



FILE NO: CH098111	COMPANY WELL FIELD COUNTY	LARAMIE ENERGY GUNDERSON 29-09M VEGA MESA	STATE COLORADO
API NO: 05077097630000			
Version SEC 29 T9S R93W 29-09 PAD PATTERSON 306	LOCATION: SHL: 2406' FNL 1239' FEL BHL: 2150' FNL 2611' FEL SEC 29 TWP 9S RGE 93W	OTHER SERVICES RPM	
PERMANENT DATUM LOG MEASURED FROM DRILL. MEAS. FROM	GL KB ELEVATION 22 FT 7631 FT ABOVE P.D.	ELEVATIONS: KB 7653 FT DF GL 7631 FT	

DATE	22-Jul-2015
RUN	1
TRIP	1
SERVICE ORDER	US098111J
DEPTH DRILLER	7844 FT
DEPTH LOGGER	7812 FT
BOTTOM LOGGED INTERVAL	7802 FT
TOP LOGGED INTERVAL	22 FT
TIME STARTED	14:30
TIME FINISHED	16:45
OPERATOR RIG TIME	2:15
TYPE OF FLUID IN HOLE	WATER
FLUID DENSITY	NA
FLUID SALINITY	NA
FLUID LEVEL	36 FT
LOGGED CEMENT TOP	NA
WELLHEAD PRESSURE	0 PSI
MAXIMUM HOLE DEVIATION	NA
NOMINAL LOGGING SPEED	100 F/MN
MAX. RECORDED TEMP.	237 DEGF
REFERENCE LOG	NONE
REFERENCE LOG DATE	NA
EQUIP. NO.	6685
LOCATION	W. QUIGLEY
GRAND JCT	
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

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
4.5 IN	11.6 LB/F		0 FT	7844 FT

REMARKS

RUN1 TRIP 1: THIS IS THE FIRST LOG ON THIS WELL

LOGGED WITH ZERO PSI AT WELLHEAD

BHT = 237

SJ = 6051' - 6073'

SJ = 6957' - 6979'

THANK YOU FOR CHOOSING BAKER HUGHES WIRELINE SERVICES

CREW: OLSON/COATE/QUIGLEY

RIG: PATTERSON 306

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	RAL	1426XA	10417452	CENTRALIZED
1	1	GR/CCL	2459XA	10218504	CENTRALIZED

MAIN PRESENTATION 0 PSI

ECLIPS 6.2wu1 PC-ECLIPS General Release Rel 6.2w Update 1 Fri Apr 25 10:54:53 Central Daylight Time 2014
Patches: 6

Plotted: Fri Jul 24 11:35:55 2015

PARAMETER AND FILTER SUMMARY REPORT

FILE: C:\dat1a\CH098111\012e03.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 7.500 ft BOTTOM DEPTH: 3800.750 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*)	172	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*)	-71	us	"	"
	TOOL DELAY (str2*)	-71	us	"	"
	TOOL DELAY (str3*)	-71	us	"	"
	TOOL DELAY (str4*)	-71	us	"	"
	TOOL DELAY (str5*)	-71	us	"	"
	TOOL DELAY (str6*)	-71	us	"	"
	TOOL DELAY (str7*)	-71	us	"	"
	TOOL DELAY (str8*)	-71	us	"	"
	TOOL DELAY (strn*)	-71	us	"	"
BASELINE NOISE (NEAR)	NOISE WINDOW START	100	us	"	"
	NOISE WINDOW LENGTH	50	us	"	"

PERCENT BOND CEMENT MAP

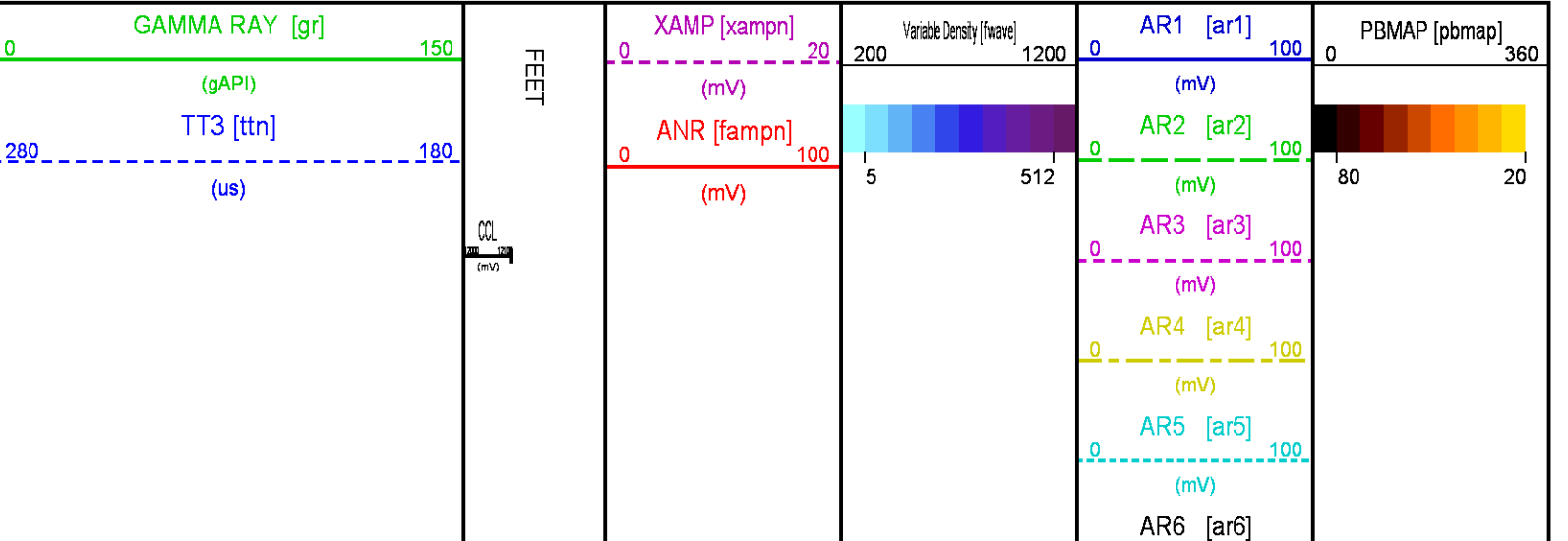
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
RAL FREE PIPE AMPLITUDE	FREE AMP REC 1	80	mV	TOP	BOTTOM

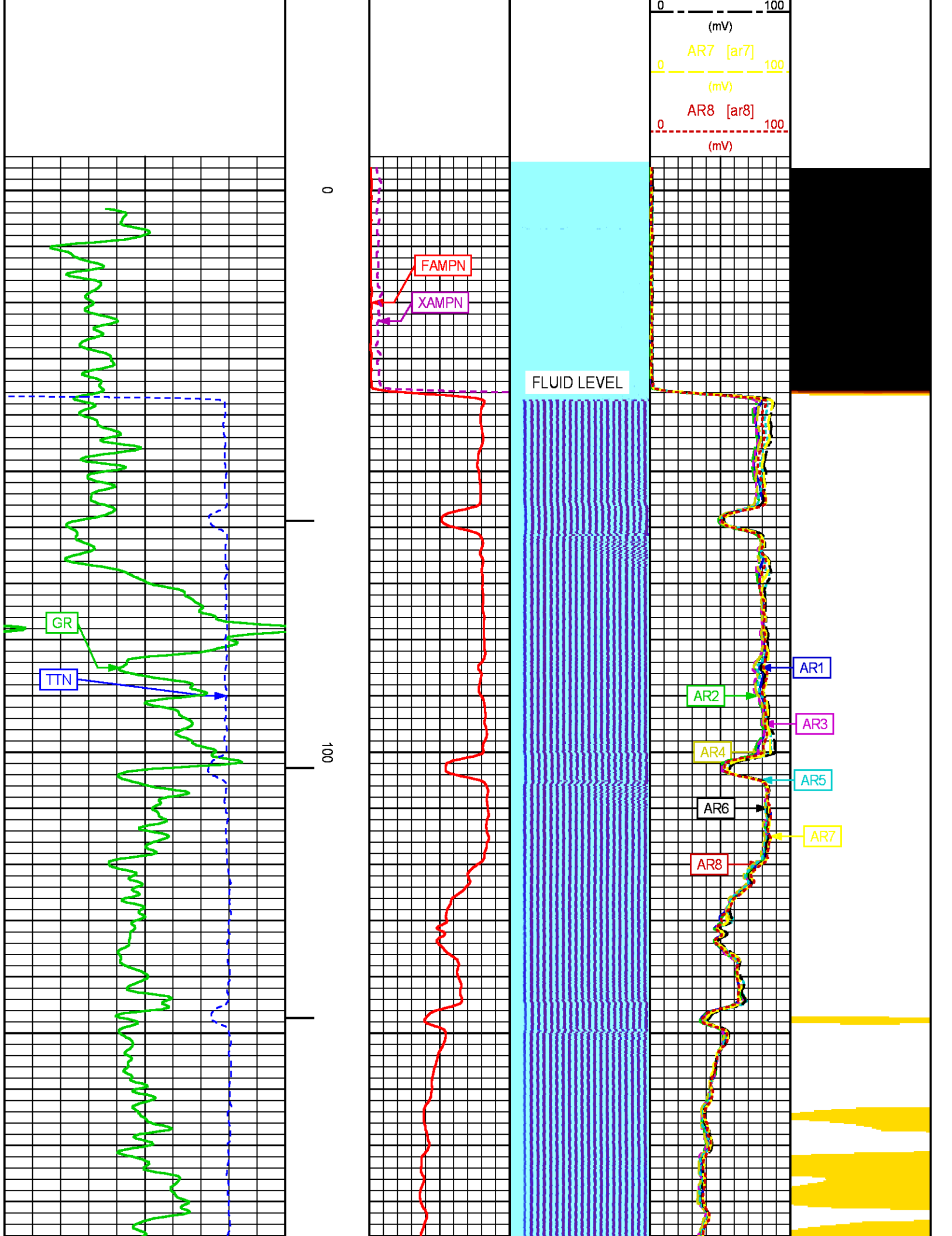
FREE AMP REC 2	80	mV	"	"
FREE AMP REC 3	80	mV	"	"
FREE AMP REC 4	80	mV	"	"
FREE AMP REC 5	80	mV	"	"
FREE AMP REC 6	80	mV	"	"
FREE AMP REC 7	80	mV	"	"
FREE AMP REC 8	80	mV	"	"
RAL FULL BOND AMPLITUDE	FULL BOND AMP REC 1	2	mV	"
	FULL BOND AMP REC 2	2	mV	"
	FULL BOND AMP REC 3	2	mV	"
	FULL BOND AMP REC 4	2	mV	"
	FULL BOND AMP REC 5	2	mV	"
	FULL BOND AMP REC 6	2	mV	"
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	FULL BOND AMP REC 8	2	mV	"

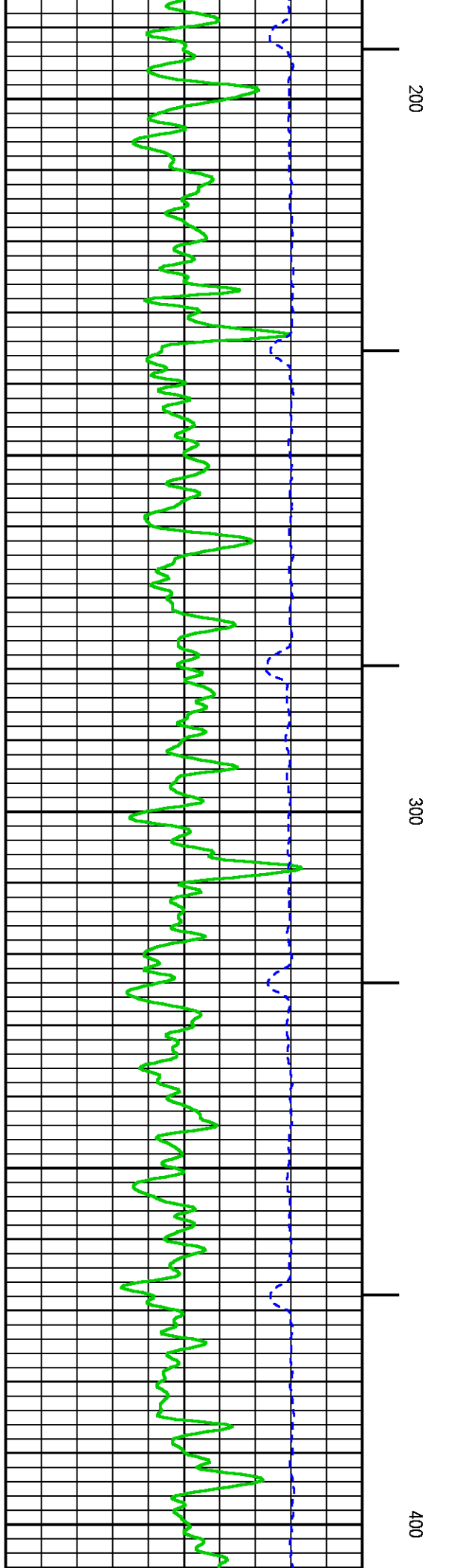
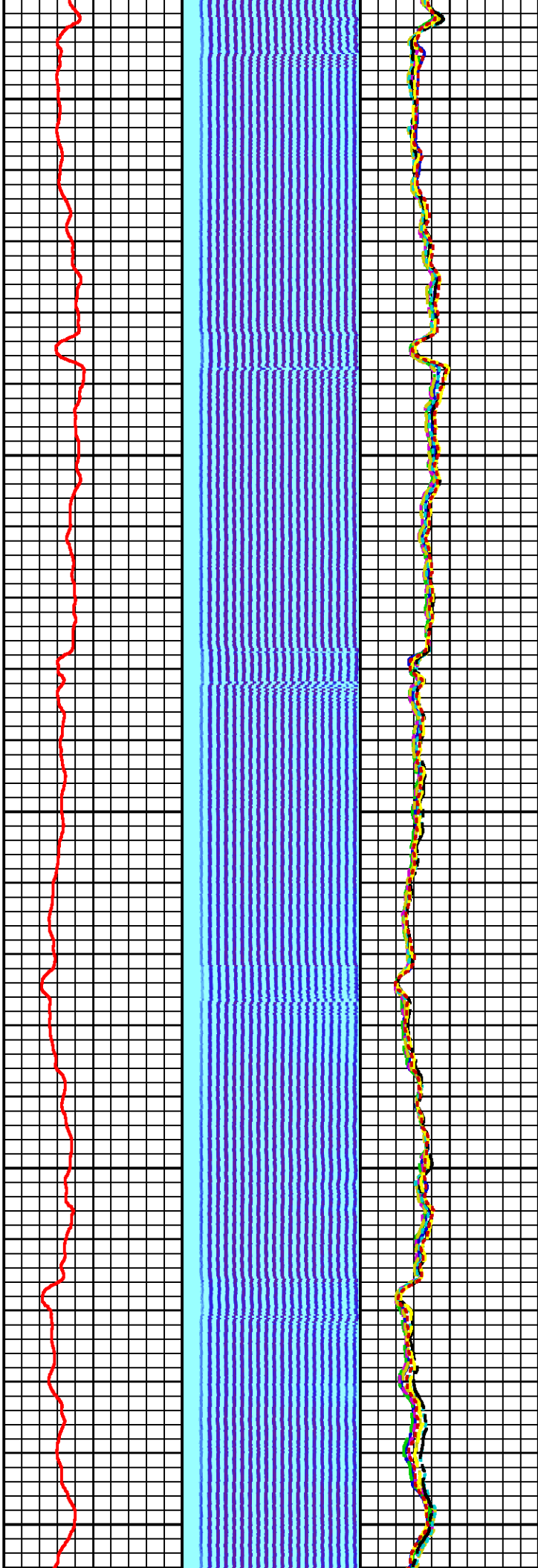
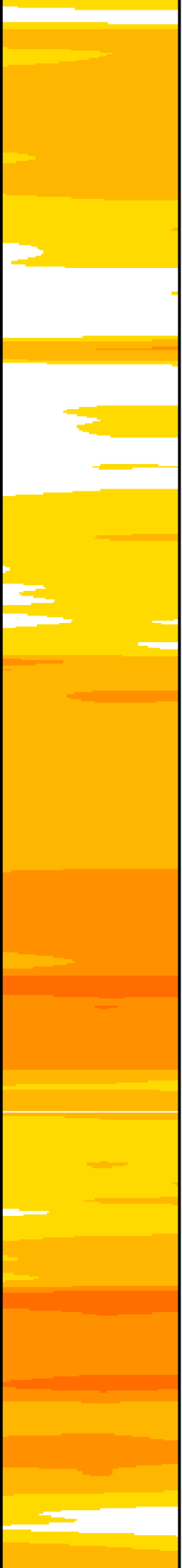
CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:AR1	Jul 22 15:45:20 2015	FIXED GATE AMPLITUDE T-R1
F1:AR2	Jul 22 15:45:20 2015	FIXED GATE AMPLITUDE T-R2
F1:AR3	Jul 22 15:45:20 2015	FIXED GATE AMPLITUDE T-R3
F1:AR4	Jul 22 15:45:20 2015	FIXED GATE AMPLITUDE T-R4
F1:AR5	Jul 22 15:45:20 2015	FIXED GATE AMPLITUDE T-R5
F1:AR6	Jul 22 15:45:20 2015	FIXED GATE AMPLITUDE T-R6
F1:AR7	Jul 22 15:45:20 2015	FIXED GATE AMPLITUDE T-R7
F1:AR8	Jul 22 15:45:20 2015	FIXED GATE AMPLITUDE T-R8
F1:CCL	Jul 22 15:45:20 2015	CASING COLLAR LOCATOR
F1:FAMPN	Jul 22 15:45:20 2015	FIXED GATE AMPLITUDE NEAR RECEIVER
F1:FWAVE	Jul 22 15:45:20 2015	FAR WAVE FORM
F1:GR	Jul 22 15:45:20 2015	GAMMA RAY
F1:PBMAP	Jul 22 15:45:20 2015	PERCENT BOND CEMENT MAP
F1:TTN	Jul 22 15:45:20 2015	TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER
F1:XAMPN	Jul 22 15:45:20 2015	FIXED GATE AMPLITUDE NEAR RECEIVER TIMES FIVE

