



FILE NO:	COMPANY	TEP ROCKY MOUNTAIN LLC	
API NO:	WELL	YOUBERG RU 14-7	
05045232590000	FIELD	RULISON	
	COUNTY	GARFIELD	
	STATE	COLORADO	
Ver. 4.06	LOCATION:	OTHER SERVICES	
	SHL: 1933' FSL & 158' FWL	RPM	
	BHL: 424' FSL & 1367' FWL		
	SEC 7	TWP 7S	RGE 93W
PERMANENT DATUM	GL	ELEVATION	7357 FT
LOG MEASURED FROM	KB	24 FT	ABOVE P.D.
DRILL. MEAS. FROM	KB		ELEVATIONS:
			KB 7381 FT
			DF 7380 FT
			GL 7357 FT

DATE	01-JAN-2017
RUN	TRIP
SERVICE ORDER	1
DEPTH DRILLER	US109795
DEPTH LOGGER	9647 FT
BOTTOM LOGGED INTERVAL	9630 FT
TOP LOGGED INTERVAL	24 FT
TIME STARTED	7:00
TIME FINISHED	10:00
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 FPM
MAX. RECORDED TEMP.	251 DEGF
REFERENCE LOG	NA
REFERENCE LOG DATE	NA
EQUIP. NO.	HL-6670
LOCATION	WOODWARD
RECORDED BY	MENTZER
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	9647 FT

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
9.625 IN	-	-	0 FT	1124 FT
4.5 IN	-	-	0 FT	9647 FT

REMARKS

RUN 1 TRIP 1: *2 OPERATIONS IN WELL*

OPERATION 1: RAL/GR/CCL RUN CENTRALIZED

WELL LOGGED WITH 0 PSI ON WELL HEAD

BHT: 251DEG

SHORT JOINT: 5614' - 5635'

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
1	2	TELEMETRY	8250 EA/8248 ED	151000/11908681	FREE
1	2	GAMMA RAY	8262 XA	10485470	FREE
1	2	RPM ELEC	8281 EA	10389421	FREE
1	2	RPM	8283 PA/8281 FA	10184883/10179236	FREE
1	2	TEMP	8255 XA	120516	FREE

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: Sun Jan 1 09:53:33 2017

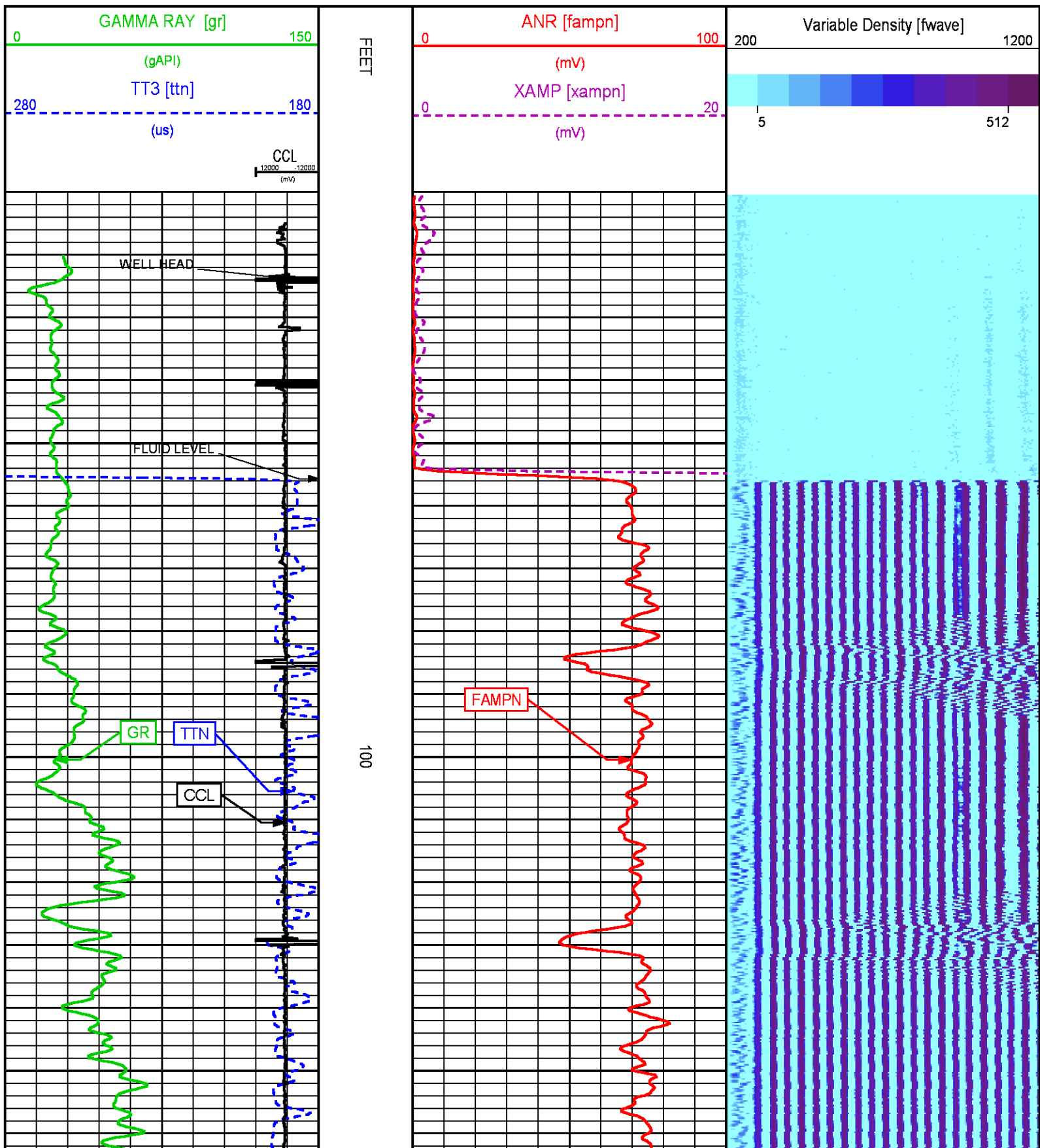
PARAMETER AND FILTER SUMMARY REPORT					
FILE: /dat1a/TEP_YOUBERG_RU_14_7/n012g02.prm LOGGING MODE: DEPTH DIRECTION: UP TOP DEPTH: 7.750 ft BOTTOM DEPTH: 9629.750 ft					
SYMMETRIC FILTER					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR	FILTER ()	medium (1)		TOP	BOTTOM
AMPLITUDE	FILTER ()	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*)	178	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	"	"

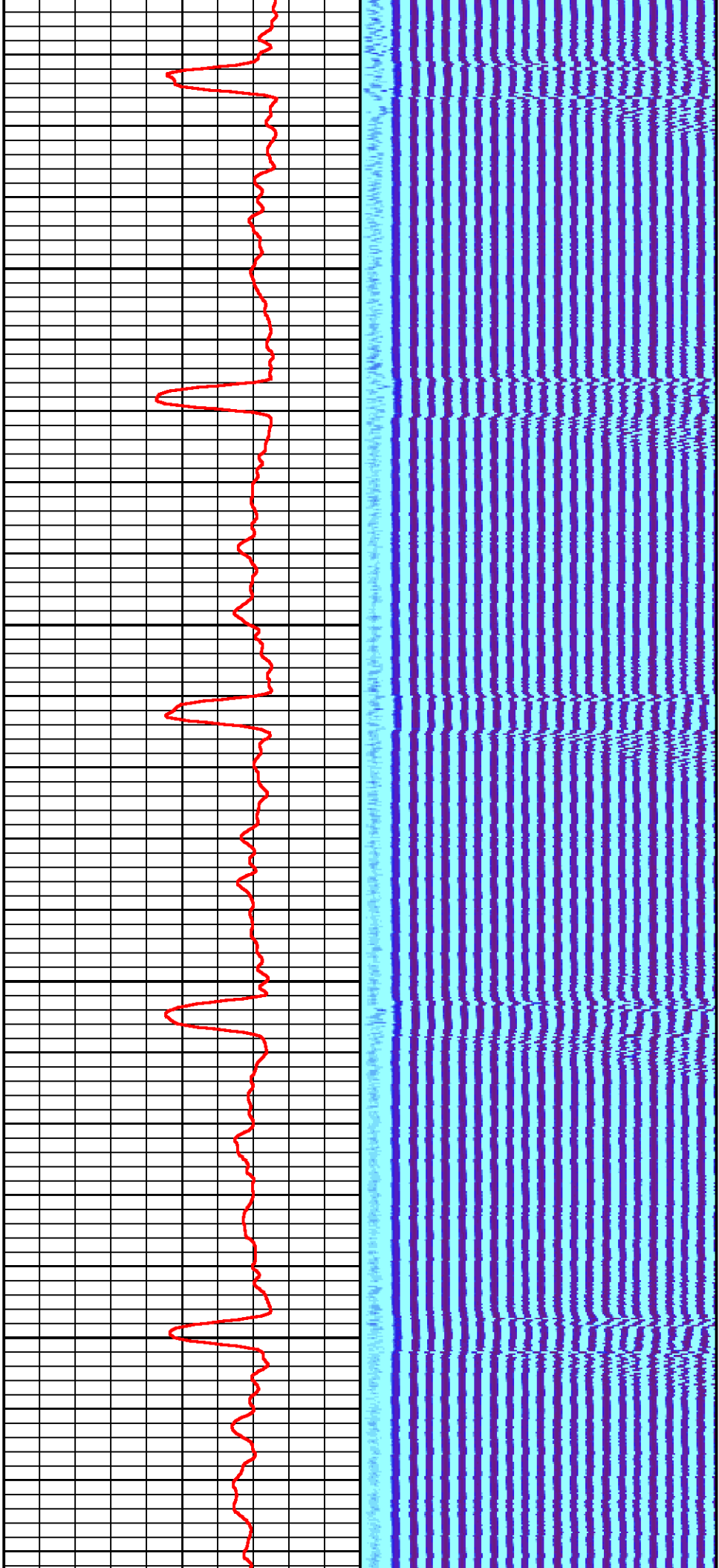
CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Jan 1 07:44:56 2017	CASING COLLAR LOCATOR
F1:FAMPN	Jan 1 07:44:56 2017	FIXED GATE AMPLITUDE NEAR RECEIVER
F1:FWAVE	Jan 1 07:44:56 2017	FAR WAVE FORM
F1:GR	Jan 1 07:44:56 2017	GAMMA RAY
F1:TTN	Jan 1 07:44:56 2017	TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER
F1:XAMPN	Jan 1 07:44:56 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	11.25		

Presentation : cpu100:TERRA_ral_cbl+01-MAIN-RAL_MN-5.fvpdf [5"/100' Scale]
Plot Interval : 10.5 - 9641.5 Feet

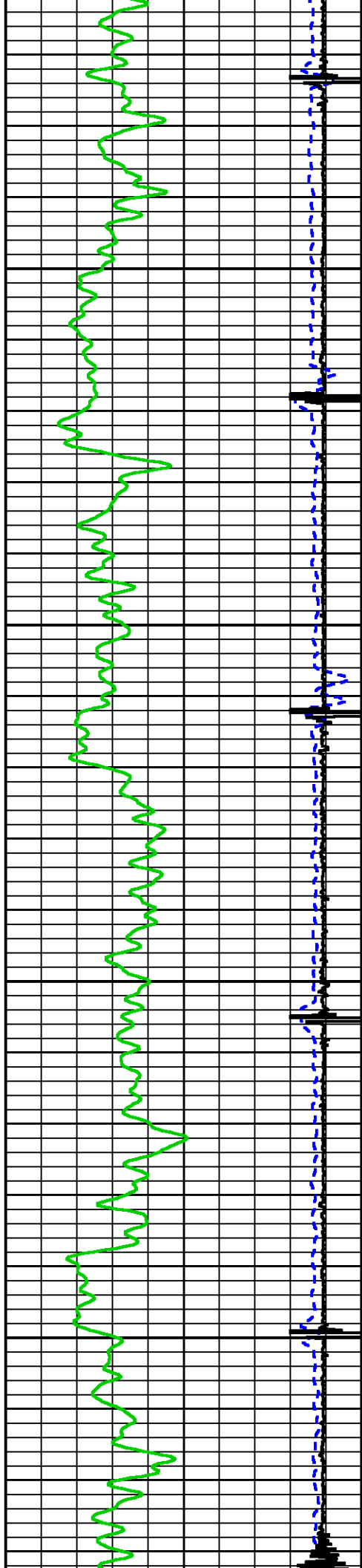
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Created On : Jan 1 07:44:56 2017
Company : TEP ROCKY MOUNTAIN LLC
Well : YOUBERG RU 14-7
Field : RULISON
File Interval : 9.5 - 9643 Feet
OCT : n012g

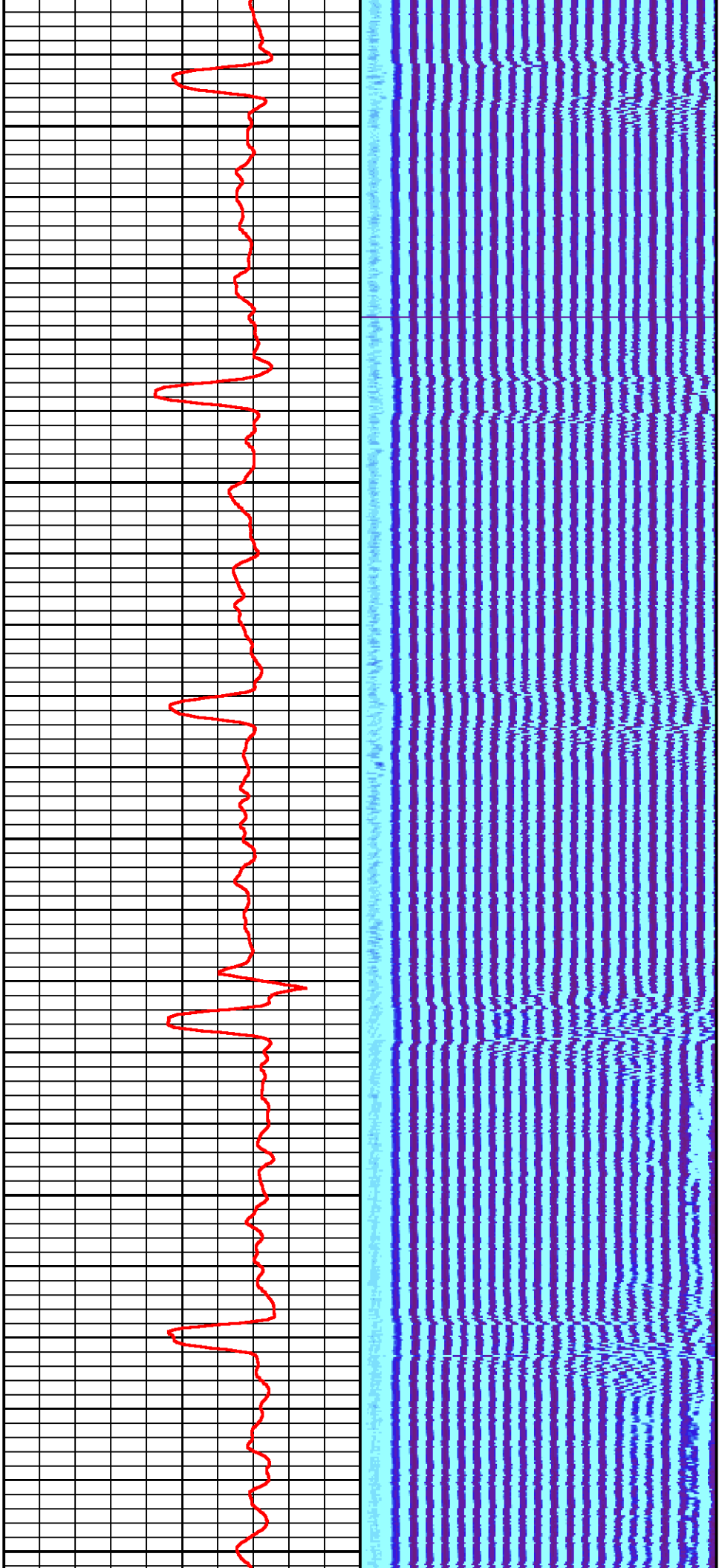




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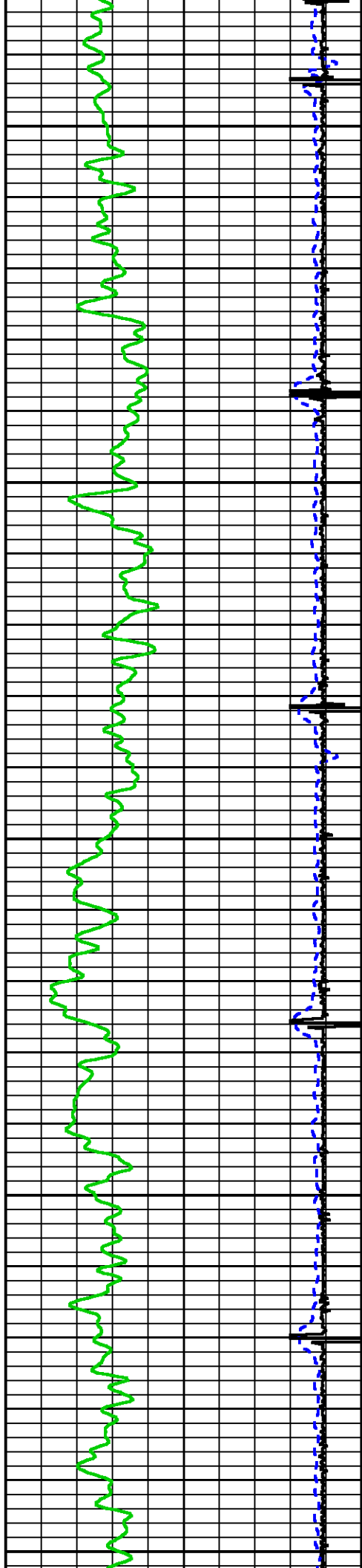


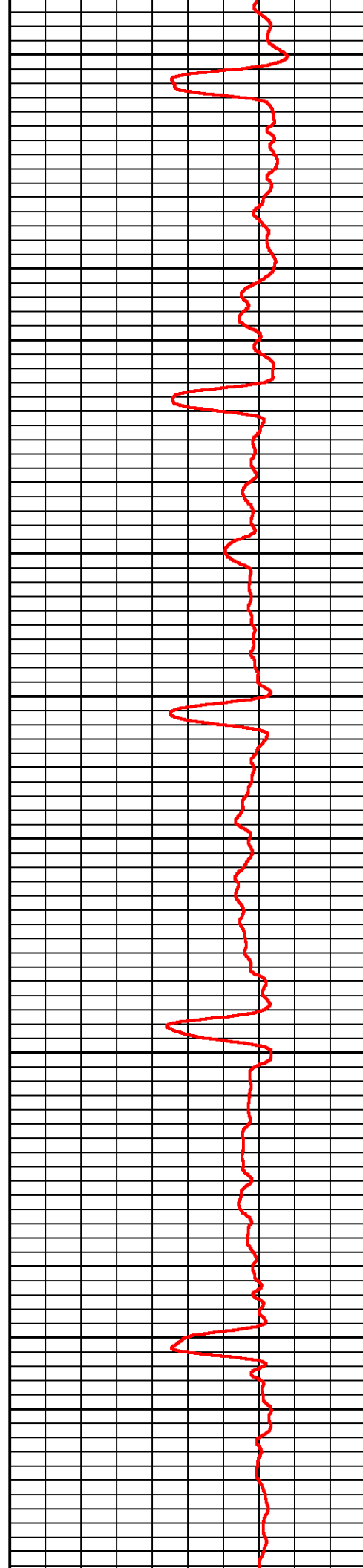
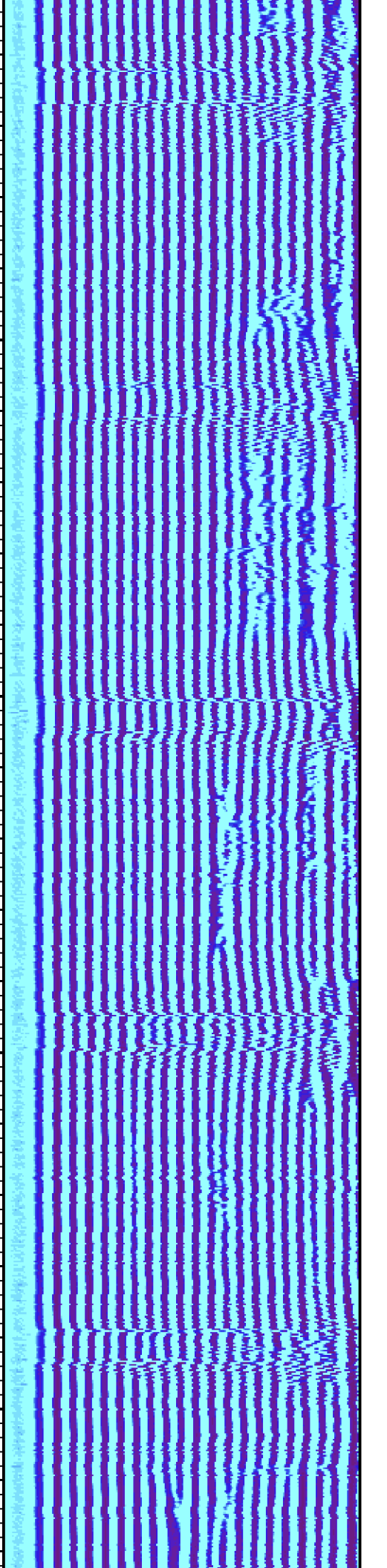


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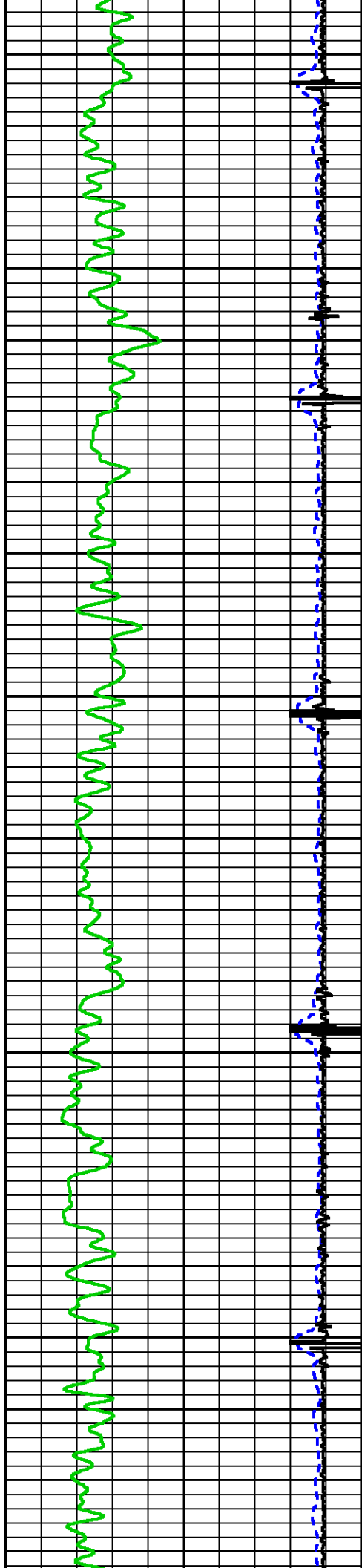
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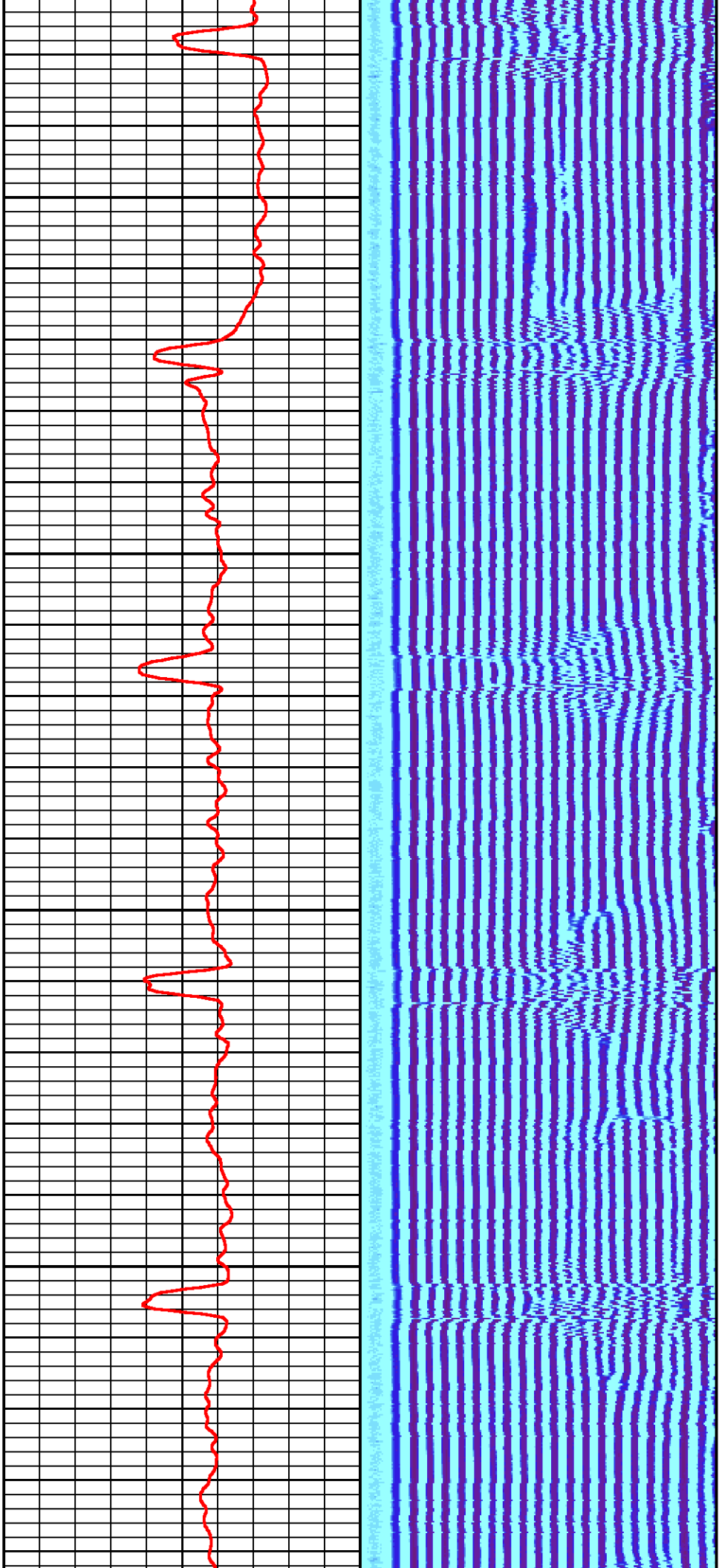




