BAKER HUGHES

Baker Atlas

RADIAL ANALYSIS BOND LOG

File No:	CH074107
API No:	05103117890000
Company	WPX ENERGY
Well	FEDERAL RGU 313-23-198
Field	SULPHUR CREEK
County	RIO BLANCO
State	COLORADO

23 1S 98W

RGU 23-23-198

CYCLONE 29

Location

SHL: 1810' FSL & 1901' FWL SEC:23

BHL: 2173' FSL & 628' FWL SEC:23

SEC 23 TWP 1S RGE 98W

Other Services

RPM

Permanent Datum	G.L.	Elevation	6545 ft
Log Measured From	K.B.	21 ft	Above P. D.
Drill Measured From	KELLY BUSHING		

Elevations

KB 6566 ft

DF

GL 6545 ft

Date		04/JUL/13		
Run		ONE		
Service Order		624435		
Depth Driller		12529 ft		
Depth Logger		12442 ft		
Bottom Logged Interval		12432 ft		
Top Logged Interval		21 ft		
Time Started		11:00		
Time Finished		16:00		
Operator Rig Time		5 HRS		
Type of Fluid in Hole		WATER		
Fluid Density		N/A		
Salinity		N/A		
Fluid Level		82 ft		
Logged Cement Top		N/A		
Wellhead Pressure		0 psi		
Maximum Hole Deviation		N/A		
Nominal Logging Speed		45 fpm		
Maximum Recorded Temperature		275 degF		
Reference Log		N/A		
Reference Log Date		N/A		
Equipment No.	Location	4271	GRAND JUNCTION	9721	GRAND JUNCTION
Recorded By		M. KINSEL			
Witnessed By		MR. TED RAGSDALE			

FOLD HERE

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.

Casing Record

Size	Weight	Grade	From	To
18 in	N/A	N/A	0 ft	80 ft
9.625 in	N/A	N/A	0 ft	3826 ft
4.5 in	11.6 lbm/ft	P-110	0 ft	12529 ft

Borehole Record

Bit Size	From	To
30 in	0 ft	80 ft
14.75/13.5	0 ft	3855 ft
8.75/7.875	0 ft	12529 ft

Remarks

ALL DATA IN THIS LOG WAS DEPTH SHIFTED TO MATCH THE TOP CCL MARK WITH KB LEVEL

AT THE CLIENT'S REQUEST. THE AMOUNT OF LINEAR SHIFT WAS 9 FEET DOWN.

SHORT JOINT: 7251' - 7274'

BHT: 275 degF

LOG DONE WITH 0 PSI ON WELLHEAD

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10163028	CENTRALIZED
1	1	GAMMA RAY/CCL	1355XA	10580209	CENTRALIZED

MAIN LOG PRIMARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	332.458	usec	28.649	12469.150
RAL	Amp Gate Start Near	199.015	usec	28.649	12469.150
RAL	Amp Gate Start Radial	199.015	usec	28.649	12469.150
RAL	Amp Gate Width Far	25.000	usec	28.649	12469.150
RAL	Amp Gate Width Near	25.000	usec	28.649	12469.150
RAL	Amp Gate Width Radial	25.000	usec	28.649	12469.150
RAL	casing od	4.500	inches	28.649	12469.150
RAL	casing wt	11.600	lbm/ft	28.649	12469.150
RAL	FB Start Far	291.900	usec	28.649	12469.150
RAL	FB Start Near	175.391	usec	28.649	12469.150
RAL	FB Start Radial	175.391	usec	28.649	12469.150
RAL	FB Thresh Far	10.000	mv	28.649	12469.150
RAL	FB Thresh Near	4.000	mv	28.649	12469.150
RAL	FB Thresh Radial	4.000	mv	28.649	12469.150
RAL	Fluid Travel Time	200.000	usec/ft	28.649	12469.024

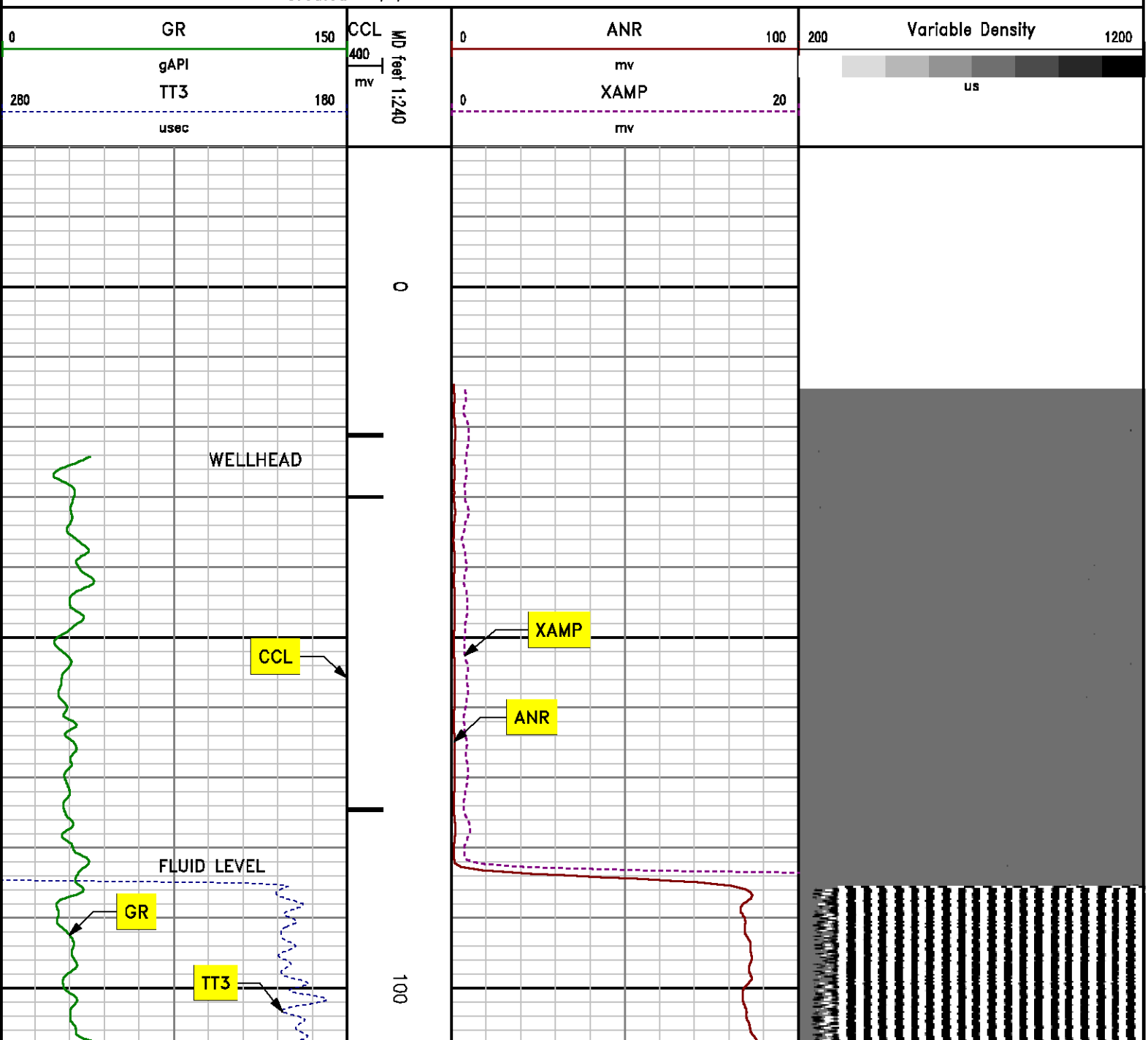
DEPTH OFFSETS
(for Acquired Curves)

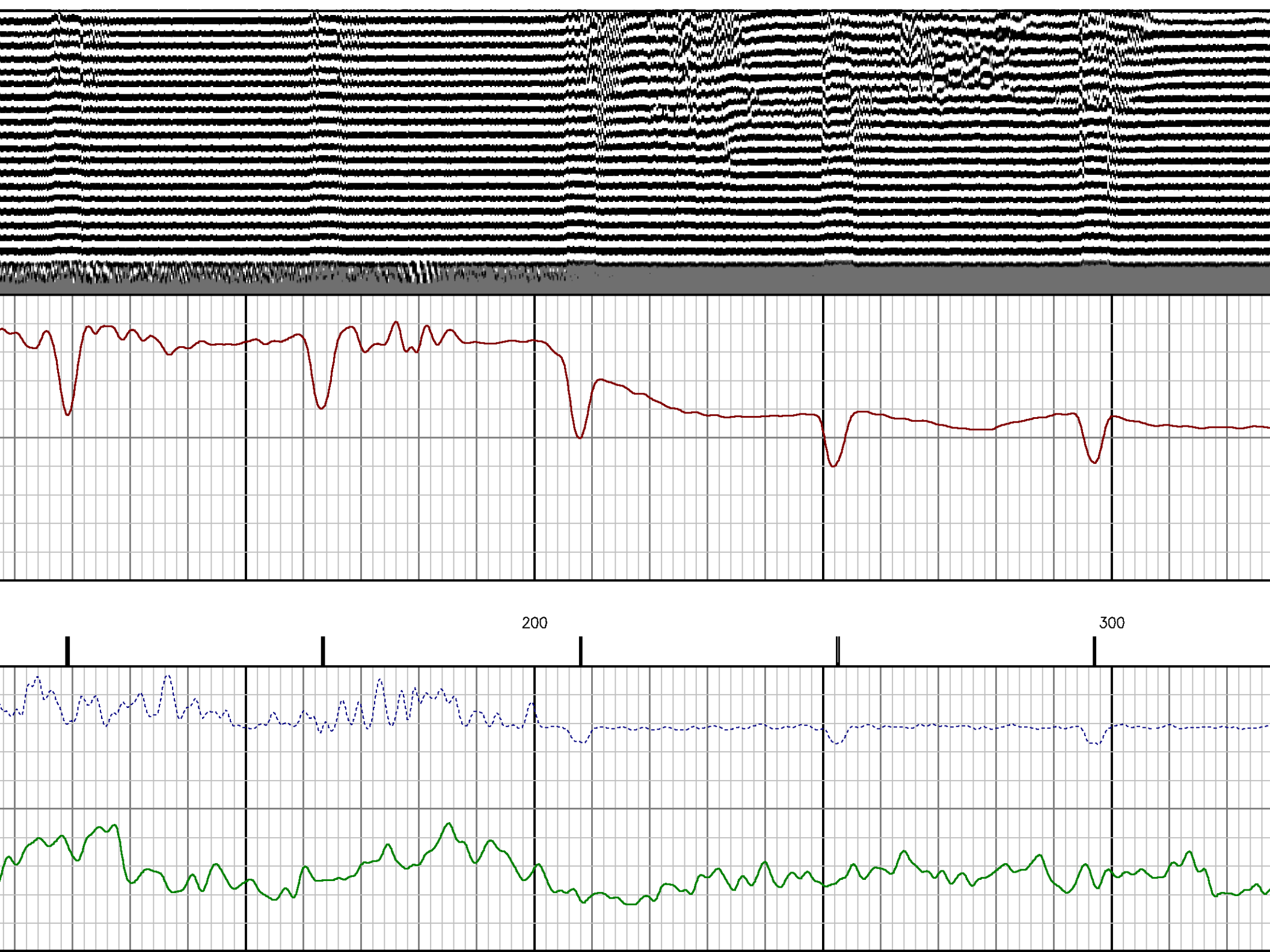
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-11.000	ACAL	ANR	AR1	AR2	AR3	AR4

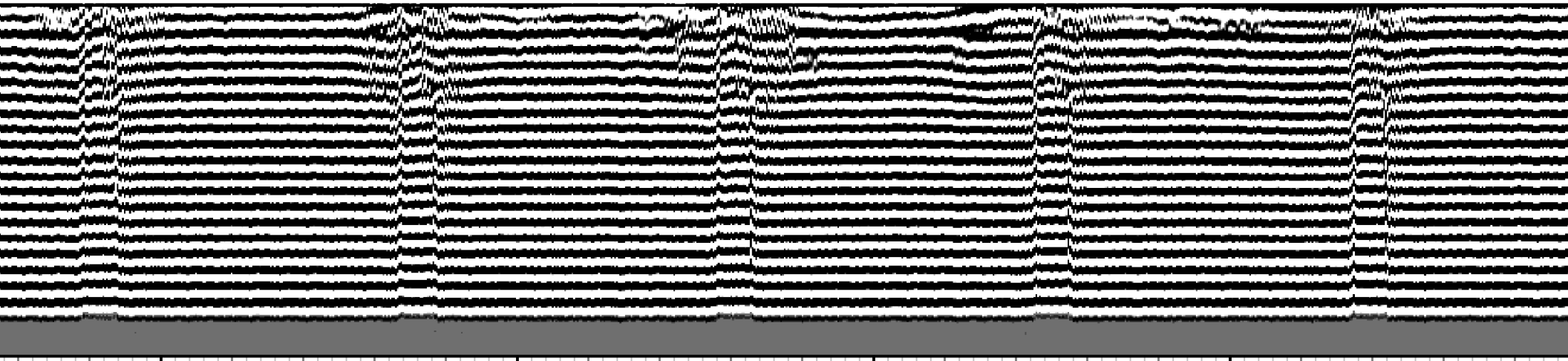
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-10.040	AFAR	SIG	TT5			
1355XA	-5.620	CCL					
1355XA	-1.500	GR					
1355XA	0.000	TEMP					

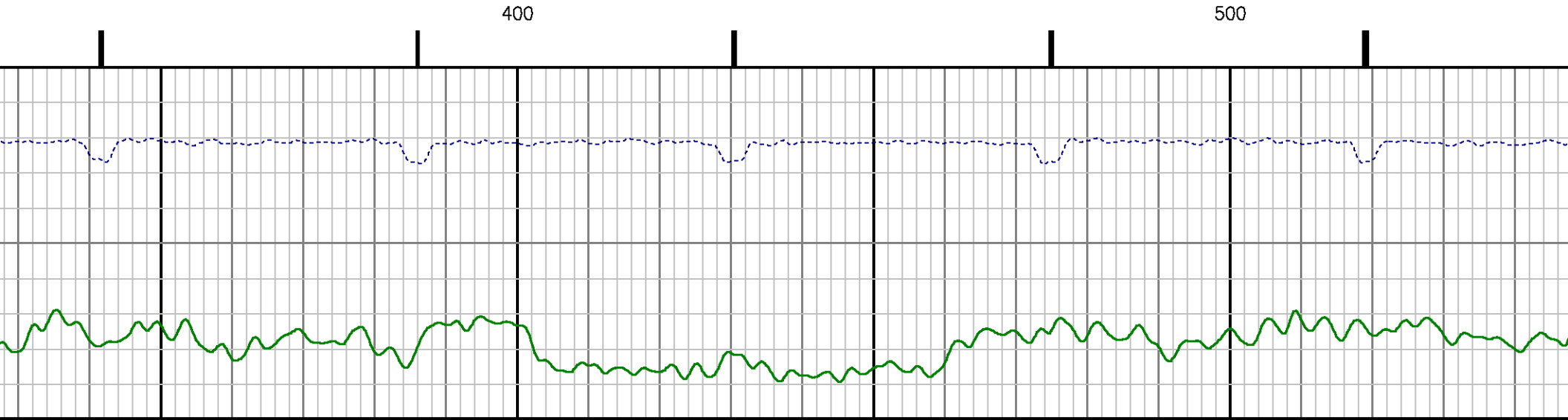
Created by : RAL, v4.8.008
Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY
Well : FEDERAL RGU 313-23-198
File Name : d:\welldata\313cbl\main.xtf
Mode : PlotMgr 5.4.504
Interval : -20.00 - 12450.00 feet UP
Created : 7/4/2013 12:20:57 PM