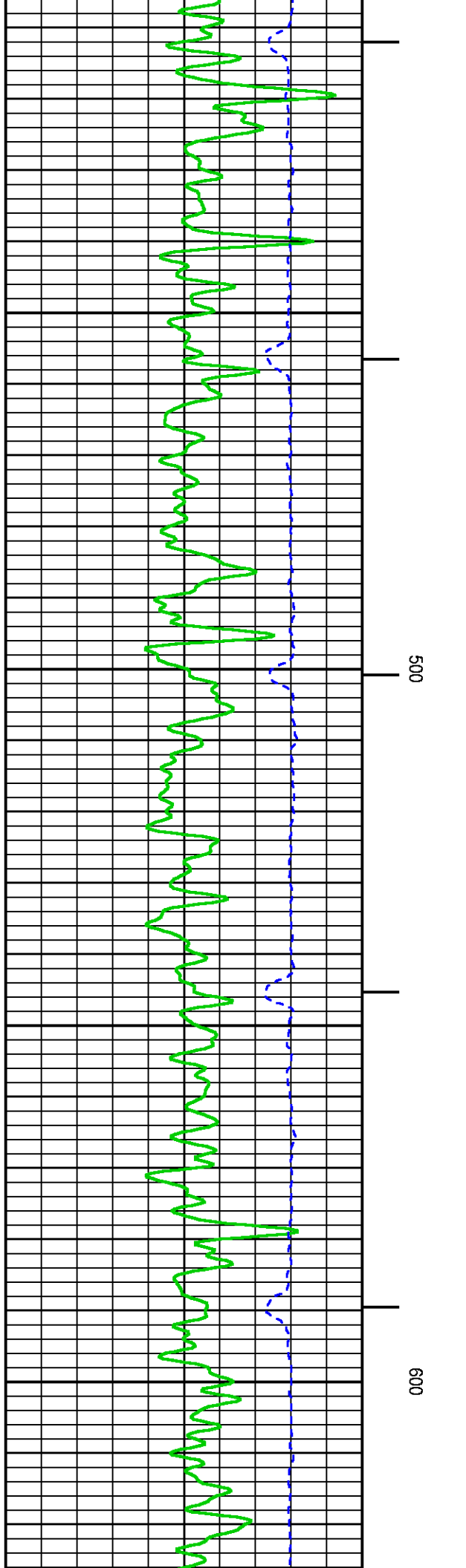
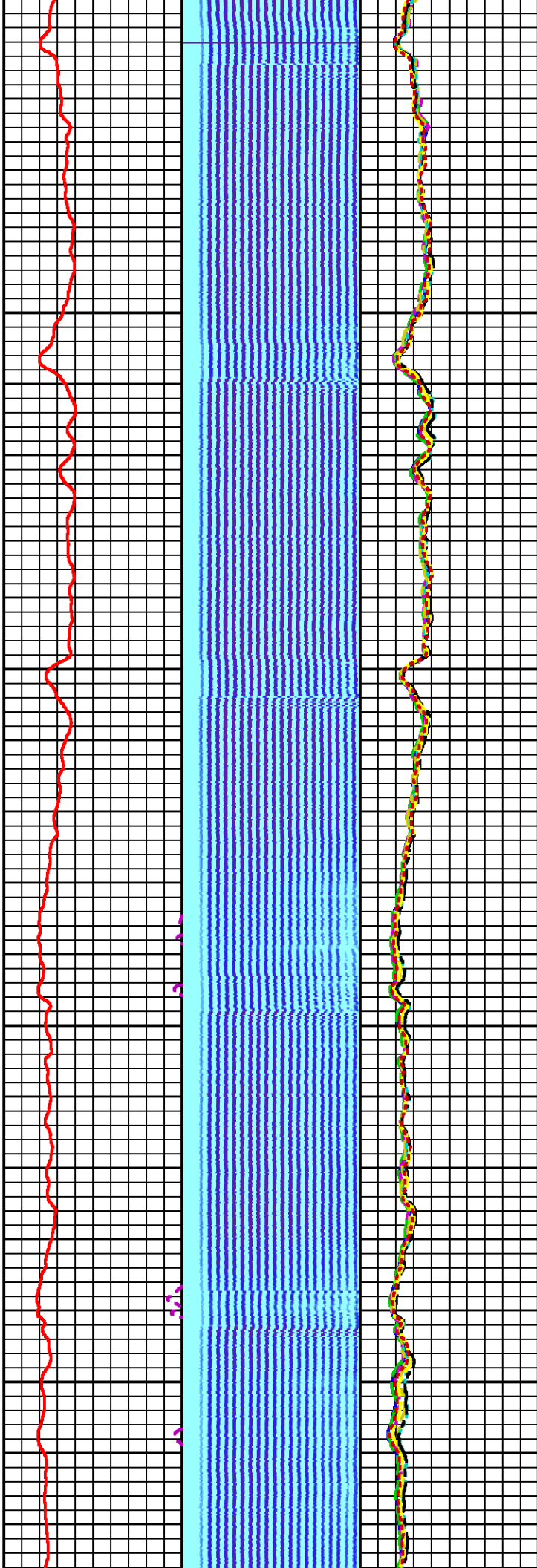
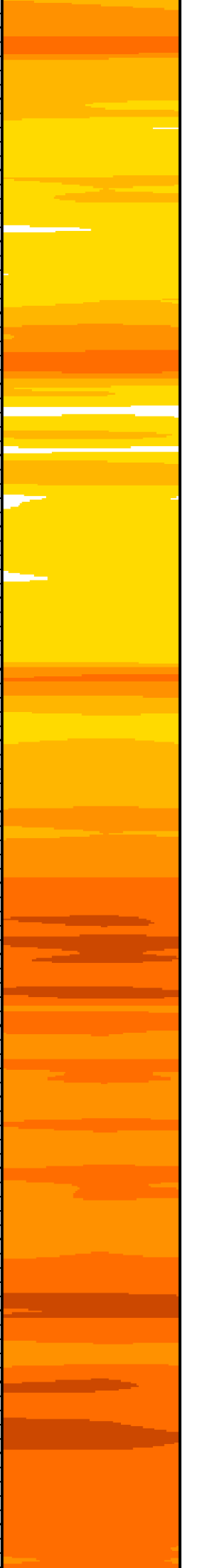
CURVE MEASURE POINT OFFSET							
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
AR1	13.75	AR5	13.75	CCL	8.50	XAMPN	13.75
AR2	13.75	AR6	13.75	FAMPN	13.75		
AR3	13.75	AR7	13.75	GR	6.50		
AR4	13.75	AR8	13.75	TTN	13.75		

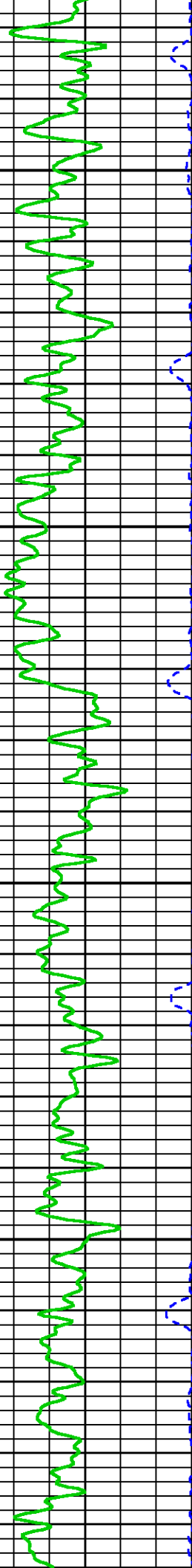
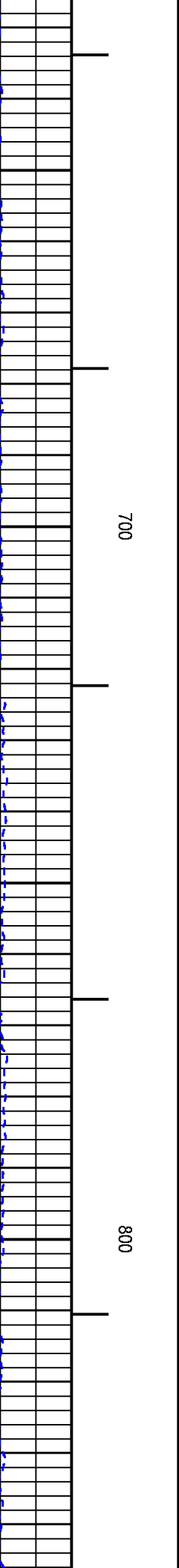
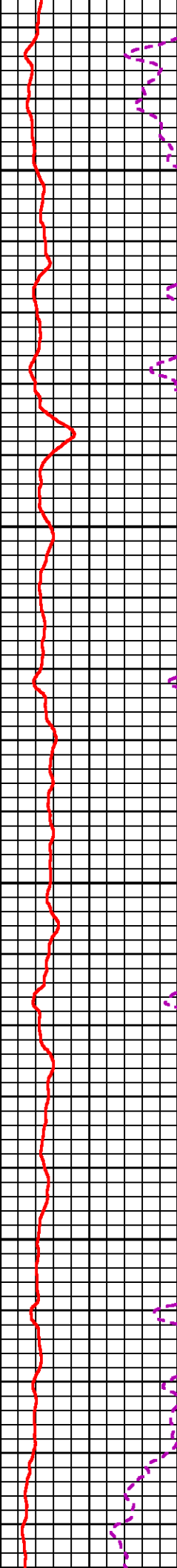
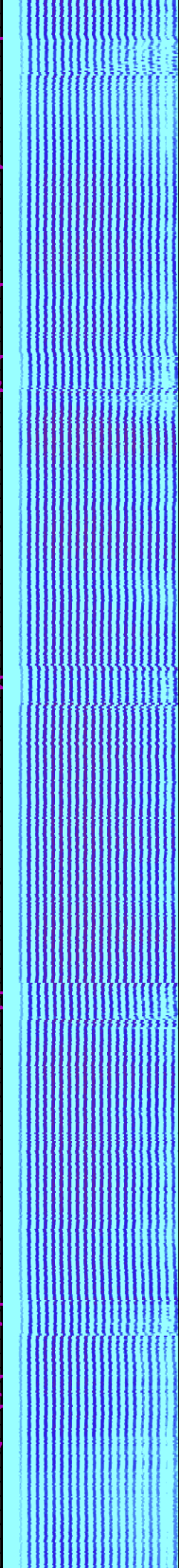
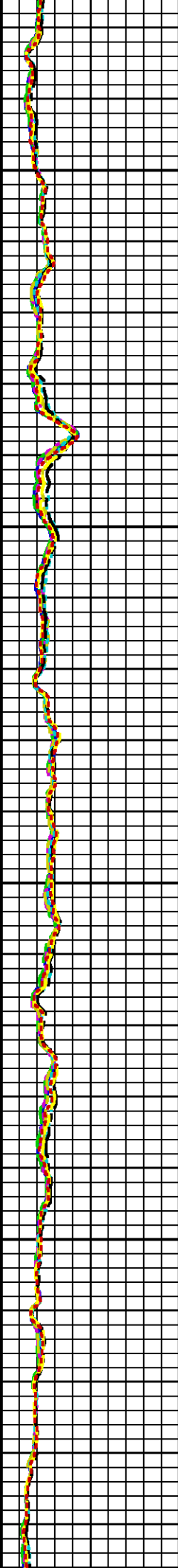
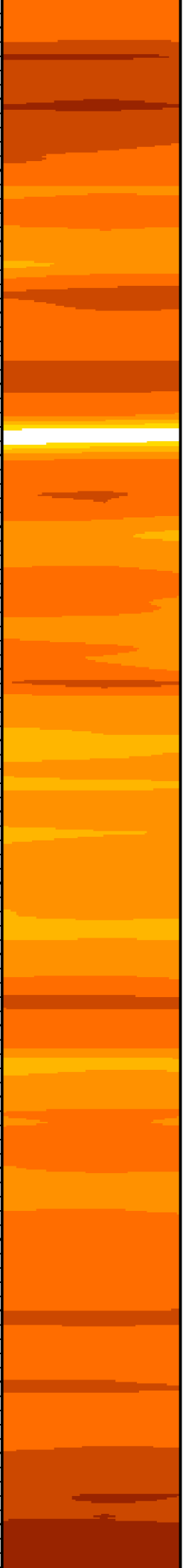
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Plot Interval	: -5 - 7818.25 Feet
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Created On	: Jul 22 15:45:20 2015
Company	: LARAMIE ENERGY
Well	: GUNDERSON 29-09M
Field	: VEGA
File Interval	: -5 - 7818.25 Feet
OCT	: n012e

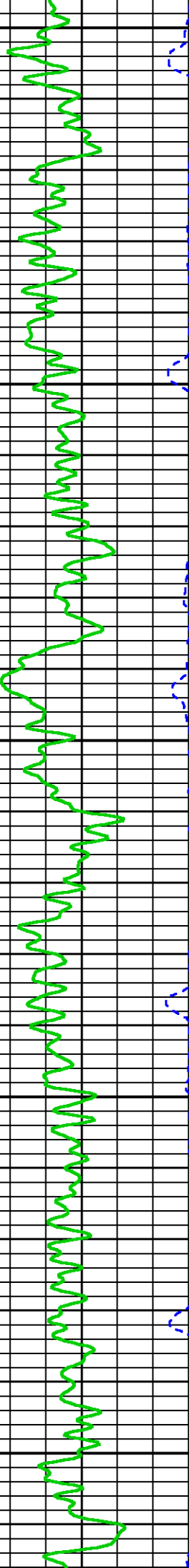
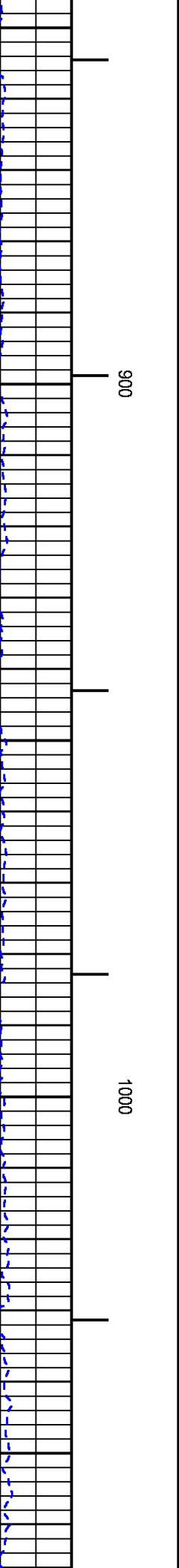
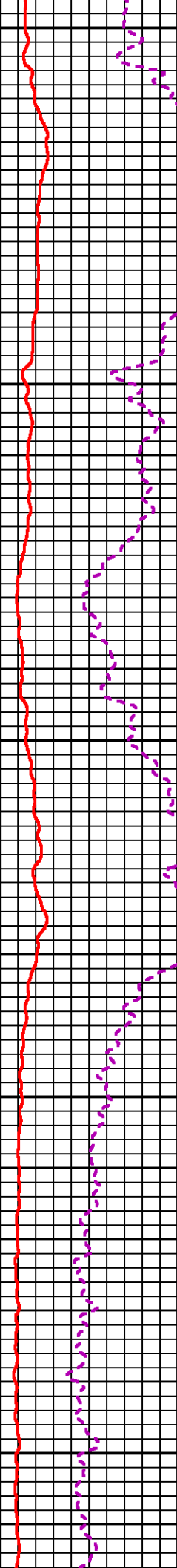
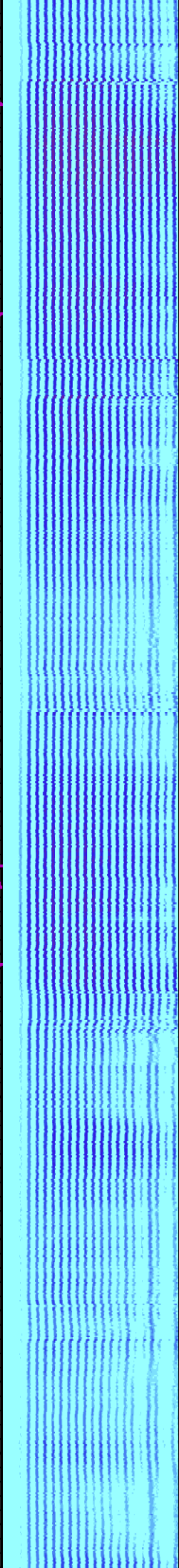
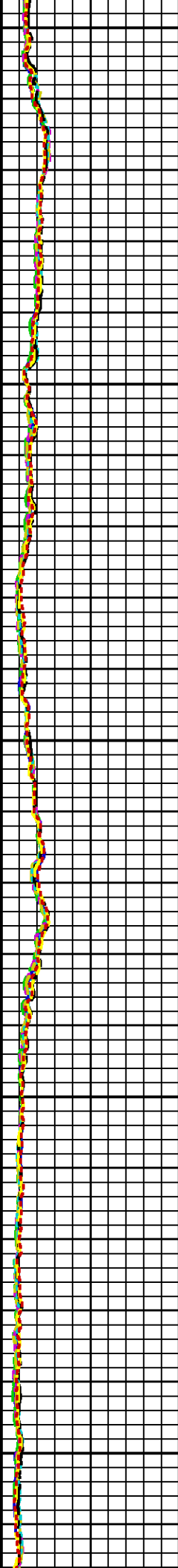


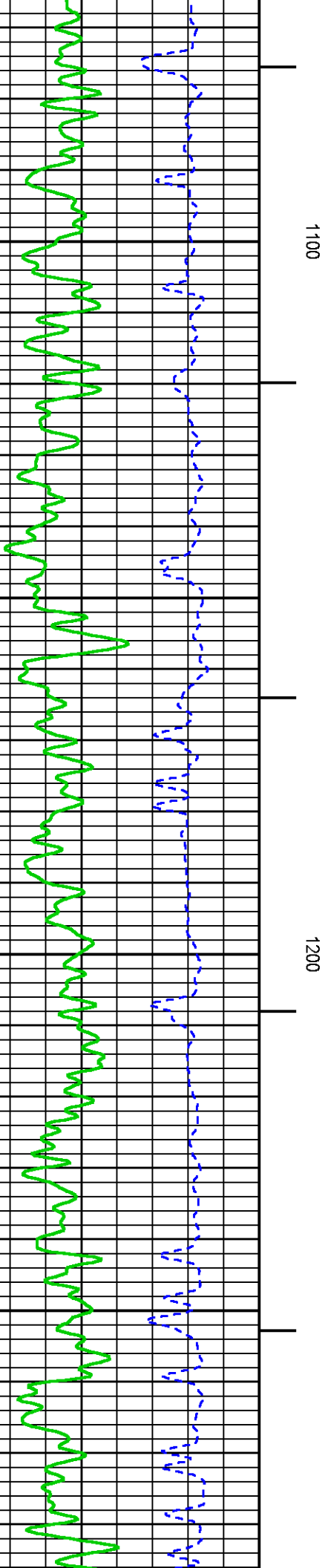
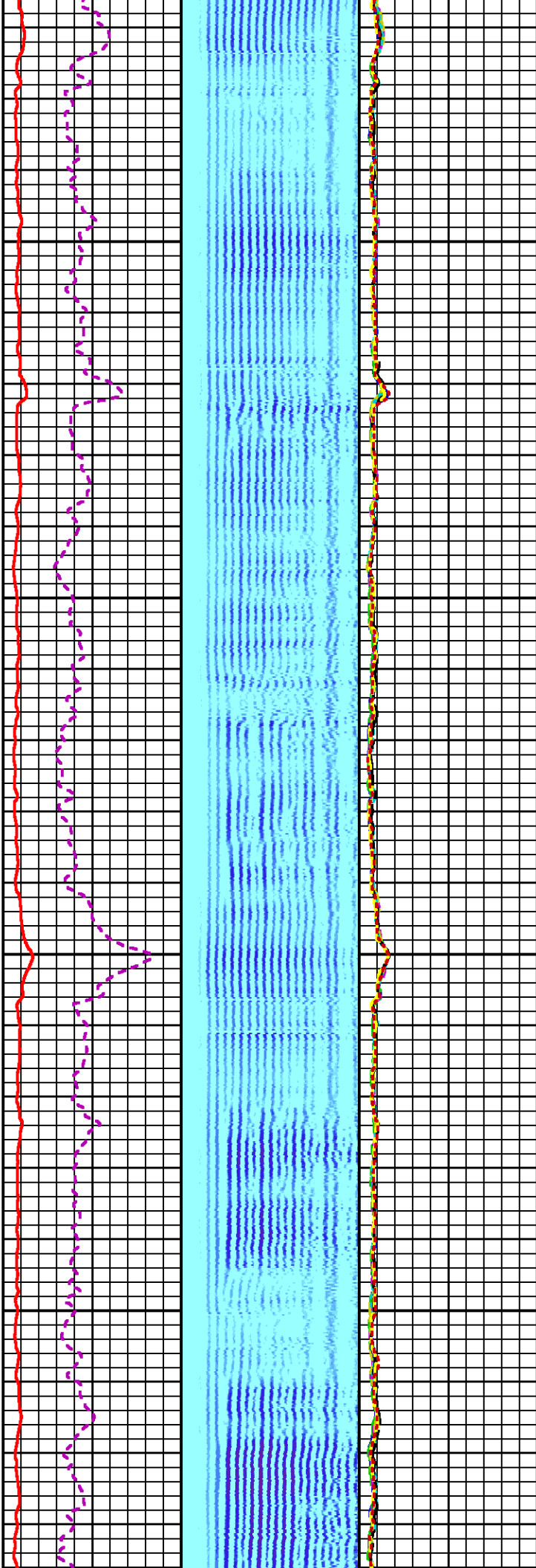
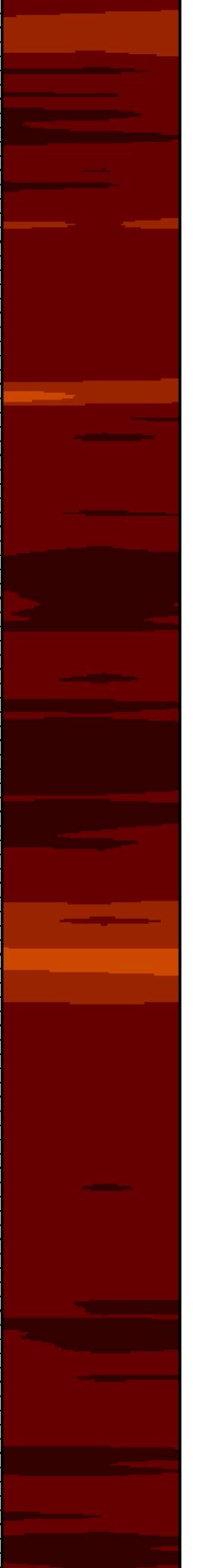


