BAKER HUGHES

Baker Atlas

RADIAL ANALYSIS BOND LOG

File No:	1715
API No:	05-045-15038-00
Company	MARATHON OIL COMPANY
Well	697-12A-21
Field	GRAND VALLEY
County	GARFIELD
State	COLORADO

Location

SHL: 1491' FNL & 1854' FEL

SEC 12 TWP 6S RGE 97W

Other Services

3.781" GAUGE

RPM

DAL

Permanent Datum	G.L.	Elevation	8300 ft
Log Measured From	K.B.	22 ft	Above P. D.
Drill Measured From	KELLY BUSHING		

Elevations

KB	8322 ft
DF	8321 ft
GL	8300 ft

Date	06-JAN-2009		
Run	ONE		
Service Order	547452		
Depth Driller	9950 ft		
Depth Logger	9918 ft		
Bottom Logged Interval	9918 ft		
Top Logged Interval	1845 ft		
Time Started	00:00		
Time Finished	04:00		
Operator Rig Time	4 HRS		
Type of Fluid in Hole	WATER		
Fluid Density	N/A		
Salinity	N/A		
Fluid Level	FULL		
Logged Cement Top	2340 ft		
Wellhead Pressure	1000 psi		
Maximum Hole Deviation	N/A		
Nominal Logging Speed	40 fpm		
Maximum Recorded Temperature	N/A		
Reference Log	BA/DAL		
Reference Log Date	5-JAN-09		
Equipment No. / Location	8054	GRAND JCT,CO.	
Recorded By	TIM KAUTT		
Witnessed By	MR. BRUCE KELSCH		

- 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
20 in	84 lbm/ft	N/A	SURFACE	140 ft
8.625 in	36 lbm/ft	J-55	SURFACE	2801 ft
4.5 in	11.6 lbm/ft	P-110	SURFACE	9983 ft

Borehole Record

Bit Size	From	To
24 in		
17.5 in		
8.75 in		

Remarks

THE CREW OF 8054 THANKS YOU.

Equipment Data

Run	Trip	Tool	Series Number	Serial Number	Position

1	1	MANDRAL	1426XA	1021B502	CENTRALIZED
1	1	GAMMA RAY	2459XA	1021B510	CENTRALIZED

MAIN SECTION

PRIMARY PRESENTATION

1000# PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	316.900	usec	1945.250	9956.999
RAL	Amp Gate Start Near	200.391	usec	1945.250	9956.999
RAL	Amp Gate Start Radial	200.391	usec	1945.250	9956.999
RAL	Amp Gate Width Far	25.000	usec	1945.250	9956.999
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RAL	Amp Gate Width Radial	25.000	usec	1945.250	9956.999
RAL	casing od	4.500	inches	1945.250	9956.999
RAL	casing wt	11.600	lbm/ft	1945.250	9956.999
RAL	FB Start Far	291.900	usec	1945.250	9956.999
RAL	FB Start Near	175.391	usec	1945.250	9956.999
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RAL	FB Thresh Far	10.000	mv	1945.250	9956.999
RAL	FB Thresh Near	10.000	mv	1945.250	9956.999
RAL	FB Thresh Radial	10.000	mv	1945.250	9956.999
RAL	Fluid Travel Time	200.000	usec/ft	1945.250	9957.947

DEPTH OFFSETS

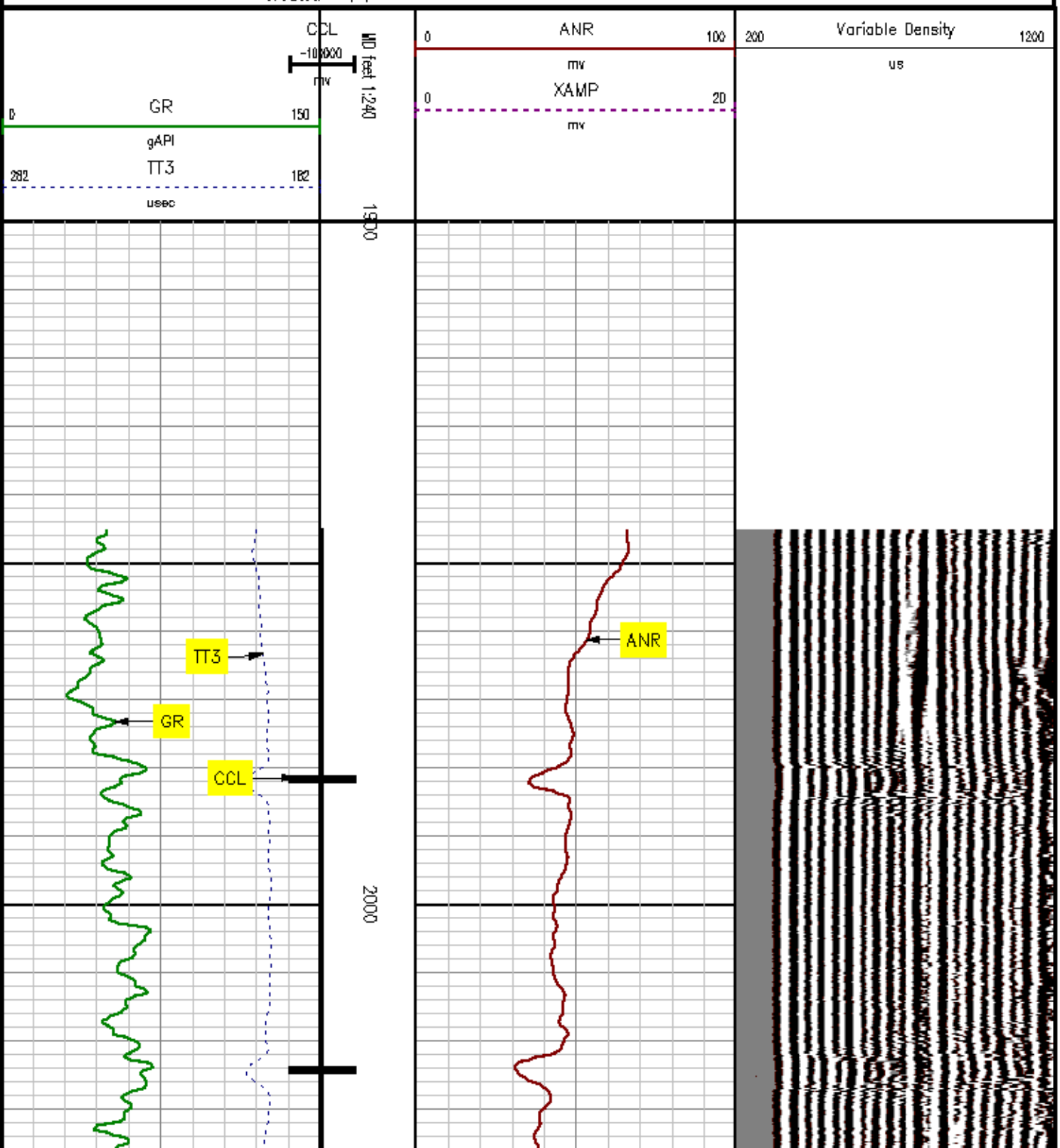
(for Acquired Curves)

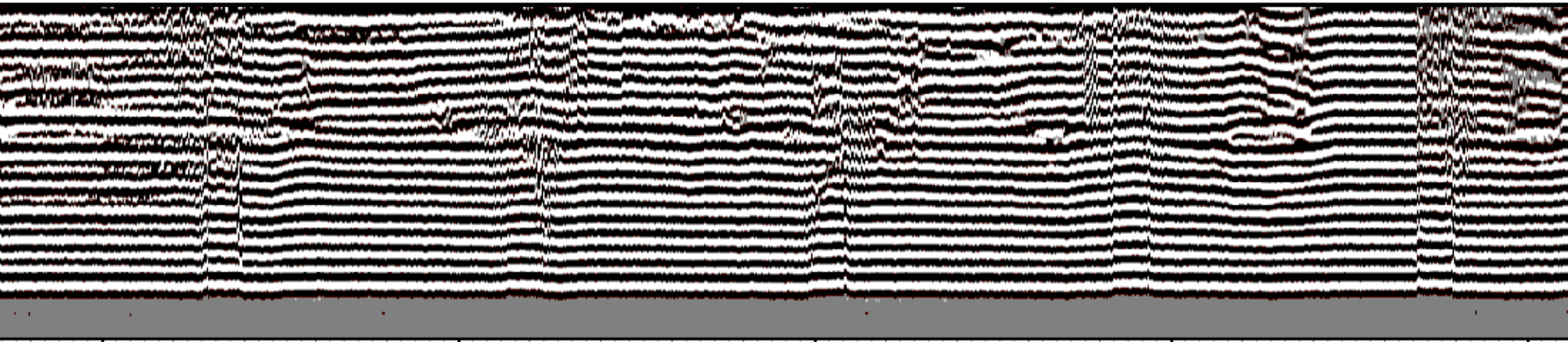
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-15.360	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-14.360	AFAR	SIG	TT5			
1426XA	-7.250	CCL					

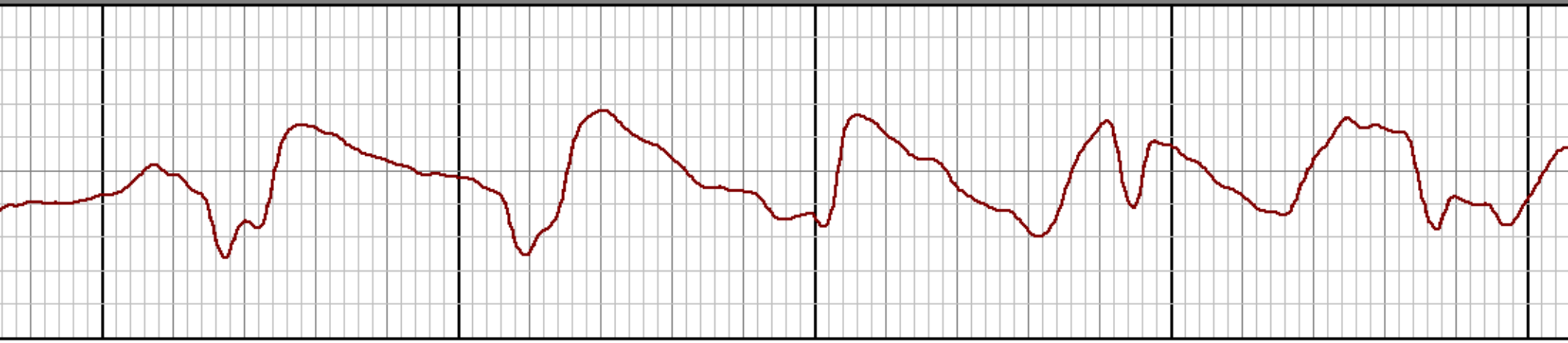
1426XA	-5.390	GR
1426XA	0.000	NEU

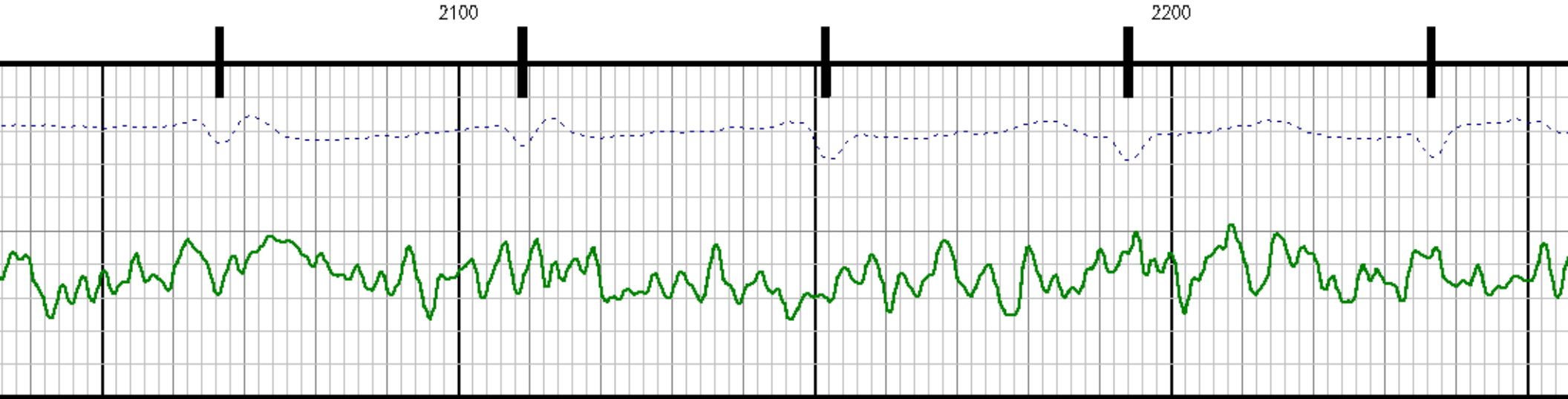
Created by : RAL, v4.8.007
Plotted by : PlotMgr, v5.4.504

Company : MARATHON OIL COMPANY
Well : 697-12A-21
File Name : D:\WELLDATA\21RAD\MAIN1.XTF
Mode : PlotMgr 5.4.504
Interval : 1900.00 - 9957.00 feet UP
Created : 1/8/2009 5:23:21 AM





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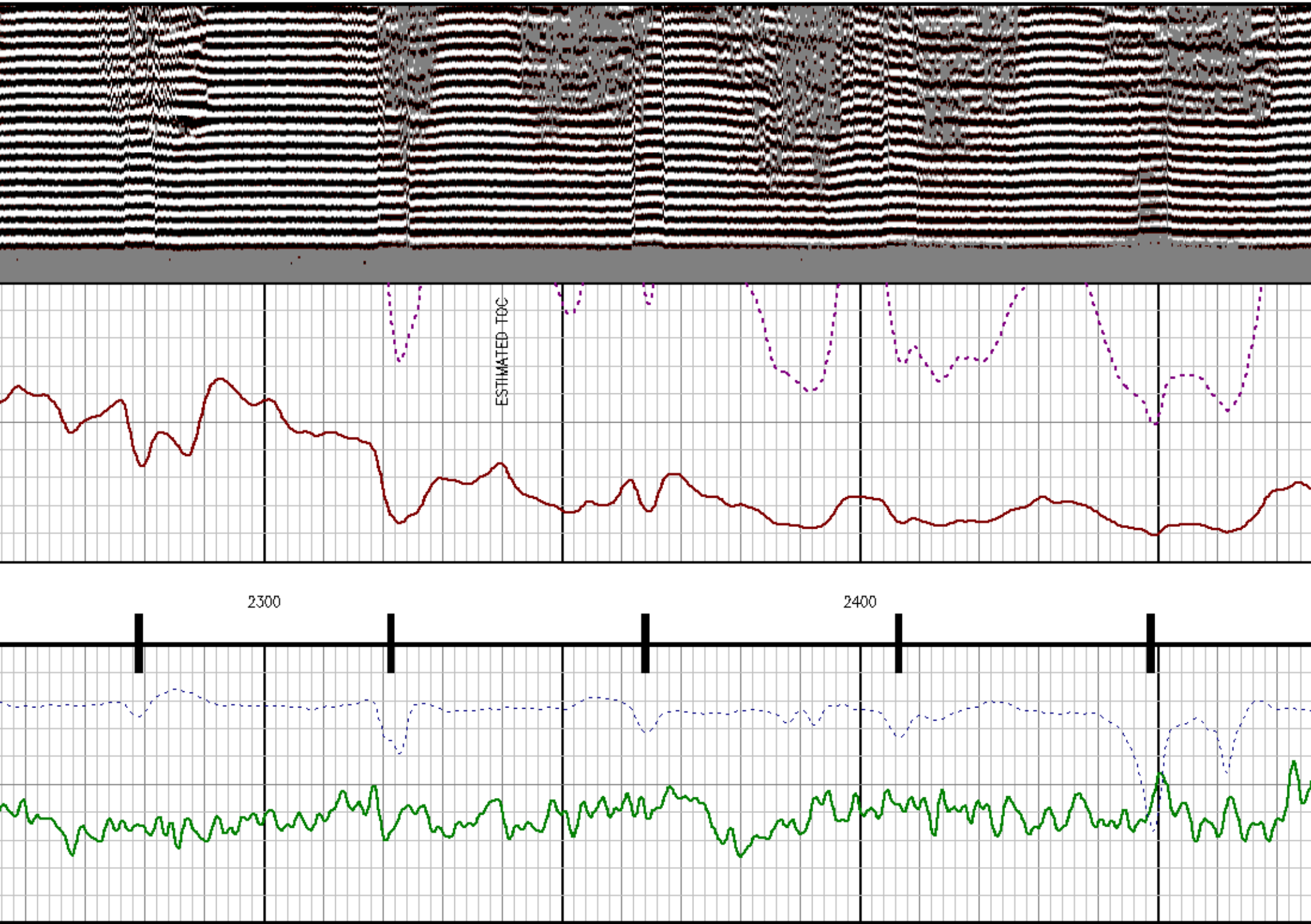
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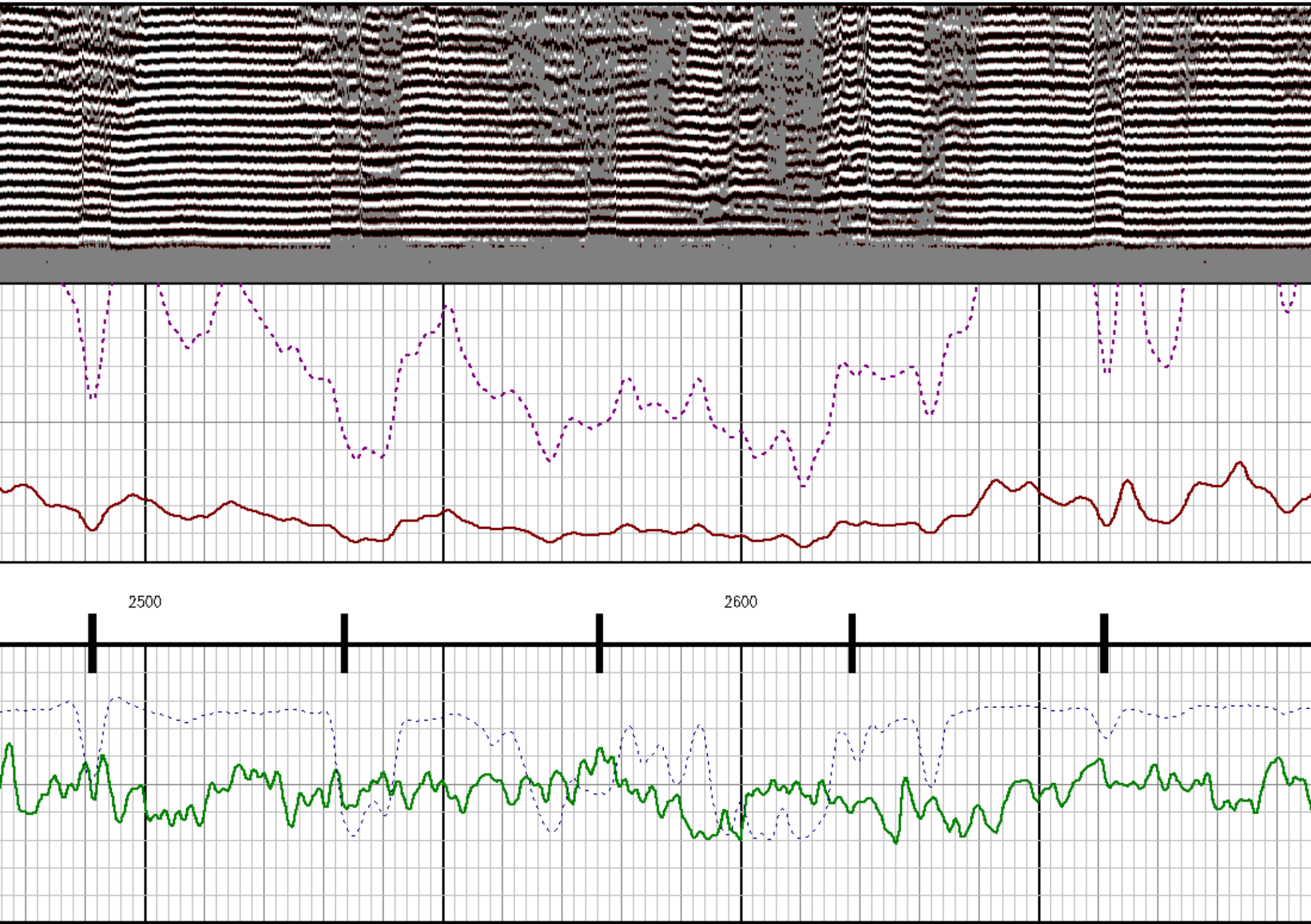
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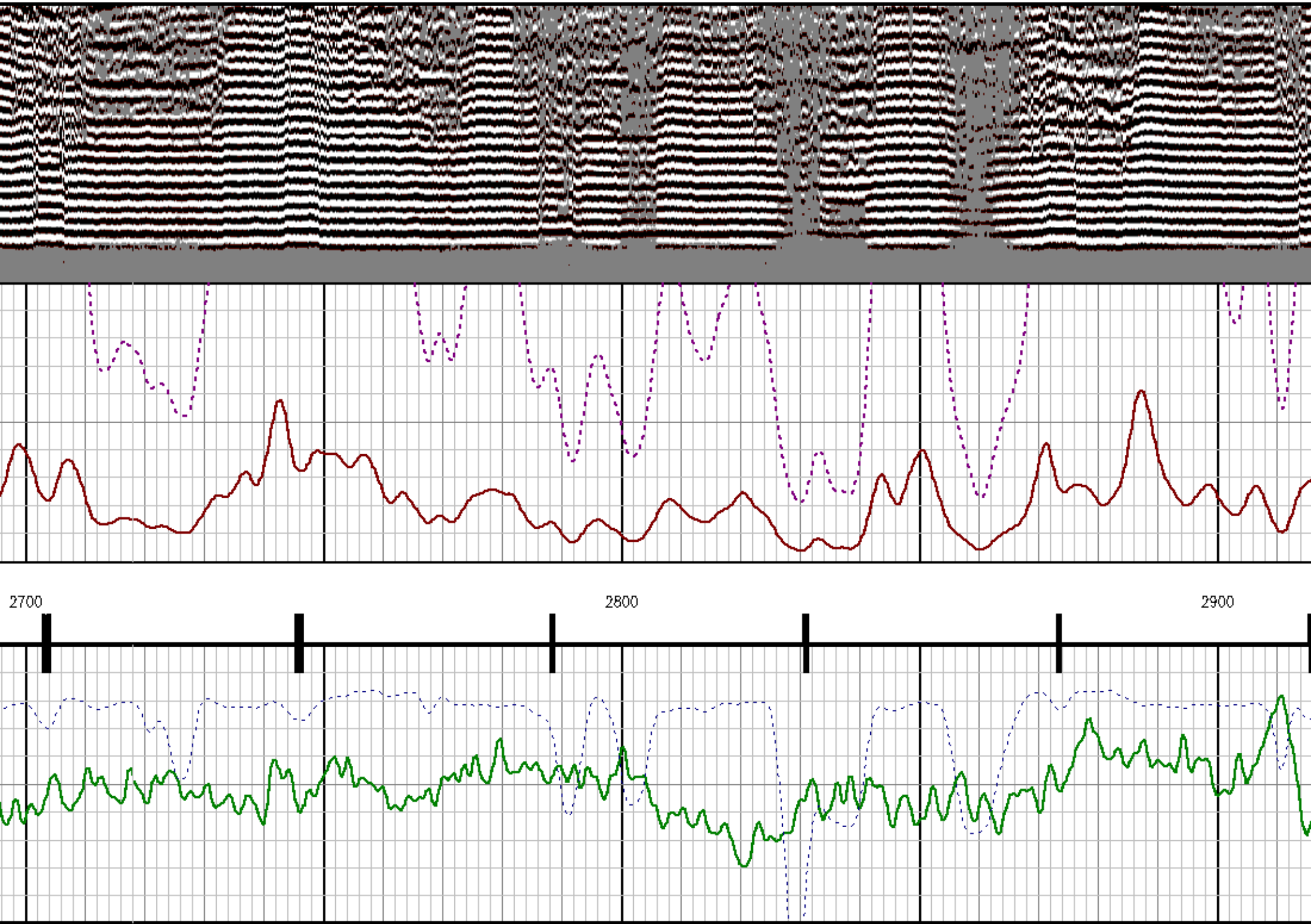
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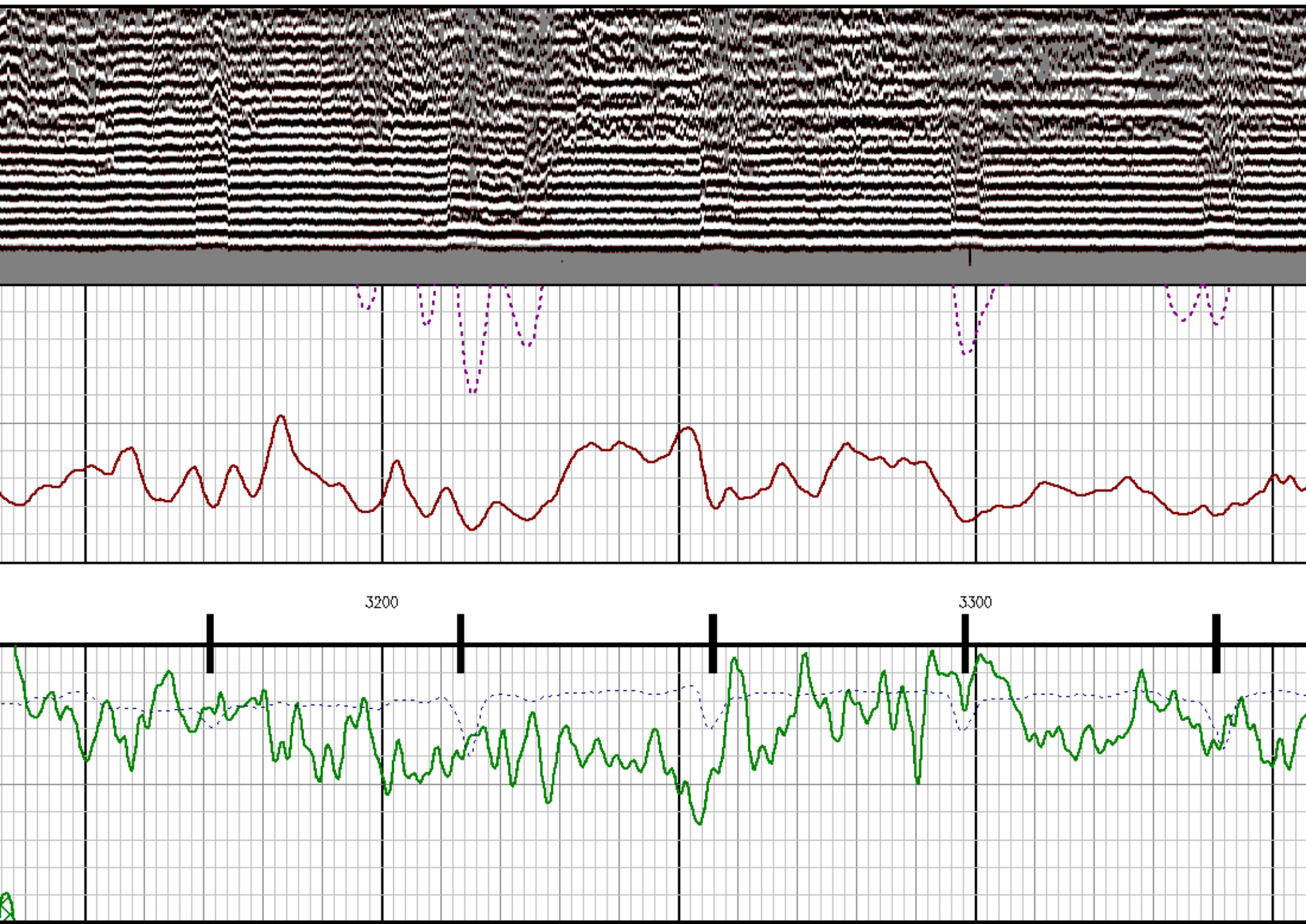
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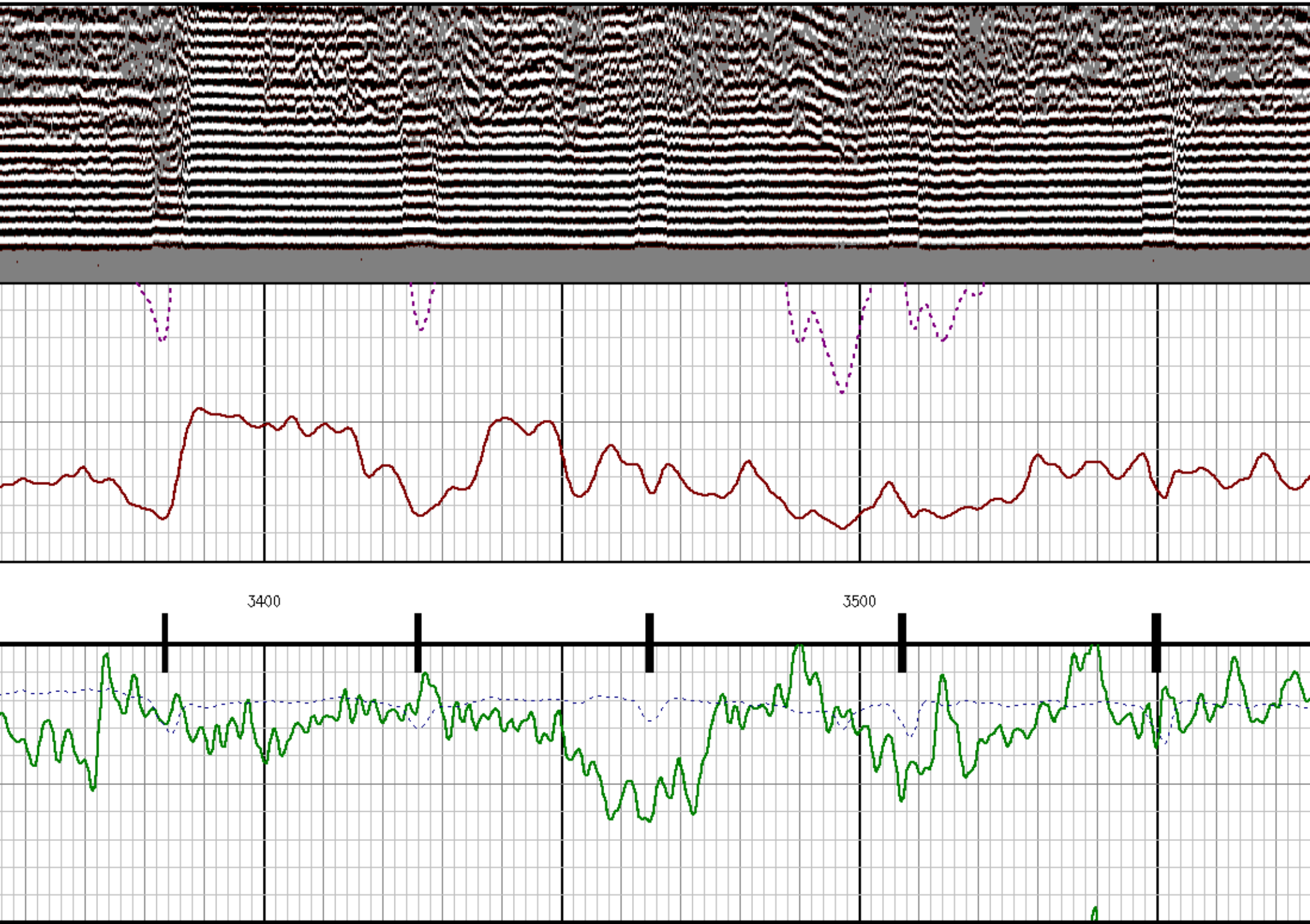
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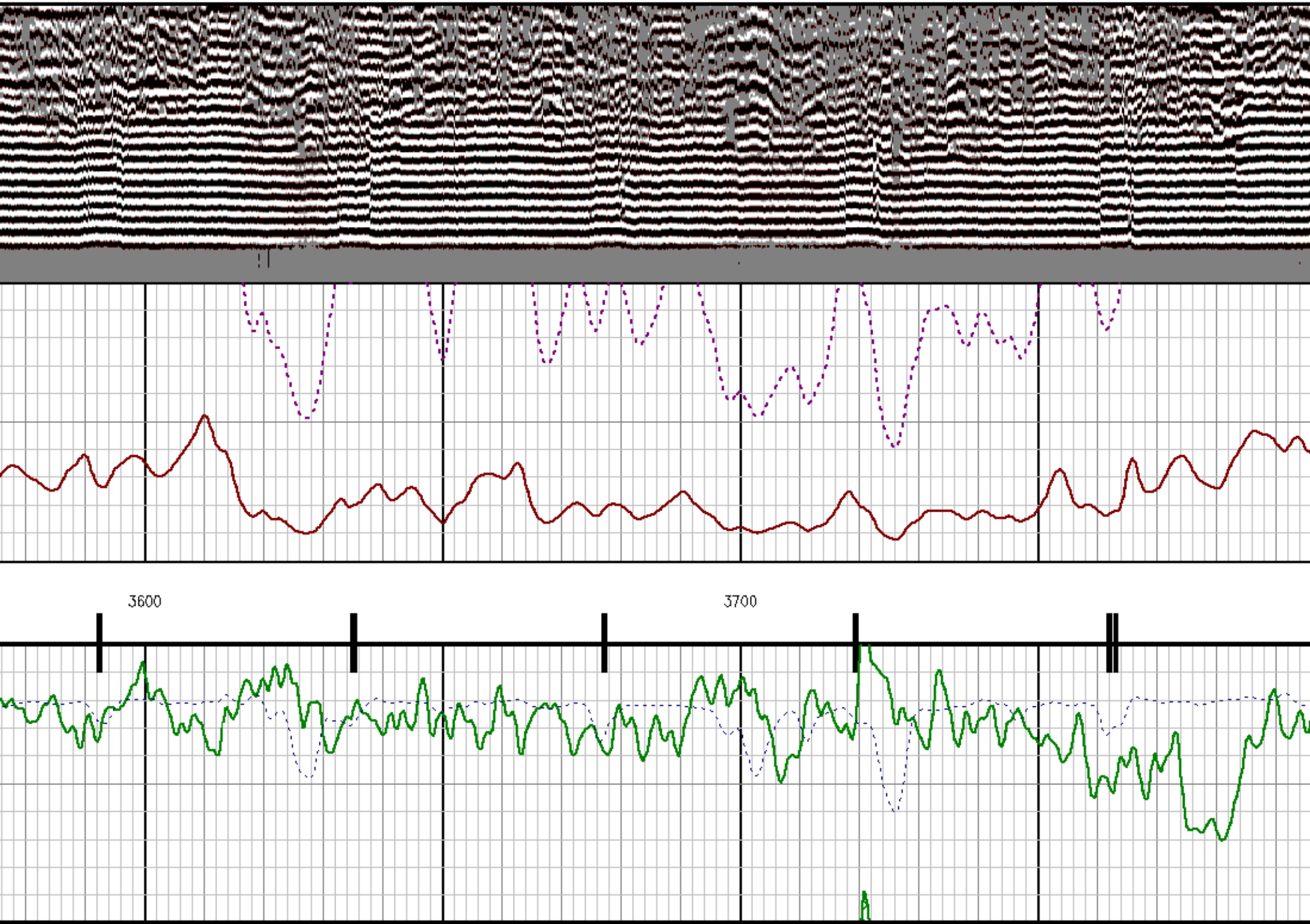
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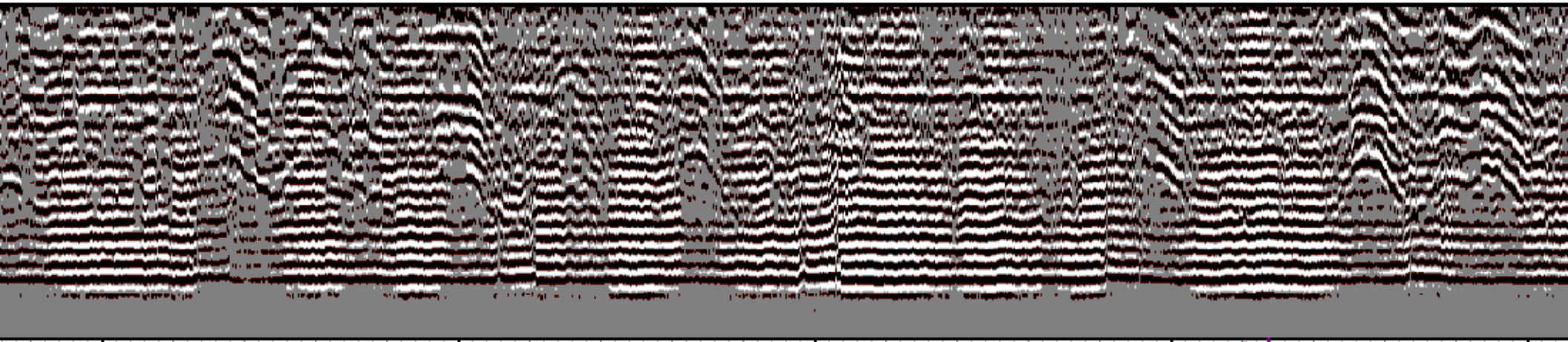

