



FILE NO: CH101524	COMPANY WELL FIELD COUNTY	LARAMIE ENERGY PICEANCE FEDERAL 28-19E VEGA MESA	STATE COLORADO
API NO: 05077102540000			

Ver. 4.05 SEC 28 T9S R93W 28-10 PAD PATTERSON 306	LOCATION: SHL: 2011' FSL 2492' FWL BHL: 613' FSL 880' FEL SEC 28 TWP 9S RGE 93W	OTHER SERVICES RPM
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PERMANENT DATUM LOG MEASURED FROM DRILL. MEAS. FROM	GL KB KB	ELEVATION 22 FT ABOVE P.D.	ELEVATIONS: KB 7704 FT DF GL 7682 FT
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DATE	25-Jan-2016
RUN	1
TRIP	1
SERVICE ORDER	US101524J
DEPTH DRILLER	8414 FT
DEPTH LOGGER	8331 FT
BOTTOM LOGGED INTERVAL	8328 FT
TOP LOGGED INTERVAL	0 FT
TIME STARTED	8:30
TIME FINISHED	11:00
OPERATOR RIG TIME	2.5 HOURS
TYPE OF FLUID IN HOLE	WATER
FLUID DENSITY	NA
FLUID SALINITY	NA
FLUID LEVEL	38 FT
LOGGED CEMENT TOP	NA
WELLHEAD PRESSURE	0 PSI
MAXIMUM HOLE DEVIATION	NA
NOMINAL LOGGING SPEED	100 F/MN
MAX. RECORDED TEMP.	245 DEGF
REFERENCE LOG	NONE
REFERENCE LOG DATE	NA
EQUIP. NO.	6685
LOCATION	W. QUIGLEY
GRAND JCT	
RECORDED BY	MR. JOHN GRUBICH
WITNESSED BY	

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	8414 FT

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
4.5 IN	11.6 LB/F		0 FT	8414 FT

### REMARKS

RUN 1 TRIP 1: THIS IS THE FIRST LOG ON THIS WELL  
LOGGED WITH 0 PSI AT THE WELLHEAD

BHT: 245 DEGF

SJ: 6452'-6474'

SJ: 7566'-7588'

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
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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: Mon Jan 25 11:17:10 2016

### PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH101524/n012g02.prm  
 LOGGING MODE: DEPTH DIRECTION: UP  
 TOP DEPTH: 12.250 ft BOTTOM DEPTH: 8336.500 ft

#### SYMMETRIC FILTER

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

#### RAL CCL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CCL FLOOR	CCL FLOOR	0		TOP	BOTTOM

#### ANALOG RAL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
AMPLITUDE WINDOW (NEAR)	AMP WINDOW START (fgp1*)	187	us	TOP	BOTTOM
	AMP WINDOW START (fgp2*)	187	us	"	"
	AMP WINDOW START (fgp3*)	187	us	"	"
	AMP WINDOW START (fgp4*)	187	us	"	"
	AMP WINDOW START (fgp5*)	187	us	"	"
	AMP WINDOW START (fgp6*)	187	us	"	"
	AMP WINDOW START (fgp7*)	187	us	"	"
	AMP WINDOW START (fgp8*)	187	us	"	"
	AMP WINDOW START (fgpn*)	187	us	"	"
TRAVEL TIME WINDOW (NEAR)	AMP WINDOW LENGTH	25	us	"	"
	TT WINDOW START (ttn*)	175	us	"	"
	TT WINDOW LENGTH	500	us	"	"
	FIRST BRK THRESHOLD (ttn*)	4	mV	"	"
RAL CASING PARAMETERS	PPT NEAR	215.678	us	"	"
RAL TOOL DELAY	TOOL DELAY (str1*)	-69	us	"	"
	TOOL DELAY (str2*)	-69	us	"	"
	TOOL DELAY (str3*)	-69	us	"	"
	TOOL DELAY (str4*)	-69	us	"	"
	TOOL DELAY (str5*)	-69	us	"	"
	TOOL DELAY (str6*)	-69	us	"	"
	TOOL DELAY (str7*)	-69	us	"	"
	TOOL DELAY (str8*)	-69	us	"	"
BASELINE NOISE (NEAR)	TOOL DELAY (strn*)	-69	us	"	"
	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	"	"

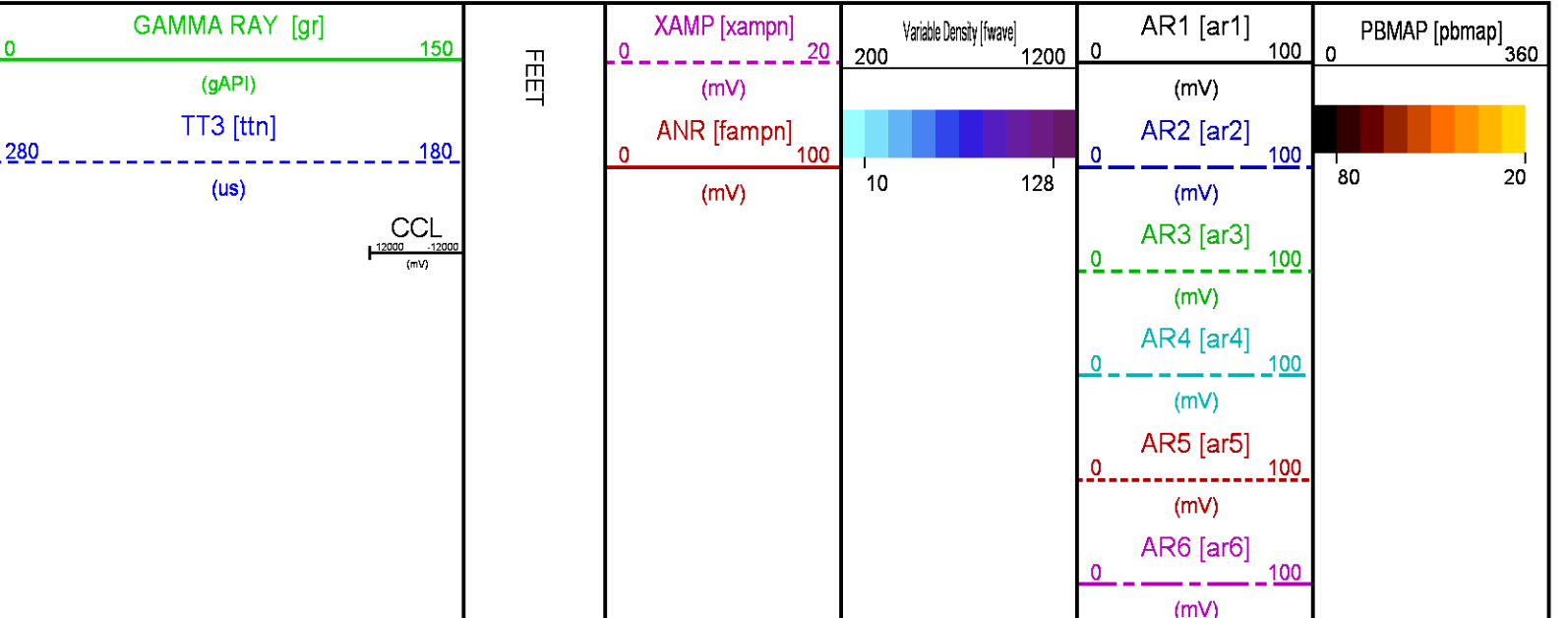
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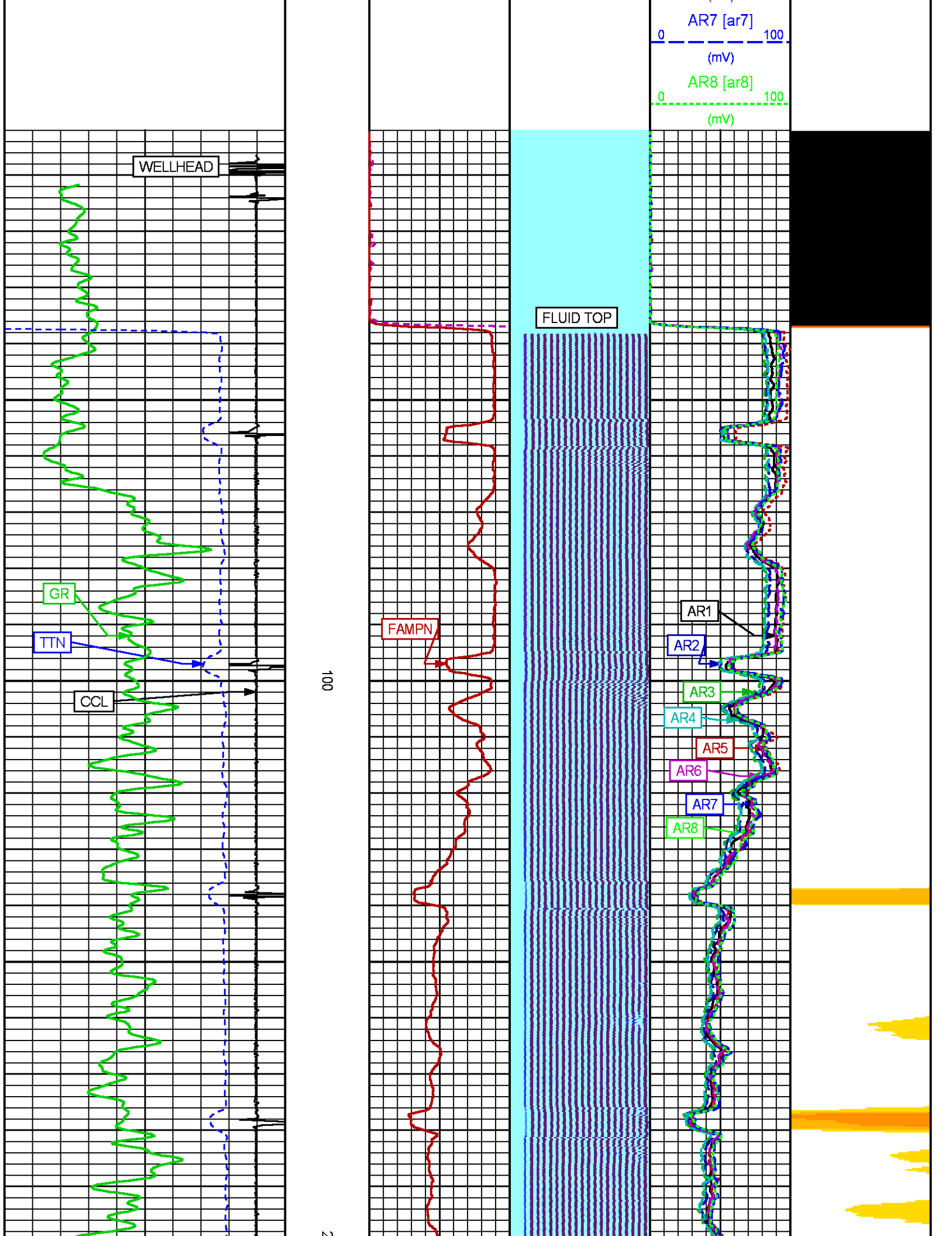
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:AR1	Jan 25 09:26:59 2016	FIXED GATE AMPLITUDE T-R1
F1:AR2	Jan 25 09:26:59 2016	FIXED GATE AMPLITUDE T-R2
F1:AR3	Jan 25 09:26:59 2016	FIXED GATE AMPLITUDE T-R3
F1:AR4	Jan 25 09:26:59 2016	FIXED GATE AMPLITUDE T-R4
F1:AR5	Jan 25 09:26:59 2016	FIXED GATE AMPLITUDE T-R5
F1:AR6	Jan 25 09:26:59 2016	FIXED GATE AMPLITUDE T-R6
F1:AR7	Jan 25 09:26:59 2016	FIXED GATE AMPLITUDE T-R7
F1:AR8	Jan 25 09:26:59 2016	FIXED GATE AMPLITUDE T-R8
F1:CCL	Jan 25 09:26:59 2016	CASING COLLAR LOCATOR
F1:FAMPN	Jan 25 09:26:59 2016	FIXED GATE AMPLITUDE NEAR RECEIVER
F1:FWAVE	Jan 25 09:26:59 2016	FAR WAVE FORM
F1:GR	Jan 25 09:26:59 2016	GAMMA RAY
F1:PBMAP	Jan 25 09:26:59 2016	PERCENT BOND CEMENT MAP
F1:TTN	Jan 25 09:26:59 2016	TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER
F1:XAMPN	Jan 25 09:26:59 2016	FIXED GATE AMPLITUDE NEAR RECEIVER TIMES FIVE

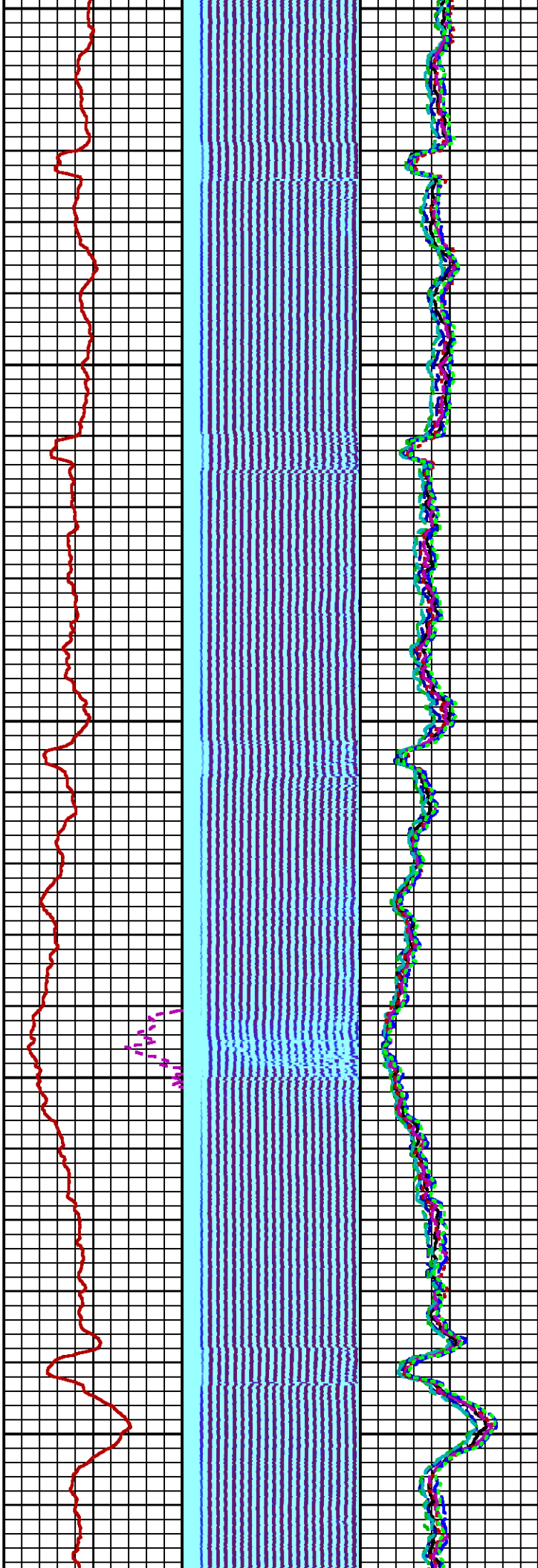
### CURVE MEASURE POINT OFFSET

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		

<b>Presentation</b>	: cas6685:/dat1a/CH101524/LARAMIE_CBL.fvpdf [5"/100' Scale]
<b>Plot Interval</b>	: 2 - 8335.25 Feet
<b>Data File 1</b>	: F1 : cas6685:/dat1a/CH101524/n012g02_MAIN.xtf
<b>Created On</b>	: Jan 25 09:26:59 2016
<b>Company</b>	: LARAMIE ENERGY
<b>Well</b>	: PICEANCE FEDERAL 28-19E
<b>Field</b>	: VEGA
<b>File Interval</b>	: 1 - 8336.5 Feet
<b>OCT</b>	: n012g



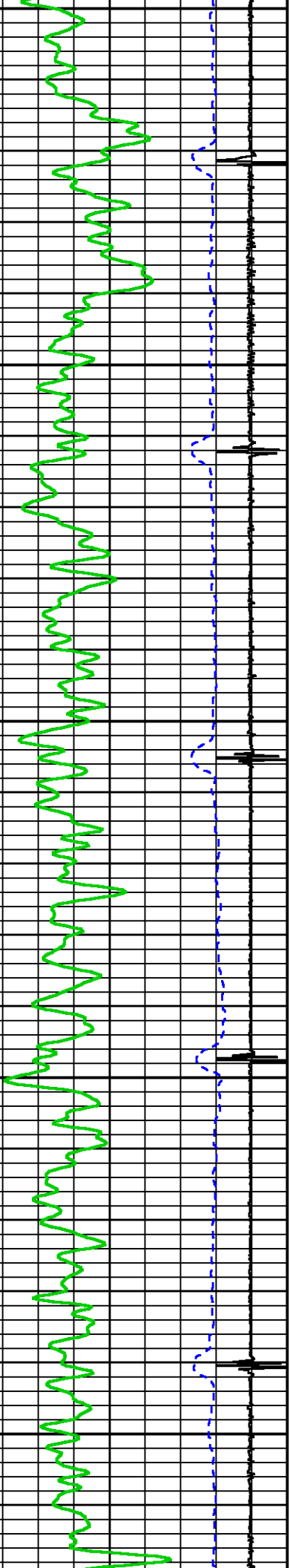


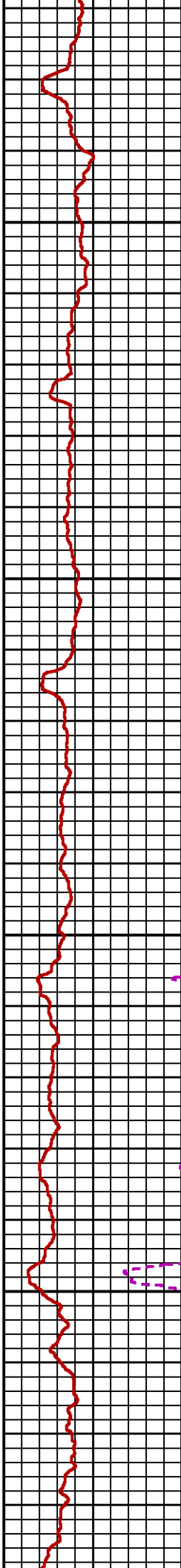
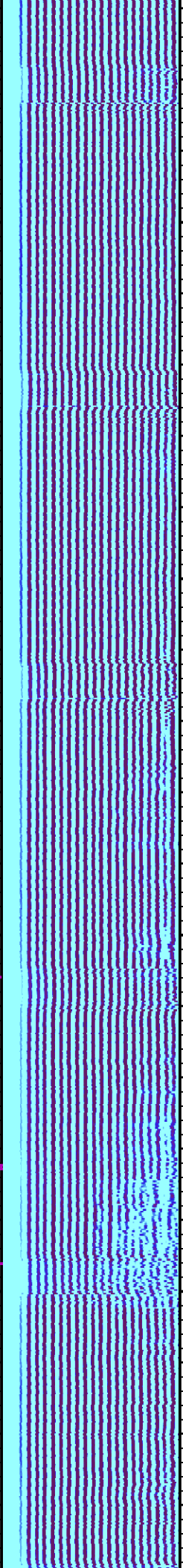
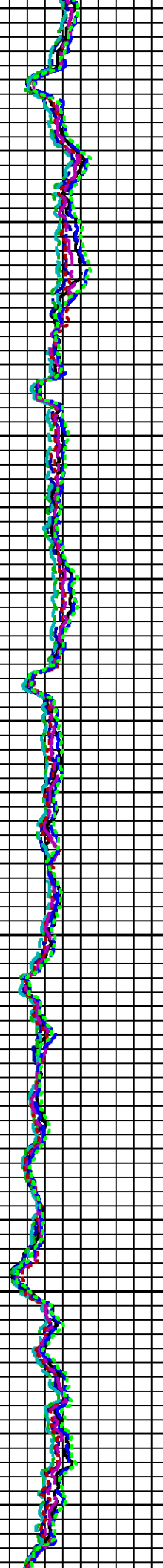
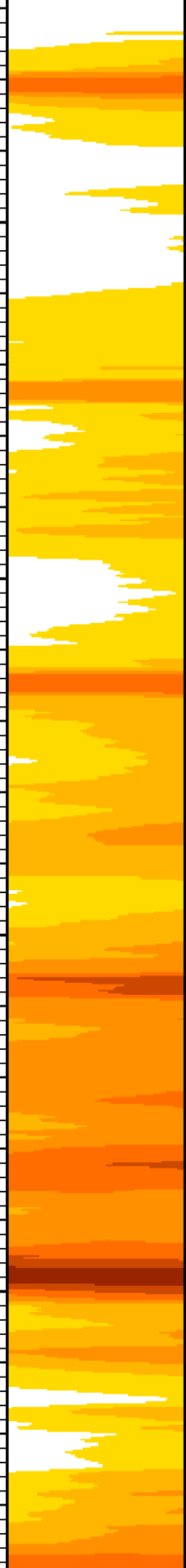


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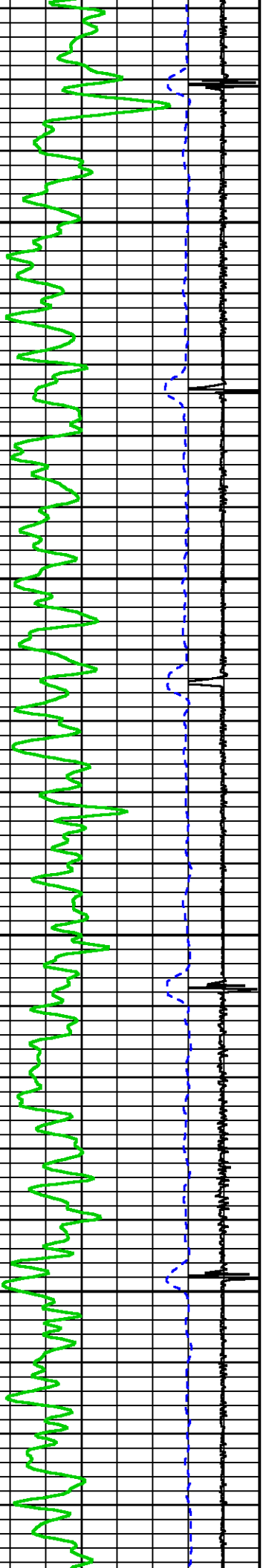
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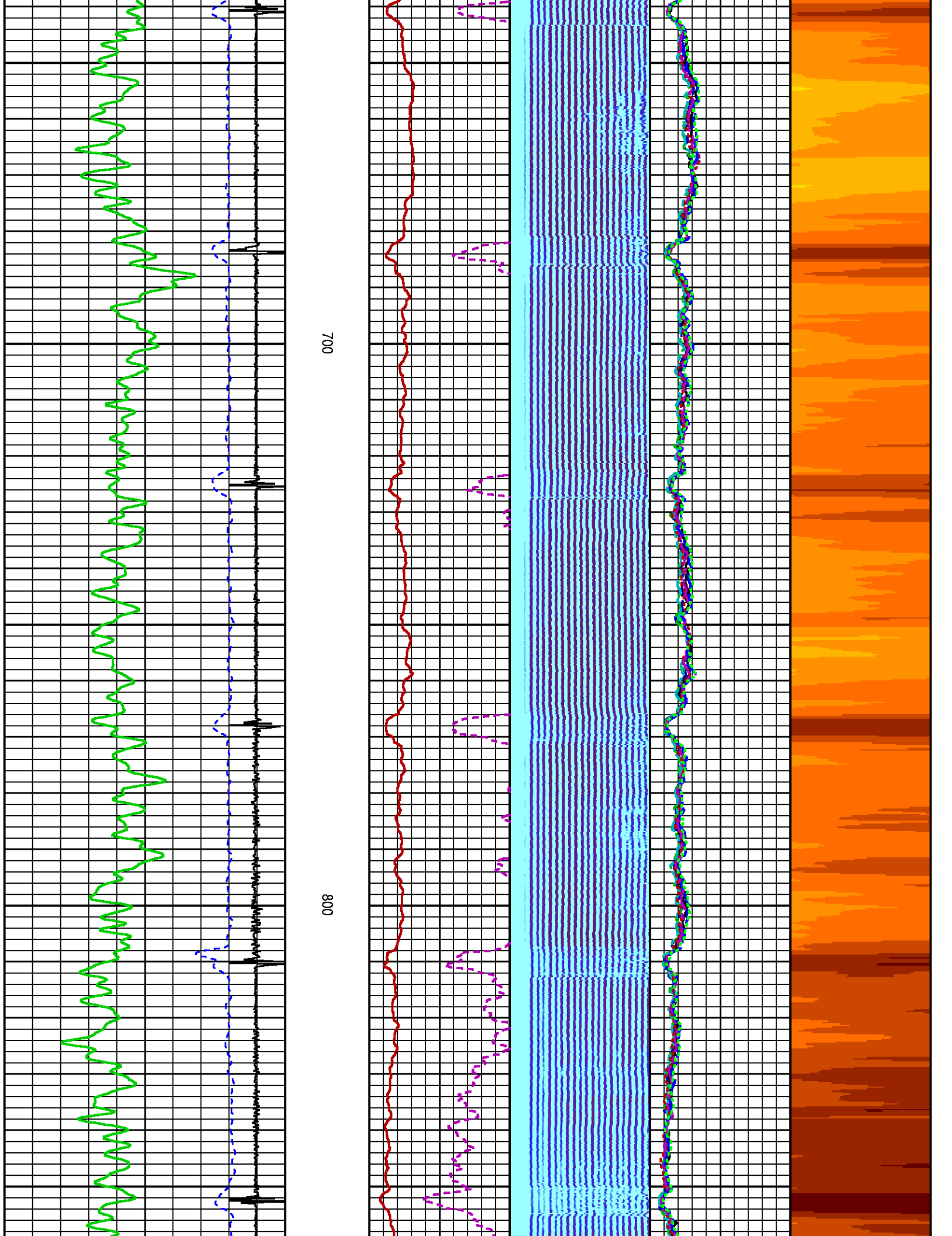