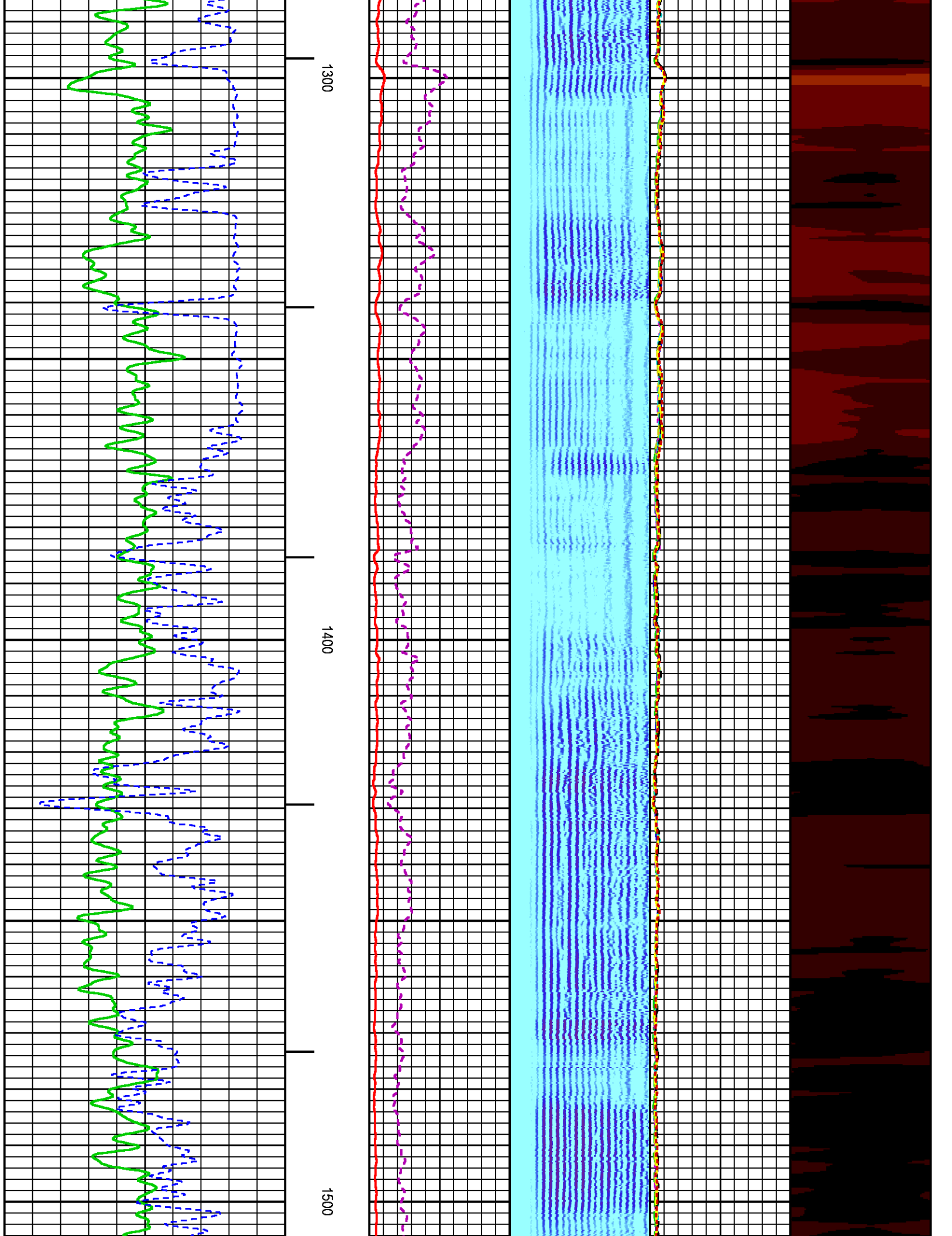


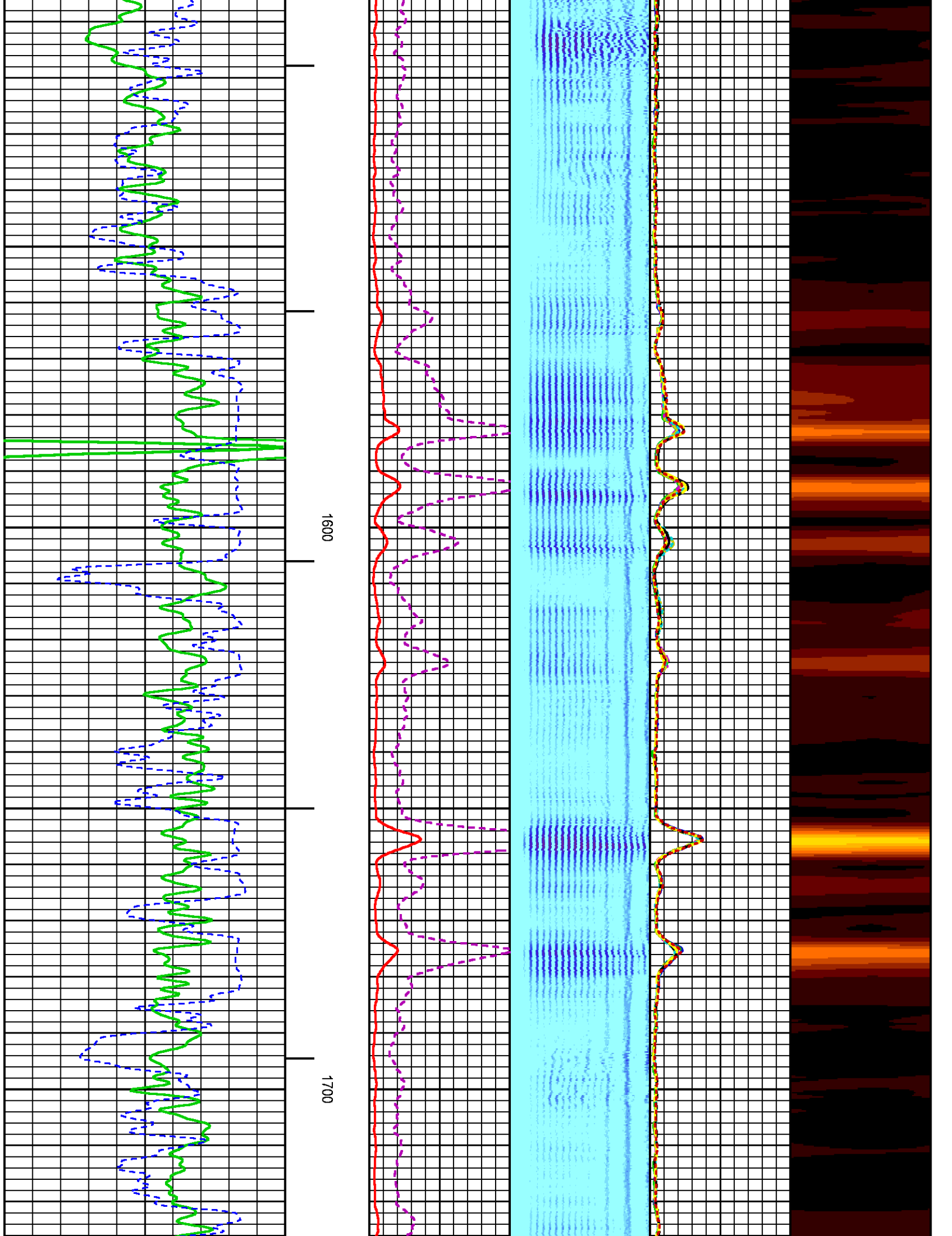


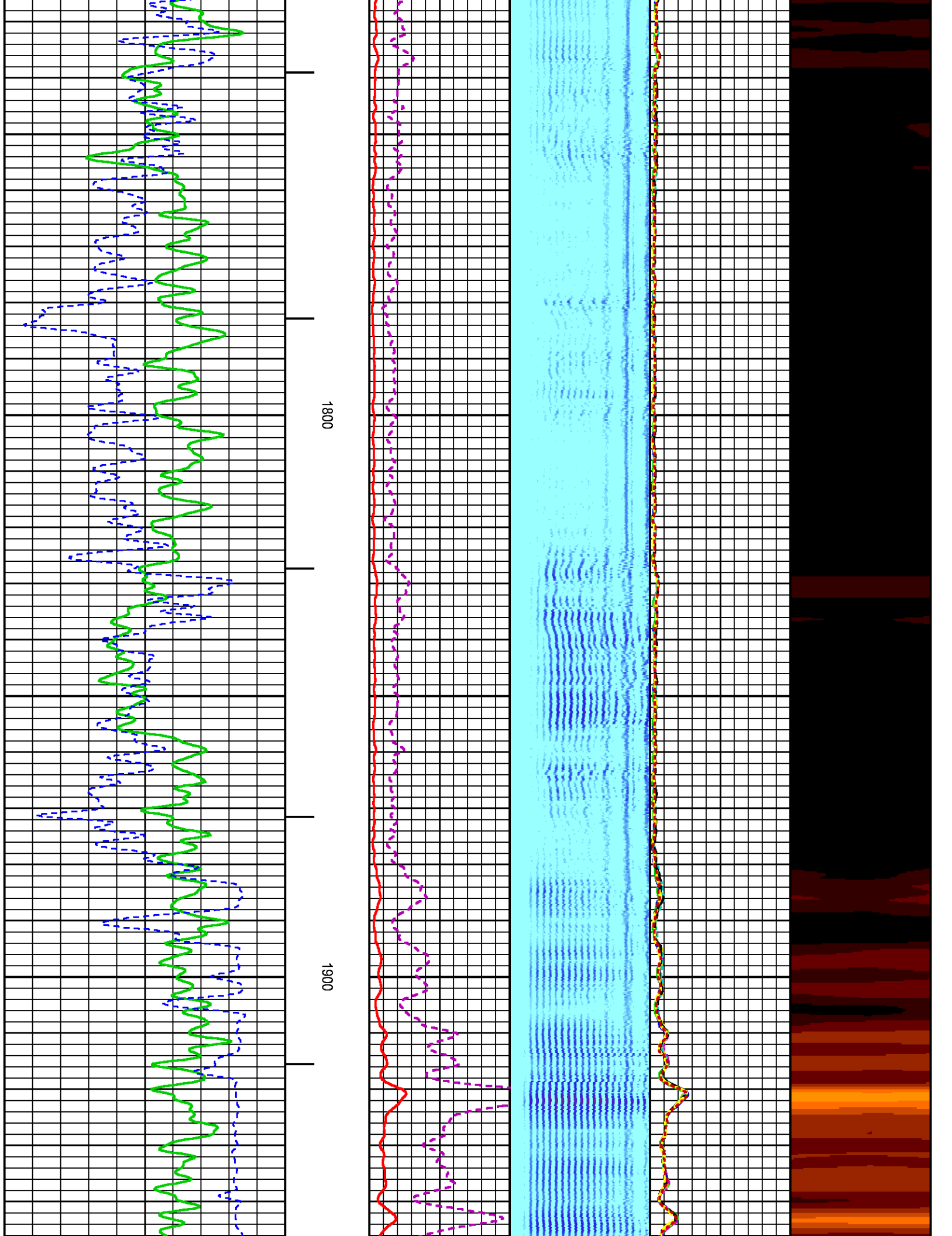


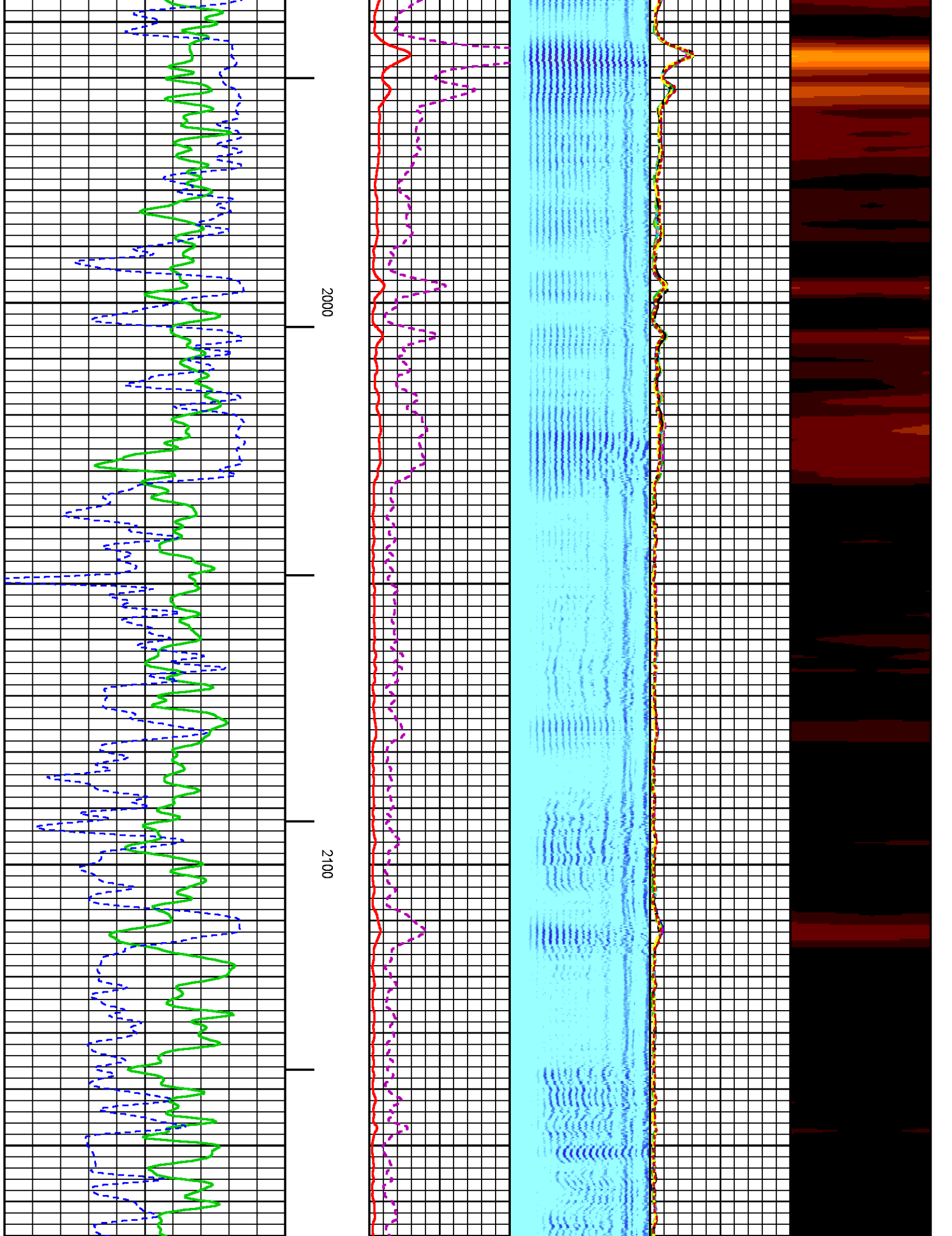


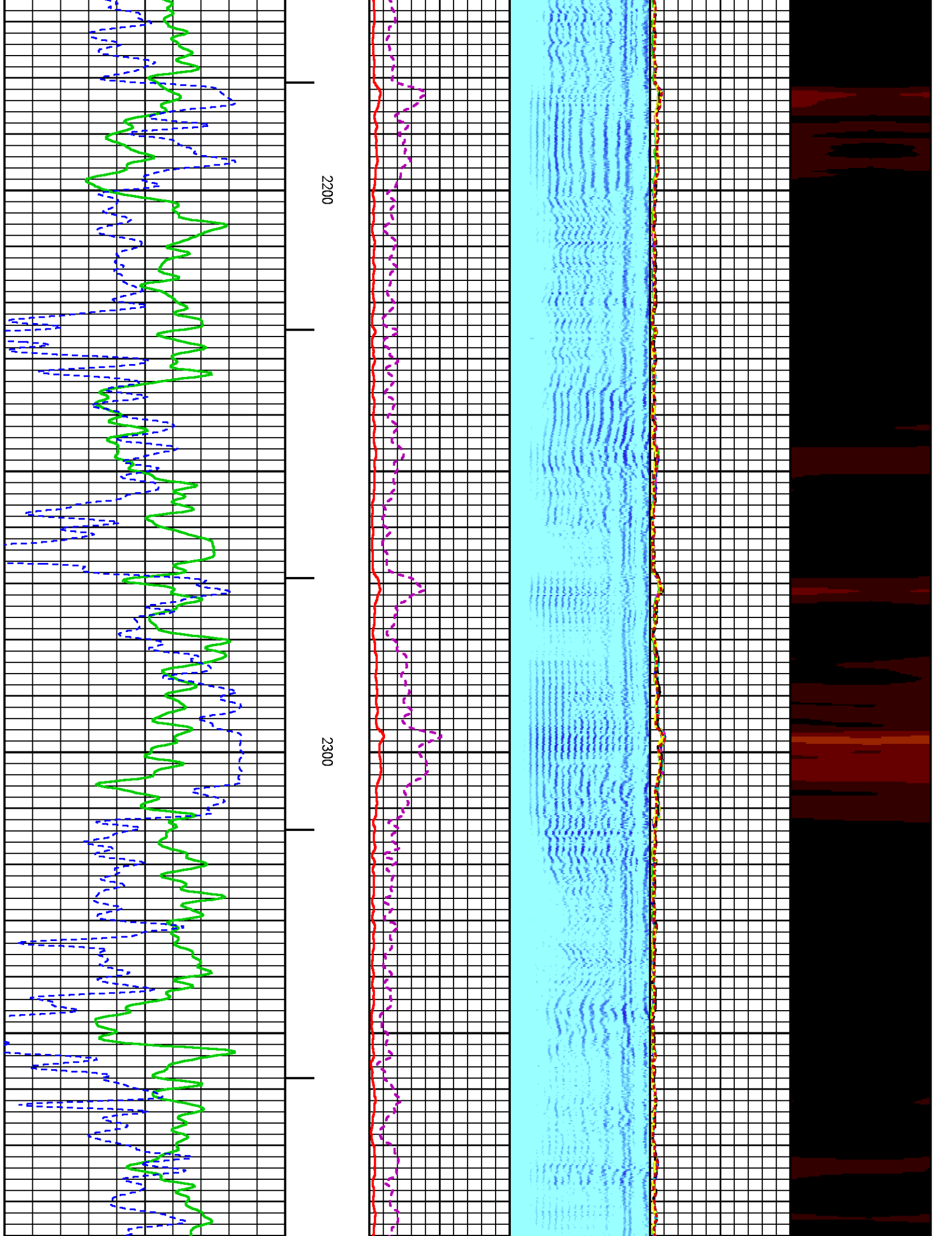


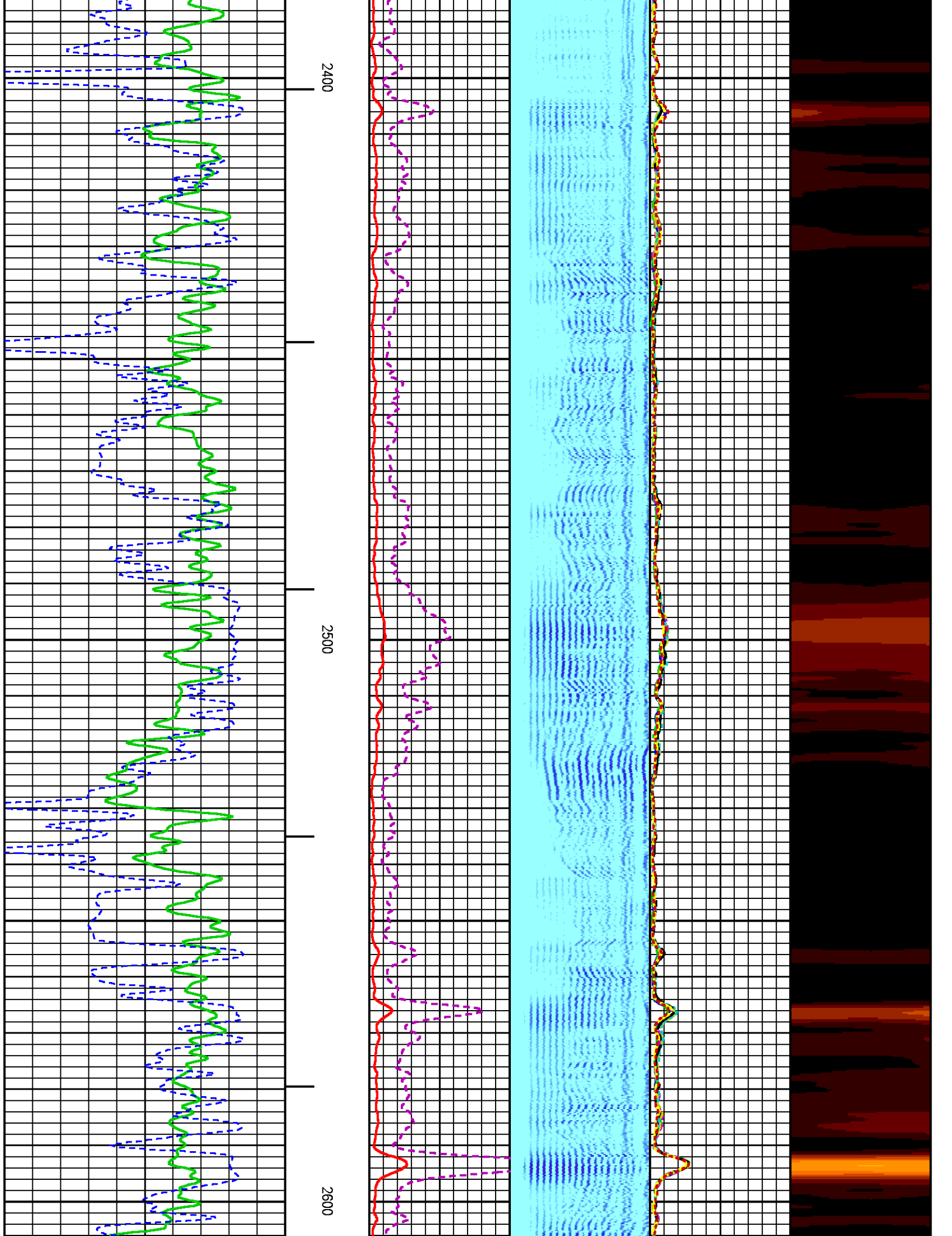


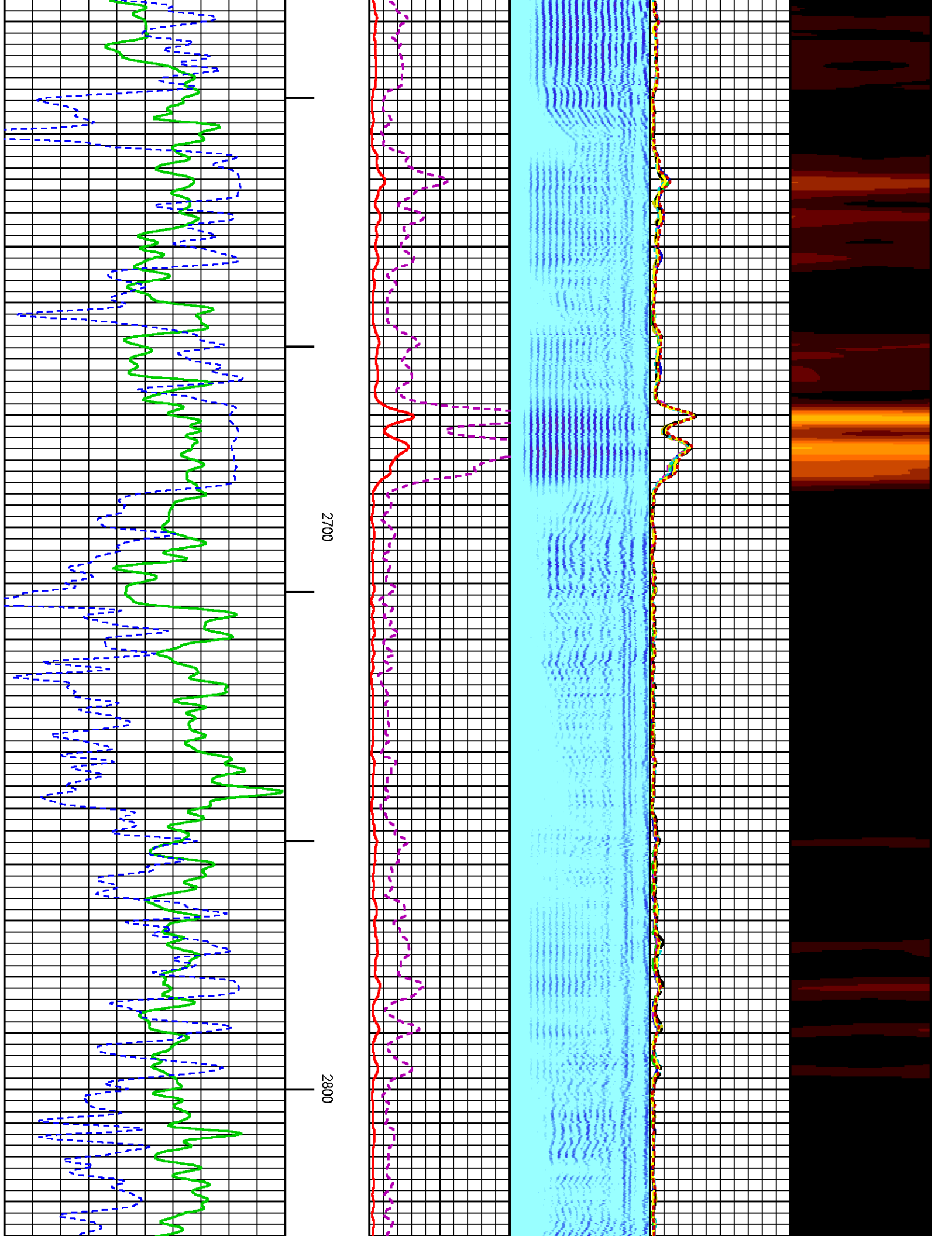


