



RADIAL CEMENT BOND LOG

FILE NO: CH132065	COMPANY LARAMIE ENERGY LLC
API NO: 05077104700000	WELL BRUTON 30-16E
	FIELD VEGA
	COUNTY MESA STATE COLORADO

Version	LOCATION: SHL: 2614' FNL & 1869' FEL BHL: 1617' FSL & 1336' FEL SEC 30 TWP 9S RGE 93W	OTHER SERVICES RPM
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PERMANENT DATUM	GL	ELEVATION	7643 FT
LOG MEASURED FROM	KB	30 FT	ABOVE P.D.
DRILL. MEAS. FROM	KB		
		ELEVATIONS:	KB 7673 FT DF GL 7643 FT

DATE	02-Feb-2018		
RUN	TRIP	1	1
SERVICE ORDER	US132065		
DEPTH DRILLER	7775 FT		
DEPTH LOGGER	7725 FT		
BOTTOM LOGGED INTERVAL	7725 FT		
TOP LOGGED INTERVAL	30 FT		
TIME STARTED	16:00		
TIME FINISHED	18:00		
OPERATOR RIG TIME	2 HOURS		
TYPE OF FLUID IN HOLE	WATER		
FLUID DENSITY	NA		
FLUID SALINITY	NA		
FLUID LEVEL	54 FT		
LOGGED CEMENT TOP	1576 FT		
WELLHEAD PRESSURE	0 PSI		
MAXIMUM HOLE DEVIATION	NA		
NOMINAL LOGGING SPEED	100 F/MN		
MAX. RECORDED TEMP.	227 DEGF		
REFERENCE LOG	NA		
REFERENCE LOG DATE	NA		
EQUIP. NO.	LOCATION	ML-4291	GRAND JCT.
RECORDED BY	T. NEWELL		
WITNESSED BY	NA		

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 WELLBORE*

OPERATION 1: RAL/GR/CCL RUN CENTRALIZED

LOGGED WITH 0 PSI ON WELLHEAD

SJ: 5843' - 5865'
SJ: 6940' - 6961'

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	RAL	1426XA	10124106	CENTRALIZED
1	1	GR/CCL	1355XA	11856714	CENTRALIZED

RAL MAIN PASS 0 PSI

ECLIPS 7.0i ECLIPS General Release Rel 7.0i Thu Jun 08 20:36:10 CDT 2017

Patches: 2

Plotted: Mon Feb 5 13:49:33 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_BRUTON_30-15E/p012g02.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 8.250 ft BOTTOM DEPTH: 7723.000 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	0.00		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	25	us	"	"
TRAVEL TIME WINDOW (NEAR)	TT WINDOW START (ttn*)	175	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*)	-68	us	"	"
	TOOL DELAY (str2*)	-68	us	"	"
	TOOL DELAY (str3*)	-68	us	"	"
	TOOL DELAY (str4*)	-68	us	"	"
	TOOL DELAY (str5*)	-68	us	"	"
	TOOL DELAY (str6*)	-68	us	"	"
	TOOL DELAY (str7*)	-68	us	"	"
	TOOL DELAY (str8*)	-68	us	"	"
	TOOL DELAY (strn*)	-68	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

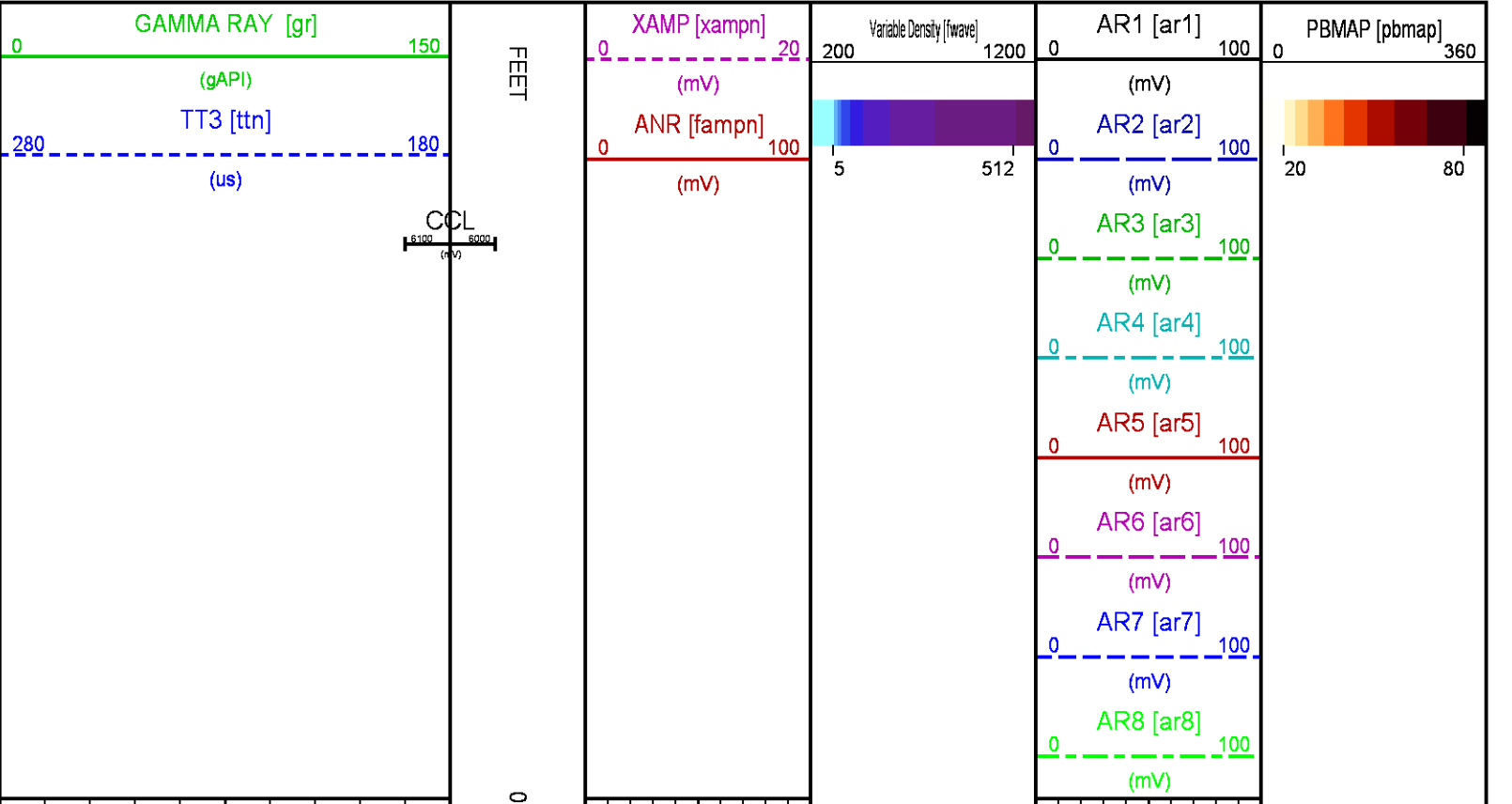
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:AR1	N/A	FIXED GATE AMPLITUDE T-R1
F1:AR2	N/A	FIXED GATE AMPLITUDE T-R2
F1:AR3	N/A	FIXED GATE AMPLITUDE T-R3
F1:AR4	N/A	FIXED GATE AMPLITUDE T-R4
F1:AR5	N/A	FIXED GATE AMPLITUDE T-R5
F1:AR6	N/A	FIXED GATE AMPLITUDE T-R6
F1:AR7	N/A	FIXED GATE AMPLITUDE T-R7
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

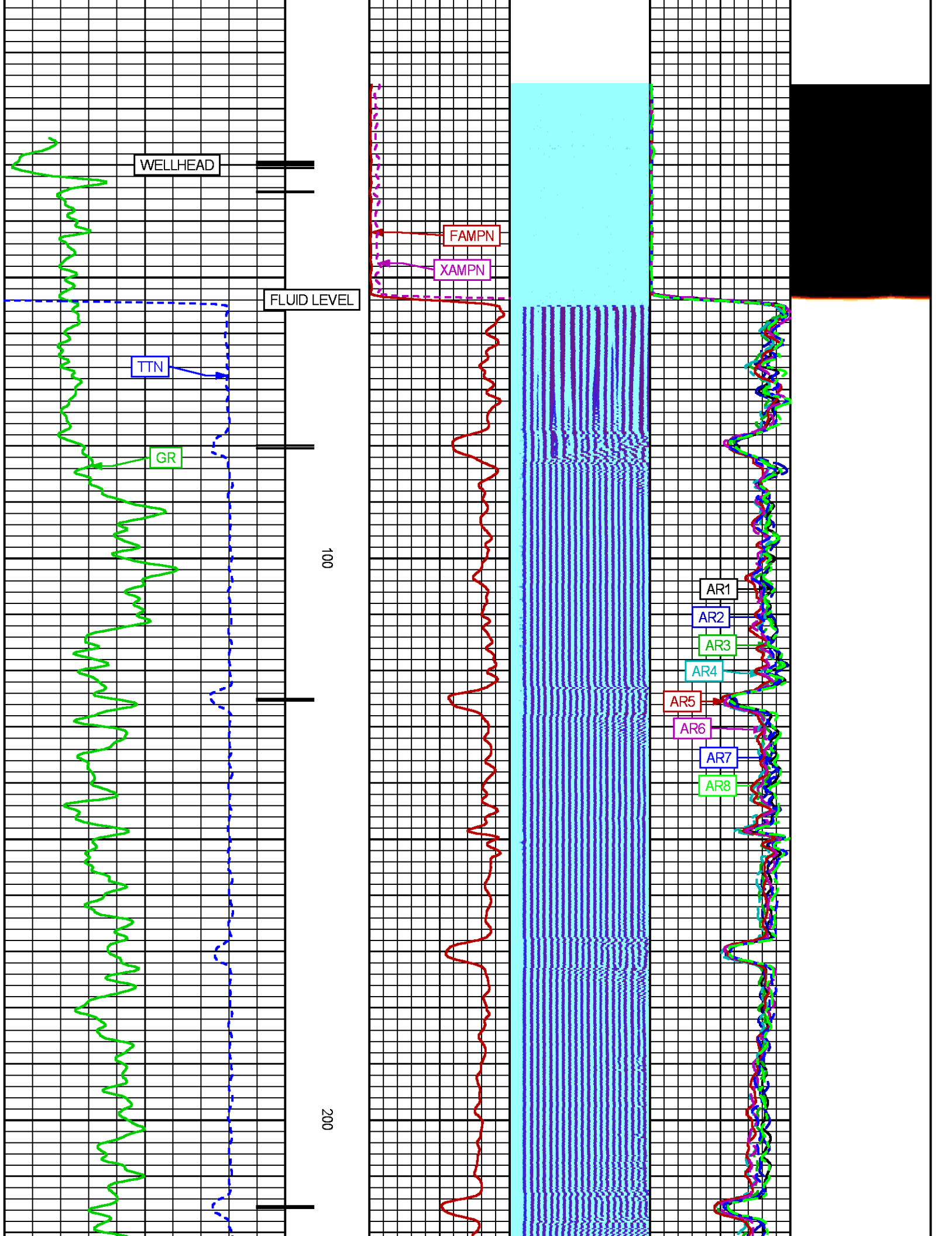
CURVE MEASURE POINT OFFSET

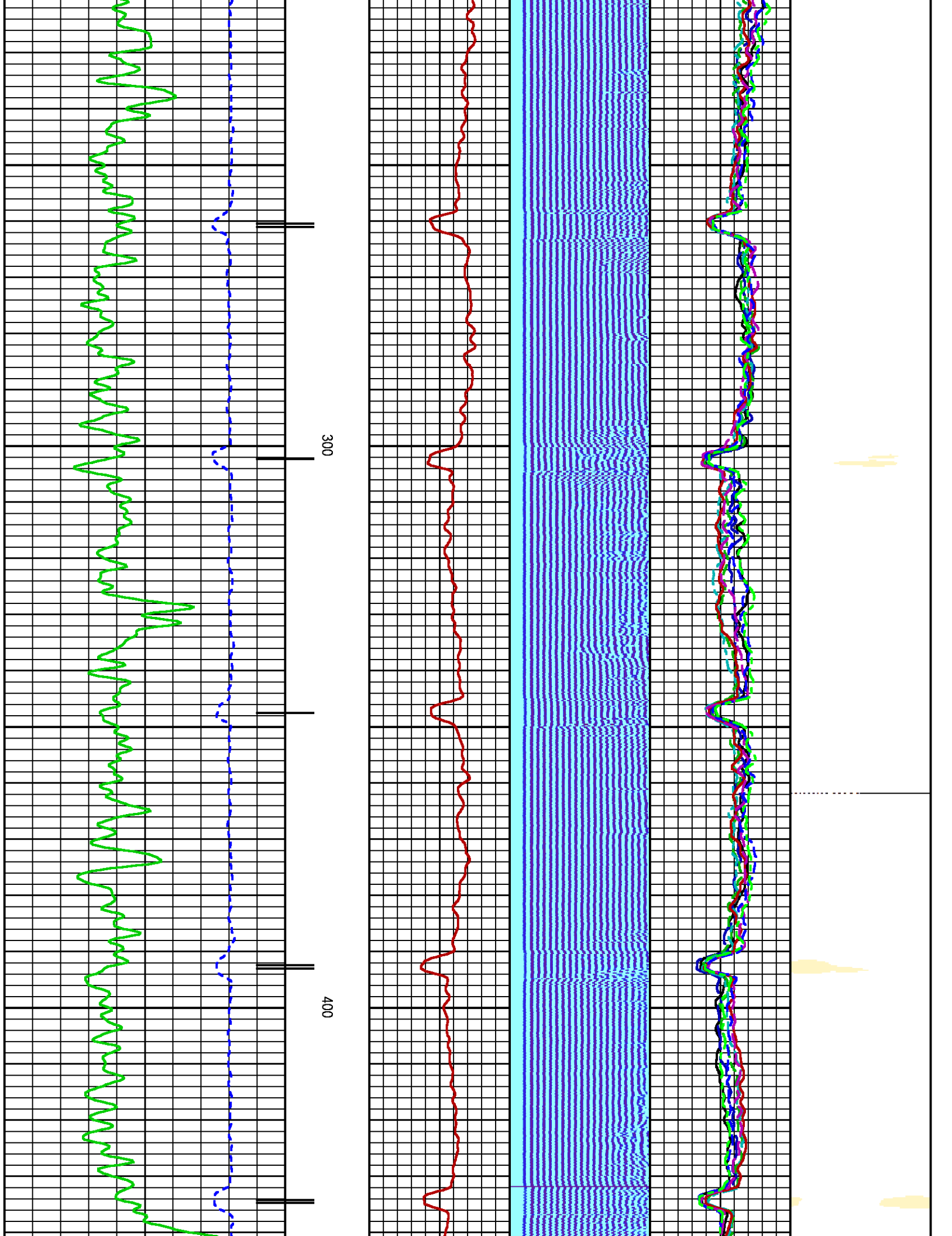
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
AR1	-11.25	AR5	-11.25	CCL	-5.75	XAMPN	-11.25
AR2	-11.25	AR6	-11.25	FAMPN	-11.25		
AR3	-11.25	AR7	-11.25	GR	-1.75		
AR4	-11.25	AR8	-11.25	TTN	-11.25		

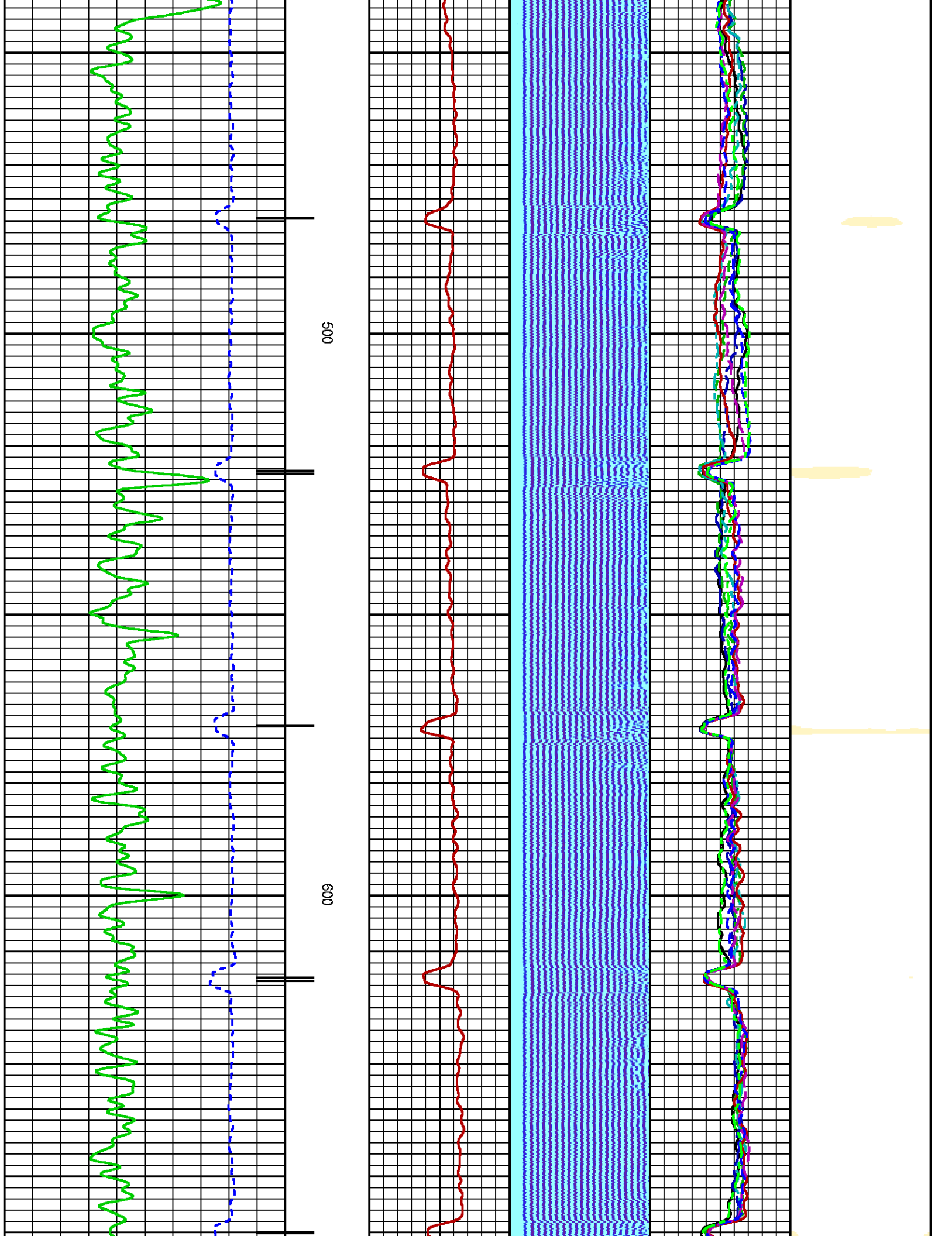
Presentation : SysA:/dat1a/LARAMIE_BRUTON_30-15E/30-15E_RAL_MAIN.fvpdf [5"/100" Scale]
Plot Interval : 0 - 7739.25 Feet