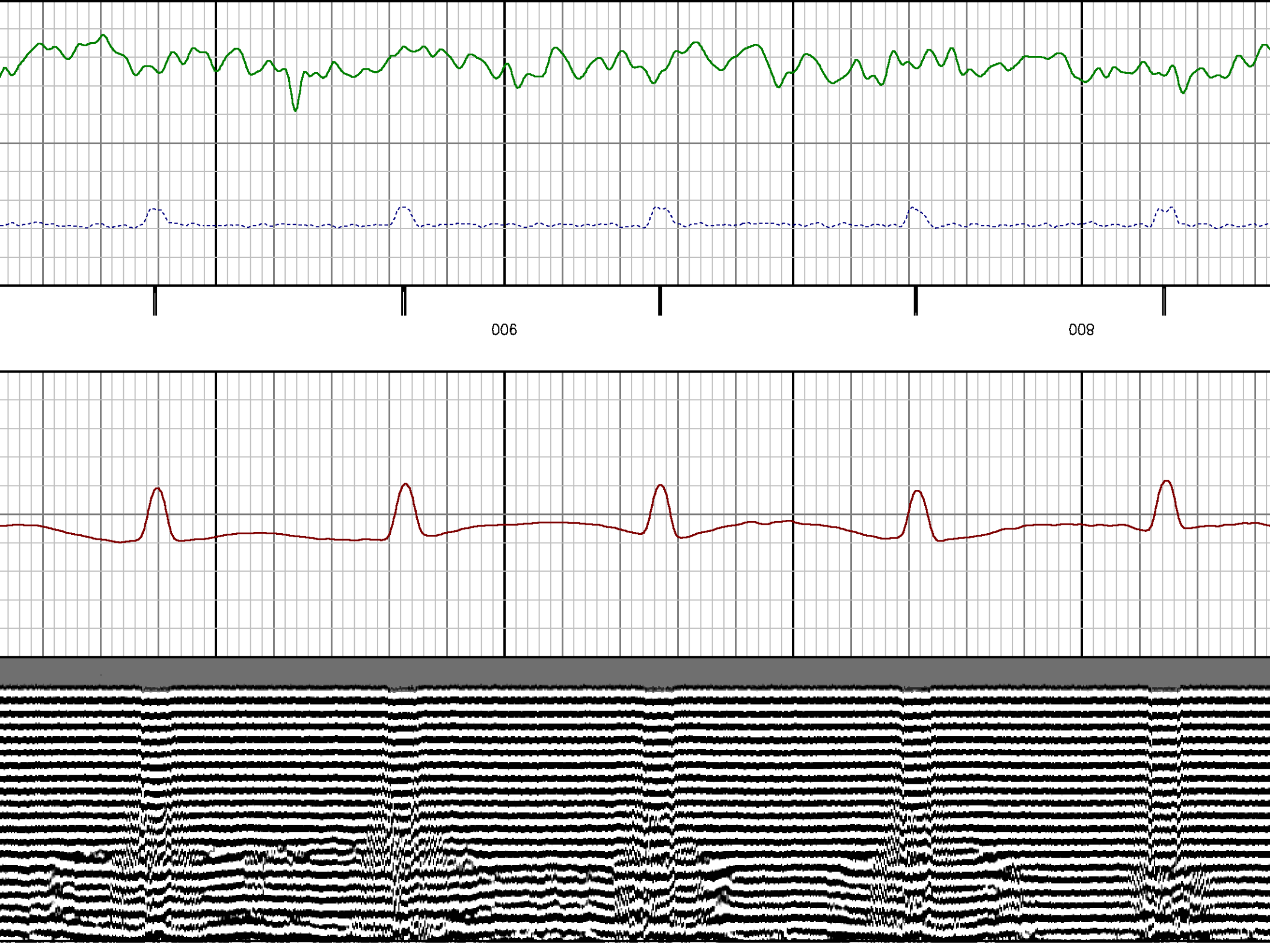


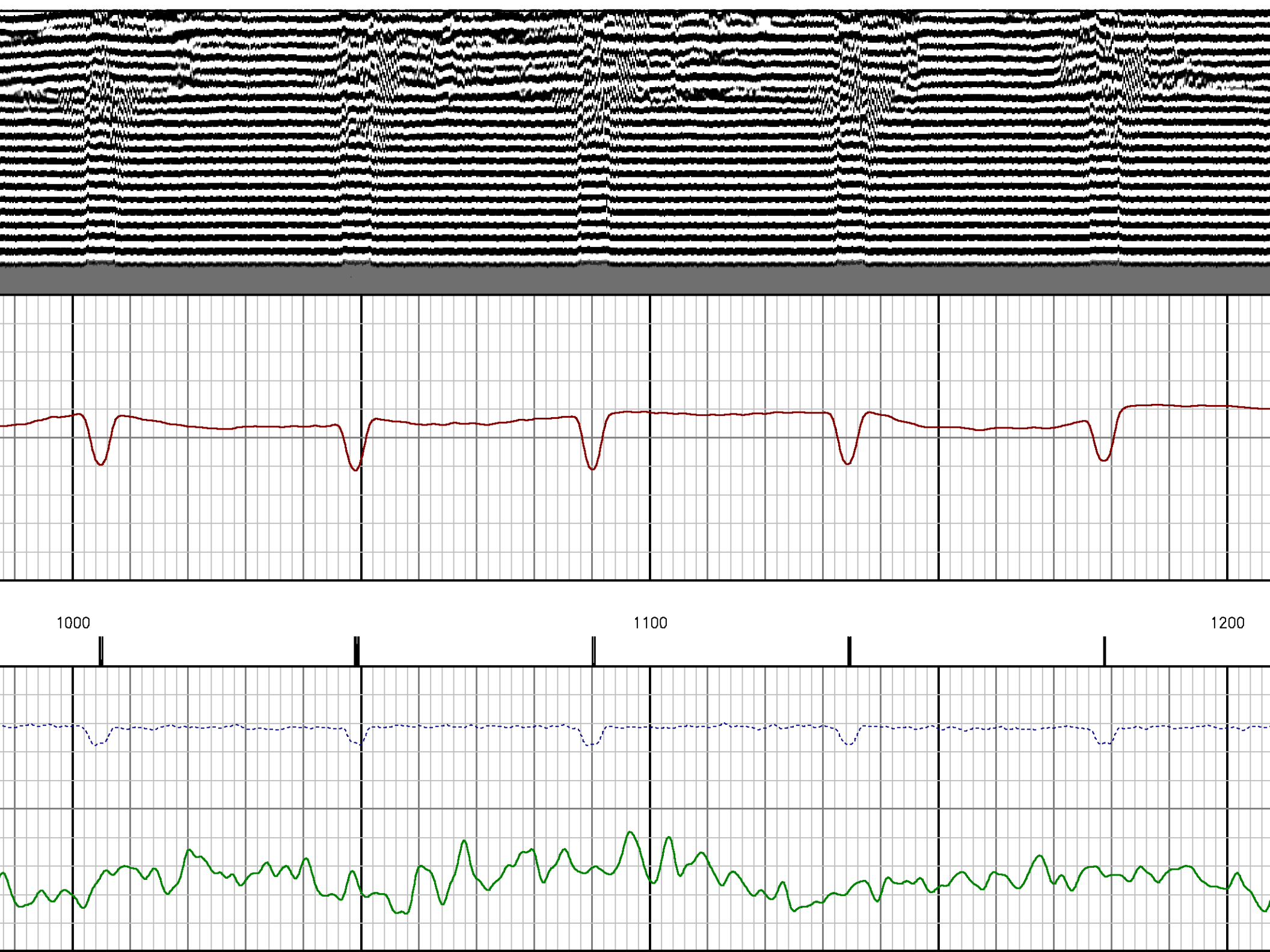

200
300

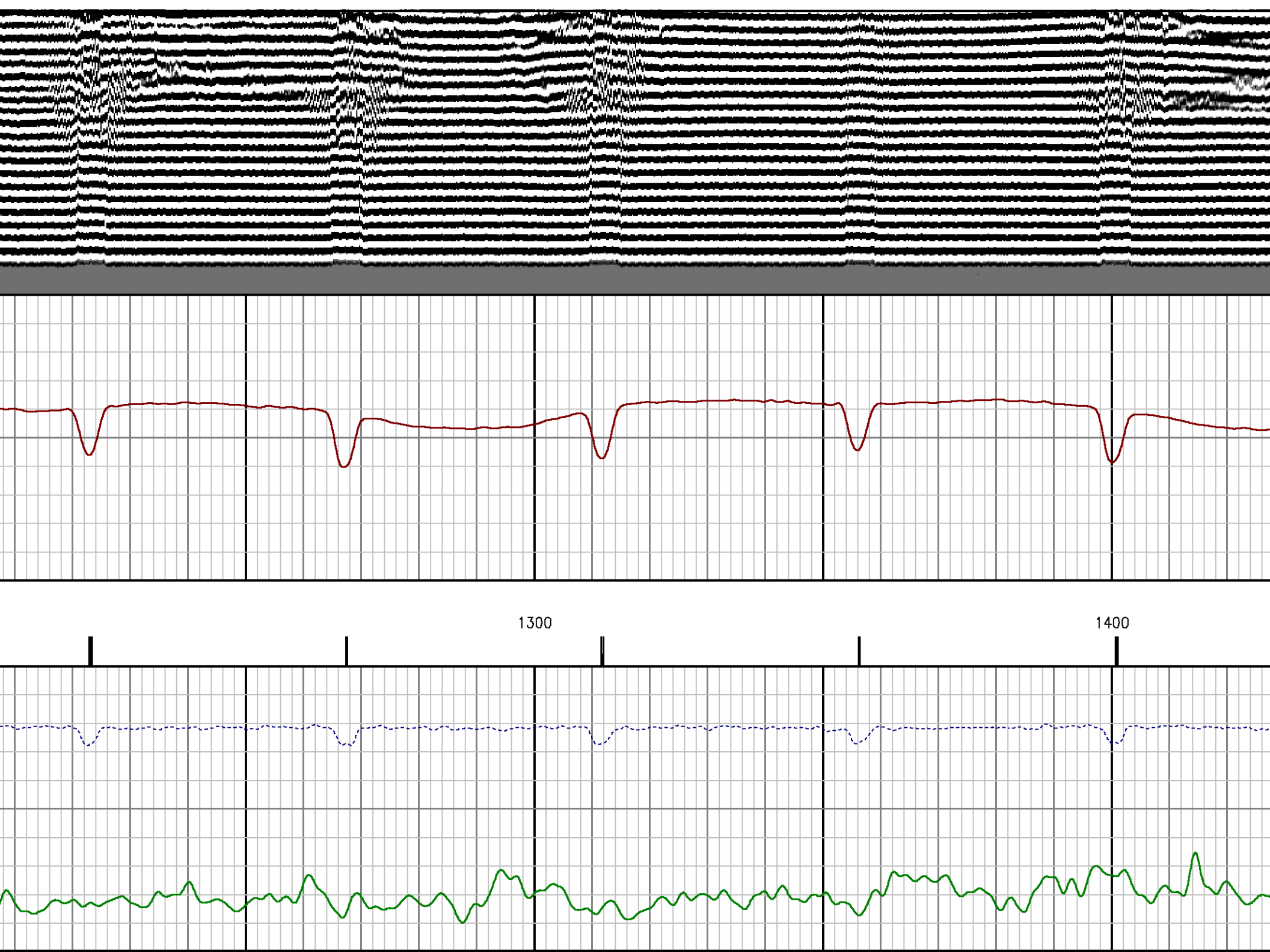


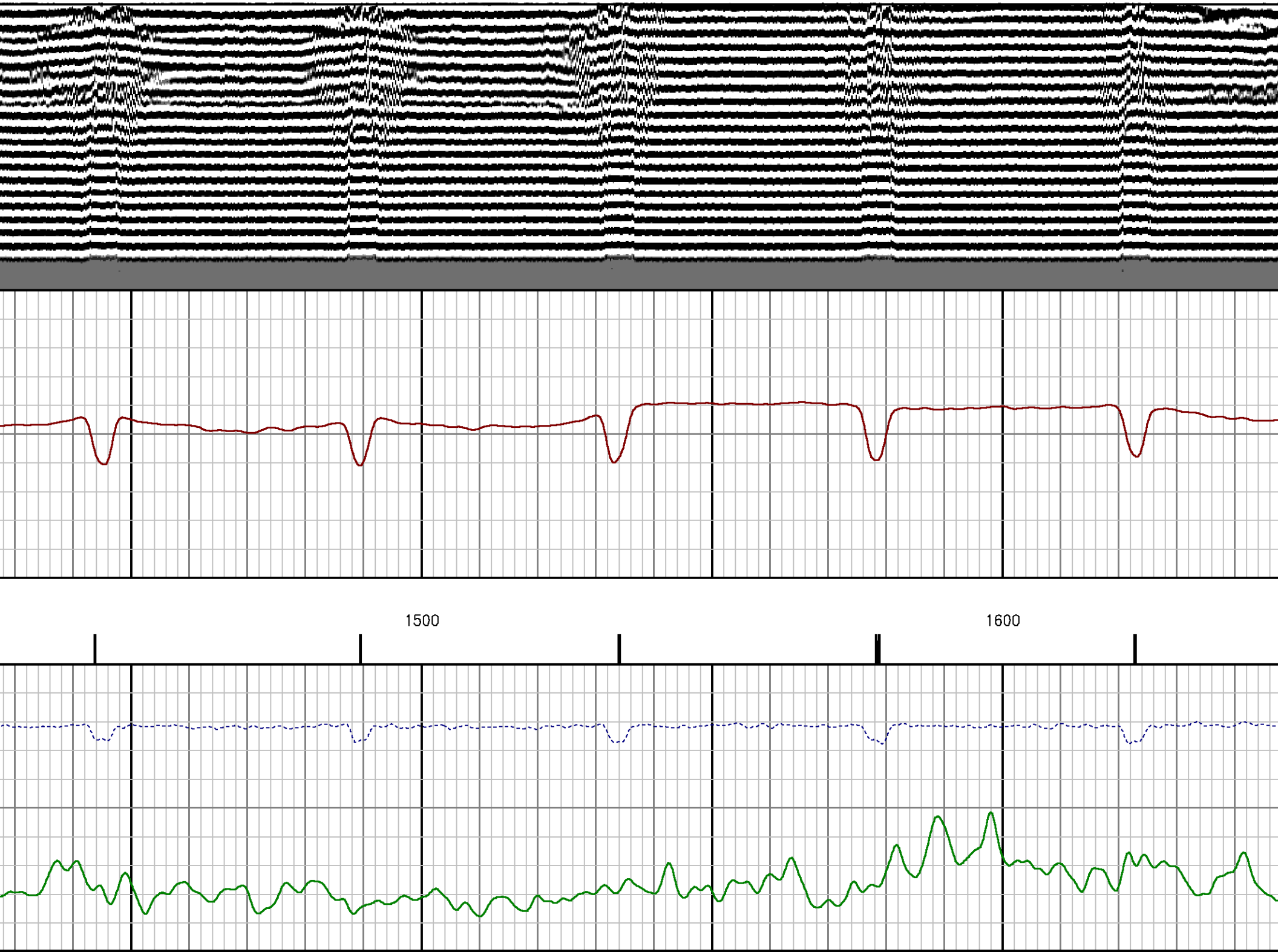

400
500

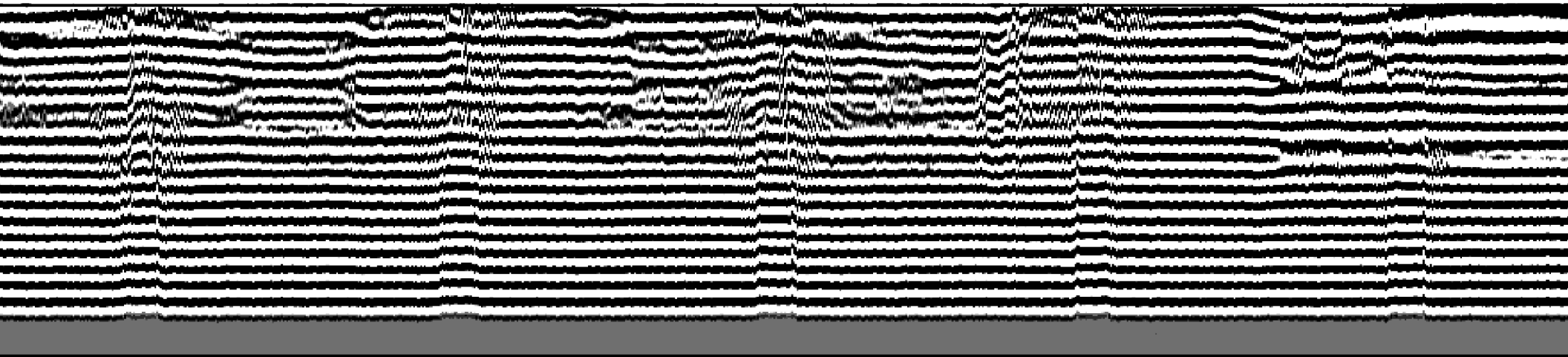
600
700

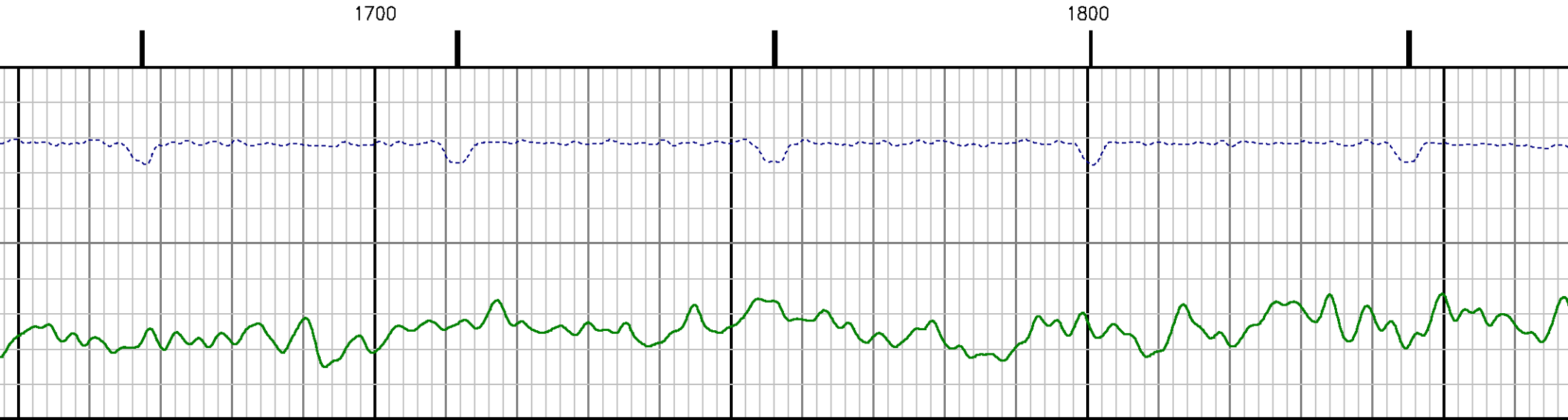

006
008

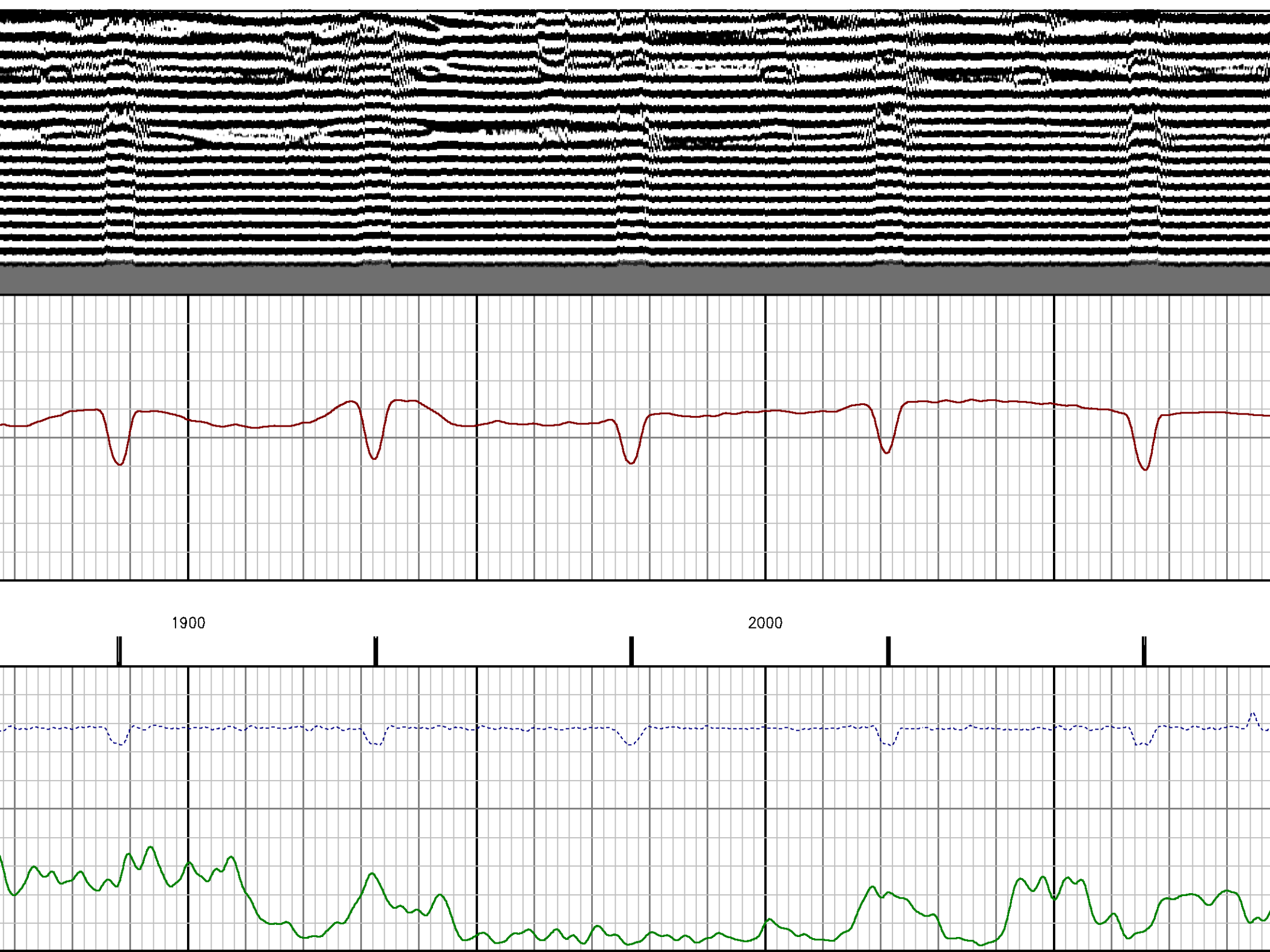

1000
1100
1200

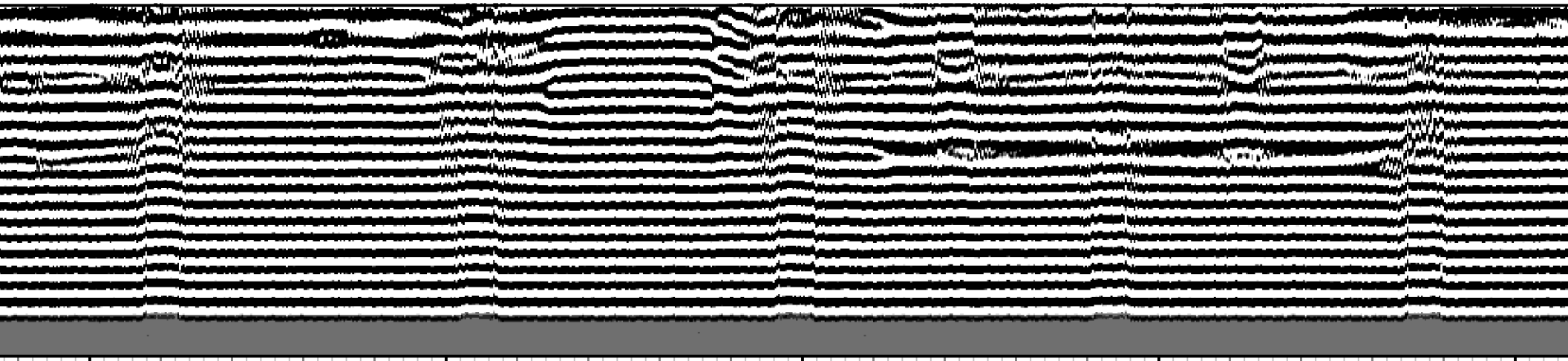

1300
1400

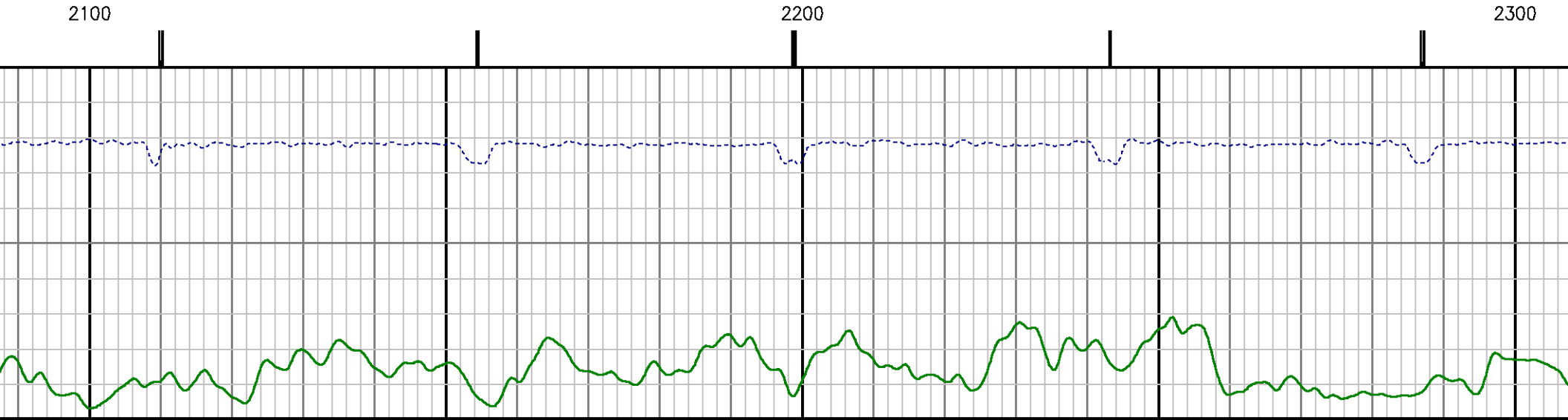

1500
1600

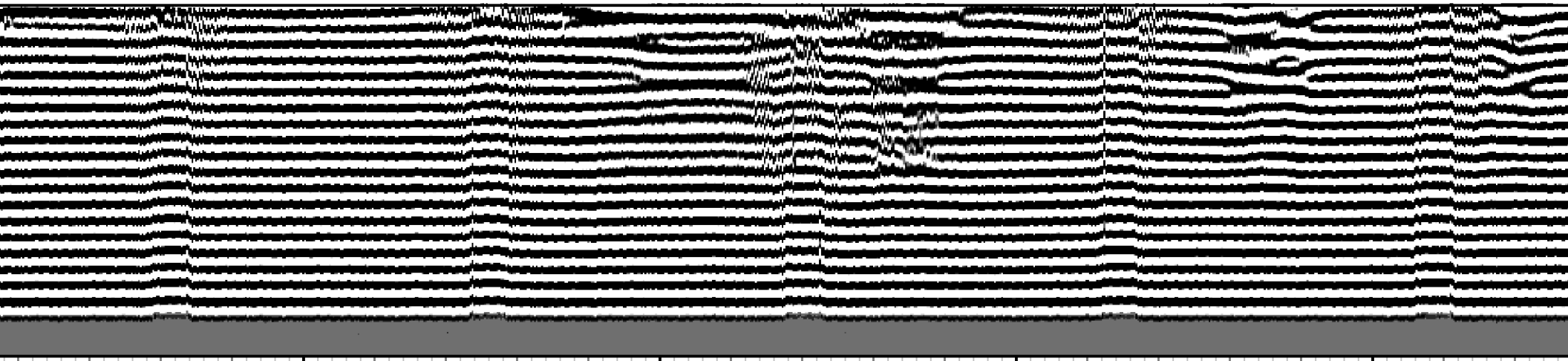


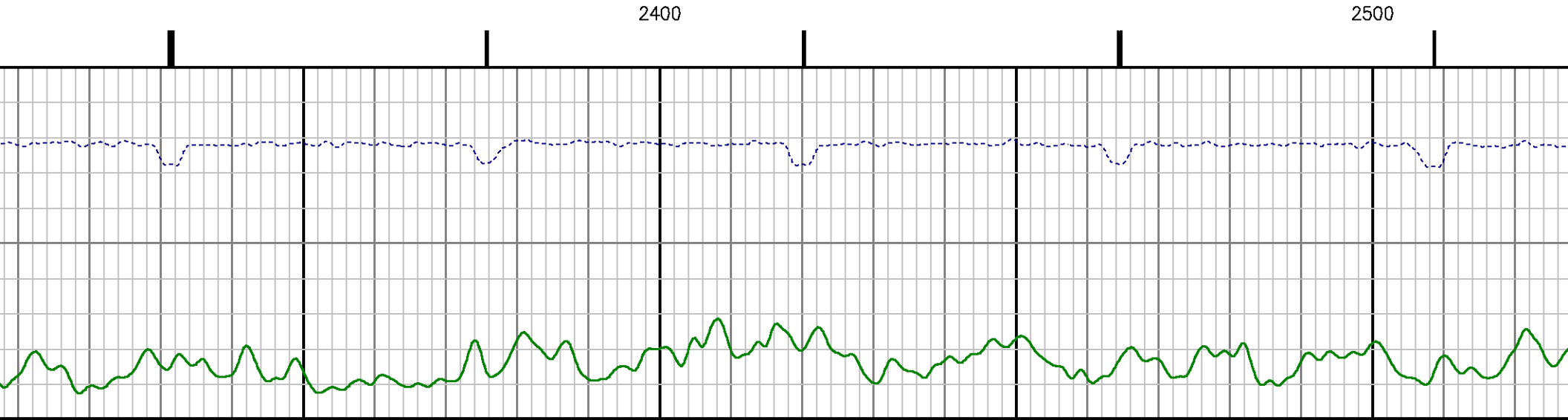

1700
1800

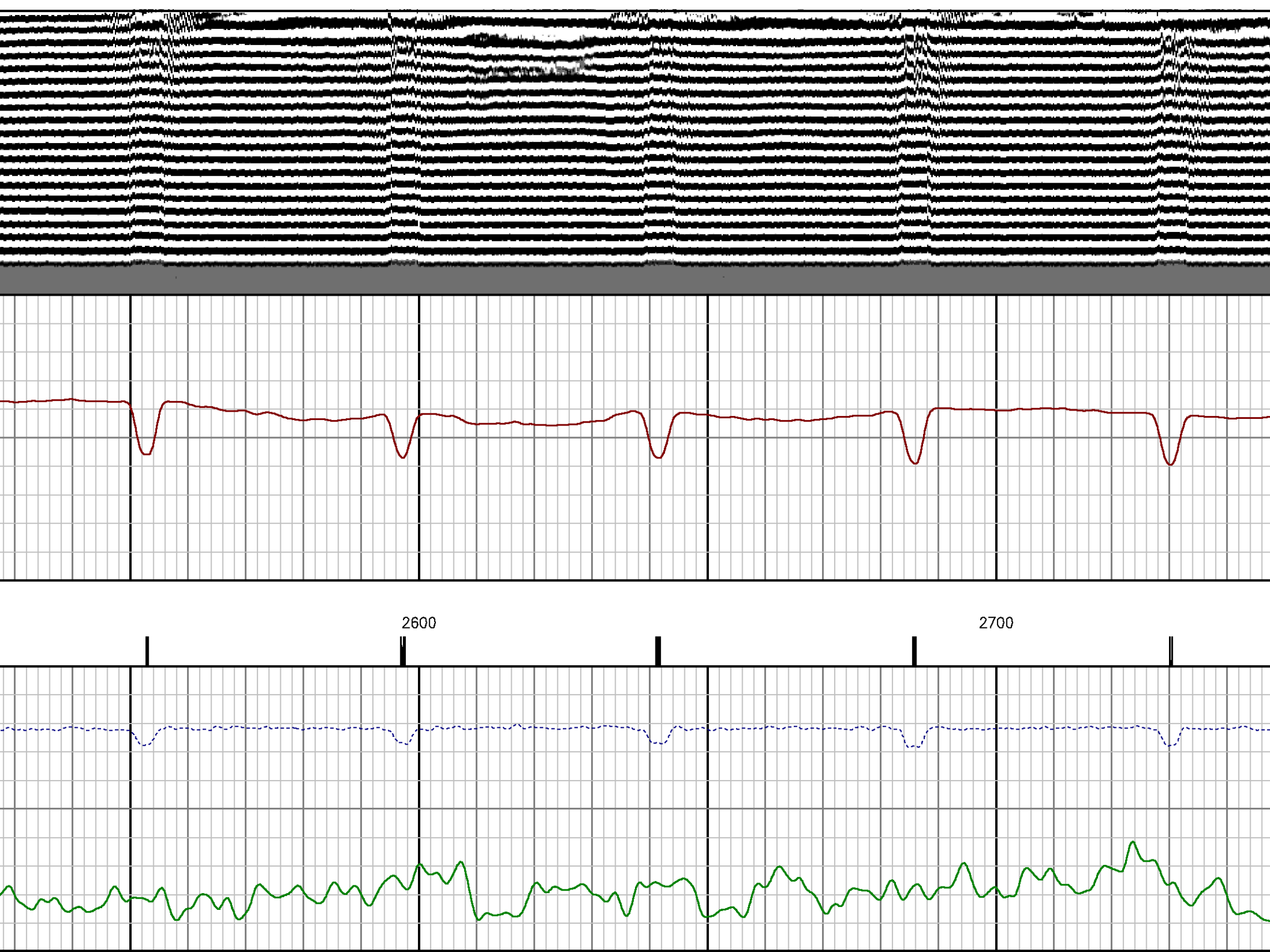

1900
2000

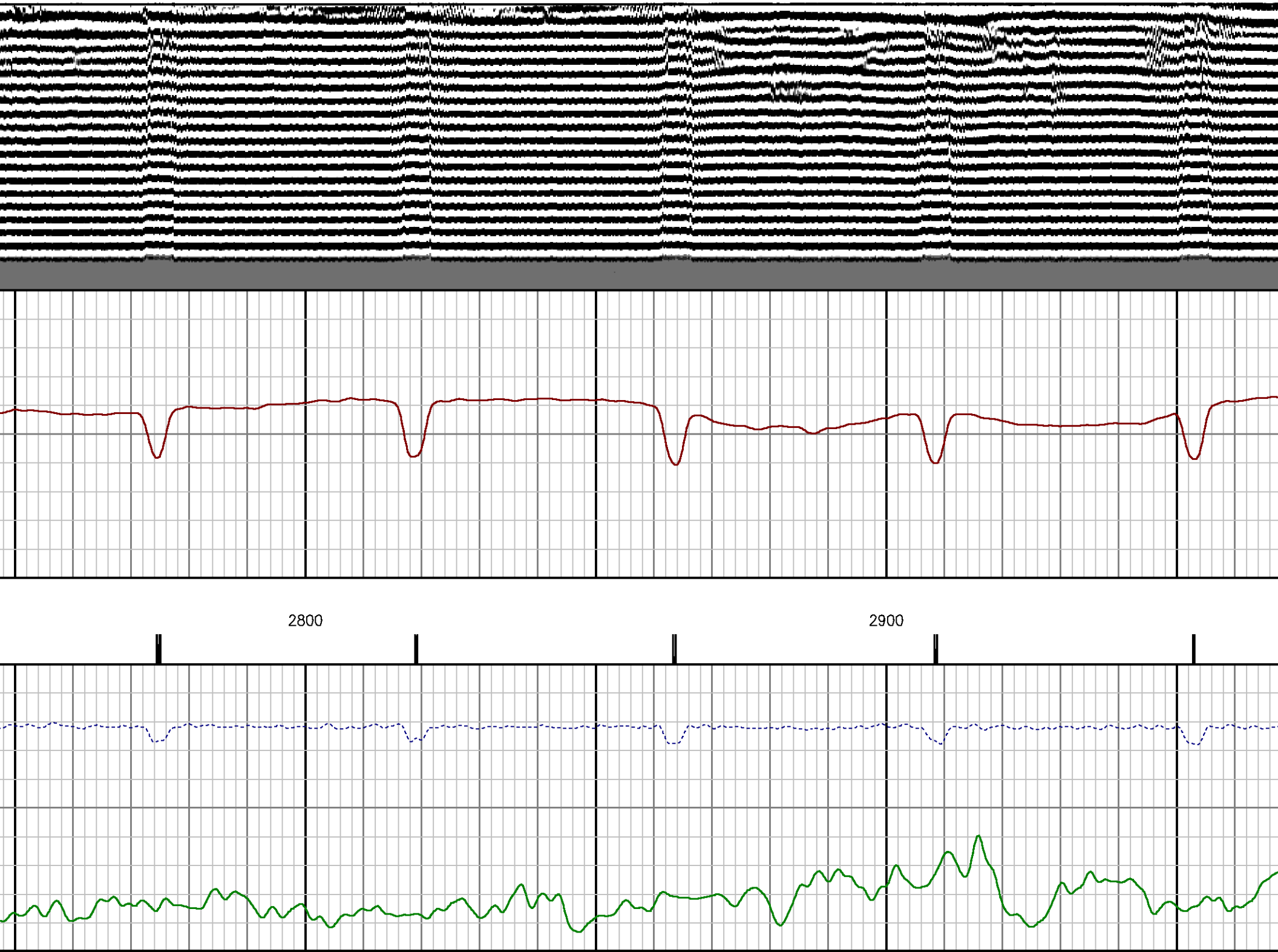


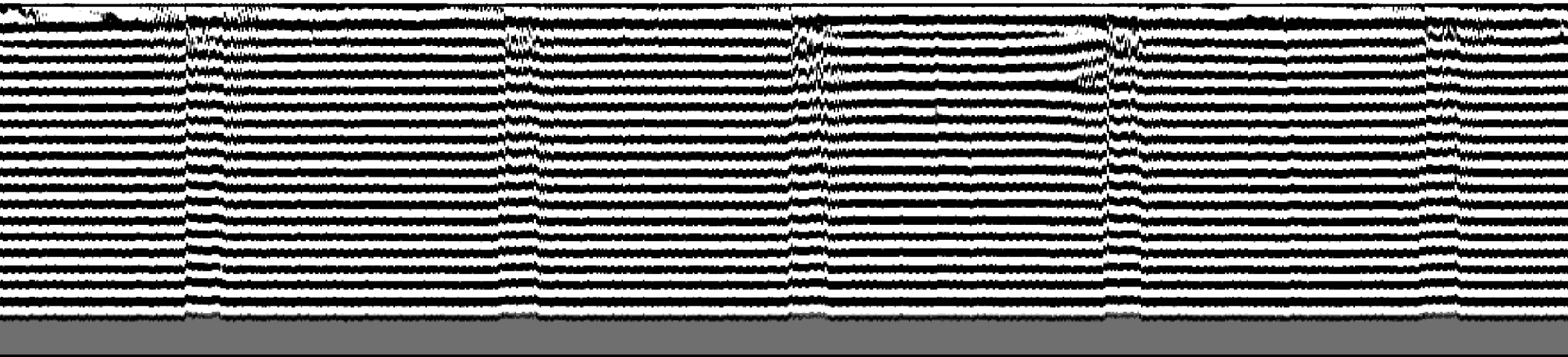

2100
2200
2300

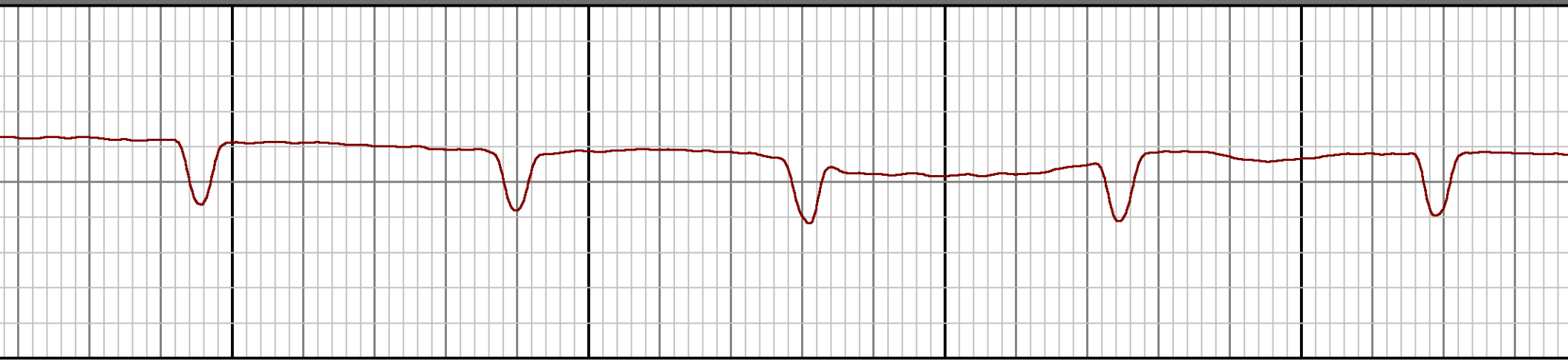


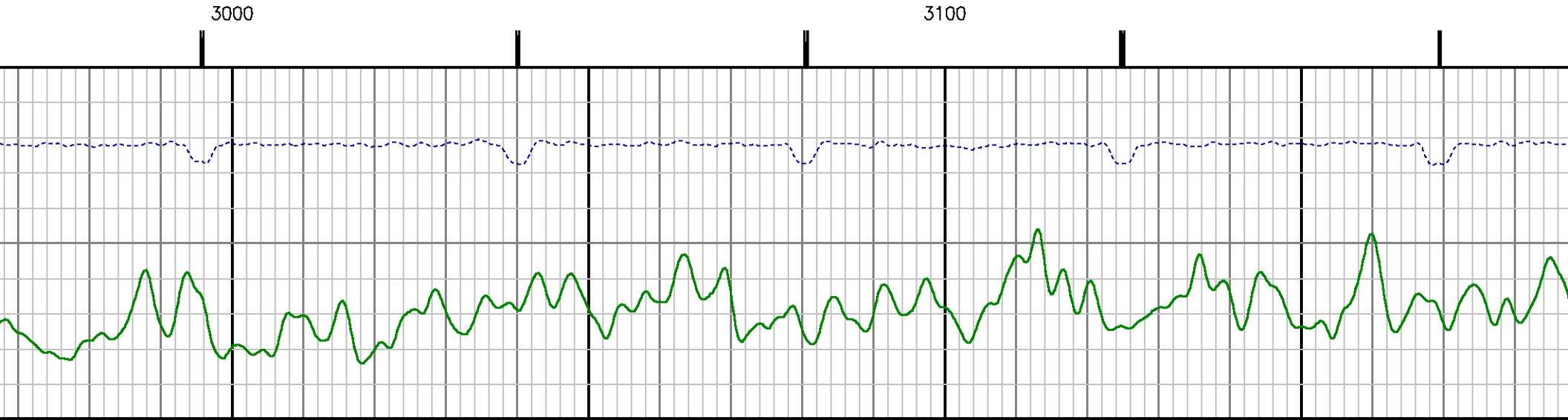

2400
2500

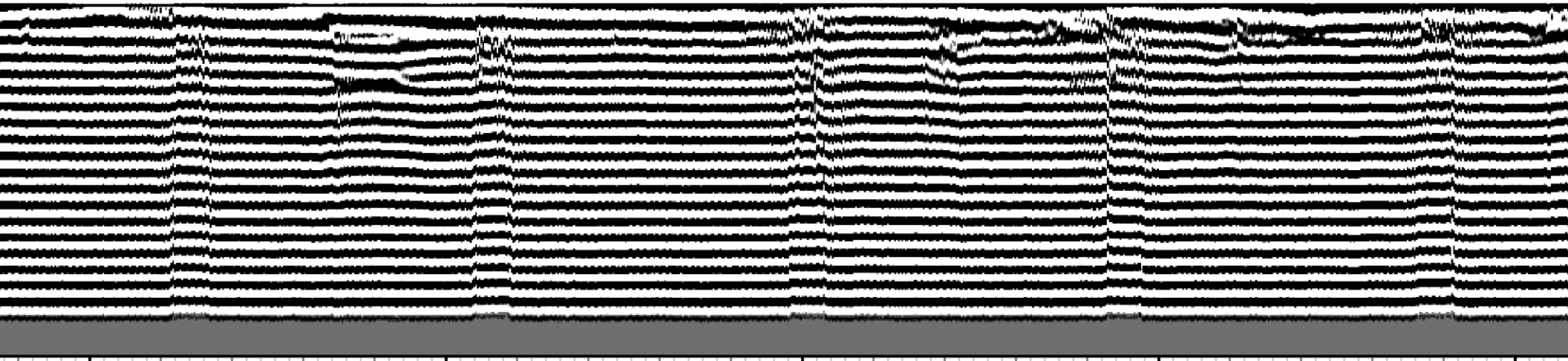

2600
2700

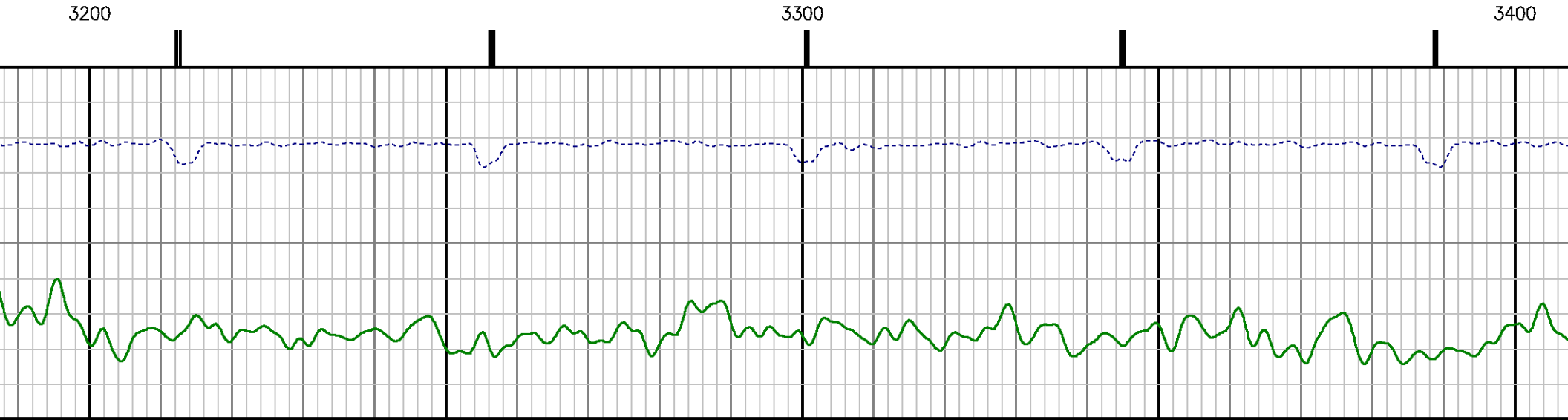

2800
2900

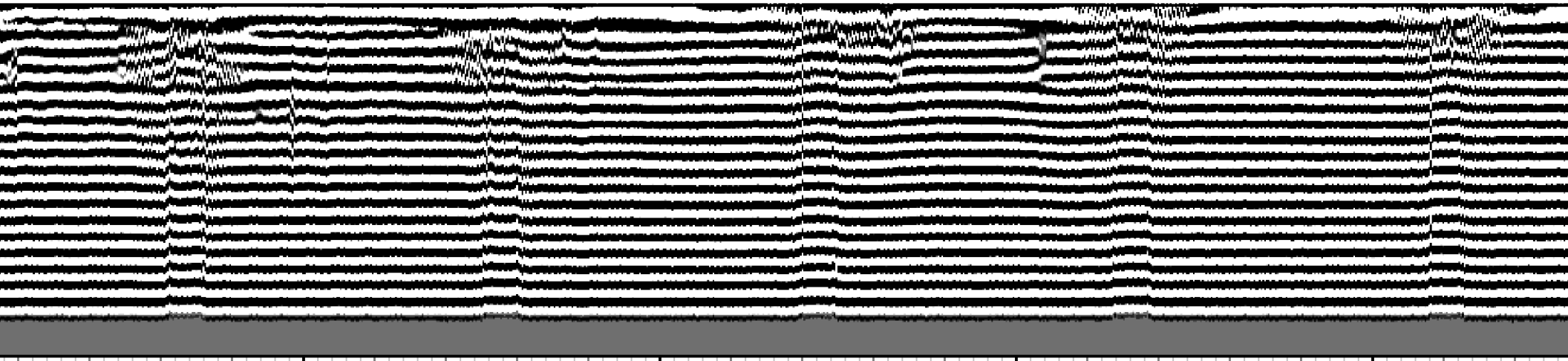


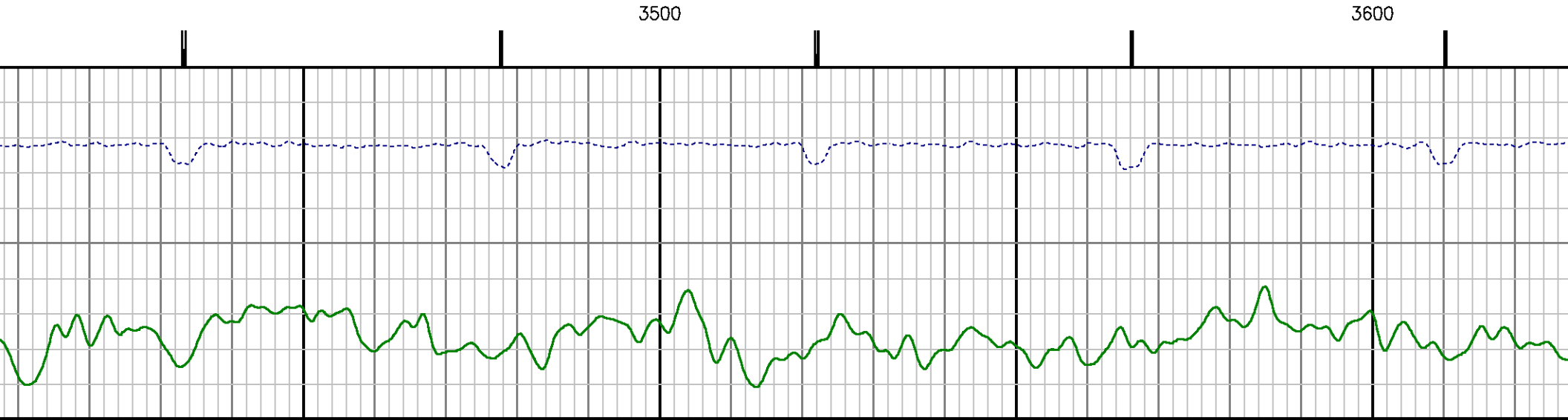


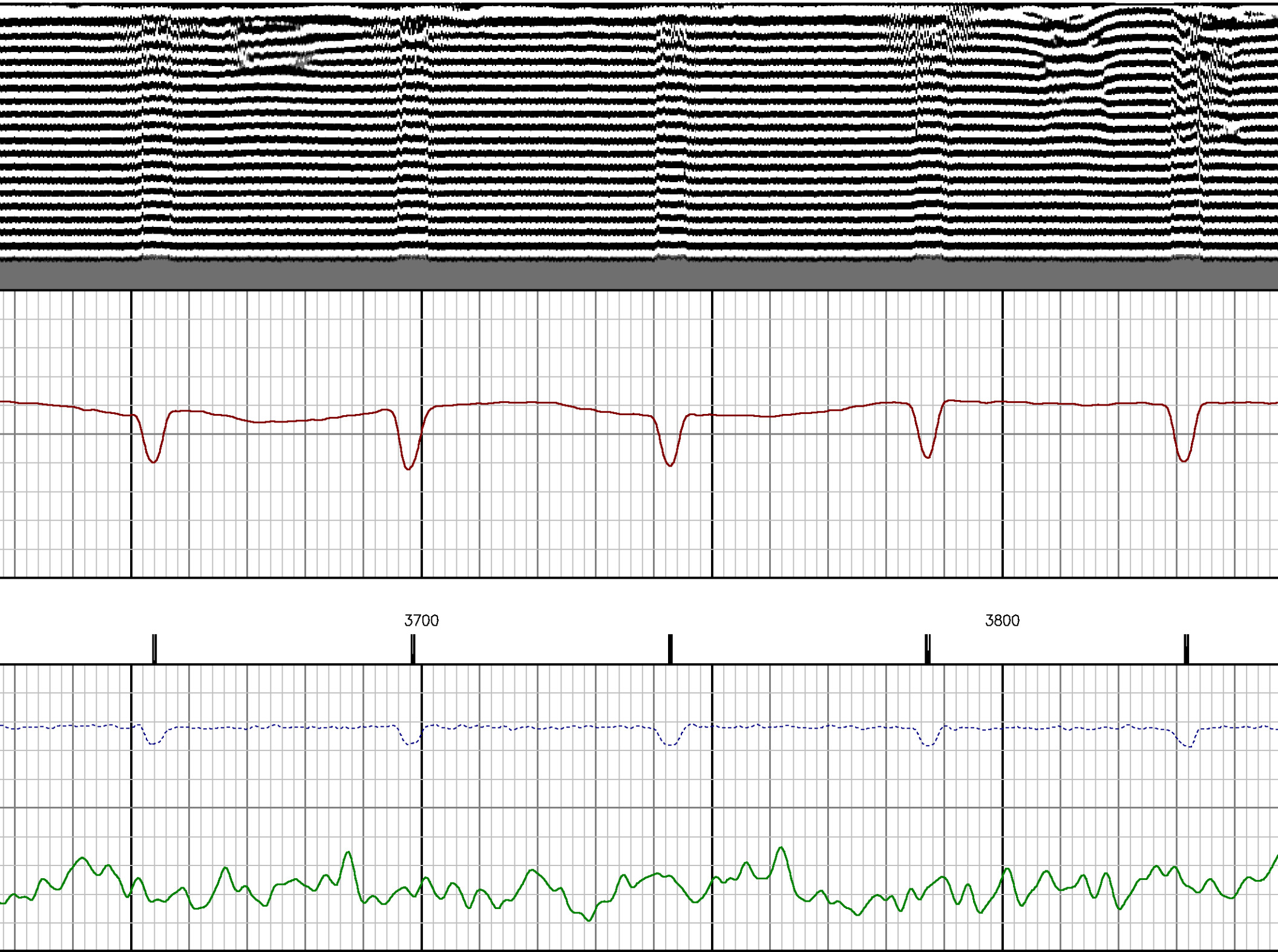

3000
3100

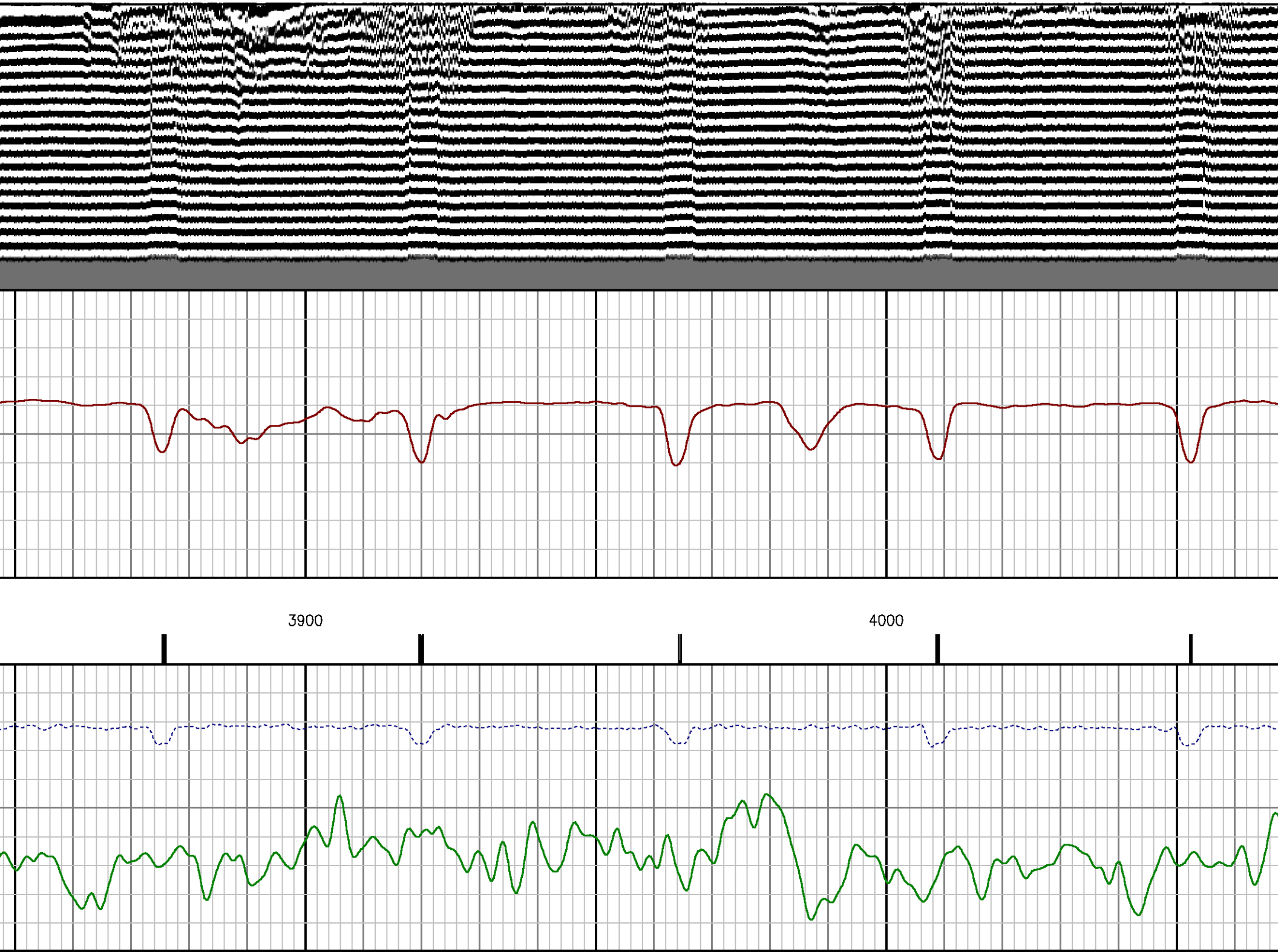


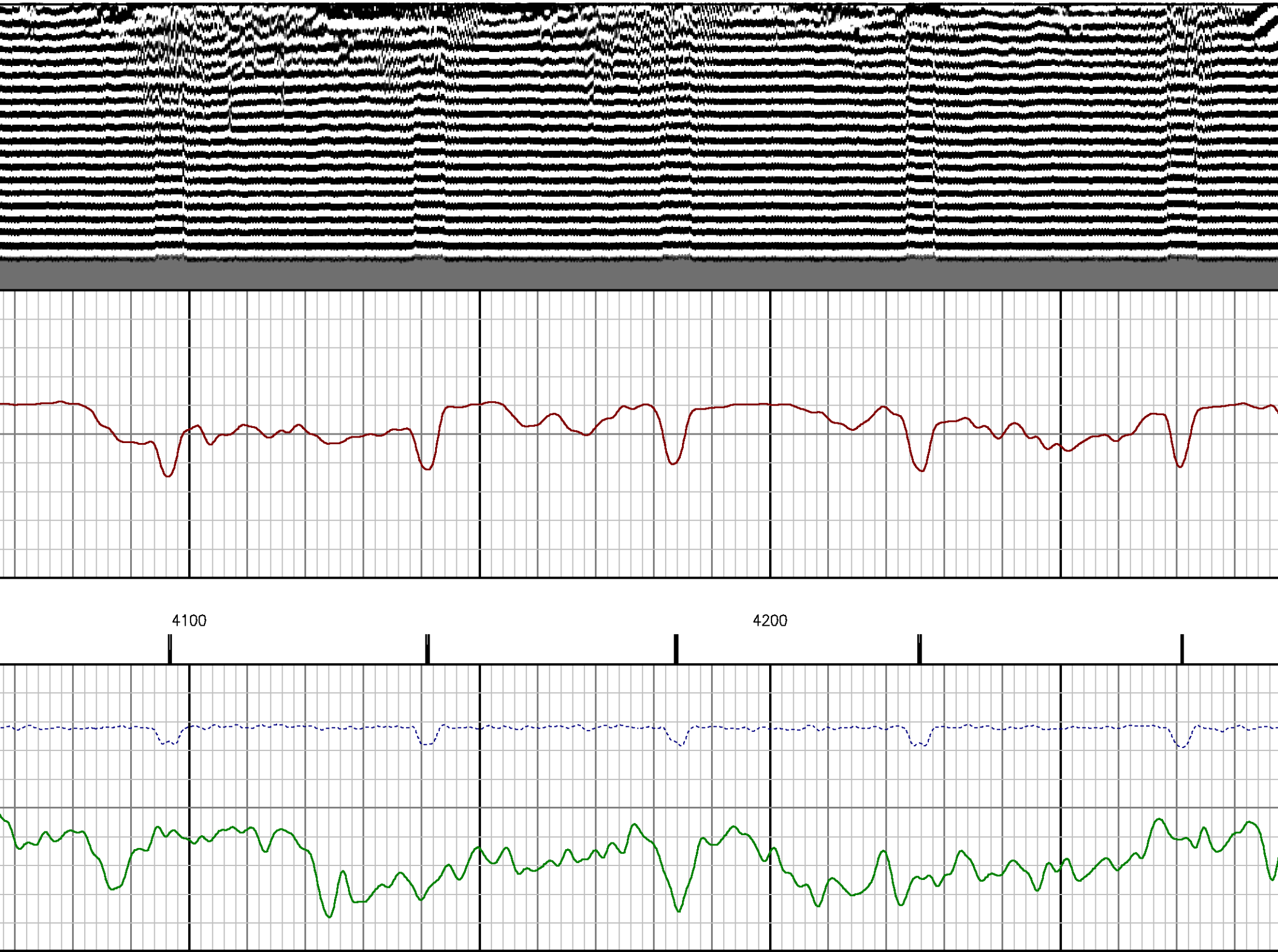

3200
3300
3400

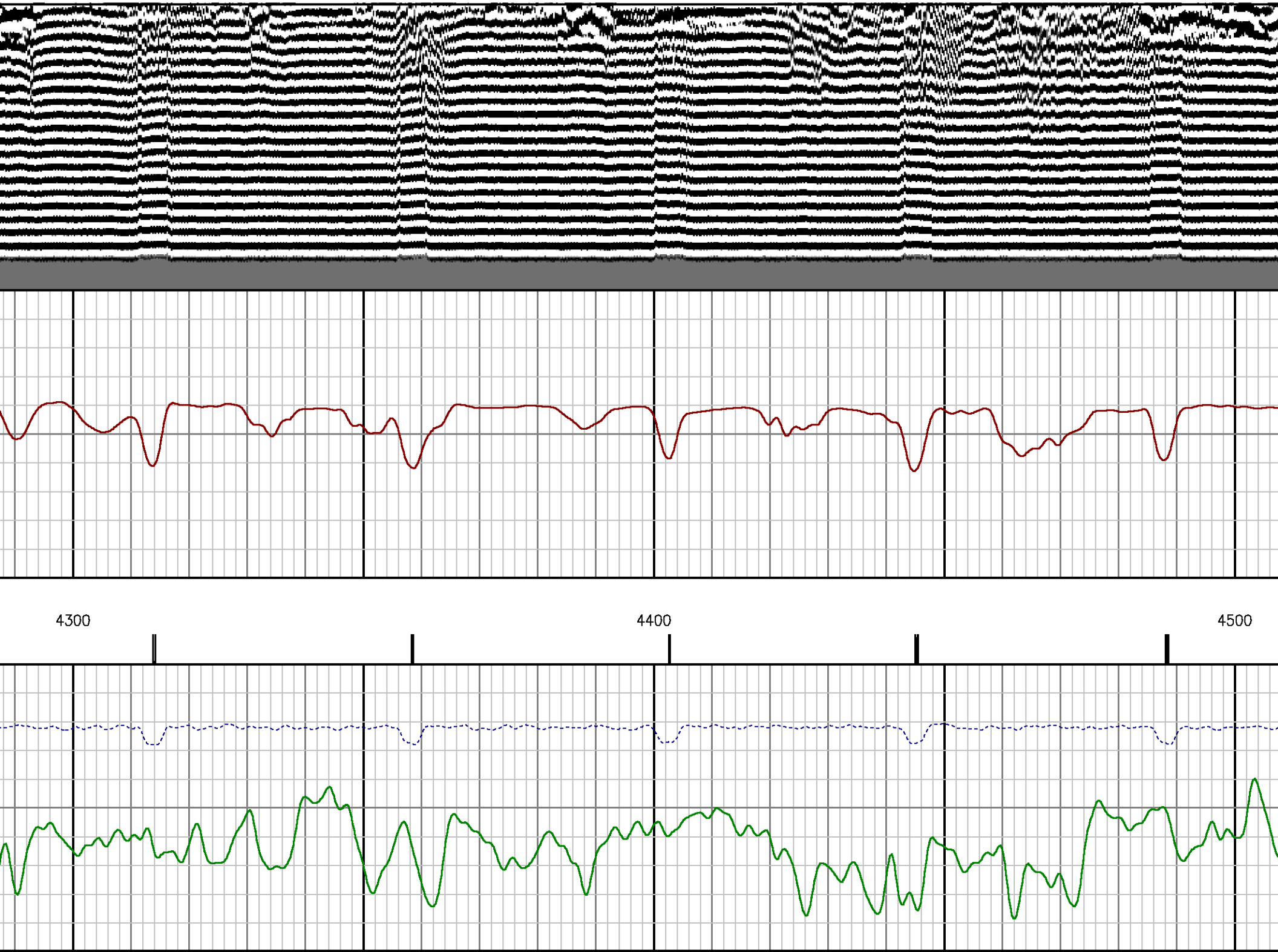


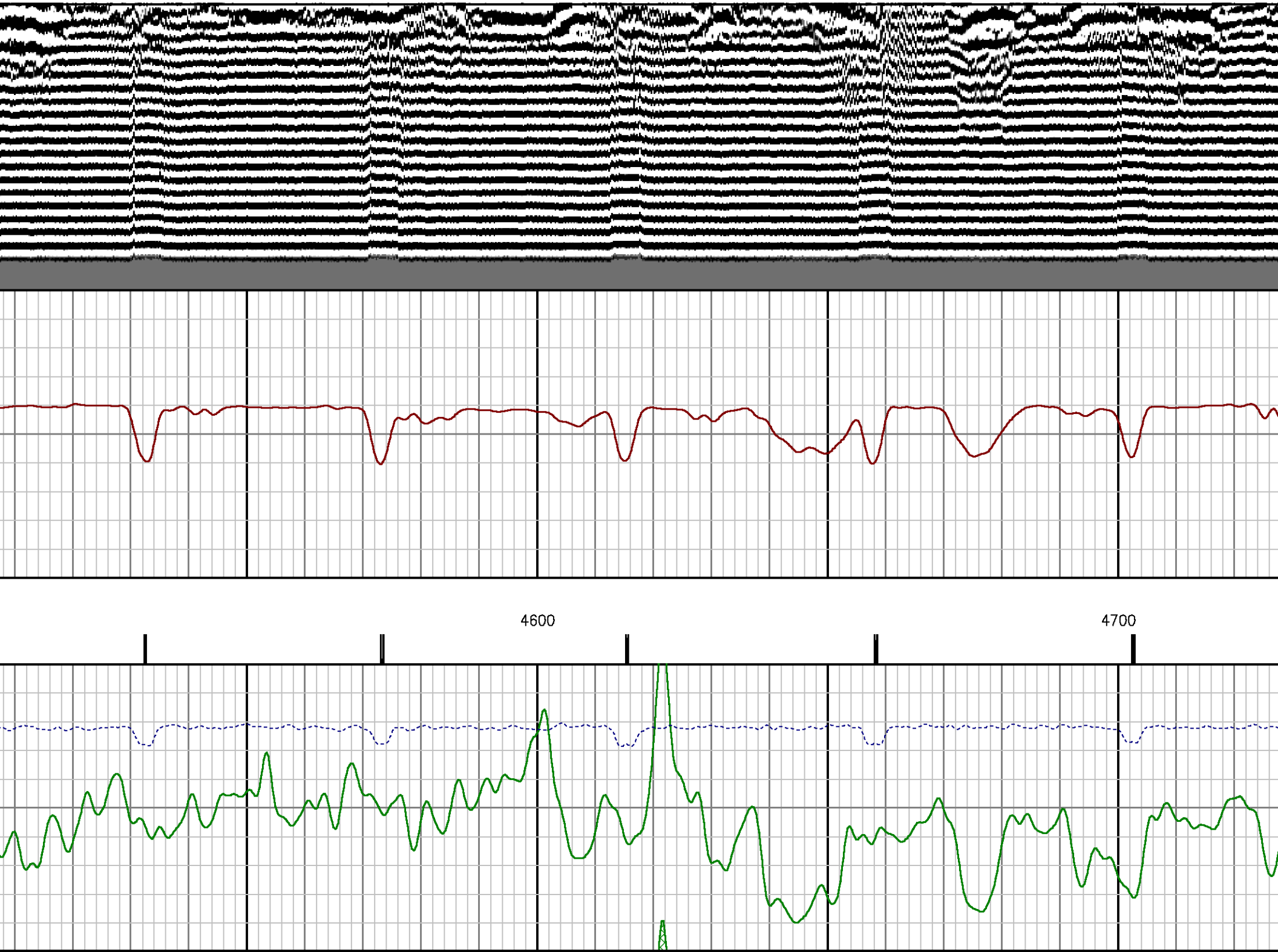

3500
3600

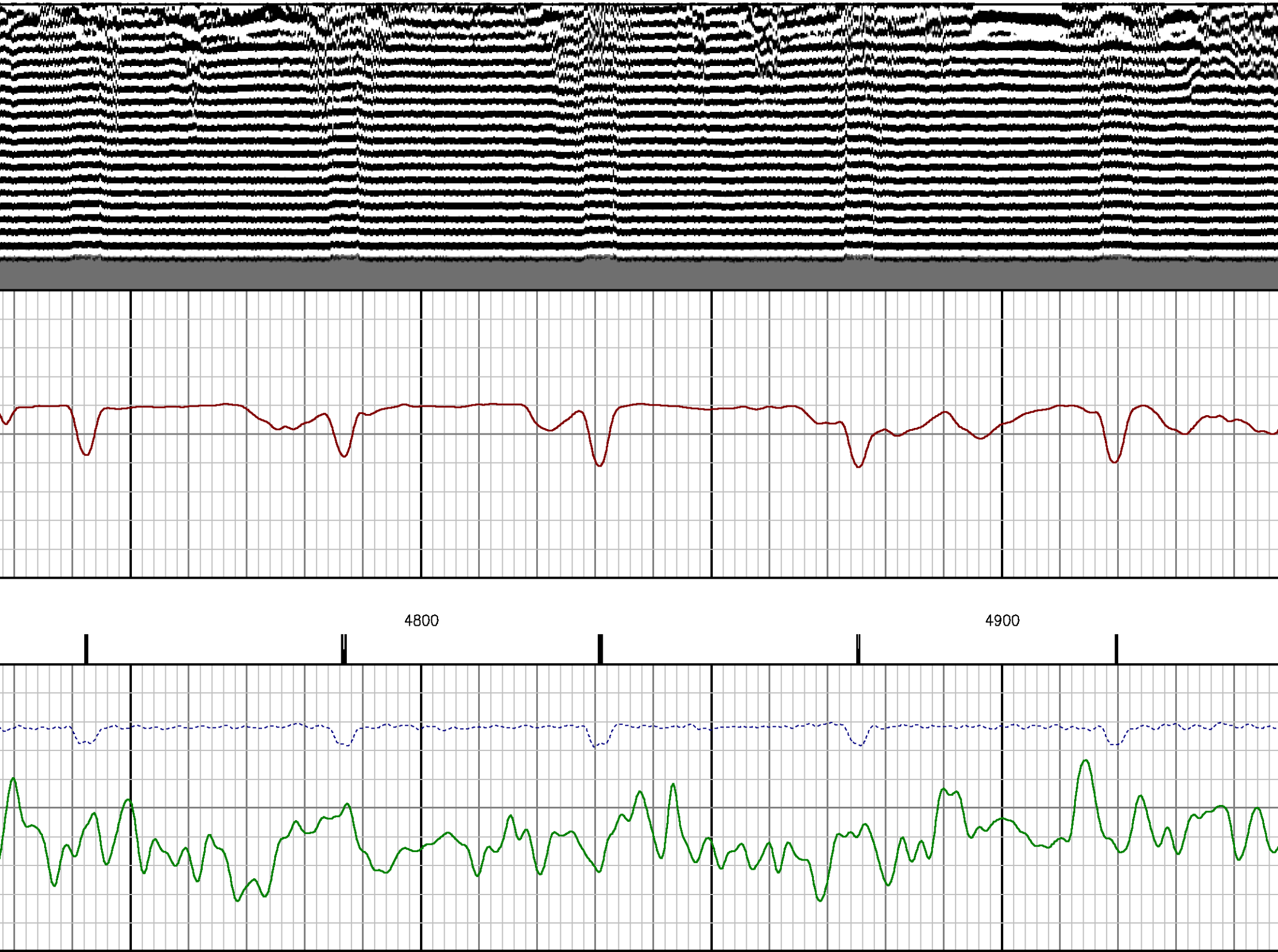

3700
3800

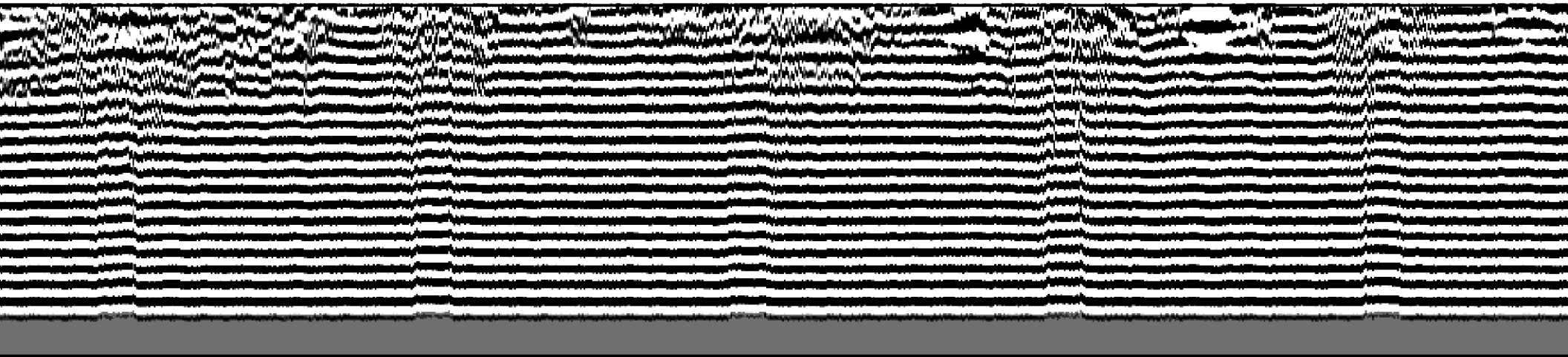

3900
4000

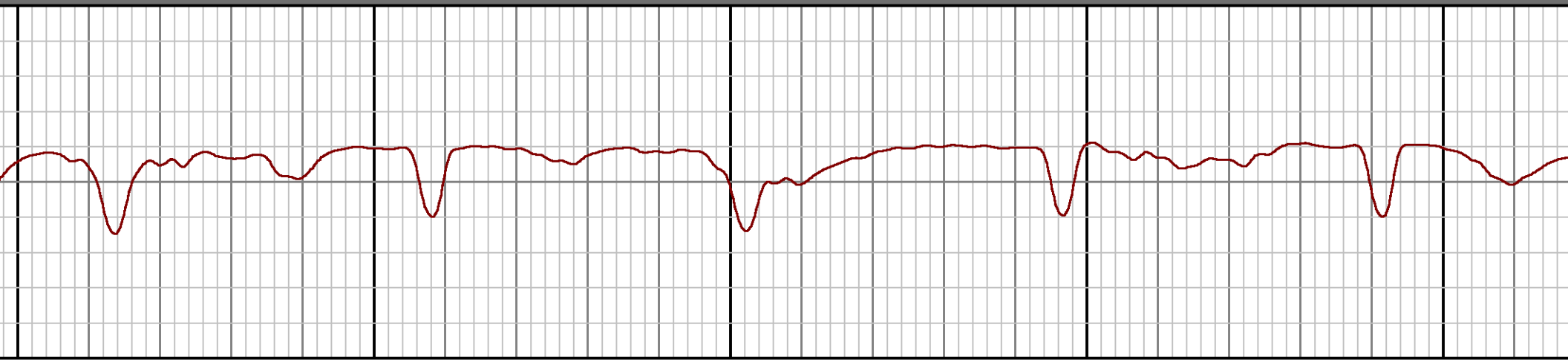

4100
4200

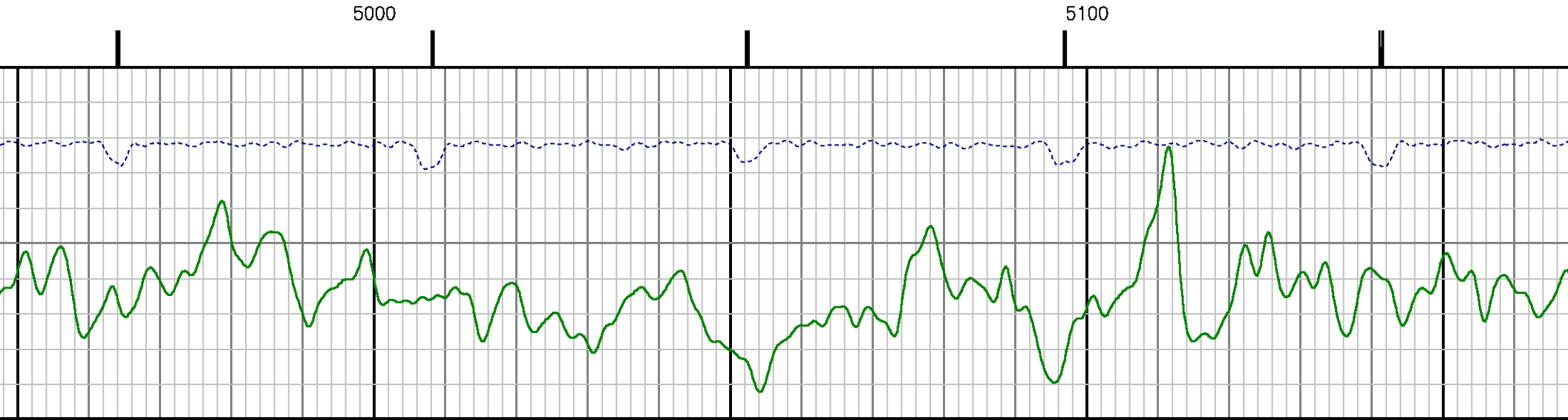

4300
4400
4500

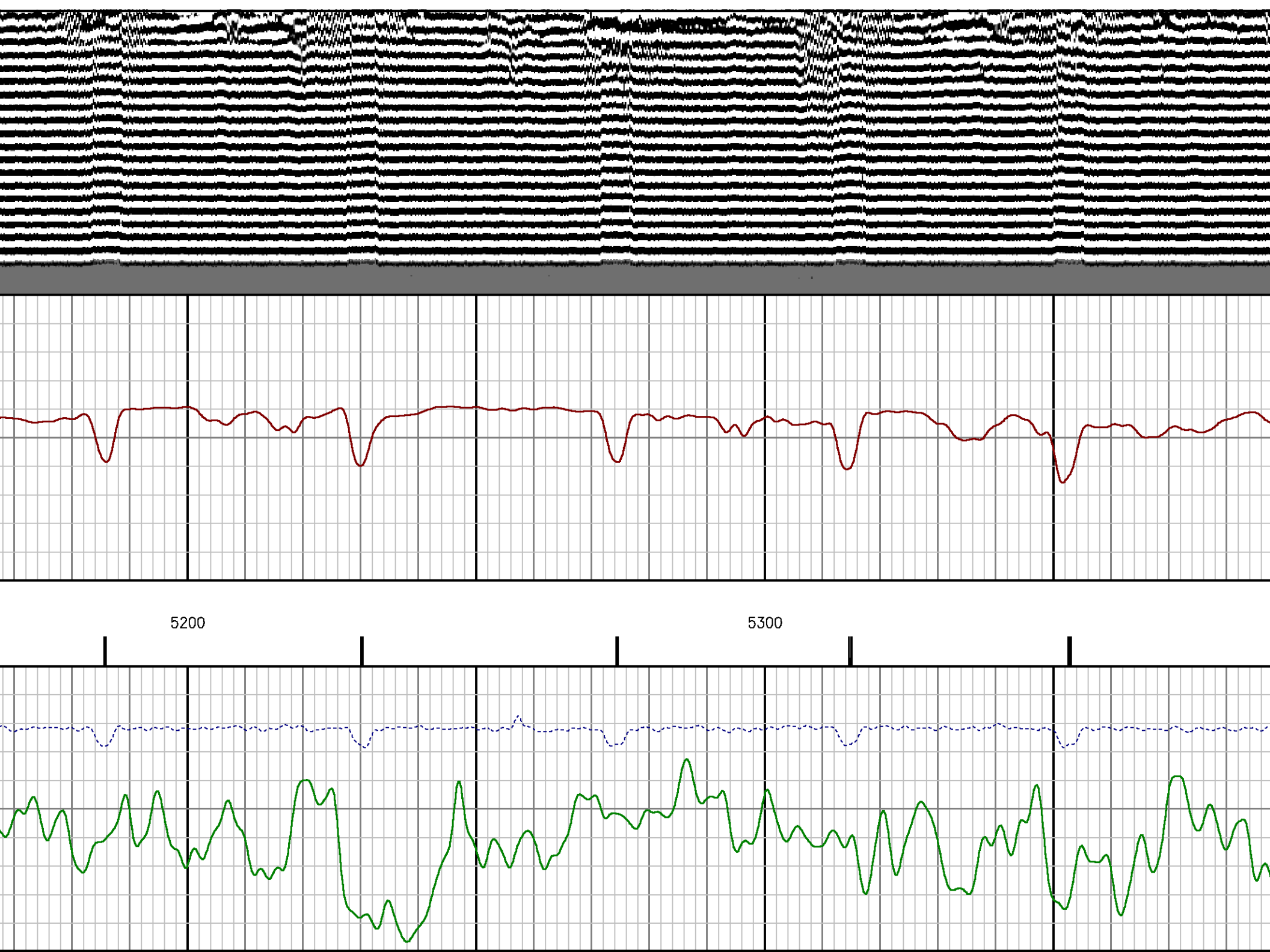

4600
4700

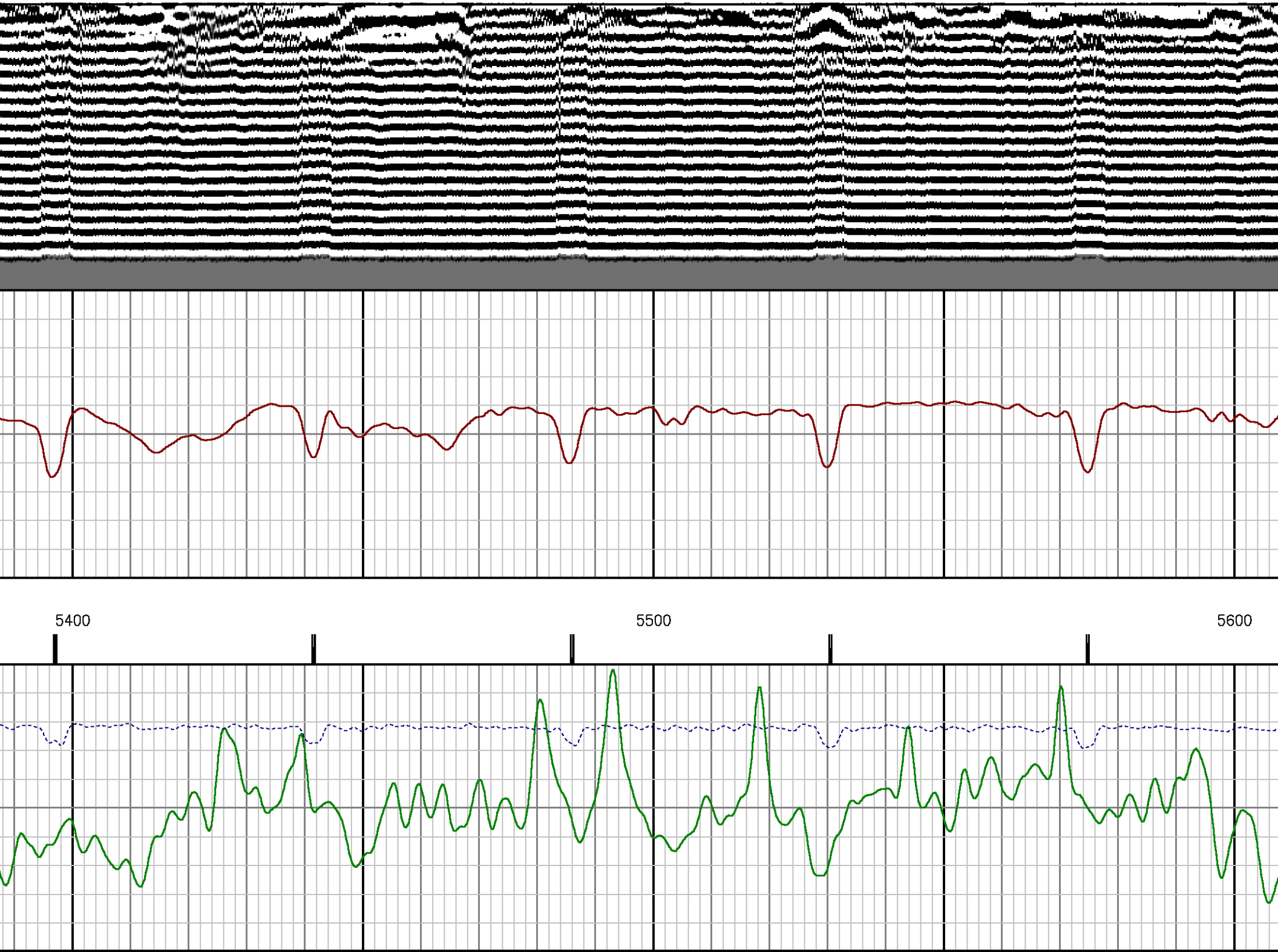

