BAKER HUGHES

Baker Atlas

RADIAL ANALYSIS BOND LOG

File No:	CH082897
API No:	05045220270000
Company	WPX ENERGY
Well	FEDERAL PA 43-21
Field	PARACHUTE
County	GARFIELD
State	COLORADO

Location

21 6S 95W

PA 22-21 PAD

NABORS 573

SHL: 2610' FNL & 1448' FWL

BHL: 2615' FSL & 272' FEL (NESE)

SEC 21 TWP 6S RGE 95W

Other Services

RPM

Permanent Datum	GL	Elevation	6030 ft
Log Measured From	KB	26 ft	Above P. D.
Drill Measured From	KELLY BUSHING		

Elevations

KB 6056 ft

DF

GL 6030 ft

Date		27/FEB/14	
Run		ONE	
Service Order		US625297	
Depth Driller		9782 ft	
Depth Logger		9757 ft	
Bottom Logged Interval		9747 ft	
Top Logged Interval		26 ft	
Time Started		2045	
Time Finished		0030	
Operator Rig Time		3.75 HRS	
Type of Fluid in Hole		WATER	
Fluid Density		NA	
Salinity		NA	
Fluid Level		76 ft	
Logged Cement Top		NA	
Wellhead Pressure		0 psi	
Maximum Hole Deviation		NA	
Nominal Logging Speed		65 fpm	
Maximum Recorded Temperature		236 degF	
Reference Log		NONE	
Reference Log Date		NA	
Equipment No.	Location	4271 GRAND JCT	
Recorded By		FLOYD RENEAU	
Witnessed By		COLE APPLEGATE	

- 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
9.625 in			26 ft	1833 ft
4.5 in	11.6 lbm/ft	I-80	26 ft	9782 ft

Borehole Record

Bit Size	From	To
13.5 in	26 ft	1833 ft
8.75 in	1833 ft	9782 ft

Remarks

All data on this log is shifted using the CCL curve to put the wellhead (top CCL mark) on depth with ground level elevation at the client's request.

The amount of linear shift is 16 feet.

Logged with zero PSI at wellhead.

BHT = 236°F

SJ = 6522'-6546'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10218496	CENT
1	1	GR/CCL	2459XA	10124121	CENT

PRIMARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	35.350	9759.000
RAL	Amp Gate Start Near	195.000	usec	35.350	9759.000
RAL	Amp Gate Start Radial	195.000	usec	35.350	9759.000
RAL	Amp Gate Width Far	25.000	usec	35.350	9759.000
RAL	Amp Gate Width Near	25.000	usec	35.350	9759.000
RAL	Amp Gate Width Radial	25.000	usec	35.350	9759.000
RAL	casing od	4.500	inches	35.350	9759.000
RAL	casing wt	11.600	lbm/ft	35.350	9759.000
RAL	FB Start Far	291.900	usec	35.350	9759.000
RAL	FB Start Near	175.391	usec	35.350	9759.000
RAL	FB Start Radial	175.391	usec	35.350	9759.000
RAL	FB Thresh Far	10.000	mv	35.350	9759.000
RAL	FB Thresh Near	4.000	mv	35.350	9759.000
RAL	FB Thresh Radial	4.000	mv	35.350	9759.000
RAL	Fluid Travel Time	200.000	usec/ft	35.350	9758.881

DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-16.750	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	-15.750	AFAR	SIG	TT5			
2459XA	-11.340	CCL					
2459XA	-9.490	GR					
2459XA	-4.090	NEU					

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

Company : WPX ENERGY
Well : FEDERAL PA 43-21
File Name : d:\welldata\wpx\pa 43-21\43ral\main.xtf
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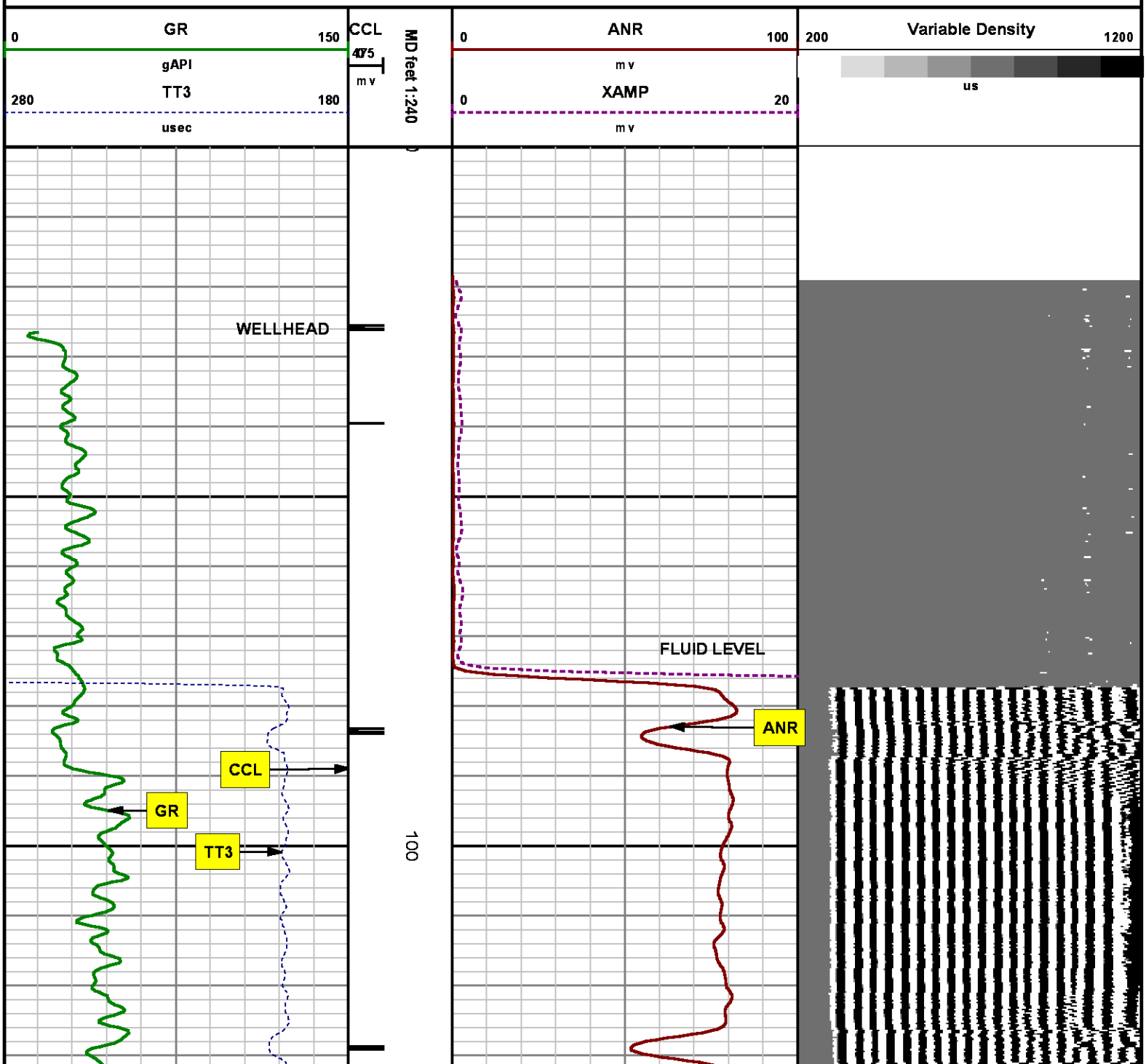

