BAKER HUGHES

Baker Atlas

RADIAL ANALYSIS BOND LOG

File No:	CH084704
API No:	05045219680000
Company	WPX ENERGY
Well	SAVAGE RWF 421-25
Field	RULISON
County	GARFIELD
State	CO

Location

25 6S 94W

RWF 22-25 PAD

CYCLONE 17

SHL: 2449' FNL & 1439' FWL

BHL: 1094' FNL & 2120' FWL

SEC 25 TWP 6S RGE 94W

Other Services

RPM

Permanent Datum	GL	Elevation	6037 ft
Log Measured From	KB	21 ft	Above P. D.
Drill Measured From	KB		

Elevations

KB 6058 ft

DF

GL 6037 ft

Date		18/APR/14	
Run		ONE	
Service Order		US625387	
Depth Driller		8815 ft	
Depth Logger		8768 ft	
Bottom Logged Interval		8758 ft	
Top Logged Interval		21 ft	
Time Started		7:30	
Time Finished		11:00	
Operator Rig Time		3.5 HOURS	
Type of Fluid in Hole		WATER	
Fluid Density		NA	
Salinity		NA	
Fluid Level		69 ft	
Logged Cement Top		NA	
Wellhead Pressure		0 psi	
Maximum Hole Deviation		NA	
Nominal Logging Speed		65 fpm	
Maximum Recorded Temperature		232 degF	
Reference Log		NA	
Reference Log Date		NA	
Equipment No.	Location	4271	GRAND JCT.
Recorded By		NEWELL	
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			0 ft	1125 ft
4.5 in	11.6 lbm/ft	I-80	0 ft	8861 ft

Borehole Record

Bit Size	From	To
13.5 in	0 ft	1125 ft
8.75 in	1125 ft	8861 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 11 feet.

Logged with zero PSI at wellhead.

BHT = 232 °F

SJ = 5552'-5576'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	CBL	1426XA	10218496	CENTRALIZED
1	1	GR/CCL	2459XA	10417456	CENTRALIZED

PRIMARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	30.280	8769.750
RAL	Amp Gate Start Near	195.000	usec	30.280	8769.750
RAL	Amp Gate Start Radial	195.000	usec	30.280	8769.750
RAL	Amp Gate Width Far	25.000	usec	30.280	8769.750
RAL	Amp Gate Width Near	25.000	usec	30.280	8769.750
RAL	Amp Gate Width Radial	25.000	usec	30.280	8769.750
RAL	casing od	4.500	inches	30.280	8769.750
RAL	casing wt	11.600	lbm/ft	30.280	8769.750
RAL	FB Start Far	291.900	usec	30.280	8769.750
RAL	FB Start Near	175.391	usec	30.280	8769.750
RAL	FB Start Radial	175.391	usec	30.280	8769.750
RAL	FB Thresh Far	10.000	mv	30.280	8769.750
RAL	FB Thresh Near	4.000	mv	30.280	8769.750
RAL	FB Thresh Radial	4.000	mv	30.280	8769.750
RAL	Fluid Travel Time	200.000	usec/ft	30.280	8770.655

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

		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 : SAVAGE RWF 421-25
File Name : d:\welldata\wpx\savage rwf 421-25\cbl421\main.xtf
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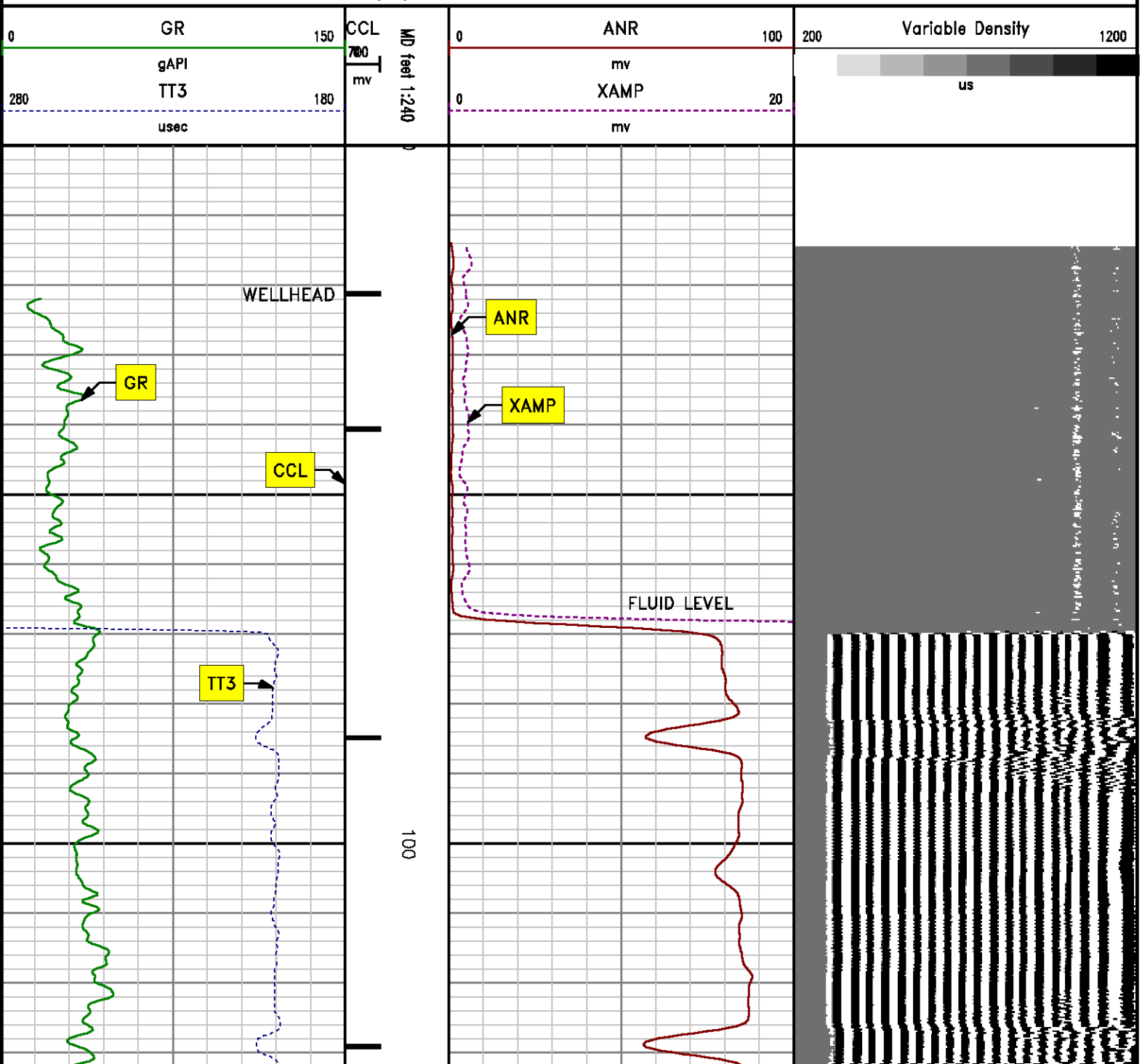

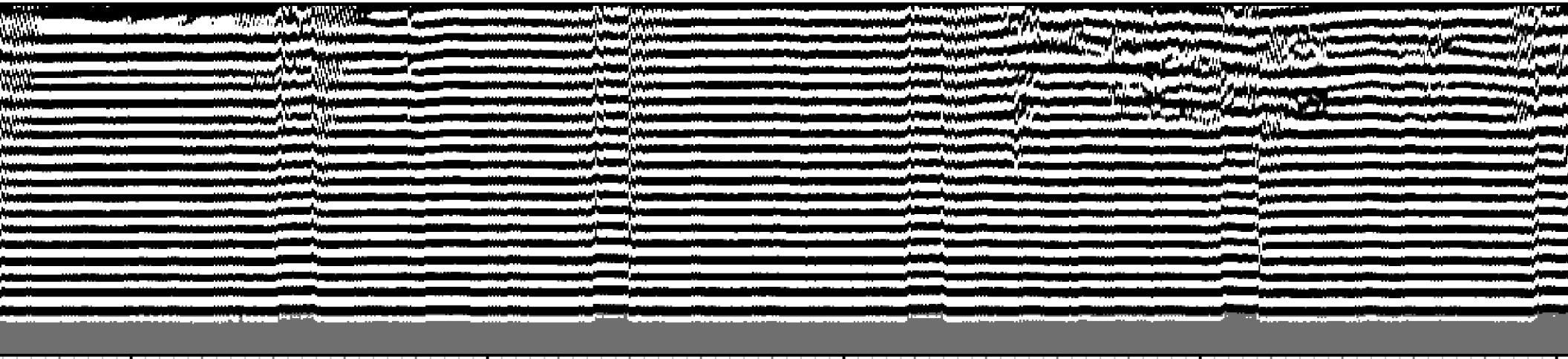

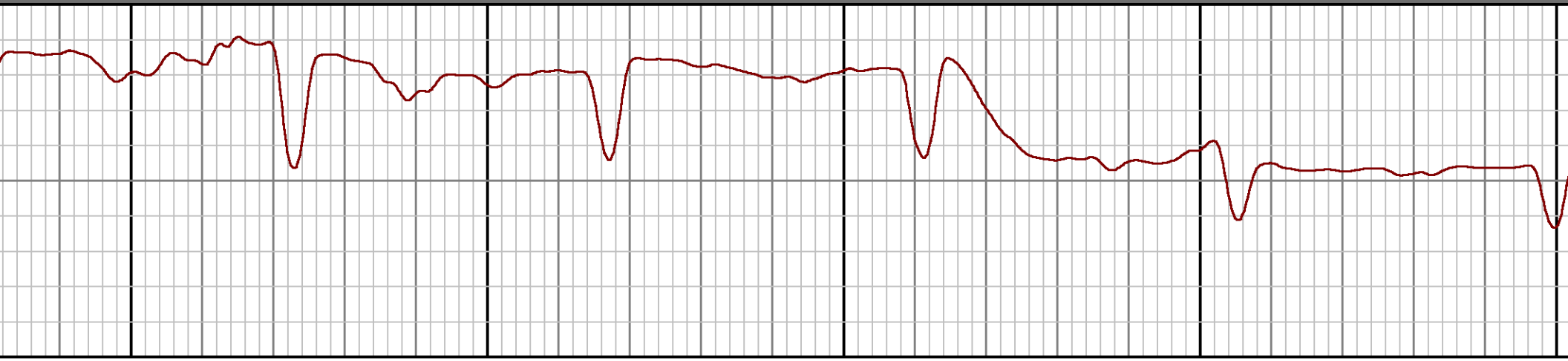

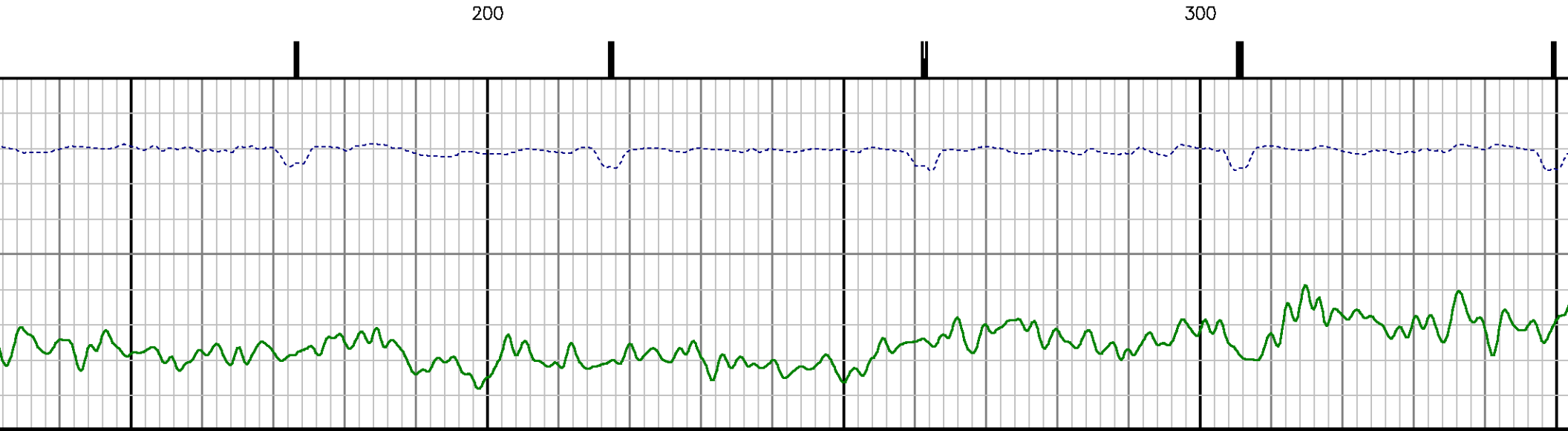
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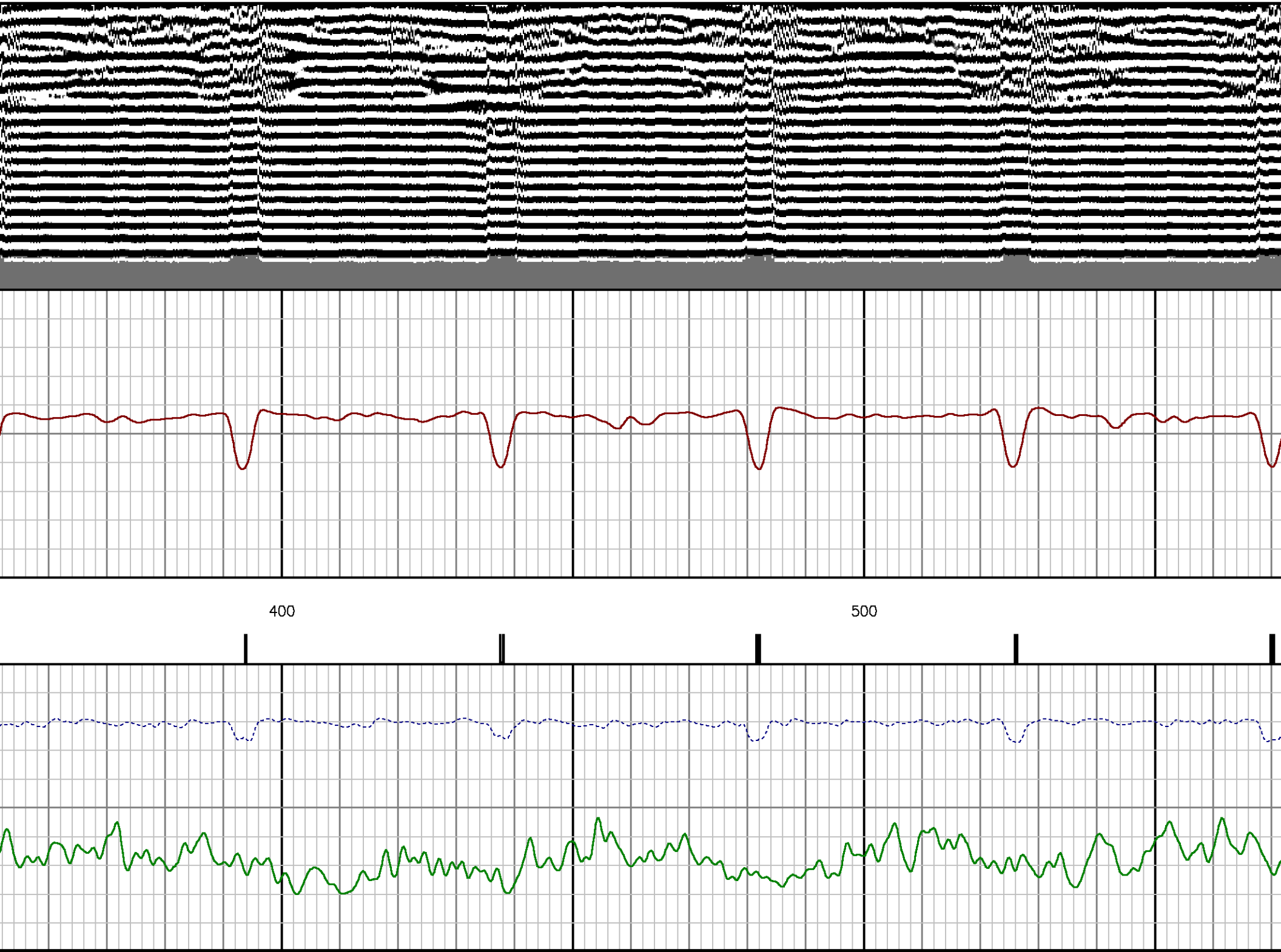
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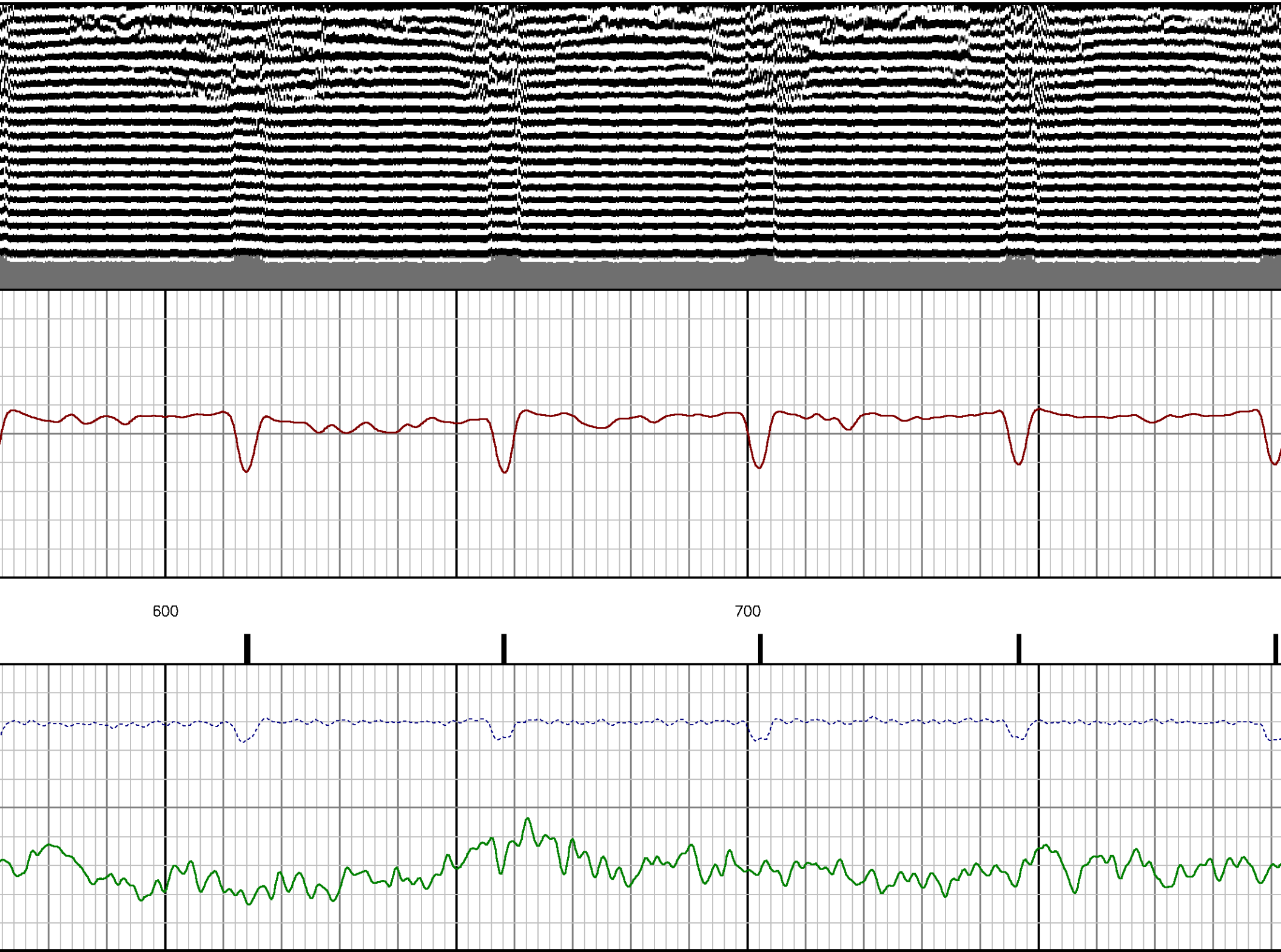
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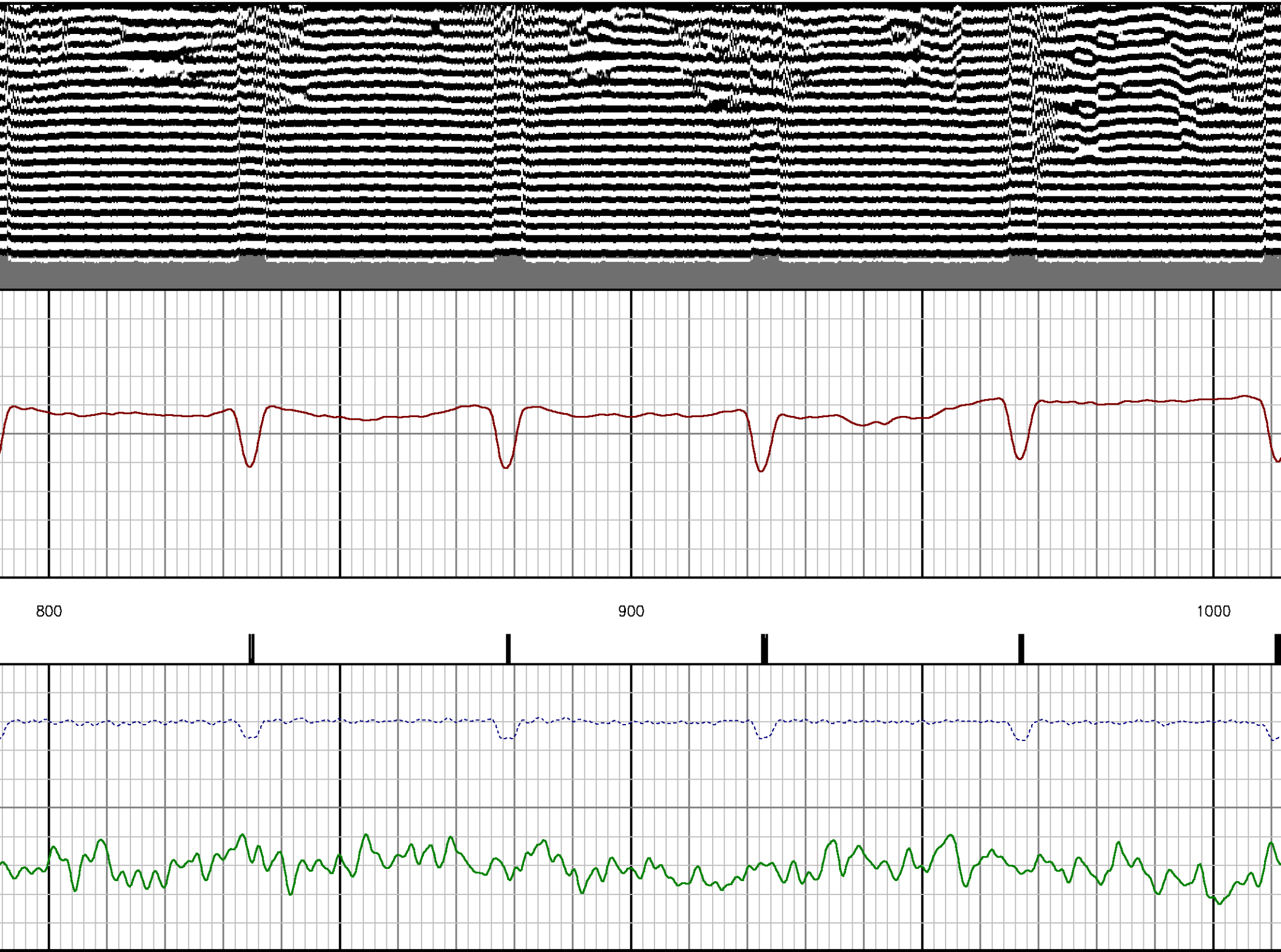
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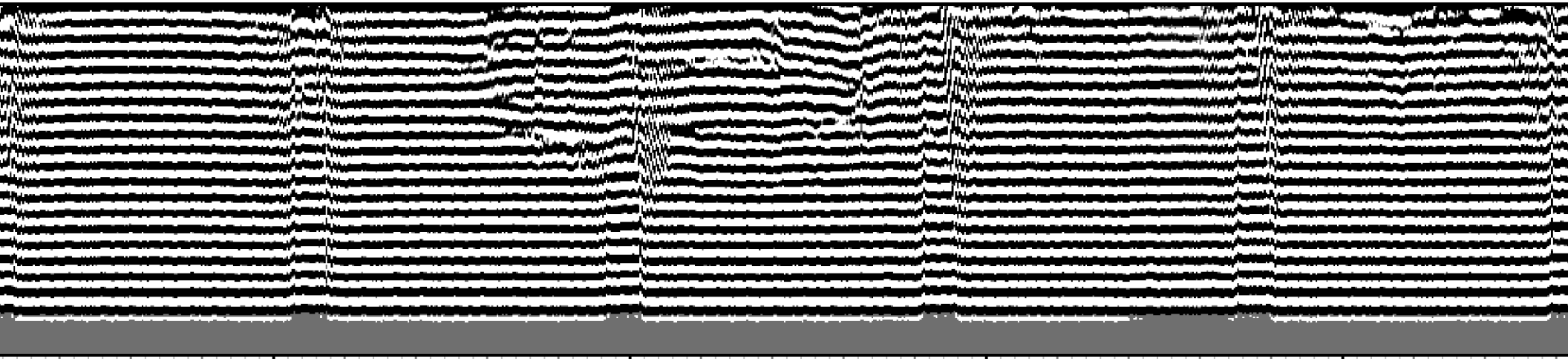

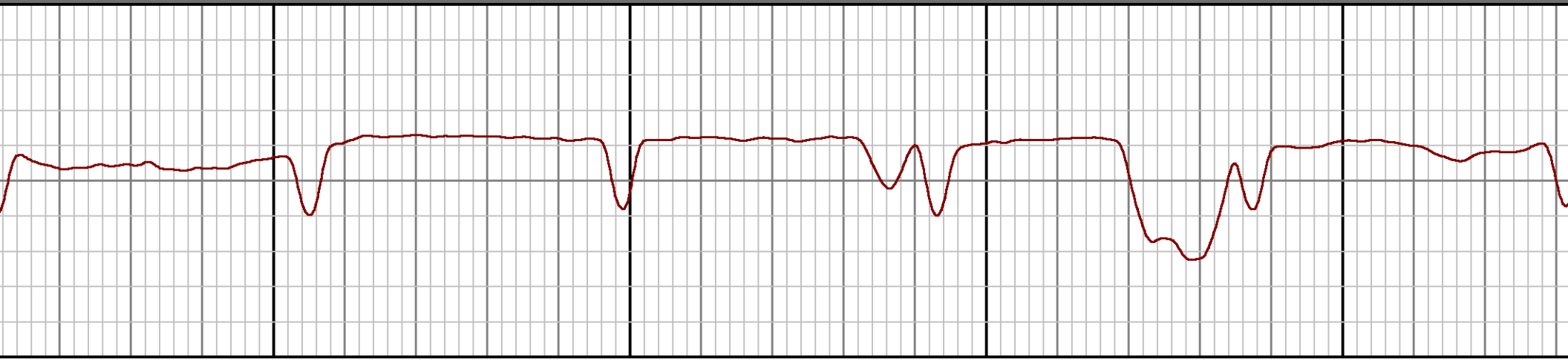

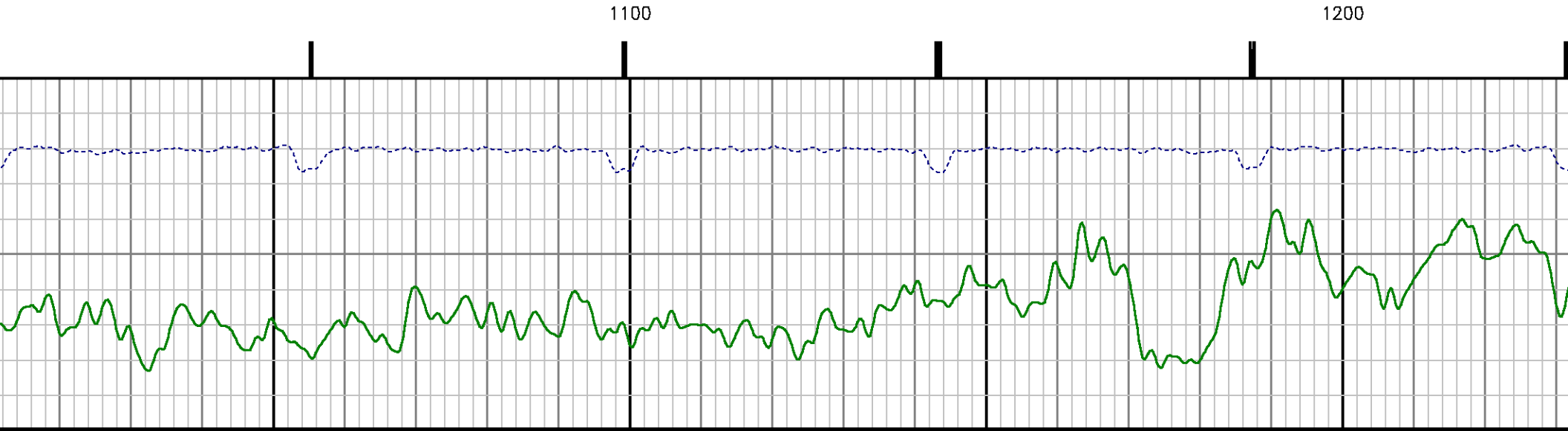
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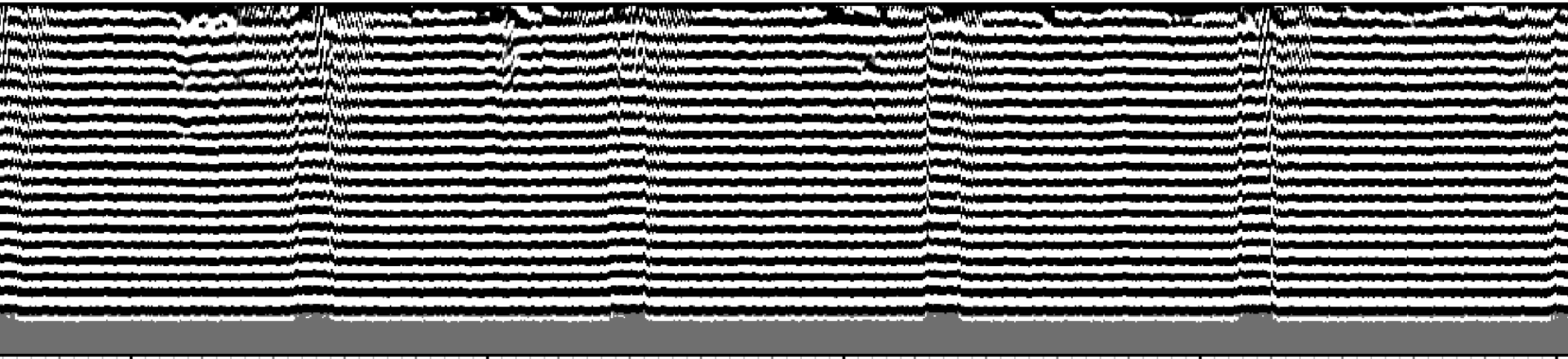

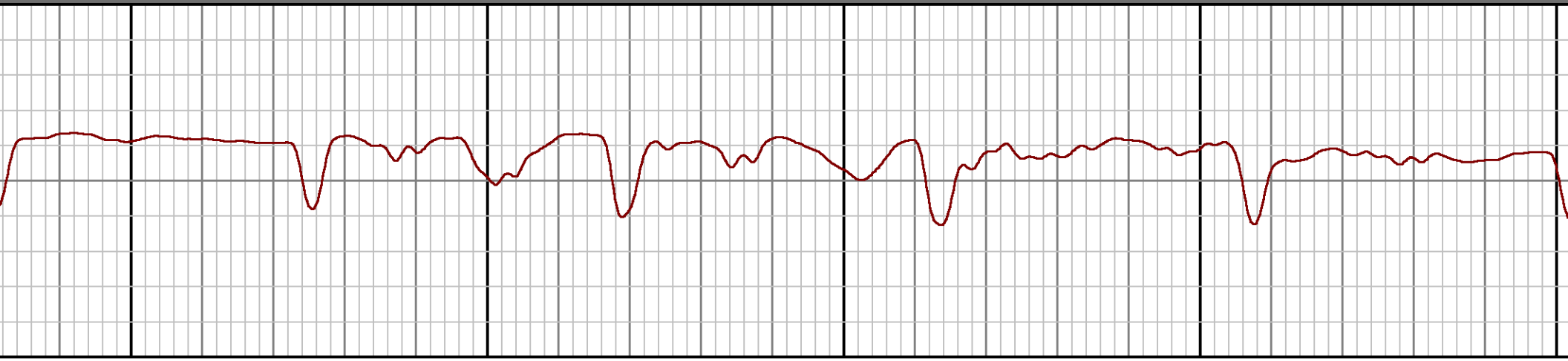

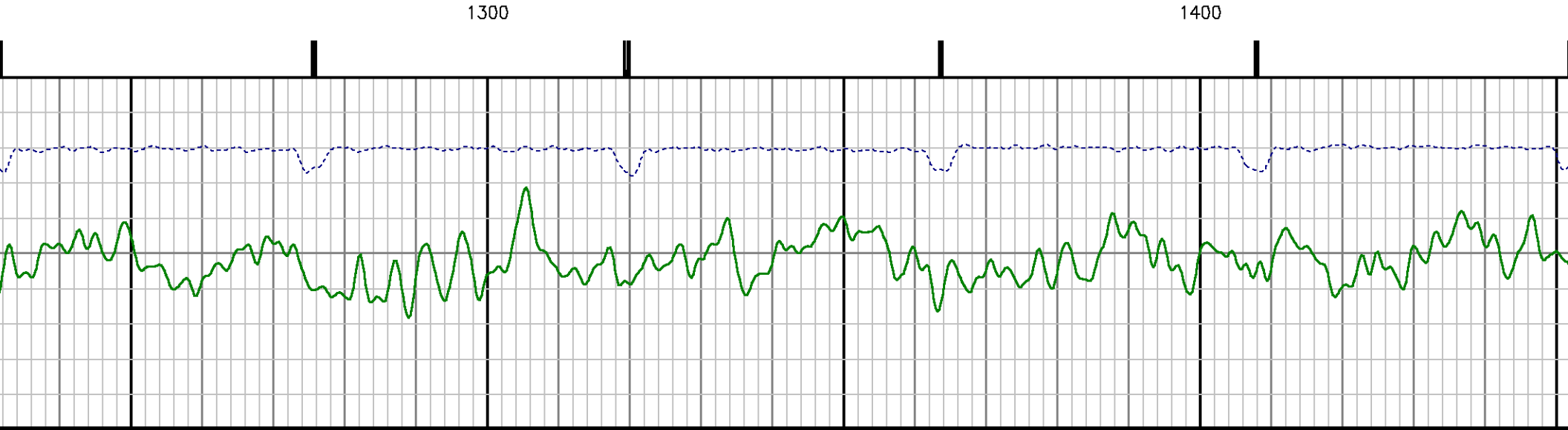
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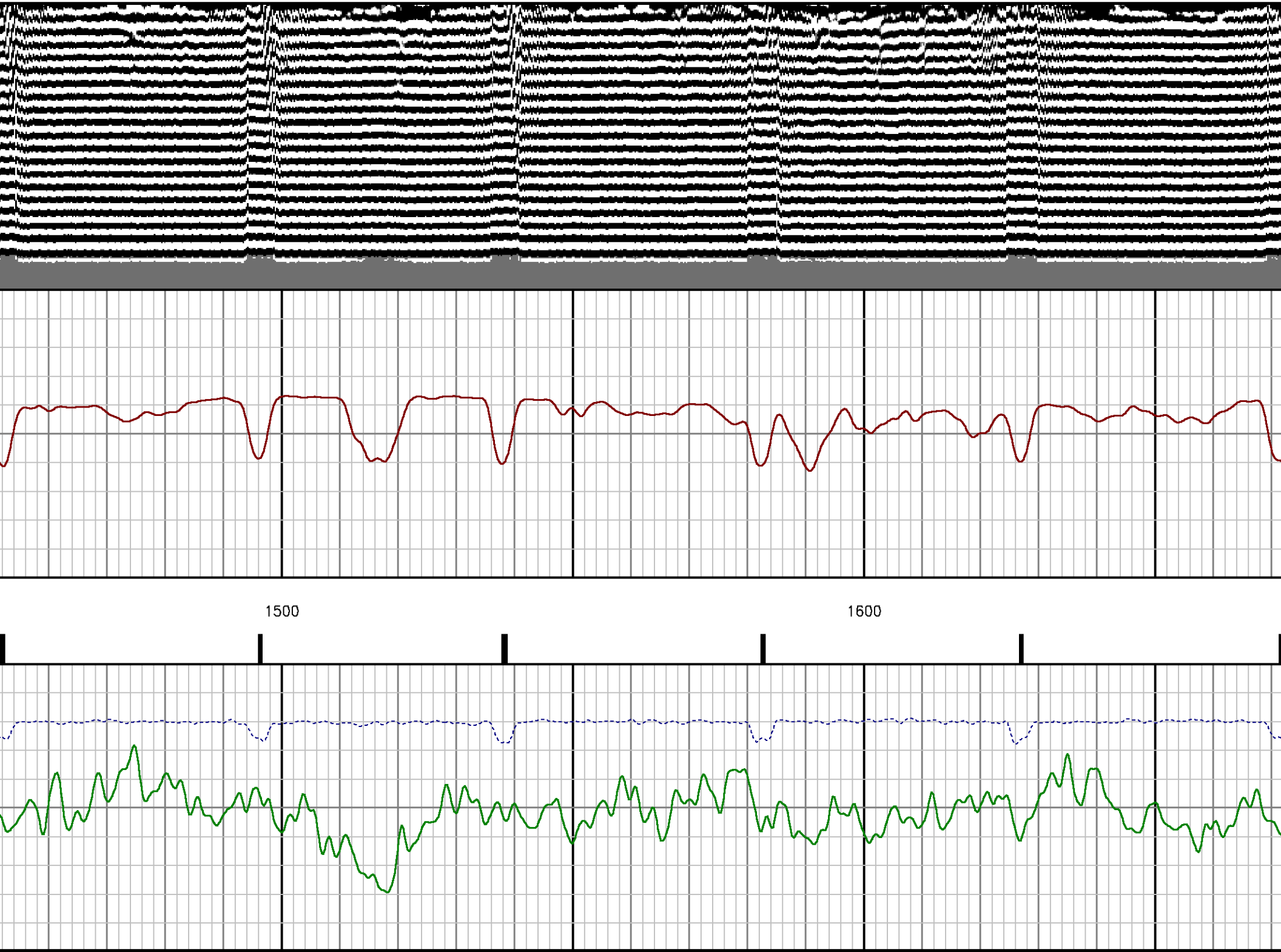
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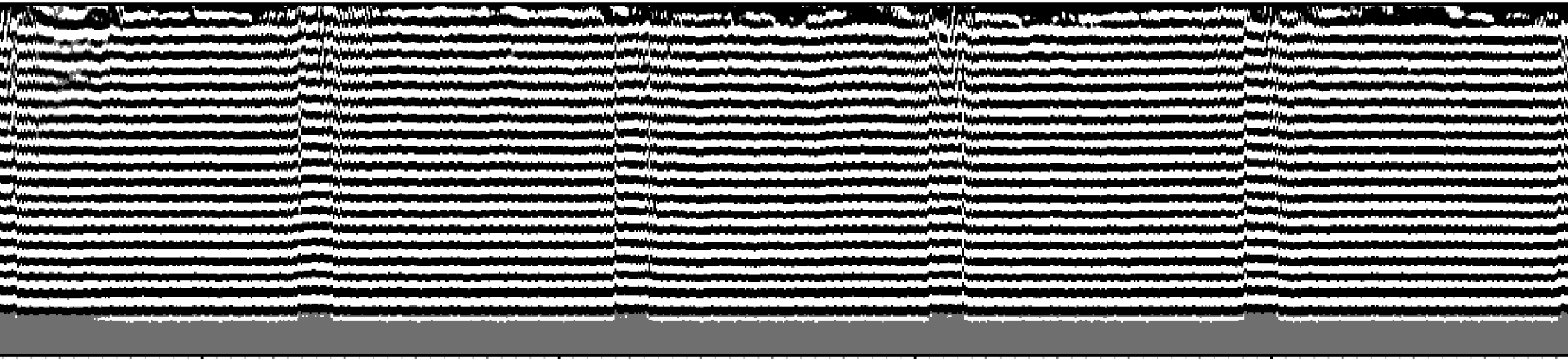

