BAKER HUGHES

Baker Atlas

RADIAL ANALYSIS BOND LOG

File No:	1475
API No:	05045173460000
Company	WILLIAMS PRODUCTION COMPANY
Well	KP 511-16
Field	KOKOPELLI
County	GARFIELD
State	COLORADO

S16 T6S R91W
PAD: KP 22-16
RIG: CYCLONE 30

Location

SHL: 1664' FNL & 1290' FWL
BHL: 1095' FNL & 880' FWL

SEC 16 TWP 6S RGE 91W

Other Services

RPM
TEMP

Permanent Datum	GL	Elevation	6679 ft
Log Measured From	KB	23 ft	Above P. D.
Drill Measured From	KELLY BUSHING		

Elevations

KB 6702 ft
DF 6701 ft
GL 6679 ft

Date	25/NOV/08		
Run	ONE		
Service Order	576533		
Depth Driller	8230 ft		
Depth Logger	8177 ft		
Bottom Logged Interval	8177 ft		
Top Logged Interval	SURFACE		
Time Started	7:00		
Time Finished	11:00		
Operator Rig Time	4 hrs		
Type of Fluid in Hole	WATER		
Fluid Density	N/A		
Salinity	N/A		
Fluid Level	FULL		
Logged Cement Top	N/A		
Wellhead Pressure	0 psi		
Maximum Hole Deviation	N/A		
Nominal Logging Speed	45 fpm		
Maximum Recorded Temperature	197 degF		
Reference Log	BAKER ATLAS TRIPLE COMBO		
Reference Log Date	20/NOV/08		
Equipment No. / Location	4214	VERNAL, UT	CRANE 9712
Recorded By	WIESER		
Witnessed By	MR. JEFF BRADY		

- 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
4.5 in	11.6 lbm/ft	P-110	SURFACE	8320 ft

Borehole Record

Bit Size	From	To
6.75 in	SURFACE	8320 ft

Remarks

LOG WAS TIED INTO BAKER ATLAS TRIPLE COMBO LOG.
WELL WAS LOGGED WITH 0 psi.
SHORT JOINT @ 4752' - 4773'.
BHT = 197 degF.

Equipment Data

Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10154957	CENTRALIZED
1	1	GR/CCL/TEL	2458XA	10124120	CENTRALIZED

MAIN SECTION
PRIMARY PRESENTATION

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	316.900	usec	28.193	8200.750
RAL	Amp Gate Start Near	200.391	usec	28.193	8200.750
RAL	Amp Gate Start Radial	200.391	usec	28.193	8200.750
RAL	Amp Gate Width Far	25.000	usec	28.193	8200.750
RAL	Amp Gate Width Near	25.000	usec	28.193	8200.750
RAL	Amp Gate Width Radial	25.000	usec	28.193	8200.750
RAL	casing od	4.500	inches	28.193	8200.750
RAL	casing wt	11.600	lbm/ft	28.193	8200.750
RAL	FB Start Far	291.900	usec	28.193	8200.750
RAL	FB Start Near	175.391	usec	28.193	8200.750
RAL	FB Start Radial	175.391	usec	28.193	8200.750
RAL	FB Thresh Far	10.000	mv	28.193	8200.750
RAL	FB Thresh Near	4.000	mv	28.193	8200.750
RAL	FB Thresh Radial	4.000	mv	28.193	8200.750
RAL	Fluid Travel Time	200.000	usec/ft	28.193	8200.625

DEPTH OFFSETS
(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-15.360	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	-14.360	AFAR	SIG	TT5			
1426XA	-7.250	CCL					
1426XA	-5.390	GR					

1426XA	0.000	NED

Created by : RAL, v4.8.007
Plotted by : PlotMgr, v5.4.504

Company : WILLIAMS PRODUCTION COMPANY
Well : KP 511-16
File Name : d:\welldata\rad511\main_cbl.xtf
Mode : PlotMgr 5.4.504
Interval : 0.00 - 8185.00 feet UP
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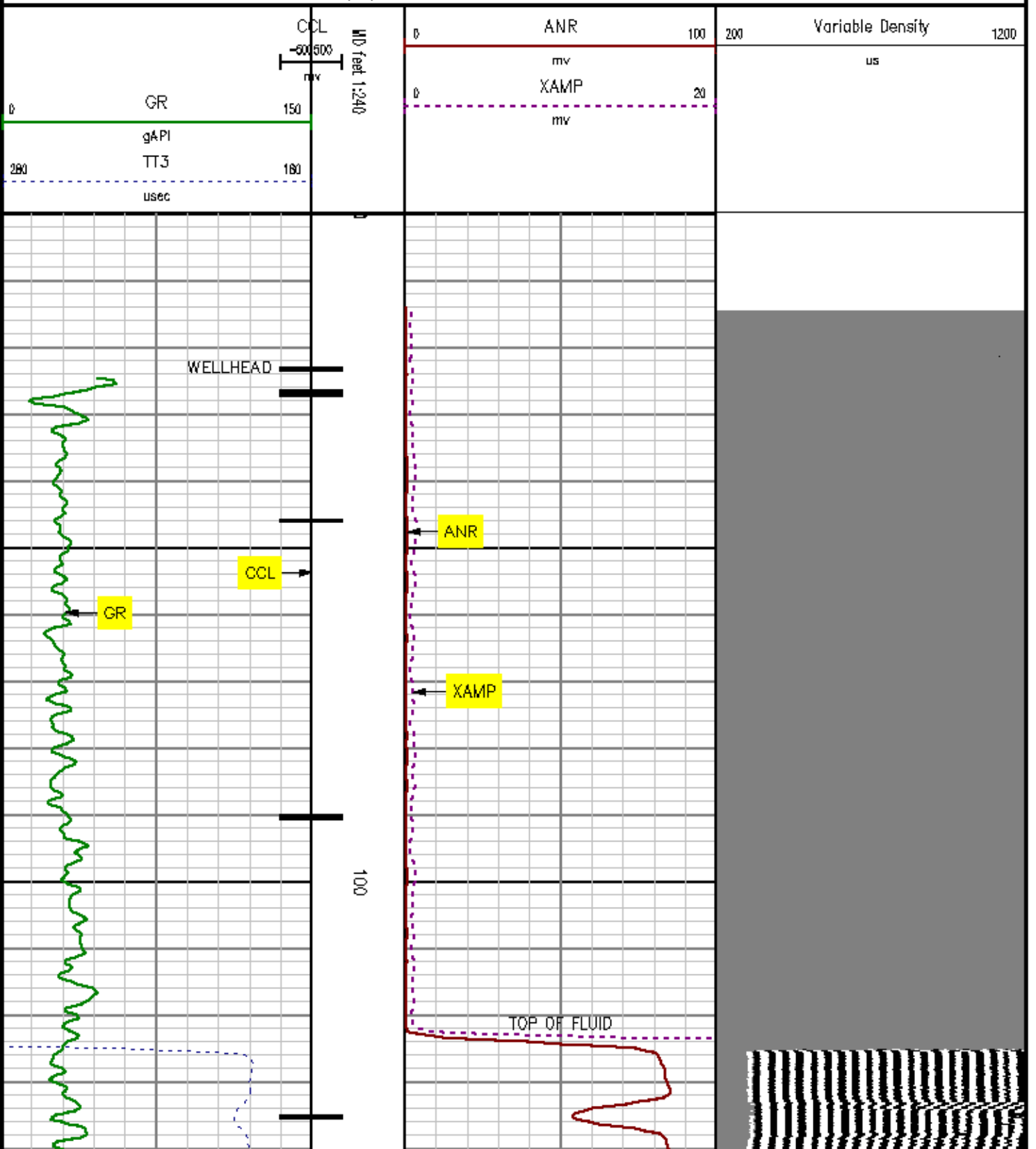