4800
4900





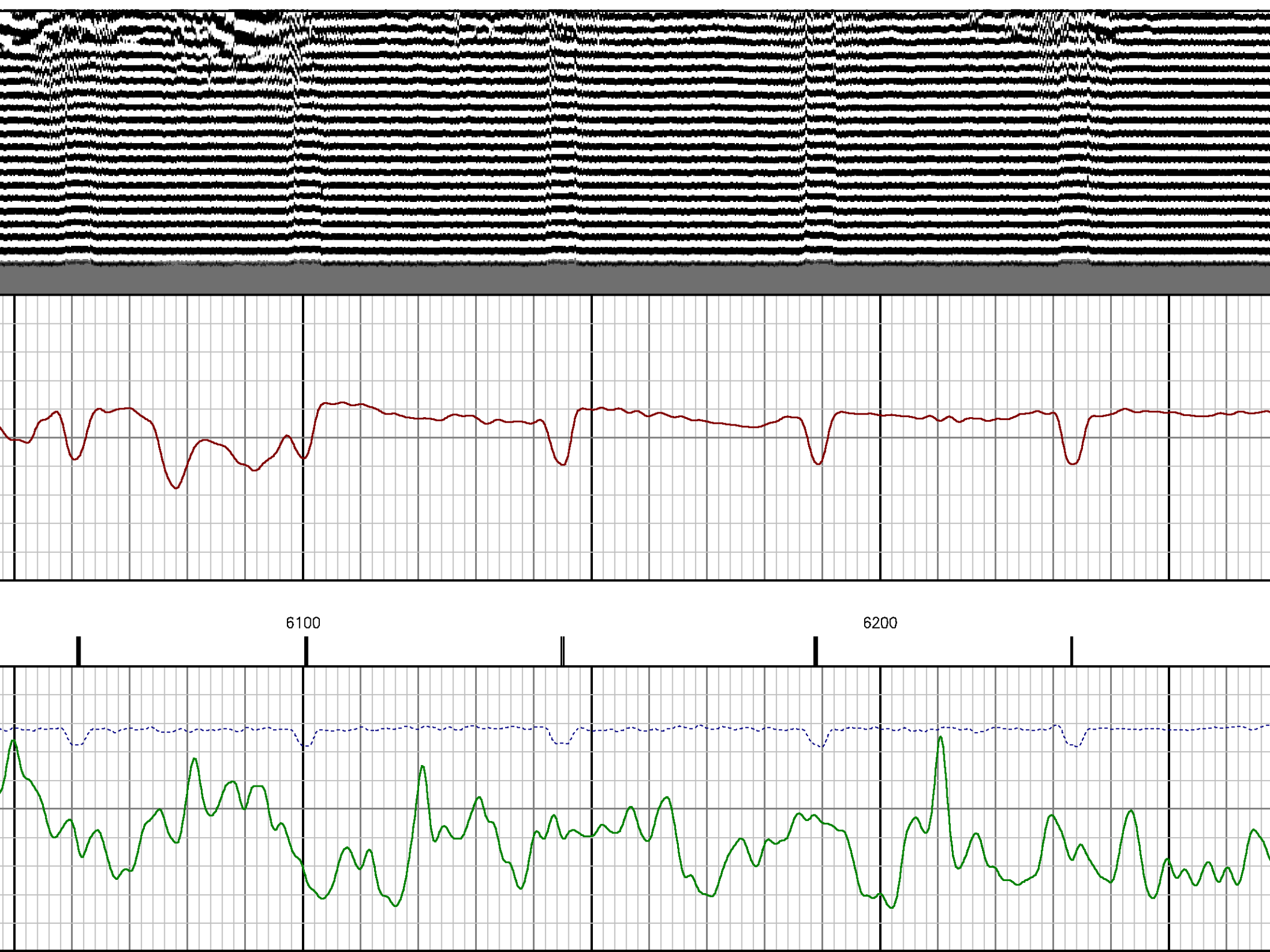

5000
5100

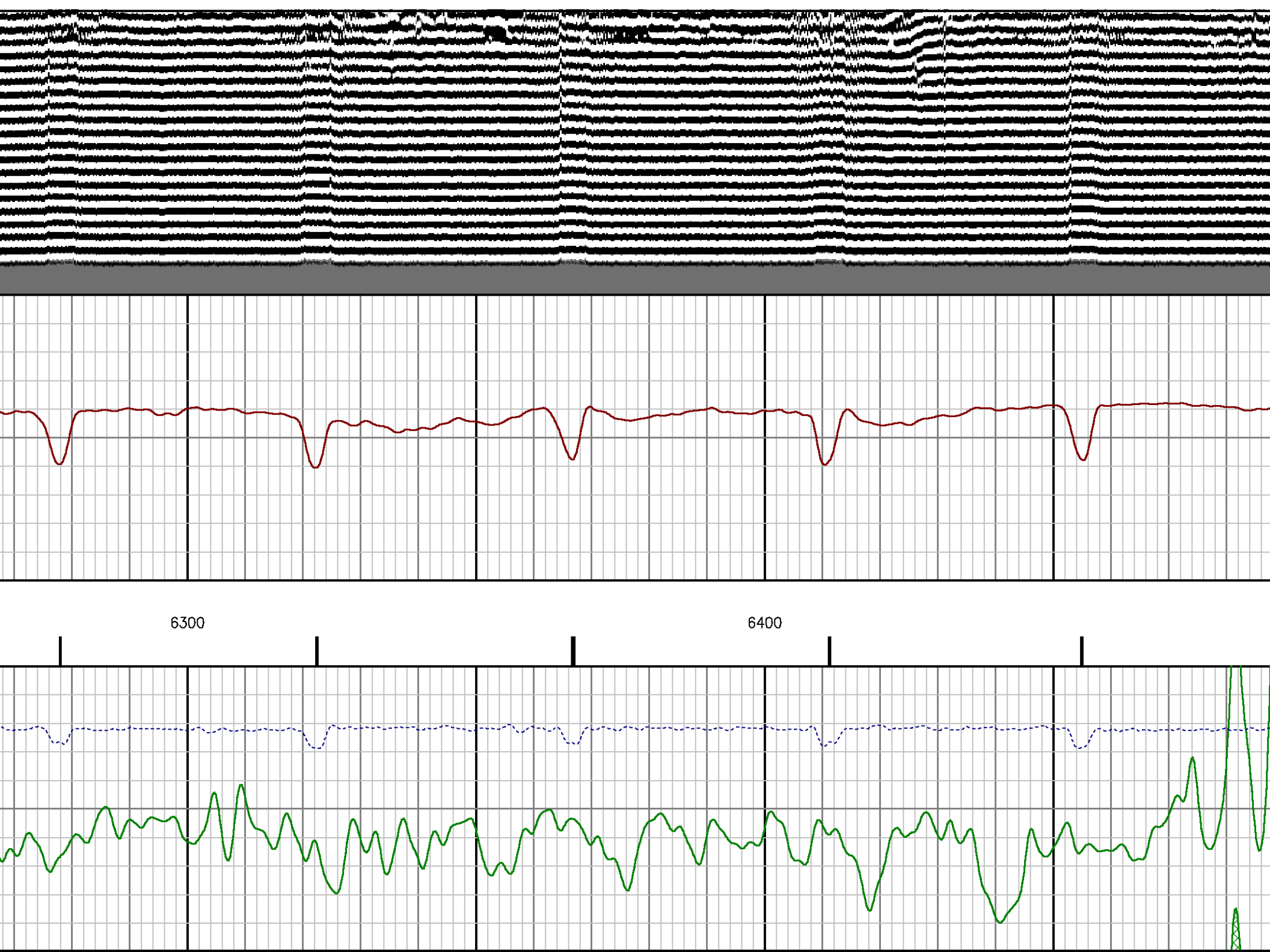

5200
5300


5400
5500
5600

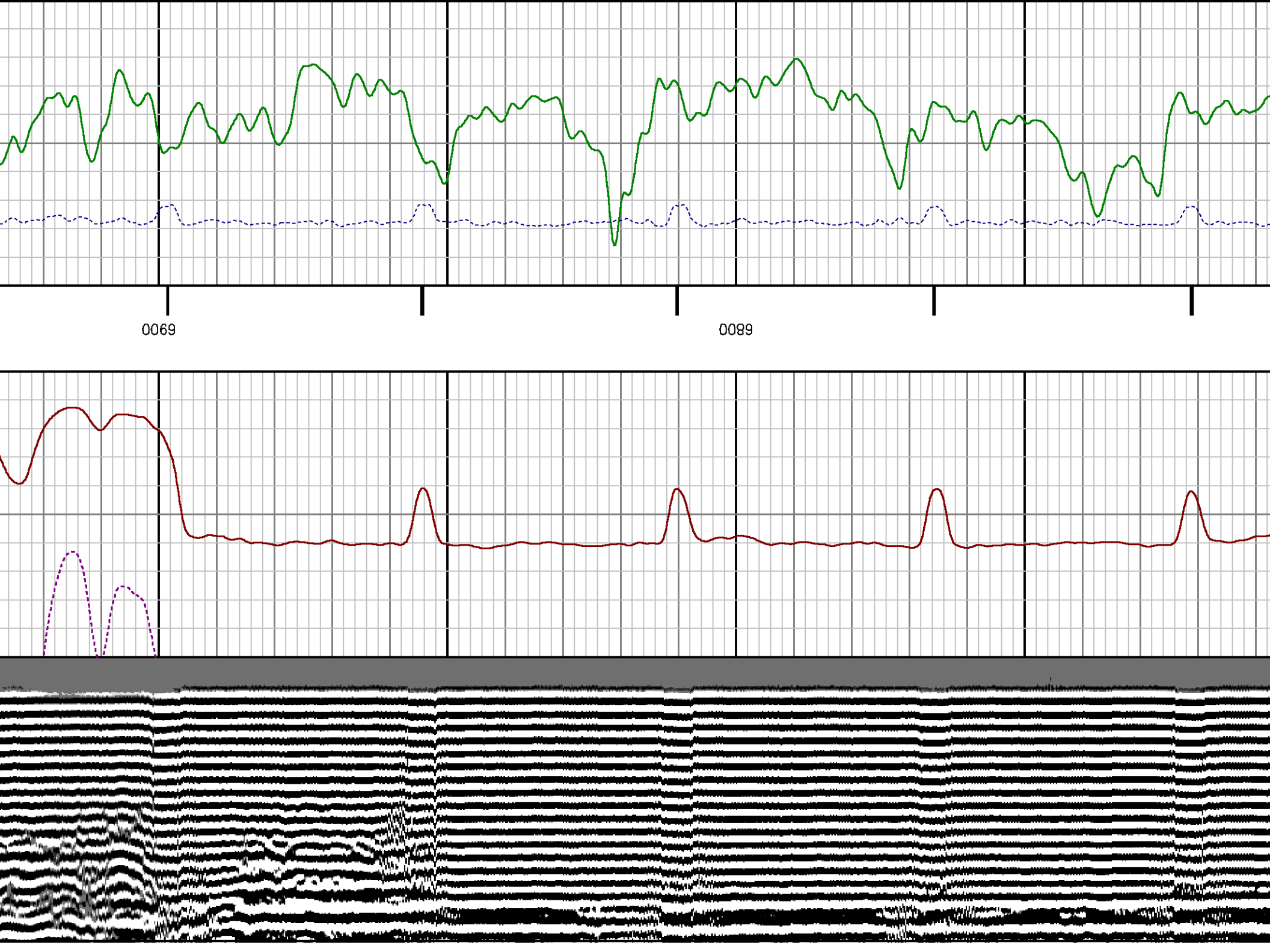
5700
5800

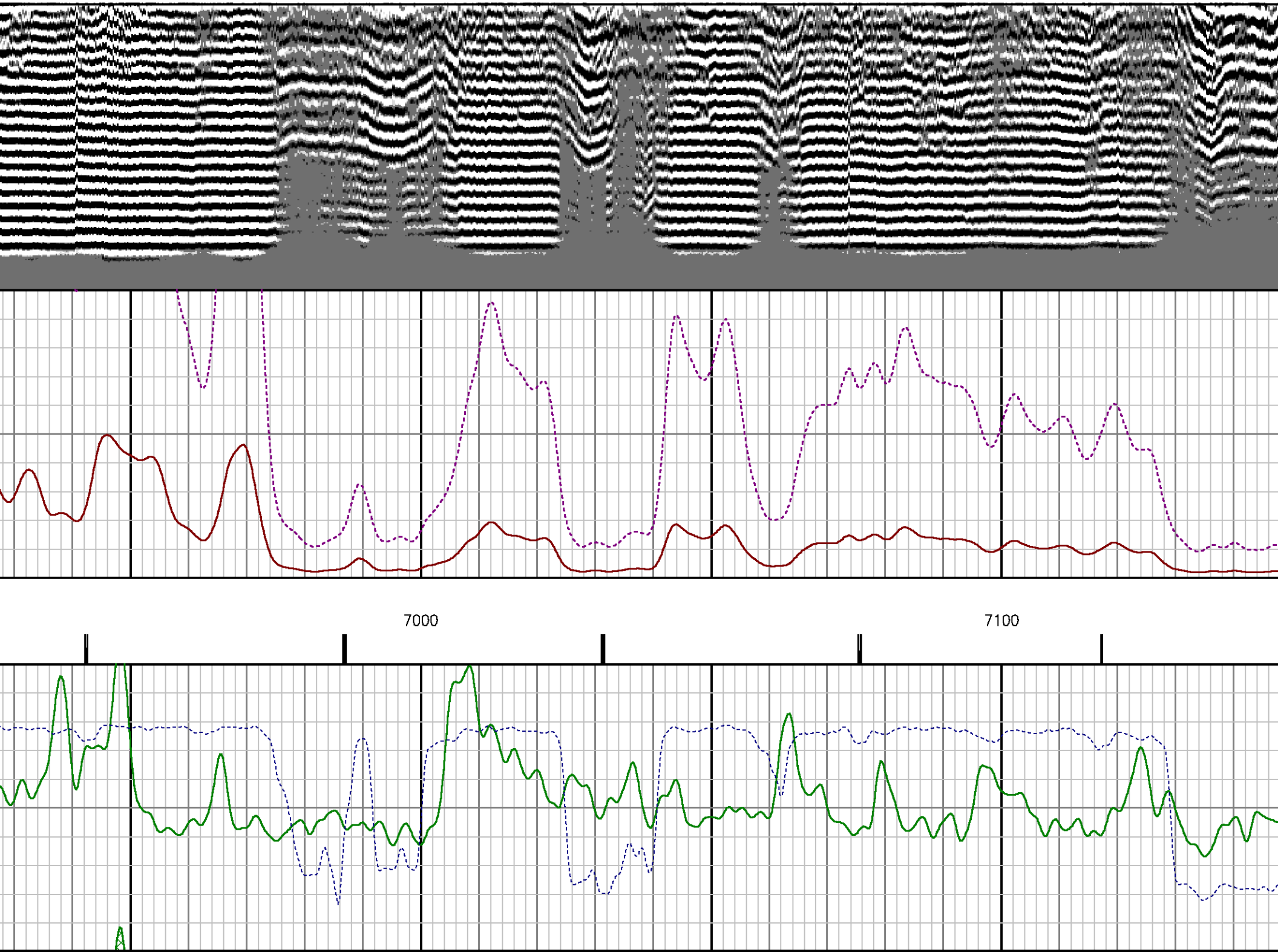
5900
6000


6100
6200

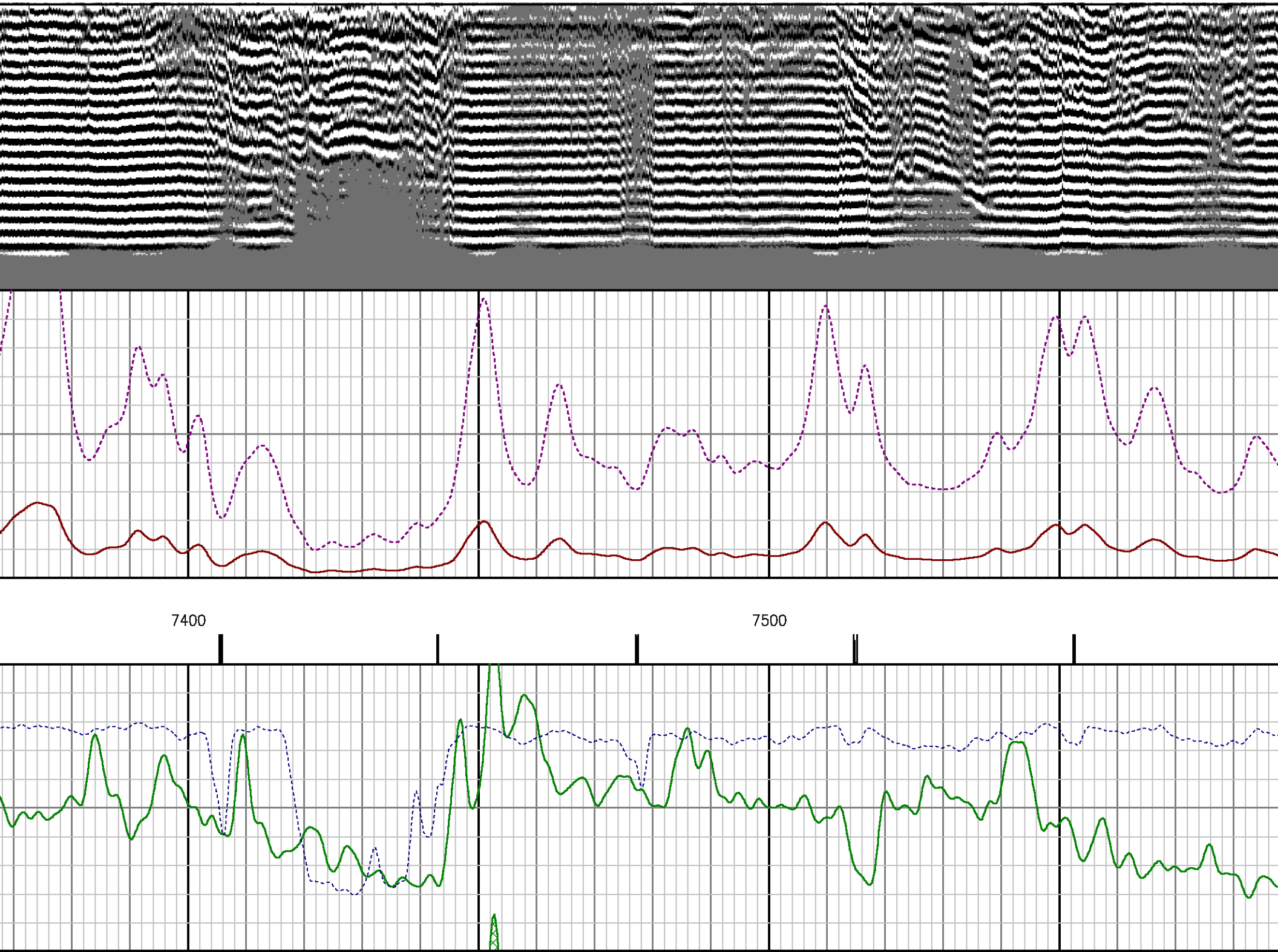

6300
6400

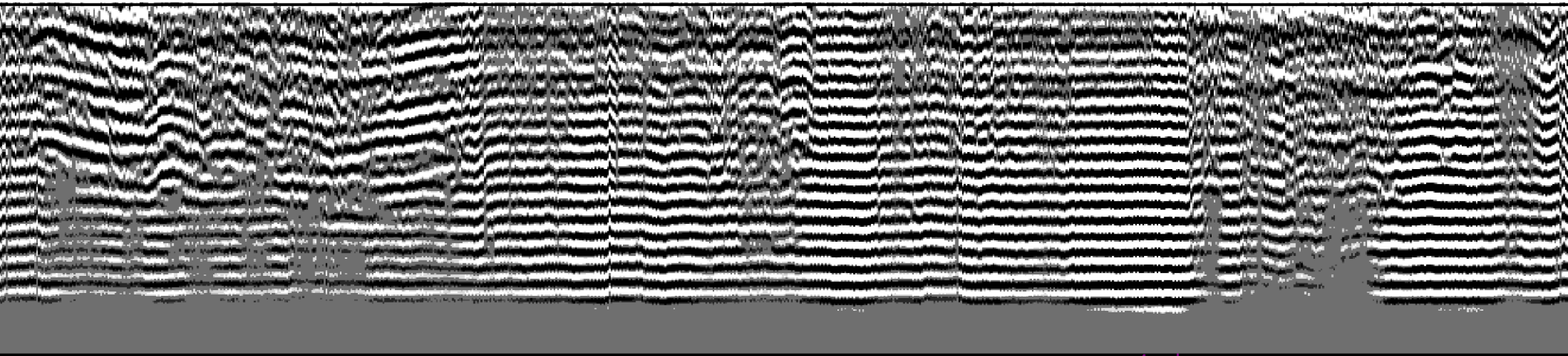
6500
6600
6700

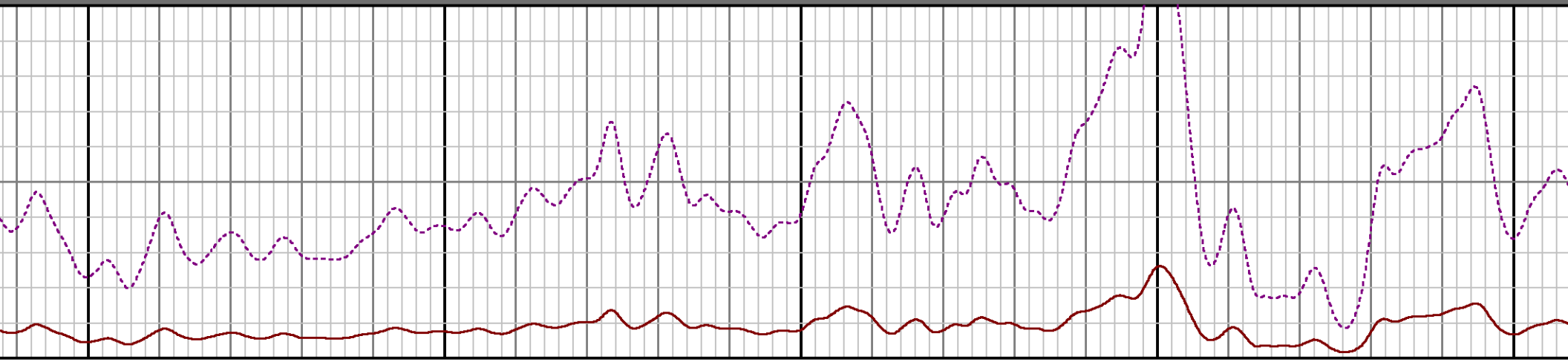

0069
0089

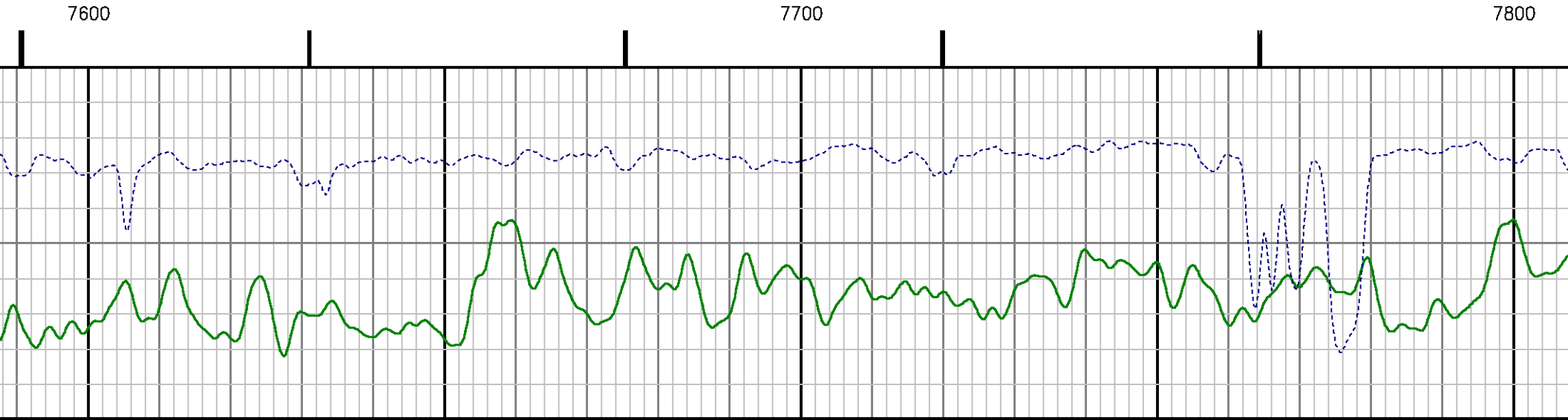

7000
7100

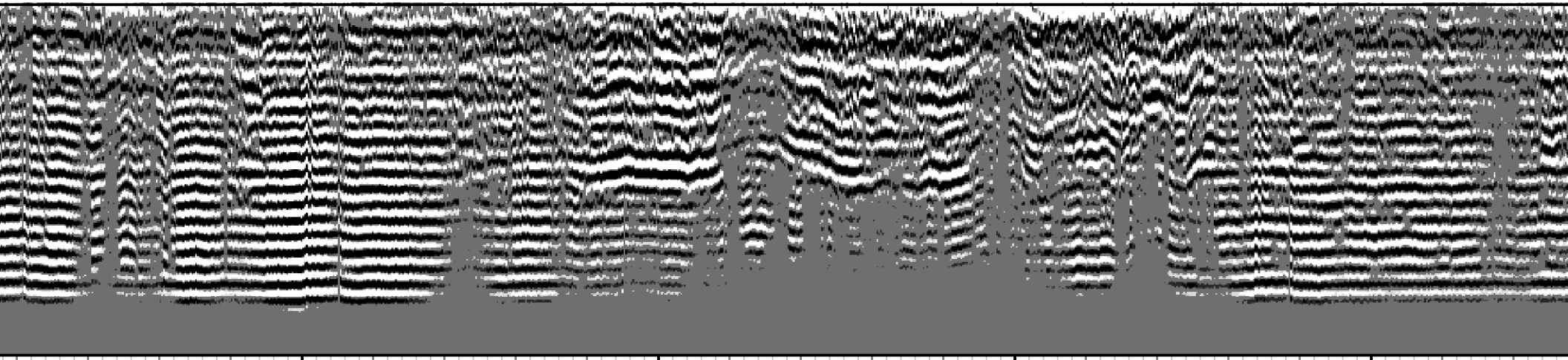
7200
7300
SHORT JOINT

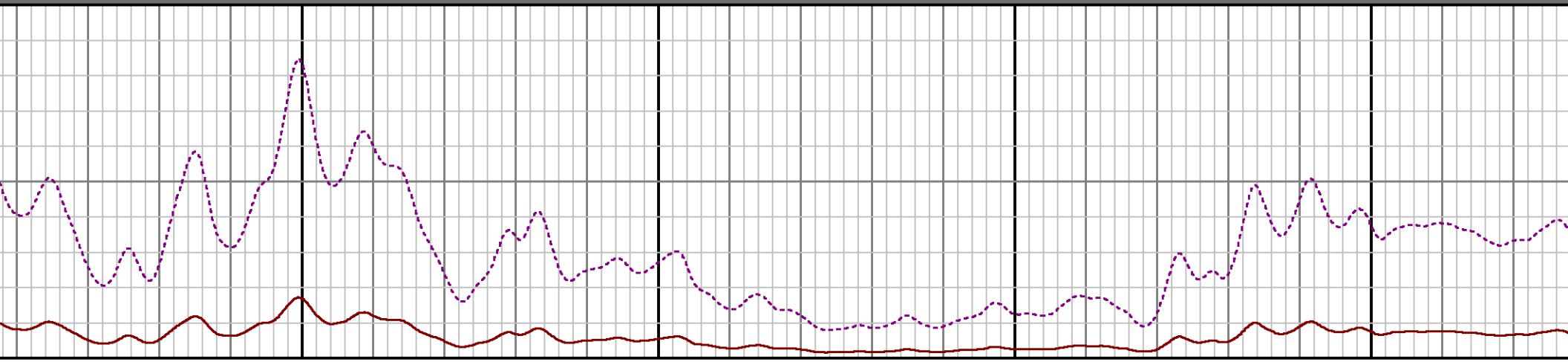

7400
7500

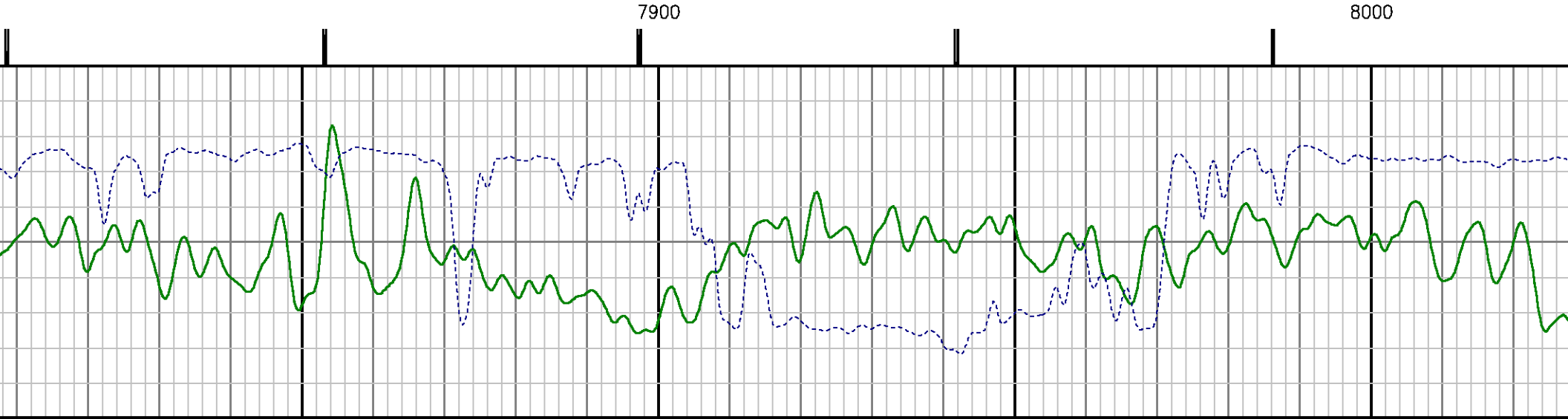


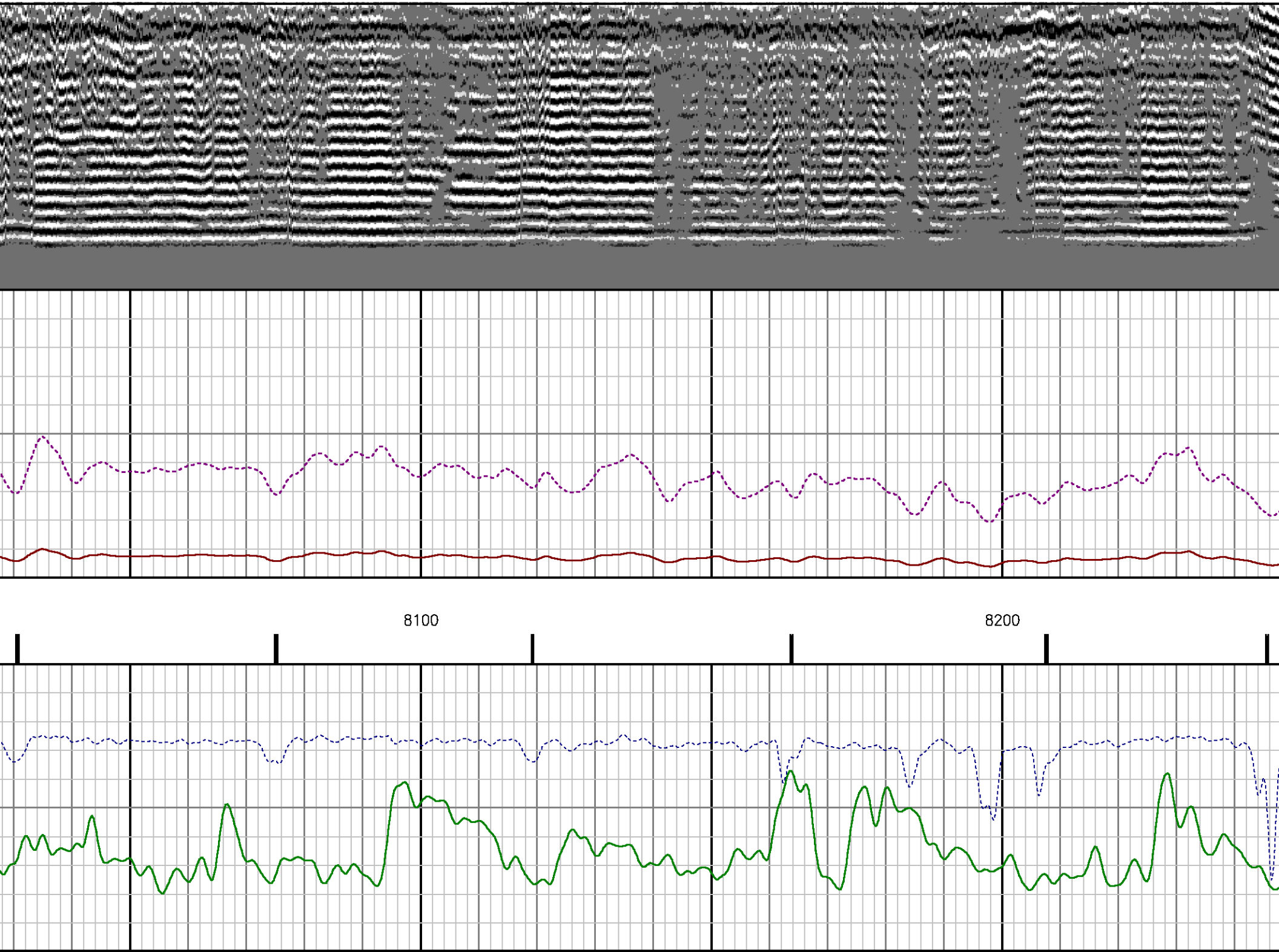


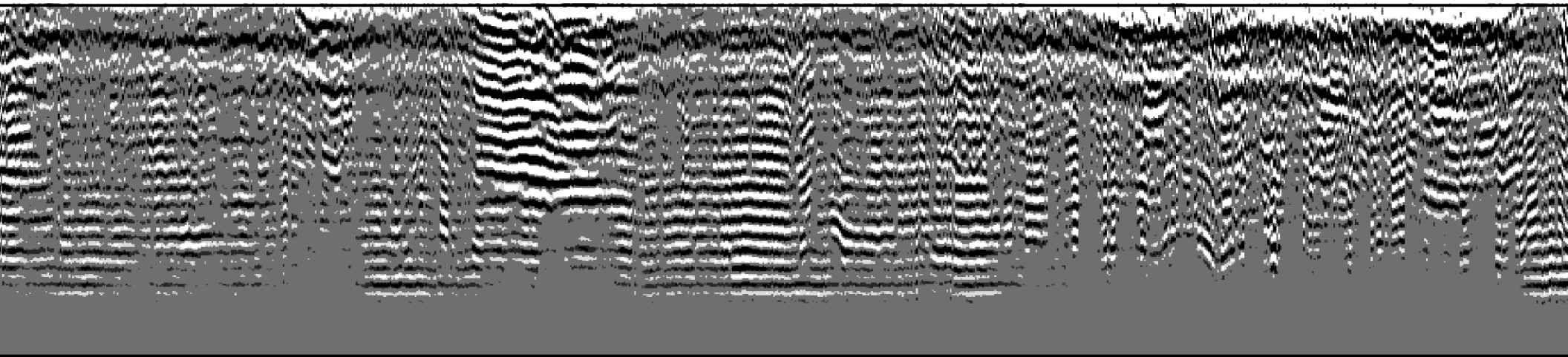

7600
7700
7800

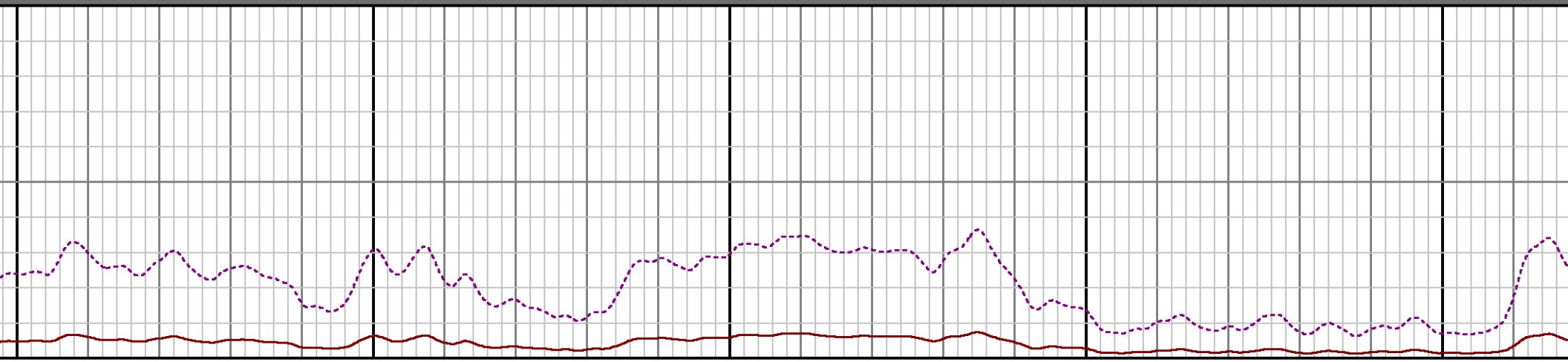


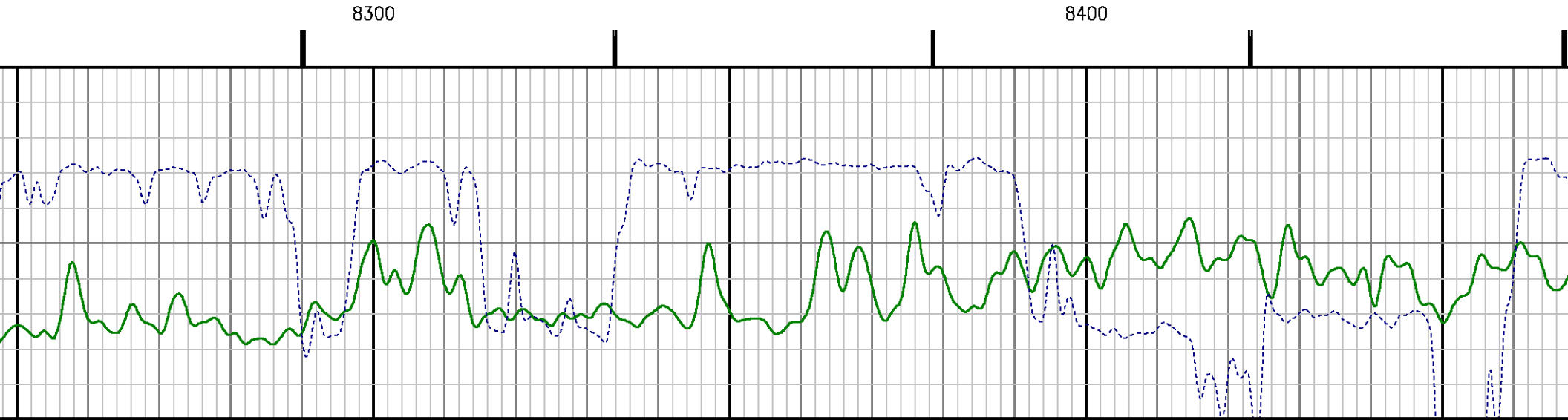



7900
8000


8100
8200





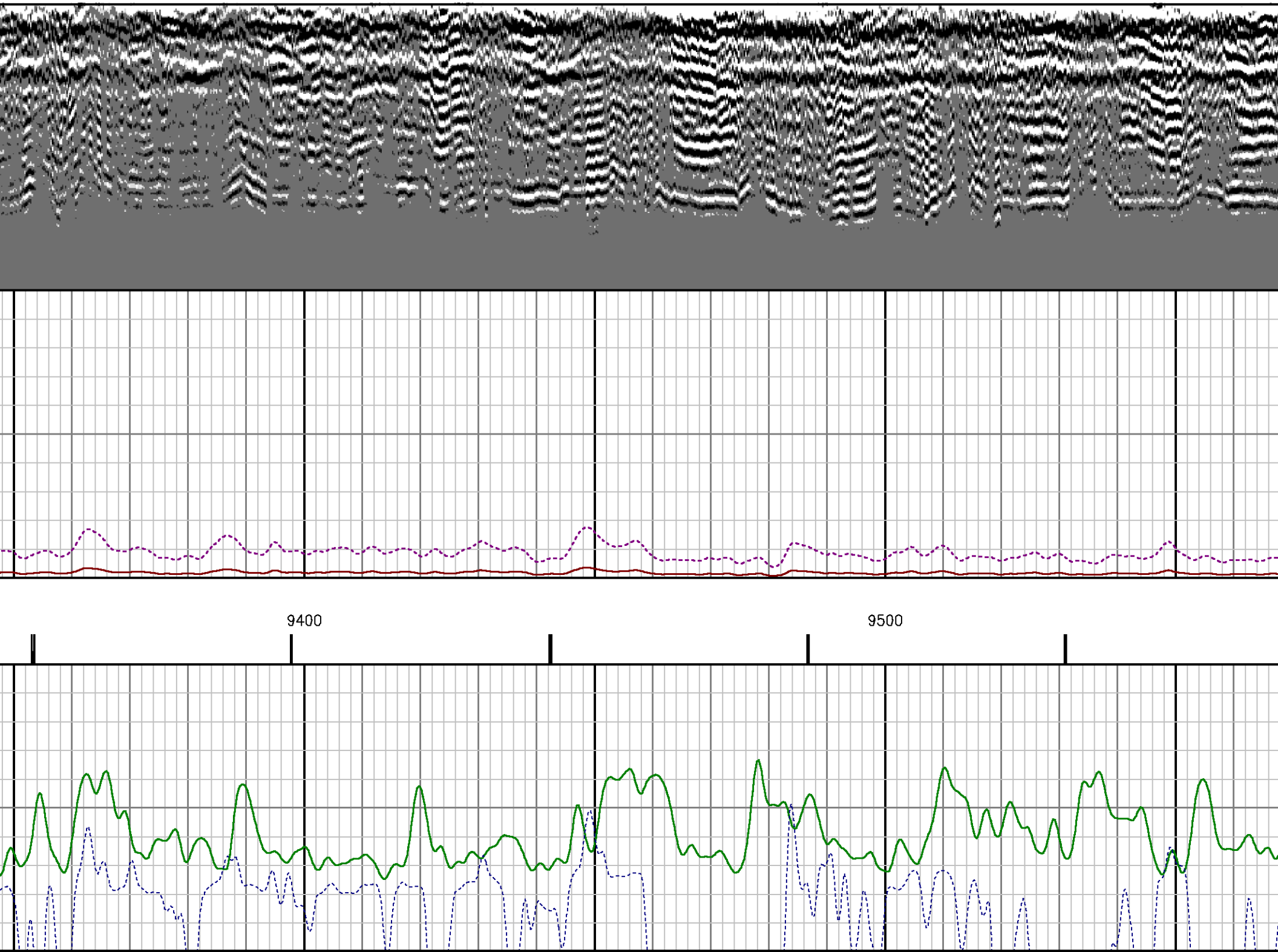

8300
8400

8500
8600

8700
8800
8900

9000
9100

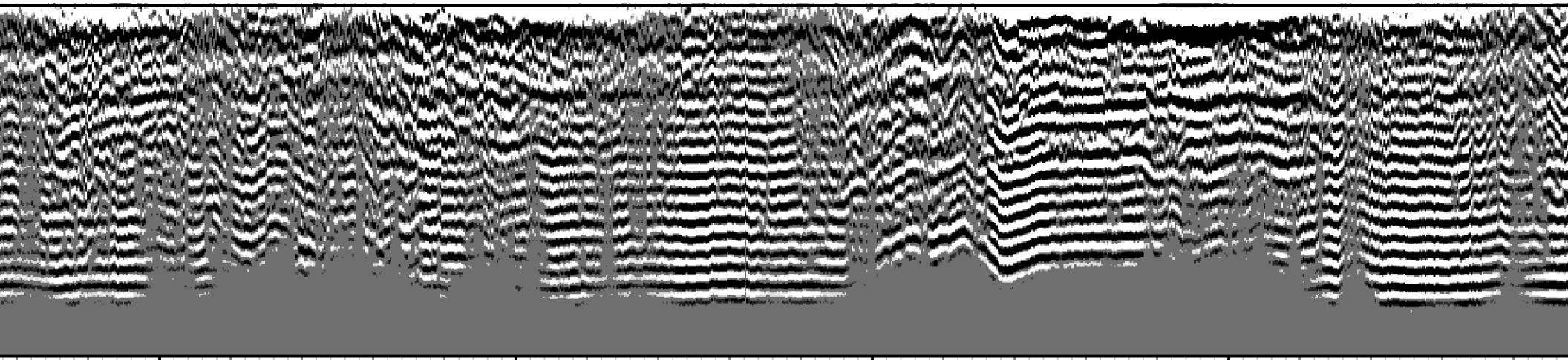
9200
9300

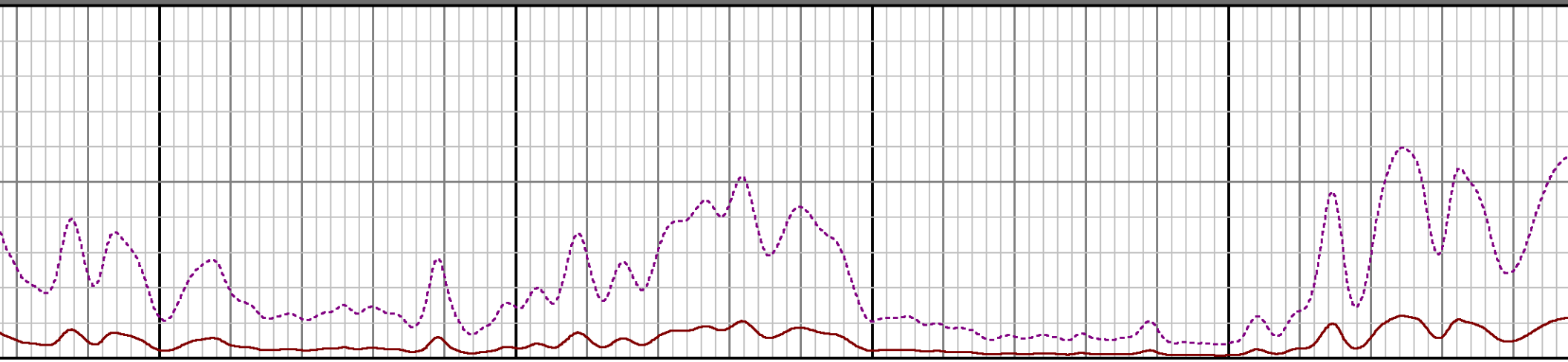

9400
9500

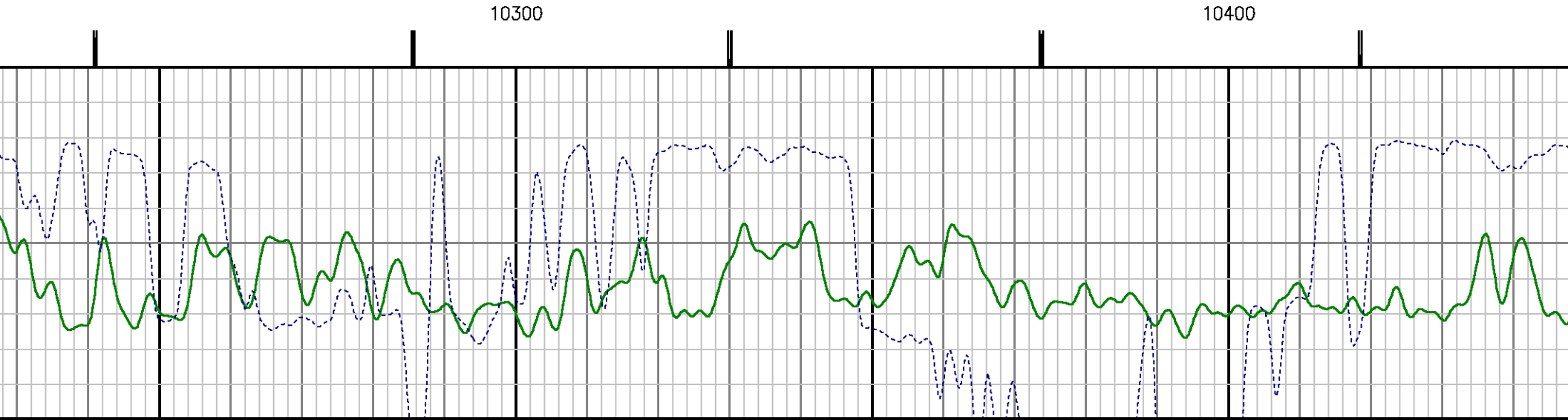
9600
9700

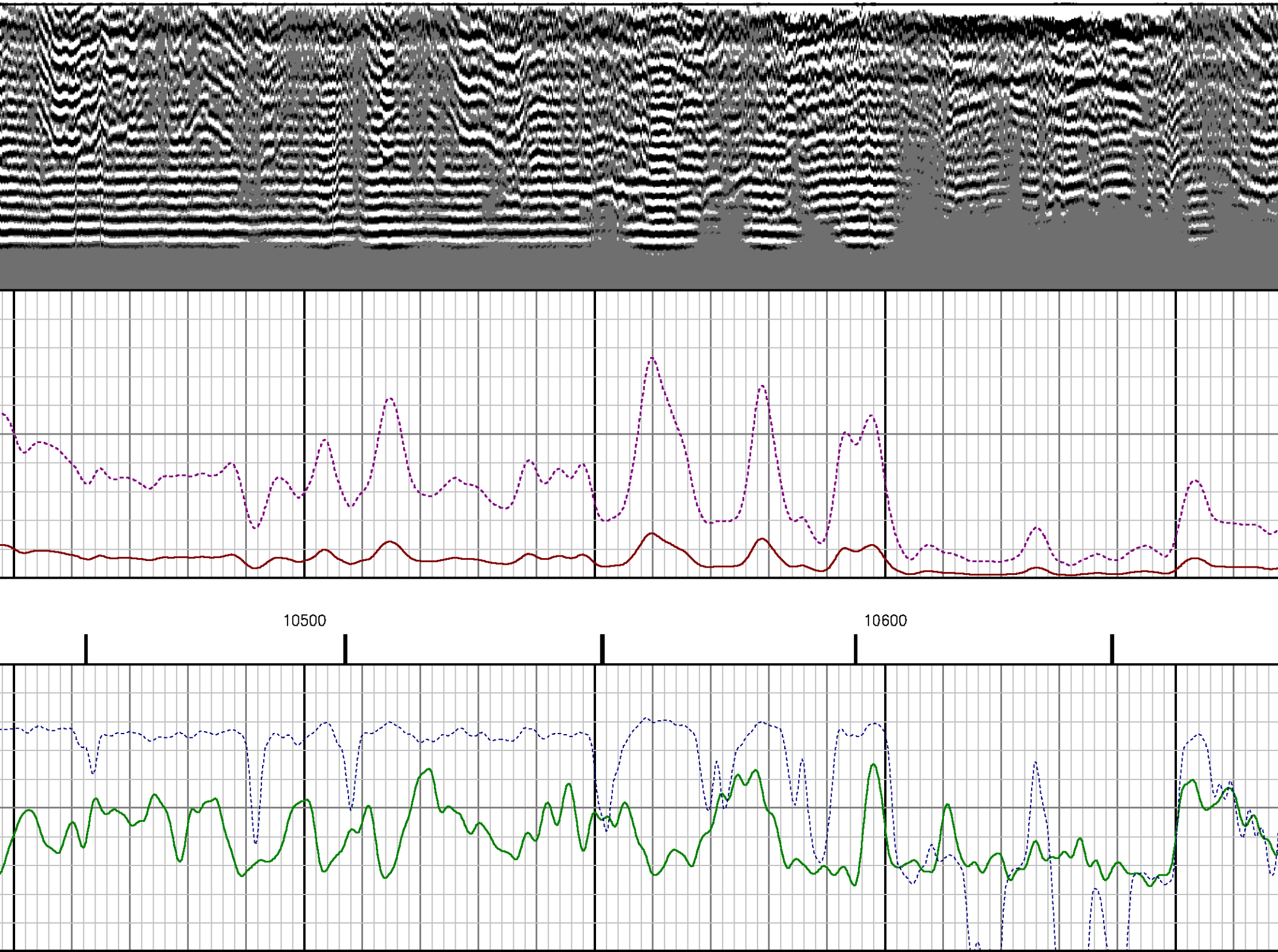
9800
9900
10000

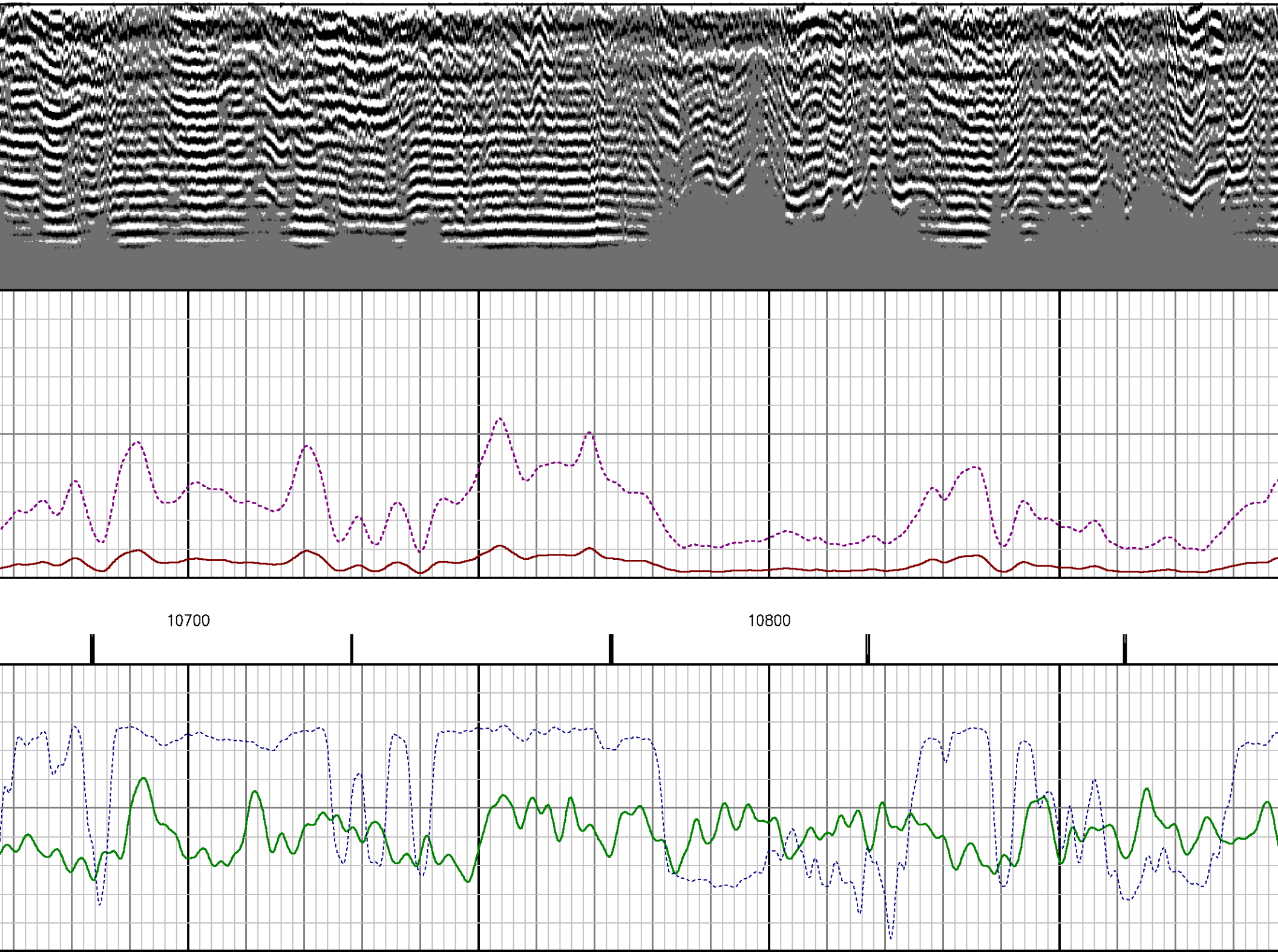
10100
10200

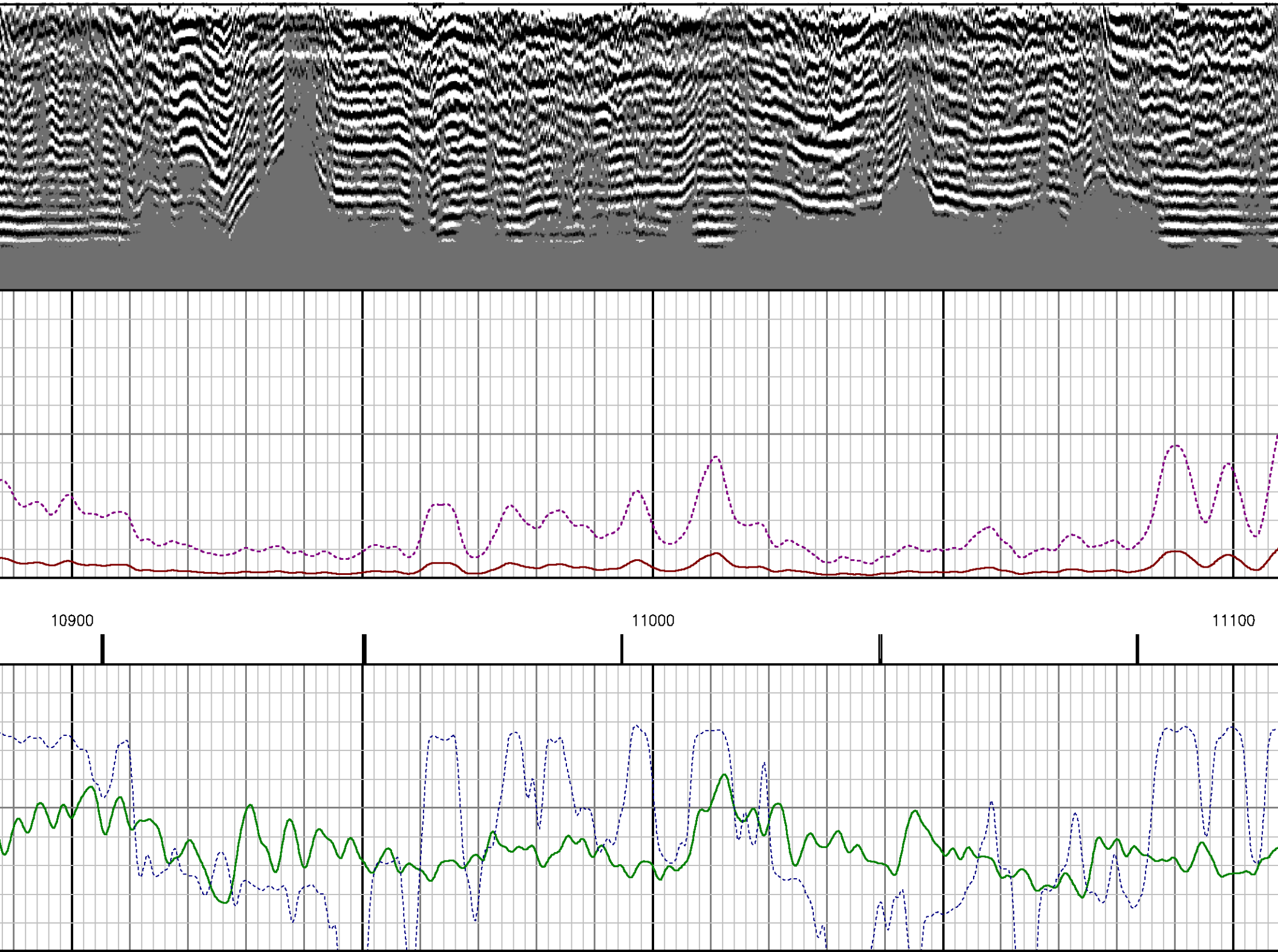


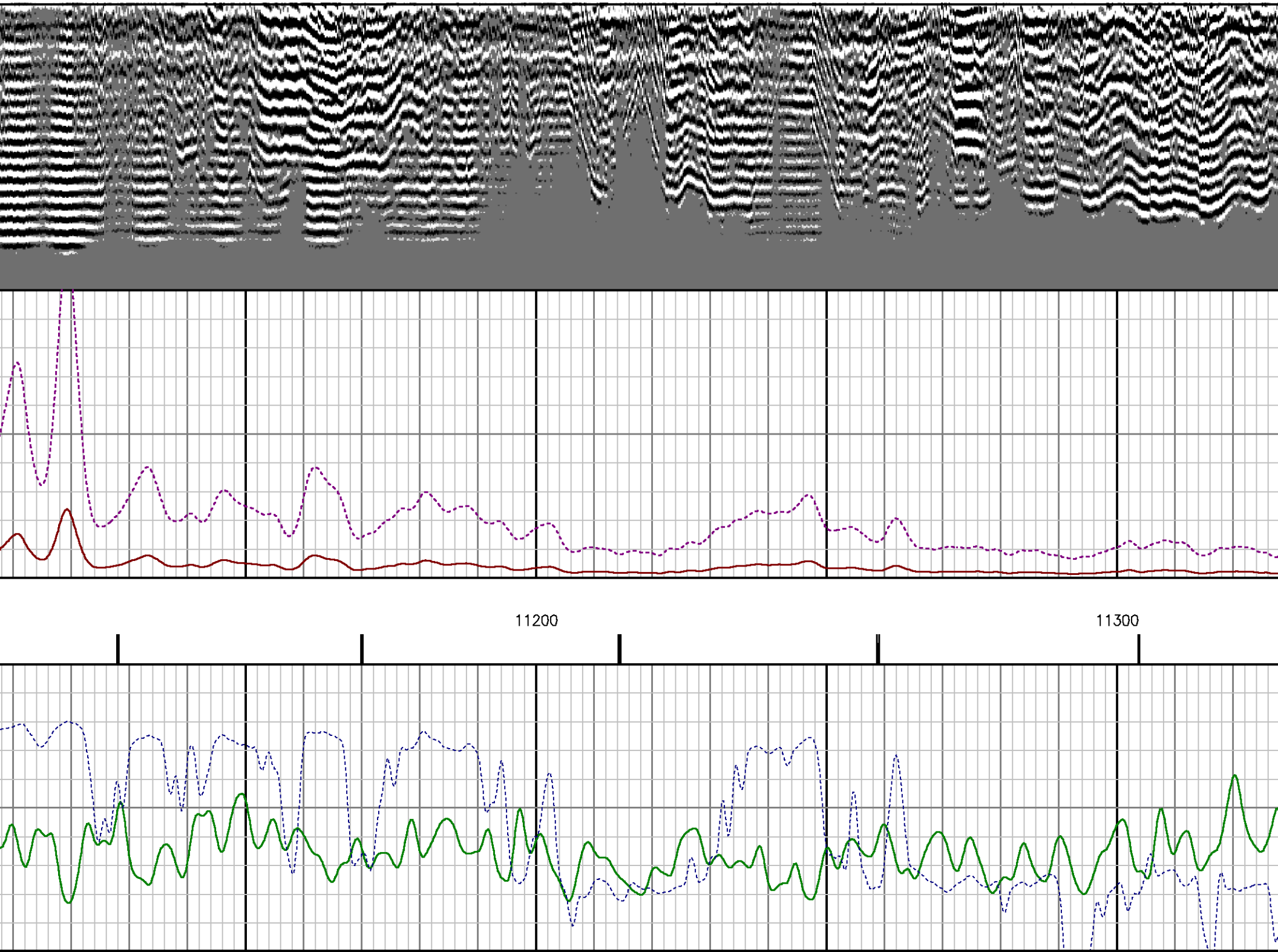


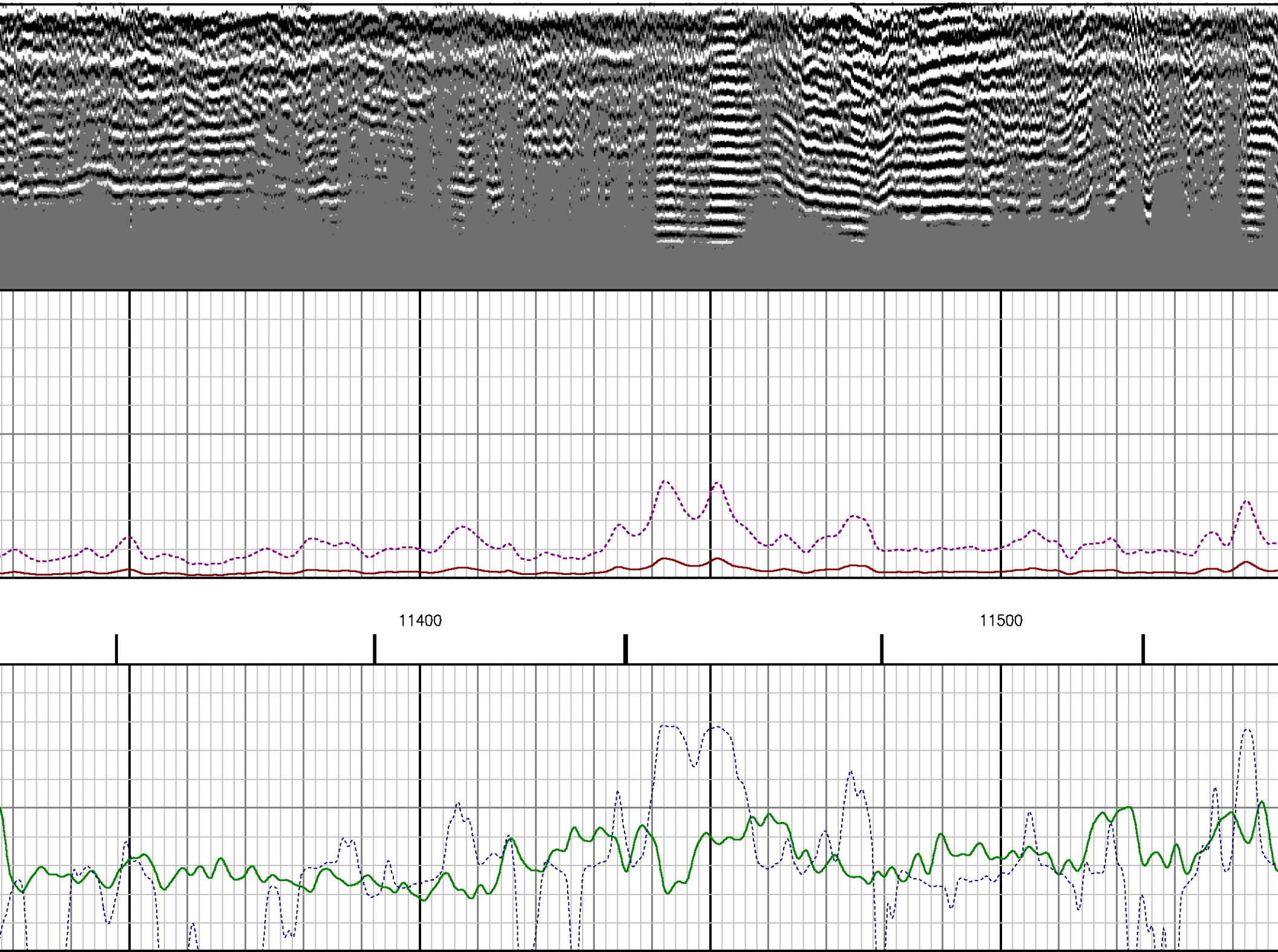

10300
10400

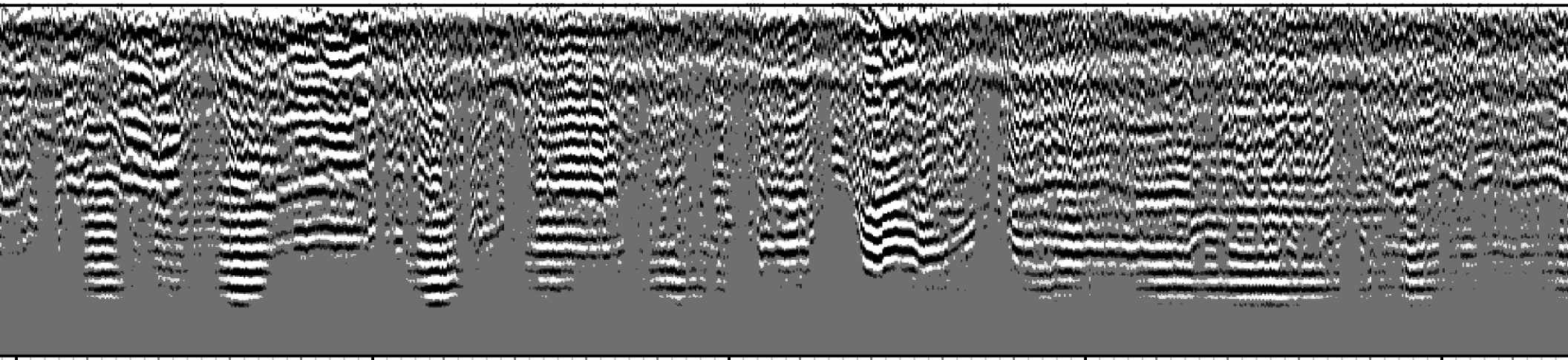

10500
10600

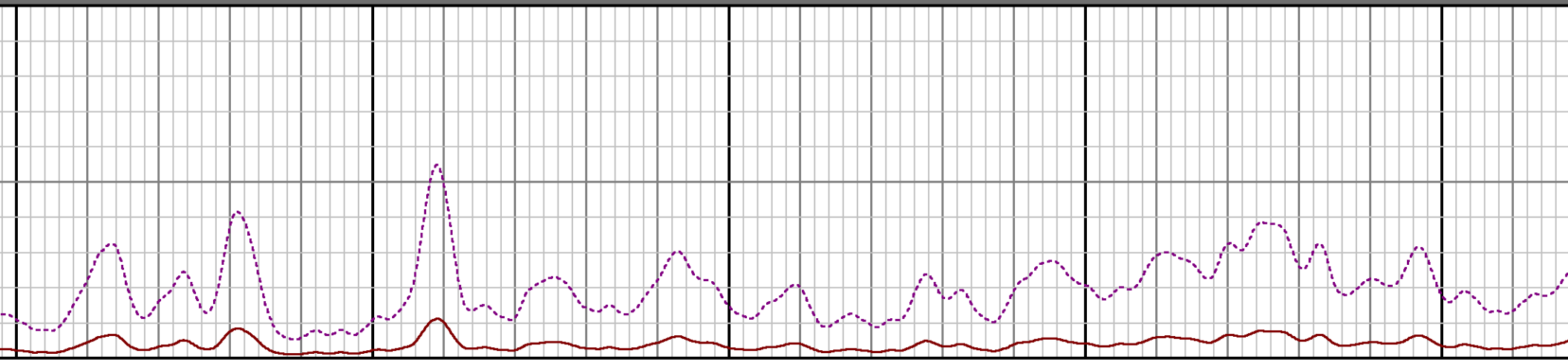

10700
10800

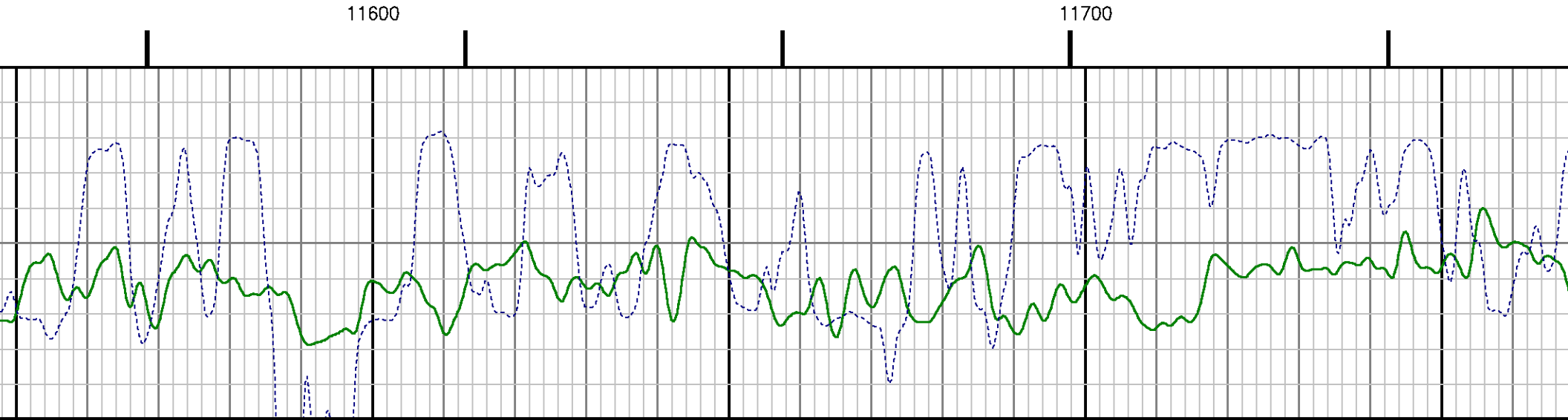

10900
11000
11100

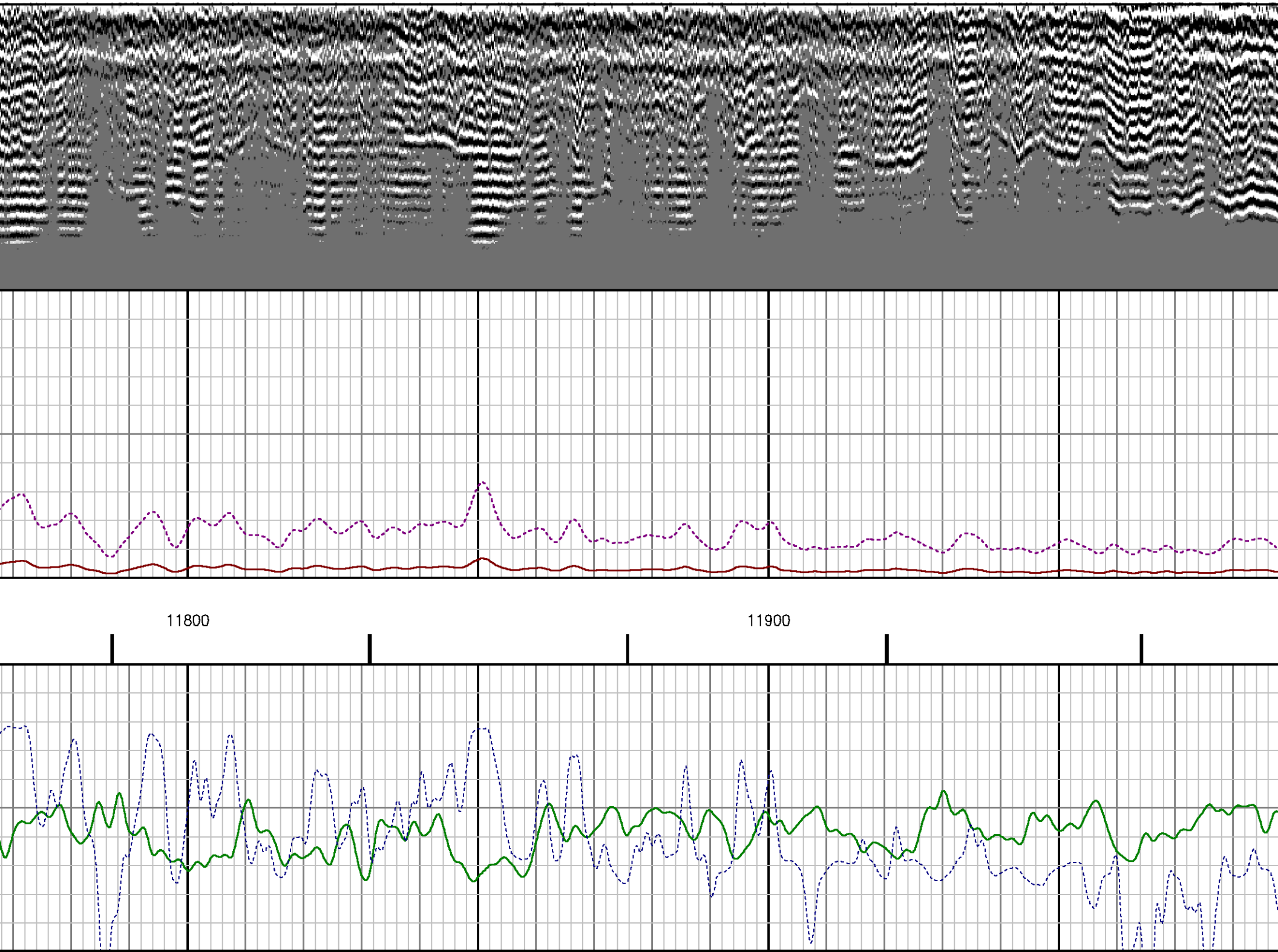

