BAKER HUGHES

Baker Atlas

RADIAL ANALYSIS BOND LOG

File No:	CH089883
API No:	05045219960000
Company	WPX ENERGY
Well	SAVAGE RWF 334-25
Field	RULISON
County	GARFIELD
State	COLORADO

Location

25 6S 94W

RWF 43-25 PAD

NABORS 577

SHL: 1147' FSL & 1391' FEL

BHL: 1428' FSL & 2632' FWL (NWSE)

SEC 25 TWP 6S RGE 94S

Other Services

RPM

Permanent Datum	GL	Elevation	6234 ft
Log Measured From	KB	26 ft	Above P. D.
Drill Measured From	KELLY BUSHING		

Elevations

KB 6260 ft

DF

GL 6234 ft

Date	01/SEP/14		
Run	ONE		
Service Order	US089883J		
Depth Driller	8900 ft		
Depth Logger	8860 ft		
Bottom Logged Interval	8850 ft		
Top Logged Interval	26 ft		
Time Started	0800		
Time Finished	1100		
Operator Rig Time	3 HRS		
Type of Fluid in Hole	WATER		
Fluid Density	NA		
Salinity	NA		
Fluid Level	74 ft		
Logged Cement Top	NA		
Wellhead Pressure	0 psi		
Maximum Hole Deviation	NA		
Nominal Logging Speed	65 fpm		
Maximum Recorded Temperature	243 degF		
Reference Log	NONE		
Reference Log Date	NA		
Equipment No. / Location	4271	GRAND JUCTION	
Recorded By	FLOYD RENEAU		
Witnessed By	BOB CADY		

- 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	1119 ft
4.5 in	11.6 lbm/ft	I-80	26 ft	8900 ft

Borehole Record

Bit Size	From	To
13.5 in	26 ft	1119 ft
8.75 in	1119 ft	8900 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 5 feet.

Logged with zero PSI at wellhead.

BHT = 243°F

SJ = 5637'-5658'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10218496	CENT
1	1	GR/CCL	1355XA	11871510	CENT

PRIMARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	310.000	usec	30.316	8862.000
RAL	Amp Gate Start Near	195.000	usec	30.316	8862.000
RAL	Amp Gate Start Radial	195.000	usec	30.316	8862.000
RAL	Amp Gate Width Far	25.000	usec	30.316	8862.000
RAL	Amp Gate Width Near	25.000	usec	30.316	8862.000
RAL	Amp Gate Width Radial	25.000	usec	30.316	8862.000
RAL	casing od	4.500	inches	30.316	8862.000
RAL	casing wt	11.600	lbm/ft	30.316	8862.000
RAL	FB Start Far	291.900	usec	30.316	8862.000
RAL	FB Start Near	180.000	usec	30.316	8862.000
RAL	FB Start Radial	180.000	usec	30.316	8862.000
RAL	FB Thresh Far	10.000	mv	30.316	8862.000
RAL	FB Thresh Near	4.000	mv	30.316	8862.000
RAL	FB Thresh Radial	4.000	mv	30.316	8862.000
RAL	Fluid Travel Time	200.000	usec/ft	30.316	8861.848

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 : SAVAGE RWF 334-25

File Name : d:\welldata\wpx\rwf 334-25\ral334\main.xtf

Mode : PlotMgr 5.4.504

Interval : 0.00 - 8864.00 feet UP

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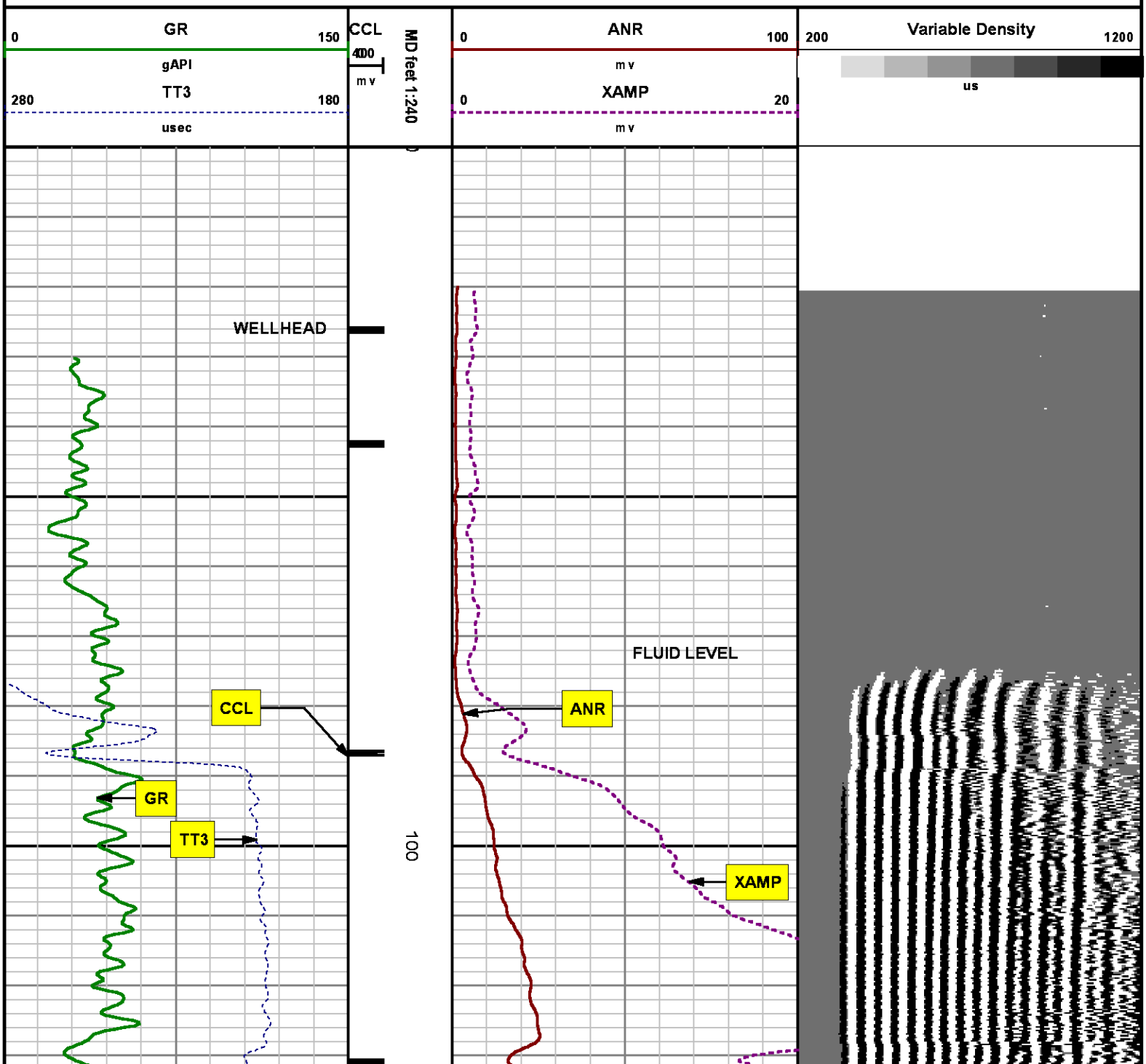

