



FILE NO:	COMPANY	TEP ROCKY MOUNTAIN LLC	
API NO:	WELL	YOUBERG RU 413-7	
05045232570000	FIELD	RULISON	
	COUNTY	GARFIELD	STATE COLORADO

Ver. 4.06	LOCATION:	OTHER SERVICES
	SHL: 1926' FSL & 158' FWL	RPM
	BHL: 1652' FSL & 296' FWL	
	SEC 7 TWP 7S RGE 93W	

PERMANENT DATUM	GL	ELEVATION	7357 FT	ELEVATIONS: KB 7381 FT DF 7357 FT GL 7357 FT
LOG MEASURED FROM	KB	24 FT	ABOVE P.D.	
DRILL. MEAS. FROM	KB			

DATE		30-DEC-2016			
RUN	TRIP	1	1		
SERVICE ORDER		US110700			
DEPTH DRILLER		9406 FT			
DEPTH LOGGER		9344 FT			
BOTTOM LOGGED INTERVAL		9344 FT			
TOP LOGGED INTERVAL		24 FT			
TIME STARTED		11:30			
TIME FINISHED		14:30			
OPERATOR RIG TIME		3 HRS			
TYPE OF FLUID IN HOLE		WATER			
FLUID DENSITY		NA			
FLUID SALINITY		NA			
FLUID LEVEL		56 FT			
LOGGED CEMENT TOP		SEE LOG			
WELLHEAD PRESSURE		0 PSI			
MAXIMUM HOLE DEVIATION		NA			
NOMINAL LOGGING SPEED		100 F/MIN			
MAX. RECORDED TEMP.		241 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	9406 FT

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
9.625 IN	-	-	0 FT	1124 FT
4.5 IN	-	-	0 FT	9406 FT

REMARKS

RUN 1 TRIP 1: \*2 OPERATIONS IN WELL\*

\*\*OP 1: RAL/GR/CCL RUN CENTRALIZED\*\*

WELL LOGGED WITH 0 PSI ON THE WELLHEAD

BHT: 241 DEGF

SHORT JOINT: 5469'-5490'

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: Fri Dec 30 15:48:33 2016

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/TEP\_YOUBERG\_RU\_413\_7/n012g02.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 20.750 ft BOTTOM DEPTH: 9356.784 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

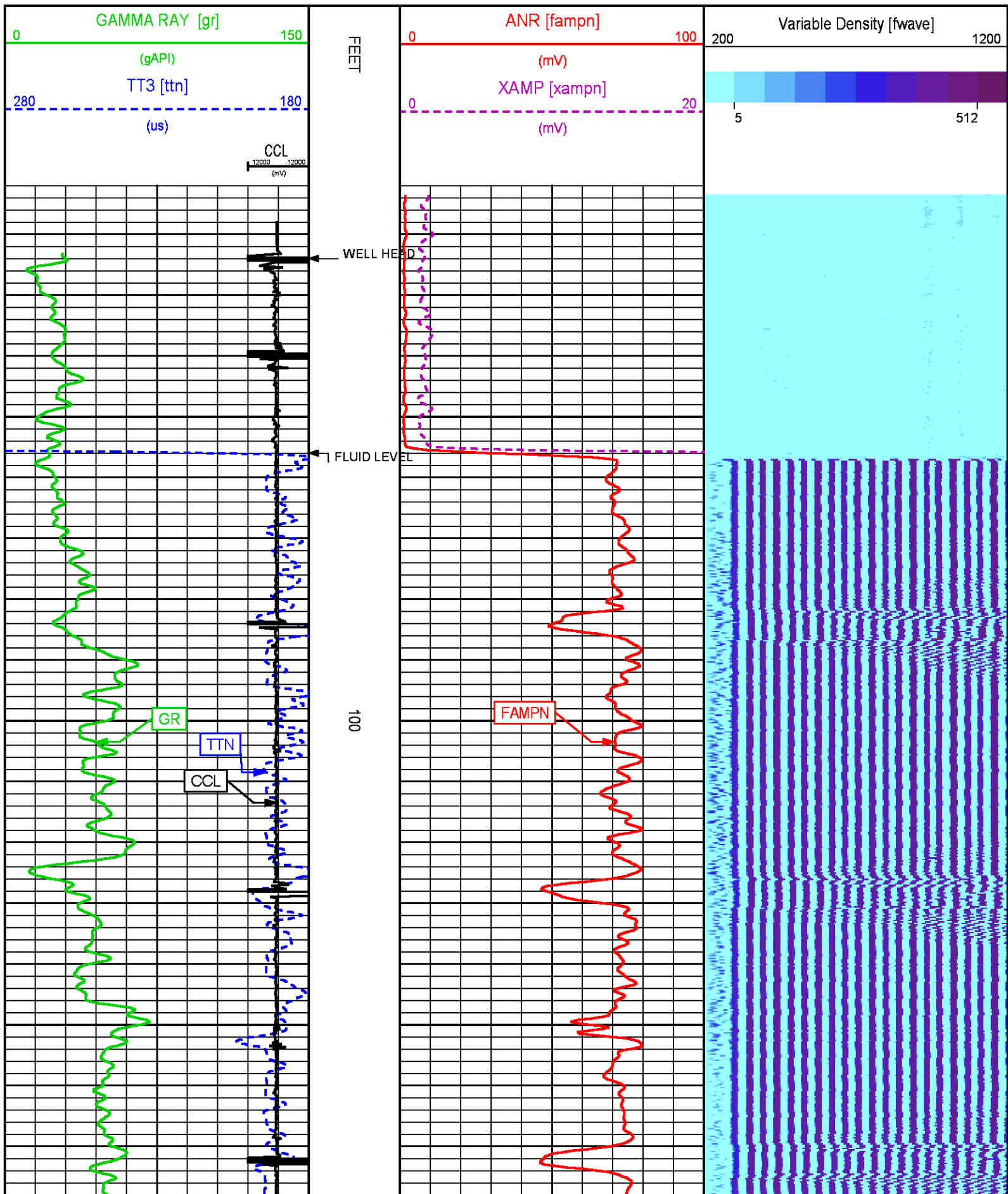
ANALOG RAL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
AMPLITUDE WINDOW (NEAR)	AMP WINDOW START (fgpn*)	179	us	TOP	BOTTOM
	AMP WINDOW LENGTH	25	us	"	"
TRAVEL TIME WINDOW (NEAR)	TT WINDOW START (ttn*)	160	us	"	"
	TT WINDOW LENGTH	500	us	"	"
	FIRST BRK THRESHOLD (ttn*)	4	mV	"	"
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	"	"

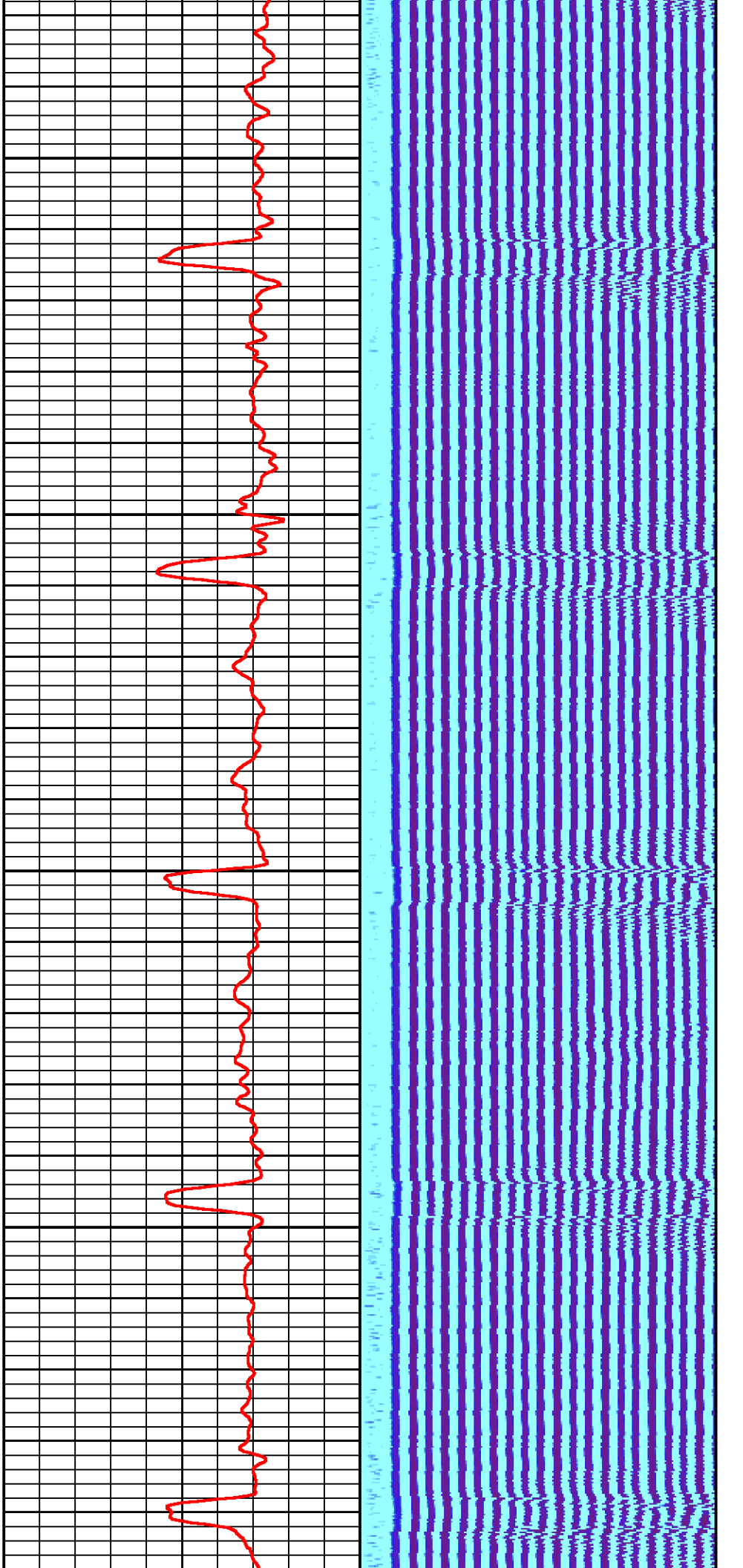
CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Dec 30 13:24:25 2016	CASING COLLAR LOCATOR
F1:FAMPN	Dec 30 13:24:25 2016	FIXED GATE AMPLITUDE NEAR RECEIVER
F1:FWAVE	Dec 30 13:24:25 2016	FAR WAVE FORM
F1:GR	Dec 30 13:24:25 2016	GAMMA RAY
F1:TTN	Dec 30 13:24:25 2016	TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER
F1:XAMPN	Dec 30 13:24:25 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				

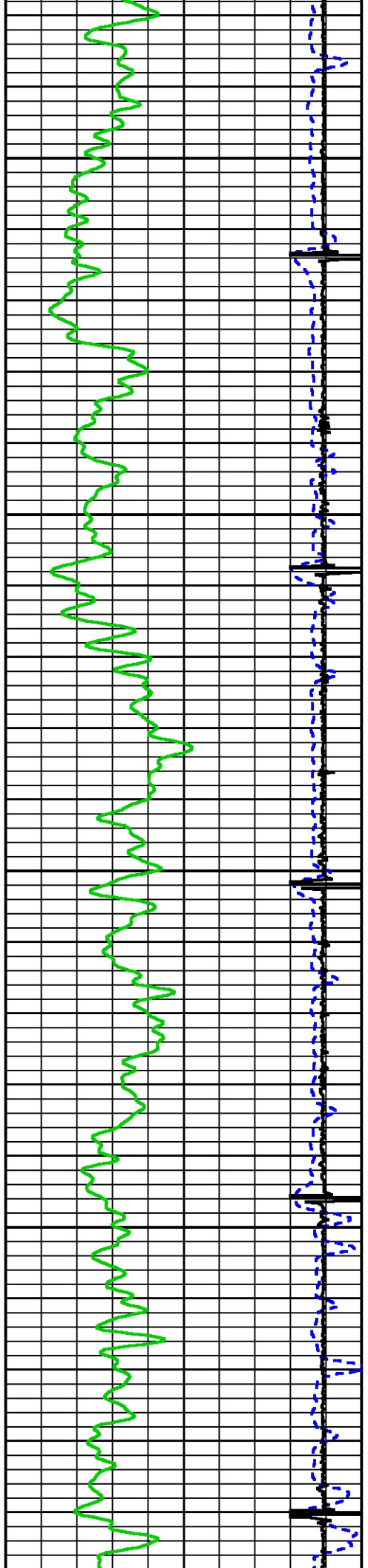
Data File 1 : F1 : cpu100:/dat1a/TEP\_YOUBERG\_RU\_413\_7/RALMAIN.xtf  
Created On : Dec 30 13:24:25 2016  
Company : TEP  
Well : YOUBERG RU 413-7  
Field : RULISON  
File Interval : 12.5 - 9356.75 Feet  
OCT : n012g

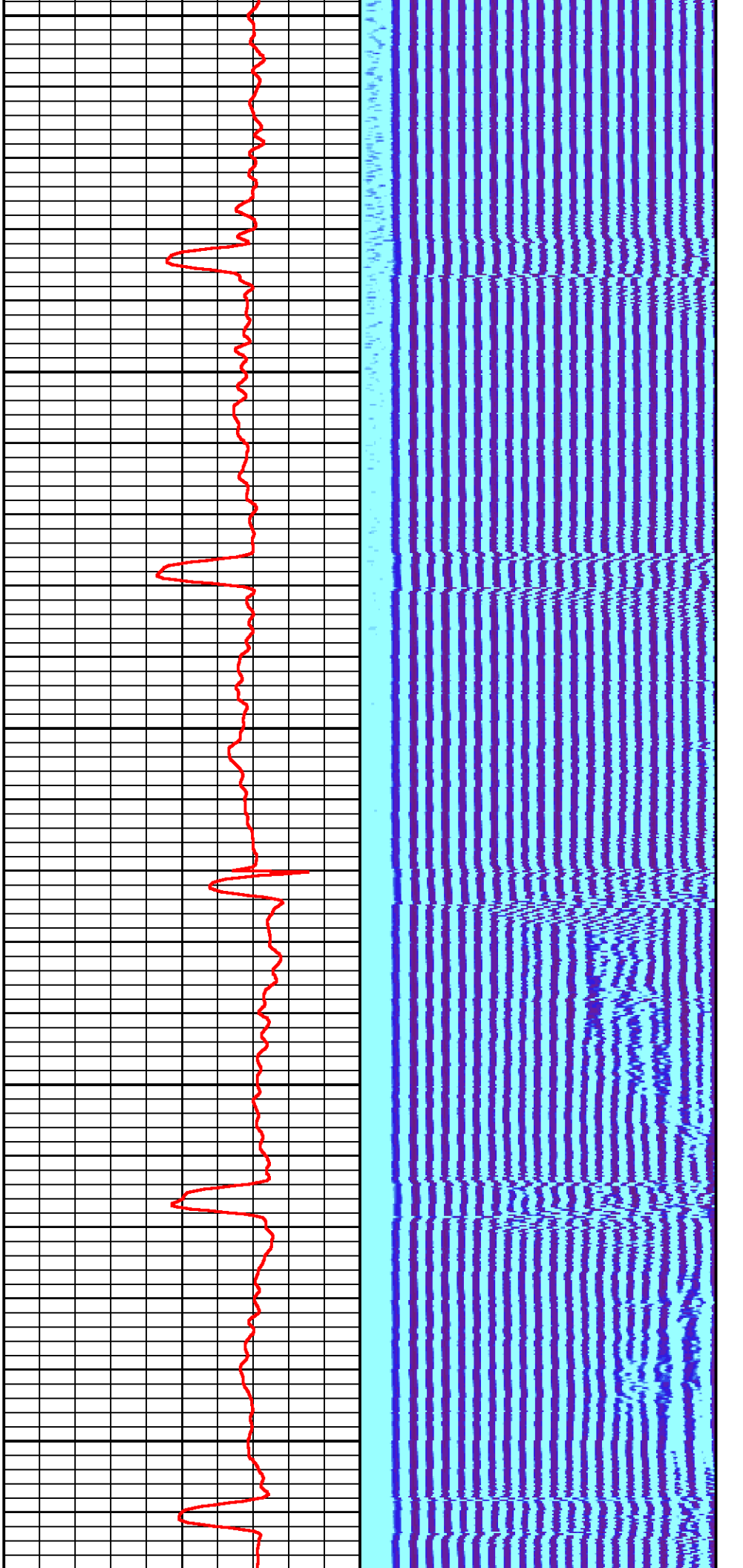




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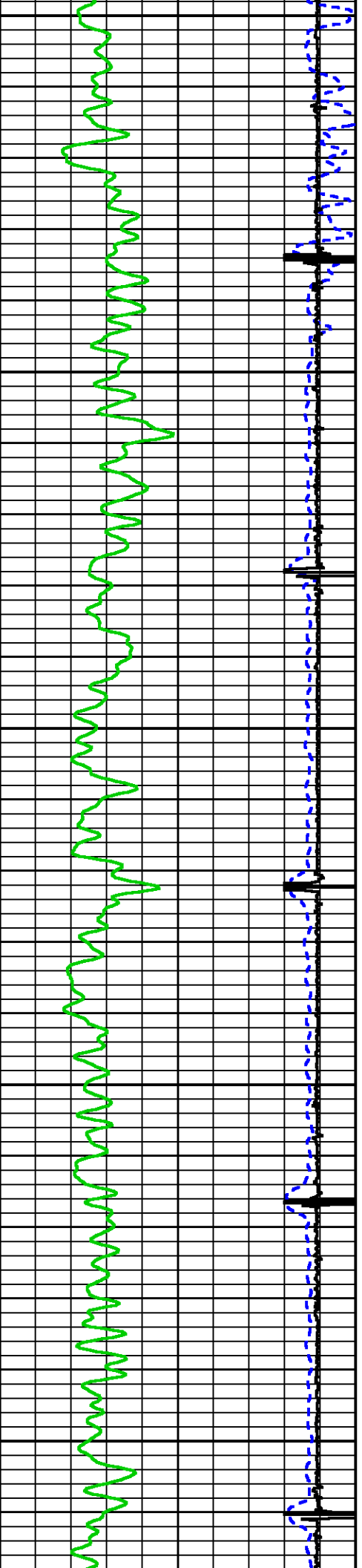


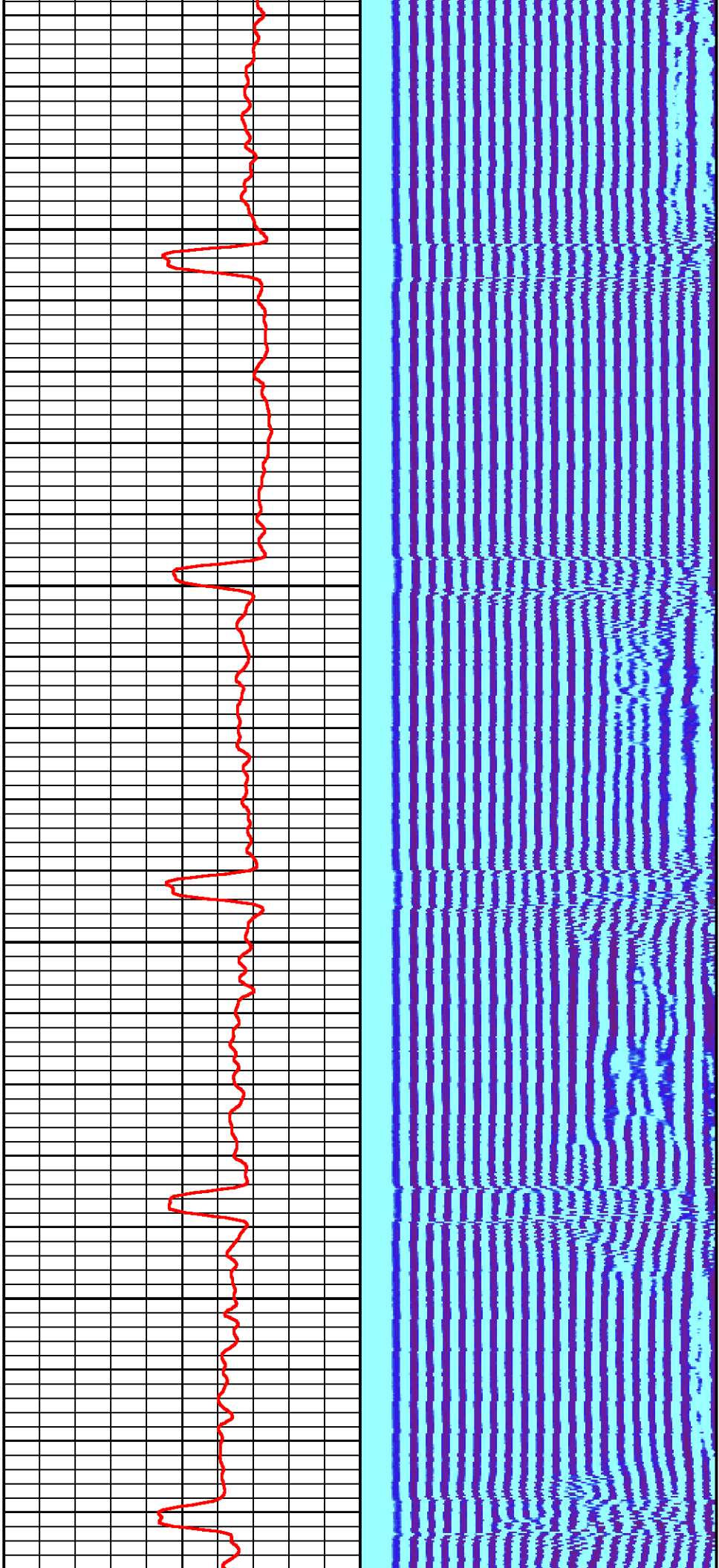


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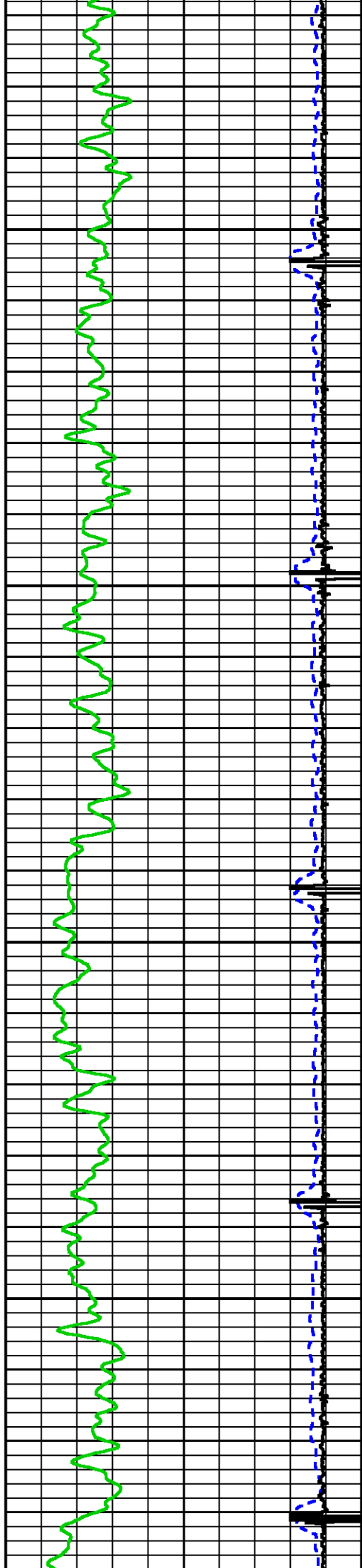
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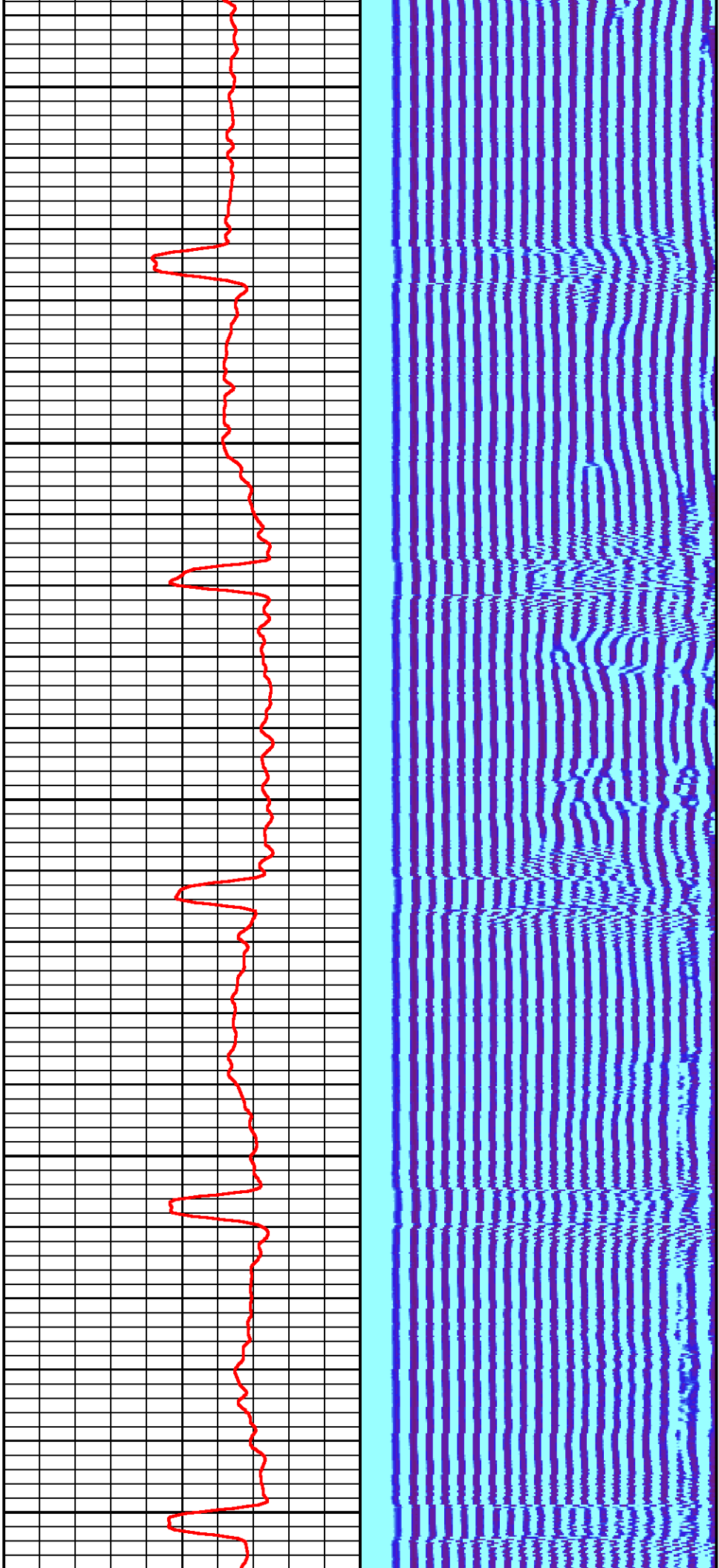


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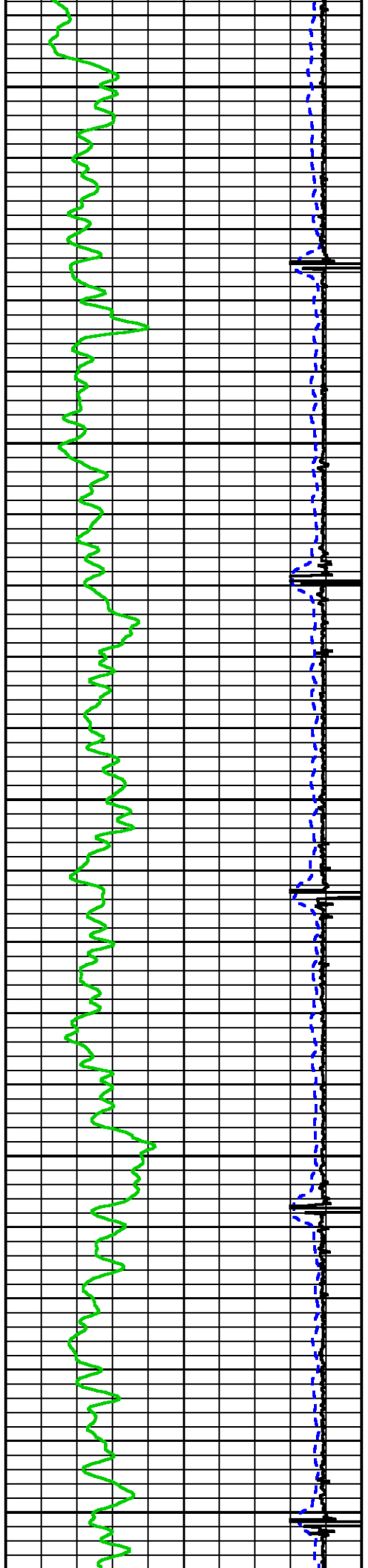