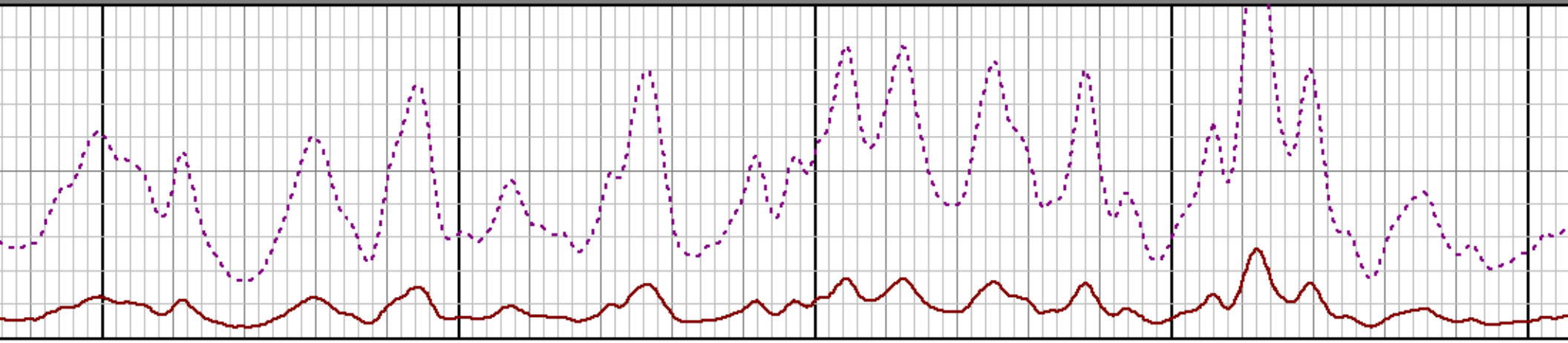

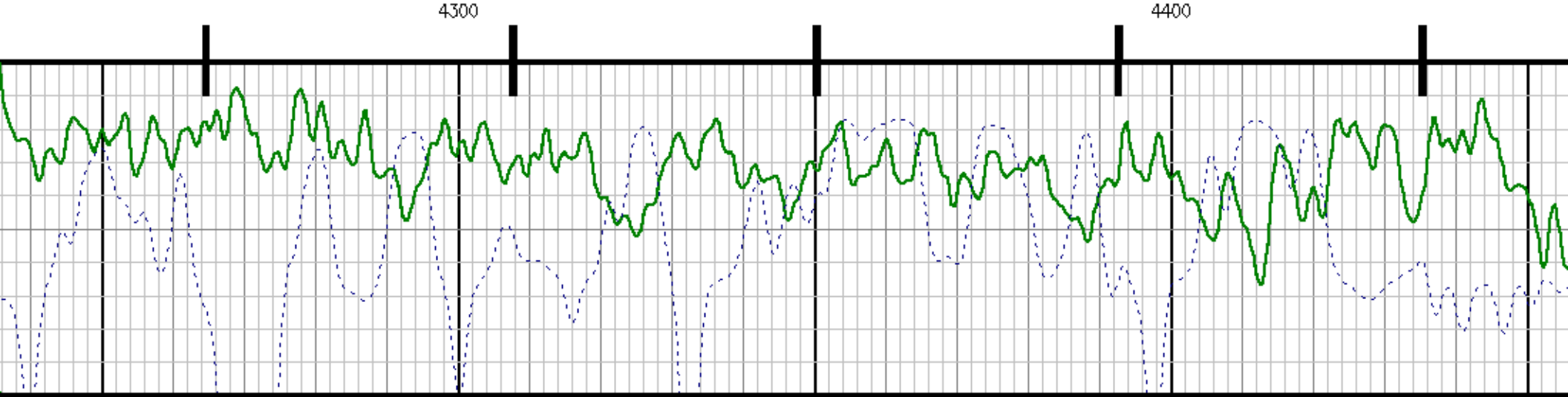
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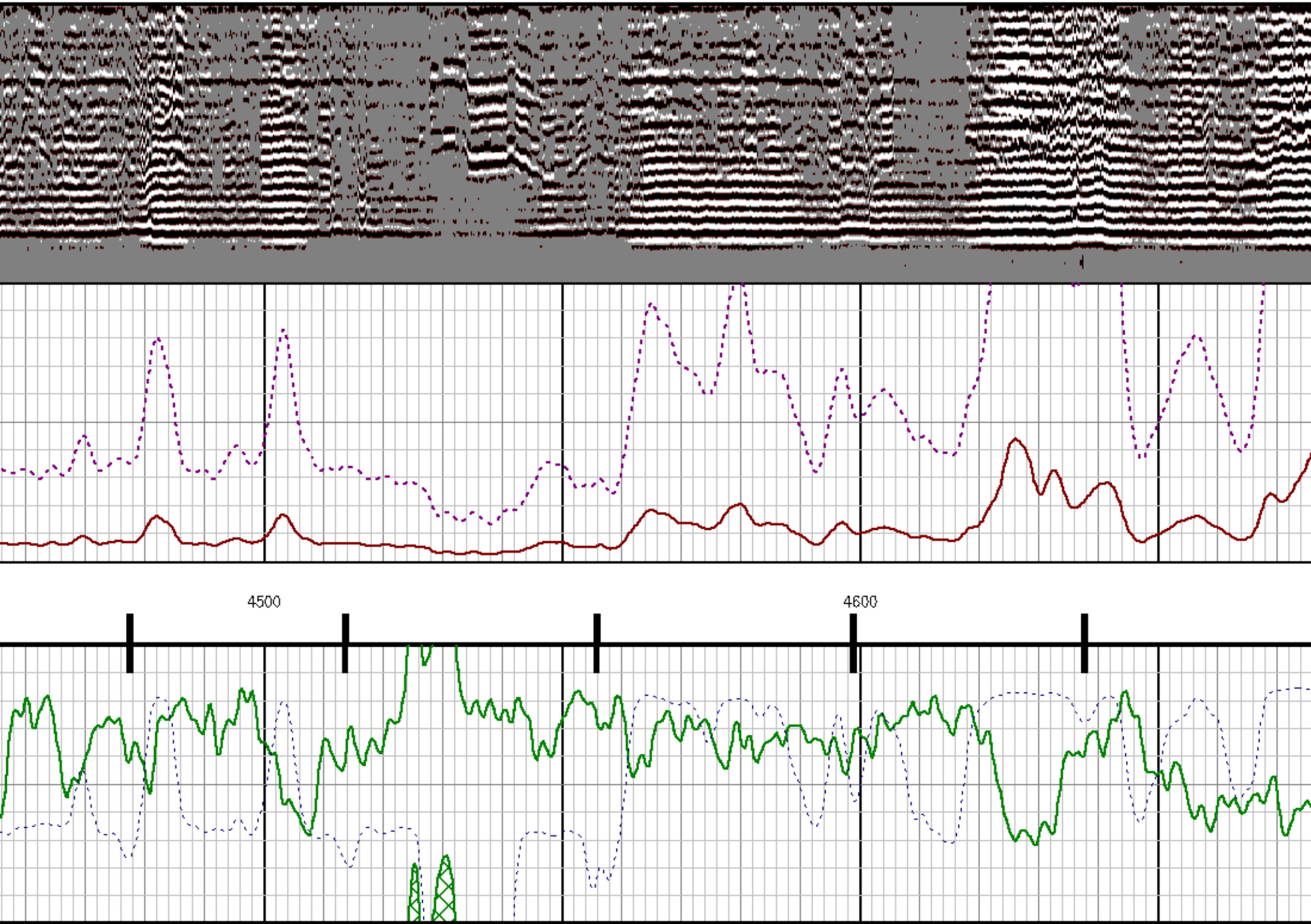
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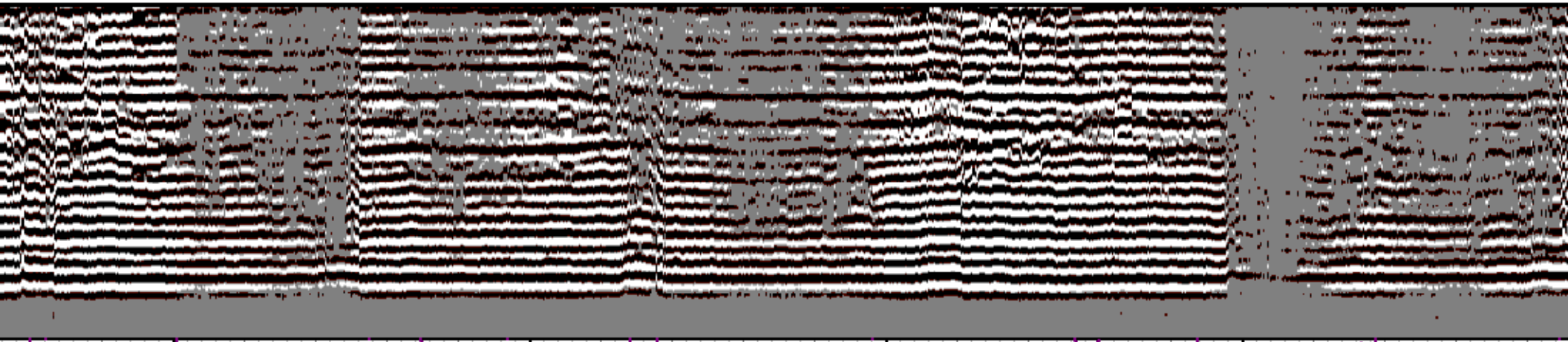