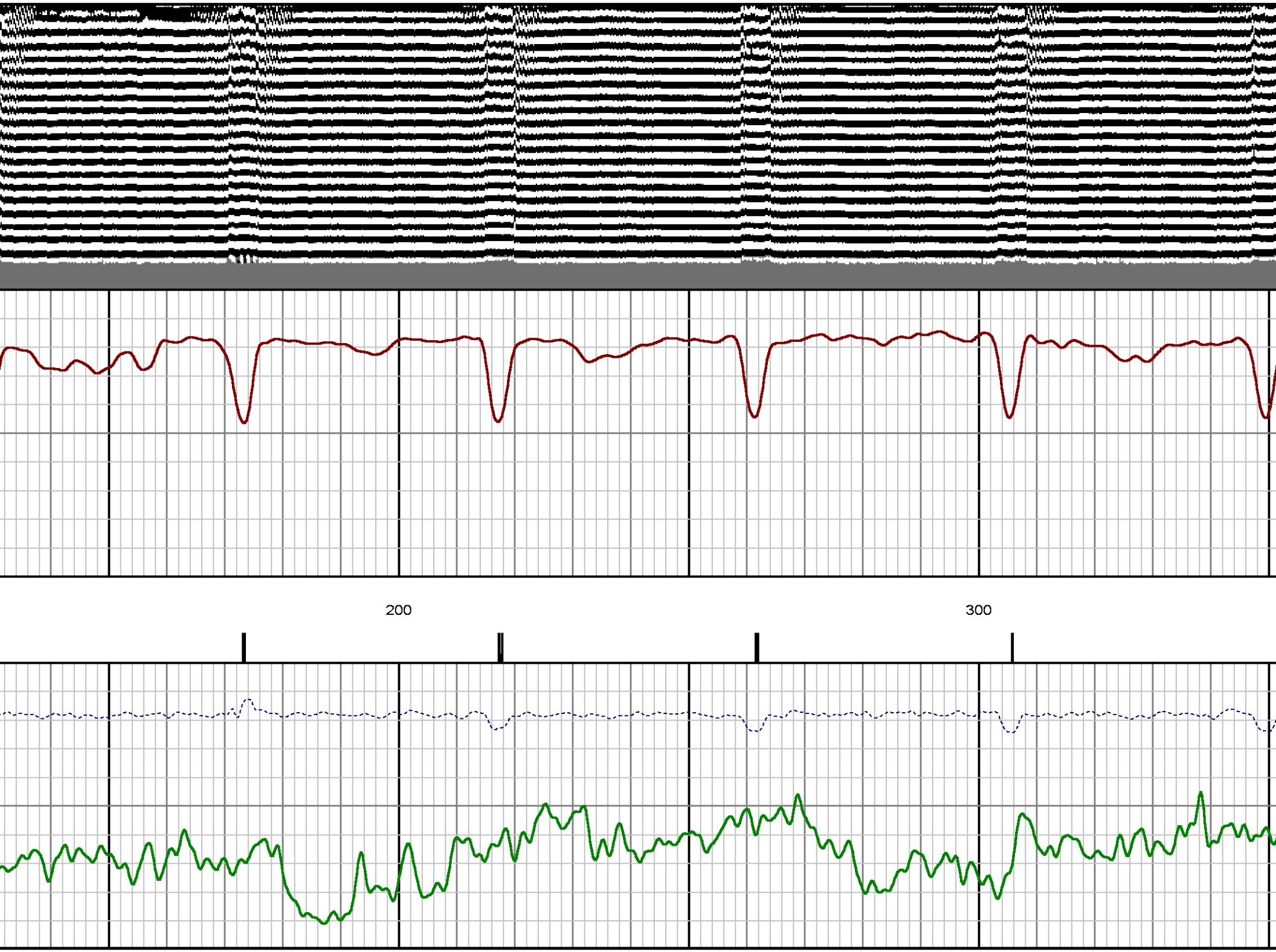
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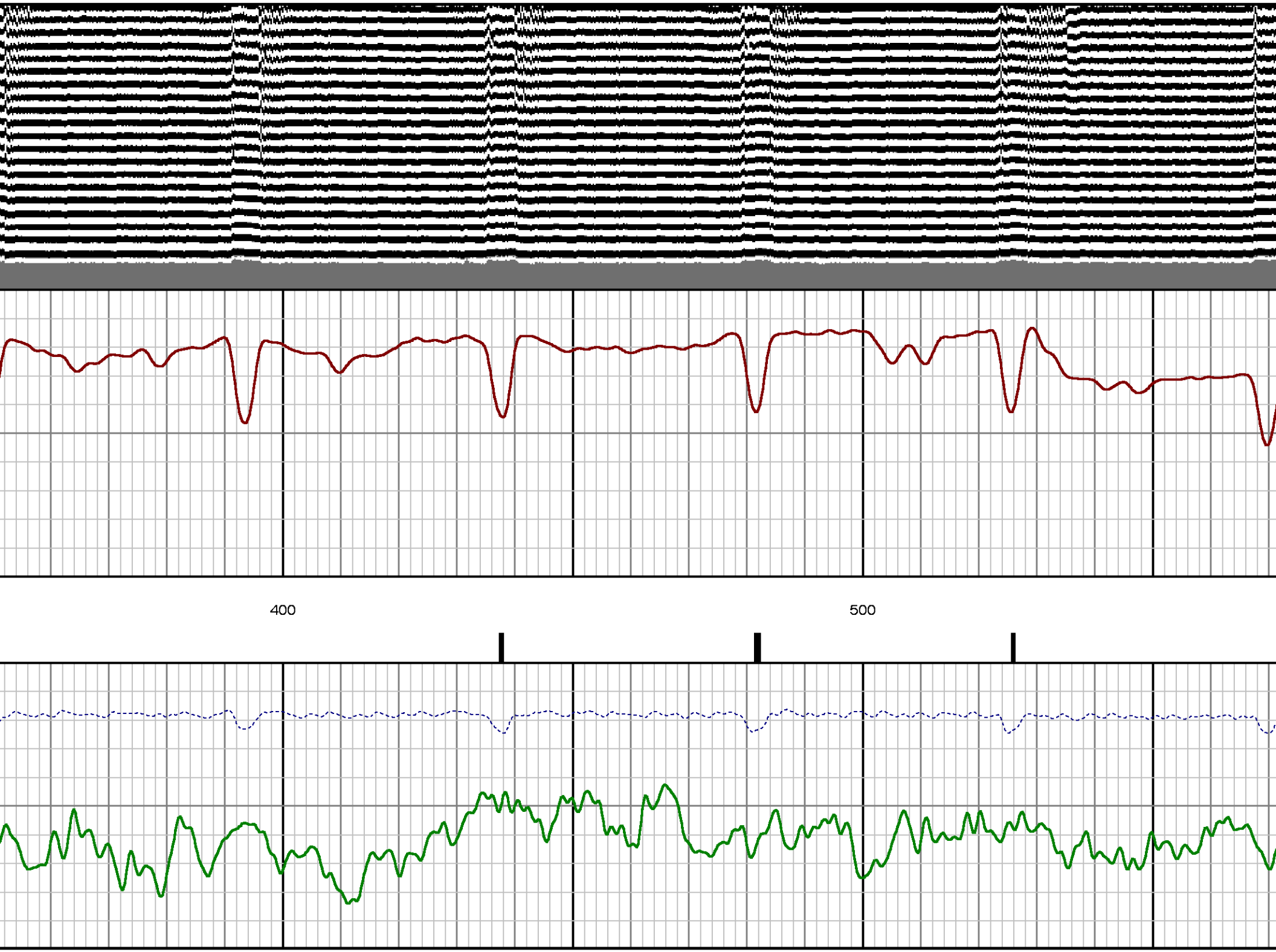
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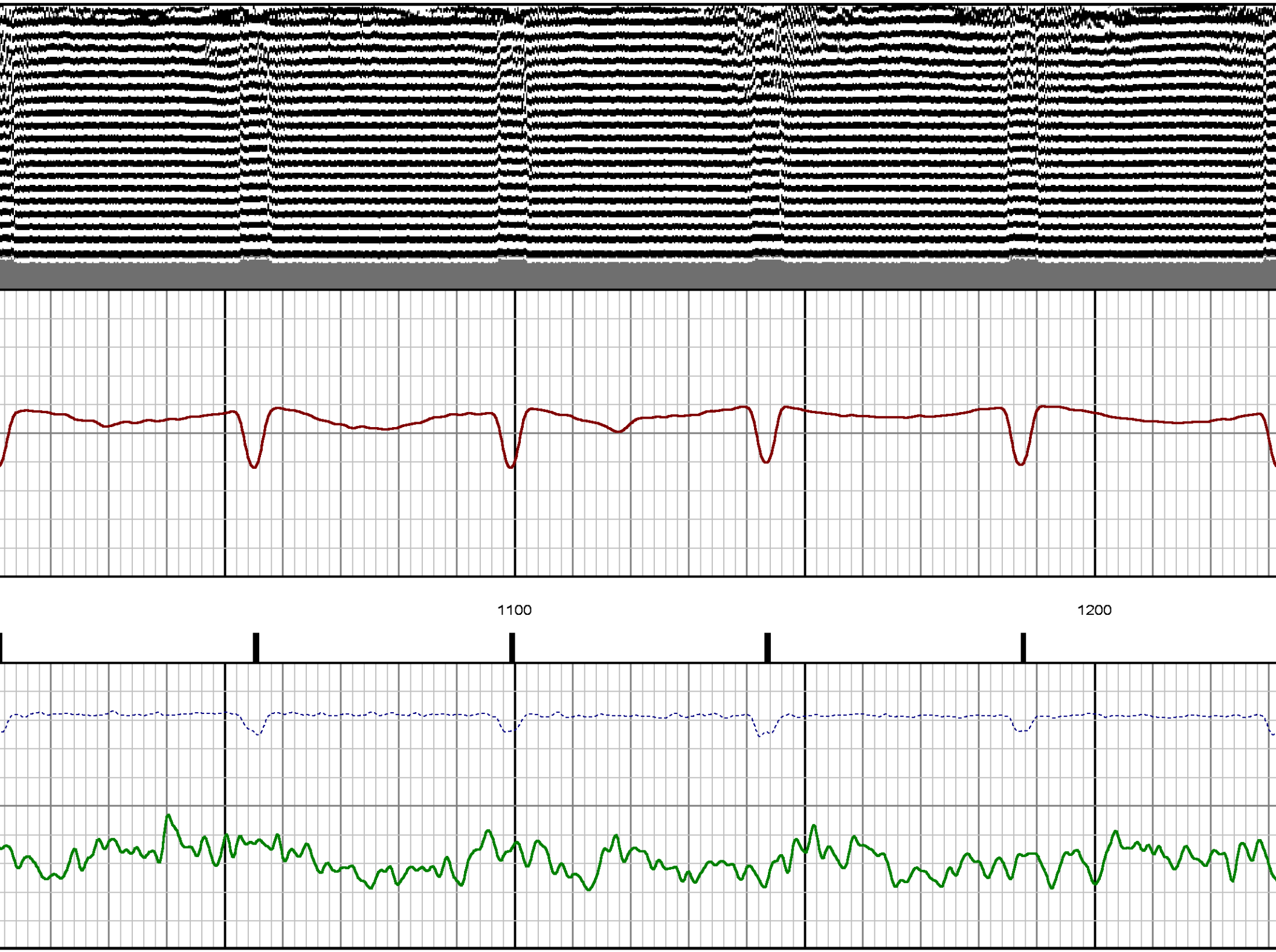
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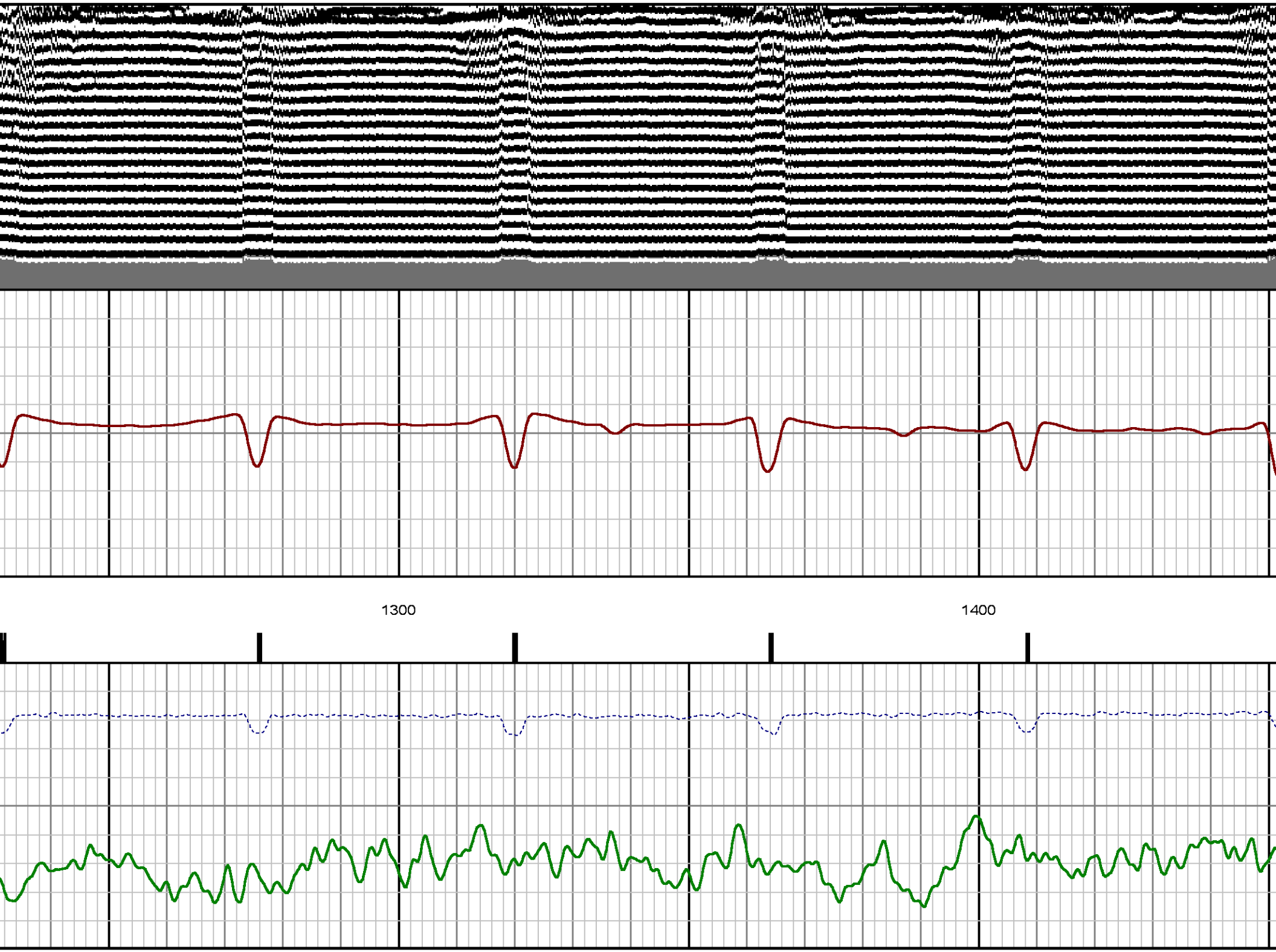
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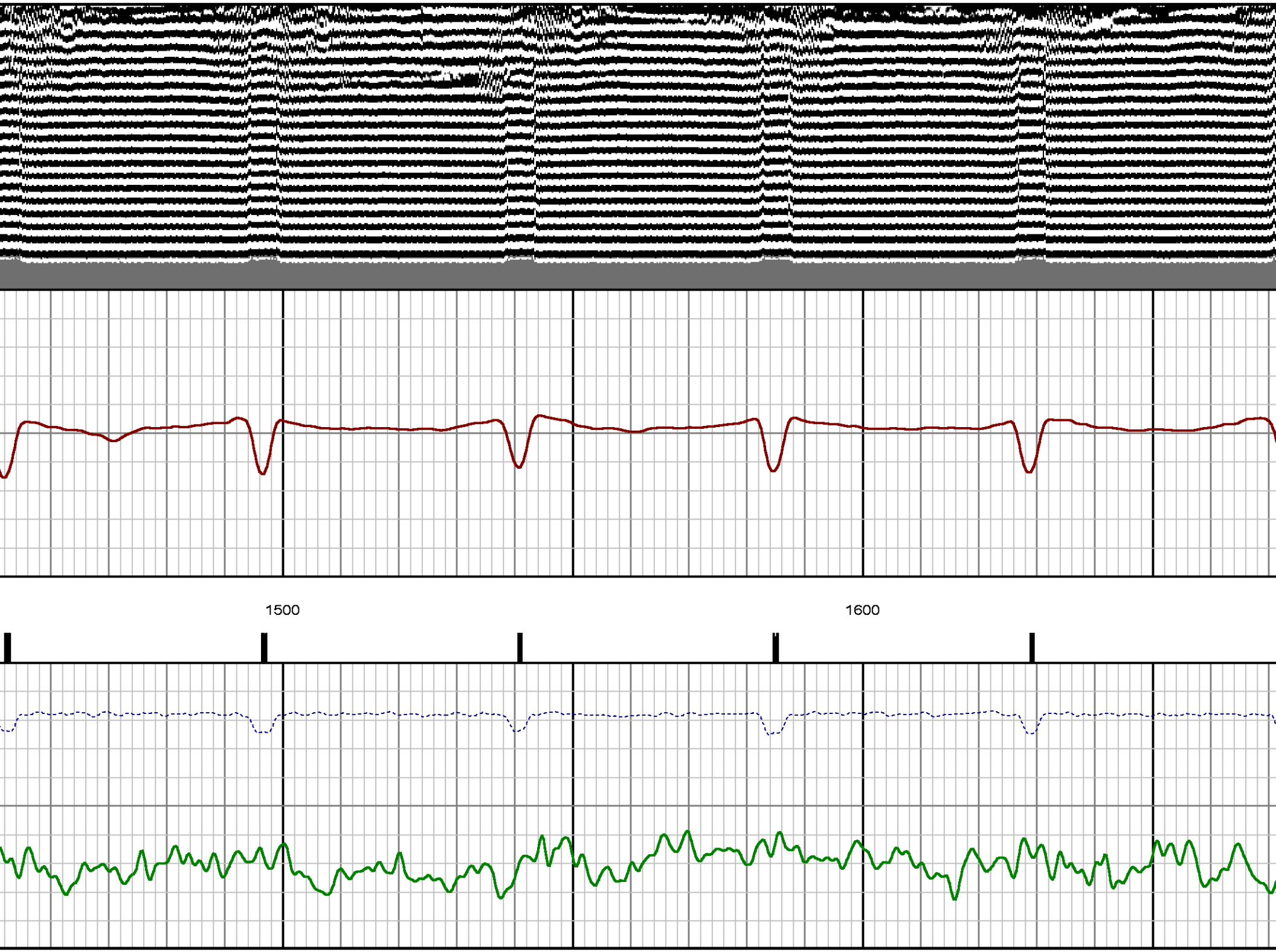
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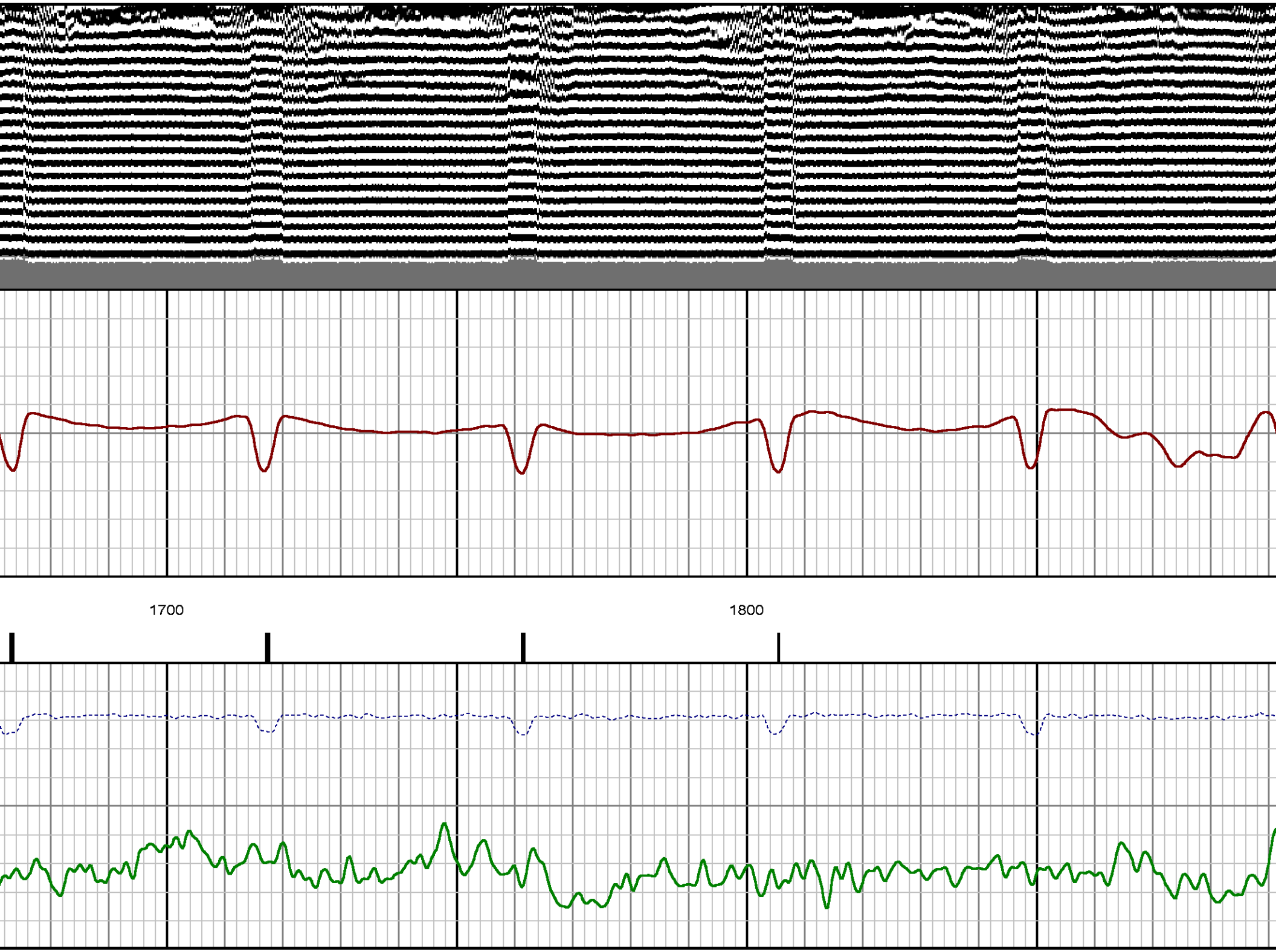
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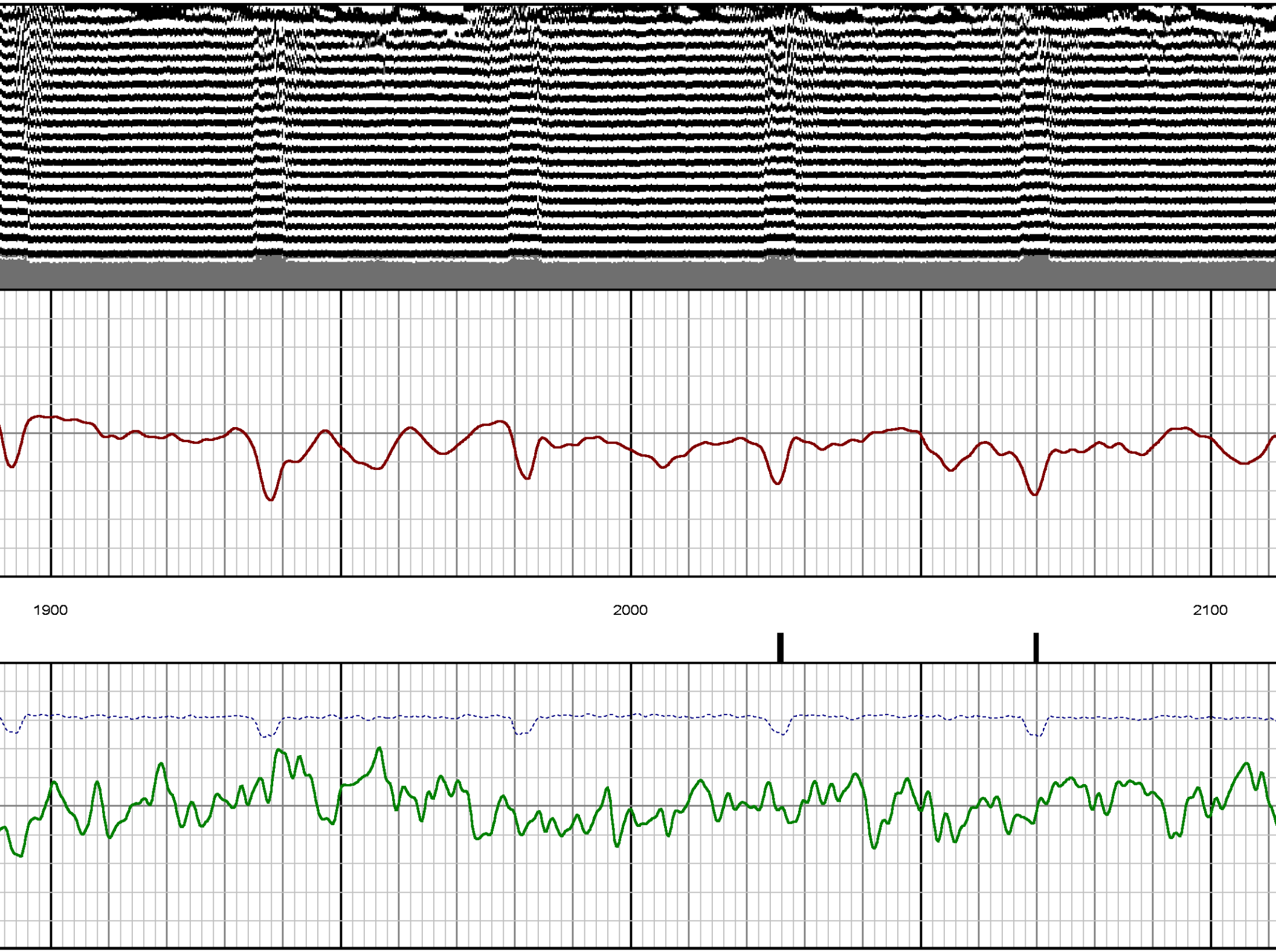
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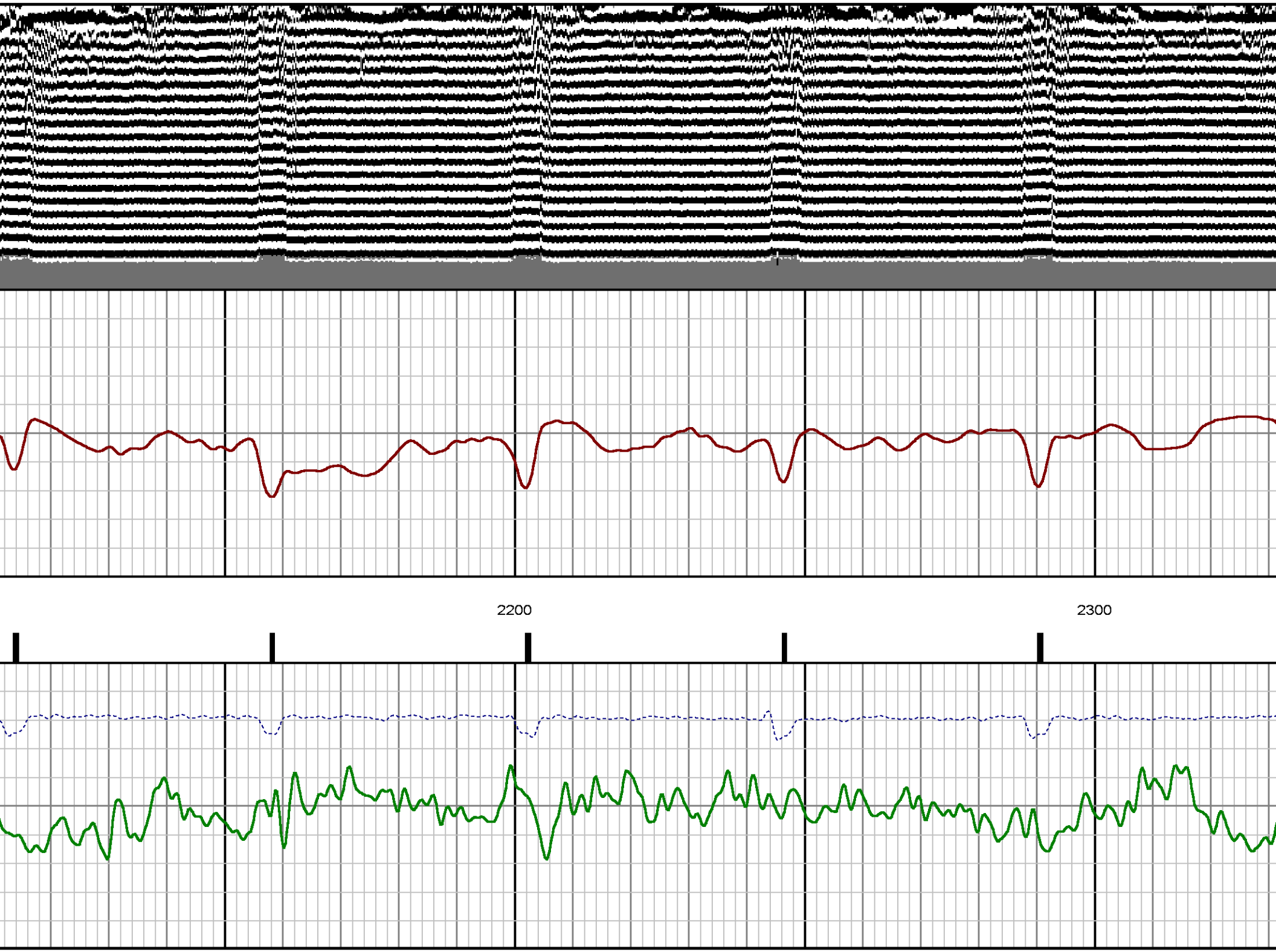
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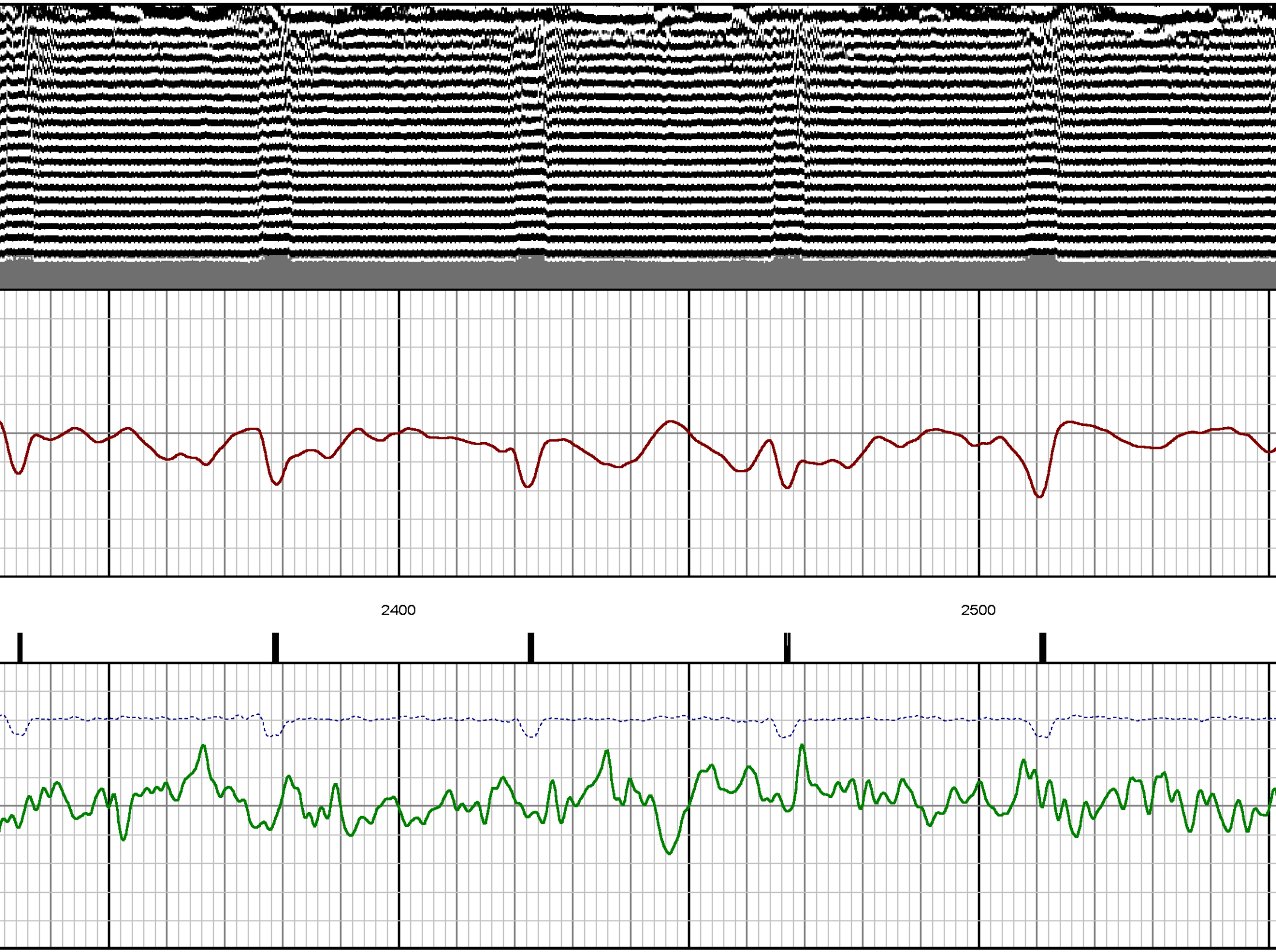
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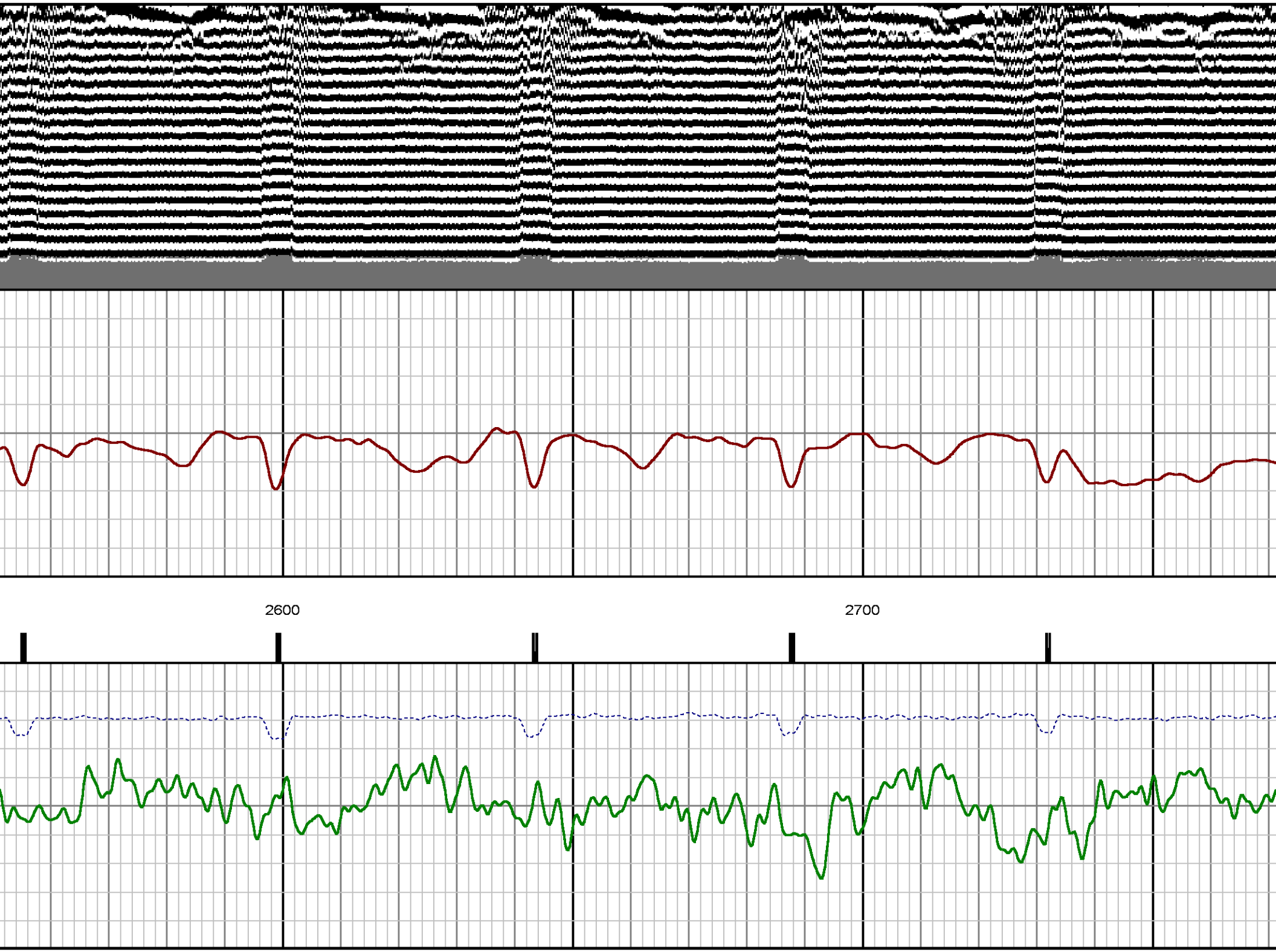
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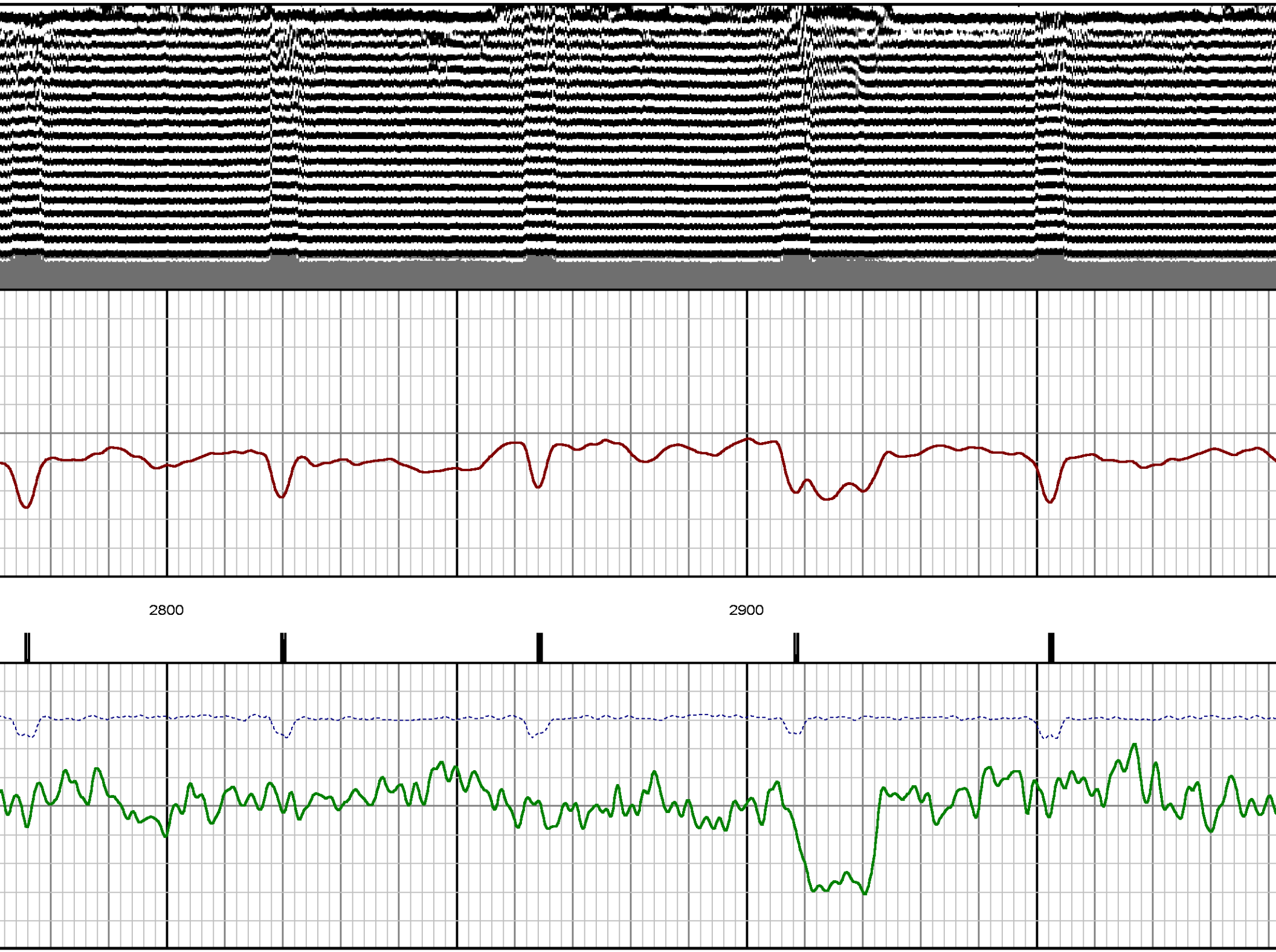
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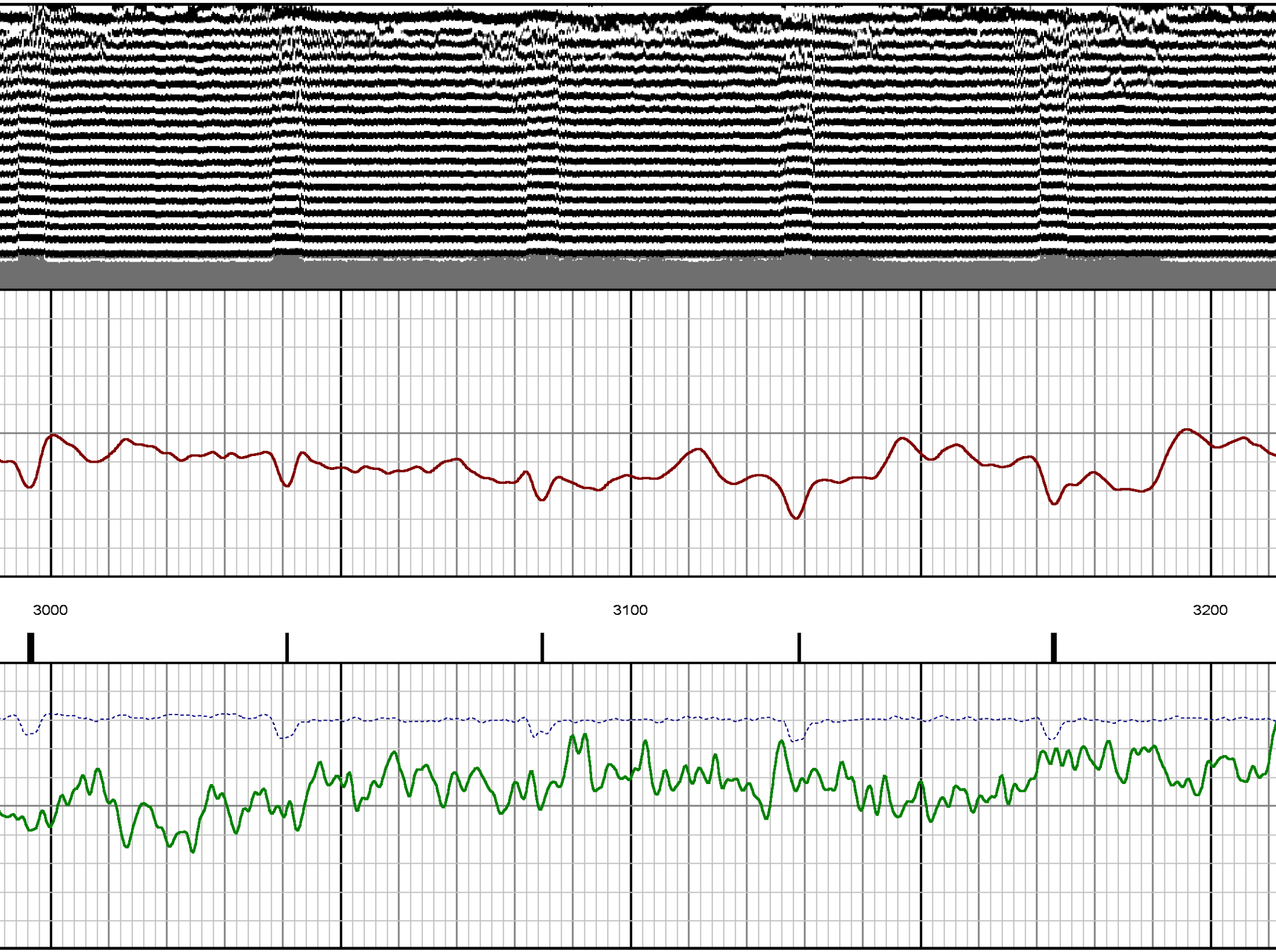
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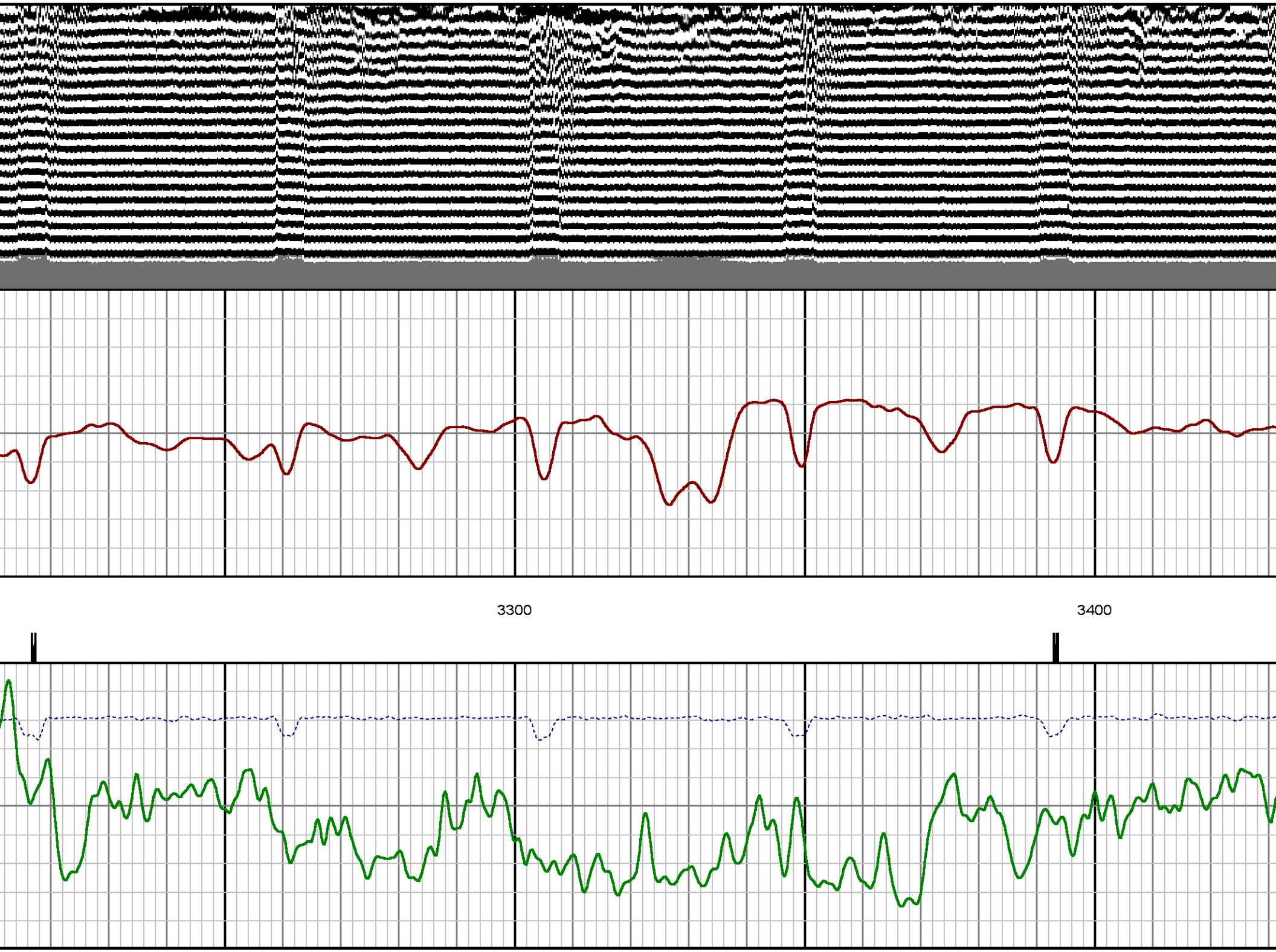
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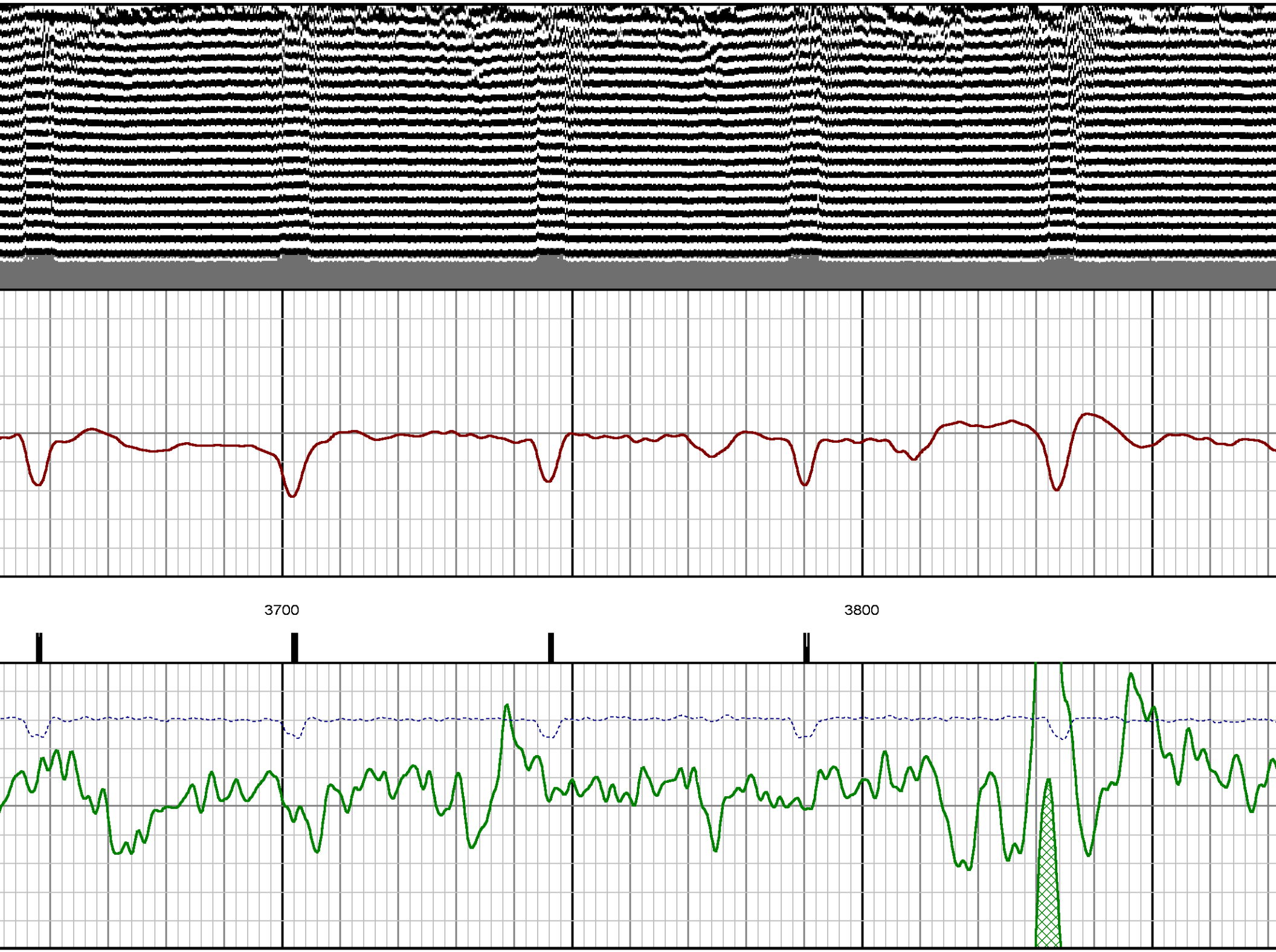