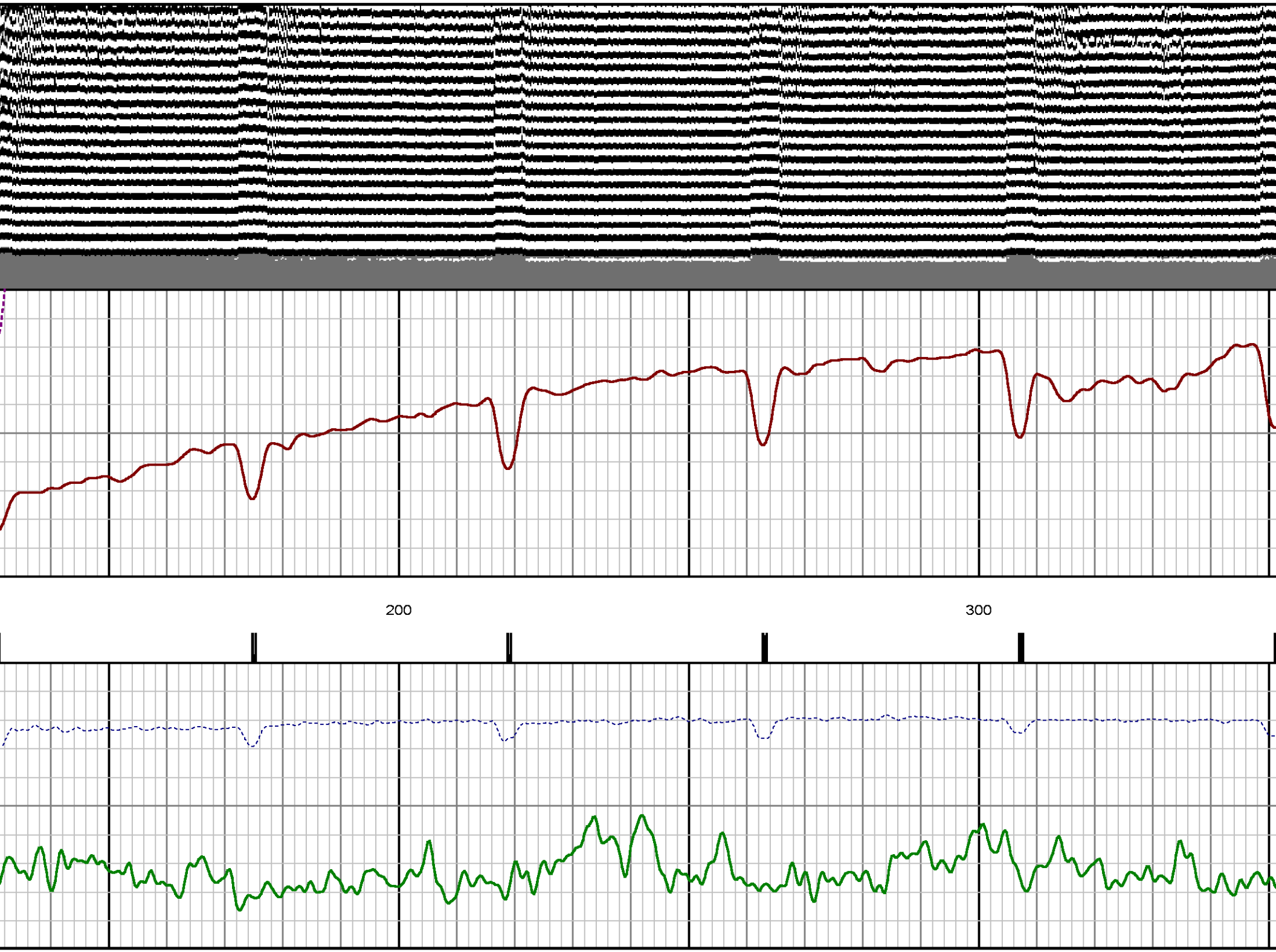
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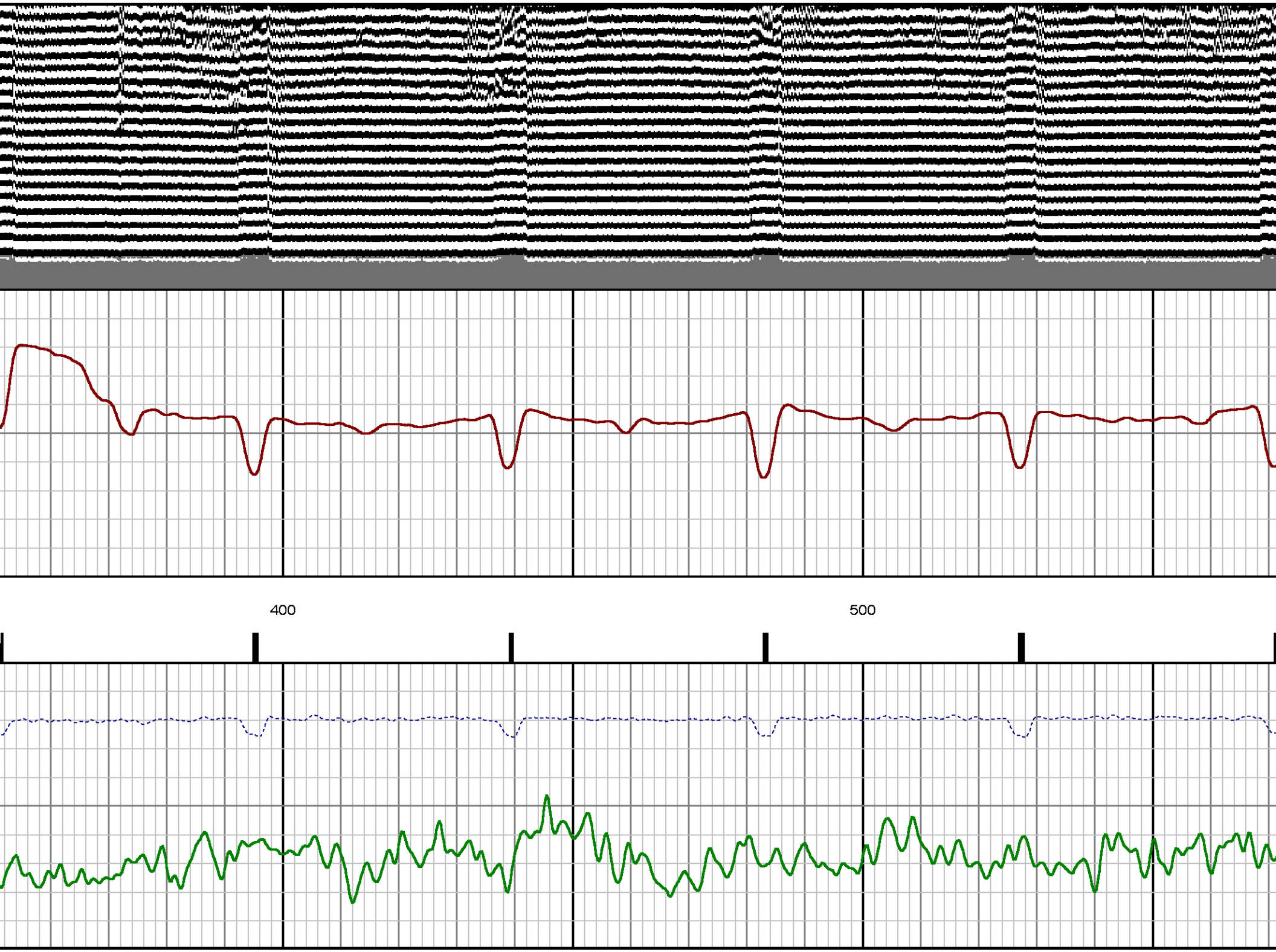
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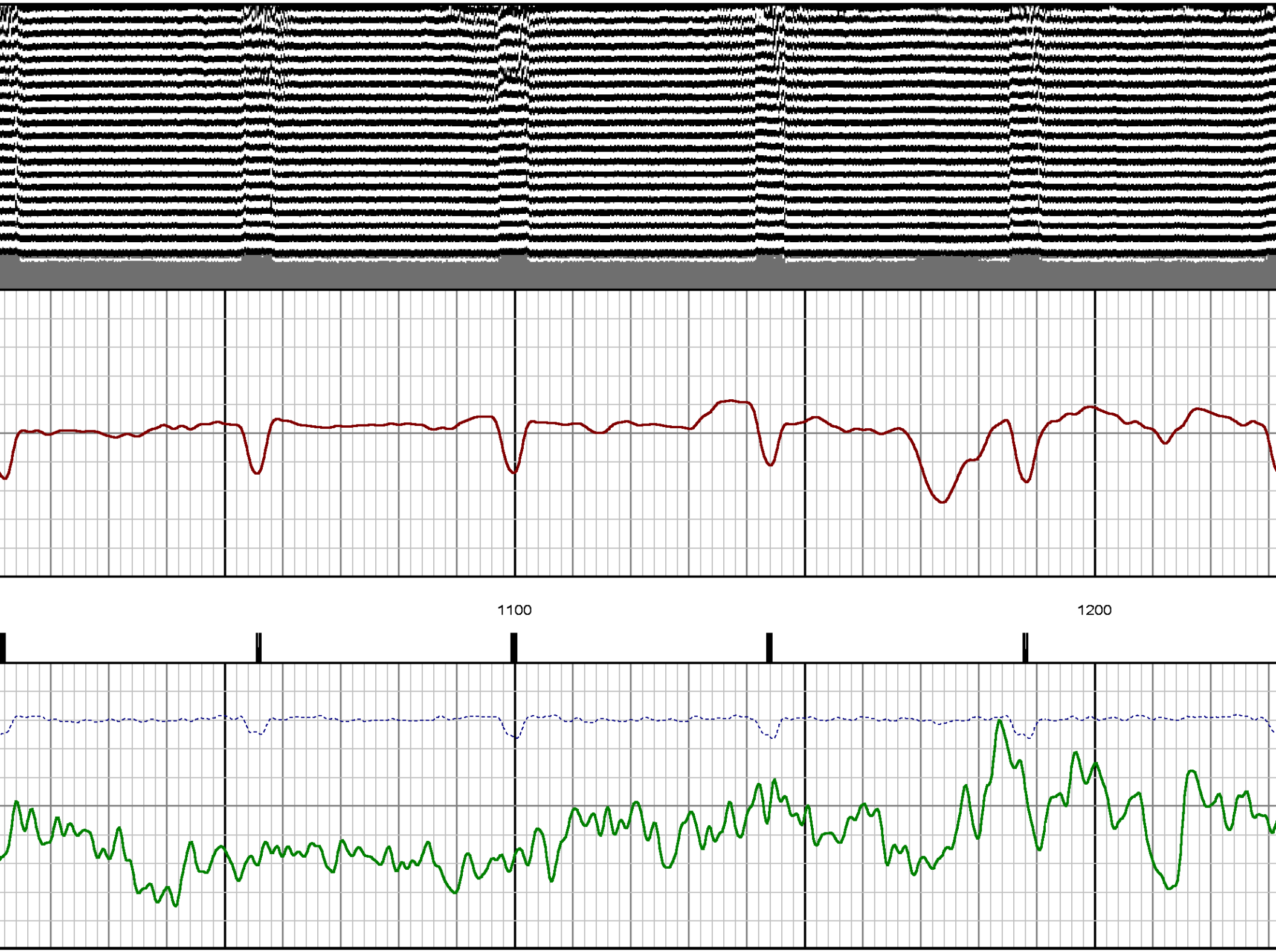
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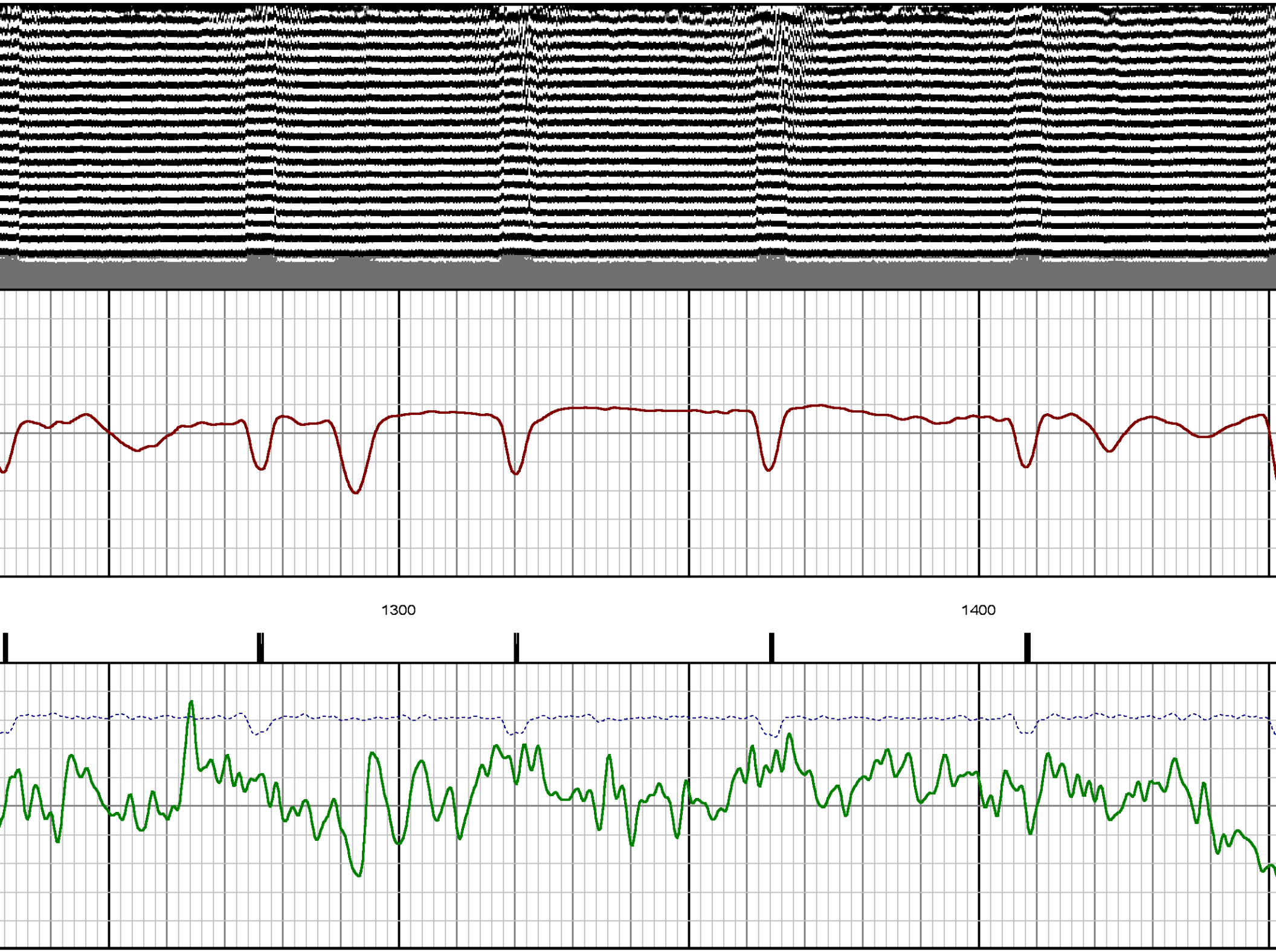
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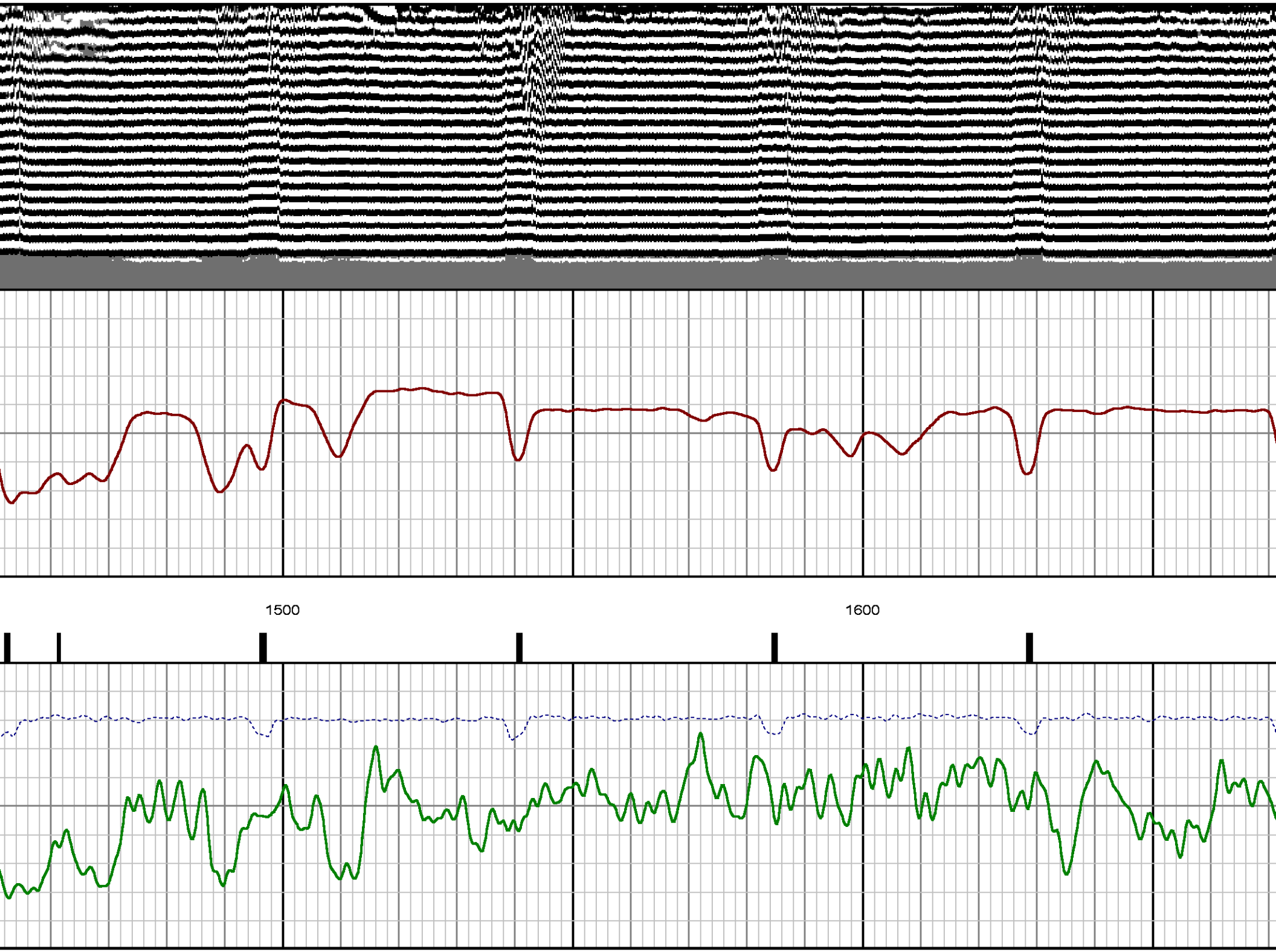
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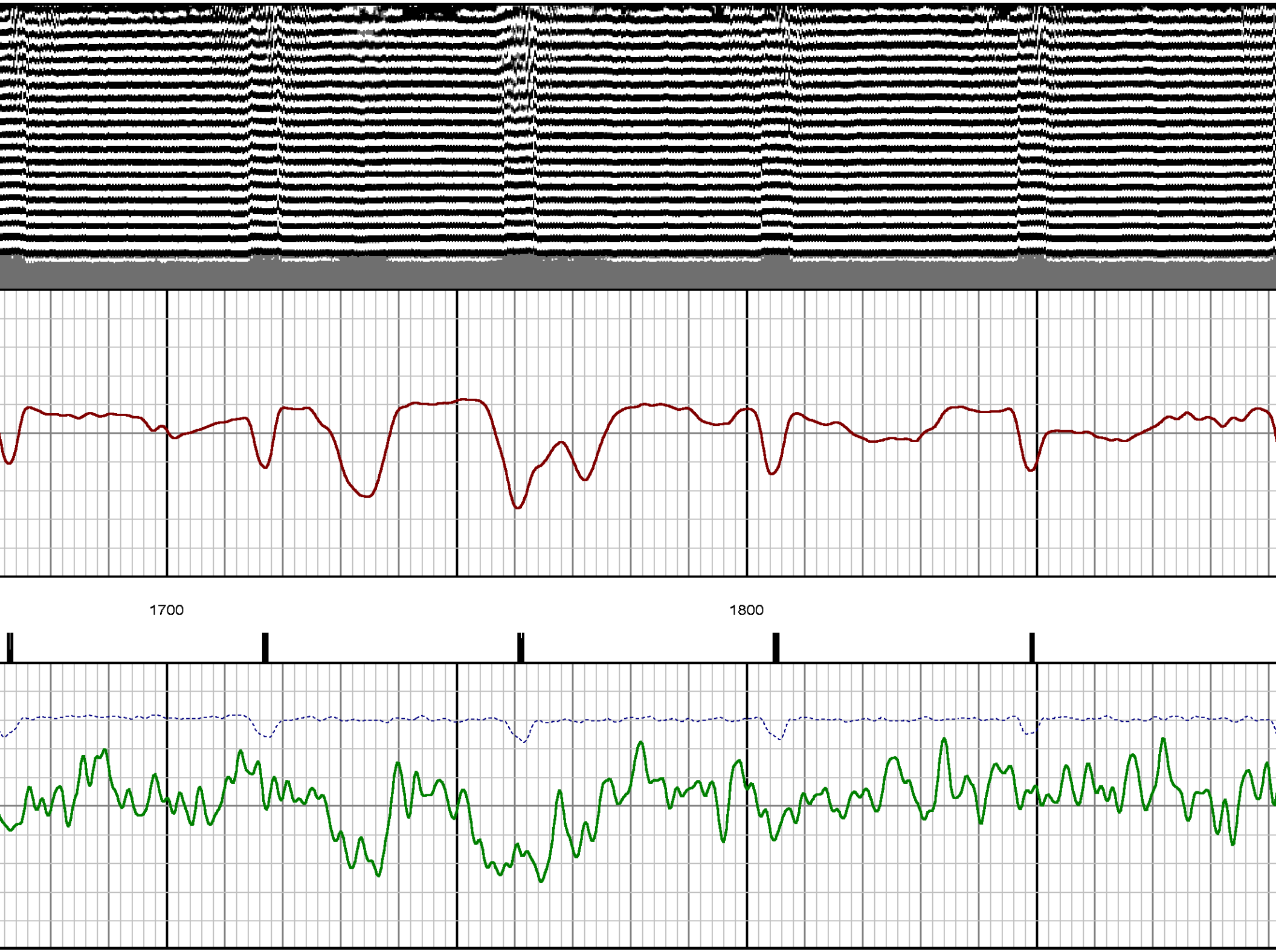
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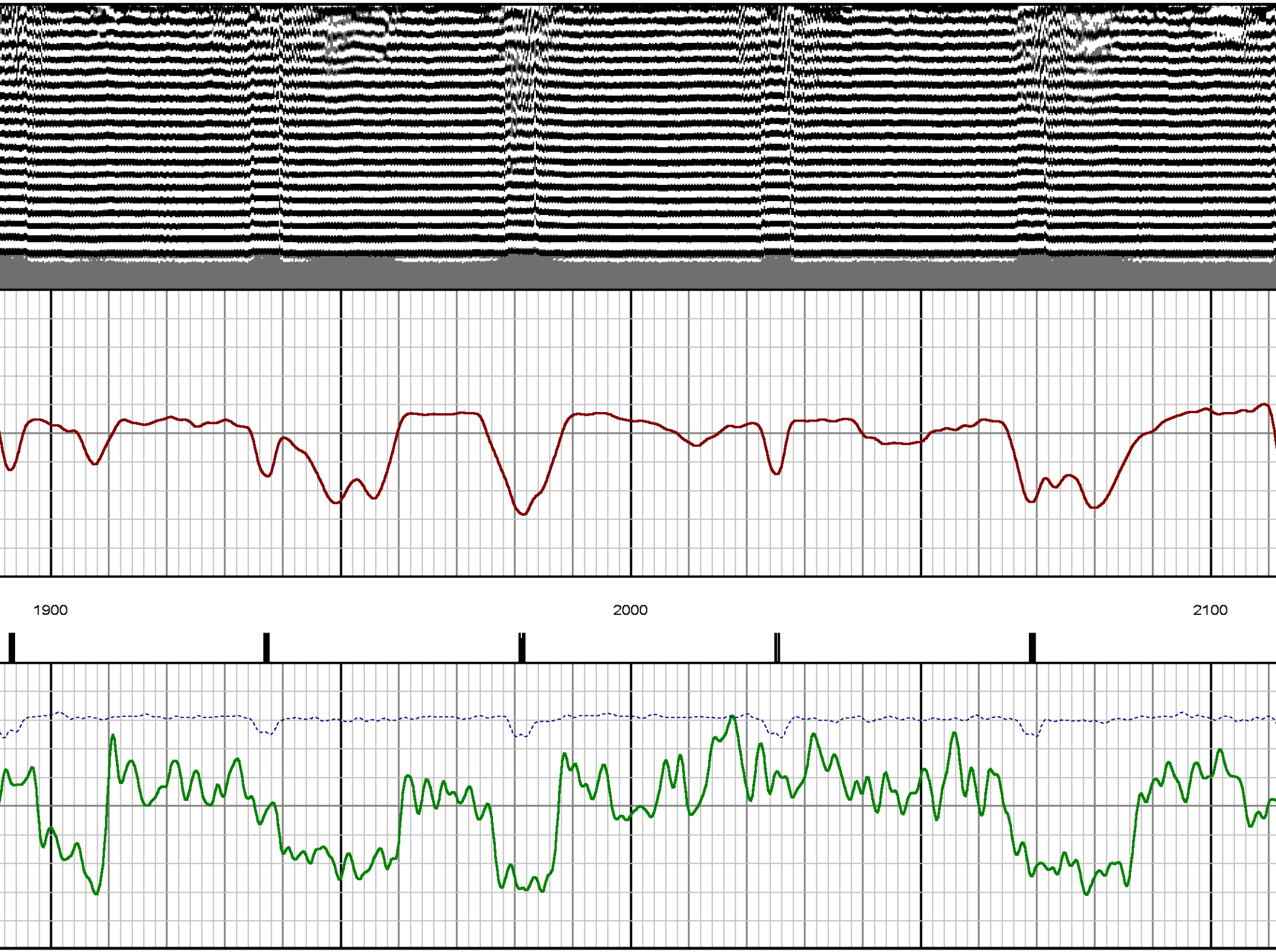
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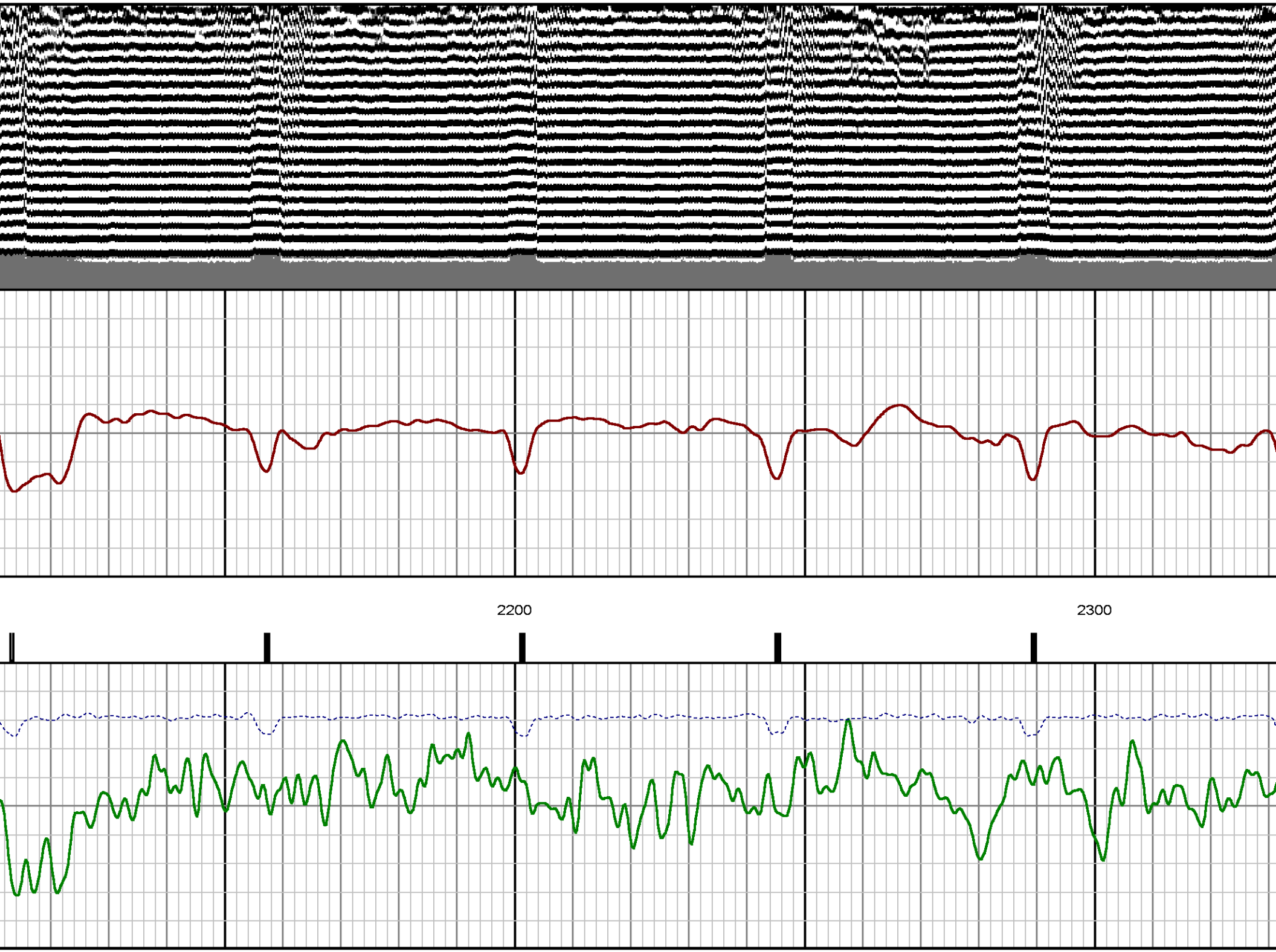
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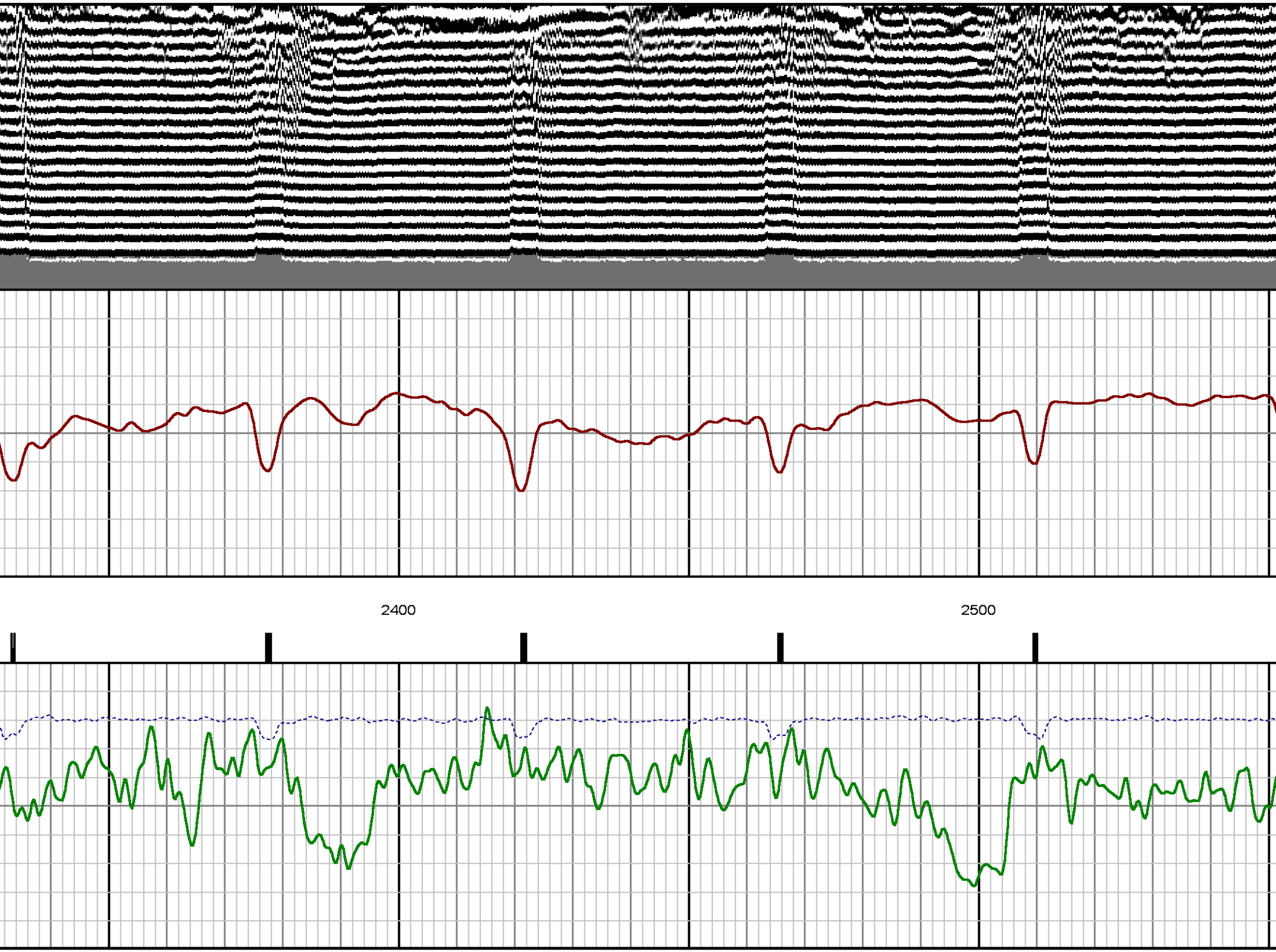