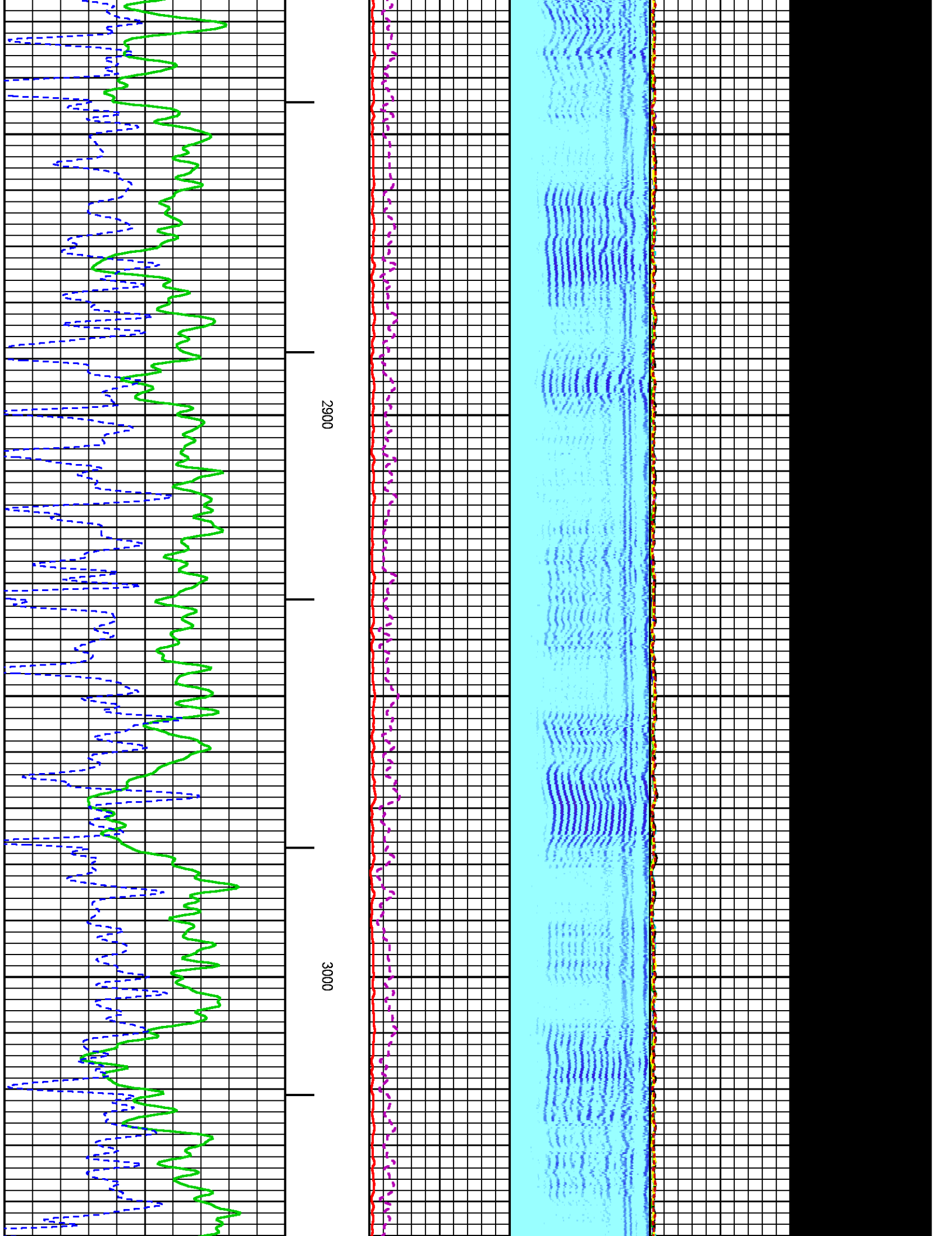


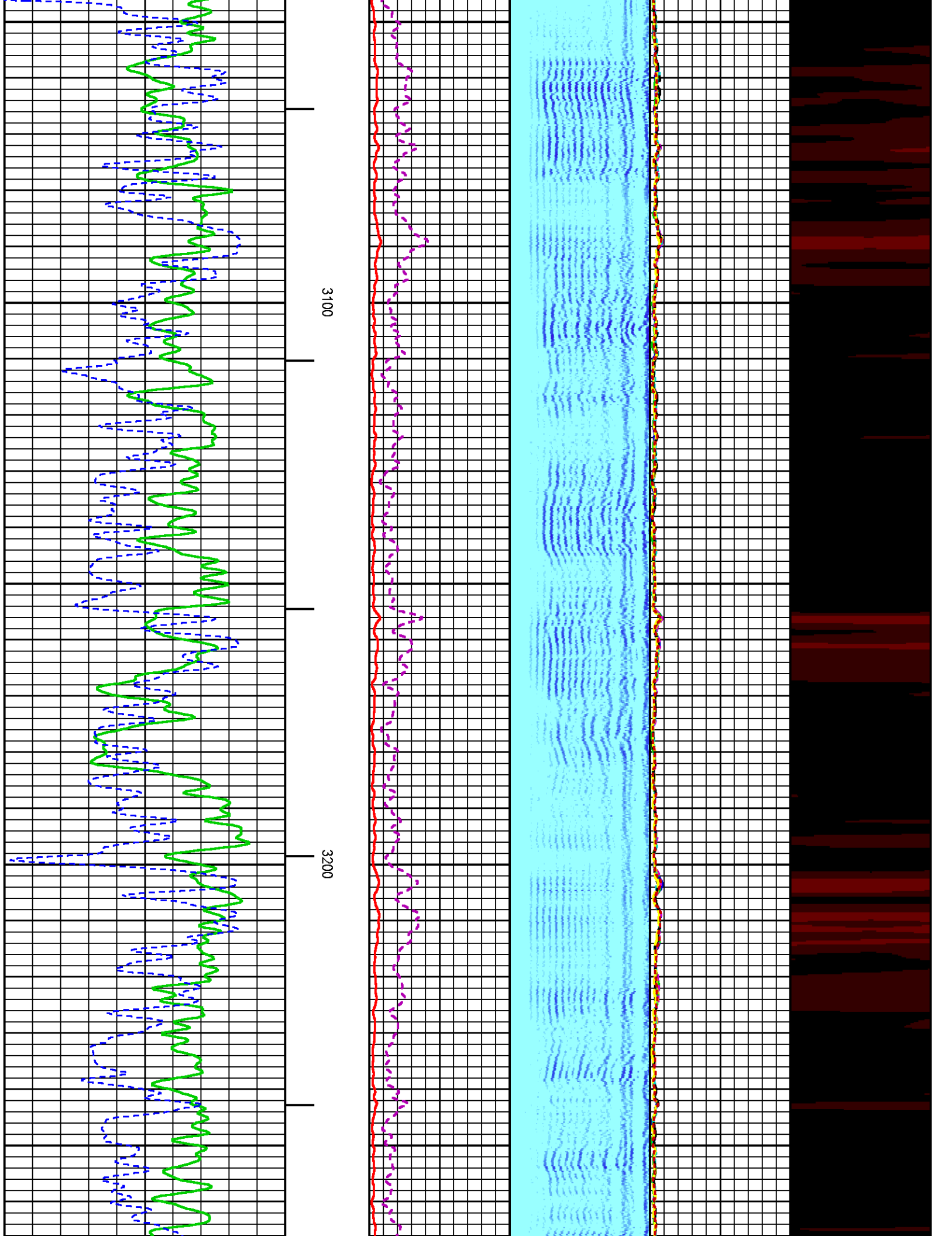


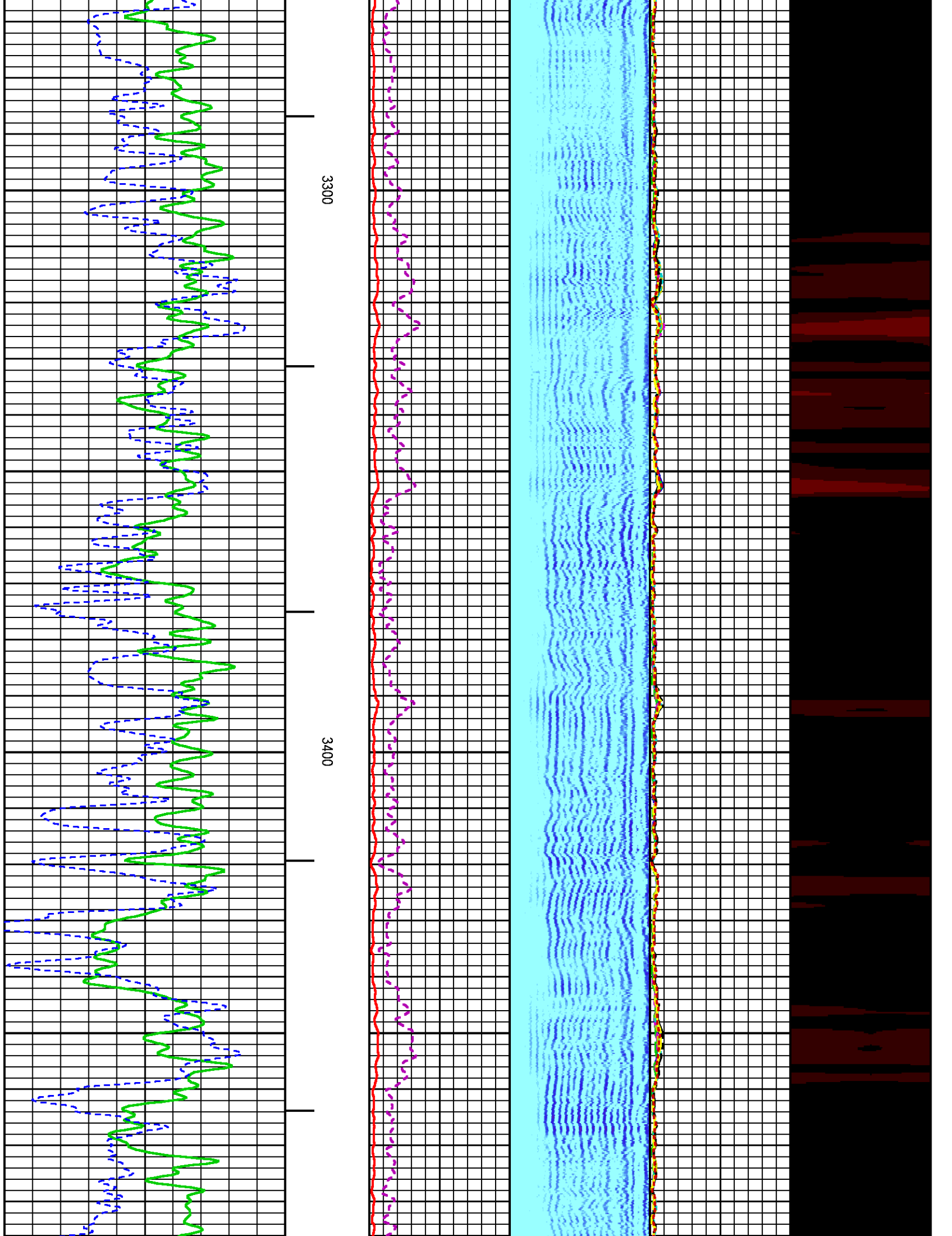


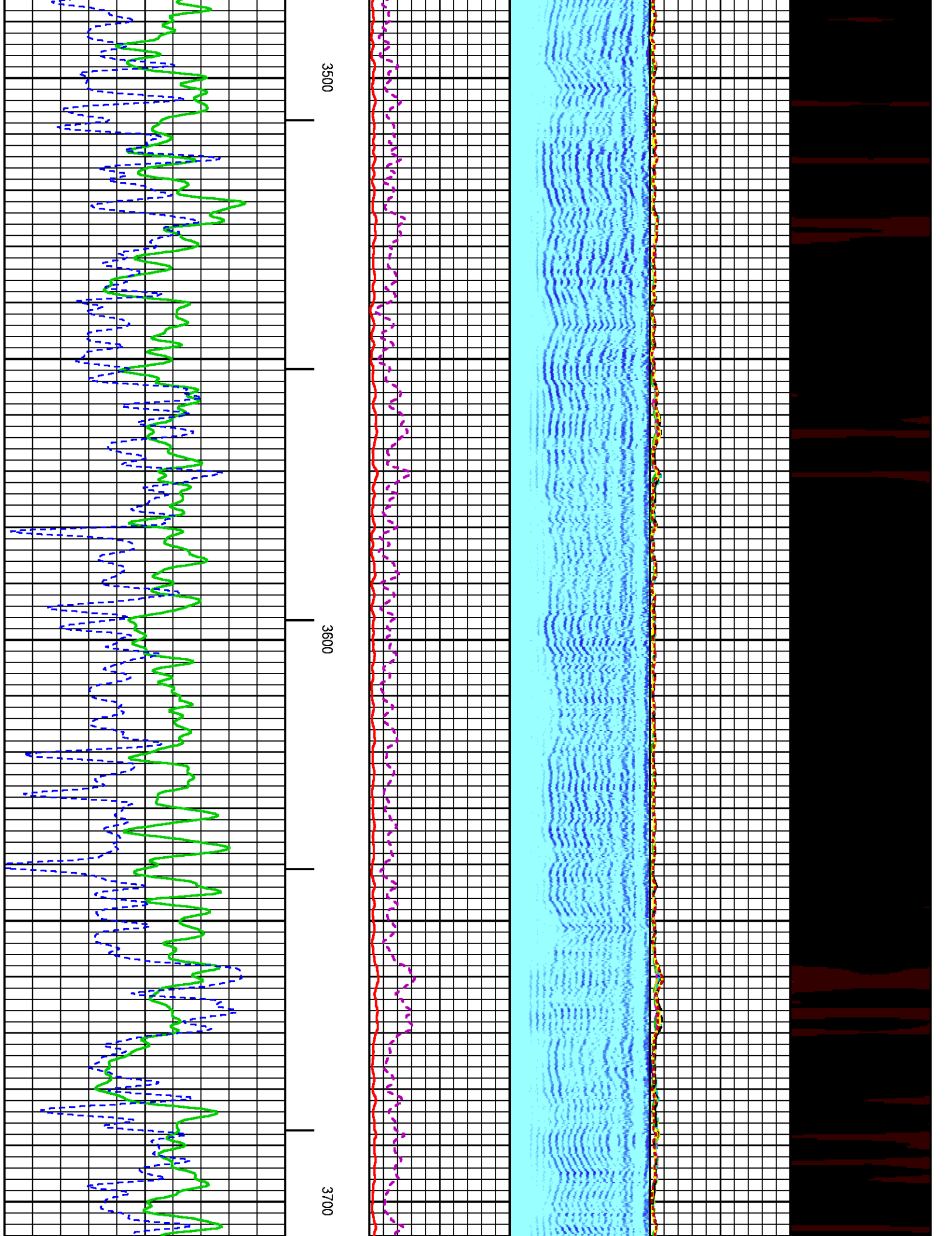


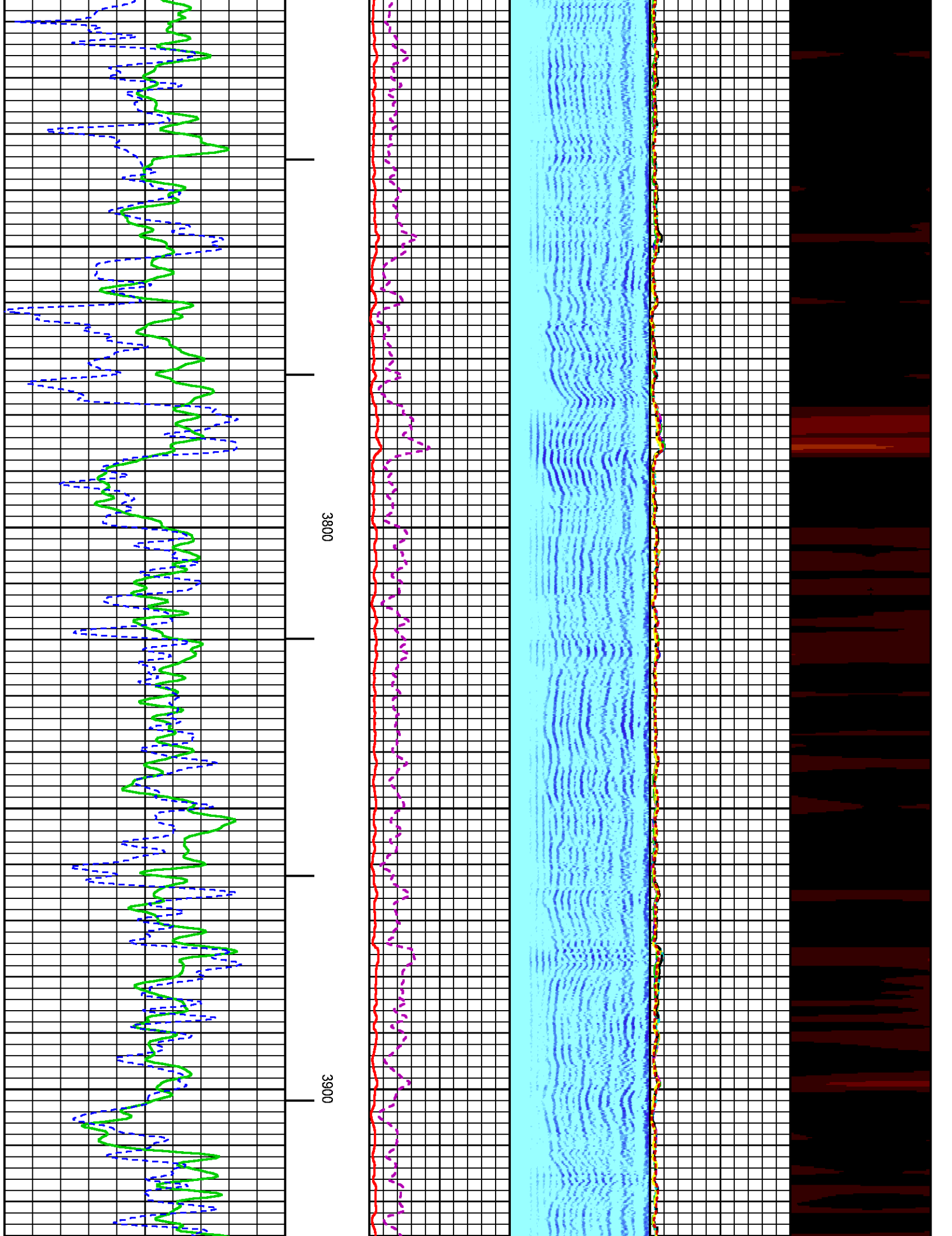


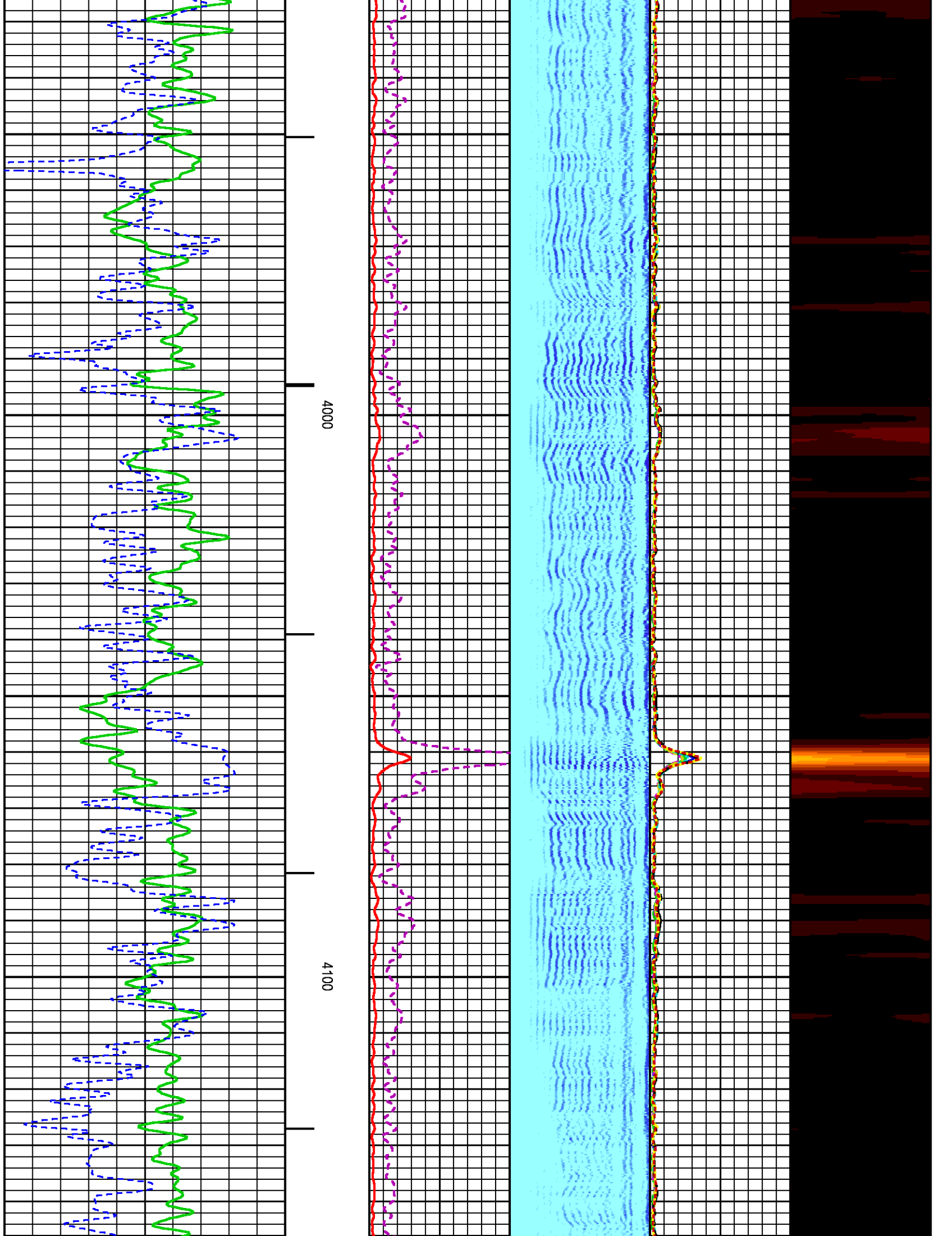


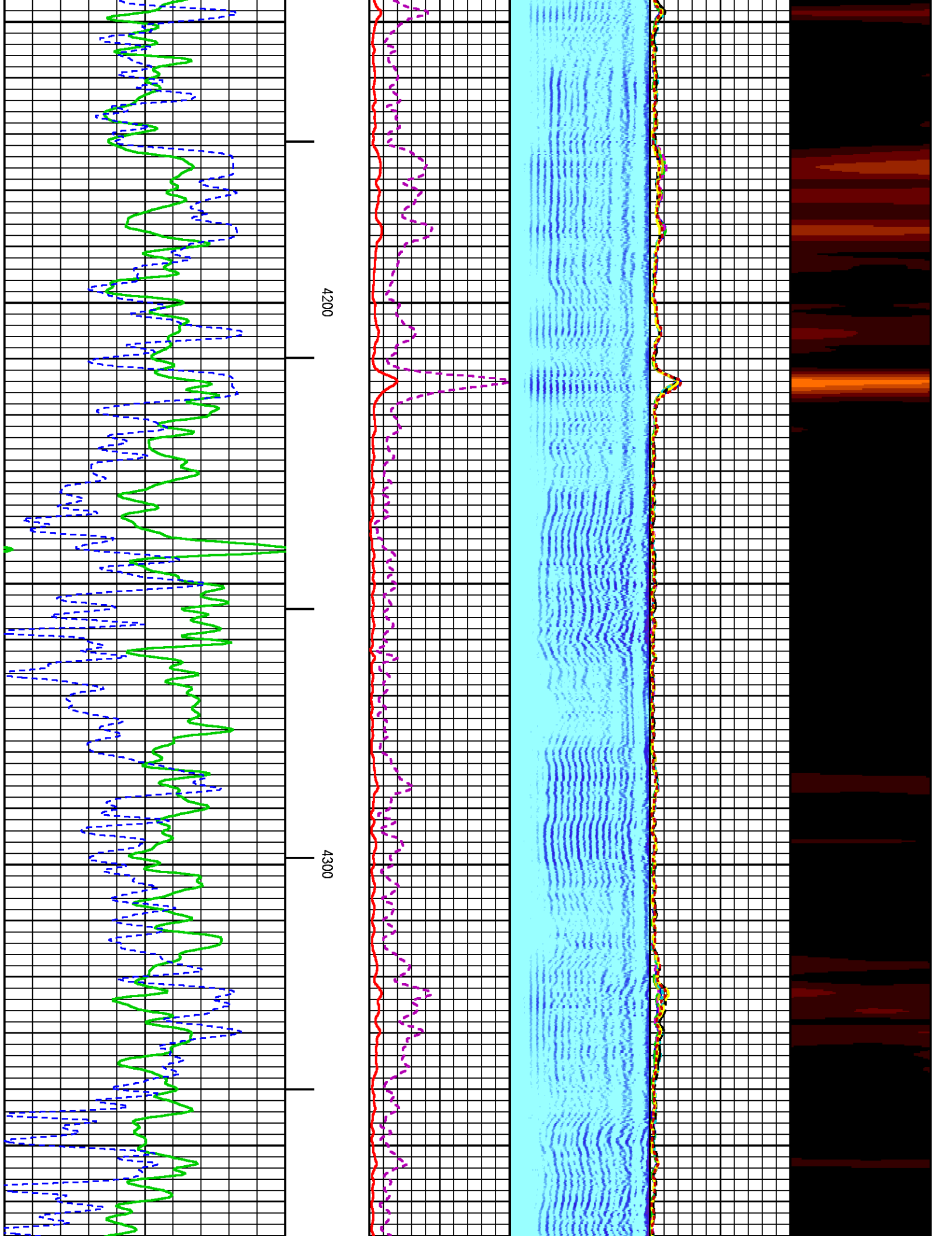