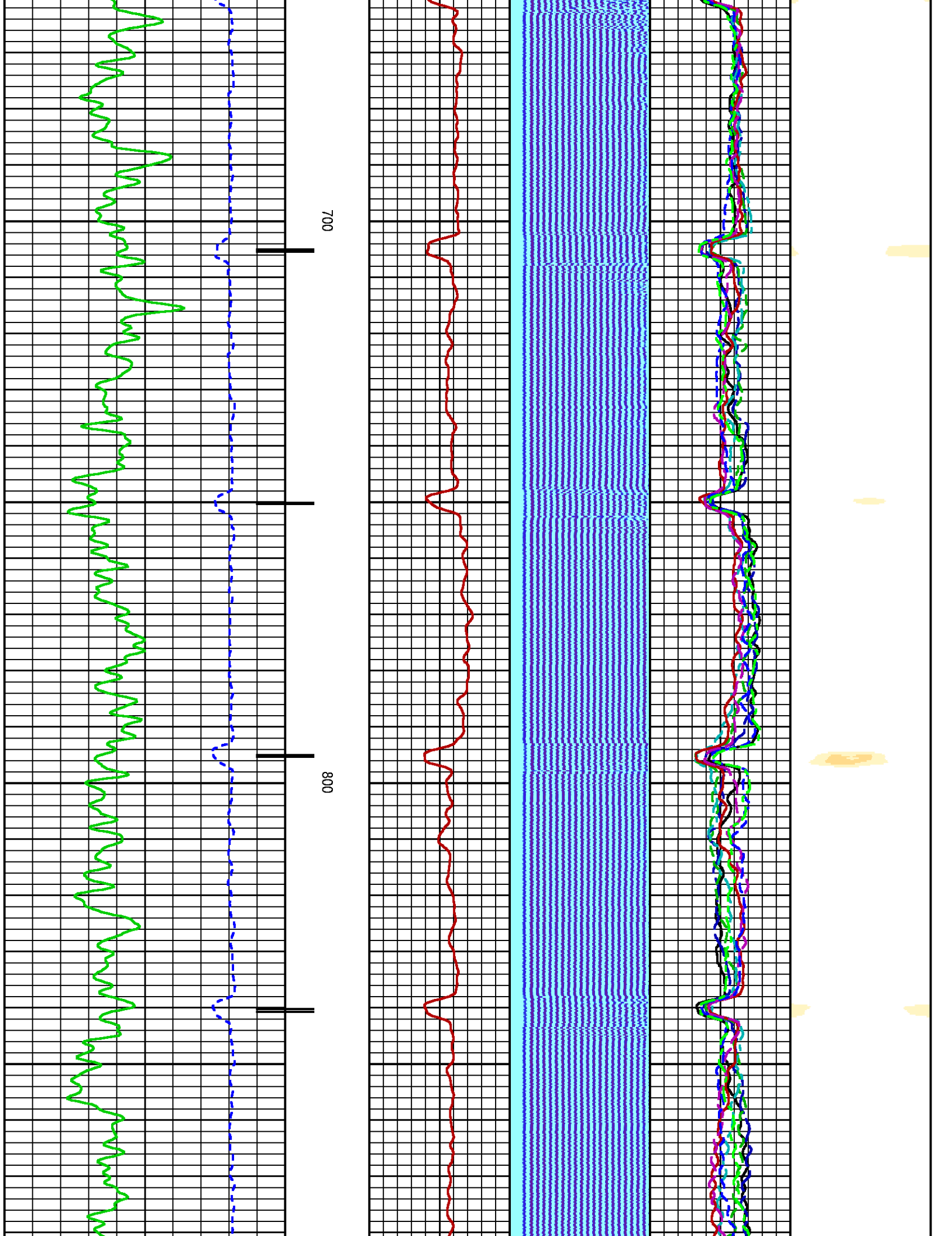
Data File 1 : F1 : SysA:C:\Users
Created On : \\na\m\i\Desktop\LARAMIE_BRUTON_30-15E\30-15E_RAL_MAIN.xtf
Company : LARAMIE ENERGY LLC
Well : BRUTON 30-15E
Field : VEGA
File Interval : 8.25 - 7740.5 Feet
OCT : p012g

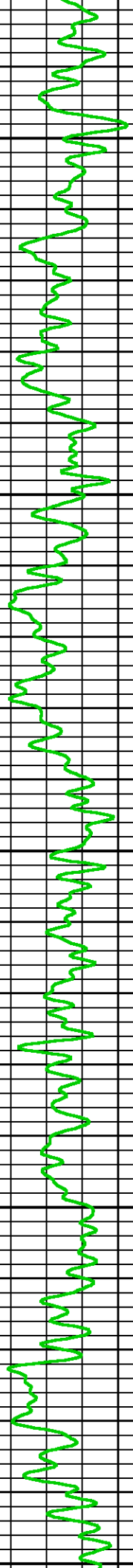
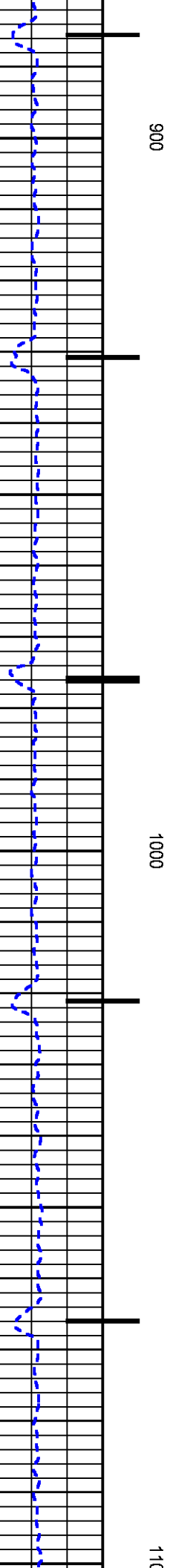
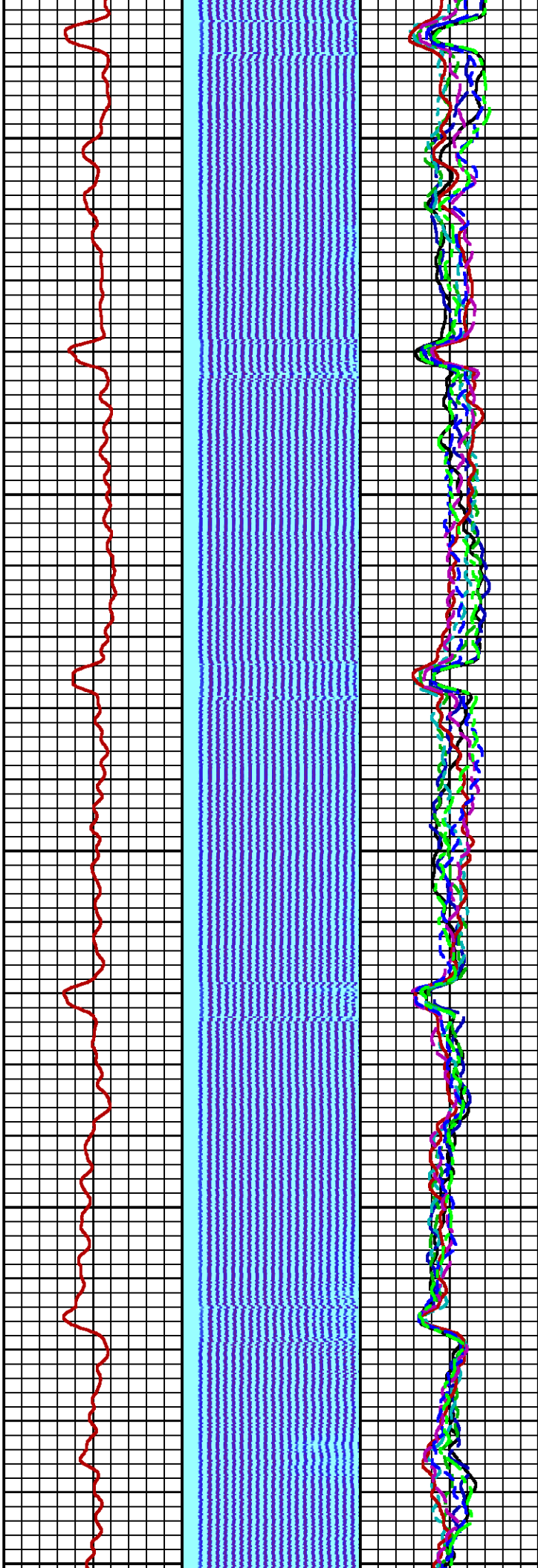
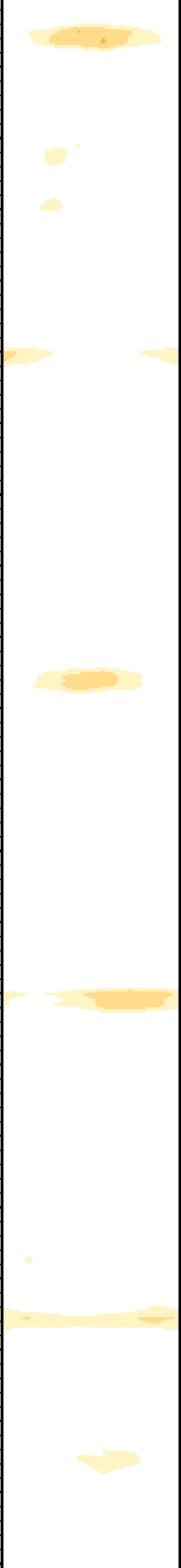


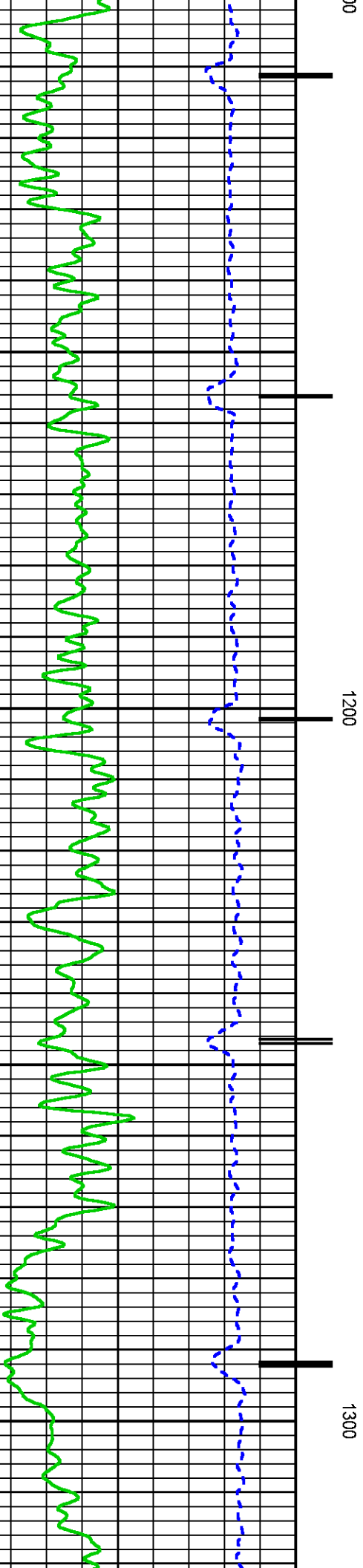
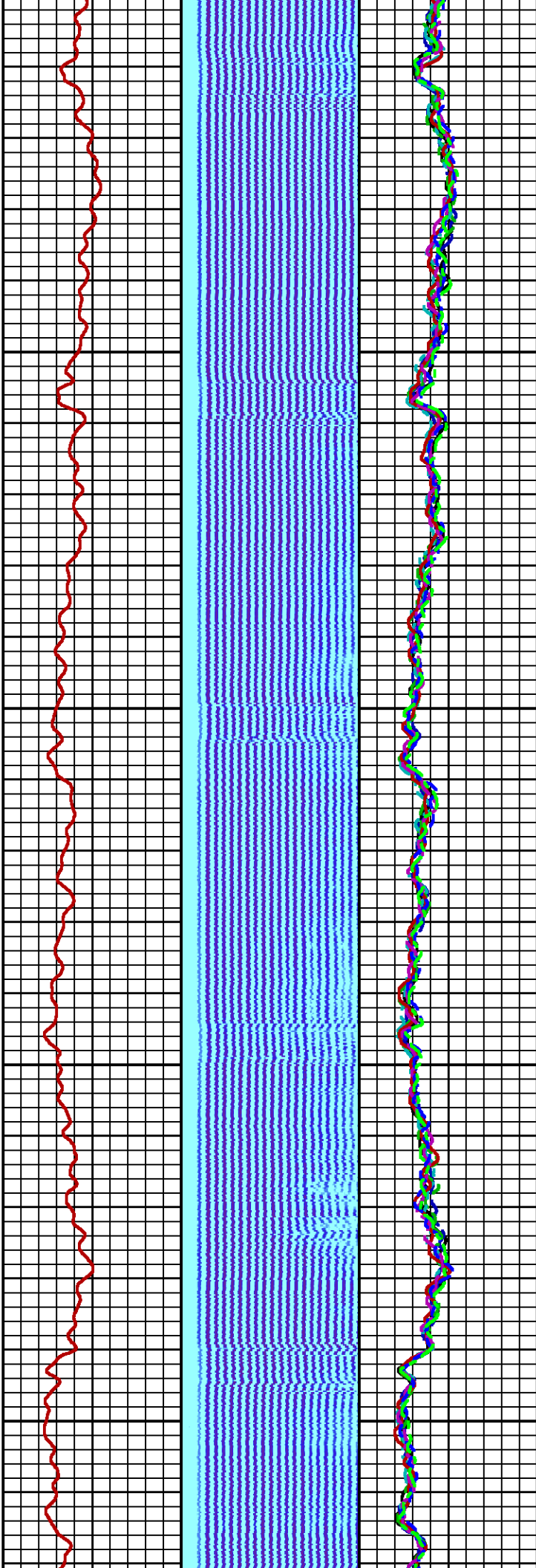
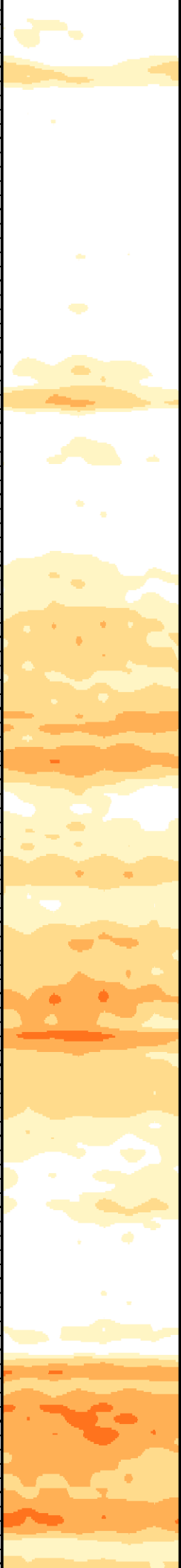


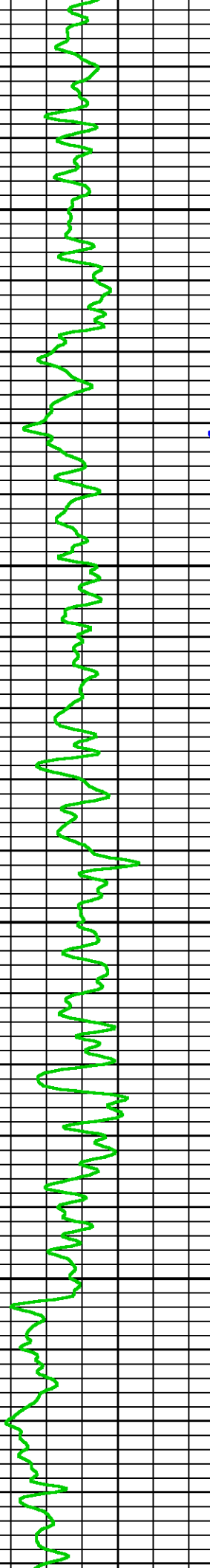
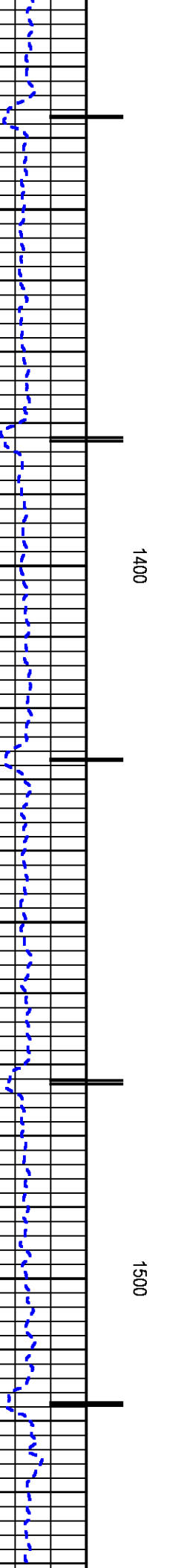
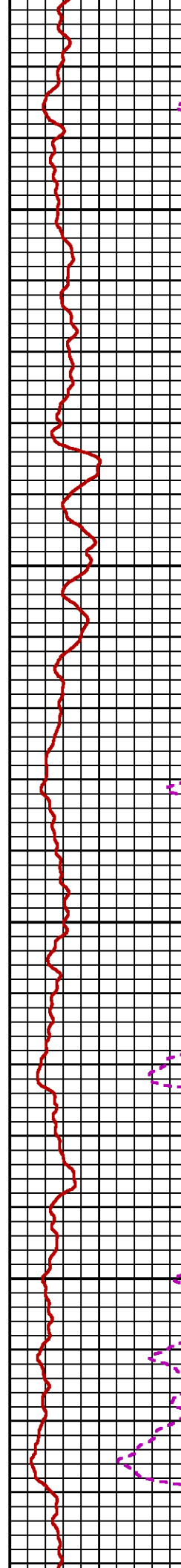
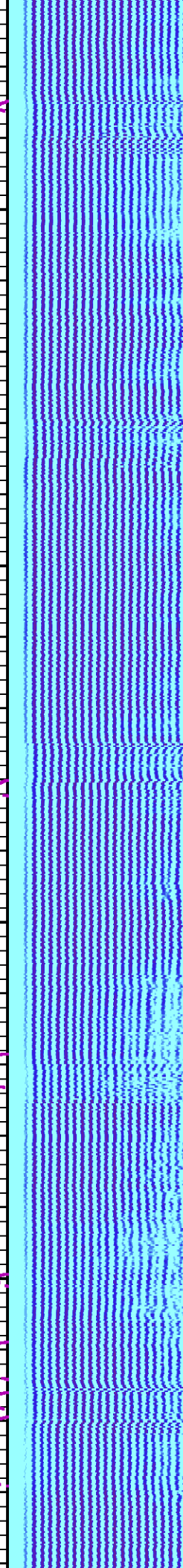
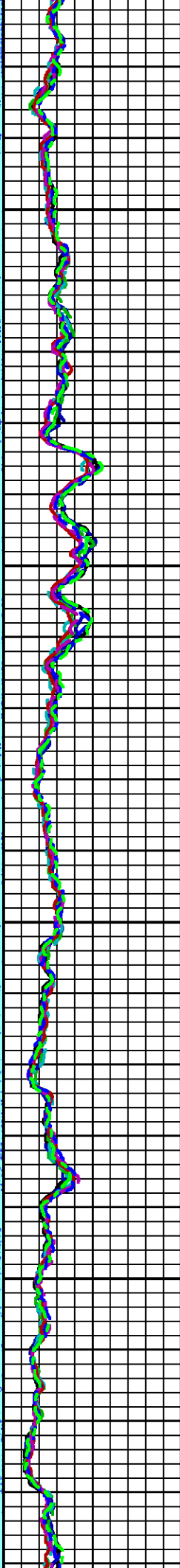
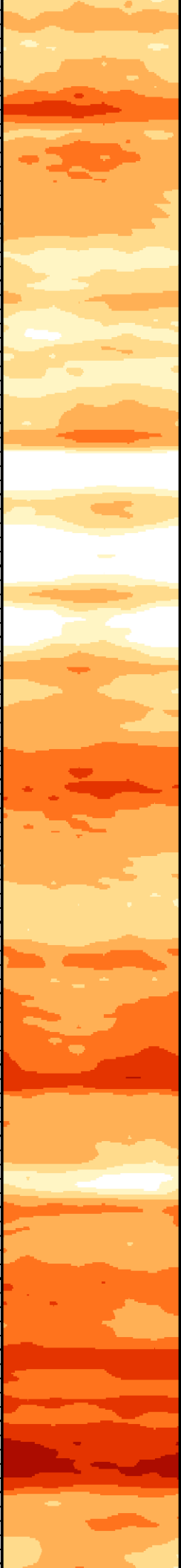


