BAKER HUGHES

Baker Atlas

RADIAL ANALYSIS BOND LOG

File No:	CH078785
API No:	05045220380000
Company	WPX ENERGY
Well	FEDERAL PA 431-21
Field	PARACHUTE
County	GARFIELD
State	CO

Location

21 6S 95W

PA 22-21 PAD

NABORS 573

SHL: 2600' FNL & 1426' FWL

BHL: 909' FNL & 1628' FEL

SEC 21 TWP 6S RGE 95W

Other Services

RPM

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

Elevations

KB	6056 ft
DF	
GL	6030 ft

Date	28/OCT/13		
Run	ONE		
Service Order	US624018		
Depth Driller	9390 ft		
Depth Logger	9340 ft		
Bottom Logged Interval	9330 ft		
Top Logged Interval	26 ft		
Time Started	6:30		
Time Finished	10:00		
Operator Rig Time	3.5 HRS		
Type of Fluid in Hole	WATER		
Fluid Density	NA		
Salinity	NA		
Fluid Level	73 ft		
Logged Cement Top	NA		
Wellhead Pressure	0 psi		
Maximum Hole Deviation	NA		
Nominal Logging Speed	65 fpm		
Maximum Recorded Temperature	NA		
Reference Log	NA		
Reference Log Date	NA		
Equipment No. Location	4271	GRAND JCT.	
Recorded By	NEWELL		
Witnessed By	ORAN JACOBS		

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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.

Borehole Record

Bit Size	From	To
13.5 in	0 ft	1156 ft
8.75 in	1156 ft	9438 ft

Casing Record

Size	Weight	Grade	From	To
9.625 in			0 ft	1156 ft
4.5 in	11.6 lbm/ft		0 ft	9438 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 3 feet.

Logged with zero PSI at wellhead.

SJ = 6127' - 6151'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	CBL	1426XA	10218495	CENTRALIZED
1	1	GR/CCL	1355XA	10580209	CENTRALIZED

PRIMARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	30.374	9371.000
RAL	Amp Gate Start Near	195.000	usec	30.374	9371.000
RAL	Amp Gate Start Radial	195.000	usec	30.374	9371.000
RAL	Amp Gate Width Far	25.000	usec	30.374	9371.000
RAL	Amp Gate Width Near	25.000	usec	30.374	9371.000
RAL	Amp Gate Width Radial	25.000	usec	30.374	9371.000
RAL	casing od	4.500	inches	30.374	9371.000
RAL	casing wt	11.600	lbm/ft	30.374	9371.000
RAL	FB Start Far	291.900	usec	30.374	9371.000
RAL	FB Start Near	175.391	usec	30.374	9371.000
RAL	FB Start Radial	175.391	usec	30.374	9371.000
RAL	FB Thresh Far	10.000	mv	30.374	9371.000
RAL	FB Thresh Near	4.000	mv	30.374	9371.000
RAL	FB Thresh Radial	4.000	mv	30.374	9371.000
RAL	Fluid Travel Time	200.000	usec/ft	30.374	9371.000

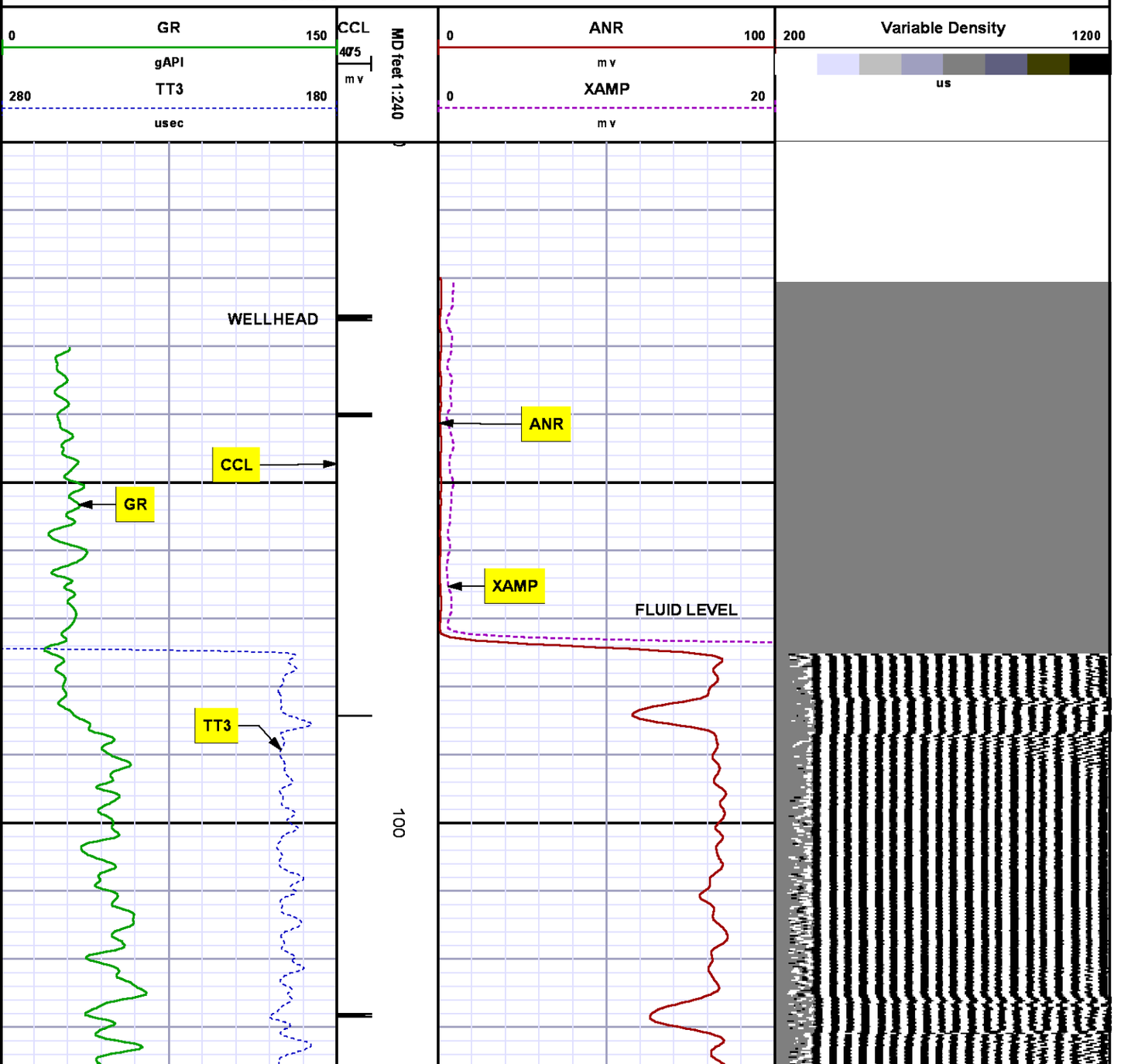
DEPTH OFFSETS
(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-11.000	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3

		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP	
1426XA	-10.040	AFAR	SIG	TT5				
1355XA	-5.620	CCL						
1355XA	-1.500	GR						
1355XA	0.000	TEMP						

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

Company : WPX ENERGY
Well : FEDERAL PA 431-21
File Name : d:\welldata\wpx energy\pa 431-21\431cbl\main.xtf
Mode : PlotMgr 5.4.504
Interval : 0.00 - 9345.00 feet UP
Created : 10/28/2013 7:29:40 AM



