



FILE NO:		COMPANY		LARAMIE ENERGY	
WELL		WELL		PICEANCE FEDERAL 29-19E	
FIELD		VEGA			
COUNTY		MESA		STATE COLORADO	
Ver. 4.06		LOCATION:		OTHER SERVICES	
SHL: LAT:39.248795N; LONG:107.788006W		BHL: LAT:39.243004N; LONG:107.788353W		RPM	
SEC 29		TWP 09 S		RGE 93 W	
PERMANENT DATUM		GL		ELEVATION 7631 FT	
LOG MEASURED FROM		KB		30 FT ABOVE P.D.	
DRILL. MEAS. FROM		KB		ELEVATIONS:	
				KB 7661 FT	
				DF	
				GL 7631 FT	
DATE		29-MAY-2017			
RUN		TRIP		1	
SERVICE ORDER		US123646J			
DEPTH DRILLER		8054 FT			
DEPTH LOGGER		7920 FT			
BOTTOM LOGGED INTERVAL		7920 FT			
TOP LOGGED INTERVAL		30 FT			
TIME STARTED		07:00			
TIME FINISHED		10:00			
OPERATOR RIG TIME		3 HRS			
TYPE OF FLUID IN HOLE		WATER			
FLUID DENSITY		NA			
FLUID SALINITY		NA			
FLUID LEVEL		54 FT			
LOGGED CEMENT TOP		1545 FT			
WELLHEAD PRESSURE		0 PSI			
MAXIMUM HOLE DEVIATION		NA			
NOMINAL LOGGING SPEED		100 F/MIN			
MAX. RECORDED TEMP.		NA			
REFERENCE LOG		NA			
REFERENCE LOG DATE		NA			
EQUIP. NO.		HL-6670		WOODWARD	
RECORDED BY		S.YASSA			
WITNESSED BY		R.CATES/A.MCCARTHY			

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	8054 FT

REMARKS	
RUN 1 TRIP 1: *2 OPERATIONS IN WELL*	
**OPERATION 1: CCL/GR/RAL RUN IN COMBINATION**	
LOGGED WITH 0 PSI AT THE WELLHEAD	
SJ1: 7096'-7074'	
SJ2: 6248' - 6226'	
CREW: JOE.PENA , S.AKKOUCH	

EQUIPMENT DATA				
RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.

1	1	RAL	1426 XA	10218497	CENTRALIZED
1	1	GR/CCL	1355 XA	111155	CENTRALIZED

## MAIN PASS 0 PSI

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

Updates: 1 Patches: 9

Plotted: Mon May 29 13:37:38 2017

### PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE\_PICEANCE\_FEDERAL\_29\_19E/n012g02.prm  
 LOGGING MODE: DEPTH DIRECTION: UP  
 TOP DEPTH: 5.250 ft BOTTOM DEPTH: 7917.250 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*)	178	us	TOP	BOTTOM
	AMP WINDOW START (fgp2*)	178	us	"	"
	AMP WINDOW START (fgp3*)	178	us	"	"
	AMP WINDOW START (fgp4*)	178	us	"	"
	AMP WINDOW START (fgp5*)	178	us	"	"
	AMP WINDOW START (fgp6*)	178	us	"	"
	AMP WINDOW START (fgp7*)	178	us	"	"
	AMP WINDOW START (fgp8*)	178	us	"	"
	AMP WINDOW START (fgpn*)	178	us	"	"
TRAVEL TIME WINDOW (NEAR)	AMP WINDOW LENGTH	25	us	"	"
	TT WINDOW START (ttn*)	160	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*)	-75	us	"	"
	TOOL DELAY (str2*)	-75	us	"	"
	TOOL DELAY (str3*)	-75	us	"	"
	TOOL DELAY (str4*)	-75	us	"	"
	TOOL DELAY (str5*)	-75	us	"	"
	TOOL DELAY (str6*)	-75	us	"	"
	TOOL DELAY (str7*)	-75	us	"	"
	TOOL DELAY (str8*)	-75	us	"	"
BASELINE NOISE (NEAR)	TOOL DELAY (strn*)	-75	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	"	"

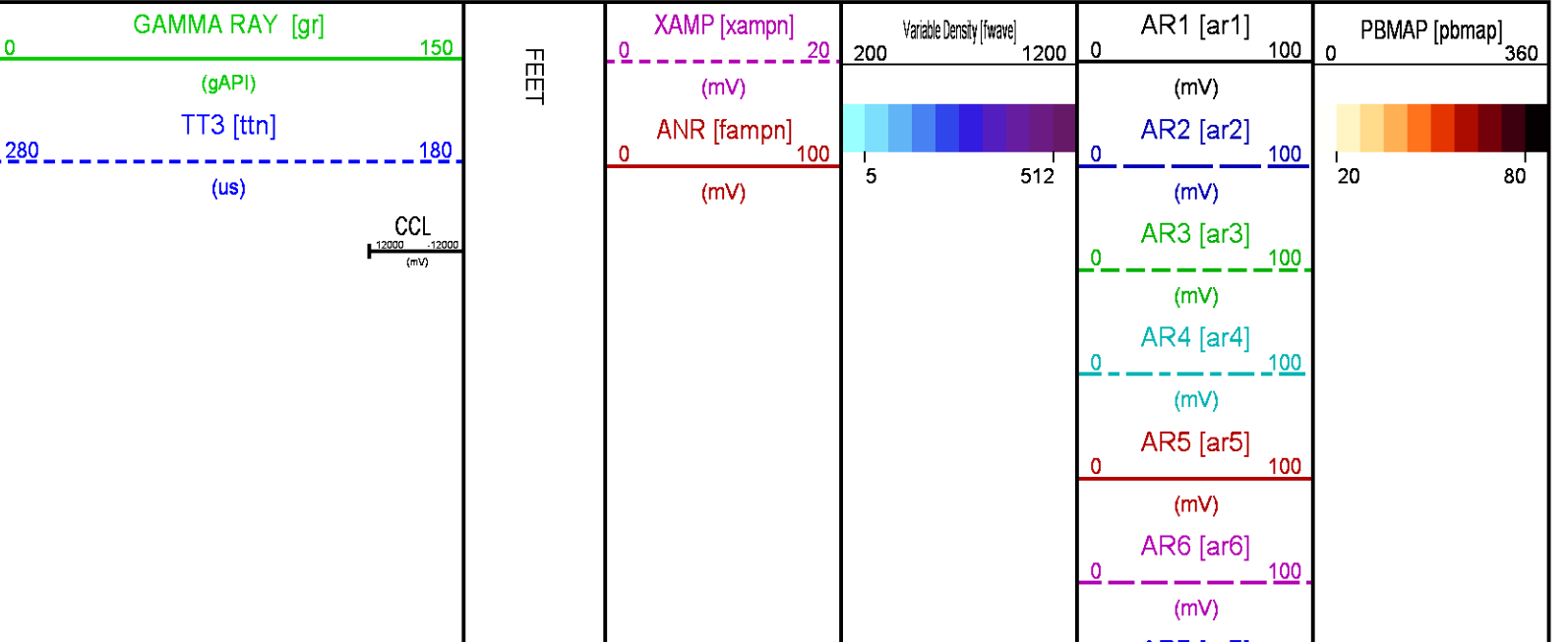
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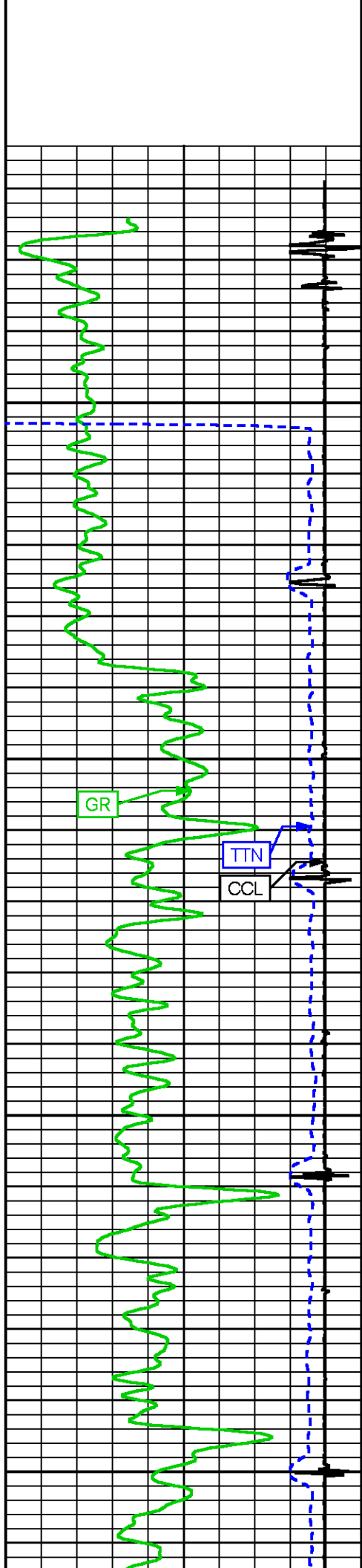
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:AR1	May 29 09:04:15 2017	FIXED GATE AMPLITUDE T-R1
F1:AR2	May 29 09:04:15 2017	FIXED GATE AMPLITUDE T-R2
F1:AR3	May 29 09:04:15 2017	FIXED GATE AMPLITUDE T-R3
F1:AR4	May 29 09:04:15 2017	FIXED GATE AMPLITUDE T-R4
F1:AR5	May 29 09:04:15 2017	FIXED GATE AMPLITUDE T-R5
F1:AR6	May 29 09:04:15 2017	FIXED GATE AMPLITUDE T-R6
F1:AR7	May 29 09:04:15 2017	FIXED GATE AMPLITUDE T-R7
F1:AR8	May 29 09:04:15 2017	FIXED GATE AMPLITUDE T-R8
F1:CCL	May 29 09:04:15 2017	CASING COLLAR LOCATOR
F1:FAMPN	May 29 09:04:15 2017	FIXED GATE AMPLITUDE NEAR RECEIVER
F1:FWAVE	May 29 09:04:15 2017	FAR WAVE FORM
F1:GR	May 29 09:04:15 2017	GAMMA RAY
F1:PBMAP	May 29 09:04:15 2017	PERCENT BOND CEMENT MAP
F1:TTN	May 29 09:04:15 2017	TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER
F1:XAMPN	May 29 09:04:15 2017	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		

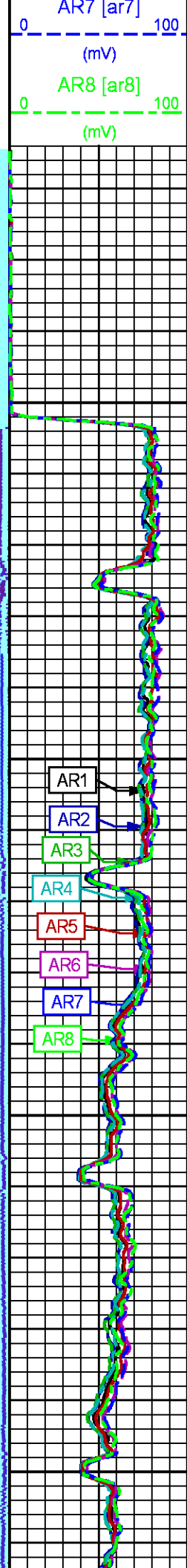
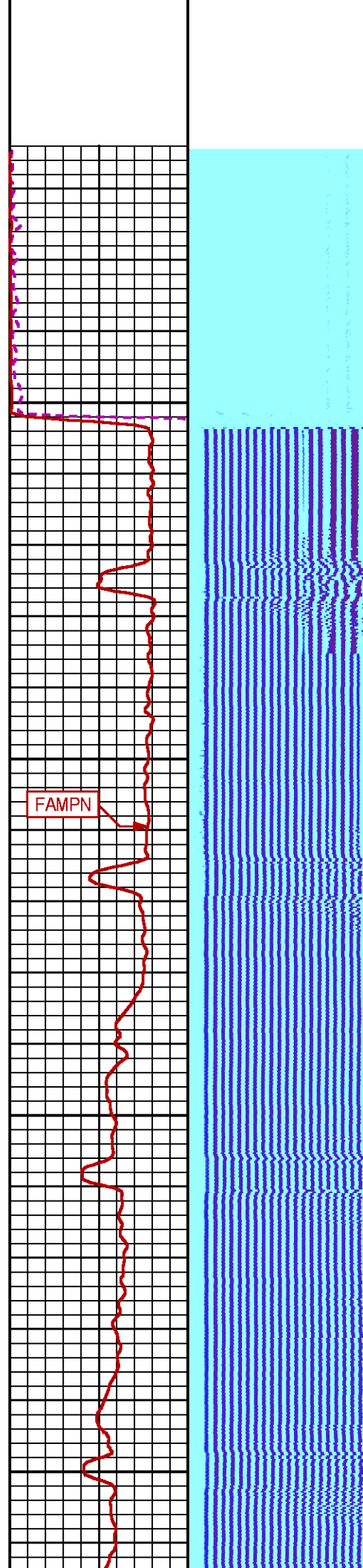
<b>Presentation</b>	: cpu100:/dat1a/LARAMIE_PICEANCE_FEDERAL_29_19E/ral_MAIN_19E-5.fvpdf [5"/100' Scale]
<b>Plot Interval</b>	: 14.5 - 7935.5 Feet
<b>Data File 1</b>	: F1 : cpu100:/dat1a/LARAMIE_PICEANCE_FEDERAL_29_19E/RAL_MAIN_19E.xtf
<b>Created On</b>	: May 29 09:04:15 2017
<b>Company</b>	: LARAMIE ENERGY
<b>Well</b>	: PICEANCE 29-19E
<b>Field</b>	: VEGA
<b>File Interval</b>	: 5.25 - 7936.75 Feet
<b>OCT</b>	: n012g

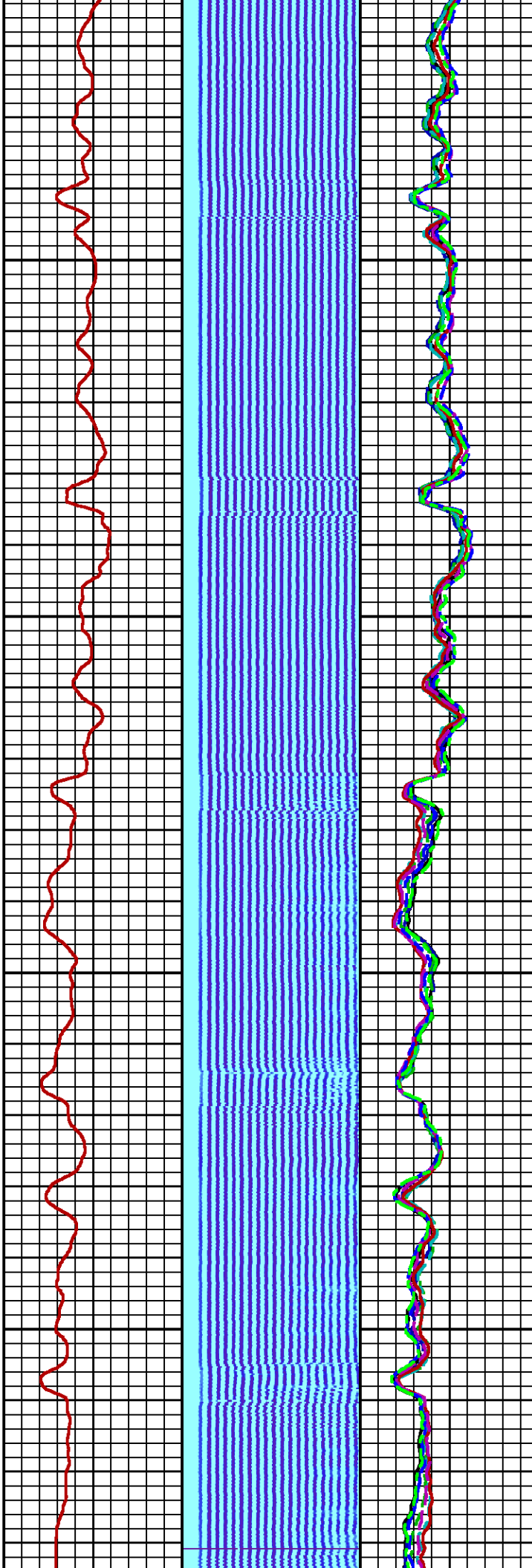
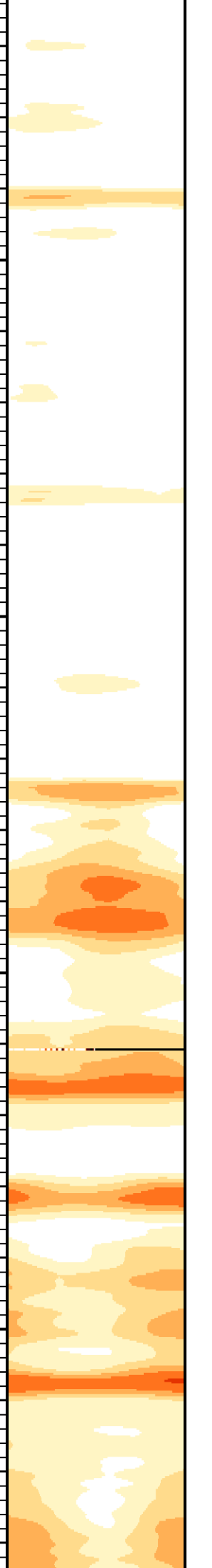




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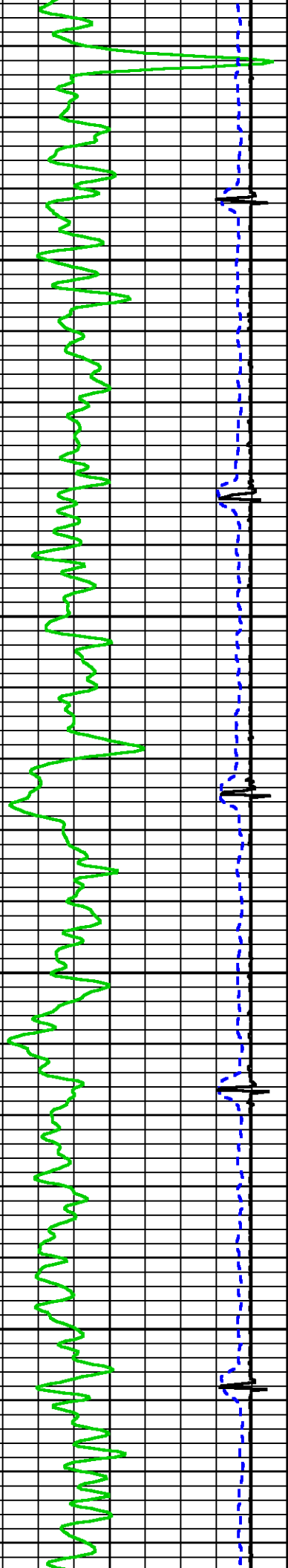
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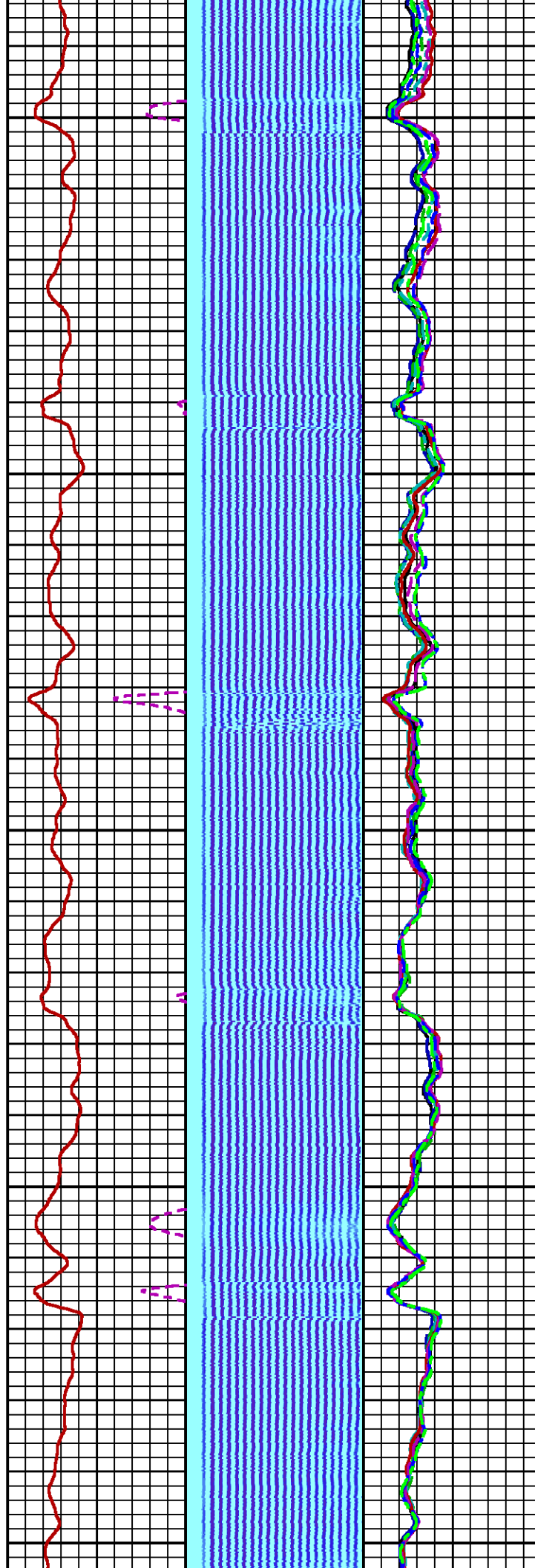
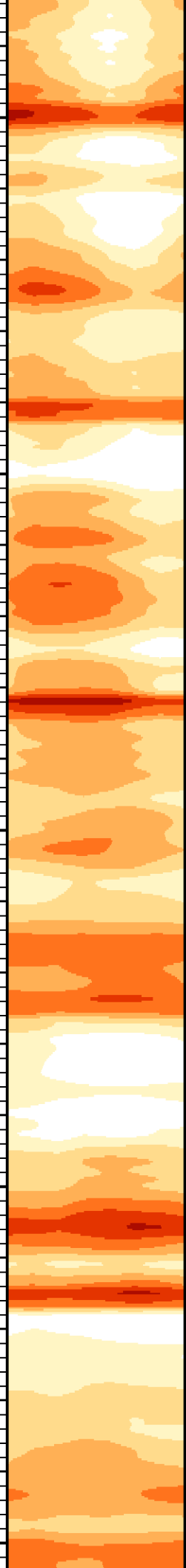




