



FILE NO: CH097899		COMPANY LARAMIE ENERGY	
API NO: 05077097620000		WELL GUNDERSON 29-09E	
Ver. 4.01		FIELD VEGA	
SEC 29 T9S R93W		COUNTY MESA	
PAD 29-09		STATE COLORADO	
PATTERSON 306		LOCATION: SHL: 2393' FNL 1140' FEL BHL: 2140' FNL 851' FEL	
SEC 29 TWP 9S RGE 93W		OTHER SERVICES RPM	
PERMANENT DATUM GL ELEVATION 7631 FT		ELEVATIONS: KB 7653 FT	
LOG MEASURED FROM KB 22 FT ABOVE P.D.		DF	
DRILL. MEAS. FROM KB		GL 7631 FT	
DATE	14-Jul-2015		
RUN	TRIP	1	1
SERVICE ORDER	US097899		
DEPTH DRILLER	7820 FT		
DEPTH LOGGER	7691 FT		
BOTTOM LOGGED INTERVAL	7681 FT		
TOP LOGGED INTERVAL	22 FT		
TIME STARTED	14:30		
TIME FINISHED	17:00		
OPERATOR RIG TIME	2.5 HOURS		
TYPE OF FLUID IN HOLE	WATER		
FLUID DENSITY	NA		
FLUID SALINITY	NA		
FLUID LEVEL	32 FT		
LOGGED CEMENT TOP	SEE LOG		
WELLHEAD PRESSURE	0 PSI		
MAXIMUM HOLE DEVIATION	NA		
NOMINAL LOGGING SPEED	60 FMIN		
MAX. RECORDED TEMP.	244 DEGF		
REFERENCE LOG	NONE		
REFERENCE LOG DATE	NA		
EQUIP. NO.	6670	GRAND JCT.	
RECORDED BY	P. EDWARDS		
WITNESSED BY	J. 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			CASING RECORD				
BIT SIZE	FROM	TO	SIZE	WEIGHT	GRADE	FROM	TO
7.875 IN	22 FT	7820 FT	4.5 IN	11.6 LB/F		22 FT	7820 FT

REMARKS
RUN 1 TRIP 1: THIS IS THE FIRST LOG ON THIS WELL. Logged with zero PSI at wellhead.  BHT = 244 degF  SJ = 5963' - 5985' SJ = 6867' - 6890'

EQUIPMENT DATA					
RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	CBL	1426XA	10417452	CENTRALIZED
1	1	CCL/GR	1355XA	11871508	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: Wed Jul 15 18:13:22 2015

## PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH29\_9E/n012g02.prm  
 LOGGING MODE: DEPTH DIRECTION: UP  
 TOP DEPTH: 8.750 ft BOTTOM DEPTH: 7700.000 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		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	"	"
TRAVEL TIME WINDOW (NEAR)	AMP WINDOW LENGTH	30	us	"	"
	TT WINDOW START (ttn*)	173	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	"	"
BASELINE NOISE (NEAR)	TOOL DELAY (strn*)	-68	us	"	"
	NOISE WINDOW START	138	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 1	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	"	"

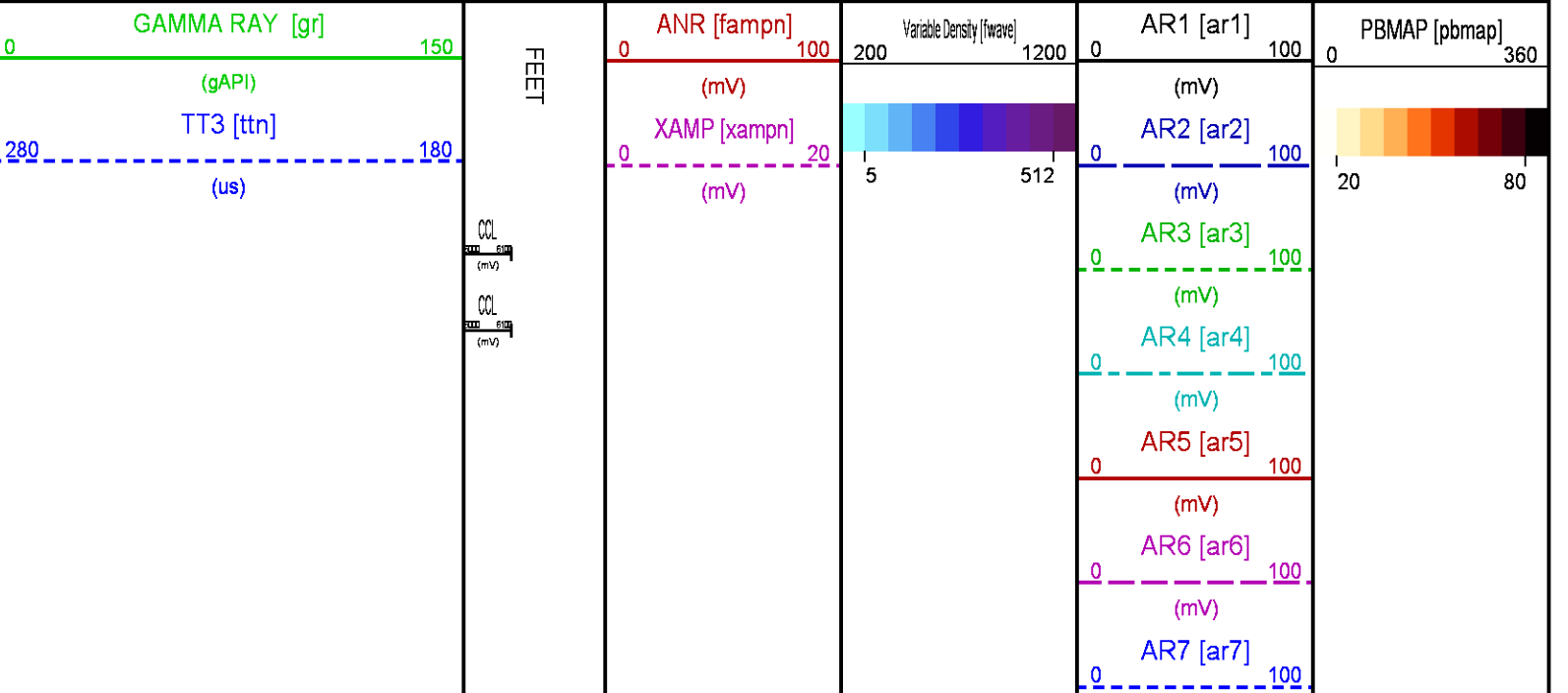
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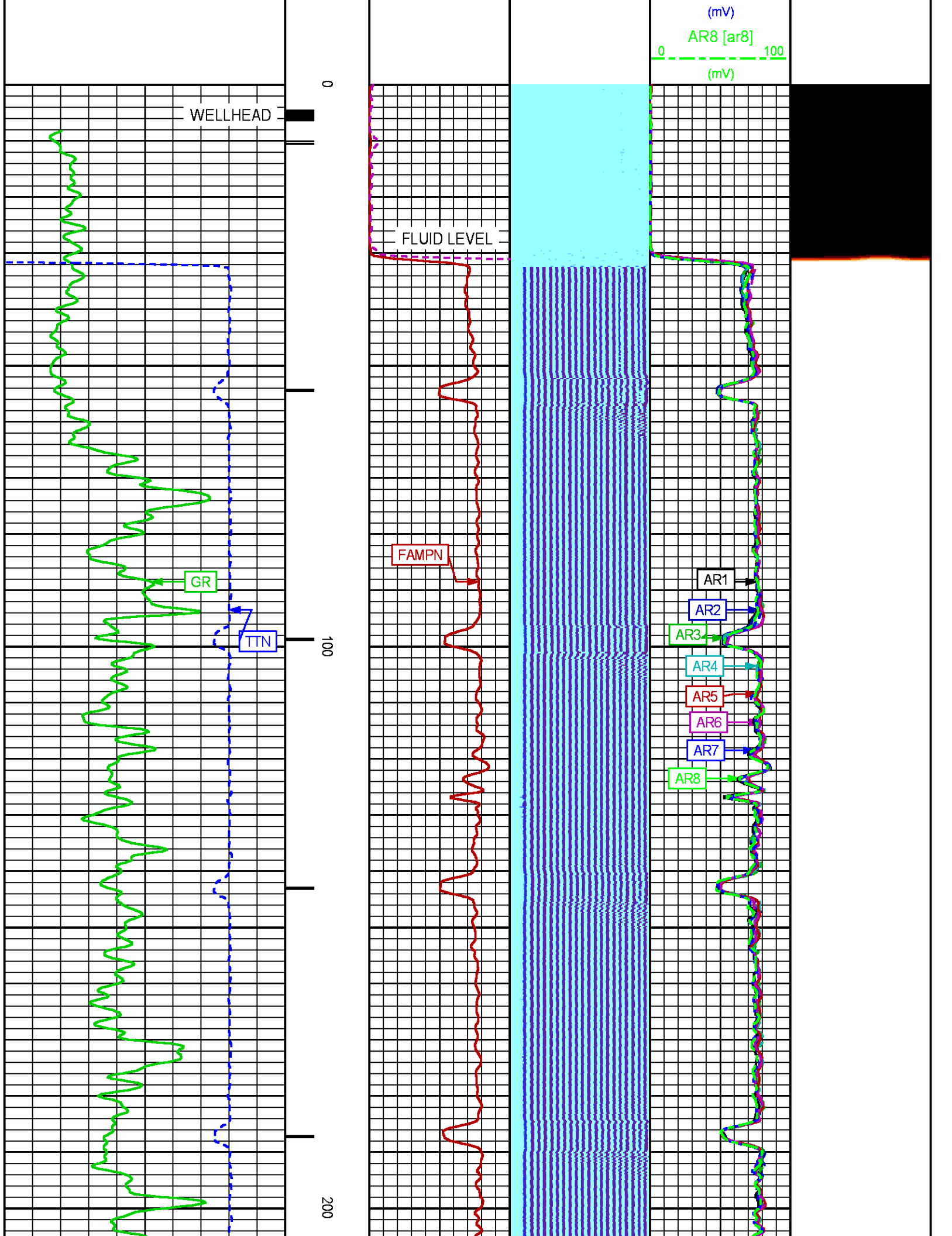
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:AR1	Jul 14 15:27:10 2015	FIXED GATE AMPLITUDE T-R1
F1:AR2	Jul 14 15:27:10 2015	FIXED GATE AMPLITUDE T-R2
F1:AR3	Jul 14 15:27:10 2015	FIXED GATE AMPLITUDE T-R3
F1:AR4	Jul 14 15:27:10 2015	FIXED GATE AMPLITUDE T-R4
F1:AR5	Jul 14 15:27:10 2015	FIXED GATE AMPLITUDE T-R5
F1:AR6	Jul 14 15:27:10 2015	FIXED GATE AMPLITUDE T-R6
F1:AR7	Jul 14 15:27:10 2015	FIXED GATE AMPLITUDE T-R7
F1:AR8	Jul 14 15:27:10 2015	FIXED GATE AMPLITUDE T-R8
F1:CCL	Jul 14 15:27:10 2015	CASING COLLAR LOCATOR
F1:FAMPN	Jul 14 15:27:10 2015	FIXED GATE AMPLITUDE NEAR RECEIVER
F1:FWAVE	Jul 14 15:27:10 2015	FAR WAVE FORM
F1:GR	Jul 14 15:27:10 2015	GAMMA RAY
F1:PBMAP	Jul 14 15:27:10 2015	PERCENT BOND CEMENT MAP
F1:TTN	Jul 14 15:27:10 2015	TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER
F1:XAMPN	Jul 14 15:27:10 2015	FIXED GATE AMPLITUDE NEAR RECEIVER TIMES FIVE

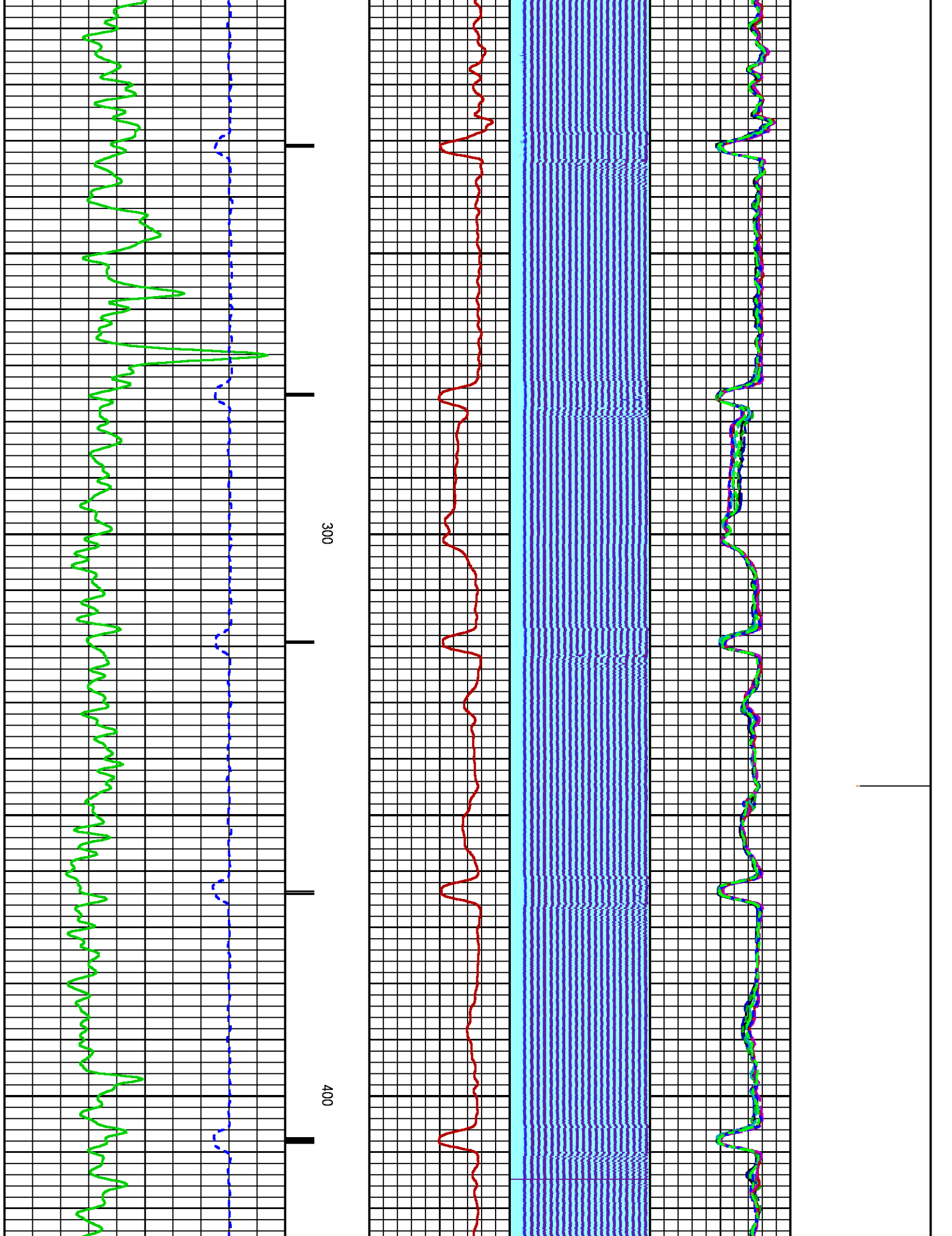
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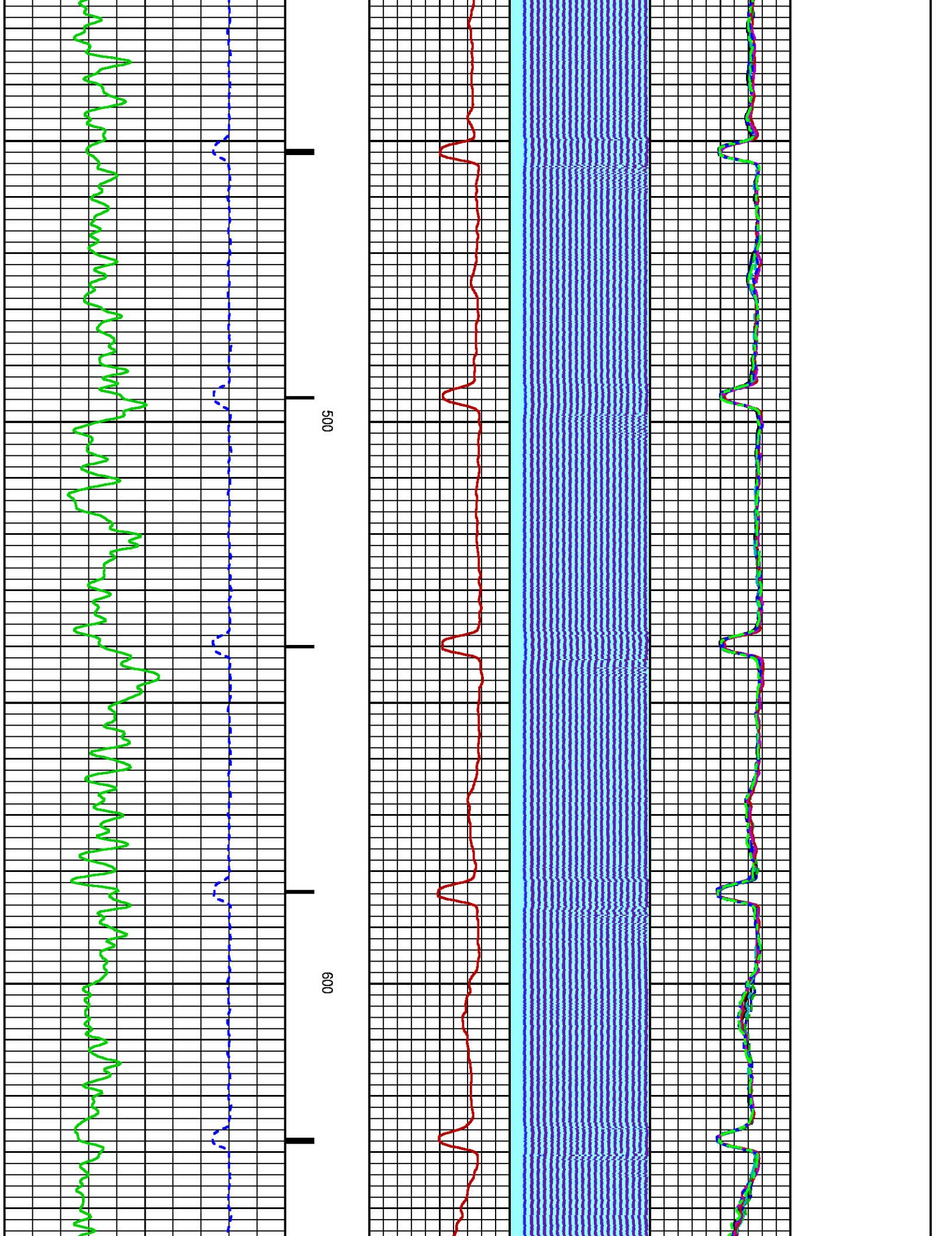
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
AR1	11.25	AR5	11.25	CCL	5.75	XAMPN	11.25
AR2	11.25	AR6	11.25	FAMPN	11.25		
AR3	11.25	AR7	11.25	GR	1.75		
AR4	11.25	AR8	11.25	TTN	11.25		

<b>Presentation</b>	: HL6670:/dat1a/CH29_9E/CBL_MAIN_PRESENTATION.fvpdf [5"/100' Scale]
<b>Plot Interval</b>	: 0 - 7696 Feet
<b>Data File 1</b>	: F1 : HL6670:/dat1a/CH29_9E/n012g02MAIN9E.xtf
<b>Created On</b>	: Jul 14 15:27:10 2015
<b>Company</b>	: LARAMIE ENERGY
<b>Well</b>	: GUNDERSON 29-9E
<b>Field</b>	: VEGA
<b>File Interval</b>	: -2.5 - 7700.25 Feet
<b>OCT</b>	: n012g