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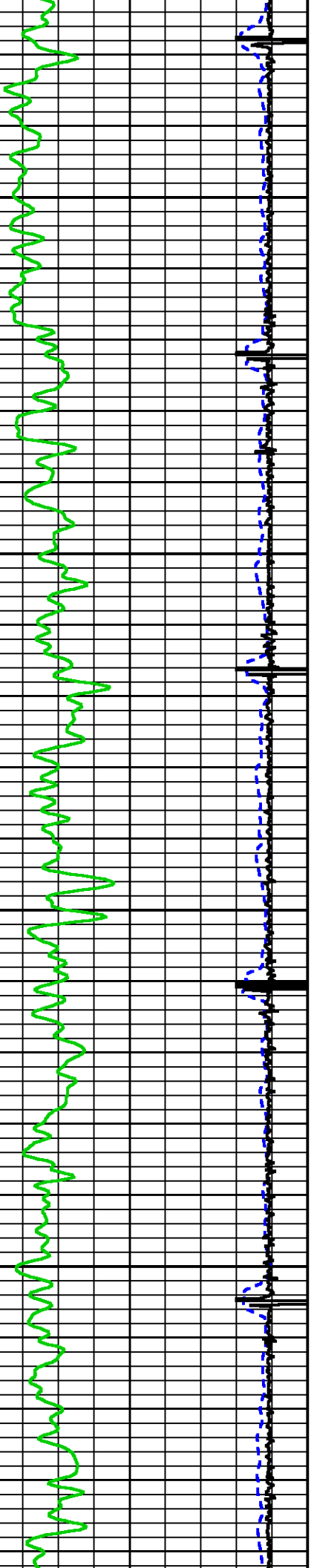
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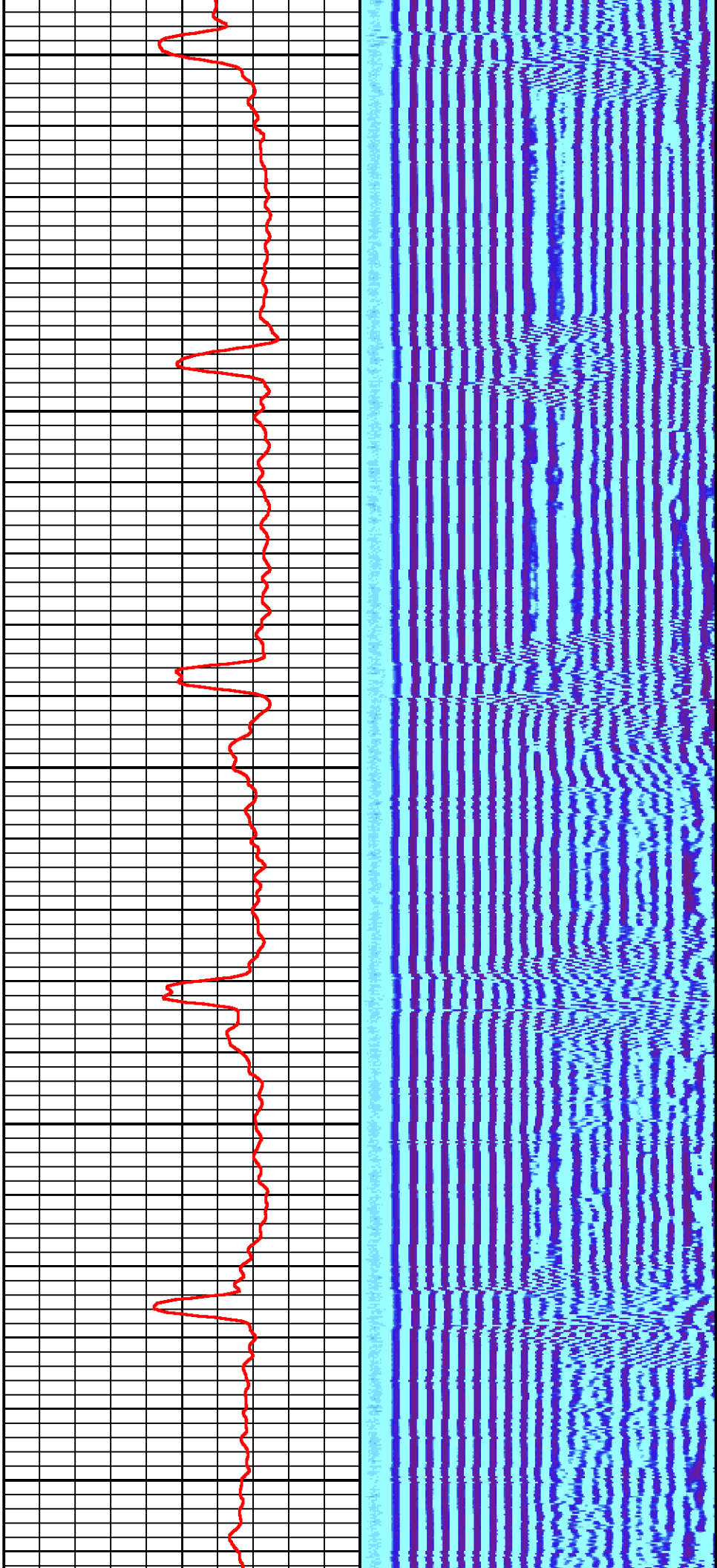




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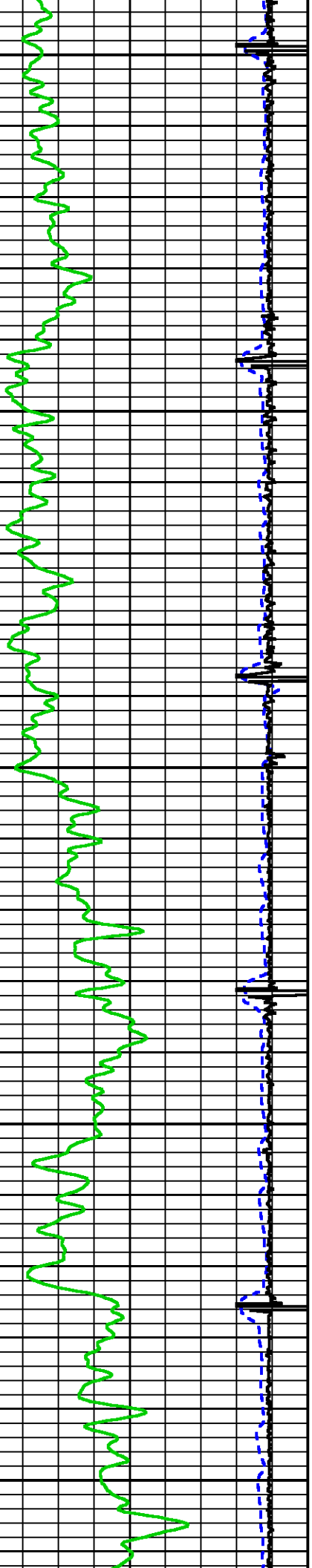
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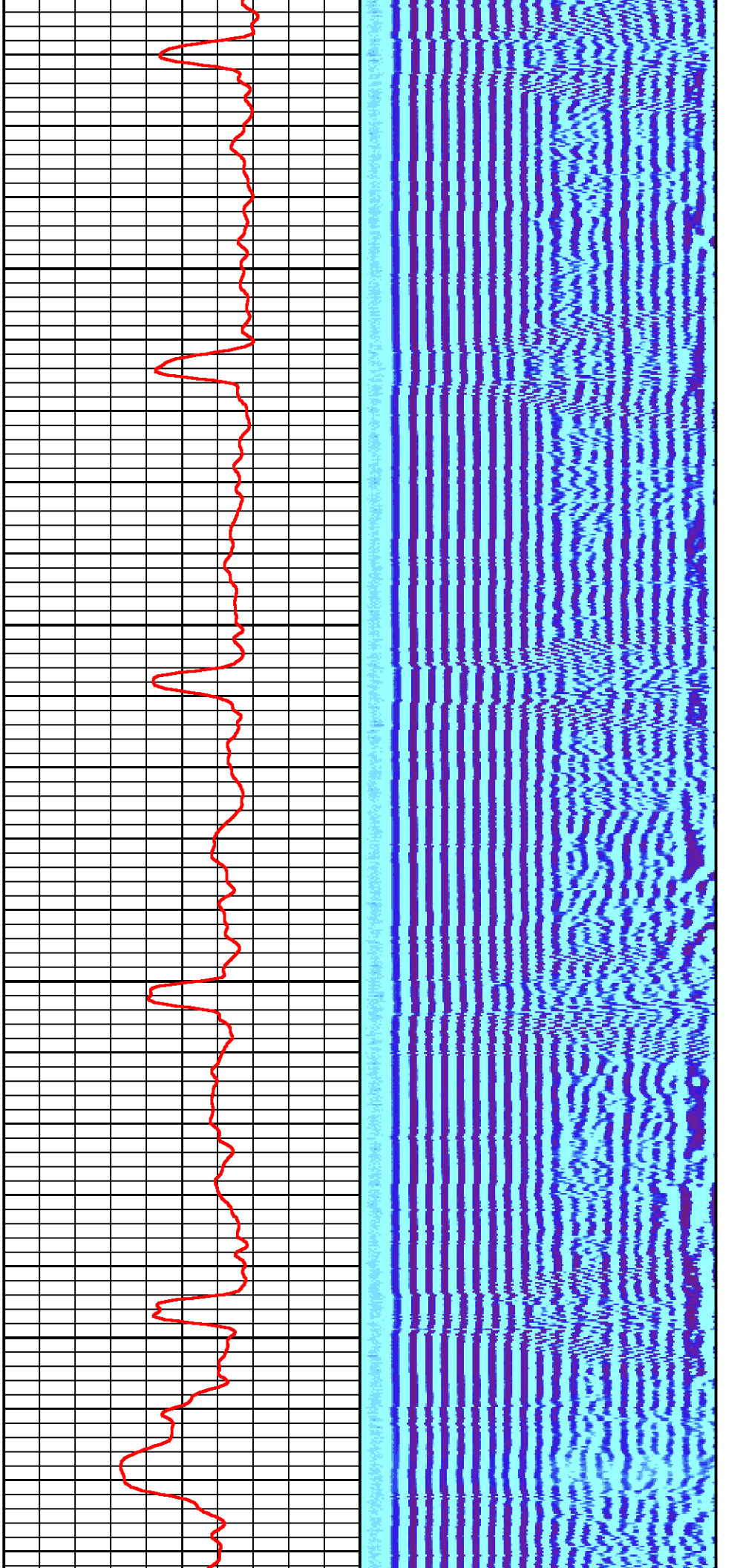




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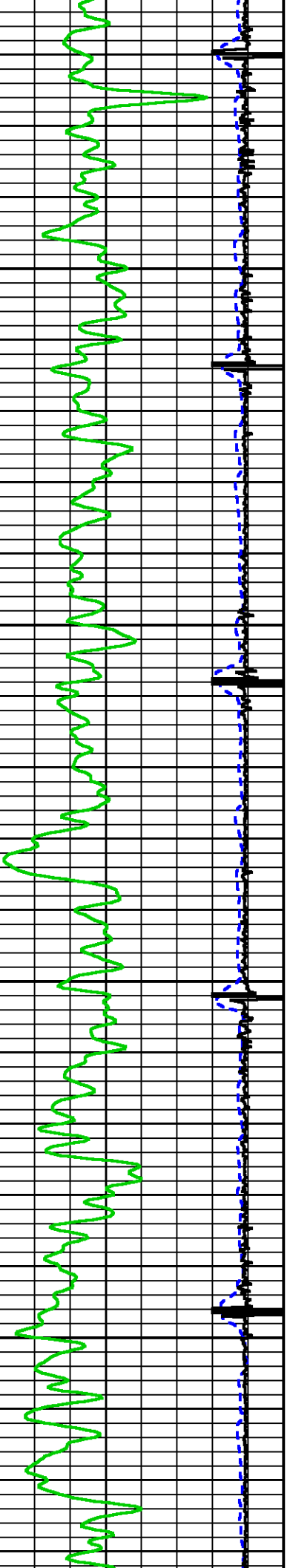
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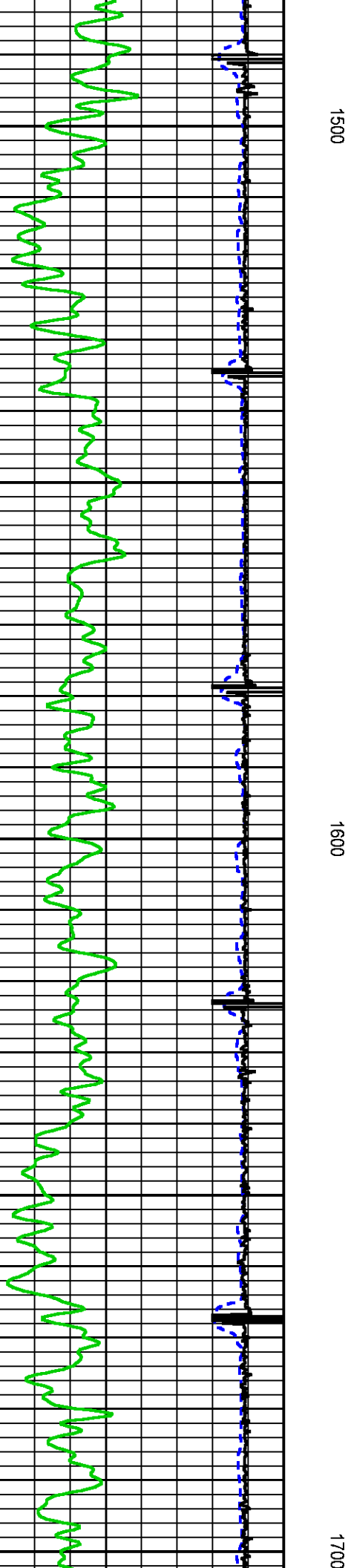
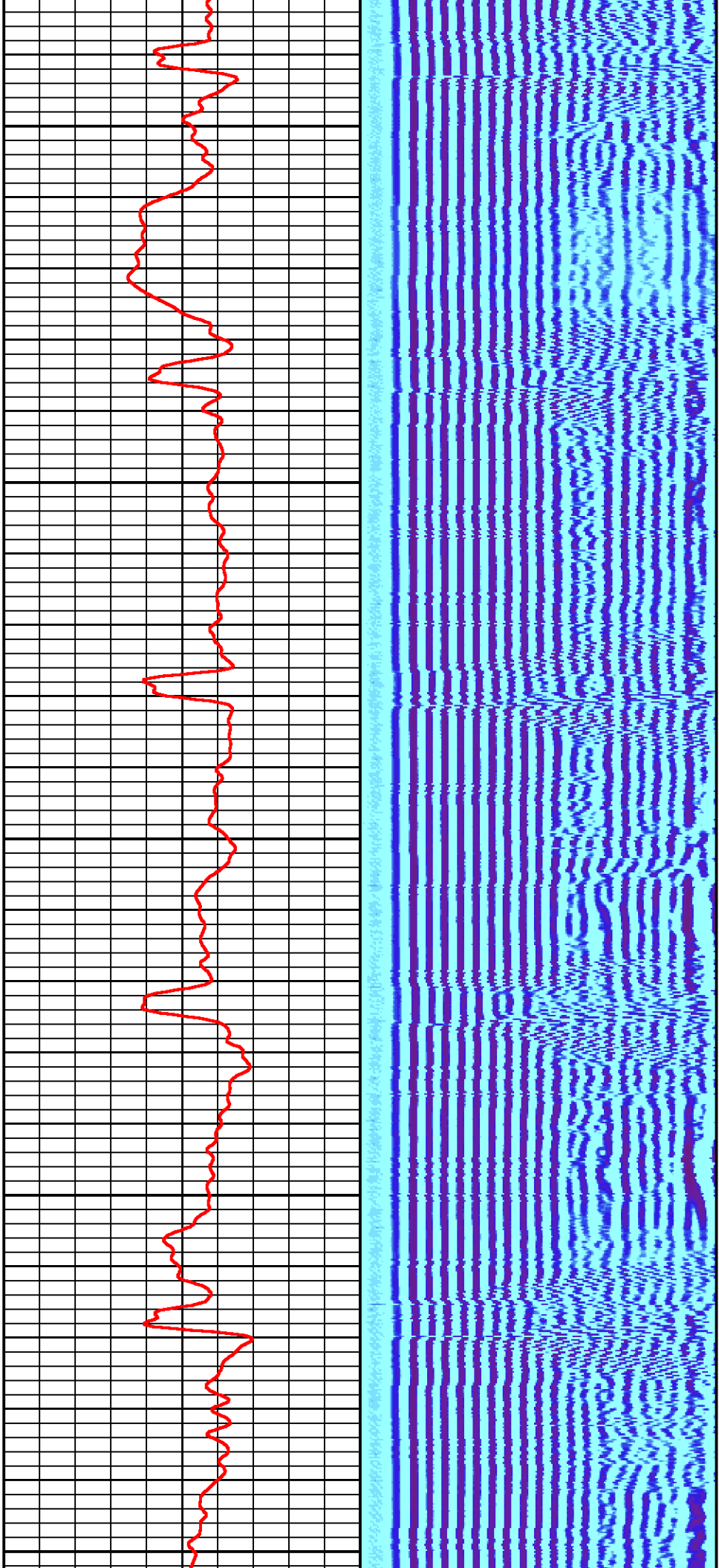


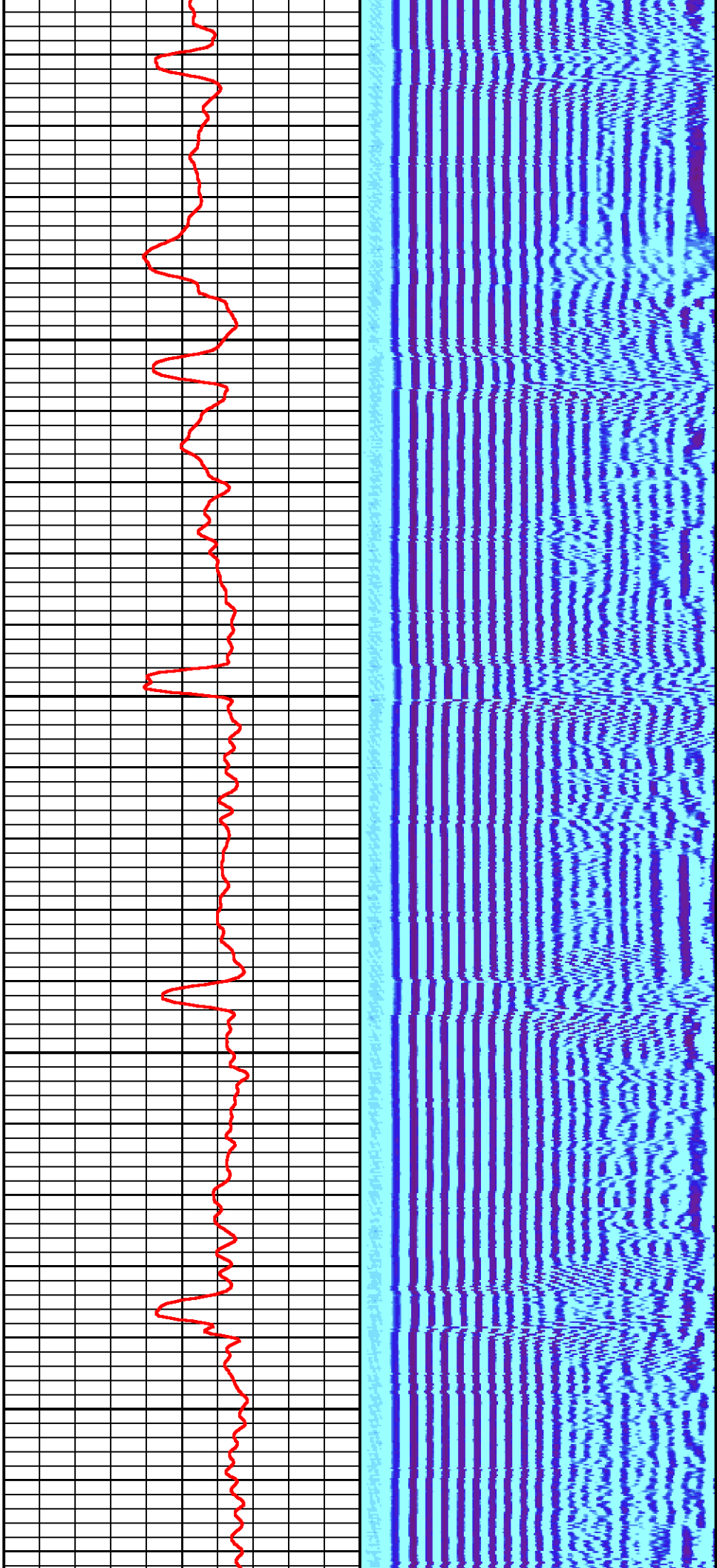


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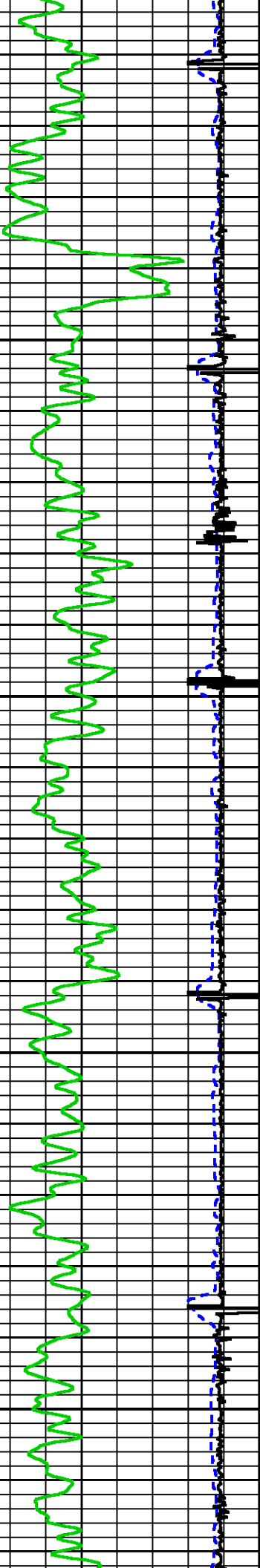


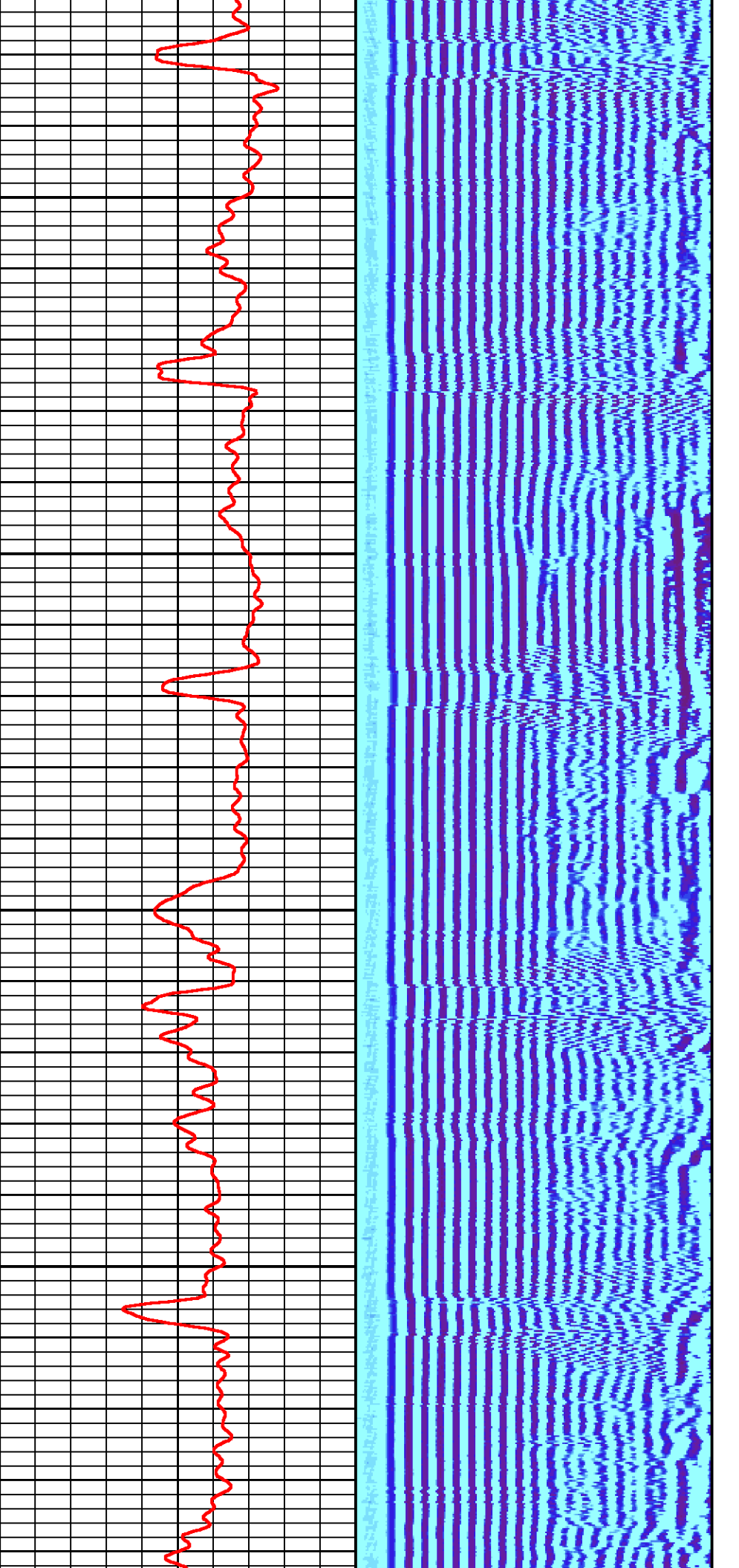




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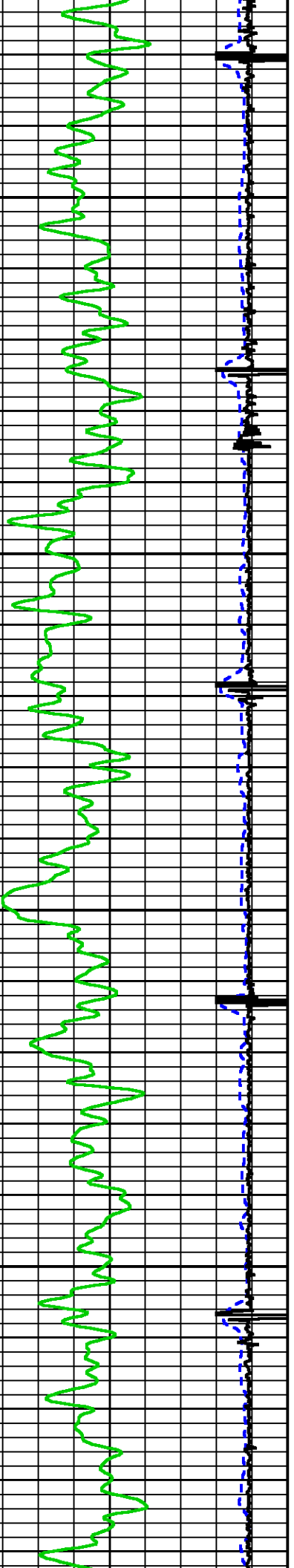
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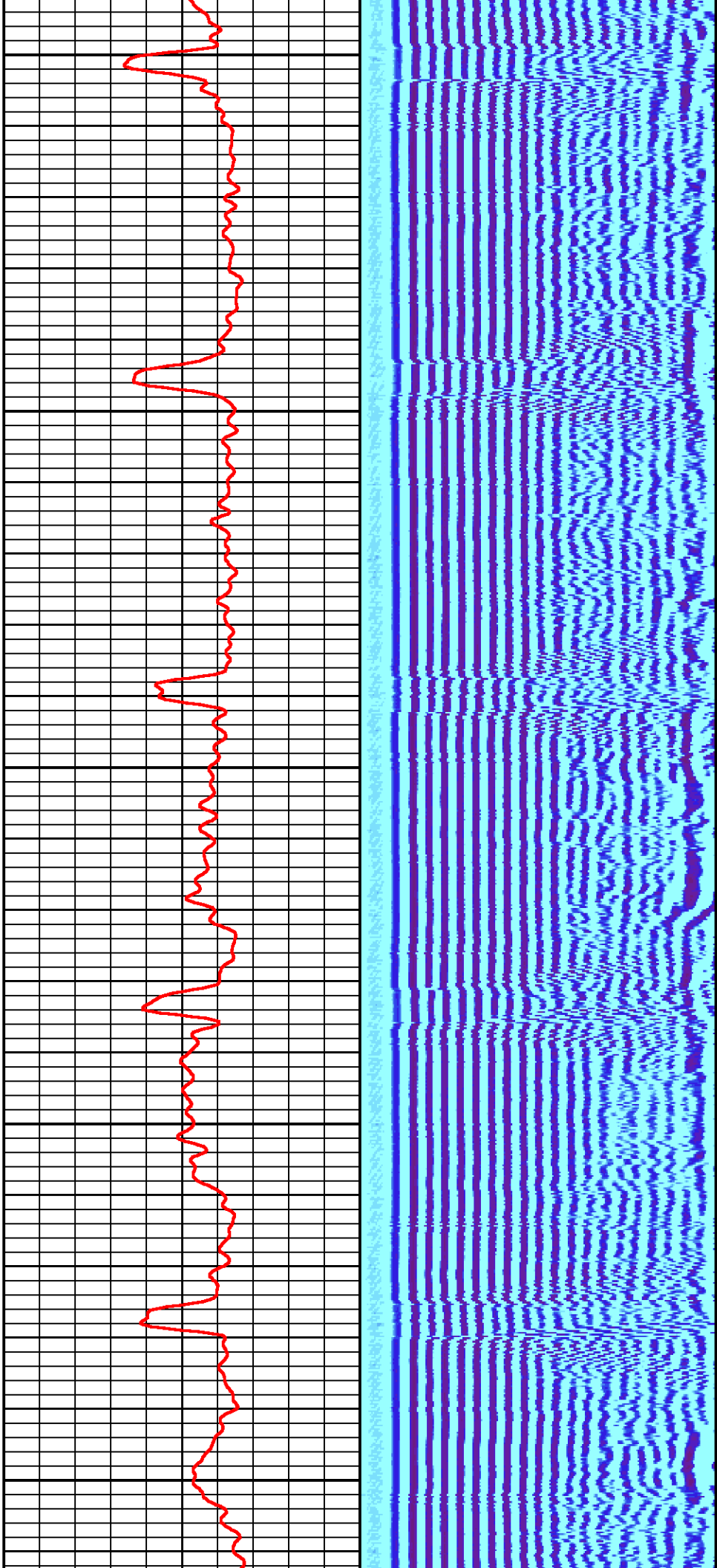




