



FILE NO: CH100239	COMPANY WELL FIELD COUNTY	LARAMIE ENERGY PICEANCE FEDERAL 28-02M VEGA MESA STATE COLORADO
API NO: 05077102390000		
Ver. 4.01 28 9S 93W 28-05 PAD PATTERSON 306	LOCATION: SHL: LAT 39.251061 LONG -107.779508 BHL: LAT 39.254282 LONG -107.774519 SEC 28 TWP 9S RGE 93W	OTHER SERVICES RPM
PERMANENT DATUM LOG MEASURED FROM DRILL. MEAS. FROM	GL ELEVATION 7556 FT KB 22 FT ABOVE P.D. KB	ELEVATIONS: KB 7578 FT DF GL 7556 FT

DATE		22-Oct-2015			
RUN	TRIP	1	1		
SERVICE ORDER		US100239			
DEPTH DRILLER		8173 FT			
DEPTH LOGGER		8118 FT			
BOTTOM LOGGED INTERVAL		8108 FT			
TOP LOGGED INTERVAL		22 FT			
TIME STARTED		8:00			
TIME FINISHED		11:30			
OPERATOR RIG TIME		3.5 HOURS			
TYPE OF FLUID IN HOLE		WATER			
FLUID DENSITY		NA			
FLUID SALINITY		NA			
FLUID LEVEL		48 FT			
LOGGED CEMENT TOP		NA			
WELLHEAD PRESSURE		0 PSI			
MAXIMUM HOLE DEVIATION		NA			
NOMINAL LOGGING SPEED		100 F/MIN			
MAX. RECORDED TEMP.		235 DEGF			
REFERENCE LOG		NA			
REFERENCE LOG DATE		NA			
EQUIP. NO.	LOCATION	HL-6670	GRAND JCT.		
RECORDED BY		T. NEWELL			
WITNESSED BY		JOHN GRUBICH			

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
7.875 IN	22 FT	8173 FT

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
4.5 IN	11.6 LB/F		22 FT	8173 FT

REMARKS
RUN 1 TRIP 1: This is the first log on this well
Logged with zero PSI at the wellhead
BHT = 235 degF
SJ = 6261' - 6282'
SJ = 7361' - 7383'
Thank you for choosing Baker Hughes ... The best choice!

EQUIPMENT DATA				
RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.
1	1	CD	1102361	12121102

1	1	CBL	1426XA	10124106	CENTRALIZED
1	1	GR/CCL	1355XA	11871510	CENTRALIZED

MAIN PRESENTATION 0 PSI

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

Updates: 1 Patches: 6

Plotted: Thu Oct 22 13:19:17 2015

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH100239/n012g02.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 23.500 ft BOTTOM DEPTH: 8131.003 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 (fgp1*)	187	us	TOP	BOTTOM
	AMP WINDOW START (fgp2*)	187	us	"	"
	AMP WINDOW START (fgp3*)	187	us	"	"
	AMP WINDOW START (fgp4*)	187	us	"	"
	AMP WINDOW START (fgp5*)	187	us	"	"
	AMP WINDOW START (fgp6*)	187	us	"	"
	AMP WINDOW START (fgp7*)	187	us	"	"
	AMP WINDOW START (fgp8*)	187	us	"	"
	AMP WINDOW START (fgpn*)	187	us	"	"
TRAVEL TIME WINDOW (NEAR)	AMP WINDOW LENGTH	25	us	"	"
	TT WINDOW START (ttn*)	176	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 (str1*)	-67	us	"	"
	TOOL DELAY (str2*)	-67	us	"	"
	TOOL DELAY (str3*)	-67	us	"	"
	TOOL DELAY (str4*)	-67	us	"	"
	TOOL DELAY (str5*)	-67	us	"	"
	TOOL DELAY (str6*)	-67	us	"	"
	TOOL DELAY (str7*)	-67	us	"	"
	TOOL DELAY (str8*)	-67	us	"	"
	TOOL DELAY (strn*)	-67	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	"	"

CURVE DESCRIPTION REPORT

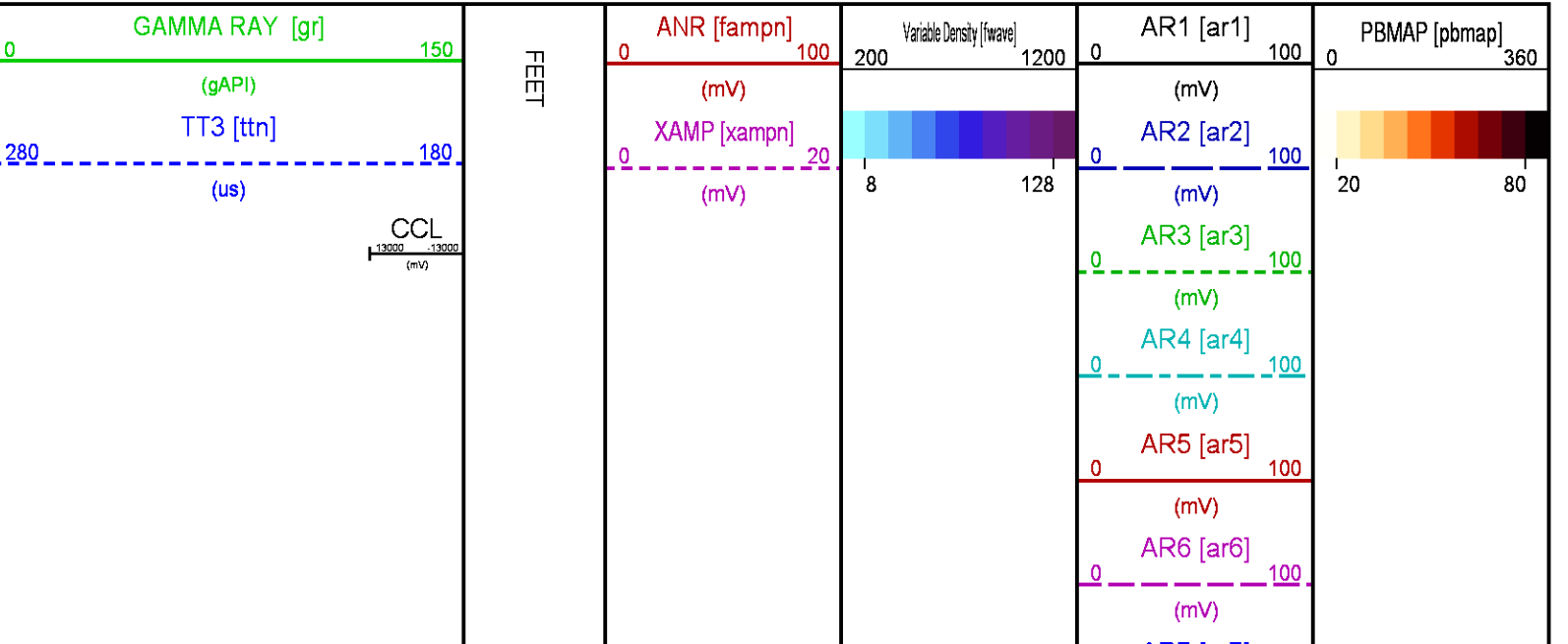
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:AR1	Oct 22 09:01:04 2015	FIXED GATE AMPLITUDE T-R1
F1:AR2	Oct 22 09:01:04 2015	FIXED GATE AMPLITUDE T-R2
F1:AR3	Oct 22 09:01:04 2015	FIXED GATE AMPLITUDE T-R3
F1:AR4	Oct 22 09:01:04 2015	FIXED GATE AMPLITUDE T-R4
F1:AR5	Oct 22 09:01:04 2015	FIXED GATE AMPLITUDE T-R5
F1:AR6	Oct 22 09:01:04 2015	FIXED GATE AMPLITUDE T-R6
F1:AR7	Oct 22 09:01:04 2015	FIXED GATE AMPLITUDE T-R7
F1:AR8	Oct 22 09:01:04 2015	FIXED GATE AMPLITUDE T-R8
F1:CCL	Oct 22 09:01:04 2015	CASING COLLAR LOCATOR
F1:FAMPN	Oct 22 09:01:04 2015	FIXED GATE AMPLITUDE NEAR RECEIVER
F1:FWAVE	Oct 22 09:01:04 2015	FAR WAVE FORM
F1:GR	Oct 22 09:01:04 2015	GAMMA RAY
F1:PBMAP	Oct 22 09:01:04 2015	PERCENT BOND CEMENT MAP
F1:TTN	Oct 22 09:01:04 2015	TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER
F1:XAMPN	Oct 22 09:01:04 2015	FIXED GATE AMPLITUDE NEAR RECEIVER TIMES FIVE

CURVE MEASURE POINT OFFSET

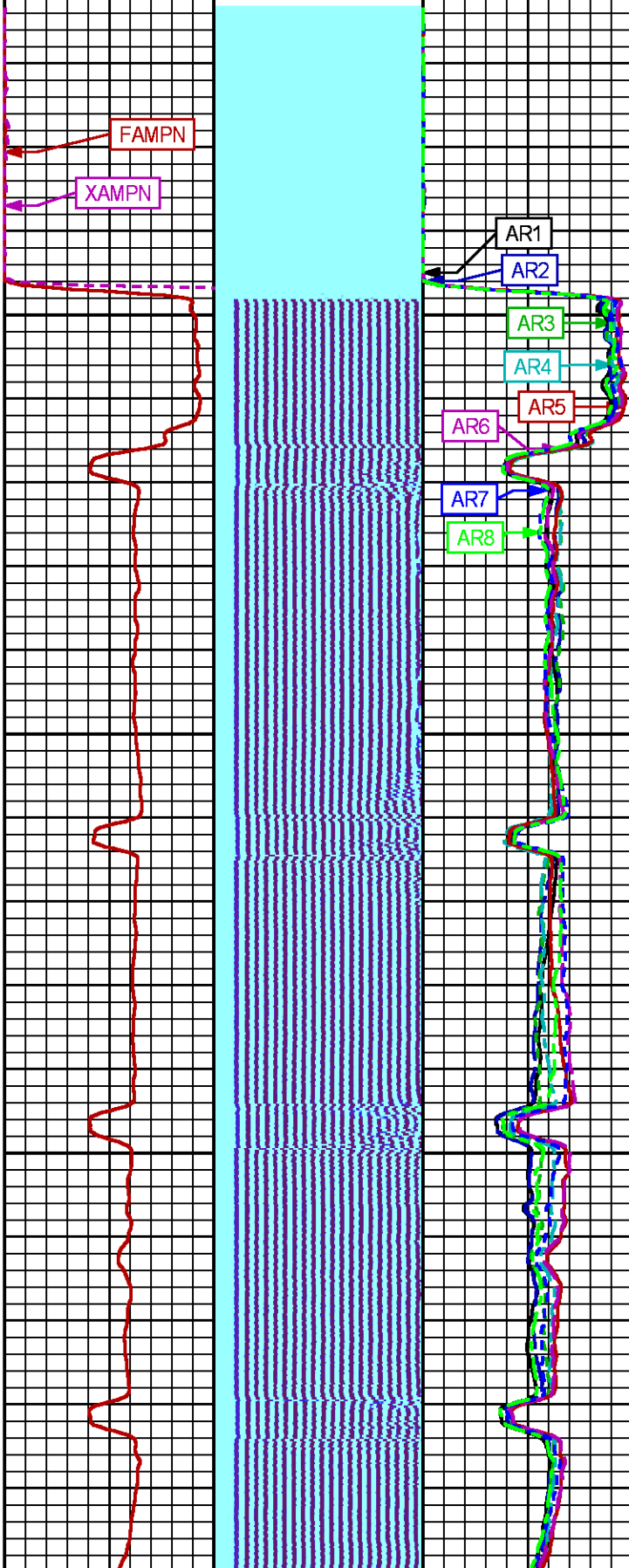
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
AR1	11.25	AR5	11.25	CCL	5.75	XAMPN	11.25
AR2	11.25	AR6	11.25	FAMPN	11.25		
AR3	11.25	AR7	11.25	GR	1.75		
AR4	11.25	AR8	11.25	TTN	11.25		

Presentation : HL6670:/dat1a/CH100239/2M_CBL_MAIN.fvpdf [5"/100' Scale]
Plot Interval : 0 - 8125 Feet

Data File 1 : F1 : HL6670:/dat1a/CH100239/02M_CBL_MAIN.xtf
Created On : Oct 22 09:01:04 2015
Company : LARAMIE ENERGY
Well : PICEANCE FEDERAL 28-02M
Field : VEGA
File Interval : 12.25 - 8130 Feet
OCT : n012g



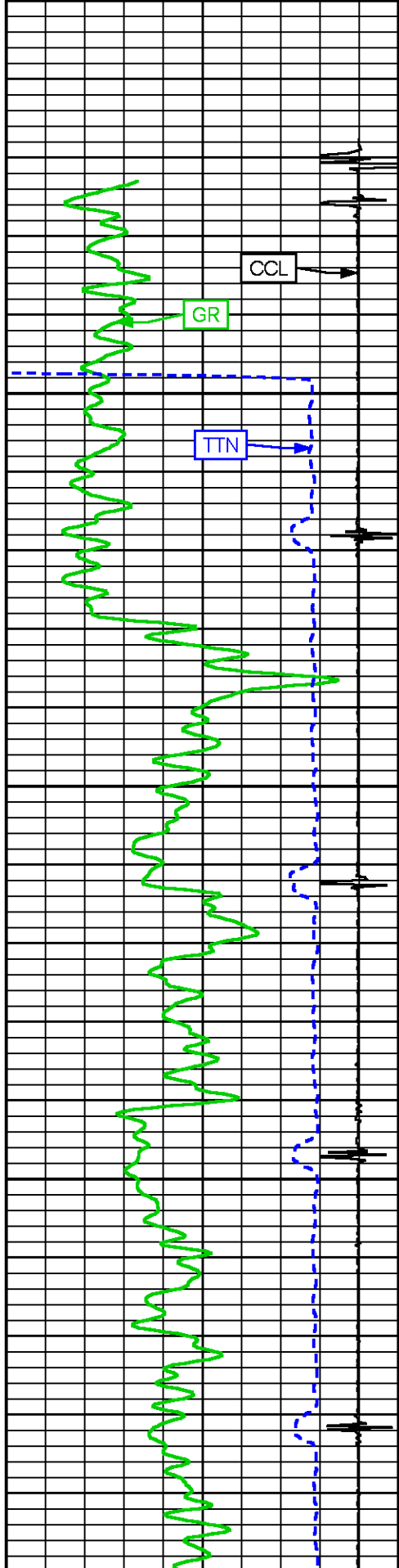
AR7 [ar7]
(mV)
AR8 [ar8]
(mV)

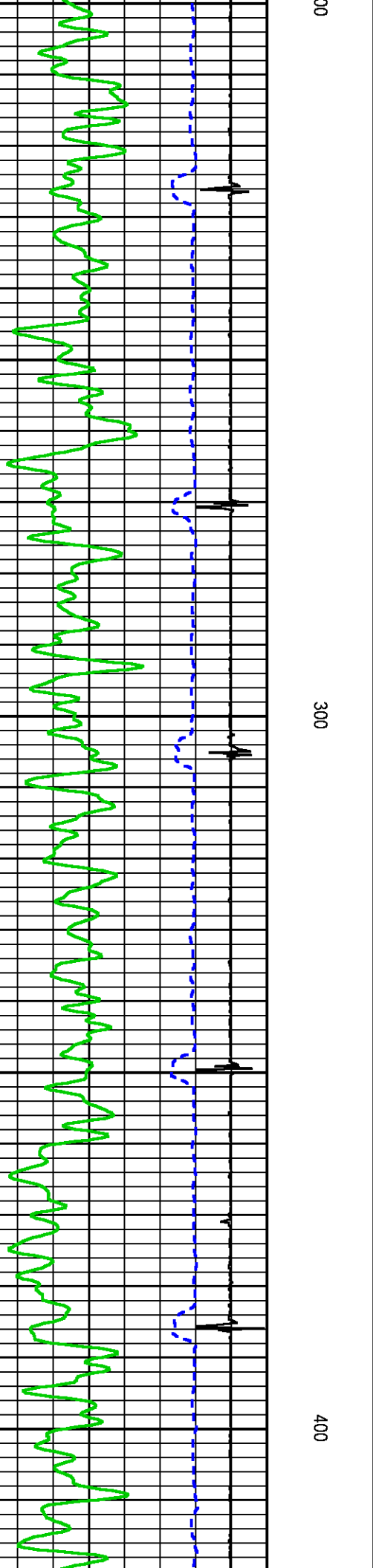
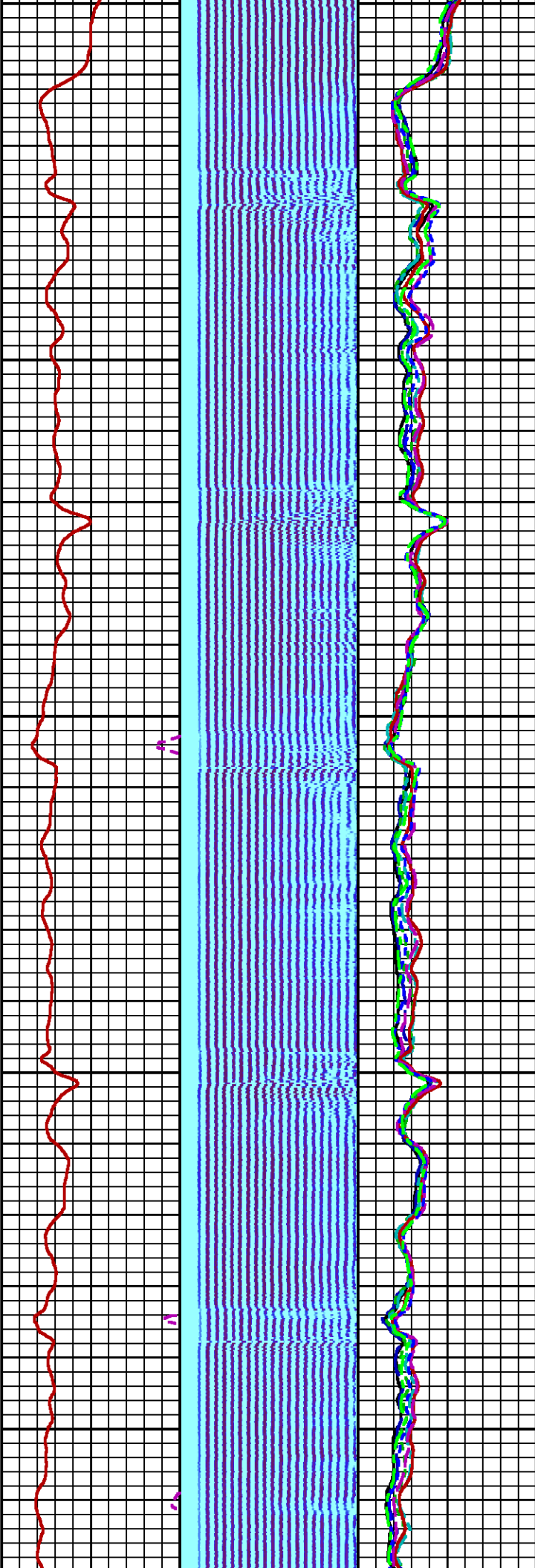
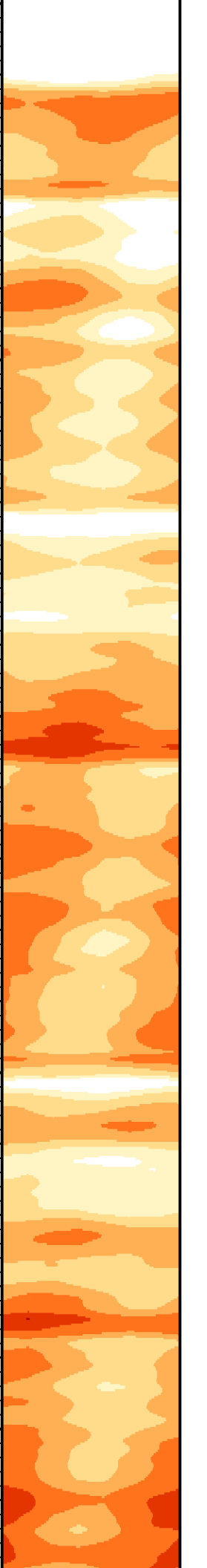