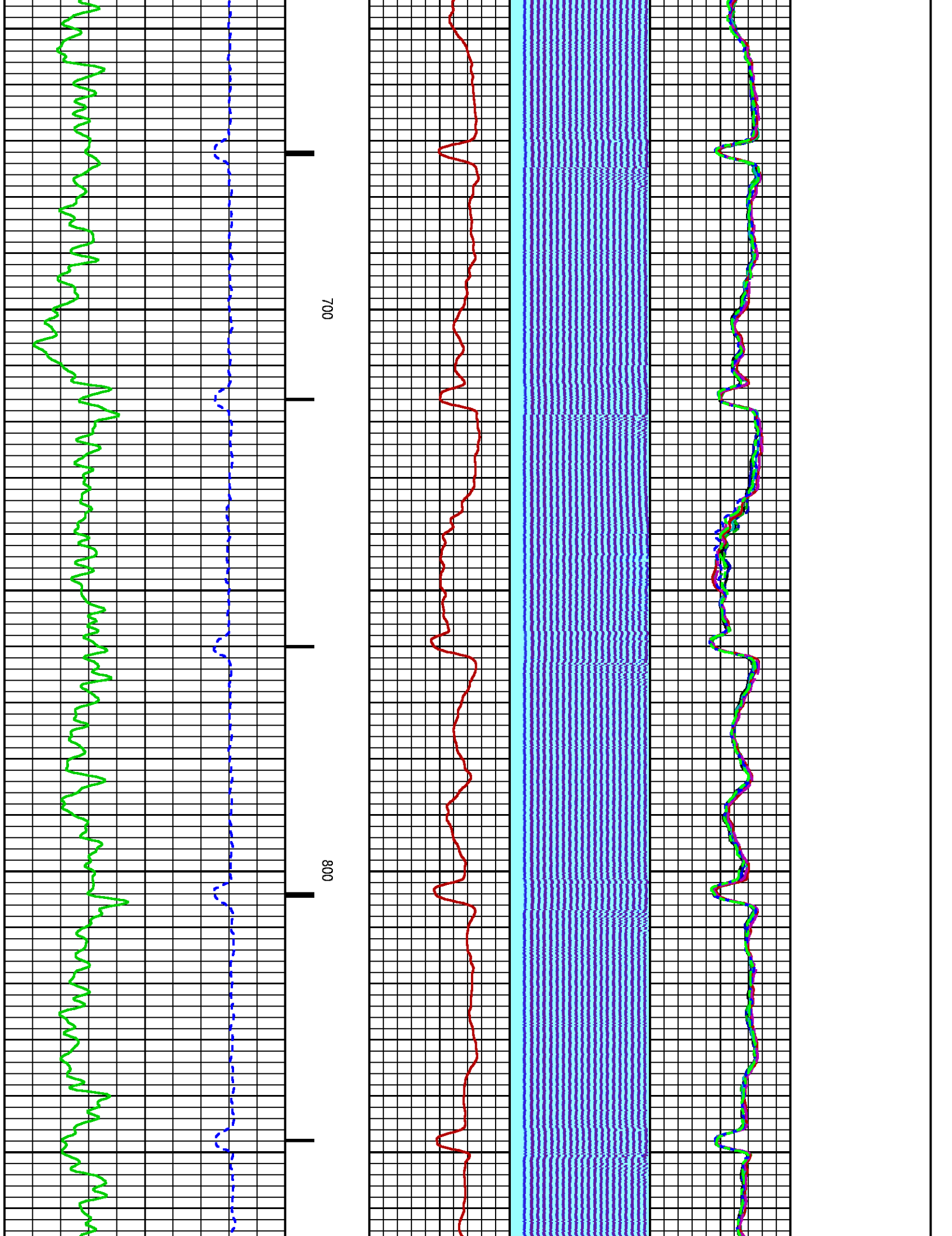


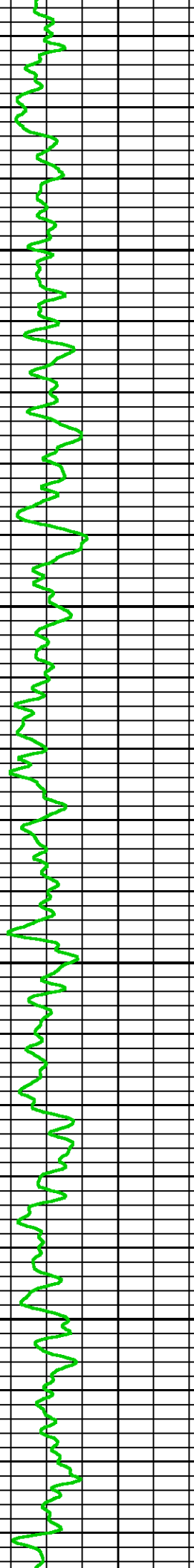
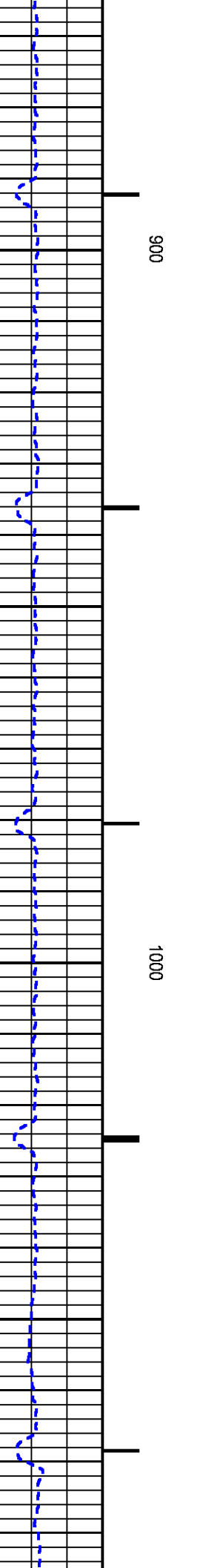
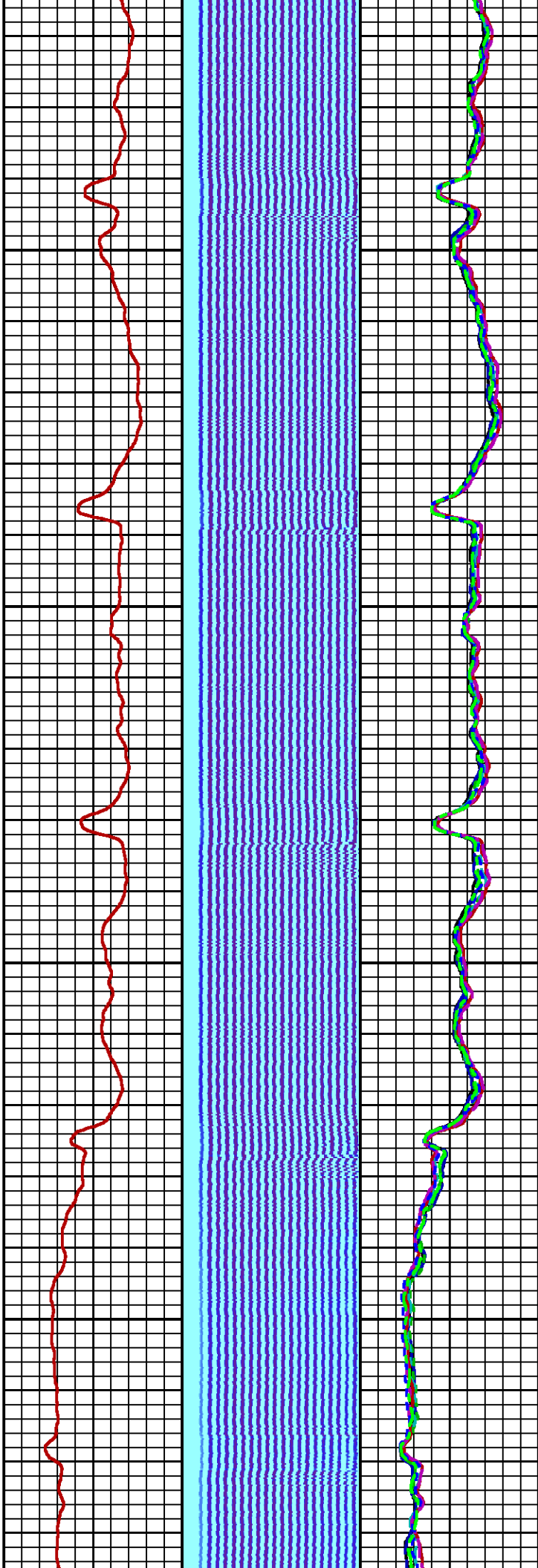
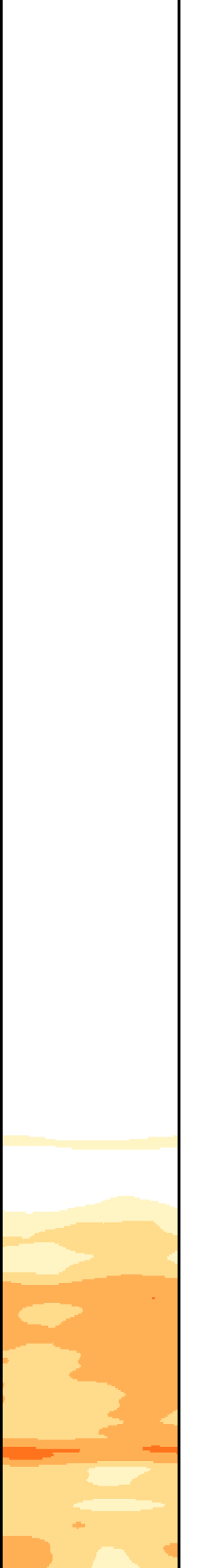