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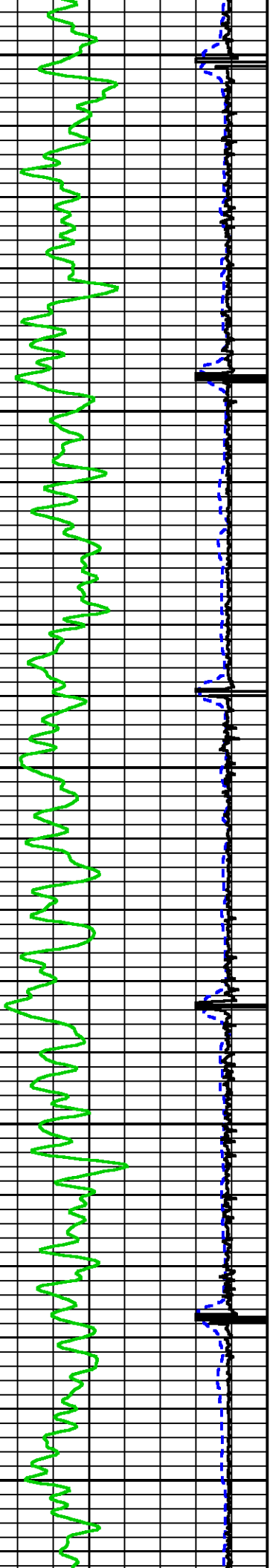
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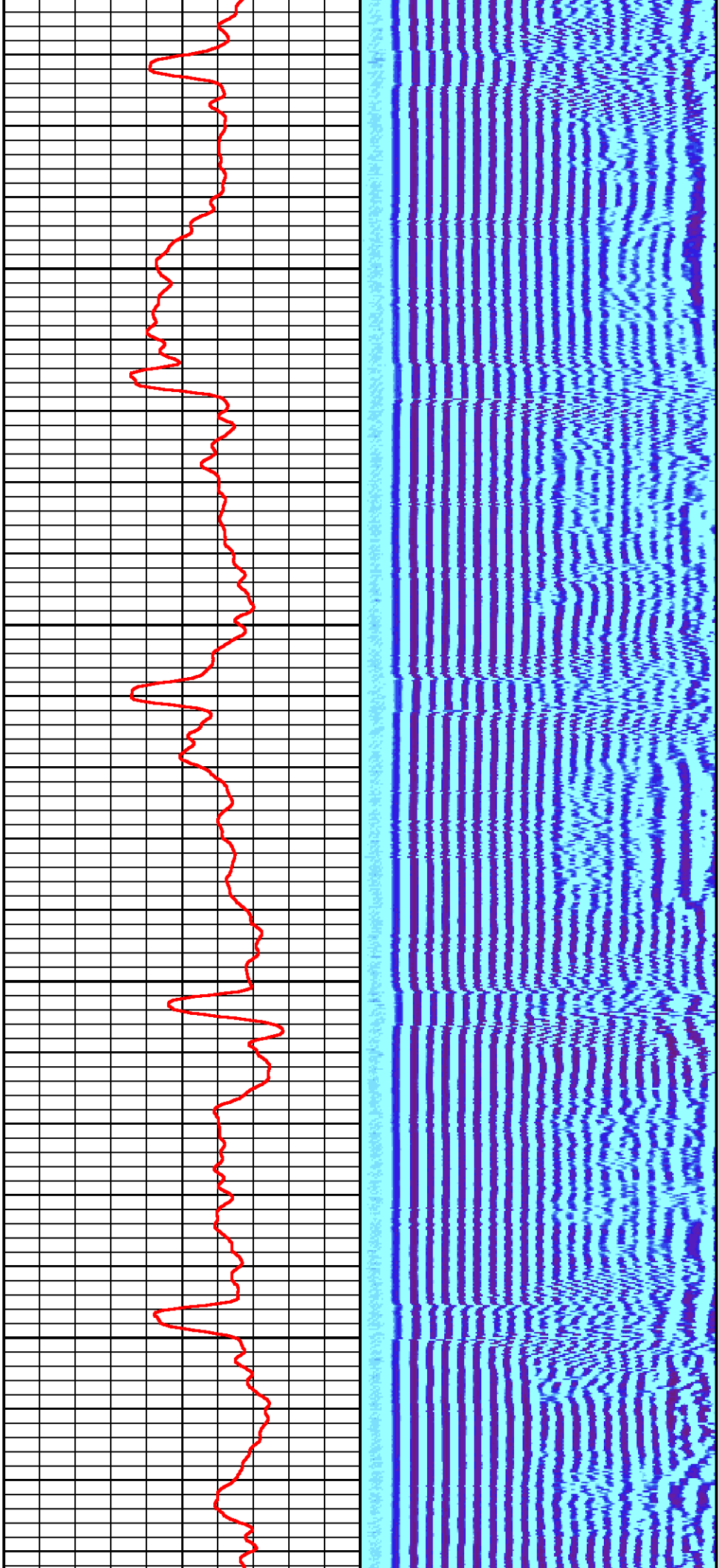




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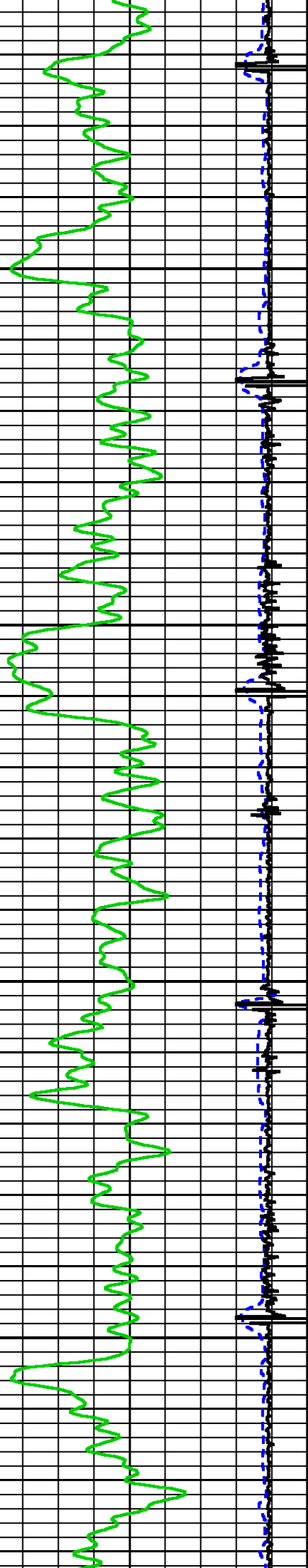
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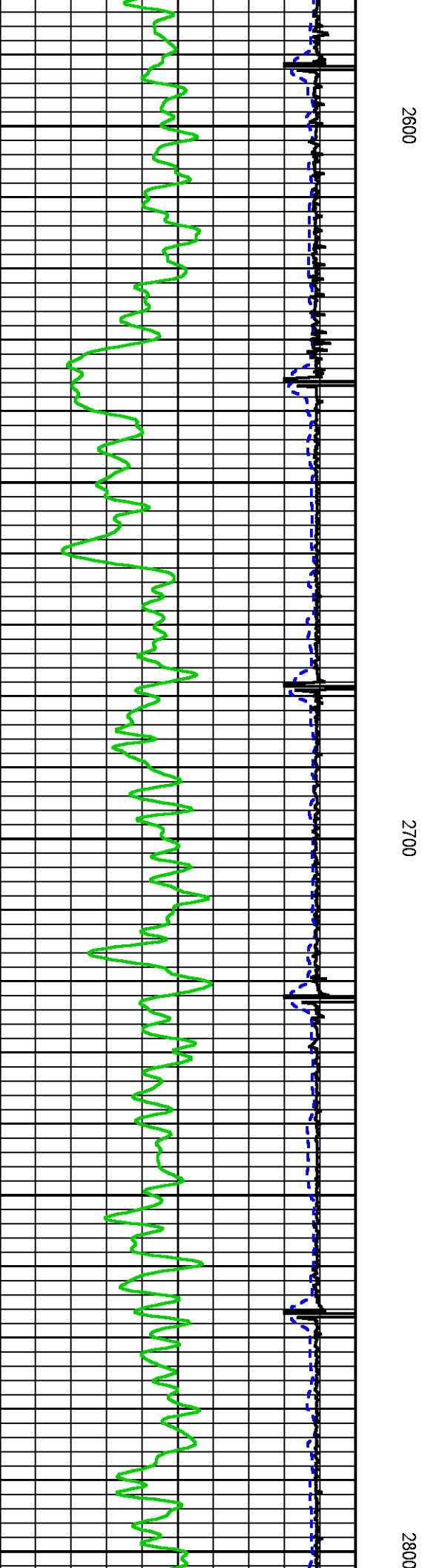
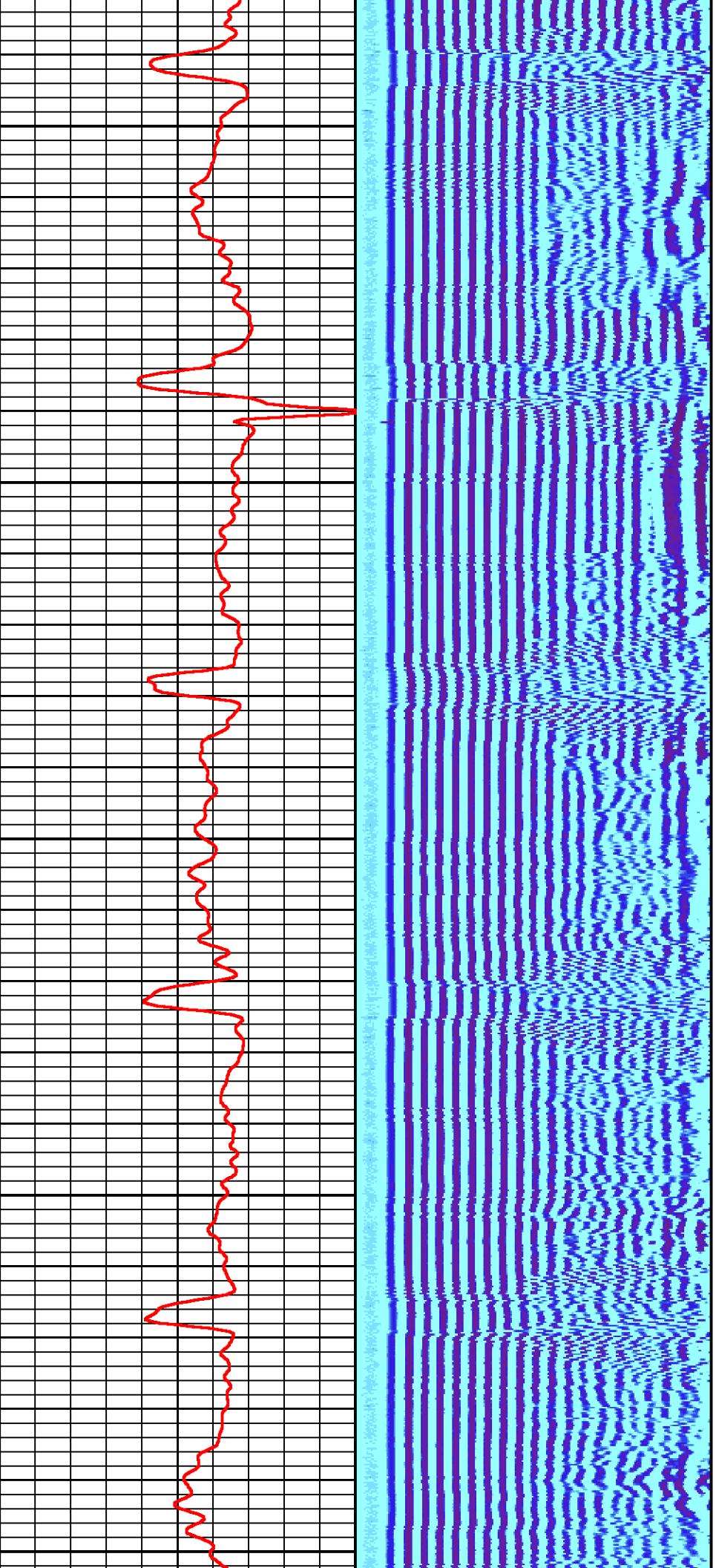


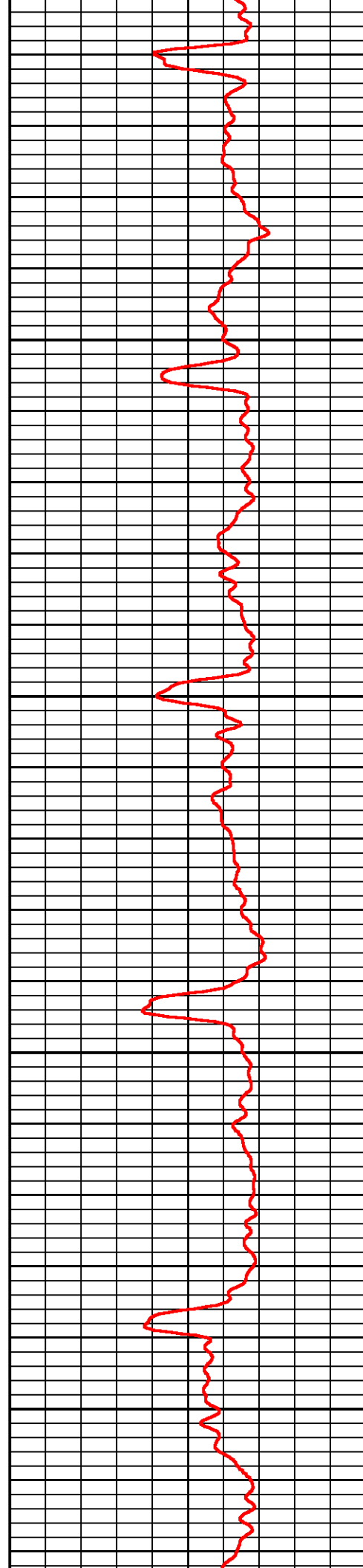
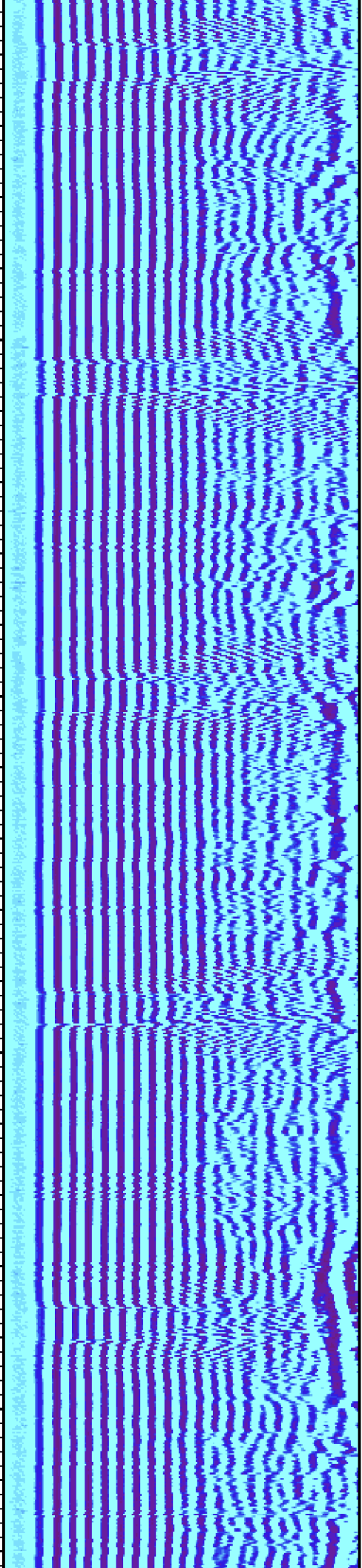


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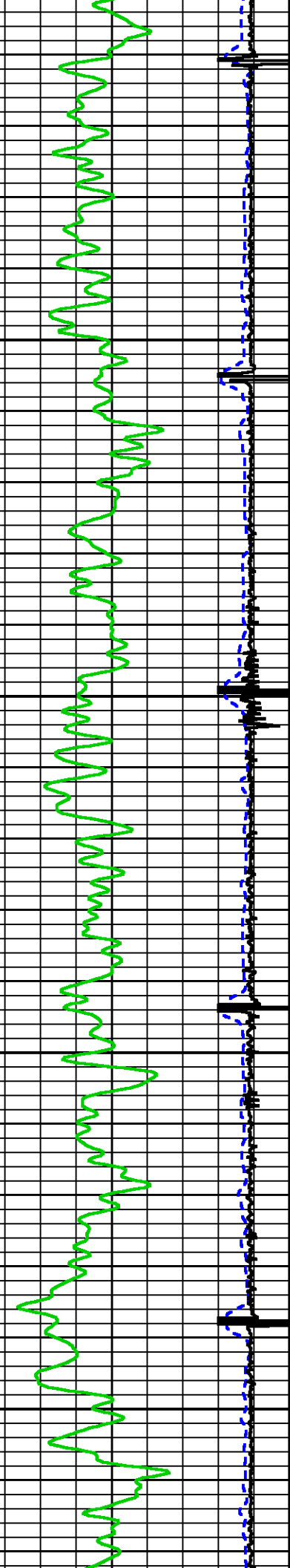


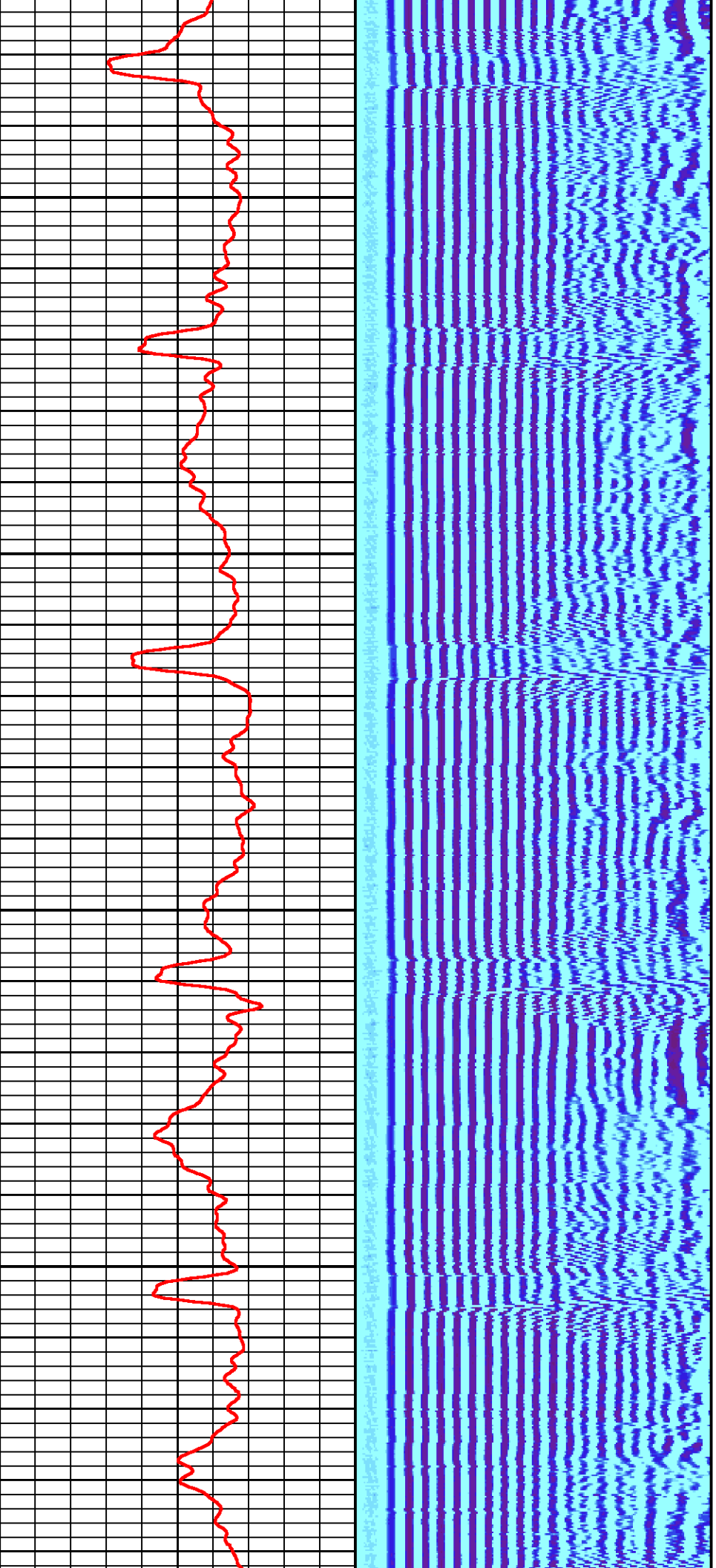




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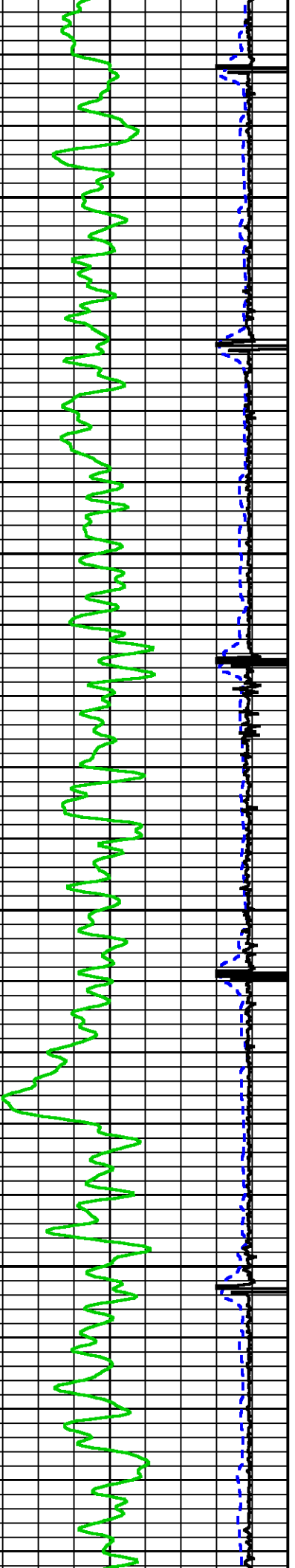
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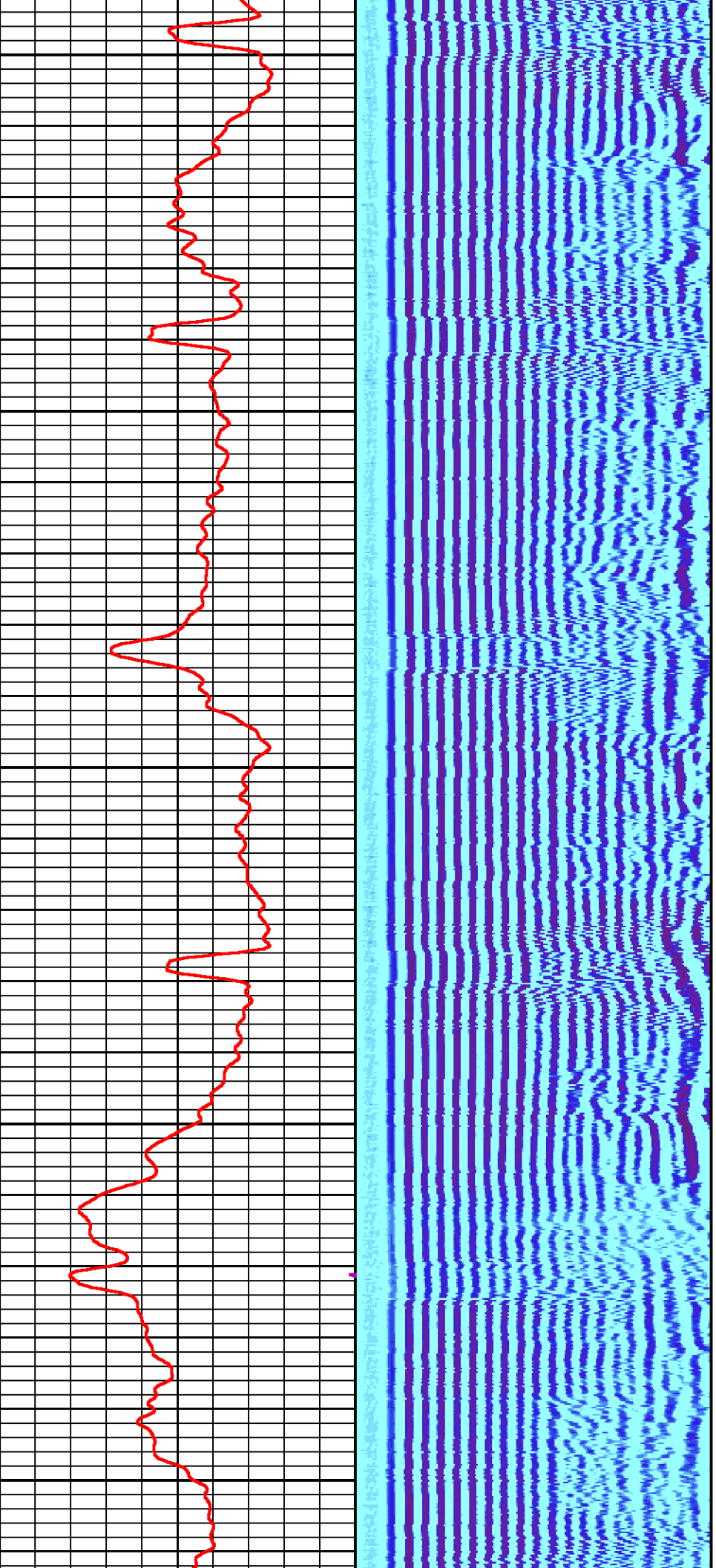




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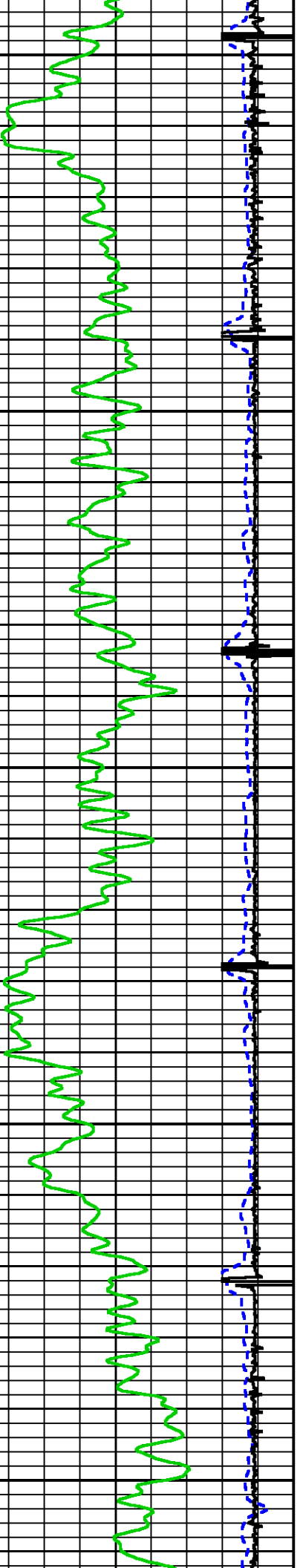
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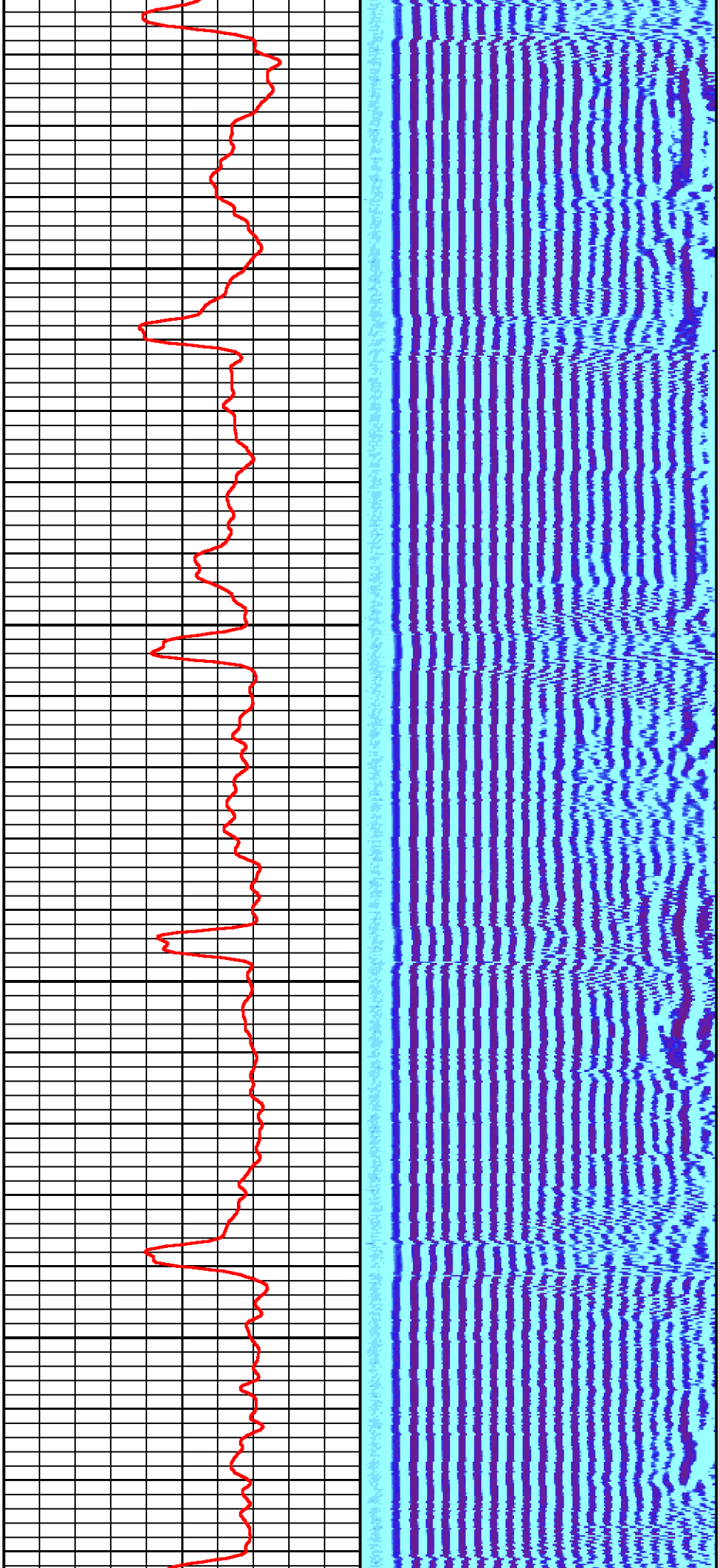