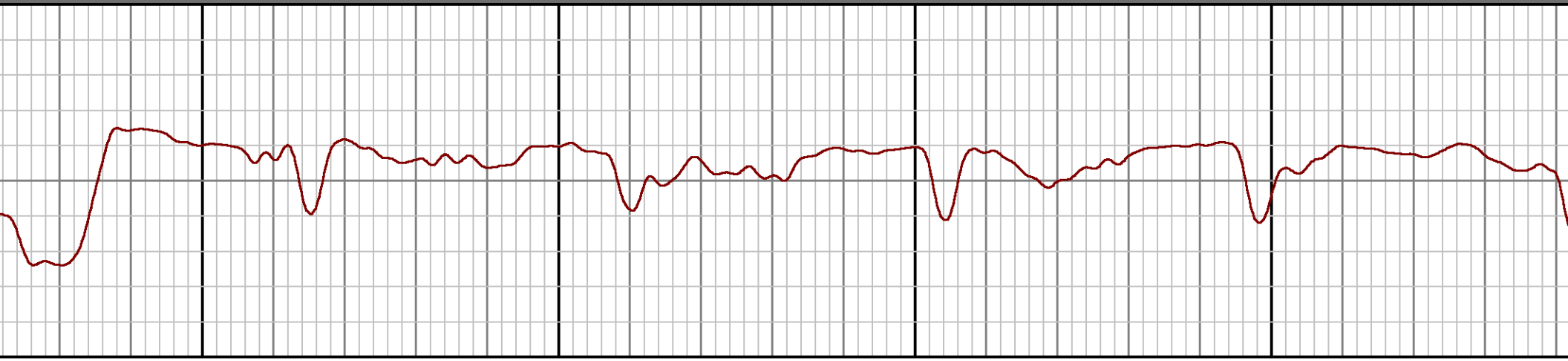

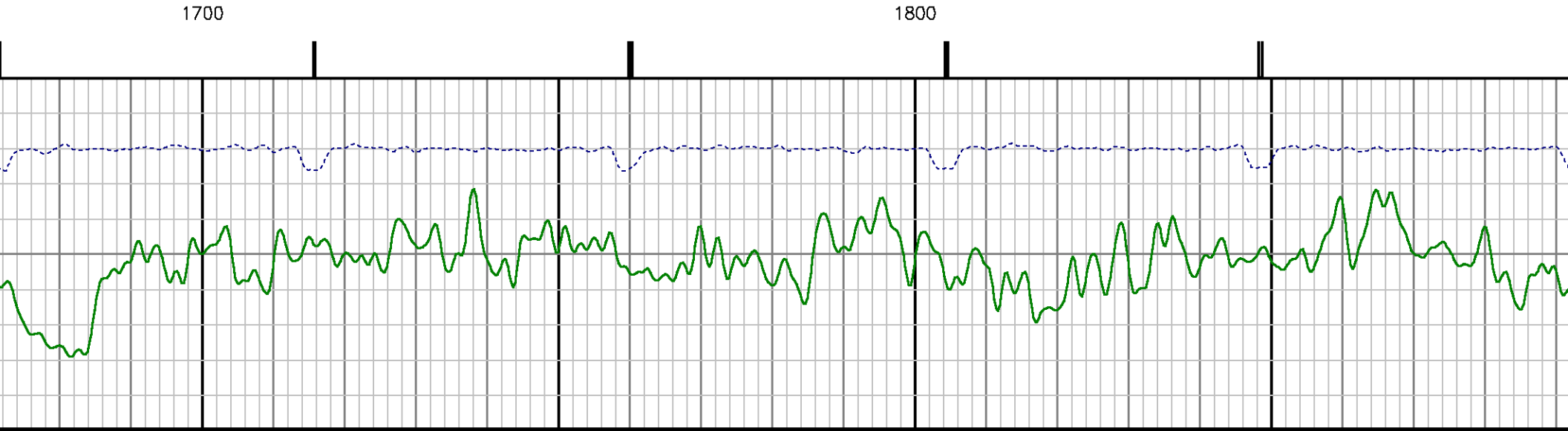
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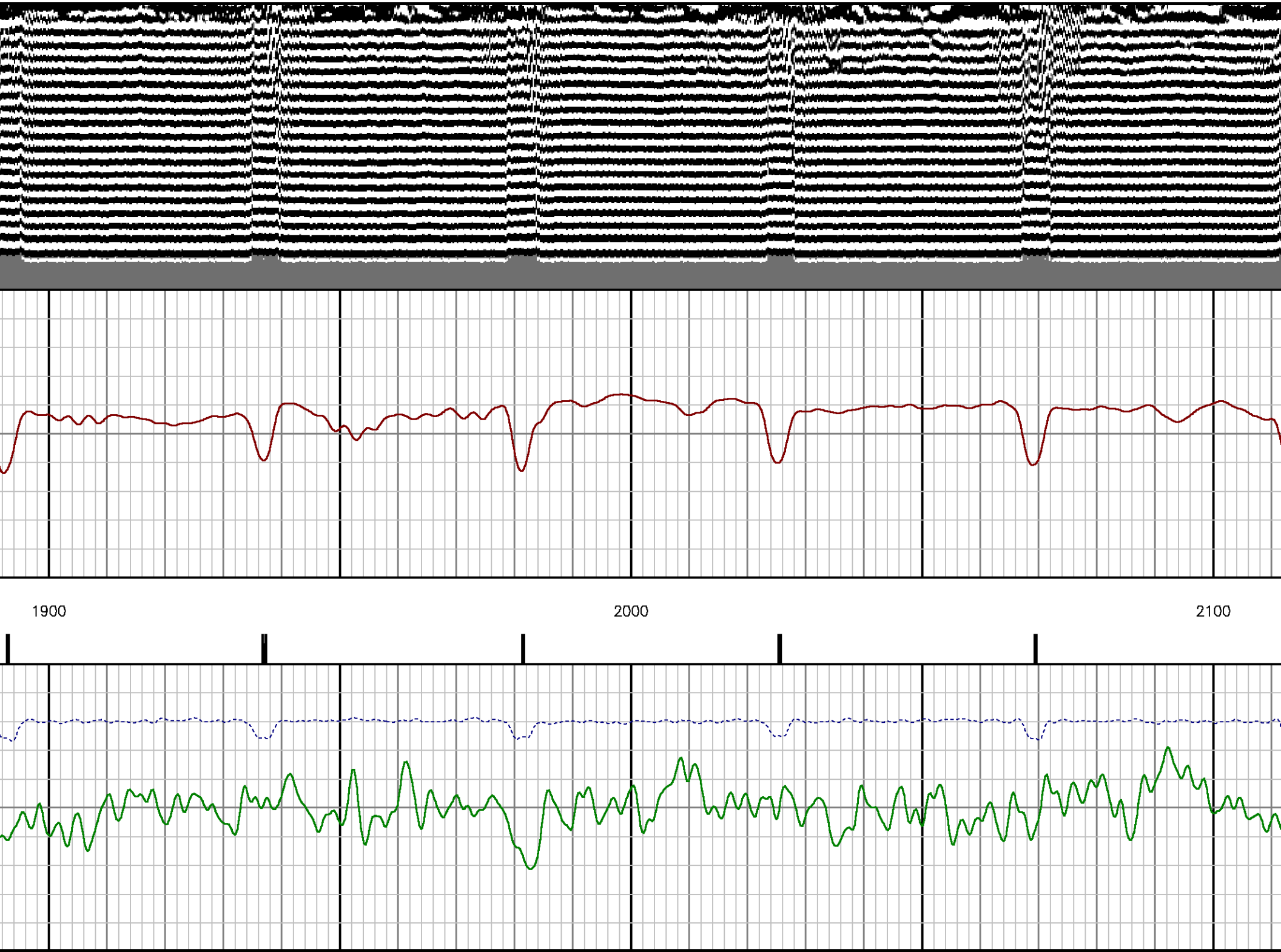
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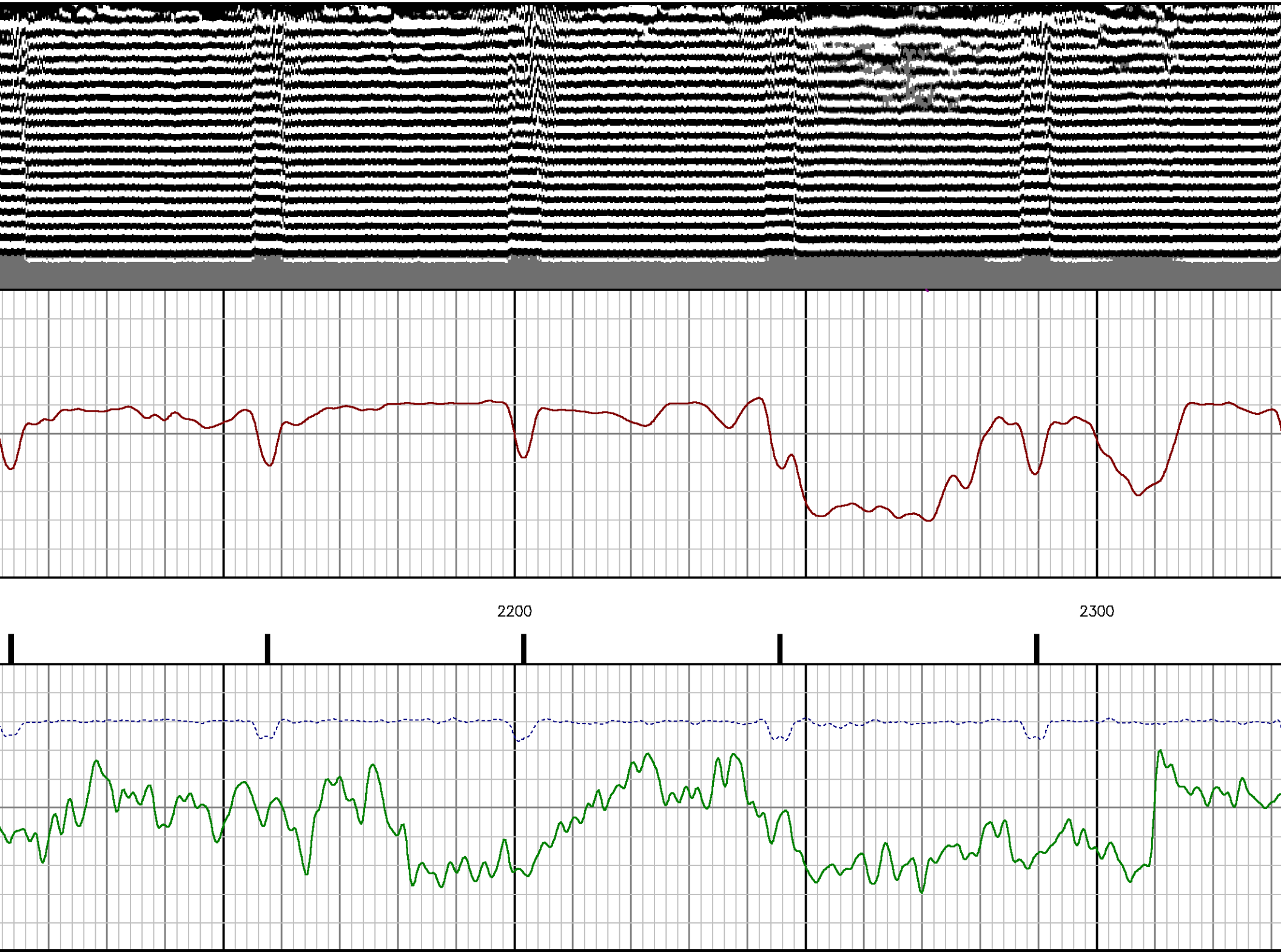
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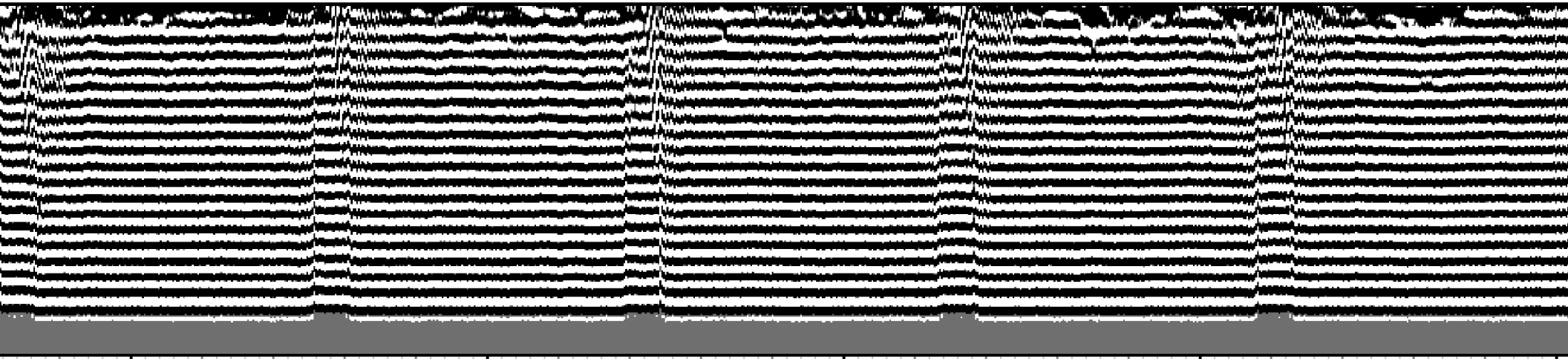

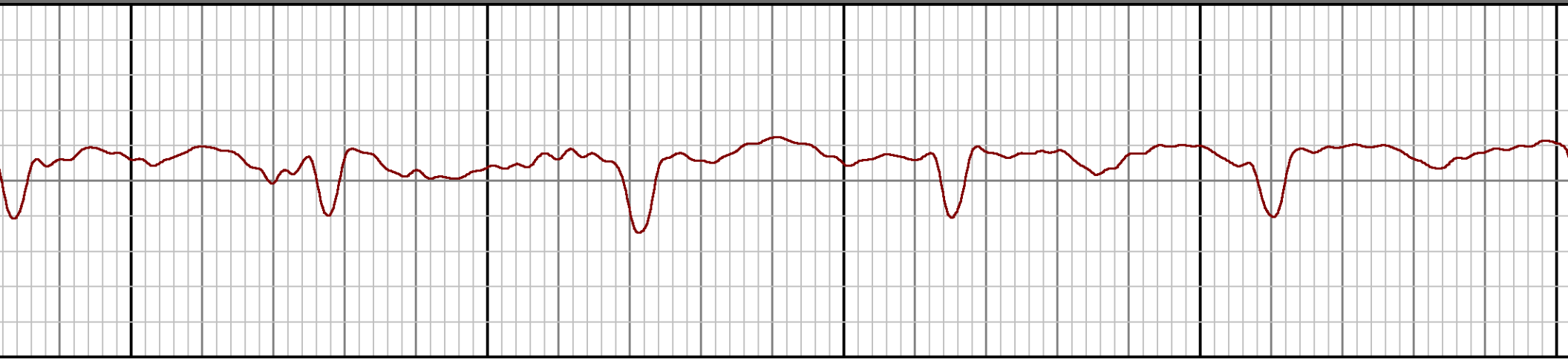

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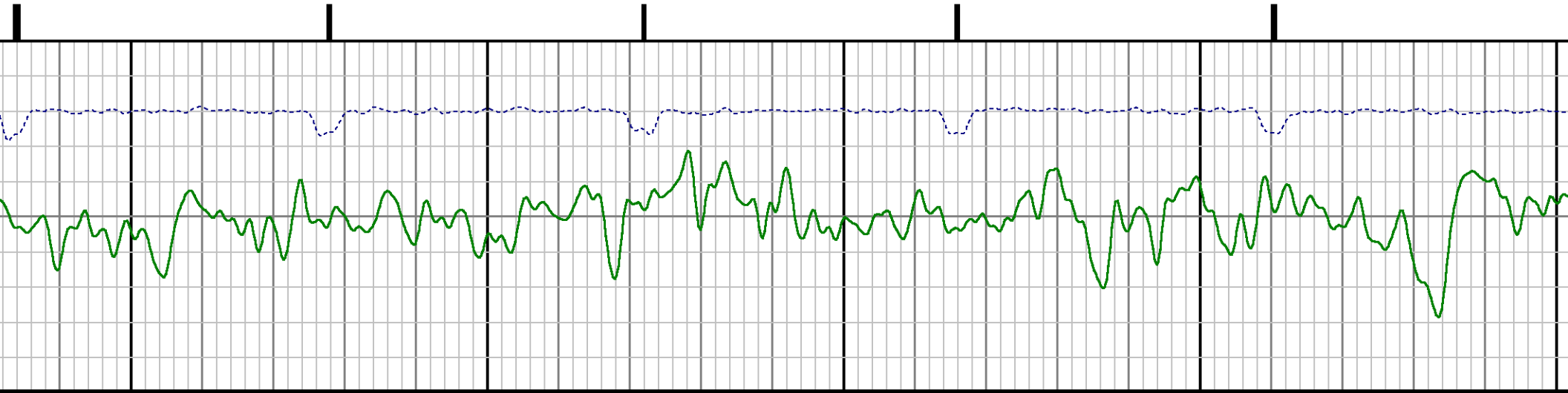

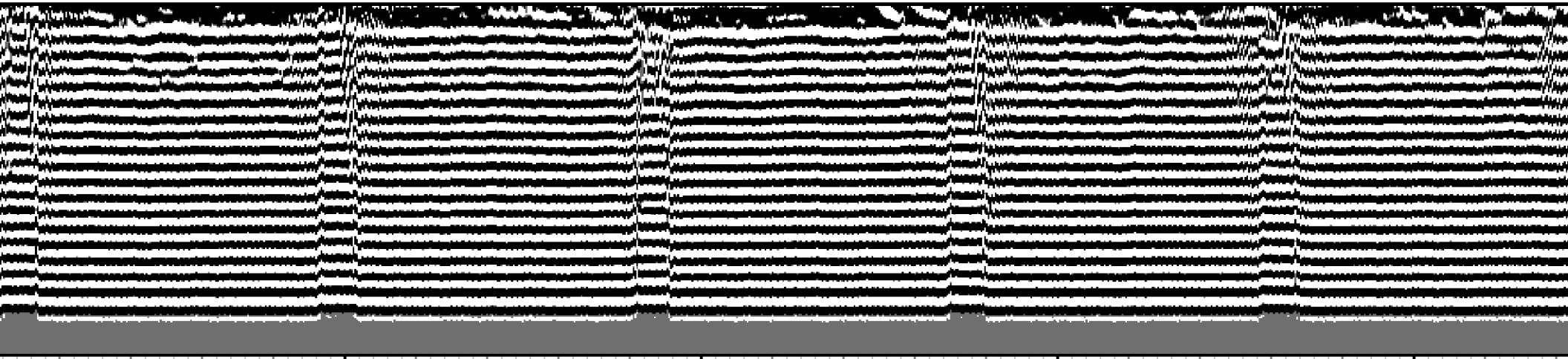

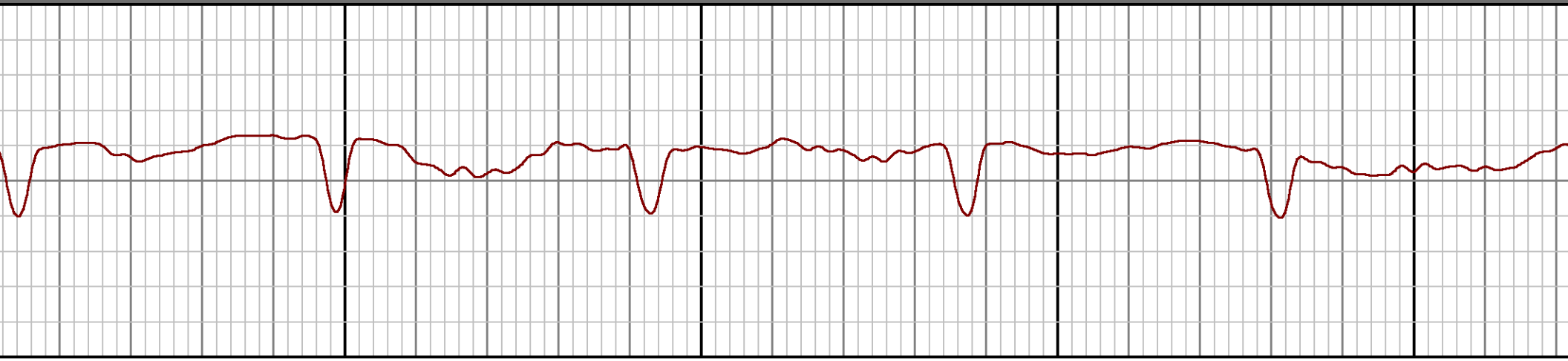

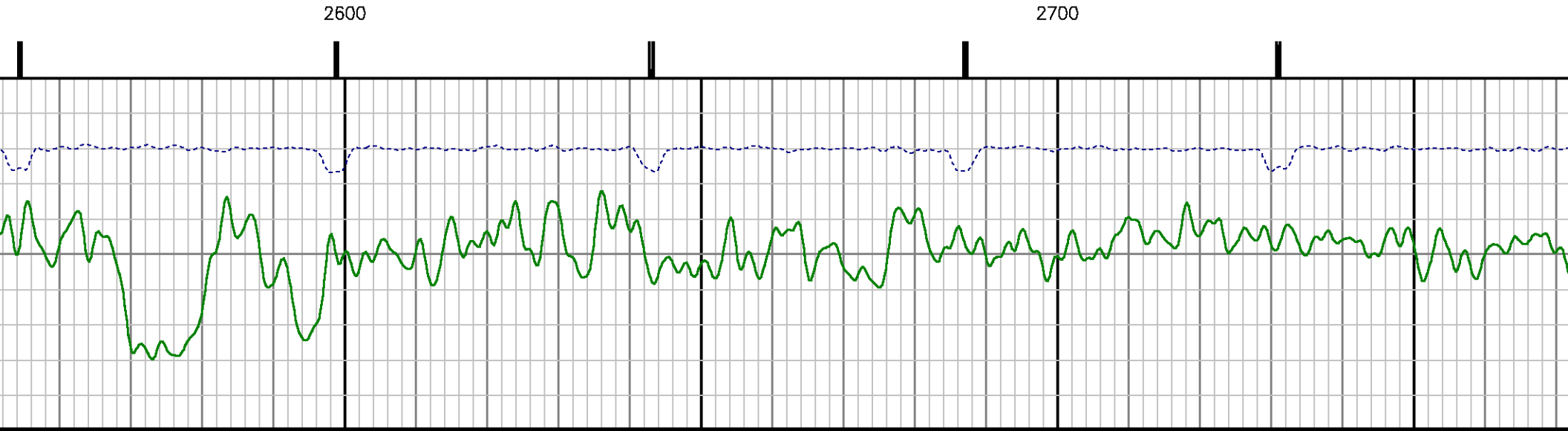
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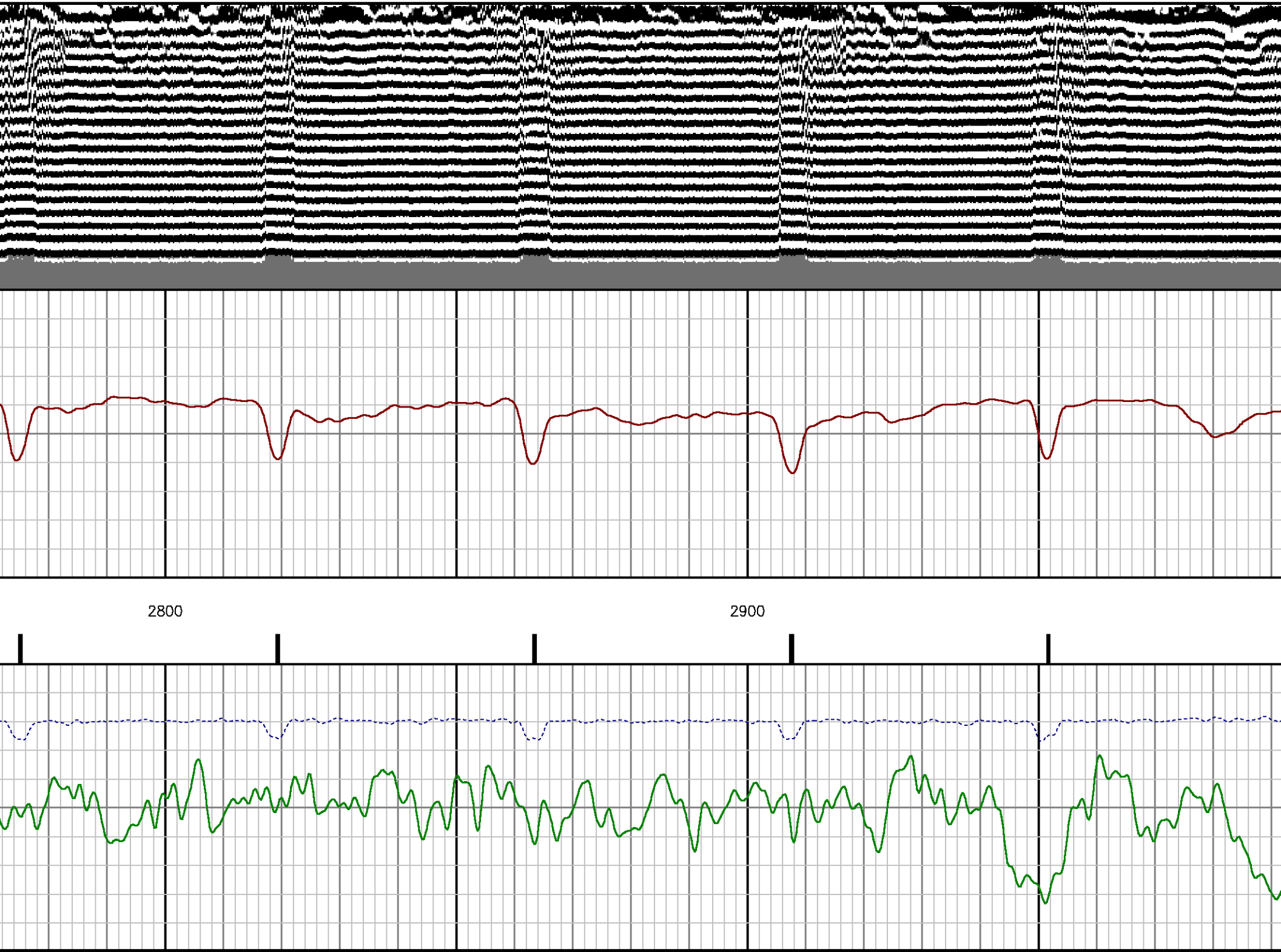
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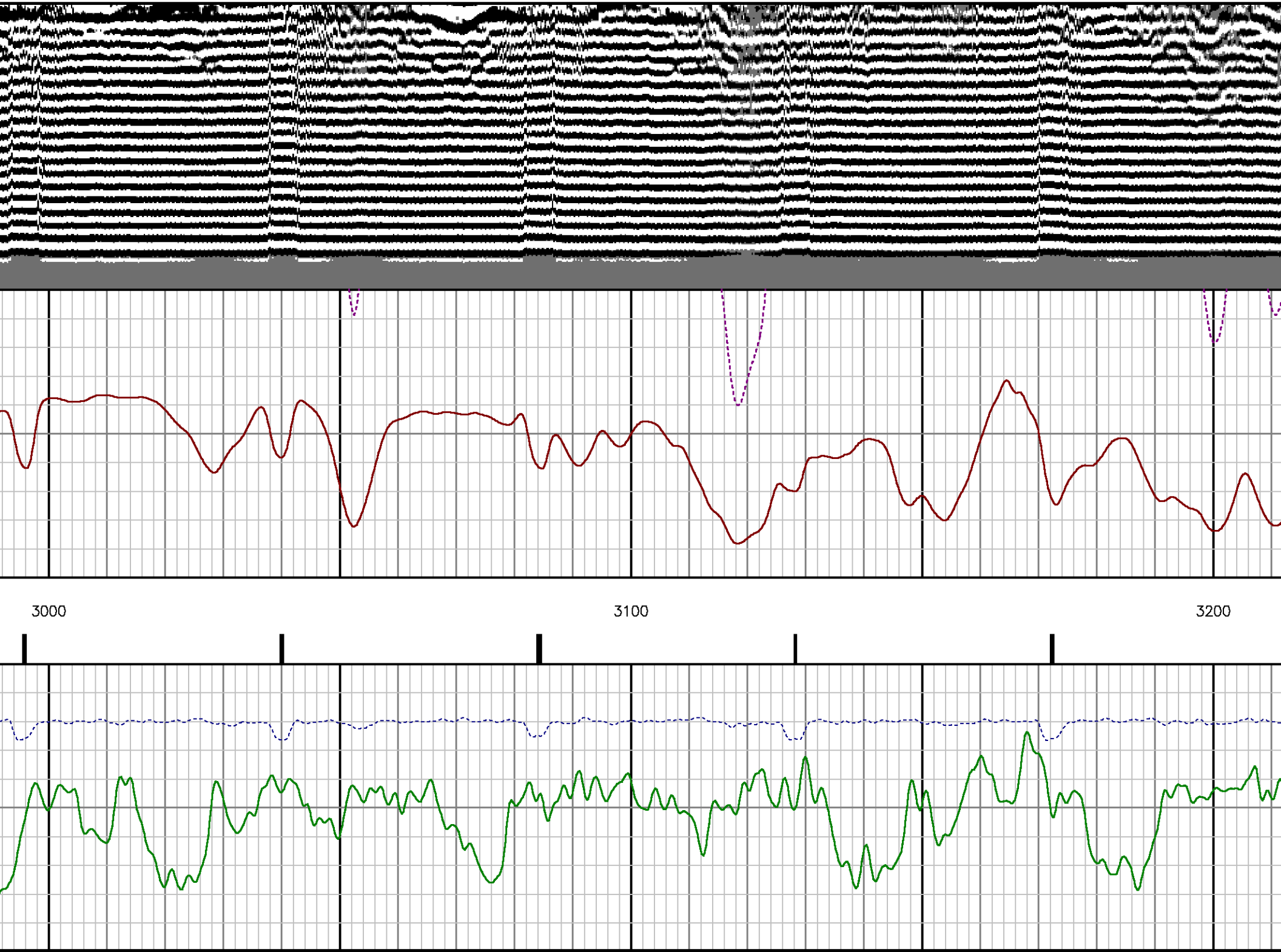
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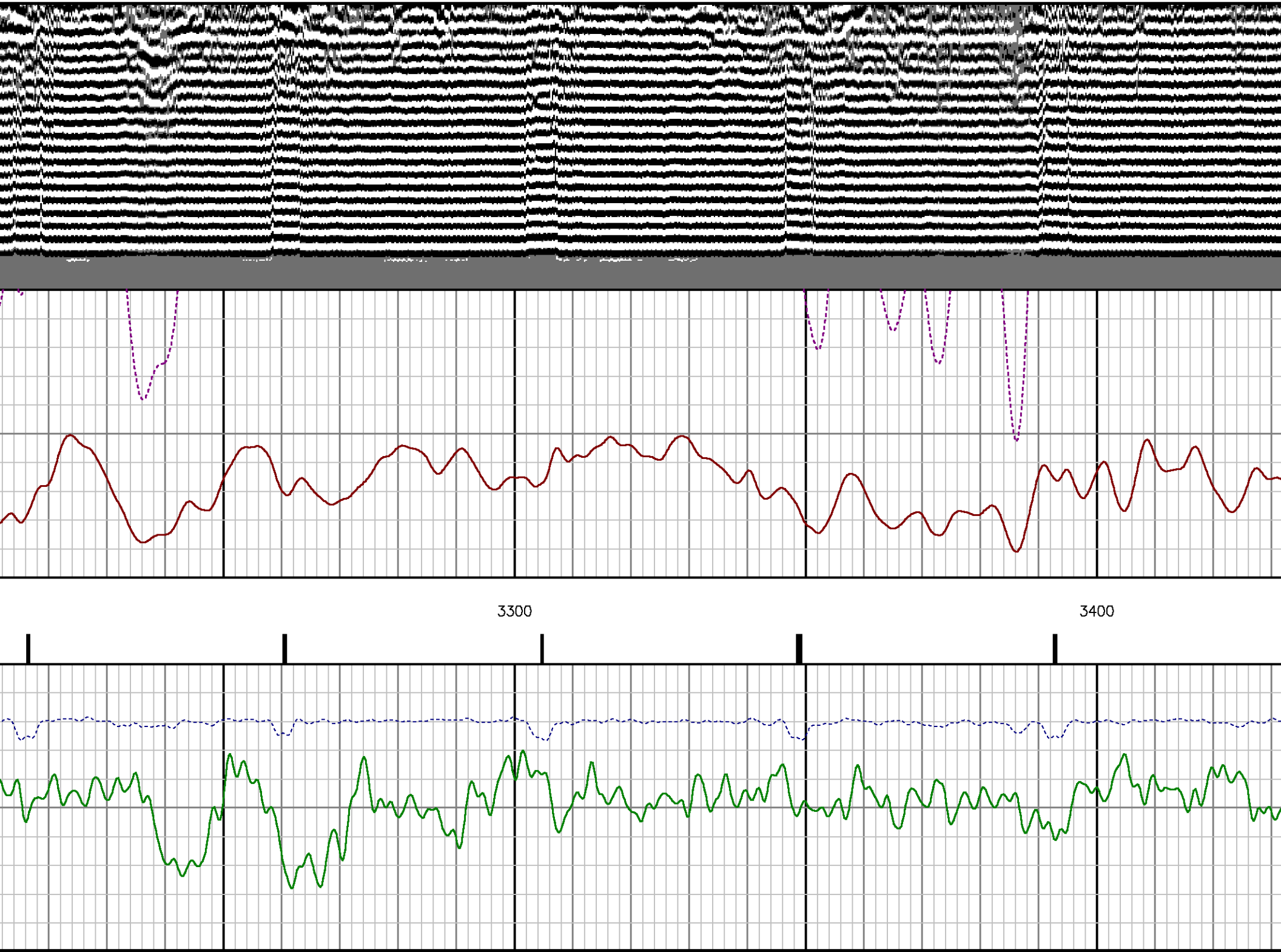
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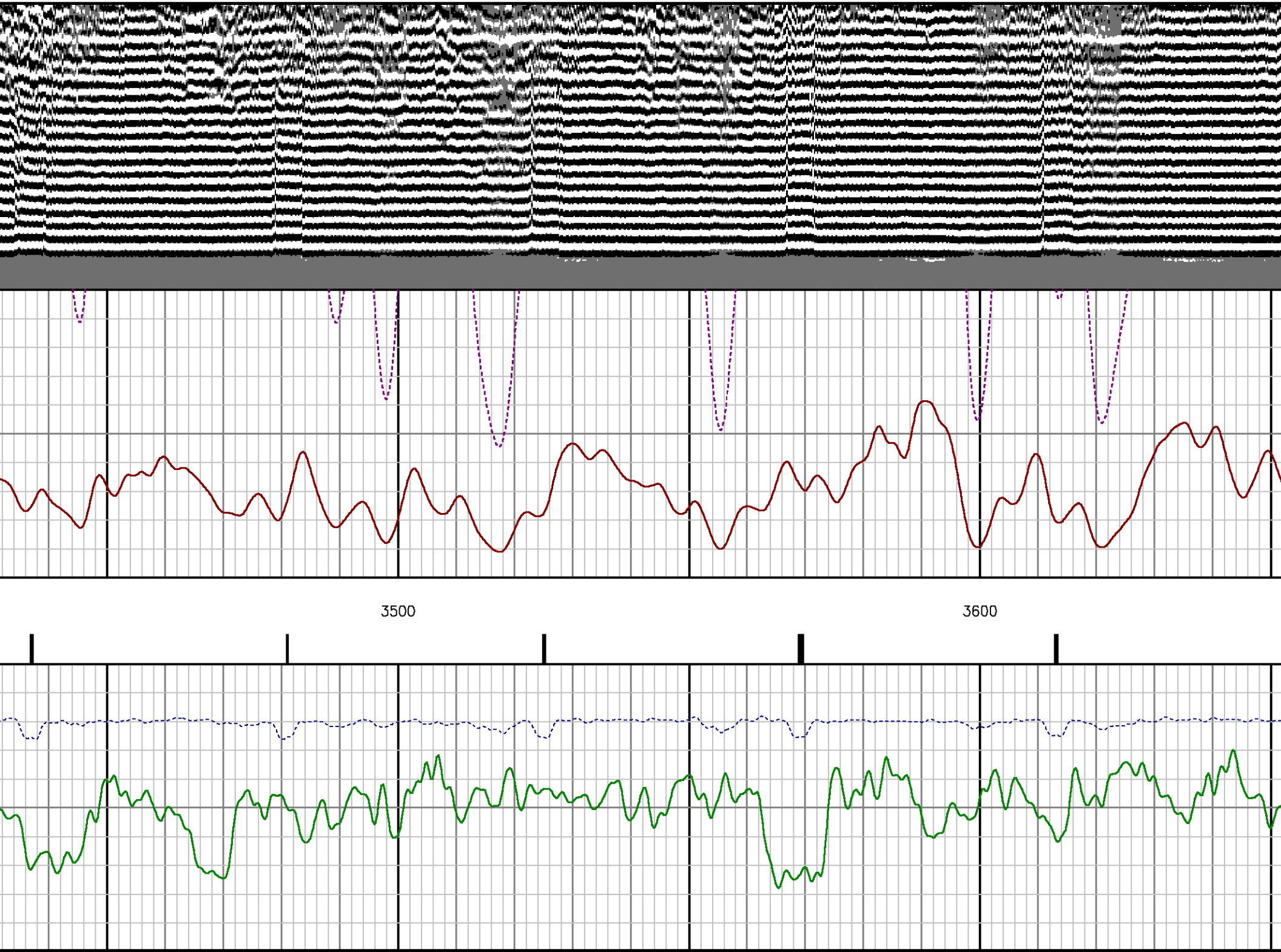
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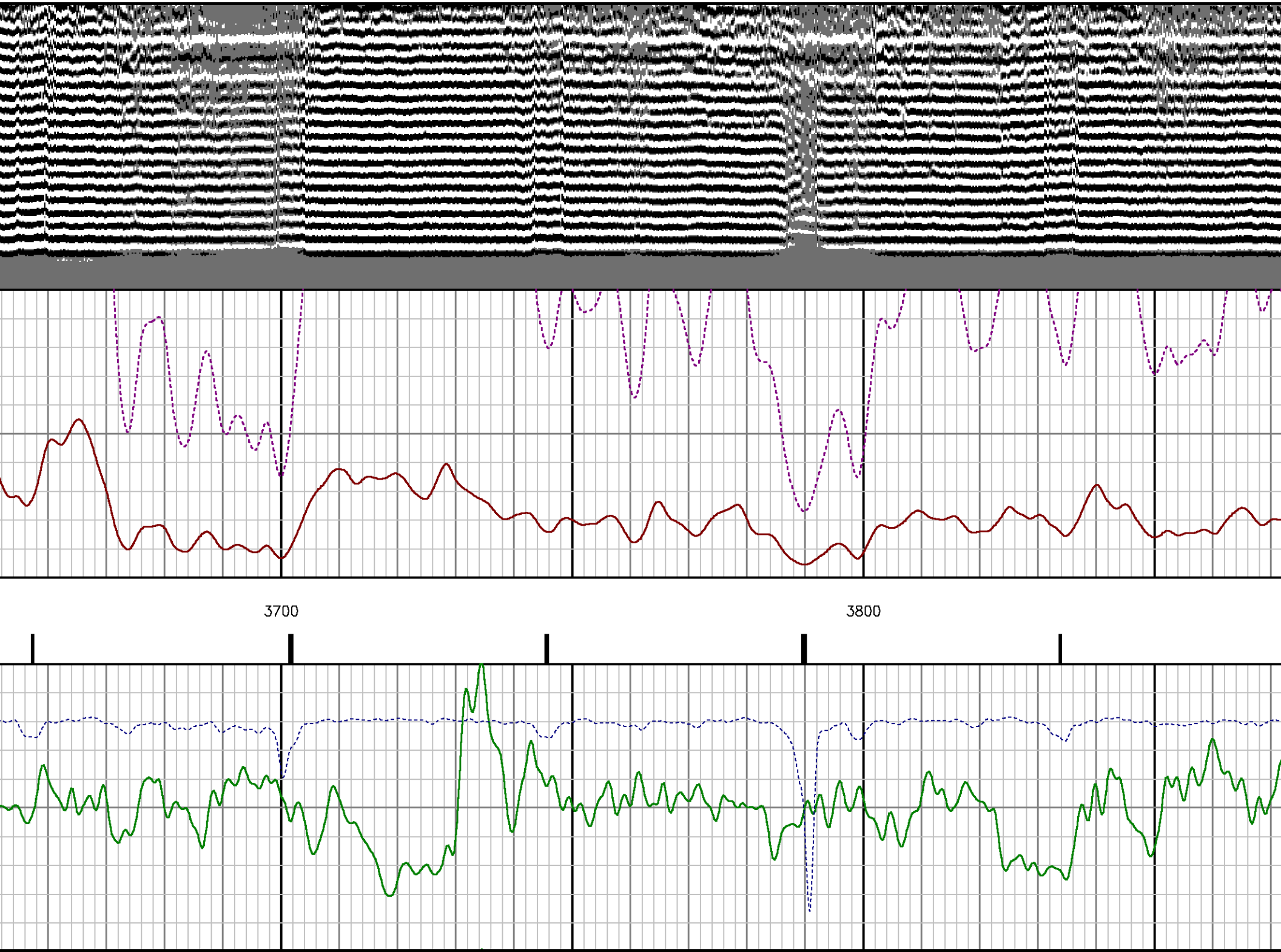
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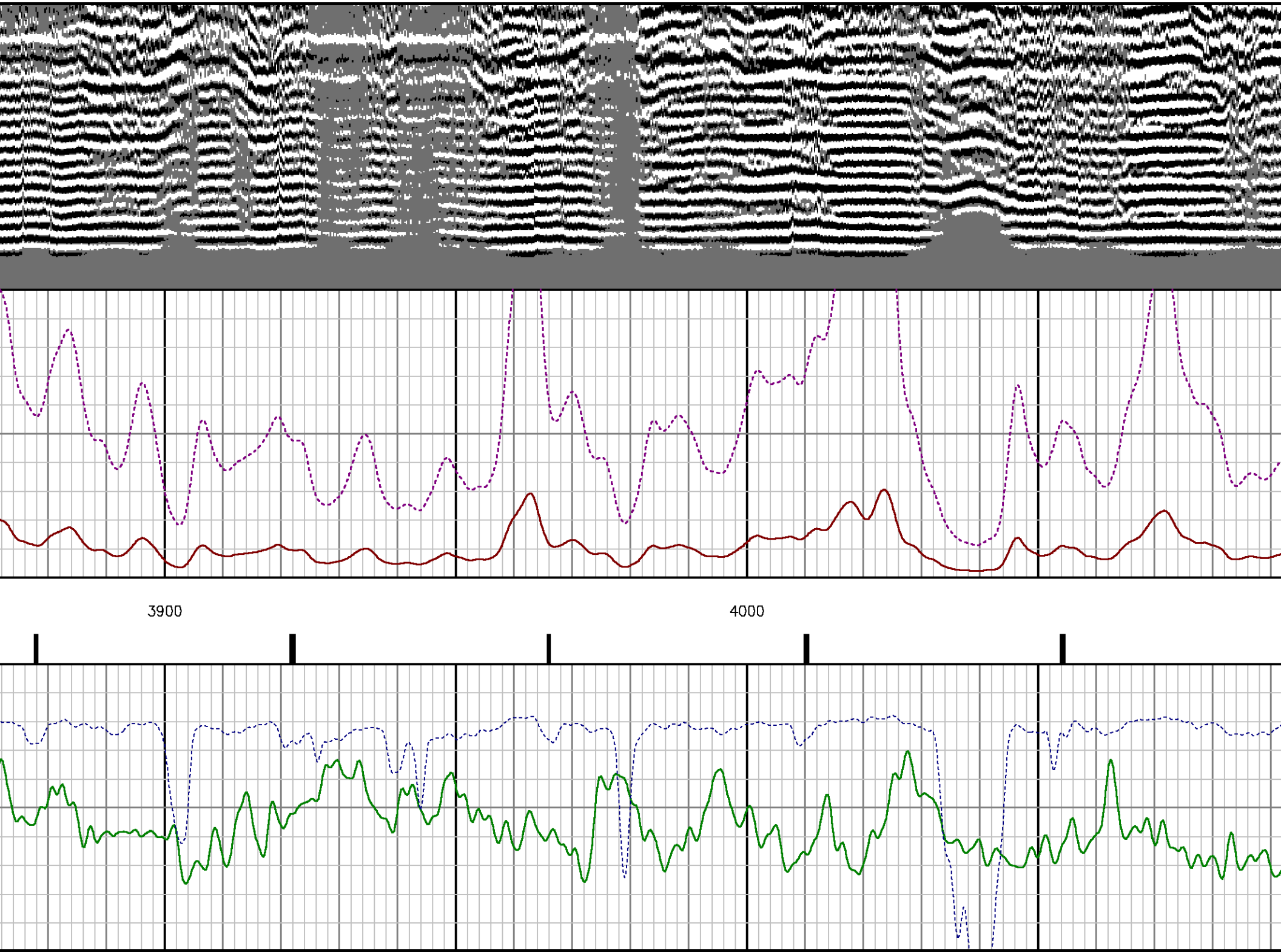
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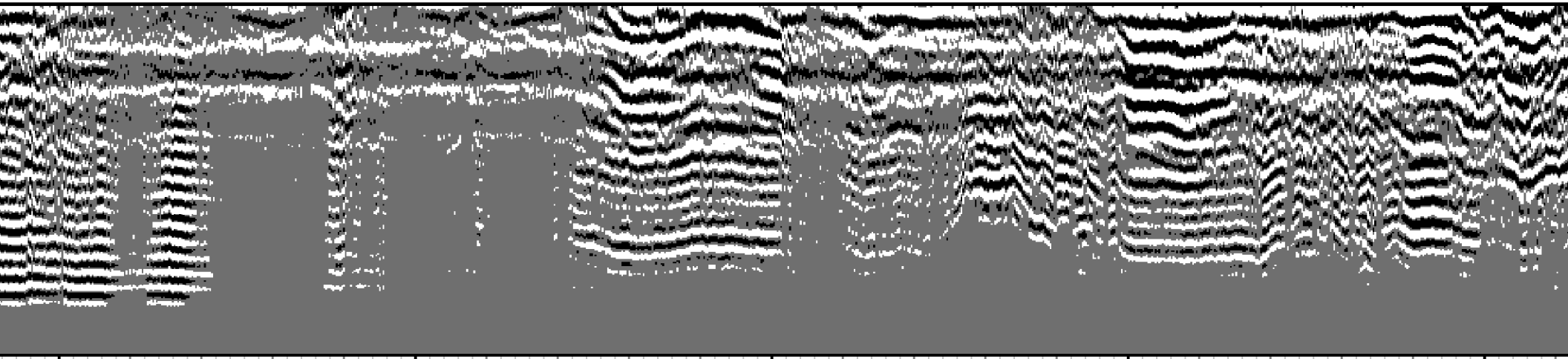