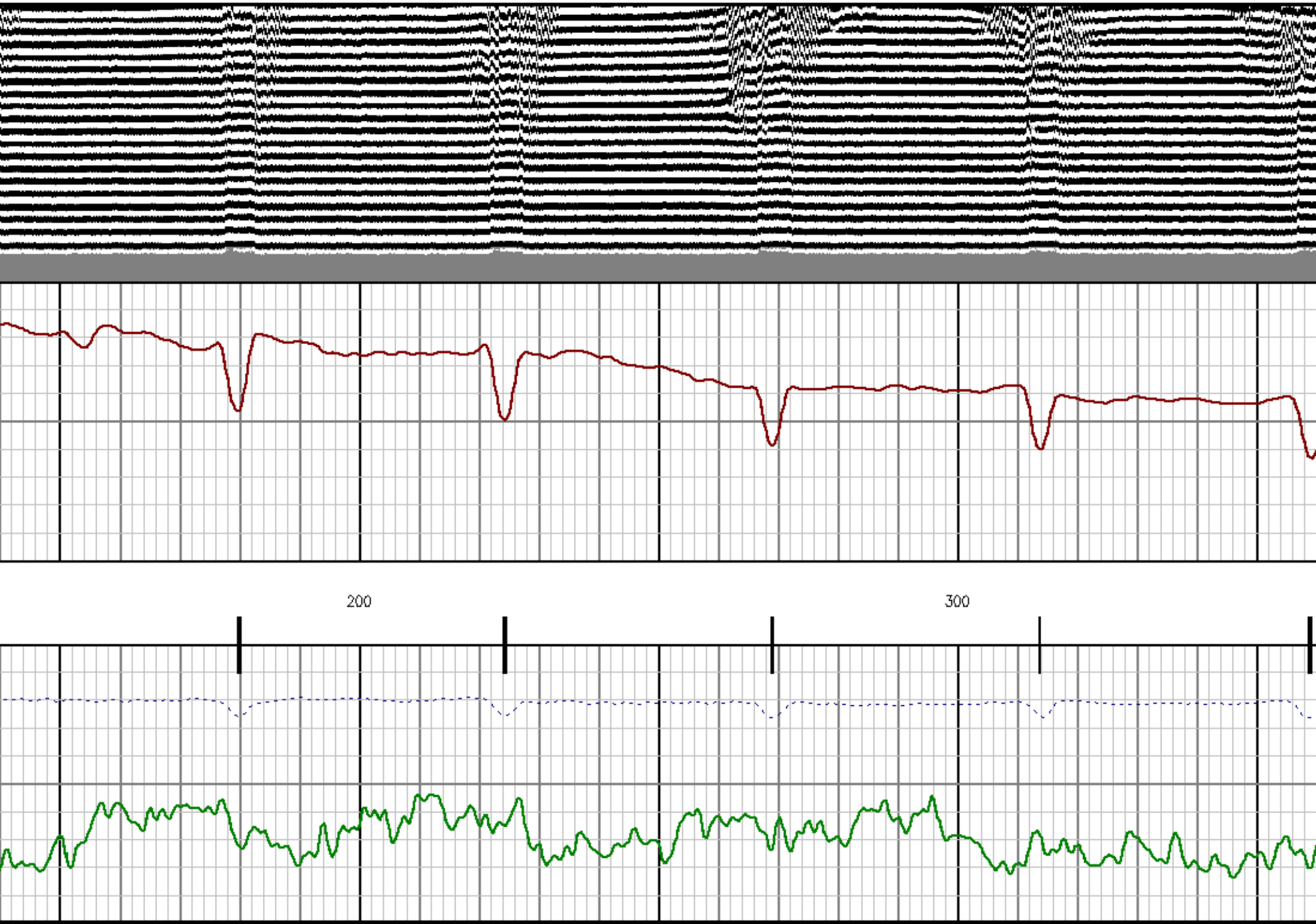
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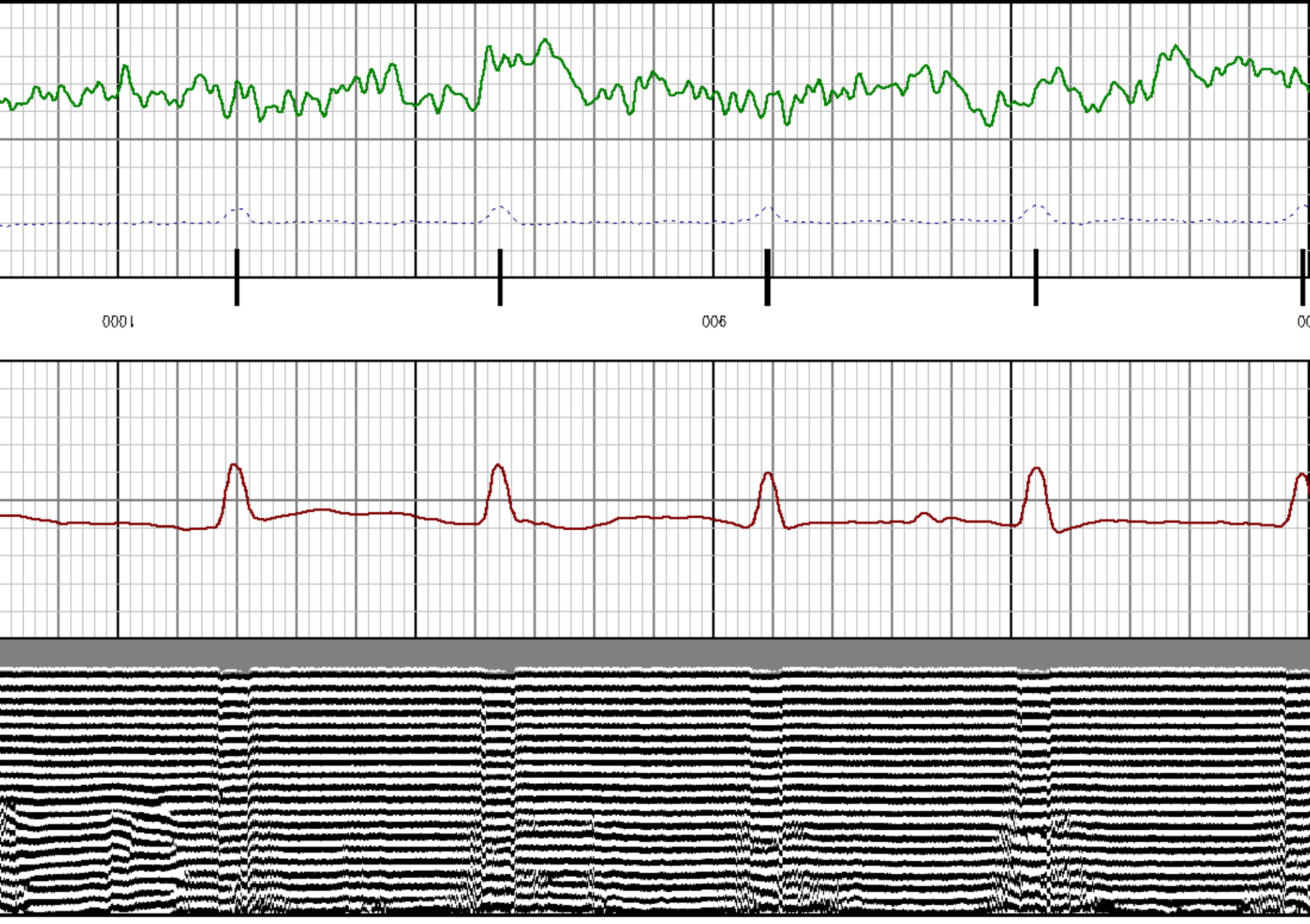
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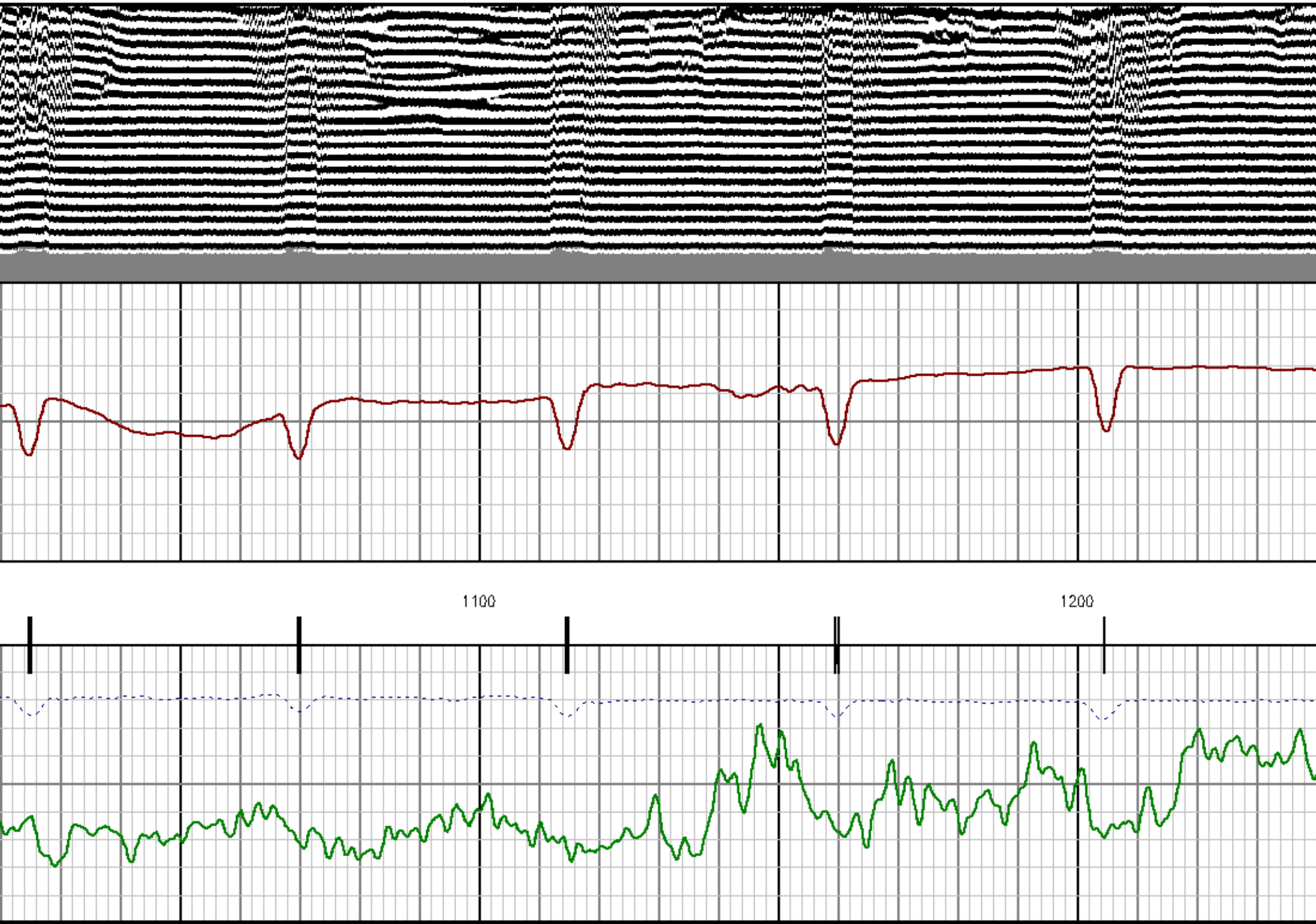
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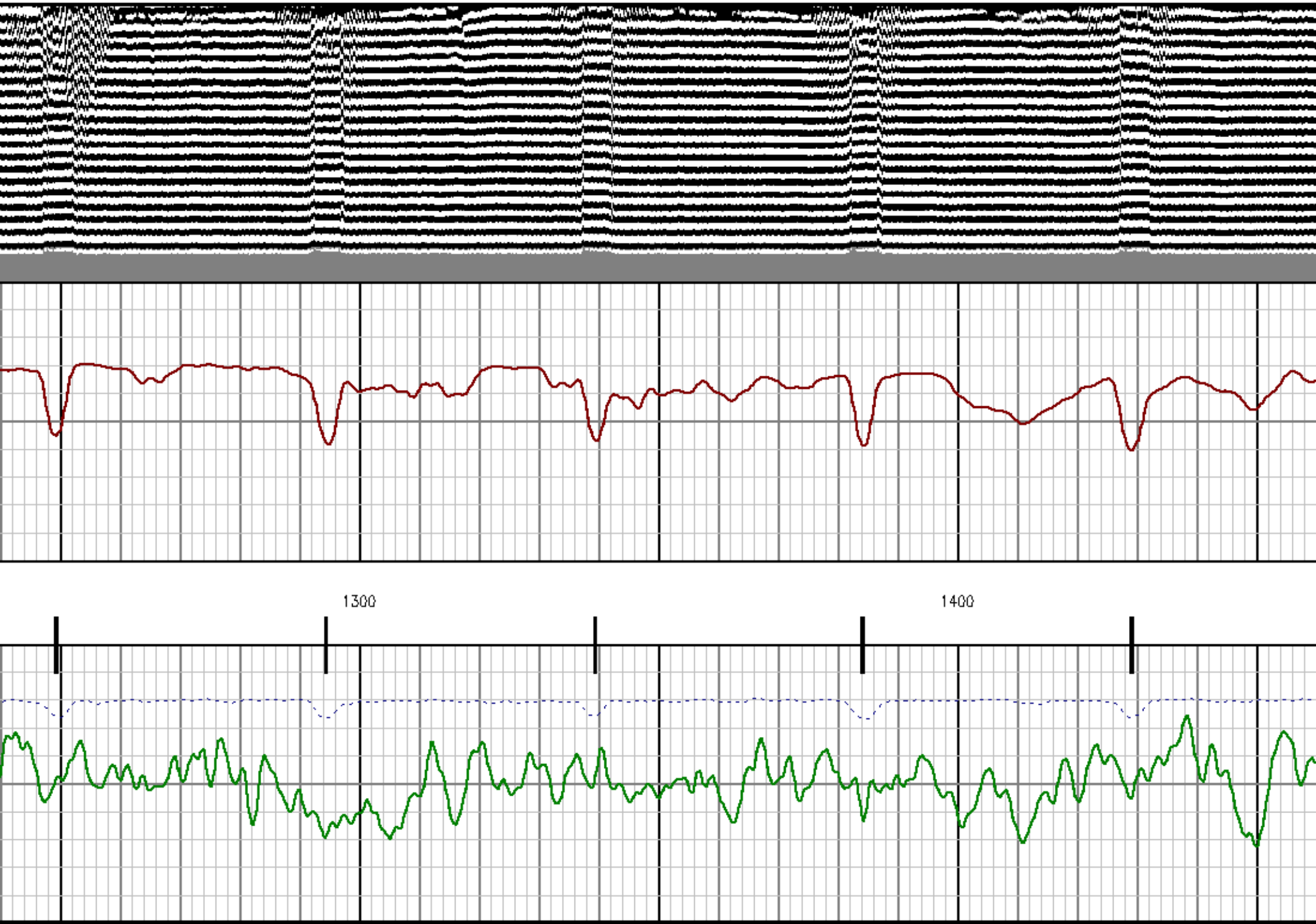
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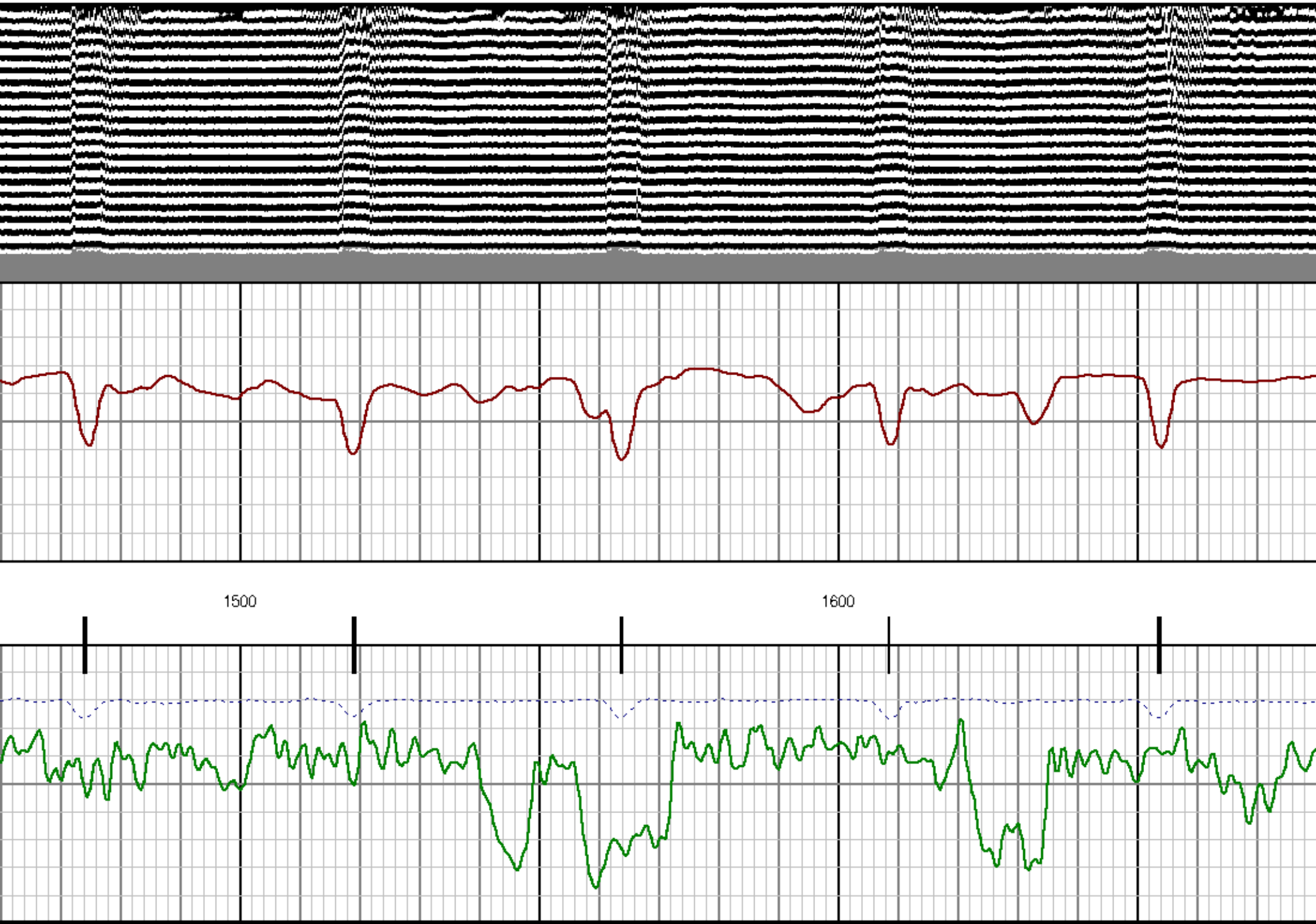
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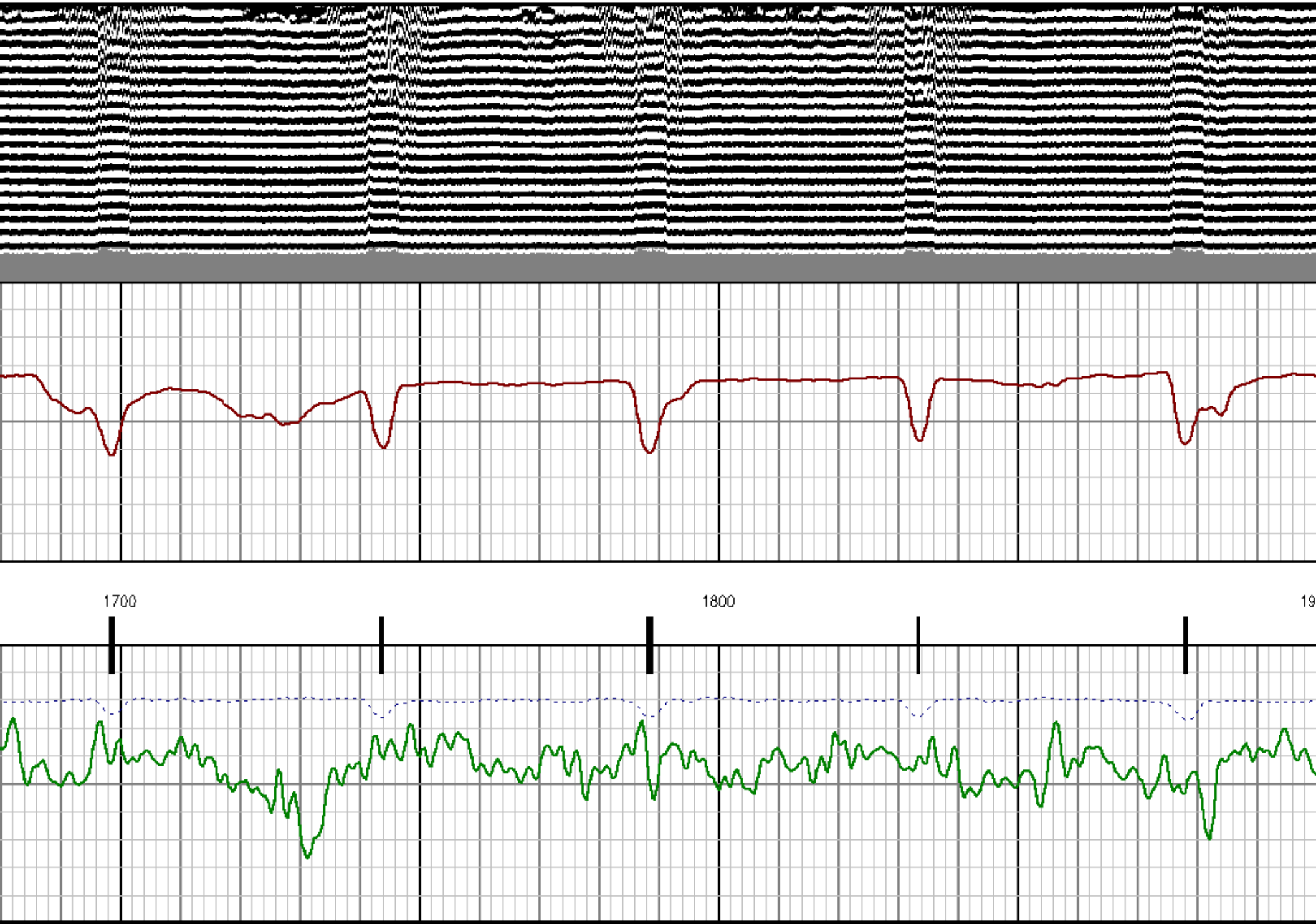
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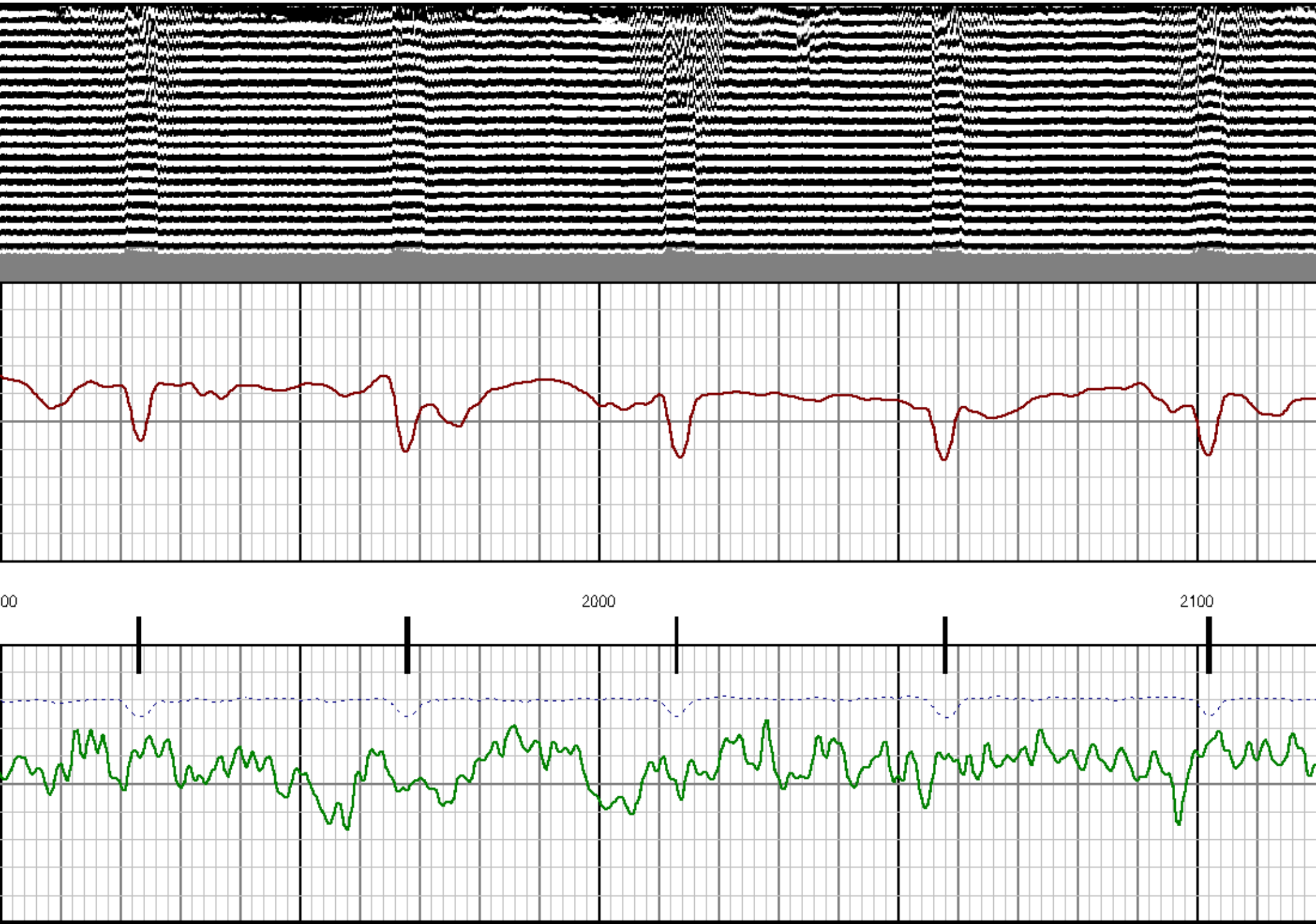
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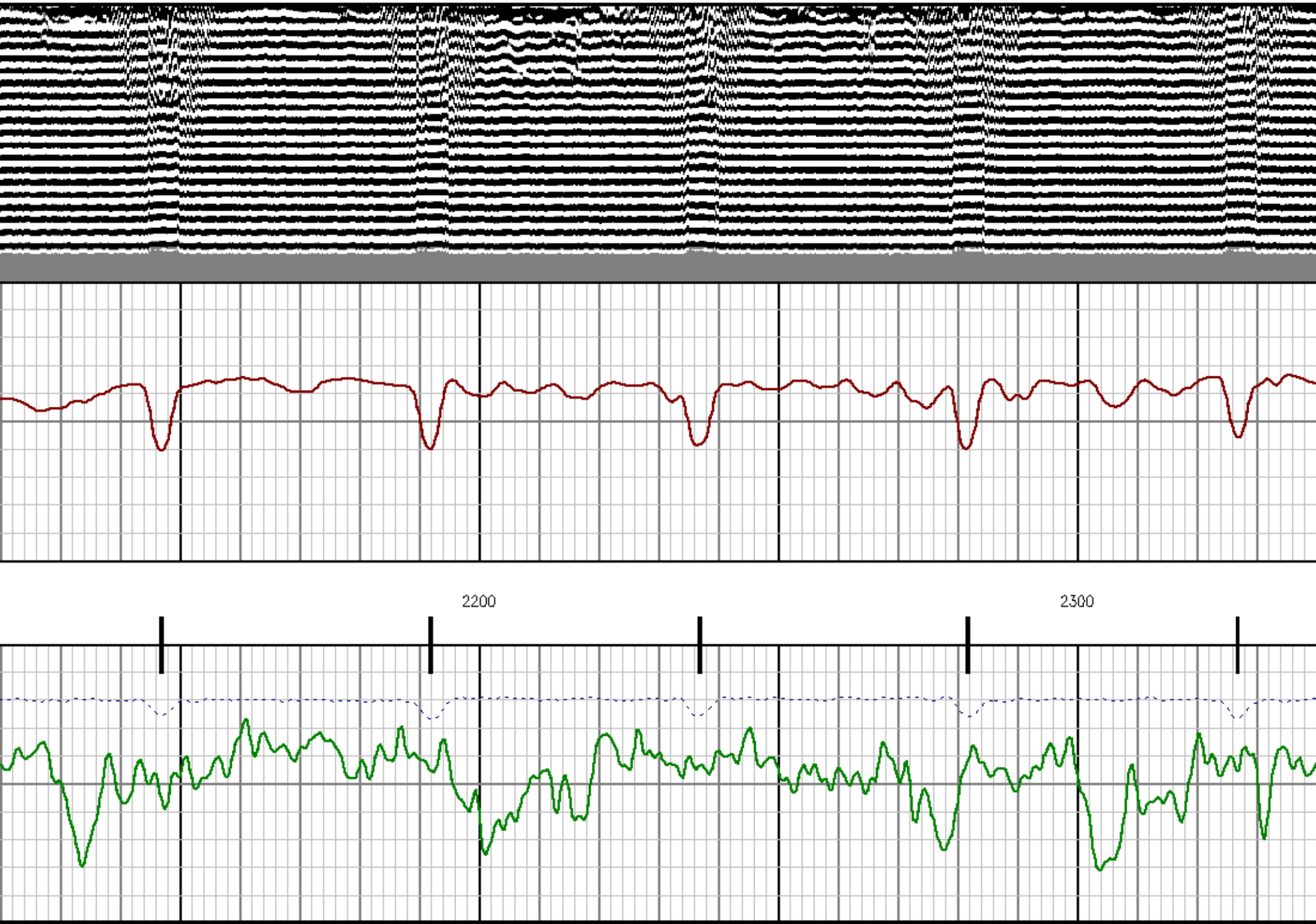
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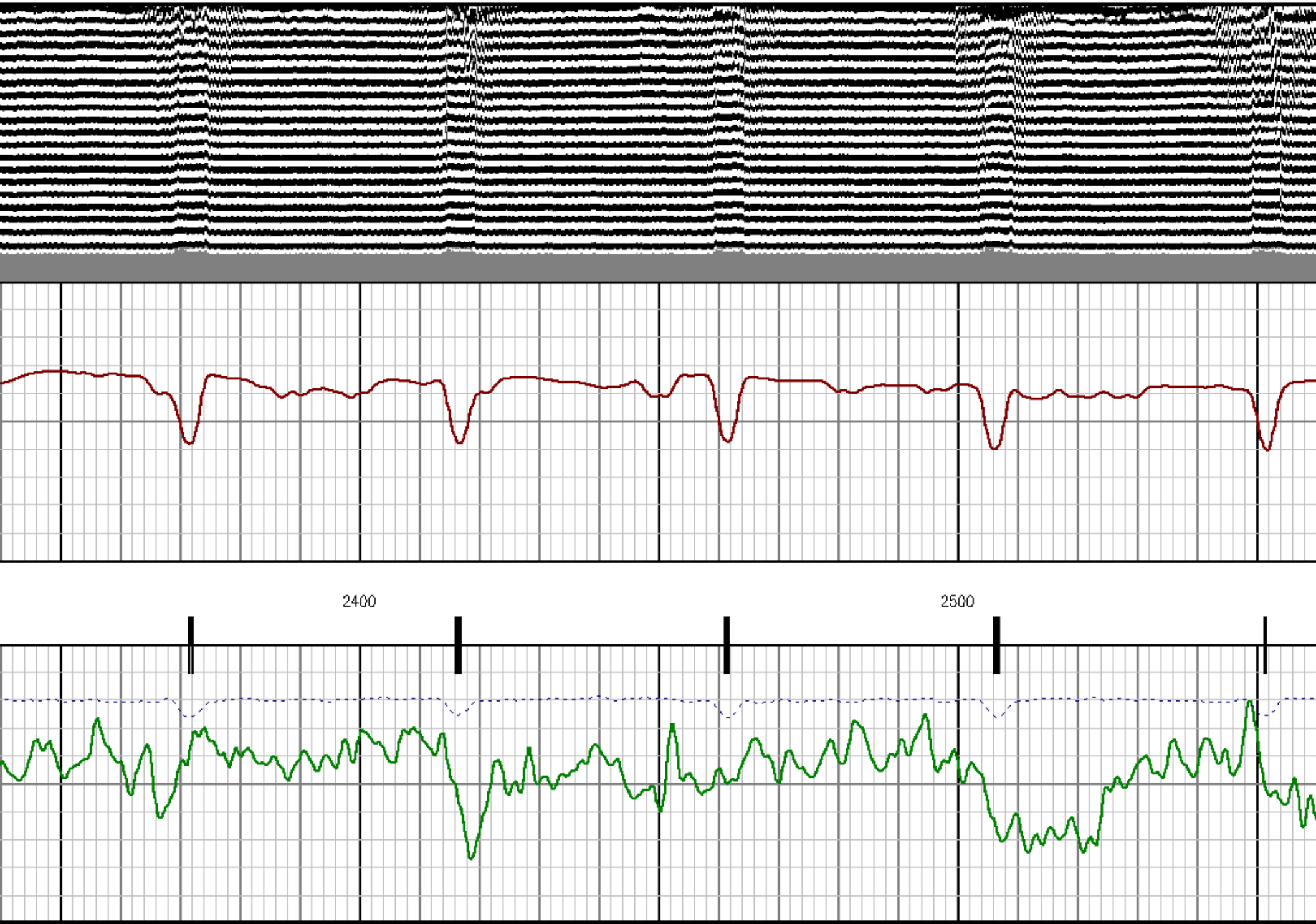
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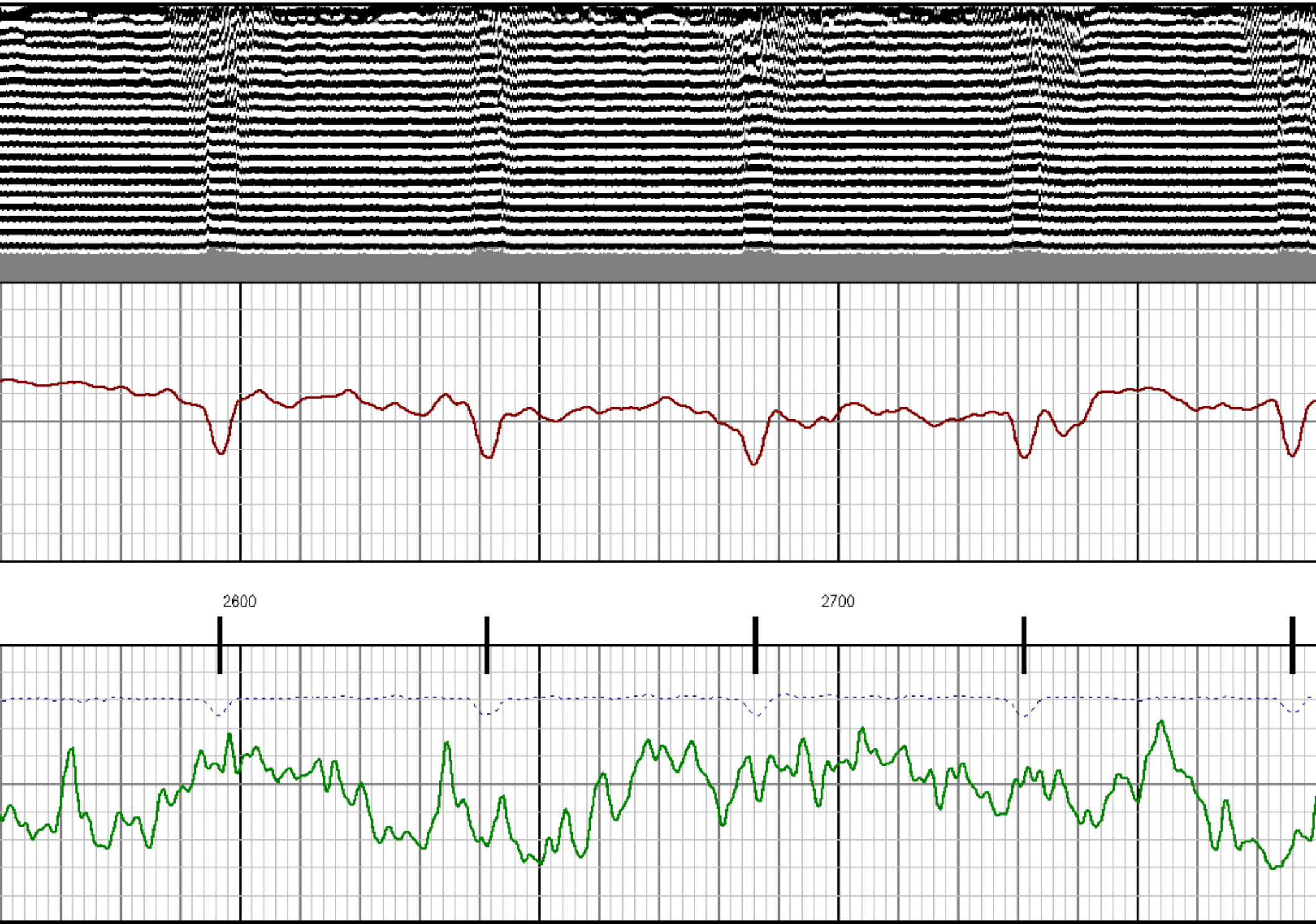
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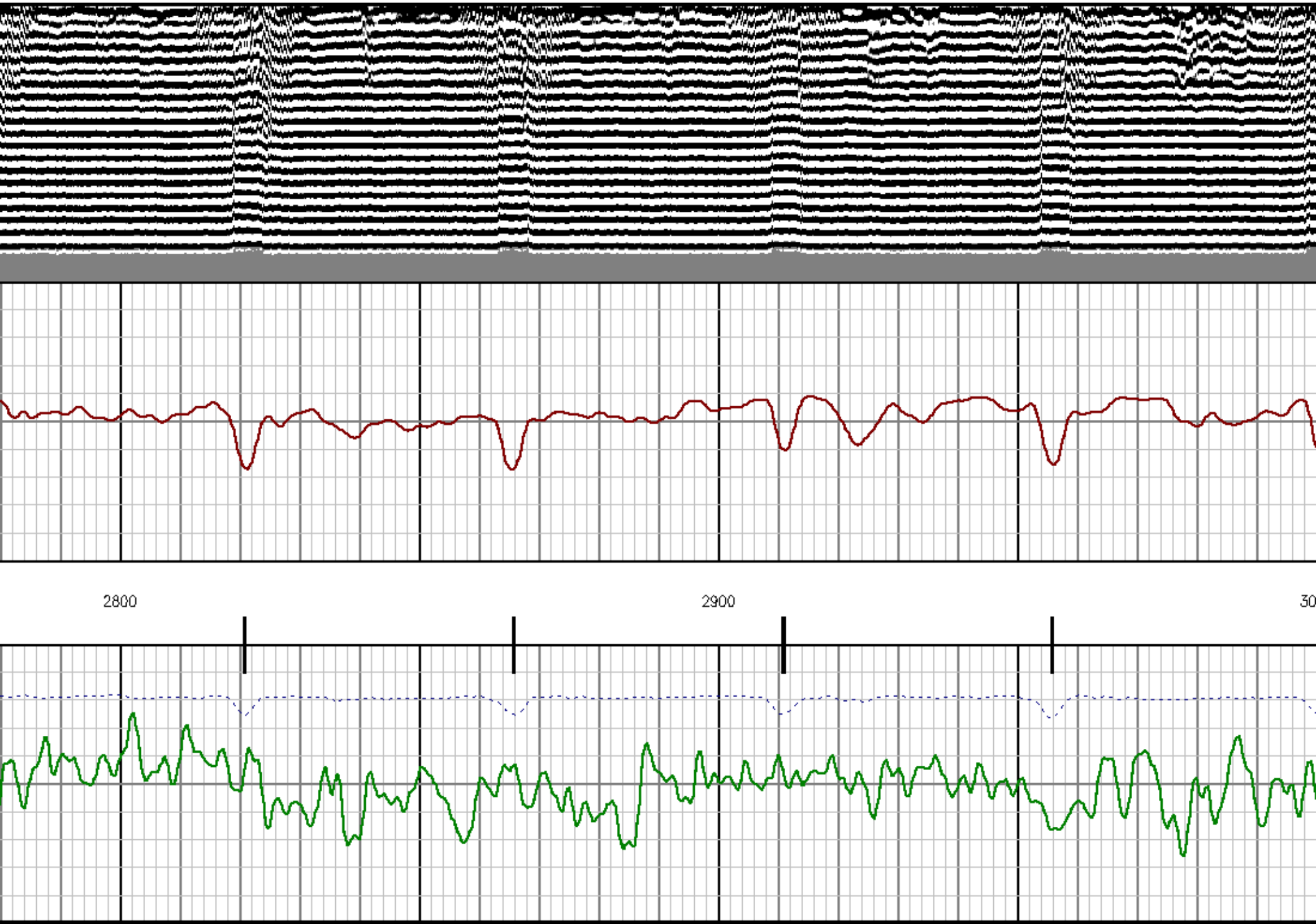