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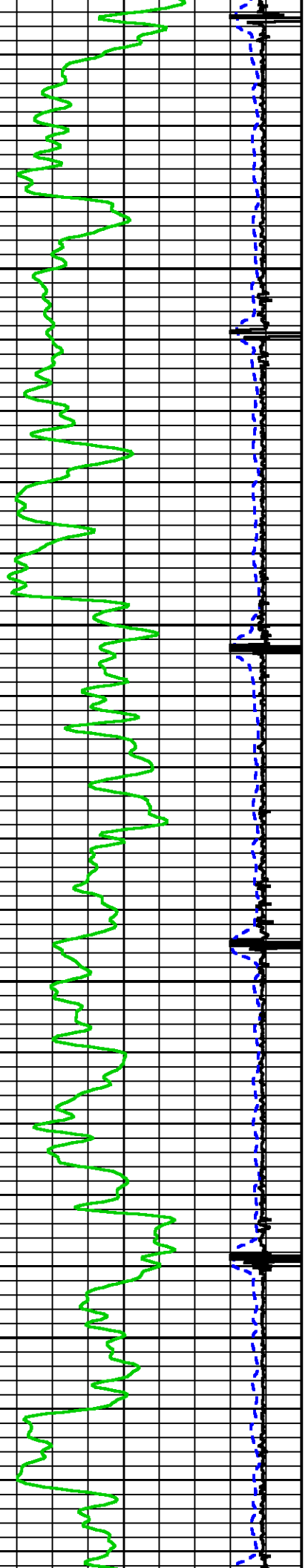
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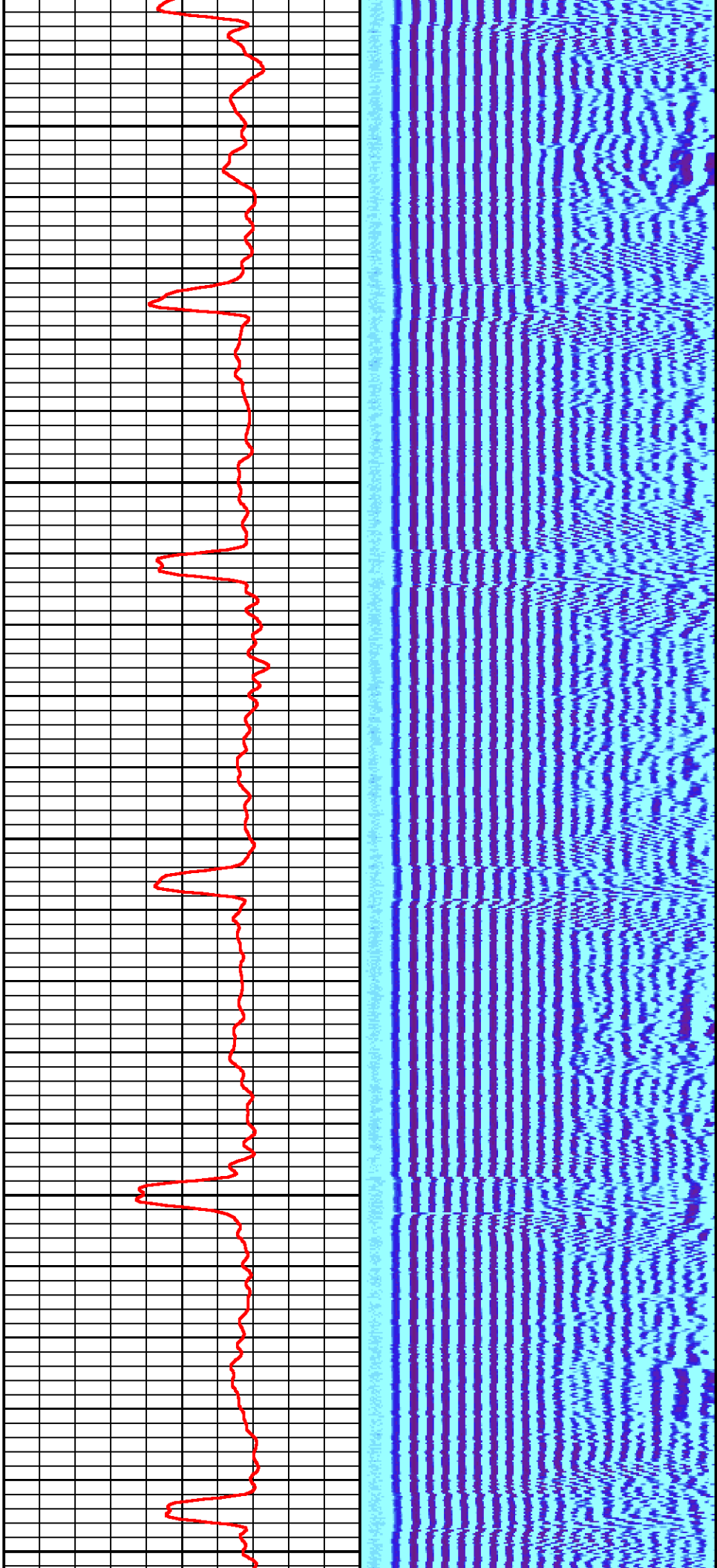




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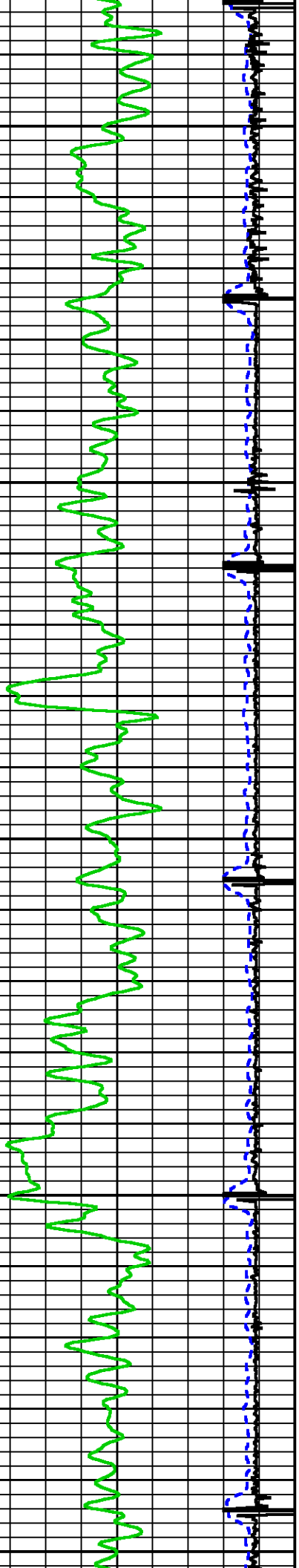


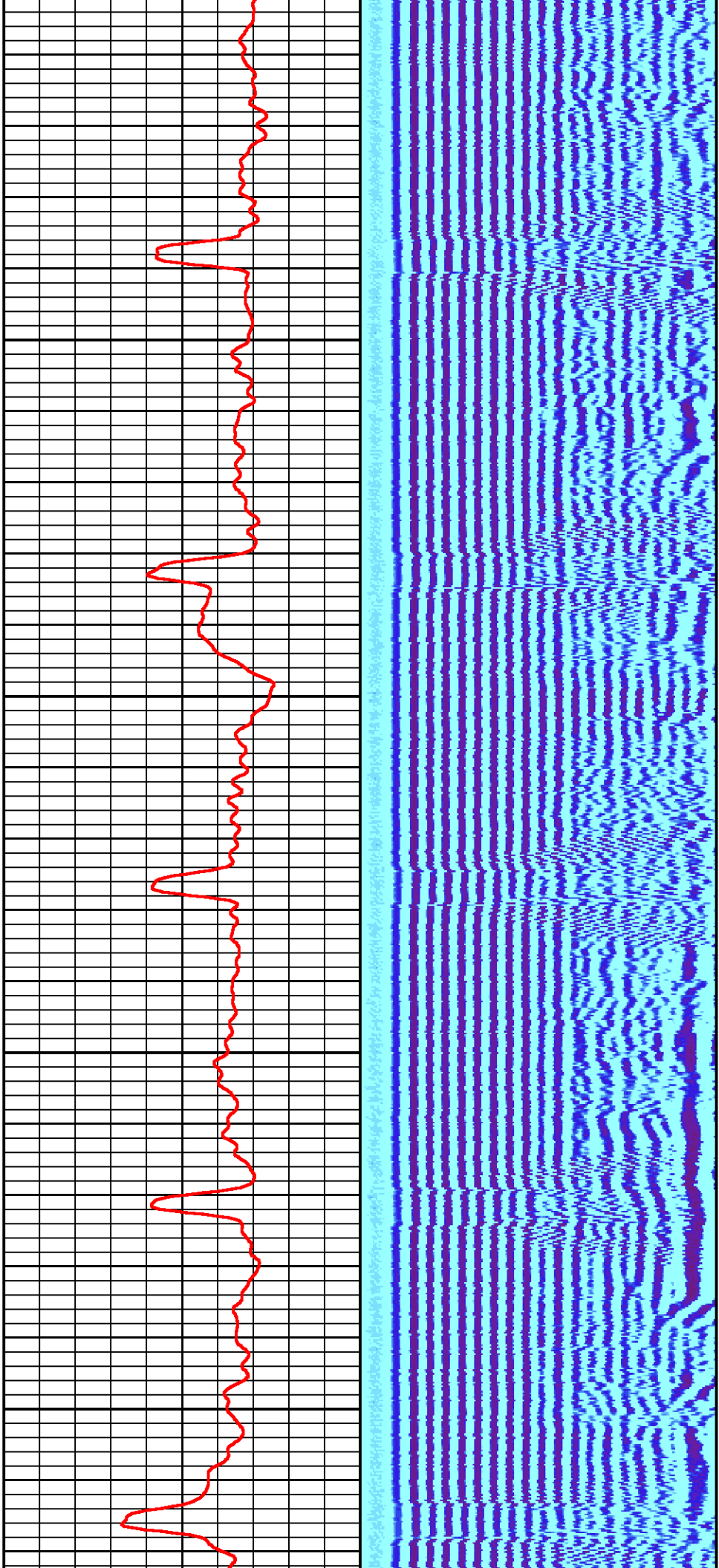


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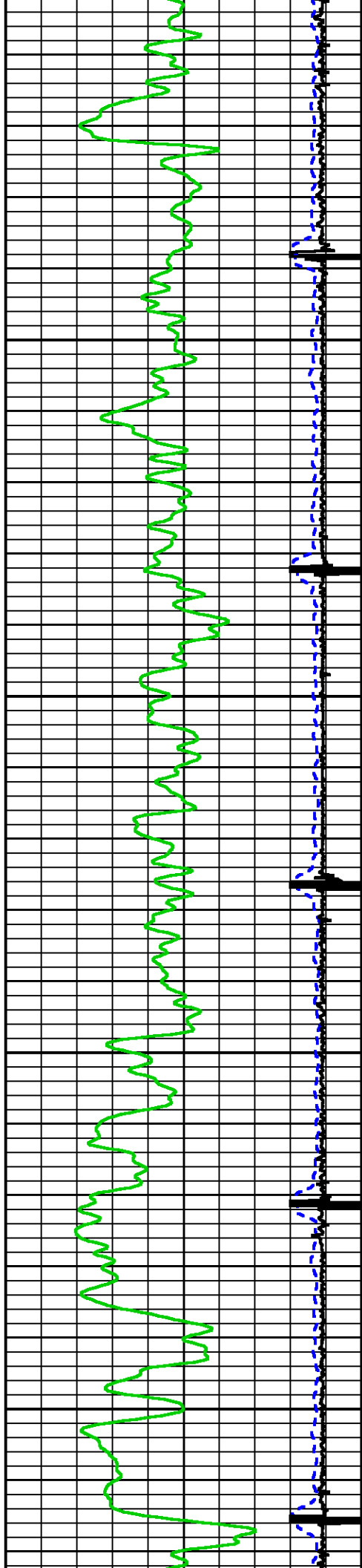
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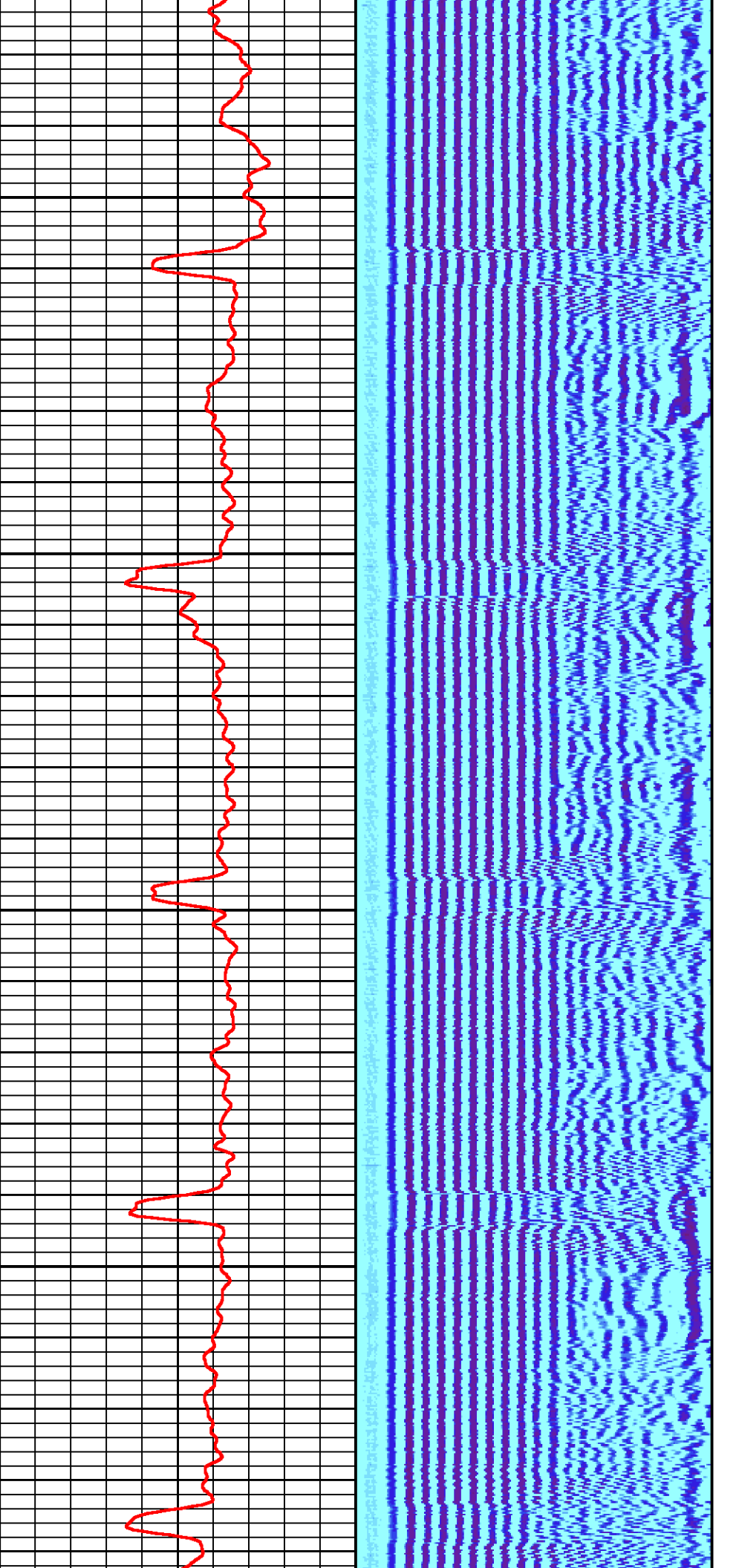




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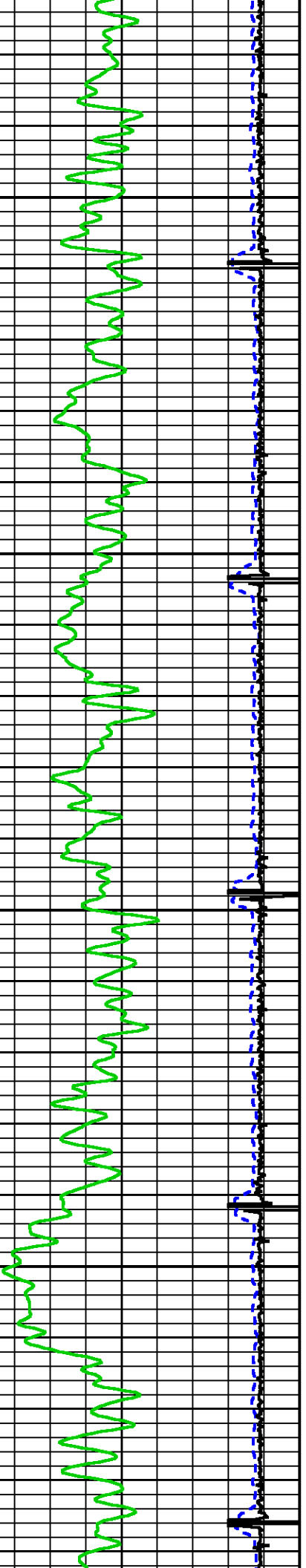
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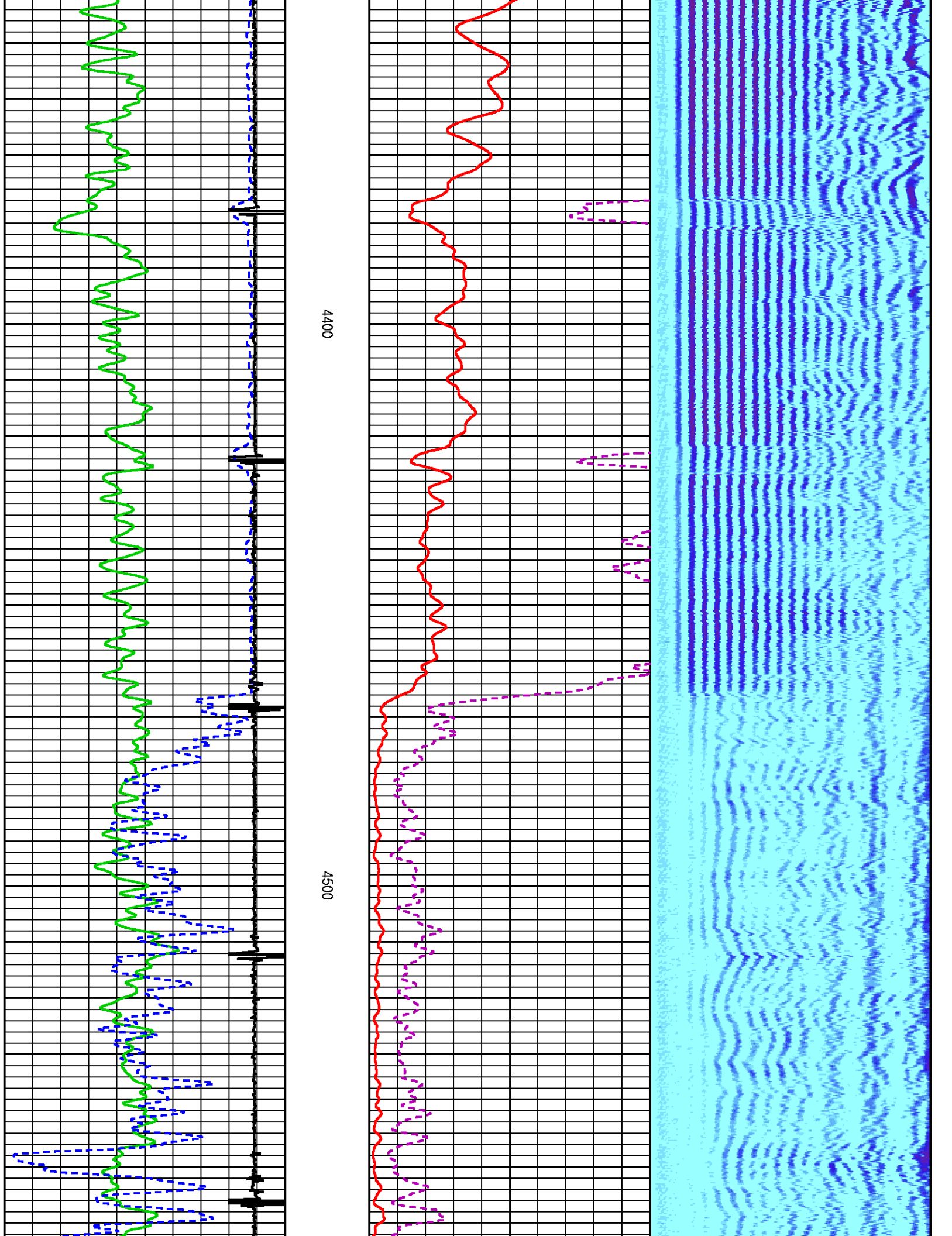