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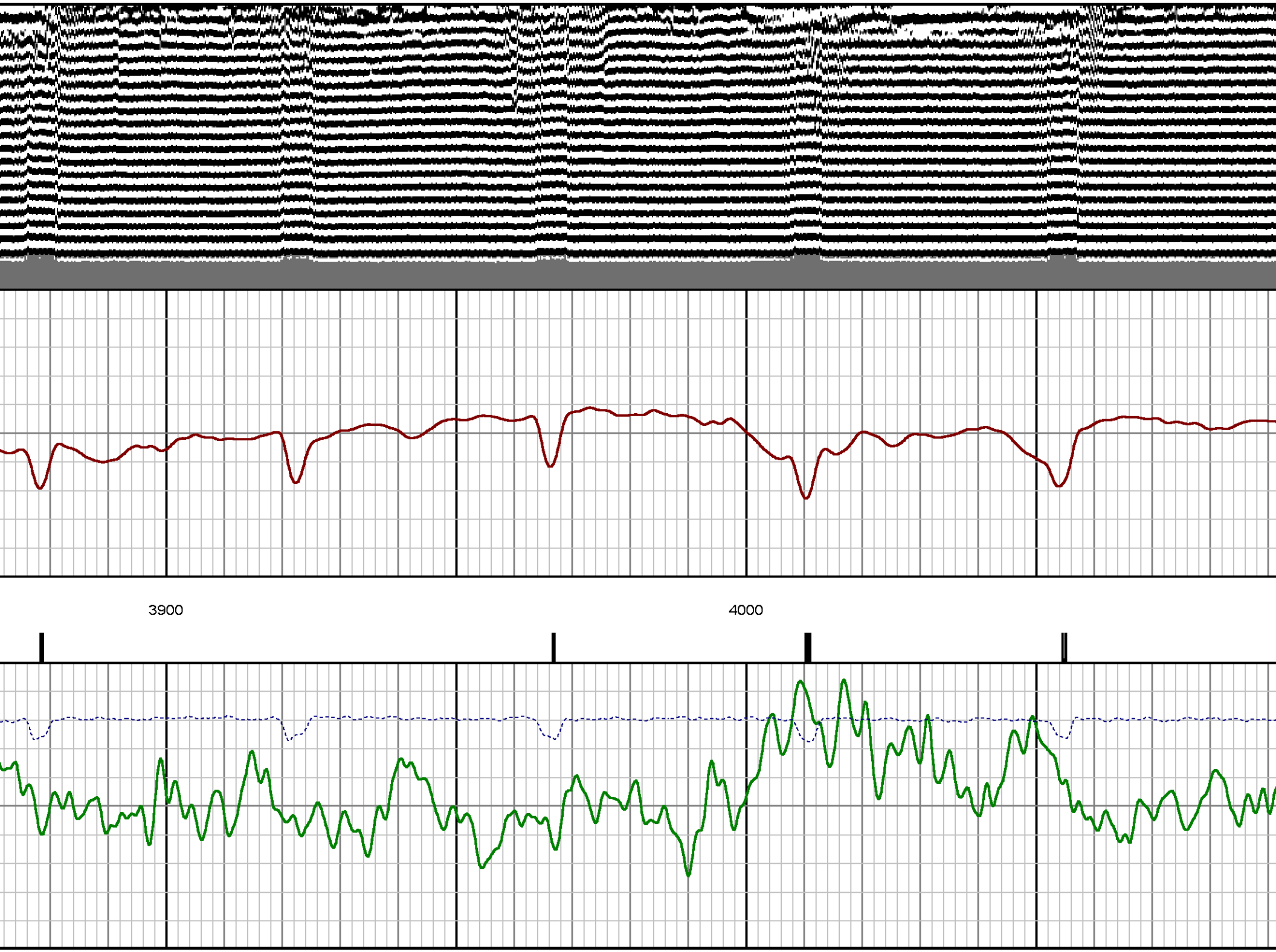
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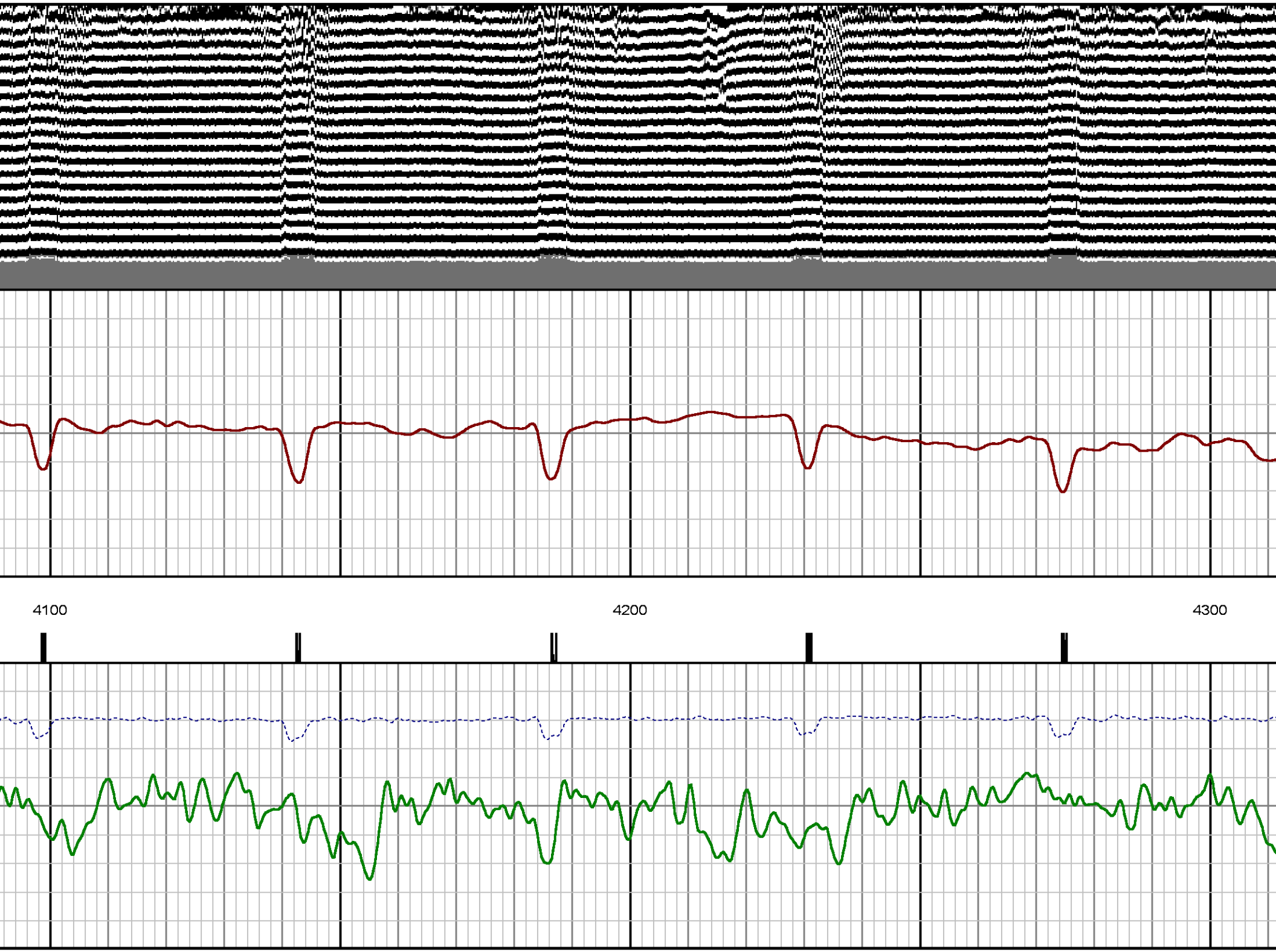
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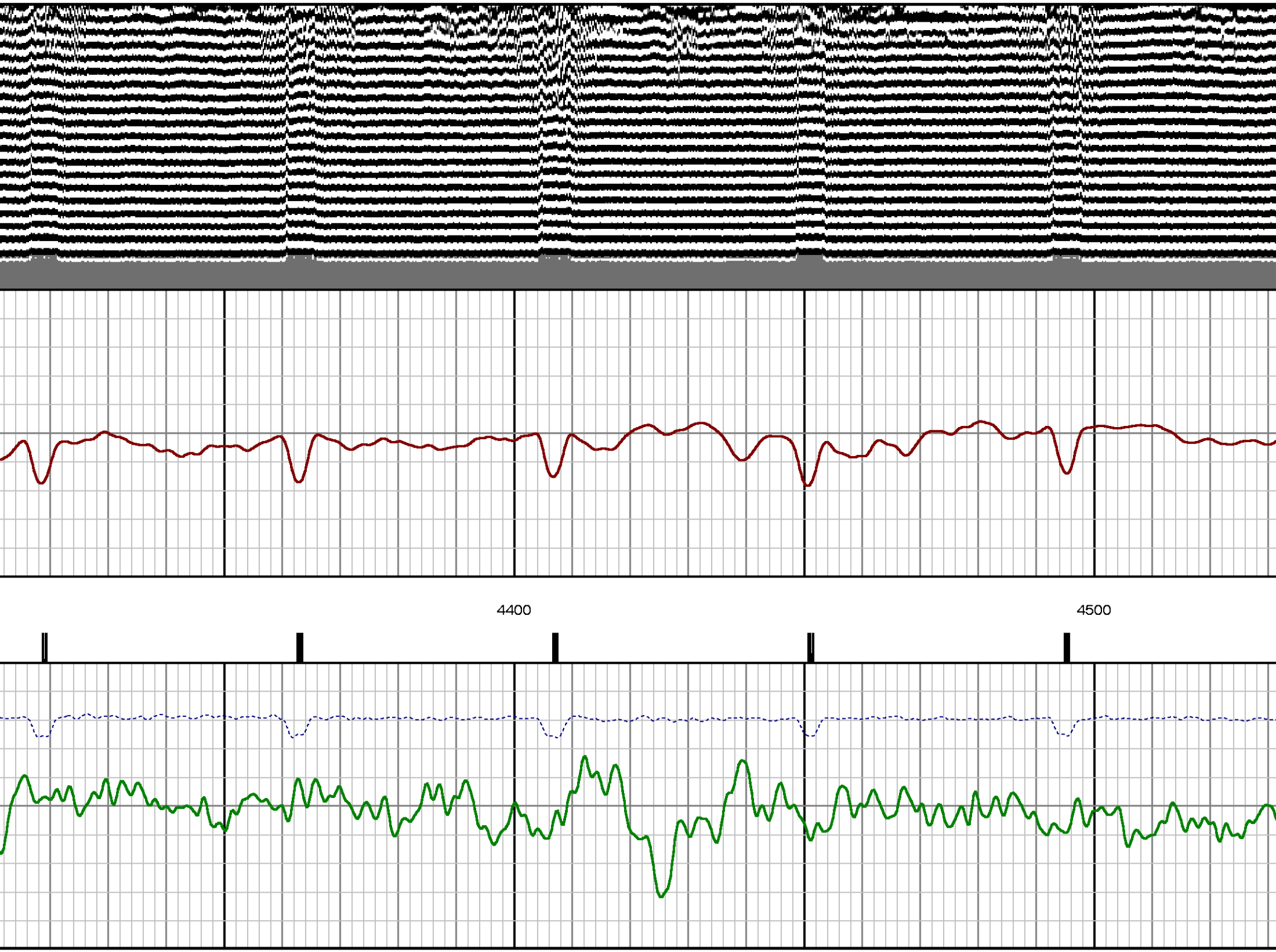
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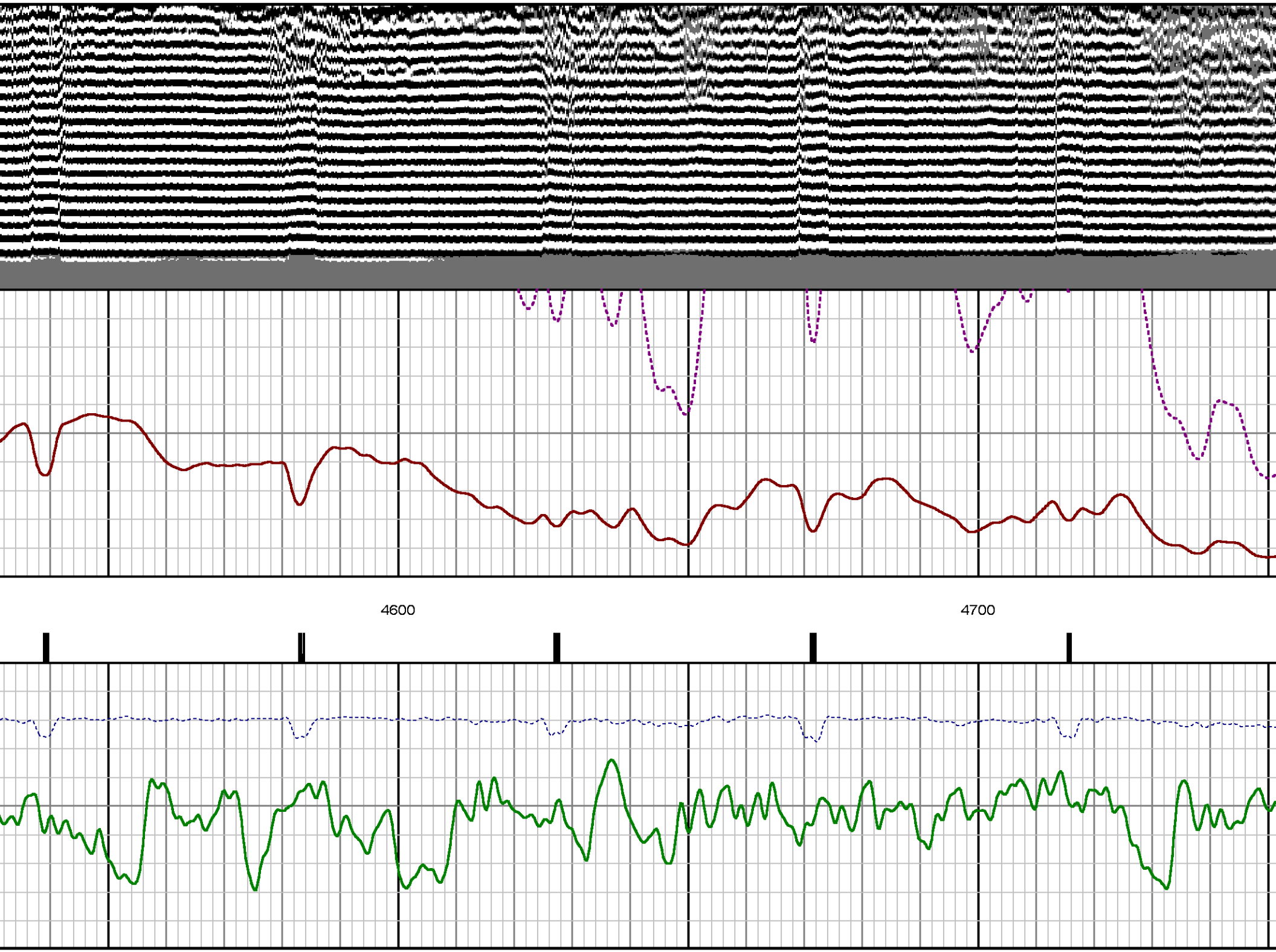
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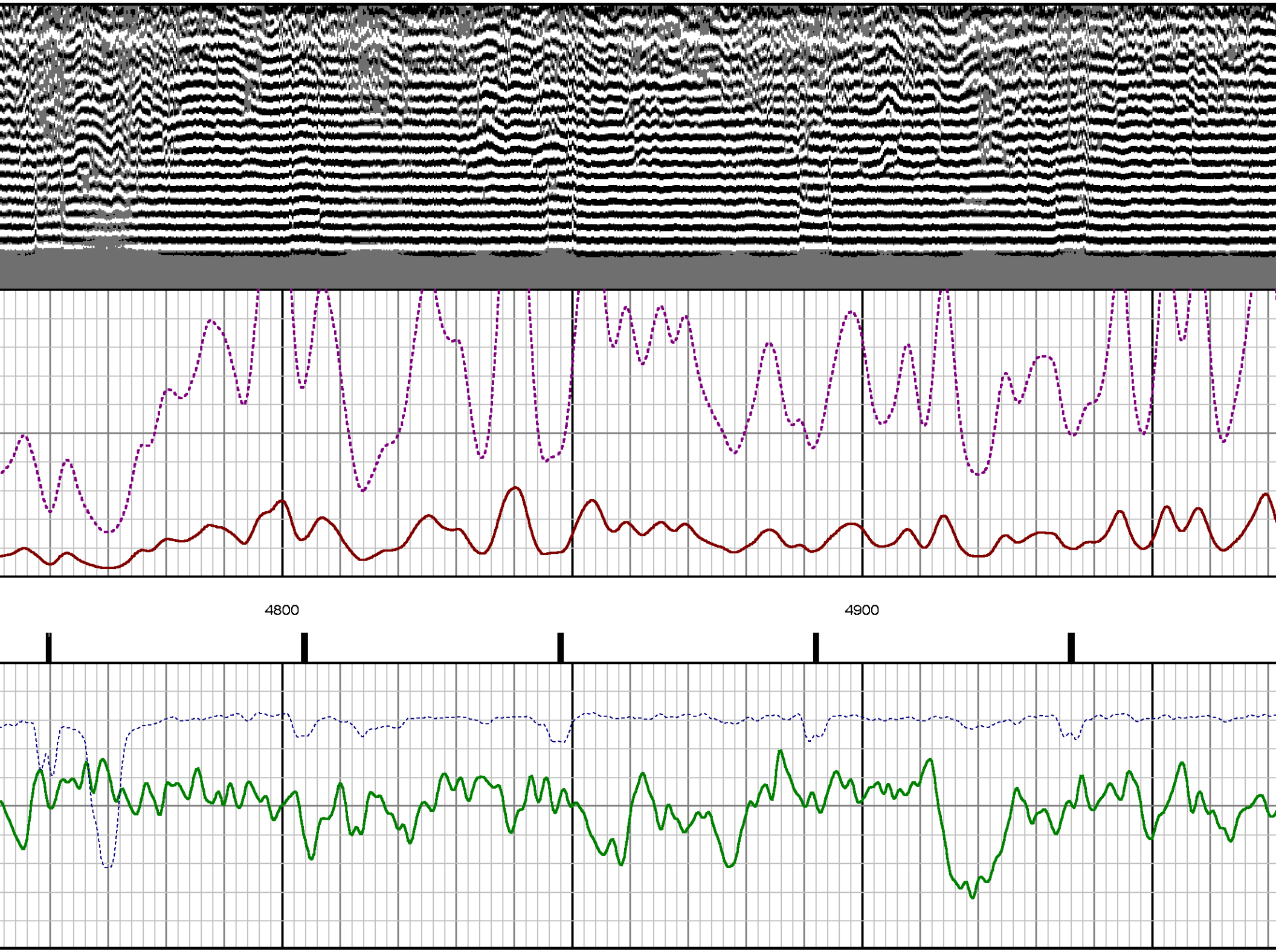
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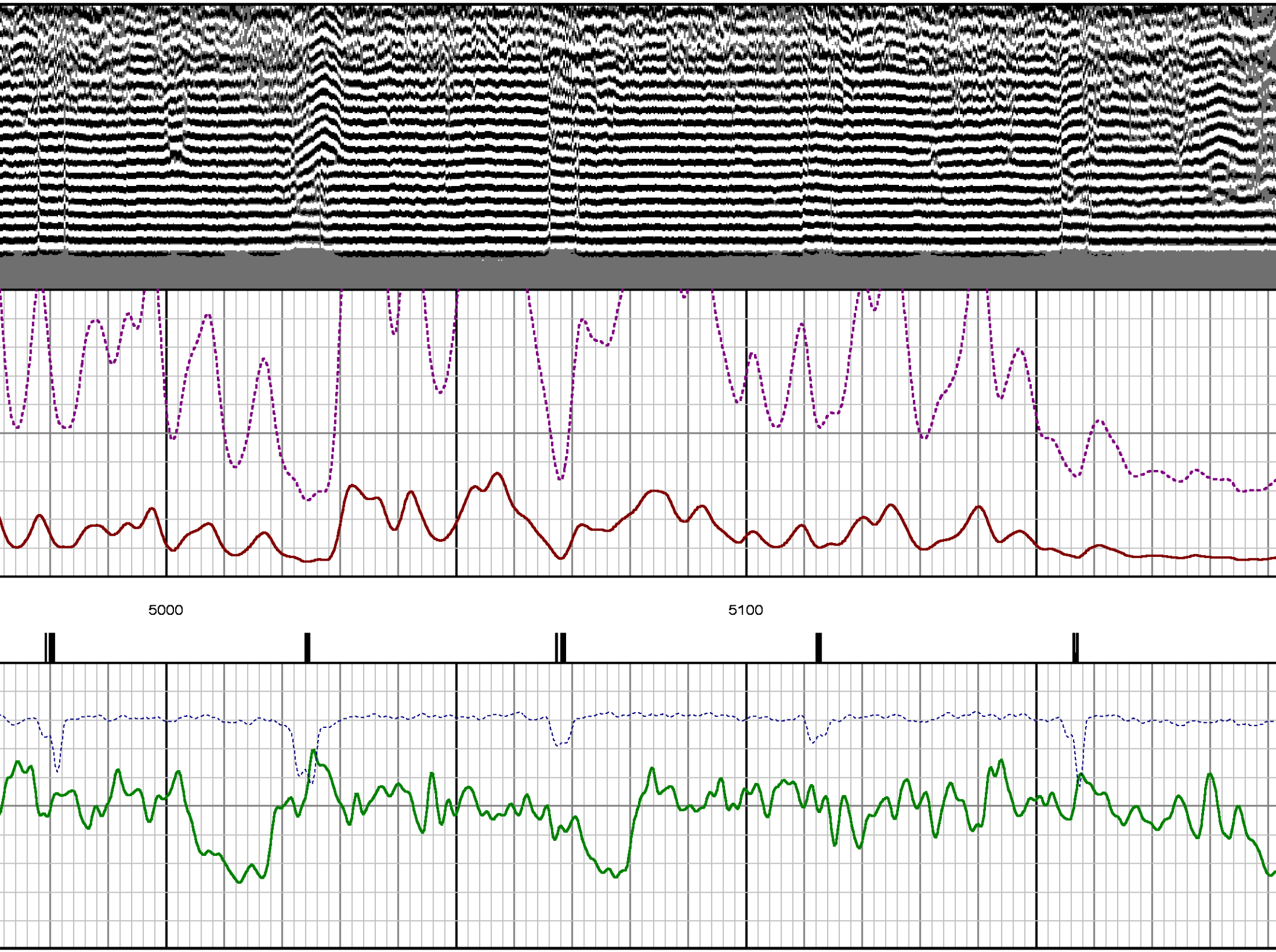
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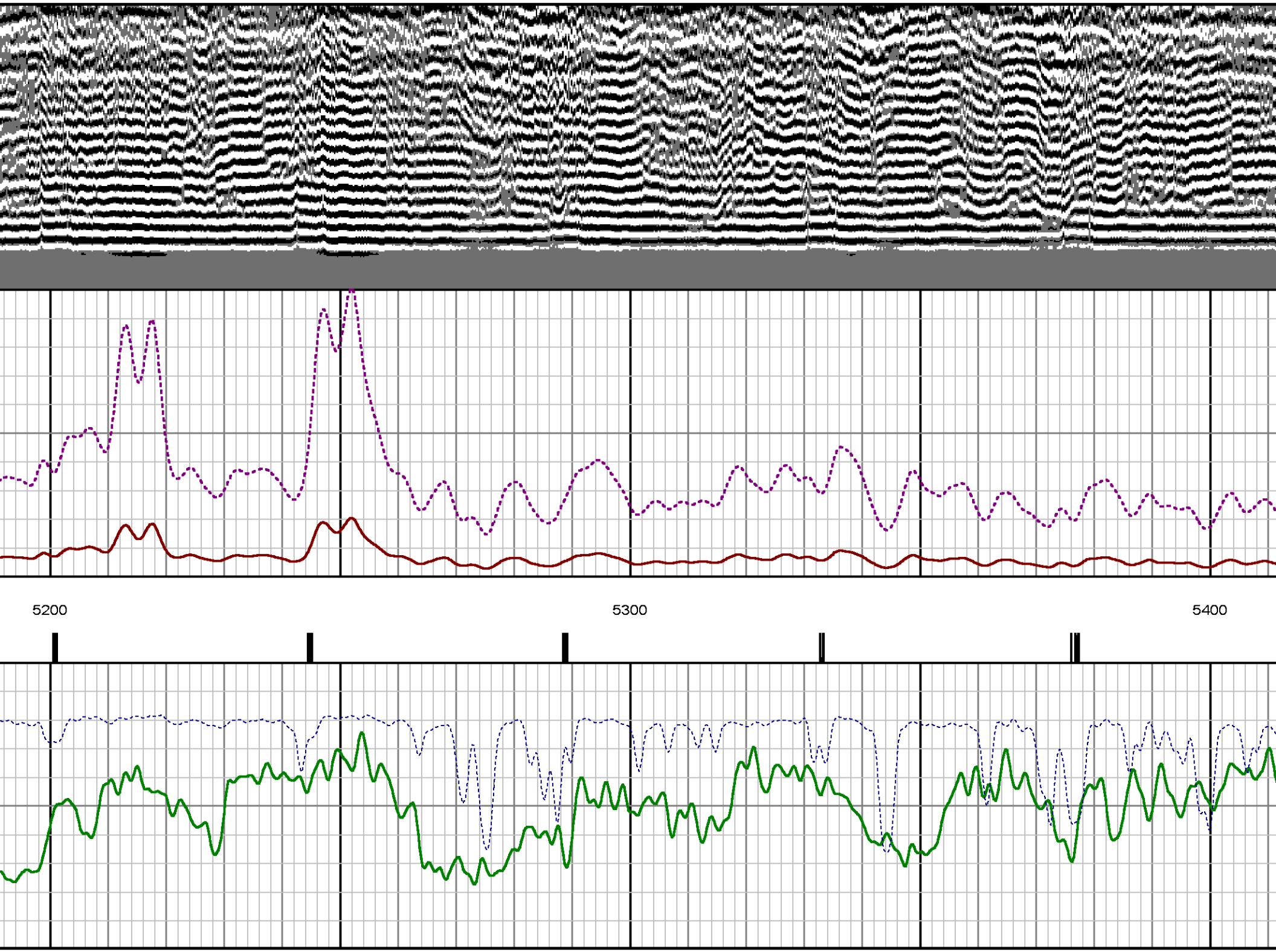
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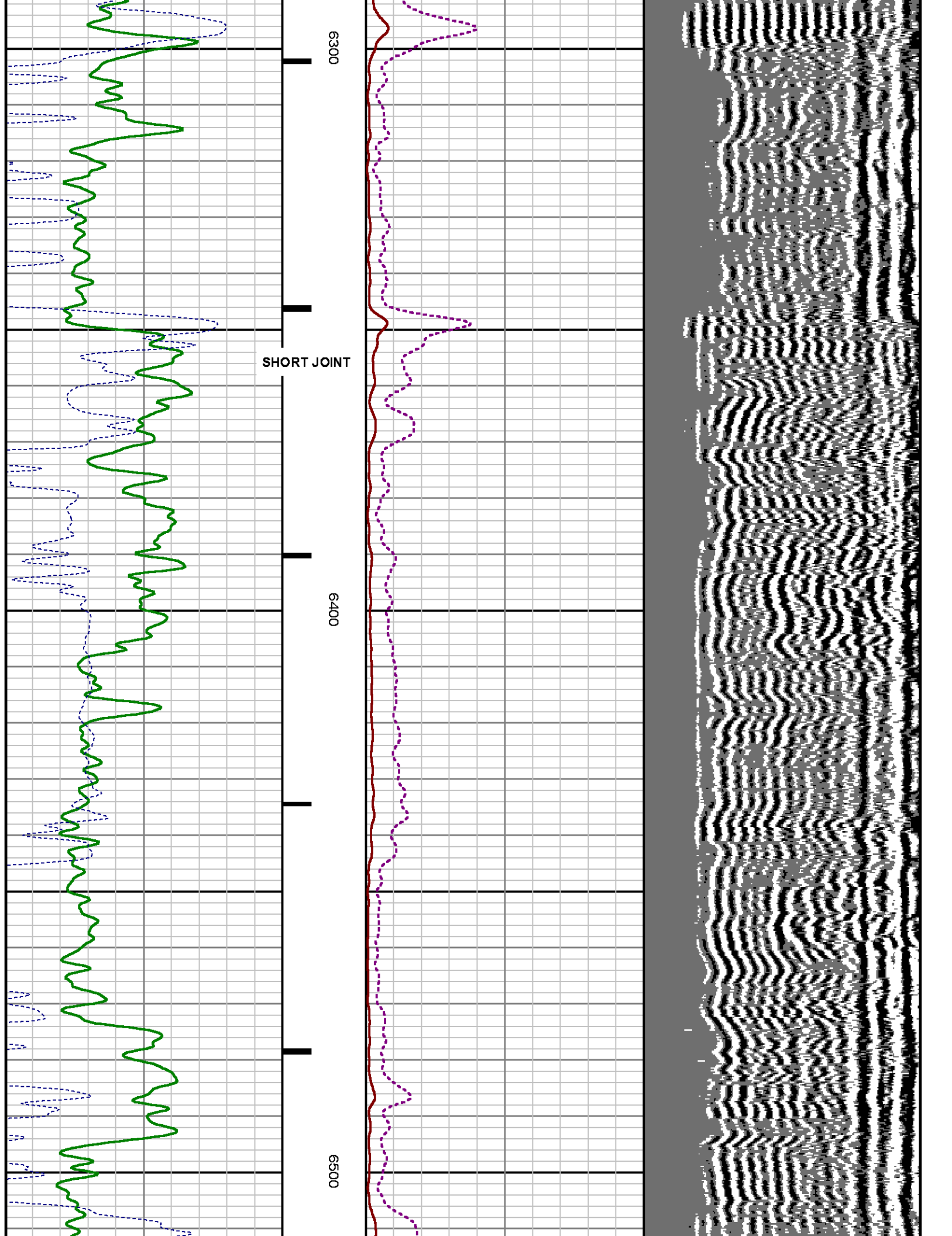
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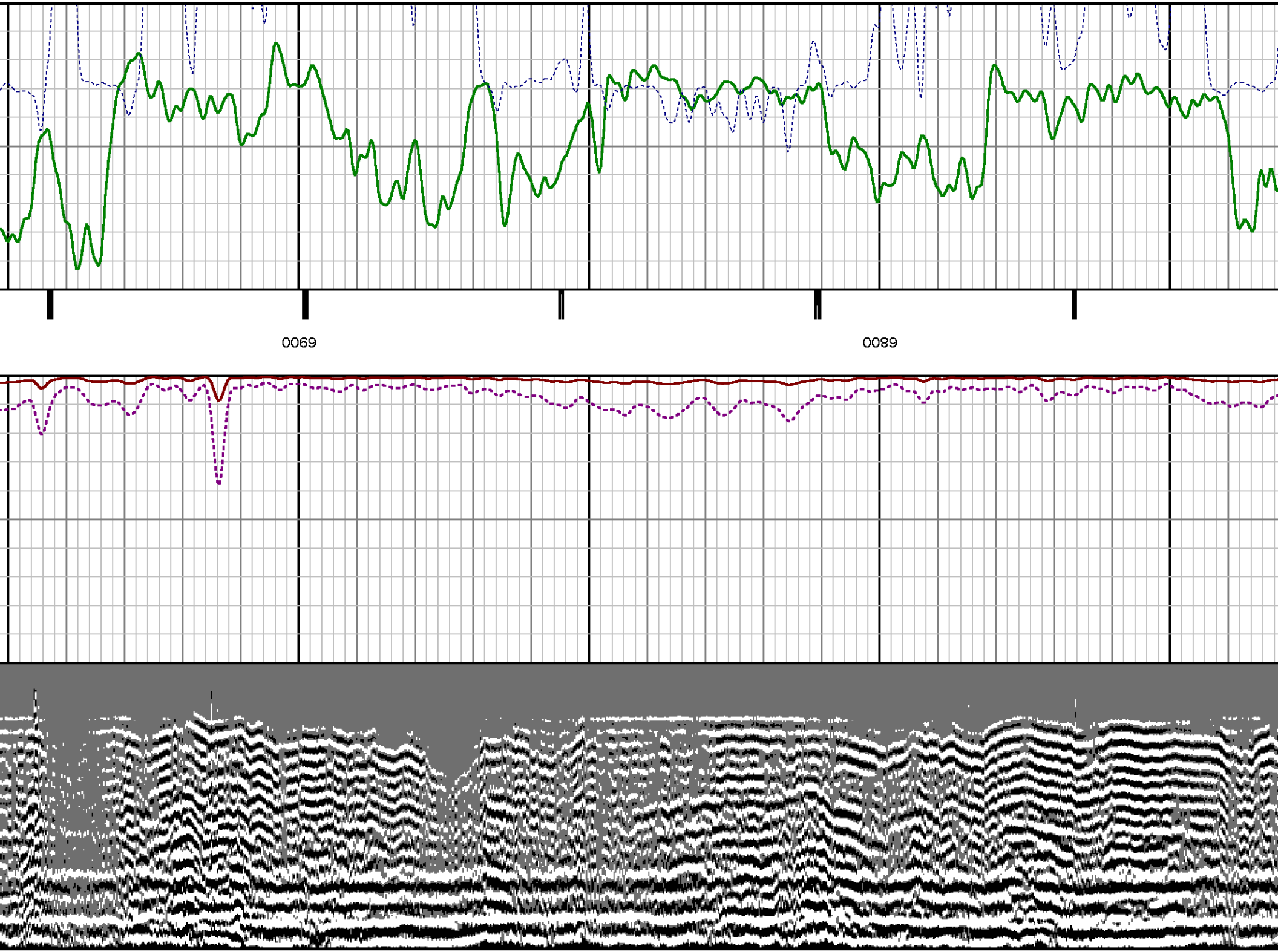
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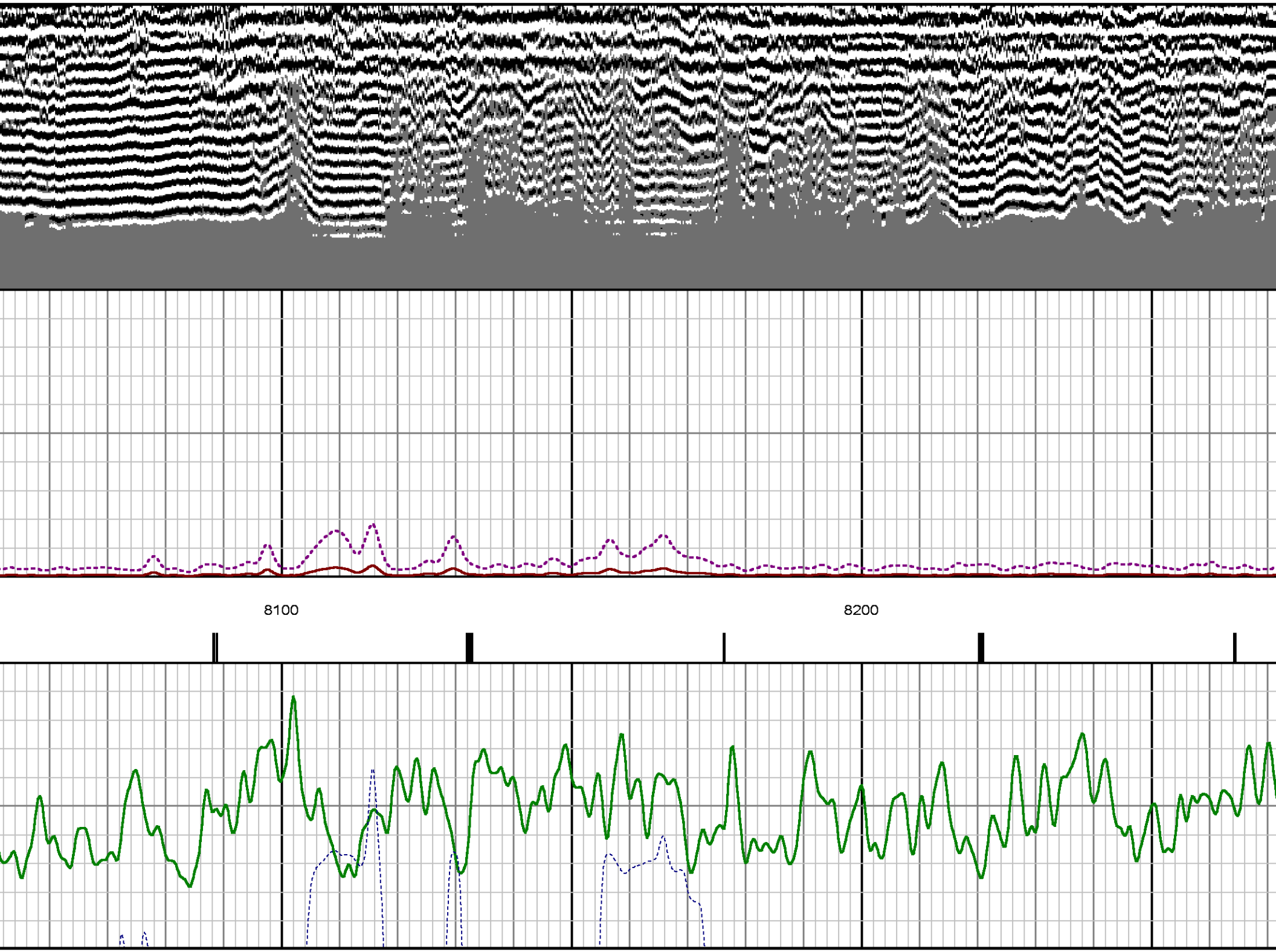
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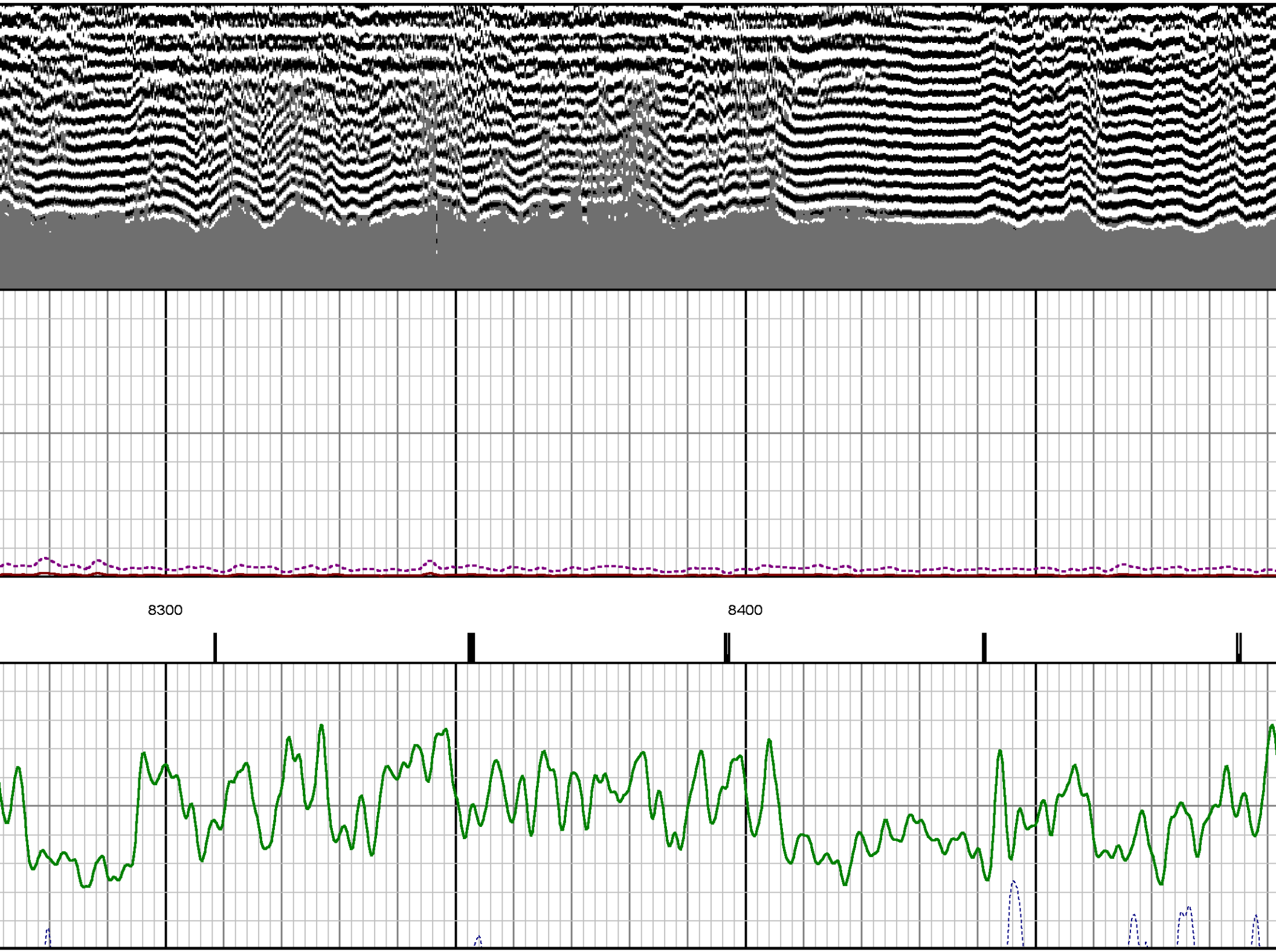
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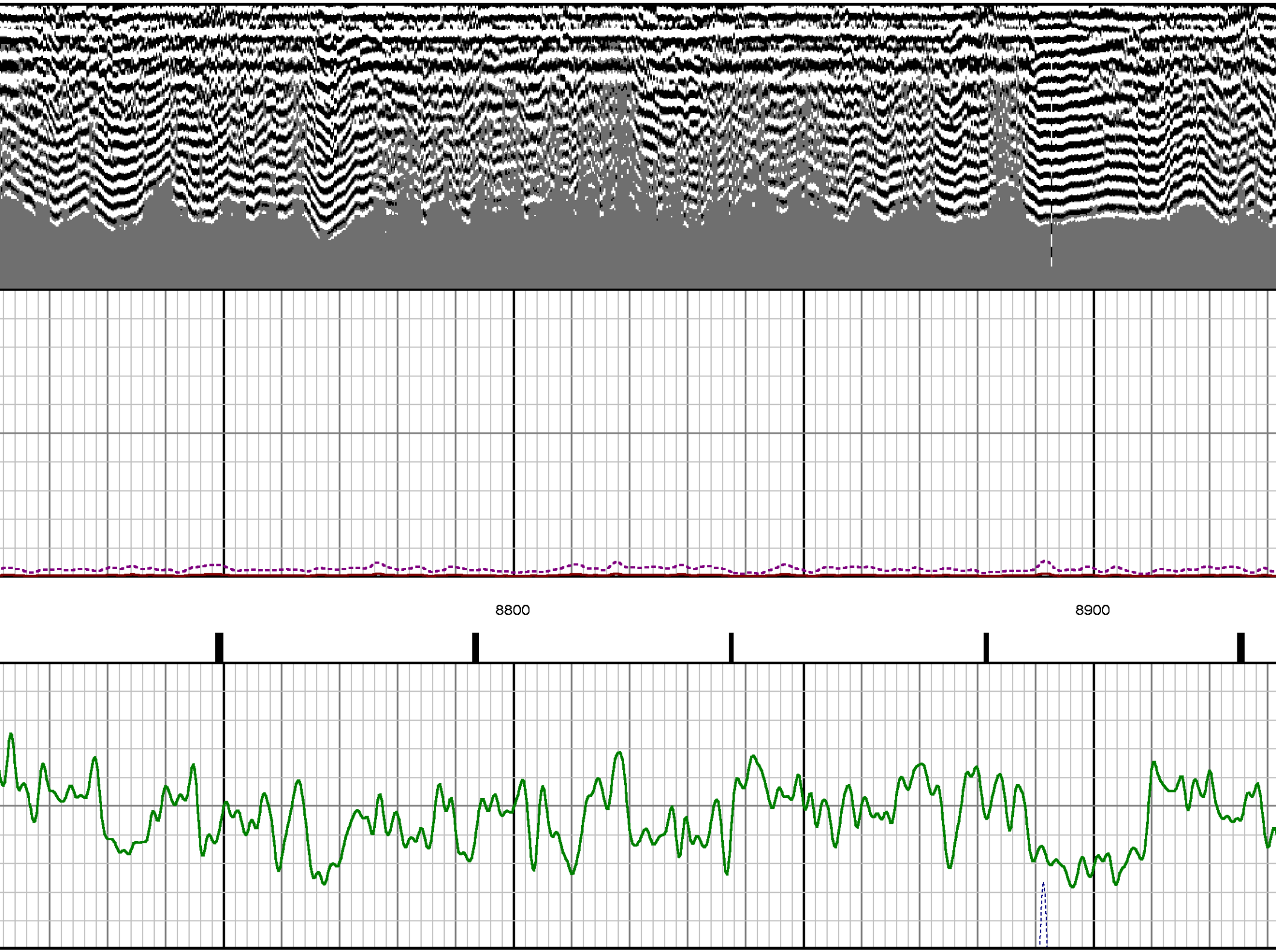
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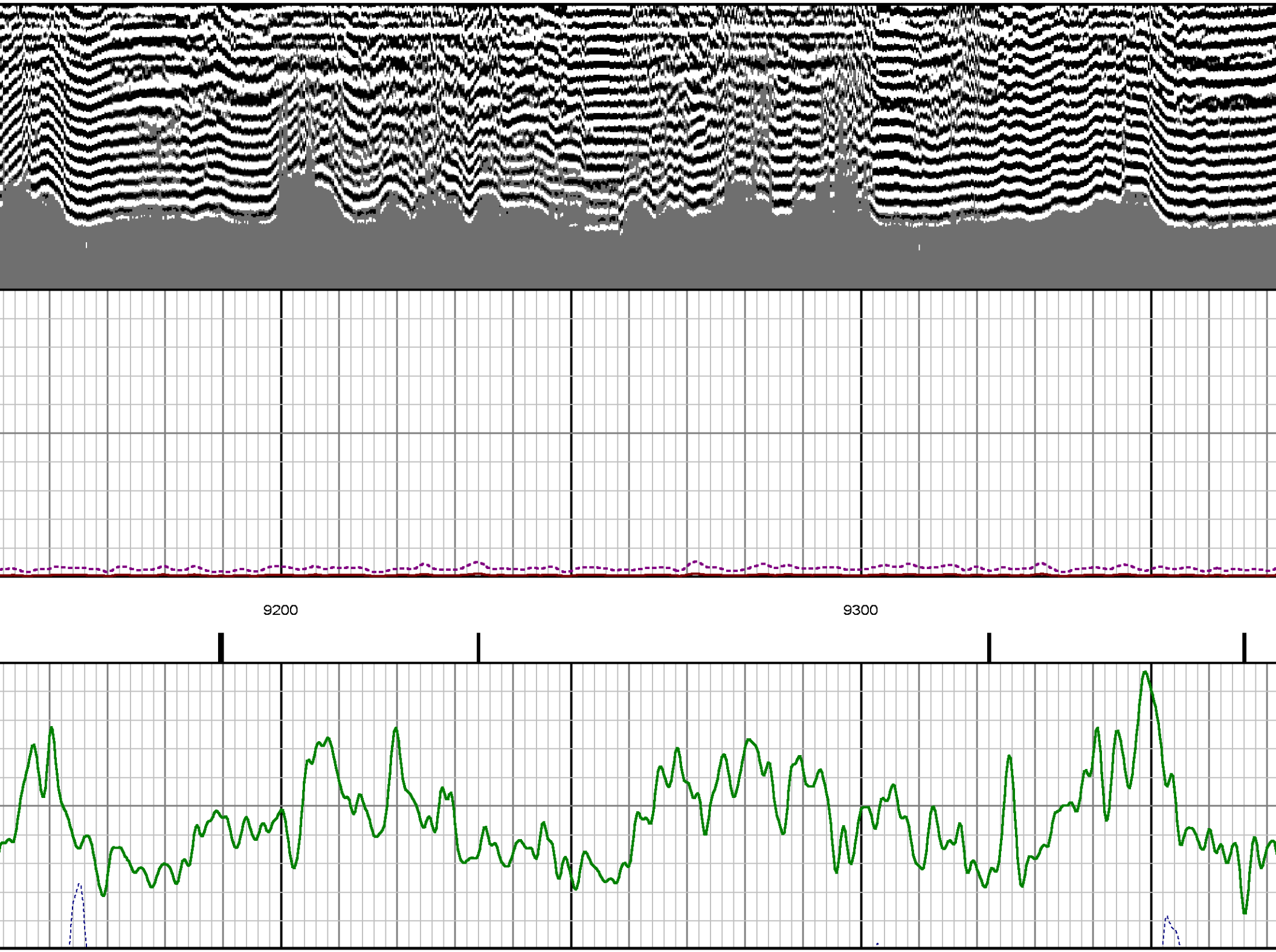
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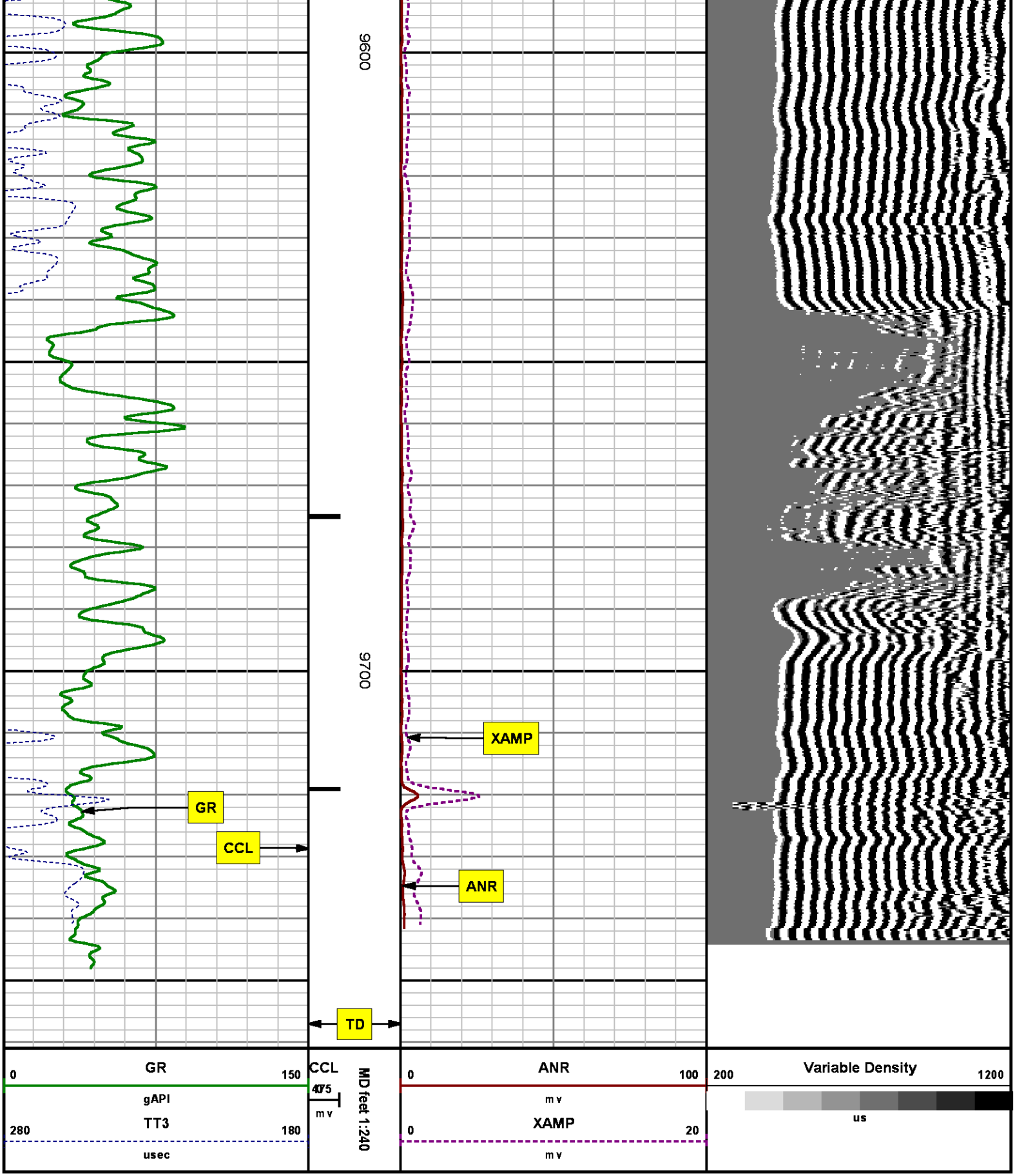