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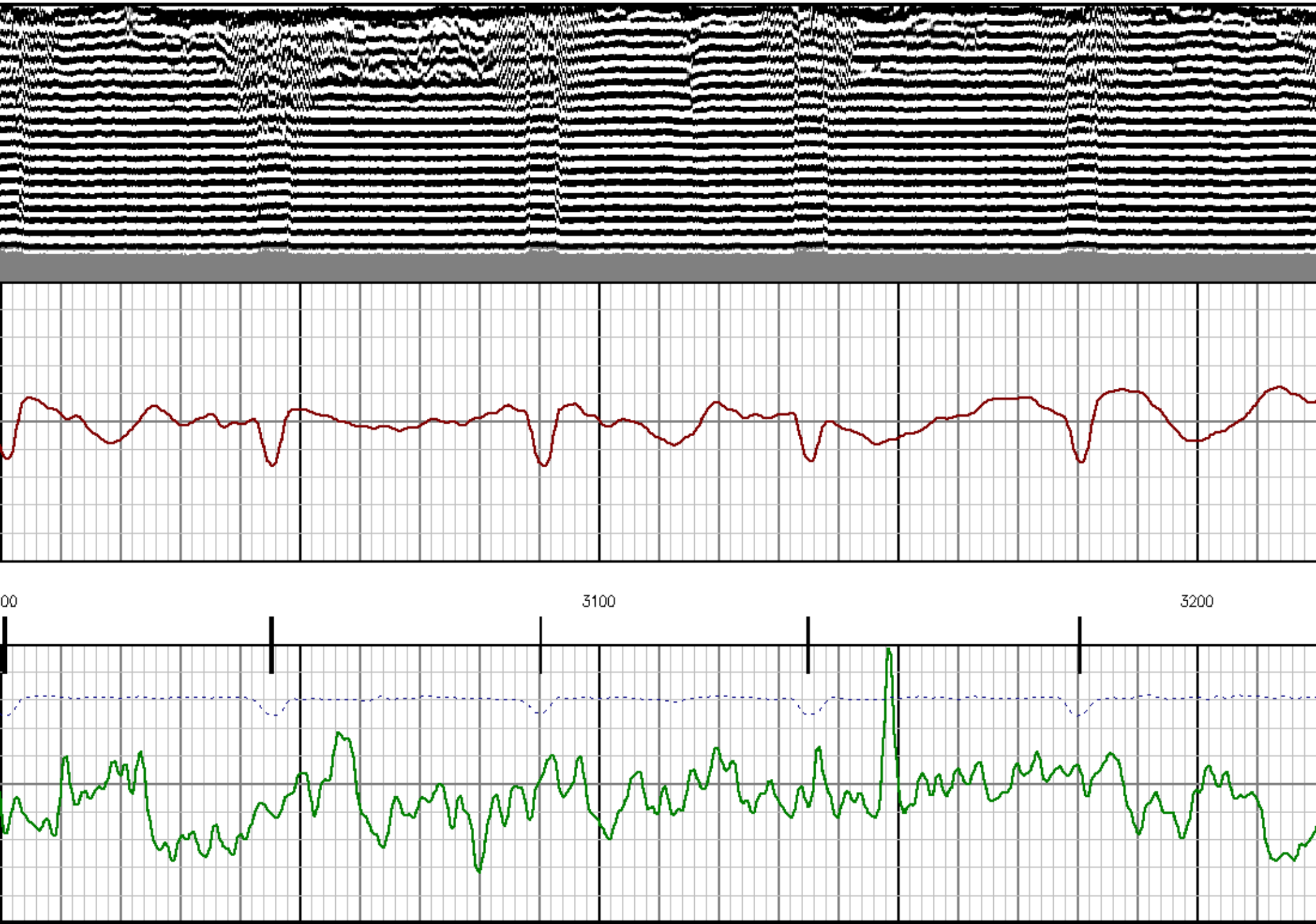
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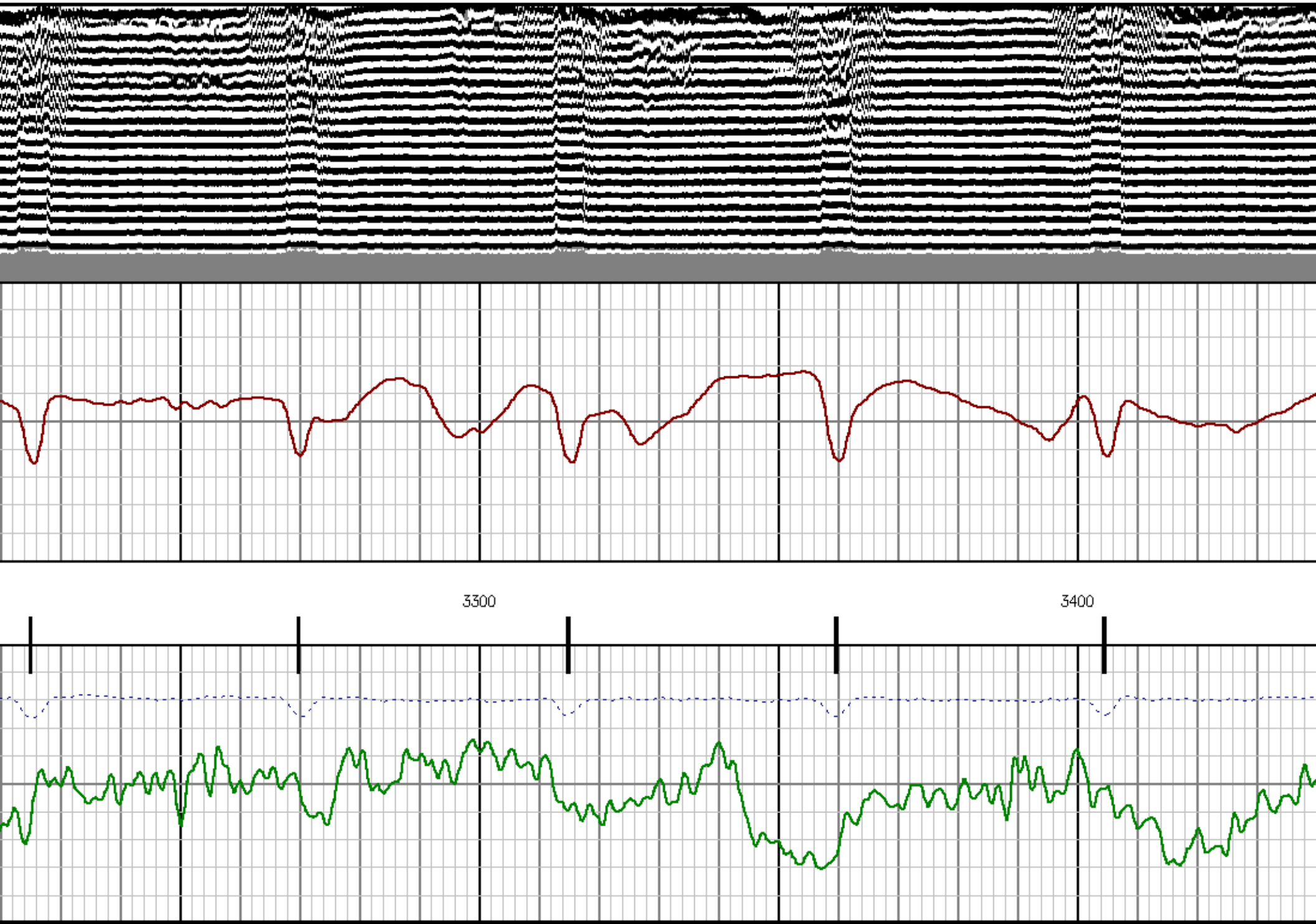
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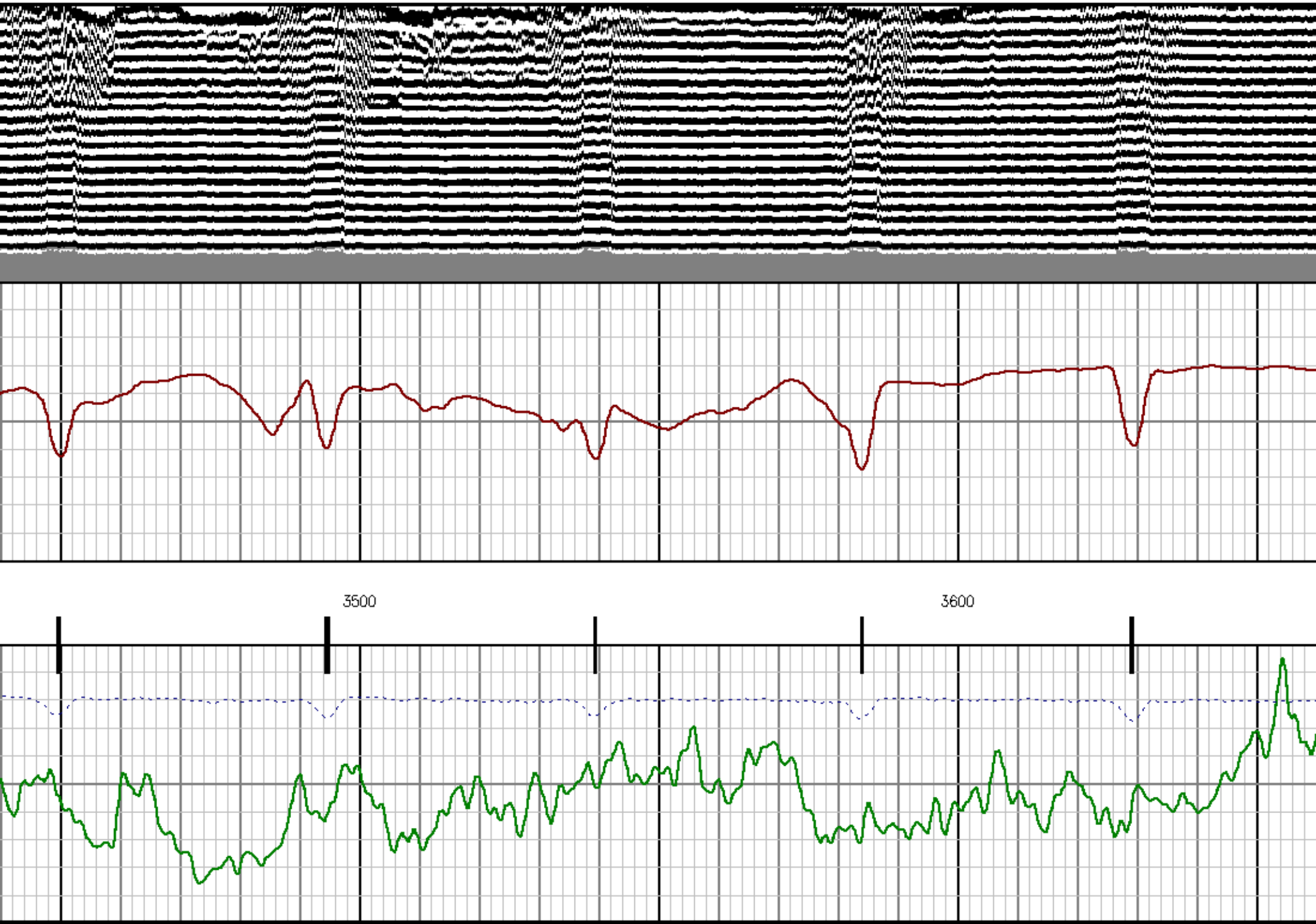
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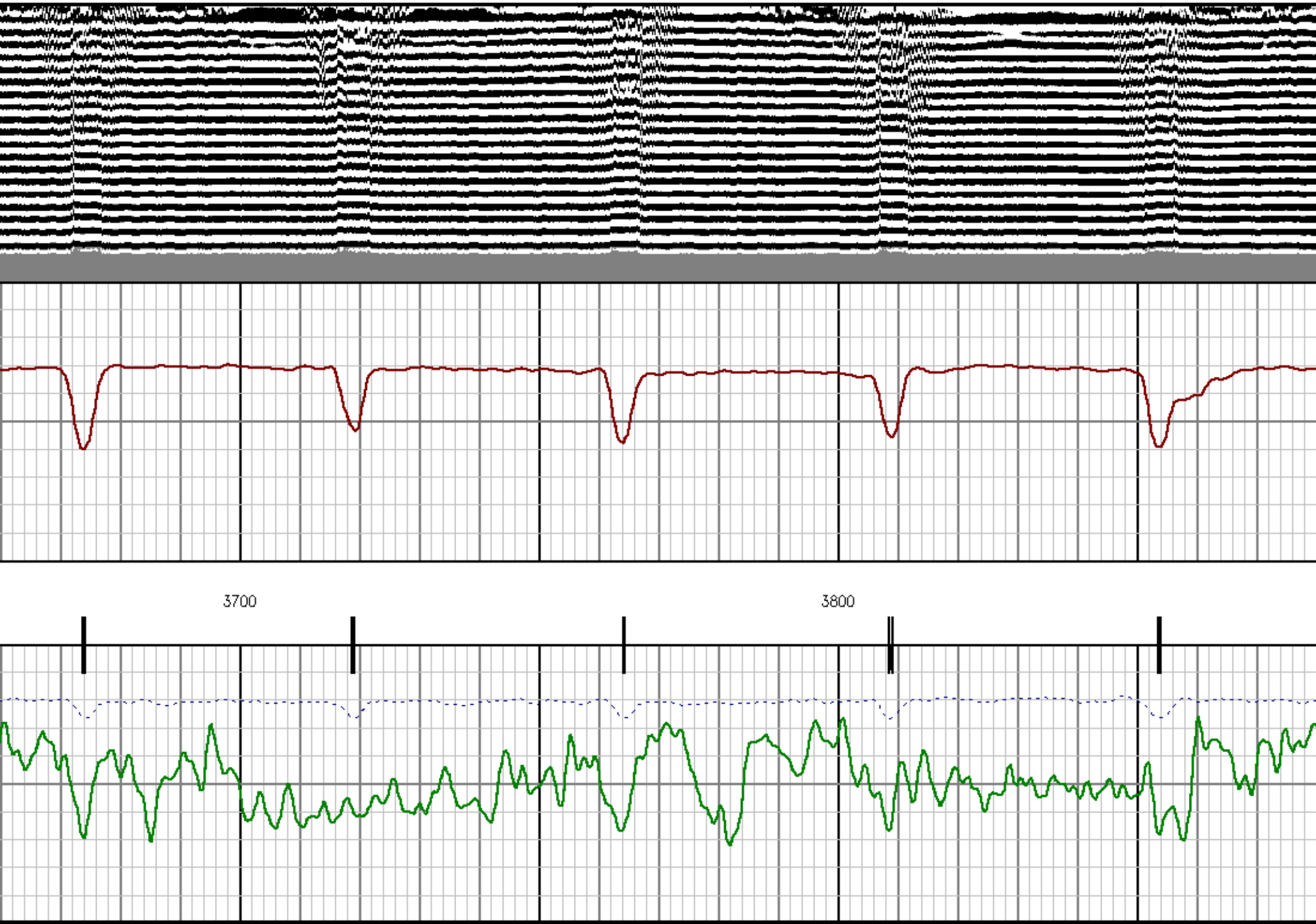
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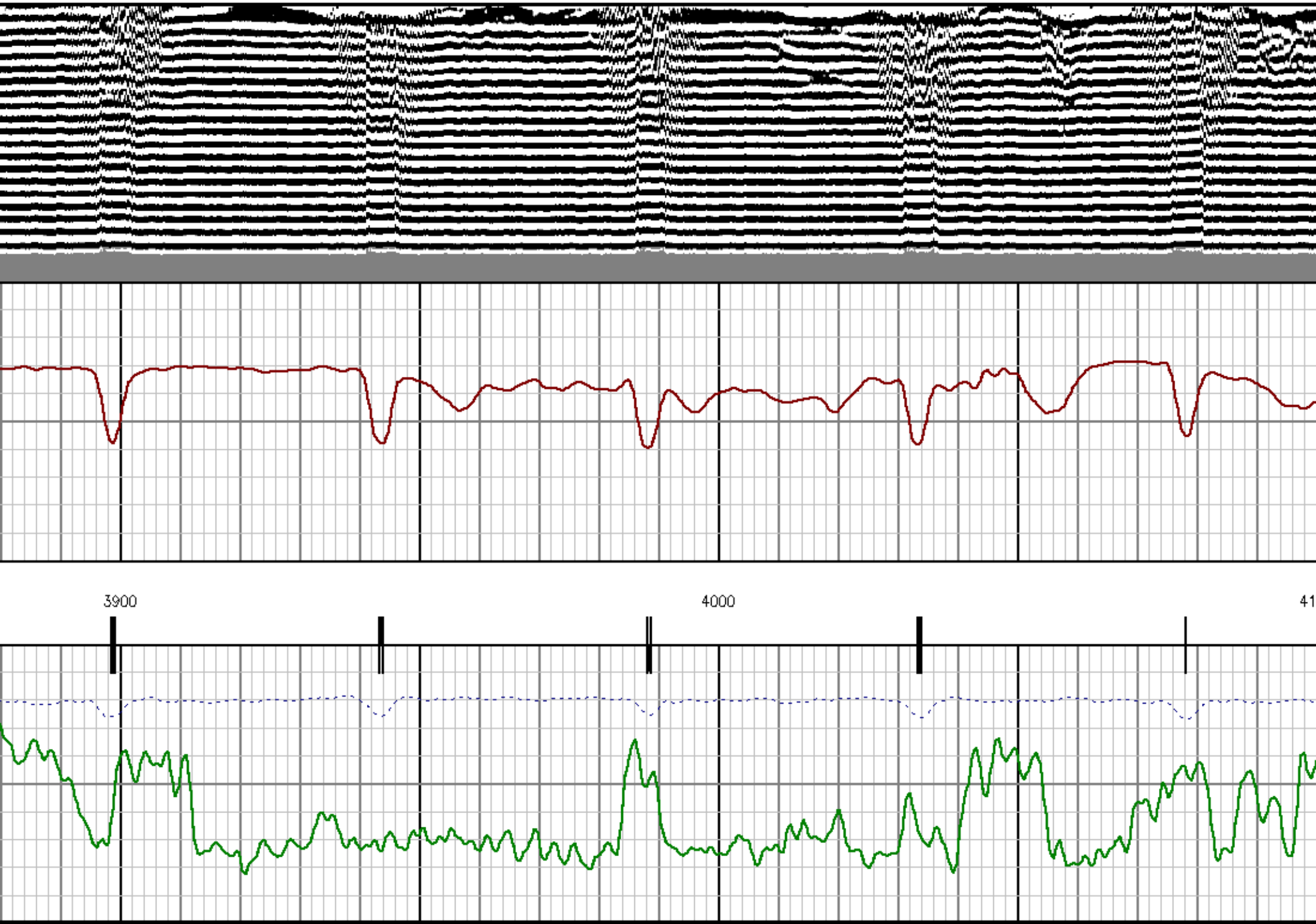
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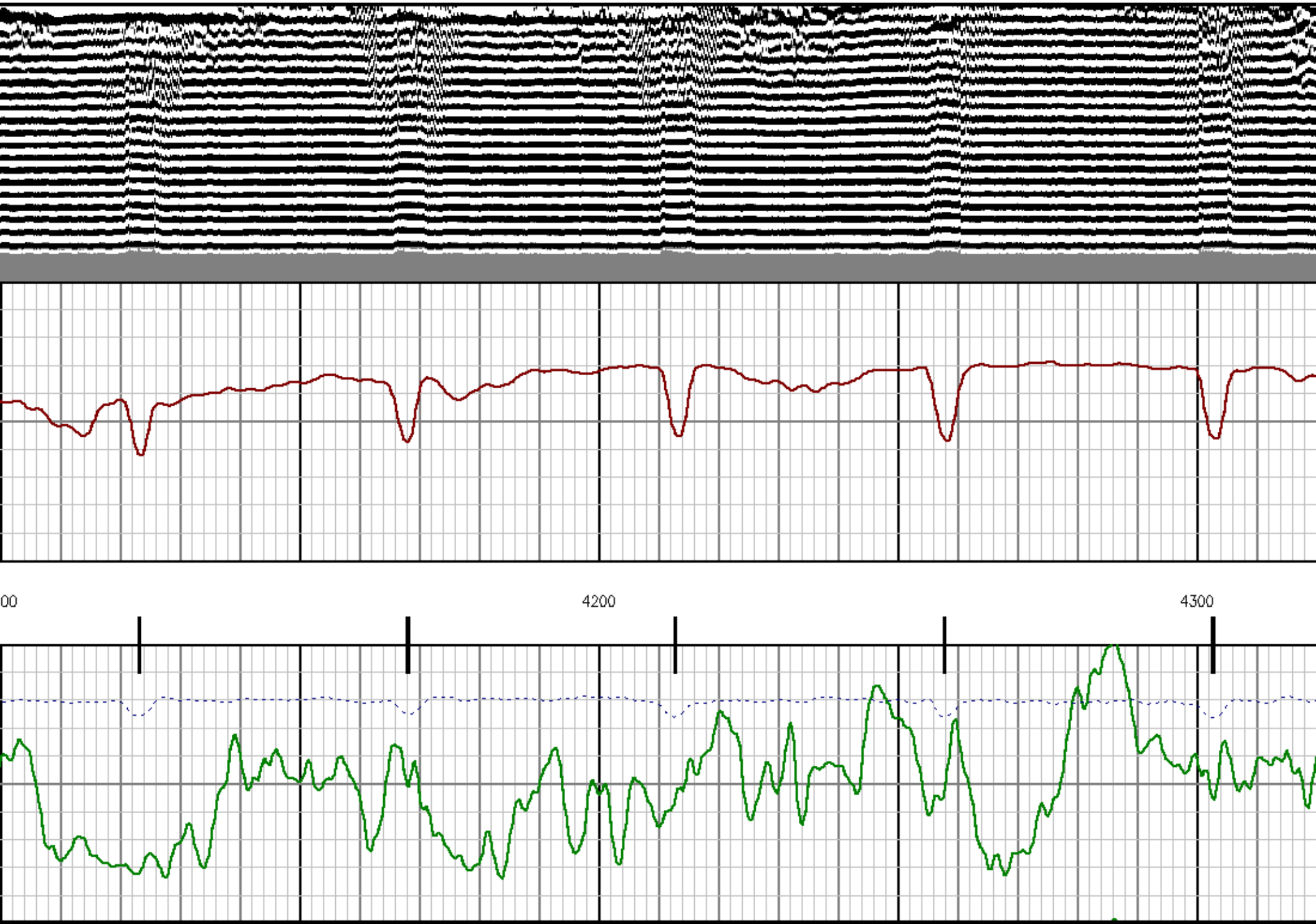
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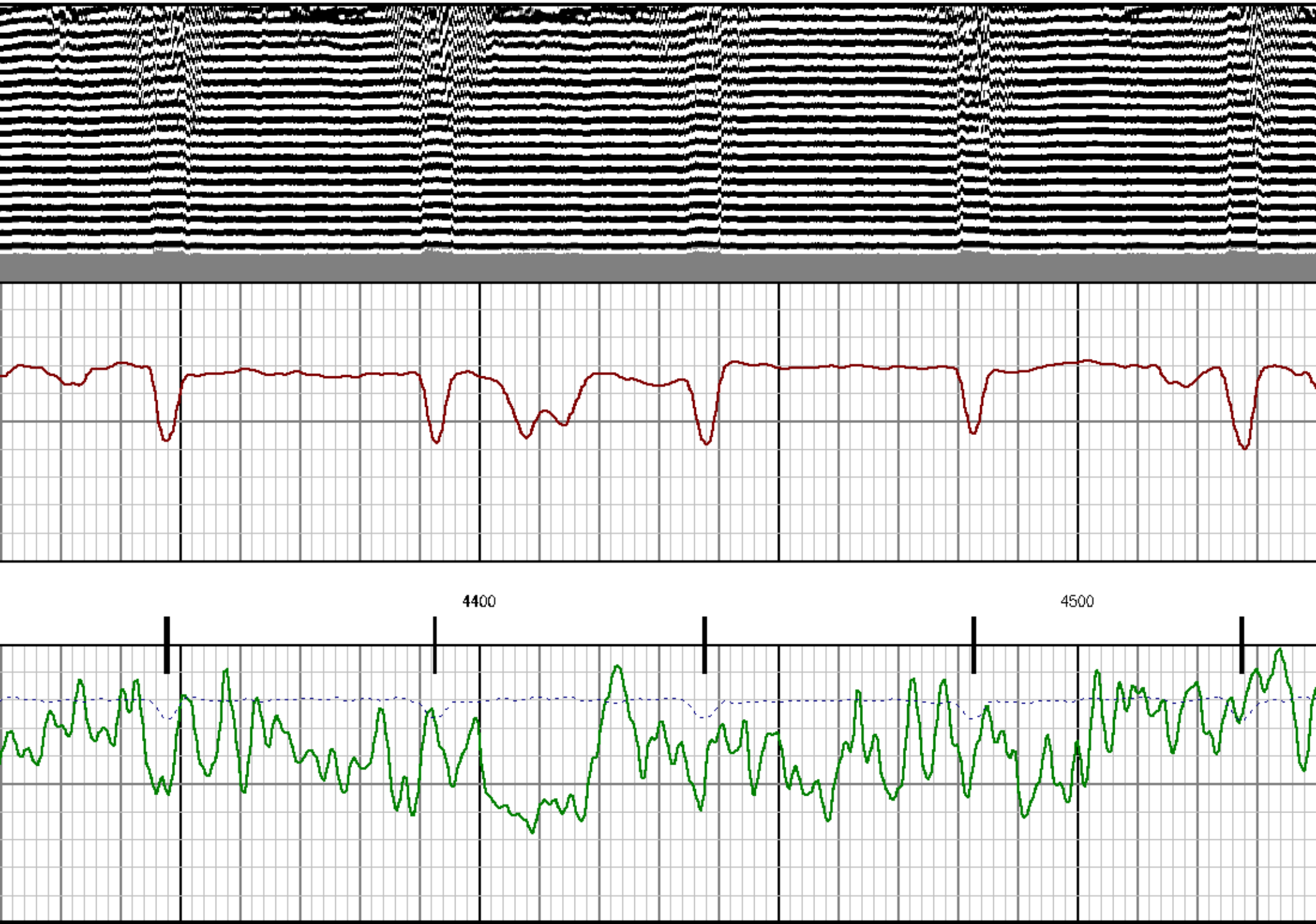
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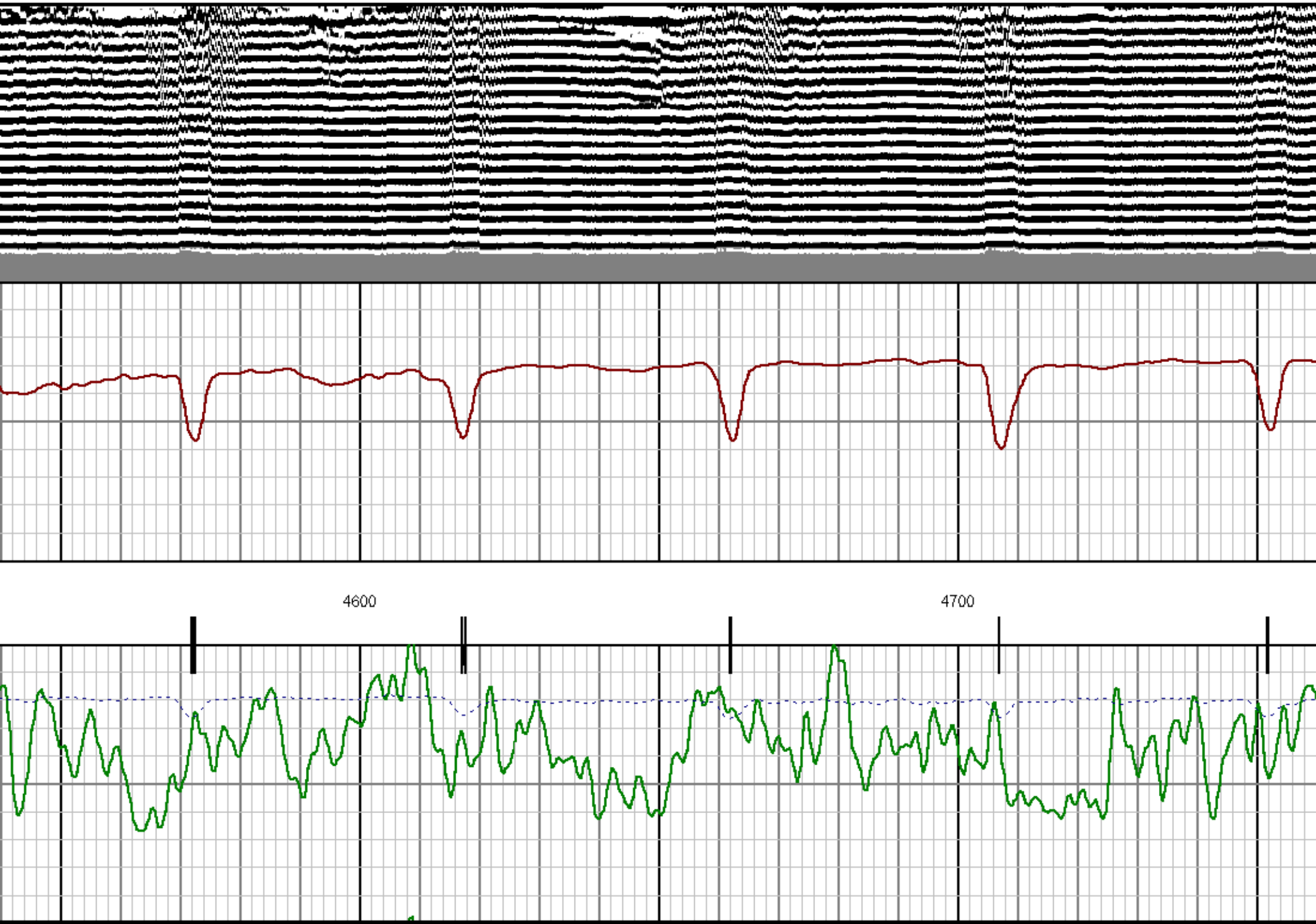
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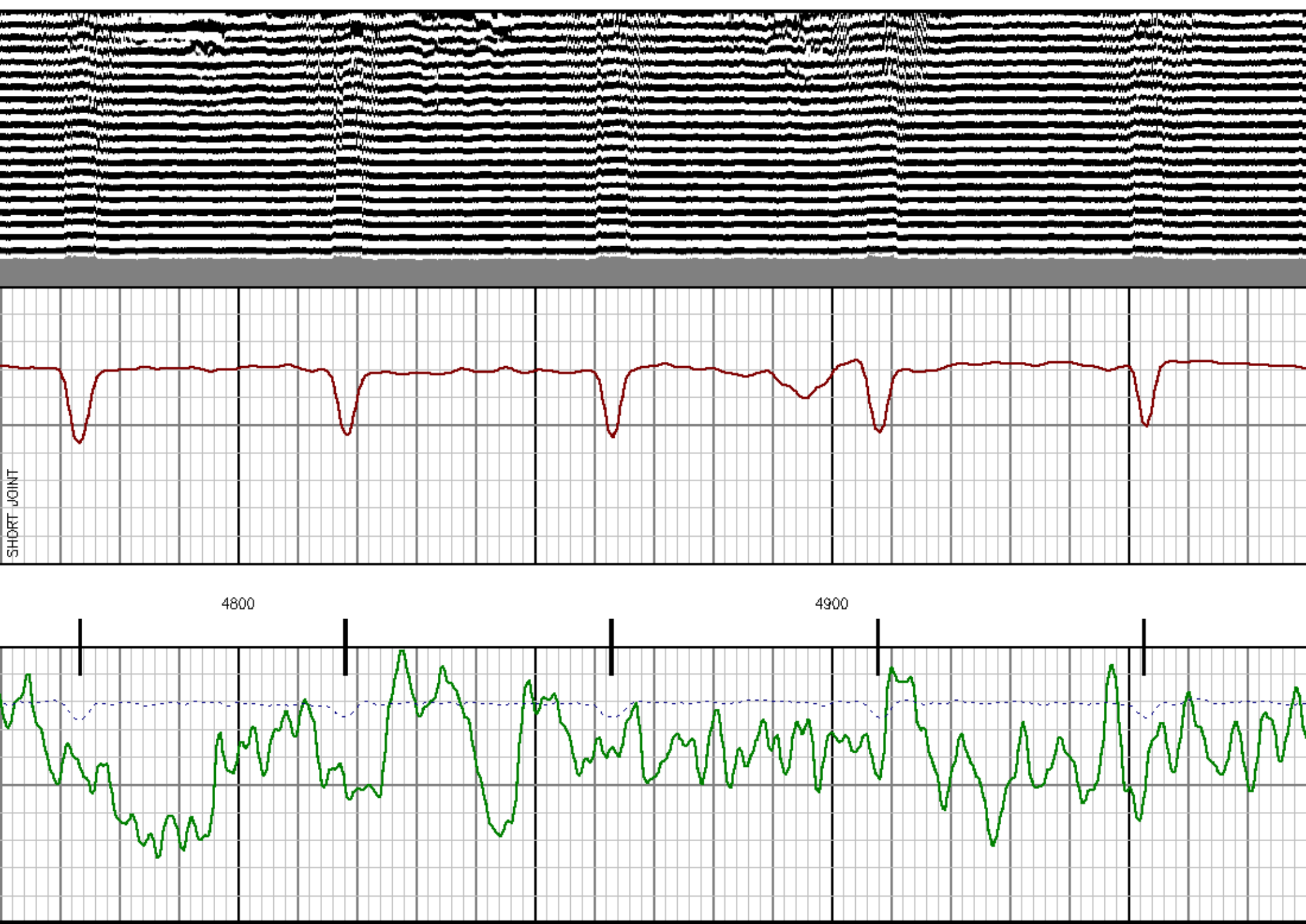
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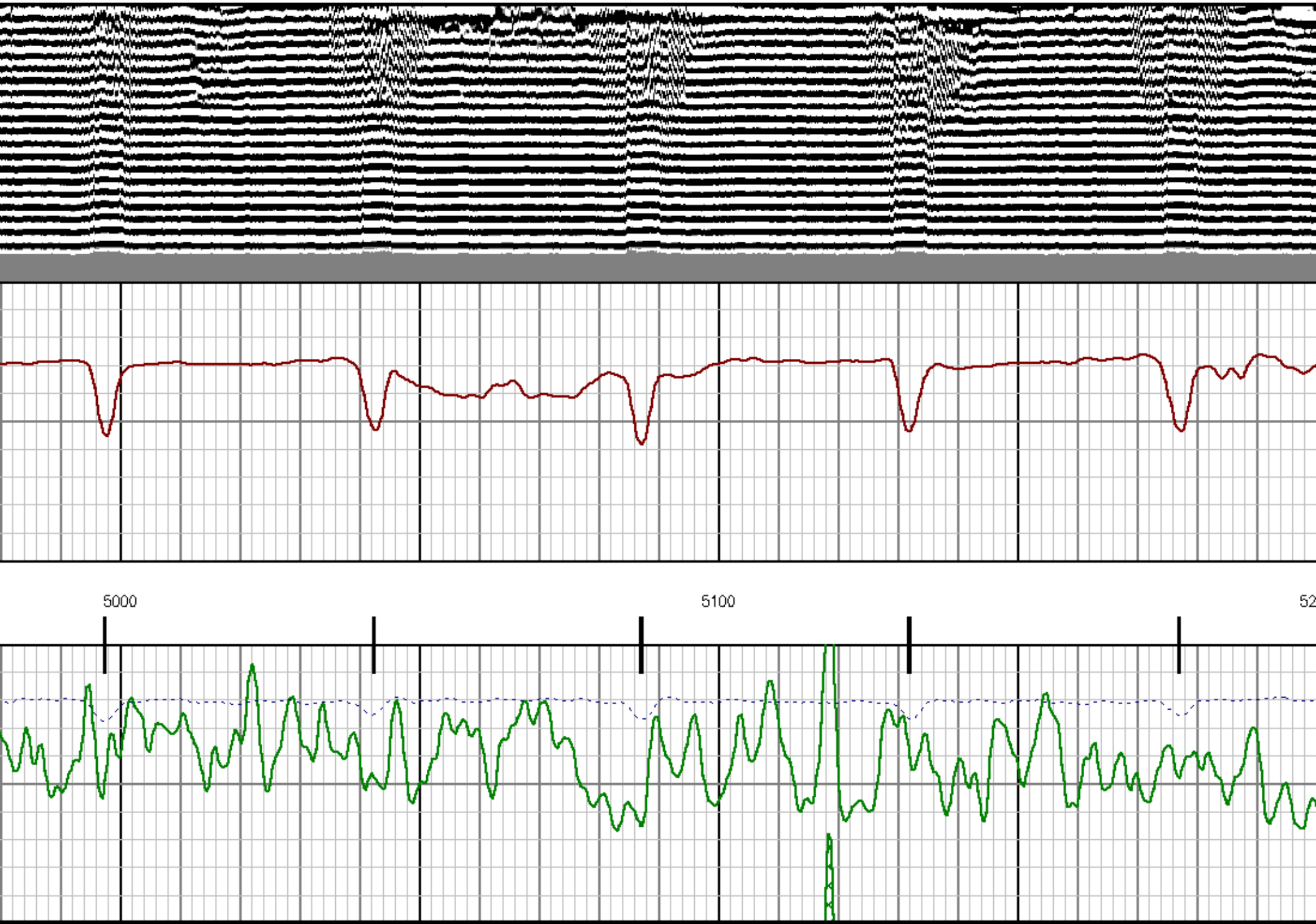
