



FILE NO:	COMPANY	LARAMIE ENERGY
API NO:	WELL	BRUTON 19-03E
05077104220000	FIELD	VEGA
	COUNTY	MESA
		STATE COLORADO
Version	LOCATION:	OTHER SERVICES
	SHL: LAT:39.262850N; LONG:107.815110W	RPM
	BHL: LAT:39.267819N; LONG:107.806885W	
	SEC 19 TWP 9S RGE 93W	
PERMANENT DATUM	GL	ELEVATION 7262 FT
LOG MEASURED FROM	KB	24 FT ABOVE P.D.
DRILL. MEAS. FROM	KB	
		ELEVATIONS:
		KB 7286 FT
		DF 7286 FT
		GL 7262 FT

DATE	27-OCT-2017
RUN	1
TRIP	1
SERVICE ORDER	US128842
DEPTH DRILLER	8365 FT
DEPTH LOGGER	8327 FT
BOTTOM LOGGED INTERVAL	8327 FT
TOP LOGGED INTERVAL	24 FT
TIME STARTED	16:30
TIME FINISHED	19:00
OPERATOR RIG TIME	2.5 HOURS
TYPE OF FLUID IN HOLE	WATER
FLUID DENSITY	NA
FLUID SALINITY	NA
FLUID LEVEL	50 FT
LOGGED CEMENT TOP	1979 FT
WELLHEAD PRESSURE	0 PSI
MAXIMUM HOLE DEVIATION	NA
NOMINAL LOGGING SPEED	100 F/MN
MAX. RECORDED TEMP.	238 DEGF
REFERENCE LOG	NA
REFERENCE LOG DATE	NA
EQUIP. NO.	HL-6670
LOCATION	WOODWARD
RECORDED BY	S.YASSA
WITNESSED BY	MR. CHUCK MALLARY

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.

REMARKS
RUN 1 TRIP 1: *2 OPERATIONS IN WELL*
OPERATION 1: RAL/GR/CCL RUN CENTRALIZED
LOGGED WITH 0 PSI ON WELLHEAD
SJ: 7449' - 7471'
SJ: 6449' - 6471'
CREW: C.GOLOBY , J.PENA

EQUIPMENT DATA				
RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.
1	1	RAL	1426XA	10404539
1	1	GAMMA RAY	1355XA	12670180

MAIN PASS 0 PSI

ECLIPS 7.0w PC-ECLIPS General Release Rel 7.0w Fri Jun 09 11:02:06 Central Daylight Time 2017
Patches: 1

Plotted: Sat Oct 28 14:57:08 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: C:\dat1a\BRUTON_19_03E\p012gR02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 1.750 ft BOTTOM DEPTH: 8317.000 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR	FILTER ()	medium (1)		TOP	BOTTOM
AMPLITUDE	FILTER ()	light (2a)		"	"
TRAVEL TIME	FILTER ()	medium (1)		"	"

RAL CCL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CCL FLOOR	CCL FLOOR	0.00		TOP	BOTTOM

ANALOG RAL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
AMPLITUDE WINDOW (NEAR)	AMP WINDOW START (fgp1*)	185	us	TOP	BOTTOM
	AMP WINDOW START (fgp2*)	185	us	"	"
	AMP WINDOW START (fgp3*)	185	us	"	"
	AMP WINDOW START (fgp4*)	185	us	"	"
	AMP WINDOW START (fgp5*)	185	us	"	"
	AMP WINDOW START (fgp6*)	185	us	"	"
	AMP WINDOW START (fgp7*)	185	us	"	"
	AMP WINDOW START (fgp8*)	185	us	"	"
	AMP WINDOW START (fgpn*)	185	us	"	"
	AMP WINDOW LENGTH	30	us	"	"
TRAVEL TIME WINDOW (NEAR)	TT WINDOW START (ttn*)	160	us	"	"
	TT WINDOW LENGTH	500	us	"	"
	FIRST BRK THRESHOLD (ttn*)	2	mV	"	"
RAL CASING PARAMETERS	PPT NEAR	200.391	us	"	"
RAL TOOL DELAY	TOOL DELAY (str1*)	-69	us	"	"
	TOOL DELAY (str2*)	-69	us	"	"
	TOOL DELAY (str3*)	-69	us	"	"
	TOOL DELAY (str4*)	-69	us	"	"
	TOOL DELAY (str5*)	-64	us	"	"
	TOOL DELAY (str6*)	-69	us	"	"
	TOOL DELAY (str7*)	-69	us	"	"
	TOOL DELAY (str8*)	-69	us	"	"
	TOOL DELAY (strn*)	-69	us	"	"
BASELINE NOISE (NEAR)	NOISE WINDOW START	125	us	"	"
	NOISE WINDOW LENGTH	25	us	"	"

PERCENT BOND CEMENT MAP

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
RAL FREE PIPE AMPLITUDE	FREE AMP REC 1	80	mV	TOP	BOTTOM
	FREE AMP REC 2	80	mV	"	"
	FREE AMP REC 3	80	mV	"	"
	FREE AMP REC 4	80	mV	"	"
	FREE AMP REC 5	80	mV	"	"
	FREE AMP REC 6	80	mV	"	"
	FREE AMP REC 7	80	mV	"	"
	FREE AMP REC 8	80	mV	"	"
RAL FULL BOND AMPLITUDE	FULL BOND AMP REC 1	2	mV	"	"
	FULL BOND AMP REC 2	2	mV	"	"

FULL BOND AMP REC 3	2	mV	"	"
FULL BOND AMP REC 4	2	mV	"	"
FULL BOND AMP REC 5	2	mV	"	"
FULL BOND AMP REC 6	2	mV	"	"
FULL BOND AMP REC 7	2	mV	"	"
FULL BOND AMP REC 8	2	mV	"	"

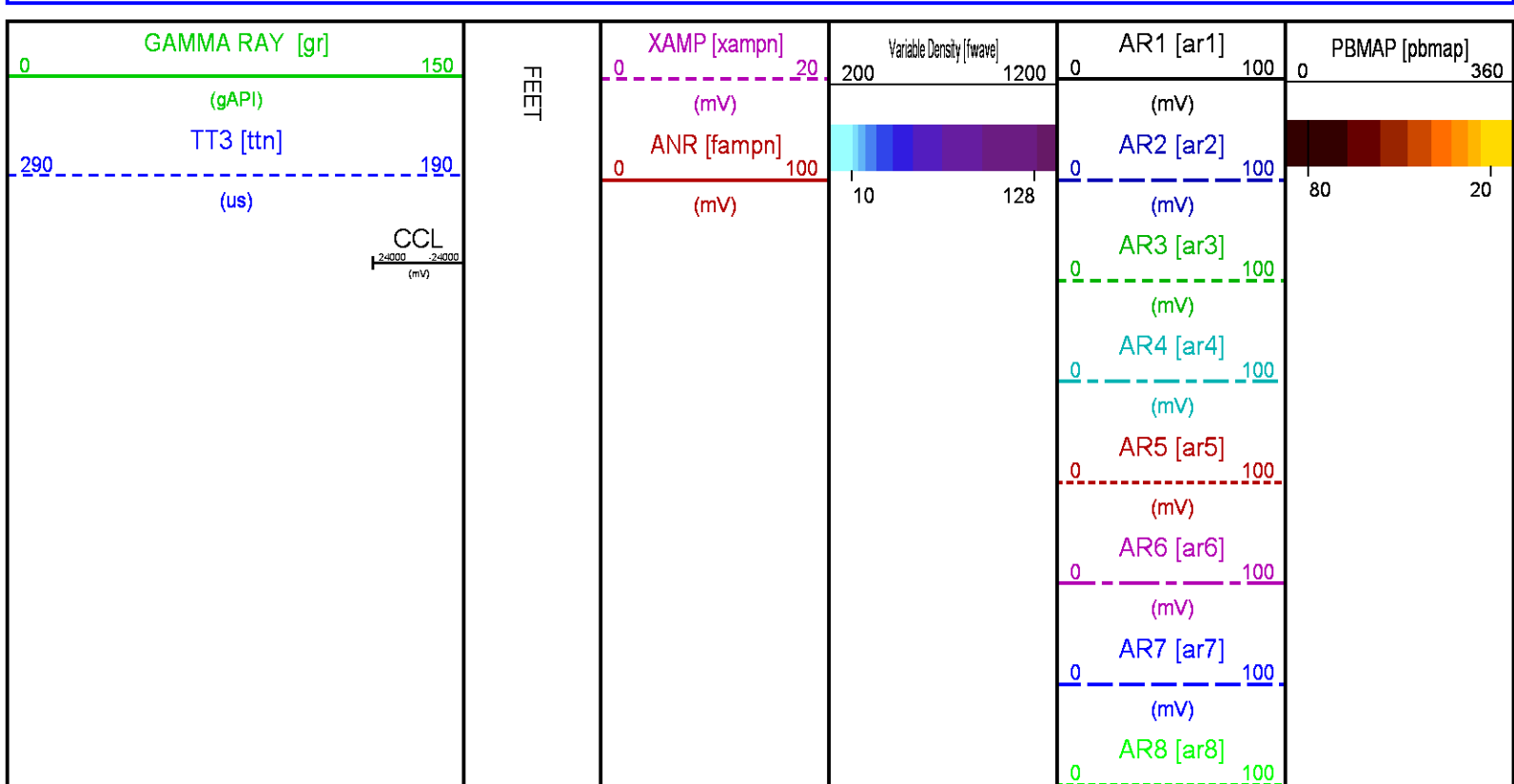
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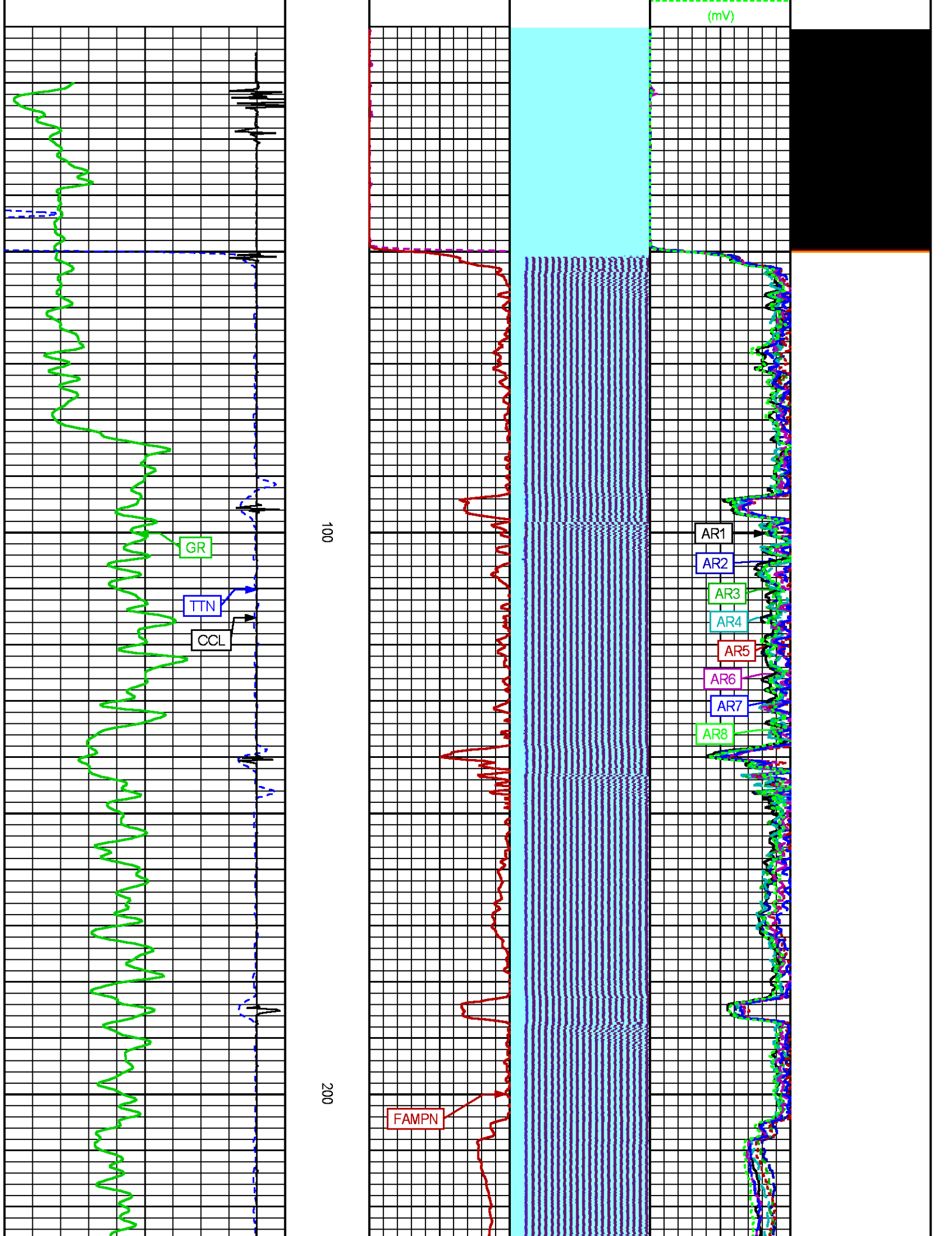
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:AR1	N/A	FIXED GATE AMPLITUDE T-R1
F1:AR2	N/A	FIXED GATE AMPLITUDE T-R2
F1:AR3	N/A	FIXED GATE AMPLITUDE T-R3
F1:AR4	N/A	FIXED GATE AMPLITUDE T-R4
F1:AR5	N/A	FIXED GATE AMPLITUDE T-R5
F1:AR6	N/A	FIXED GATE AMPLITUDE T-R6
F1:AR7	N/A	FIXED GATE AMPLITUDE T-R7
F1:AR8	N/A	FIXED GATE AMPLITUDE T-R8
F1:CCL	N/A	CASING COLLAR LOCATOR
F1:FAMPN	N/A	FIXED GATE AMPLITUDE NEAR RECEIVER
F1:FWAVE	N/A	FAR WAVE FORM
F1:GR	N/A	GAMMA RAY
F1:PBMAP	N/A	PERCENT BOND CEMENT MAP
F1:TTN	N/A	TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER
F1:XAMPN	N/A	FIXED GATE AMPLITUDE NEAR RECEIVER TIMES FIVE

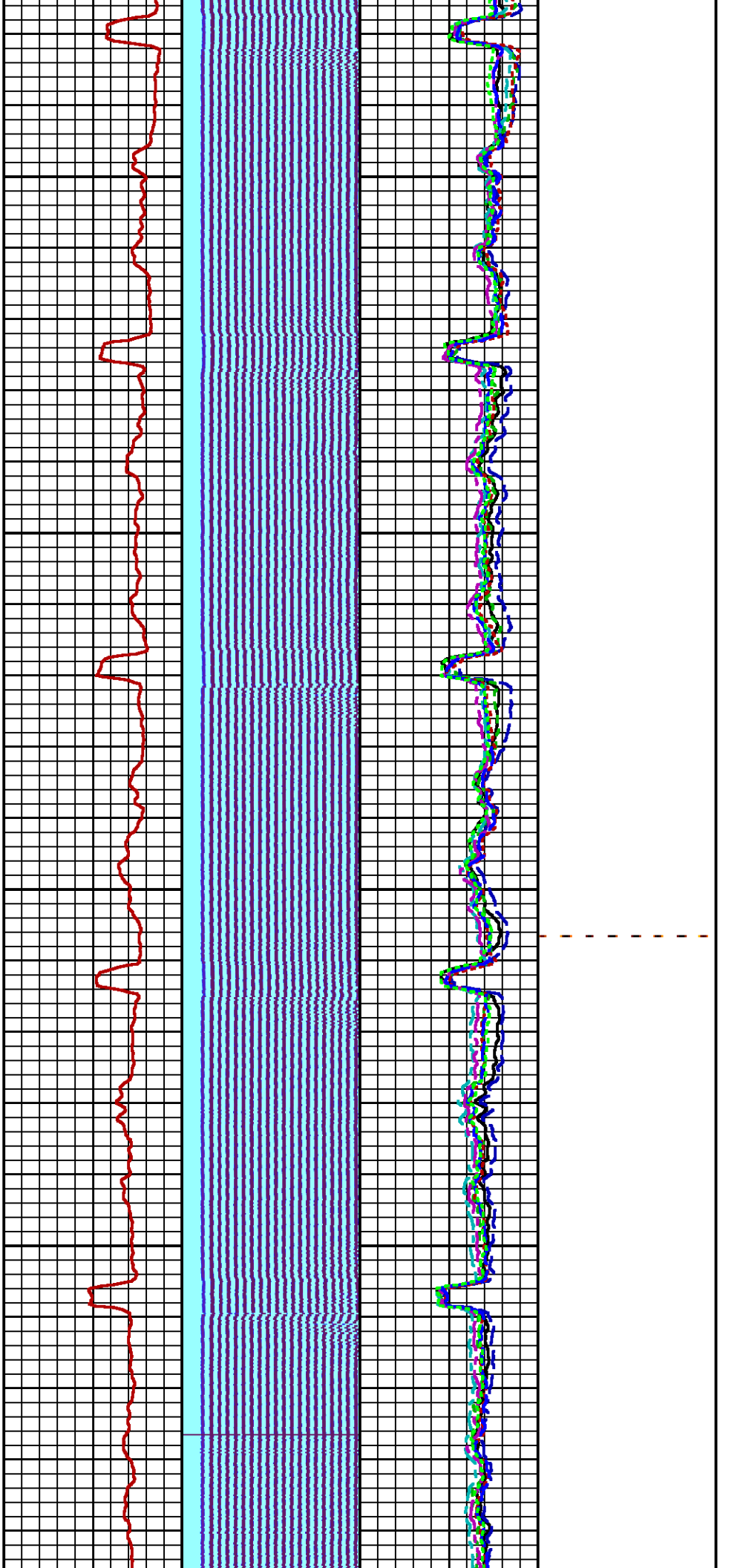
CURVE MEASURE POINT OFFSET

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
AR1	-11.25	AR5	-11.25	CCL	-5.75	XAMPN	-11.25
AR2	-11.25	AR6	-11.25	FAMPN	-11.25		
AR3	-11.25	AR7	-11.25	GR	-1.75		
AR4	-11.25	AR8	-11.25	TTN	-11.25		

Presentation	: BHI78FR4H2:C:\dat1a\BRUTON_19_03E\BRUTON_19_03E_RAL_MAIN.fvpdf [5"/100' Scale]
Plot Interval	: 10.25 - 8336.75 Feet
Data File 1	: F1 : BHI78FR4H2:C:\dat1a\BRUTON_19_03E\BRUTON_19_03E_RAL_MAIN.xtf
Created On	: N/A
Company	: LARAMIE ENERGY II LLC
Well	: BRUTON 19-03E
Field	: VEGA
File Interval	: -0.5 - 8338 Feet
OCT	: p012g

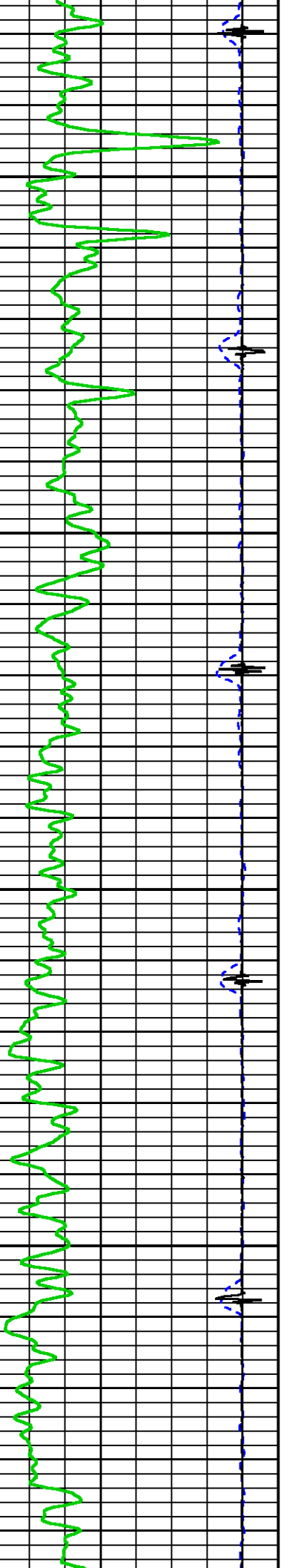


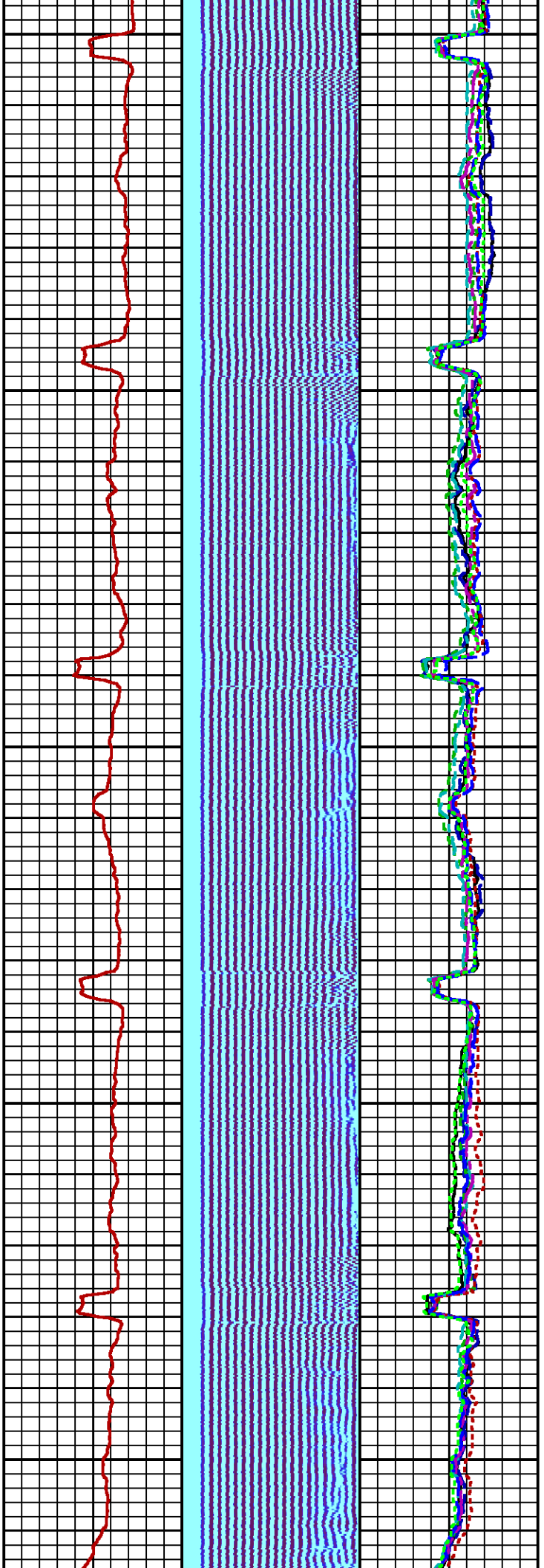




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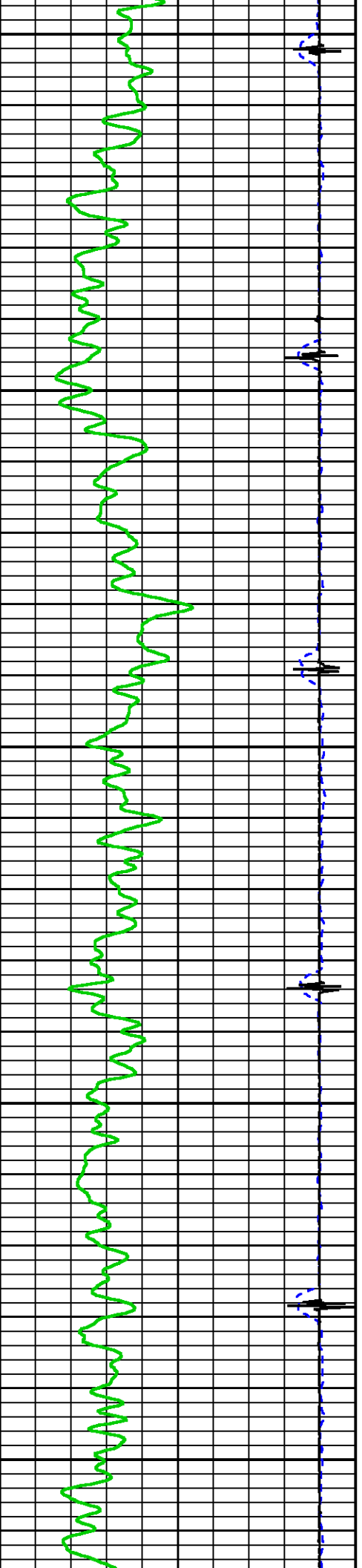
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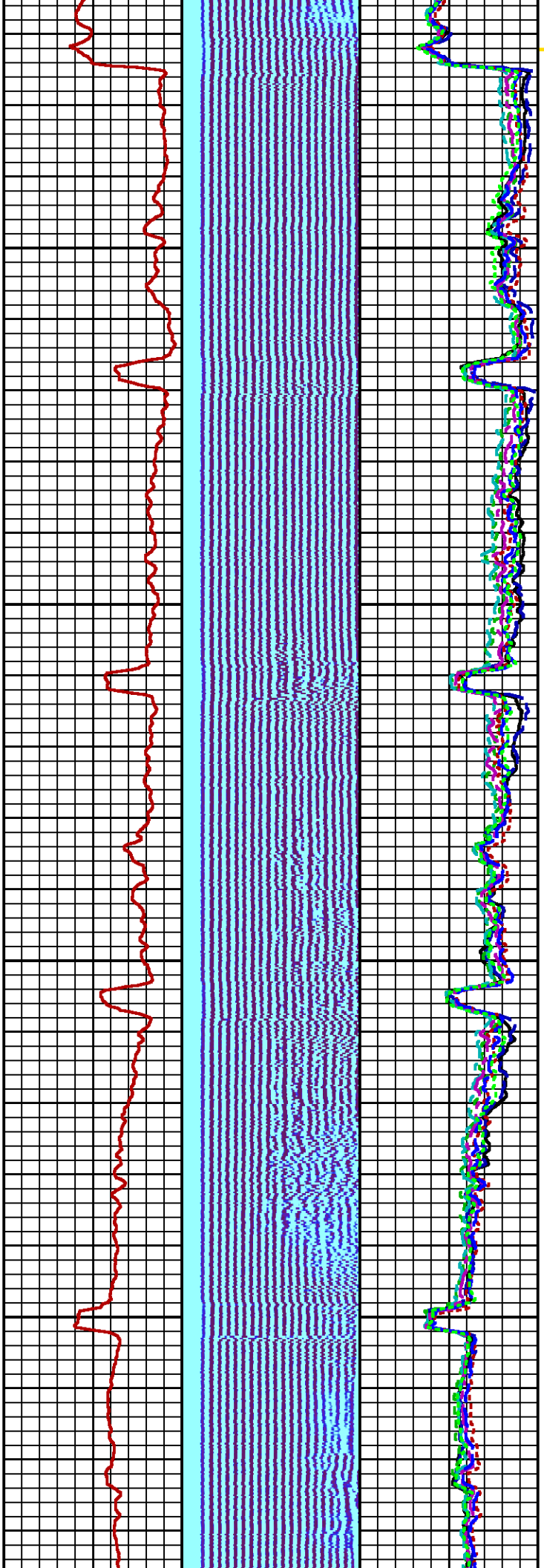