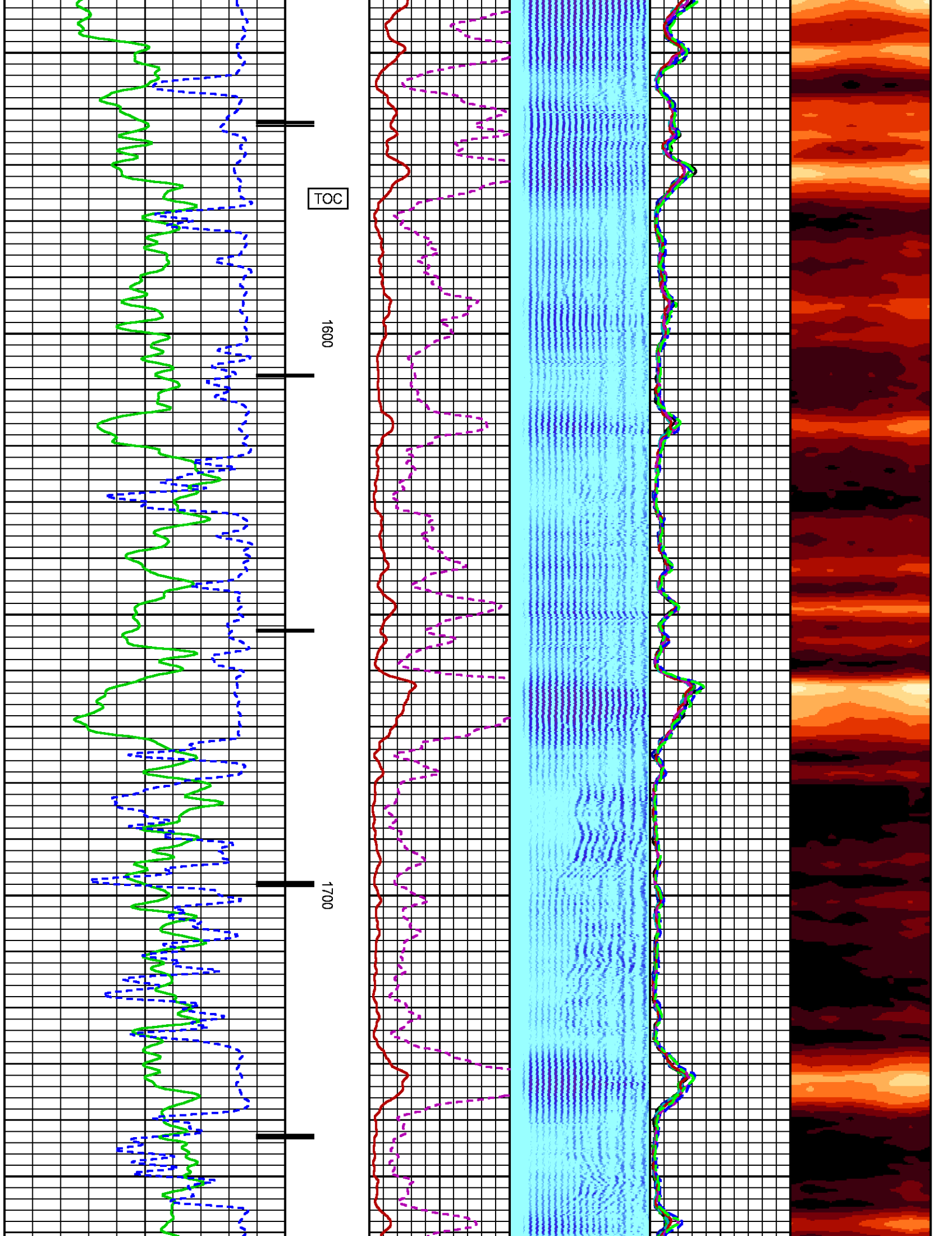


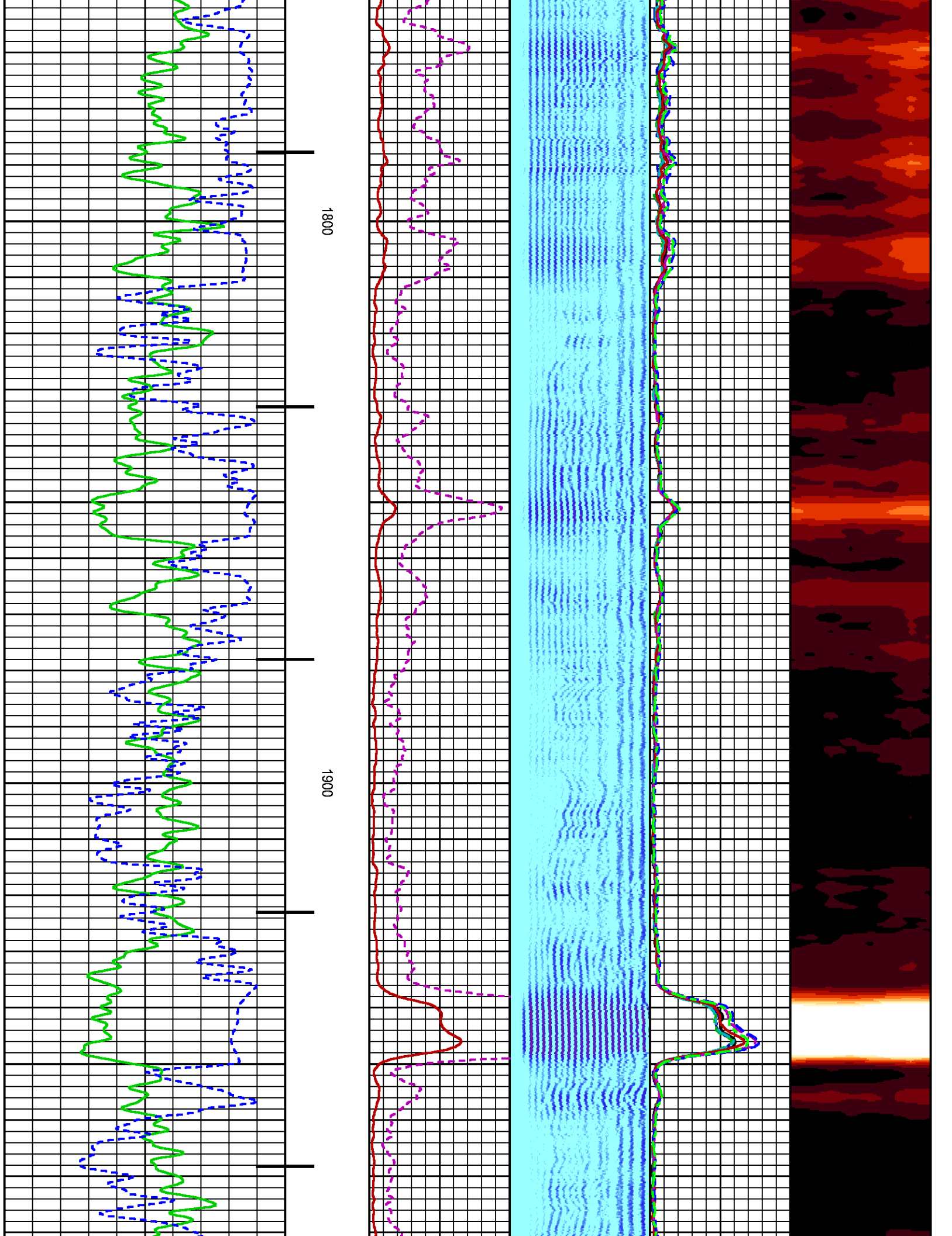


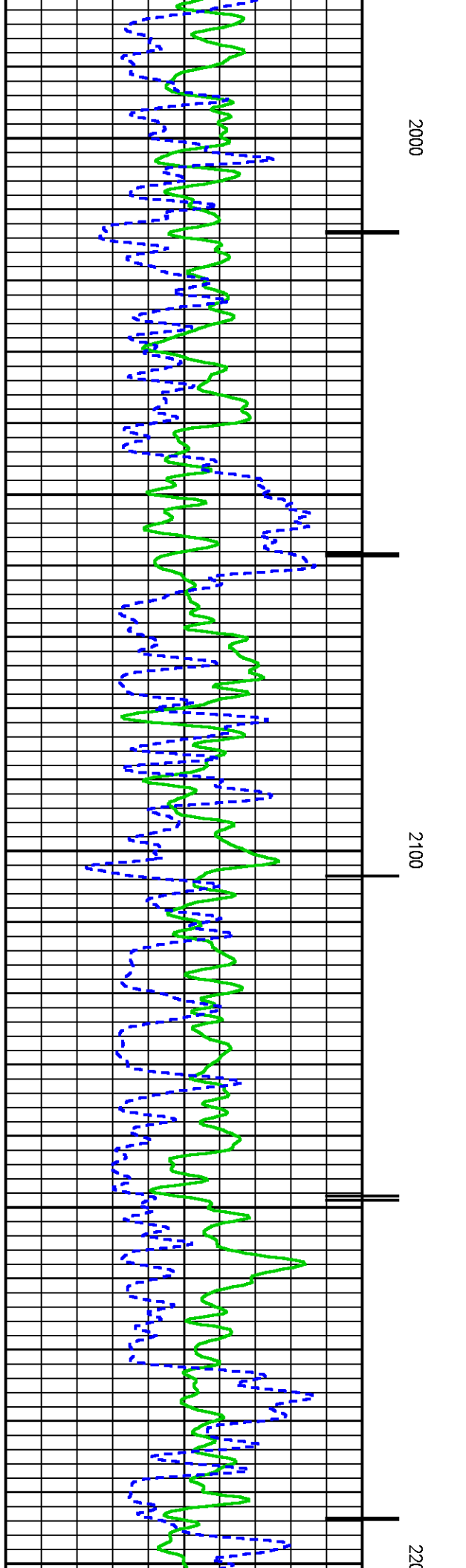
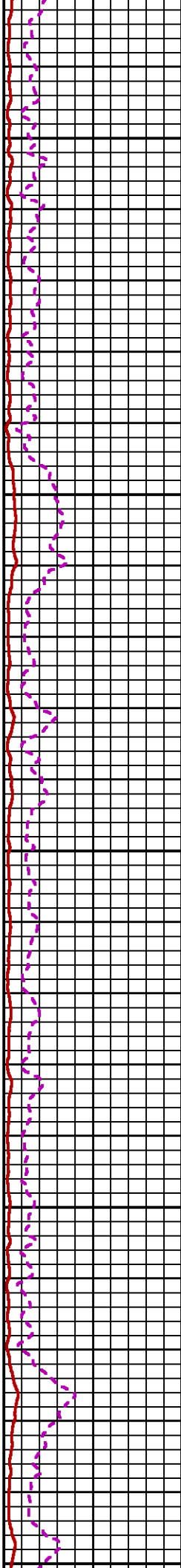
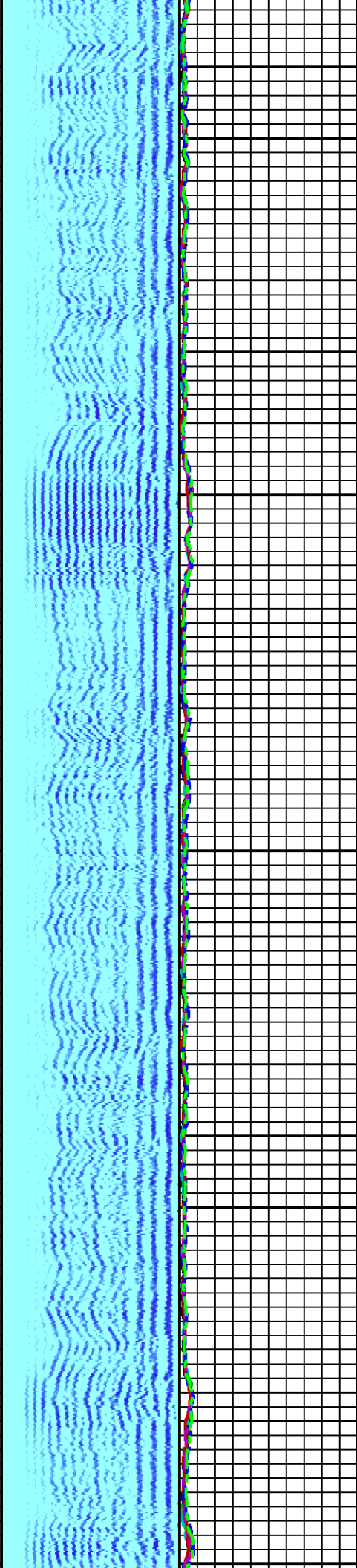








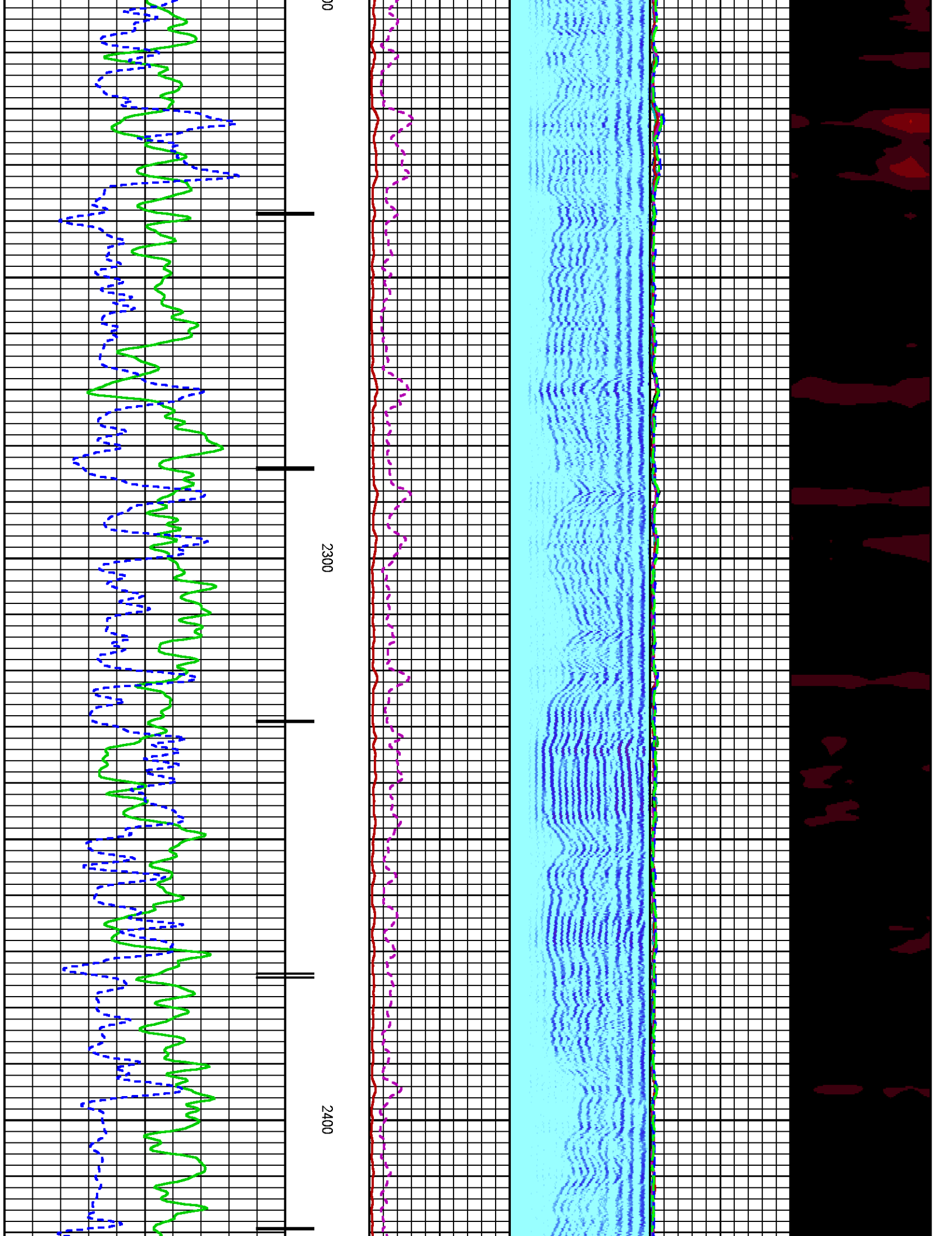


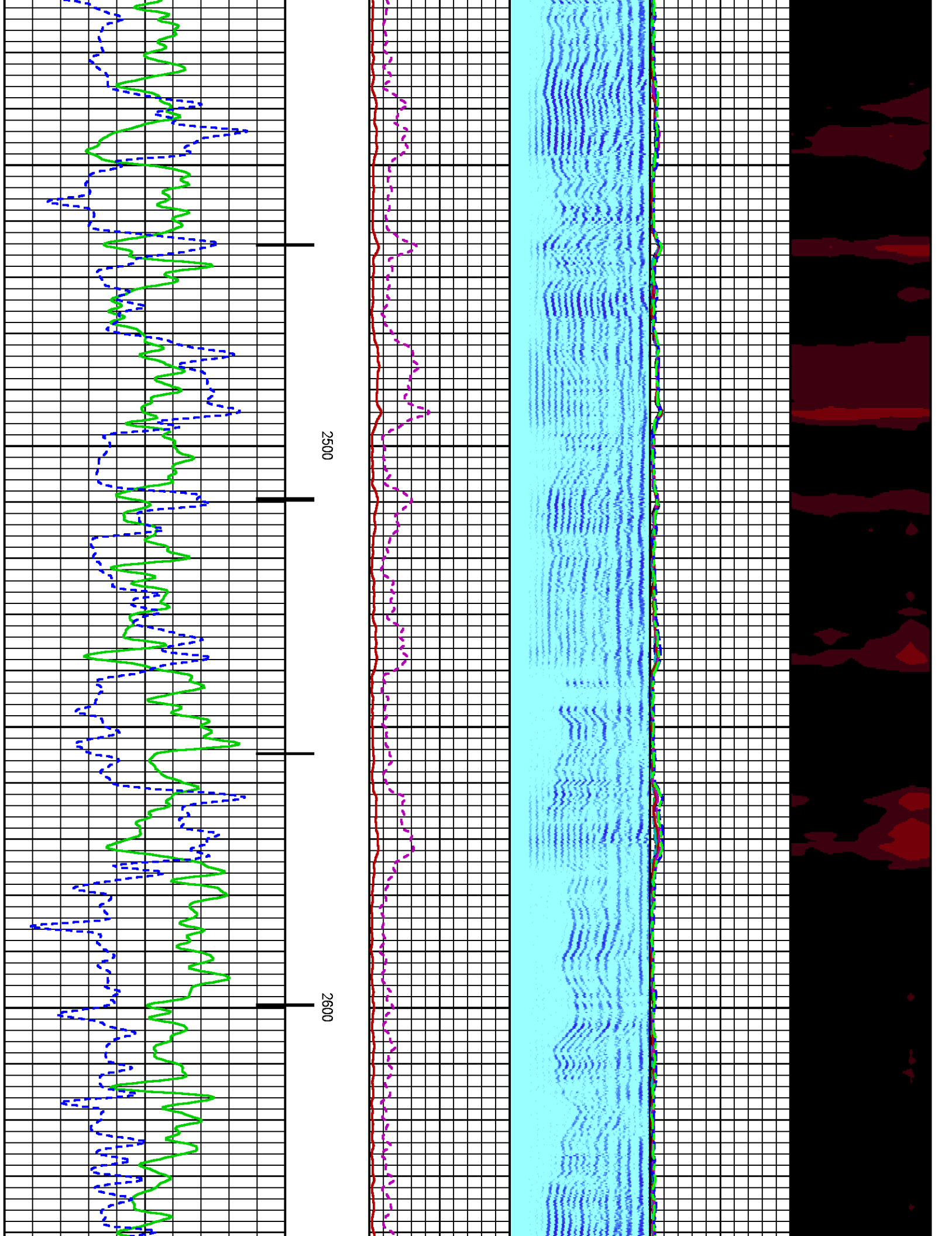


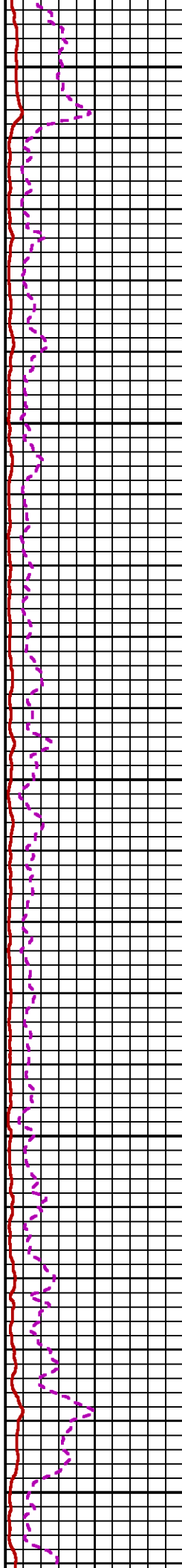
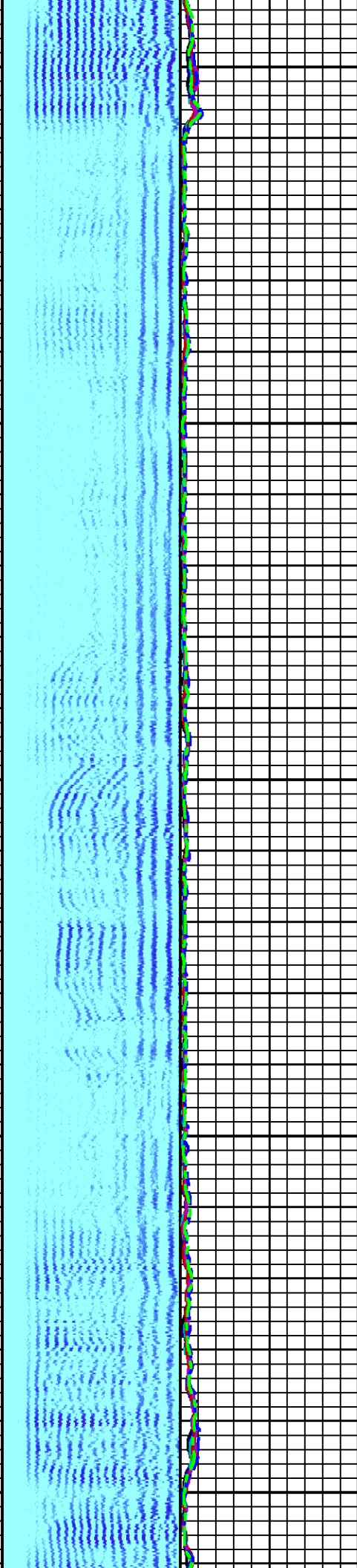
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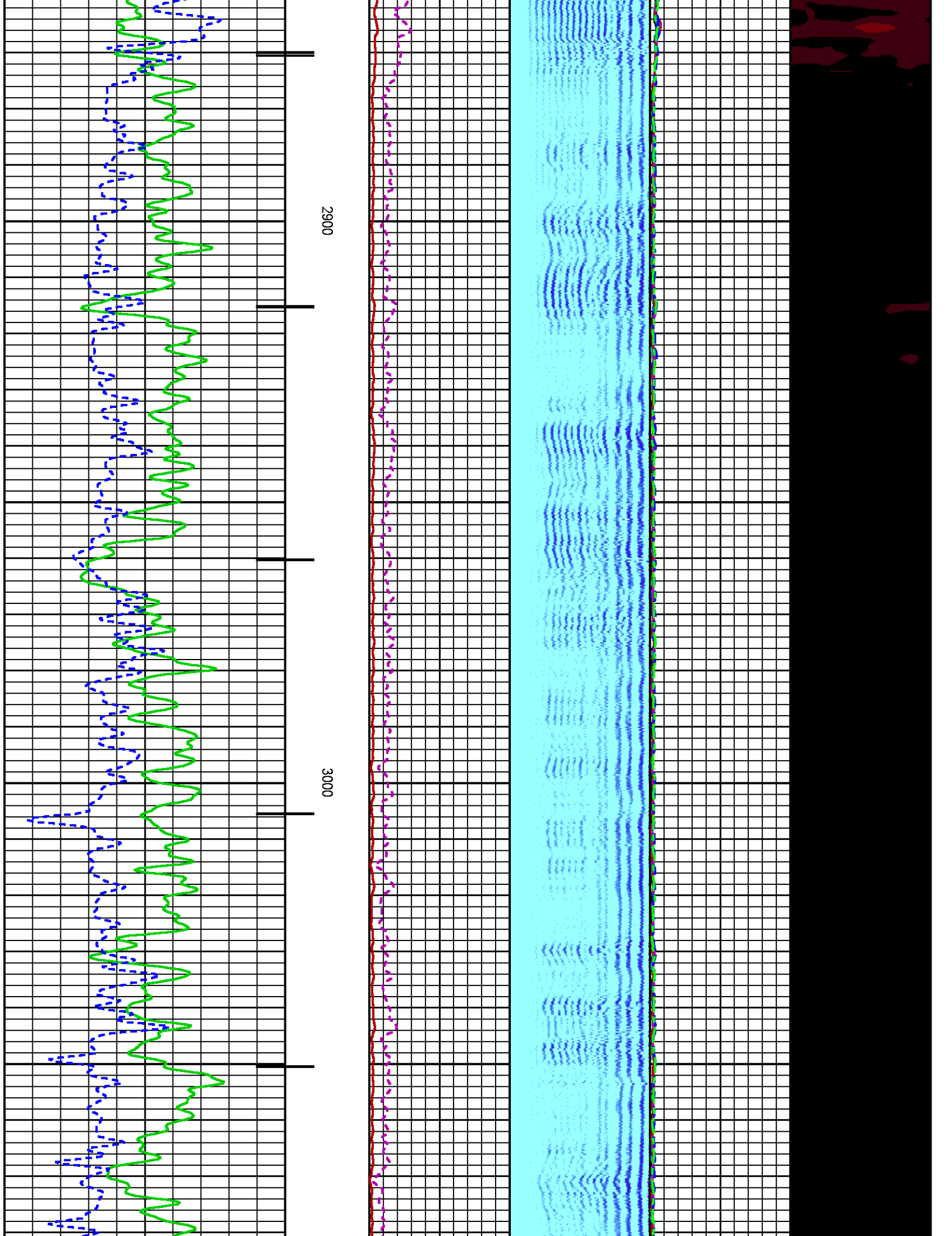