11200
11300

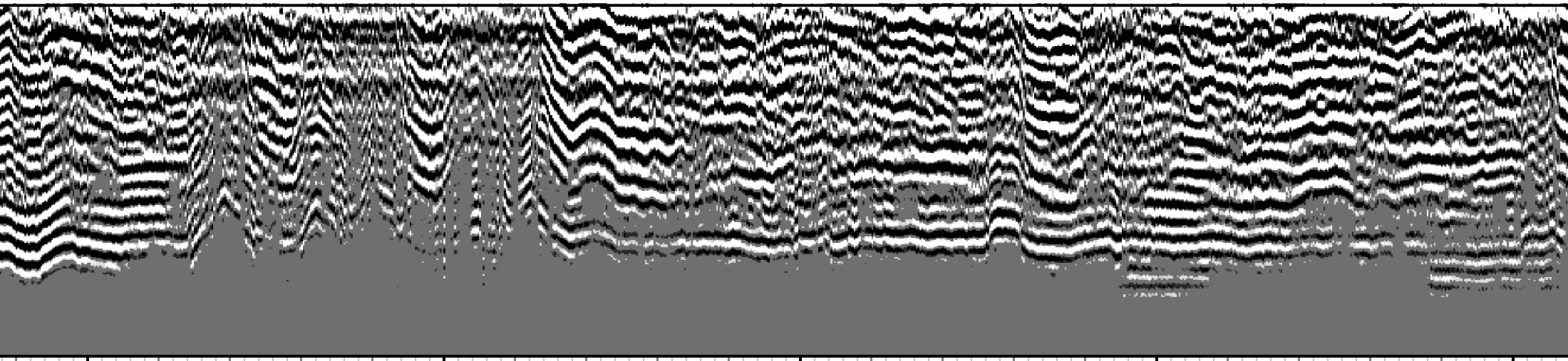

11400
11500

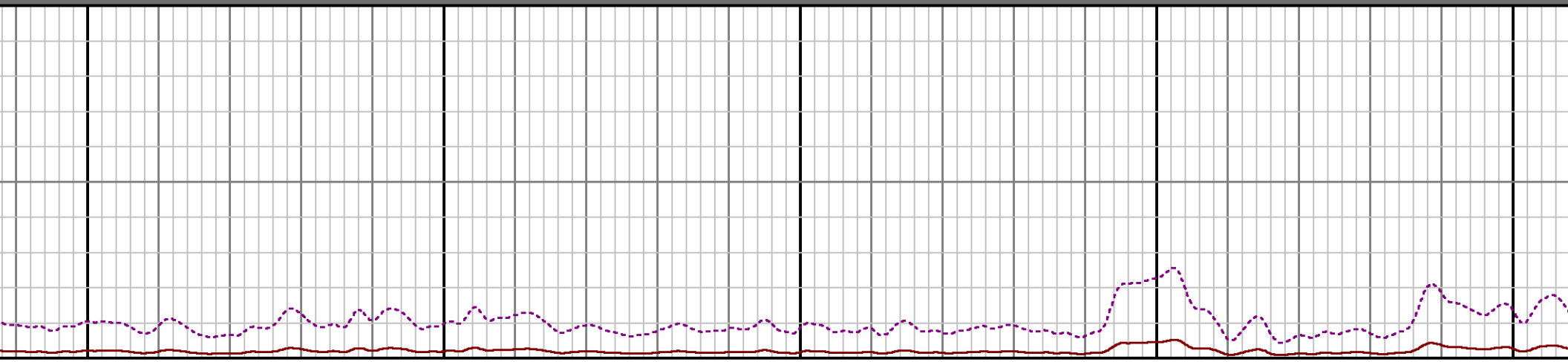


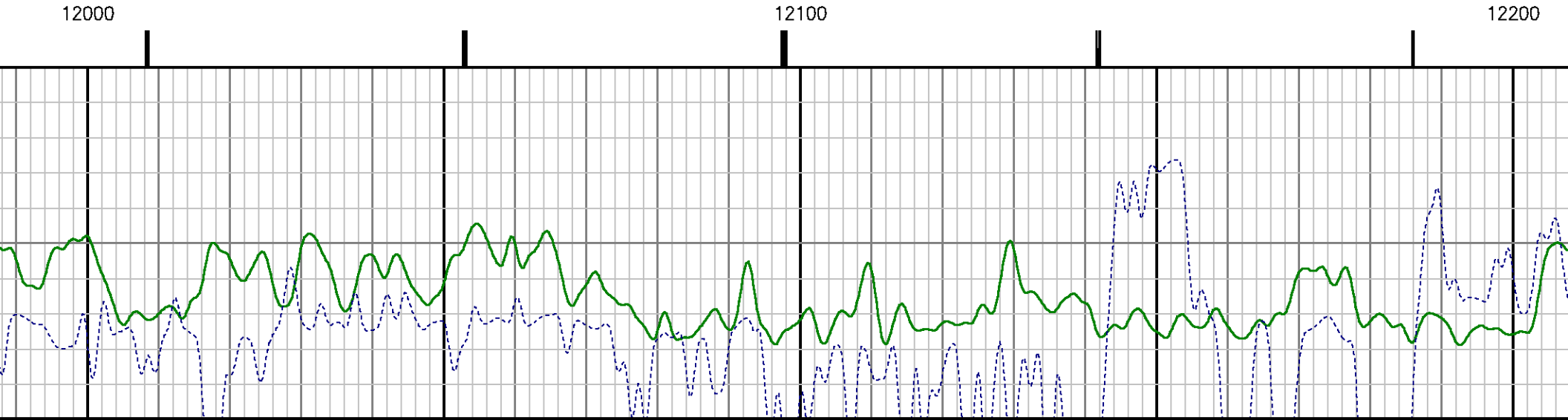



11600
11700

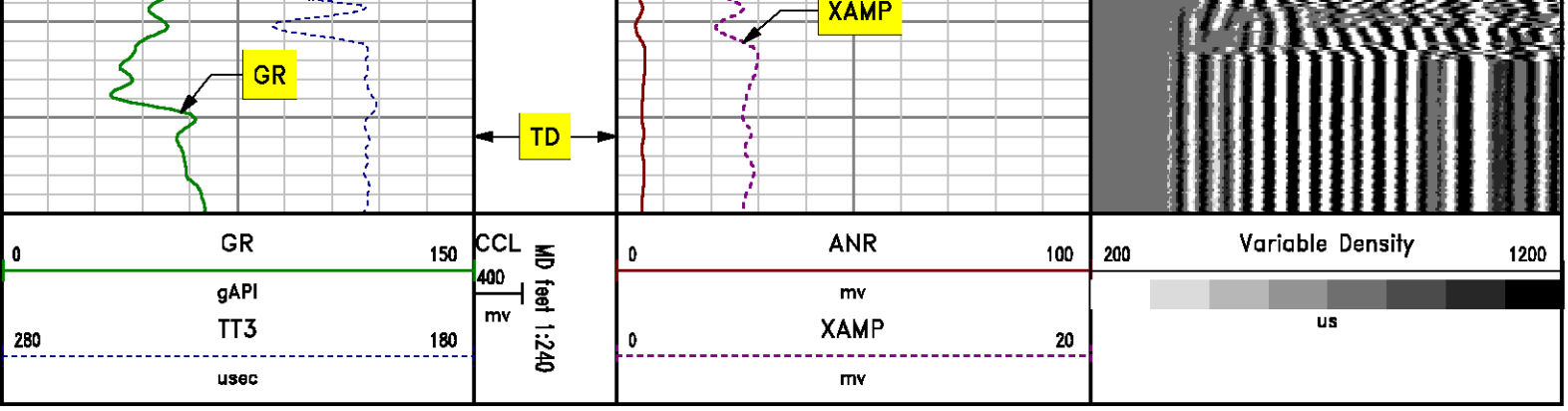

11800
11900






12000
12100
12200

12300
12400
CCL
TT3
ANR



MAIN LOG SECONDARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	332.458	usec	28.649	12469.150
RAL	Amp Gate Start Near	199.015	usec	28.649	12469.150
RAL	Amp Gate Start Radial	199.015	usec	28.649	12469.150
RAL	Amp Gate Width Far	25.000	usec	28.649	12469.150
RAL	Amp Gate Width Near	25.000	usec	28.649	12469.150
RAL	Amp Gate Width Radial	25.000	usec	28.649	12469.150
RAL	casing od	4.500	inches	28.649	12469.150
RAL	casing wt	11.600	lbm/ft	28.649	12469.150
RAL	FB Start Far	291.900	usec	28.649	12469.150
RAL	FB Start Near	175.391	usec	28.649	12469.150
RAL	FB Start Radial	175.391	usec	28.649	12469.150
RAL	FB Thresh Far	10.000	mv	28.649	12469.150
RAL	FB Thresh Near	4.000	mv	28.649	12469.150
RAL	FB Thresh Radial	4.000	mv	28.649	12469.150
RAL	Fluid Travel Time	200.000	usec/ft	28.649	12469.024

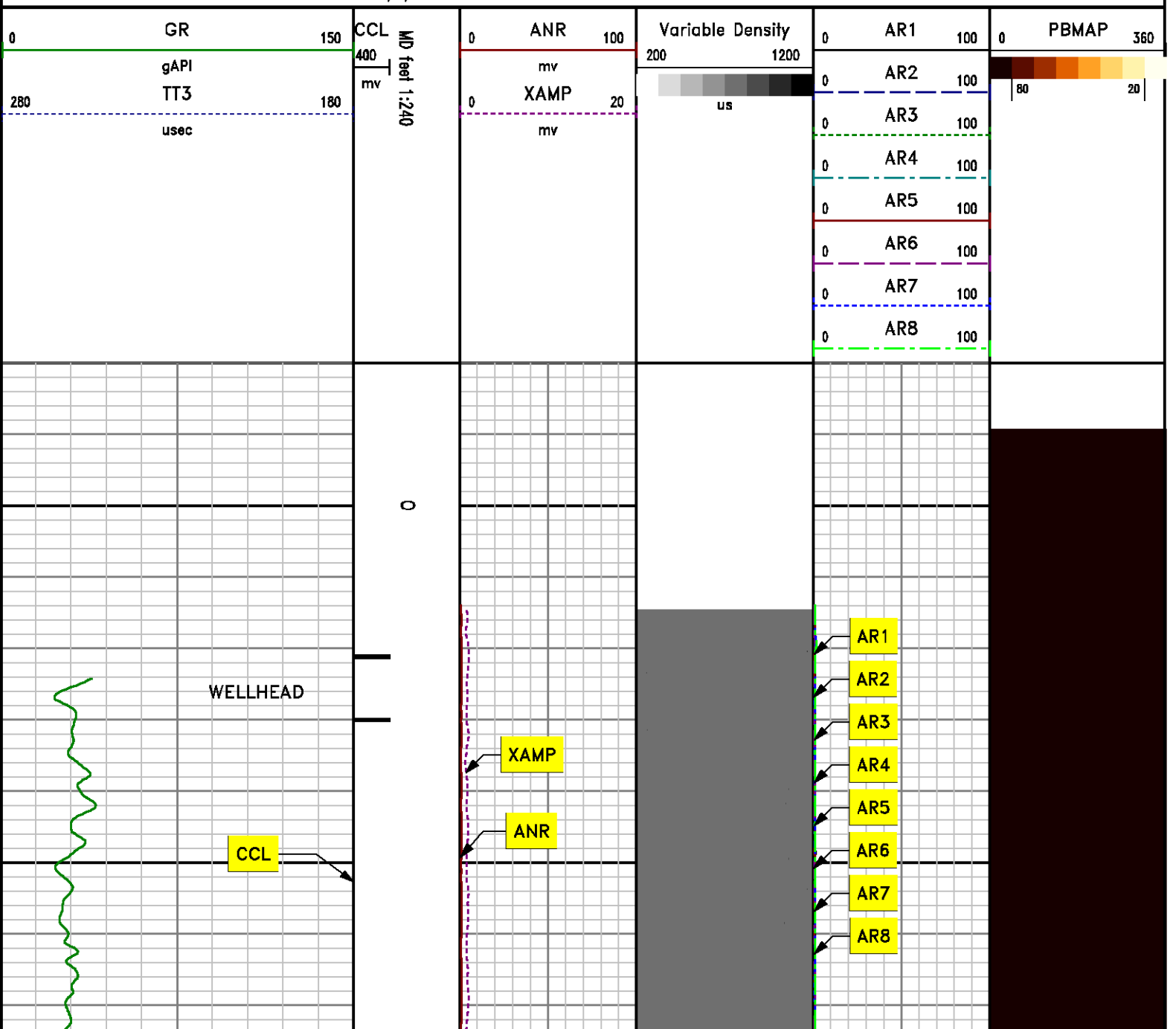
DEPTH OFFSETS
(for Acquired Curves)

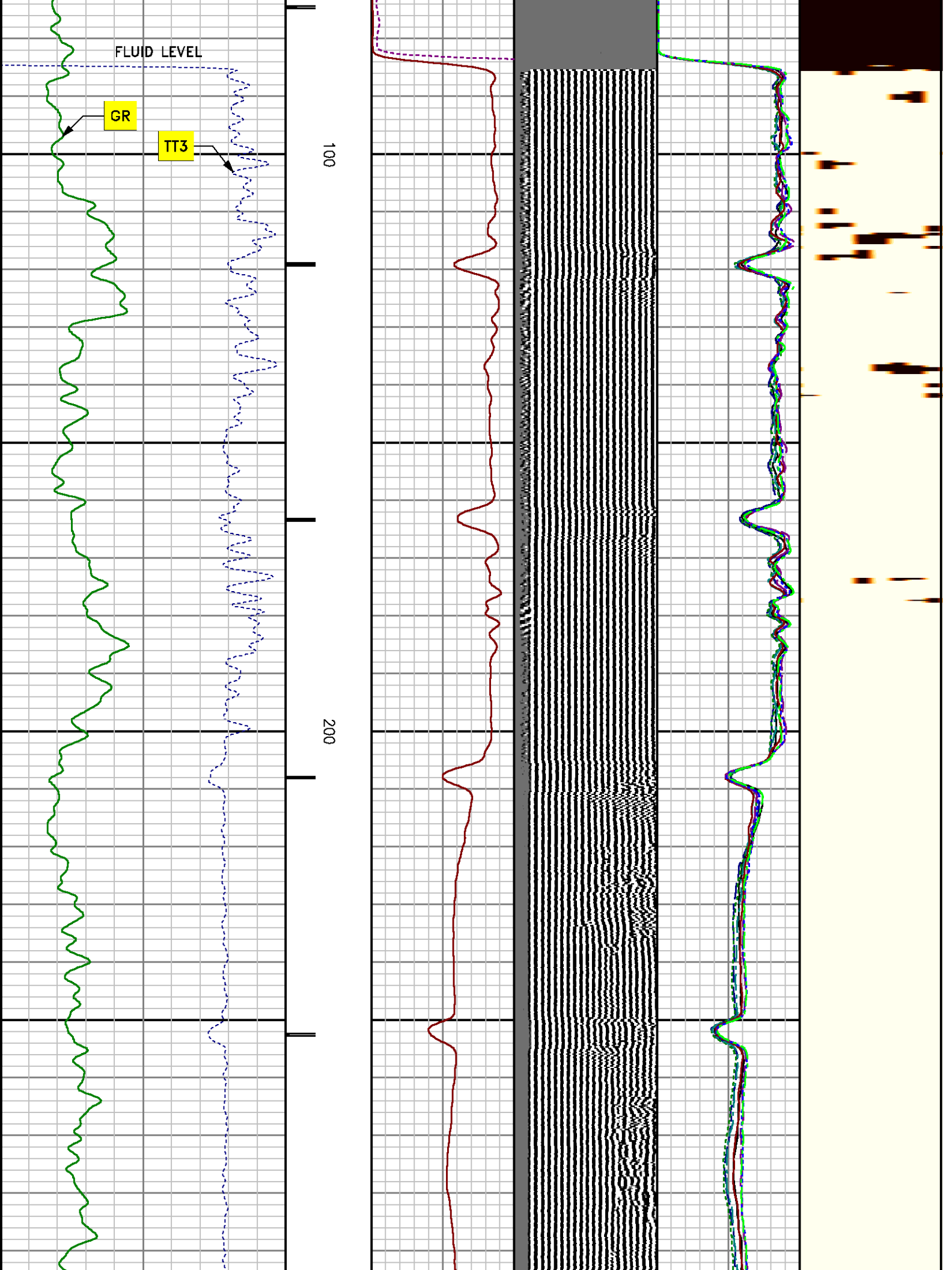
SERIES	DEPTH OFFSET	ACQUIRED CURVES

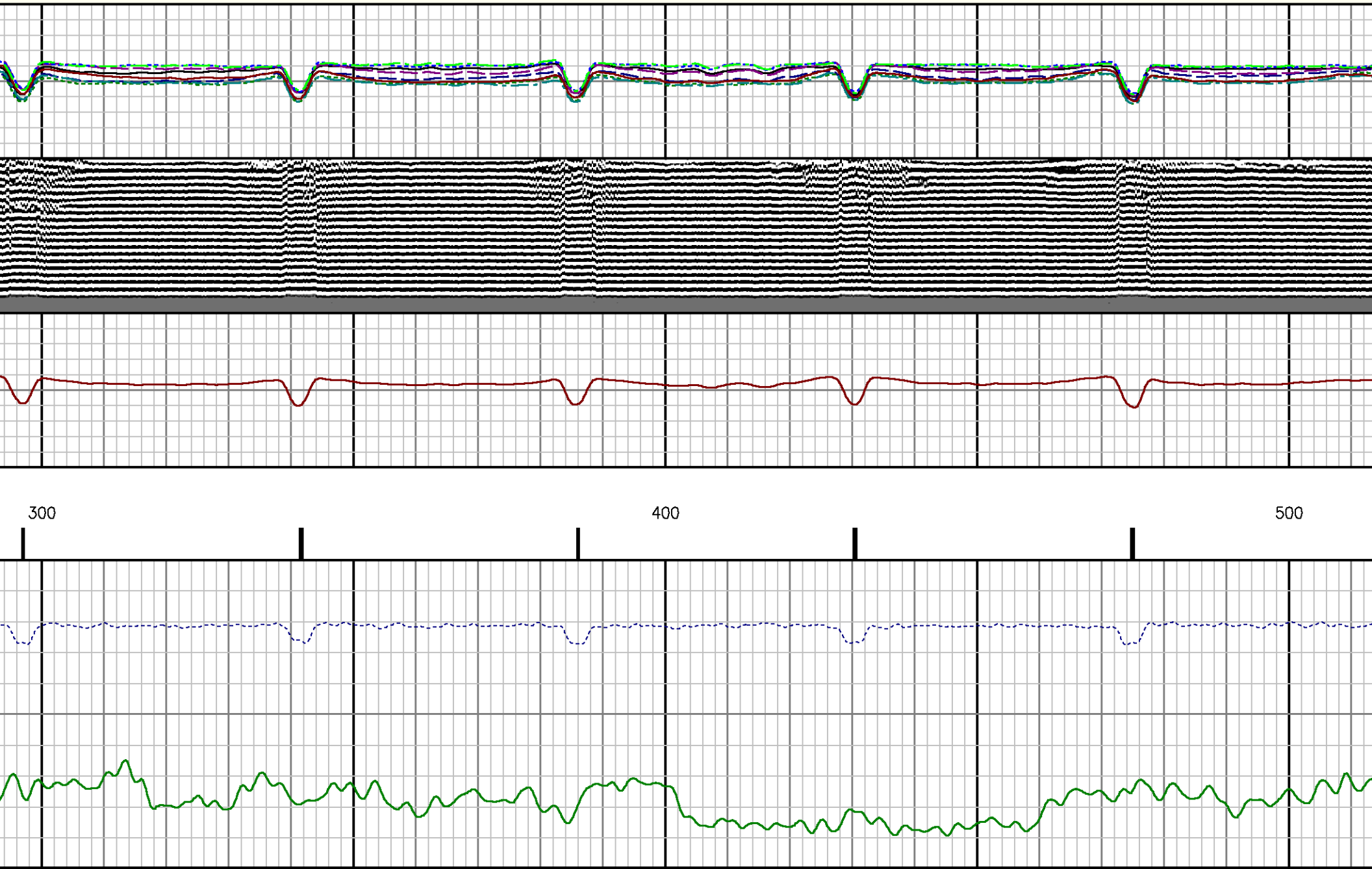
1426XA	-11.000	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-10.040	AFAR	SIG	TT5			
1355XA	-5.620	CCL					
1355XA	-1.500	GR					
1355XA	0.000	TEMP					

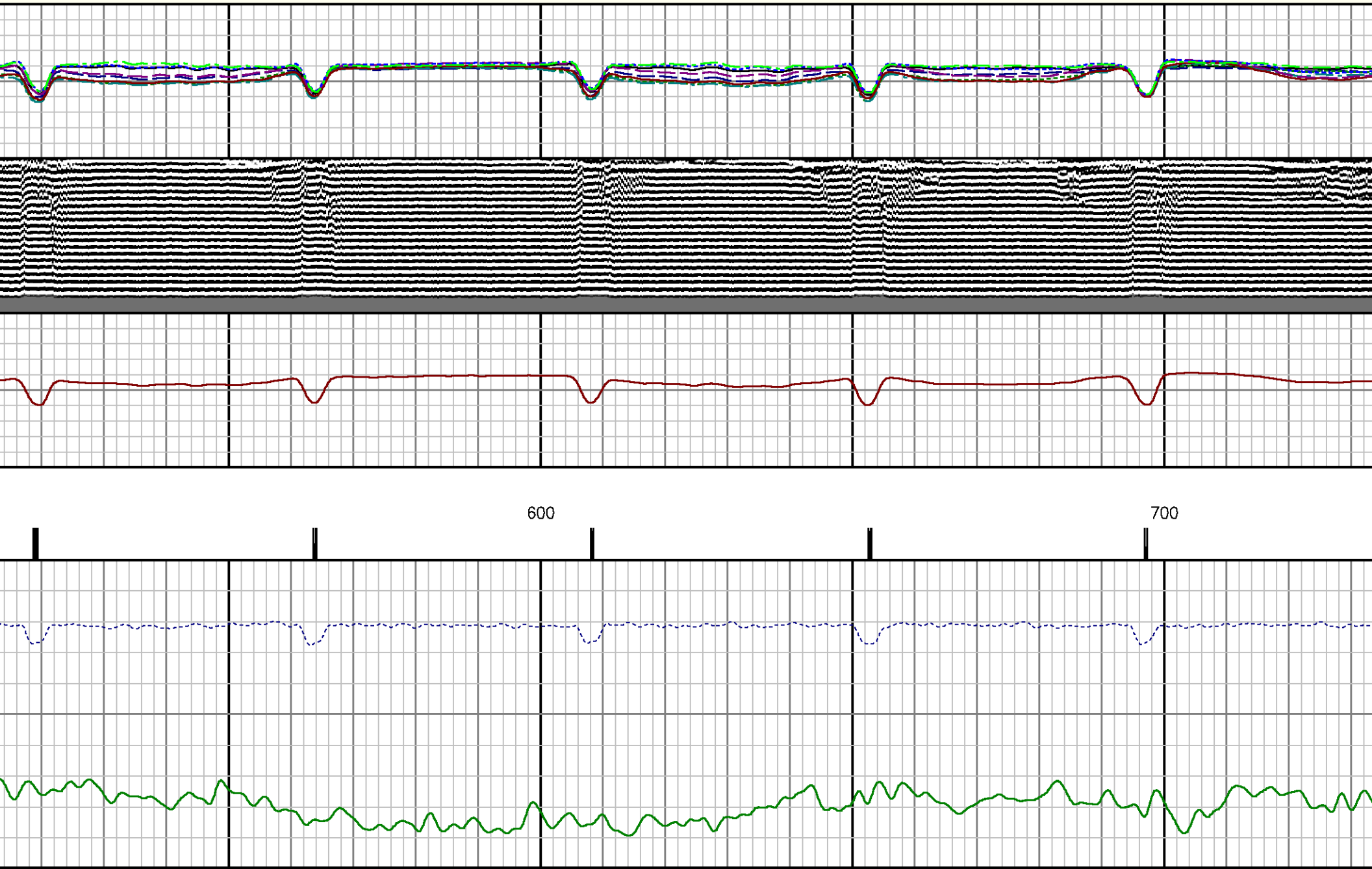
Created by : RAL, v4.8.008
Plotted by : PlotMgr, v5.4.504