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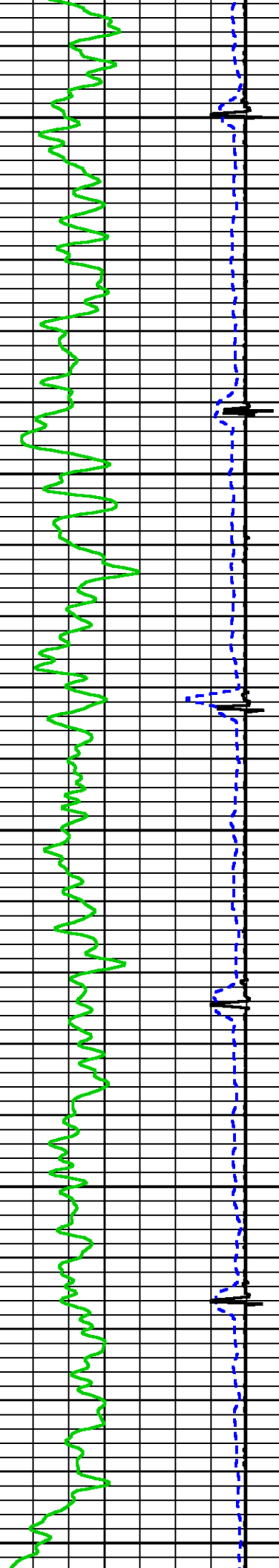
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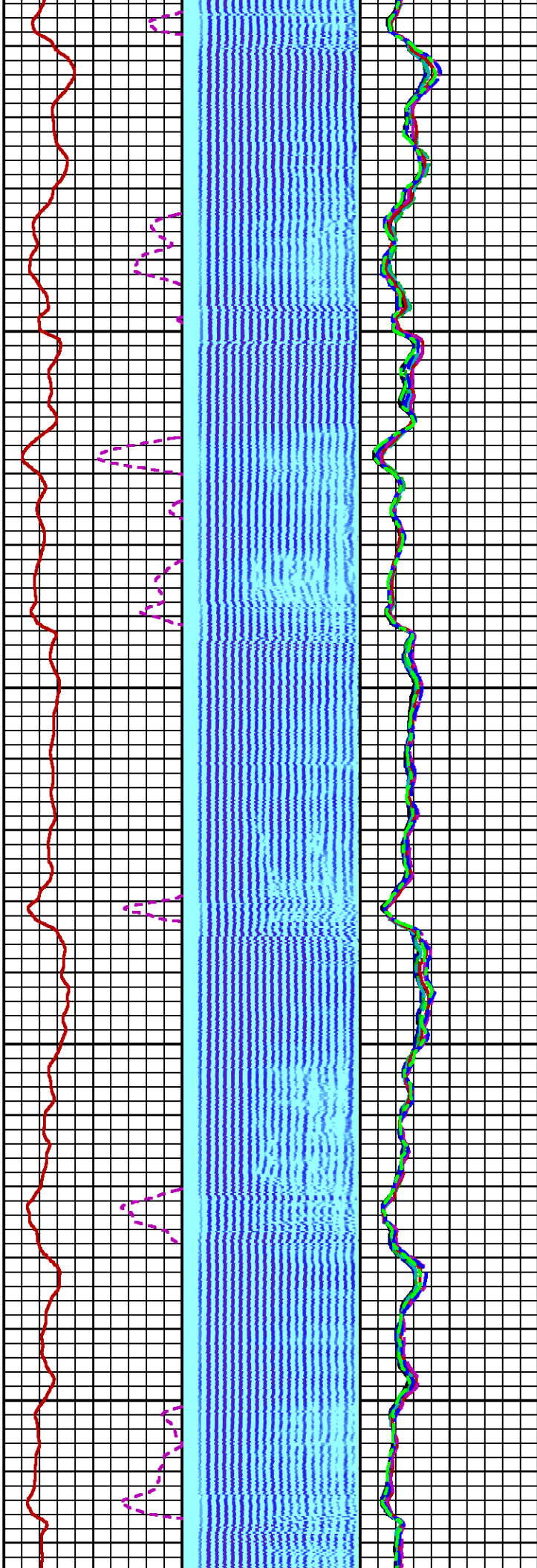
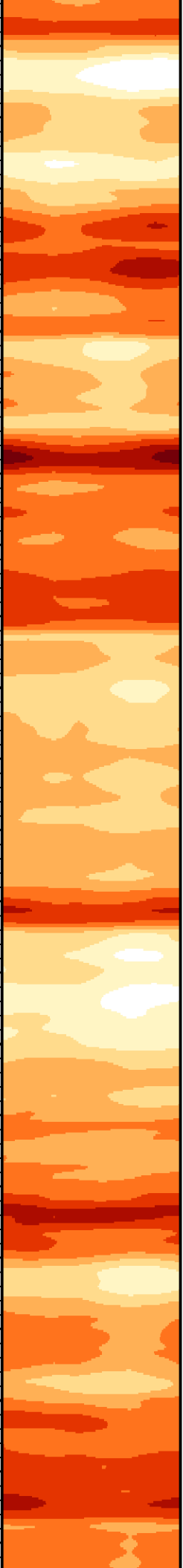


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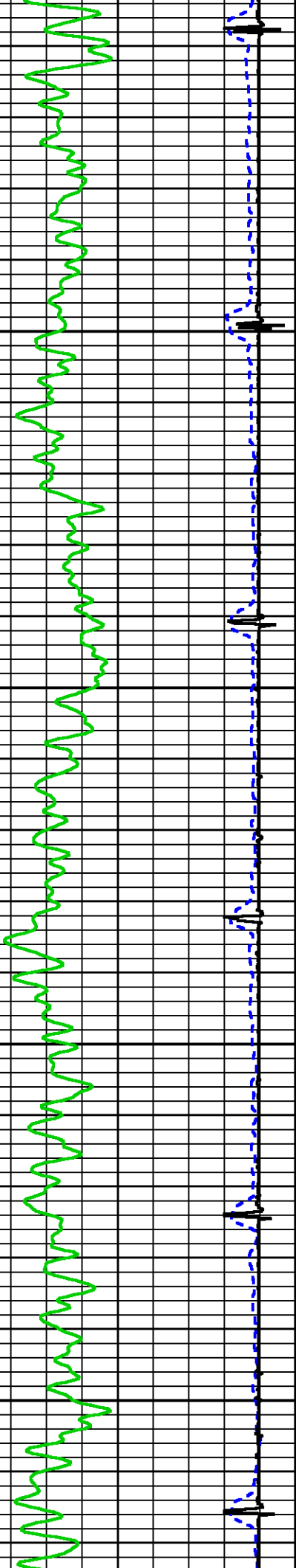


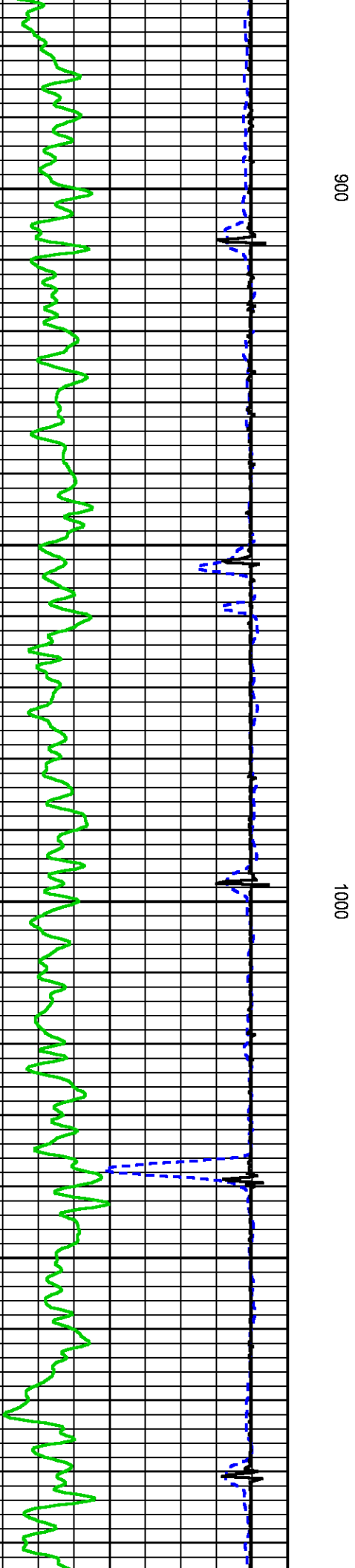
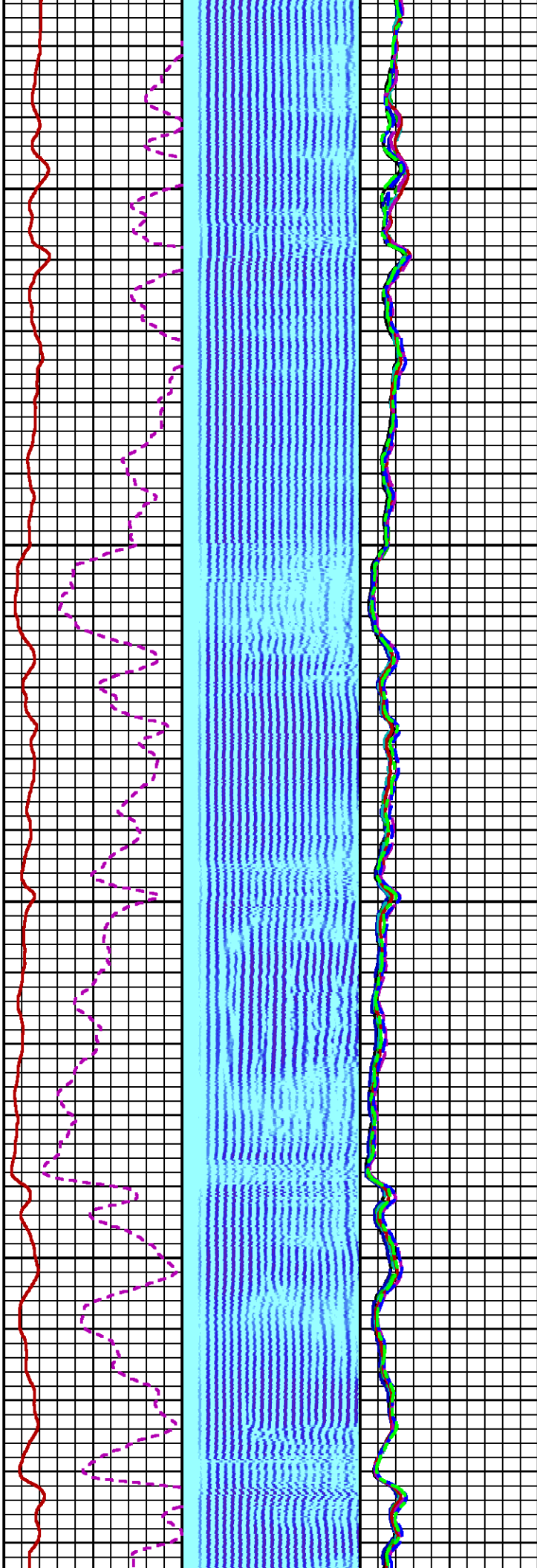
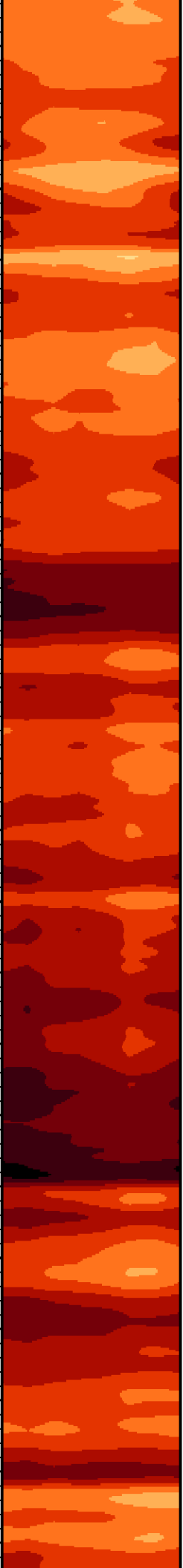




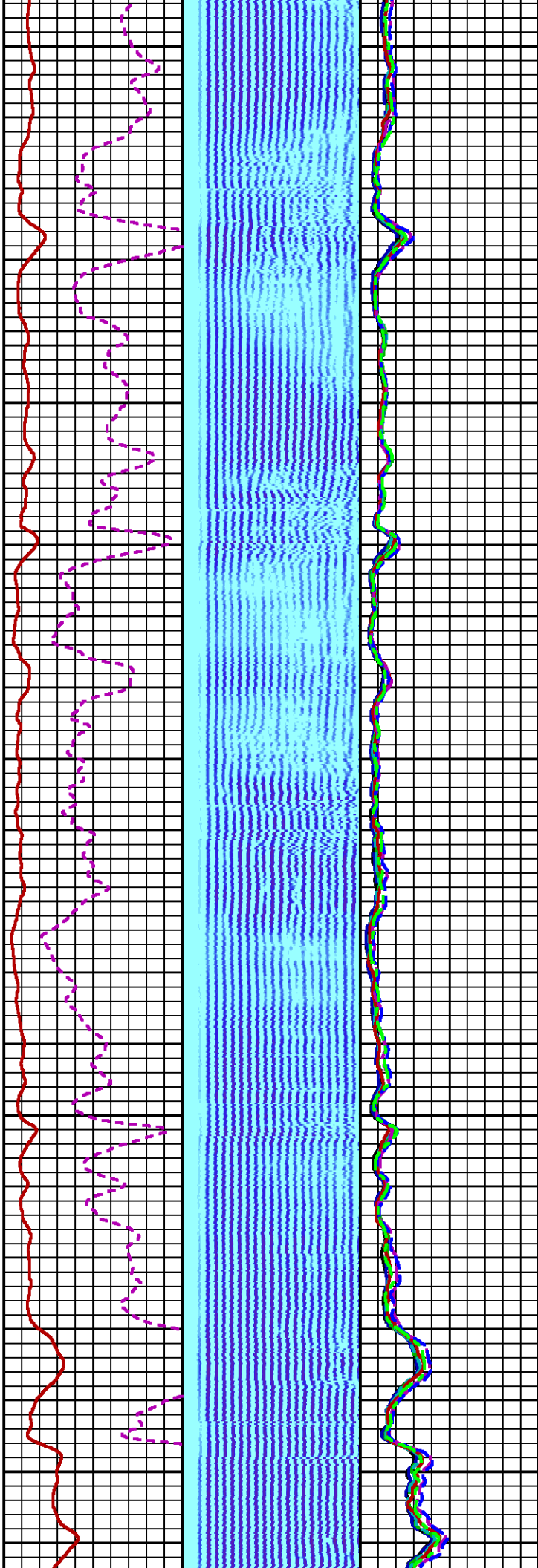
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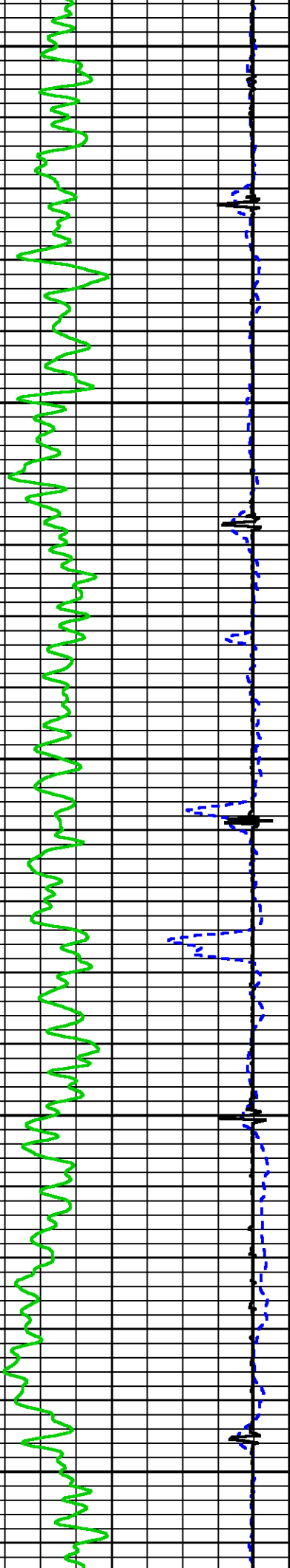


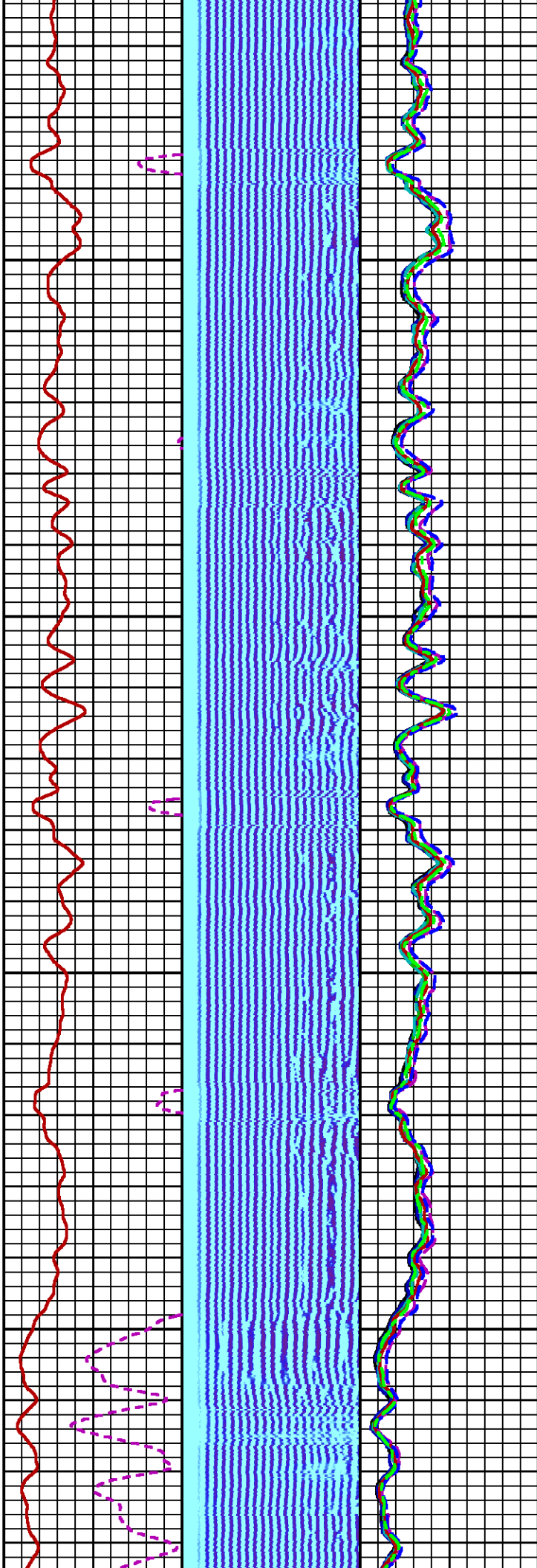
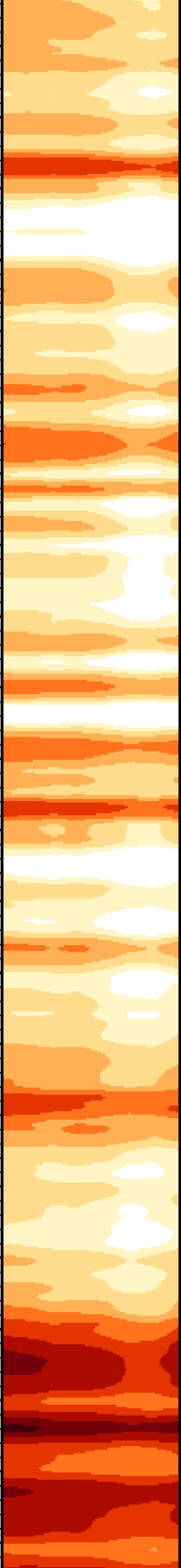


1100

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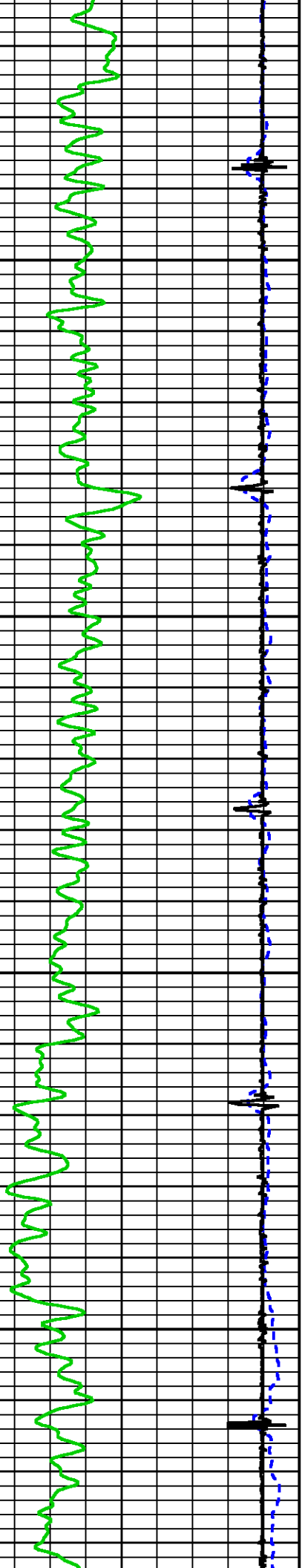
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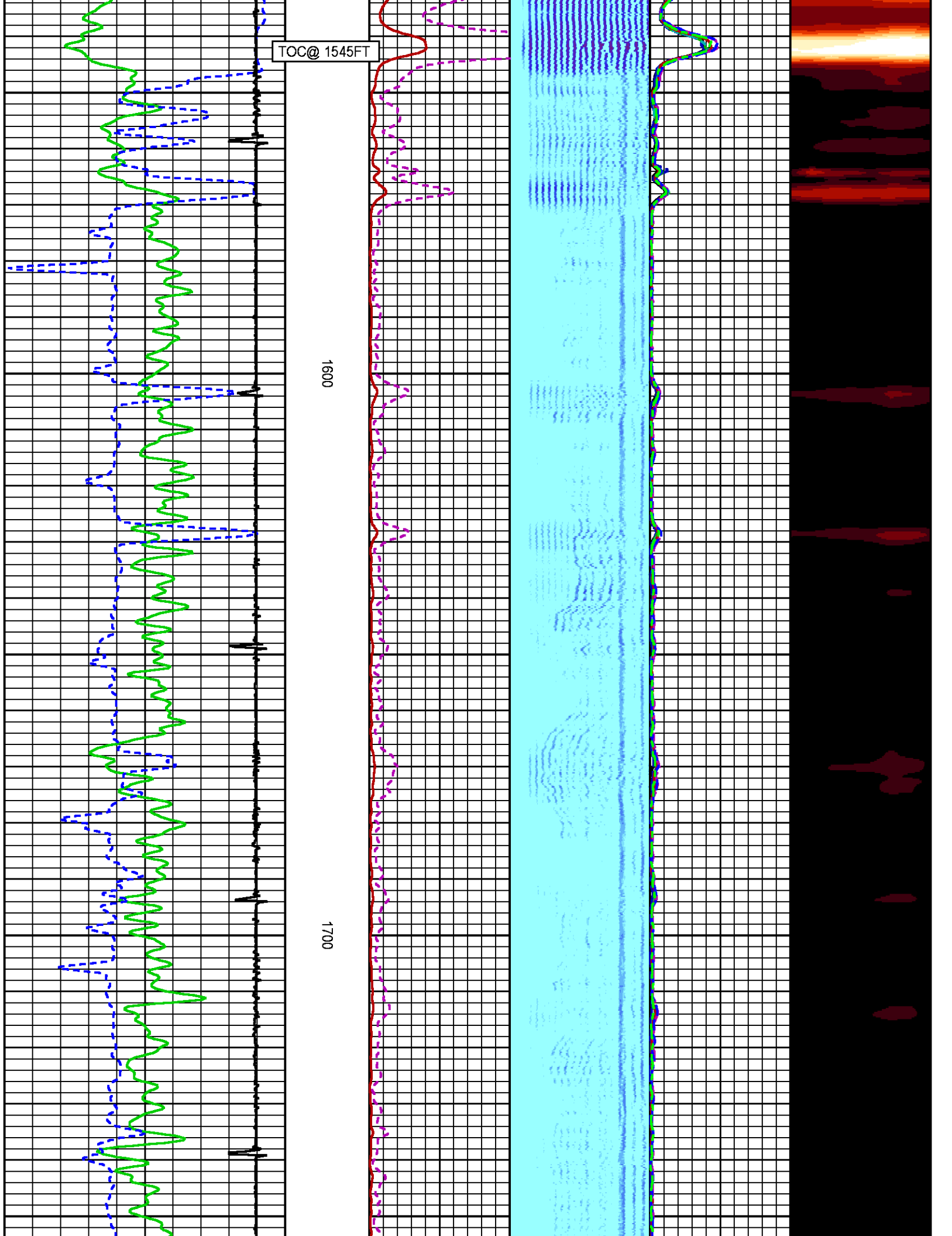