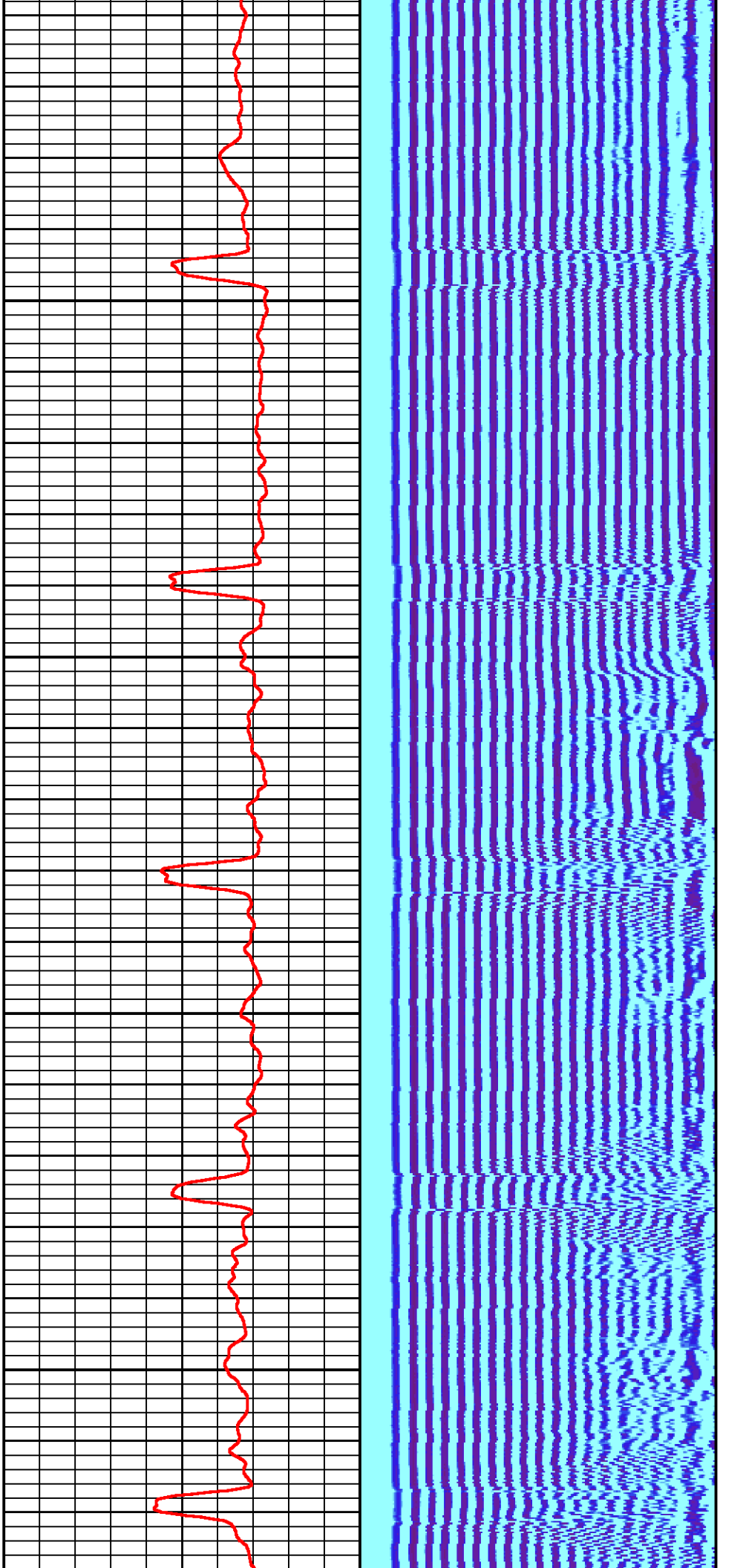




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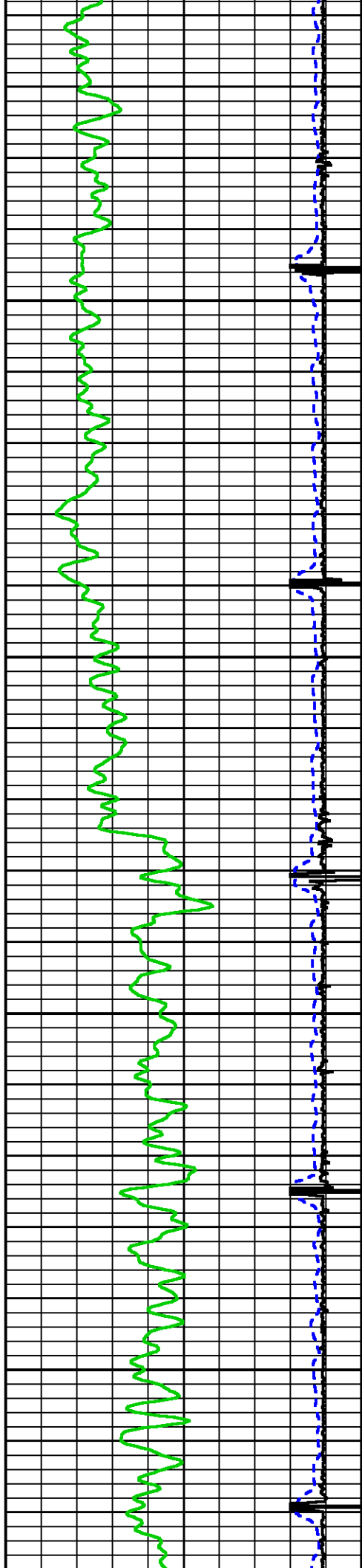
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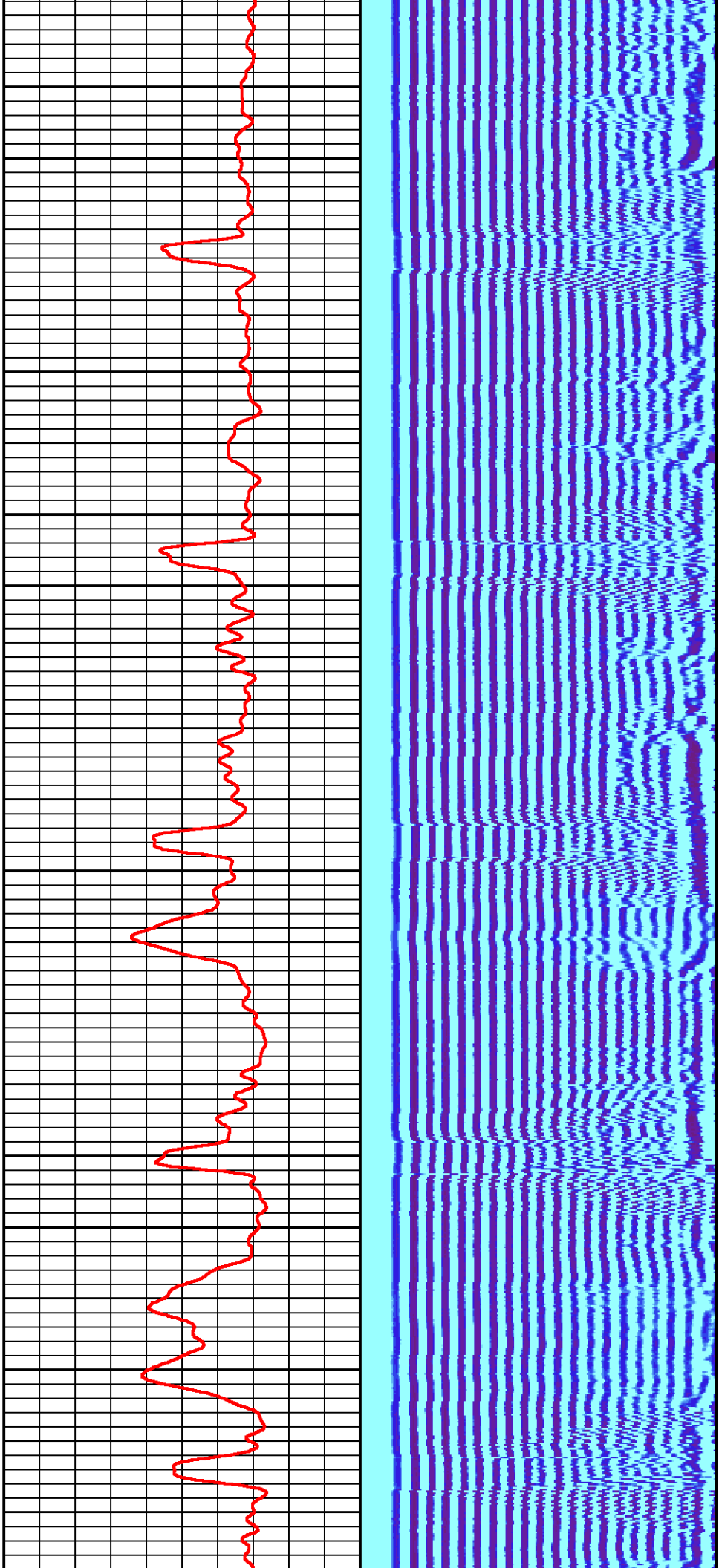


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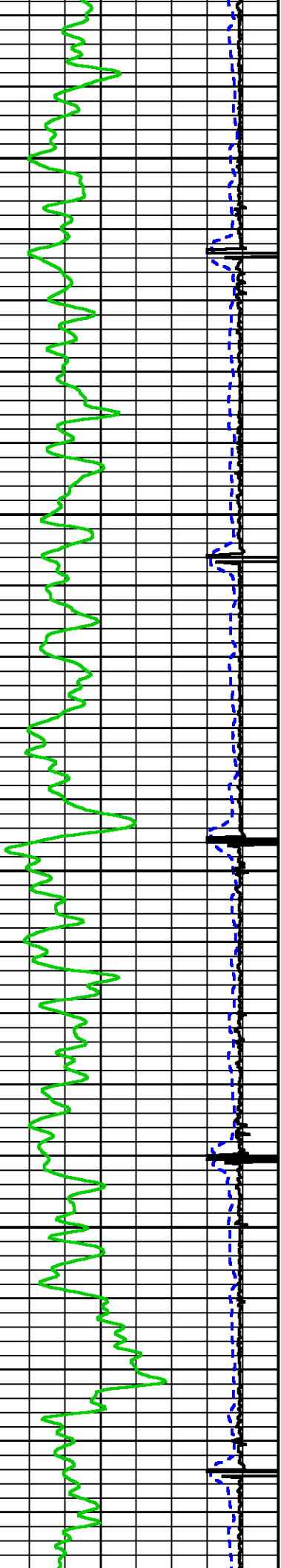


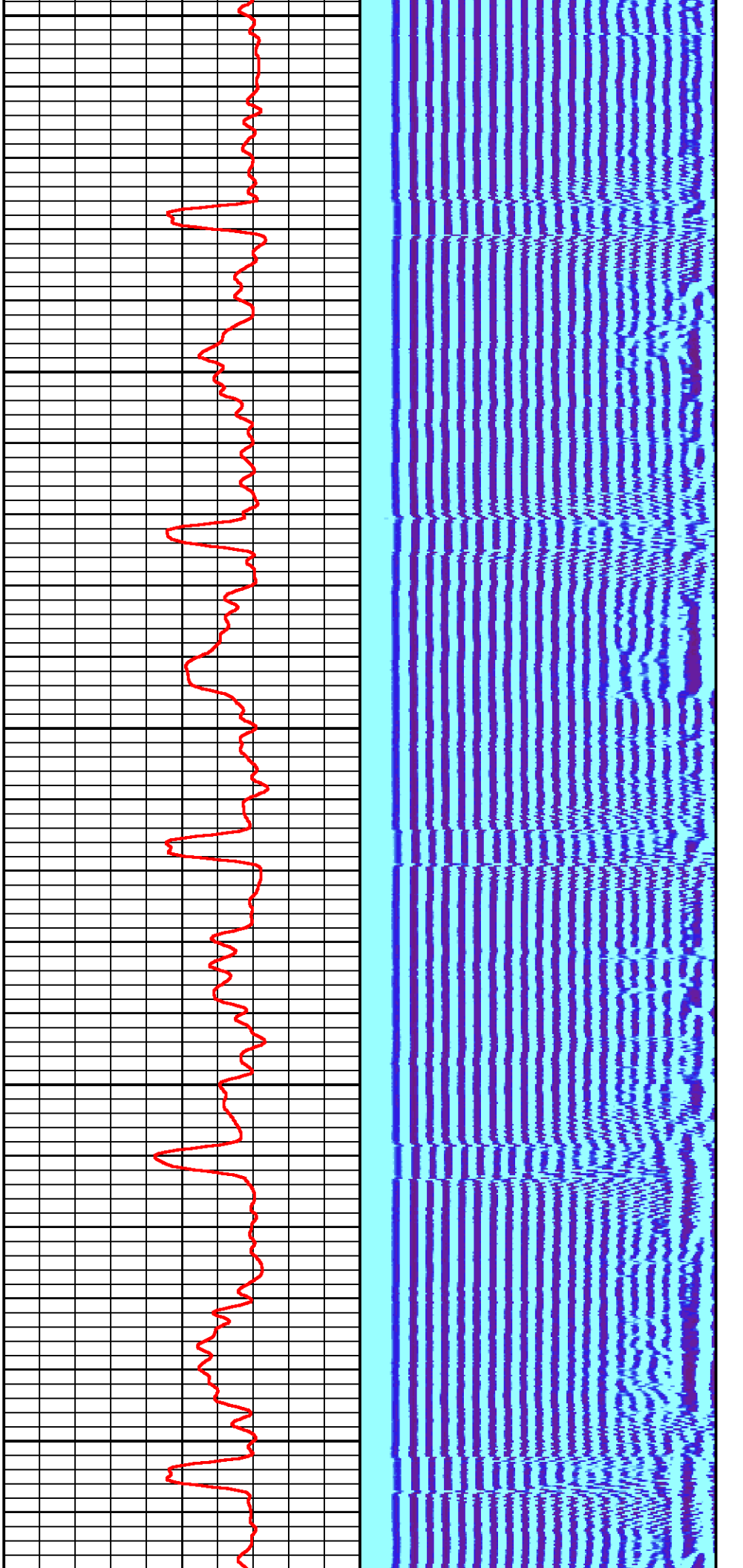




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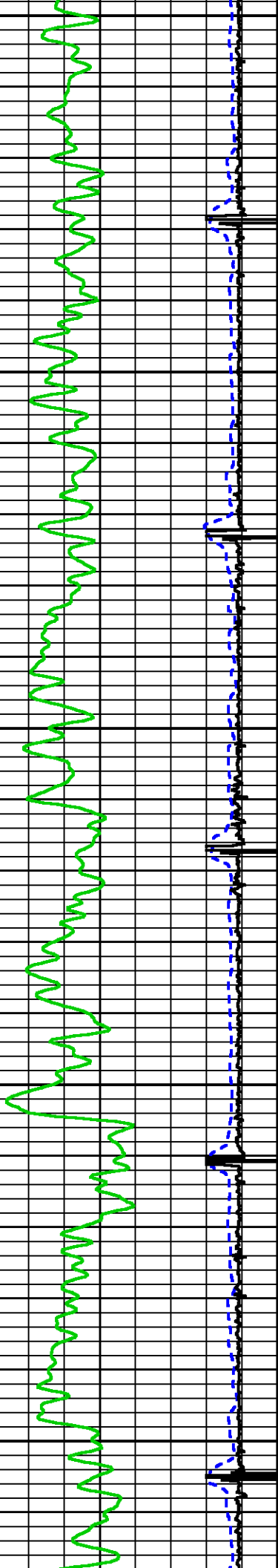


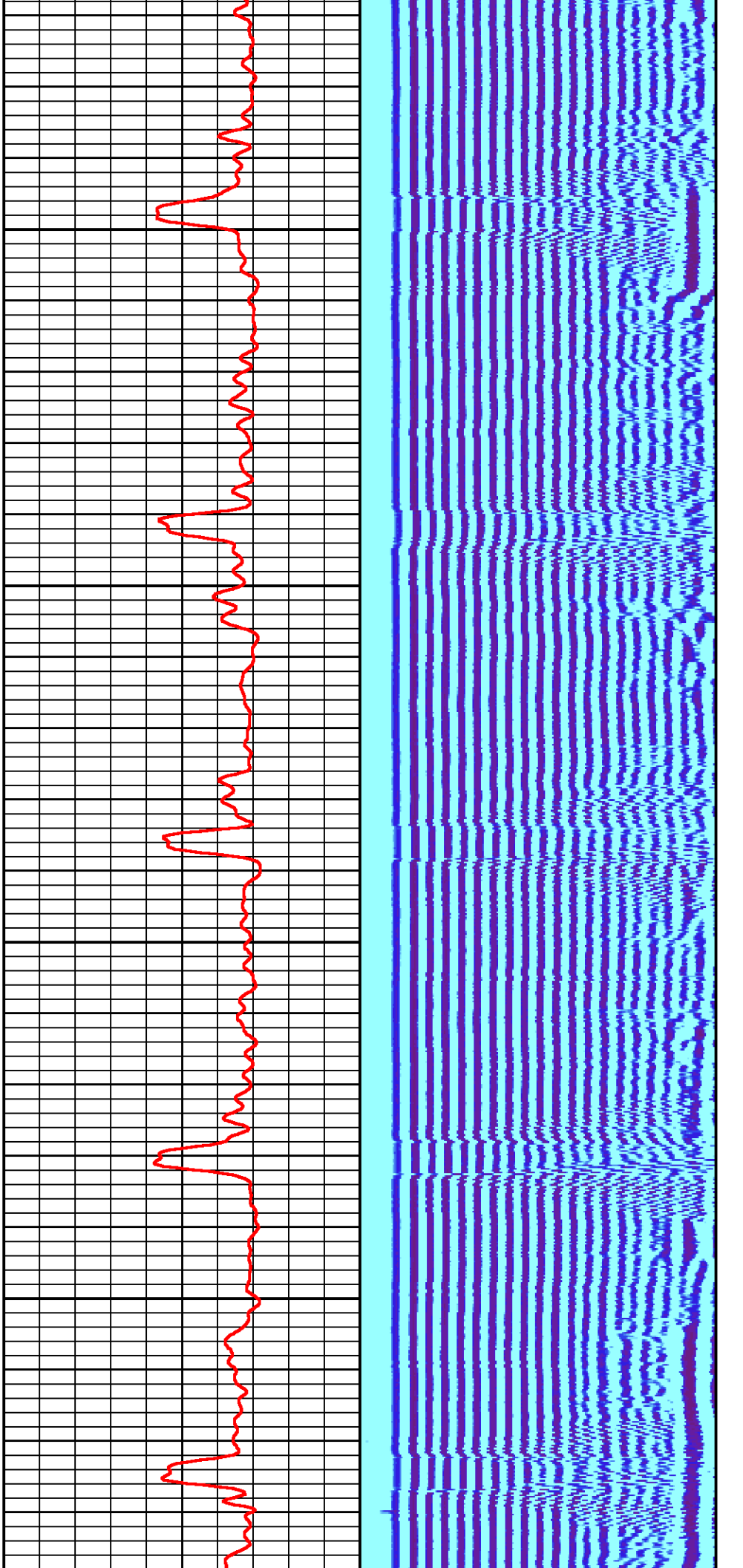


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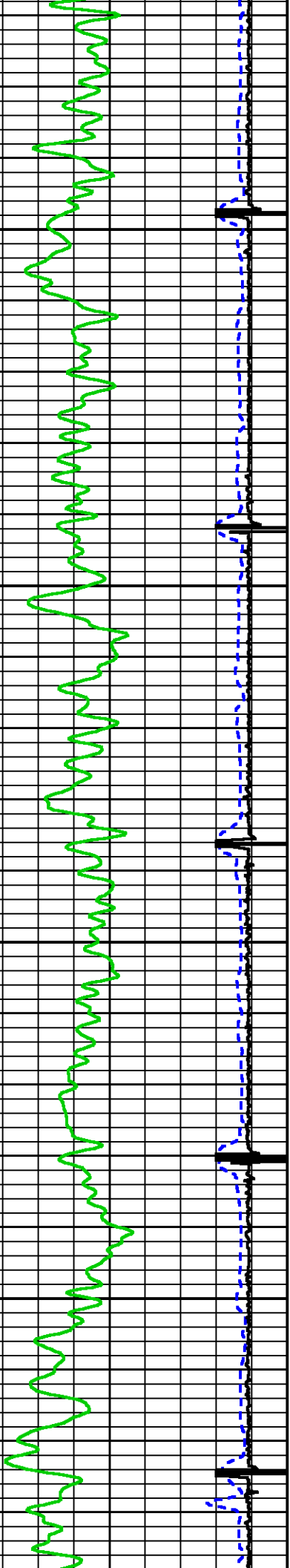
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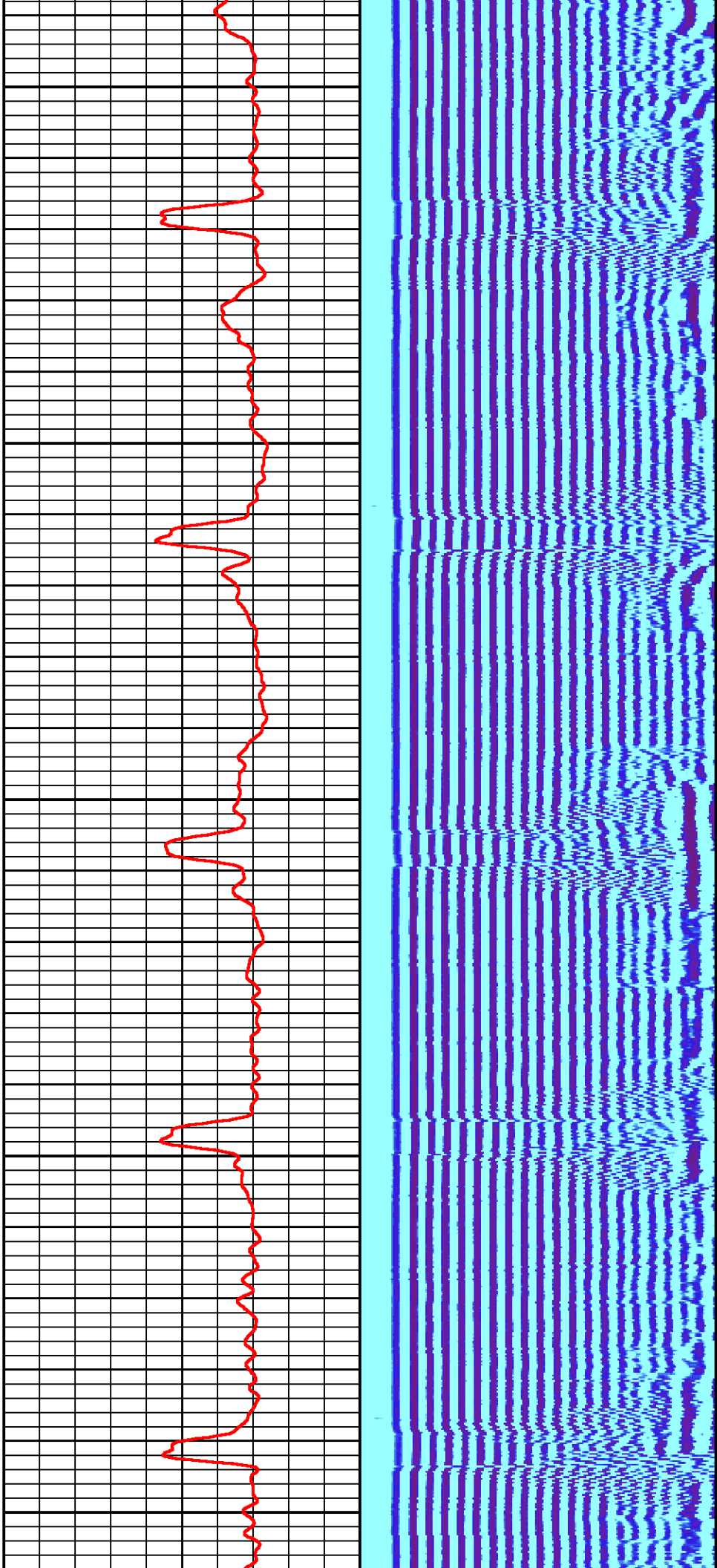




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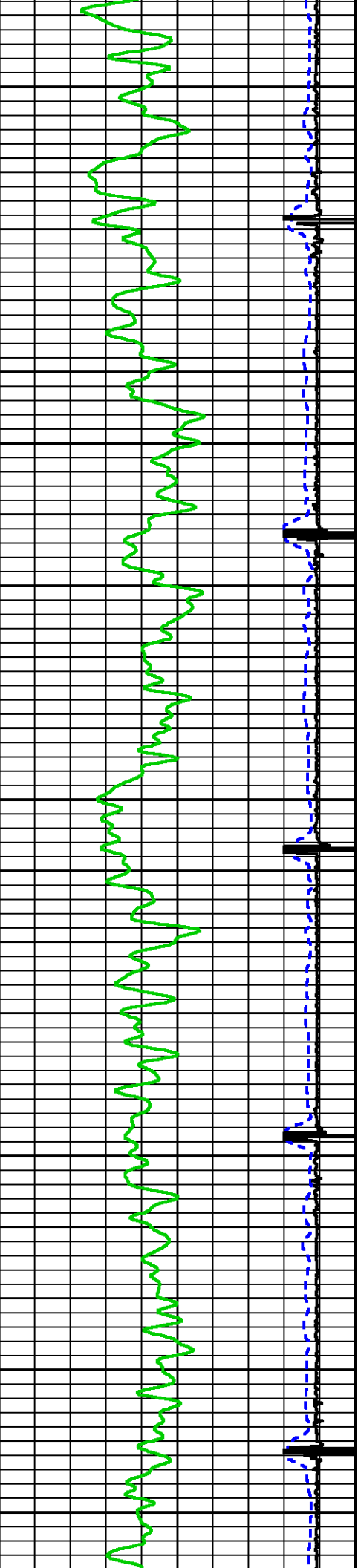
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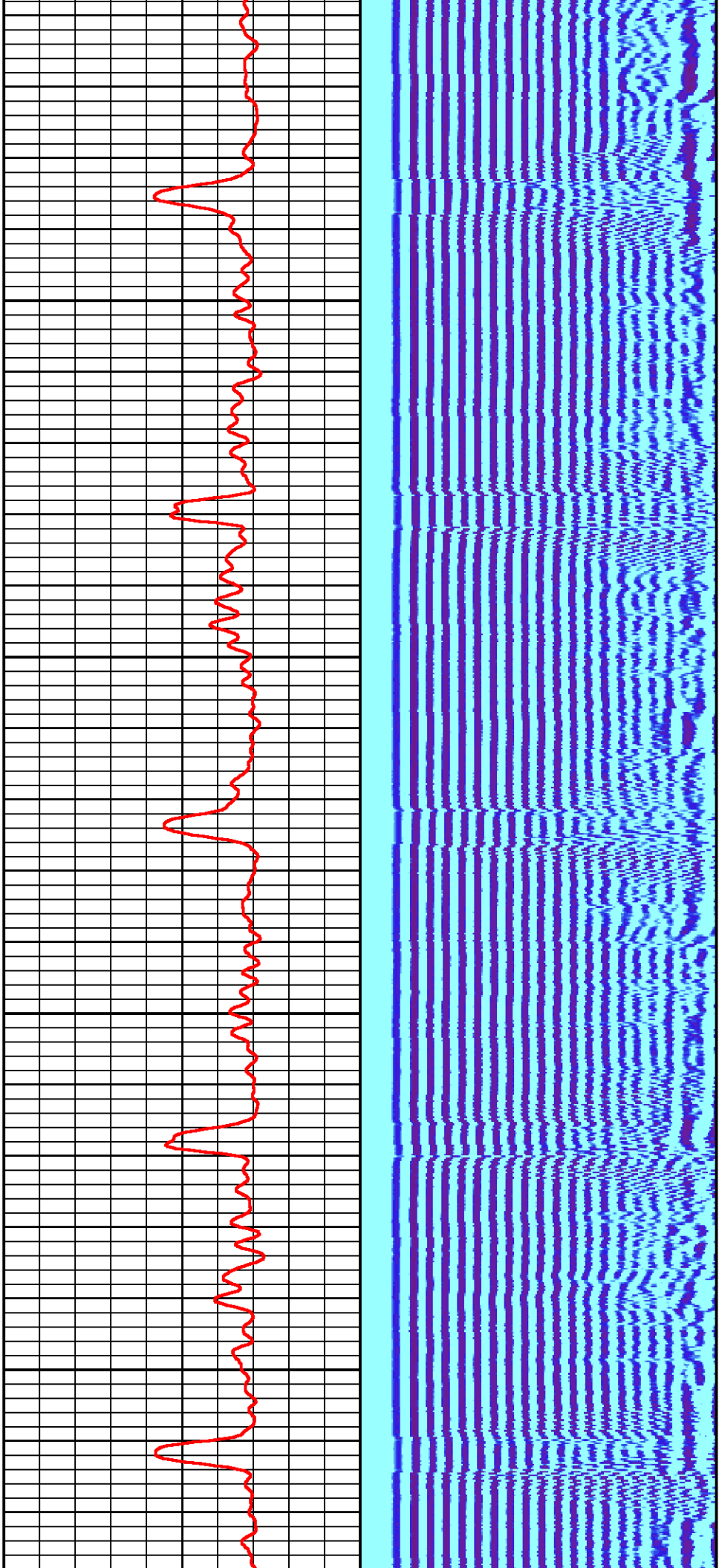