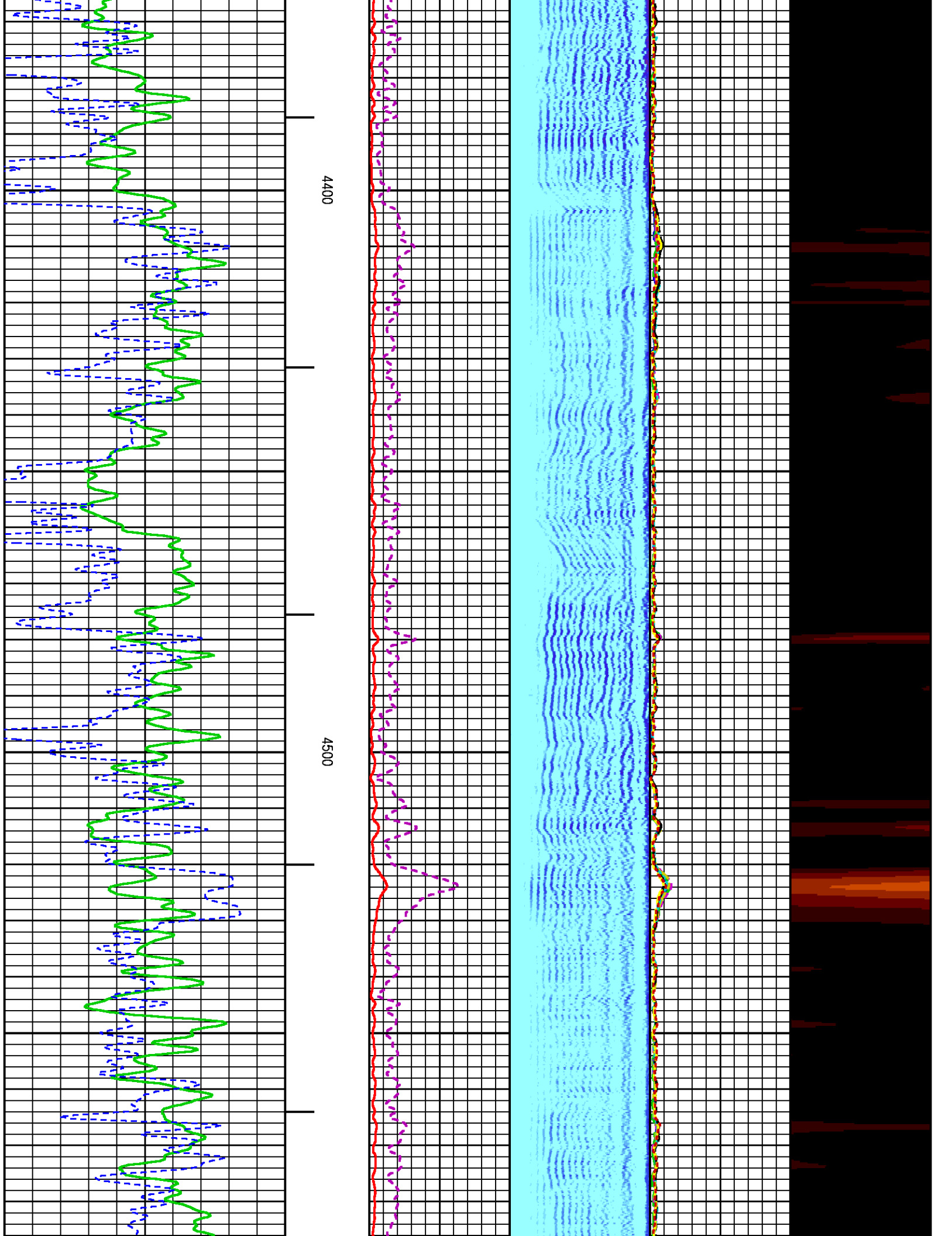


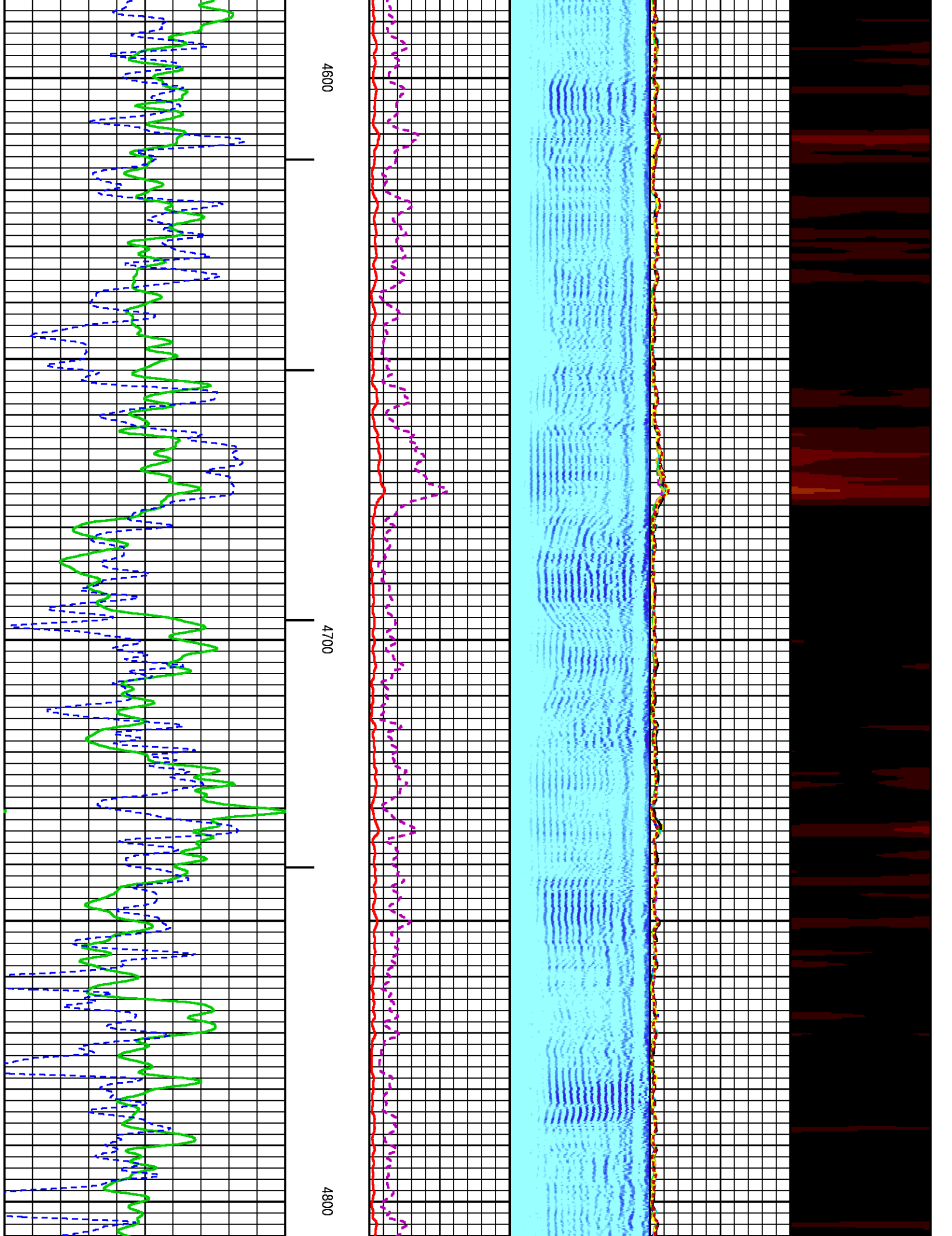


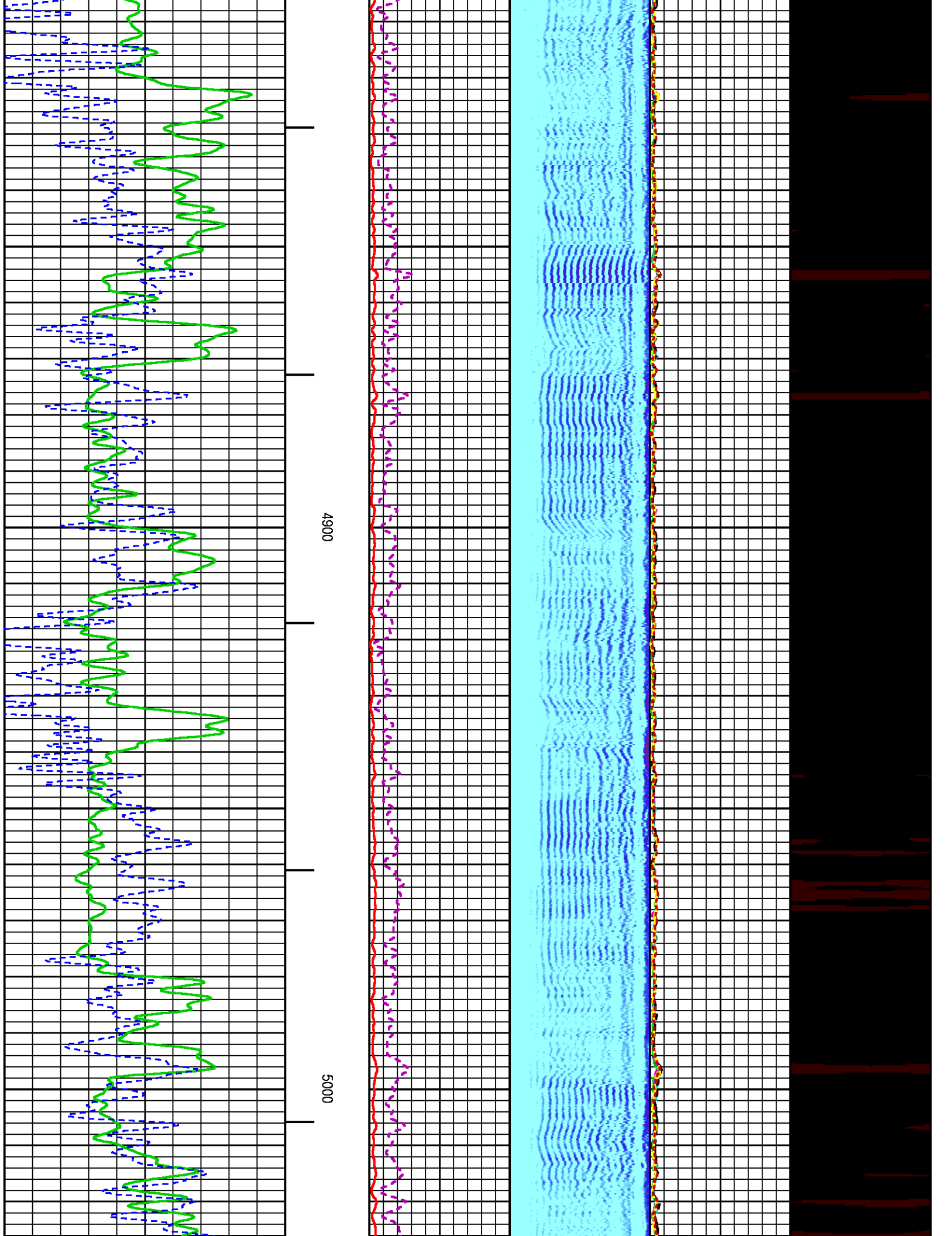


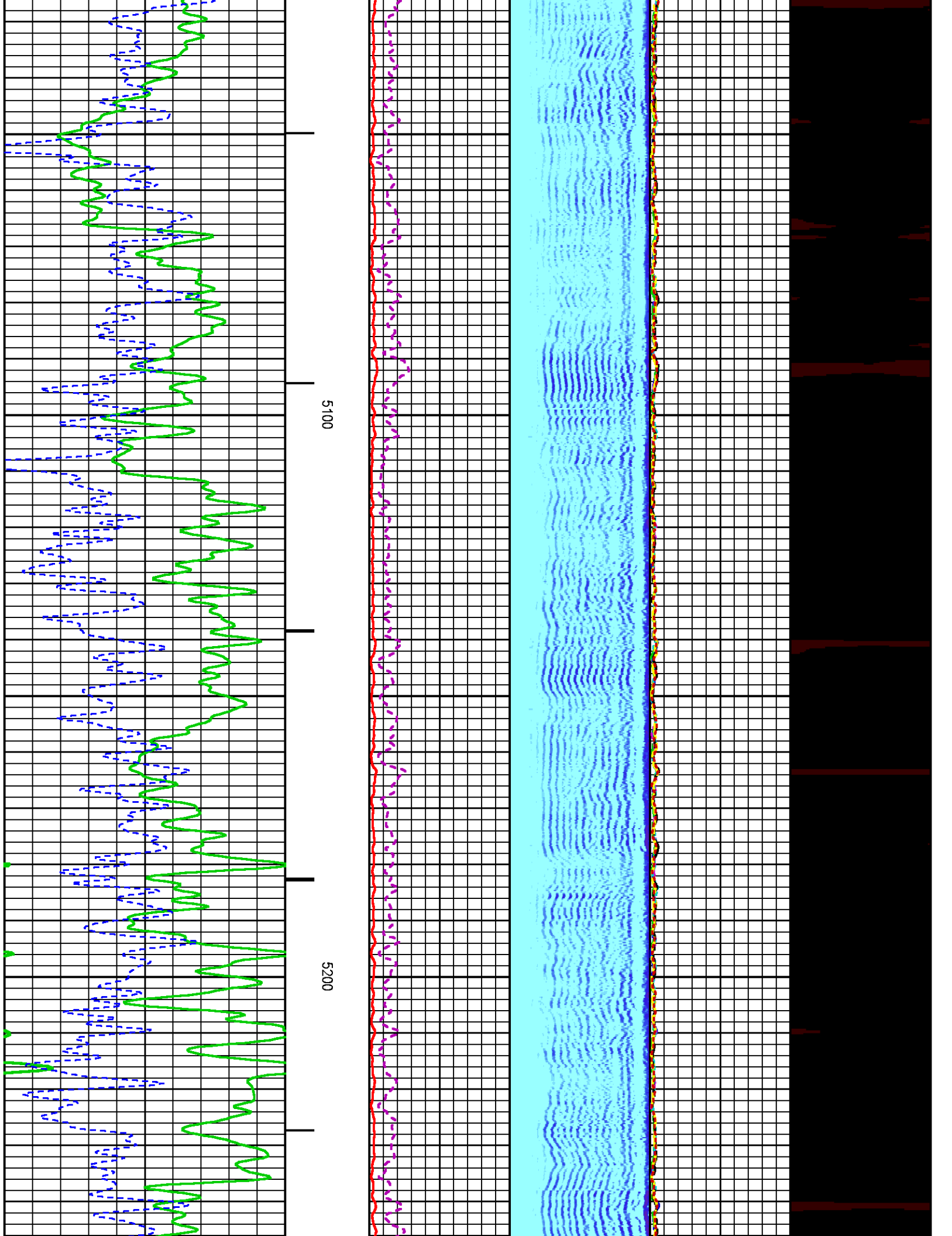


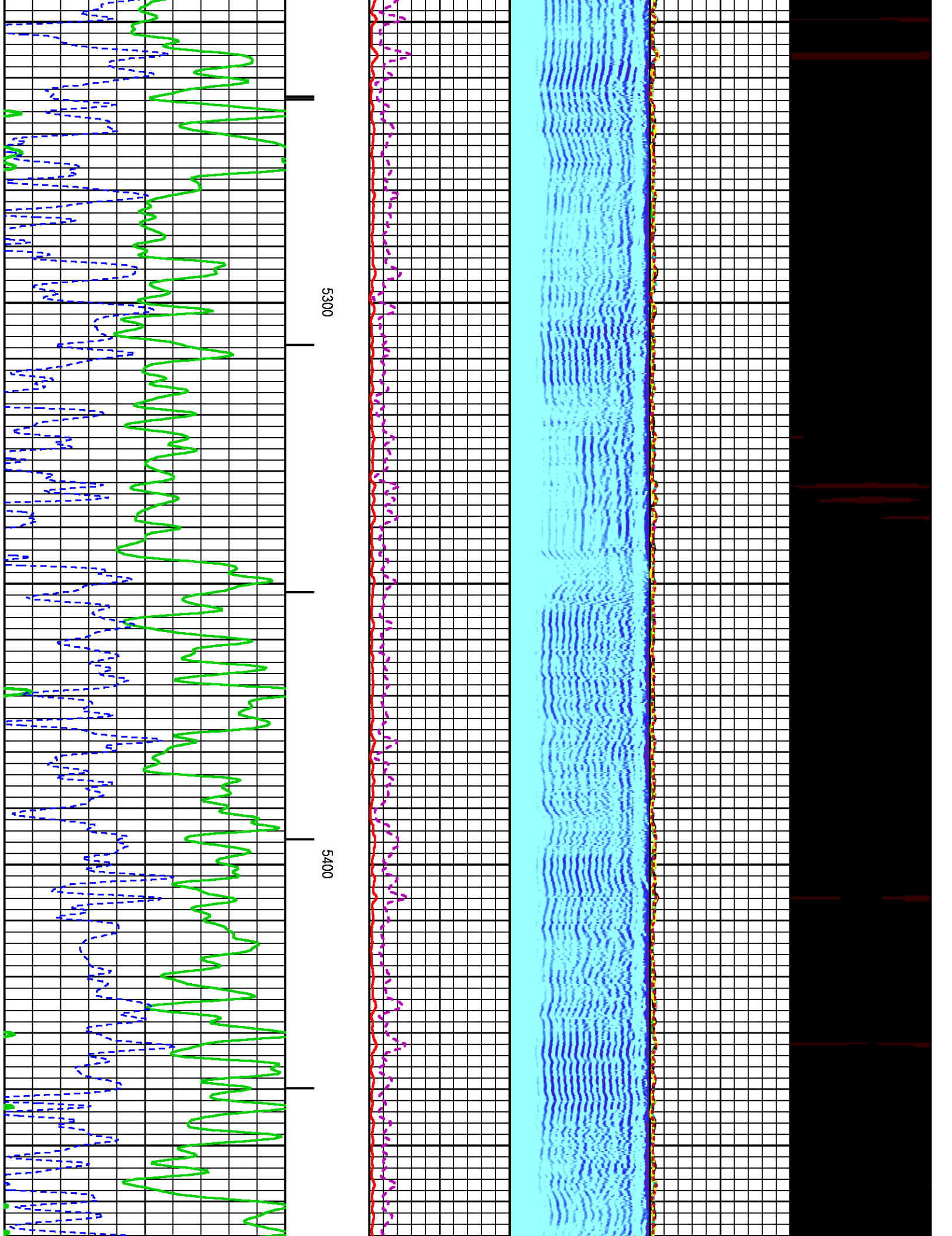


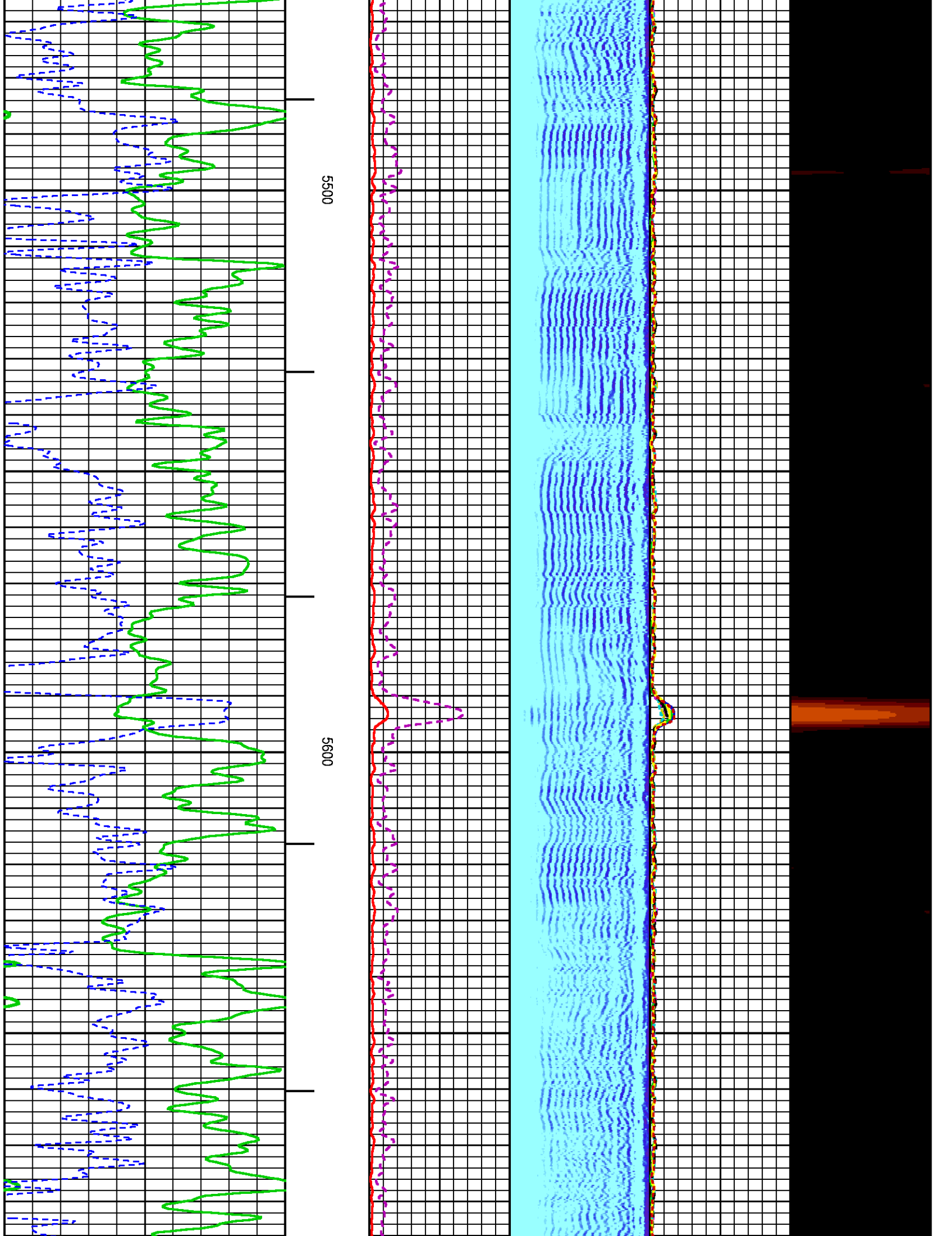


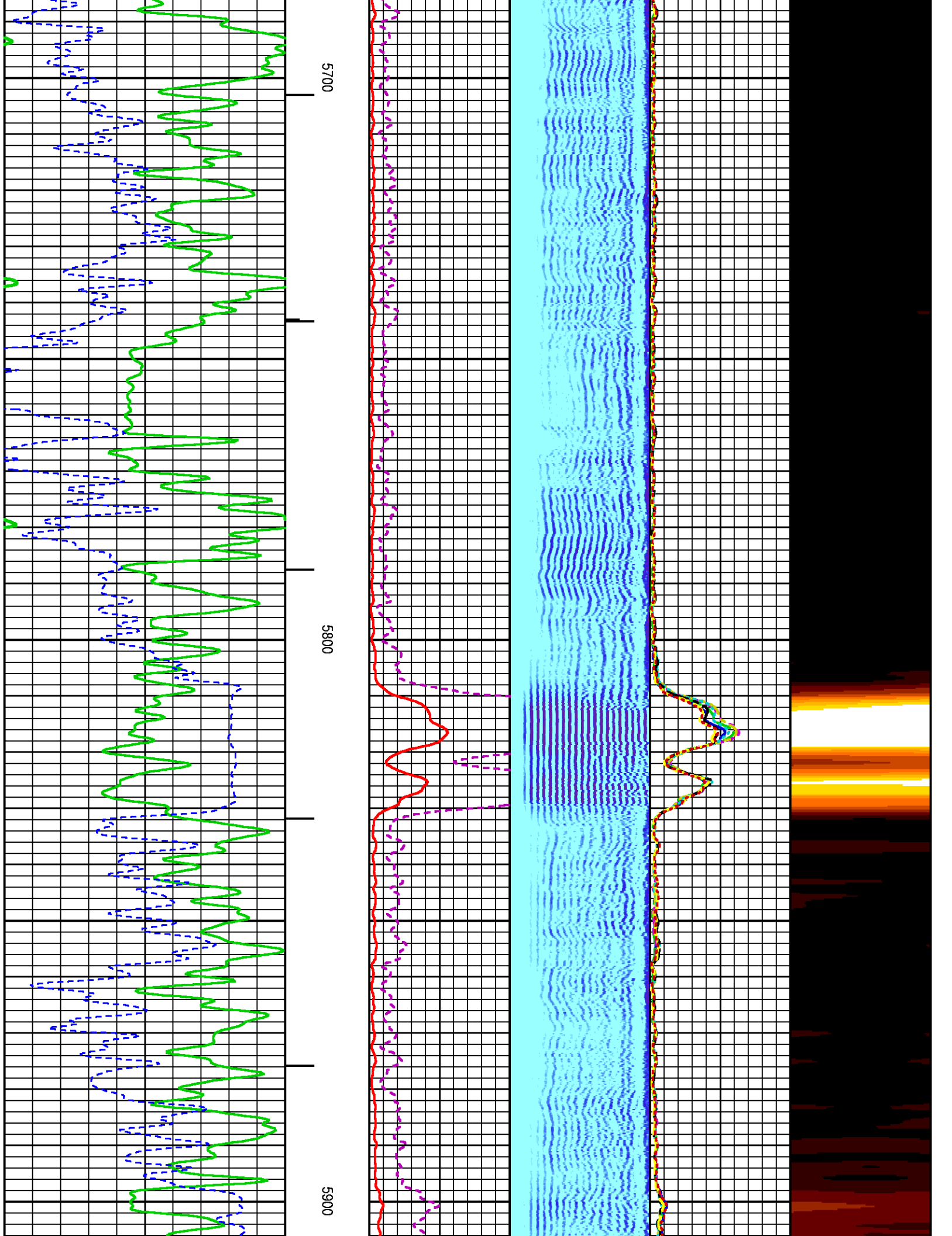