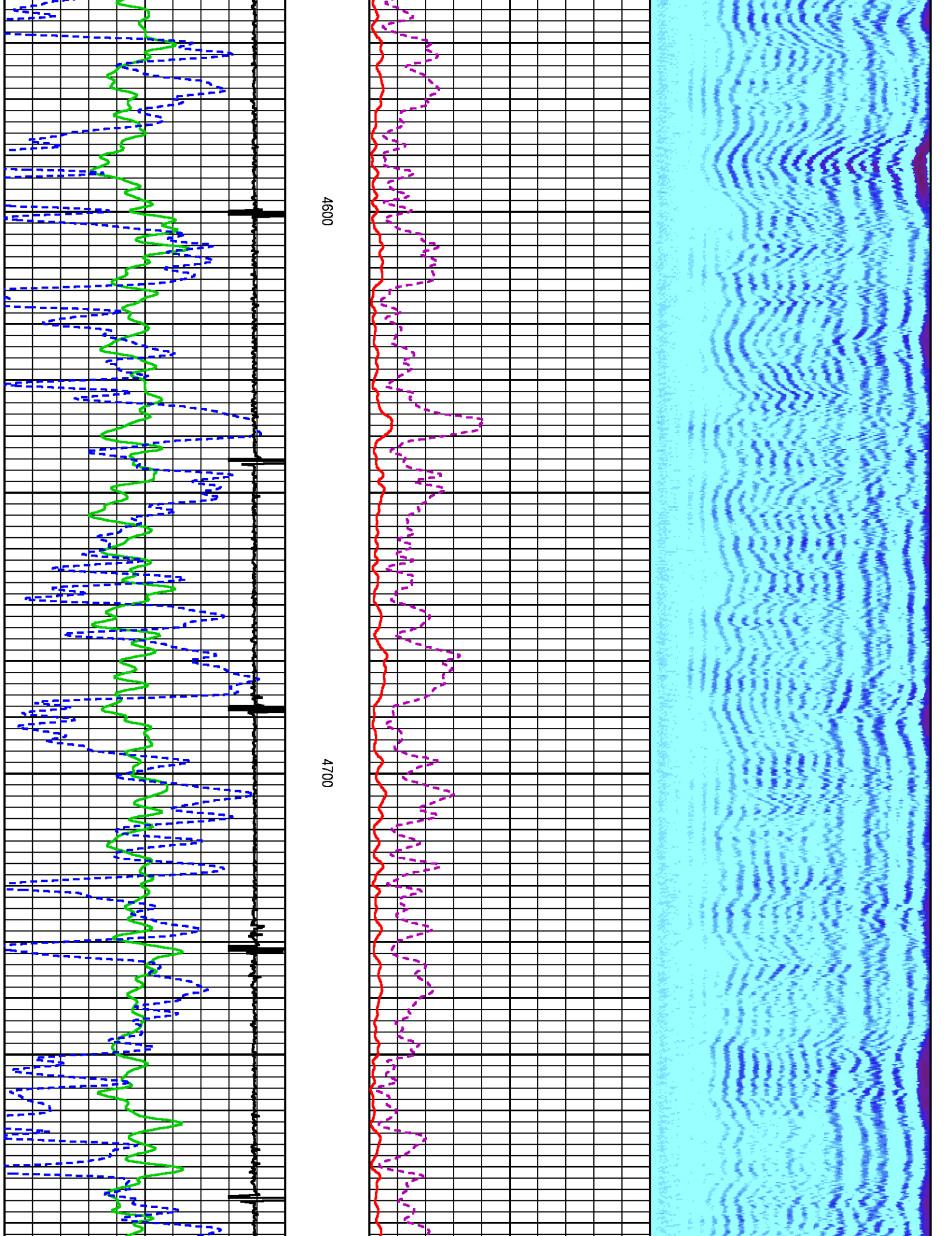


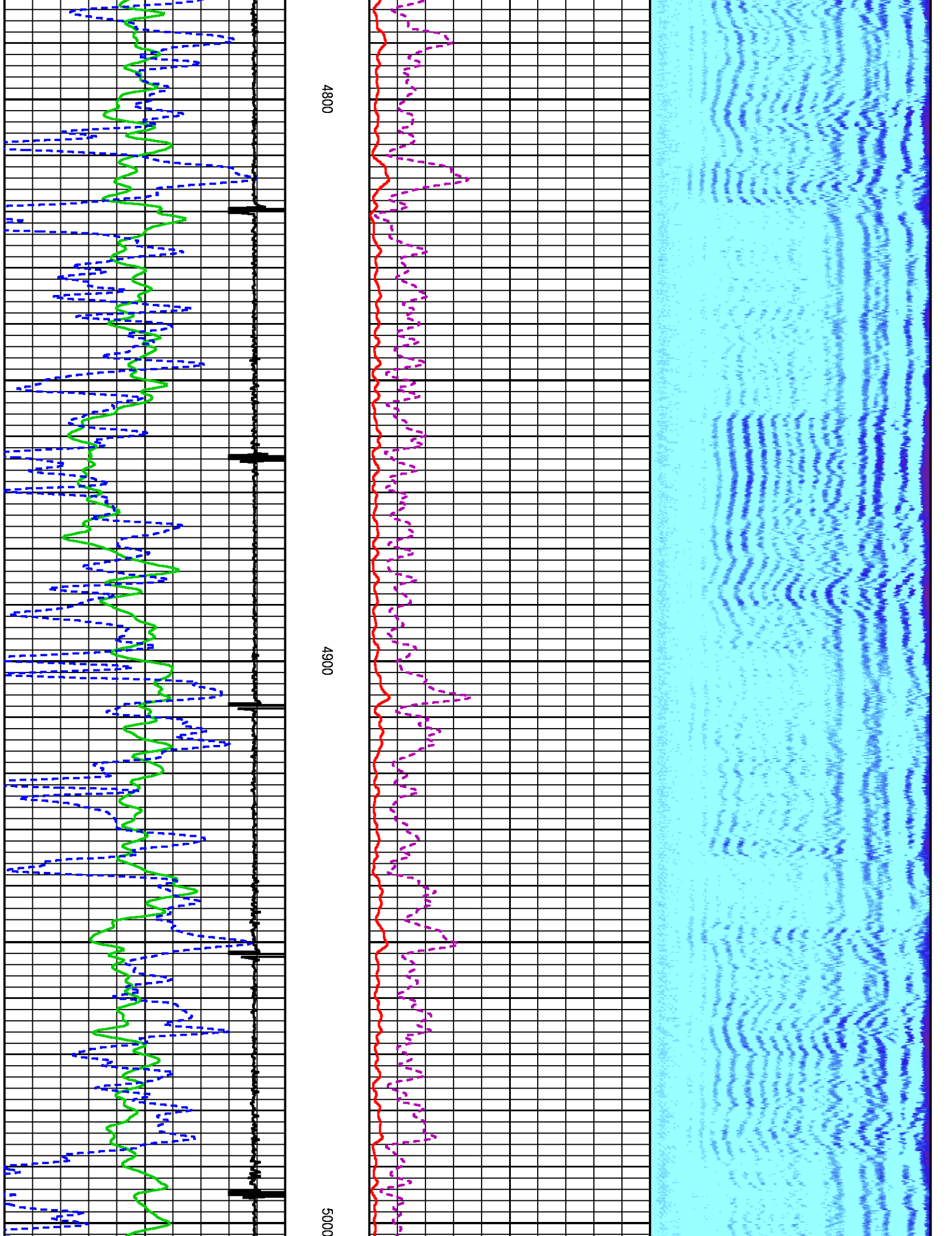
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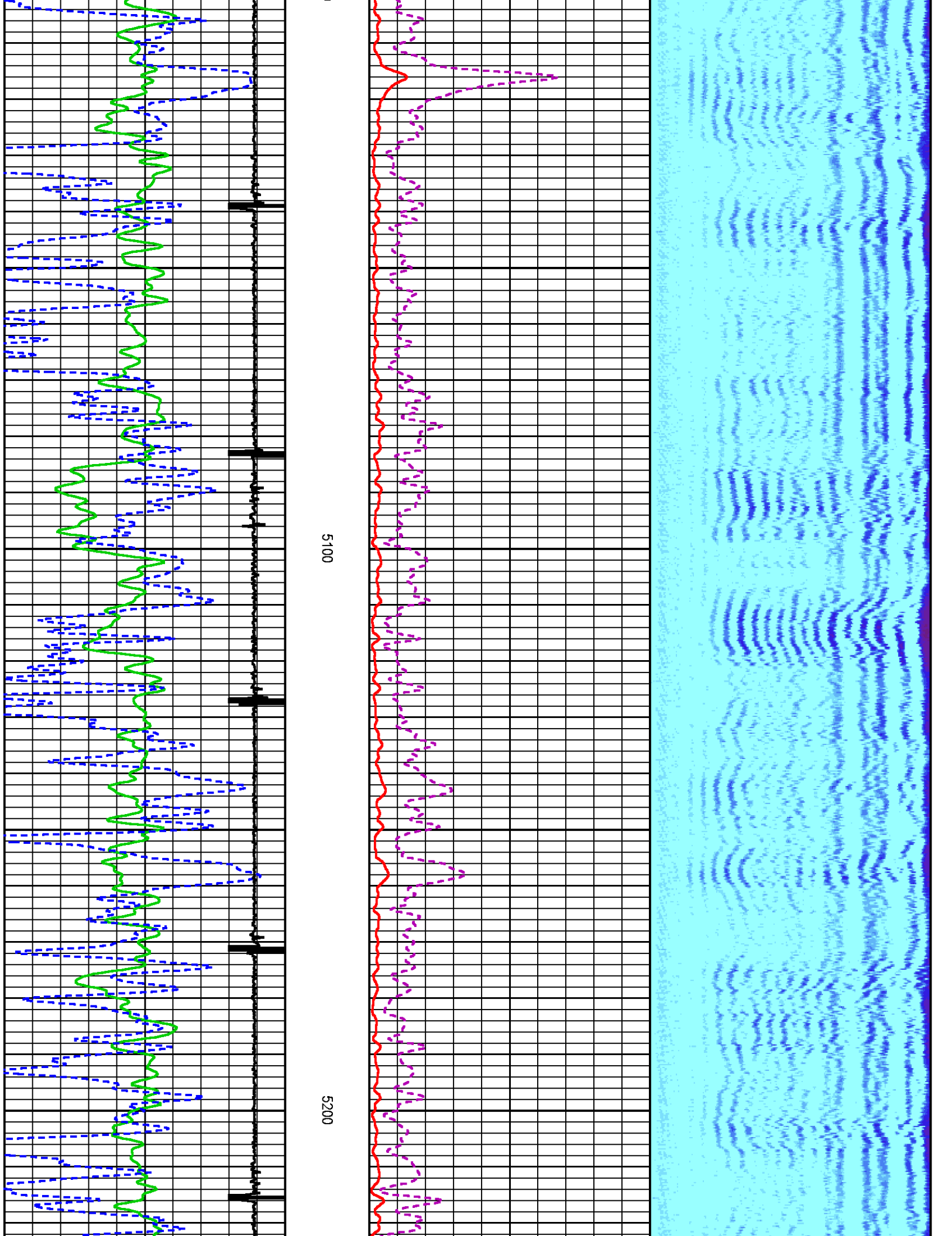
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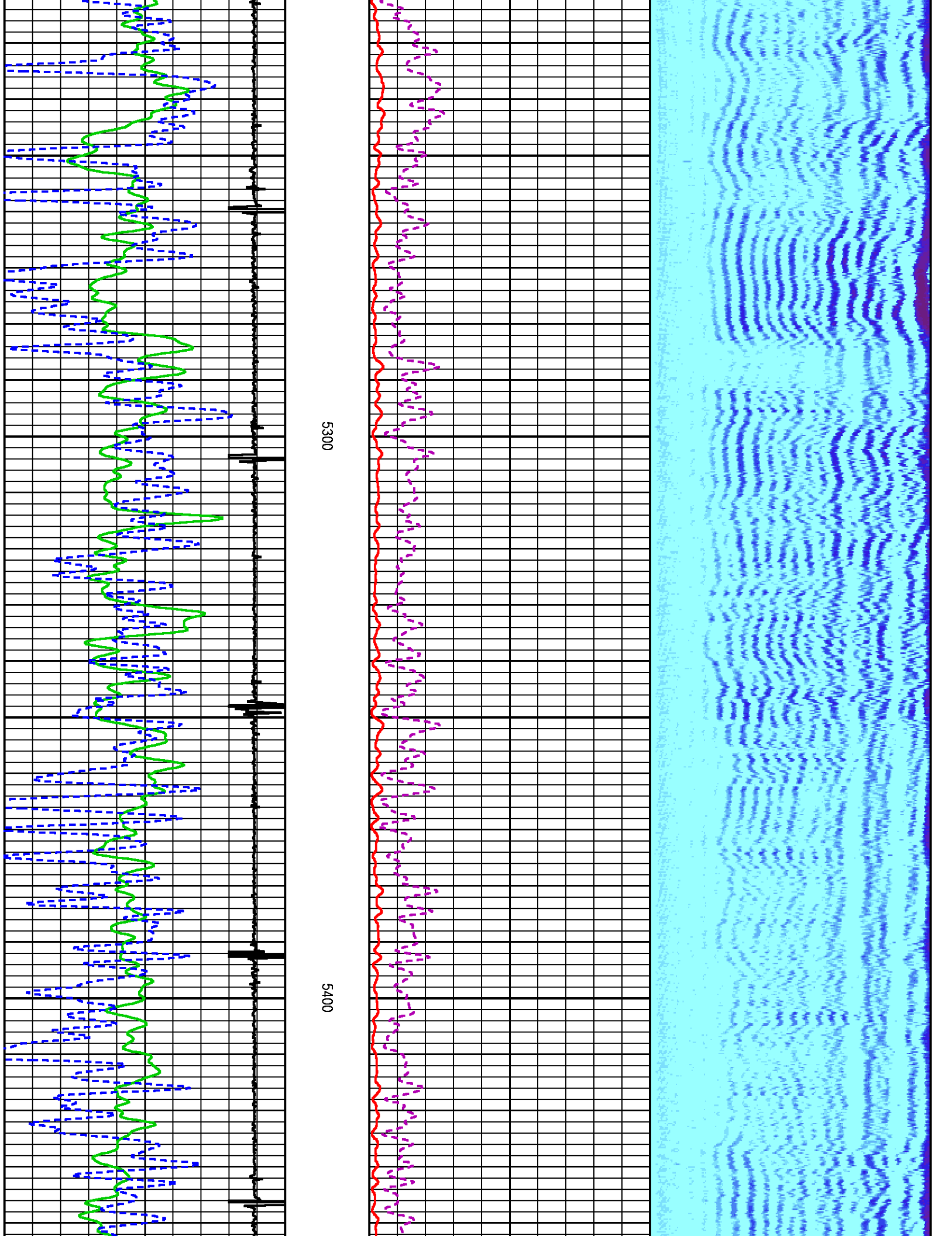


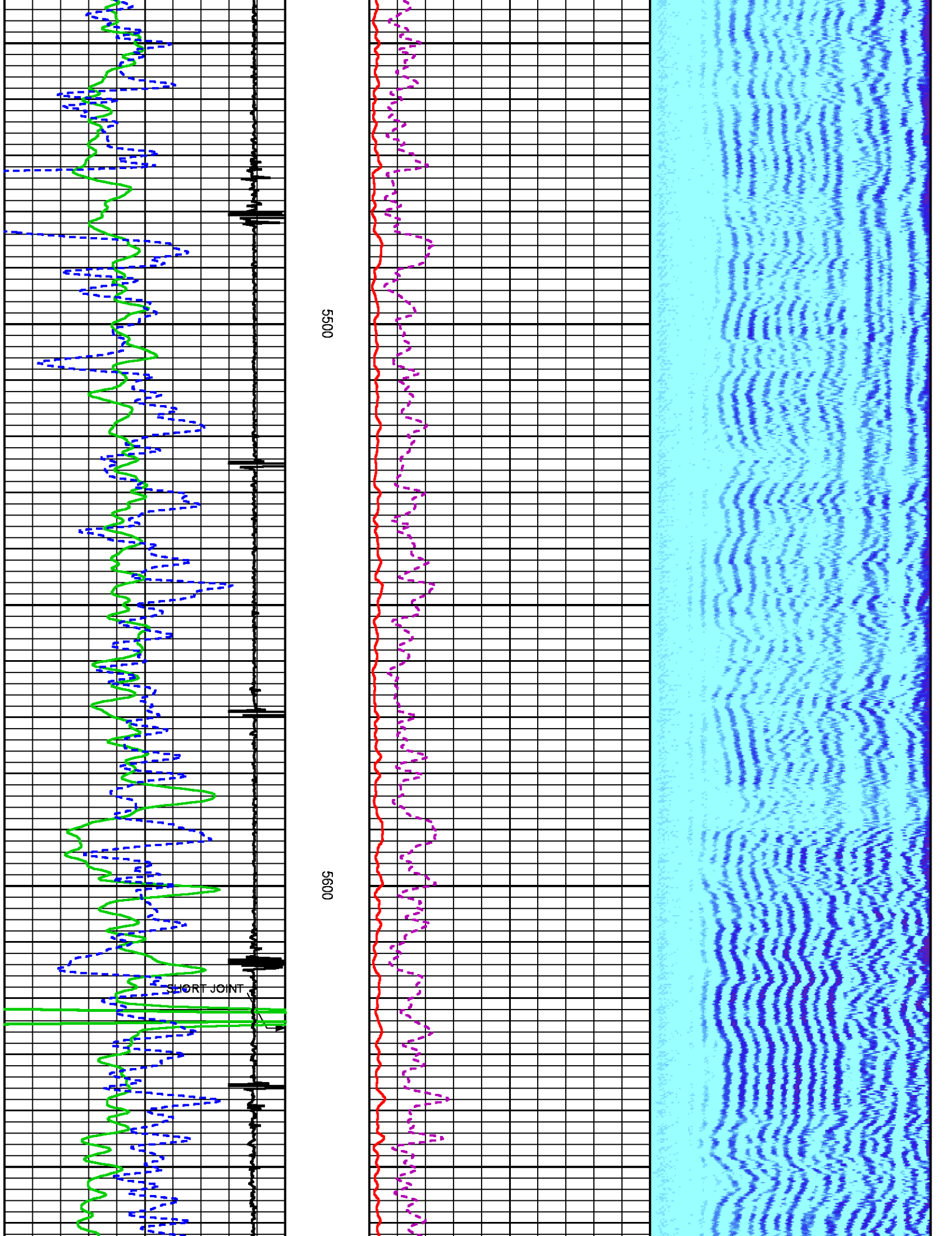


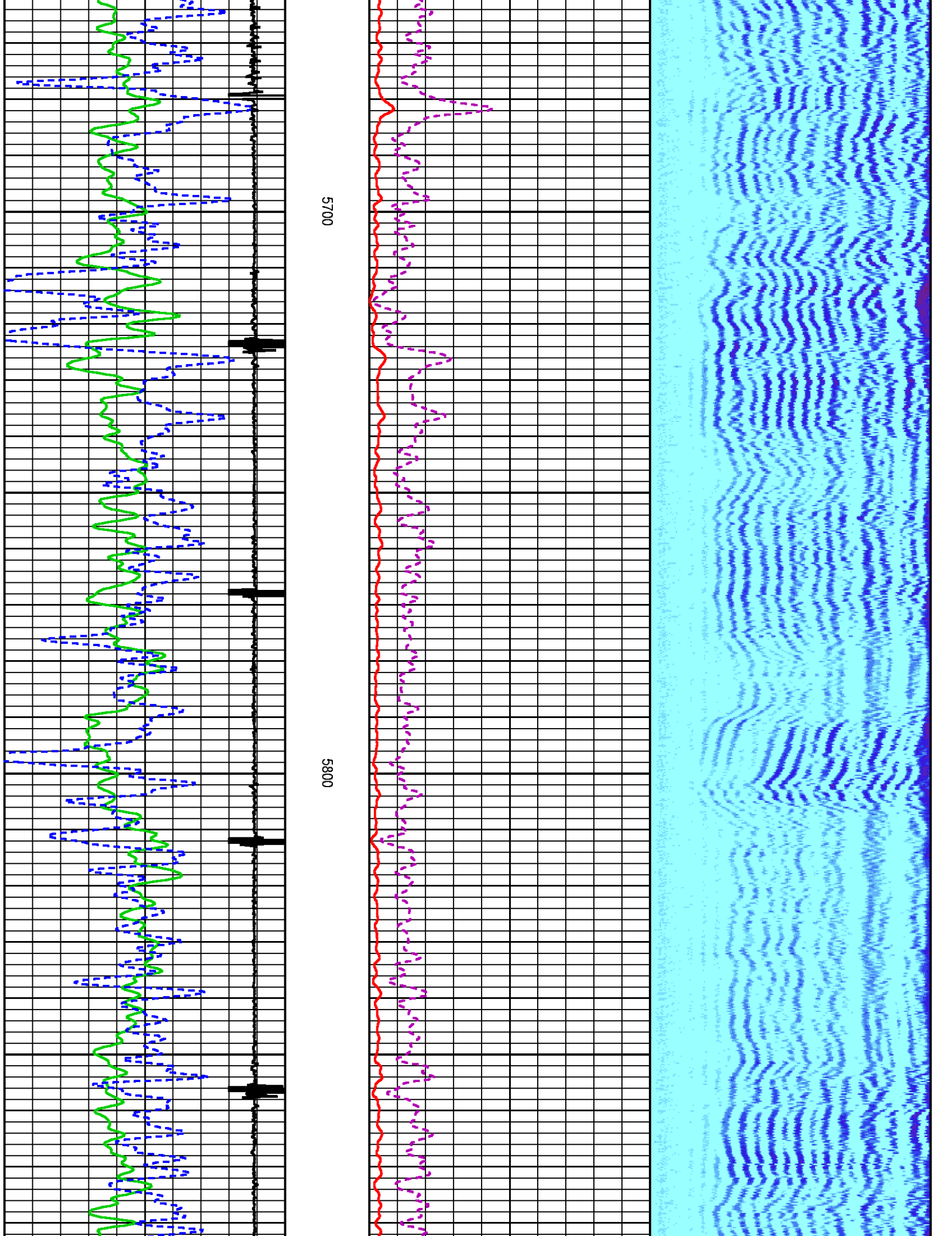


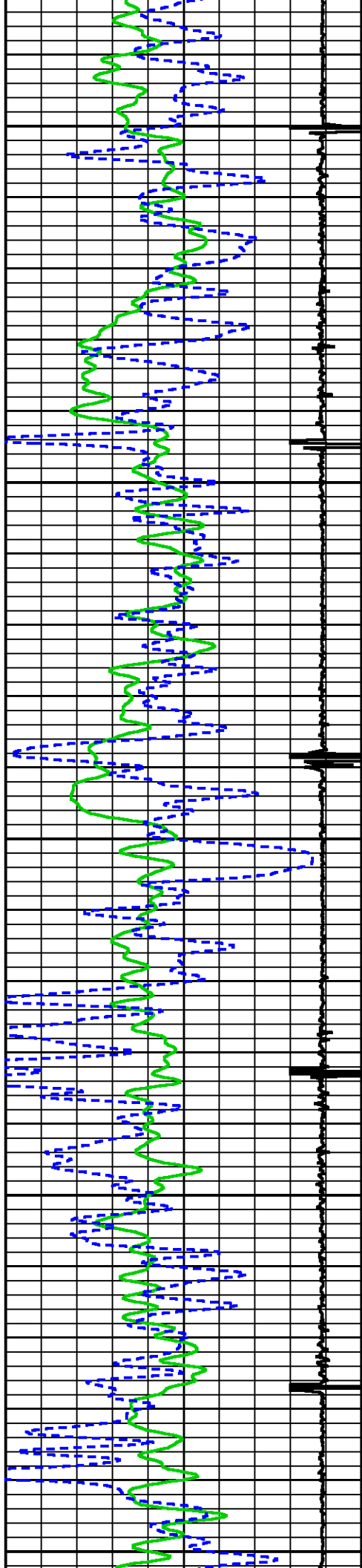








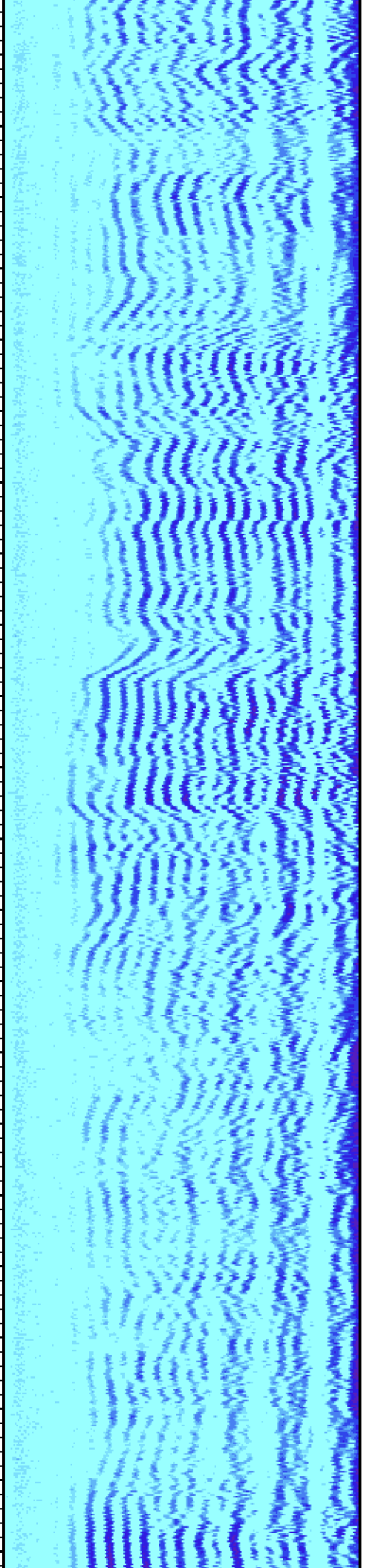
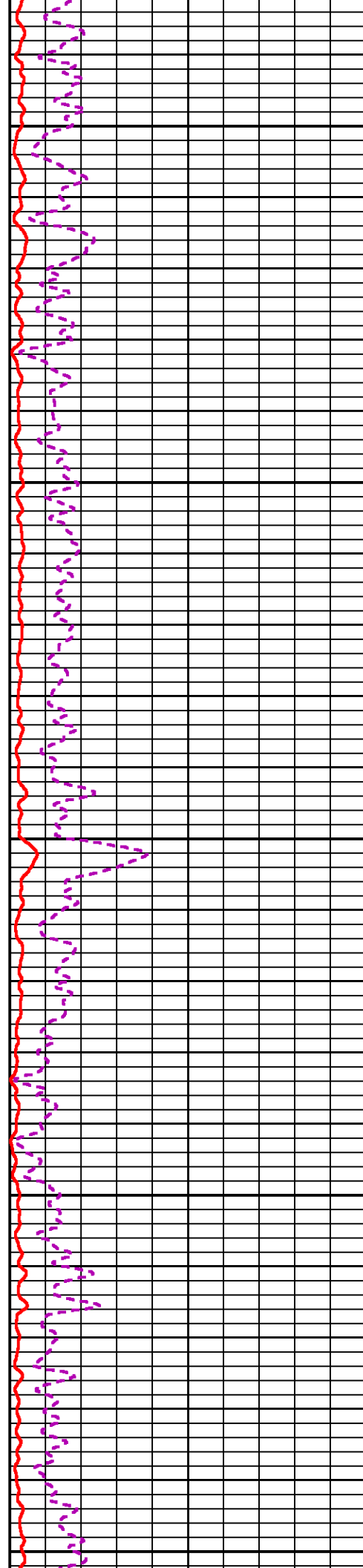


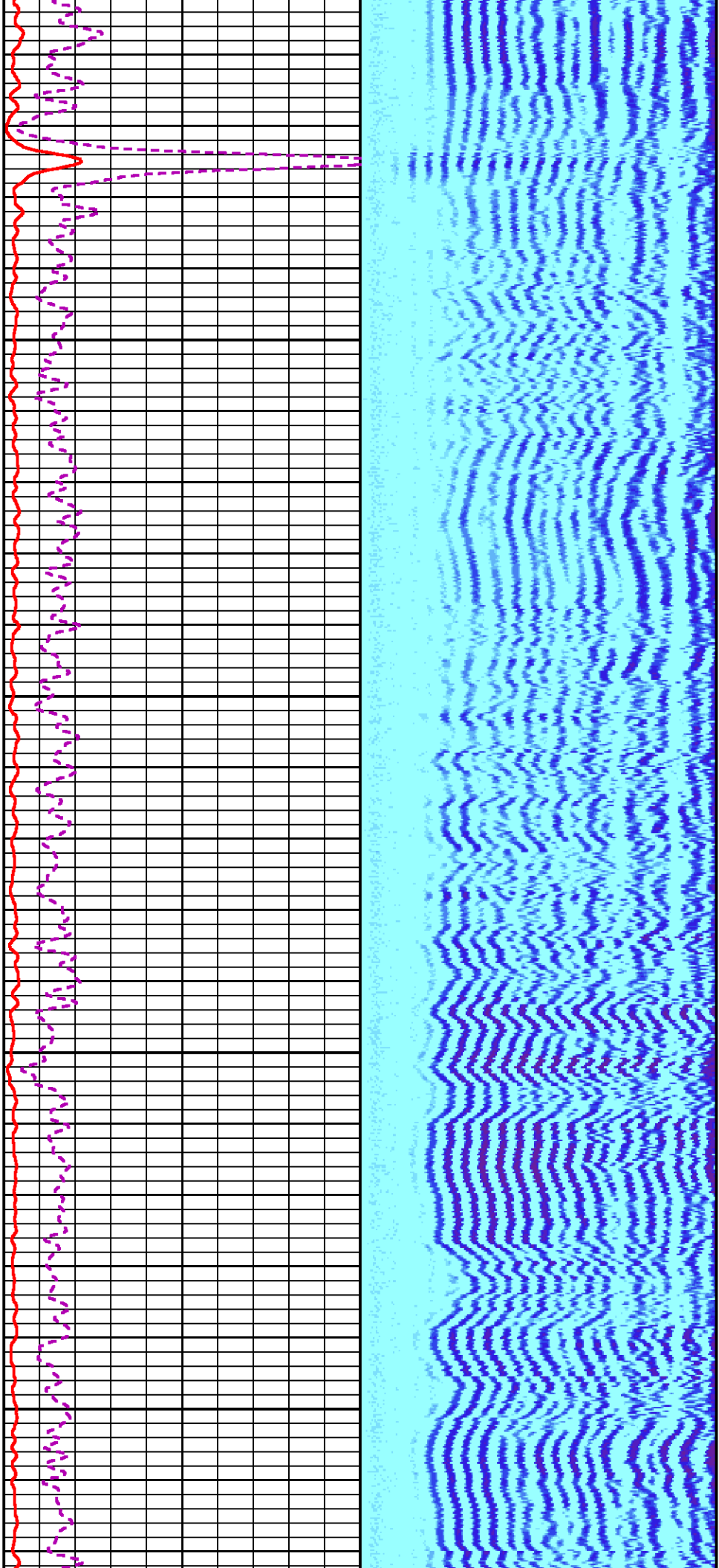


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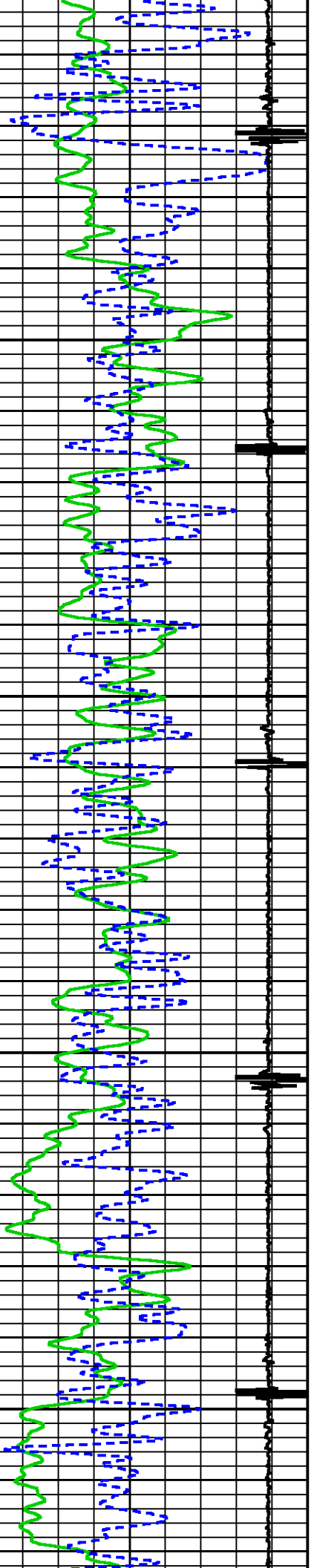
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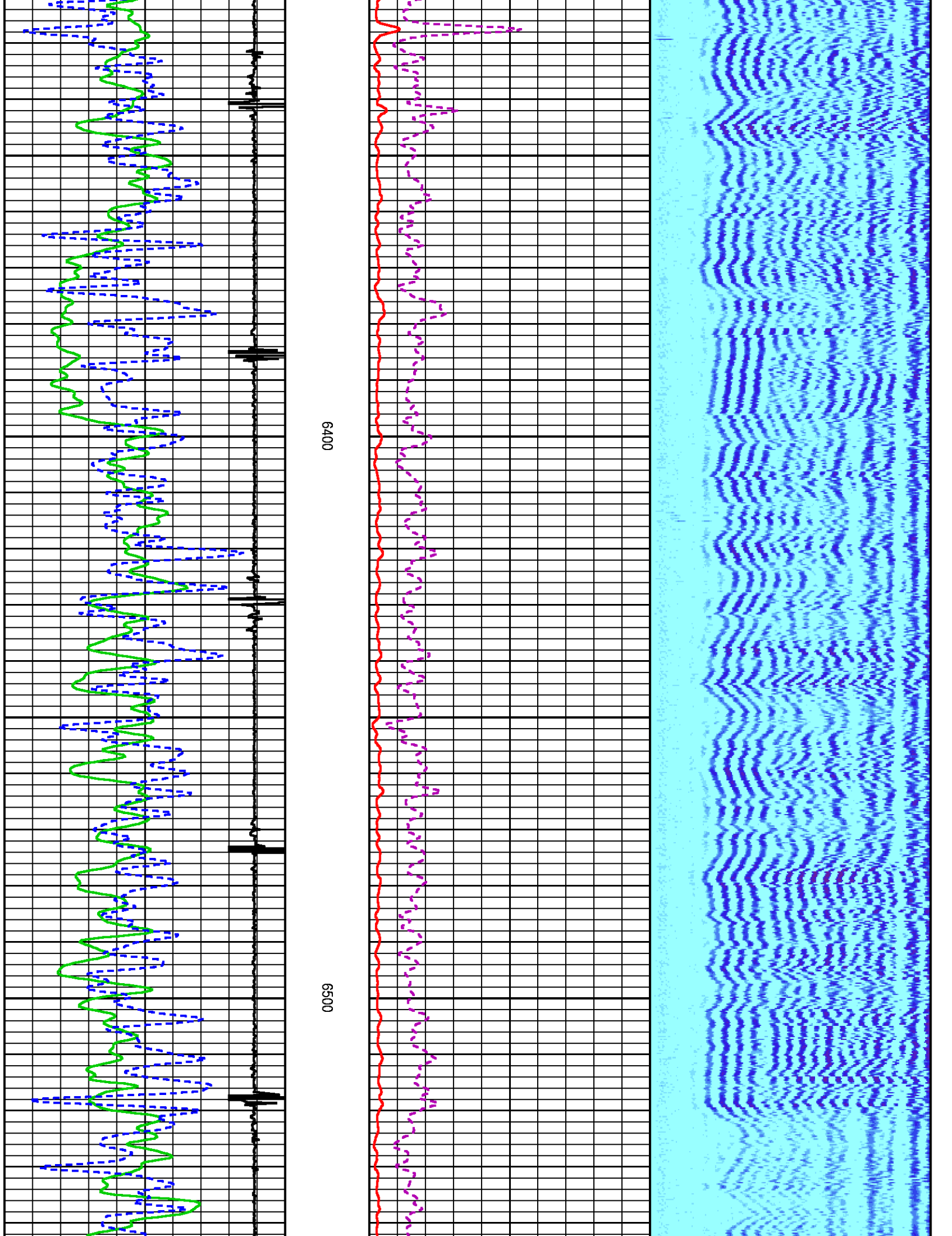