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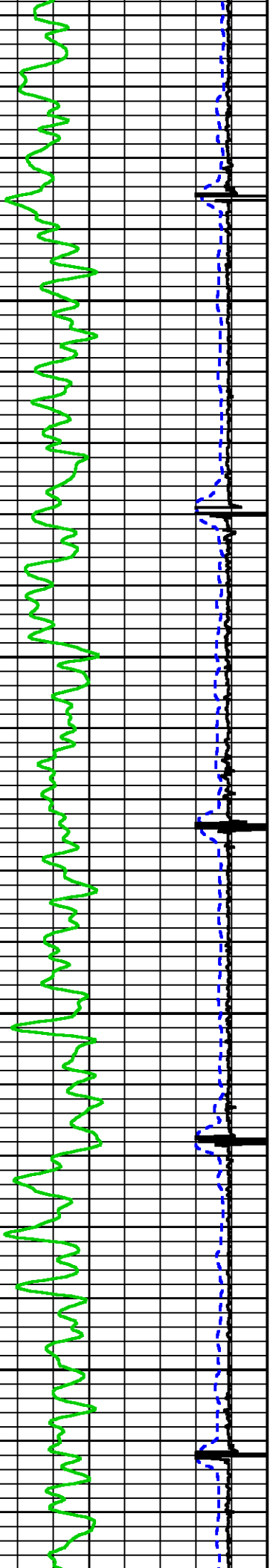




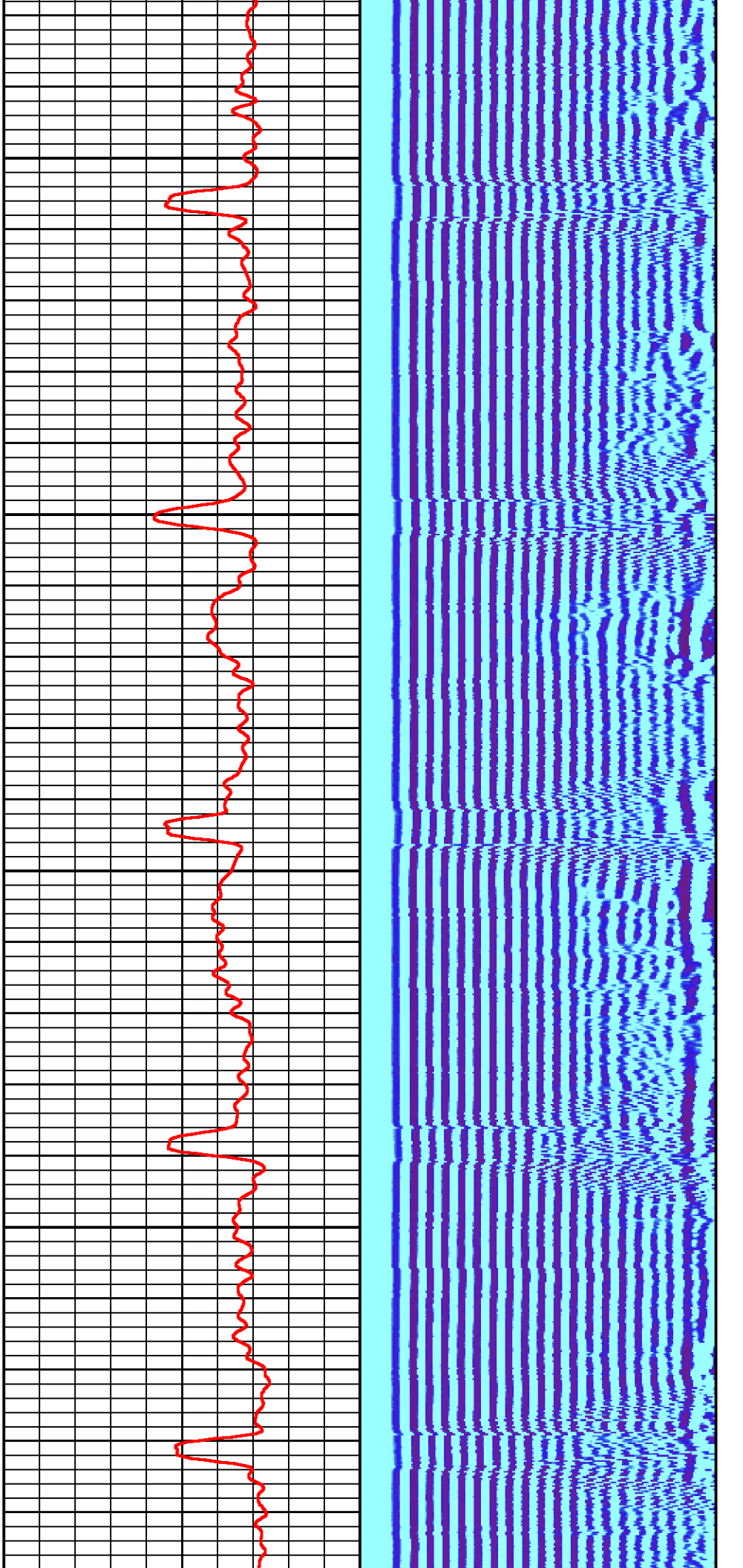


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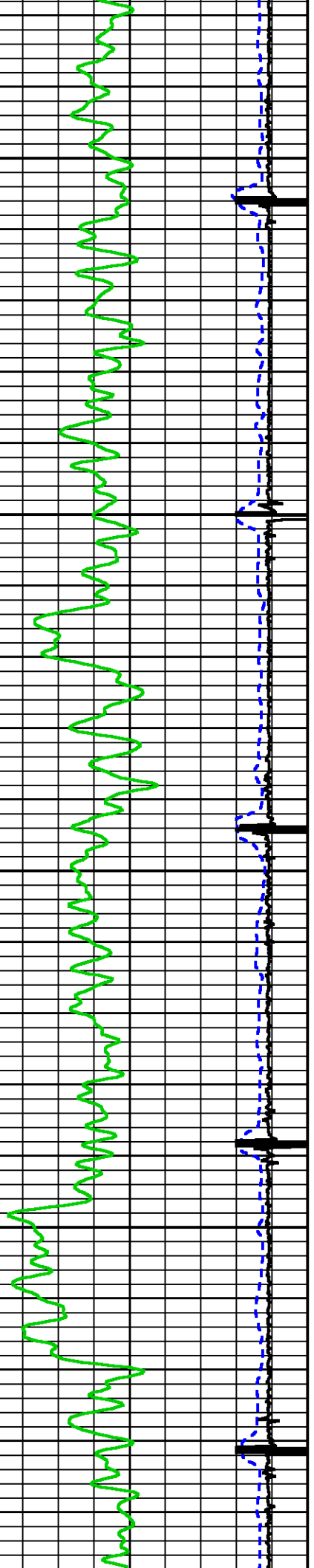


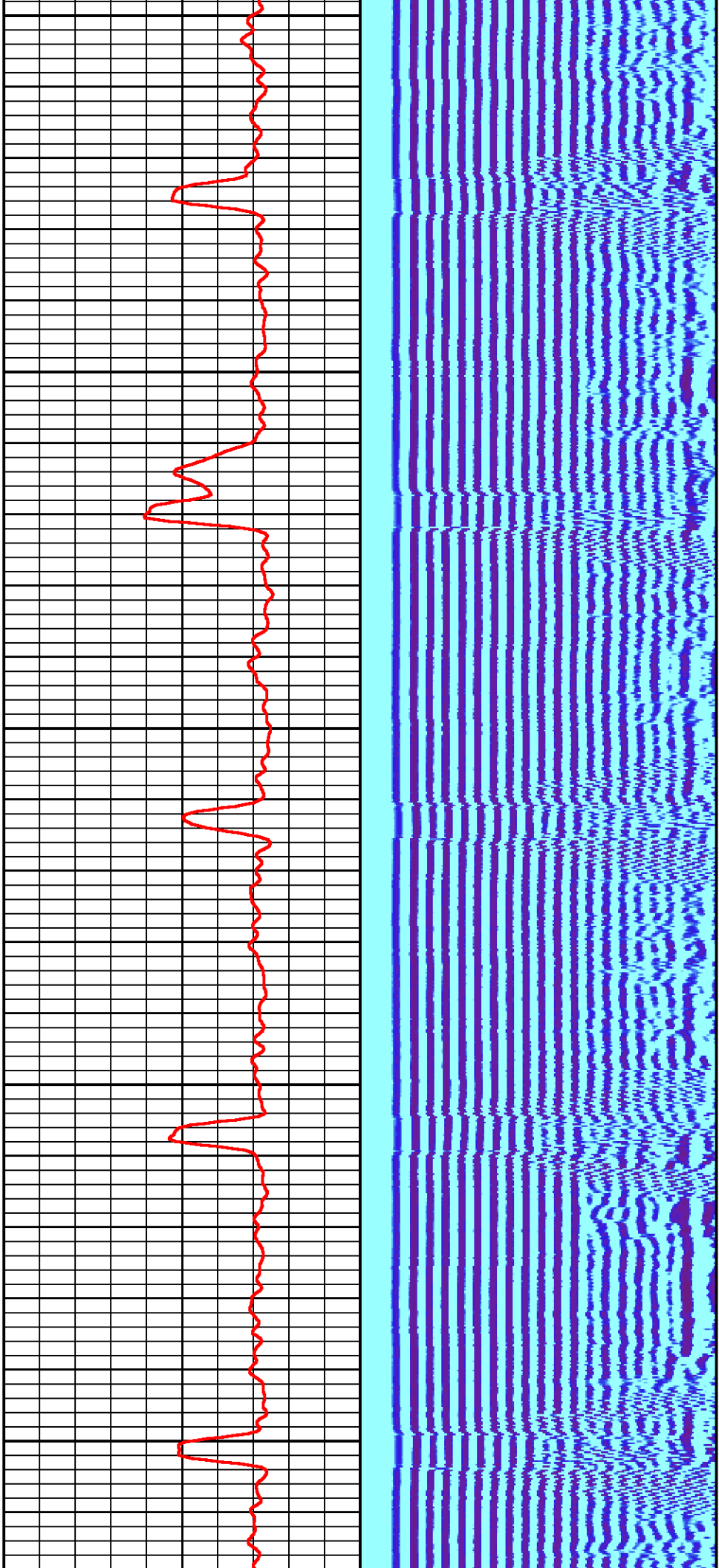




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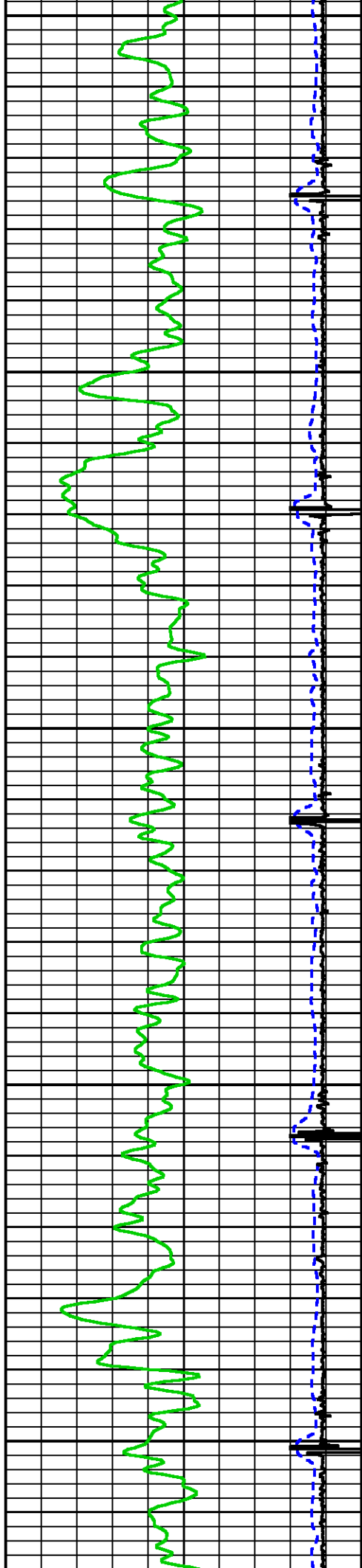


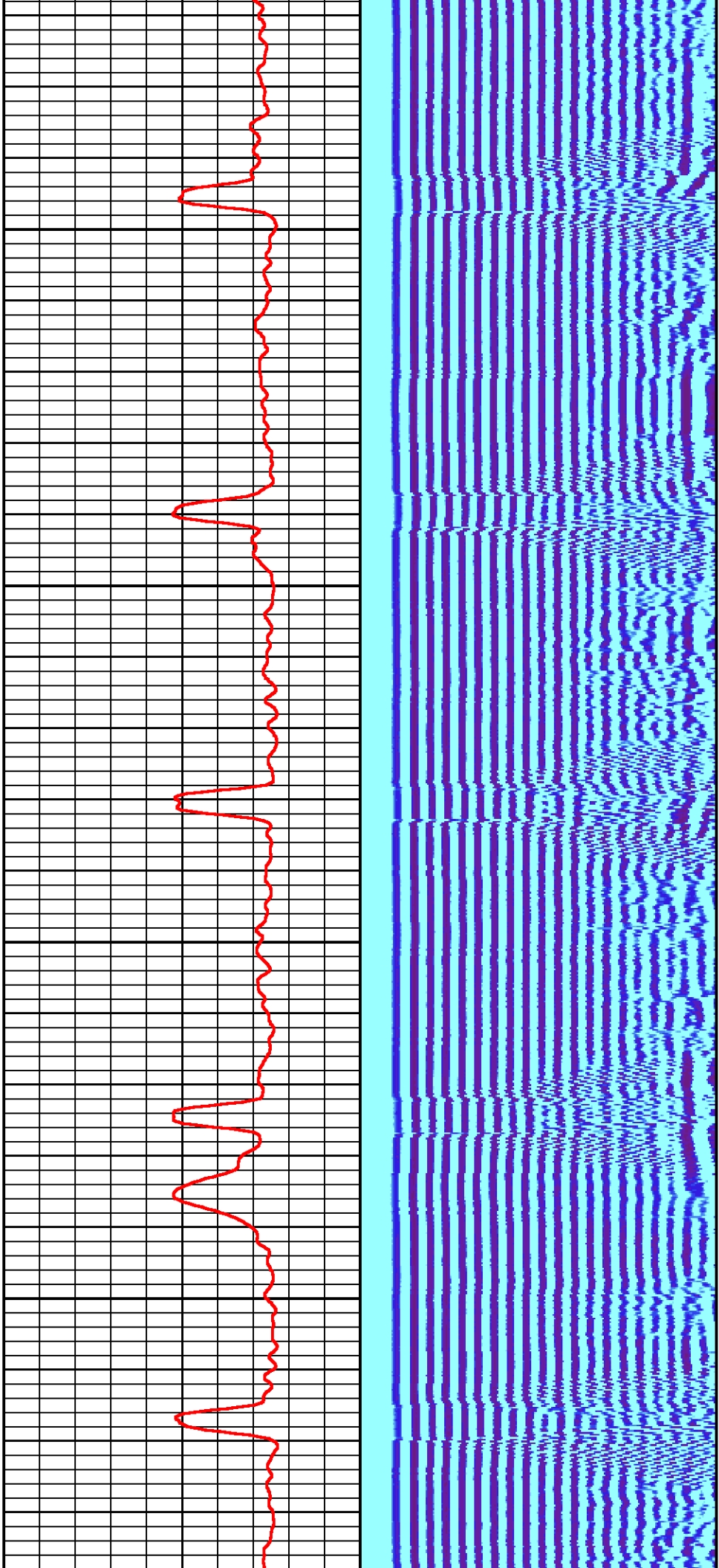


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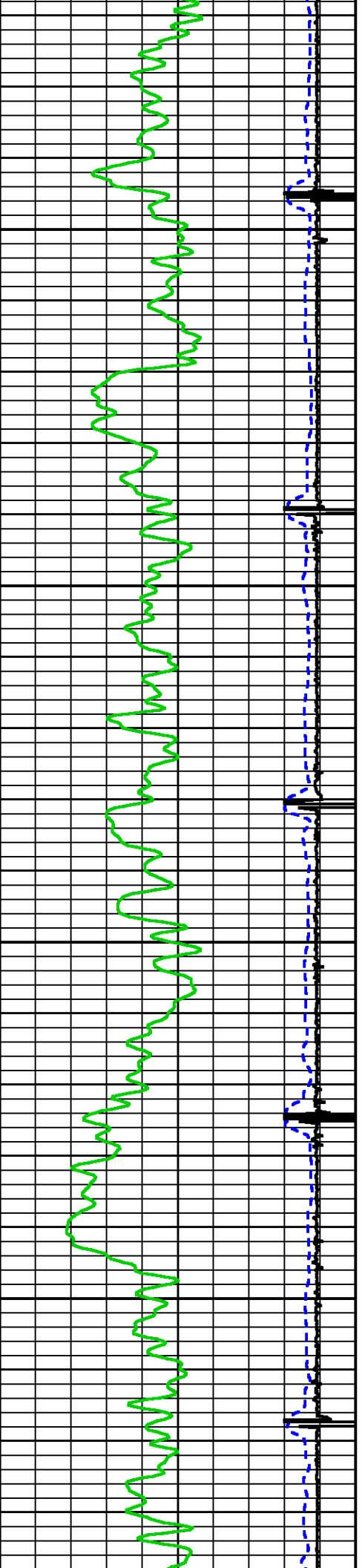
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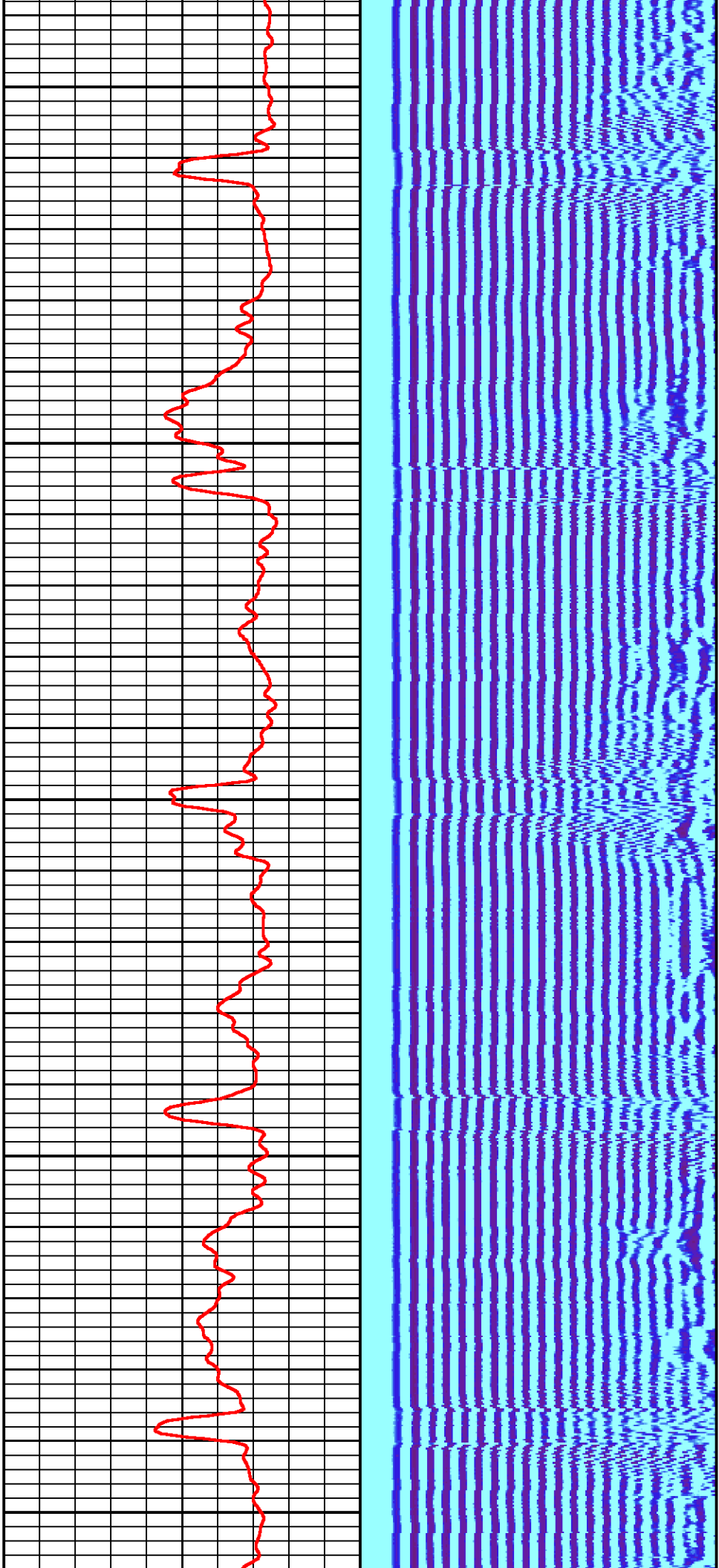




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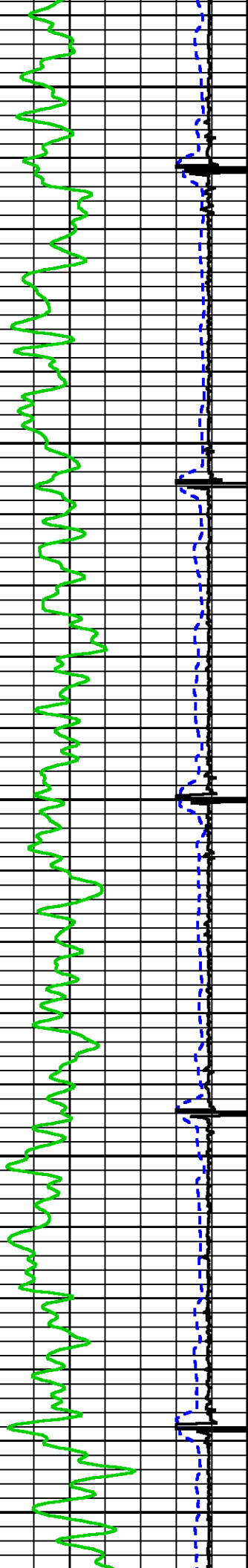
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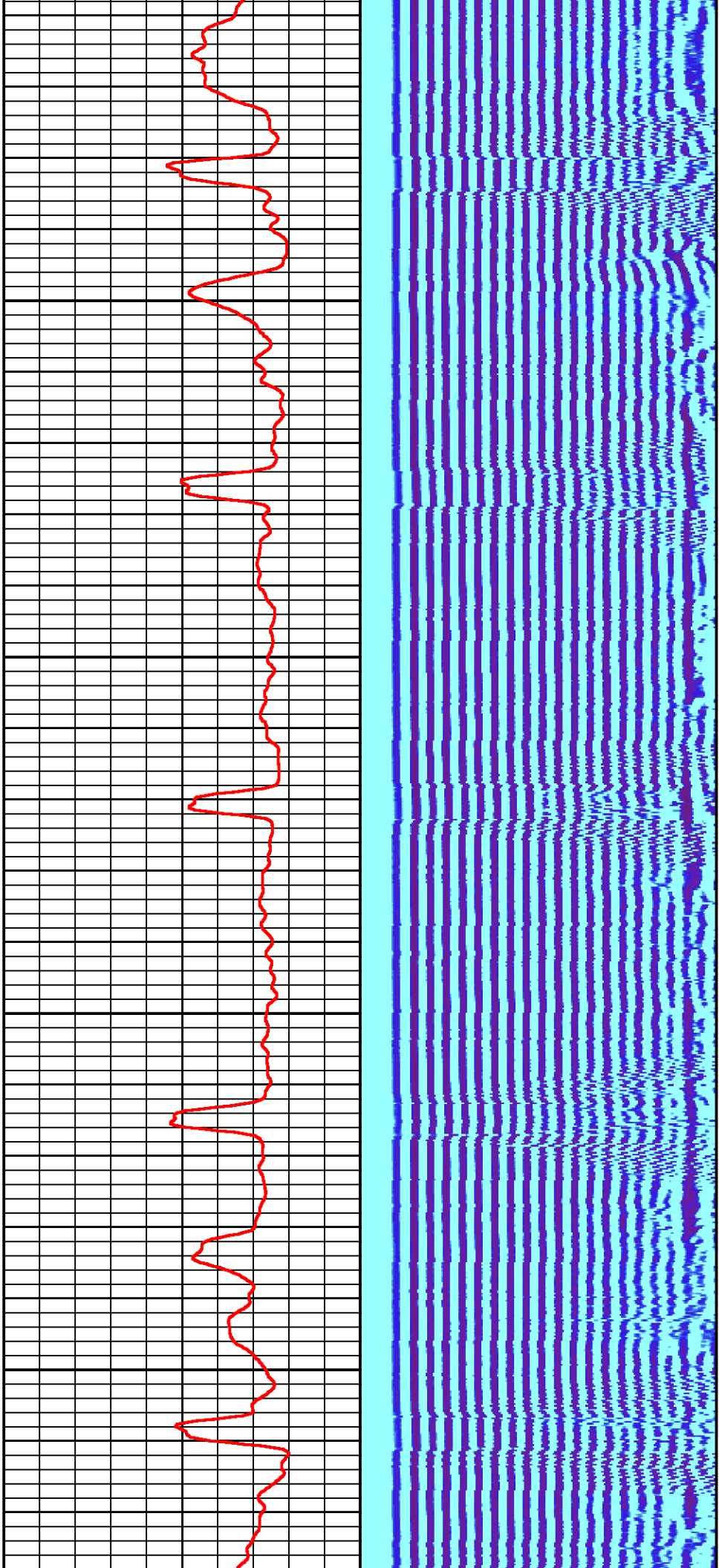


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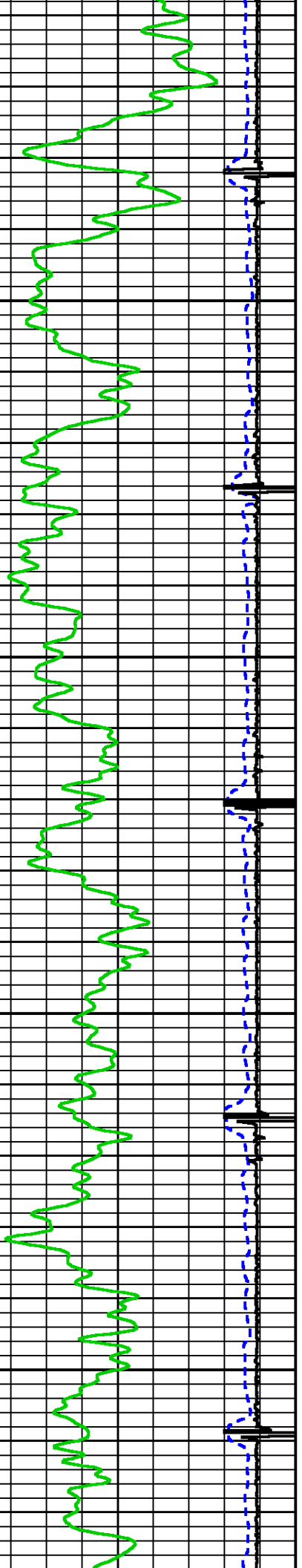