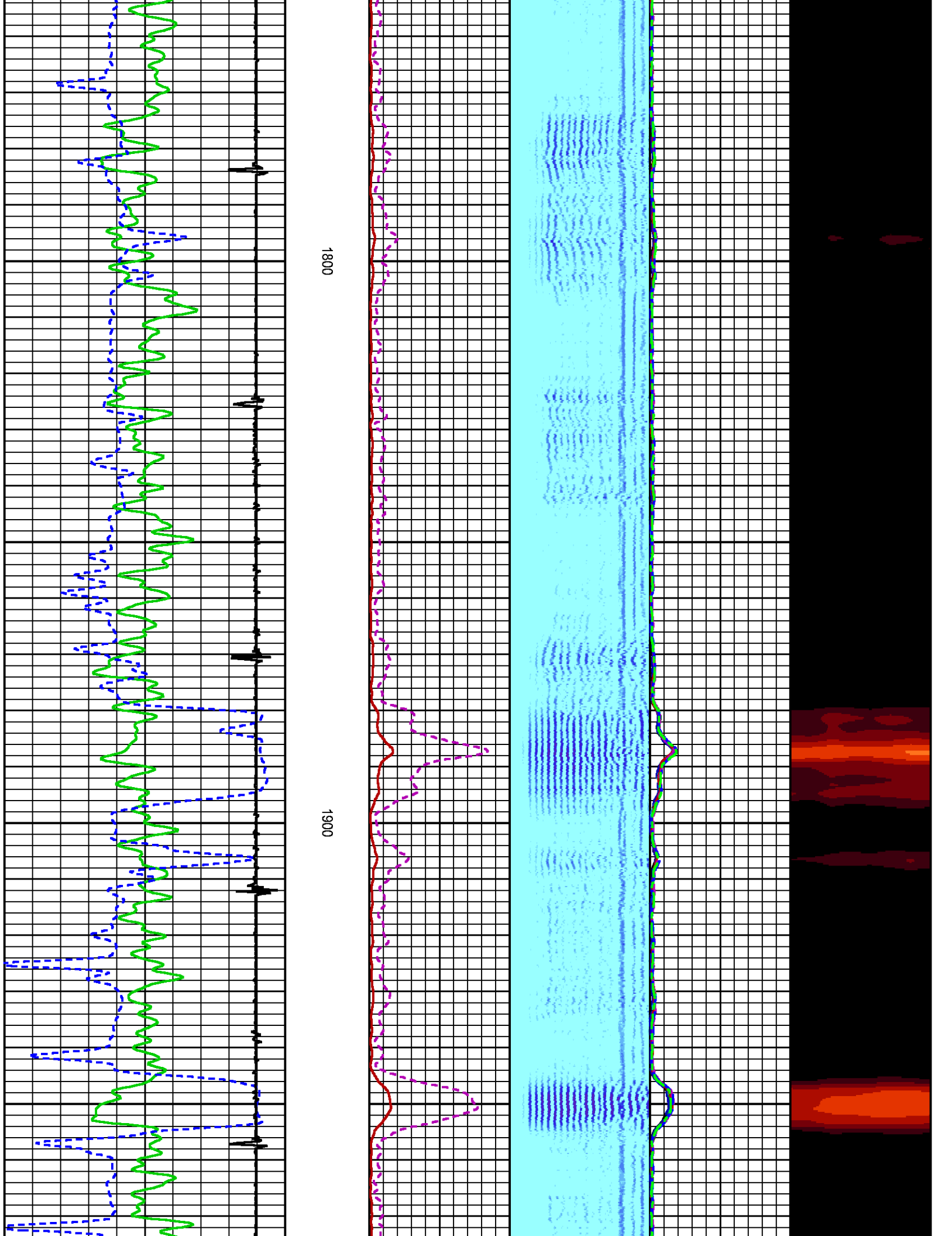


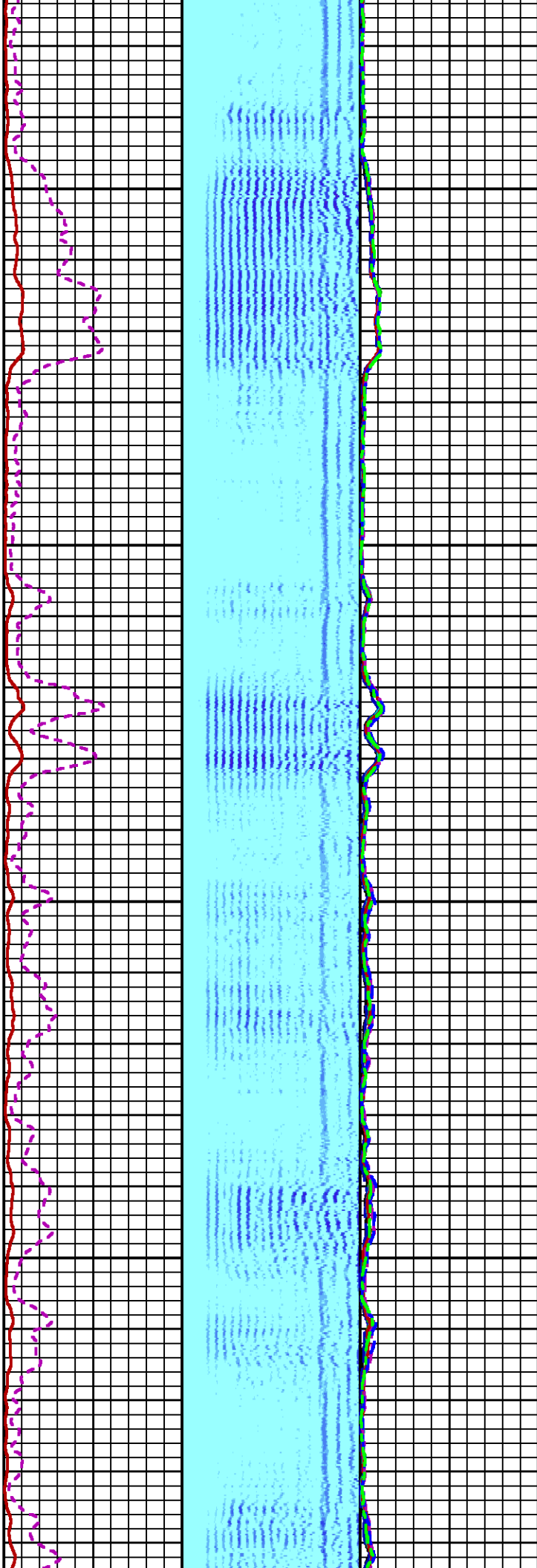
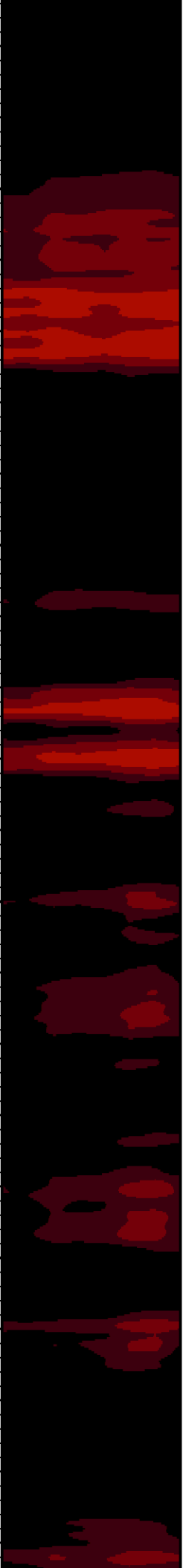
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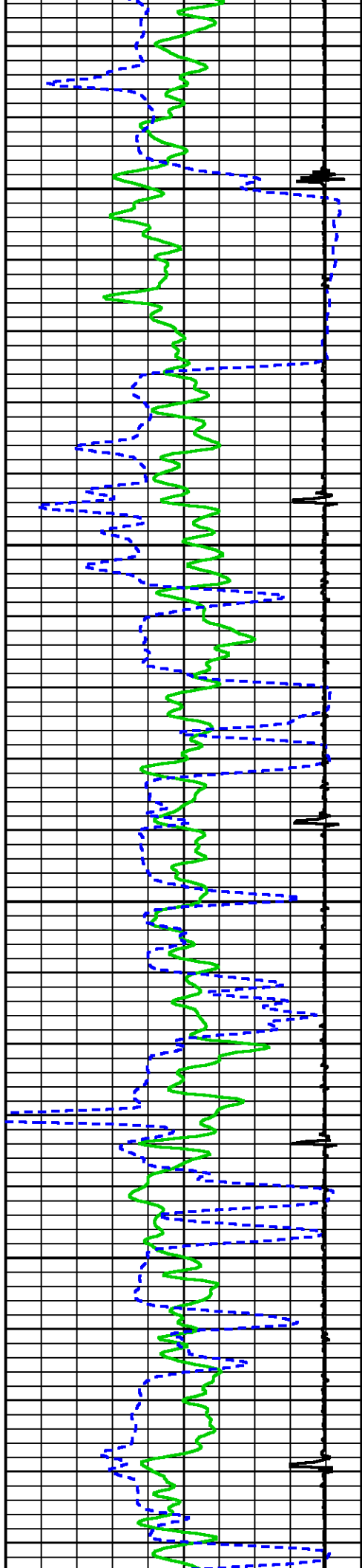




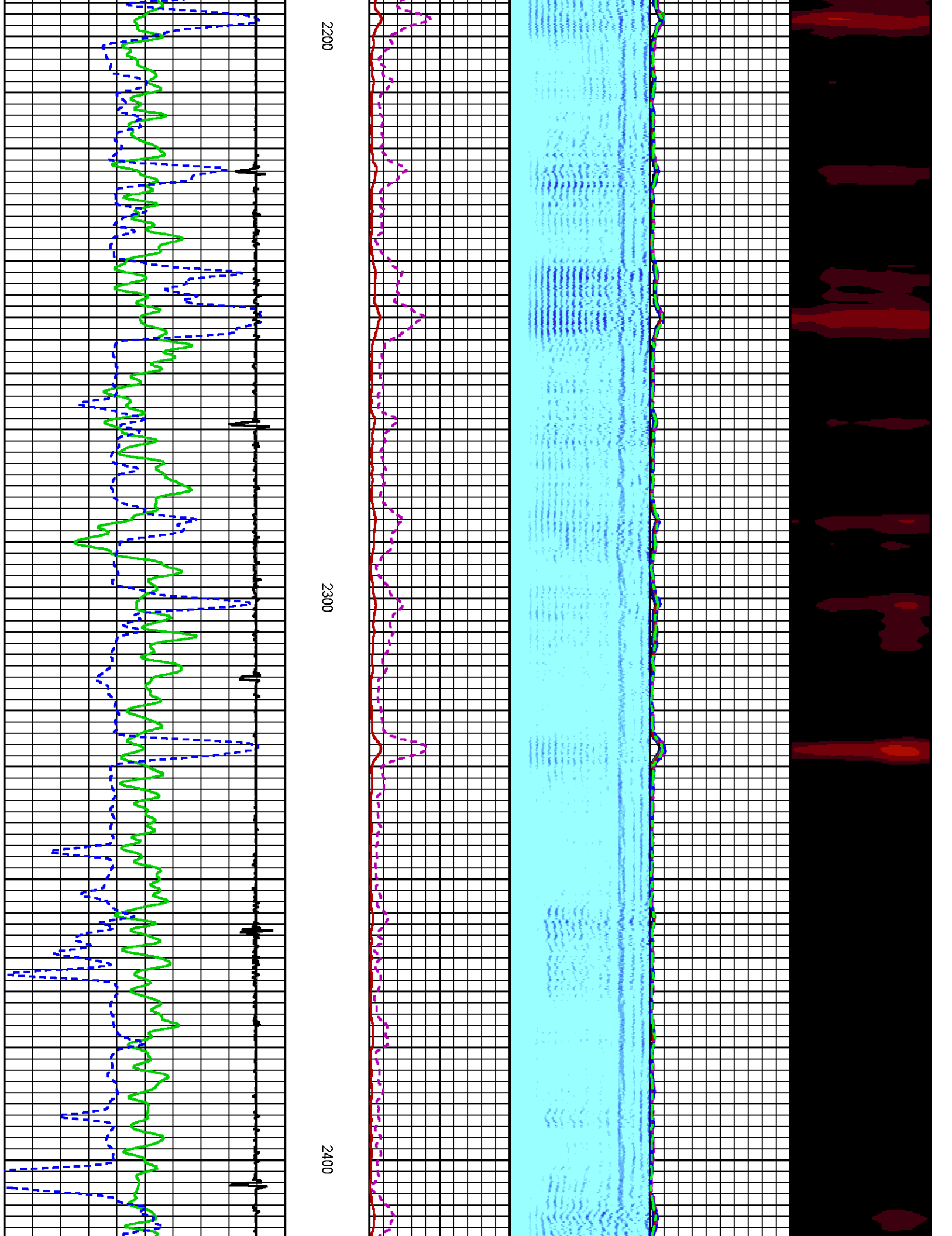


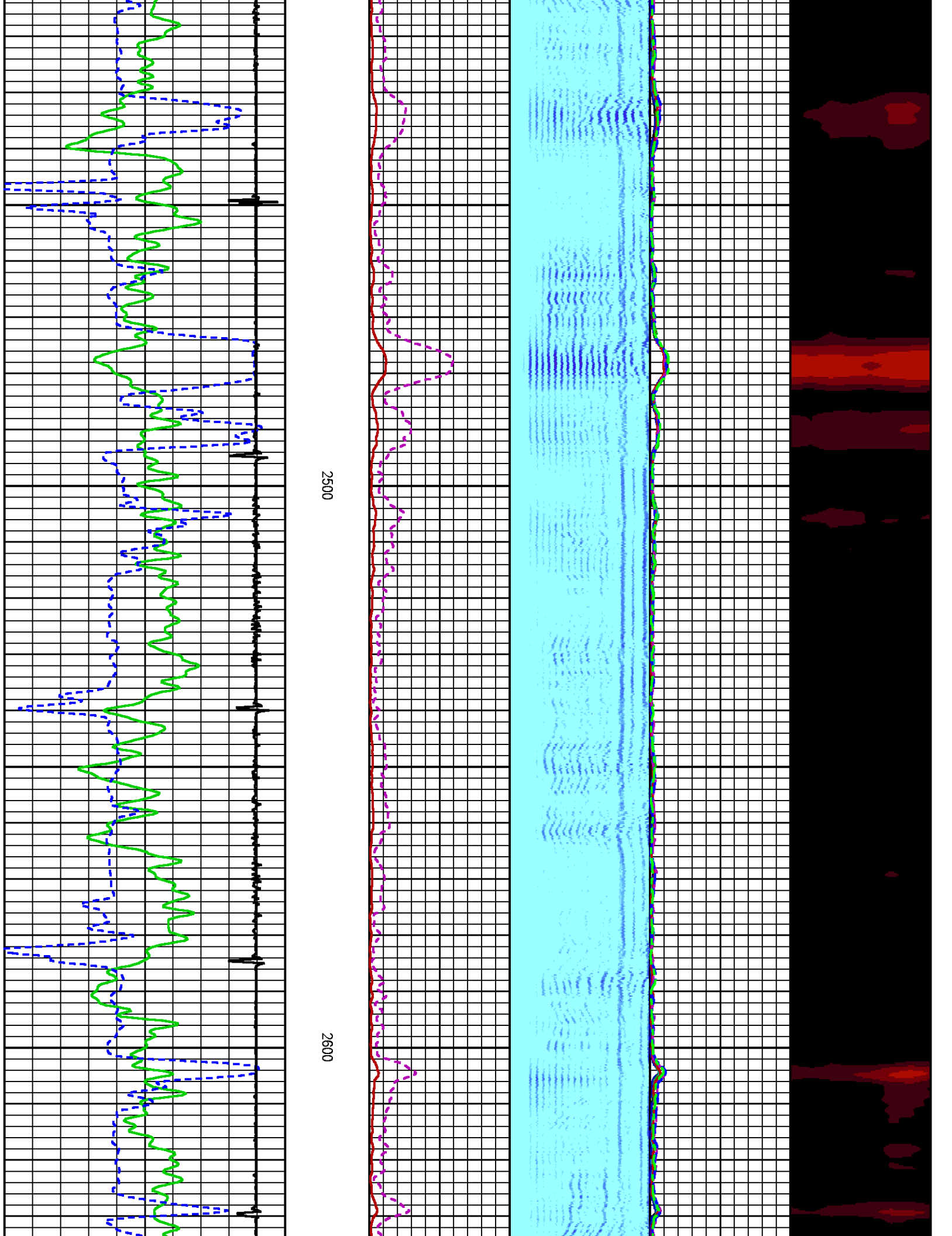
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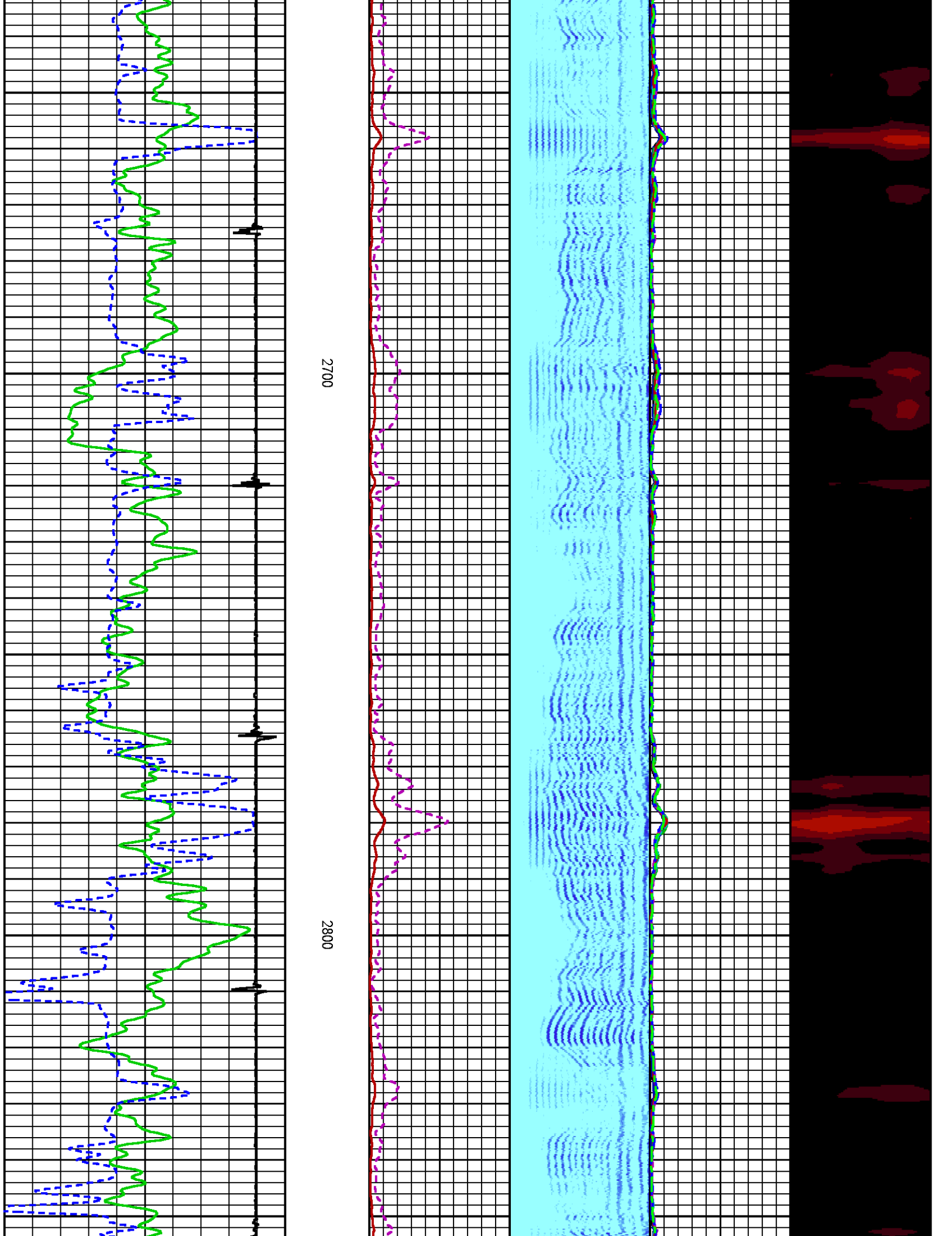
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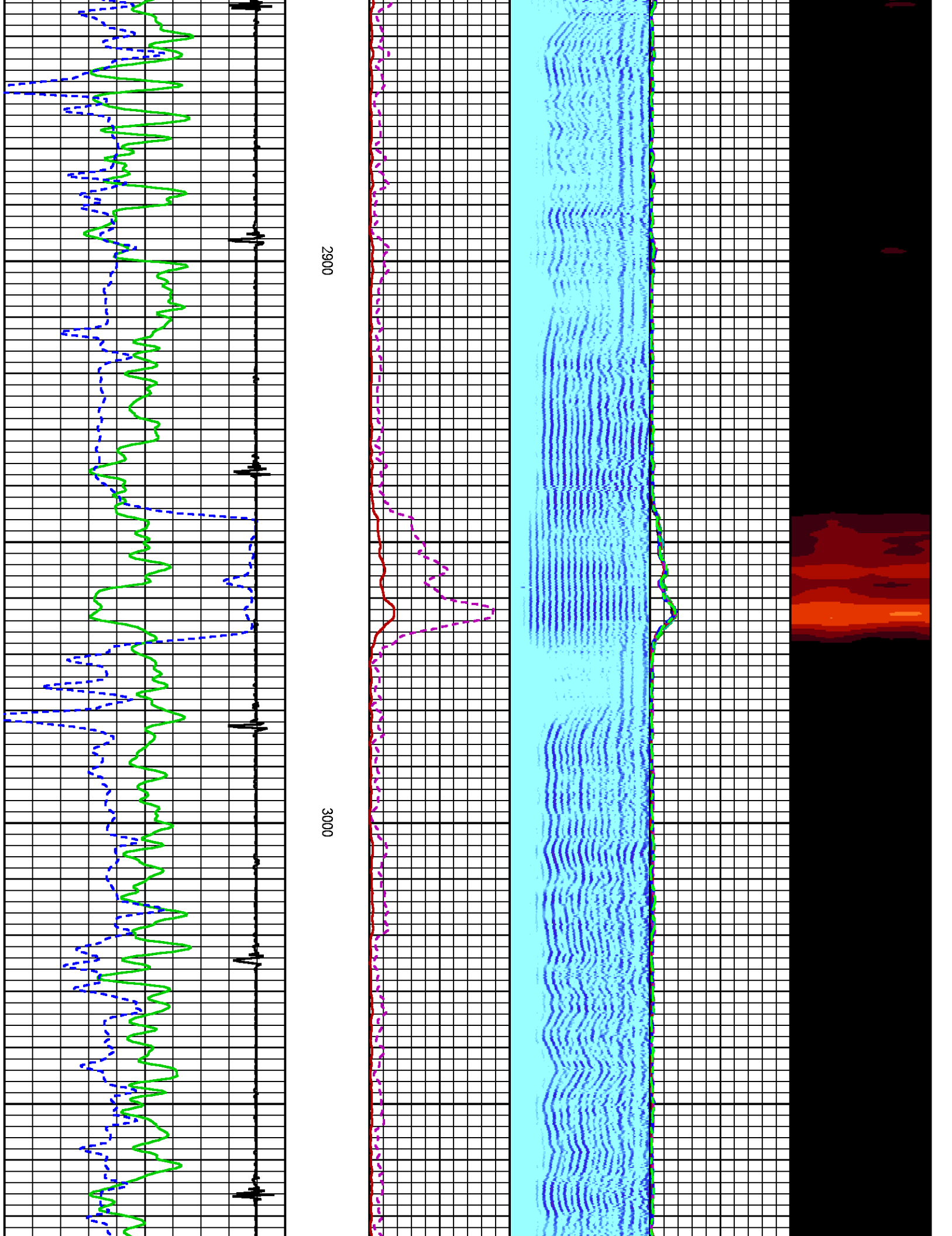