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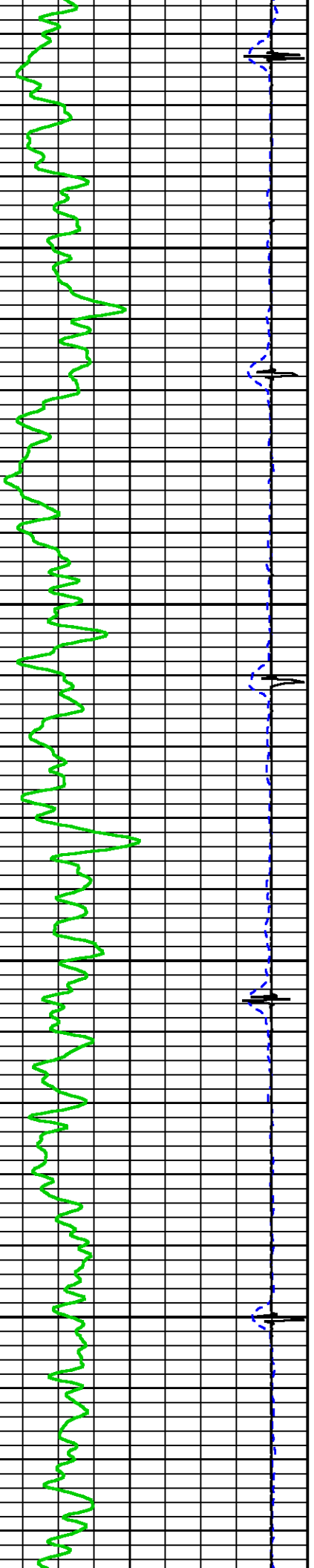
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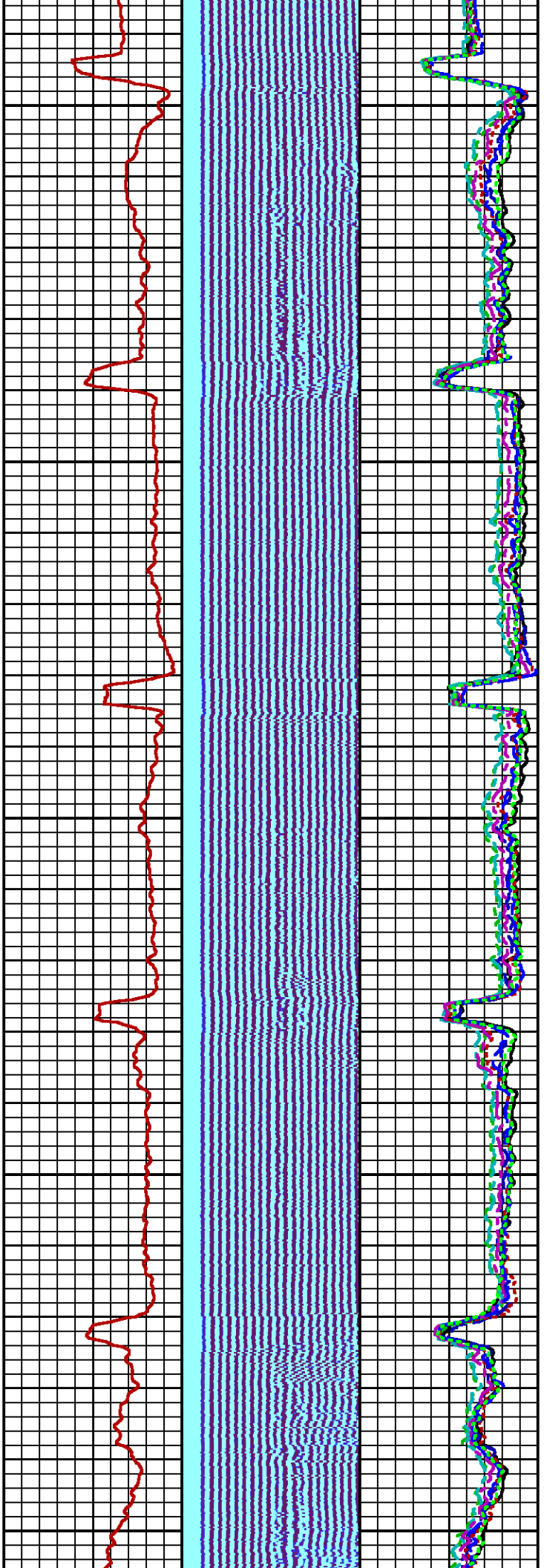




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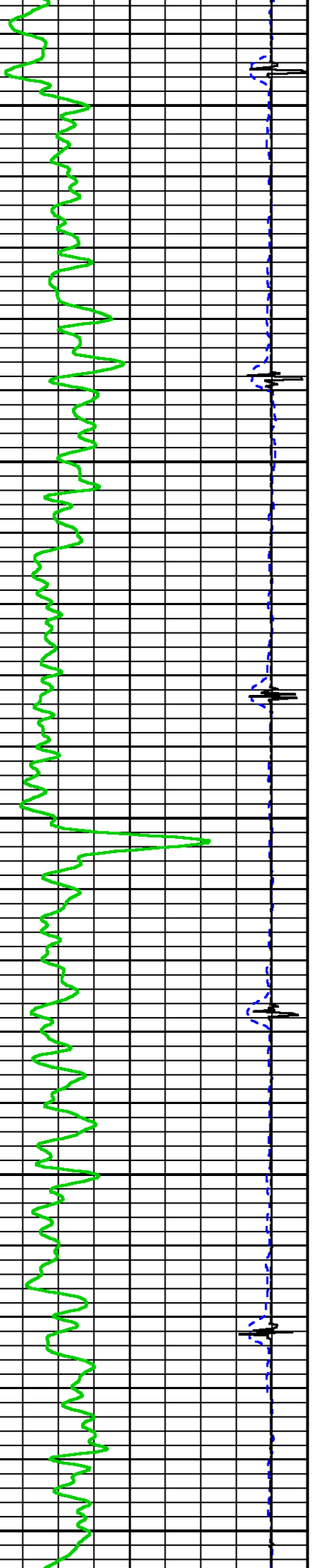


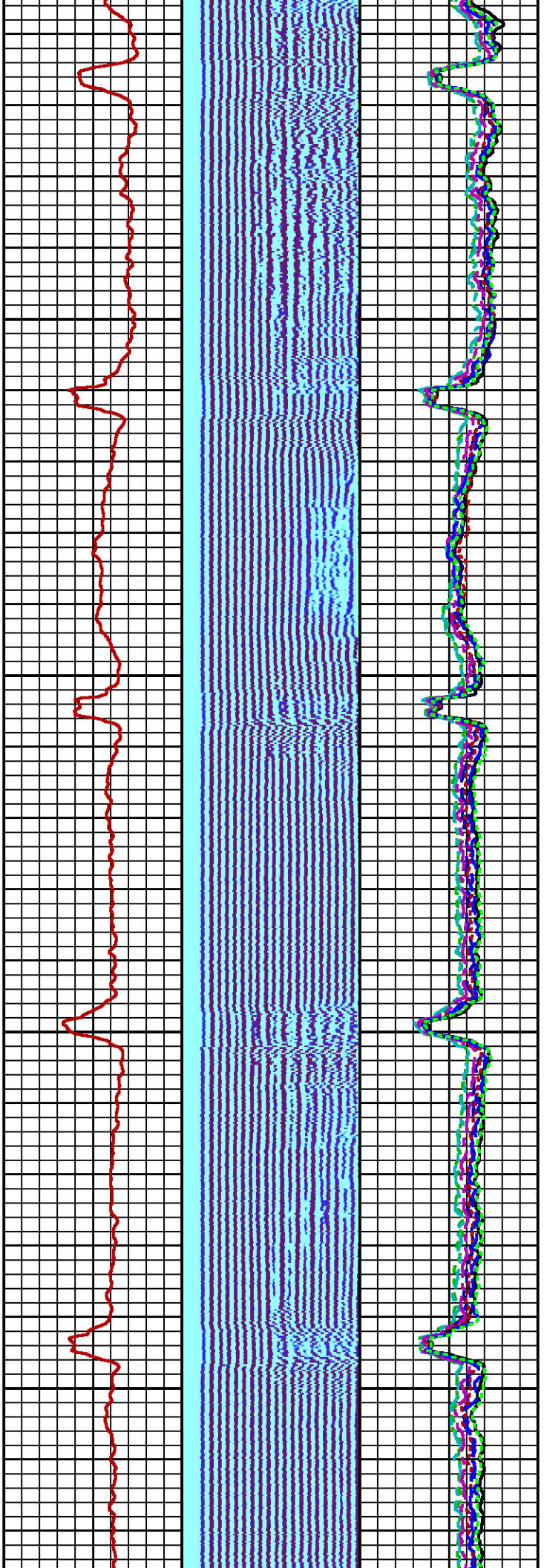


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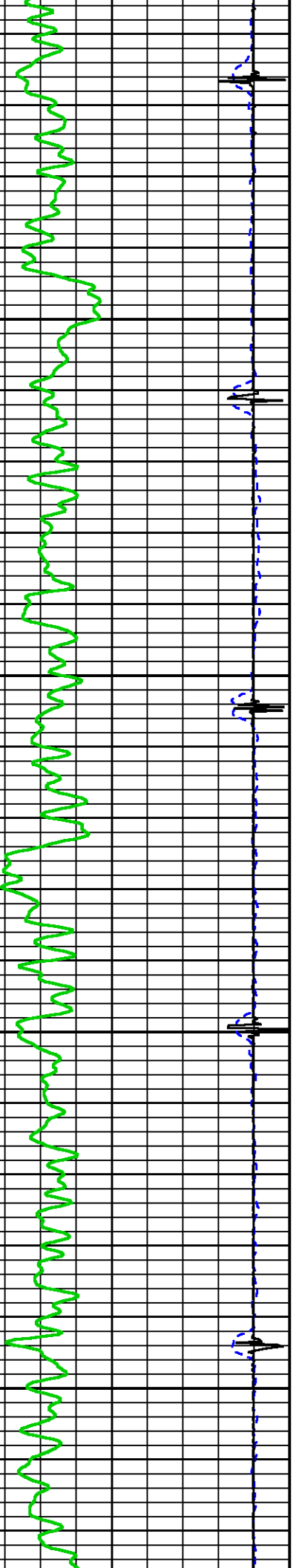
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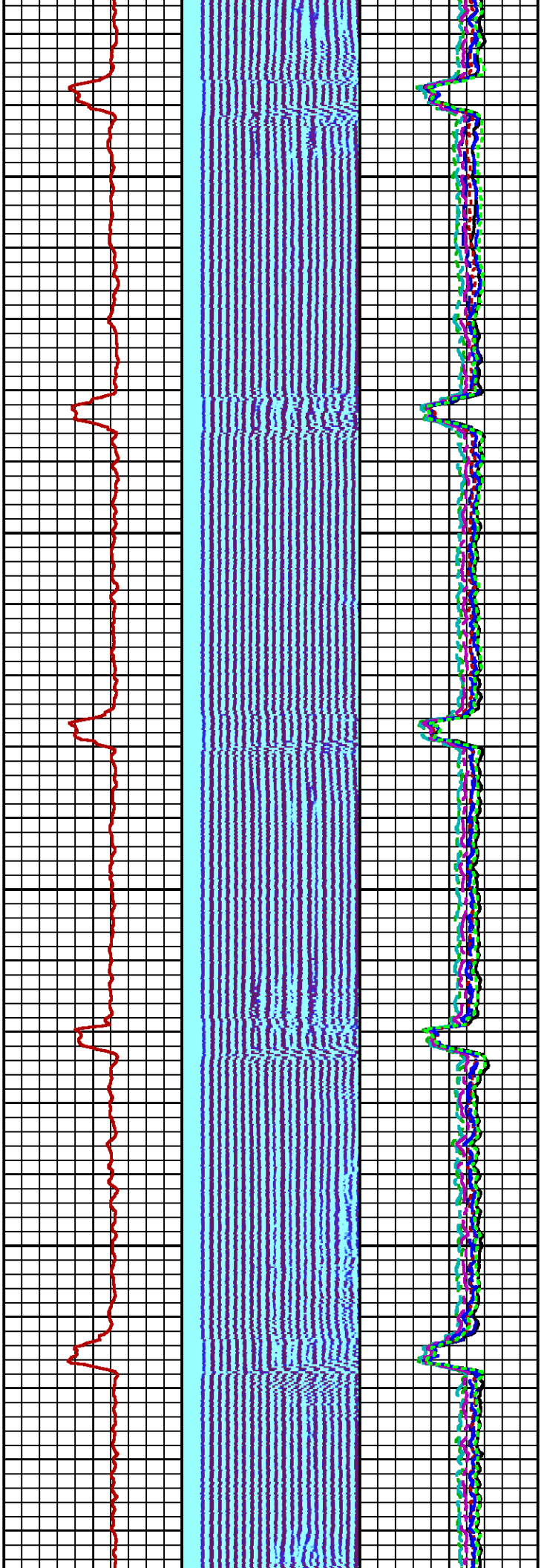




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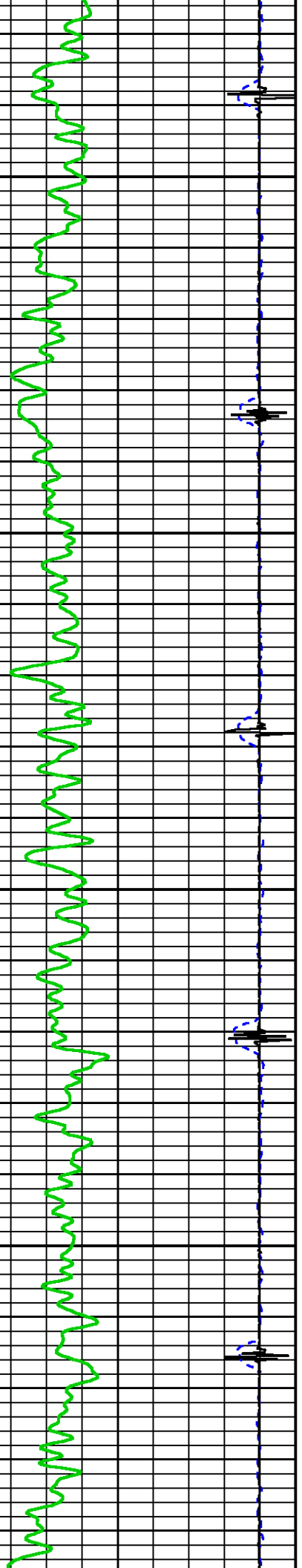
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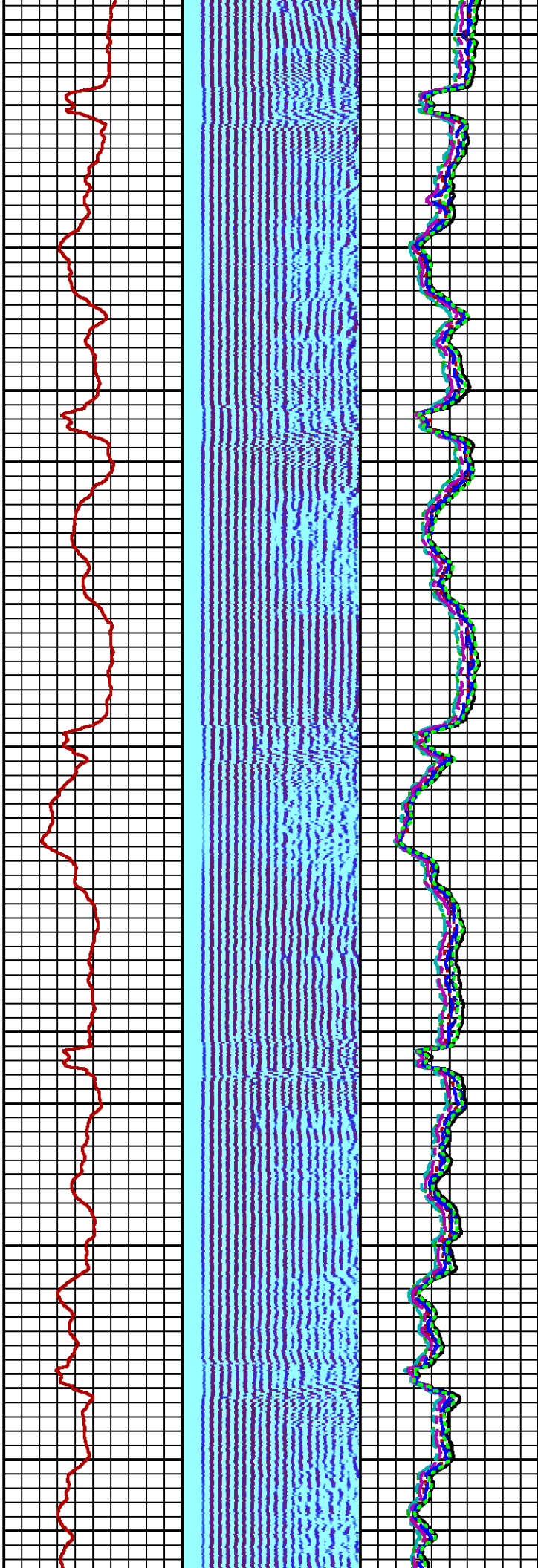




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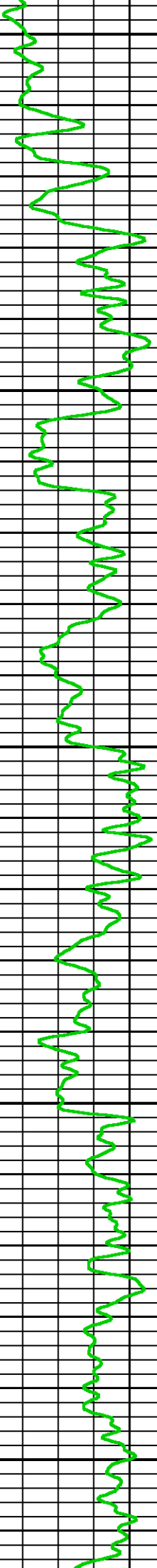
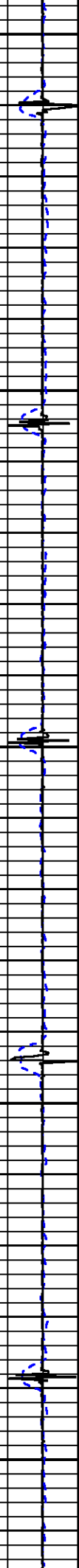
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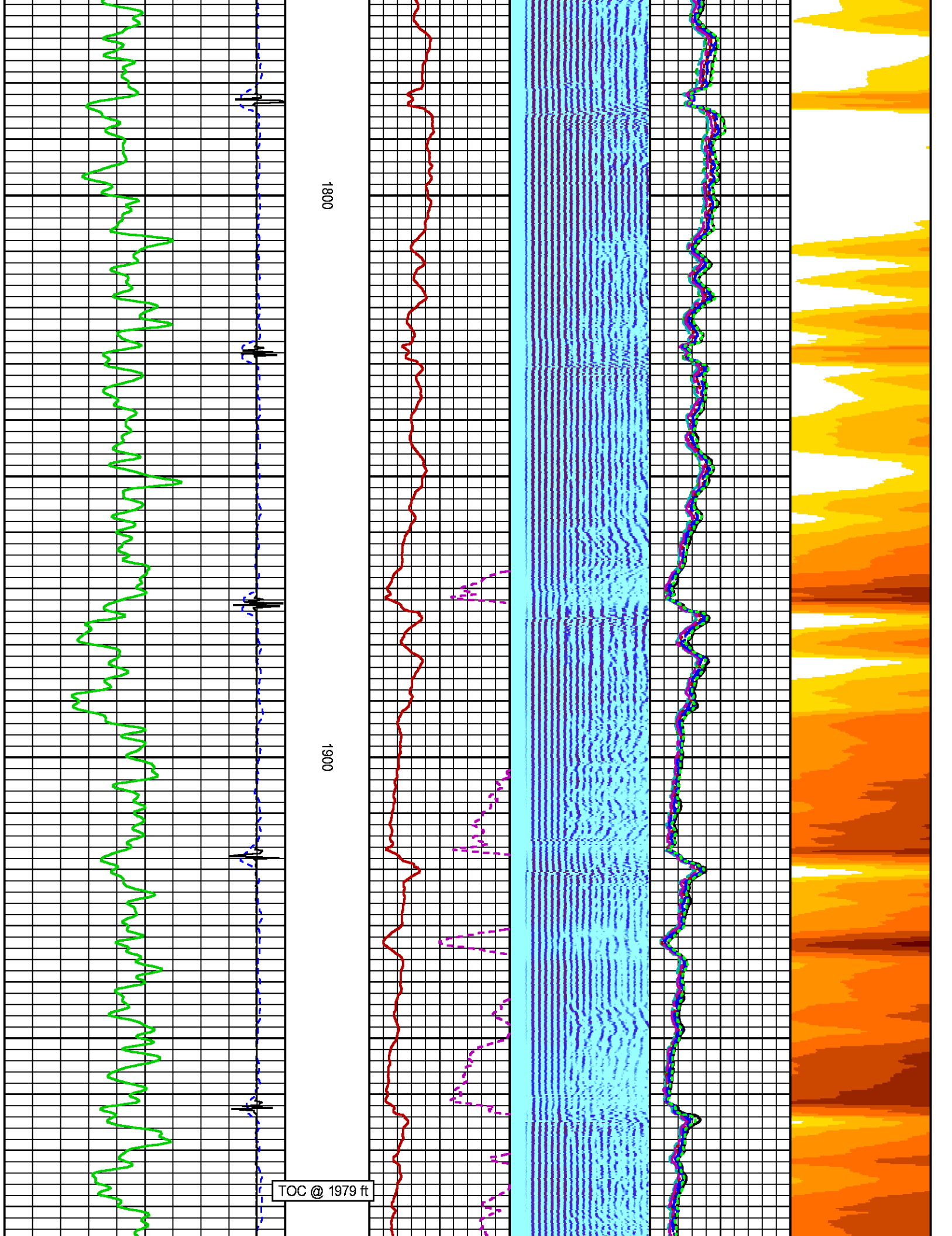