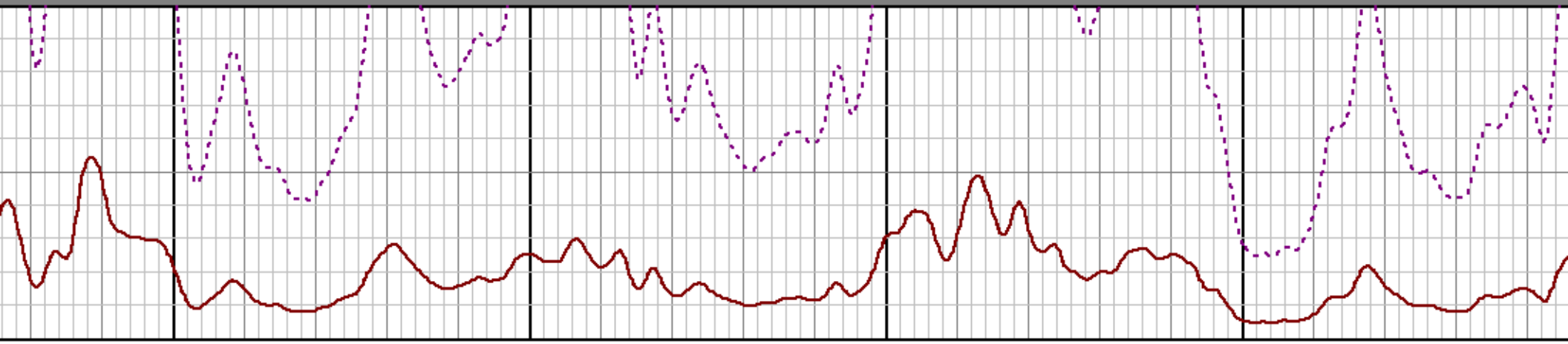

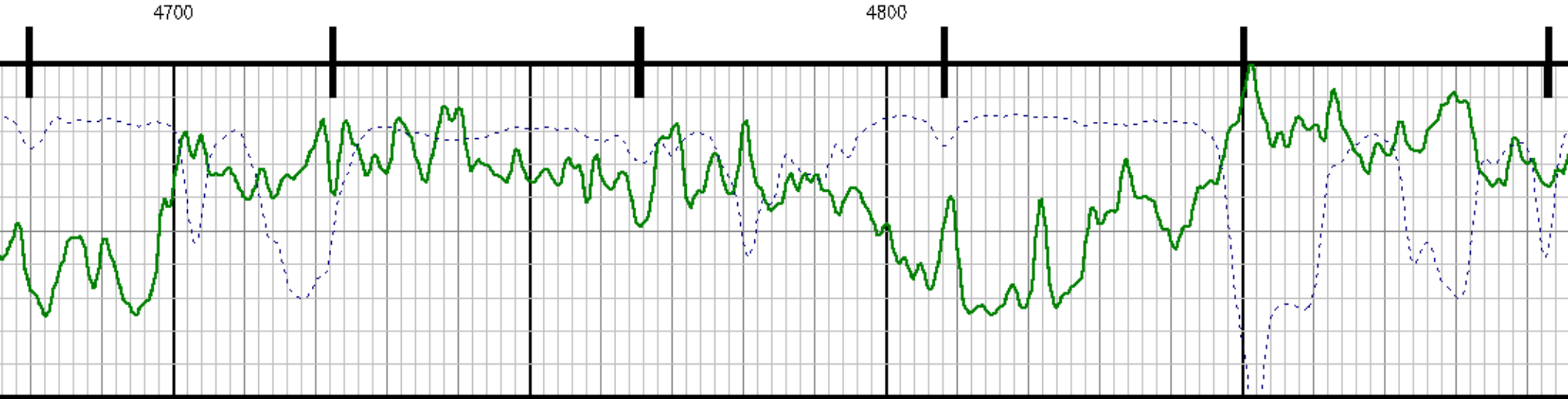
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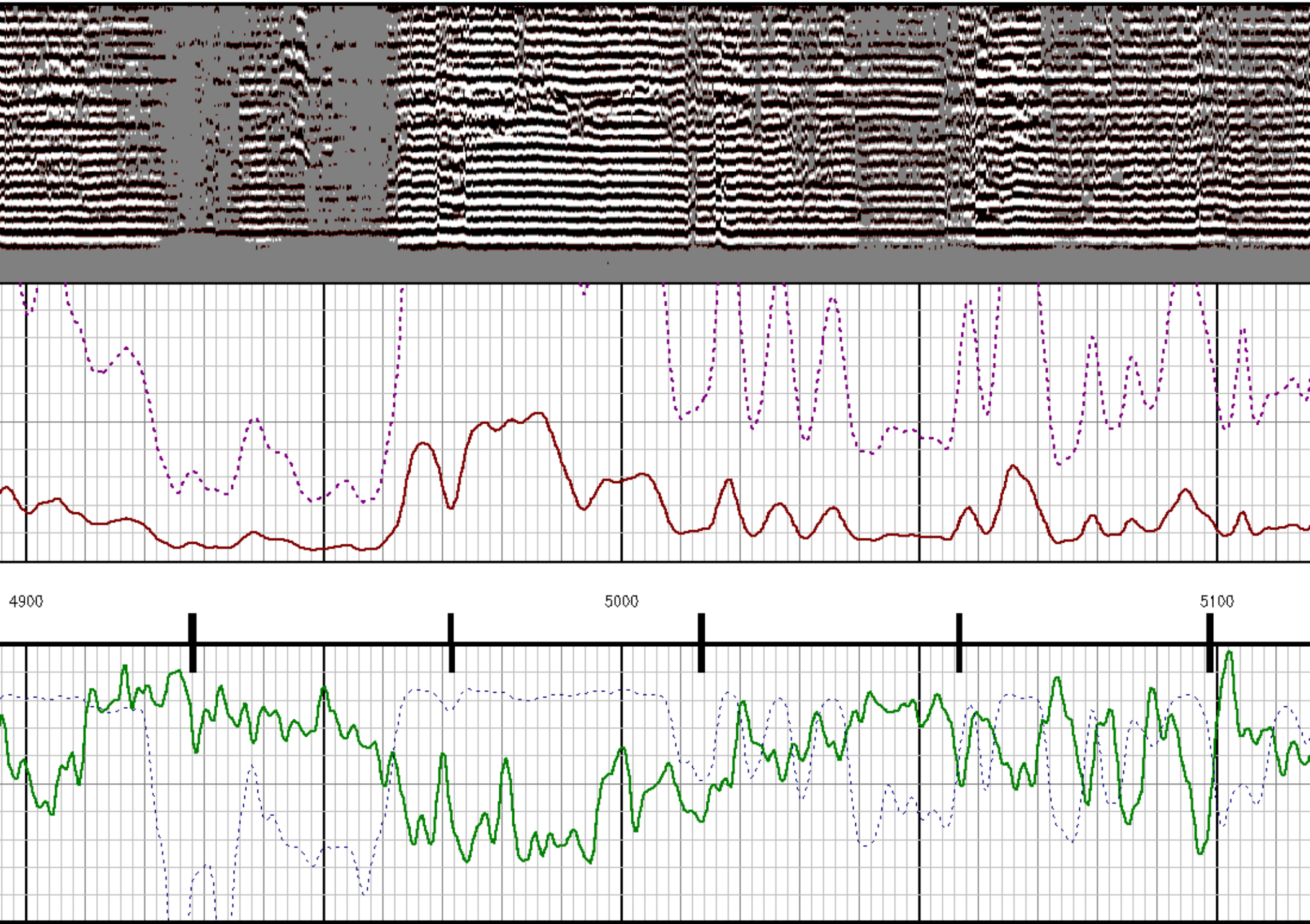
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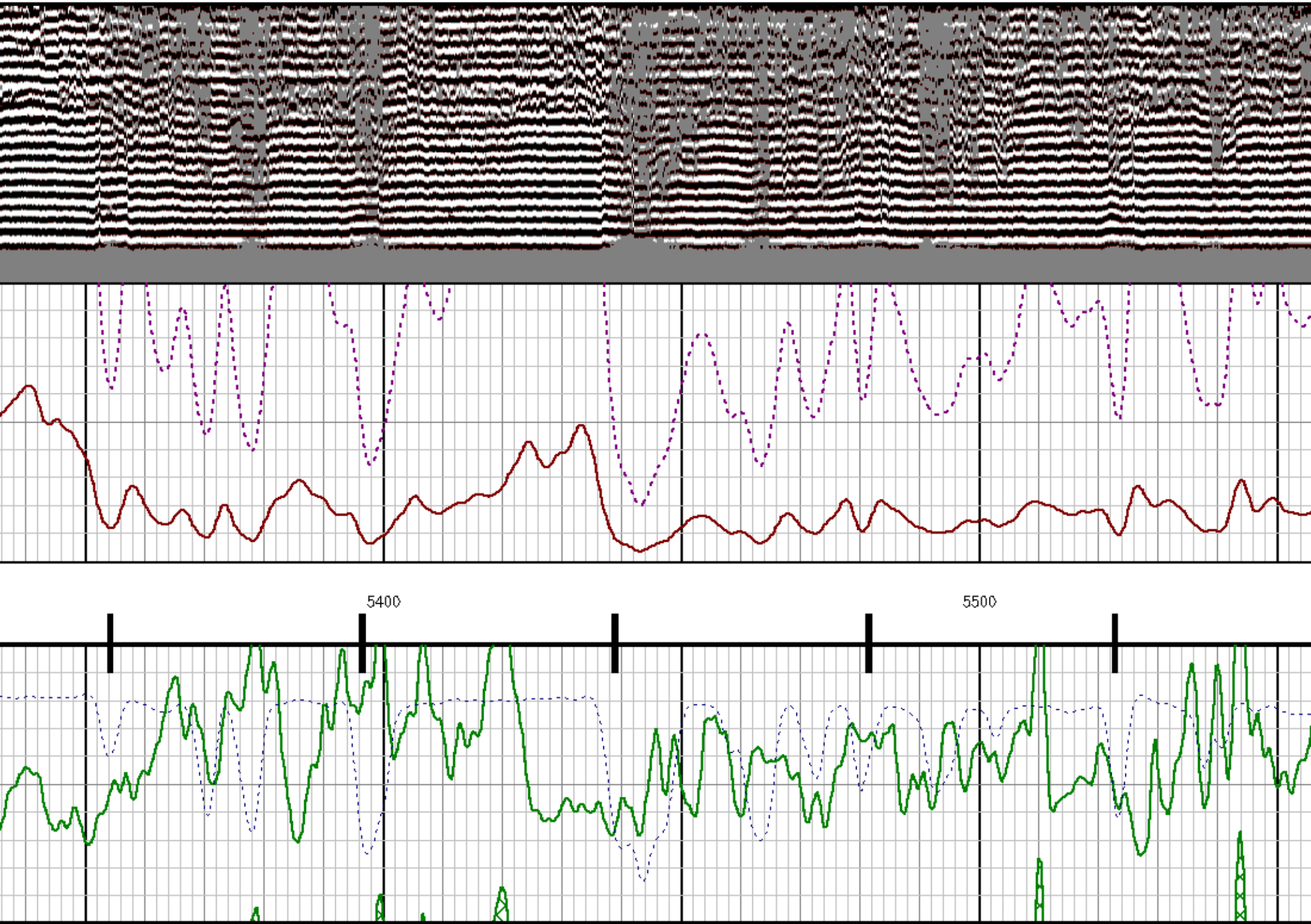
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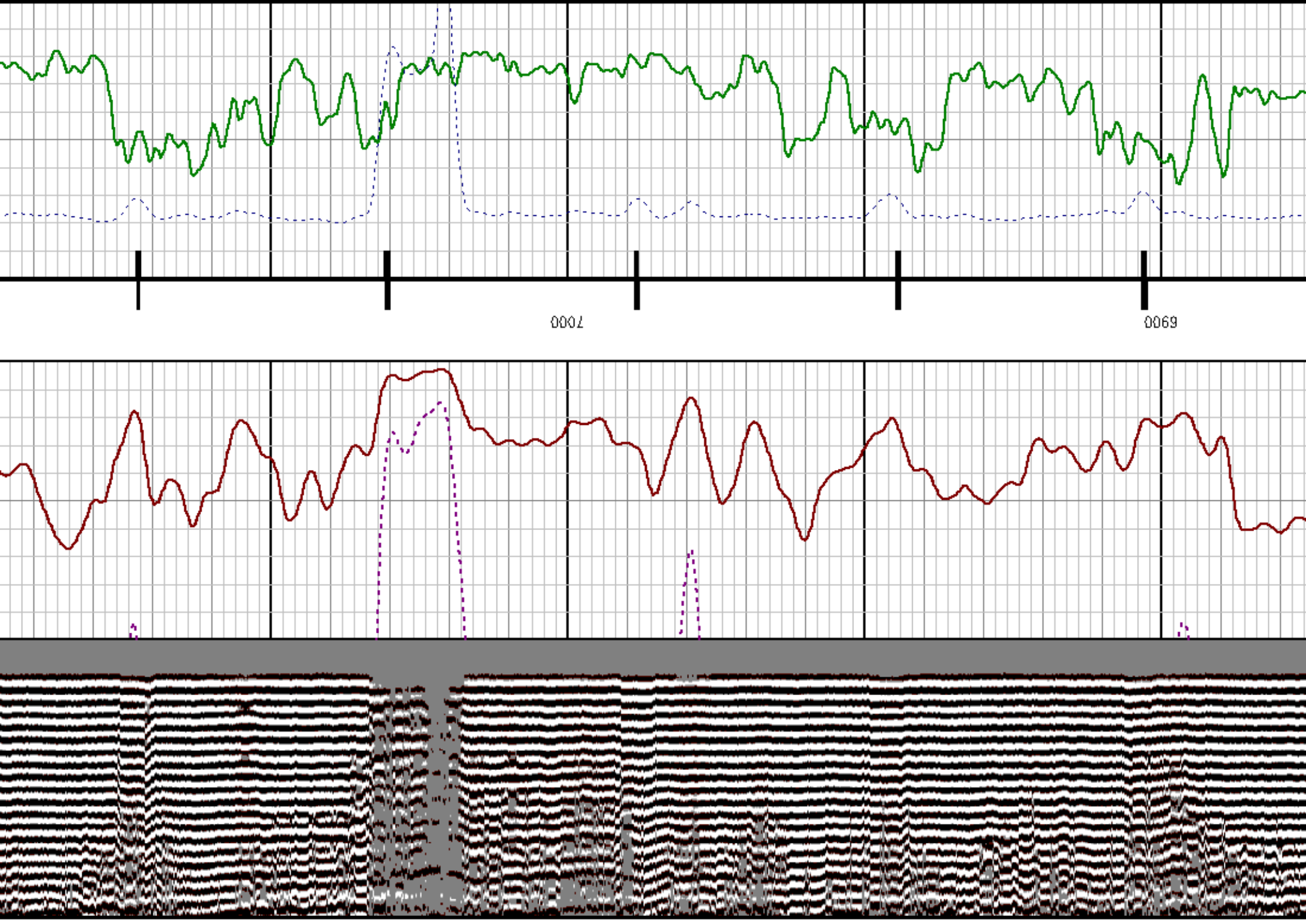
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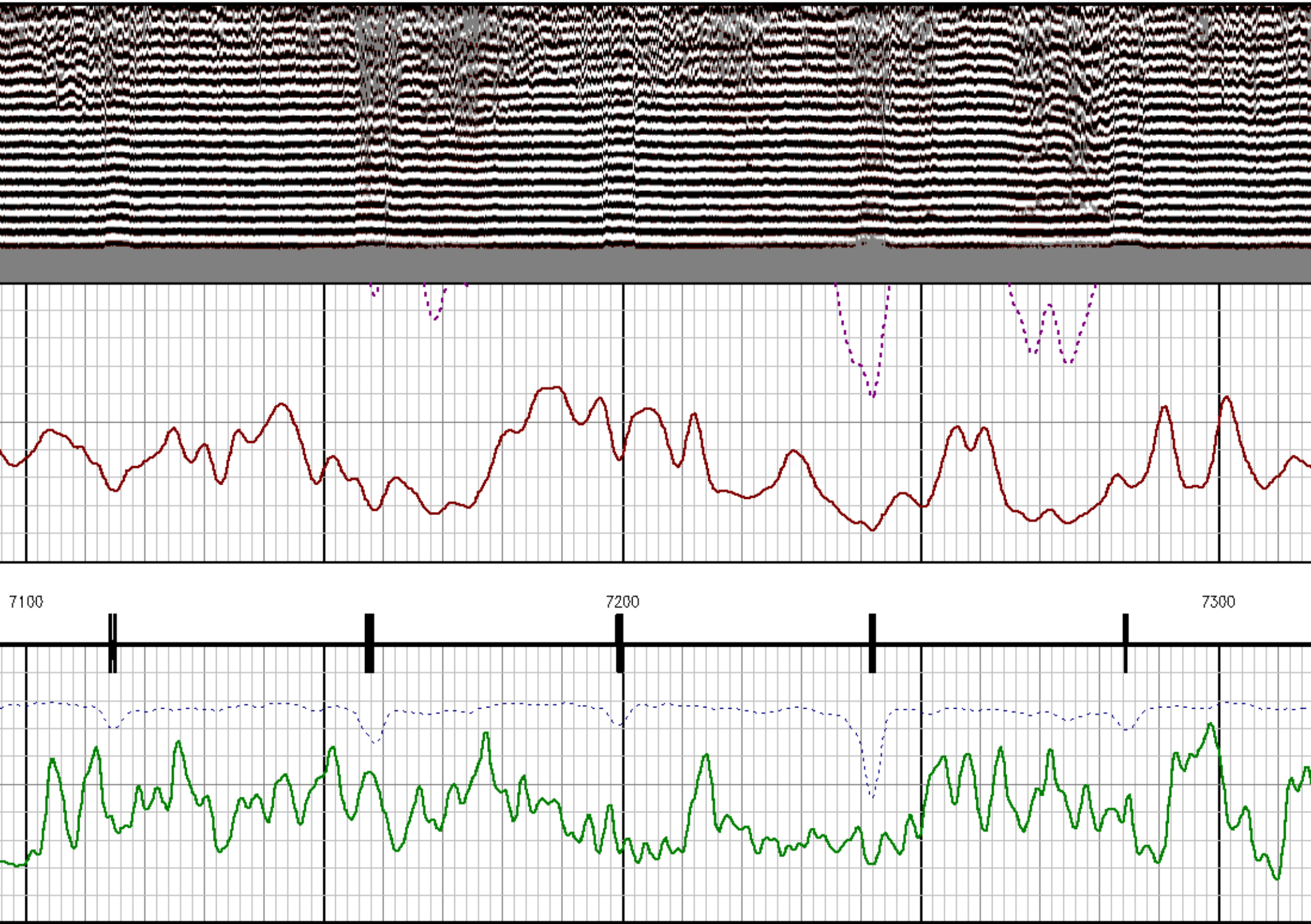
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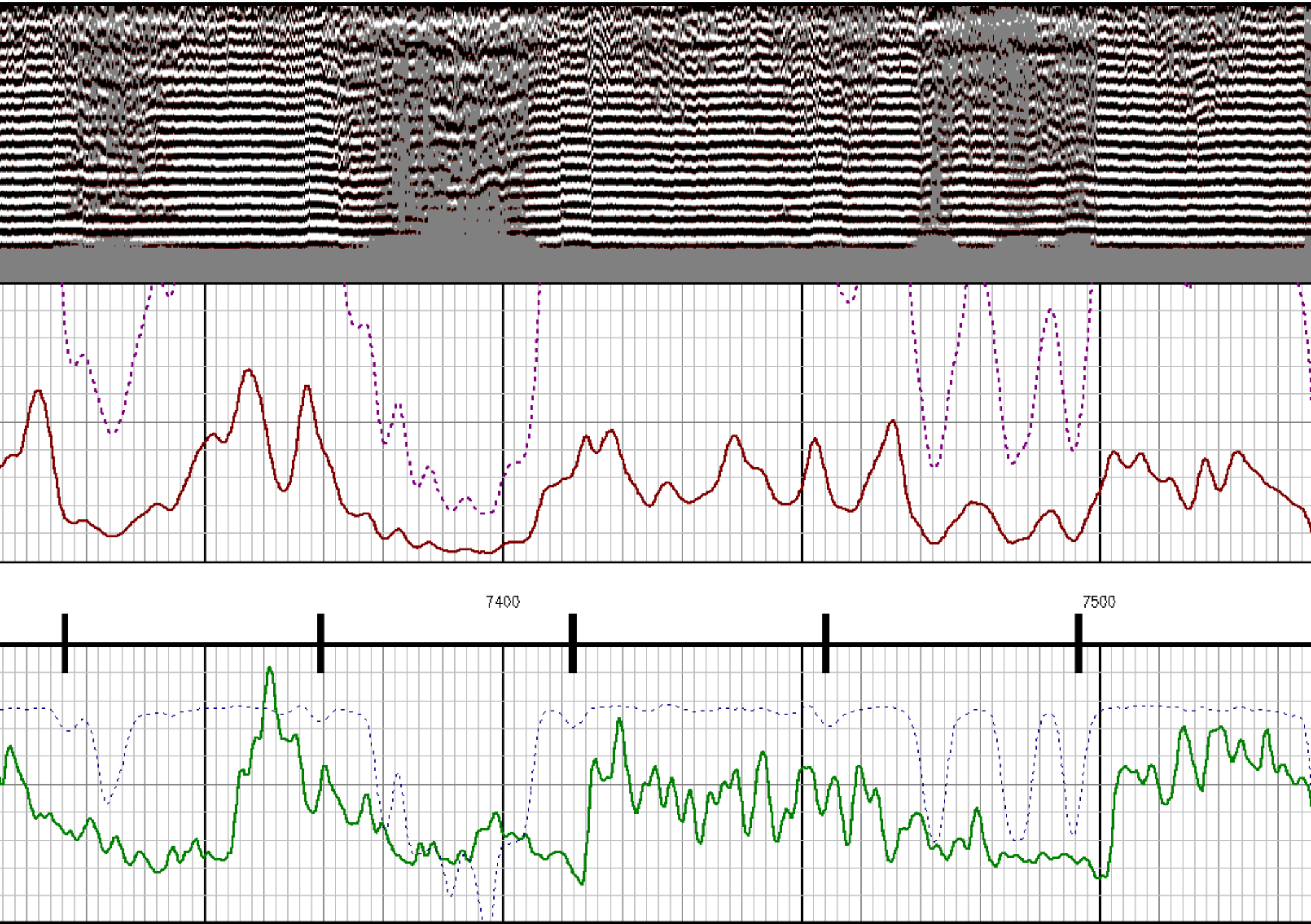
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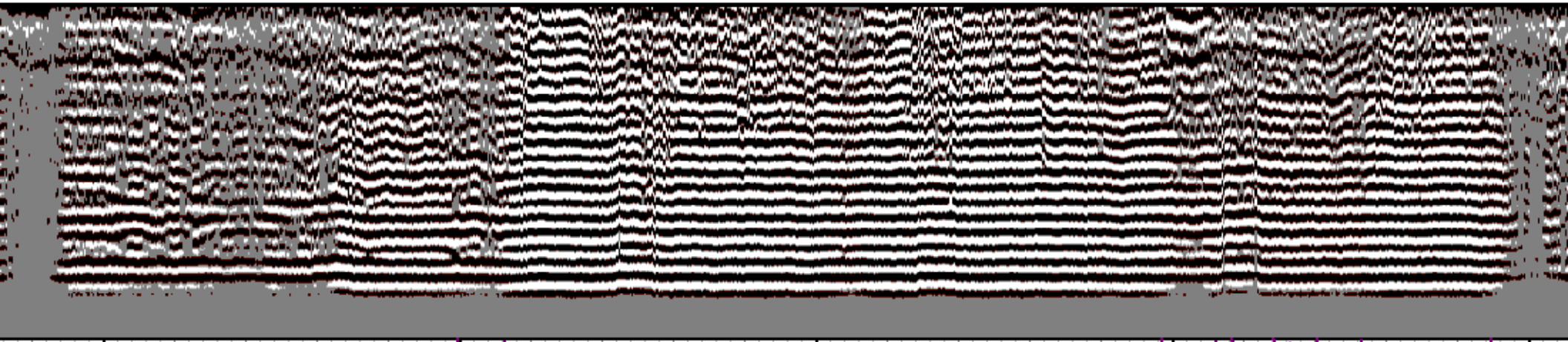