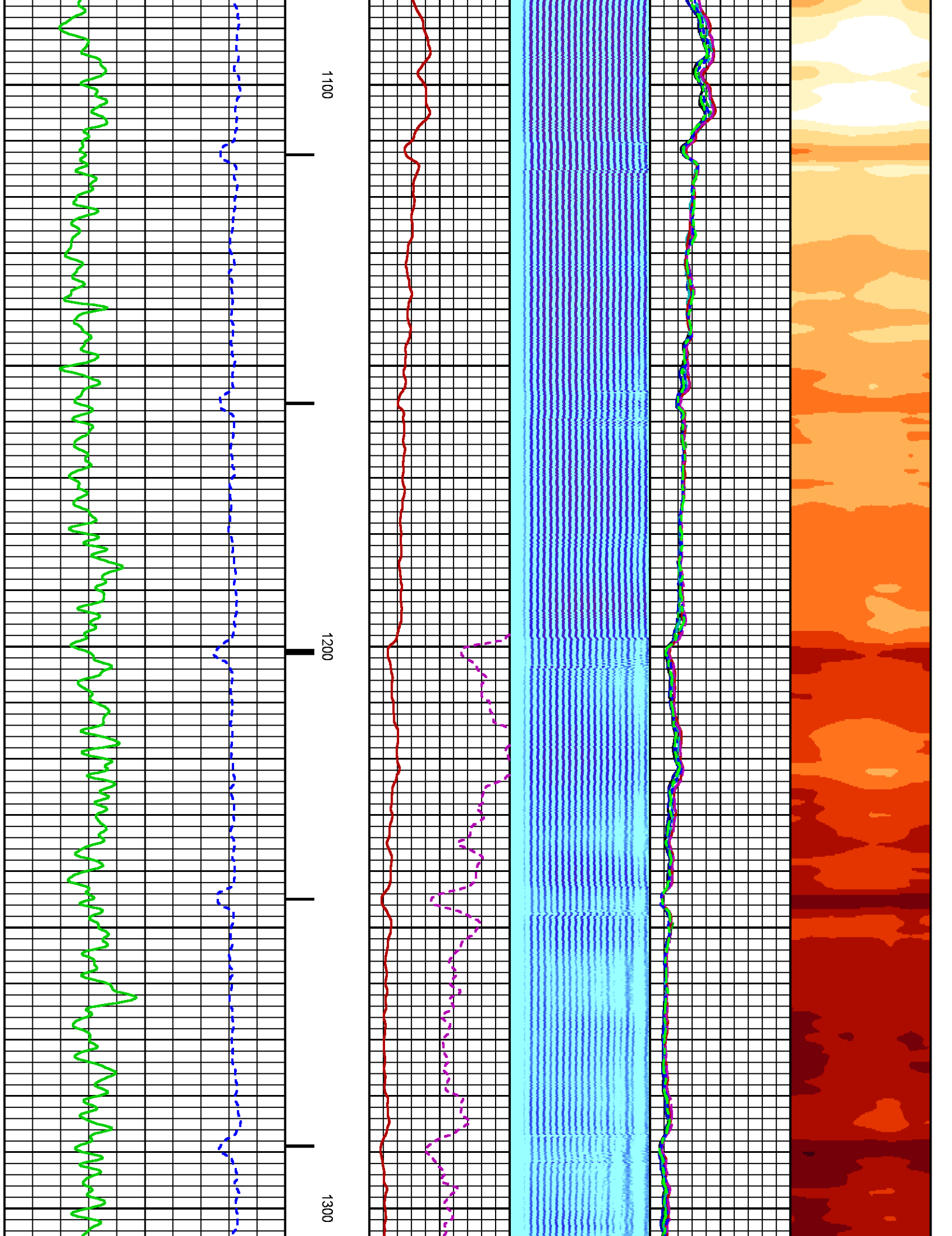


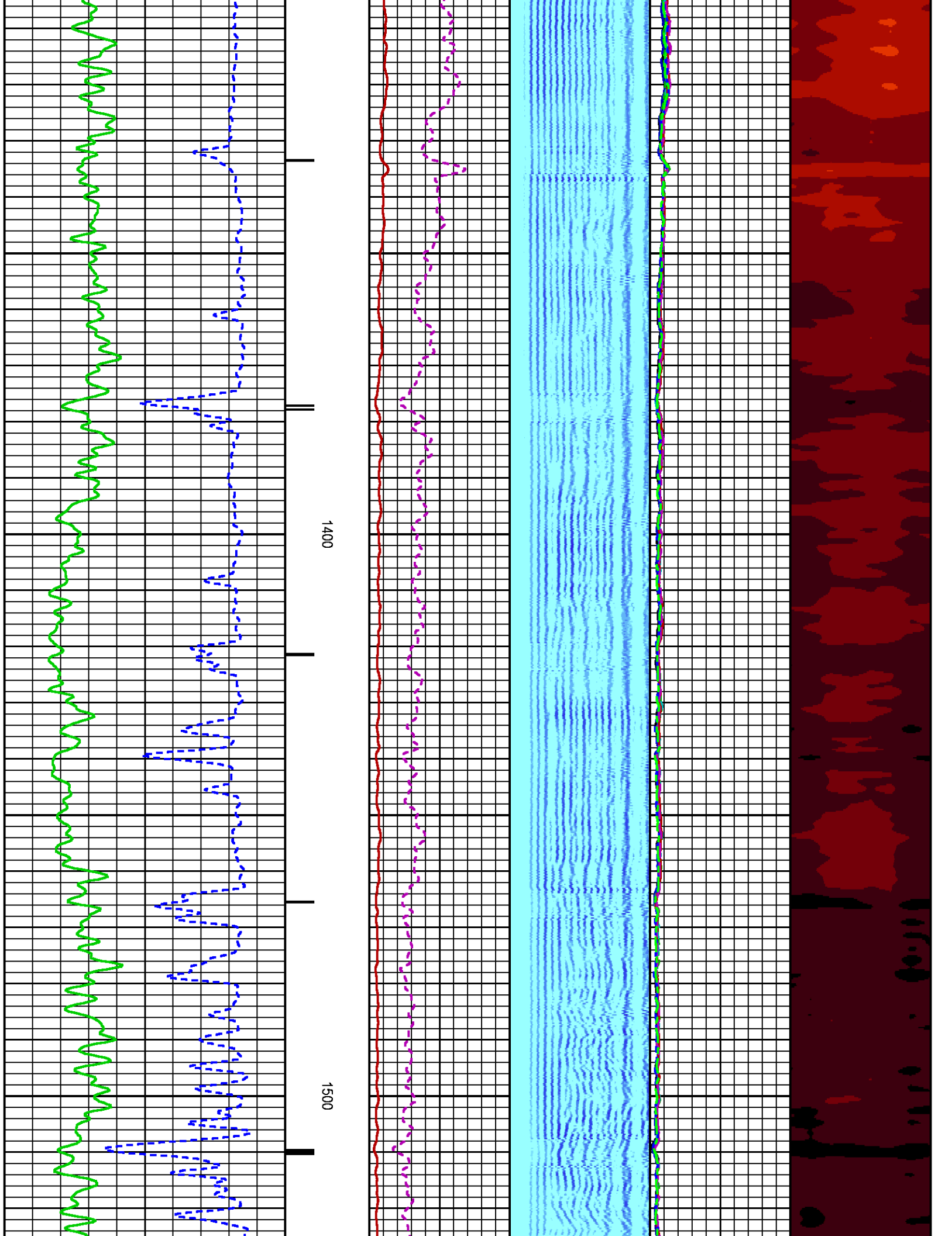


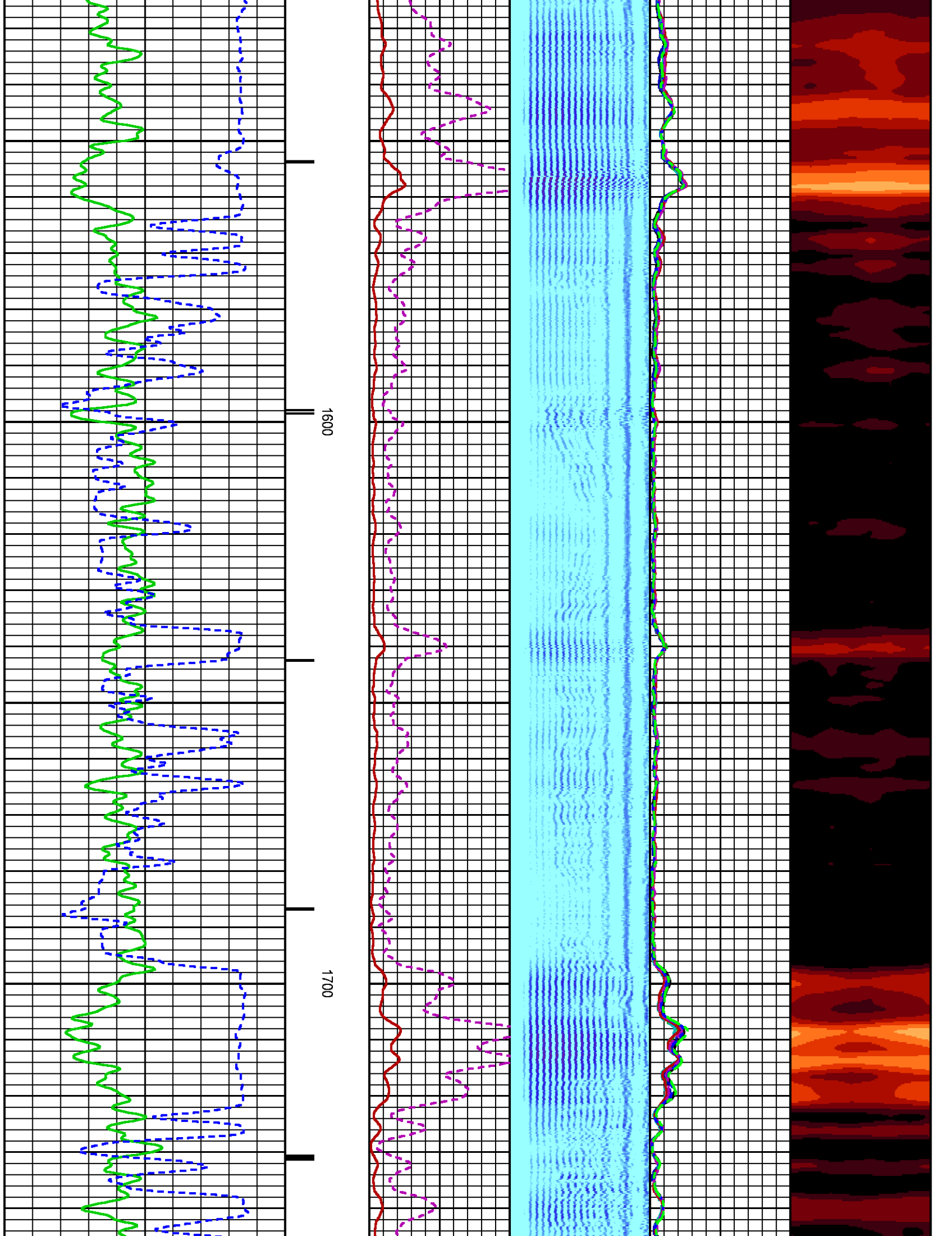


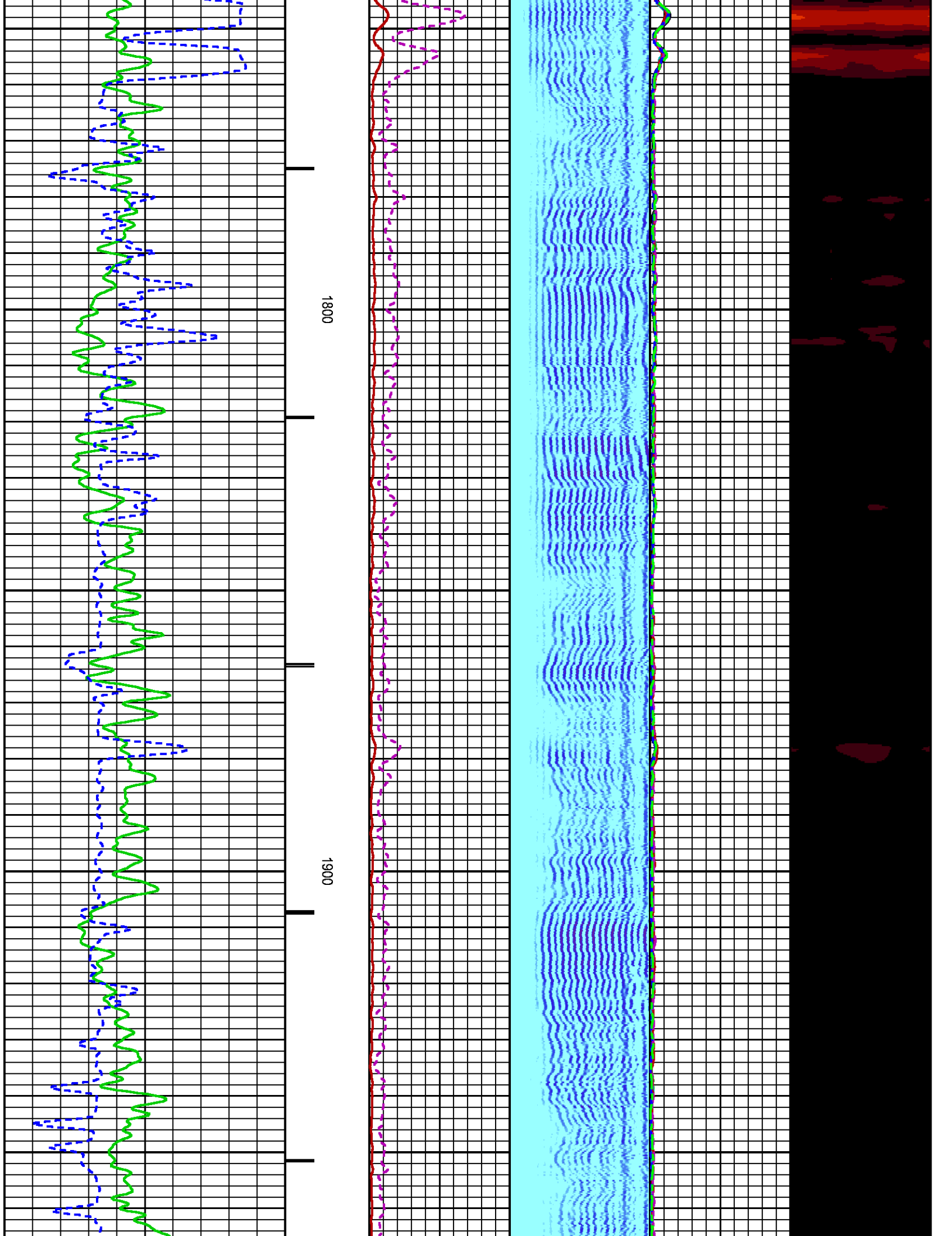


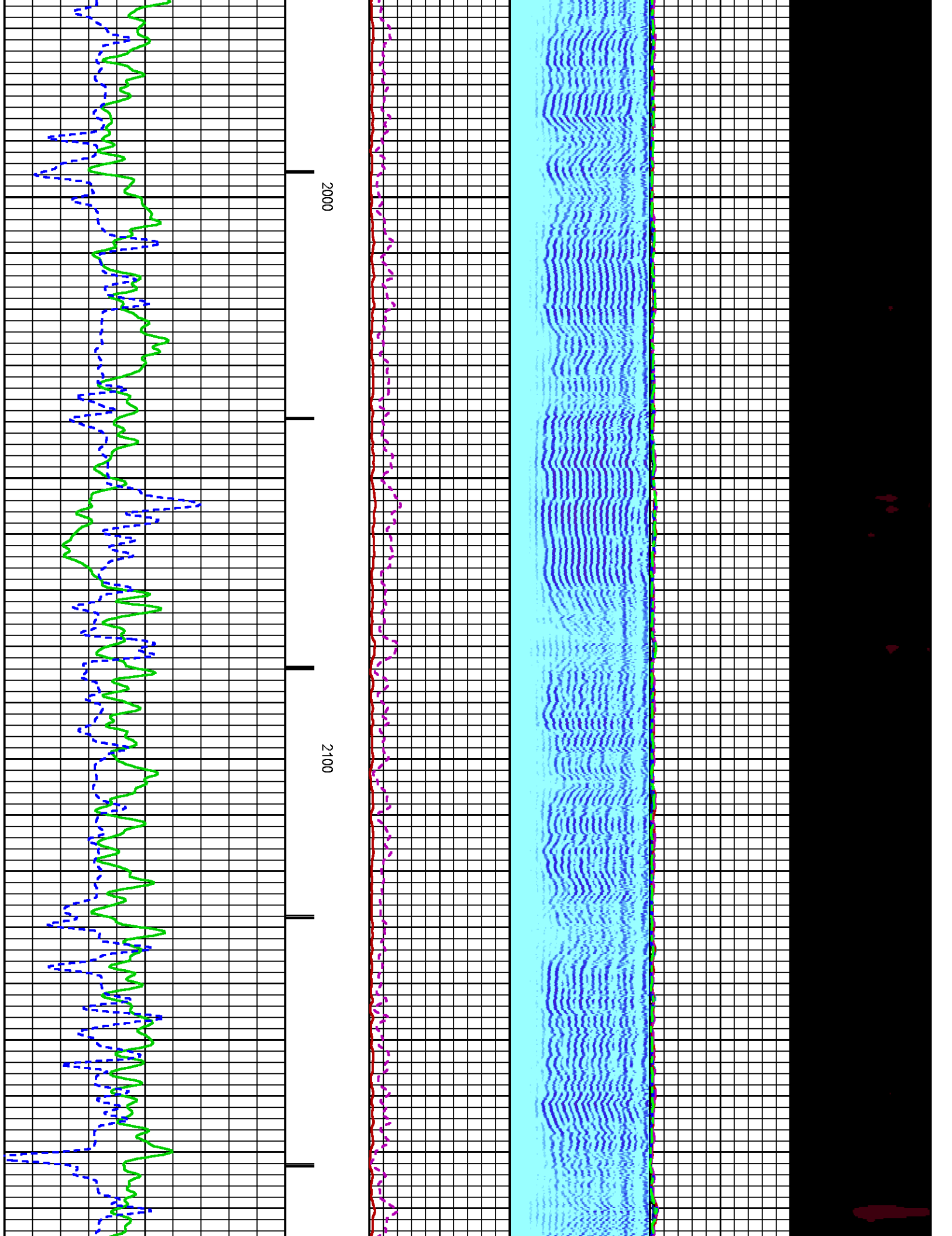




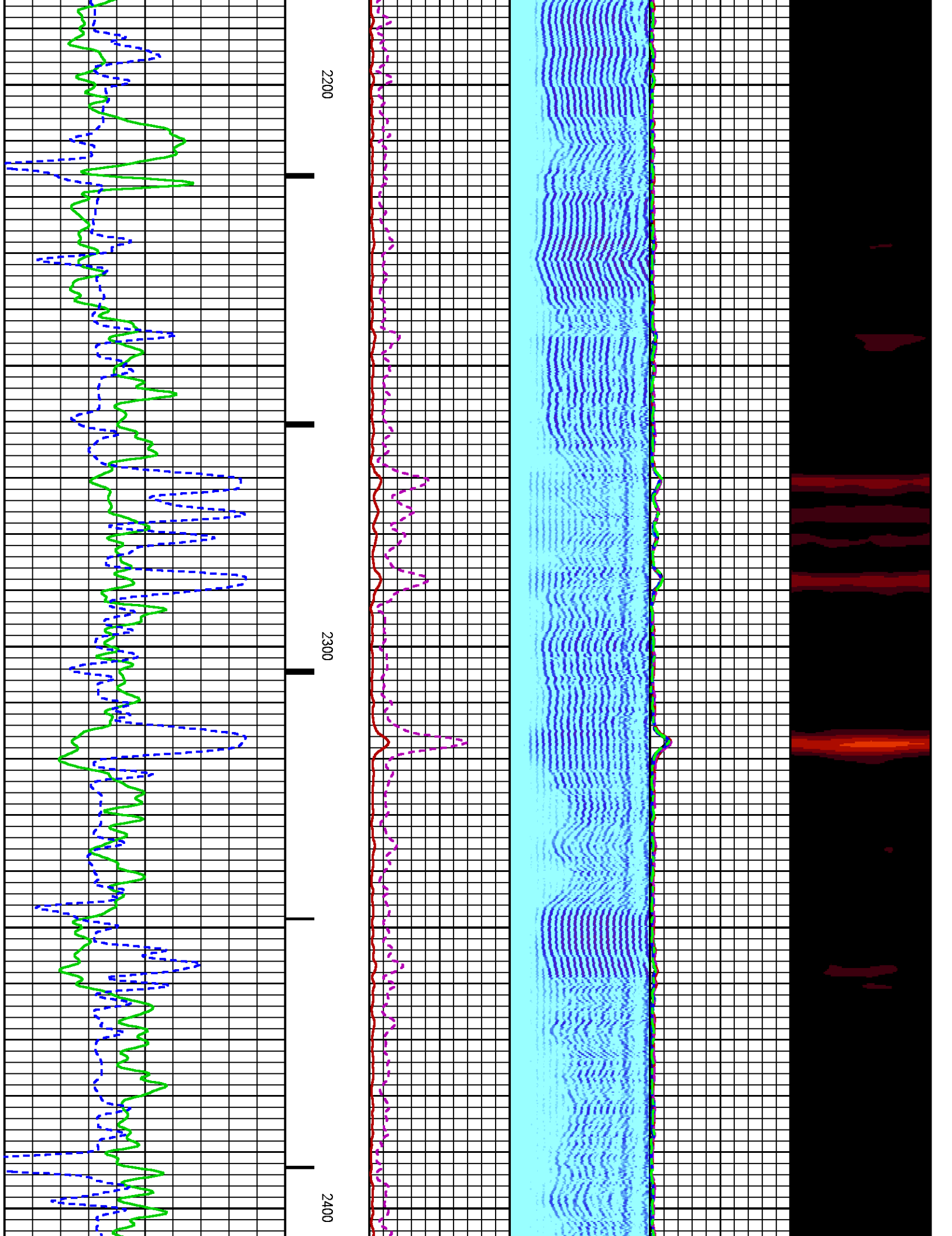




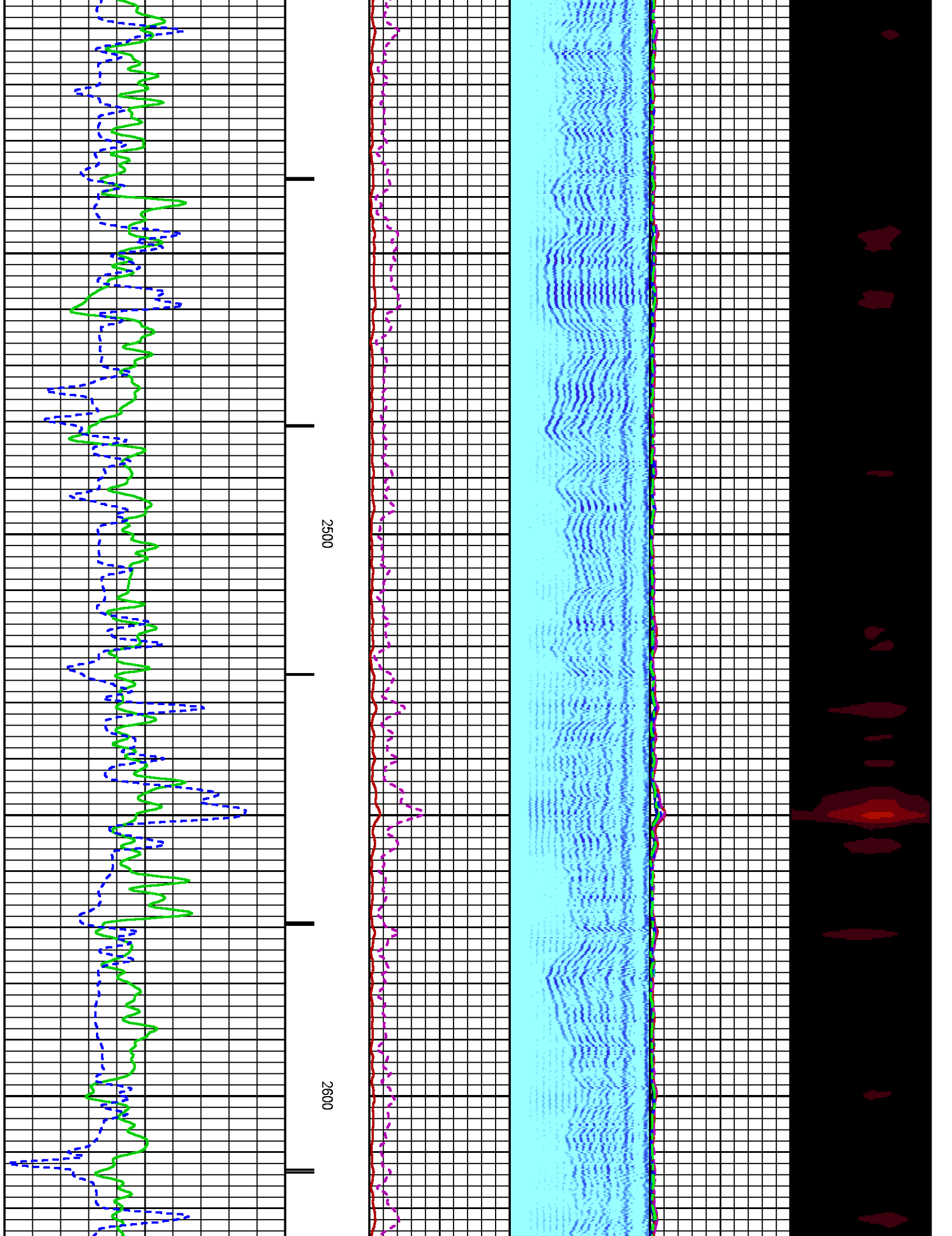