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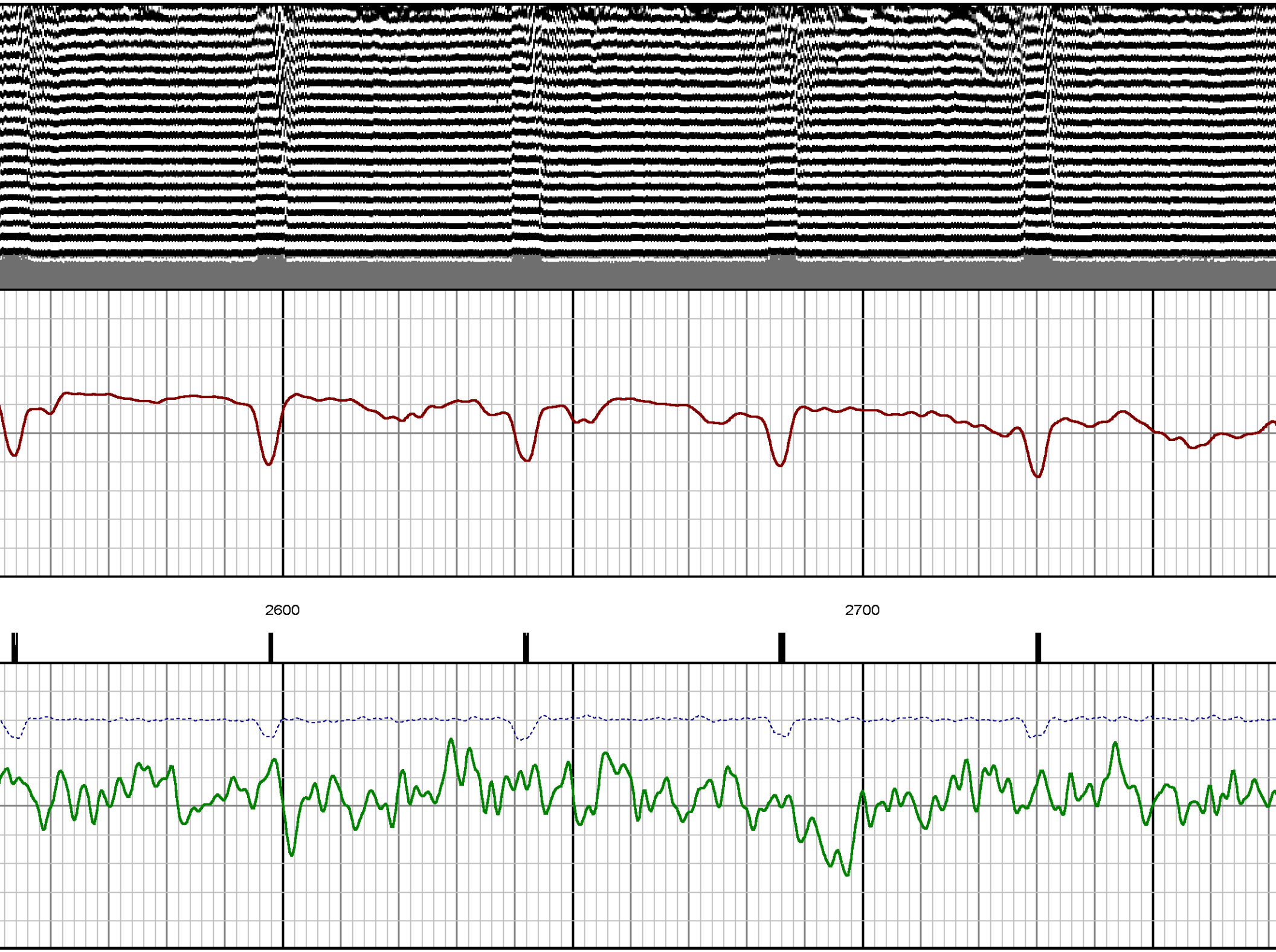
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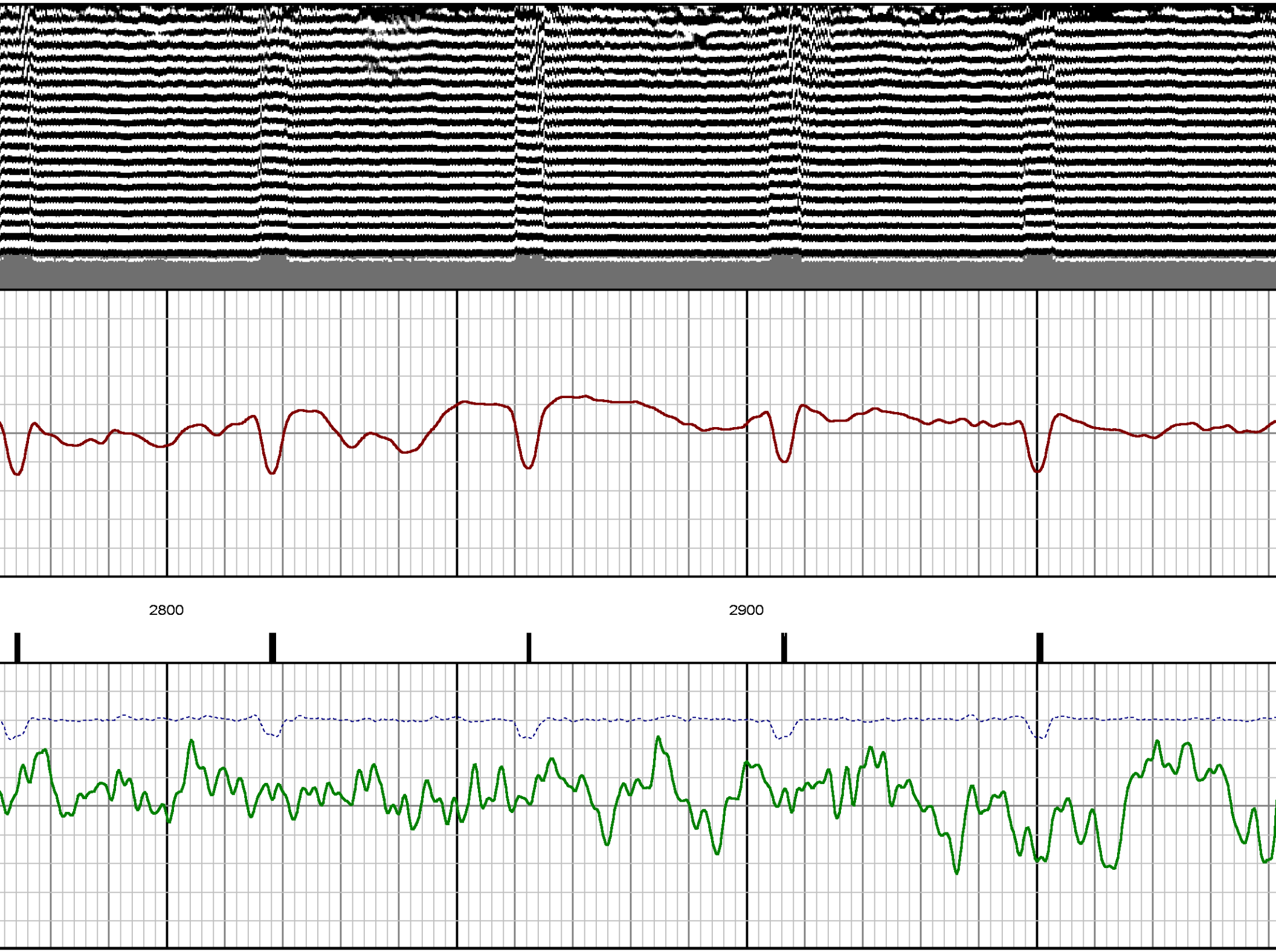
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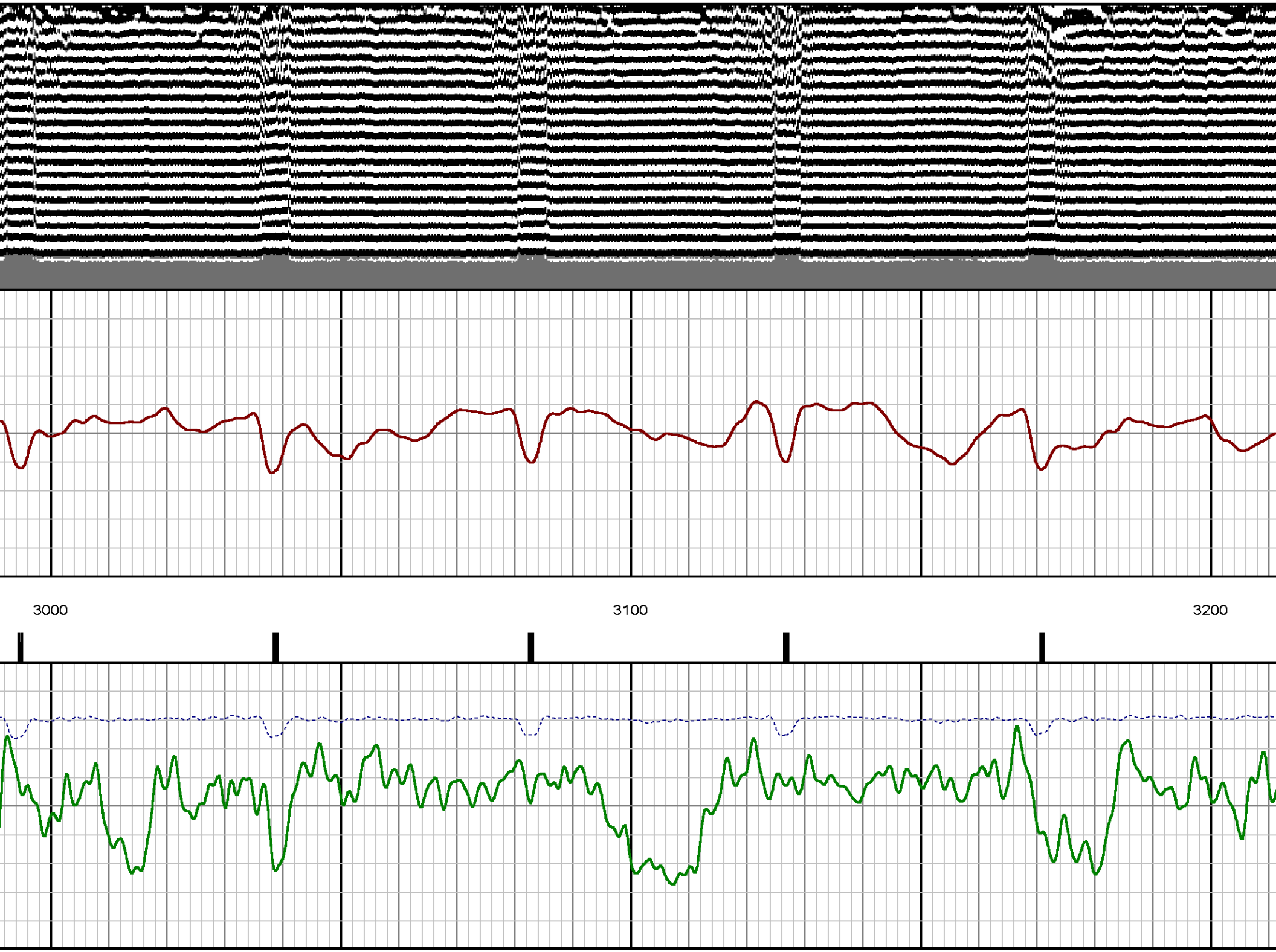
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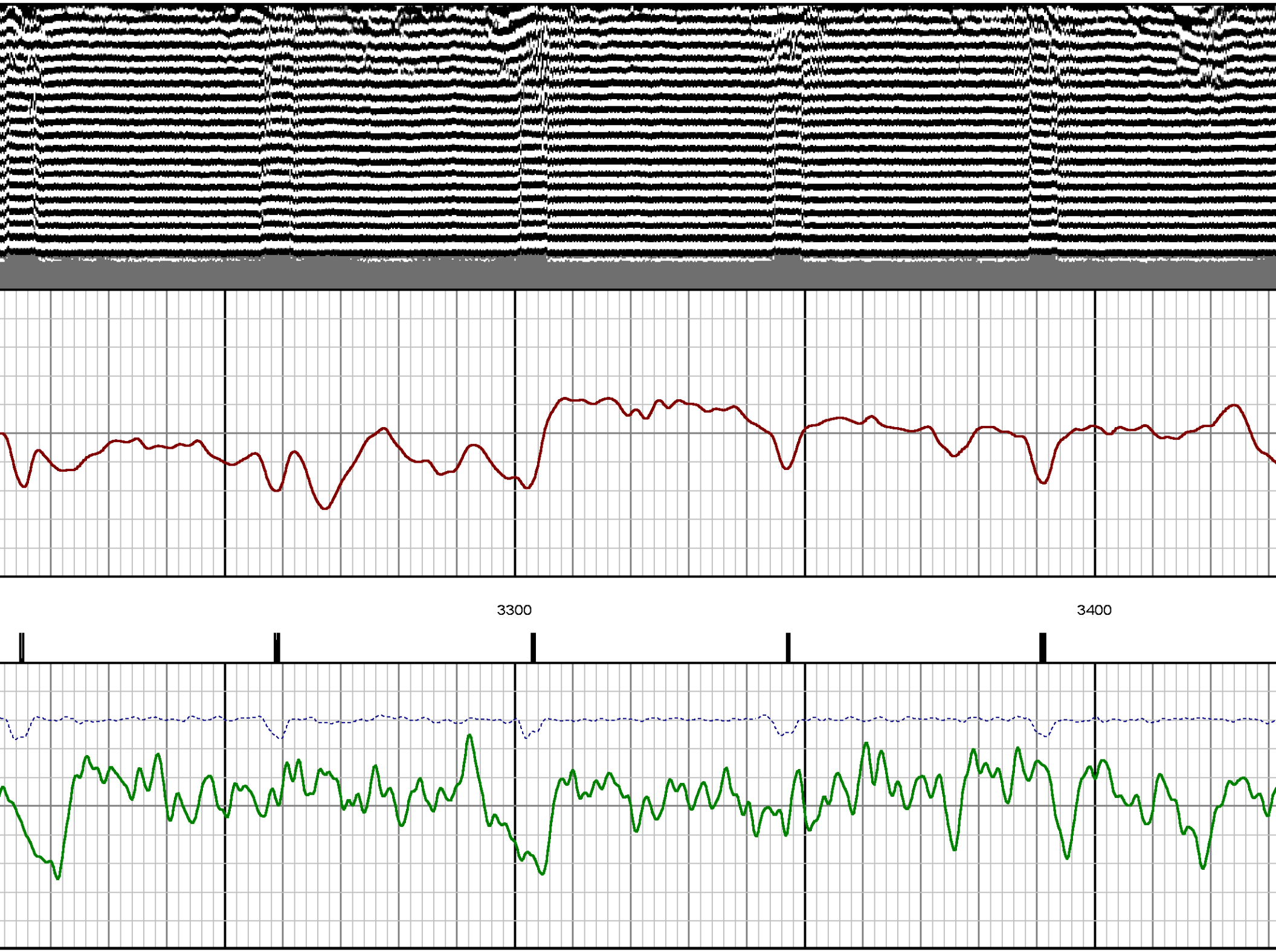
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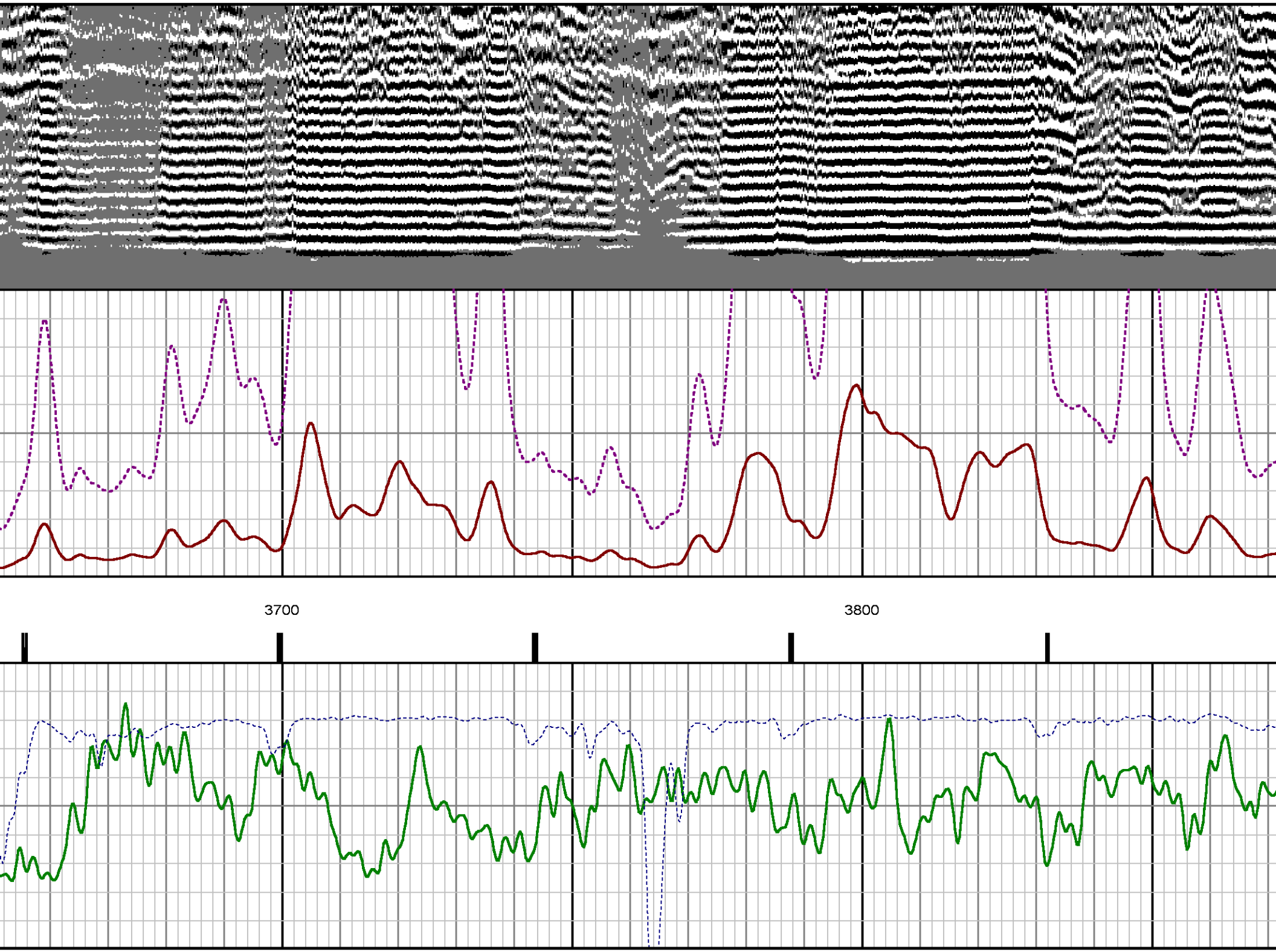
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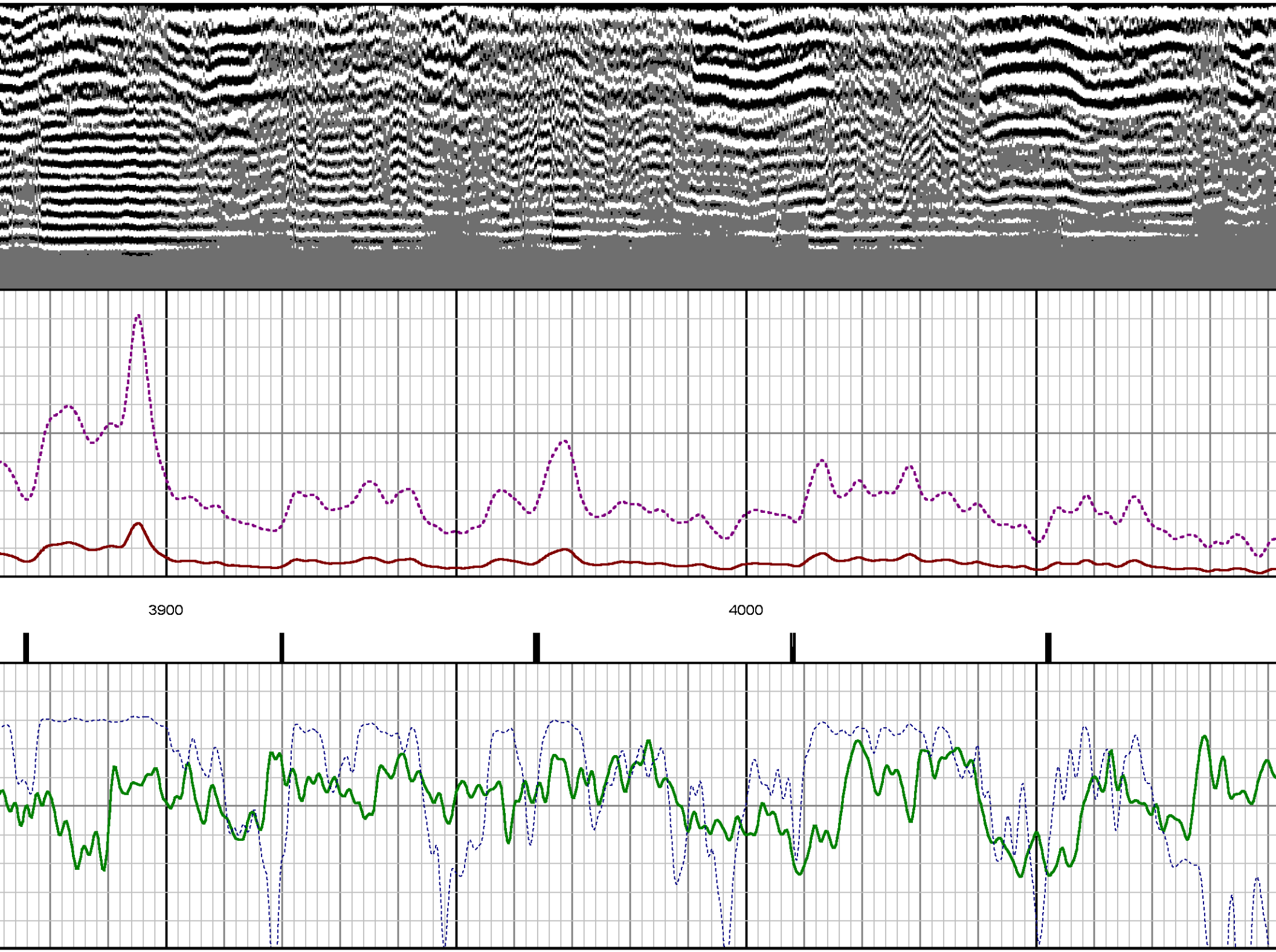
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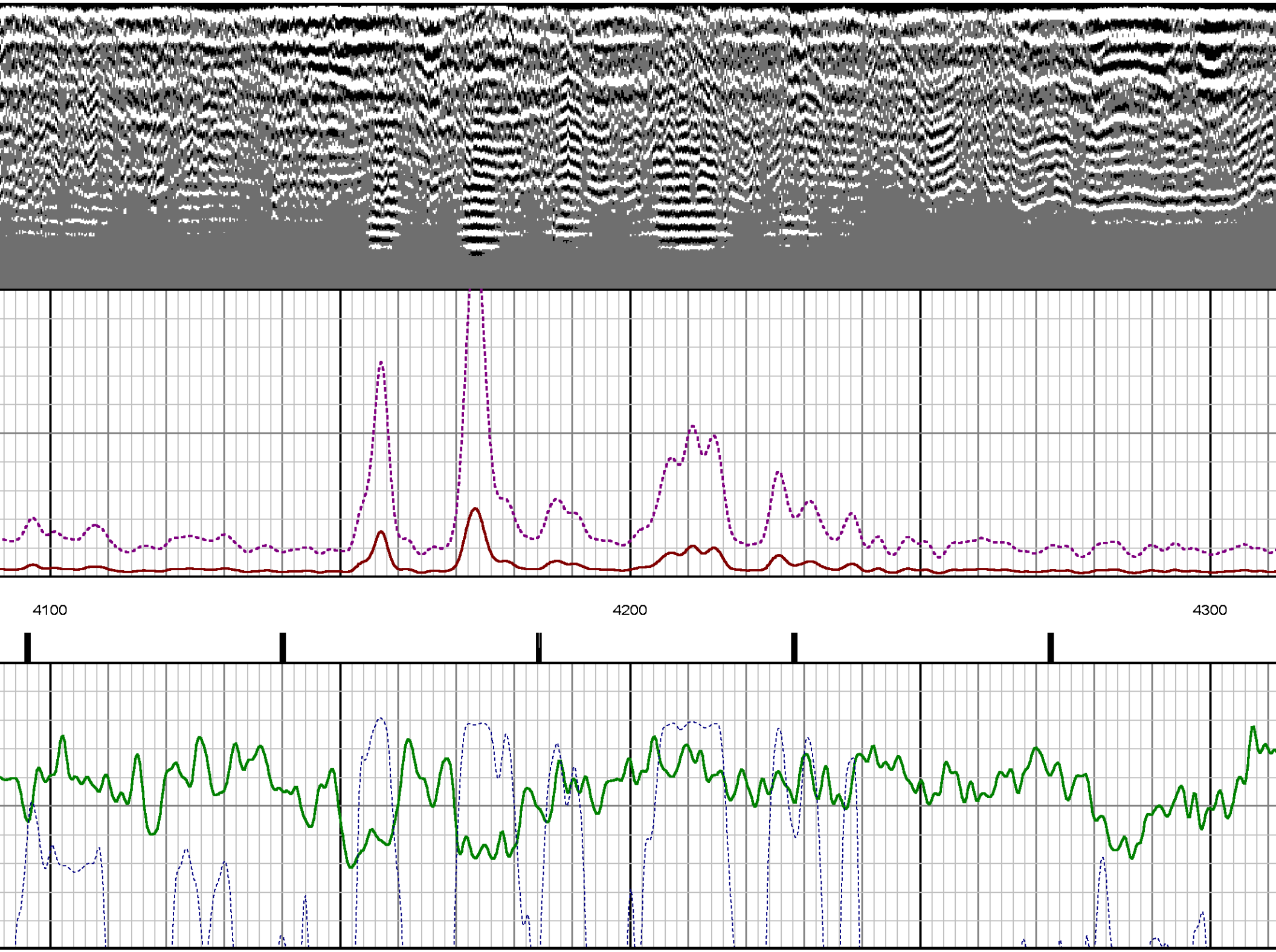
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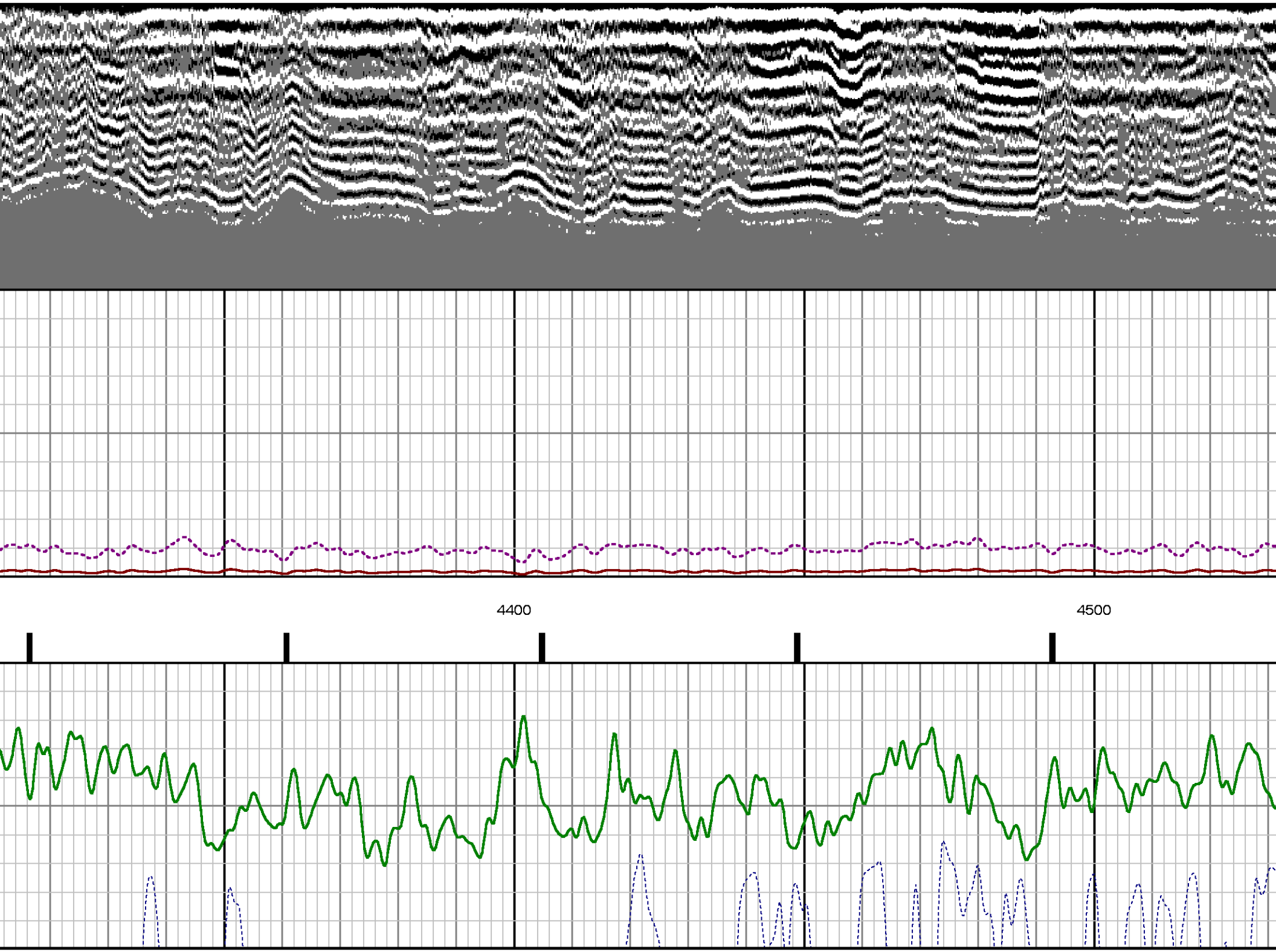
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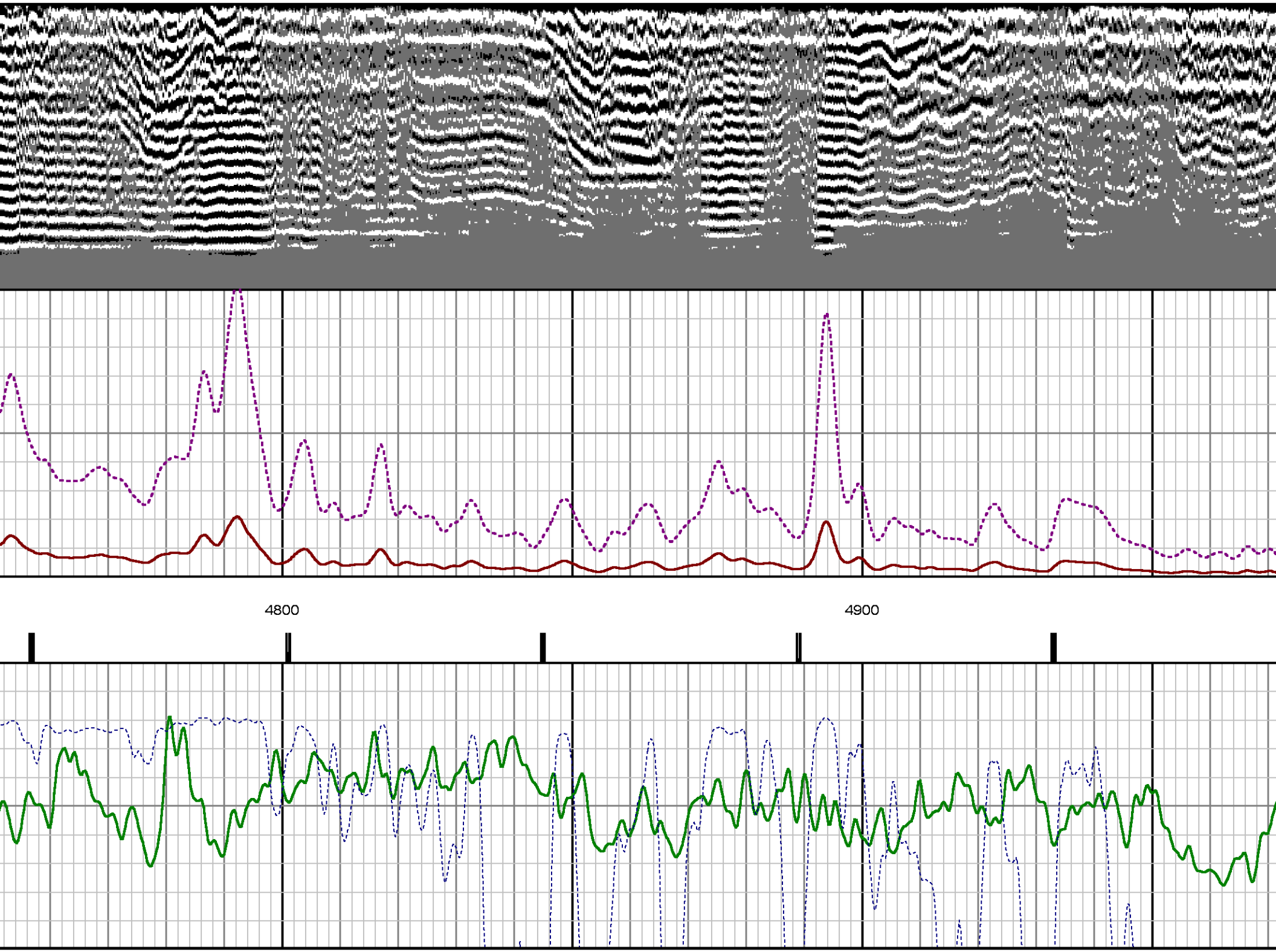