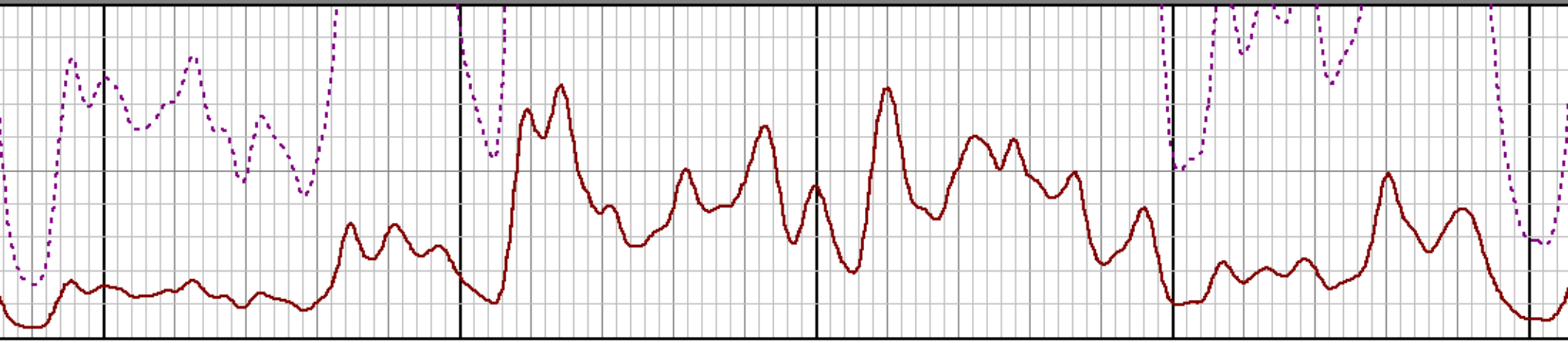

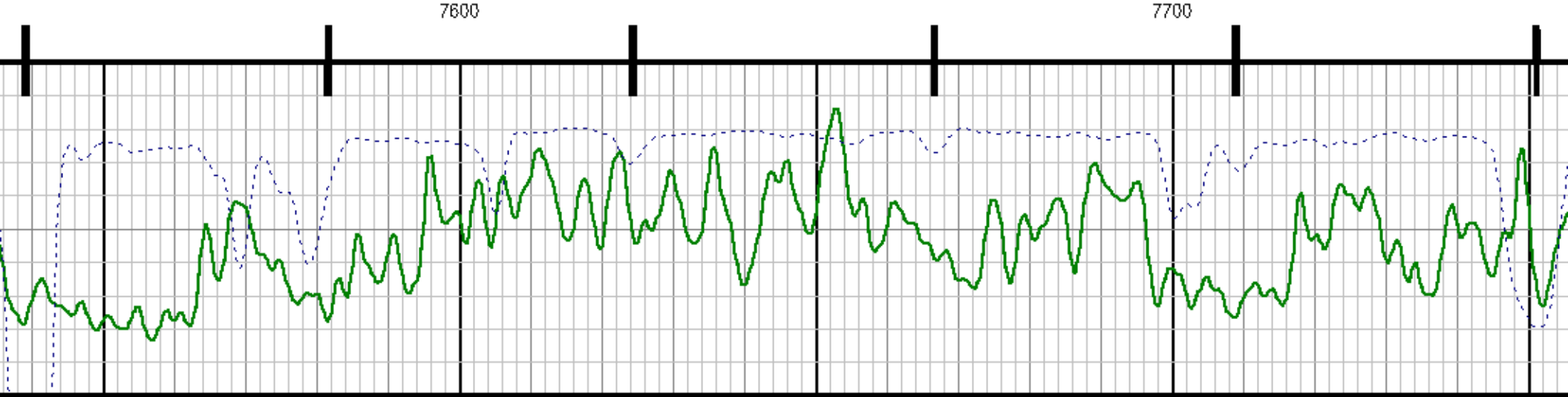
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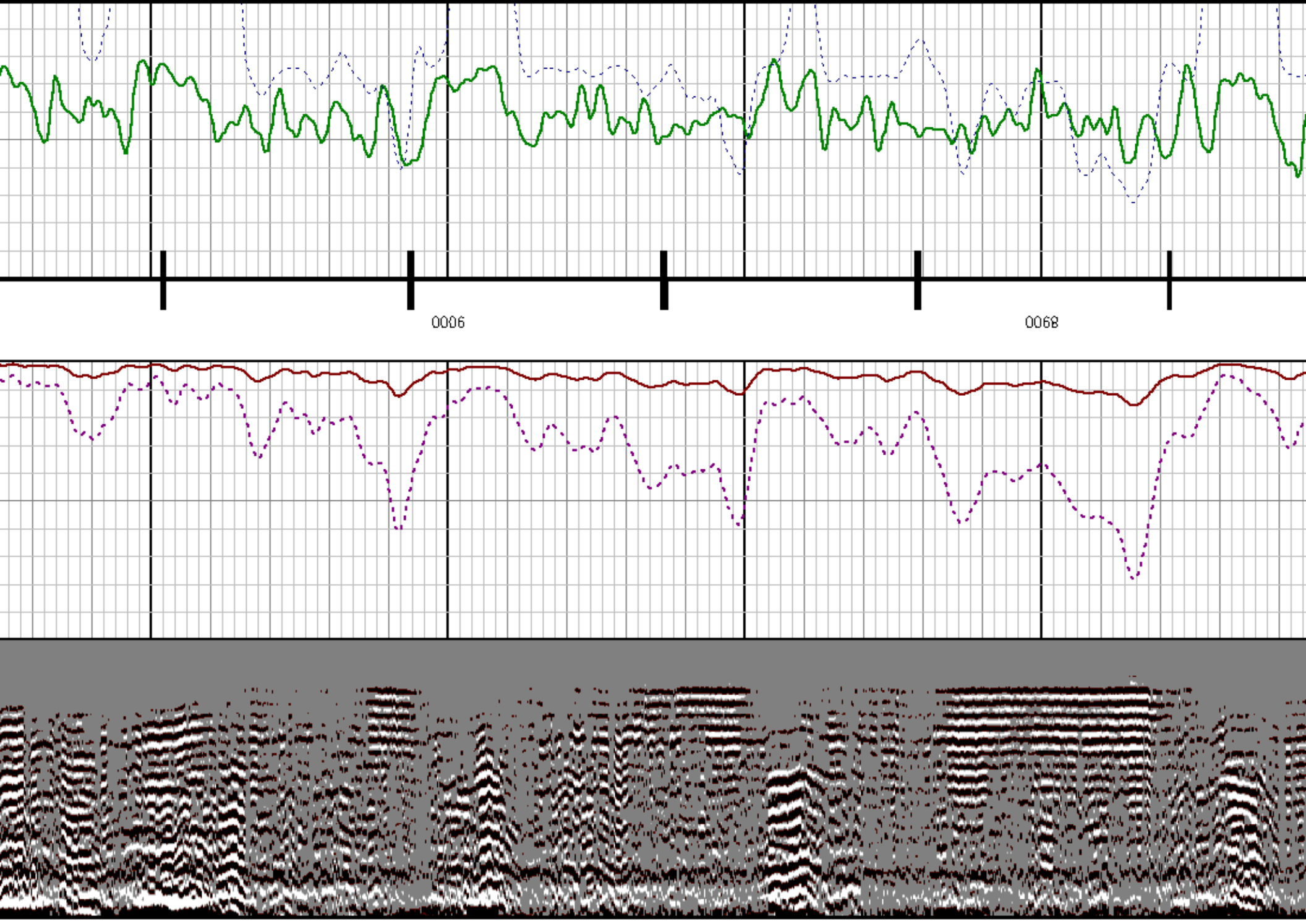
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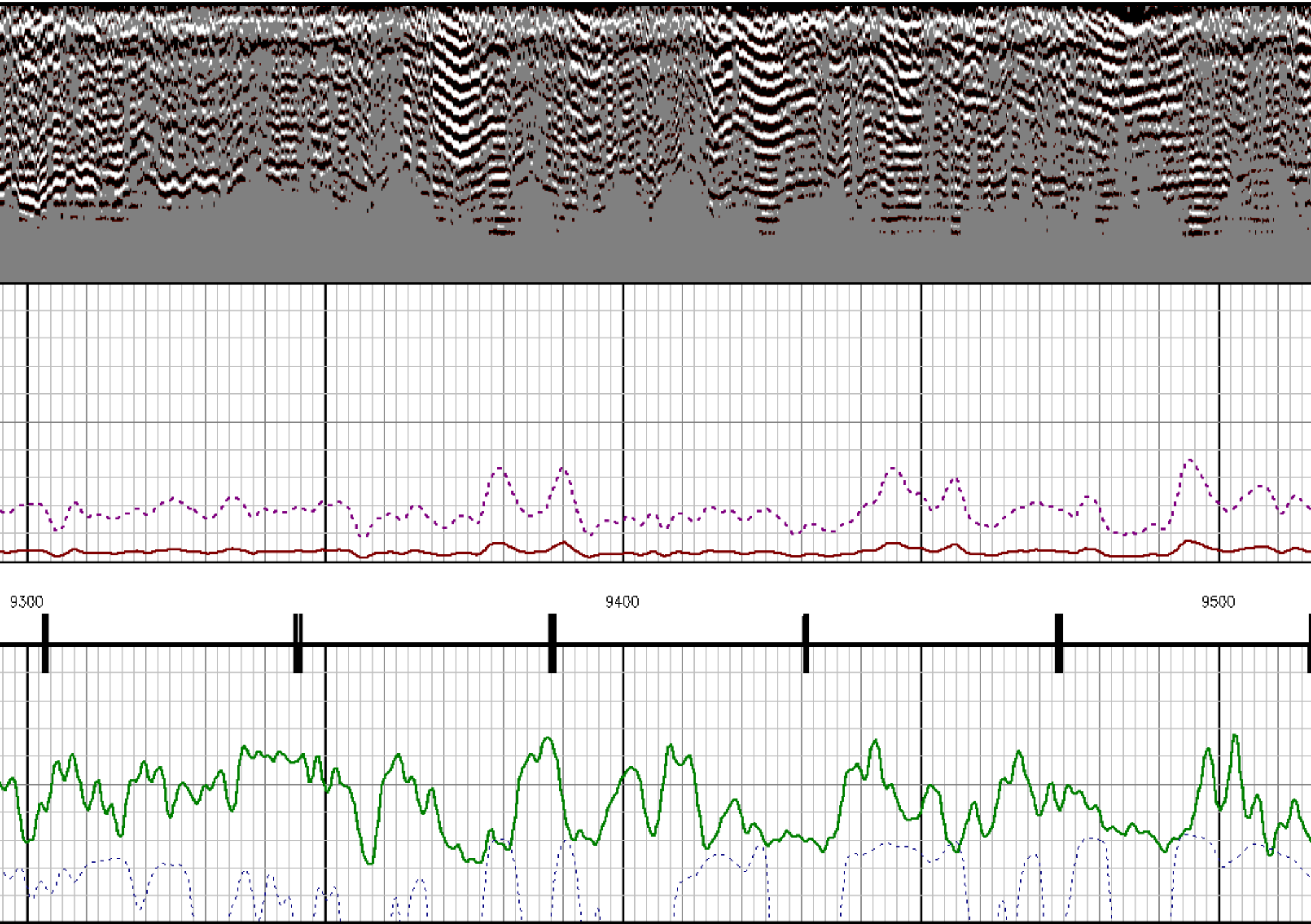
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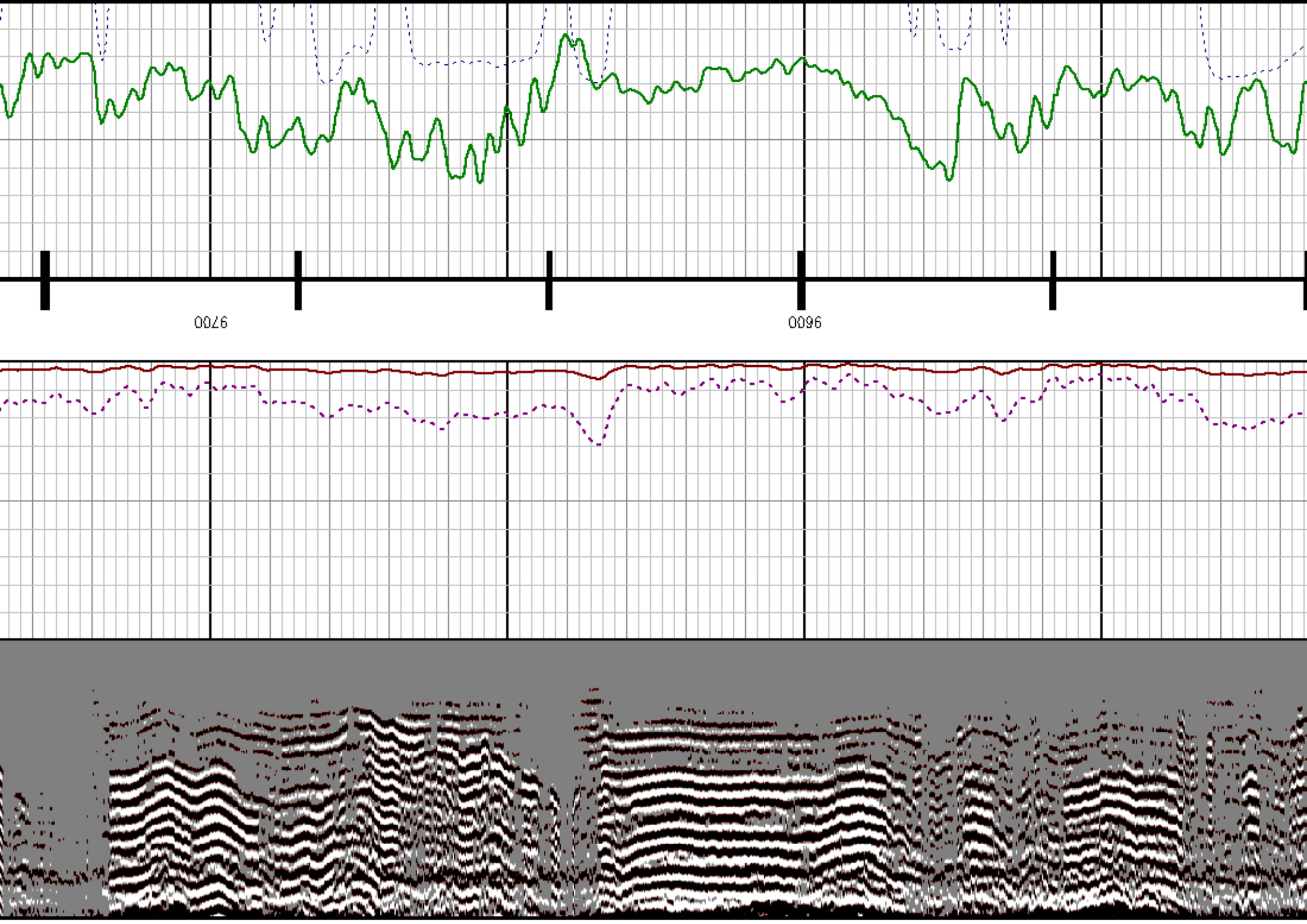
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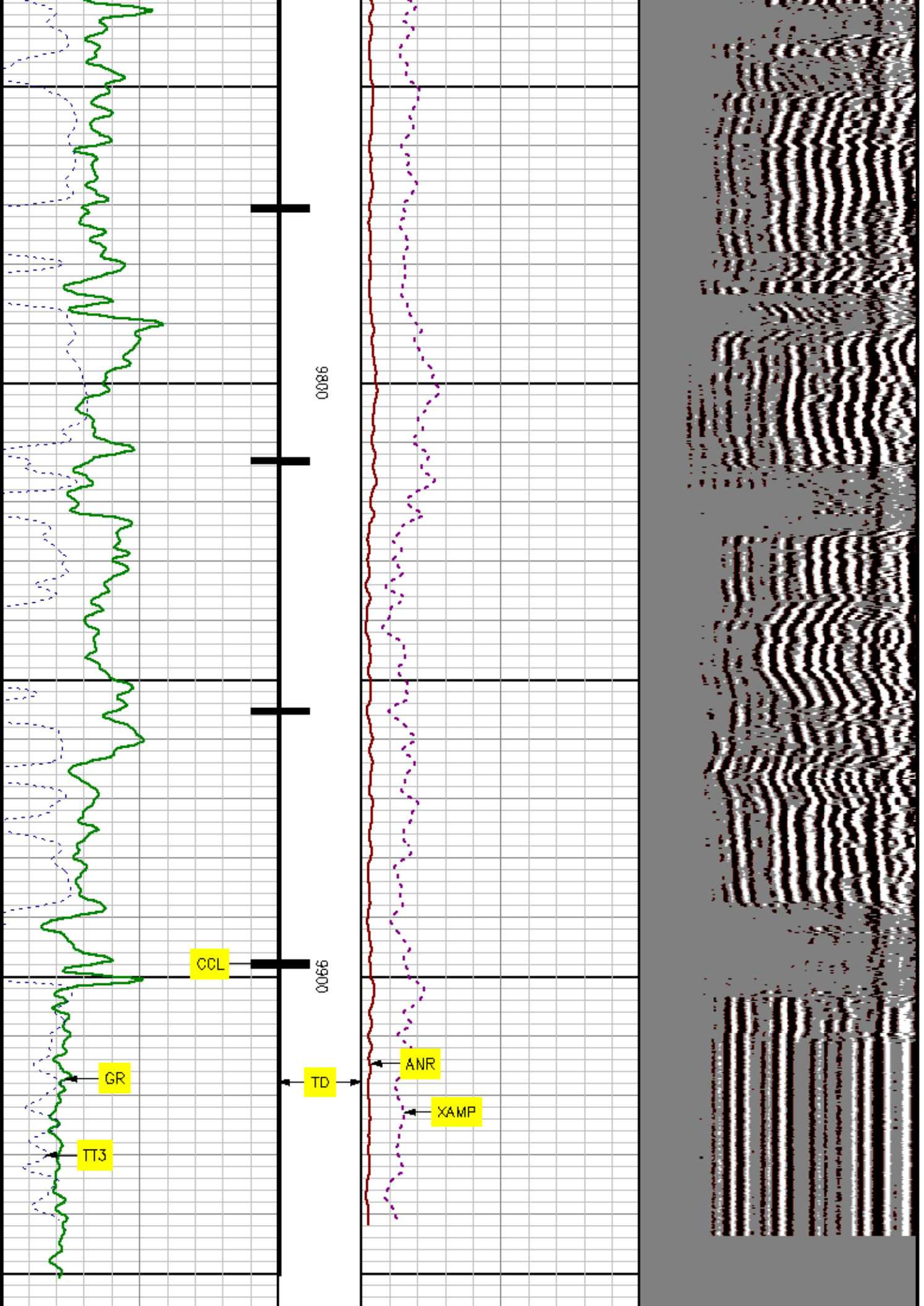
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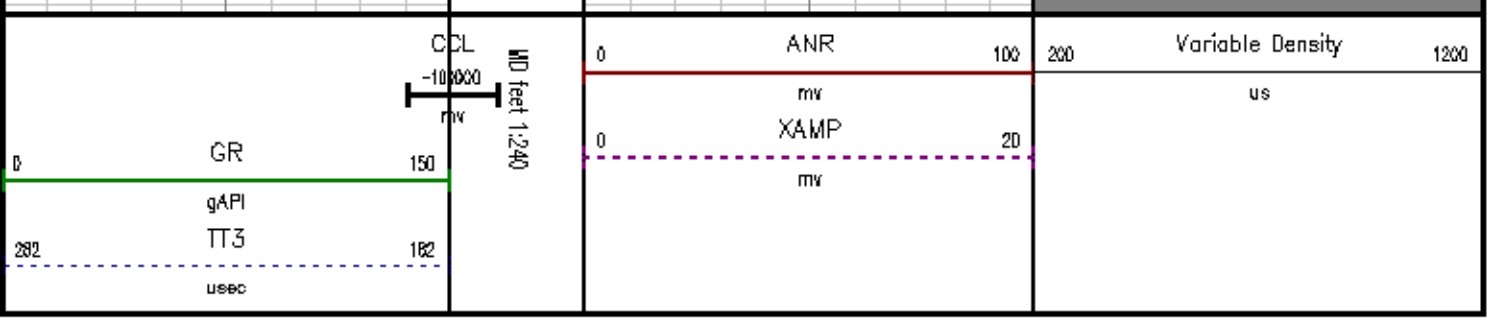

MAIN SECTION
SECONDARY PRESENTATION

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	316.900	usec	1945.250	9956.999
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DEPTH OFFSETS
(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
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		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						

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Plotted by : PlotMgr, v5.4.504

Company : MARATHON OIL COMPANY
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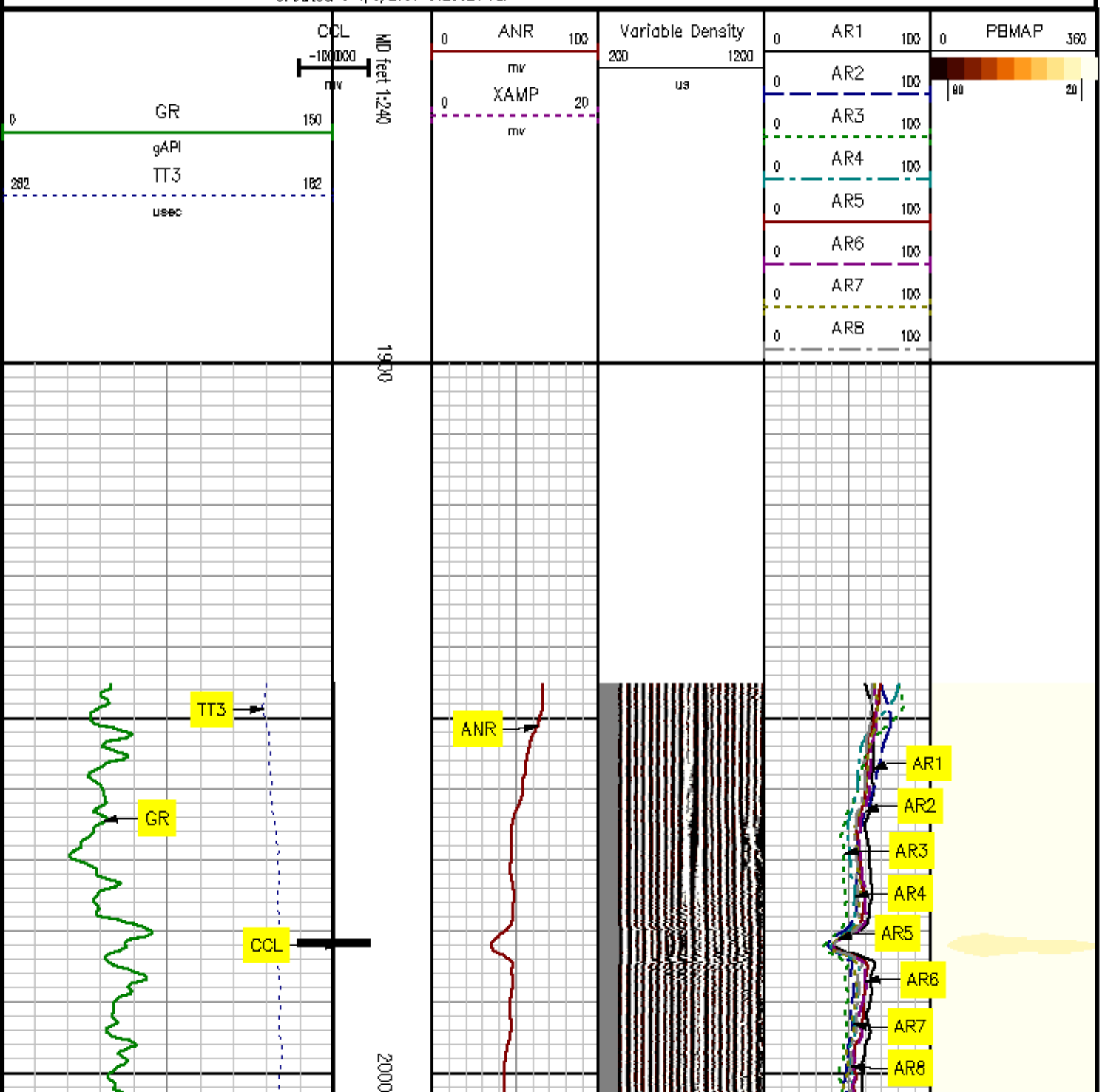

