



FILE NO: CH101513		COMPANY LARAMIE ENERGY	
API NO: 05077102550000		WELL PICEANCE FEDERAL 28-09E	
Ver. 4.05		FIELD VEGA	
28-9S 93W		COUNTY MESA	
28-10 PAD		STATE COLORADO	
PATTERSON 306		LOCATION: SHL: LAT 39.246680, LONG: -107.774793 BHL: LAT 39.249433, LONG -107.768135 SEC 28 TWP 9S RGE 93W	
PERMANENT DATUM LOG MEASURED FROM		OTHER SERVICES	
G.L. ELEVATION 7682 FT		KB 7704 FT	
K.B. 22 FT ABOVE P.D.		DF	
DRILL. MEAS. FROM K.B.		GL 7682 FT	
DATE	21-Jan-2016		
RUN	TRIP	1	1
SERVICE ORDER	US101513J		
DEPTH DRILLER	8419 FT		
DEPTH LOGGER	8401 FT		
BOTTOM LOGGED INTERVAL	8399 FT		
TOP LOGGED INTERVAL	0 FT		
TIME STARTED	07:30		
TIME FINISHED	10:00		
OPERATOR RIG TIME	2.5 HOURS		
TYPE OF FLUID IN HOLE	WATER		
FLUID DENSITY	NA		
FLUID SALINITY	NA		
FLUID LEVEL	37 FT		
LOGGED CEMENT TOP	SEE LOG		
WELLHEAD PRESSURE	0 PSI		
MAXIMUM HOLE DEVIATION	NA		
NOMINAL LOGGING SPEED	100 F/MN		
MAX. RECORDED TEMP.	244 DEGF		
REFERENCE LOG	NA		
REFERENCE LOG DATE	NA		
EQUIP. NO.	LOCATION	HL-6685	GRAND JCT.
RECORDED BY	SPENCER		
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	0 FT	8503 FT

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
4.5 IN	11.6 LB/F		0 FT	8503 FT

REMARKS
RUN 1 TRIP 1: THIS IS THE FIRST LOGGING RUN ON THIS WELL THE LOG HAS BEEN ZEROED AT KB HEIGHT AND NOT SHIFTED DURING THE LOGGING WELL HEAD PRESSURE = 0 PSI BHT = 245 DEGF SJ = 6725' - 6746' SJ = 7581' - 7603' THANKS FOR CHOOSING BAKER HUGHES WIRELINE...THE BEST CHOICE!!! CREW: COATE / OLSON

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	RAL	1426XA	10404539	CENTRALIZED
1	1	GR / CCL	1355XA	11871507	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: 8

Plotted: Thu Jan 21 12:44:08 2016

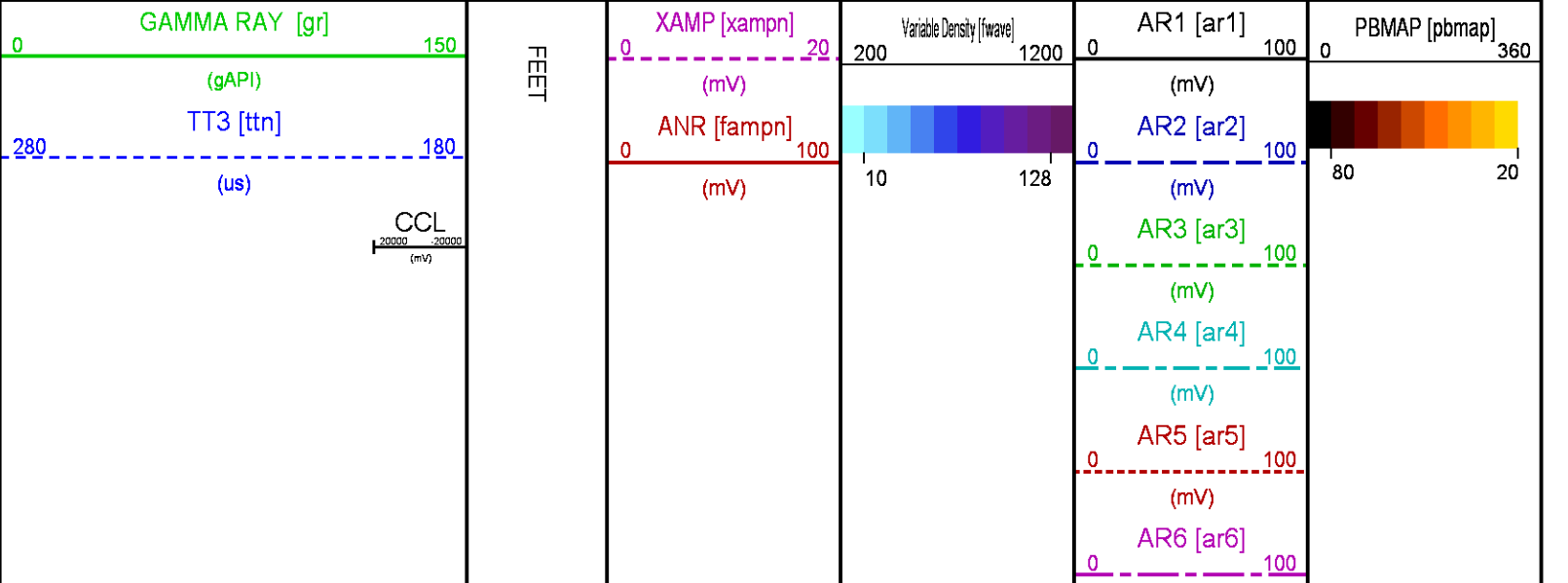
PARAMETER AND FILTER SUMMARY REPORT					
FILE: /dat1a/CH101513/n012g02.prm LOGGING MODE: DEPTH DIRECTION: UP TOP DEPTH: 15.250 ft BOTTOM DEPTH: 8410.756 ft					
SYMMETRIC FILTER					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR	FILTER ()	medium (1)		TOP	BOTTOM
AMPLITUDE	FILTER ()	medium (1)		"	"
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	"	"
	AMP WINDOW LENGTH	30	us	"	"
TRAVEL TIME WINDOW (NEAR)	TT WINDOW START (ttn*)	175	us	"	"
	TT WINDOW LENGTH	500	us	"	"
	FIRST BRK THRESHOLD (ttn*)	2	mV	"	"
RAL CASING PARAMETERS	PPT NEAR	200.391	us	"	"
RAL TOOL DELAY	TOOL DELAY (str1*)	-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	132	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	81	mV	TOP	BOTTOM
	FREE AMP REC 2	81	mV	"	"
	FREE AMP REC 3	81	mV	"	"

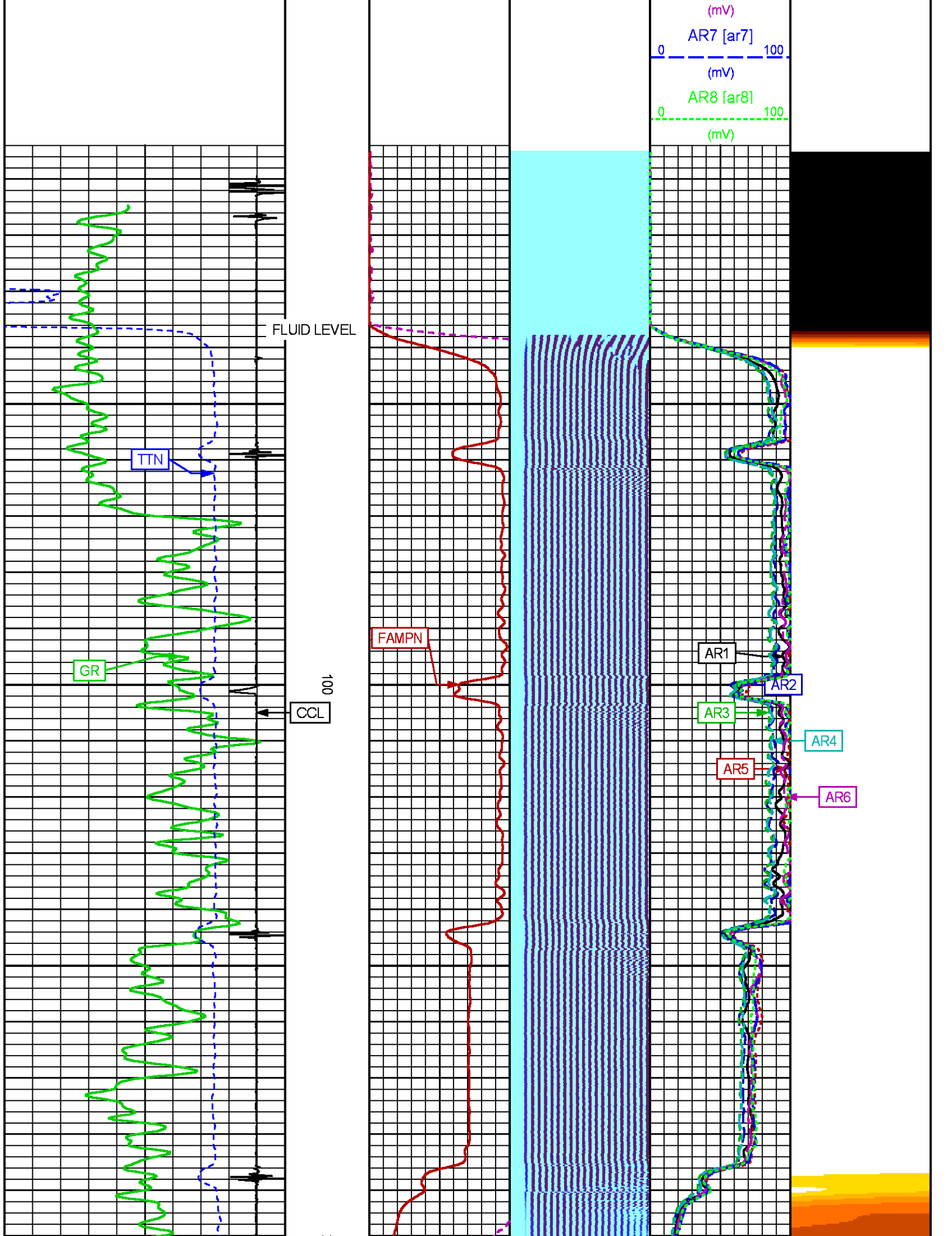
	FREE AMP REC 4	81	mV	"	"
	FREE AMP REC 5	81	mV	"	"
	FREE AMP REC 6	81	mV	"	"
	FREE AMP REC 7	81	mV	"	"
	FREE AMP REC 8	81	mV	"	"
RAL FULL BOND AMPLITUDE	FULL BOND AMP REC 1	2	mV	"	"
	FULL BOND AMP REC 2	2	mV	"	"
	FULL BOND AMP REC 3	2	mV	"	"
	FULL BOND AMP REC 4	2	mV	"	"
	FULL BOND AMP REC 5	2	mV	"	"
	FULL BOND AMP REC 6	2	mV	"	"
	FULL BOND AMP REC 7	2	mV	"	"
	FULL BOND AMP REC 8	2	mV	"	"

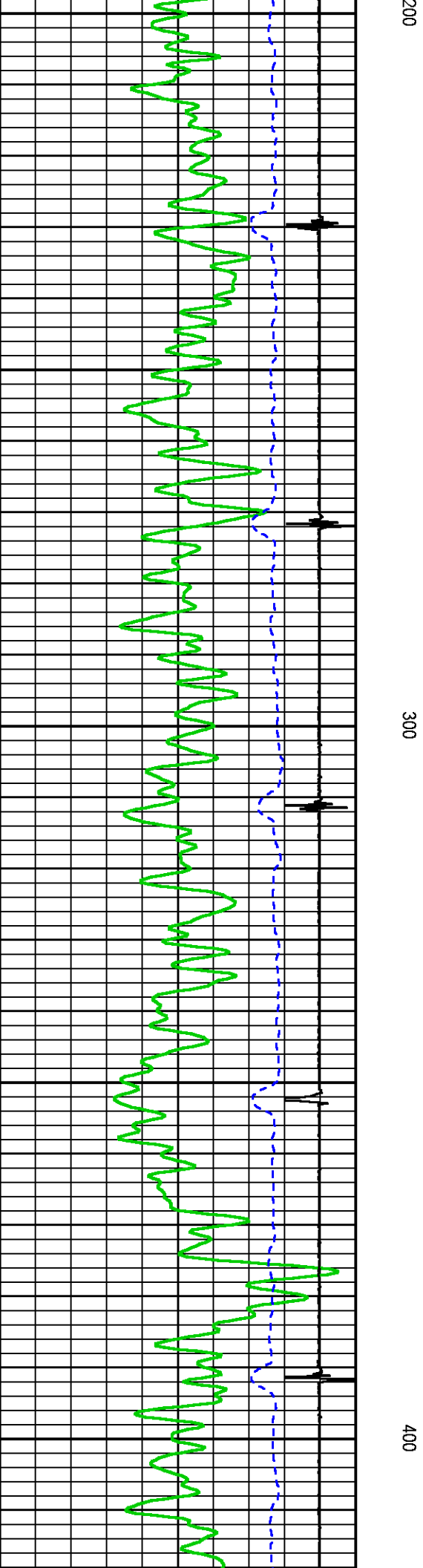
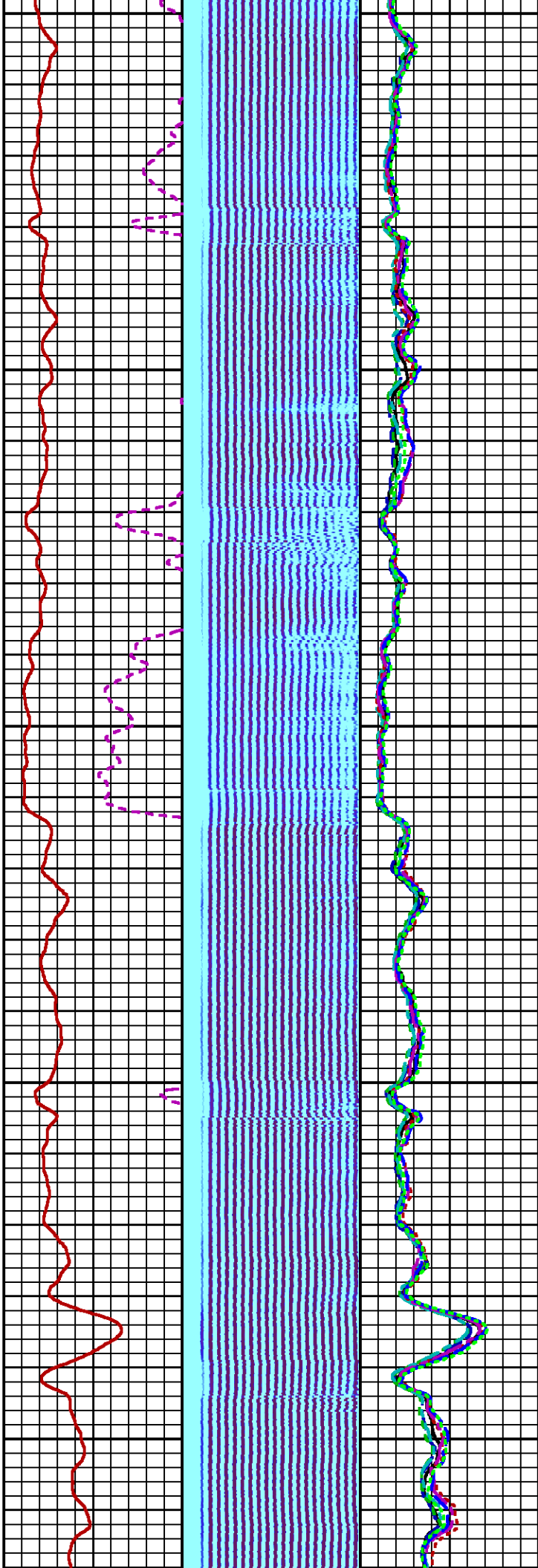
CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:AR1	Jan 21 08:13:36 2016	FIXED GATE AMPLITUDE T-R1
F1:AR2	Jan 21 08:13:36 2016	FIXED GATE AMPLITUDE T-R2
F1:AR3	Jan 21 08:13:36 2016	FIXED GATE AMPLITUDE T-R3
F1:AR4	Jan 21 08:13:36 2016	FIXED GATE AMPLITUDE T-R4
F1:AR5	Jan 21 08:13:36 2016	FIXED GATE AMPLITUDE T-R5
F1:AR6	Jan 21 08:13:36 2016	FIXED GATE AMPLITUDE T-R6
F1:AR7	Jan 21 08:13:36 2016	FIXED GATE AMPLITUDE T-R7
F1:AR8	Jan 21 08:13:36 2016	FIXED GATE AMPLITUDE T-R8
F1:CCL	Jan 21 08:13:36 2016	CASING COLLAR LOCATOR
F1:FAMPN	Jan 21 08:13:36 2016	FIXED GATE AMPLITUDE NEAR RECEIVER
F1:FWAVE	Jan 21 08:13:36 2016	FAR WAVE FORM
F1:GR	Jan 21 08:13:36 2016	GAMMA RAY
F1:PBMAP	Jan 21 08:13:36 2016	PERCENT BOND CEMENT MAP
F1:TTN	Jan 21 08:13:36 2016	TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER
F1:XAMPN	Jan 21 08:13:36 2016	FIXED GATE AMPLITUDE NEAR RECEIVER TIMES FIVE

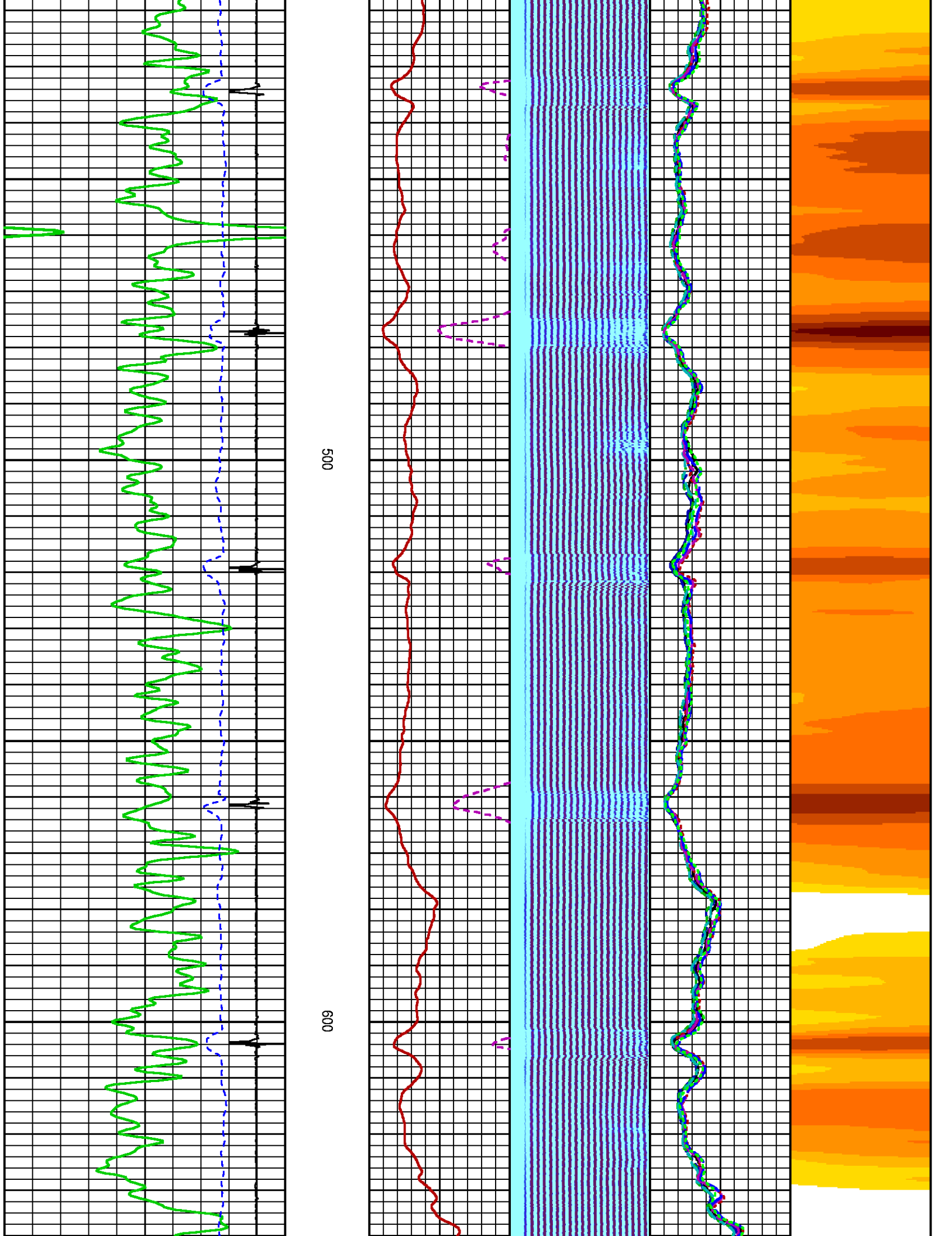
CURVE MEASURE POINT OFFSET					
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
AR1	11.25	AR5	11.25	CCL	5.75
AR2	11.25	AR6	11.25	FAMPN	11.25
AR3	11.25	AR7	11.25	GR	1.75
AR4	11.25	AR8	11.25	TTN	11.25
				XAMPN	11.25