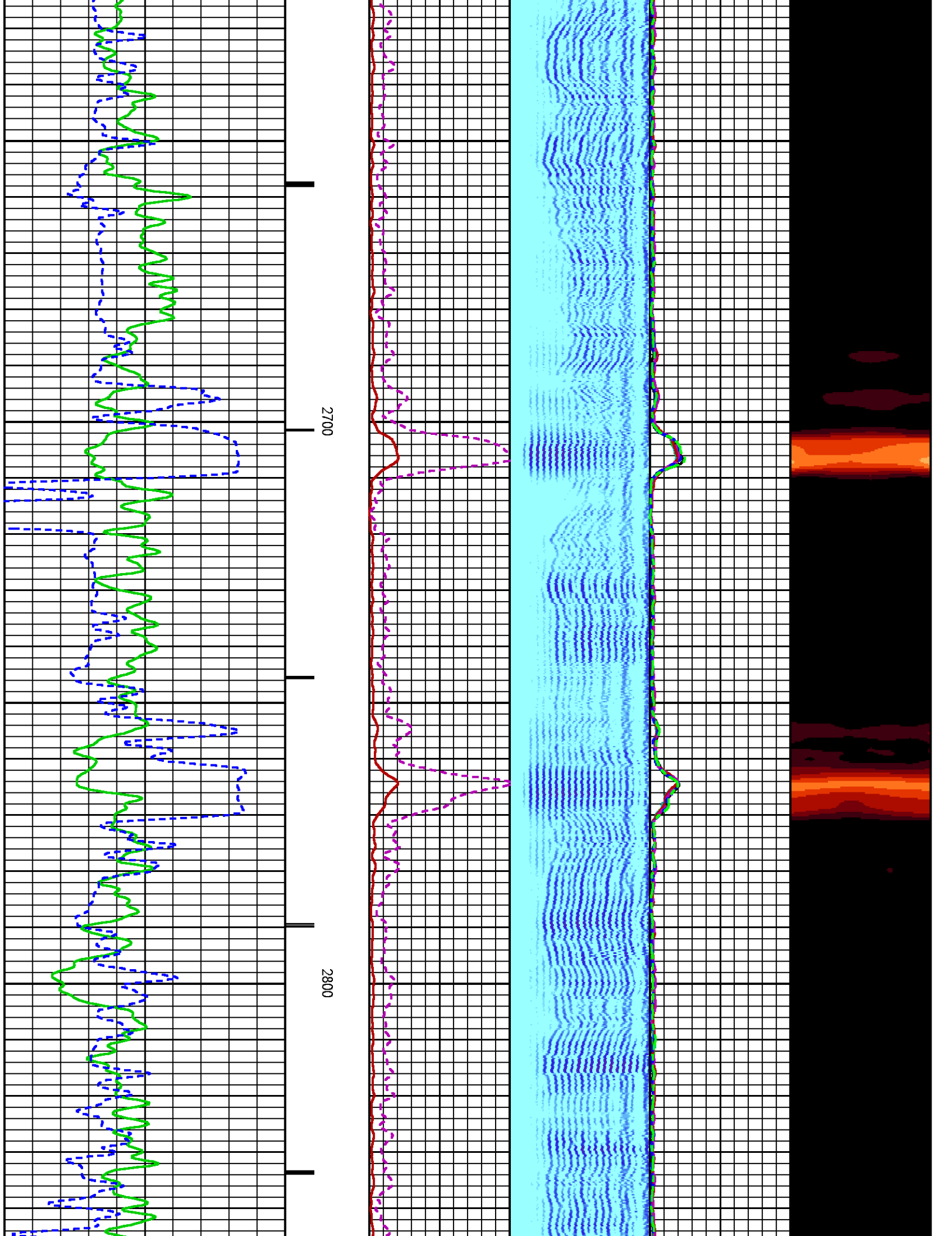


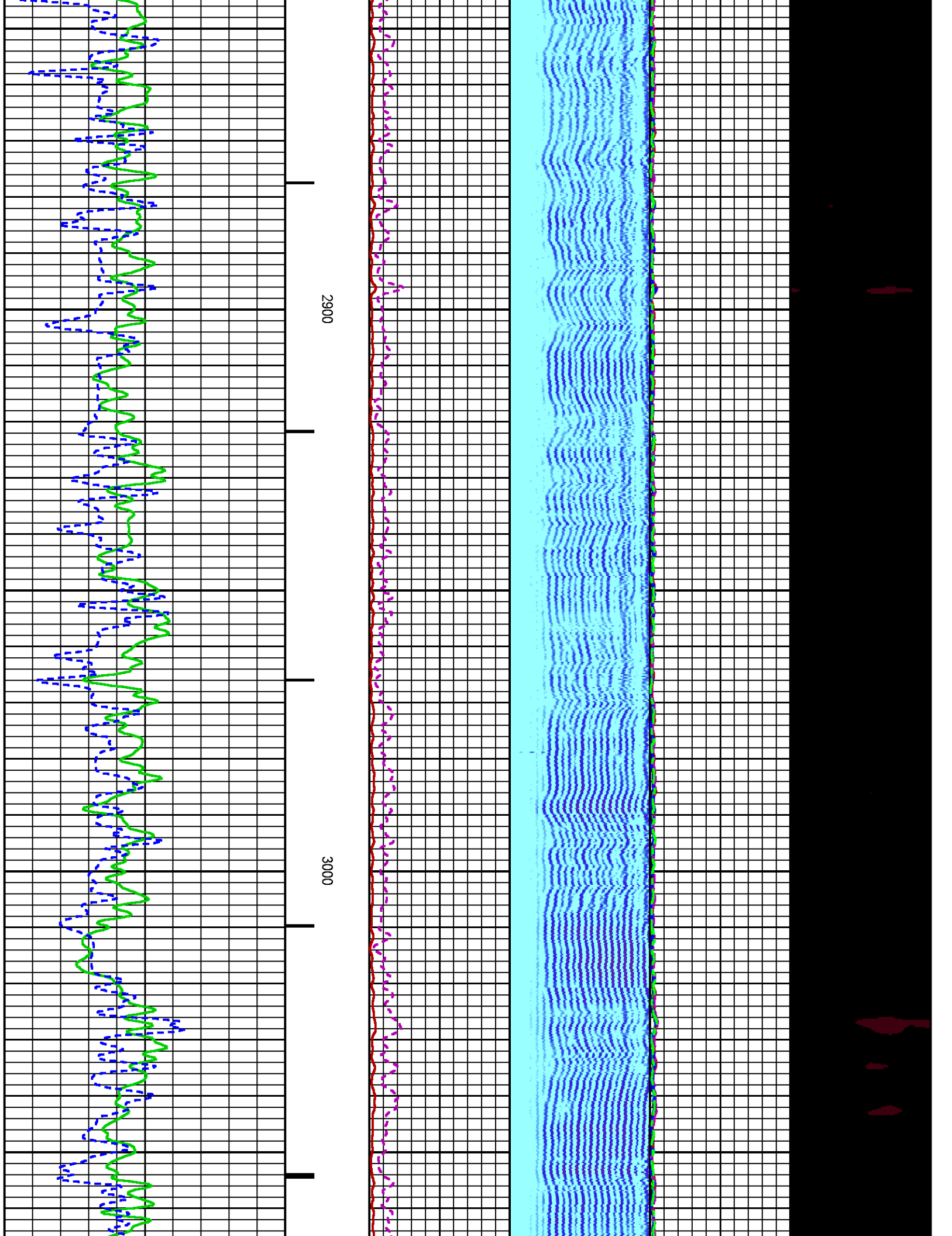


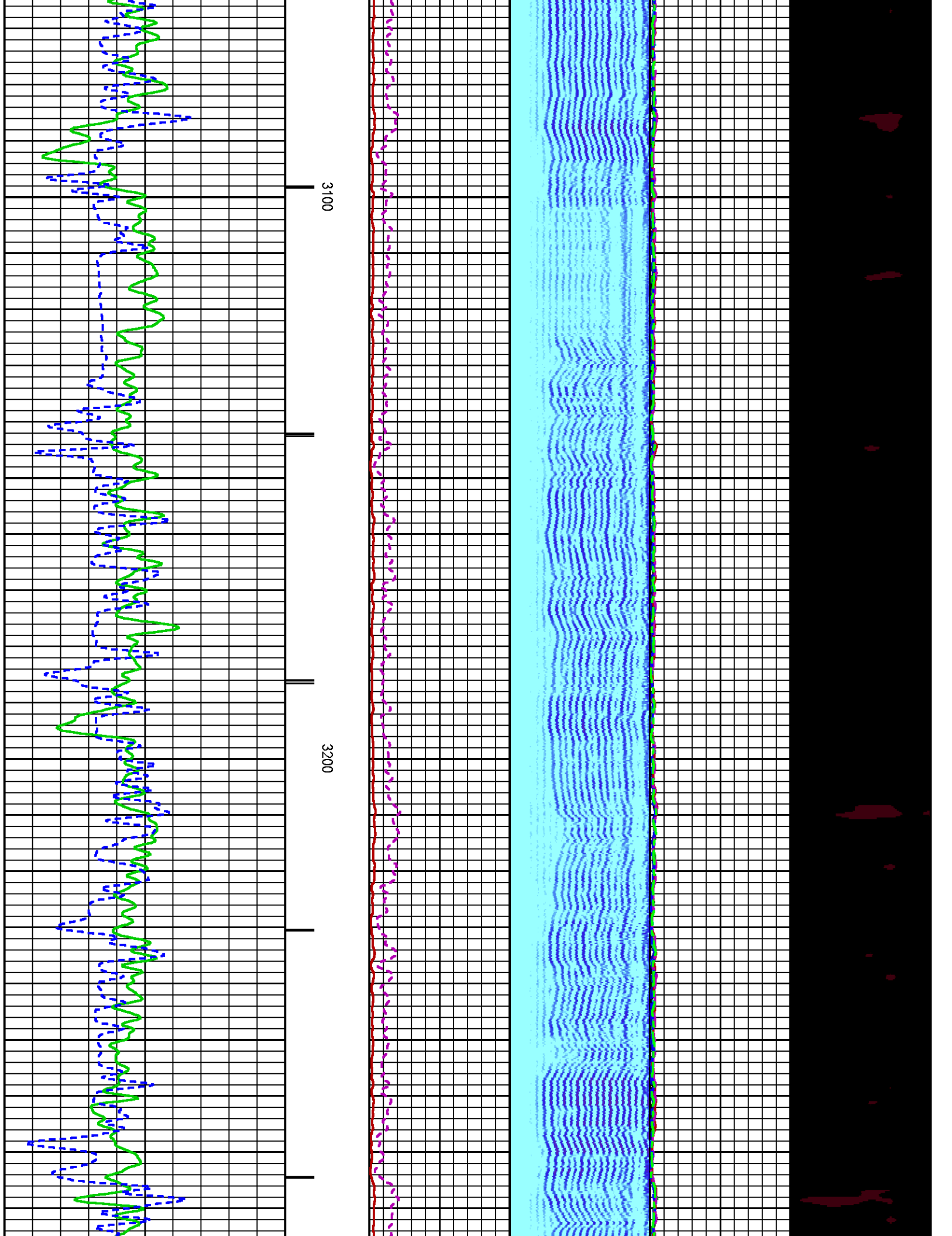


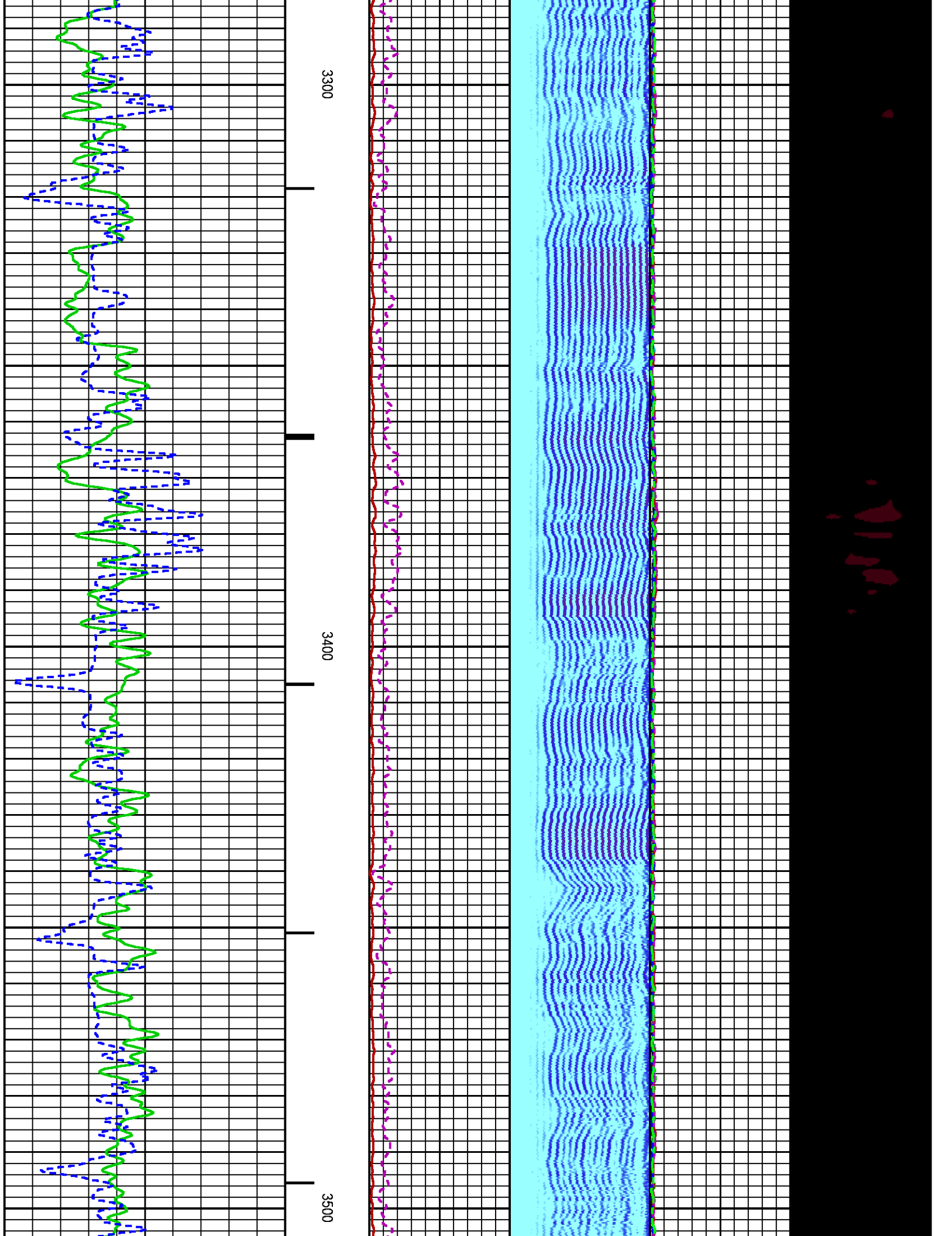




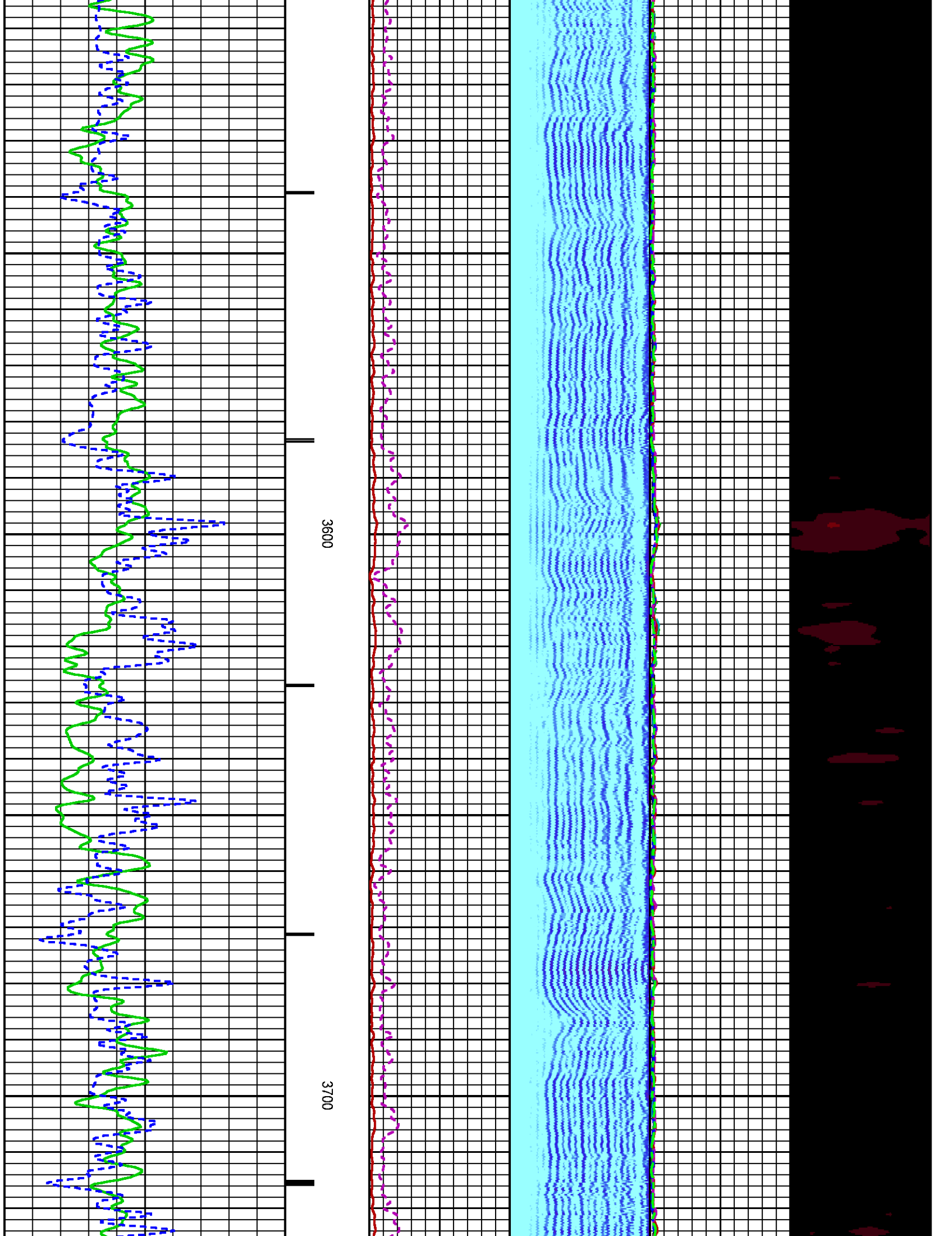




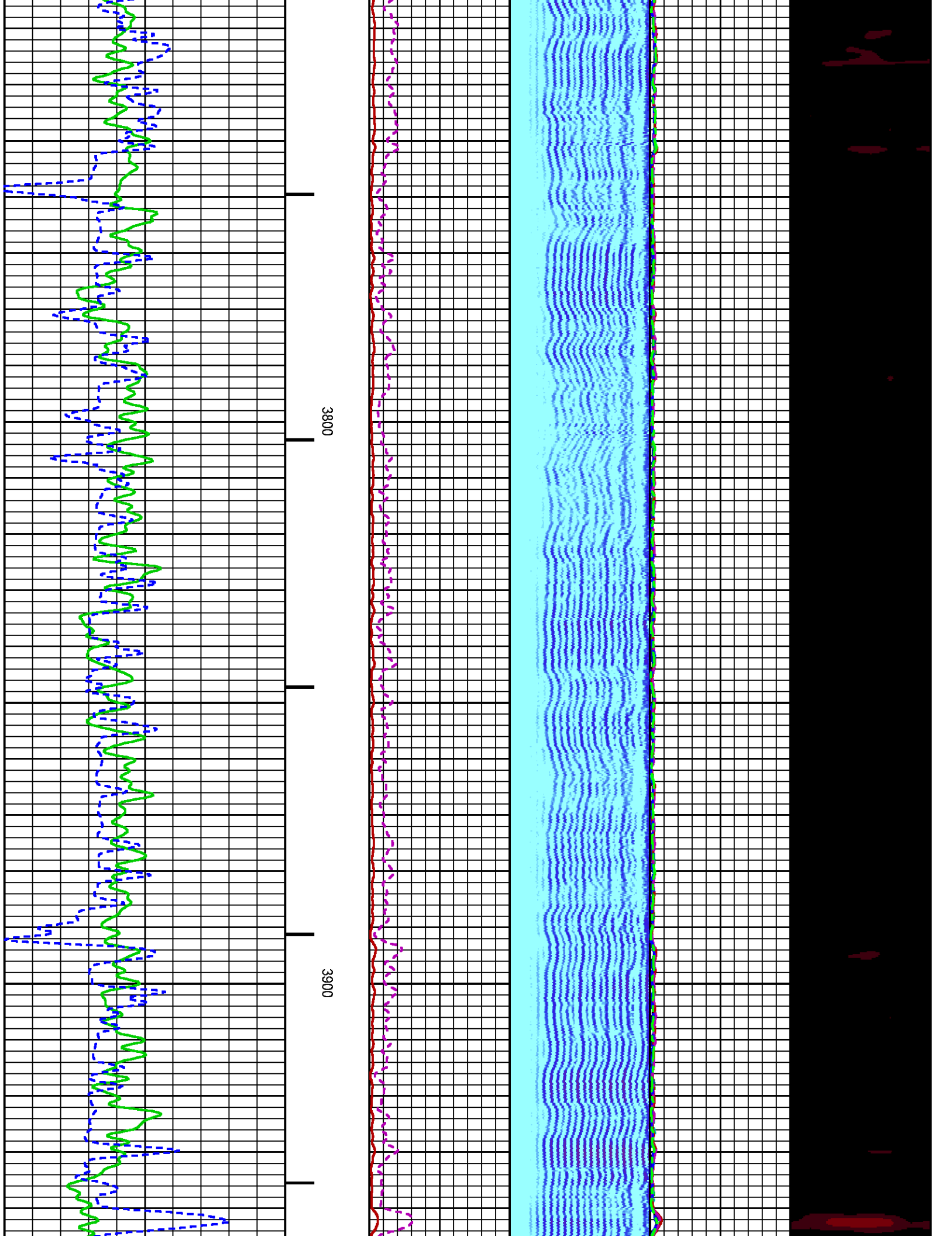


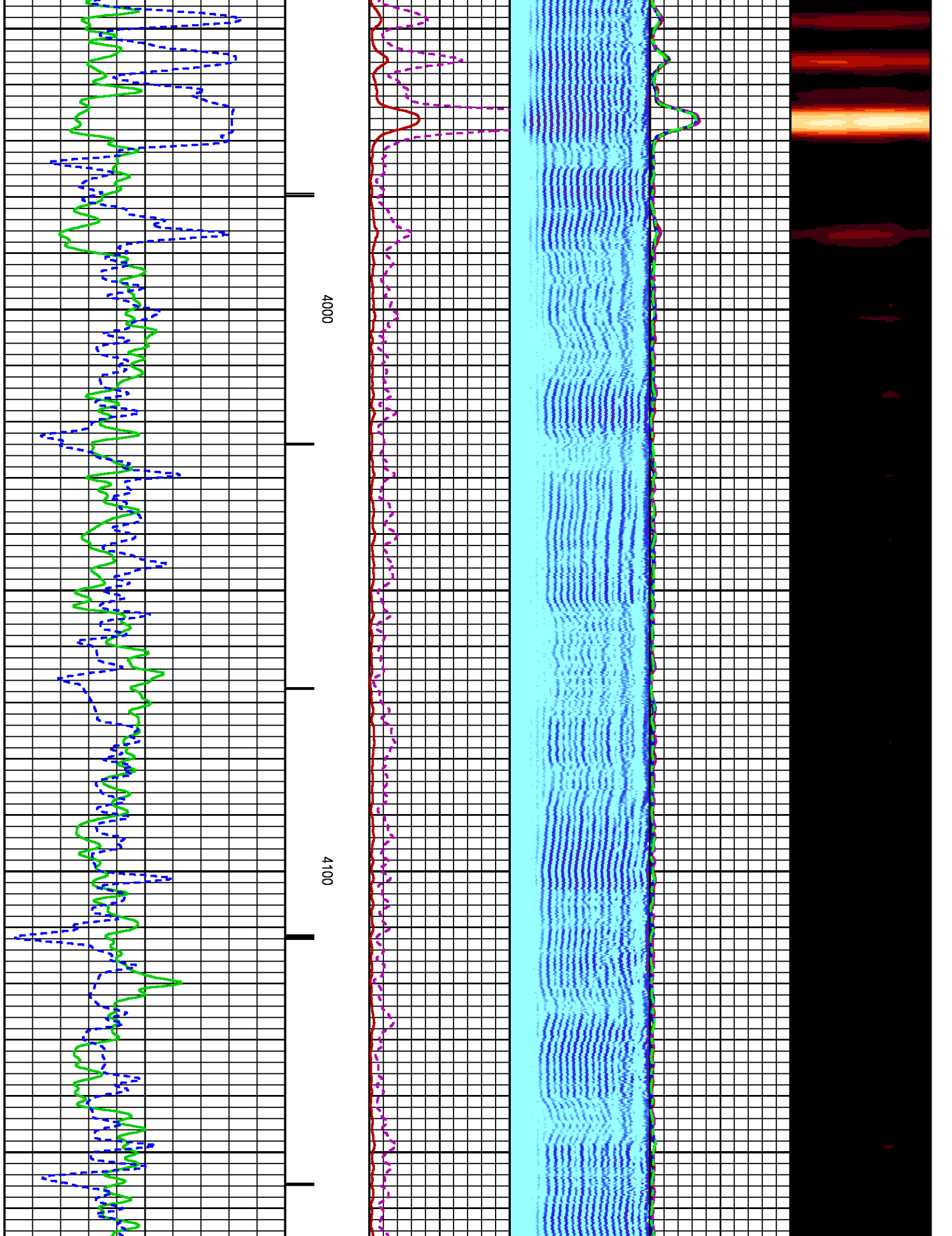