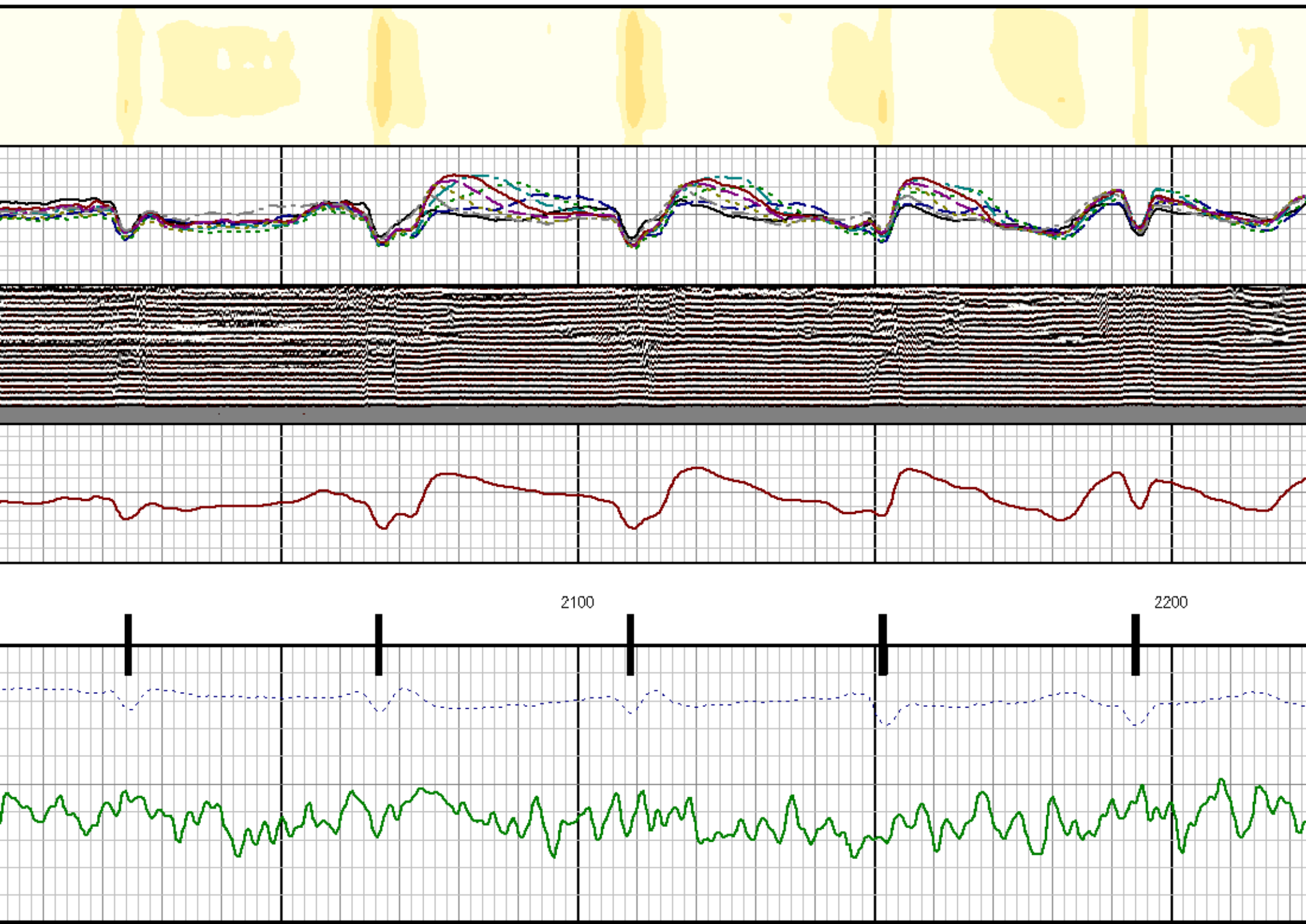
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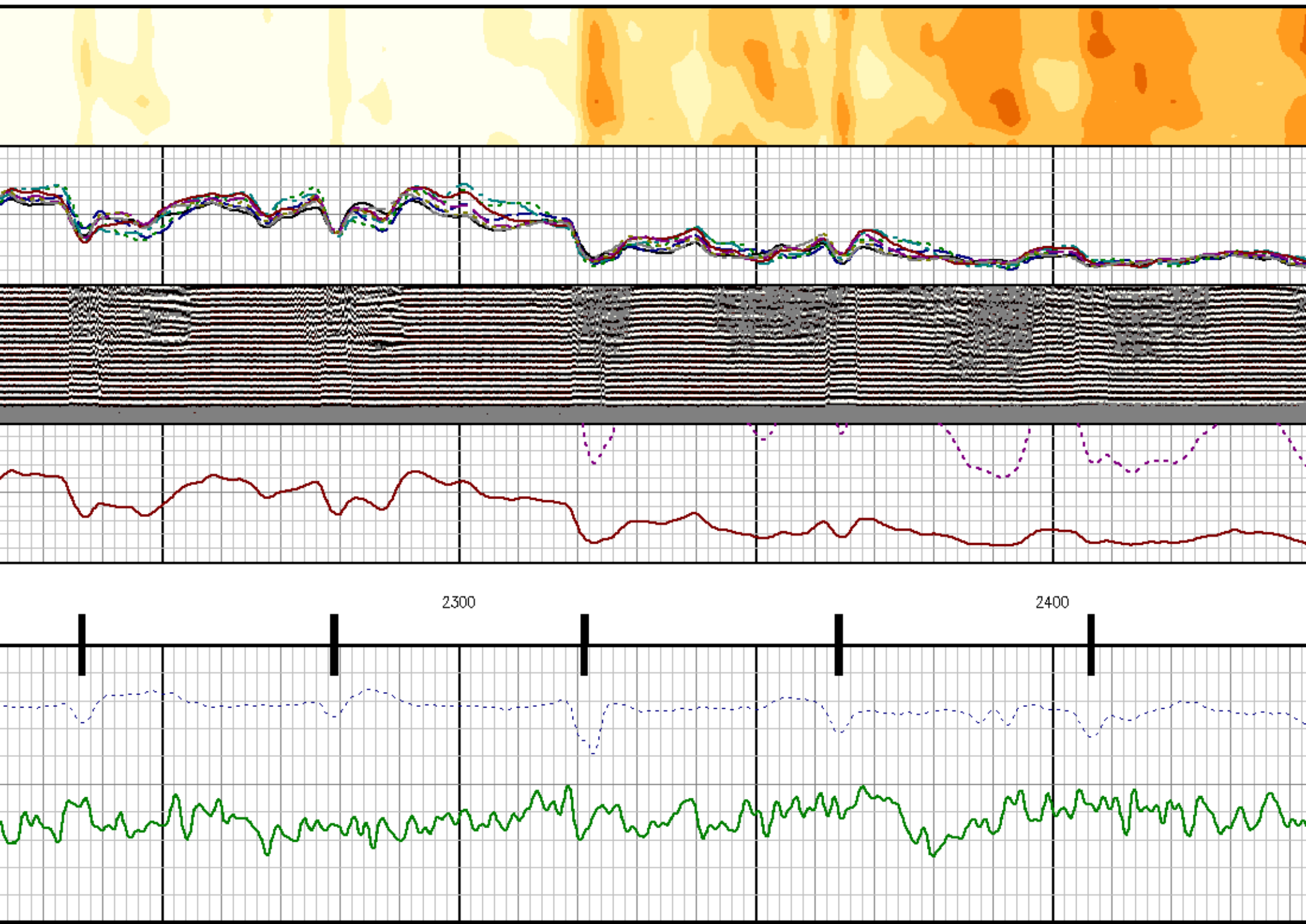
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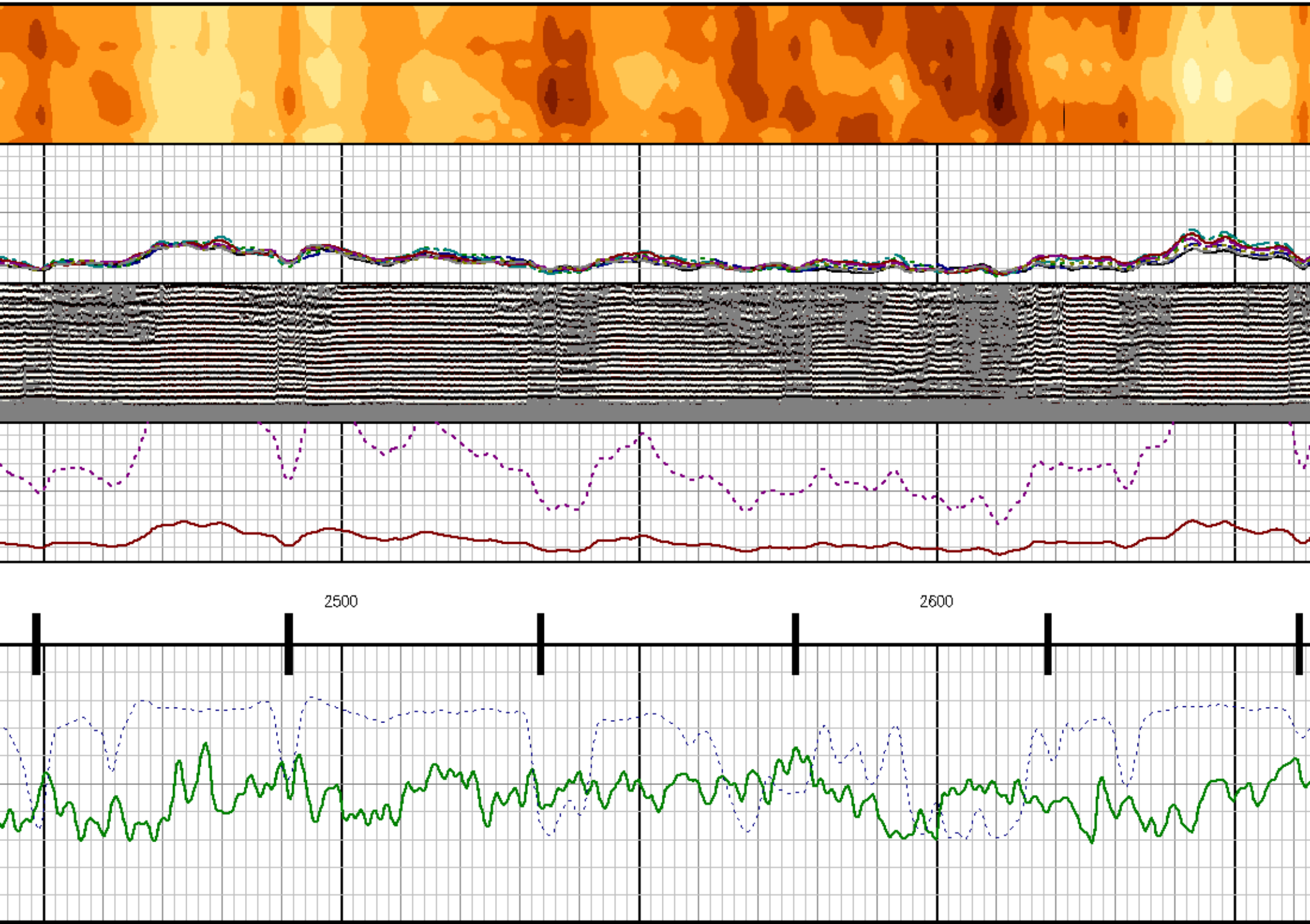
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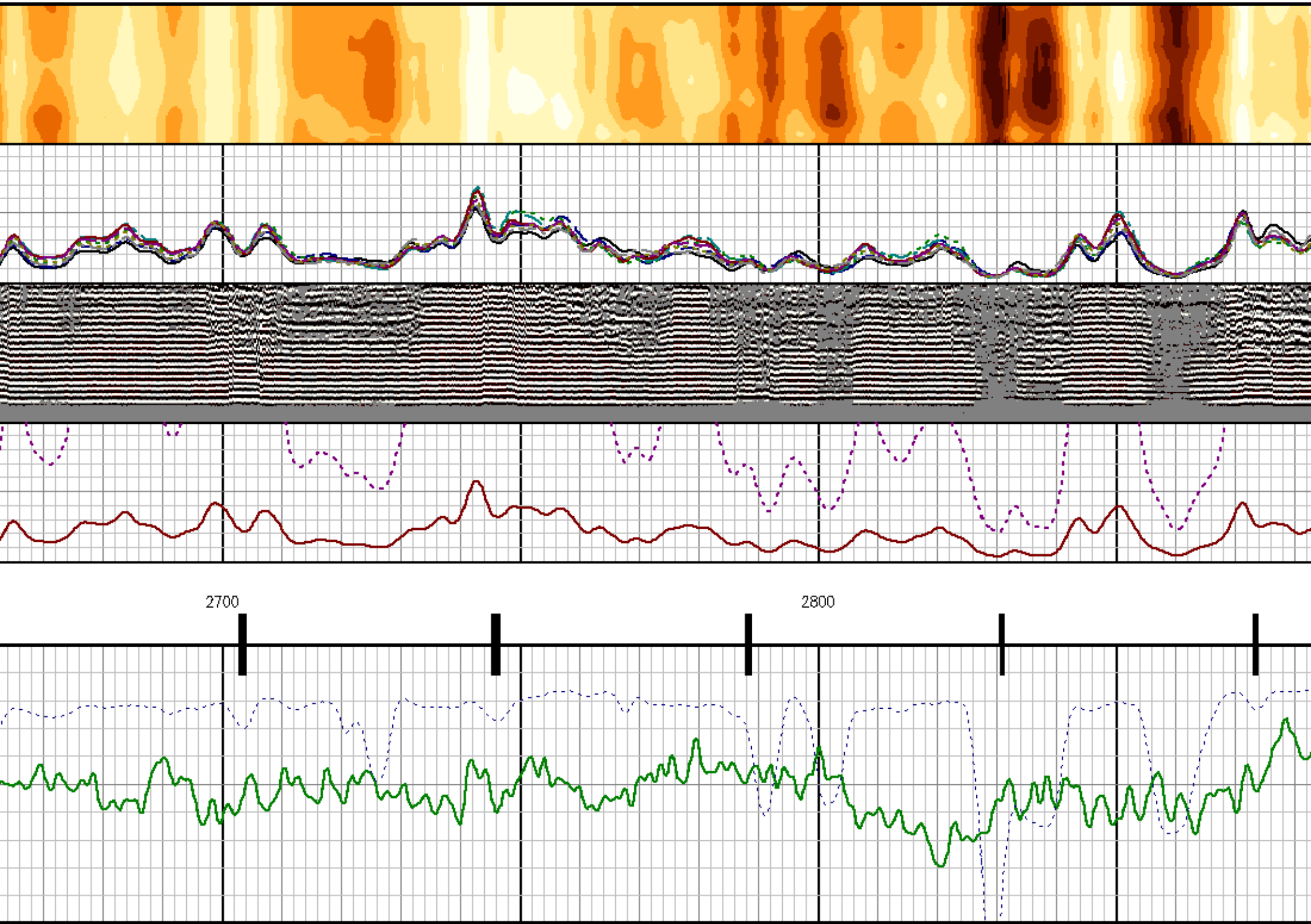
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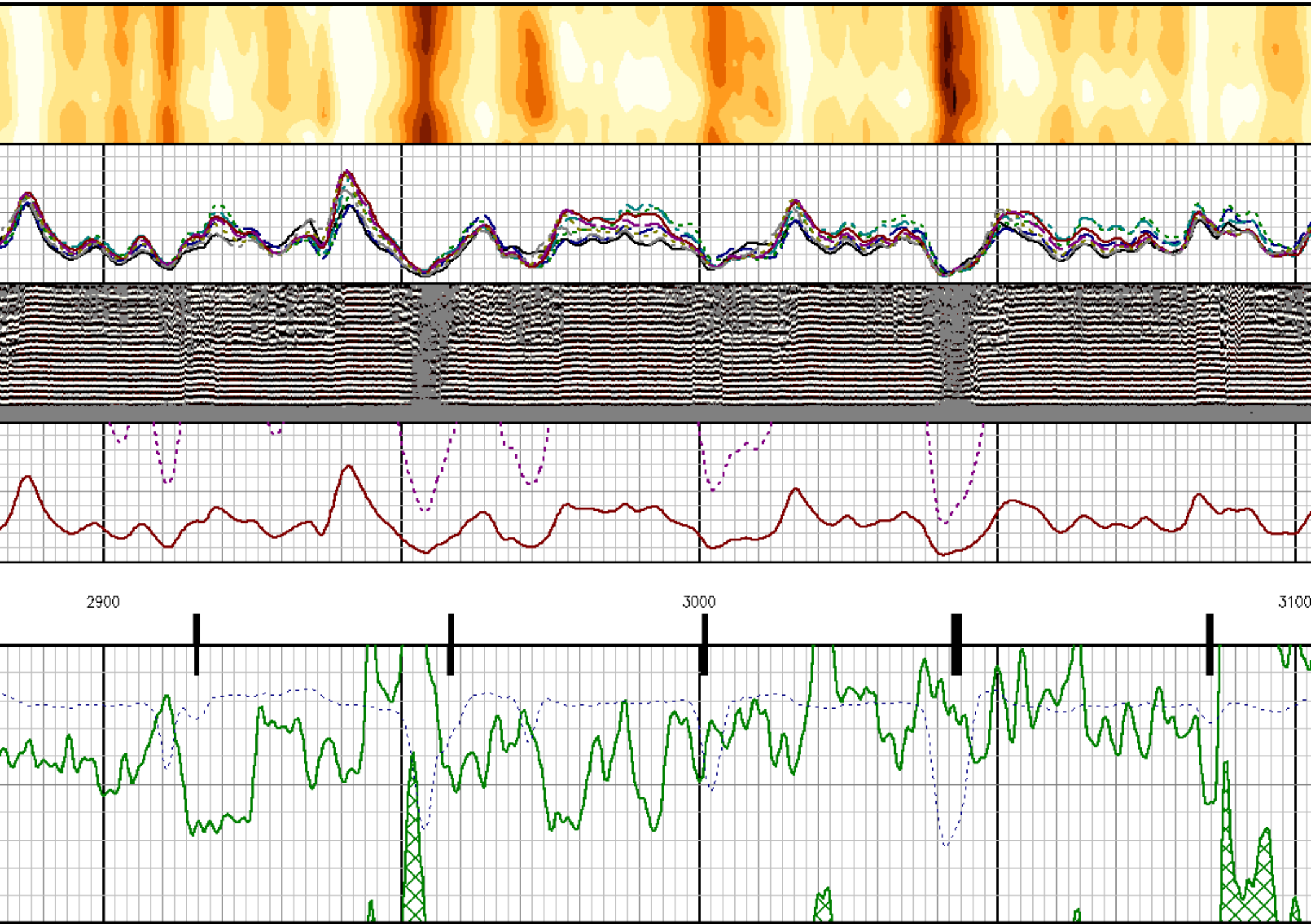
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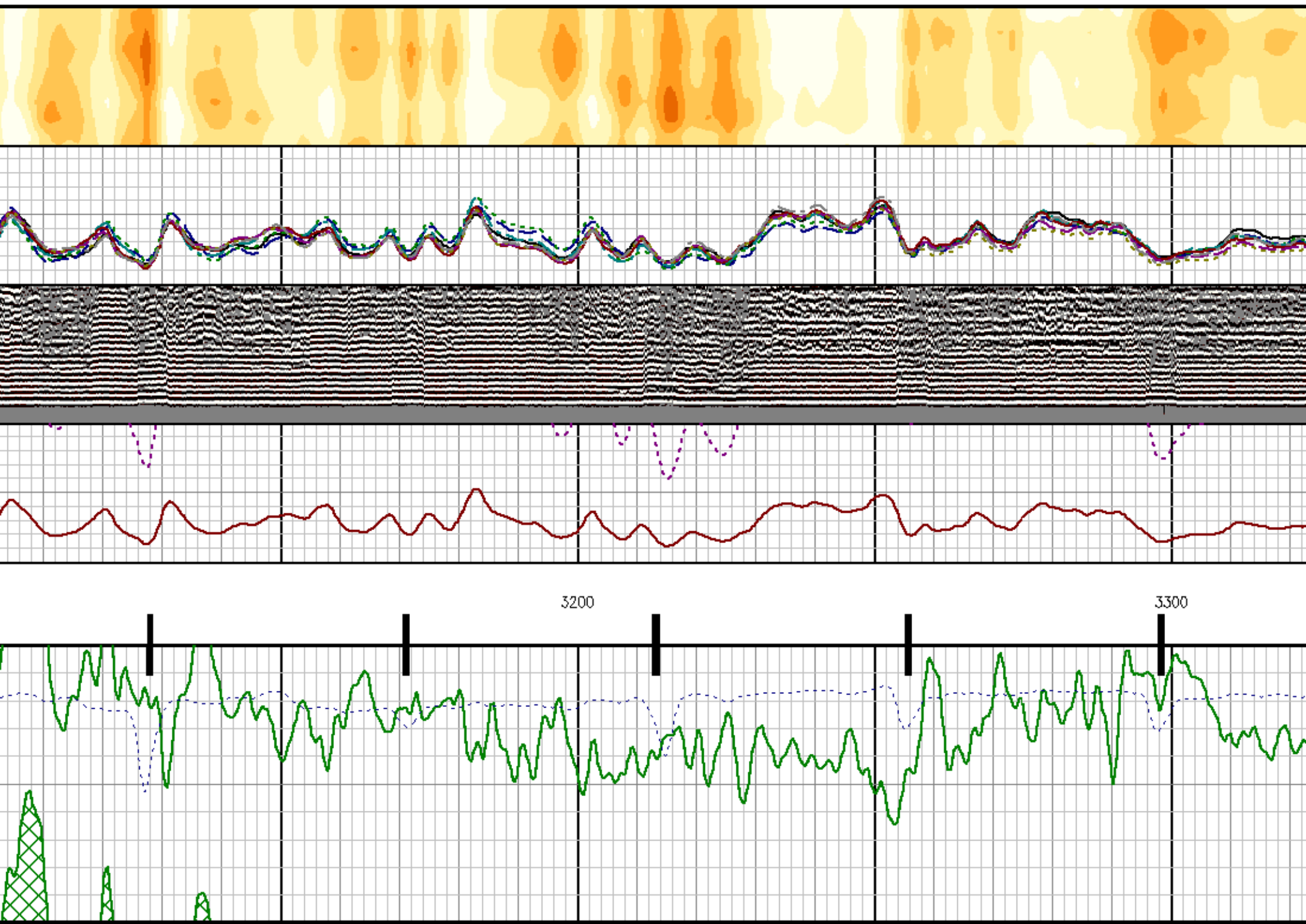
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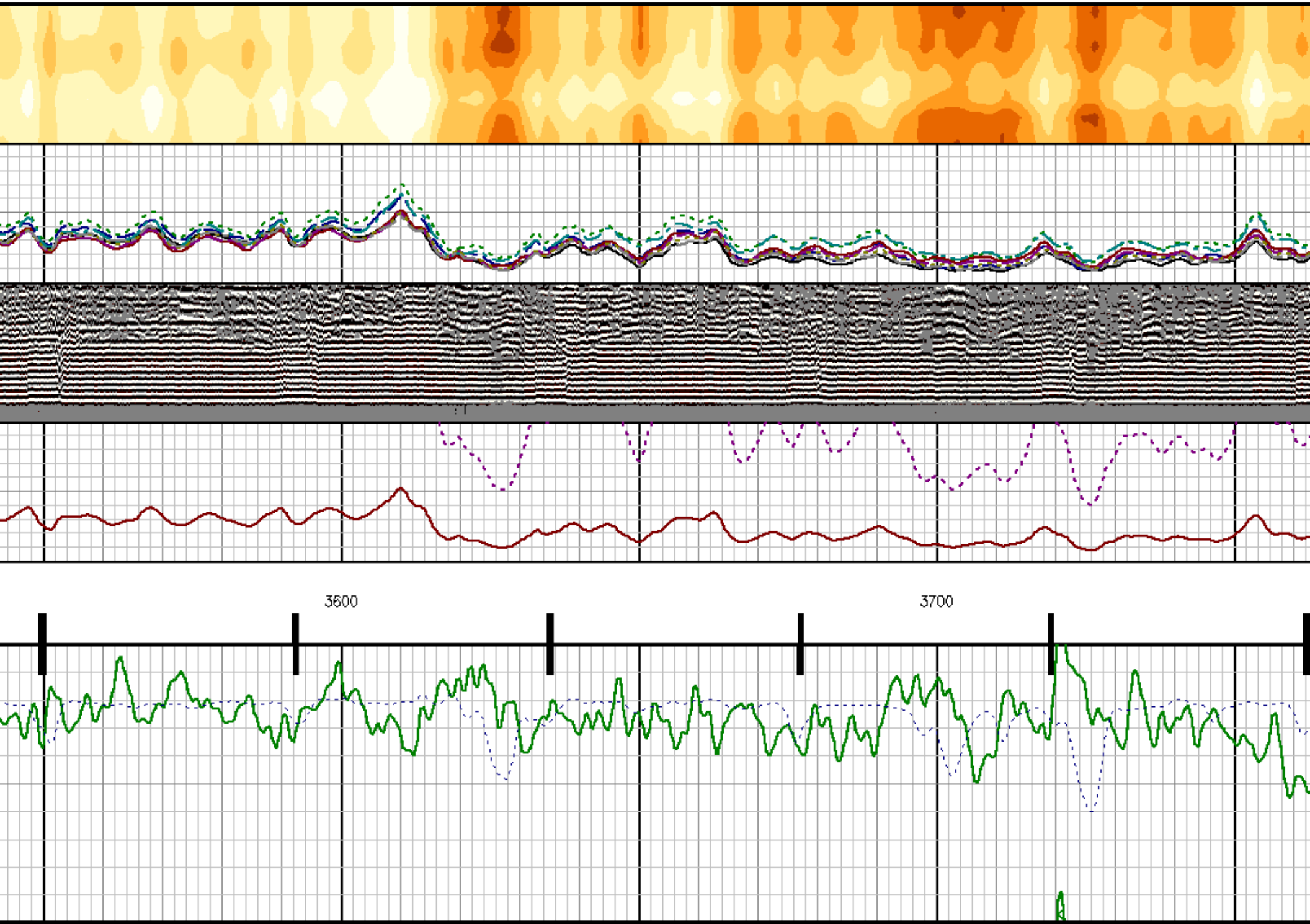
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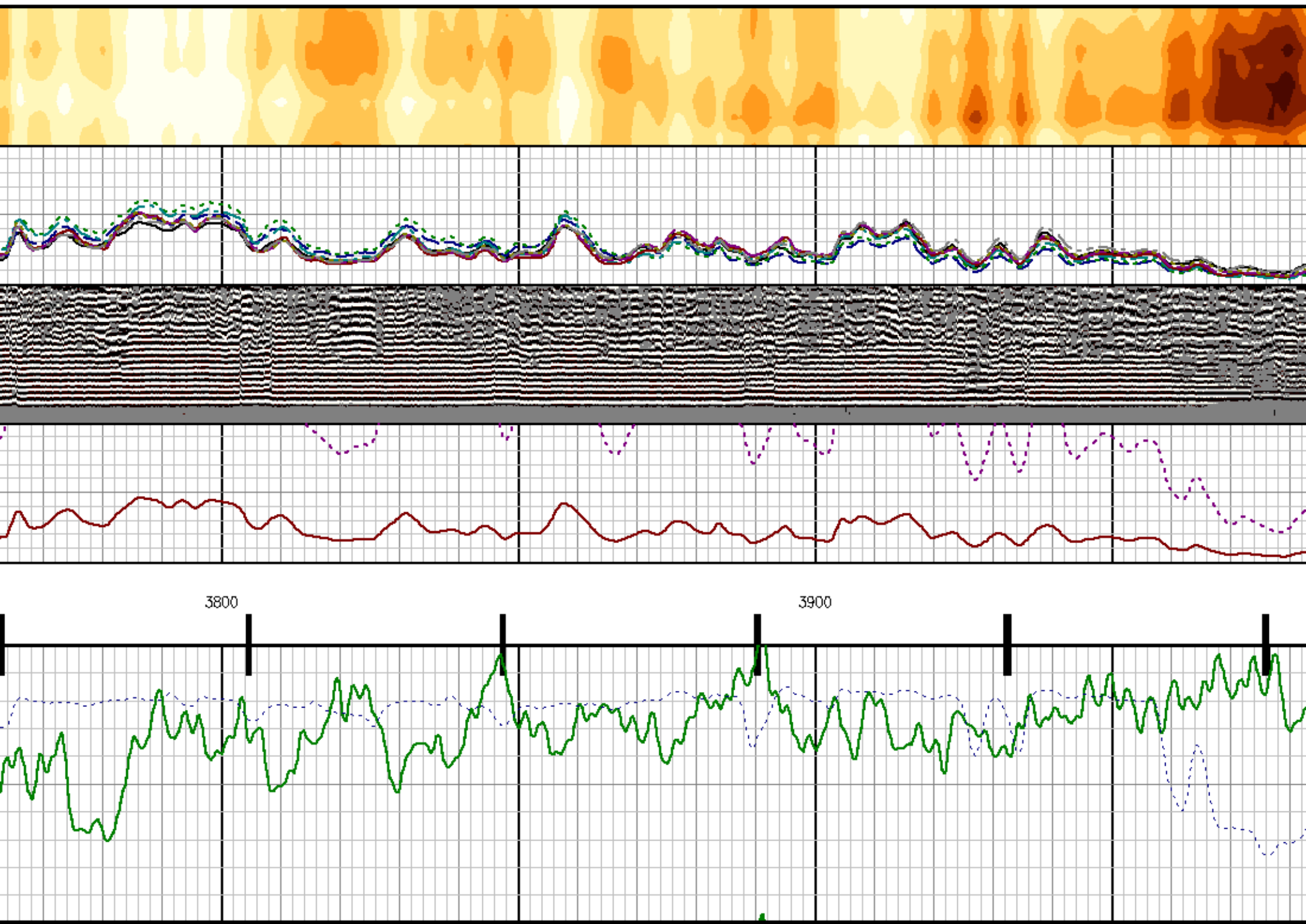
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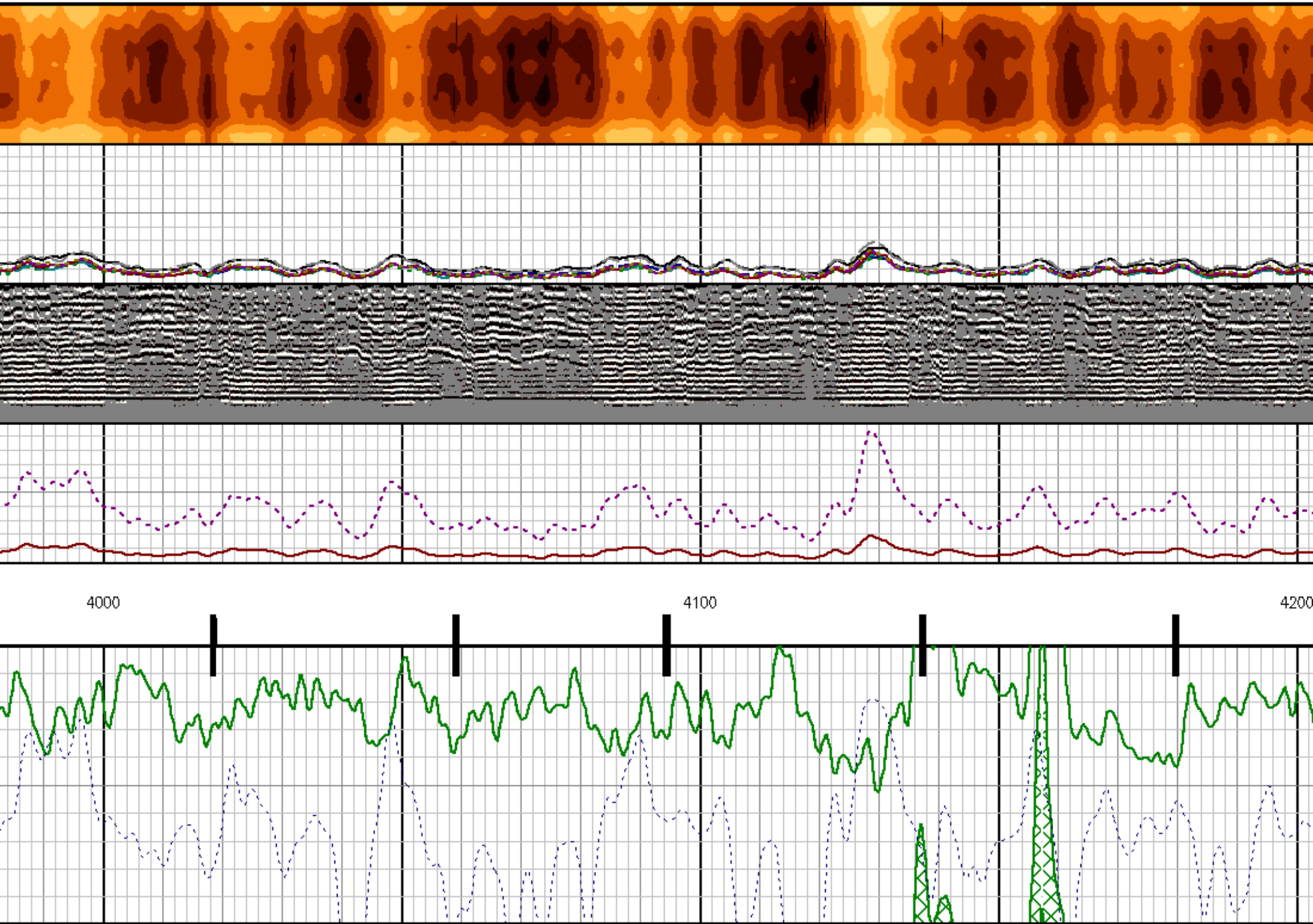
