	-0.96	-0.01
AMP AIR	1.67	2.50	2.45	2.20	2.39	2.44	2.57	2.62	2.52	3.37	101.37
	SHOP M FACTOR	SHOP A FACTOR	WIRELINE FACTOR								
	1.14	0.00	0.99								

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)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBTR ON (gAPI)	CALBTR (gAPI)
GR	75.82	247.07	171.2	0.584	44.28	144.28	100

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	BACKGROUND (gAPI)	CALBTR ON (gAPI)	DIFF. (gAPI)
GR	77.11	254.76	0.584	45.03	148.77	103.74
						50.00 100.00

	COMPANY	TEP ROCKY MOUNTAIN LLC		FILE NO:	
	WELL	YOUBERG RU 514-7			
	FIELD	RULISON		API NO:	
	COUNTY	GARFIELD	STATE	COLORADO	05045232600000
LOCATION:		ELEVATIONS:			
SHL:1912' FSL & 158' FWL		KB 7381 FT			
BHL:186' FSL & 862' FWL		DF			
SEC 7 TWP 7S RGE 93W		GL 7357 FT			
		DATE		03-DEC-2016	