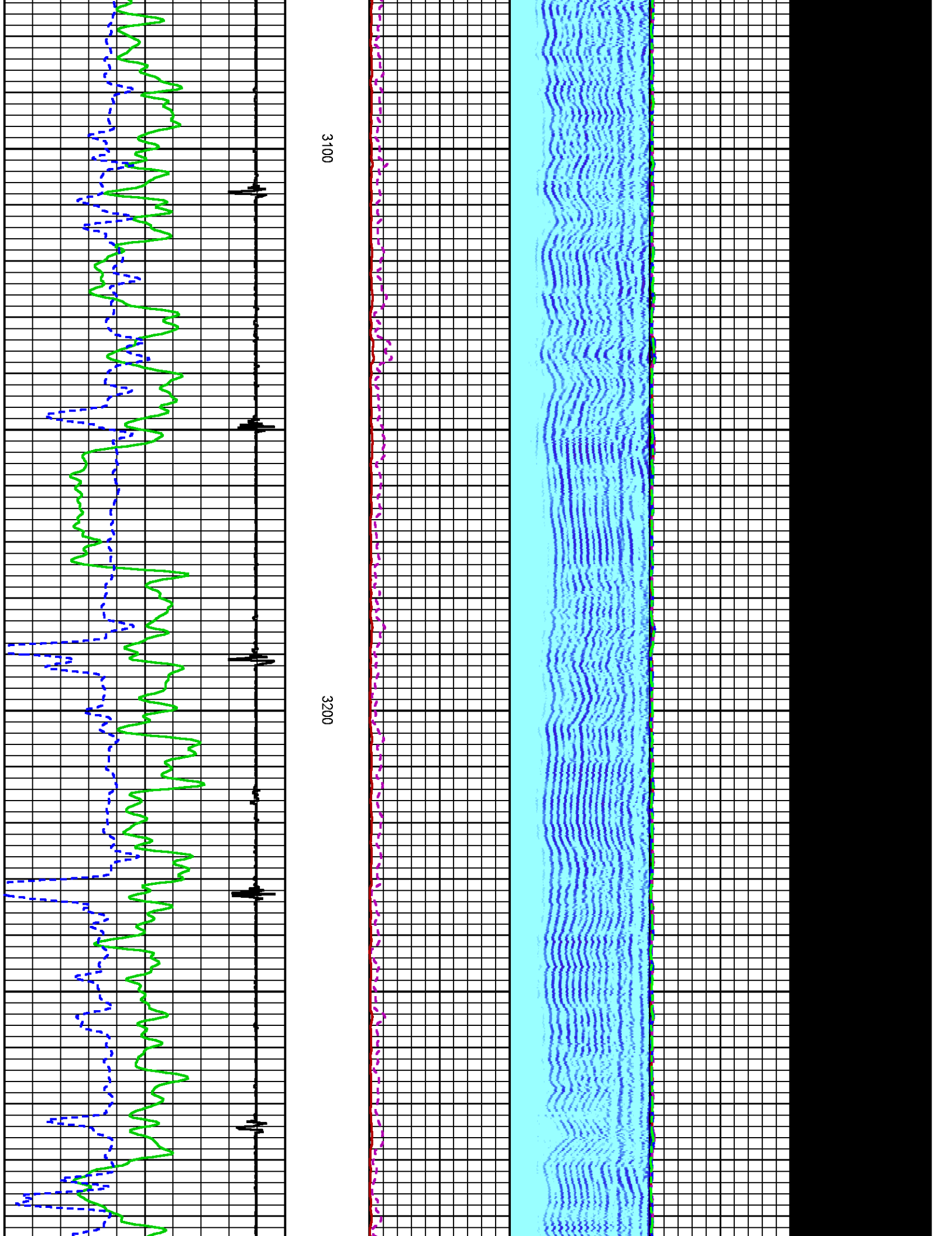




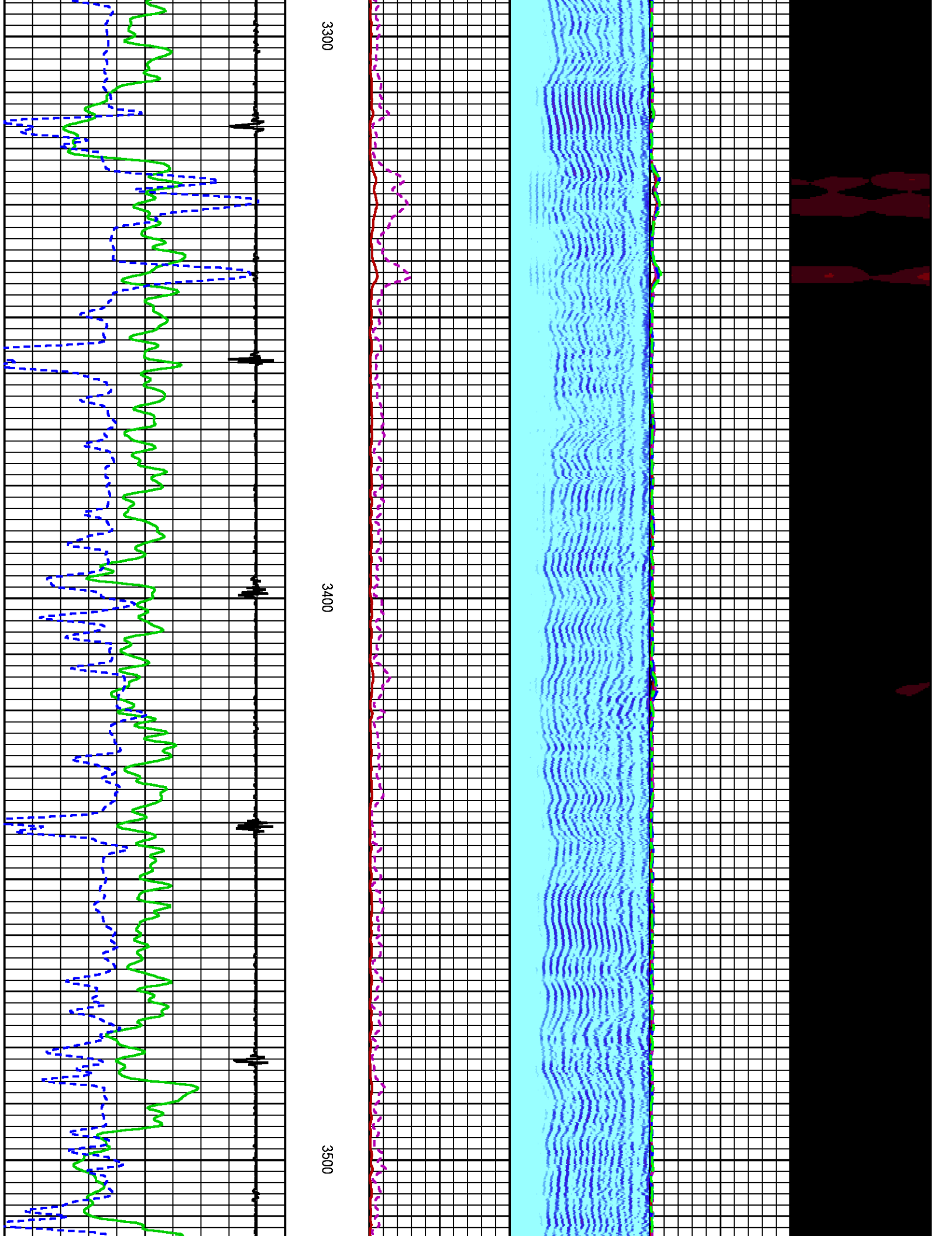


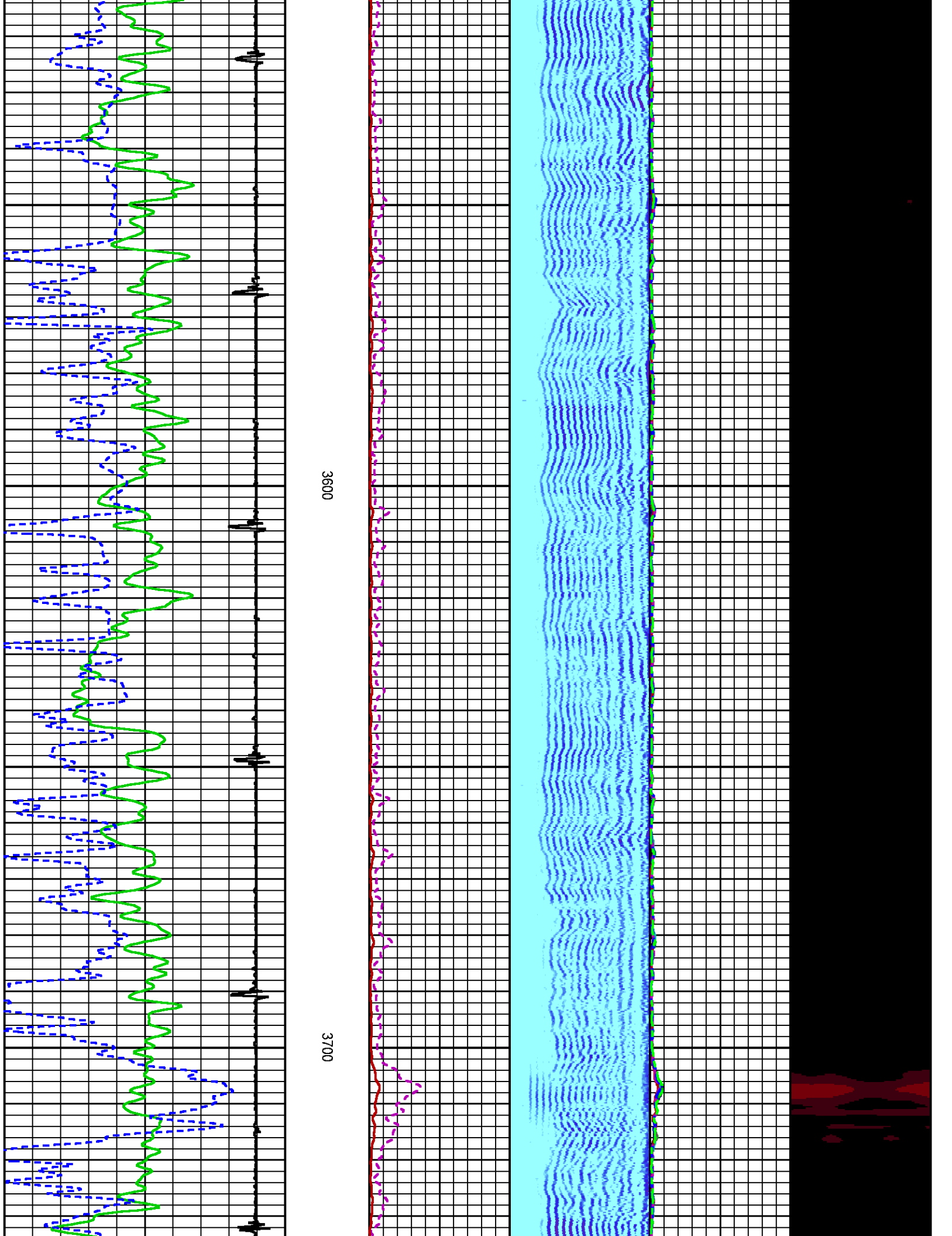


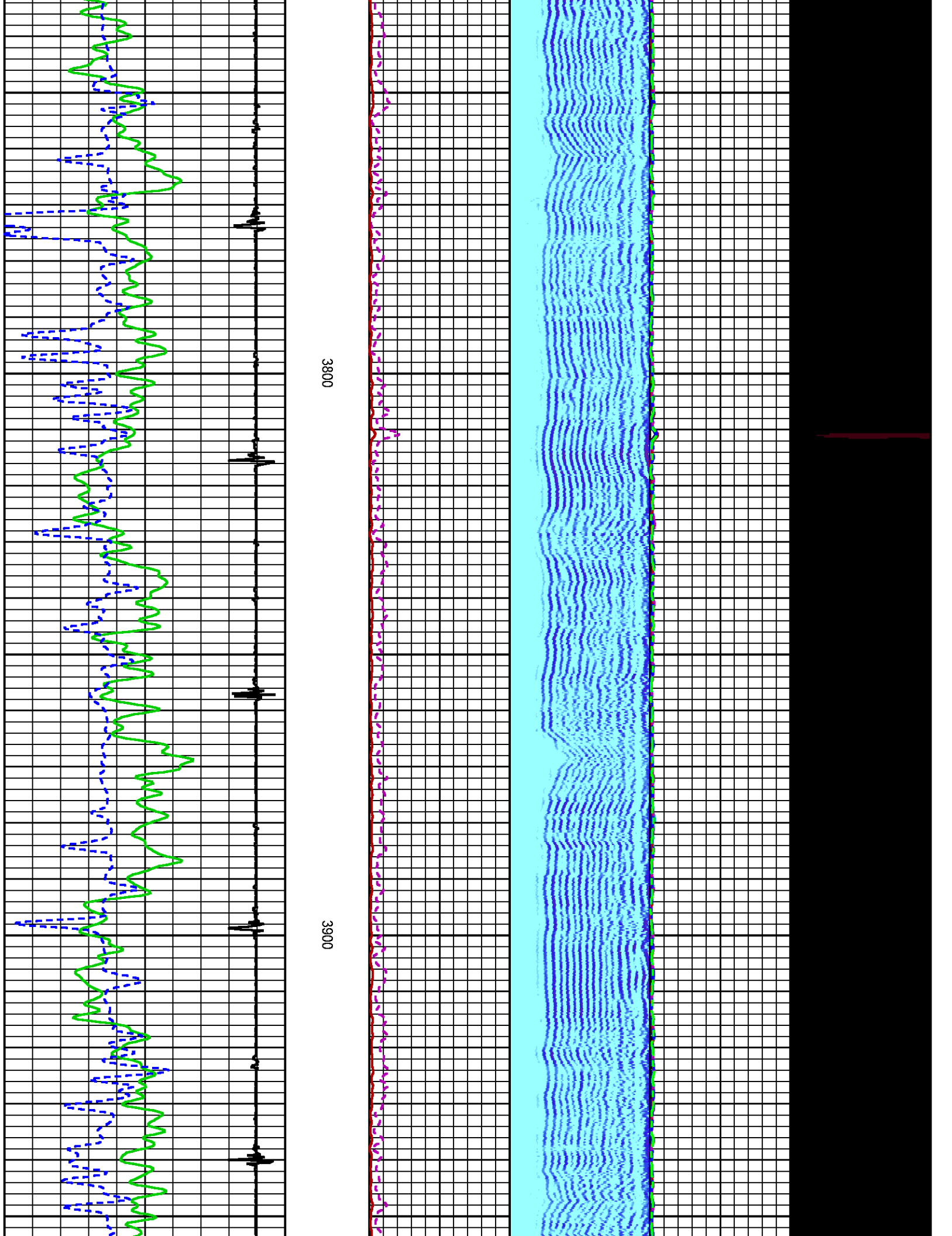


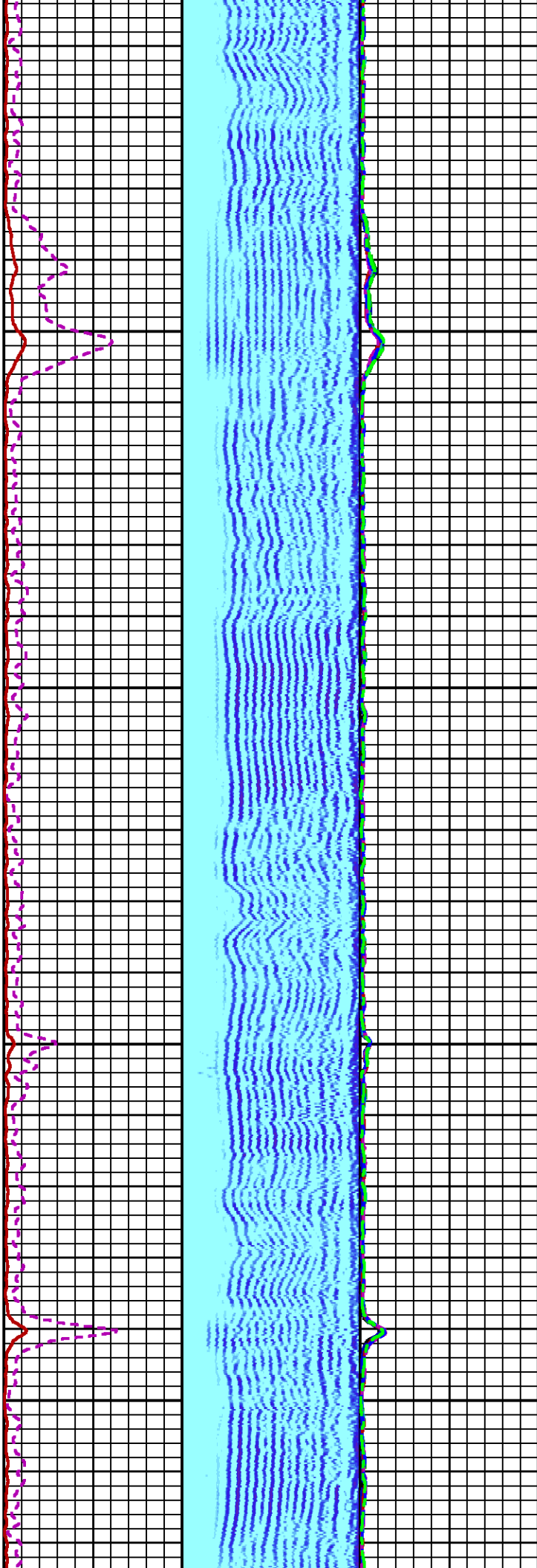
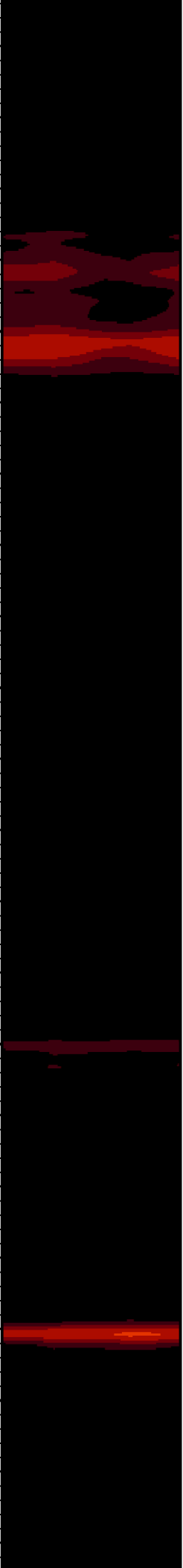