SECONDARY PRESENTATION
0 PSI

OFSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	35.350	9759.000
RAL	Amp Gate Start Near	195.000	usec	35.350	9759.000
RAL	Amp Gate Start Radial	195.000	usec	35.350	9759.000
RAL	Amp Gate Width Far	25.000	usec	35.350	9759.000
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RAL	casing od	4.500	inches	35.350	9759.000
RAL	casing wt	11.600	lbm/ft	35.350	9759.000
RAL	FB Start Far	291.900	usec	35.350	9759.000
RAL	FB Start Near	175.391	usec	35.350	9759.000
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RAL	FB Thresh Far	10.000	mv	35.350	9759.000
RAL	FB Thresh Near	4.000	mv	35.350	9759.000
RAL	FB Thresh Radial	4.000	mv	35.350	9759.000
RAL	Fluid Travel Time	200.000	usec/ft	35.350	9758.881

DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES
1426XA	-16.750	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	-15.750	AFAR SIG TT5
2459XA	-11.340	CCL
2459XA	-9.490	GR
2459XA	-4.090	NEU

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

Well : FEDERAL PA 43-21

File Name : d:\welldata\wpx\pa 43-21\43ral\main.xtf

Mode : PlotMgr 5.4.504

Interval : 0.00 - 9761.00 feet UP

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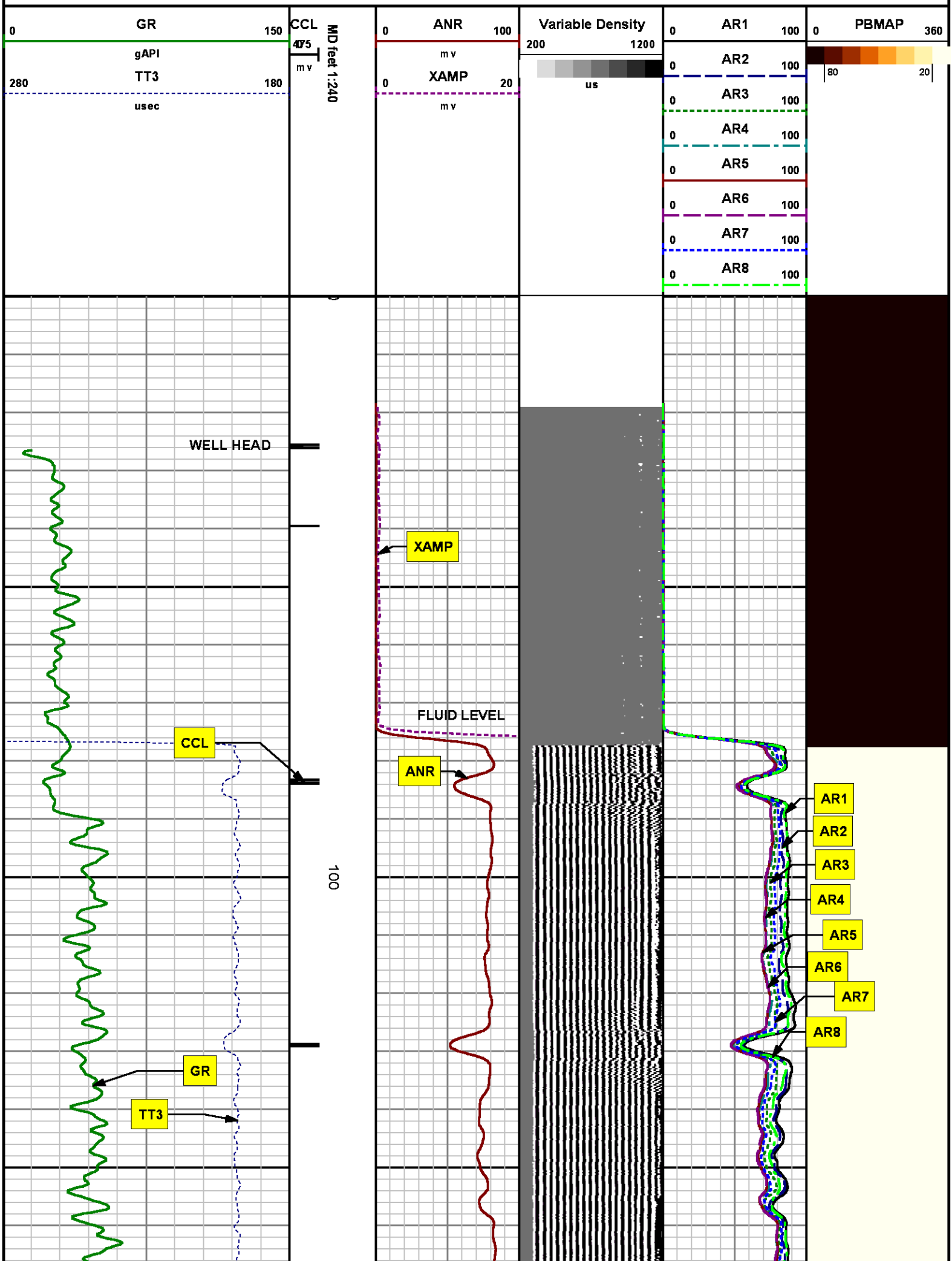