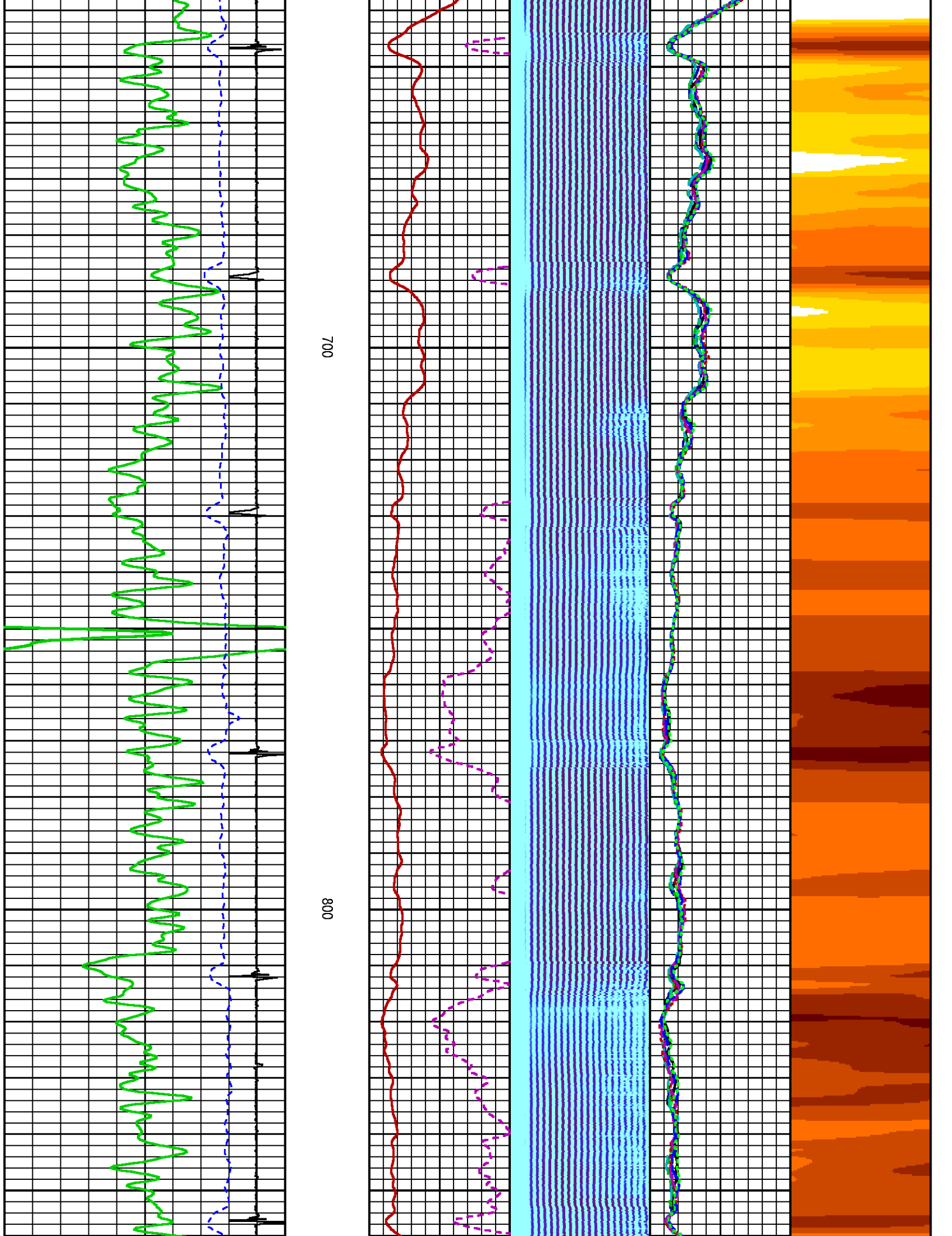
Presentation	: cas6685:/dat1a/CH101513/LARAMIE_CBL-MAIN.fvpdf [5"/100' Scale]
Plot Interval	: 5 - 8407.5 Feet
Data File 1	: F1 : cas6685:/dat1a/CH101513/n012g02.aff
Created On	: Jan 21 08:13:36 2016
Company	: LARAMIE ENERGY
Well	: PICEANCE FEDERAL 28-09E
Field	: VEGA
File Interval	: 4 - 8408.75 Feet
OCT	: n012g

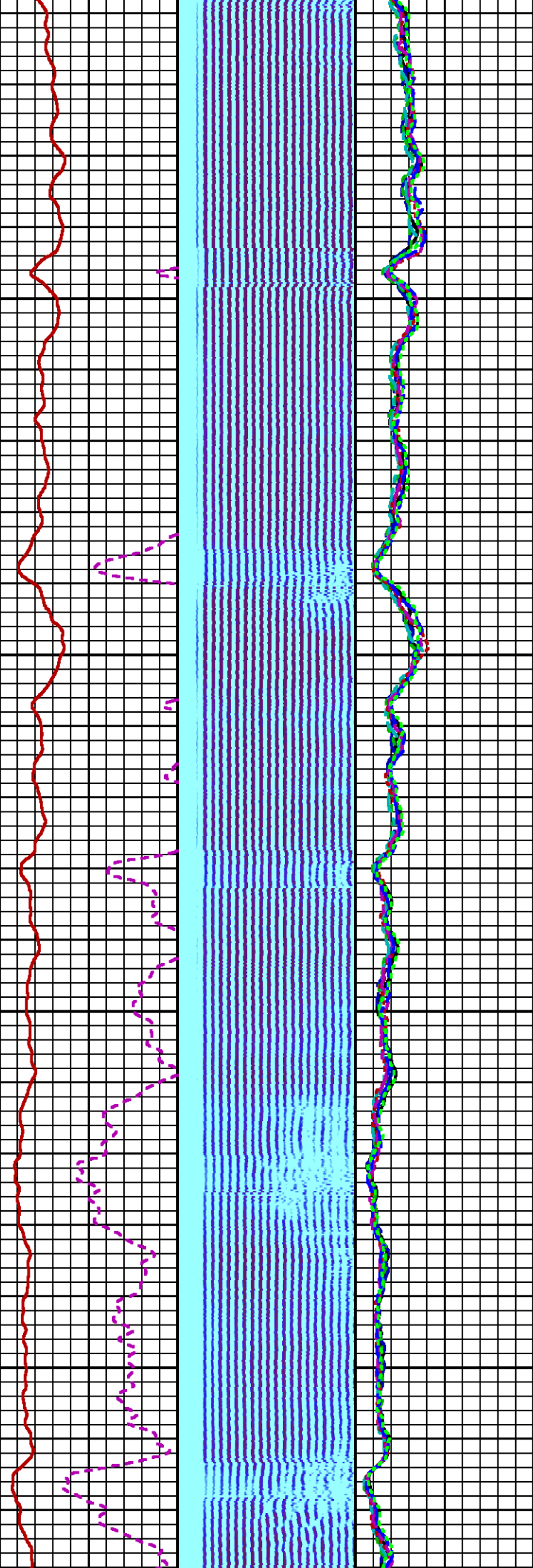
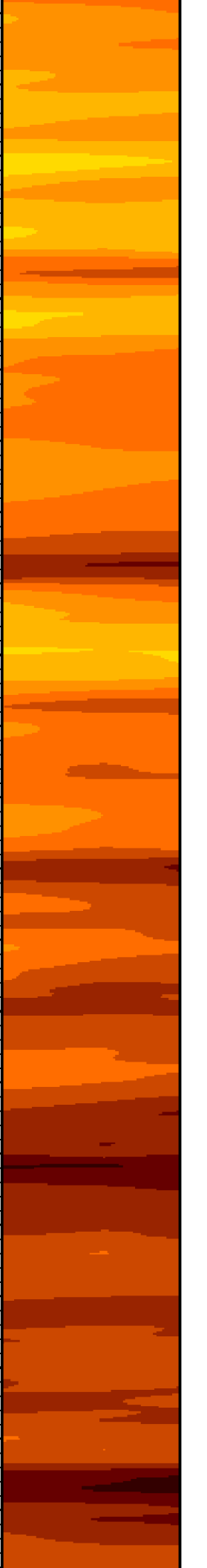






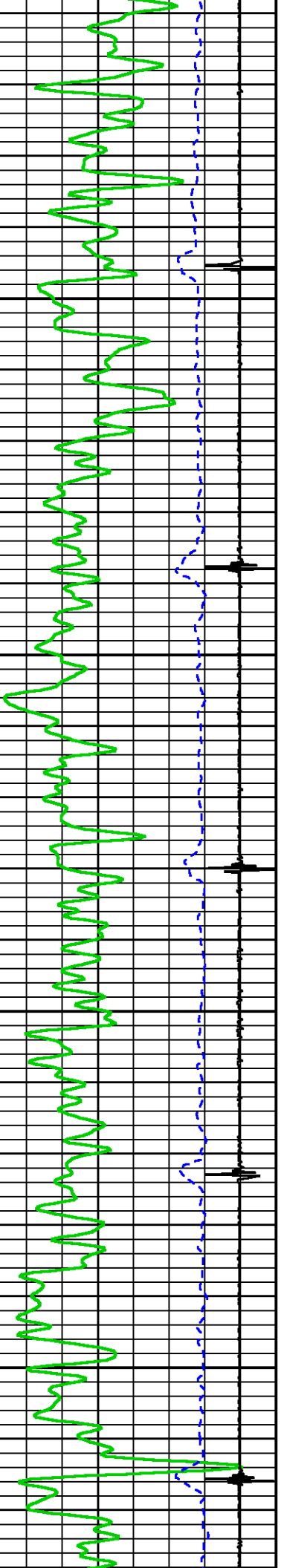


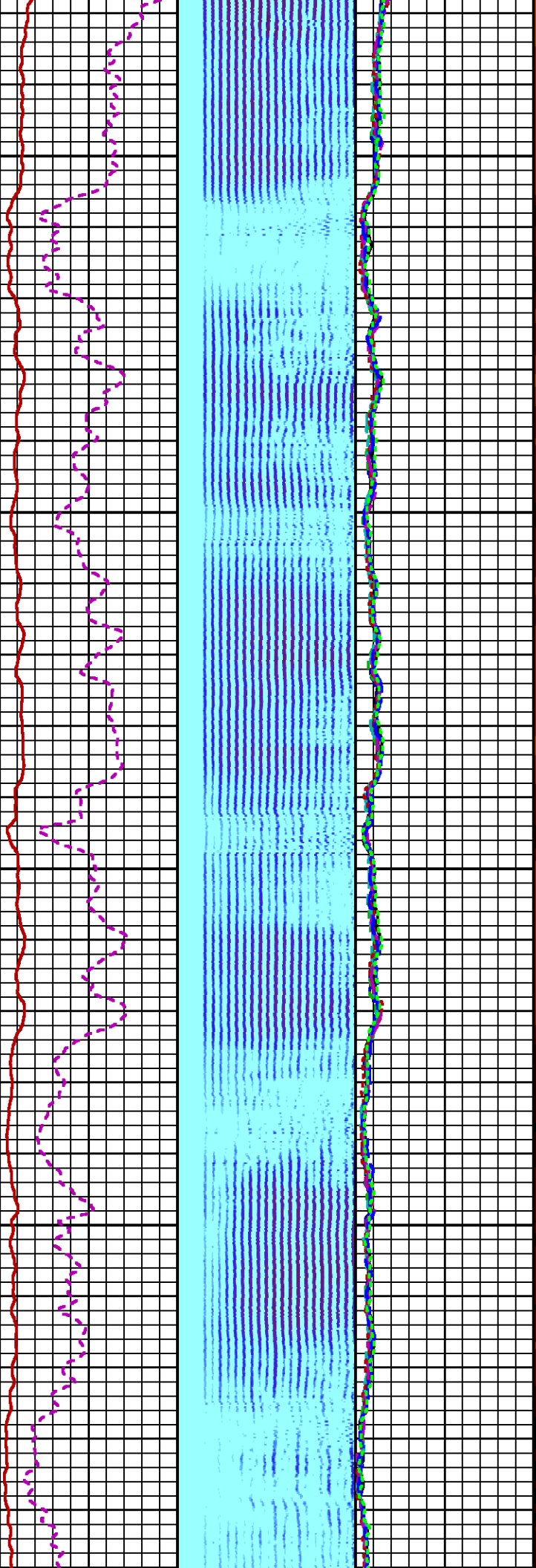




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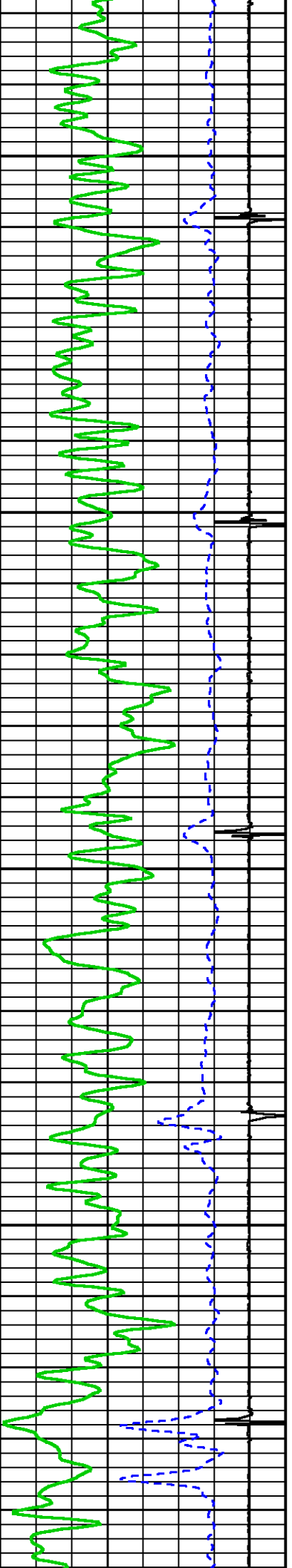
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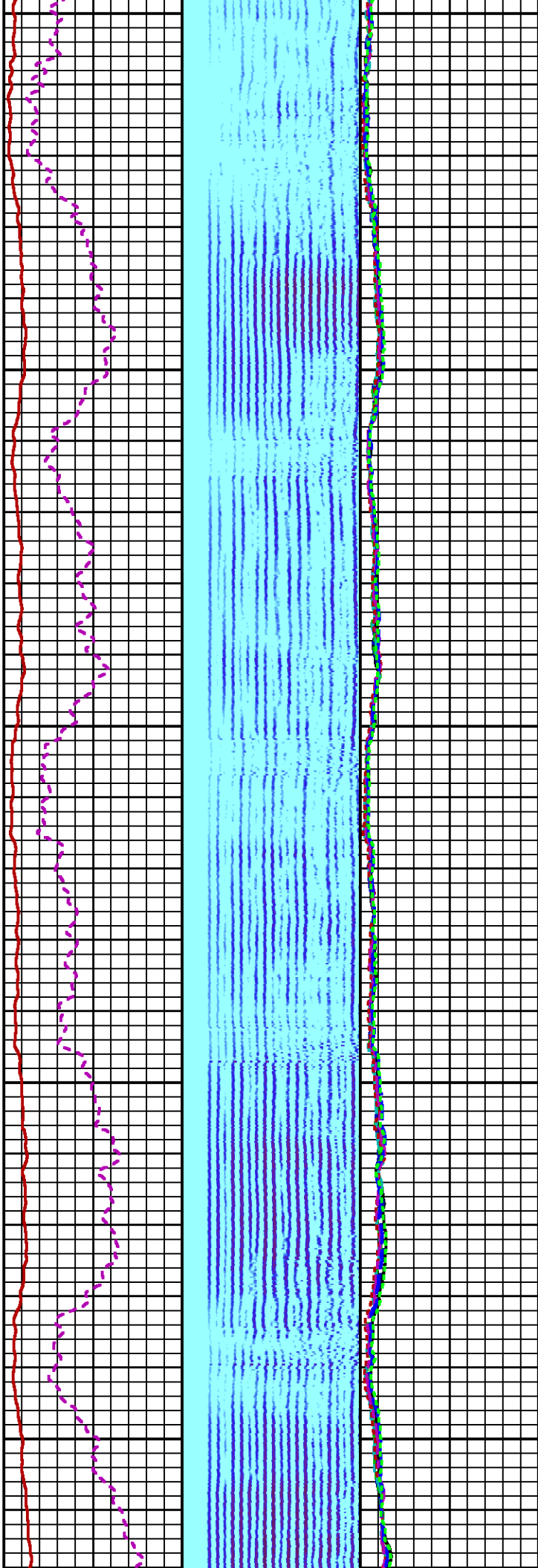




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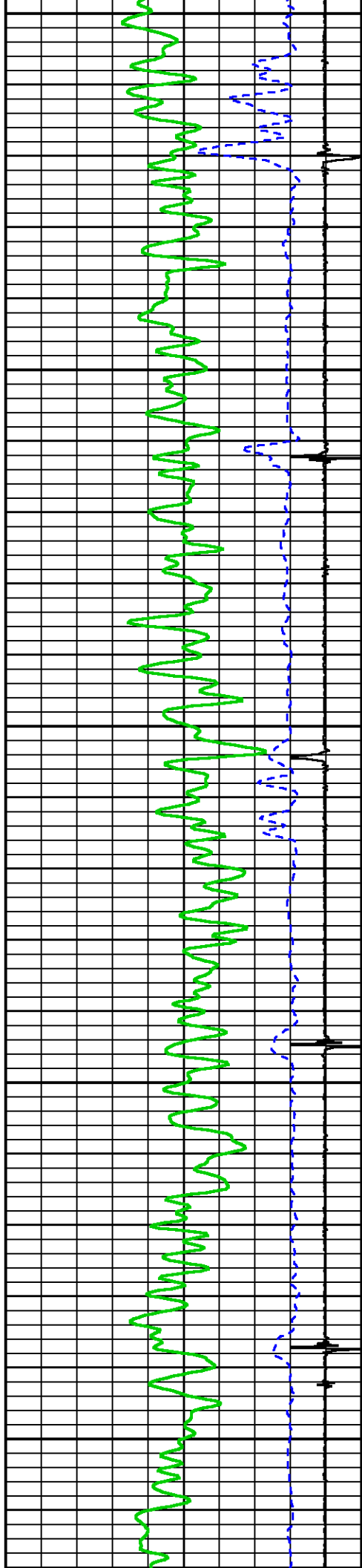