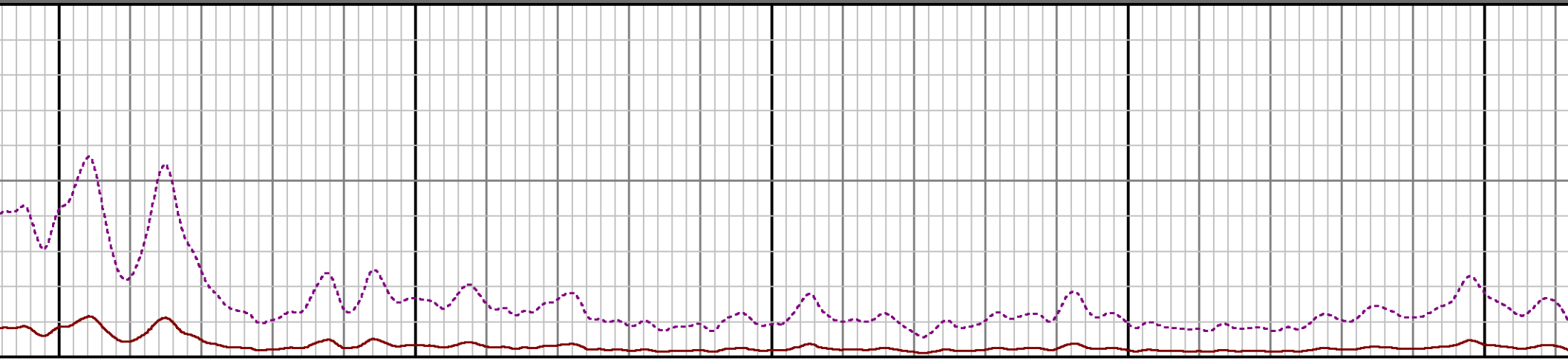

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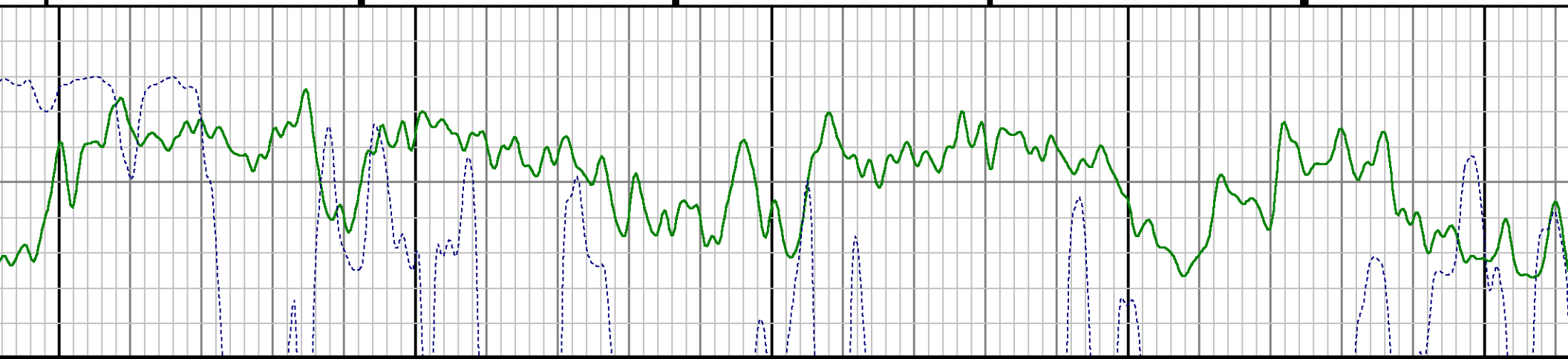