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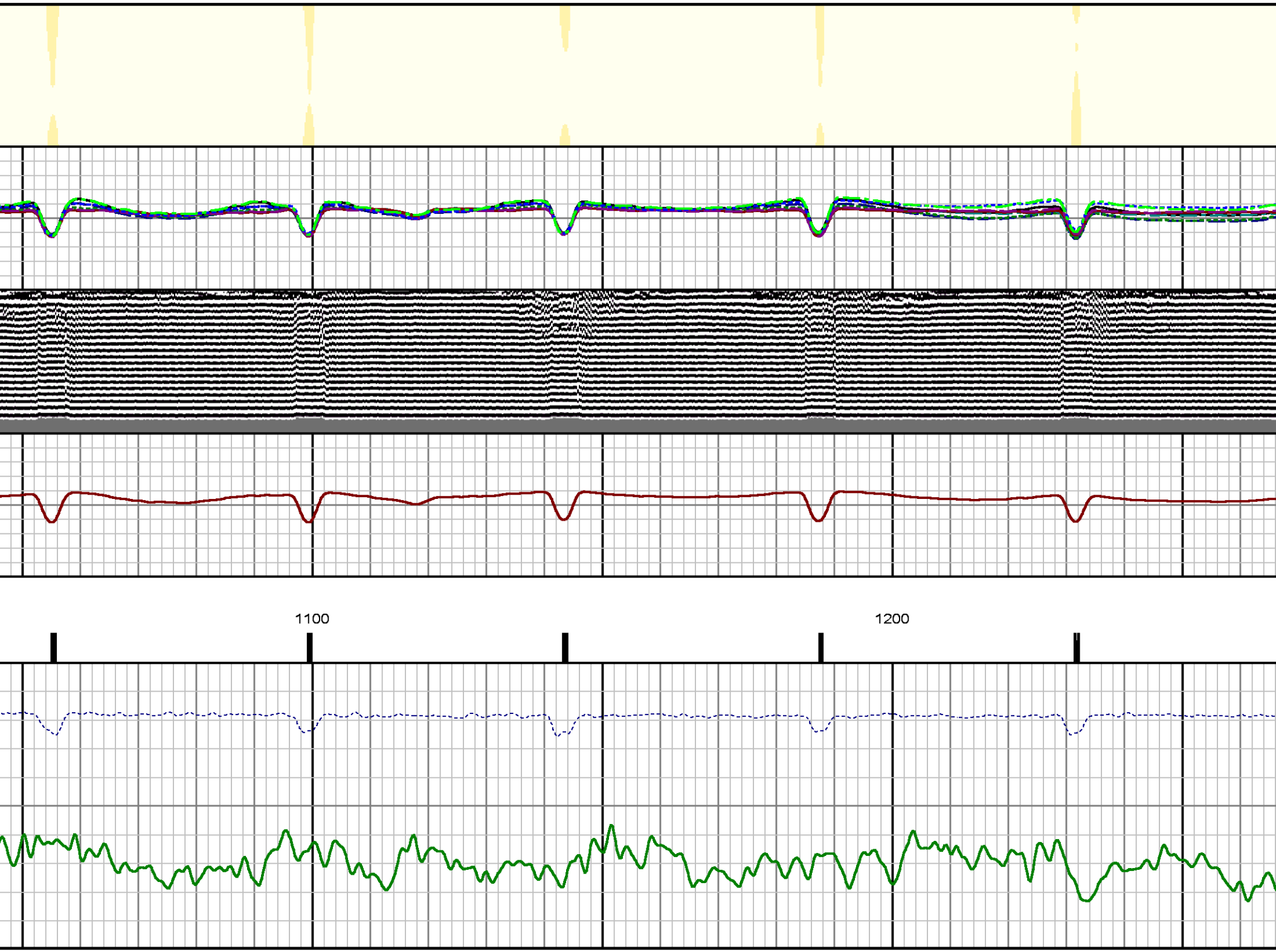
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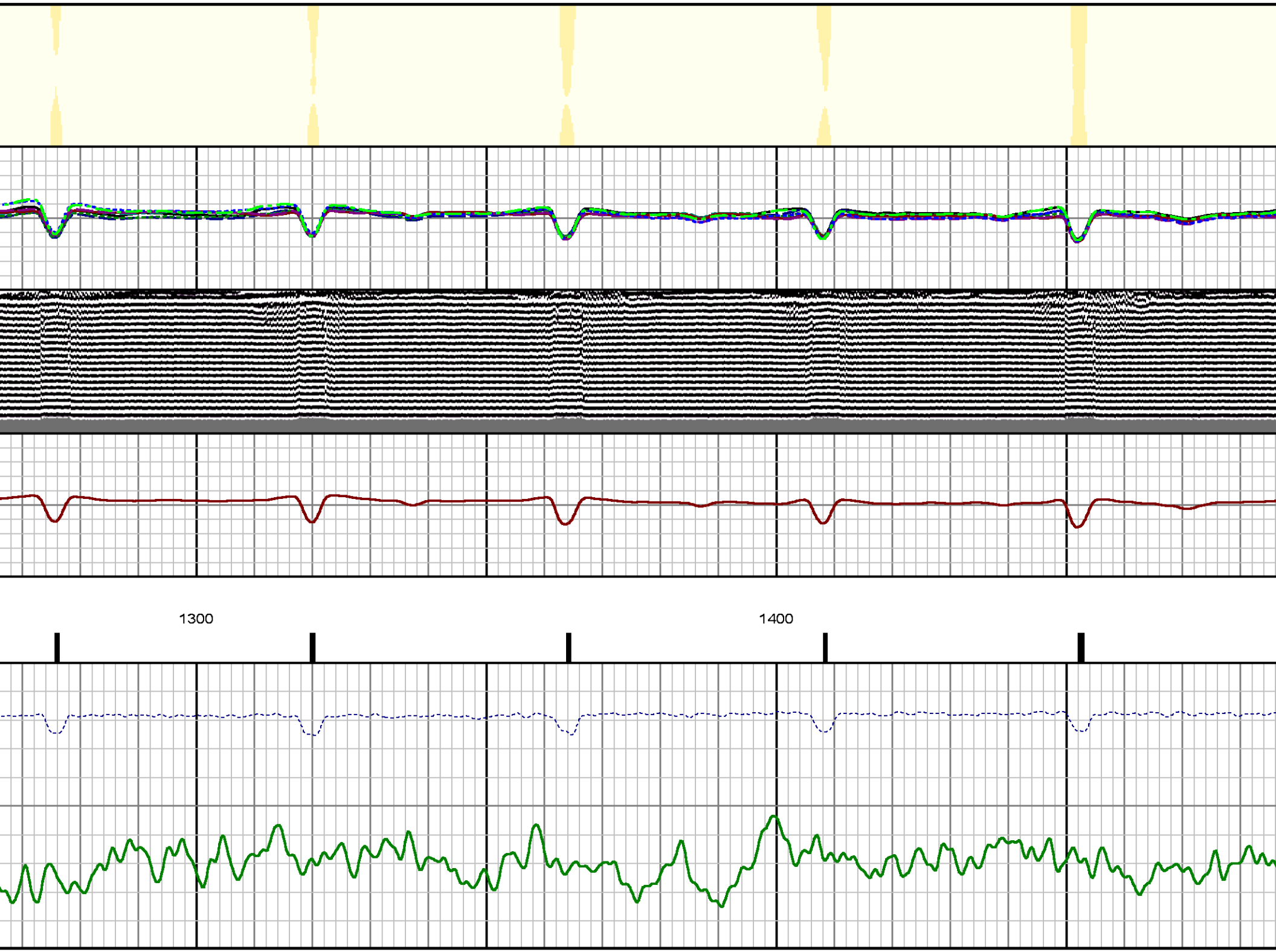
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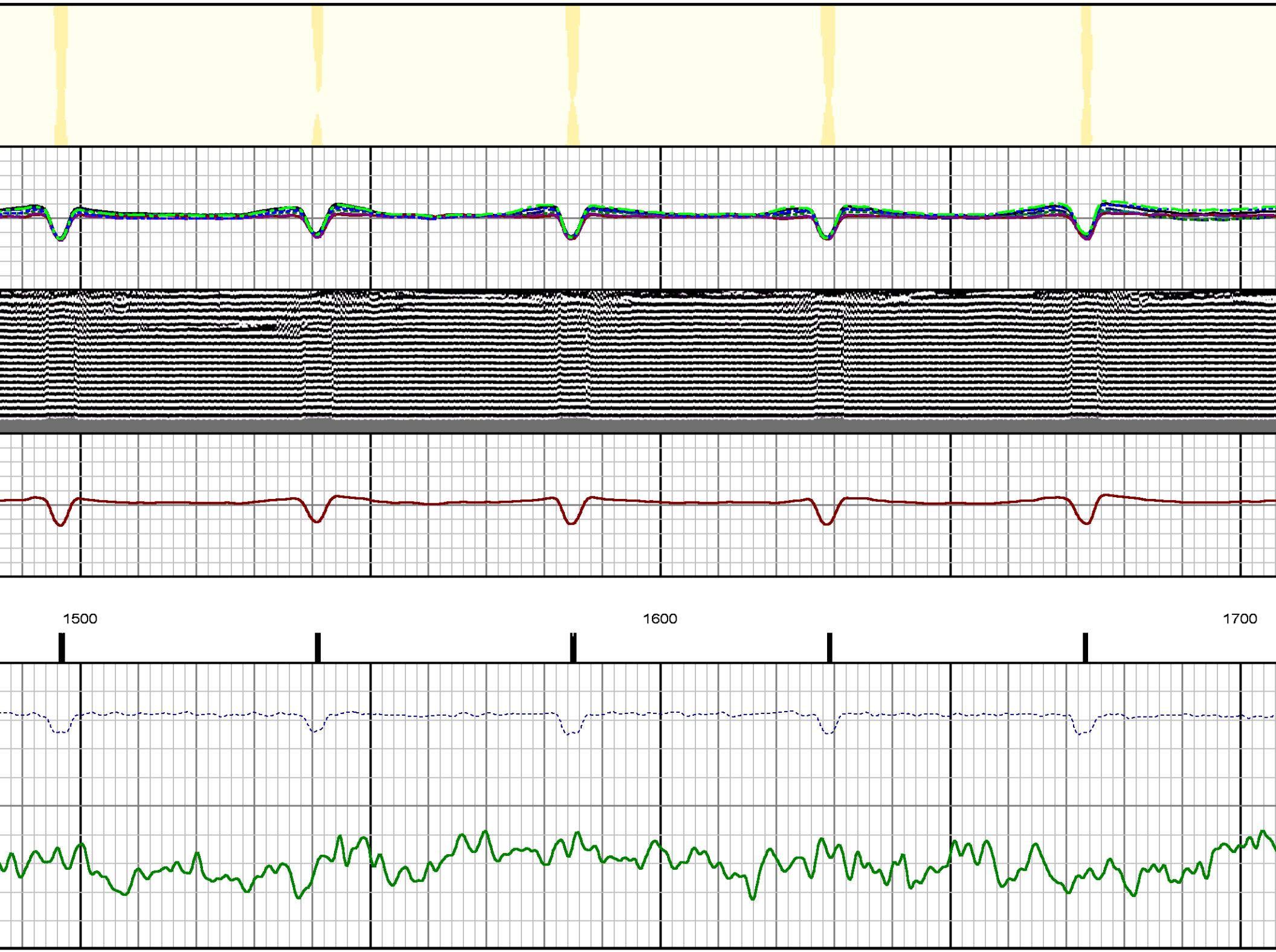
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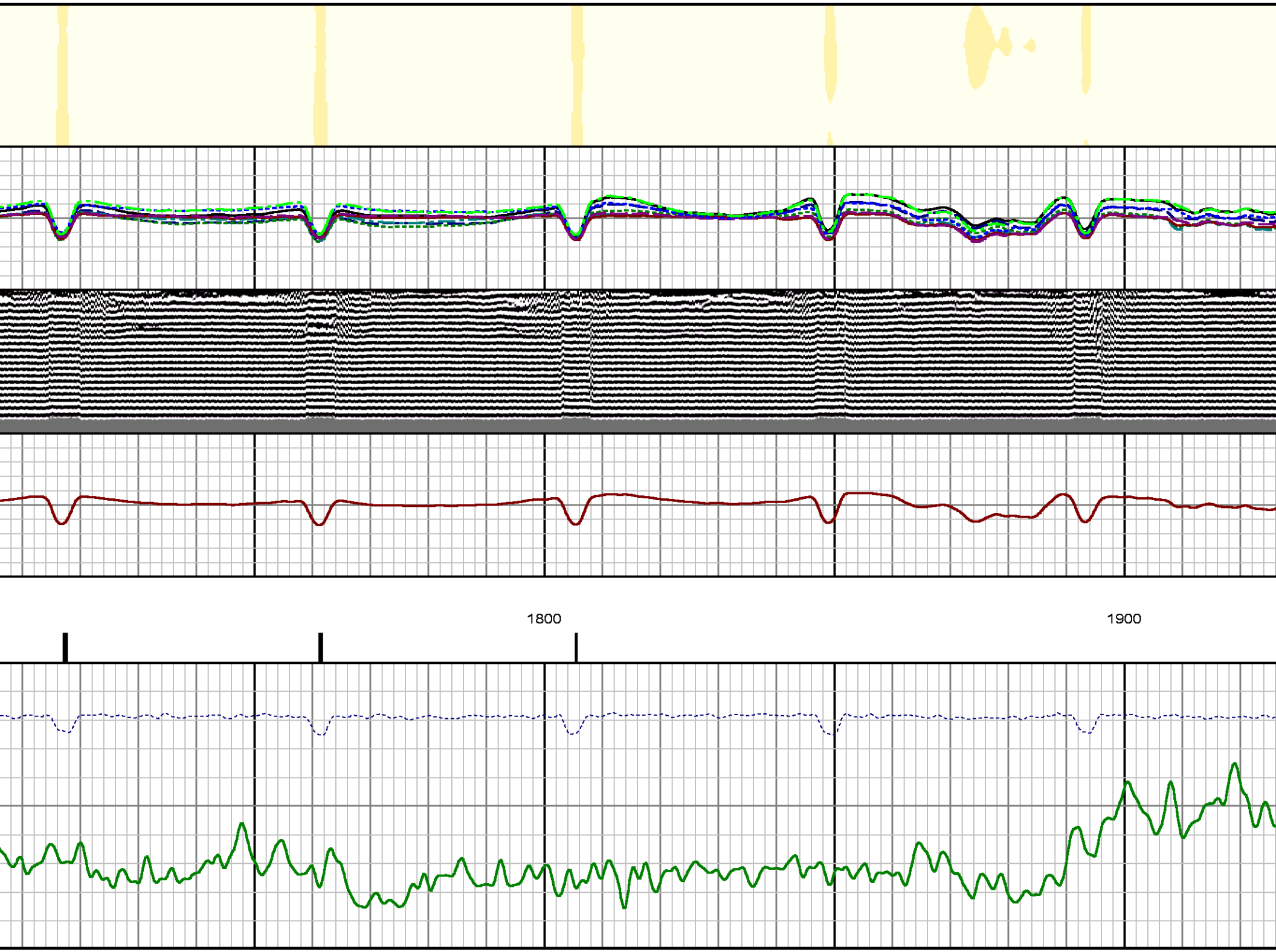
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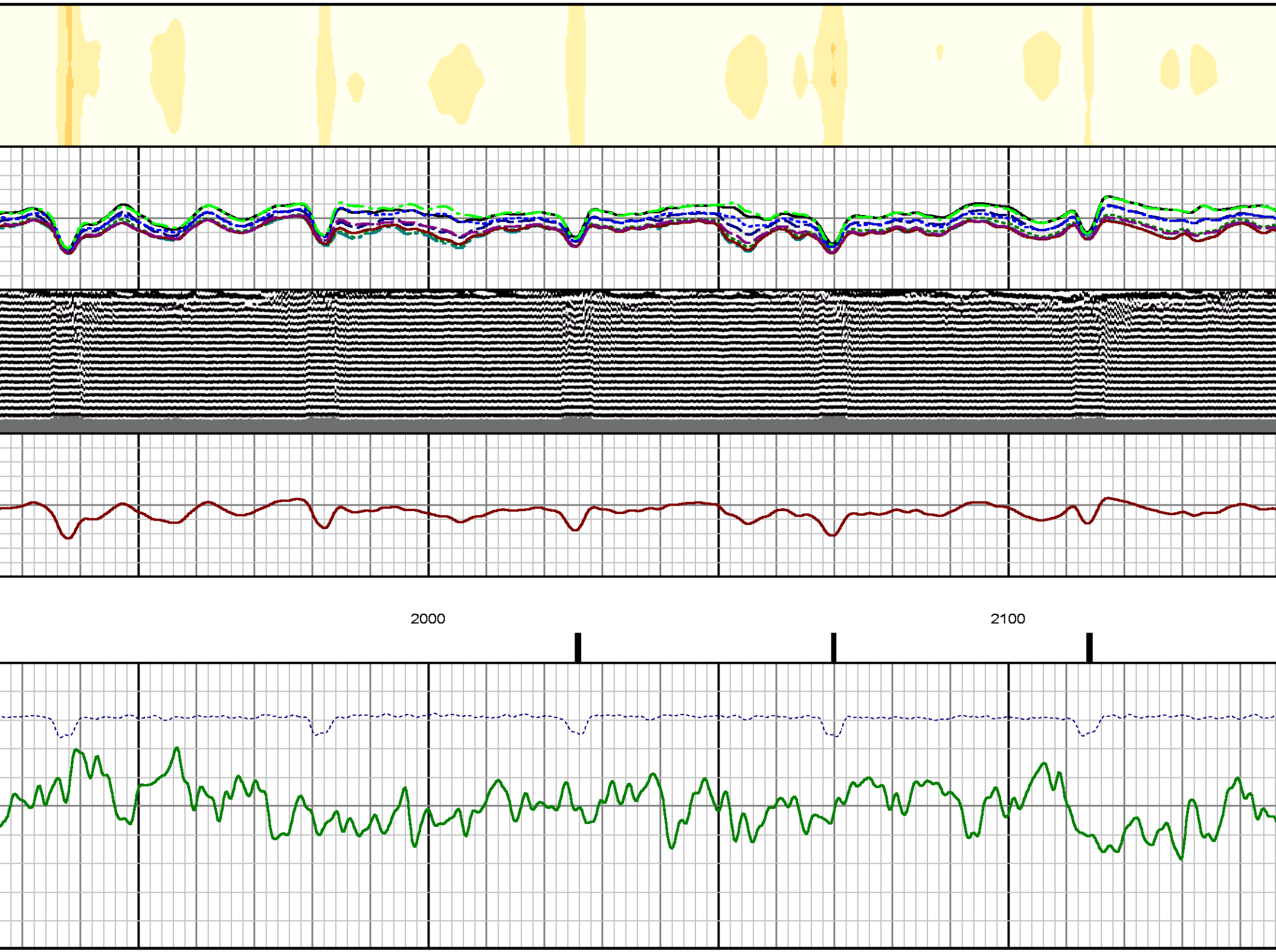
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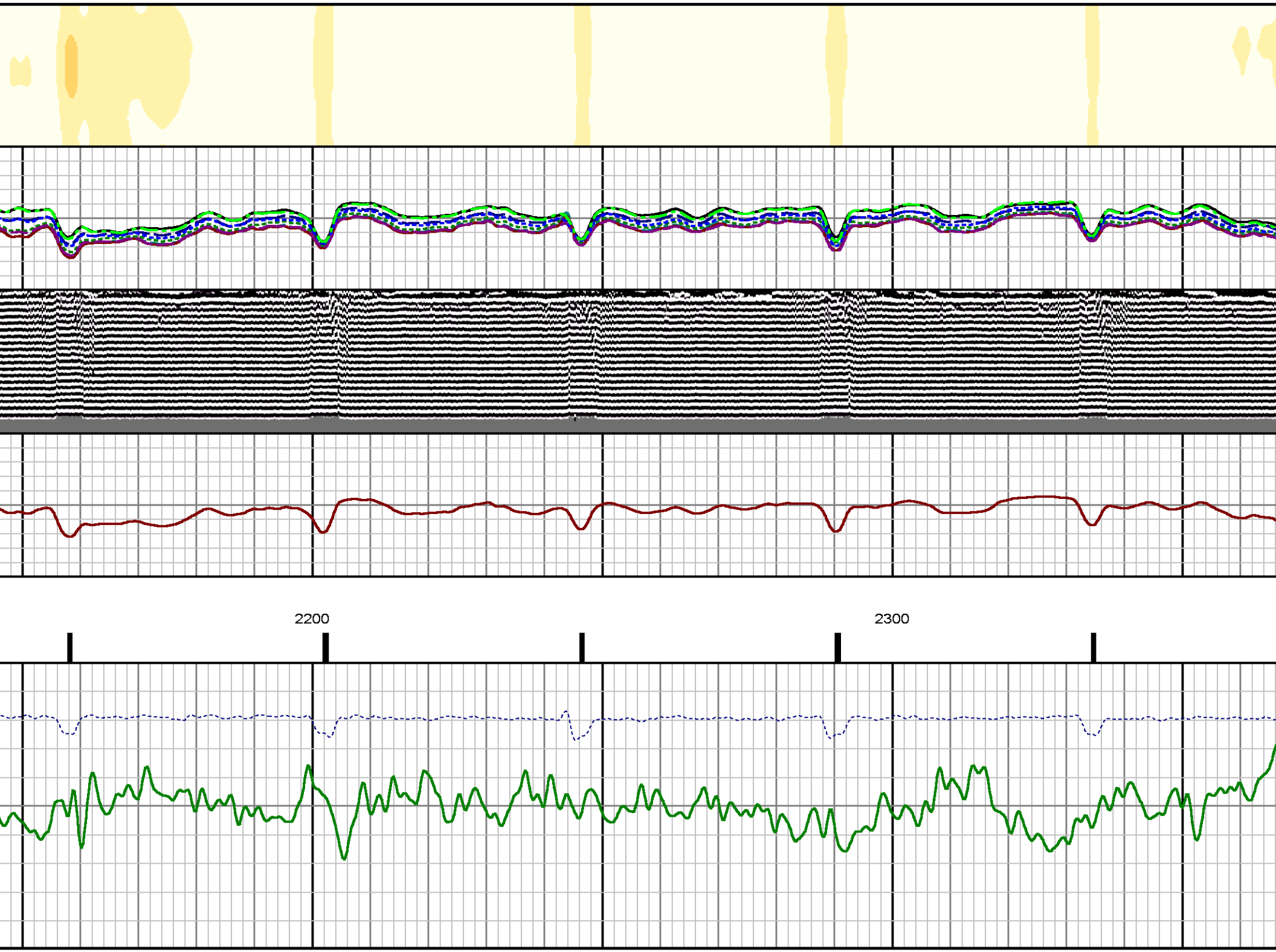
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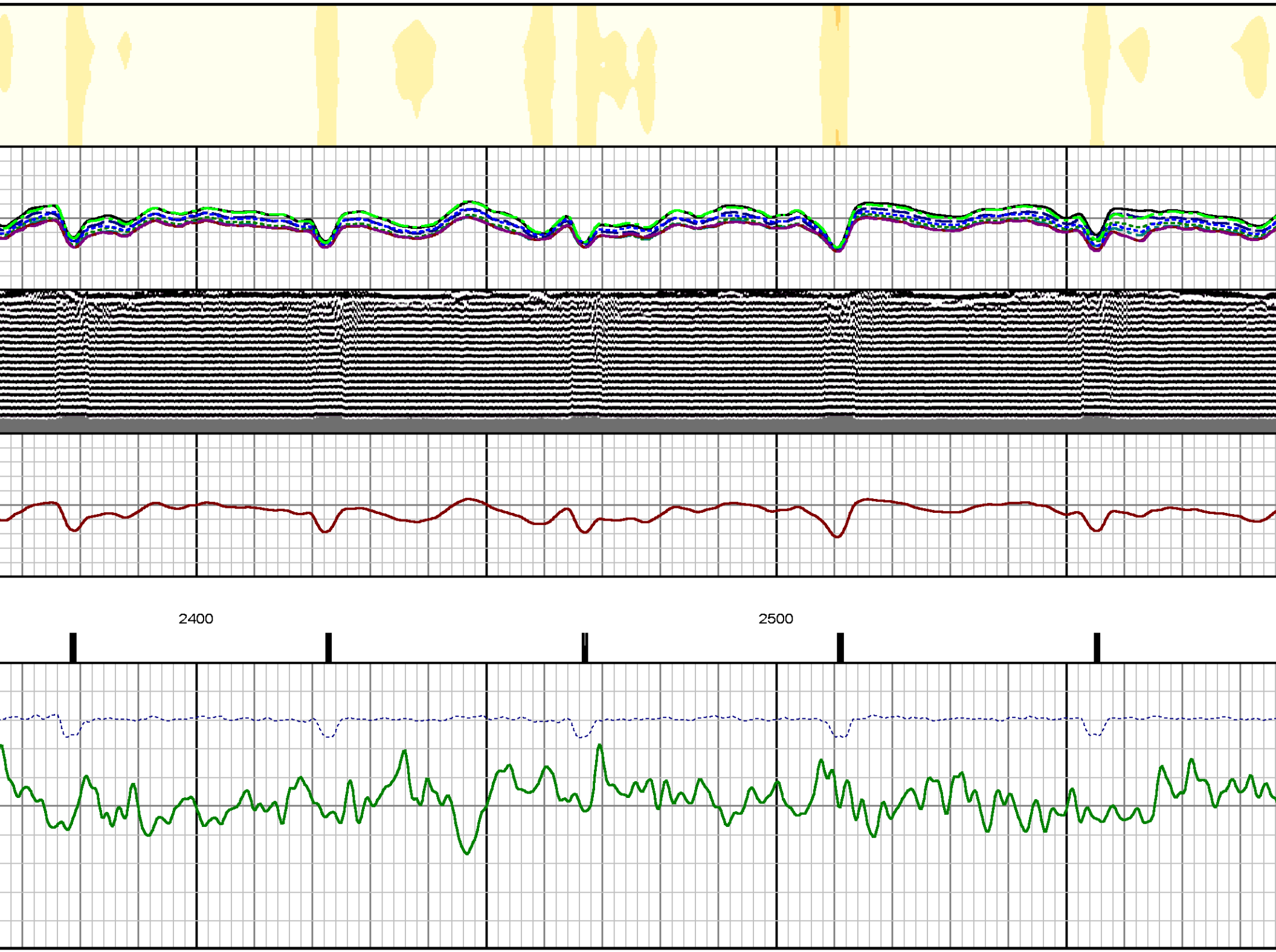
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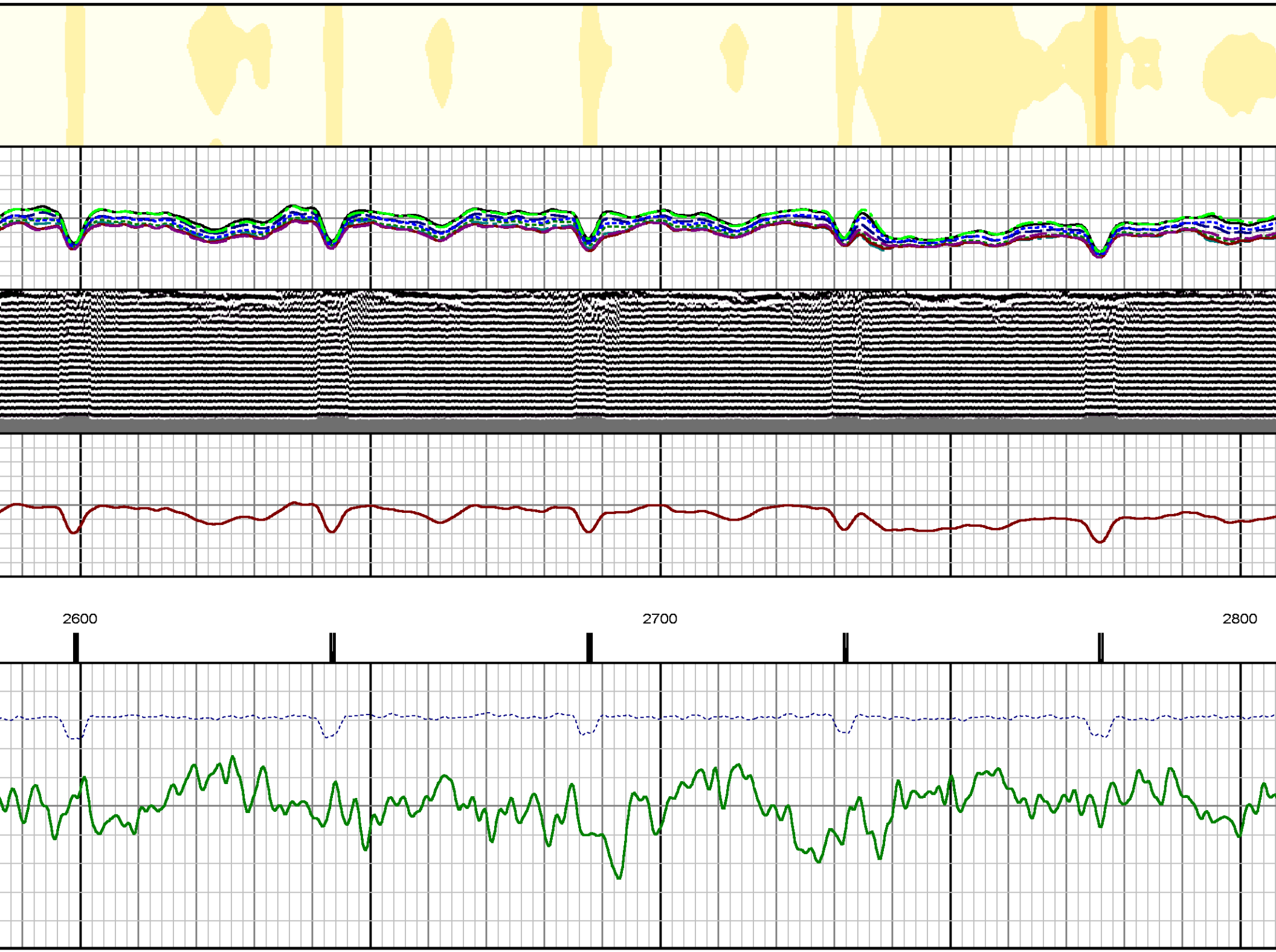
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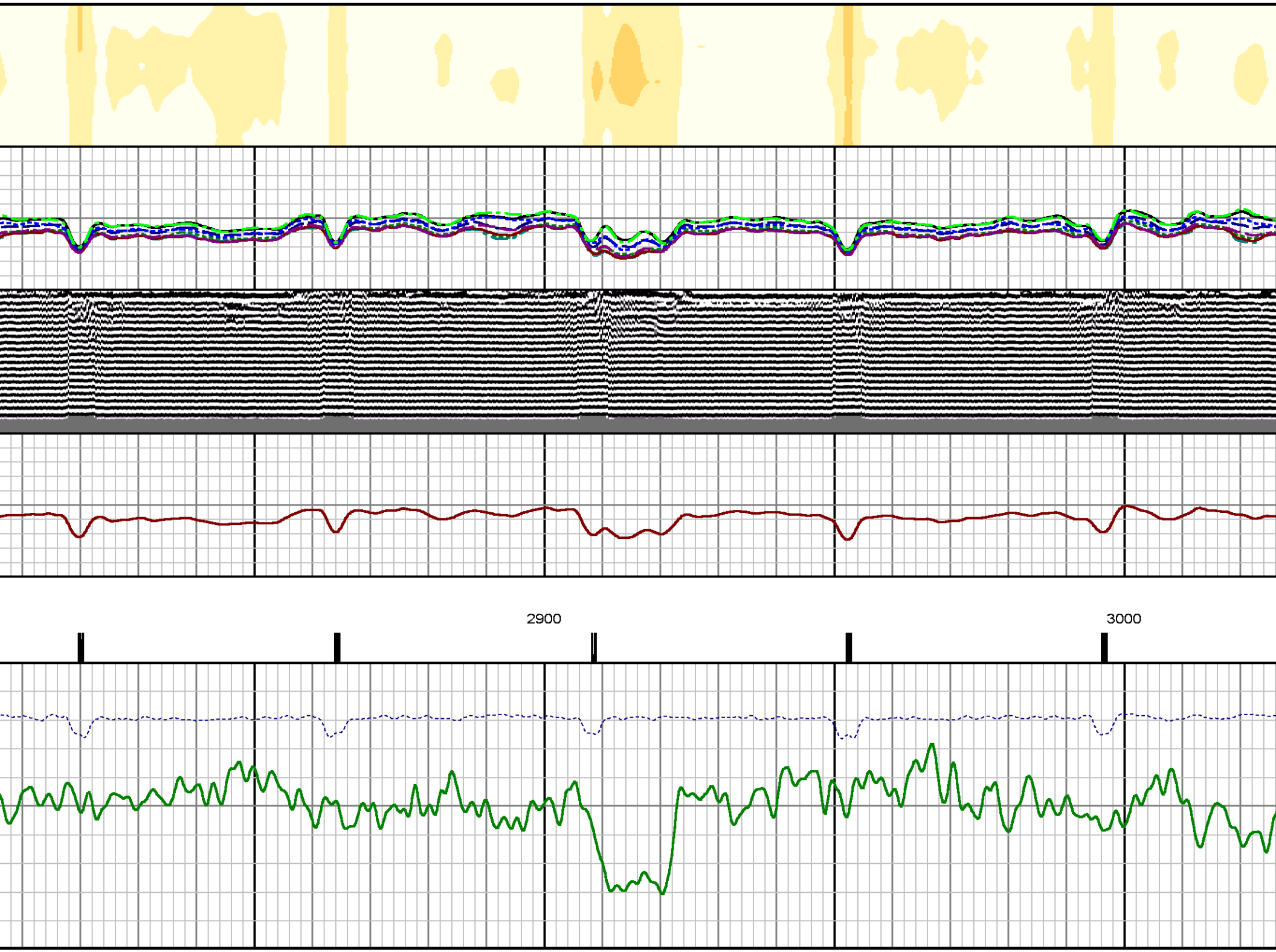
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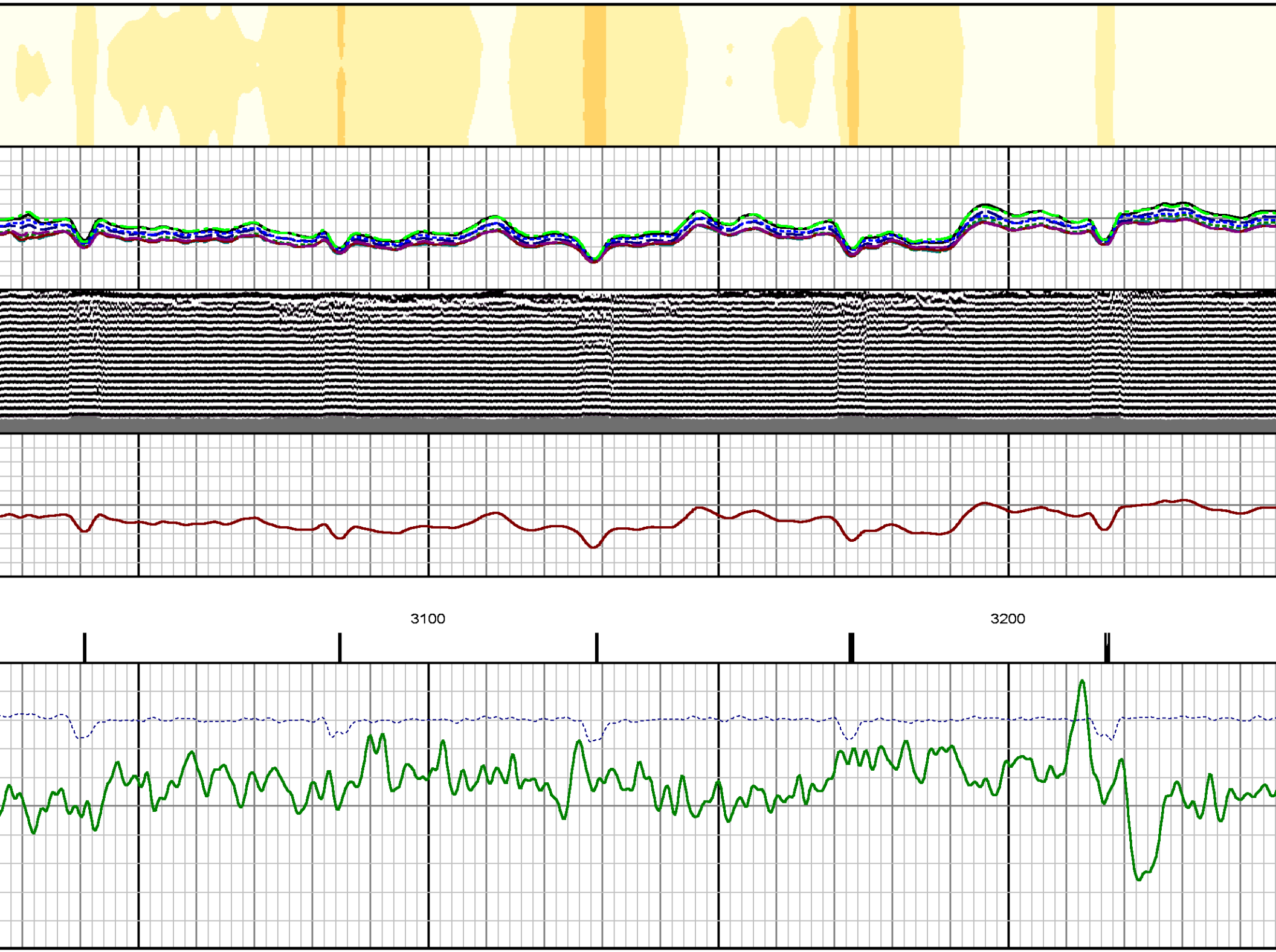
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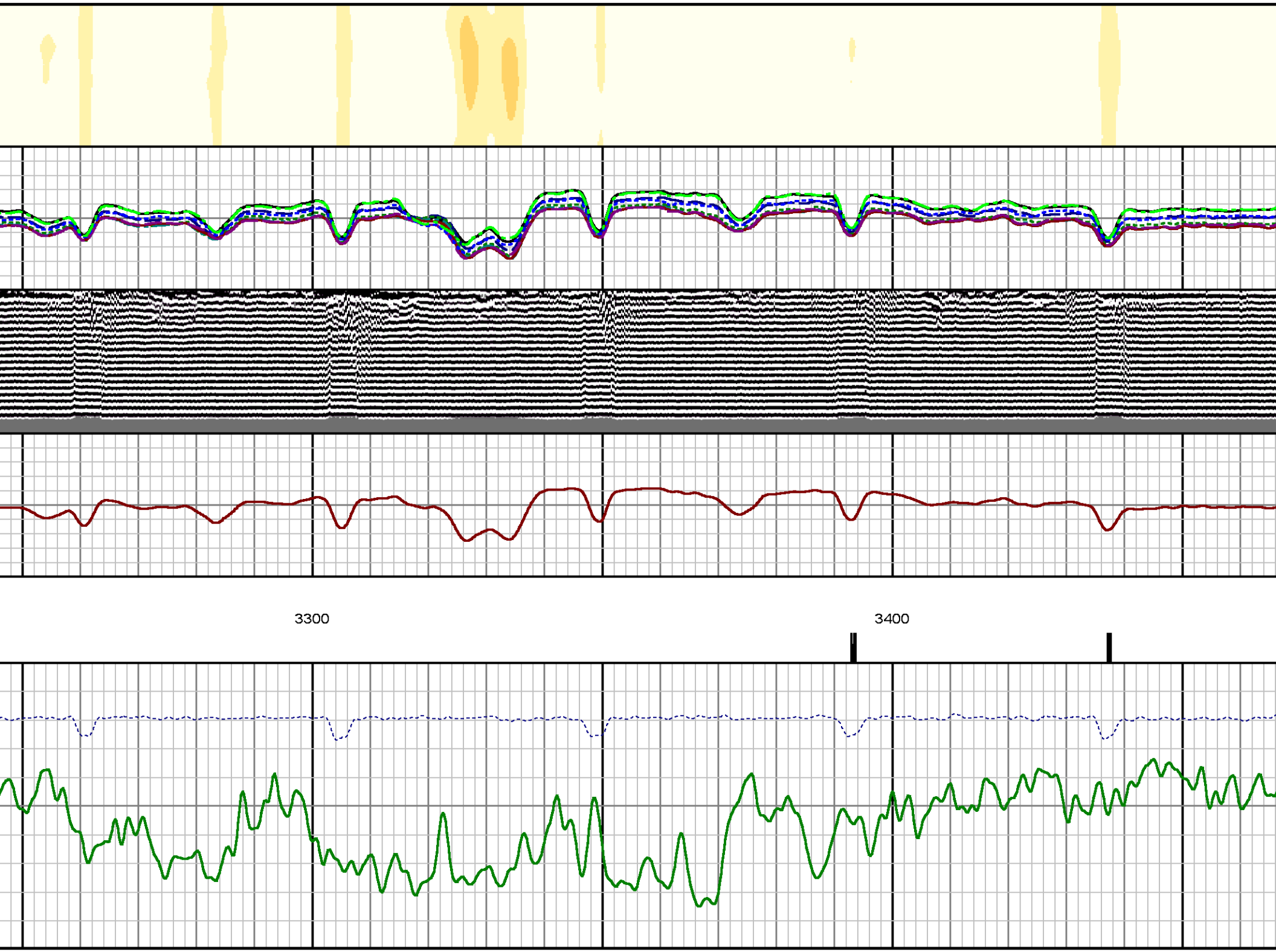