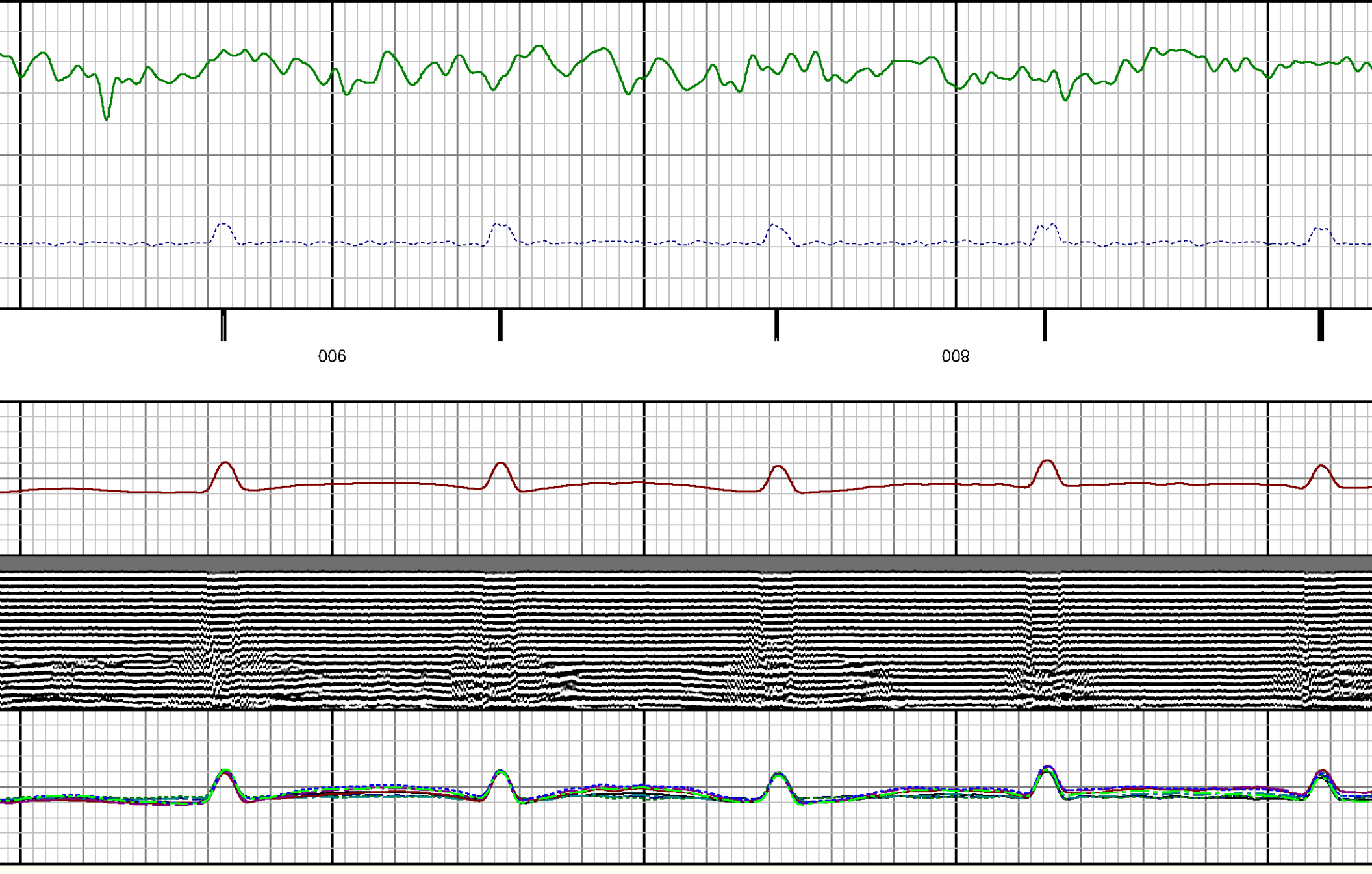
Company : WPX ENERGY
Well : FEDERAL RGU 313-23-198
File Name : d:\welldata\313cbl\main.xtf
Mode : PlotMgr 5.4.504
Interval : -20.00 - 12450.00 feet UP
Created : 7/4/2013 12:20:57 PM