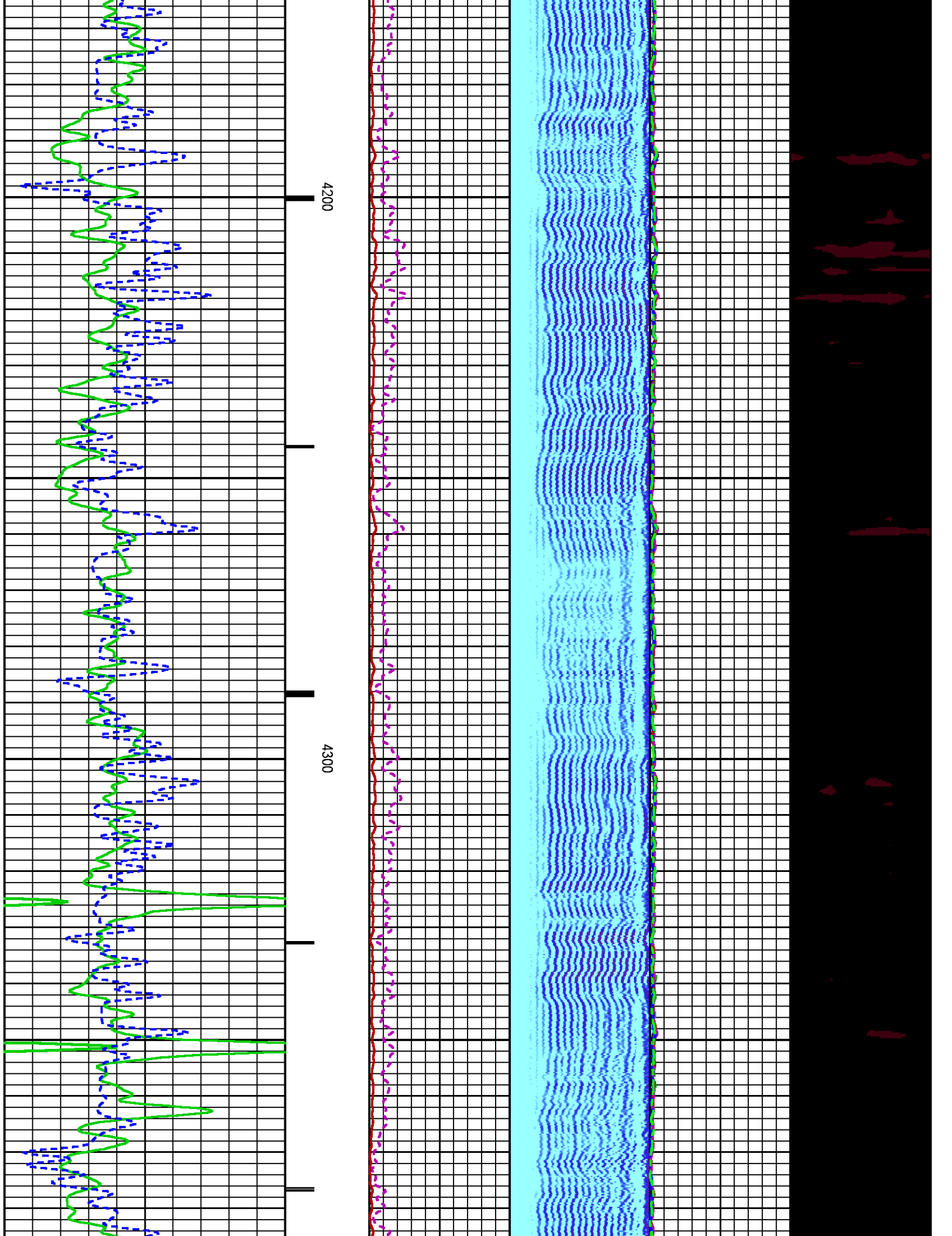


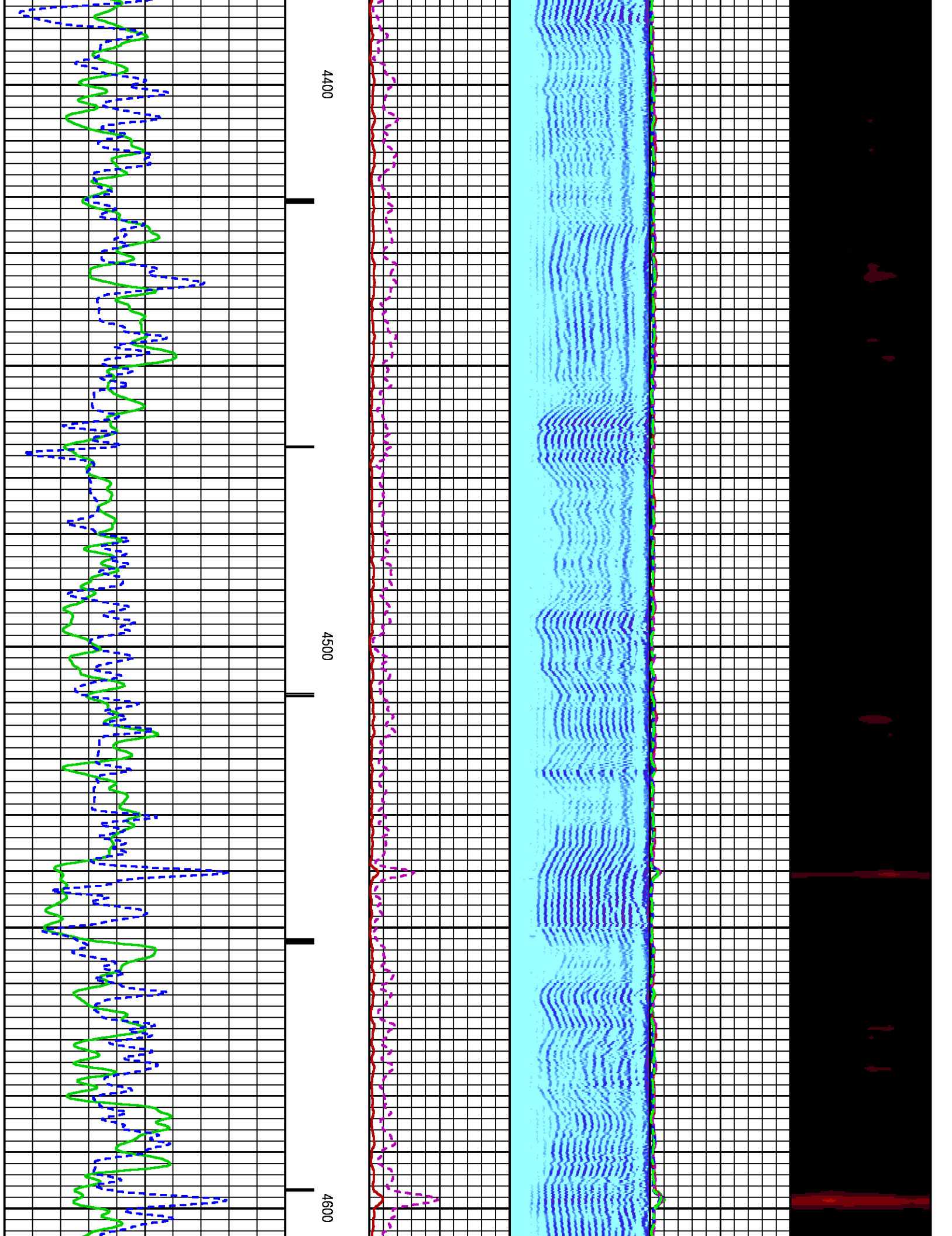




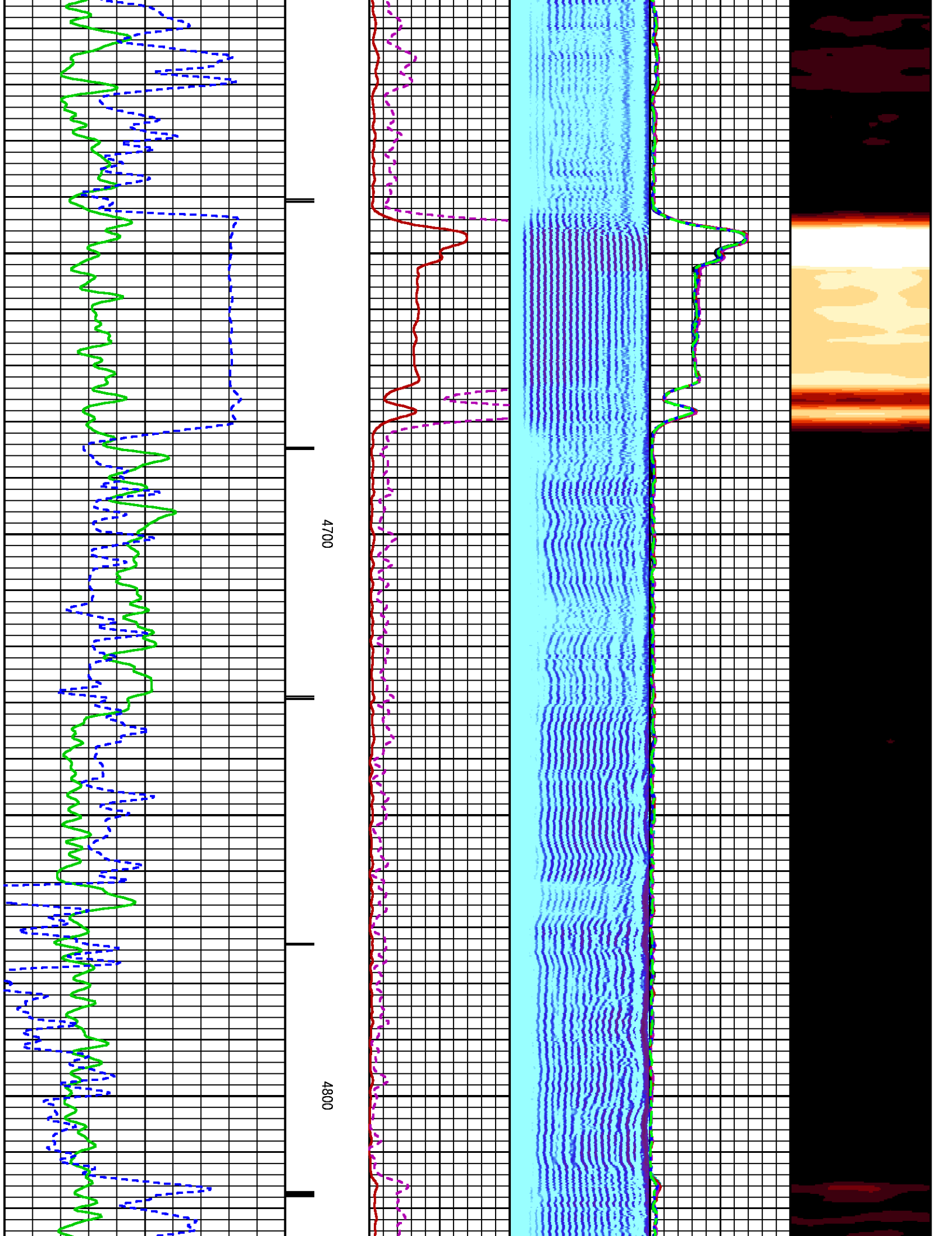


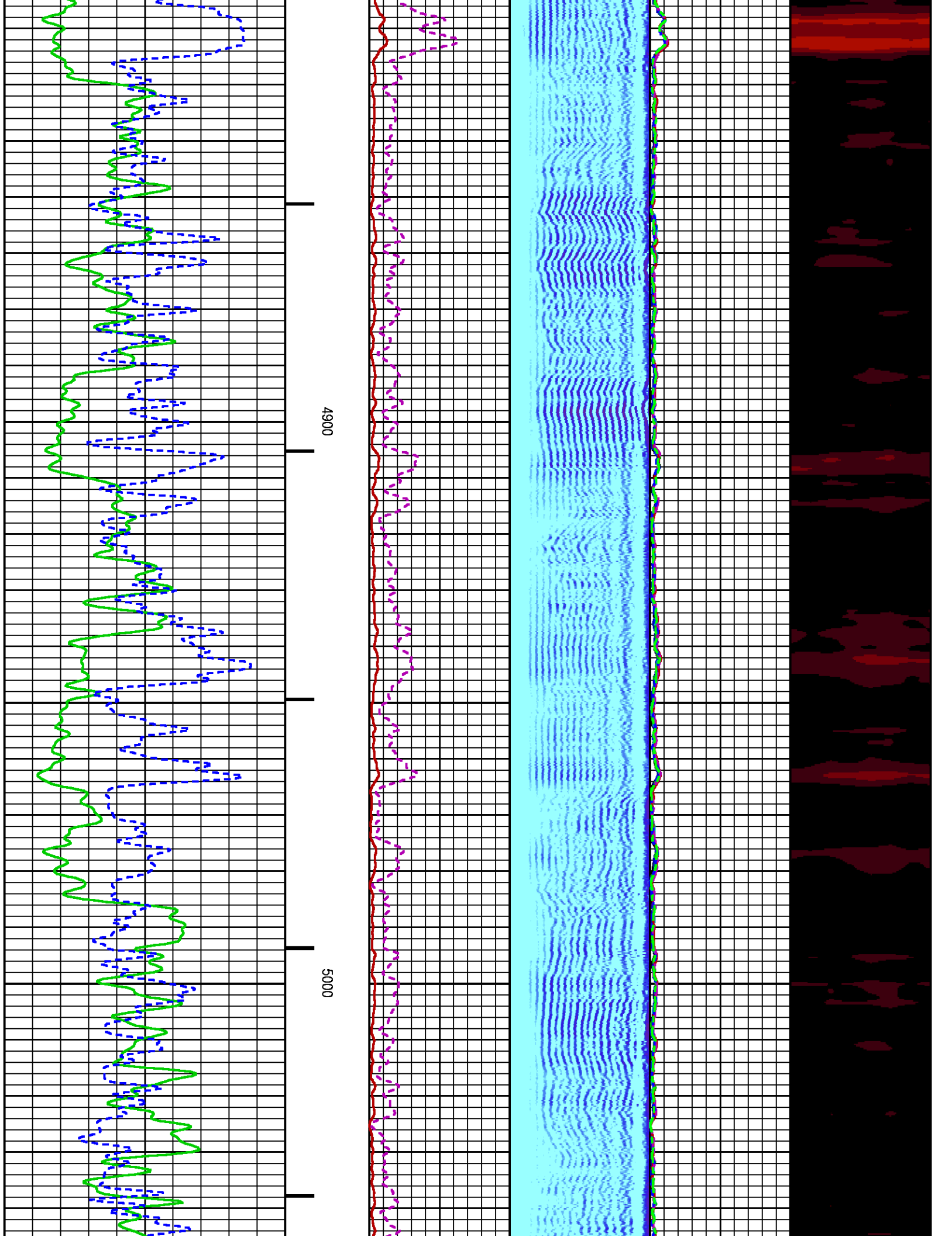




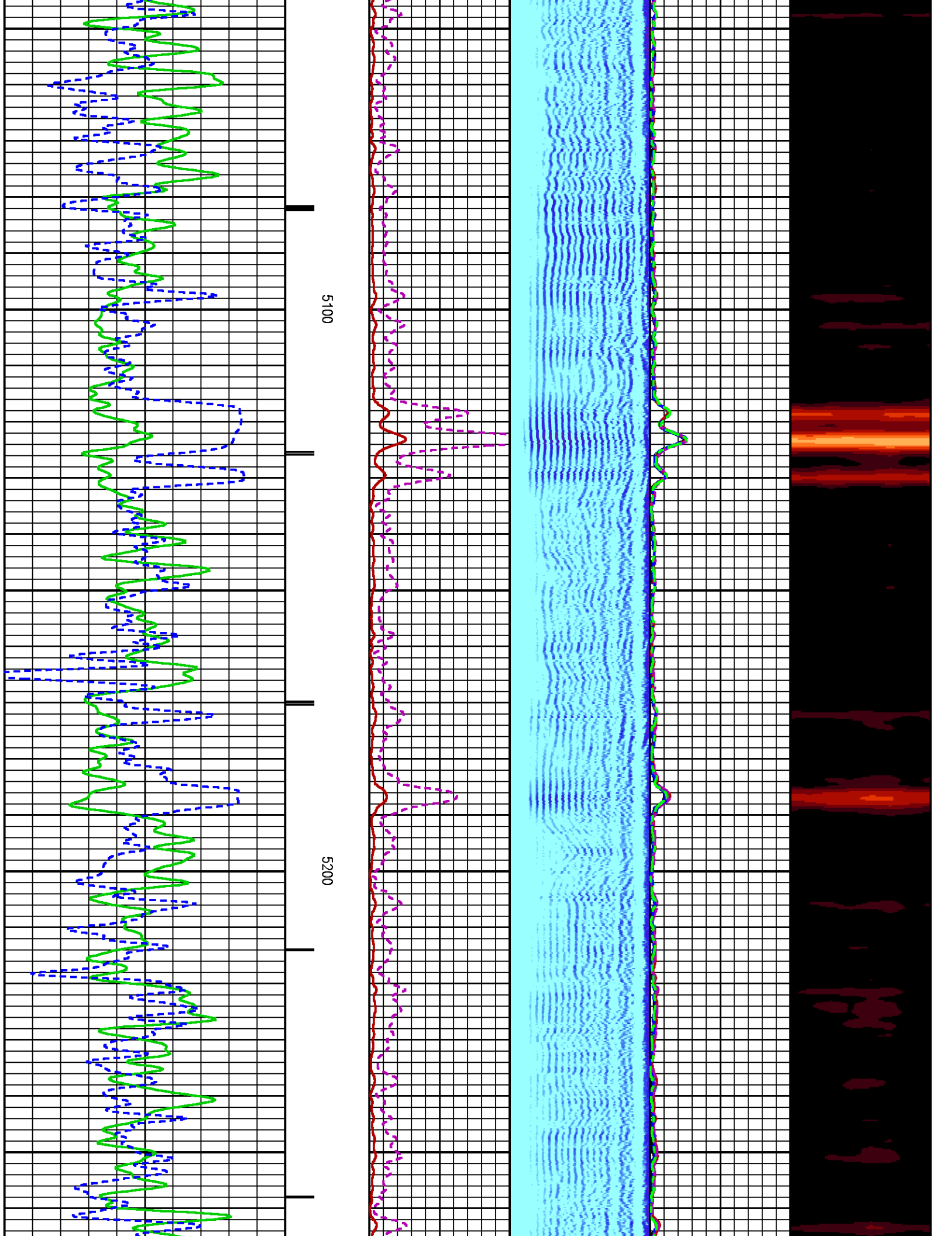


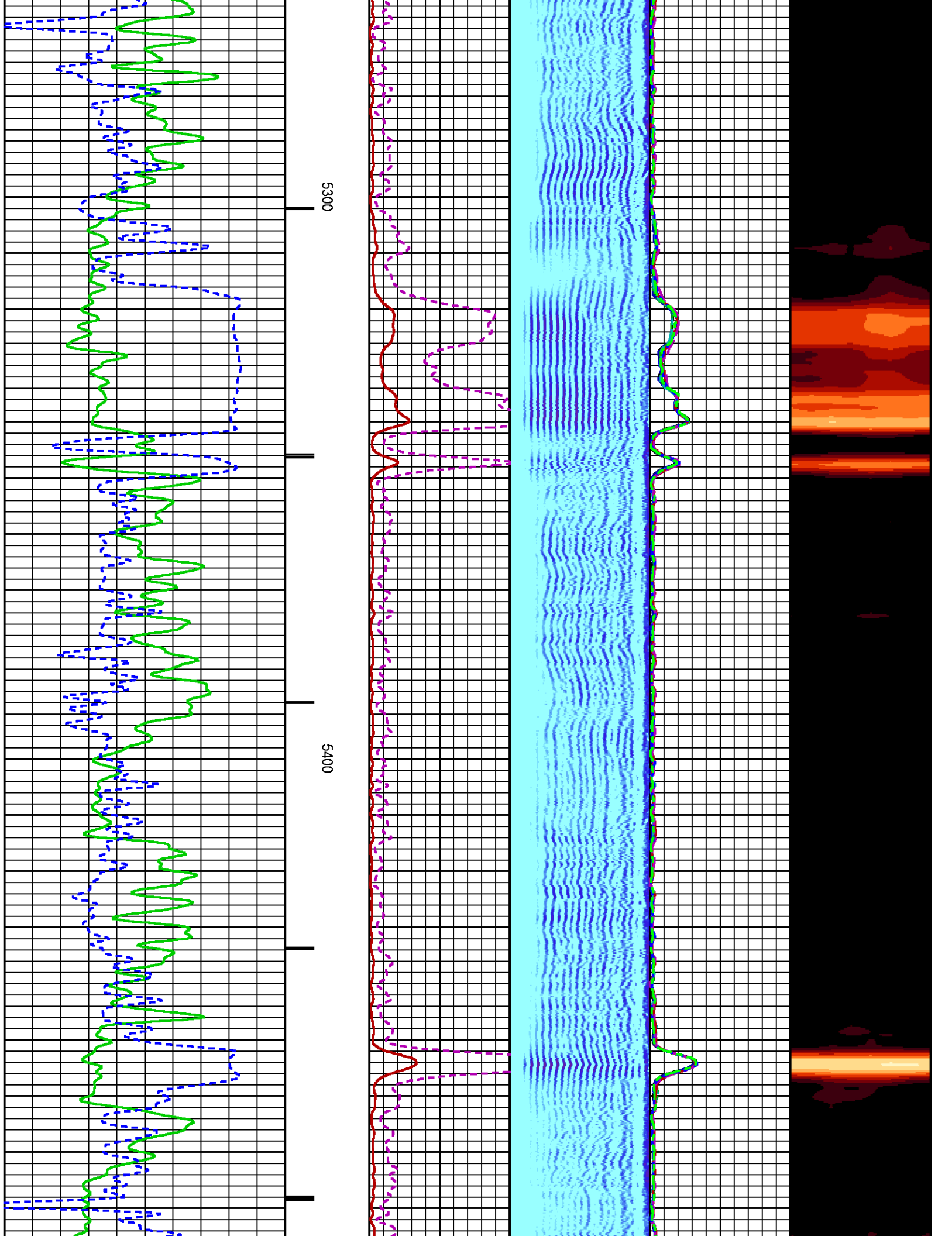


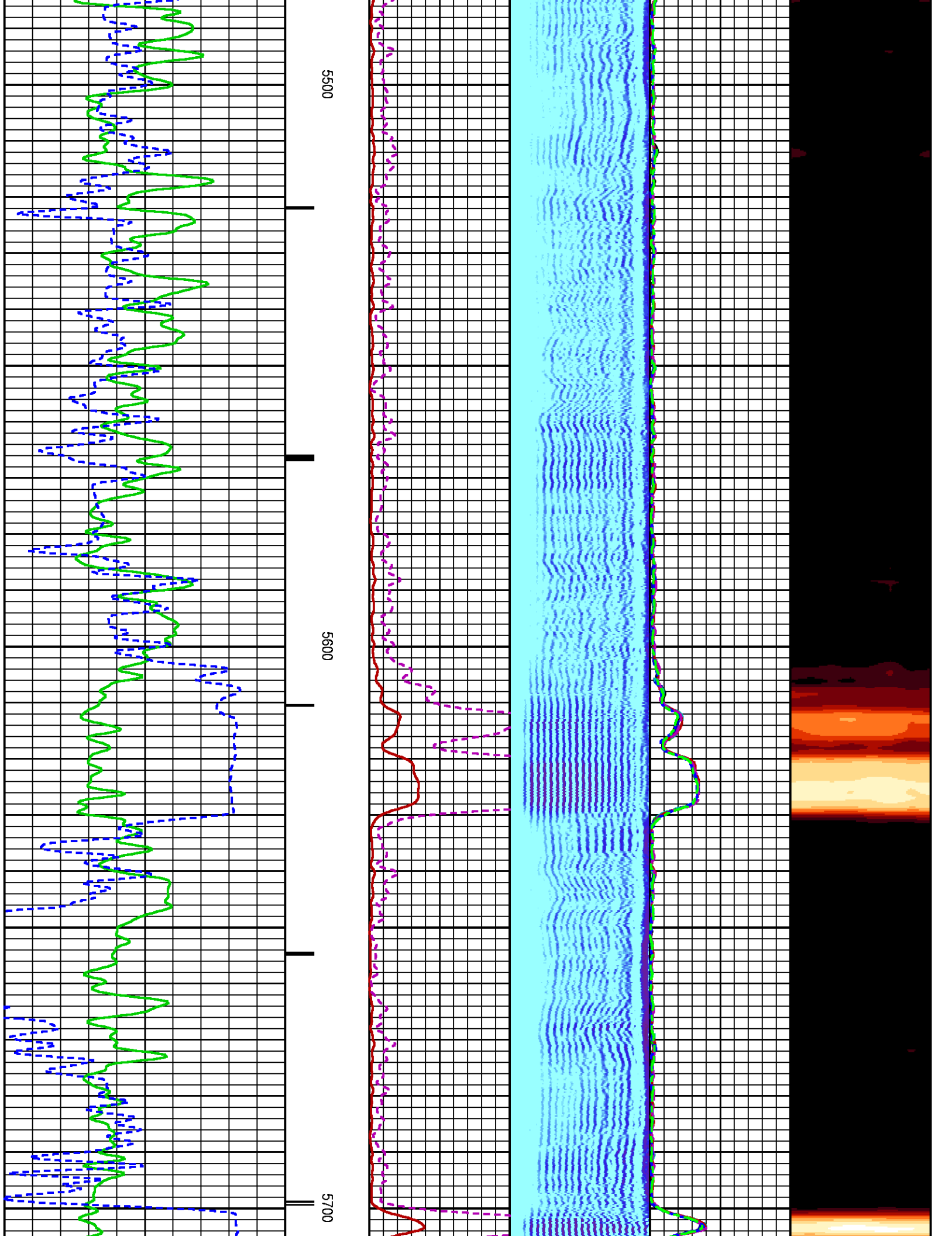