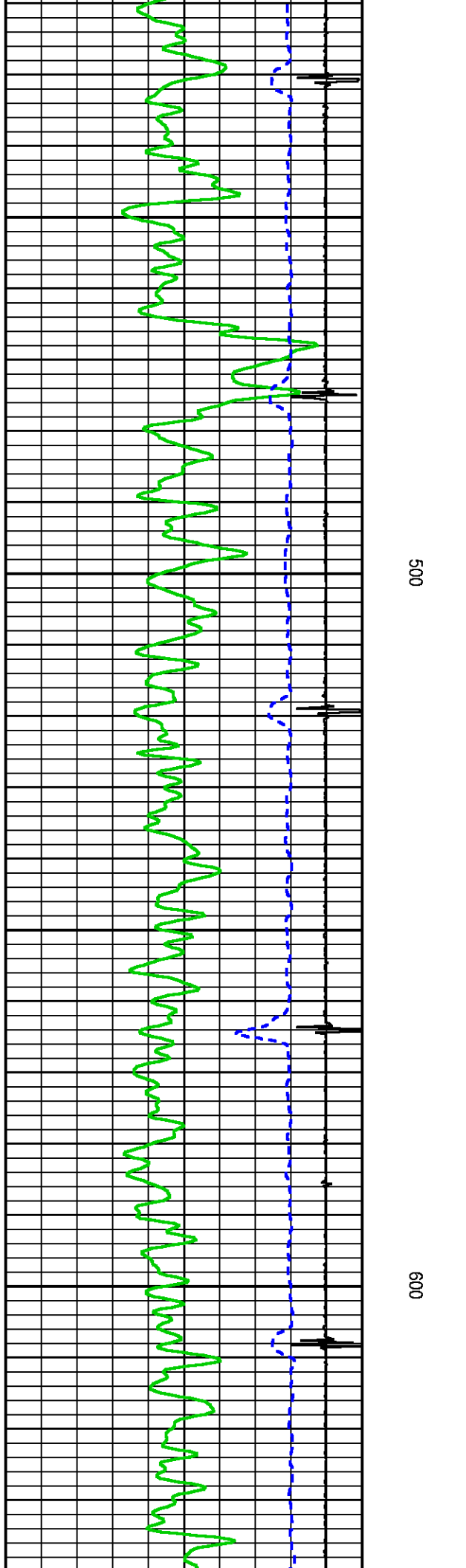
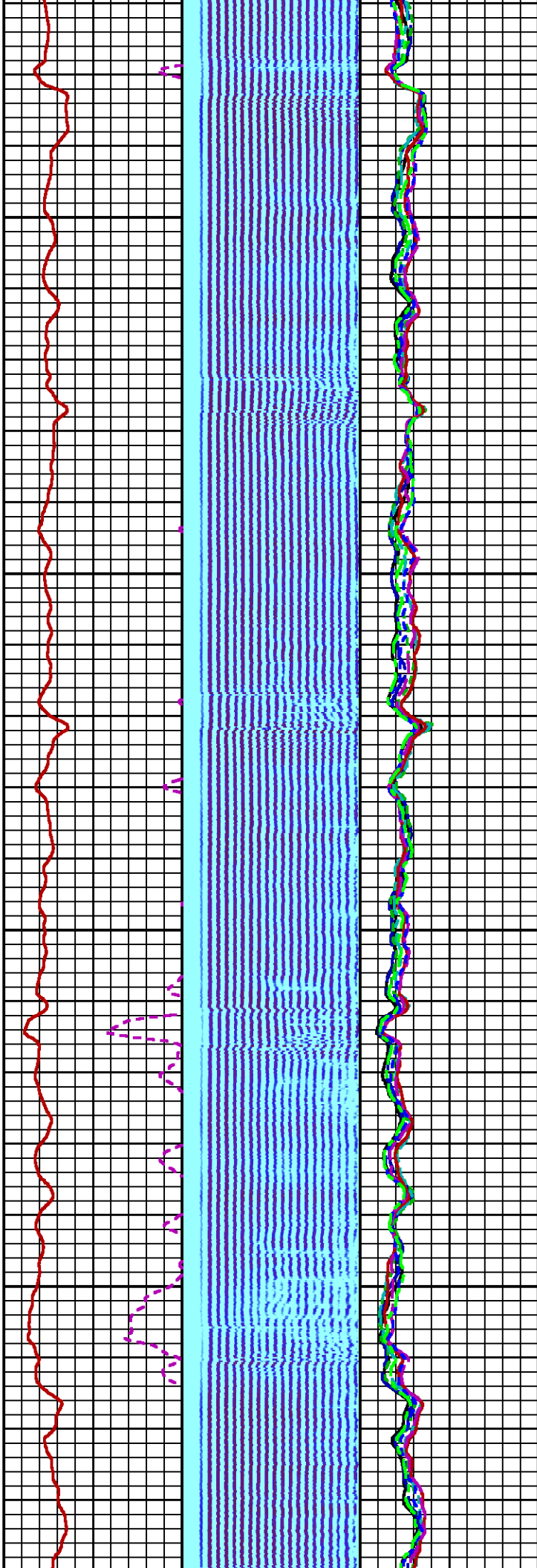
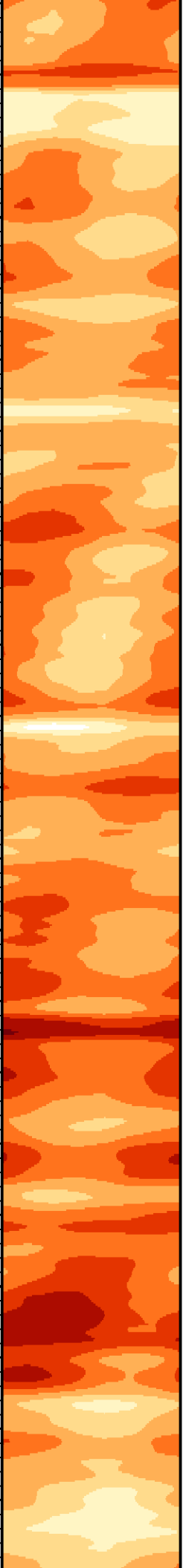
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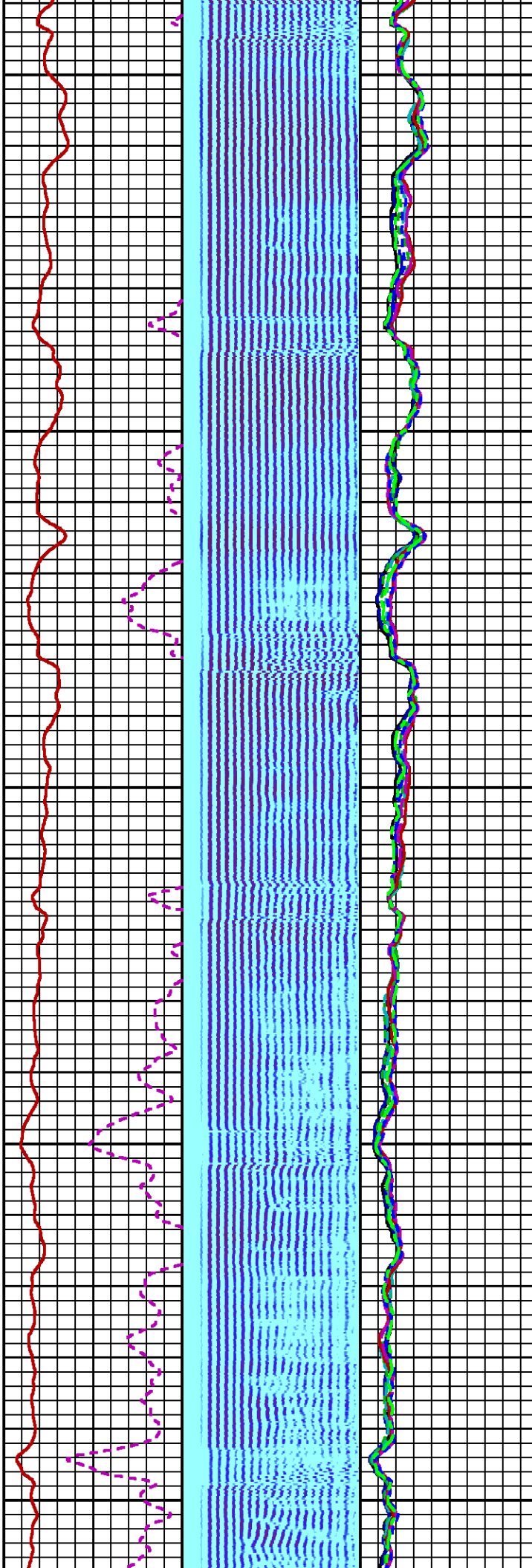
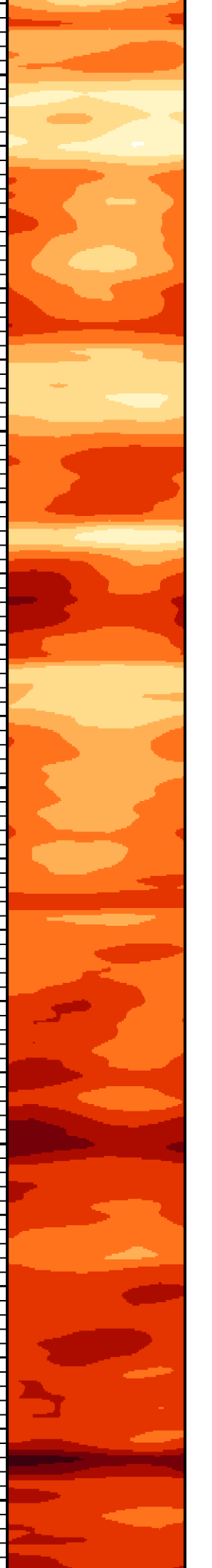
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200



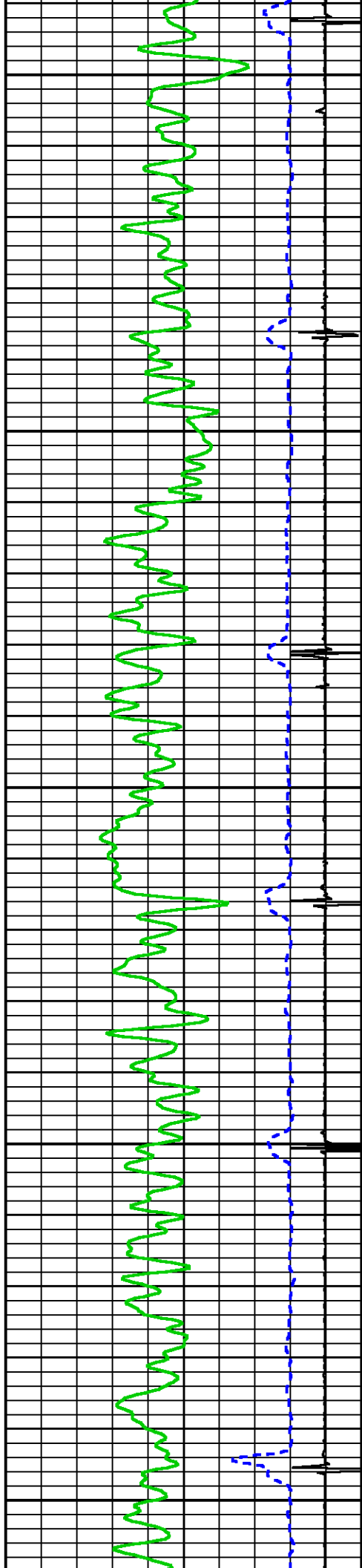


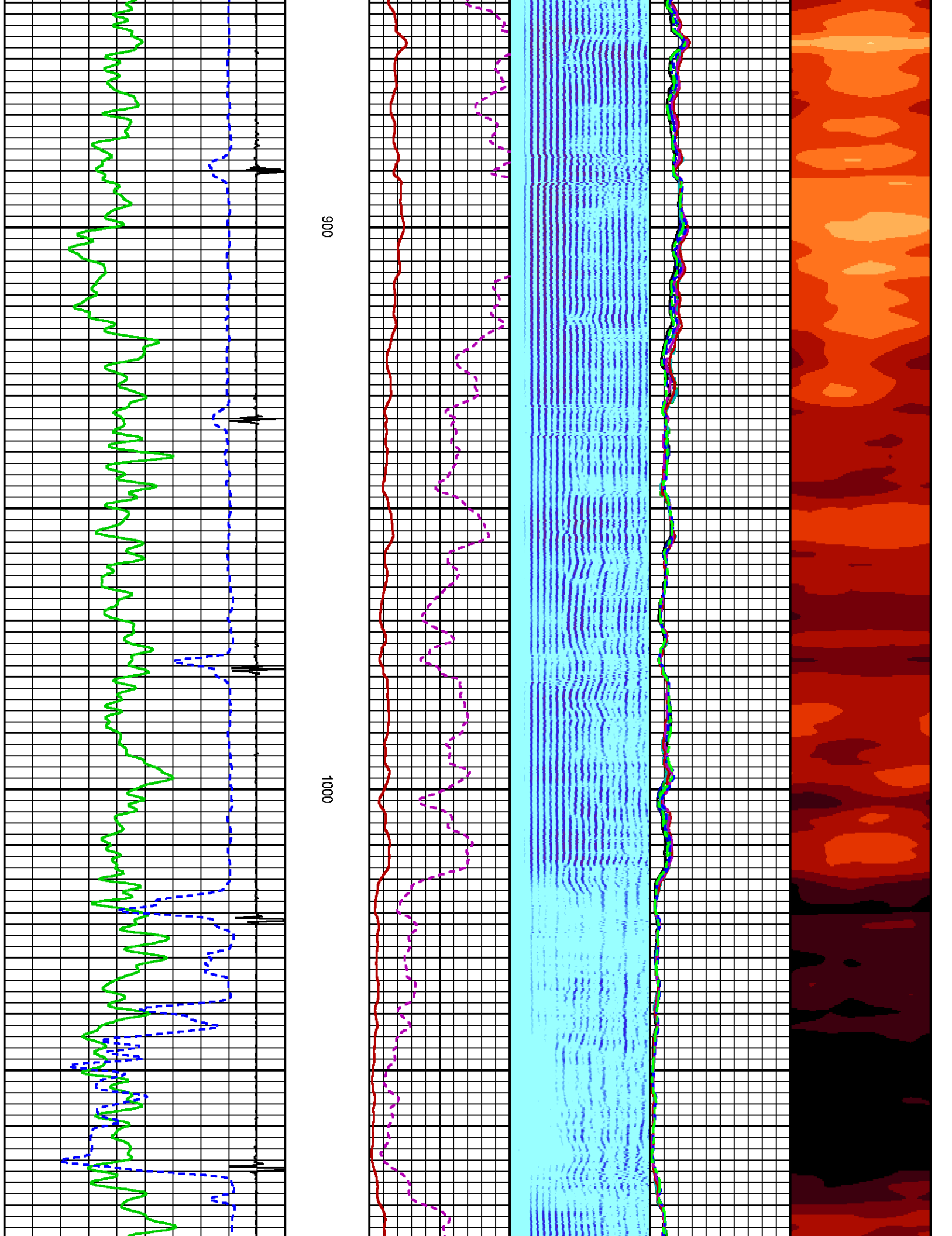


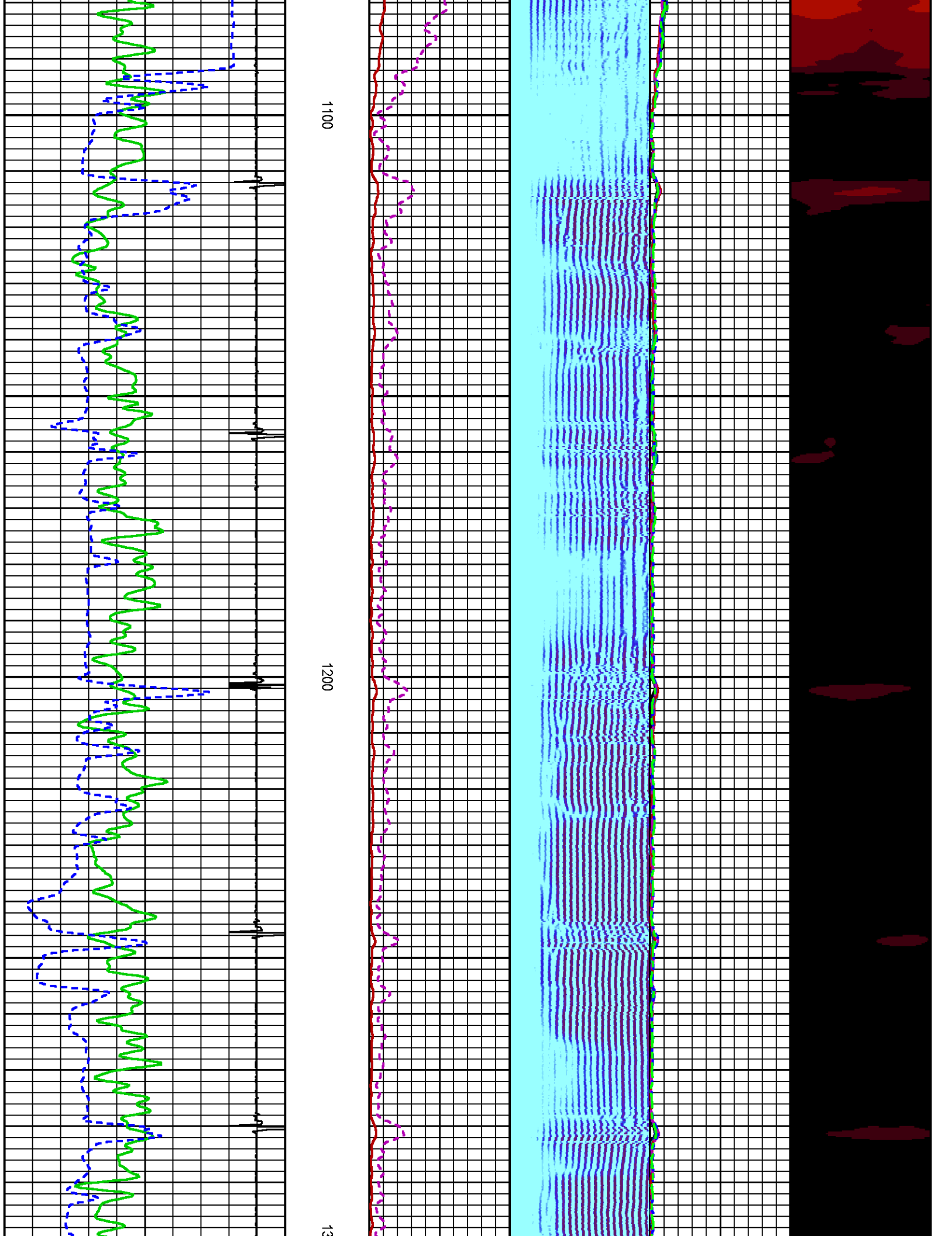


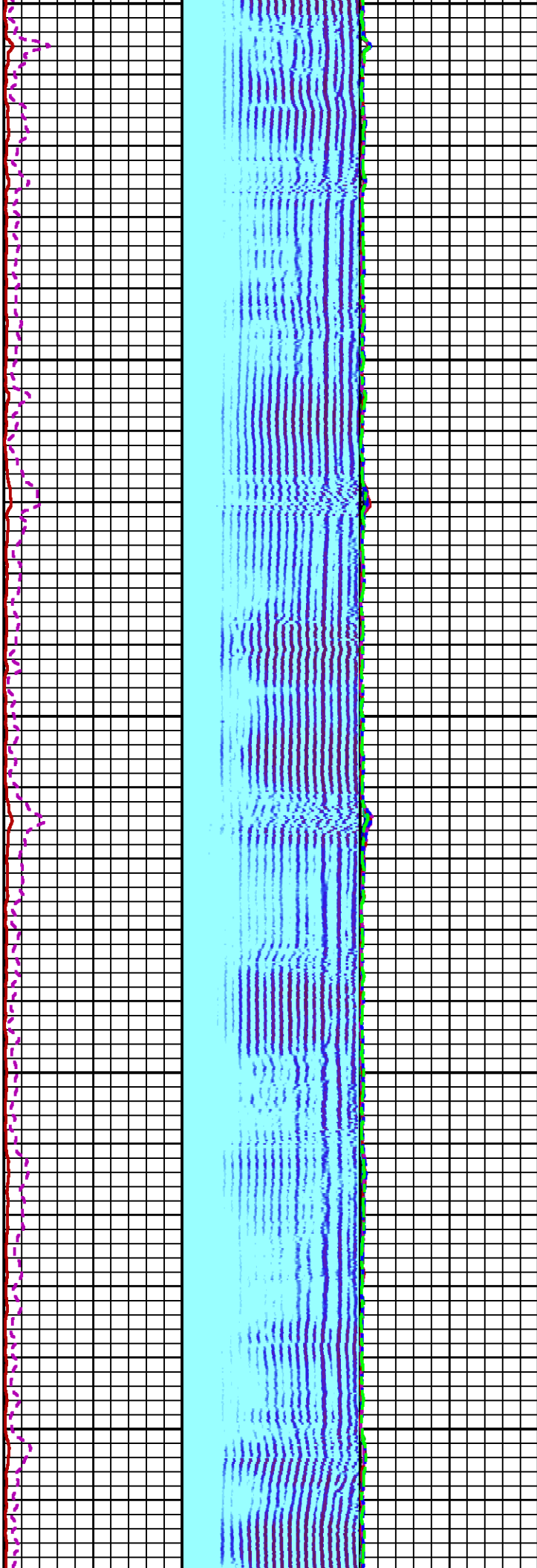
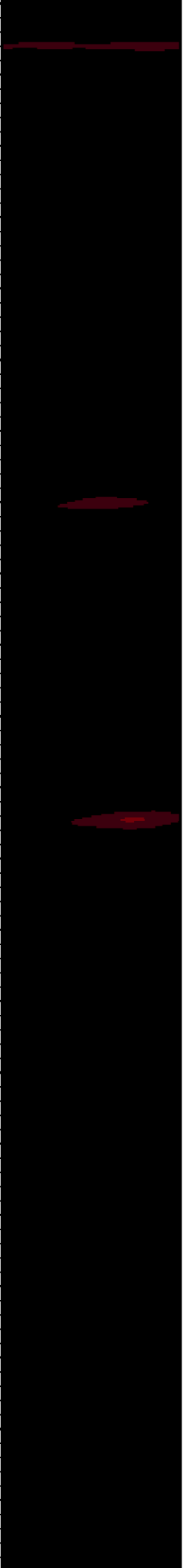
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800





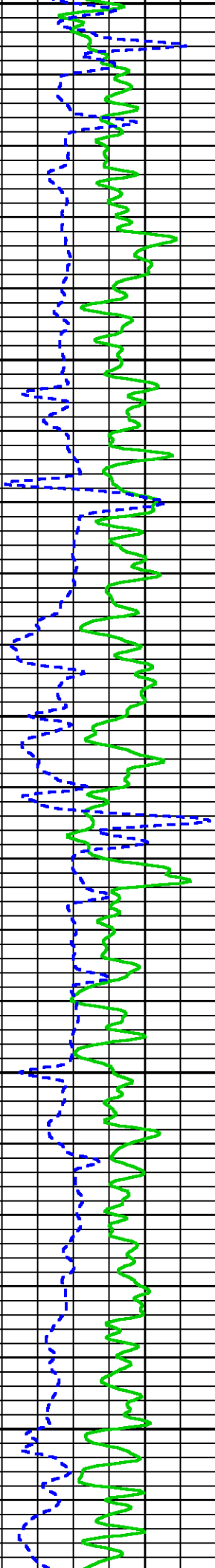
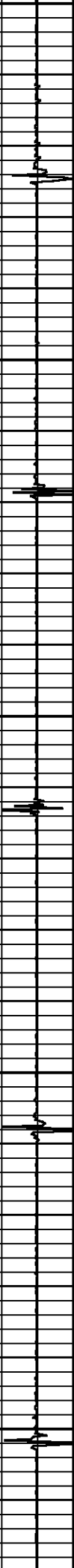