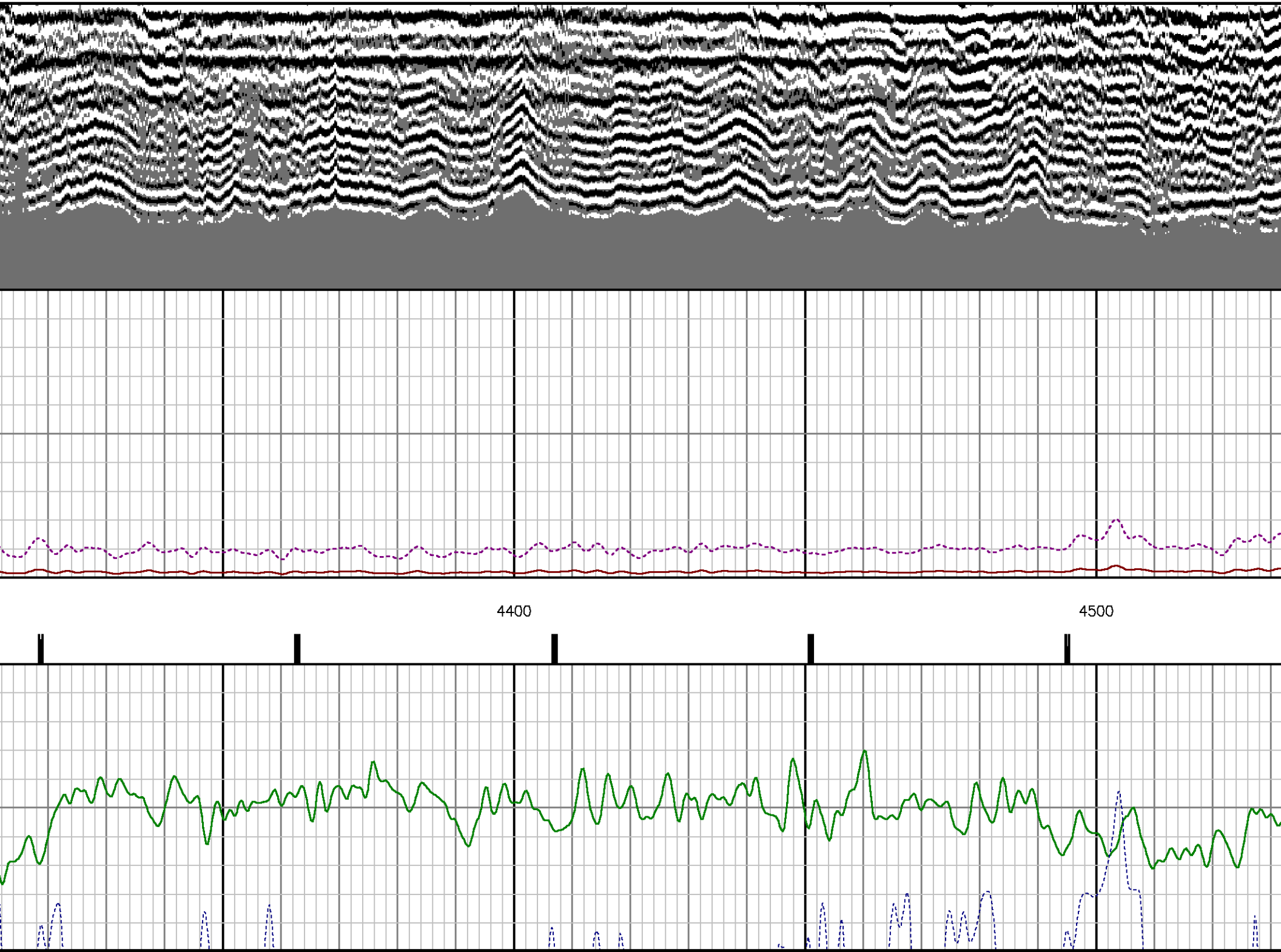
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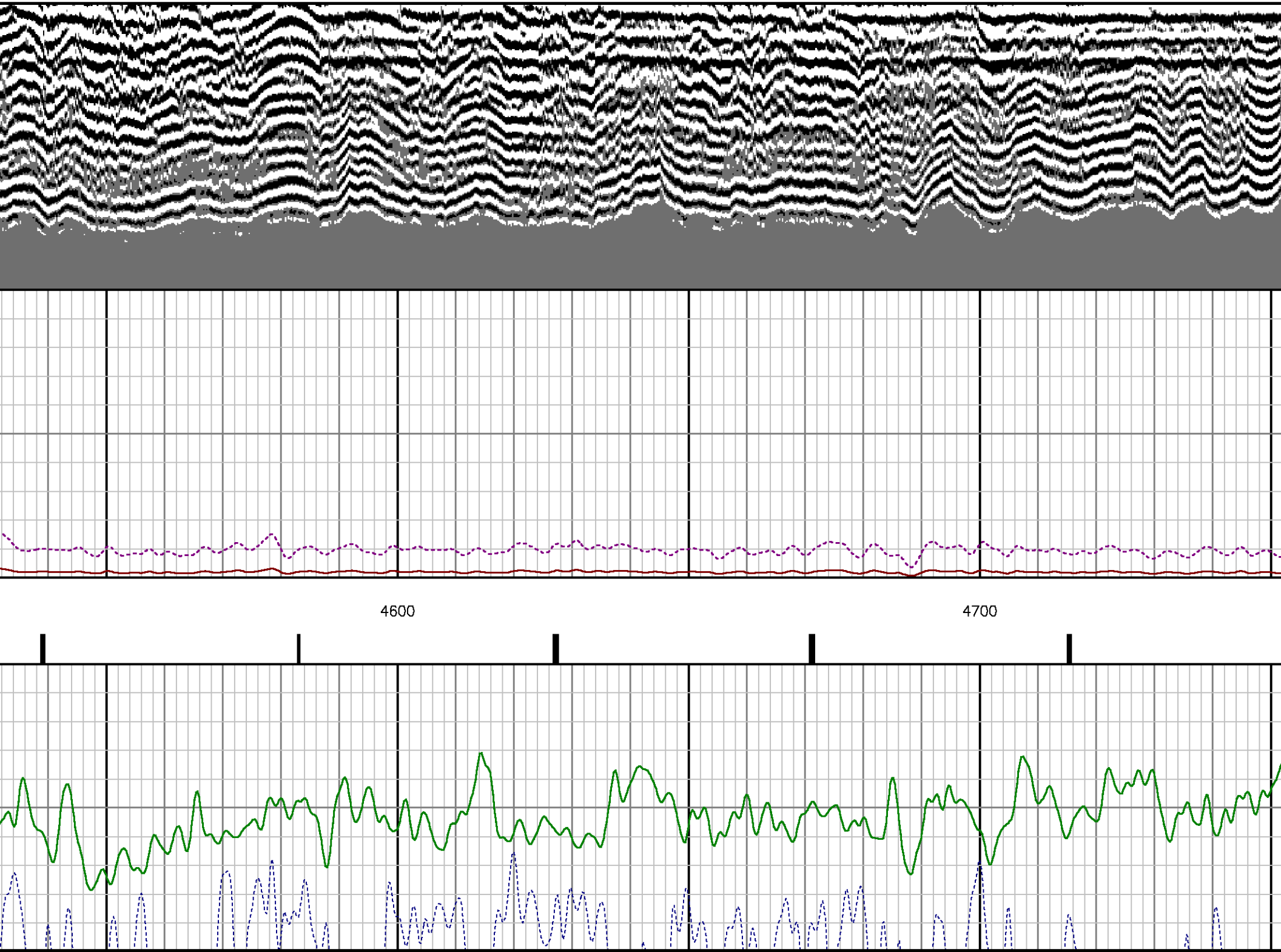
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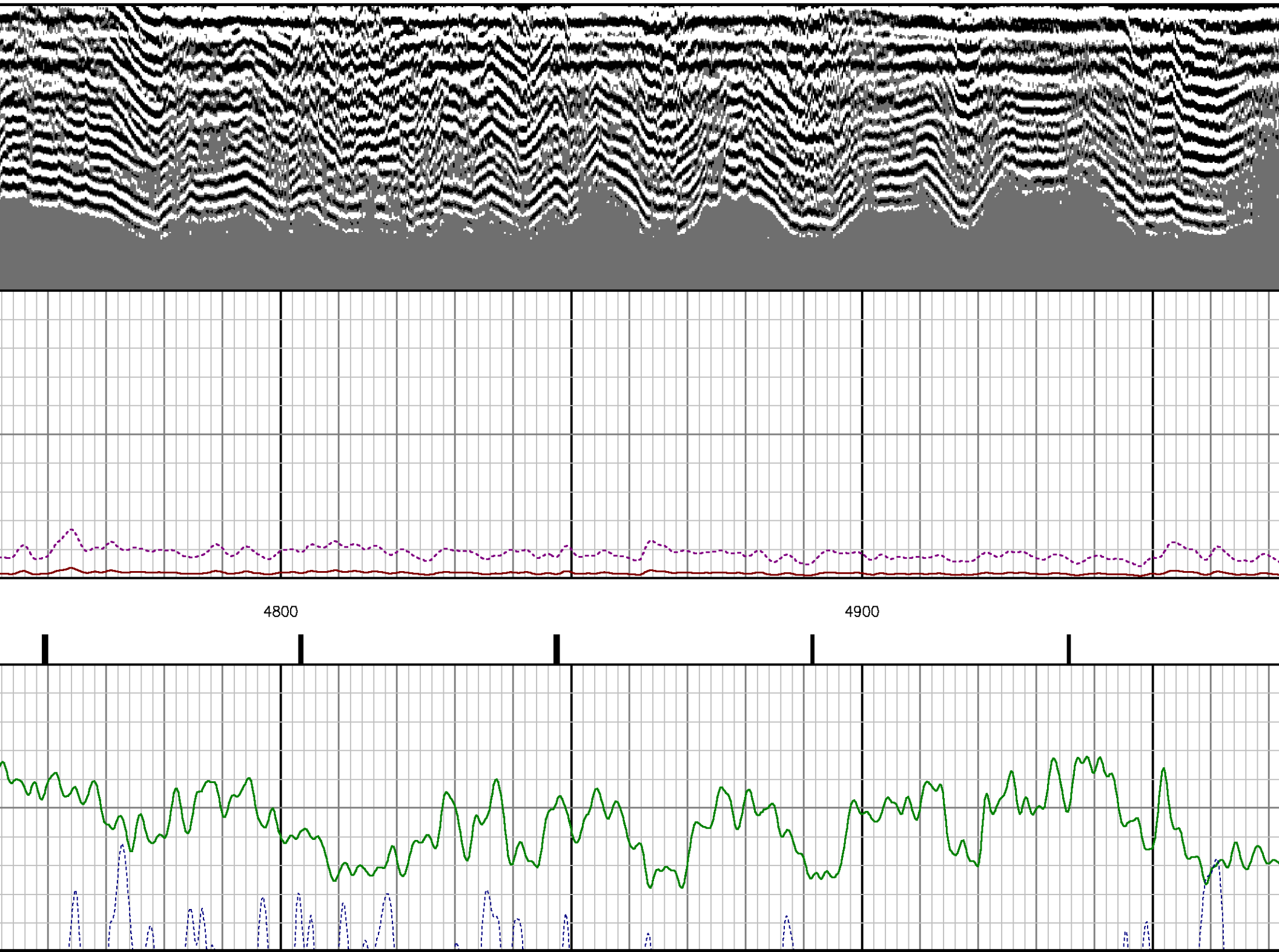
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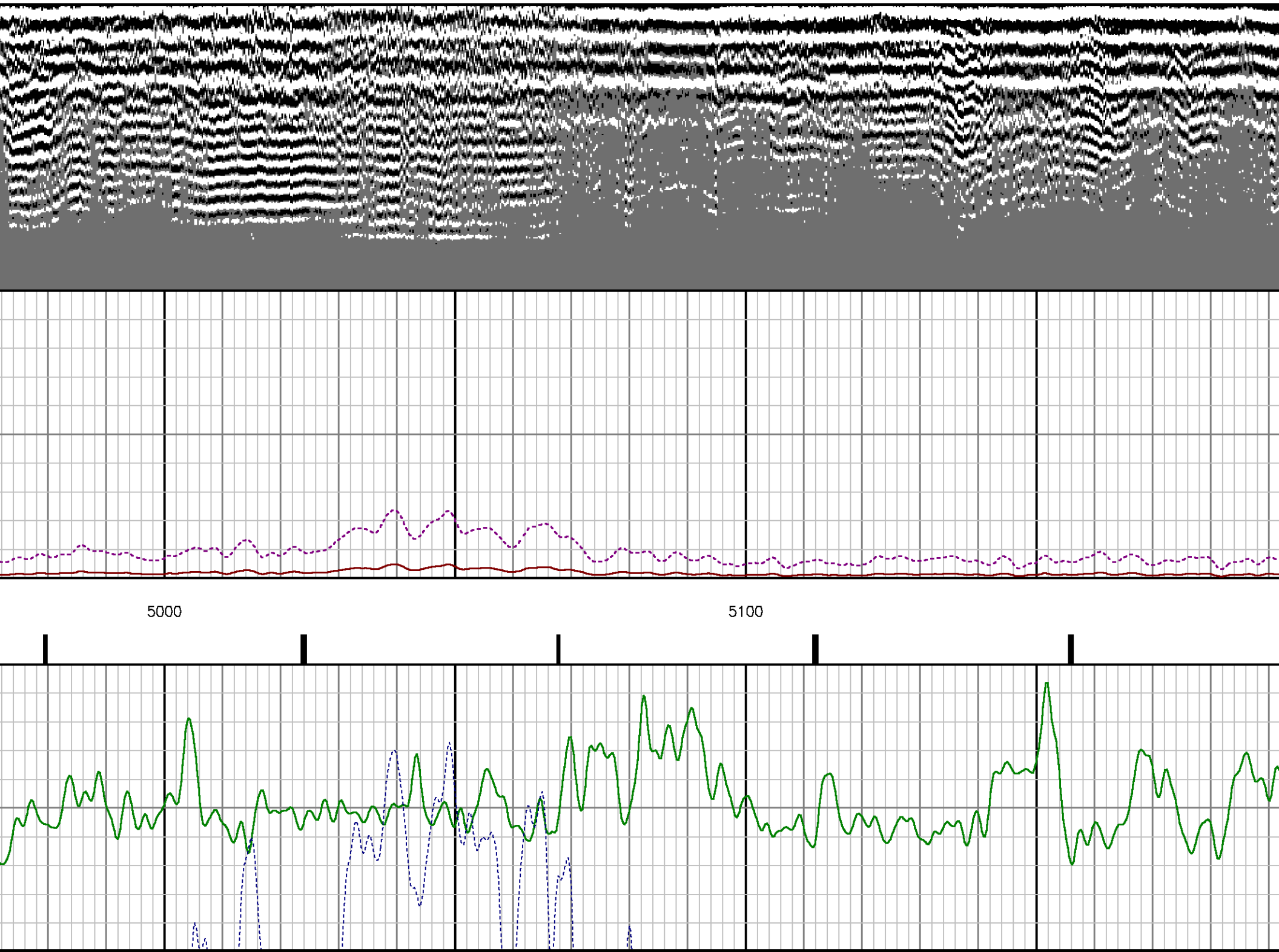
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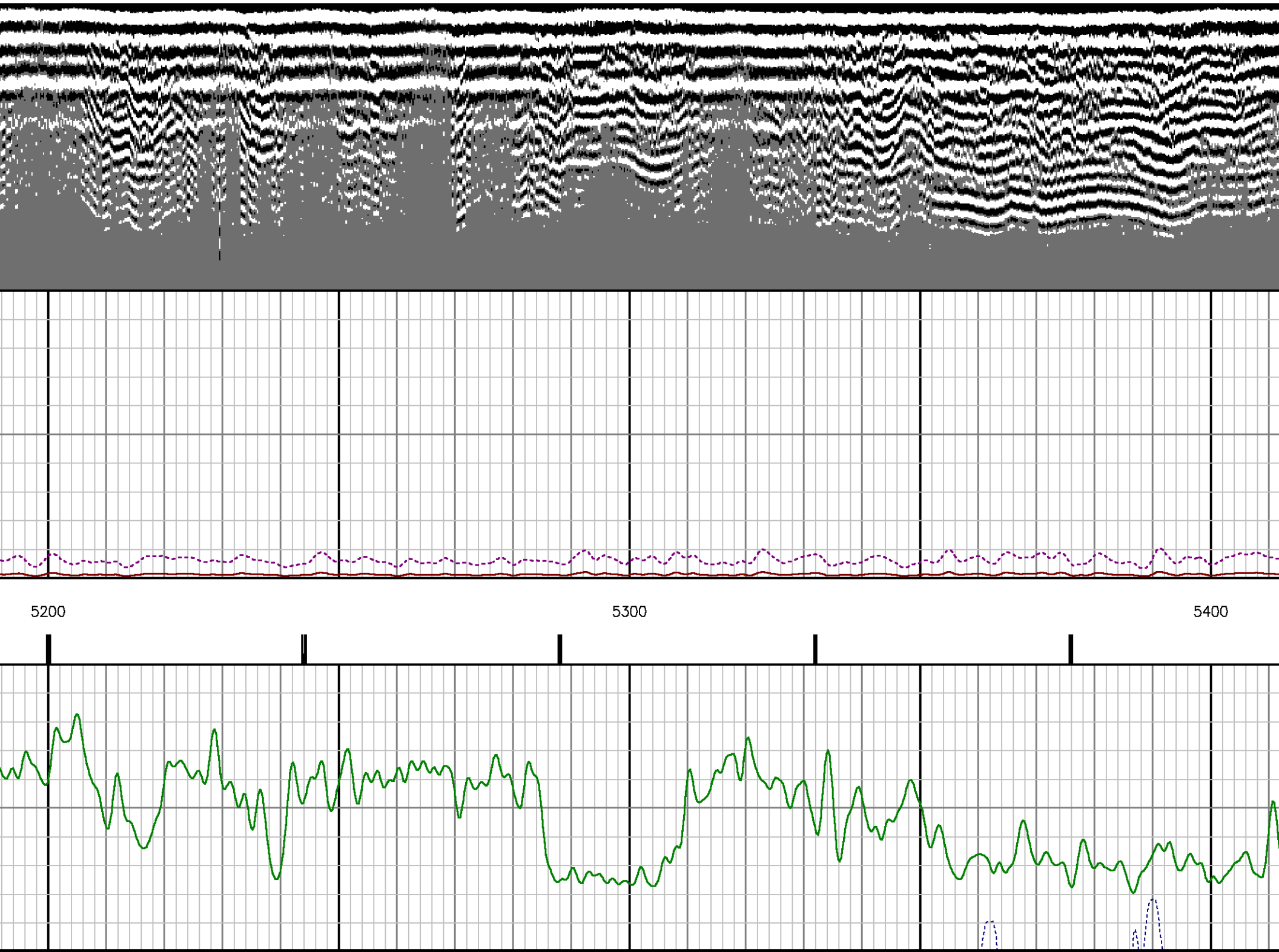
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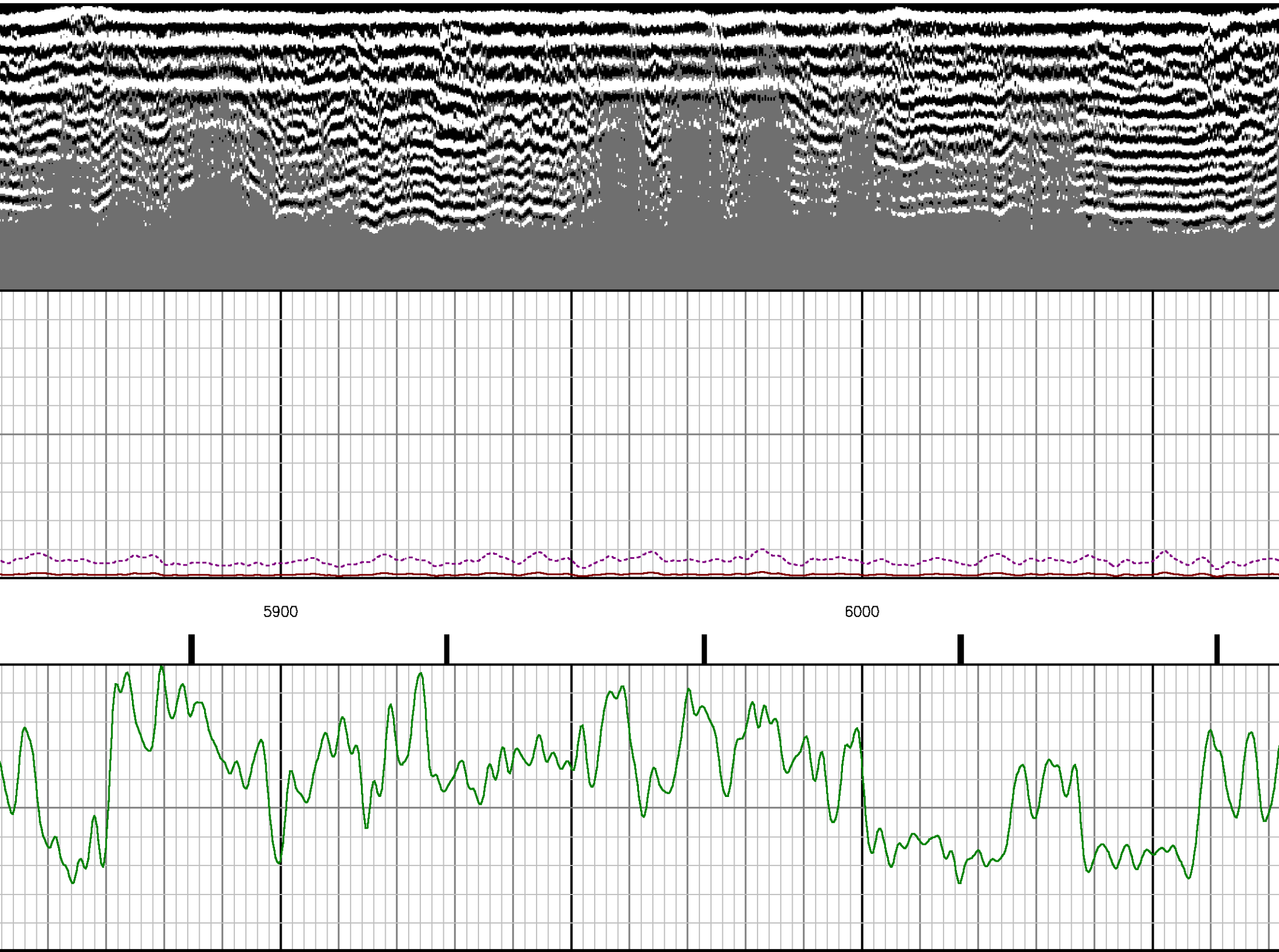
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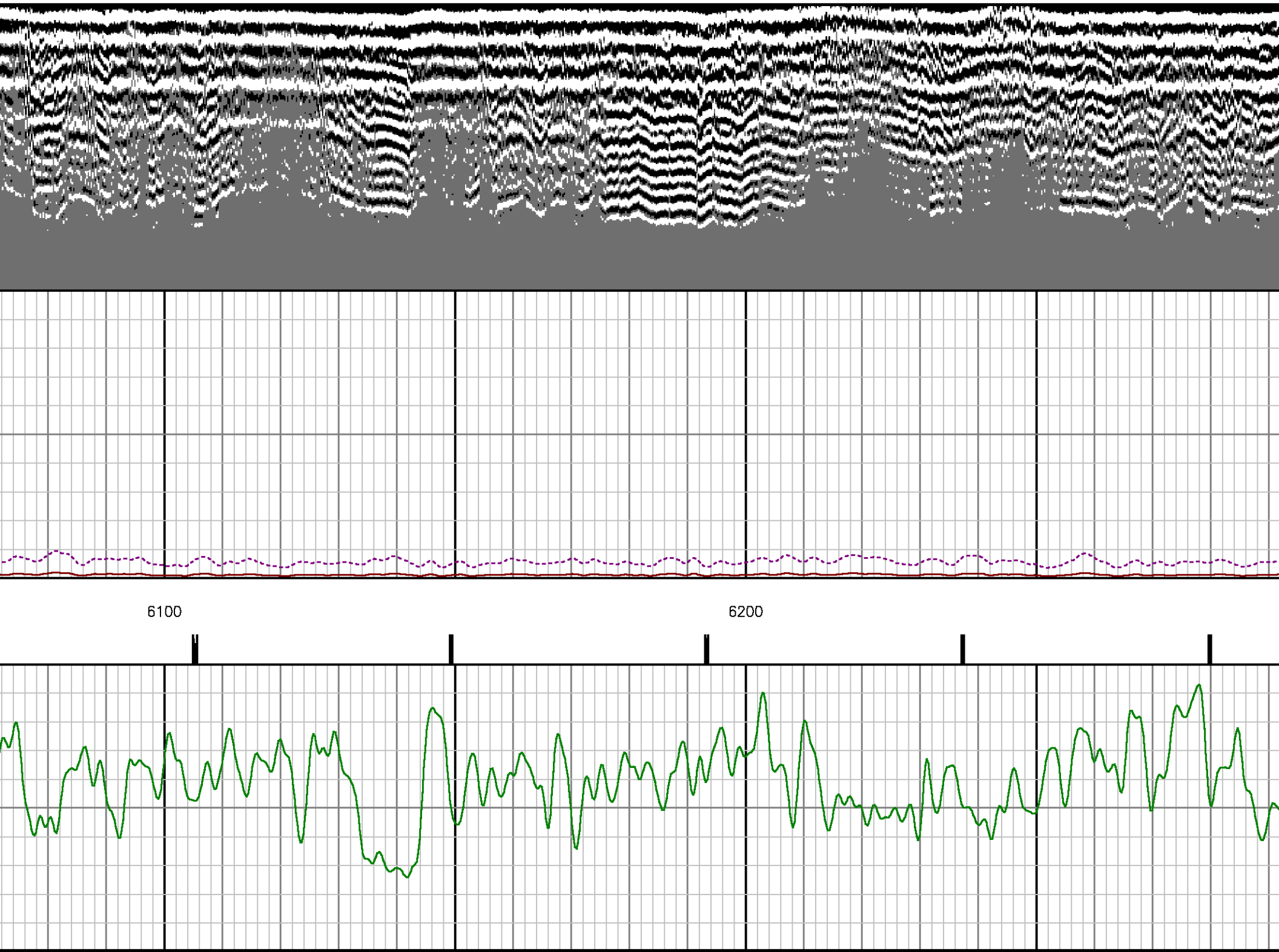
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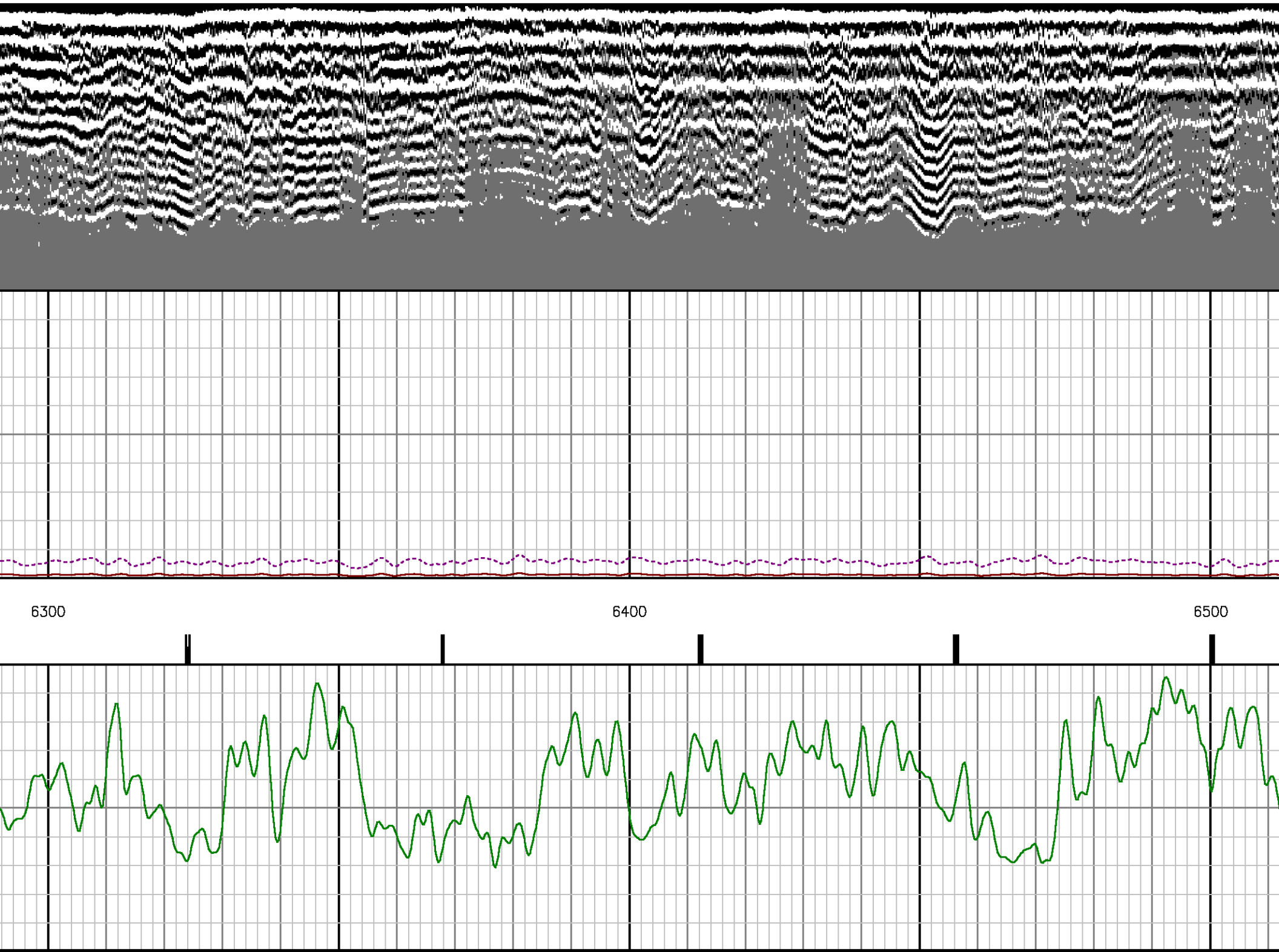
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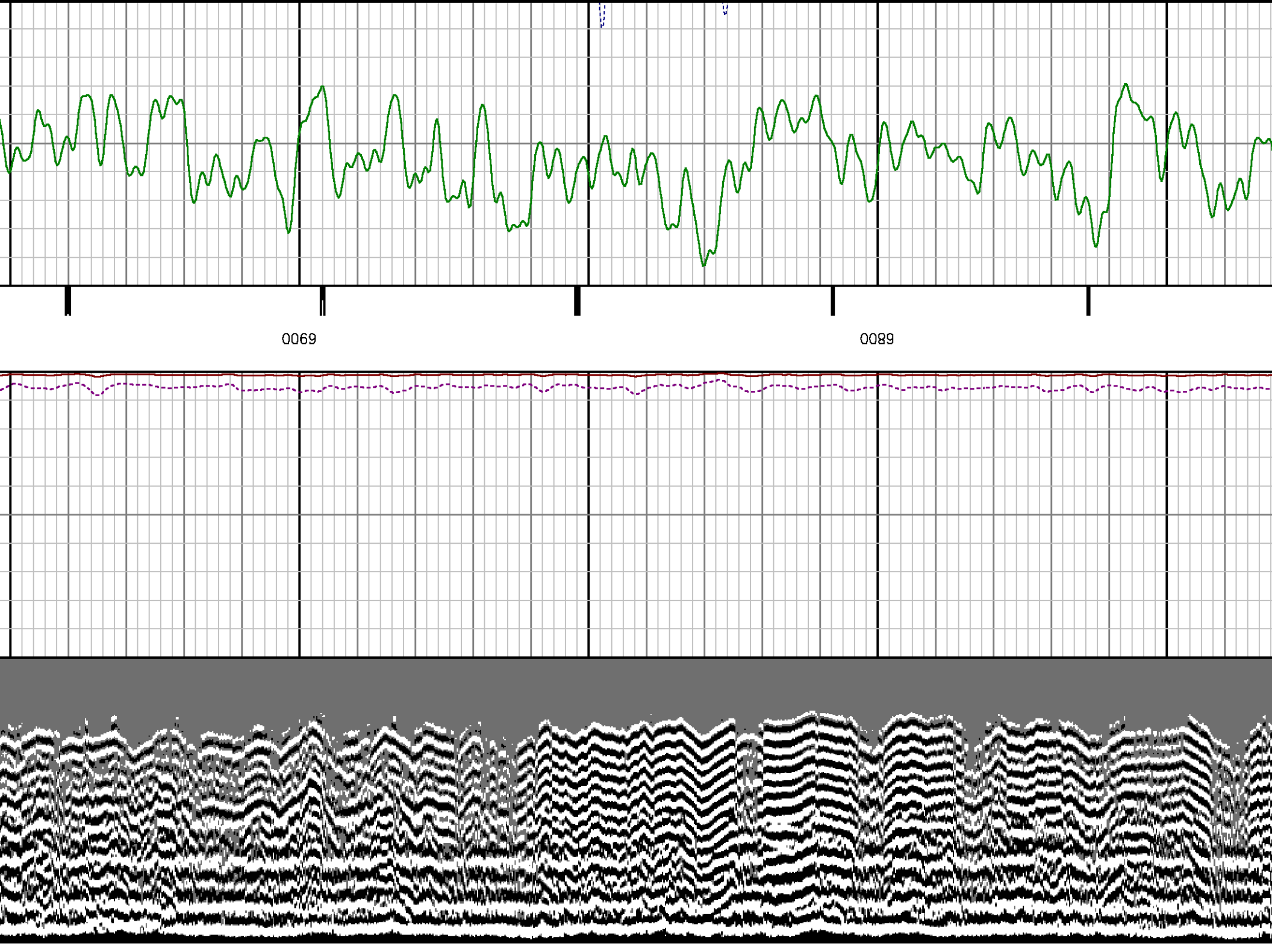
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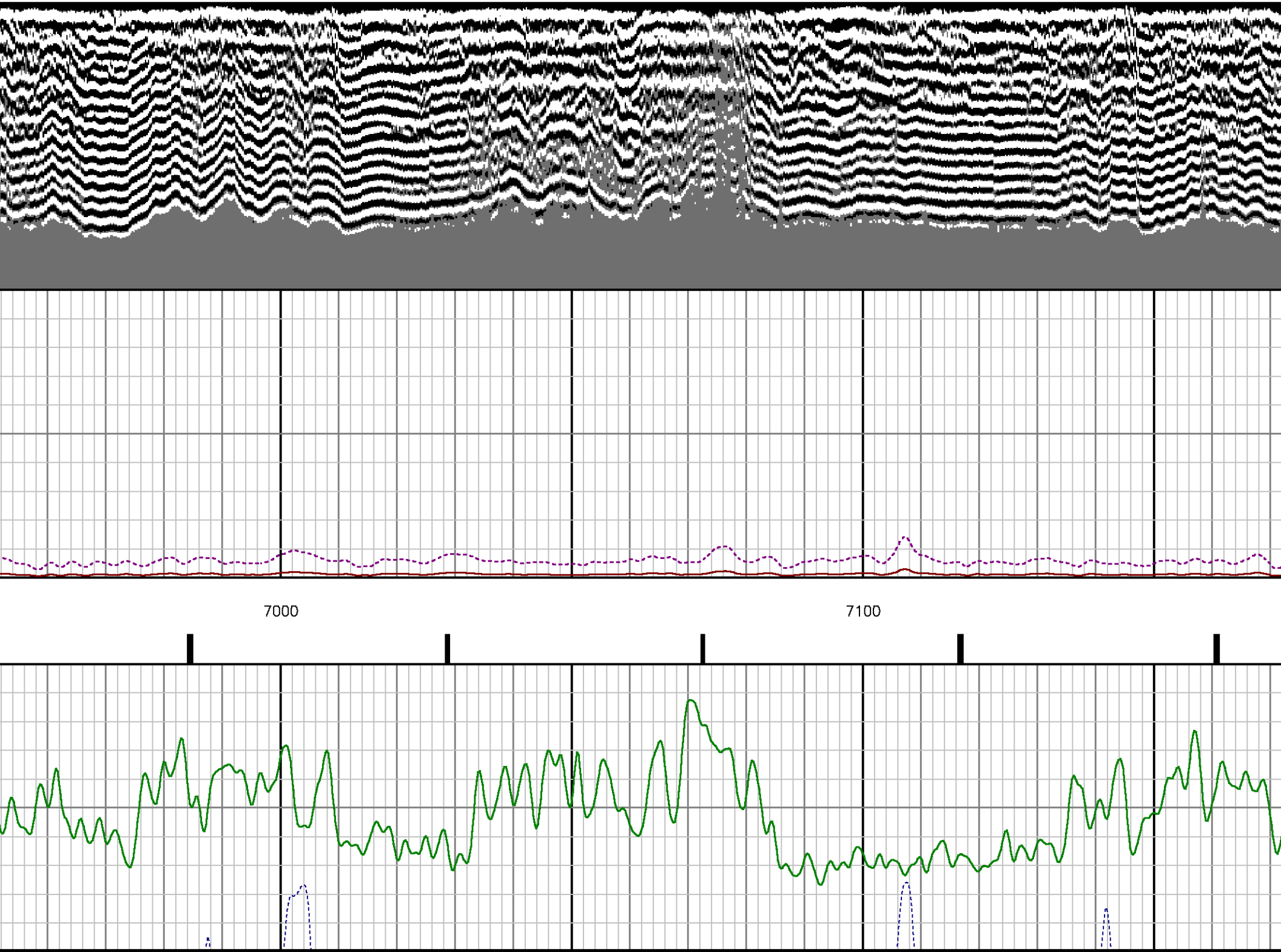
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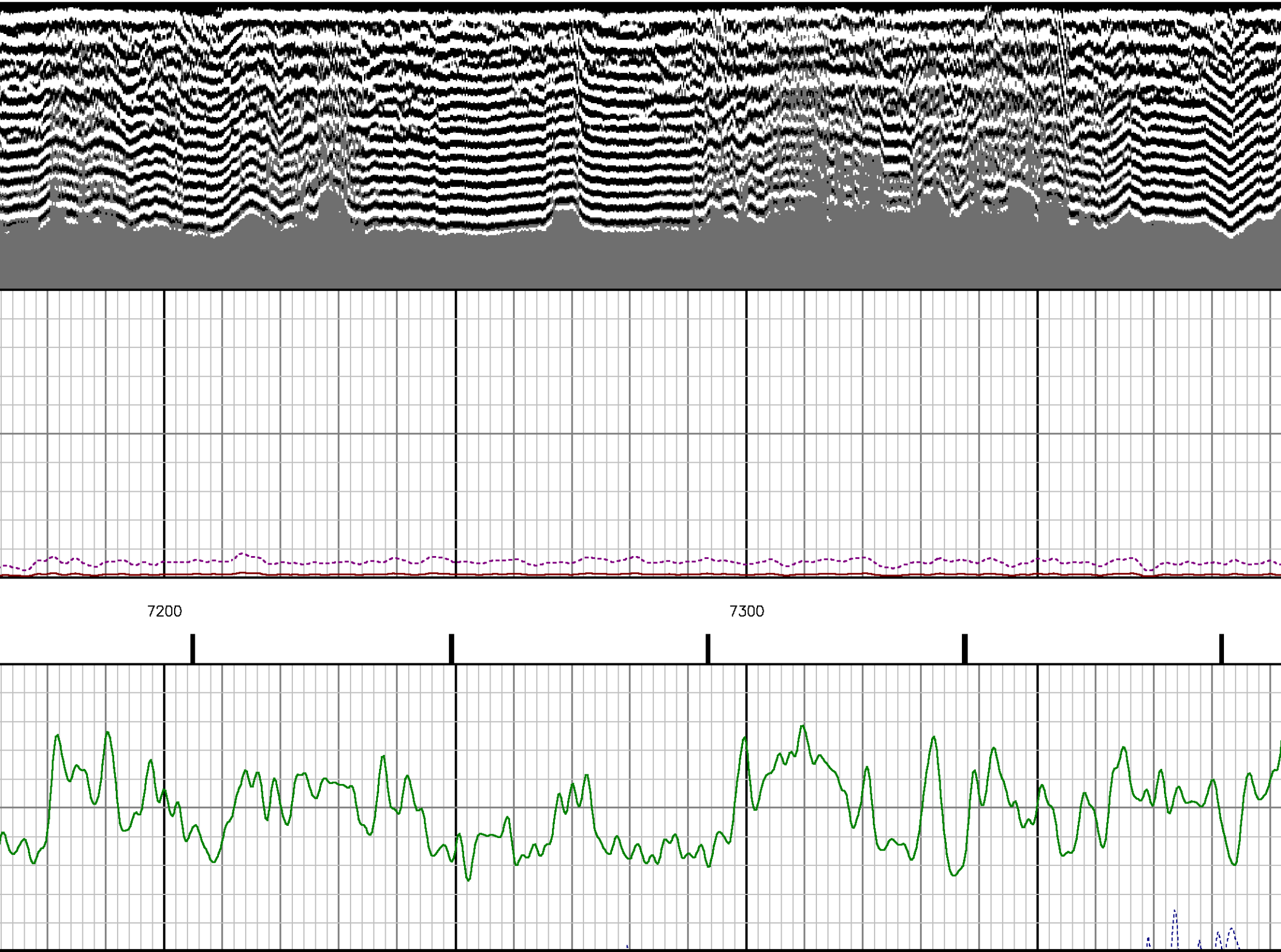
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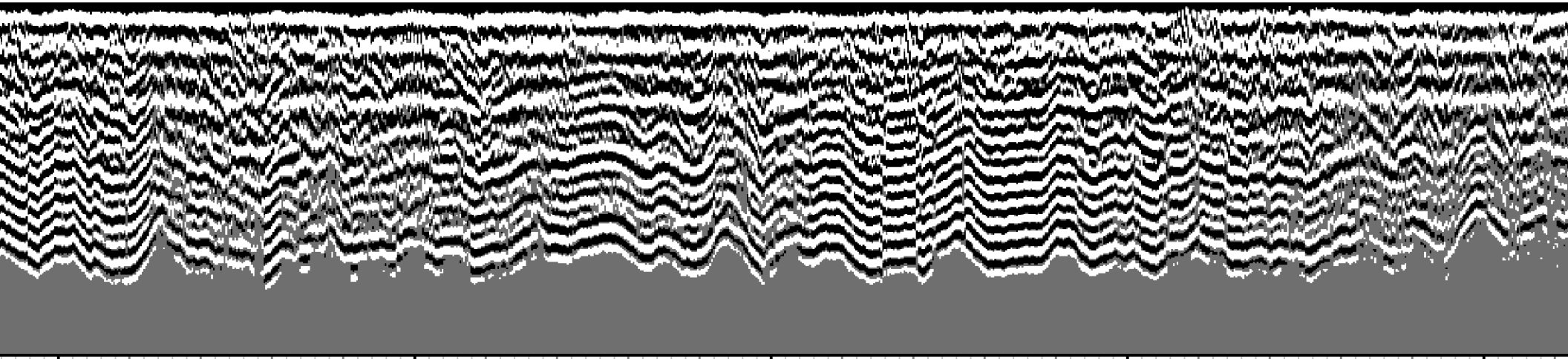

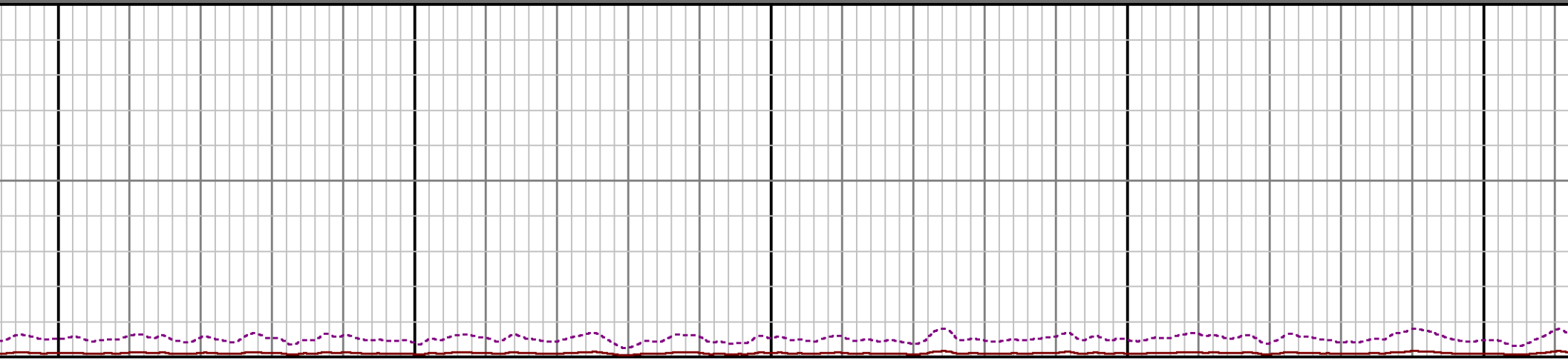

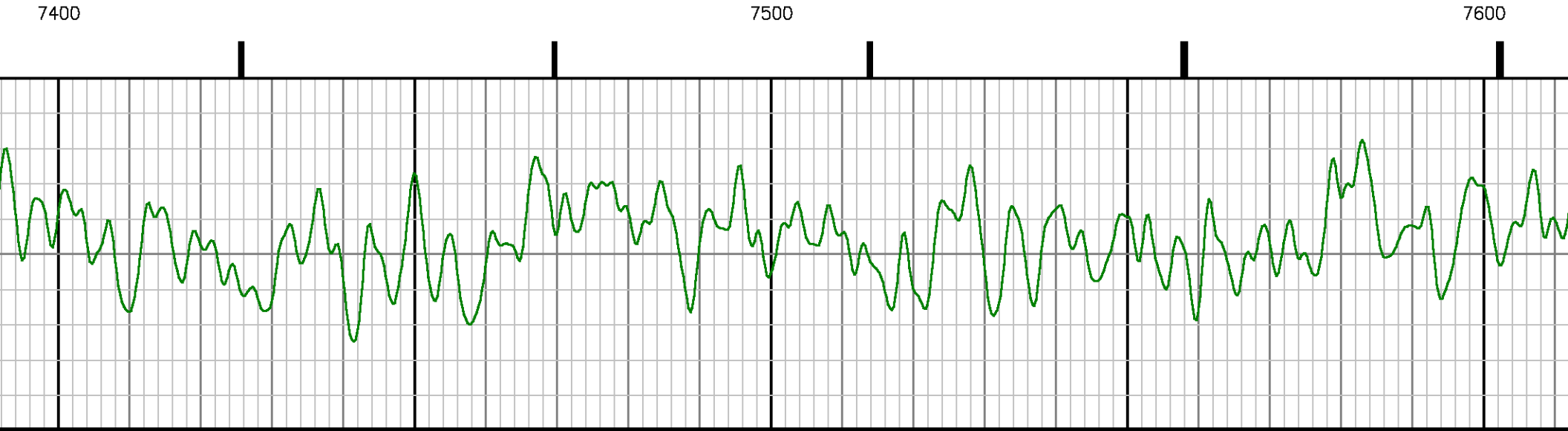
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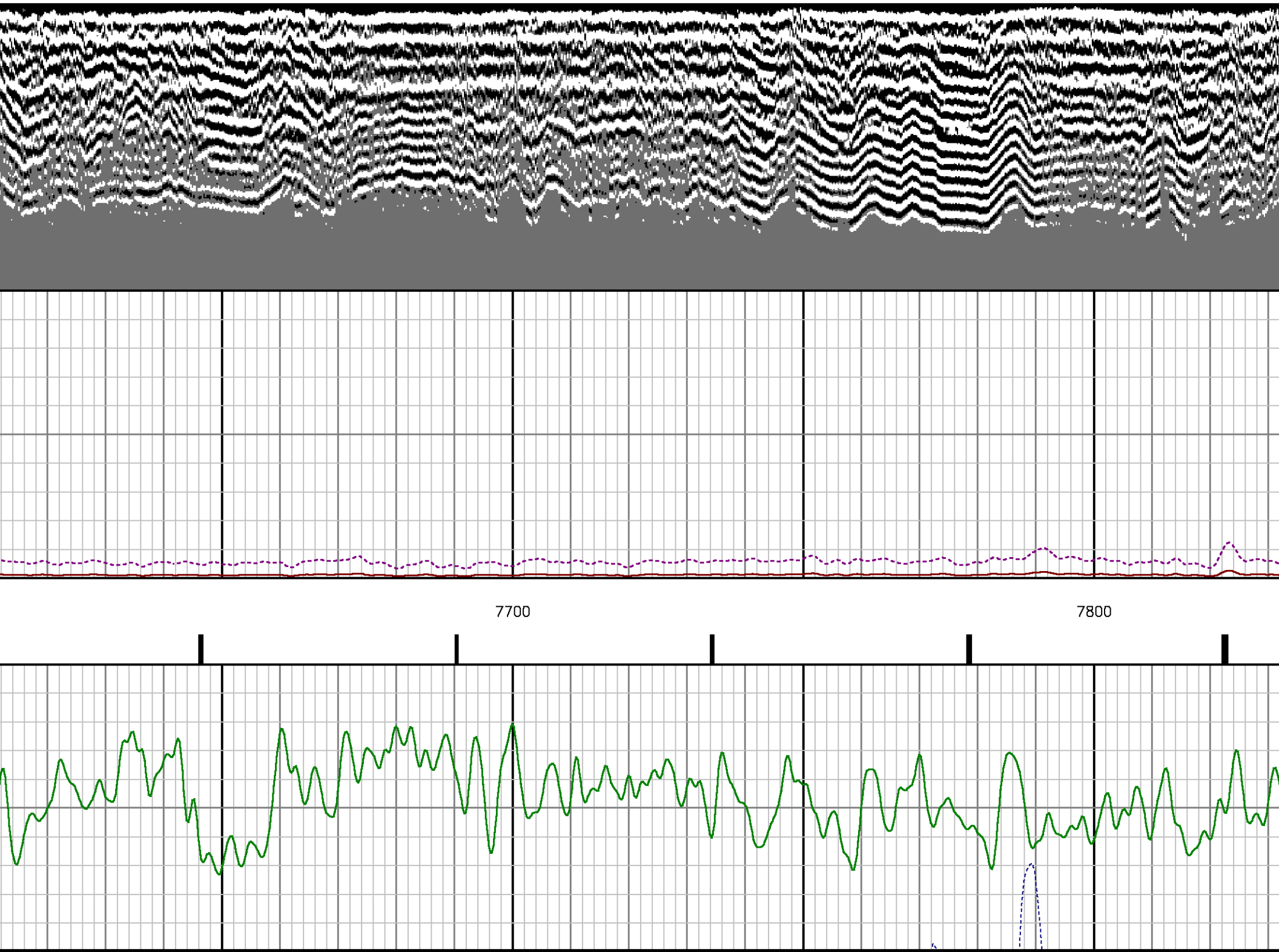
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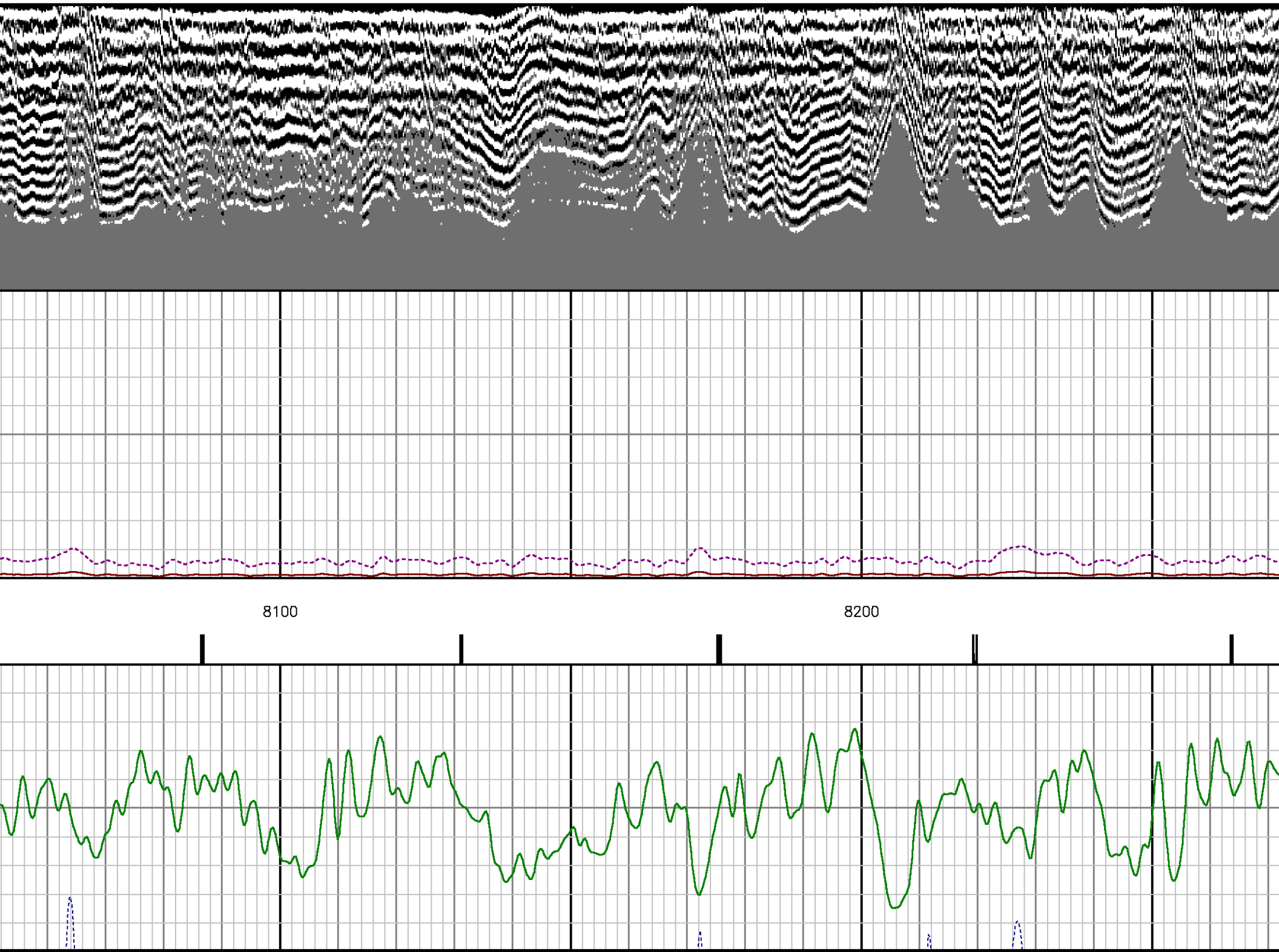
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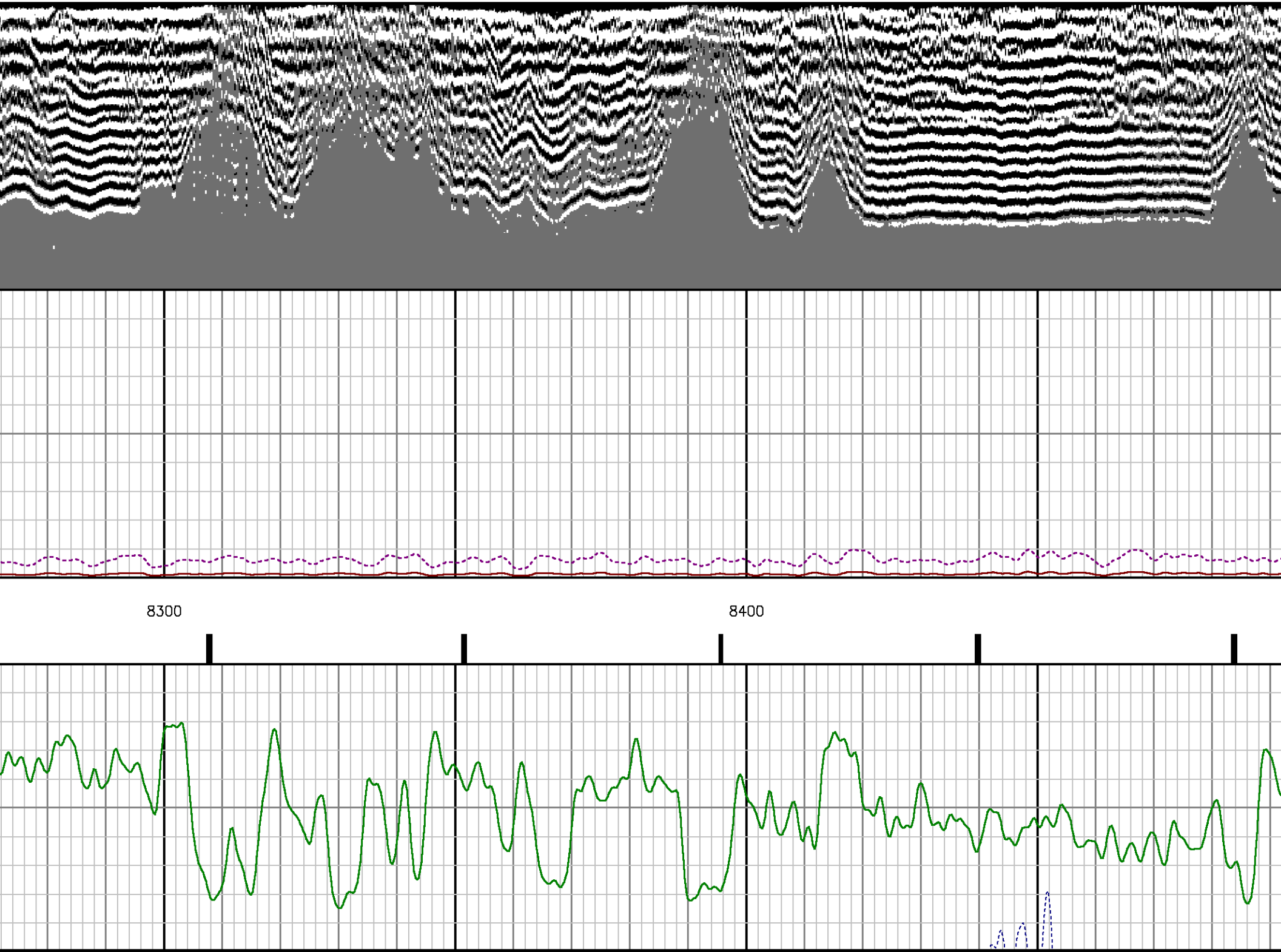
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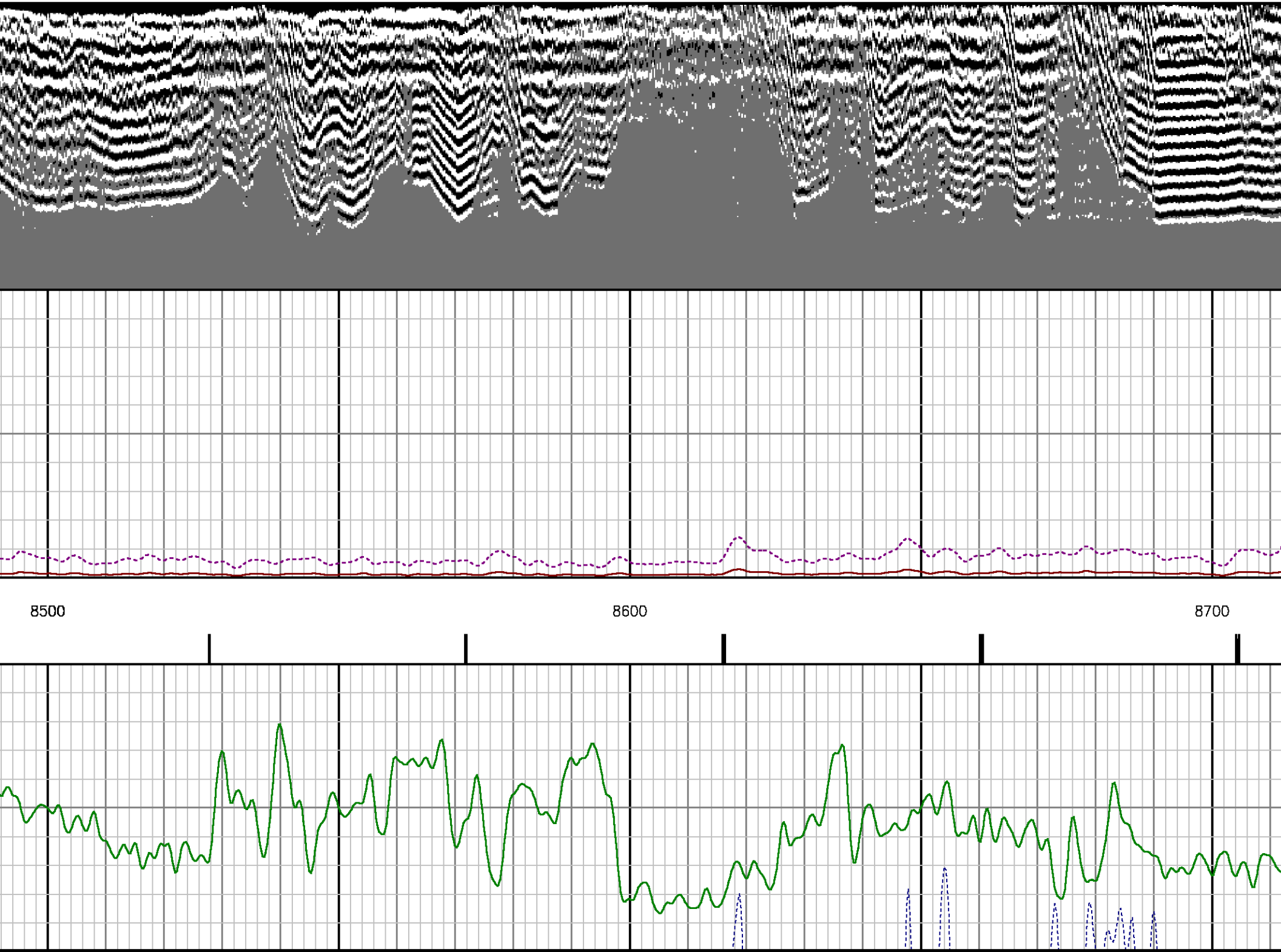
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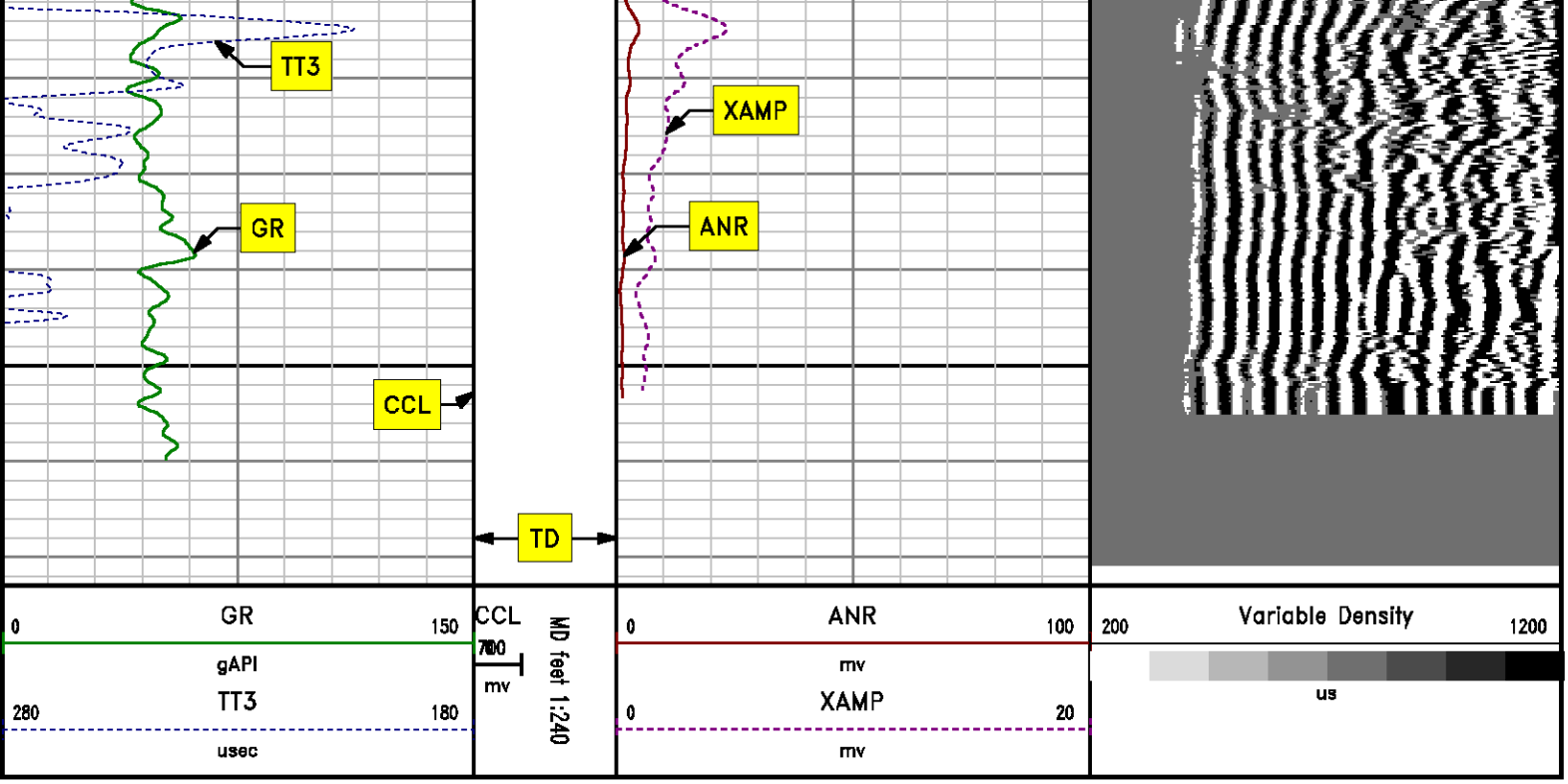

SECONDARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	30.280	8769.750
RAL	Amp Gate Start Near	195.000	usec	30.280	8769.750
RAL	Amp Gate Start Radial	195.000	usec	30.280	8769.750
RAL	Amp Gate Width Far	25.000	usec	30.280	8769.750
RAL	Amp Gate Width Near	25.000	usec	30.280	8769.750
RAL	Amp Gate Width Radial	25.000	usec	30.280	8769.750
RAL	casing od	4.500	inches	30.280	8769.750
RAL	casing wt	11.600	lbm/ft	30.280	8769.750
RAL	FB Start Far	291.900	usec	30.280	8769.750
RAL	FB Start Near	175.391	usec	30.280	8769.750
RAL	FB Start Radial	175.391	usec	30.280	8769.750
RAL	FB Thresh Far	10.000	mv	30.280	8769.750
RAL	FB Thresh Near	4.000	mv	30.280	8769.750
RAL	FB Thresh Radial	4.000	mv	30.280	8769.750
RAL	Fluid Travel Time	200.000	usec/ft	30.280	8770.655

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 : SAVAGE RWF 421-25
File Name : d:\welldata\wpx\savage rwf 421-25\cbl421\main.xtf
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Interval : 0.00 - 8773.00 feet UP
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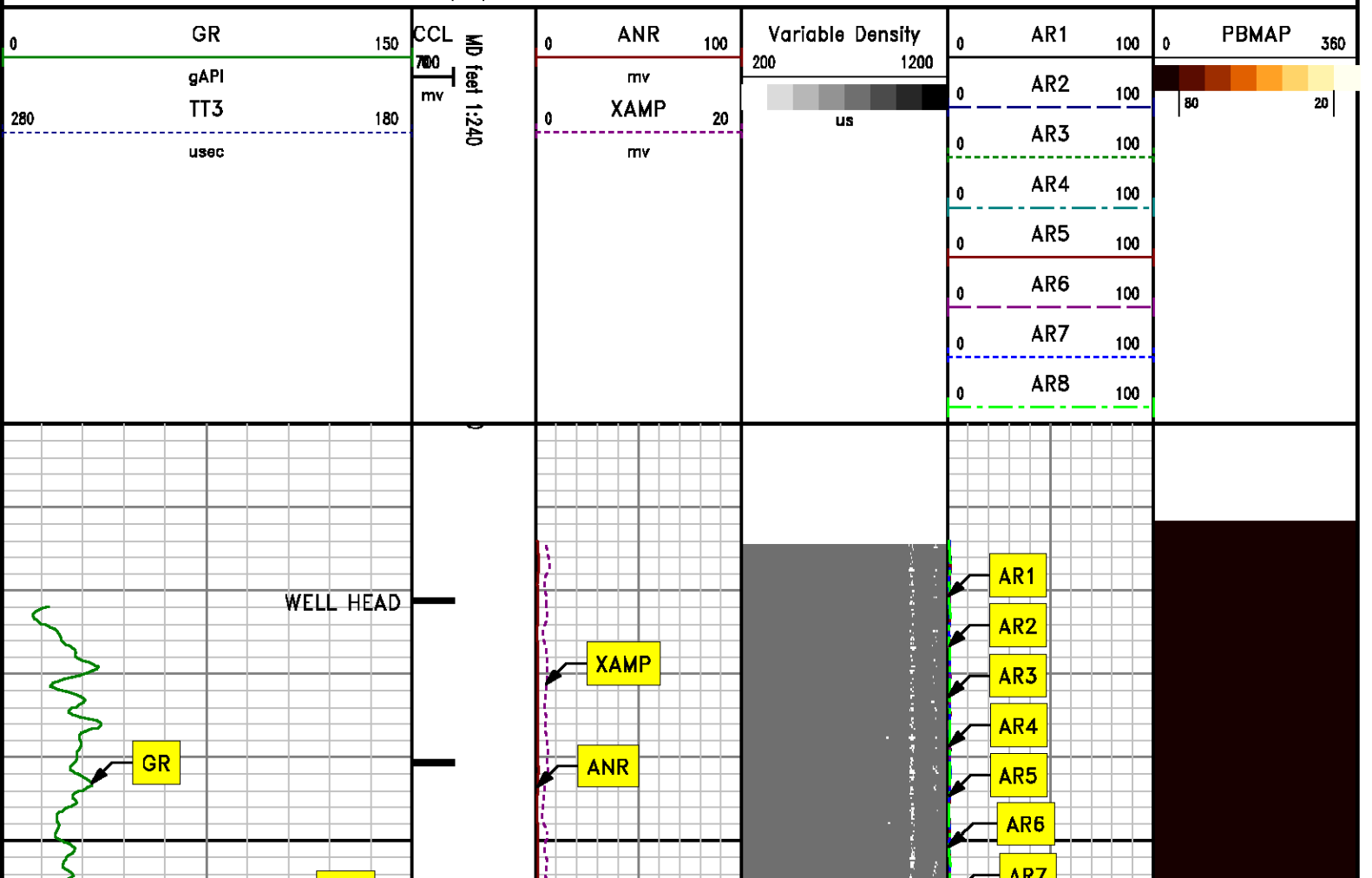