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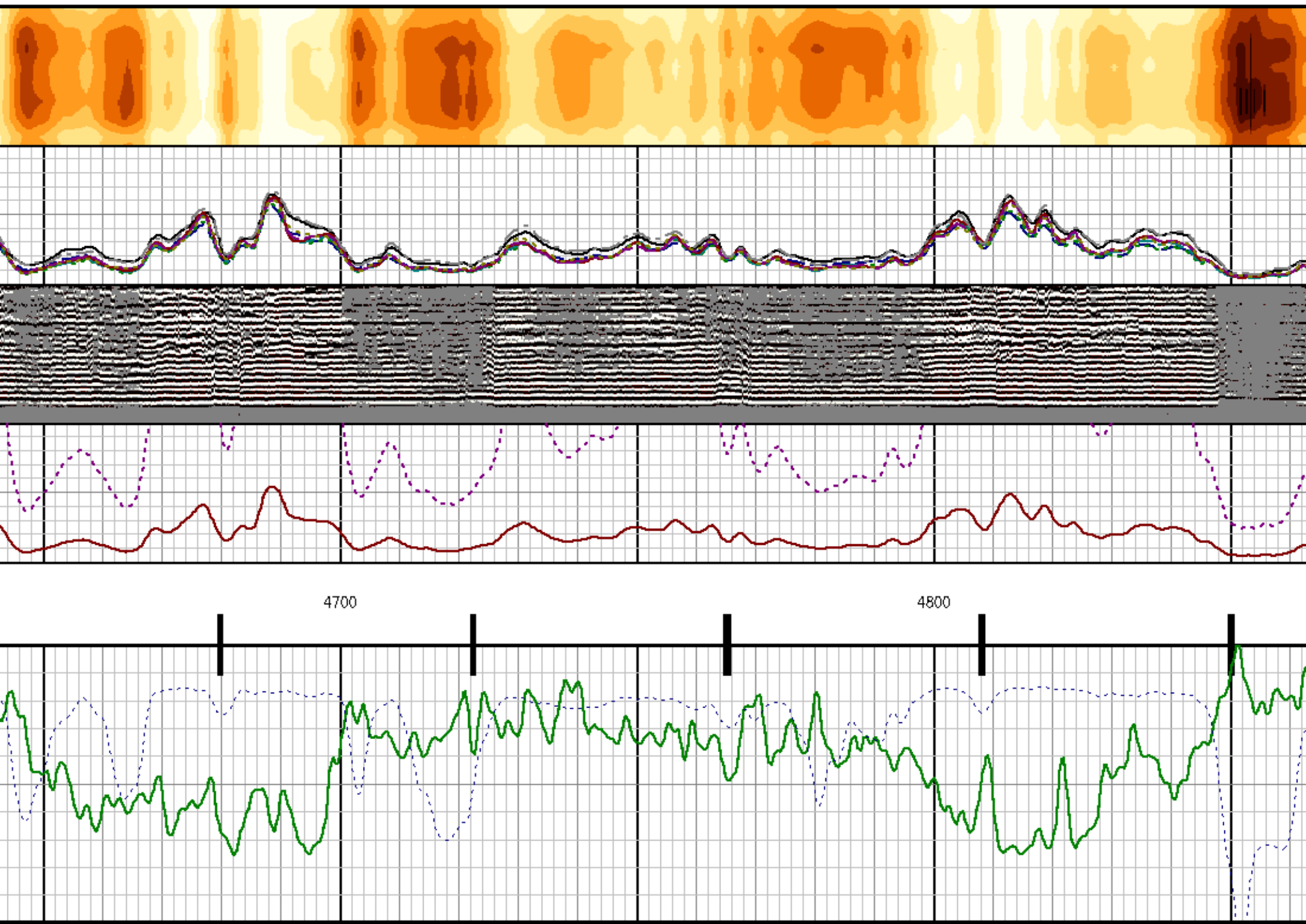
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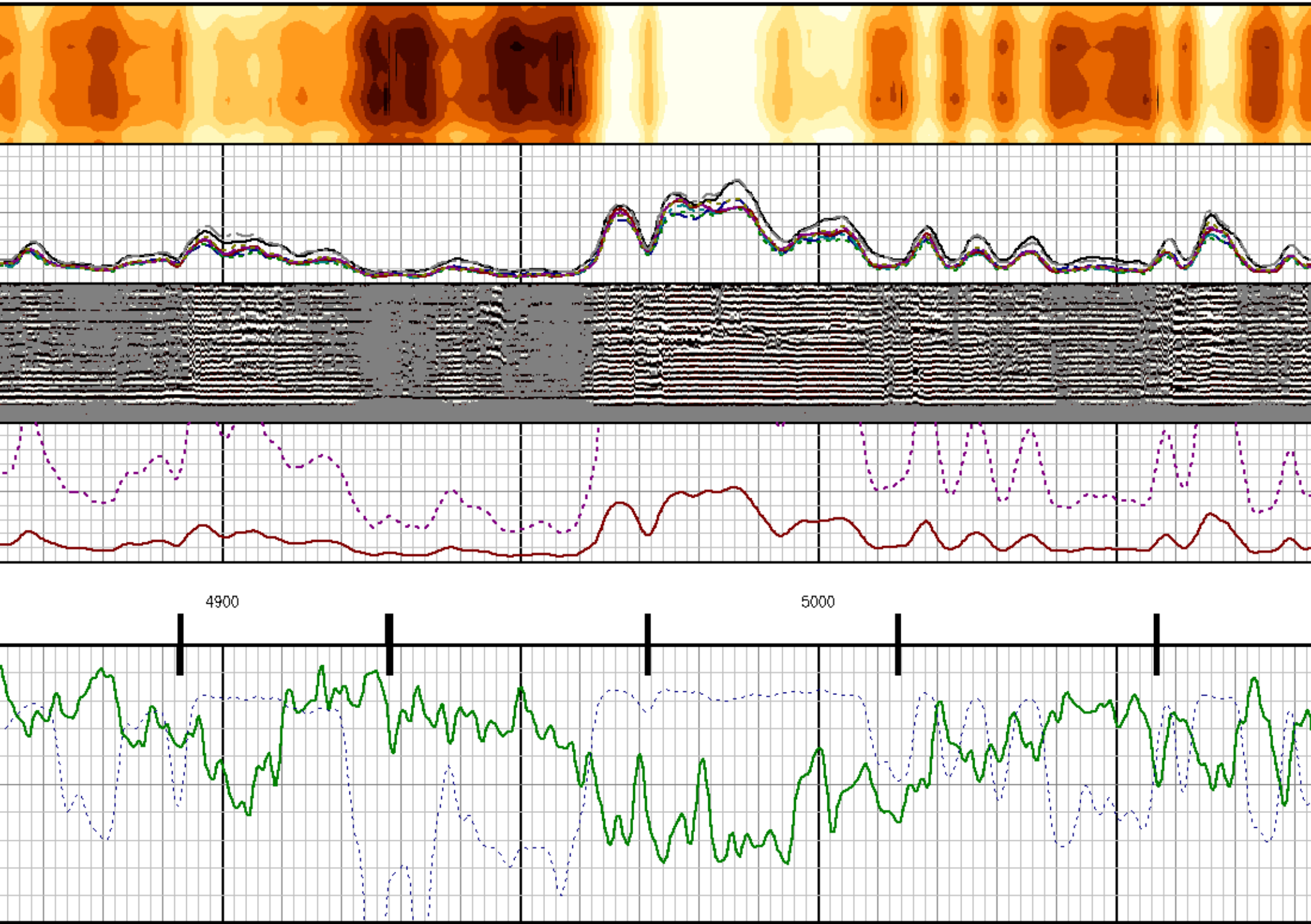
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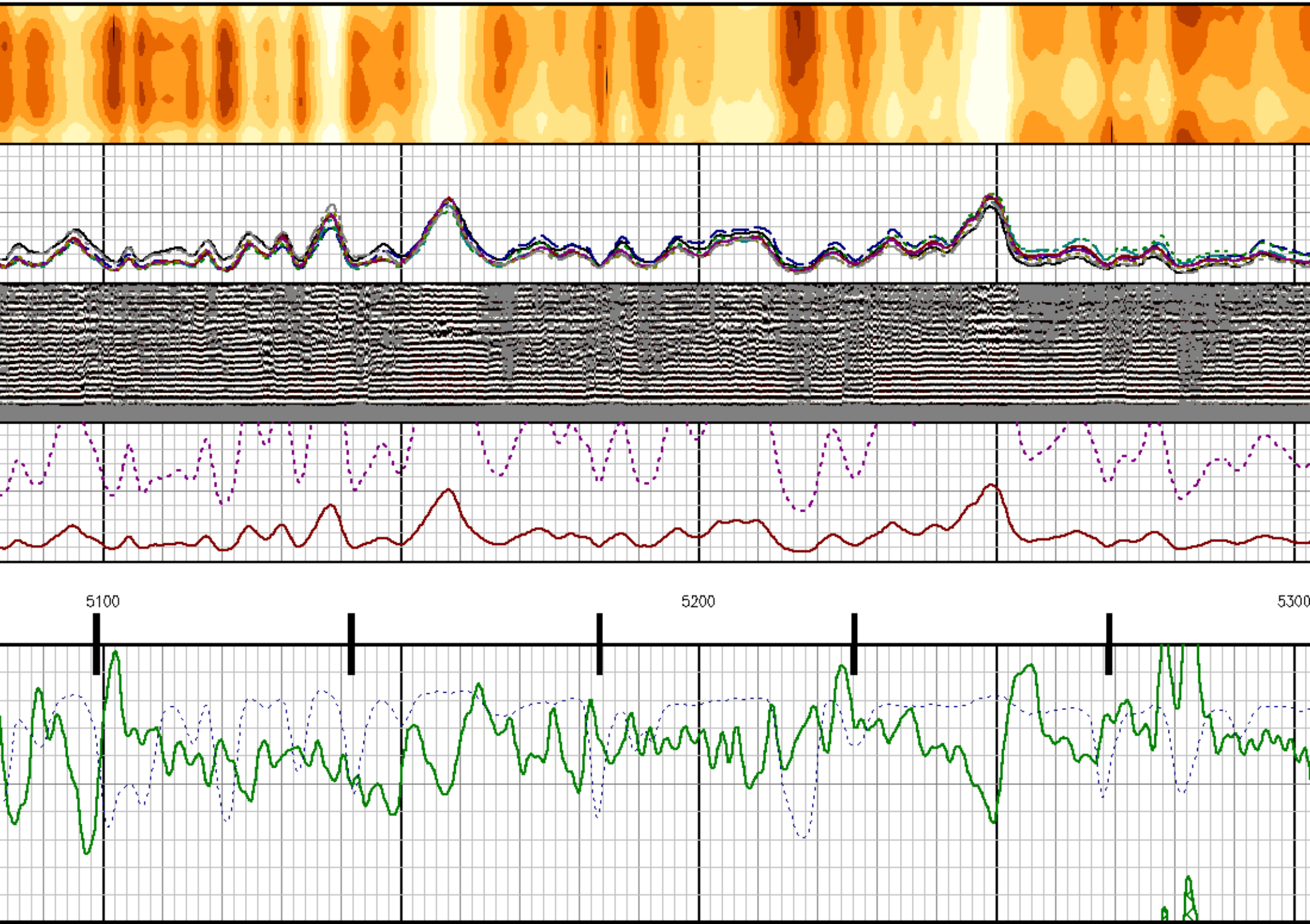
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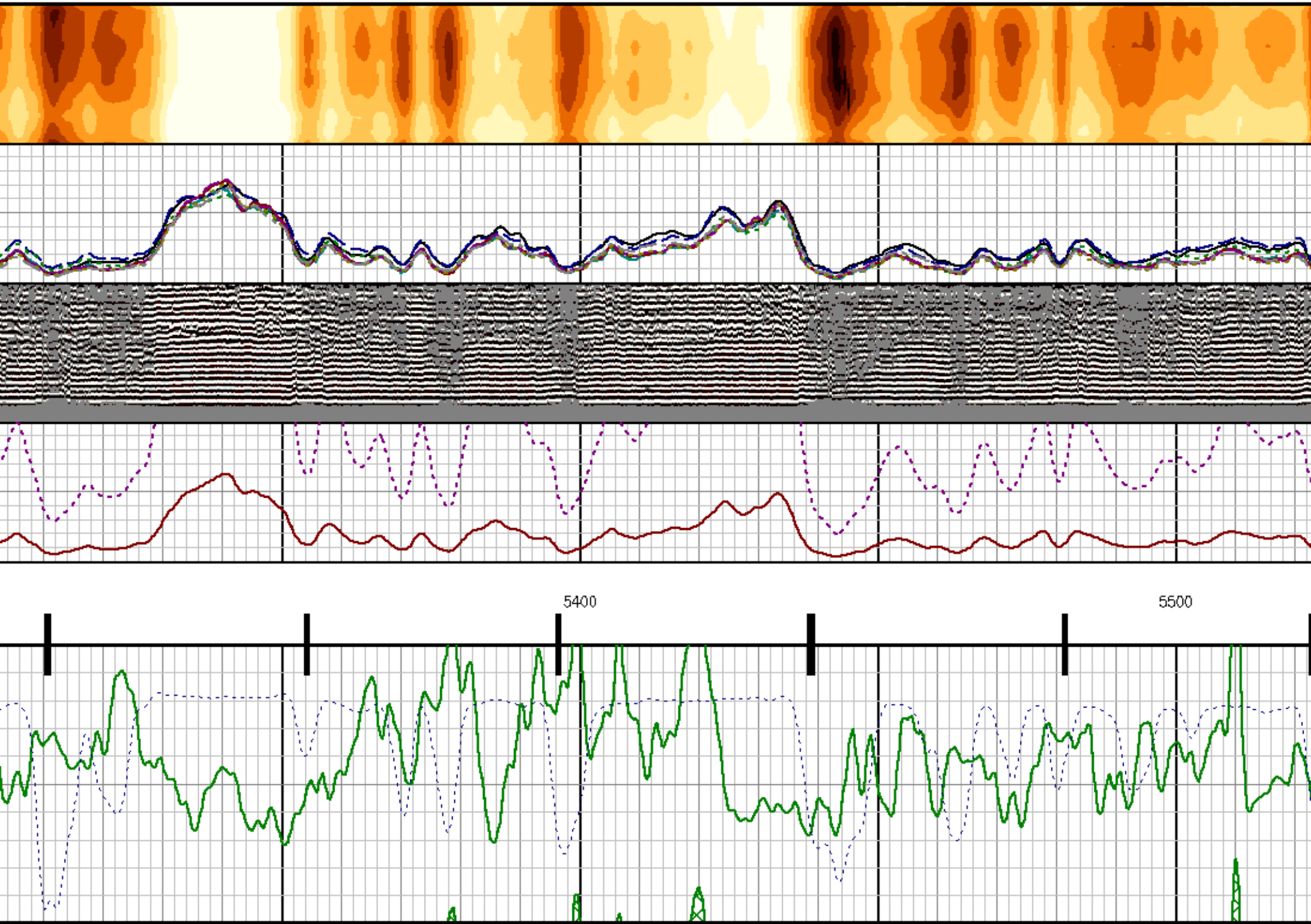
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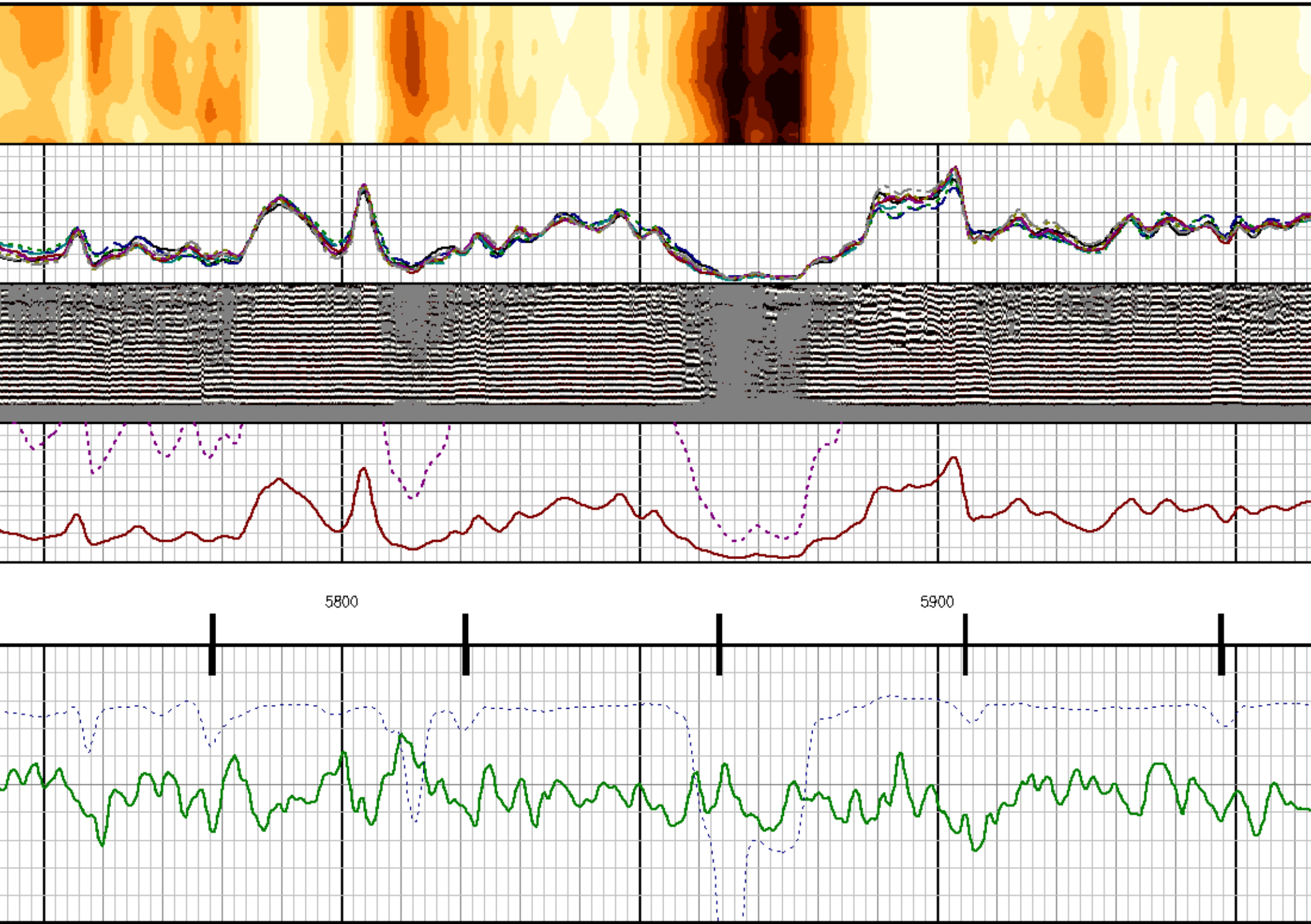
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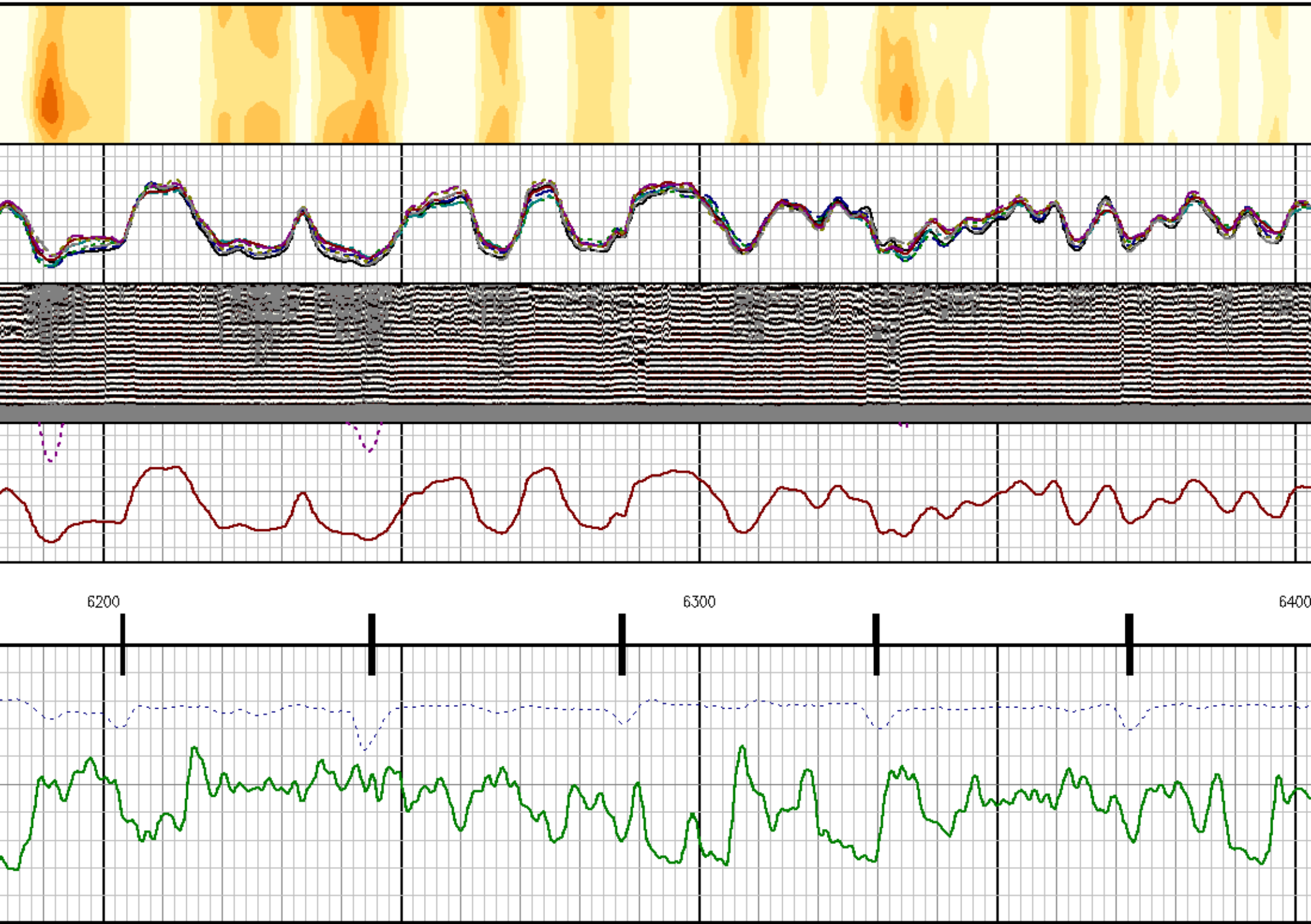
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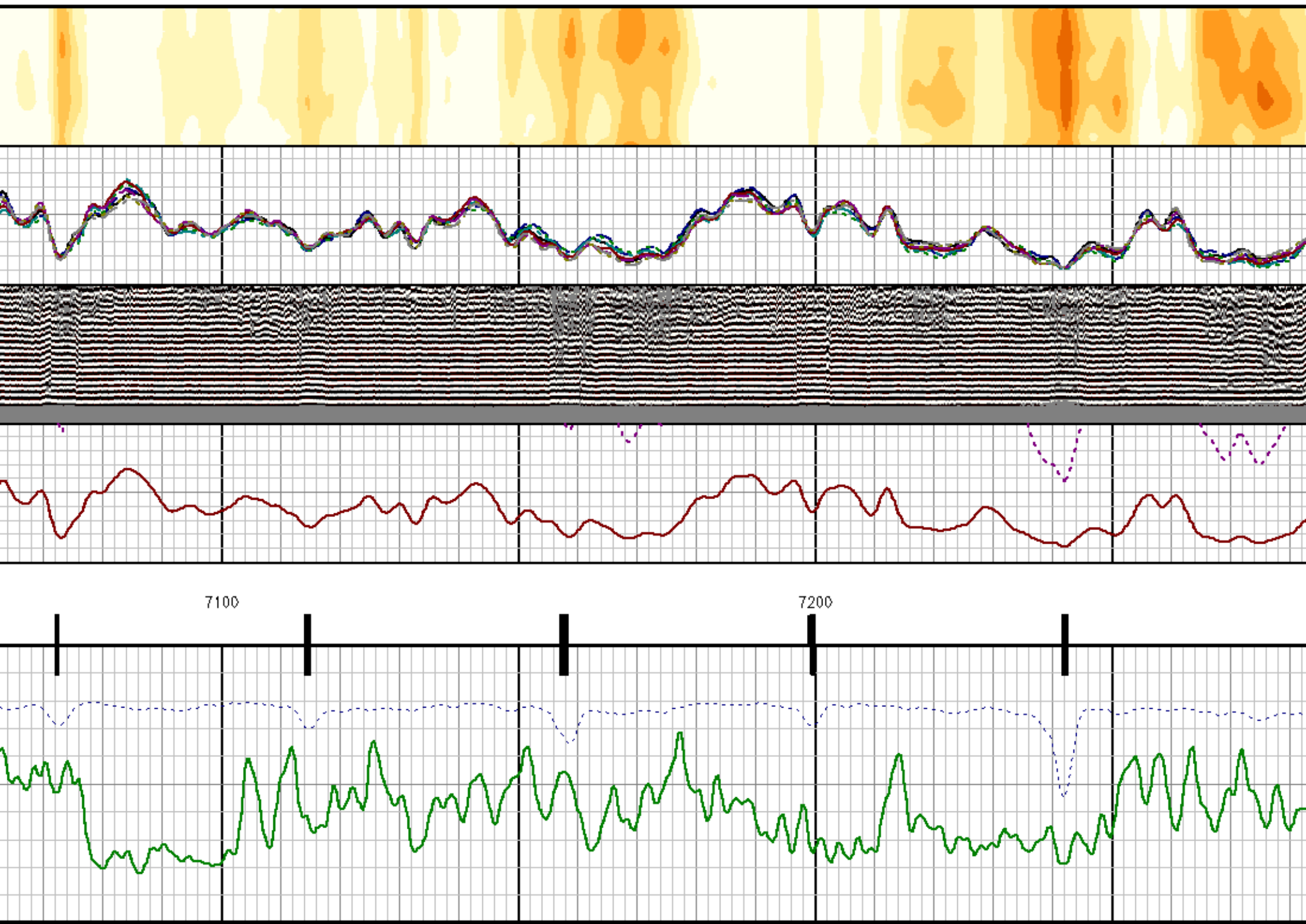
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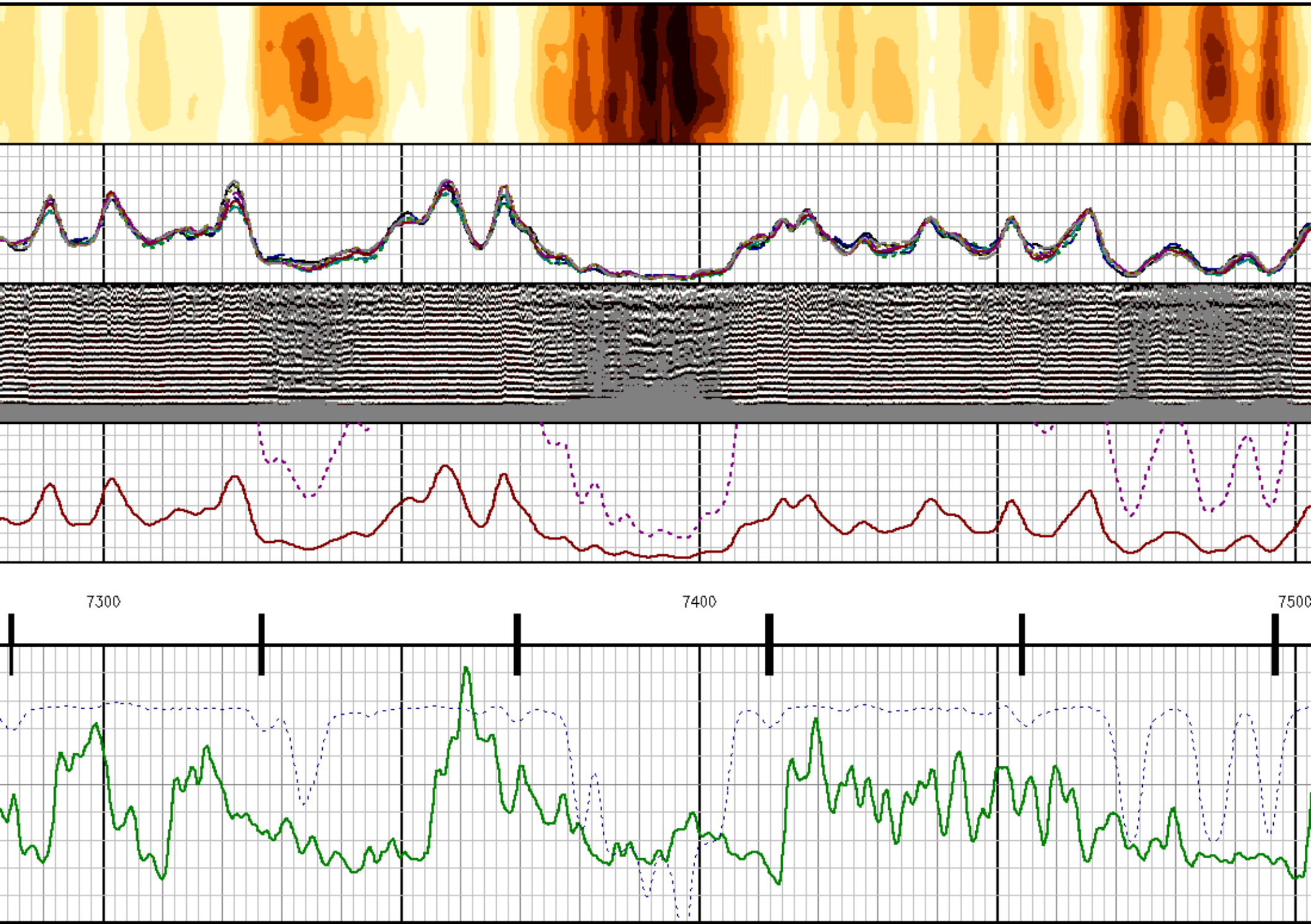