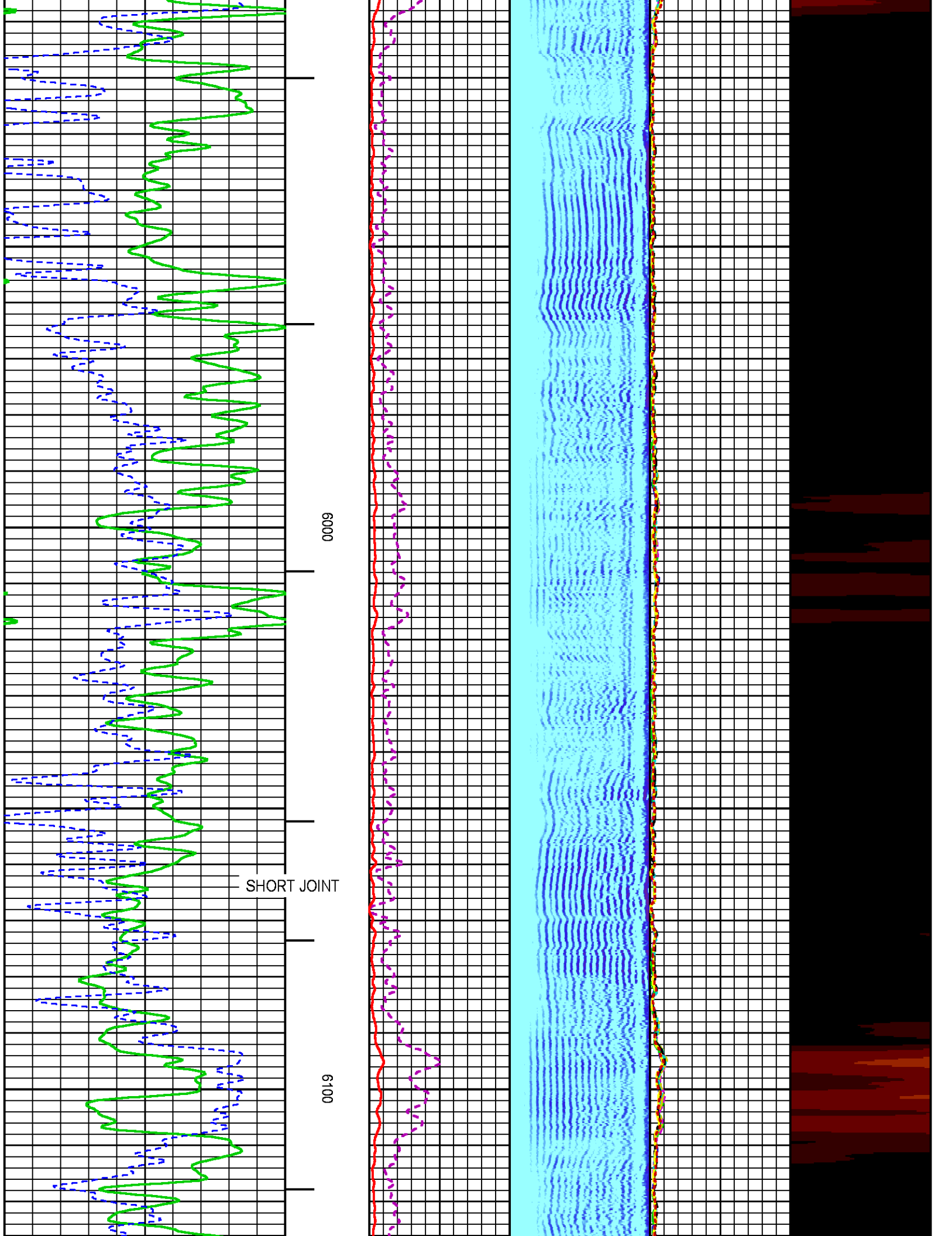


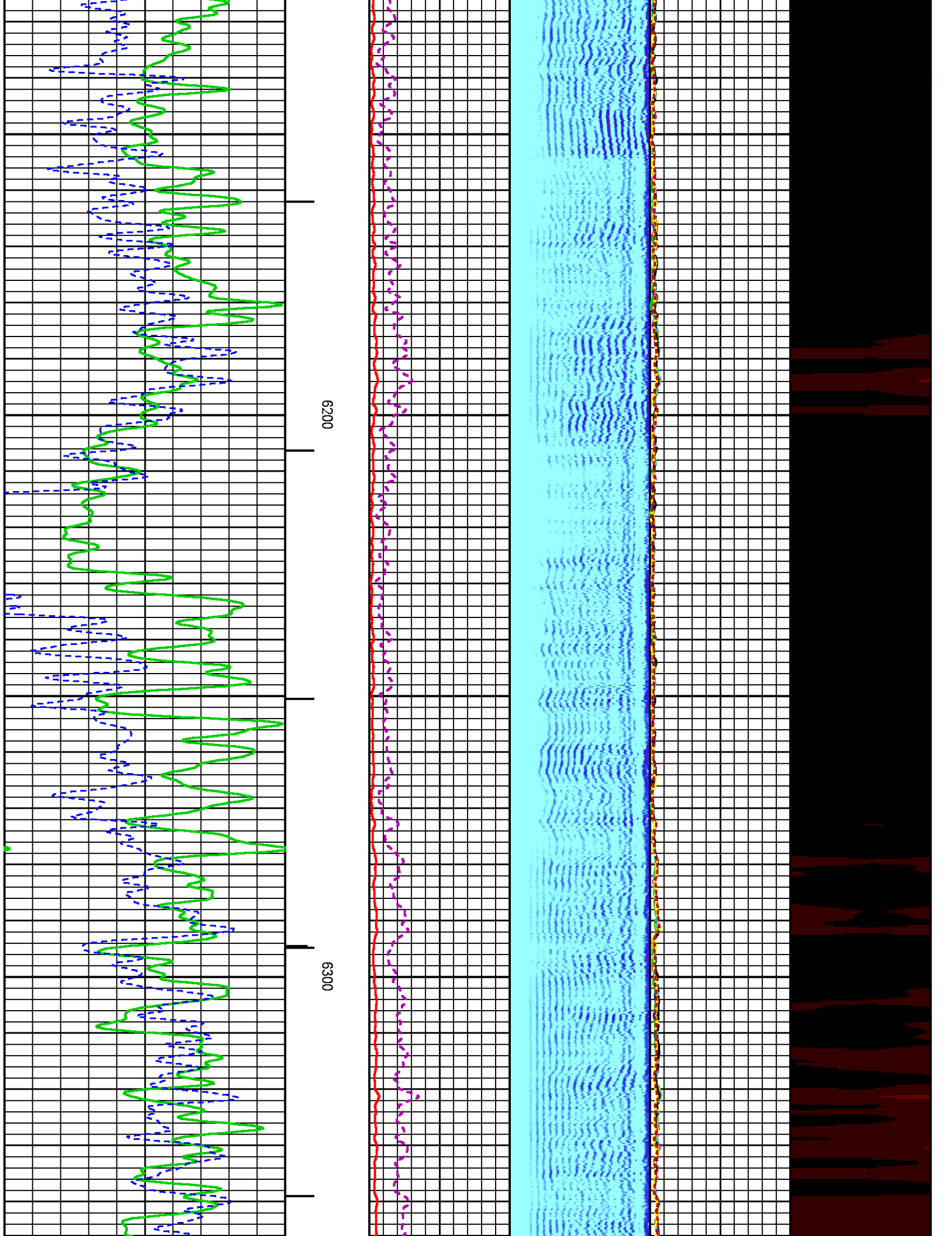


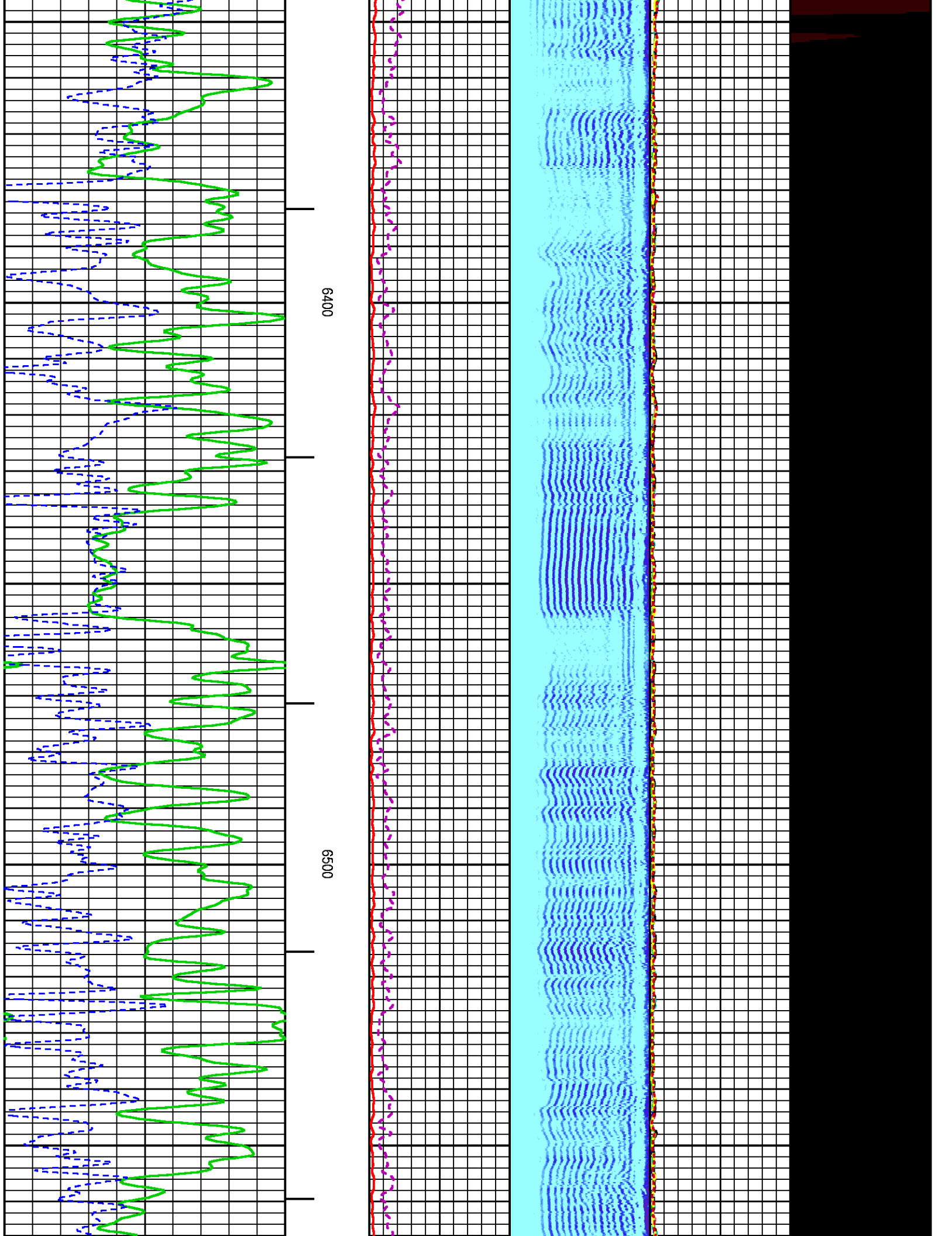


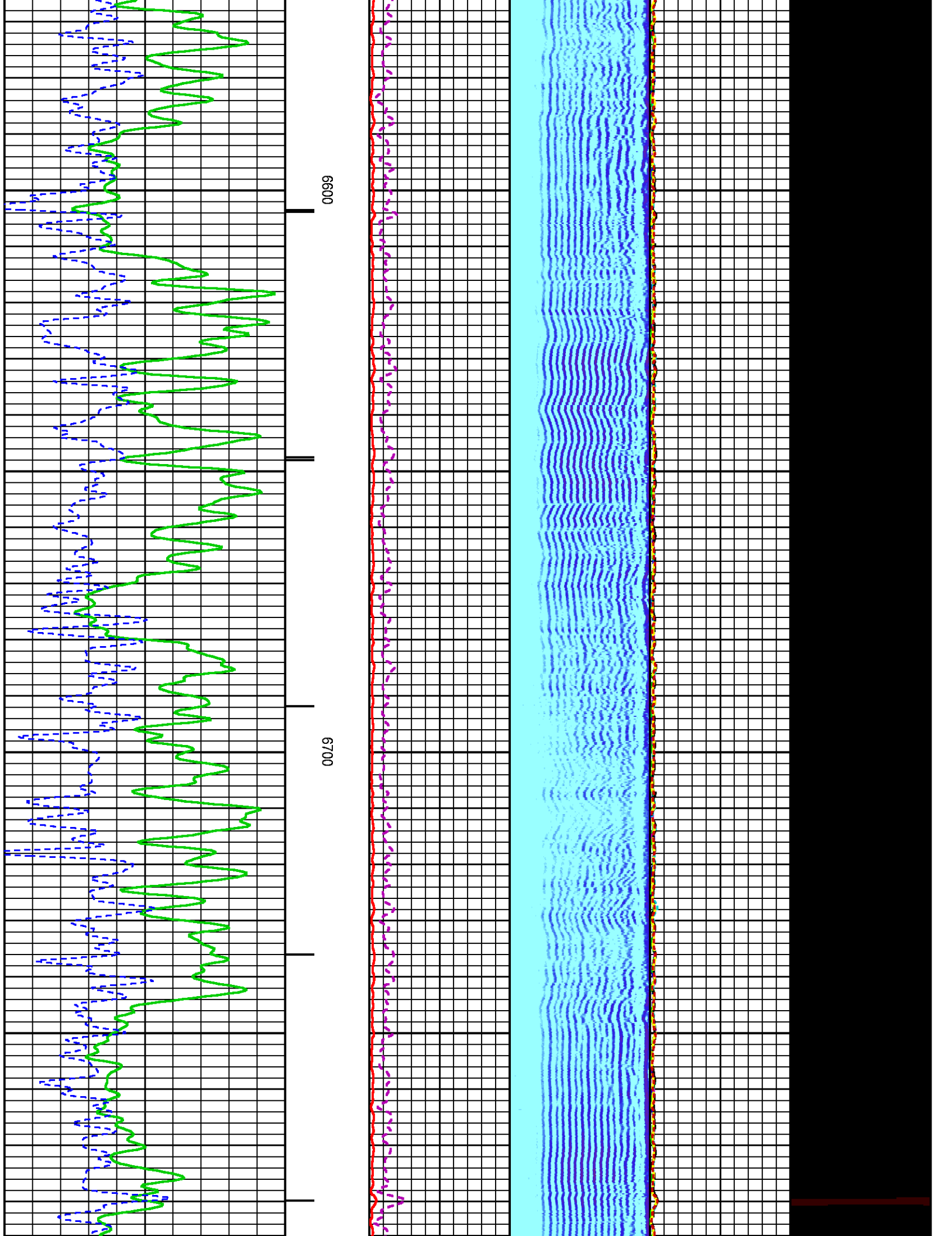


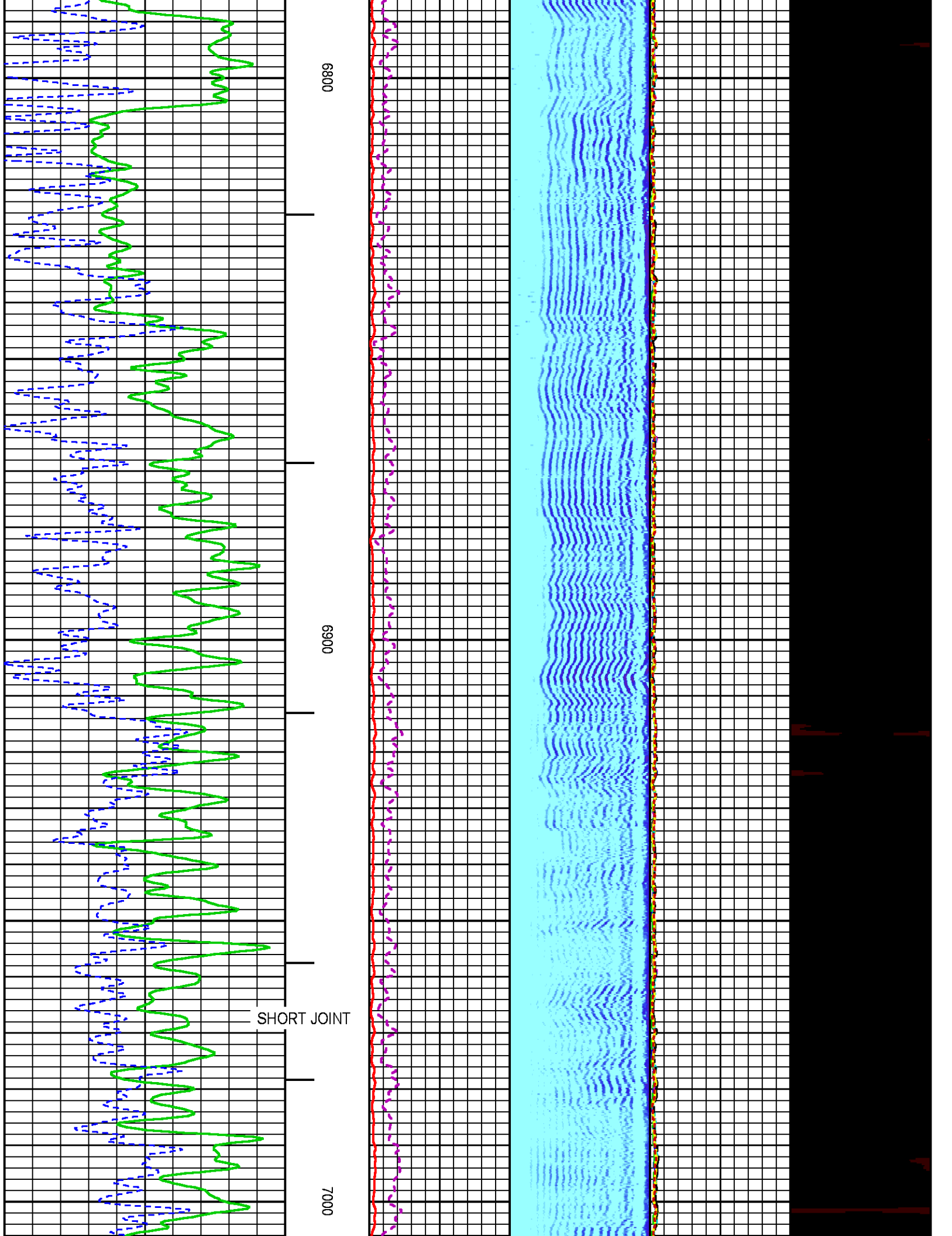


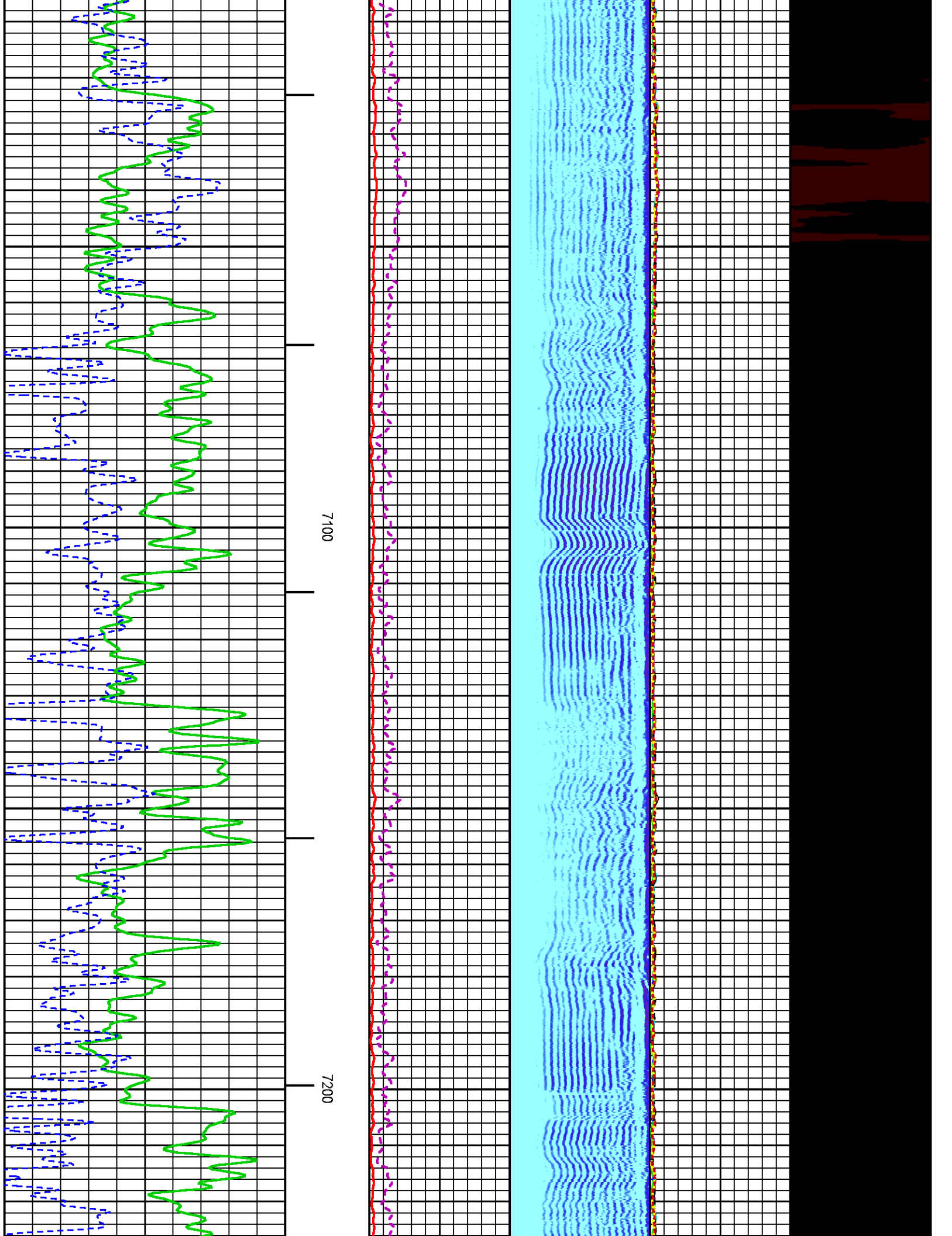


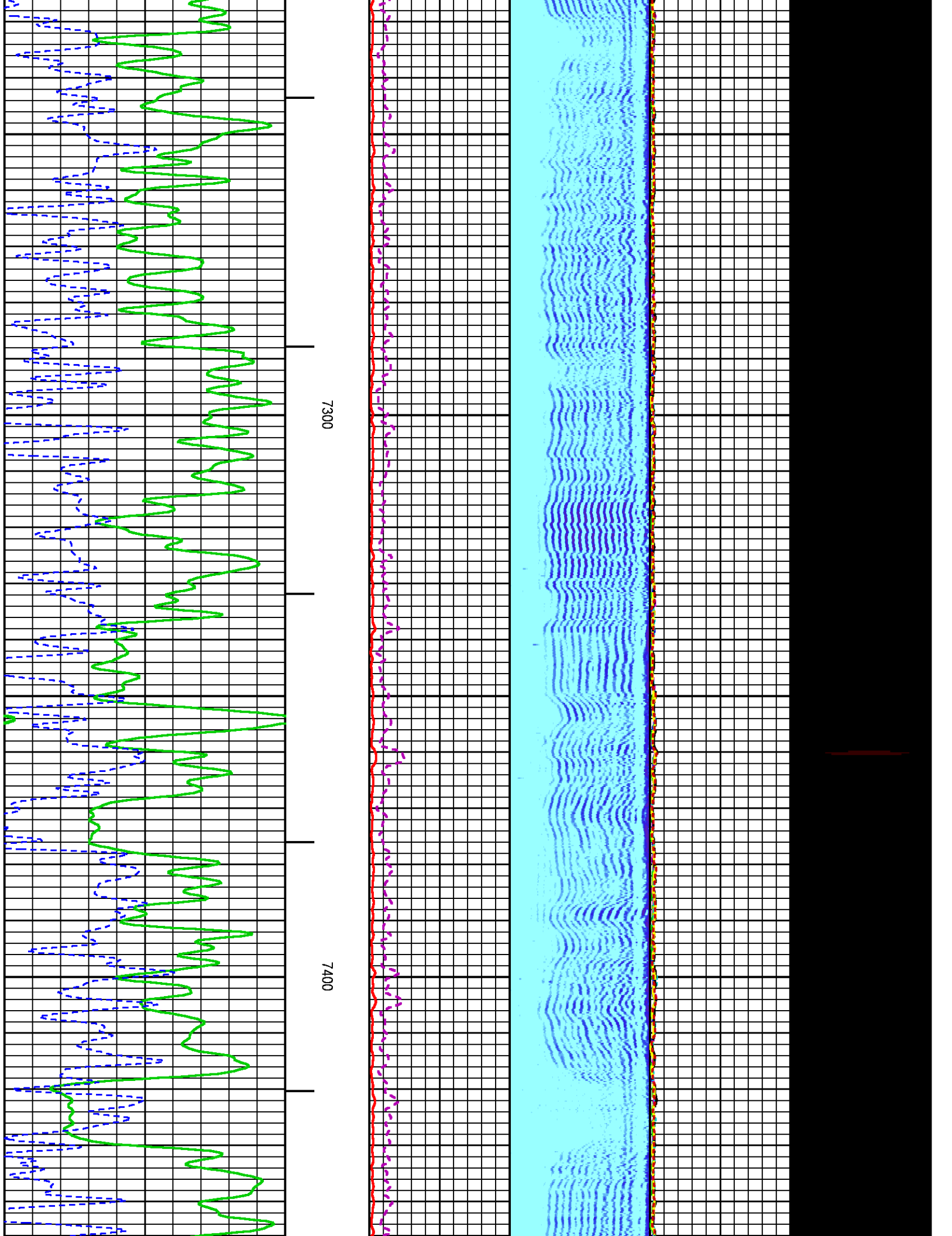