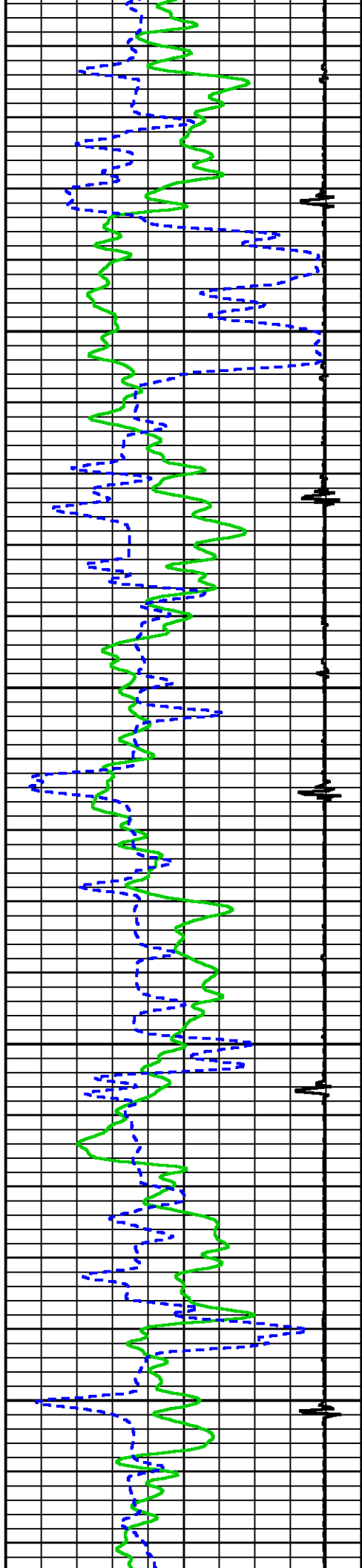


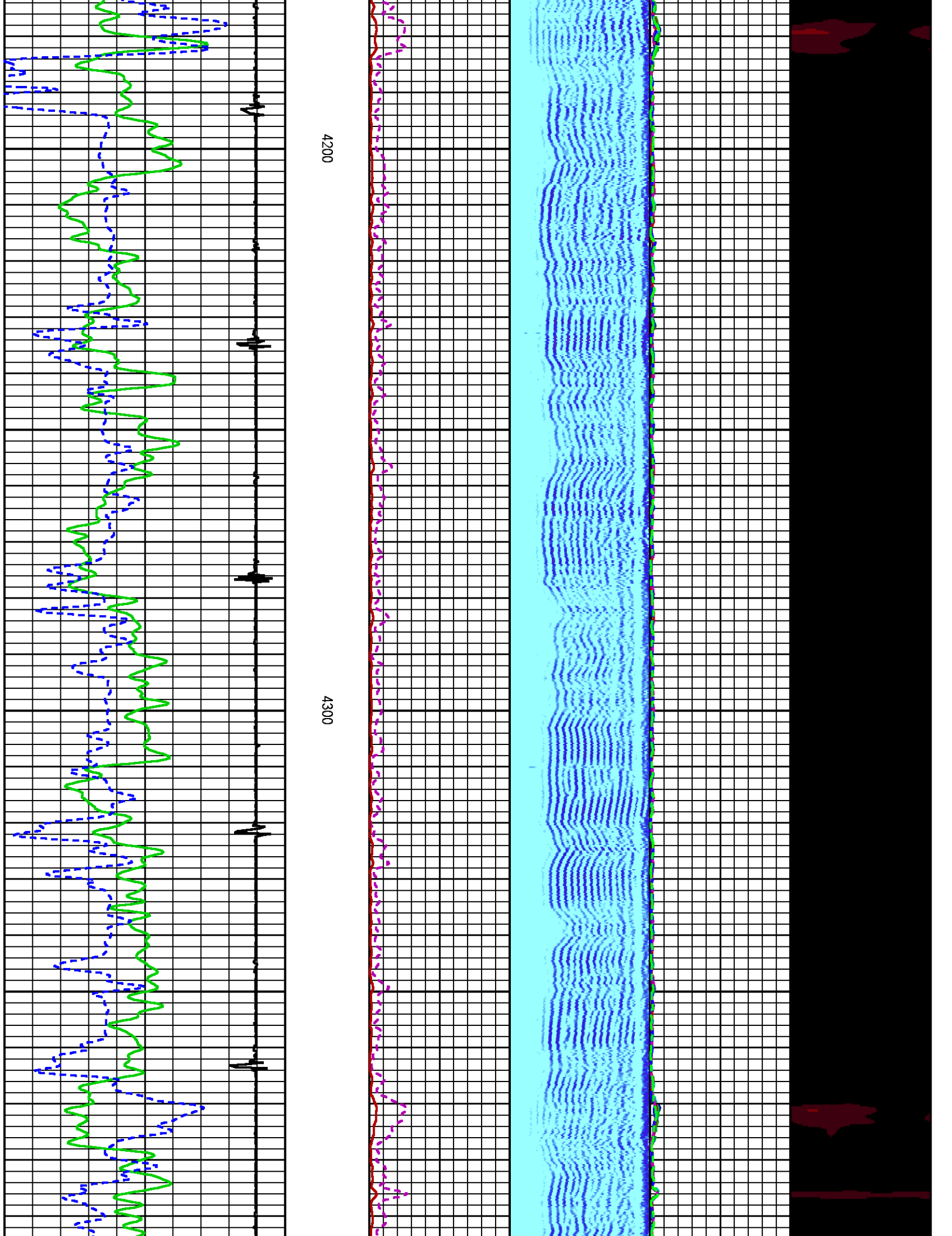




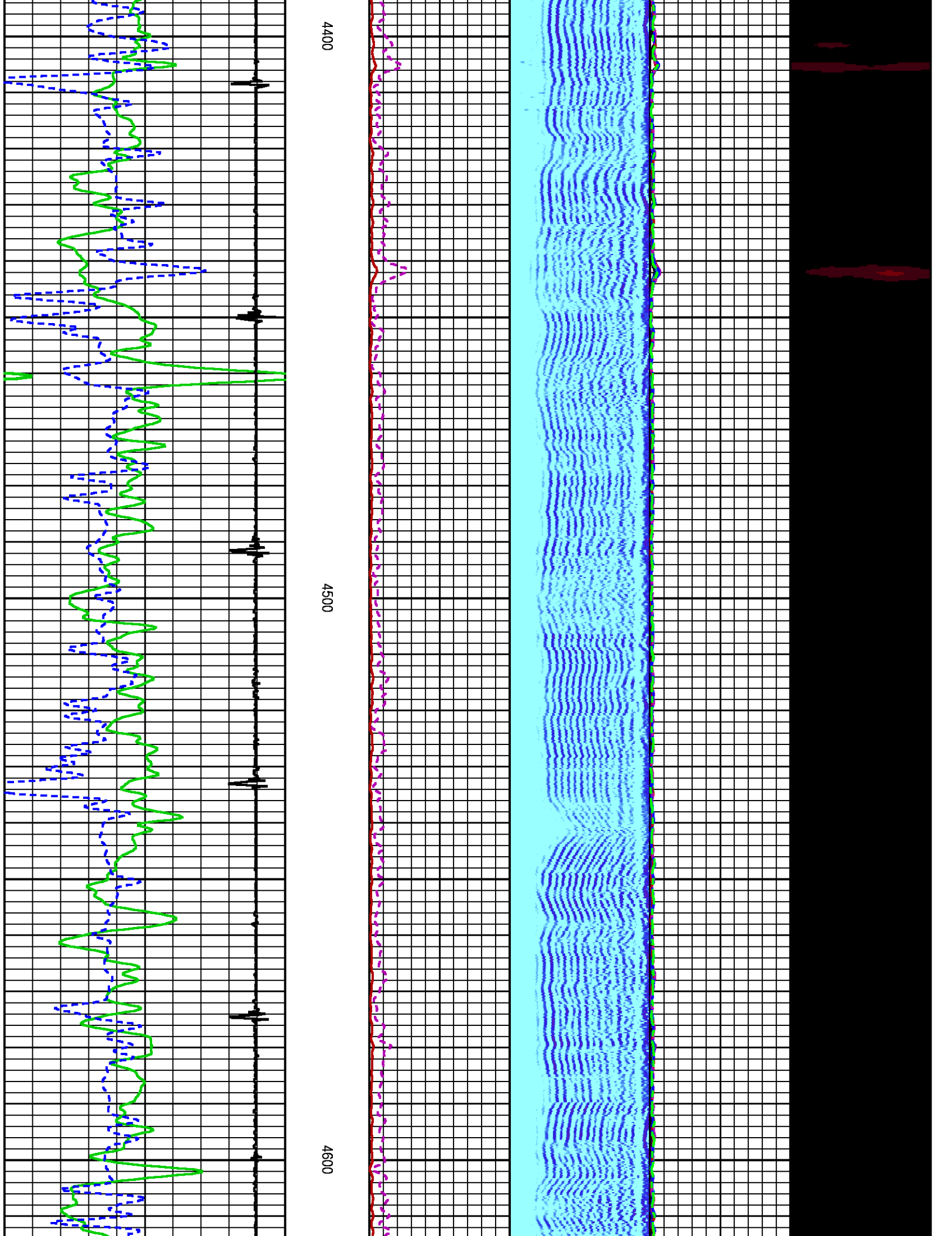
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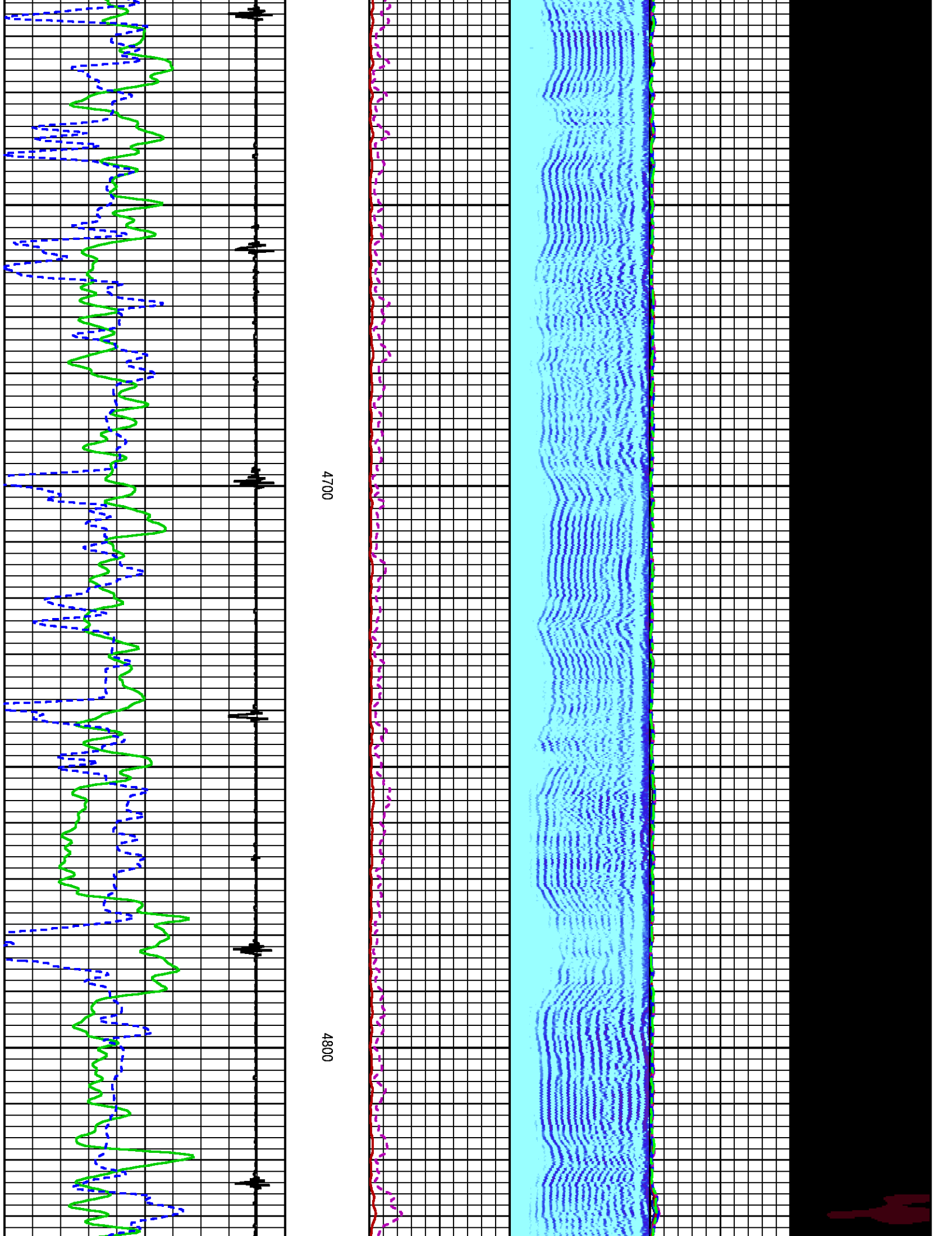
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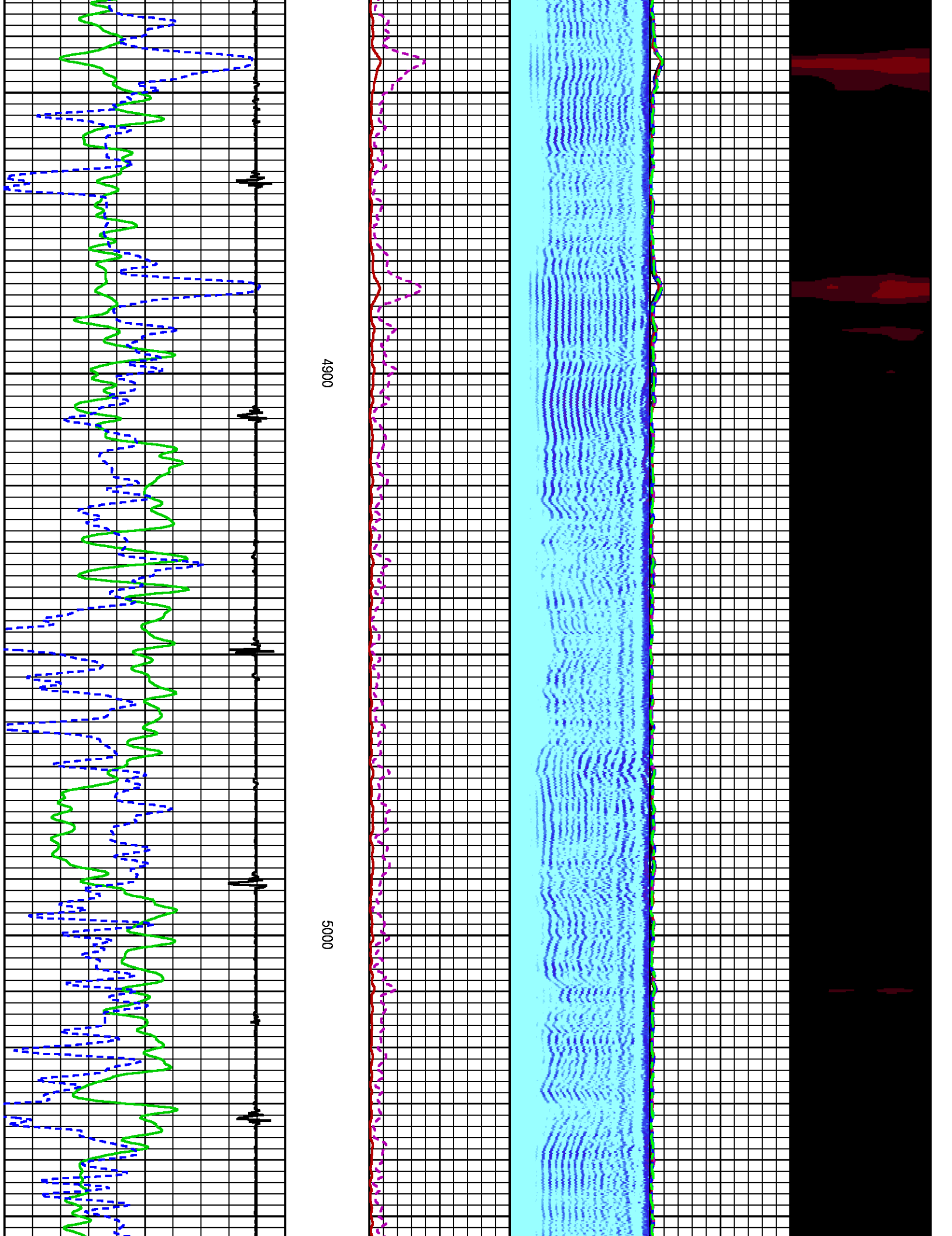