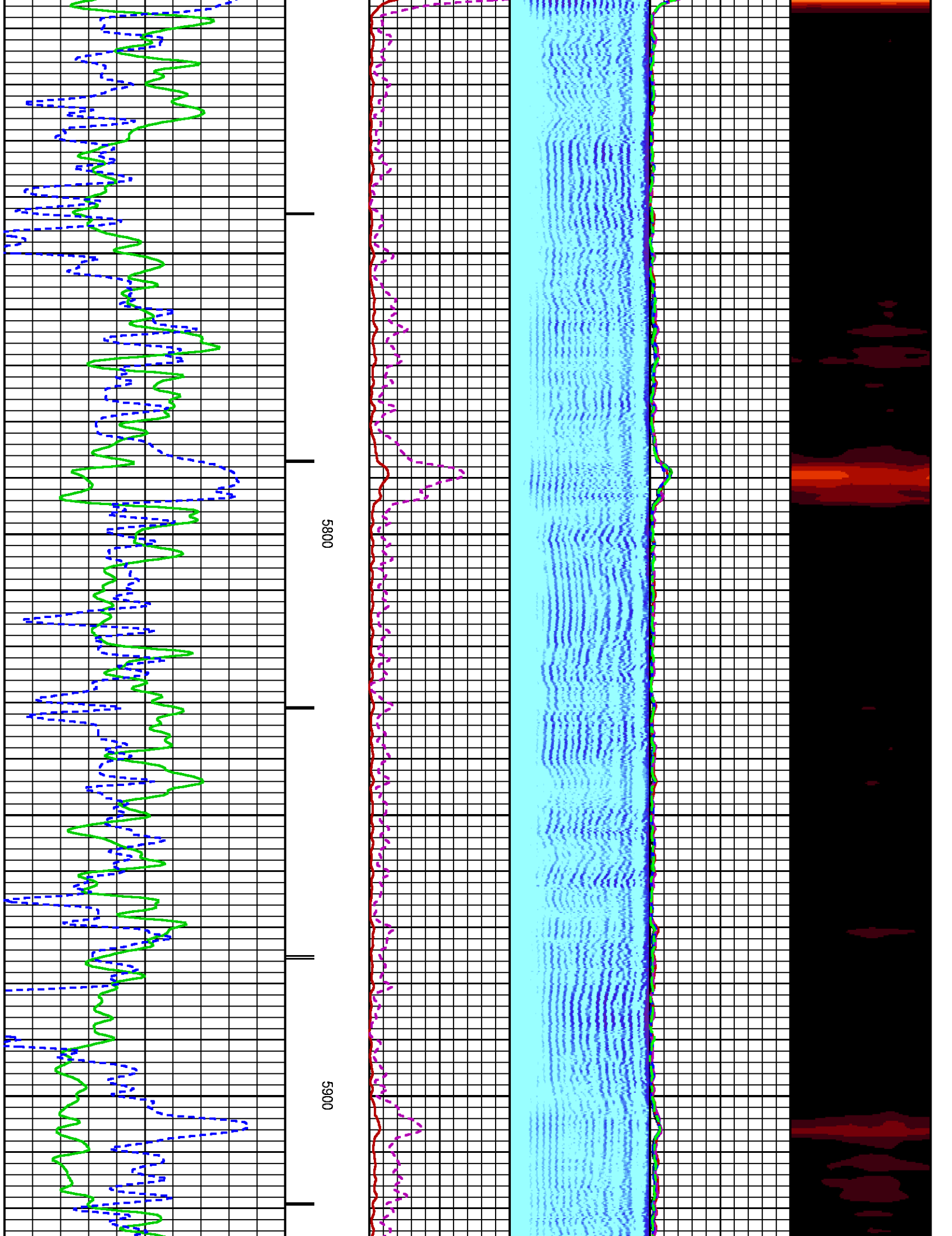


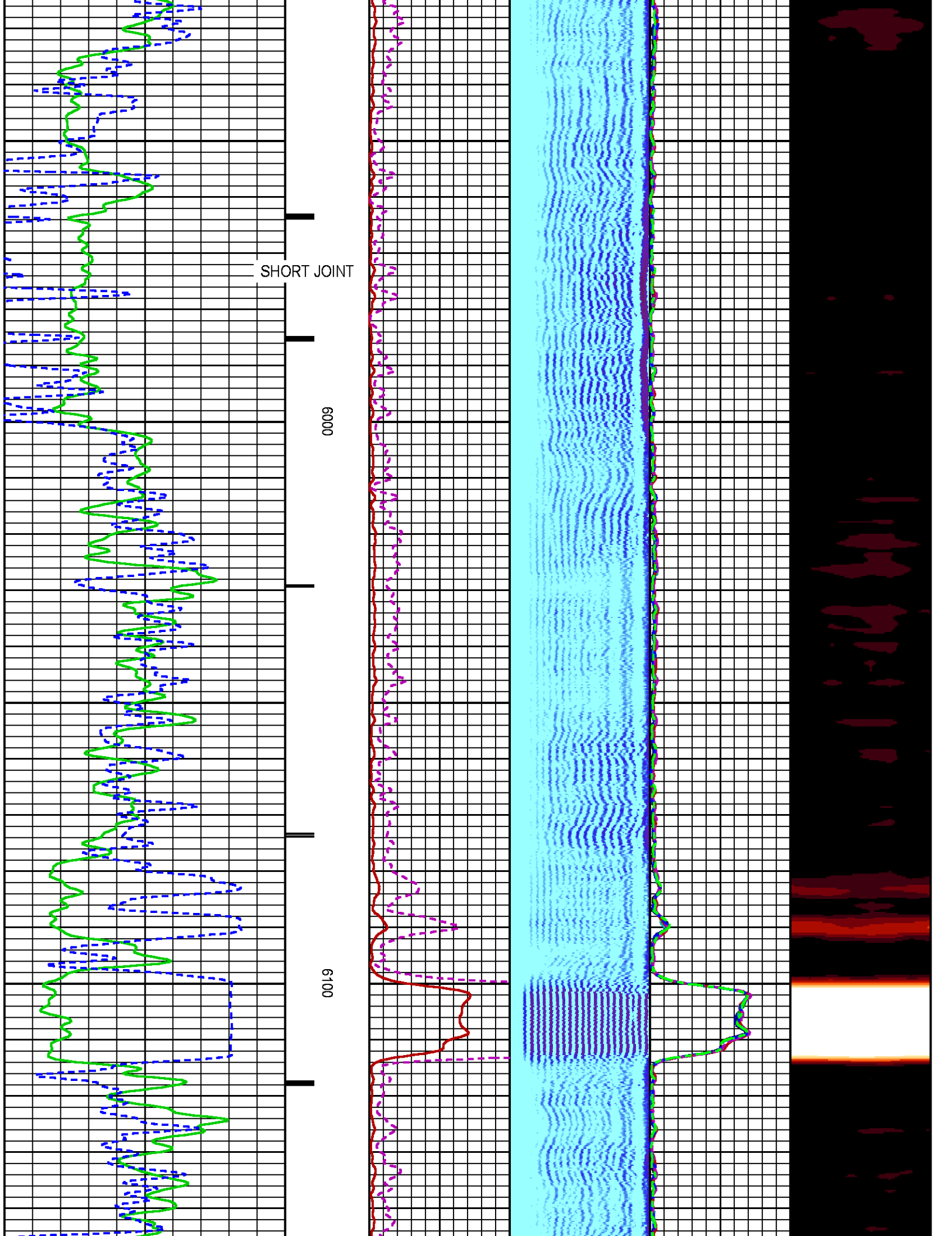




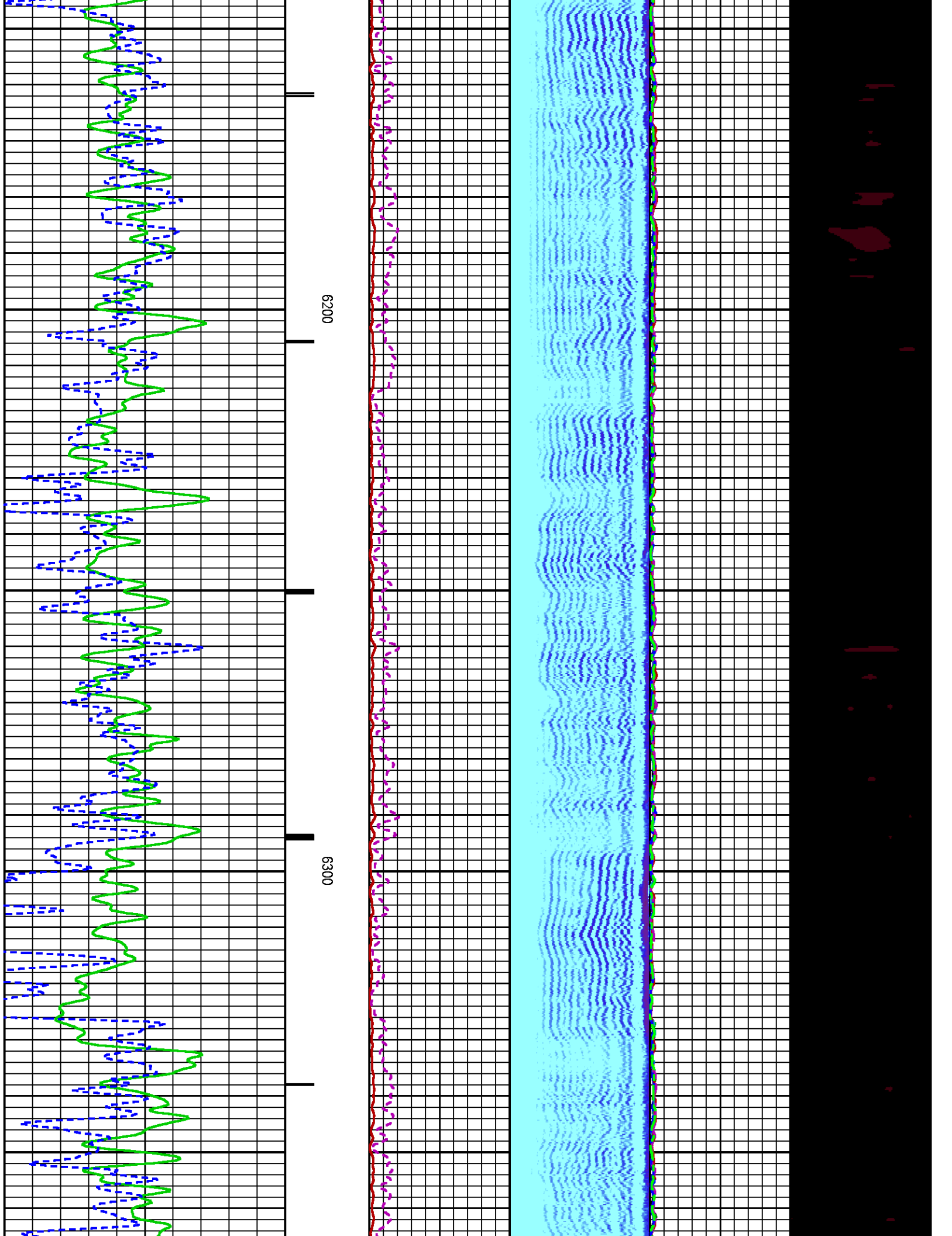




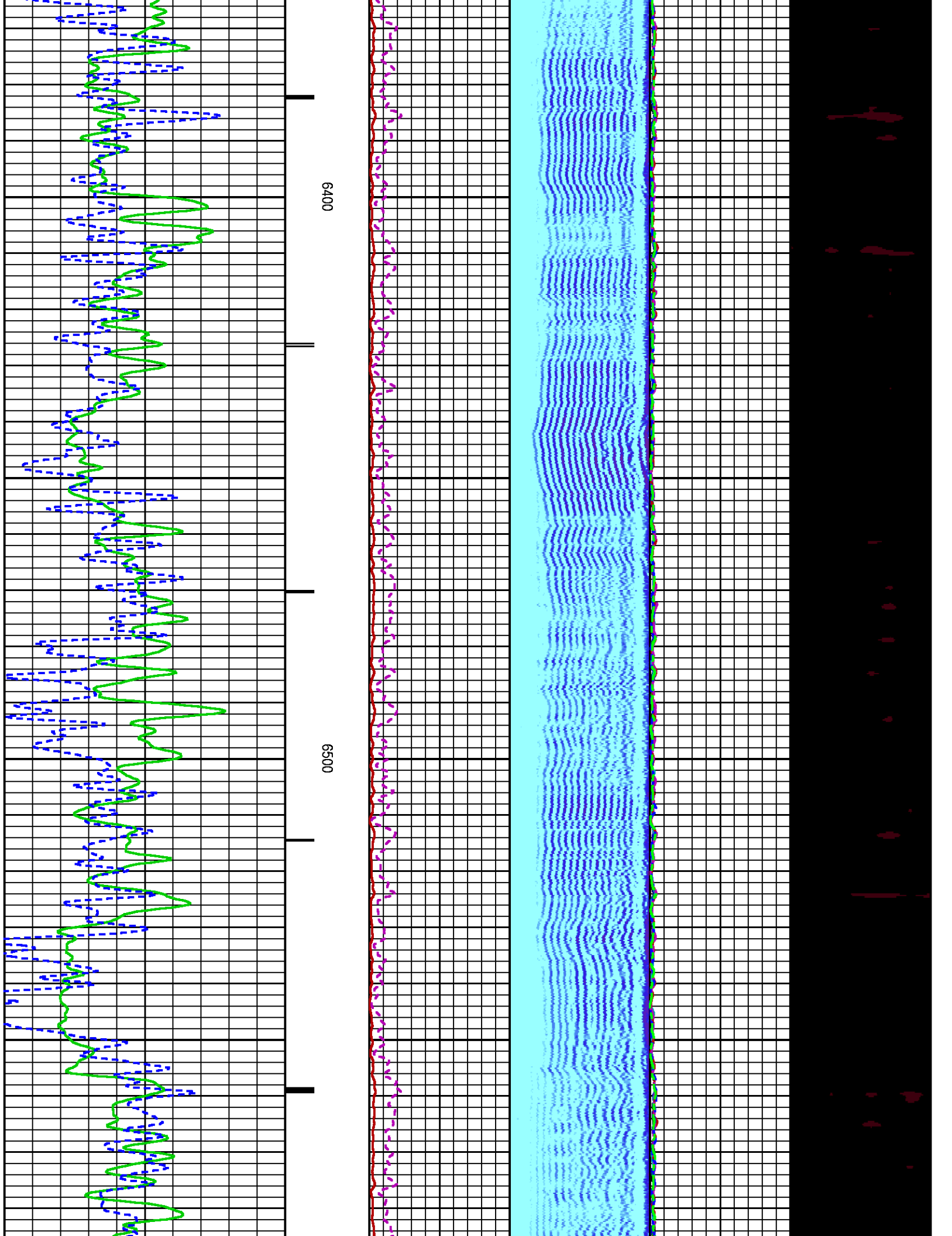


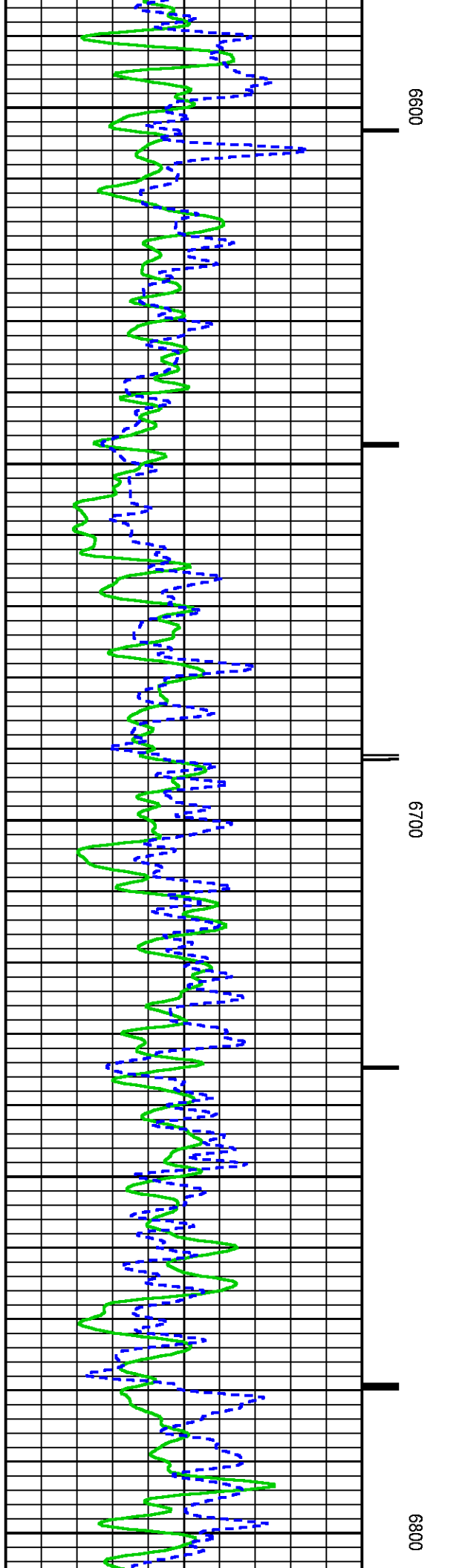
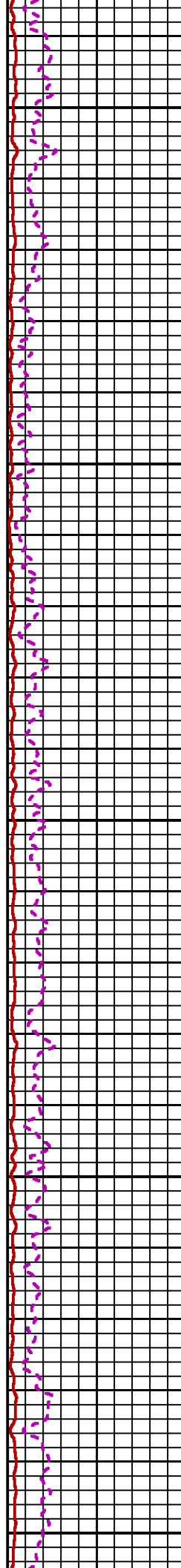
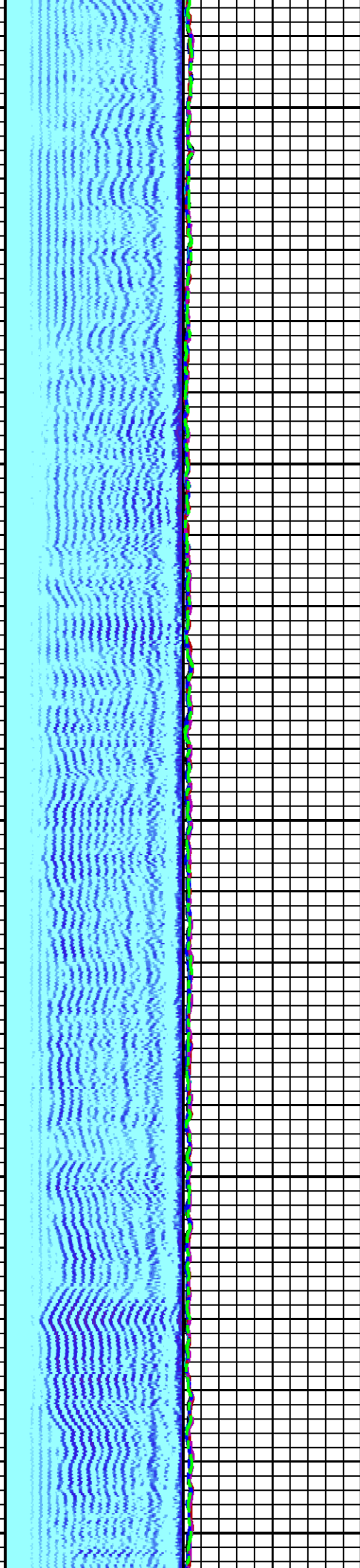