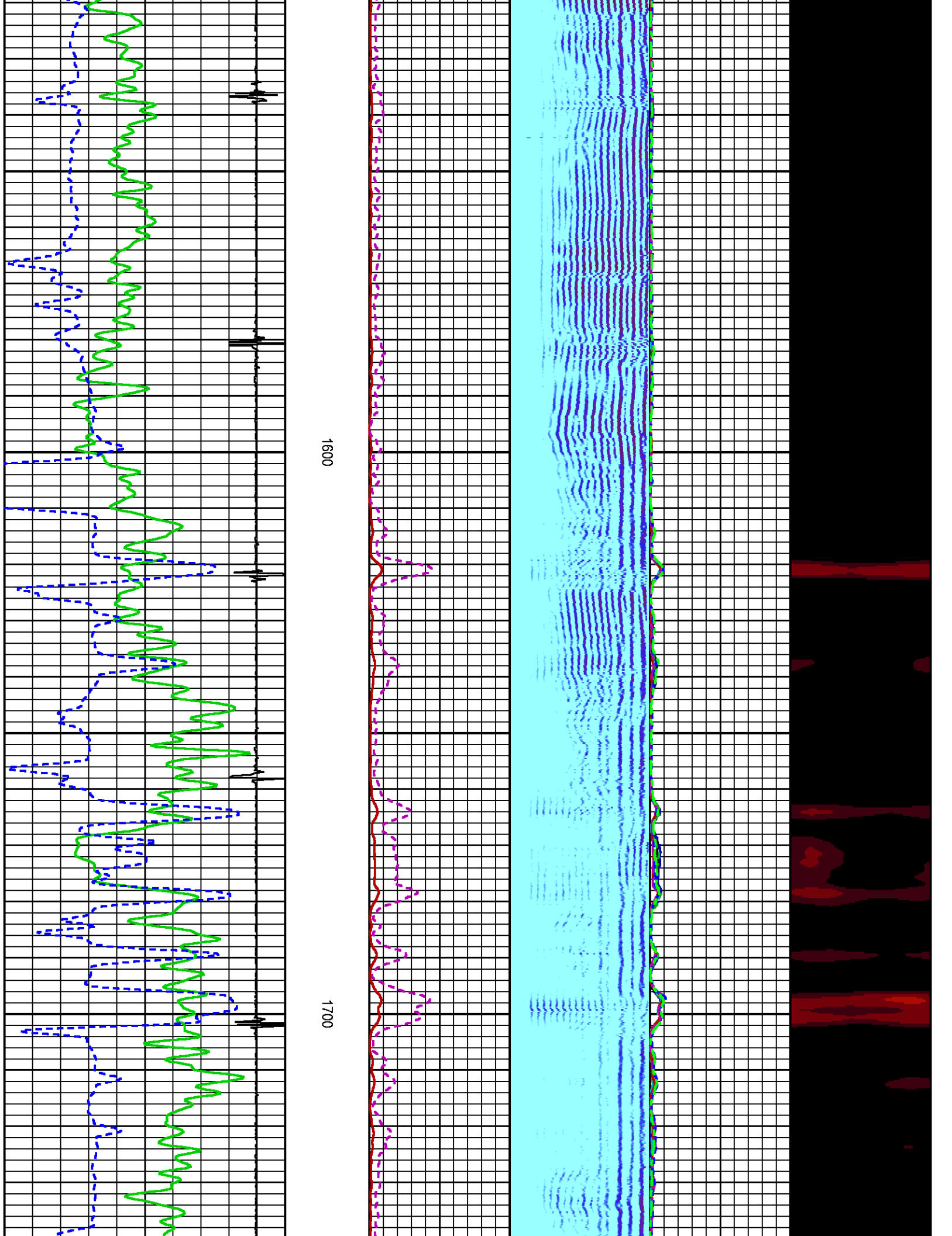


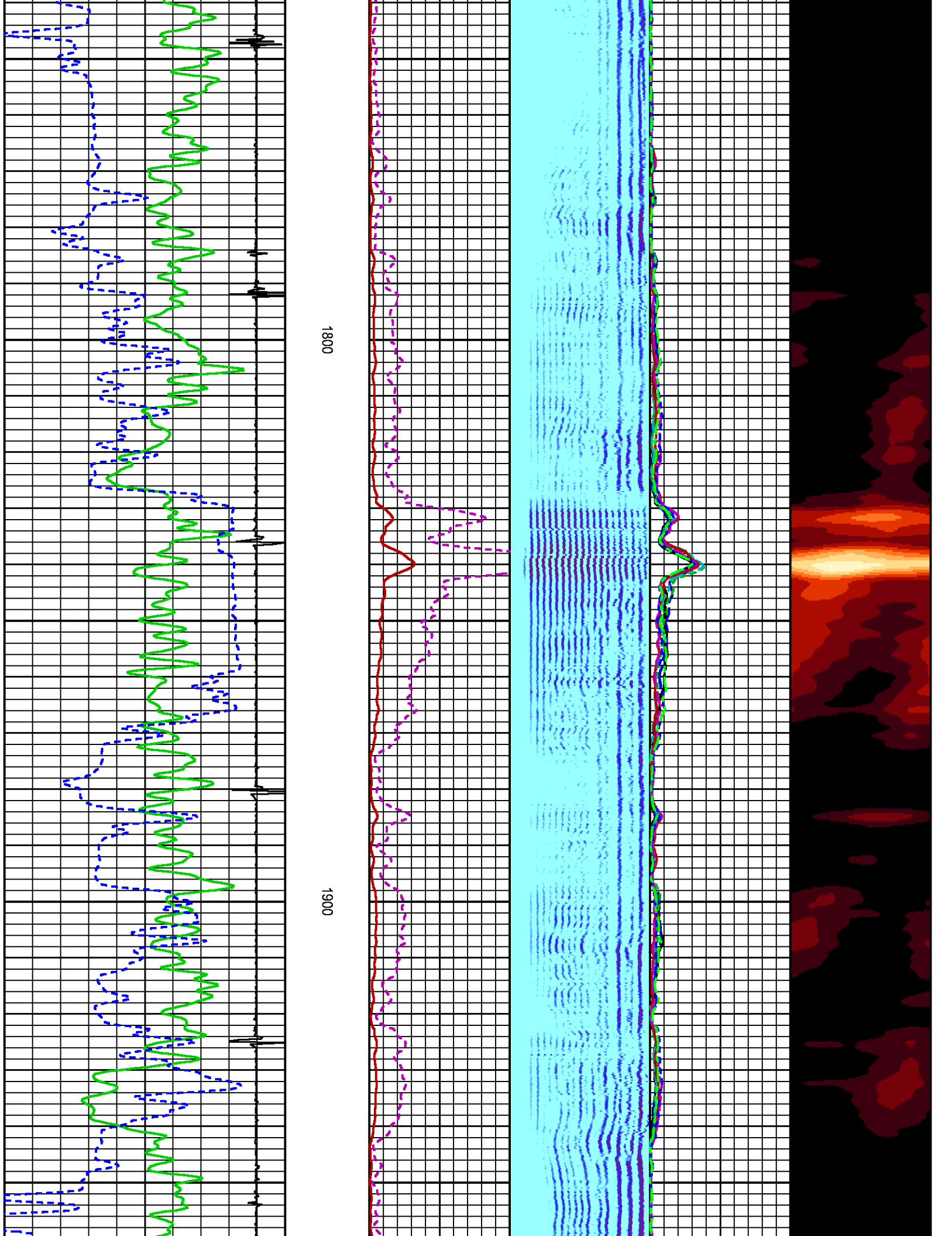
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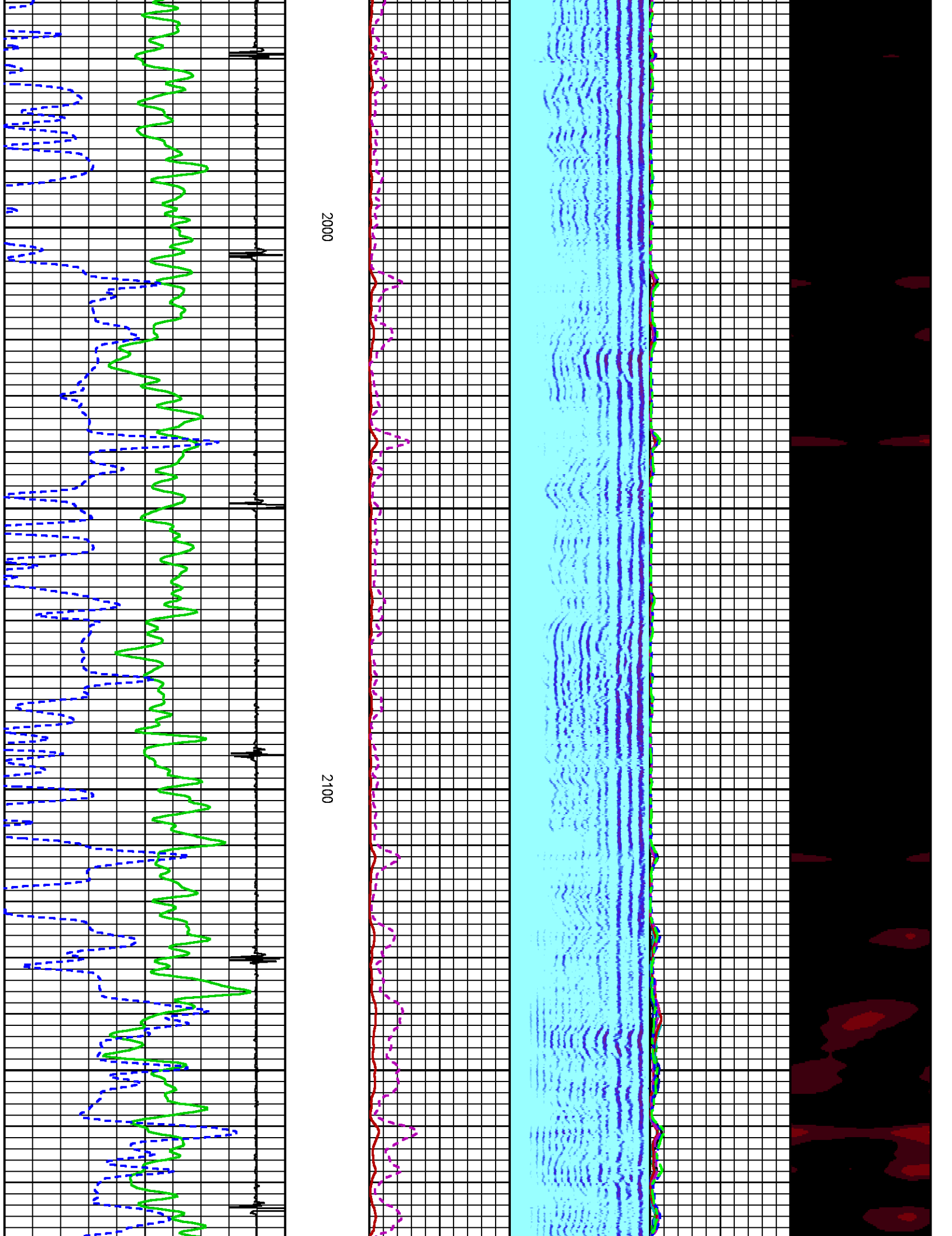
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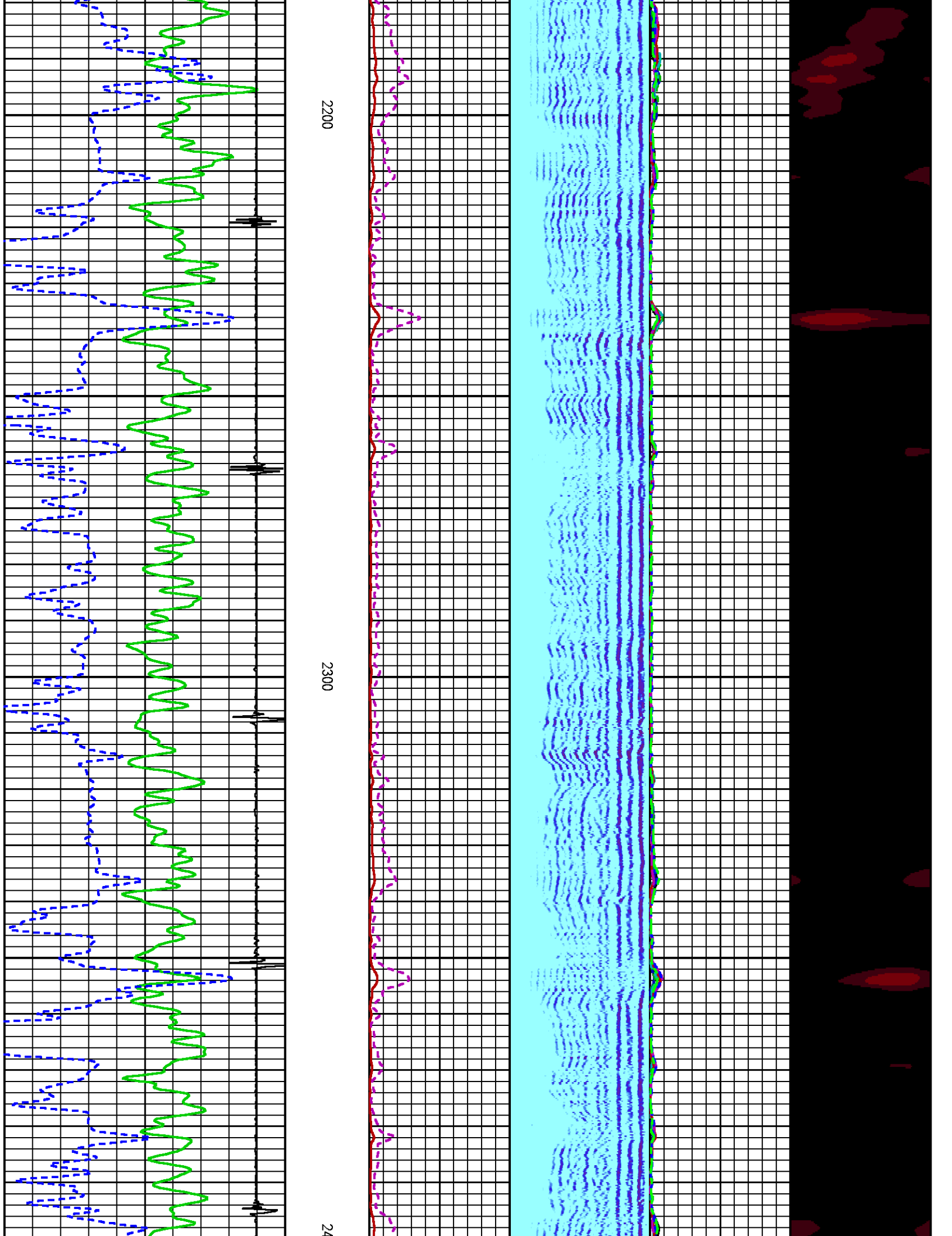
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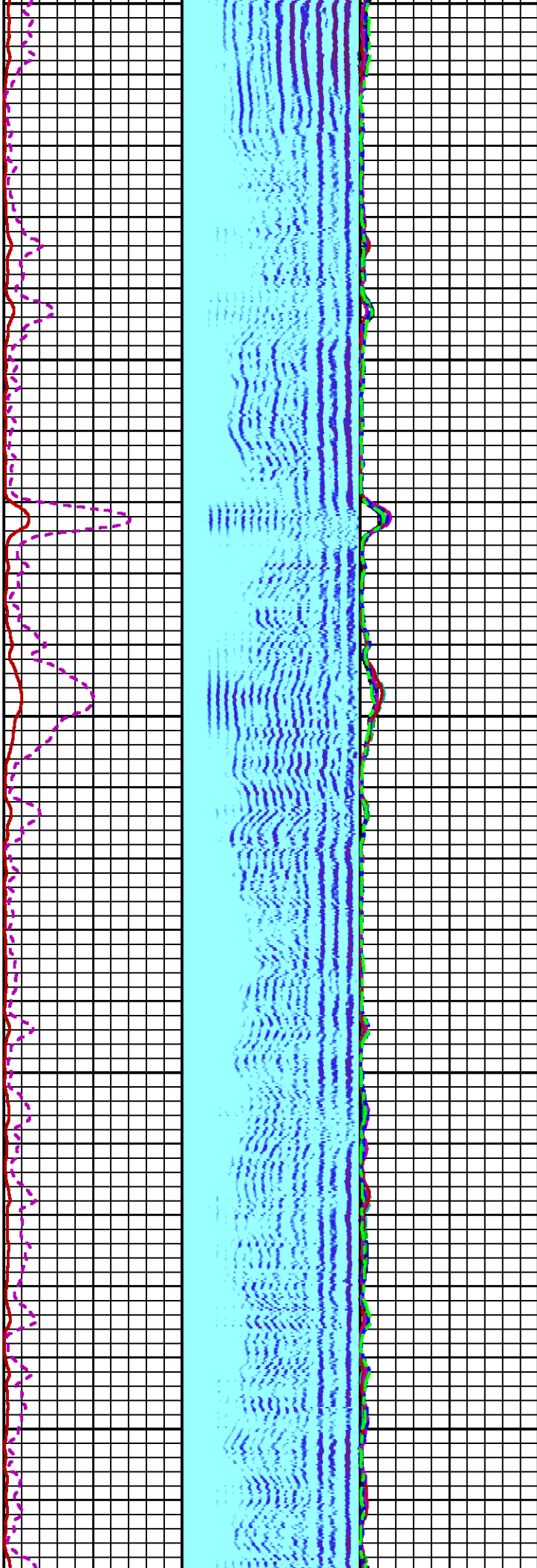