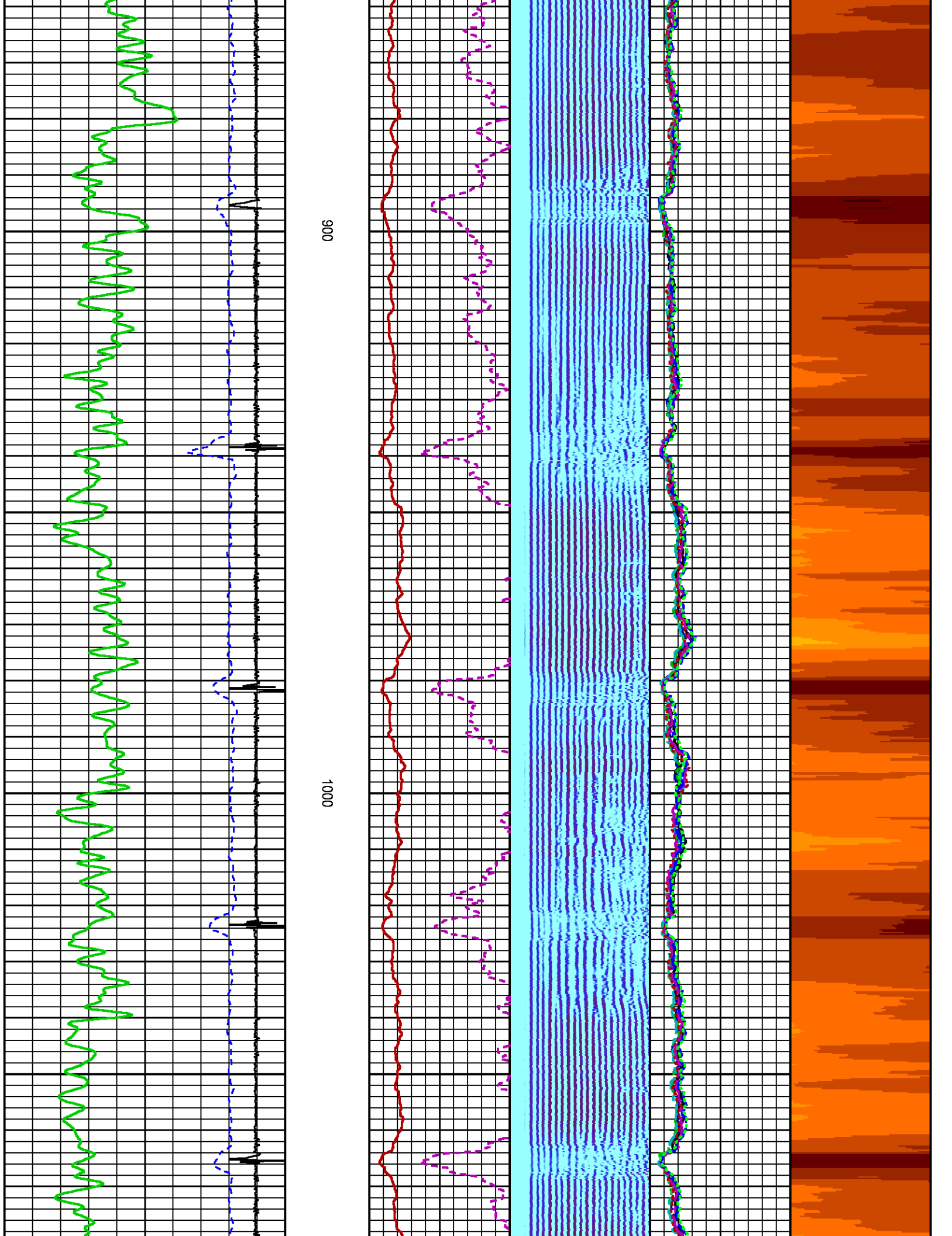
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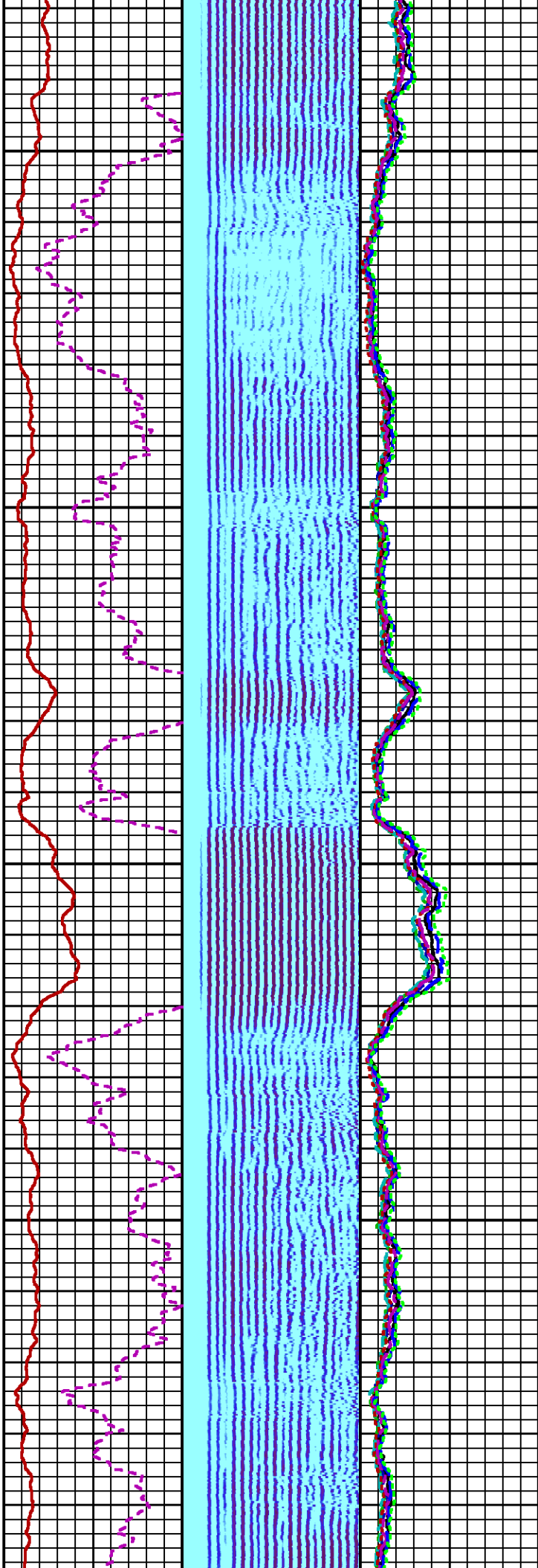
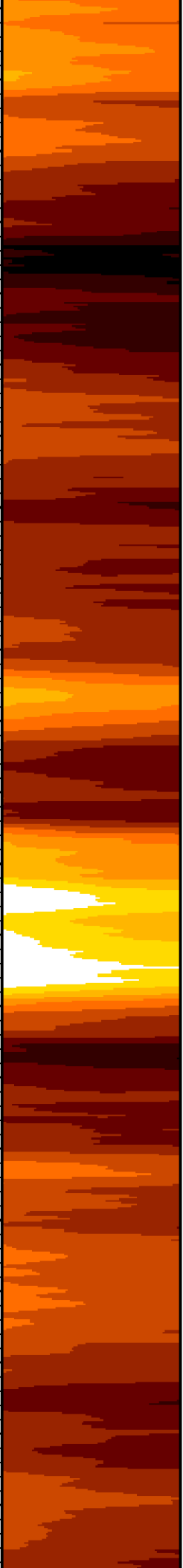








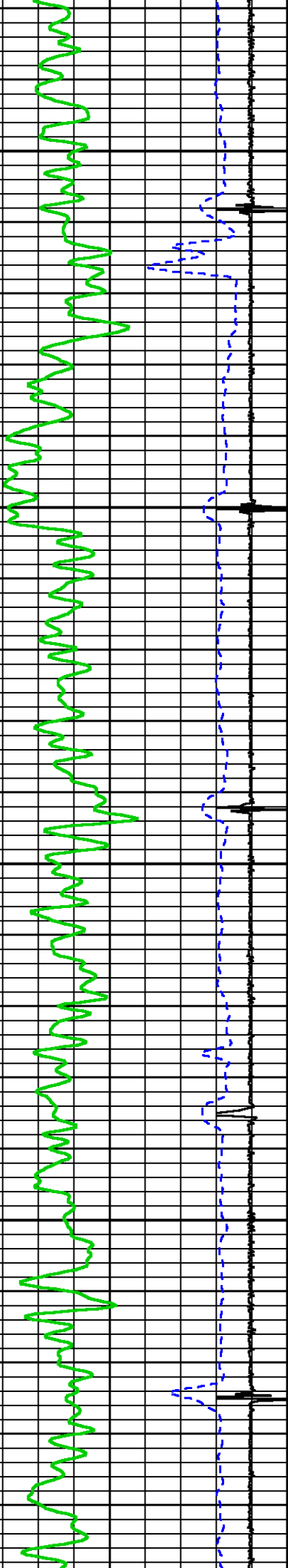


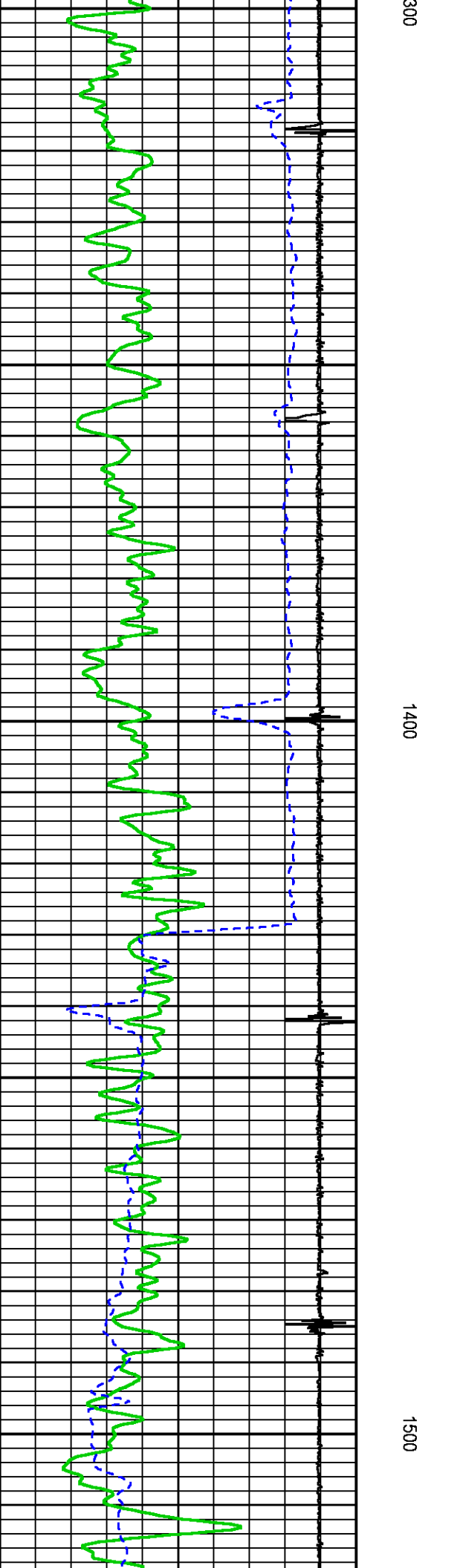
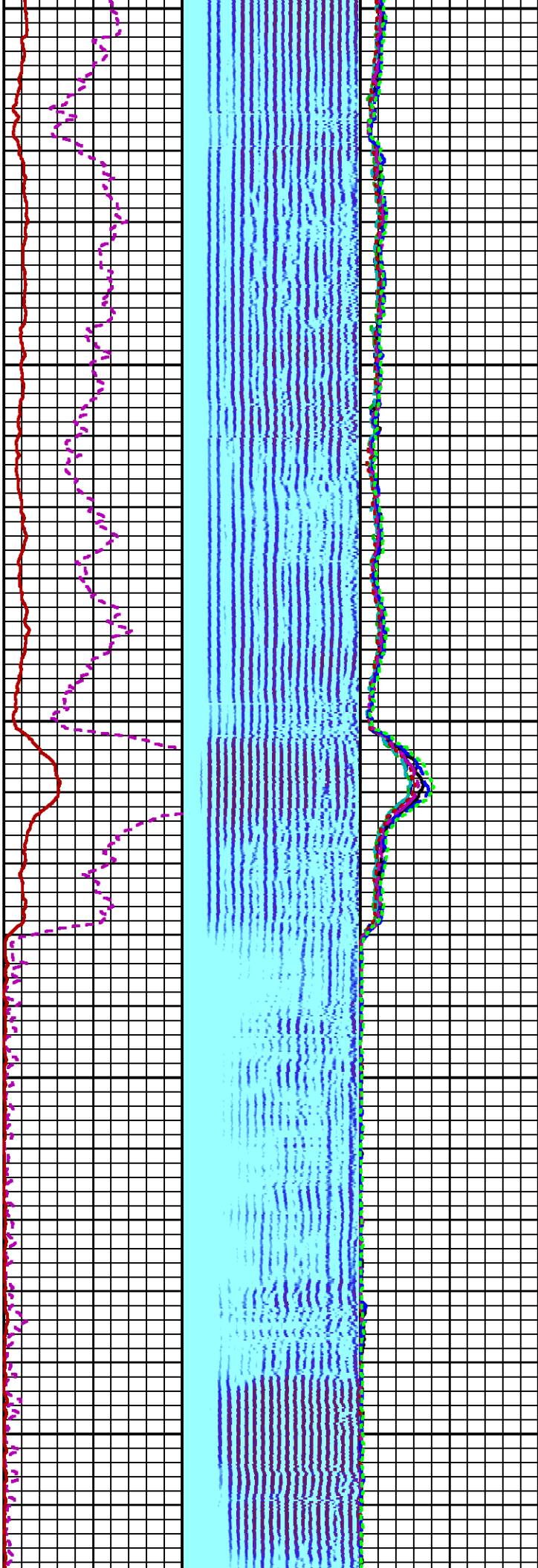
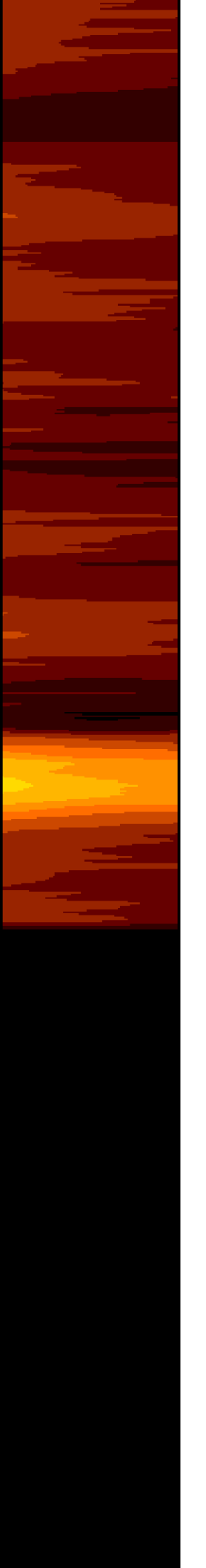


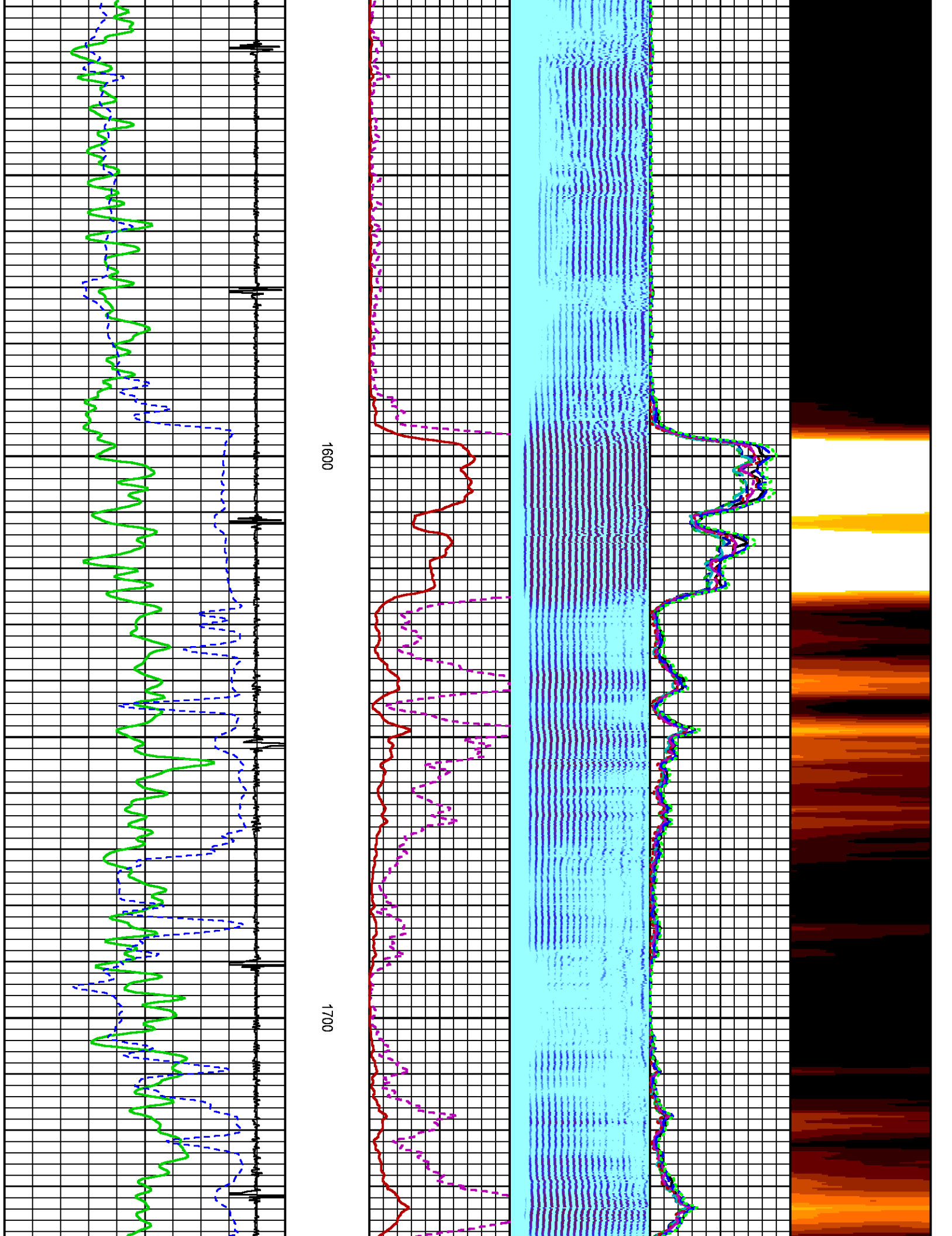
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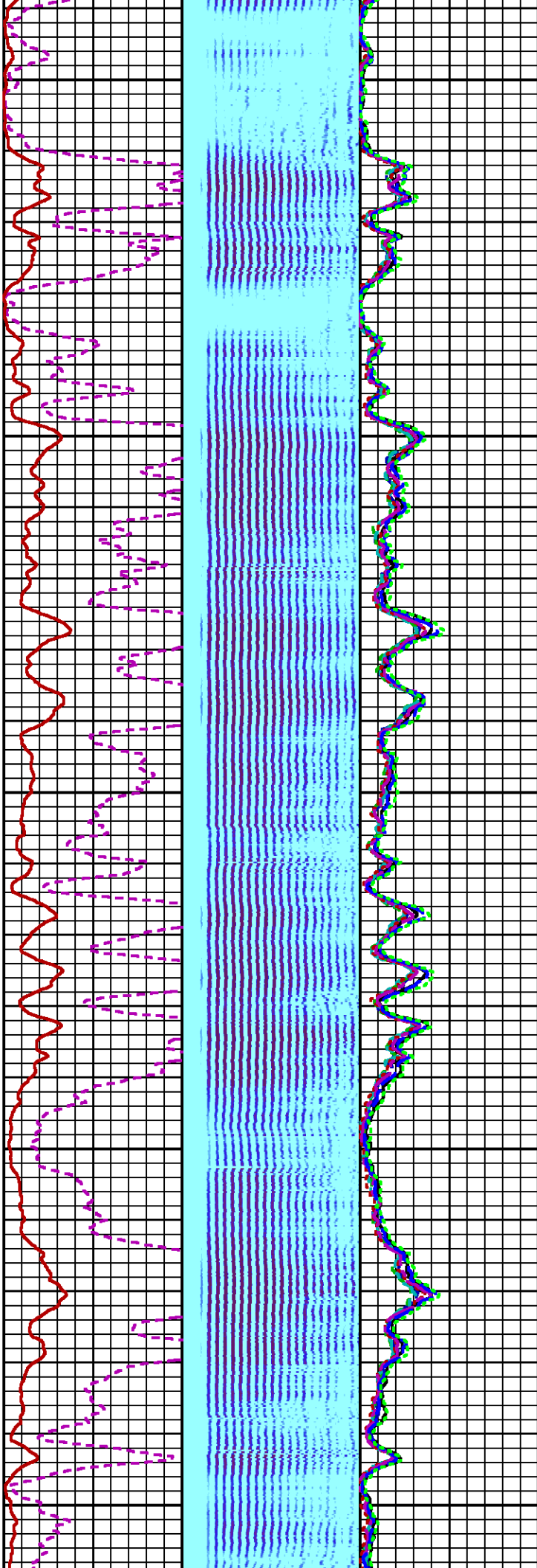
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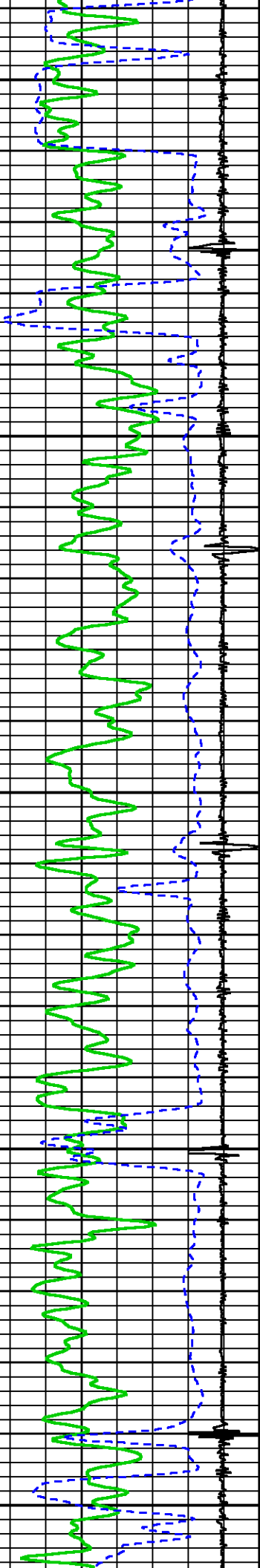