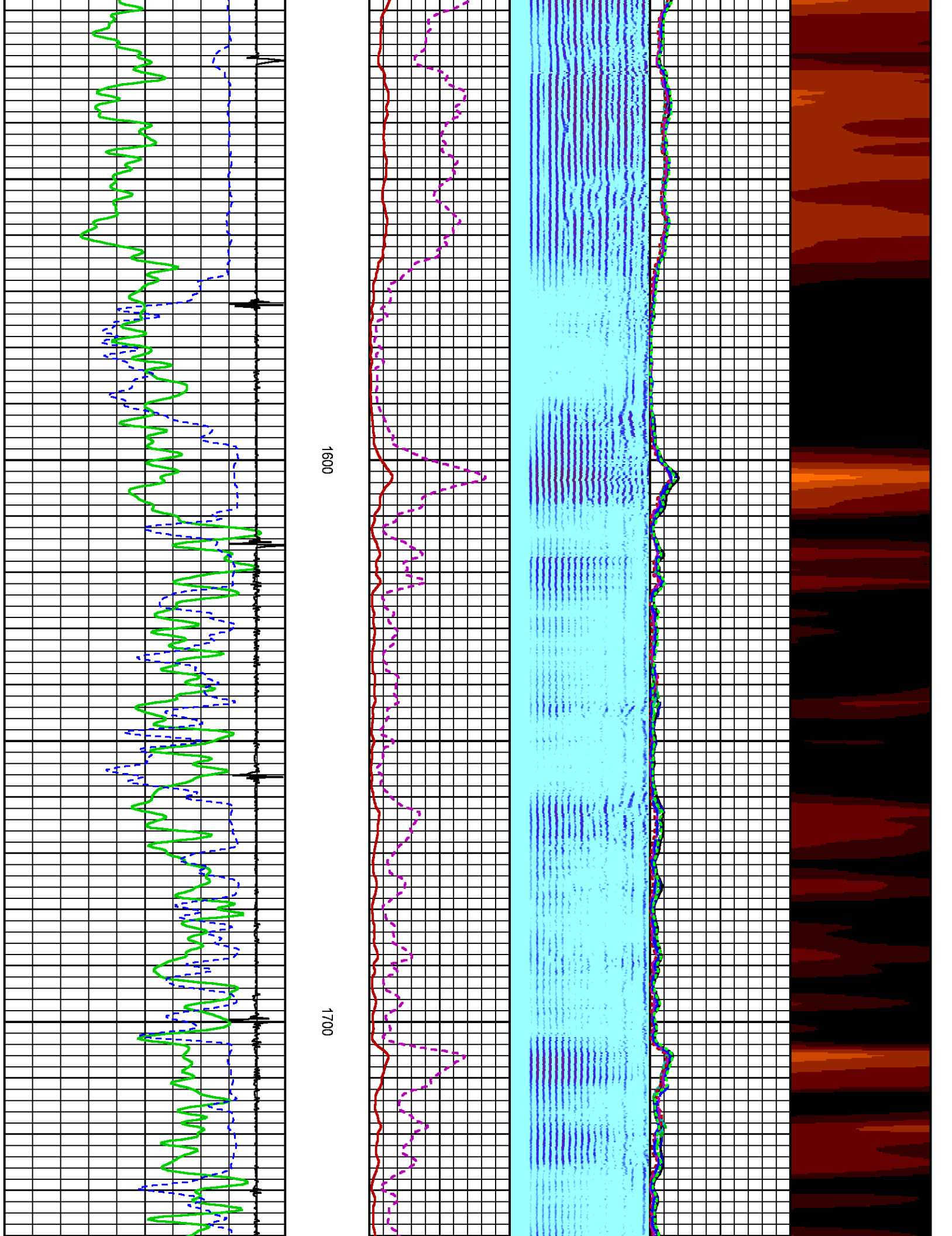


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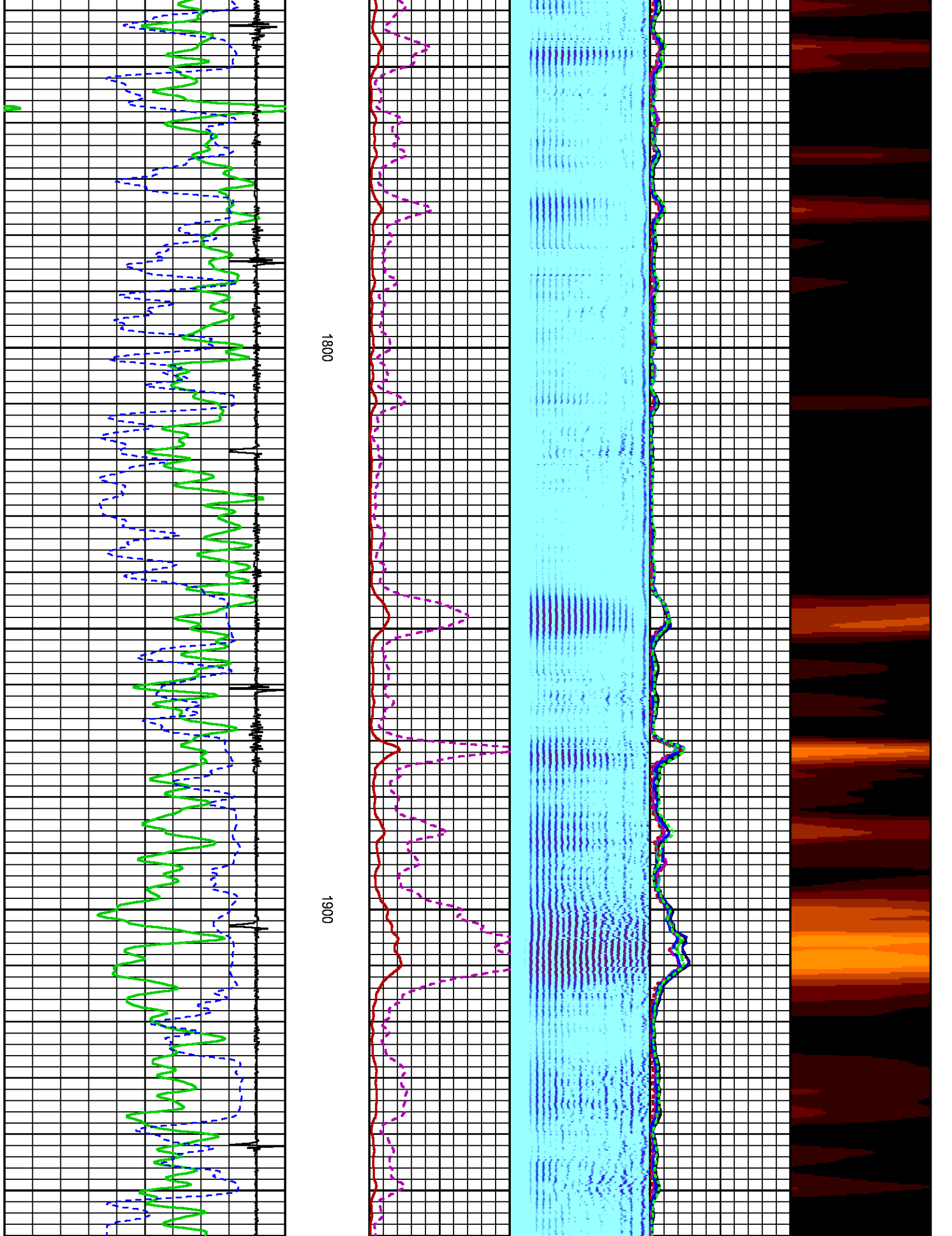
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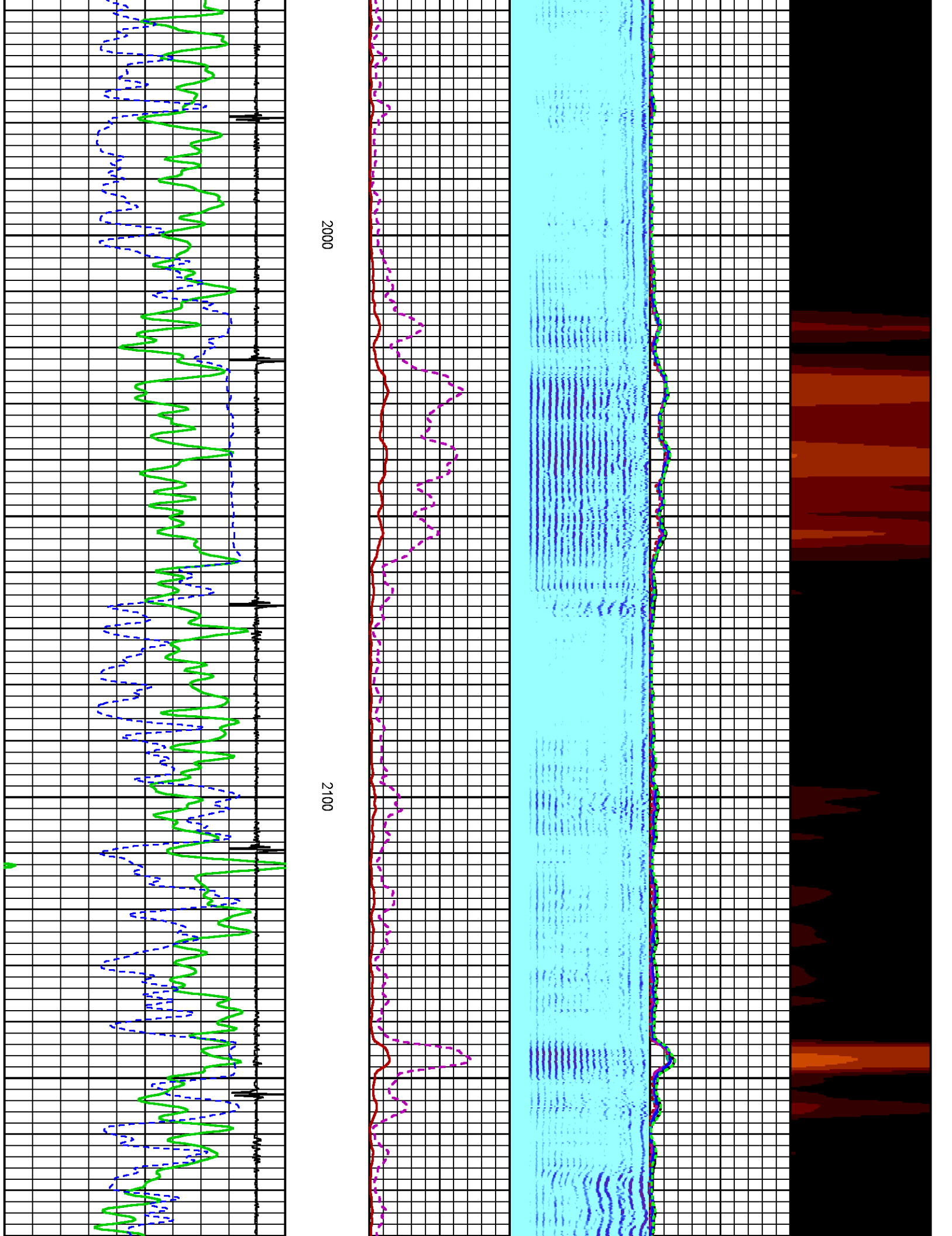


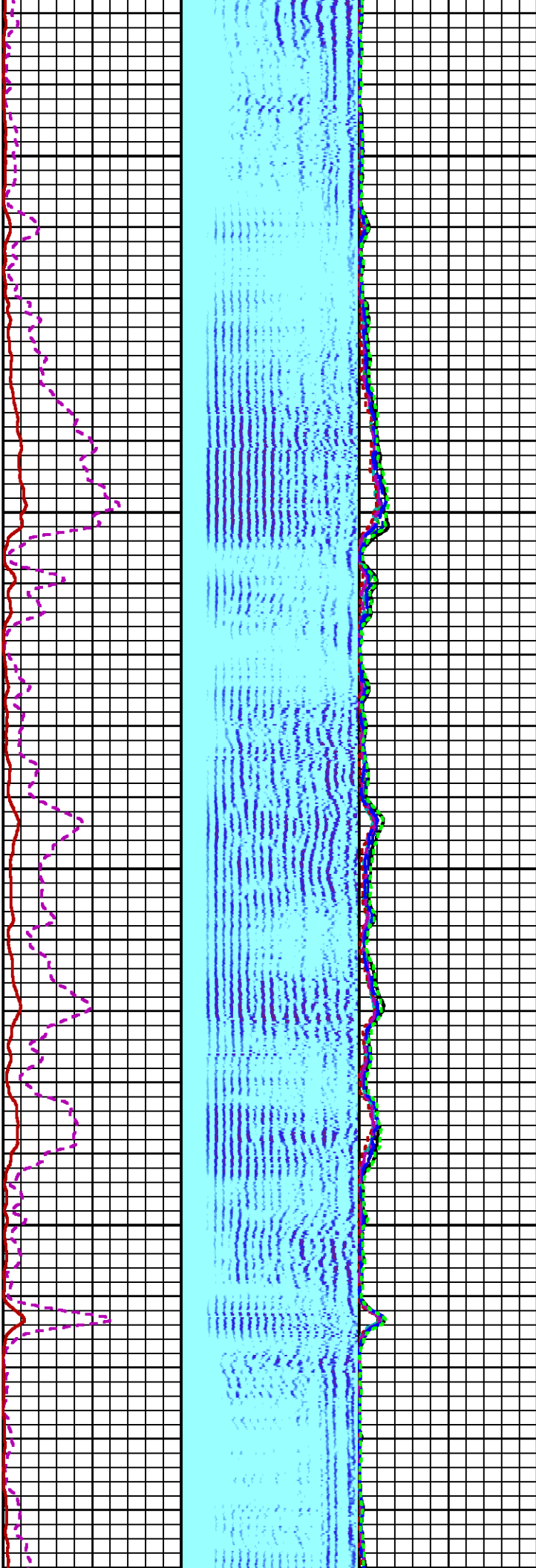
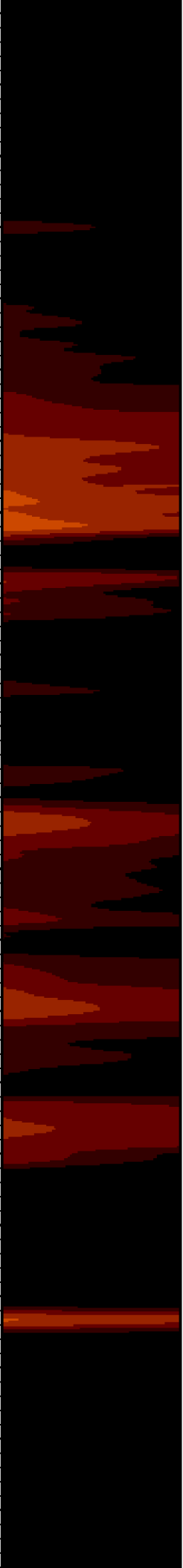


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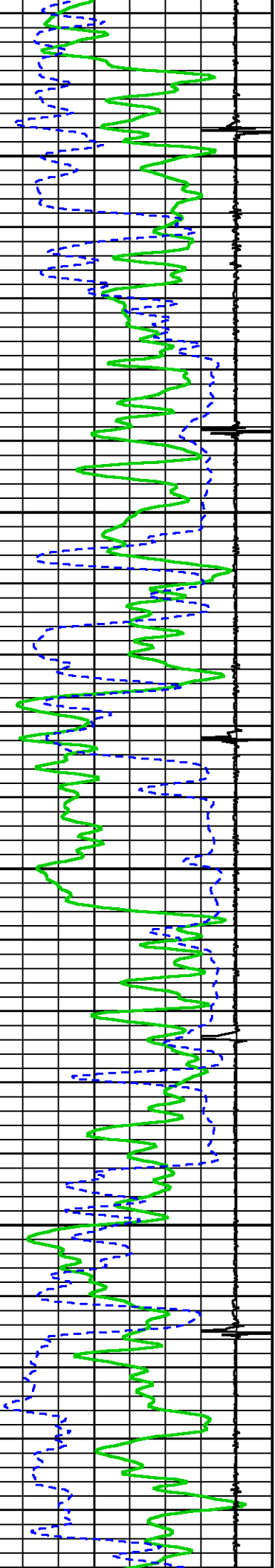


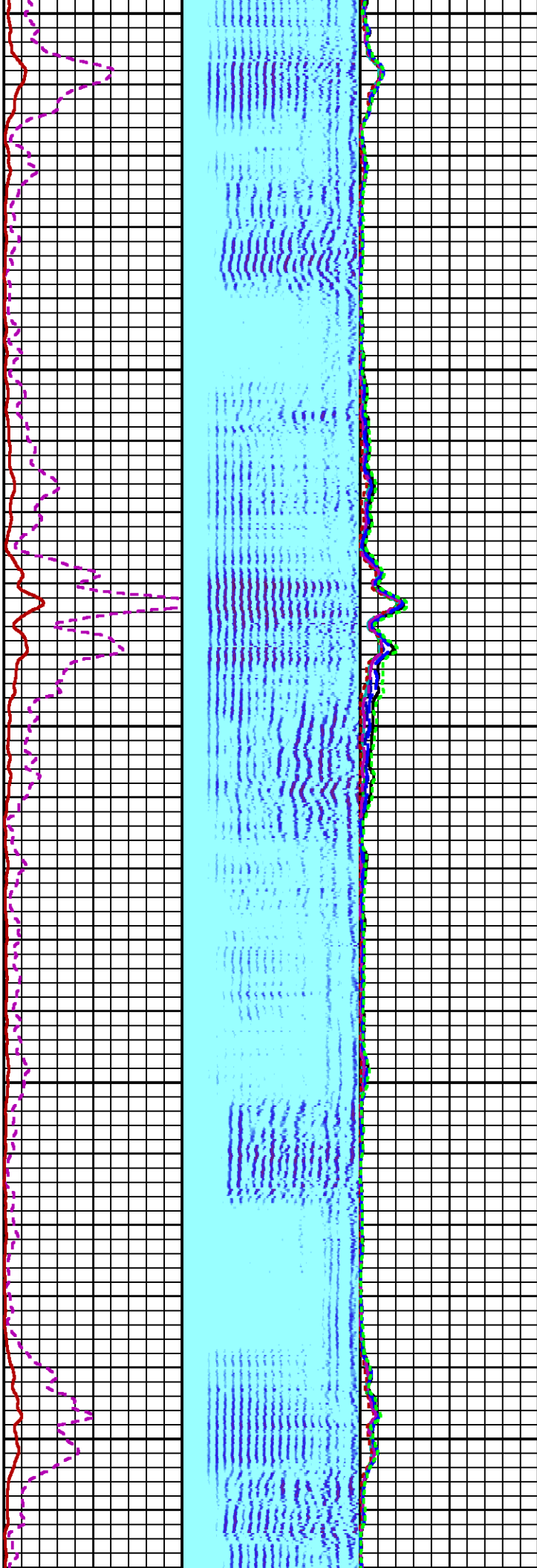
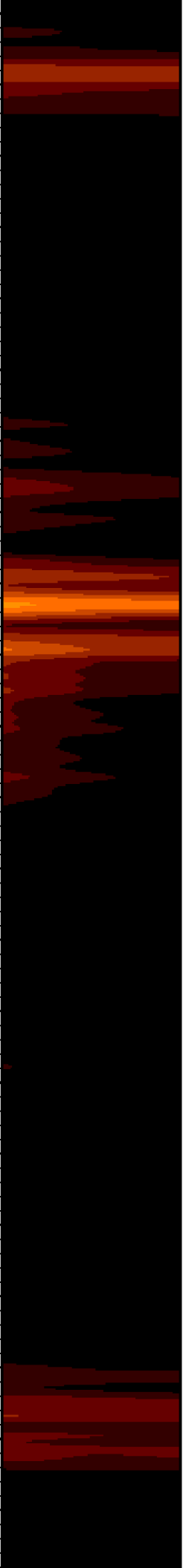




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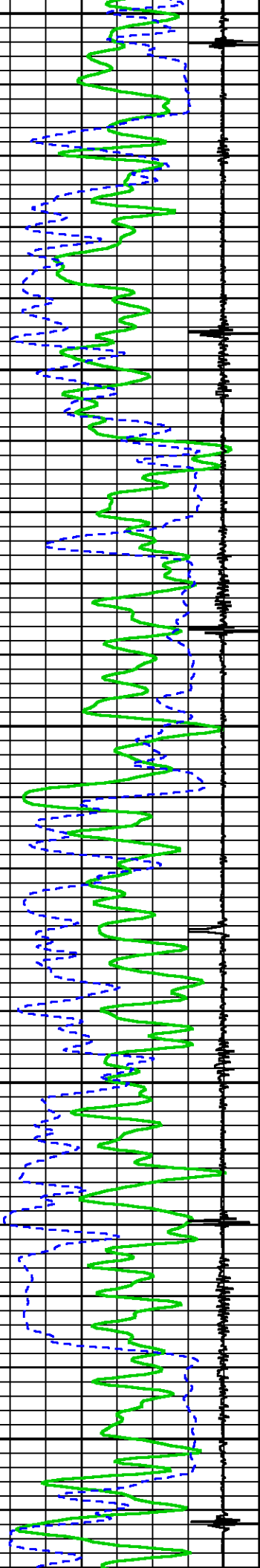


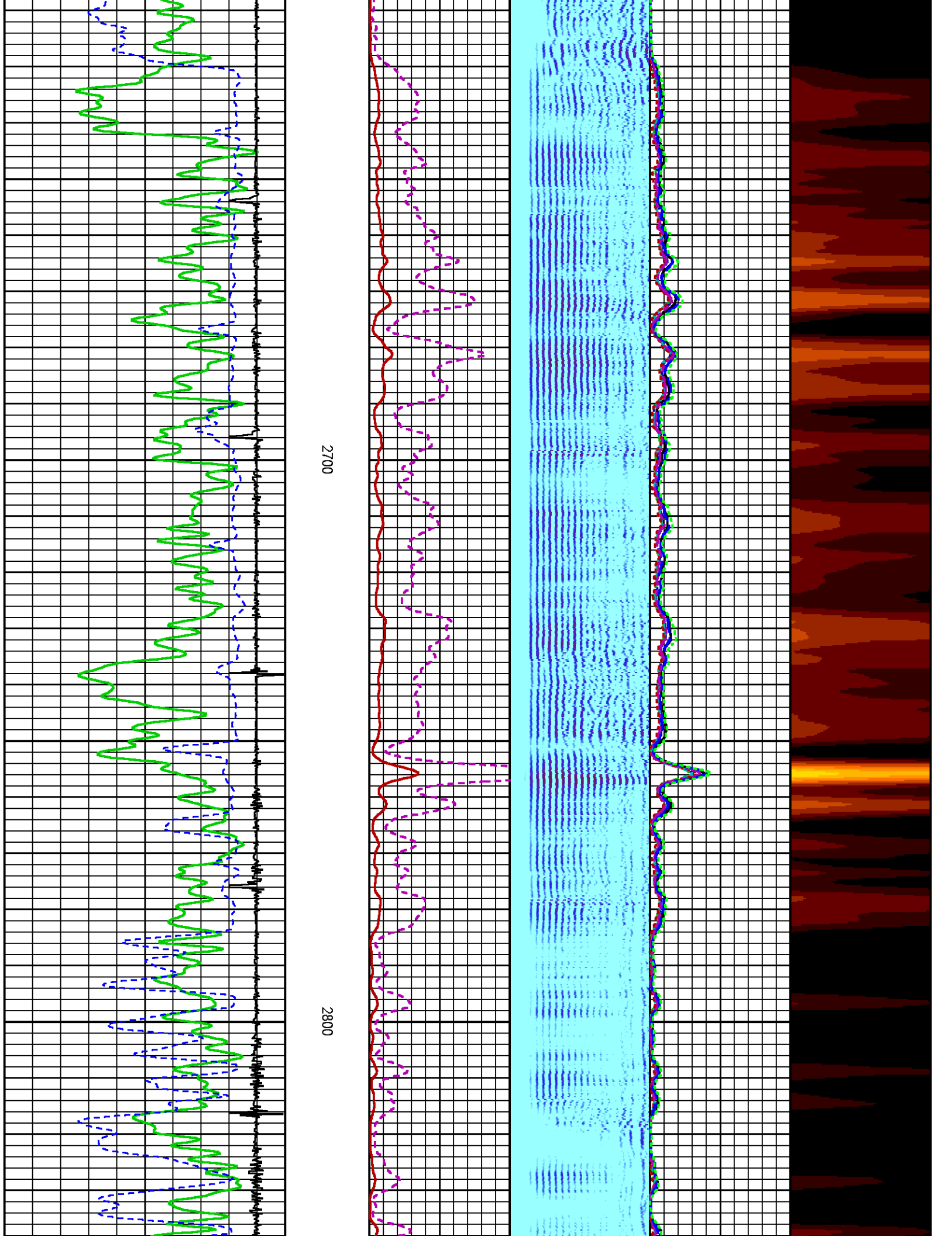


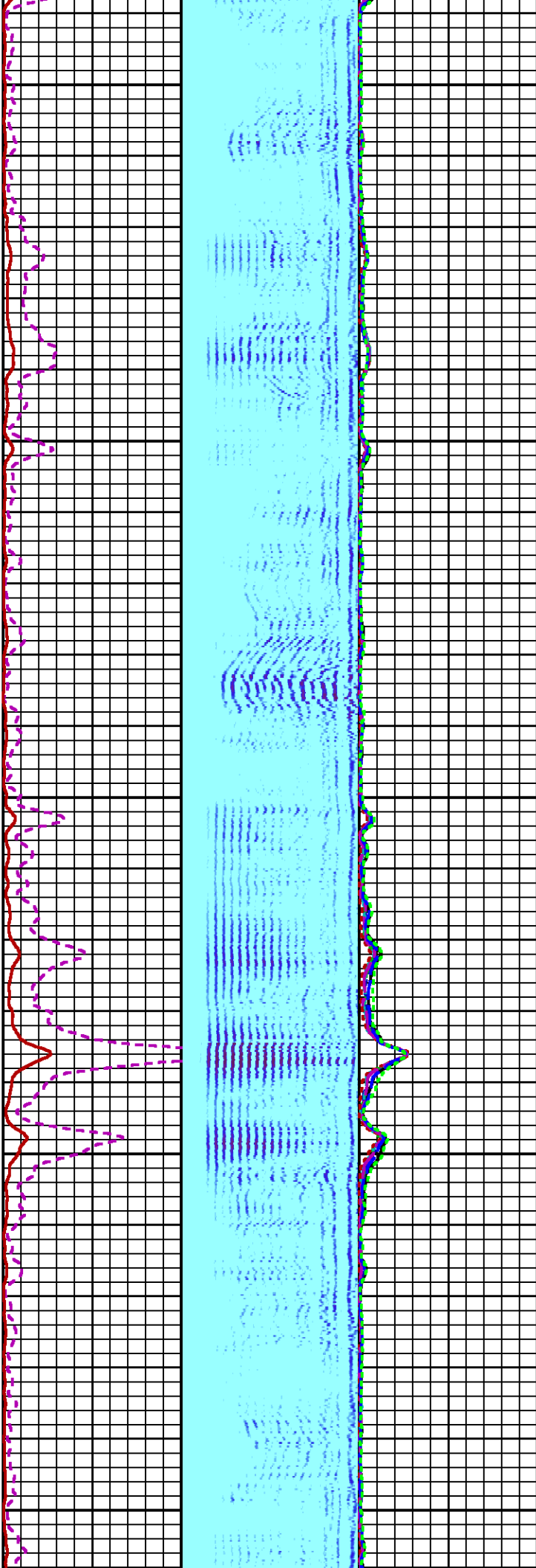
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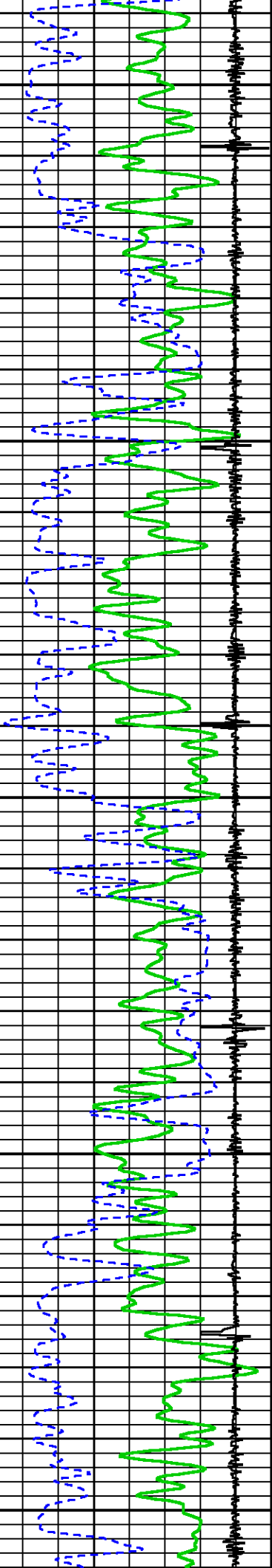