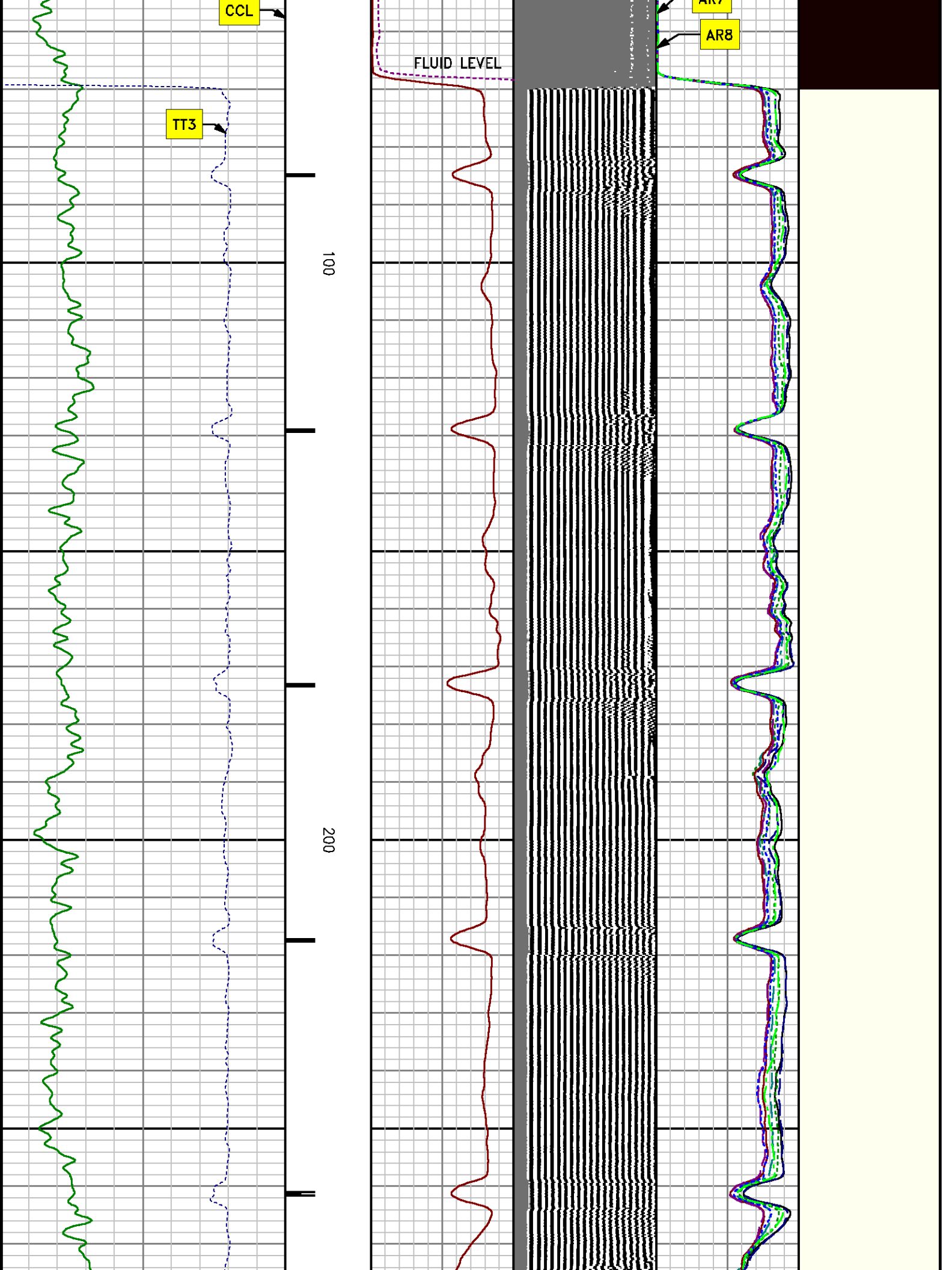
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TT3
FLUID LEVEL
AR7
AR8
100
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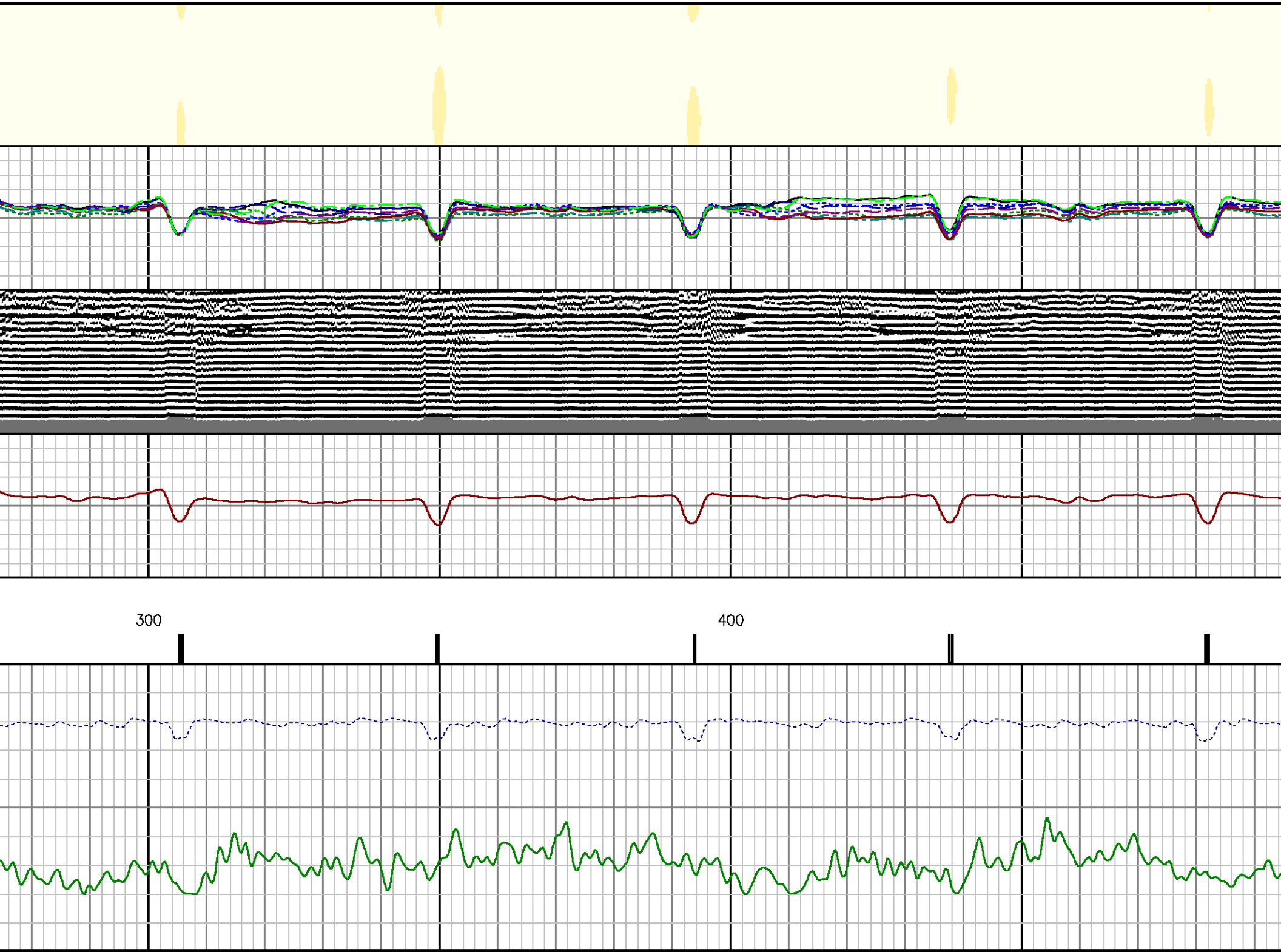
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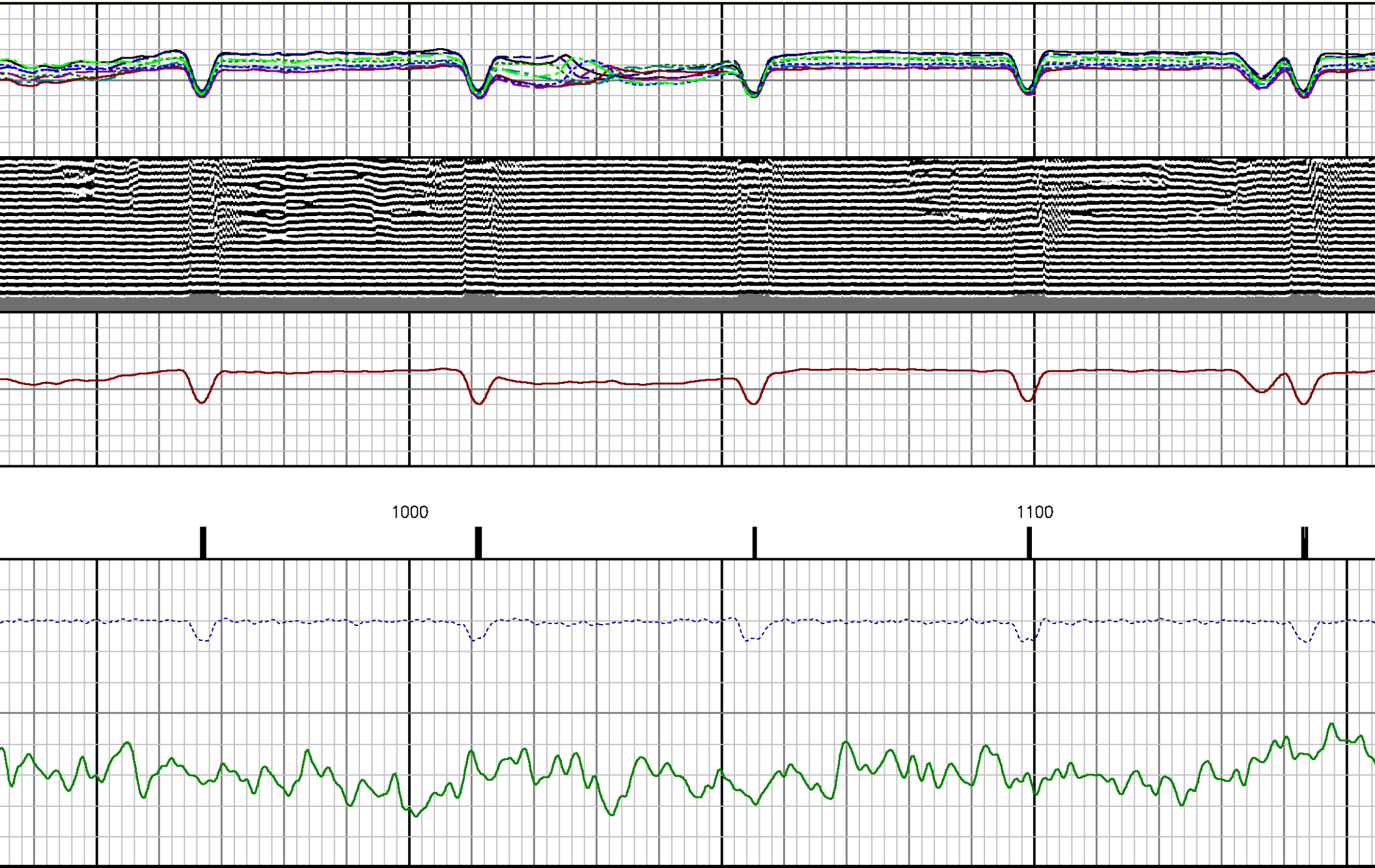
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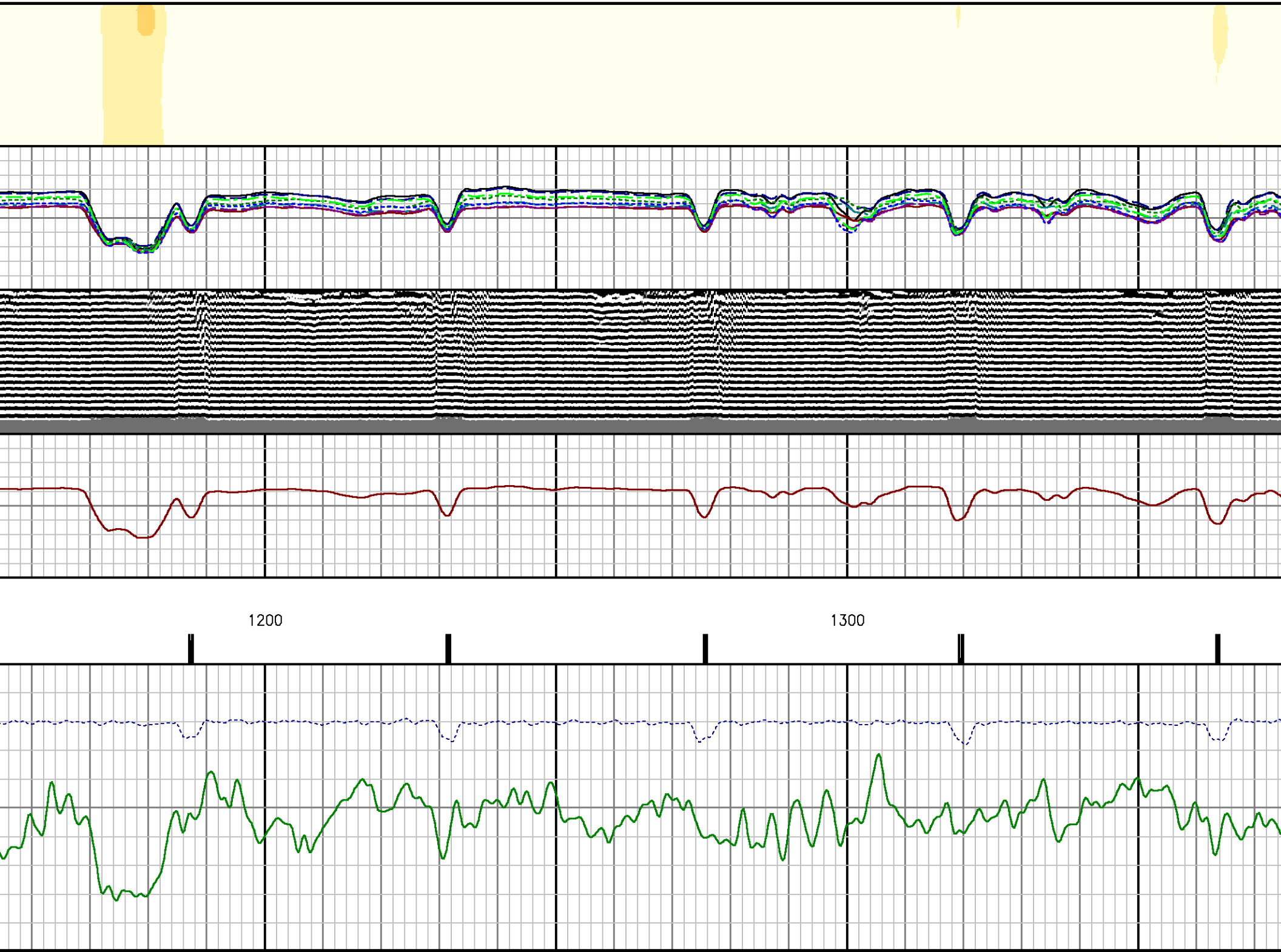
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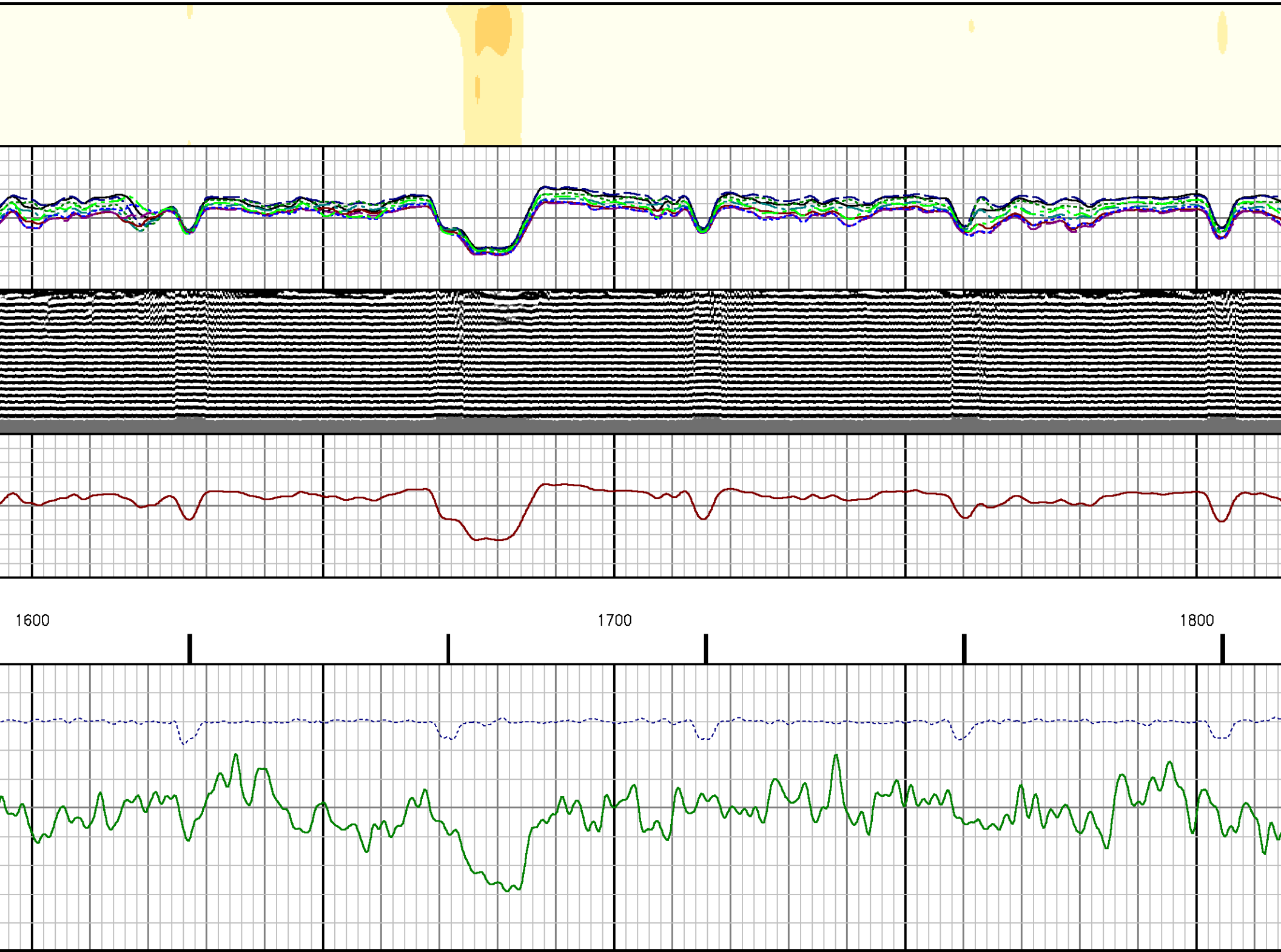
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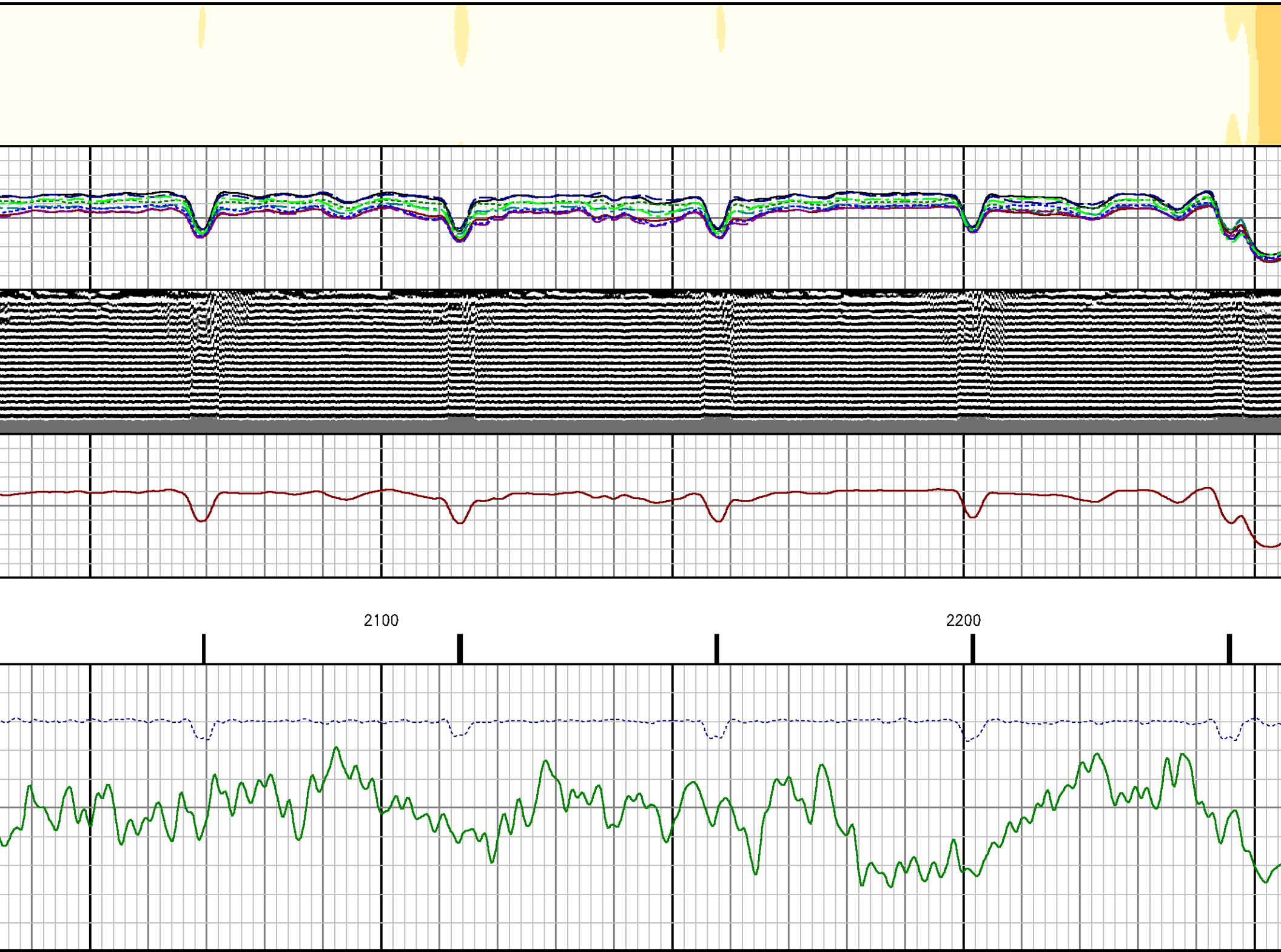
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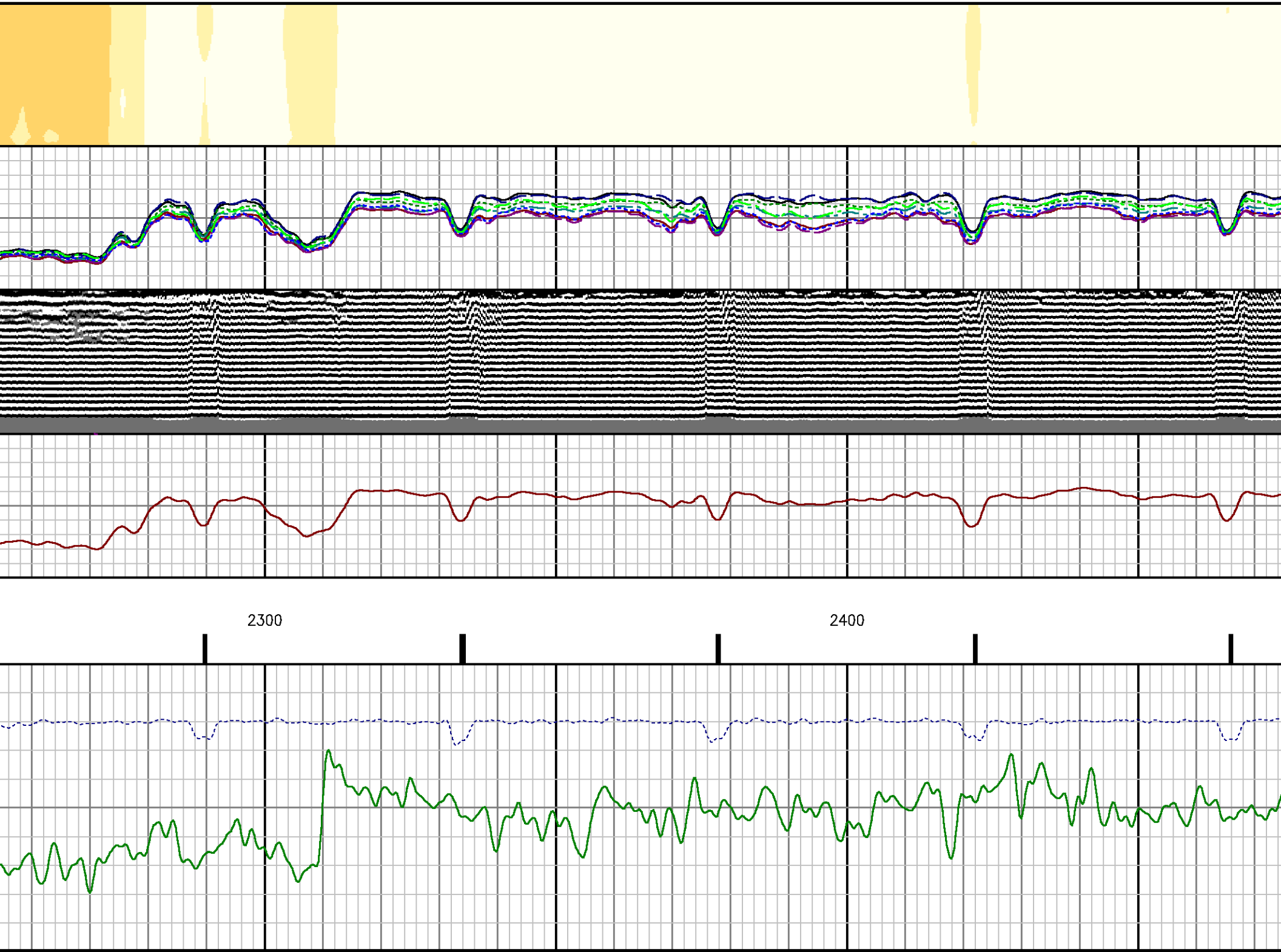
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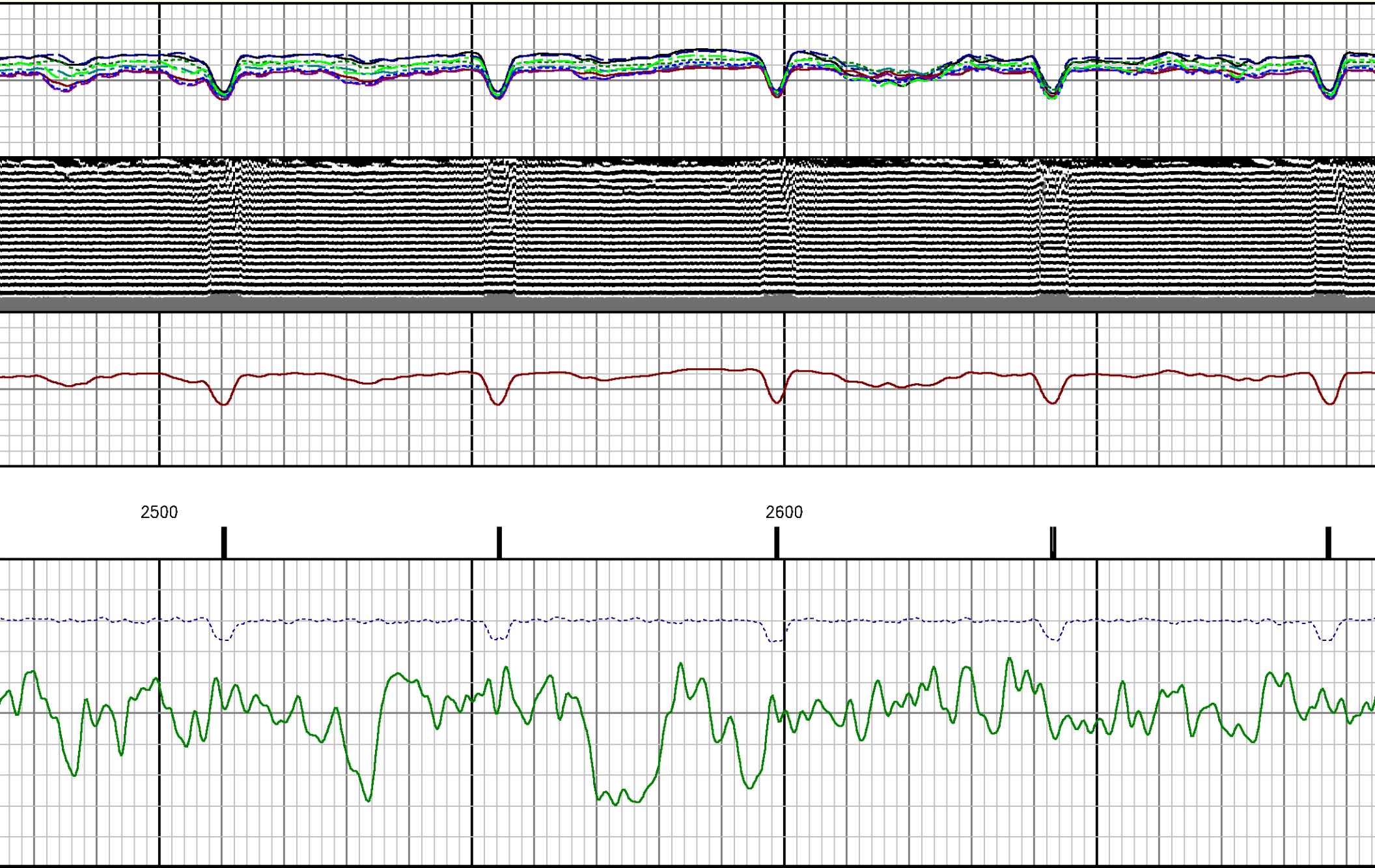
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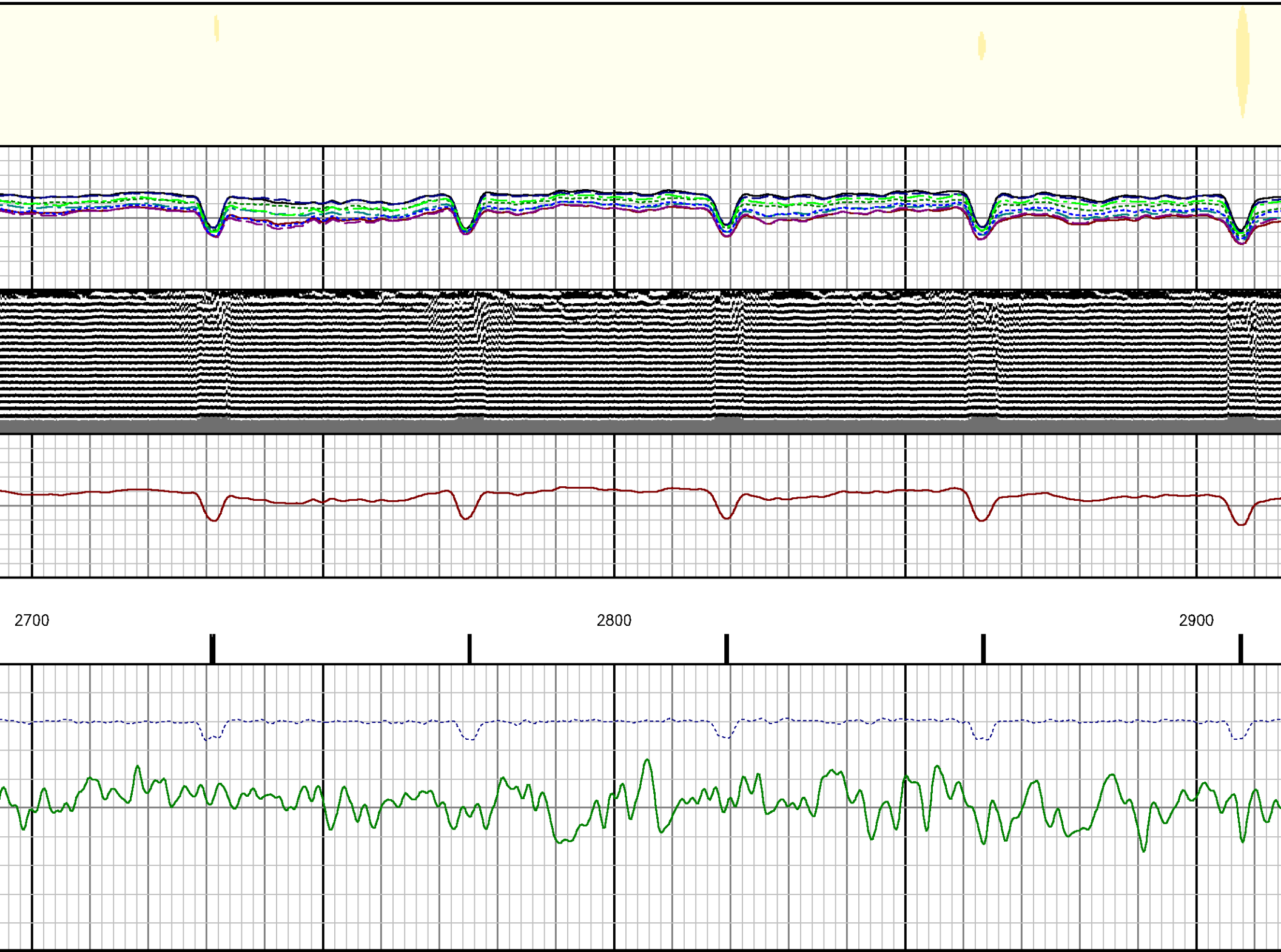
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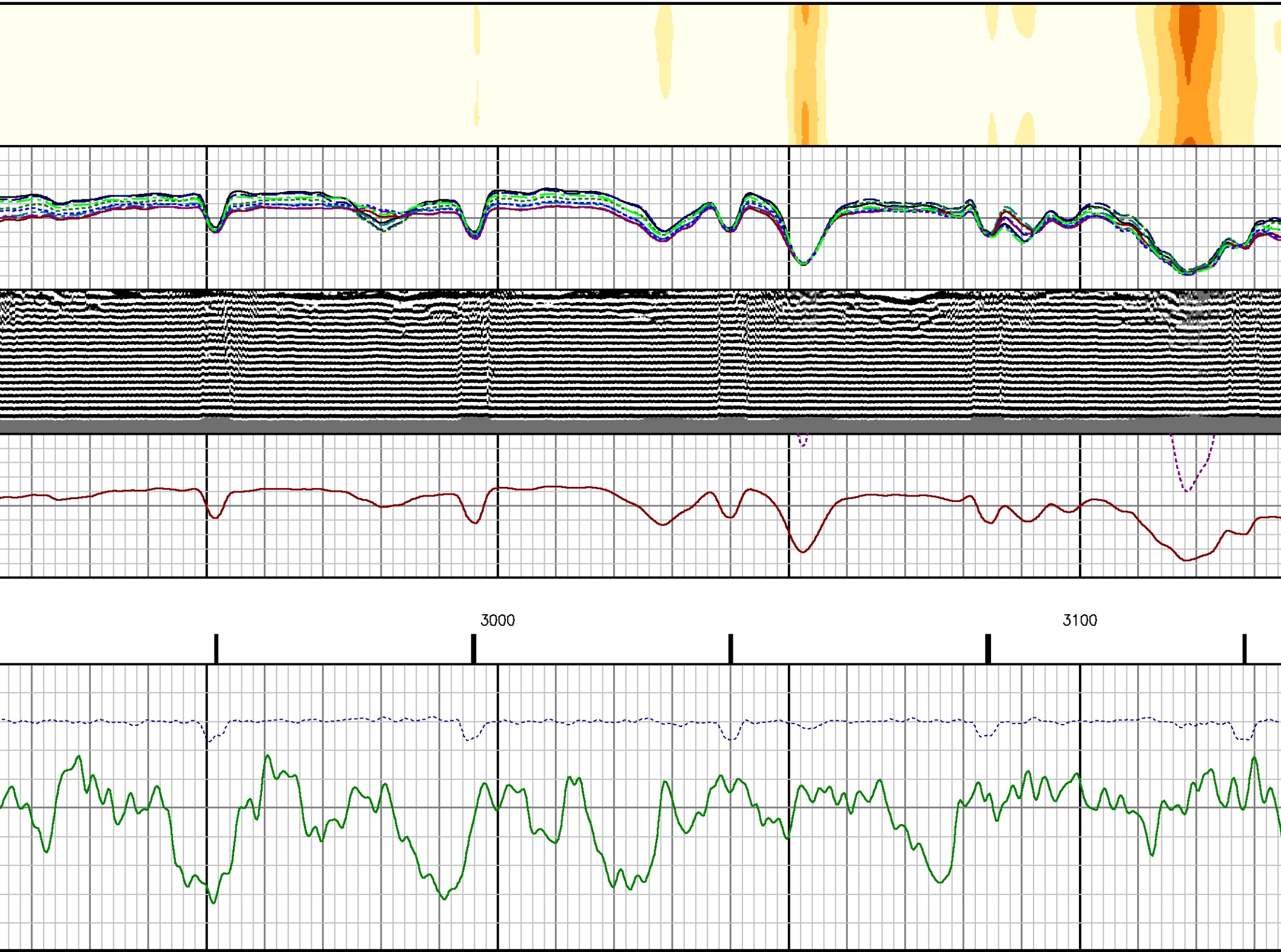
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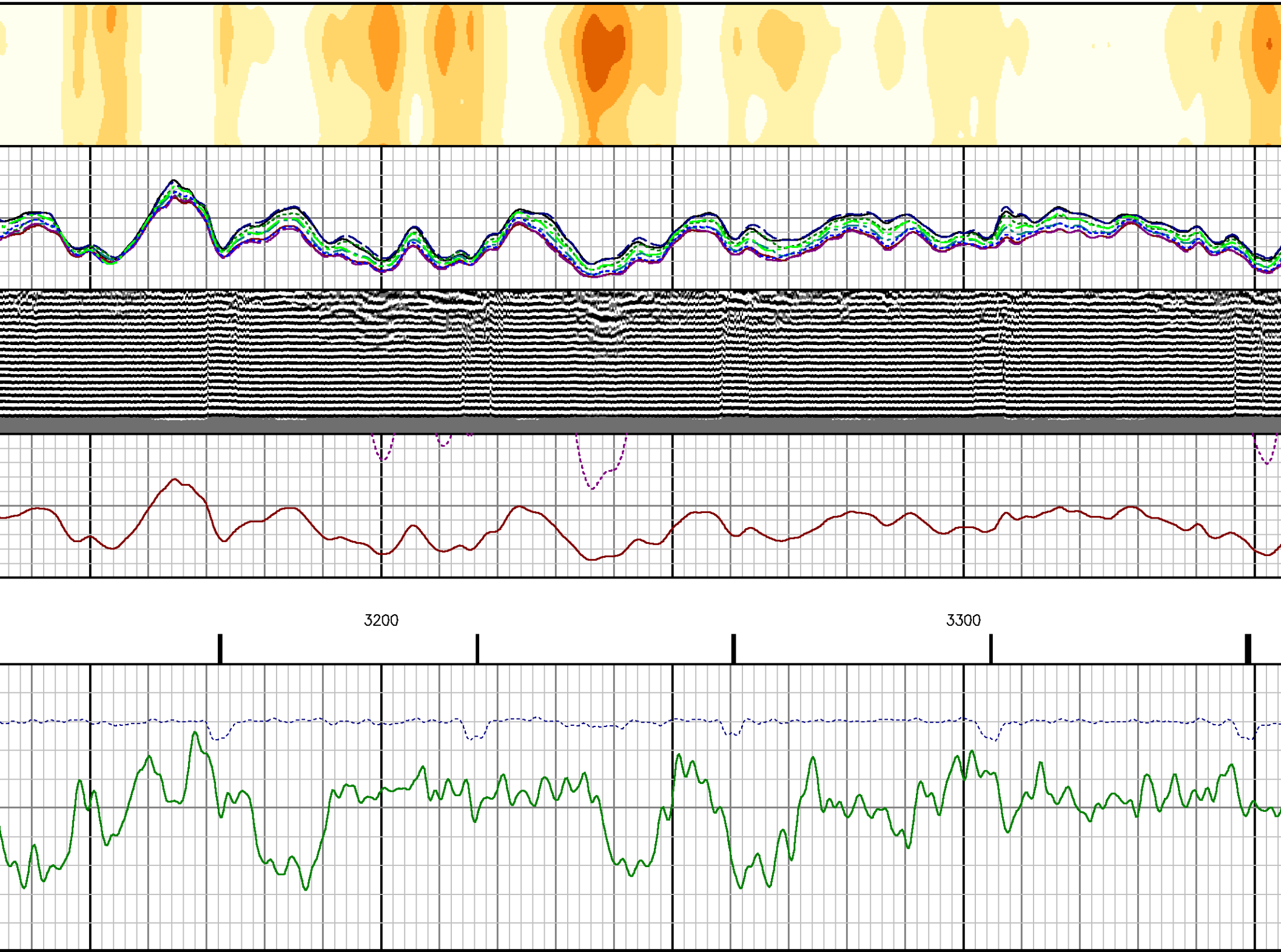
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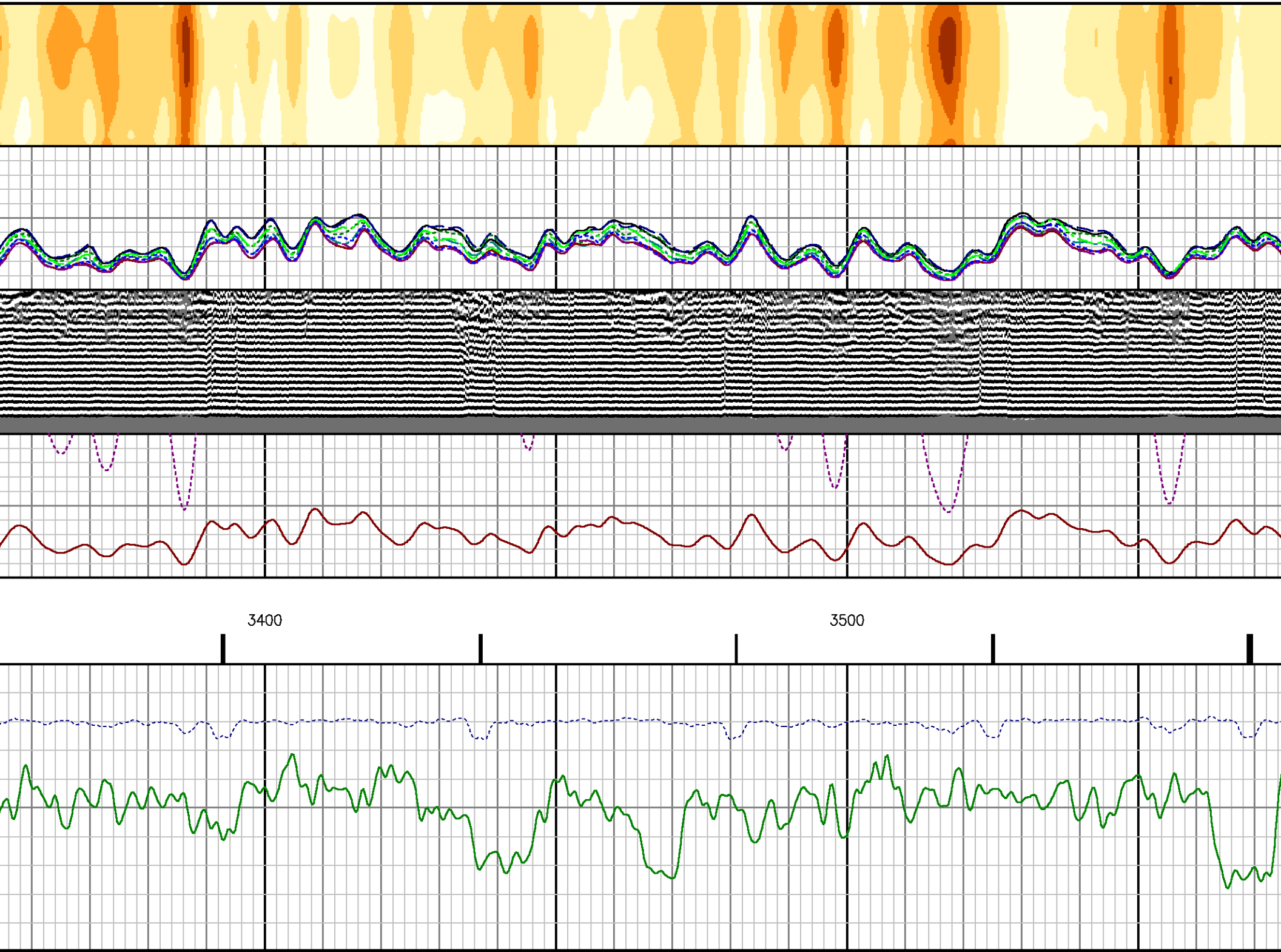
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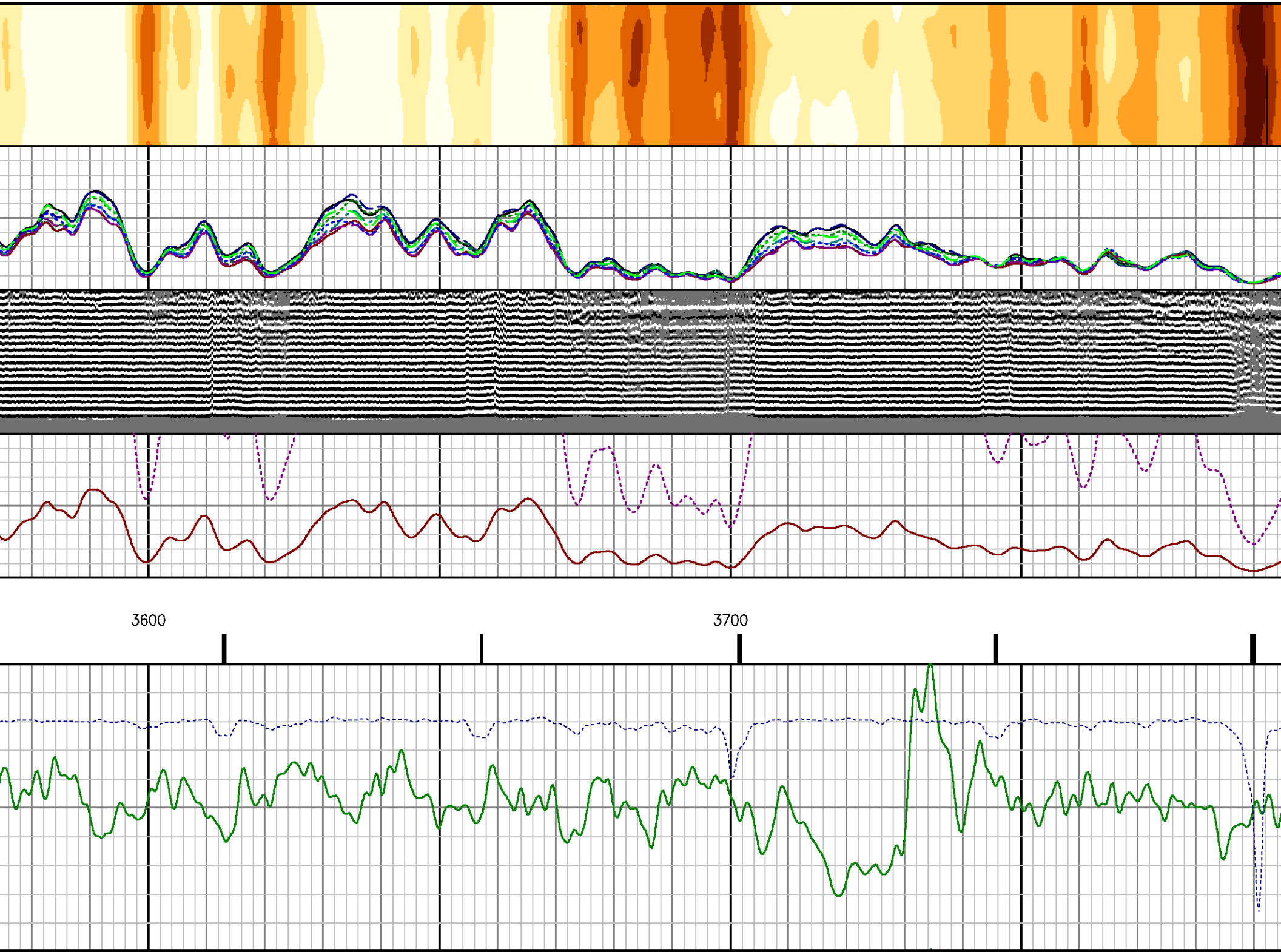
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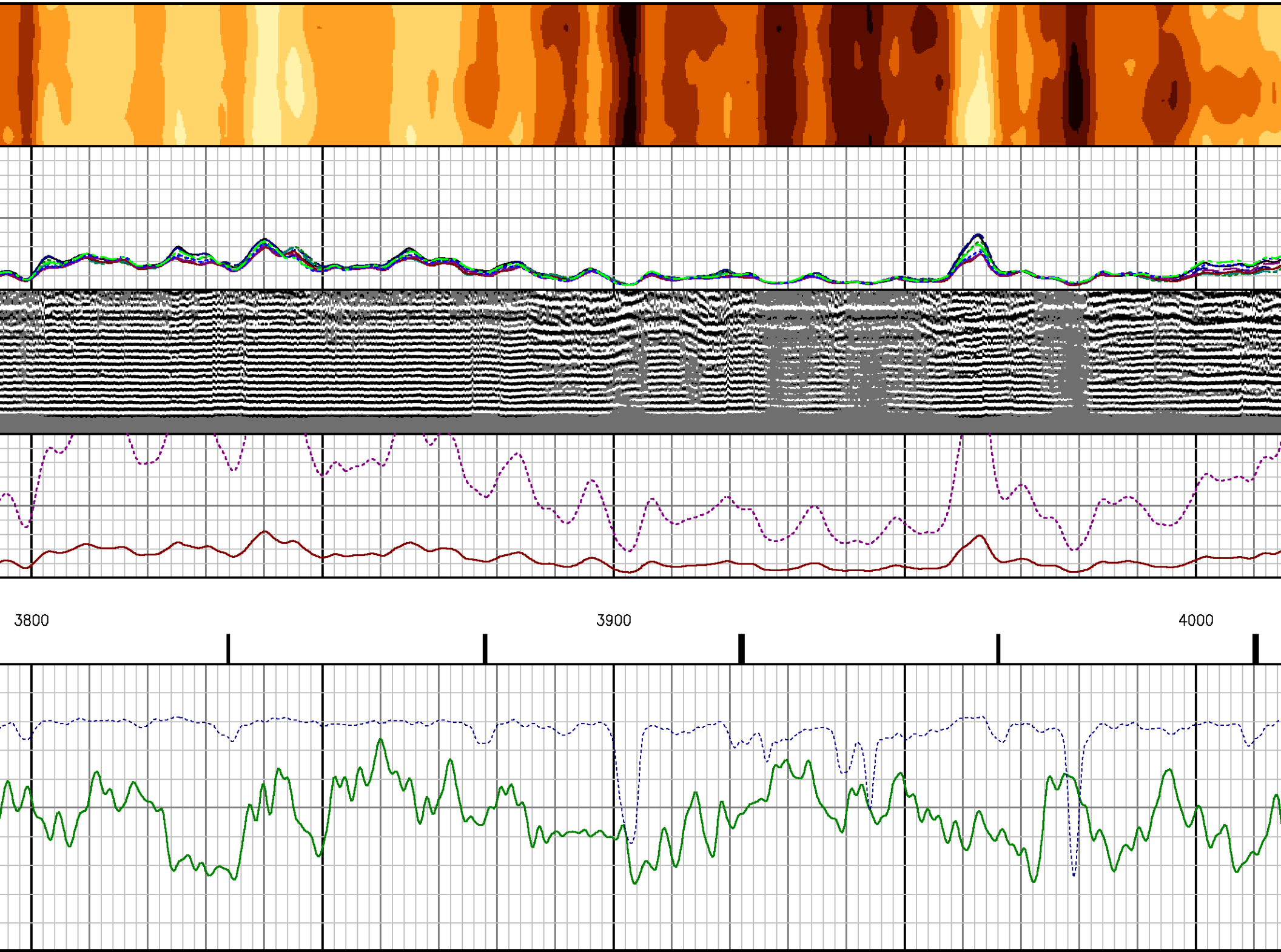
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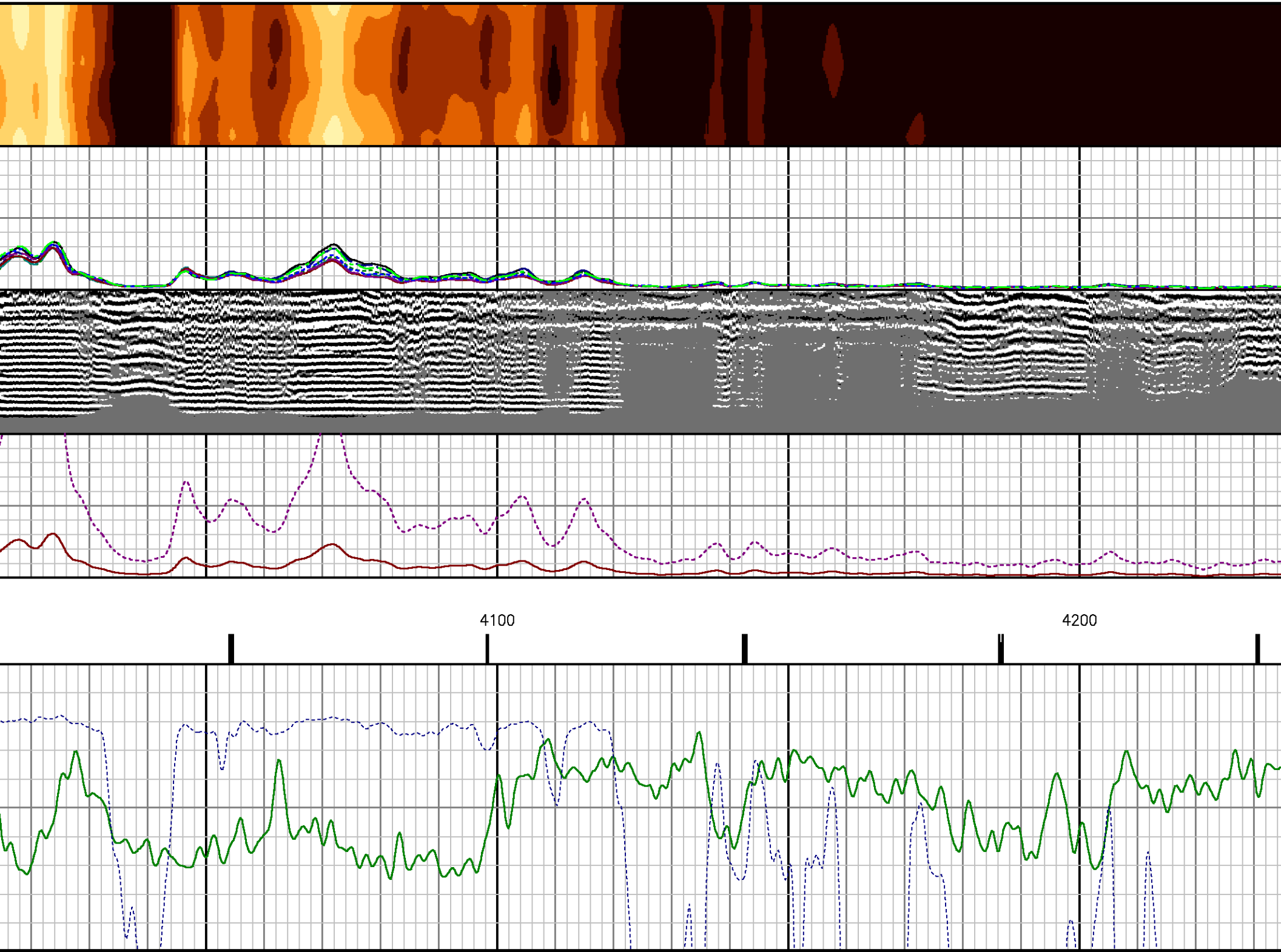
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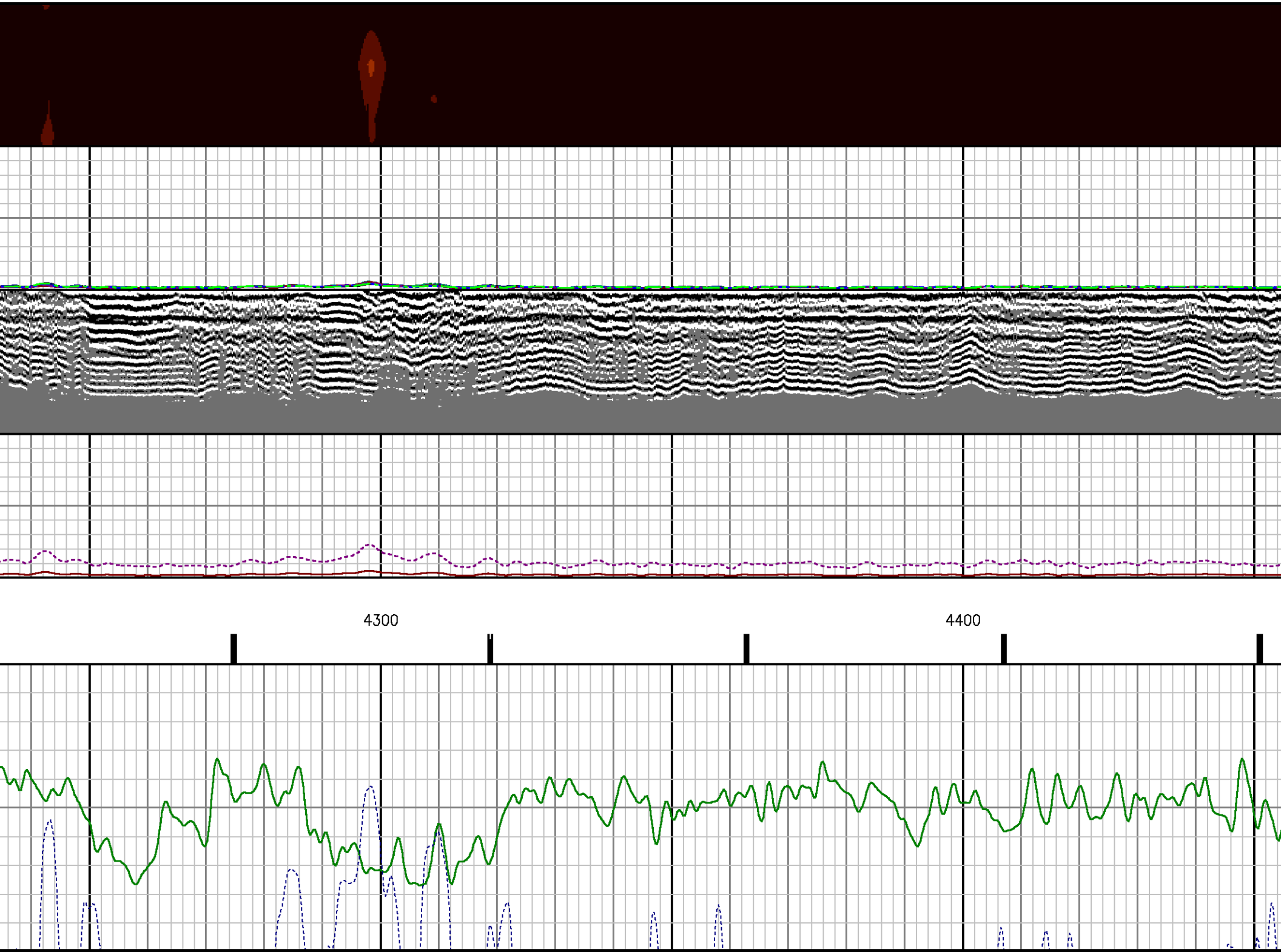
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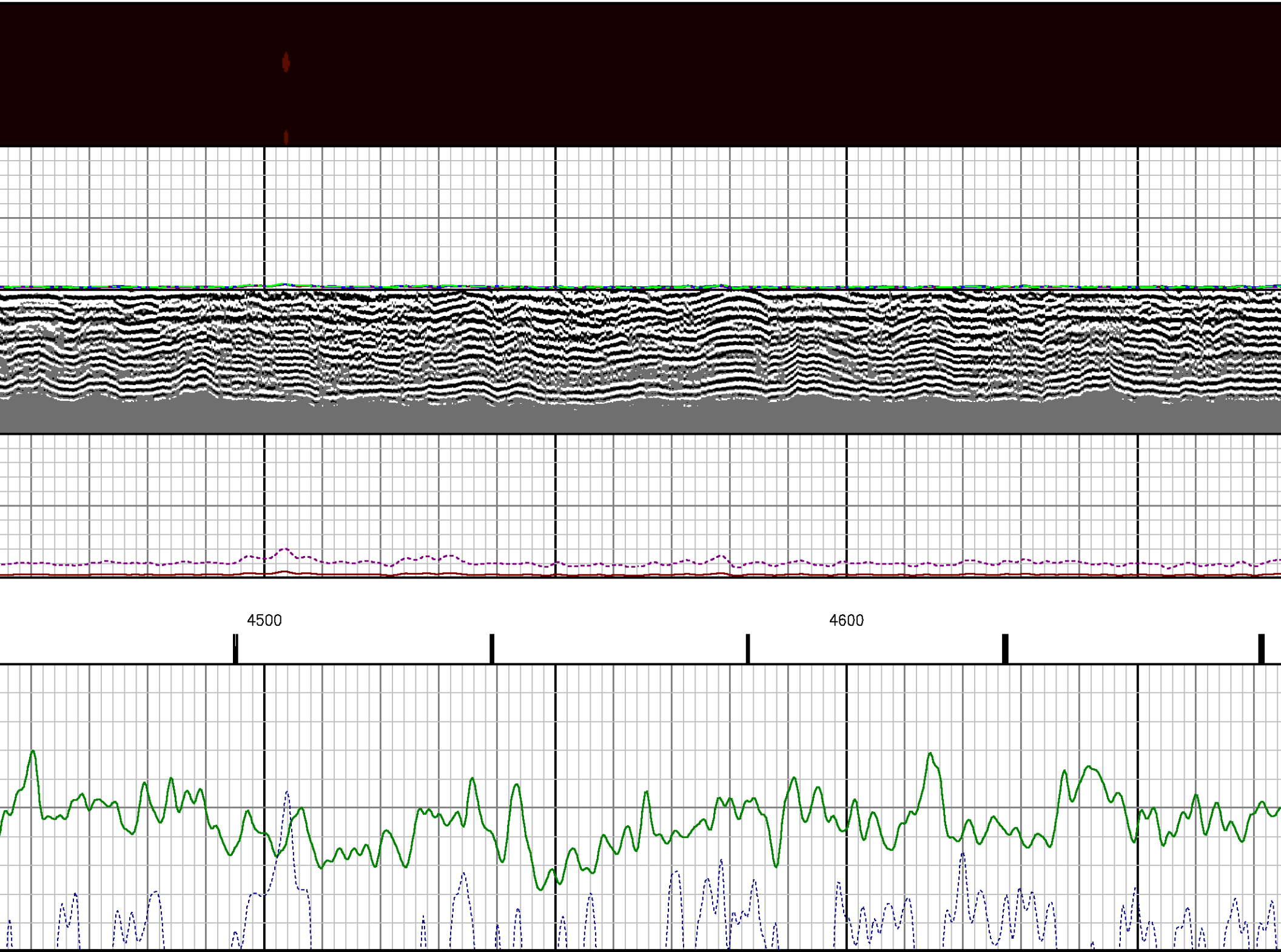
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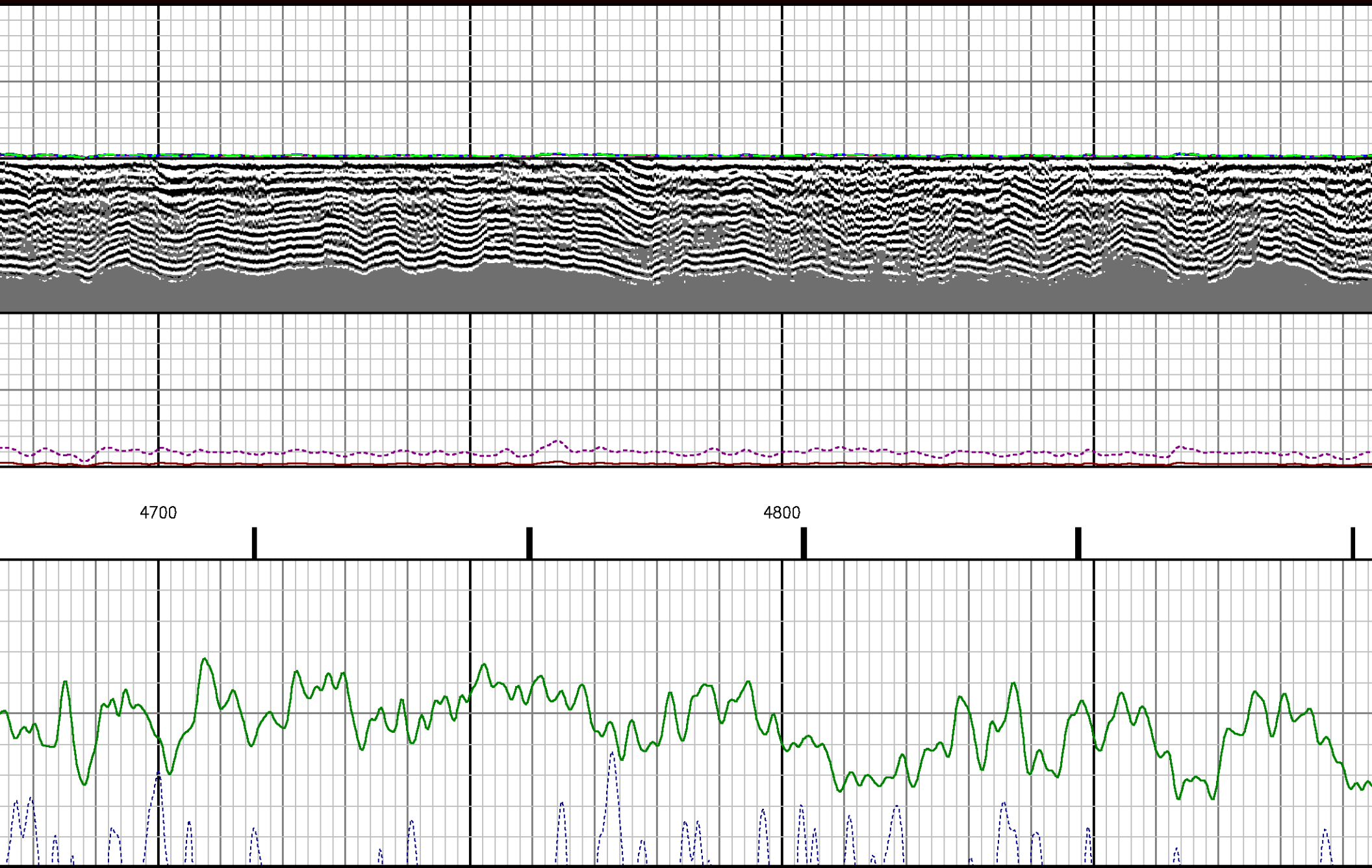
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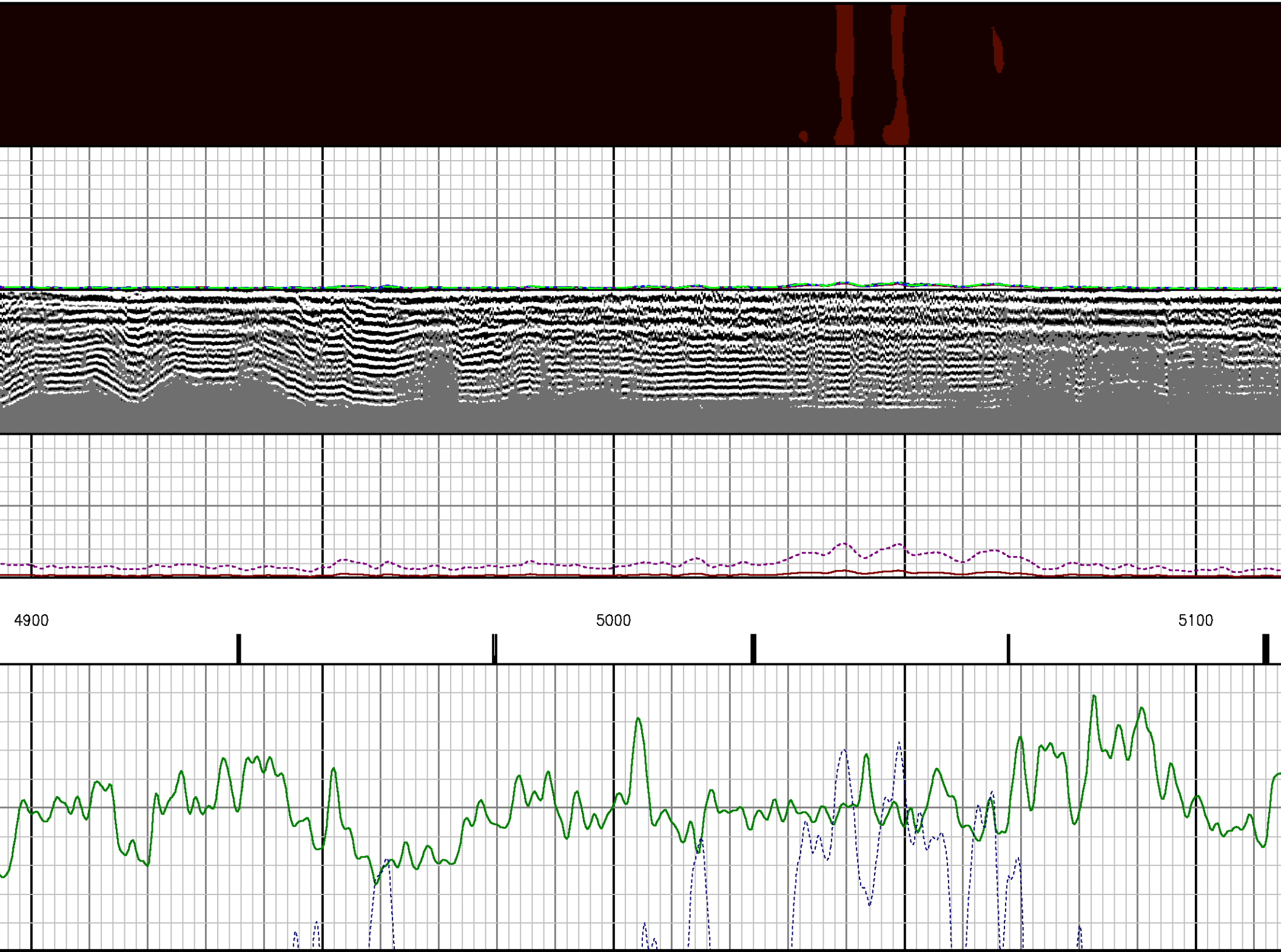
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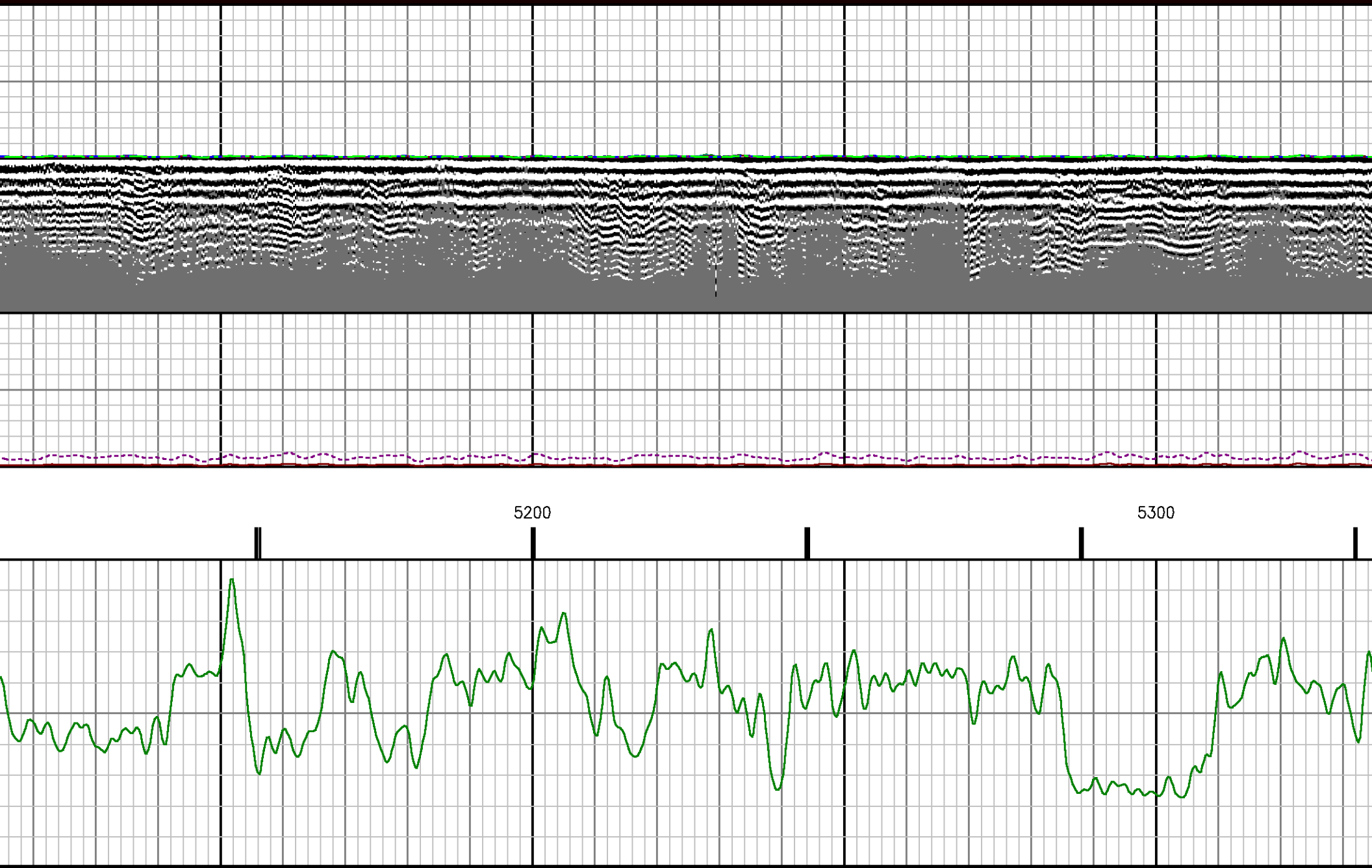
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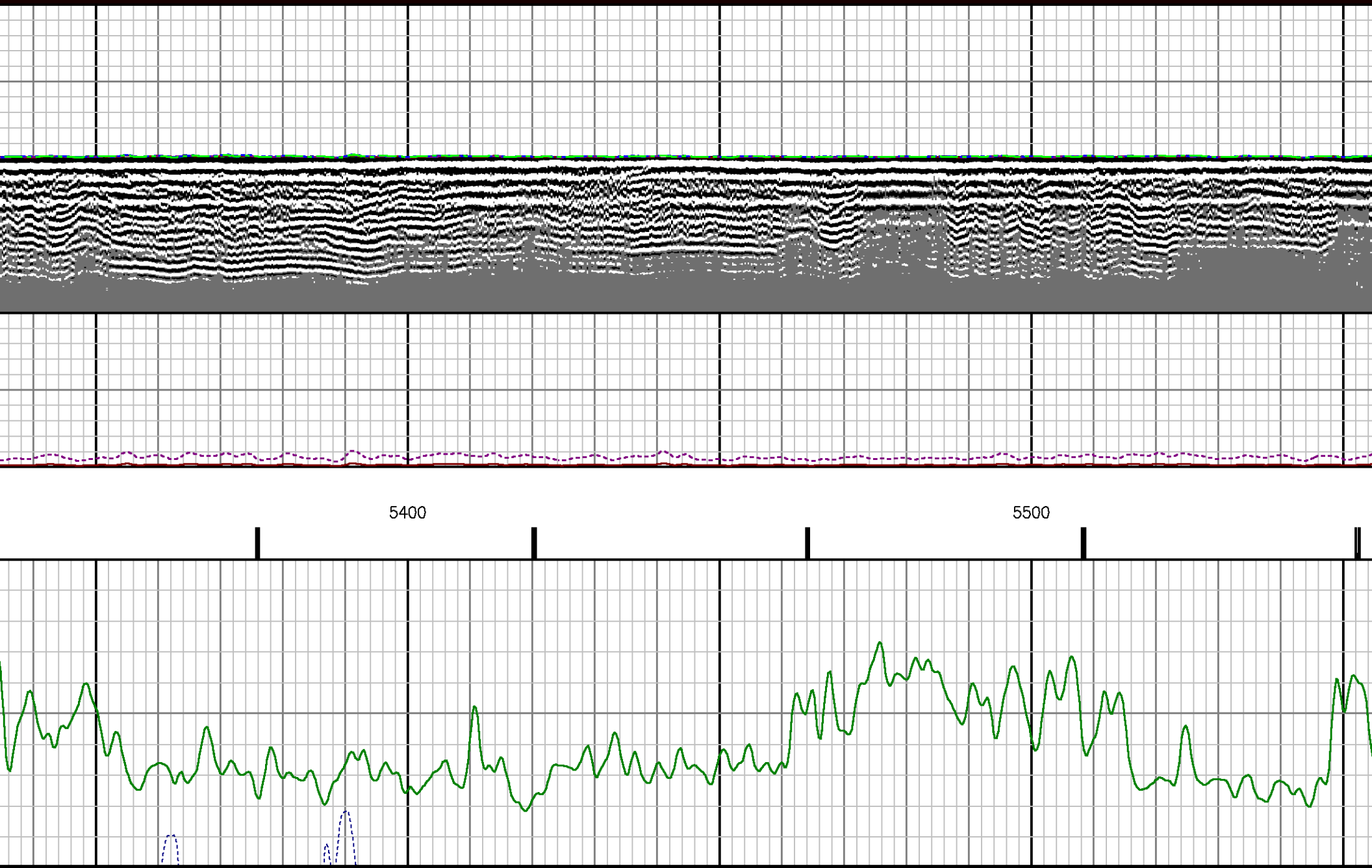
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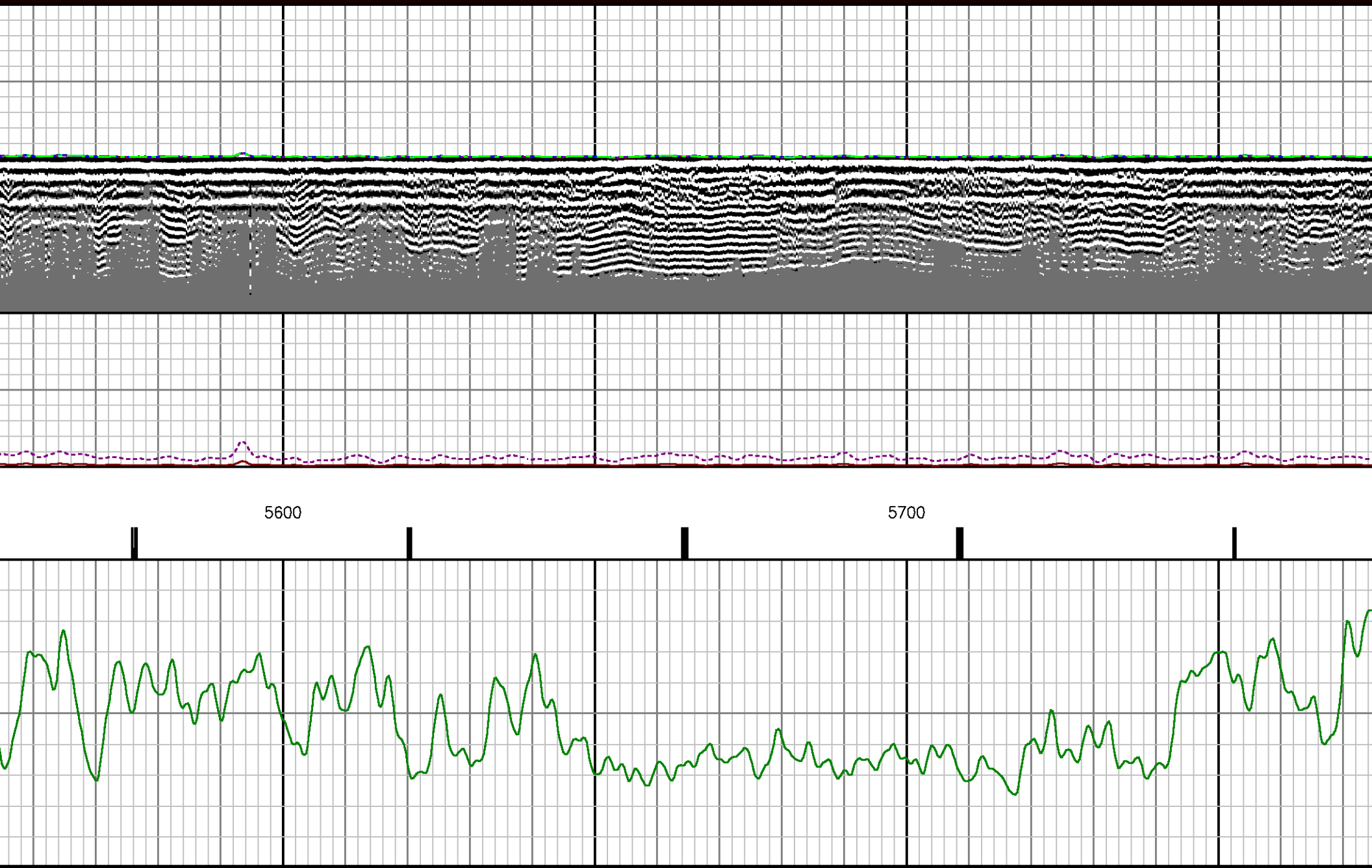
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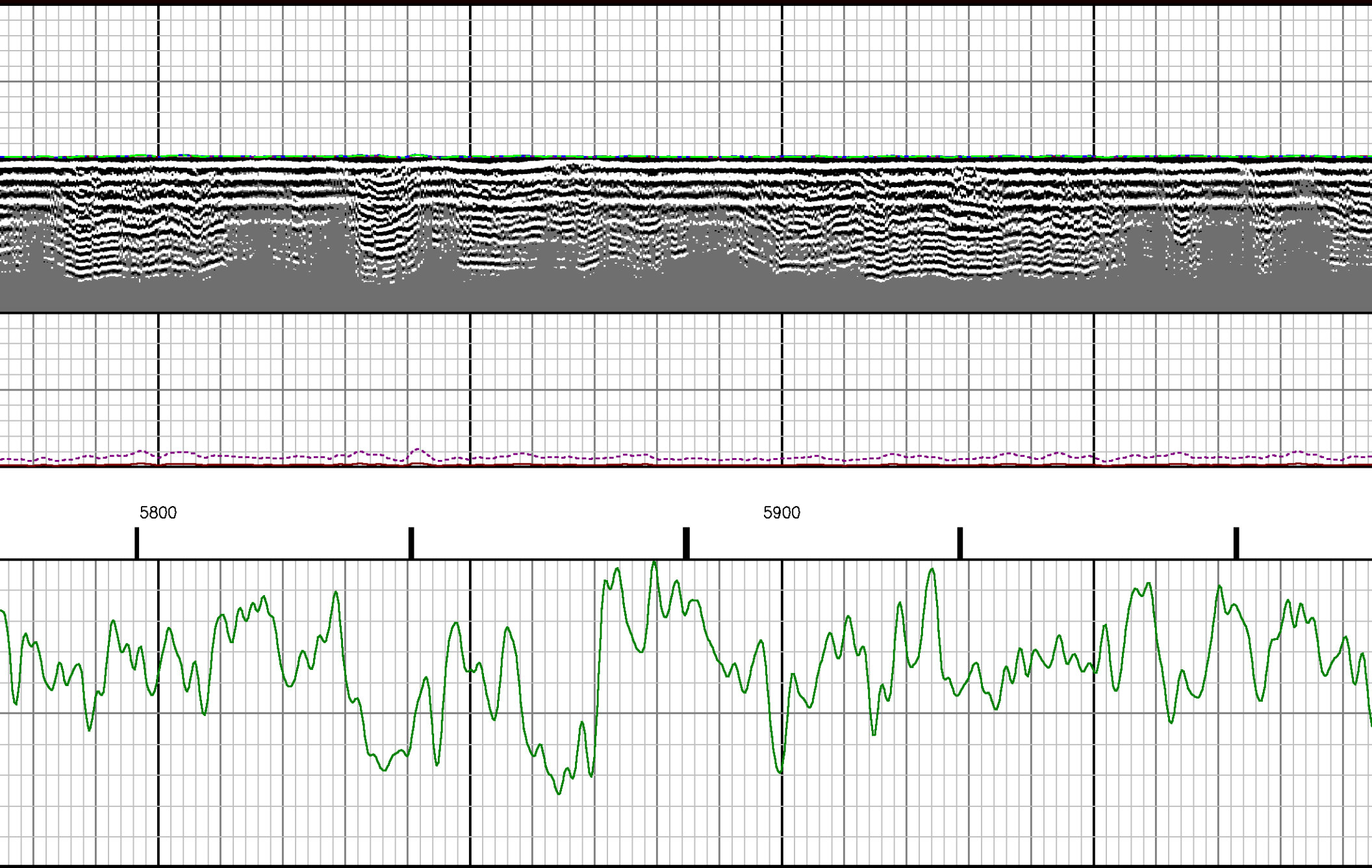
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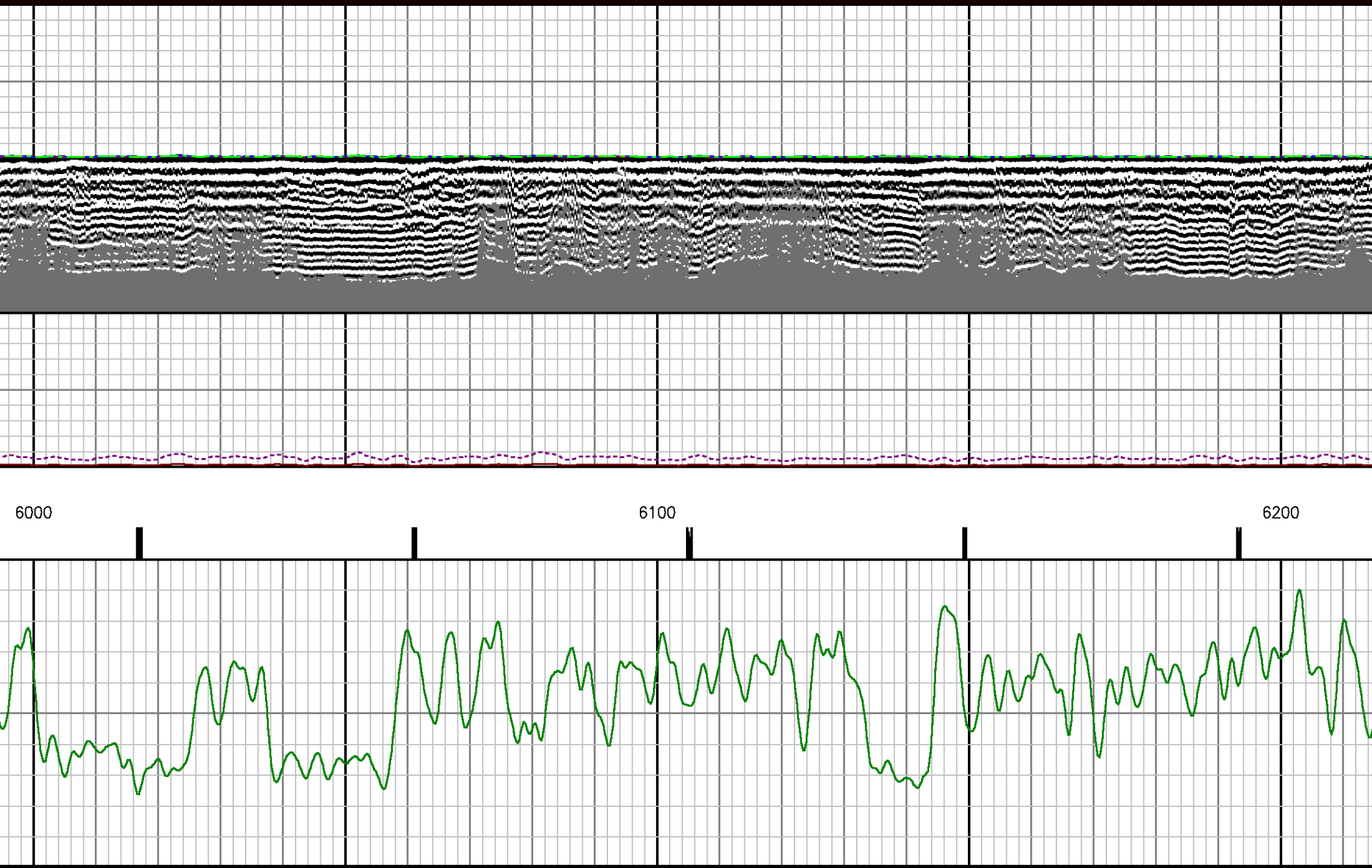
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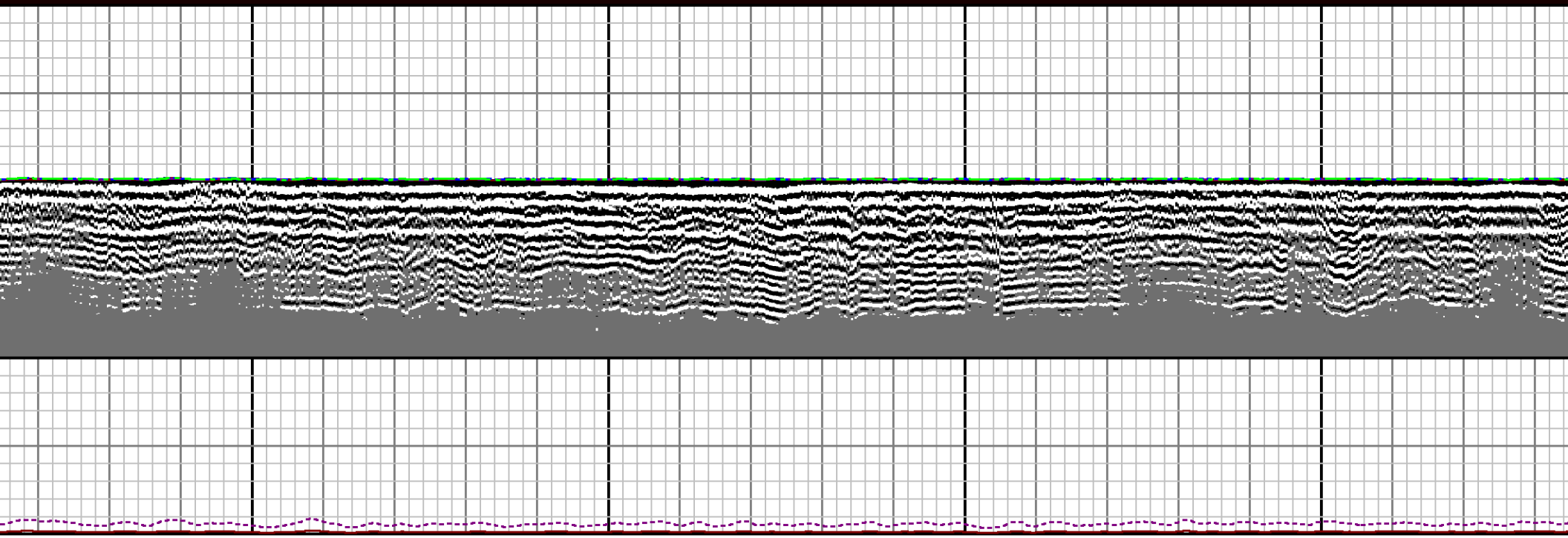