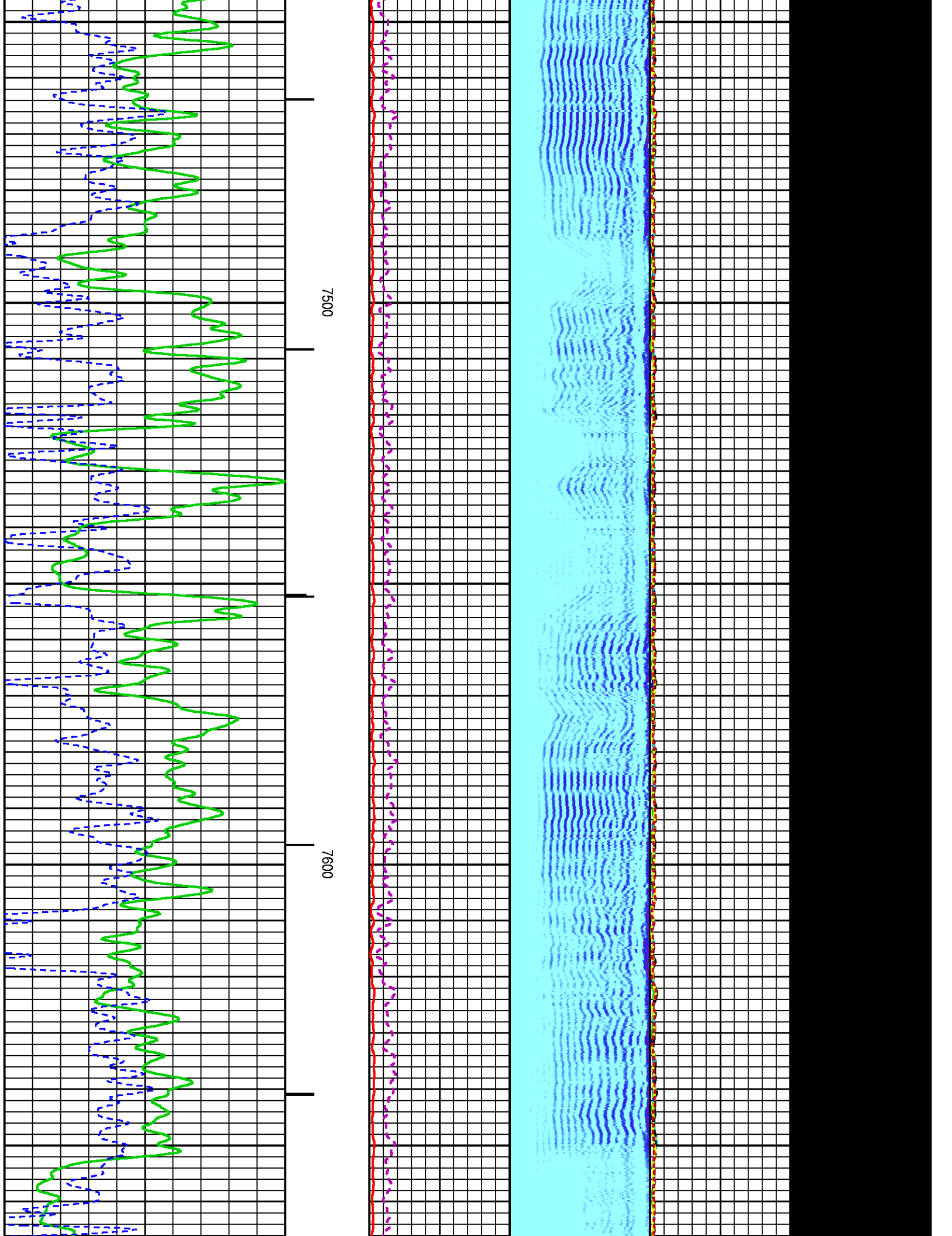


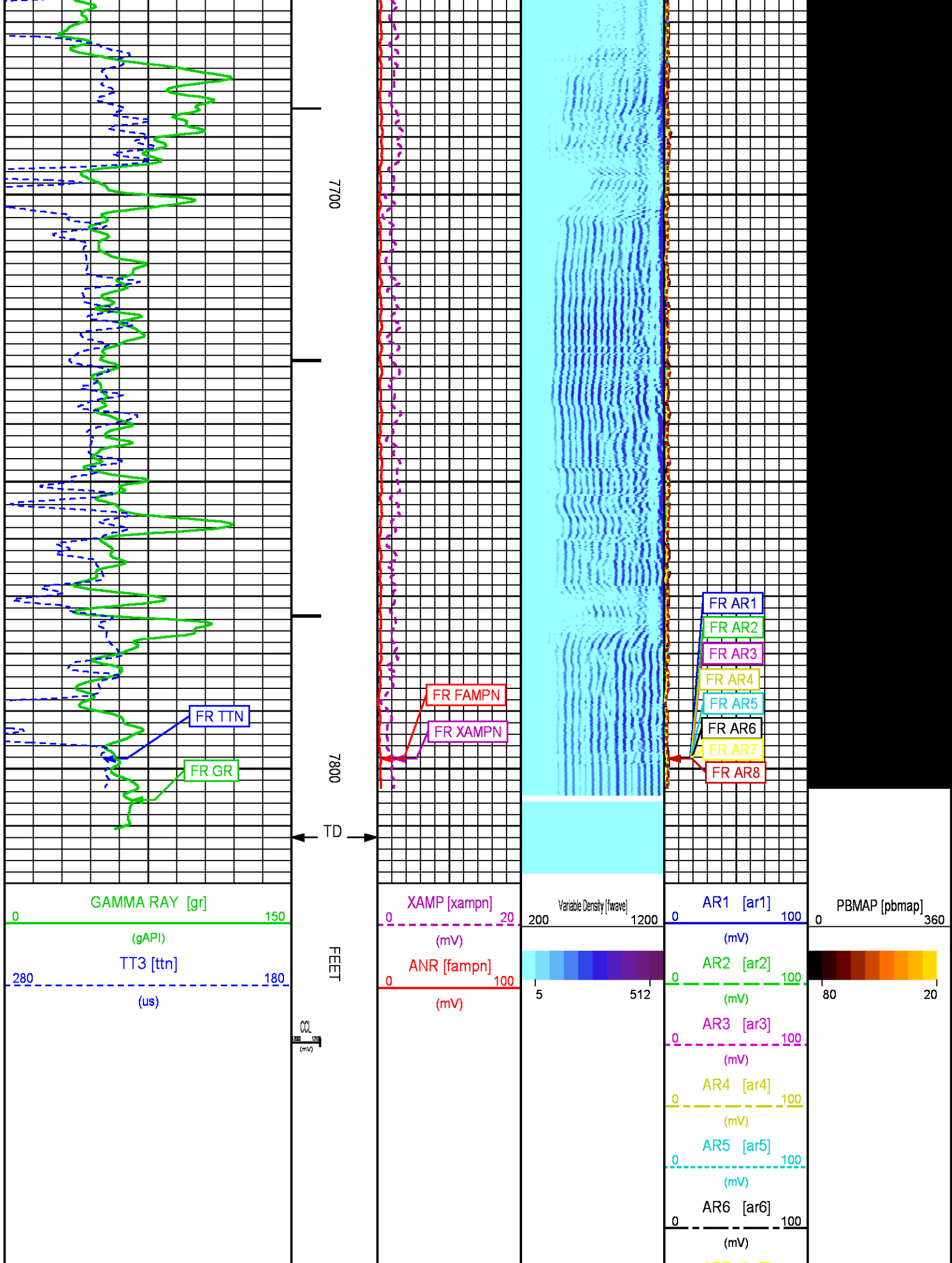


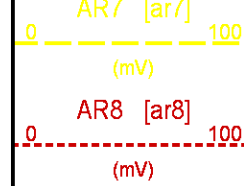












REPEAT PRESENTATION 0 PSI

ECLIPS 6.2wu1 PC-ECLIPS General Release Rel 6.2w Update 1 Fri Apr 25 10:54:53 Central Daylight Time 2014
Patches: 6