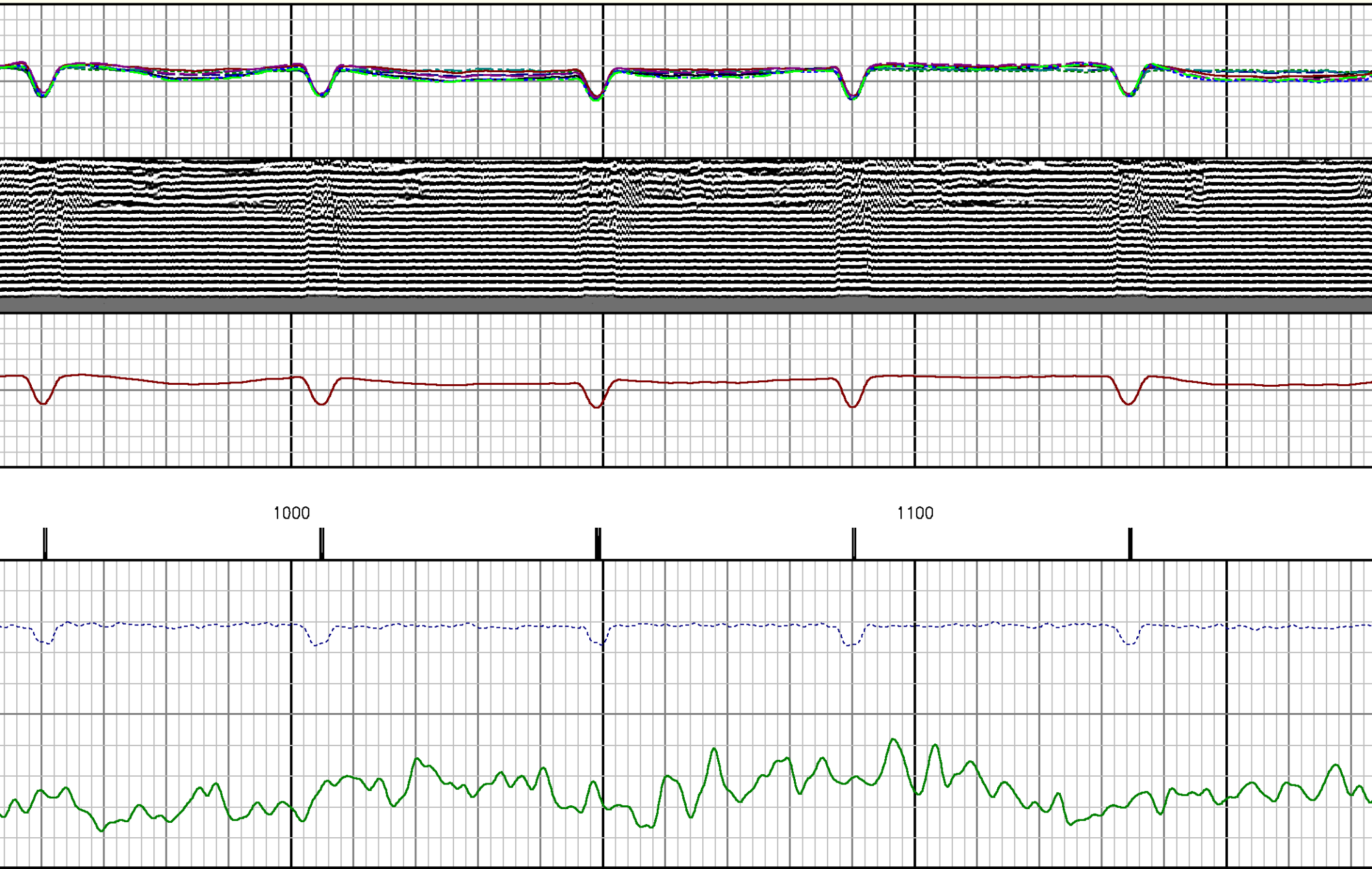


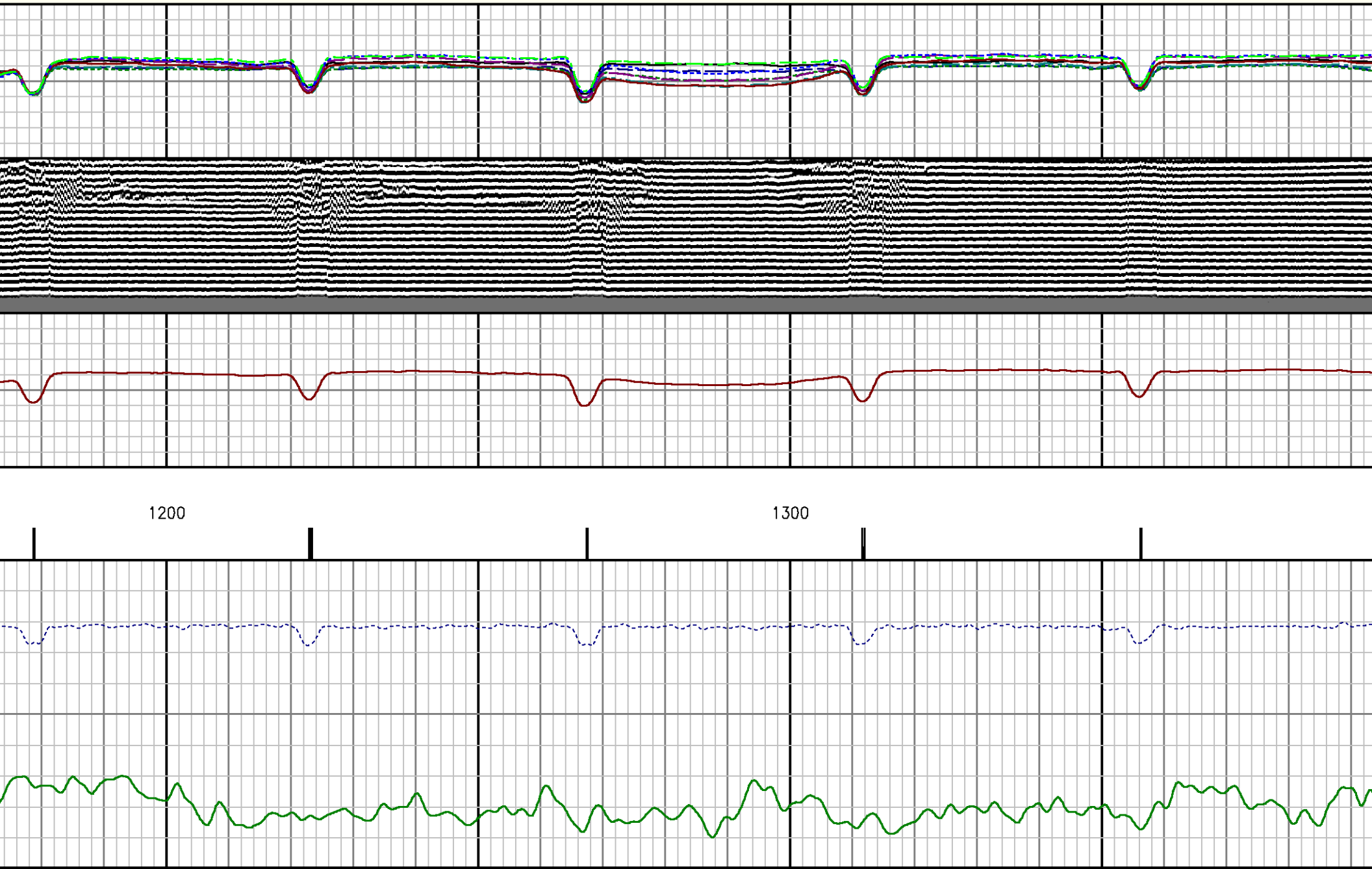

FLUID LEVEL
GR
TT3
100
200

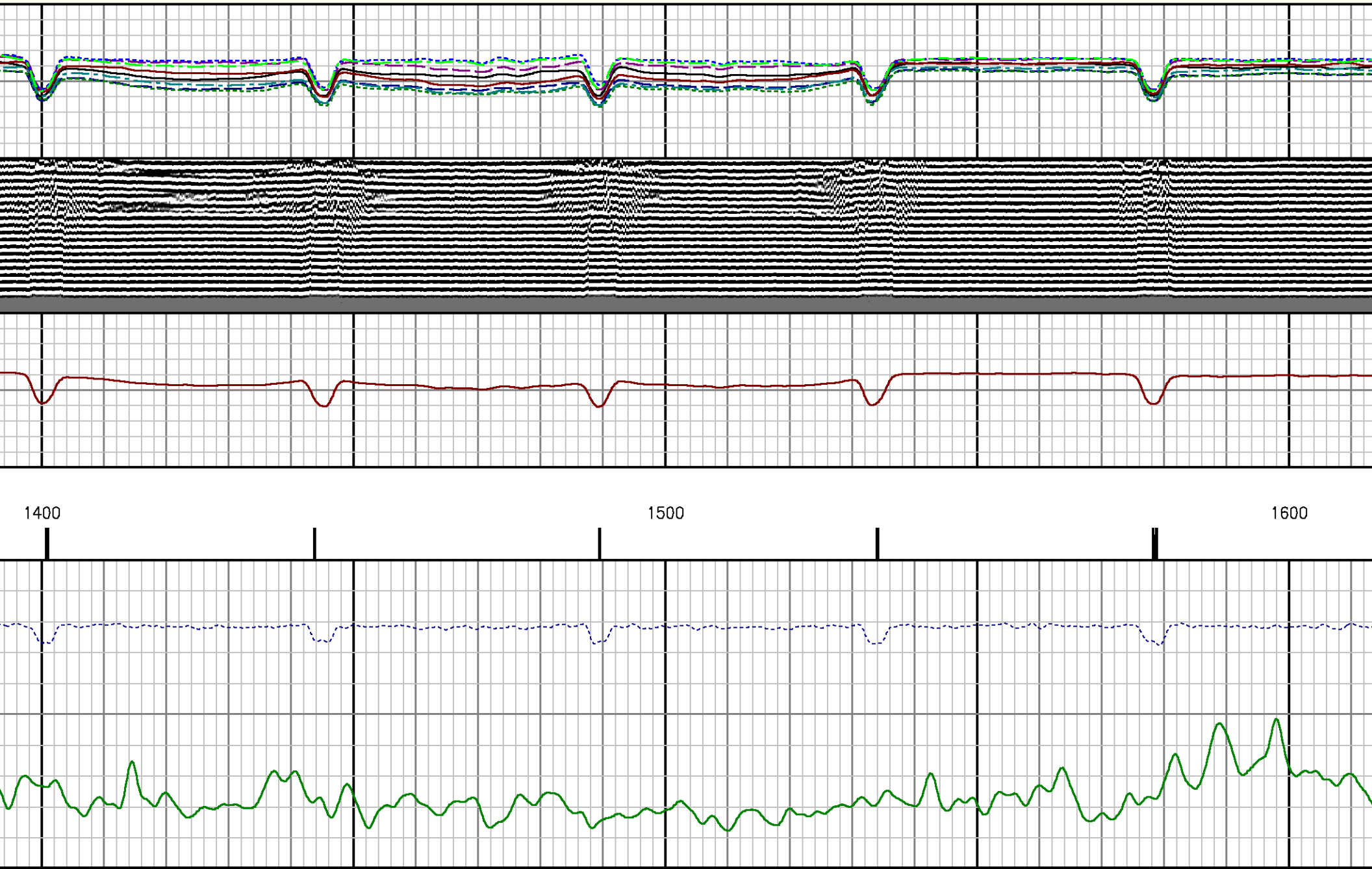

300
400
500

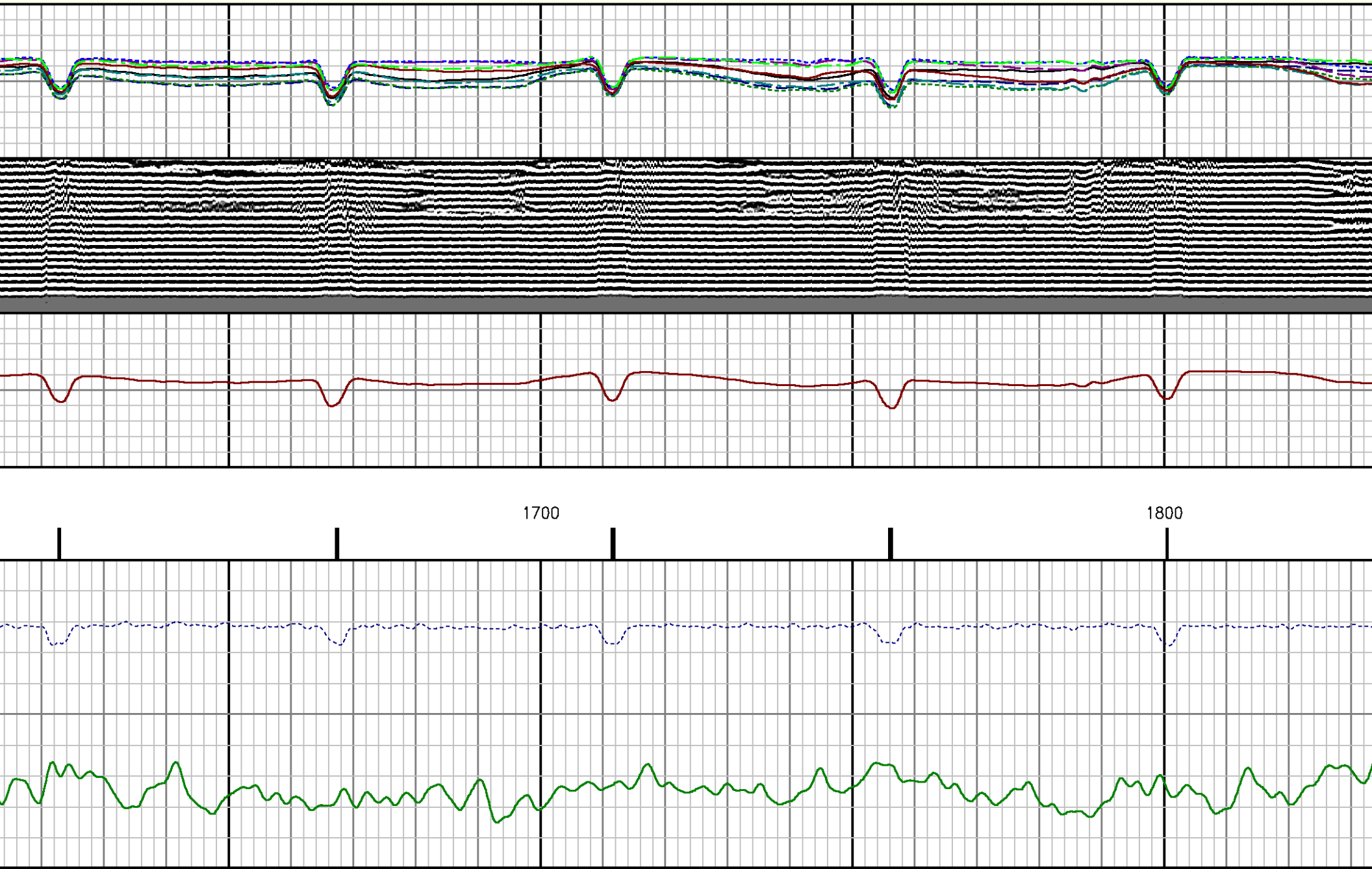

600
700

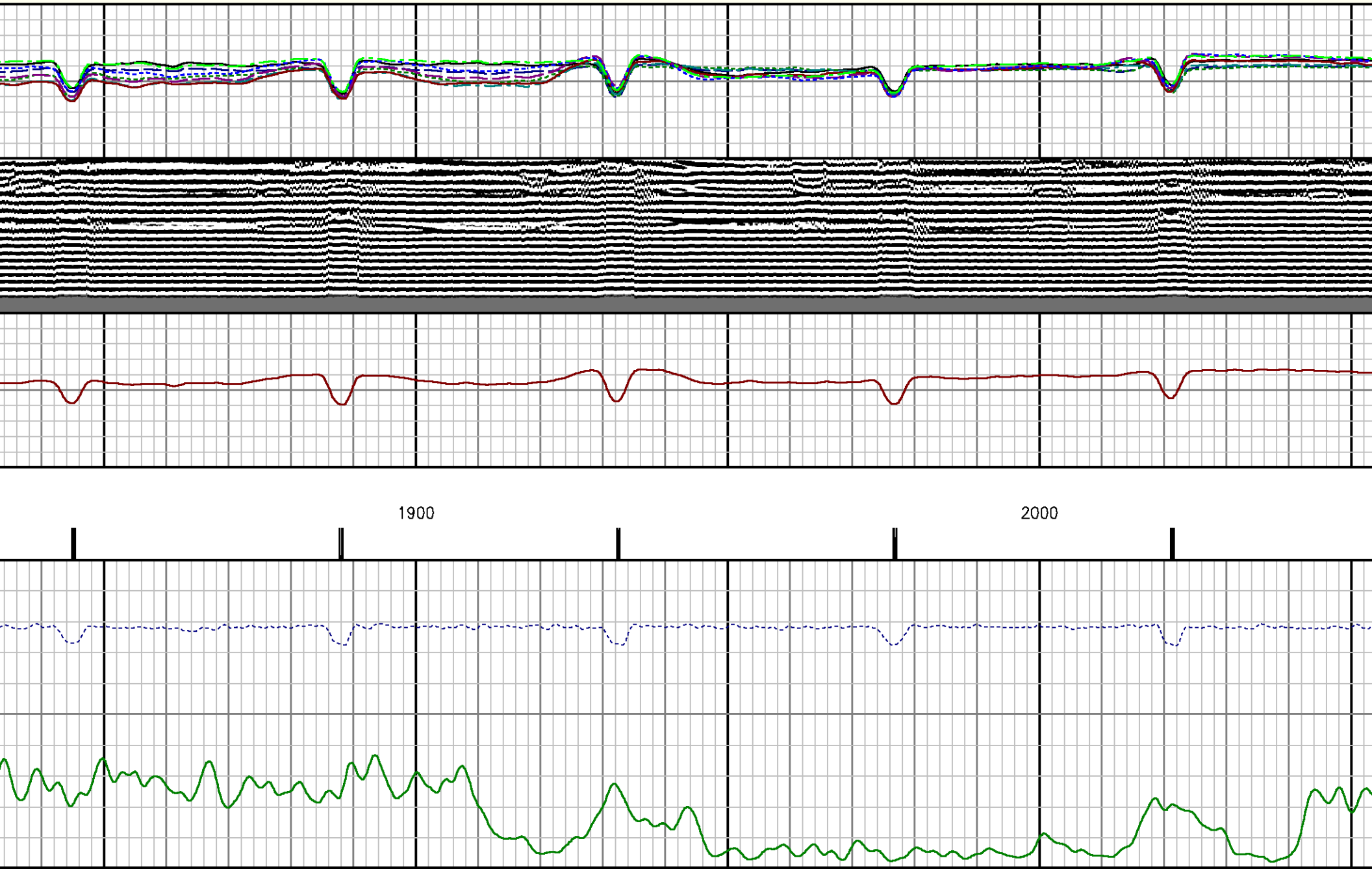

006
008

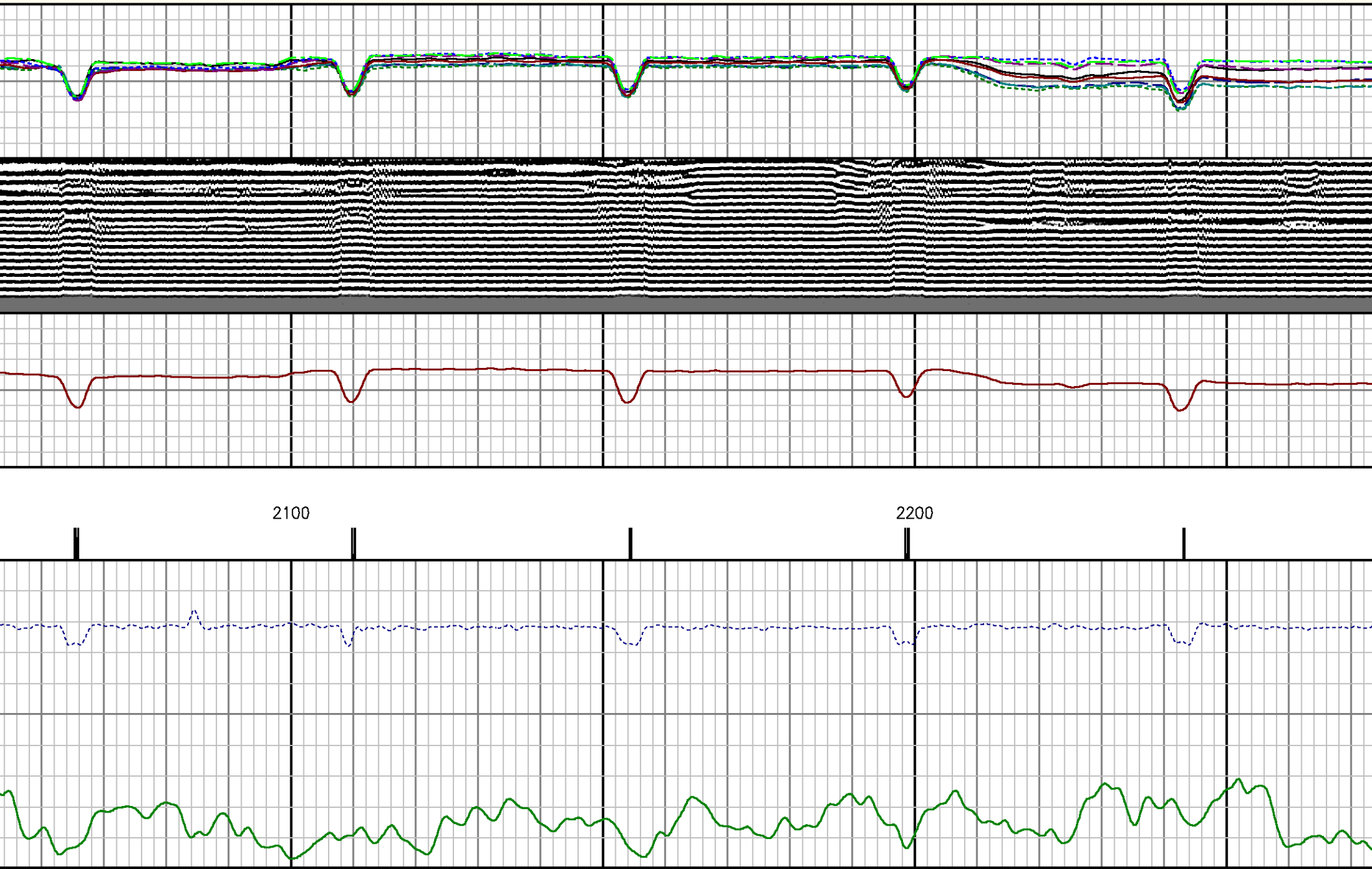

1000
1100

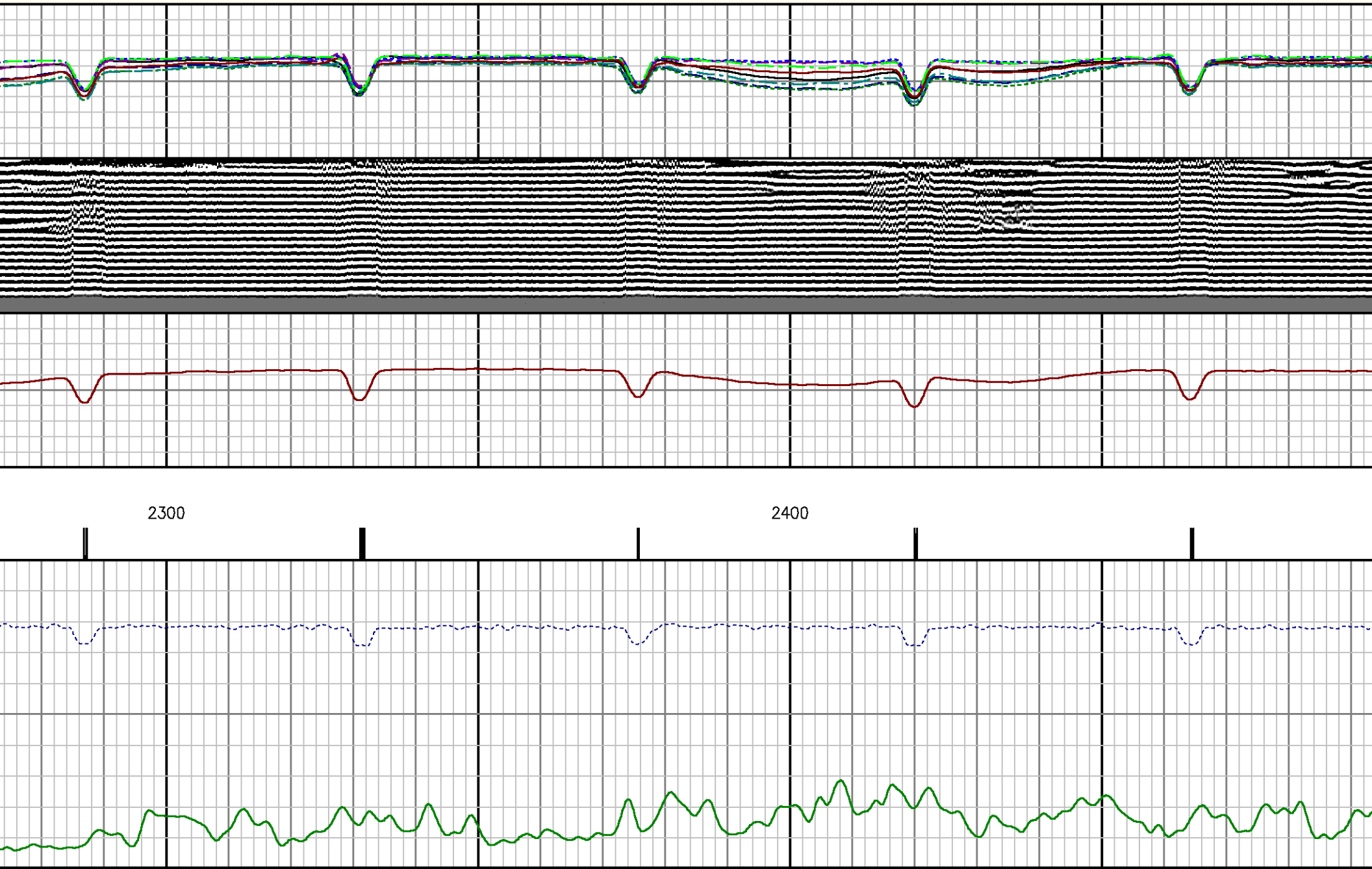

1200
1300

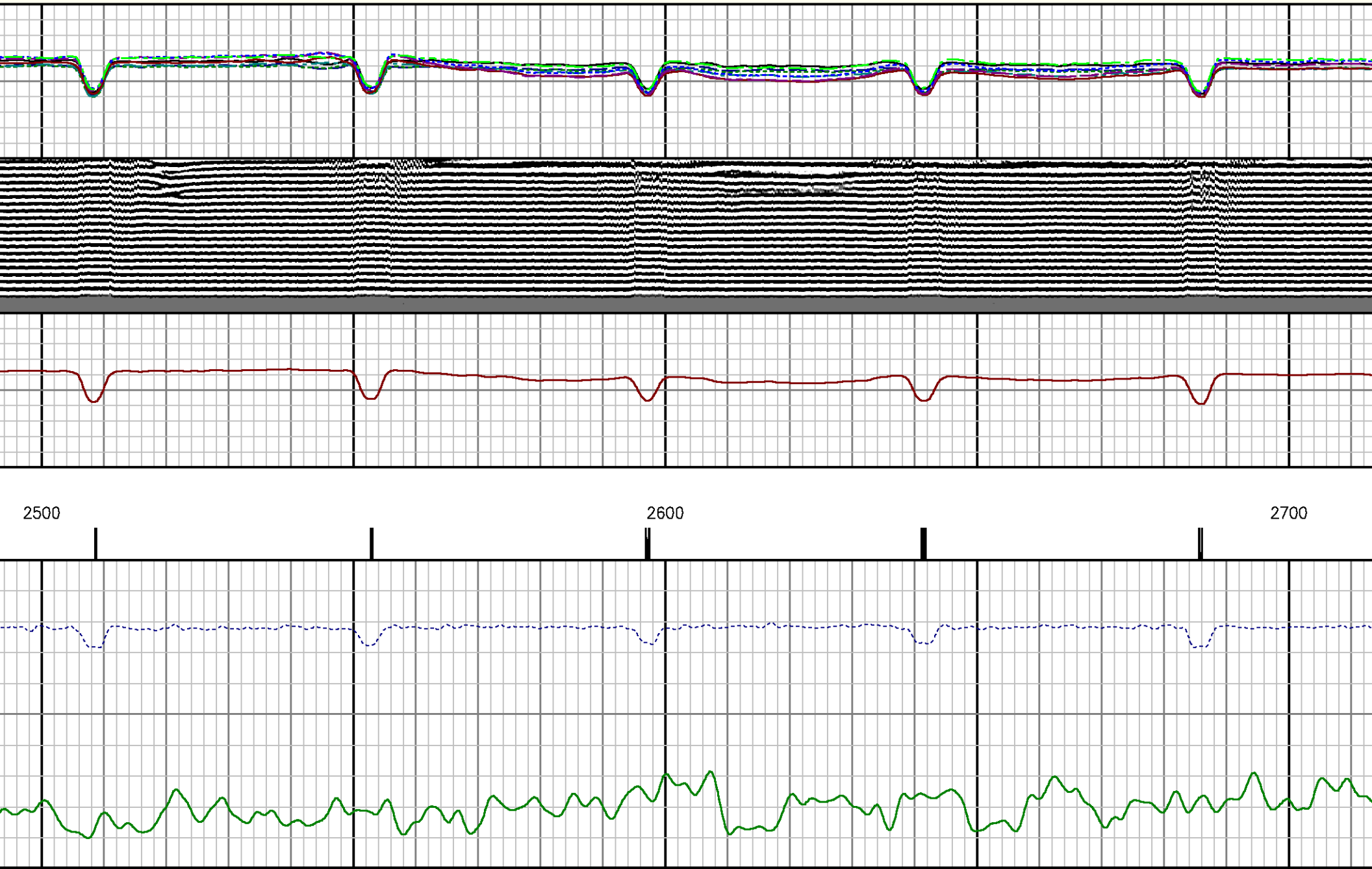

1400
1500
1600

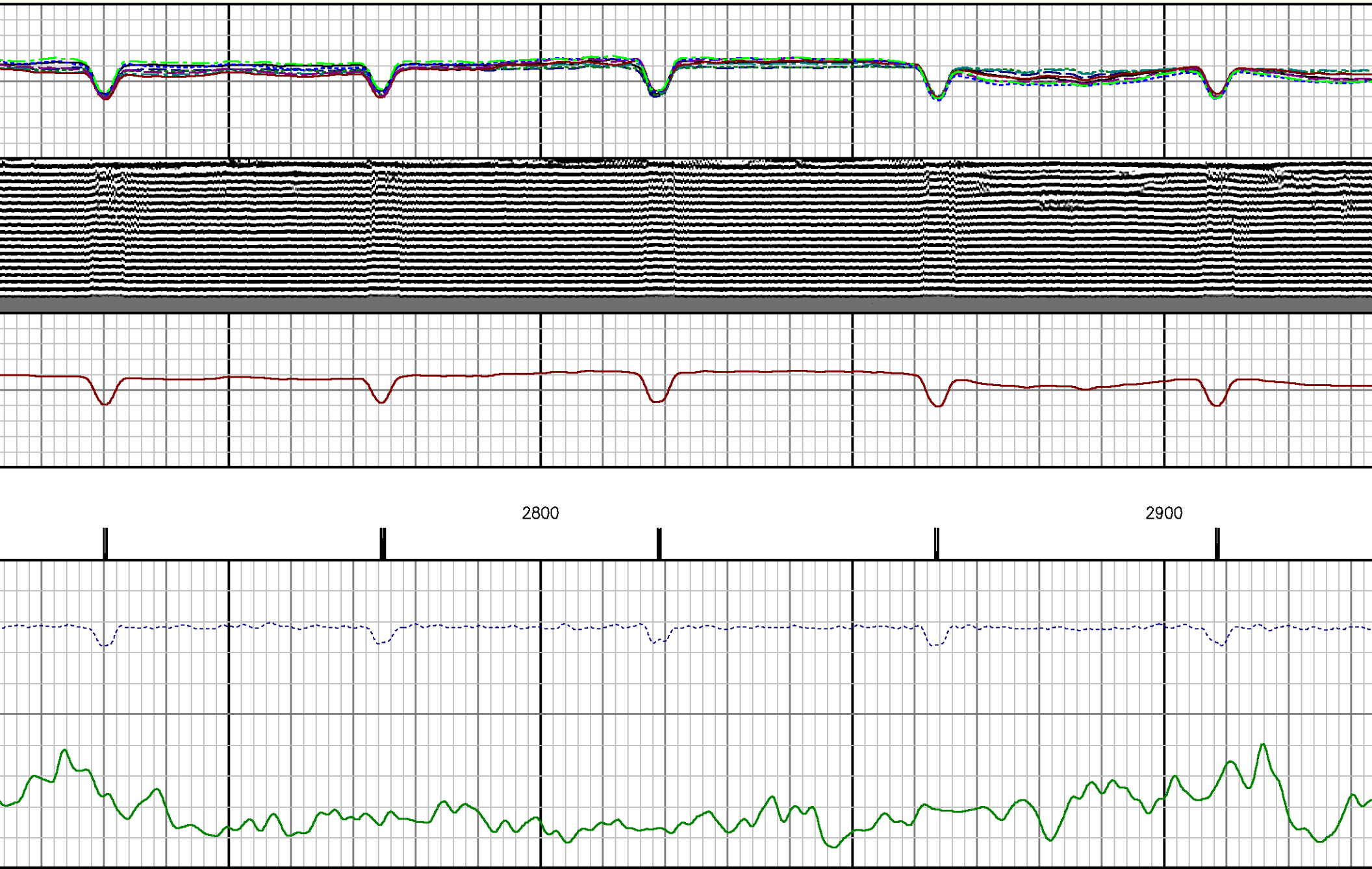

1700
1800

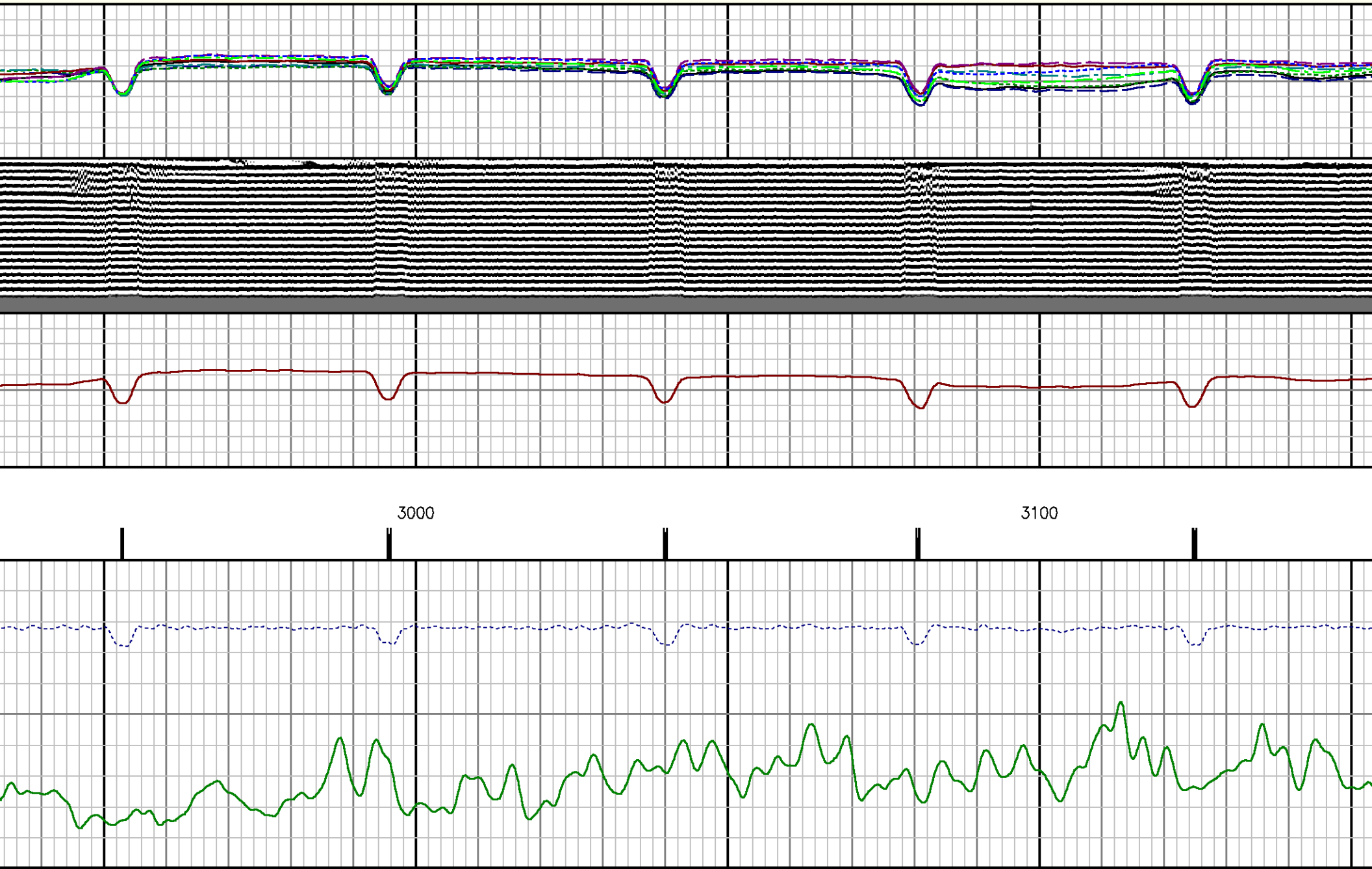

1900
2000

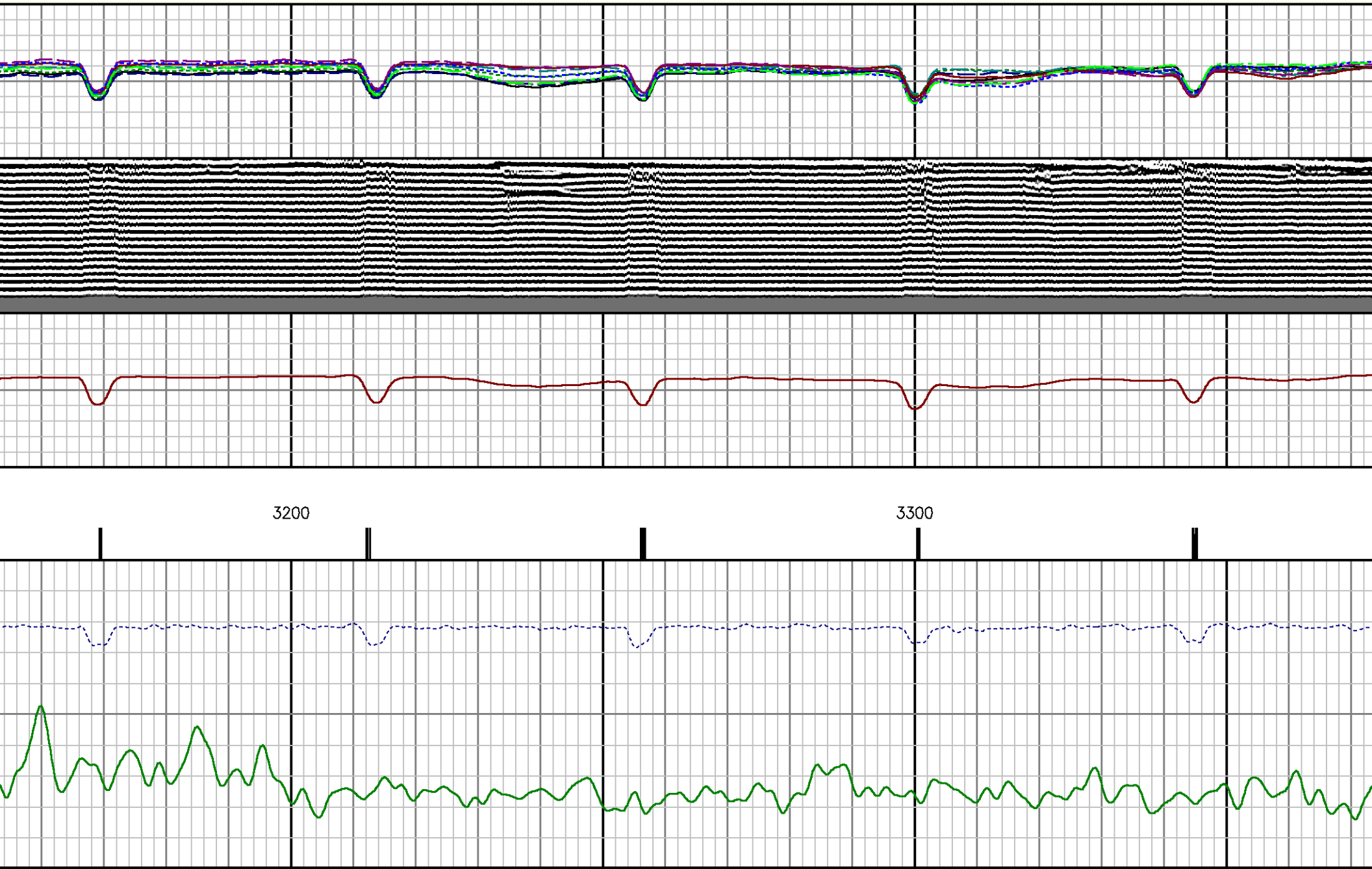

2100
2200

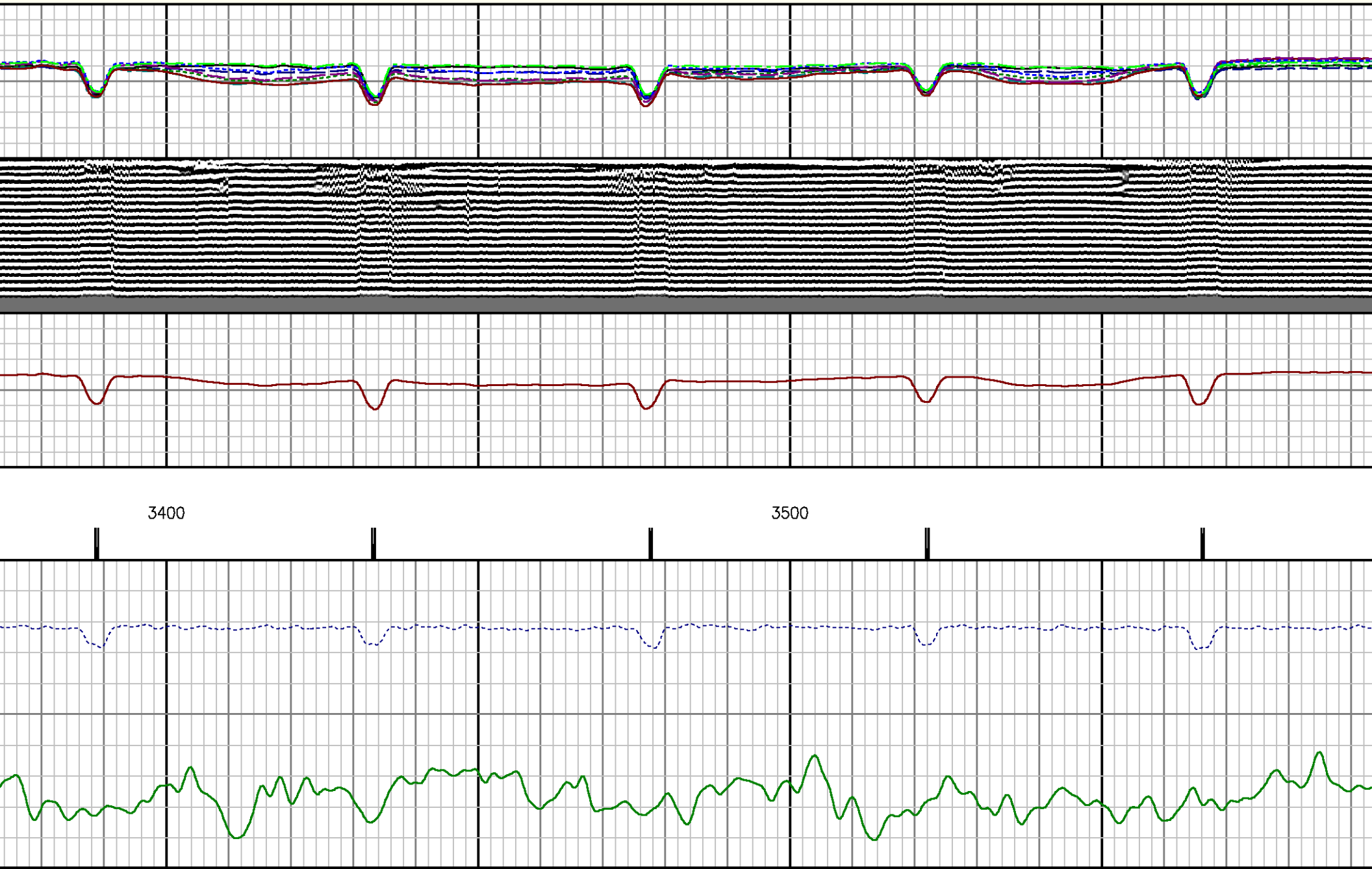

2300
2400

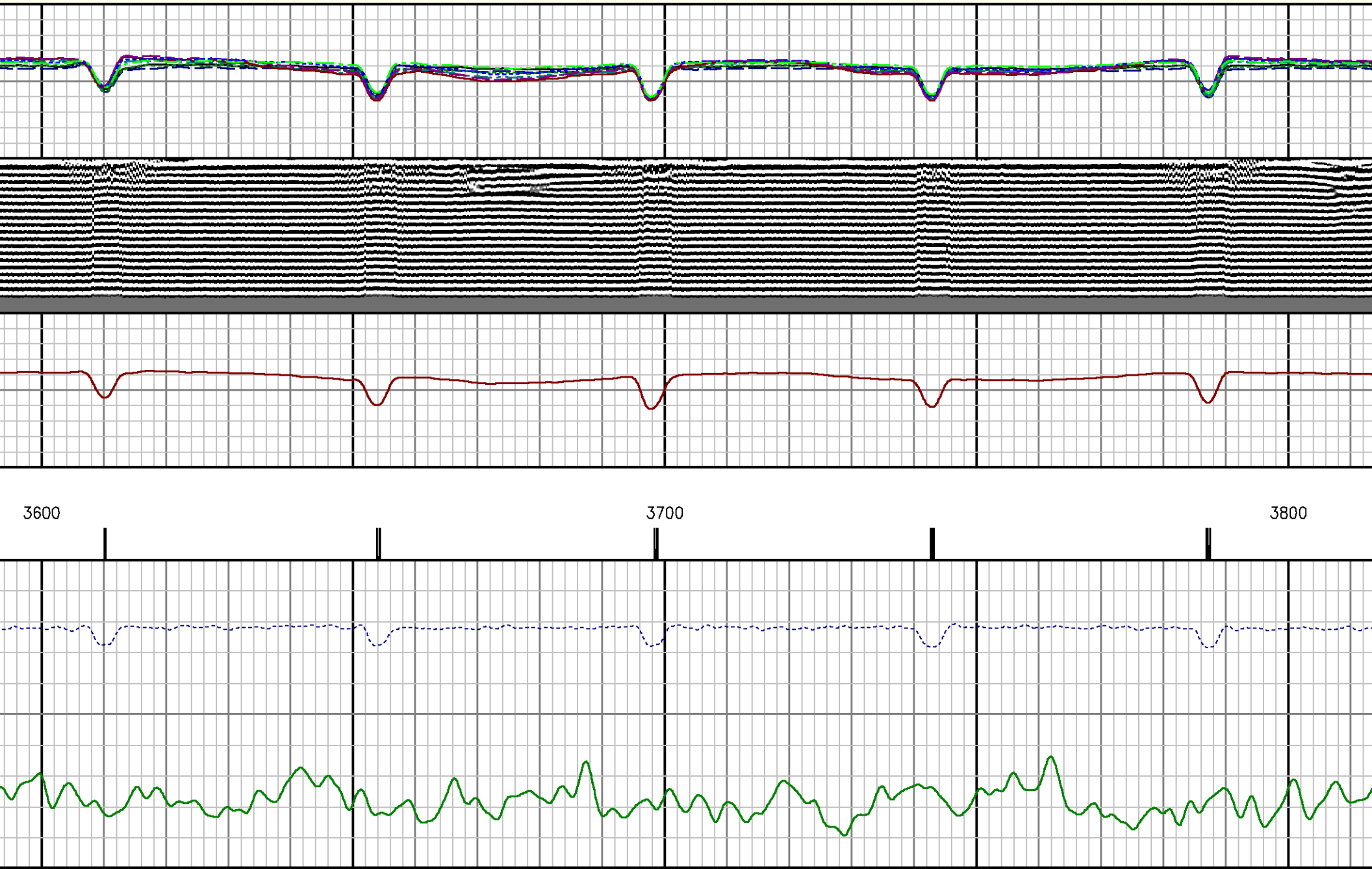

2500
2600
2700

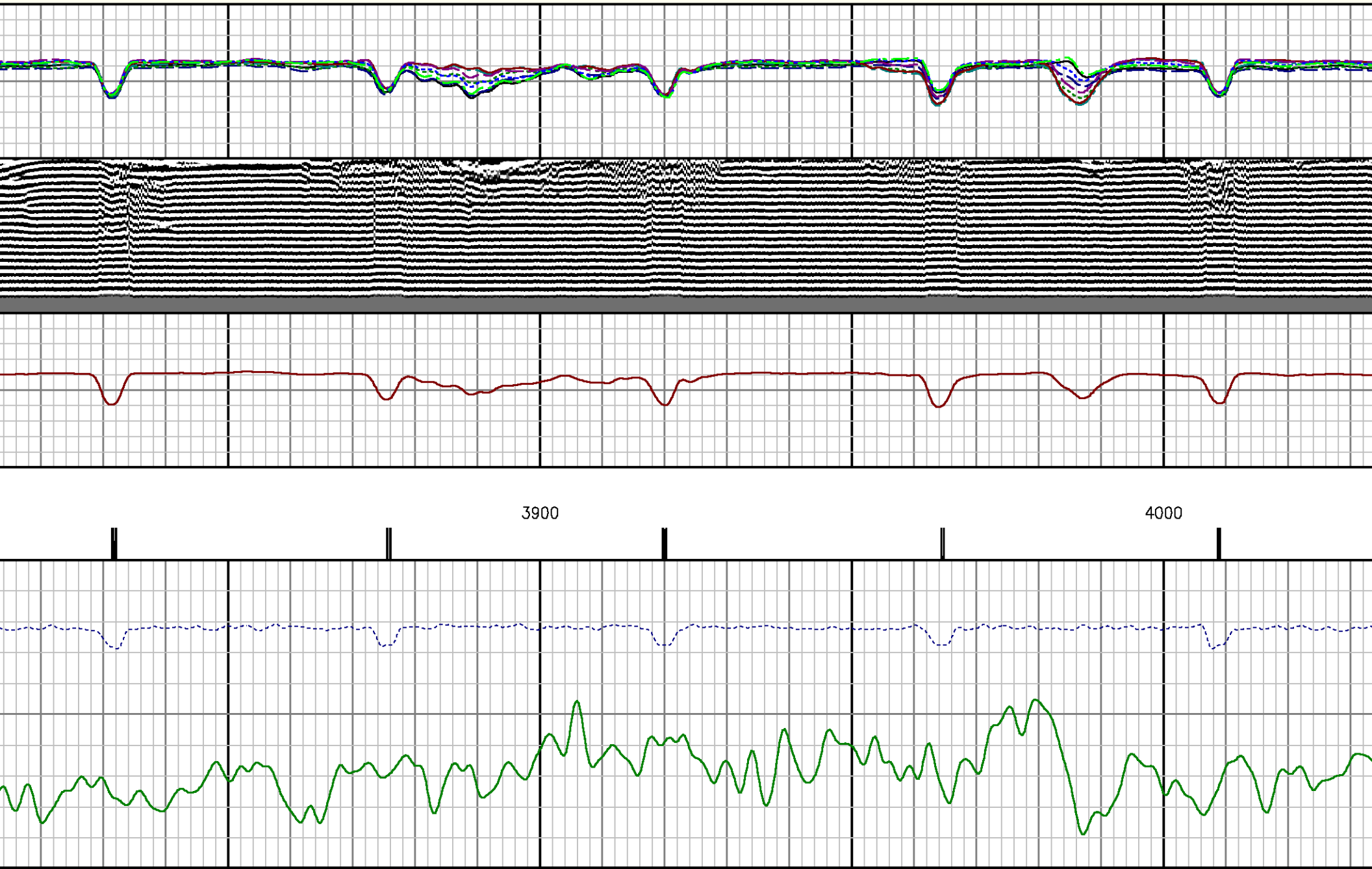

2800
2900

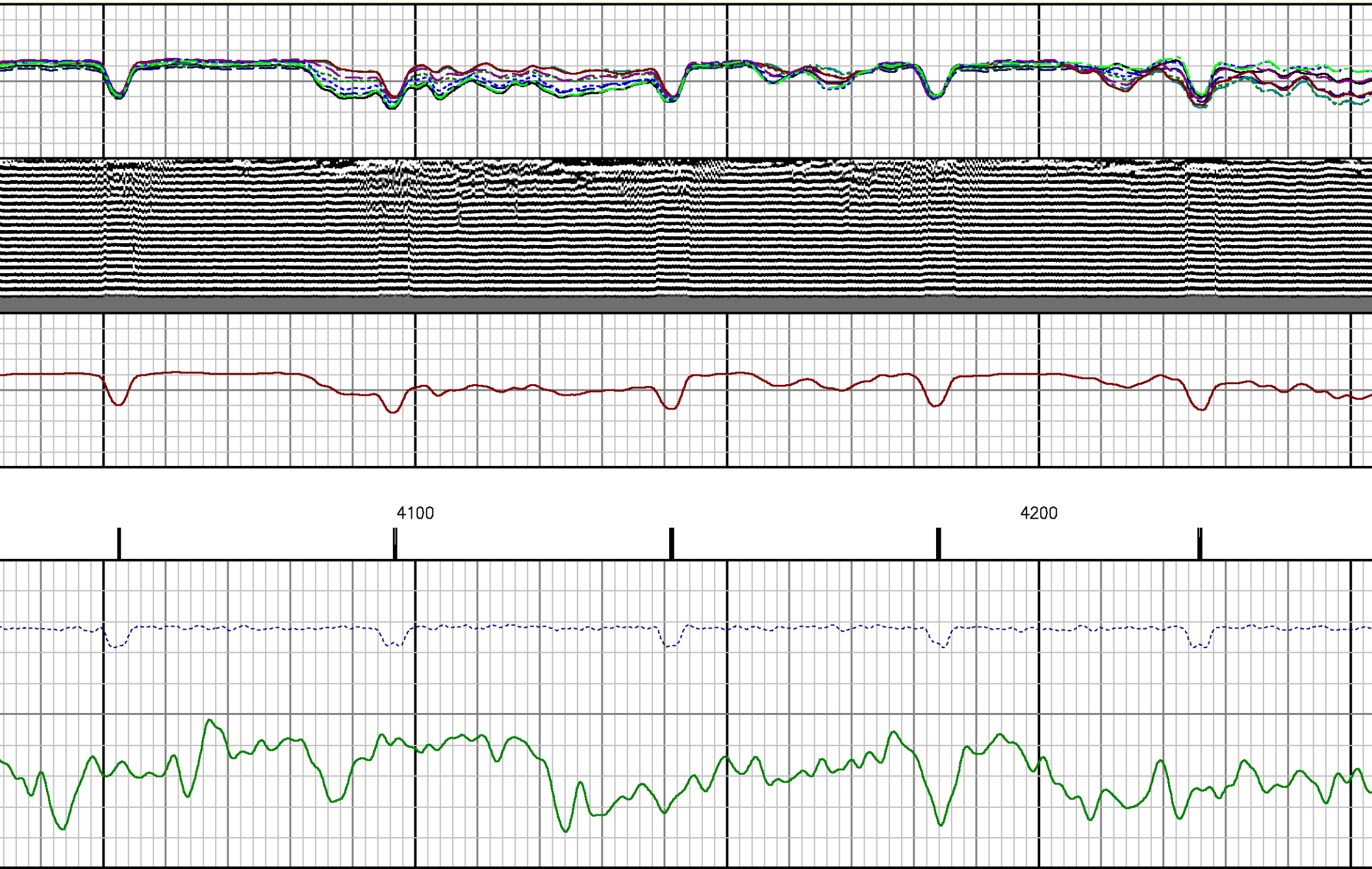

3000
3100

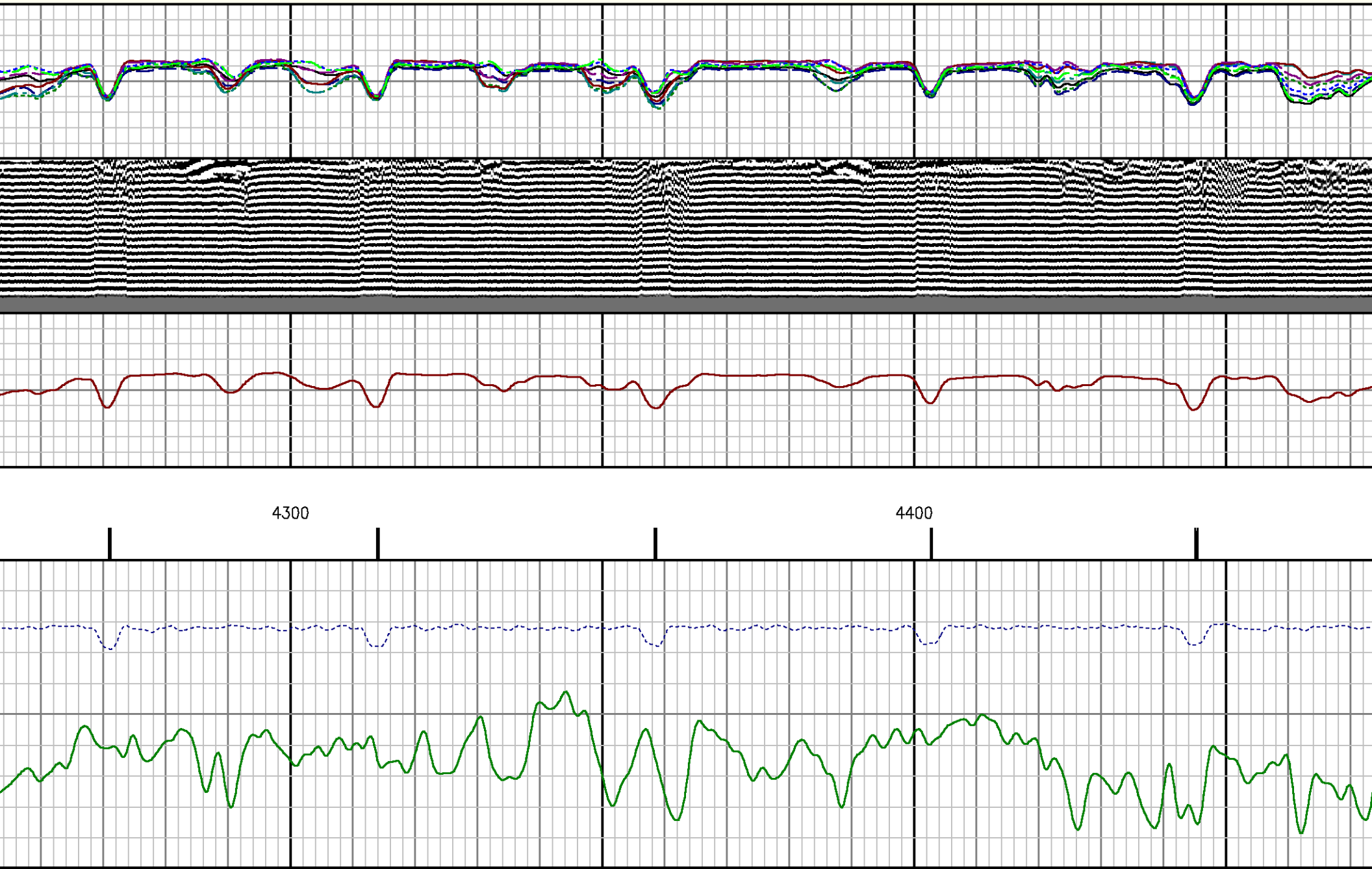

3200
3300

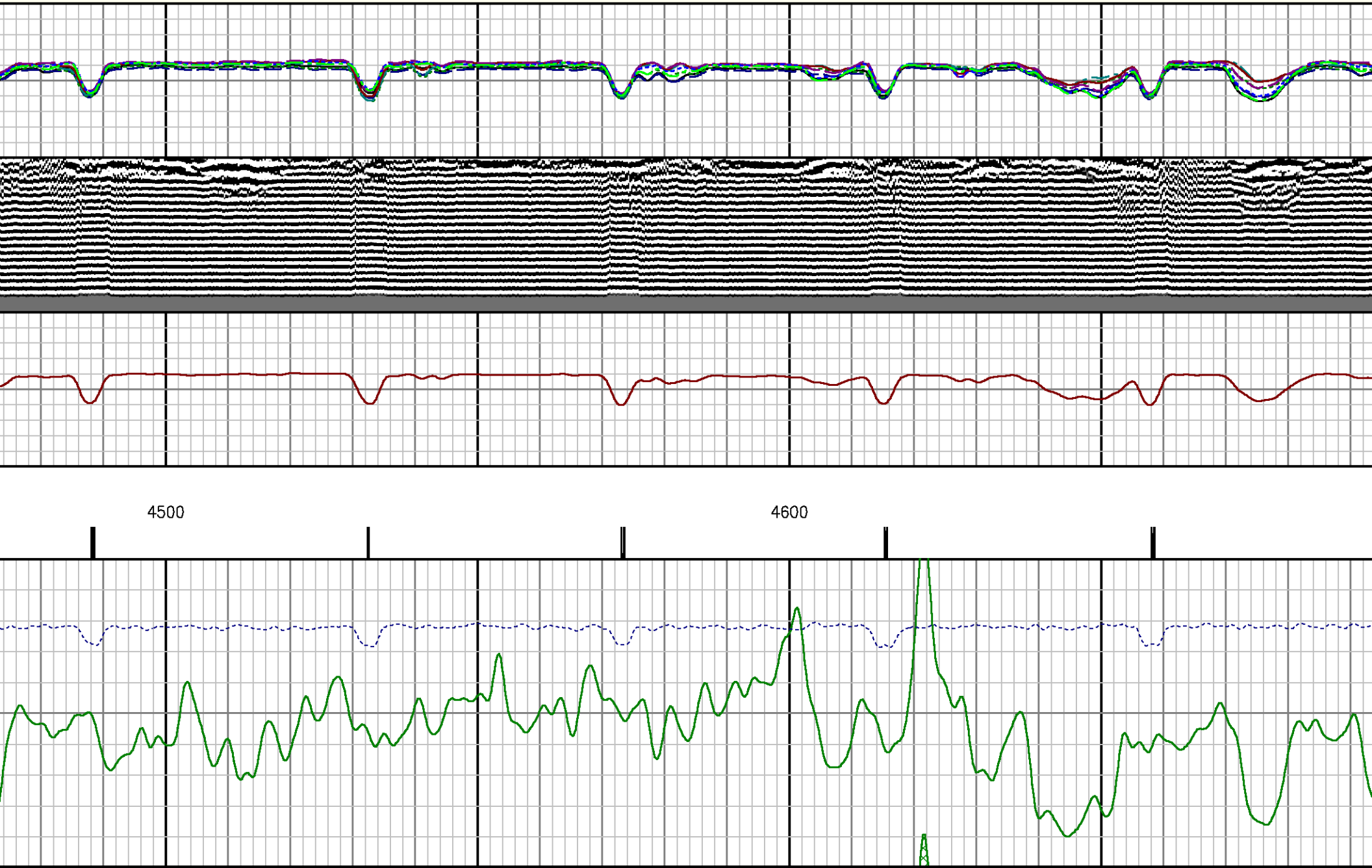

3400
3500

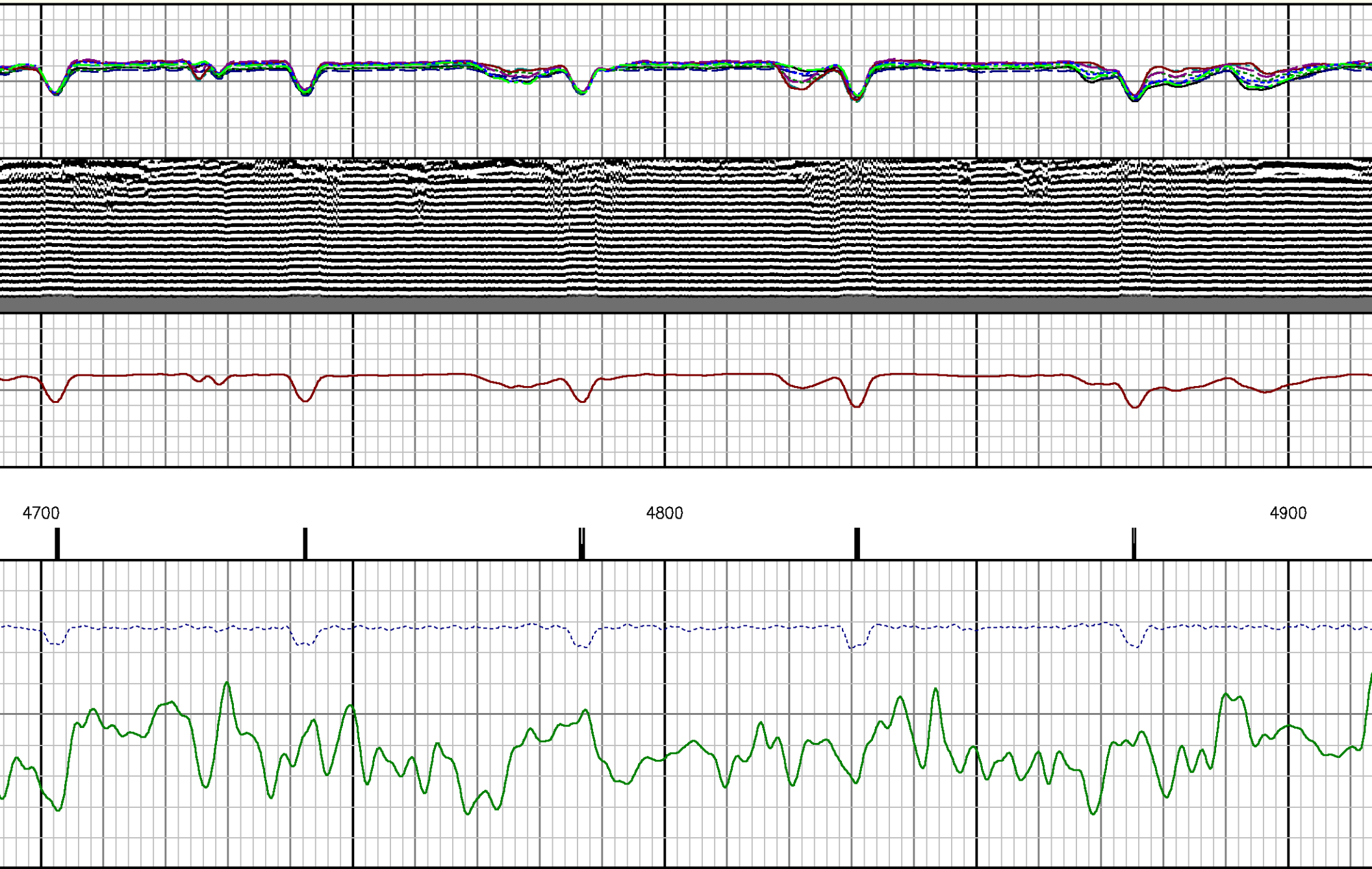

3600
3700
3800

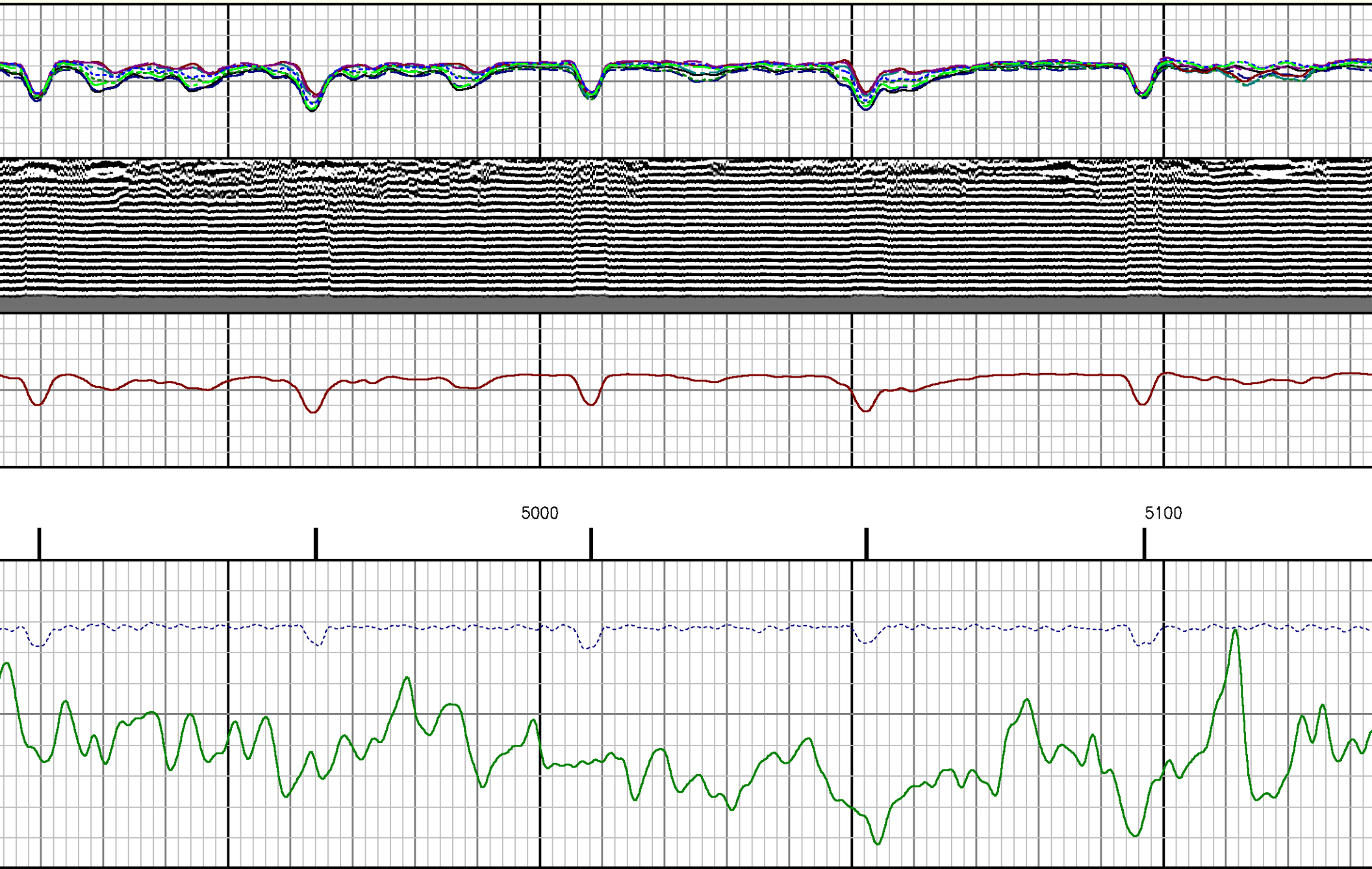

3900
4000

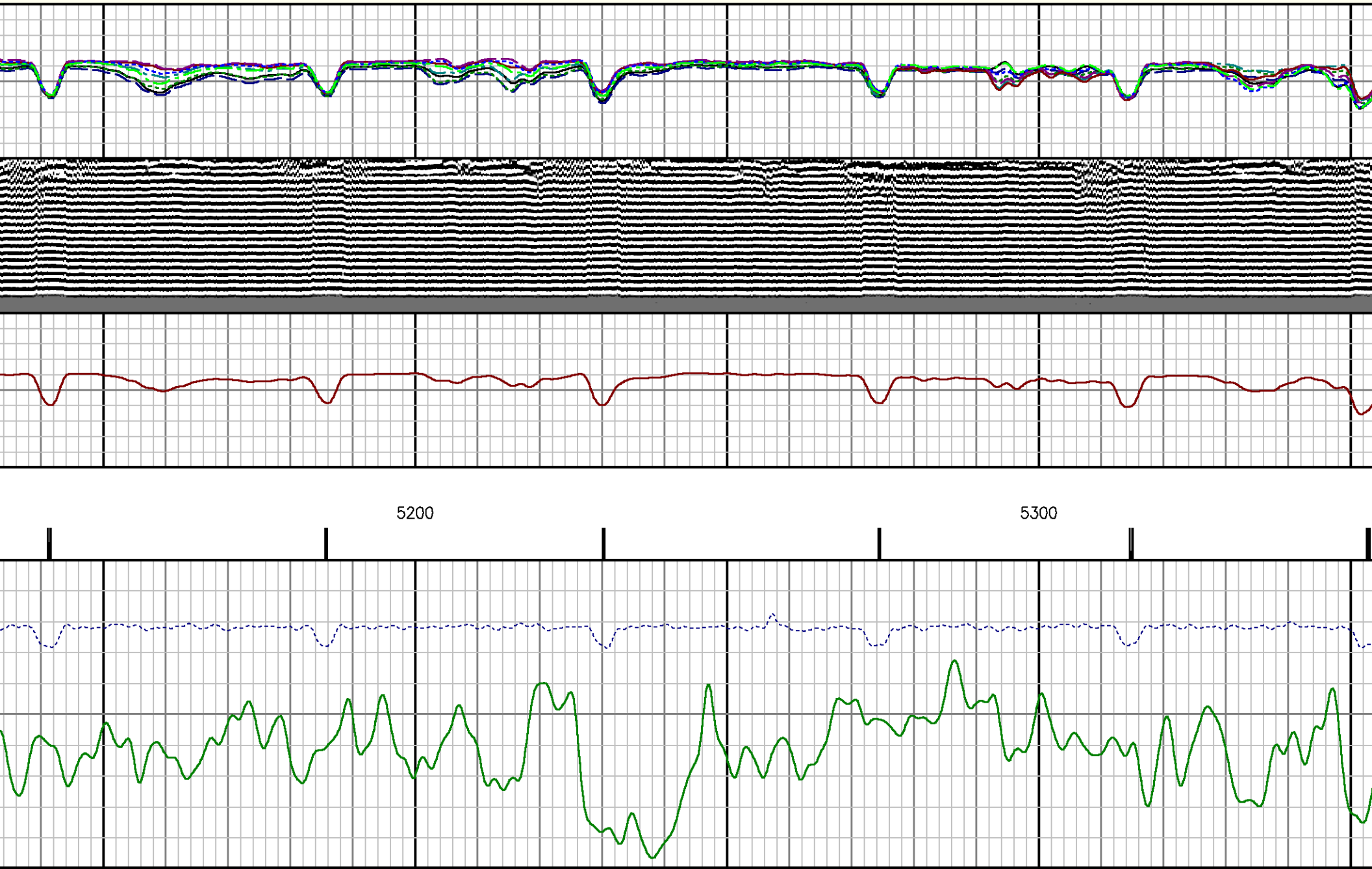

4100
4200

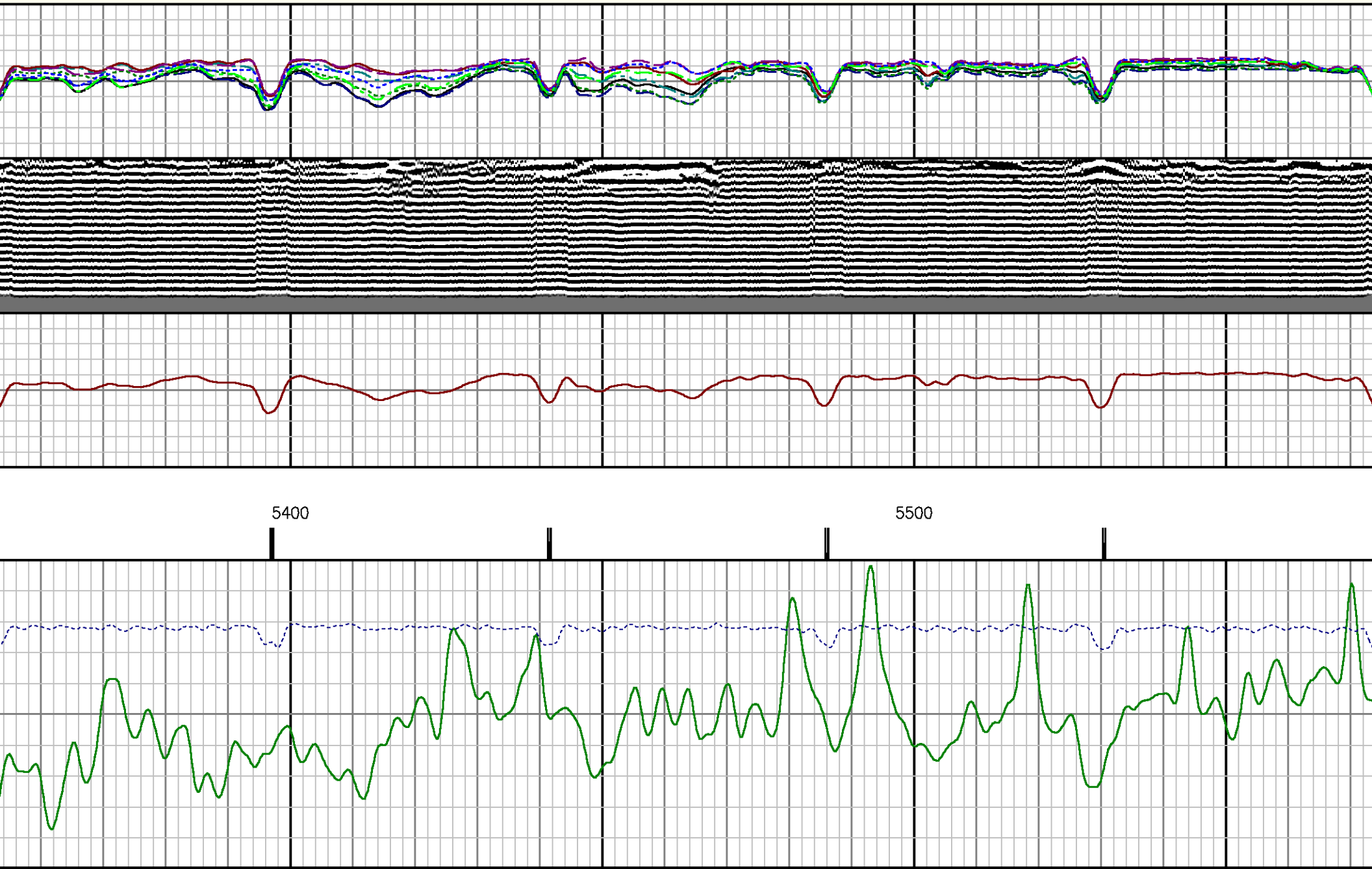

4300
4400

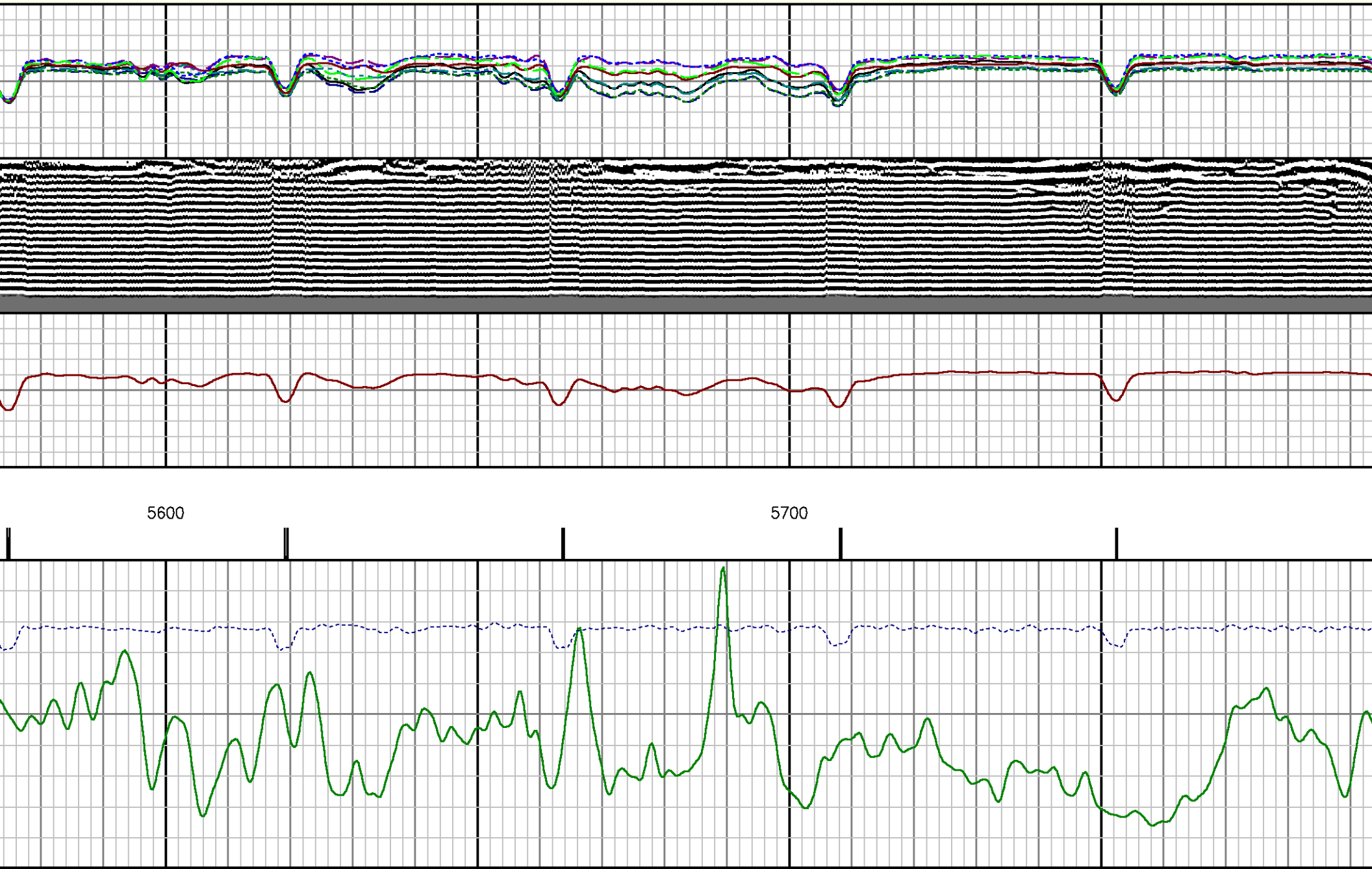

4500
4600


4700
4800
4900

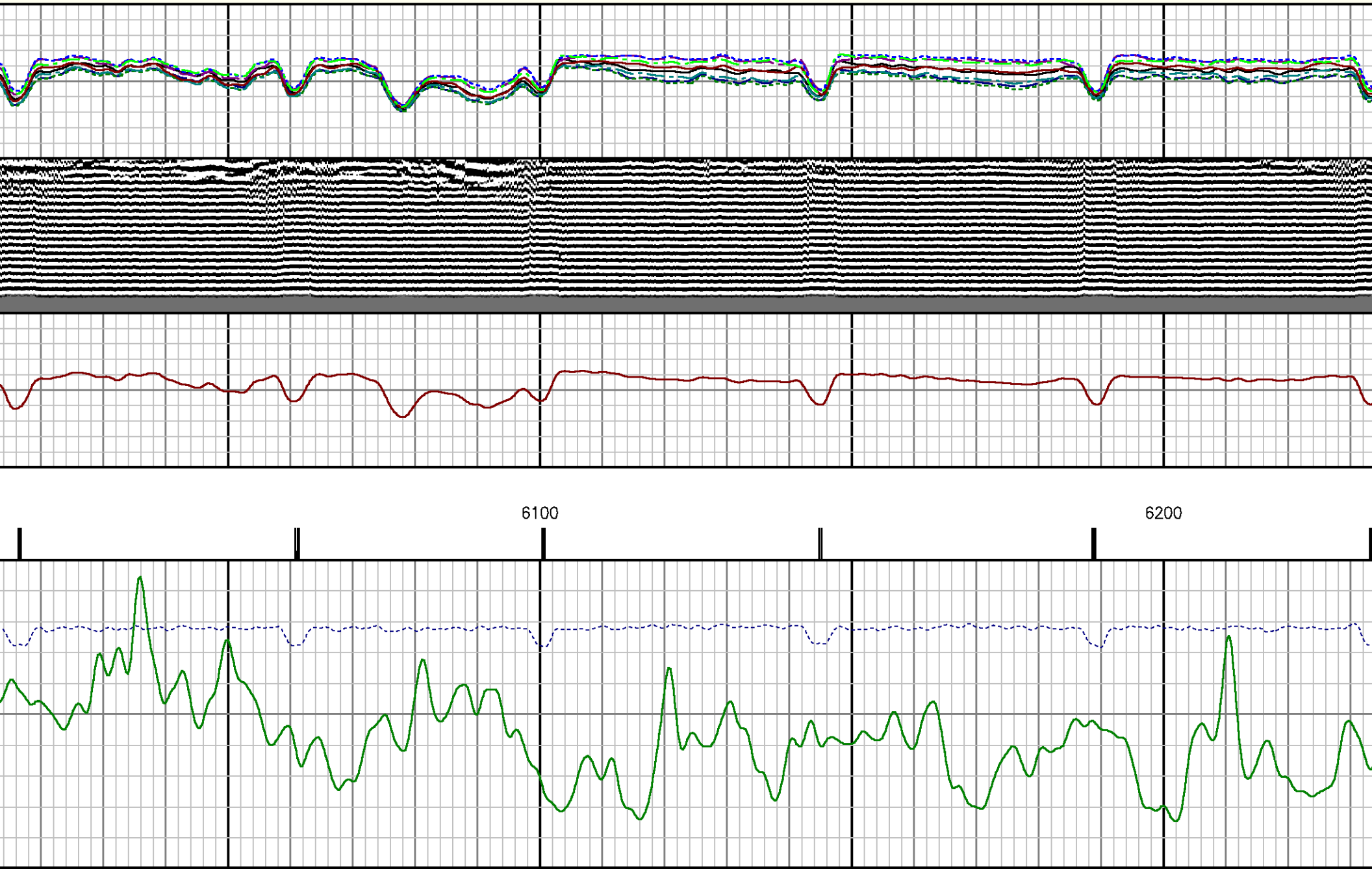

5000
5100

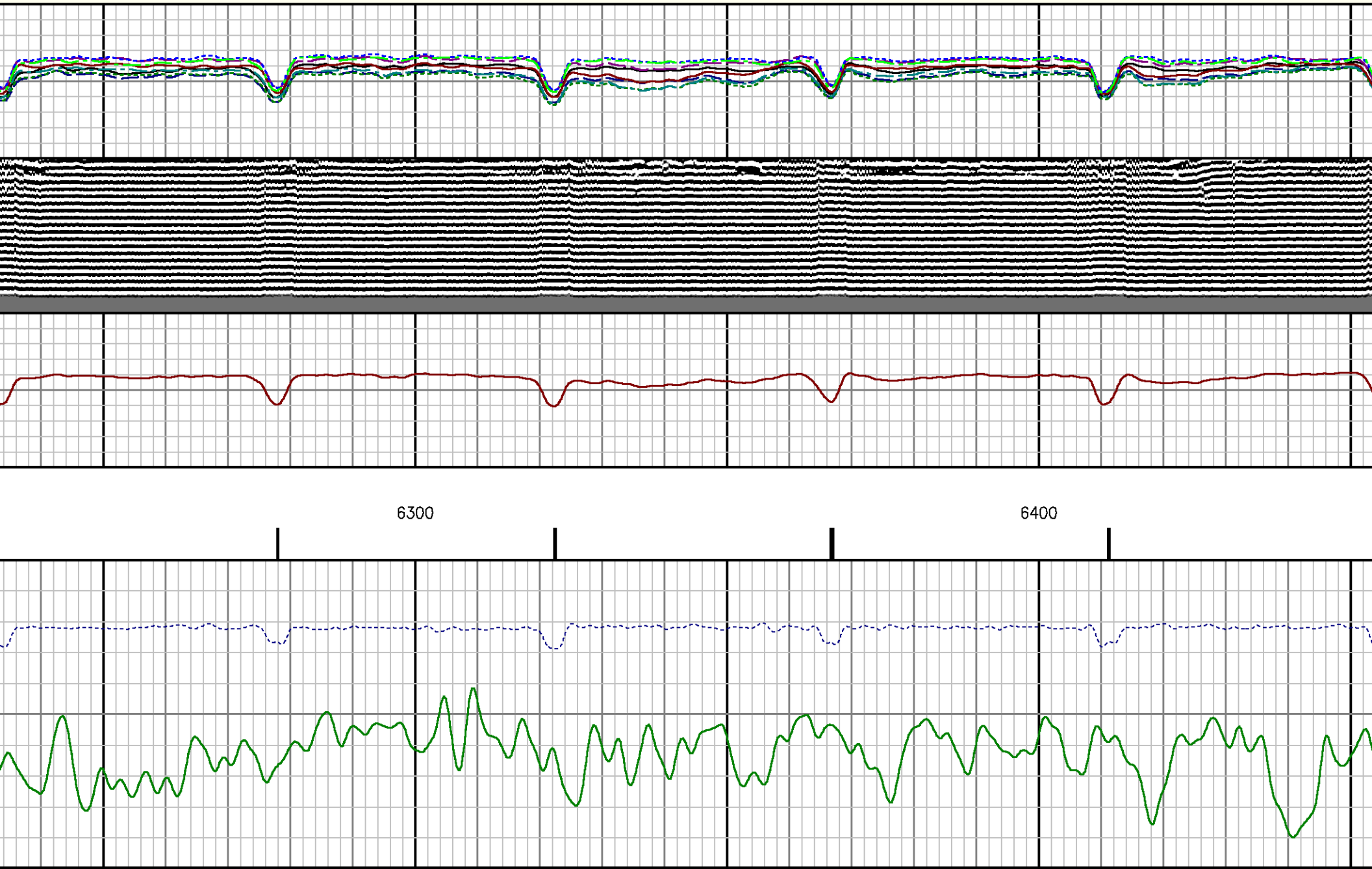

5200
5300

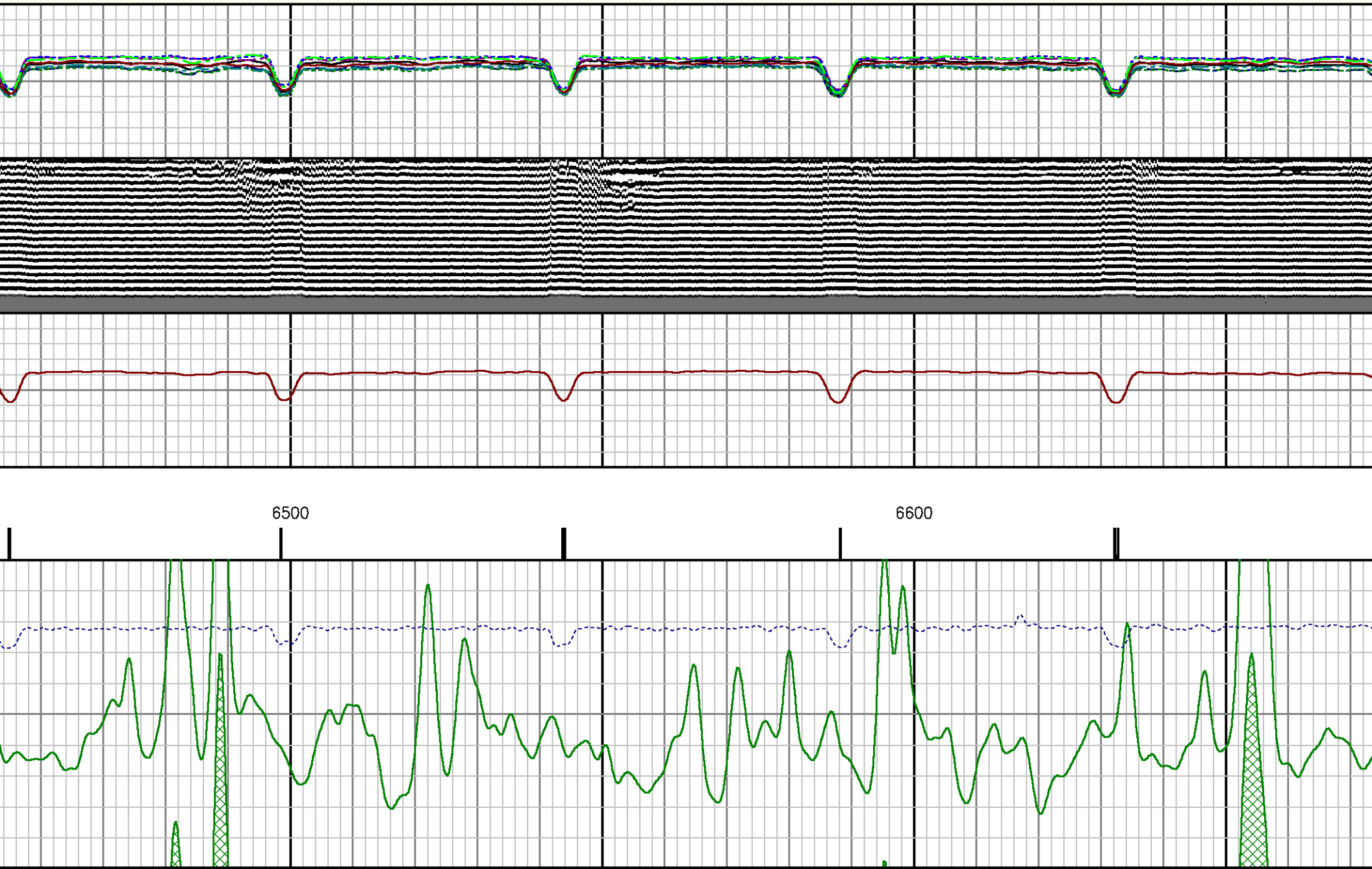

5400
5500

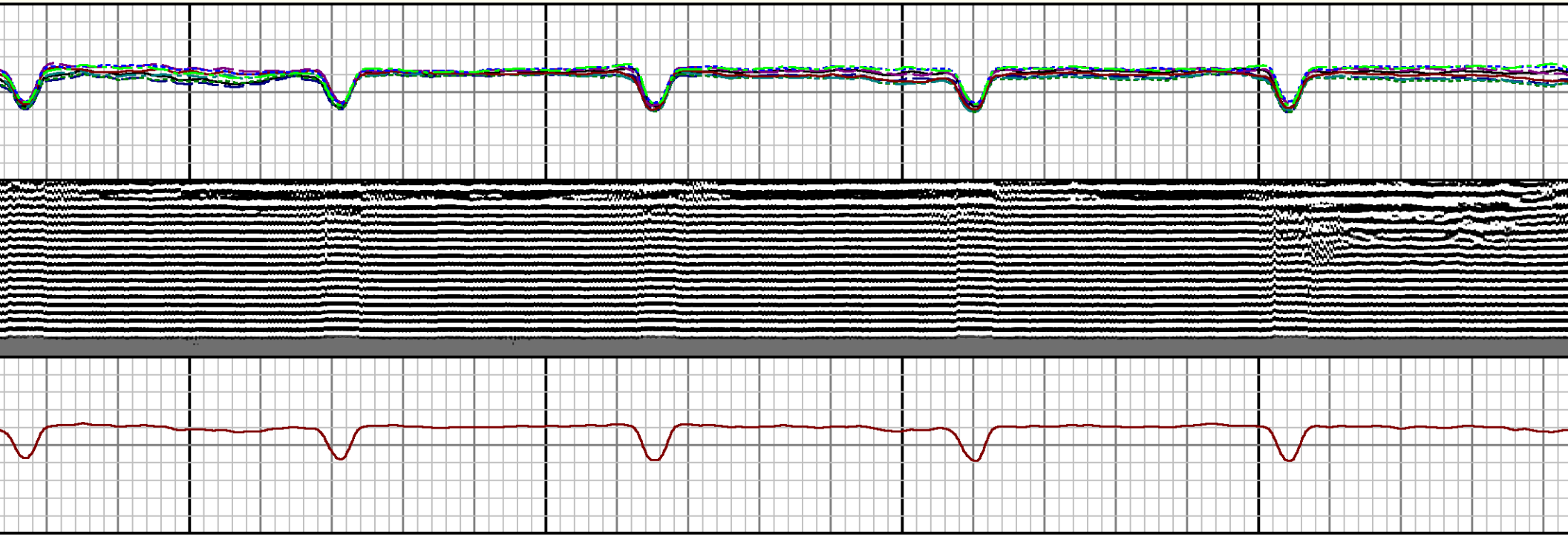

5600
5700

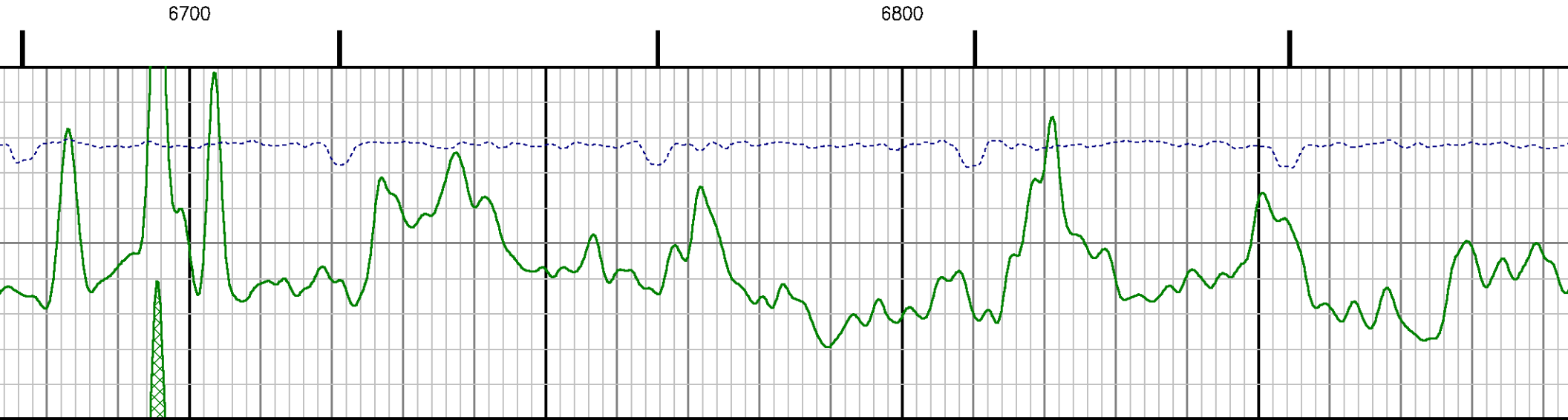
5800
5900
6000

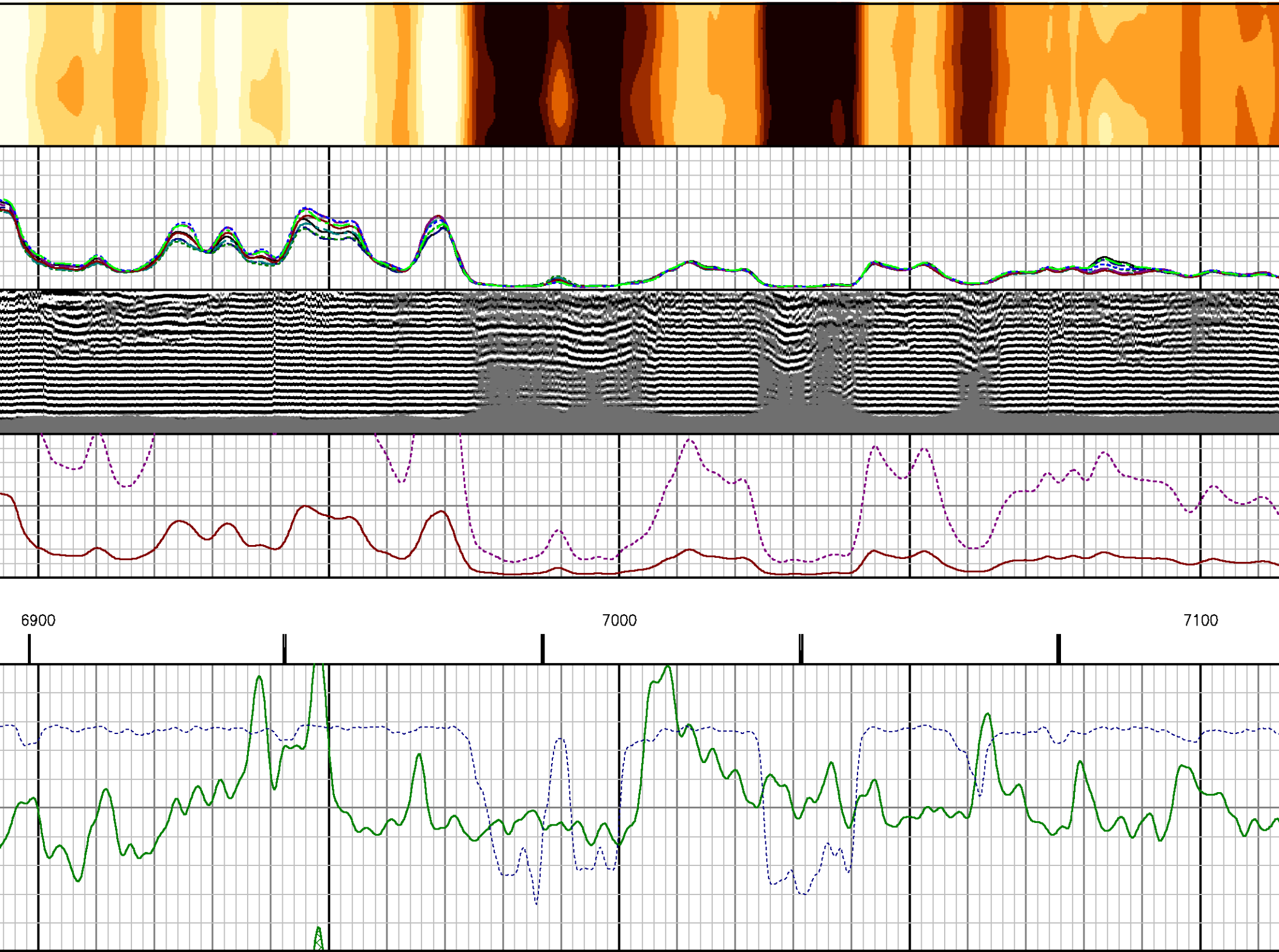

6100
6200

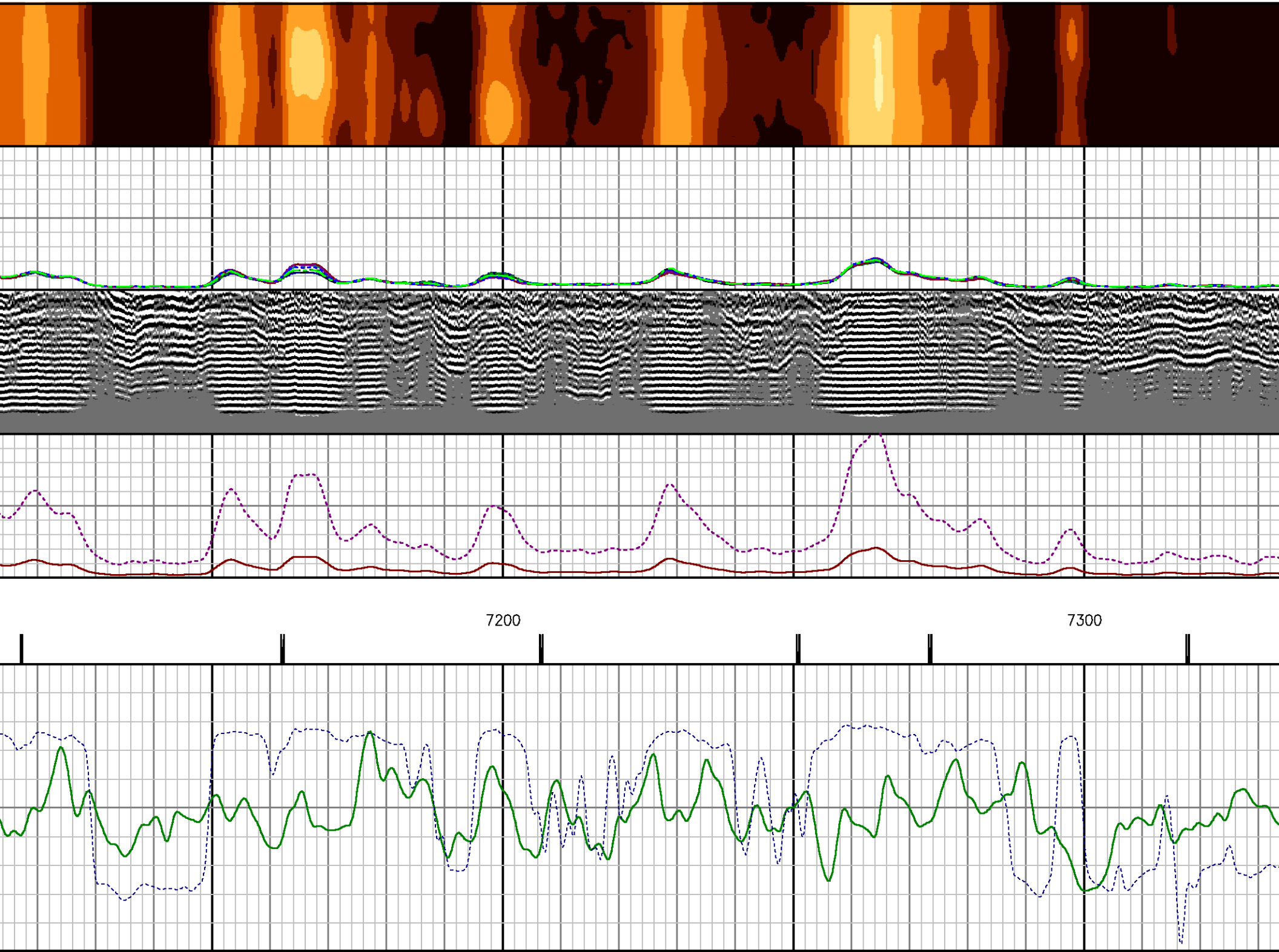

6300
6400

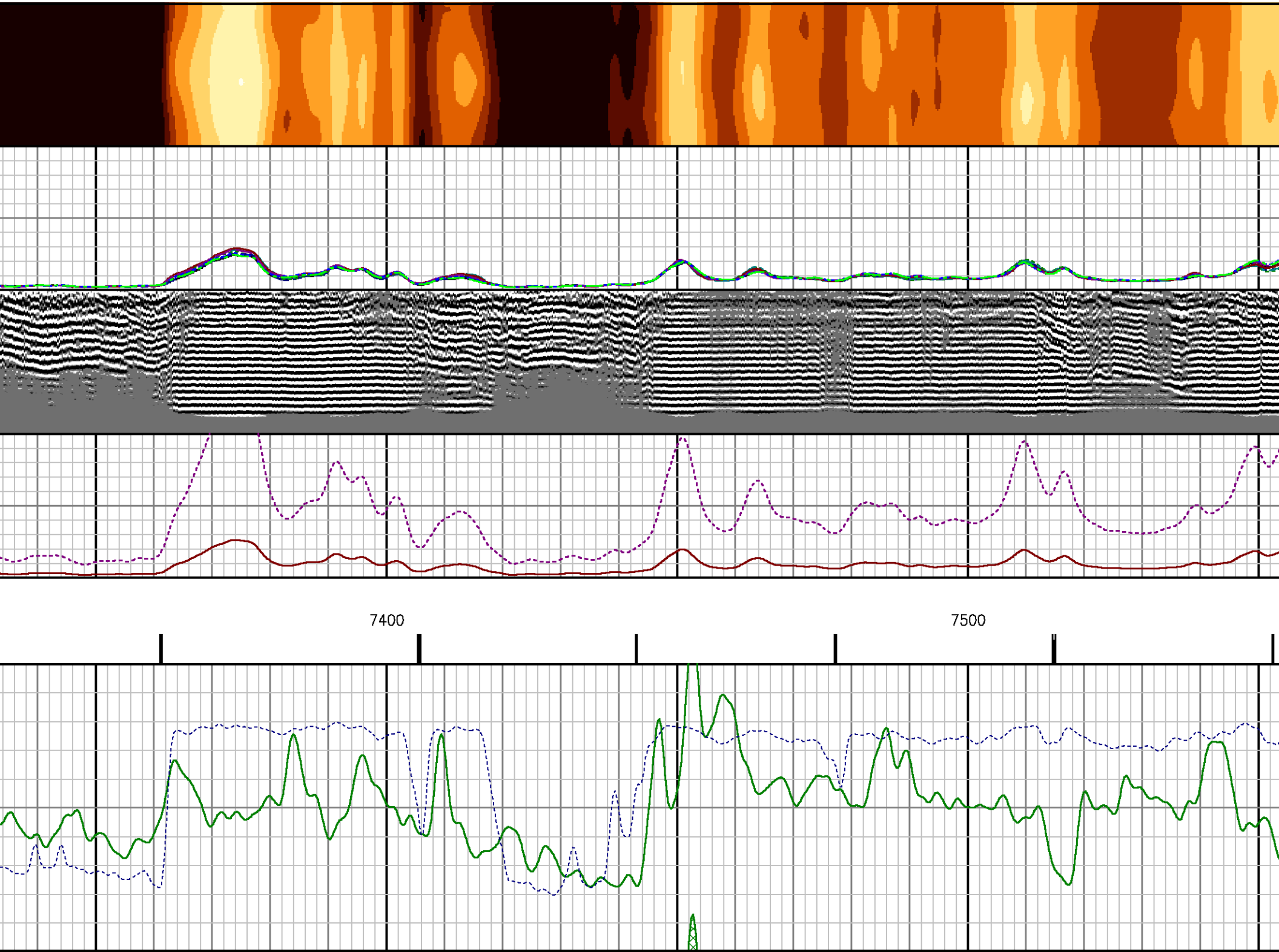

6500
6600

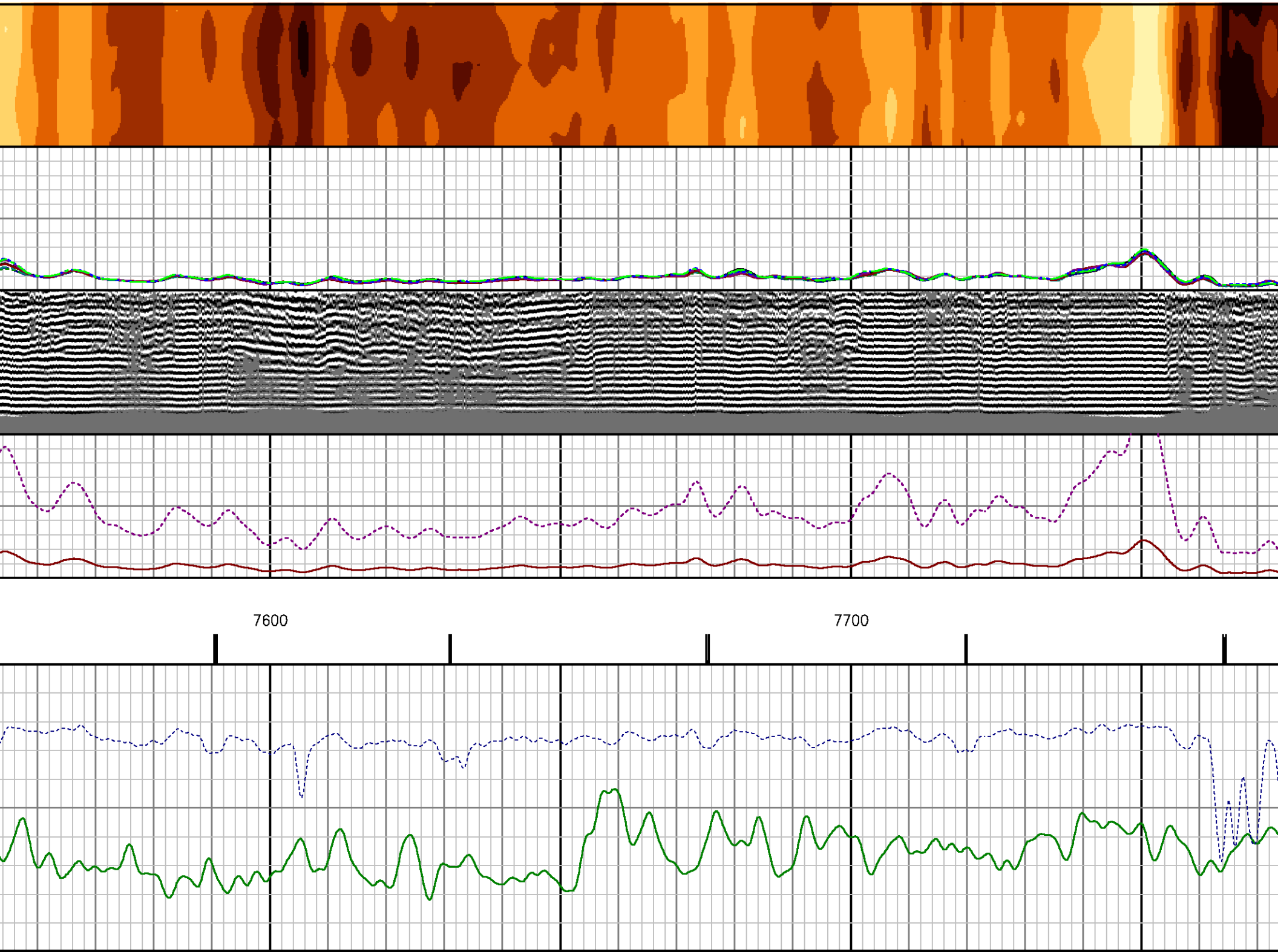


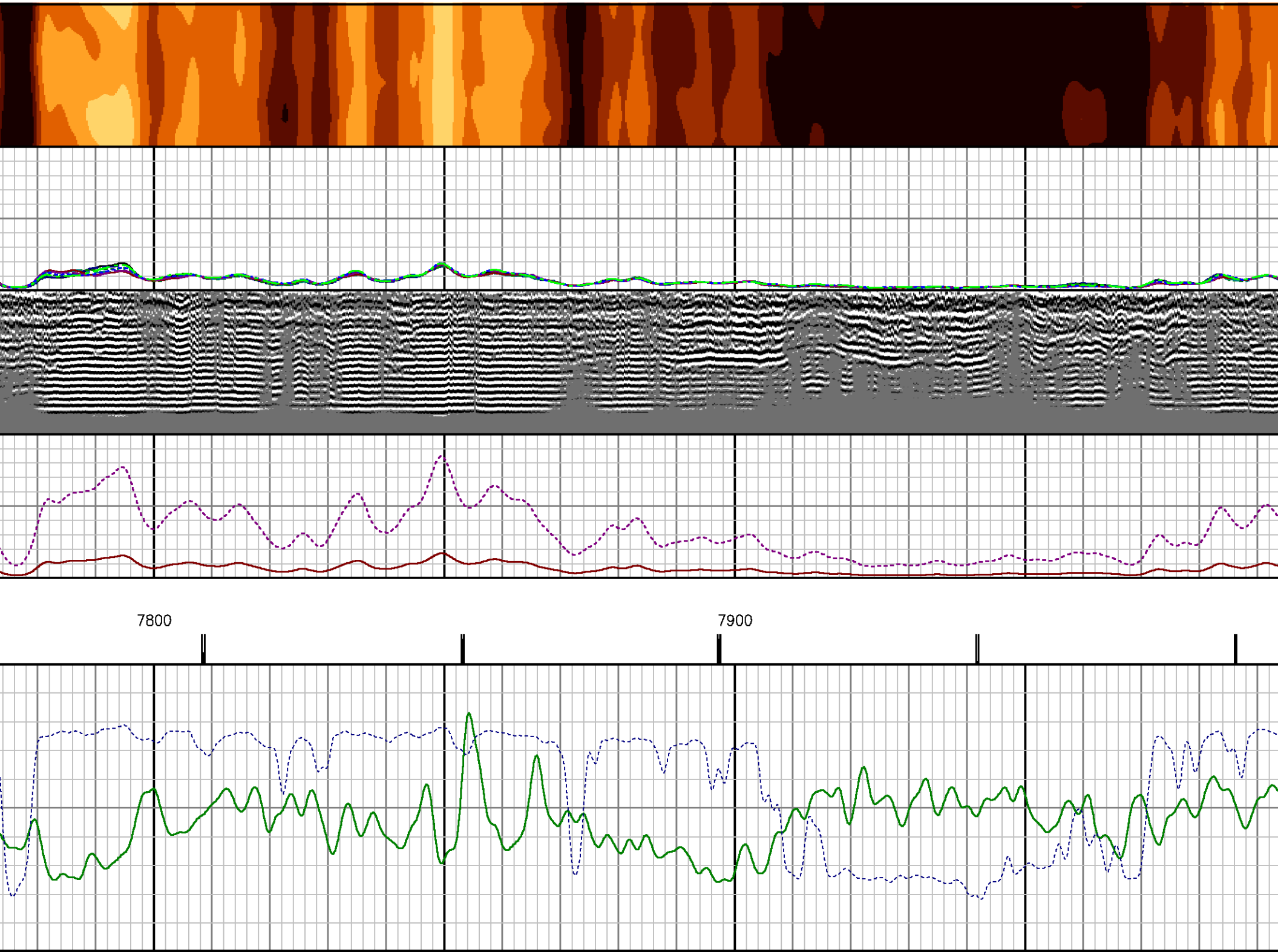

6700
6800

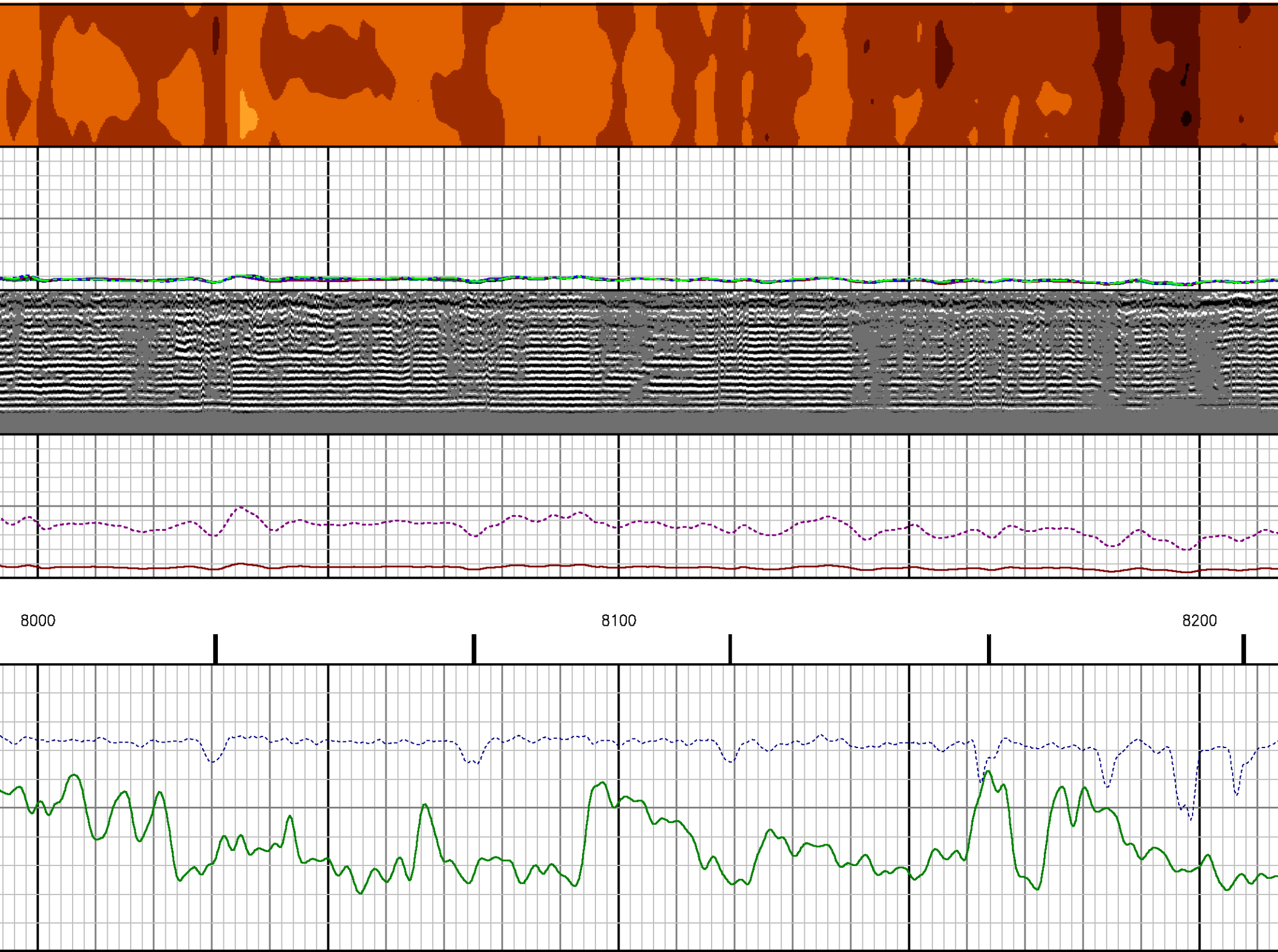

6900
7000
7100

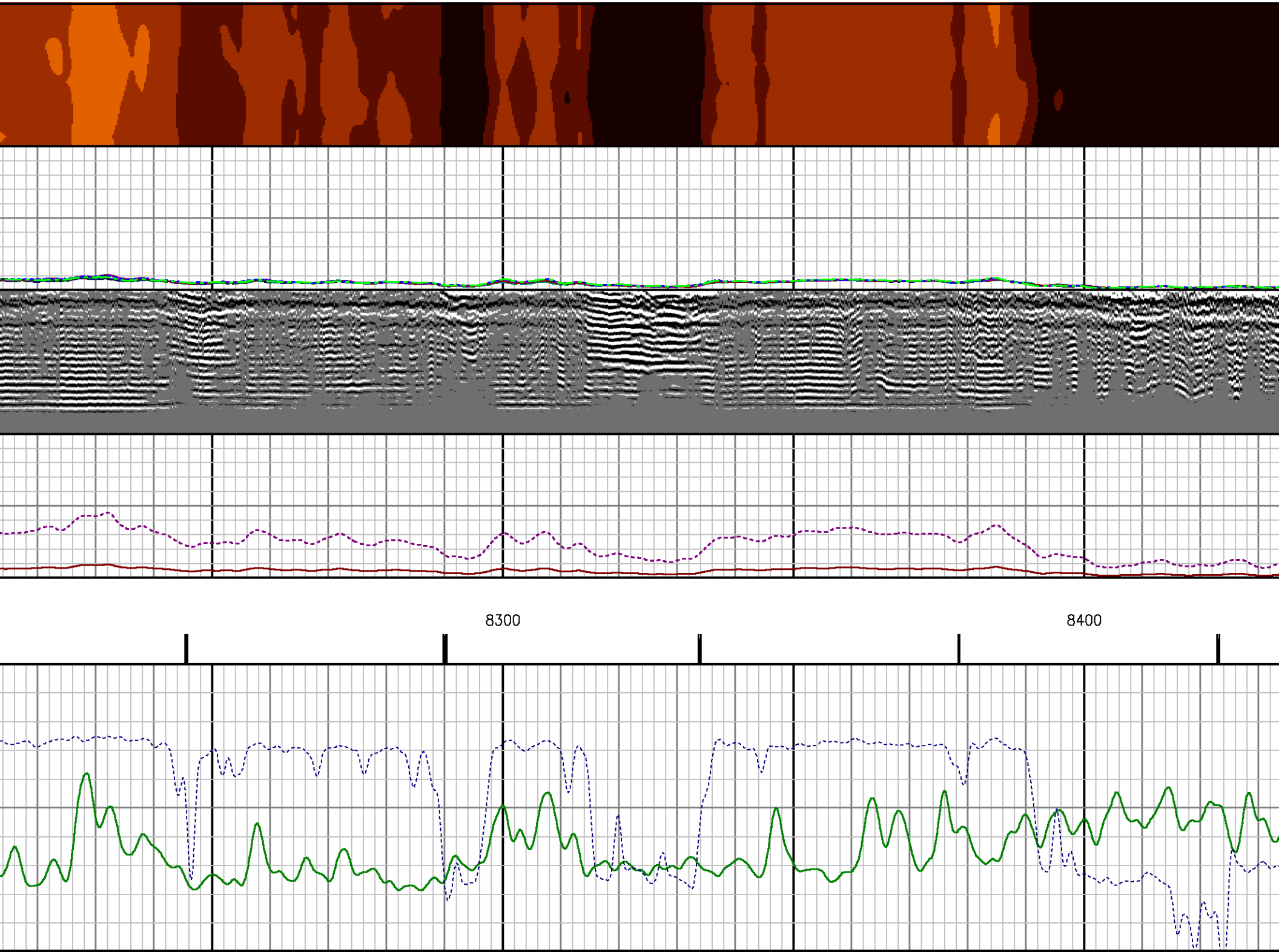

7200
7300


7400
7500


7600
7700

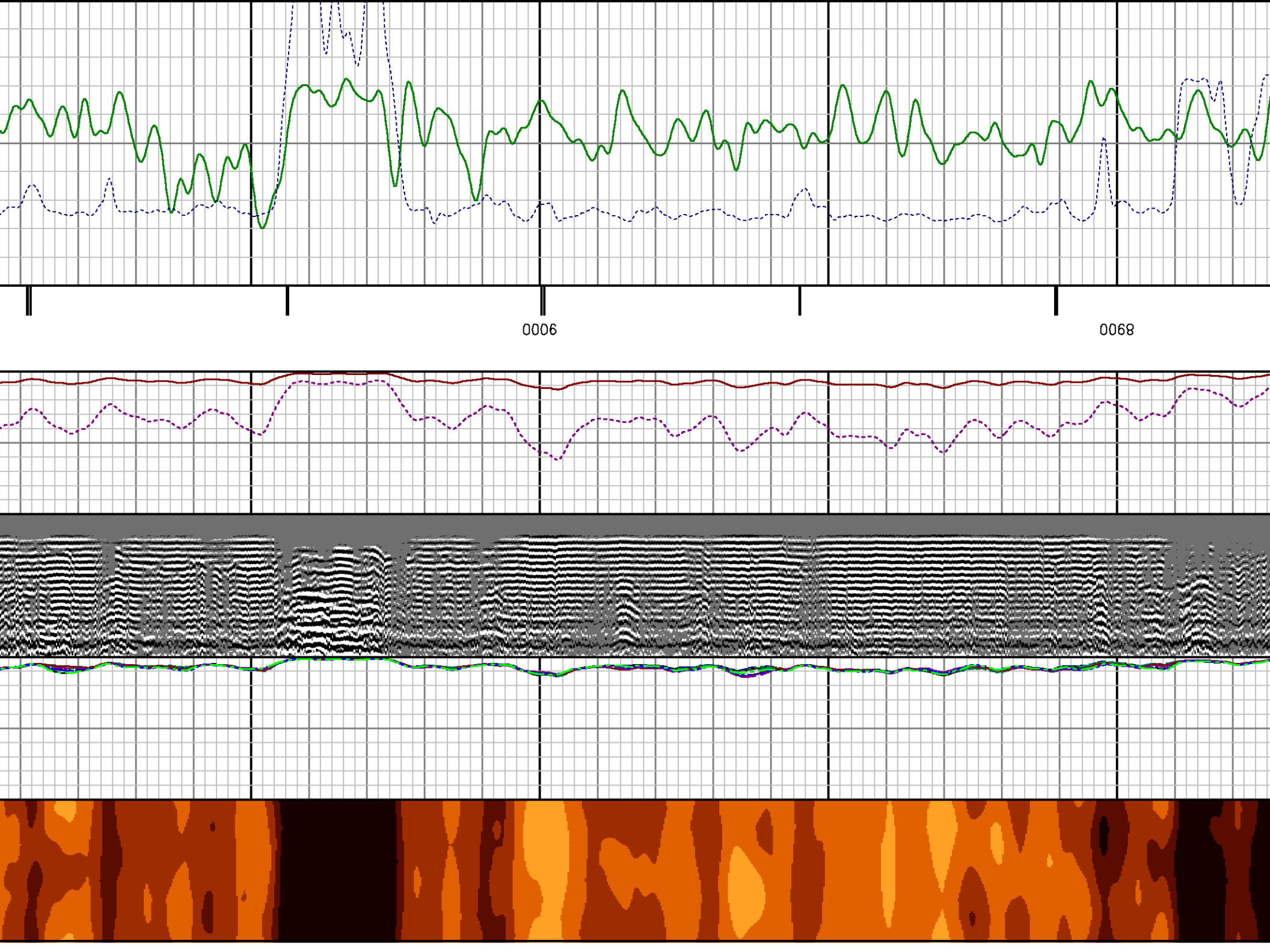

7800
7900

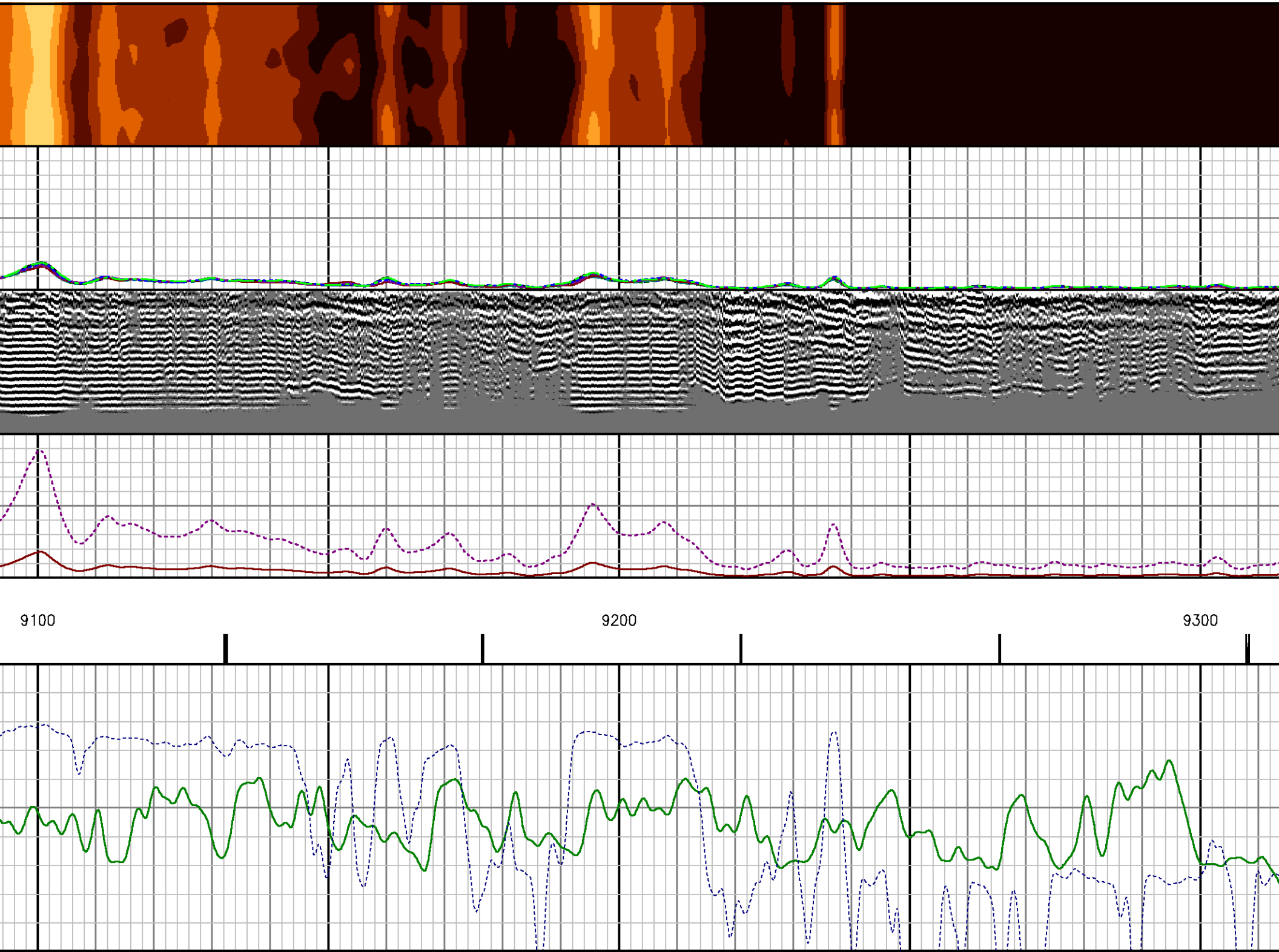

8000
8100
8200

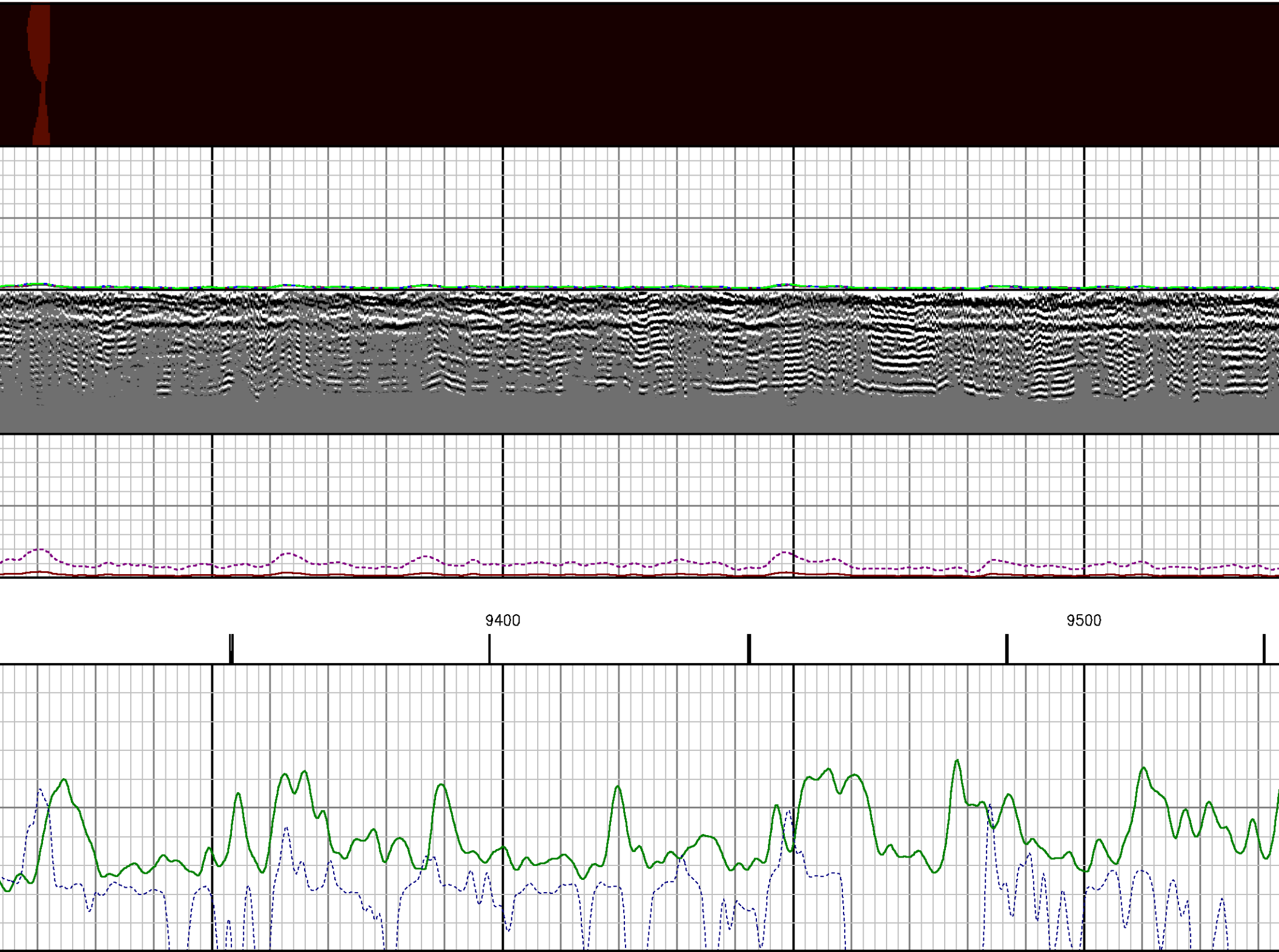

8300
8400

8500
8600

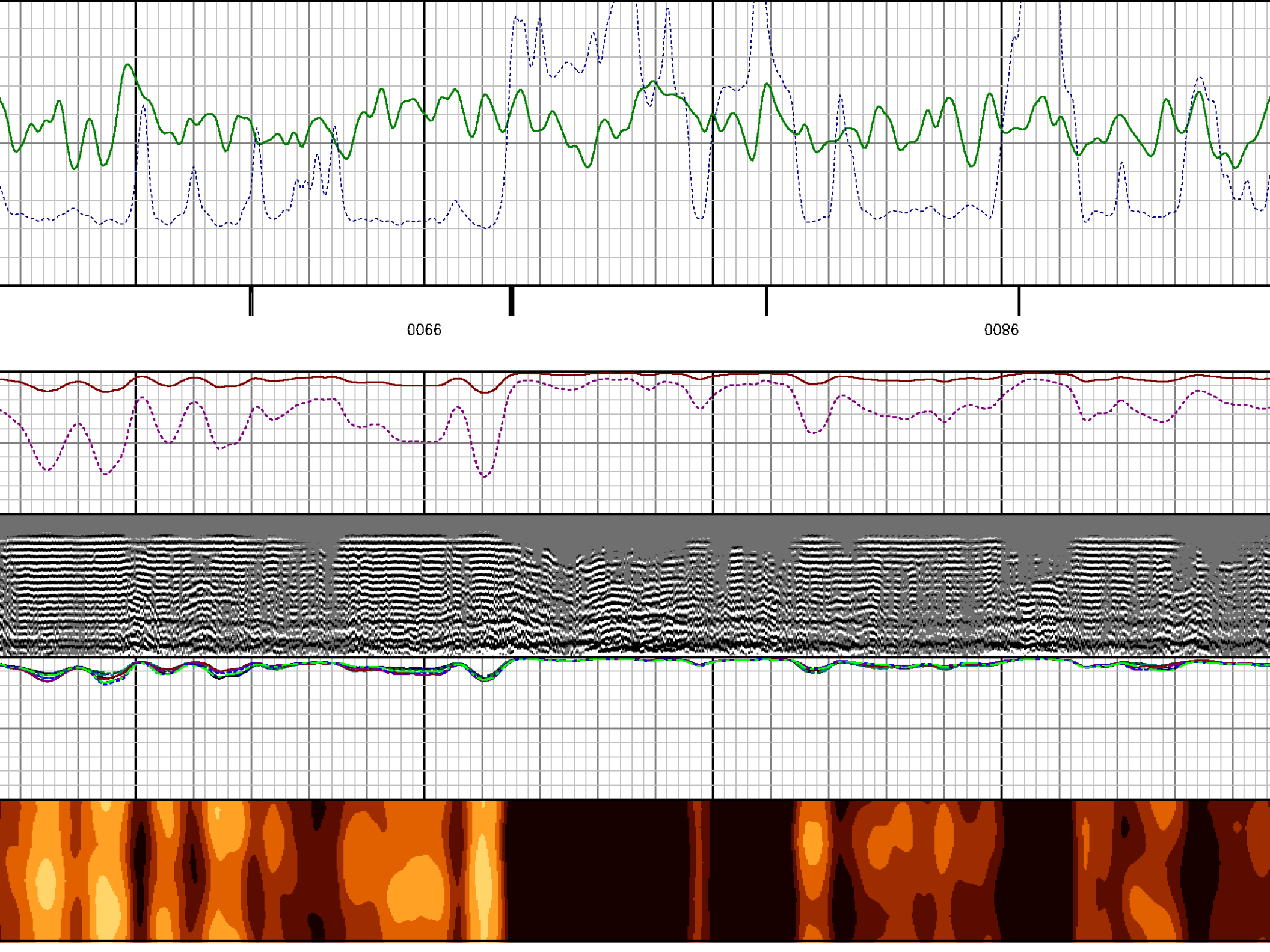
8700
8800

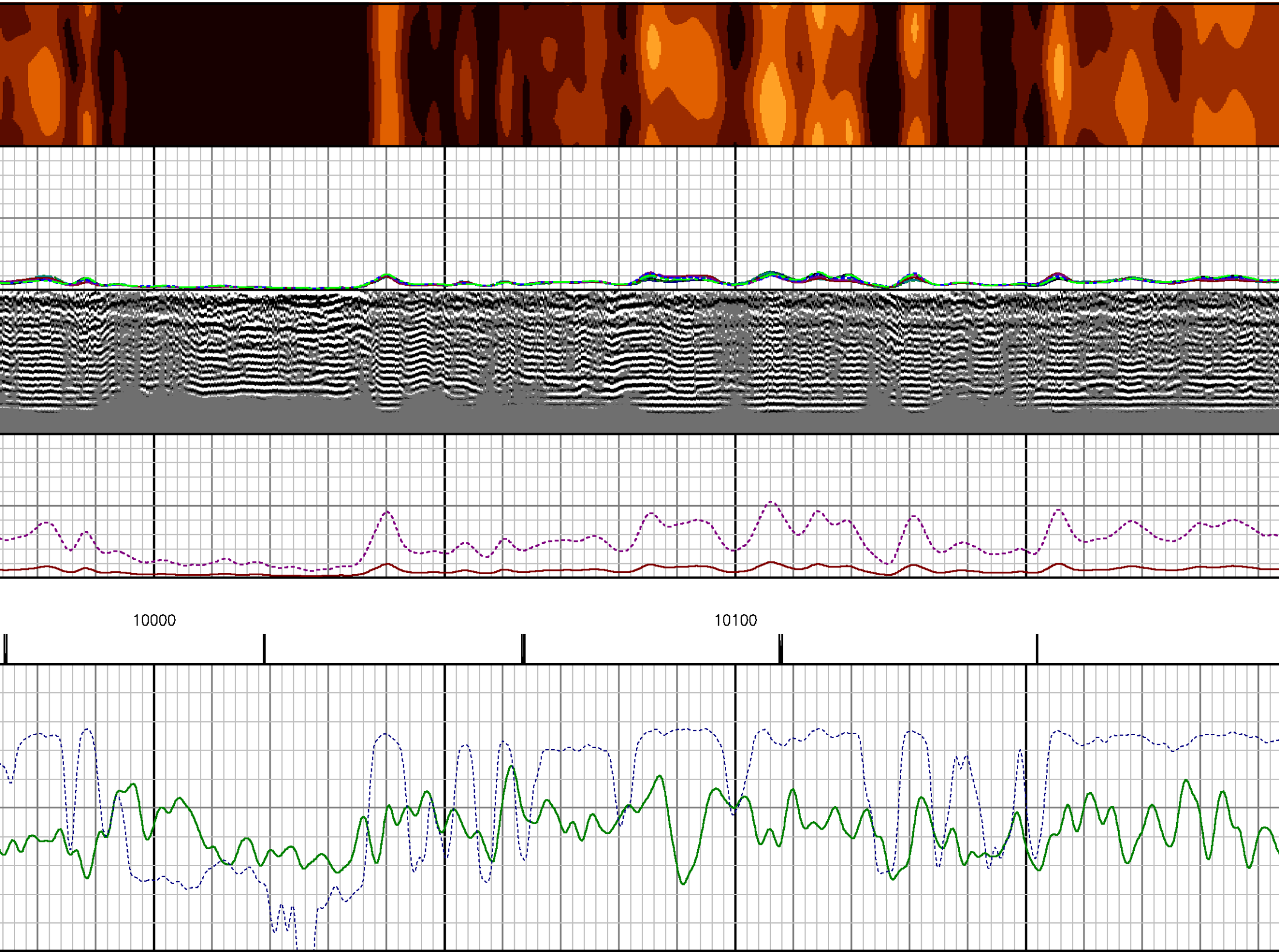

0006
0068

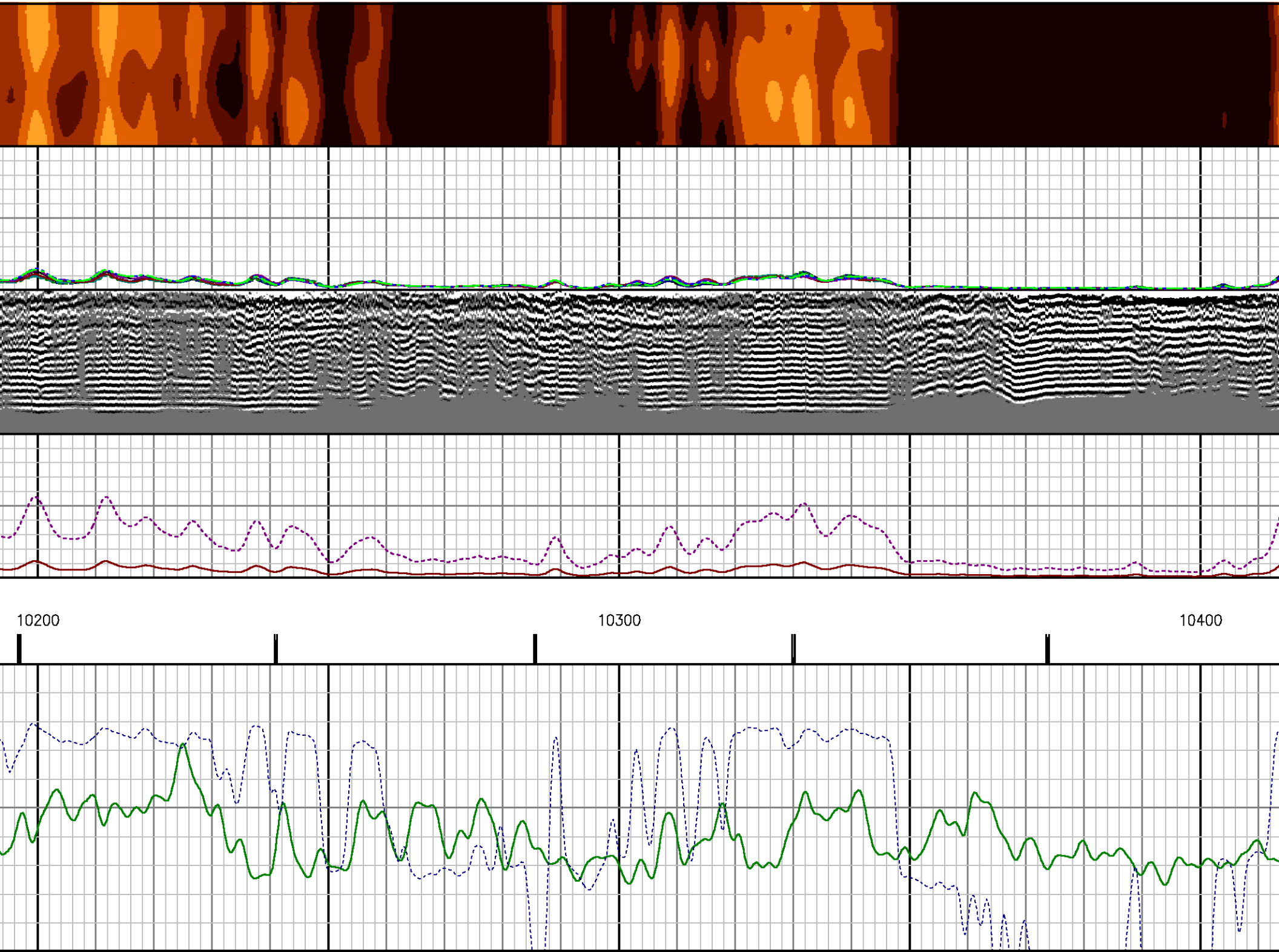

9100
9200
9300

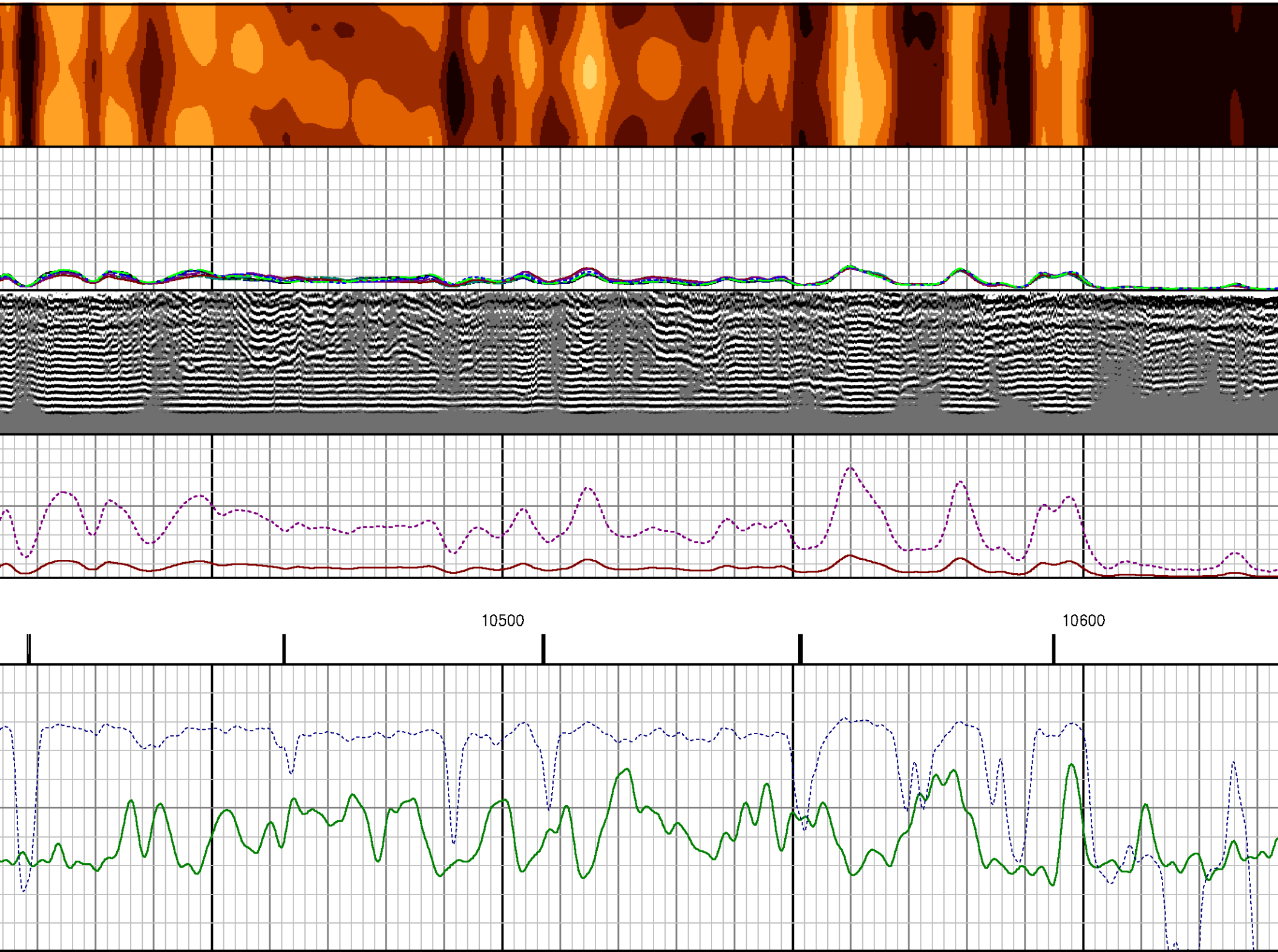

9400
9500

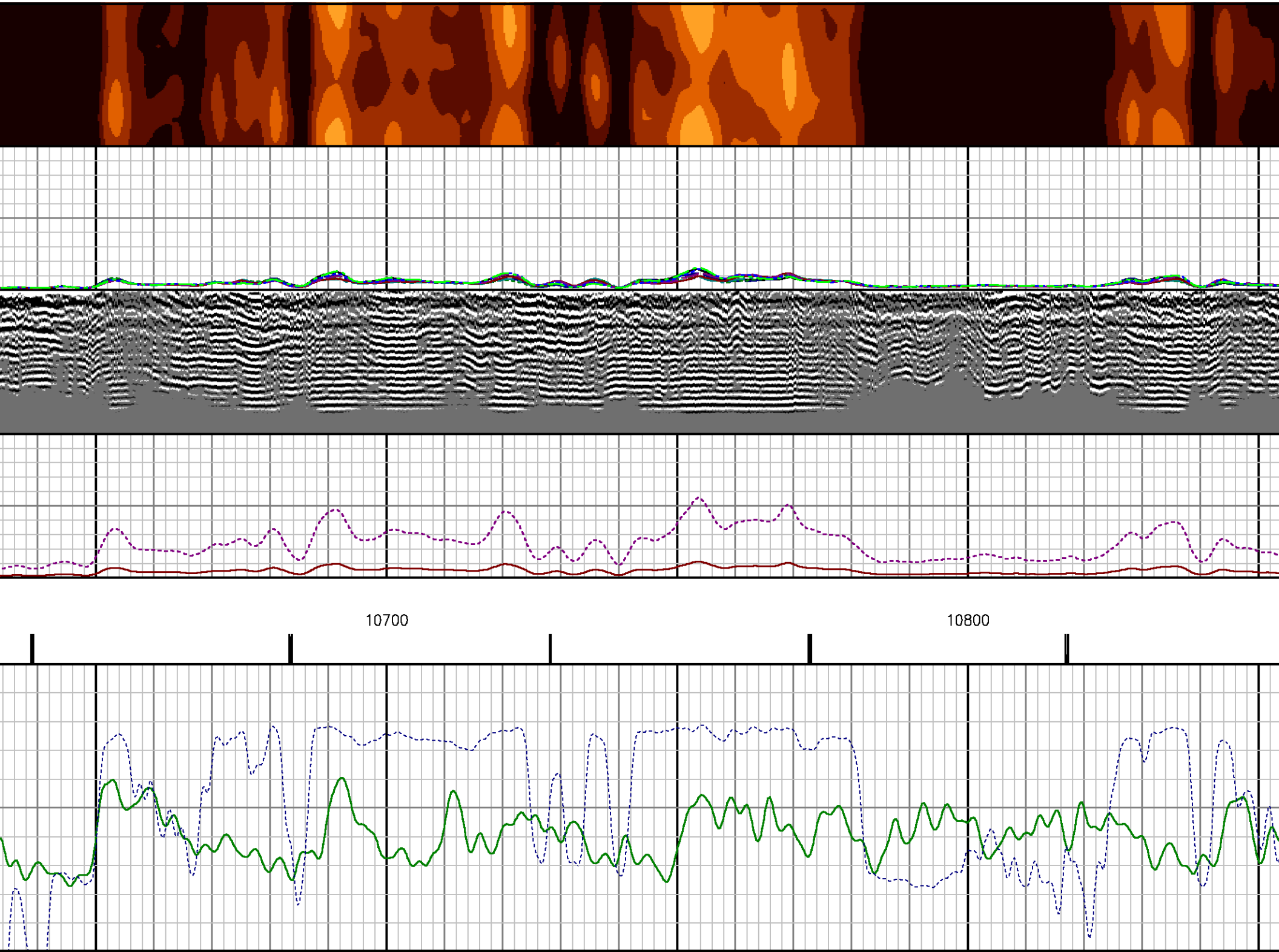
9600
9700

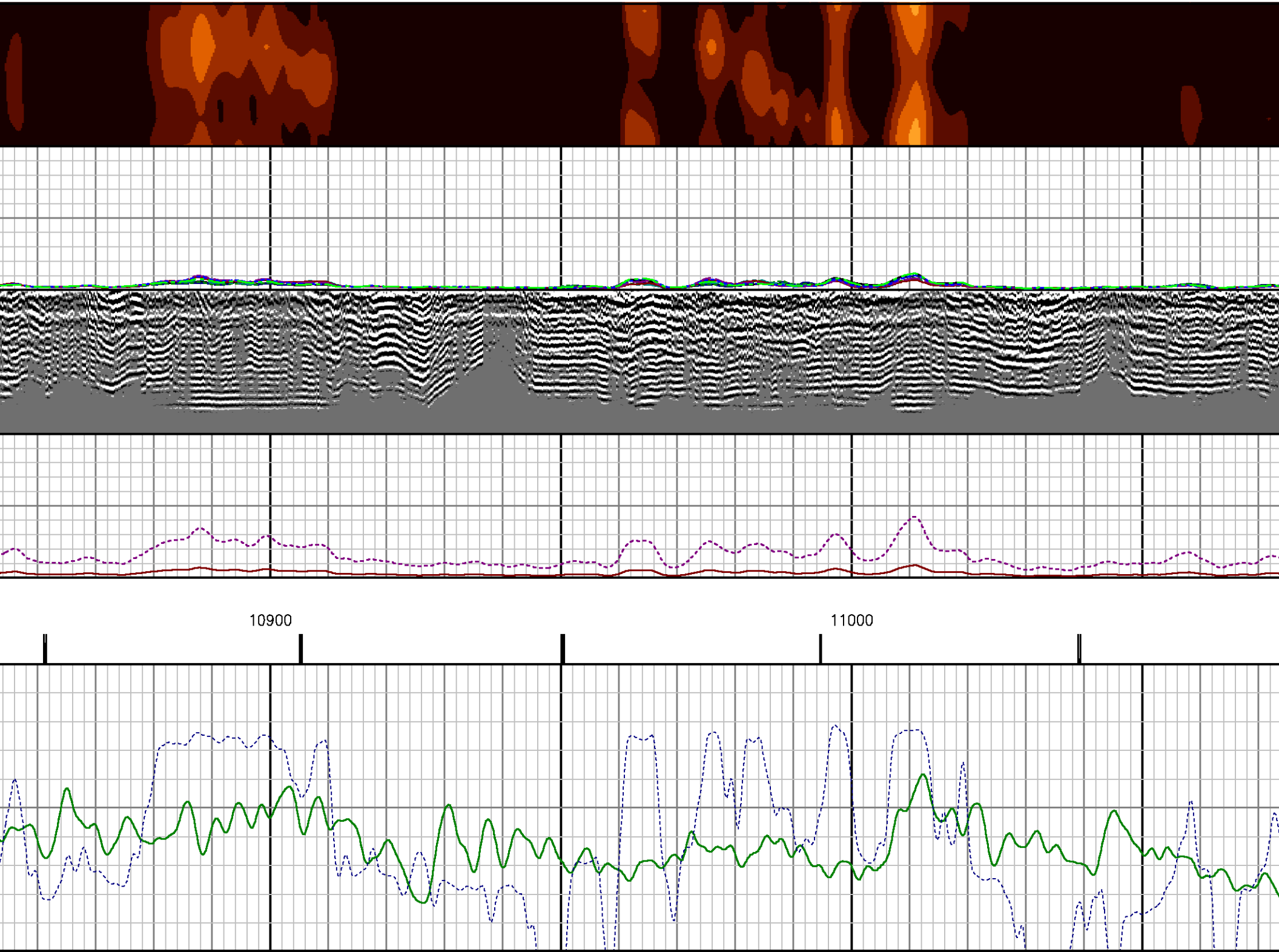

0066
0086

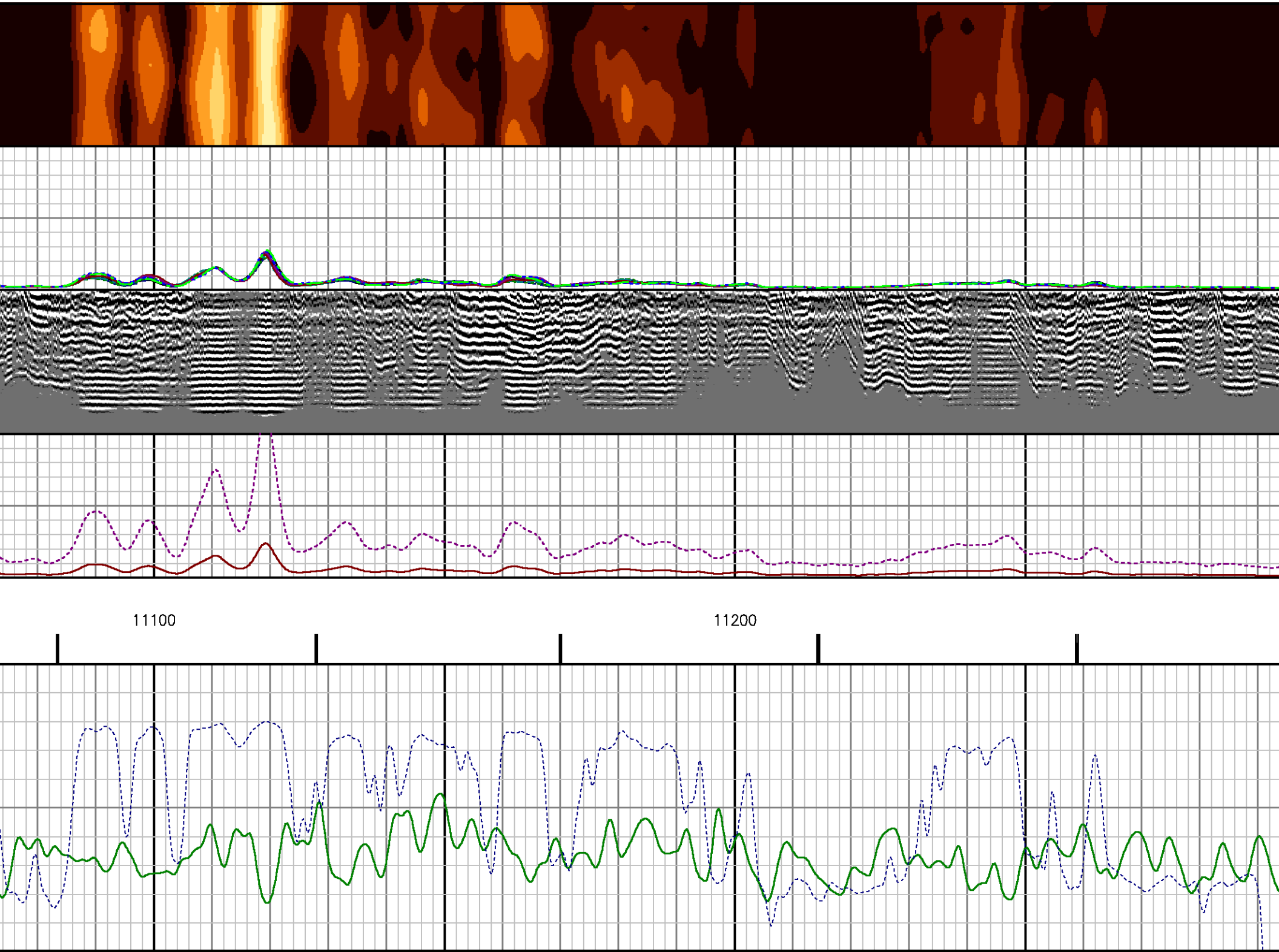

10000
10100