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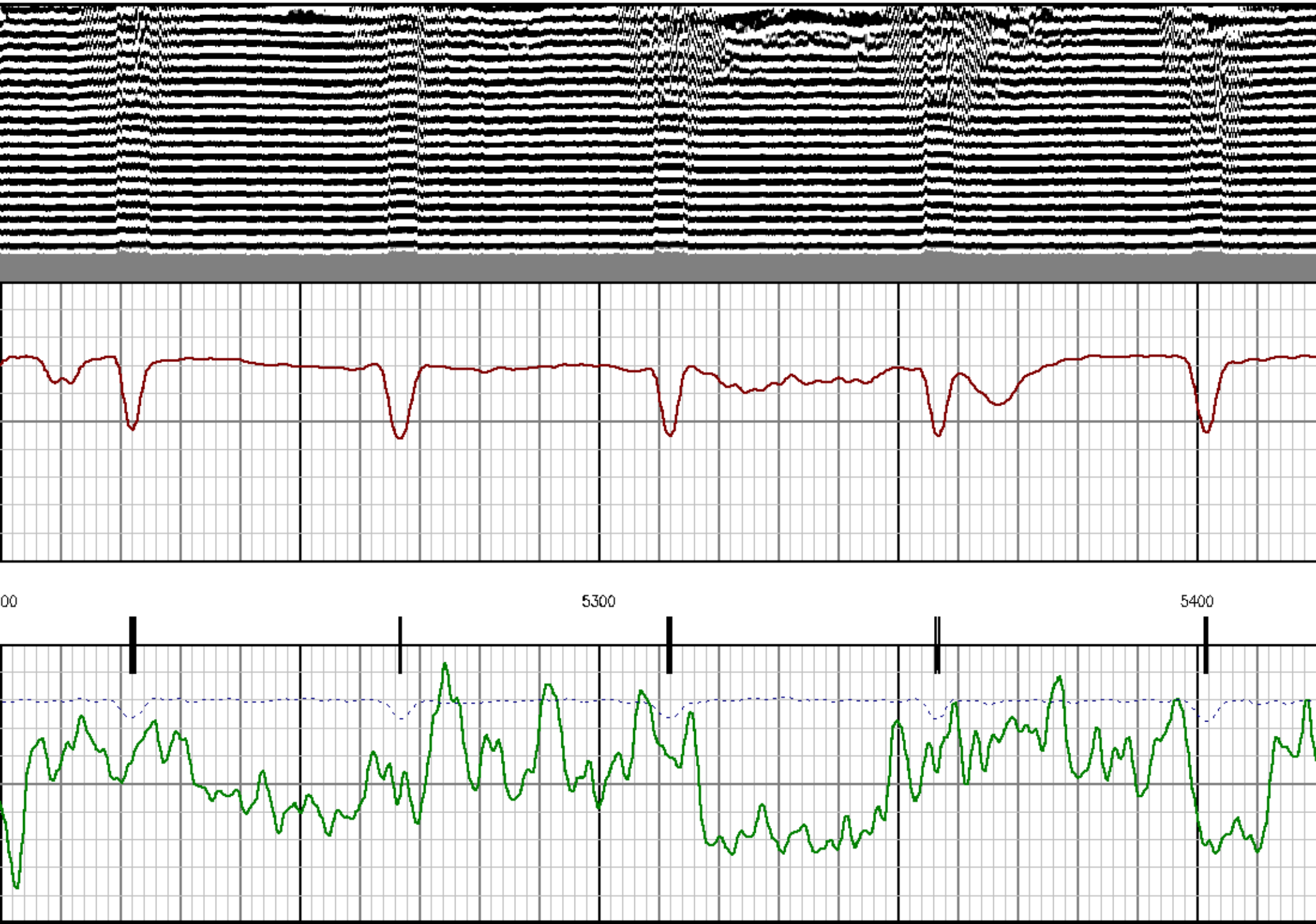
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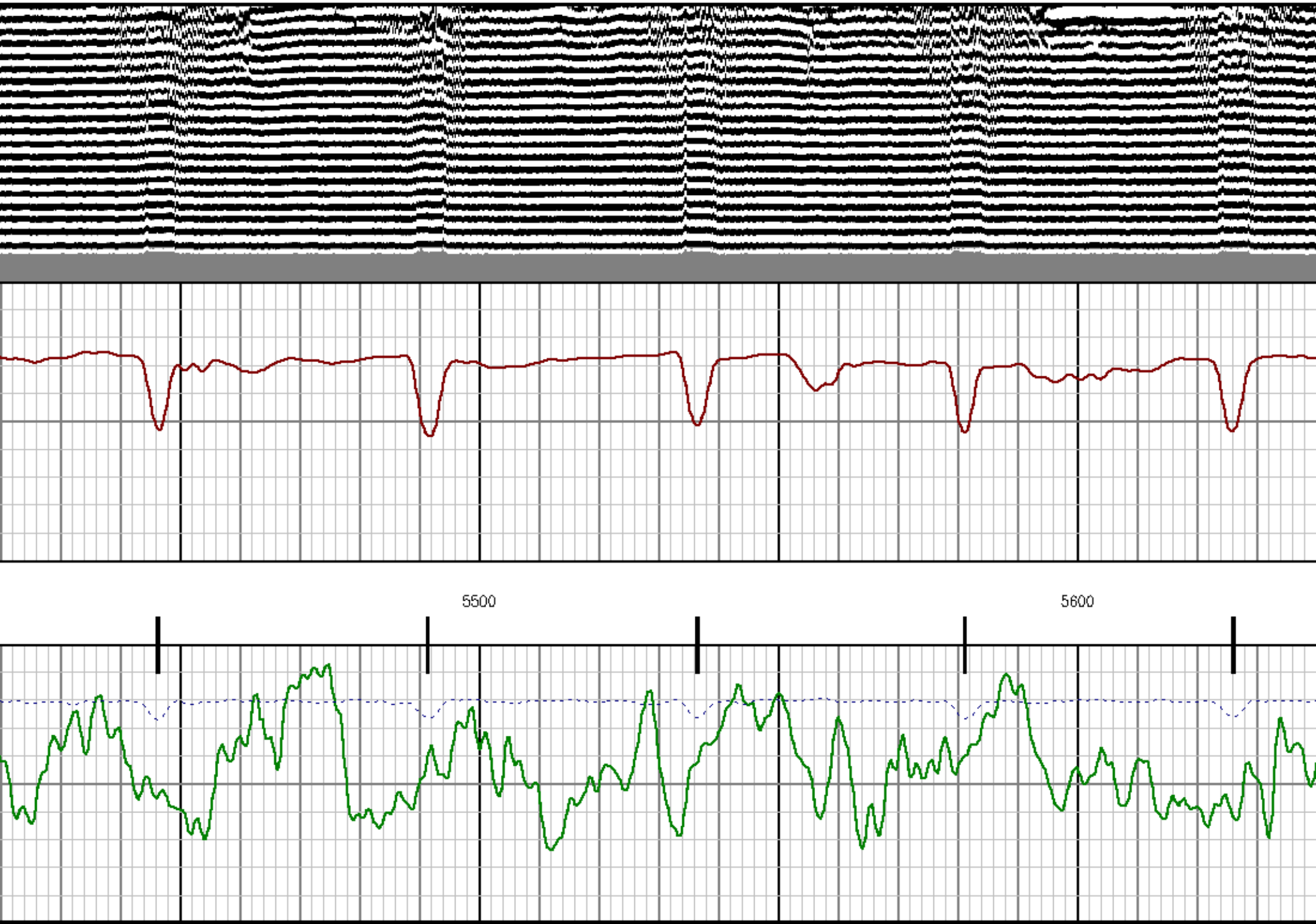
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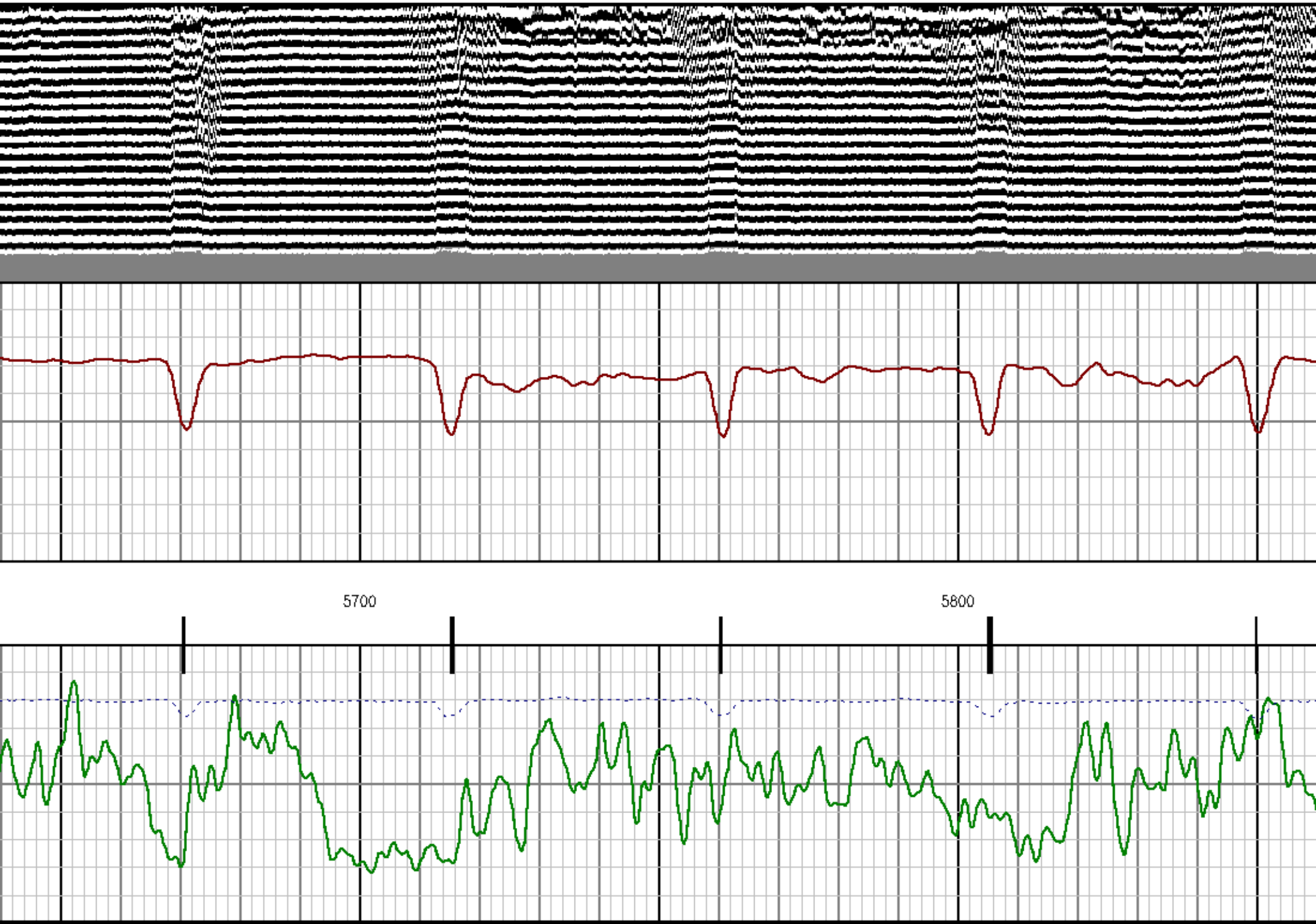
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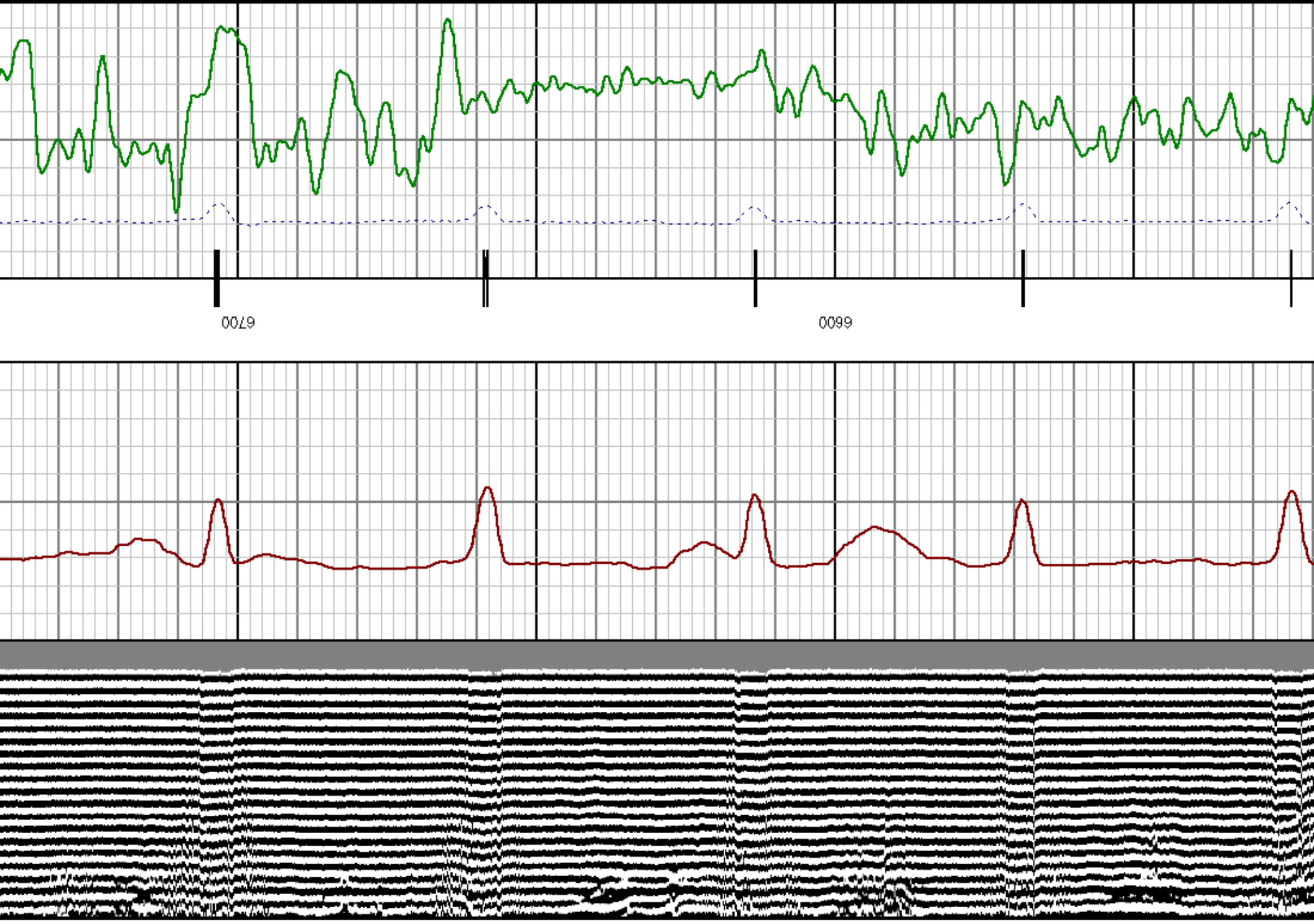
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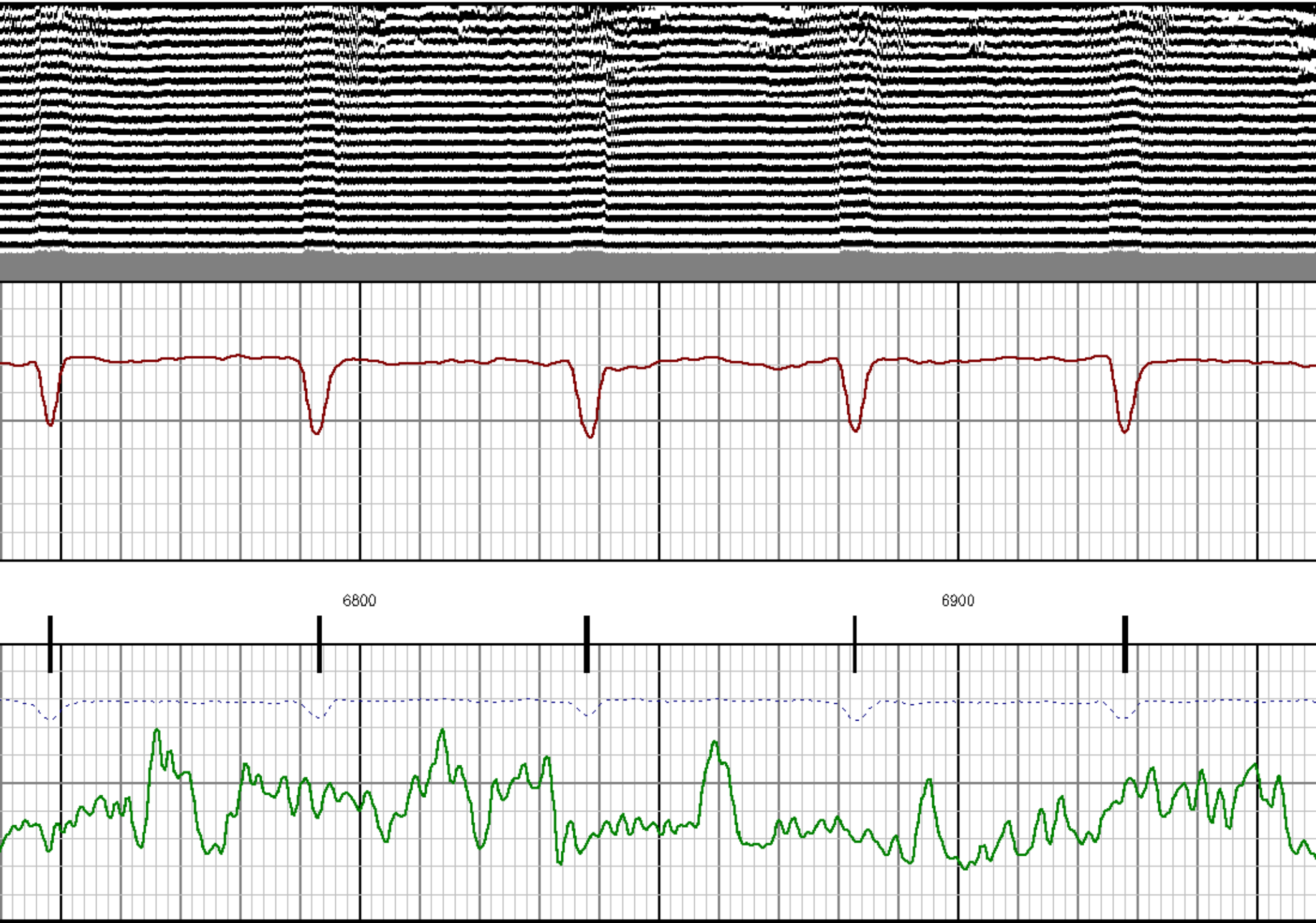
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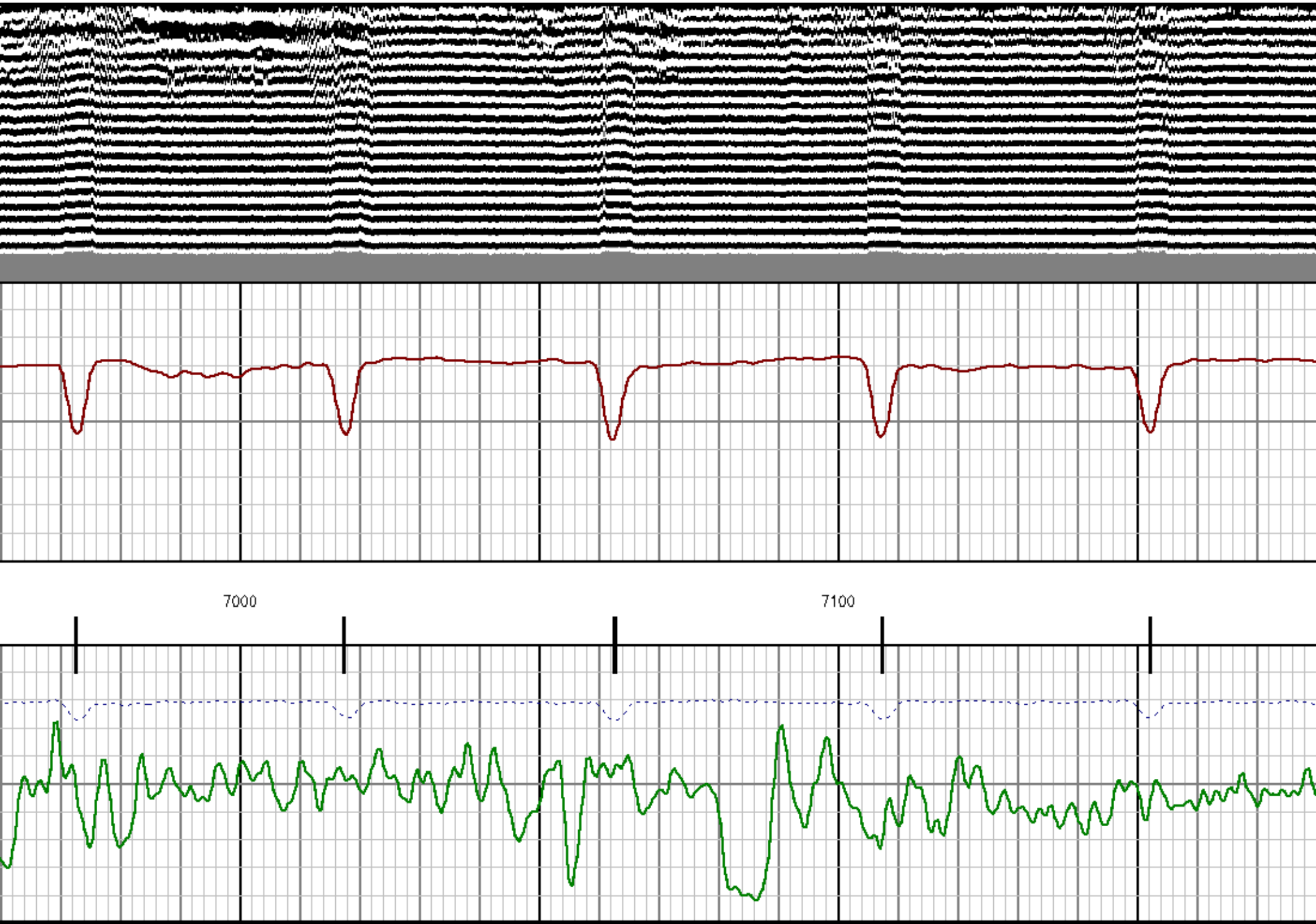
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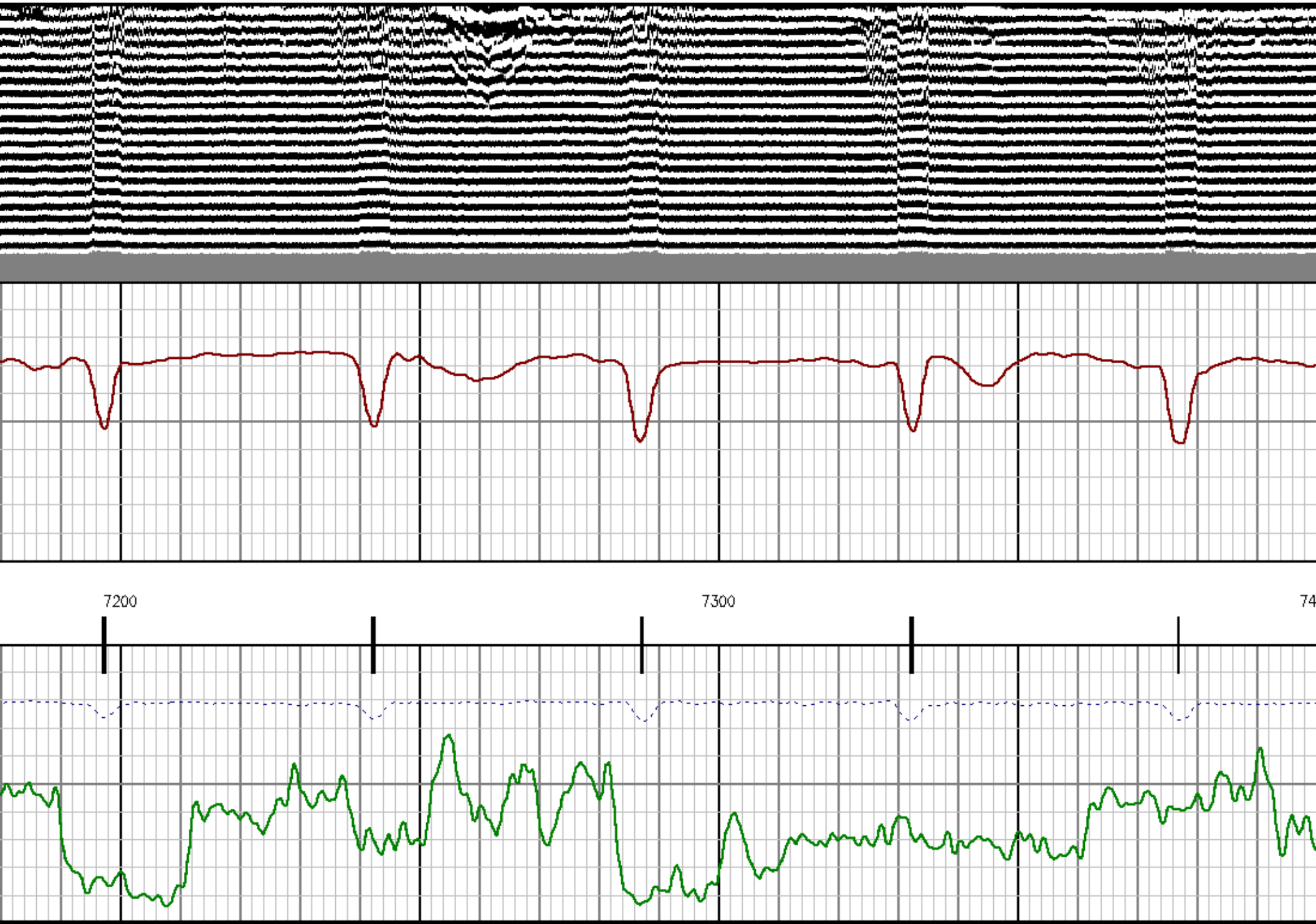
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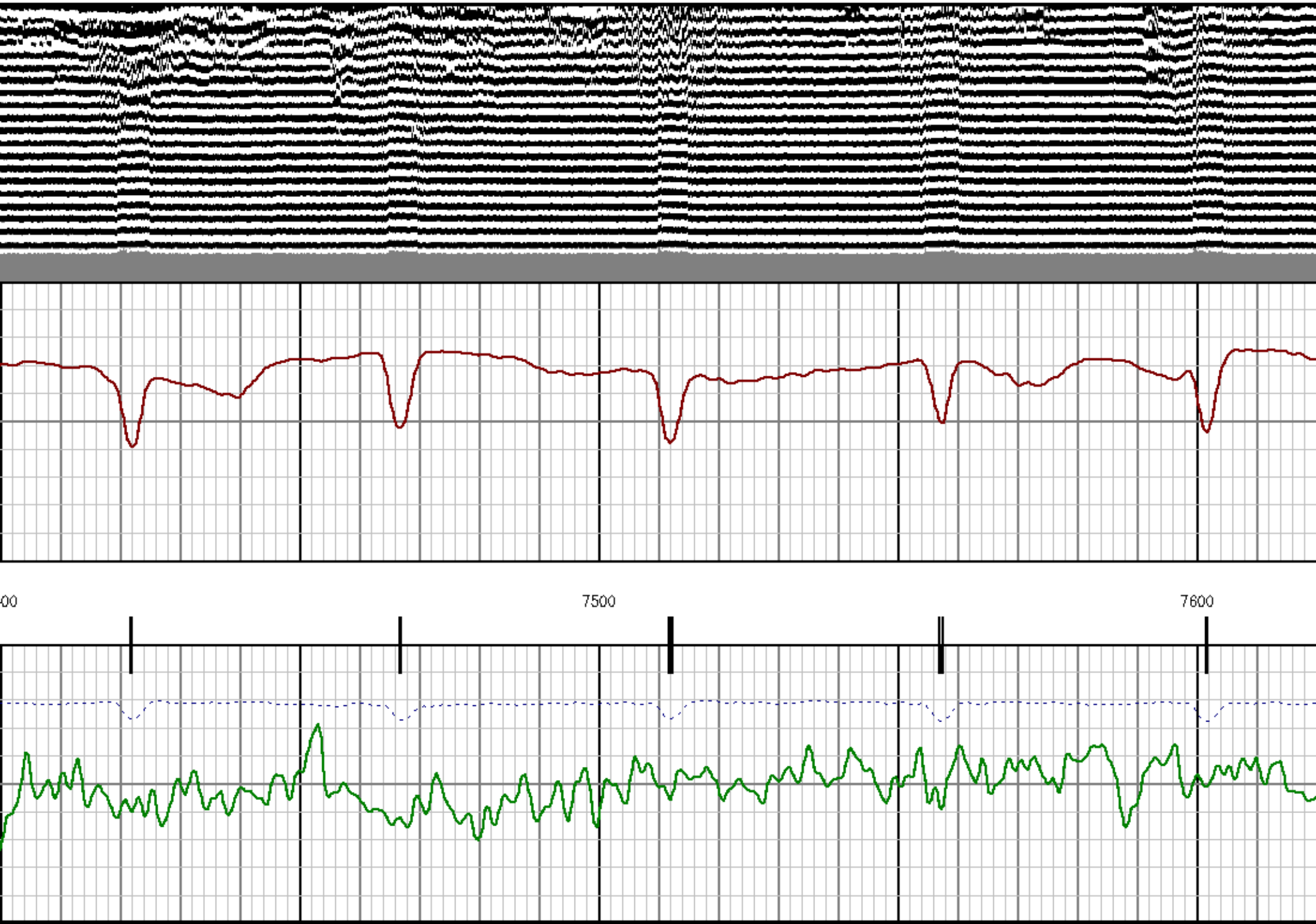
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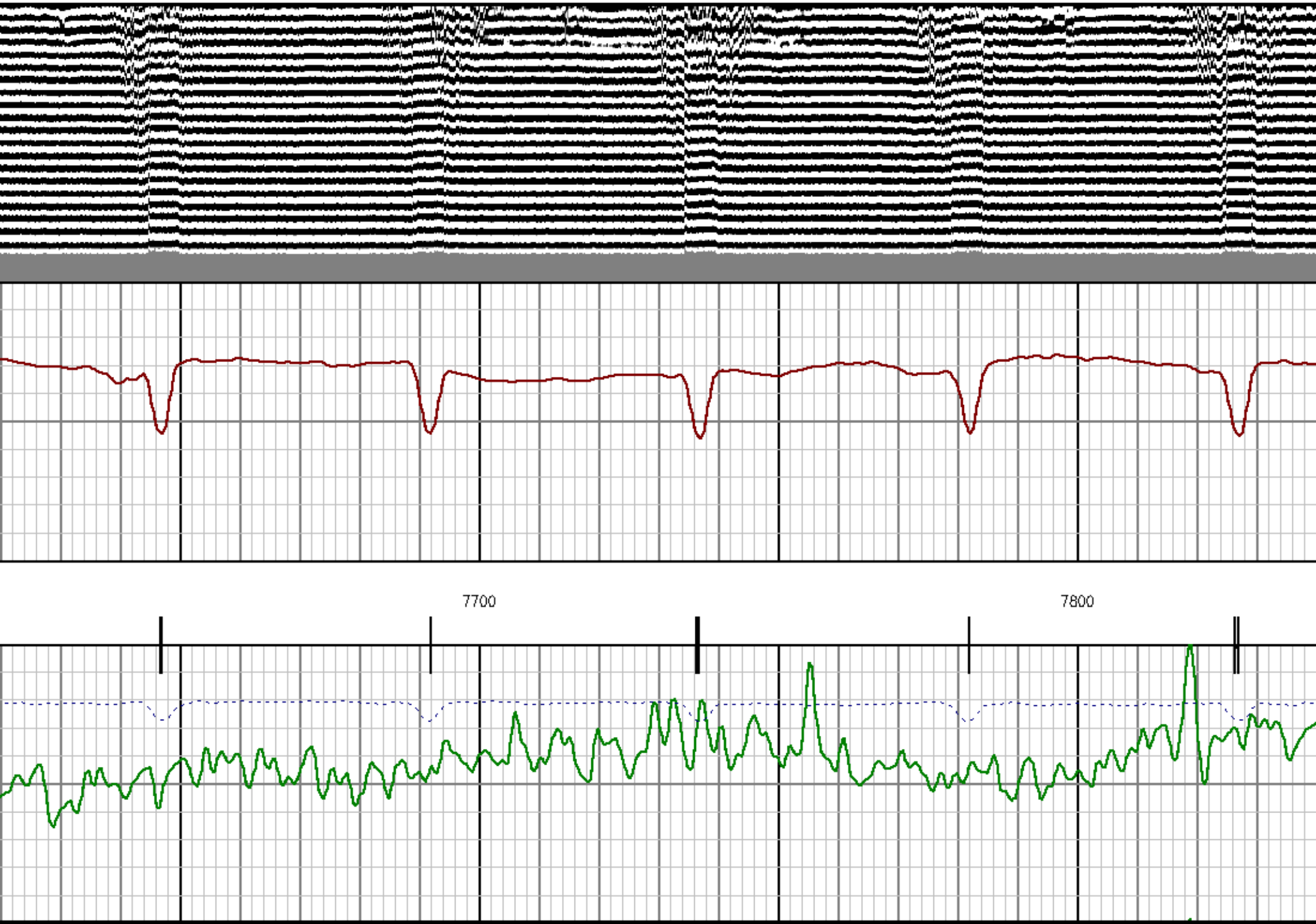
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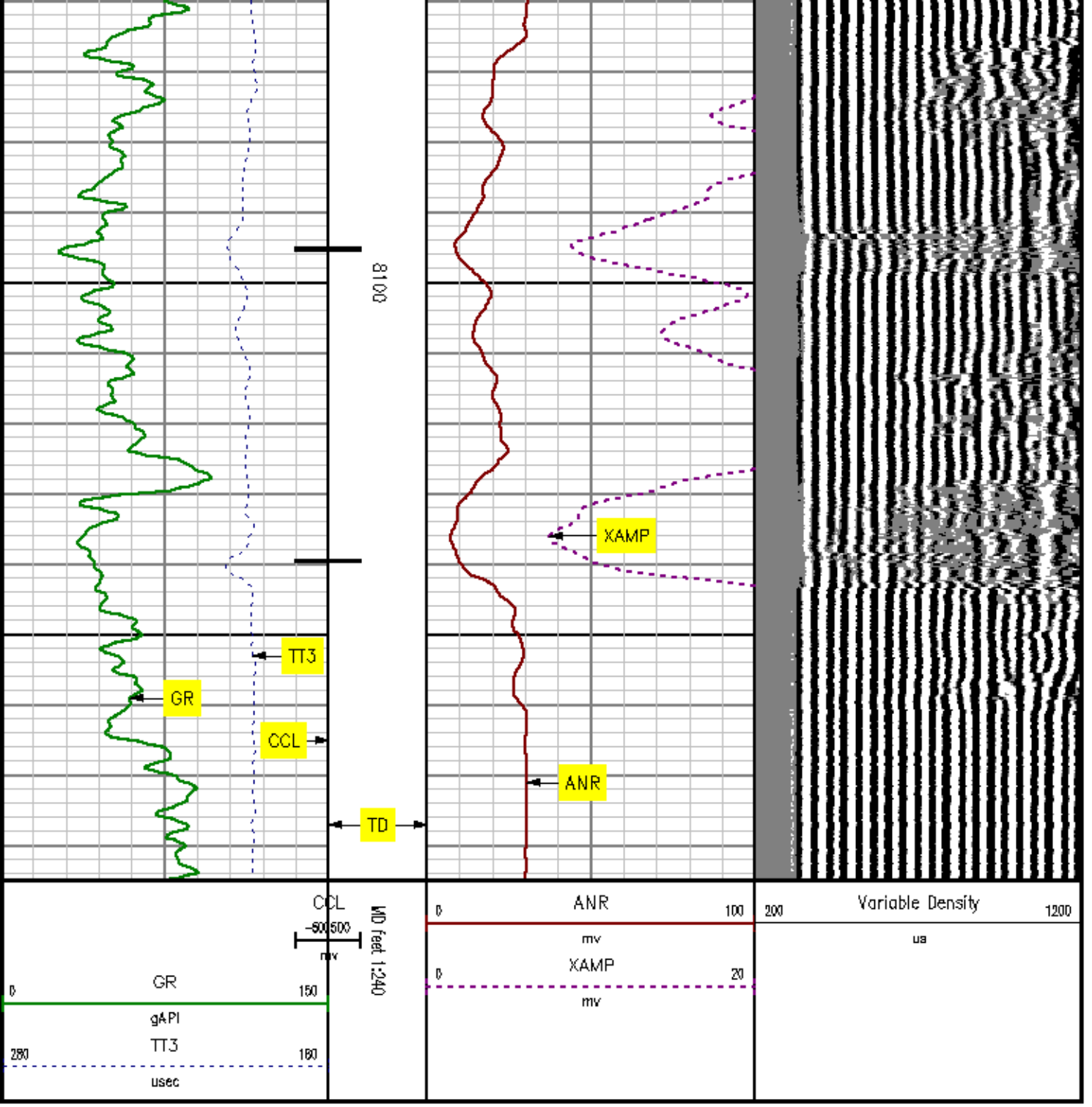