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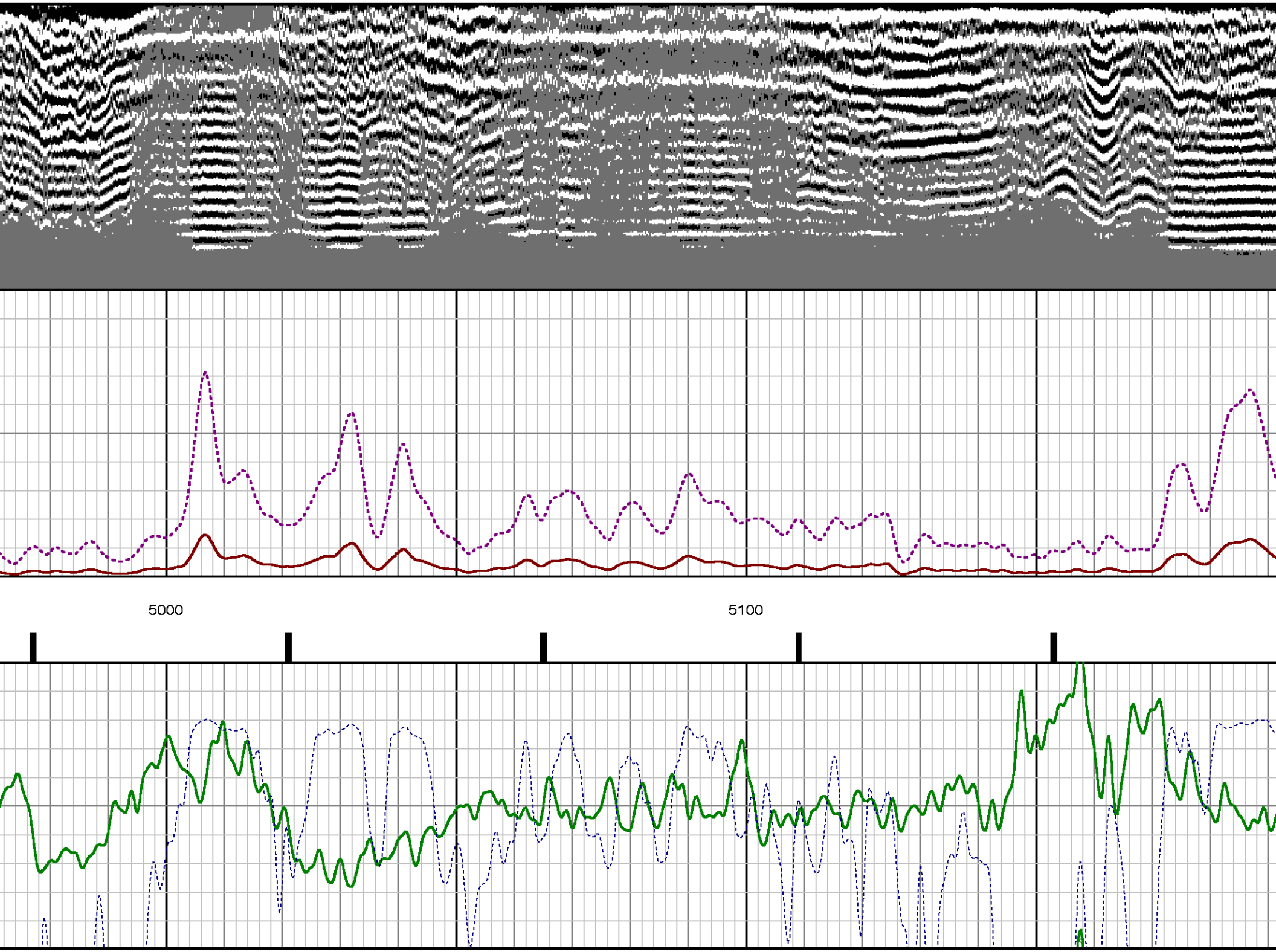
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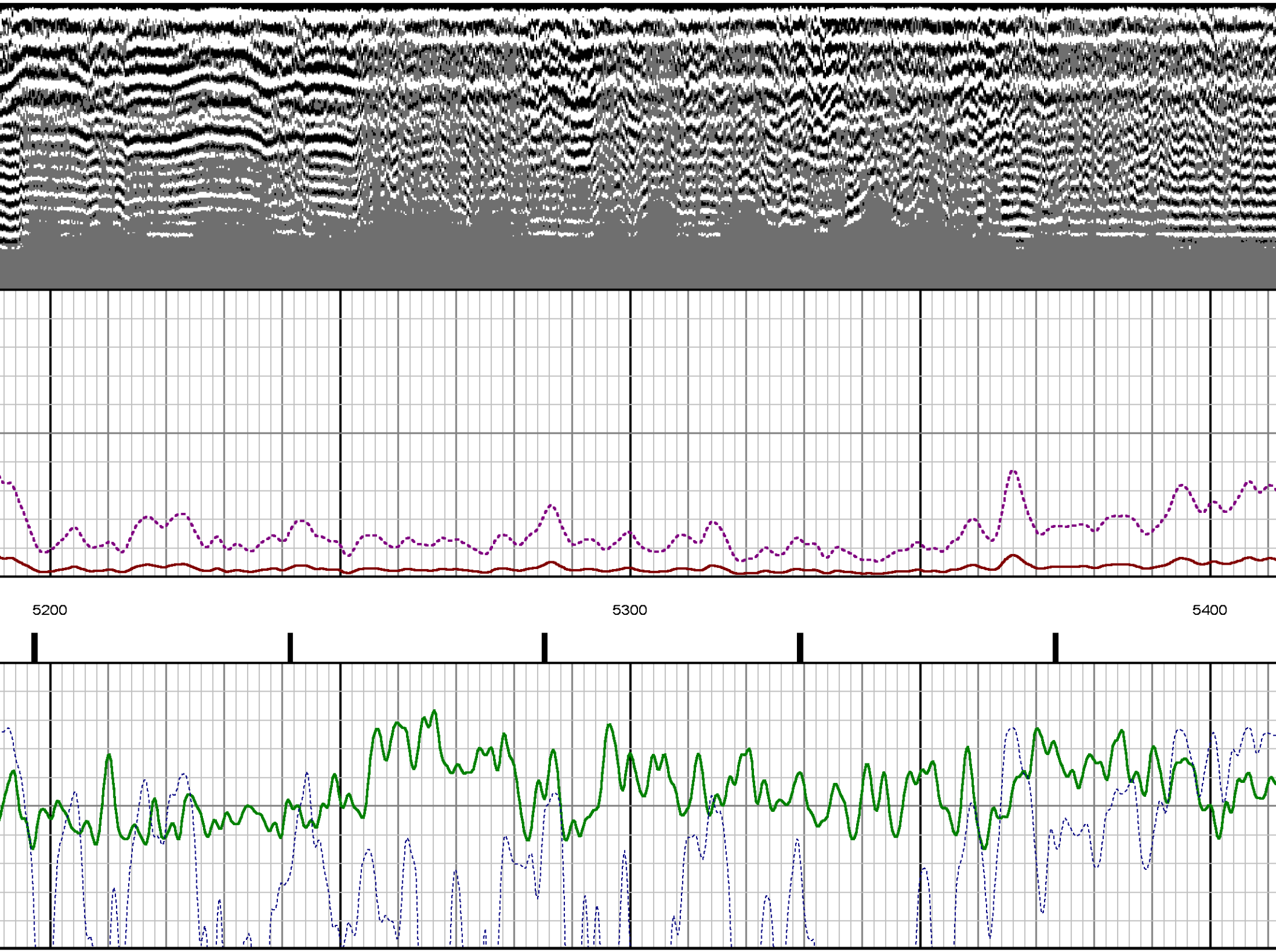
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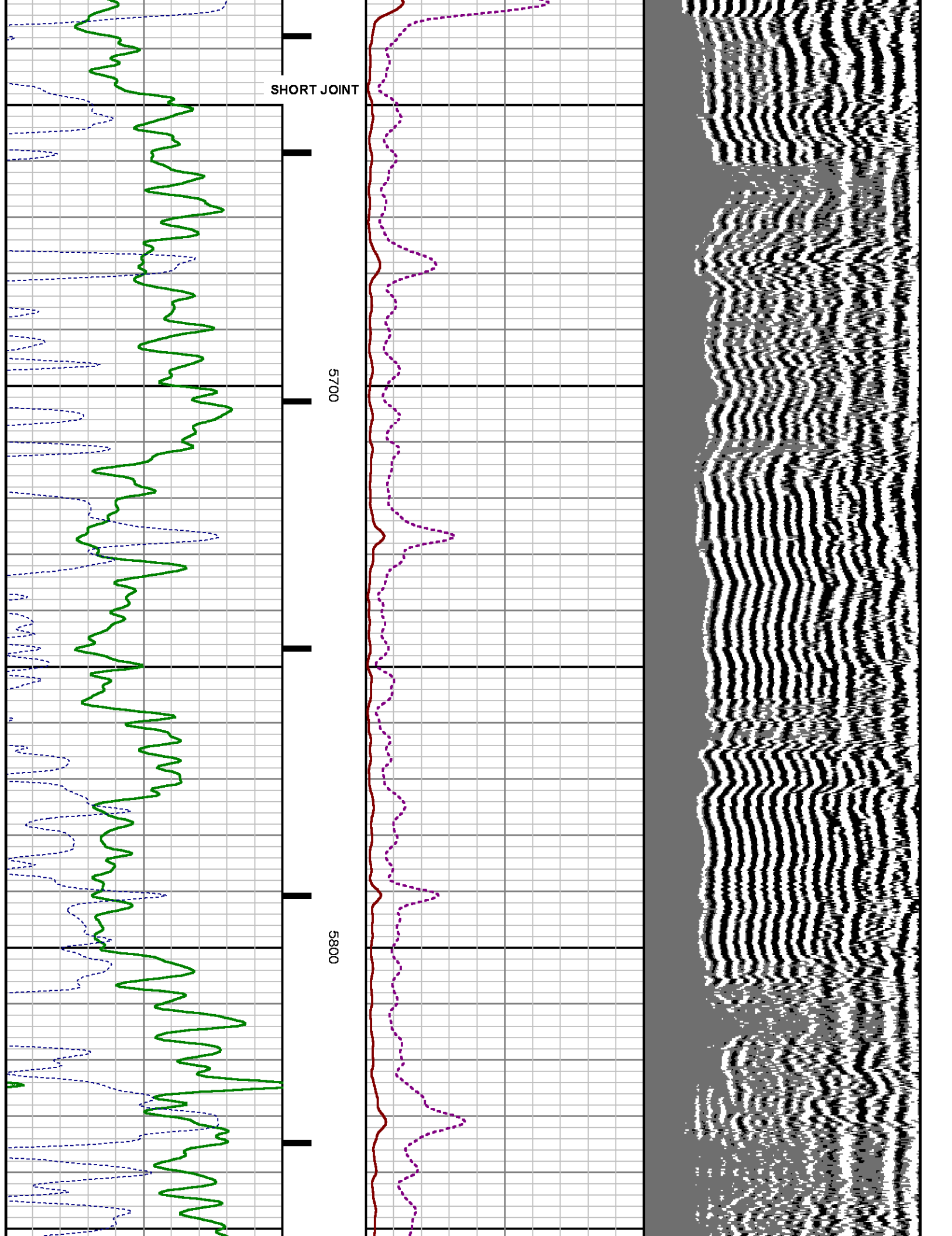
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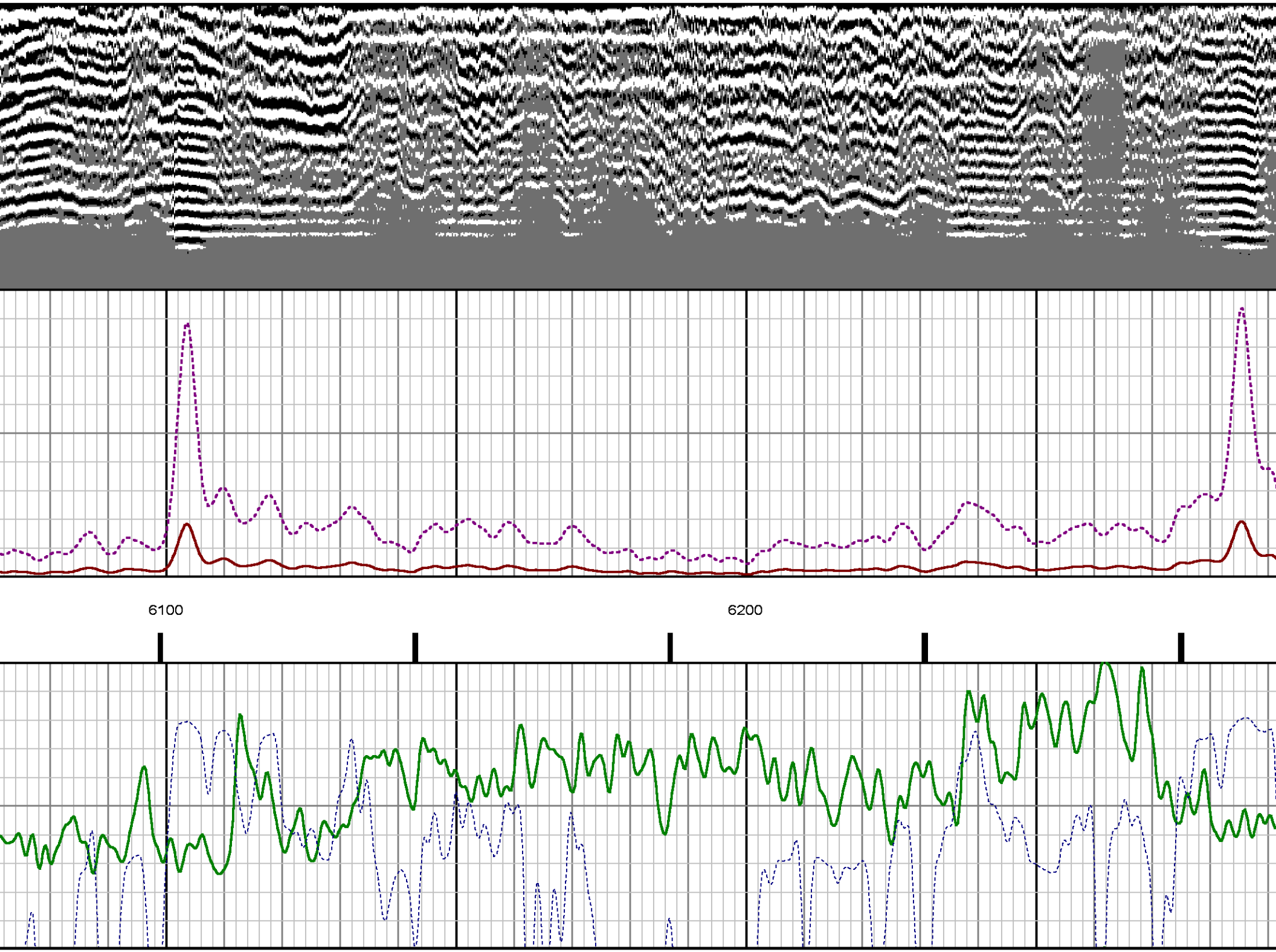
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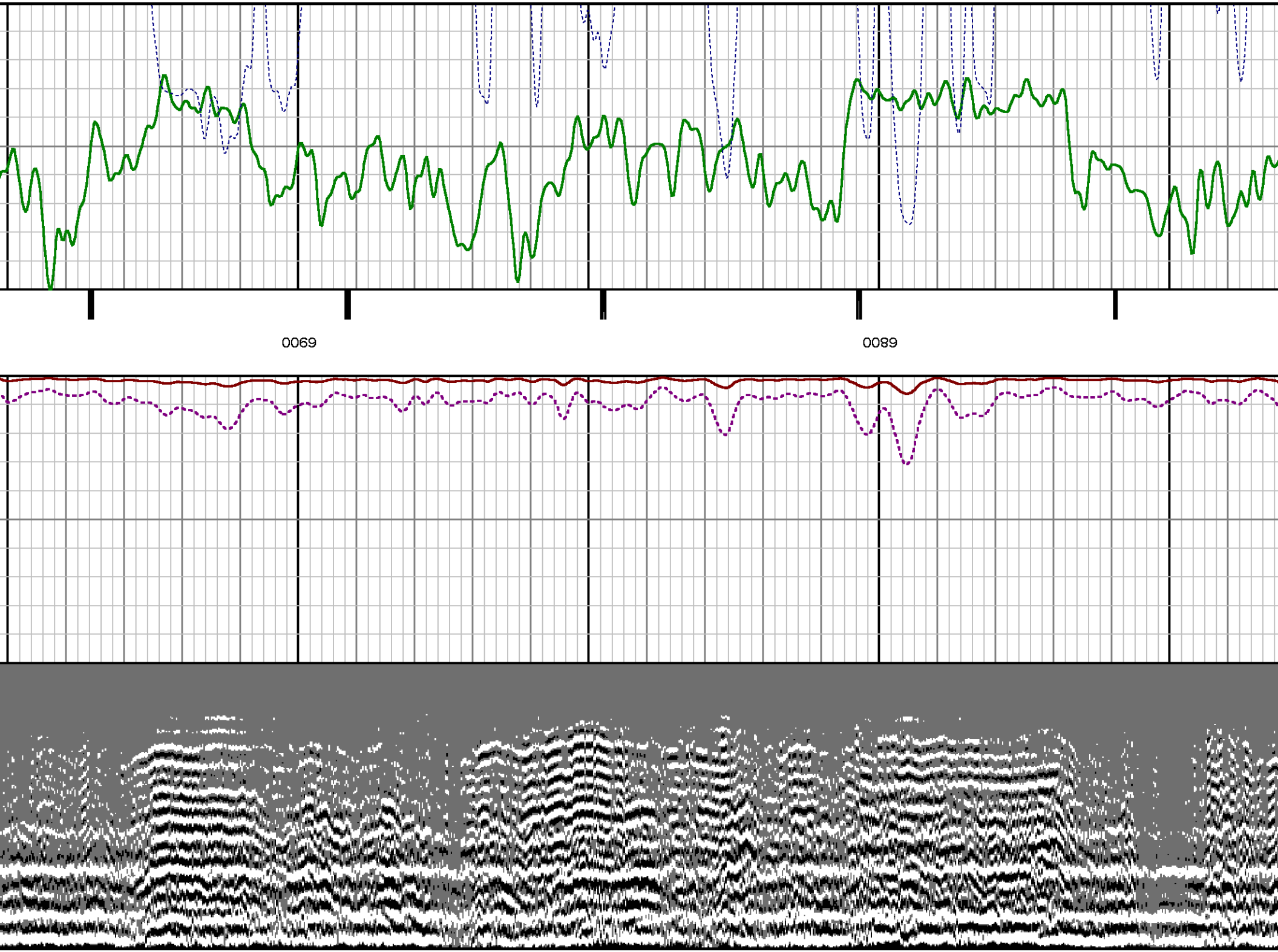
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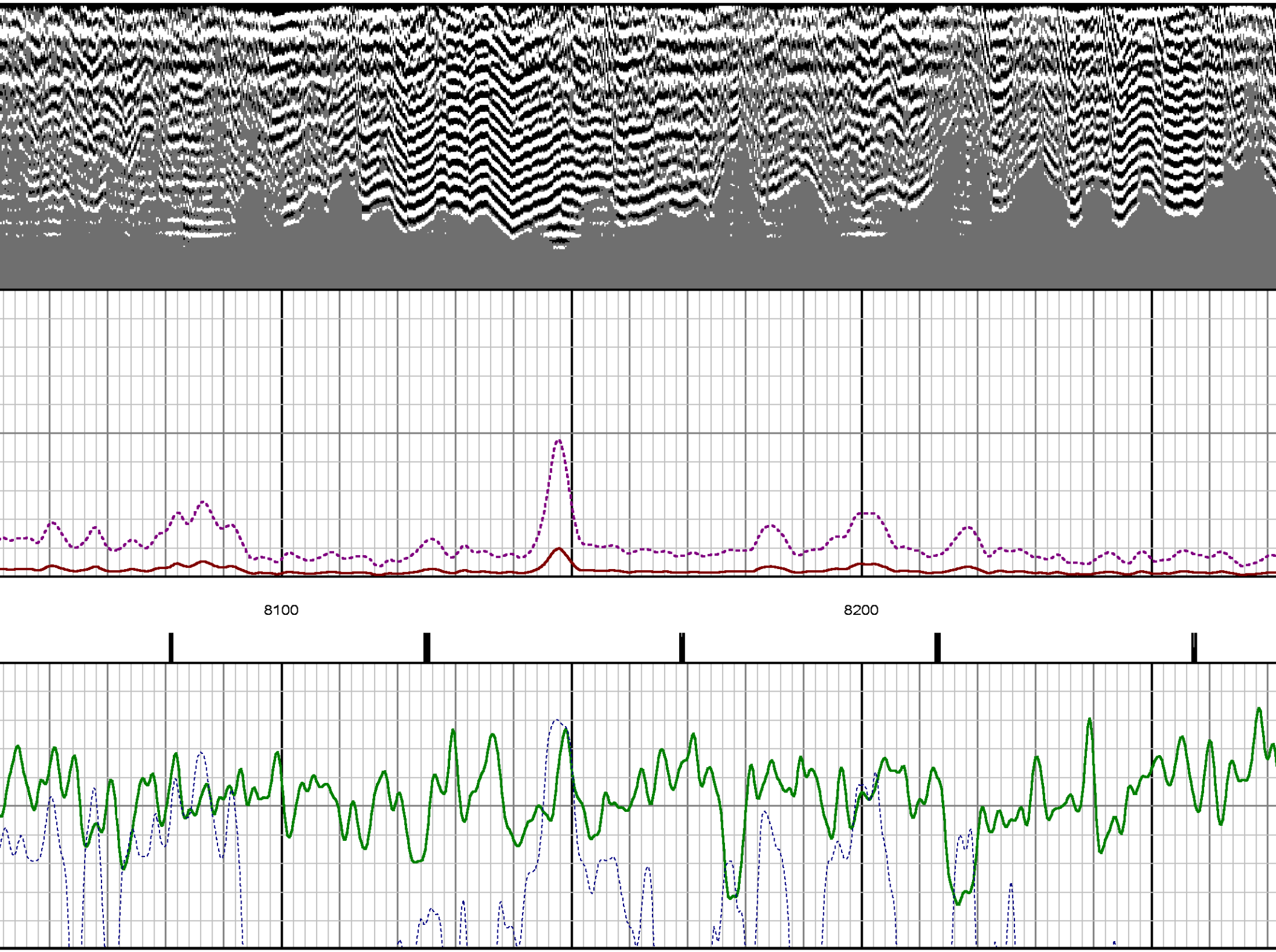
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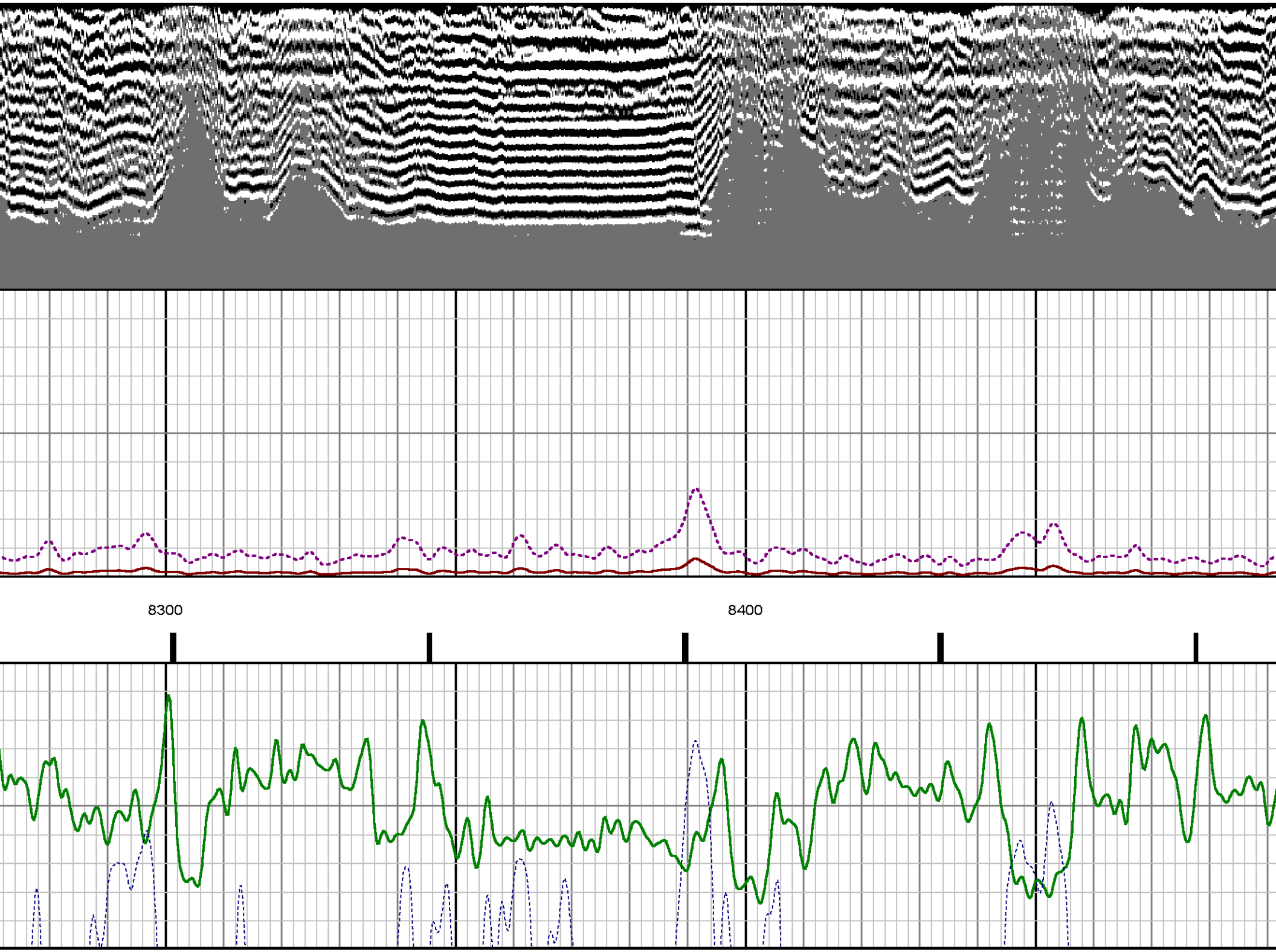
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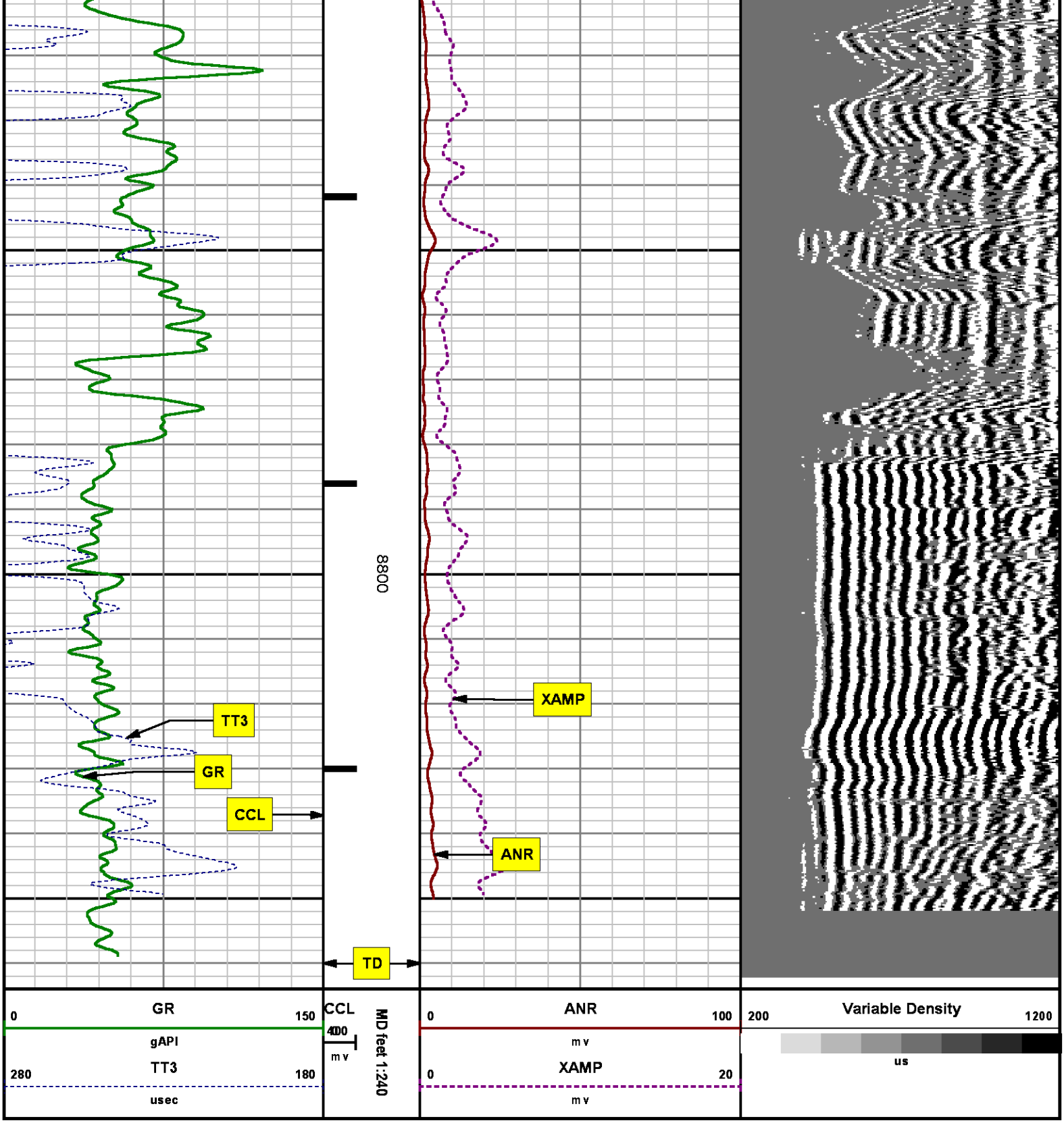