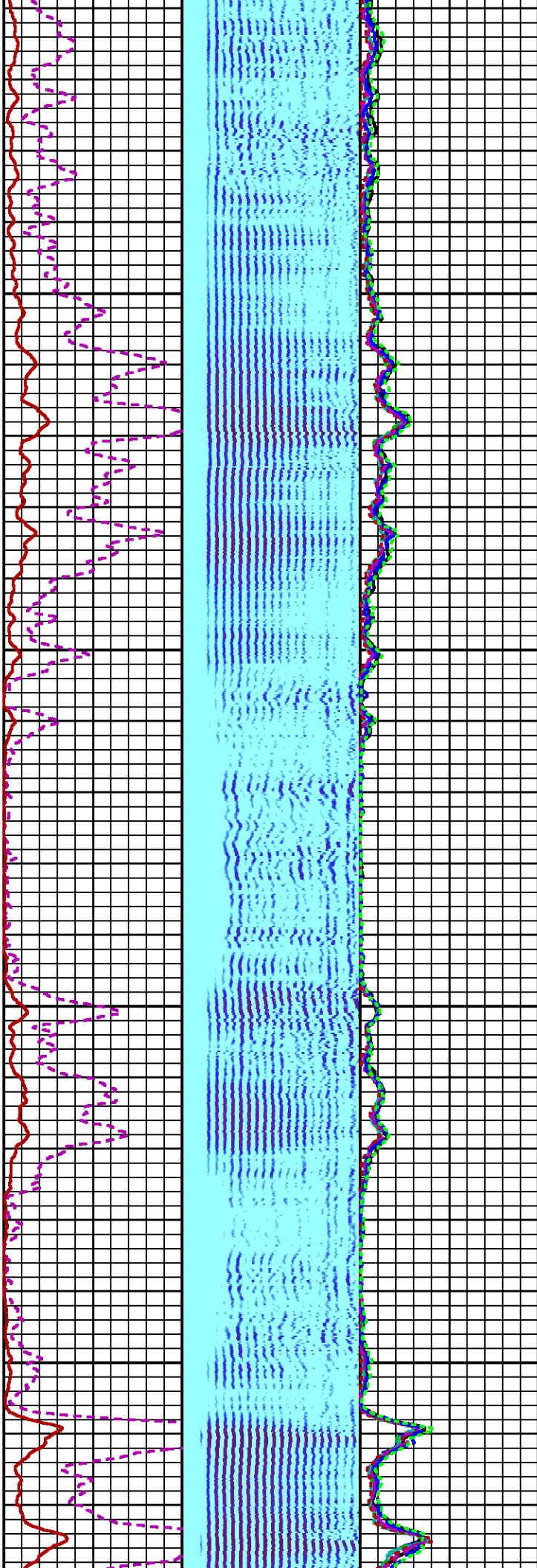
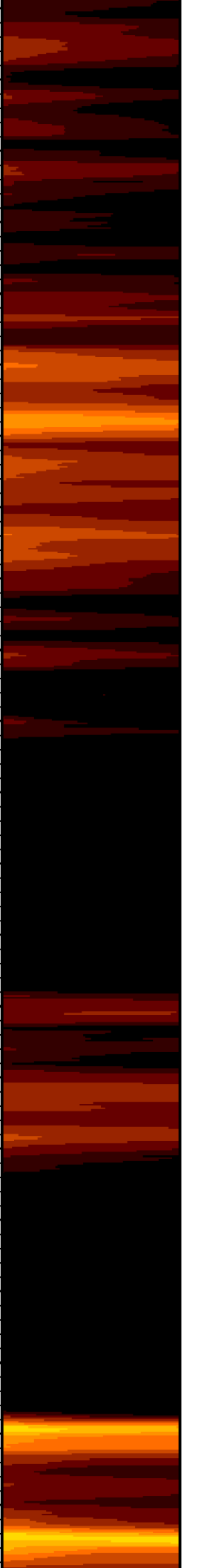


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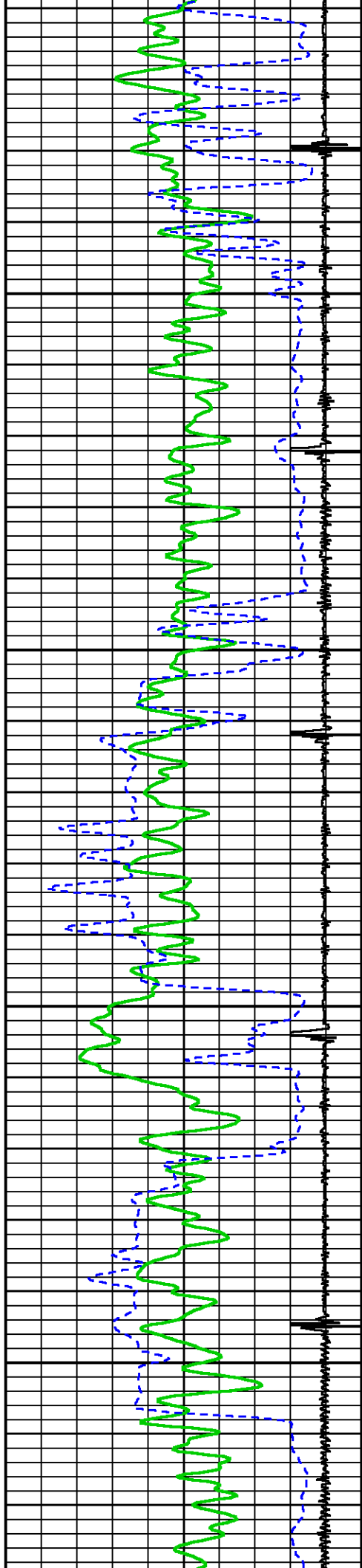


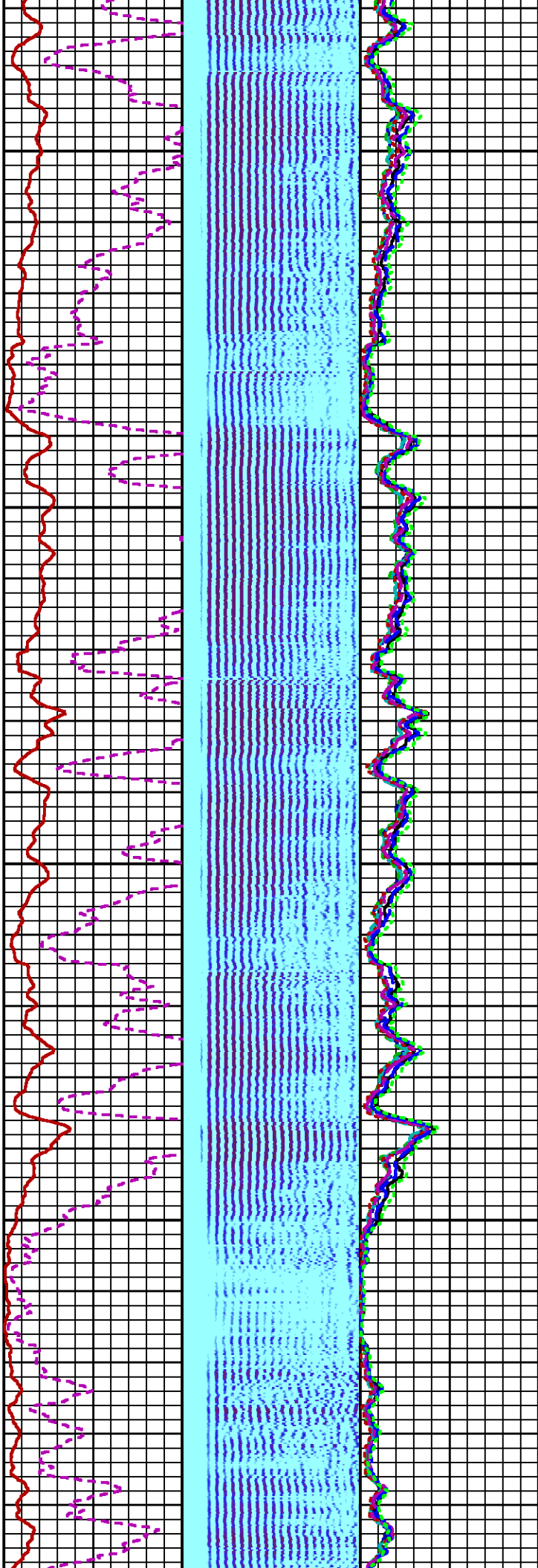




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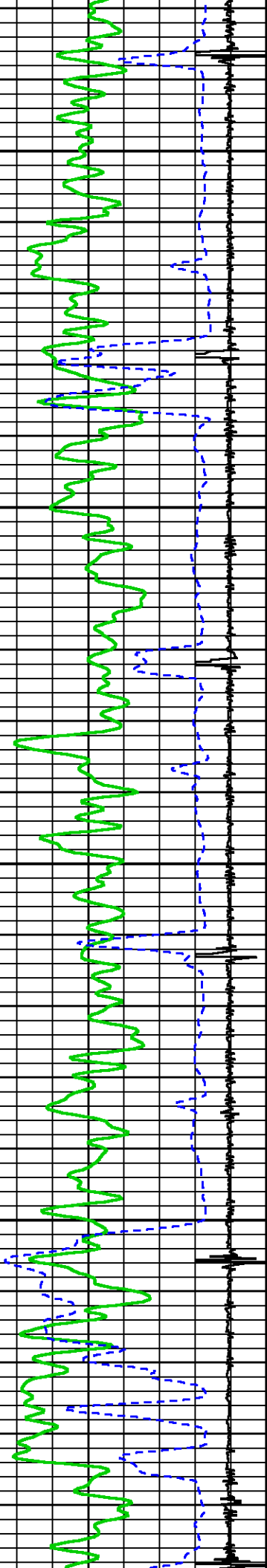




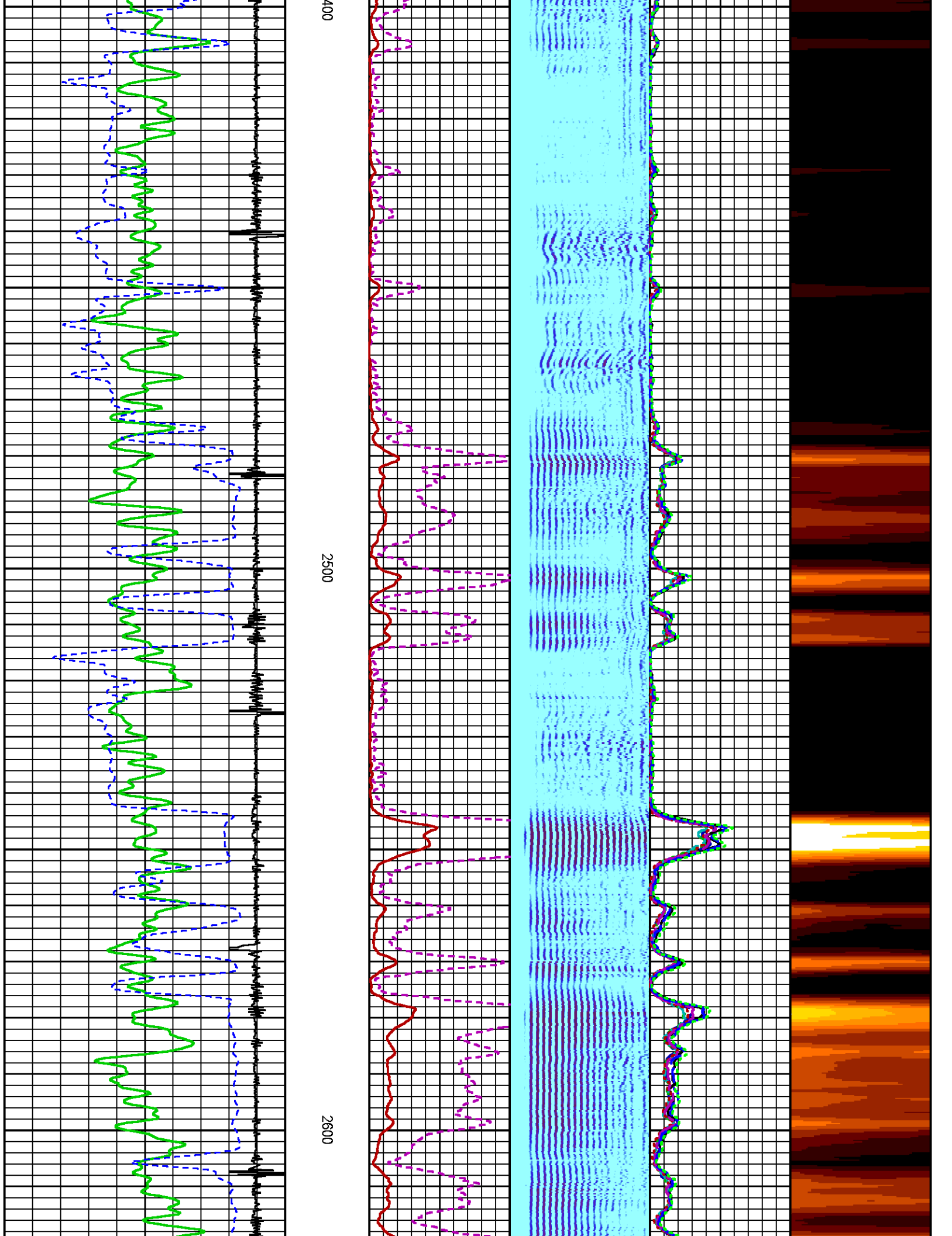
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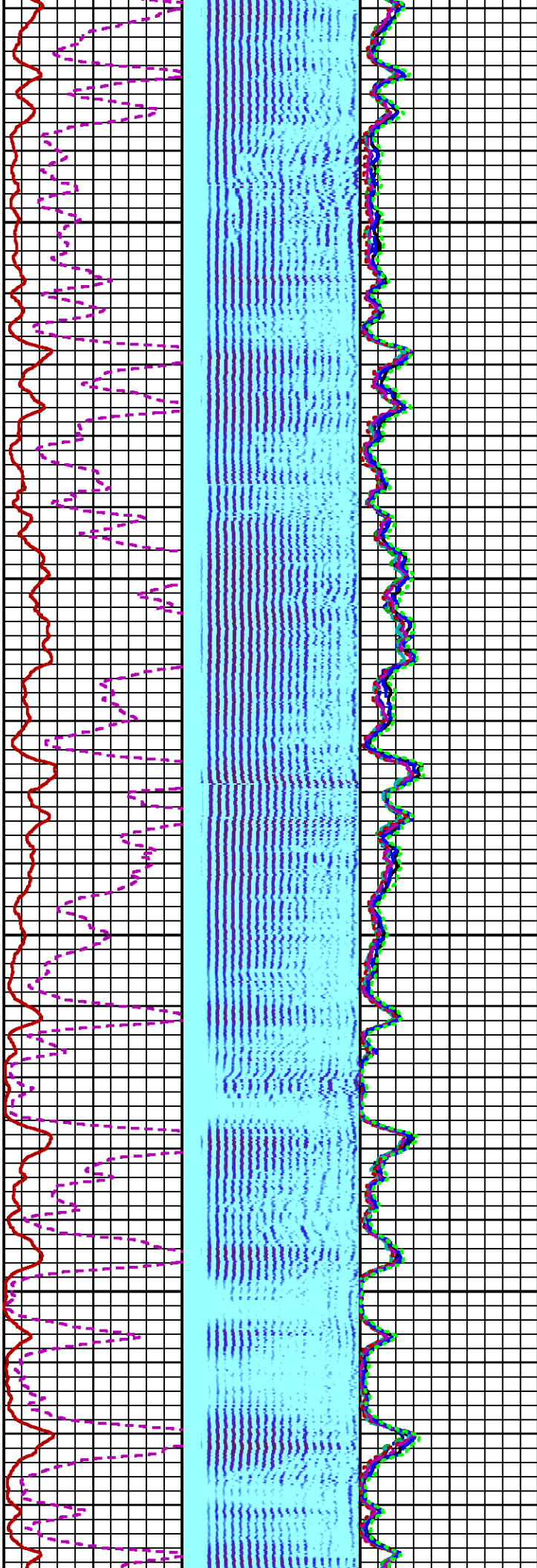
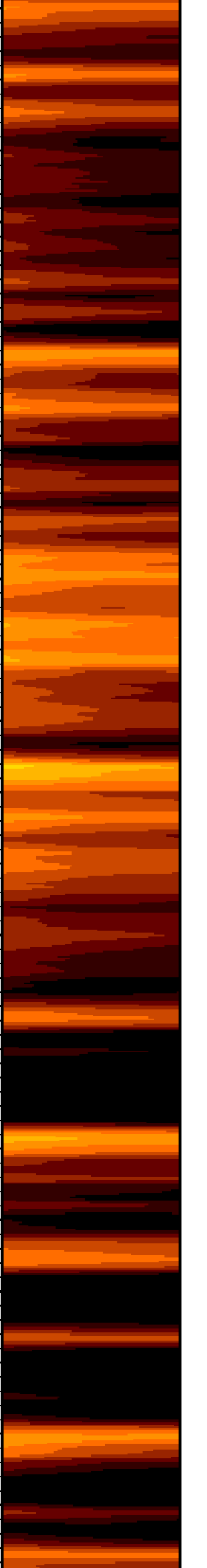
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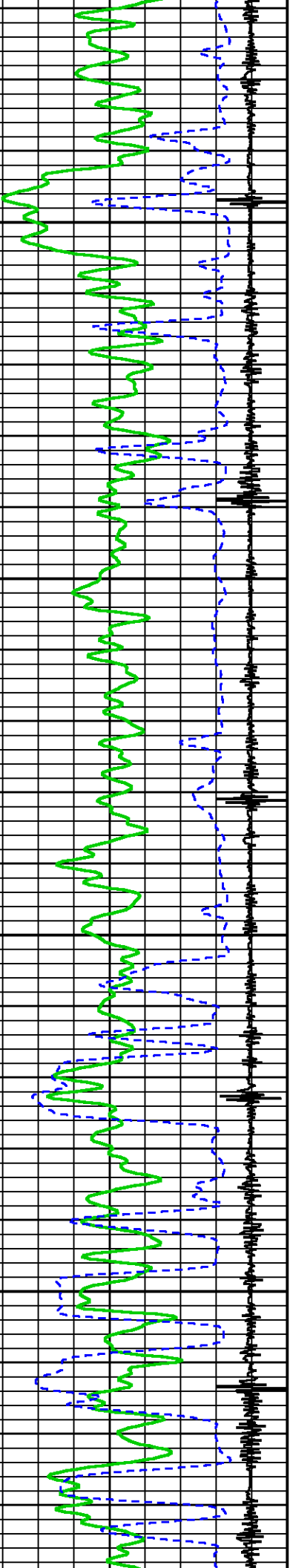