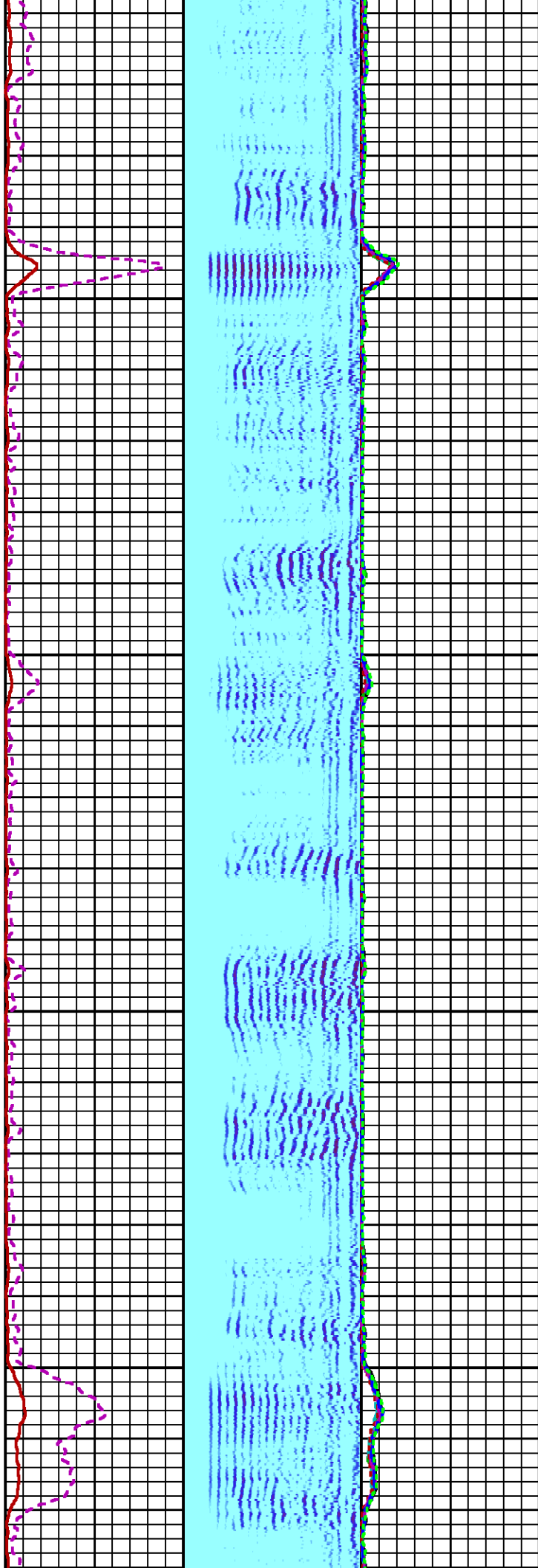




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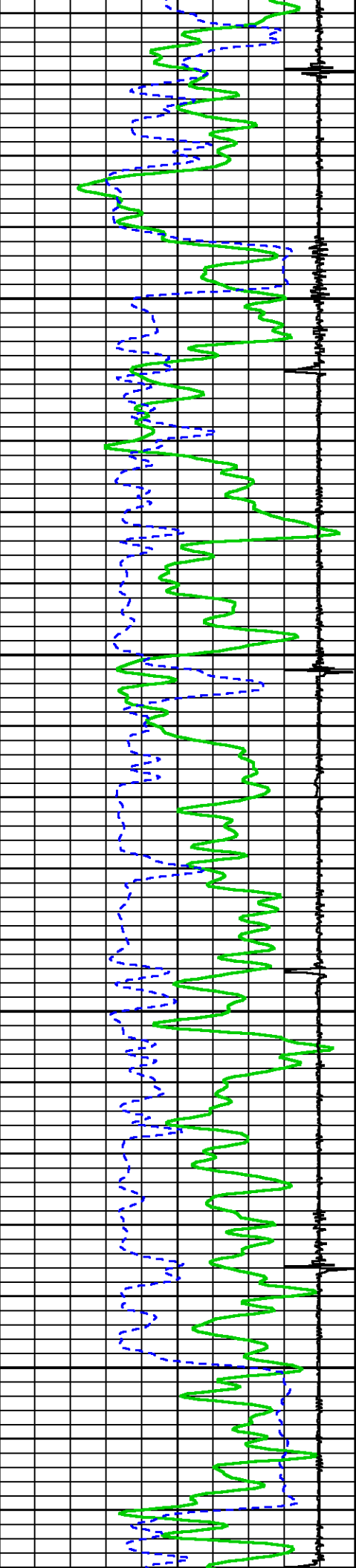
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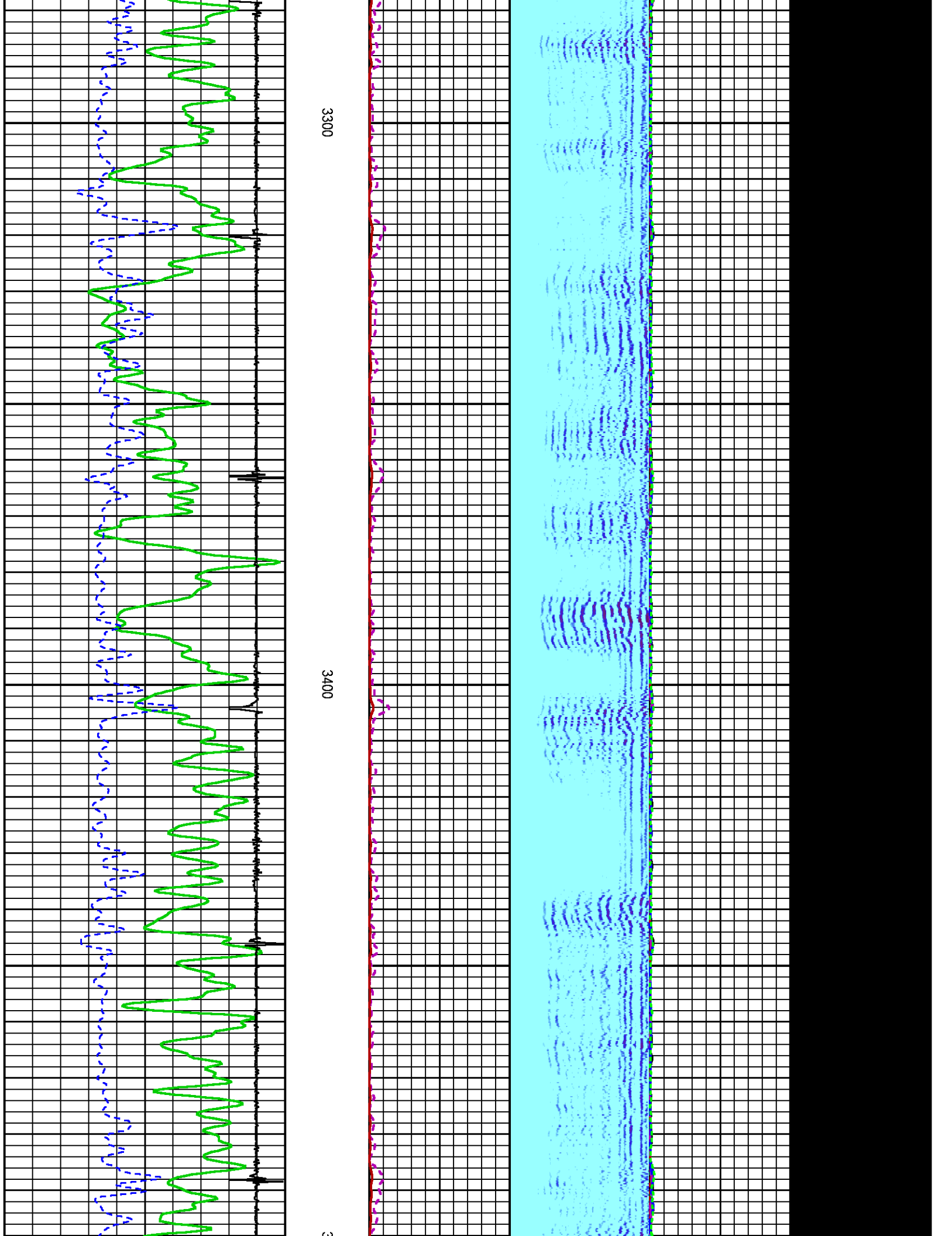


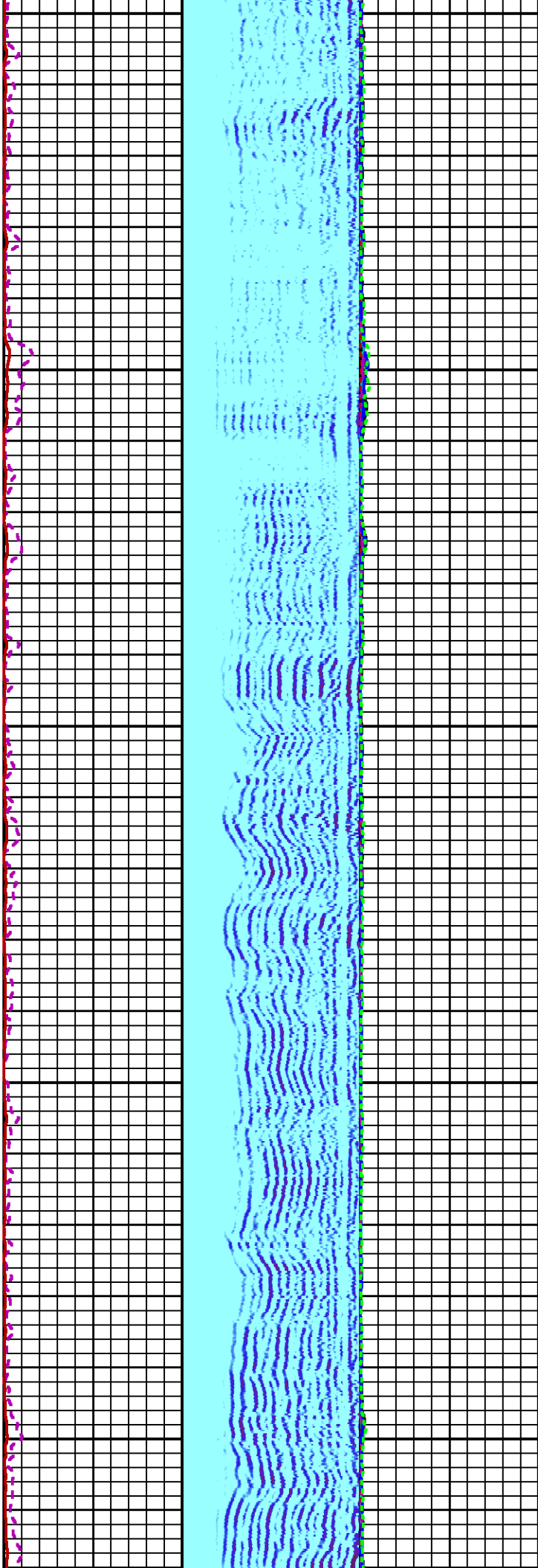


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3200



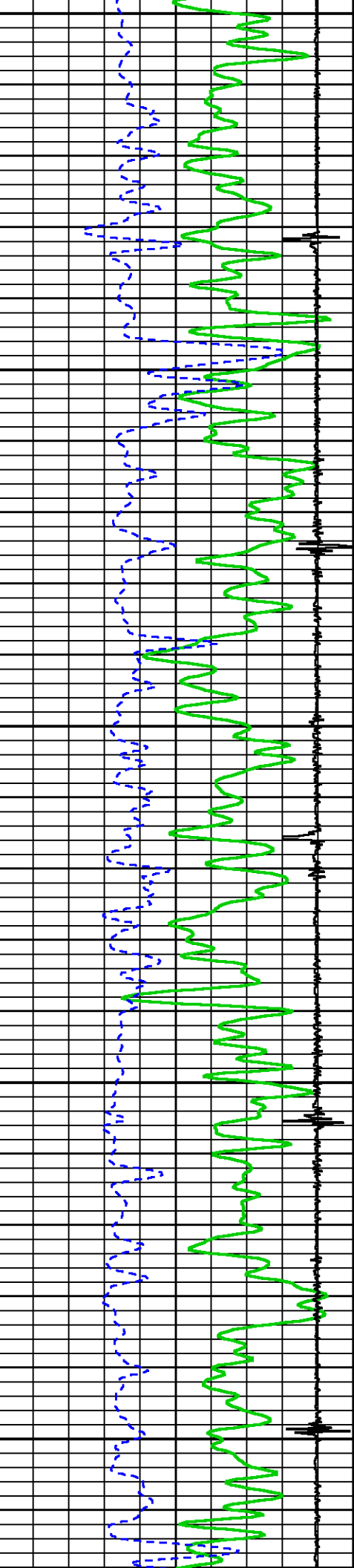


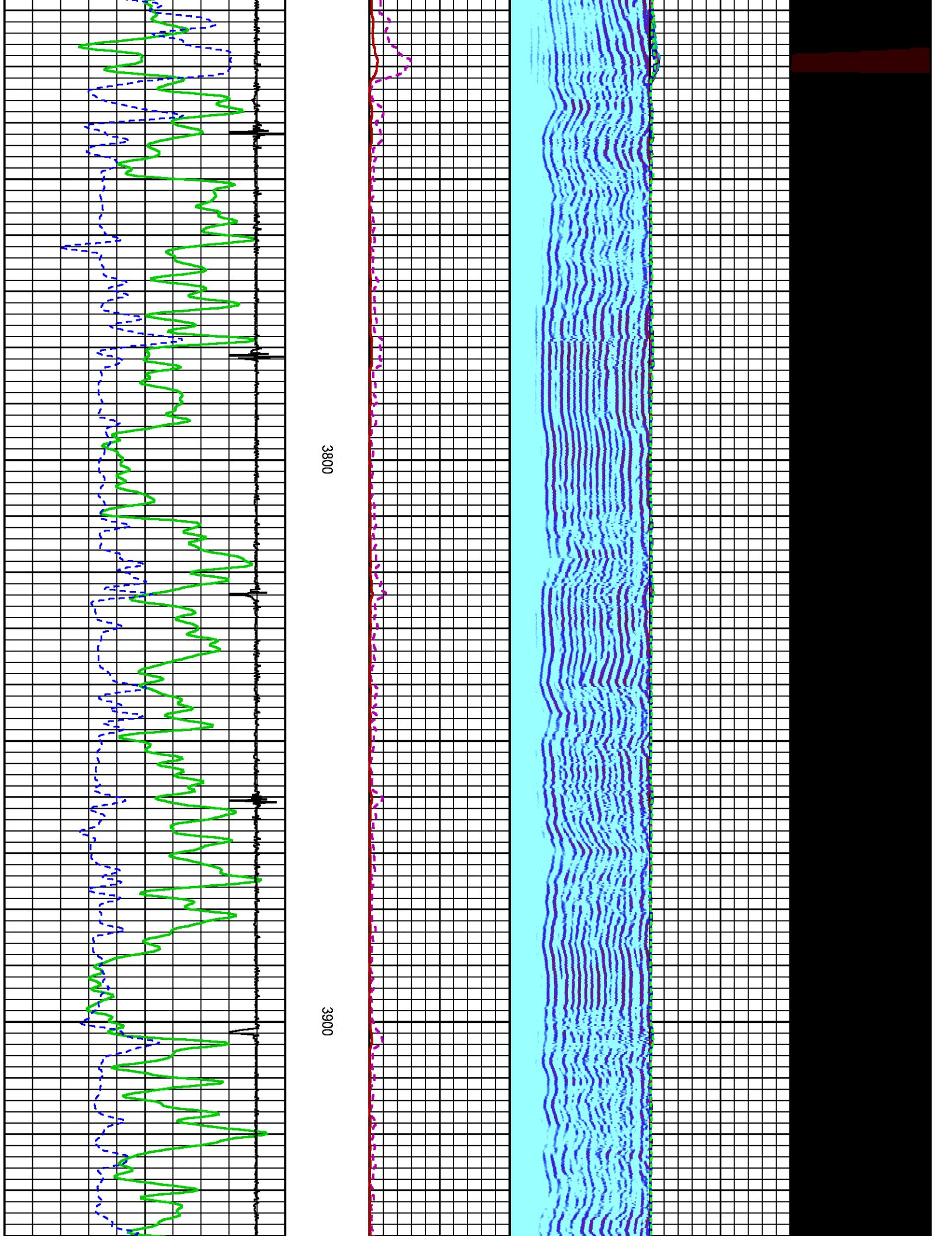


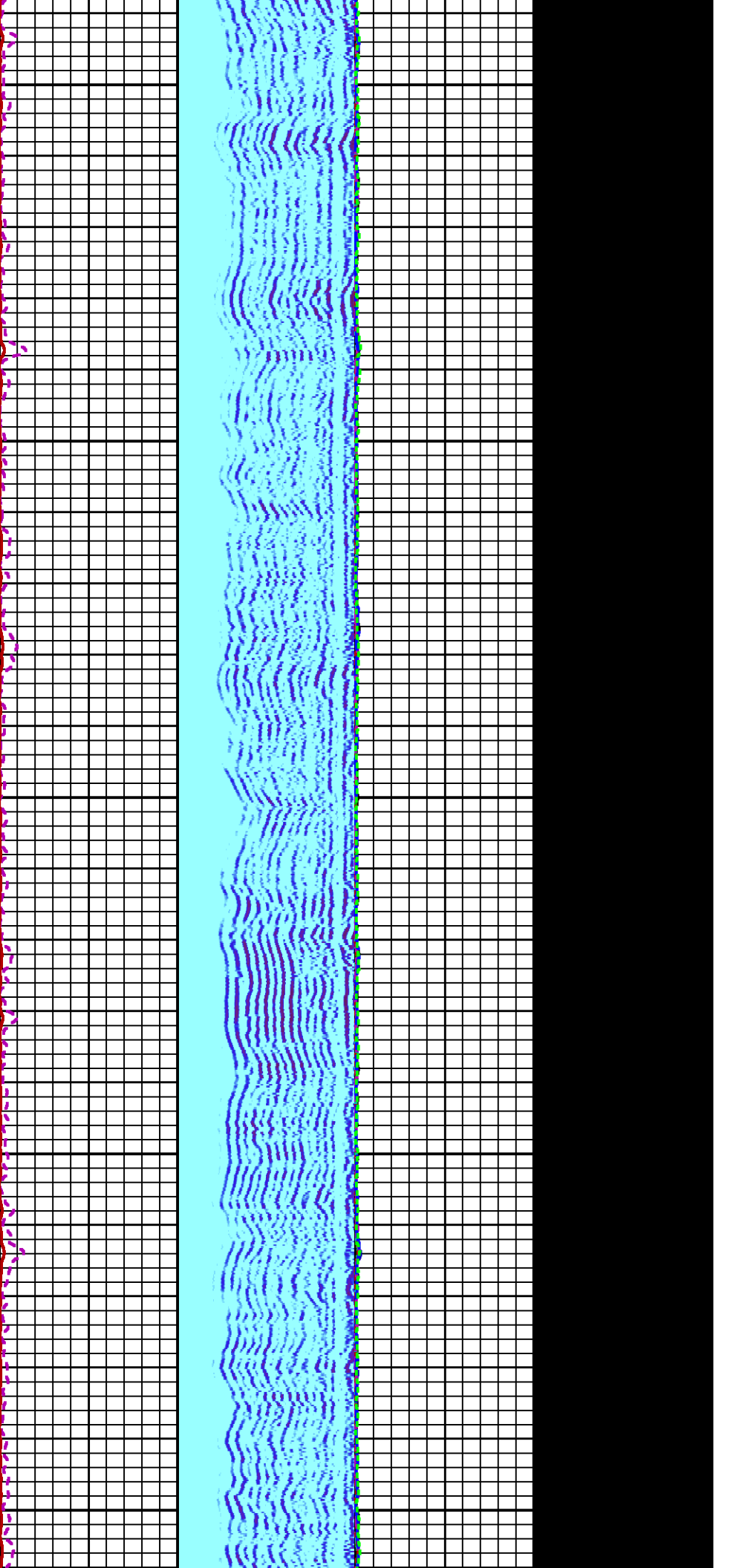
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3600

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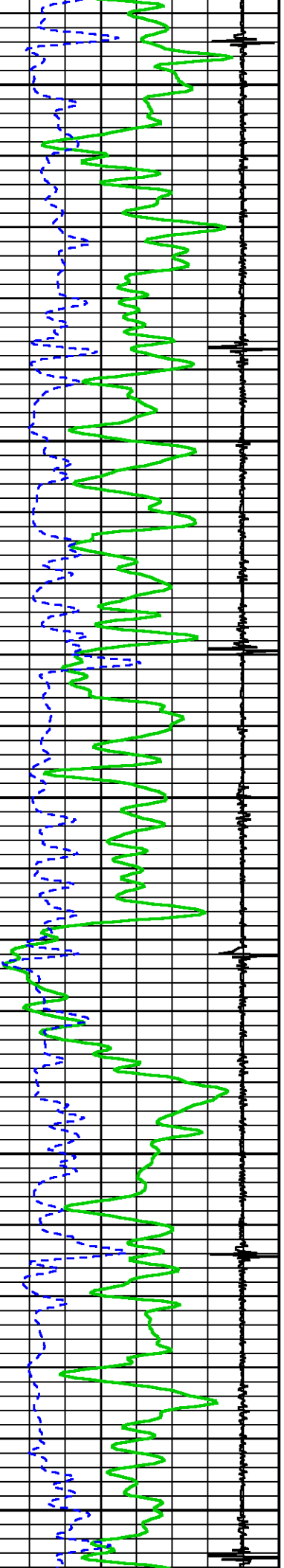