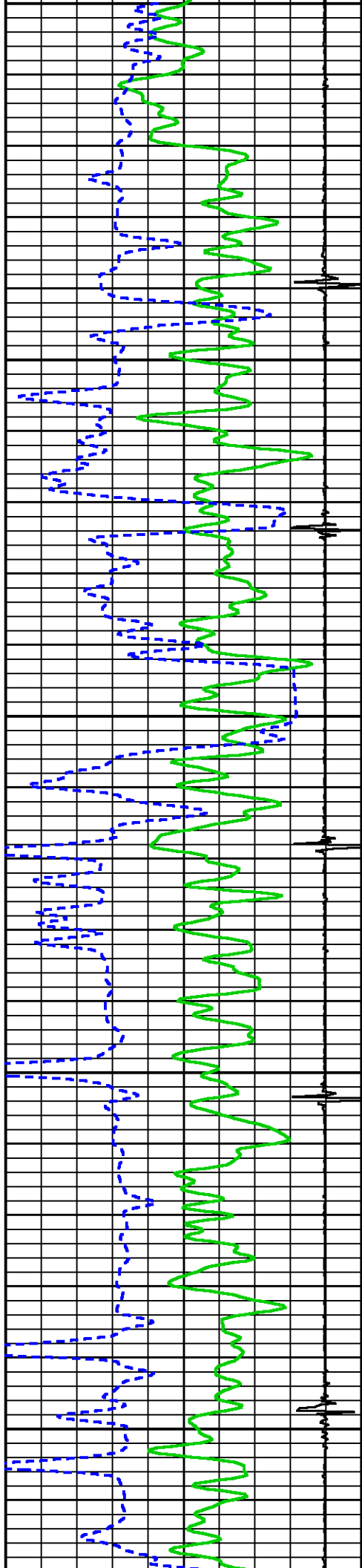


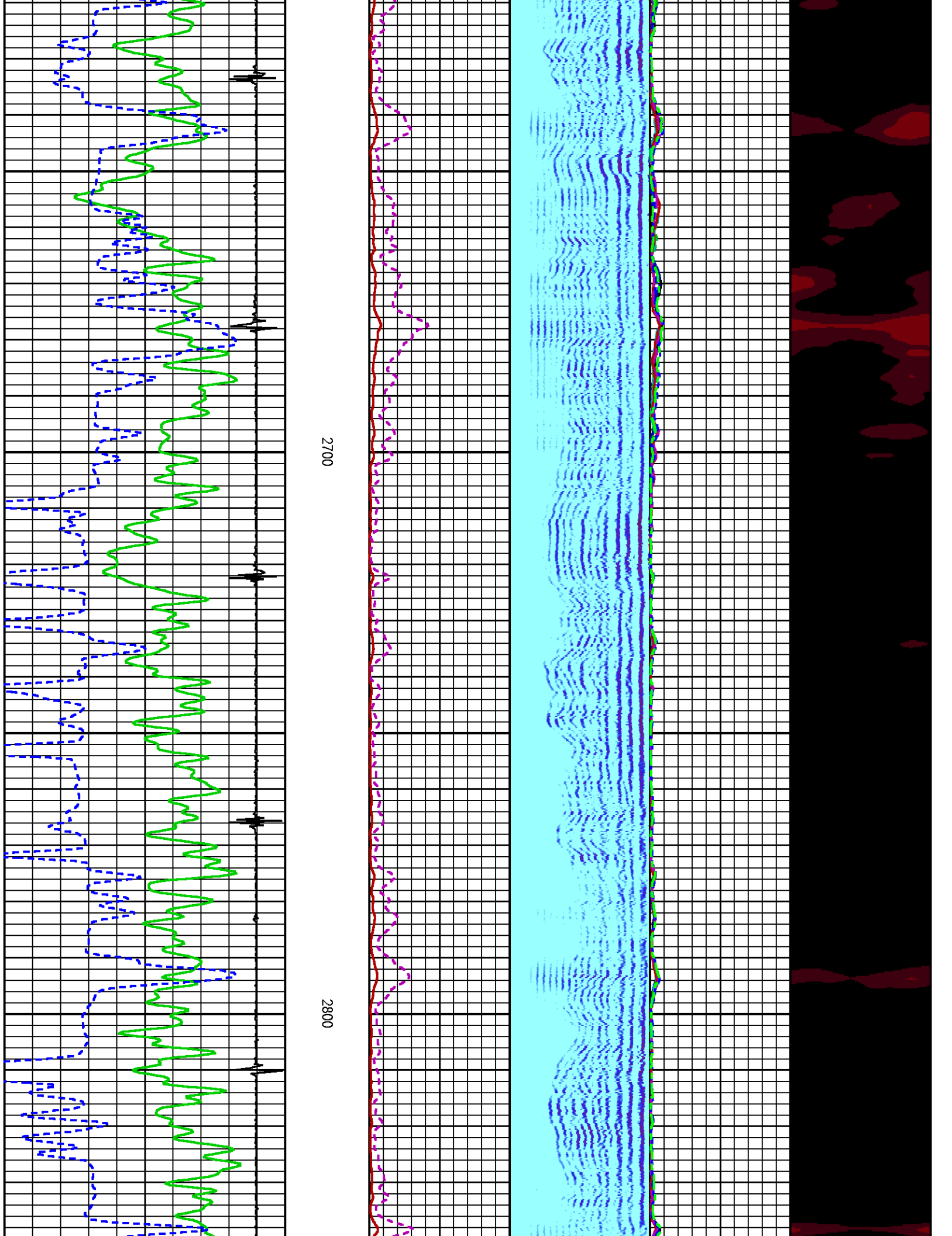


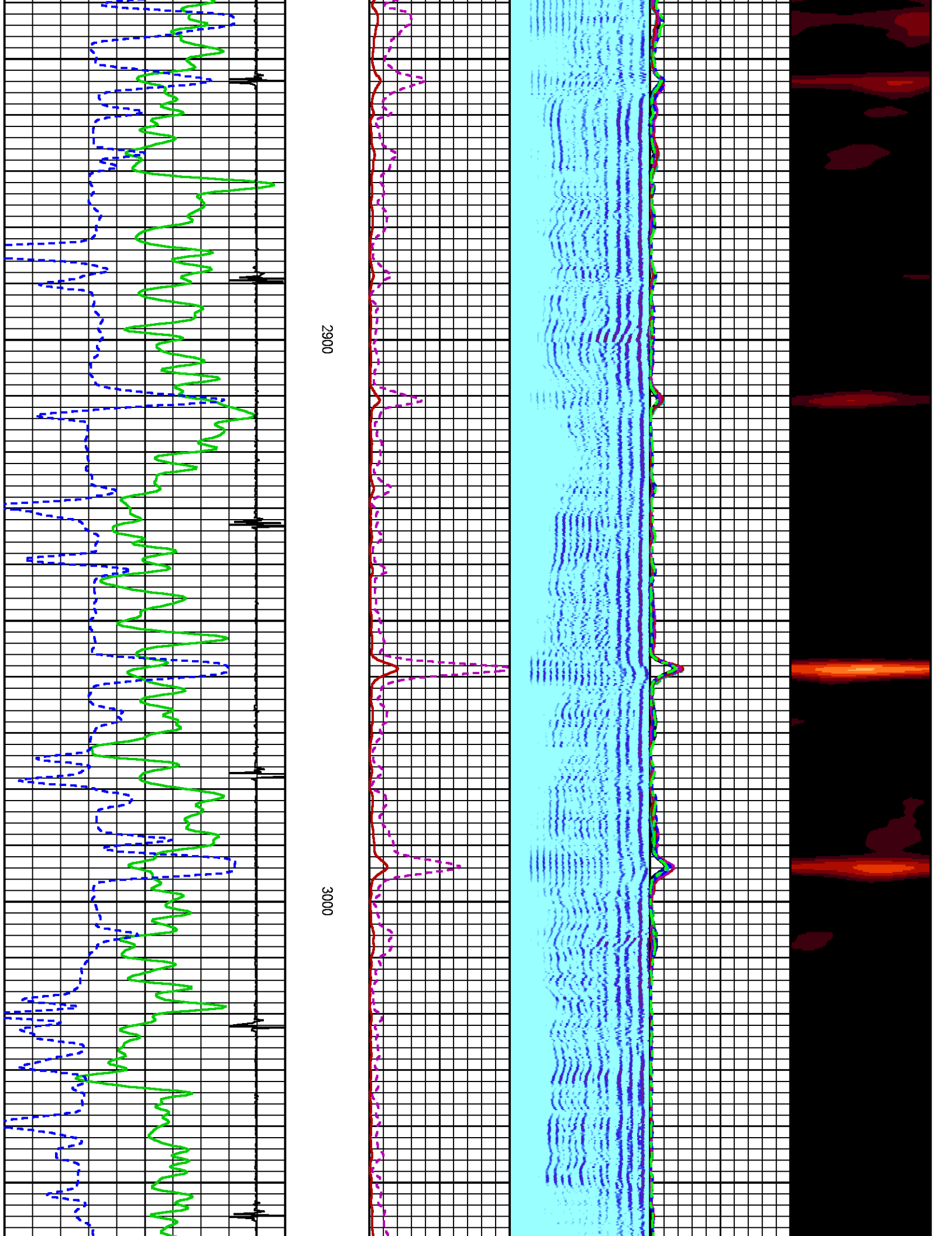
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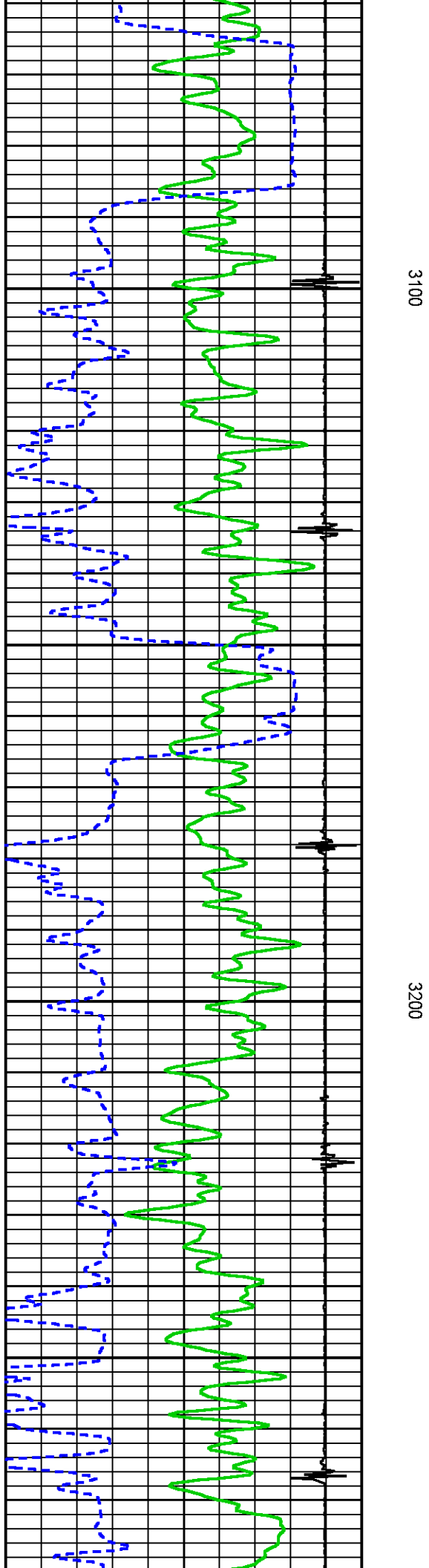
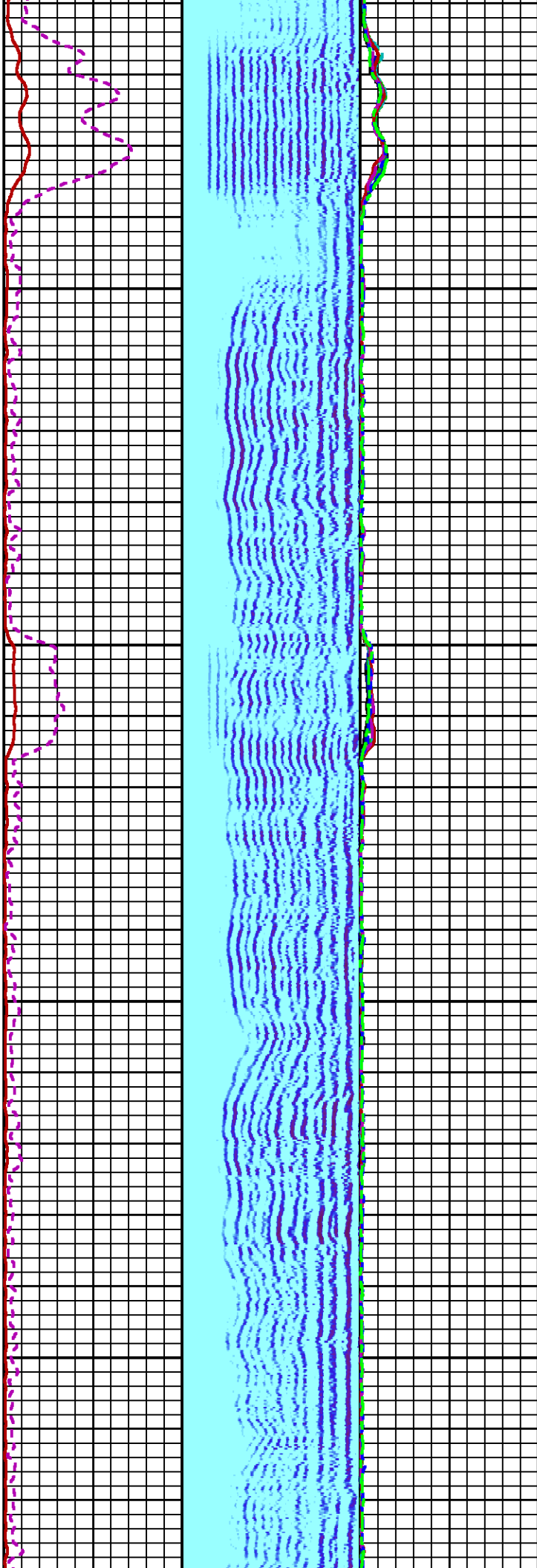
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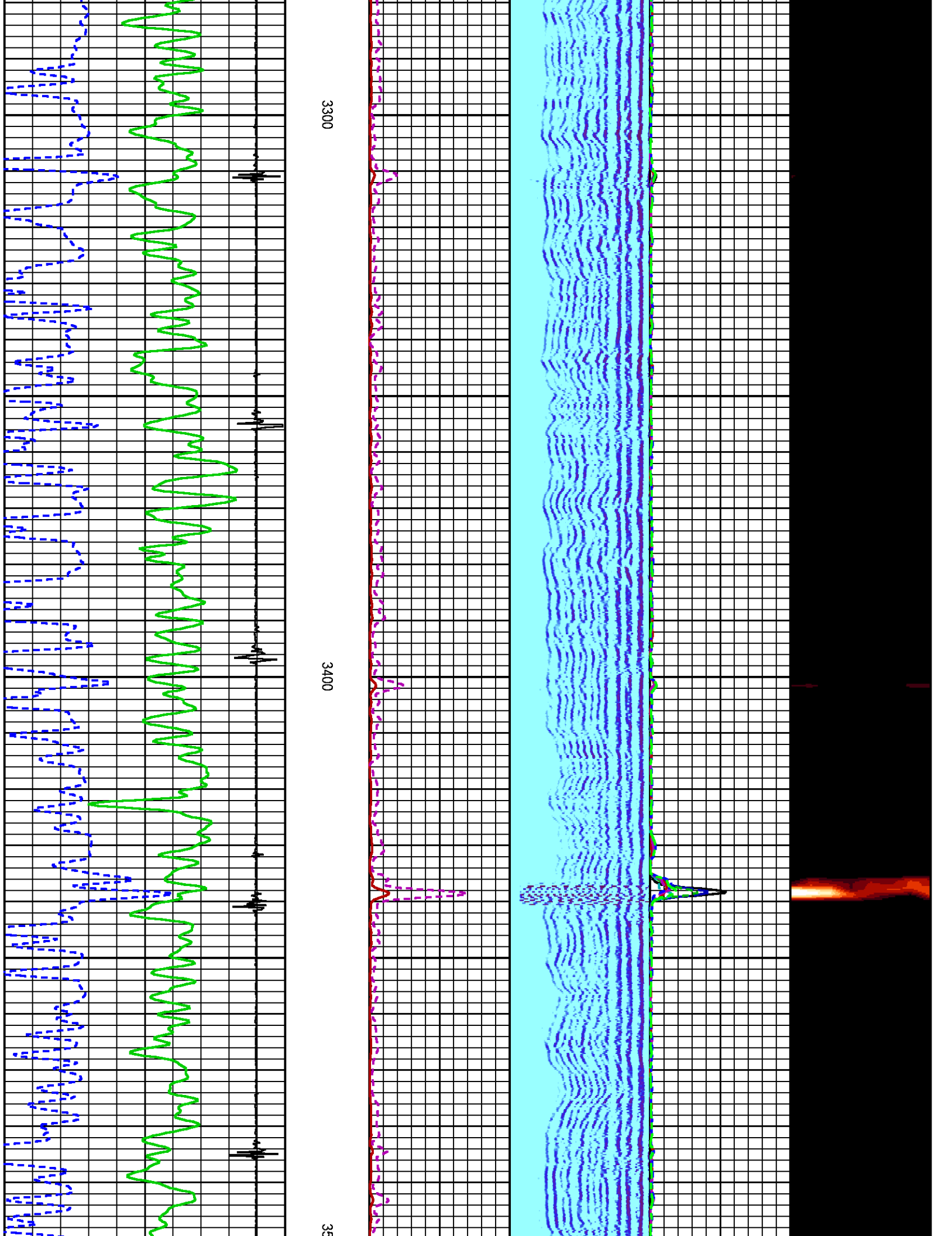
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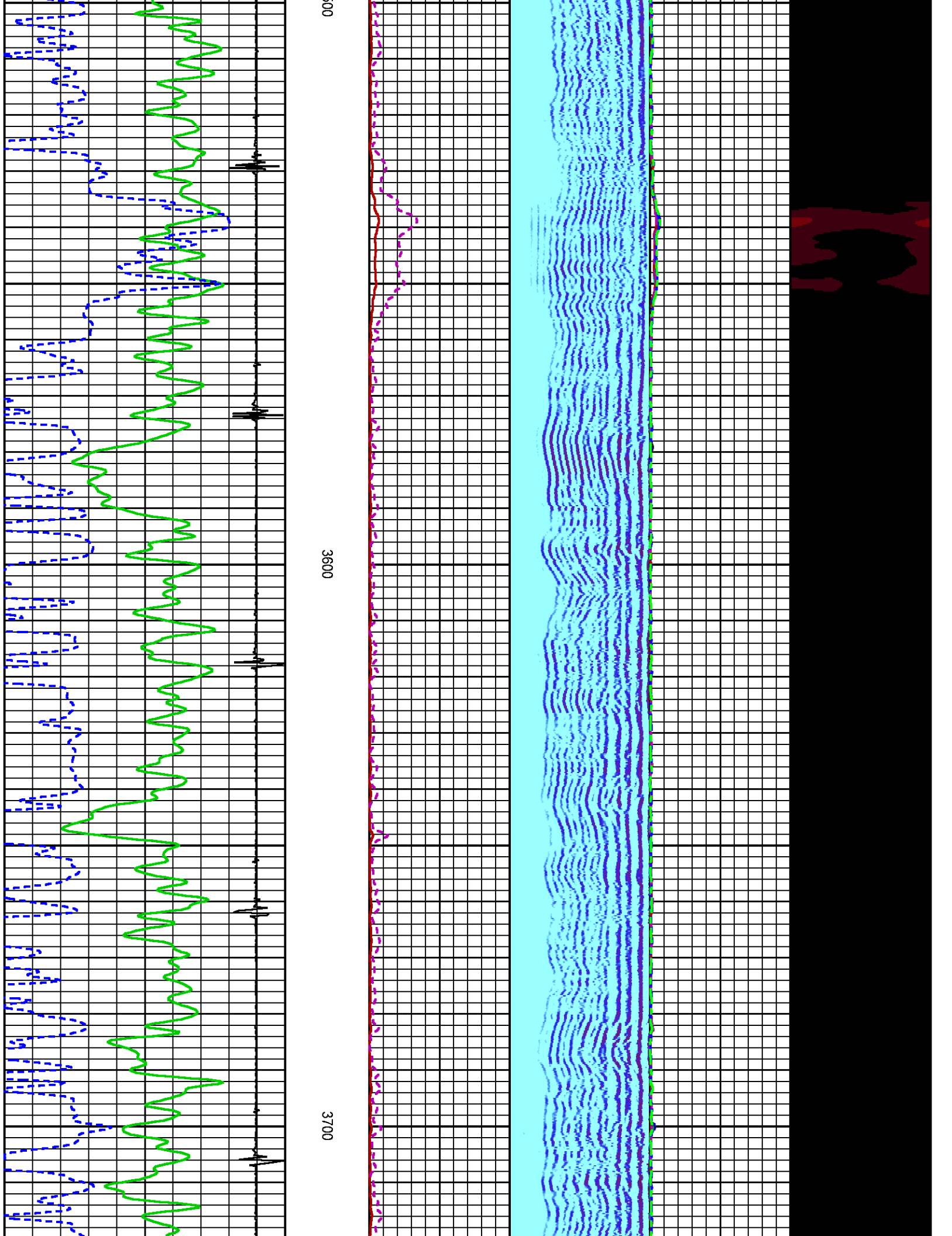