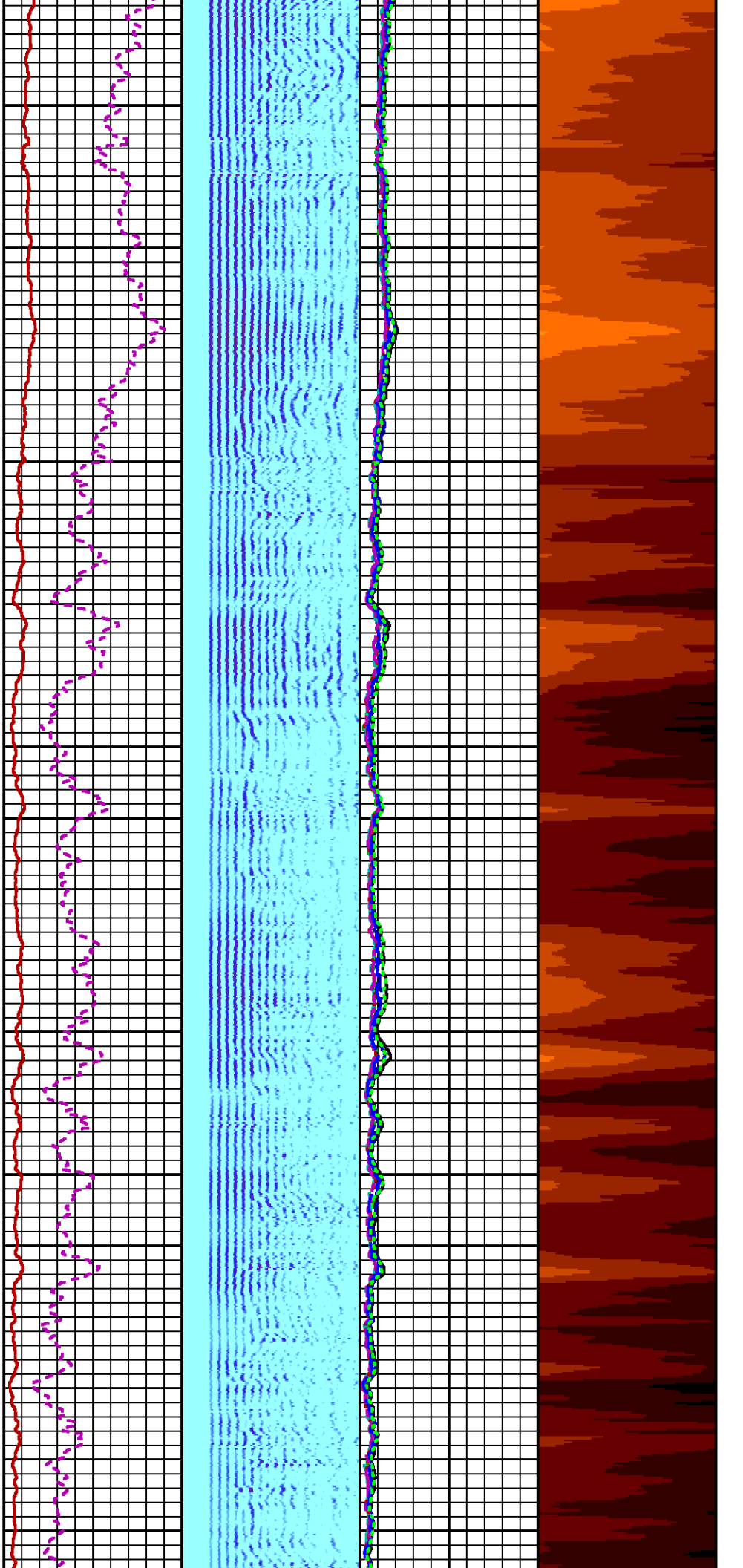


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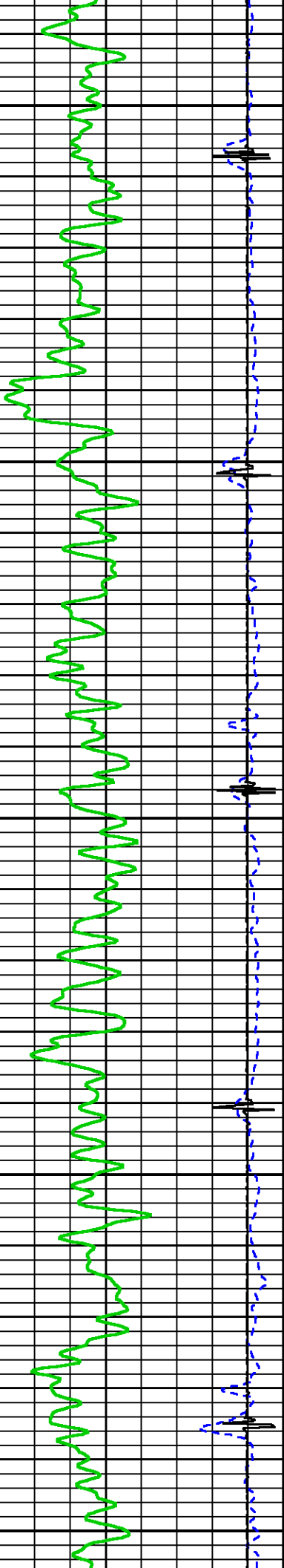


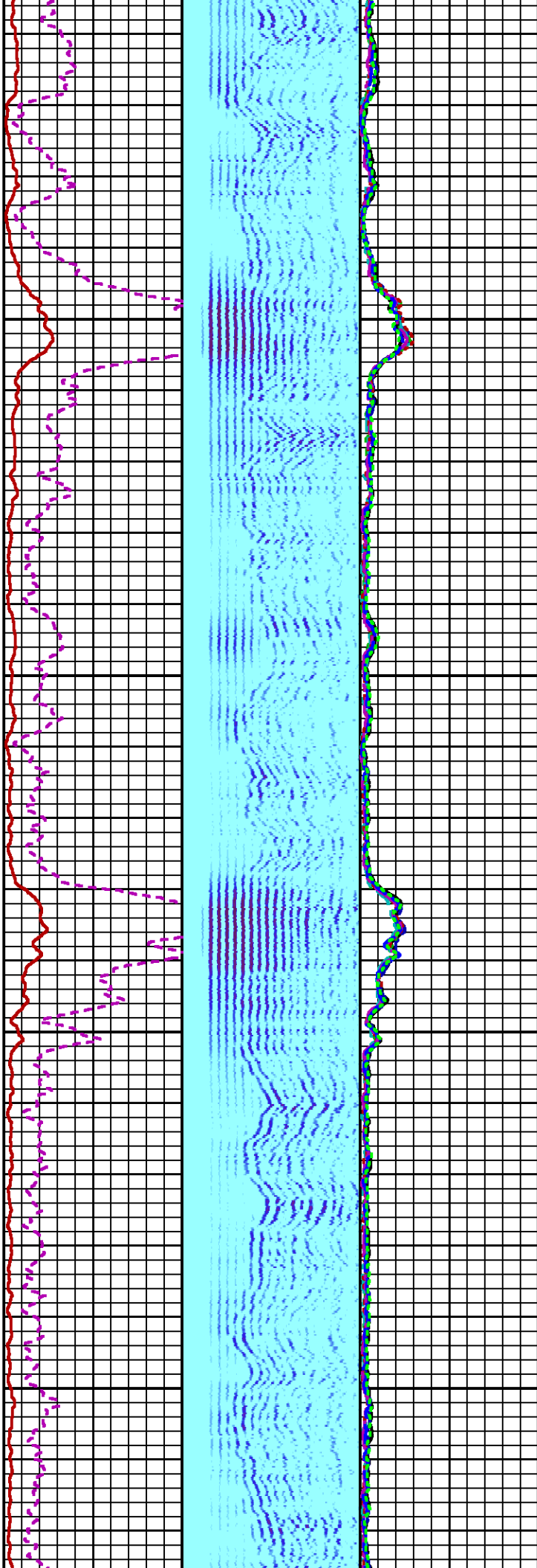


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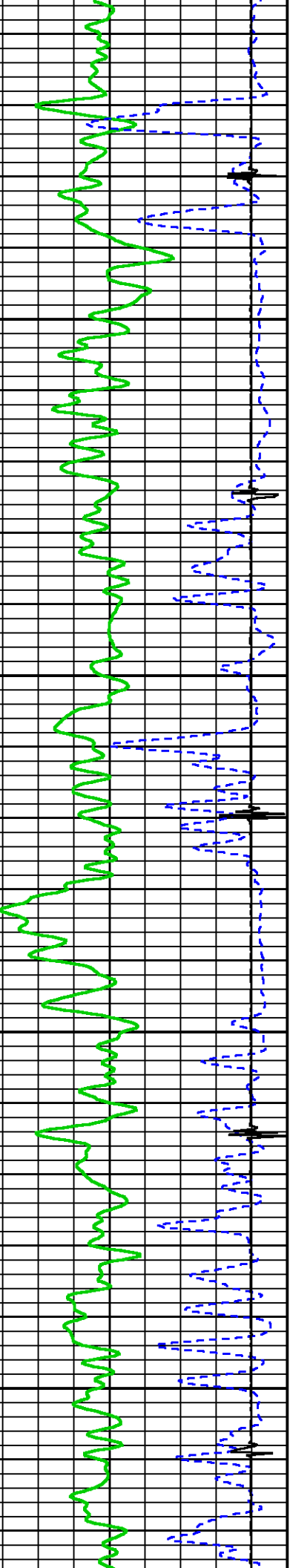
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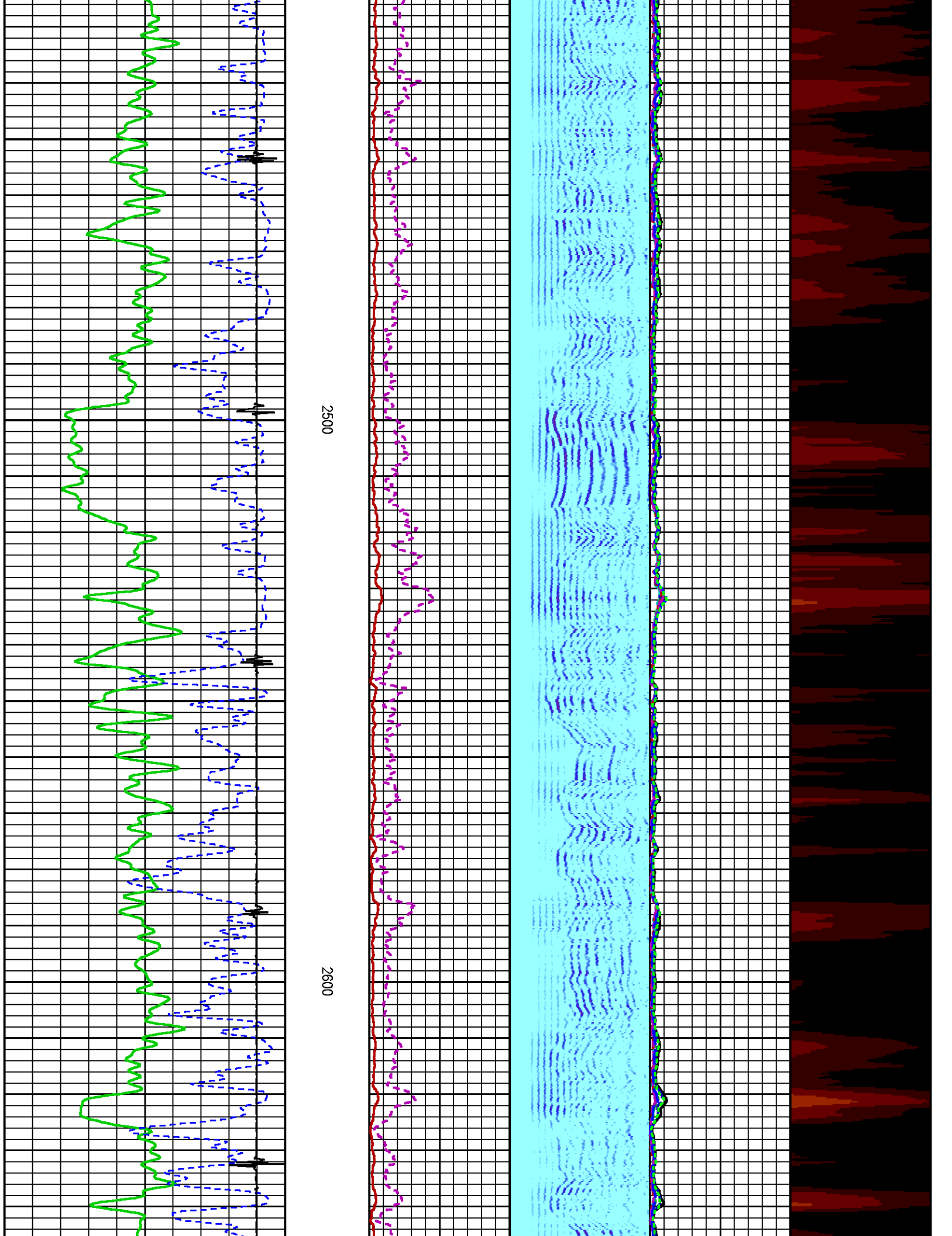


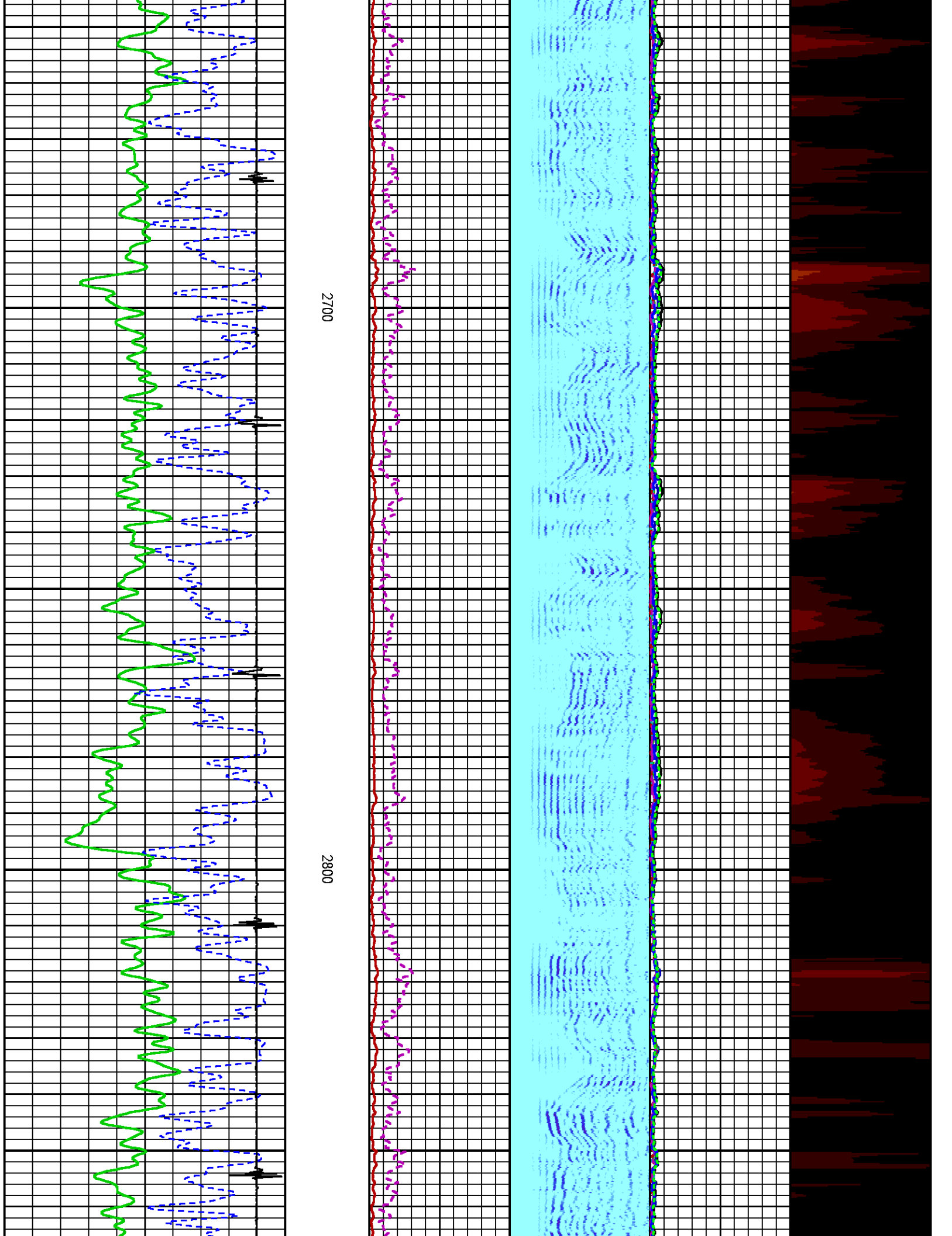


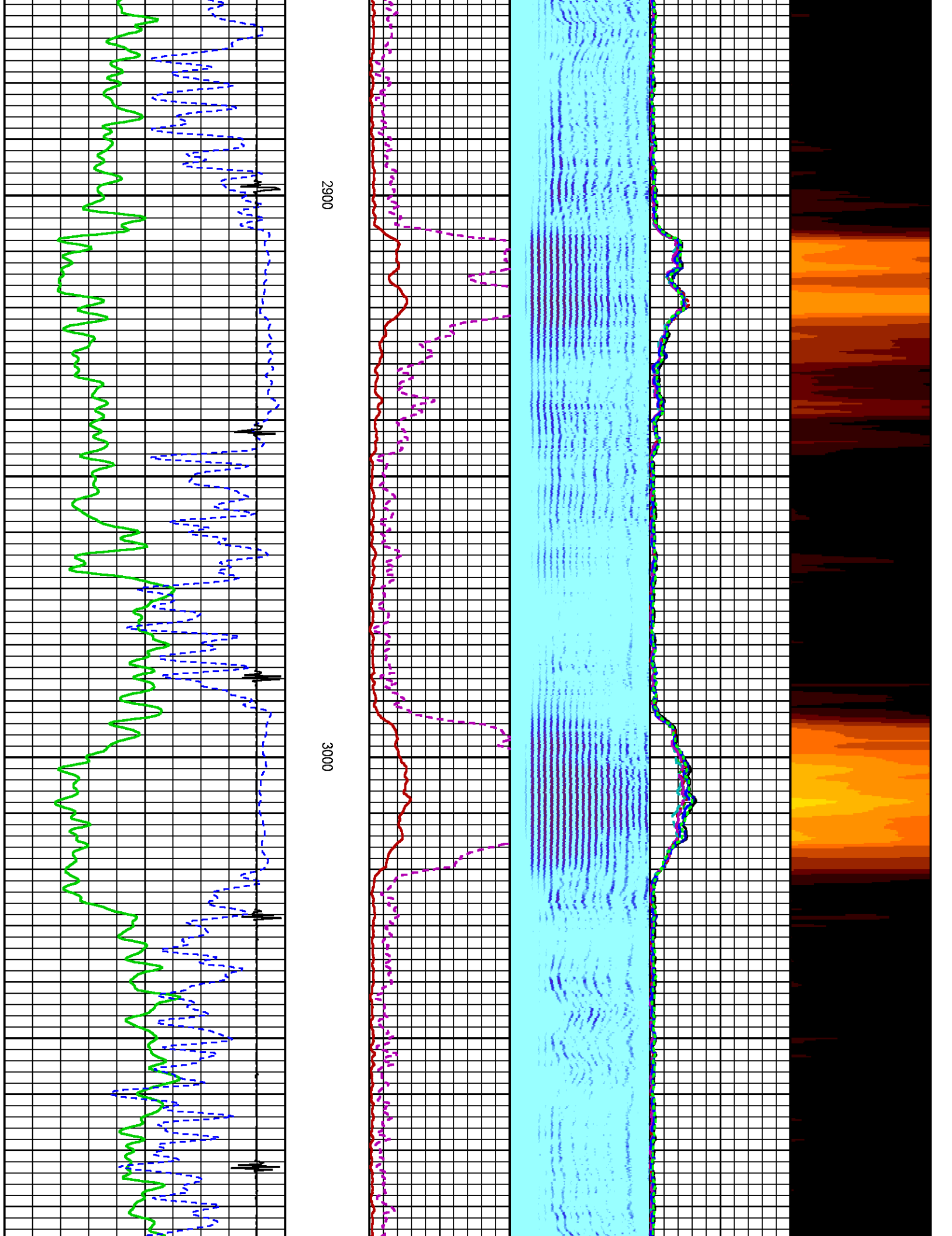
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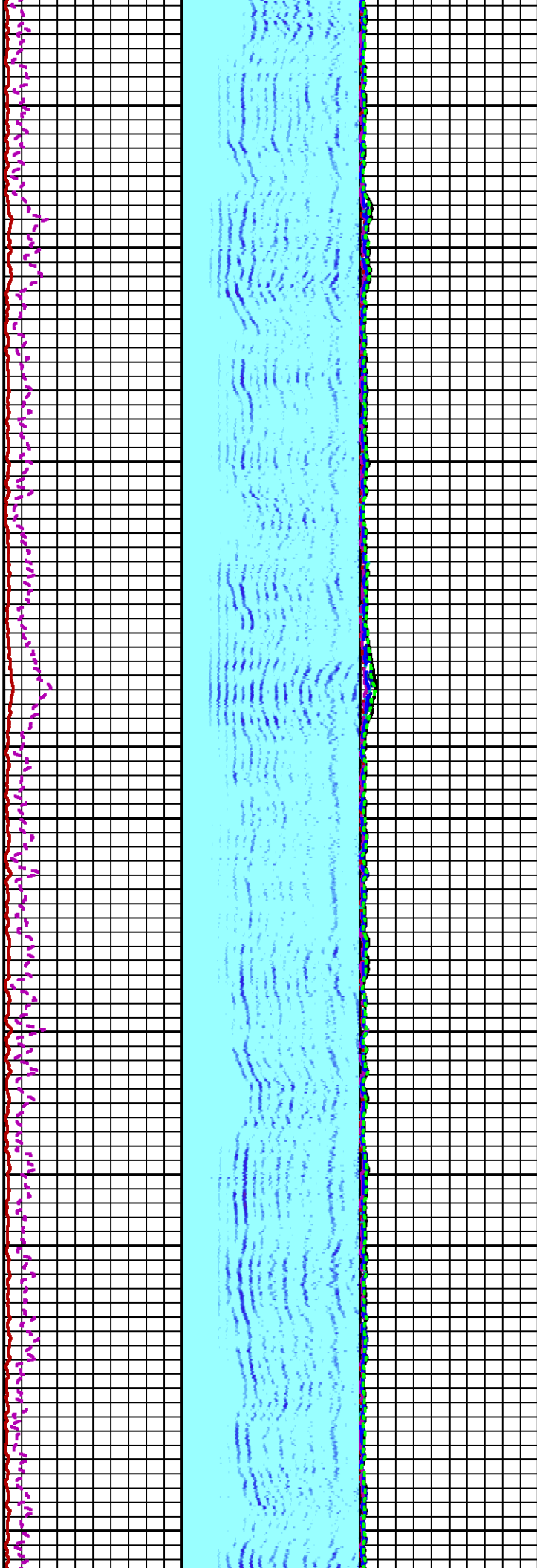
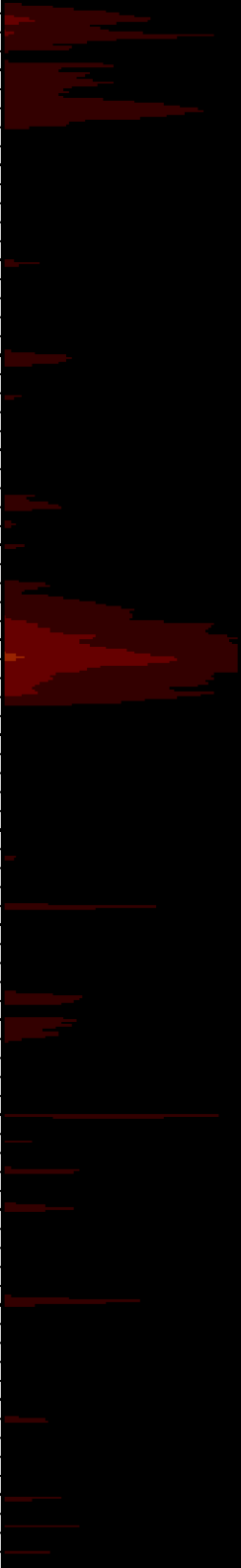
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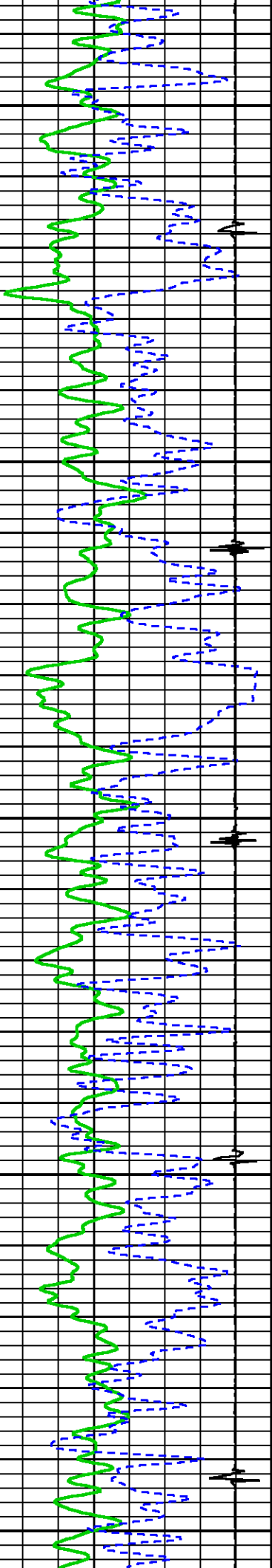