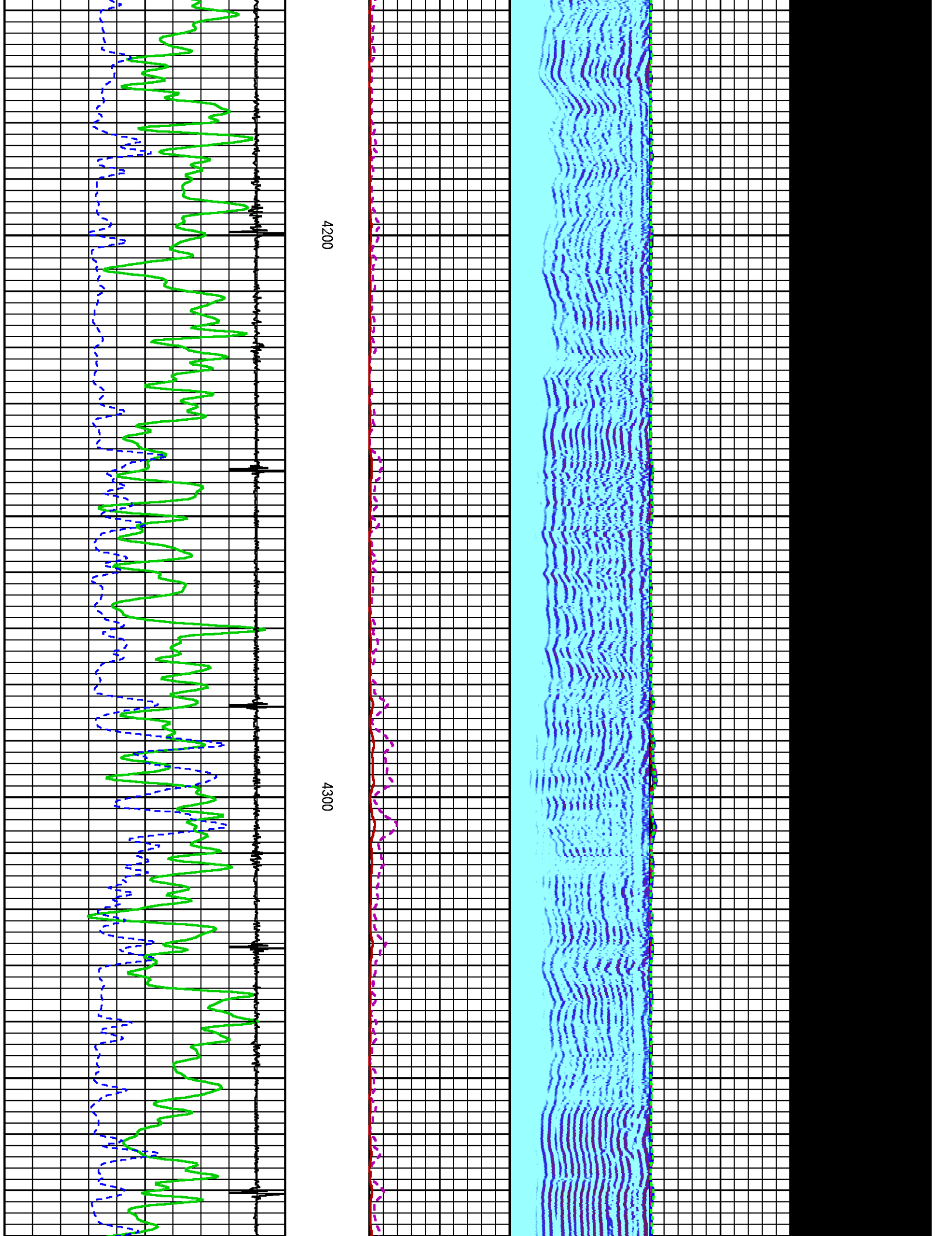


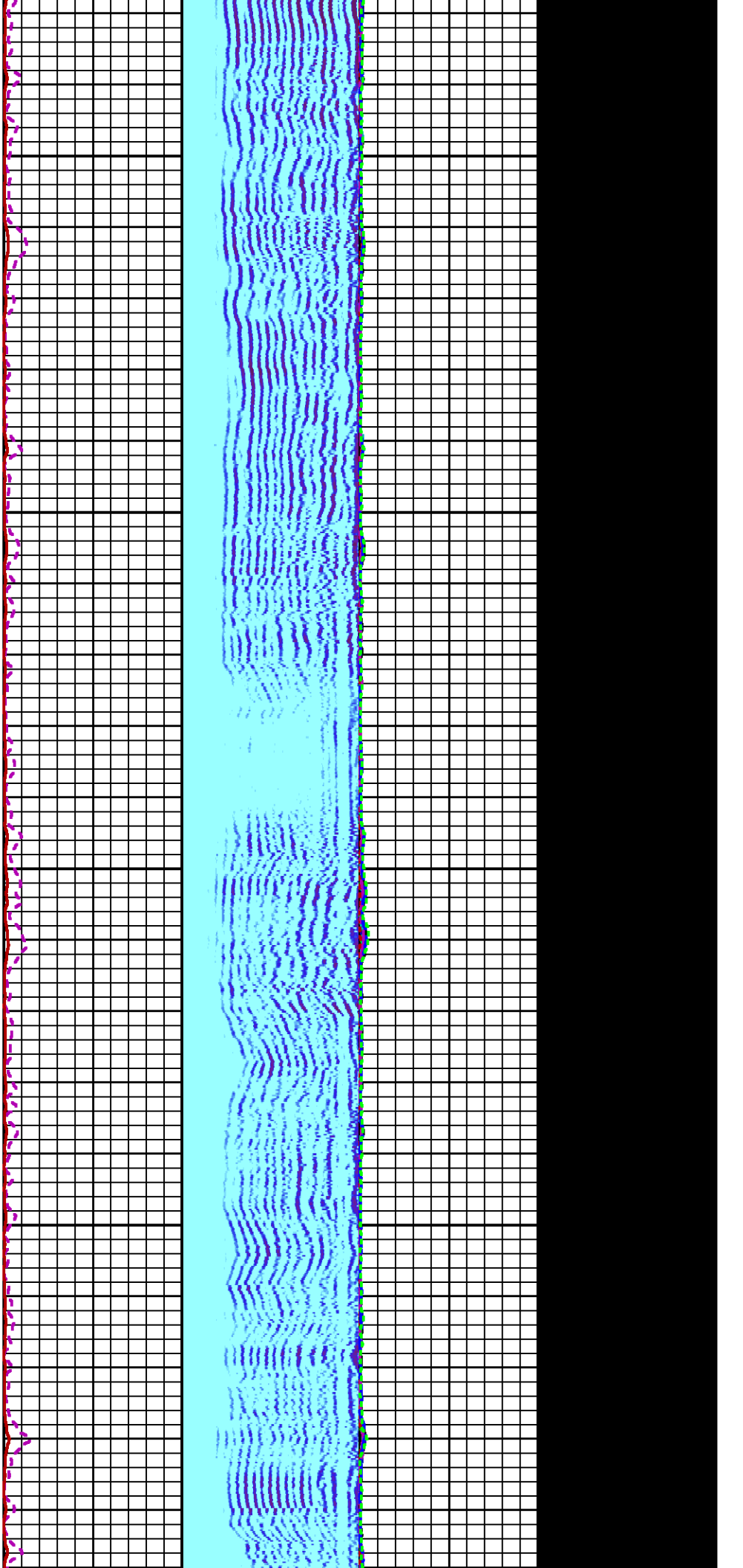


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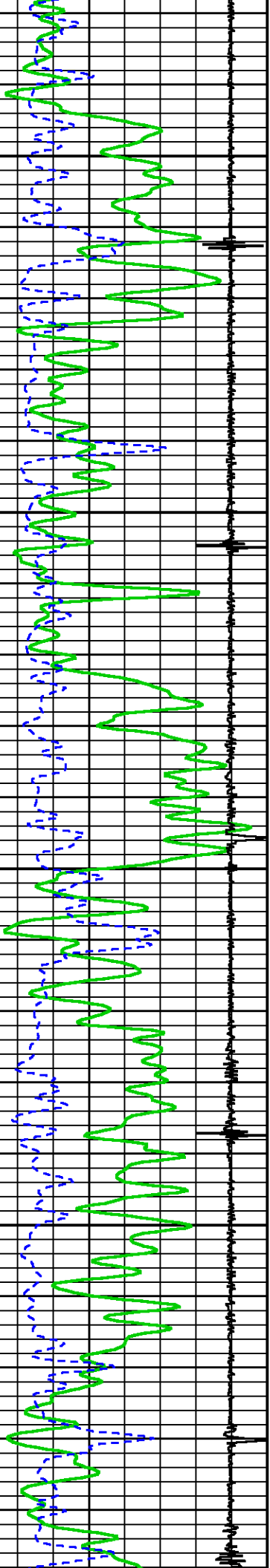


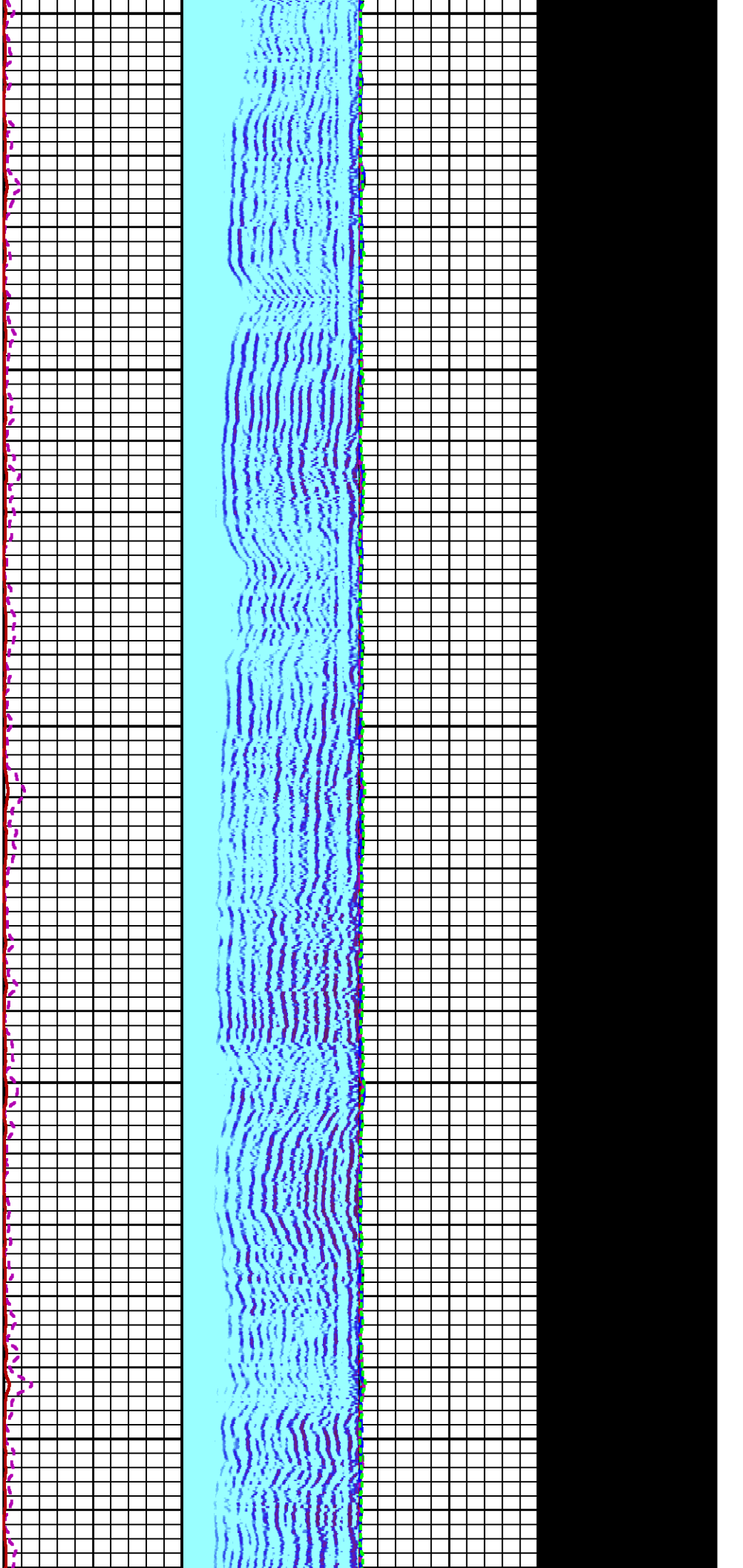




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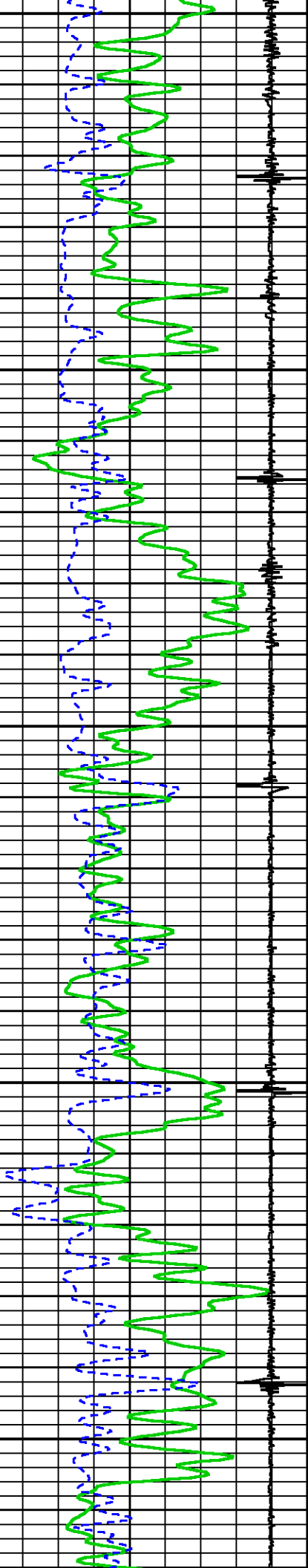


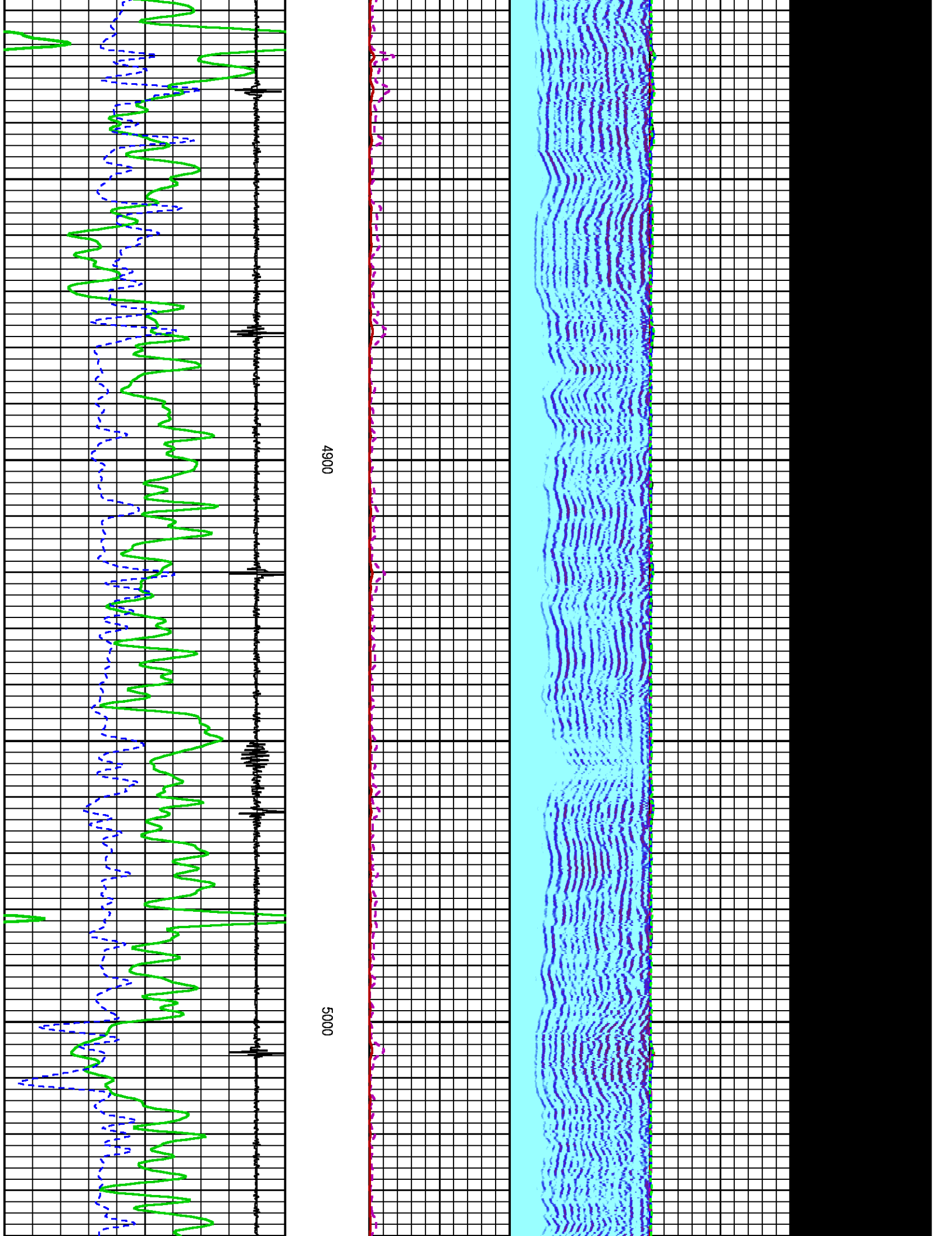


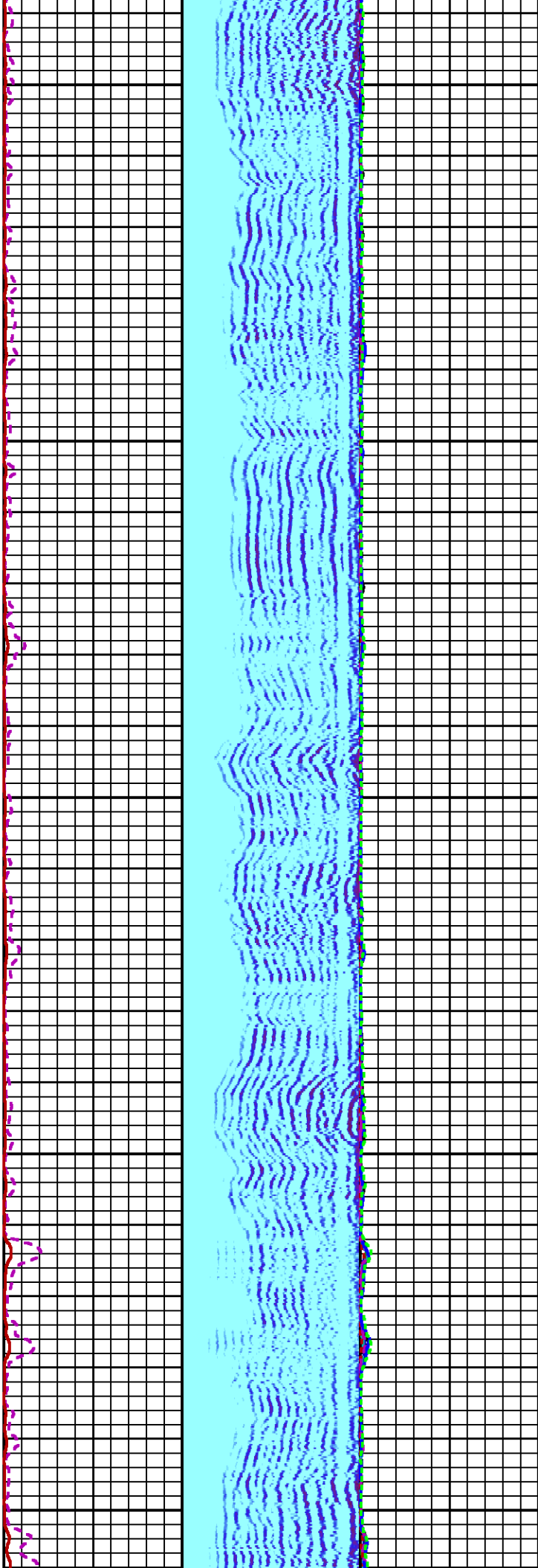
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4800