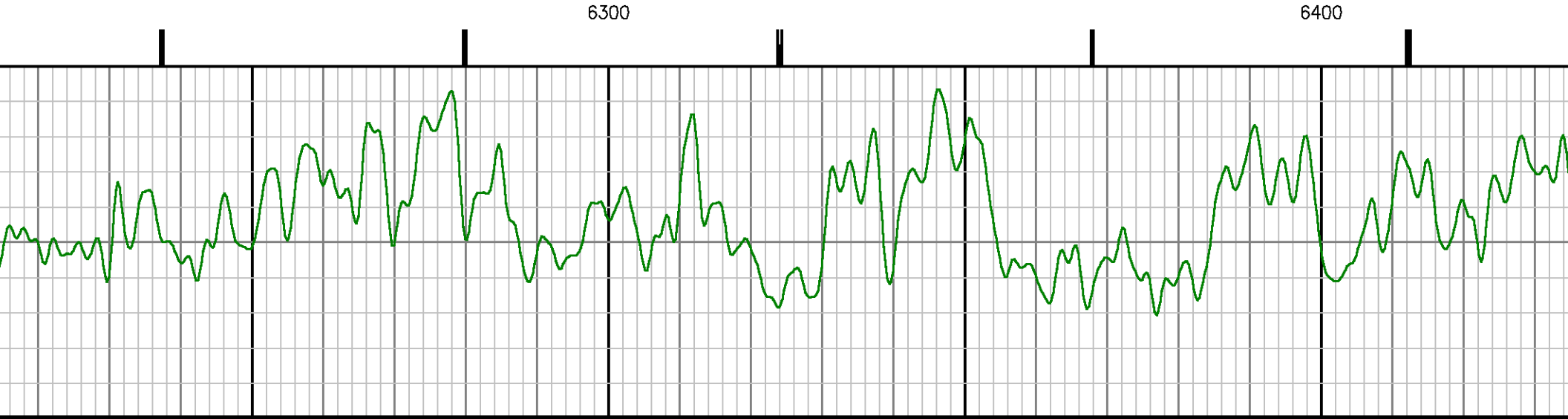
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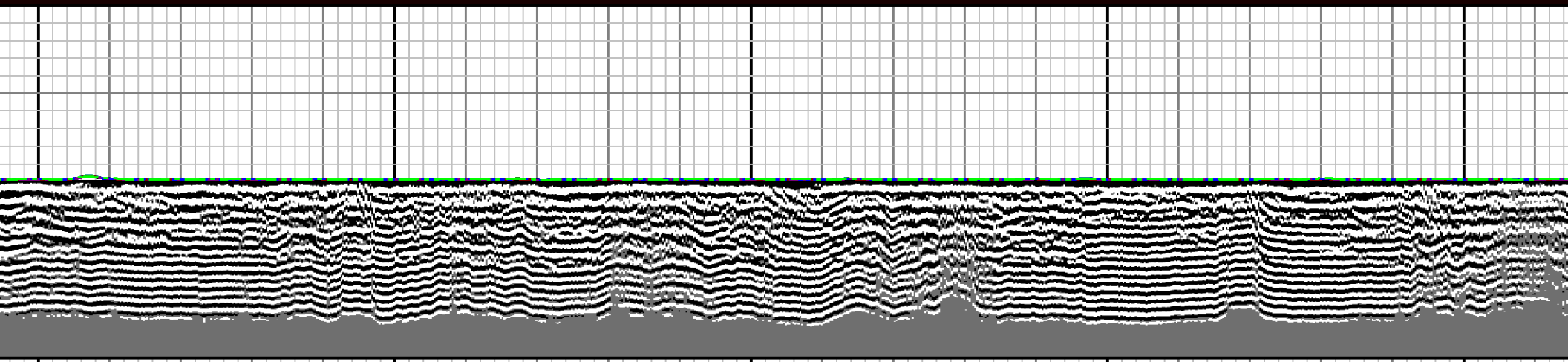