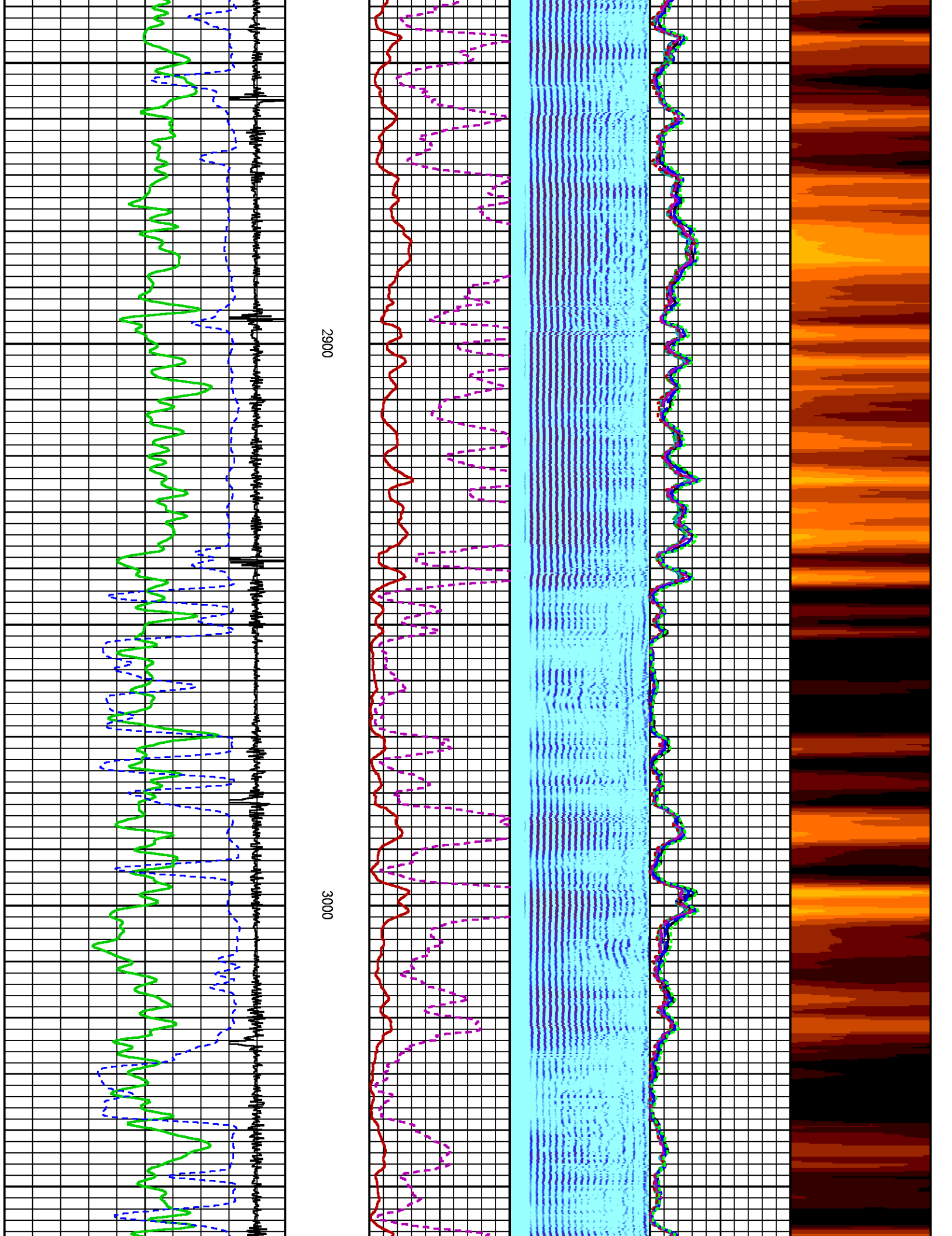


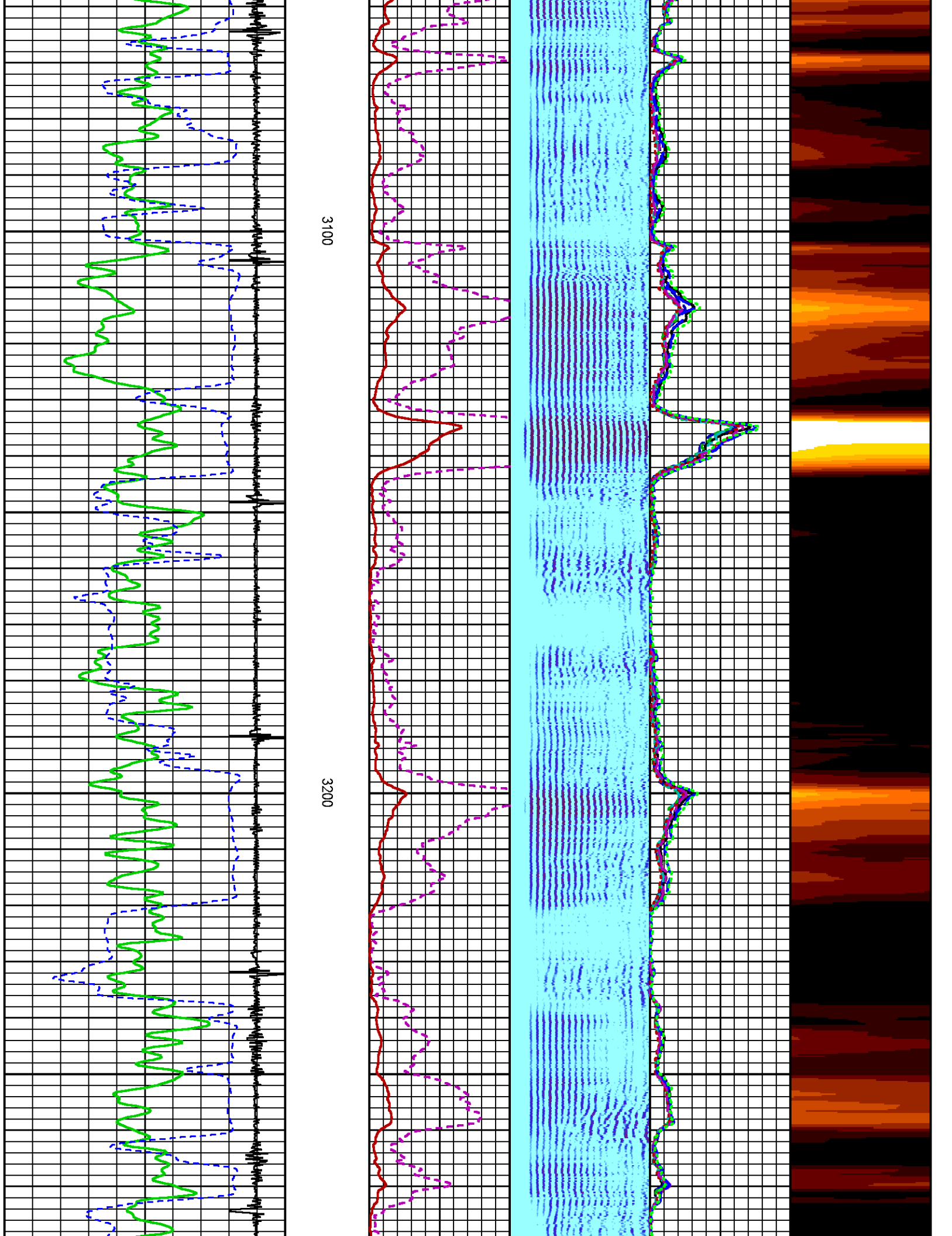


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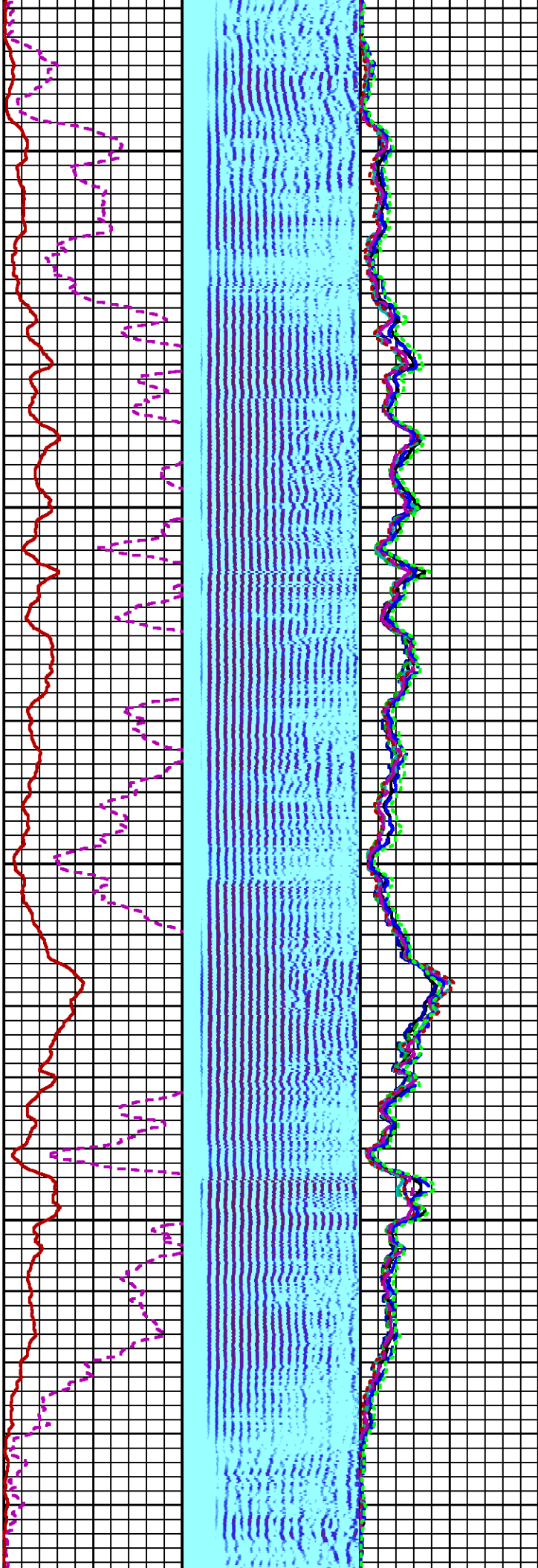
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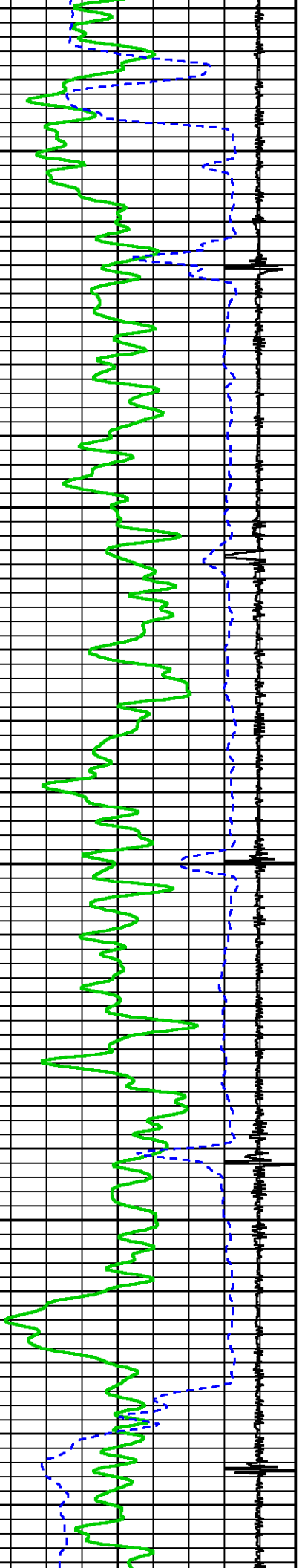


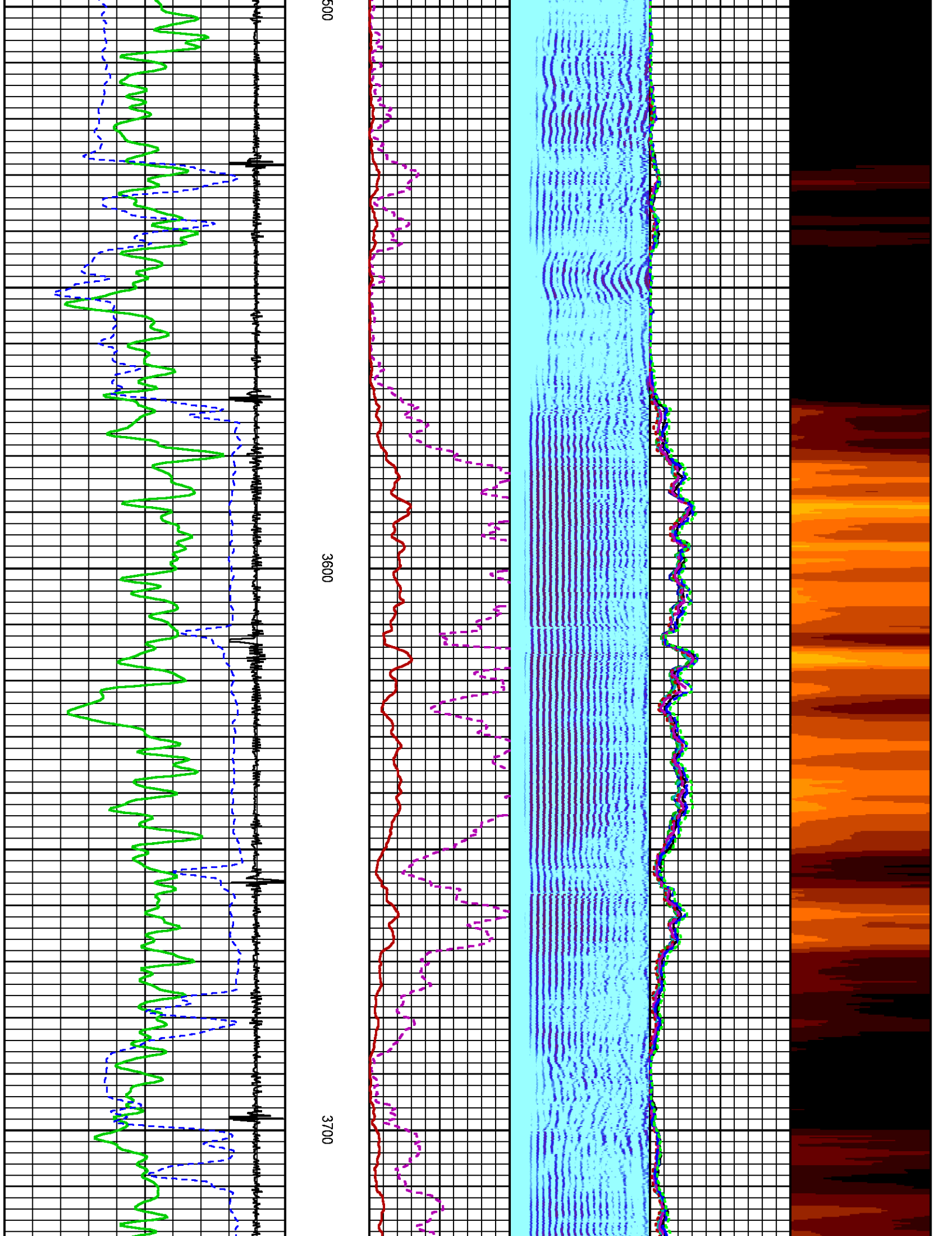


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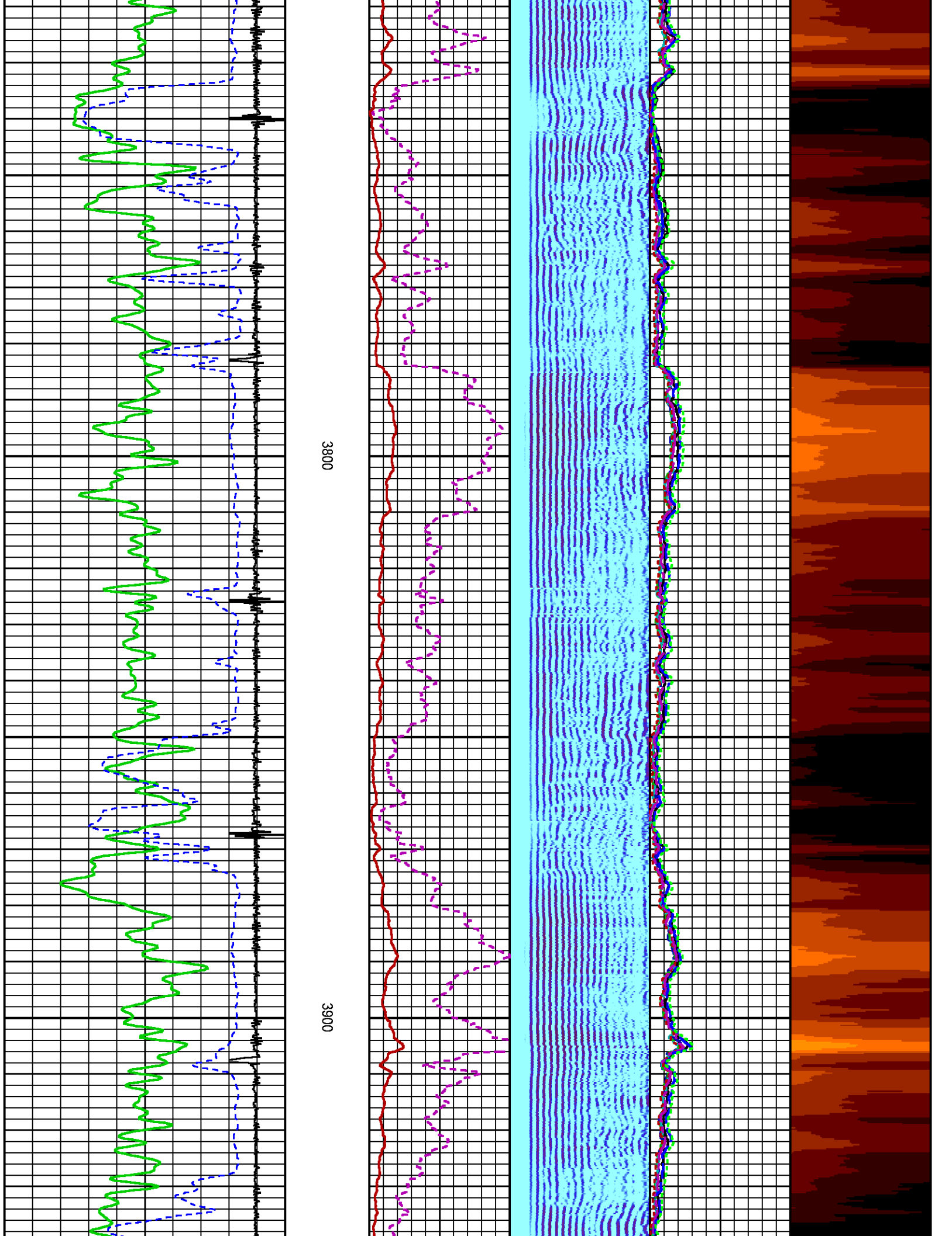
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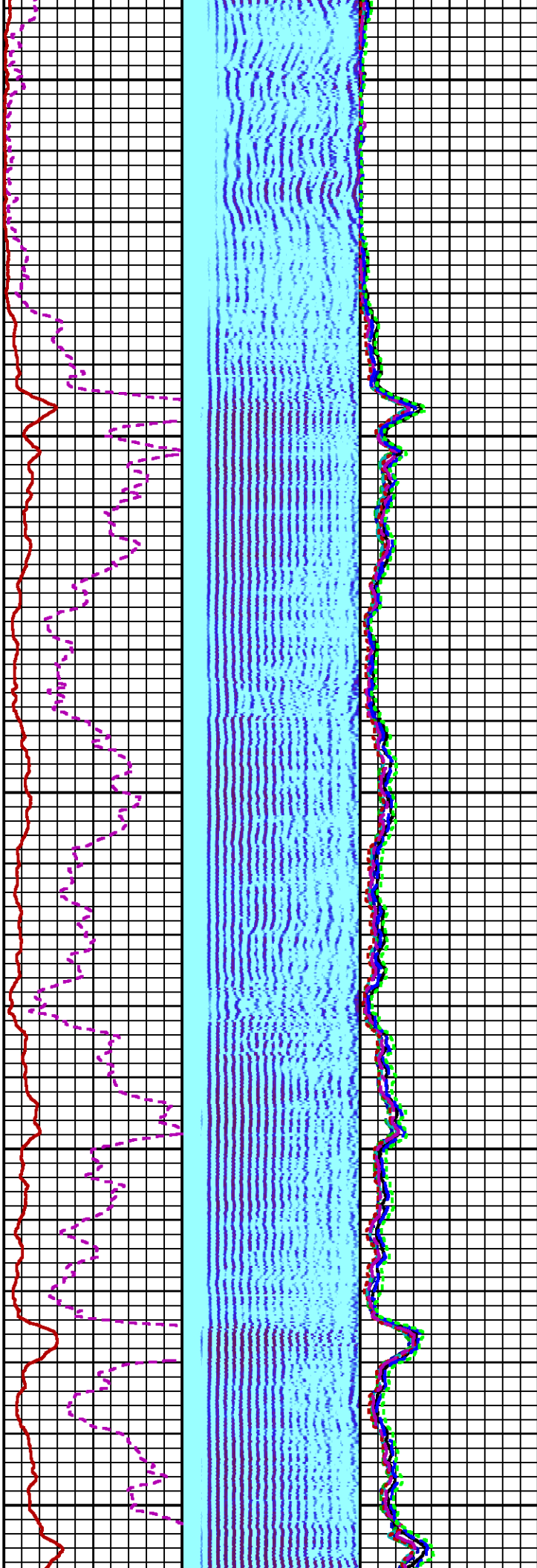
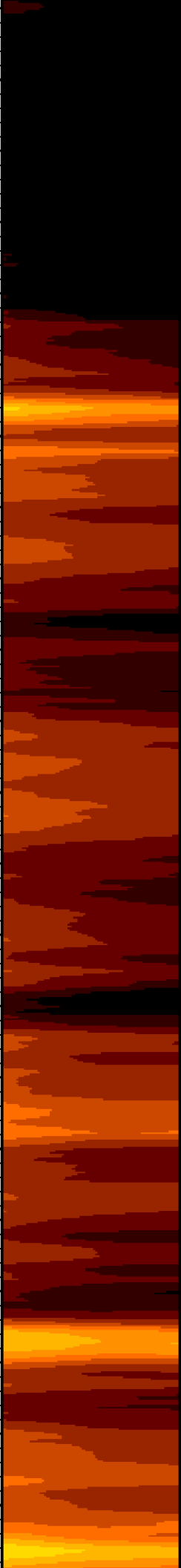
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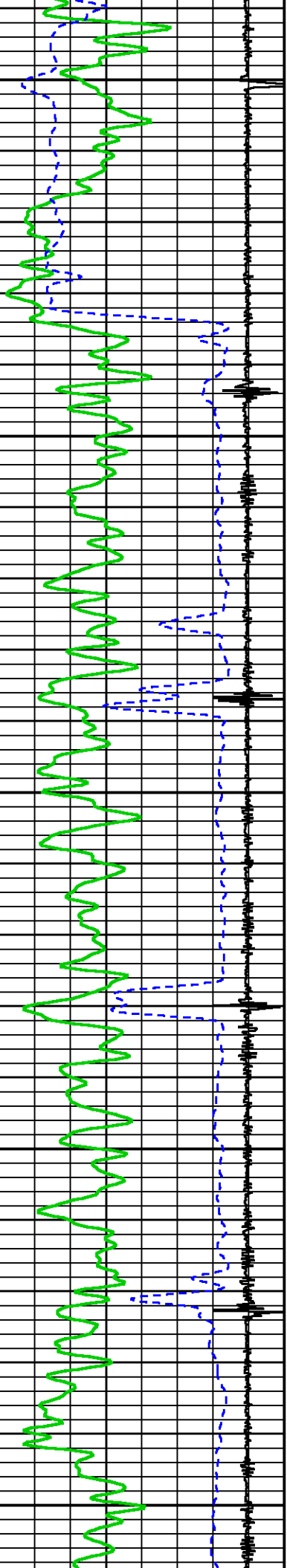