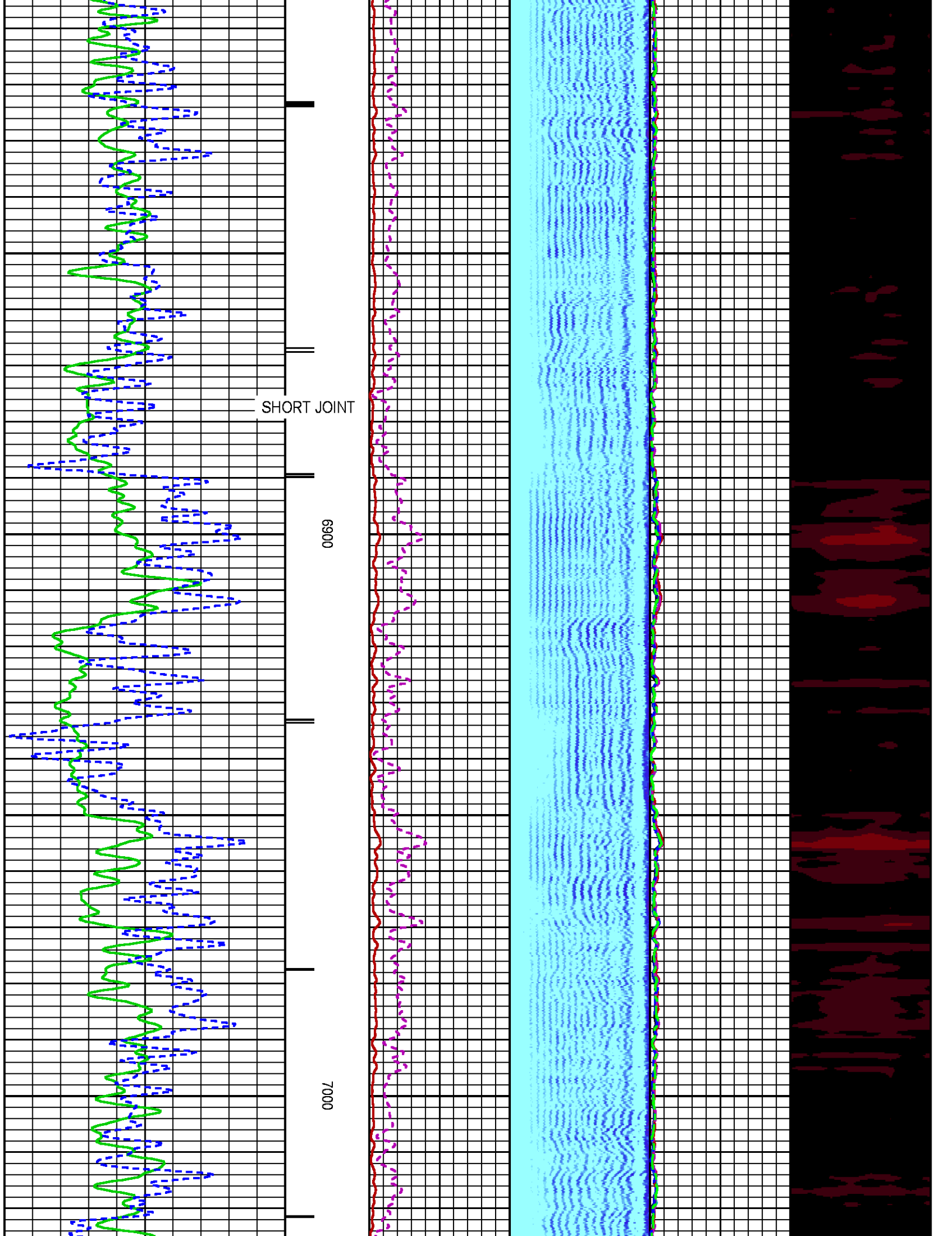


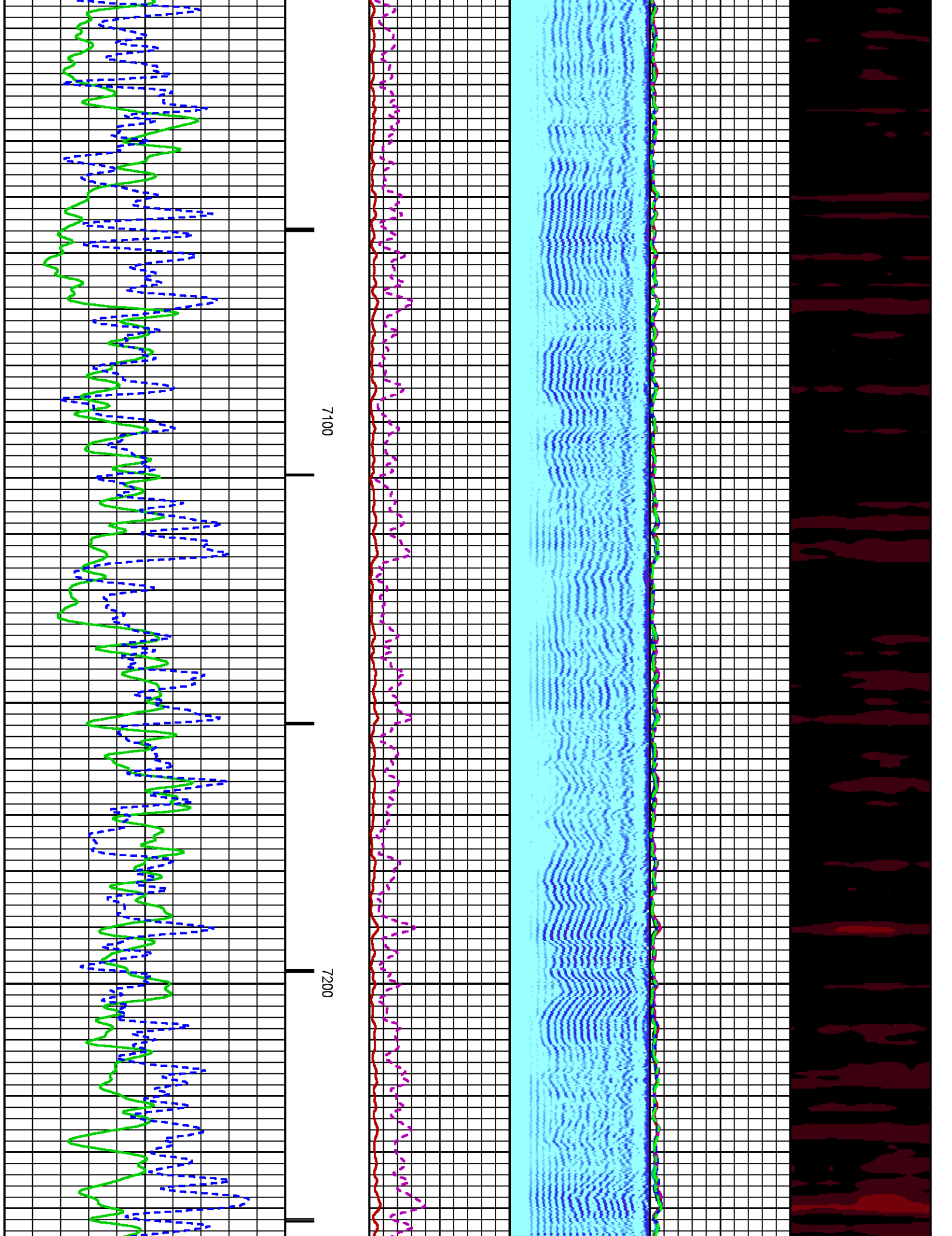


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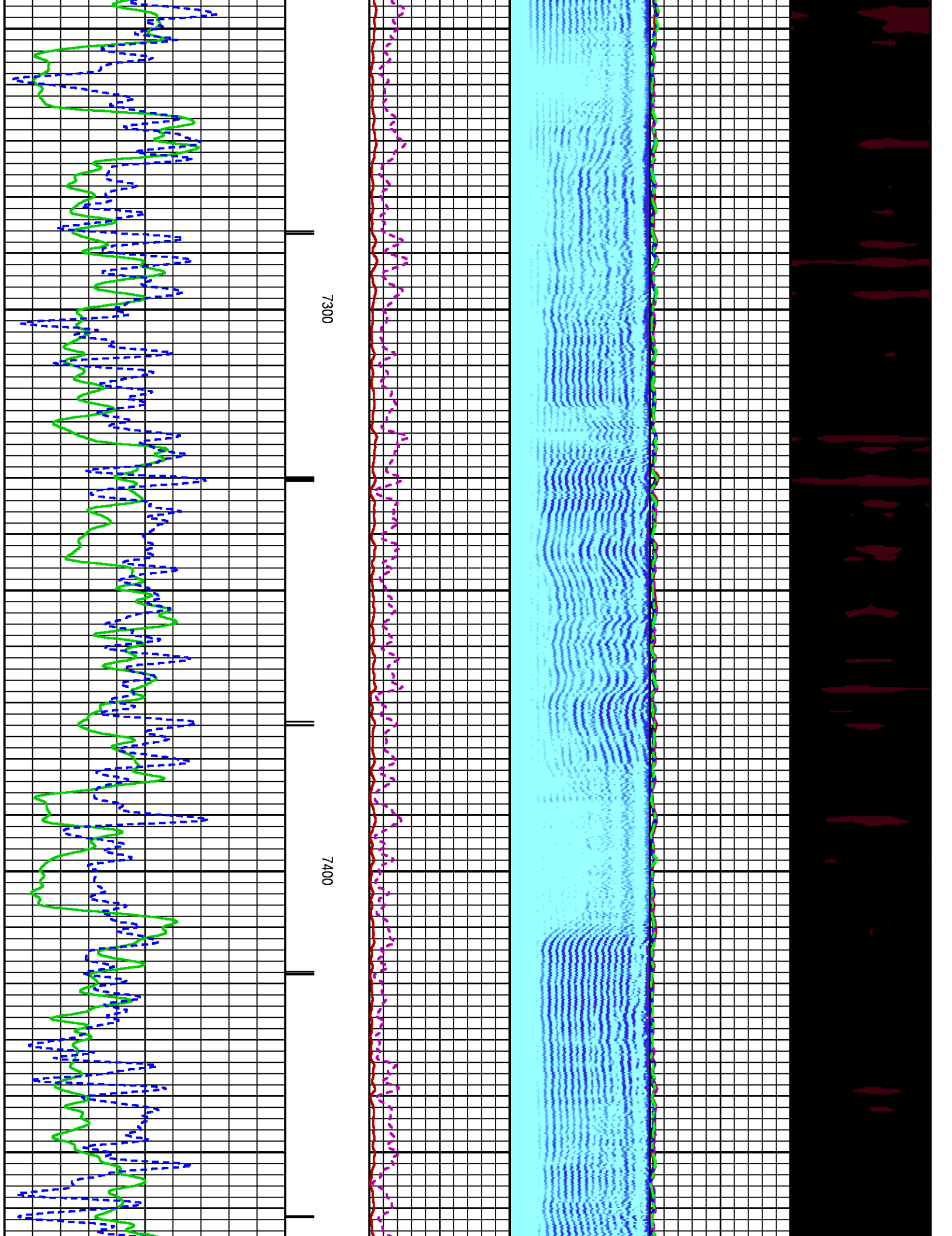
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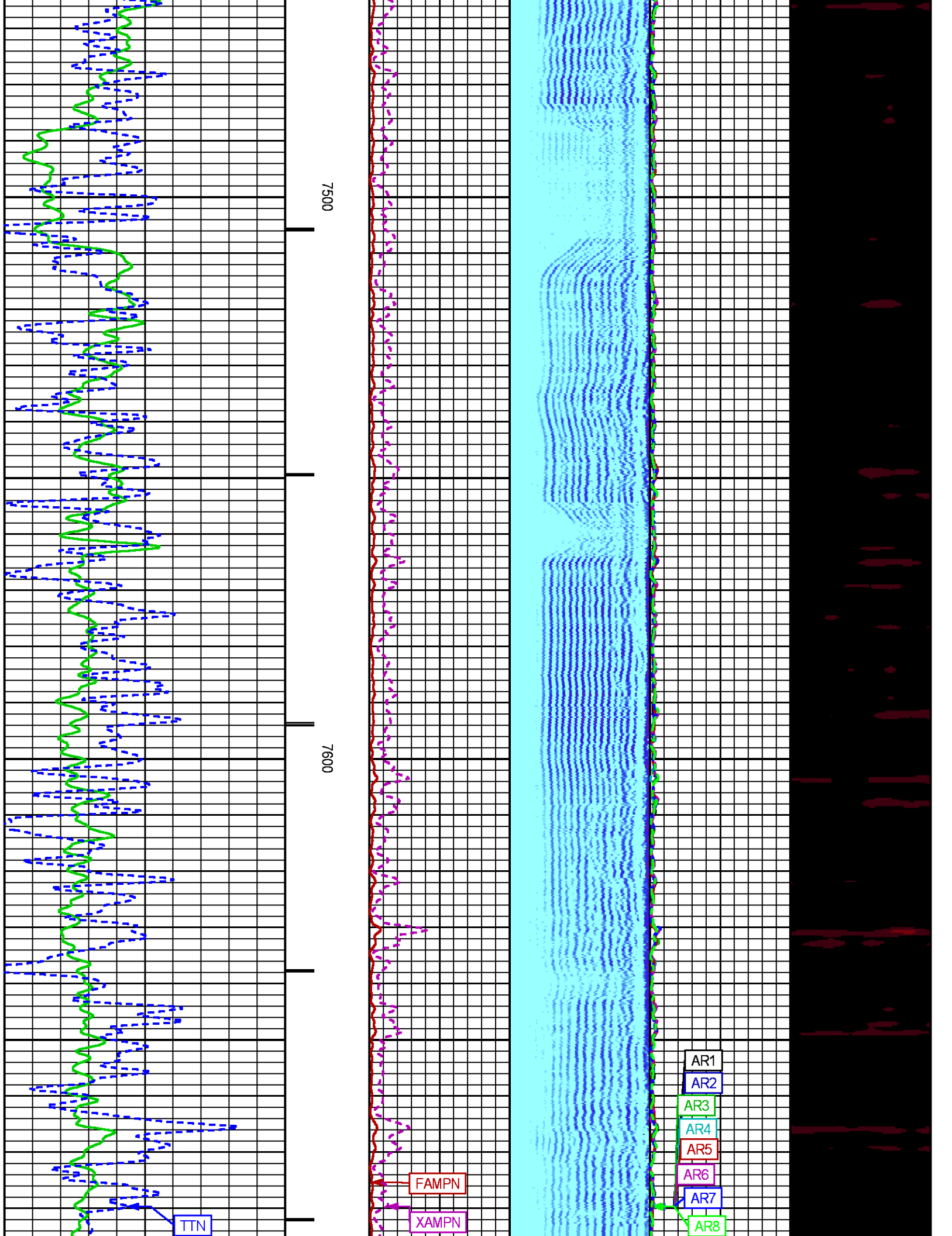