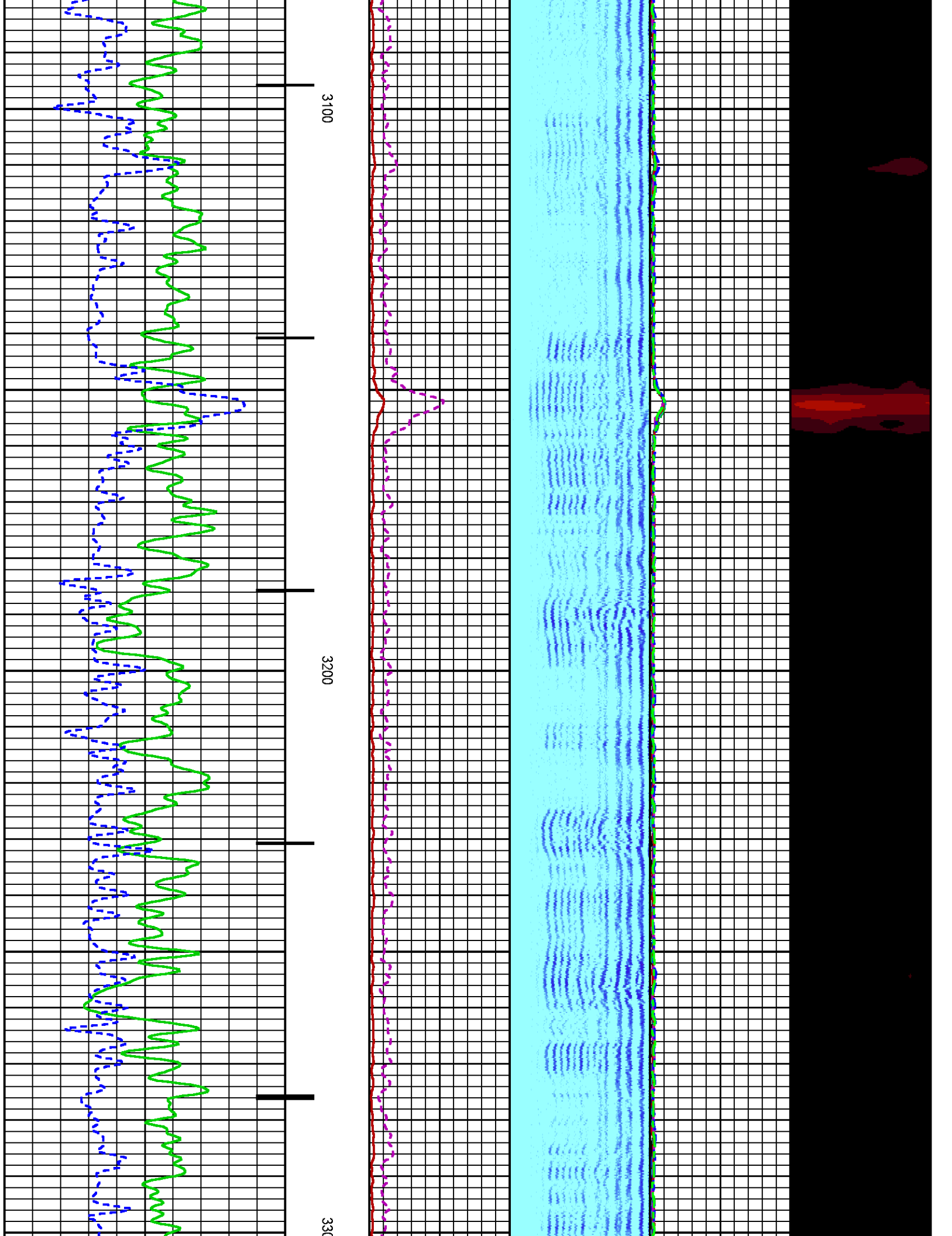


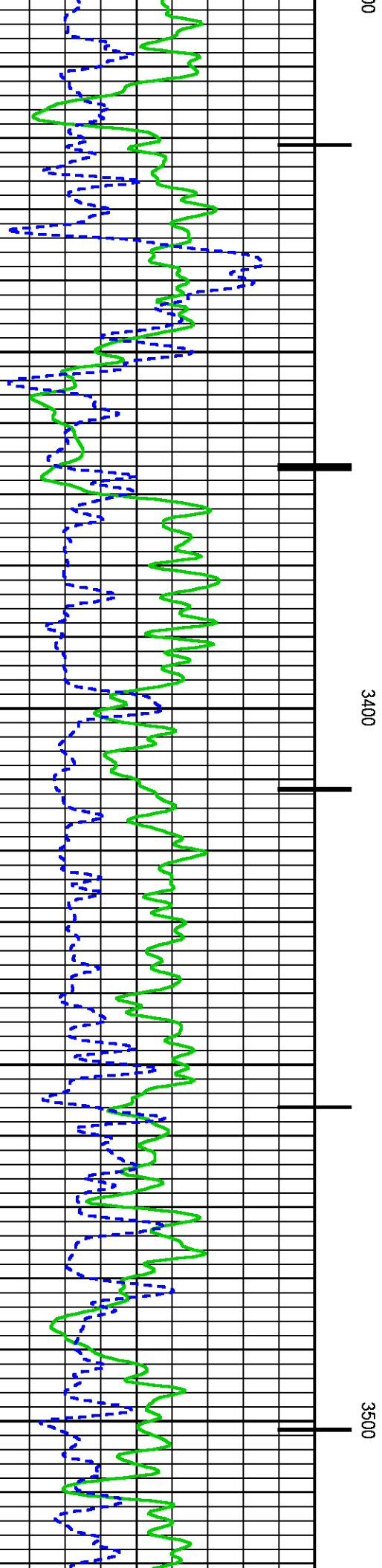
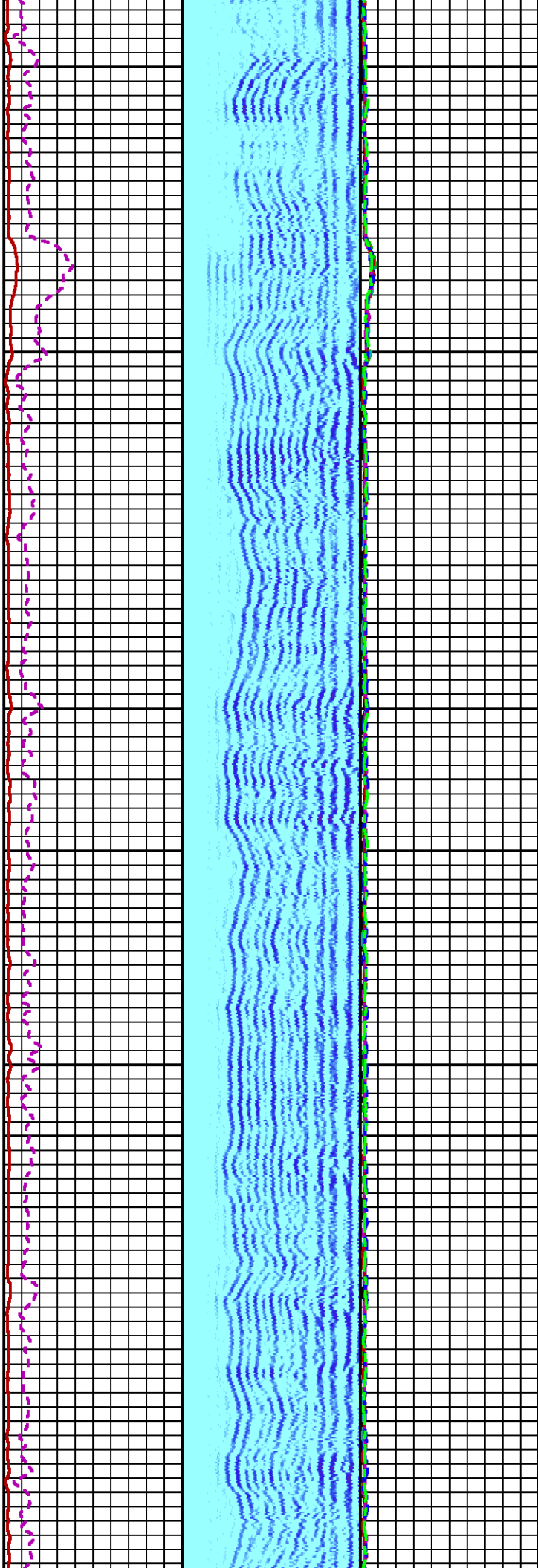


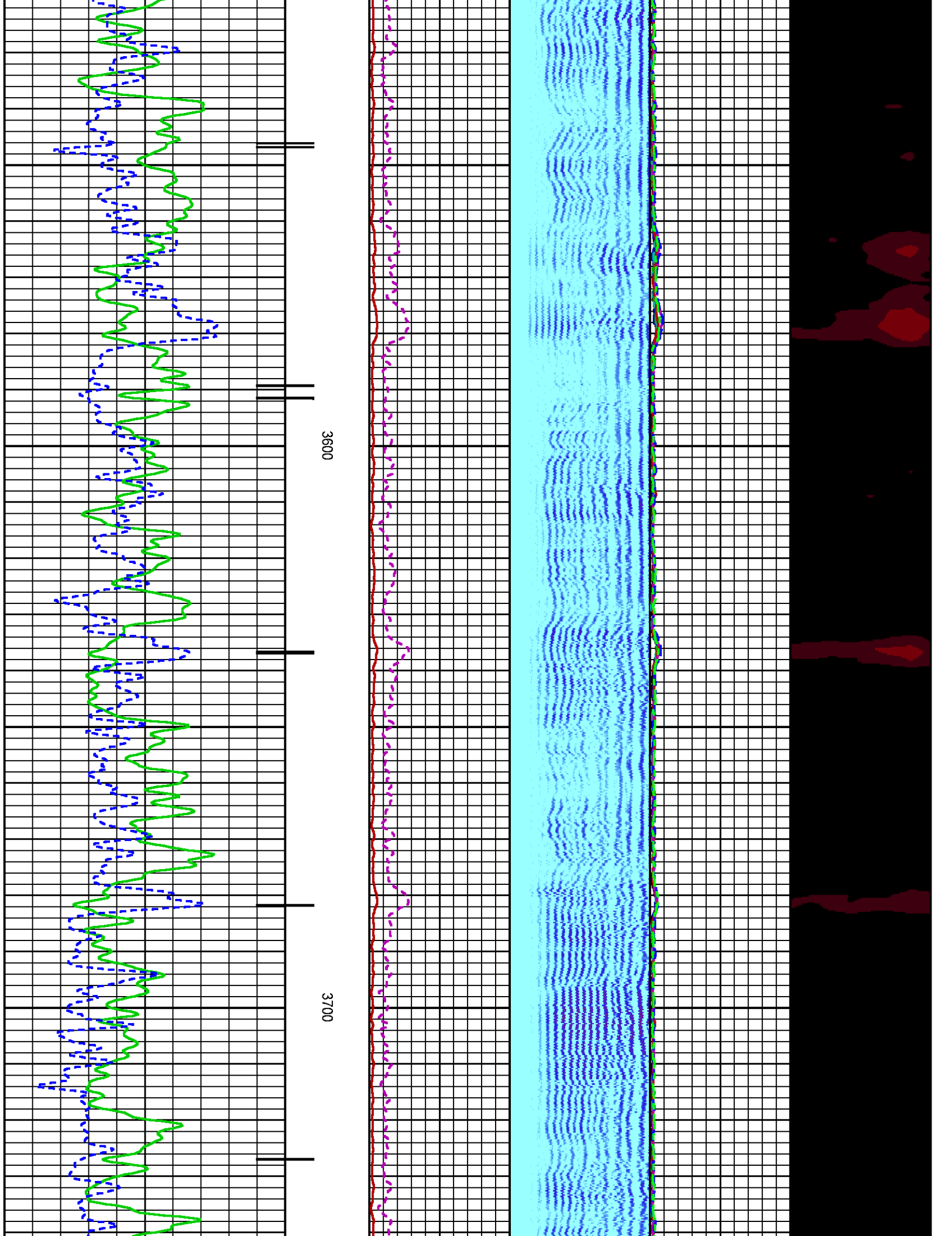
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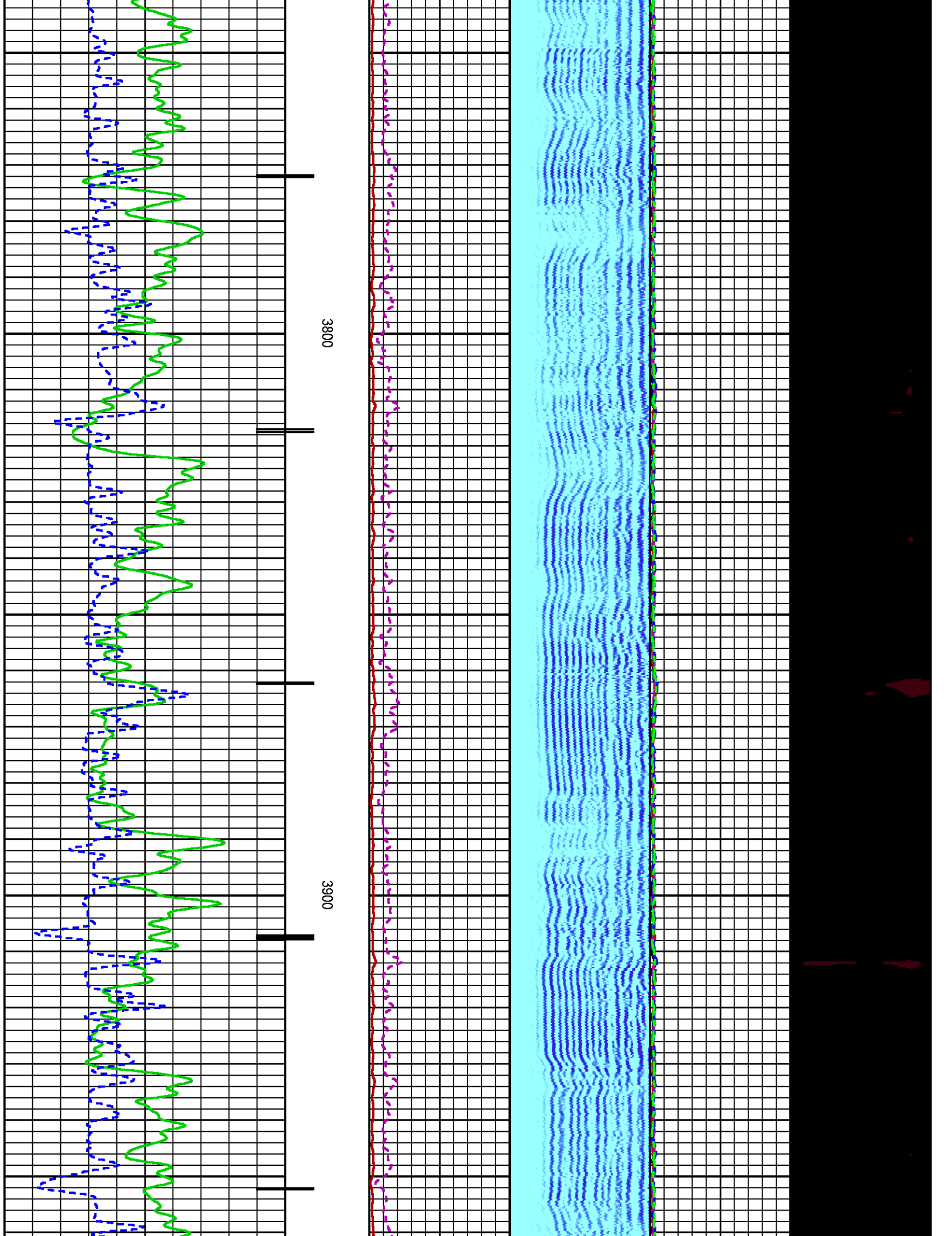
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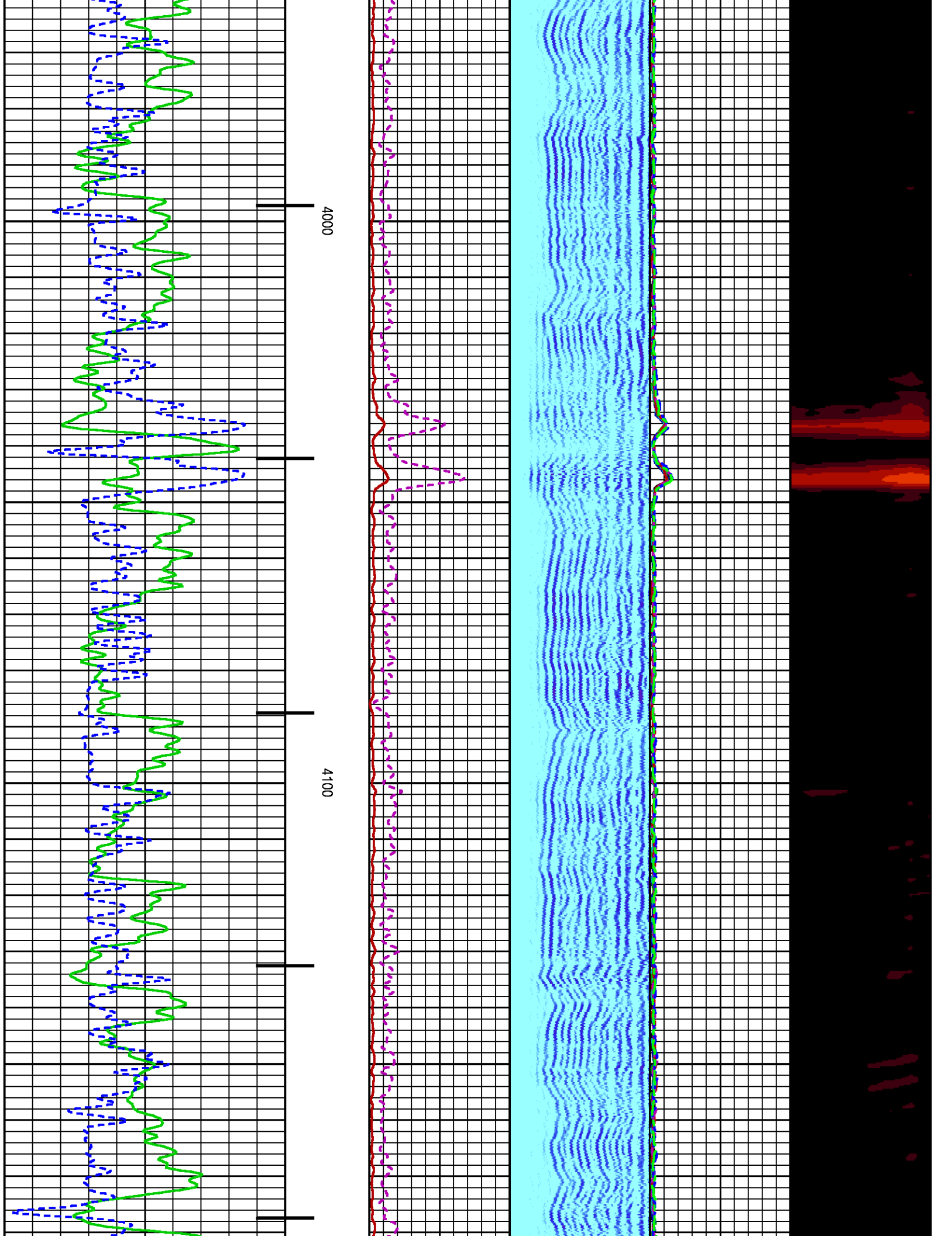