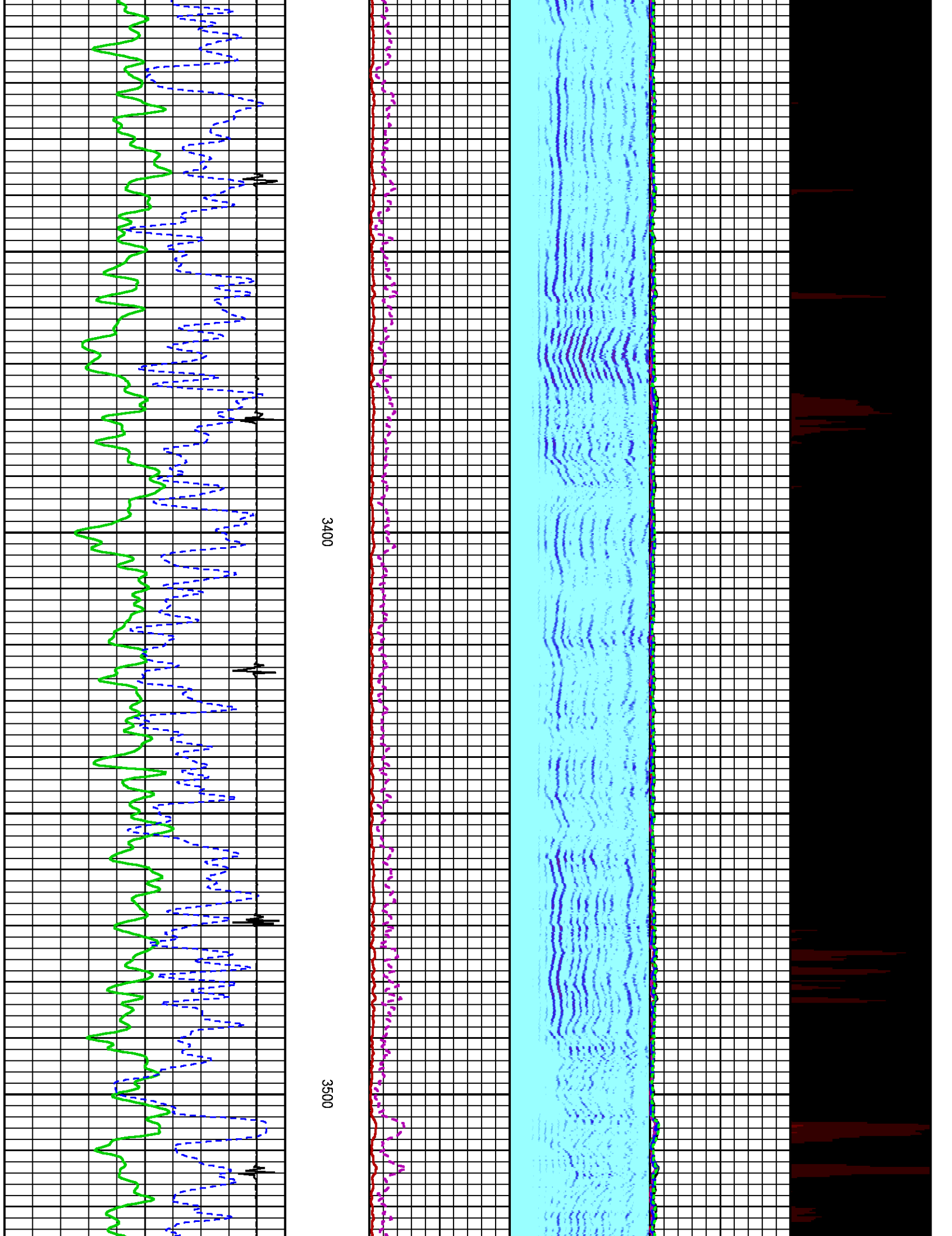


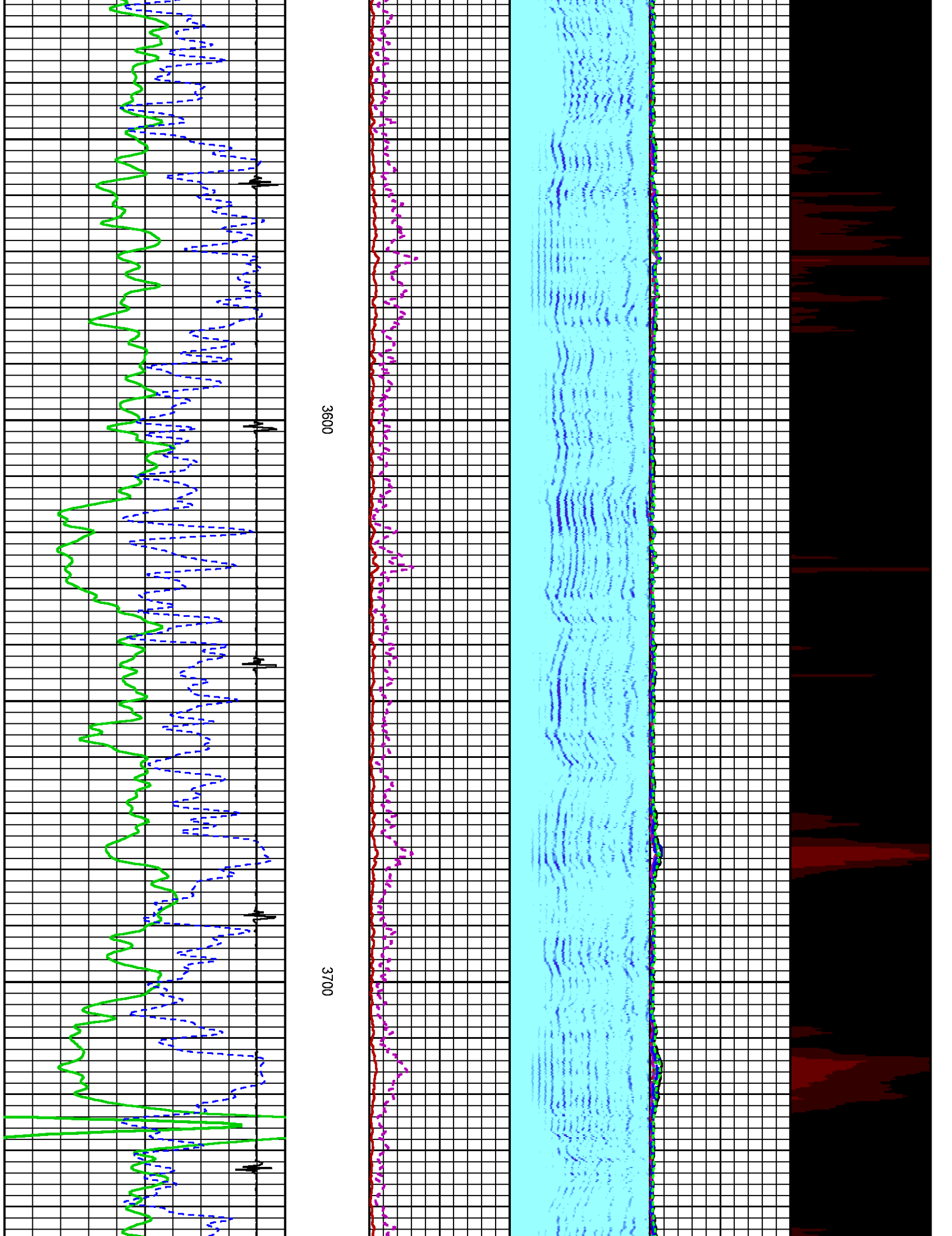
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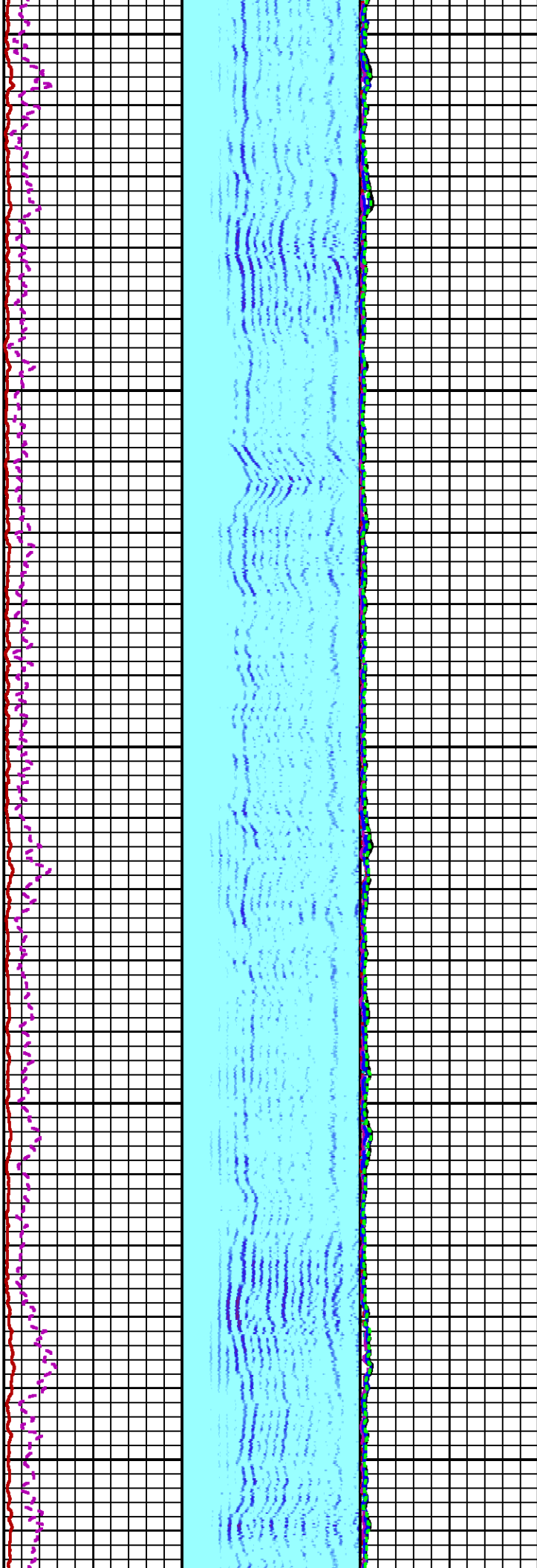
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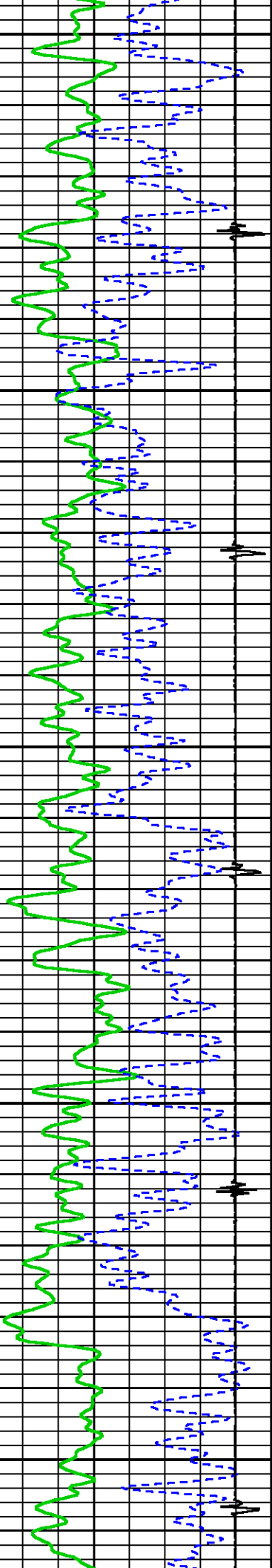