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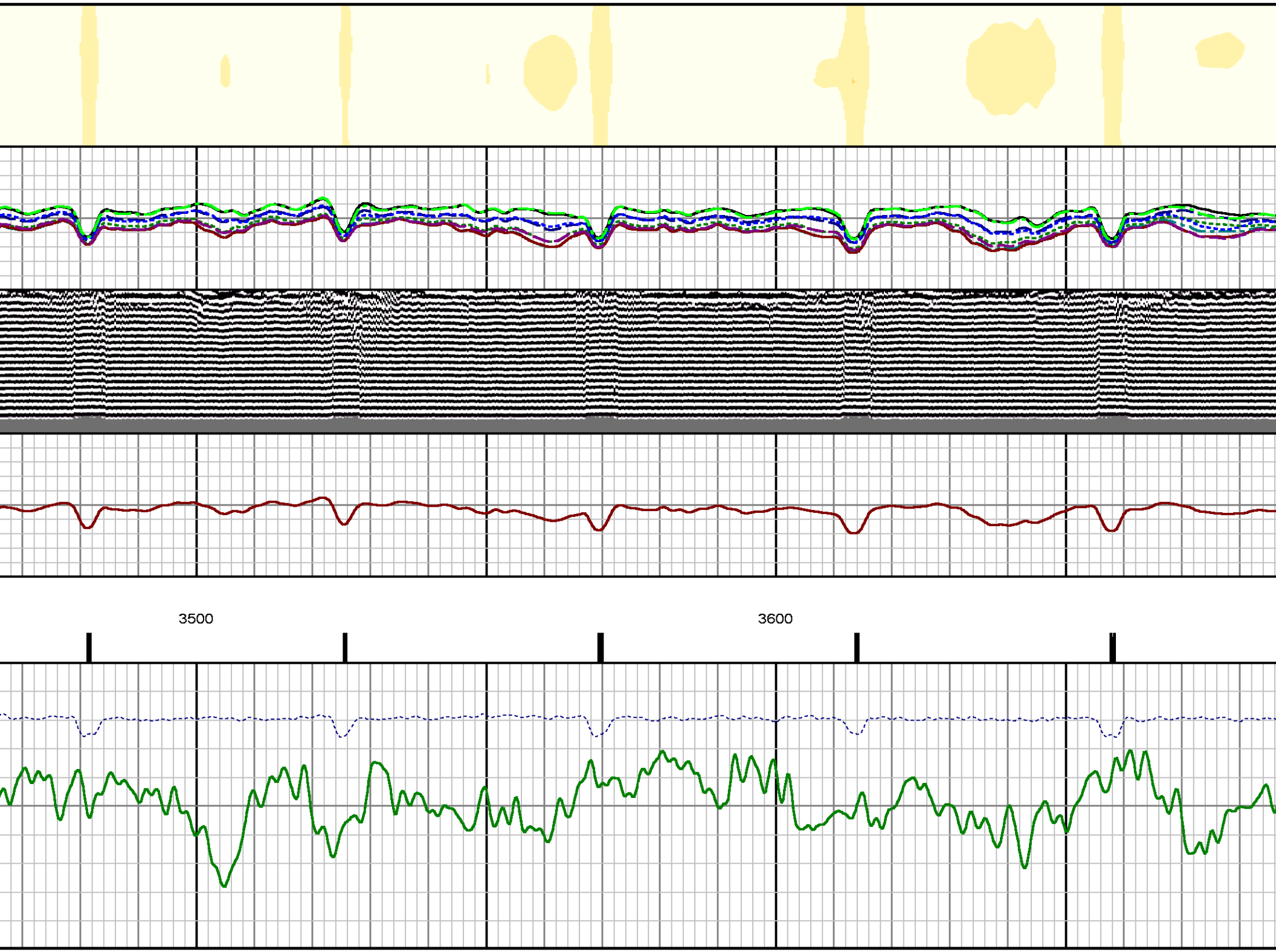
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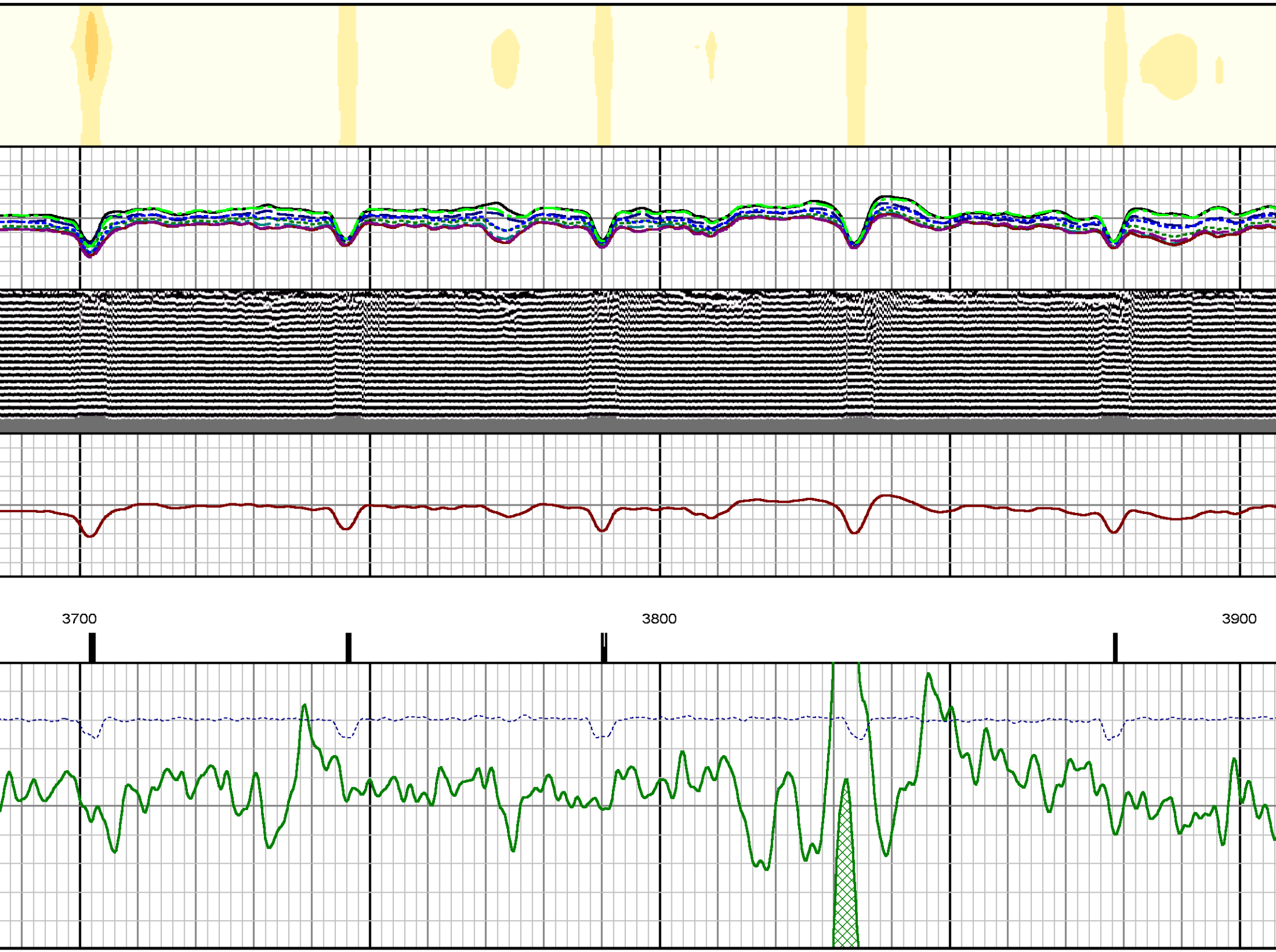
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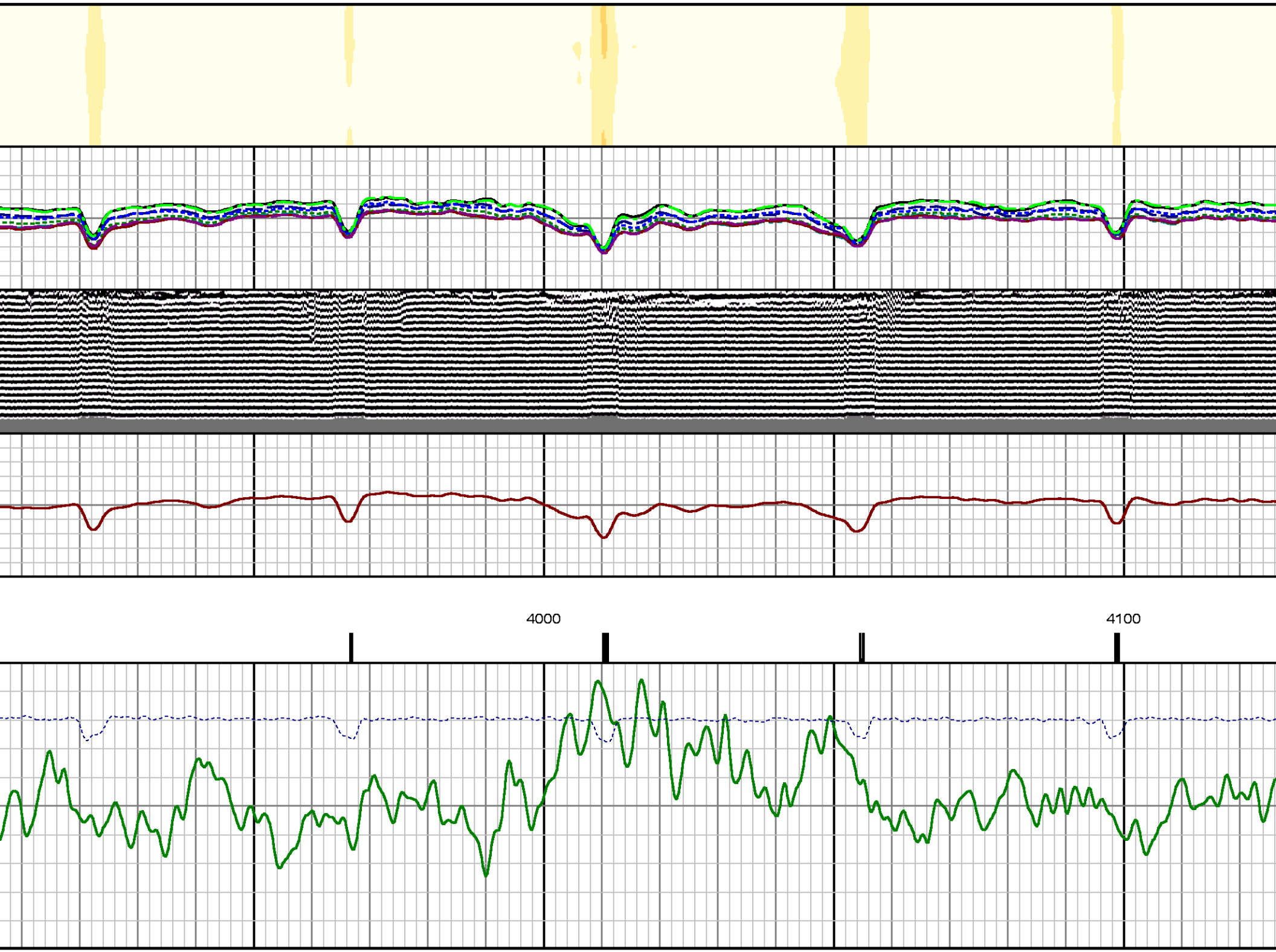
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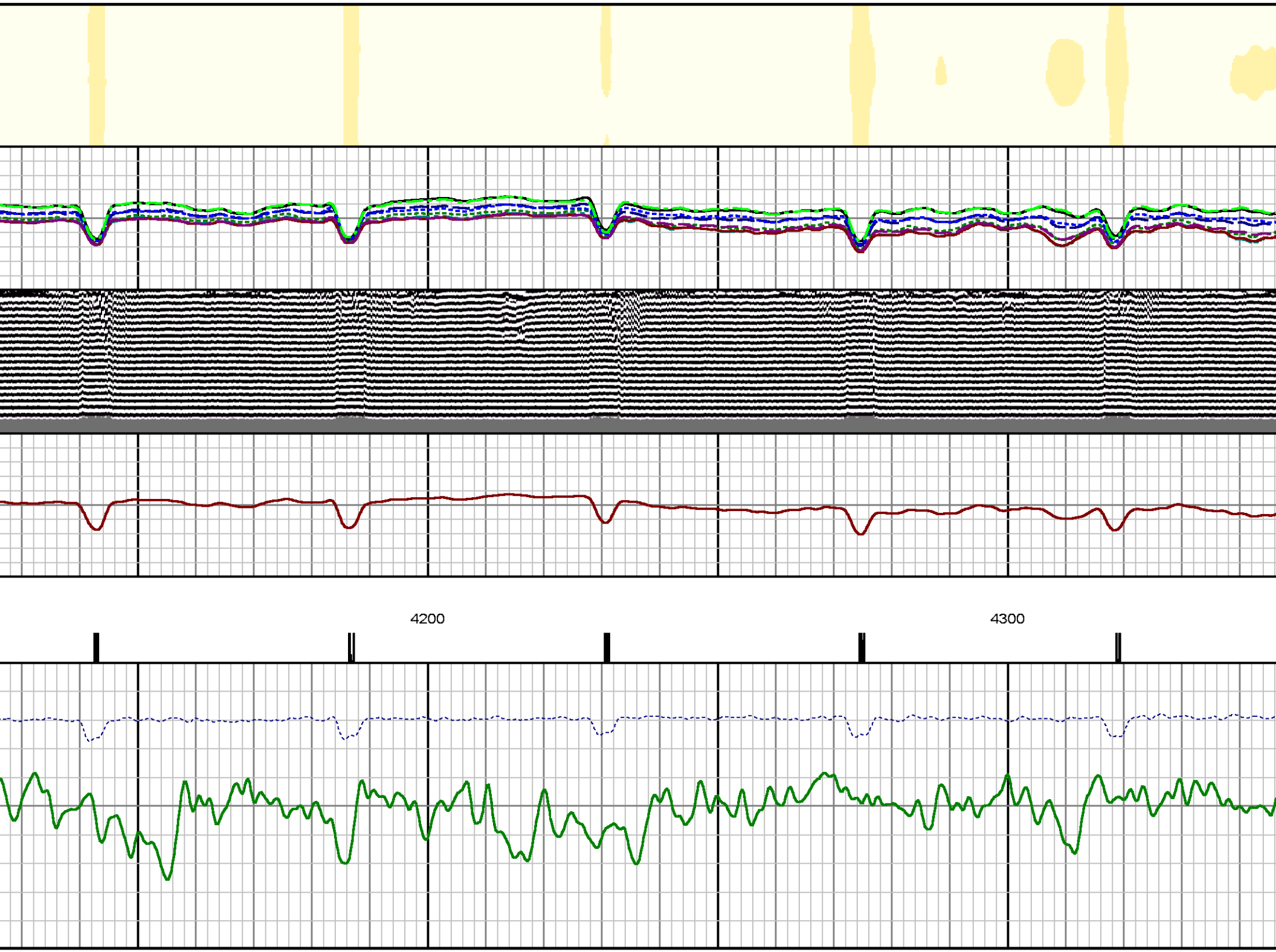
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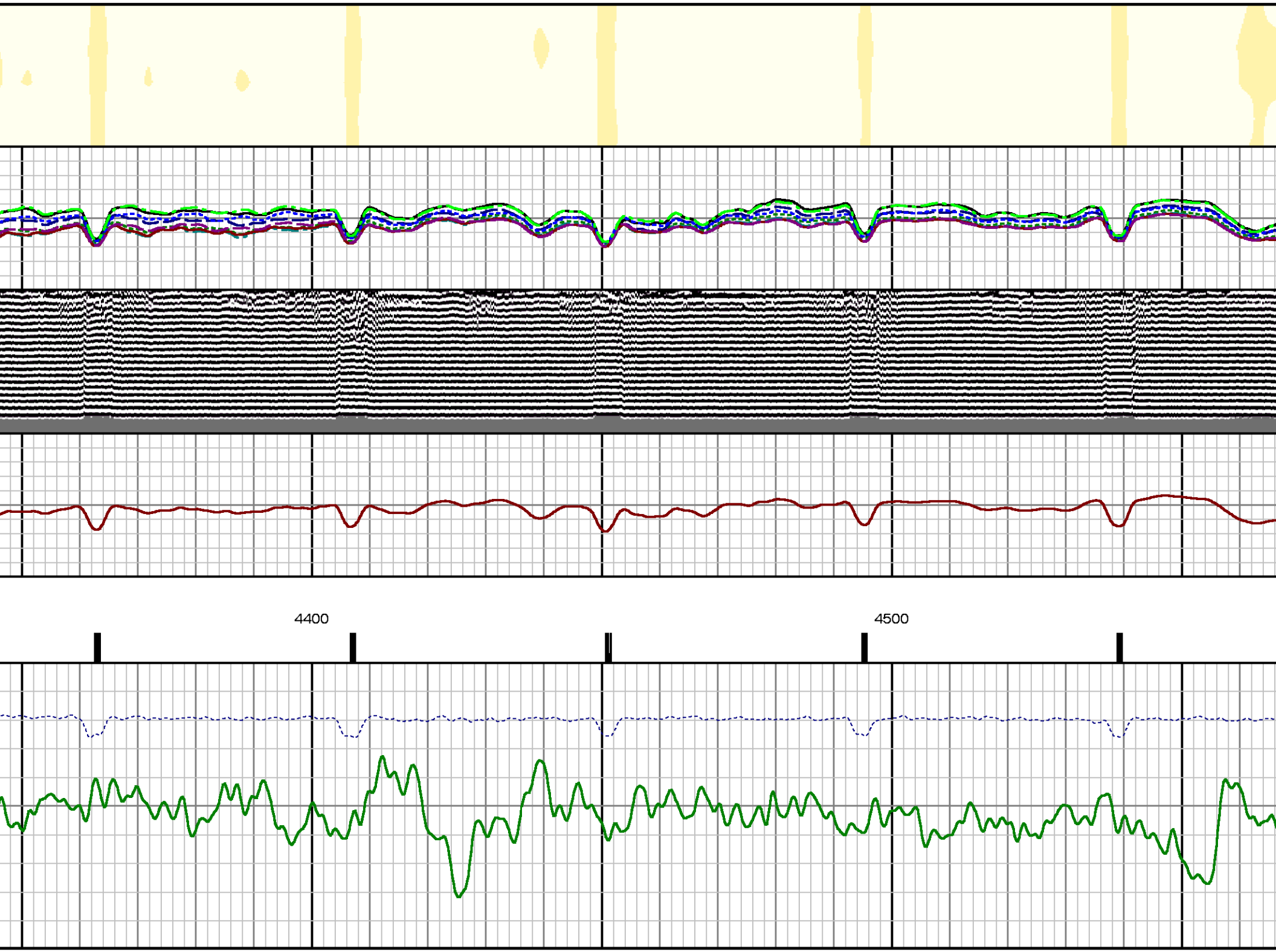
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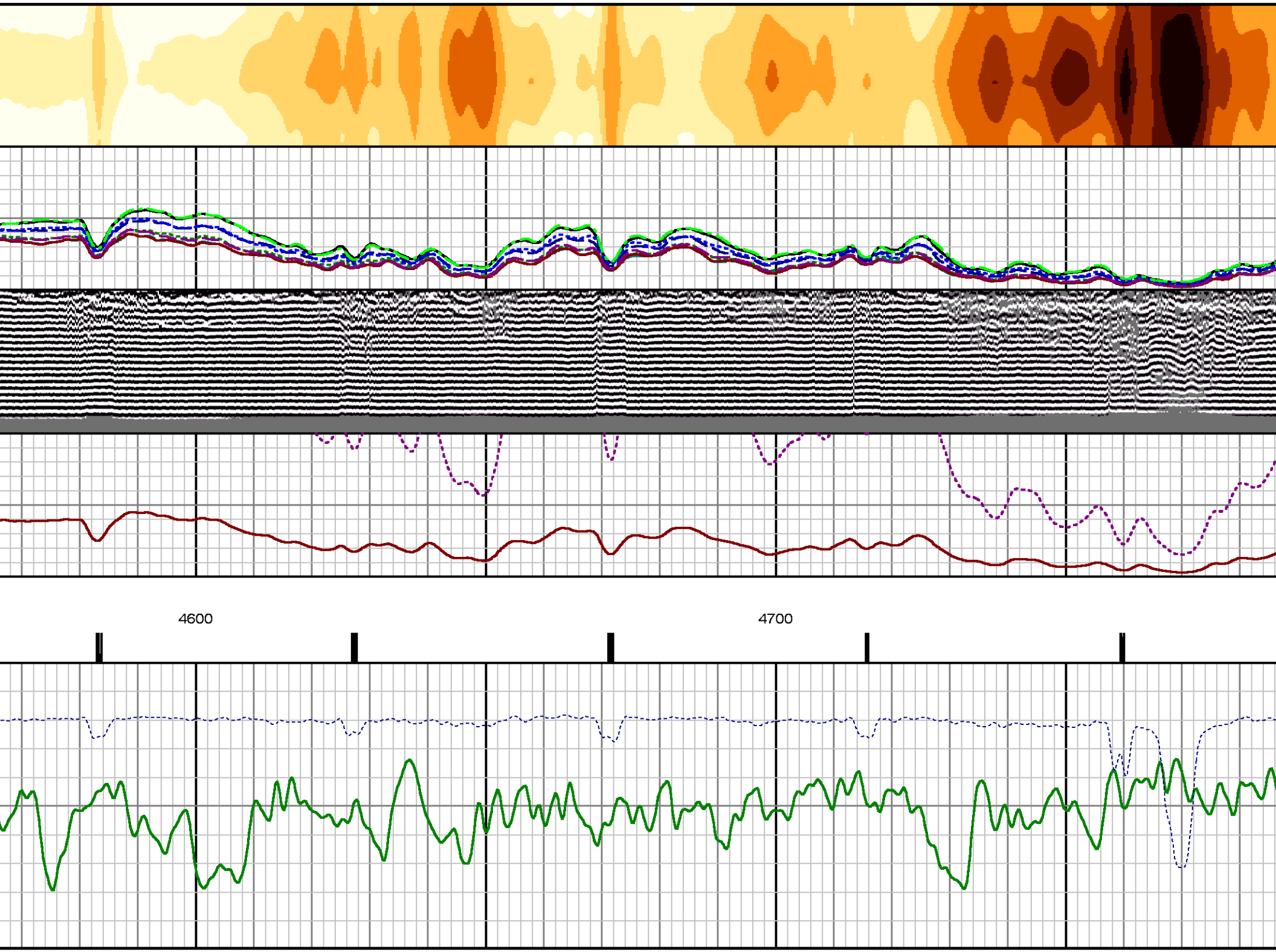
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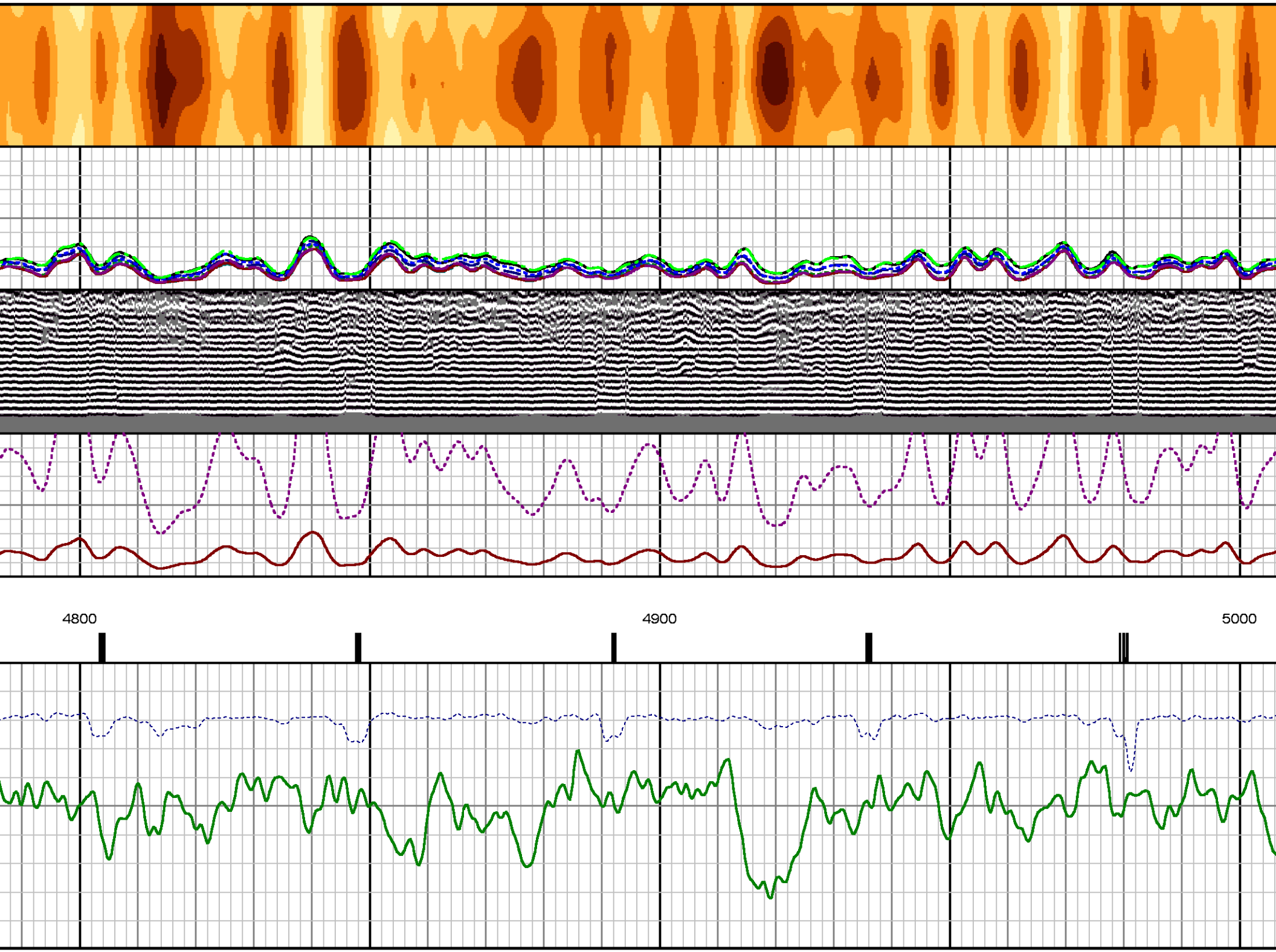
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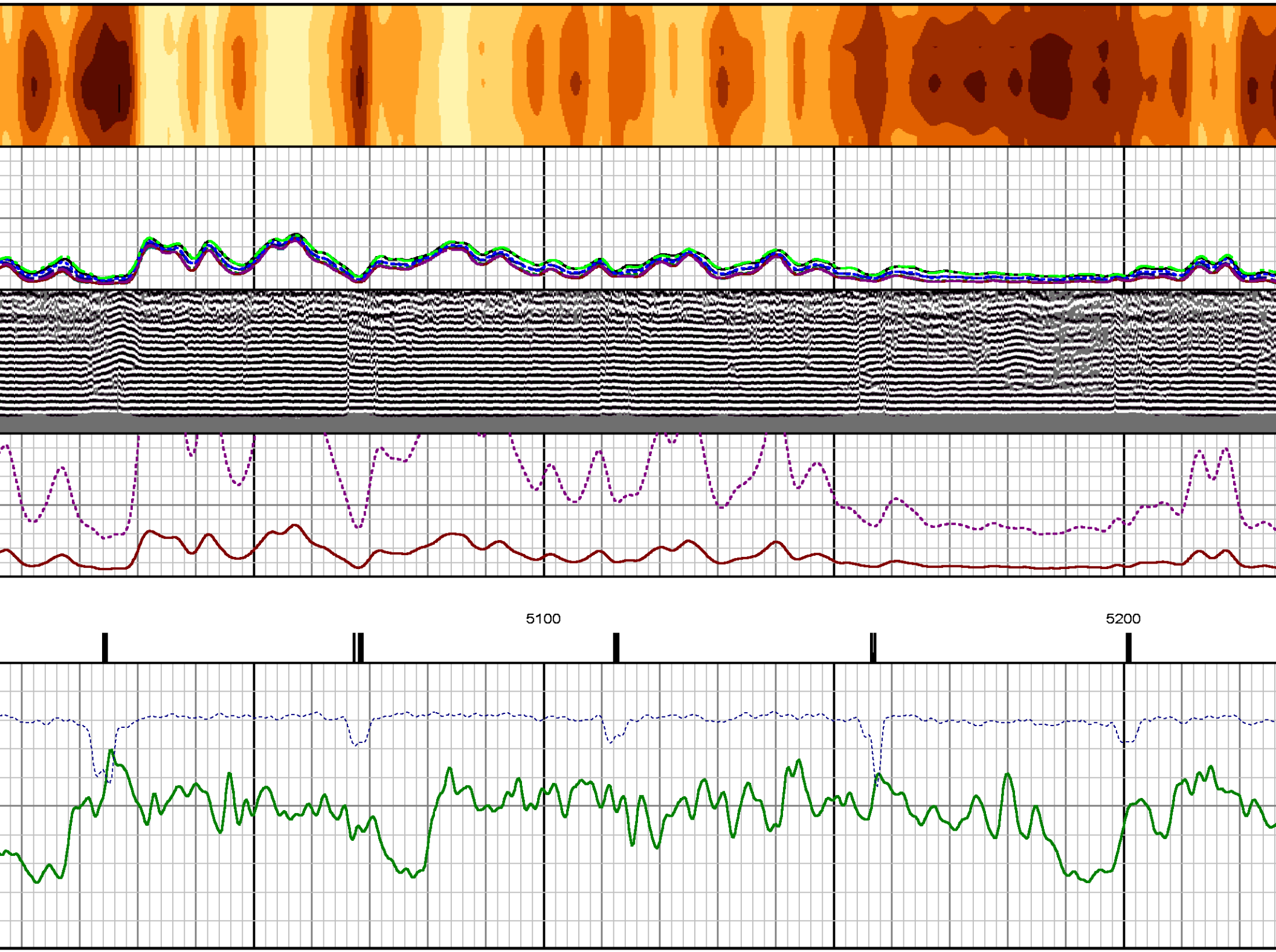
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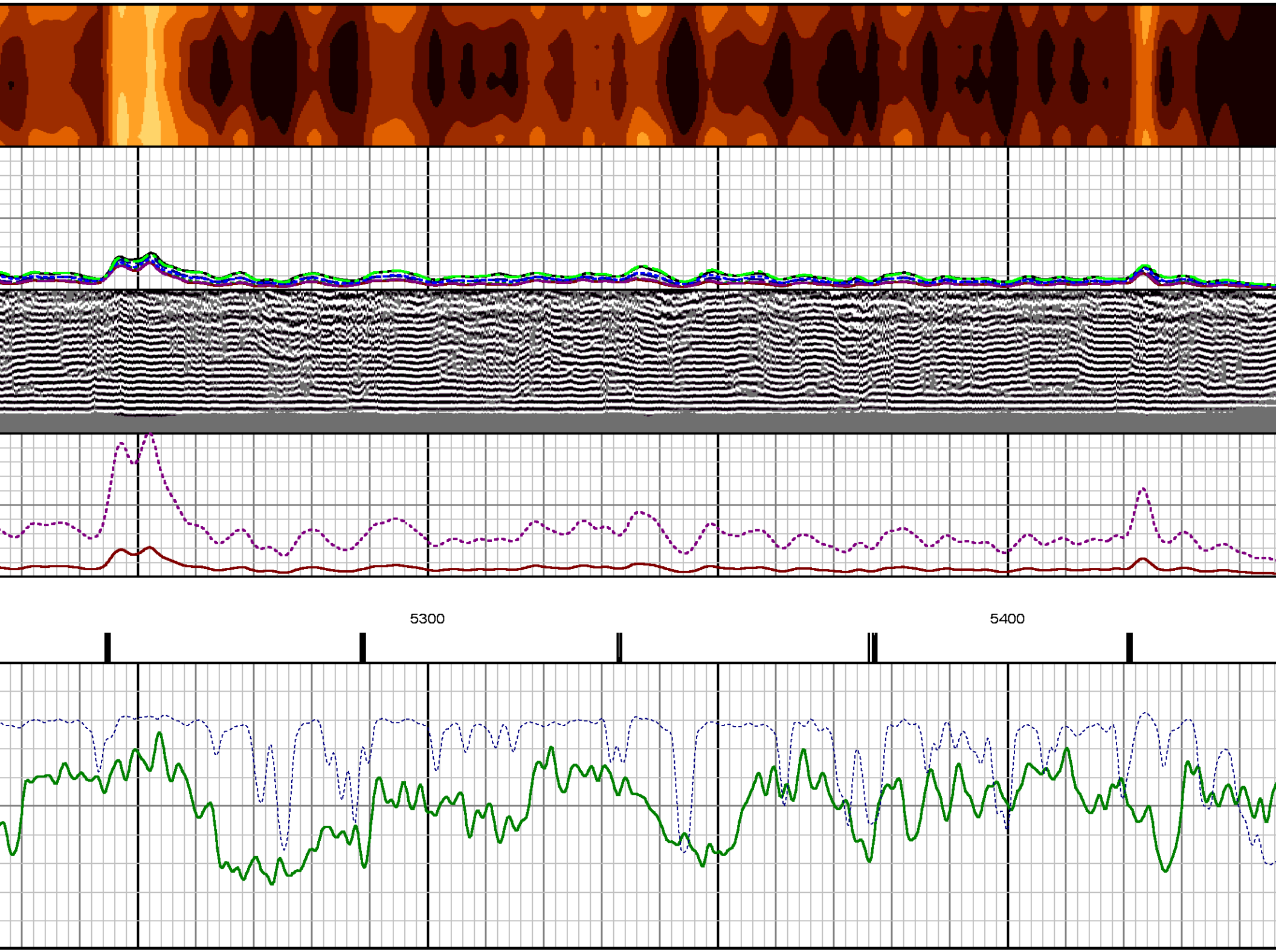
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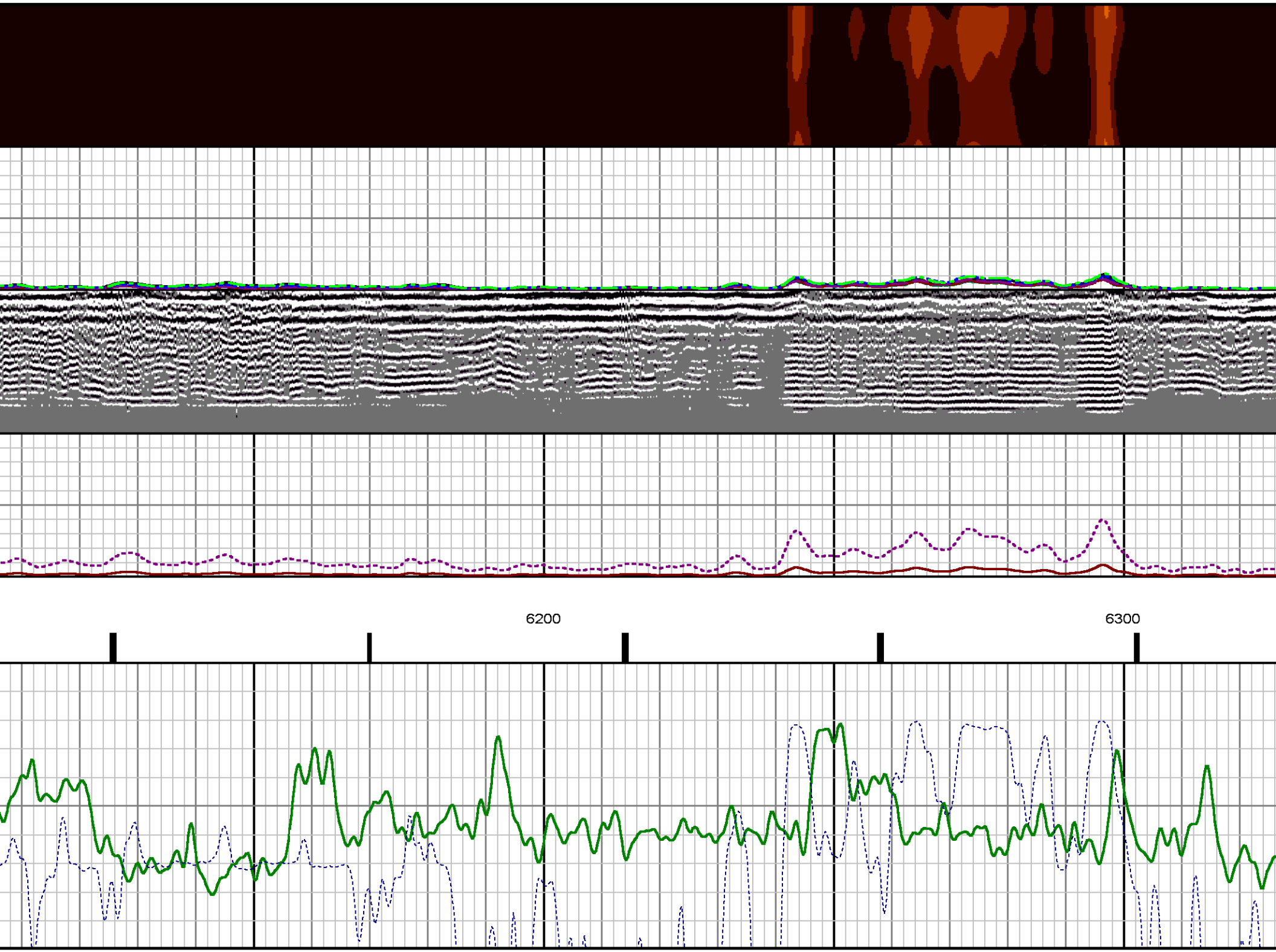