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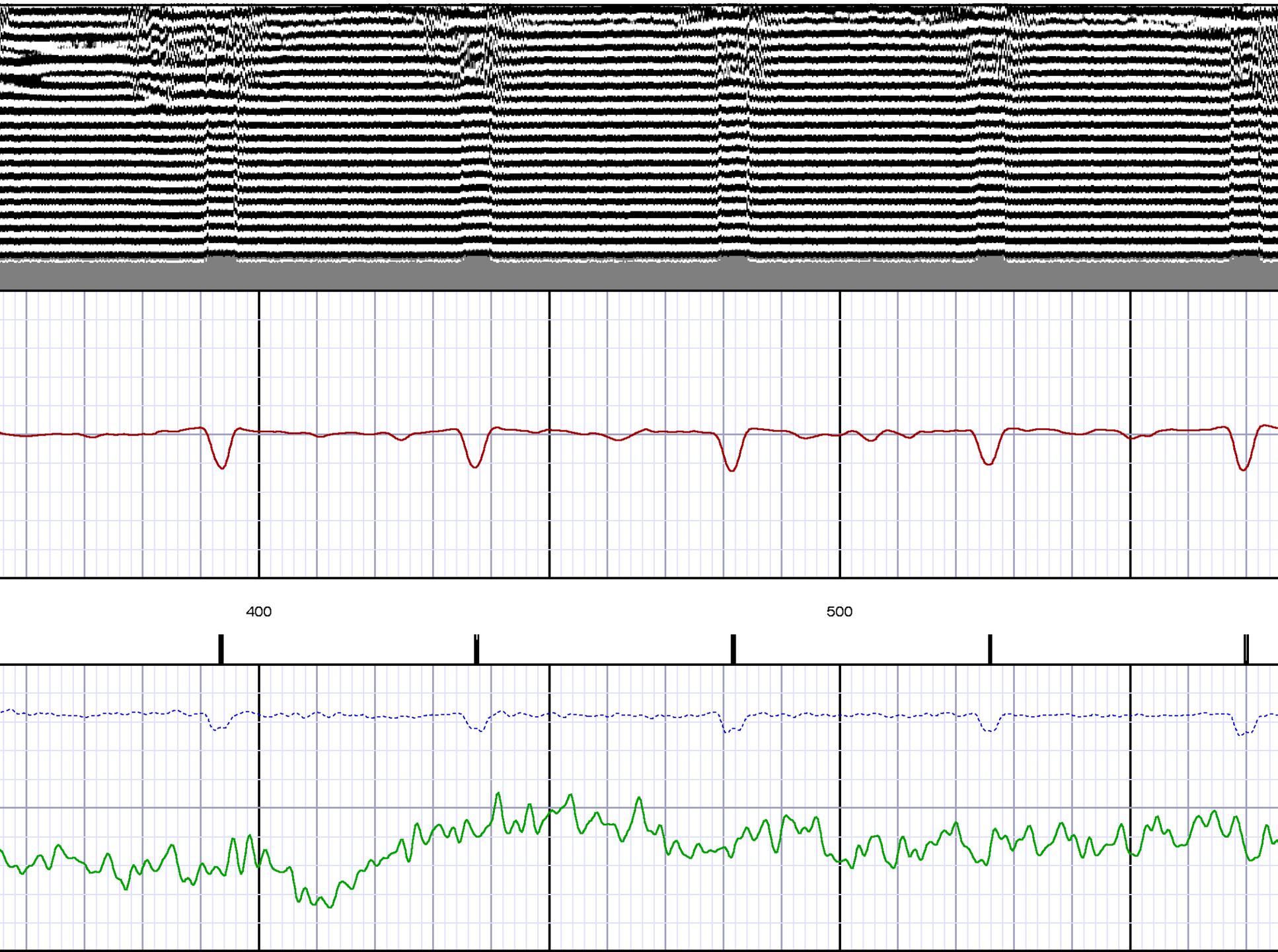
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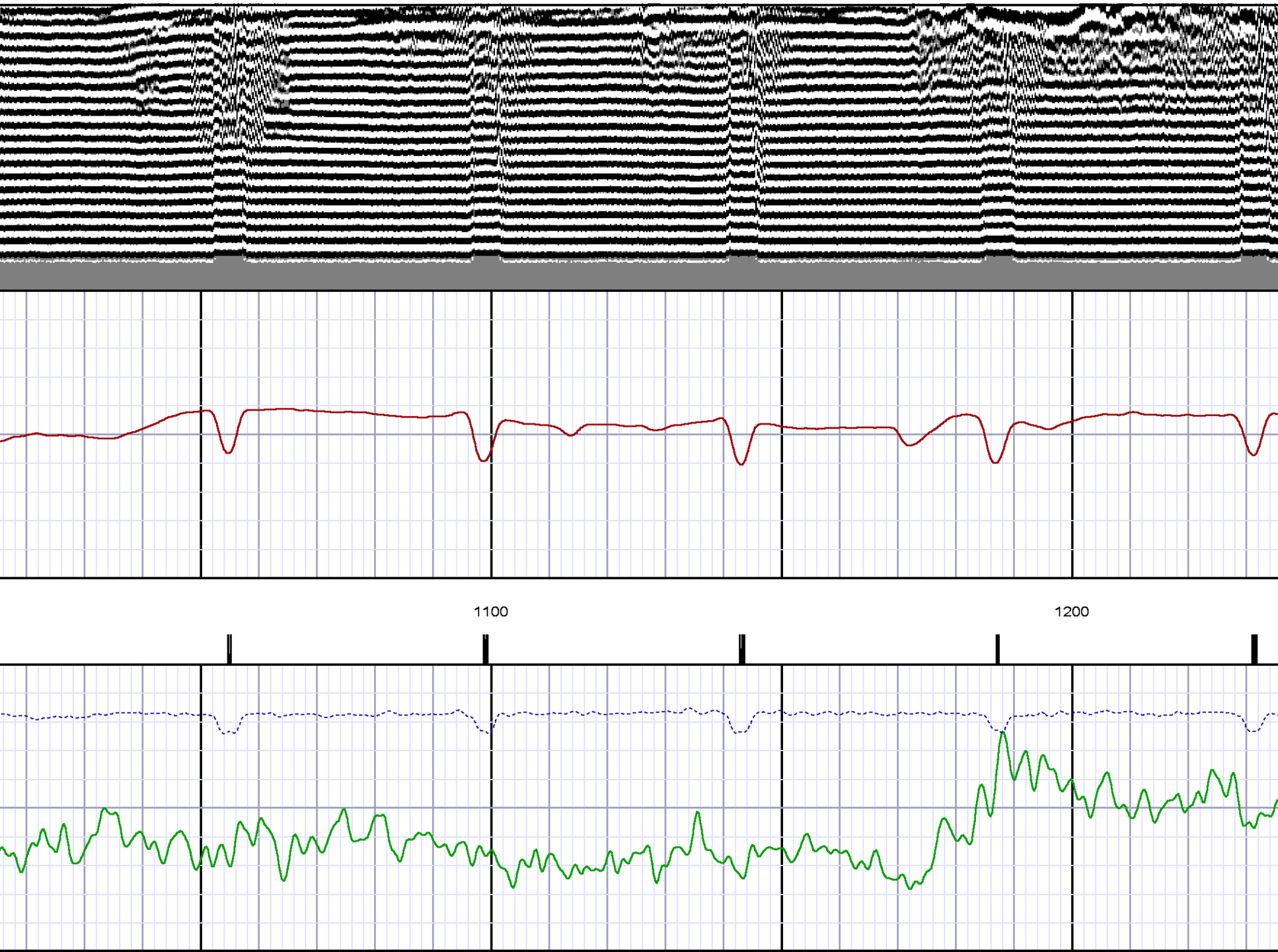
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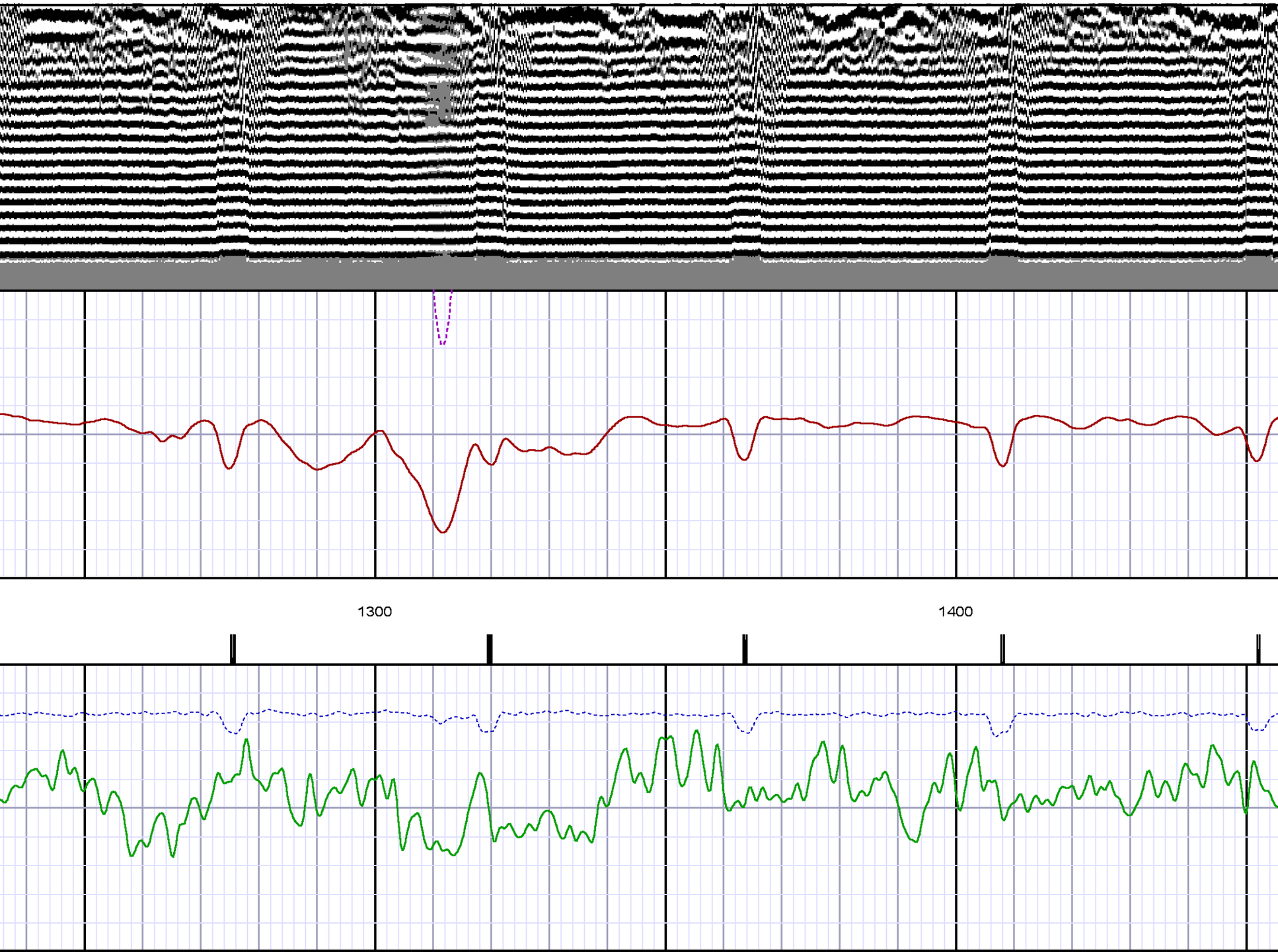
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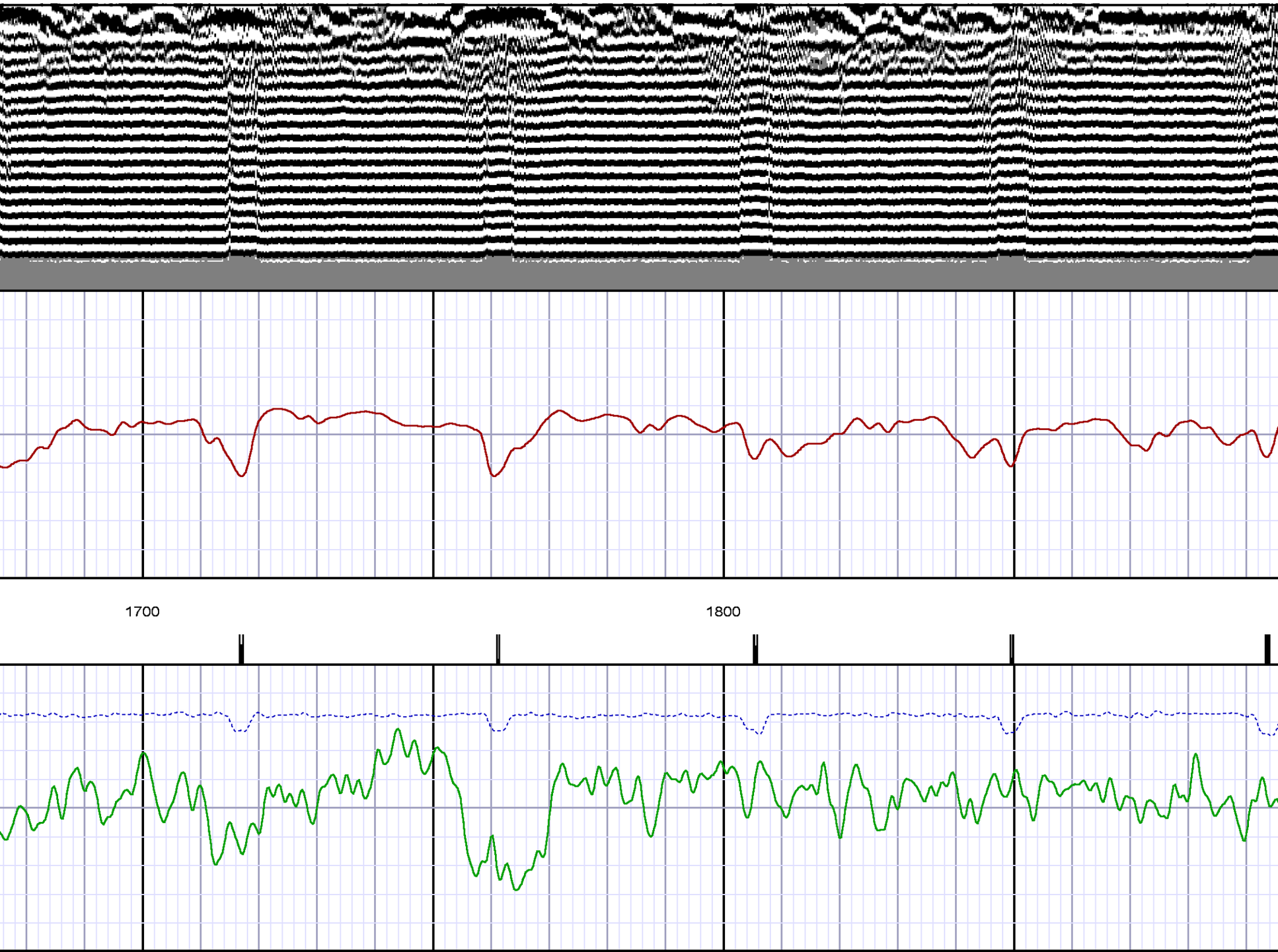
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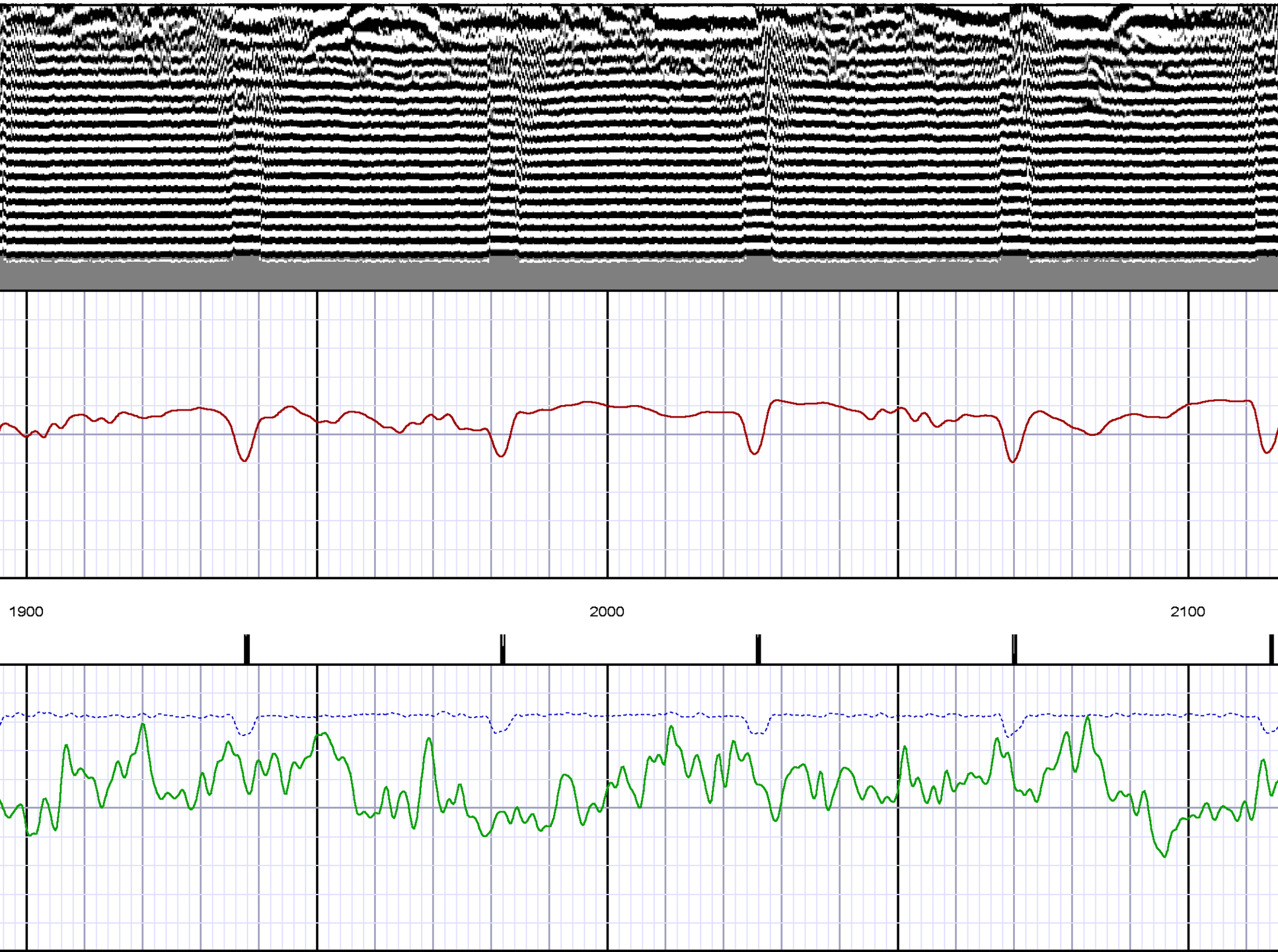
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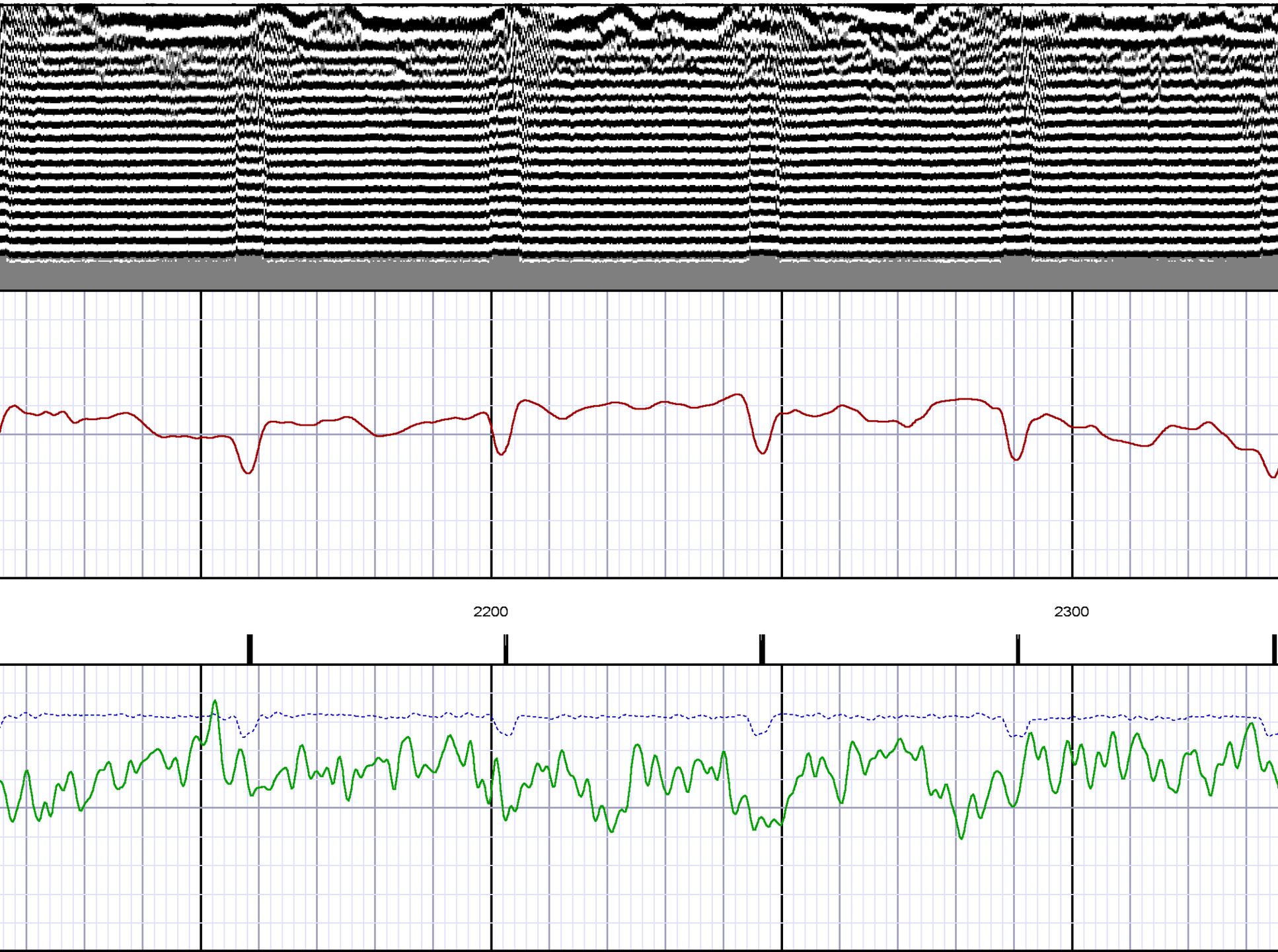
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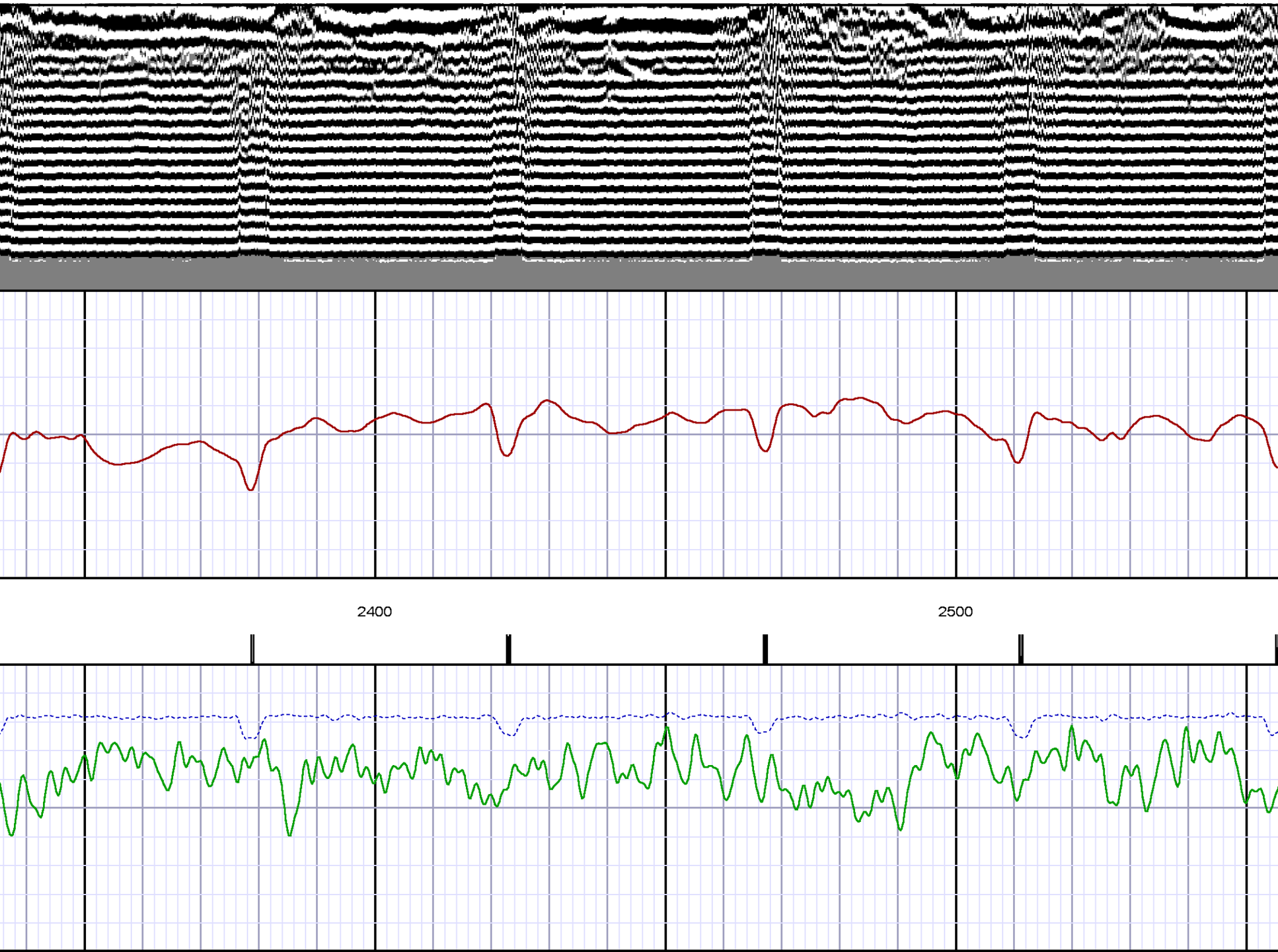