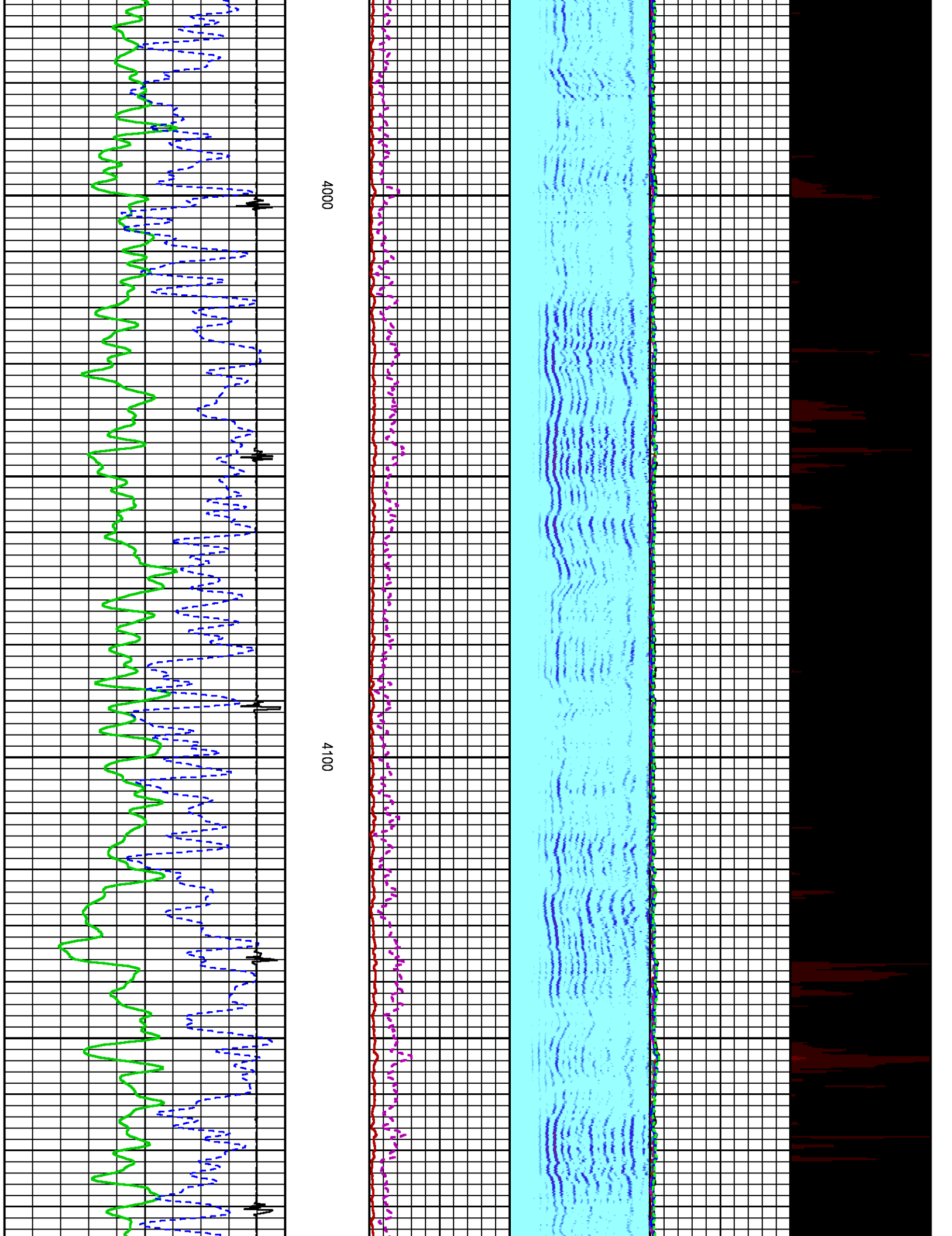


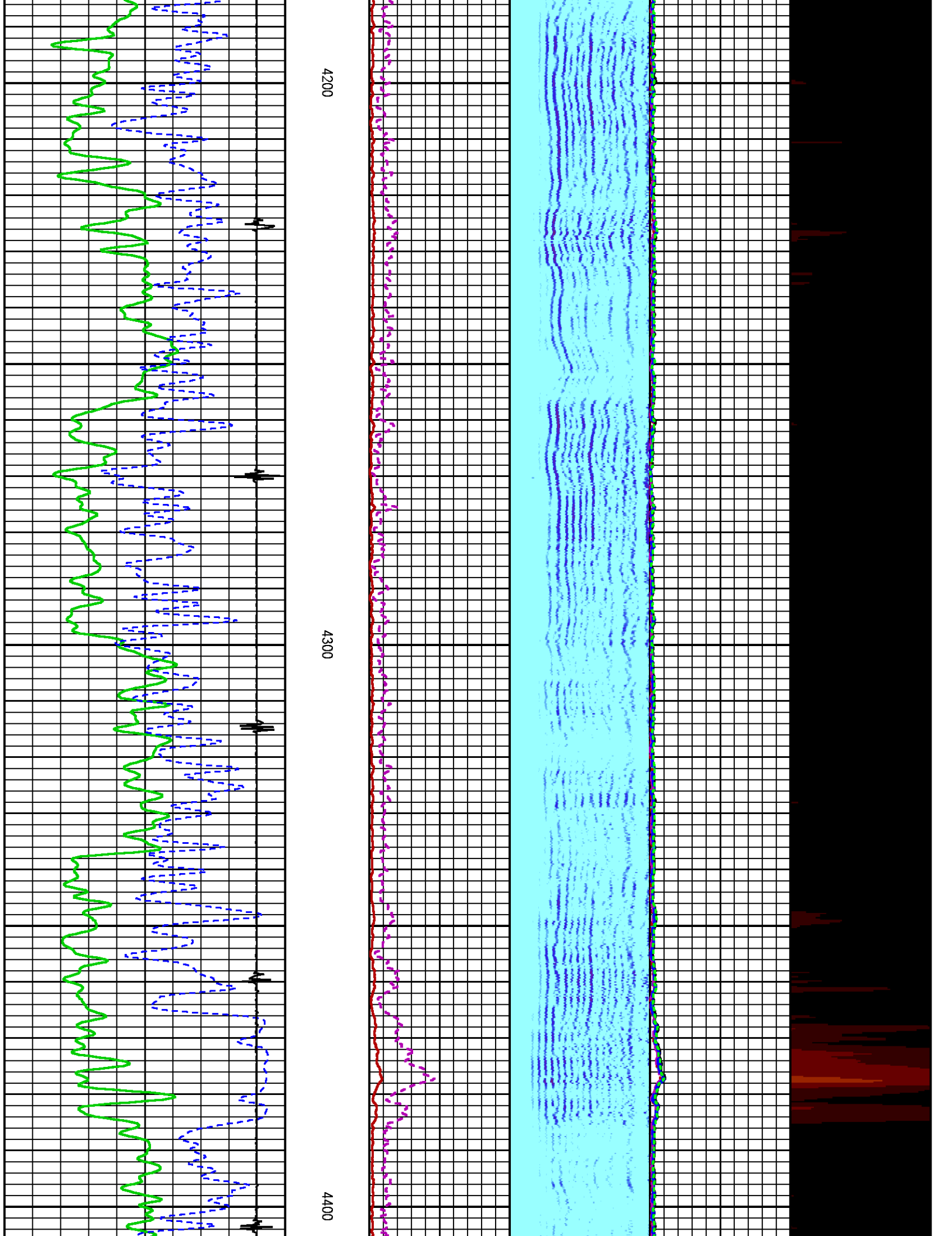


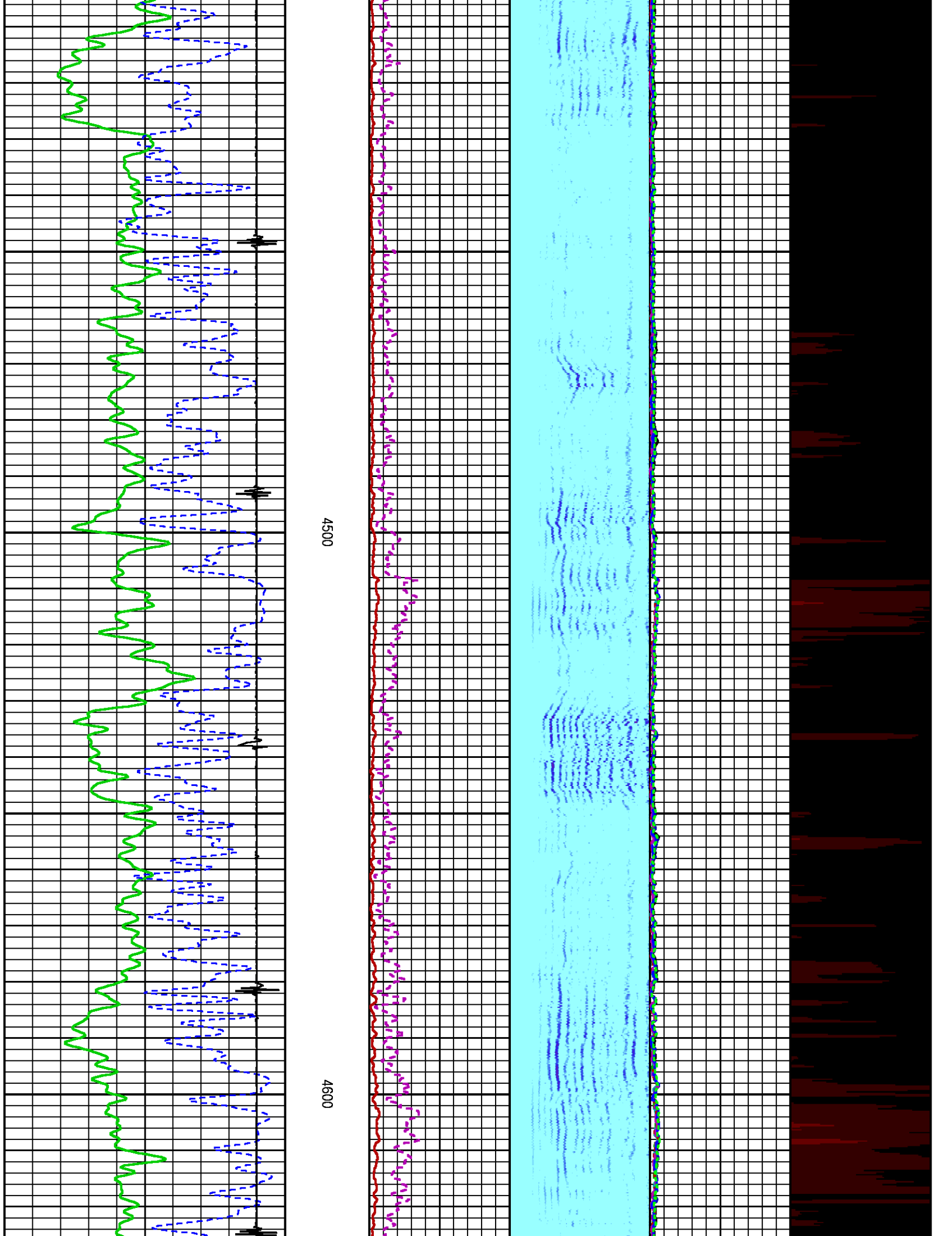
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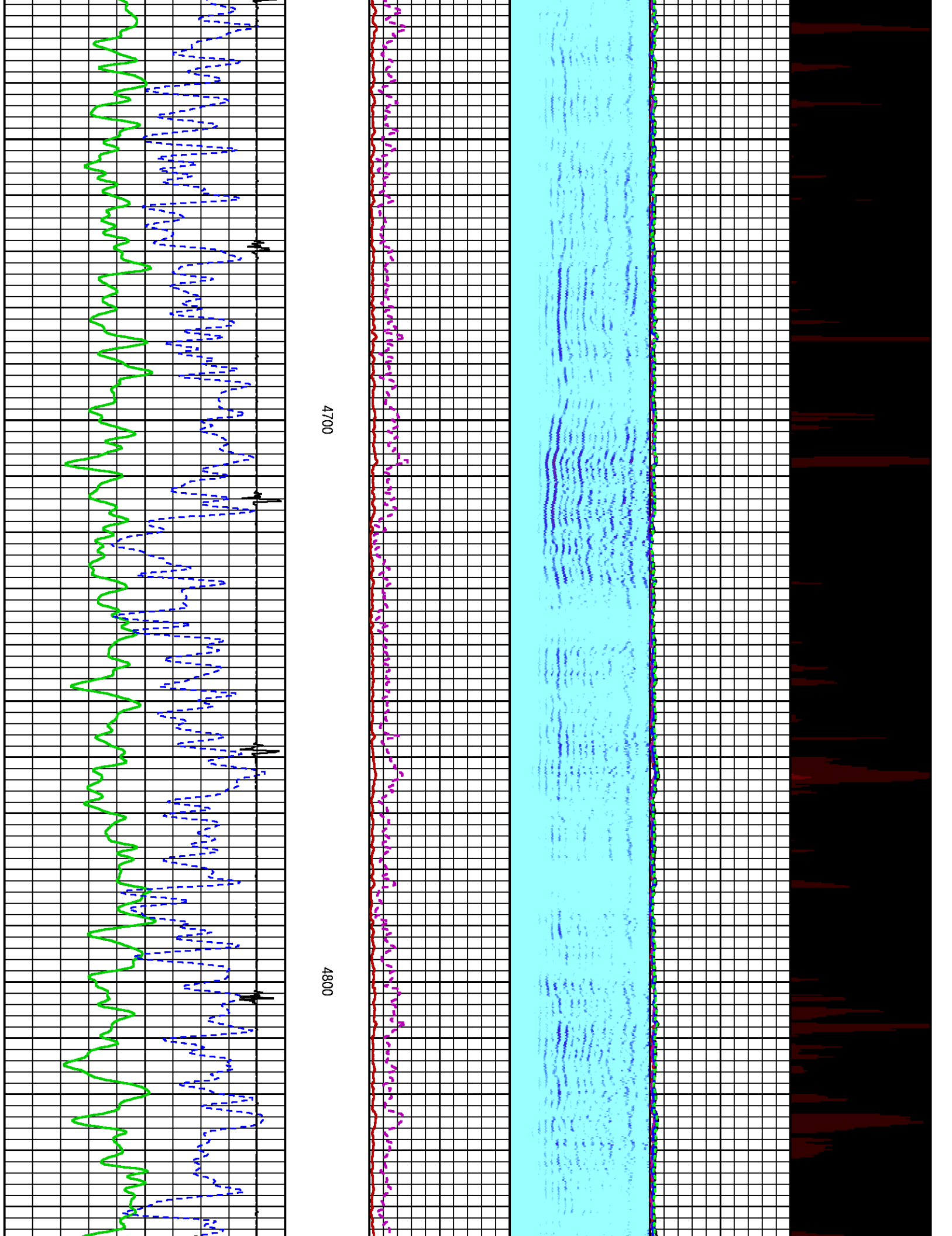
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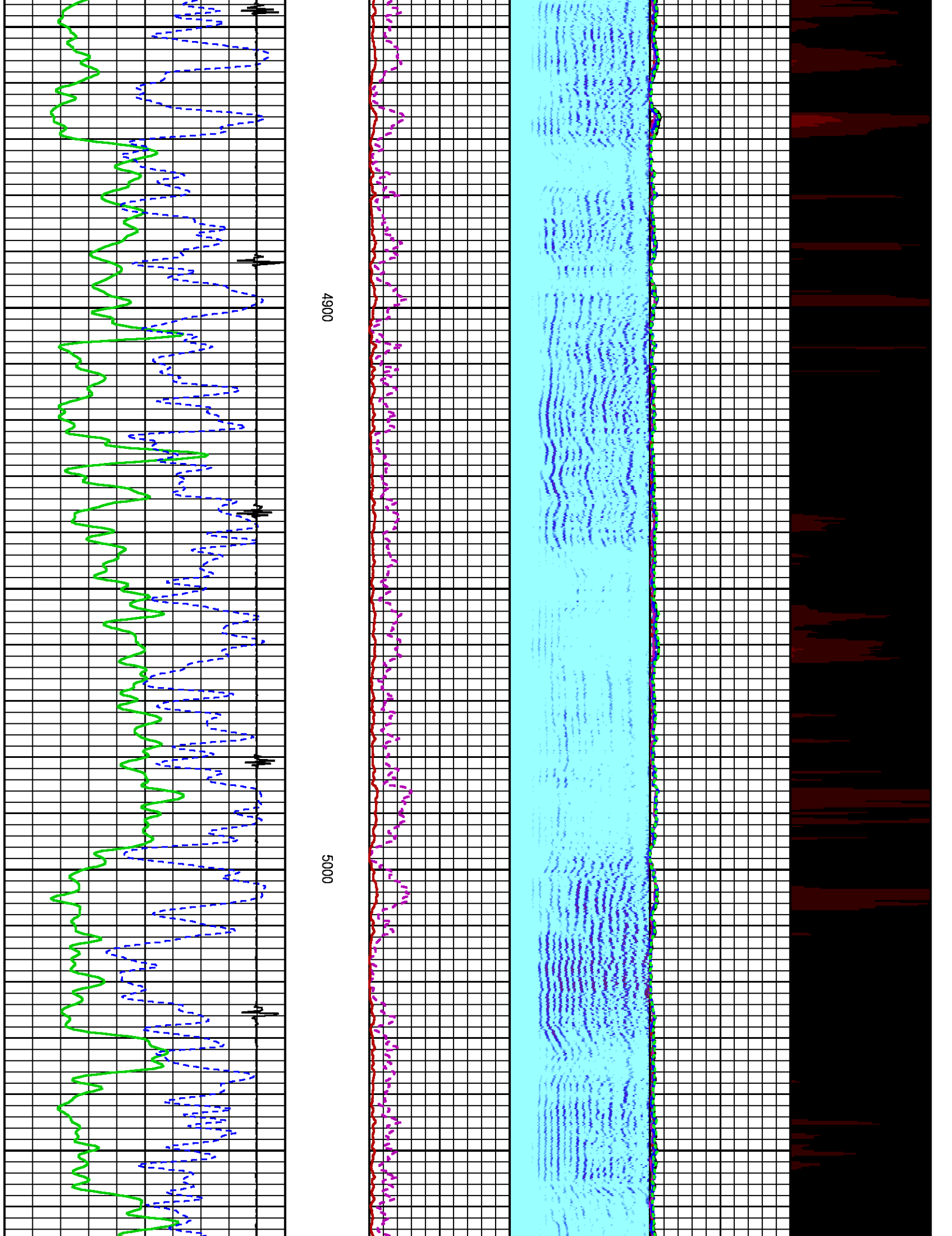


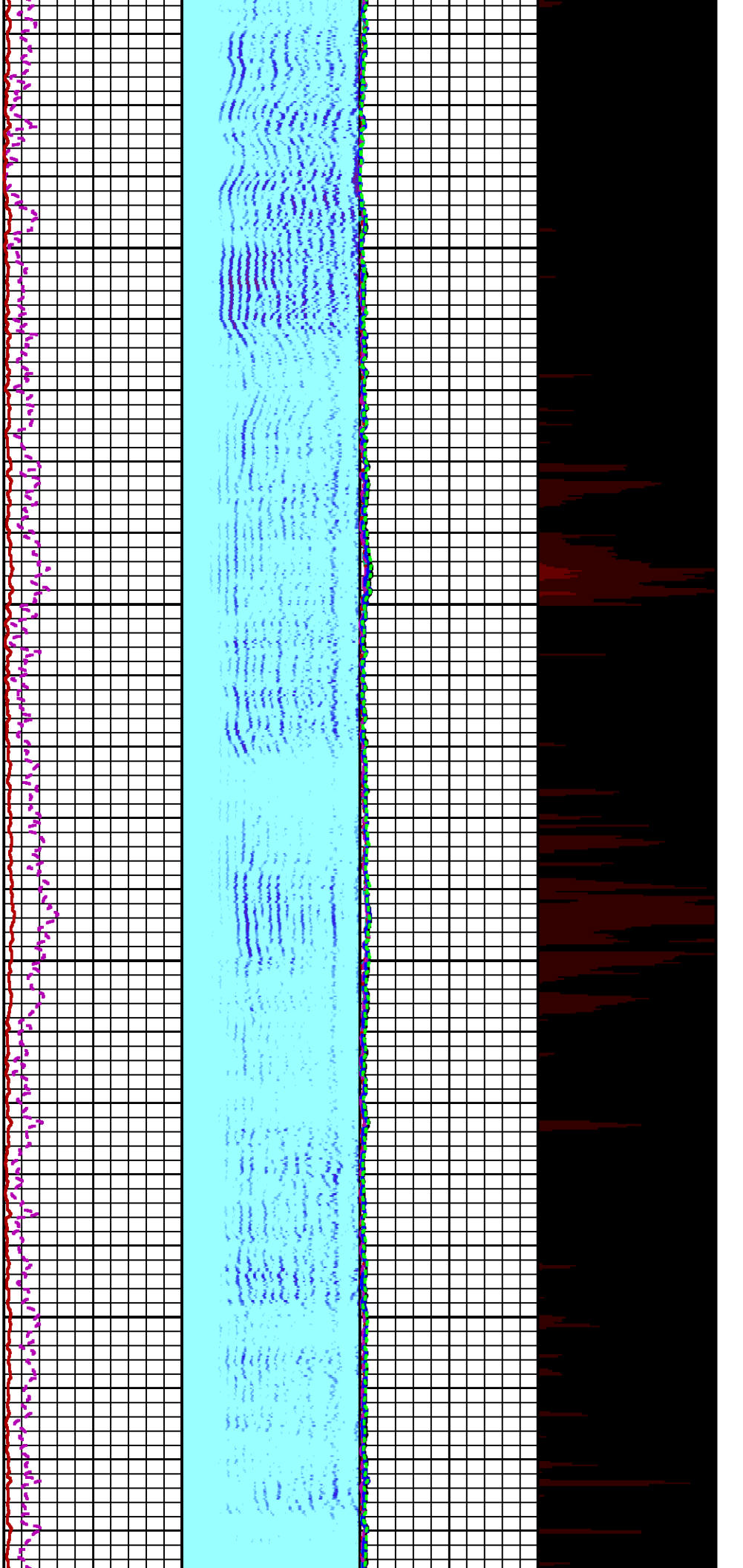






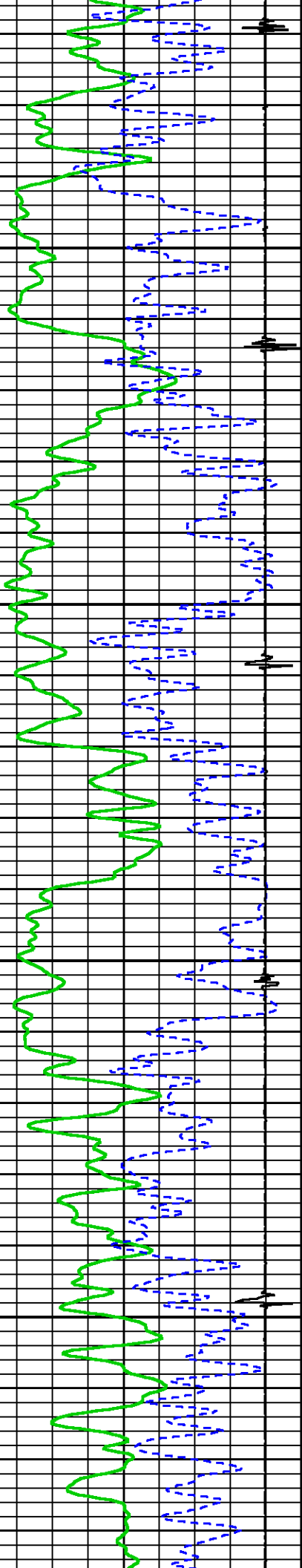


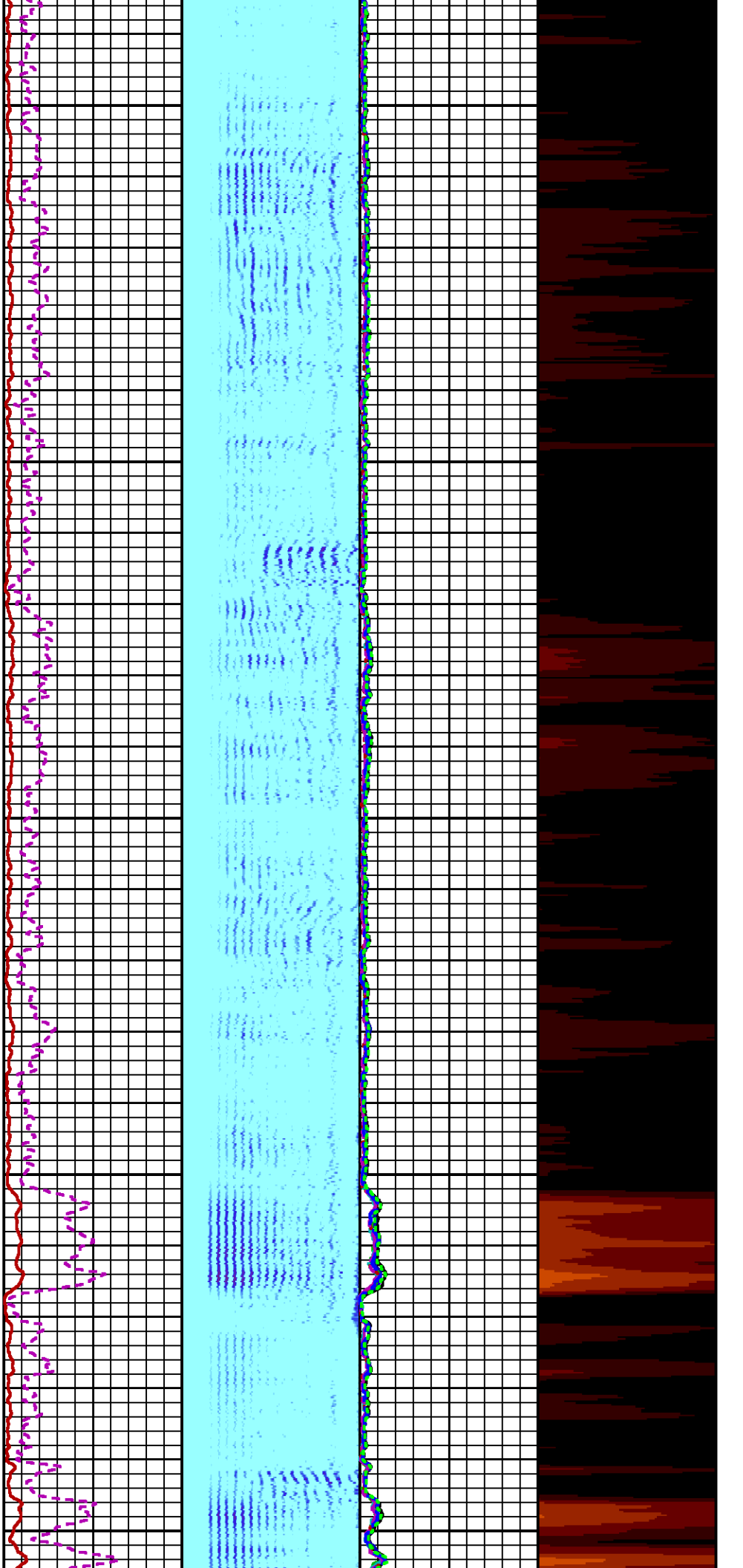




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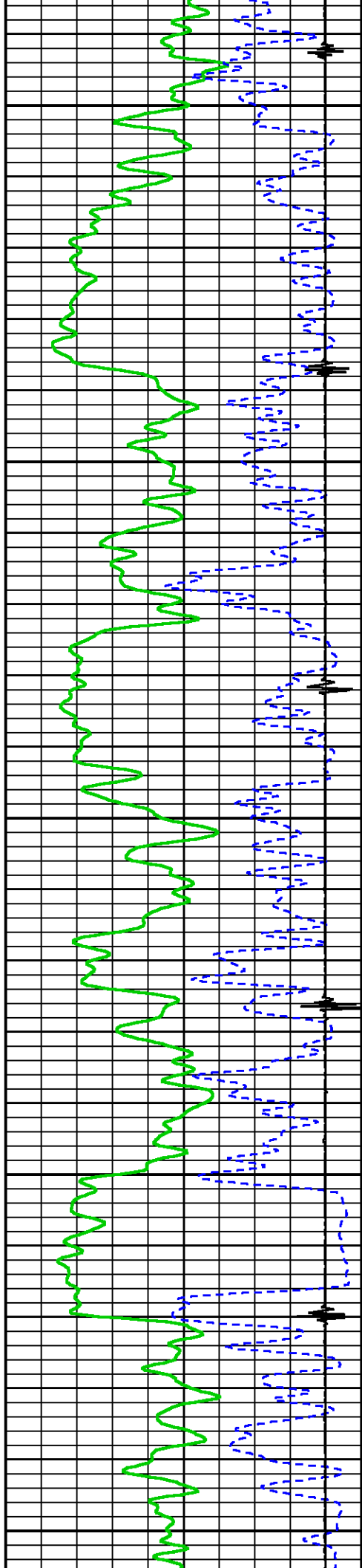