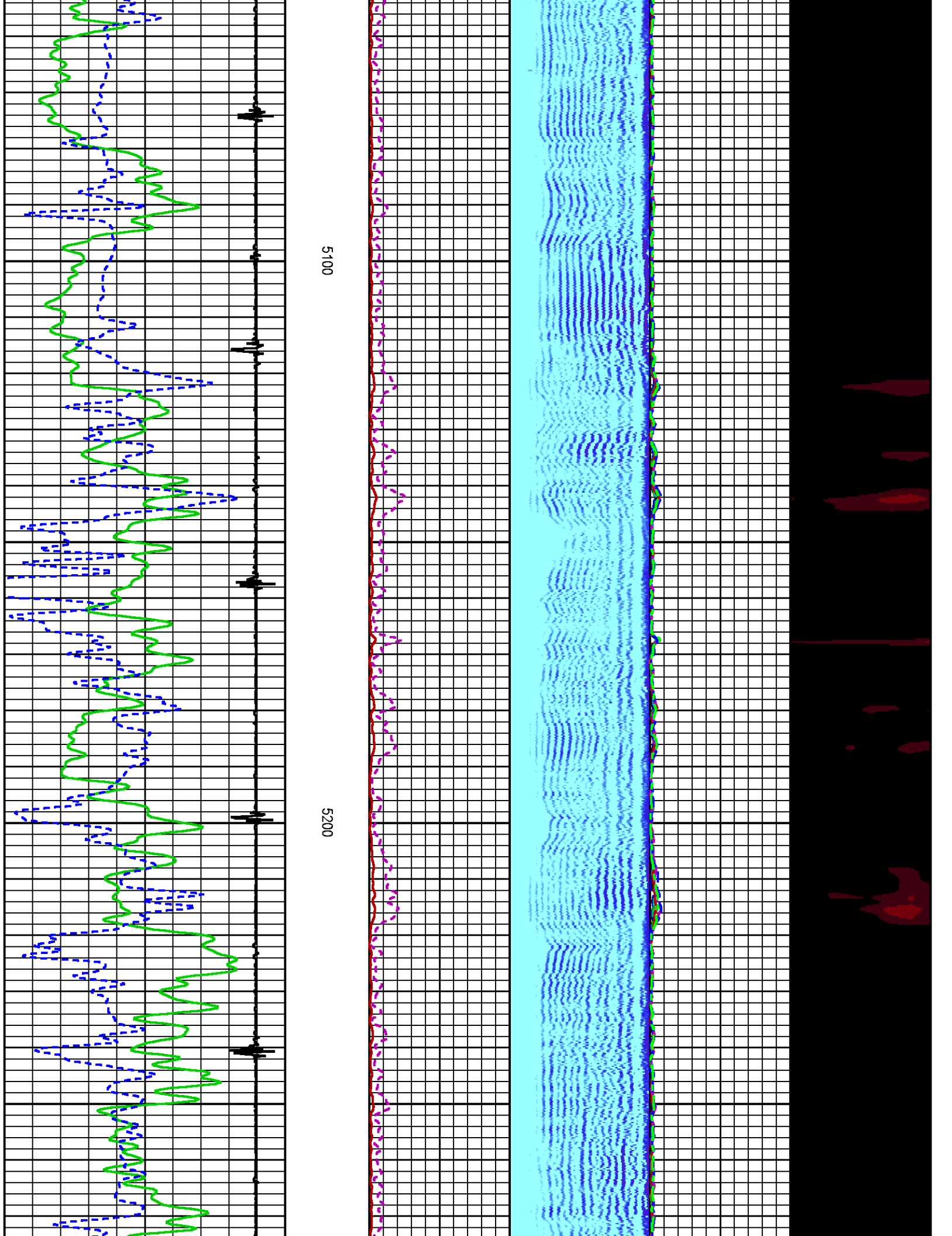


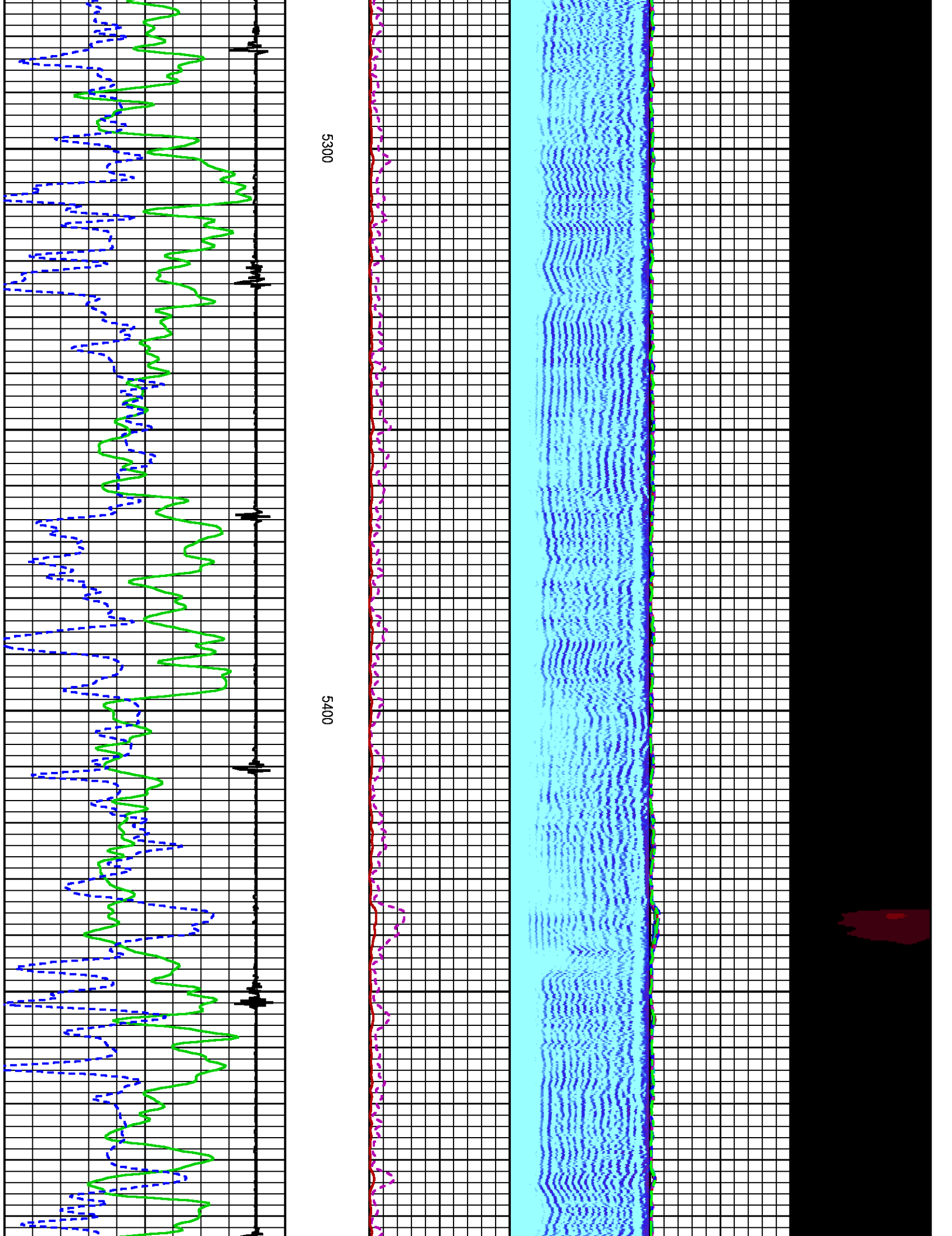




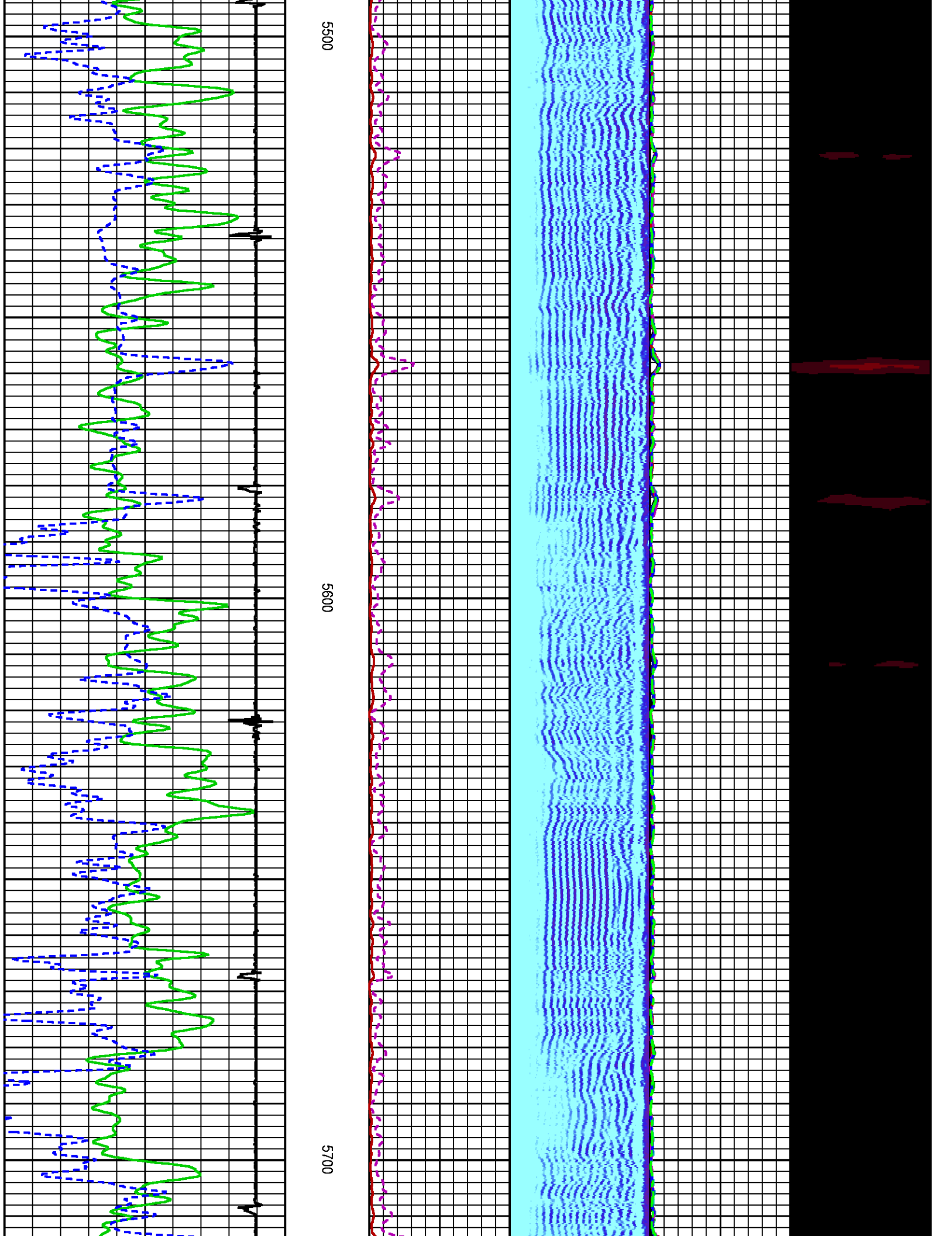


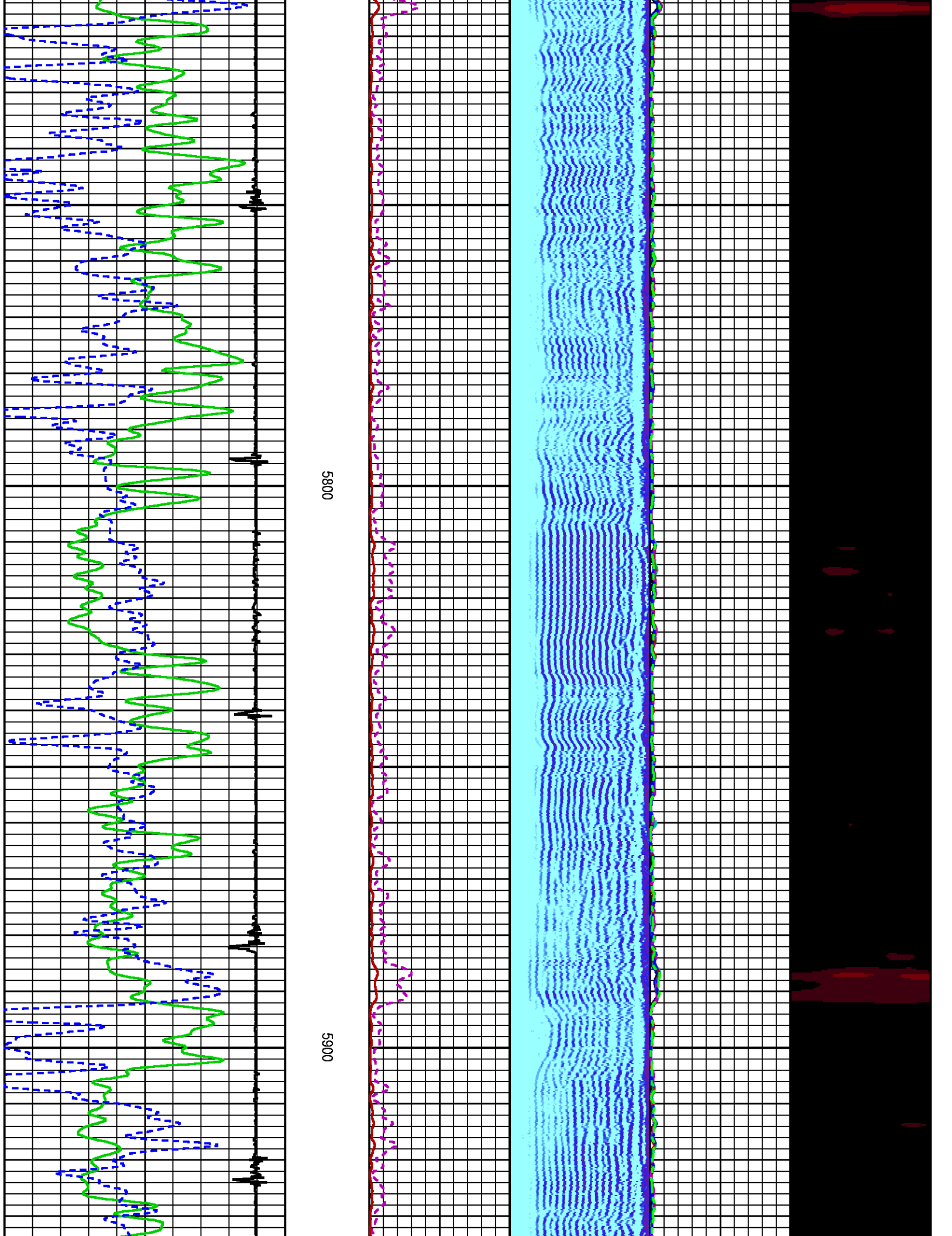


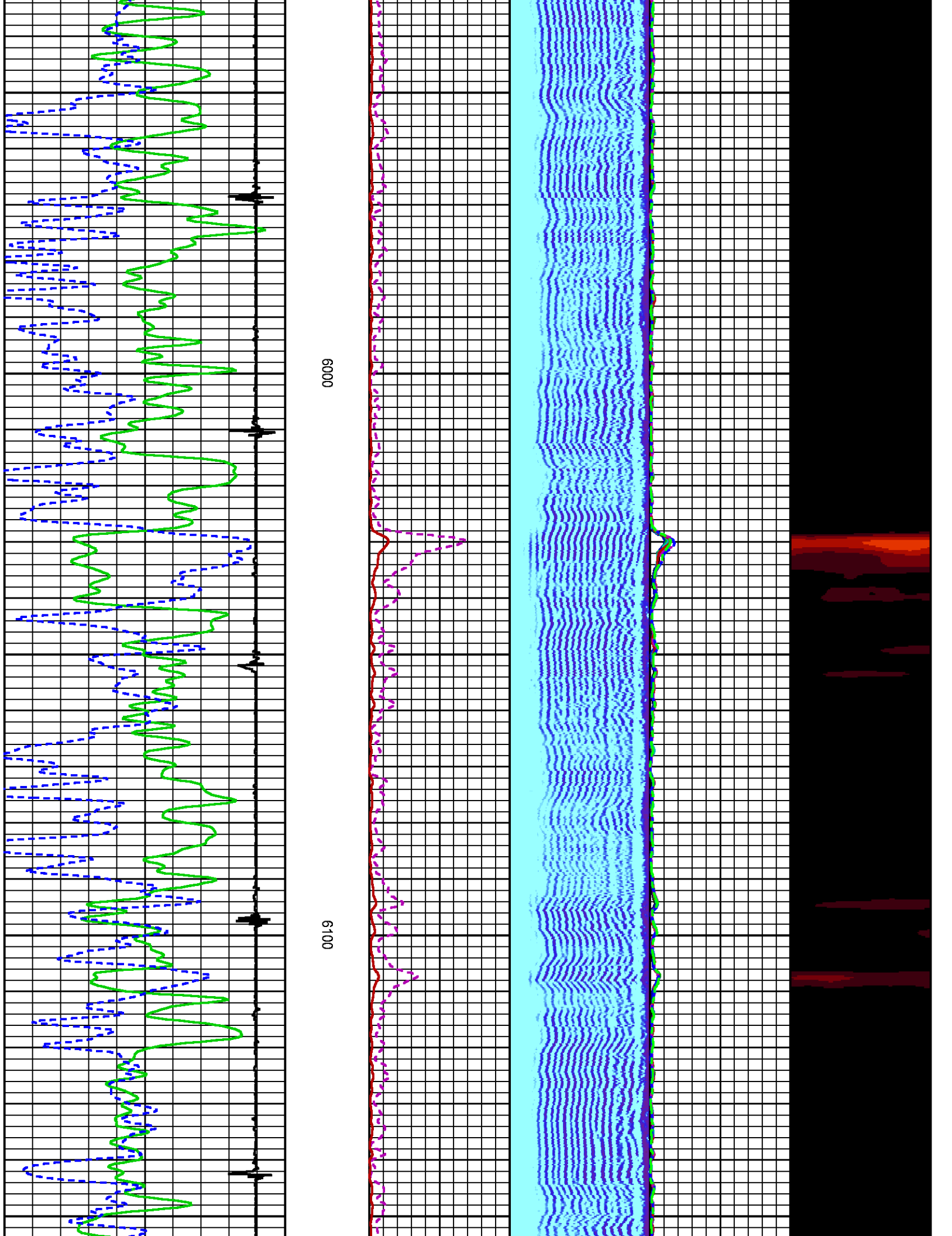


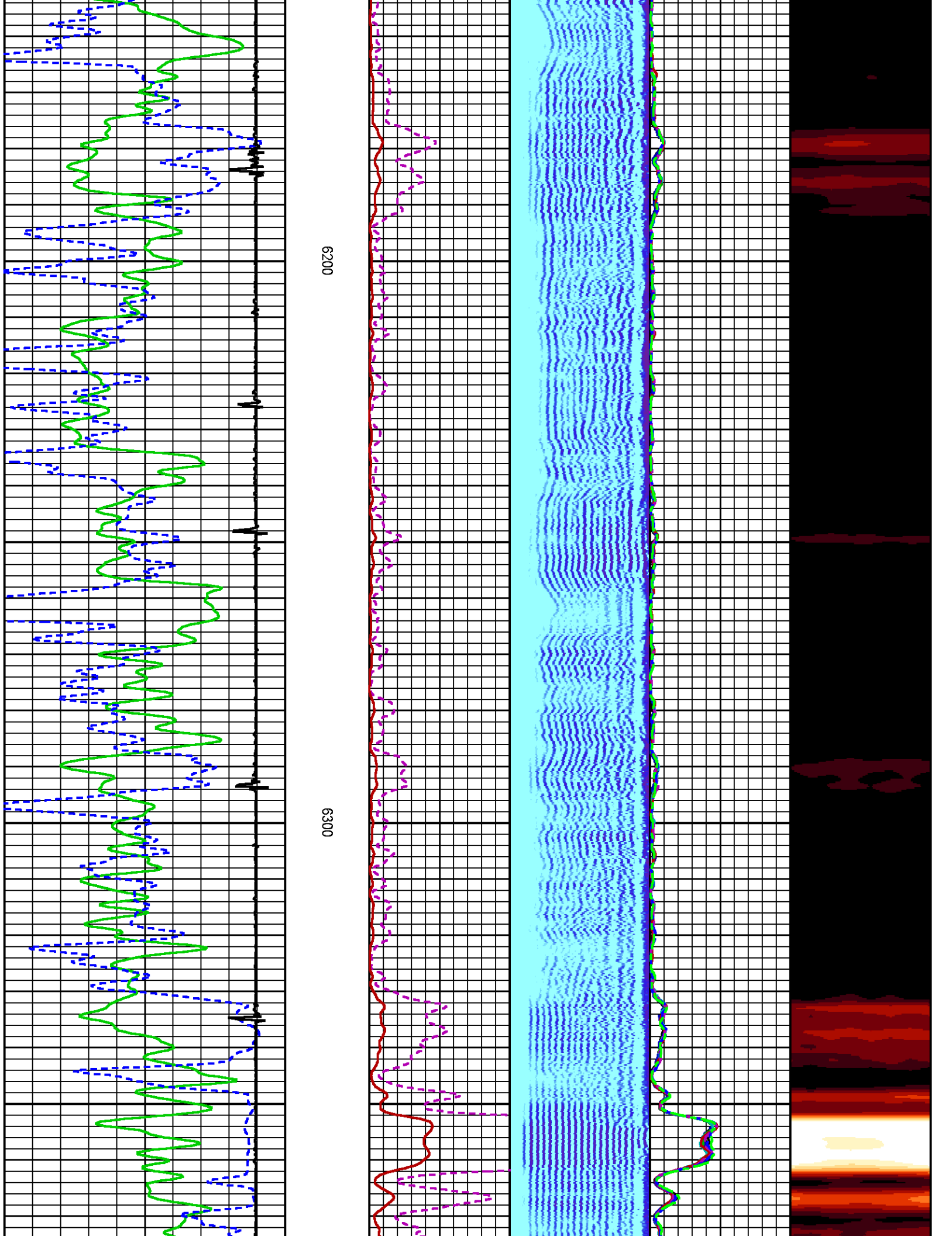




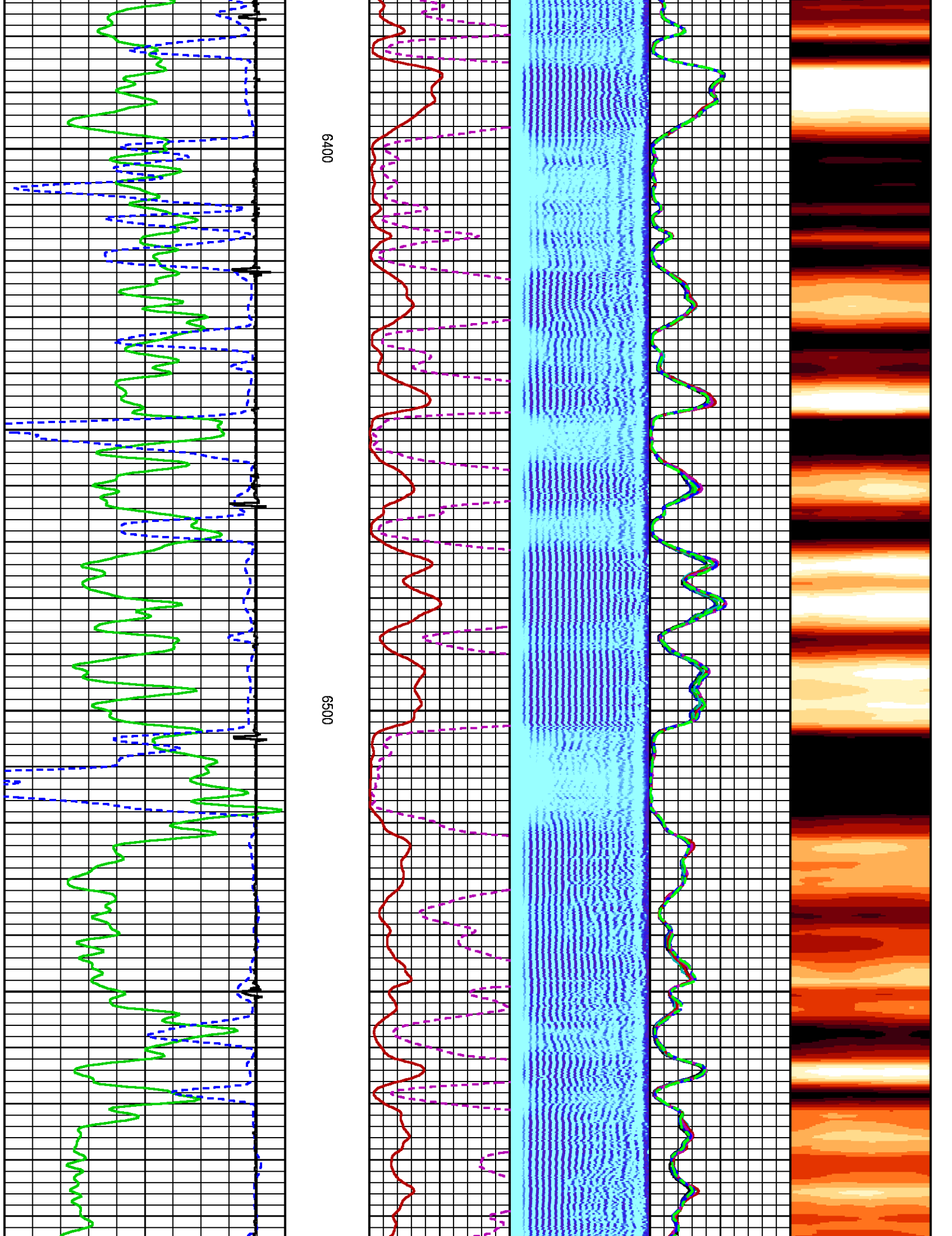




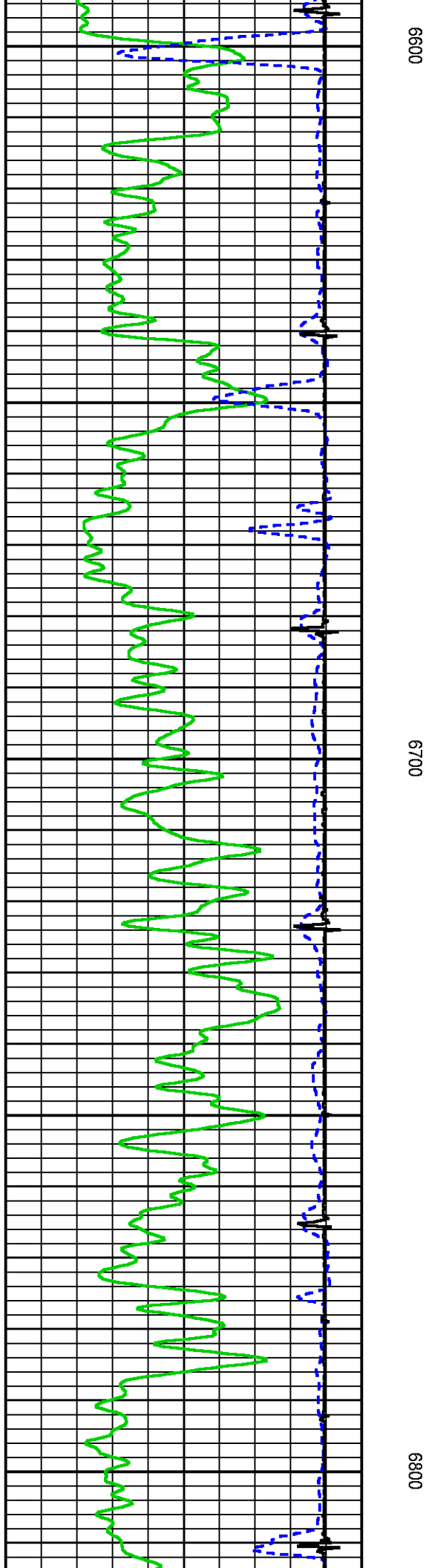
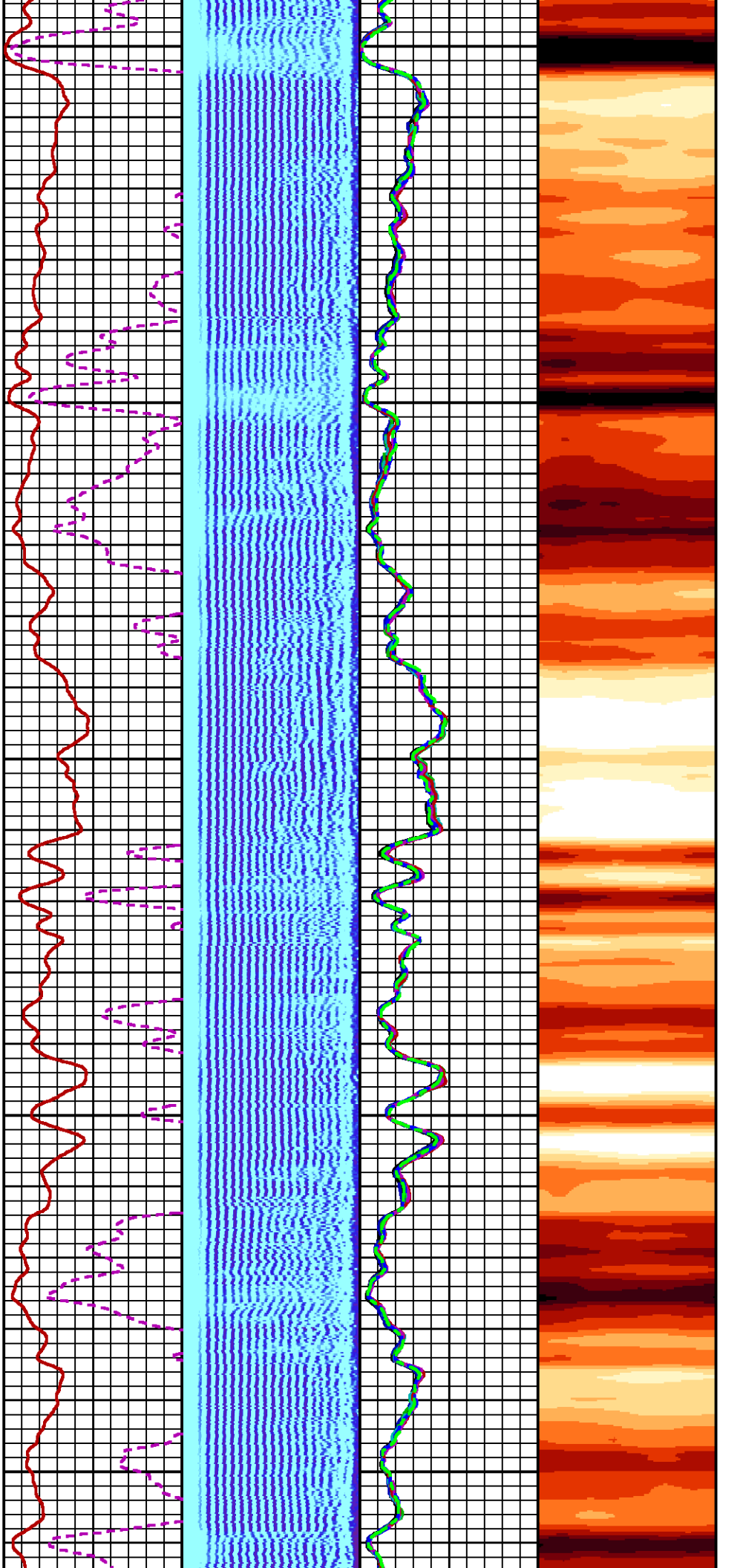