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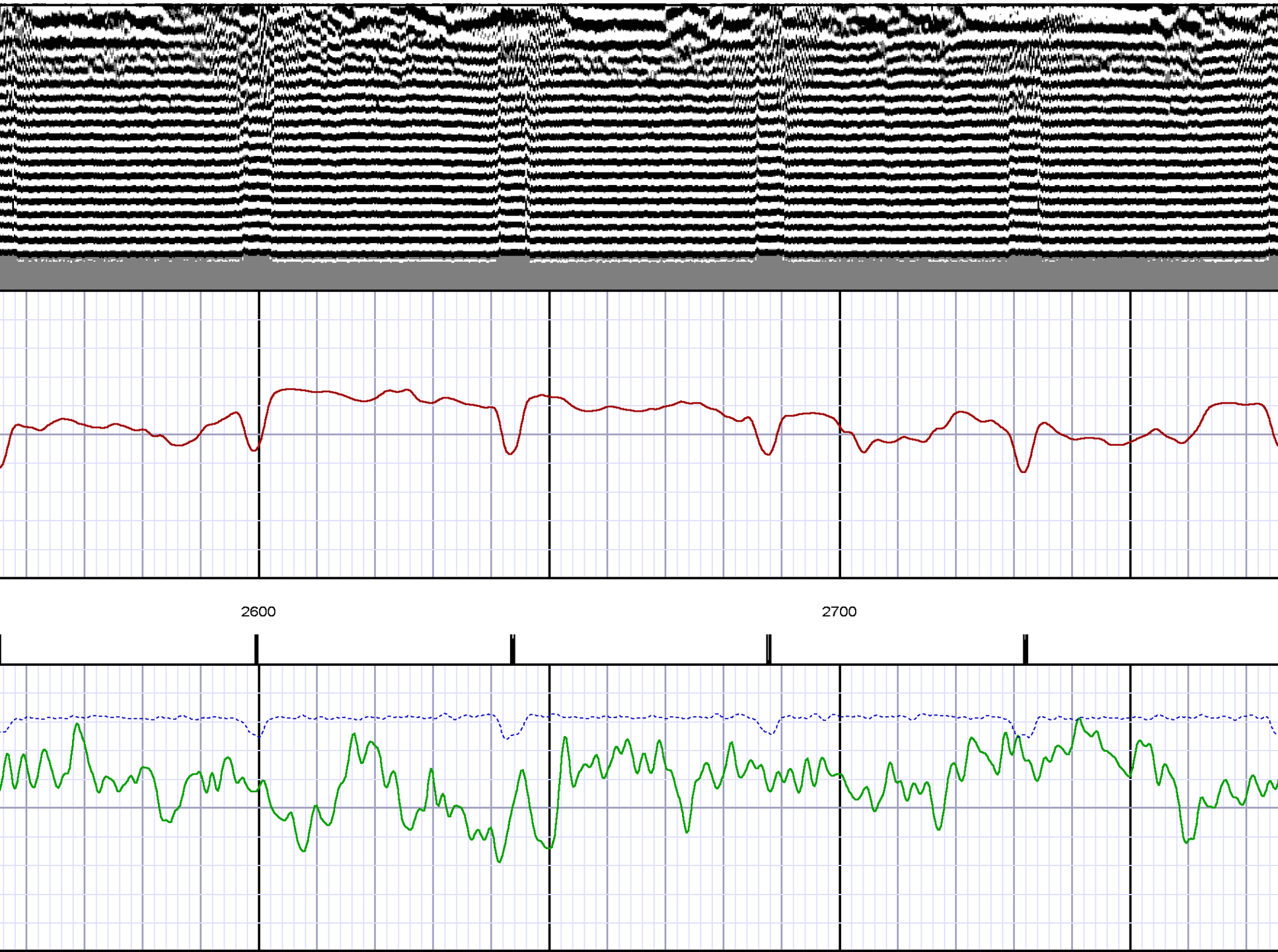
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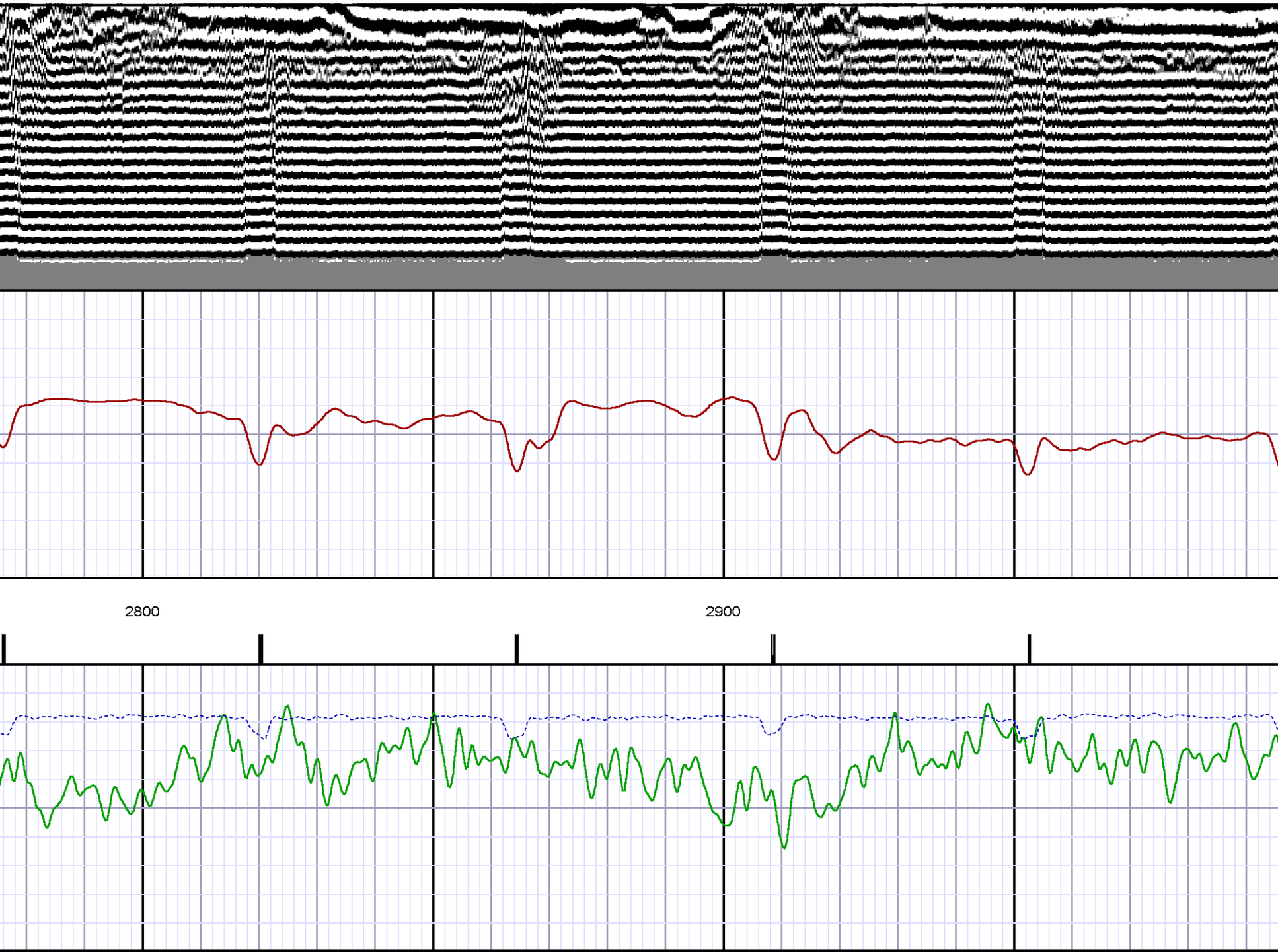
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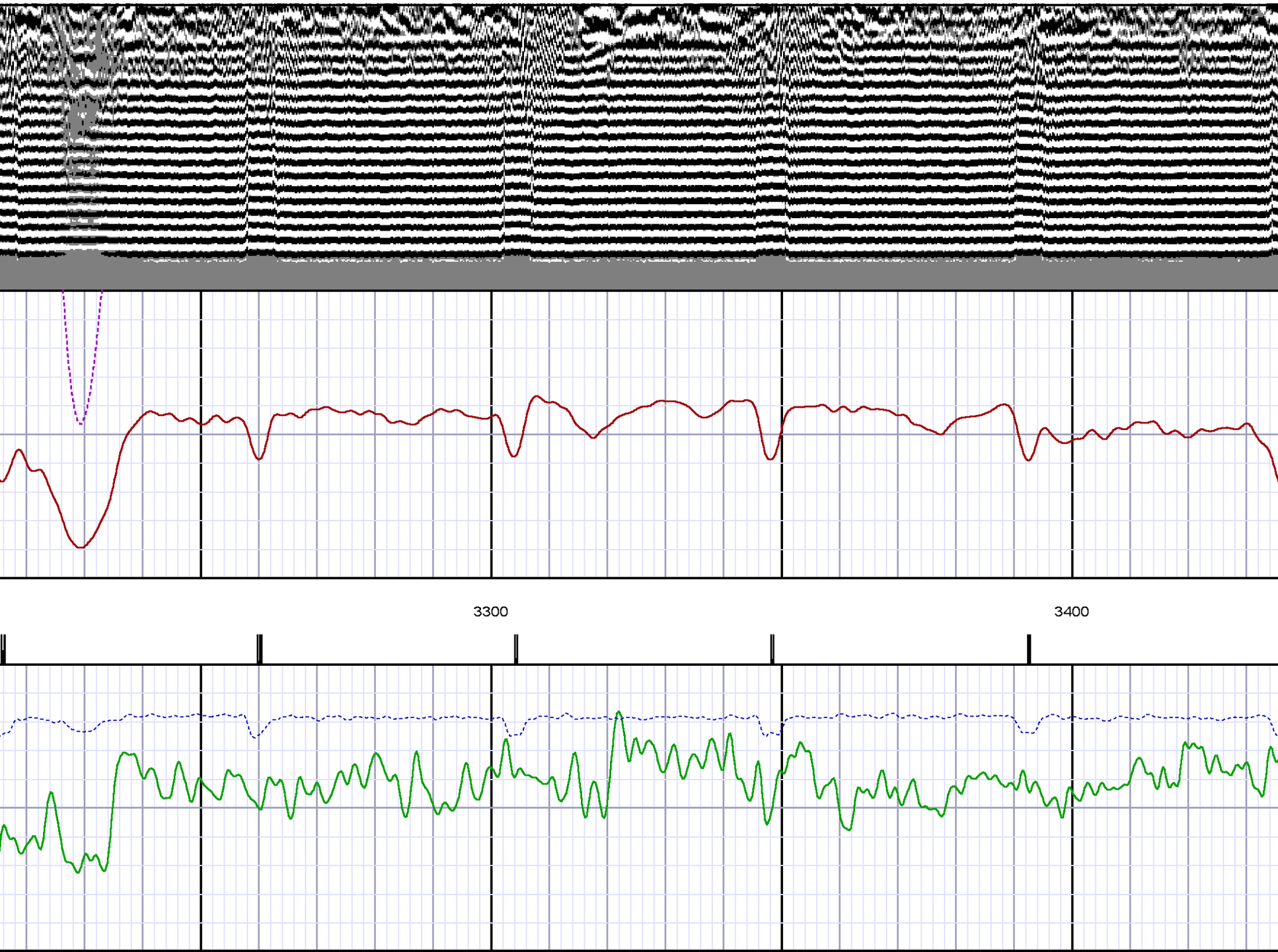
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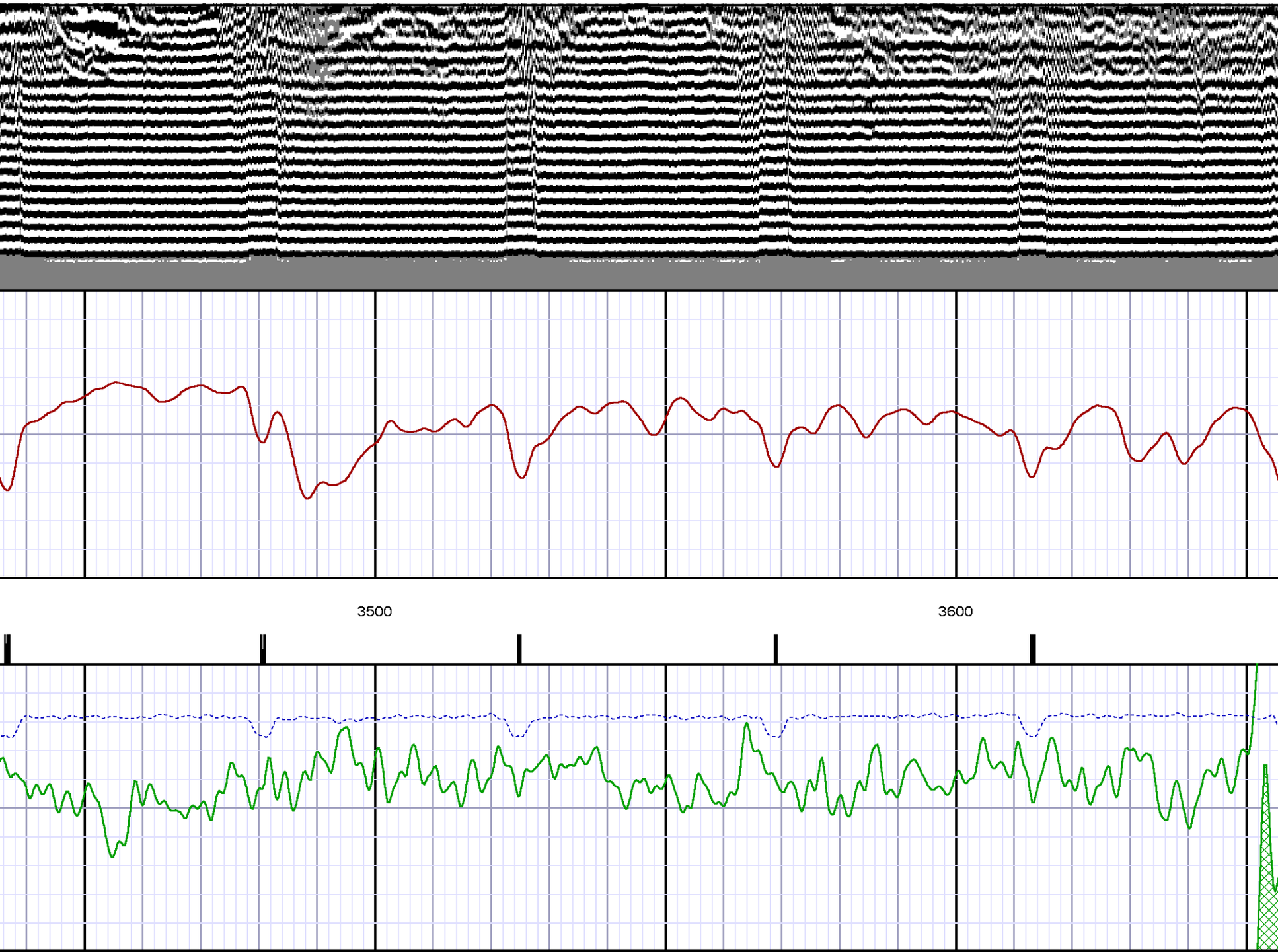
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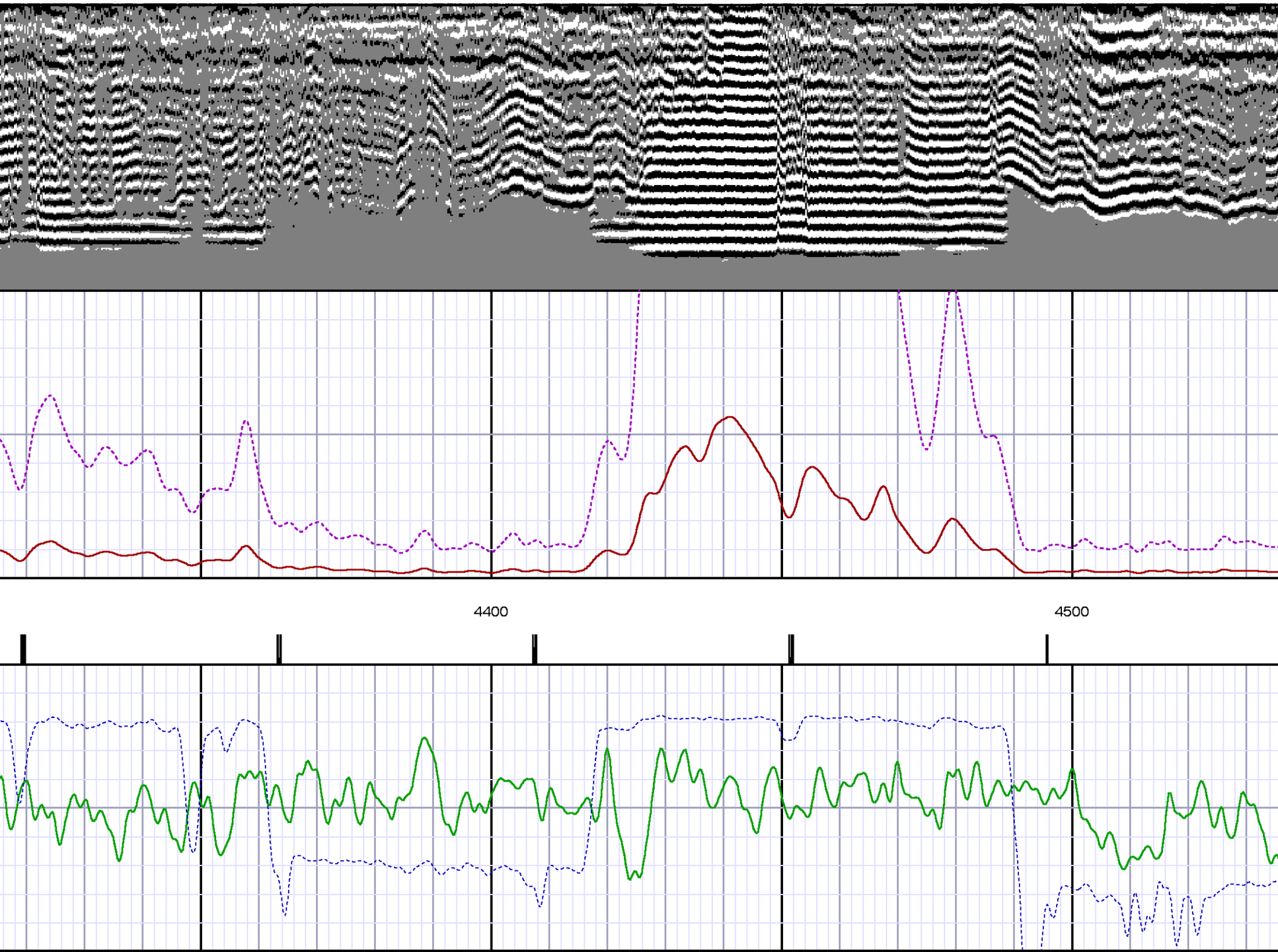
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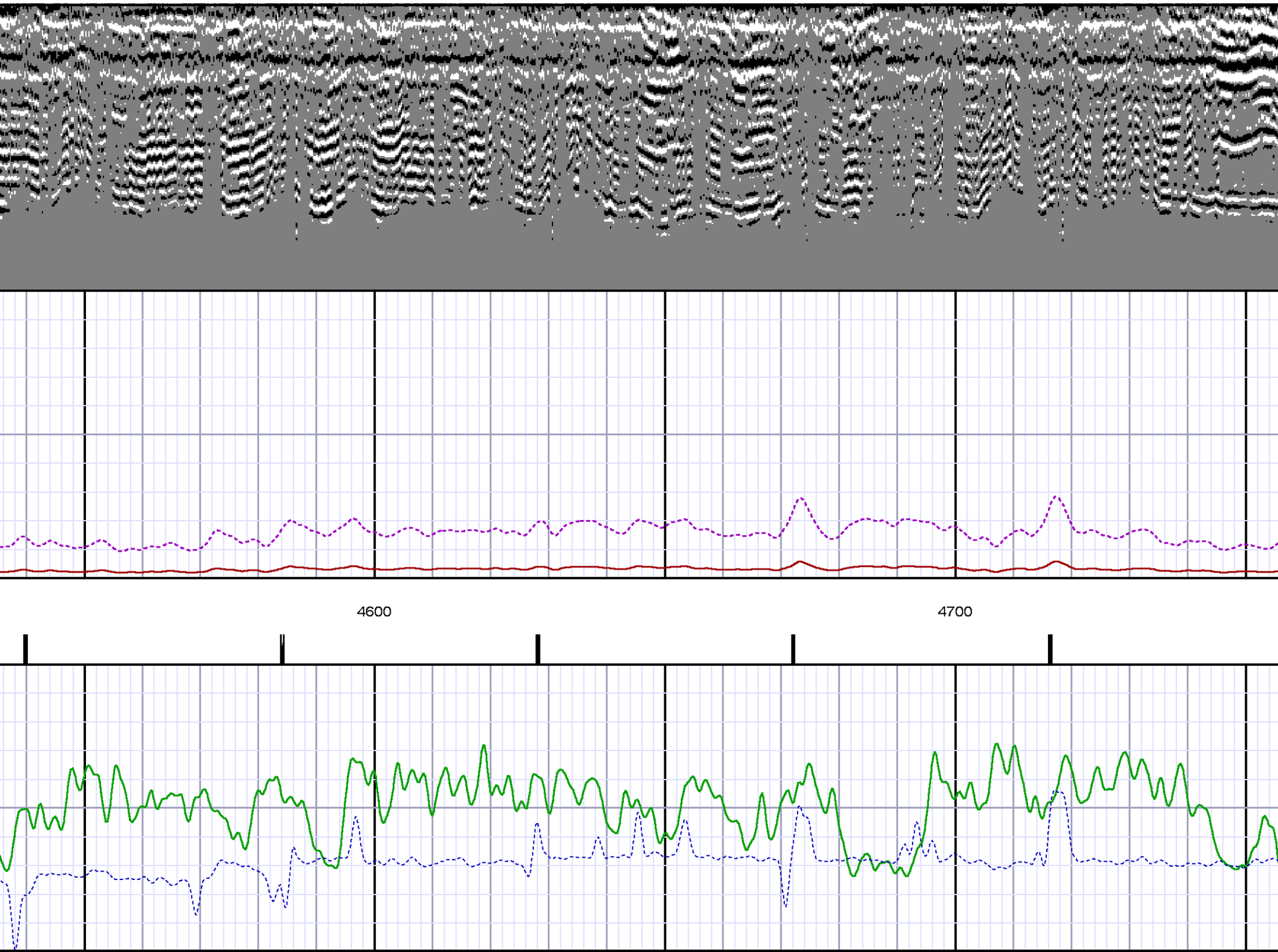
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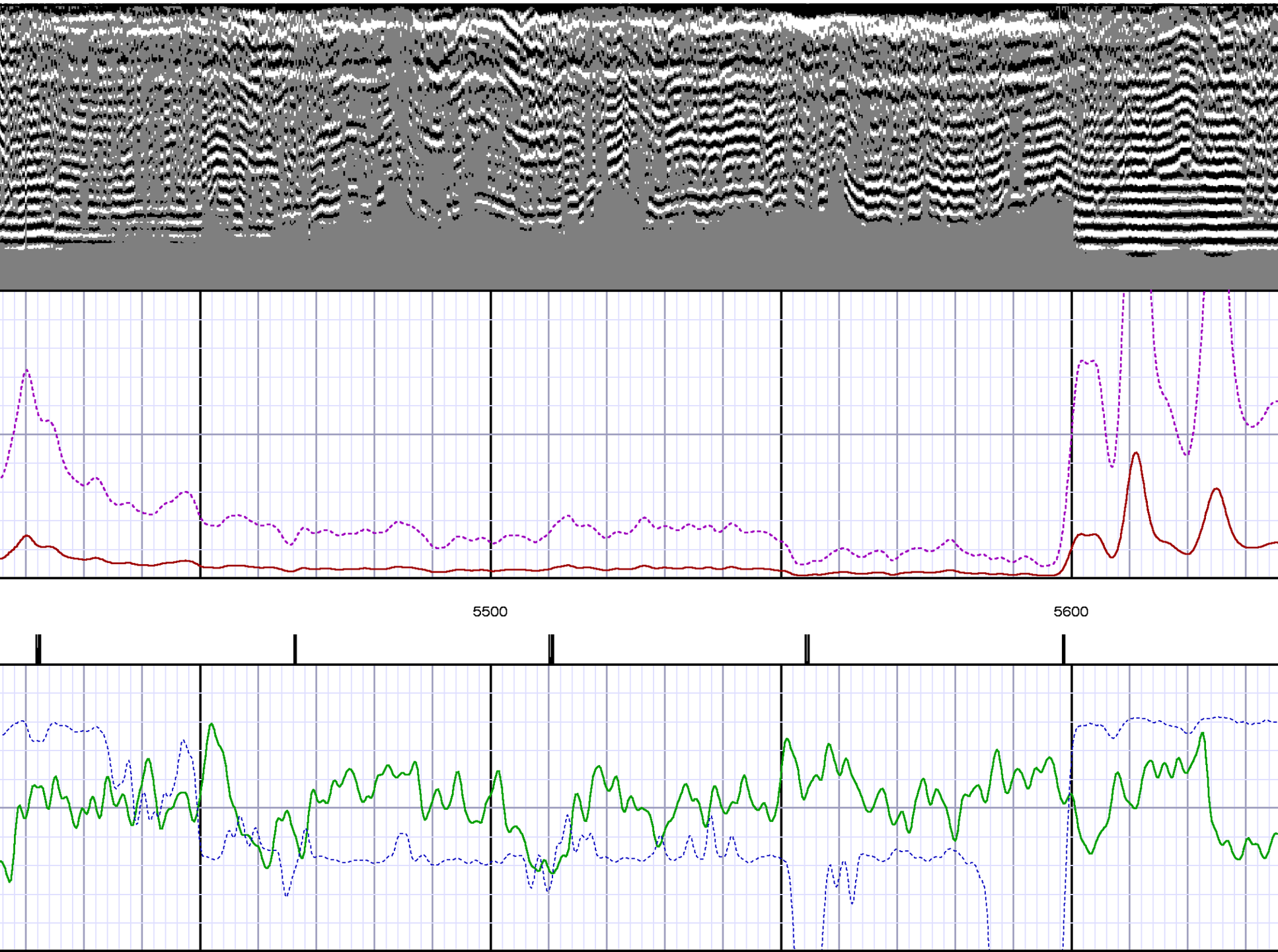