MAIN SECTION
SECONDARY PRESENTATION

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	316.900	usec	28.193	8200.750
RAL	Amp Gate Start Near	200.391	usec	28.193	8200.750
RAL	Amp Gate Start Radial	200.391	usec	28.193	8200.750
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RAL	FB Thresh Near	4.000	mv	28.193	8200.750
RAL	FB Thresh Radial	4.000	mv	28.193	8200.750
RAL	Fluid Travel Time	200.000	usec/ft	28.193	8200.625

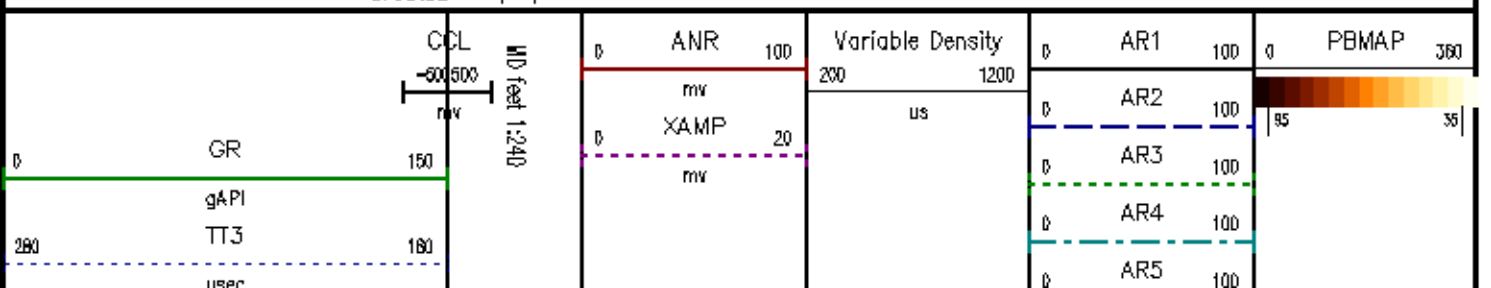
DEPTH OFFSETS

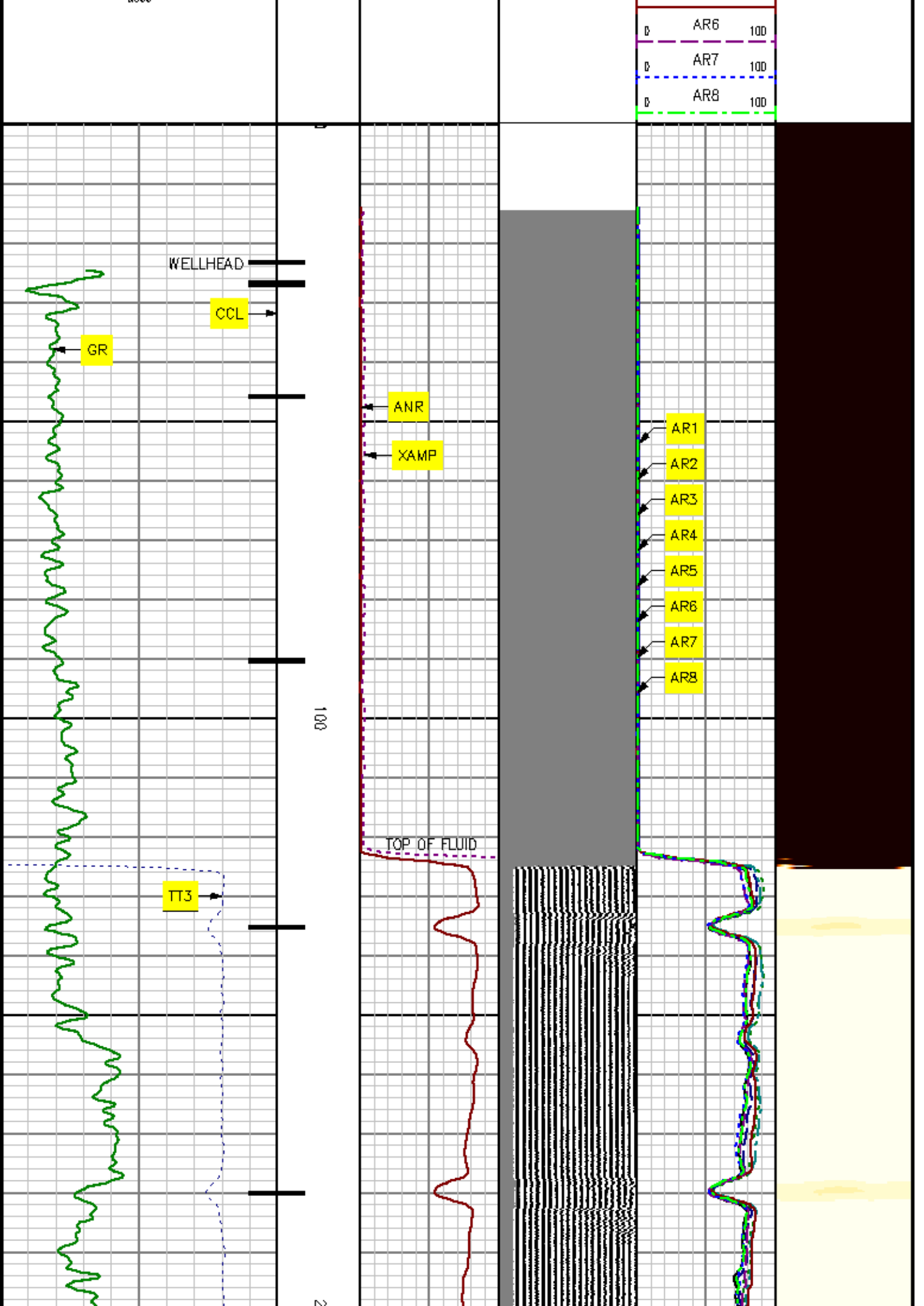
(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-15.360	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	-14.360	AFAR	SIG	TT5			
1426XA	-7.250	CCL					
1426XA	-5.390	GR					
1426XA	0.000	NEU					

Created by : RAL, v4.8.007
Plotted by : PlotMgr, v5.4.504

Company : WILLIAMS PRODUCTION COMPANY
Well : KP 511-16
File Name : d:\welldata\rad511\main_cbl.xtf
Mode : PlotMgr 5.4.504
Interval : 0.00 - 8185.00 feet UP
Created : 11/25/2009 1:43:56 PM