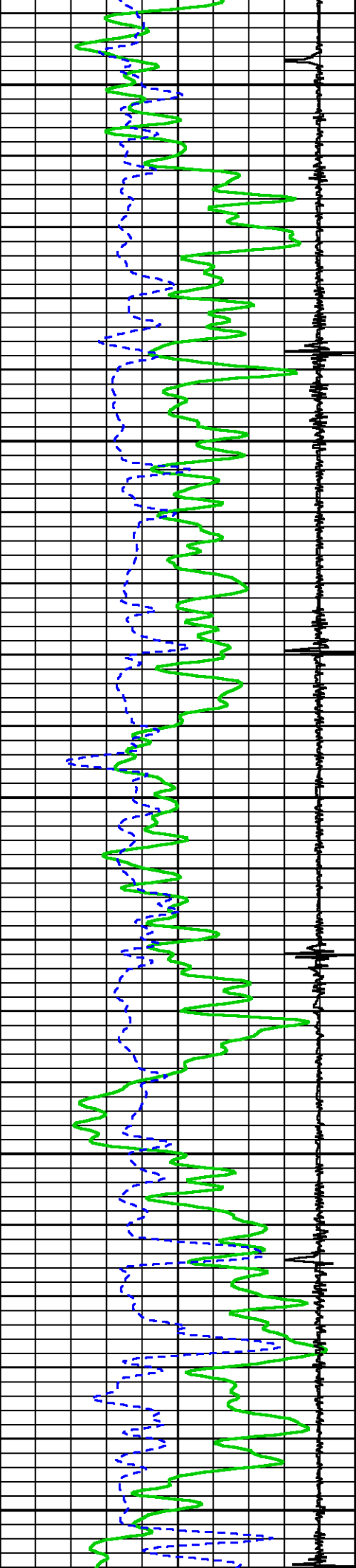


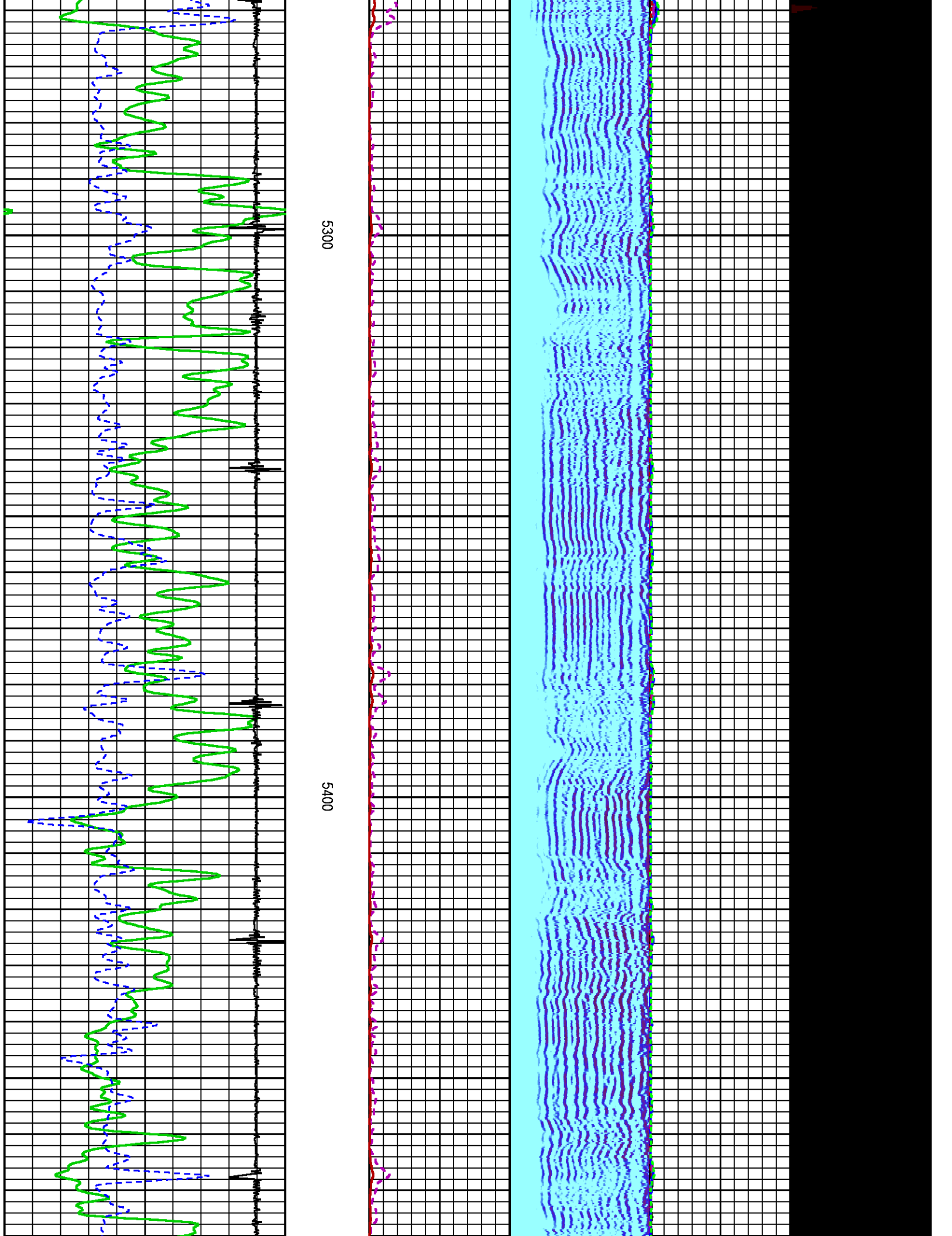


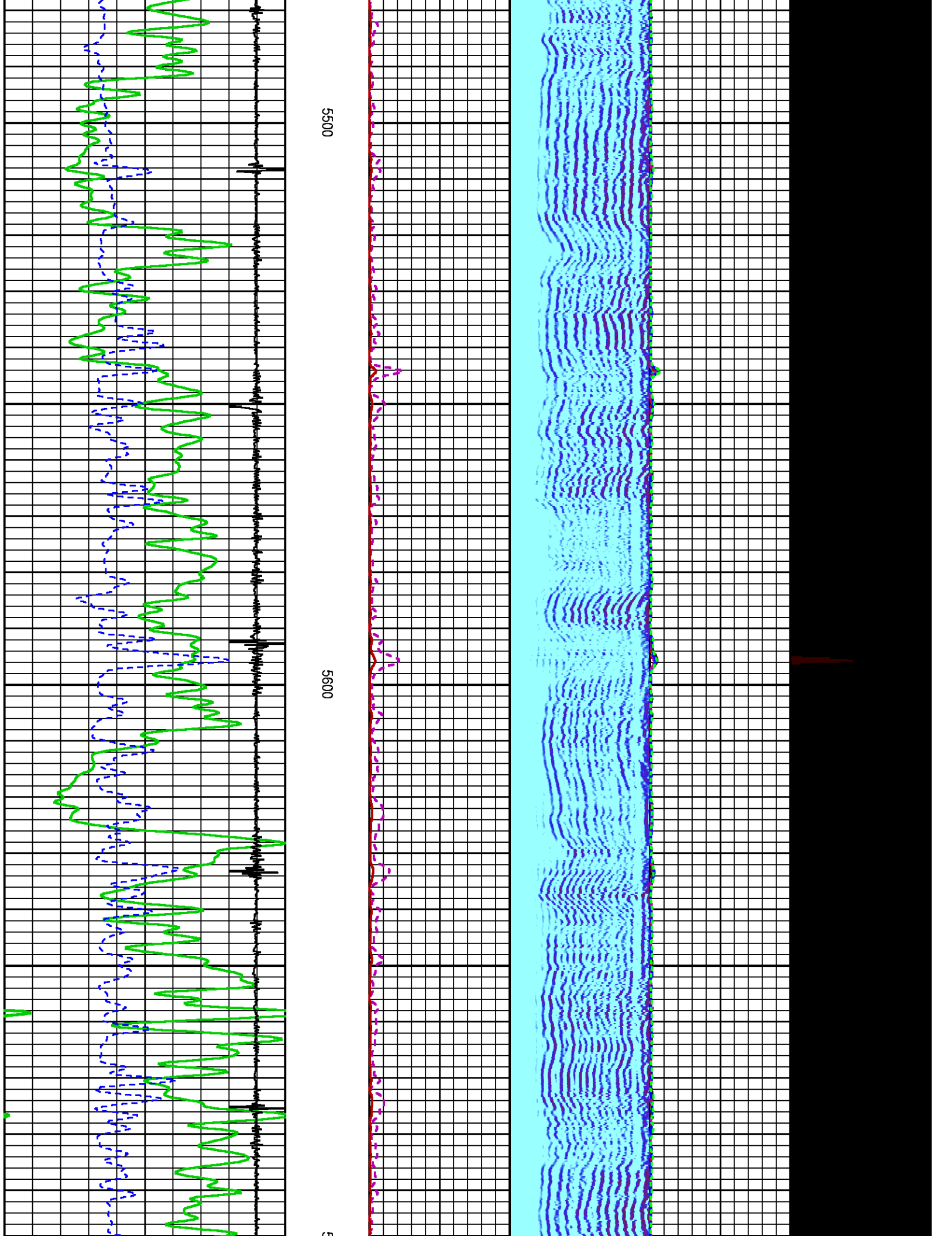


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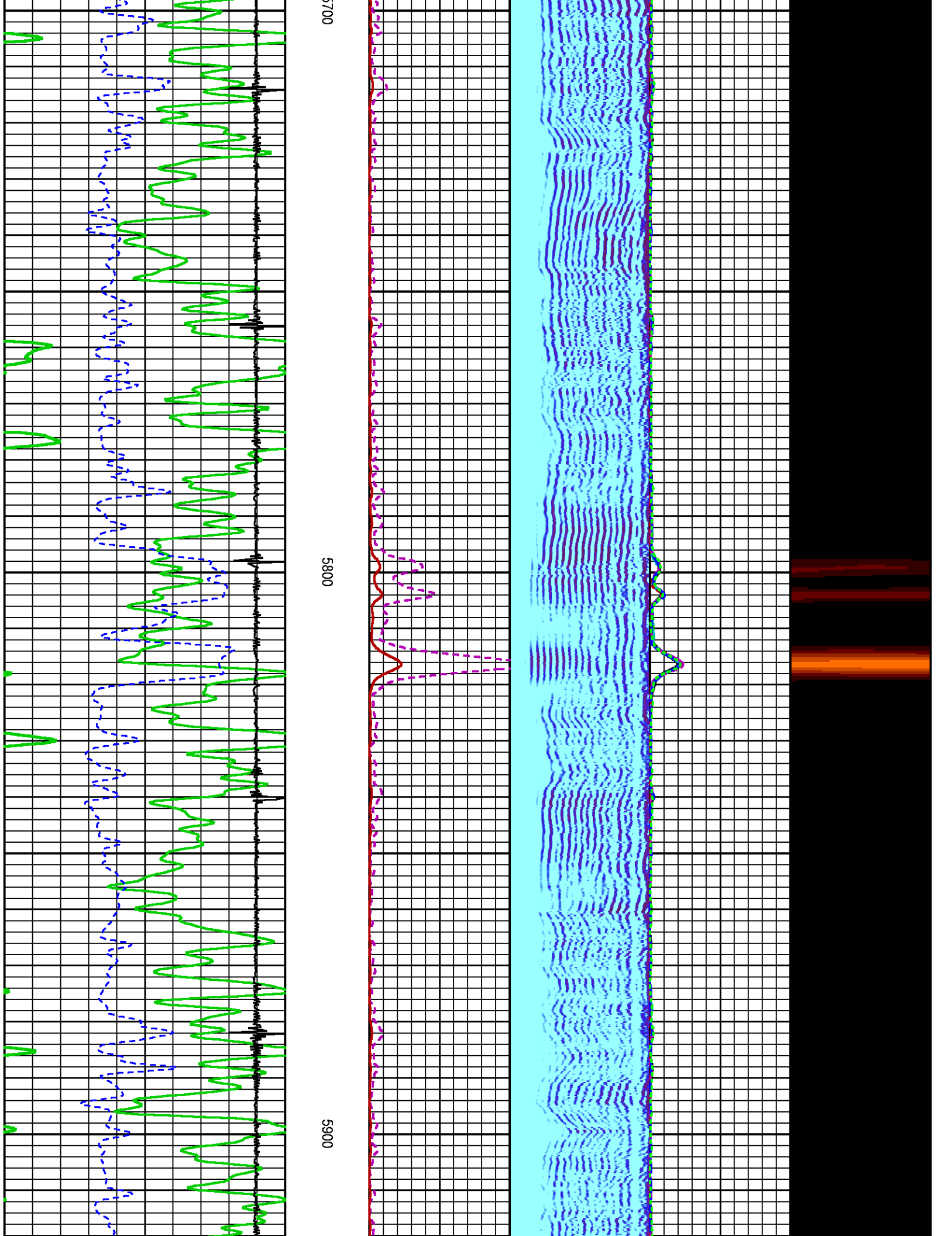


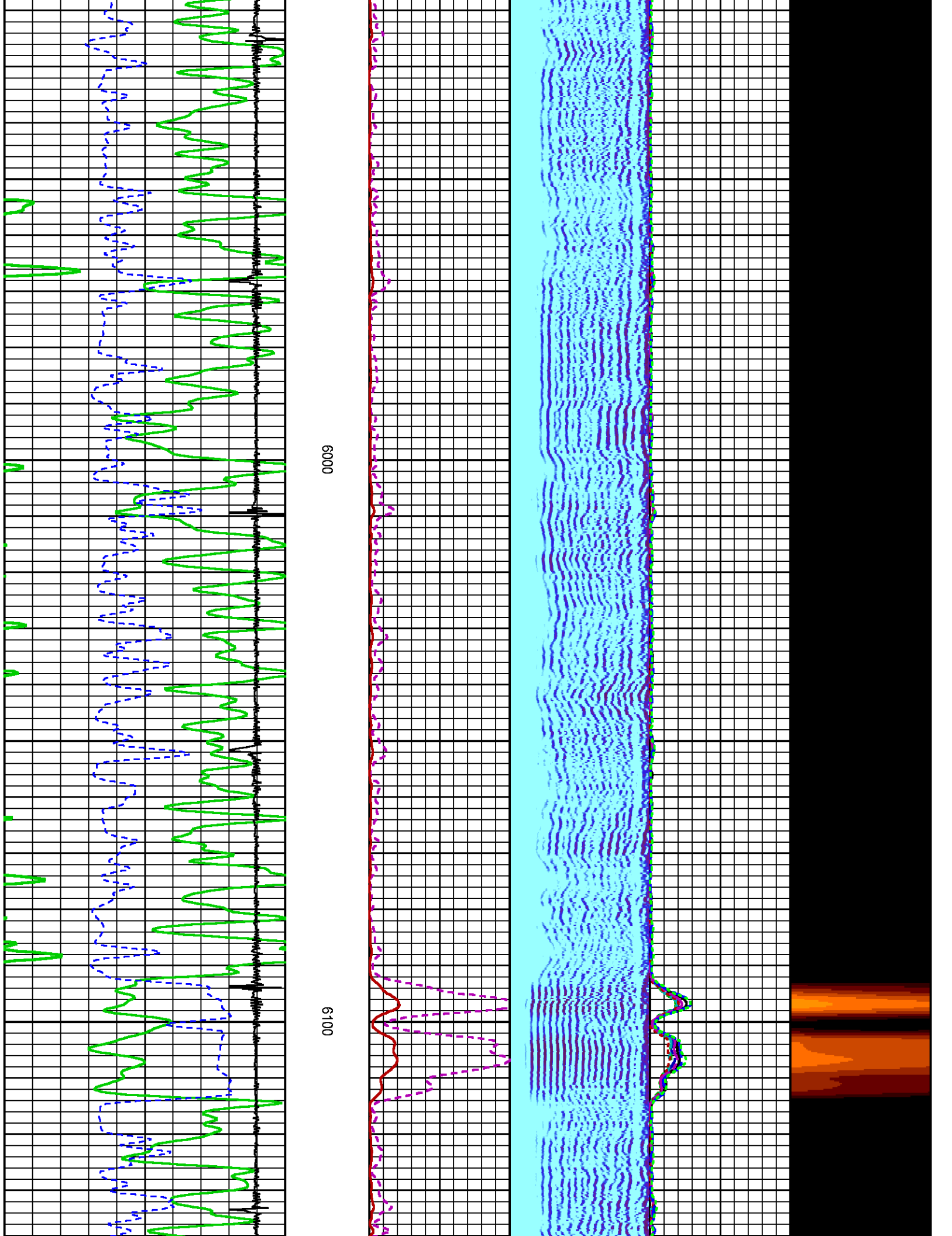


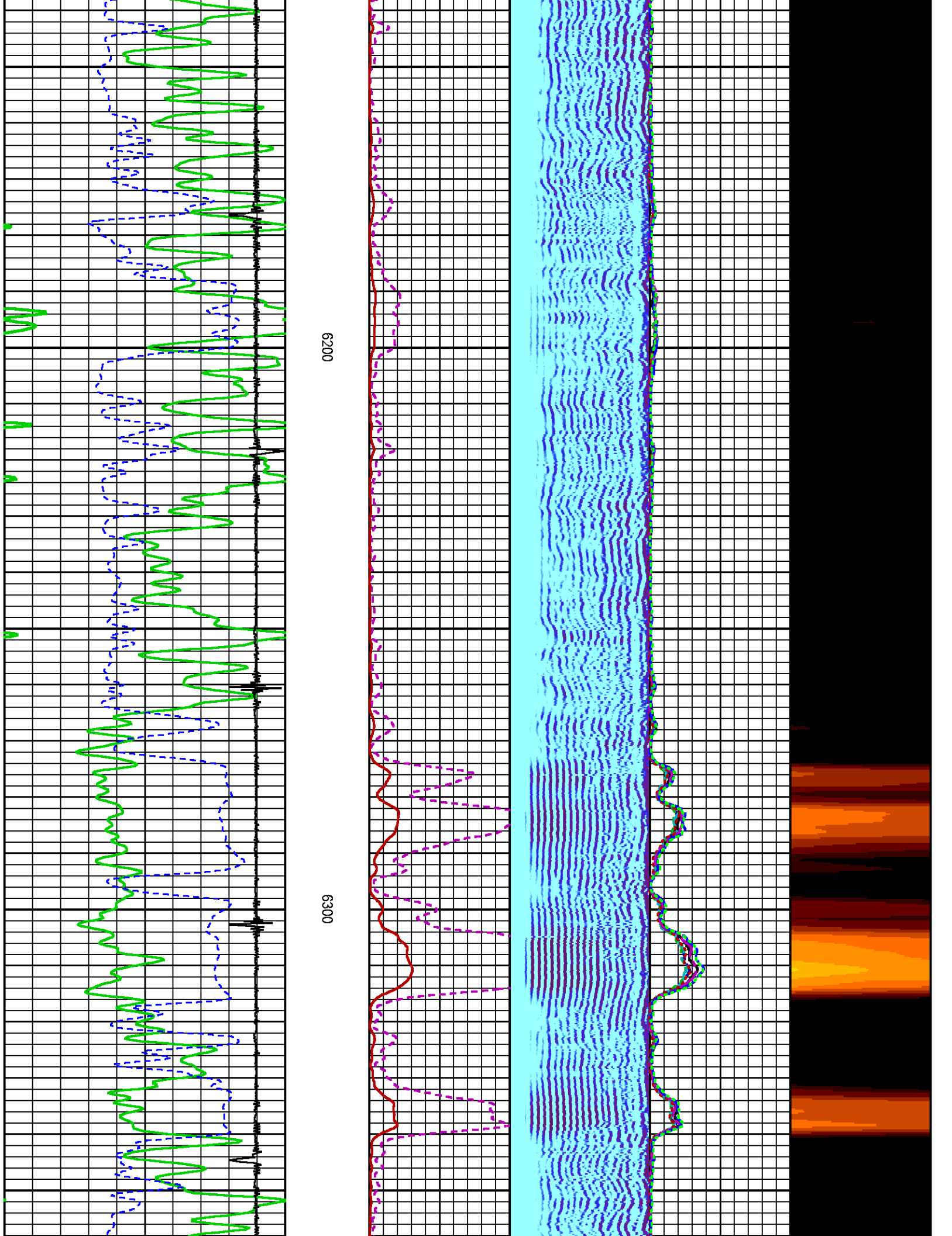


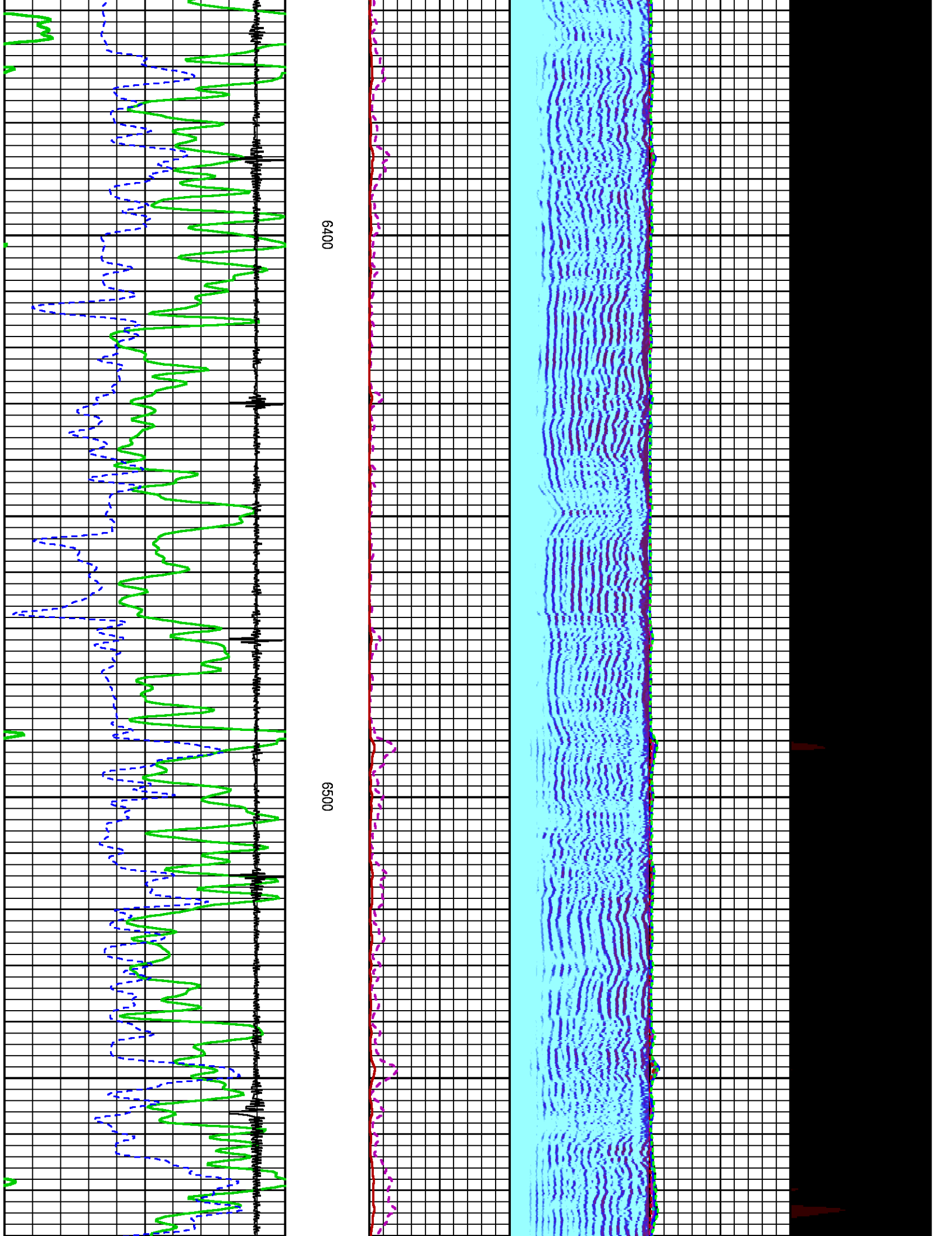
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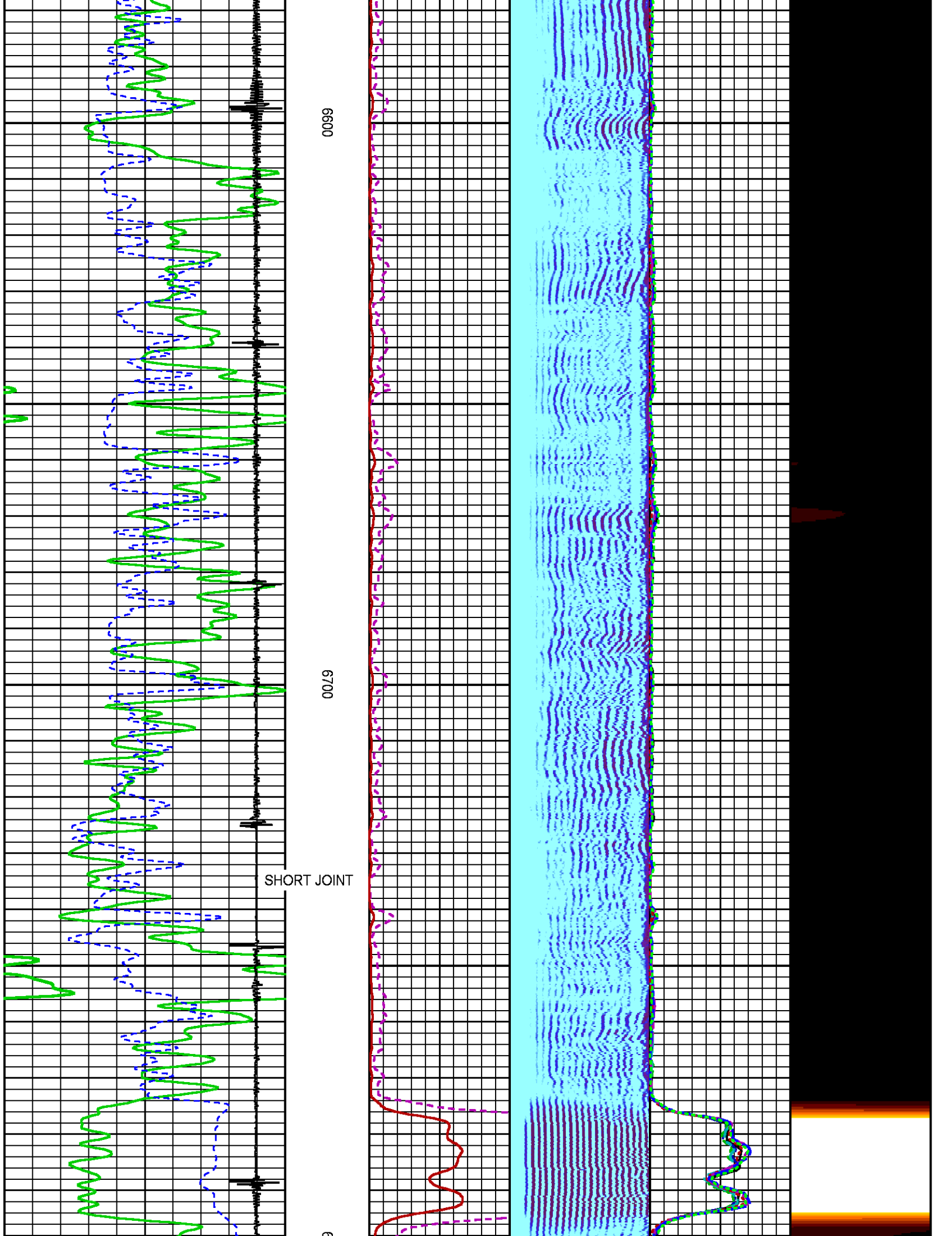
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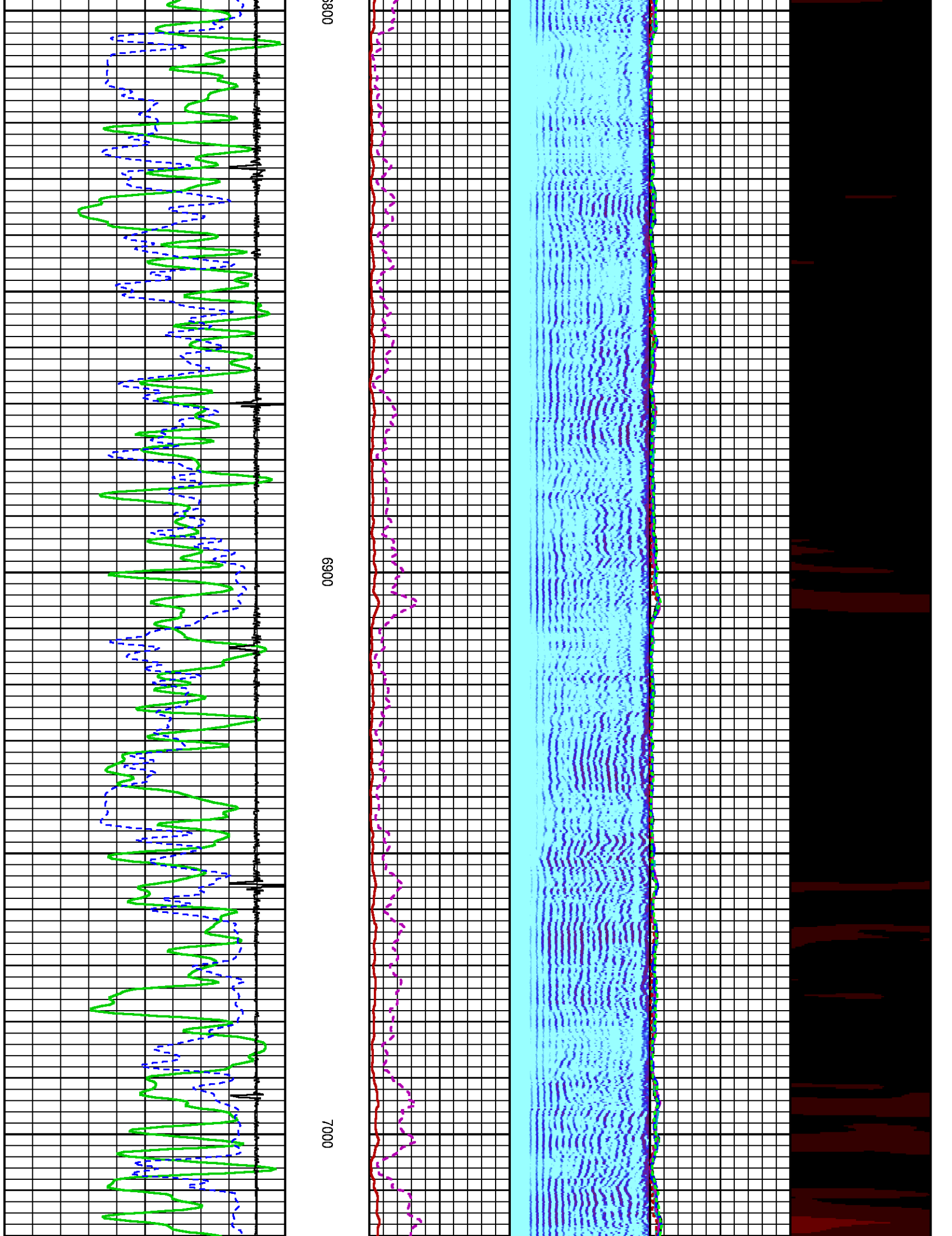