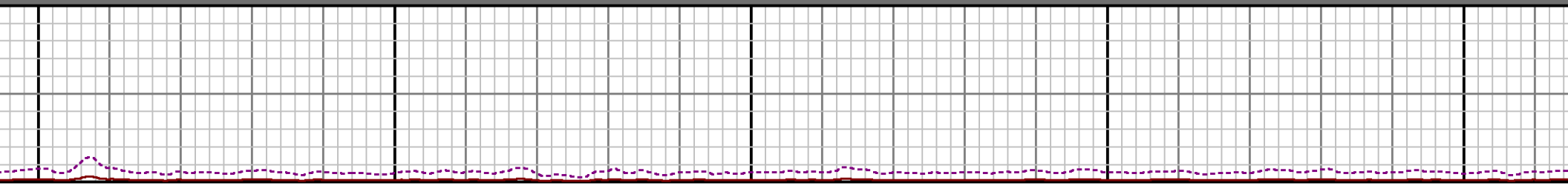

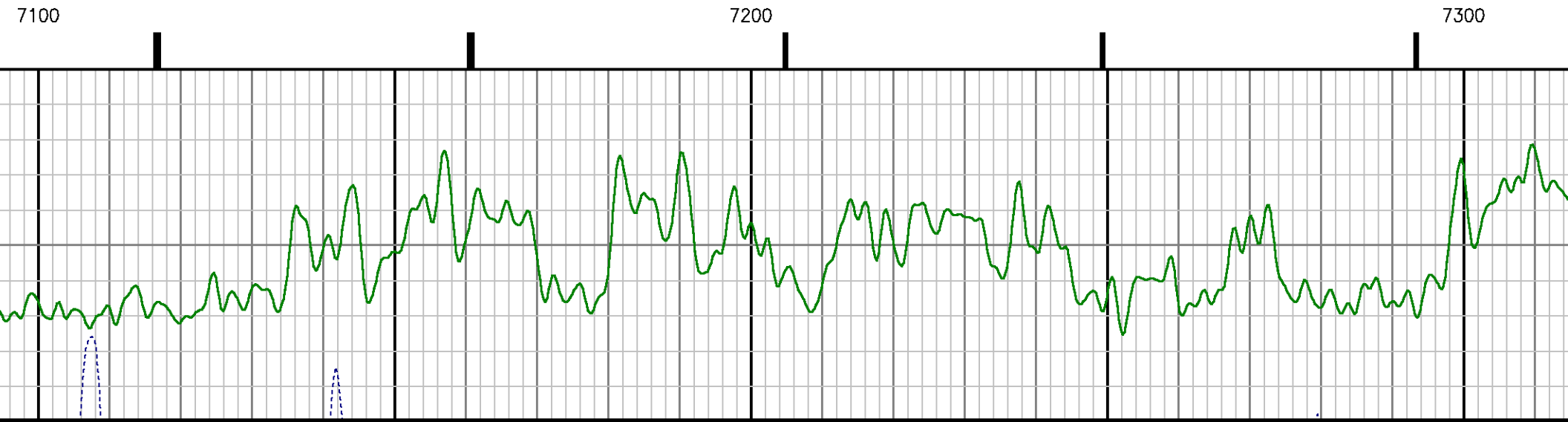
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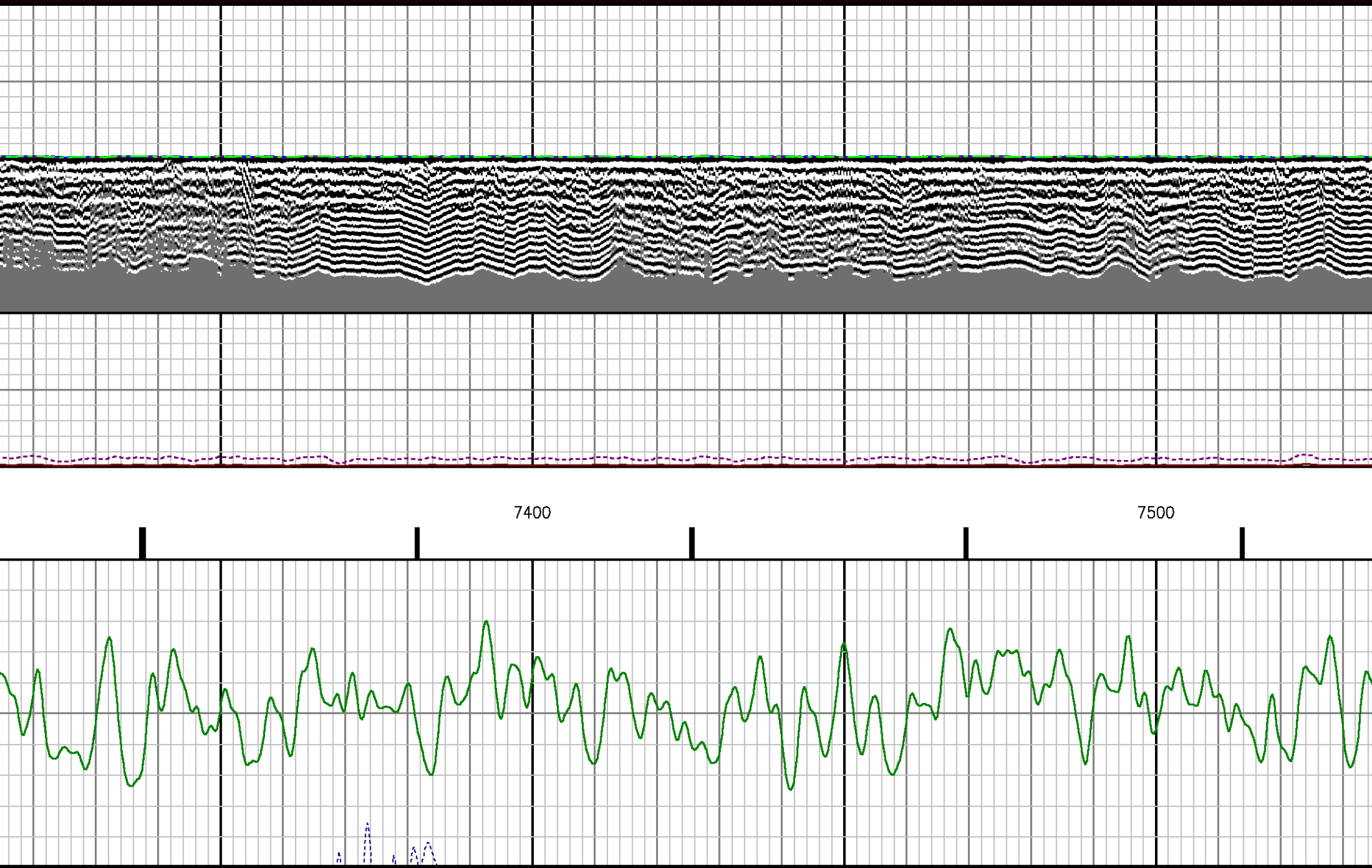
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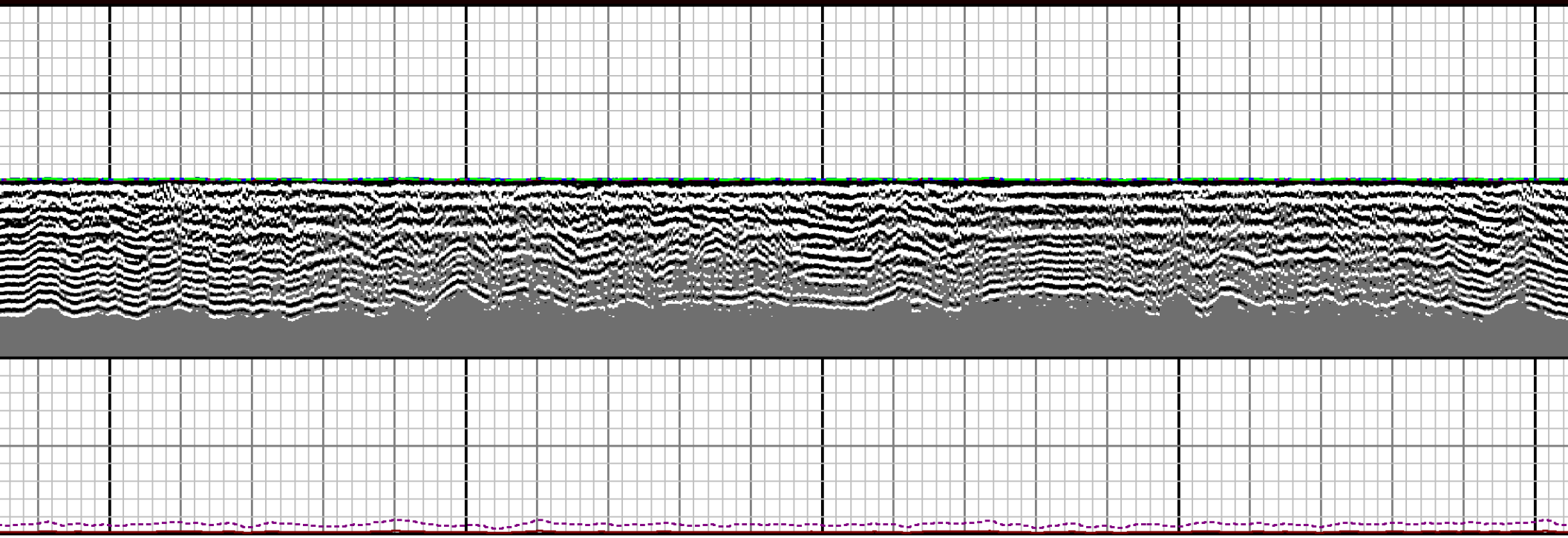

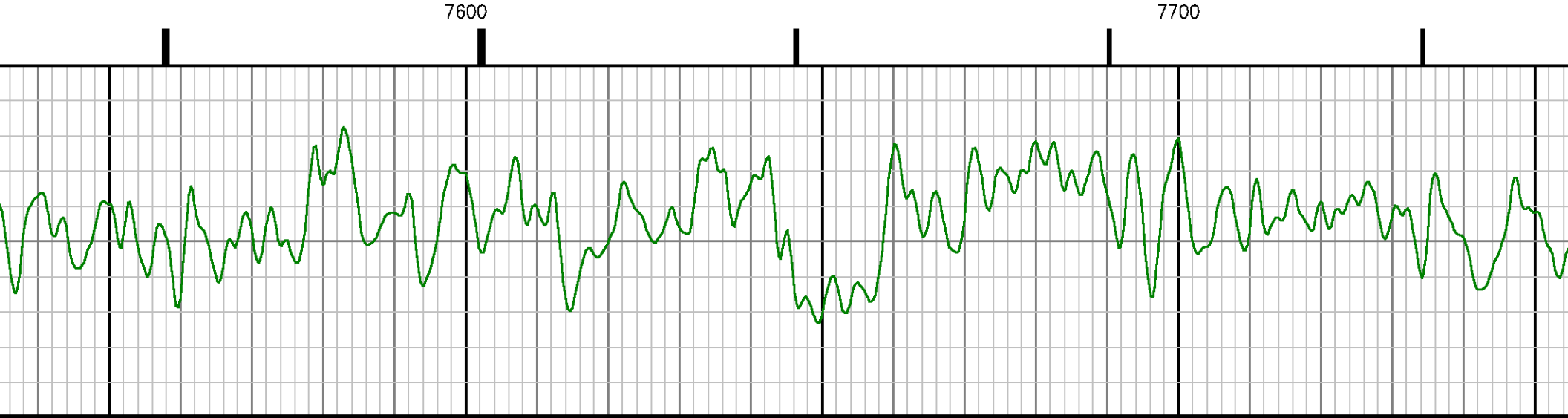
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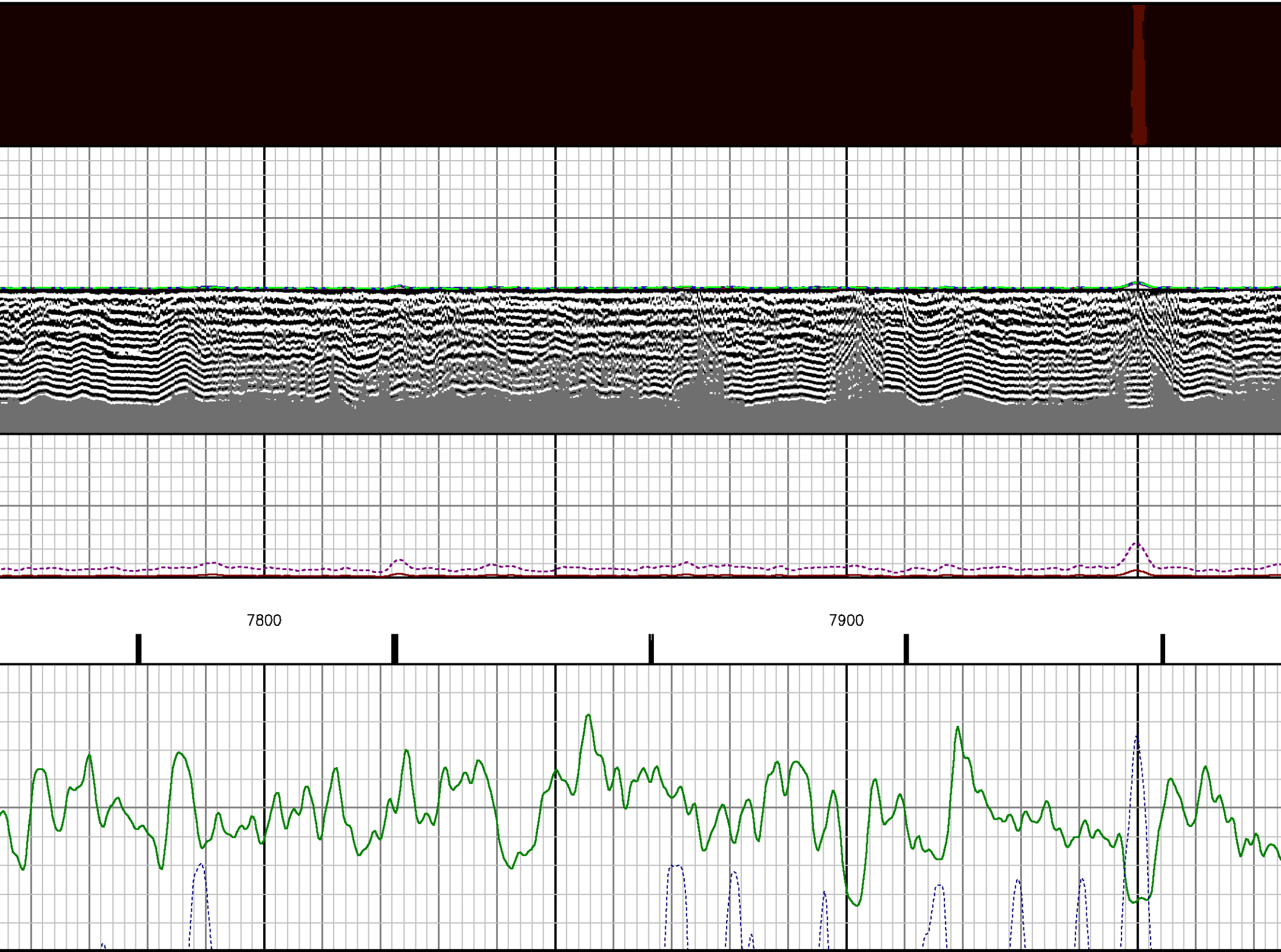
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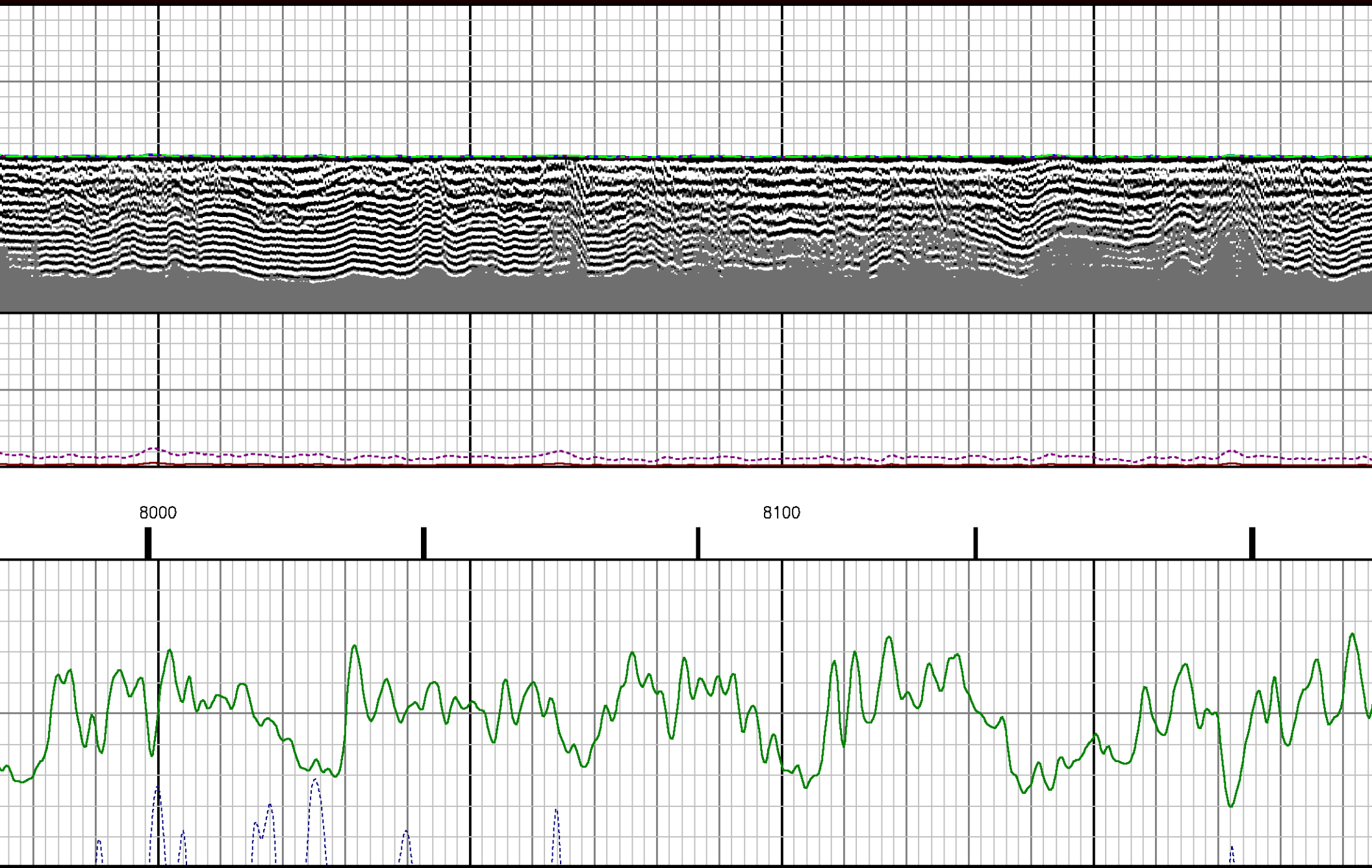
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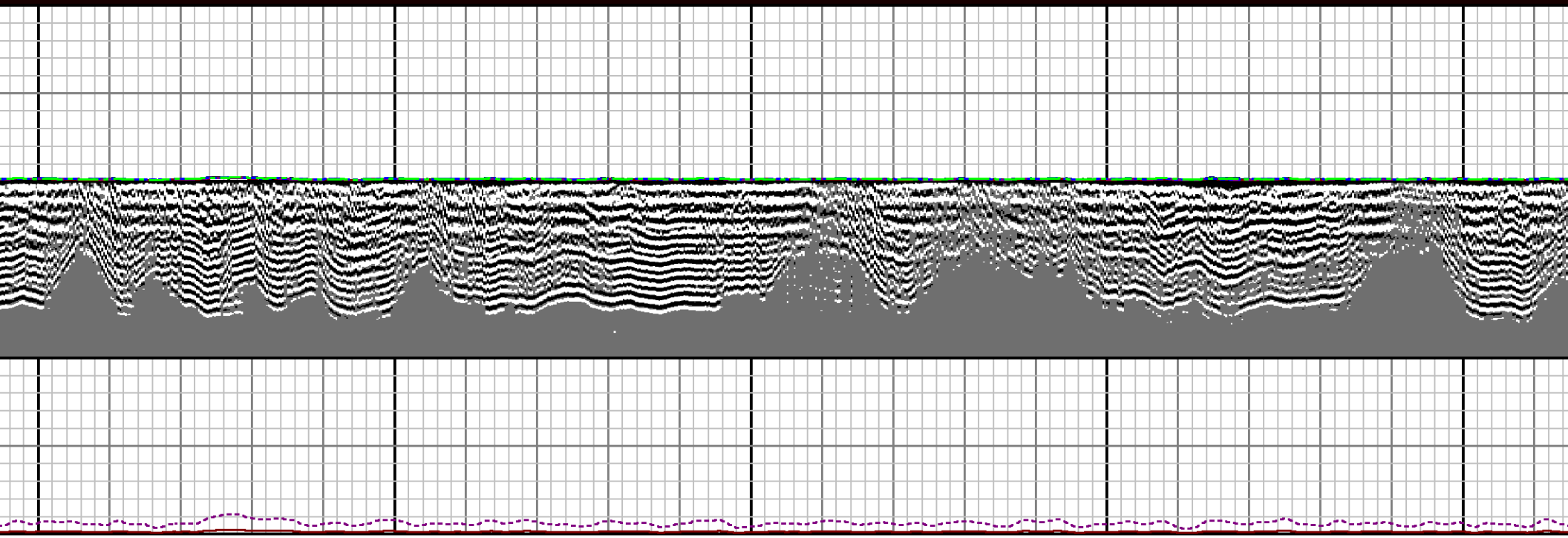

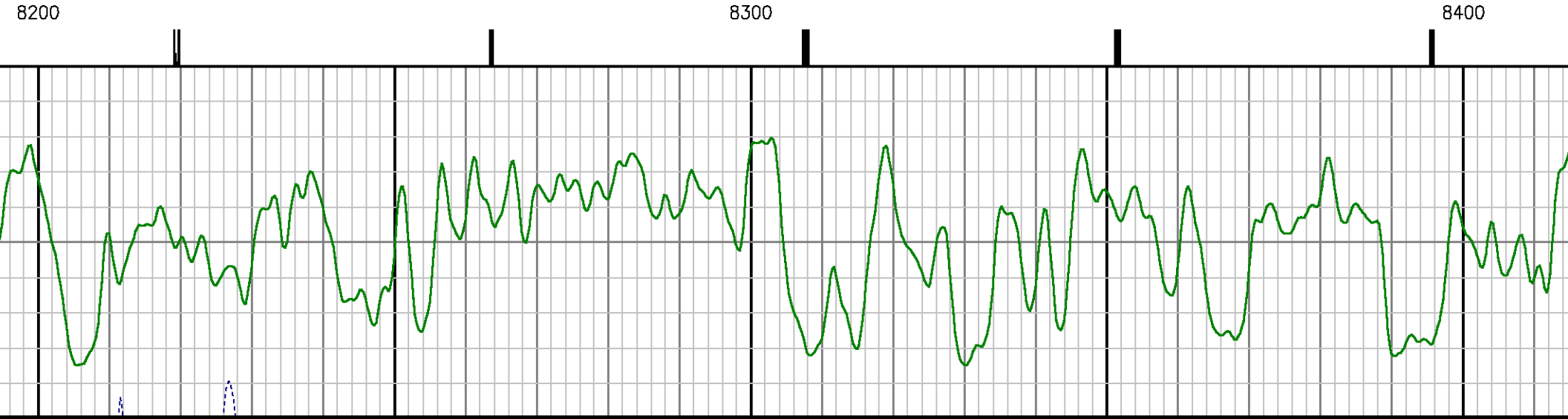
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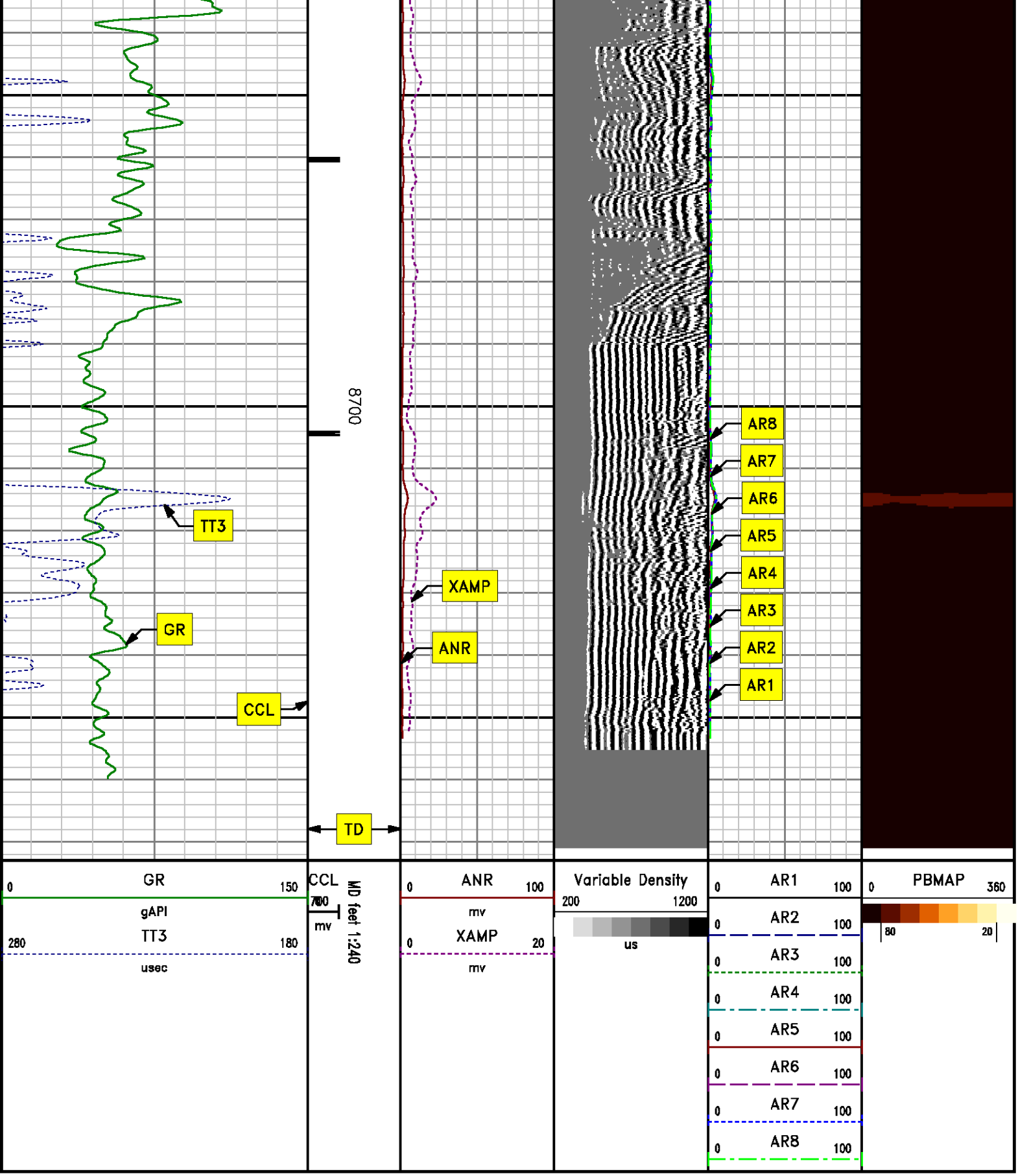


REPEAT SECTION

0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	8437.470	8766.470
RAL	Amp Gate Start Near	195.000	usec	8437.470	8766.470
RAL	Amp Gate Start Radial	195.000	usec	8437.470	8766.470
RAL	Amp Gate Width Far	25.000	usec	8437.470	8766.470
RAL	Amp Gate Width Near	25.000	usec	8437.470	8766.470
RAL	Amp Gate Width Radial	25.000	usec	8437.470	8766.470
RAL	casing od	4.500	inches	8437.470	8766.470
RAL	casing wt	11.600	lbm/ft	8437.470	8766.470
RAL	FB Start Far	291.900	usec	8437.470	8766.470
RAL	FB Start Near	175.391	usec	8437.470	8766.470
RAL	FB Start Radial	175.391	usec	8437.470	8766.470
RAL	FB Thresh Far	10.000	mv	8437.470	8766.470
RAL	FB Thresh Near	4.000	mv	8437.470	8766.470
RAL	FB Thresh Radial	4.000	mv	8437.470	8766.470
RAL	Fluid Travel Time	200.000	usec/ft	8437.470	8767.094

DEPTH OFFSETS

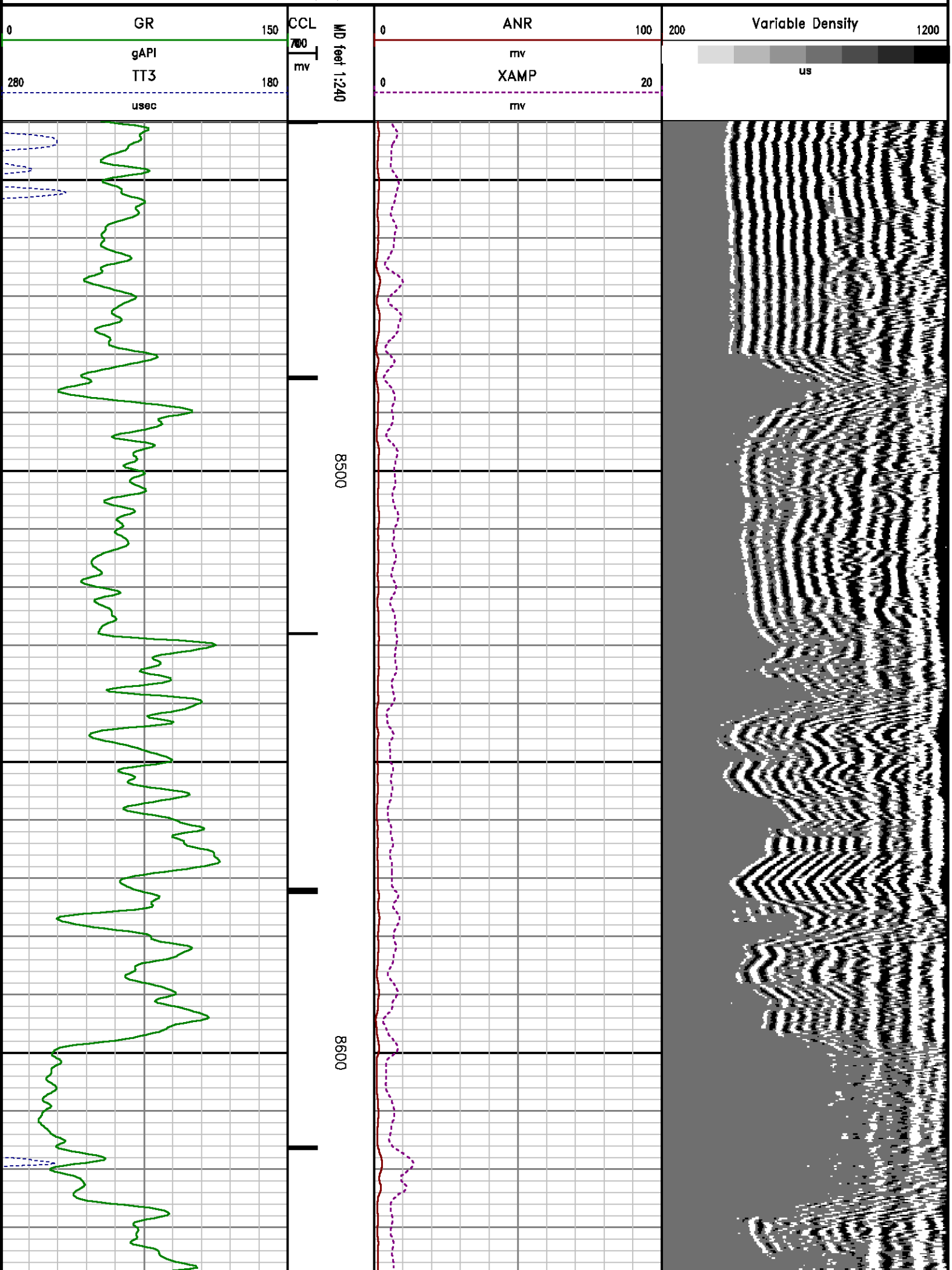
(for Acquired Curves)

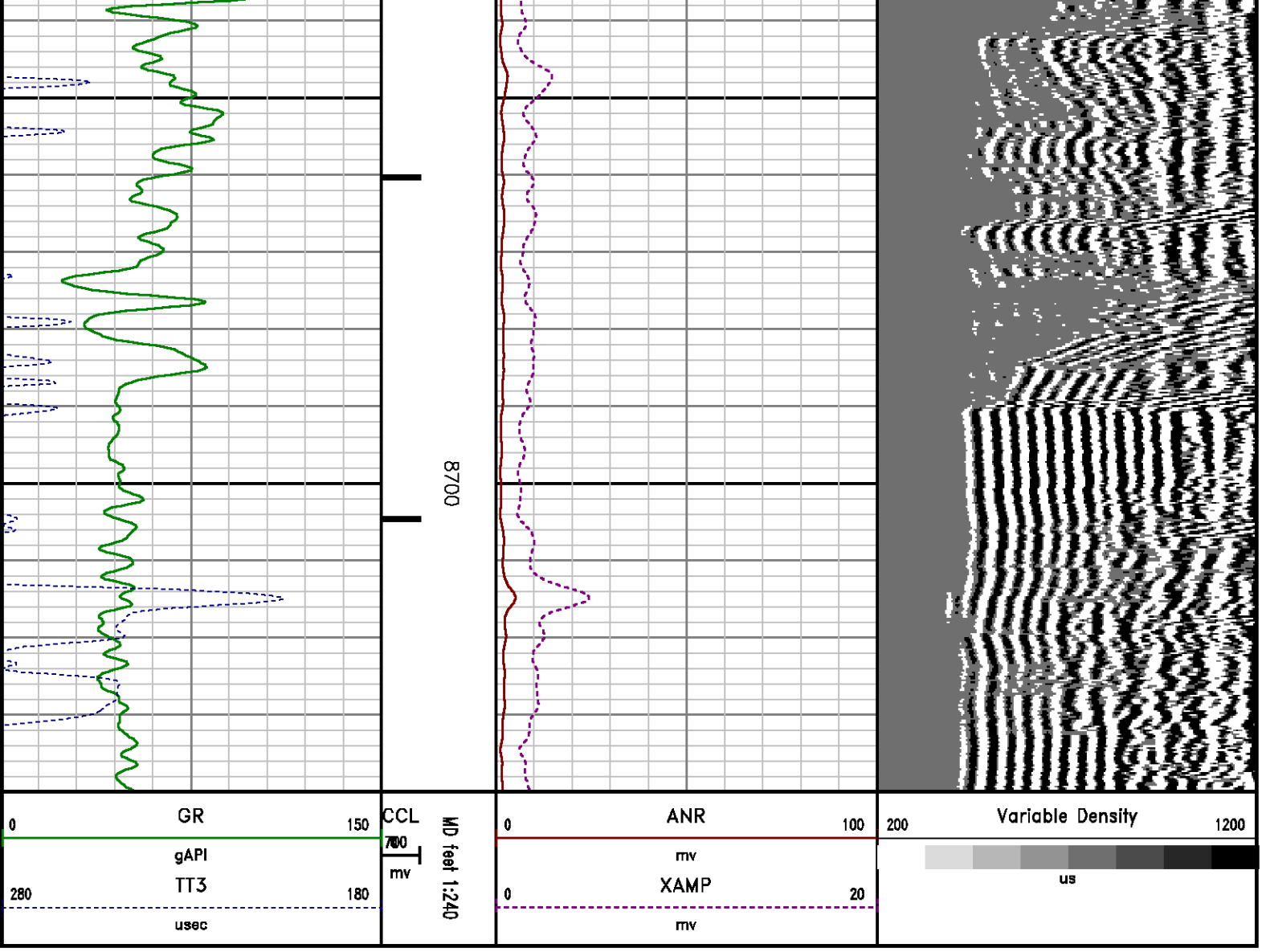
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-16.750	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-15.750	AFAR	SIG	TT5			
2459XA	-11.340	CCL					
2459XA	-9.490	GR					
2459XA	-4.090	NEU					

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

Company : WPX ENERGY
Well : SAVAGE RWF 421-25
File Name : d:\welldata\wpx\savage rwf 421-25\cbl421\repeat.xtf
Mode : PlotMgr 5.4.504
Interval : 8440.00 - 8740.00 feet UP

Created : 4/18/2014 2:00:35 PM





CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP\496A18 shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Apr 18 10:49:13 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: A18

Tool Delay [usec]	Tank OD in	Tank Wt lbm/ft	Tank ID in
-52.00	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	-0.008	100.00	0.31

3 Ft. Receiver	217	216	30	166	20	0.409	100.00	0.30
5 Ft. Receiver	327	325	30	263	25	1.035	150.00	0.34
Radial #1	217	216	30	166	22	0.623	100.00	0.30
Radial #2	218	216	30	166	22	0.382	100.00	0.30
Radial #3	218	216	30	166	22	0.626	100.00	0.30
Radial #4	218	216	30	166	22	0.873	100.00	0.31
Radial #5	217	216	30	166	22	0.926	100.00	0.31
Radial #6	217	216	30	166	22	1.116	100.00	0.31
Radial #7	216	216	30	166	22	0.567	100.00	0.30
Radial #8	218	216	30	166	22	0.774	100.00	0.30

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\496A18 fld.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Apr 18 10:50:37 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: A18

Tool Delay [usec]	Casing OD [in]	Casing Wt [lbm/ft]	Casing ID [in]
-52.00	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	0.021	0.000	1.00	100.000
3 Ft. Receiver	200	30	2.197			
5 Ft. Receiver	317	30	2.024			
Radial #1	200	30	1.639			
Radial #2	200	30	1.572			
Radial #3	200	30	1.819			
Radial #4	200	30	1.797			
Radial #5	200	30	2.067			
Radial #6	200	30	2.157			
Radial #7	200	30	1.758			
Radial #8	200	30	1.733			

GAMMA RAY

Calibration File: C:\case\calver\GR\456A3.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Apr 03 13:37:28 2014 TOOL SERIES: 2459XA ASSET: 456 SEQ: A3

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	76.84	356.71	0.661	50.80	235.80	185.00

Verification File: C:\case\calver\GR\456A3.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Thu Apr 03 13:38:35 2014 TOOL SERIES: 2459XA ASSET: 456 SEQ: A3

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	80.98	351.78	0.661	53.53	232.54	179.01

TOOL DIAGRAM

OTA SHORT CABLE HEAD

PROBE 2 3/4 DUAL RECEIVER RADII

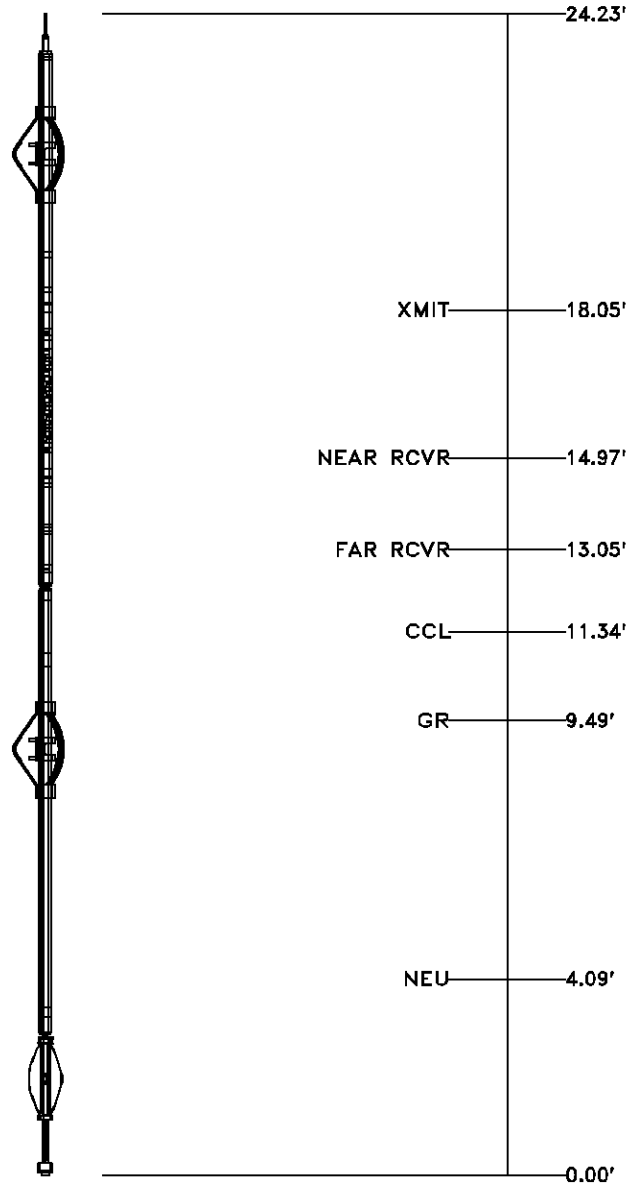
Series	1426XA
Mnemonic	PROB
Diameter	2.75"
Length	11.17'
Measure Point	0.75' FAR RCVR
Measure Point	2.67' NEAR RCVR
Measure Point	5.75' XMIT
Temp Rating	350.00 °F
Press Rating	18000.00 PSI

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

CENTRALIZER

Series	RALCENT
Mnemonic	CENT
Diameter	3.12"
Weight	20.00 lb



Total Length: 24.23'
Total Weight: Not Available
Max Diameter: 0' 3.12"

BAKER HUGHES

Baker Atlas

CASE

Company	WPX ENERGY		File No:
Well	SAVAGE RWF 421-25		CH084704
Field	RULISON		API No:
County	GARFIELD	State CO	05045219680000

Location

SHL: 2449' FNL & 1439' FWL

BHL: 1094' FNL & 2120' FWL

SEC 25 TWP 6S RGE 94W

Elevations

KB	6058 ft	25 6S 94W
DF		RWF 22-25 PAD
GL	6037 ft	CYCLONE 17