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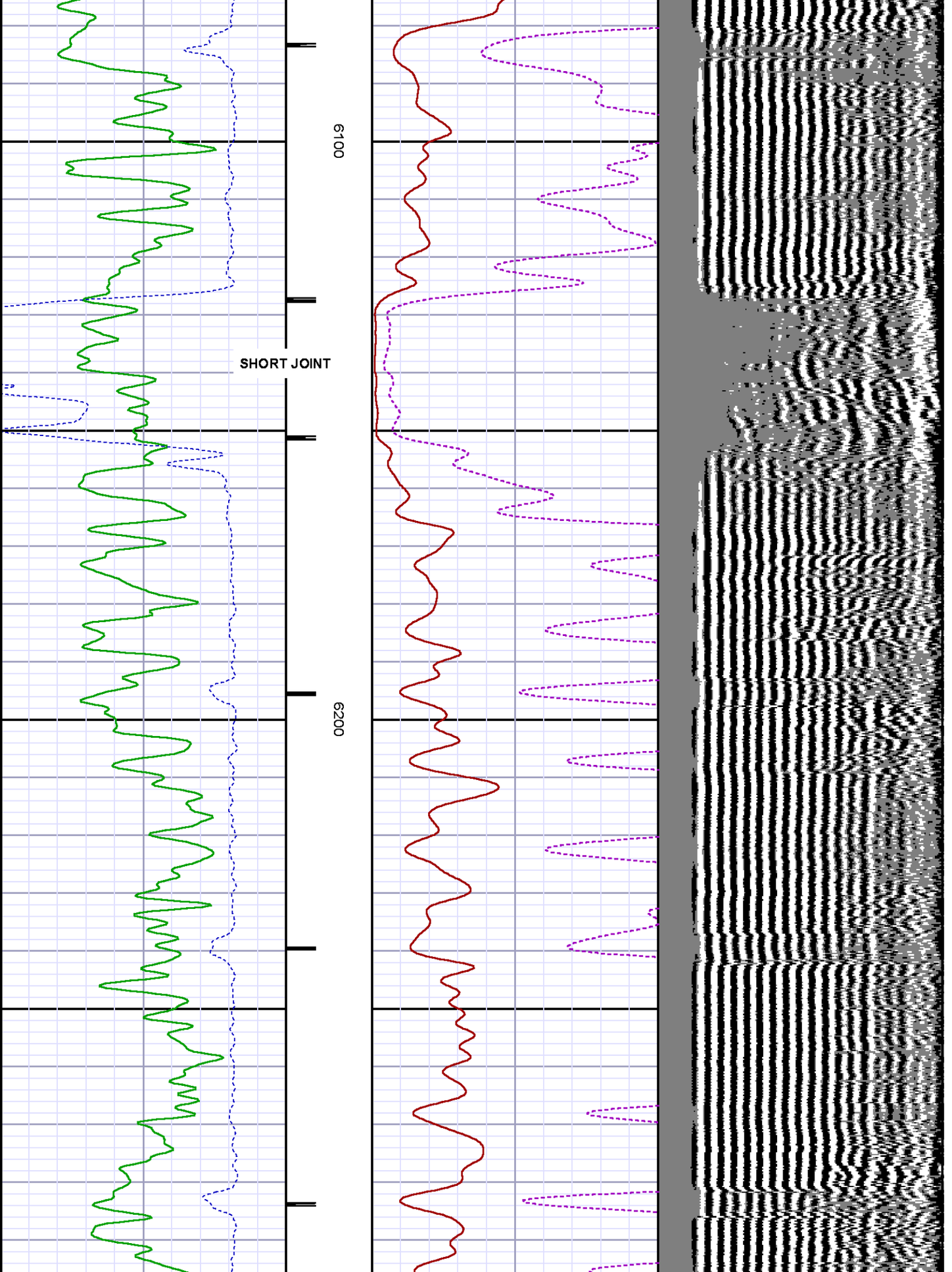
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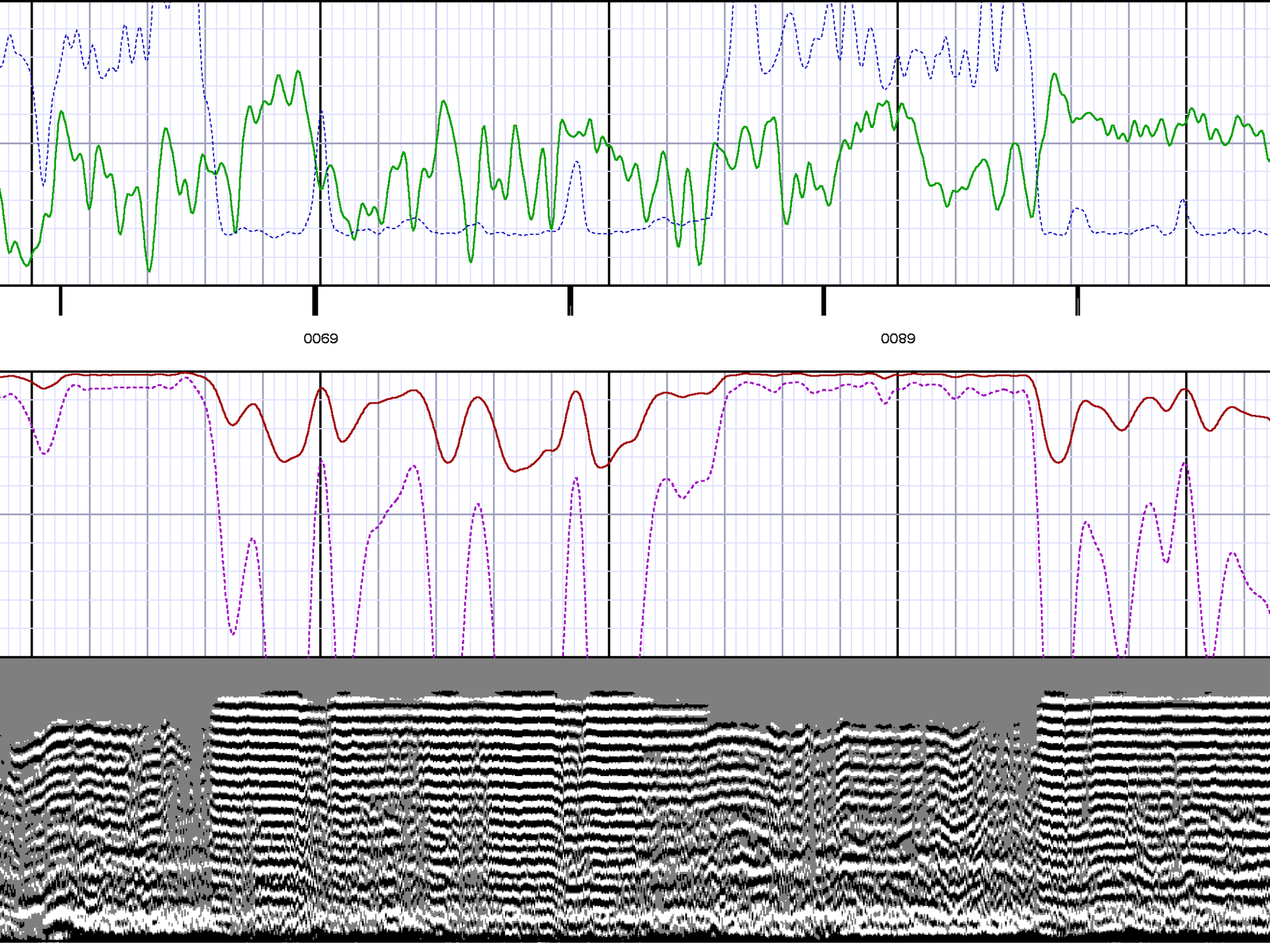
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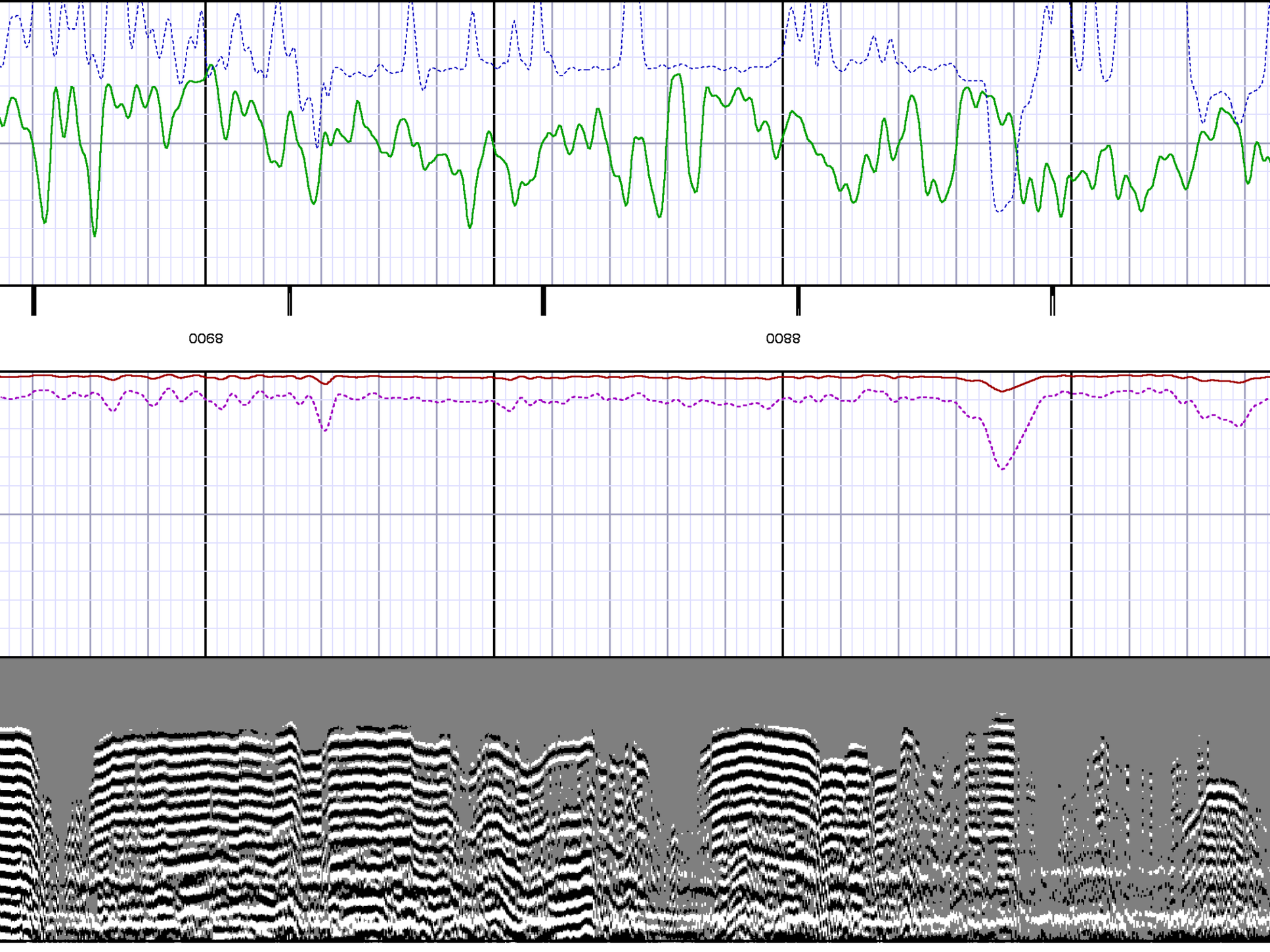
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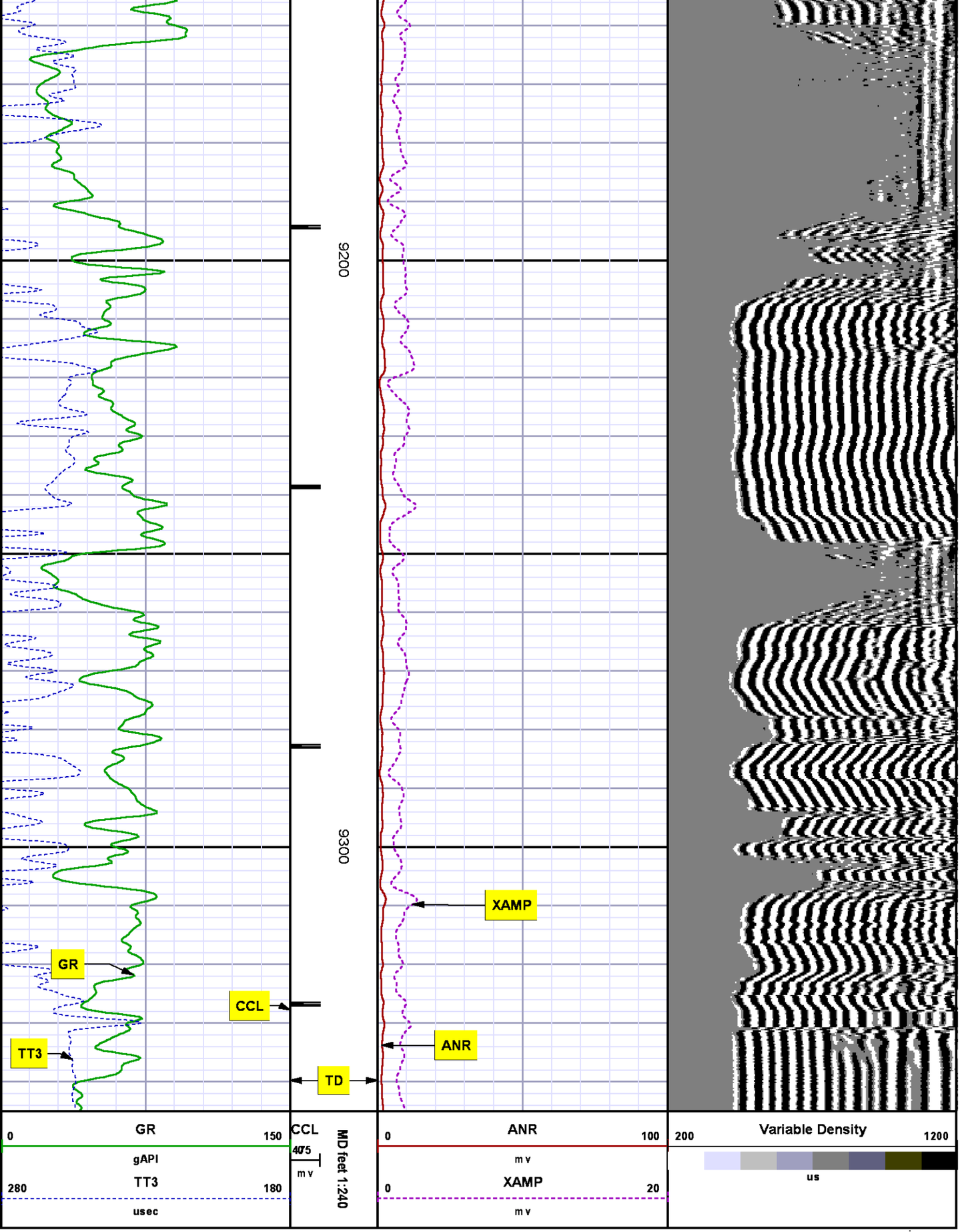
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TT3
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ANR
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usec
CCL
4075
mv
MD feet 1:240
0
ANR
100
mv
0
XAMP
20
mv
200
Variable Density
1200
us