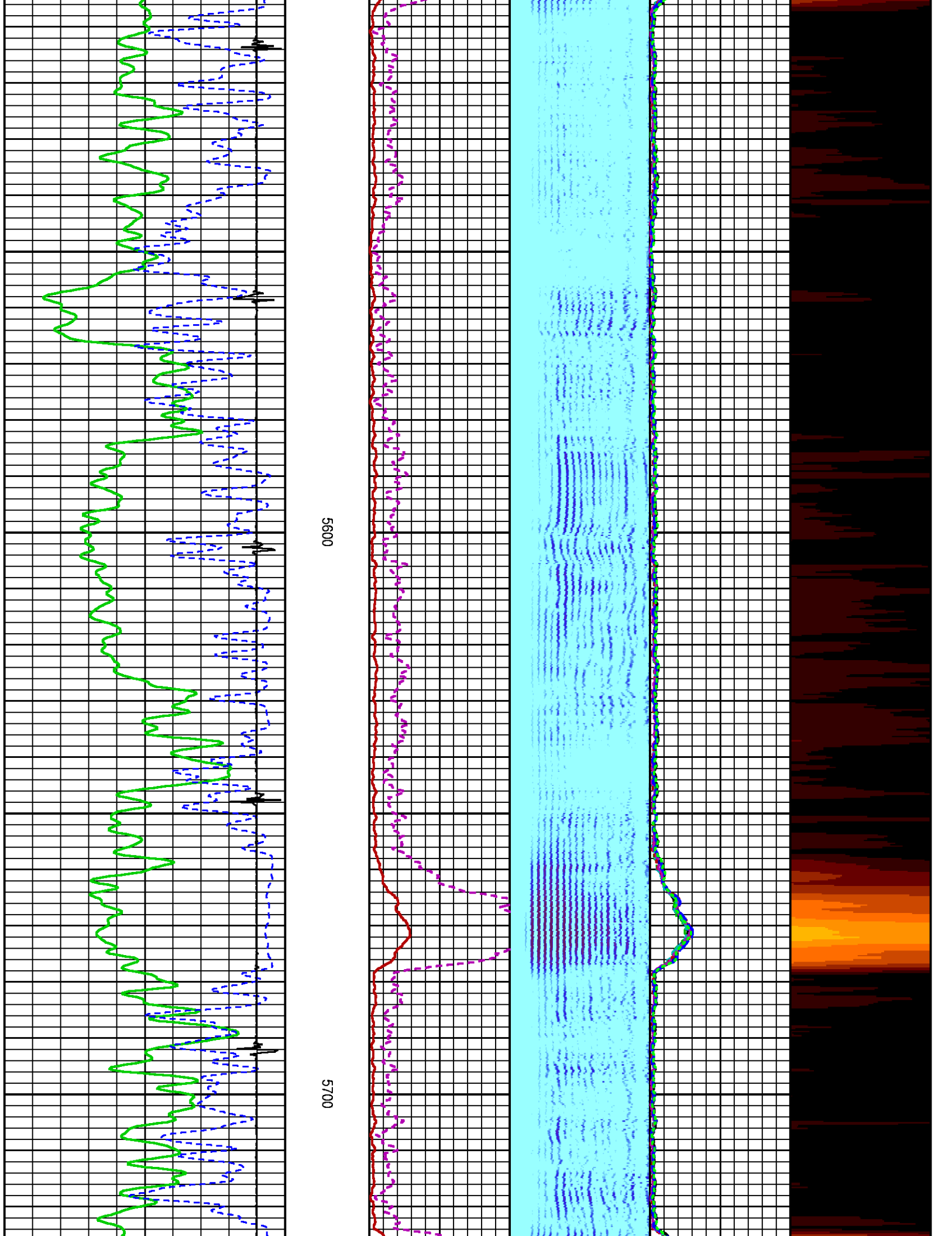


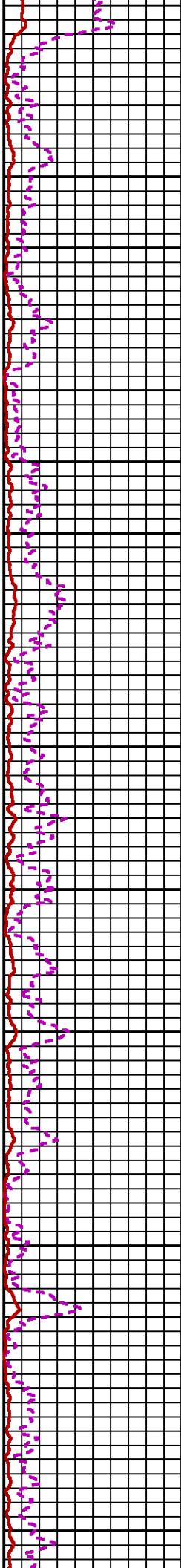
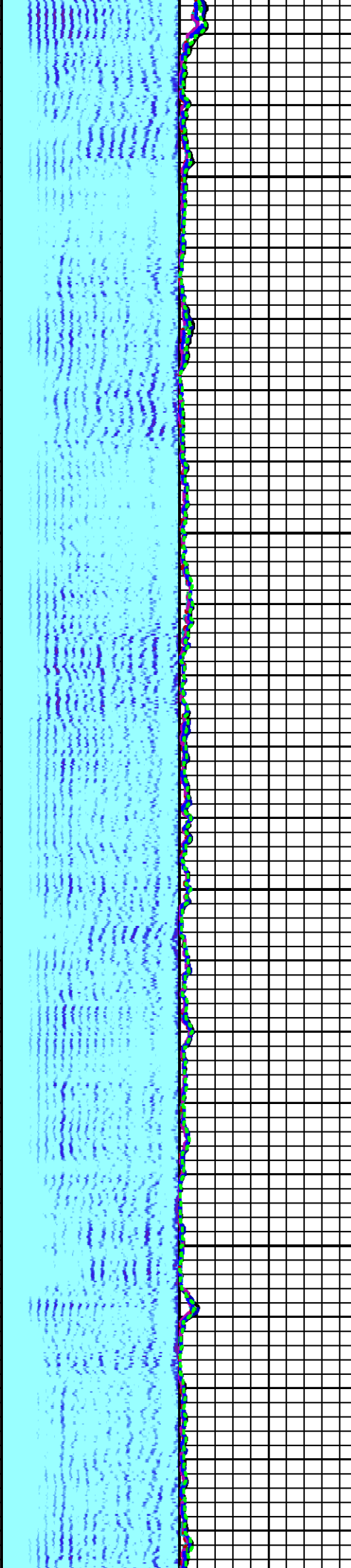
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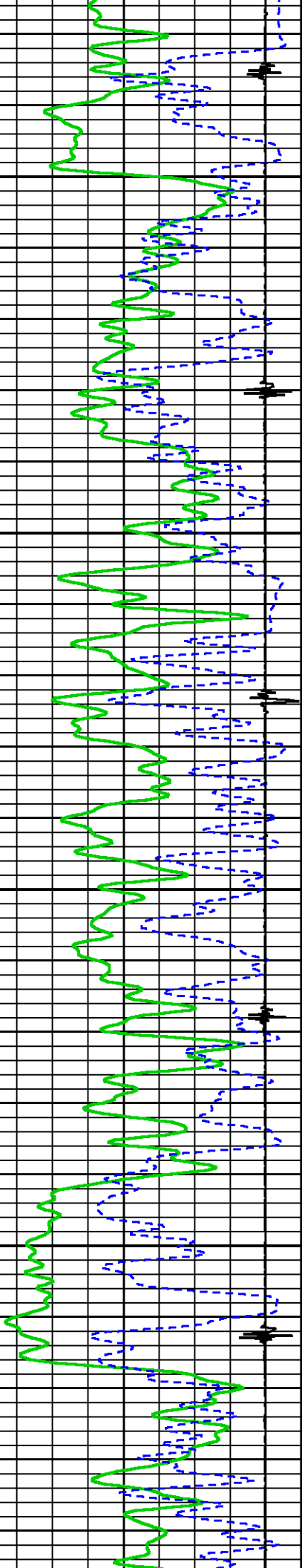


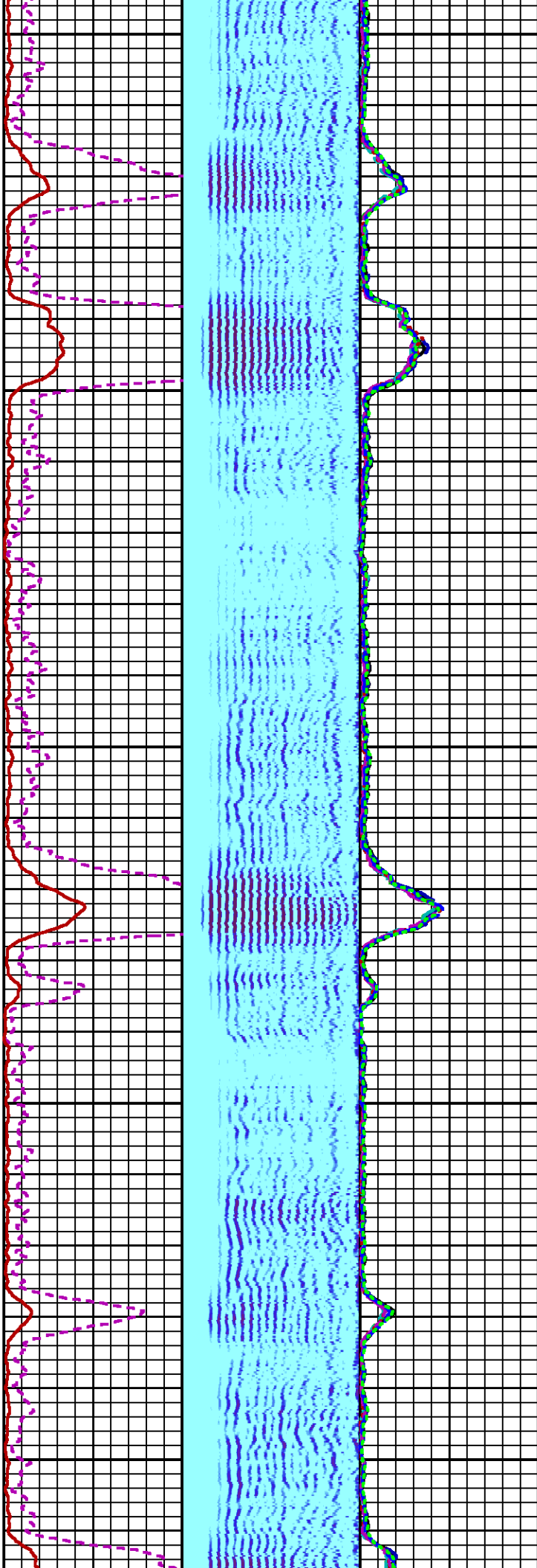
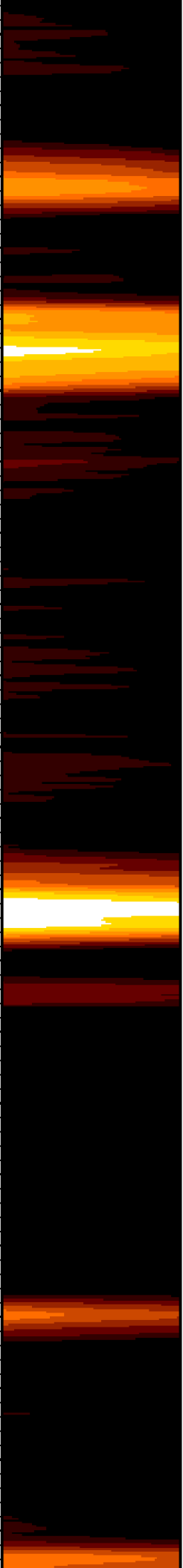




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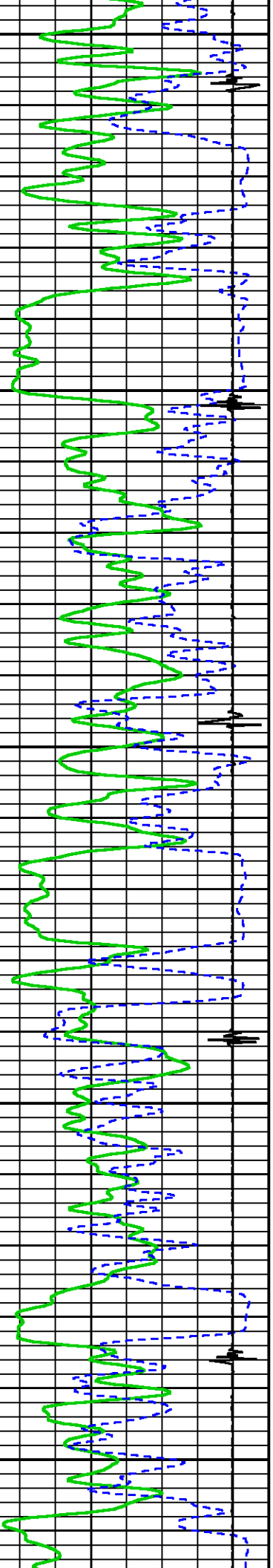
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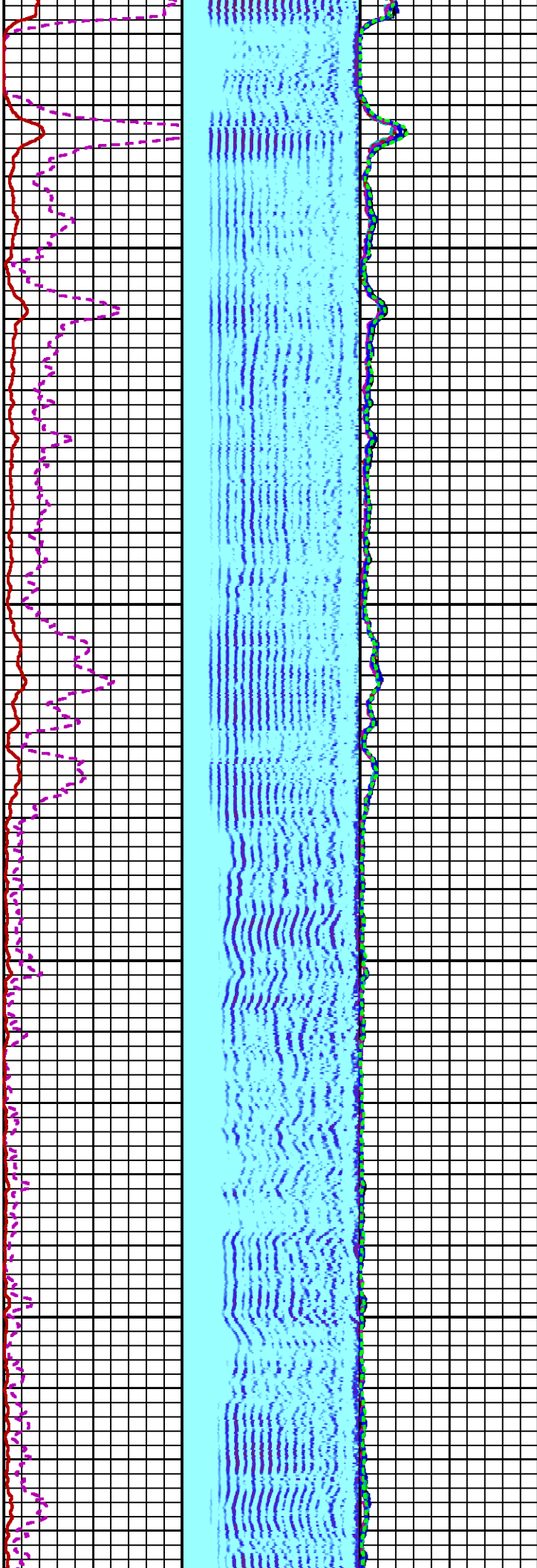




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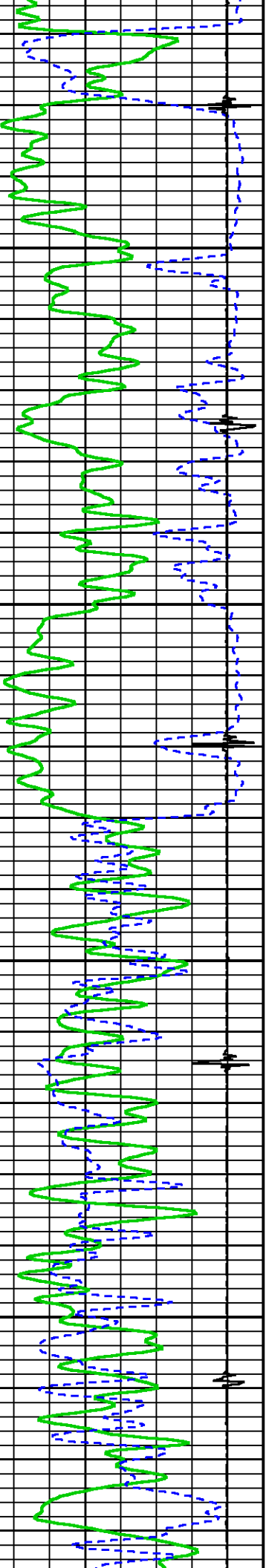
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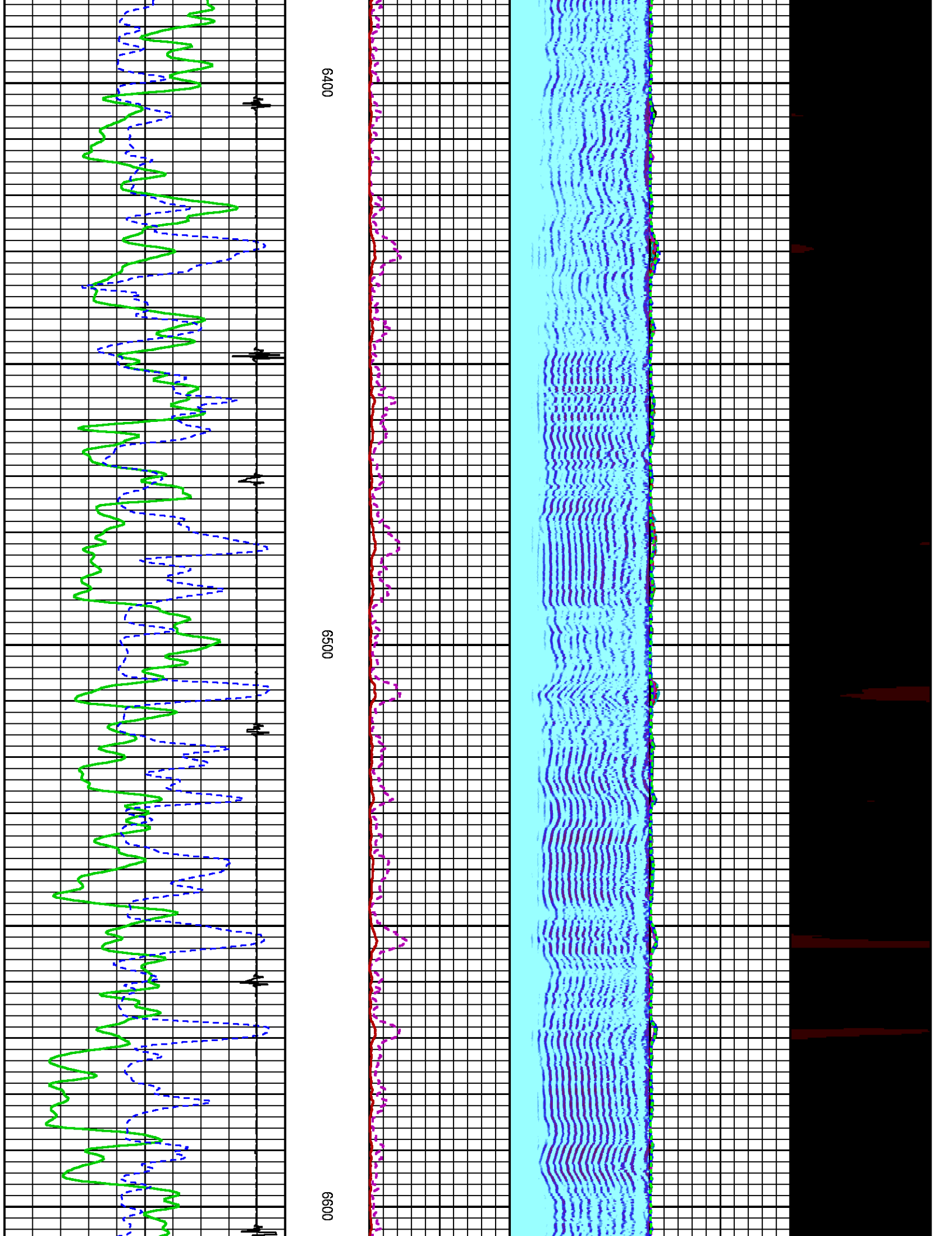


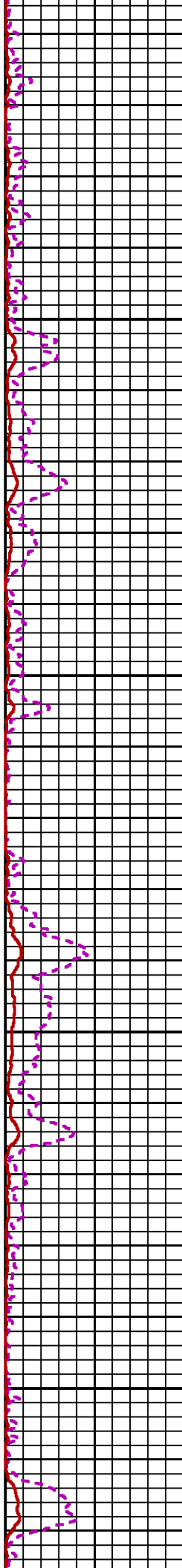
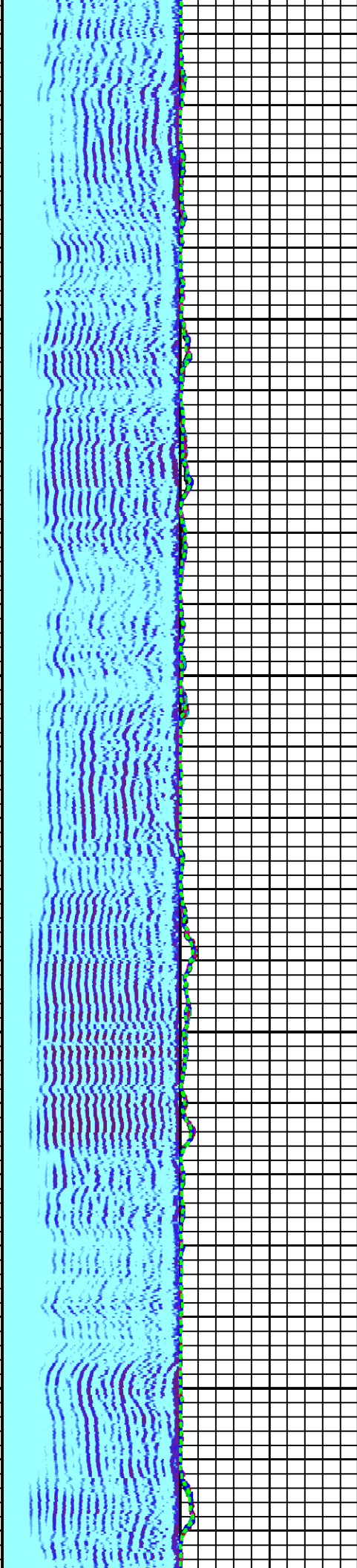
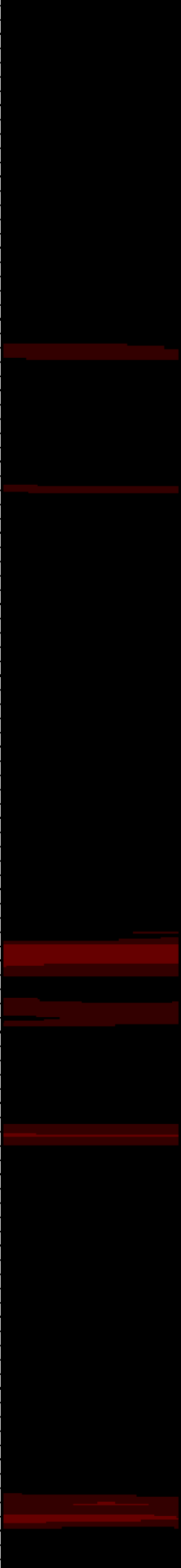


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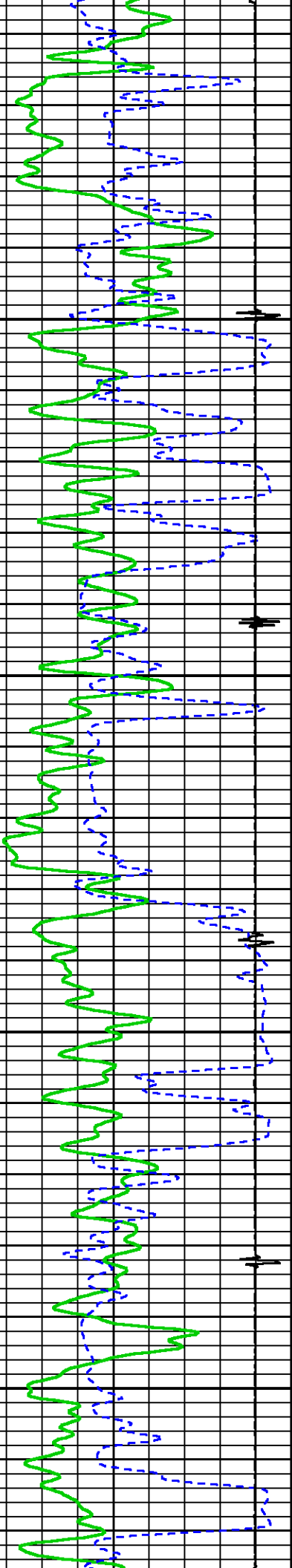


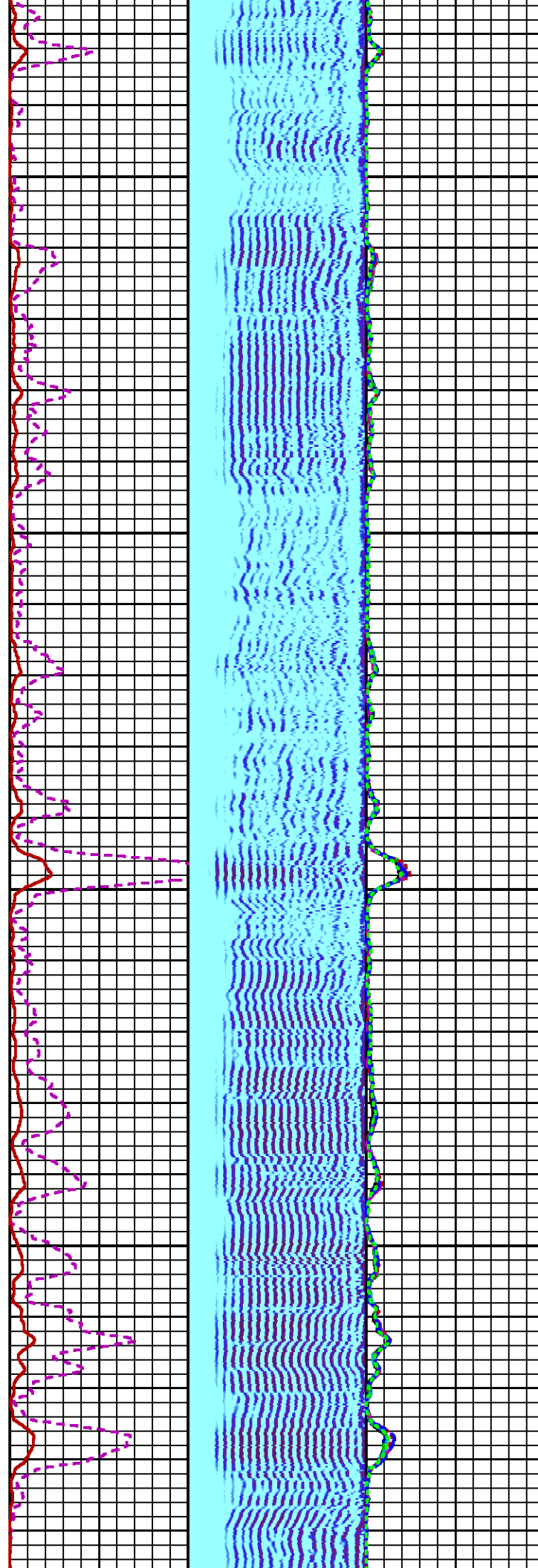
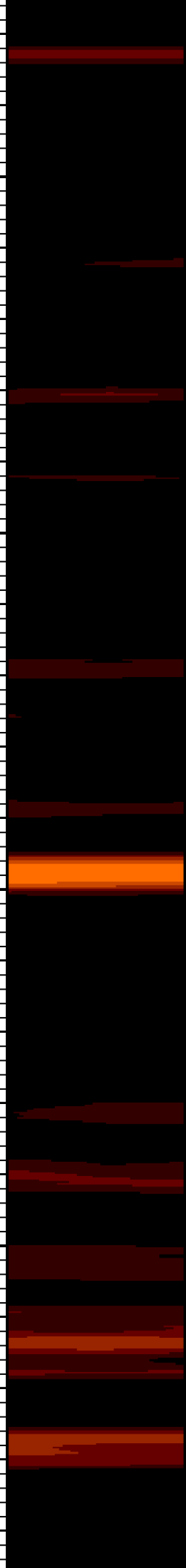