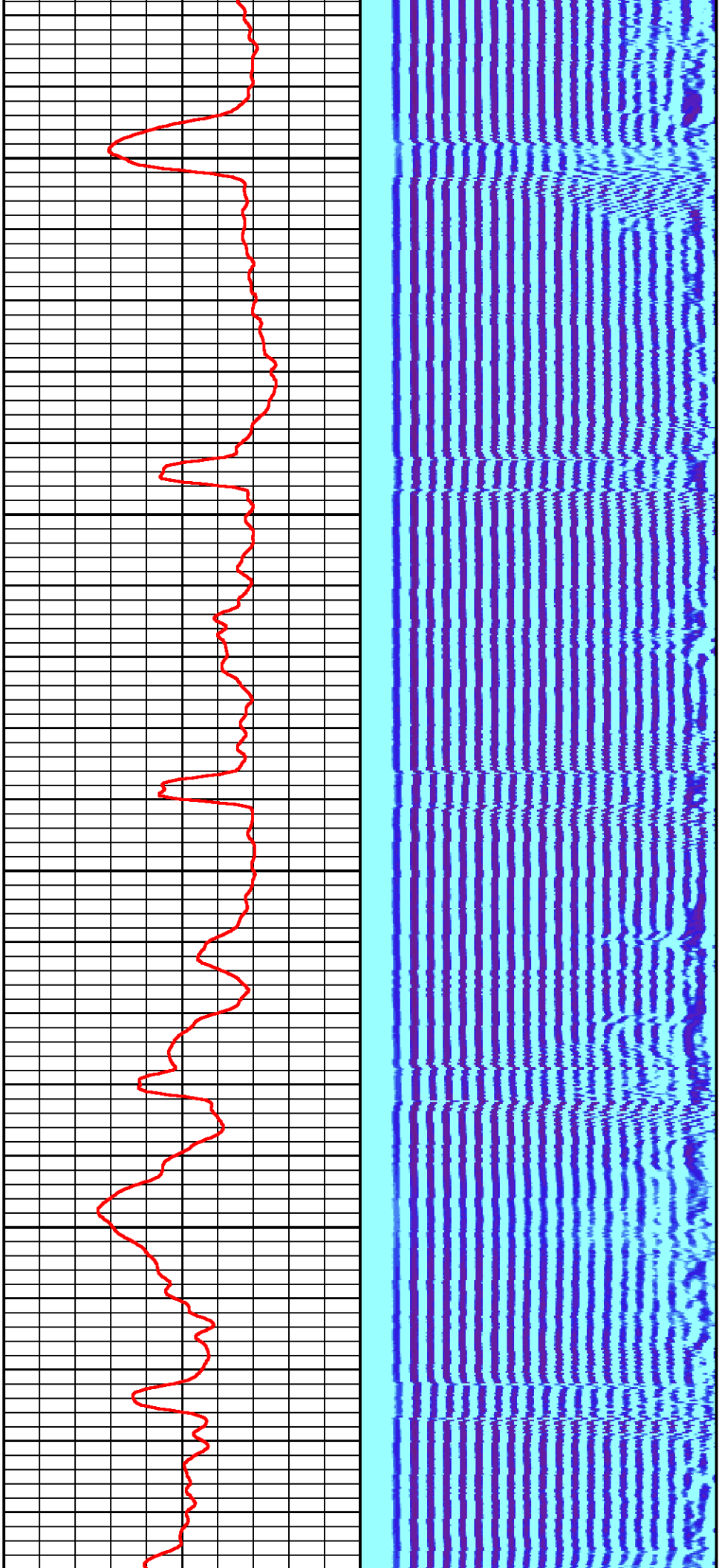


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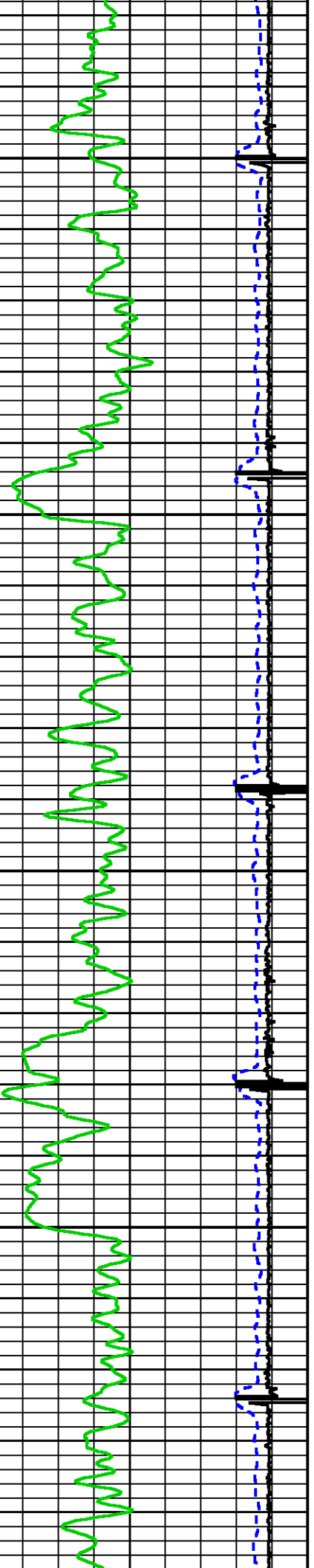


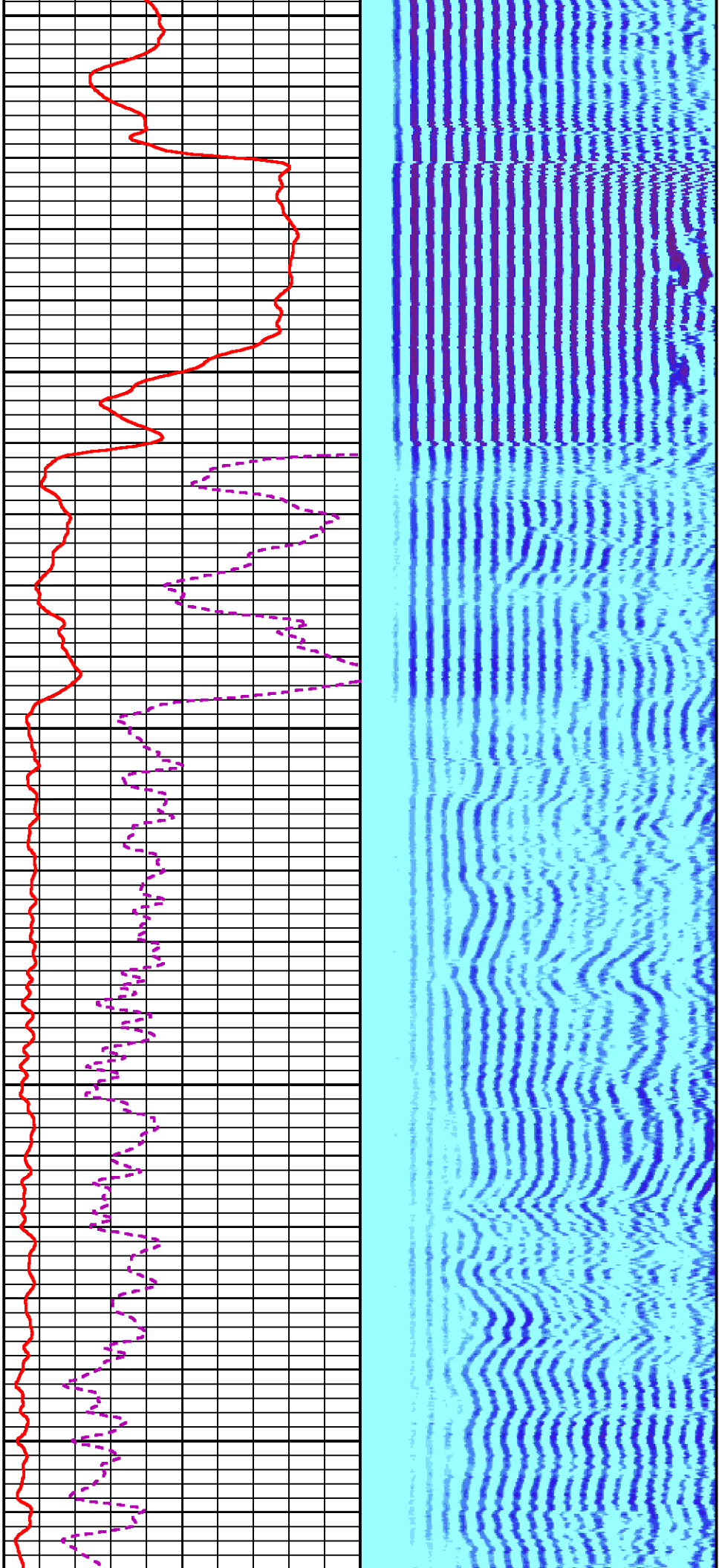




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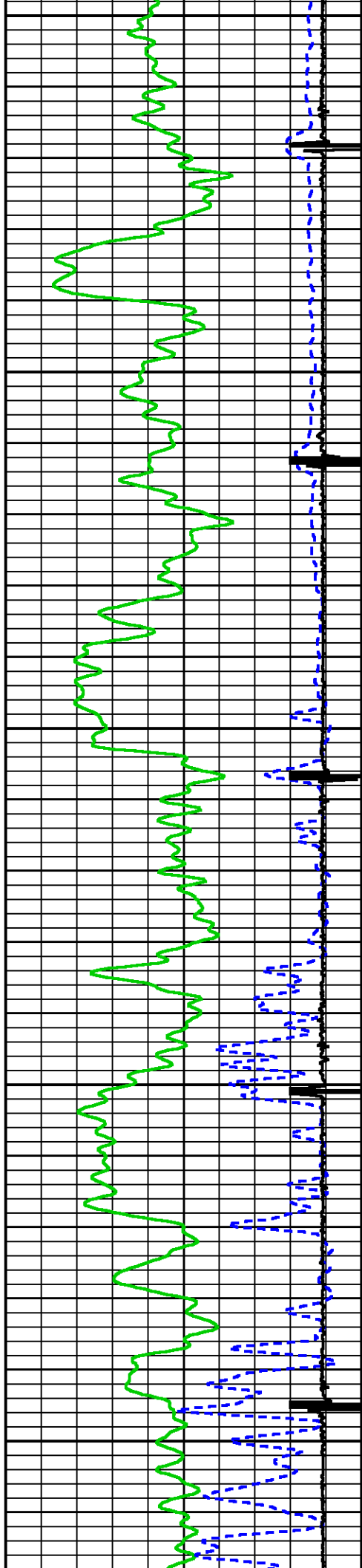


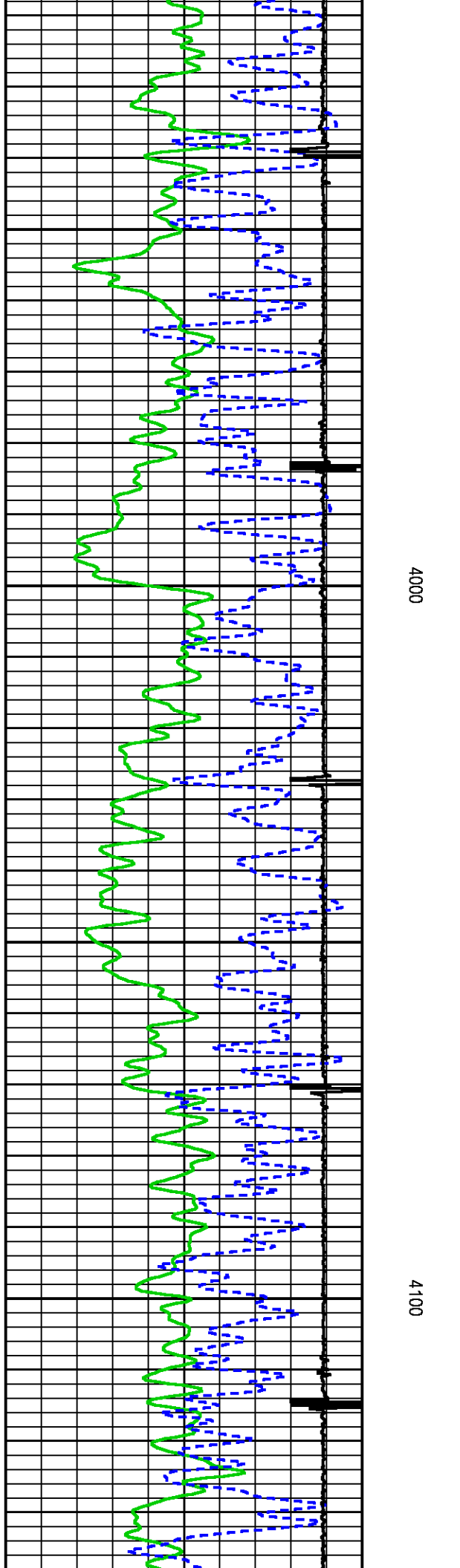
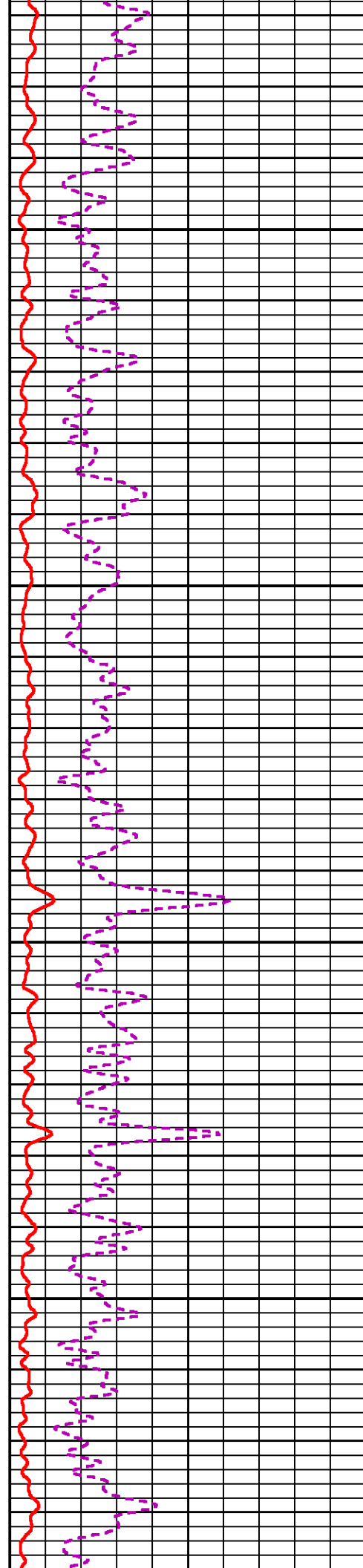
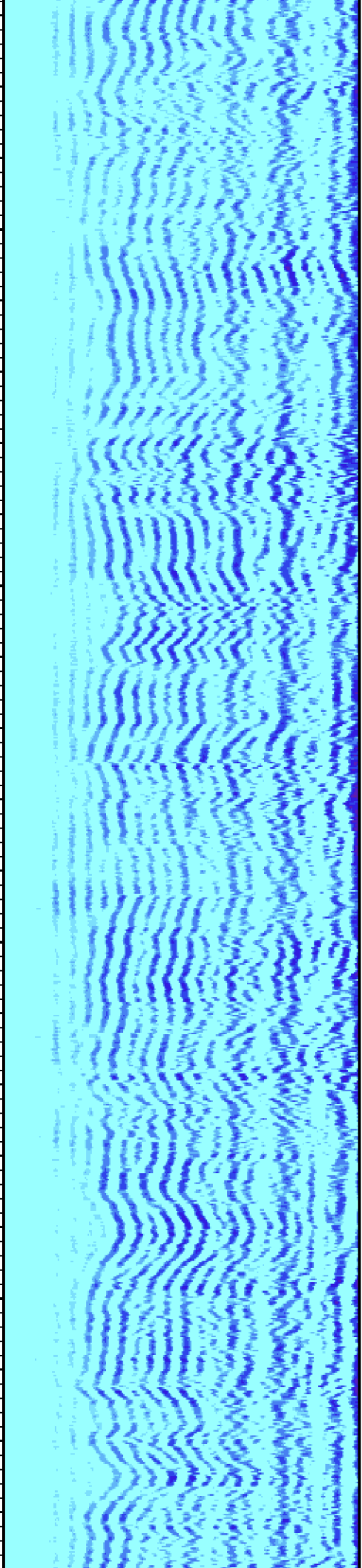


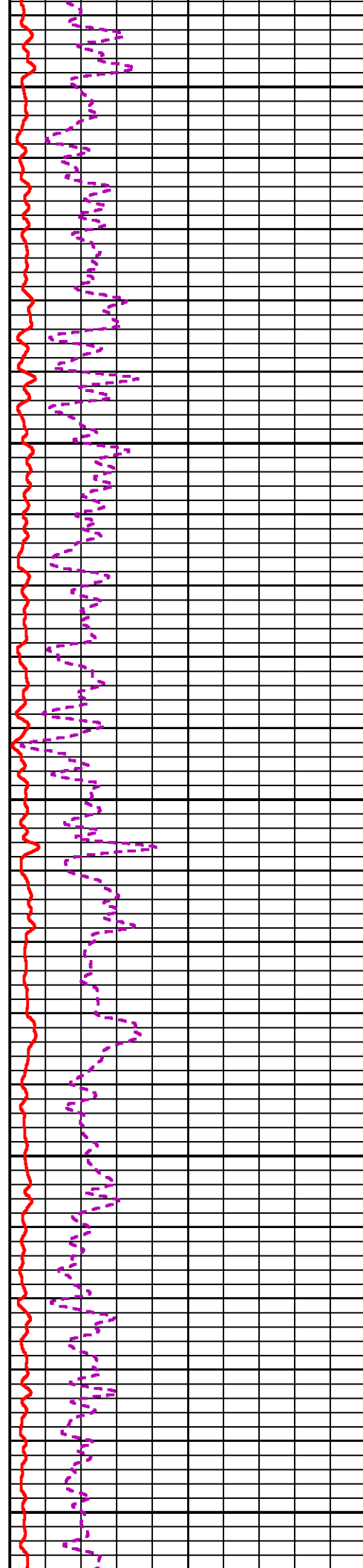
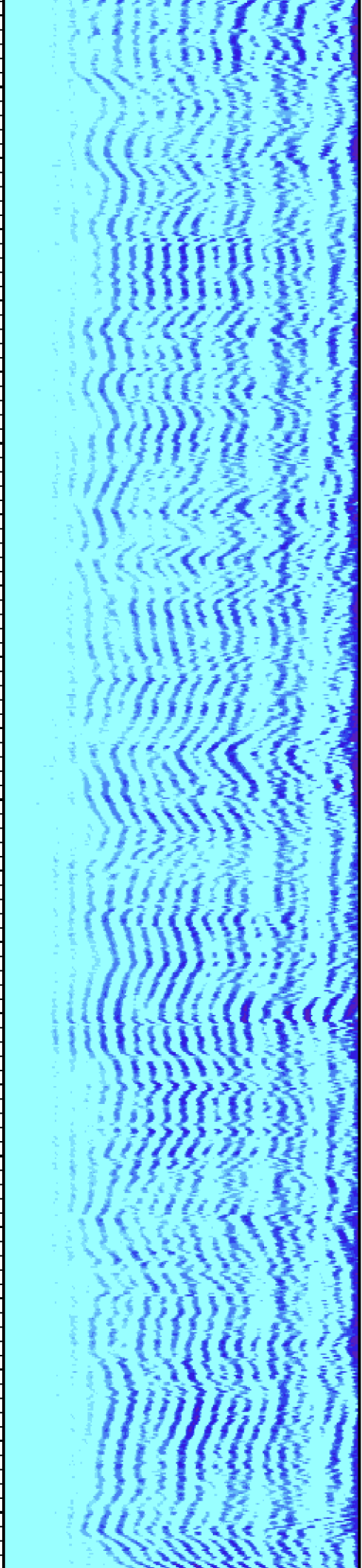
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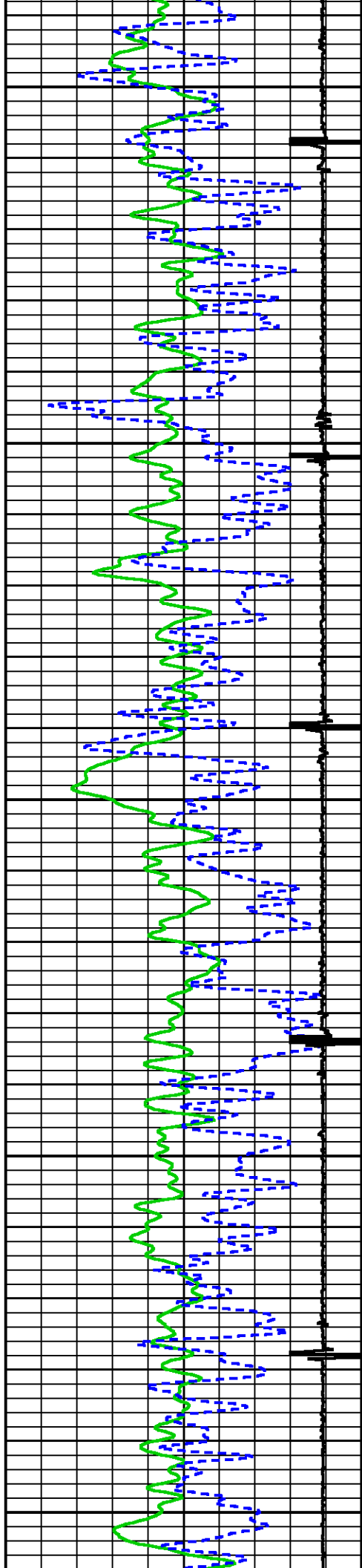