SECONDARY PRESENTATION
O PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	30.374	9371.000
RAL	Amp Gate Start Near	195.000	usec	30.374	9371.000
RAL	Amp Gate Start Radial	195.000	usec	30.374	9371.000
RAL	Amp Gate Width Far	25.000	usec	30.374	9371.000
RAL	Amp Gate Width Near	25.000	usec	30.374	9371.000
RAL	Amp Gate Width Radial	25.000	usec	30.374	9371.000
RAL	casing od	4.500	inches	30.374	9371.000
RAL	casing wt	11.600	lbm/ft	30.374	9371.000
RAL	FB Start Far	291.900	usec	30.374	9371.000
RAL	FB Start Near	175.391	usec	30.374	9371.000
RAL	FB Start Radial	175.391	usec	30.374	9371.000
RAL	FB Thresh Far	10.000	mv	30.374	9371.000
RAL	FB Thresh Near	4.000	mv	30.374	9371.000
RAL	FB Thresh Radial	4.000	mv	30.374	9371.000
RAL	Fluid Travel Time	200.000	usec/ft	30.374	9371.000

DEPTH OFFSETS

(for Acquired Curves)

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

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

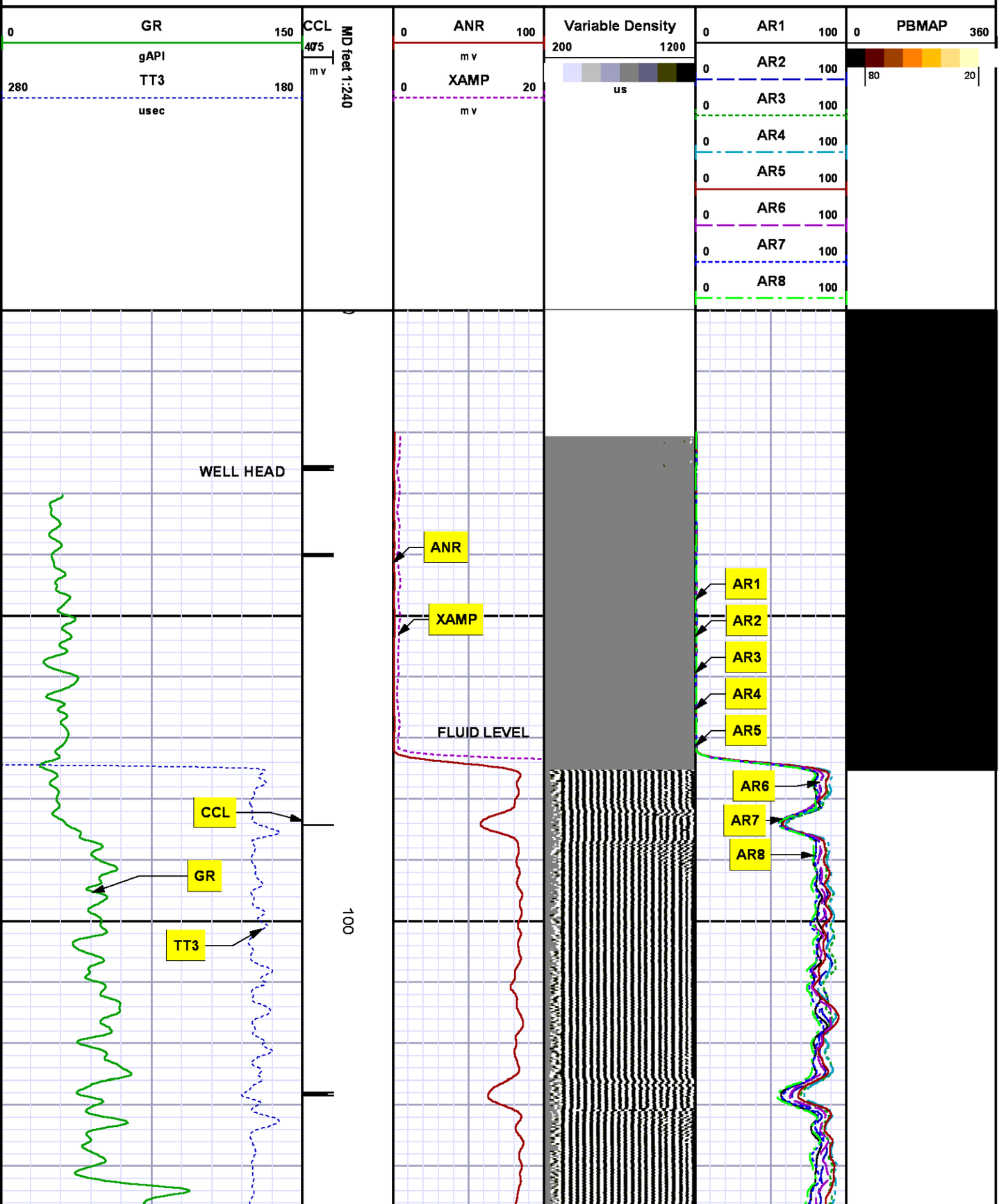
Well : FEDERAL PA 431-21

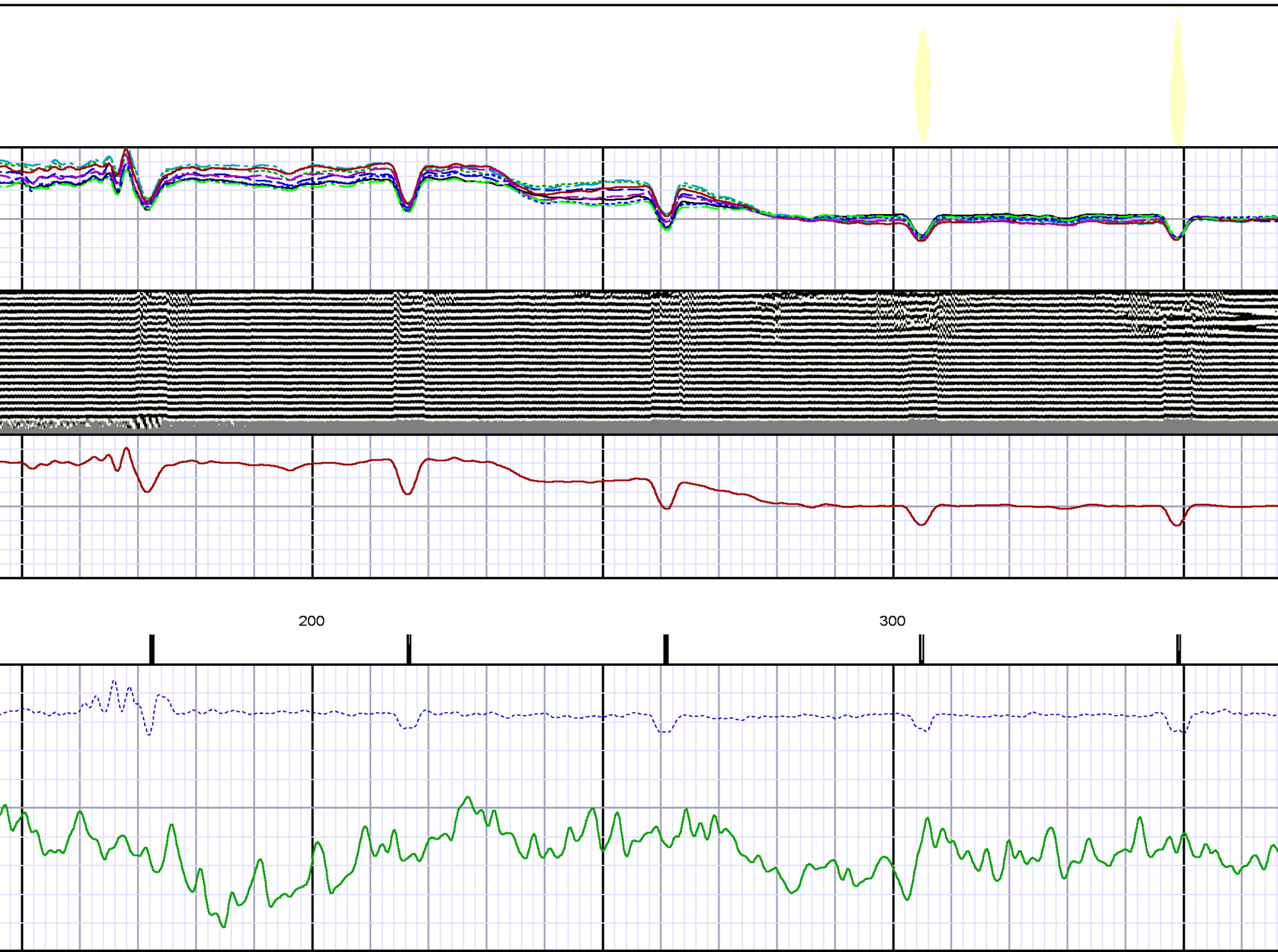
File Name : d:\welldata\wpx energy\pa 431-21\431cbl\main.xtf