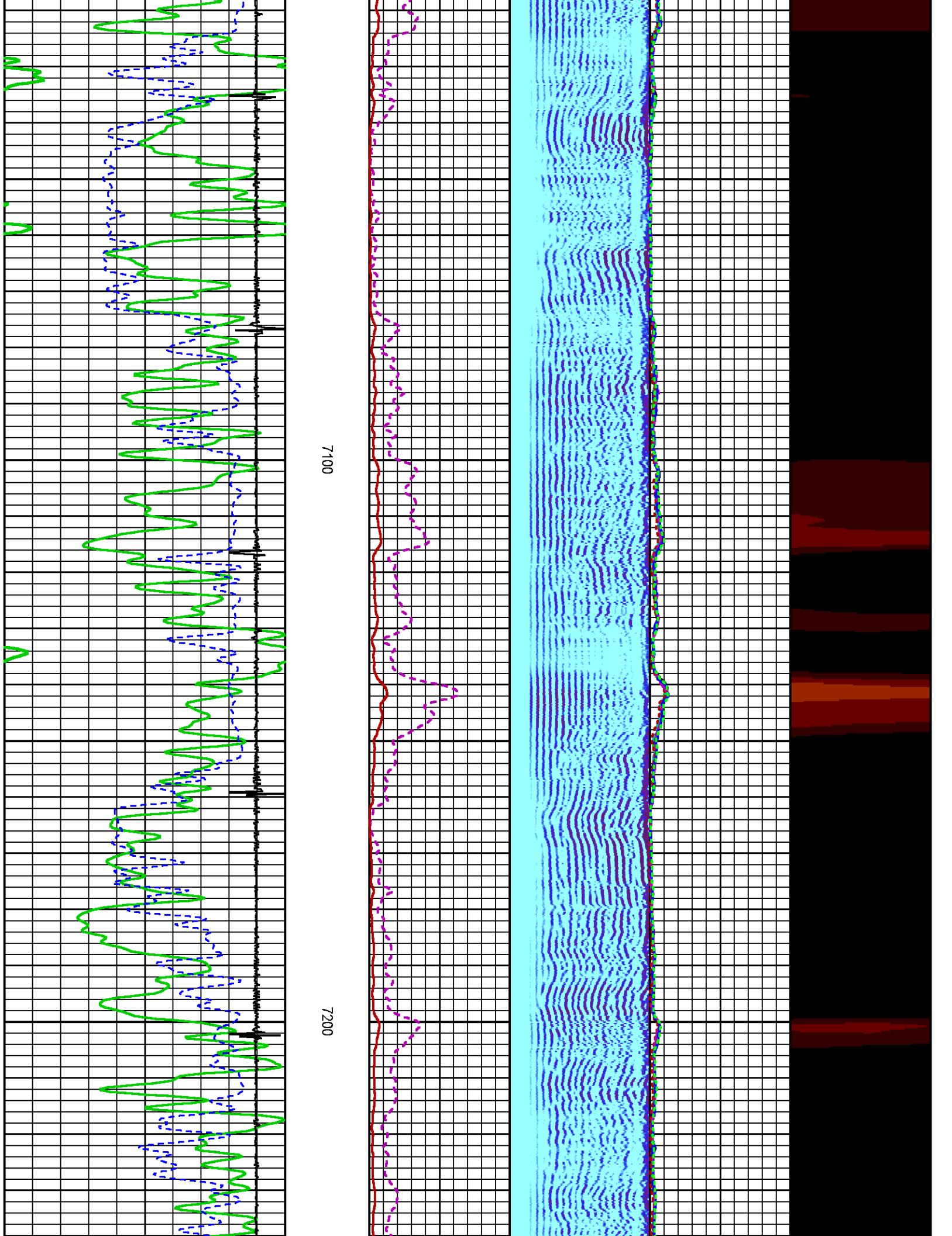


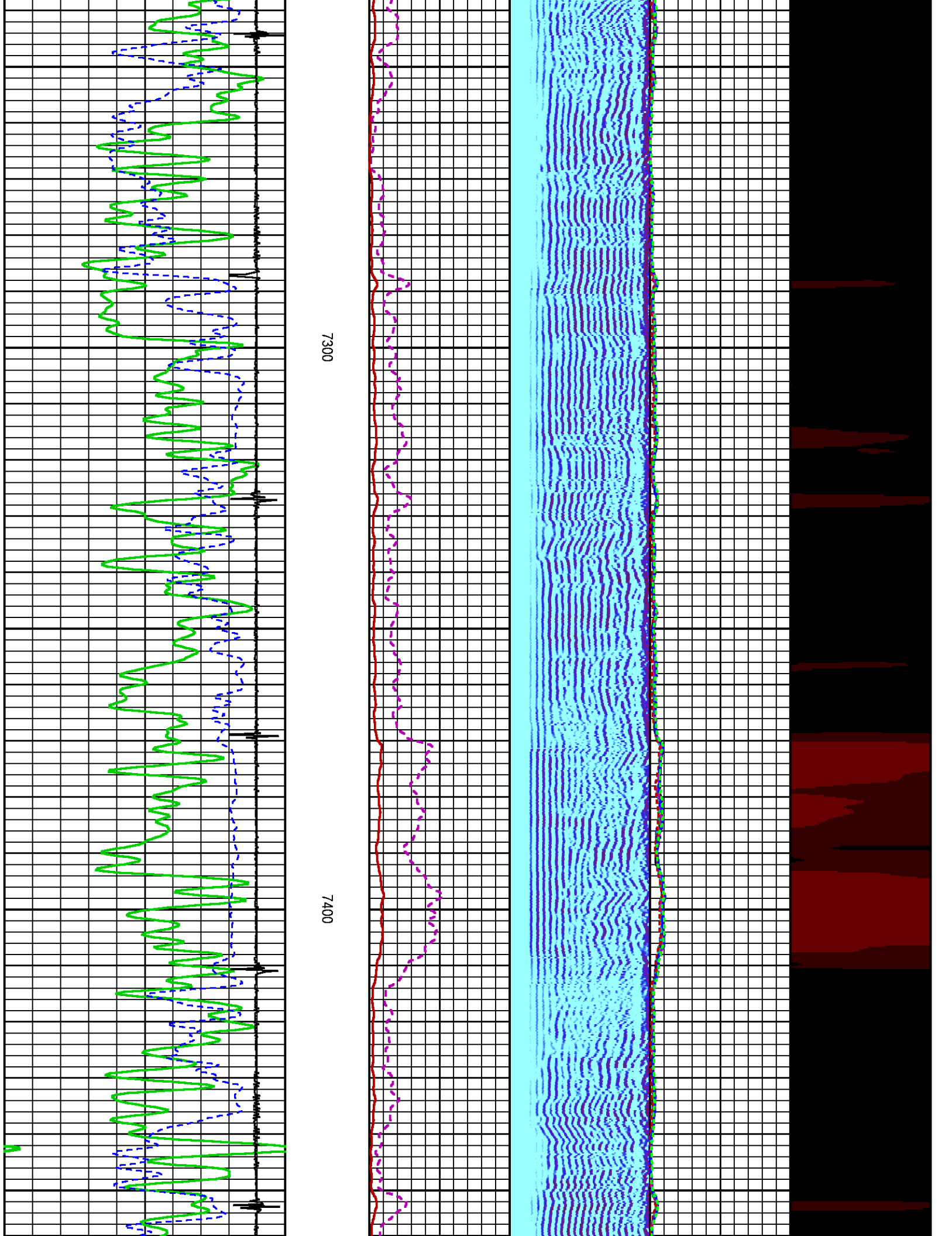


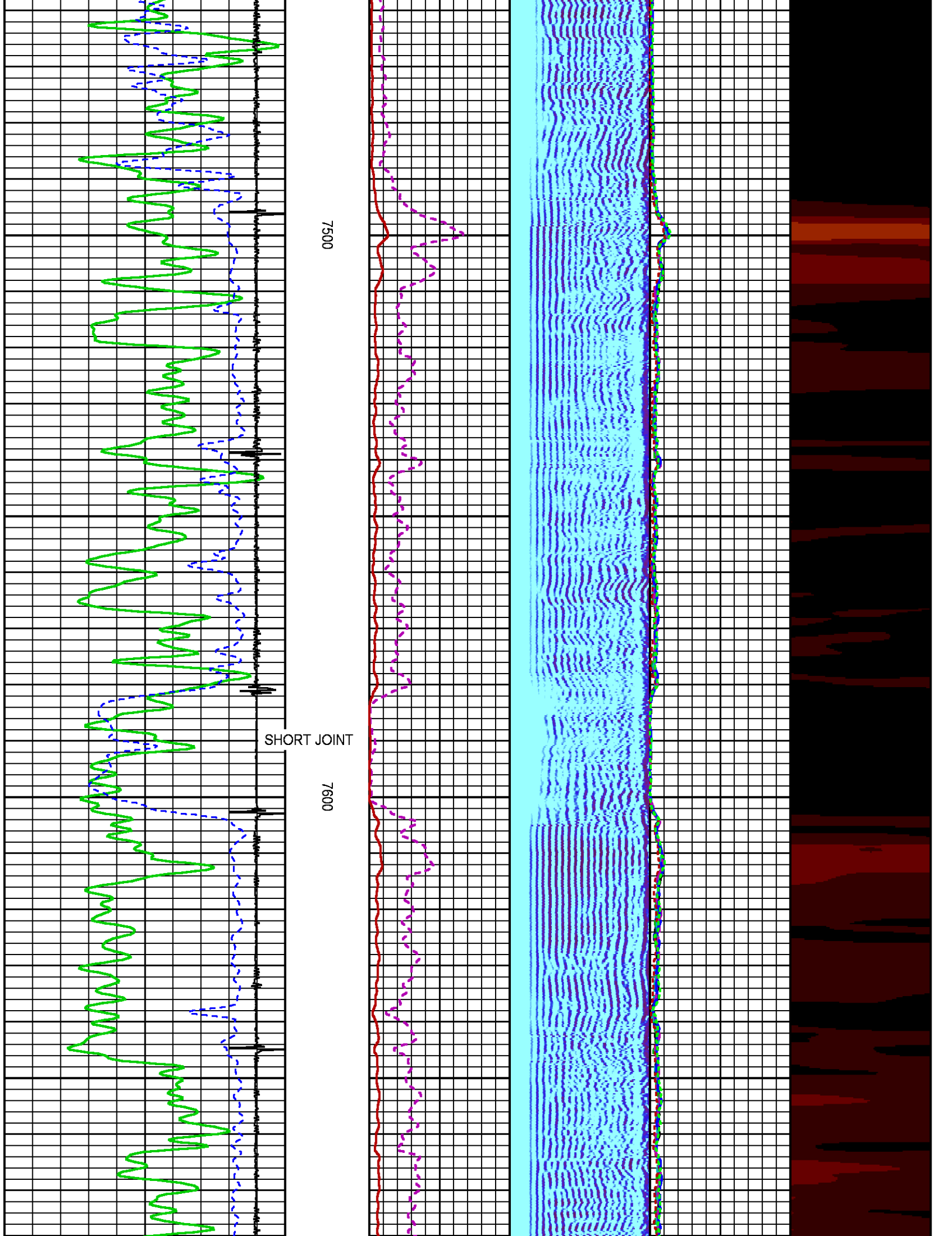


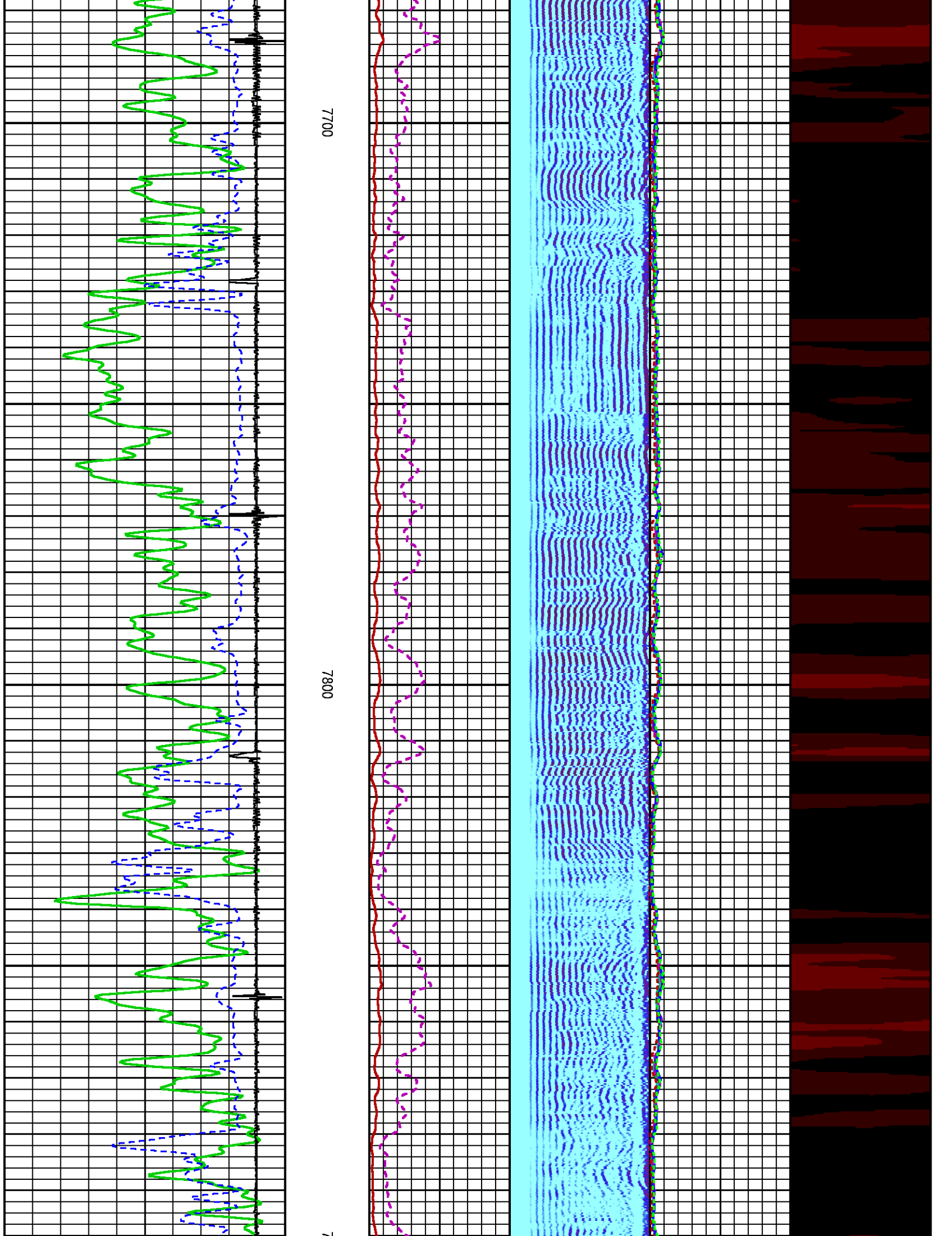


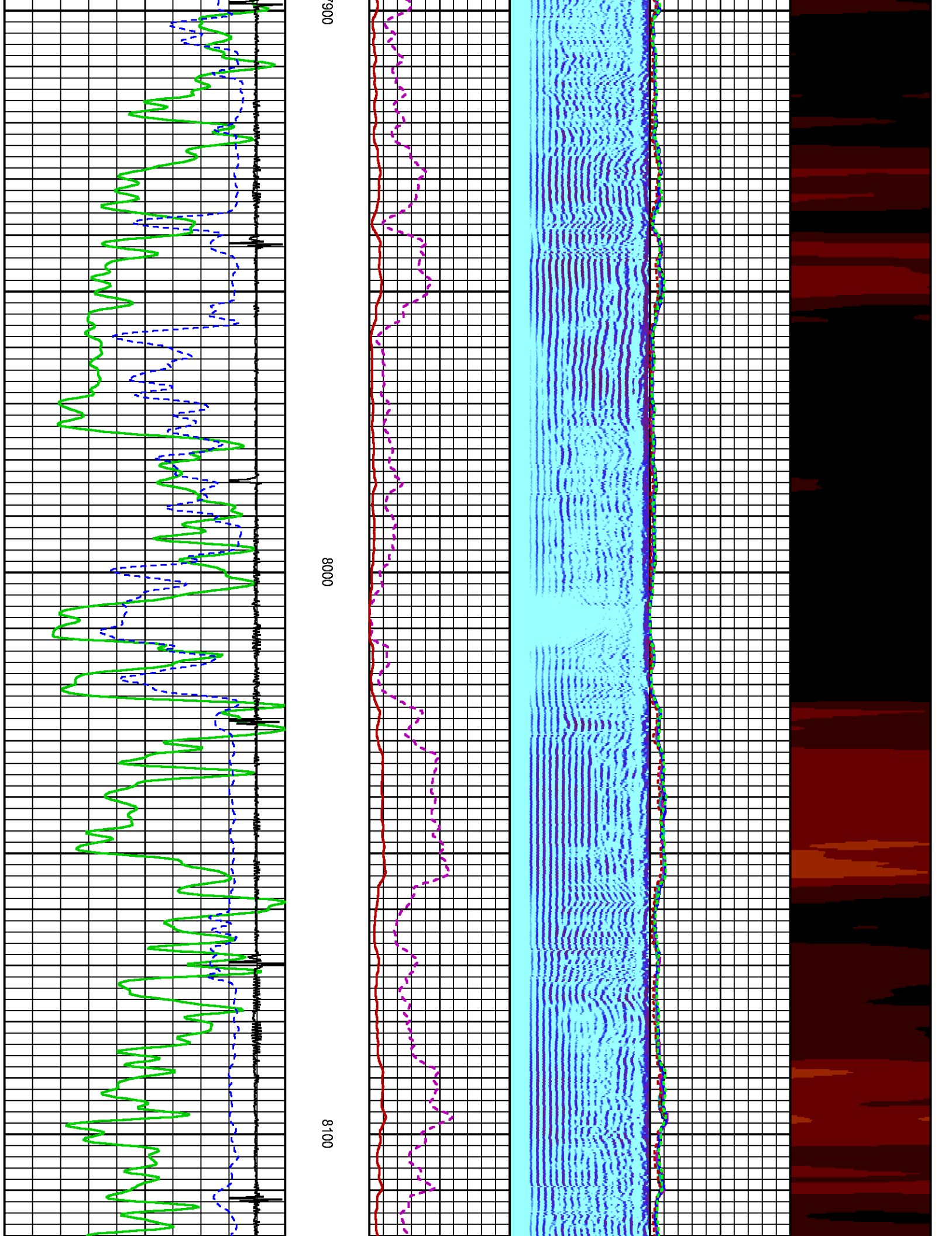


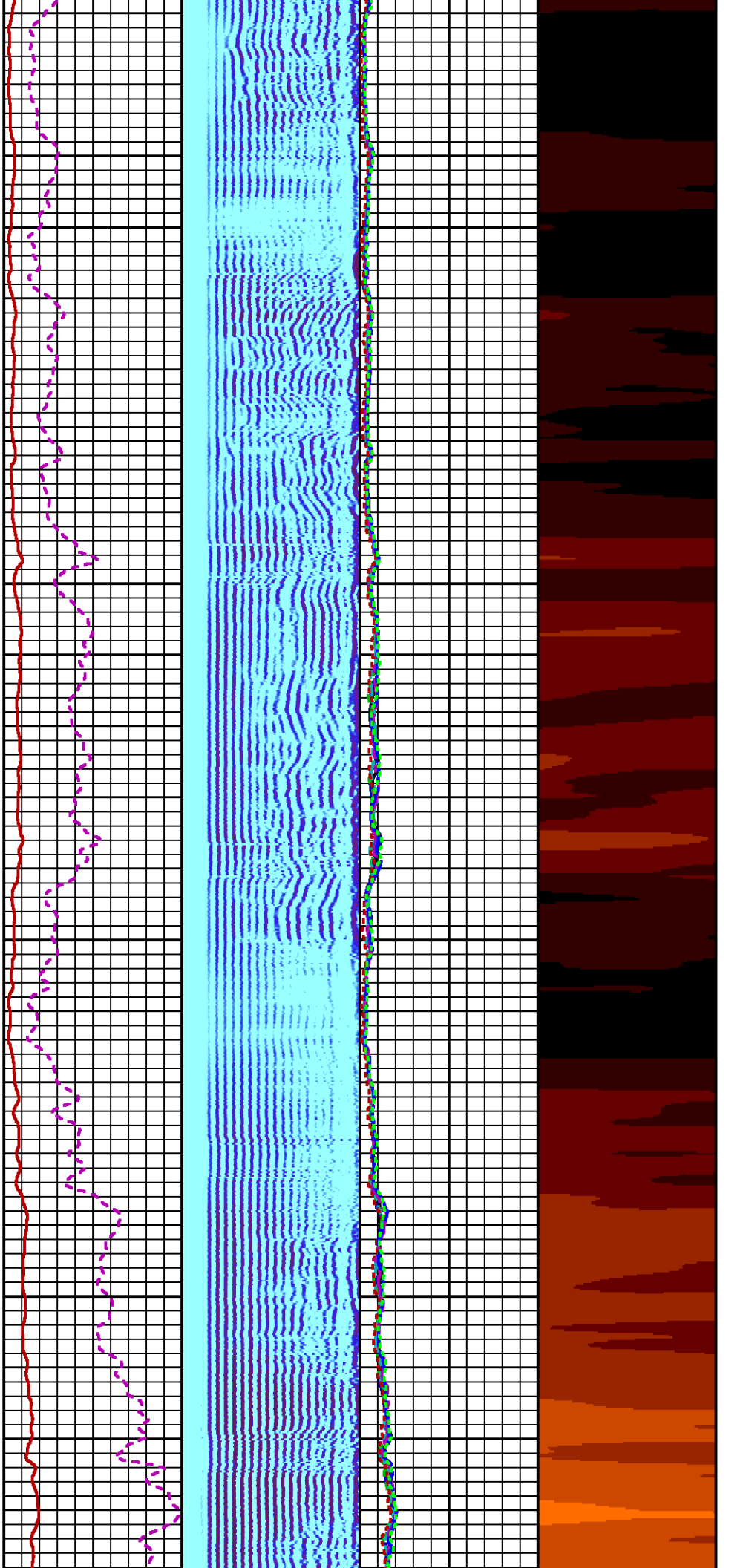






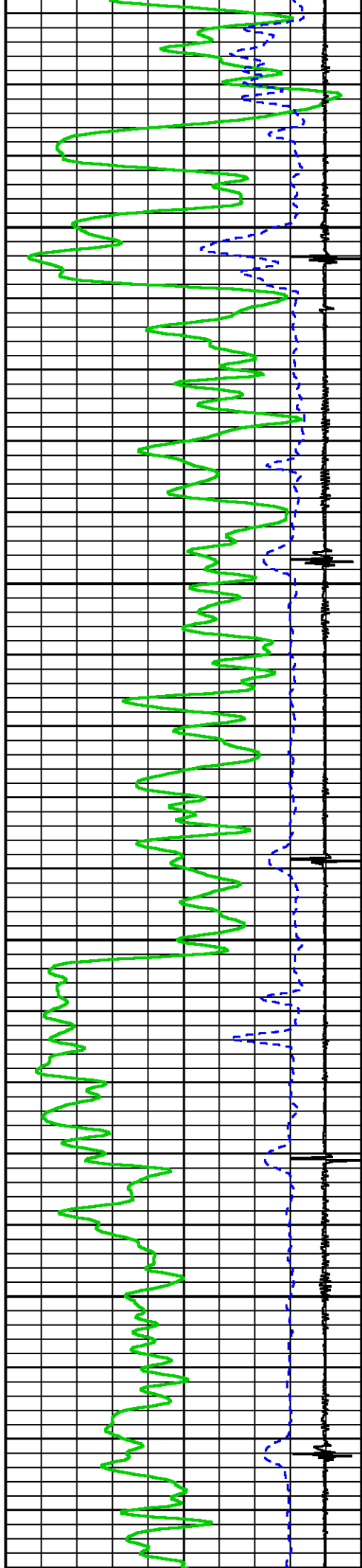


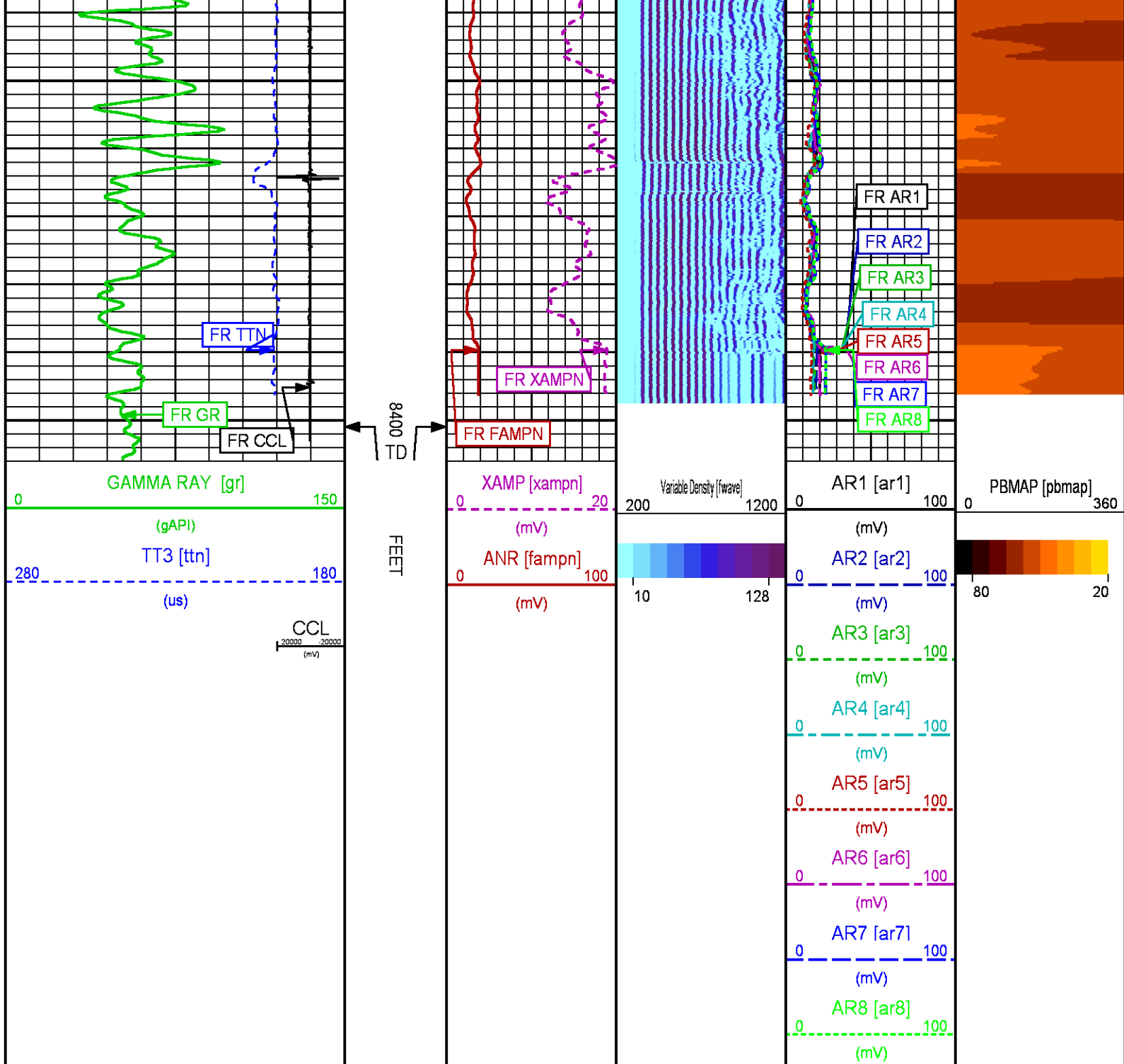




8200

8300





REPEAT PRESENTATION 0 PSI

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013
Updates: 1 Patches: 8

Plotted: Thu Jan 21 08:12:59 2016

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH101513/n012g01.prm

LOGGING MODE: DEPTH

8172.250 ft

DIRECTION: UP

BOTTOM DEPTH: 8408.750 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*)	185	us	TOP	BOTTOM
	AMP WINDOW START (fgp2*)	185	us	"	"
	AMP WINDOW START (fgp3*)	185	us	"	"
	AMP WINDOW START (fgp4*)	185	us	"	"
	AMP WINDOW START (fgp5*)	185	us	"	"
	AMP WINDOW START (fgp6*)	185	us	"	"
	AMP WINDOW START (fgp7*)	185	us	"	"
	AMP WINDOW START (fgp8*)	185	us	"	"
	AMP WINDOW START (fgpn*)	185	us	"	"
	AMP WINDOW LENGTH	30	us	"	"
TRAVEL TIME WINDOW (NEAR)	TT WINDOW START (ttn*)	175	us	"	"
	TT WINDOW LENGTH	500	us	"	"
	FIRST BRK THRESHOLD (ttn*)	2	mV	"	"
RAL CASING PARAMETERS	PPT NEAR	200.391	us	"	"
RAL TOOL DELAY	TOOL DELAY (str1*)	-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	132	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	81	mV	TOP	BOTTOM
	FREE AMP REC 2	81	mV	"	"
	FREE AMP REC 3	81	mV	"	"
	FREE AMP REC 4	81	mV	"	"
	FREE AMP REC 5	81	mV	"	"
	FREE AMP REC 6	81	mV	"	"
	FREE AMP REC 7	81	mV	"	"
	FREE AMP REC 8	81	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	"	"

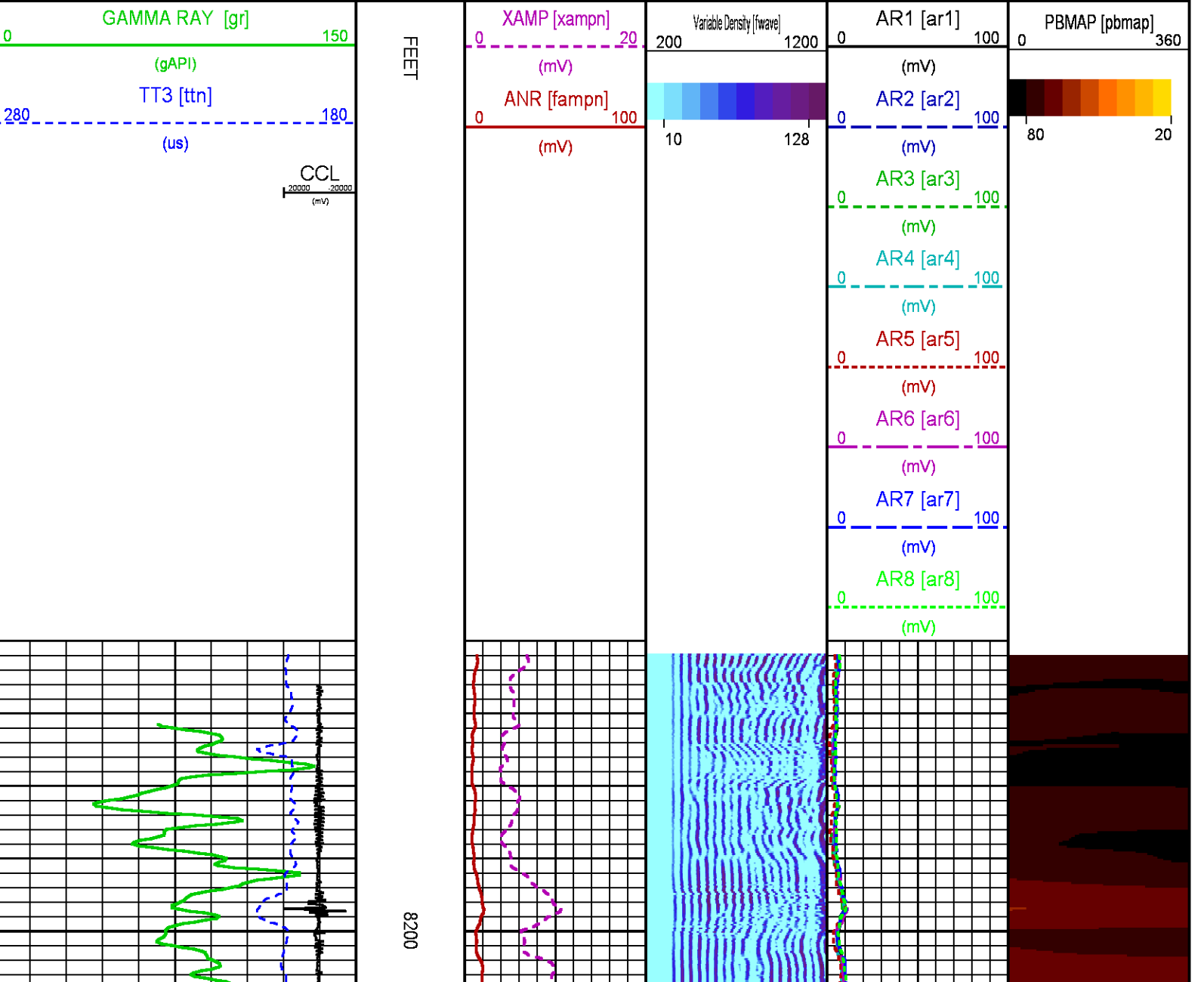
CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:AR1	Jan 21 08:08:33 2016	FIXED GATE AMPLITUDE T-R1
F1:AR2	Jan 21 08:08:33 2016	FIXED GATE AMPLITUDE T-R2
F1:AR3	Jan 21 08:08:33 2016	FIXED GATE AMPLITUDE T-R3
F1:AR4	Jan 21 08:08:33 2016	FIXED GATE AMPLITUDE T-R4
F1:AR5	Jan 21 08:08:33 2016	FIXED GATE AMPLITUDE T-R5
F1:AR6	Jan 21 08:08:33 2016	FIXED GATE AMPLITUDE T-R6
F1:AR7	Jan 21 08:08:33 2016	FIXED GATE AMPLITUDE T-R7

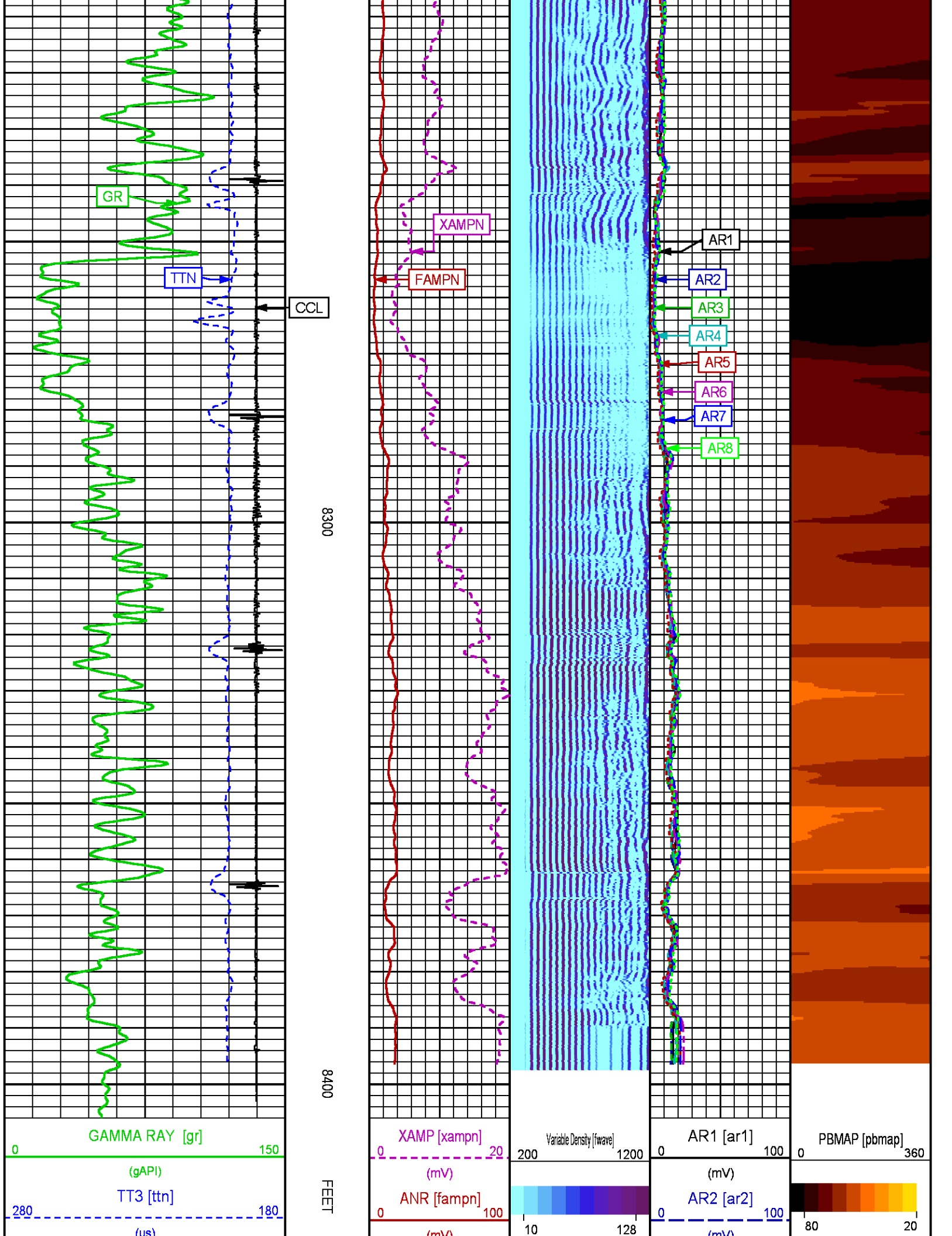
F1:AR8	Jan 21 08:08:33 2016	FIXED GATE AMPLITUDE T-R8
F1:CCL	Jan 21 08:08:33 2016	CASING COLLAR LOCATOR
F1:FAMPN	Jan 21 08:08:33 2016	FIXED GATE AMPLITUDE NEAR RECEIVER
F1:FWAVE	Jan 21 08:08:33 2016	FAR WAVE FORM
F1:GR	Jan 21 08:08:33 2016	GAMMA RAY
F1:PBMAP	Jan 21 08:08:33 2016	PERCENT BOND CEMENT MAP
F1:TTN	Jan 21 08:08:33 2016	TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER
F1:XAMPN	Jan 21 08:08:33 2016	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	: cas6685:/dat1a/CH101513/LARAMIE_CBL-RPT.fvpdf [5"/100' Scale]
Plot Interval	: 8161.75 - 8407.5 Feet