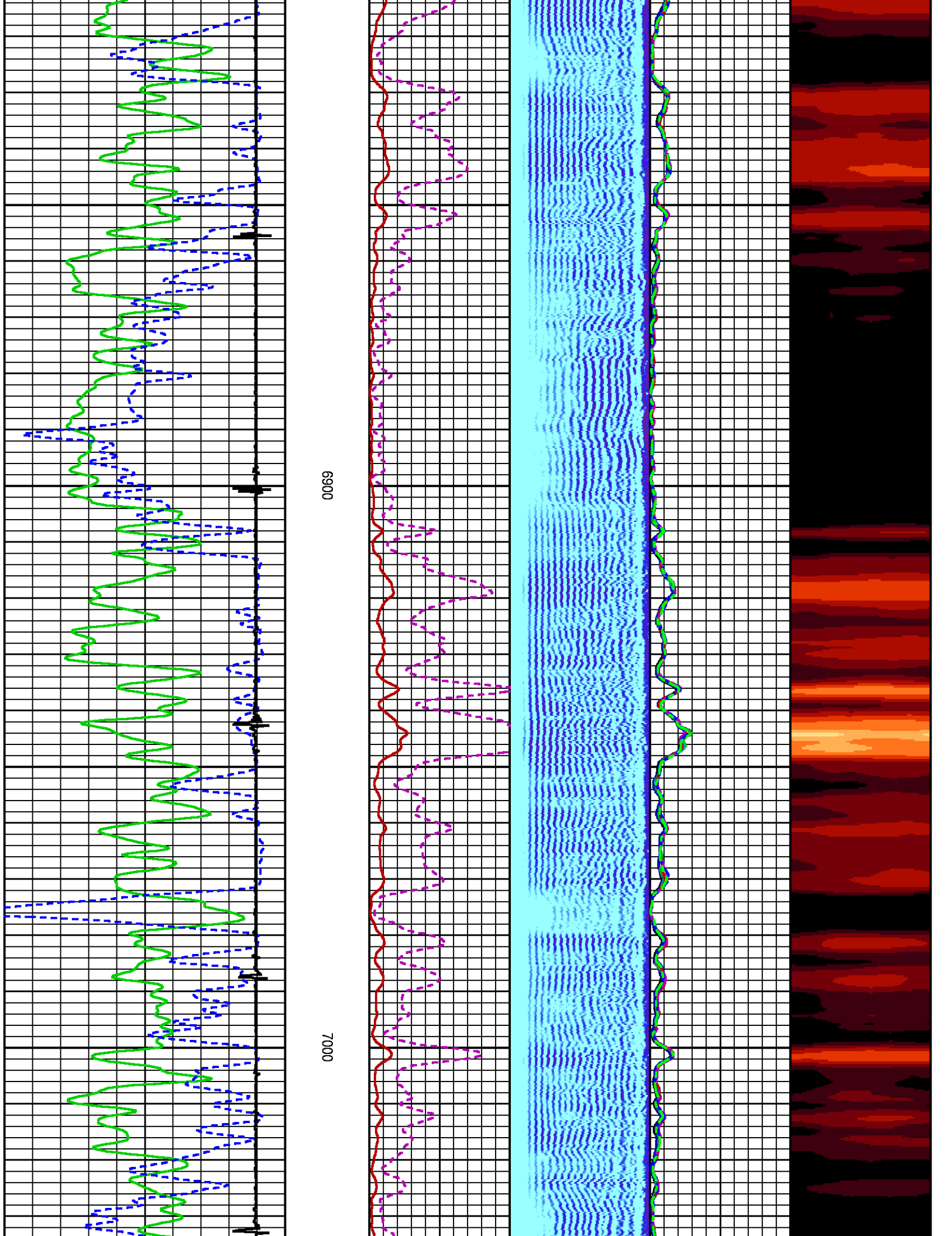


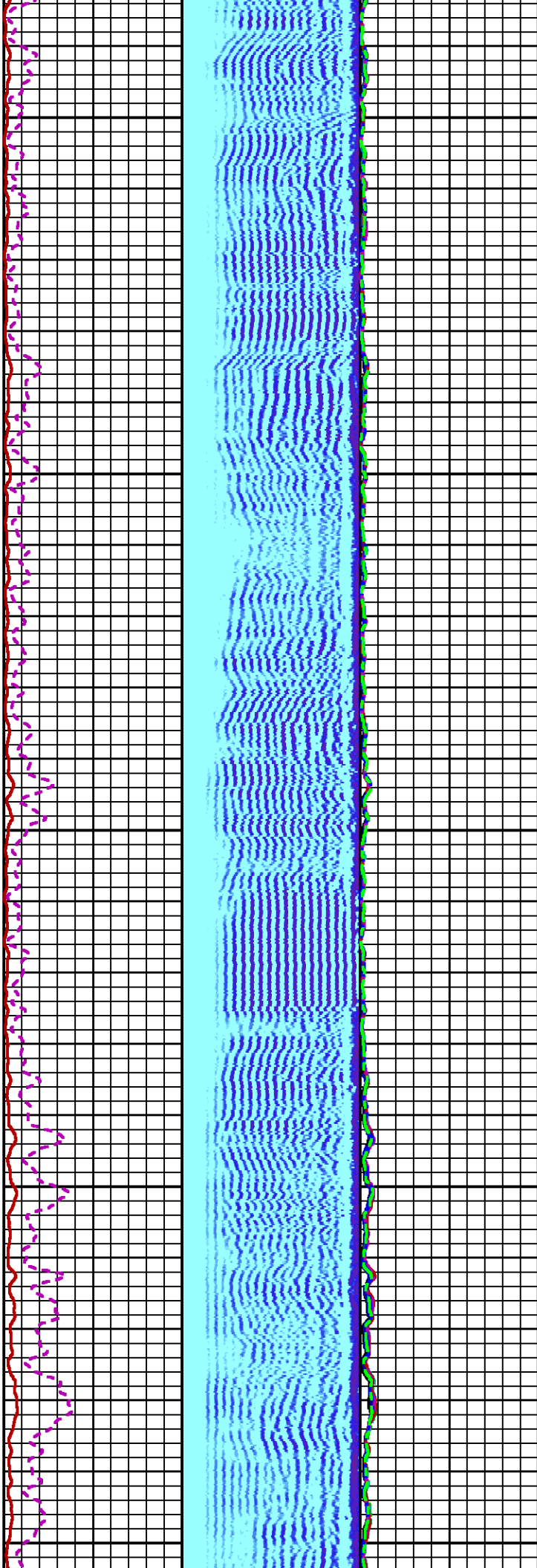






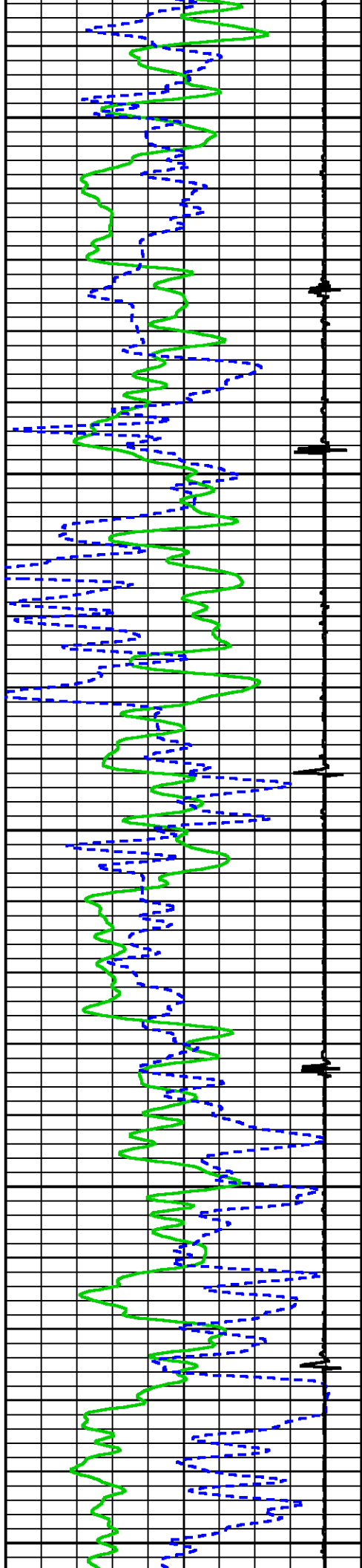


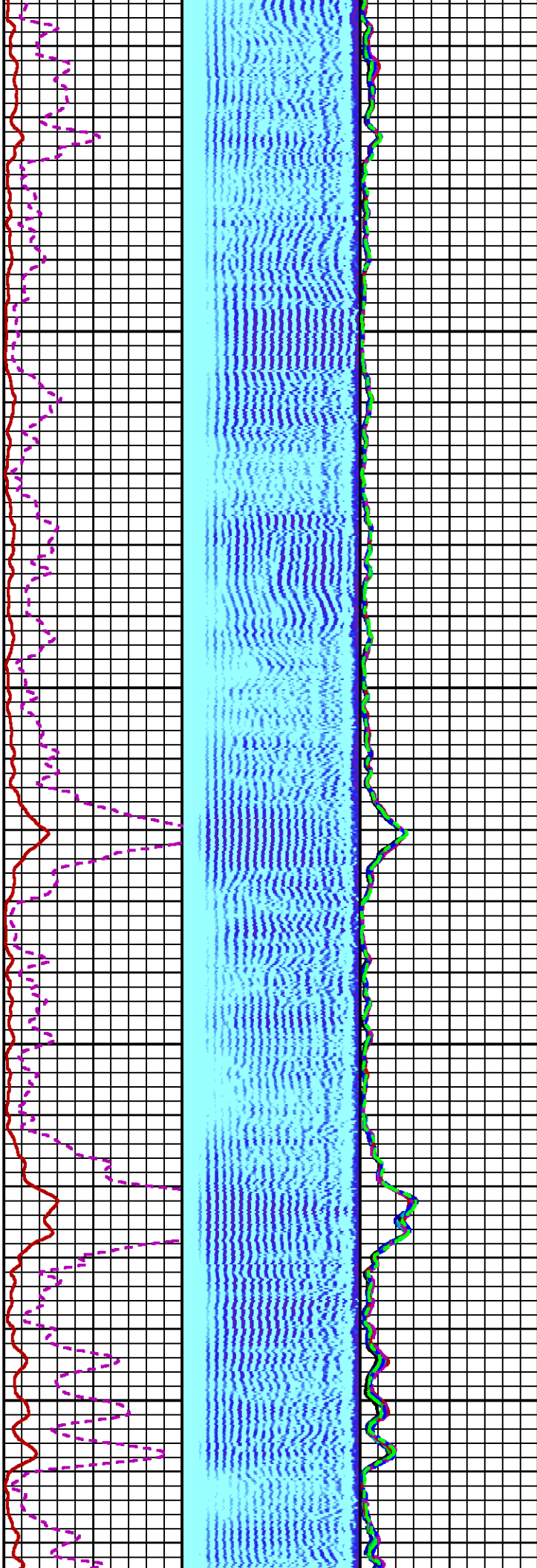




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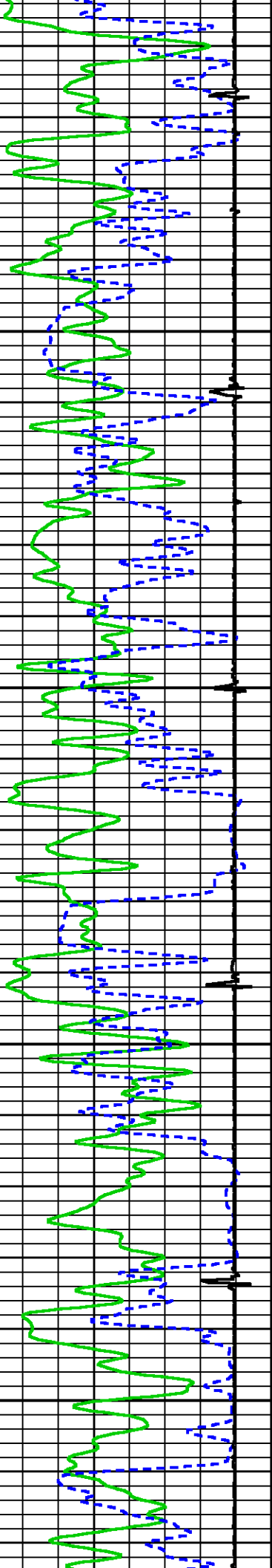
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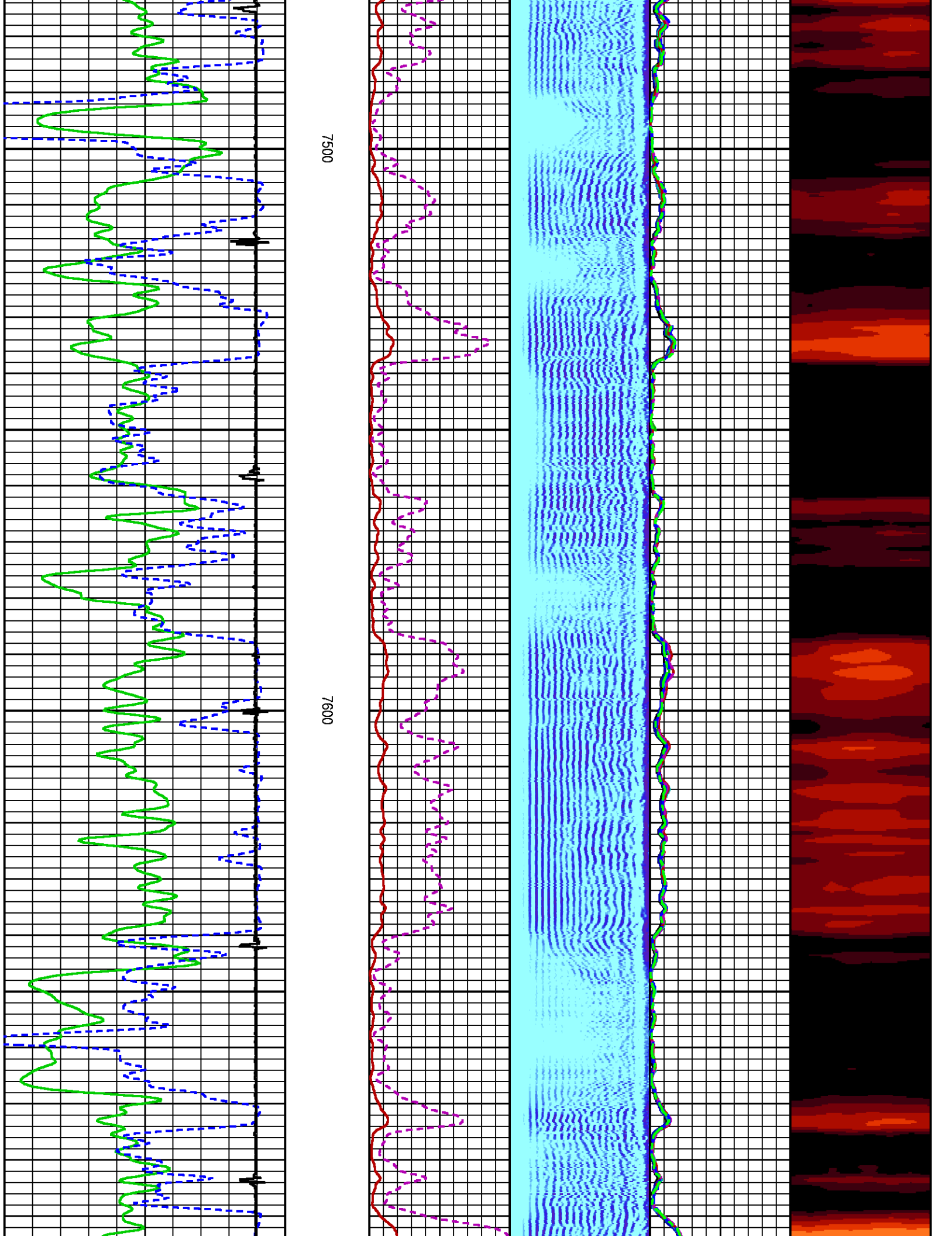


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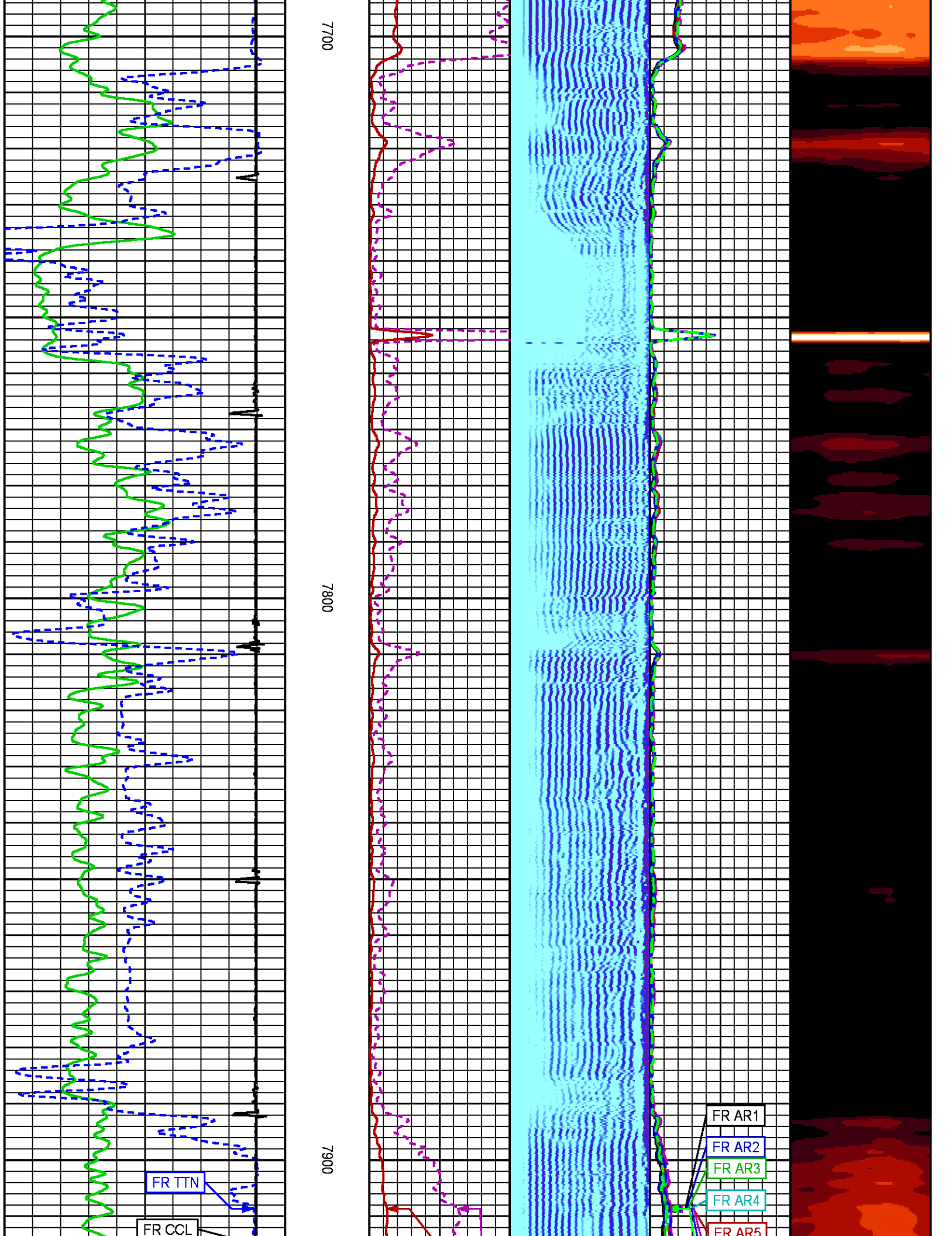
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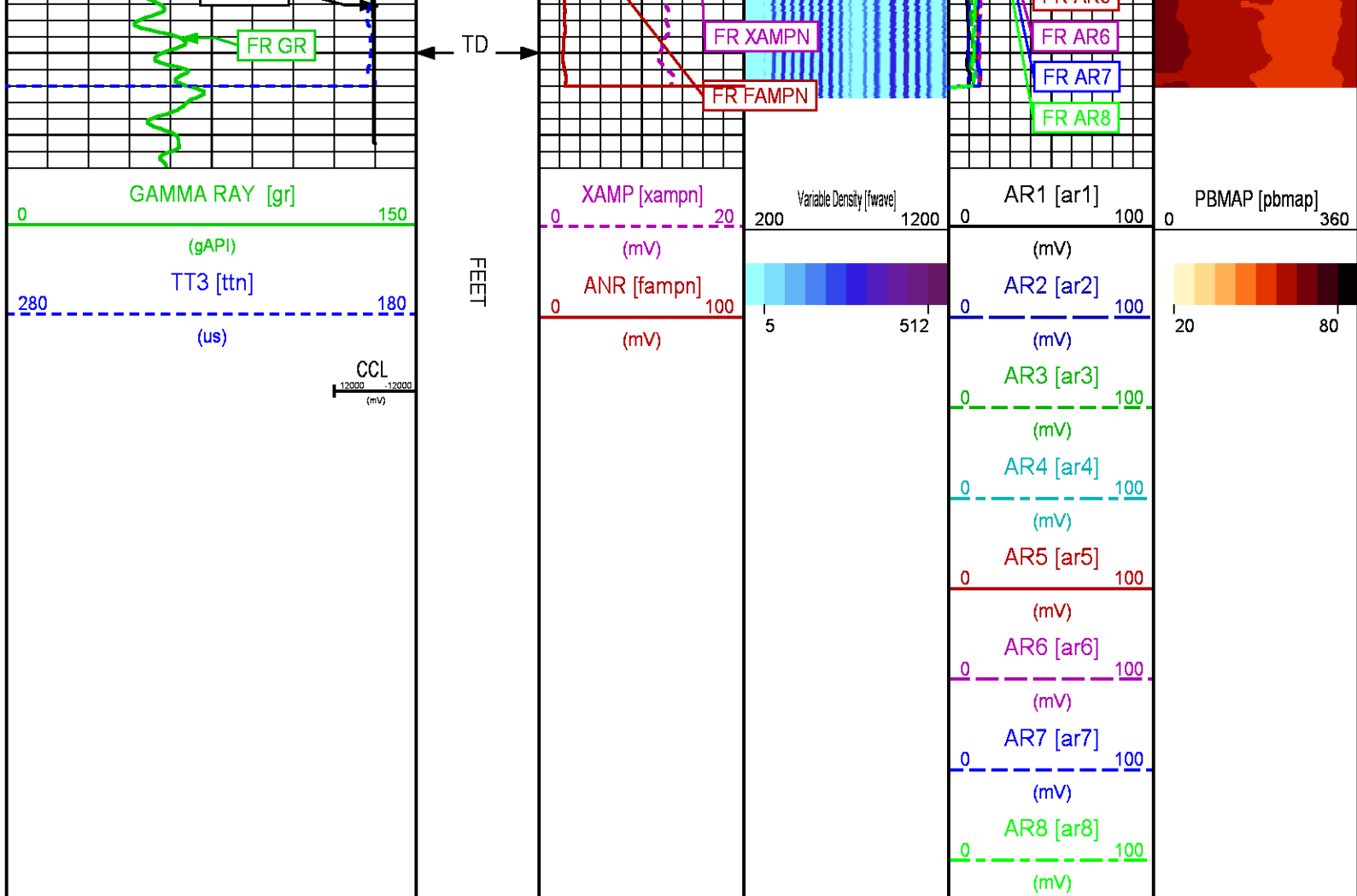