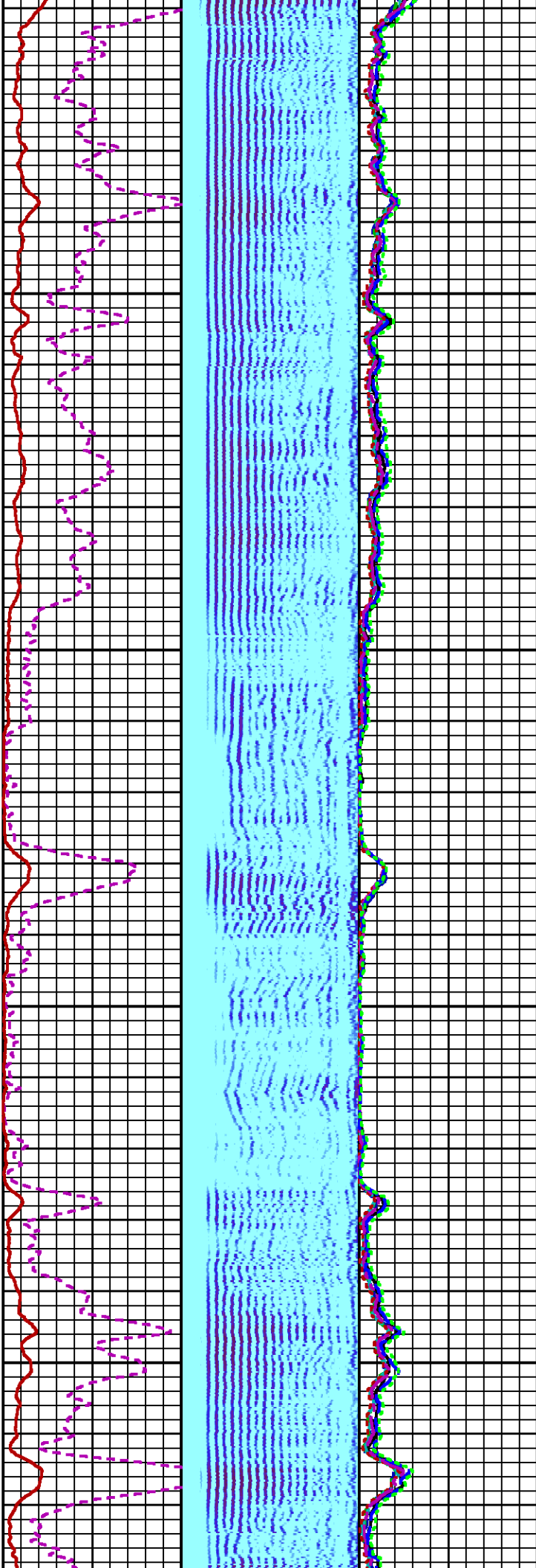




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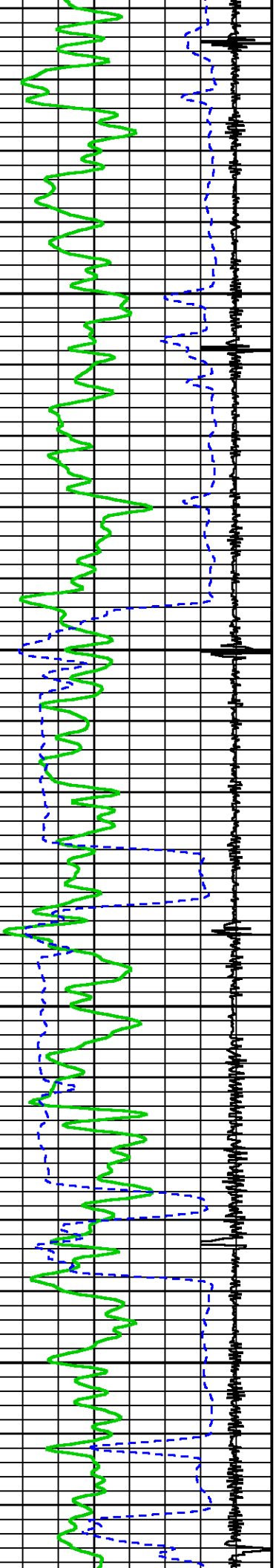
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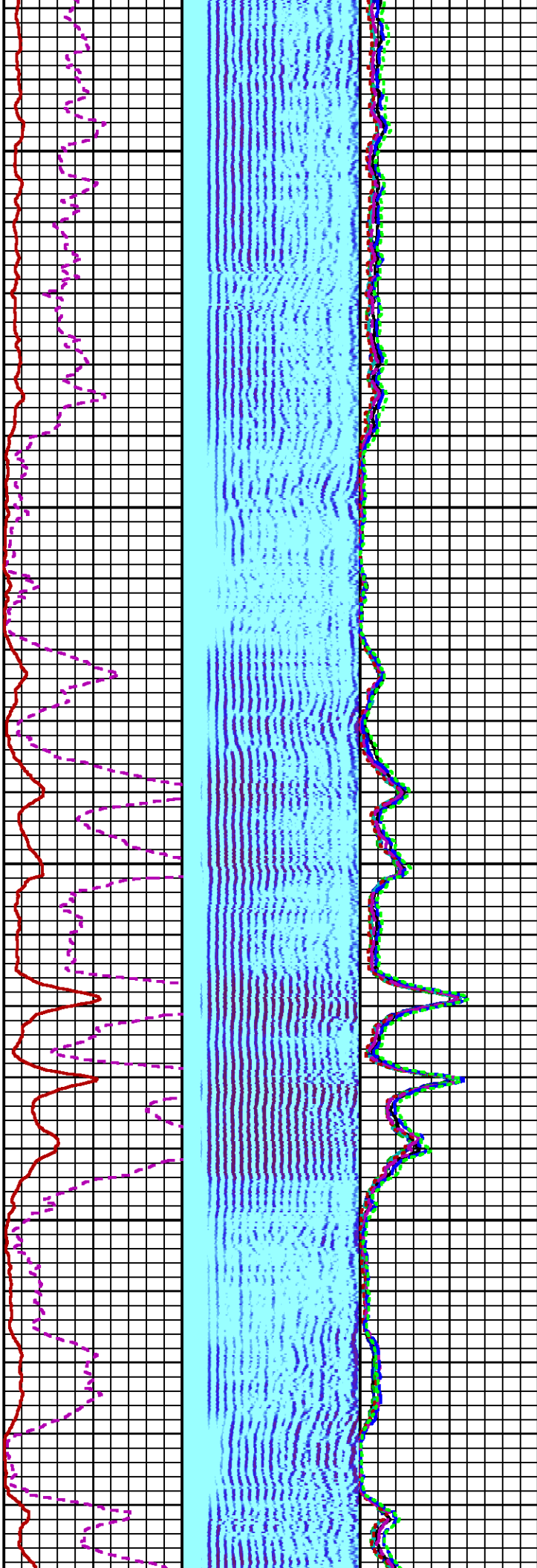
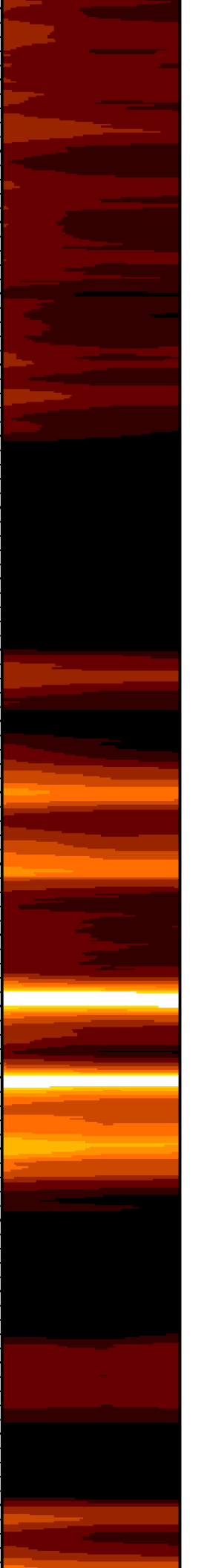




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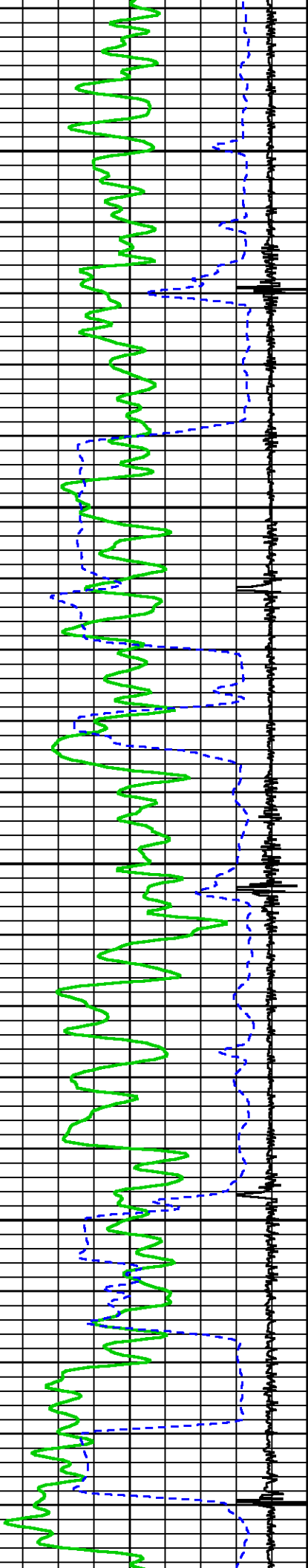




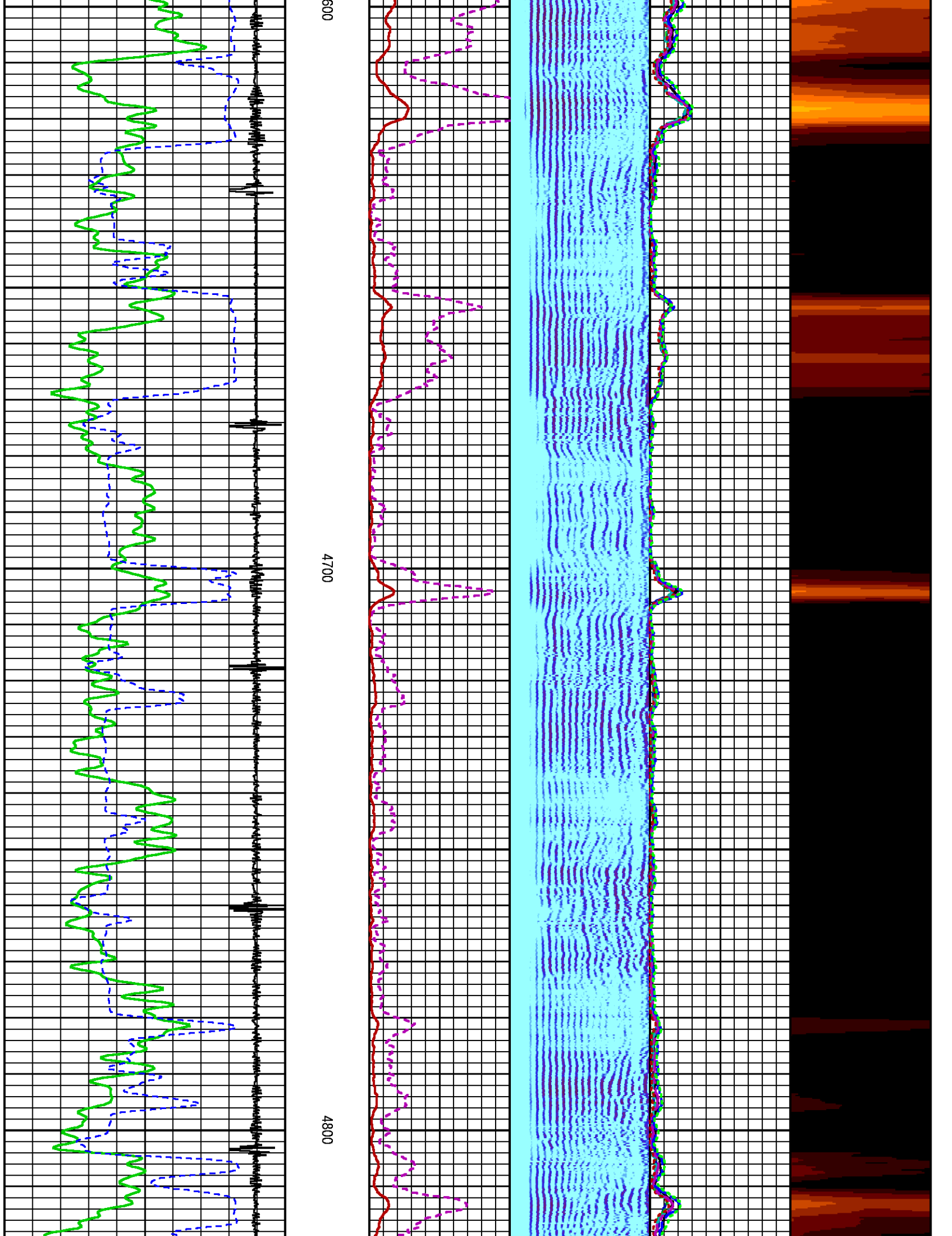
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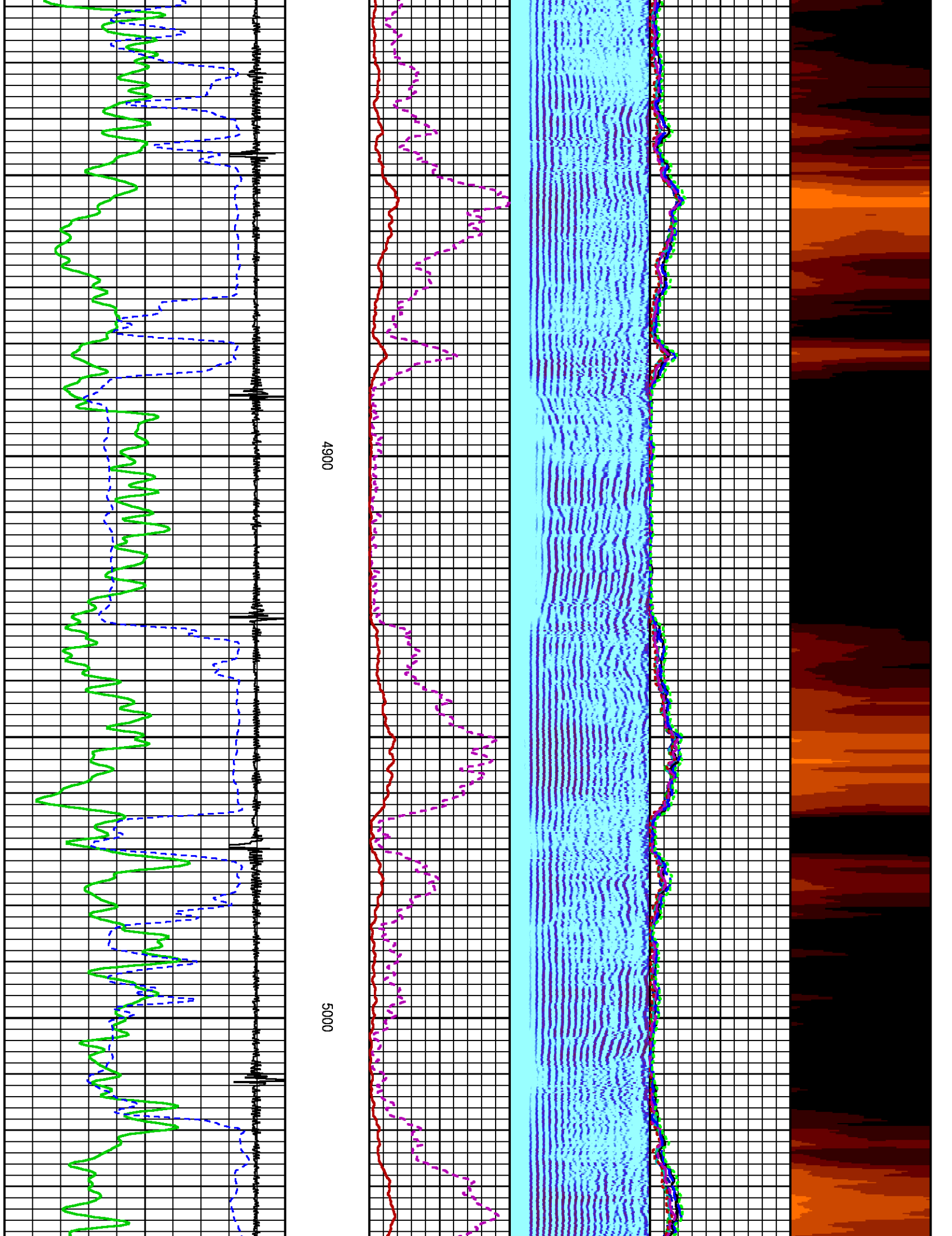
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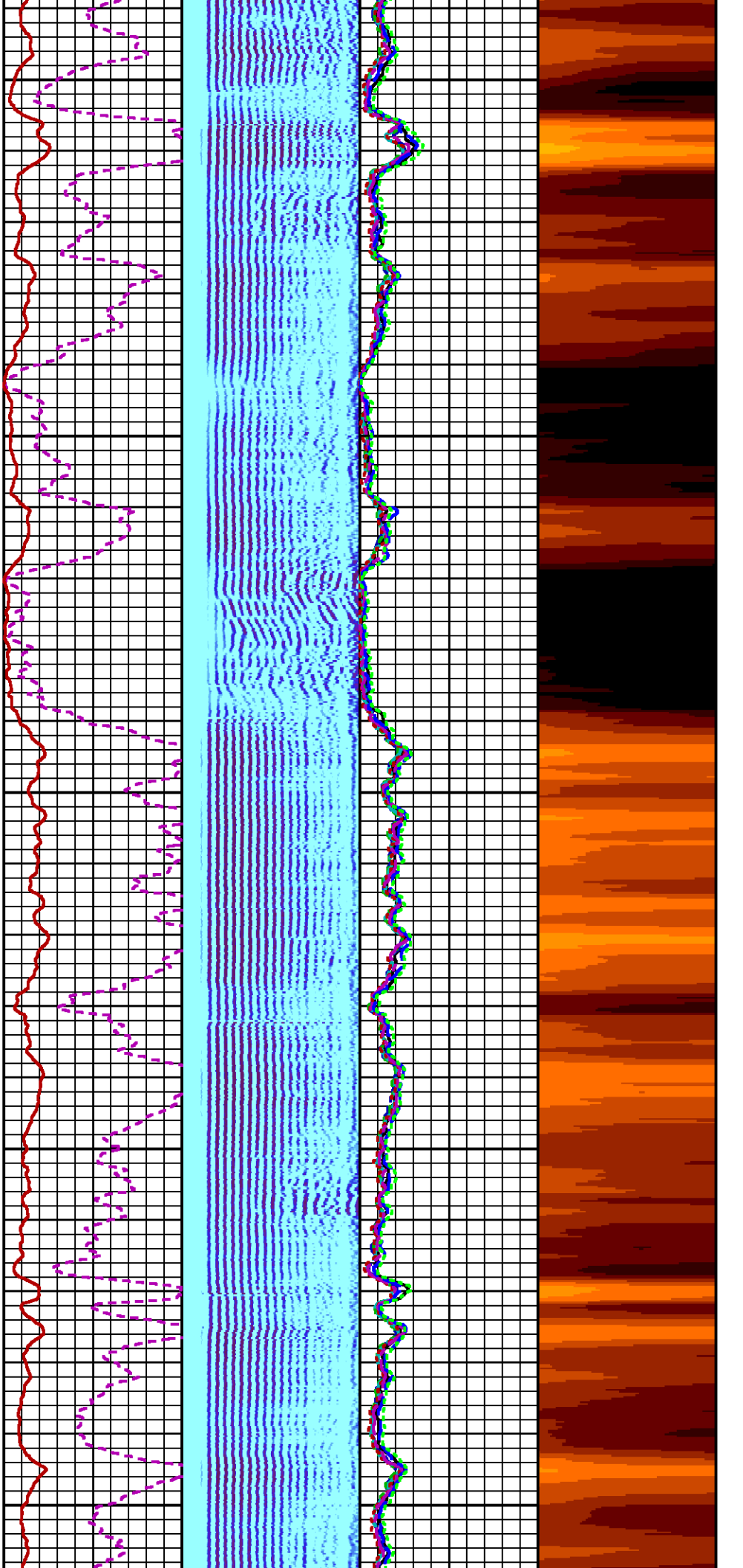






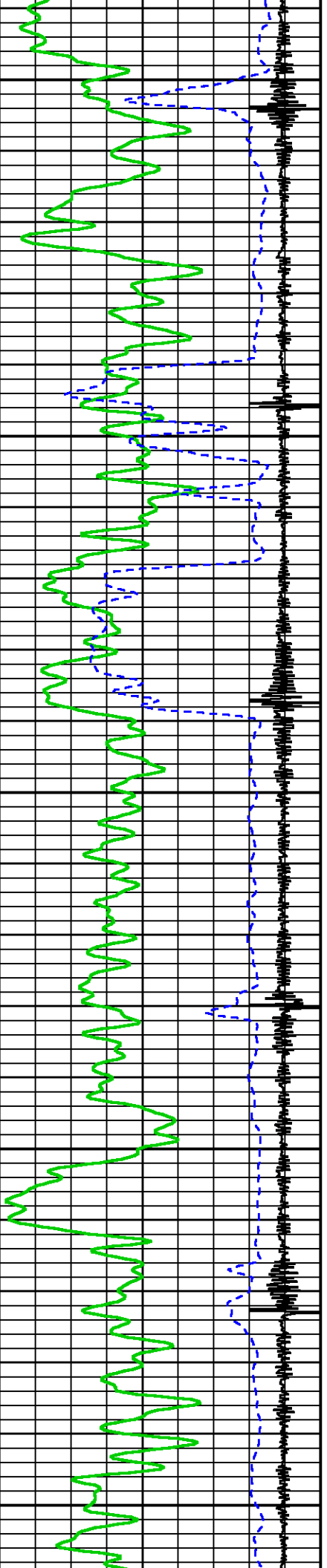


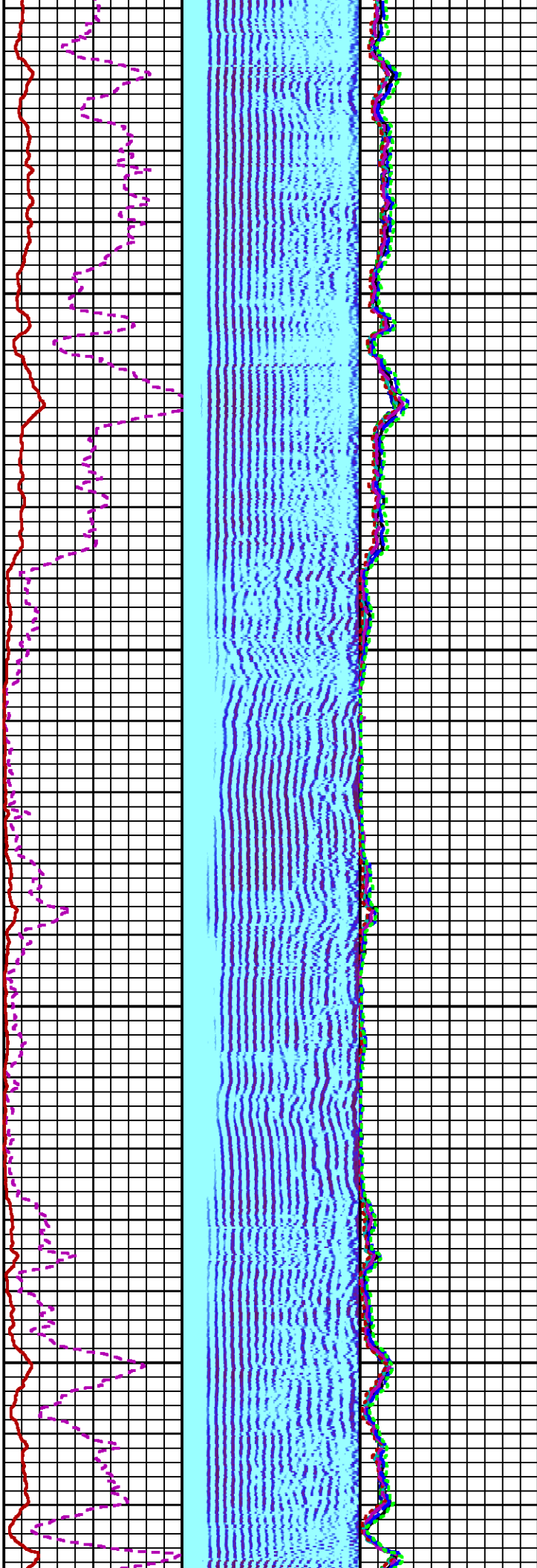




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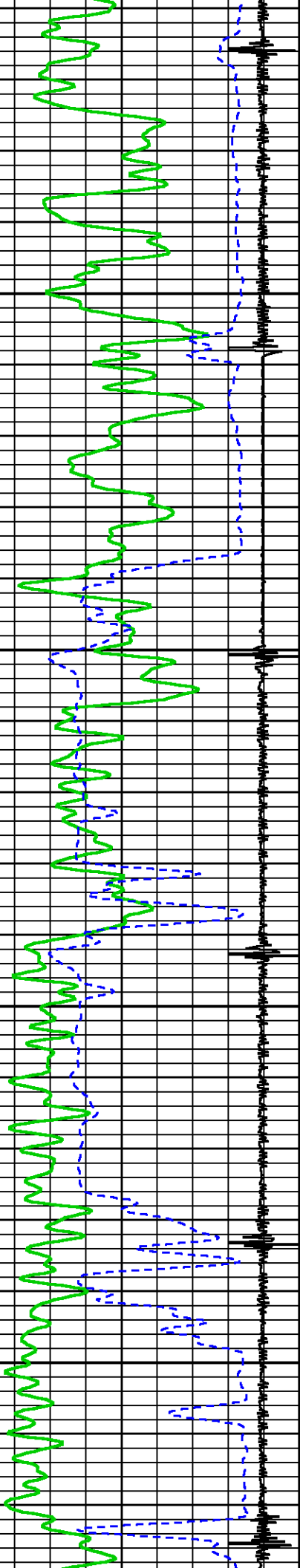
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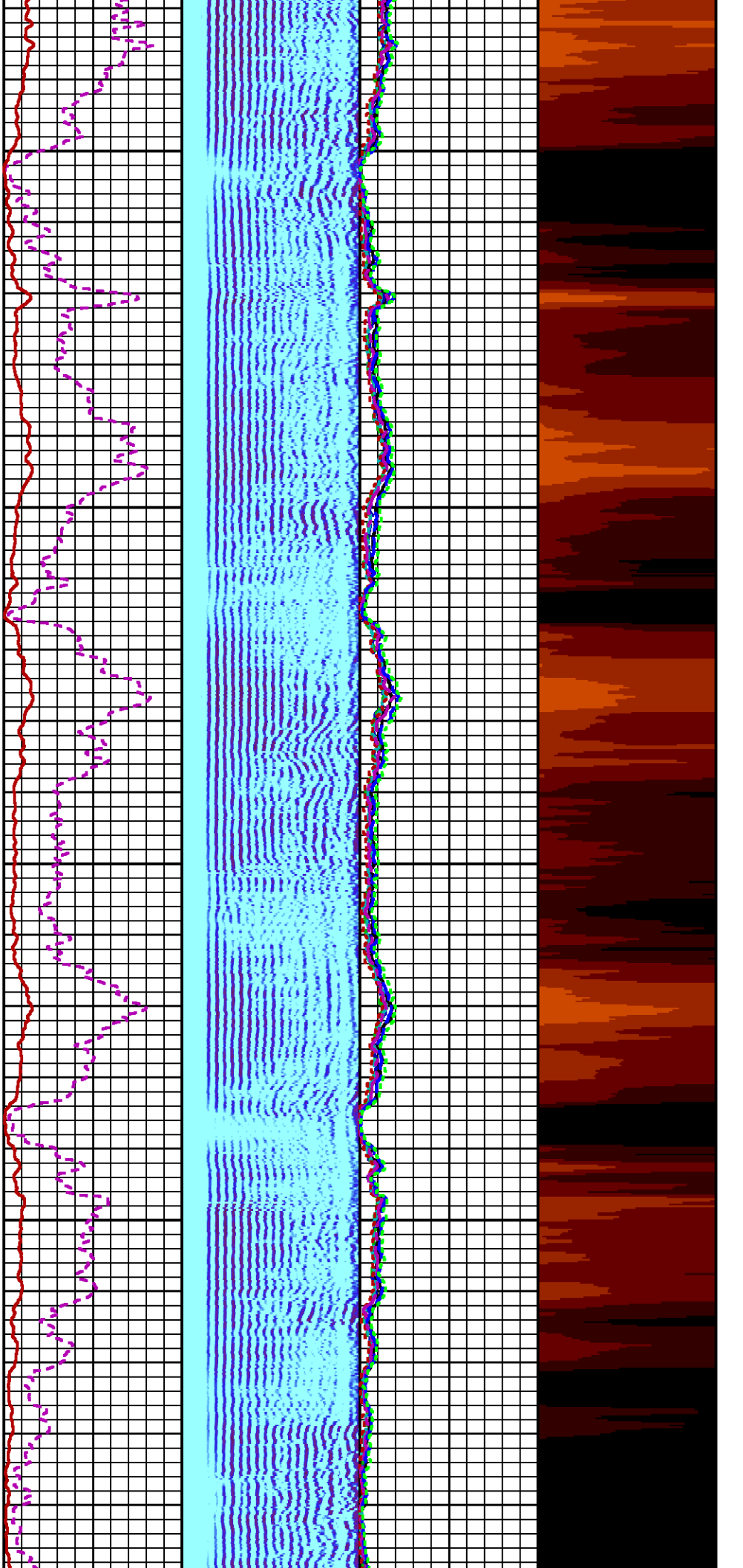