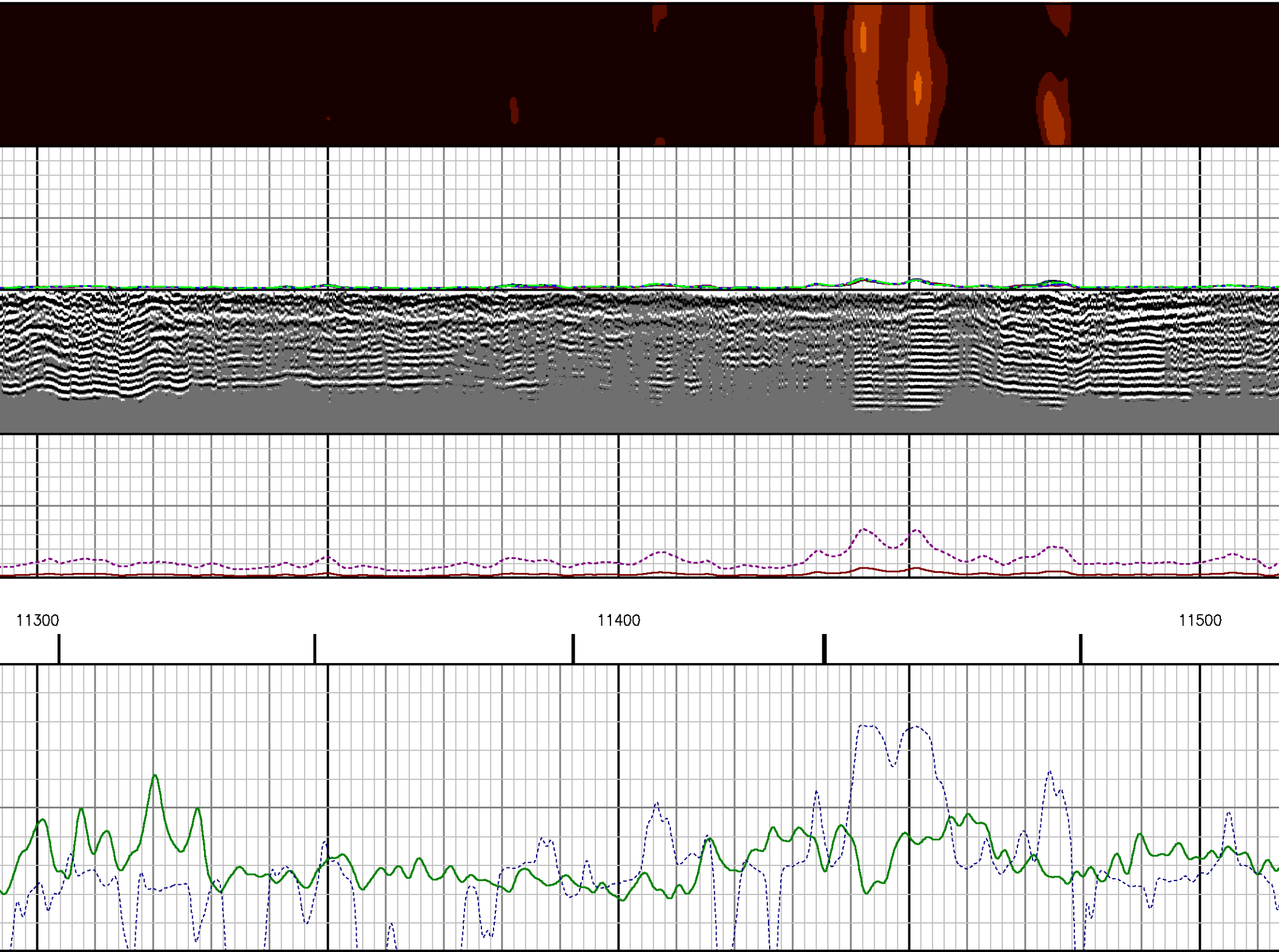

10200
10300
10400

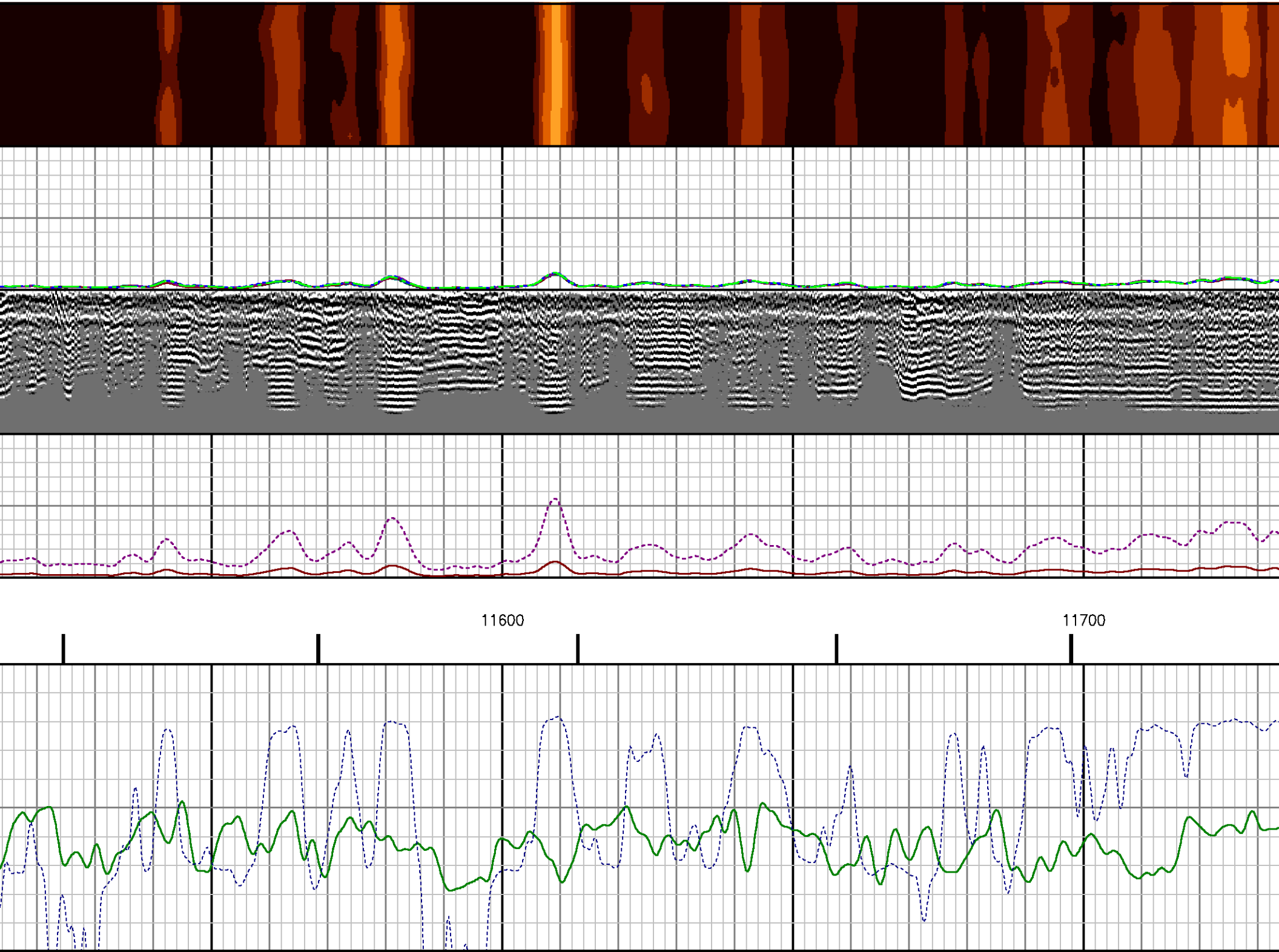

10500
10600

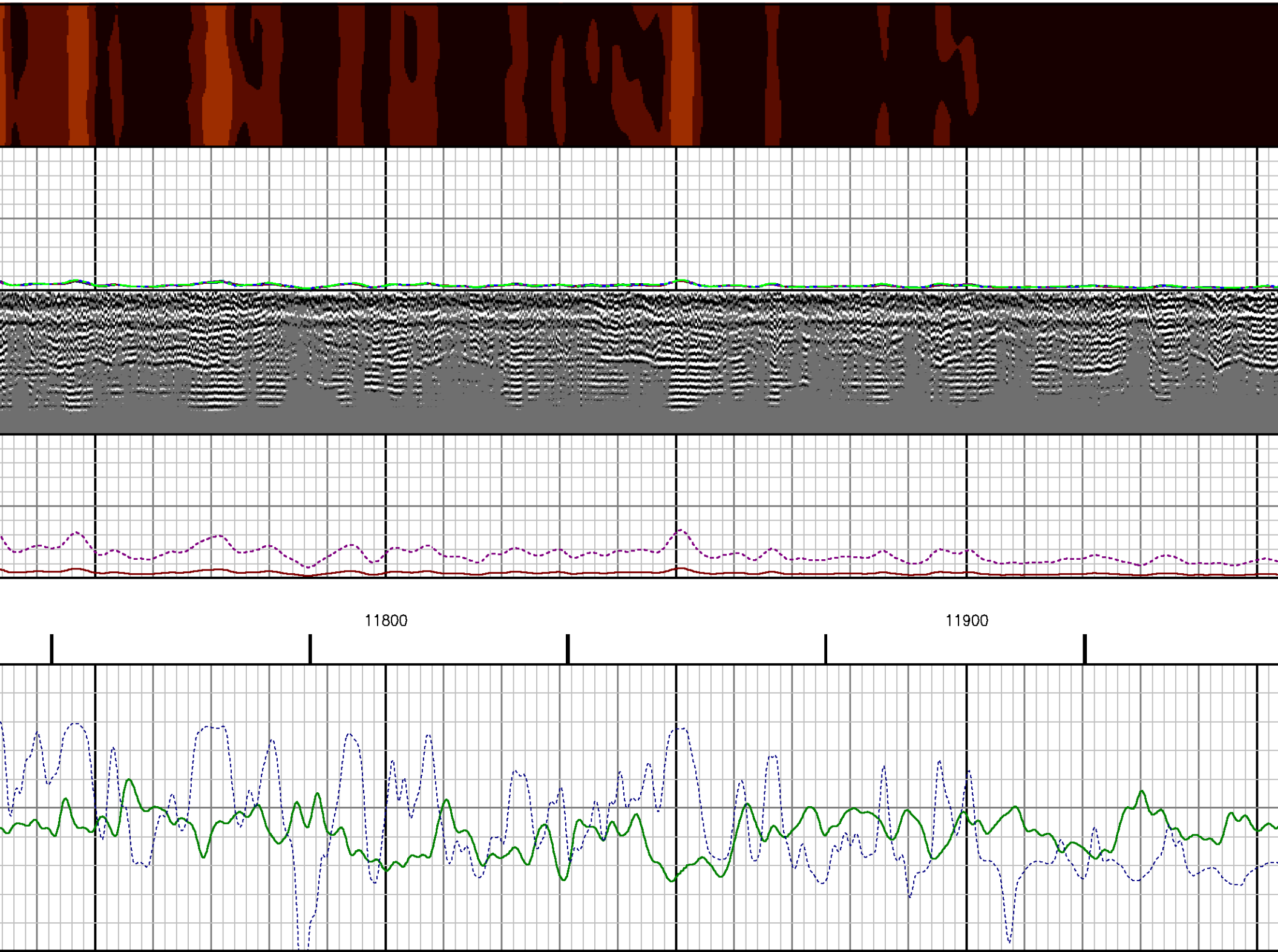

10700
10800

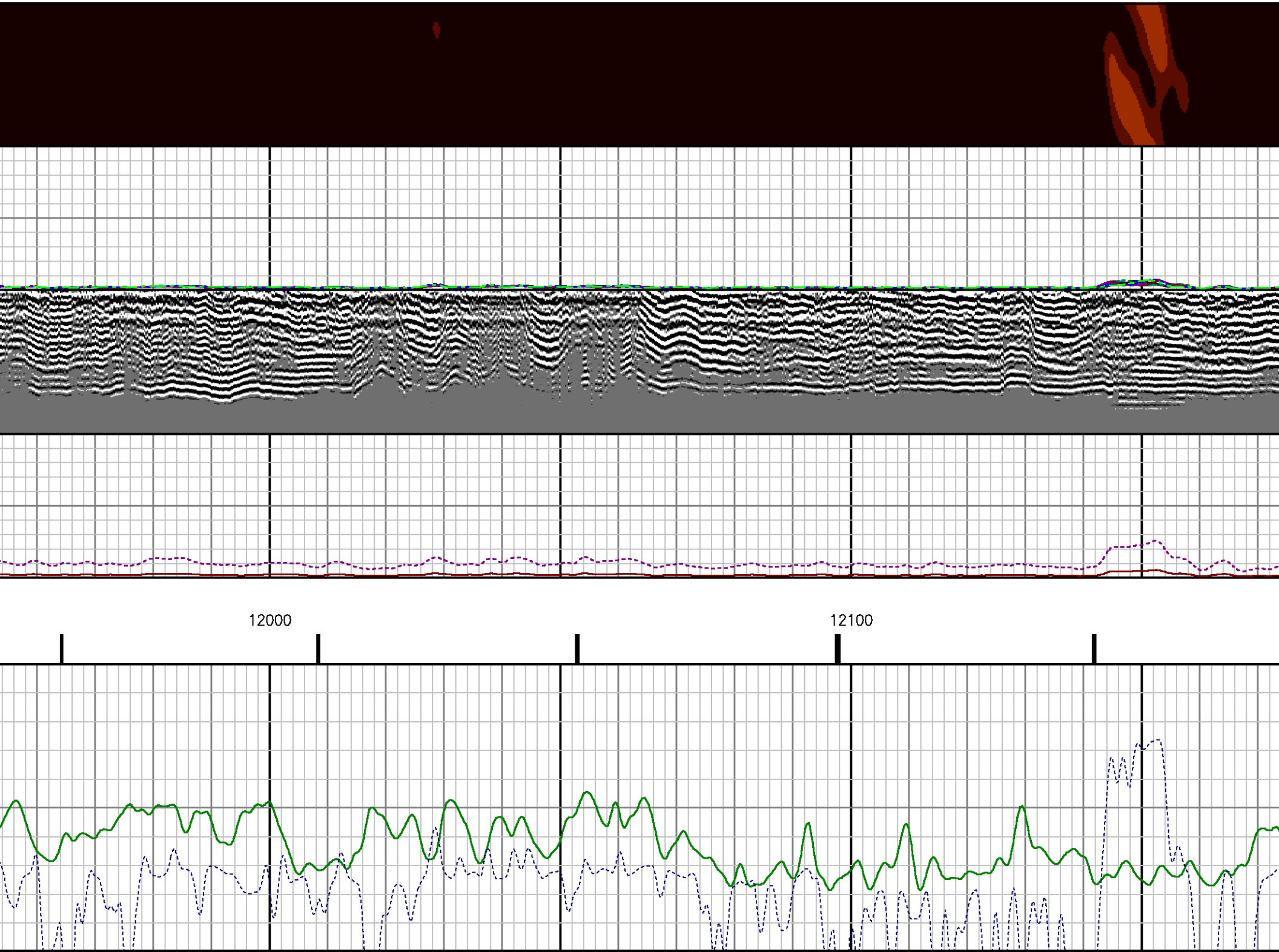

10900
11000


11100
11200

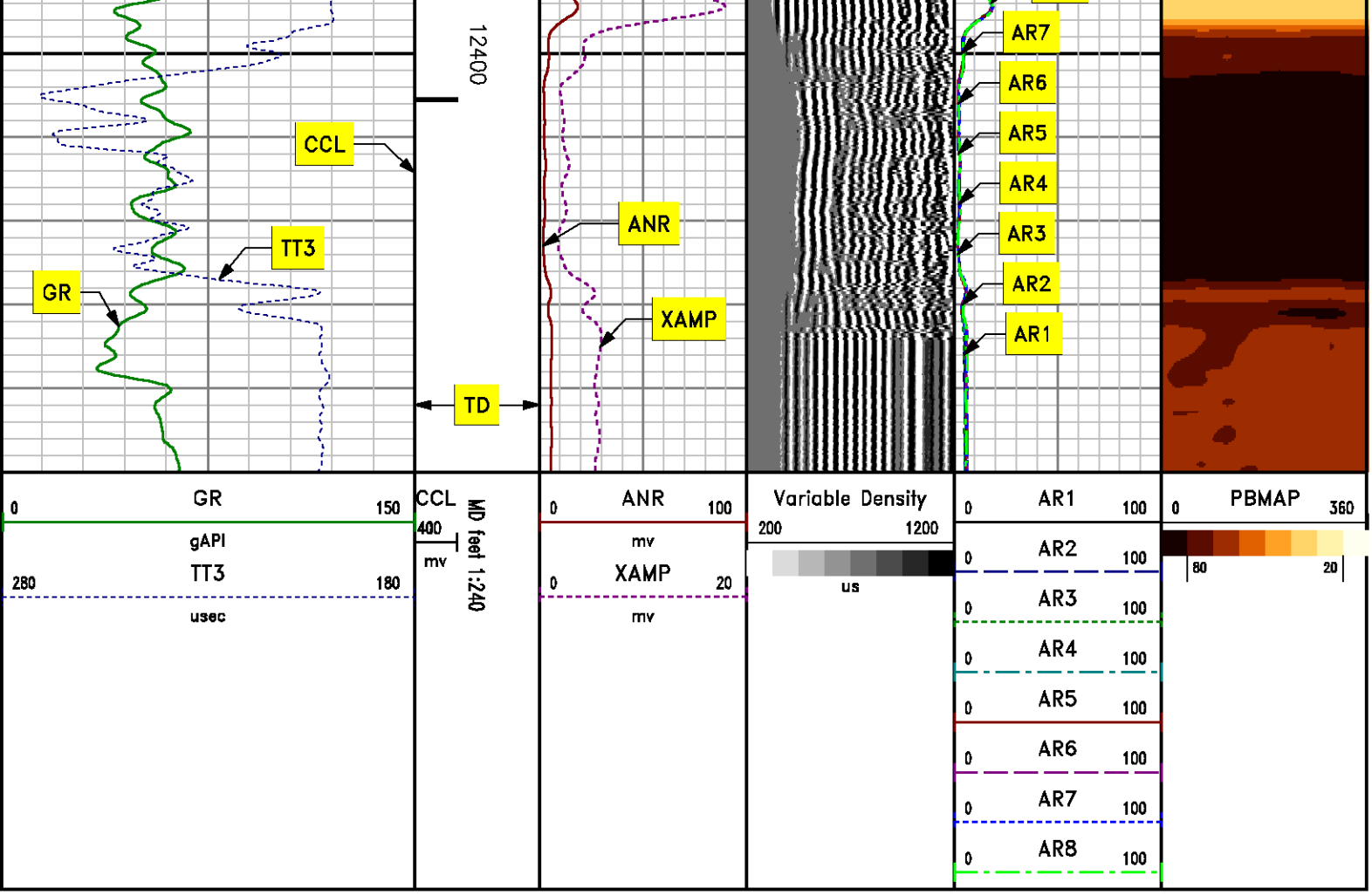

11300
11400
11500


11600
11700


11800
11900


12000
12100

12200
12300
AR8



REPEAT PASS
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	332.458	usec	9689.937	10001.000
RAL	Amp Gate Start Near	199.015	usec	9689.937	10001.000
RAL	Amp Gate Start Radial	199.015	usec	9689.937	10001.000
RAL	Amp Gate Width Far	25.000	usec	9689.937	10001.000
RAL	Amp Gate Width Near	25.000	usec	9689.937	10001.000
RAL	Amp Gate Width Radial	25.000	usec	9689.937	10001.000
RAL	casing od	4.500	inches	9689.937	10001.000
RAL	casing wt	11.600	lbm/ft	9689.937	10001.000
RAL	FB Start Far	291.900	usec	9689.937	10001.000

RAL	FB Start Near	175.391	usec	9689.937	10001.000
RAL	FB Start Radial	175.391	usec	9689.937	10001.000
RAL	FB Thresh Far	10.000	mv	9689.937	10001.000
RAL	FB Thresh Near	4.000	mv	9689.937	10001.000
RAL	FB Thresh Radial	4.000	mv	9689.937	10001.000
RAL	Fluid Travel Time	200.000	usec/ft	9689.937	10000.562

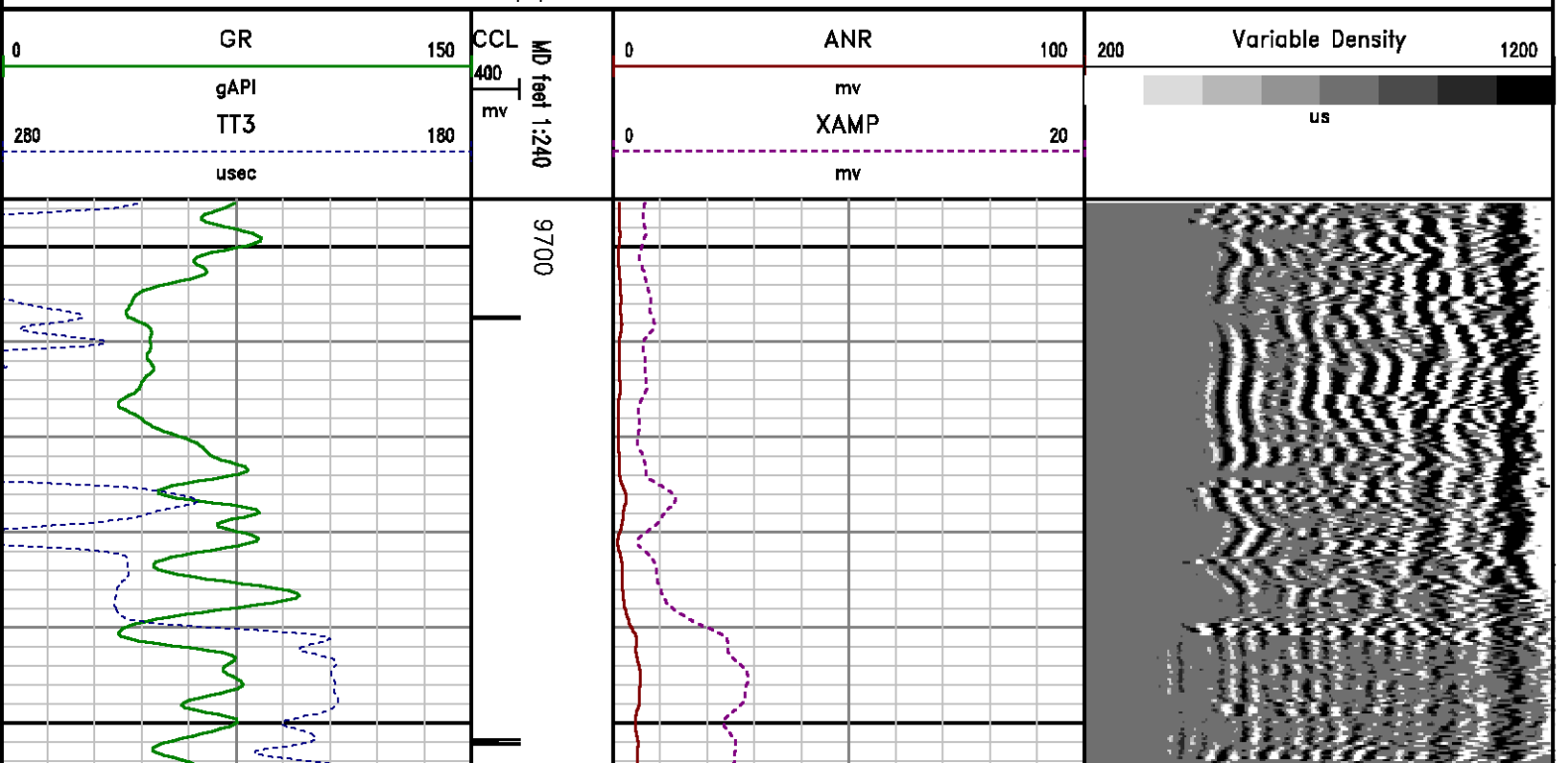
DEPTH OFFSETS

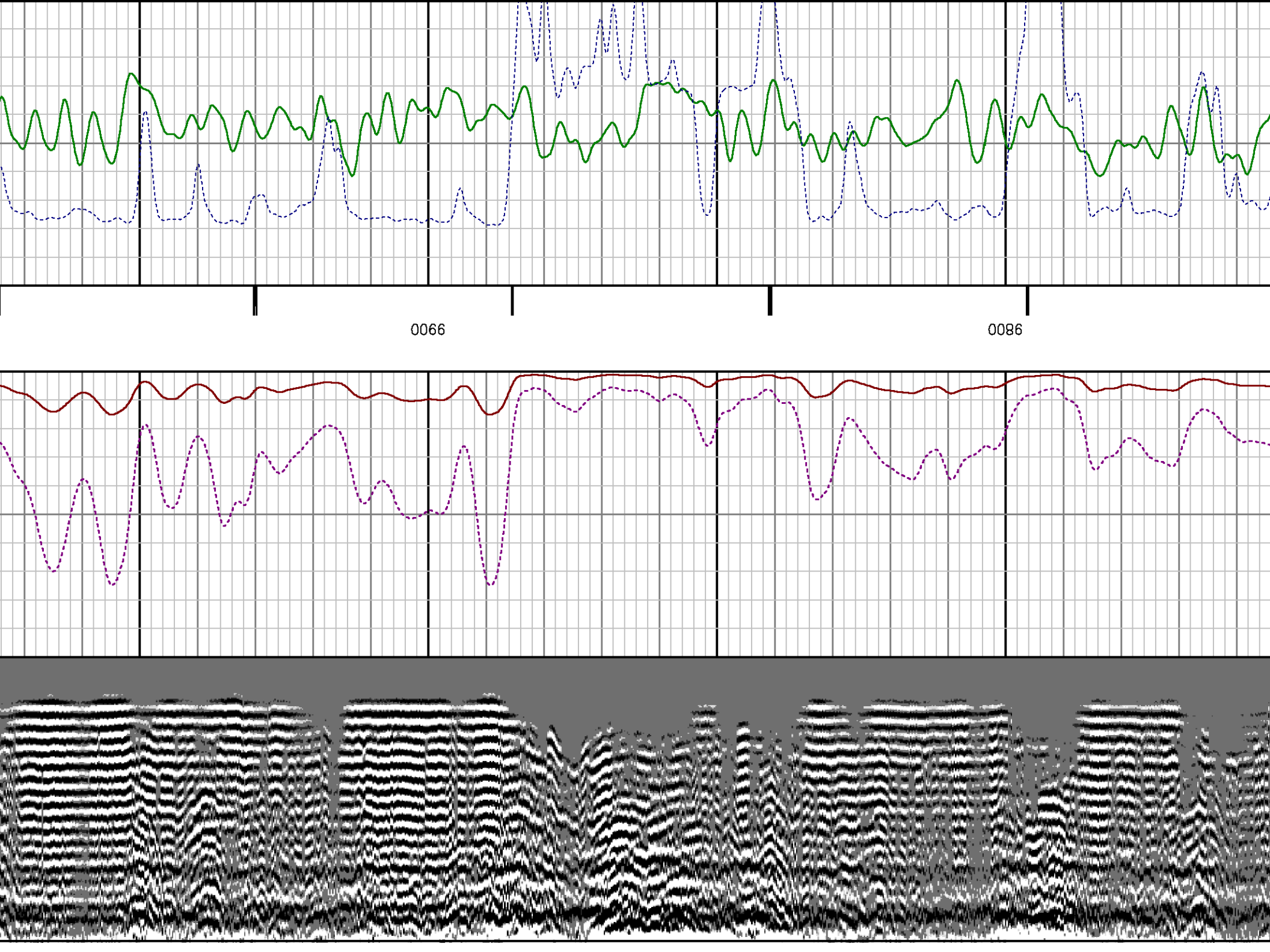
(for Acquired Curves)

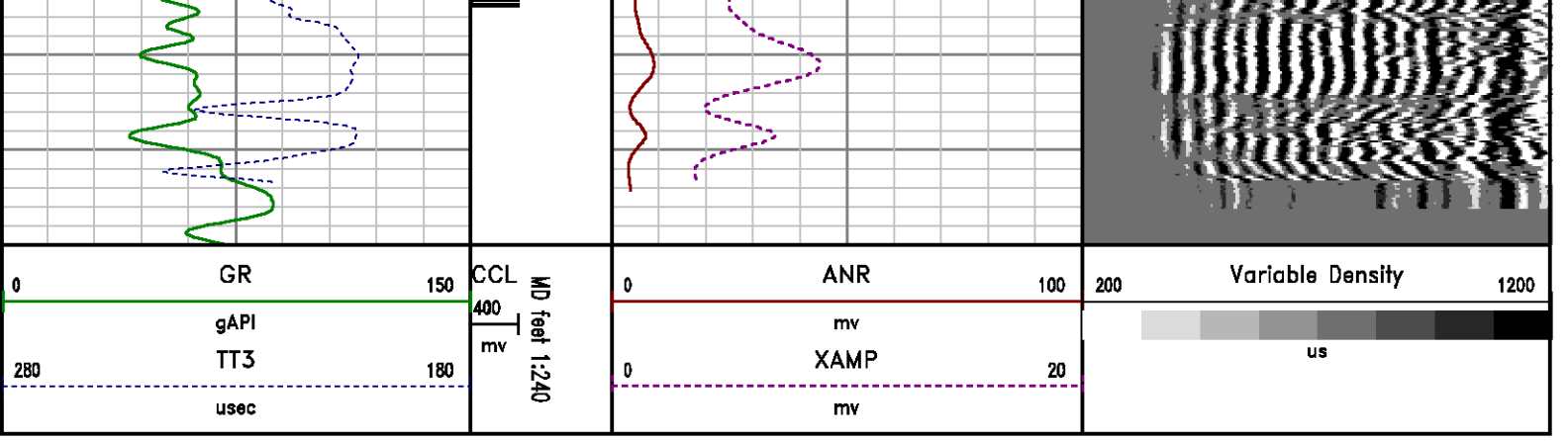
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-11.000	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-10.040	AFAR	SIG	TT5			
1355XA	-5.620	CCL					
1355XA	-1.500	GR					
1355XA	0.000	TEMP					

Created by : RAL, v4.8.008
Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY
Well : FEDERAL RGU 313-23-198
File Name : d:\welldata\313cbl\repeat.xtf
Mode : PlotMgr 5.4.504
Interval : 9695.00 - 10000.00 feet UP
Created : 7/4/2013 12:03:50 PM




0066
0086



CALIBRATION SUMMARY

GAMMA RAY

Calibration File: C:\case\calver\GR\209J7.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Jun 27 10:51:00 2013 TOOL SERIES: 1355XA ASSET: 209 SEQ: J7

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	132.31	583.42	0.410	54.26	239.26	185.00

Verification File: C:\case\calver\GR\209J7.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Thu Jun 27 10:52:46 2013 TOOL SERIES: 1355XA ASSET: 209 SEQ: J7

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	140.71	580.31	0.410	57.71	237.98	180.28

RALSHP