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AR8
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AR5
AR6
AR7
AR8
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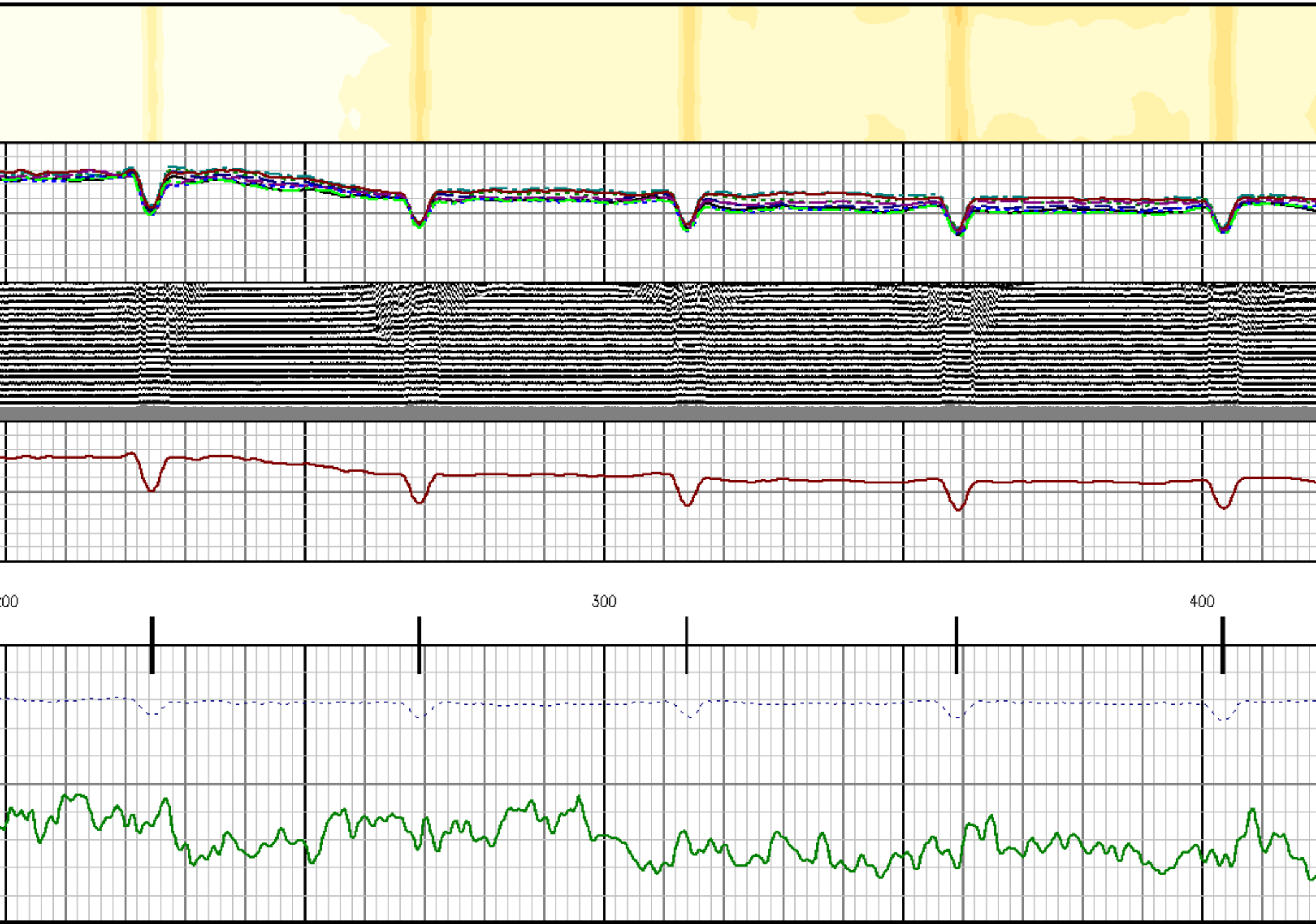
TOP OF FLUID
TT3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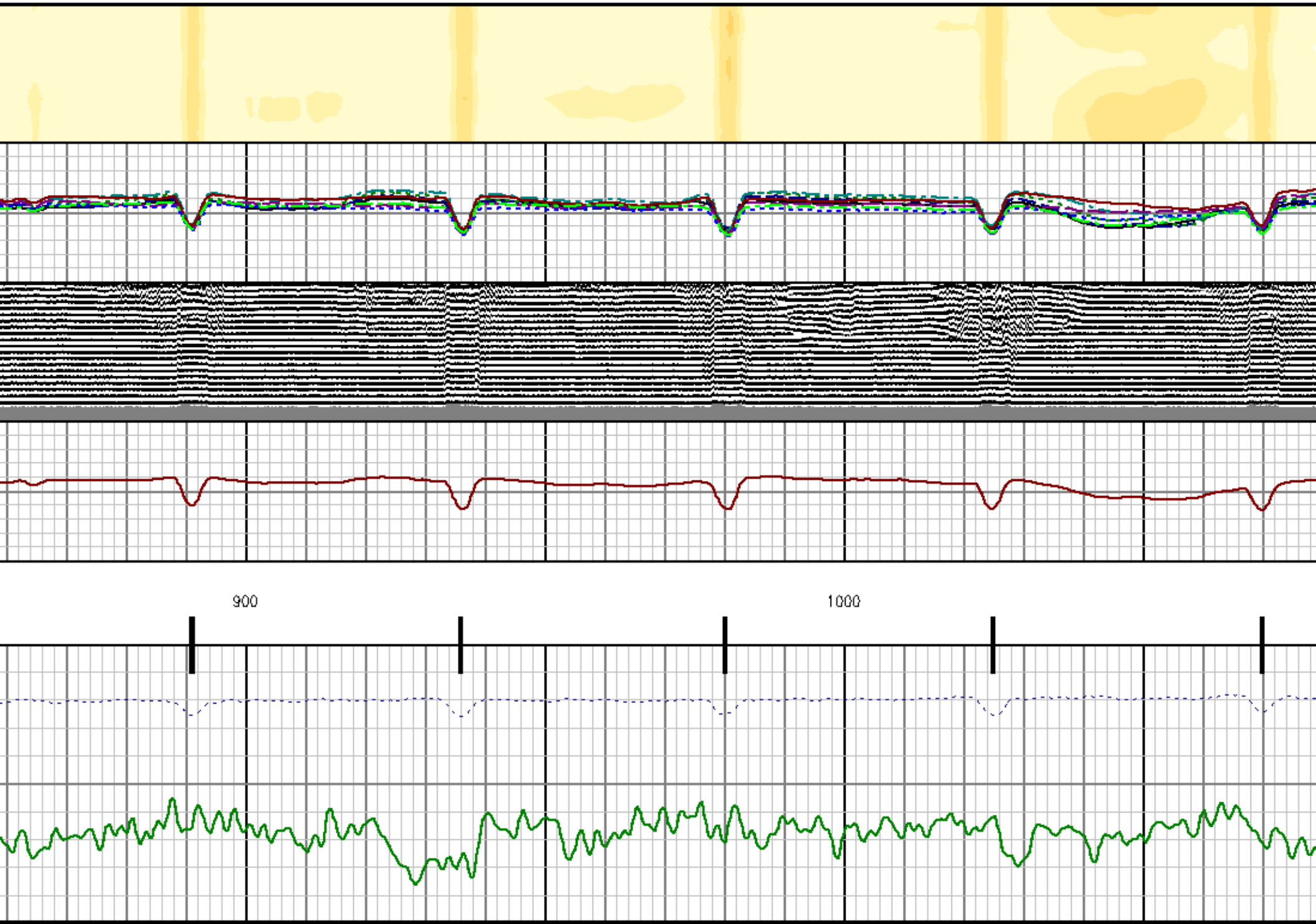
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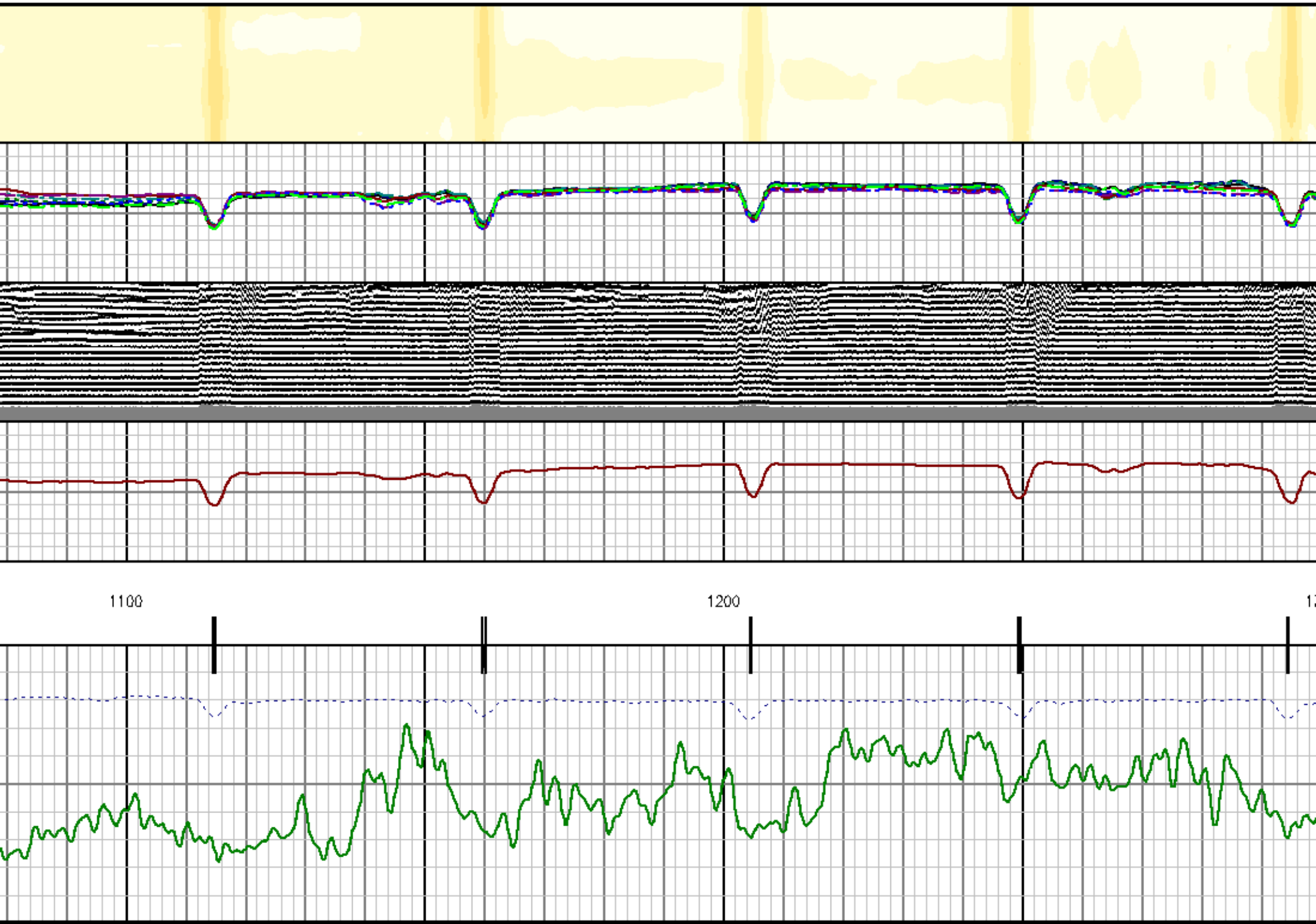
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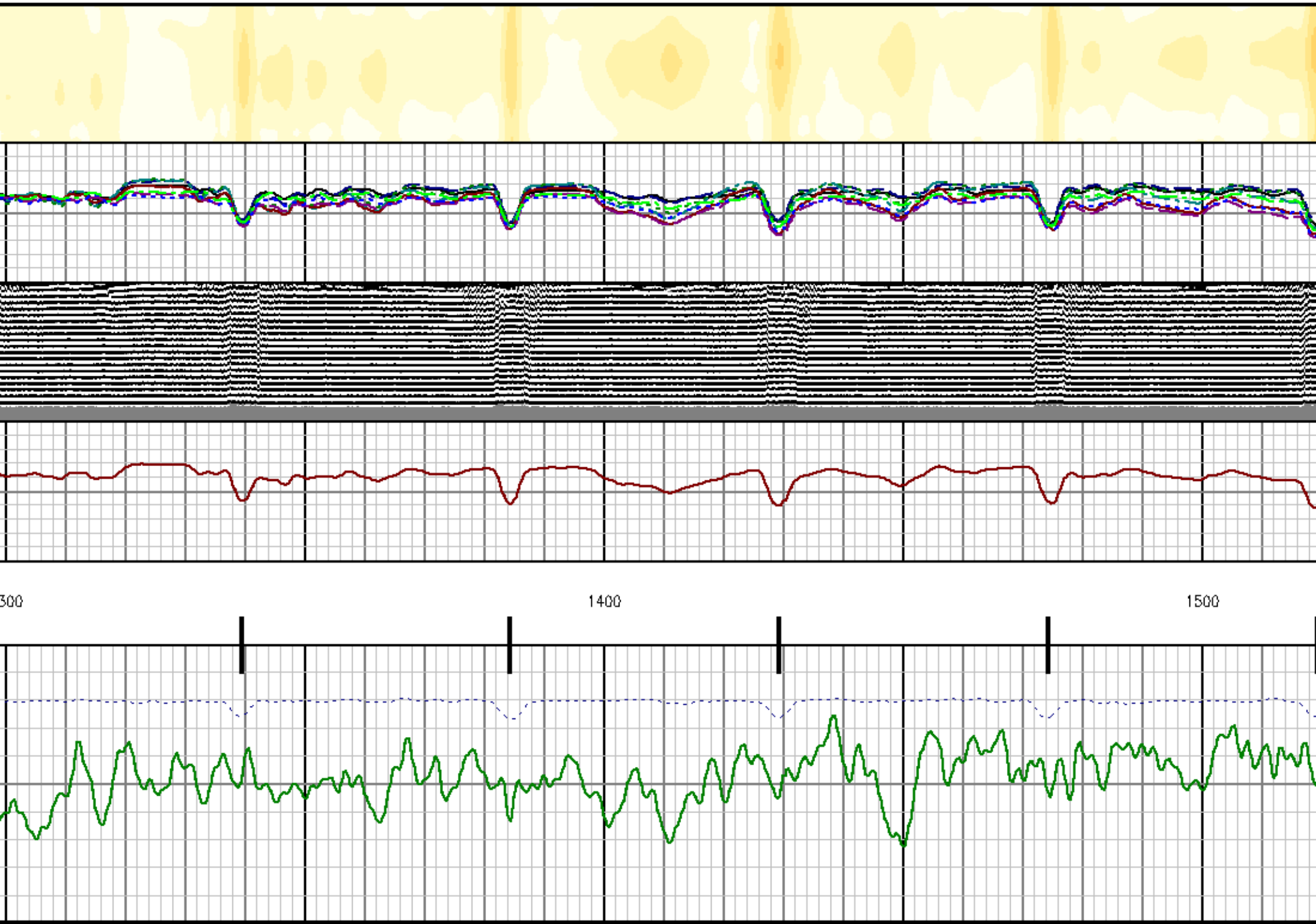
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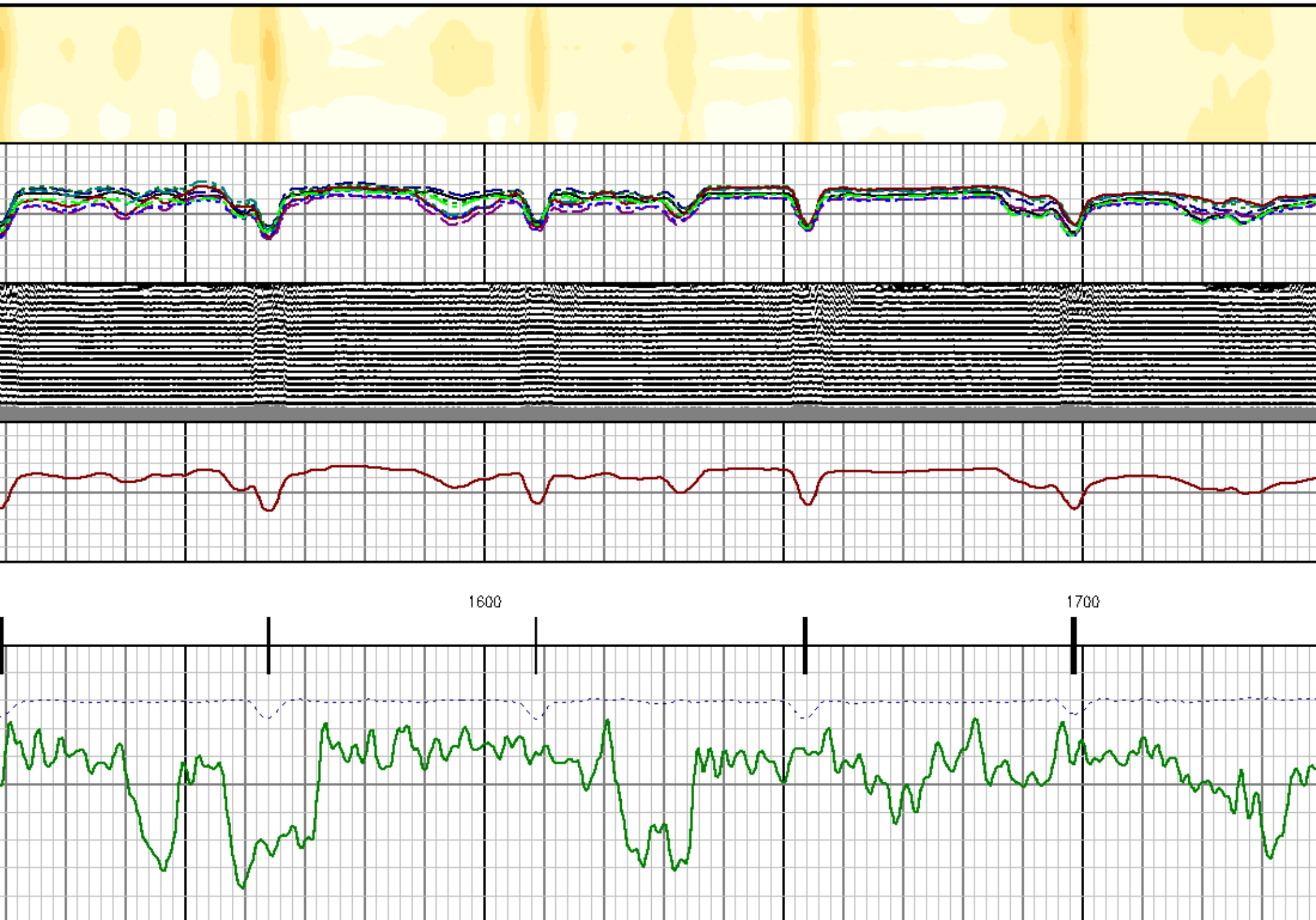
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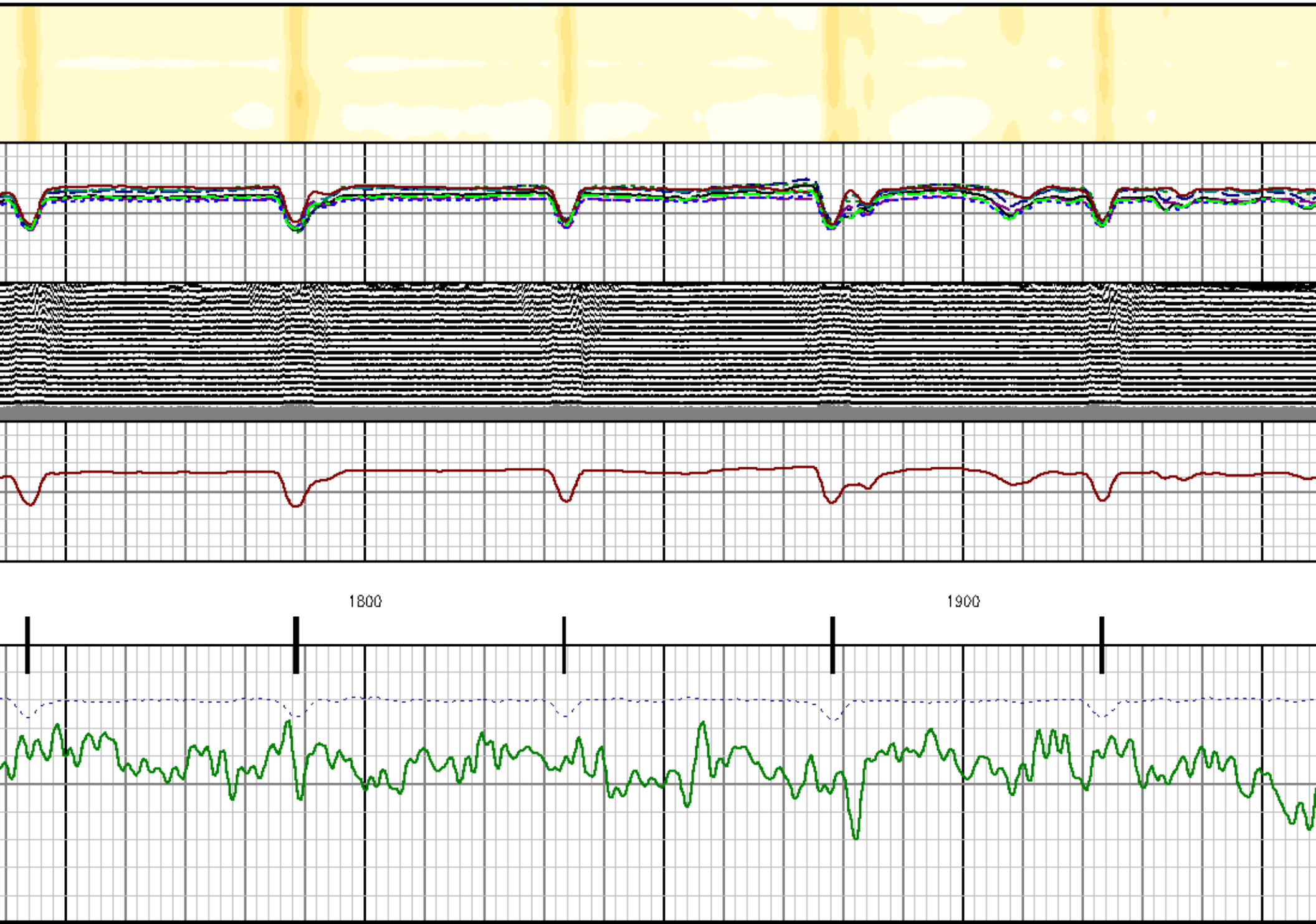
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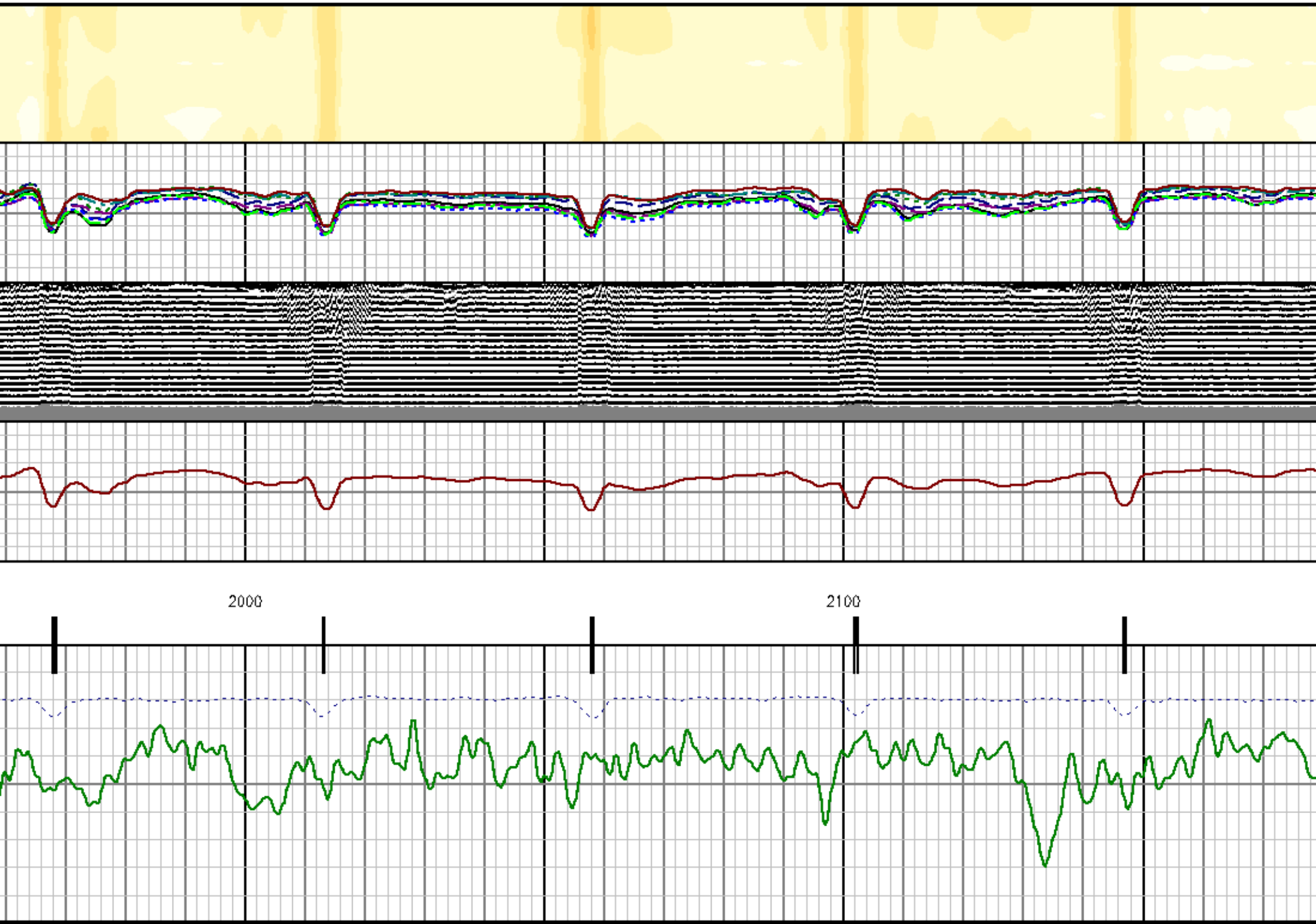
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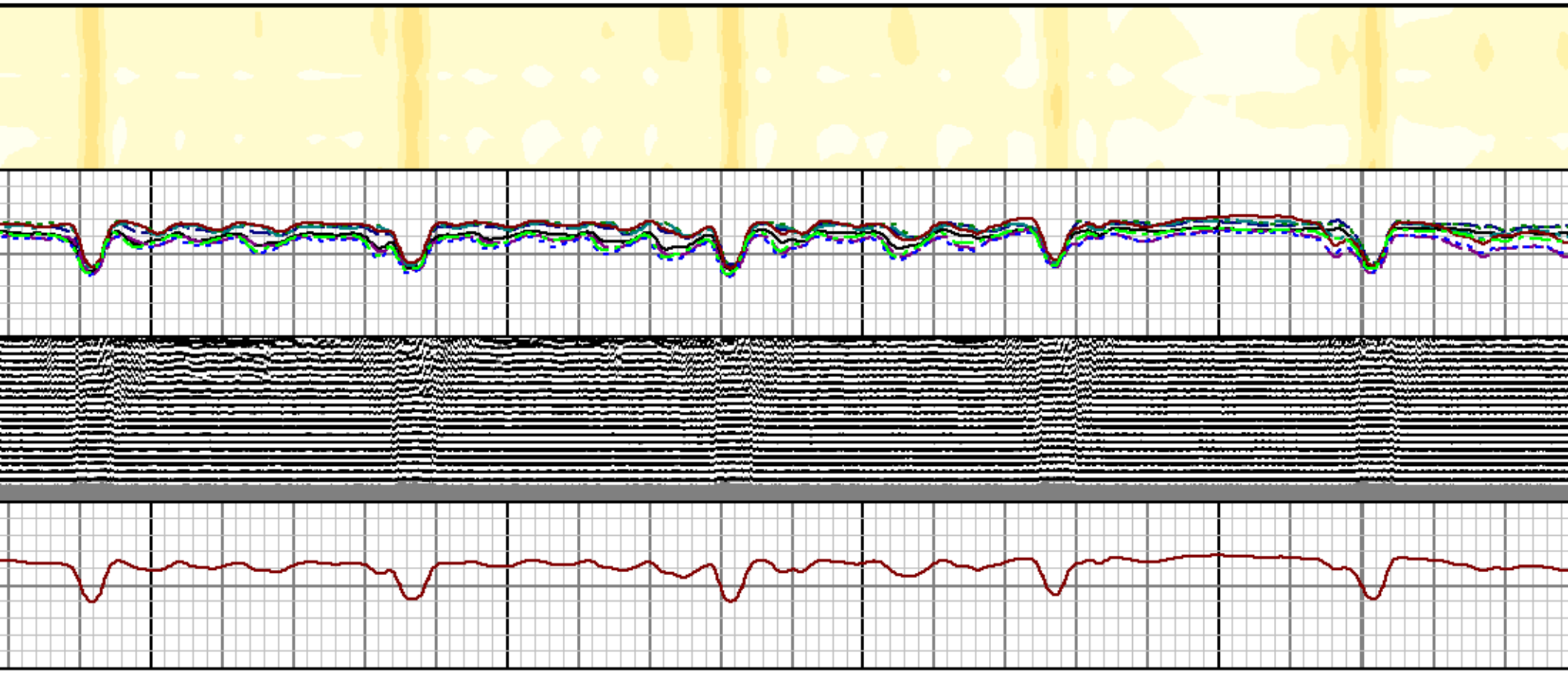