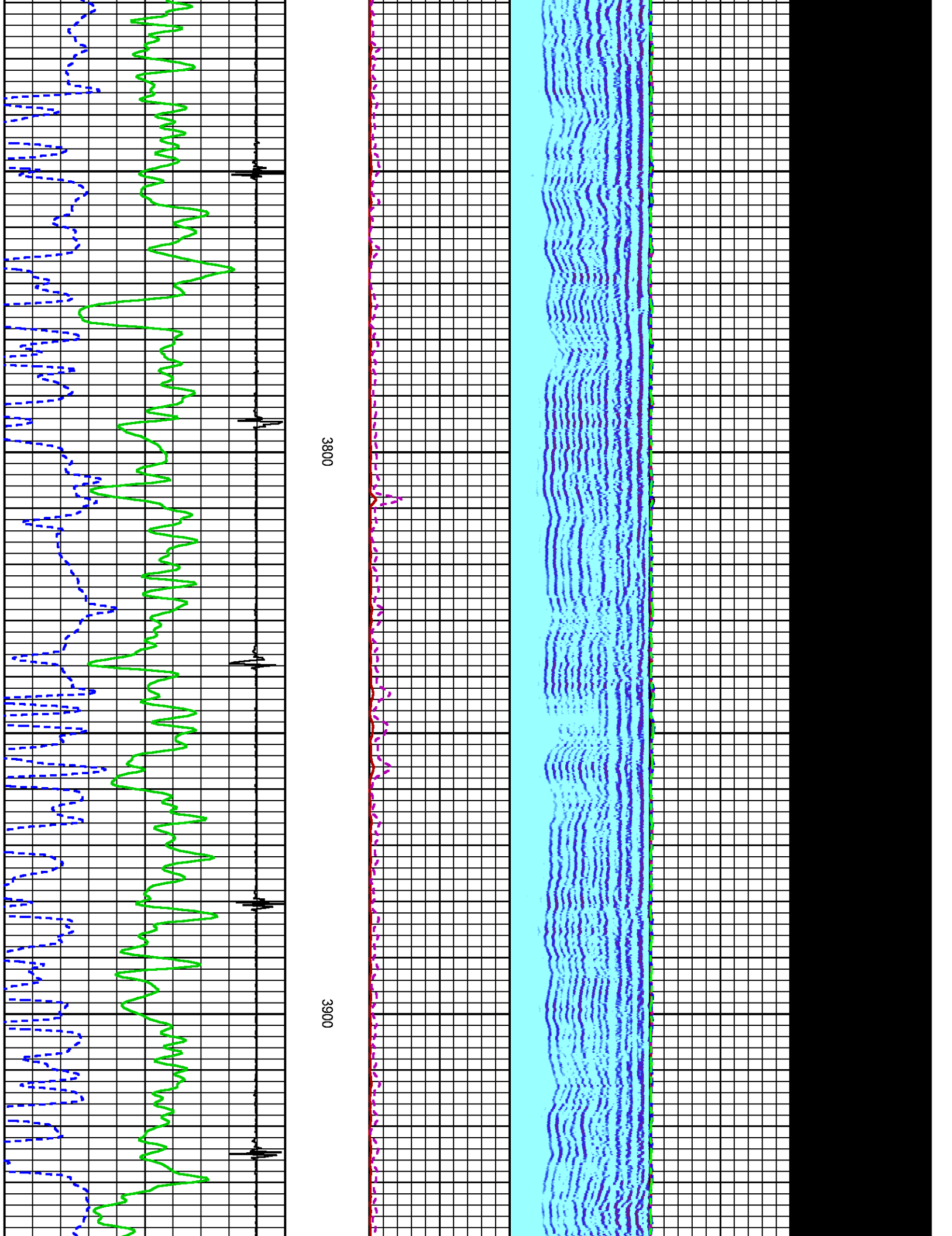


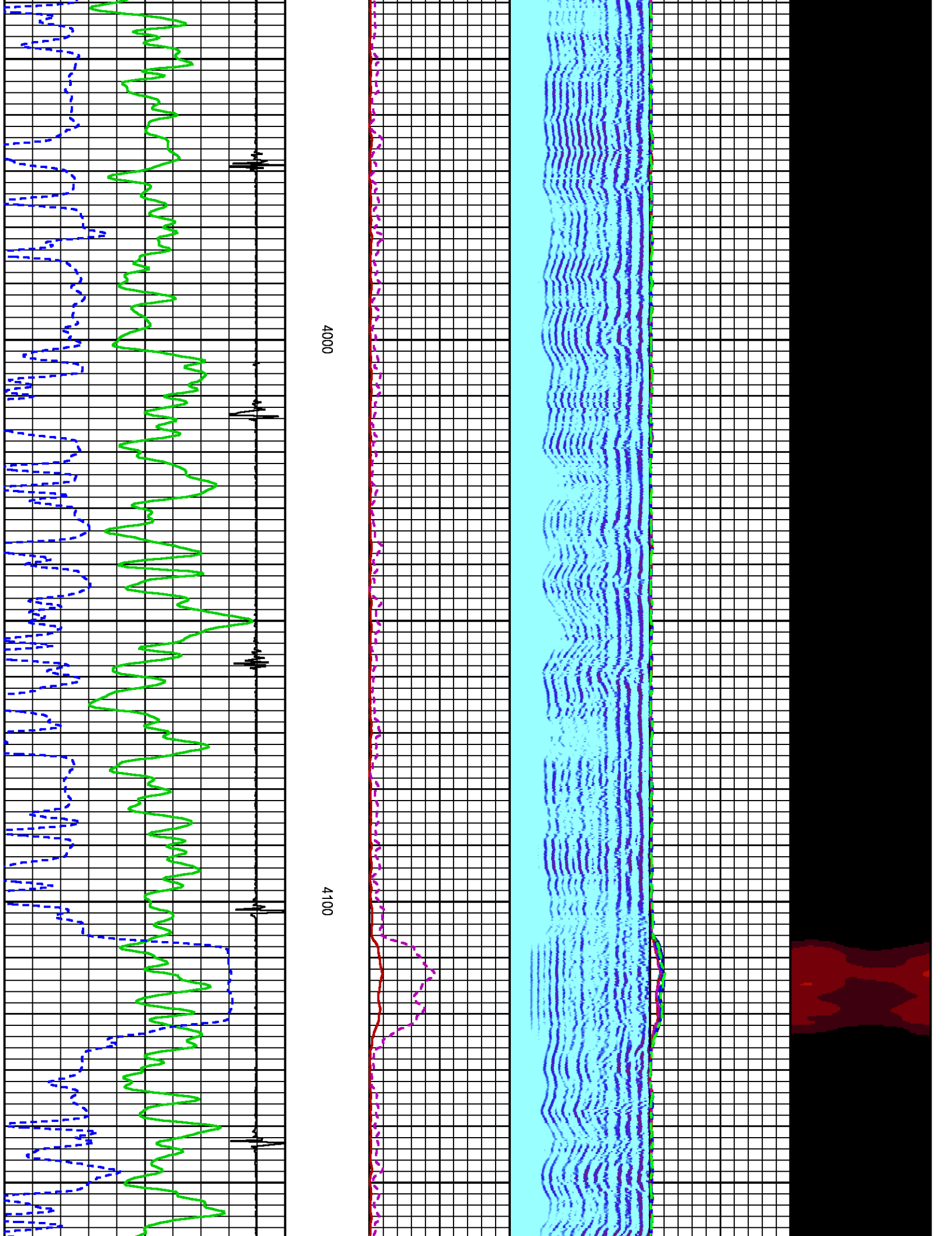


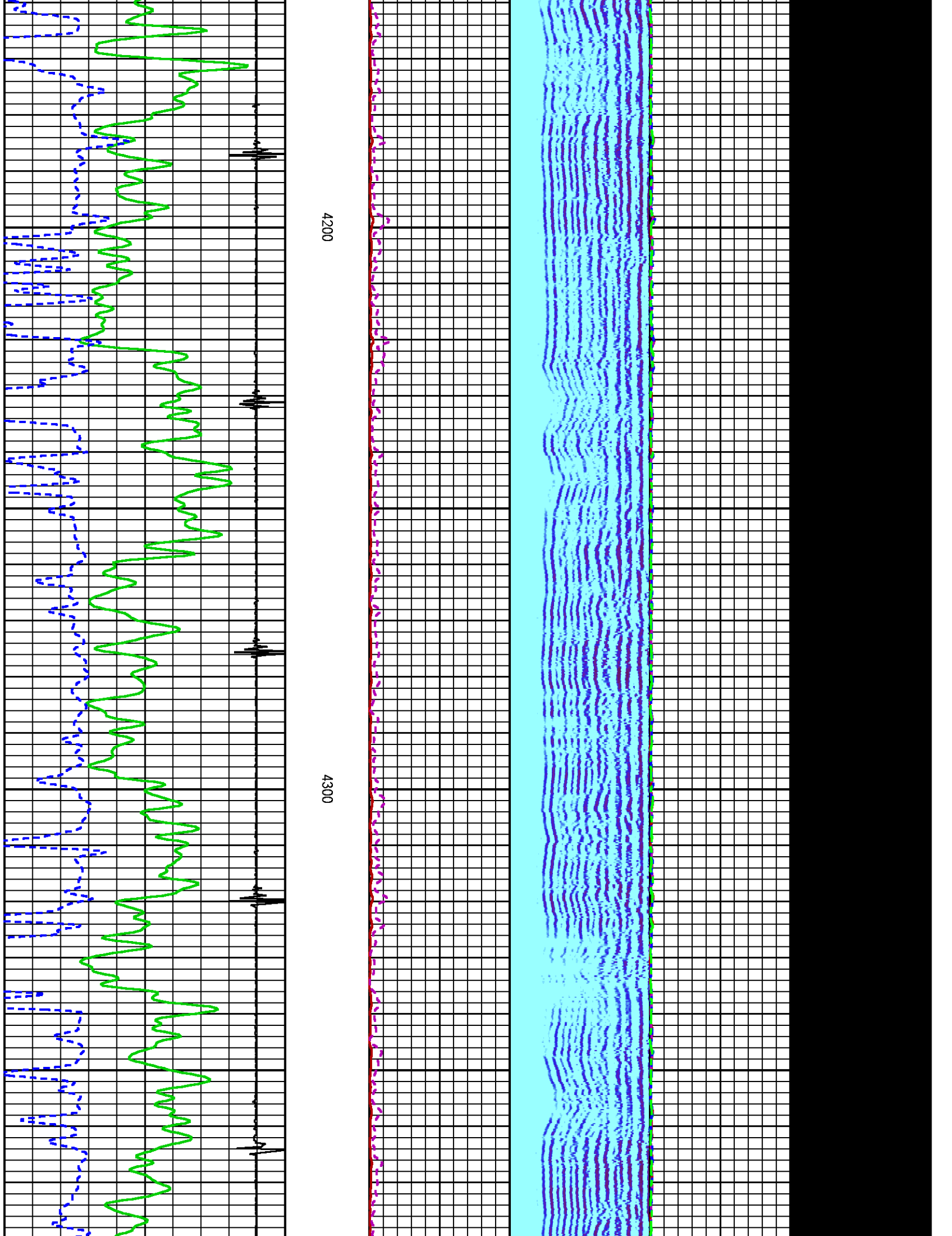


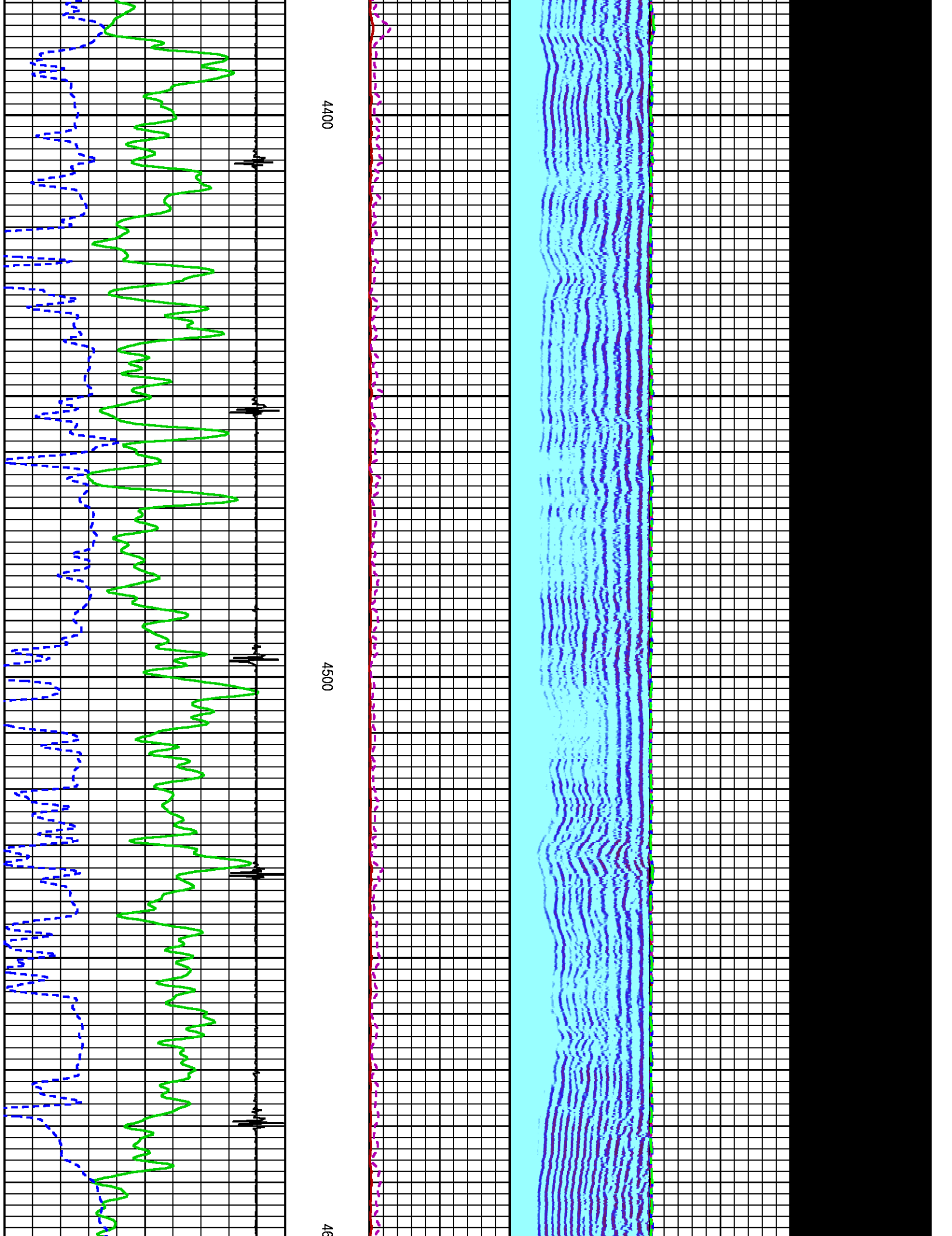


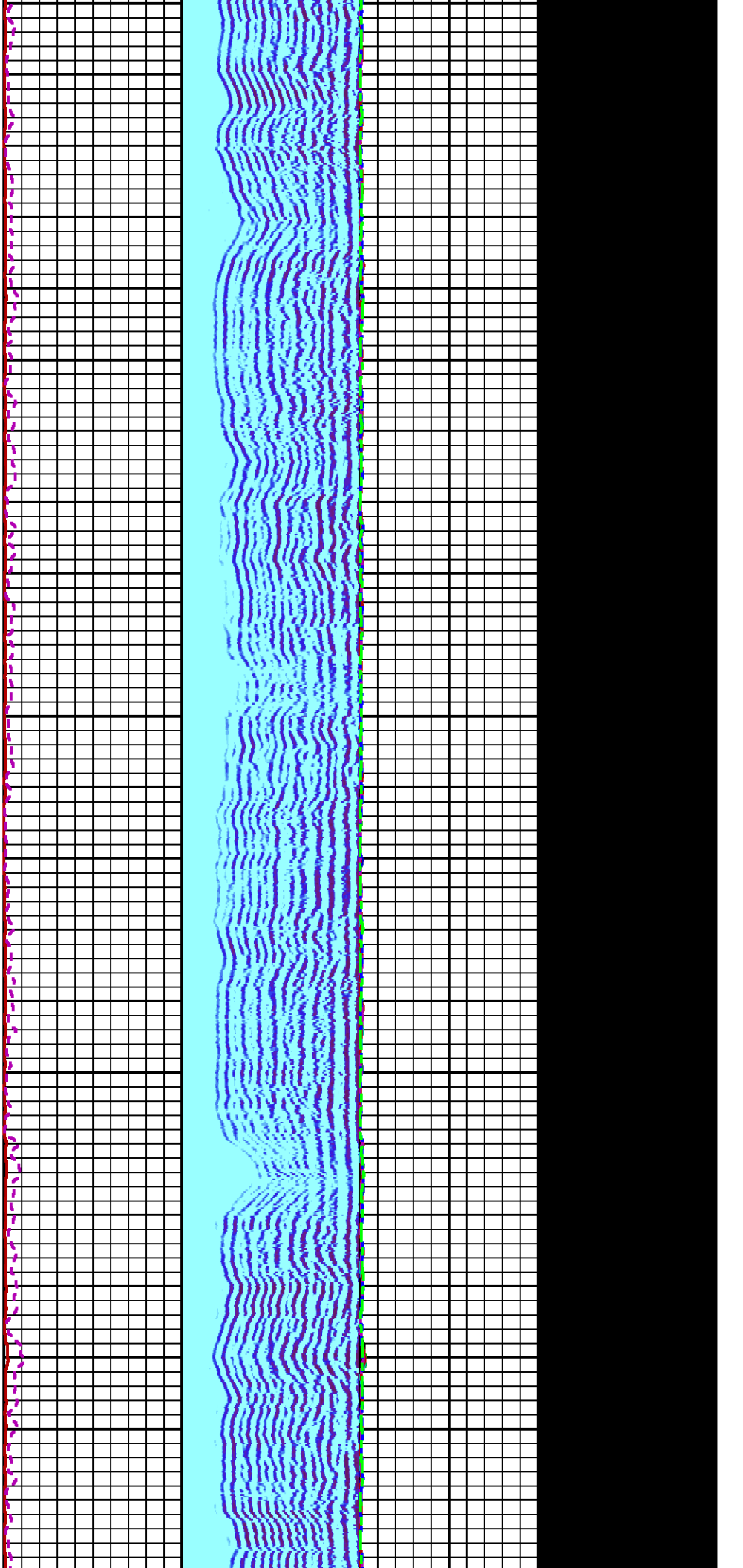








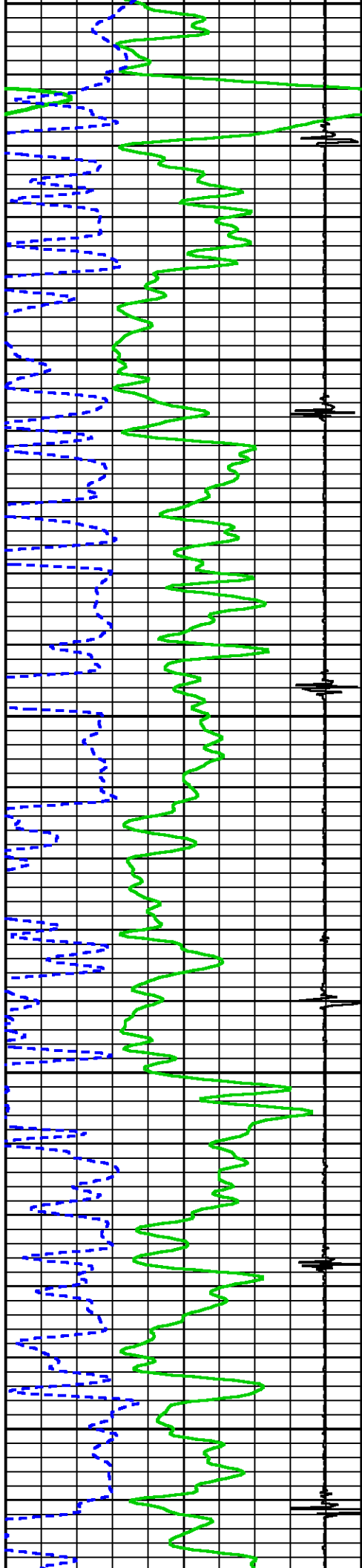


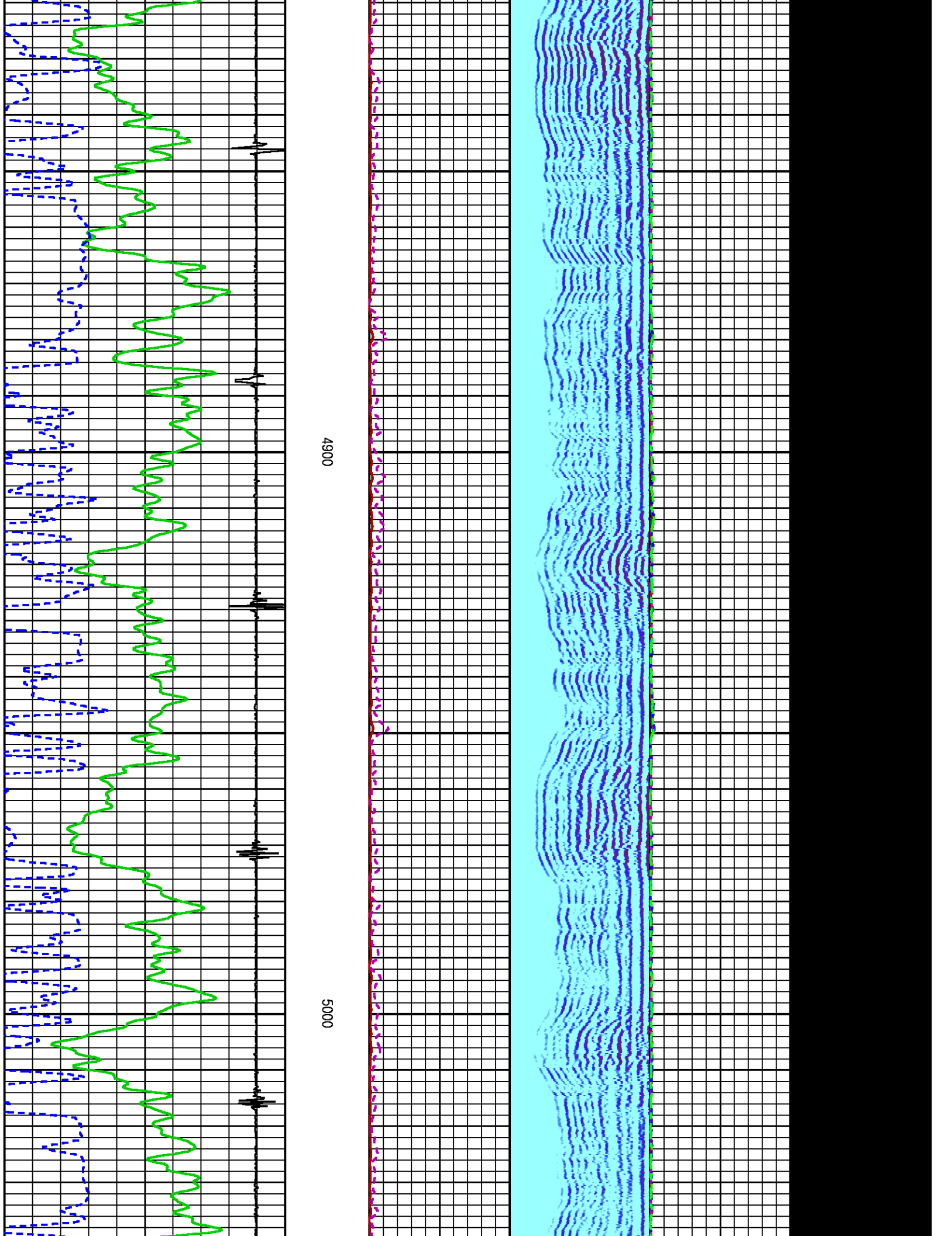


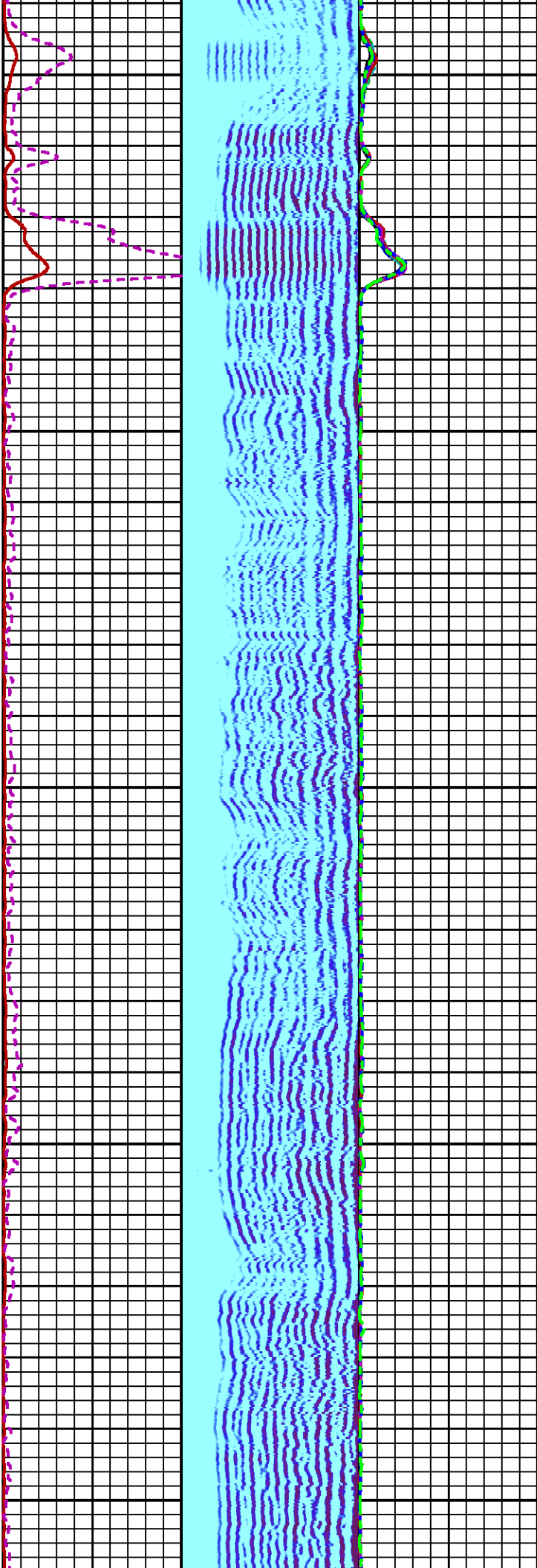
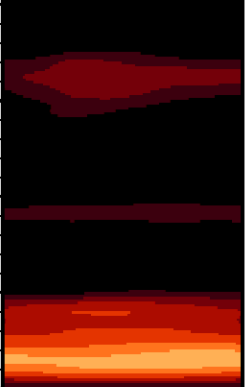
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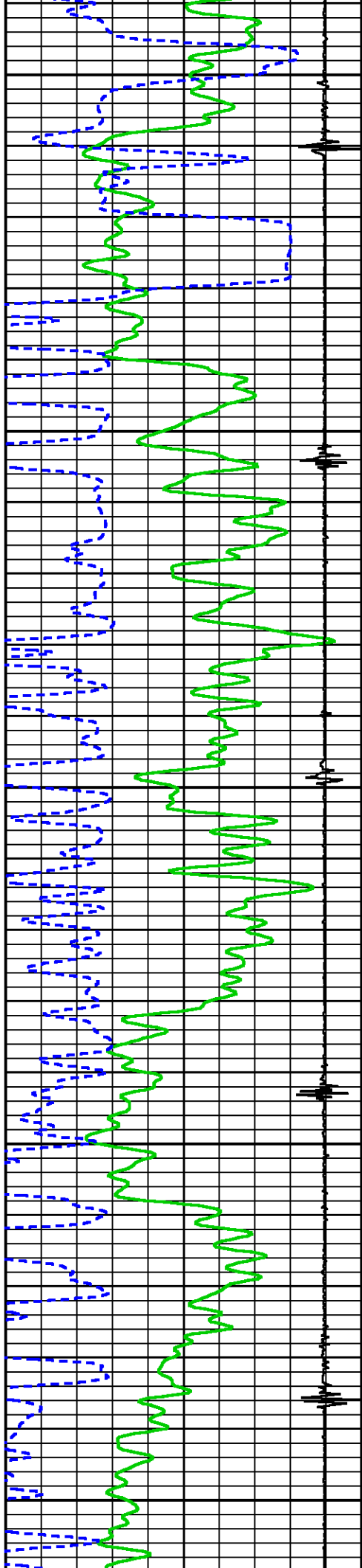