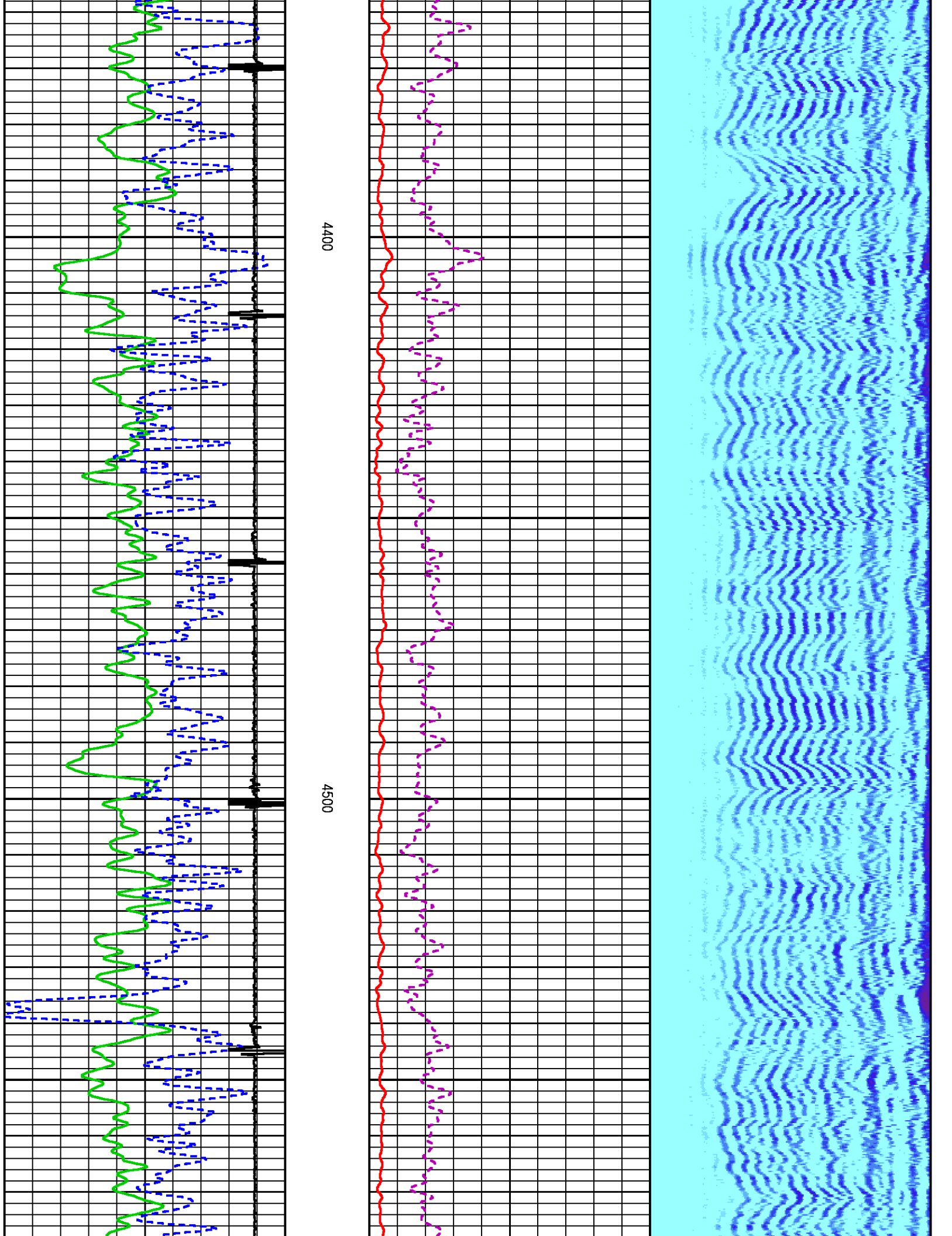


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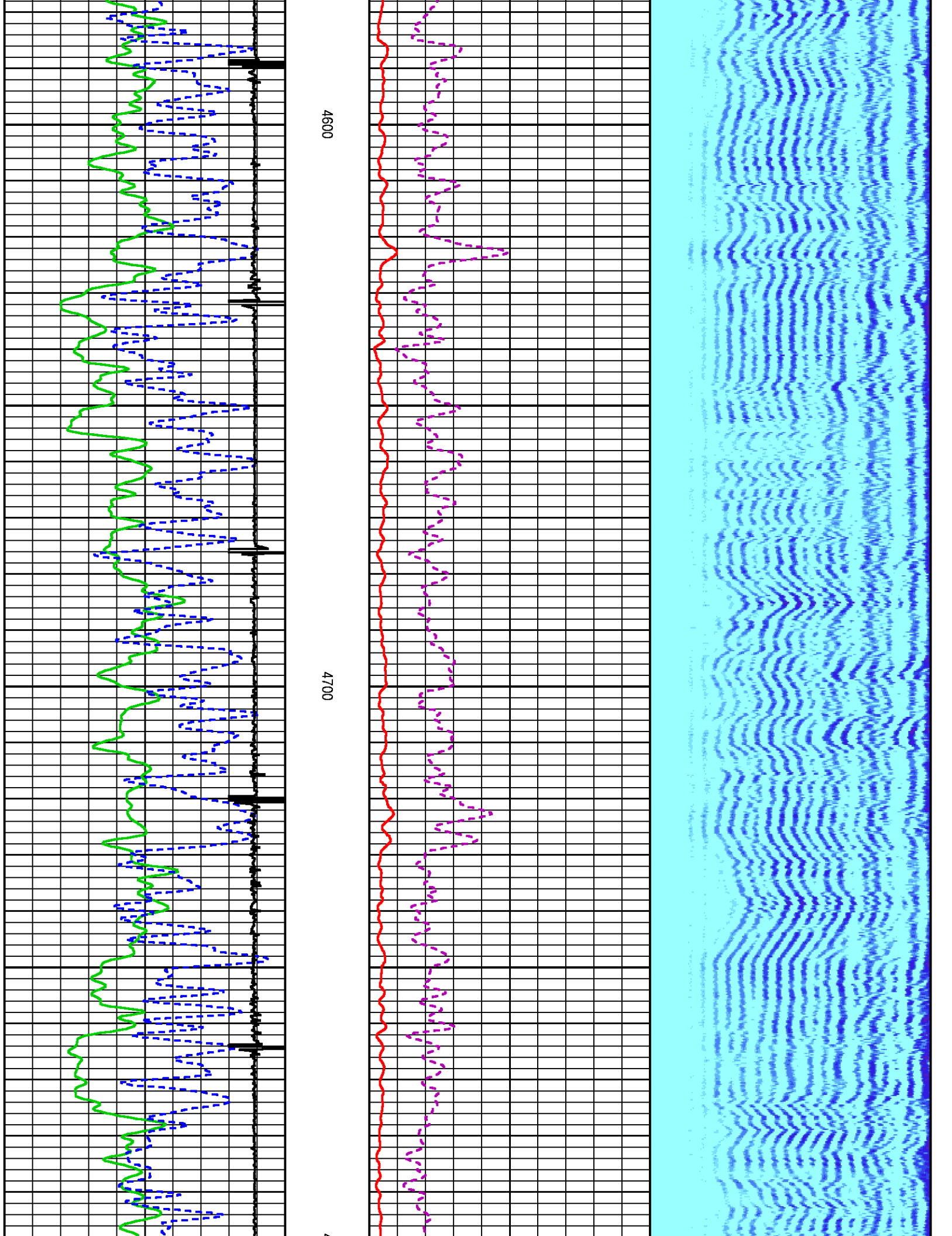
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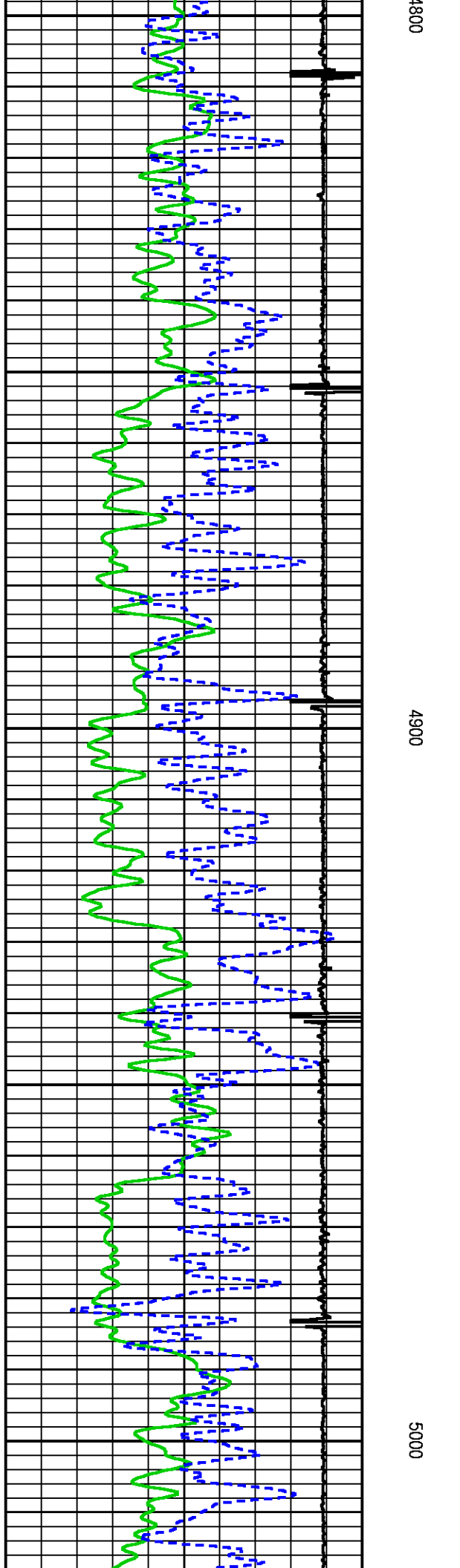
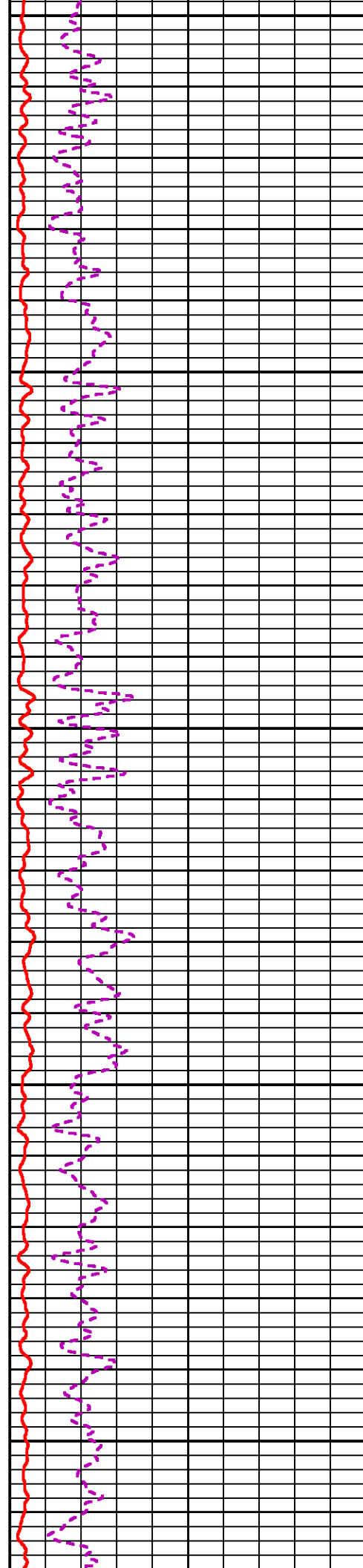
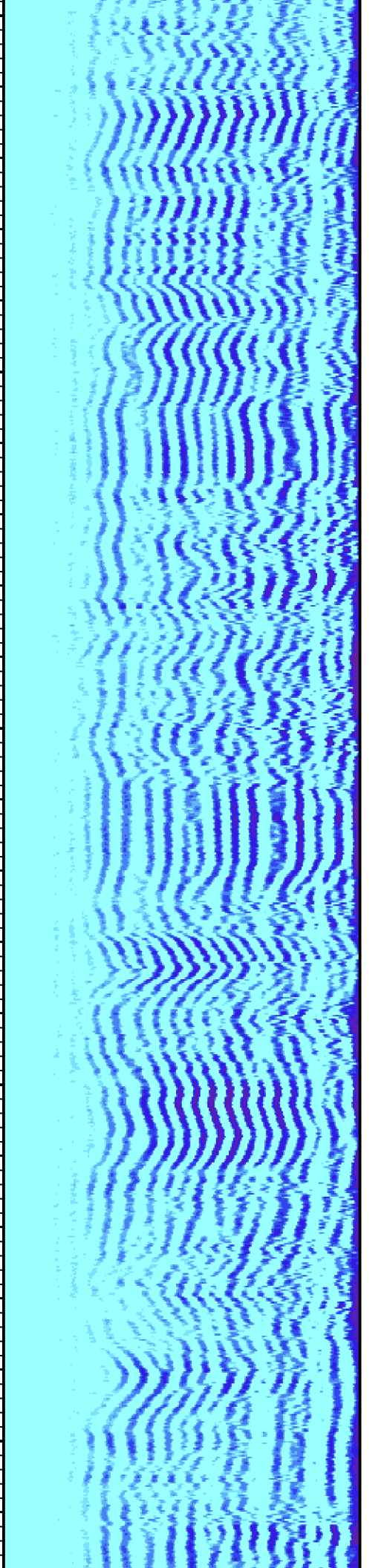


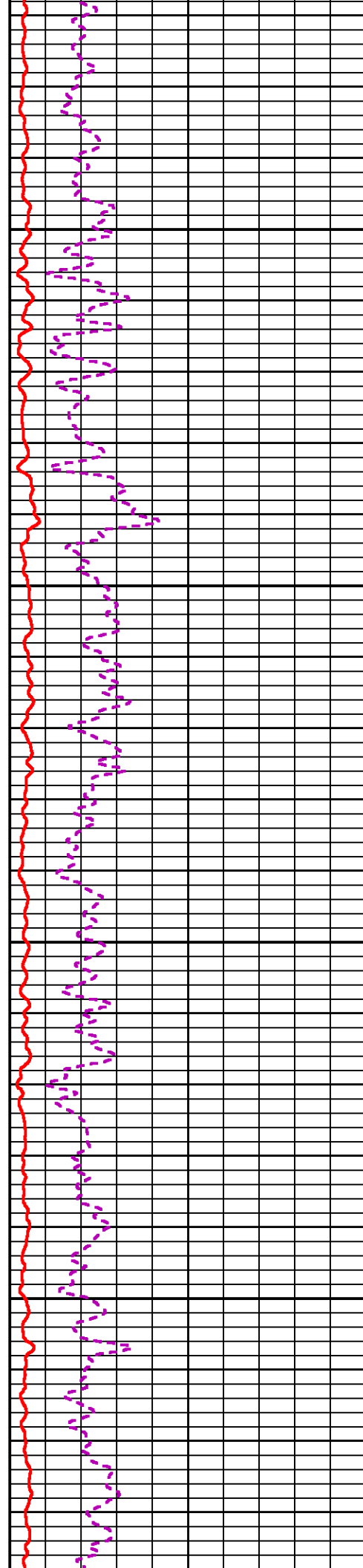
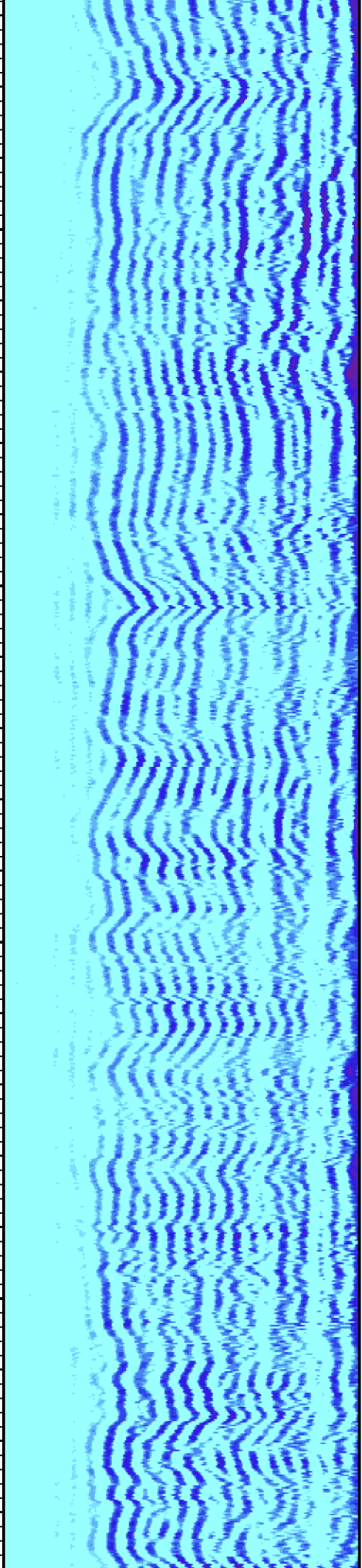






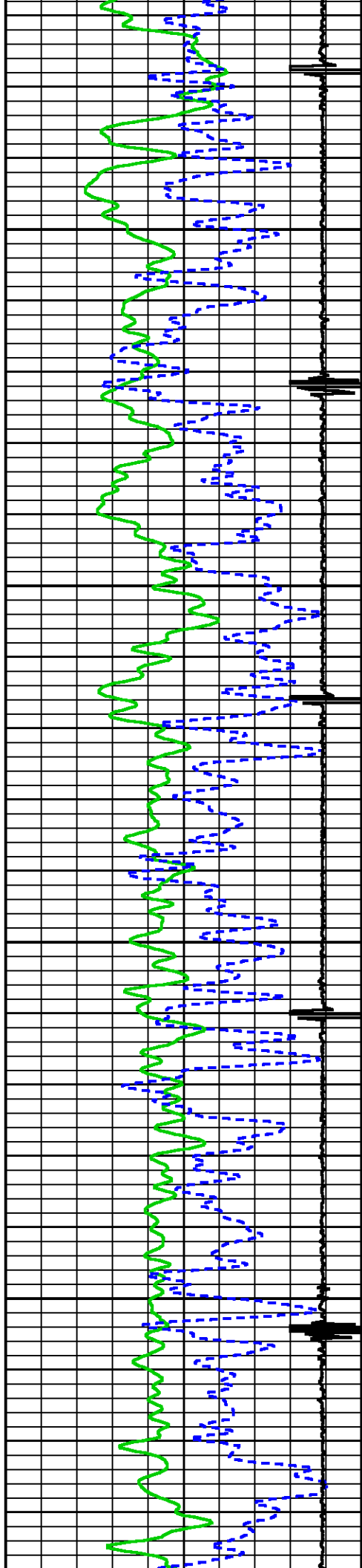


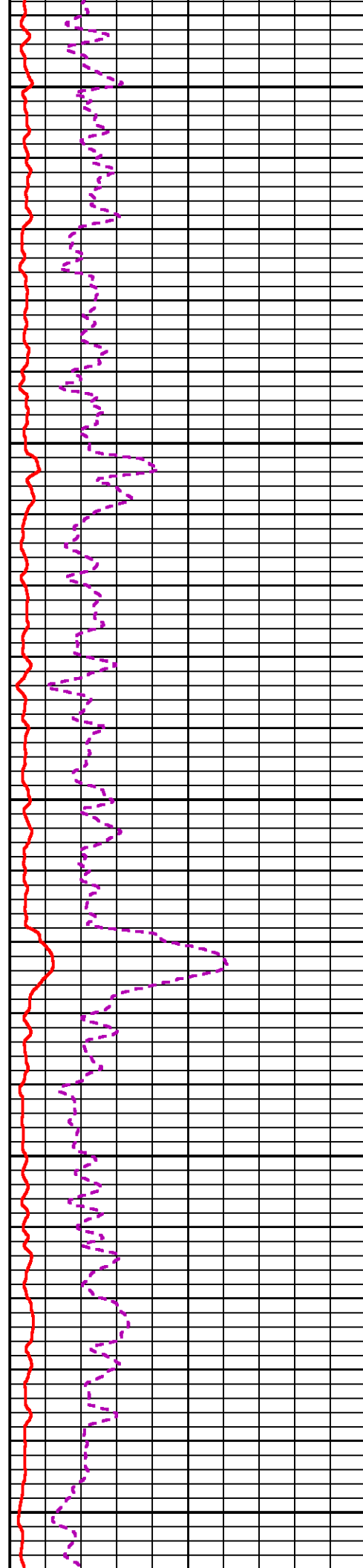
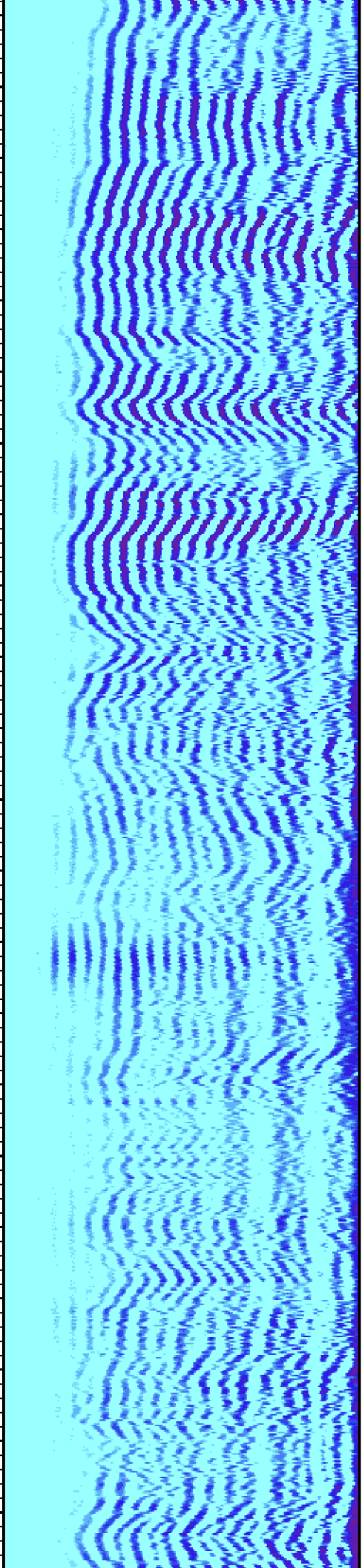




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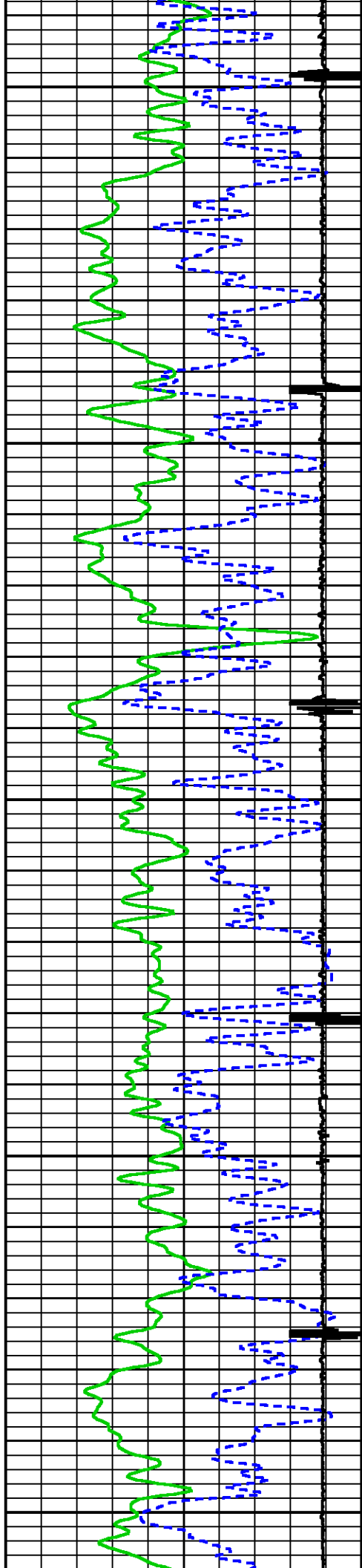
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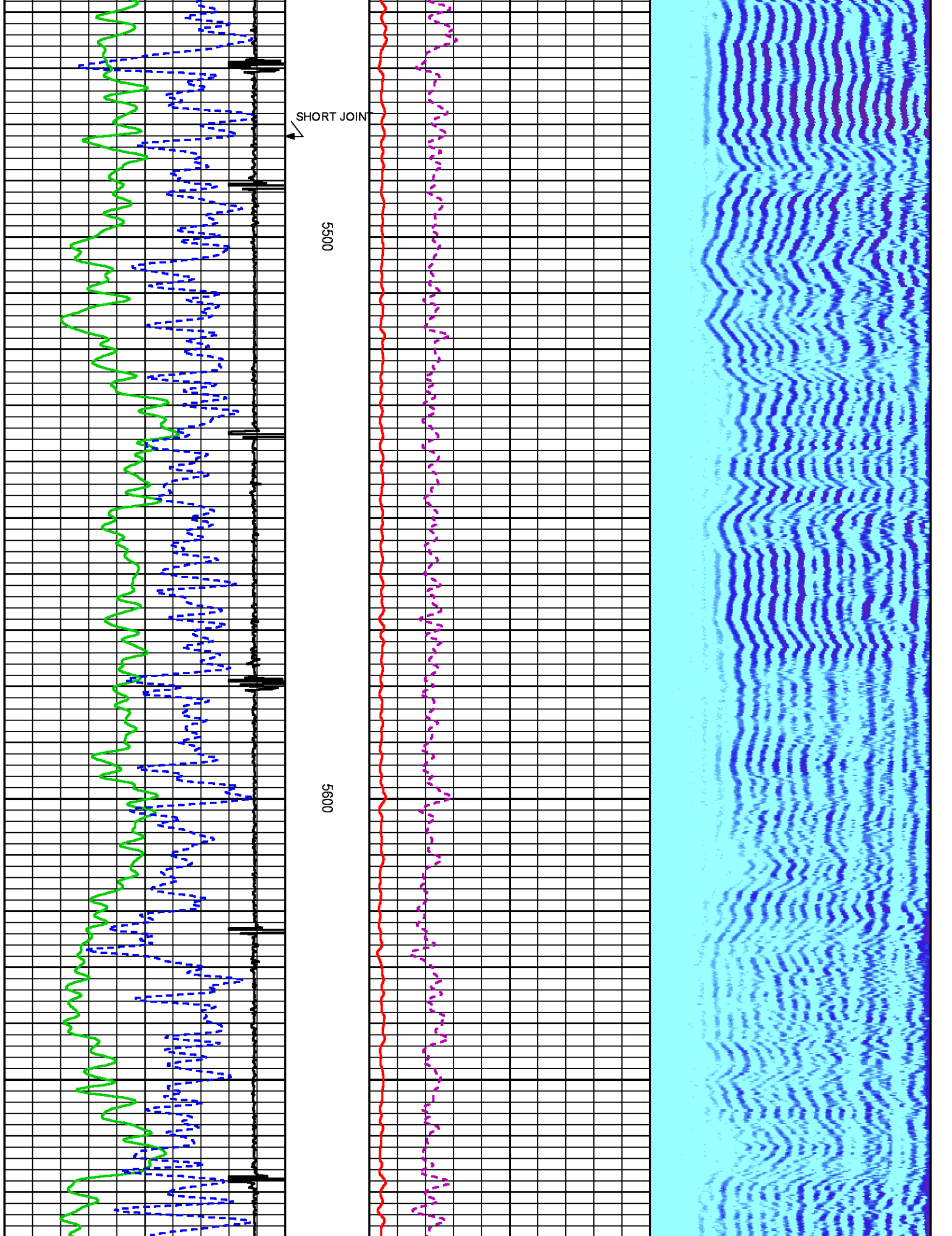


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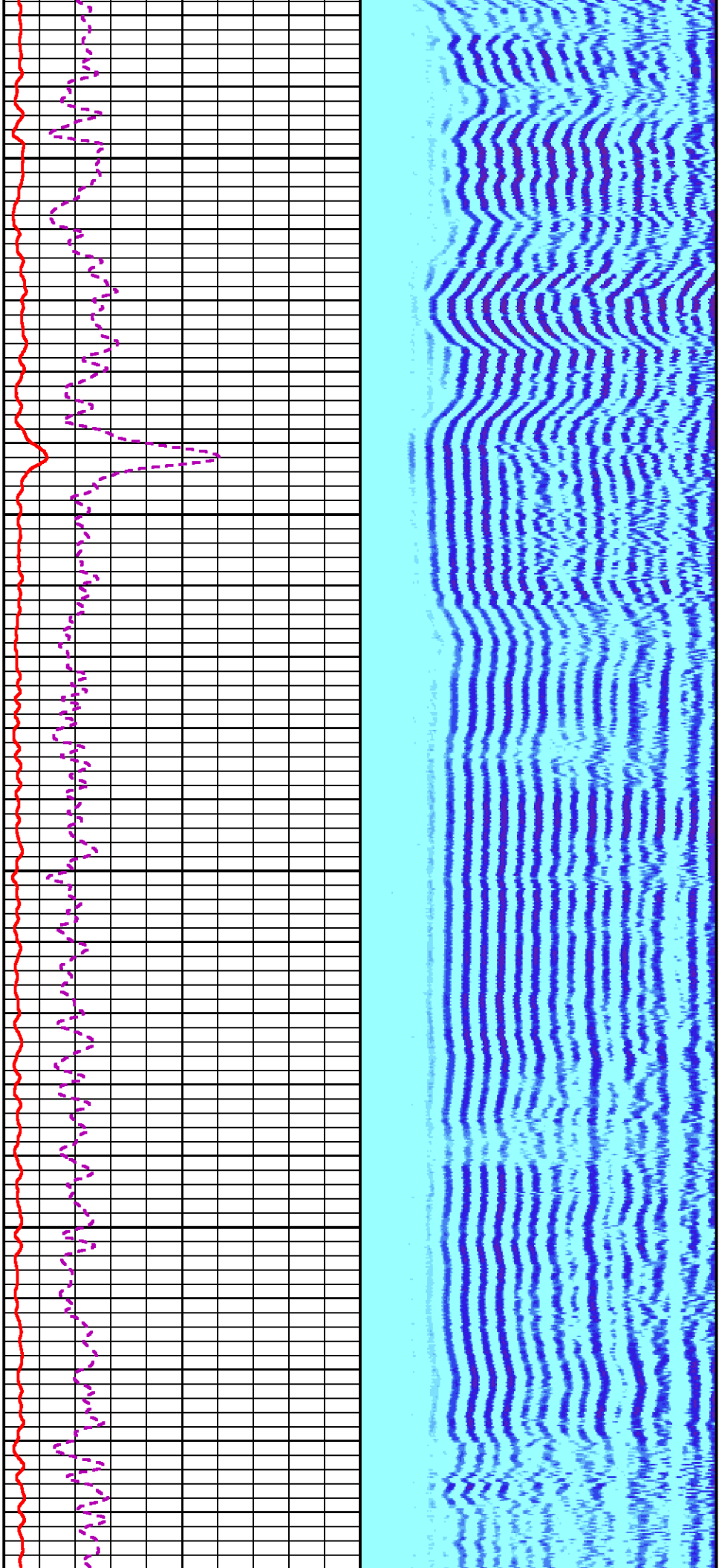
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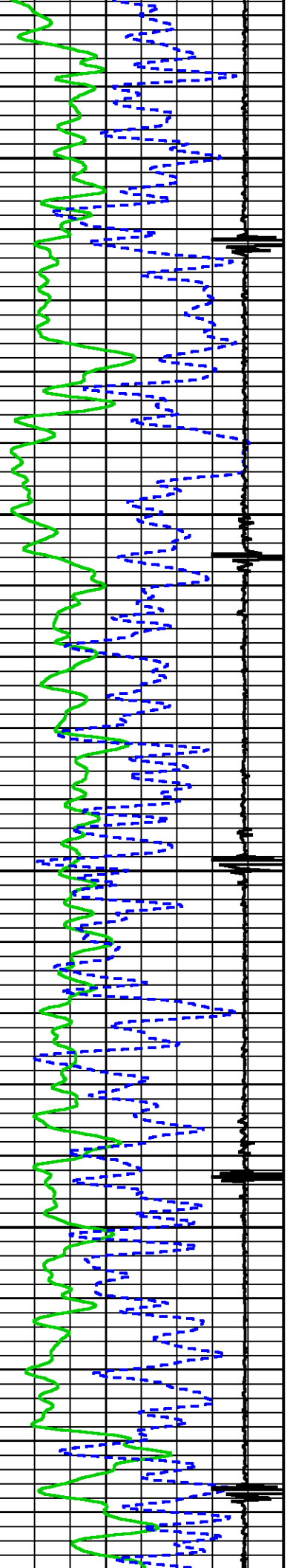