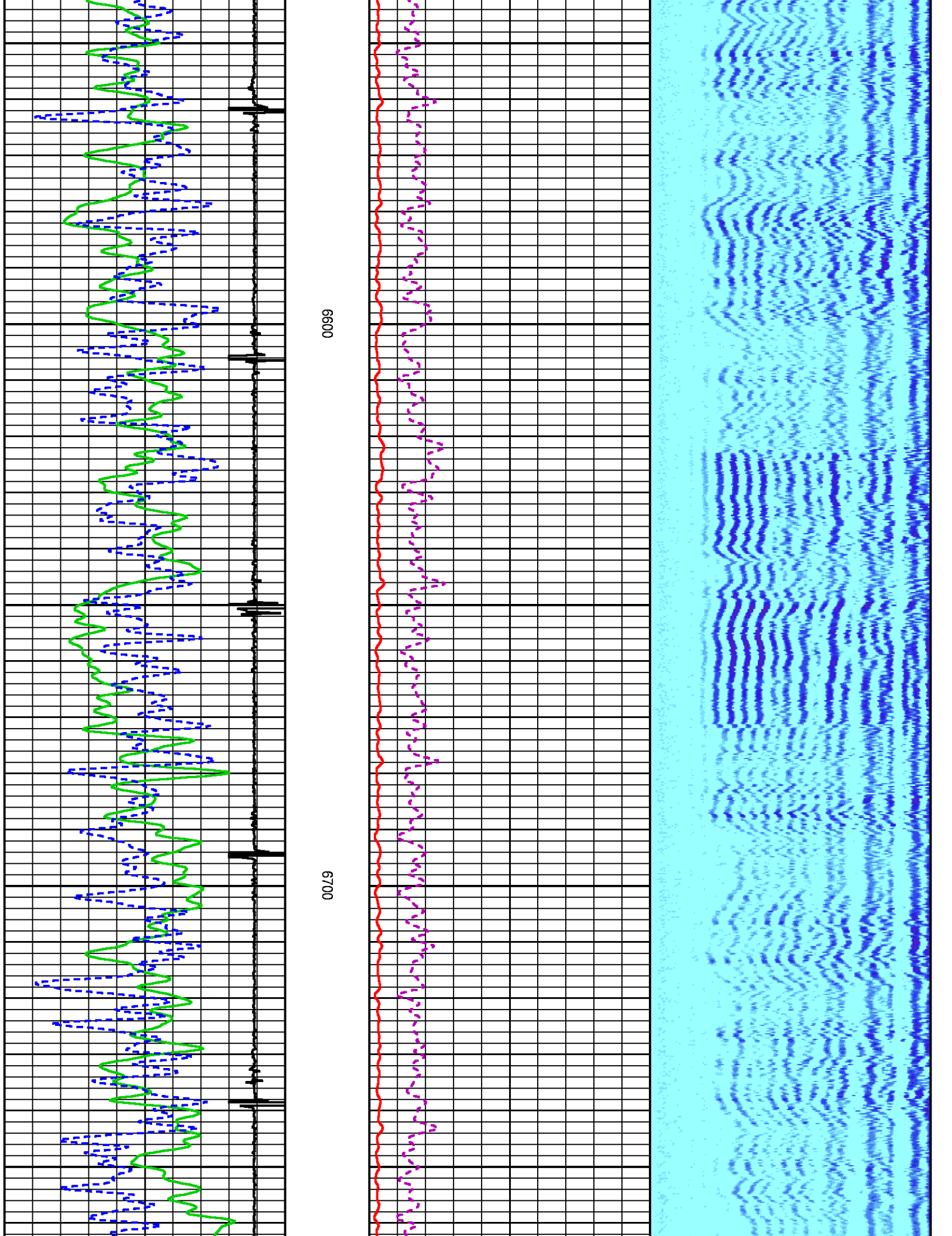


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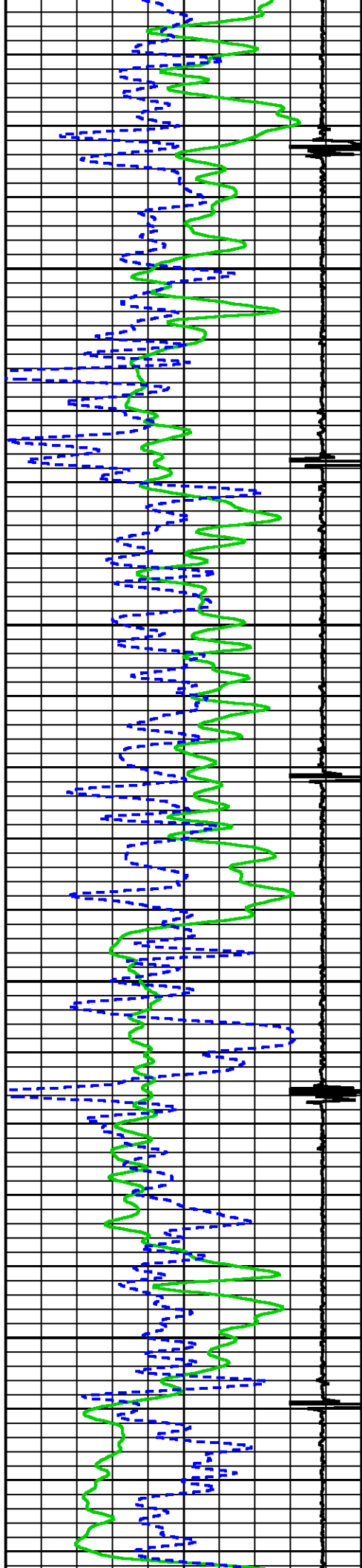






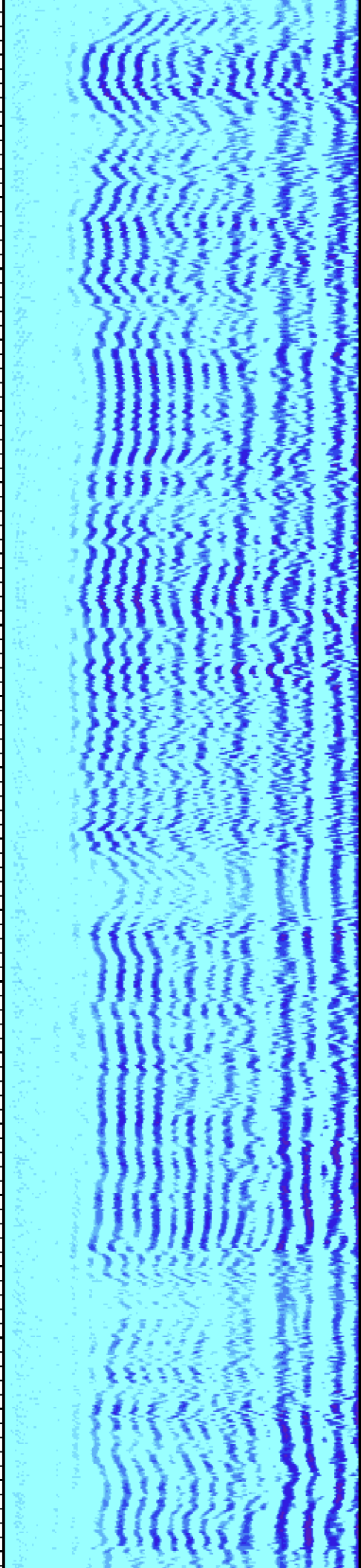
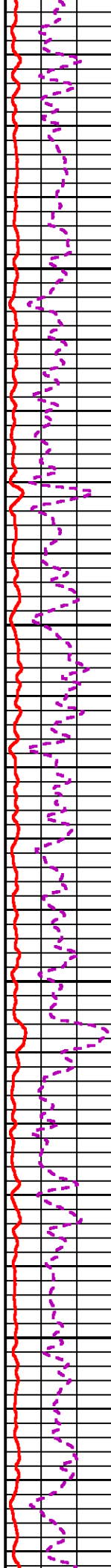
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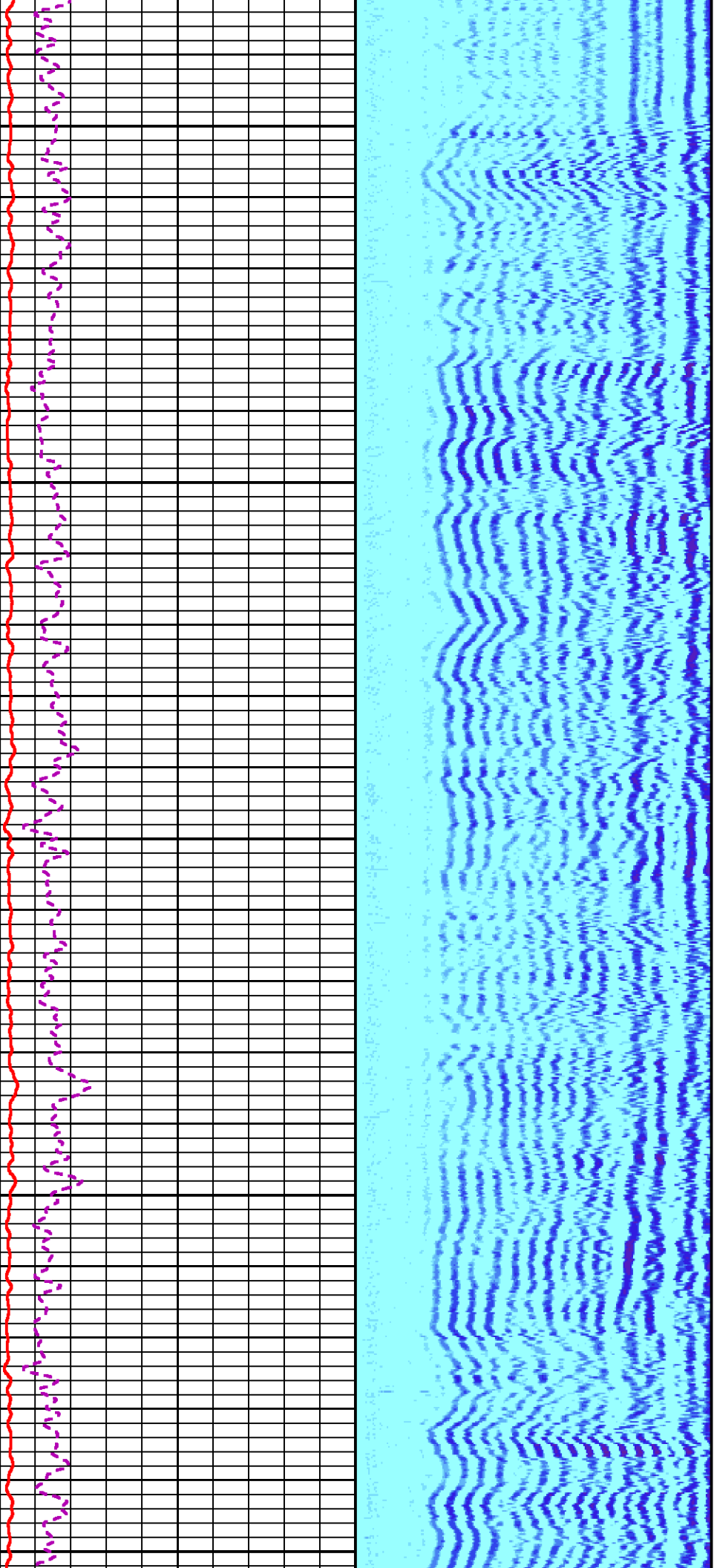
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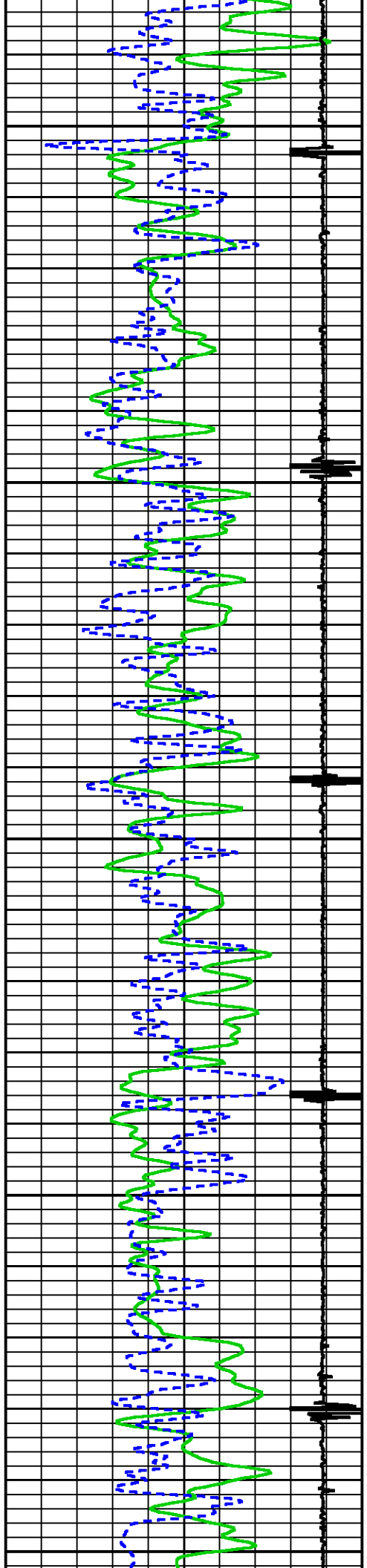


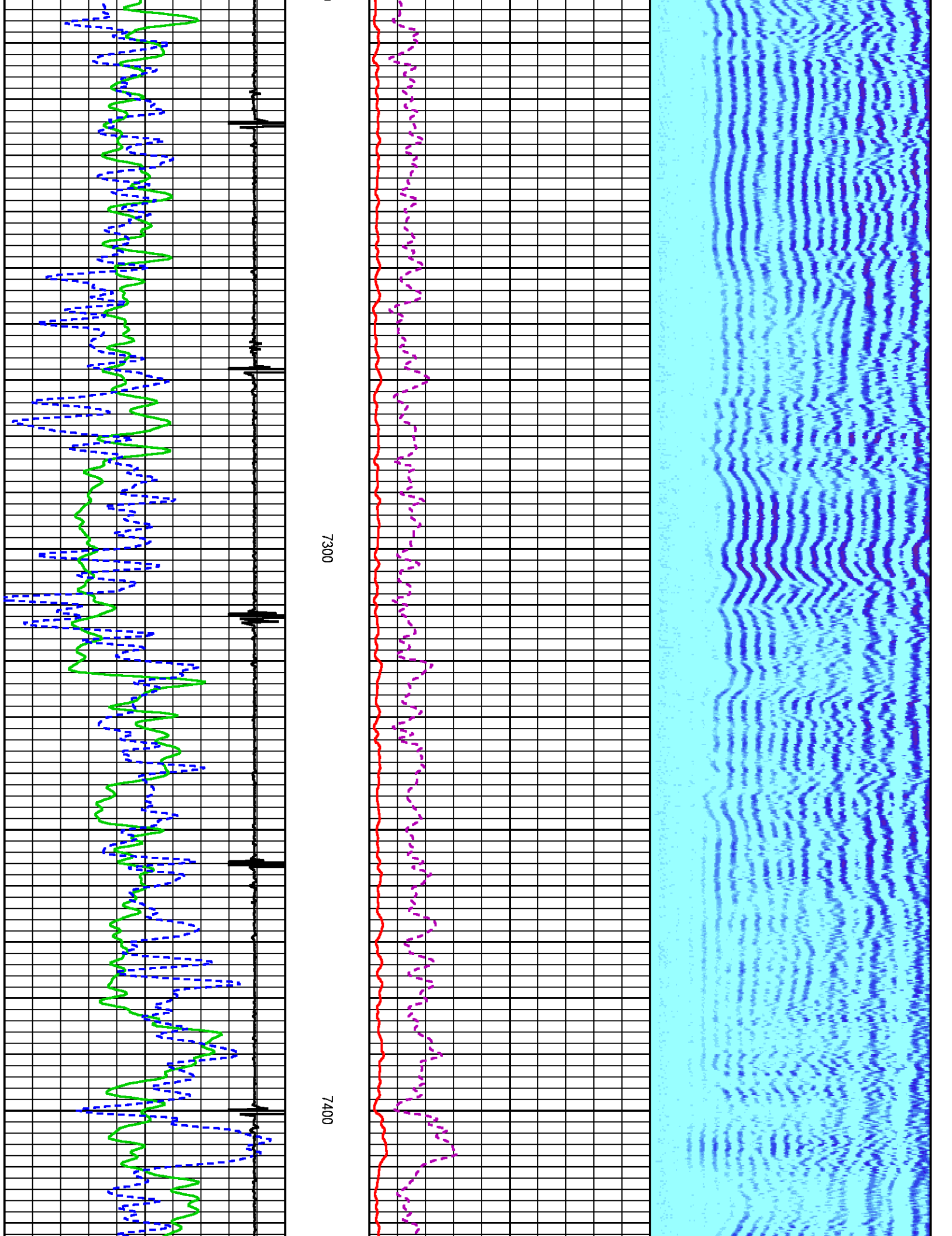


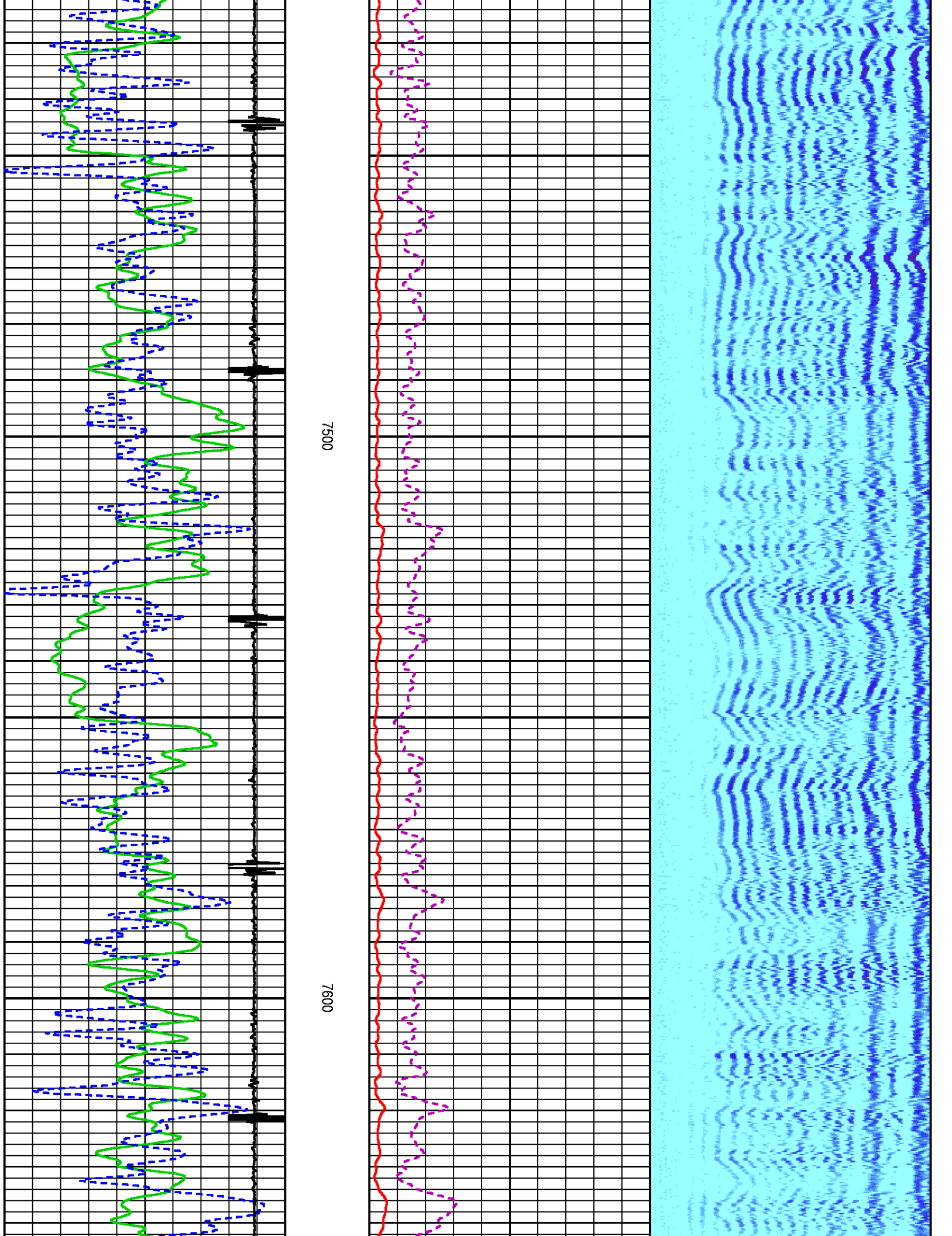
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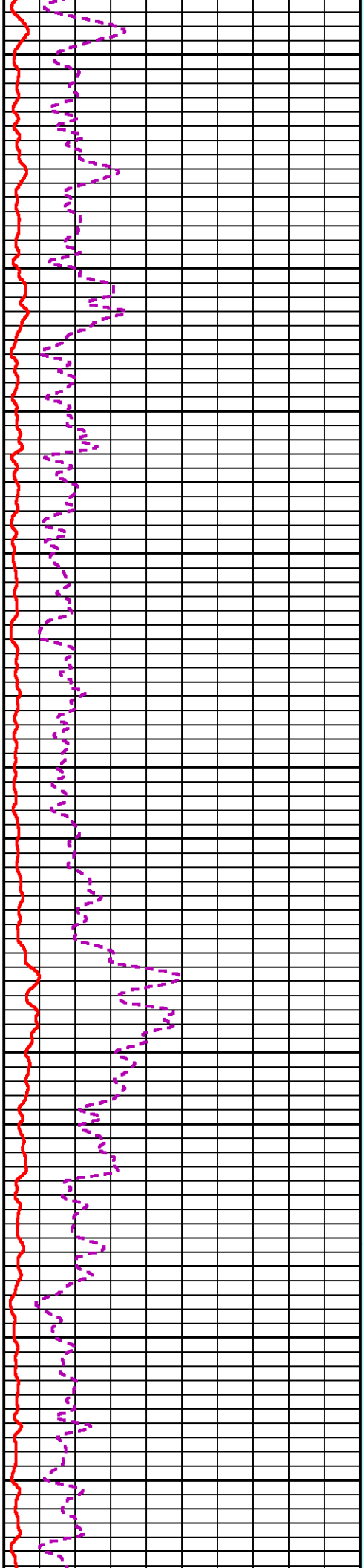
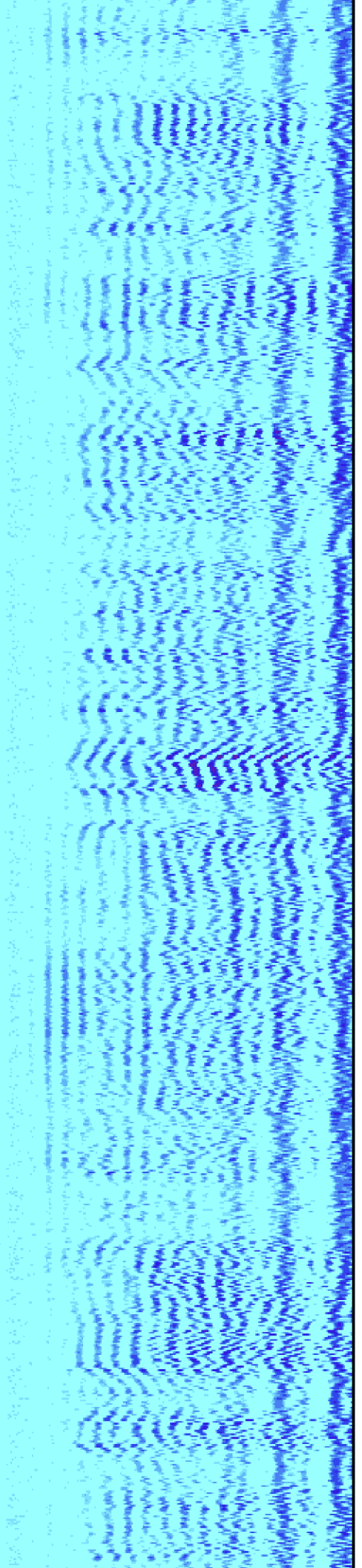
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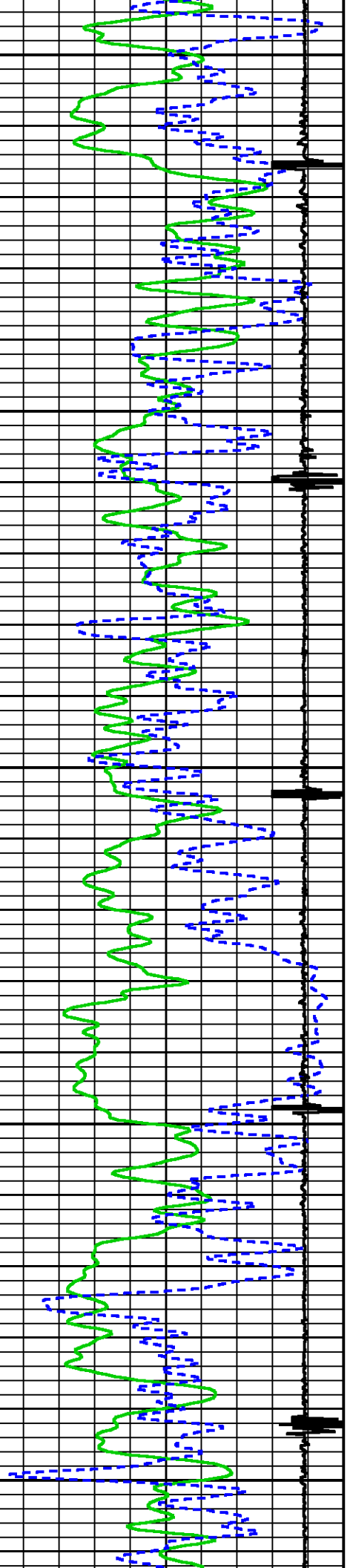