Mode : PlotMgr 5.4.504

Interval : 0.00 - 9345.00 feet UP

Created : 10/28/2013 7:29:40 AM

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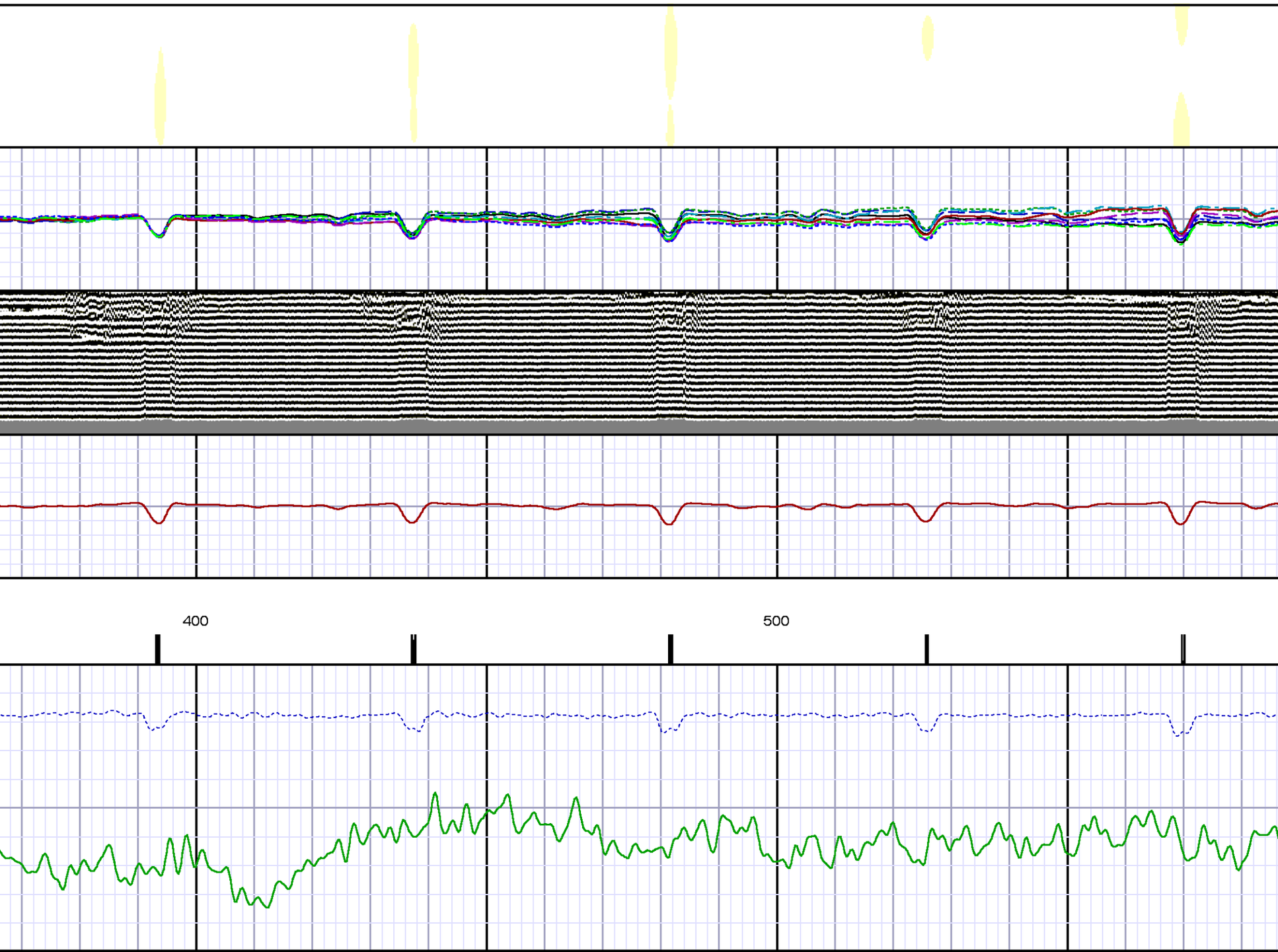
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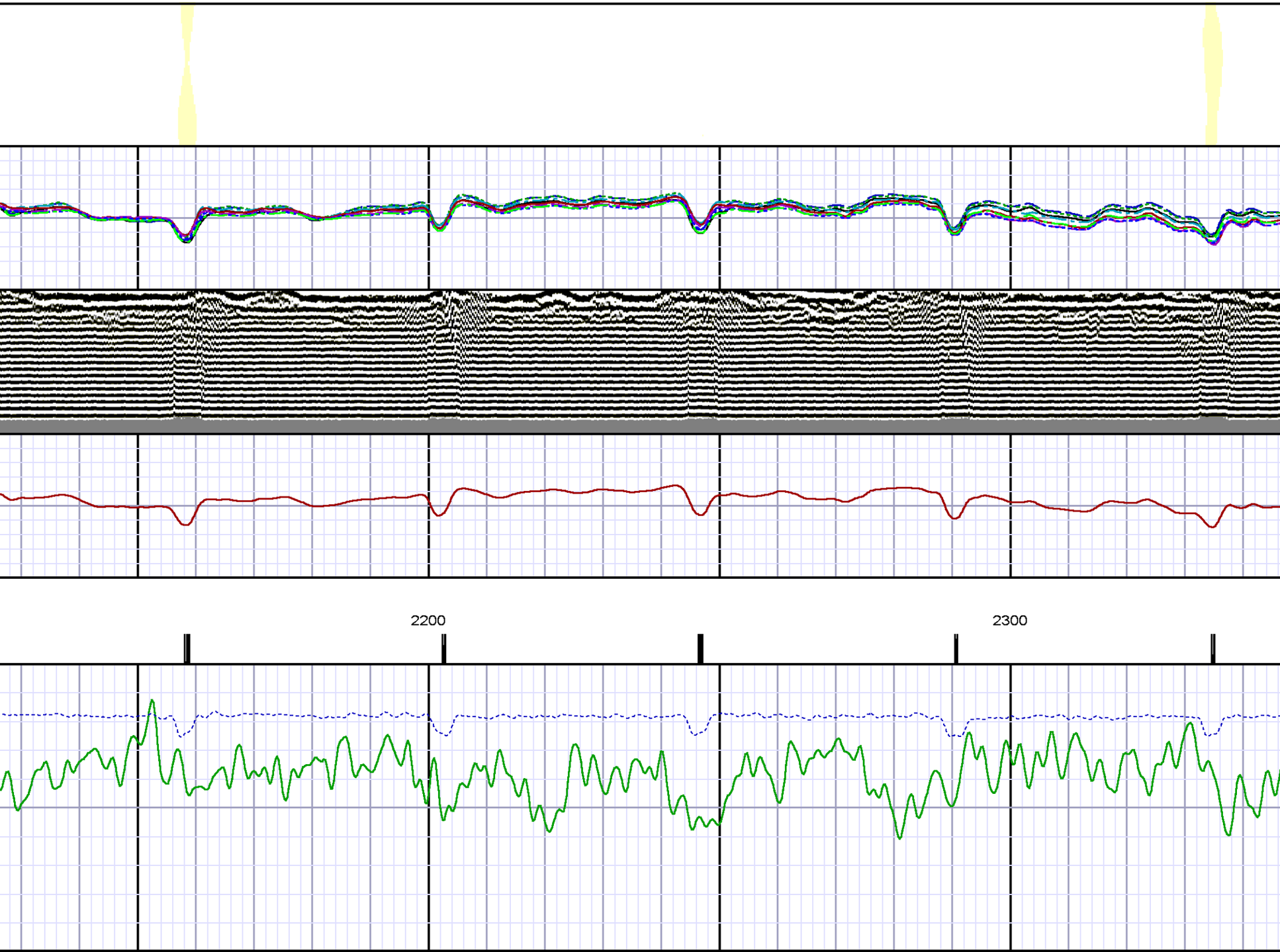
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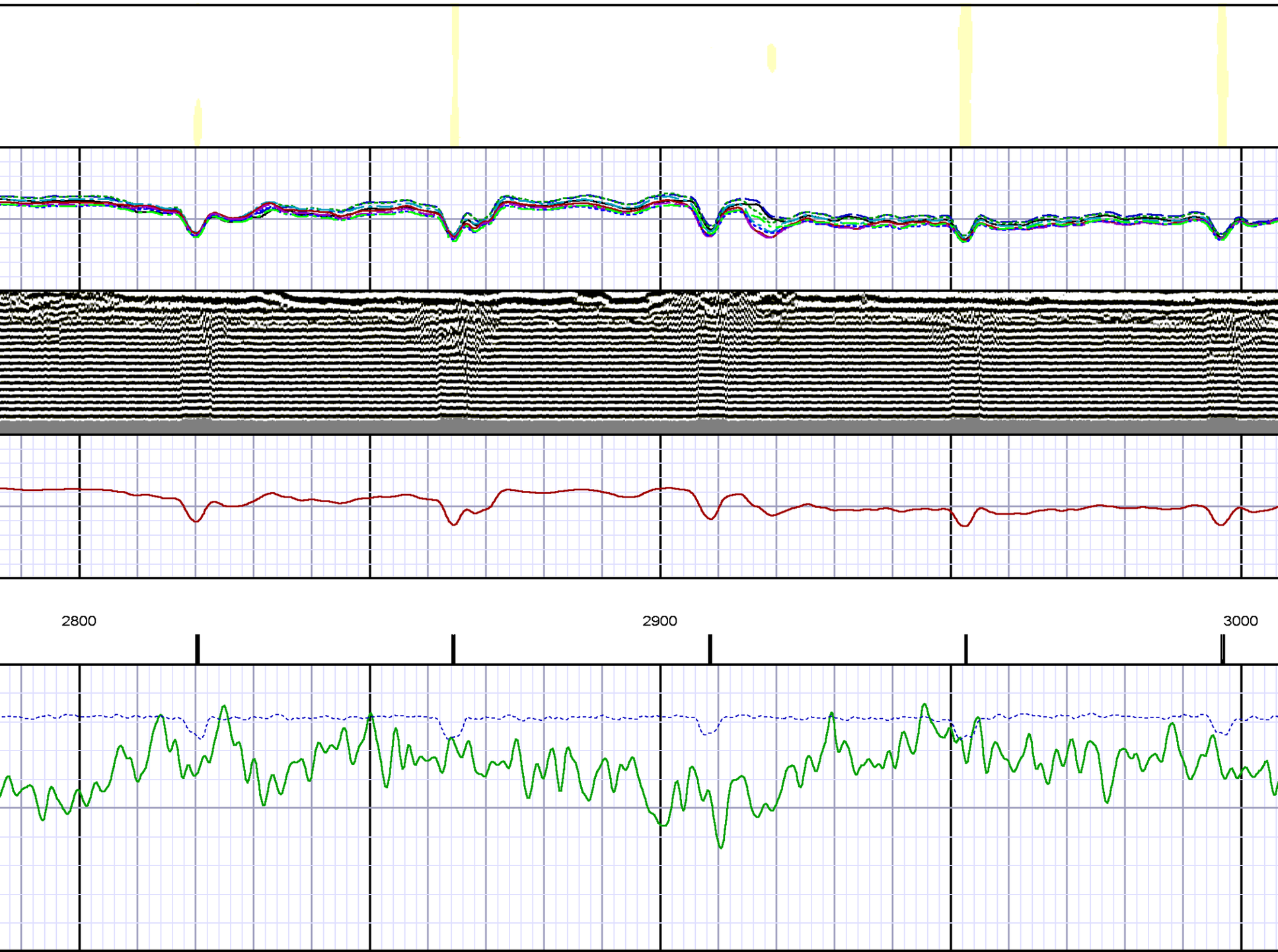
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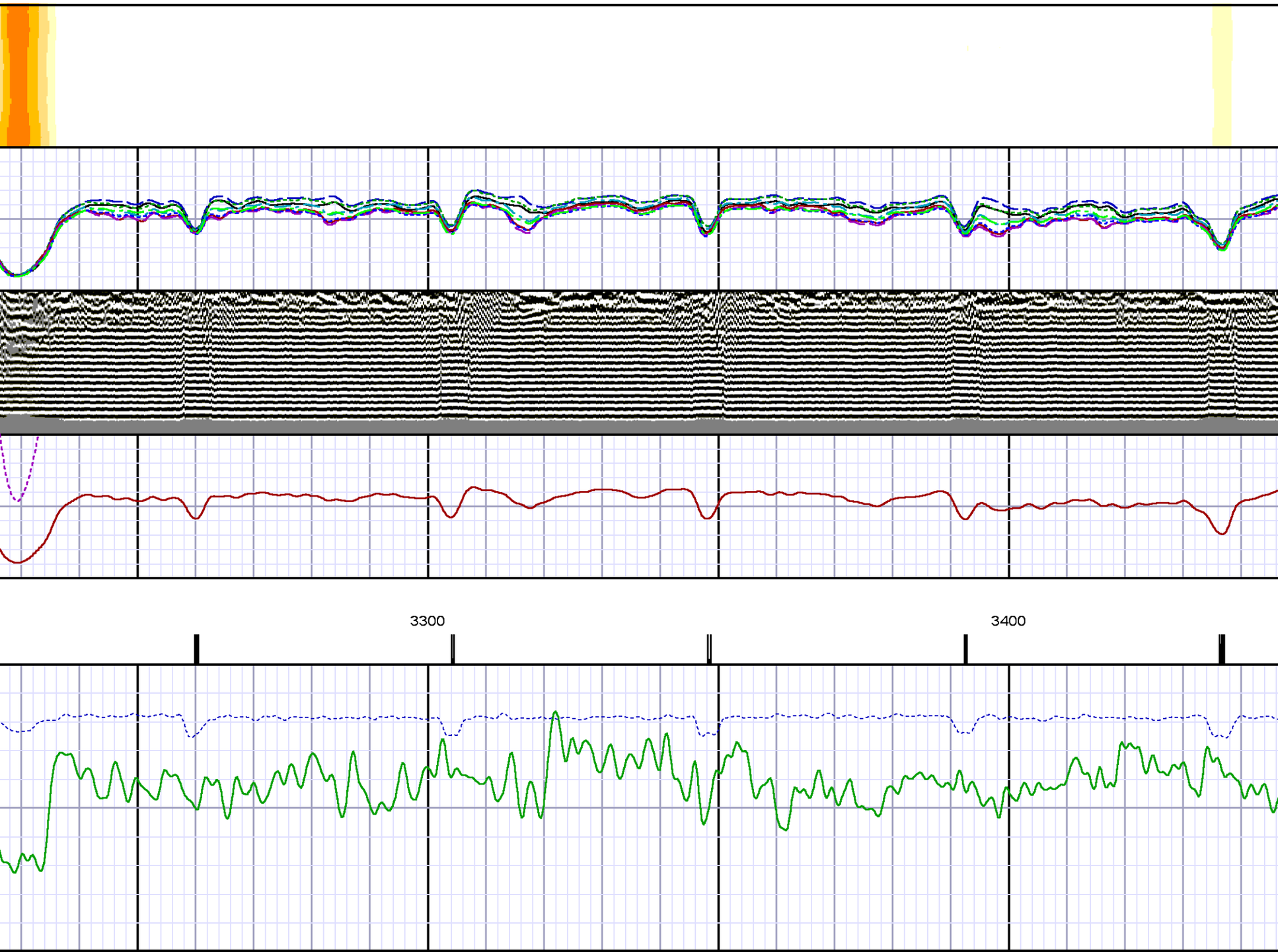
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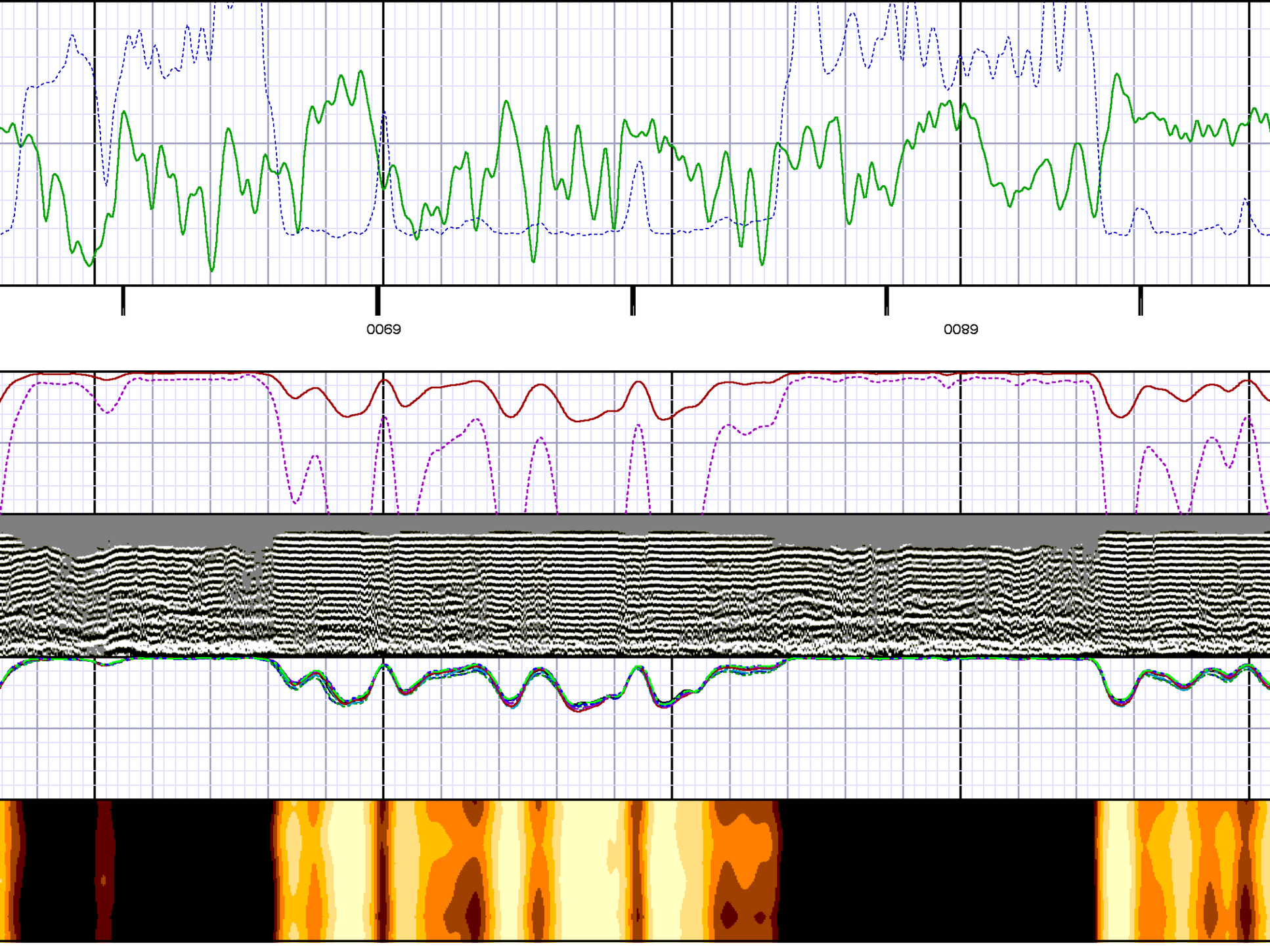
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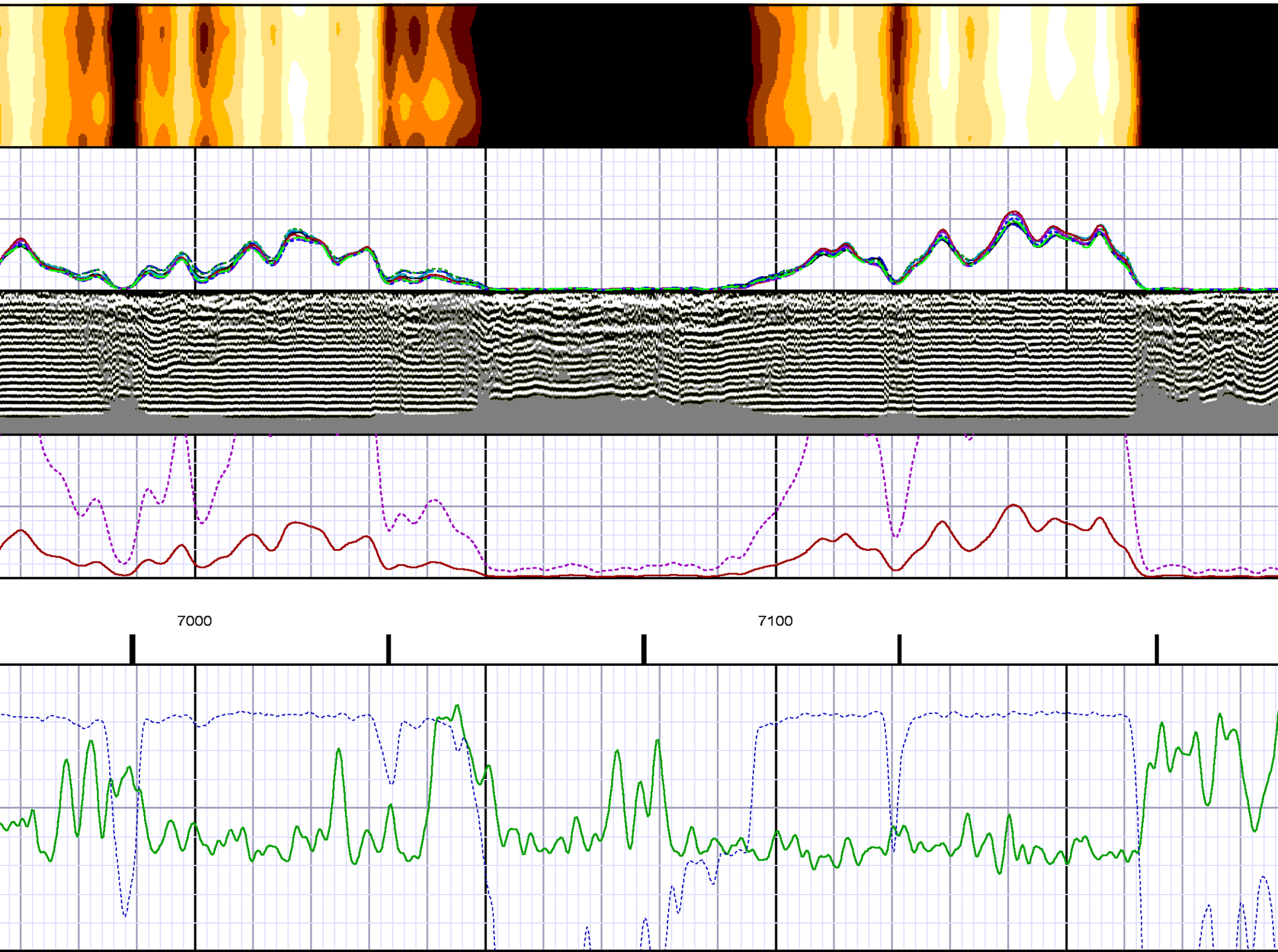
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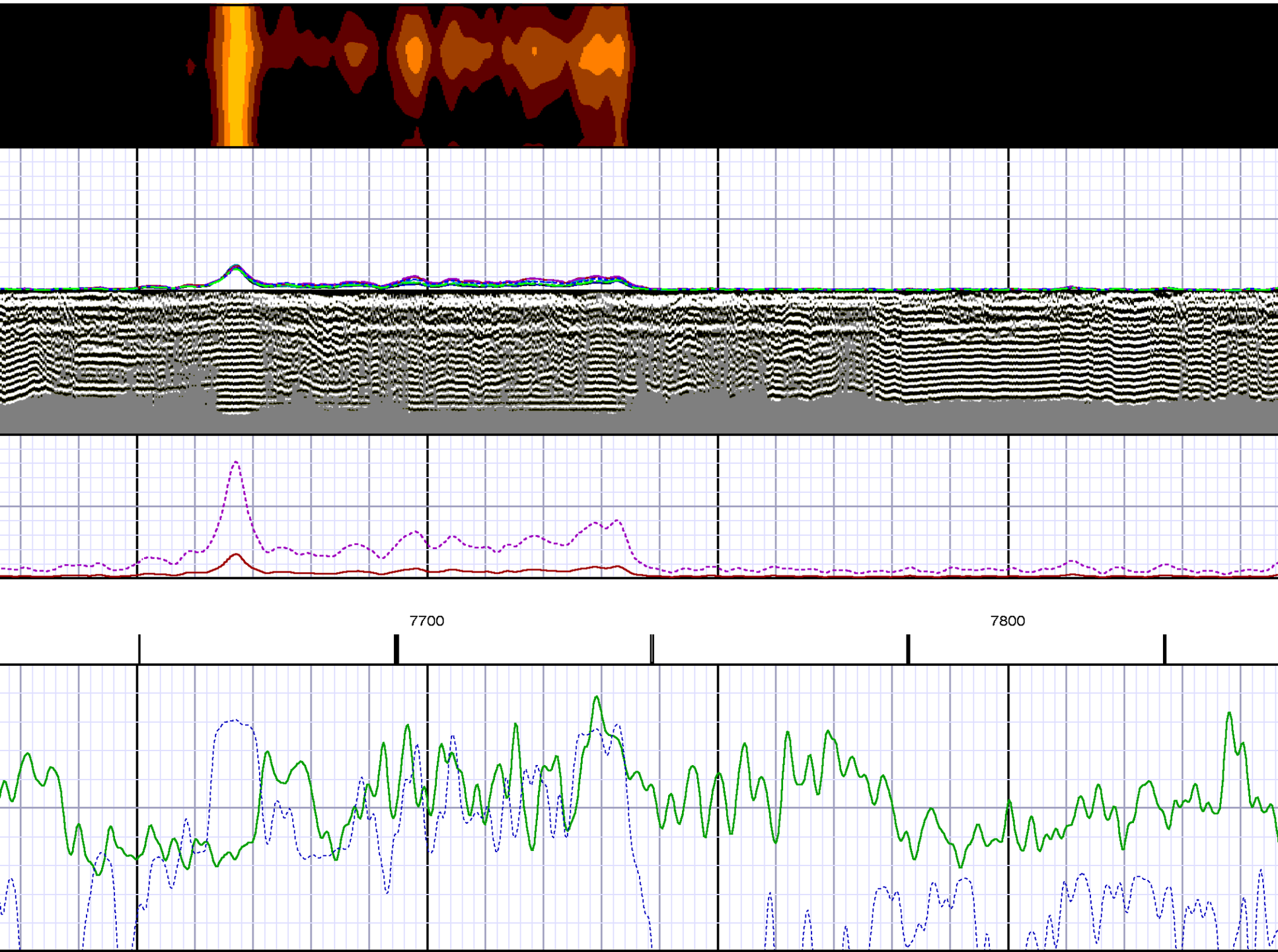
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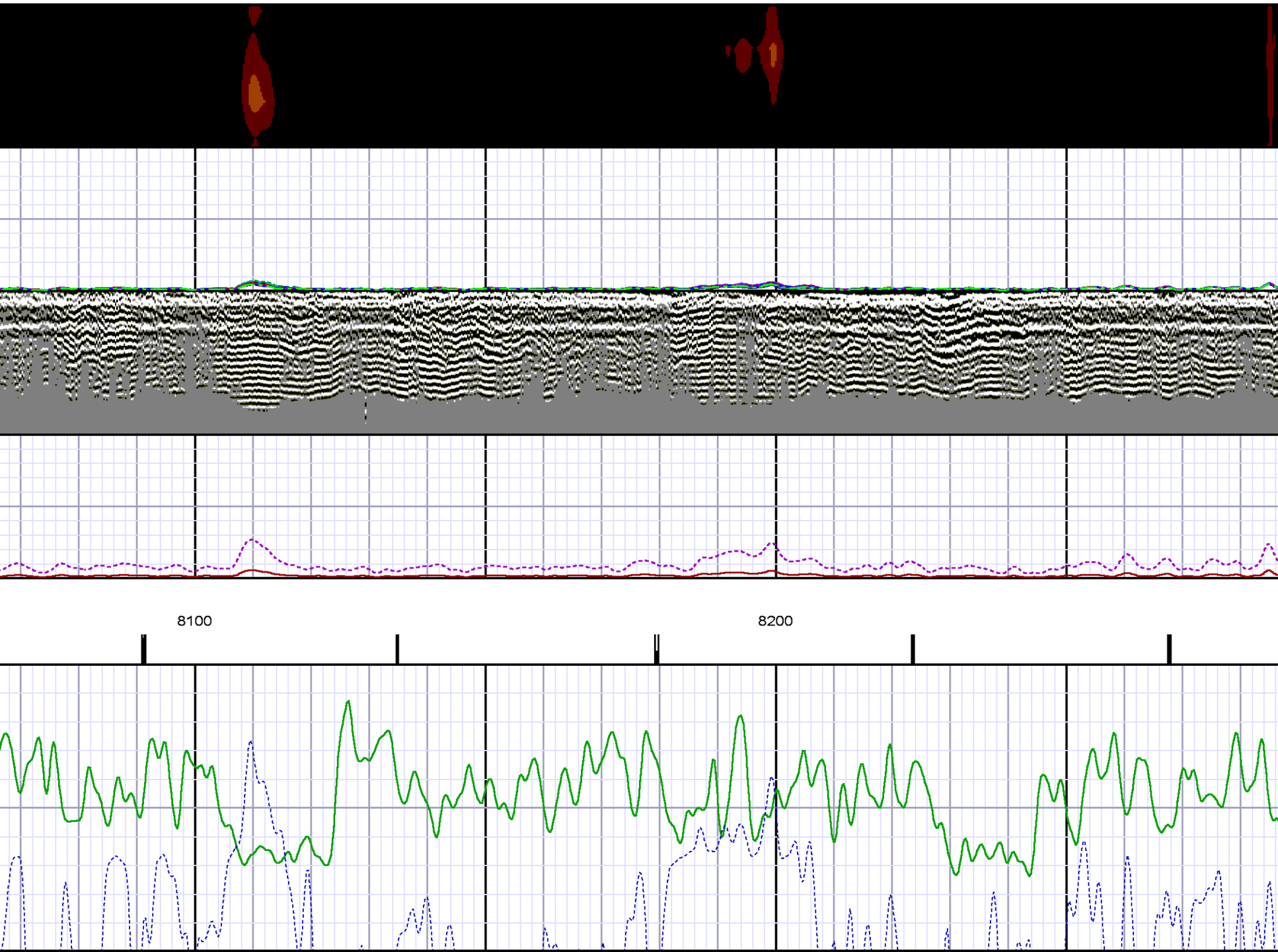