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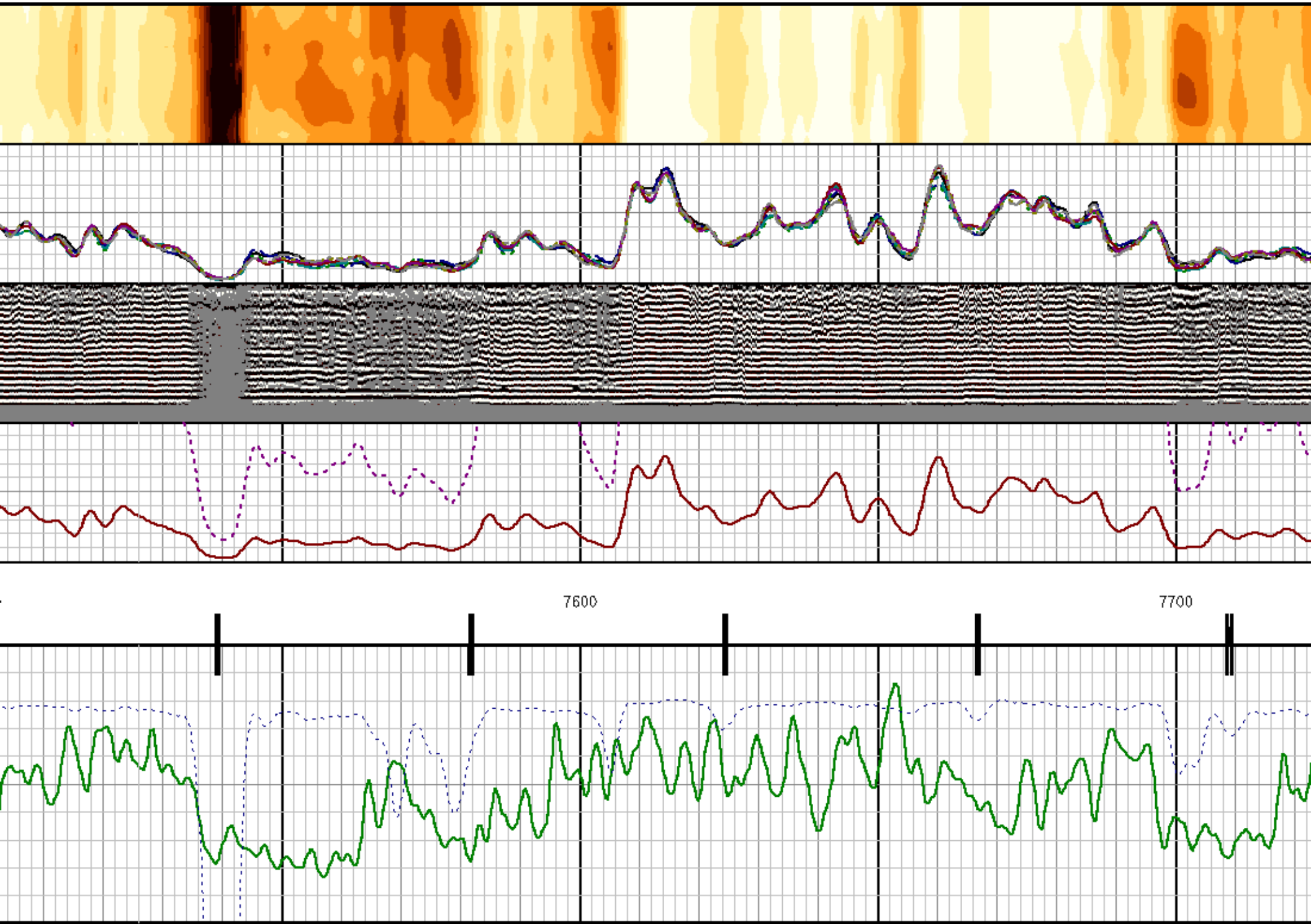
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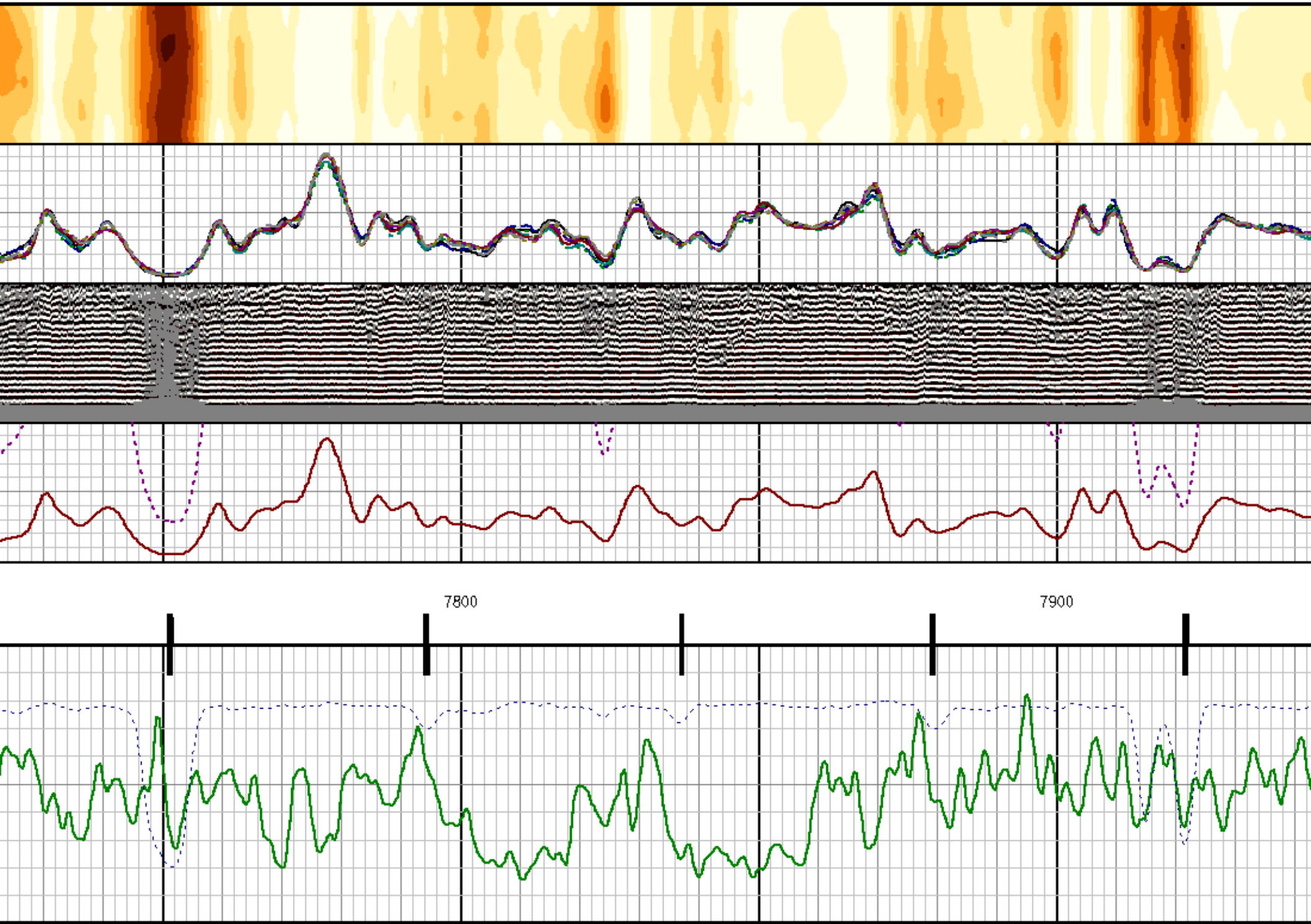
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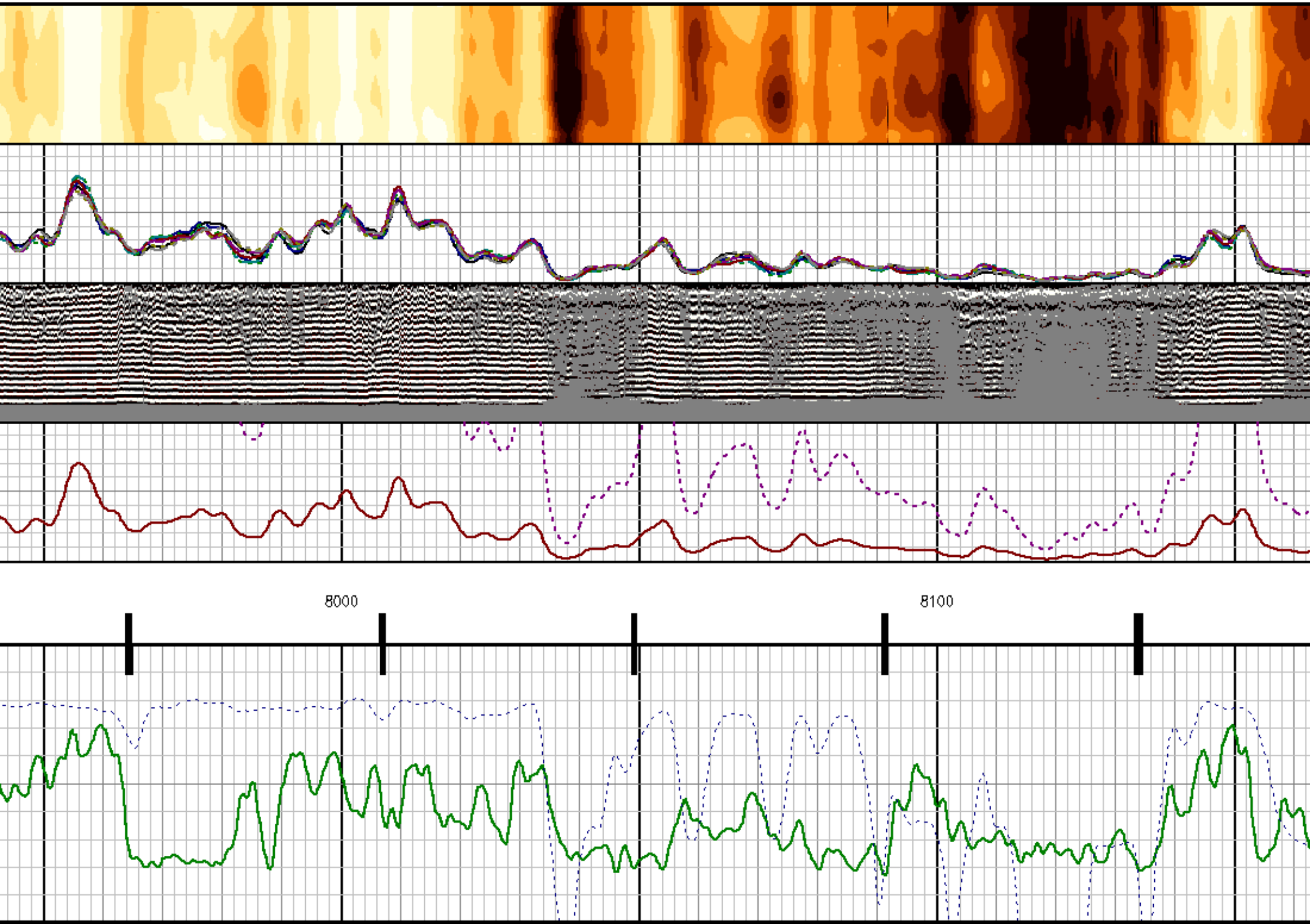
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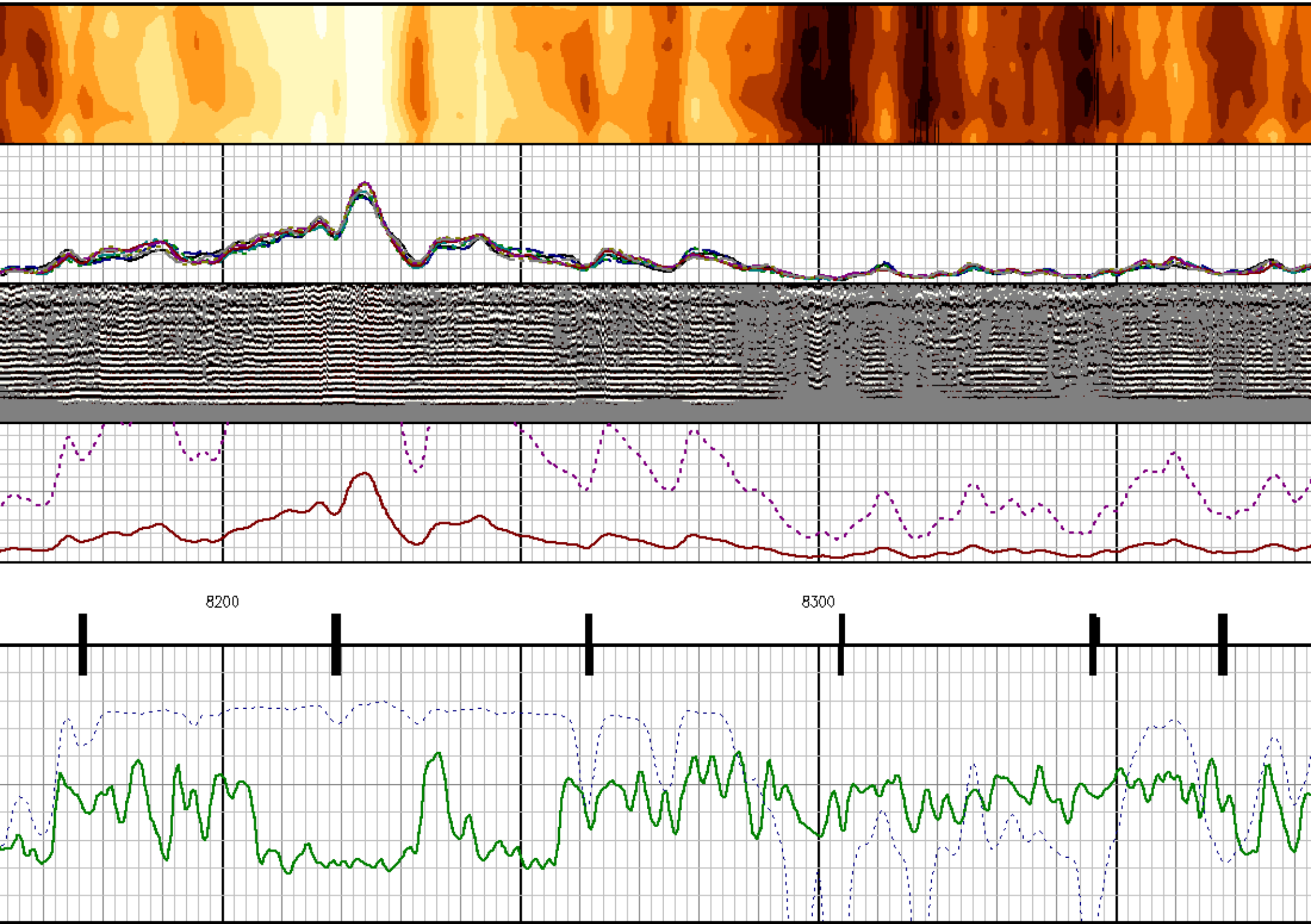
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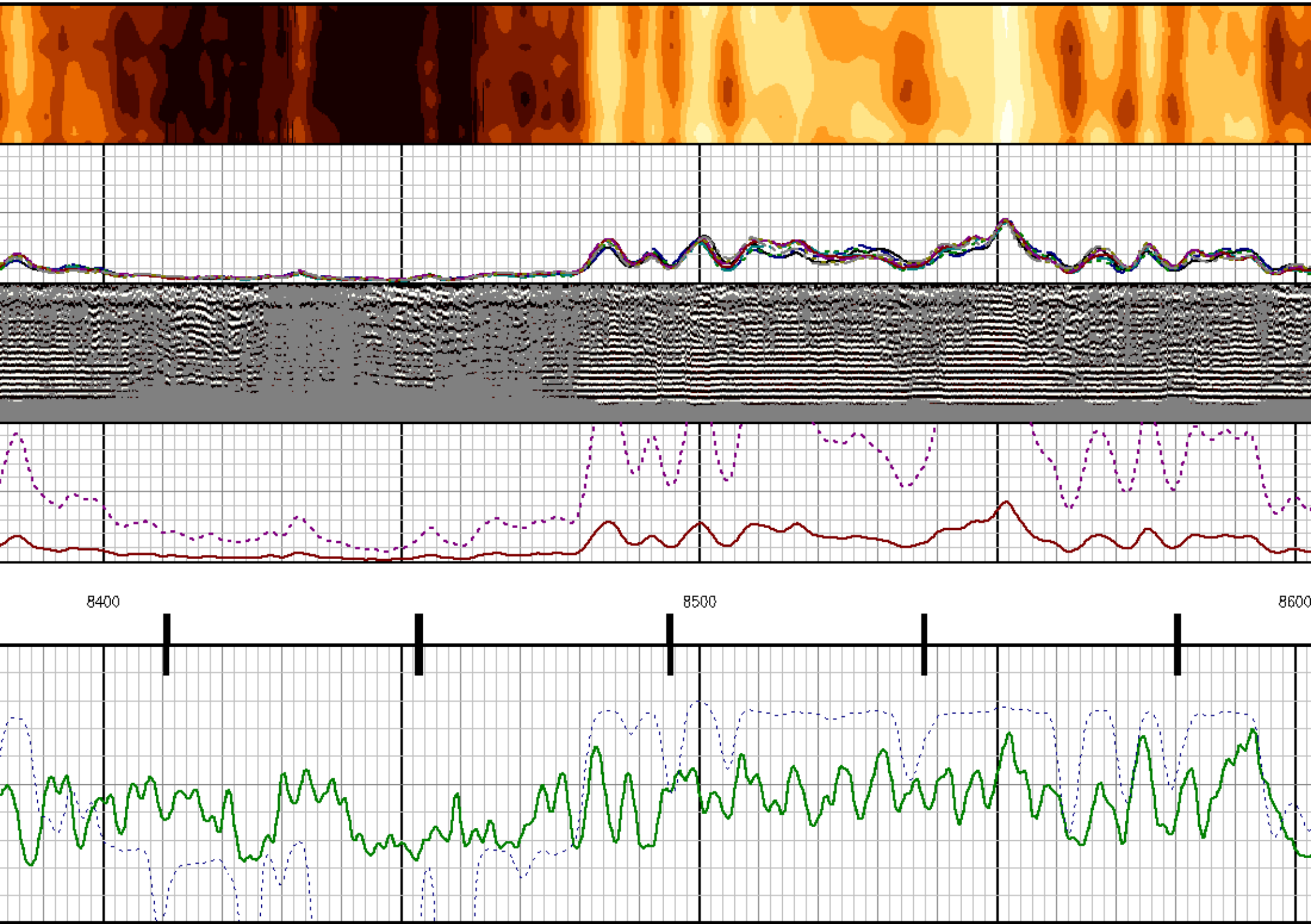
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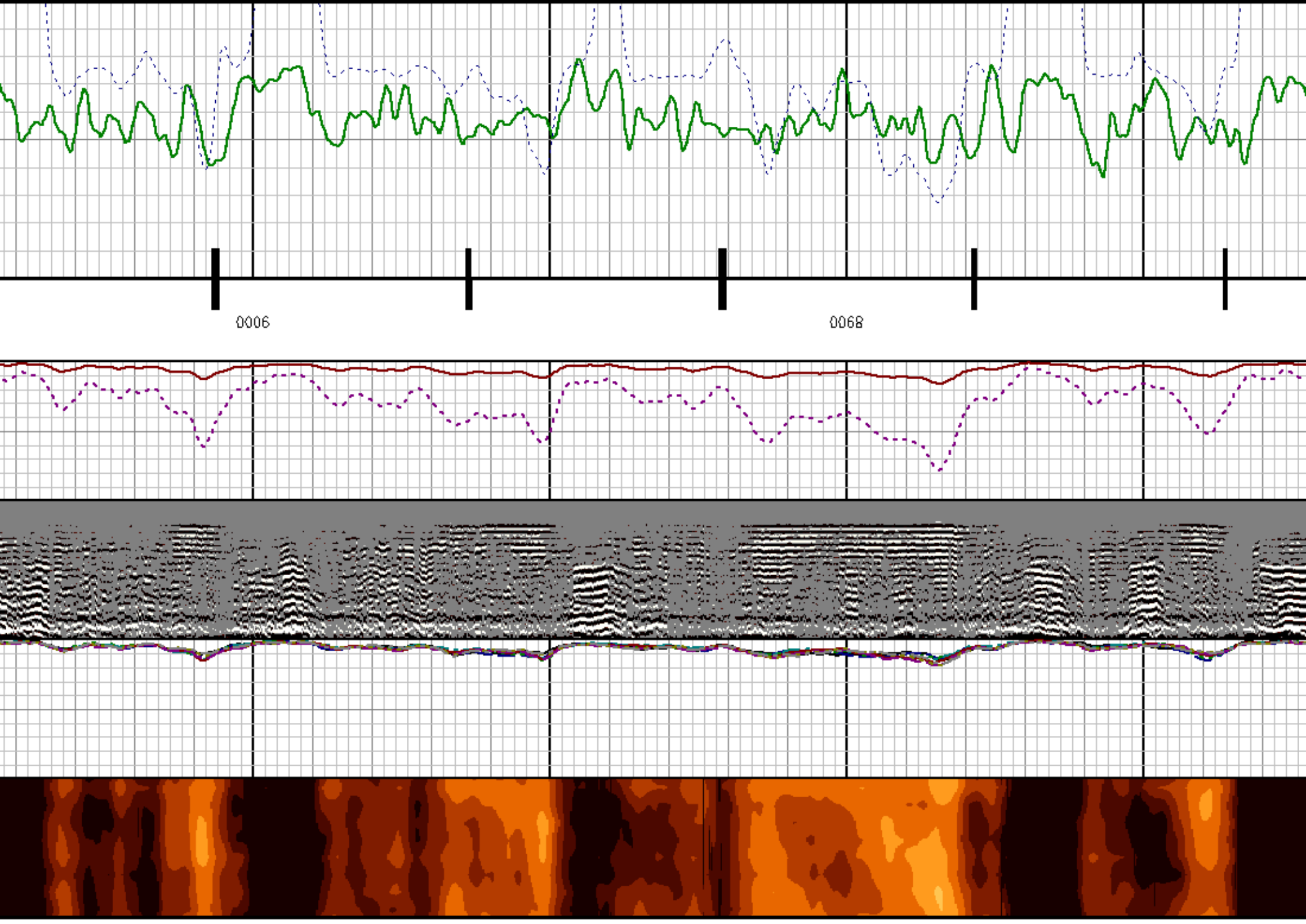
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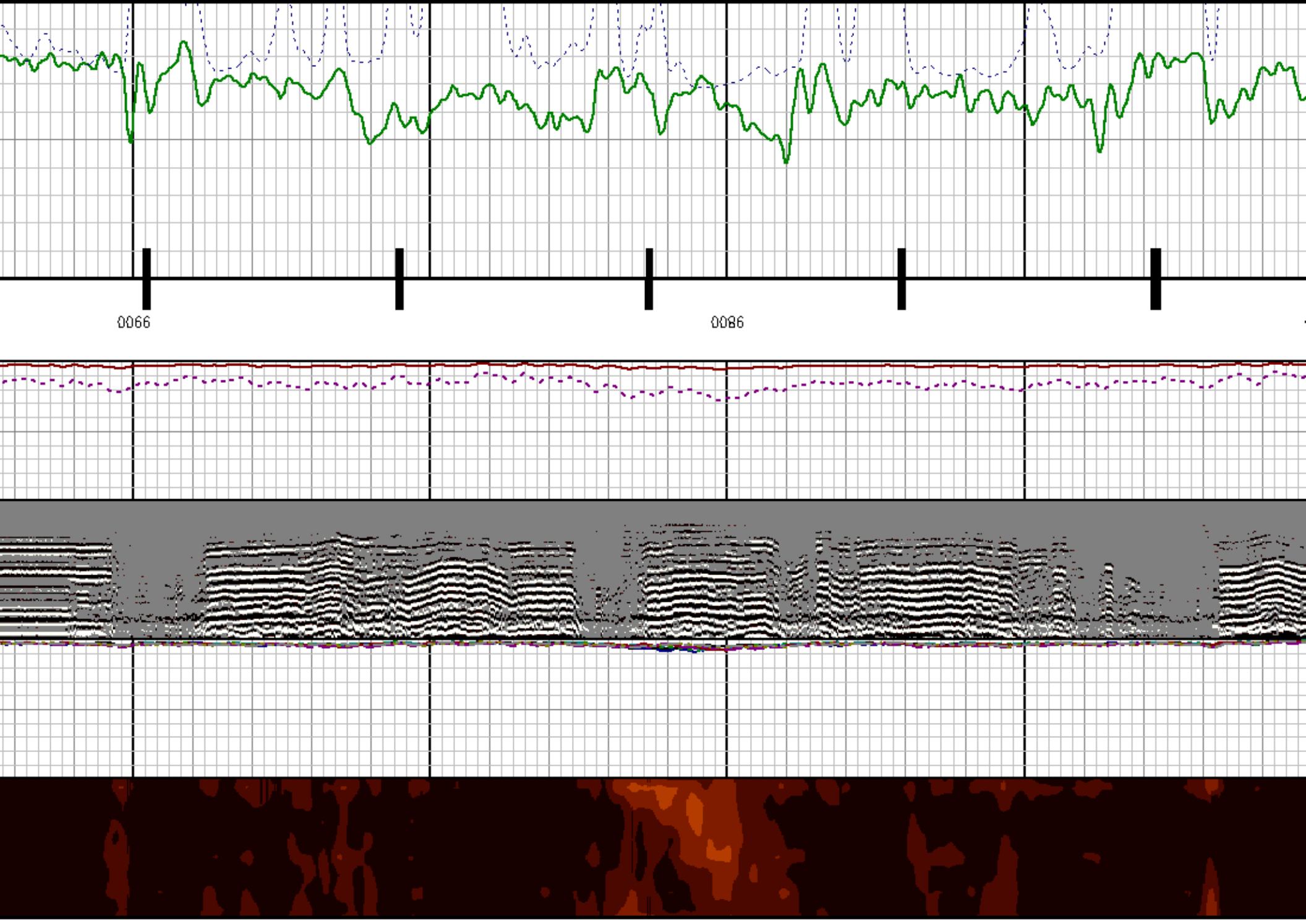
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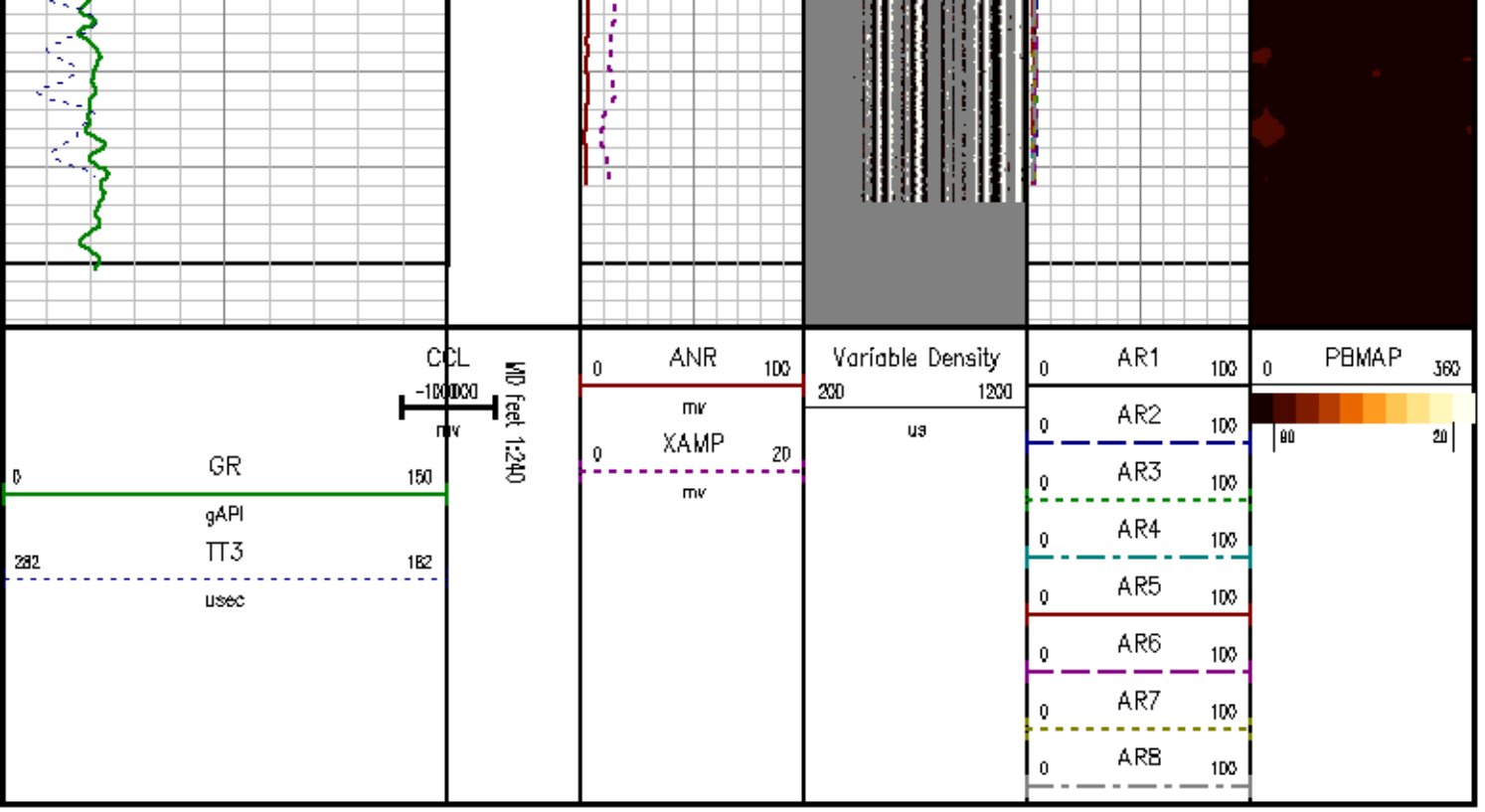