SECONDARY PRESENTATION

O PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	310.000	usec	30.316	8862.000
RAL	Amp Gate Start Near	195.000	usec	30.316	8862.000
RAL	Amp Gate Start Radial	195.000	usec	30.316	8862.000
RAL	Amp Gate Width Far	25.000	usec	30.316	8862.000
RAL	Amp Gate Width Near	25.000	usec	30.316	8862.000
RAL	Amp Gate Width Radial	25.000	usec	30.316	8862.000
RAL	casing od	4.500	inches	30.316	8862.000
RAL	casing wt	11.600	lbm/ft	30.316	8862.000
RAL	FB Start Far	291.900	usec	30.316	8862.000
RAL	FB Start Near	180.000	usec	30.316	8862.000
RAL	FB Start Radial	180.000	usec	30.316	8862.000
RAL	FB Thresh Far	10.000	mv	30.316	8862.000
RAL	FB Thresh Near	4.000	mv	30.316	8862.000
RAL	FB Thresh Radial	4.000	mv	30.316	8862.000
RAL	Fluid Travel Time	200.000	usec/ft	30.316	8861.848

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 : SAVAGE RWF 334-25

File Name : d:\welldata\wpx\rwf 334-25\ral334\main.xtf

Mode : PlotMgr 5.4.504

Interval : 0.00 - 8864.00 feet UP

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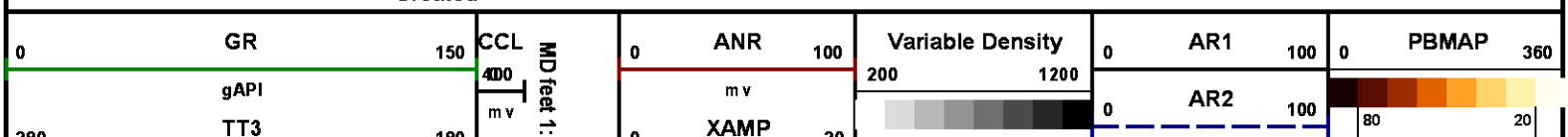