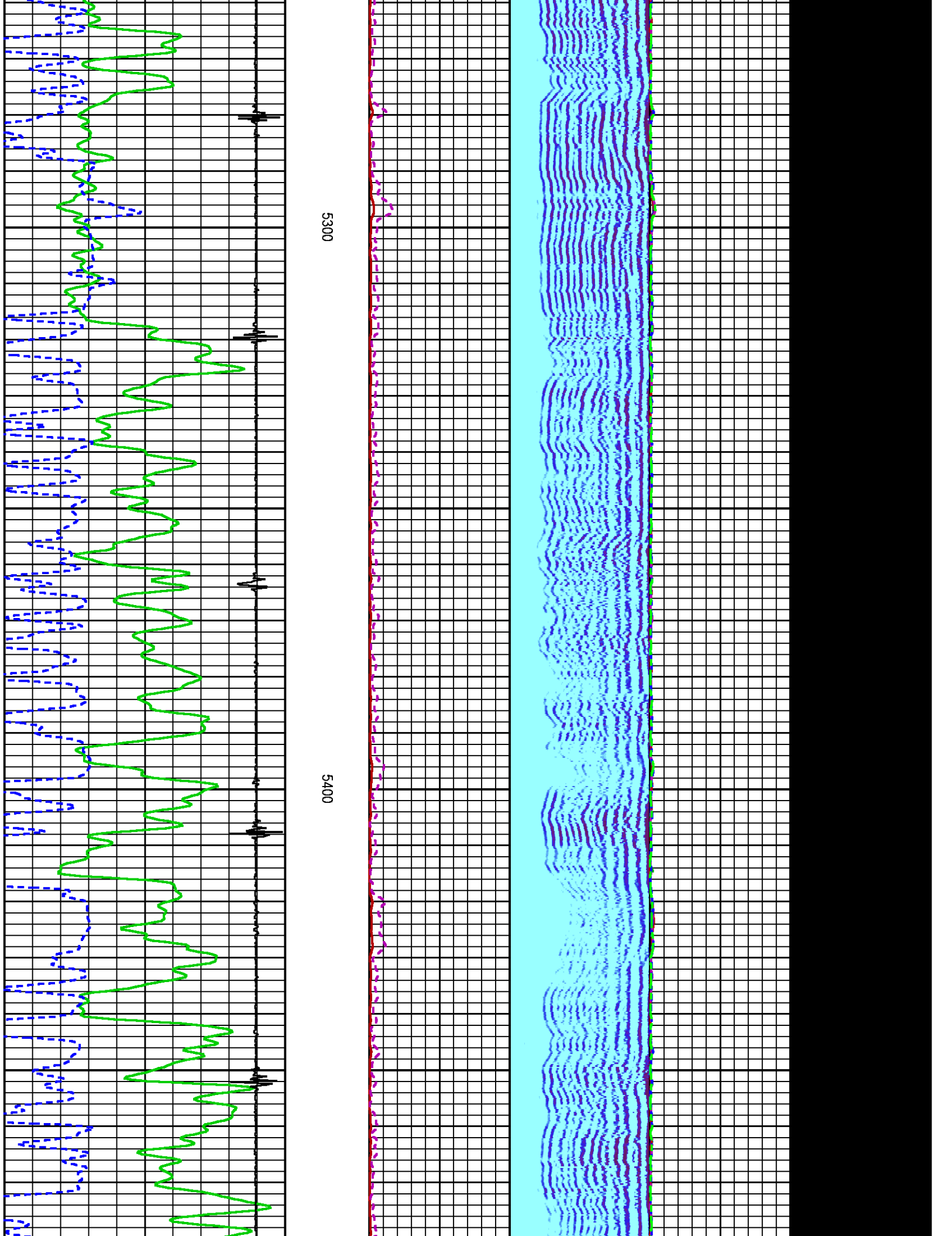


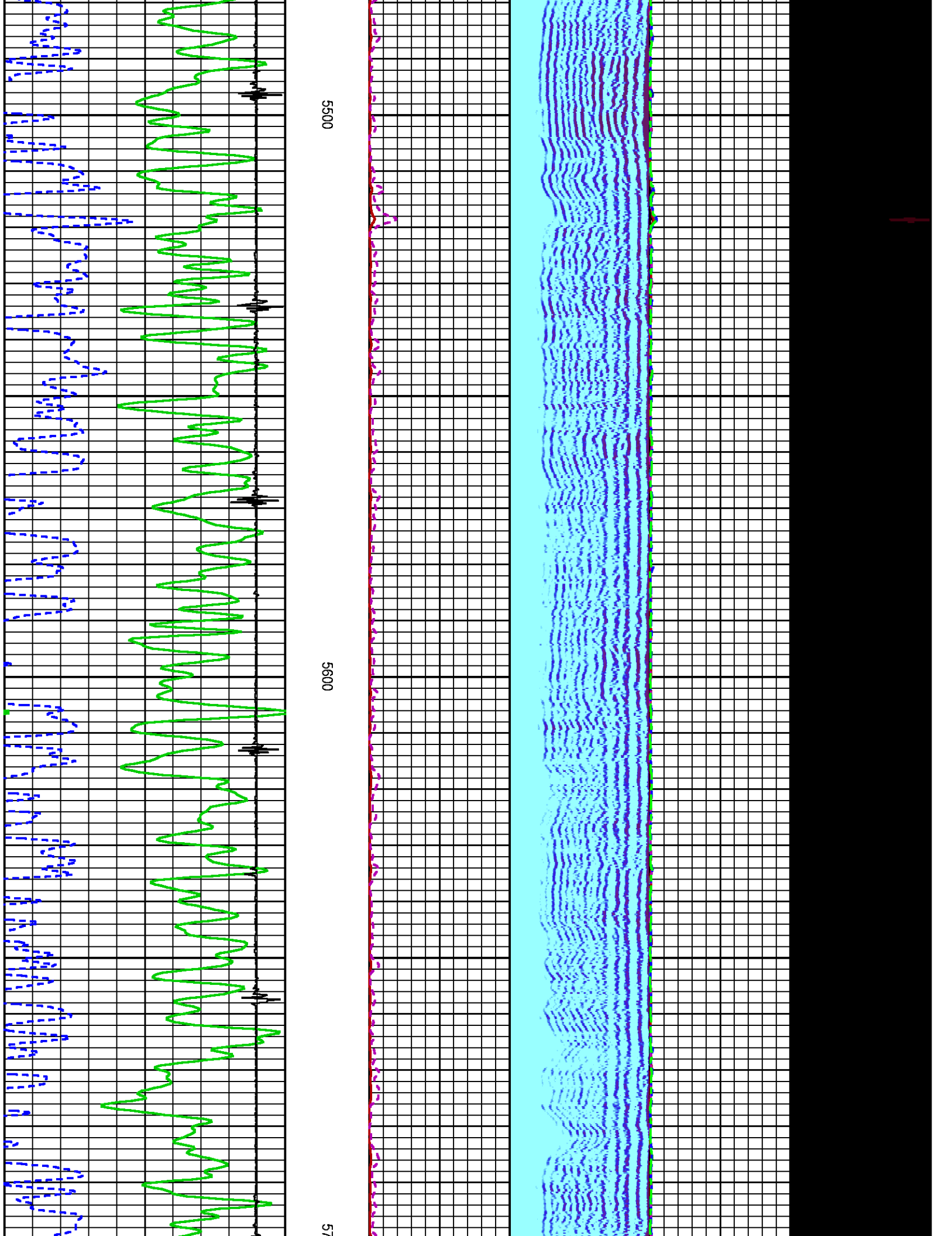


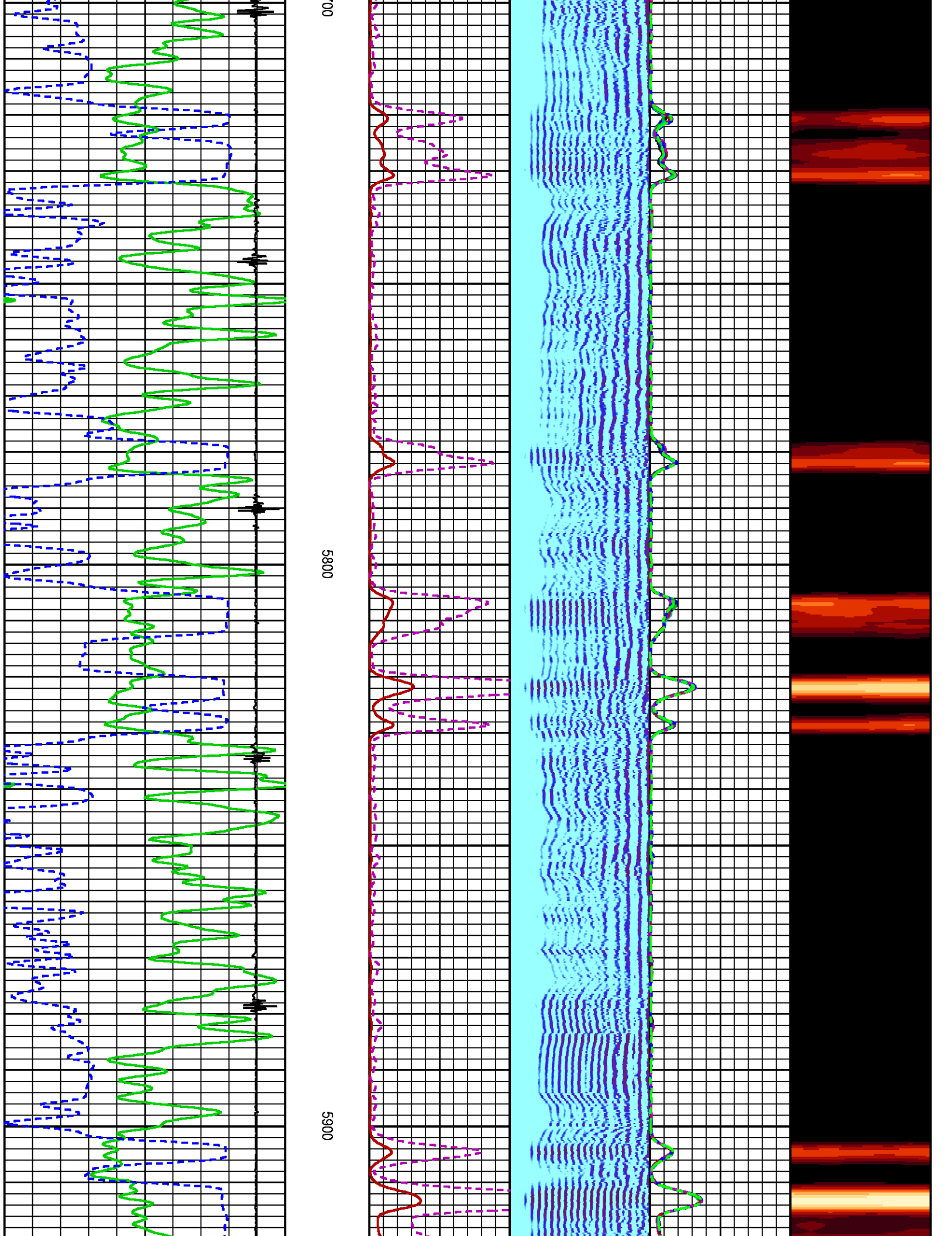
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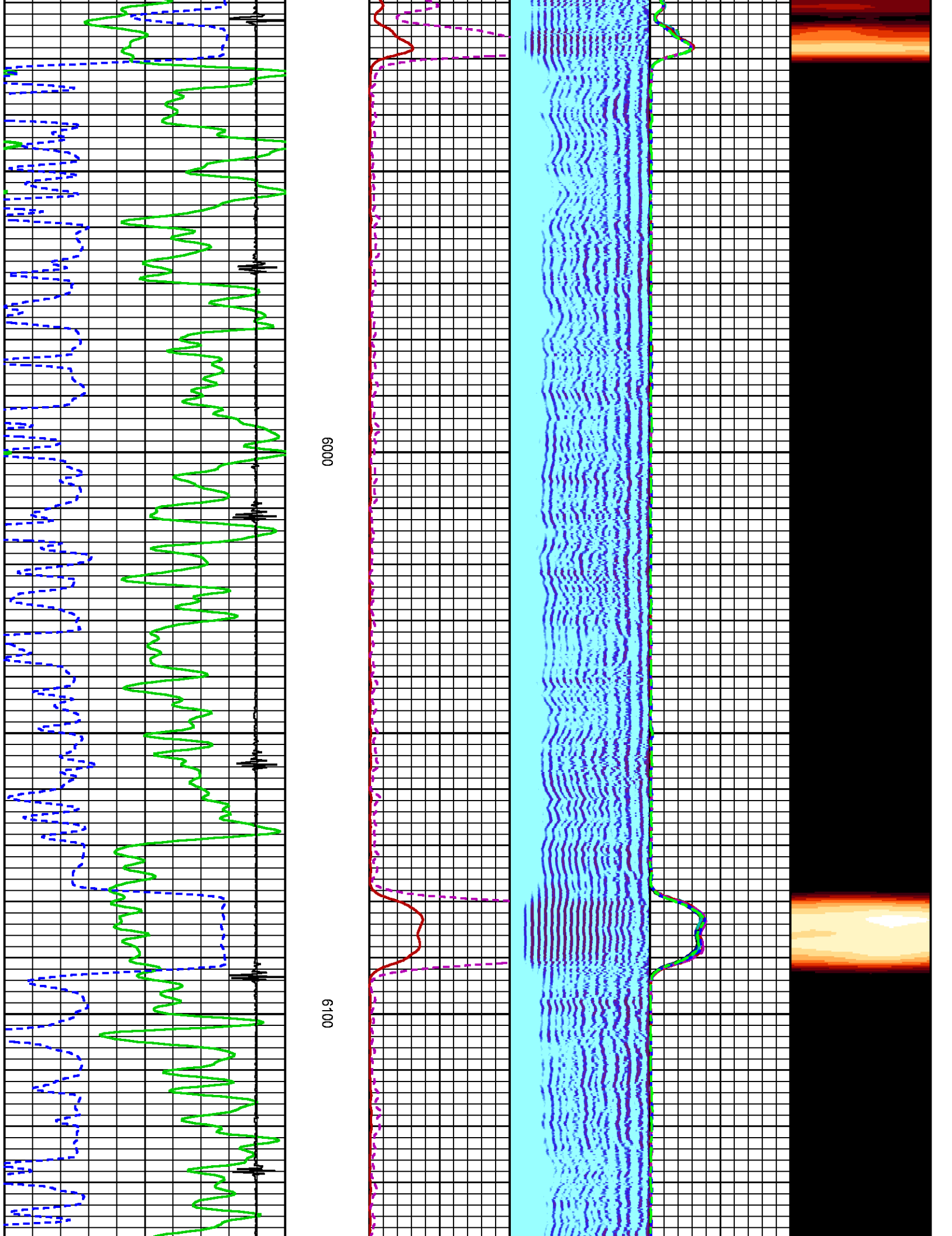
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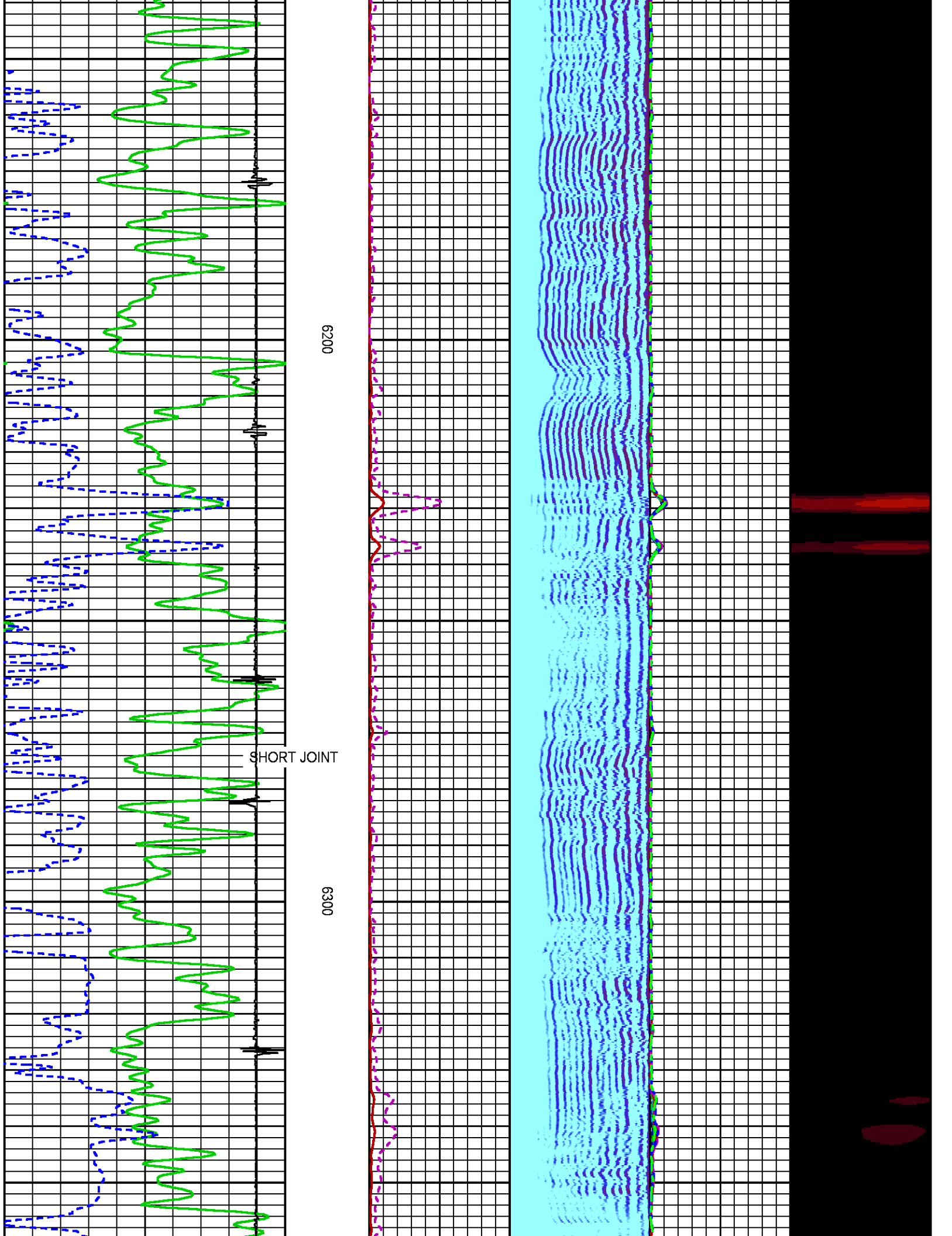