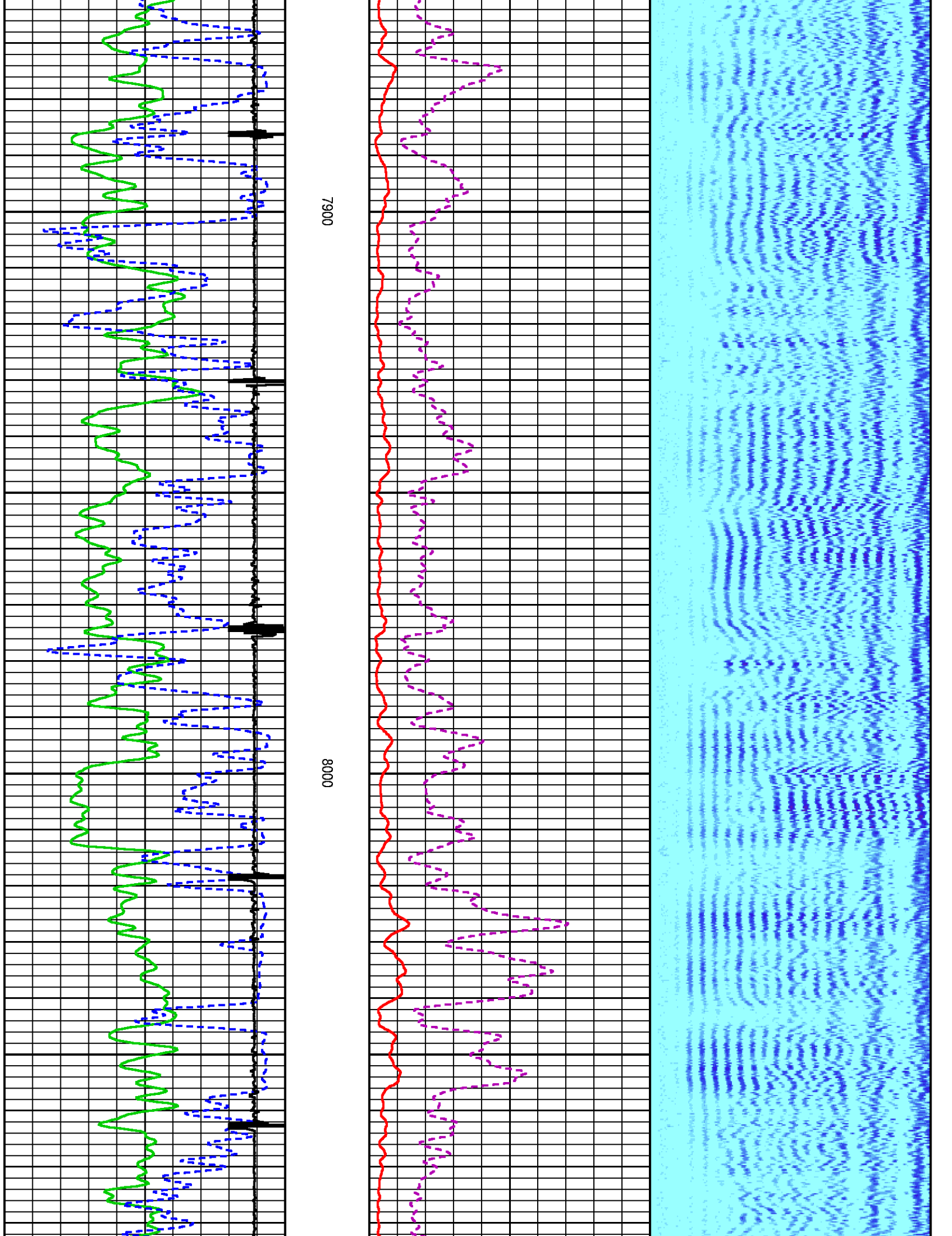


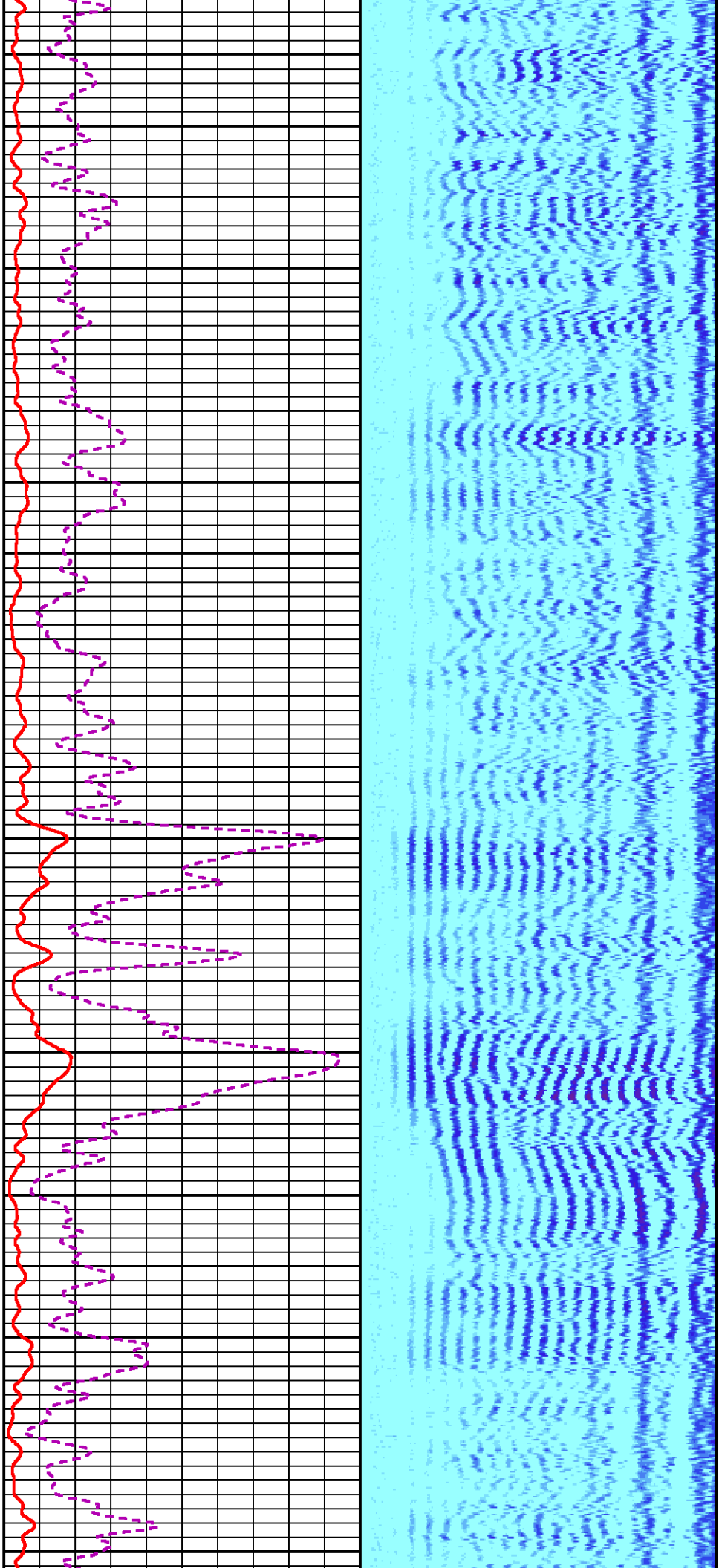


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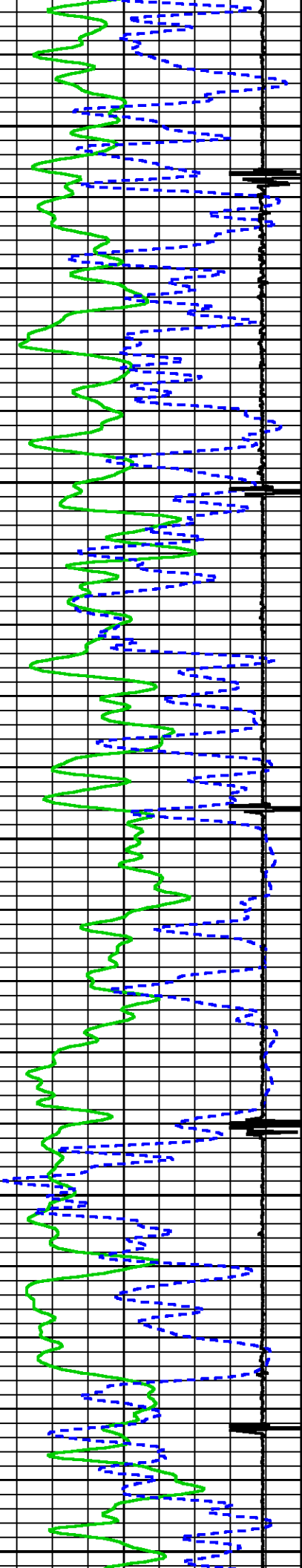


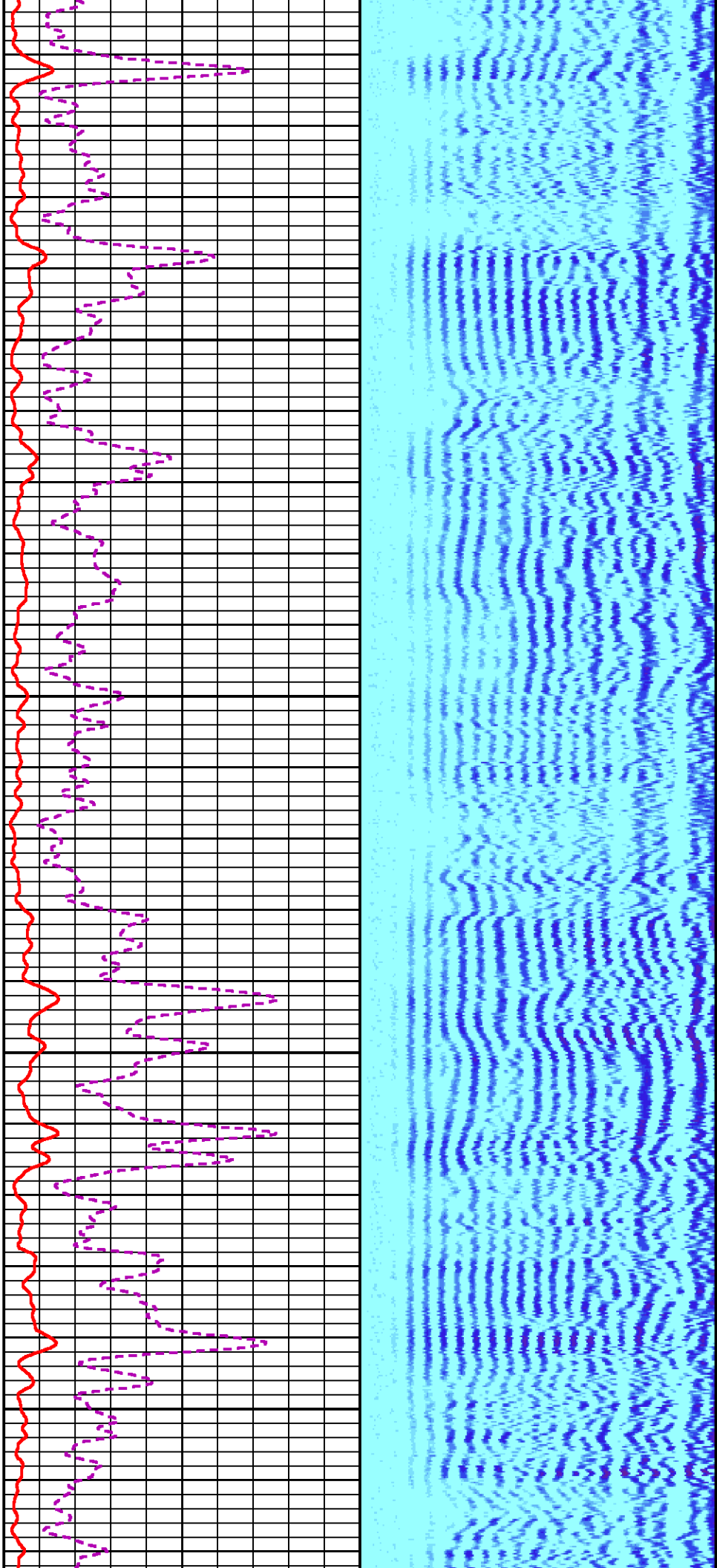


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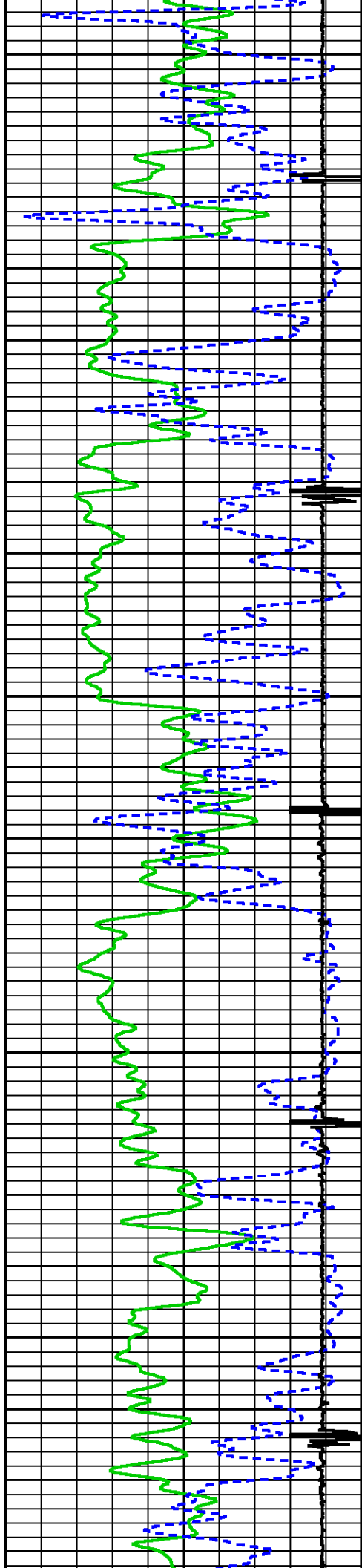
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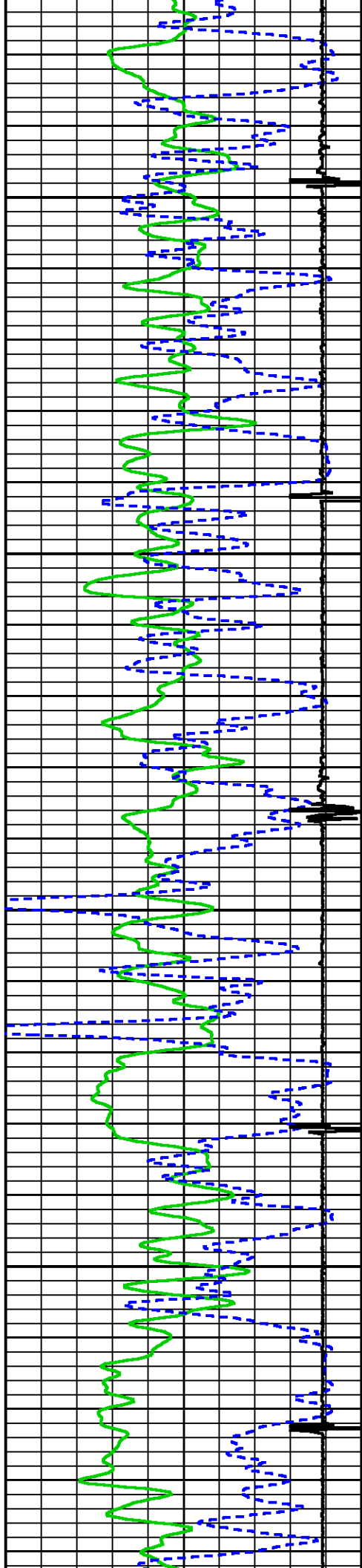




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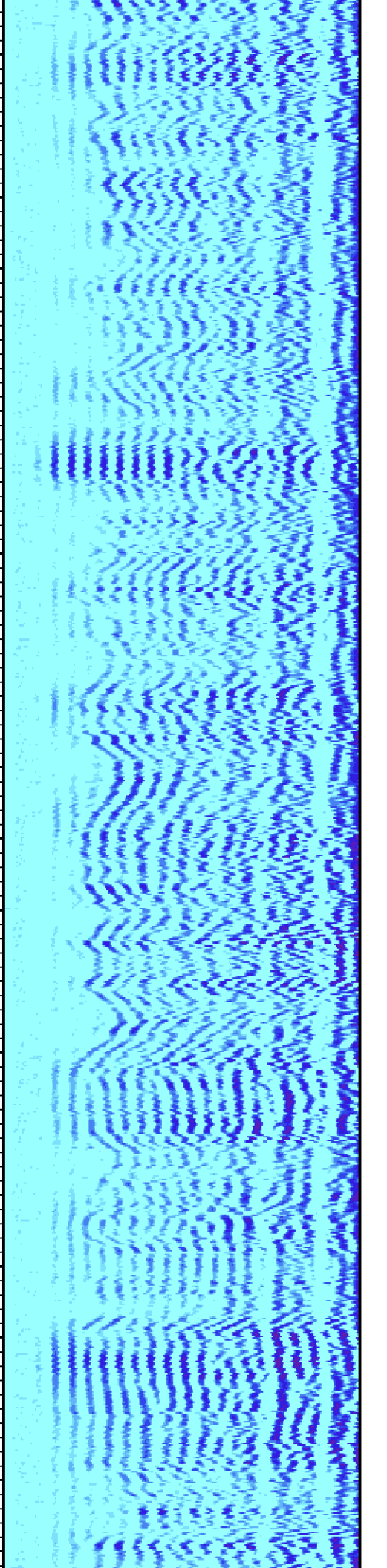
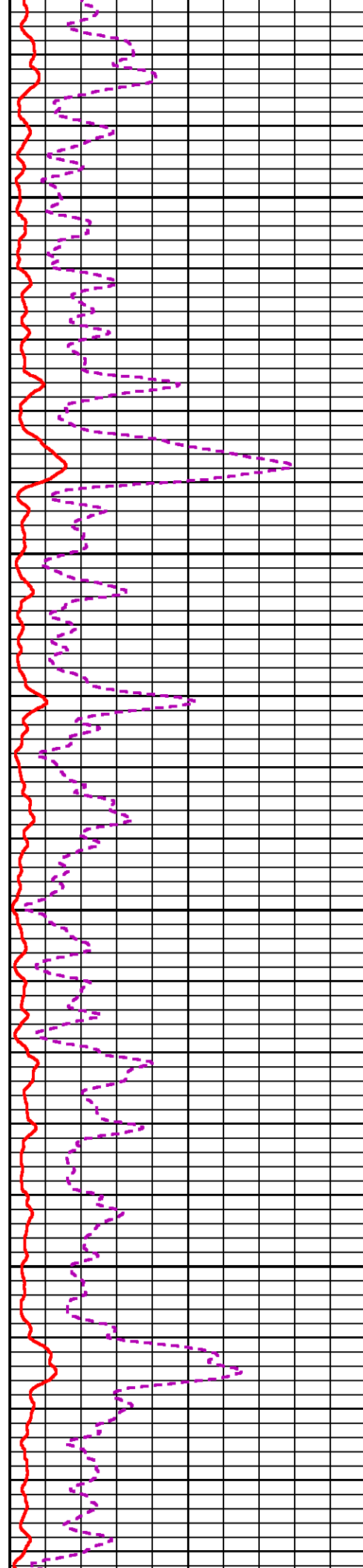
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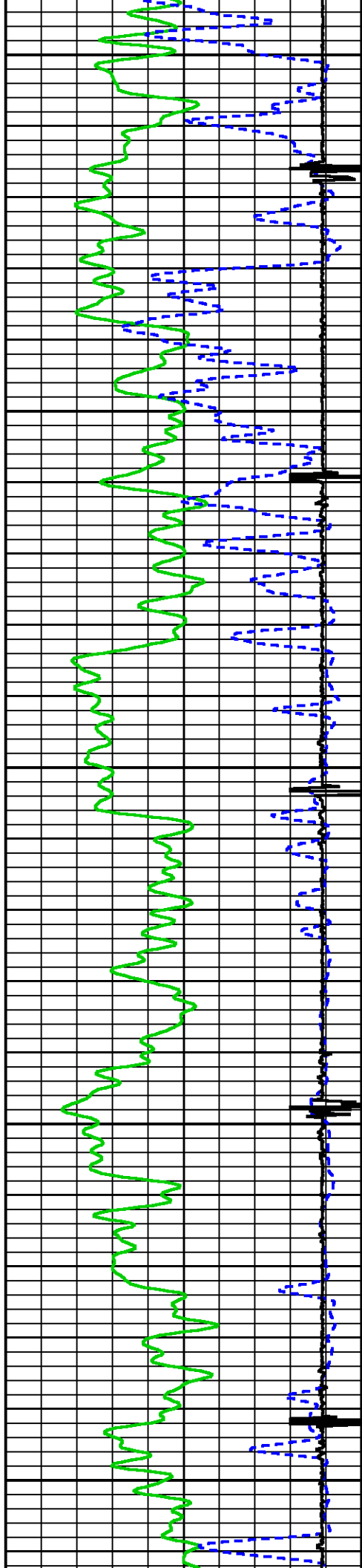




8600

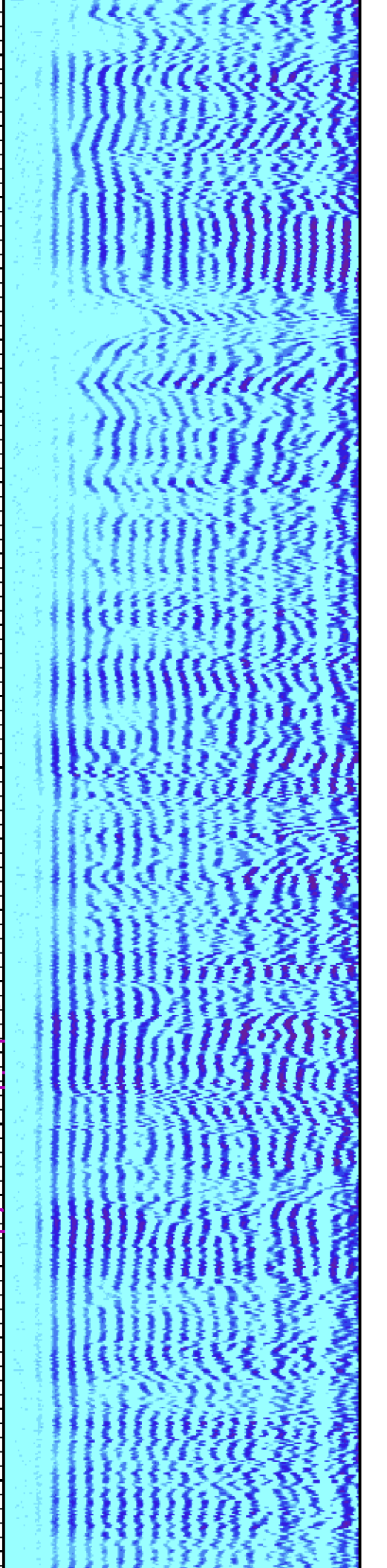
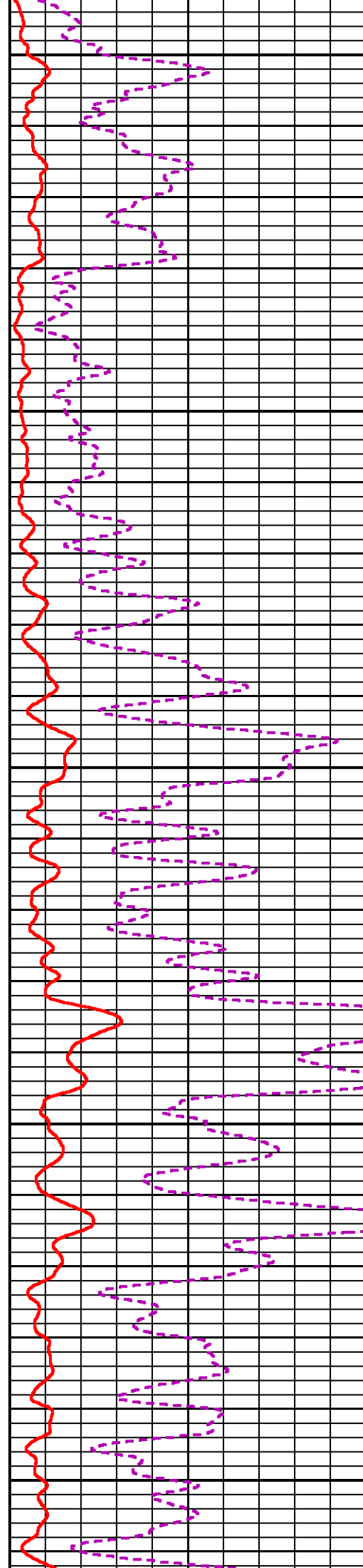
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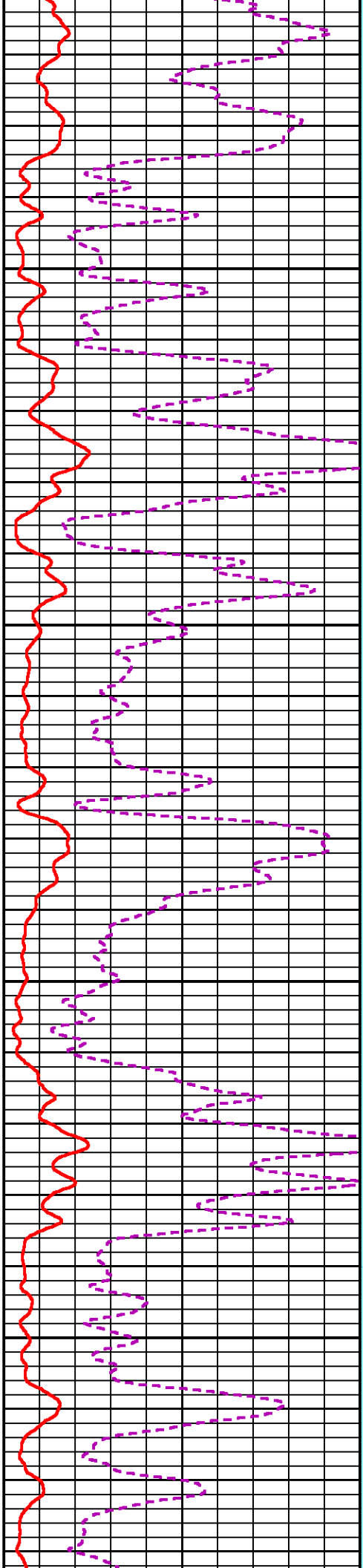
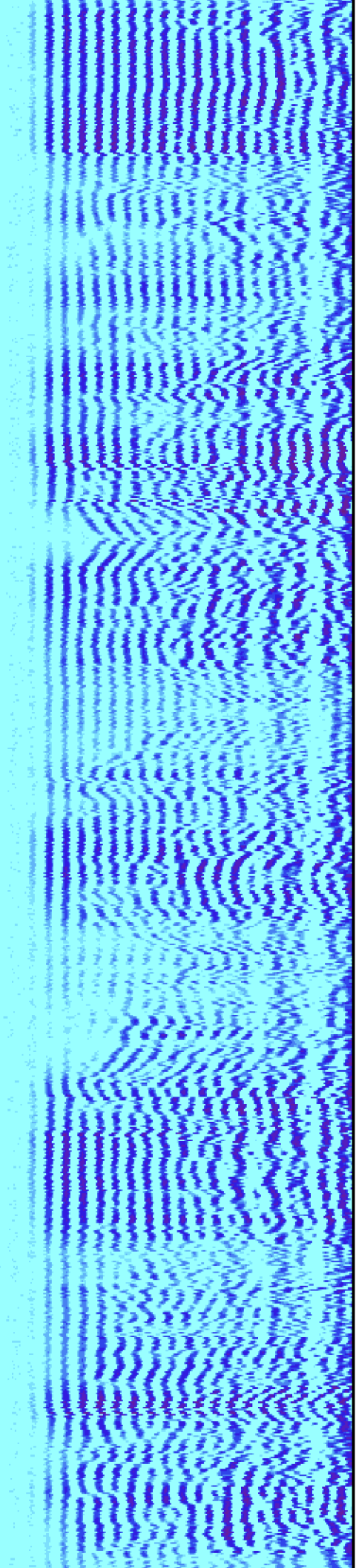