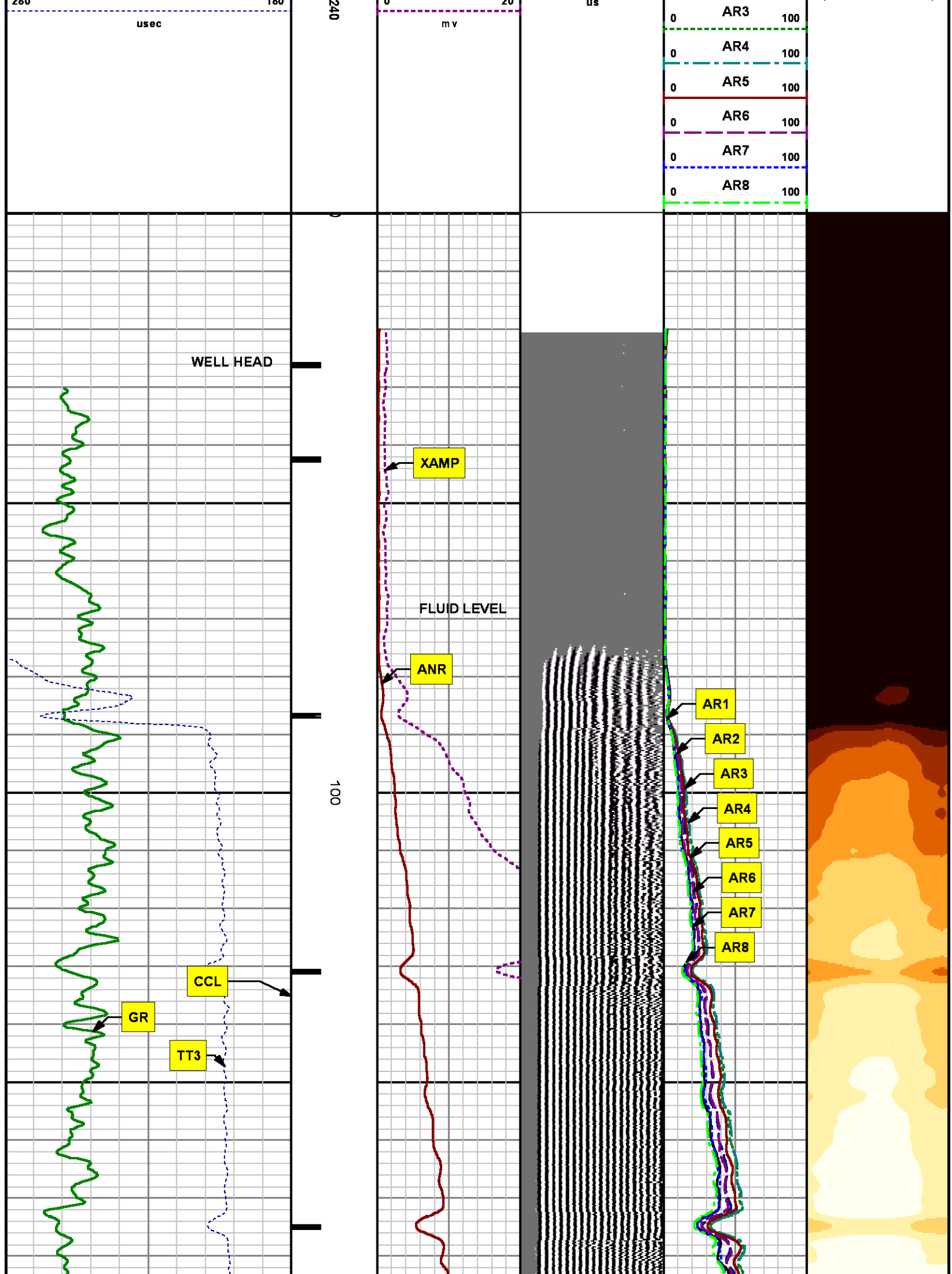
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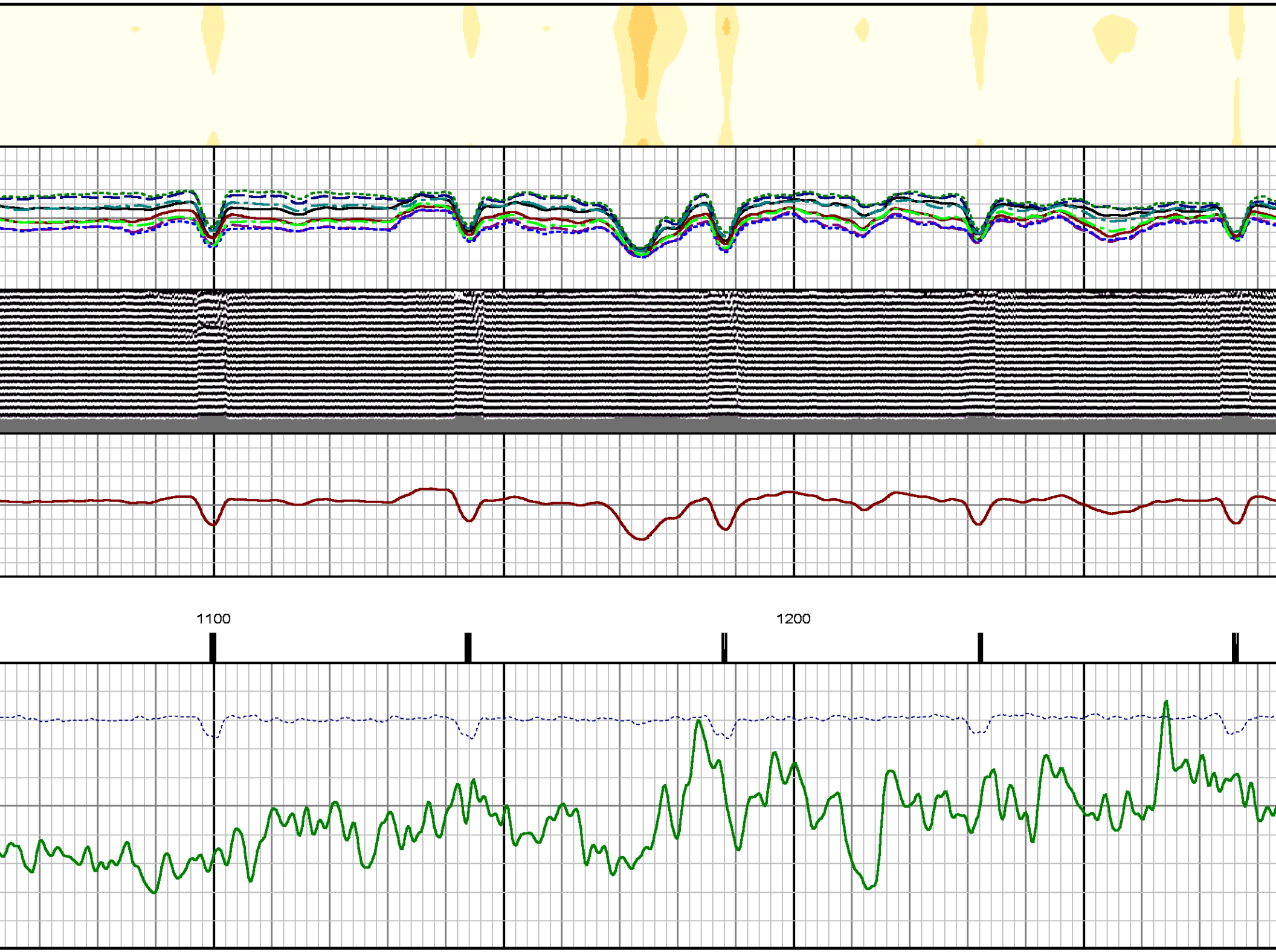
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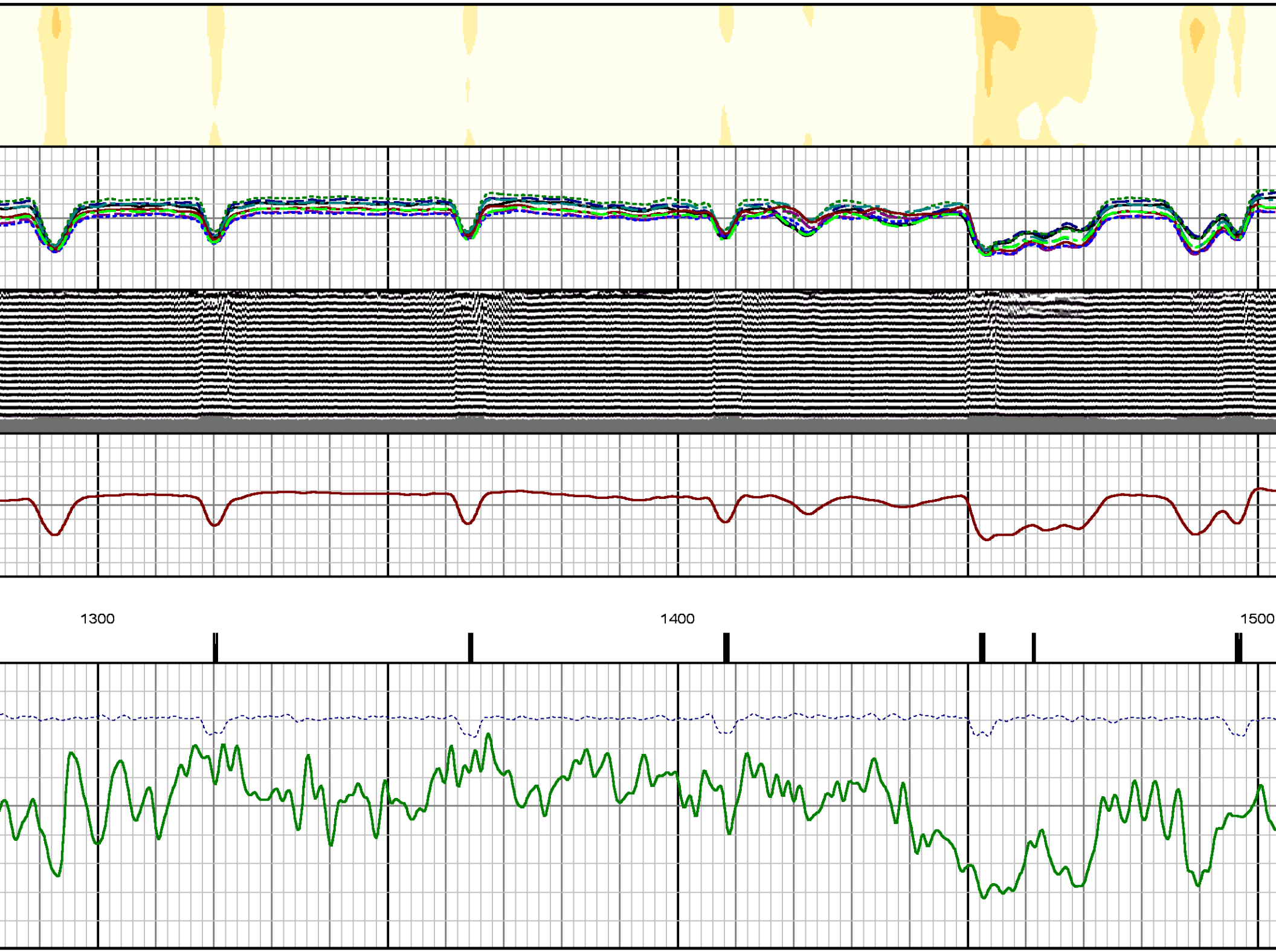
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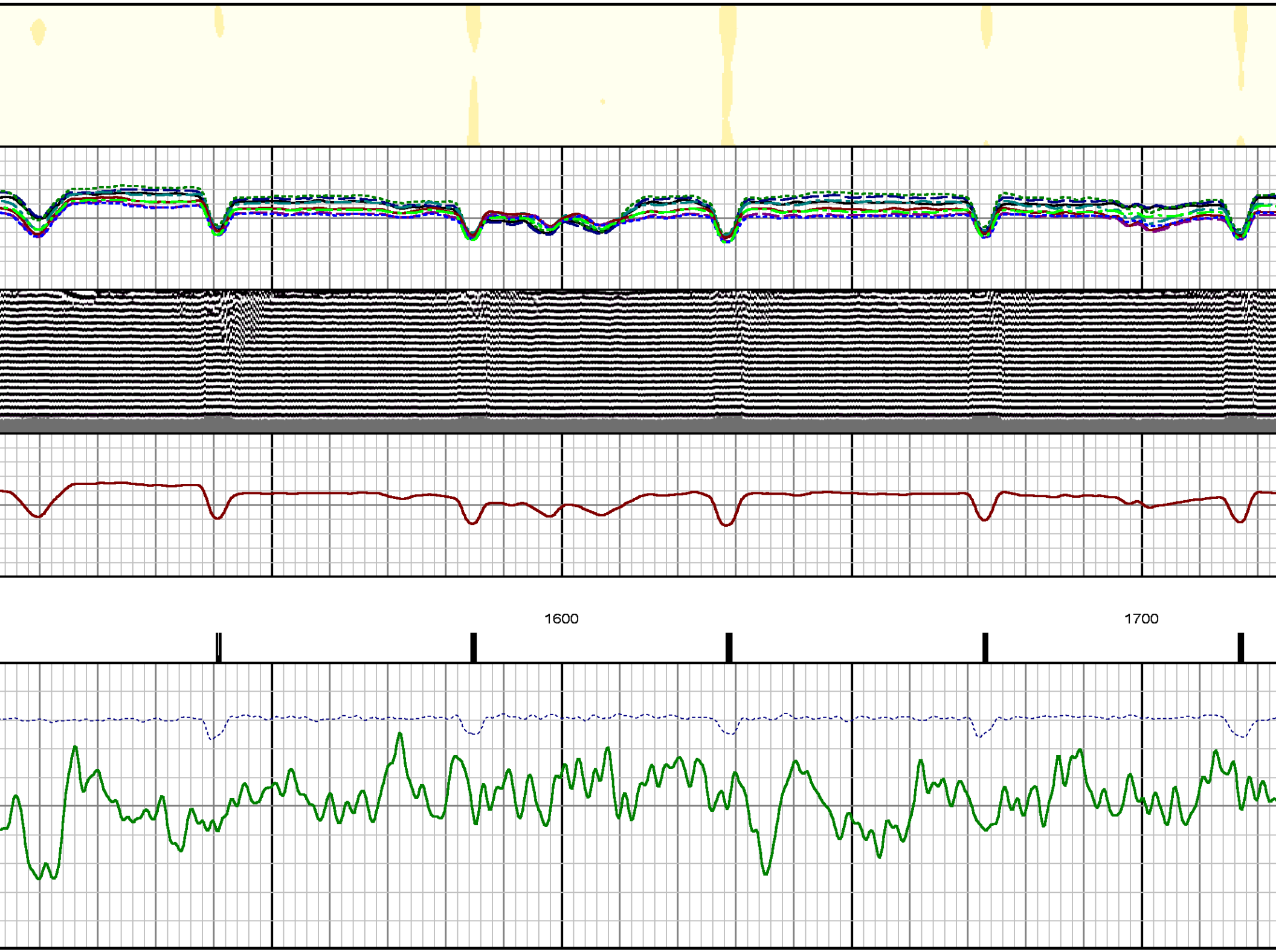
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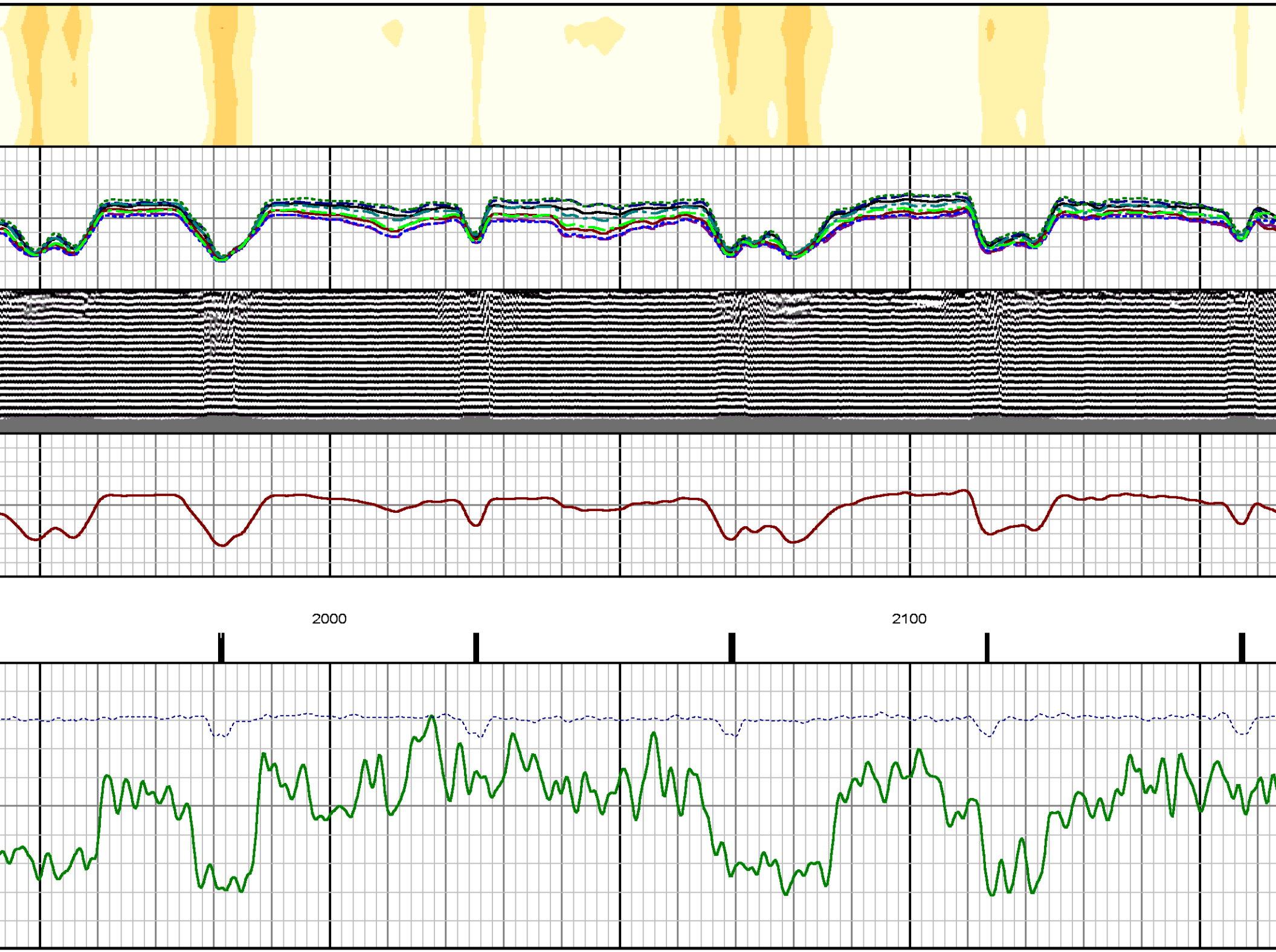
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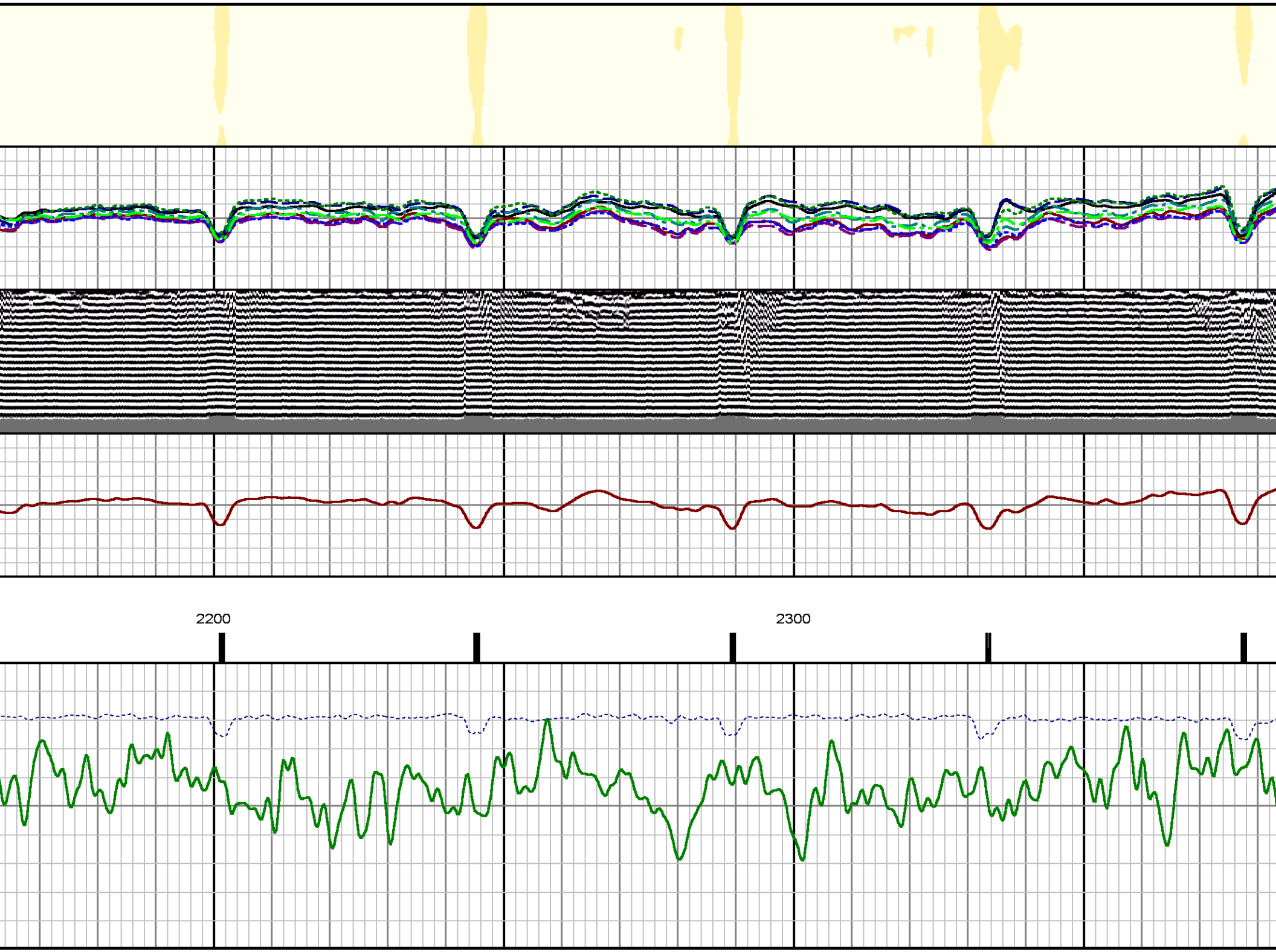
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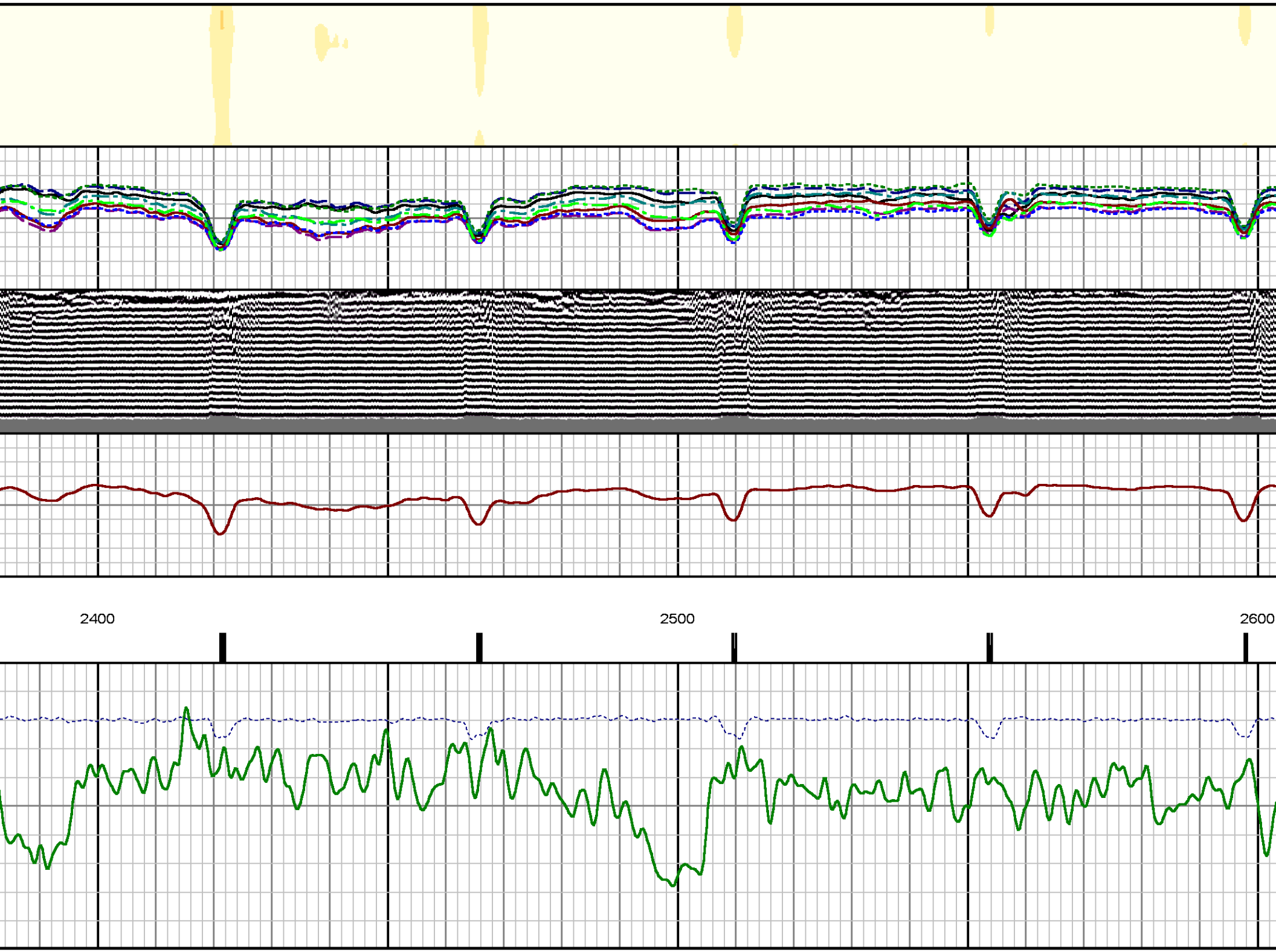
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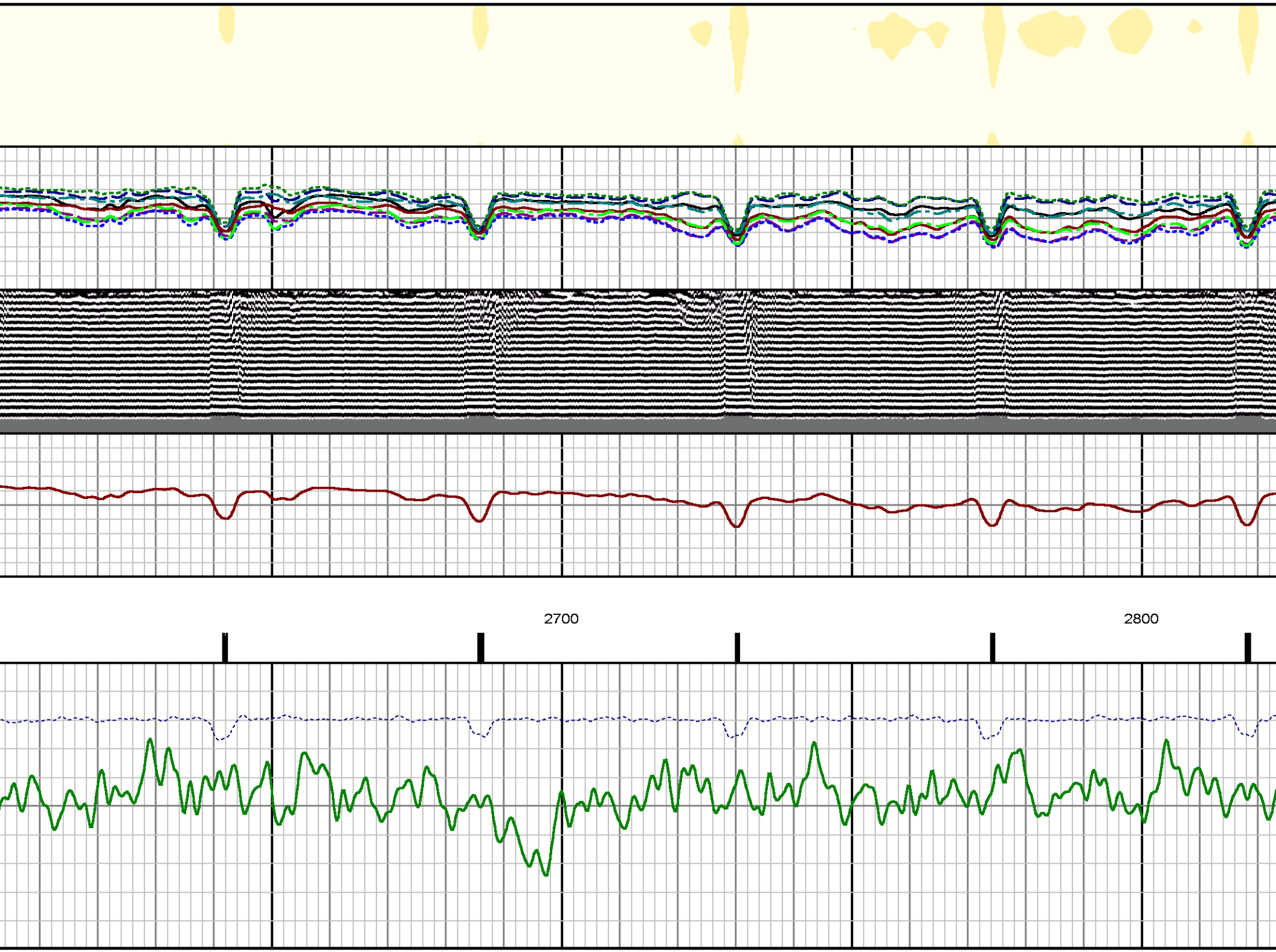
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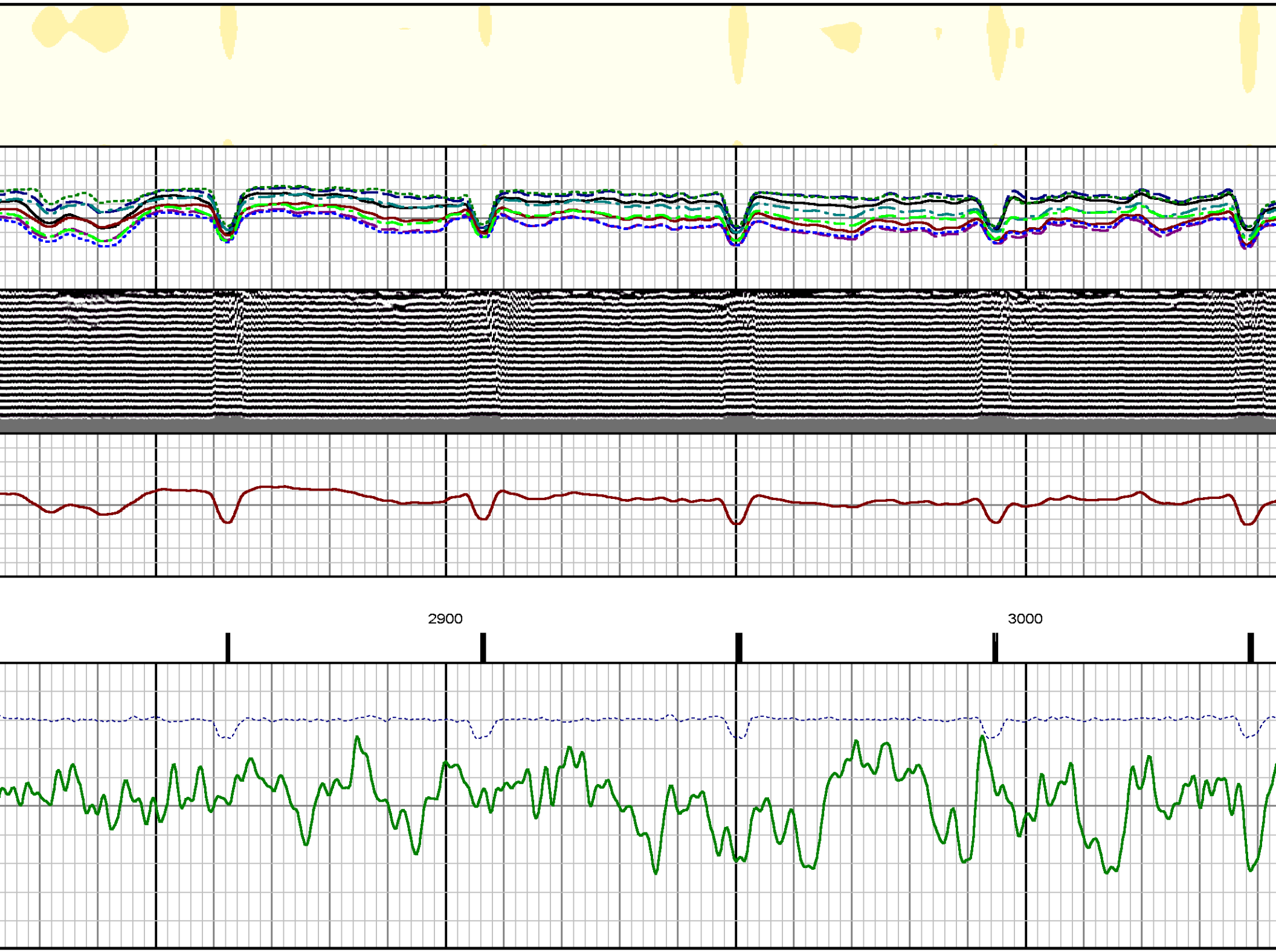
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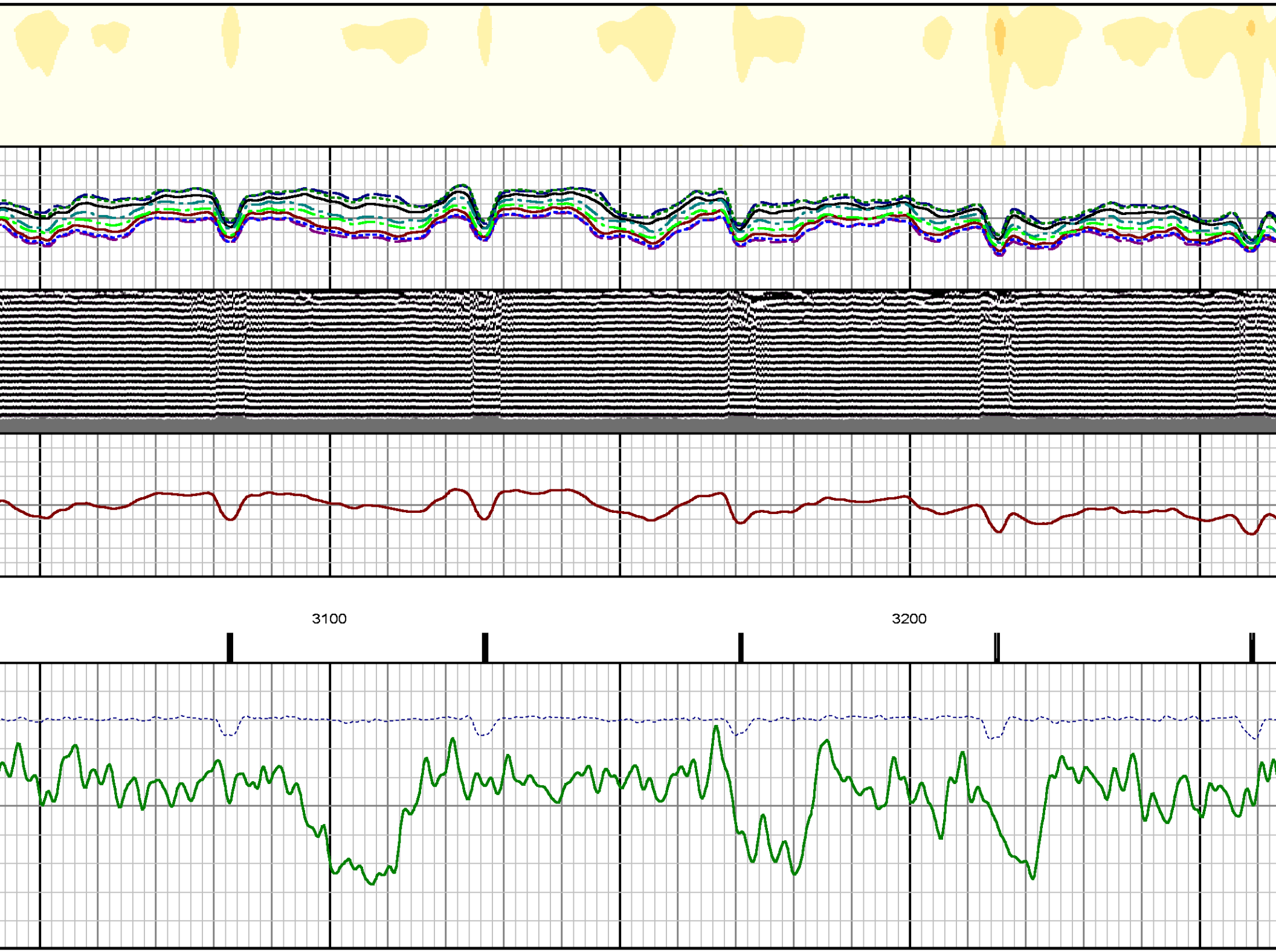
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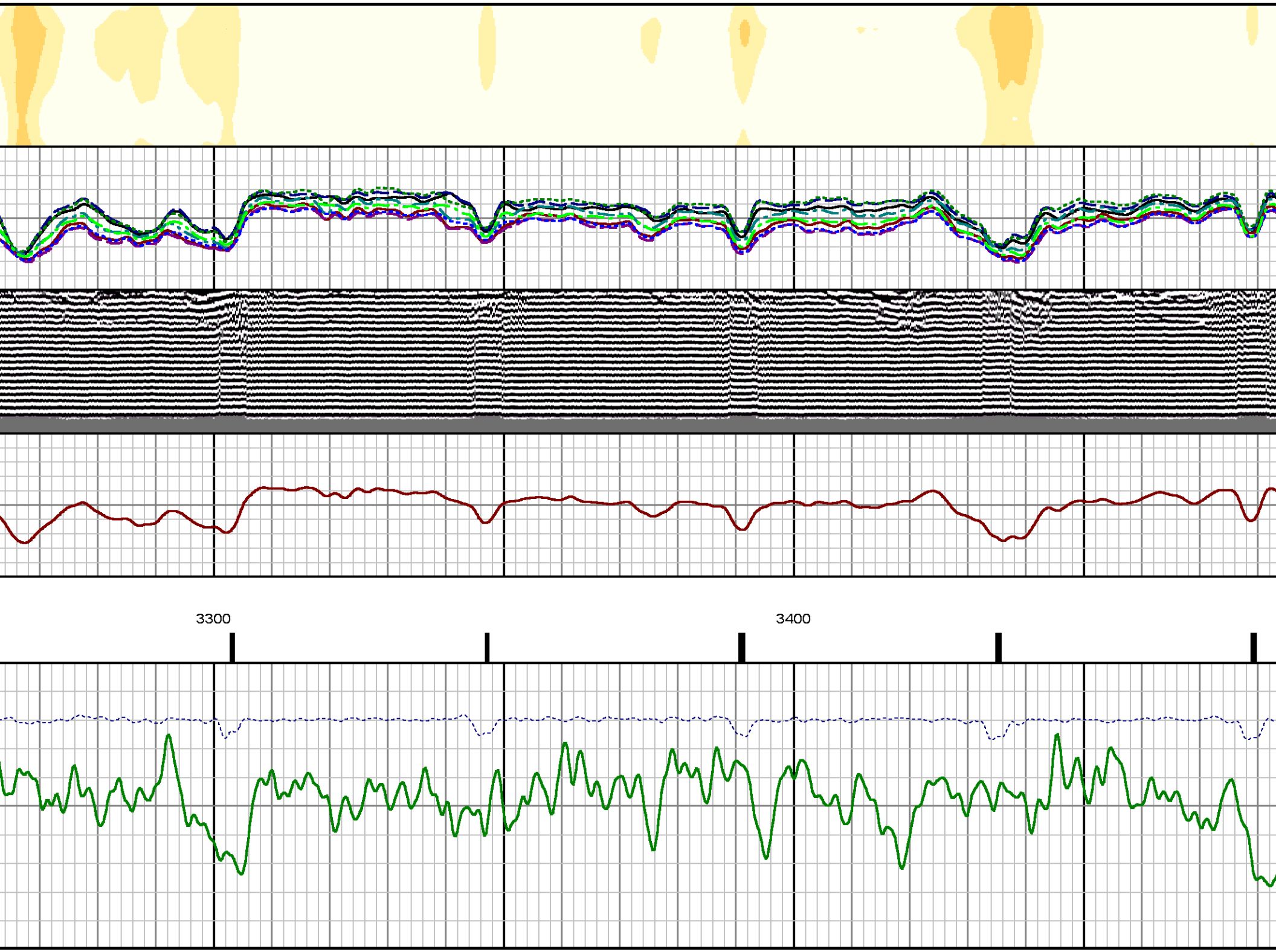
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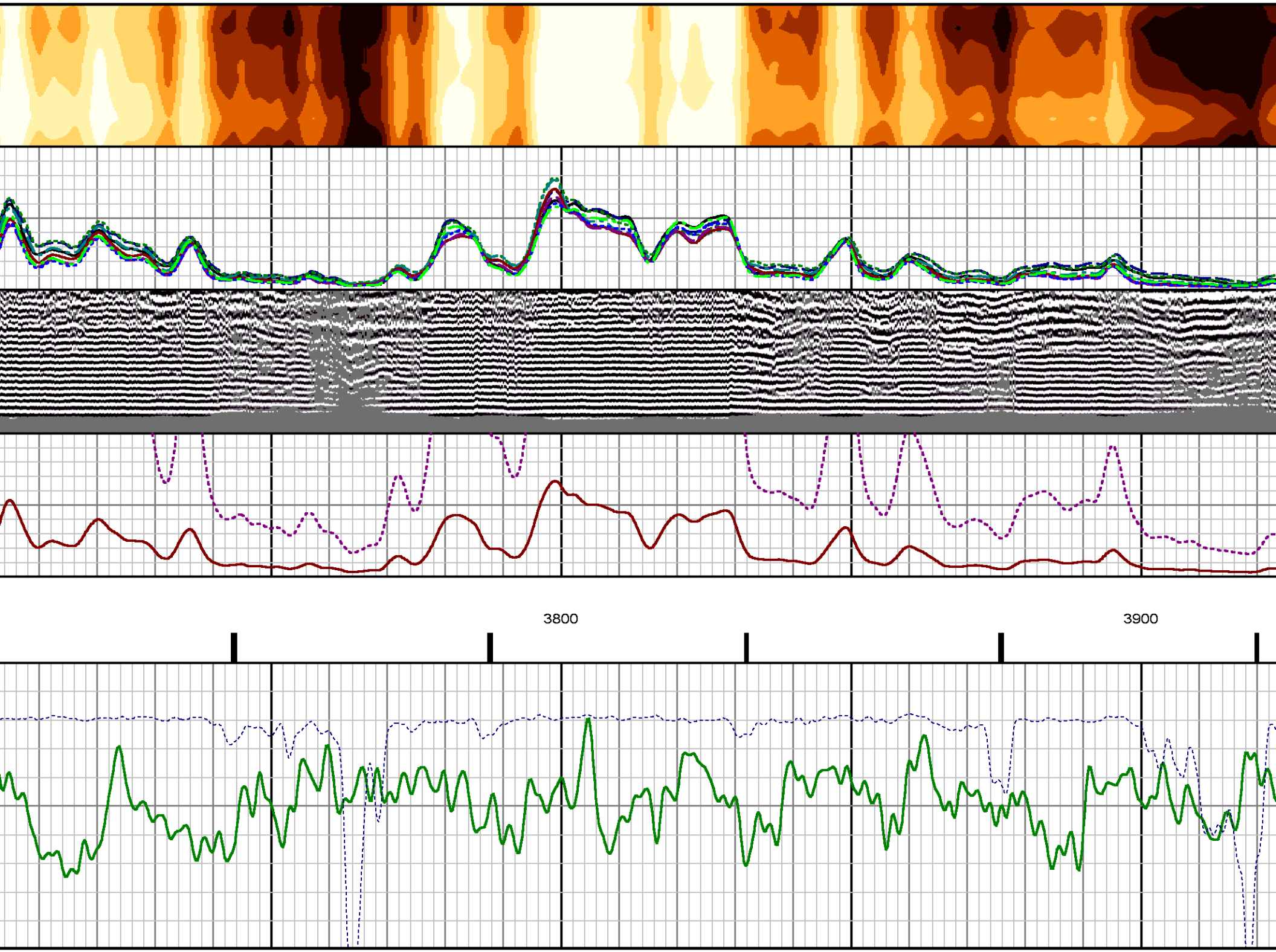
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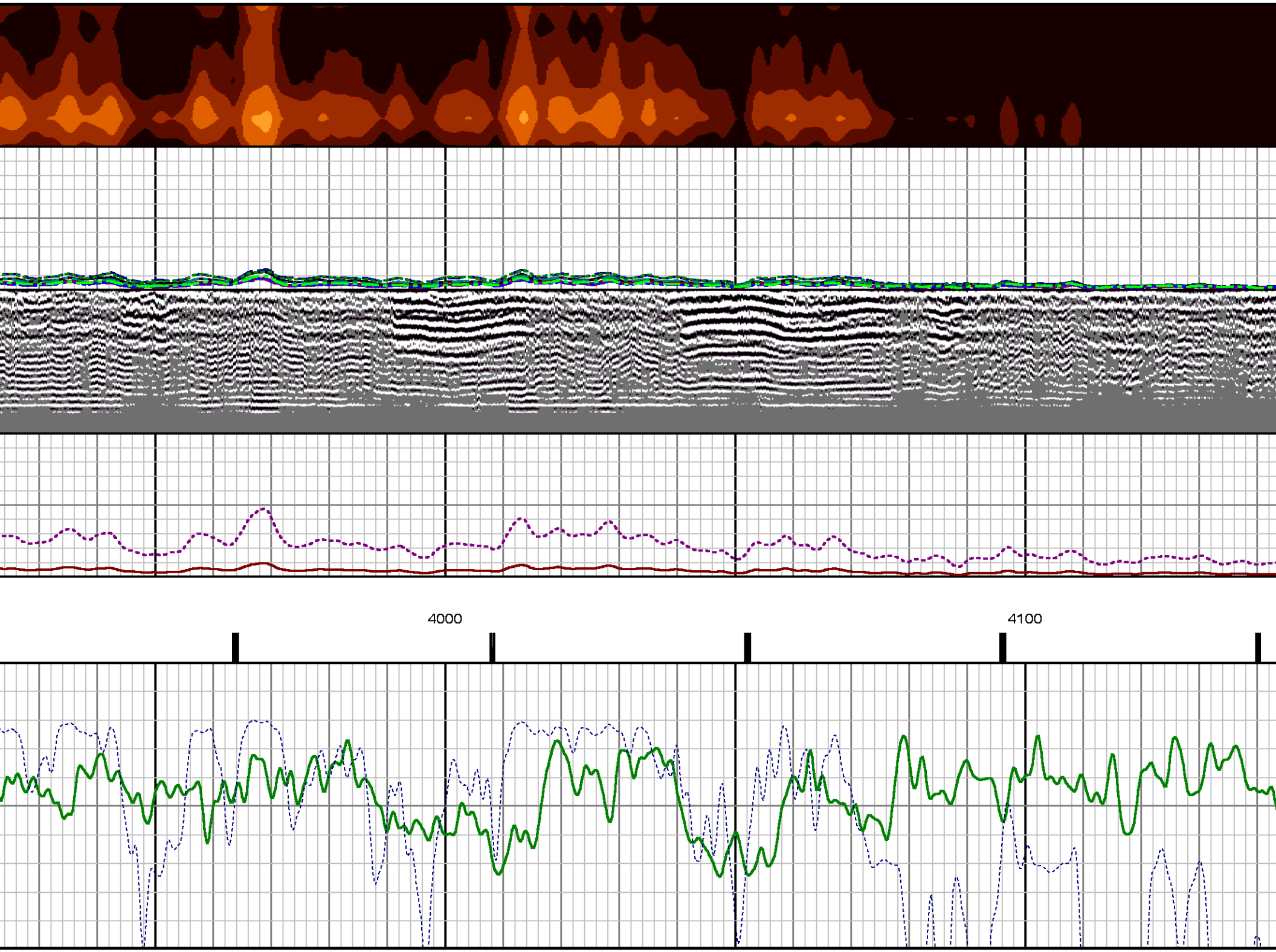