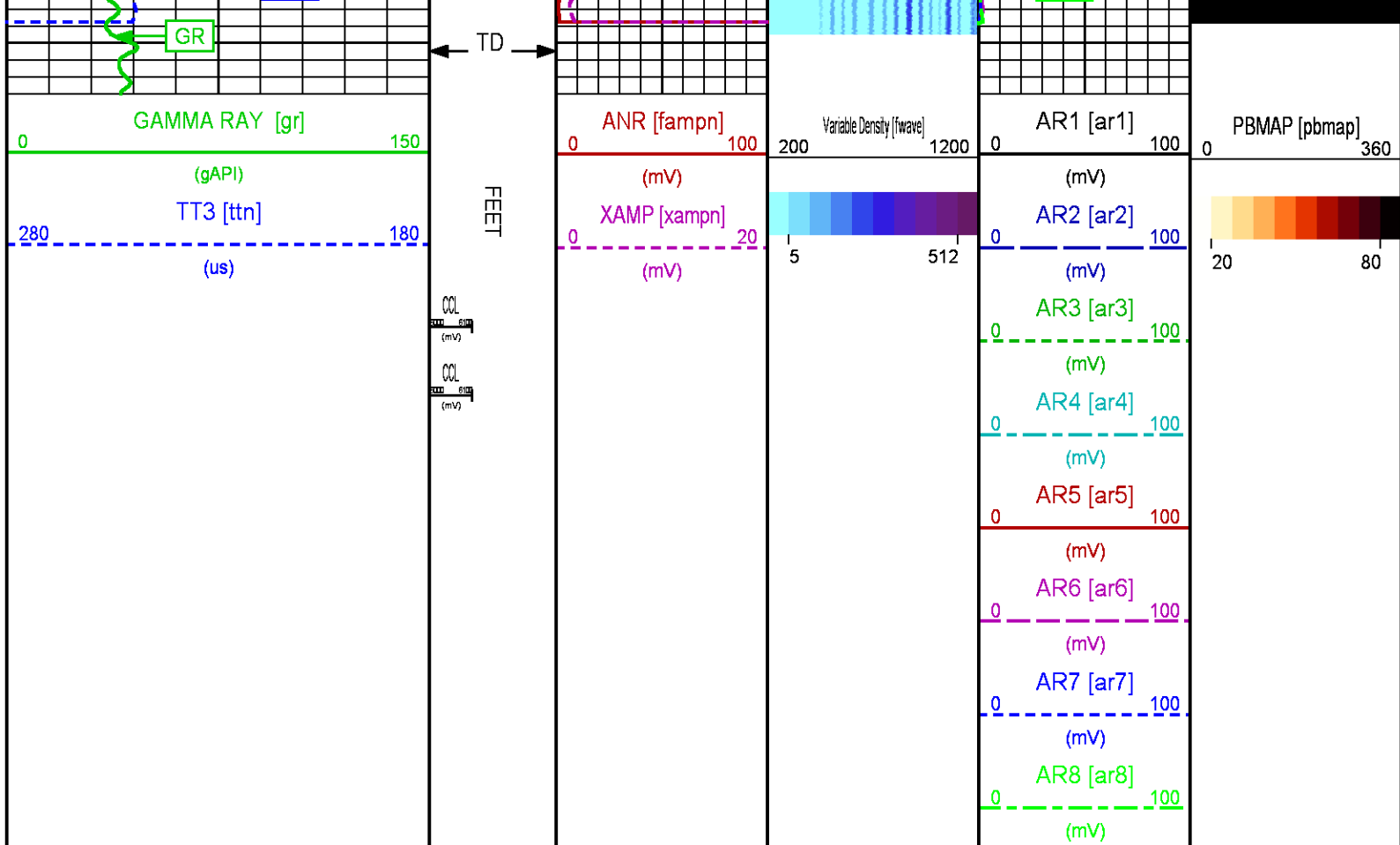












REPEAT PRESENTATION 0 PSI

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

Plotted: Tue Jul 14 15:43:49 2015

### PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH29\_9E/n012g01.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 7443.500 ft BOTTOM DEPTH: 7706.750 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 (fcp1*)	185	US	TOP	BOTTOM

AMP 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	"	"
	TT WINDOW START (ttn*)	173	us	"	"
TRAVEL TIME WINDOW (NEAR)	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	138	us	"	"
	NOISE WINDOW LENGTH	25	us	"	"

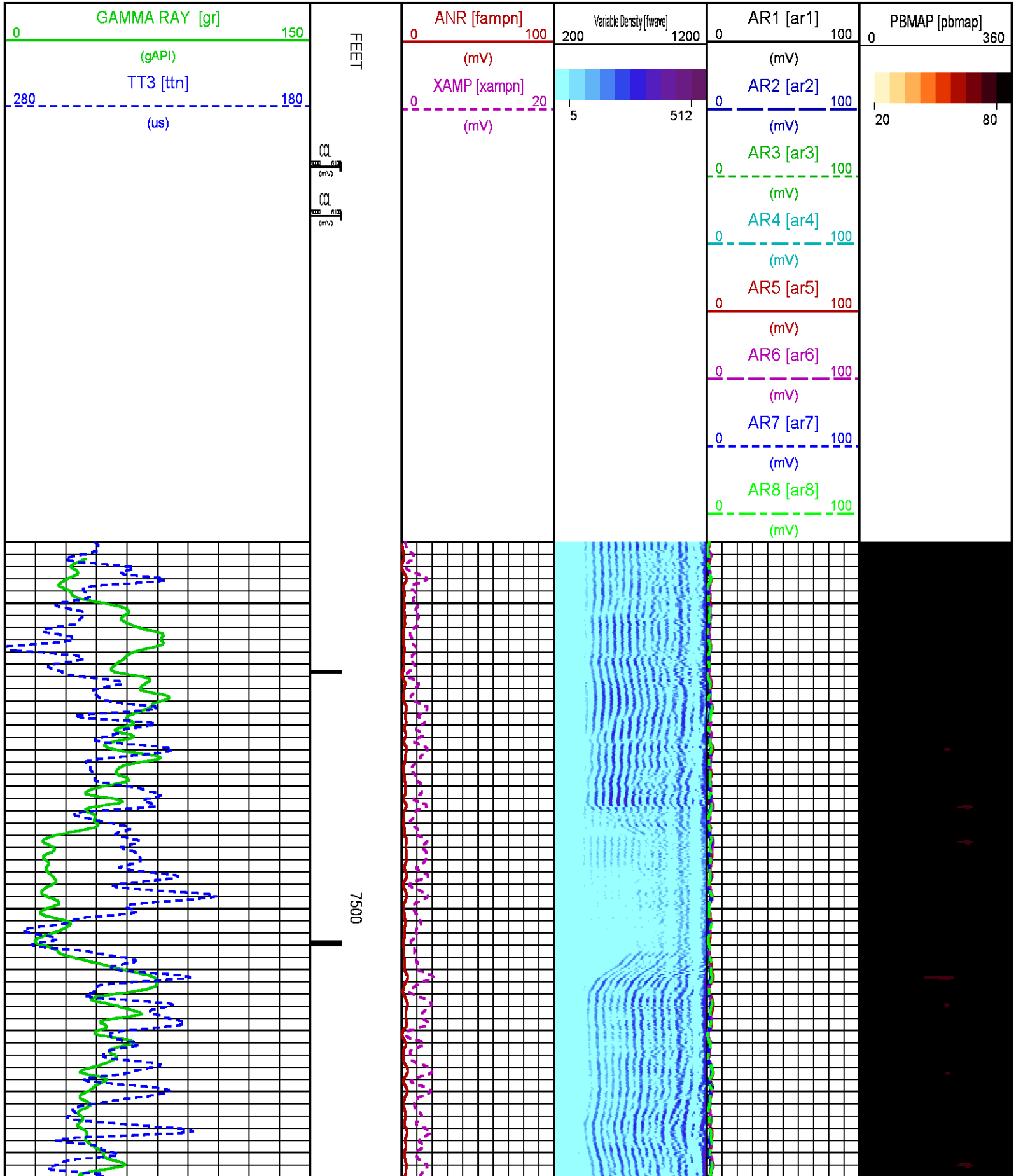
PERCENT BOND CEMENT MAP					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
RAL FREE PIPE AMPLITUDE	FREE AMP REC 1	80	mV	TOP	BOTTOM
	FREE AMP REC 2	80	mV	"	"
	FREE AMP REC 3	80	mV	"	"
	FREE AMP REC 4	80	mV	"	"
	FREE AMP REC 5	80	mV	"	"
	FREE AMP REC 6	80	mV	"	"
	FREE AMP REC 7	80	mV	"	"
	FREE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

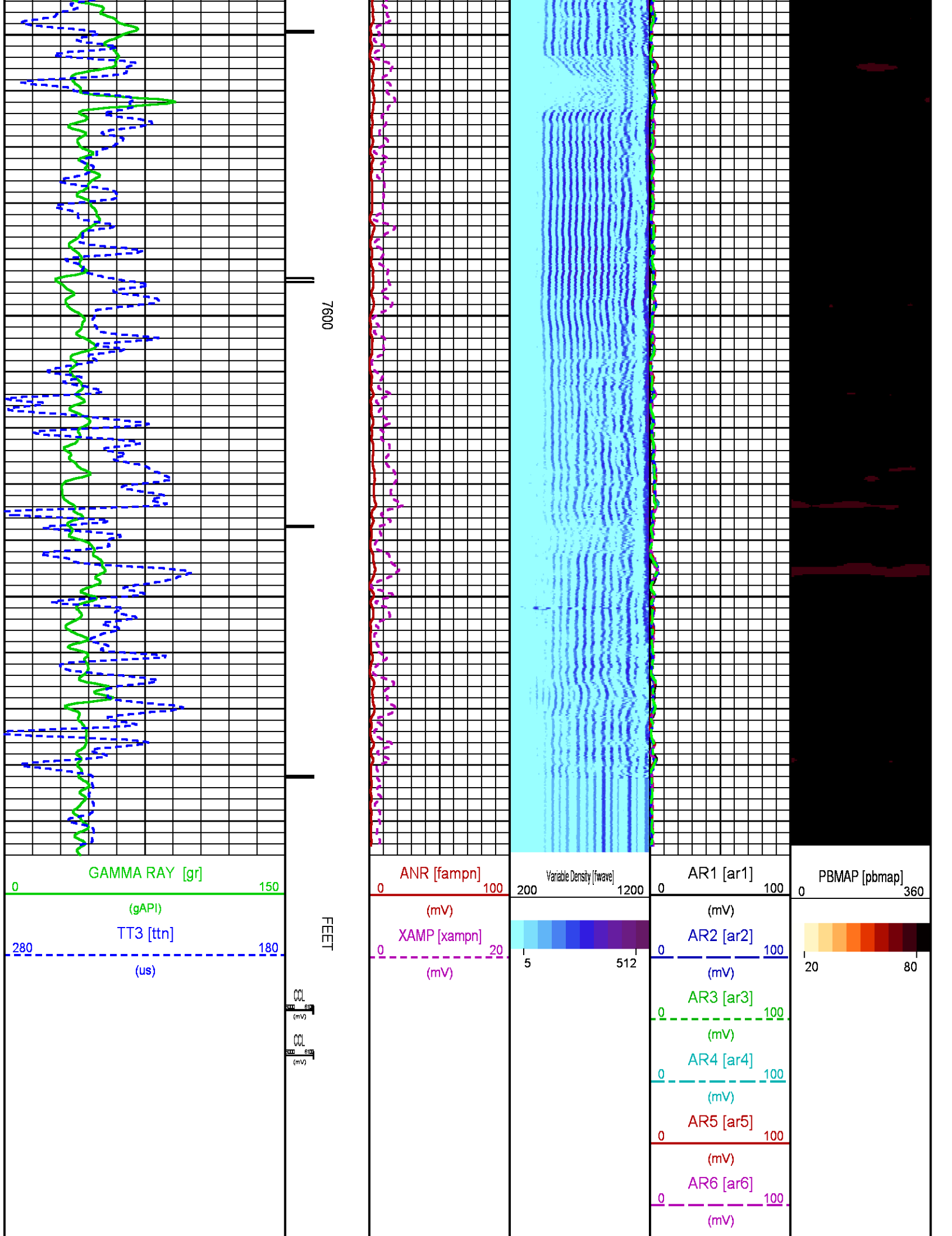
CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:AR1	Jul 14 15:19:53 2015	FIXED GATE AMPLITUDE T-R1
F1:AR2	Jul 14 15:19:53 2015	FIXED GATE AMPLITUDE T-R2
F1:AR3	Jul 14 15:19:53 2015	FIXED GATE AMPLITUDE T-R3
F1:AR4	Jul 14 15:19:53 2015	FIXED GATE AMPLITUDE T-R4
F1:AR5	Jul 14 15:19:53 2015	FIXED GATE AMPLITUDE T-R5
F1:AR6	Jul 14 15:19:53 2015	FIXED GATE AMPLITUDE T-R6
F1:AR7	Jul 14 15:19:53 2015	FIXED GATE AMPLITUDE T-R7
F1:AR8	Jul 14 15:19:53 2015	FIXED GATE AMPLITUDE T-R8
F1:CCL	Jul 14 15:19:53 2015	CASING COLLAR LOCATOR
F1:FAMPN	Jul 14 15:19:53 2015	FIXED GATE AMPLITUDE NEAR RECEIVER
F1:FWAVE	Jul 14 15:19:53 2015	FAR WAVE FORM
F1:GR	Jul 14 15:19:53 2015	GAMMA RAY
F1:PBMAP	Jul 14 15:19:53 2015	PERCENT BOND CEMENT MAP
F1:TTN	Jul 14 15:19:53 2015	TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER
F1:XAMPN	Jul 14 15:19:53 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		

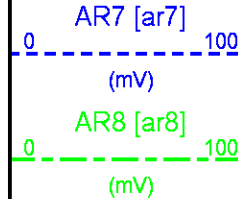
Plot Interval : 7440 - 7696 Feet

Data File 1 : F1 : HL6670:/dat1a/CH29\_9E/n012g01.xtf  
Created On : Jul 14 15:19:53 2015  
Company : LARAMIE ENERGY  
Well : GUNDERSON 29-9E  
Field : VEGA  
File Interval : 7432 - 7706.75 Feet  
OCT : n012g









## CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/CH29\_9E/m012g.tp1

### RAL PRIMARY CALIBRATION SUMMARY

TOOL #: 1426XA 10417452

DATE/TIME PERFORMED: Mon Jul 13 09:30:20 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)	0.02	-0.06	0.09	0.04	0.00	-0.06	-0.05	0.01	0.04	0.33	-0.06
AMP FLUID (mV)	61	61	61	60	61	60	60	60	61	80	61
TT (us)	219	219	219	220	220	219	218	218	219	328	219
M FACTOR	1.64	1.64	1.65	1.66	1.65	1.65	1.65	1.66	1.65	1.89	1.65

### RAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 1426XA 10417452

DATE/TIME PERFORMED: Tue Jul 14 14:39:07 2015

DAYS SINCE CAL: 1

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	0.00	0.00	-0.01	-0.04	0.01	-0.01	-0.03	-0.02	-0.01	0.23	0.01
AMP AIR	0.02	-0.18	-0.42	-0.02	-0.01	0.16	0.56	-0.11	-0.15	-0.22	101.10

SHOP M FACTOR	SHOP A FACTOR	WIRELINE FACTOR
1.65	0.00	0.99

### GR PRIMARY CALIBRATION SUMMARY

TOOL #: 1355XA 11871508

DATE/TIME PERFORMED: Wed Jul 1 11:50:07 2015

UNIT #: 3880TA HL6670

CALB JIG #: 4702NK WA-612

	BACKGROUND (cts)	CALBTR ON (cts)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBTR ON (gAPI)	CALBTR (gAPI)
GR	48.36	341.51	293.2	0.631	30.52	215.52	185

### GR PRIMARY VERIFICATION SUMMARY

TOOL #: 1355XA 11871508

DATE/TIME PERFORMED:

Wed Jul 1 11:53:52 2015

UNIT #: 3880TA HL6670

VERI JIG #: 4702NK WA-612

	BACKGROUND (cts)	CALBRTR ON (cts)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	49.07	327.64	0.631	30.96	206.76	175.80
						175.00 195.00

**TEMP PRIMARY CALIBRATION SUMMARY**

TOOL #: 1355XA 11871508

DATE/TIME PERFORMED: Fri Jul 3 08:04:33 2015

UNIT #: 3880TA HL6670

	T(0)	T(1)	T(2)	T(3)
Corr Coeff for Temp	0.000000E+00	9.000000E-02	0.000000E+00	0.000000E+00

**INSTRUMENT CONFIGURATION**

Source File: /dat1a/CH29\_9E/CBL-tdg

CABLEHEAD

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

20.38'

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

NEAR RCVR 11.17'

FAR RCVR 10.21'

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




CCL 5.79'

GR 1.67'

TEMP 0.17'

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

	<b>COMPANY</b> <u>LARAMIE ENERGY</u> <b>WELL</b> <u>GUNDERSON 29-09E</u> <b>FIELD</b> <u>VEGA</u> <b>COUNTY</b> <u>MESA</u> <b>STATE</b> <u>COLORADO</u>	<b>FILE NO:</b> <u>CH097899</u> <b>API NO:</b> <u>05077097620000</u>
	<b>LOCATION:</b> SHL: 2393' FNL 1140' FEL BHL: 2140' FNL 851' FEL  SEC <u>29</u> TWP <u>9S</u> RGE <u>93W</u>	<b>ELEVATIONS:</b> KB 7553 FT DF GL 7531 FT  DATE <u>14-Jul-2015</u>