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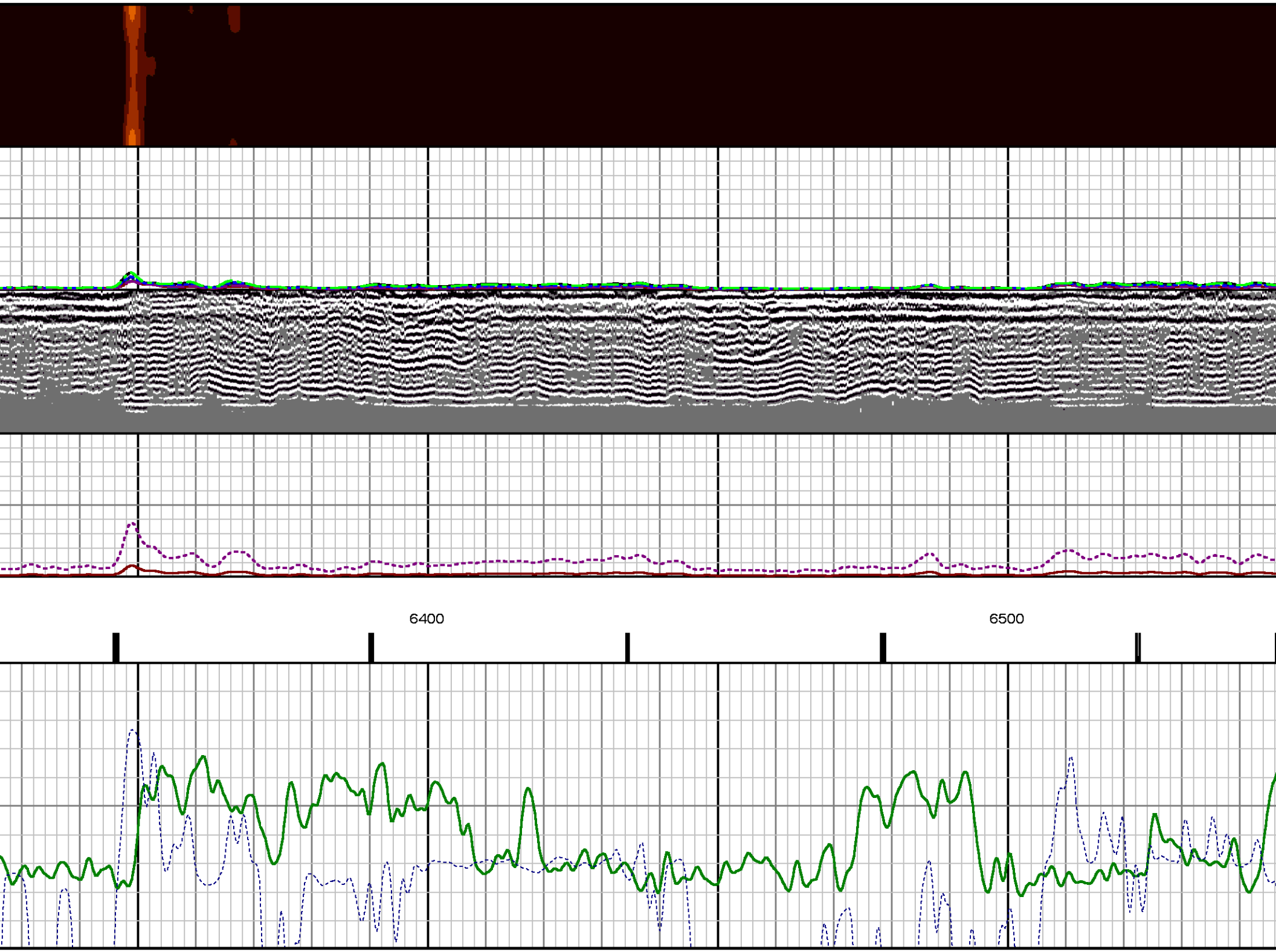
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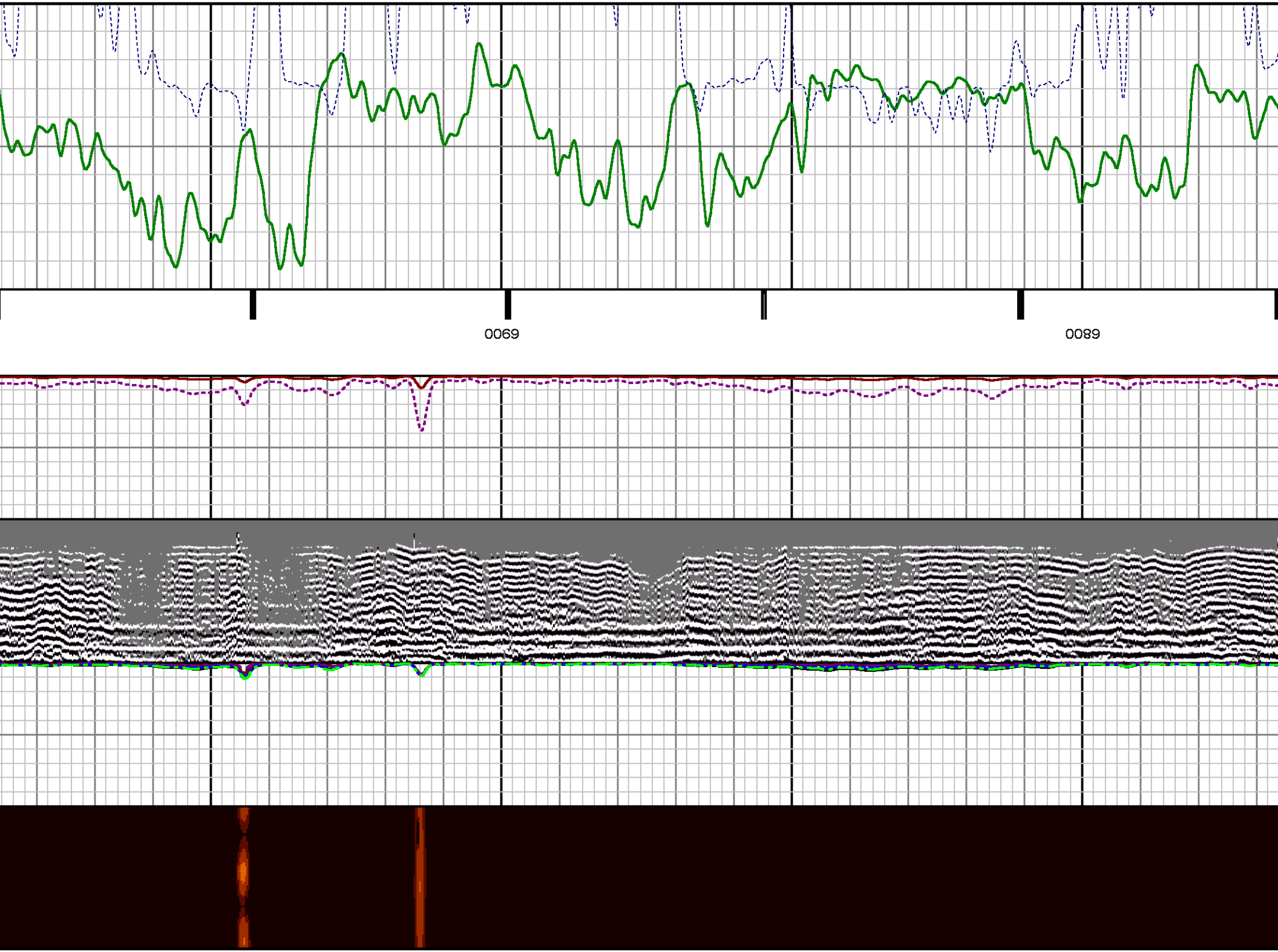
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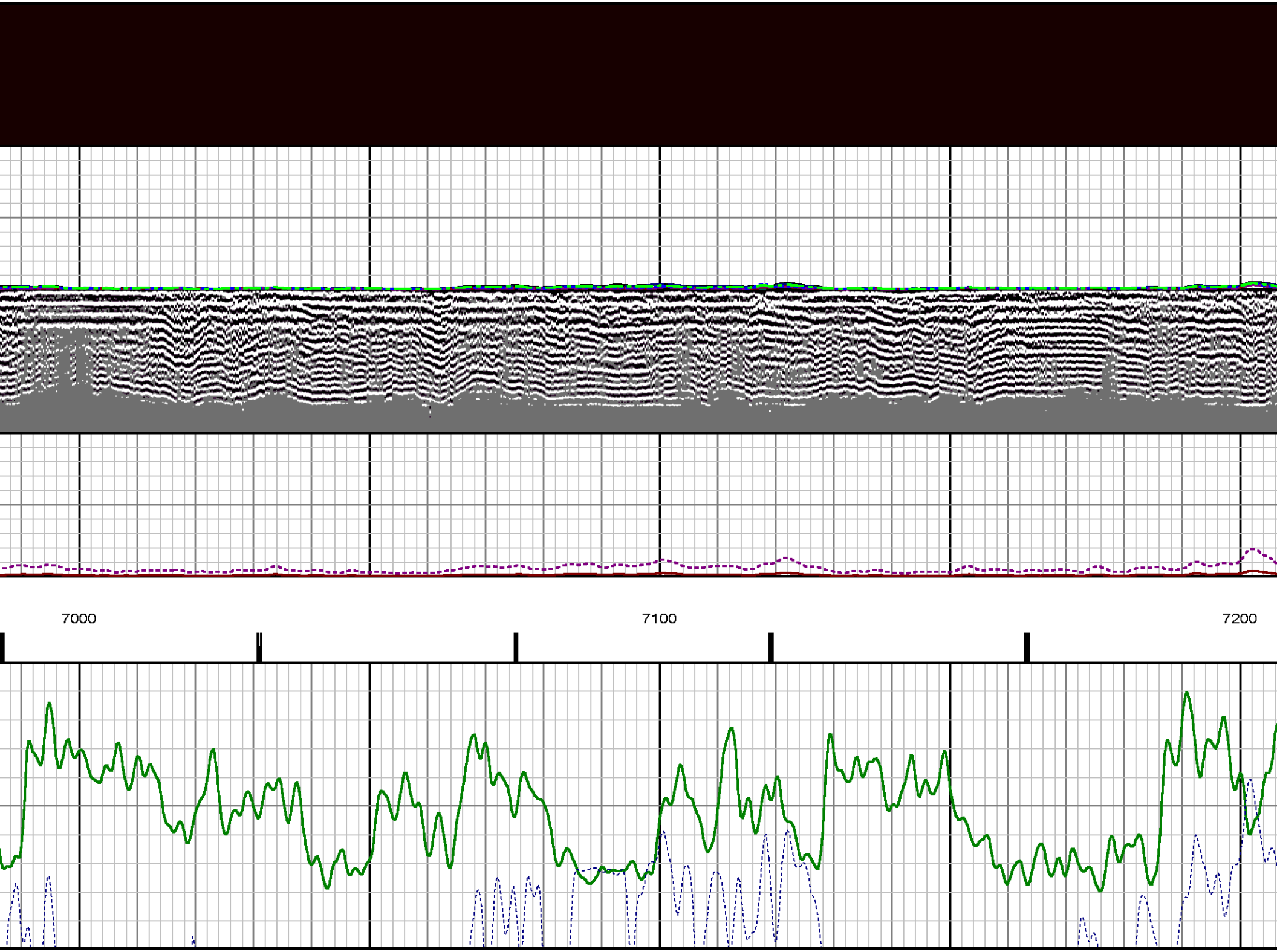
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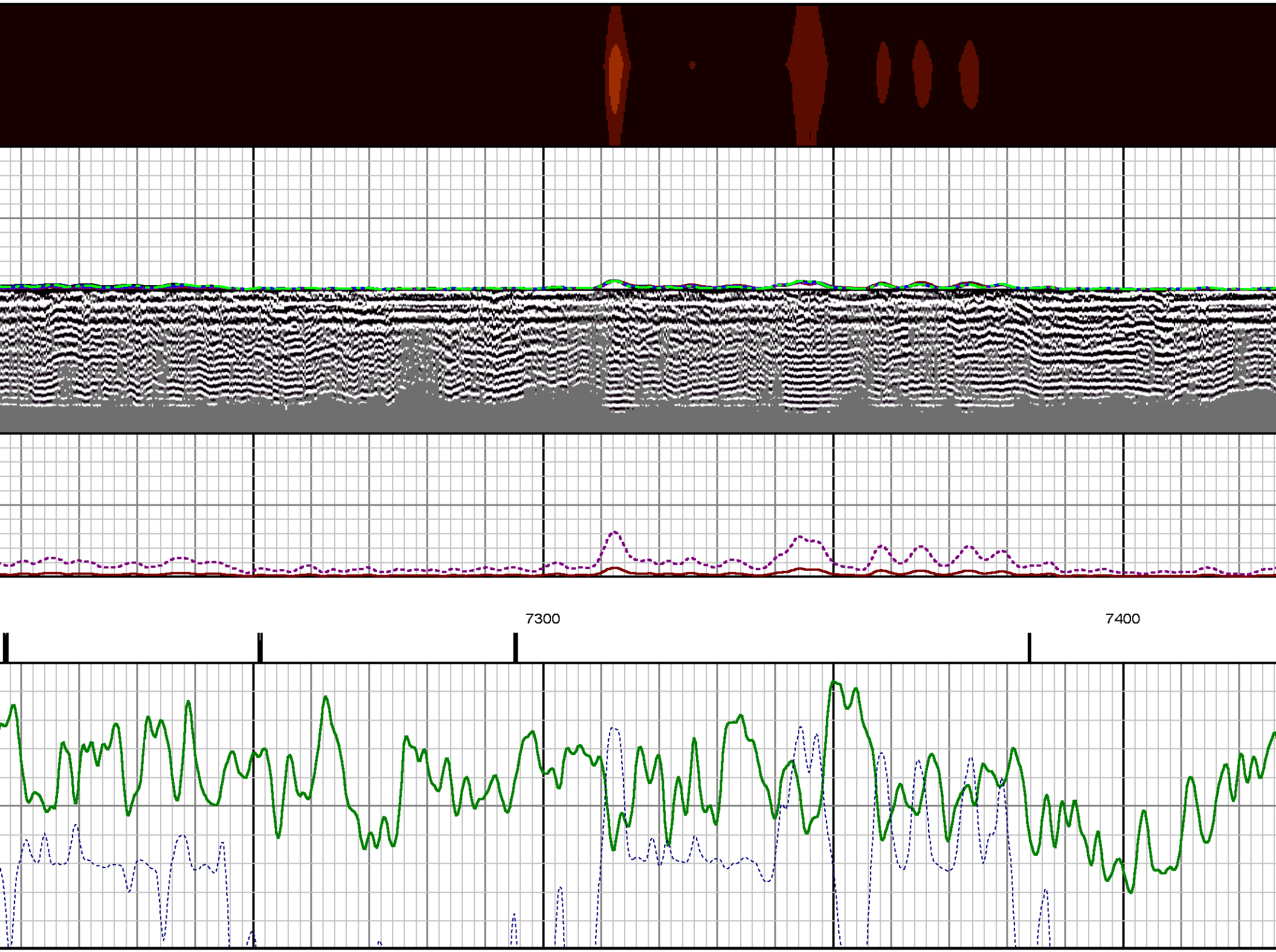
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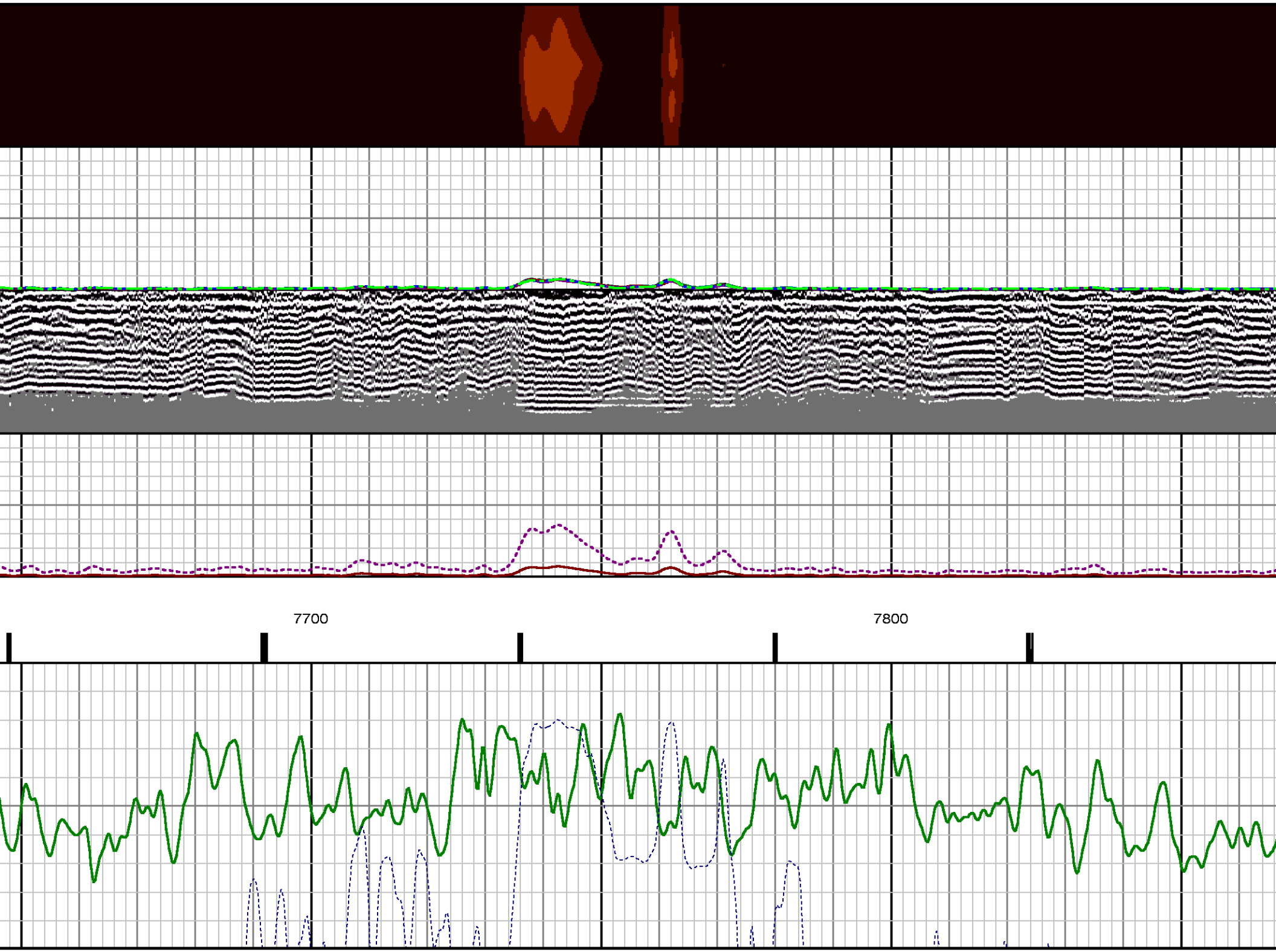
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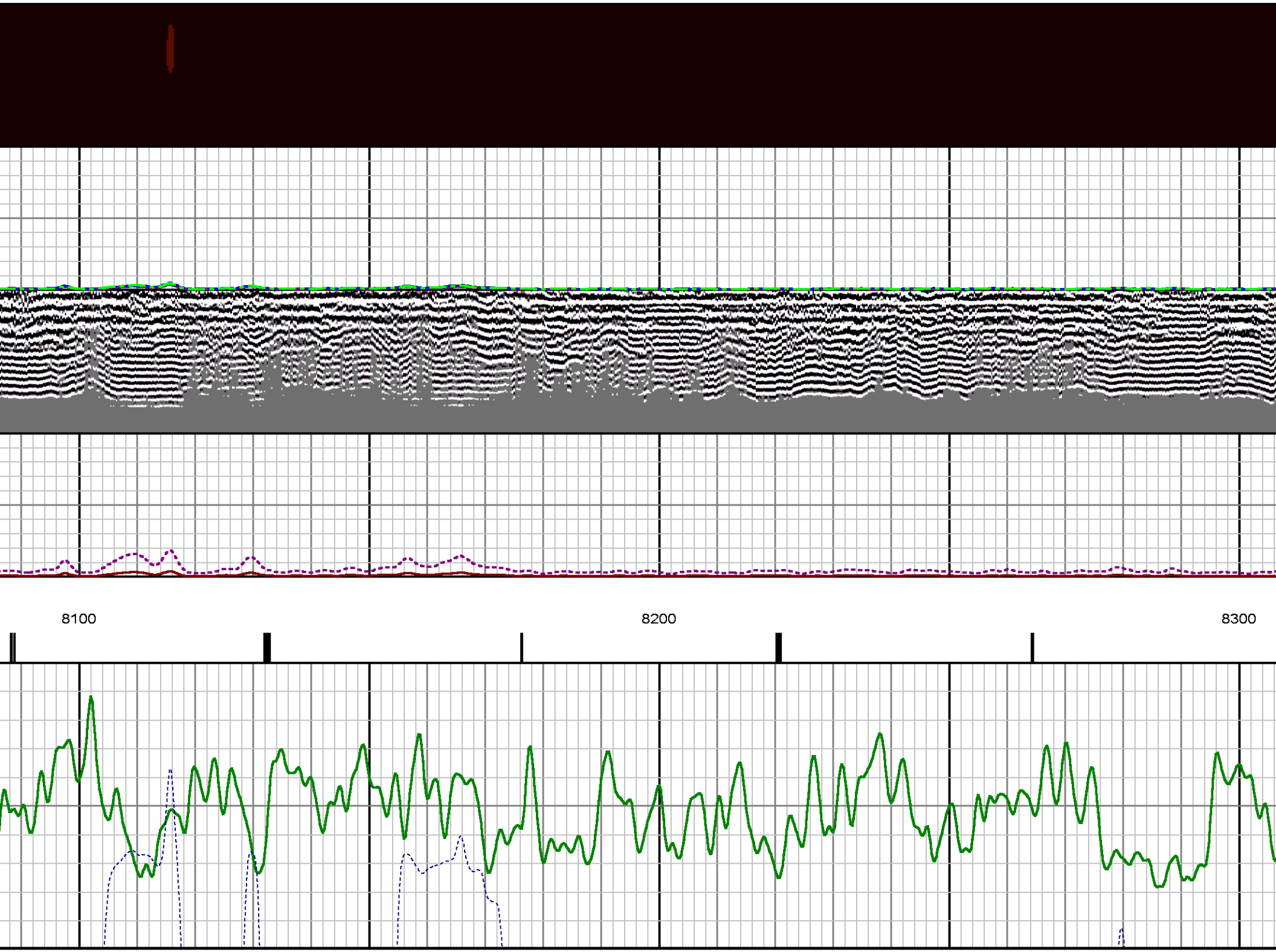
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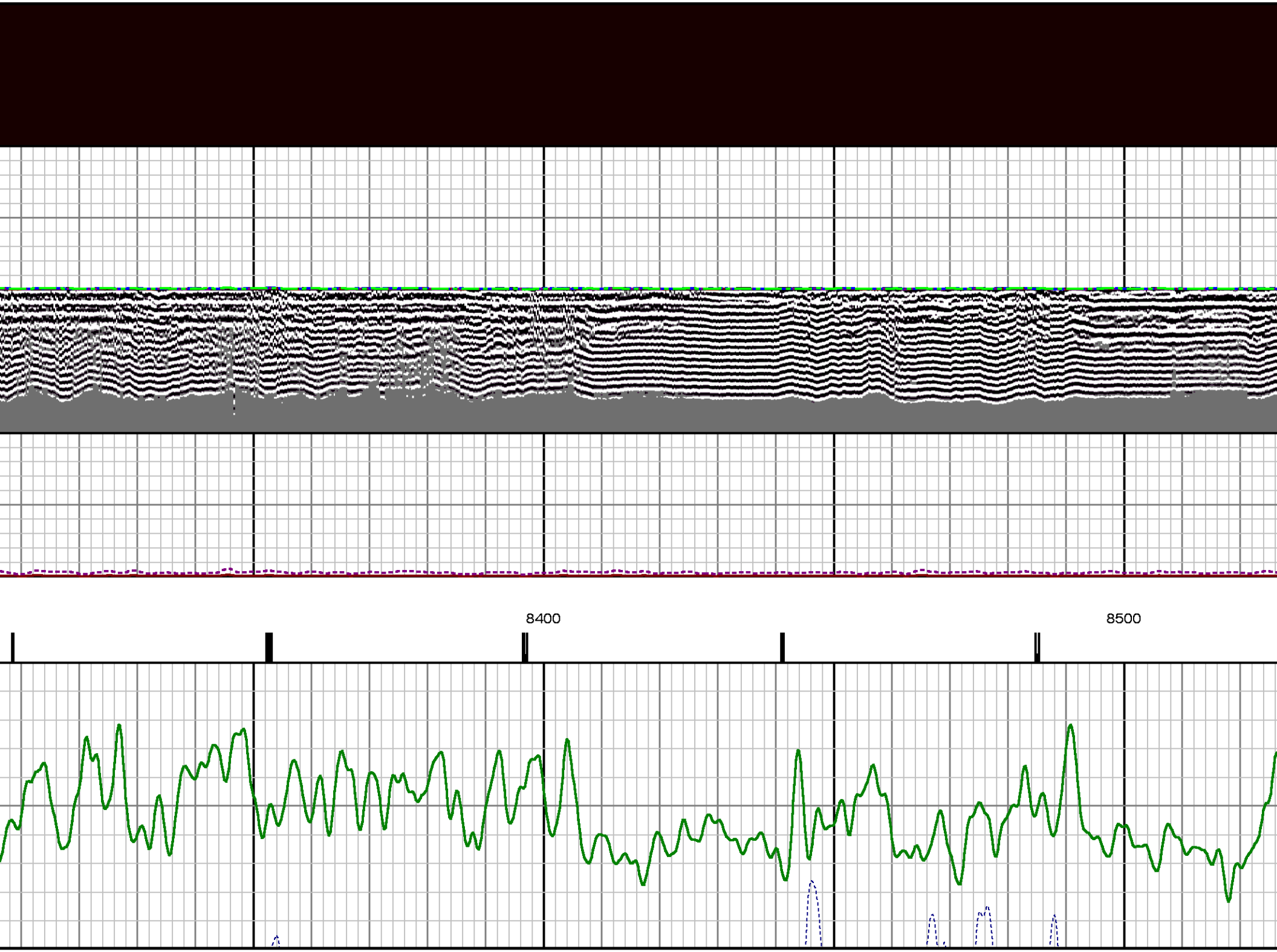
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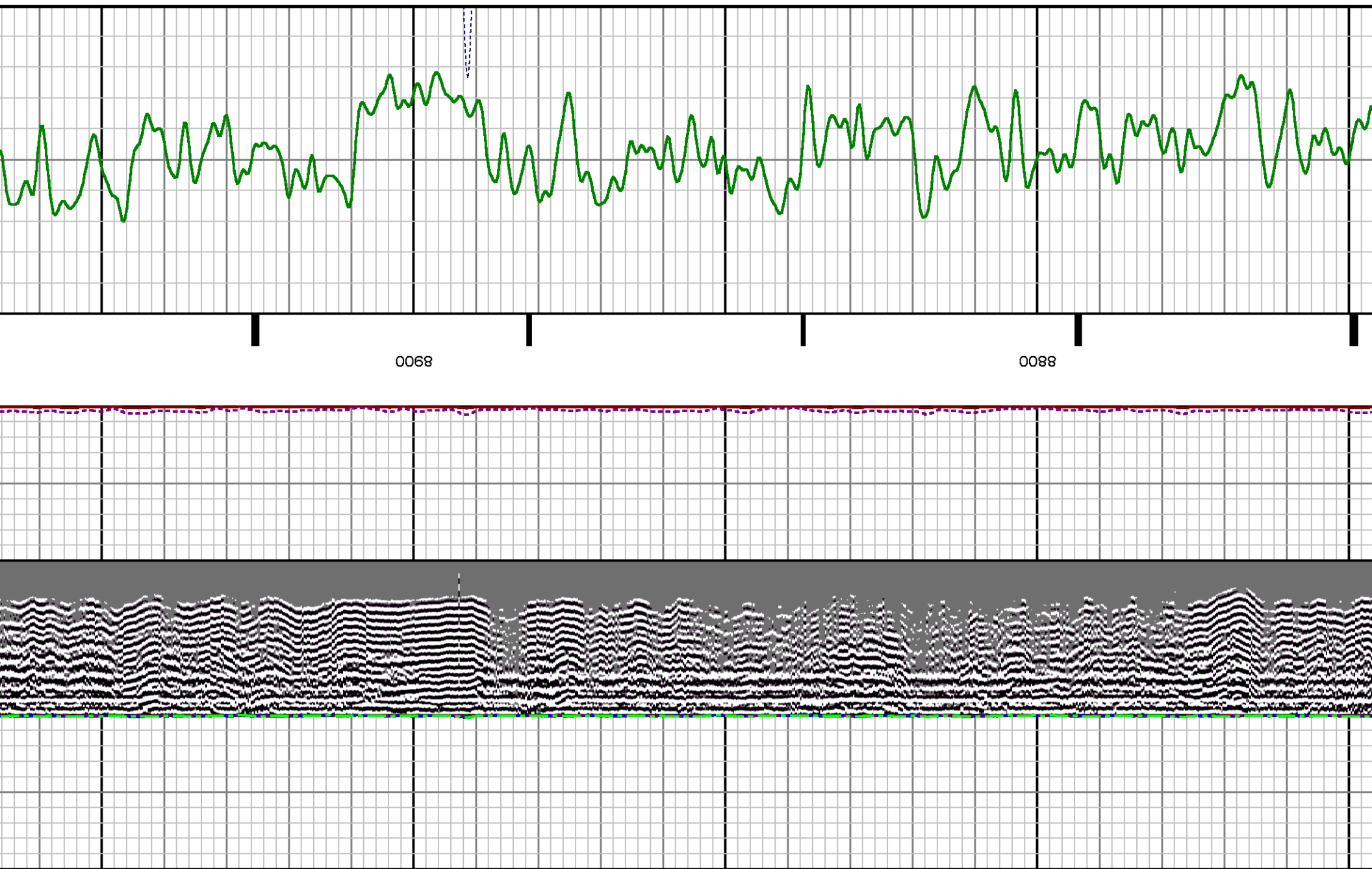
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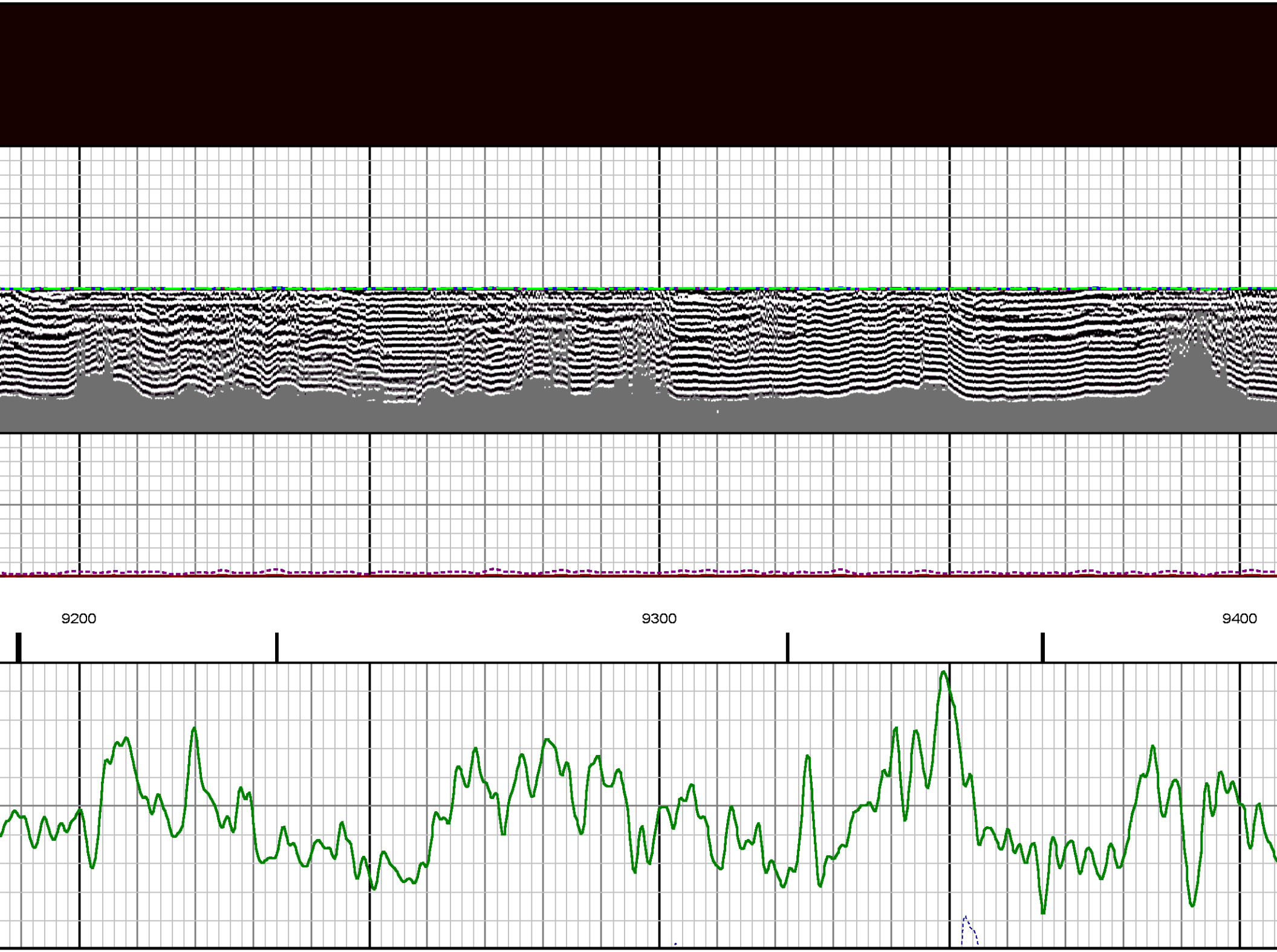
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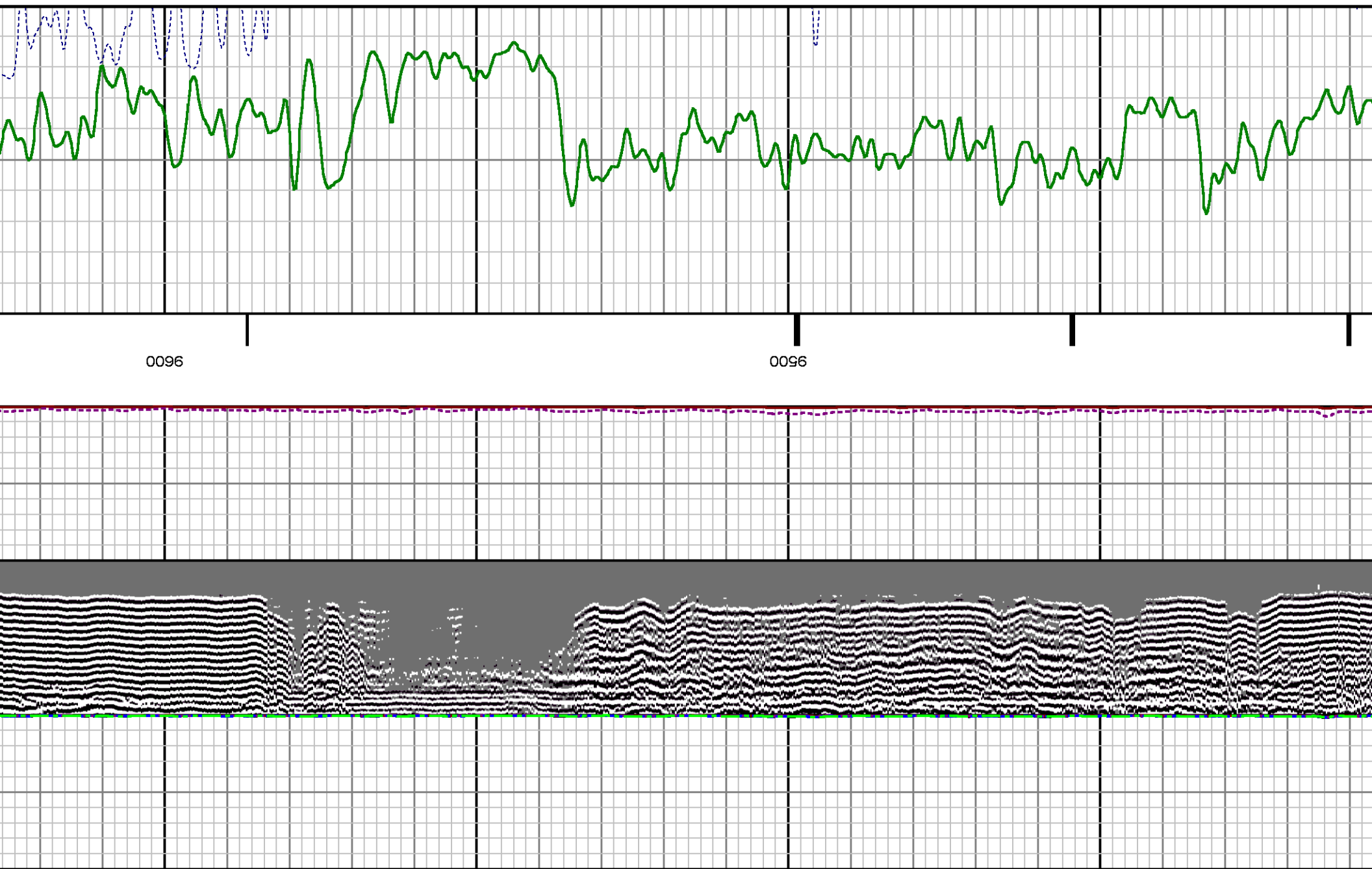
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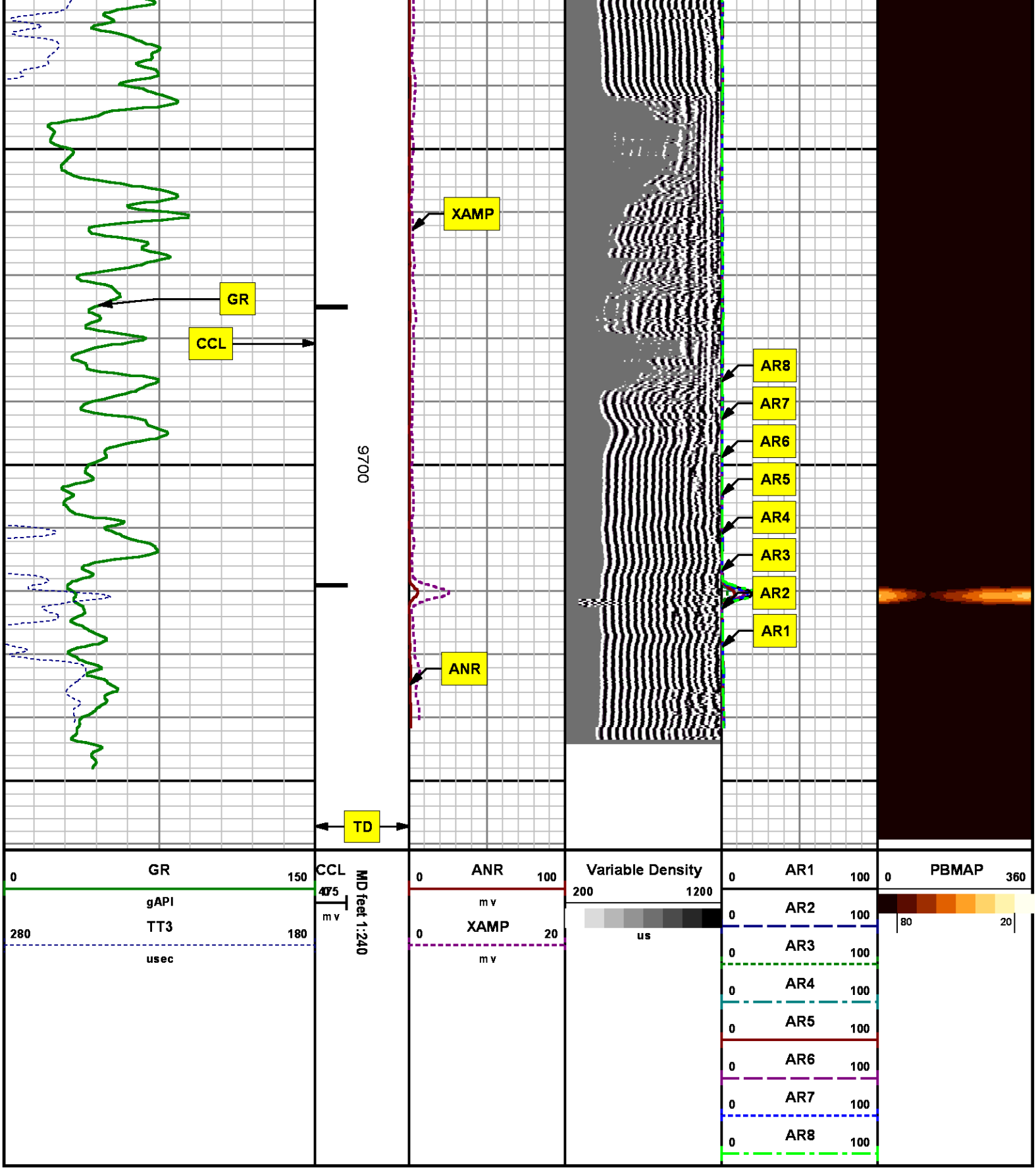