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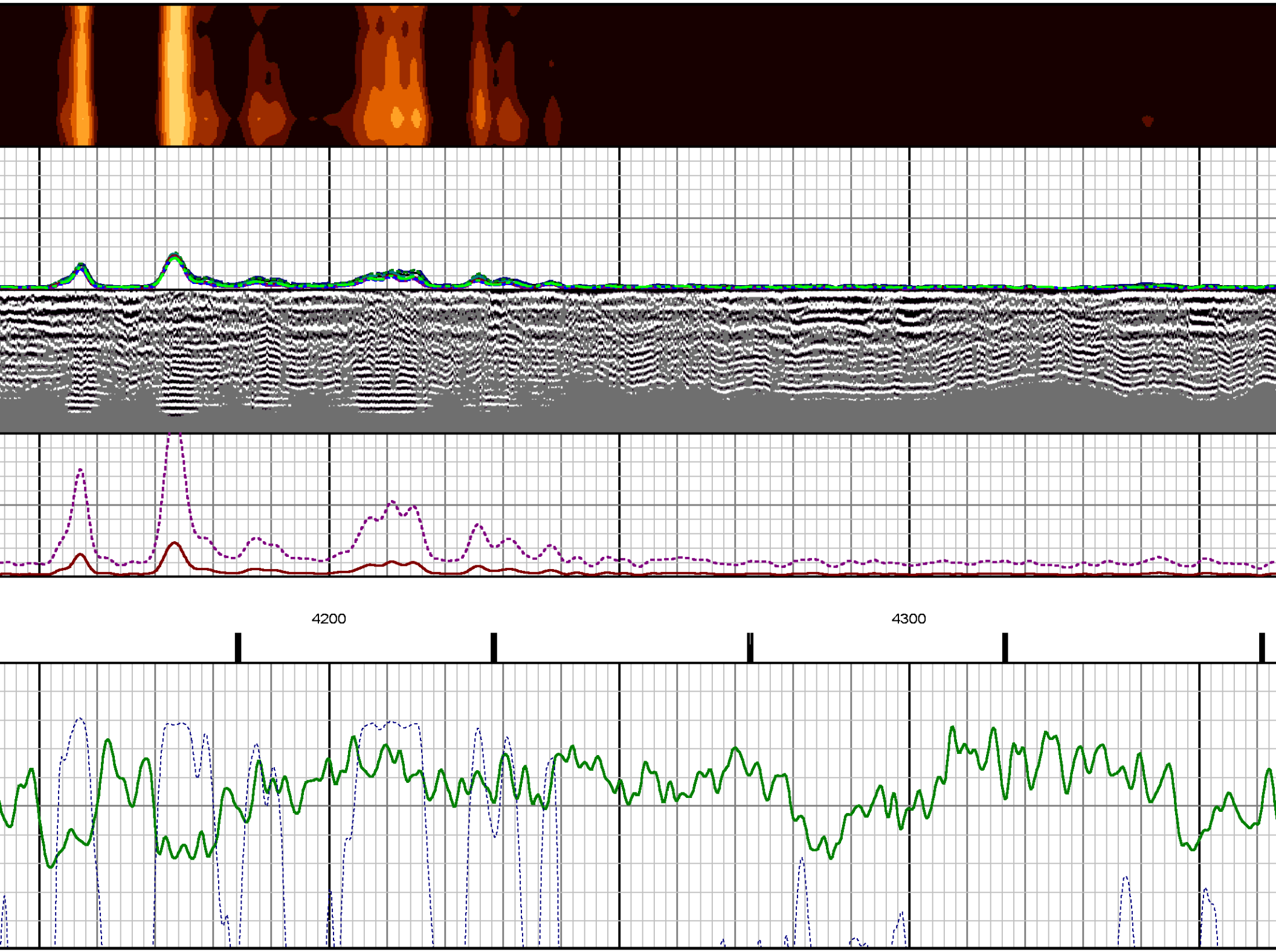
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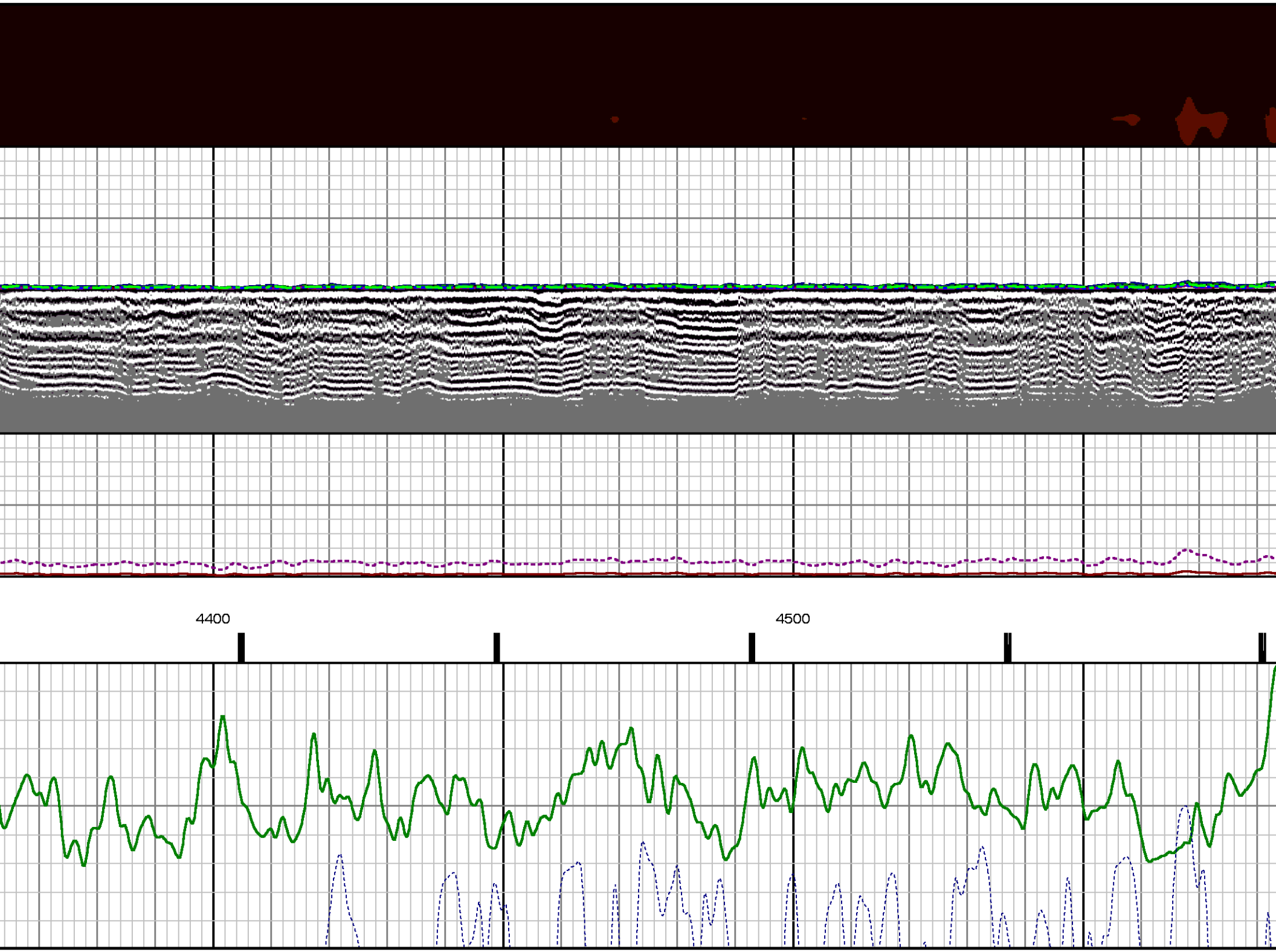
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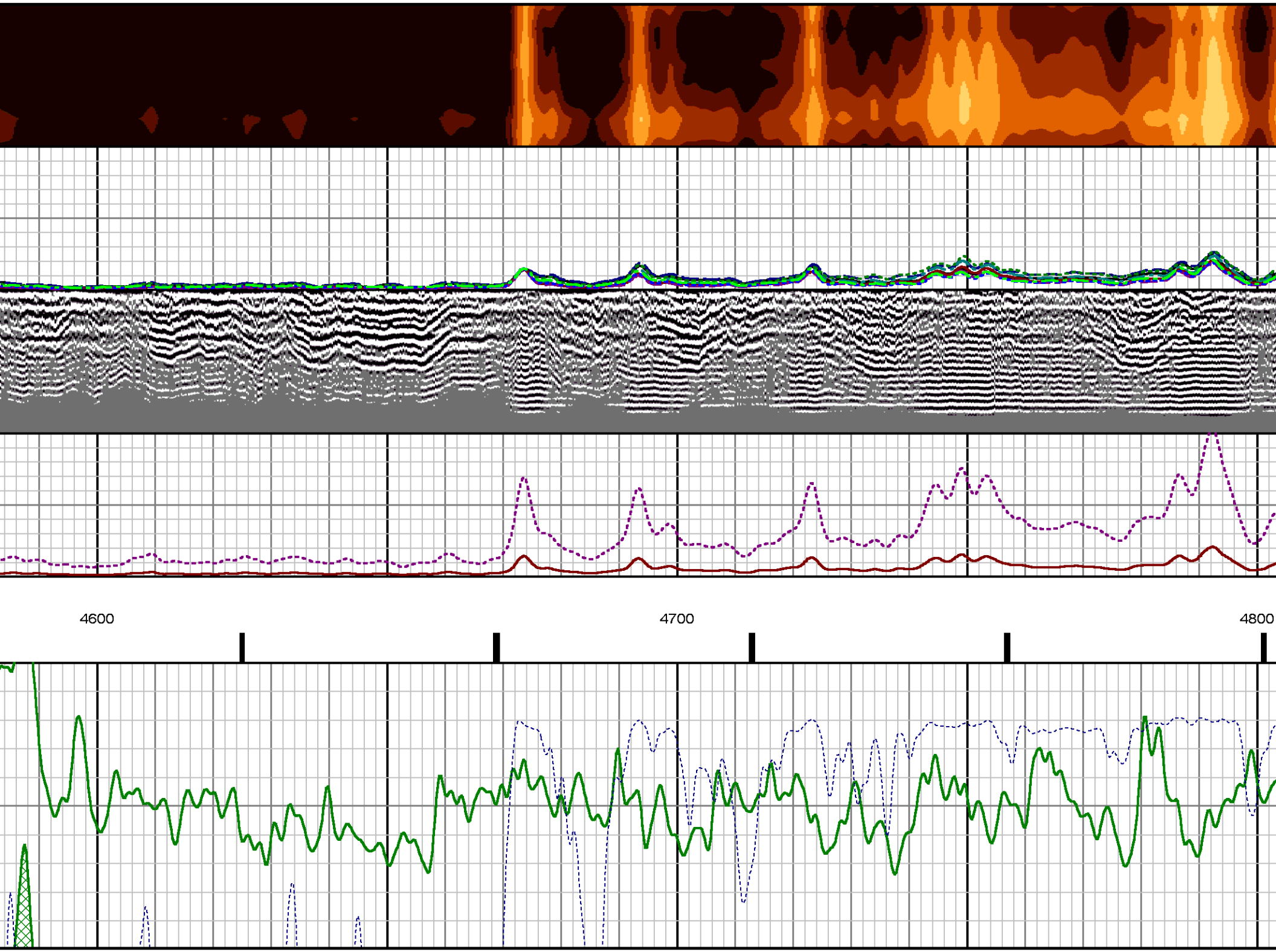
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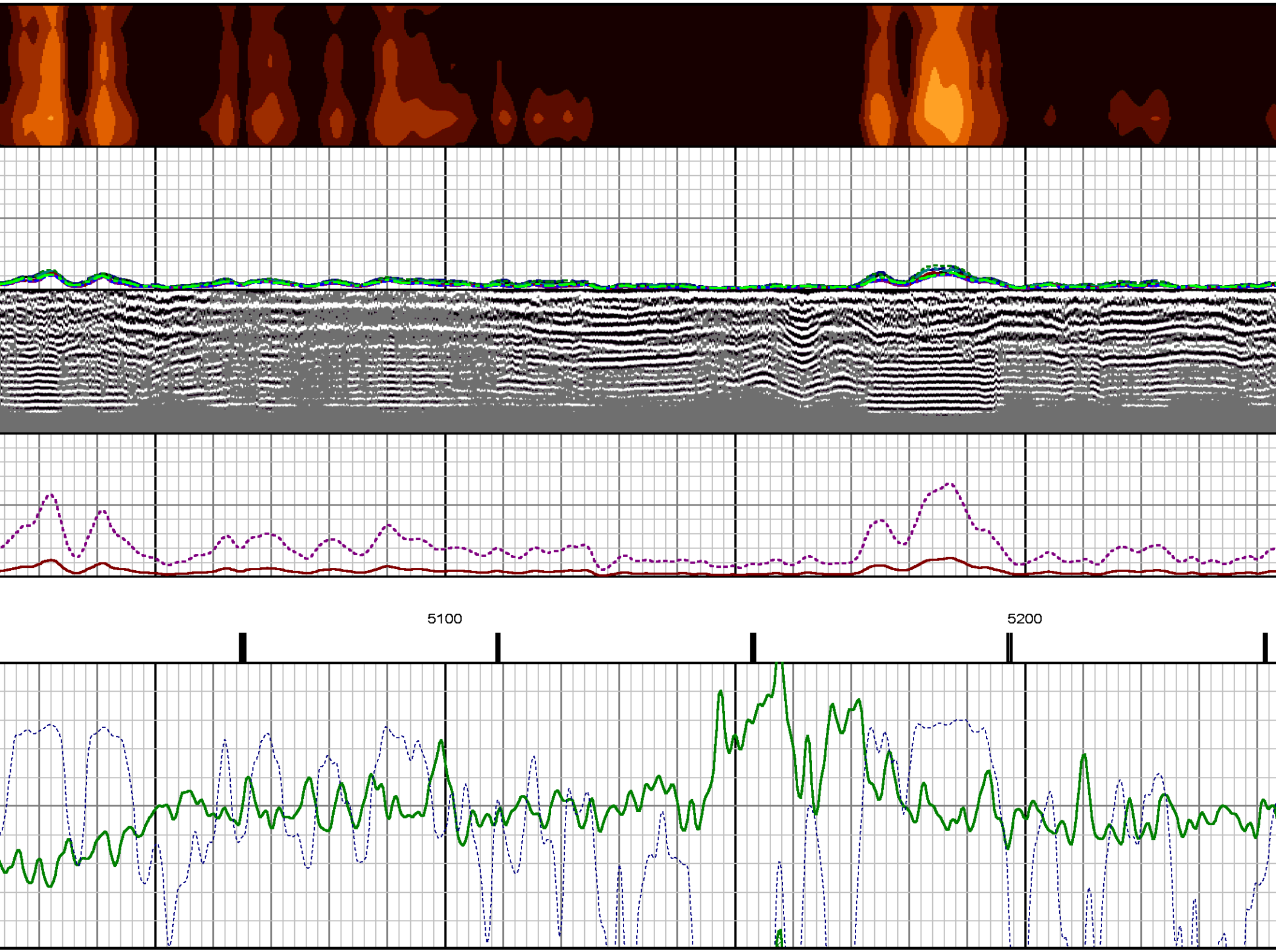
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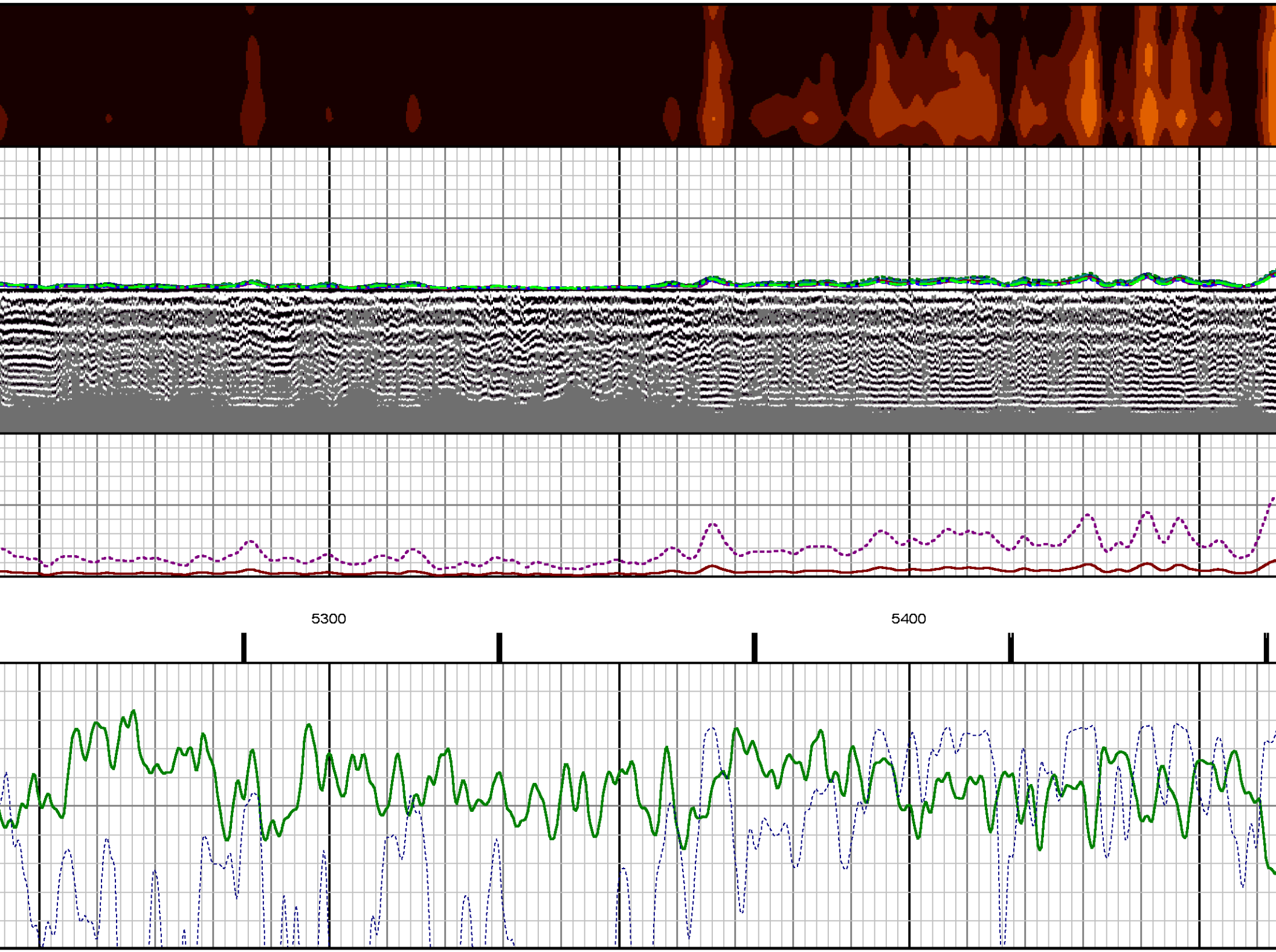
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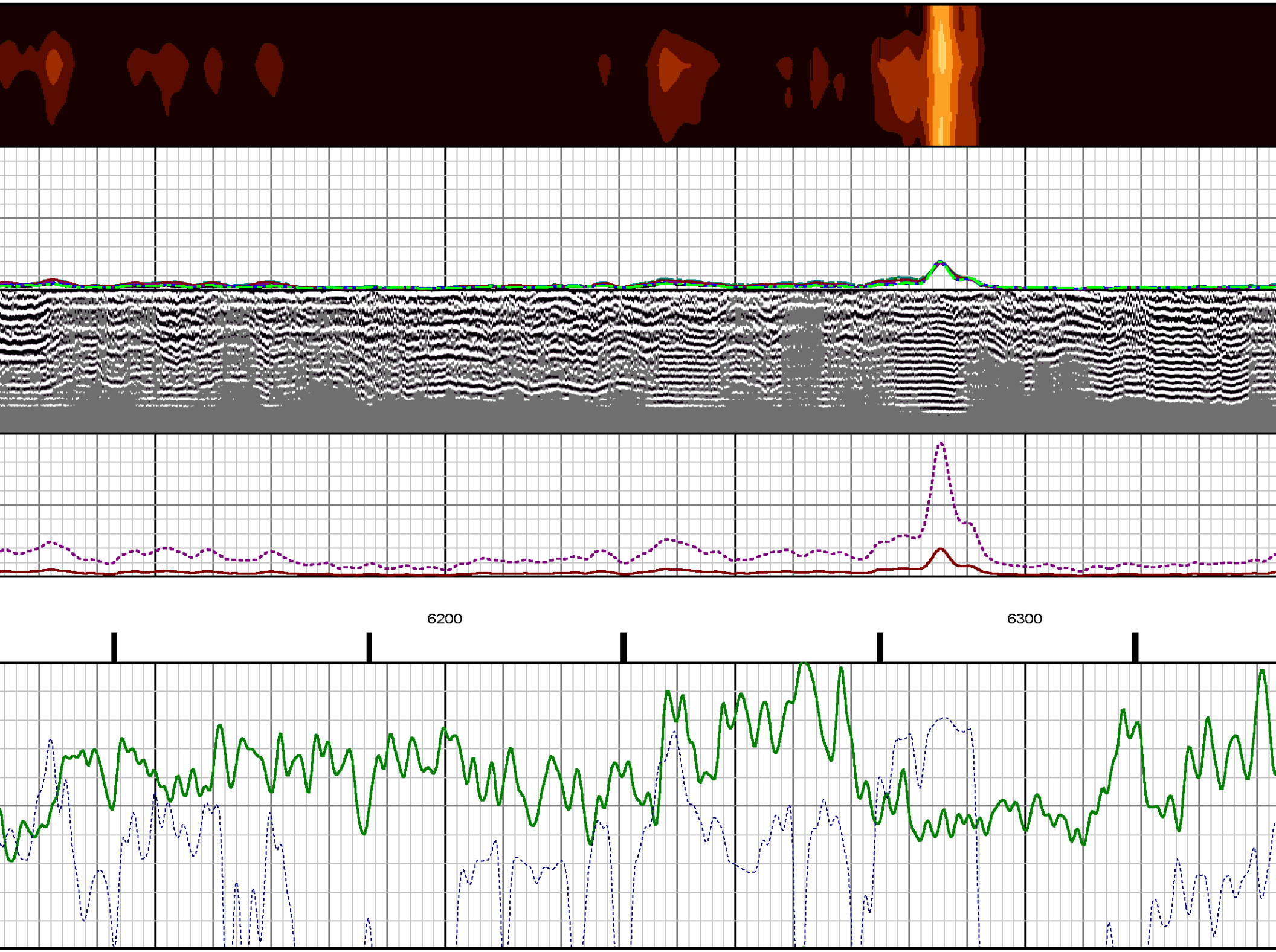
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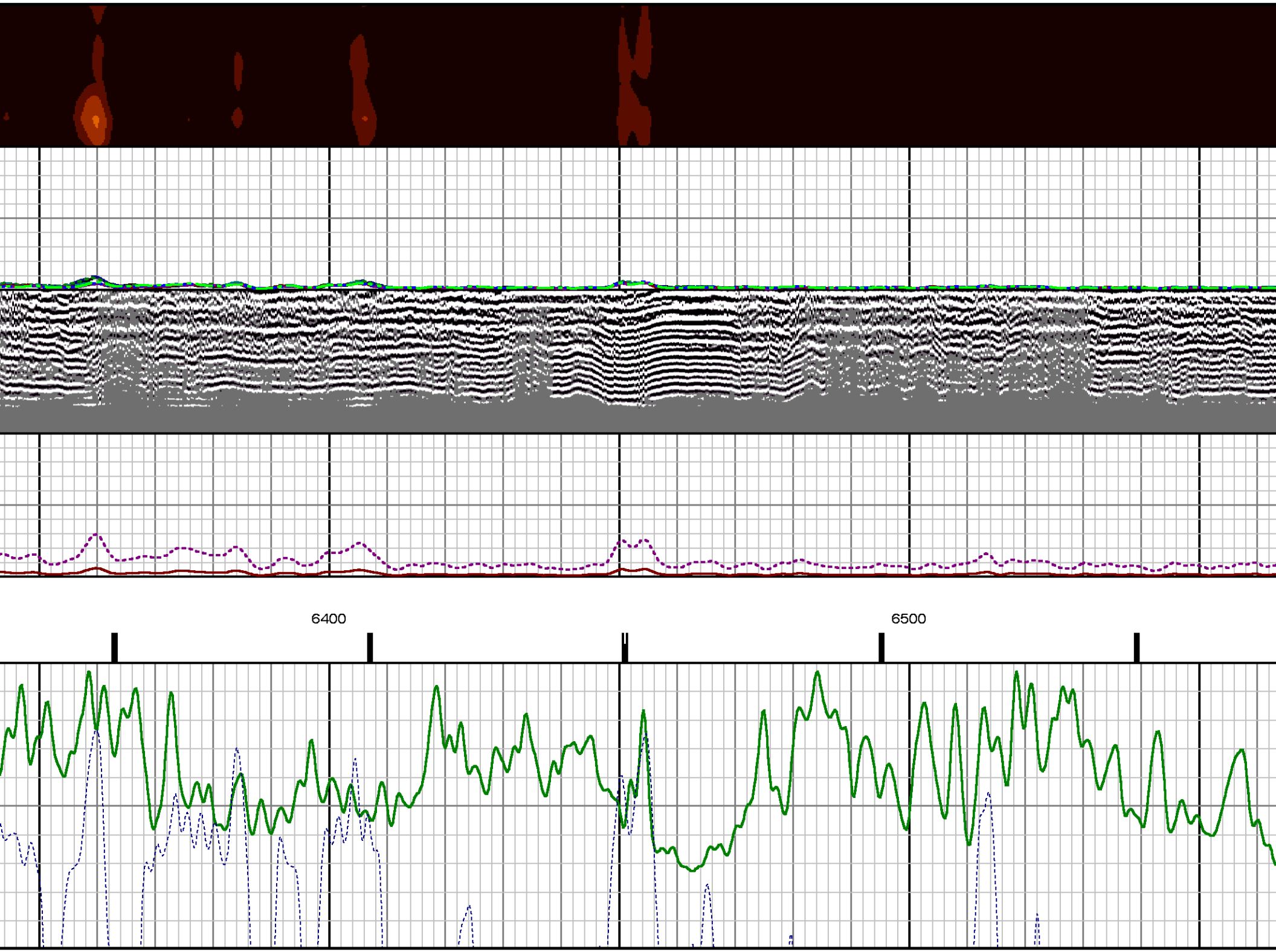
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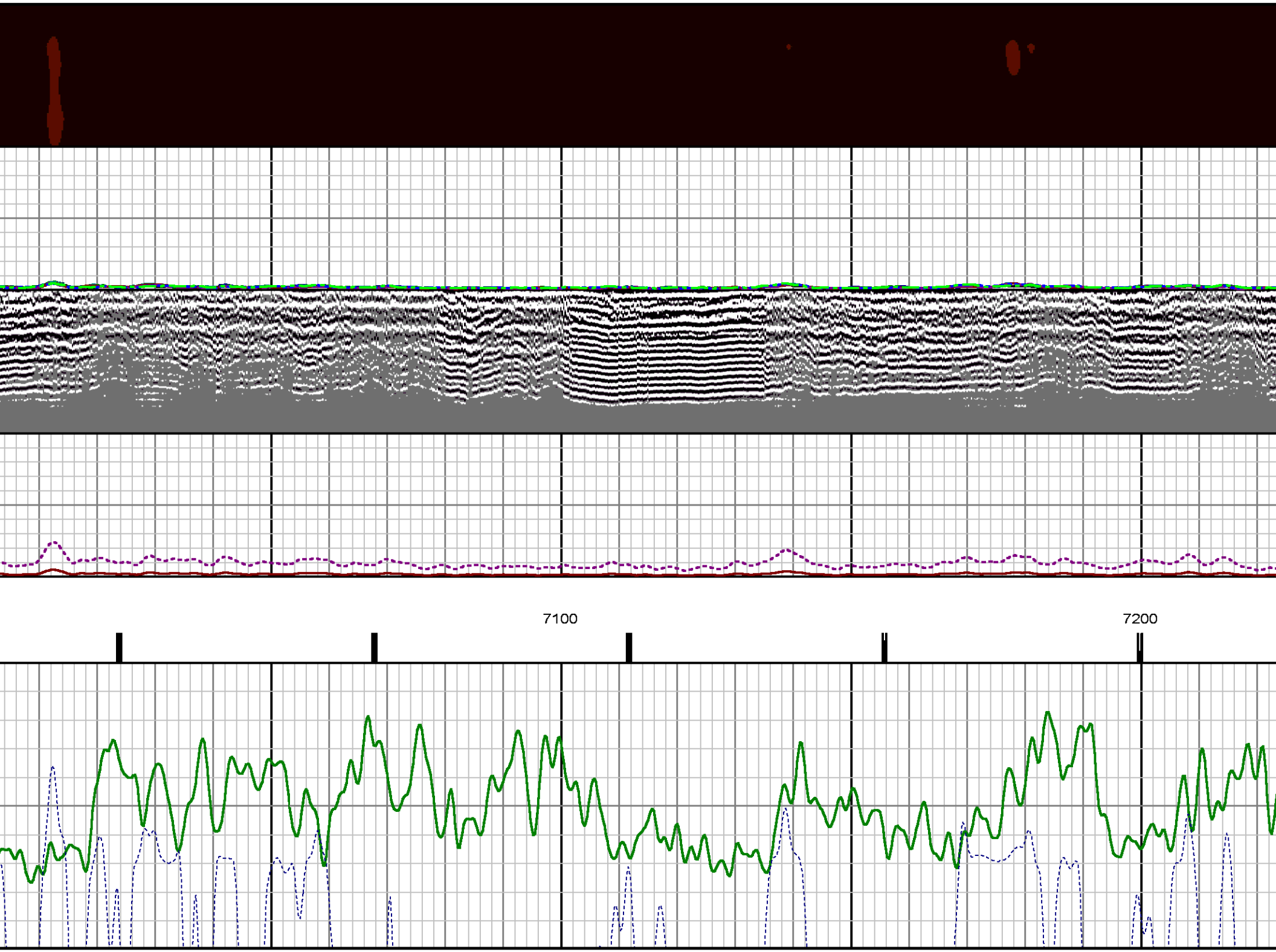
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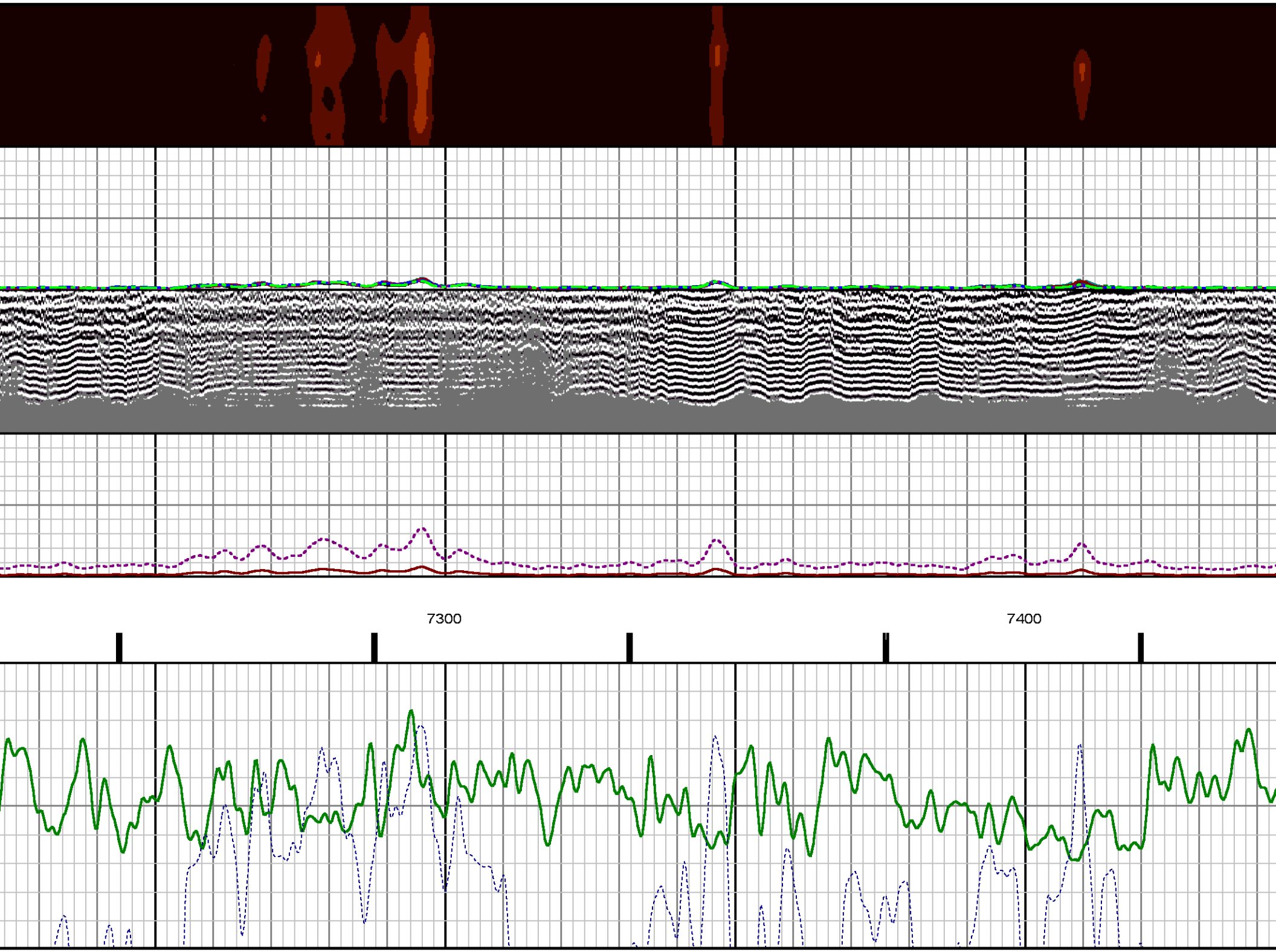
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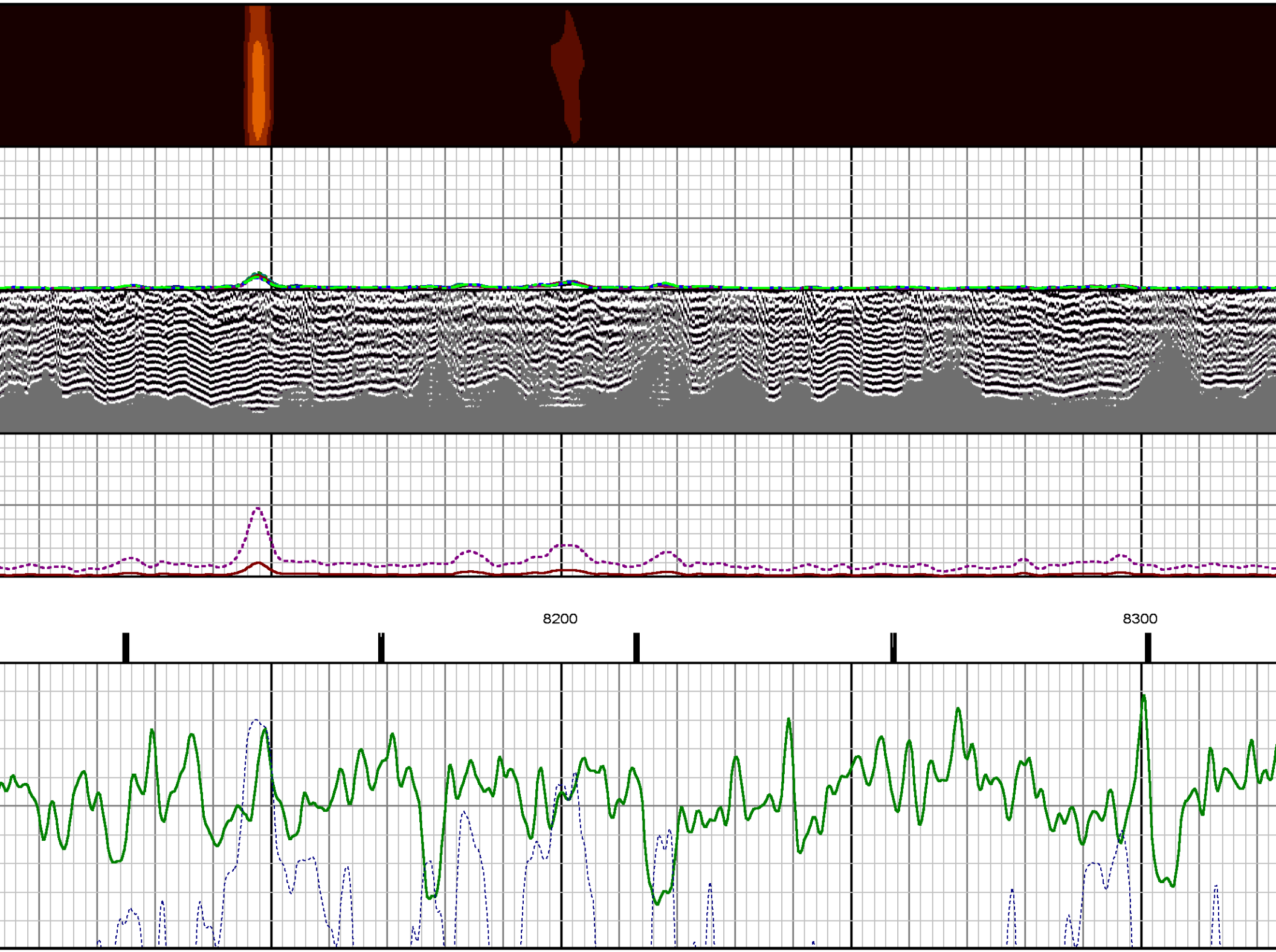
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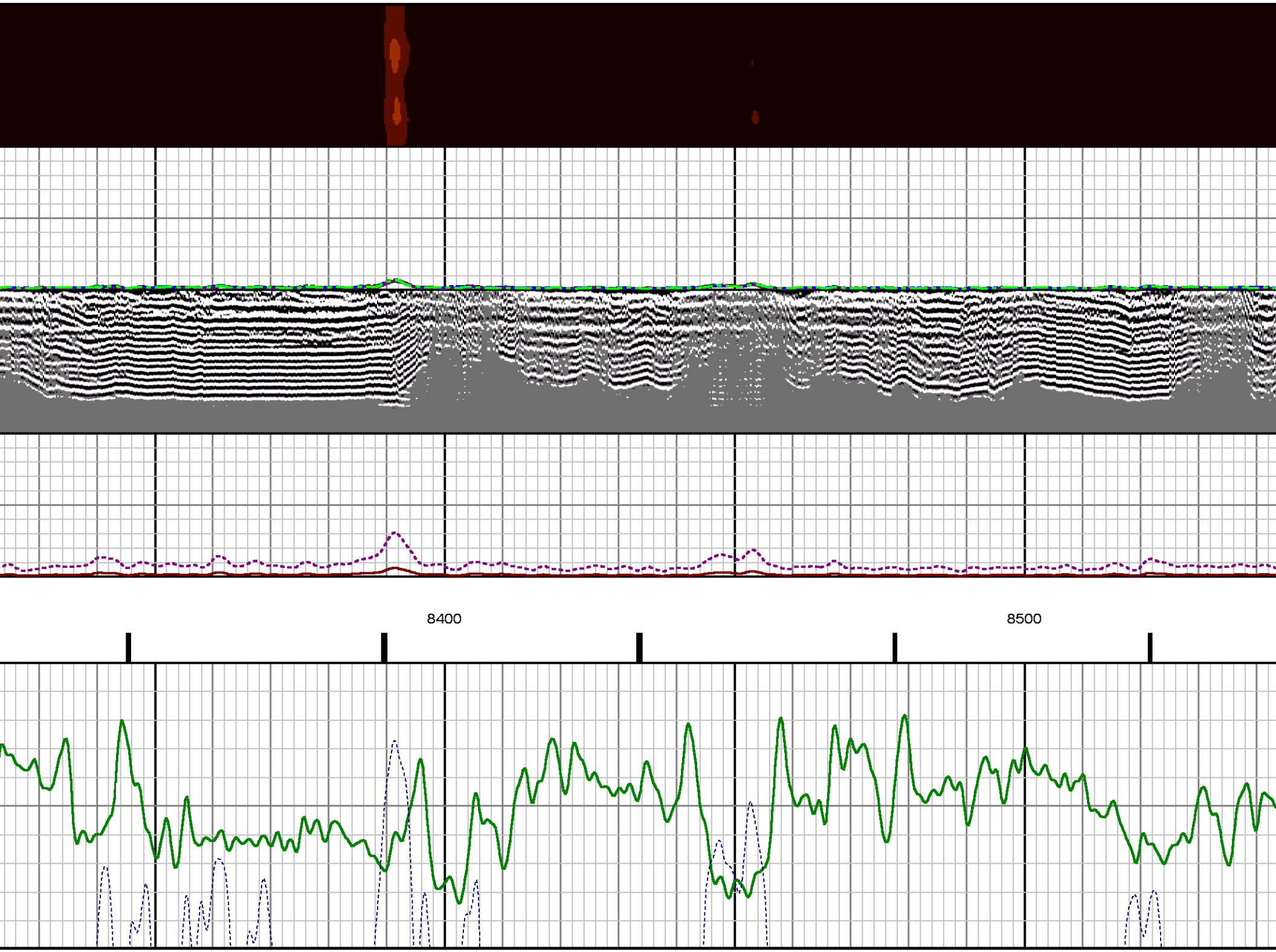
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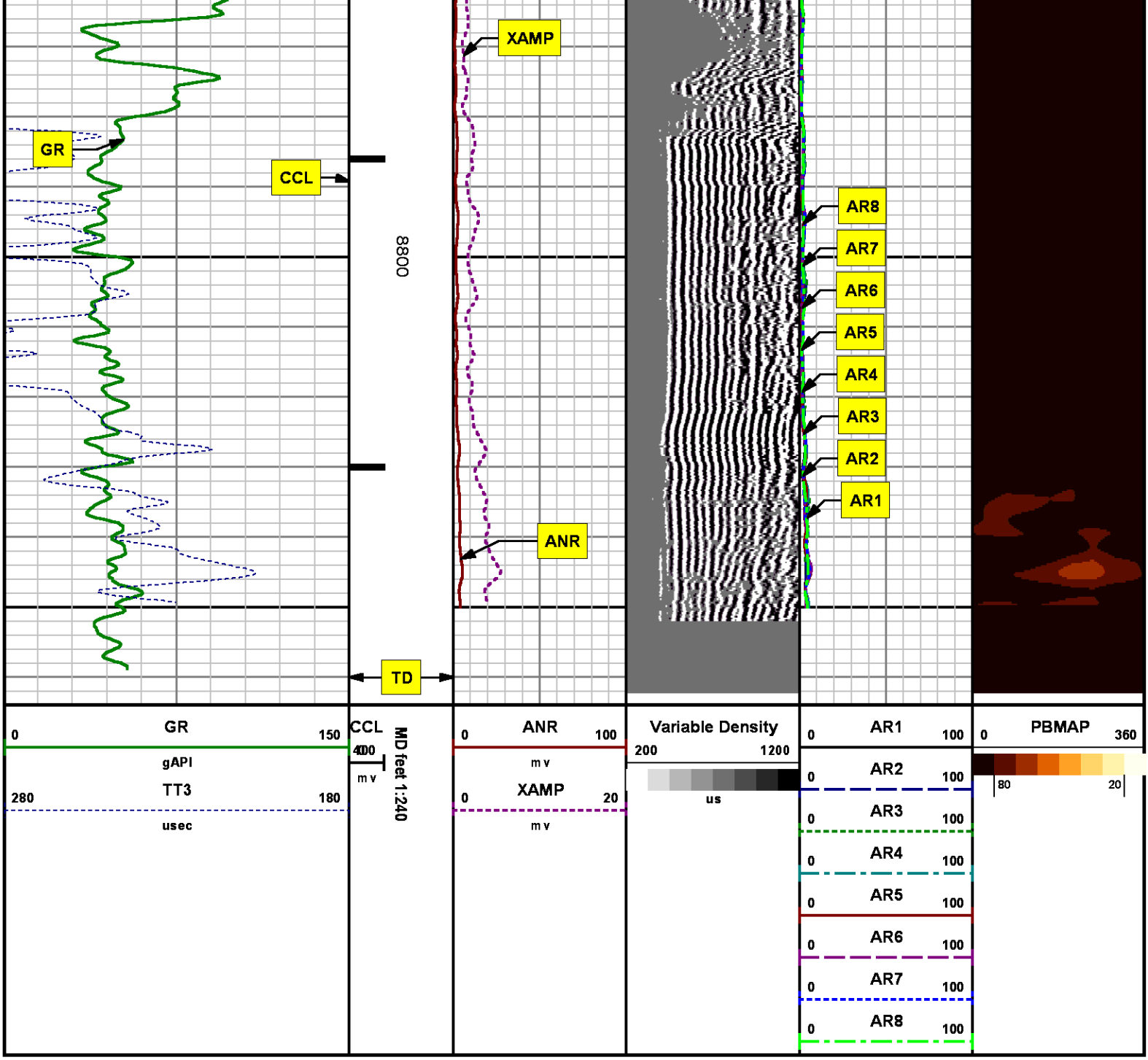