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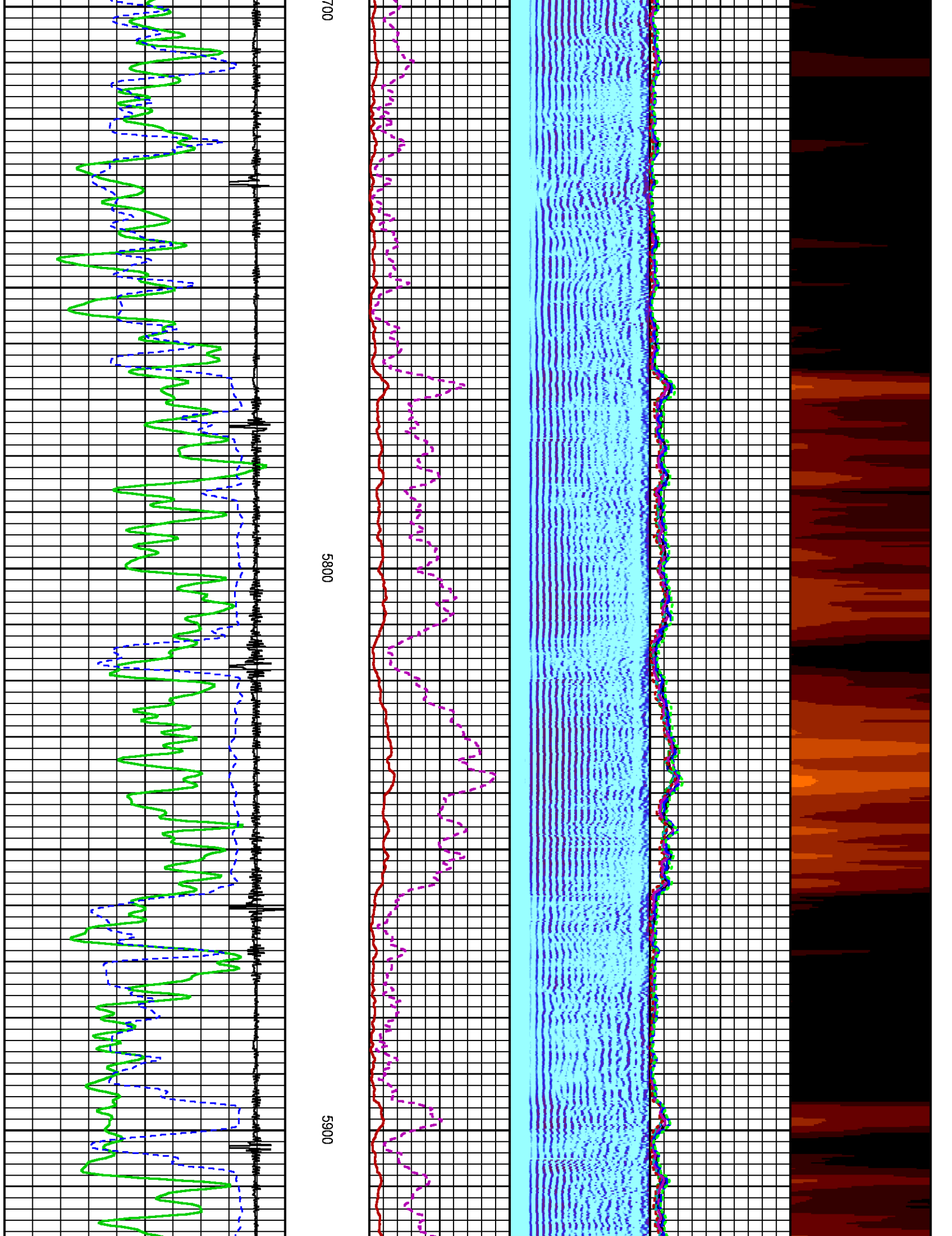




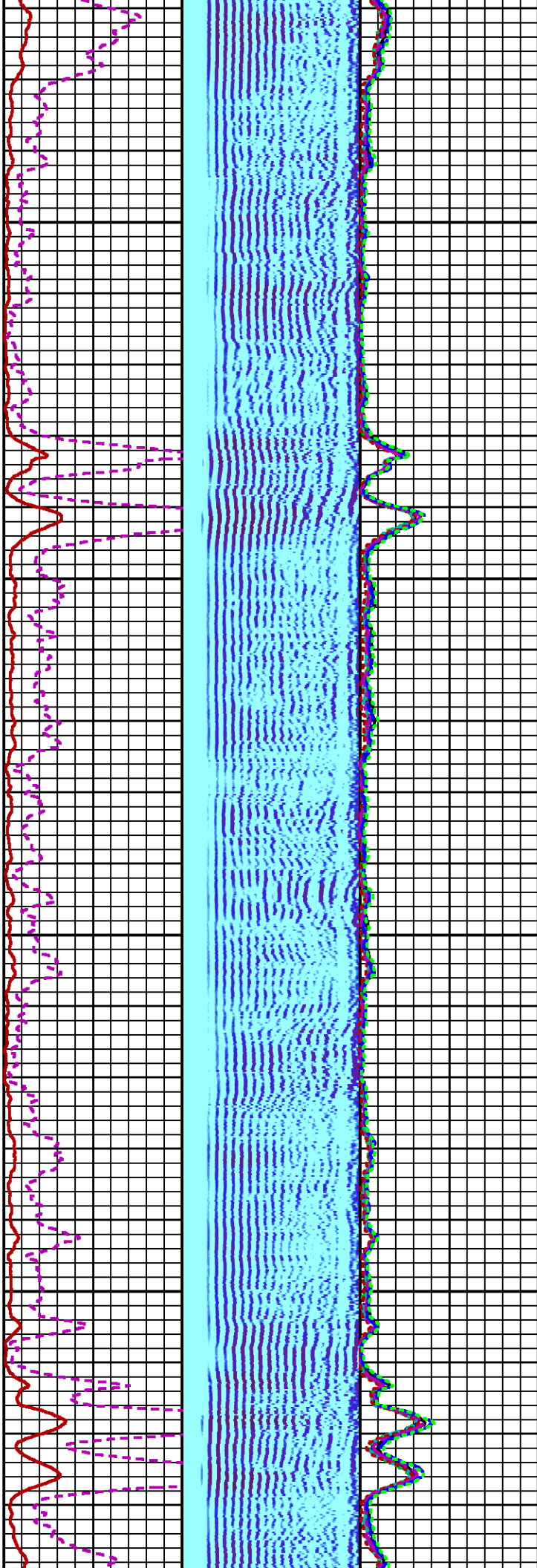
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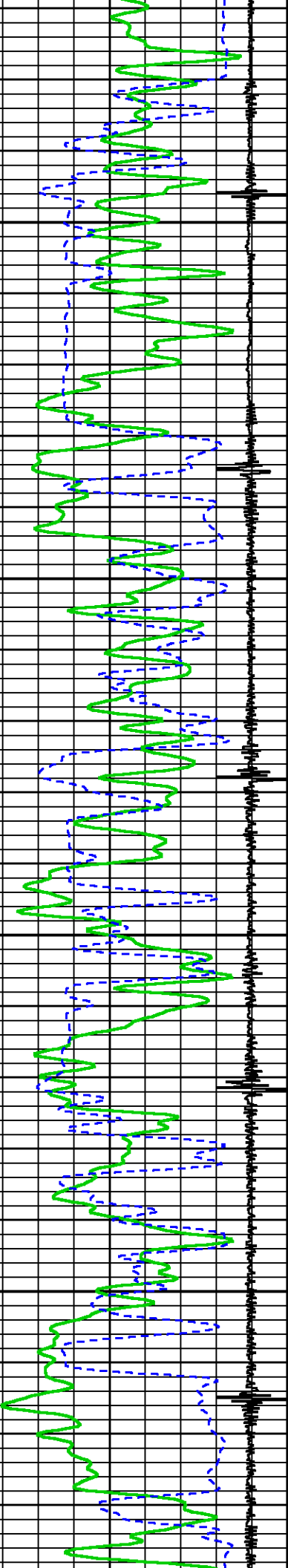


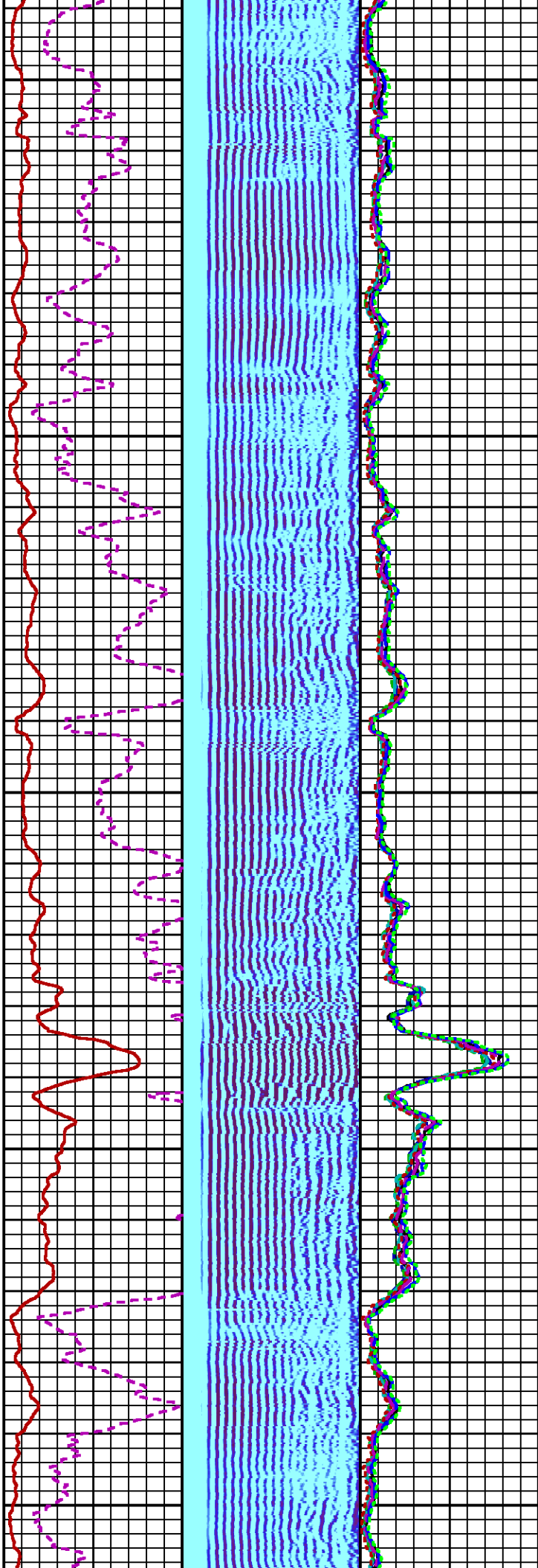




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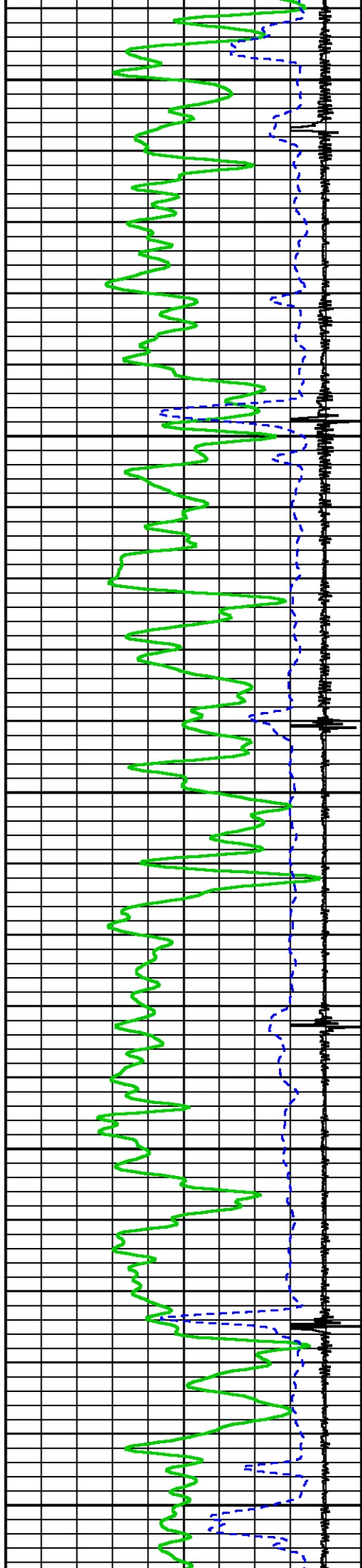
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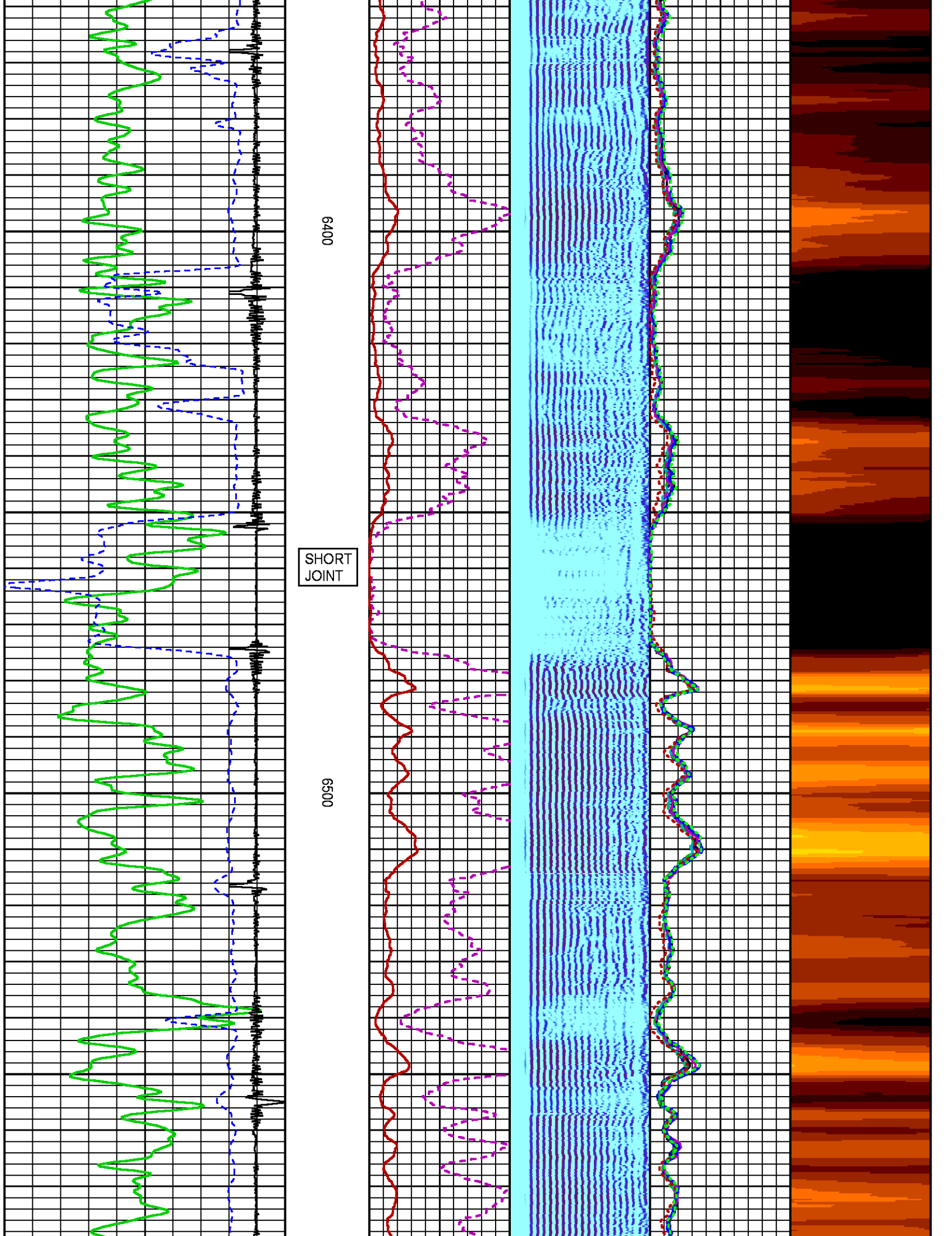


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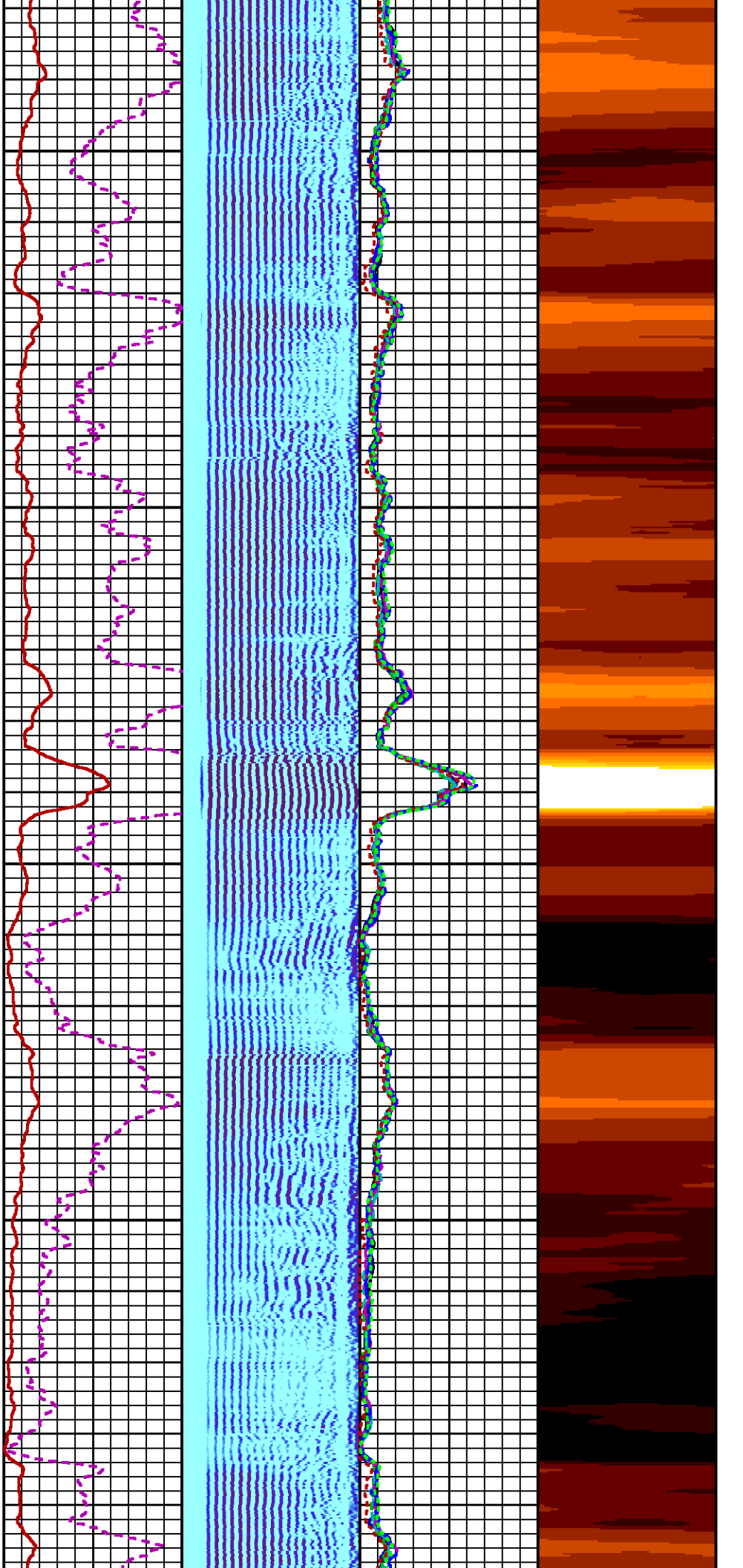