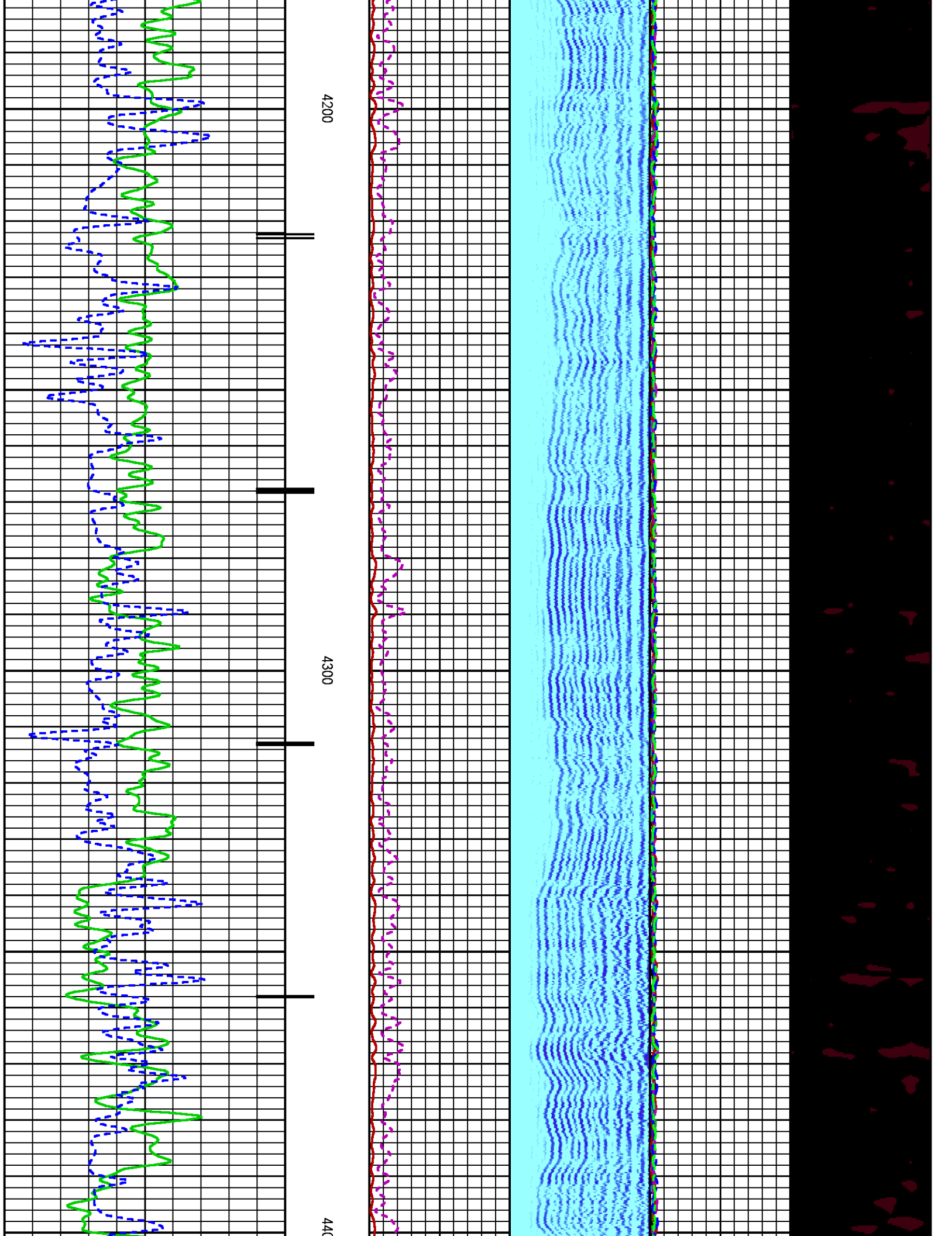


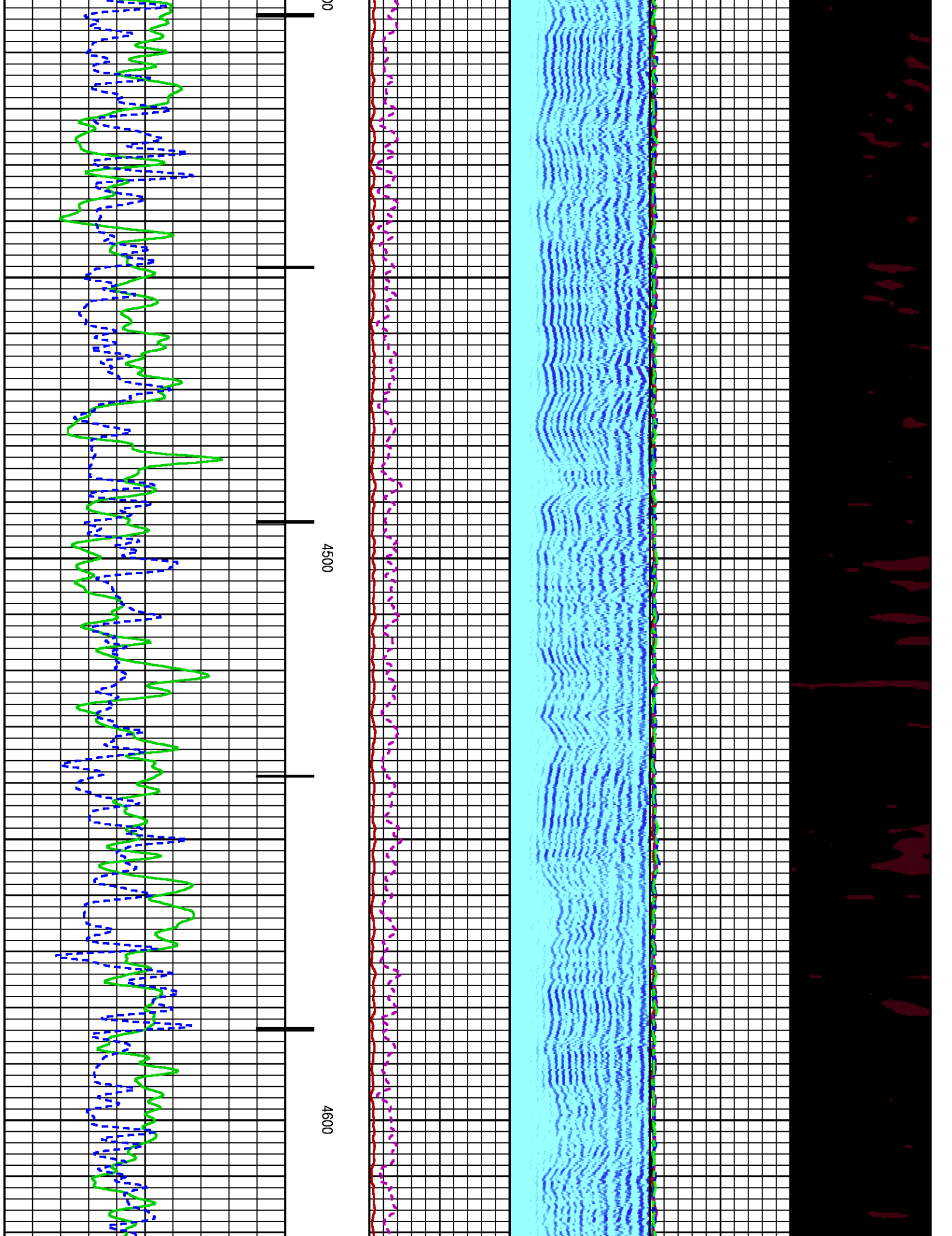


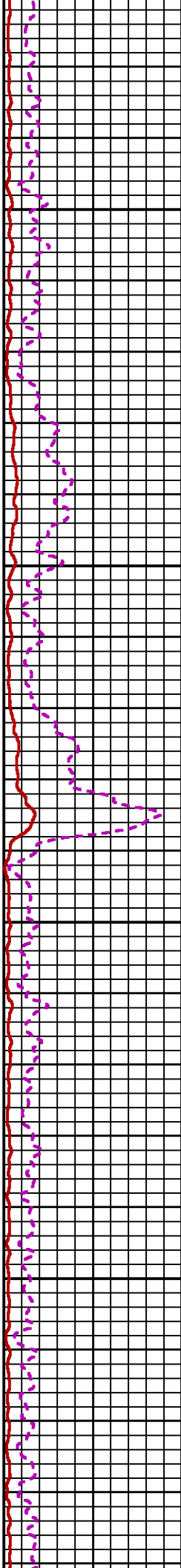
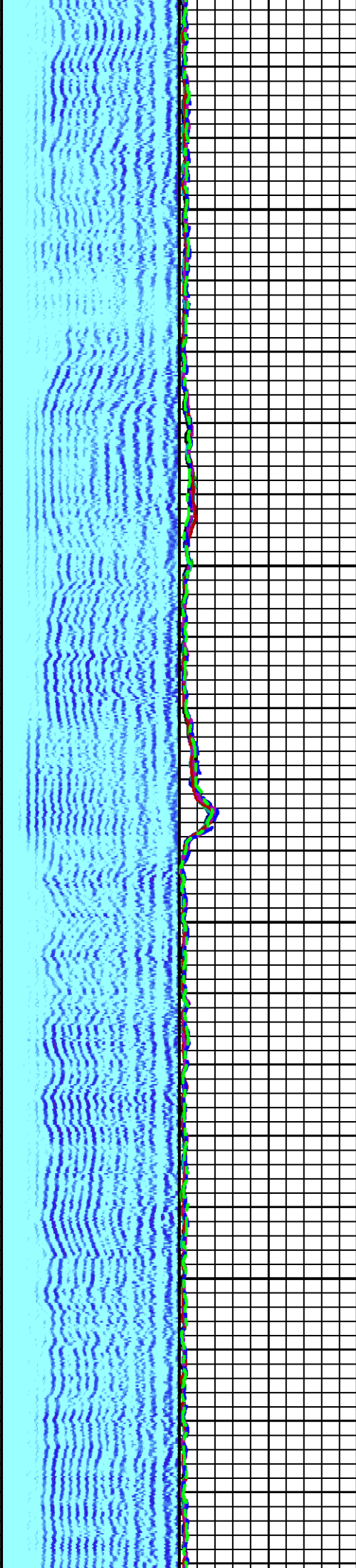
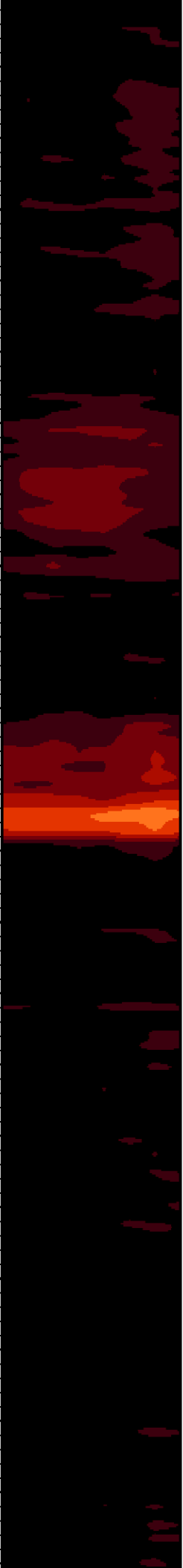






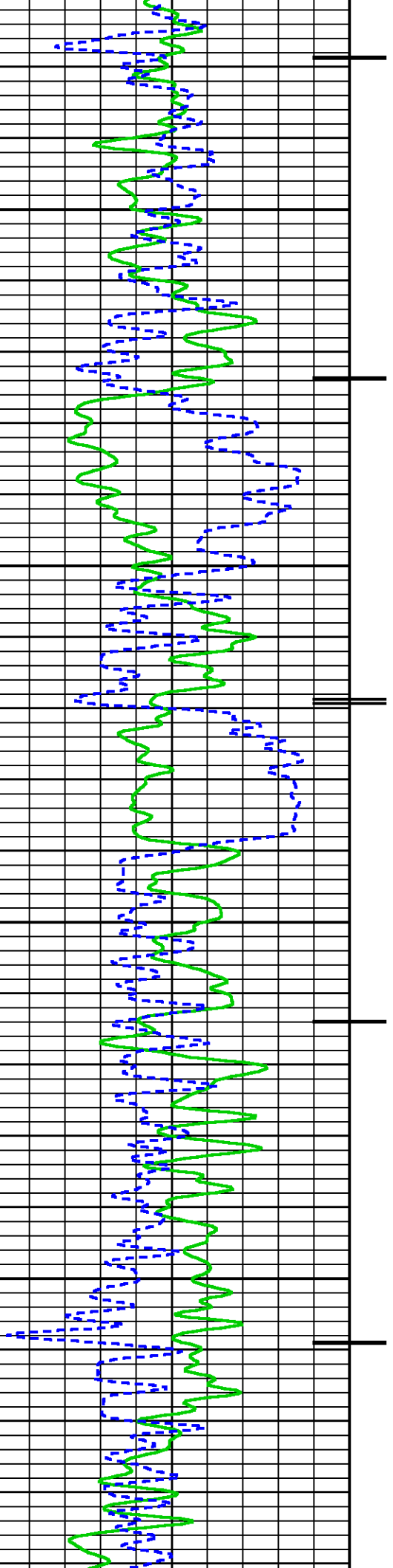


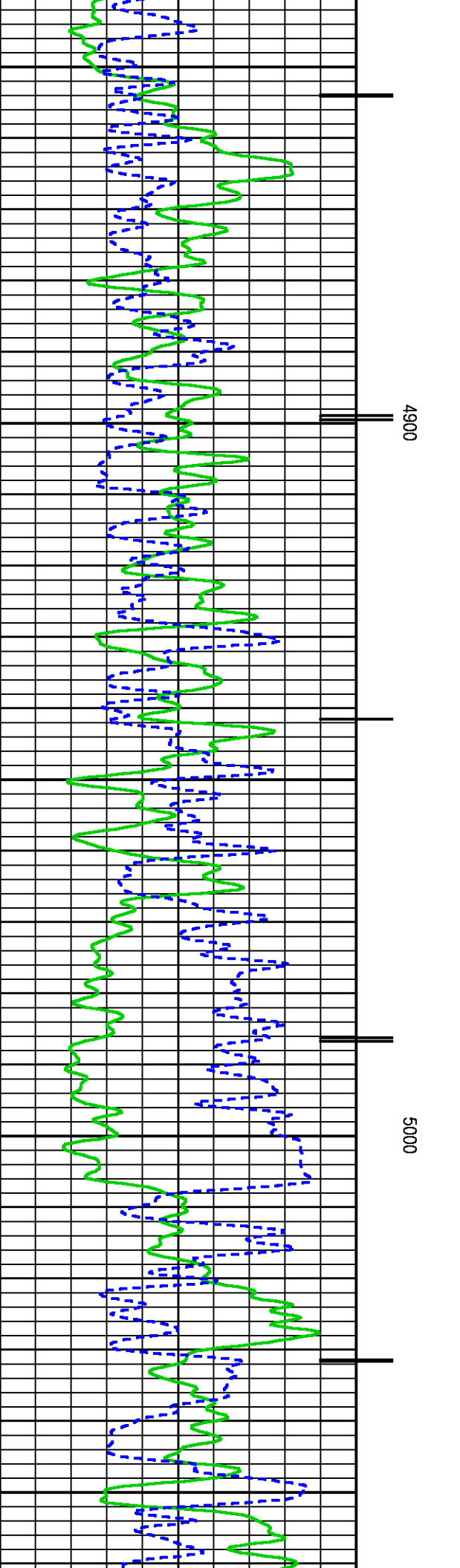
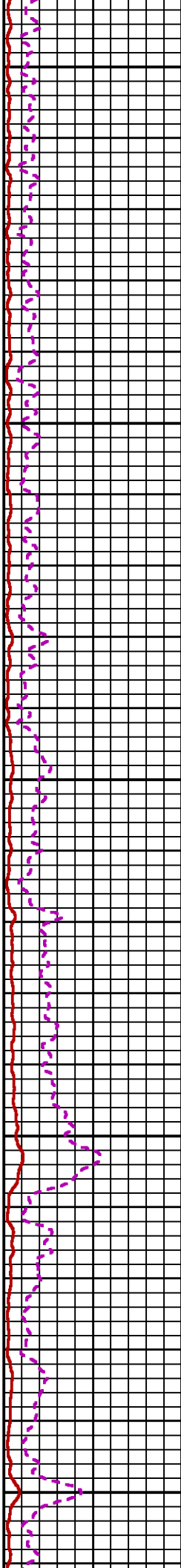
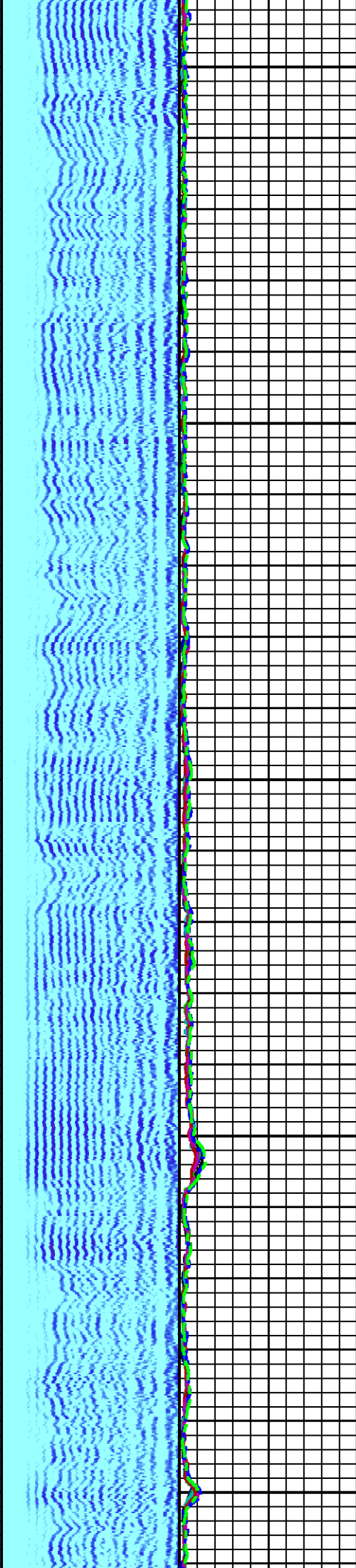