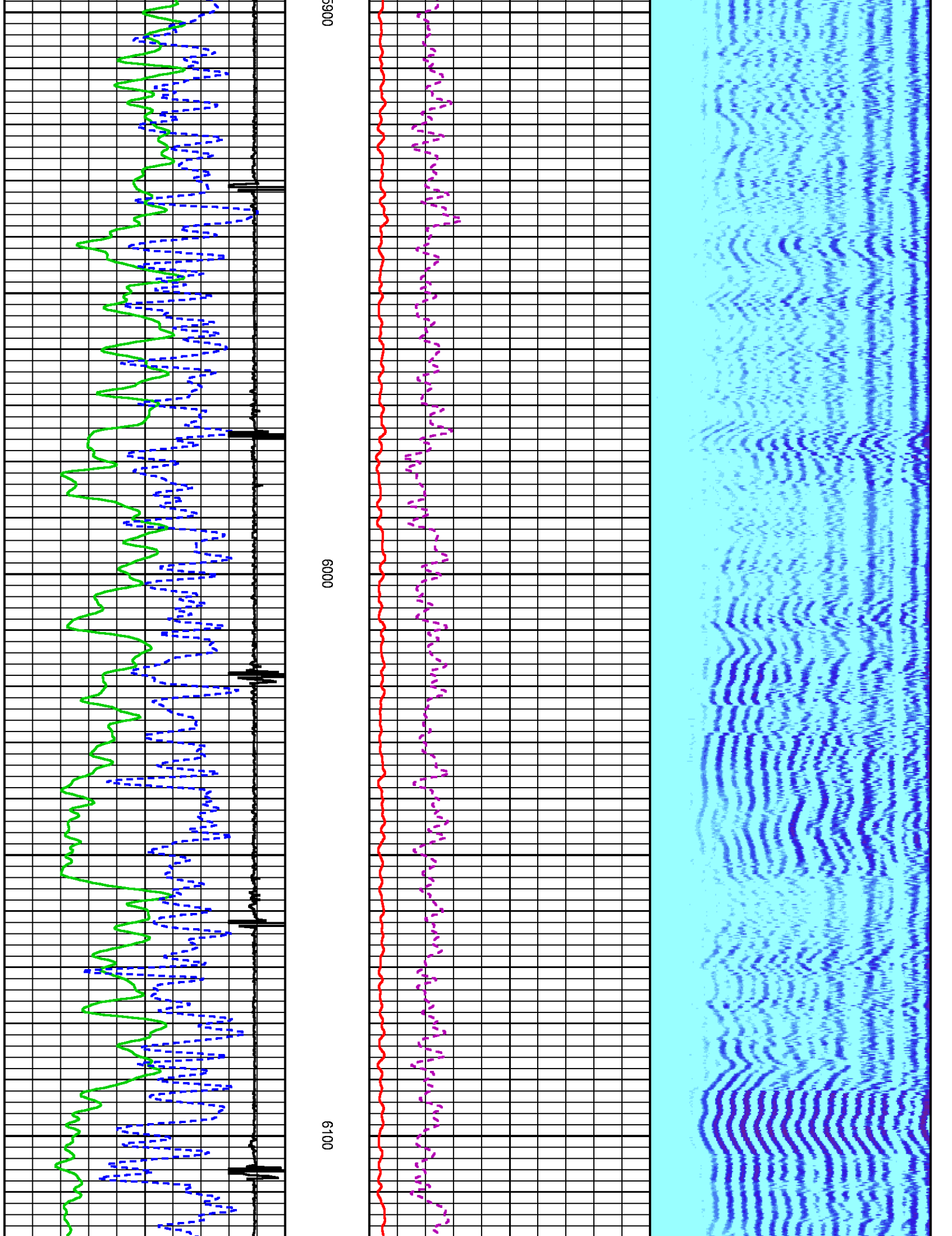


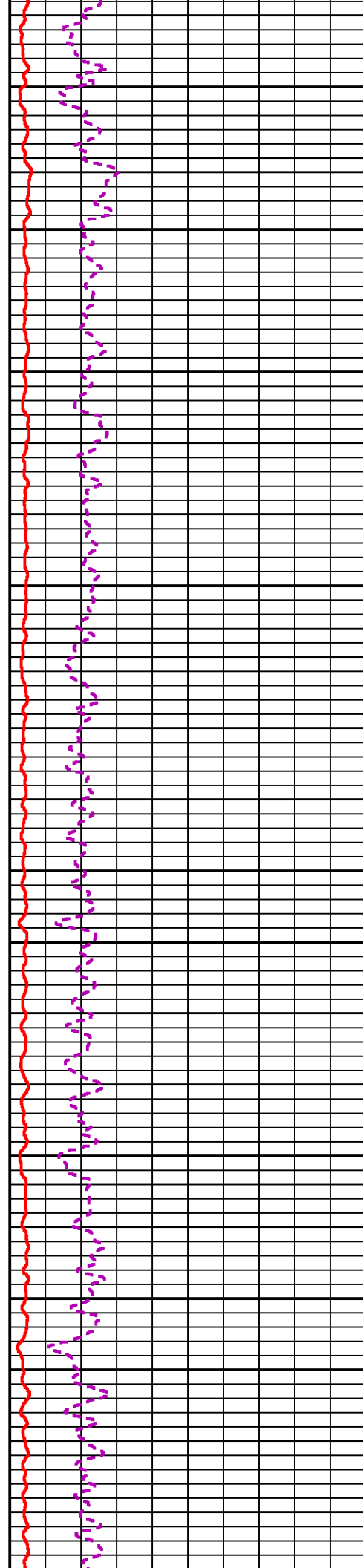
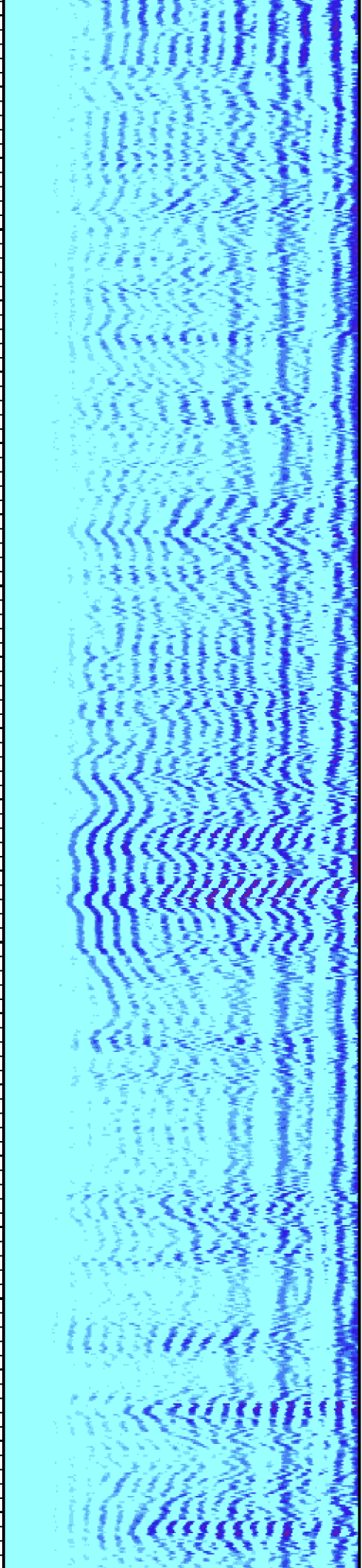


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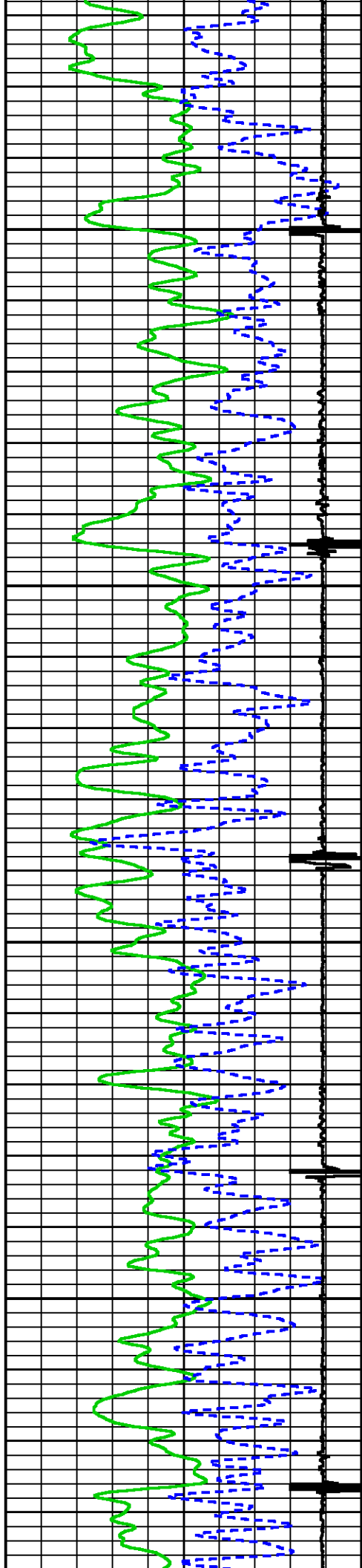


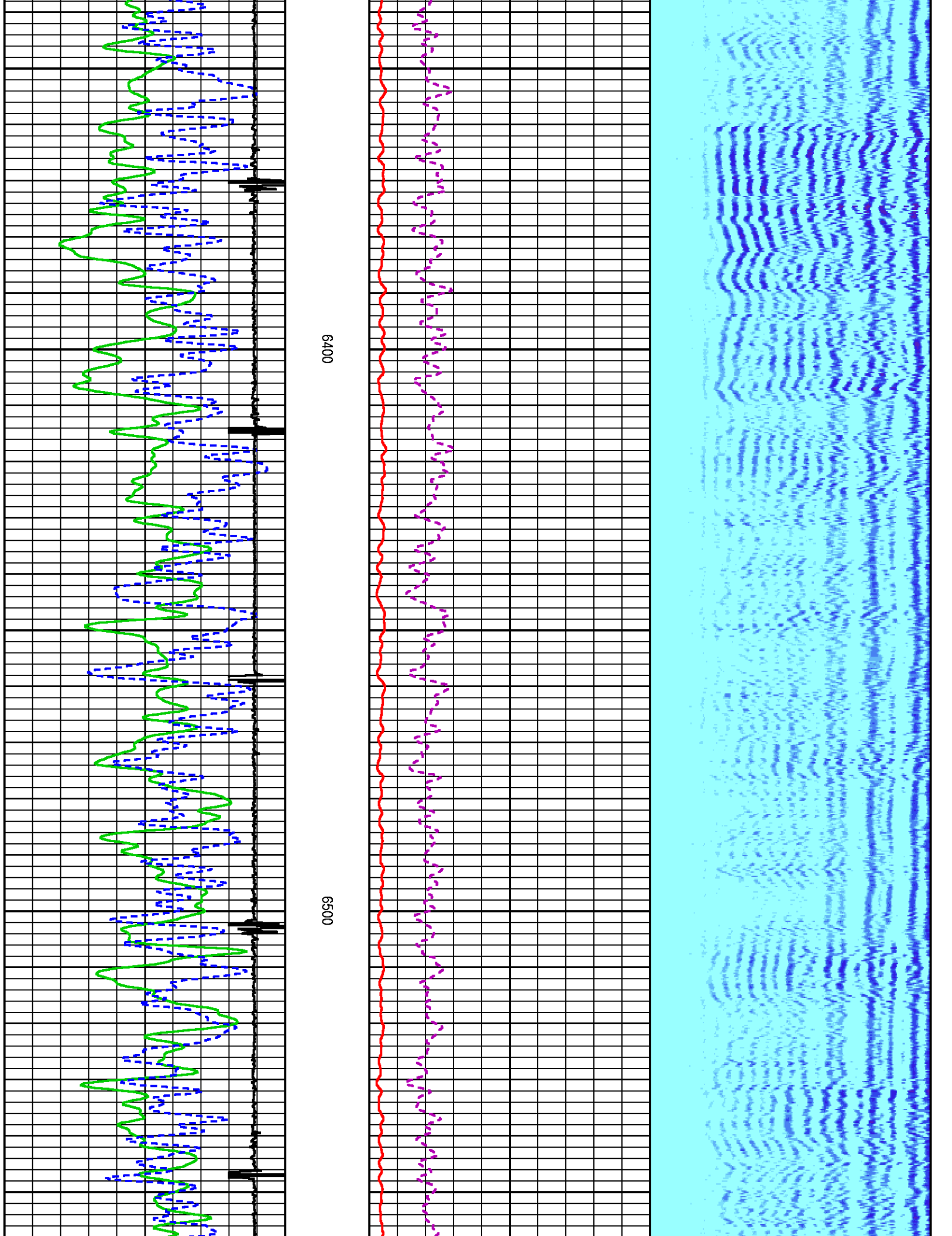




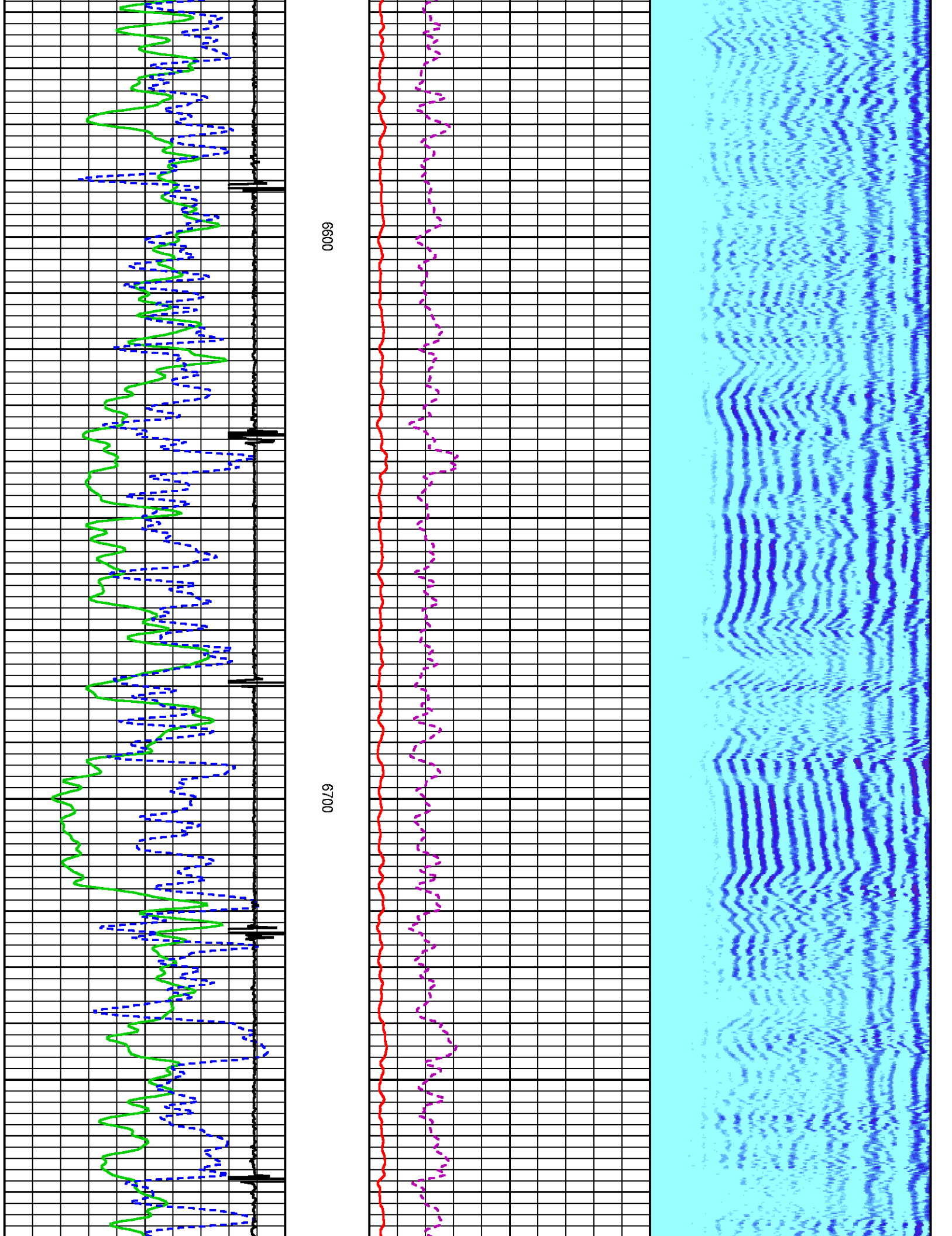
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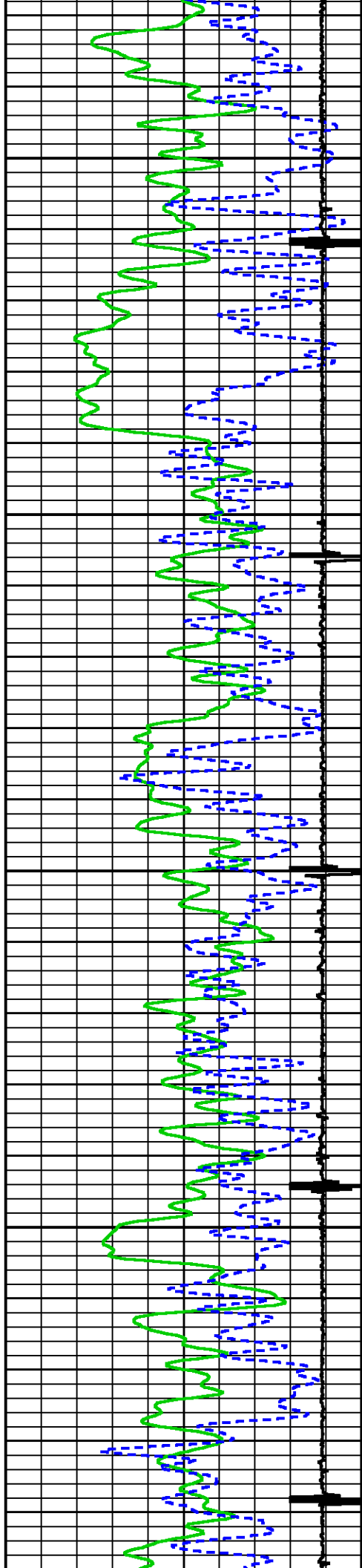
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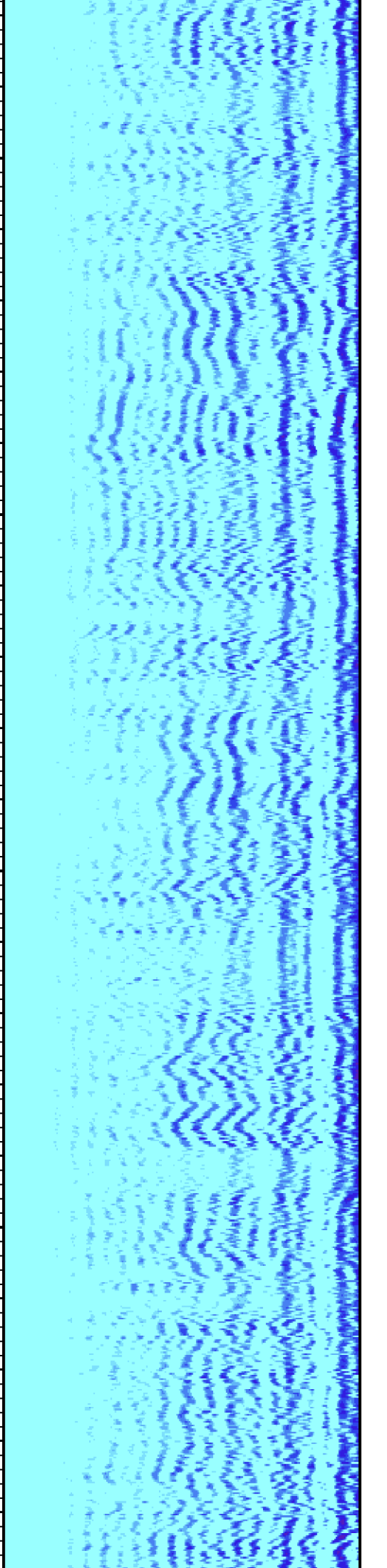
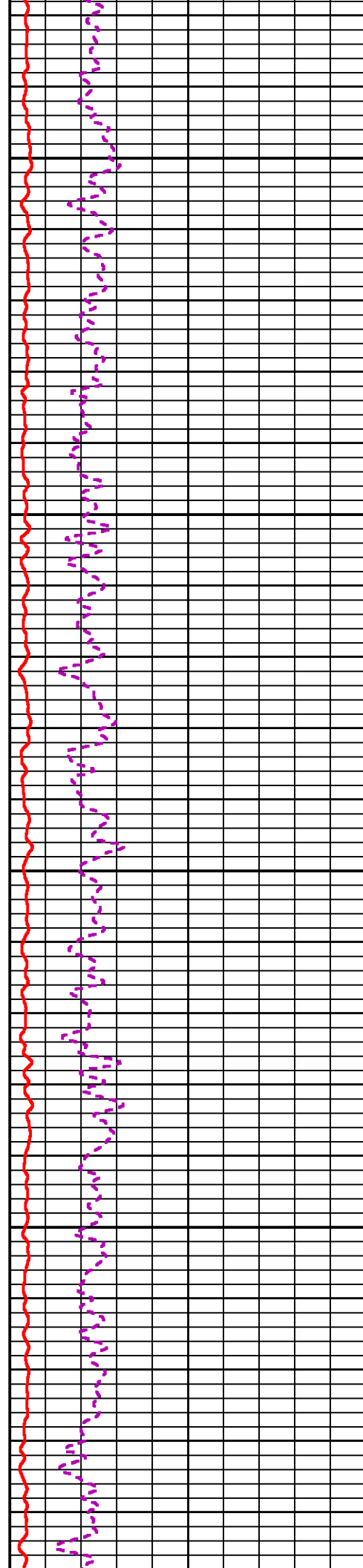


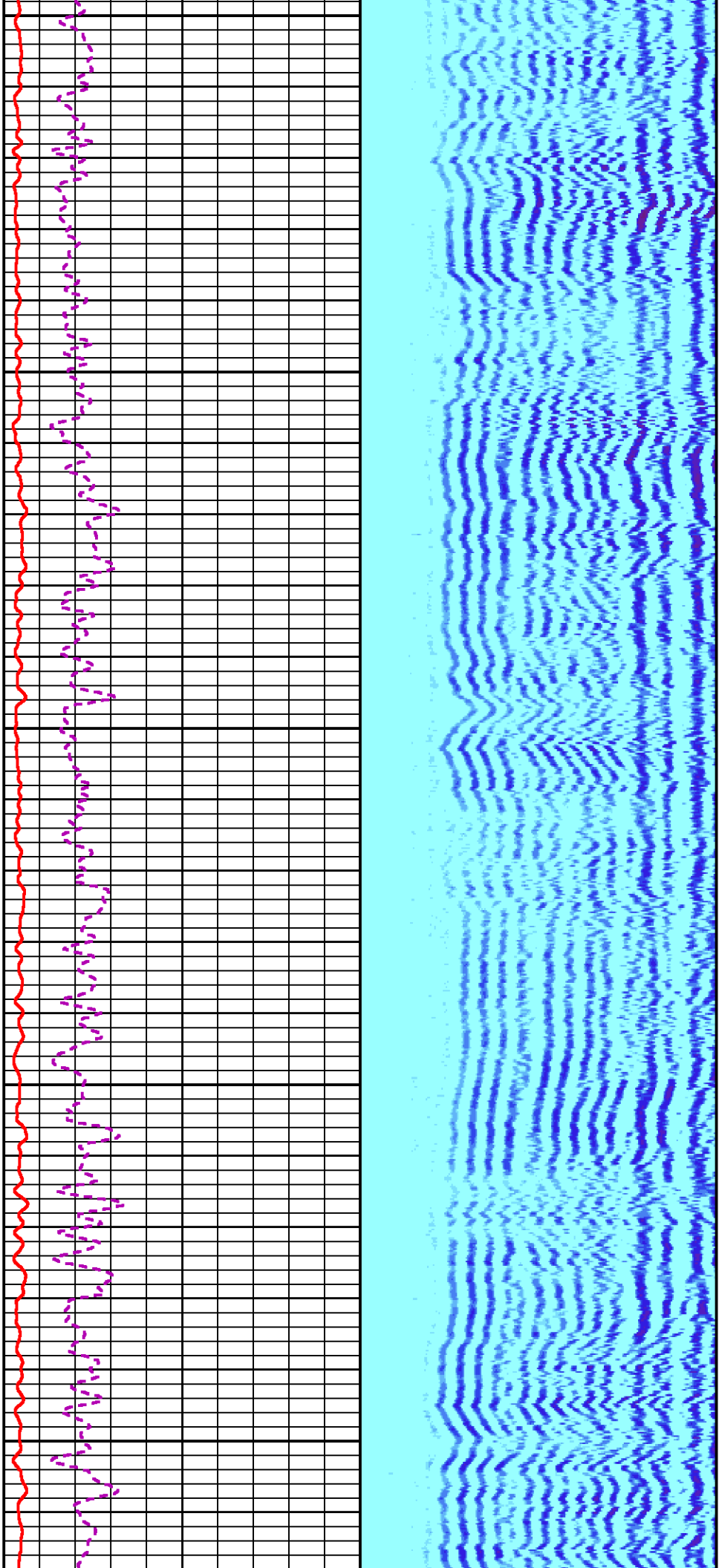




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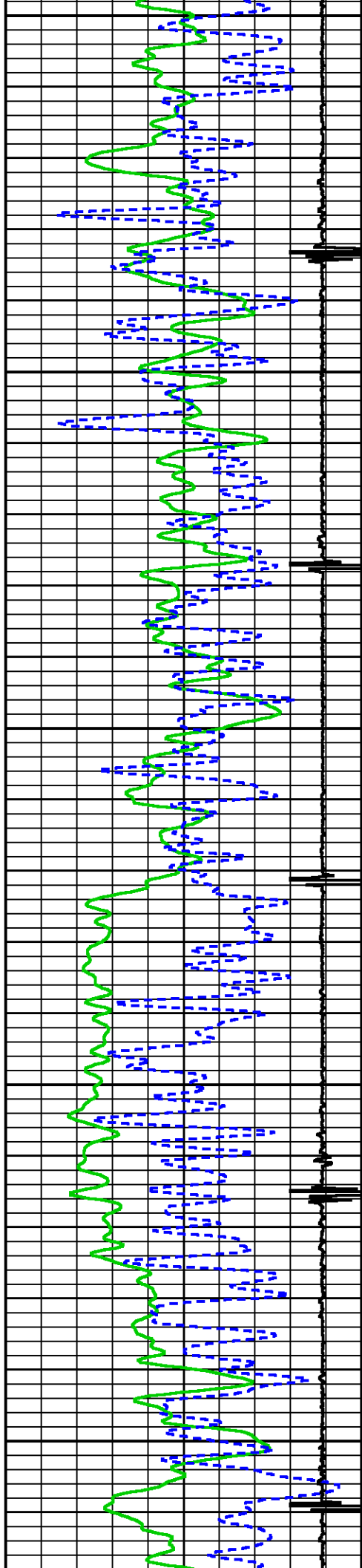


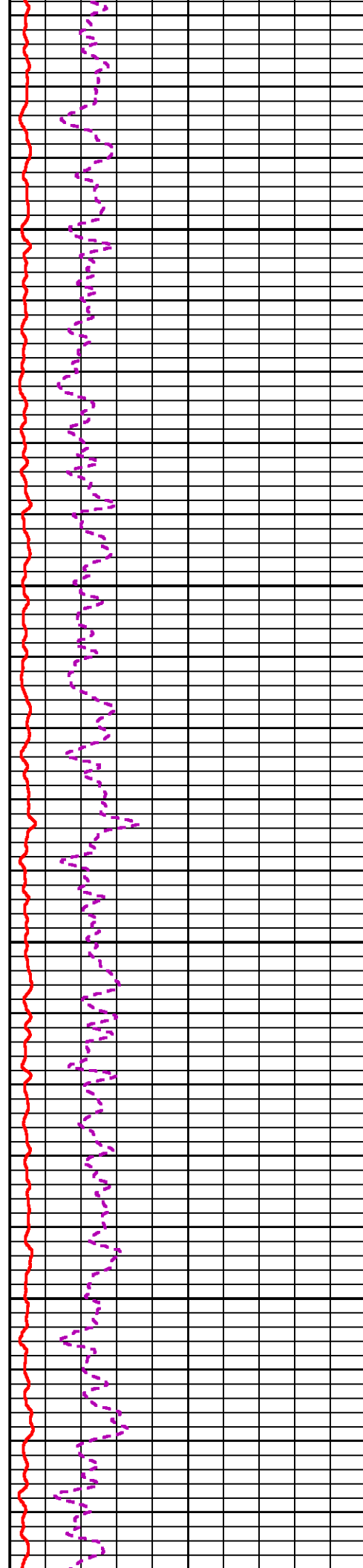
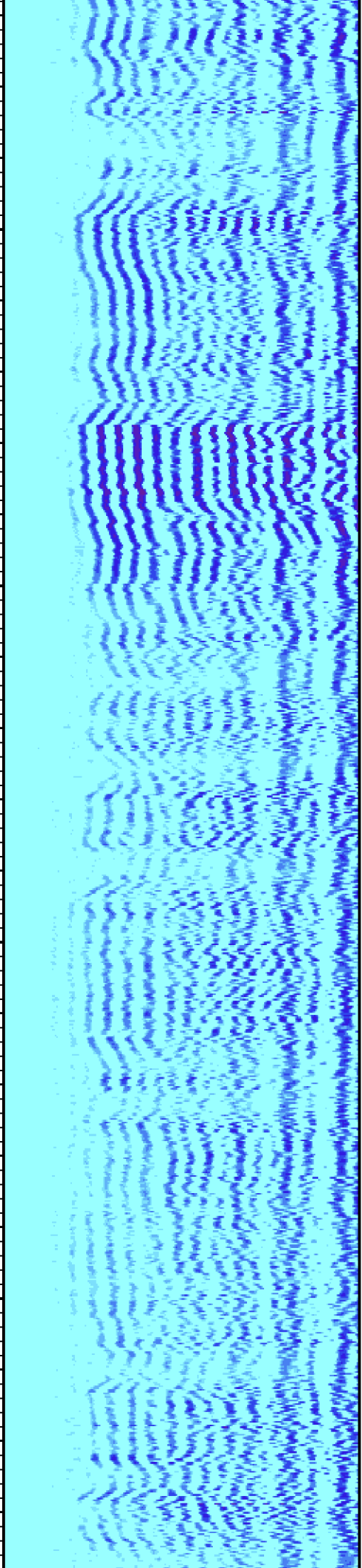