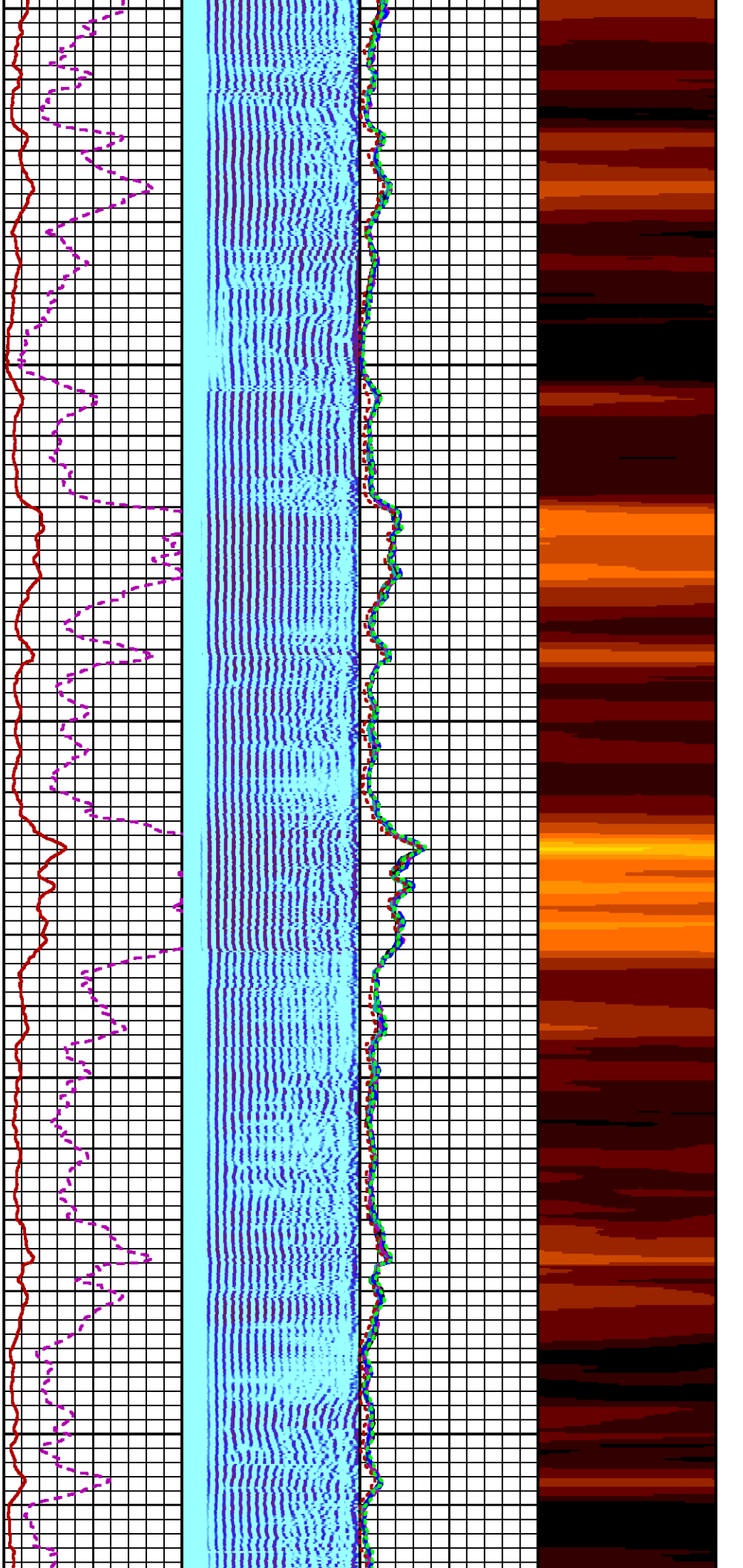


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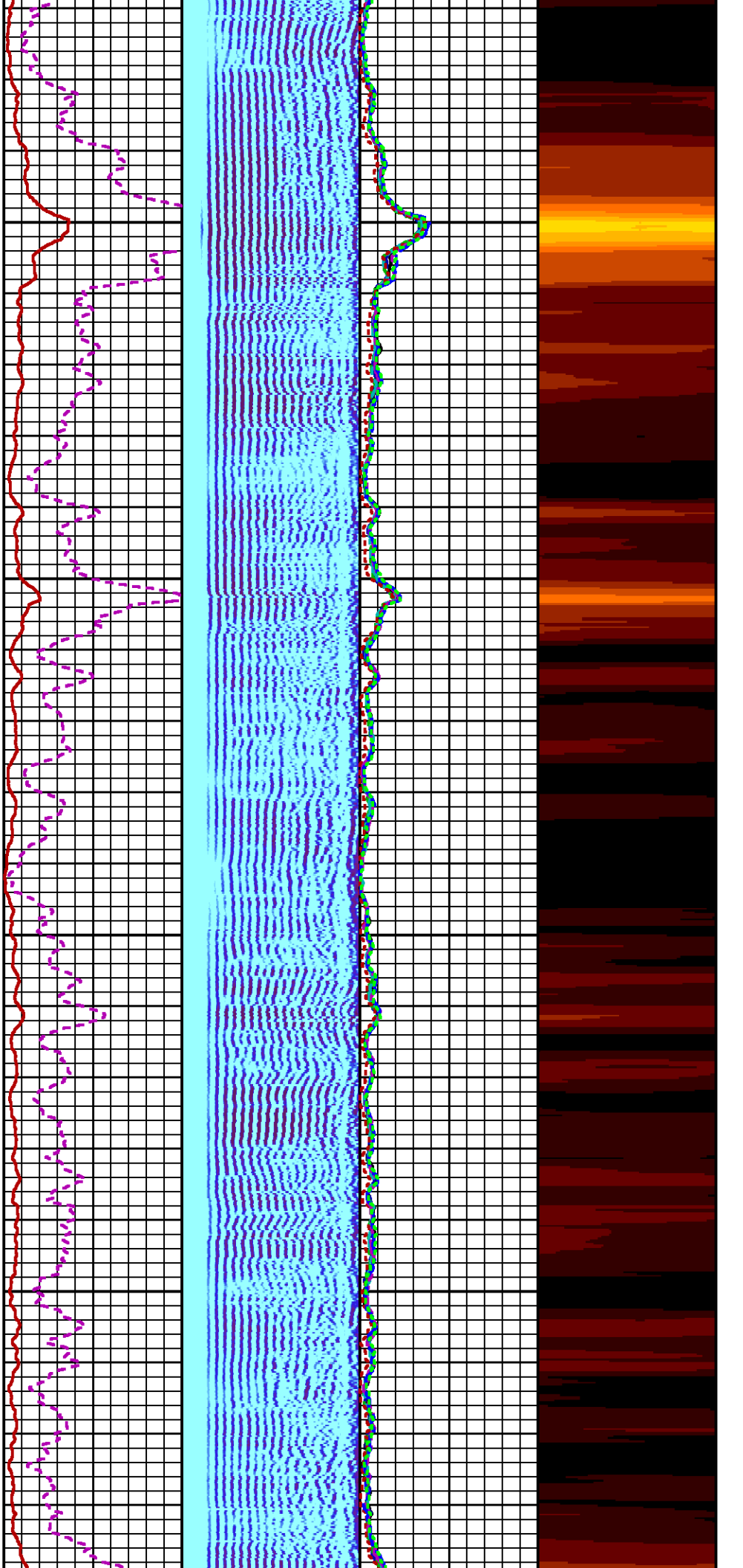




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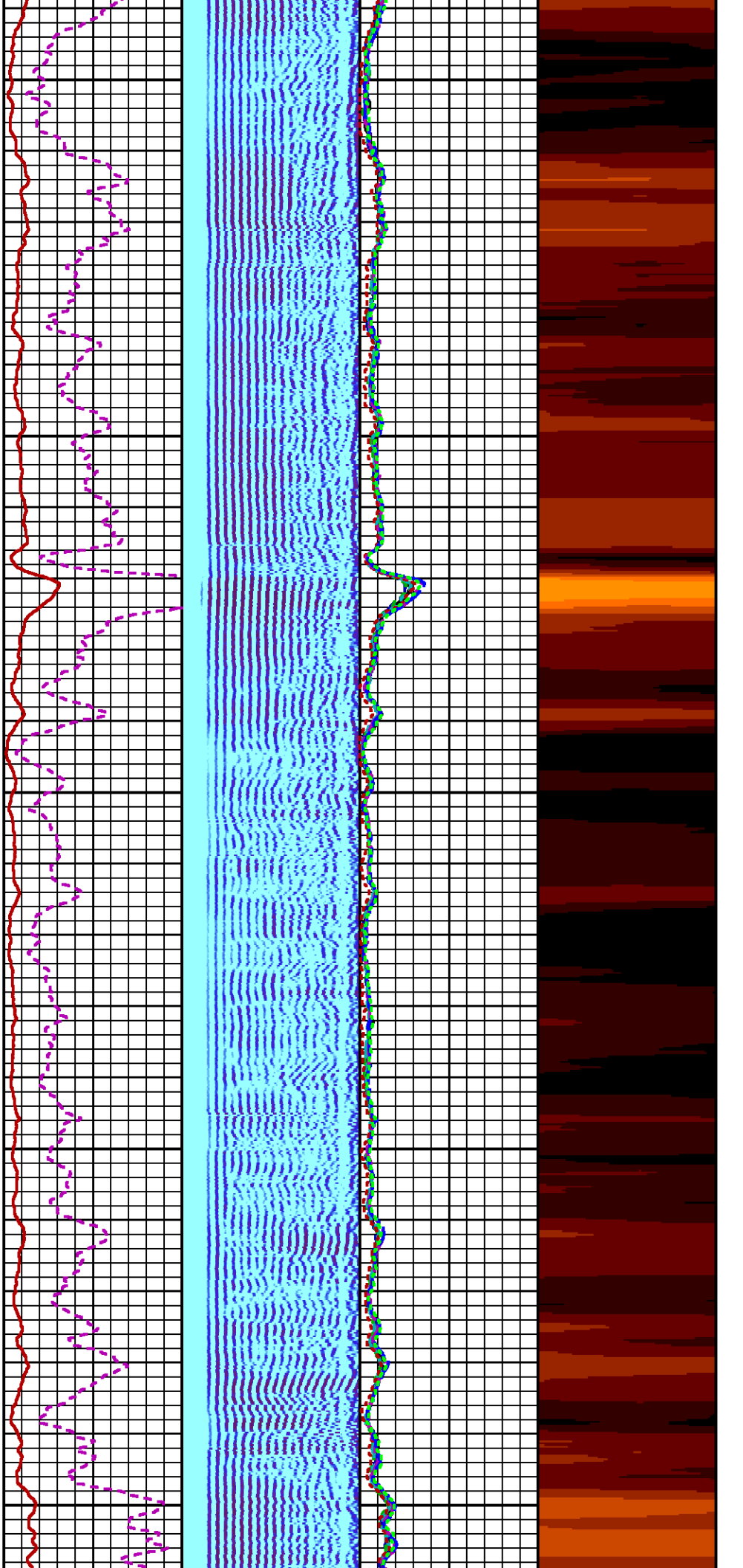
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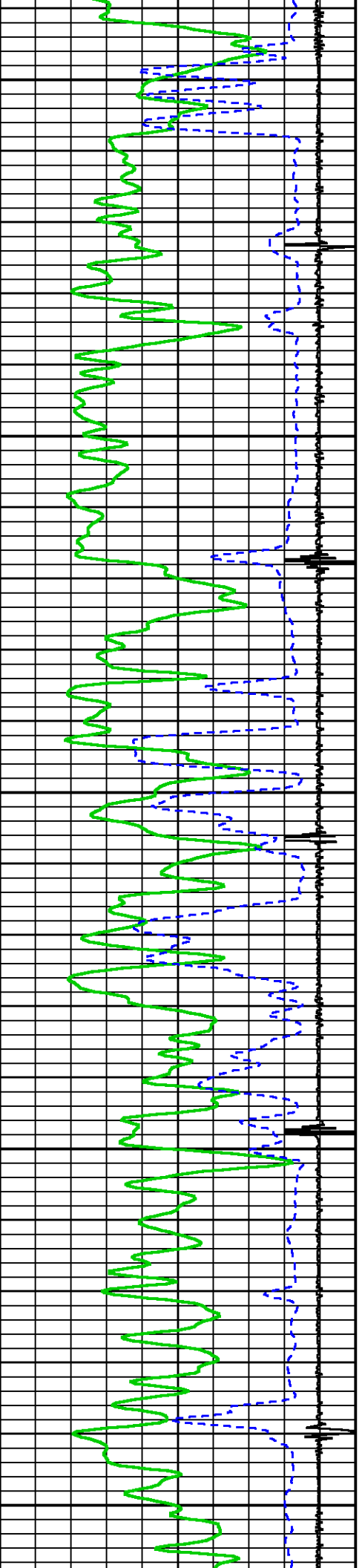
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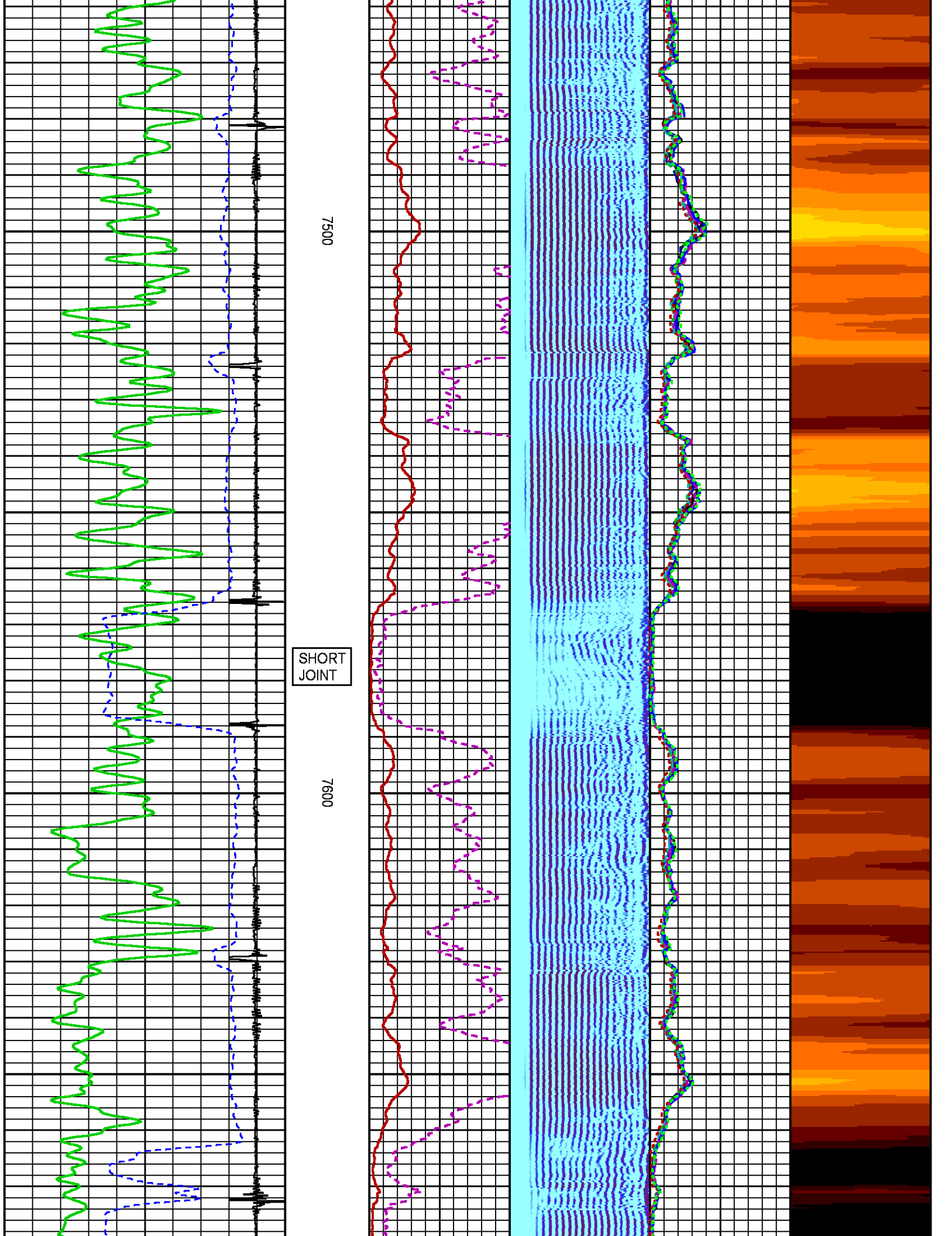


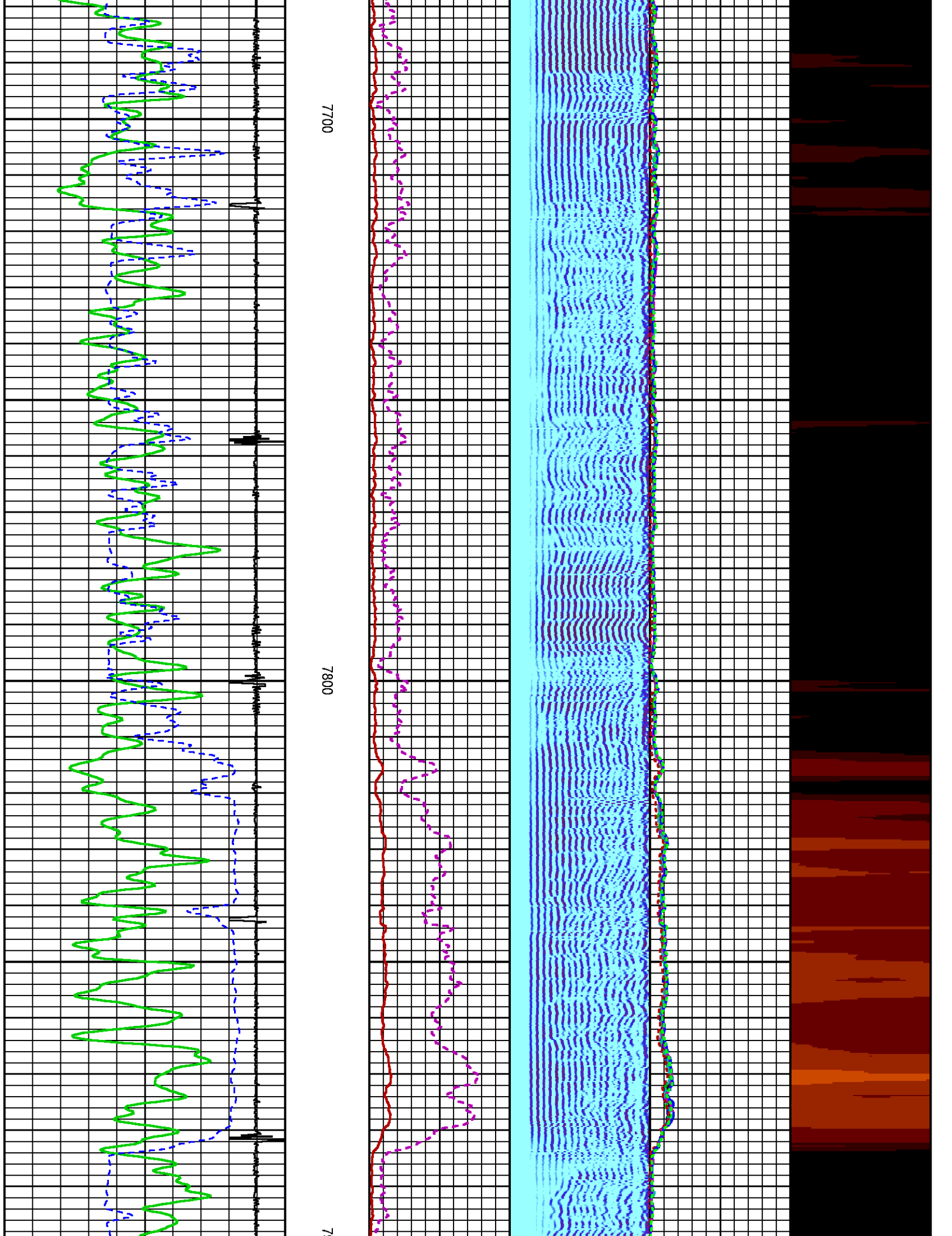
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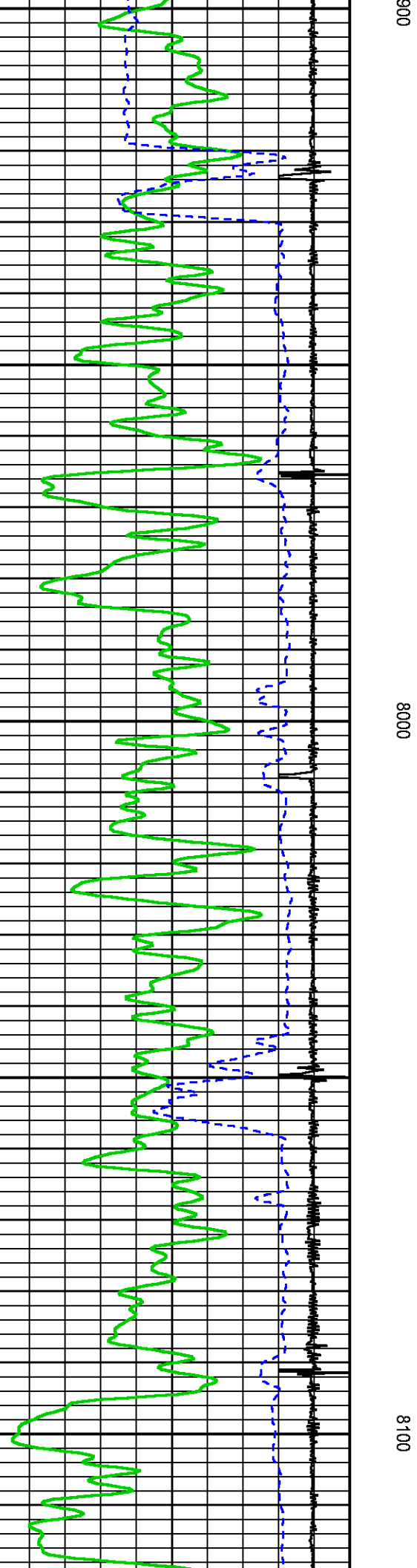
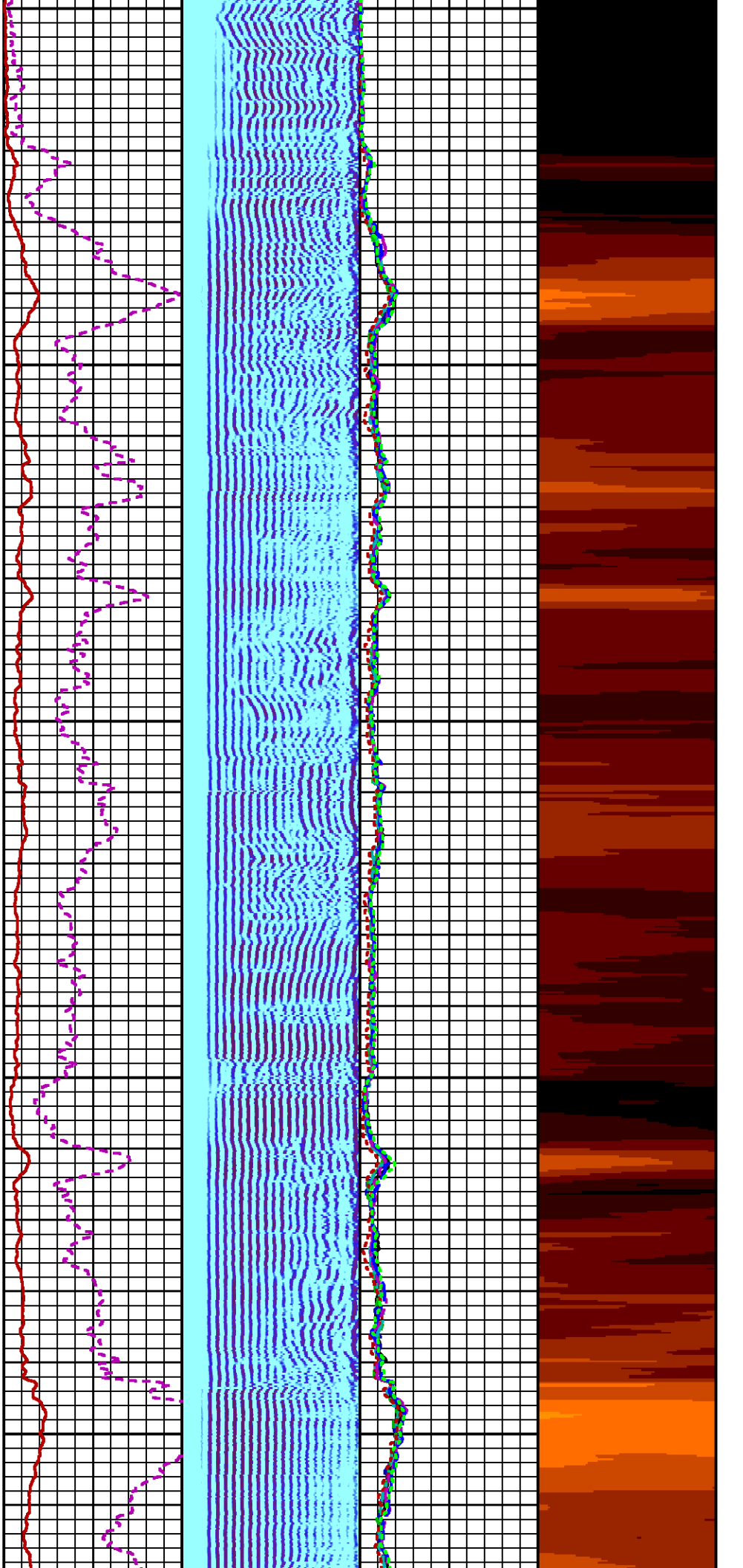
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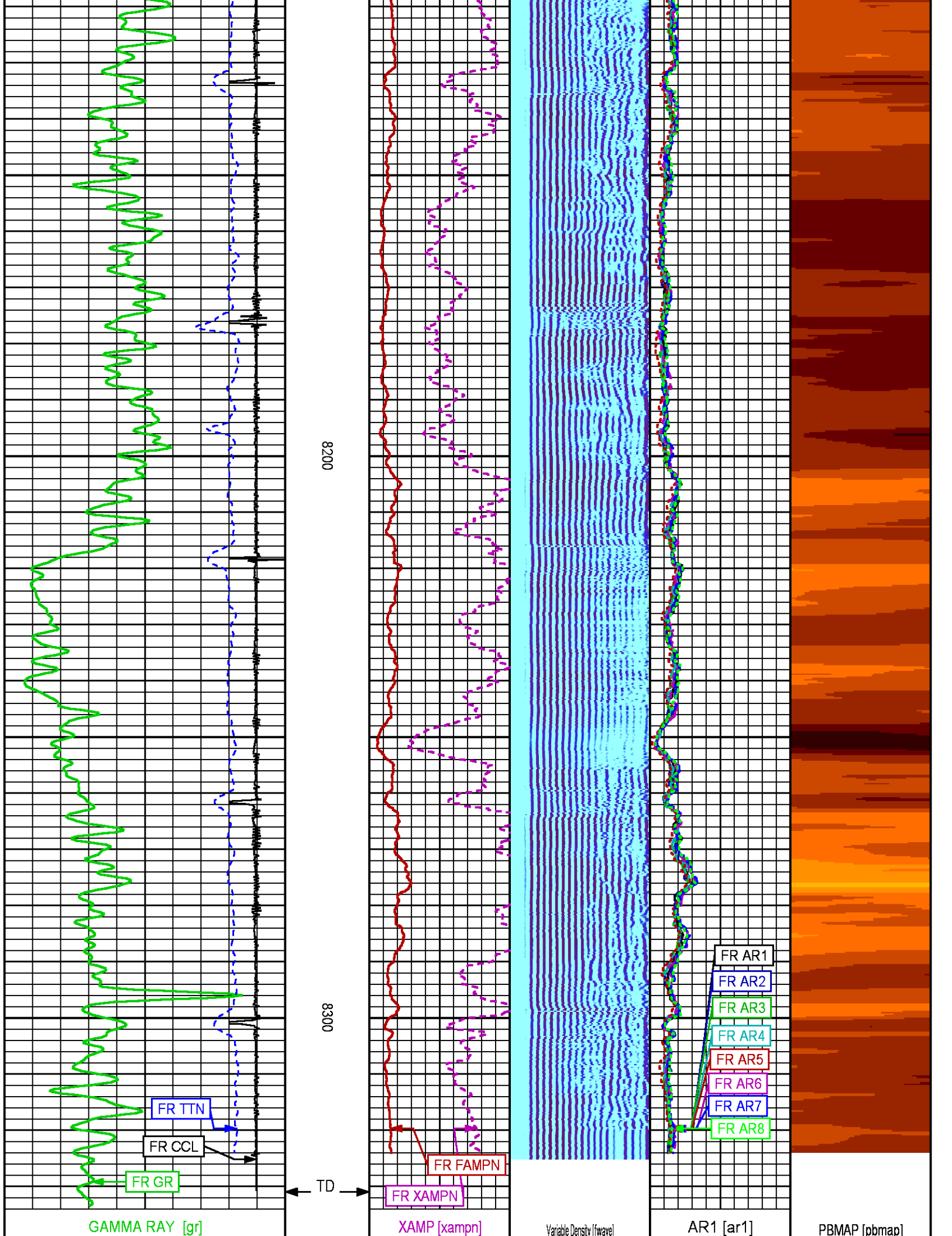