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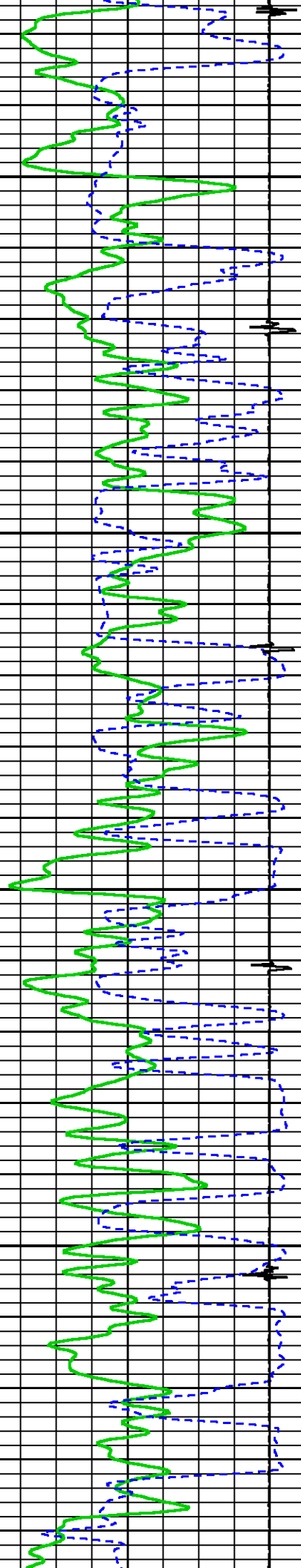
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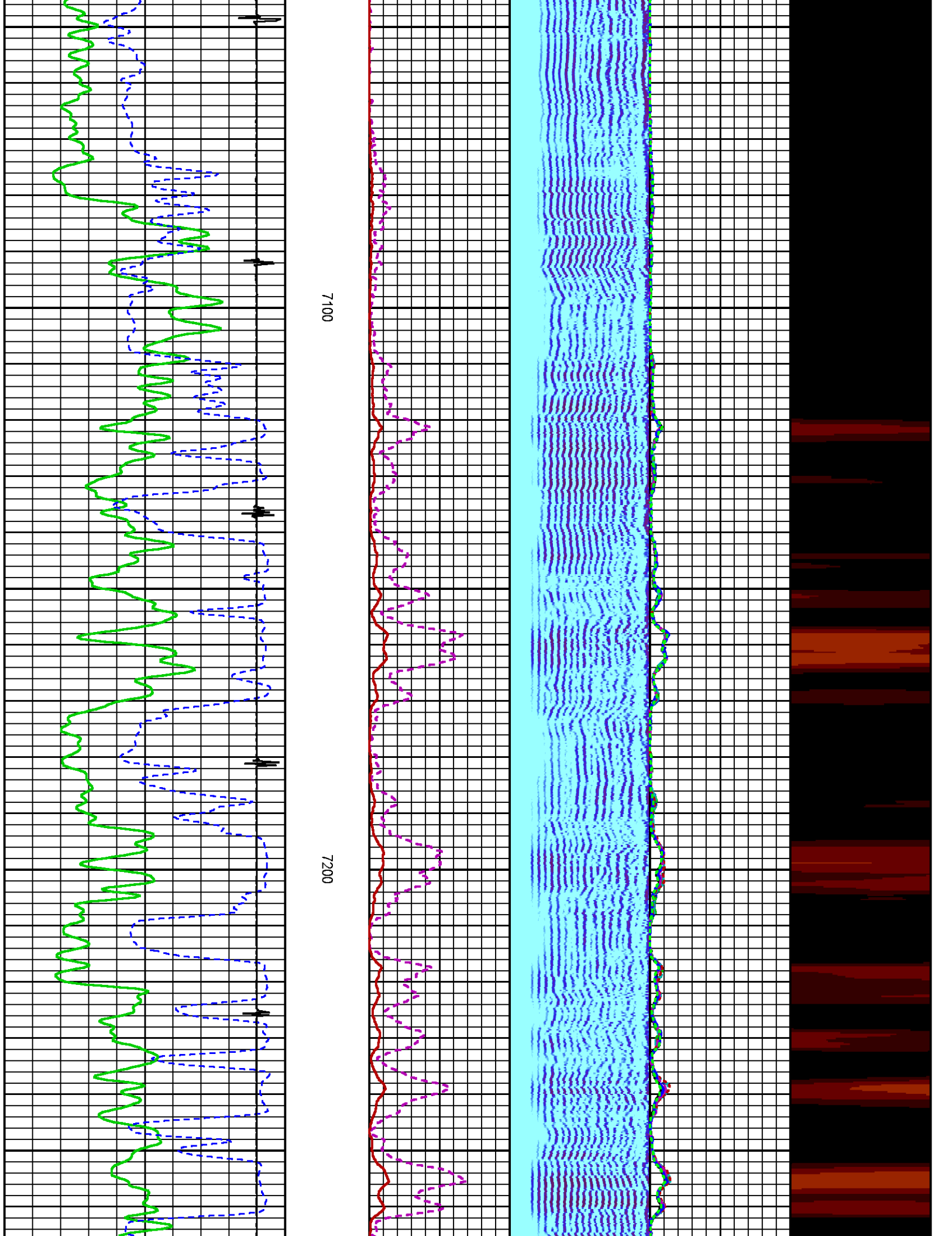


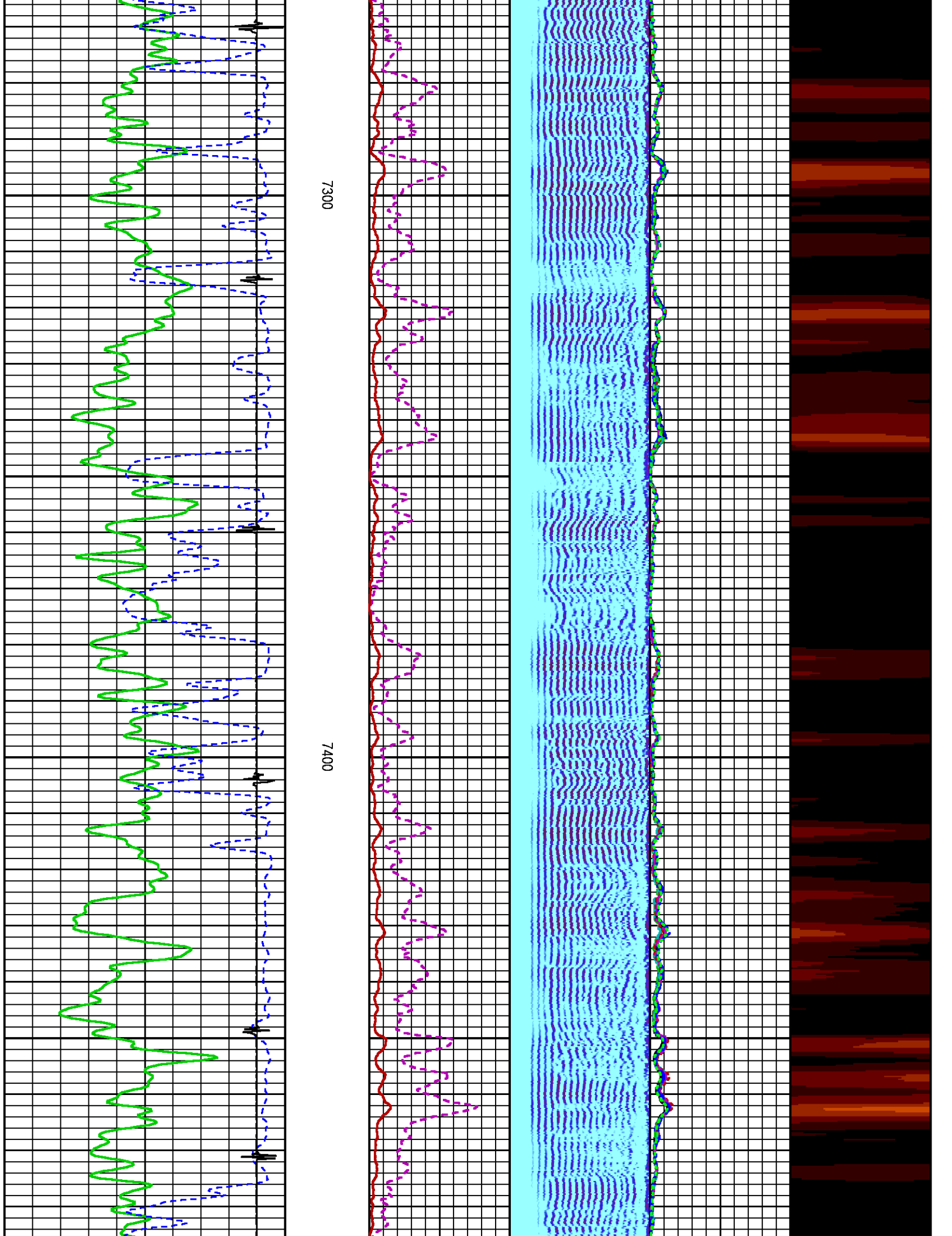


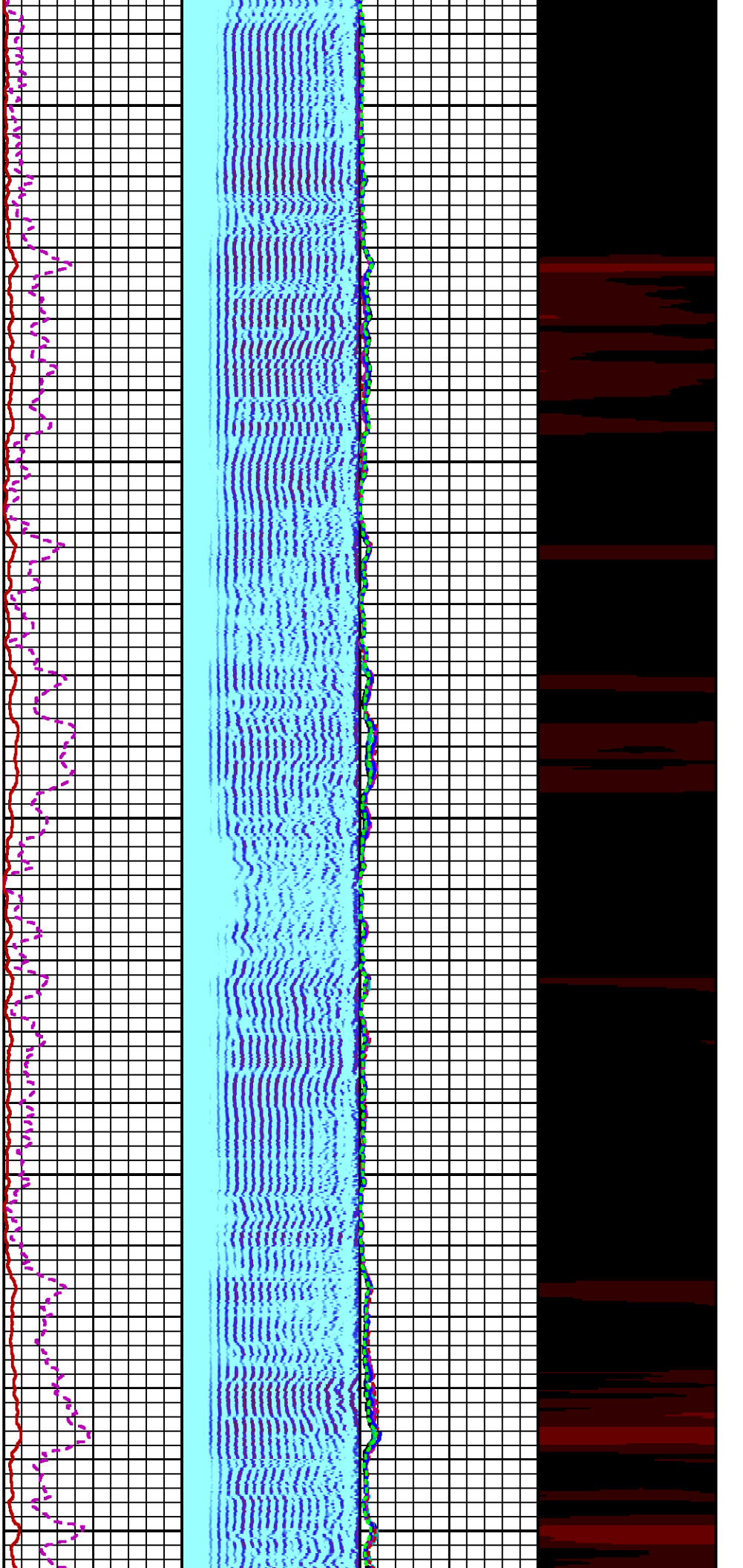
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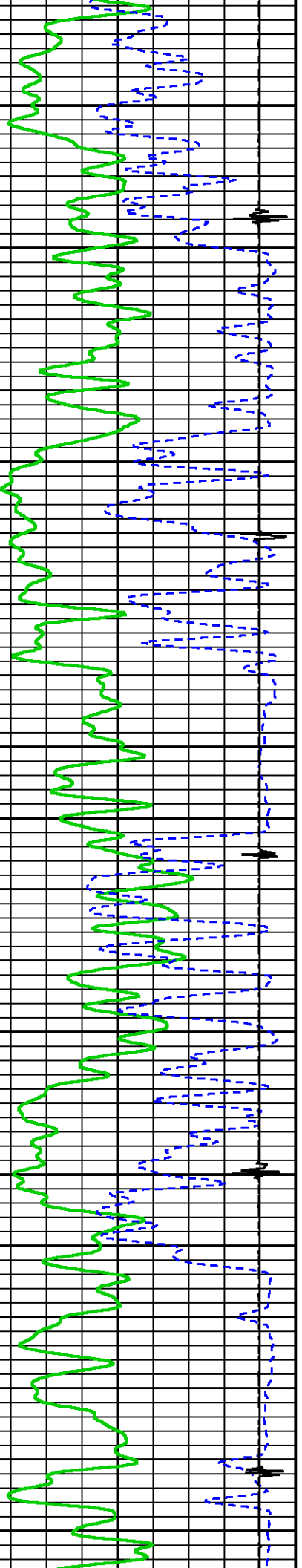