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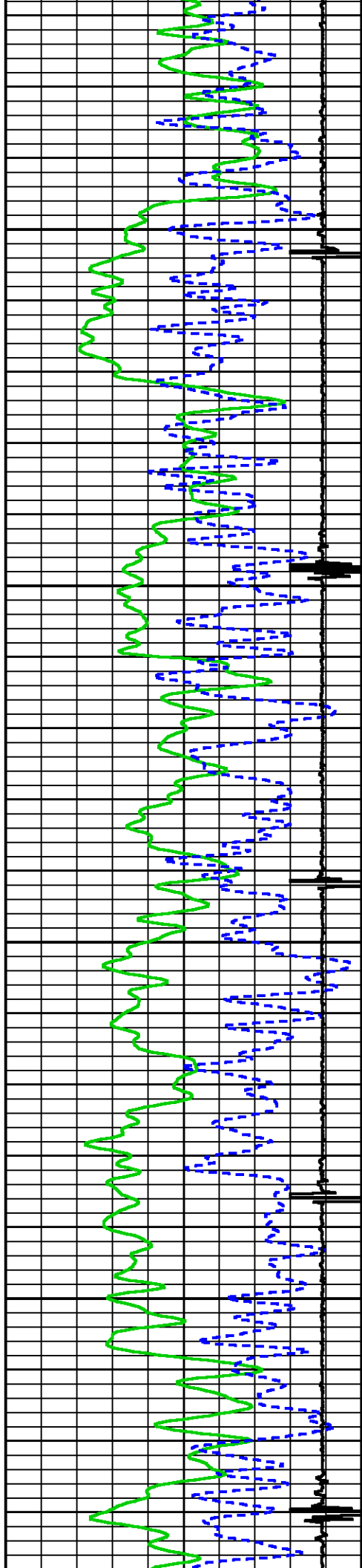
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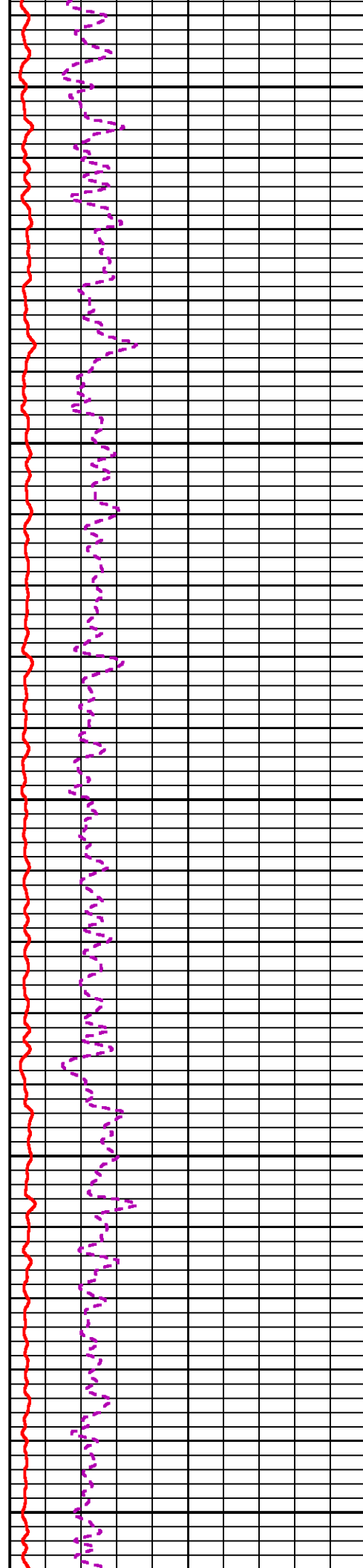
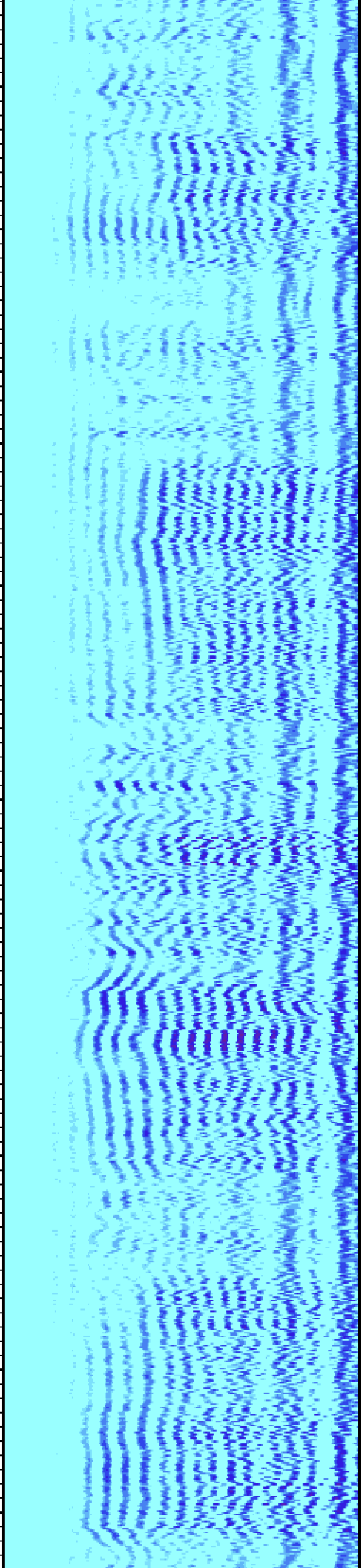


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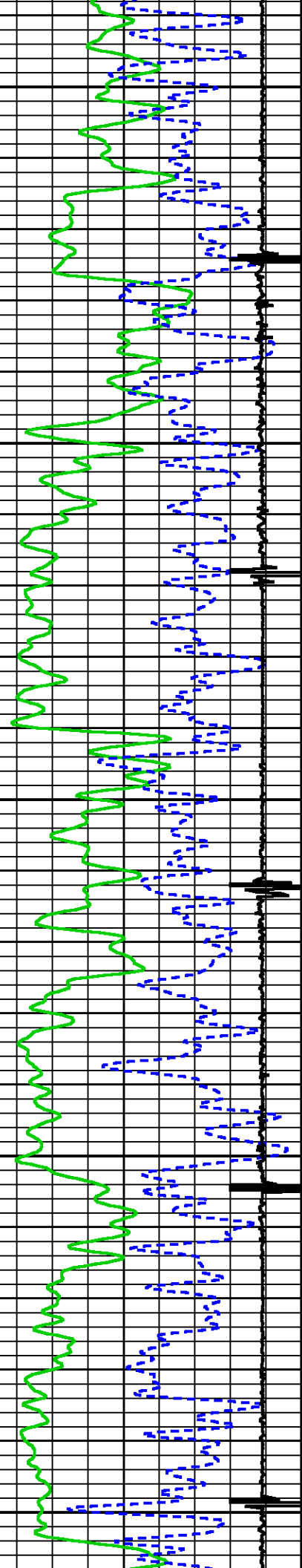


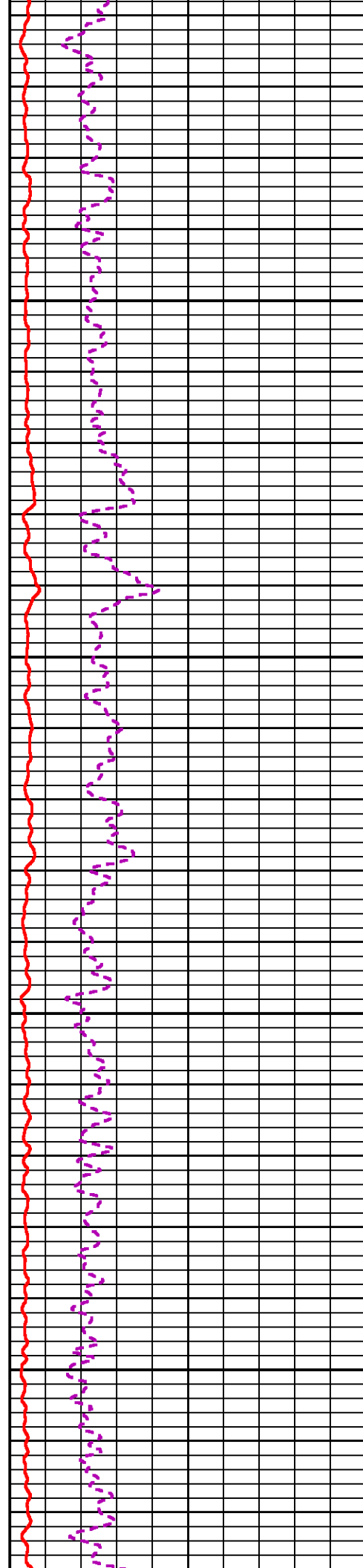
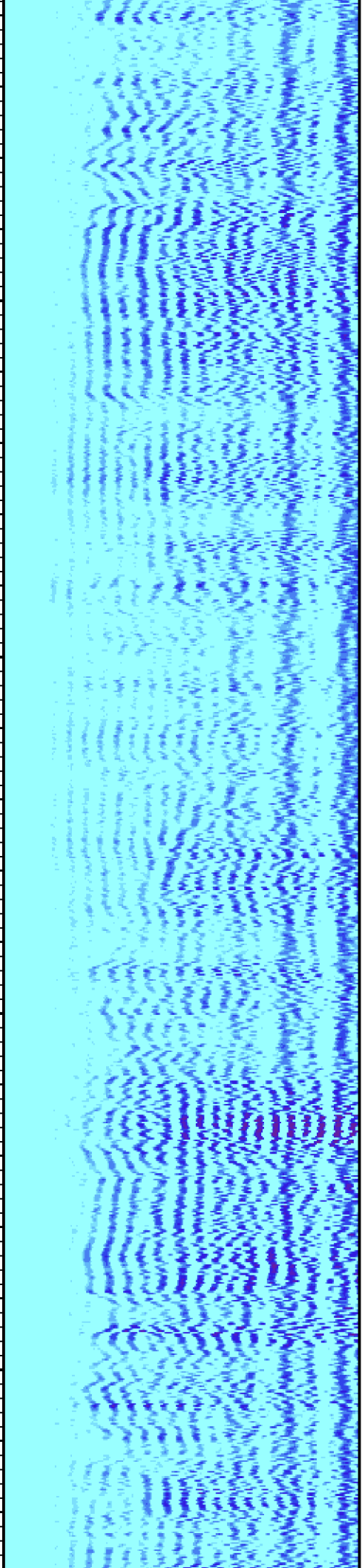




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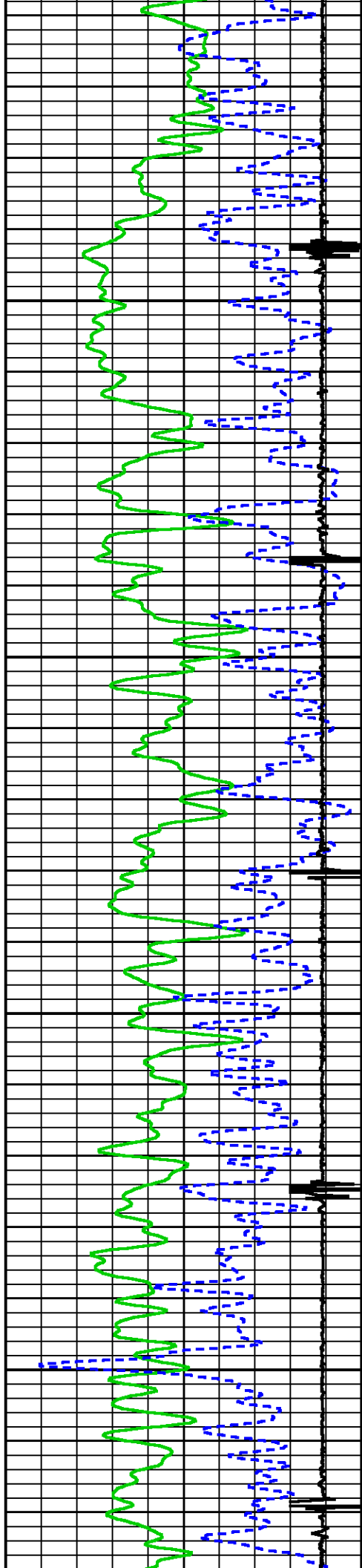
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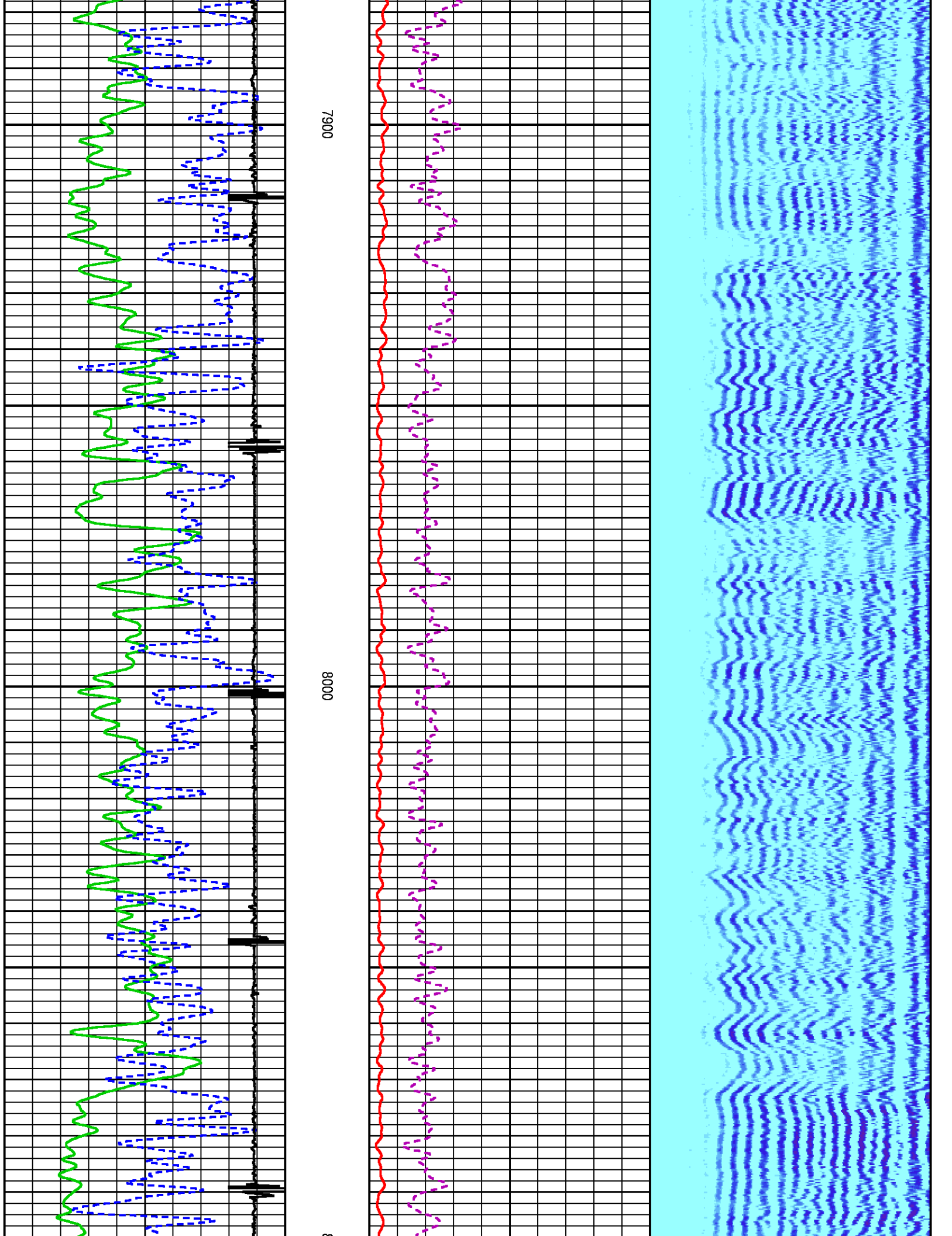


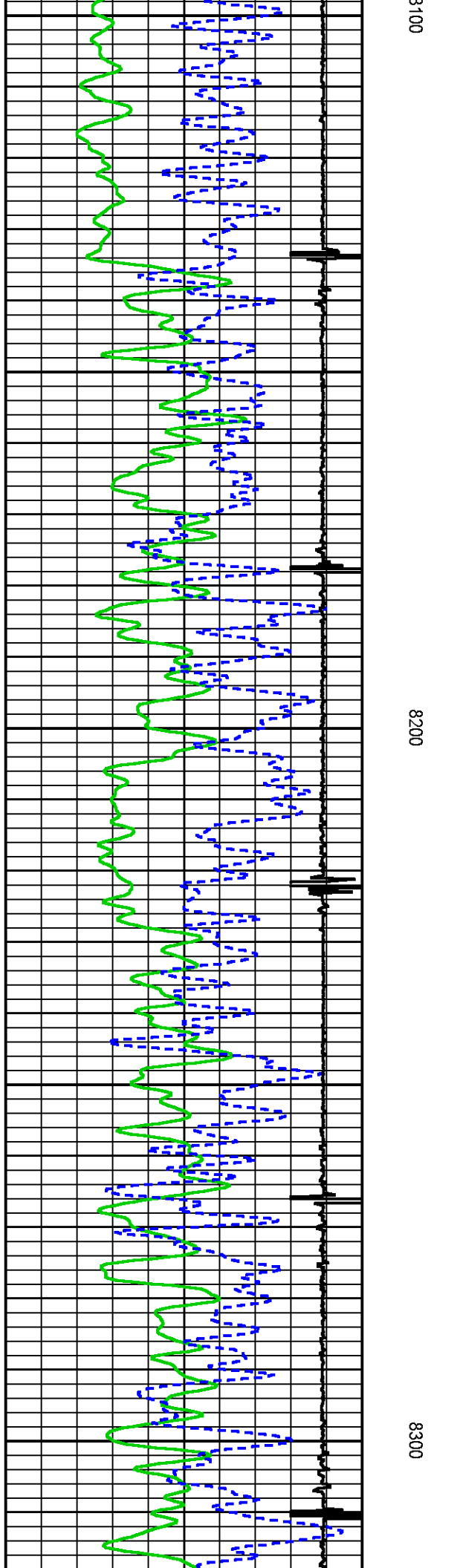
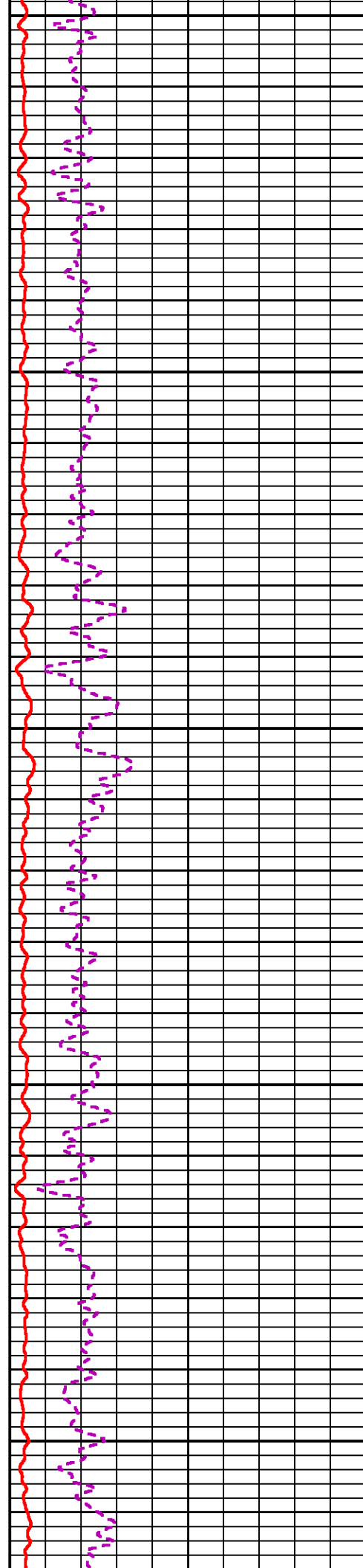
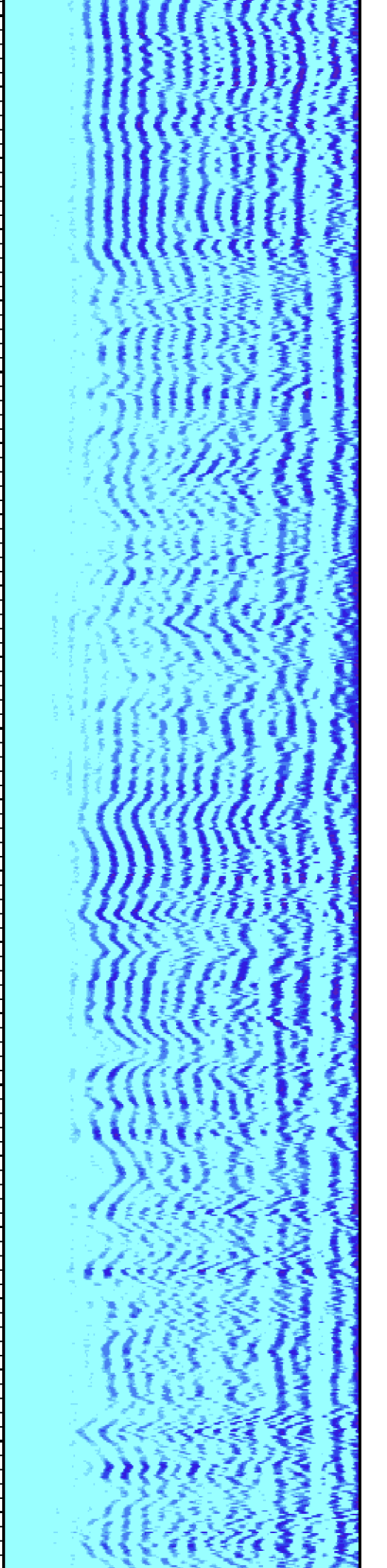