REPEAT SECTION

0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	9435.209	9758.459
RAL	Amp Gate Start Near	195.000	usec	9435.209	9758.459
RAL	Amp Gate Start Radial	195.000	usec	9435.209	9758.459
RAL	Amp Gate Width Far	25.000	usec	9435.209	9758.459
RAL	Amp Gate Width Near	25.000	usec	9435.209	9758.459
RAL	Amp Gate Width Radial	25.000	usec	9435.209	9758.459
RAL	casing od	4.500	inches	9435.209	9758.459
RAL	casing wt	11.600	lbm/ft	9435.209	9758.459
RAL	FB Start Far	291.900	usec	9435.209	9758.459
RAL	FB Start Near	175.391	usec	9435.209	9758.459
RAL	FB Start Radial	175.391	usec	9435.209	9758.459
RAL	FB Thresh Far	10.000	mv	9435.209	9758.459
RAL	FB Thresh Near	4.000	mv	9435.209	9758.459
RAL	FB Thresh Radial	4.000	mv	9435.209	9758.459
RAL	Fluid Travel Time	200.000	usec/ft	9435.209	9758.434

DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES
1426XA	-16.750	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	-15.750	AFAR SIG TT5
2459XA	-11.340	CCL
2459XA	-9.490	GR
2459XA	-4.090	NEU

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

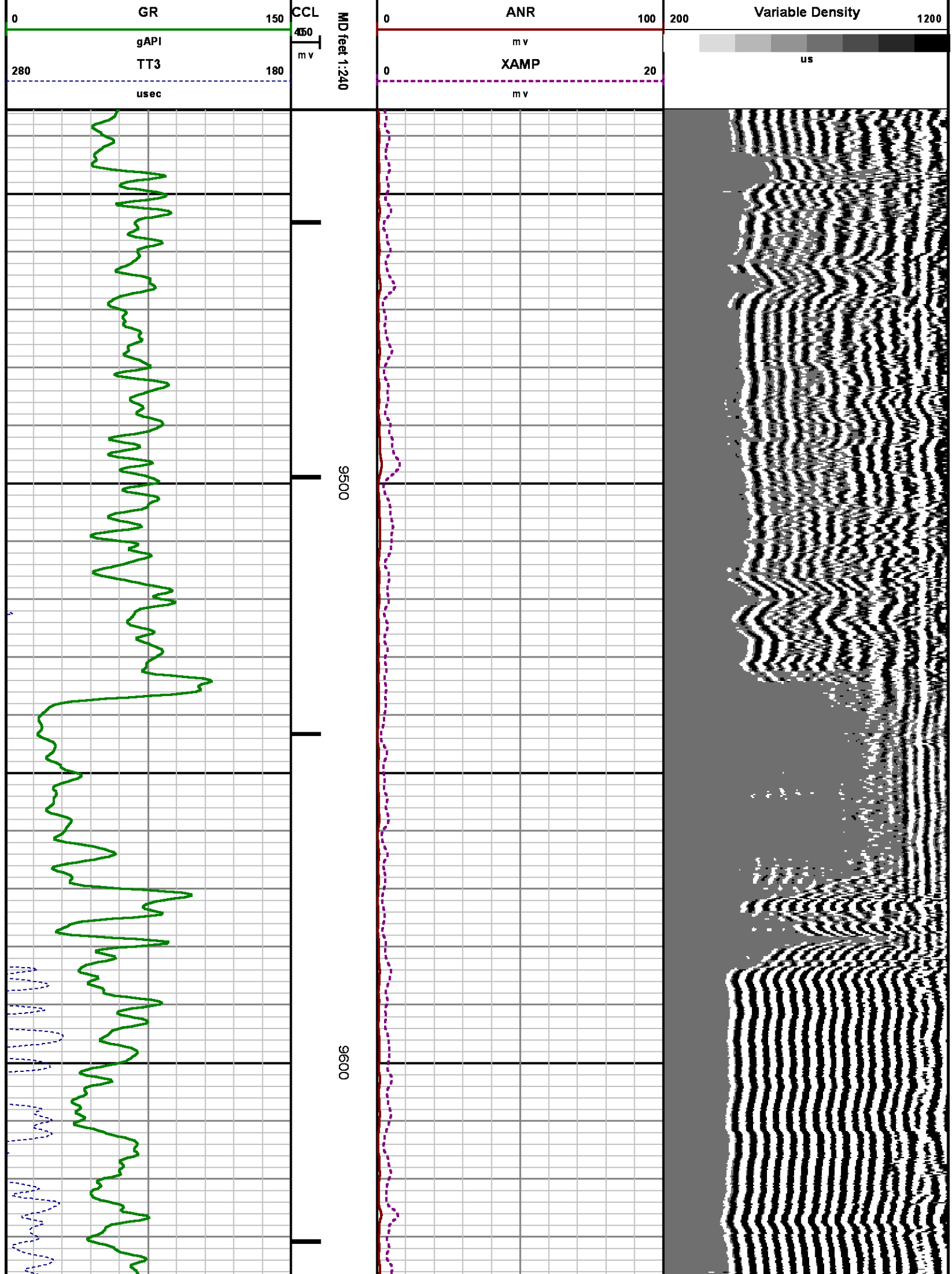
Well : FEDERAL PA 43-21

File Name : d:\welldata\wpx\pa 43-21\43ral\repeat.xtf

Mode : PlotMgr 5.4.504

Interval : 9435.46 - 9747.00 feet UP

Created : 3/1/2014 3:54:47 PM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gAPI
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usec
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mv
Variable Density
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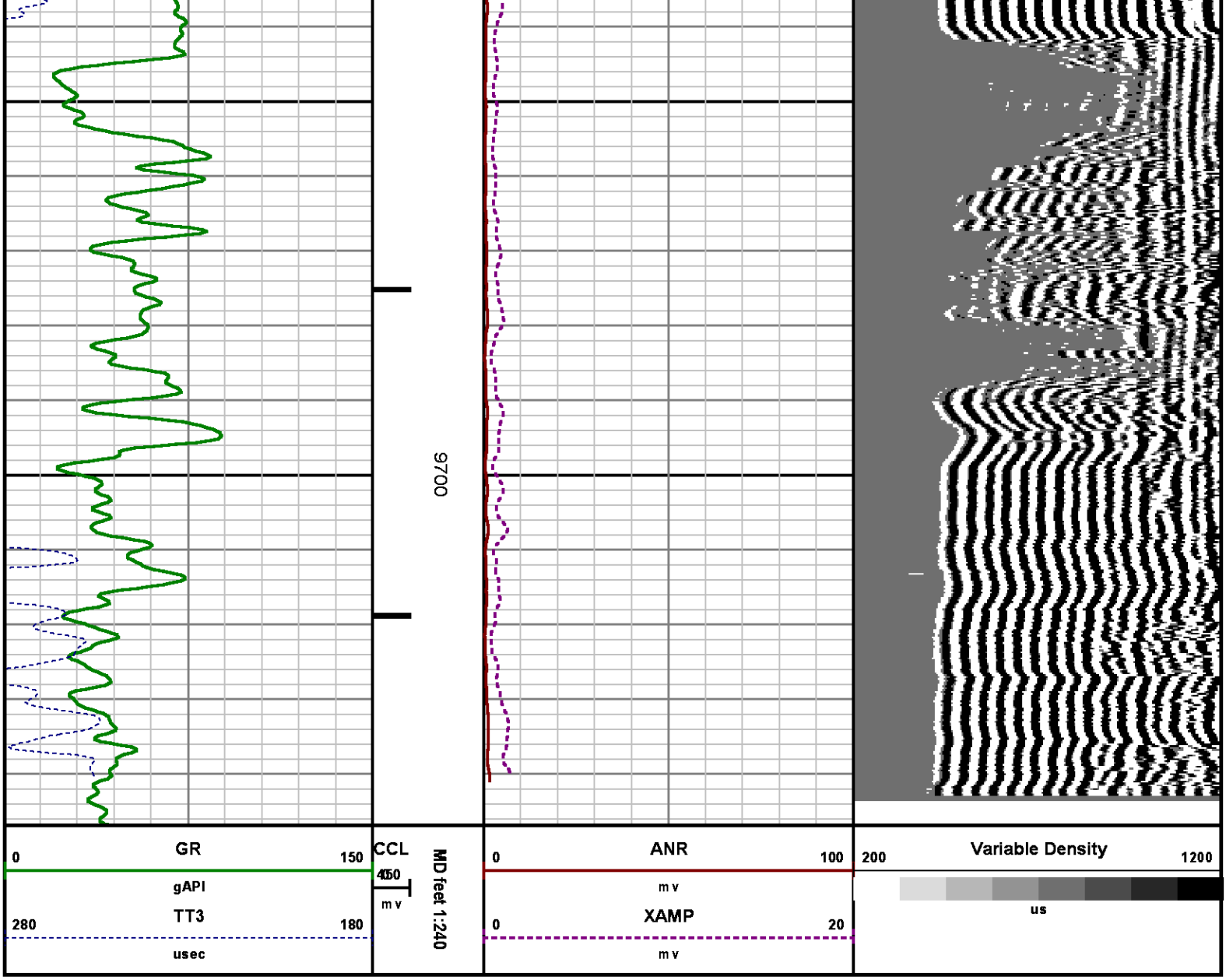
1200
us



CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP\496F27_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Feb 27 17:21:44 2014 **TOOL SERIES:** 1426XA **ASSET:** 496 **SEQ:** F27

Tool Delay [usec]	Tank OD in	Tank Wt lbm/ft	Tank ID in
-56.00	5.50	15.50	4.95

	Amp Gate	Amp Gate	Zero Gate	Zero Gate

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	217	216	30	166	25	-0.051	100.00	0.16
3 Ft. Receiver	217	216	30	144	25	-0.231	100.00	0.16
5 Ft. Receiver	325	324	30	238	25	0.008	150.00	0.18
Radial #1	217	216	30	147	25	-0.329	100.00	0.16
Radial #2	217	216	30	147	25	-0.210	100.00	0.16
Radial #3	217	216	30	147	25	-0.075	100.00	0.16
Radial #4	217	216	30	147	25	-0.213	100.00	0.16
Radial #5	217	216	30	147	25	-0.243	100.00	0.16
Radial #6	216	216	30	147	25	-0.148	100.00	0.16
Radial #7	214	216	30	147	25	-0.097	100.00	0.16
Radial #8	217	216	30	147	25	-0.033	100.00	0.16

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\496F27_fld.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Feb 27 17:24:12 2014 **TOOL SERIES:** 1426XA **ASSET:** 496 **SEQ:** F27

Tool Delay [usec]	Casing OD in	Casing Wt lbm/ft	Casing ID in
-56.00	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	0.043	0.000	1.00	100.000
3 Ft. Receiver	195	25	1.813			
5 Ft. Receiver	305	25	2.260			
Radial #1	195	25	1.262			
Radial #2	195	25	1.307			
Radial #3	195	25	1.459			
Radial #4	195	25	1.505			
Radial #5	195	25	1.657			
Radial #6	195	25	1.789			
Radial #7	195	25	1.432			
Radial #8	195	25	1.402			

GAMMA RAY

Calibration File: C:\case\calver\GR\1012412122.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat Feb 22 12:18:15 2014 **TOOL SERIES:** 2459XA **ASSET:** 10124121 **SEQ:** 22

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA-612	36.22	291.56	0.725	26.24	211.24	185.00

Verification File: C:\case\calver\GR\1012412122.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Sat Feb 22 12:19:23 2014 **TOOL SERIES:** 2459XA **ASSET:** 10124121 **SEQ:** 22

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA-612	41.96	293.60	0.725	30.40	212.73	182.33

TOOL DIAGRAM

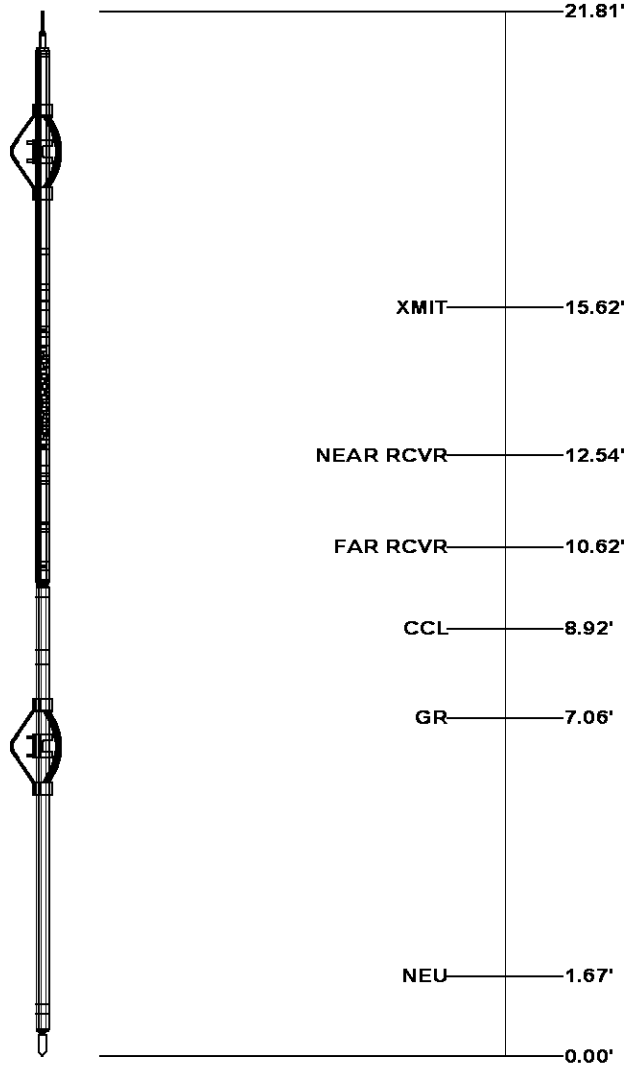
OTA SHORT CABLE HEAD

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

Probe GR/CCL/NEU

Series	2459XA
Mnemonic	PROB
Diameter	2.75"
Length	9.42'
Measure Point	1.21' NEU
Measure Point	6.60' GR
Measure Point	8.46' CCL



Total Length: 21.81'
Total Weight: Not Available
Max Diameter: 0' 2.75"

BAKER HUGHES

Baker Atlas

CASE

Company	WPX ENERGY		File No:
Well	FEDERAL PA 43-21		CH082897
Field	PARACHUTE		API No:
County	GARFIELD	State COLORADO	05045220270000

Location

SHL: 2610' FNL & 1448' FWL

BHL: 2615' FSL & 272' FEL (NESE)

SEC 21 TWP 6S RGE 95W

Elevations

KB 6056 ft

DF

GL 6030 ft

21 6S 95W

PA 22-21 PAD

NABORS 573