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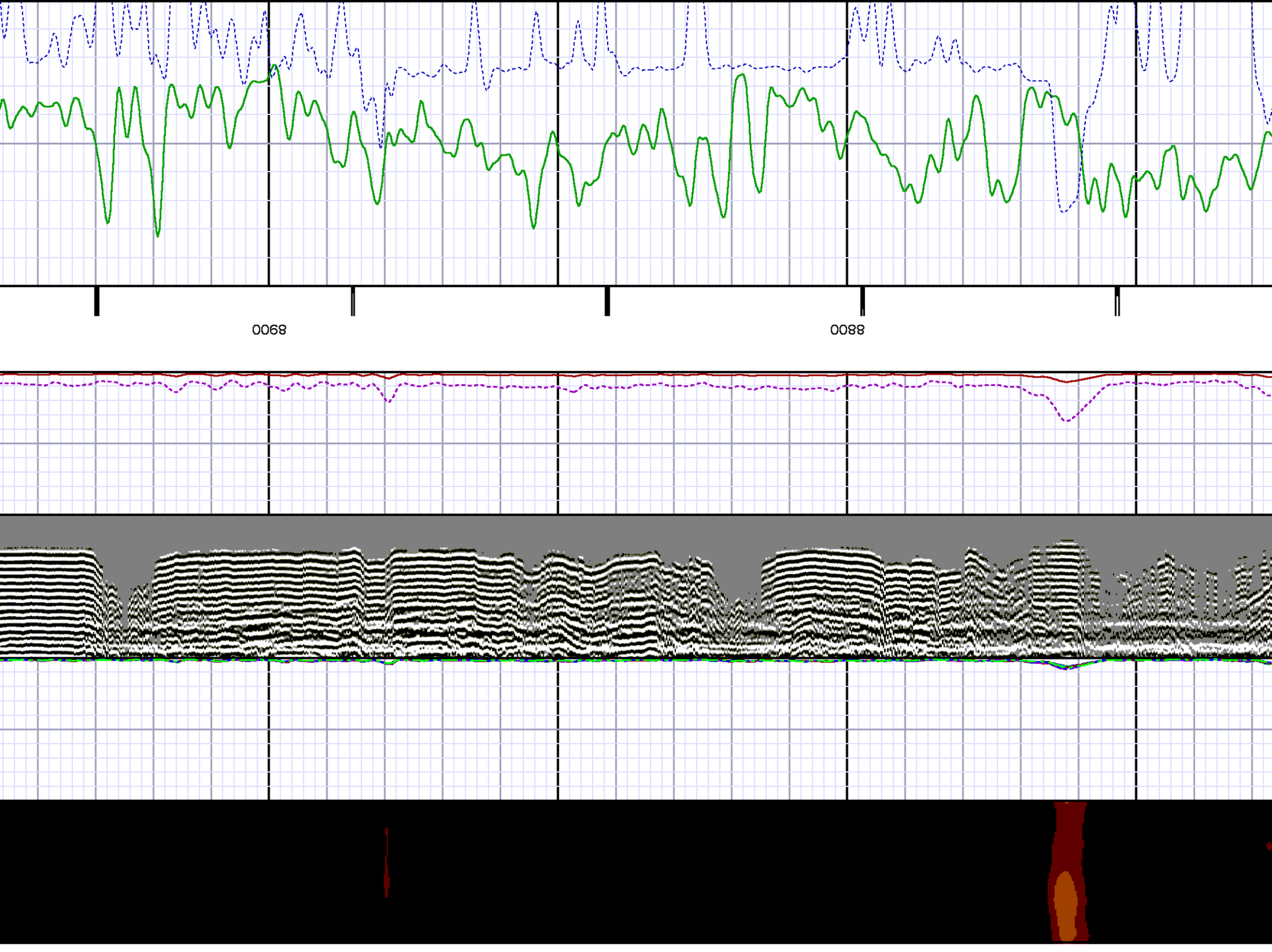
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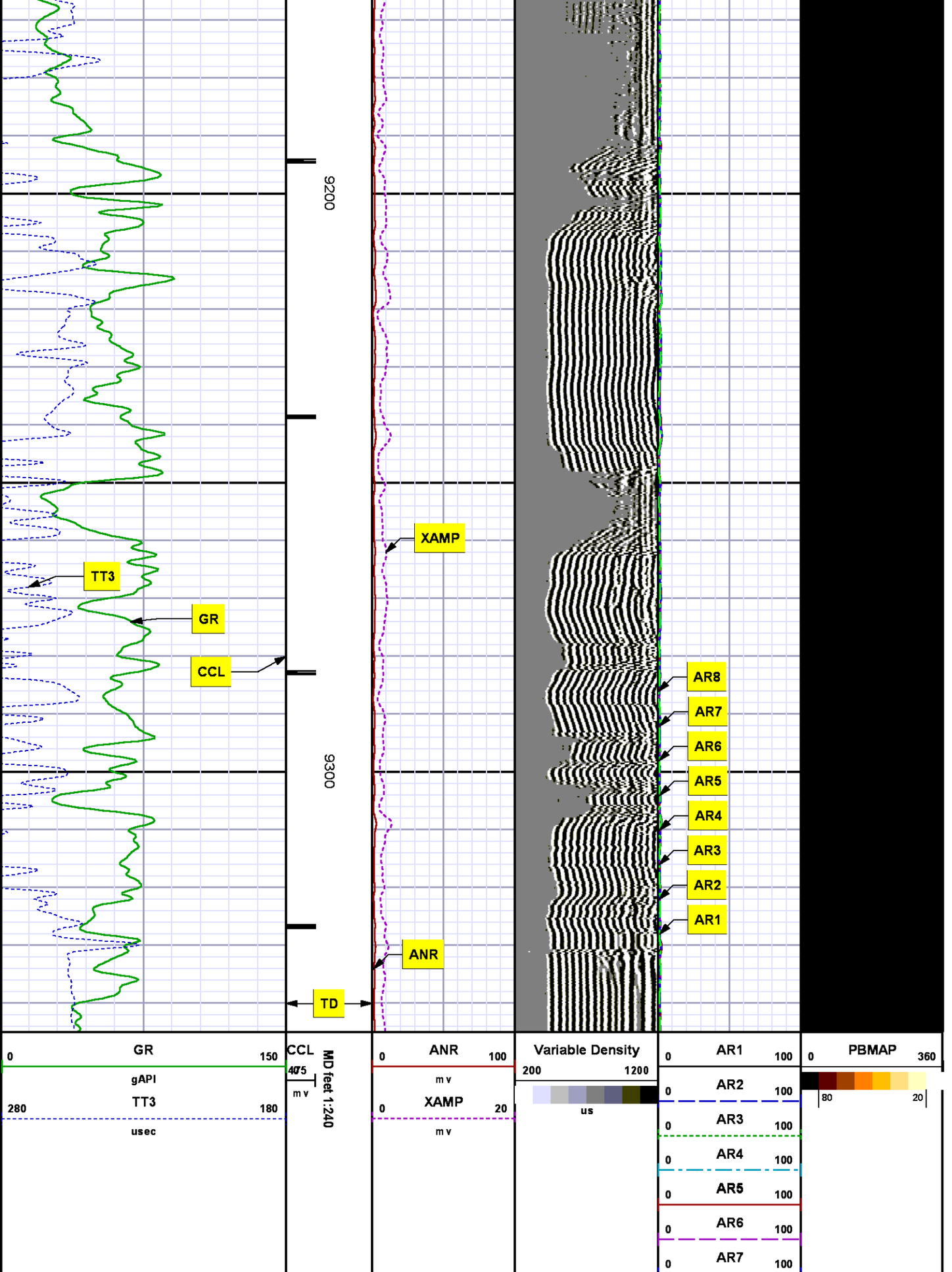
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ANR
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AR7
AR6
AR5
AR4
AR3
AR2
AR1
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GR
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gAPI
280
TT3
180
usec
CCL
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m v
MD feet 1:240
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ANR
100
m v
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XAMP
20
m v
Variable Density
200
1200
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AR1
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0
AR2
100
0
AR3
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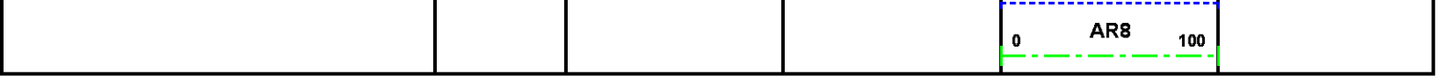