Shop Calibration: C:\case\calver\RALSHP\028JUL4_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Jul 04 11:23:40 2013 TOOL SERIES: 1426XA ASSET: 028 SEQ: JUL4

Tool Delay [usec]	Tank OD in	Tank Wt lbm/ft	Tank ID in
-58.00	5.50	15.50	4.95

RECEIVER	Travel Time [usec]	Amp. Gate Start [usec]	Amp. Gate Width [usec]	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	221	216	30	166	25	0.393	100.00	0.20
3 Ft. Receiver	219	216	30	166	25	2.579	100.00	0.20
5 Ft. Receiver	355	350	30	282	25	2.755	150.00	0.16
Radial #1	221	216	30	166	25	5.133	100.00	0.20
Radial #2	221	216	30	166	25	3.779	100.00	0.20
Radial #3	220	216	30	166	25	2.803	100.00	0.20
Radial #4	219	216	30	166	25	0.799	100.00	0.20
Radial #5	219	216	30	166	25	0.156	100.00	0.20
Radial #6	219	216	30	166	25	2.293	100.00	0.20
Radial #7	219	216	30	166	25	-0.560	100.00	0.19
Radial #8	221	216	30	166	25	4.306	100.00	0.20

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\028JUL4_fld.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Jul 04 11:24:59 2013 TOOL SERIES: 1426XA ASSET: 028 SEQ: JUL4

Tool Delay [usec]	Casing OD in	Casing Wt lbm/ft	Casing ID in
-58.00	4.50	11.60	4.00

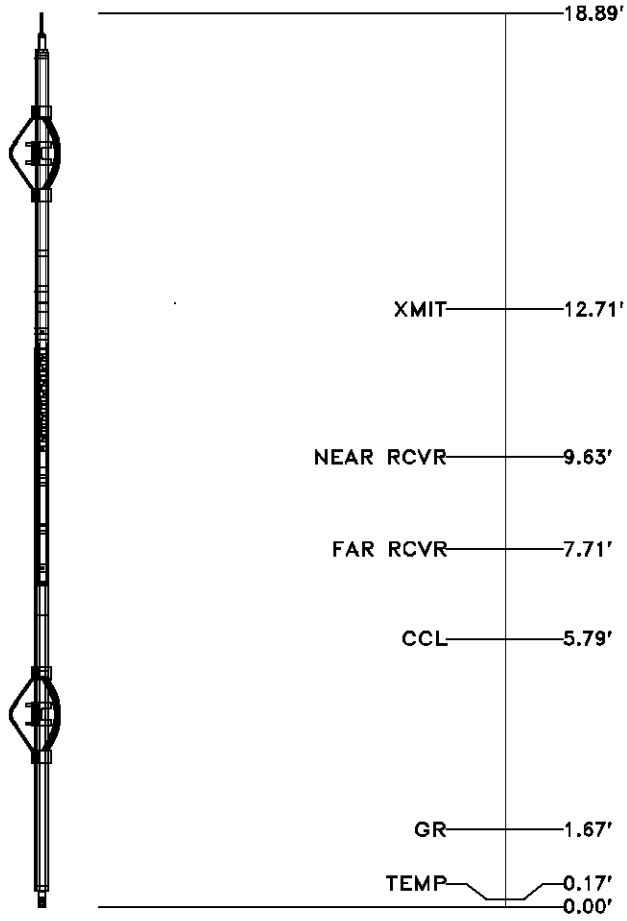
RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]
CAL Pulse	166	25	0.101	0.000	1.00	100.000
3 Ft. Receiver	200	30	-0.143			
5 Ft. Receiver	317	30	-0.377			
Radial #1	200	30	-0.253			
Radial #2	200	30	-0.169			
Radial #3	200	30	-0.122			
Radial #4	200	30	-0.130			
Radial #5	200	30	-0.136			
Radial #6	200	30	-0.115			
Radial #7	200	30	-0.152			
Radial #8	200	30	-0.240			

TOOL DIAGRAM

OTA SHORT CABLE HEAD

PROBE 2 3/4 DUAL RECEIVER RADII	
Series	1426XA
Mnemonic	PROB
Diameter	2.75"
Length	11.17'
Measure Point	0.75' FAR RCVR
Measure Point	2.67' NEAR RCVR
Measure Point	5.75' XMIT
Temp Rating	350.00 °F
Press Rating	18000.00 PSI

RAL GR/TEMP/CCL/CHV DETECTOR	
Series	1355XA
Mnemonic	RAL
Diameter	2.75"
Weight	85.00 lb
Length	6.96'
Measure Point	0.17' TEMP
Measure Point	1.67' GR
Measure Point	5.79' CCL
Temp Rating	400.00 °F
Press Rating	20000.00 PSI



Total Length: 18.89'
Total Weight: Not Available
Max Diameter: 0' 2.75"

BAKER HUGHES

Baker Atlas

Company	WPX ENERGY		File No: CH074107
Well	FEDERAL RGU 313-23-198		API No: 05103117890000
Field	SULPHUR CREEK		
County	RIO BLANCO	State COLORADO	

Location	Elevations	
SHL: 1810' FSL & 1901' FWL SEC:23	KB 6566 ft	23 1S 98W
BHL: 2173' FSL & 628' FWL SEC:23	DF	RGU 23-23-198
	GL 6545 ft	CYCLONE 29
SEC 23 TWP 1S RGE 98W		