7700

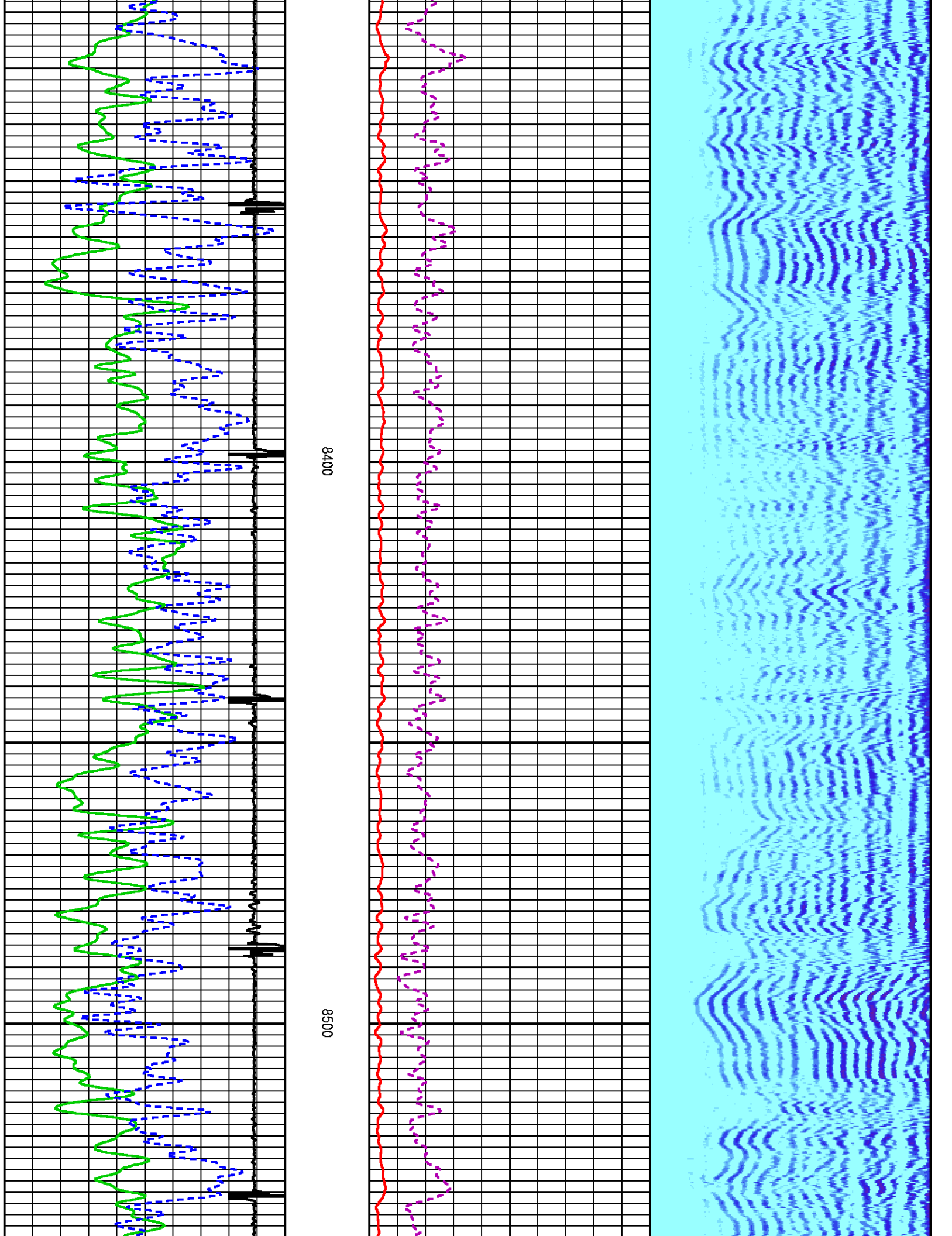
7800

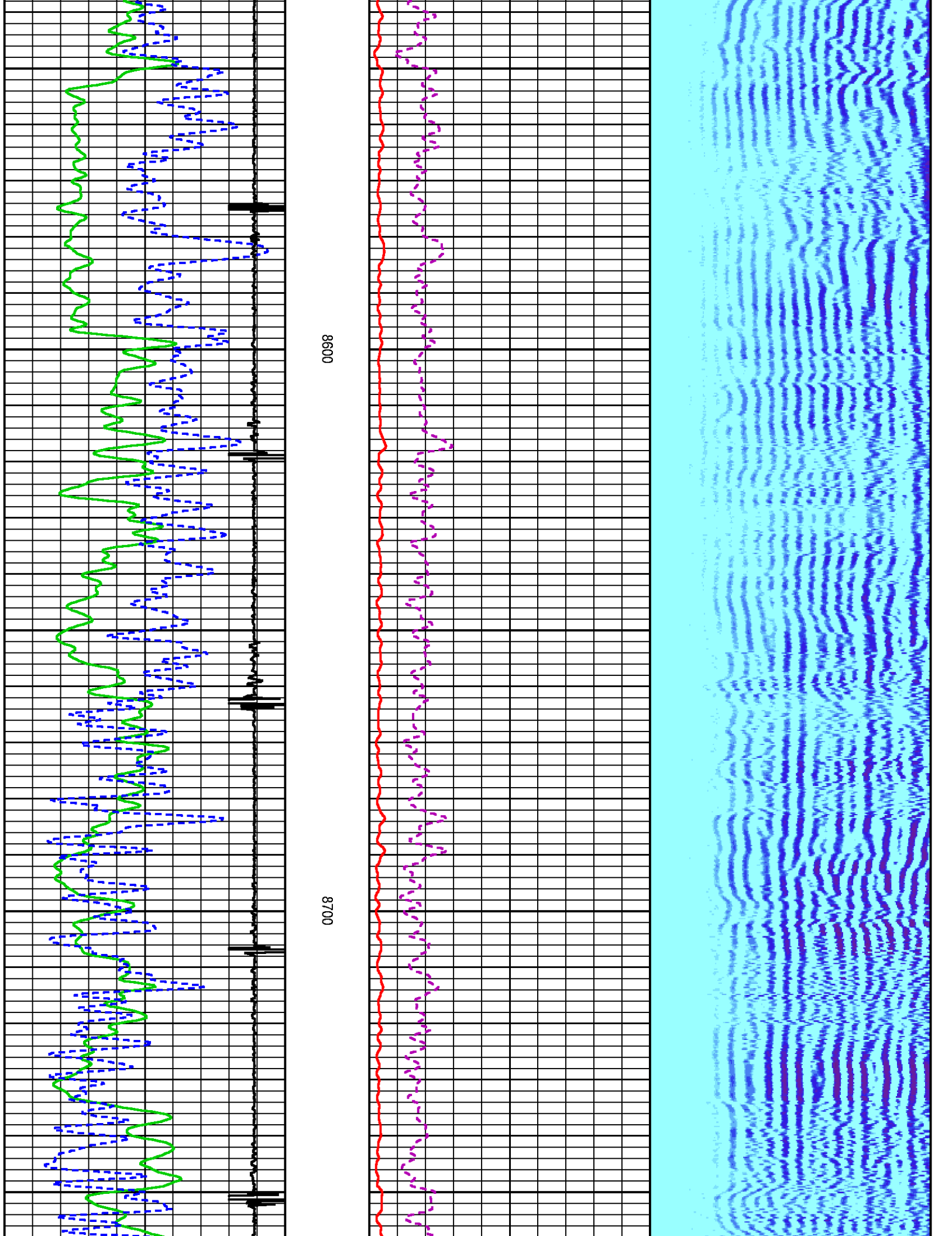


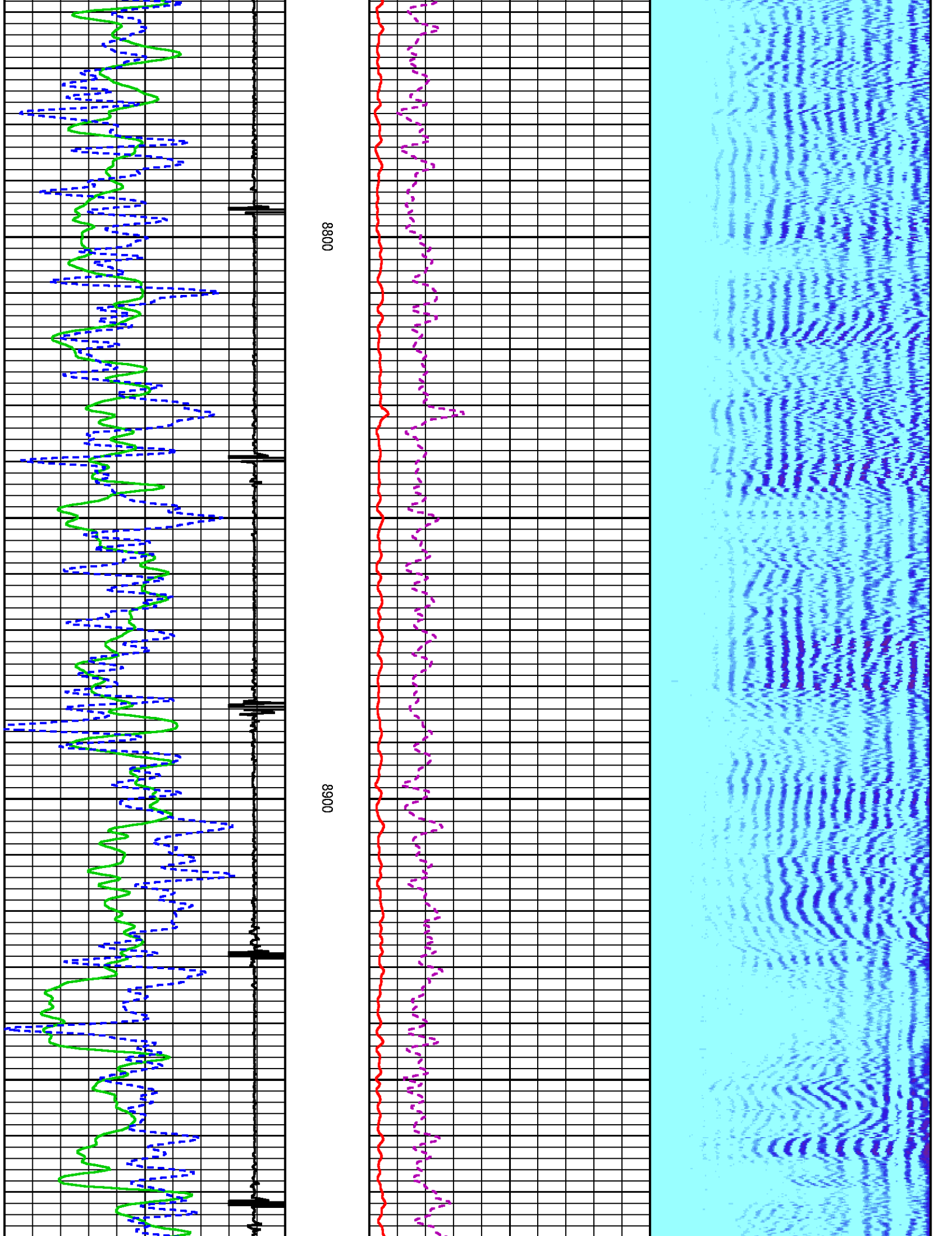


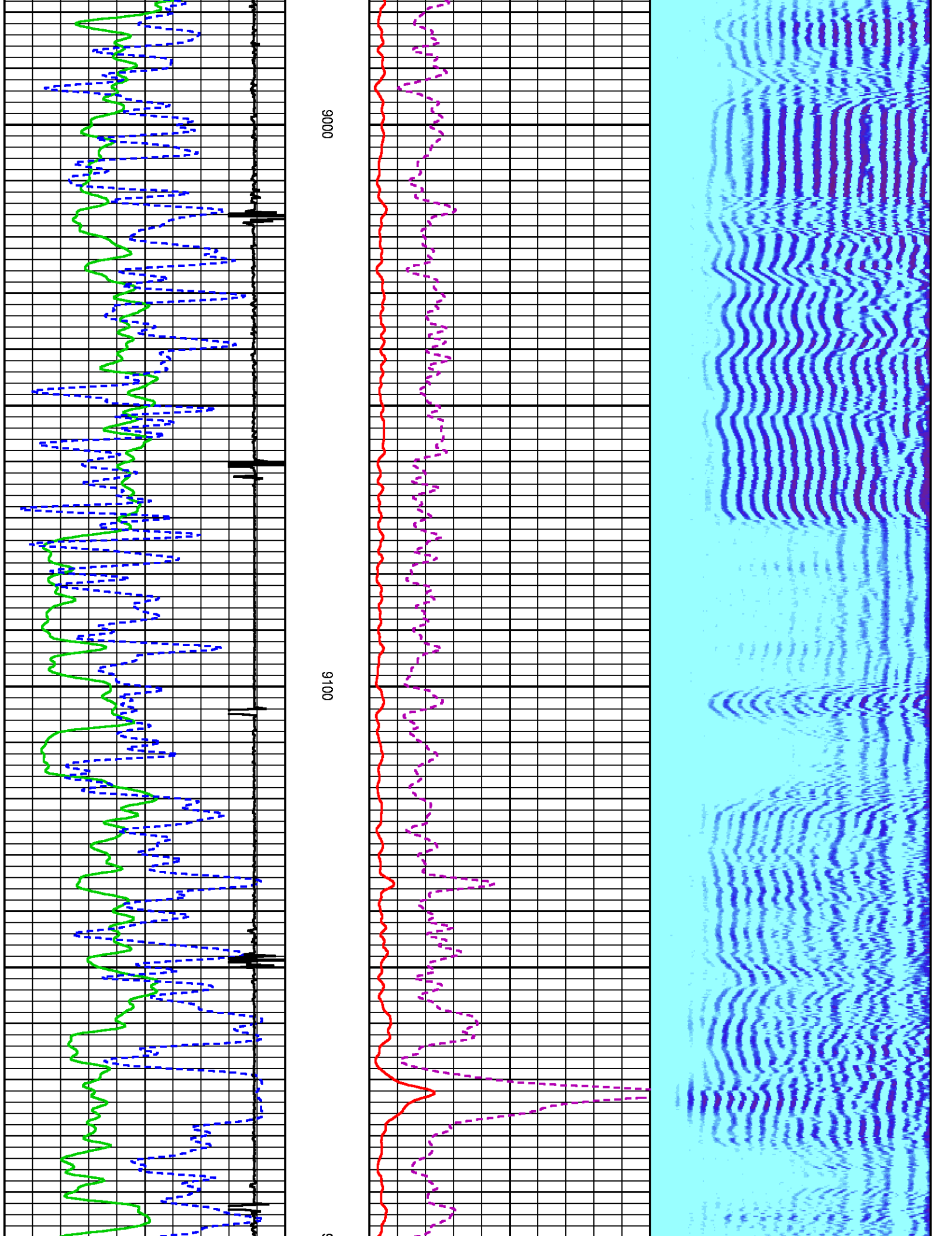




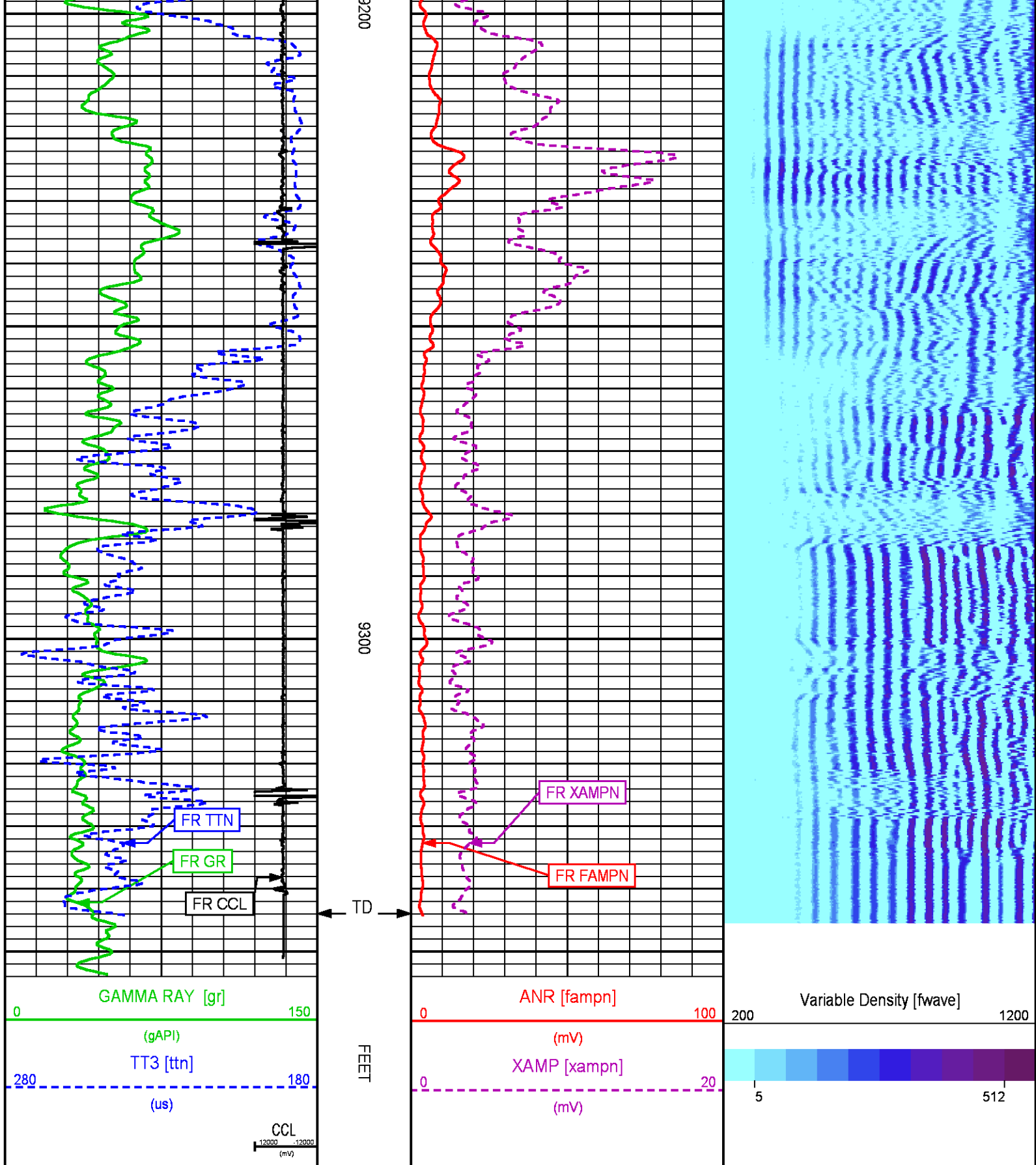












REPEAT LOG 0 PSI

Plotted: Fri Dec 30 15:12:38 2016

PARAMETER AND FILTER SUMMARY REPORT

FILE:	/dat1a/TEP_YOUBERG_RU_413_7/n012g01.prm			
LOGGING MODE:	DEPTH	DIRECTION:	UP	
TOP DEPTH:	9066.500 ft	BOTTOM DEPTH:	9363.250 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

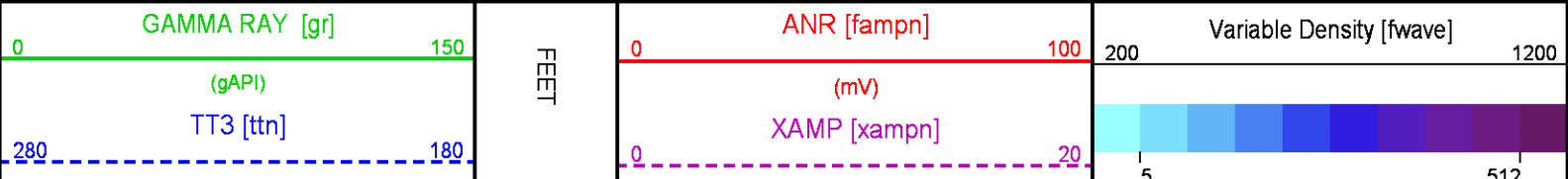
ANALOG RAL PROCESSING				
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
AMPLITUDE WINDOW (NEAR)	AMP WINDOW START (fgpn*)	179	us	TOP BOTTOM
	AMP WINDOW LENGTH	25	us	" "
TRAVEL TIME WINDOW (NEAR)	TT WINDOW START (ttn*)	160	us	" "
	TT WINDOW LENGTH	500	us	" "
	FIRST BRK THRESHOLD (ttn*)	4	mV	" "
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	" "

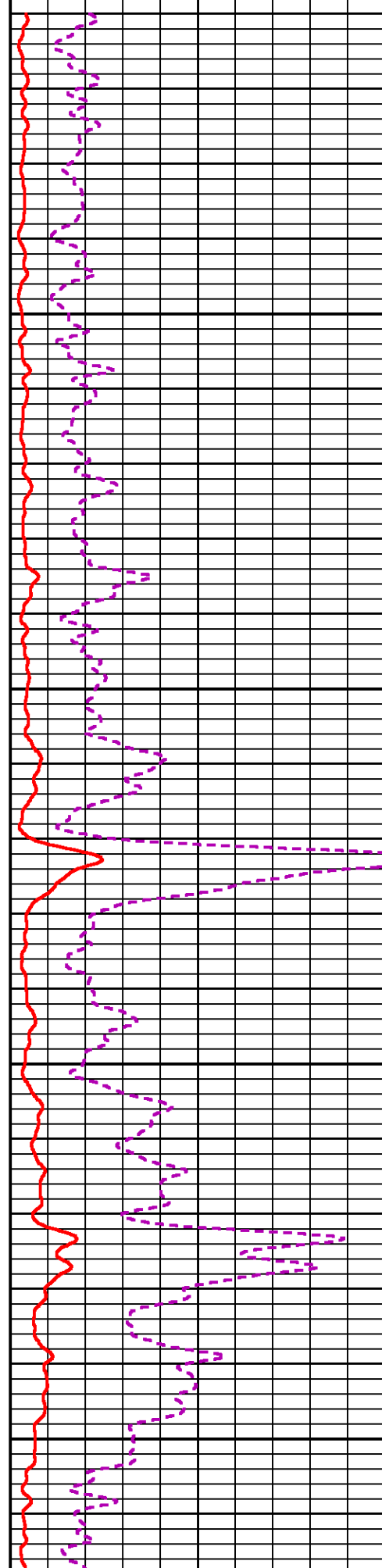
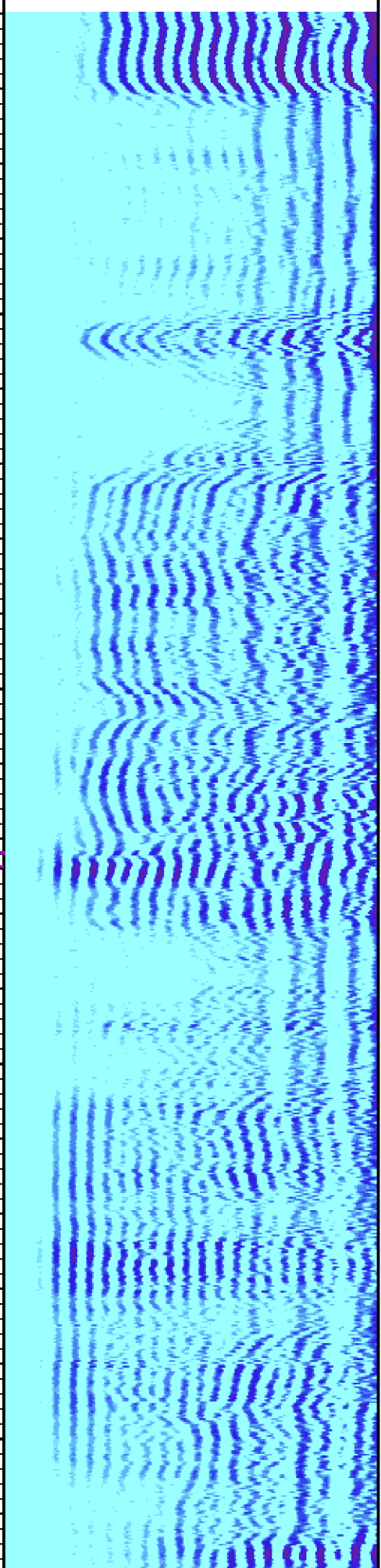
CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Dec 30 13:17:49 2016	CASING COLLAR LOCATOR
F1:FAMPN	Dec 30 13:17:49 2016	FIXED GATE AMPLITUDE NEAR RECEIVER
F1:FWAVE	Dec 30 13:17:49 2016	FAR WAVE FORM
F1:GR	Dec 30 13:17:49 2016	GAMMA RAY
F1:TTN	Dec 30 13:17:49 2016	TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER
F1:XAMPN	Dec 30 13:17:49 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				

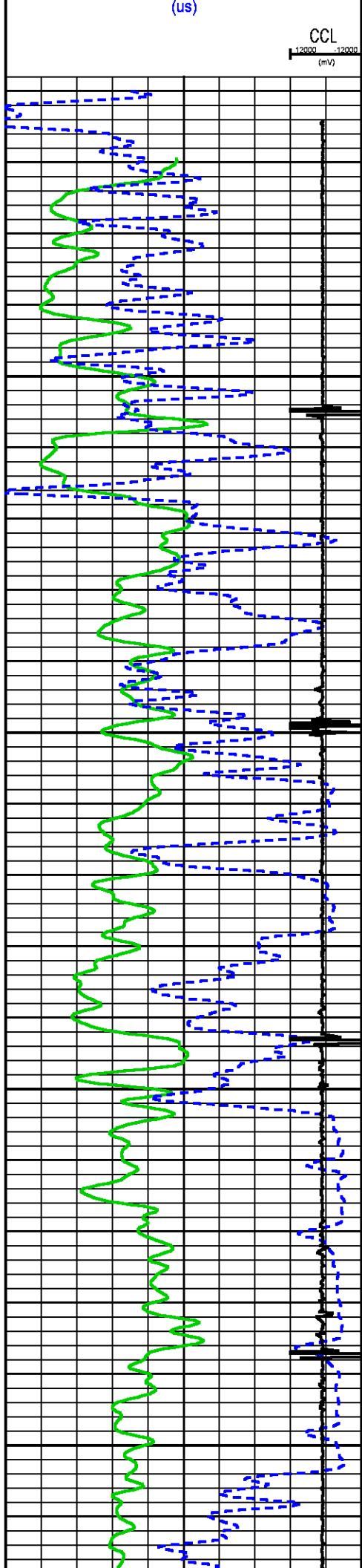
Presentation	: cpu100:/dat1a/TEP_YOUBERG_RU_413_7/TERRA_ral_cbl+01-REPEAT-REPRAL-5.fvpdf [5"/100' Scale]
Plot Interval	: 9059.75 - 9365.5 Feet
Data File 1	: F1 : cpu100:/dat1a/TEP_YOUBERG_RU_413_7/REPRAL.xtf
Created On	: Dec 30 13:17:49 2016
Company	: TEP
Well	: YOUBERG RU 413-7
Field	: RULISON
File Interval	: 9058.75 - 9367 Feet
OCT	: n012g





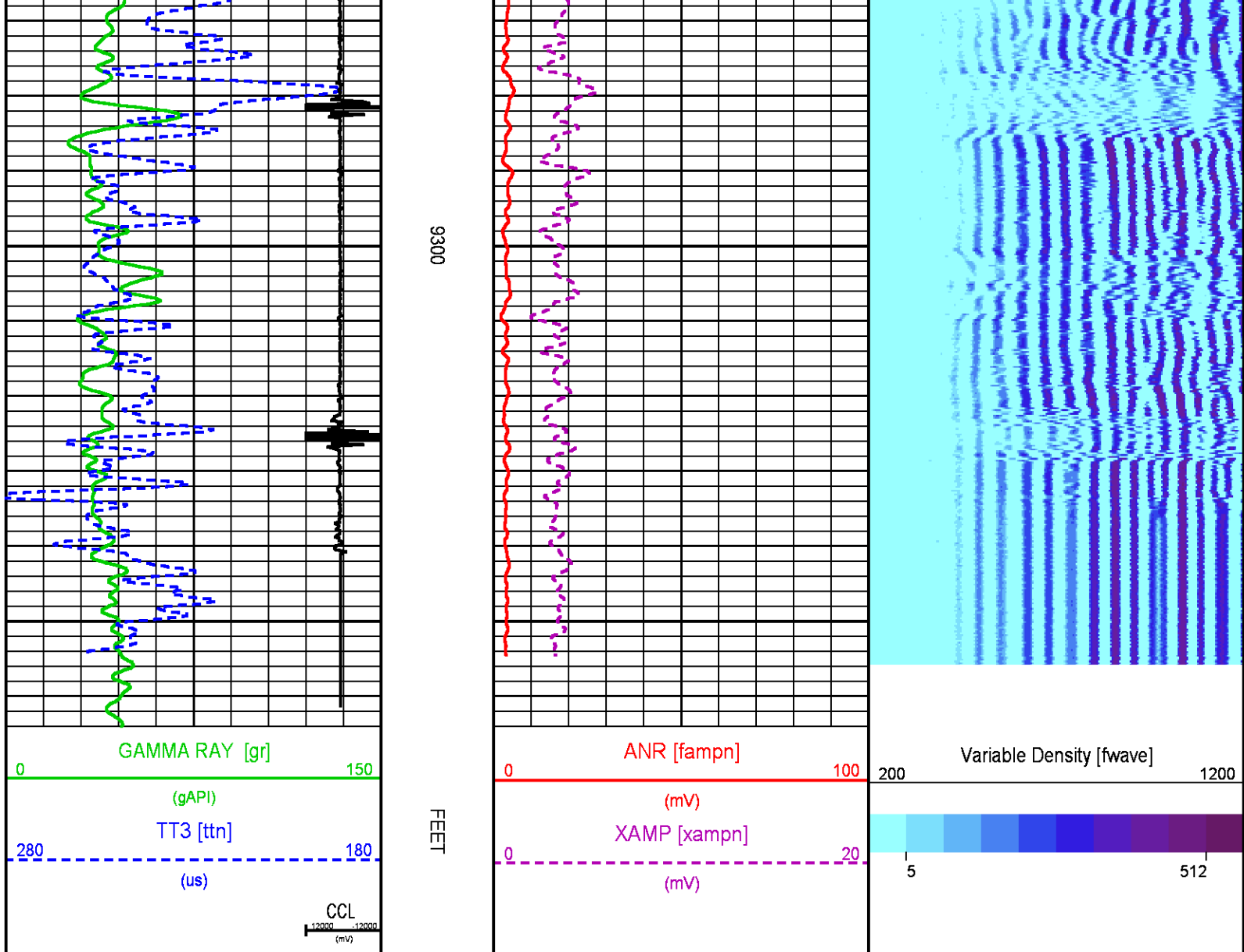
9100

9200



CCL  
12000  
(mV)

(us)



### CALIBRATION / VERIFICATION SUMMARY

Source File: Idat1aITEP\_YOUBERG\_RU\_413\_7m012g.tp1

#### RAL PRIMARY CALIBRATION SUMMARY

TOOL #: 1426XA10154957

DATE/TIME PERFORMED: Fri Dec 30 12:07:14 2016

UNIT #: 3880TA HL6670

	NEAR	R1	R2	R3	R4	R5	R6	R7	R8	FAR	CAL
TARGETS	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
ZERO (mV)	1.94	2.69	2.59	2.52	2.40	2.54	2.39	2.46	2.49	6.40	-0.03
AMP FLUID (mV)	88	88	88	89	89	87	86	85	86	118	91
TT (us)	213	212	212	212	212	212	212	212	213	319	212
M FACTOR	1.17	1.18	1.17	1.16	1.16	1.18	1.20	1.21	1.20	1.35	1.09

#### RAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 1426XA10154957

DATE/TIME PERFORMED: Fri Dec 30 12:09:00 2016

DAYS SINCE CAL: 0

UNIT #: 3880TA HL6670

CABLE #: 6670SM SMALL6670

	NEAR	R1	R2	R3	R4	R5	R6	R7	R8	FAR	CAL
ZERO	-1.78	-2.44	-2.53	-2.50	-2.55	-2.19	-2.36	-2.16	-2.11	-2.60	0.01

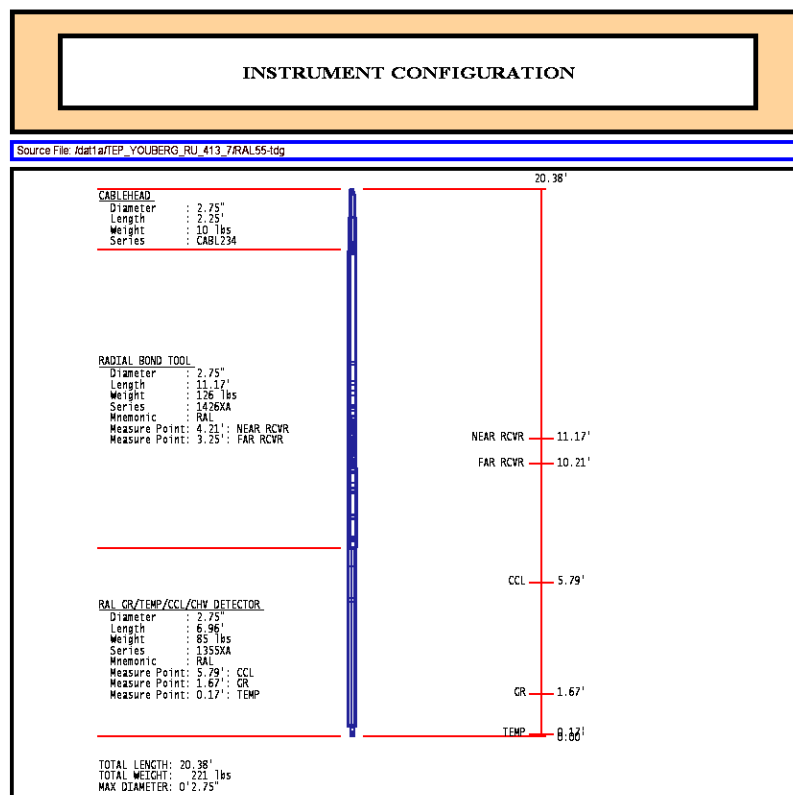


AMP AIR	2.87	3.65	3.77	3.76	3.44	3.24	3.51	3.11	3.41	3.64	100.15
<div> <div>SHOP</div> <div>M FACTOR</div> <div>1.09</div> </div> <div> <div>SHOP</div> <div>A FACTOR</div> <div>0.00</div> </div> <div> <div>WIRELINE</div> <div>FACTOR</div> <div>1.00</div> </div>											

GR PRIMARY CALIBRATION SUMMARY						
TOOL #: 1355XA12670180		DATE/TIME PERFORMED: Tue Nov 15 11:53:22 2016				
UNIT #: 3880TAHL6670		CALB JIG #: 4702NKDA_228				
	BACKGROUND (cts)	CALBTR ON (cts)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBTR ON (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 #: 3880TAHL6670		VERI JIG #: 4702NKDA_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
						103.00 103.00



	<b>COMPANY</b> <u>TEP ROCKY MOUNTAIN LLC</u> <b>WELL</b> <u>YOUBERG RU 413-7</u> <b>FIELD</b> <u>RULISON</u> <b>COUNTY</b> <u>GARFIELD</u> <b>STATE</b> <u>COLORADO</u>	<b>FILE NO:</b> _____  <b>API NO:</b> <u>05045232570000</u>	
	<b>LOCATION:</b> SHL: 1926' FSL & 158' FWL BHL: 1652' FSL & 296' FWL	<b>ELEVATIONS:</b> KB 7381 FT DF 7357 FT GL 7357 FT	
	<b>SEC</b> <u>7</u> <b>TWP</b> <u>7S</u> <b>RGE</b> <u>93W</u>	<b>DATE</b> <u>30-DEC-2016</u>	