REPEAT SECTION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	9047.270	9367.520
RAL	Amp Gate Start Near	195.000	usec	9047.270	9367.520
RAL	Amp Gate Start Radial	195.000	usec	9047.270	9367.520
RAL	Amp Gate Width Far	25.000	usec	9047.270	9367.520
RAL	Amp Gate Width Near	25.000	usec	9047.270	9367.520
RAL	Amp Gate Width Radial	25.000	usec	9047.270	9367.520
RAL	casing od	4.500	inches	9047.270	9367.520
RAL	casing wt	11.600	lbm/ft	9047.270	9367.520
RAL	FB Start Far	291.900	usec	9047.270	9367.520
RAL	FB Start Near	175.391	usec	9047.270	9367.520
RAL	FB Start Radial	175.391	usec	9047.270	9367.520
RAL	FB Thresh Far	10.000	mv	9047.270	9367.520
RAL	FB Thresh Near	4.000	mv	9047.270	9367.520
RAL	FB Thresh Radial	4.000	mv	9047.270	9367.520
RAL	Fluid Travel Time	200.000	usec/ft	9047.270	9367.081

DEPTH OFFSETS
(for Acquired Curves)

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

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

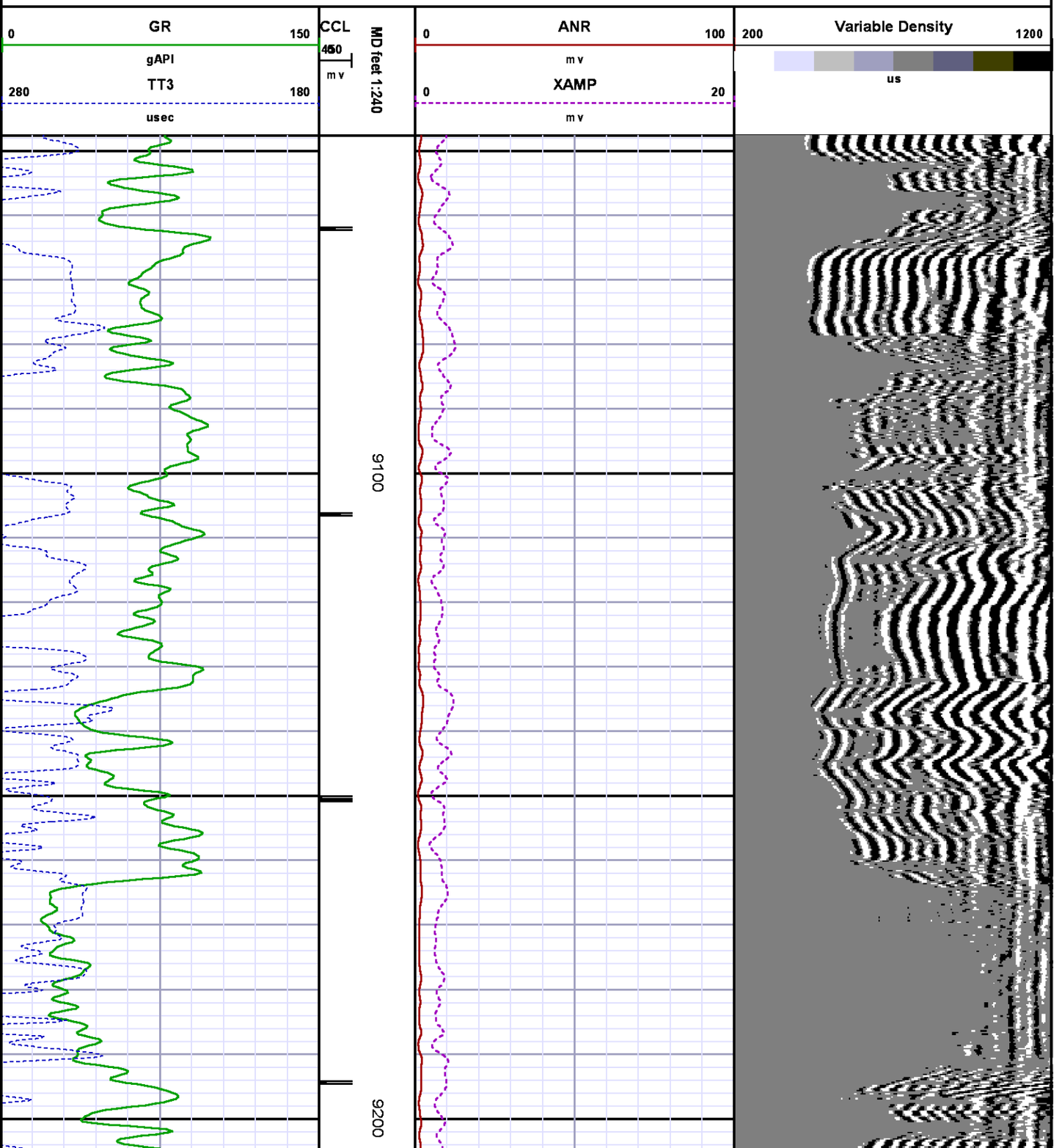
Well : FEDERAL PA 431-21

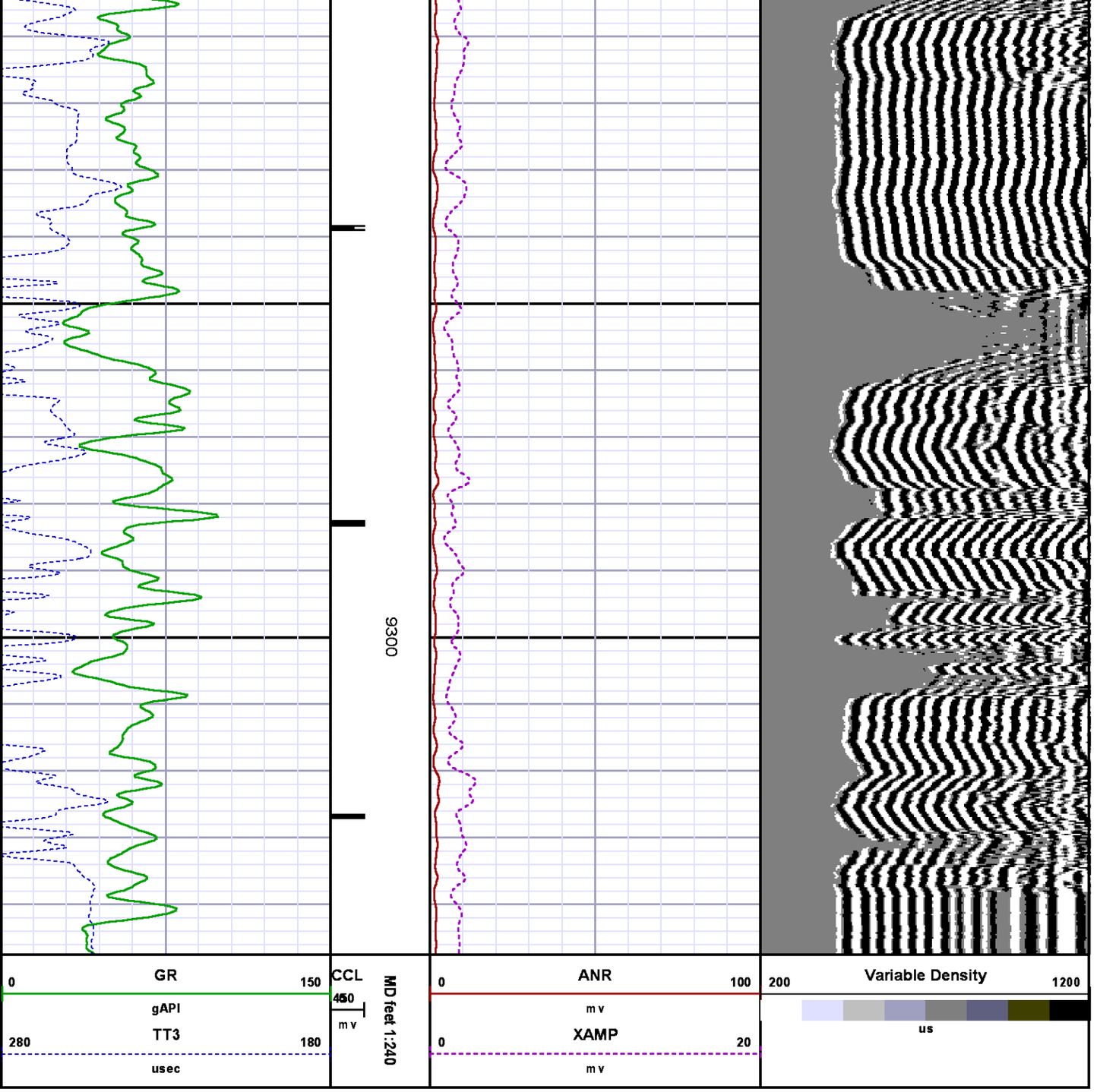
File Name : d:\welldata\wpx energy\pa 431-21\431cbl\repeat.xtf

Mode : PlotMgr 5.4.504

Interval : 9047.52 - 9347.52 feet UP

Created : 10/28/2013 7:20:14 AM





CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP\495O27_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun Oct 27 11:59:15 2013 **TOOL SERIES:** 1426XA **ASSET:** 495 **SEQ:** O27

Tool Delay [usec]	Tank OD in	Tank Wt lbm/ft	Tank ID in
-56.00	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	-0.625	100.00	0.14
3 Ft. Receiver	218	216	30	166	25	-2.015	100.00	0.14
5 Ft. Receiver	328	332	30	282	25	-1.357	150.00	0.15
Radial #1	218	216	30	166	25	0.889	100.00	0.14
Radial #2	218	216	30	166	25	1.581	100.00	0.14
Radial #3	217	216	30	166	25	-0.126	100.00	0.14
Radial #4	216	216	30	166	25	-0.710	100.00	0.14
Radial #5	216	216	30	166	25	-1.464	100.00	0.14
Radial #6	216	216	30	166	25	-2.156	100.00	0.14
Radial #7	217	216	30	166	25	-1.432	100.00	0.14
Radial #8	218	216	30	166	25	-0.488	100.00	0.14

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\495O27_fld.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun Oct 27 12:01:44 2013 **TOOL SERIES:** 1426XA **ASSET:** 495 **SEQ:** O27

Tool Delay [usec]	Casing OD in	Casing Wt lbm/ft	Casing ID in
-56.00	4.50	11.60	4.00

RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]
CAL Pulse	166	25	0.009	0.000	1.00	100.000
3 Ft. Receiver	195	25	-0.378			
5 Ft. Receiver	305	25	-0.481			
Radial #1	195	25	-0.081			
Radial #2	195	25	-0.275			
Radial #3	195	25	-0.170			
Radial #4	195	25	-0.079			
Radial #5	195	25	-0.163			
Radial #6	195	25	-0.233			
Radial #7	195	25	-0.150			
Radial #8	195	25	-0.098			

GAMMA RAY

Calibration File: C:\case\calver\GR\470TN.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat Oct 26 12:52:01 2013 TOOL SERIES: 8262XY ASSET: 470 SEQ: TN

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA-612	70.96	408.93	0.533	37.79	217.79	180.00

Verification File: C:\case\calver\GR\470TN.VP

PRIMARY VERIFICATION

DATE/TIME PERFORMED: Sat Oct 26 12:55:24 2013 TOOL SERIES: 8262XY ASSET: 470 SEQ: TN

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA-612	73.22	412.91	0.533	39.00	219.91	180.91

TOOL DIAGRAM

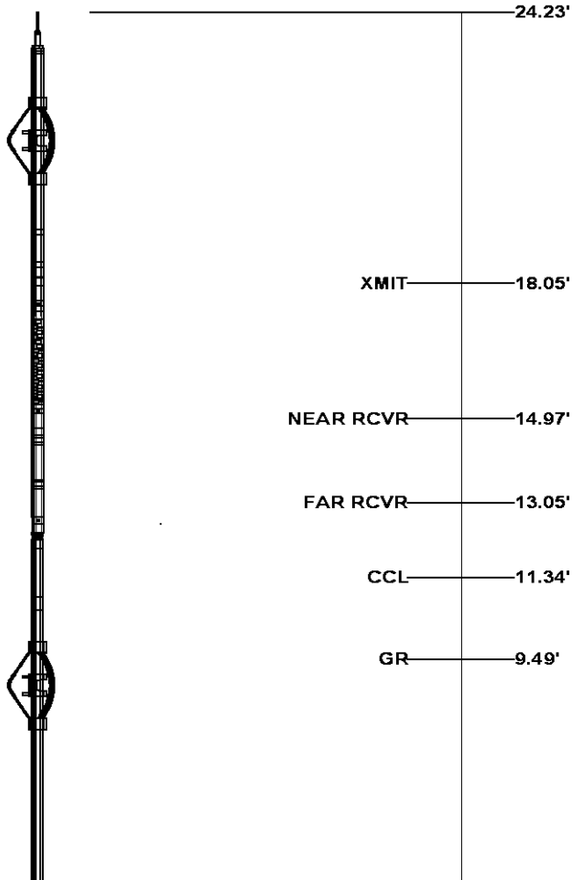
OTA SHORT CABLE HEAD

PROBE 2 3/4 DUAL RECEIVER RADII

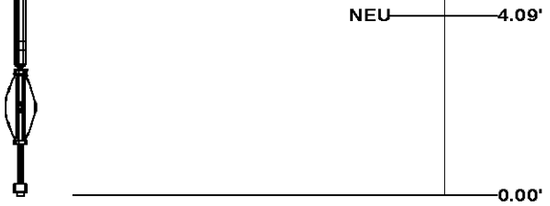
Series	1426XA
Mnemonic	PROB
Diameter	2.75"
Length	11.17'
Measure Point	0.75' FAR RCVR
Measure Point	2.67' NEAR RCVR
Measure Point	5.75' XMIT
Temp Rating	350.00 °F
Press Rating	18000.00 PSI

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	FEDERAL PA 431-21		CH078785
Field	PARACHUTE		API No:
County	GARFIELD	State CO	05045220380000

Location	Elevations	
SHL: 2600' FNL & 1426' FWL	KB 6056 ft	21 6S 95W
BHL: 909' FNL & 1628' FEL	DF	PA 22-21 PAD
	GL 6030 ft	NABORS 573
SEC 21 TWP 6S RGE 95W		