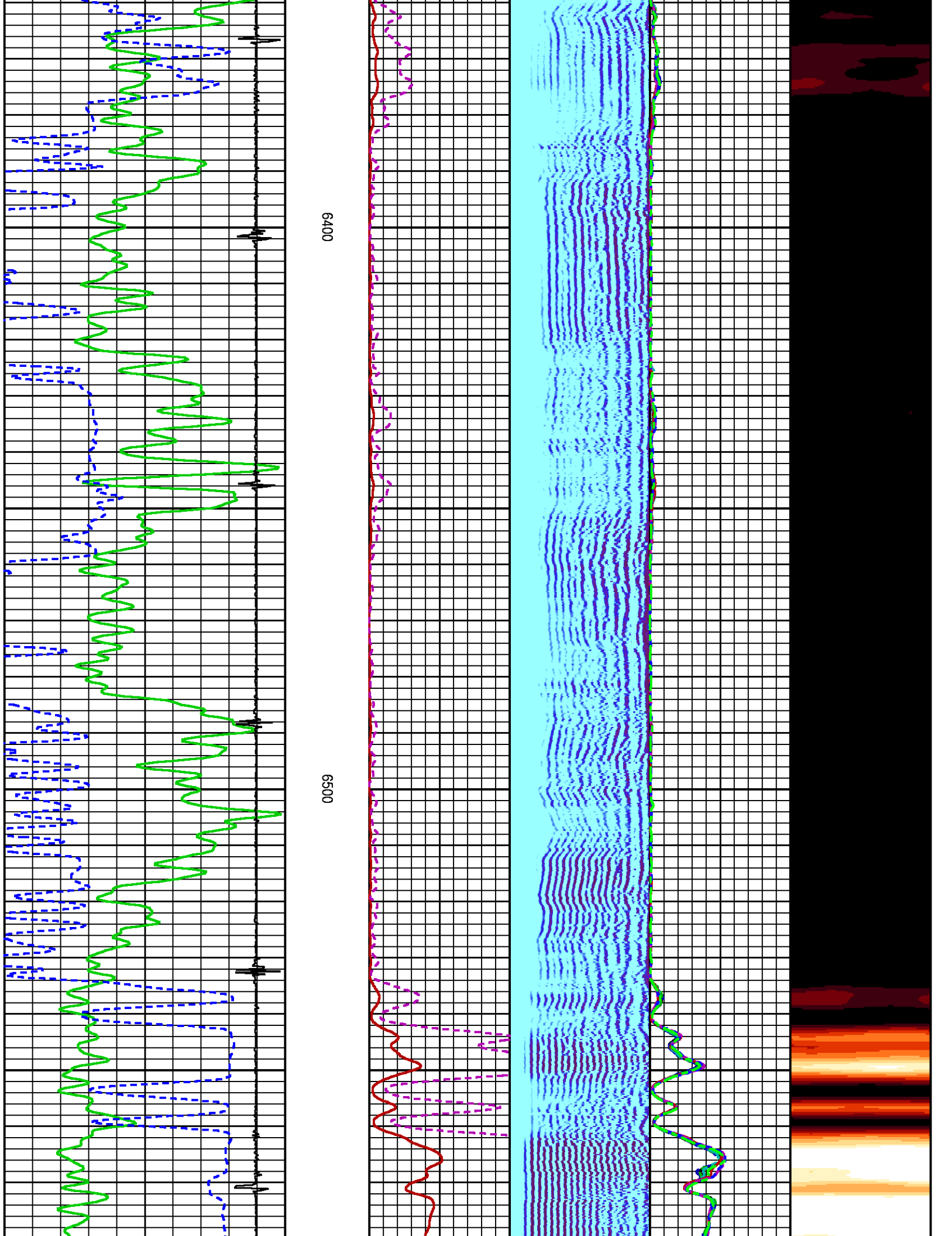


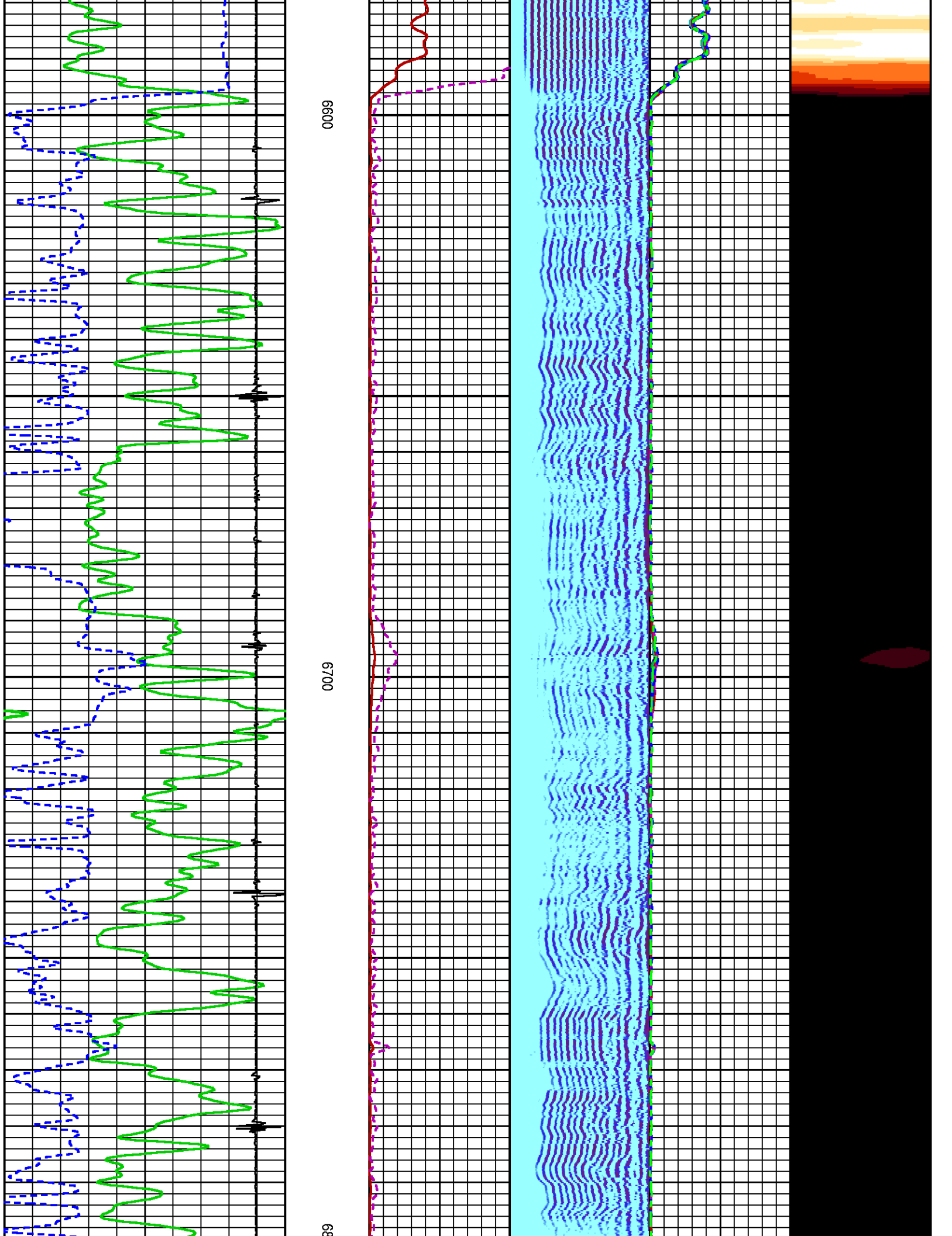


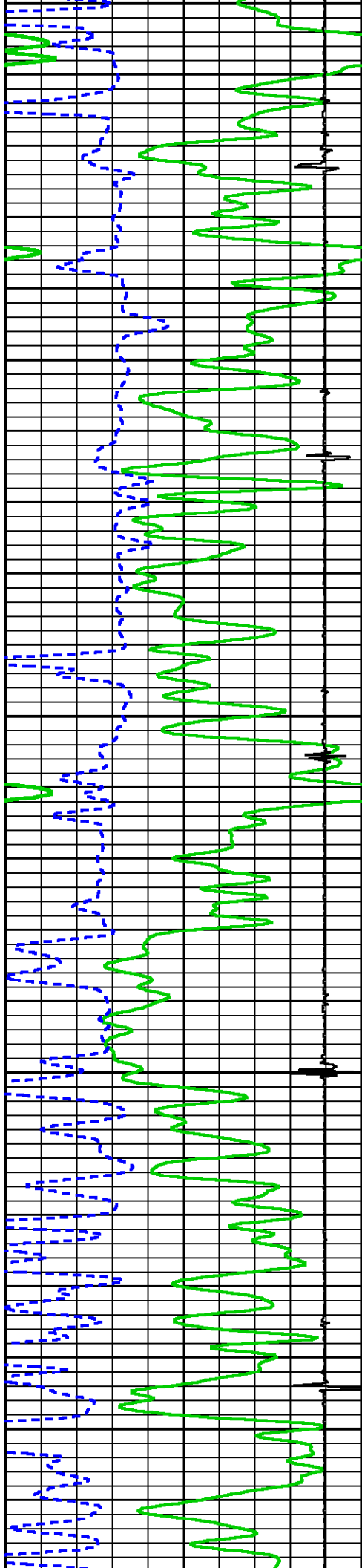








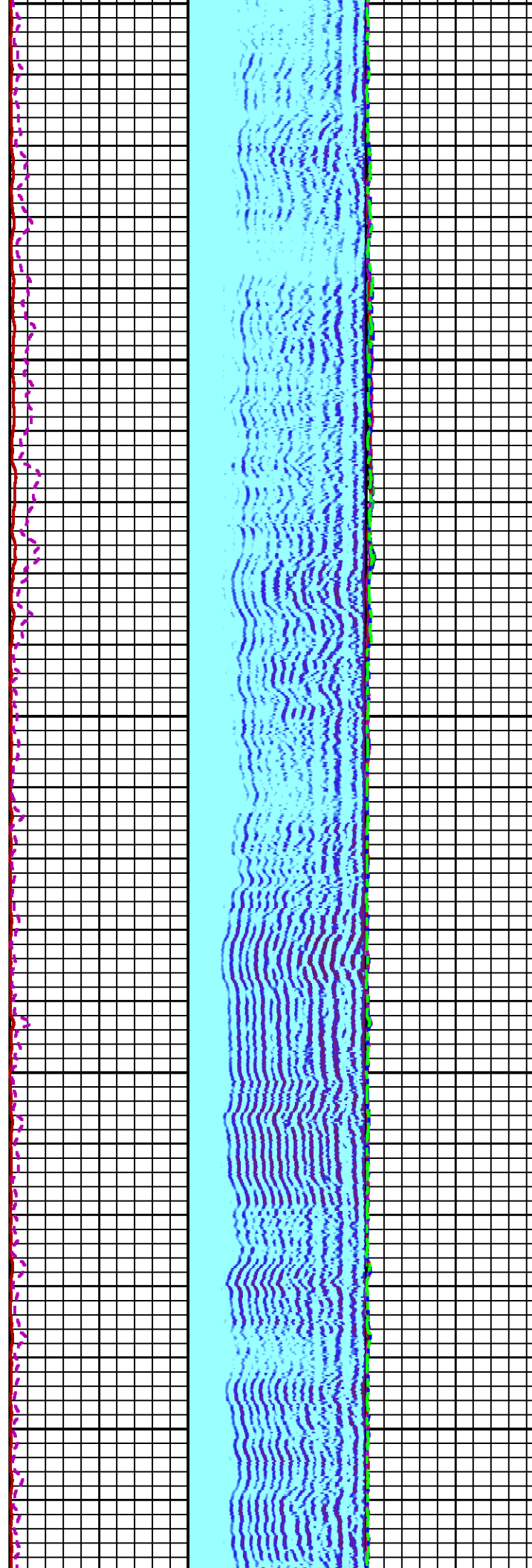


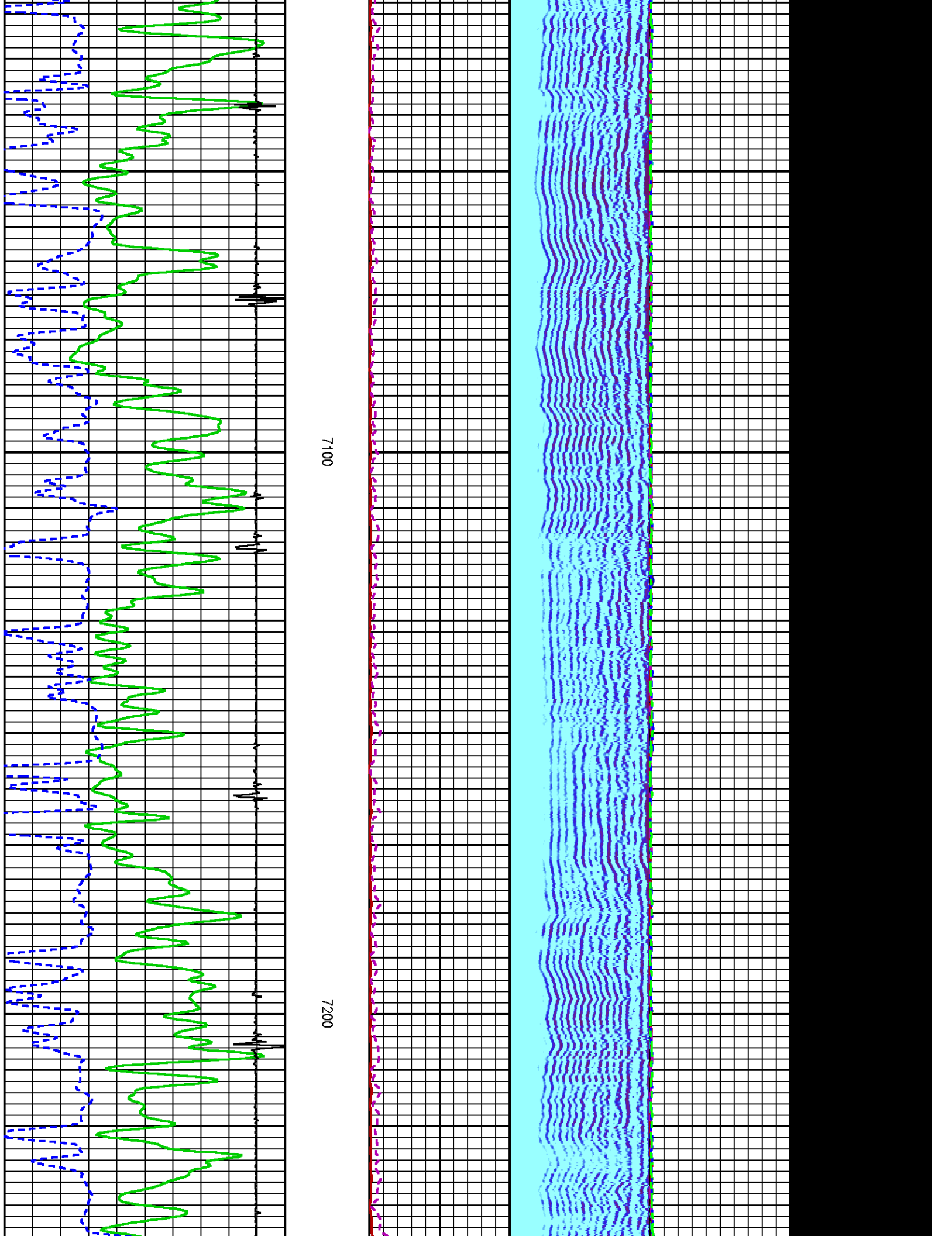


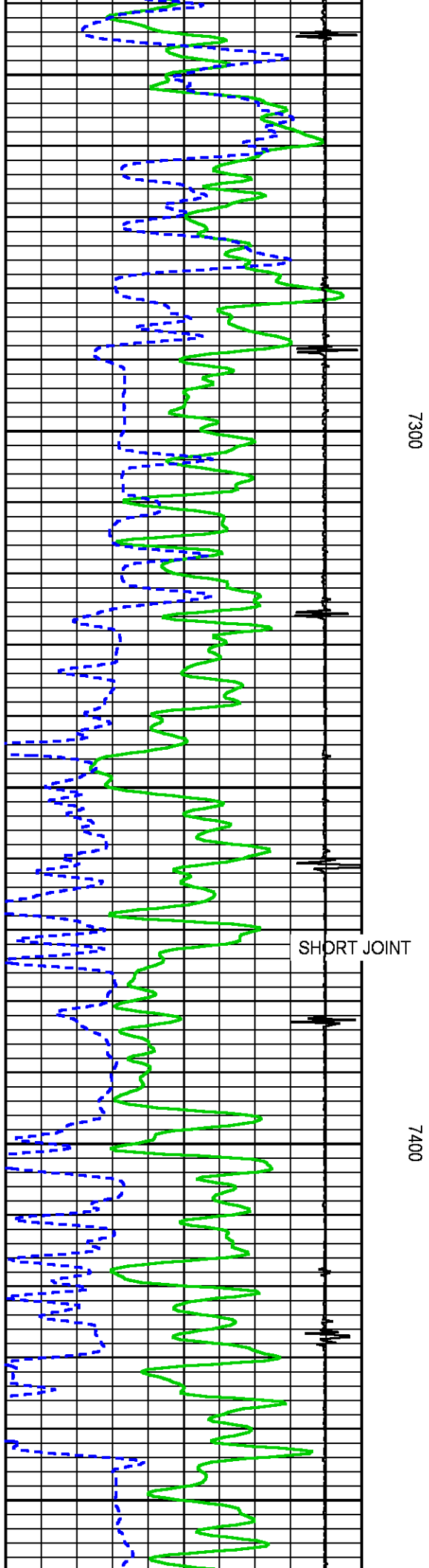
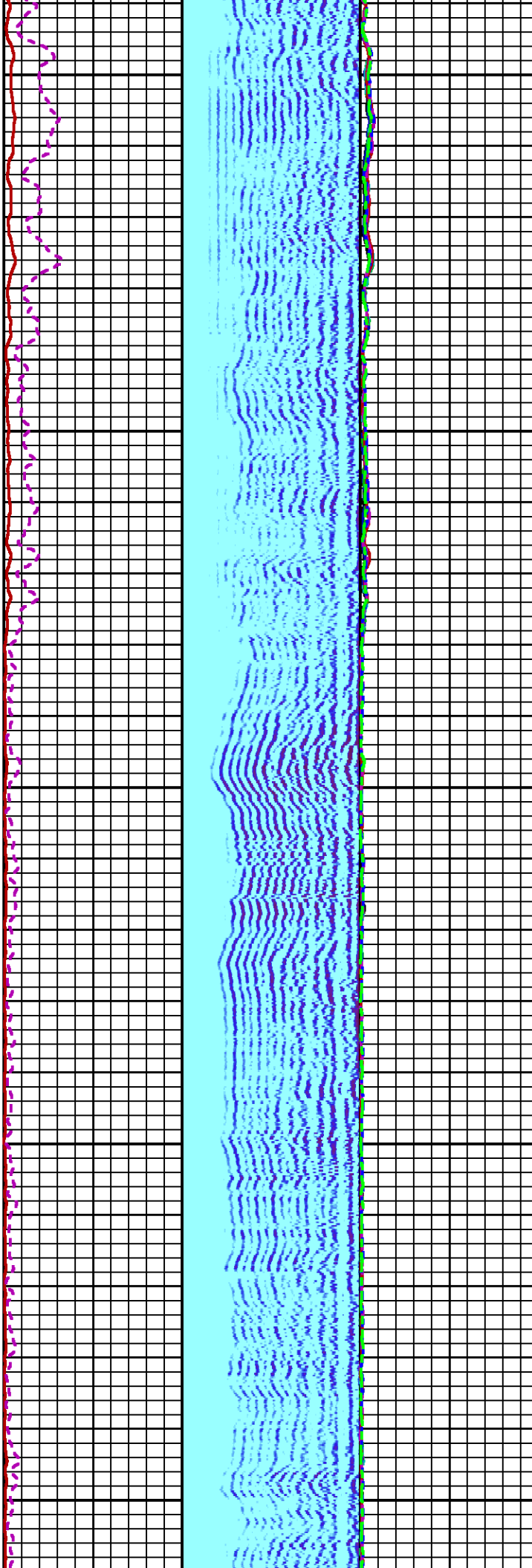
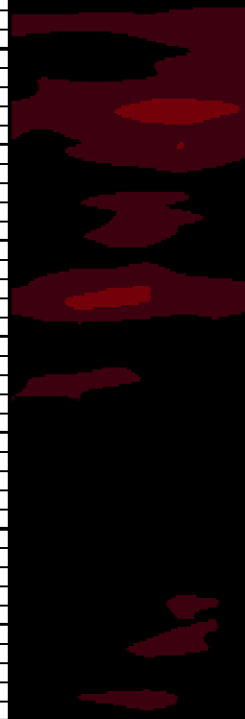
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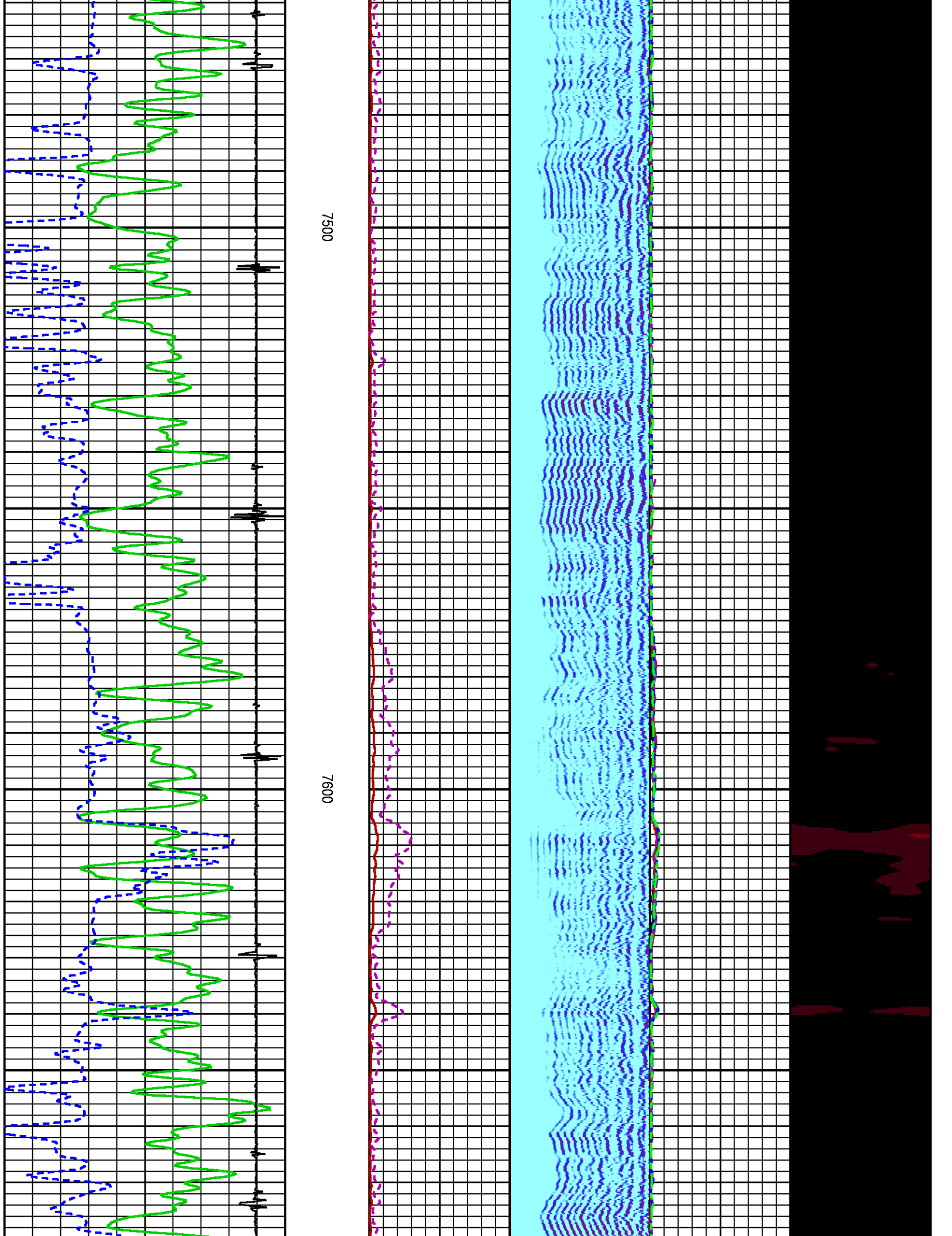
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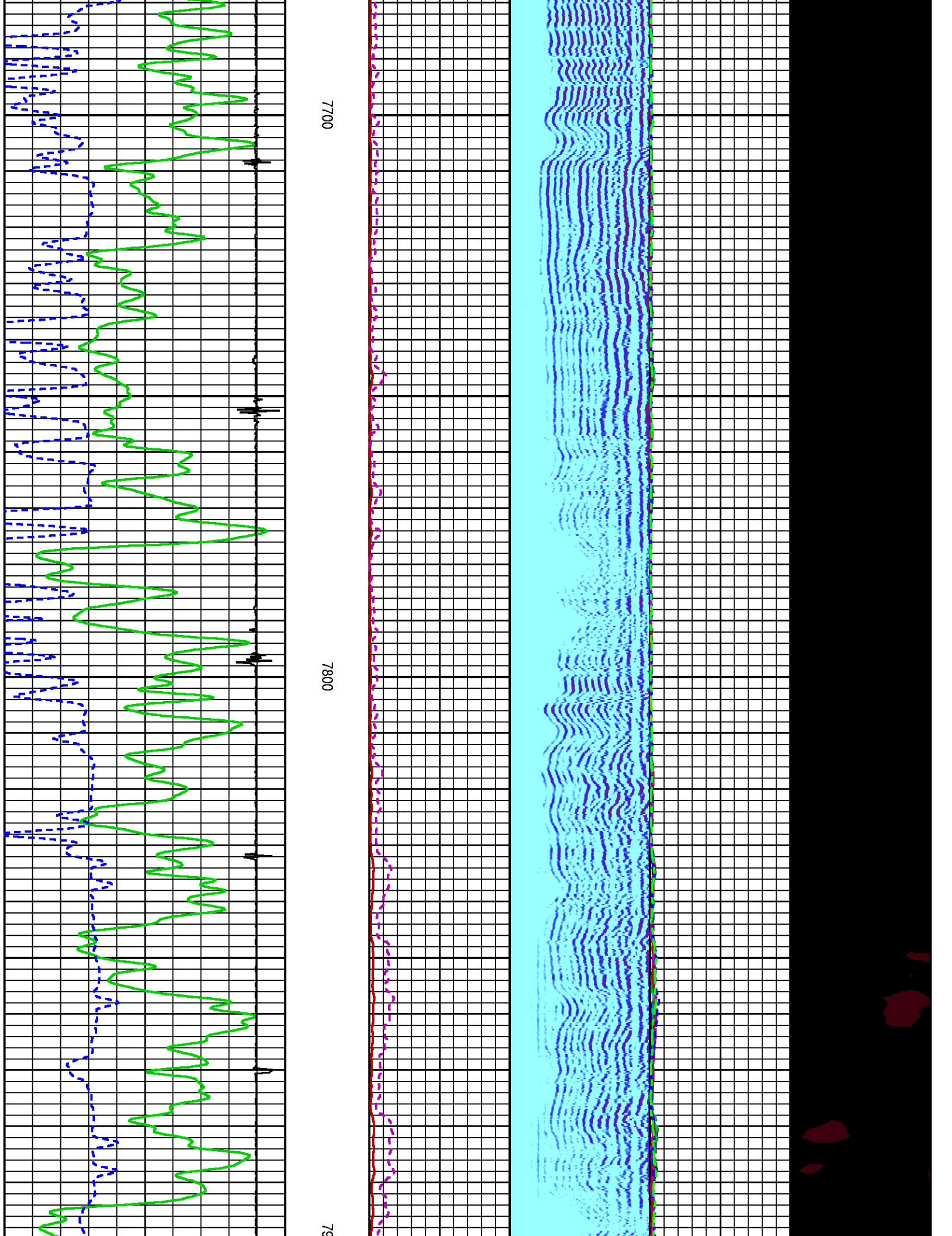
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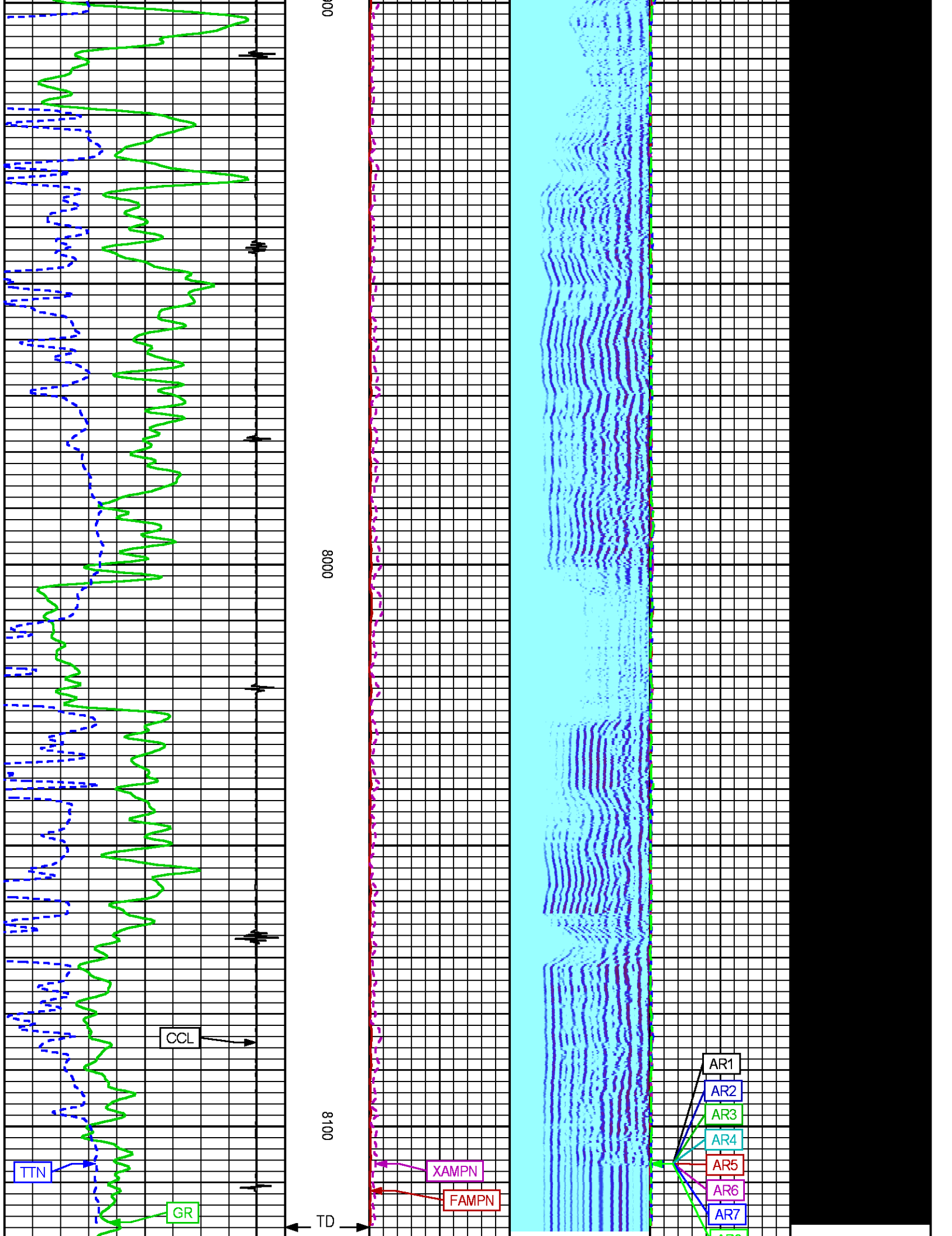