REPEAT SECTION

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	316.900	usec	9685.250	9984.000
RAL	Amp Gate Start Near	200.391	usec	9685.250	9984.000
RAL	Amp Gate Start Radial	200.391	usec	9685.250	9984.000
RAL	Amp Gate Width Far	25.000	usec	9685.250	9984.000
RAL	Amp Gate Width Near	25.000	usec	9685.250	9984.000
RAL	Amp Gate Width Radial	25.000	usec	9685.250	9984.000
RAL	casing od	4.500	inches	9685.250	9984.000
RAL	casing wt	11.600	lbm/ft	9685.250	9984.000
RAL	FB Start Far	291.900	usec	9685.250	9984.000
RAL	FB Start Near	175.391	usec	9685.250	9984.000
RAL	FB Start Radial	175.391	usec	9685.250	9984.000
RAL	FB Thresh Far	10.000	mv	9685.250	9984.000
RAL	FB Thresh Near	10.000	mv	9685.250	9984.000
RAL	FB Thresh Radial	10.000	mv	9685.250	9984.000
RAL	Fluid Travel Time	200.000	usec/ft	9685.250	9984.973

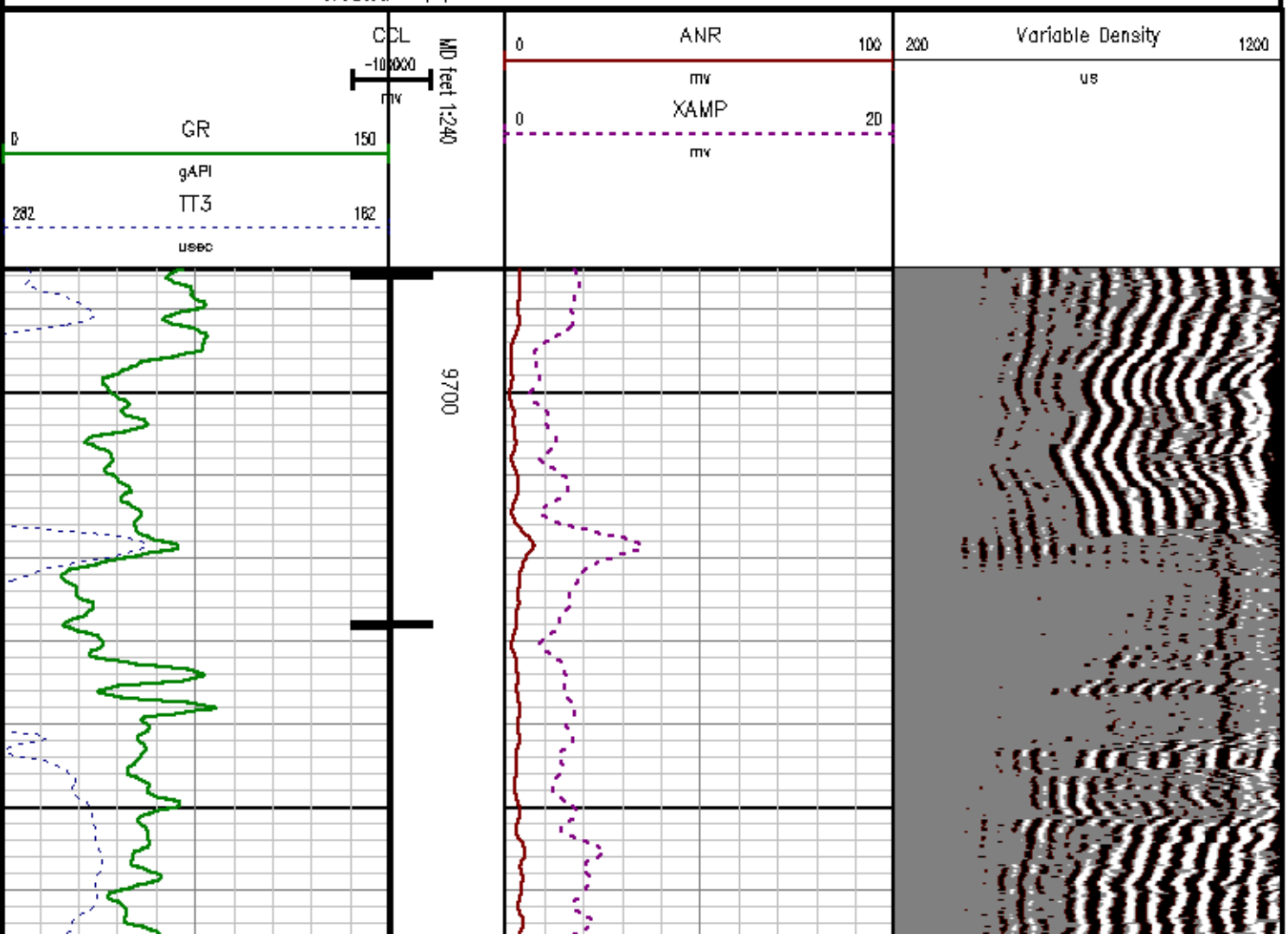
DEPTH OFFSETS

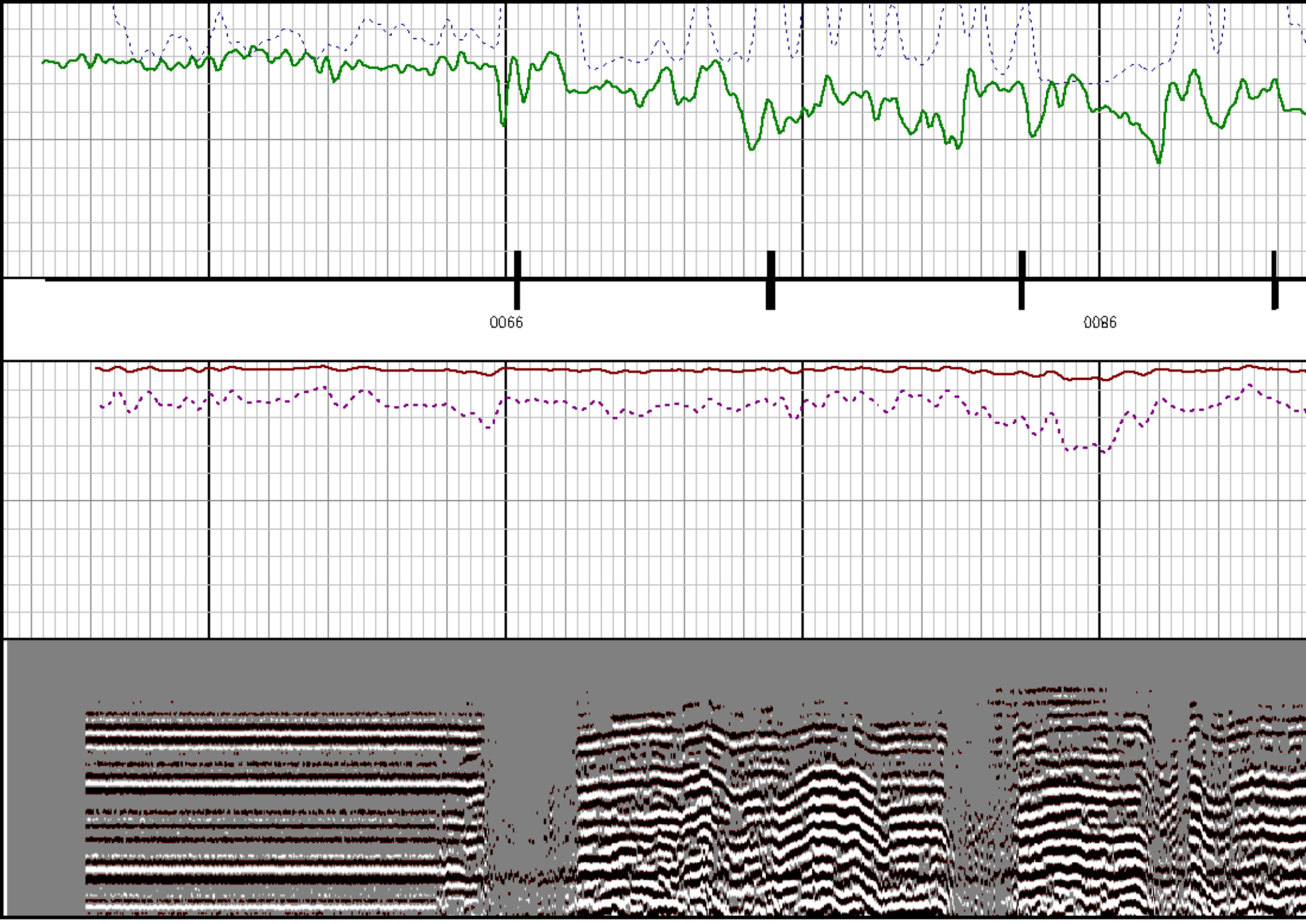
(for Acquired Curves)

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 : MARATHON OIL COMPANY
Well : 697-12A-21
File Name : d:\welldata\21rad\repeat1.xtf
Mode : PlotMgr 5.4.504
Interval : 9685.25 - 9985.00 feet UP
Created : 1/8/2009 5:34:02 AM

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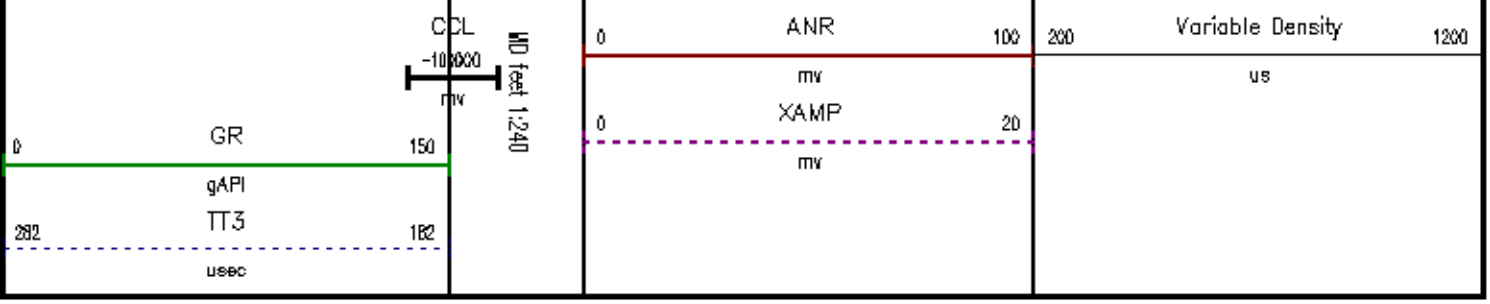


CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP\502J3 shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Jan 07 05:06:02 2009 TOOL SERIES: 1426XA ASSET: 502 SEQ: J3

Tool Delay [usec]	Tank OD in	Tank Wt lbm/ft	Tank ID in
-54.00	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	222	216	30	166	25	-0.406	100.00	0.13
3 Ft. Receiver	221	216	30	166	25	7.099	100.00	0.13
5 Ft. Receiver	329	332	30	282	25	-22.249	150.00	0.13
Radial #1	220	216	30	166	25	4.827	100.00	0.13
Radial #2	222	216	30	166	25	5.525	100.00	0.13
Radial #3	221	216	30	166	25	1.962	100.00	0.13
Radial #4	220	216	30	166	25	10.042	100.00	0.13
Radial #5	216	216	30	166	25	3.958	100.00	0.13
Radial #6	218	216	30	166	25	0.085	100.00	0.13
Radial #7	220	216	30	166	25	-1.299	100.00	0.13
Radial #8	223	216	30	166	25	-0.762	100.00	0.13

GAMMA RAY #2

Calibration File: C:\case\calver\GR\10218510J2.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Mon Jan 05 19:46:53 2009 TOOL SERIES: 1426XA ASSET: 10218510 SEQ: J2

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K DA857	114.22	493.64	0.264	30.10	130.10	100.00

Verification File: C:\cass\calver\GR\10218510J2.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Mon Jan 05 19:47:56 2009 TOOL SERIES: 1426XA ASSET: 10218510 SEQ: J2

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K DA857	111.56	469.78	0.264	29.40	123.81	94.41

TOOL DIAGRAM

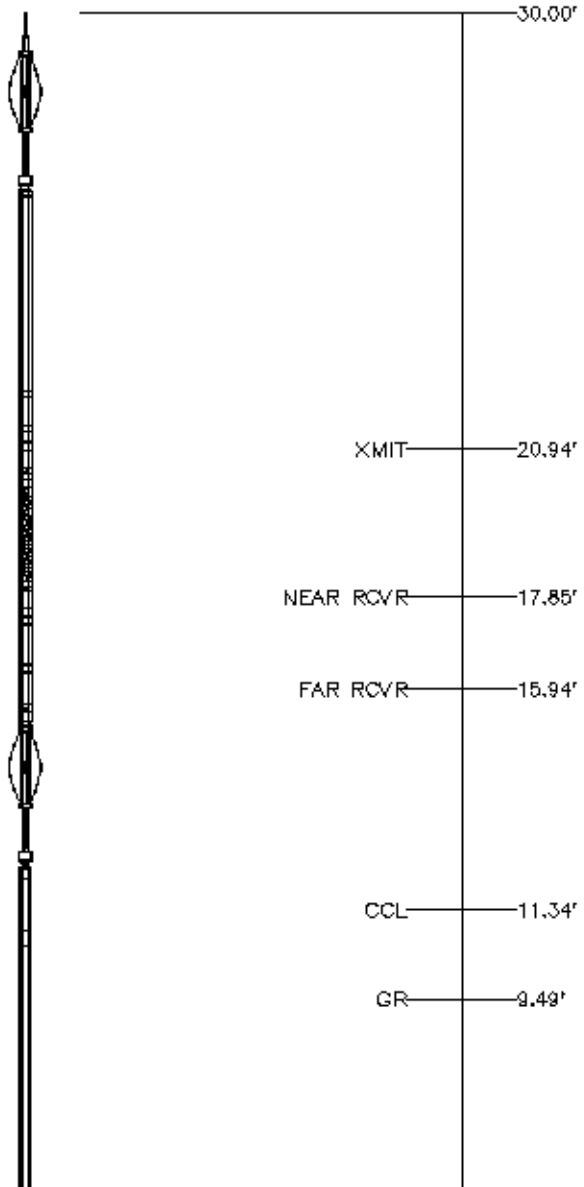
OTA SHORT CABLE HEAD

CENTRALIZER	
Series	RALCENT
Mnemonic	CENT
Diameter	3.12"
Weight	20.00 lb

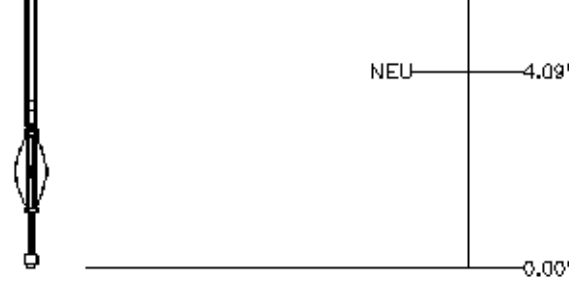
PROBE 2 3/4 DUAL RECEIVER RADII (1426XA)

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: 30.00'
Total Weight: Not Available
Max Diameter: 0' 3.12"

BAKER HUGHES

Baker Atlas

CASE

Company	MARATHON OIL COMPANY		File No: 1715
Well	697-12A-21		API No: 05-045-15036-00
Field	GRAND VALLEY		
County	GARFIELD	State COLORADO	

Location

SHL: 1491' FNL & 1854' FEL

SEC 12 TWP 6S RGE 97W

Elevations

KB 8322 ft
DF 8321 ft
GL 8300 ft