Plotted: Fri Jul 24 11:38:52 2015

PARAMETER AND FILTER SUMMARY REPORT

FILE: C:\dat1a\CH098111\012e01.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 7356.500 ft BOTTOM DEPTH: 7824.500 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR	FILTER ()	medium (1)		TOP	BOTTOM
AMPLITUDE	FILTER ()	medium (1) light (2a)		TOP 7694.750	7694.750 BOTTOM
TRAVEL TIME	FILTER ()	medium (1)		TOP	BOTTOM

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*)	172	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*)	-71	us	"	"
	TOOL DELAY (str2*)	-71	us	"	"
	TOOL DELAY (str3*)	-71	us	"	"
	TOOL DELAY (str4*)	-71	us	"	"
	TOOL DELAY (str5*)	-71	us	"	"
	TOOL DELAY (str6*)	-71	us	"	"
	TOOL DELAY (str7*)	-71	us	"	"
	TOOL DELAY (str8*)	-71	us	"	"
BASELINE NOISE (NEAR)	TOOL DELAY (strn*)	-71	us	"	"
	NOISE WINDOW START	100	us	"	"
	NOISE WINDOW LENGTH	50	us	"	"

PERCENT BOND CEMENT MAP

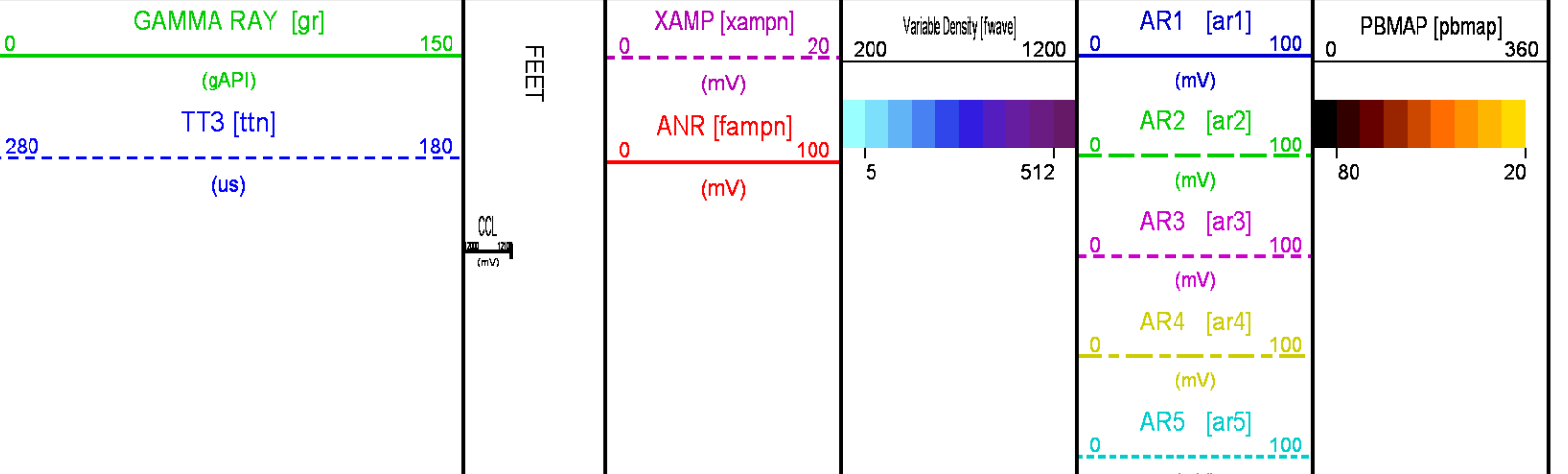
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (%)	
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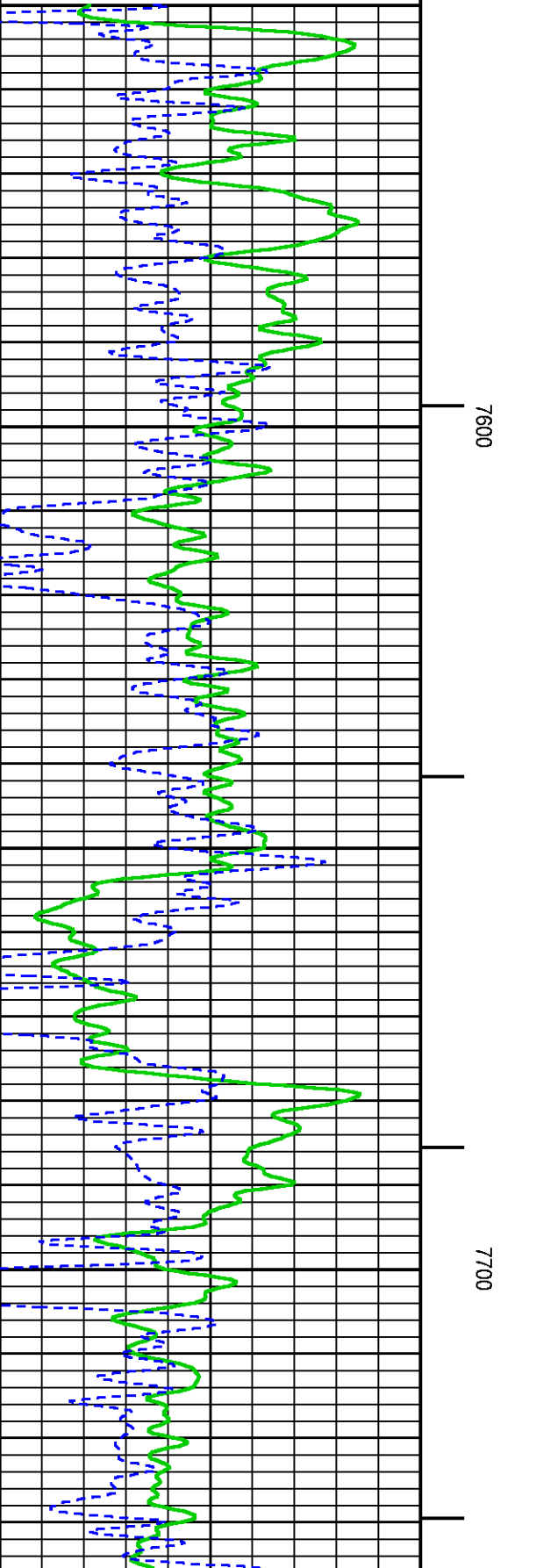
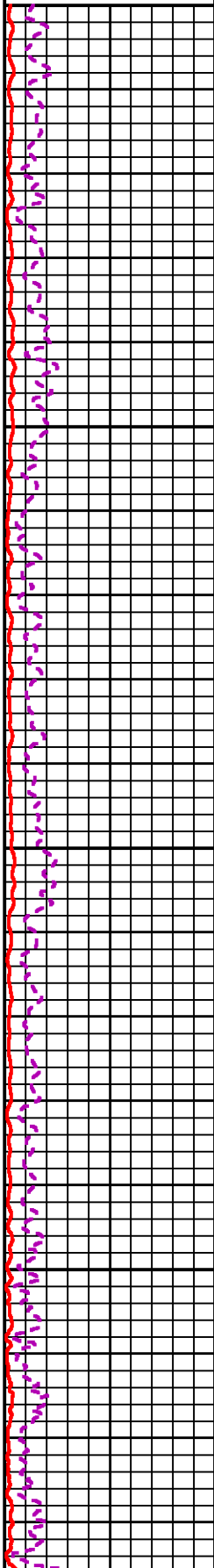
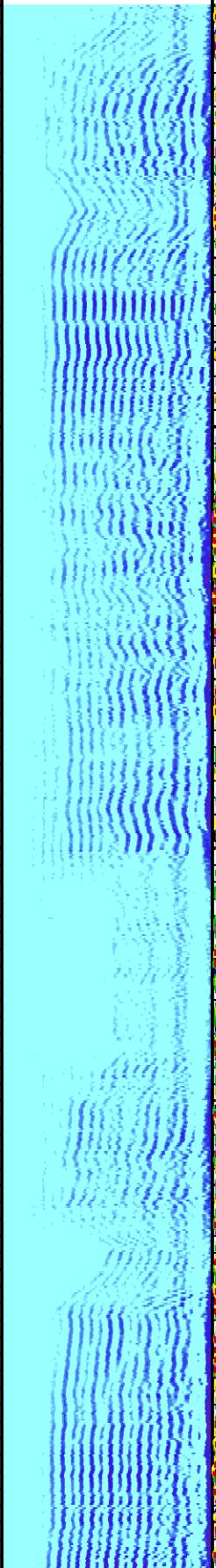
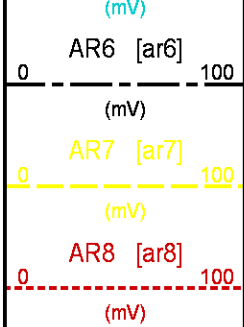
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
RAL FREE PIPE AMPLITUDE	FREE AMP REC 1	80	mV	TOP	BOTTOM
	FREE AMP REC 2	80	mV	"	"
	FREE AMP REC 3	80	mV	"	"
	FREE AMP REC 4	80	mV	"	"
	FREE AMP REC 5	80	mV	"	"
	FREE AMP REC 6	80	mV	"	"
	FREE AMP REC 7	80	mV	"	"
	FREE AMP REC 8	80	mV	"	"
RAL FULL 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 22 14:48:29 2015	FIXED GATE AMPLITUDE T-R1
F1:AR2	Jul 22 14:48:29 2015	FIXED GATE AMPLITUDE T-R2
F1:AR3	Jul 22 14:48:29 2015	FIXED GATE AMPLITUDE T-R3
F1:AR4	Jul 22 14:48:29 2015	FIXED GATE AMPLITUDE T-R4
F1:AR5	Jul 22 14:48:29 2015	FIXED GATE AMPLITUDE T-R5
F1:AR6	Jul 22 14:48:29 2015	FIXED GATE AMPLITUDE T-R6
F1:AR7	Jul 22 14:48:29 2015	FIXED GATE AMPLITUDE T-R7
F1:AR8	Jul 22 14:48:29 2015	FIXED GATE AMPLITUDE T-R8
F1:CCL	Jul 22 14:48:29 2015	CASING COLLAR LOCATOR
F1:FAMPN	Jul 22 14:48:29 2015	FIXED GATE AMPLITUDE NEAR RECEIVER
F1:FWAVE	Jul 22 14:48:29 2015	FAR WAVE FORM
F1:GR	Jul 22 14:48:29 2015	GAMMA RAY
F1:PBMAP	Jul 22 14:48:29 2015	PERCENT BOND CEMENT MAP
F1:TTN	Jul 22 14:48:29 2015	TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER
F1:XAMPN	Jul 22 14:48:29 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	13.75	AR5	13.75	CCL	8.50	XAMPN	13.75
AR2	13.75	AR6	13.75	FAMPN	13.75		
AR3	13.75	AR7	13.75	GR	6.50		
AR4	13.75	AR8	13.75	TTN	13.75		

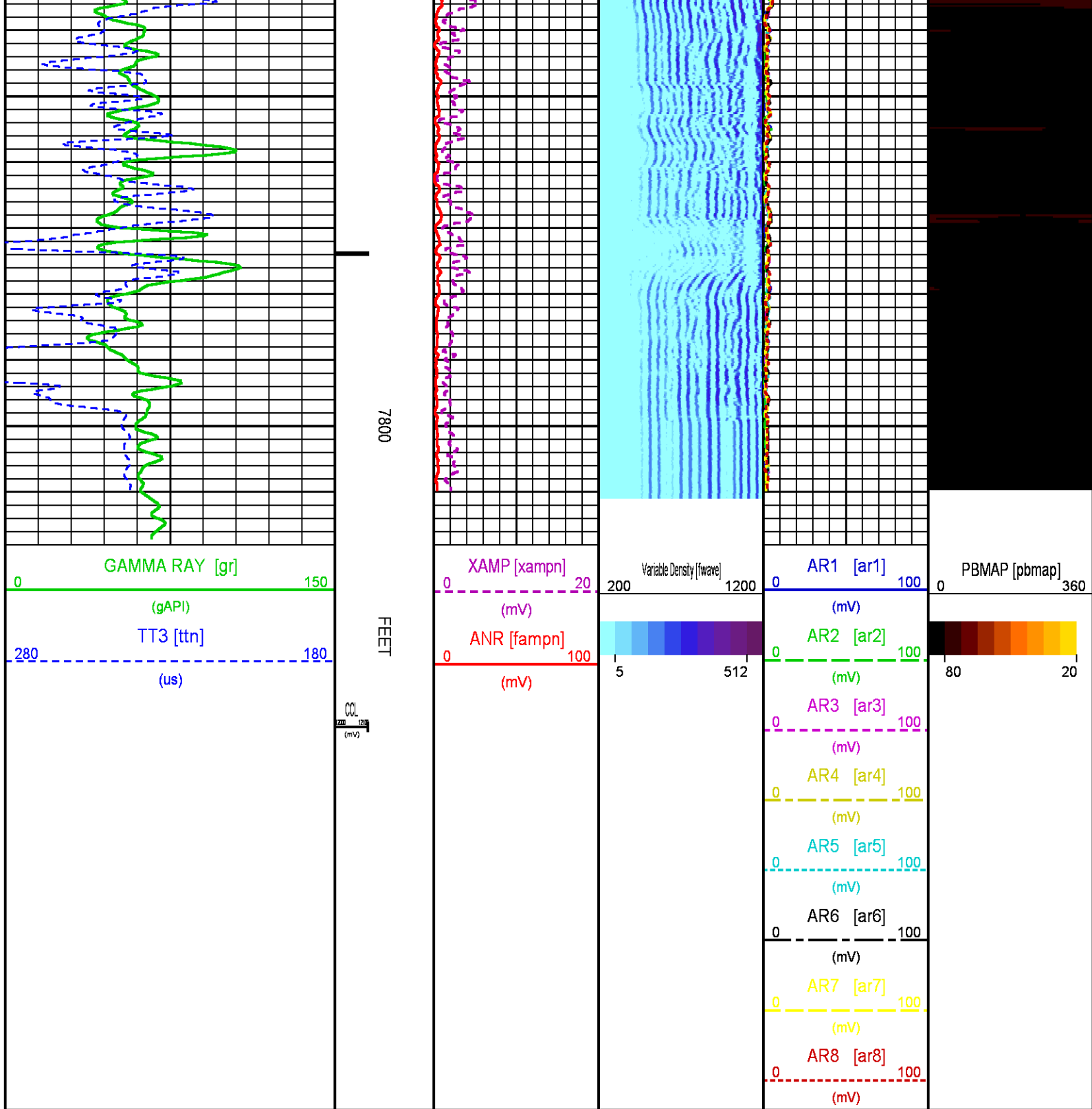
Presentation	: BHID26LKX1:C:\dat1a\CH098111\09M_CBLREPEAT.fvpdf [5"/100' Scale]
Plot Interval	: 7550 - 7823.5 Feet
Data File 1	: F1 : BHID26LKX1:C:\dat1a\CH098111\n012e01_09M_REPEAT.xtf
Created On	: Jul 22 14:48:29 2015
Company	: LARAMIE ENERGY
Well	: GUNDERSON 29-09M
Field	: VEGA
File Interval	: 7342.5 - 7824.75 Feet
OCT	: n012e





7600

7700



CALIBRATION / VERIFICATION SUMMARY

Source File: C:\dat1a\CH098111\012e.tp1

RAL PRIMARY CALIBRATION SUMMARY

TOOL #: 1426XA 10417452

DATE/TIME PERFORMED: Wed Jul 22 14:07:41 2015

UNIT #: 3885TC 6685

	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)	-0.04	0.10	-0.00	0.03	0.03	-0.01	-0.03	-0.00	0.02	0.41	-0.12
AMP FLUID (mV)	103	103	102	102	102	102	102	102	103	136	102
TT (us)	217	217	217	218	218	217	216	215	217	326	217
M FACTOR	0.97	0.97	0.98	0.98	0.98	0.98	0.98	0.98	0.98	1.10	0.98

RAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 1426XA 10417452

DATE/TIME PERFORMED: Wed Jul 22 14:11:52 2015

DAYS SINCE CAL: 0

UNIT #: 3885TC 6685

CABLE #: 6685SM 123456

	NEAR (mV)	R1 (mV)	R2 (mV)	R3 (mV)	R4 (mV)	R5 (mV)	R6 (mV)	R7 (mV)	R8 (mV)	FAR (mV)	CAL (mV)
ZERO	0.08	-0.01	0.11	0.00	0.05	0.01	-0.02	0.03	-0.08	0.04	-0.07
AMP AIR	1.14	0.93	0.59	1.27	1.49	1.57	1.89	0.88	1.18	1.35	100.25

SHOP M FACTOR	SHOP A FACTOR	WIREFINE FACTOR
0.98	0.00	1.00

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 2459XA 10218504

DATE/TIME PERFORMED: Tue Jul 21 11:22:52 2015

UNIT #: 3885TC 6685

CALB JIG #: 4702NK DA-501

	BACKGROUND (cts)	CALBTR ON (cts)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBTR ON (gAPI)	CALBTR (gAPI)
GR	87.82	338.31	250.5	0.739	64.86	249.86	185

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 2459XA 10218504

DATE/TIME PERFORMED: Tue Jul 21 11:24:22 2015

UNIT #: 3885TC 6685

VERI JIG #: 4702NK DA-501

	BACKGROUND (cts)	CALBRTR ON (cts)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	82.13	341.33	0.739	60.66	252.09	191.43
						175.00 195.00

INSTRUMENT CONFIGURATION

Source File: C:\adat1a\CH098111\CBL-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

TOTAL LENGTH: 20.38"
TOTAL WEIGHT: 235 lbs
MAX DIAMETER: 0.4.00"



20.38'

NEAR RCVR 11.17'

FAR RCVR 10.21'

CCL 5.79'

GR 1.67'

TEMP 0.17'



COMPANY
WELL
FIELD
COUNTY

LARAMIE ENERGY
GUNDERSON 29-09M
VEGA
MESA

STATE COLORADO

LOCATION:

SHL: 2406' FNL 1239' FEL
BHL: 2150' FNL 2611' FEL

ELEVATIONS:

KB 7553 FT
DF
GL 7531 FT

FILE NO:

CH098111

API NO:

05077097630000

SEC 29 T9S R93W
29-09 PAD
PATTERSON 306



SEC	<u>29</u>	TWP	<u>9S</u>	RGE	<u>93W</u>	DATE	<u>22-Jul-2015</u>
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