REPEAT SECTION

0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	310.000	usec	8535.920	8862.170
RAL	Amp Gate Start Near	195.000	usec	8535.920	8862.170
RAL	Amp Gate Start Radial	195.000	usec	8535.920	8862.170
RAL	Amp Gate Width Far	25.000	usec	8535.920	8862.170
RAL	Amp Gate Width Near	25.000	usec	8535.920	8862.170
RAL	Amp Gate Width Radial	25.000	usec	8535.920	8862.170
RAL	casing od	4.500	inches	8535.920	8862.170
RAL	casing wt	11.600	lbm/ft	8535.920	8862.170
RAL	FB Start Far	291.900	usec	8535.920	8862.170
RAL	FB Start Near	180.000	usec	8535.920	8862.170
RAL	FB Start Radial	180.000	usec	8535.920	8862.170
RAL	FB Thresh Far	10.000	mv	8535.920	8862.170
RAL	FB Thresh Near	4.000	mv	8535.920	8862.170
RAL	FB Thresh Radial	4.000	mv	8535.920	8862.170
RAL	Fluid Travel Time	200.000	usec/ft	8535.920	8861.670

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

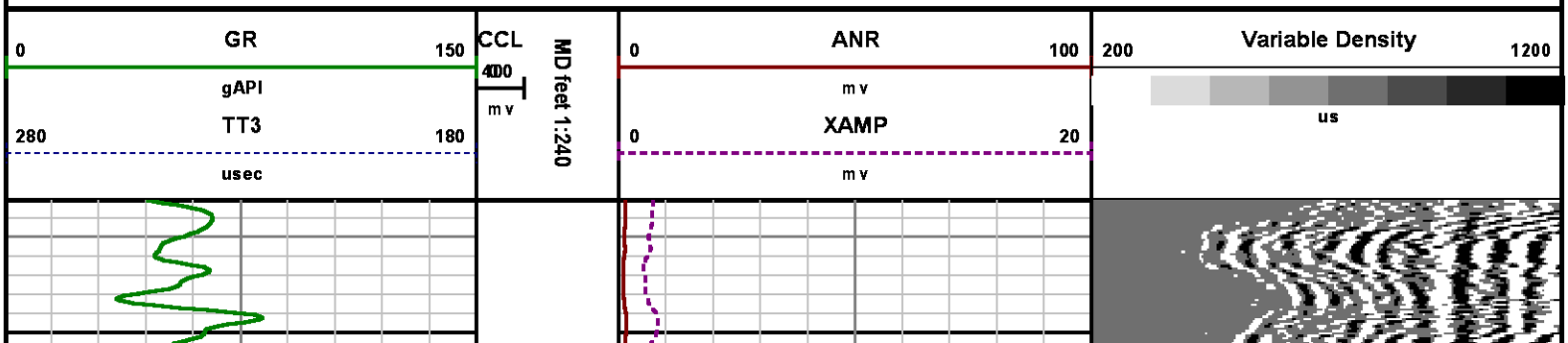
Well : SAVAGE RWF 334-25

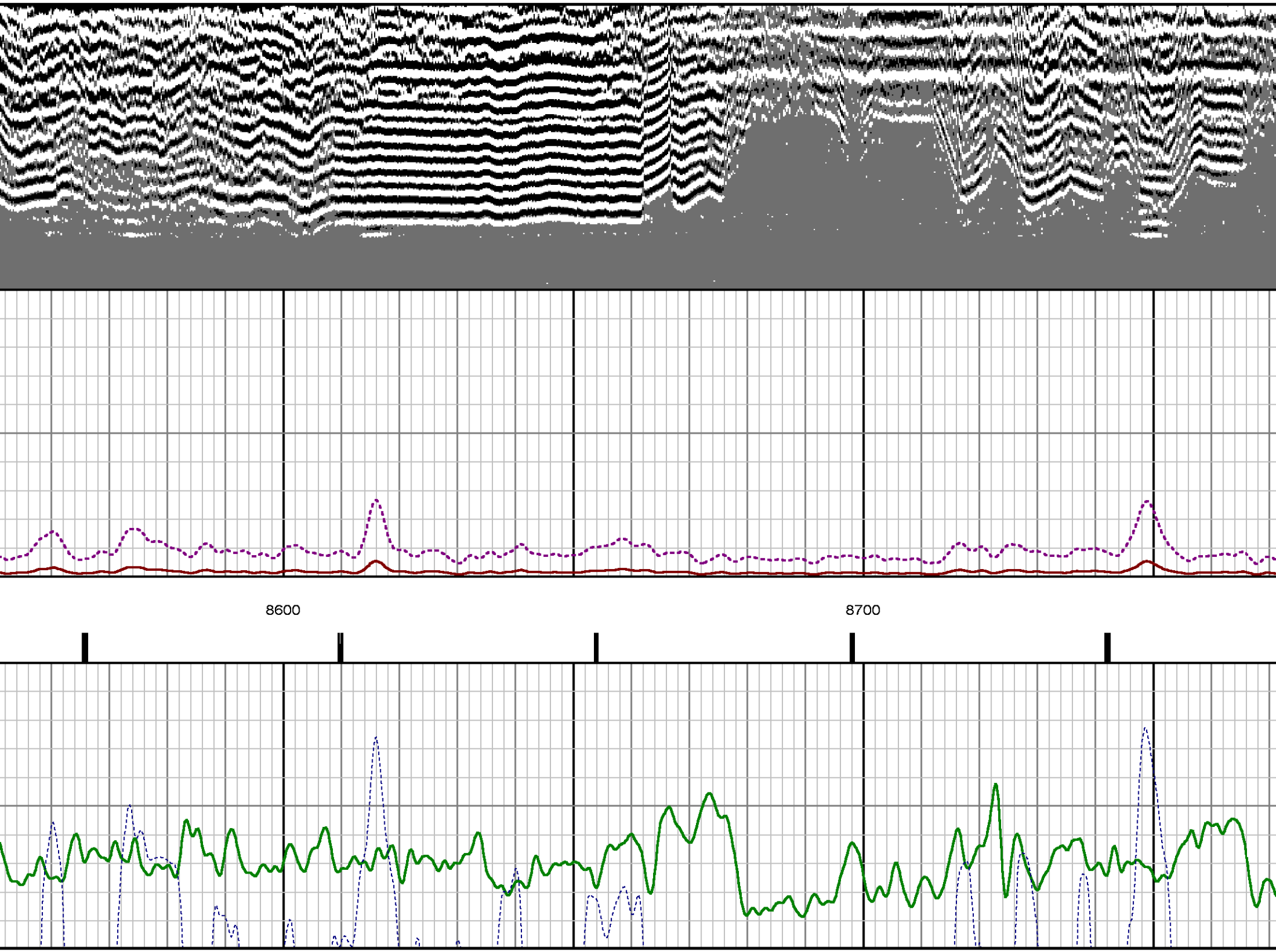
File Name : d:\welldata\wpx\rwf 334-25\ral334\repeat.xtf

Mode : PlotMgr 5.4.504

Interval : 8536.17 - 8862.17 feet UP

Created : 9/1/2014 8:35:14 AM

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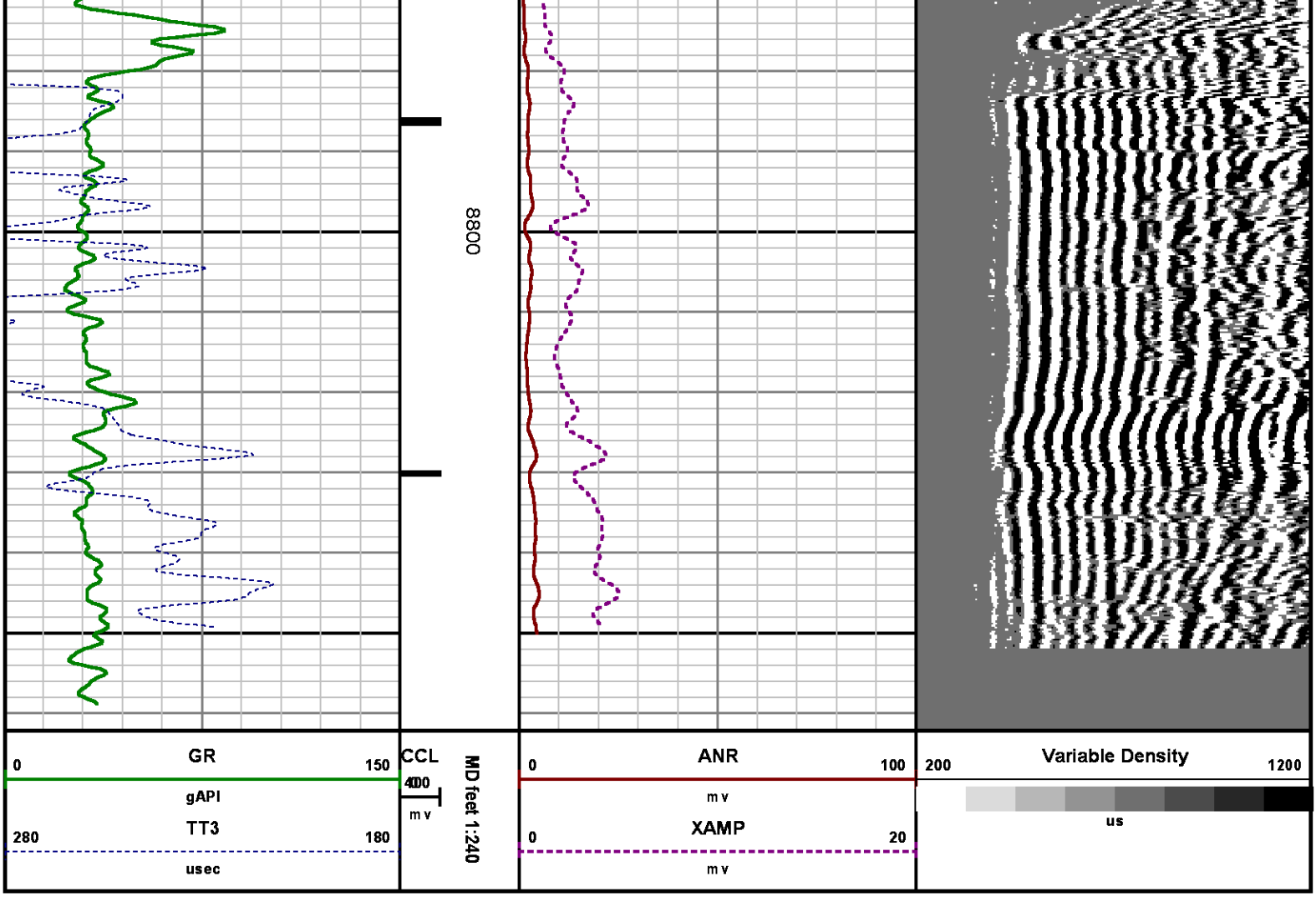


CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP\496AU29_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Aug 29 13:06:57 2014 **TOOL SERIES:** 1426XA **ASSET:** 496 **SEQ:** AU29

Tool Delay [usec]	Tank OD in	Tank Wt lbm/ft	Tank ID in
-53.00	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	218	216	30	166	25	-0.157	100.00	0.31
3 Ft. Receiver	217	216	30	166	25	2.432	100.00	0.30
5 Ft. Receiver	326	325	30	244	25	0.126	150.00	0.34
Radial #1	217	216	30	166	25	1.708	100.00	0.31

Radial #2	216	216	30	166	25	1.524	100.00	0.30
Radial #3	216	216	30	166	25	2.506	100.00	0.30
Radial #4	216	216	30	166	25	2.286	100.00	0.30
Radial #5	216	216	30	166	25	2.035	100.00	0.30
Radial #6	217	216	30	166	25	2.053	100.00	0.31
Radial #7	217	216	30	166	25	1.714	100.00	0.31
Radial #8	219	216	30	166	25	2.058	100.00	0.31

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\496AU29_fld.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Aug 29 13:08:50 2014 **TOOL SERIES:** 1426XA **ASSET:** 496 **SEQ:** AU29

Tool Delay [usec]	Casing OD in	Casing Wt lbm/ft	Casing ID in
-53.00	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	0.047	0.000	1.00	100.000
3 Ft. Receiver	195	25	2.335			
5 Ft. Receiver	305	25	3.409			
Radial #1	195	25	1.727			
Radial #2	195	25	1.700			
Radial #3	195	25	2.083			
Radial #4	195	25	2.143			
Radial #5	195	25	2.273			
Radial #6	195	25	2.310			
Radial #7	195	25	1.810			
Radial #8	195	25	1.744			

GAMMA RAY

Calibration File: C:\case\calver\GR\11871510A1.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Aug 15 09:48:50 2014 **TOOL SERIES:** 1355XA **ASSET:** 11871510 **SEQ:** A1

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	78.09	460.84	0.483	37.74	222.74	185.00

Verification File: C:\case\calver\GR\11871510A1.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED:	Fri Aug 15 09:50:00 2014	TOOL SERIES:	1355XA	ASSET:	11871510	SEQ:	A1

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	85.91	455.51	0.483	41.52	220.17	178.64

TOOL DIAGRAM

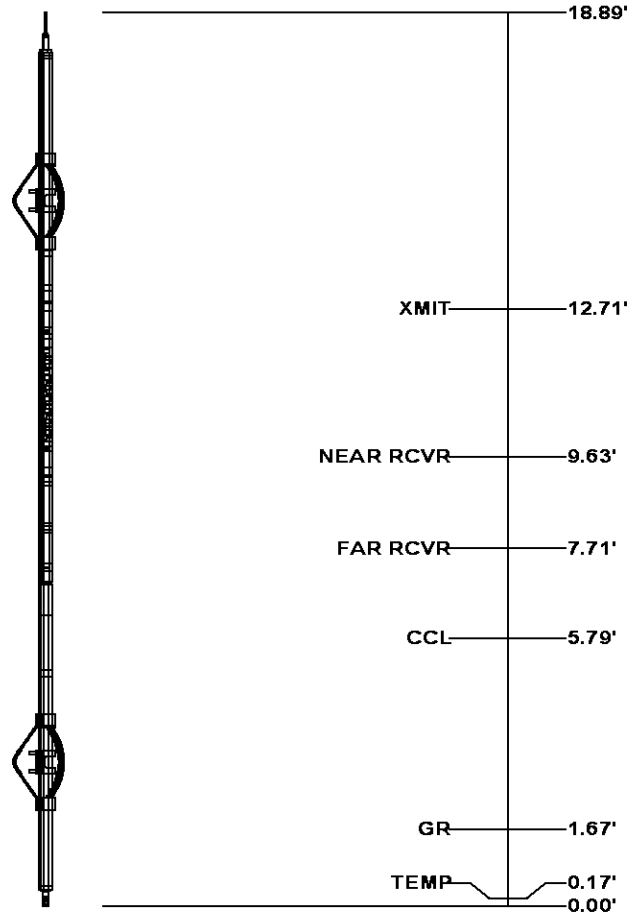
OTA SHORT CABLE HEAD

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: CH089883
Well	SAVAGE RWF 334-25		
Field	RULISON		API No: 05045219960000
County	GARFIELD	State COLORADO	

Location	Elevations	
SHL: 1147' FSL & 1391' FEL	KB 6260 ft	25 6S 94W

CASE	BHL: 1428' FSL & 2632' FWL (NWSE) SEC 25 TWP 6S RGE 94S	DF GL 6234 ft	RWF 43-25 PAD NABORS 577