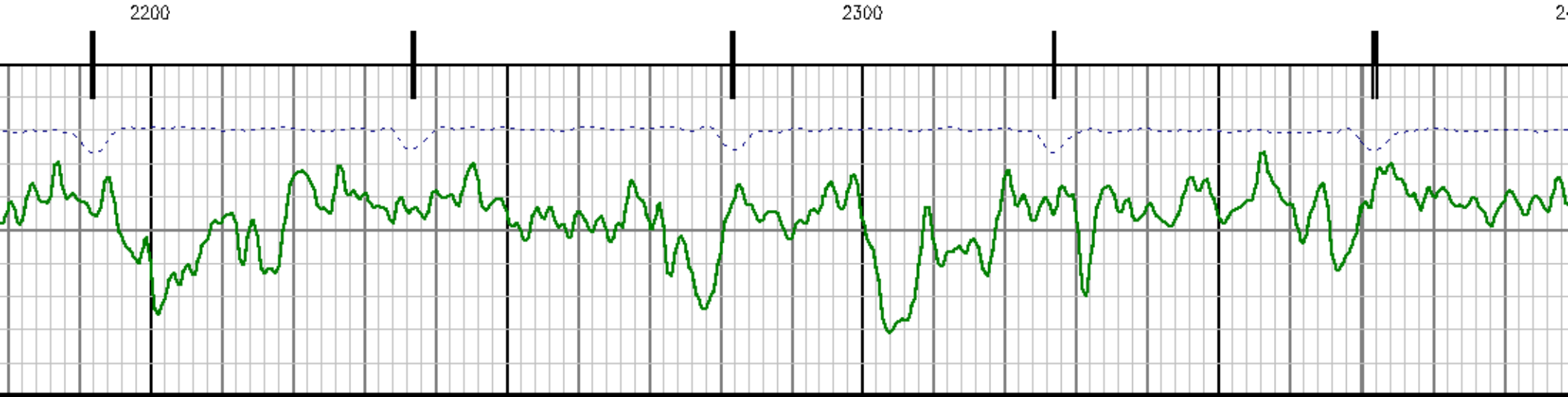
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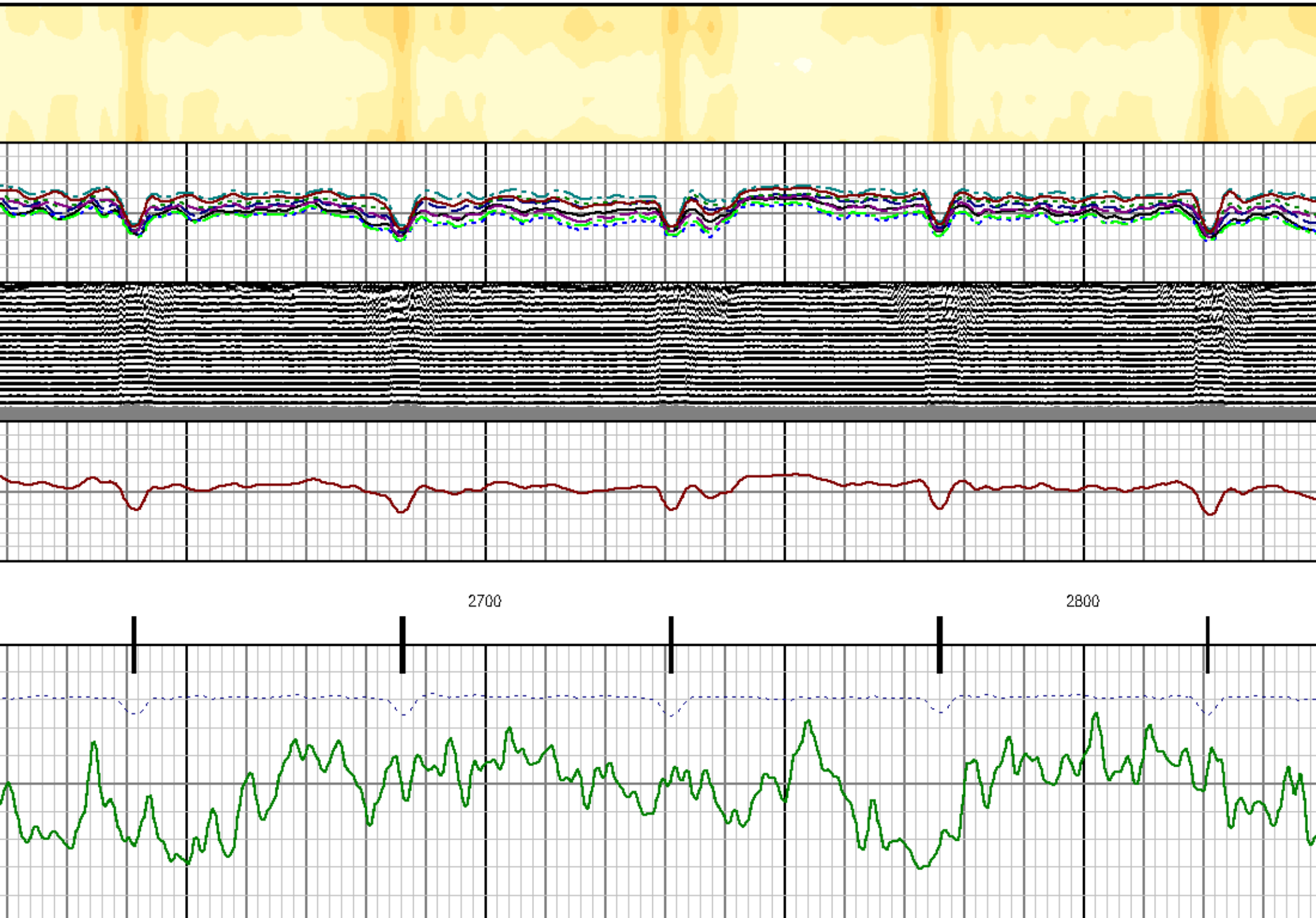
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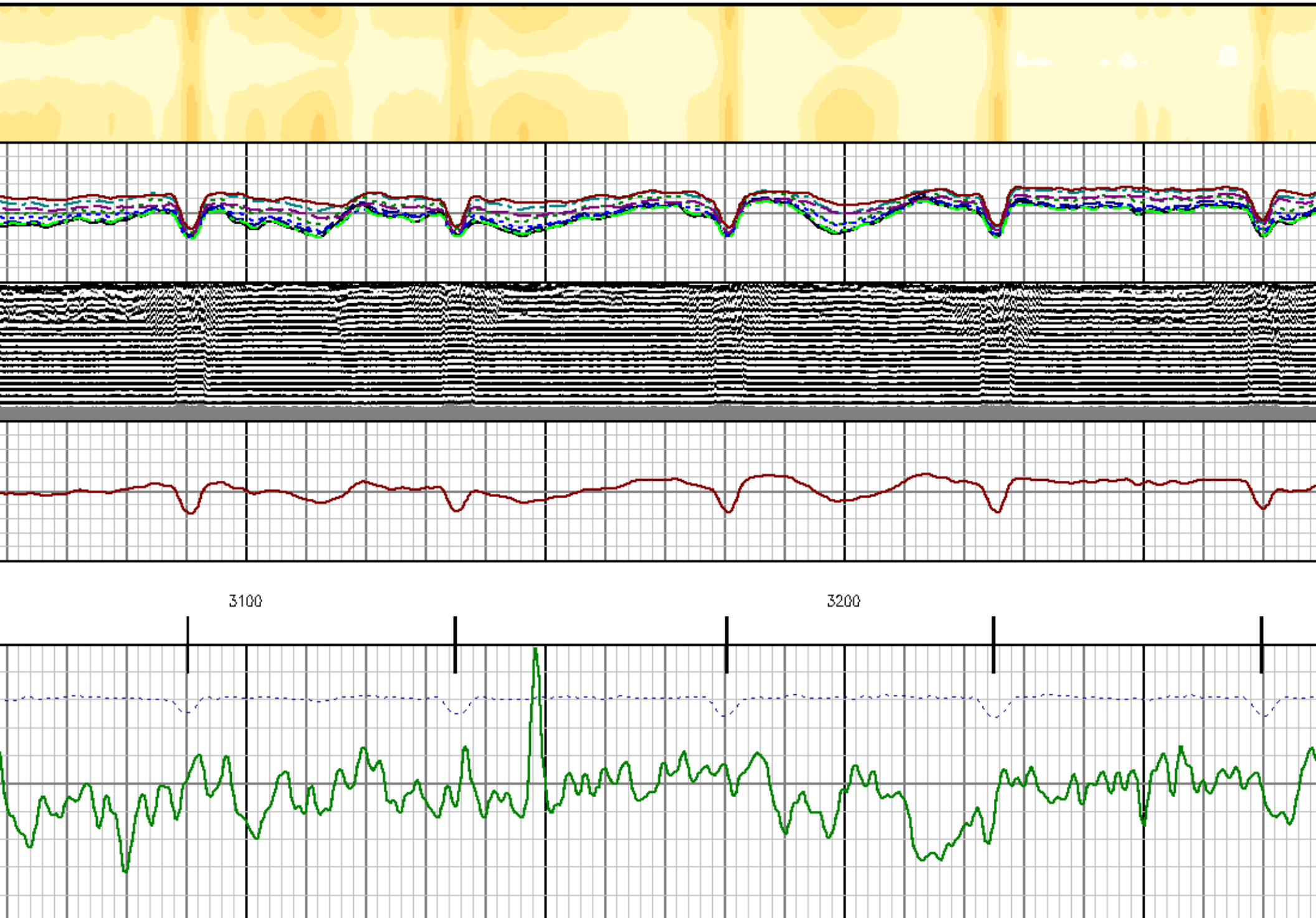
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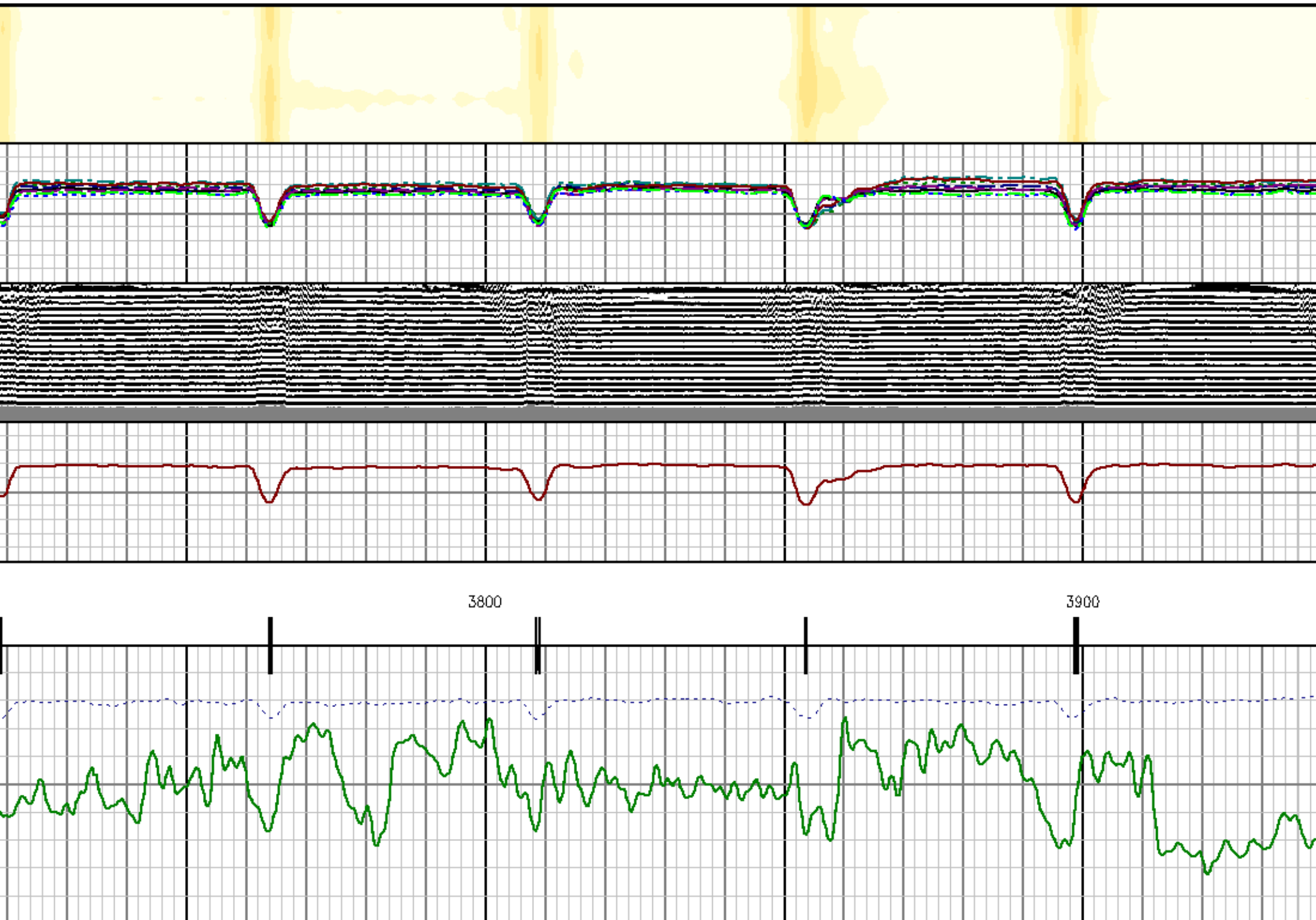
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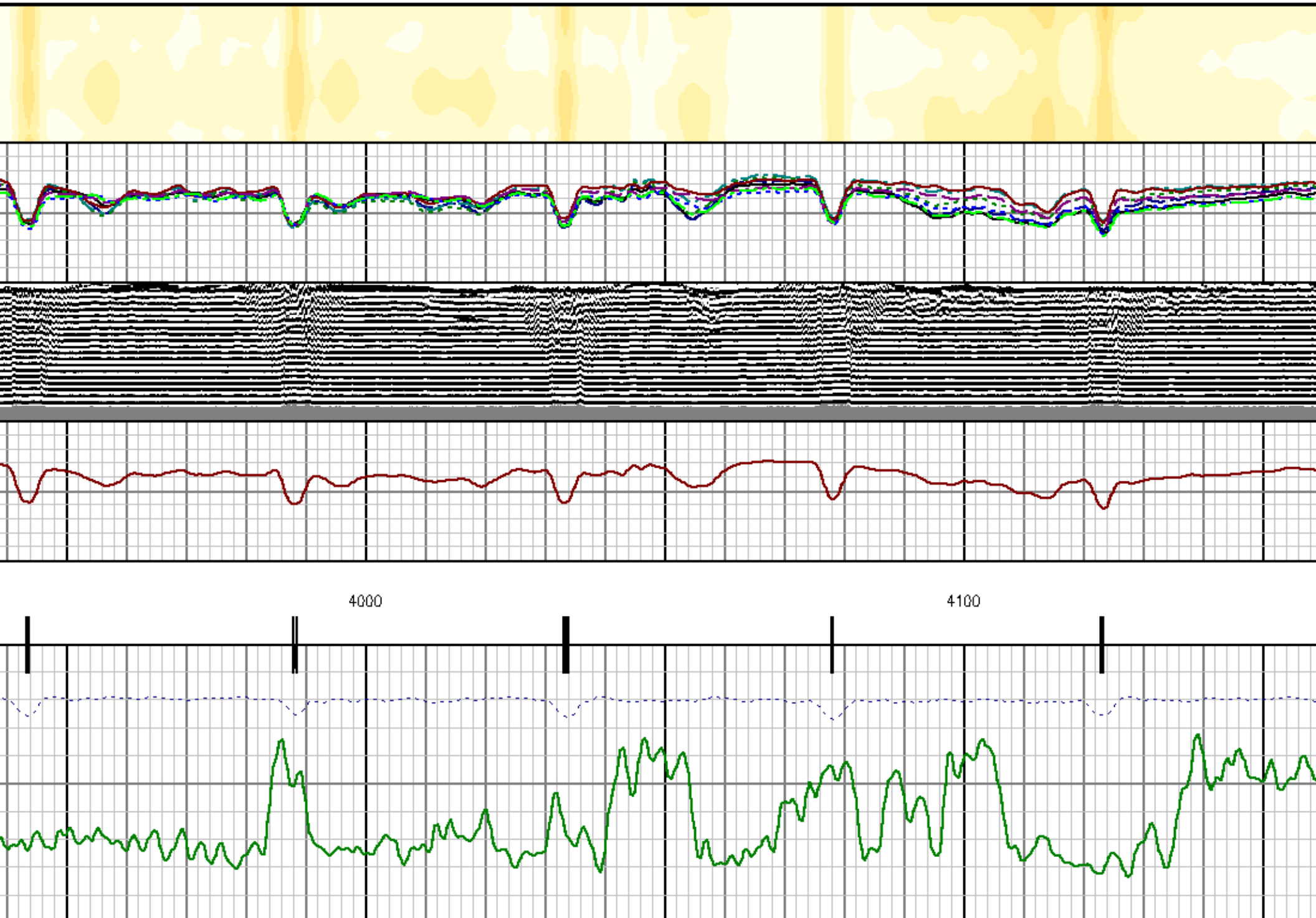
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SHORT JOINT

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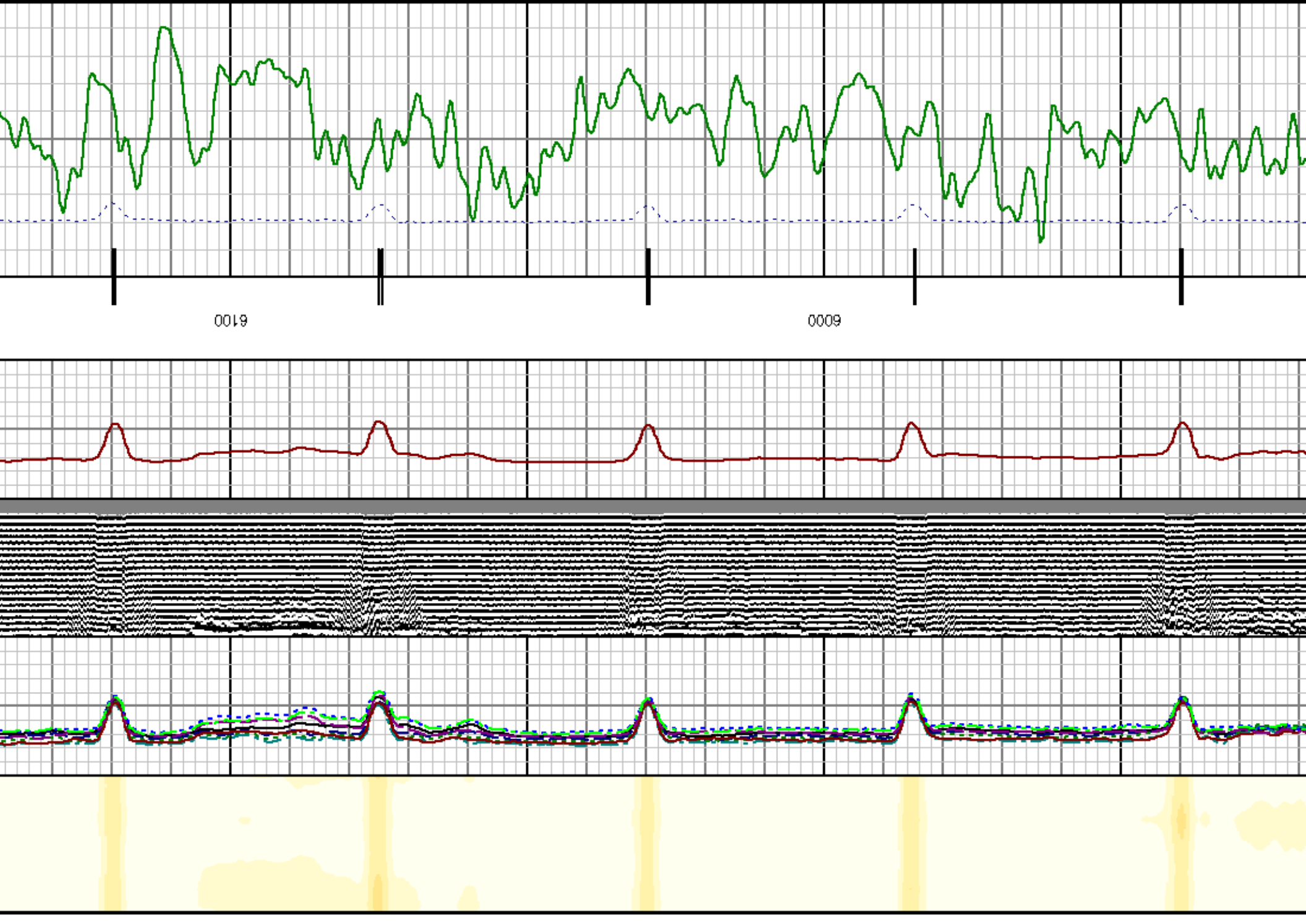
5600

5700
5800
5900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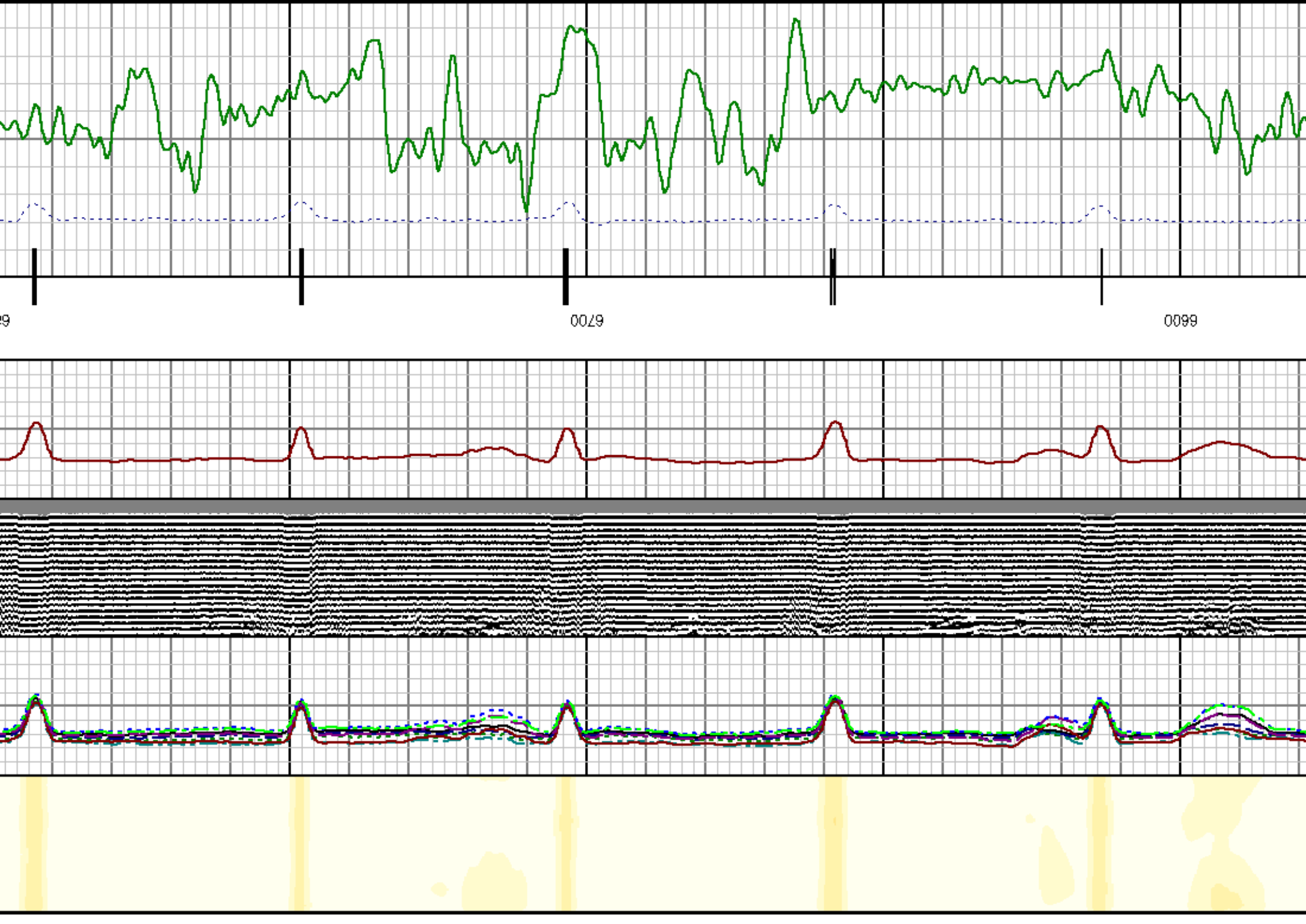
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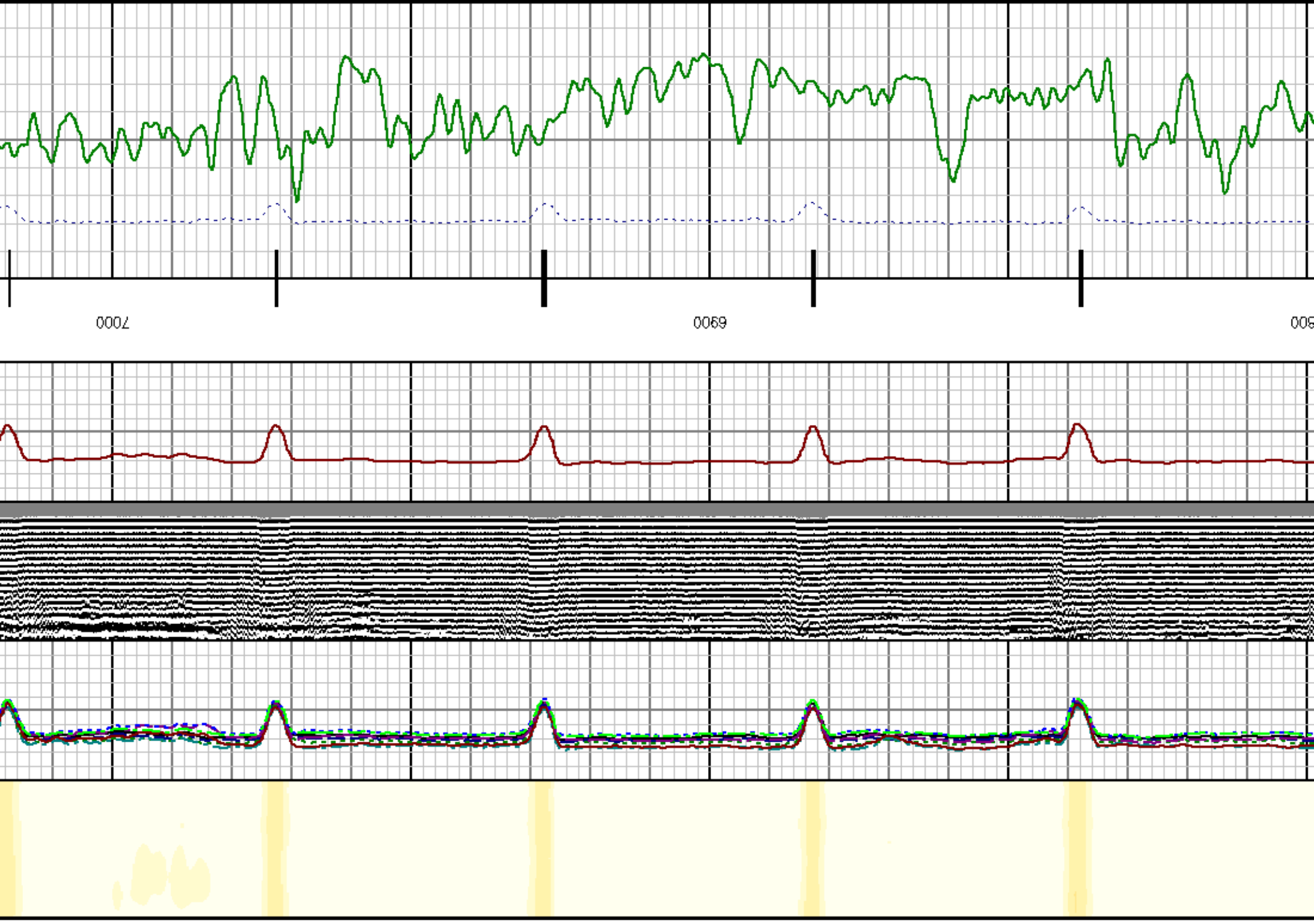
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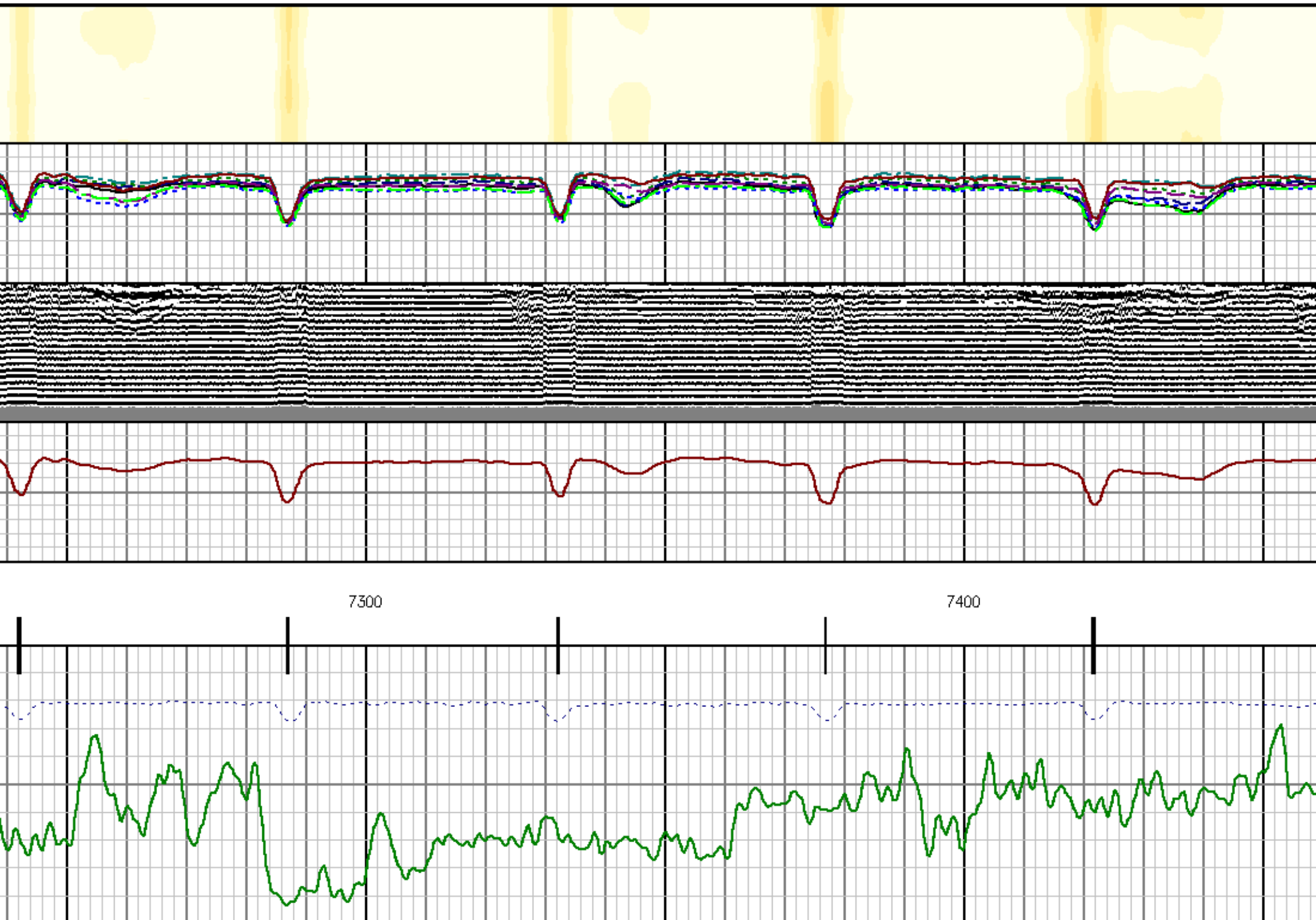
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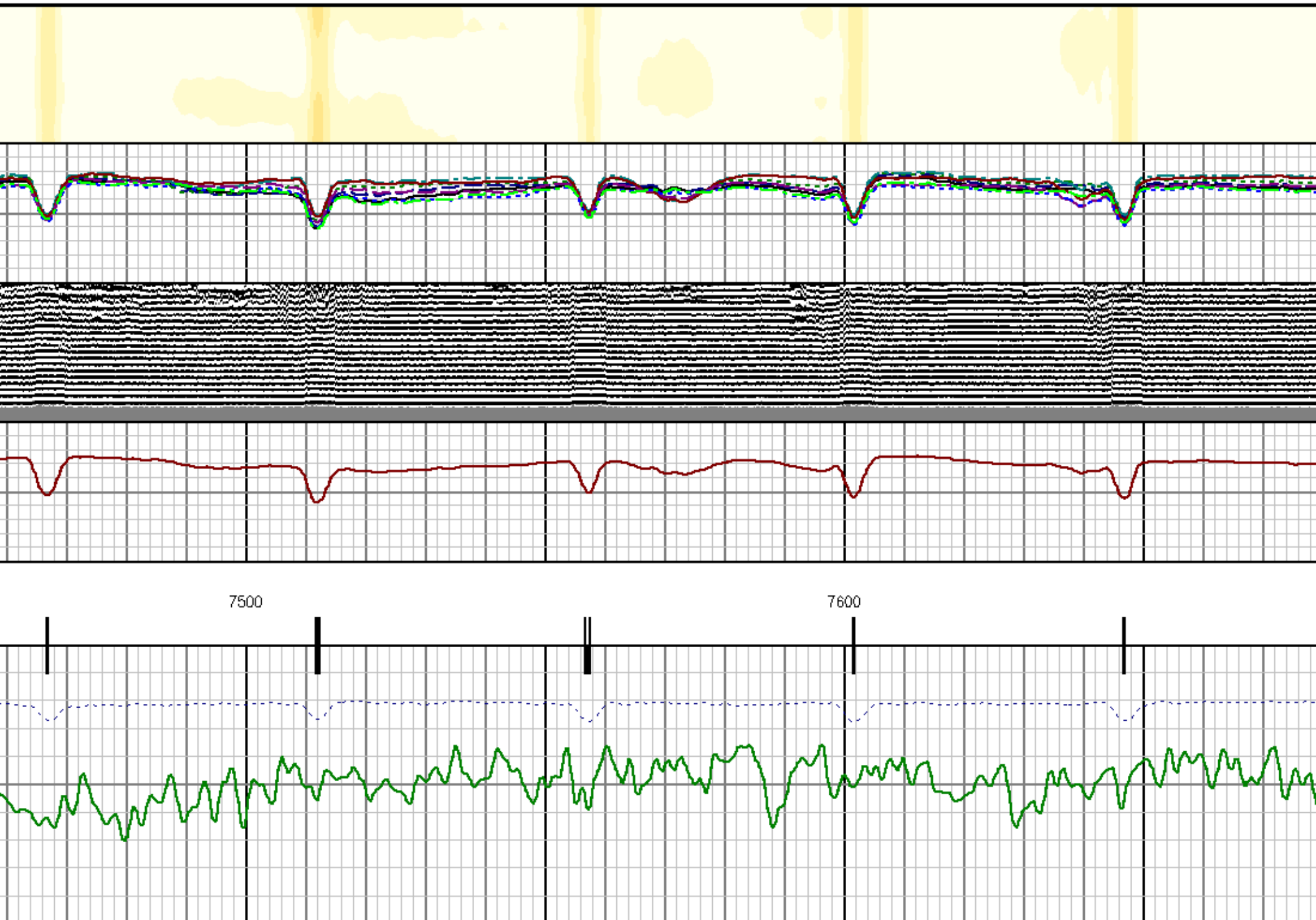
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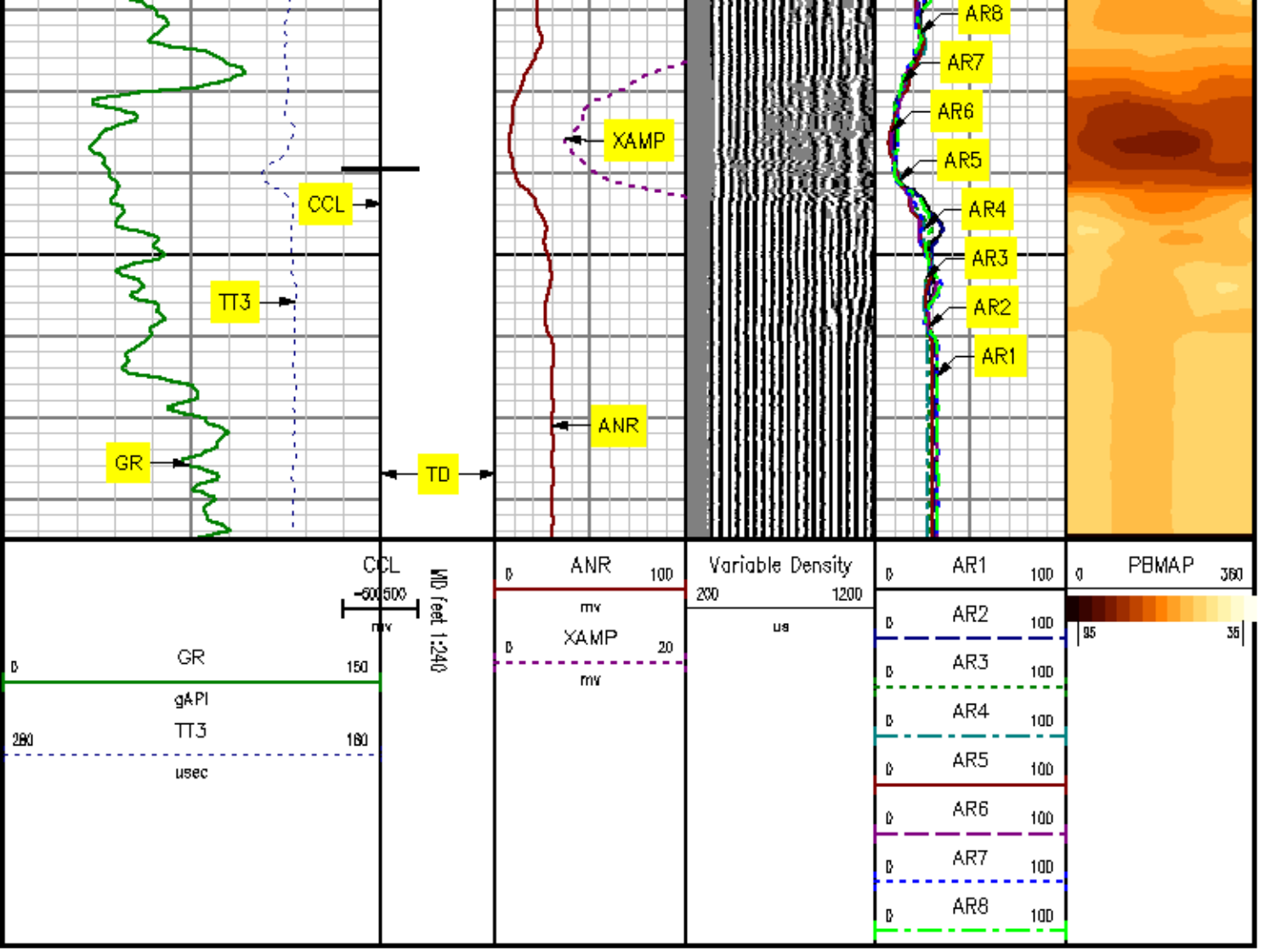