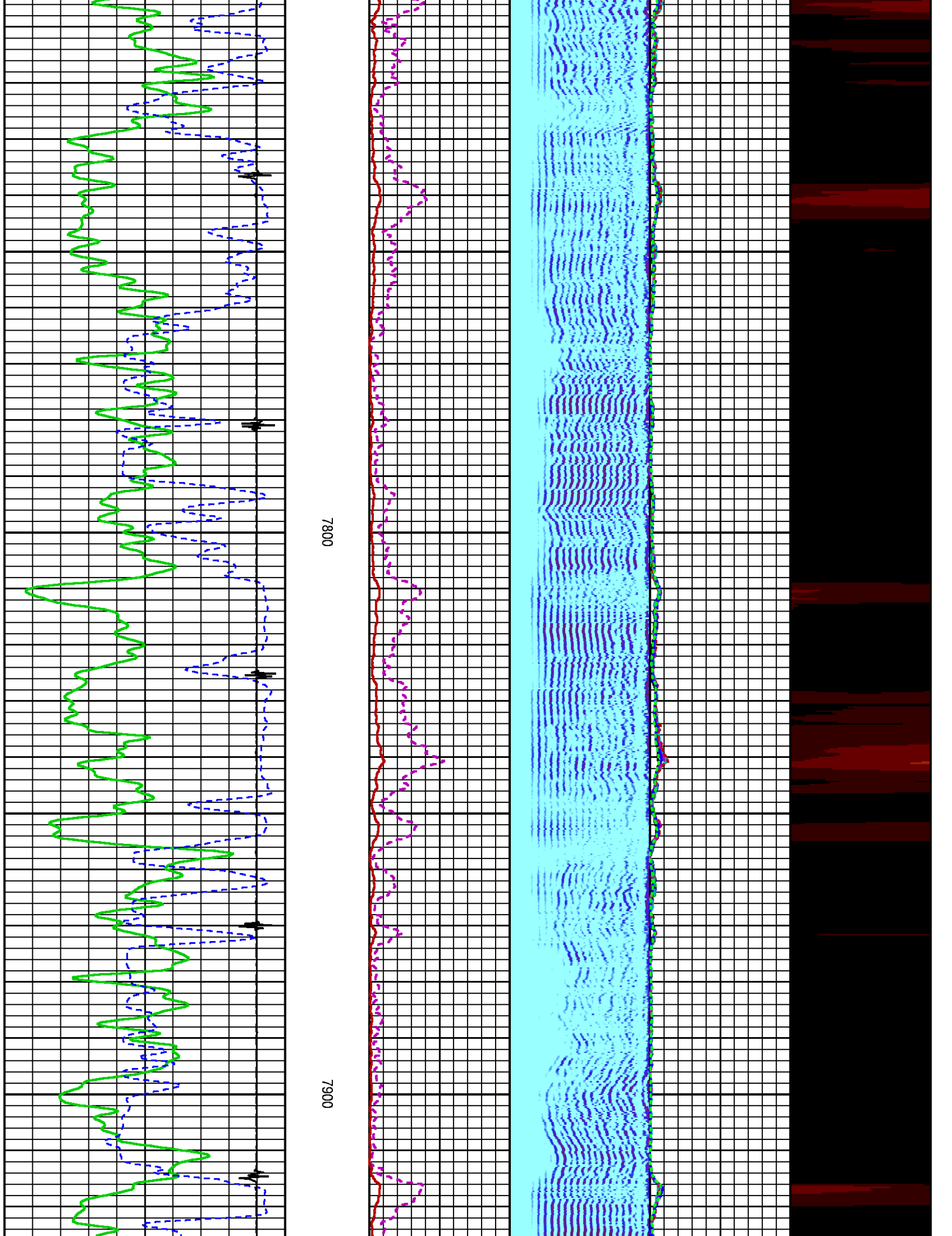


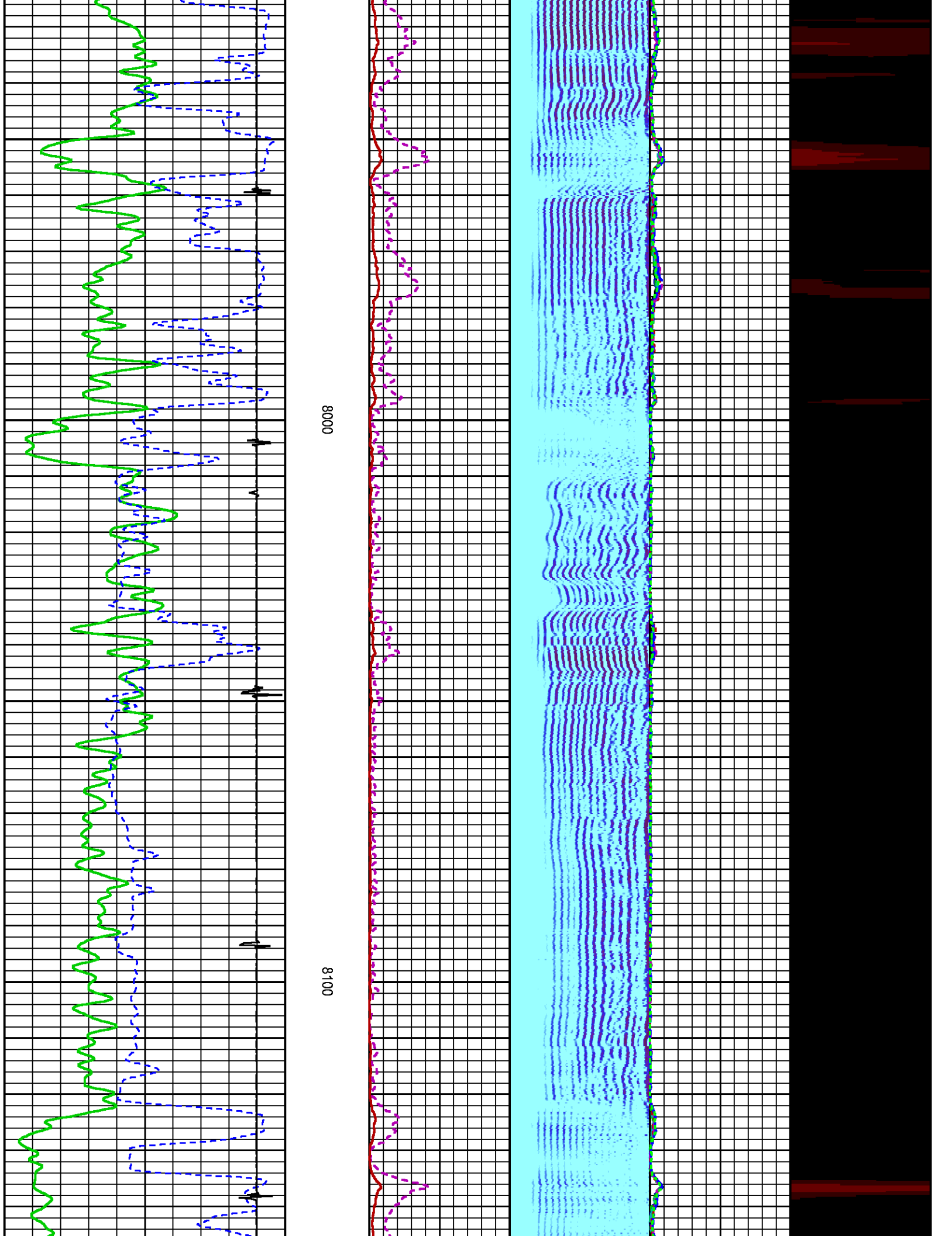
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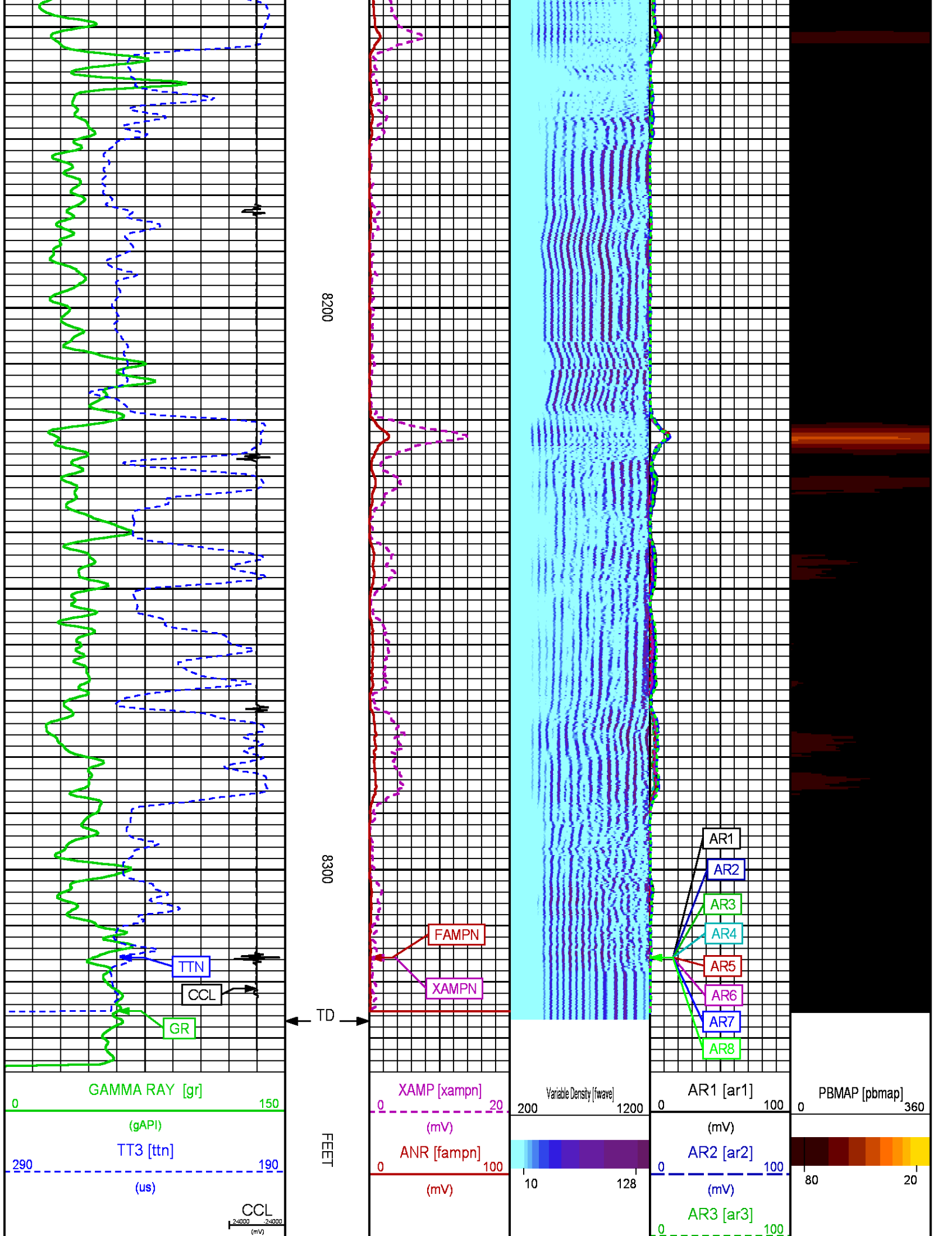
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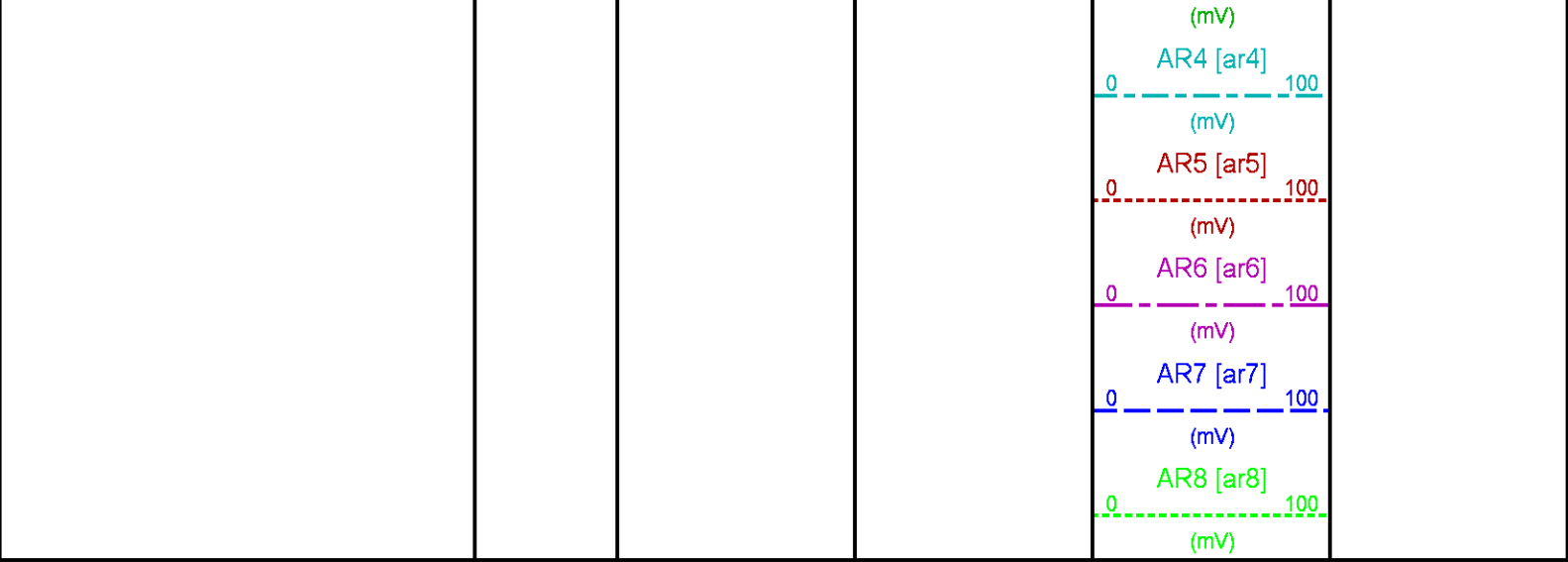
7700











REPEAT PASS 0 PSI

ECLIPS 7.0w PC-ECLIPS General Release Rel 7.0w Fri Jun 09 11:02:06 Central Daylight Time 2017
Patches: 1

Plotted: Fri Oct 27 18:28:10 2017

PARAMETER AND FILTER SUMMARY REPORT					
FILE: C:\dat1a\BRUTON_19_03Elp012g01.prm LOGGING MODE: DEPTH DIRECTION: UP TOP DEPTH: 8006.500 ft BOTTOM DEPTH: 8320.000 ft					
SYMMETRIC FILTER					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR	FILTER ()	medium (1)		TOP	BOTTOM
AMPLITUDE	FILTER ()	light (2a)		"	"
TRAVEL TIME	FILTER ()	medium (1)		"	"
RAL CCL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CCL FLOOR	CCL FLOOR	0.00		TOP	BOTTOM
ANALOG RAL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
AMPLITUDE WINDOW (NEAR)	AMP WINDOW START (fgp1*)	185	us	TOP	BOTTOM
	AMP WINDOW START (fgp2*)	185	us	"	"
	AMP WINDOW START (fgp3*)	185	us	"	"
	AMP WINDOW START (fgp4*)	185	us	"	"
	AMP WINDOW START (fgp5*)	185	us	"	"
	AMP WINDOW START (fgp6*)	185	us	"	"
	AMP WINDOW START (fgp7*)	185	us	"	"
	AMP WINDOW START (fgp8*)	185	us	"	"
	AMP WINDOW START (fgpn*)	185	us	"	"
	AMP WINDOW LENGTH	30	us	"	"
TRAVEL TIME WINDOW (NEAR)	TT WINDOW START (ttn*)	160	us	"	"
	TT WINDOW LENGTH	500	us	"	"
	FIRST BRK THRESHOLD (ttn*)	2	mV	"	"
RAL CASING PARAMETERS	PPT NEAR	200.391	us	"	"
RAL TOOL DELAY	TOOL DELAY (ctr1*)	60	us	"	"

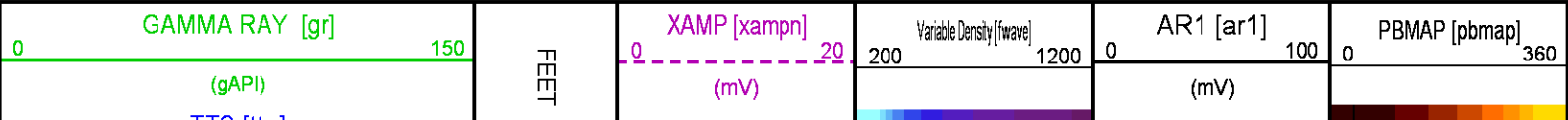
RAL TOOL DELAY	TOOL DELAY (str1*)	-69	us	"	"
	TOOL DELAY (str2*)	-69	us	"	"
	TOOL DELAY (str3*)	-69	us	"	"
	TOOL DELAY (str4*)	-69	us	"	"
	TOOL DELAY (str5*)	-69	us	"	"
	TOOL DELAY (str6*)	-69	us	"	"
	TOOL DELAY (str7*)	-69	us	"	"
	TOOL DELAY (str8*)	-69	us	"	"
	TOOL DELAY (strn*)	-69	us	"	"
BASLINE NOISE (NEAR)	NOISE WINDOW START	125	us	"	"
	NOISE WINDOW LENGTH	25	us	"	"

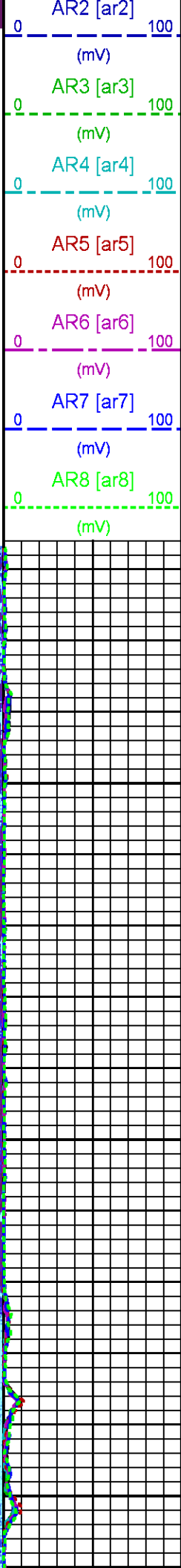
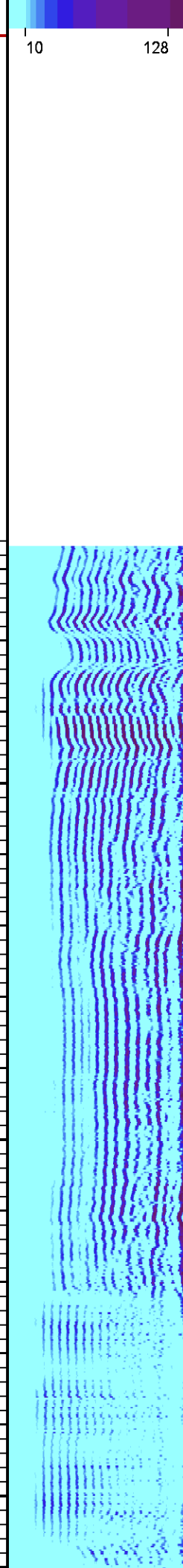
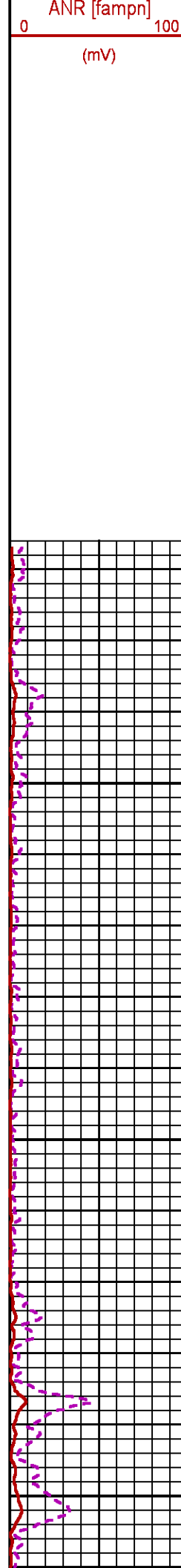
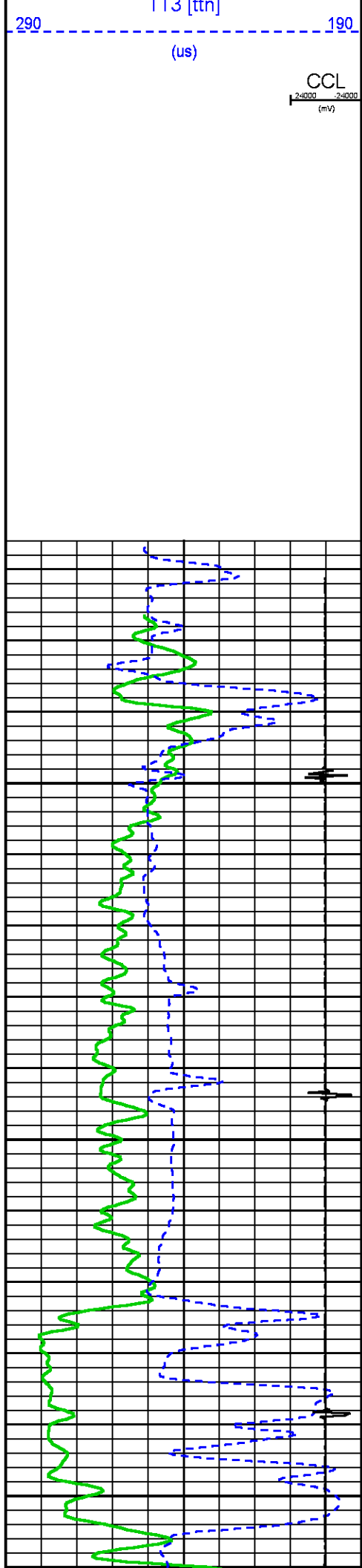
PERCENT BOND CEMENT MAP					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
RAL FREE PIPE AMPLITUDE	FREE AMP REC 1	80	mV	TOP	BOTTOM
	FREE AMP REC 2	80	mV	"	"
	FREE AMP REC 3	80	mV	"	"
	FREE AMP REC 4	80	mV	"	"
	FREE AMP REC 5	80	mV	"	"
	FREE AMP REC 6	80	mV	"	"
	FREE AMP REC 7	80	mV	"	"
	FREE AMP REC 8	80	mV	"	"
RAL FULL BOND AMPLITUDE	FULL BOND AMP REC 1	2	mV	"	"
	FULL BOND AMP REC 2	2	mV	"	"
	FULL BOND AMP REC 3	2	mV	"	"
	FULL BOND AMP REC 4	2	mV	"	"
	FULL BOND AMP REC 5	2	mV	"	"
	FULL BOND AMP REC 6	2	mV	"	"
	FULL BOND AMP REC 7	2	mV	"	"
	FULL BOND AMP REC 8	2	mV	"	"

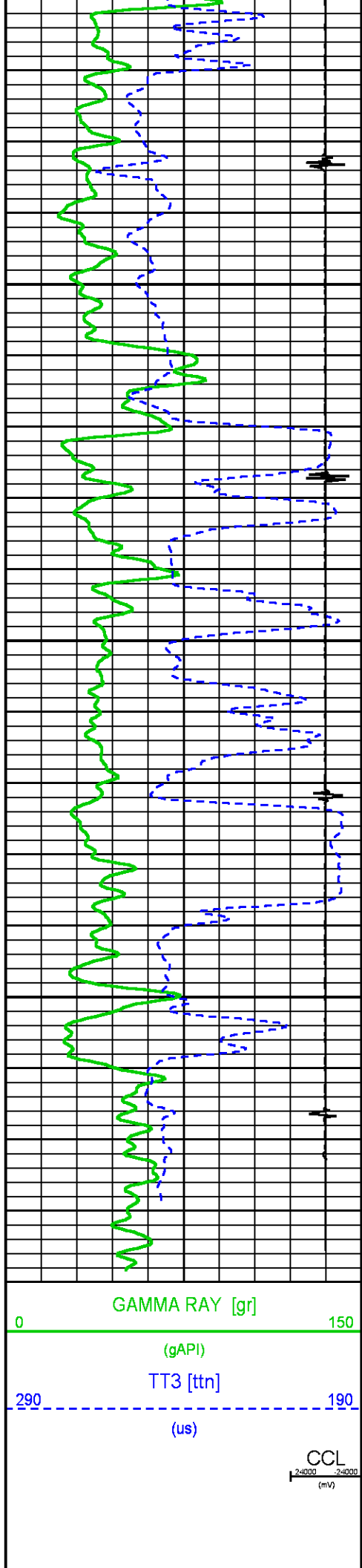
CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:AR1	N/A	FIXED GATE AMPLITUDE T-R1
F1:AR2	N/A	FIXED GATE AMPLITUDE T-R2
F1:AR3	N/A	FIXED GATE AMPLITUDE T-R3
F1:AR4	N/A	FIXED GATE AMPLITUDE T-R4
F1:AR5	N/A	FIXED GATE AMPLITUDE T-R5
F1:AR6	N/A	FIXED GATE AMPLITUDE T-R6
F1:AR7	N/A	FIXED GATE AMPLITUDE T-R7
F1:AR8	N/A	FIXED GATE AMPLITUDE T-R8
F1:CCL	N/A	CASING COLLAR LOCATOR
F1:FAMPN	N/A	FIXED GATE AMPLITUDE NEAR RECEIVER
F1:FWAVE	N/A	FAR WAVE FORM
F1:GR	N/A	GAMMA RAY
F1:PBMAP	N/A	PERCENT BOND CEMENT MAP
F1:TTN	N/A	TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER
F1:XAMPN	N/A	FIXED GATE AMPLITUDE NEAR RECEIVER TIMES FIVE

CURVE MEASURE POINT OFFSET					
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
AR1	-11.25	AR5	-11.25	CCL	-5.75
AR2	-11.25	AR6	-11.25	FAMPN	-11.25
AR3	-11.25	AR7	-11.25	GR	-1.75
AR4	-11.25	AR8	-11.25	TTN	-11.25
				XAMPN	-11.25

Presentation	: BHI78FR4H2:C:\dat1a\BRUTON_19_03E\BRUTON_19_03E_RAL_RPT.fvpdf [5"/100' Scale]
Plot Interval	: 7995.75 - 8319 Feet
Data File 1	: F1 : BHI78FR4H2:C:\dat1a\BRUTON_19_03E\BRUTON_19_03E_RAL_RPT.xtf
Created On	: N/A
Company	: LARAMIE ENERGY II LLC
Well	: BRUTON 19-03E
Field	: VEGA
File Interval	: 7994.75 - 8320.25 Feet
OCT	: p012g



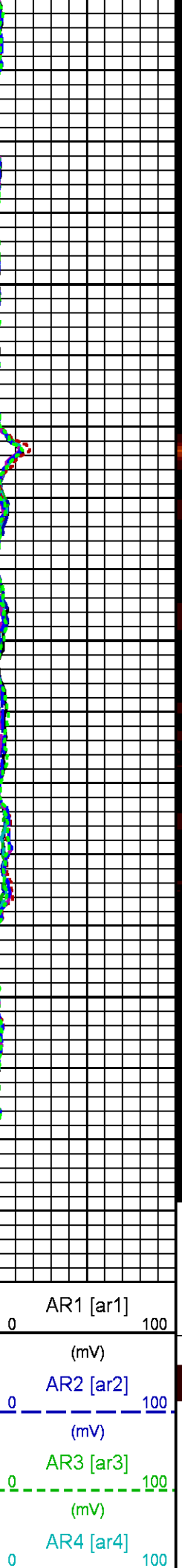
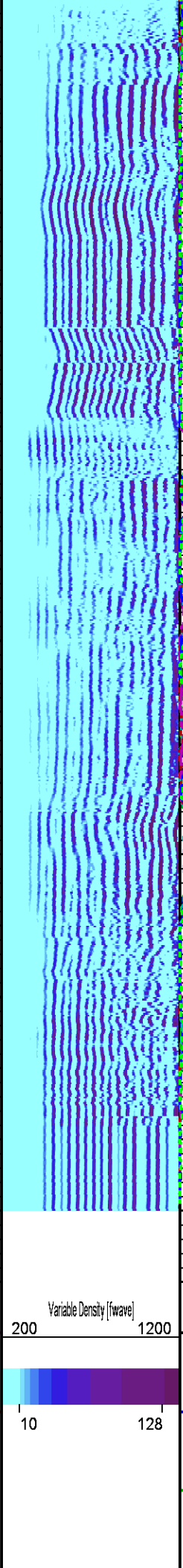
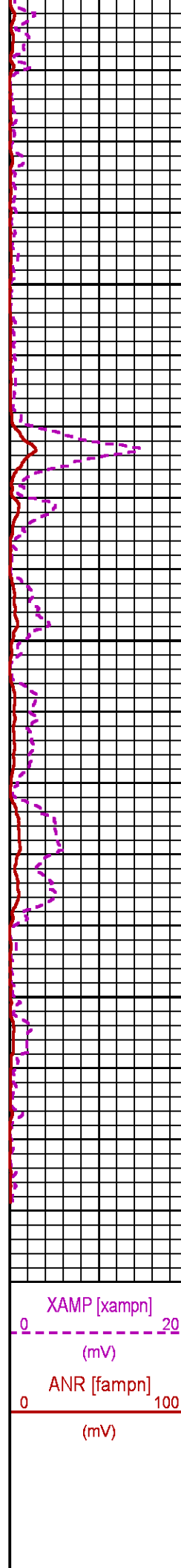


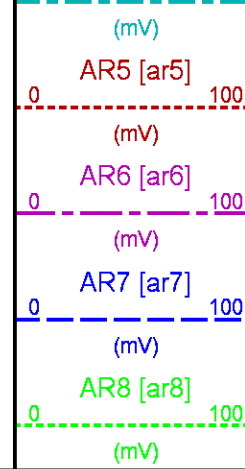


8200

8300

FEET





CALIBRATION / VERIFICATION SUMMARY

Source File: C:\dat1a\BRUTON_19_03Ep012g.tp1

RAL PRIMARY CALIBRATION SUMMARY

TOOL #: 1426XA 10404539

DATE/TIME PERFORMED: Fri Oct 27 16:50:17 2017

UNIT #: CHANGE ME

	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)	-0.28	-0.28	-0.33	-0.30	-0.29	-0.51	-0.31	-0.25	-0.33	-0.48	-0.01
AMP FLUID (mV)	94	94	93	92	92	95	94	94	94	129	91
TT (us)	200	201	201	200	200	199	199	199	201	316	202
M FACTOR	1.06	1.07	1.07	1.08	1.08	1.05	1.06	1.06	1.06	1.16	1.09

RAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 1426XA 10404539

DATE/TIME PERFORMED: Fri Oct 27 16:51:12 2017

DAYS SINCE CAL: 0

UNIT #: CHANGE ME

CABLE #: HL6670 6670SL

NEAR (mV)	R1 (mV)	R2 (mV)	R3 (mV)	R4 (mV)	R5 (mV)	R6 (mV)	R7 (mV)	R8 (mV)	FAR (mV)	CAL (mV)
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ZERO	-0.21	-0.33	-0.23	-0.34	-0.33	-0.51	-0.28	-0.36	-0.32	-0.34	-0.01
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AMP AIR	0.65	0.62	0.73	0.71	0.65	0.67	0.80	0.88	0.61	0.75	99.91
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SHOP M FACTOR	SHOP A FACTOR	WIRELINE FACTOR
1.09	0.00	1.00

INSTRUMENT CONFIGURATION

Source File: C:\dat1a\BRUTON_19_03\VRAL-tdg.meta

CABLEHEAD

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

RADIAL BOND TOOL

Diameter : 2.75"
Length : 11.17'
Weight : 126 lbs
Series : 1426XA
Mnemonic : RAL
Measure Point: 4.21': NEAR RCVR
Measure Point: 3.25': FAR RCVR

RAL GR/TEMP/CCL/CHV 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



20.38'

NEAR RCVR 11.17'

FAR RCVR 10.21'

CCL 5.79'

GR 1.67'

TEMP 0.17'

TOTAL LENGTH: 20.38'
TOTAL WEIGHT: 235 lbs
MAX DIAMETER: 0'4.00"



COMPANY LARAMIE ENERGY

WELL BRUTON 19-03E

FIELD VEGA

COUNTY MESA STATE COLORADO

FILE NO:

API NO:

05077104220000

LOCATION:

SHL: LAT:39.262850N;LONG:107.815110W

BHL: LAT:39.267819N;LONG:107.806885W

SEC 19 TWP 9S RGE 93W

ELEVATIONS:

KB 7286 FT

DF 7286 FT

GL 7262 FT

DATE 27-OCT-2017