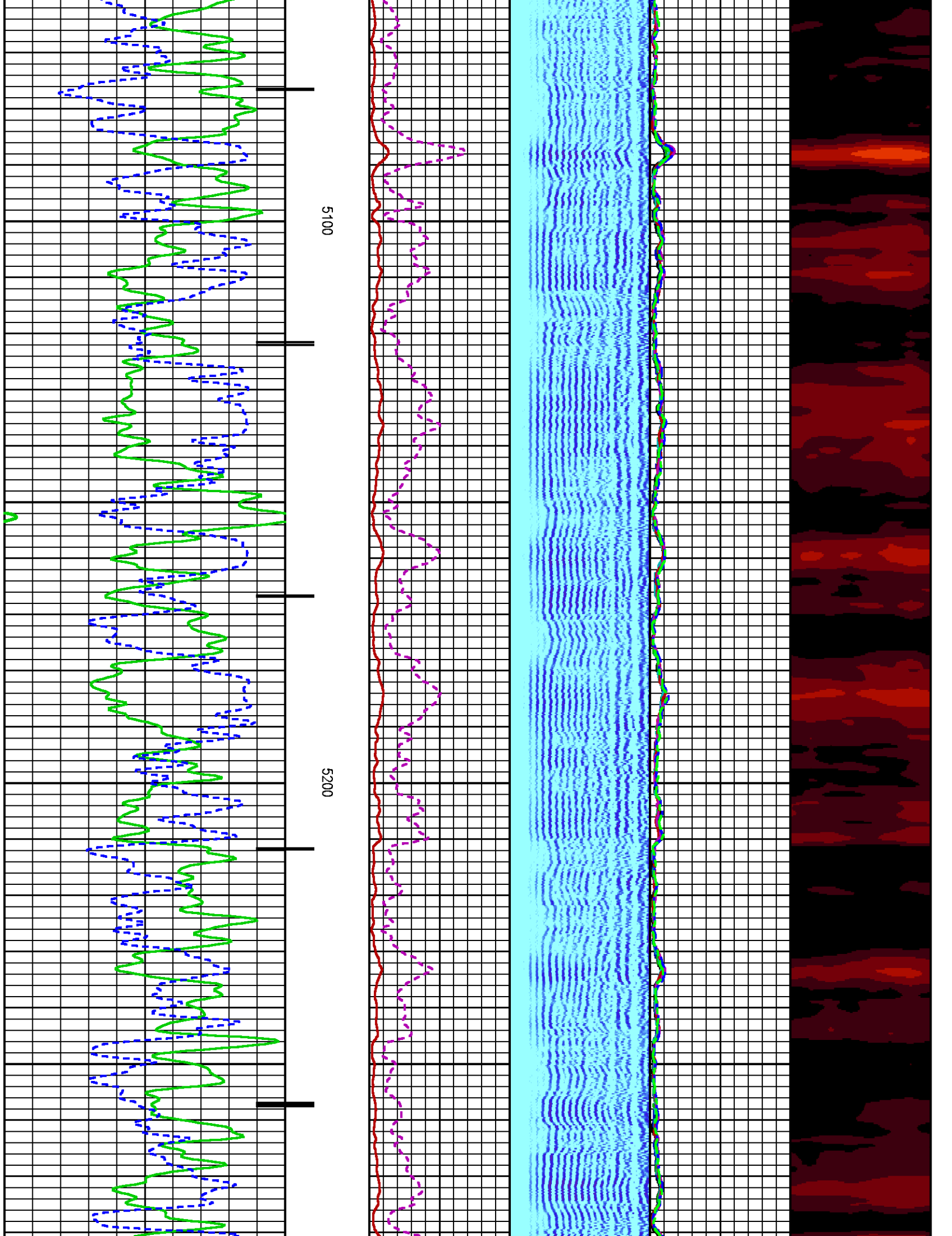


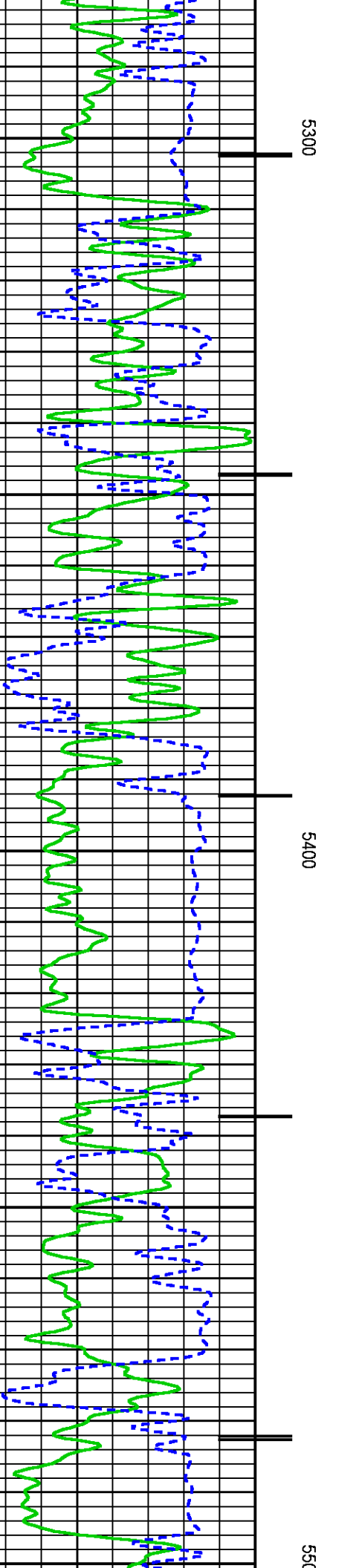
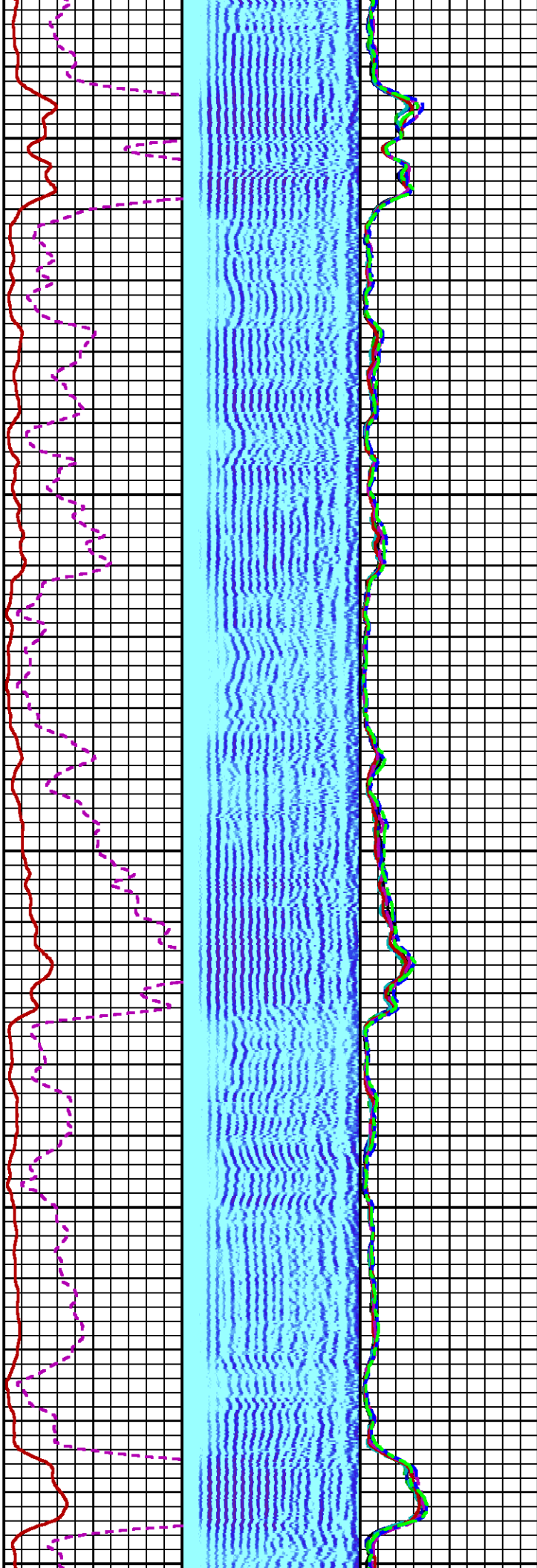
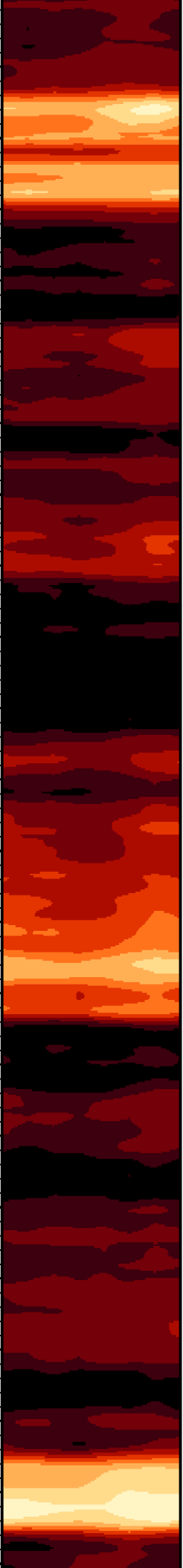
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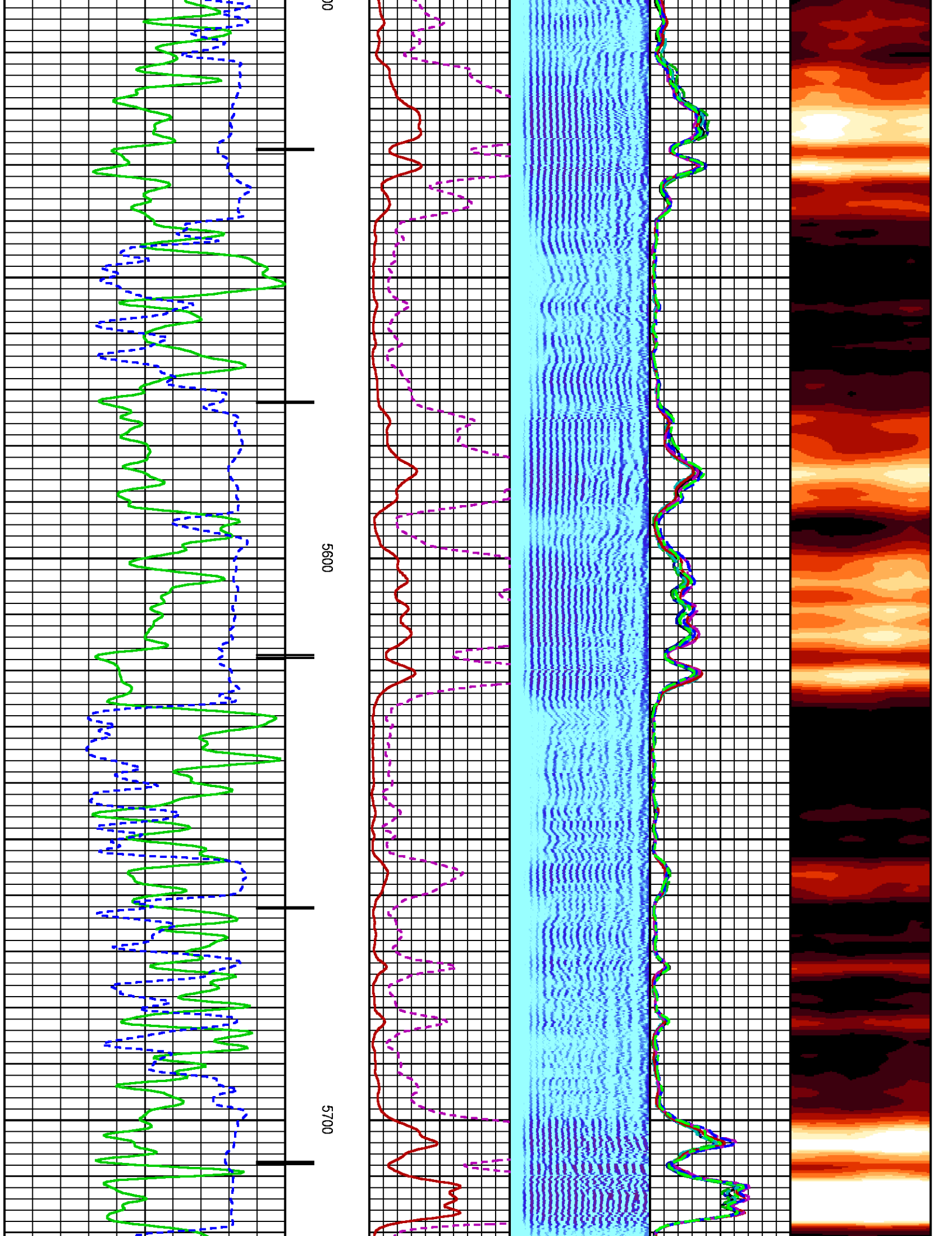
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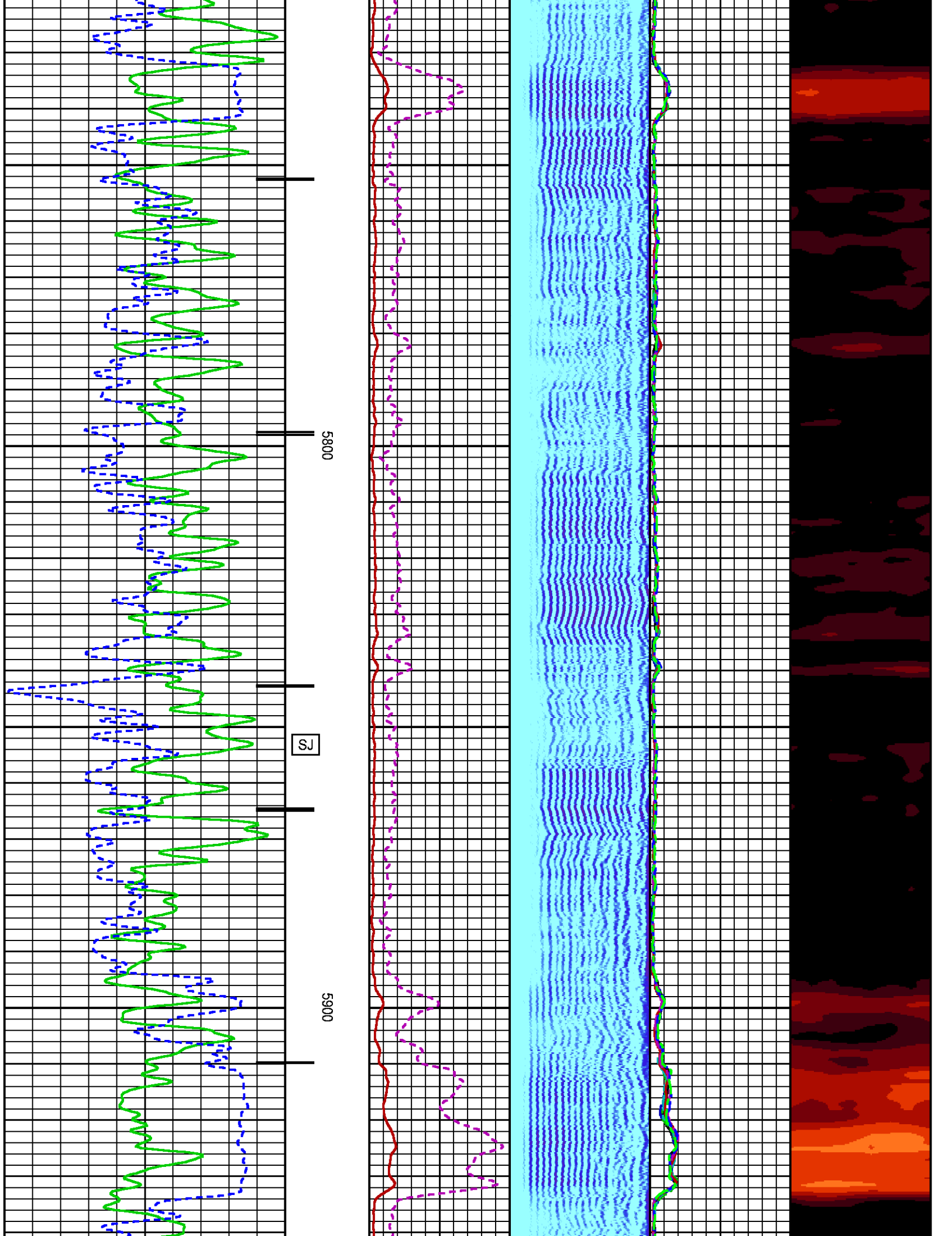