REPEAT SECTION

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	316.900	usec	7867.375	8202.500
RAL	Amp Gate Start Near	200.391	usec	7867.375	8202.500
RAL	Amp Gate Start Radial	200.391	usec	7867.375	8202.500
RAL	Amp Gate Width Far	25.000	usec	7867.375	8202.500
RAL	Amp Gate Width Near	25.000	usec	7867.375	8202.500
RAL	Amp Gate Width Radial	25.000	usec	7867.375	8202.500
RAL	casing od	4.500	inches	7867.375	8202.500
RAL	casing wt	11.600	lbm/ft	7867.375	8202.500
RAL	FB Start Far	291.900	usec	7867.375	8202.500
RAL	FB Start Near	175.391	usec	7867.375	8202.500

RAL	FB Start Neut	175.391	usec	7867.375	8202.500
RAL	FB Start Radial	175.391	usec	7867.375	8202.500
RAL	FB Thresh Far	10.000	mv	7867.375	8202.500
RAL	FB Thresh Near	4.000	mv	7867.375	8202.500
RAL	FB Thresh Radial	4.000	mv	7867.375	8202.500
RAL	Fluid Travel Time	200.000	usec/ft	7867.375	8202.500

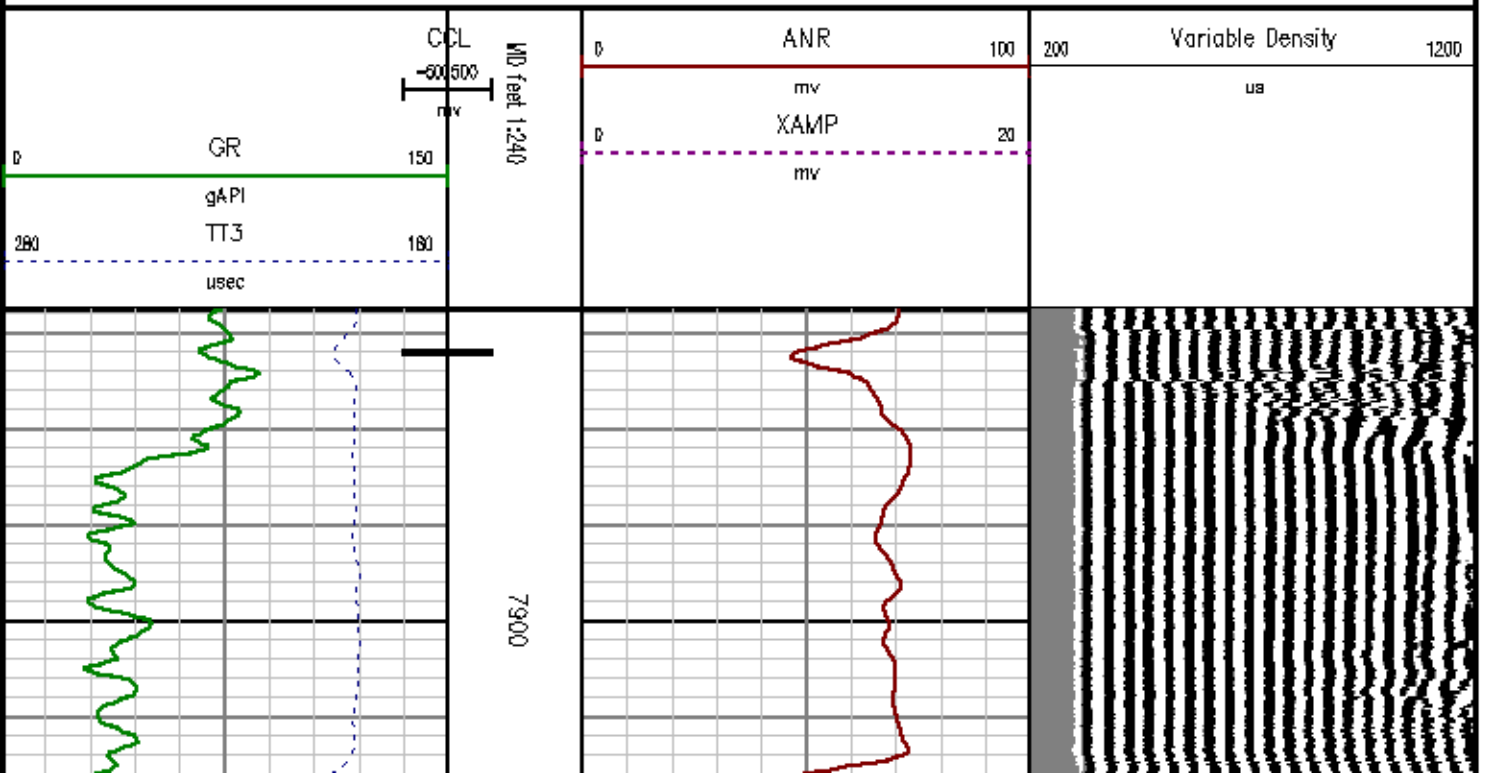
DEPTH OFFSETS

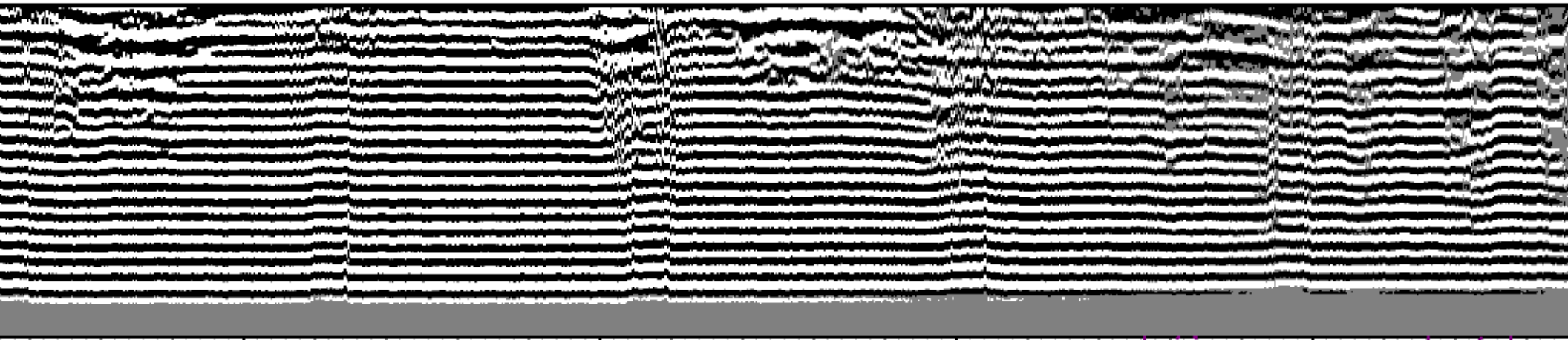
(for Acquired Curves)

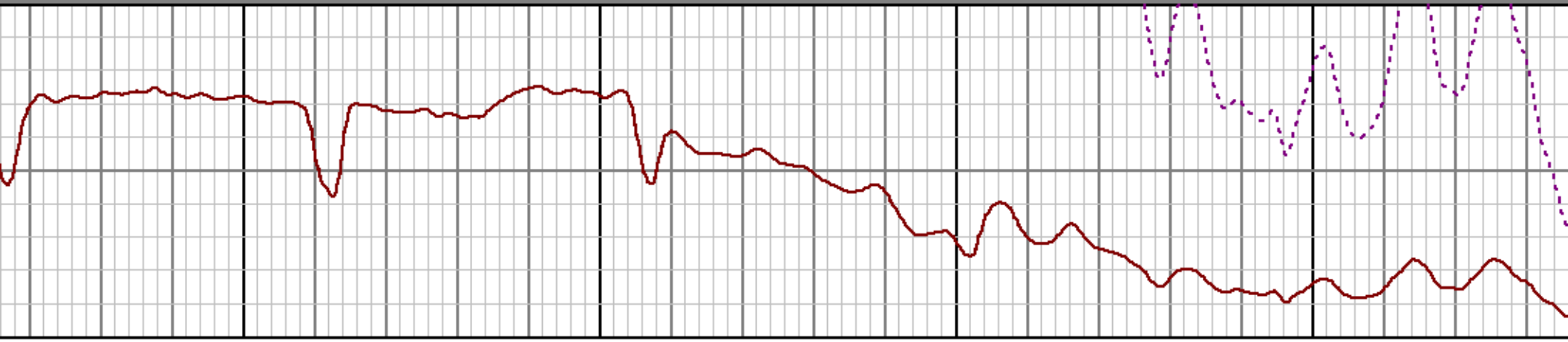
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-15.360	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-14.360	AFAR	SIG	TT5			
1426XA	-7.250	CCL					
1426XA	-5.390	GR					
1426XA	0.000	NEU					

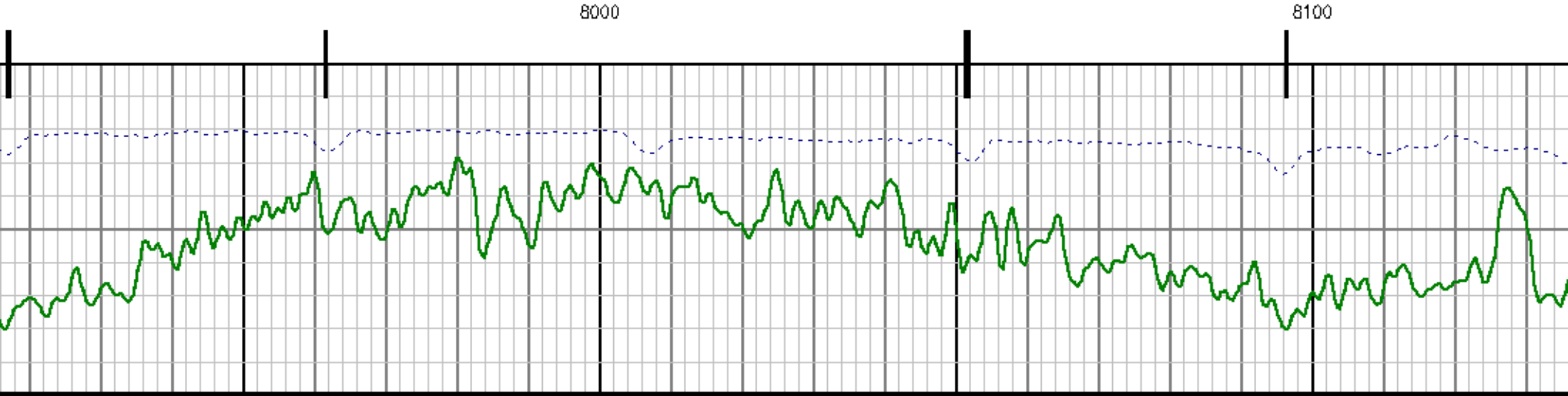
Created by : RAL, v4.8.007
Plotted by : PlotMgr, v5.4.504

Company : WILLIAMS PRODUCTION COMPANY
Well : KP 511-16
File Name : d:\welldata\rad511\repeat.xtf
Mode : PlotMgr 5.4.504
Interval : 7867.50 - 8202.50 feet UP
Created : 11/25/2009 1:45:48 PM





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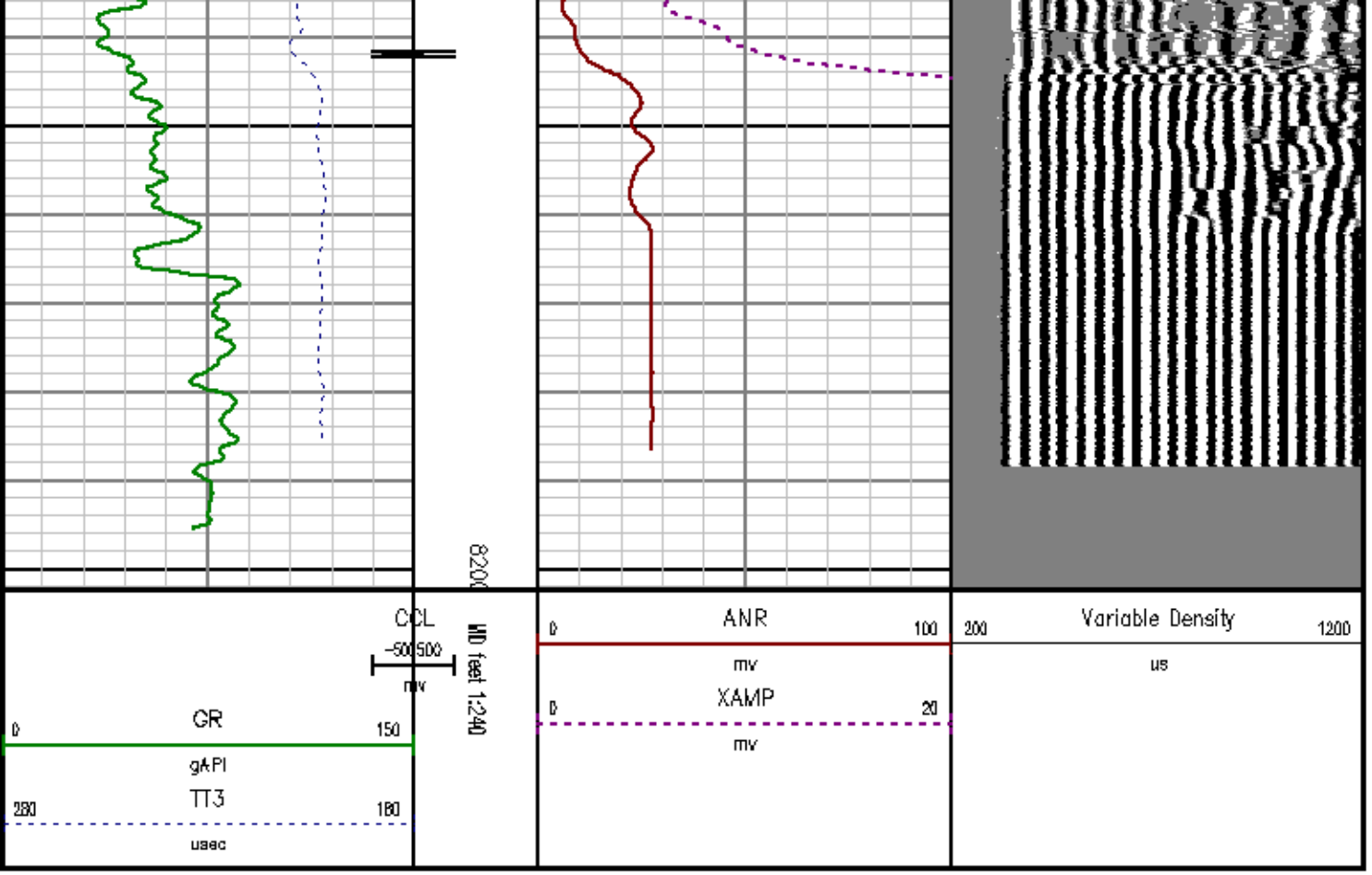


CALIBRATION SUMMARY

GAMMA RAY

Calibration File: C:\case\calver\GR\120NO.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Tue Nov 24 04:15:29 2009 TOOL SERIES: 1426XA ASSET: 120 SEQ: NO

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K SHOP	44.89	249.20	0.905	40.65	225.65	185.00

Verification File: C:\case\calver\GR\120NO.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Tue Nov 24 04:17:38 2009 TOOL SERIES: 1426XA ASSET: 120 SEQ: NO

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K SHOP	44.71	247.51	0.905	40.49	224.12	183.63

RALSHP

Shop Calibration: C:\case\calver\RALSHP\957N25 shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Nov 25 19:34:00 2009 TOOL SERIES: 1426XA ASSET: 957 SEQ: N25

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

RECEIVER	Travel Time [usec]	Amp. Gate Start [usec]	Amp. Gate Width [usec]	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	218	216	30	114	53	0.060	100.00	0.14
3 Ft. Receiver	219	216	30	139	35	0.181	100.00	0.14
5 Ft. Receiver	327	326	30	227	25	0.064	150.00	0.15
Radial #1	220	217	30	155	25	0.211	100.00	0.14
Radial #2	219	217	30	155	25	-0.147	100.00	0.14
Radial #3	218	217	30	155	25	0.003	100.00	0.14
Radial #4	218	217	30	155	25	0.264	100.00	0.14
Radial #5	220	217	30	155	25	-0.150	100.00	0.14
Radial #6	220	217	30	155	25	-0.147	100.00	0.14
Radial #7	220	217	30	155	25	0.111	100.00	0.14
Radial #8	221	217	30	155	25	-0.364	100.00	0.14

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\957N25 fld.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Nov 25 19:40:50 2009 TOOL SERIES: 1426XA ASSET: 957 SEQ: N25

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

RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]
CAL Pulse	114	53	-0.000	0.000	1.00	100.000
3 Ft. Receiver	200	25	-0.261			
5 Ft. Receiver	317	25	-0.145			
Radial #1	200	25	-1.582			
Radial #2	200	25	-1.543			
Radial #3	200	25	-0.308			
Radial #4	200	25	-0.448			
Radial #5	200	25	-0.141			
Radial #6	200	25	-0.175			
Radial #7	200	25	-0.273			
Radial #8	200	25	-0.294			

TOOL DIAGRAM

OTA SHORT CABLE HEAD

CENTRALIZER

Series	RALCENT
Mnemonic	CENT
Diameter	3.12"
Weight	20.00 lb

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

CENTRALIZER

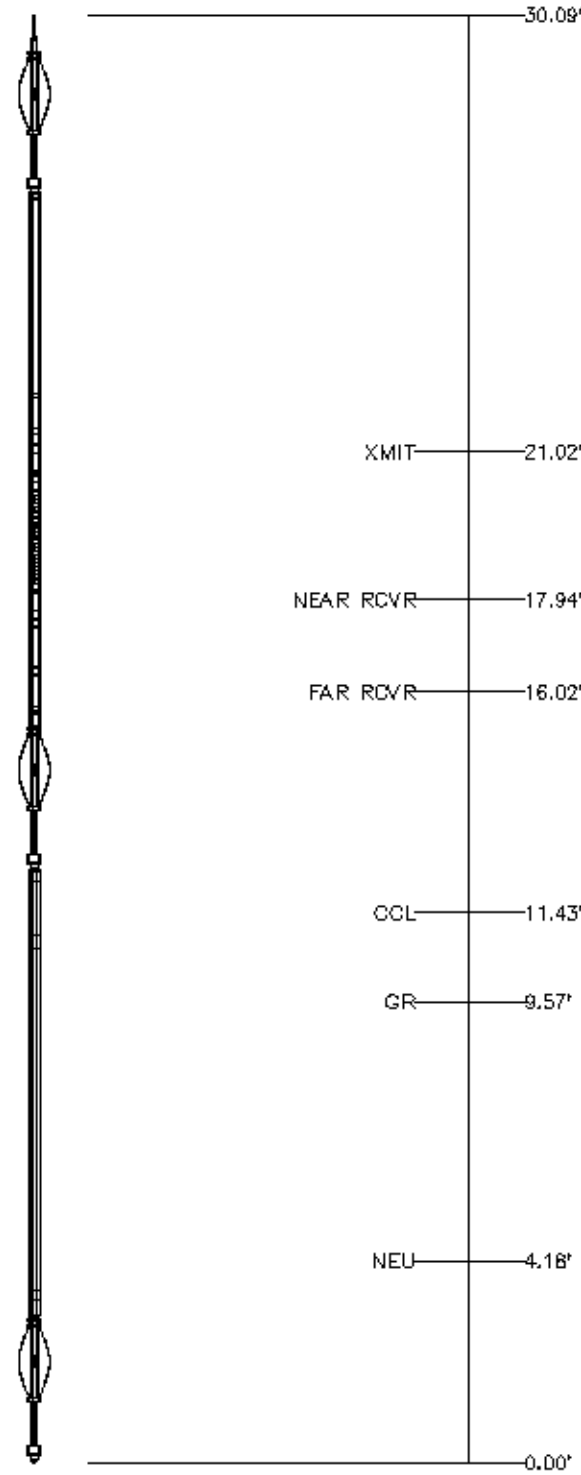
Series	RALCENT
Mnemonic	CENT
Diameter	3.12"
Weight	20.00 lb

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: 30.09'
Total Weight: Not Available
Max Diameter: 0' 3.12"

BAKER HUGHES

Baker Atlas

Company	WILLIAMS PRODUCTION COMPANY		File No: 1475
Well	KP 511-16		API No: 05045173460000
Field	KOKOPELLI		
County	GARFIELD	State COLORADO	

Location

SHL: 1684' FNL & 1280' FWL

BHL: 1095' FNL & 860' FWL

SEC 16 TWP 6S RGE 91W

Elevations

KB 6702 ft

DF 6701 ft

GL 6679 ft

S16 T6S R91W

PAD: KP 22-16

RIG: CYCLONE 30