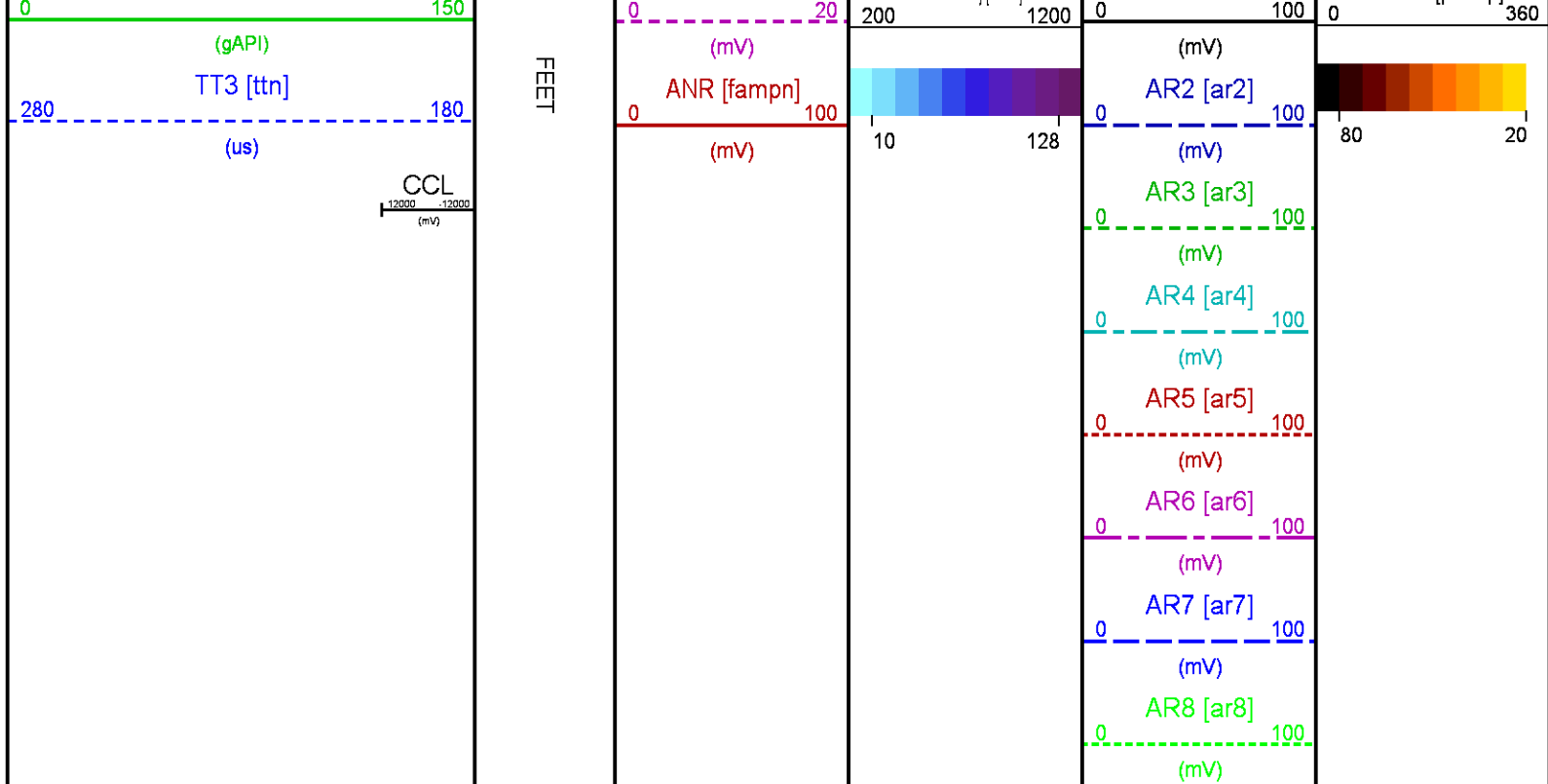












REPEAT PRESENTATION 0 PSI

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

Updates: 1 Patches: 8

Plotted: Mon Jan 25 10:40:49 2016

## PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH101524/n012g01.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 8099.000 ft BOTTOM DEPTH: 8340.000 ft

### SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR	FILTER ()	medium (1)		TOP	BOTTOM
AMPLITUDE	FILTER ()	light (2a)		"	"
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 (tgp7*)	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*)	175	us	"	"
	TT WINDOW LENGTH	500	us	"	"
	FIRST BRK THRESHOLD (ttn*)	4	mV	"	"
RAL CASING PARAMETERS	PPT NEAR	215.678	us	"	"
RAL TOOL DELAY	TOOL DELAY (str1*)	-69	us	"	"
	TOOL DELAY (str2*)	-69	us	"	"
	TOOL DELAY (str3*)	-69	us	"	"
	TOOL DELAY (str4*)	-69	us	"	"
	TOOL DELAY (str5*)	-69	us	"	"
	TOOL DELAY (str6*)	-69	us	"	"
	TOOL DELAY (str7*)	-69	us	"	"
	TOOL DELAY (str8*)	-69	us	"	"
BASELINE NOISE (NEAR)	TOOL DELAY (strn*)	-69	us	"	"
	NOISE WINDOW START	125	us	"	"
	NOISE WINDOW LENGTH	25	us	"	"

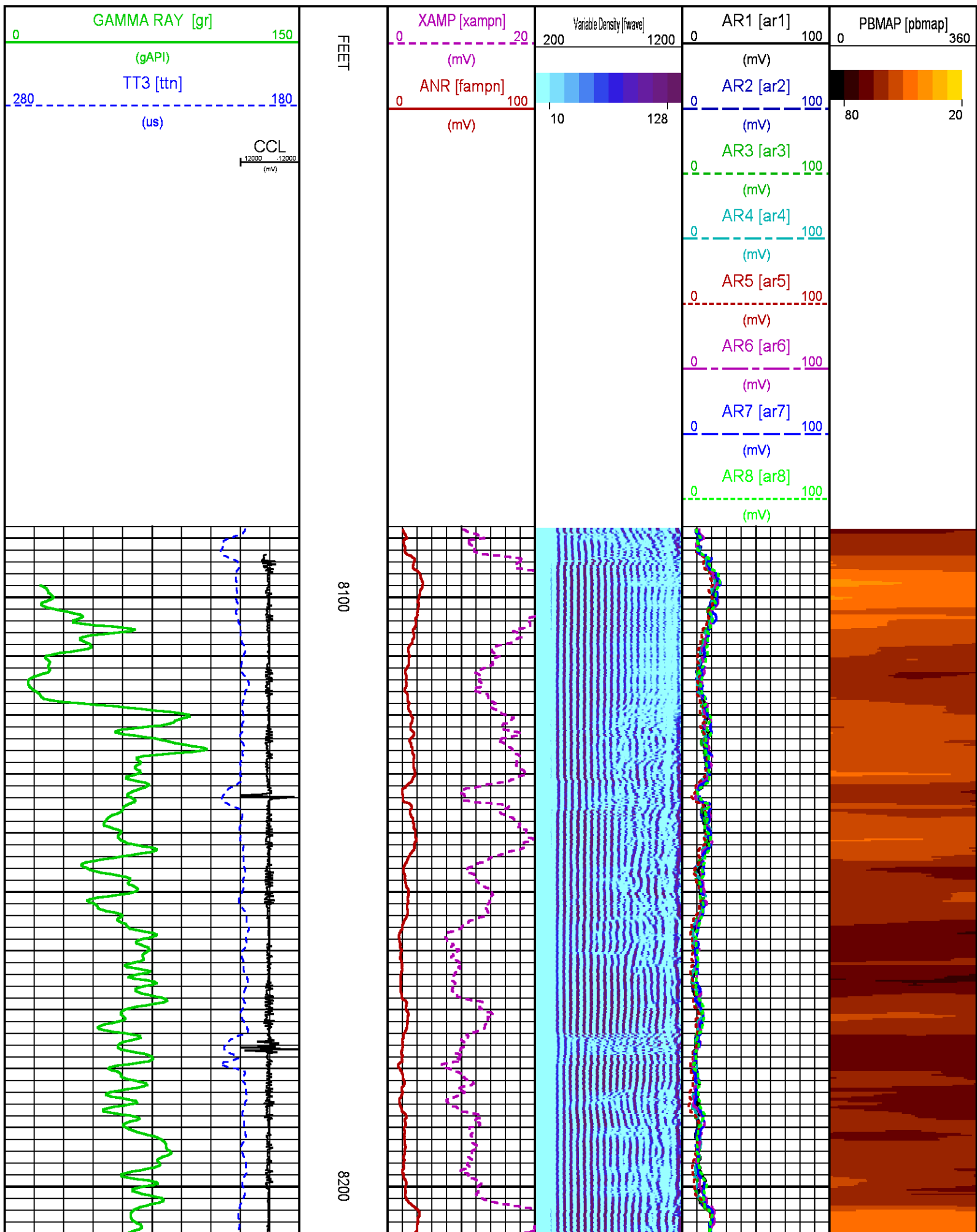
PERCENT BOND CEMENT MAP					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
RAL FREE PIPE AMPLITUDE	FREE AMP REC 1	80	mV	TOP	BOTTOM
	FREE AMP REC 2	80	mV	"	"
	FREE AMP REC 3	80	mV	"	"
	FREE AMP REC 4	80	mV	"	"
	FREE AMP REC 5	80	mV	"	"
	FREE AMP REC 6	80	mV	"	"
	FREE AMP REC 7	80	mV	"	"
	FREE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

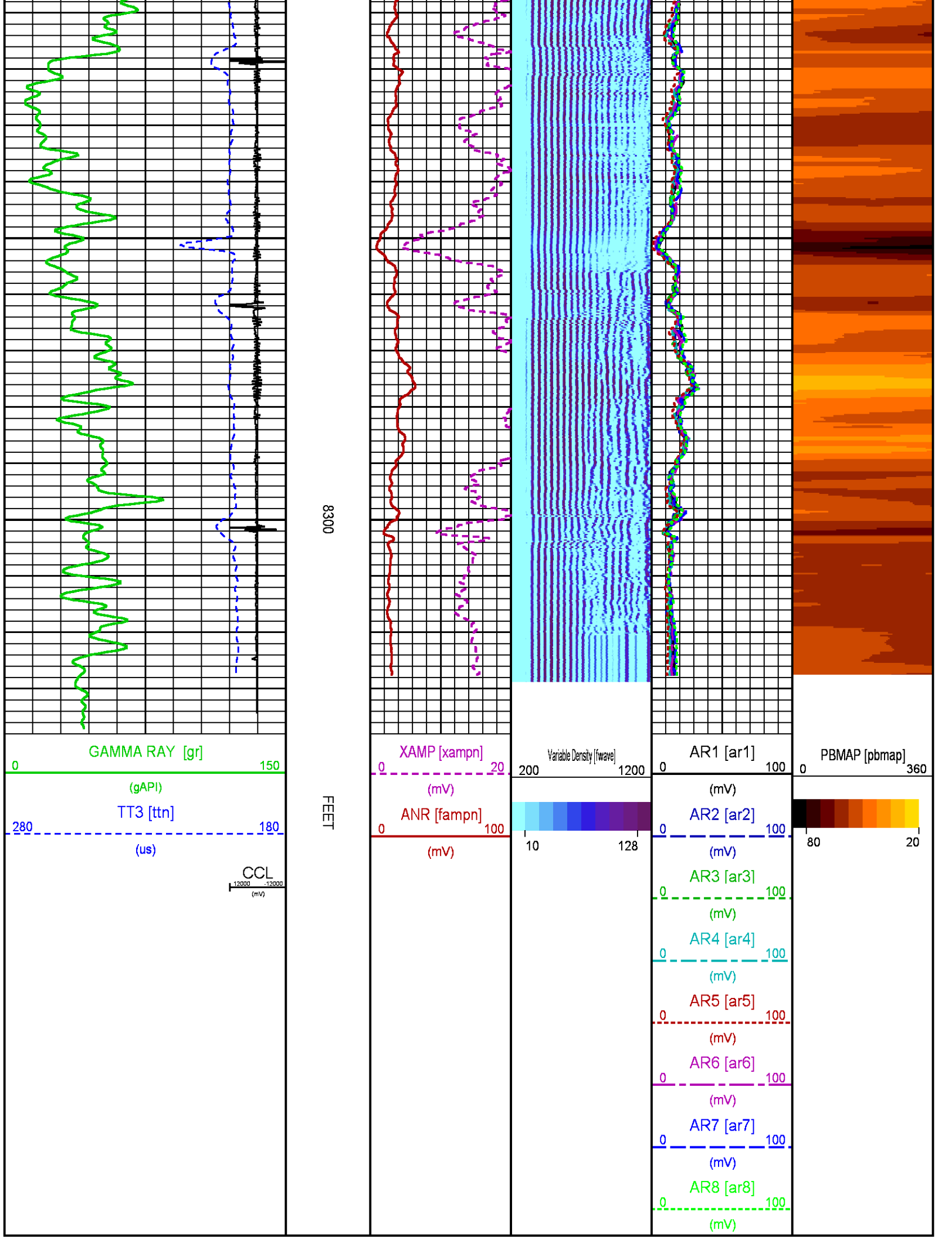
CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:AR1	Jan 25 09:21:50 2016	FIXED GATE AMPLITUDE T-R1
F1:AR2	Jan 25 09:21:50 2016	FIXED GATE AMPLITUDE T-R2
F1:AR3	Jan 25 09:21:50 2016	FIXED GATE AMPLITUDE T-R3
F1:AR4	Jan 25 09:21:50 2016	FIXED GATE AMPLITUDE T-R4
F1:AR5	Jan 25 09:21:50 2016	FIXED GATE AMPLITUDE T-R5
F1:AR6	Jan 25 09:21:50 2016	FIXED GATE AMPLITUDE T-R6
F1:AR7	Jan 25 09:21:50 2016	FIXED GATE AMPLITUDE T-R7
F1:AR8	Jan 25 09:21:50 2016	FIXED GATE AMPLITUDE T-R8
F1:CCL	Jan 25 09:21:50 2016	CASING COLLAR LOCATOR
F1:FAMPN	Jan 25 09:21:50 2016	FIXED GATE AMPLITUDE NEAR RECEIVER
F1:FWAVE	Jan 25 09:21:50 2016	FAR WAVE FORM
F1:GR	Jan 25 09:21:50 2016	GAMMA RAY
F1:PBMAP	Jan 25 09:21:50 2016	PERCENT BOND CEMENT MAP
F1:TTN	Jan 25 09:21:50 2016	TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER
F1:XAMPN	Jan 25 09:21:50 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/CH101524/LARAMIE_CBL_REPEAT.fvpdf [5"/100' Scale]
Plot Interval	: 8088.25 - 8338.75 Feet
Data File 1	: F1 : cas6685:/dat1a/CH101524/n012g01_REPEAT.xtf
Created On	: Jan 25 09:21:50 2016
Company	: LARAMIE ENERGY
Well	: PICEANCE FEDERAL 28-19E

Field : VEGA  
File Interval : 8087.25 - 8340 Feet  
OCT : n012g





## CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/CH101524/n012g.tp1

### RAL PRIMARY CALIBRATION SUMMARY

TOOL #: 1426XA 10404539

DATE/TIME PERFORMED: Mon Jan 25 08:44:22 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)	-0.12	-0.07	-0.03	-0.16	-0.03	-0.28	-0.02	-0.20	-0.10	-1.11	-0.03
AMP FLUID (mV)	108	108	107	106	106	110	108	108	109	150	105
TT (us)	220	221	220	220	219	219	219	218	221	326	221
M FACTOR	0.93	0.93	0.94	0.94	0.94	0.91	0.92	0.92	0.92	0.99	0.95

### RAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 1426XA 10404539

DATE/TIME PERFORMED: Mon Jan 25 08:45:42 2016

DAYS SINCE CAL: 0

UNIT #: 3885TC 6685

CABLE #: 6685sm 6685sm

	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	-0.12	-0.09	-0.13	-0.07	-0.17	-0.15	-0.09	-0.16	-0.86	0.02
AMP AIR	0.66	0.60	0.26	0.25	0.38	0.66	0.36	0.11	0.55	1.82	100.04

SHOP M FACTOR	SHOP A FACTOR	WIRELINE FACTOR
0.95	0.00	1.00

## GR PRIMARY CALIBRATION SUMMARY

TOOL #: 1355XA 11871507

DATE/TIME PERFORMED: Mon Jan 25 08:48:24 2016

UNIT #: 3885TC 6685

CALB JIG #: 4702NK VBA-905

	BACKGROUND (cts)	CALBRTR ON (cts)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	CALBRTR (gAPI)
GR	39.38	189.56	150.2	0.999	39.33	189.33	150

## GR PRIMARY VERIFICATION SUMMARY

TOOL #: 1355XA 11871507

DATE/TIME PERFORMED: Mon Jan 25 08:50:01 2016

UNIT #: 3885TC 6685

VERI JIG #: 4702NK VBA-905

	BACKGROUND (cts)	CALBRTR ON (cts)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	55.47	196.27	0.999	55.40	196.03	140.63
						140.00 160.00

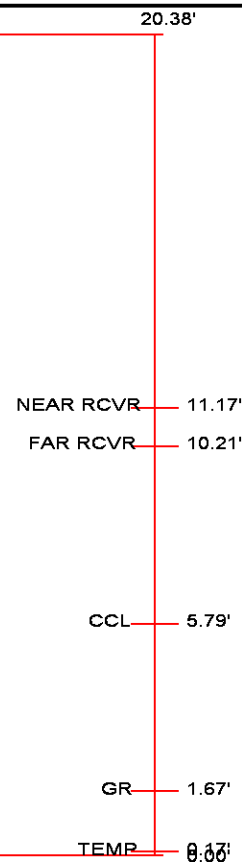
## INSTRUMENT CONFIGURATION

Source File: /dat1a/CH101507/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'  
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: 225 lbs  
MAX DIAMETER: 0'4.25'

	COMPANY	LARAMIE ENERGY		FILE NO:	
	WELL	PICEANCE FEDERAL 28-19E			CH101524
	FIELD	VEGA		API NO:	
	COUNTY	MESA	STATE	COLORADO	05077102540000
	LOCATION:	SHL: 2011' FSL 2492' FWL BHL: 613' FSL 880' FEL		ELEVATIONS:	SEC 28 T9S R93W 28-10 PAD PATTERSON 306
		KB 7704 FT DF GL 7682 FT			
	SEC 28 TWP 9S RGE 93W	DATE		25-Jan-2016	