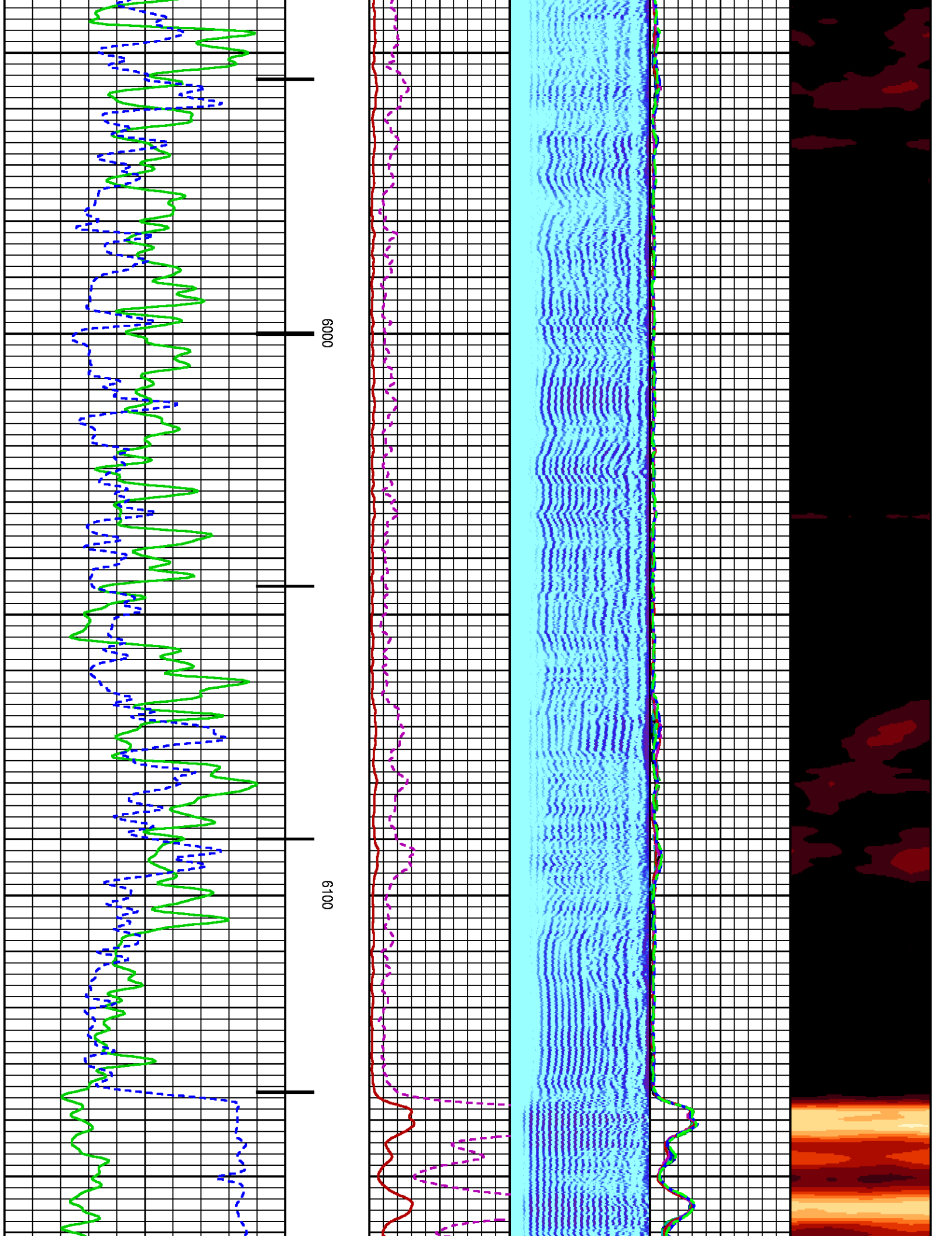


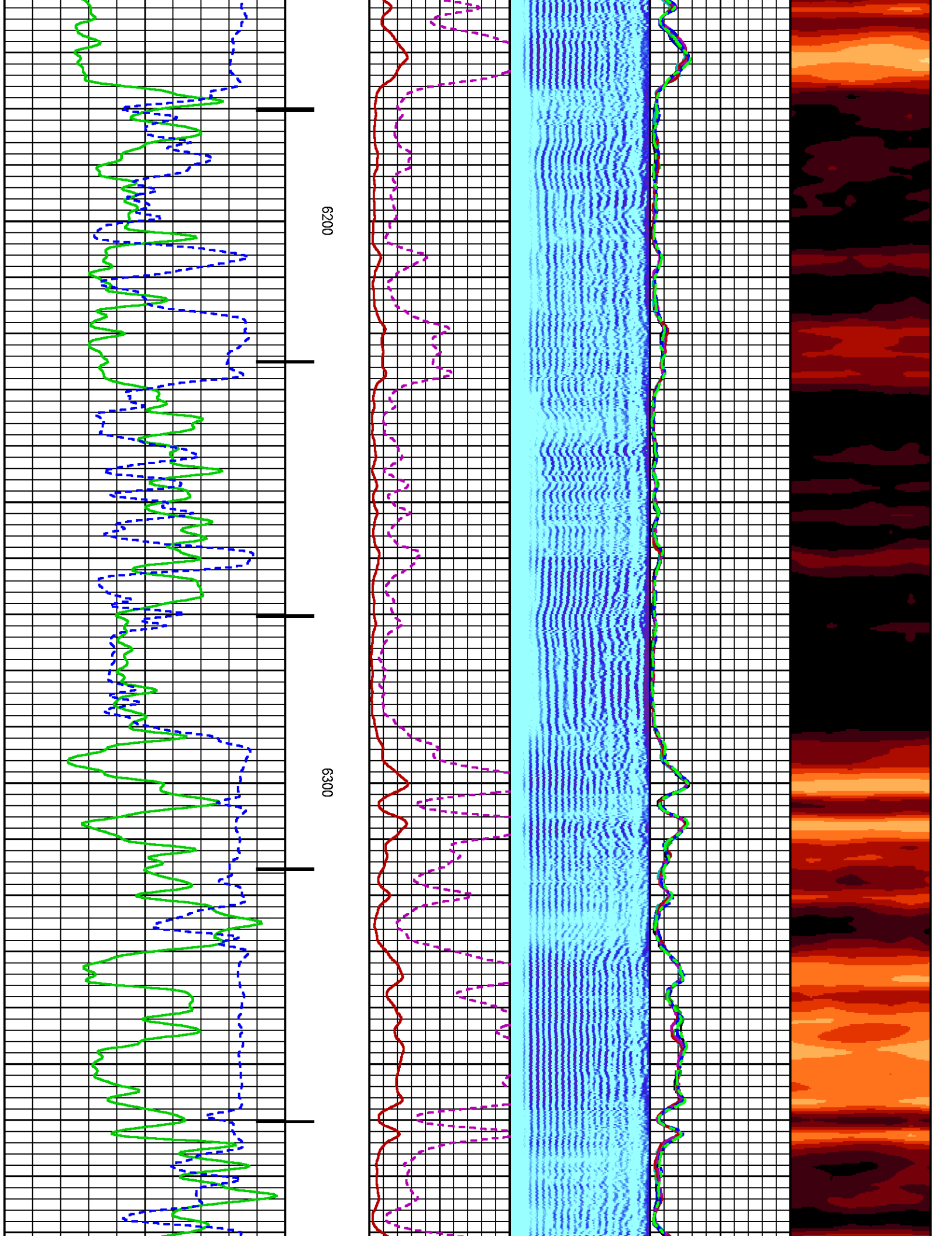


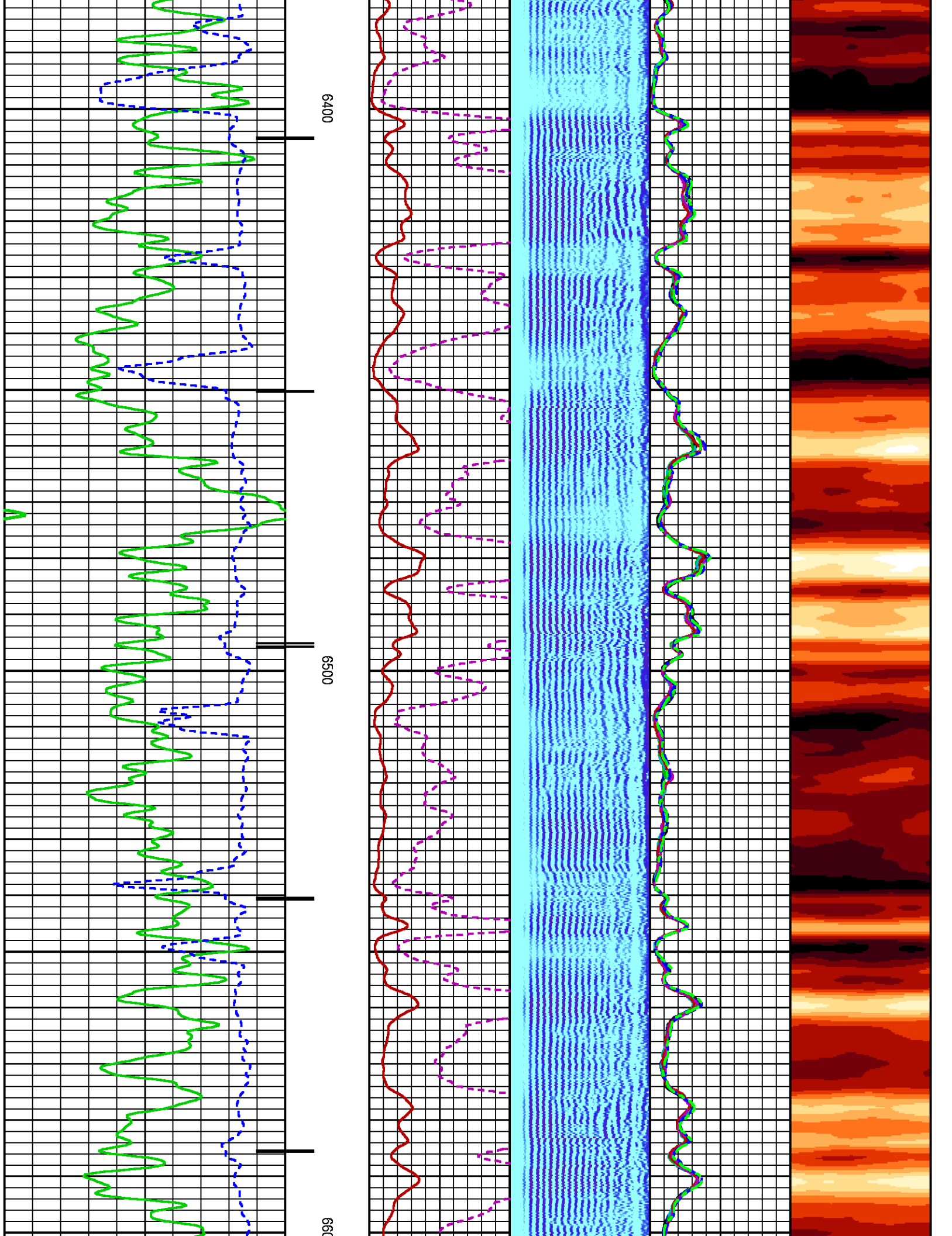


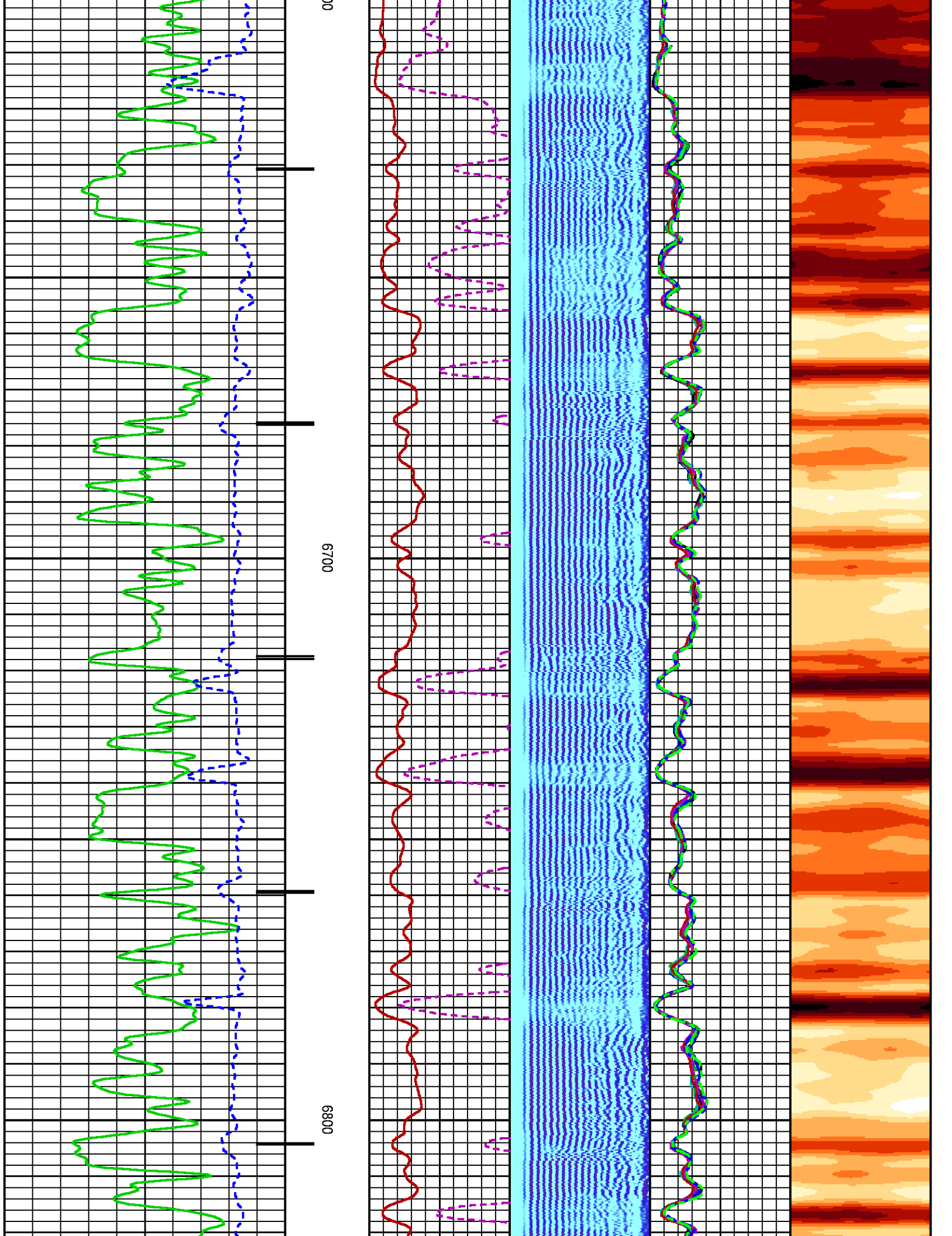


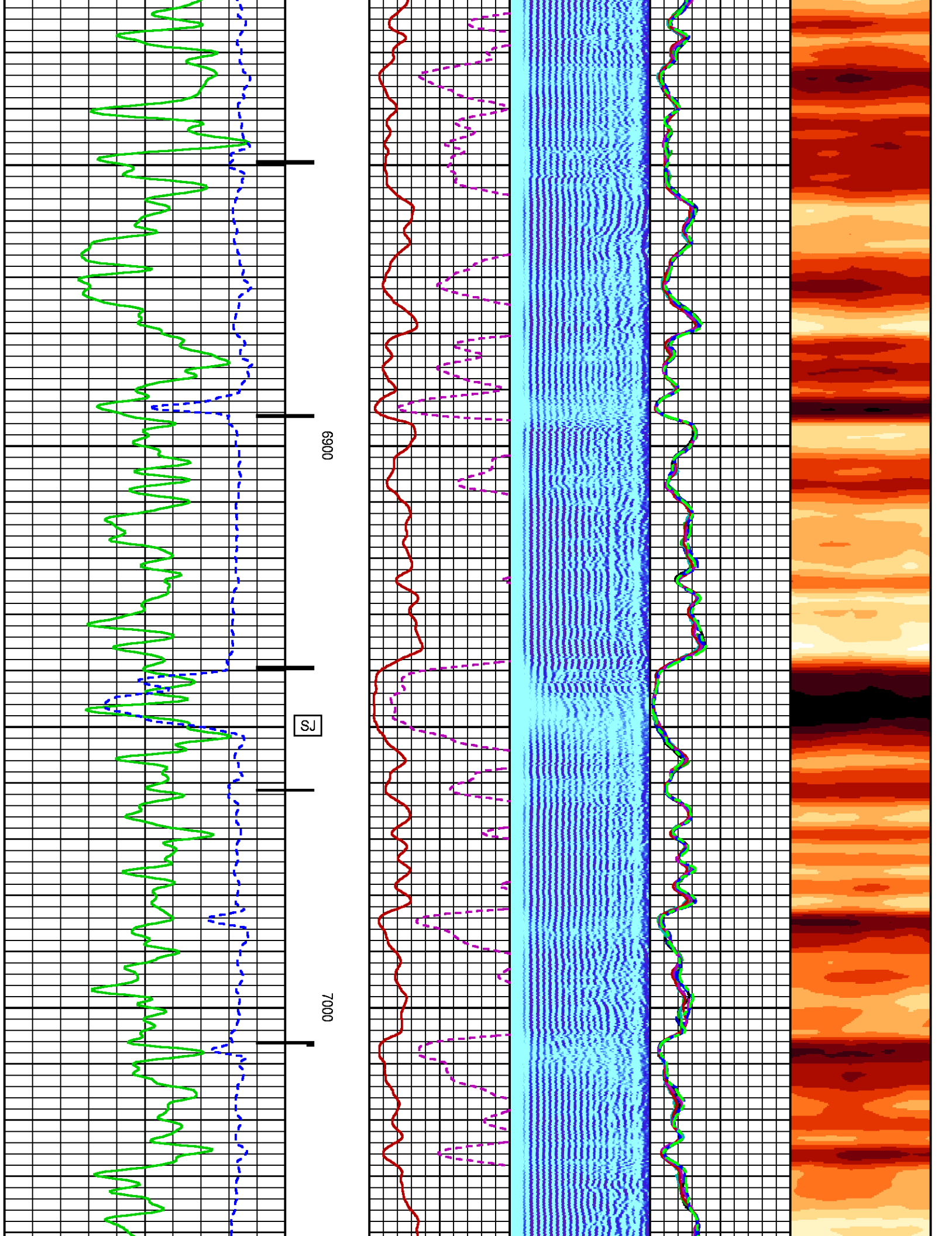


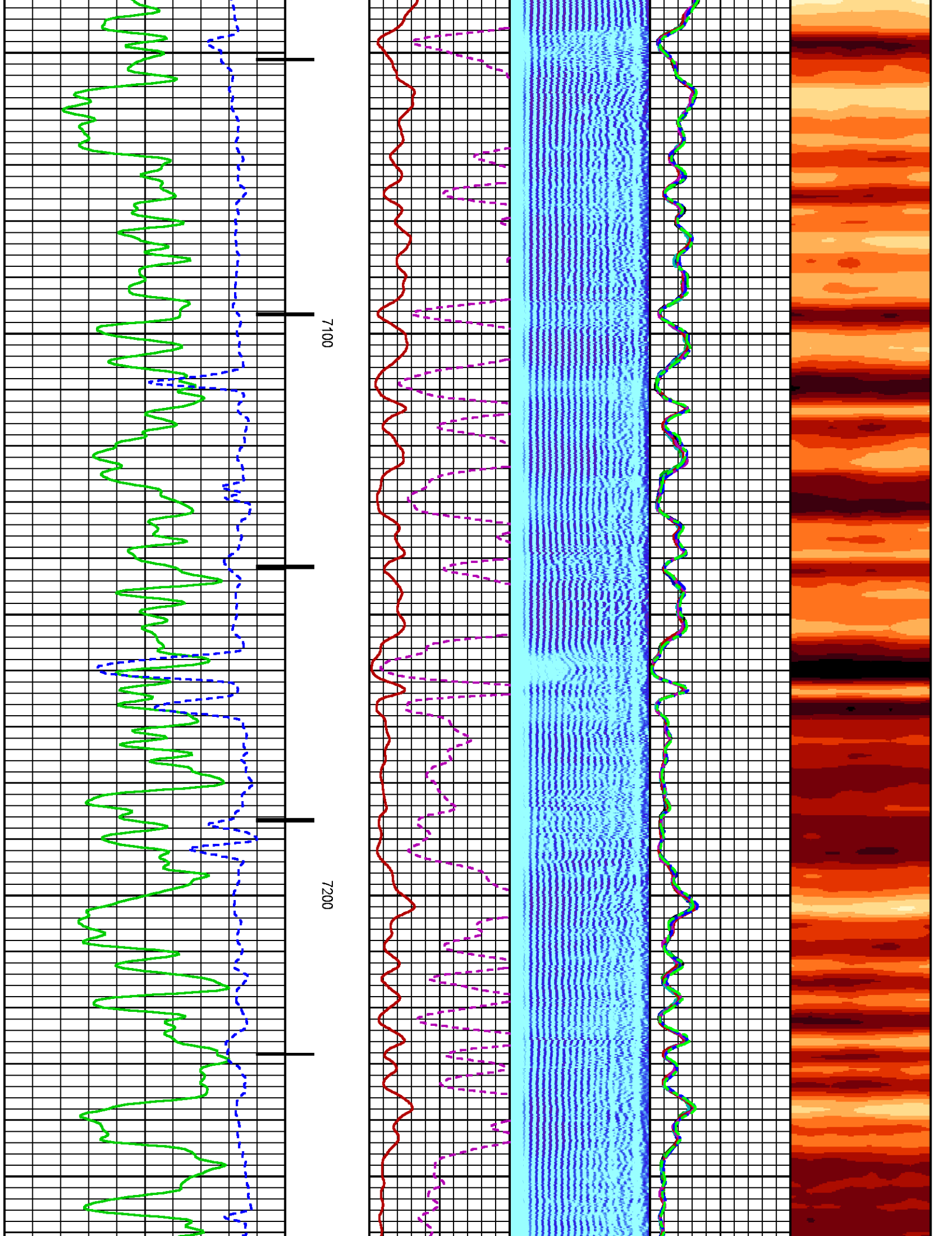


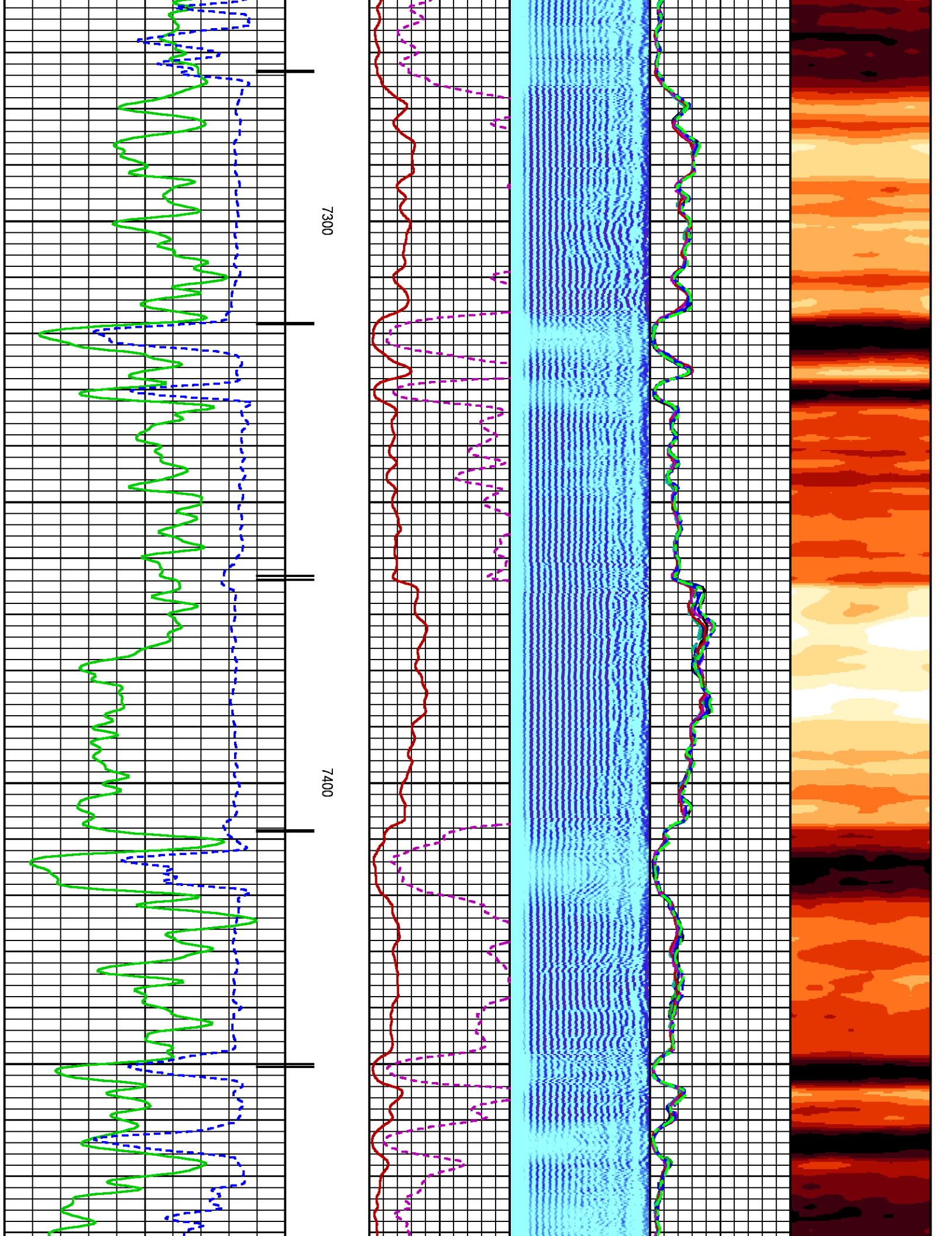


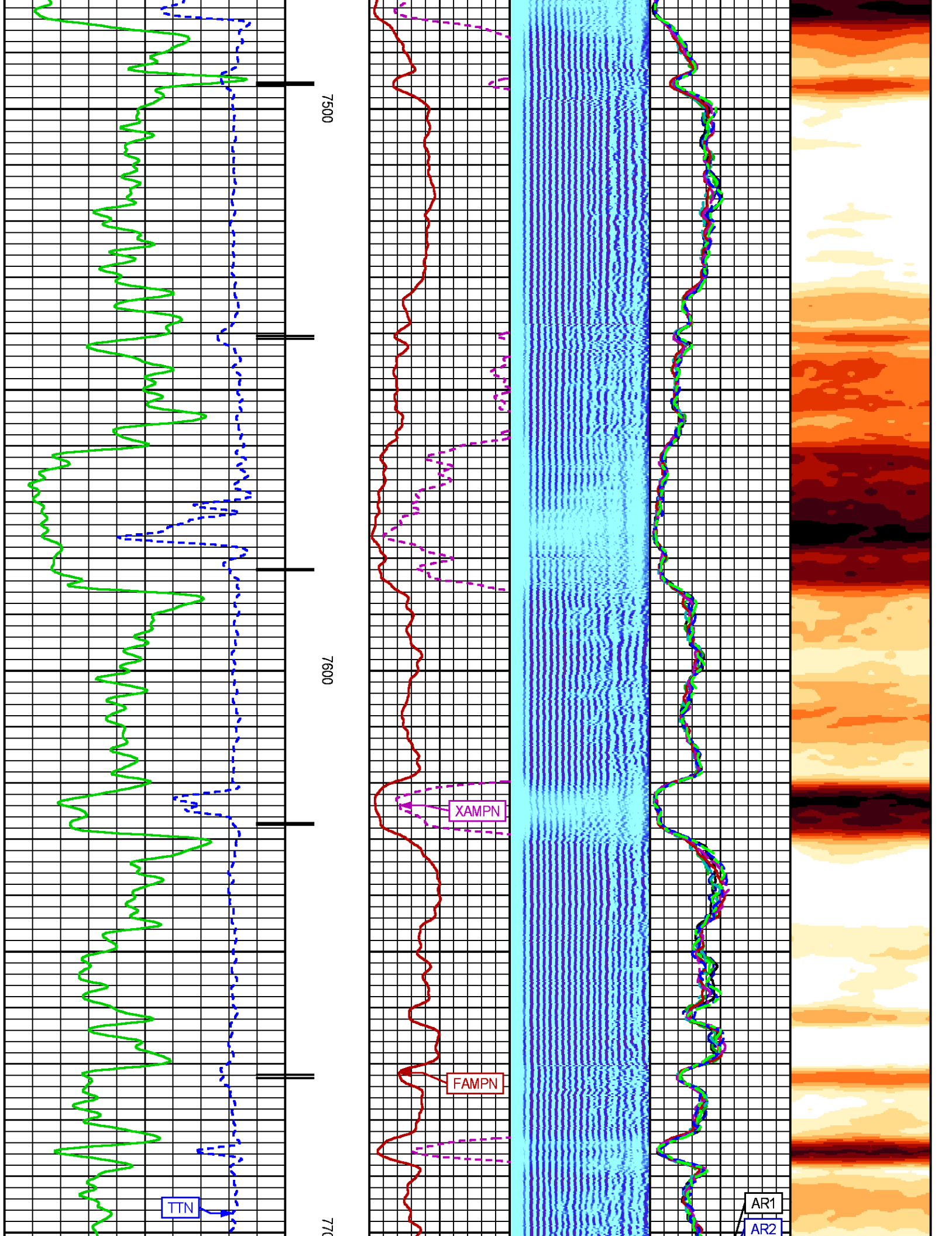


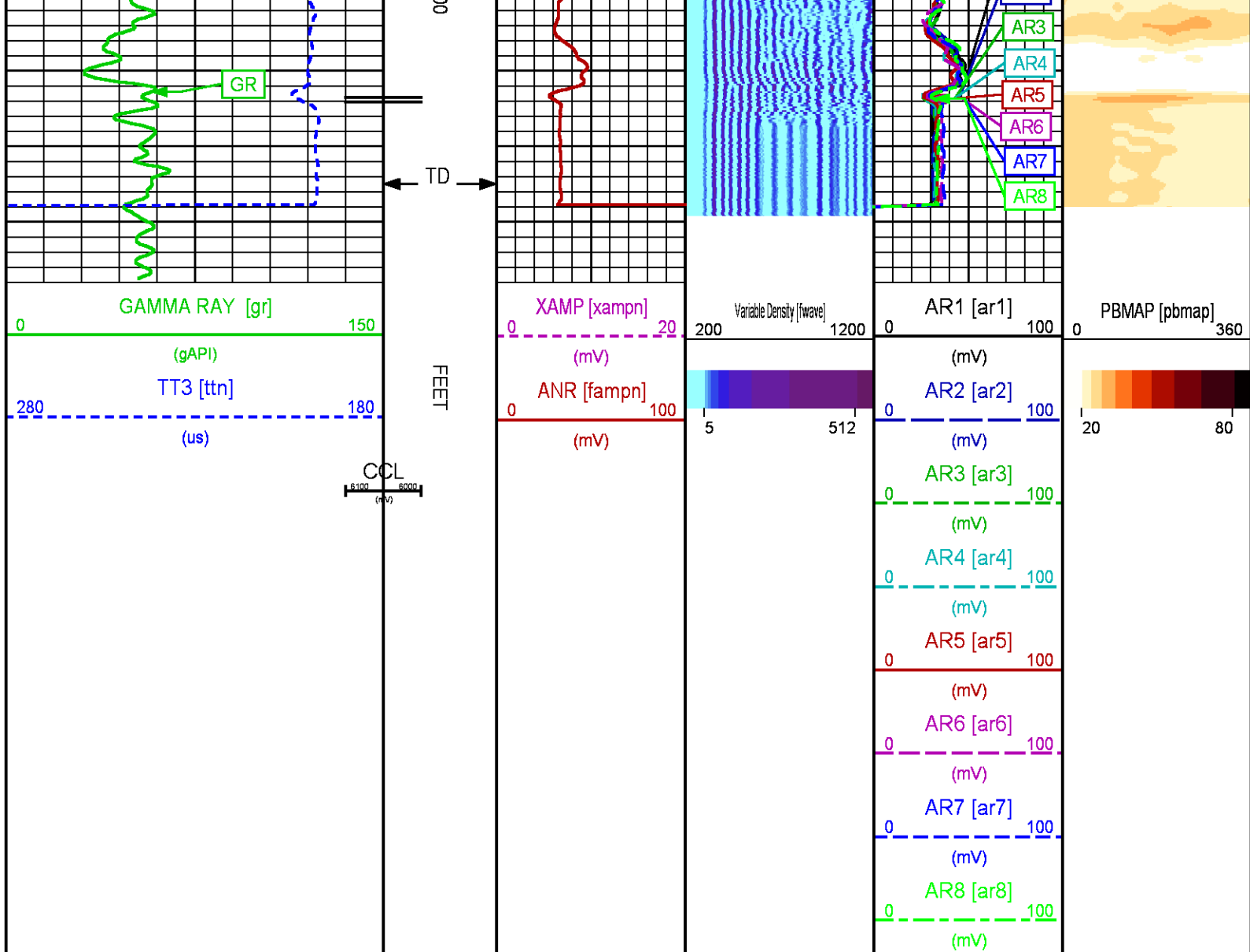












REPEAT PASS

ECLIPS 7.0i ECLIPS General Release Rel 7.0i Thu Jun 08 20:36:10 CDT 2017
Patches: 2

Plotted: Mon Feb 5 13:50:04 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_BRUTON_30-15E/p012g01.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 7486.250 ft BOTTOM DEPTH: 7723.000 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)		"	"

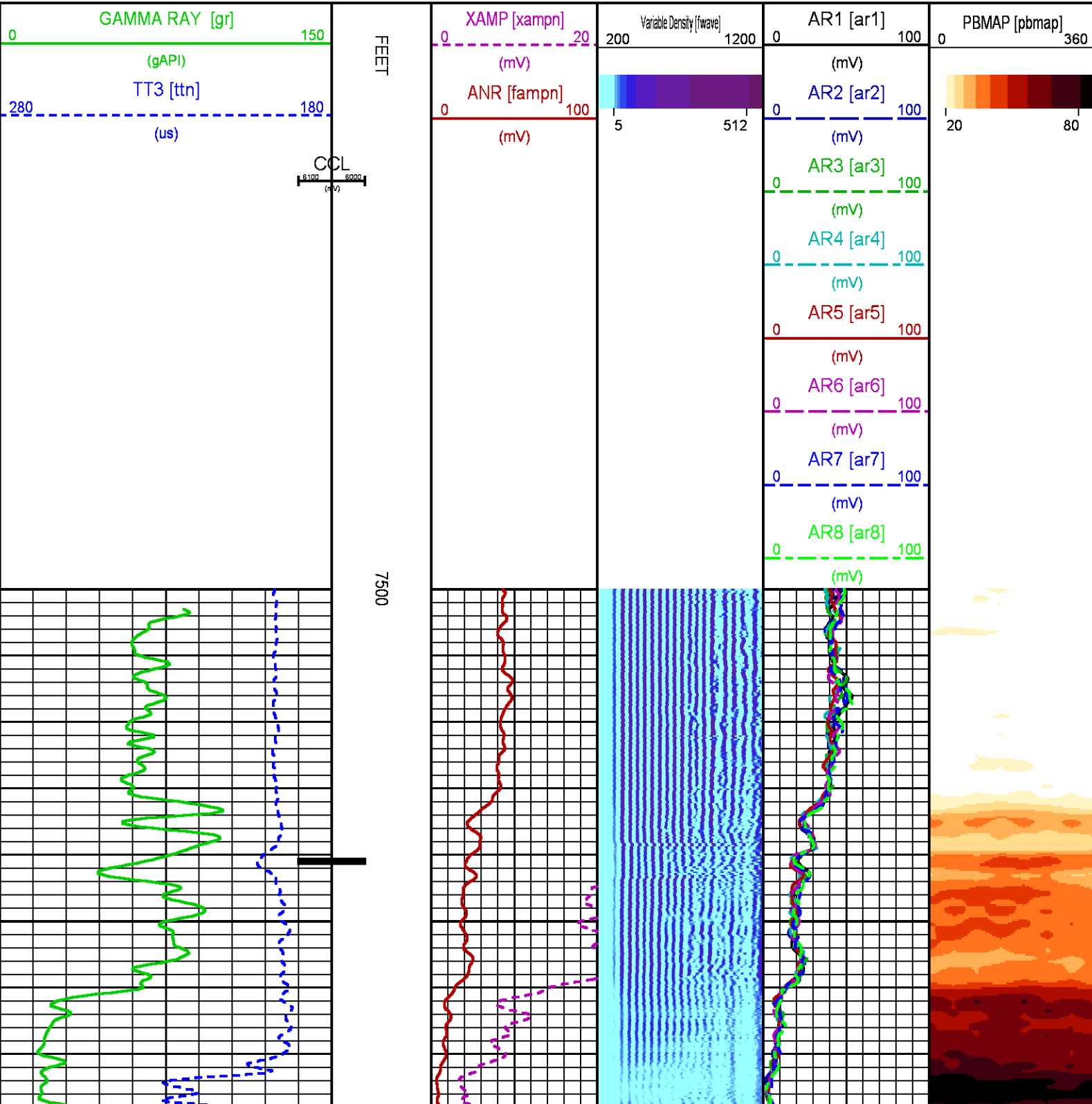
RAL CCL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CCL FLOOR	CCL FLOOR	0.00		TOP	BOTTOM
ANALOG RAL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
AMPLITUDE WINDOW (NEAR)	AMP WINDOW START (fgp1*)	185	us	TOP	BOTTOM
	AMP WINDOW START (fgp2*)	185	us	"	"
	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	25	us	"	"
TRAVEL TIME WINDOW (NEAR)	TT WINDOW START (ttn*)	175	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*)	-68	us	"	"
	TOOL DELAY (str2*)	-68	us	"	"
	TOOL DELAY (str3*)	-68	us	"	"
	TOOL DELAY (str4*)	-68	us	"	"