REPEAT PASS 0 PSI

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013  
Updates: 1 Patches: 9

Plotted: Mon May 29 13:37:48 2017

## PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE\_PICEANCE\_FEDERAL\_29\_19E/n012g01.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 7588.500 ft BOTTOM DEPTH: 7939.750 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

ANALOG RAL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
AMPLITUDE WINDOW (NEAR)	AMP WINDOW START (fgp1*)	178	us	TOP	BOTTOM
	AMP WINDOW START (fgp2*)	178	us	"	"
	AMP WINDOW START (fgp3*)	178	us	"	"
	AMP WINDOW START (fgp4*)	178	us	"	"
	AMP WINDOW START (fgp5*)	178	us	"	"
	AMP WINDOW START (fgp6*)	178	us	"	"
	AMP WINDOW START (fgp7*)	178	us	"	"
	AMP WINDOW START (fgp8*)	178	us	"	"
	AMP WINDOW START (fgpn*)	178	us	"	"
	AMP WINDOW LENGTH	25	us	"	"
TRAVEL TIME WINDOW (NEAR)	TT WINDOW START (ttn*)	160	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*)	-75	us	"	"
	TOOL DELAY (str2*)	-75	us	"	"
	TOOL DELAY (str3*)	-75	us	"	"
	TOOL DELAY (str4*)	-75	us	"	"
	TOOL DELAY (str5*)	-75	us	"	"
	TOOL DELAY (str6*)	-75	us	"	"
	TOOL DELAY (str7*)	-75	us	"	"
	TOOL DELAY (str8*)	-75	us	"	"
	TOOL DELAY (strn*)	-75	us	"	"
BASELINE NOISE (NEAR)	NOISE WINDOW START	125	us	"	"
	NOISE WINDOW LENGTH	25	us	"	"

PERCENT BOND CEMENT MAP

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
RAL FREE PIPE AMPLITUDE	FREE AMP REC 1	80	mV	TOP	BOTTOM
	FREE AMP REC 2	80	mV	"	"
	FREE AMP REC 3	80	mV	"	"
	FREE AMP REC 4	80	mV	"	"
	FREE AMP REC 5	80	mV	"	"
	FREE AMP REC 6	80	mV	"	"
	FREE AMP REC 7	80	mV	"	"
	FREE AMP REC 8	80	mV	"	"
RAL FULL BOND AMPLITUDE	FULL BOND AMP REC 1	2	mV	"	"
	FULL BOND AMP REC 2	2	mV	"	"
	FULL BOND AMP REC 3	2	mV	"	"
	FULL BOND AMP REC 4	2	mV	"	"
	FULL BOND AMP REC 5	2	mV	"	"
	FULL BOND AMP REC 6	2	mV	"	"
	FULL BOND AMP REC 7	2	mV	"	"
	FULL BOND AMP REC 8	2	mV	"	"

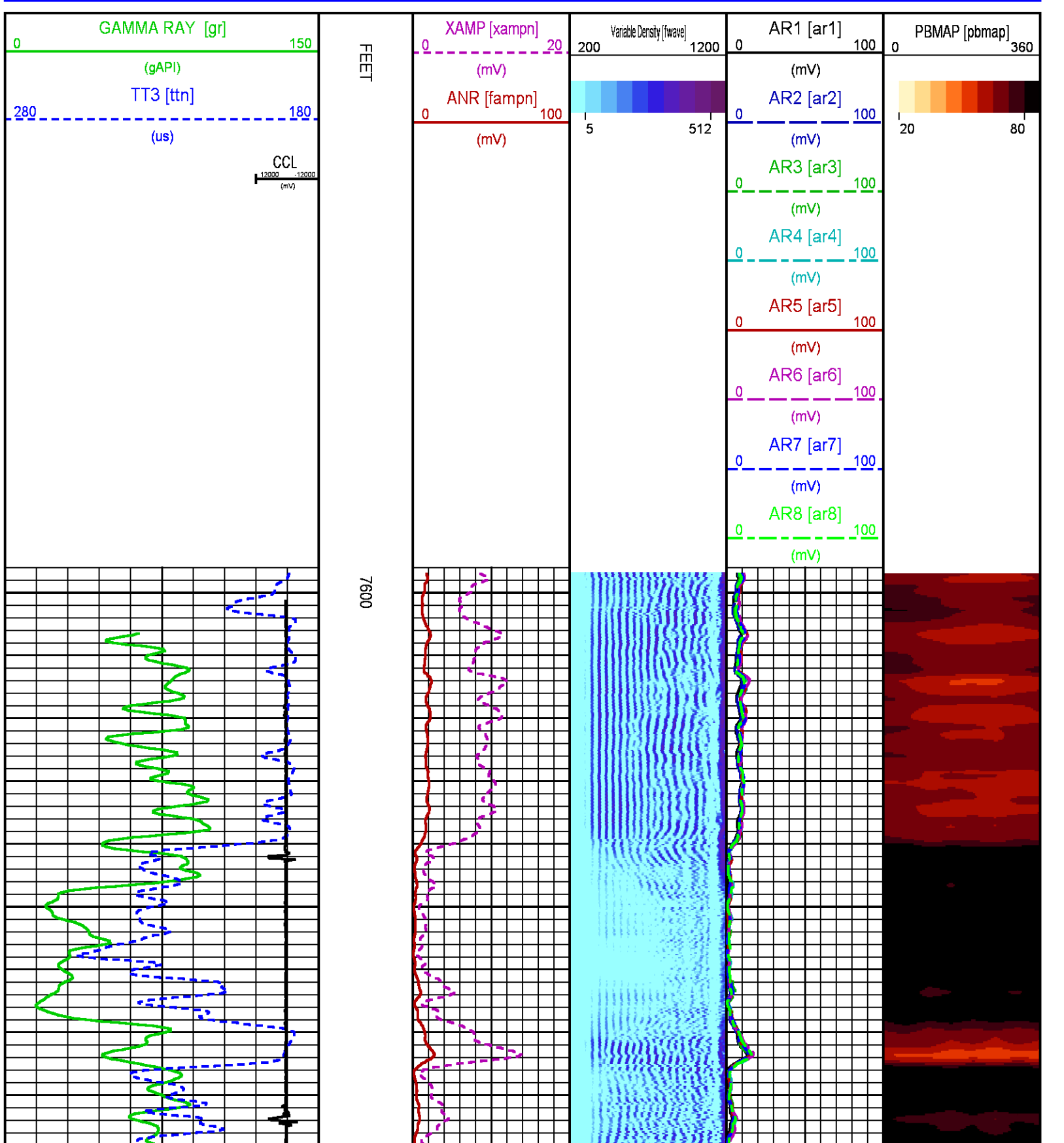
CURVE DESCRIPTION REPORT

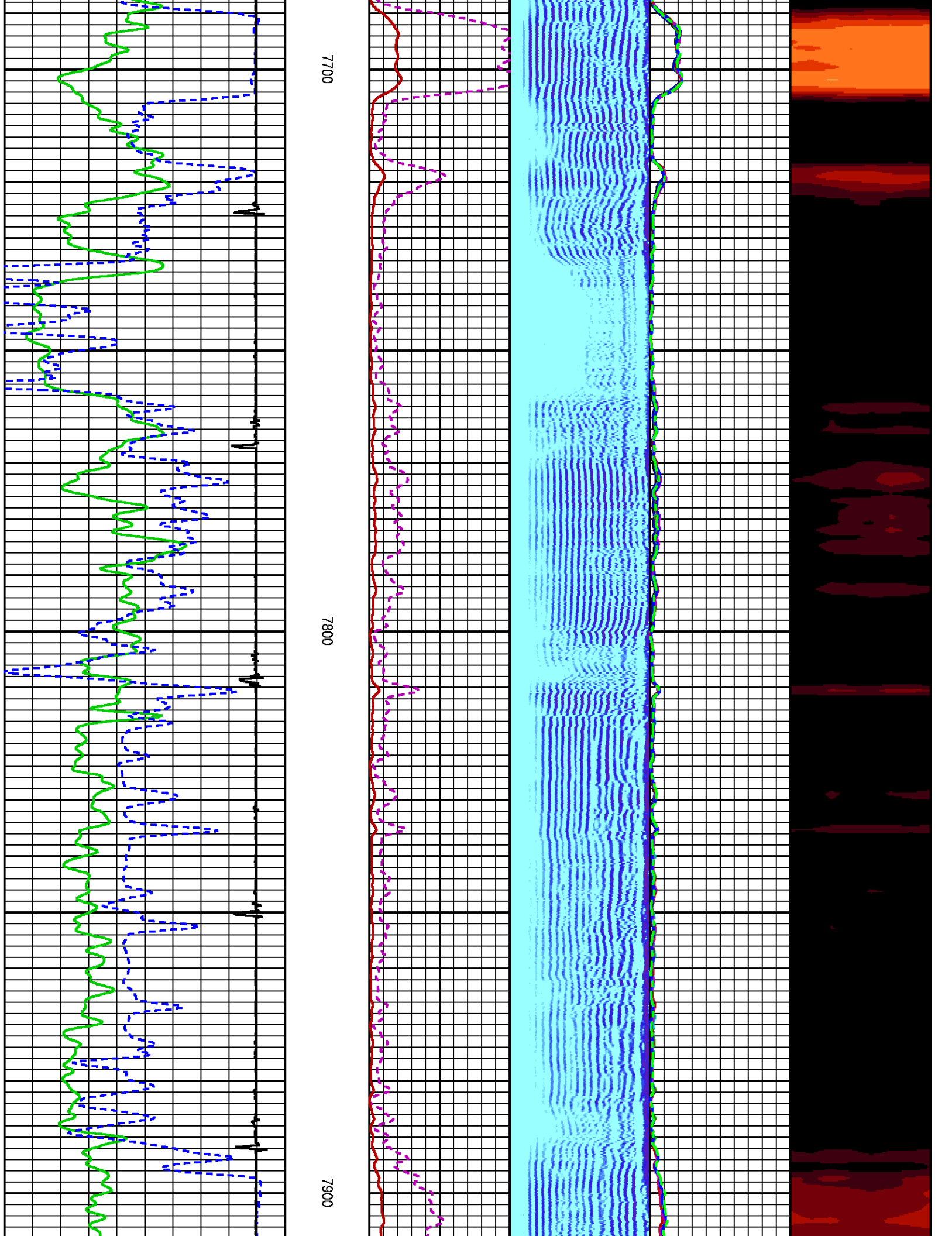
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:AR1	May 29 08:56:56 2017	FIXED GATE AMPLITUDE T-R1
F1:AR2	May 29 08:56:56 2017	FIXED GATE AMPLITUDE T-R2
F1:AR3	May 29 08:56:56 2017	FIXED GATE AMPLITUDE T-R3
F1:AR4	May 29 08:56:56 2017	FIXED GATE AMPLITUDE T-R4
F1:AR5	May 29 08:56:56 2017	FIXED GATE AMPLITUDE T-R5
F1:AR6	May 29 08:56:56 2017	FIXED GATE AMPLITUDE T-R6
F1:AR7	May 29 08:56:56 2017	FIXED GATE AMPLITUDE T-R7
F1:AR8	May 29 08:56:56 2017	FIXED GATE AMPLITUDE T-R8
F1:CCL	May 29 08:56:56 2017	CASING COLLAR LOCATOR
F1:FAMPN	May 29 08:56:56 2017	FIXED GATE AMPLITUDE NEAR RECEIVER
F1:FWAVE	May 29 08:56:56 2017	FAR WAVE FORM
F1:GR	May 29 08:56:56 2017	GAMMA RAY
F1:PBMAP	May 29 08:56:56 2017	PERCENT BOND CEMENT MAP
F1:TTN	May 29 08:56:56 2017	TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER
F1:XAMPN	May 29 08:56:56 2017	FIXED GATE AMPLITUDE NEAR RECEIVER TIMES FIVE

CURVE MEASURE POINT OFFSET

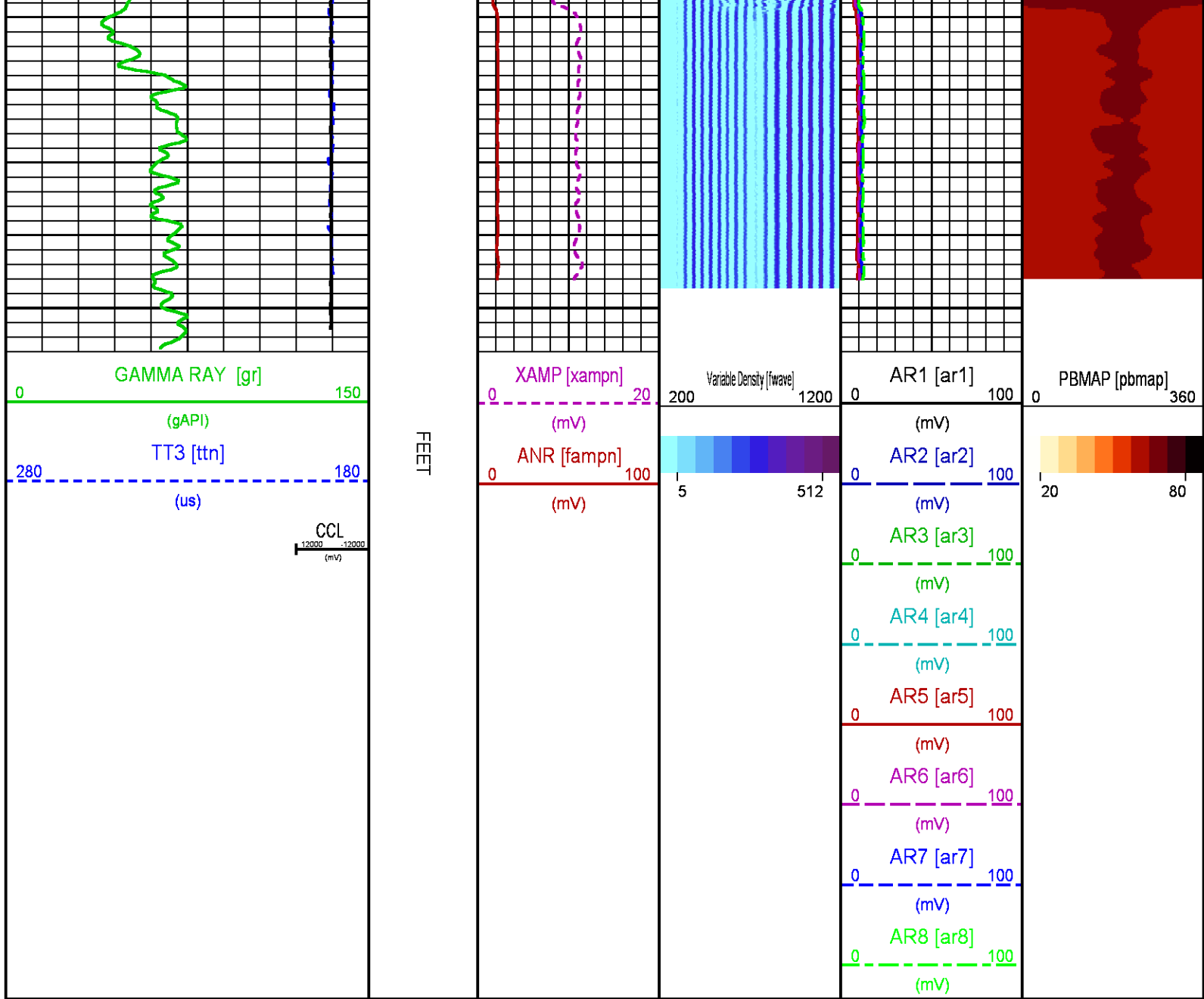
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
AR1	11.25	AR5	11.25	CCL	5.75	XAMPN	11.25
AR2	11.25	AR6	11.25	FAMPN	11.25		
AR3	11.25	AR7	11.25	GR	1.75		

AR4	11.25	AR8	11.25	TTN	11.25
<b>Presentation</b> : cpu100:/dat1a/LARAMIE_PICEANCE_FEDERAL_29_19E/ ral_all+01-REPEAT-RAL_REPEAT_19E-5.fvpdf [5"/100' Scale]					
<b>Plot Interval</b> : 7596.75 - 7957.25 Feet					
<b>Data File 1</b> : F1 : cpu100:/dat1a/LARAMIE_PICEANCE_FEDERAL_29_19E/RAL_REPT_19E.xtf					
<b>Created On</b> : May 29 08:56:56 2017					
<b>Company</b> : LARAMIE ENERGY					
<b>Well</b> : PICEANCE 29-19E					
<b>Field</b> : VEGA					
<b>File Interval</b> : 7595.75 - 7958.5 Feet					
<b>OCT</b> : n012g					









CALIBRATION / VERIFICATION SUMMARY											
Source File: ddata\ARAME_PICEANCE_FEDERAL_29_19\ch012g.tpt											
RAL PRIMARY CALIBRATION SUMMARY											
TOOL #:		1426XA10218497		DATE/TIME PERFORMED:		Fri May 26 10:02:14 2017					
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)	-0.07	0.00	-0.01	0.00	-0.04	-0.06	-0.03	-0.04	0.01	0.13	-0.02
AMP FLUID (mV)	96	97	97	95	96	96	97	97	97	152	95
TT (us)	212	212	212	211	211	211	211	211	213	324	212
M FACTOR	1.04	1.03	1.04	1.05	1.04	1.04	1.03	1.03	1.04	0.99	1.05
RAL BEFORE LOG VERIFICATION SUMMARY											
TOOL #:		1426XA10218497		DATE/TIME PERFORMED:		Fri May 26 10:03:31 2017		DAYS SINCE CAL:		0	

	NEAR	R1	R2	R3	R4	R5	R6	R7	R8	FAR	CAL
	(mV)	(mV)	(mV)	(mV)	(mV)	(mV)	(mV)	(mV)	(mV)	(mV)	(mV)
ZERO	0.00	0.02	-0.02	0.03	0.00	0.03	-0.03	0.00	-0.02	0.09	-0.01
AMP AIR	0.20	-0.28	-0.42	0.50	0.59	0.31	0.51	0.24	-0.02	0.79	99.99

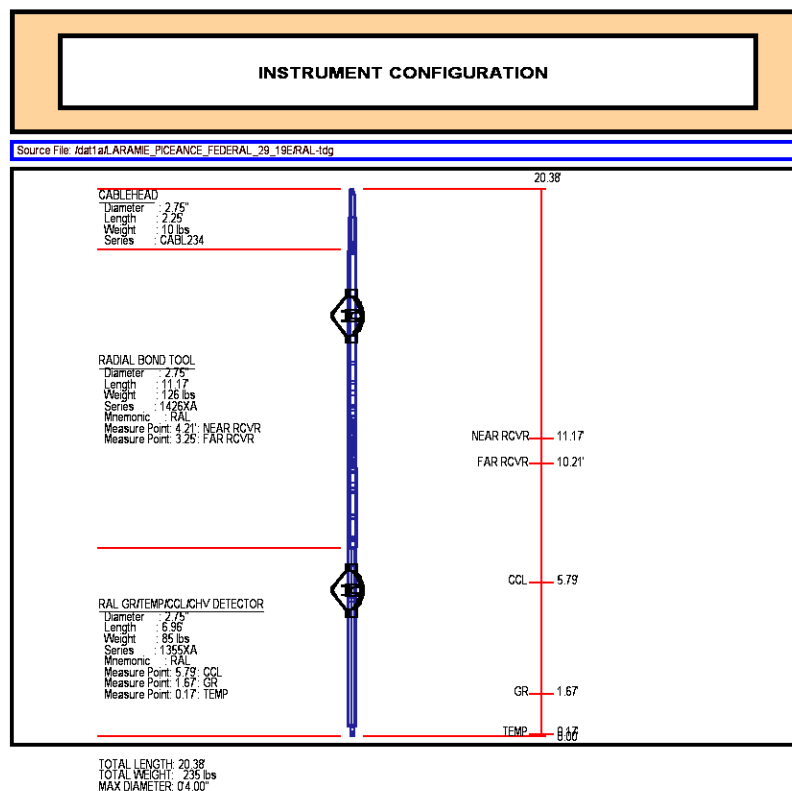
  


SHOP	SHOP	WIRELINE
M FACTOR	A FACTOR	FACTOR
1.05	0.00	1.00

GR PRIMARY CALIBRATION SUMMARY							
TOOL #:		1355XA111155		DATE/TIME PERFORMED:		Tue Nov 15 11:09:30 2016	
UNIT #:		3880TA HL6670		CALB JIG #:		4702NK DA_228	
BACKGROUND	CALBTR ON	GR DIFF	MULT	BACKGROUND	CALBTR ON	CALBTR	
(cts)	(cts)	(cts/fs)		(gAPI)	(gAPI)	(gAPI)	
GR	73.82	227.20	153.4	0.652	48.13	148.13	100

GR PRIMARY VERIFICATION SUMMARY							
TOOL #:		1355XA111155		DATE/TIME PERFORMED:		Tue Nov 15 11:10:37 2016	
UNIT #:		3880TA HL6670		VERI JIG #:		4702NK DA_228	
BACKGROUND	CALBTR ON	MULT	BACKGROUND	CALBTR ON	DIFF		
(cts)	(cts)		(gAPI)	(gAPI)	(gAPI)		
GR	76.31	230.40	0.652	49.75	150.22	100.46	
					90.00	110.00	



	<b>COMPANY</b> <u>LARAMIE ENERGY</u> <b>WELL</b> <u>PICEANCE FEDERAL 29-19E</u> <b>FIELD</b> <u>VEGA</u> <b>COUNTY</b> <u>MESA</u> <b>STATE</b> <u>COLORADO</u>	<b>FILE NO:</b> _____ <b>API NO:</b> <u>05-077-10359-0000</u>	
	<b>LOCATION:</b> SHL: LAT:39.248795N; LONG:107.788006W BHL: LAT:39.243004N; LONG:107.788353W SEC <u>29</u> TWP <u>09 S</u> RGE <u>93 W</u>	<b>ELEVATIONS:</b> KB <u>7561 FT</u> DF _____ GL <u>7531 FT</u>	
	<b>DATE</b> <u>29-MAY-2017</u>		