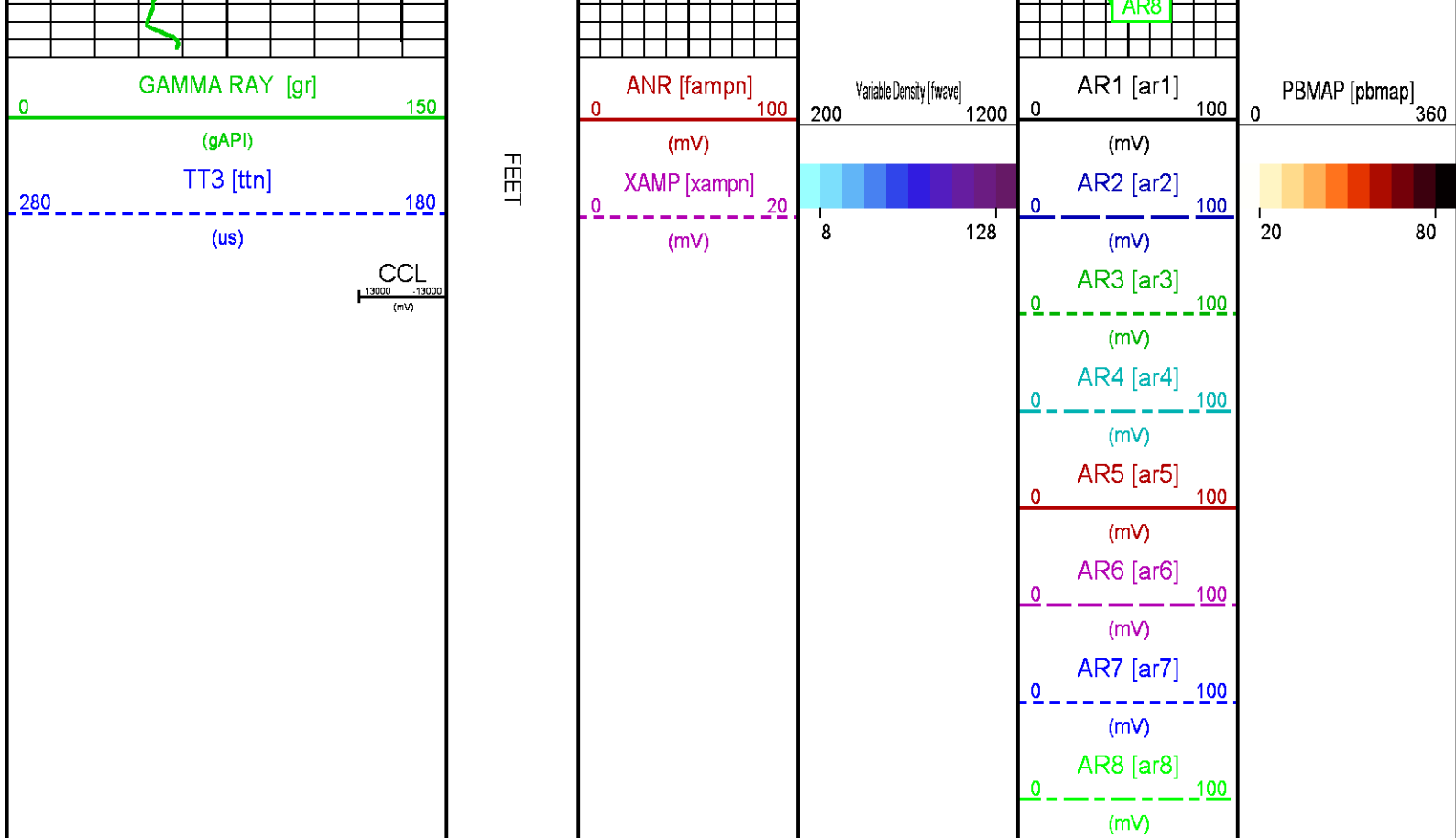












REPEAT PRESENTATION 0 PSI

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013
Updates: 1 Patches: 6

Plotted: Thu Oct 22 09:38:31 2015

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH100239/n012g01.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 7814.000 ft BOTTOM DEPTH: 8130.750 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 (fgp1*)	187	us	TOP	BOTTOM
	AMP WINDOW START (fgp2*)	187	us	"	"

	AMP WINDOW START (fgp3*)	187	us	"	"
	AMP WINDOW START (fgp4*)	187	us	"	"
	AMP WINDOW START (fgp5*)	187	us	"	"
	AMP WINDOW START (fgp6*)	187	us	"	"
	AMP WINDOW START (fgp7*)	187	us	"	"
	AMP WINDOW START (fgp8*)	187	us	"	"
	AMP WINDOW START (fgpn*)	187	us	"	"
	AMP WINDOW LENGTH	25	us	"	"
TRAVEL TIME WINDOW (NEAR)	TT WINDOW START (ttn*)	176	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 (str1*)	-67	us	"	"
	TOOL DELAY (str2*)	-67	us	"	"
	TOOL DELAY (str3*)	-67	us	"	"
	TOOL DELAY (str4*)	-67	us	"	"
	TOOL DELAY (str5*)	-67	us	"	"
	TOOL DELAY (str6*)	-67	us	"	"
	TOOL DELAY (str7*)	-67	us	"	"
	TOOL DELAY (str8*)	-67	us	"	"
	TOOL DELAY (strn*)	-67	us	"	"
BASELINE NOISE (NEAR)	NOISE WINDOW START	125	us	"	"
	NOISE WINDOW LENGTH	25	us	"	"

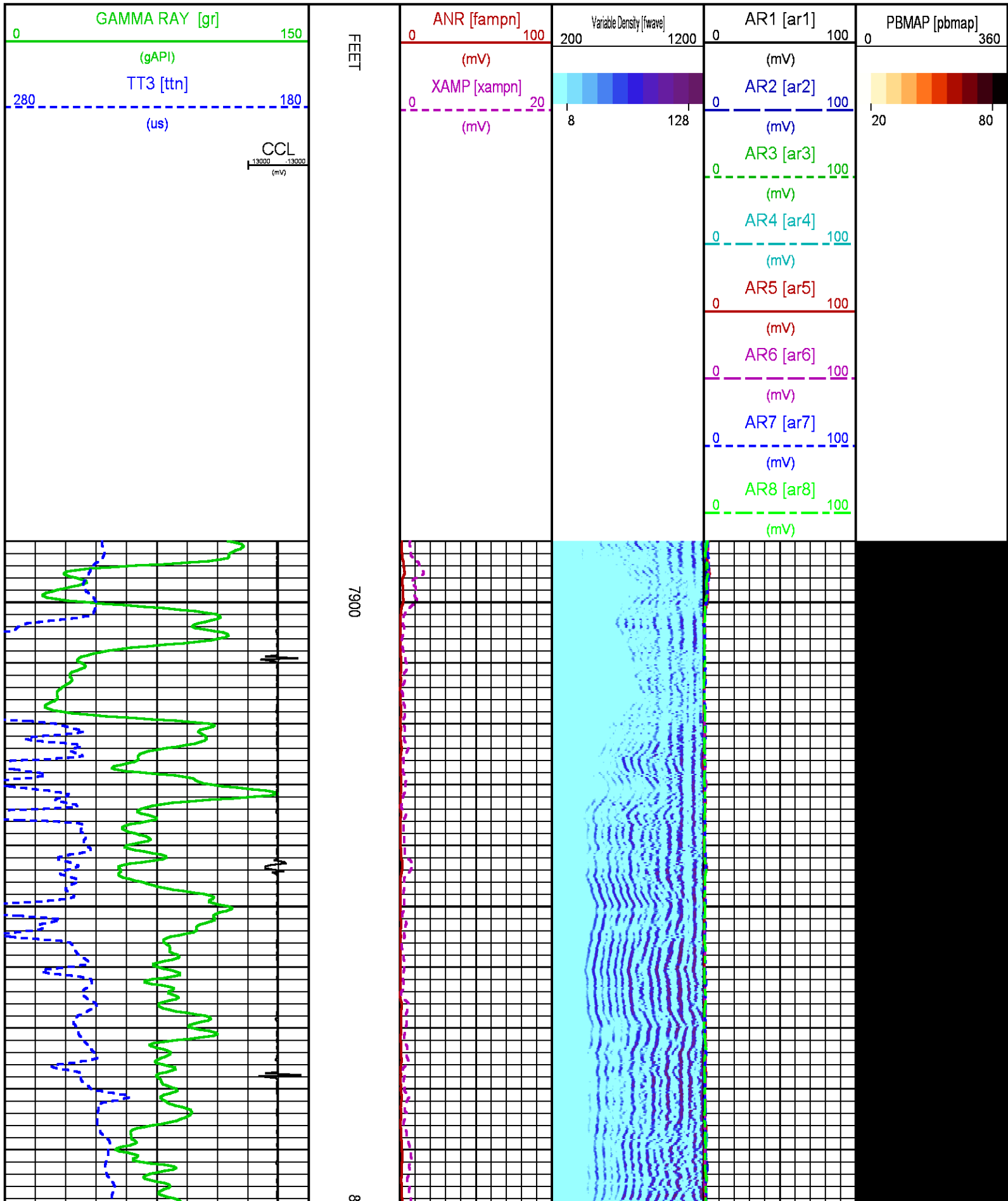
PERCENT BOND CEMENT MAP					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
RAL FREE PIPE AMPLITUDE	FREE AMP REC 1	80	mV	TOP	BOTTOM
	FREE AMP REC 2	80	mV	"	"
	FREE AMP REC 3	80	mV	"	"
	FREE AMP REC 4	80	mV	"	"
	FREE AMP REC 5	80	mV	"	"
	FREE AMP REC 6	80	mV	"	"
	FREE AMP REC 7	80	mV	"	"
	FREE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

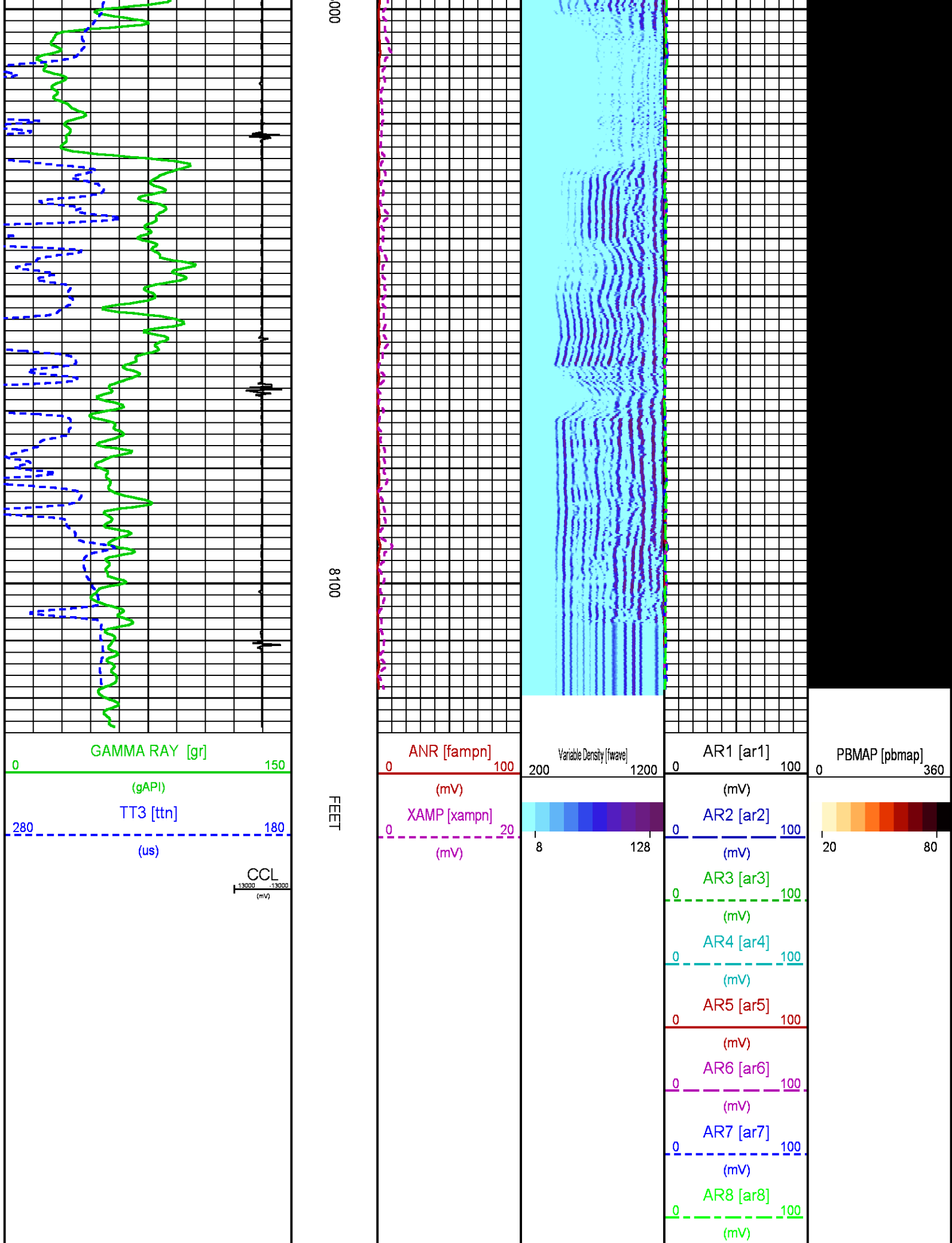
CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:AR1	Oct 22 08:53:20 2015	FIXED GATE AMPLITUDE T-R1
F1:AR2	Oct 22 08:53:20 2015	FIXED GATE AMPLITUDE T-R2
F1:AR3	Oct 22 08:53:20 2015	FIXED GATE AMPLITUDE T-R3
F1:AR4	Oct 22 08:53:20 2015	FIXED GATE AMPLITUDE T-R4
F1:AR5	Oct 22 08:53:20 2015	FIXED GATE AMPLITUDE T-R5
F1:AR6	Oct 22 08:53:20 2015	FIXED GATE AMPLITUDE T-R6
F1:AR7	Oct 22 08:53:20 2015	FIXED GATE AMPLITUDE T-R7
F1:AR8	Oct 22 08:53:20 2015	FIXED GATE AMPLITUDE T-R8
F1:CCL	Oct 22 08:53:20 2015	CASING COLLAR LOCATOR
F1:FAMPN	Oct 22 08:53:20 2015	FIXED GATE AMPLITUDE NEAR RECEIVER
F1:FWAVE	Oct 22 08:53:20 2015	FAR WAVE FORM
F1:GR	Oct 22 08:53:20 2015	GAMMA RAY
F1:PBMAP	Oct 22 08:53:20 2015	PERCENT BOND CEMENT MAP
F1:TTN	Oct 22 08:53:20 2015	TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER
F1:XAMPN	Oct 22 08:53:20 2015	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	: HL6670:/dat1a/CH100239/2M_CBL_REPEAT.fvpdf [5"/100' Scale]
Plot Interval	: 7890 - 8125 Feet

Data File 1 : F1 : HL6670:/dat1a/CH100239/02M_CBL_REPEAT.xtf
Created On : Oct 22 08:53:20 2015
Company : LARAMIE ENERGY
Well : PICEANCE FEDERAL 28-02M
Field : VEGA
File Interval : 7802.25 - 8130.75 Feet
OCT : n012g





CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/CH100239/h012g.tp1

RAL PRIMARY CALIBRATION SUMMARY

TOOL #: 1426XA 10124106

DATE/TIME PERFORMED: Thu Oct 22 08:21:45 2015

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)	-0.11	0.01	0.09	0.02	-0.05	0.00	-0.05	-0.08	-0.13	-0.85	0.06
AMP FLUID (mV)	103	103	102	103	103	102	103	103	103	133	101
TT (us)	217	217	217	217	217	216	216	216	218	324	218
M FACTOR	0.97	0.98	0.98	0.97	0.97	0.98	0.98	0.97	0.97	1.12	0.99

RAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 1426XA 10124106

DATE/TIME PERFORMED: Thu Oct 22 08:25:53 2015

DAYS SINCE CAL: 0

UNIT #: 3880TA HL6670

CABLE #: 6670SM SMALL1

	NEAR (mV)	R1 (mV)	R2 (mV)	R3 (mV)	R4 (mV)	R5 (mV)	R6 (mV)	R7 (mV)	R8 (mV)	FAR (mV)	CAL (mV)
ZERO	0.11	0.12	0.08	-0.01	-0.18	-0.19	-0.23	-0.10	0.02	0.09	0.08
AMP AIR	-0.12	-0.99	-1.01	-0.83	-0.66	-0.33	-0.10	0.26	-0.28	-0.25	99.88

SHOP M FACTOR	SHOP A FACTOR	WIRELINE FACTOR
0.99	0.00	1.00

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 1355XA 11871510

DATE/TIME PERFORMED: Fri Oct 9 09:14:59 2015

UNIT #: 3880TA HL6670

CALB JIG #: 4702NK WA-612

	BACKGROUND (cts)	CALBRTR ON (cts)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	CALBRTR (gAPI)
GR	65.78	249.56	183.8	0.816	53.69	203.69	150

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 1355XA 11871510

DATE/TIME PERFORMED: Fri Oct 9 09:16:42 2015

UNIT #: 3880TA HL6670

VERI JIG #: 4702NK WA-612

	BACKGROUND (cts)	CALBRTR ON (cts)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	66.93	242.00	0.816	54.63	197.52	142.89
						140.00 160.00

INSTRUMENT CONFIGURATION

Source File: /dat1a/CH100239/CBL-tdg

A3 CABLEHEAD

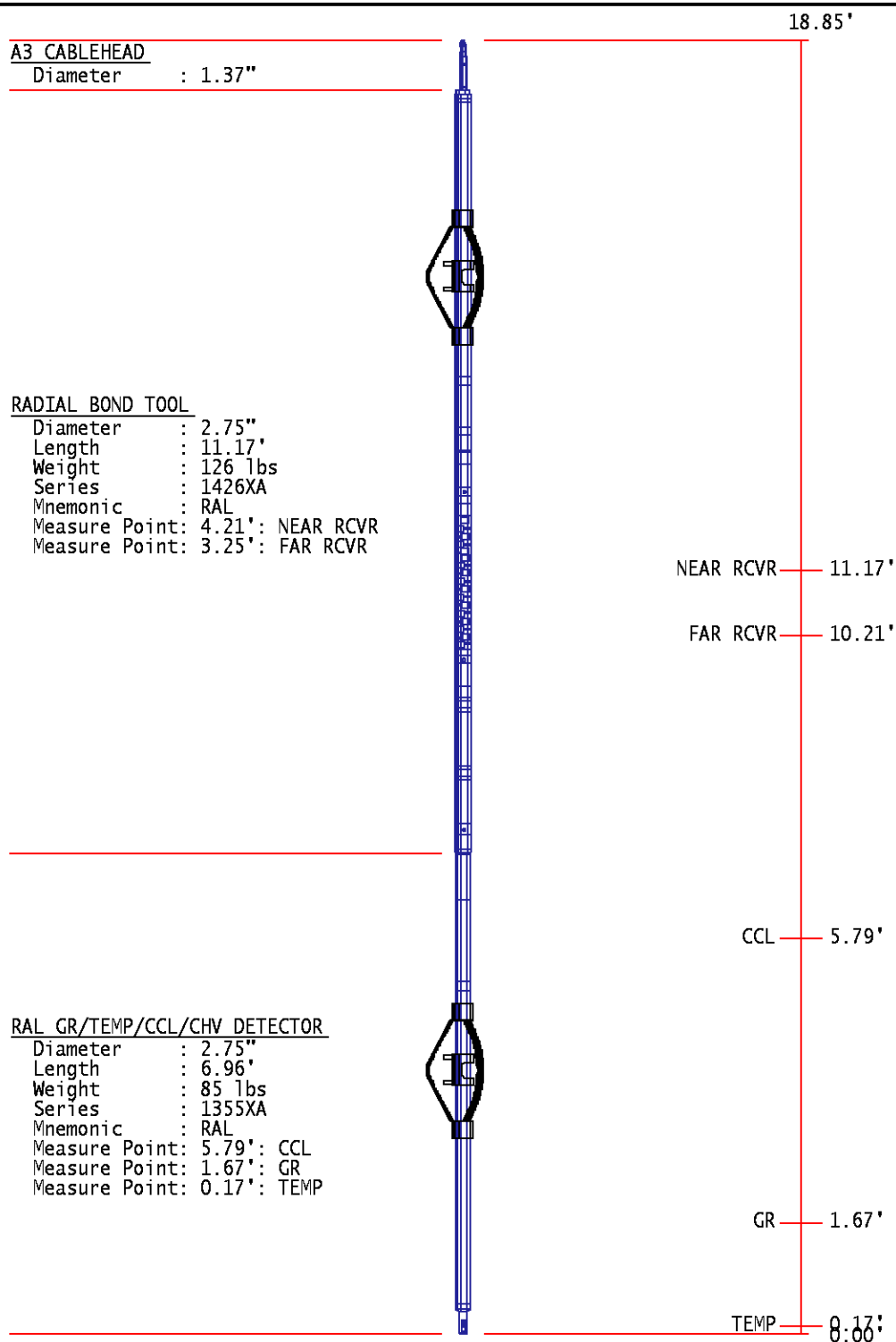
Diameter : 1.37"

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



TOTAL LENGTH: 18.85'
TOTAL WEIGHT: 227 lbs
MAX DIAMETER: 0'4.00"

	COMPANY	LARAMIE ENERGY		FILE NO:	CH100239	
	WELL	PICEANCE FEDERAL 28-02M		API NO:	05077102390000	
	FIELD	VEGA				
	COUNTY	MESA	STATE	COLORADO		
	LOCATION:			ELEVATIONS:	28 9S 93W	
	SHL: LAT 39.251061 LONG -107.779508			KB 7578 FT	28-05 PAD	
	BHL: LAT 39.254282 LONG -107.774519			DF	PATTERSON 306	
	SEC	28	TWP	9S	RGE	93W
				DATE	22-Oct-2015	