	TOOL DELAY (str5*)	-68	us	"	"
	TOOL DELAY (str6*)	-68	us	"	"
	TOOL DELAY (str7*)	-68	us	"	"
	TOOL DELAY (str8*)	-68	us	"	"
	TOOL DELAY (strn*)	-68	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	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			

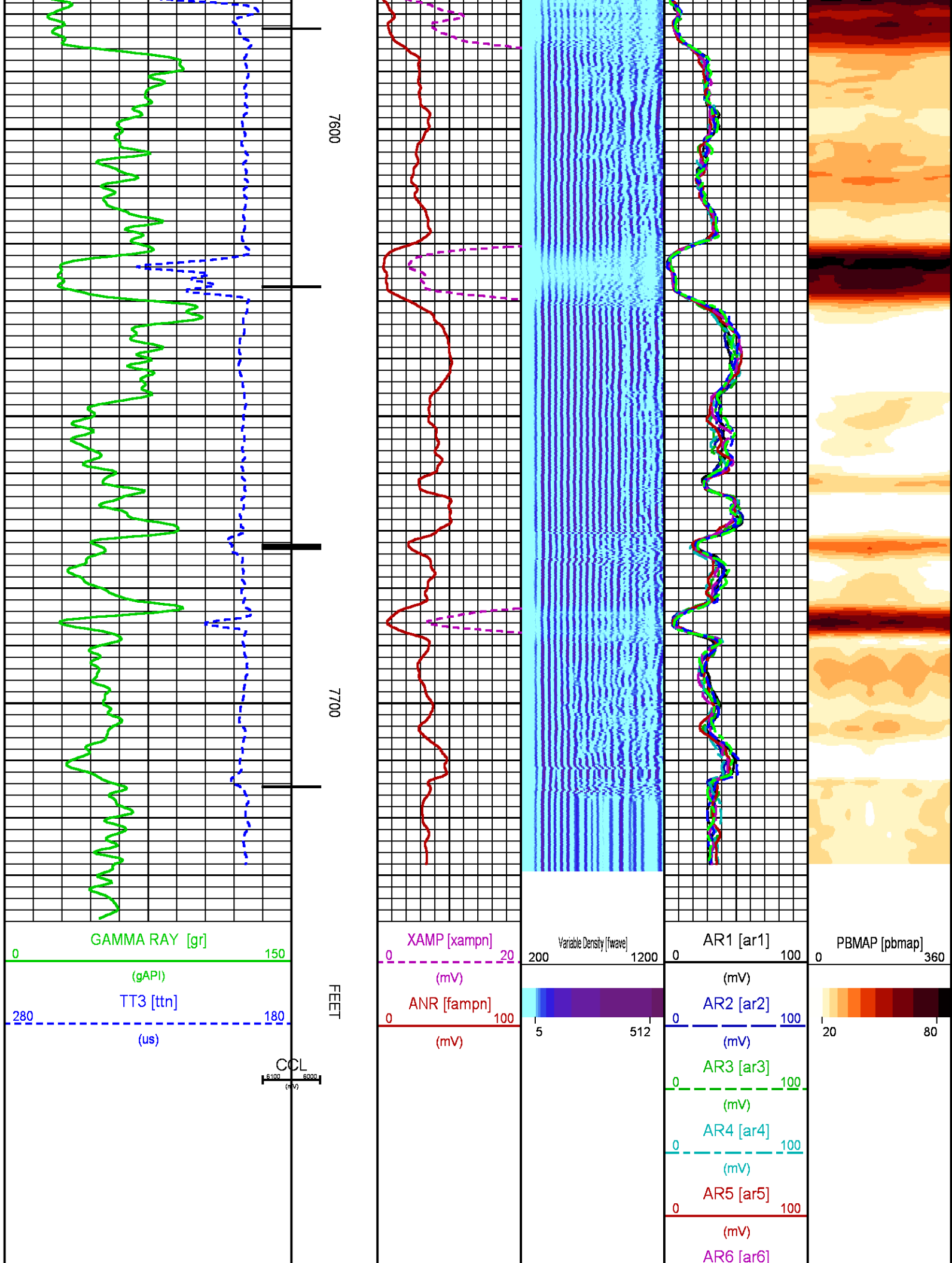
CURTAIN LOG CURVE OFFSET

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 : SysA:/dat1a/LARAMIE_BRUTON_30-15E/30-15E_RAL_REPEAT.fvpdf [5"/100' Scale]
Plot Interval : 7500 - 7739.25 Feet

Data File 1 : F1 : SysA:C:\Users
Created On : \\NA\m\i\Desktop\LARAMIE_BRUTON_30-15E\30-15E_RAL_REPEAT.xtf
Company : LARAMIE ENERGY LLC
Well : BRUTON 30-15E
Field : VEGA
File Interval : 7486 - 7740.5 Feet
OCT : p012g

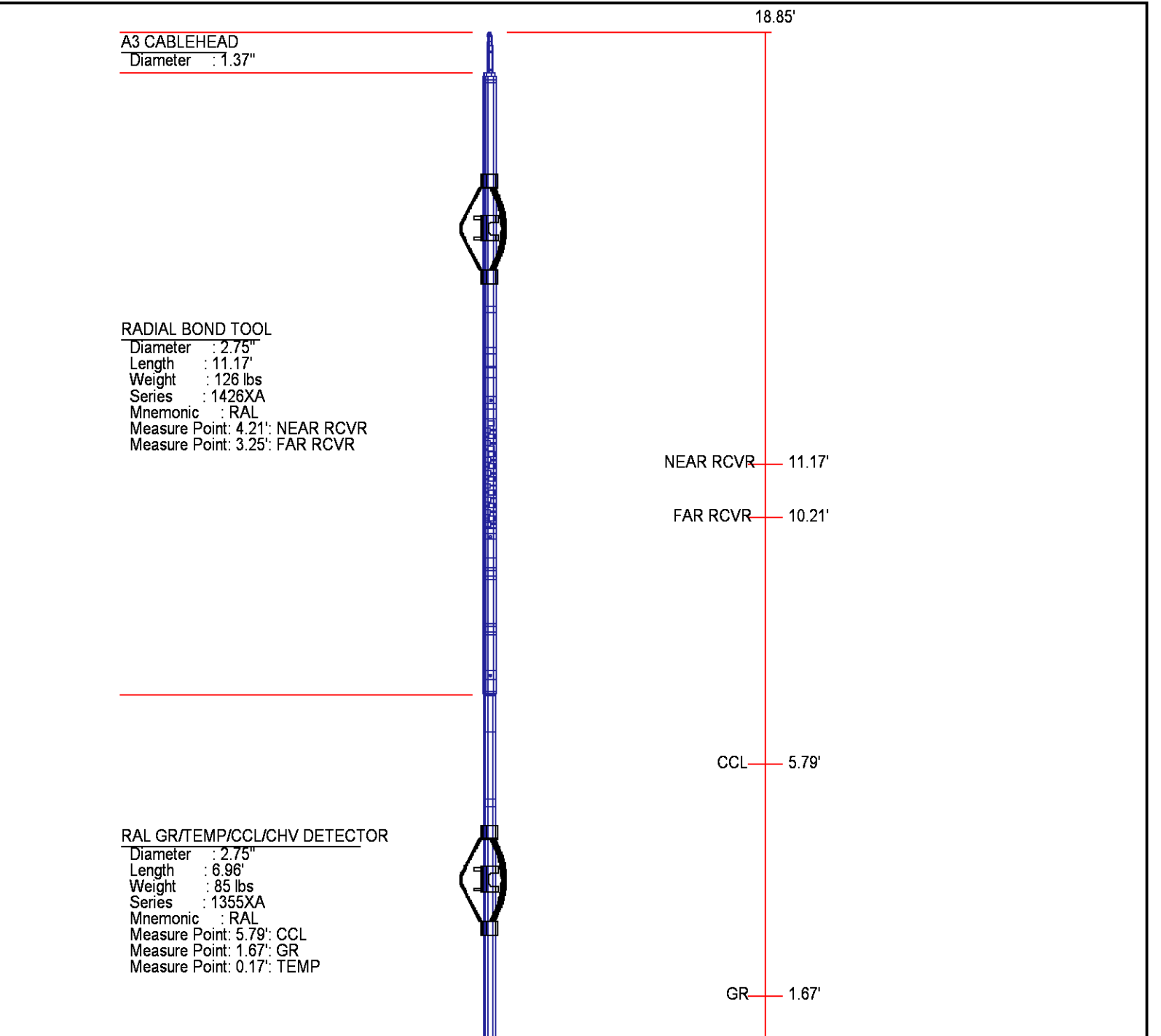




0	100
(mV)	
AR7 [ar7]	
0	100
(mV)	
AR8 [ar8]	
0	100
(mV)	

INSTRUMENT CONFIGURATION

Source File: C:\Users\newetimj\Desktop\LARAMIE_BRUTON_30-15E\RAL-tdg



TEMP 0.17'
0.00'

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

**BAKER
HUGHES**
a GE company



ECLIPS

COMPANY LARAMIE ENERGY LLC
WELL BRUTON 30-15E
FIELD VEGA
COUNTY MESA **STATE** COLORADO

FILE NO:
CH132065
API NO:
05077104700000

LOCATION:

SHL: 2614' FNL & 1869' FEL
BHL: 1617' FSL & 1336' FEL

SEC 30 **TWP** 9S **RGE** 93W

ELEVATIONS:

KB 7673 FT
DF
GL 7643 FT

DATE 02-Feb-2018