Data File 1	: F1 : cas6685:/dat1a/CH101513/n012g01.aff
Created On	: Jan 21 08:08:33 2016
Company	: LARAMIE ENERGY
Well	: PICEANCE FEDERAL 28-09E
Field	: VEGA
File Interval	: 8160.75 - 8408.75 Feet
OCT	: n012g





CCL
20000 20000
(mV)

(mV)

AR3 [ar3]

0 100
(mV)

AR4 [ar4]

0 100
(mV)

AR5 [ar5]

0 100
(mV)

AR6 [ar6]

0 100
(mV)

AR7 [ar7]

0 100
(mV)

AR8 [ar8]

0 100
(mV)

CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/CH101513/n012g.tp1

RAL PRIMARY CALIBRATION SUMMARY

TOOL #: 1426XA 10404539

DATE/TIME PERFORMED: Wed Jan 20 08:09:45 2016

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)	-1.27	-1.35	-1.43	-1.43	-1.43	-2.54	-1.58	-1.63	-1.40	-3.87	-0.39
AMP FLUID (mV)	100	101	100	99	99	103	101	101	101	128	96
TT (us)	201	201	201	201	200	200	199	200	202	307	202
M FACTOR	0.99	0.98	0.99	1.00	0.99	0.95	0.98	0.98	0.98	1.13	1.03

RAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 1426XA 10404539

DATE/TIME PERFORMED: Thu Jan 21 07:34:22 2016

DAYS SINCE CAL: 0

UNIT #: 3885TC 6685

CABLE #: HL6685 SMALL1

	NEAR (mV)	R1 (mV)	R2 (mV)	R3 (mV)	R4 (mV)	R5 (mV)	R6 (mV)	R7 (mV)	R8 (mV)	FAR (mV)	CAL (mV)
ZERO	0.03	0.02	-0.04	0.02	0.01	-0.02	0.05	-0.03	-0.04	-0.02	-0.01
AMP AIR	-0.57	-0.81	-0.43	-0.60	-0.57	-1.01	-1.00	-0.93	-0.59	-0.43	104.51

SHOP M FACTOR	SHOP A FACTOR	WIRELINE FACTOR
1.03	0.00	0.96

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 1355XA 110837

DATE/TIME PERFORMED: Wed Jan 20 07:56:24 2016

UNIT #: 3885TC 6685

CALB JIG #: 4702NK BA-905

	BACKGROUND (cts)	CALBRTR ON (cts)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	CALBRTR (gAPI)
GR	43.33	163.33	120.0	1.250	54.17	204.17	150

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 1355XA 110837

DATE/TIME PERFORMED: Wed Jan 20 07:57:29 2016

UNIT #: 3885TC 6685

VERI JIG #: 4702NK BA-905

	BACKGROUND (cts)	CALBRTR ON (cts)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	42.49	163.20	1.250	53.11	204.00	150.89
						140.00 160.00

INSTRUMENT CONFIGURATION

Source File: /dat1a/CH101513/n012g~-tdg

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'

20.38'

NEAR RCVR 11.17'

FAR RCVR 10.21'

CCL 5.79'


Weight : 85 lbs
Series : 1355XA
Mnemonic : RAL
Measure Point: 5.79': CCL
Measure Point: 1.67': GR
Measure Point: 0.17': TEMP



GR 1.67'

TEMP 0.17'

TOTAL LENGTH: 20.38'
TOTAL WEIGHT: 225 lbs
MAX DIAMETER: 04.25"

	COMPANY	<u>LARAMIE ENERGY</u>		FILE NO:	<u>CH101513</u>
	WELL	<u>PICEANCE FEDERAL 28-09E</u>		API NO:	<u>05077102550000</u>
	FIELD	<u>VEGA</u>			
	COUNTY	<u>MESA</u>	STATE	<u>COLORADO</u>	
	LOCATION:	SHL: LAT 39.246680, LONG: -107.774793 BHL: LAT 39.249433, LONG -107.768135		ELEVATIONS:	28 9S 93W 28-10 PAD PATTERSON 306
	SEC <u>28</u>	TWP <u>9S</u>	RGE <u>93W</u>	DATE	21-Jan-2016