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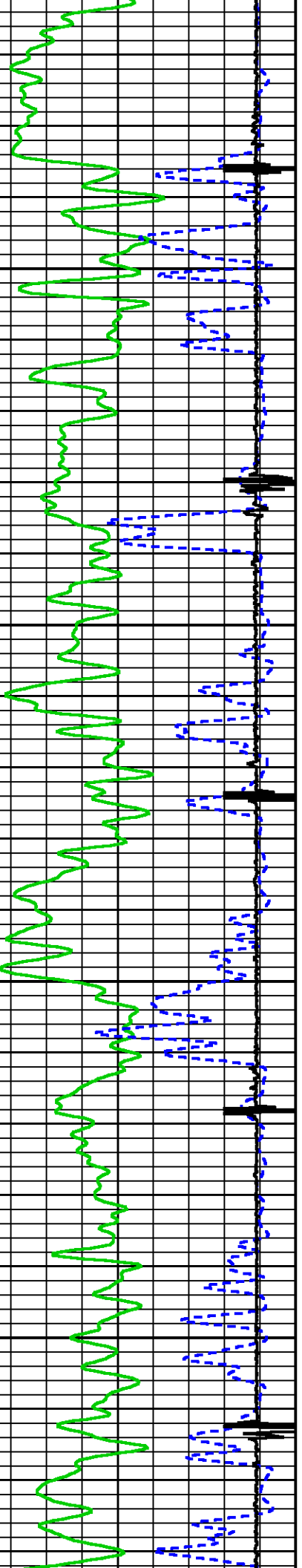
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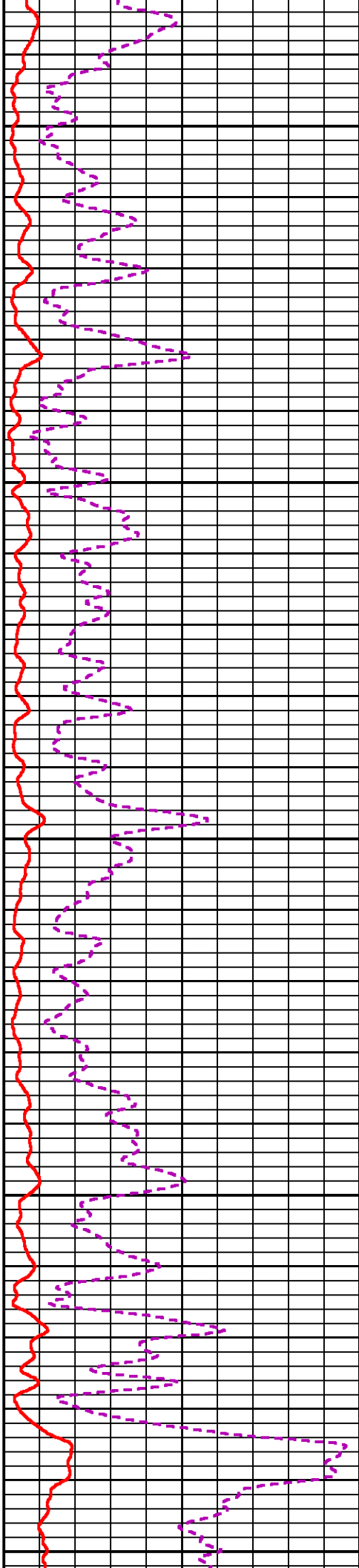
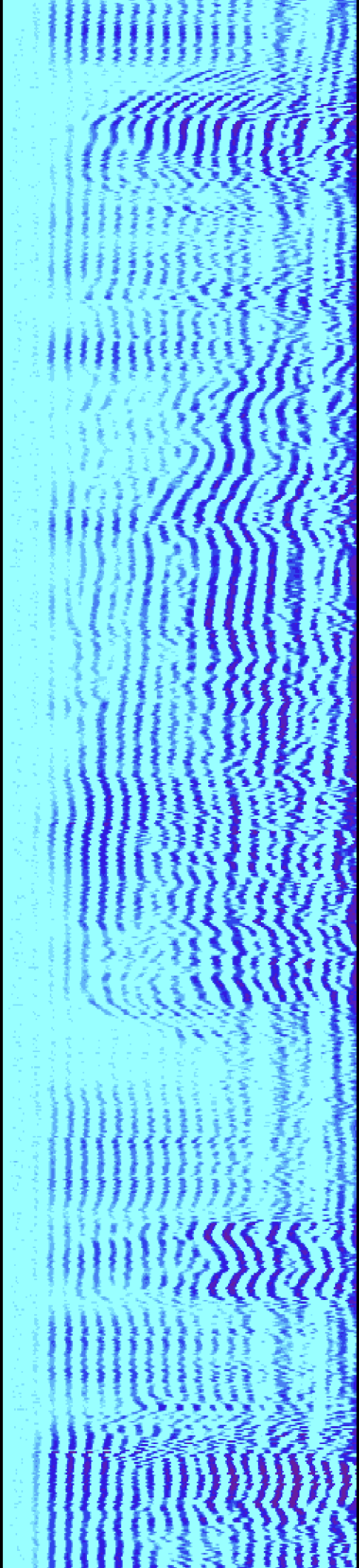




9000

9100

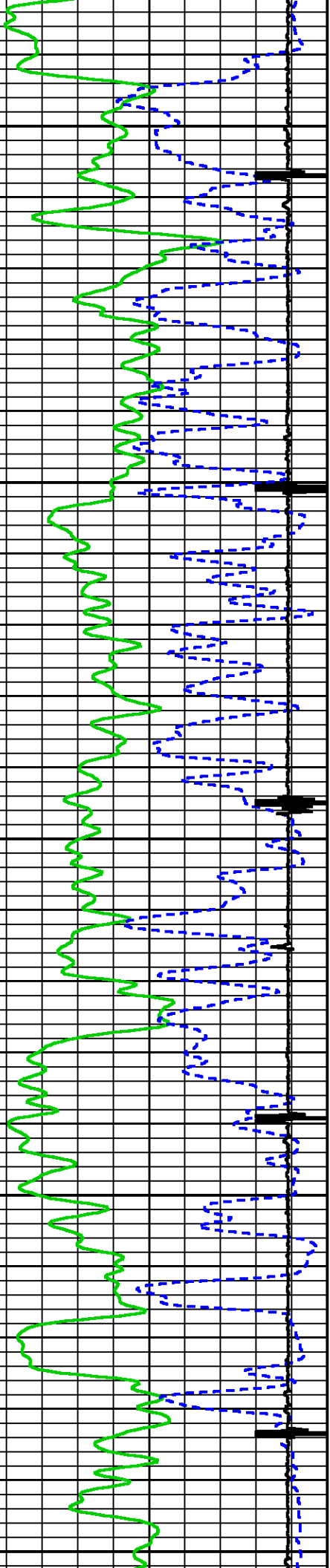


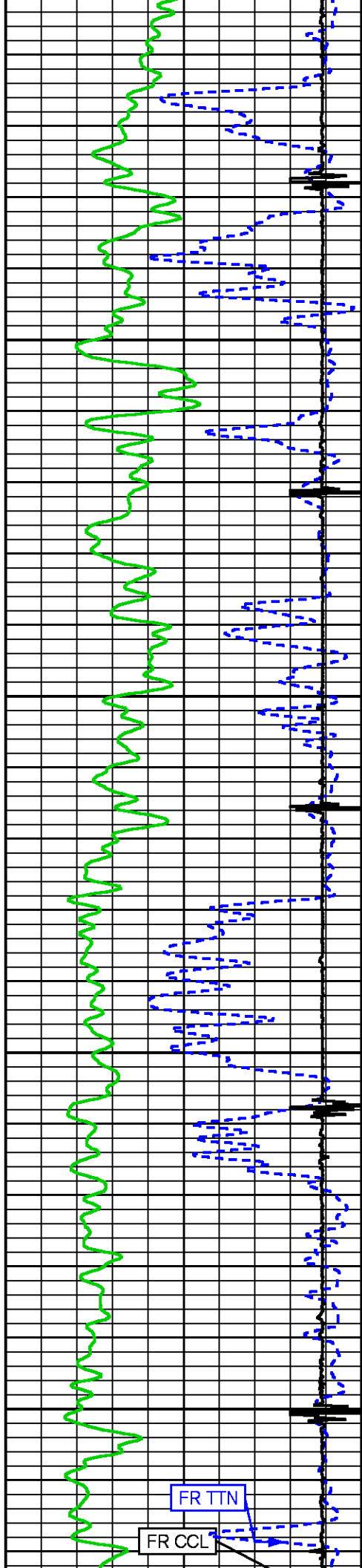


9200

9300

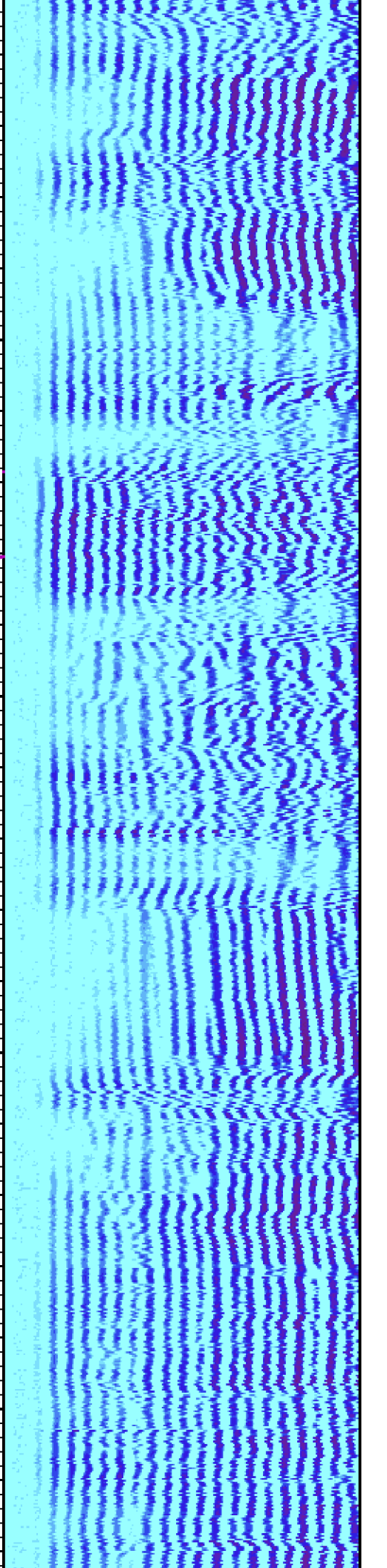
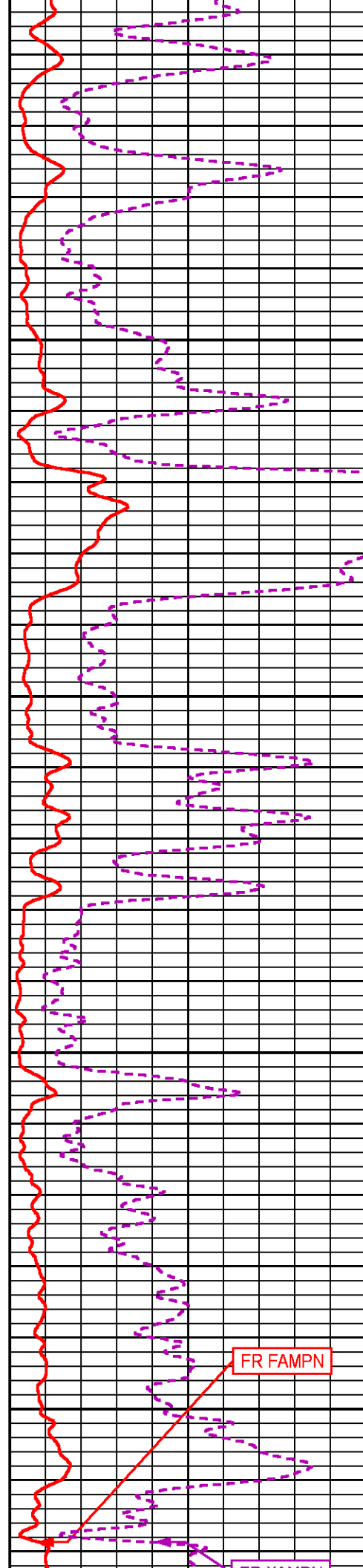
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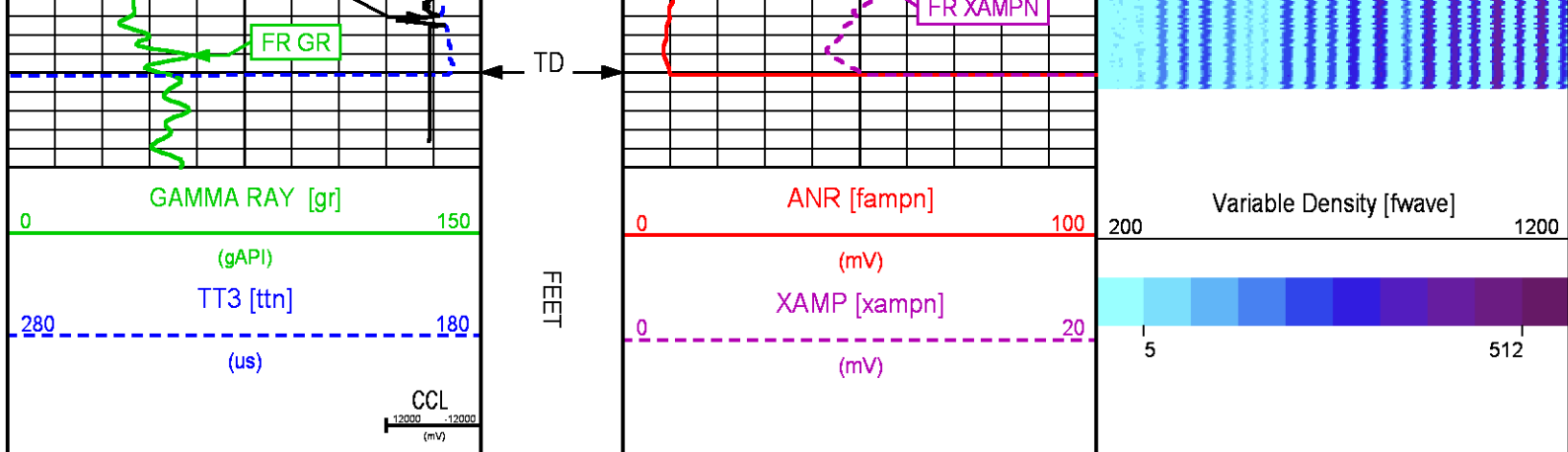




0096

9600





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: Sun Jan 1 09:53:57 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/TEP_YOUBERG RU 14 7/m012g01.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 9310.250 ft BOTTOM DEPTH: 9630.750 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*)	178	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 1 07:36:50 2017	CASING COLLAR LOCATOR
F1:FAMPN	Jan 1 07:36:50 2017	FIXED GATE AMPLITUDE NEAR RECEIVER
F1:FWAVE	Jan 1 07:36:50 2017	FAR WAVE FORM
F1:GR	Jan 1 07:36:50 2017	GAMMA RAY

CURVE MEASURE POINT OFFSET

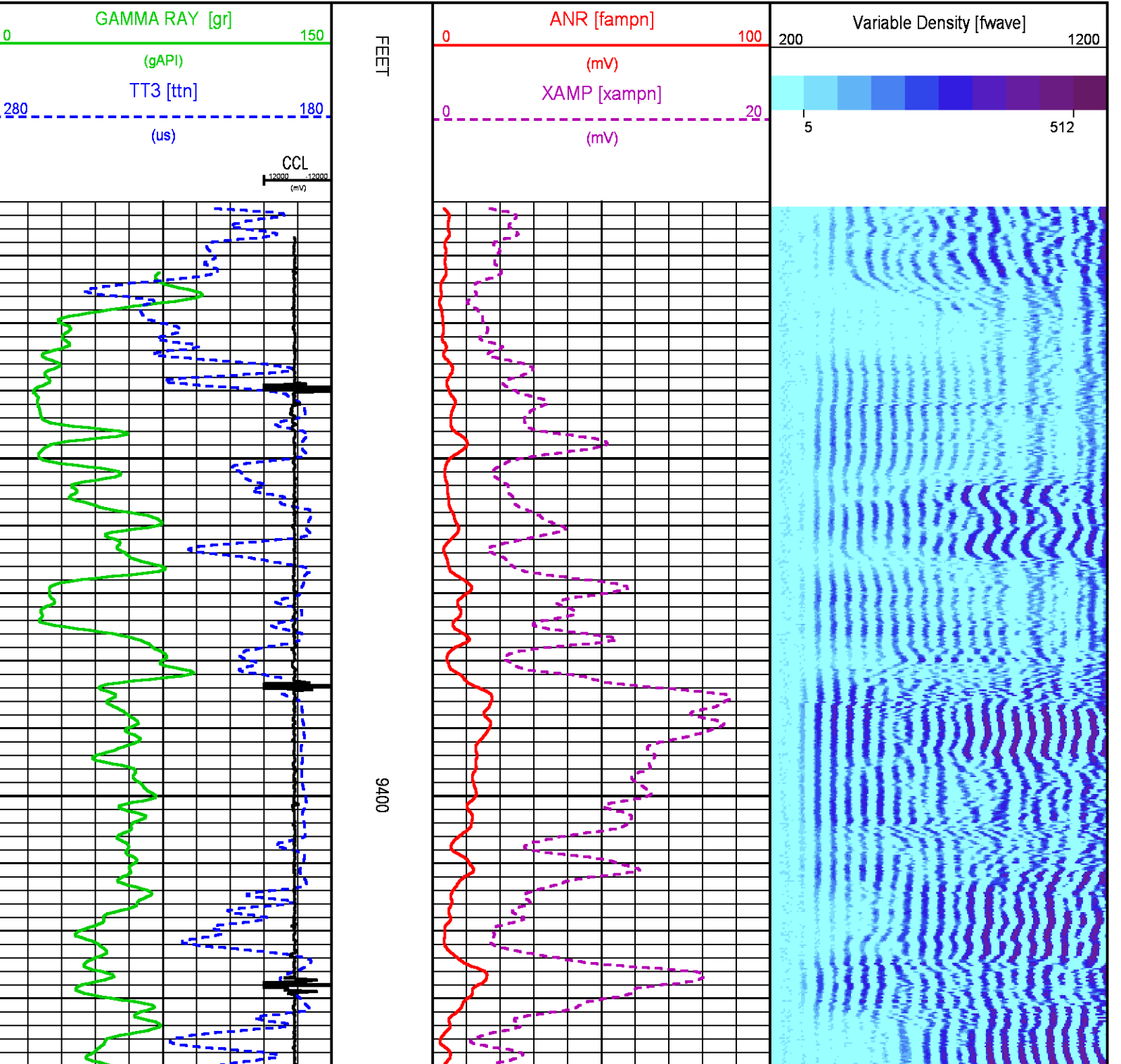
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	5.75	GR	1.75	XAMPN	11.25		
FAMPN	11.25	TTN	11.25				

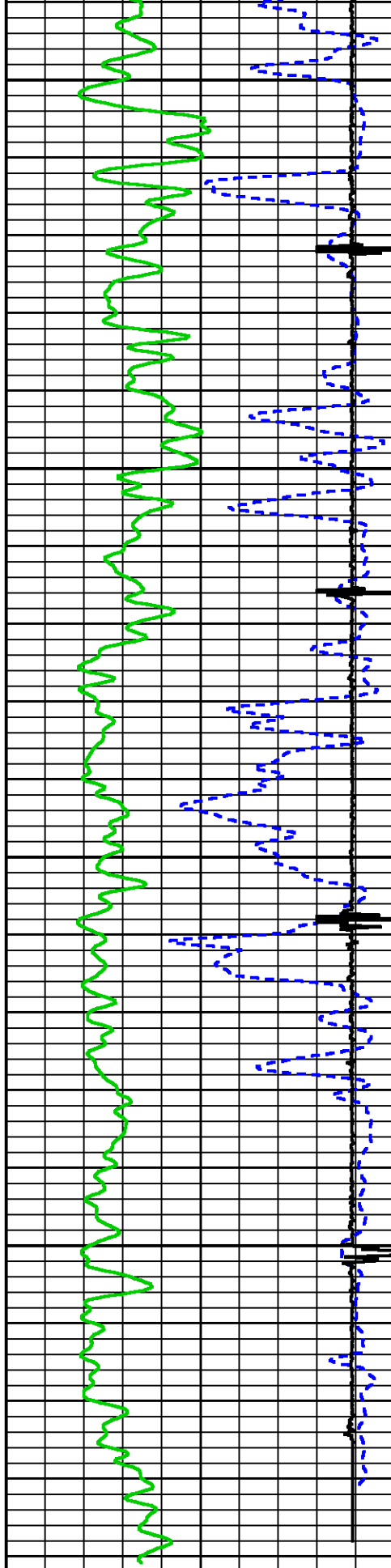
Presentation
Plot Interval

: cpu100:TERRA_ral_cbl+01-REPEAT-RAL_REP-5.fvpdf [5"/100' Scale]
: 9312.75 - 9642.25 Feet

Data File 1
Created On
Company
Well
Field
File Interval
OCT

: F1 : cpu100:/dat1a/TEP_YOUBERG_RU_14_7/RAL_REP.xtf
: Jan 1 07:36:50 2017
: TEP ROCKY MOUNTAIN LLC
: YOUBERG RU 14-7
: RULISON
: 9311.75 - 9643.75 Feet
: n012g

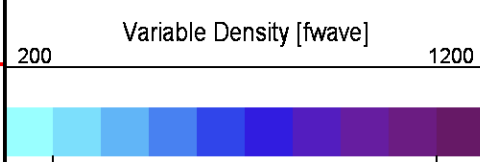
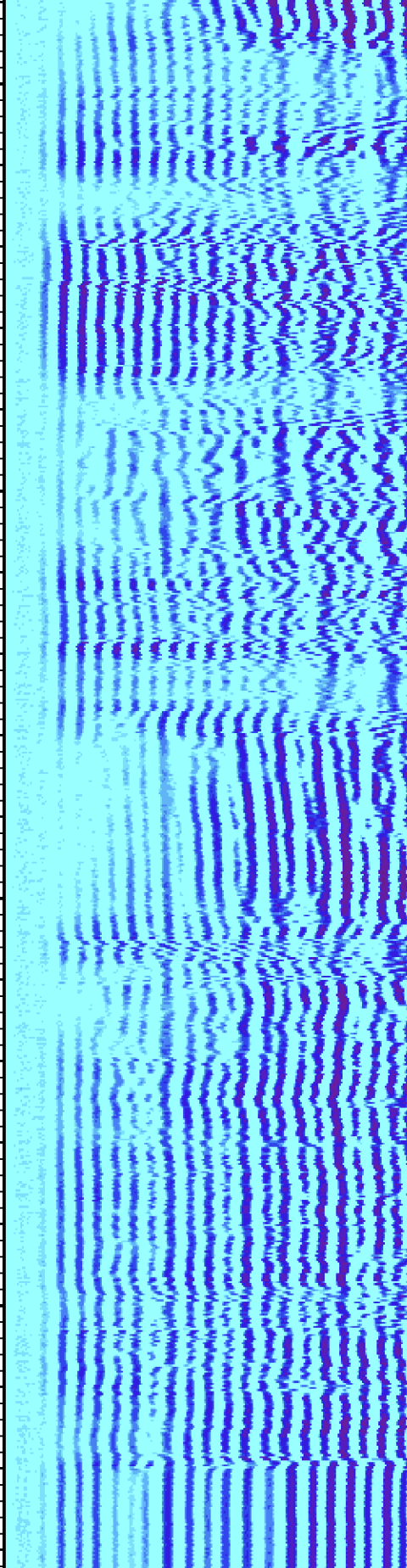
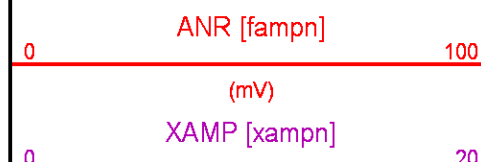
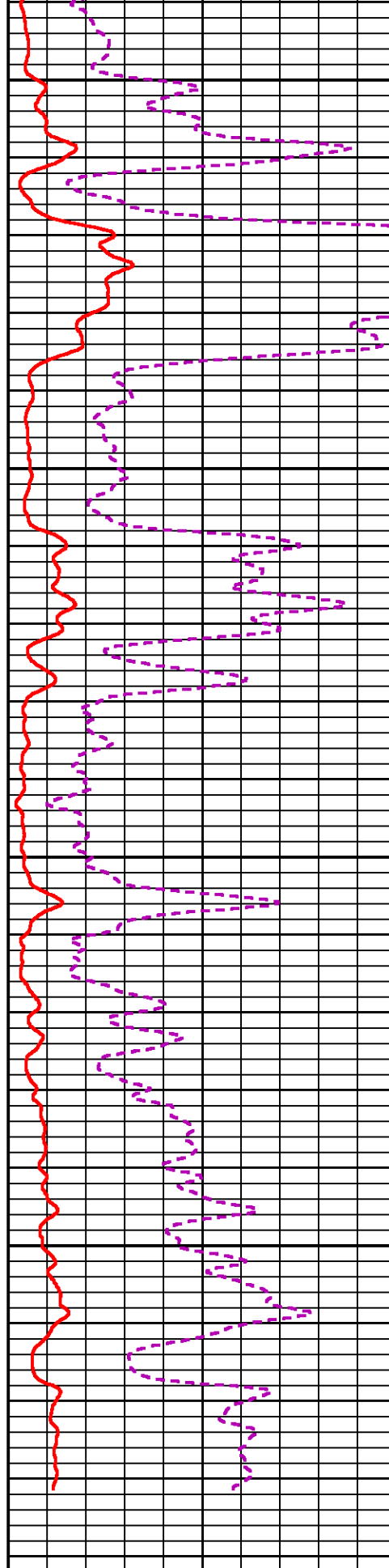
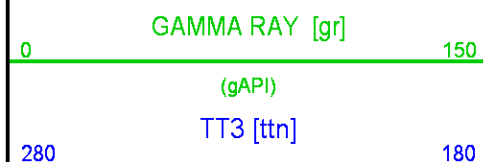




9500

9600

FEET



(us)

CCL
12000 -12000
(mV)

(mV)

5

512

CALIBRATION / VERIFICATION SUMMARY

Source File: \\data1a\TEP_YOUBERG_RU_14_7h012g1p1

RAL PRIMARY CALIBRATION SUMMARY

TOOL #: 1426XA10154957

DATE/TIME PERFORMED: Sun Jan 1 06:49:01 2017

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)	2.01	2.87	2.63	2.61	2.41	2.52	2.38	2.49	2.45	6.38	0.11
AMP FLUID (mV)	86	86	86	86	87	85	84	84	84	116	89
TT (us)	212	211	211	211	211	211	211	211	212	318	211
M FACTOR	1.19	1.20	1.20	1.19	1.18	1.21	1.22	1.23	1.22	1.37	1.12

RAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 1426XA10154957

DATE/TIME PERFORMED: Sun Jan 1 06:50:18 2017

DAYS SINCE CAL: 0

UNIT #: 3880TA HL6670

CABLE #: 6670SM SL6670

	NEAR (mV)	R1 (mV)	R2 (mV)	R3 (mV)	R4 (mV)	R5 (mV)	R6 (mV)	R7 (mV)	R8 (mV)	FAR (mV)	CAL (mV)
ZERO	1.84	1.90	2.12	2.05	2.15	2.17	1.98	1.82	2.08	4.35	-0.06
AMP AIR	0.03	0.58	0.01	0.09	0.18	0.04	-0.10	0.20	0.02	-1.99	100.87

SHOP M FACTOR	SHOP A FACTOR	WIRELINE FACTOR
1.12	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)	CALBRTR ON (cts)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	CALBRTR (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)	CALBRTR ON (cts)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	77.11	254.76	0.584	45.03	148.77	103.74

INSTRUMENT CONFIGURATION

Source File: \\data1a\TEP_YOUBERG_RU_14_7RAL55-1dg

CABLEHEAD
Diameter : 2.75"
Length : 2.25"
Weight : 10 lbs
Series : CABL234

20.38

RADIAL BOND TOOL
 Diameter : 2.75"
 Length : 11.17'
 Weight : 126 lbs
 Series : 1425XA
 Mnemonic : RAL
 Measure Point: 4.21' NEAR RCVR
 Measure Point: 3.25' FAR RCVR

NEAR RCVR 11.17'
 FAR RCVR 10.21'


RAL GR/TEMP/CCL/HV DETECTOR
 Diameter : 2.75"
 Length : 6.96'
 Weight : 85 lbs
 Series : 1355XA
 Mnemonic : RAL
 Measure Point: 5.79' CCL
 Measure Point: 1.67' GR
 Measure Point: 0.17' TEMP

CCL 5.79'

GR 1.67'

TEMP 0.17'

TOTAL LENGTH: 20.38'
 TOTAL WEIGHT: 221 lbs
 MAX DIAMETER: 02.75"

	COMPANY <u>TEP ROCKY MOUNTAIN LLC</u>		FILE NO: _____
	WELL <u>YOUBERG RU 14-7</u>		API NO: _____
	FIELD <u>RULISON</u>	COUNTY <u>GARFIELD</u>	STATE <u>COLORADO</u>
	LOCATION: SHL: 1933' FSL & 158' FWL BHL: 424' FSL & 1367' FWL		ELEVATIONS: KB 7381 FT DF 7380 FT GL 7357 FT
SEC <u>7</u> TWP <u>7S</u> RGE <u>93W</u>		DATE <u>01-JAN-2017</u>	