RADIAL SECTOR BOND LOG WITH GAMMA RAY

PIONEER

Pioneer Energy Services

CompanyANADARKO PETROLEUM

Well MULGA 28C-23HZ

Field WATTENBERG

County WELD State CO

Company **ANADARKO PETROLEUM**

Well **MULGA 28C-23HZ**

Field **WATTENBERG**

County **WELD** State **CO**

Location: API # : 05123392550000

SHL: 275' FSL & 2237' FWL
SESW

SEC 23 TWP 2N RGE 67W

Other Services

JBGR
Caliper

Permanent Datum	GL	Elevation	4947
Log Measured From	KB		
Drilling Measured From	KB		

Elevation	
K.B.	4972
D.F.	4972
G.L.	4947

Date of Service	AUGUST 15, 2014		
Run Number	ONE		
Depth Driller or PBTD	12534		
Depth Logger	6855		
Bottom Log Interval	6855		
Top Log Interval	SURFACE		
Open Hole Size	8+7/8"		
Type Fluid	WATER		
Fluid Level	SURFACE		
Fluid Density	8.33		
Max. Recorded Temperature	NA		
Max. Wellhead Pressure	2500		
Wellhead Connection	10K WELL HEAD		
Estimated Cement Top	49		
Unit Number	75		
Wireline Size	9/32"		
Location	FT MORGAN, CO		
Recorded By	LEROY HOBBS		
Witnessed By	MR. TREVOR DANIELS		

	Size	Wt/Ft	Top	Bottom
Tubing Record				
Surface Casing	9+5/8"	36#	SURFACE	1224
Production Casing	7"	26#	SURFACE	7944
Liner Record	4+1/2"	11.6#	6820	12527

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Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

THANK YOU FOR USING PIONEER Energy SERVICES

Your Pioneer Energy Services Crew	Tool Data - Services	Serial Number
Engineer: HOBBS	Sector CBL	
Operator: Geno		
Operator: Igor		
Operator:		

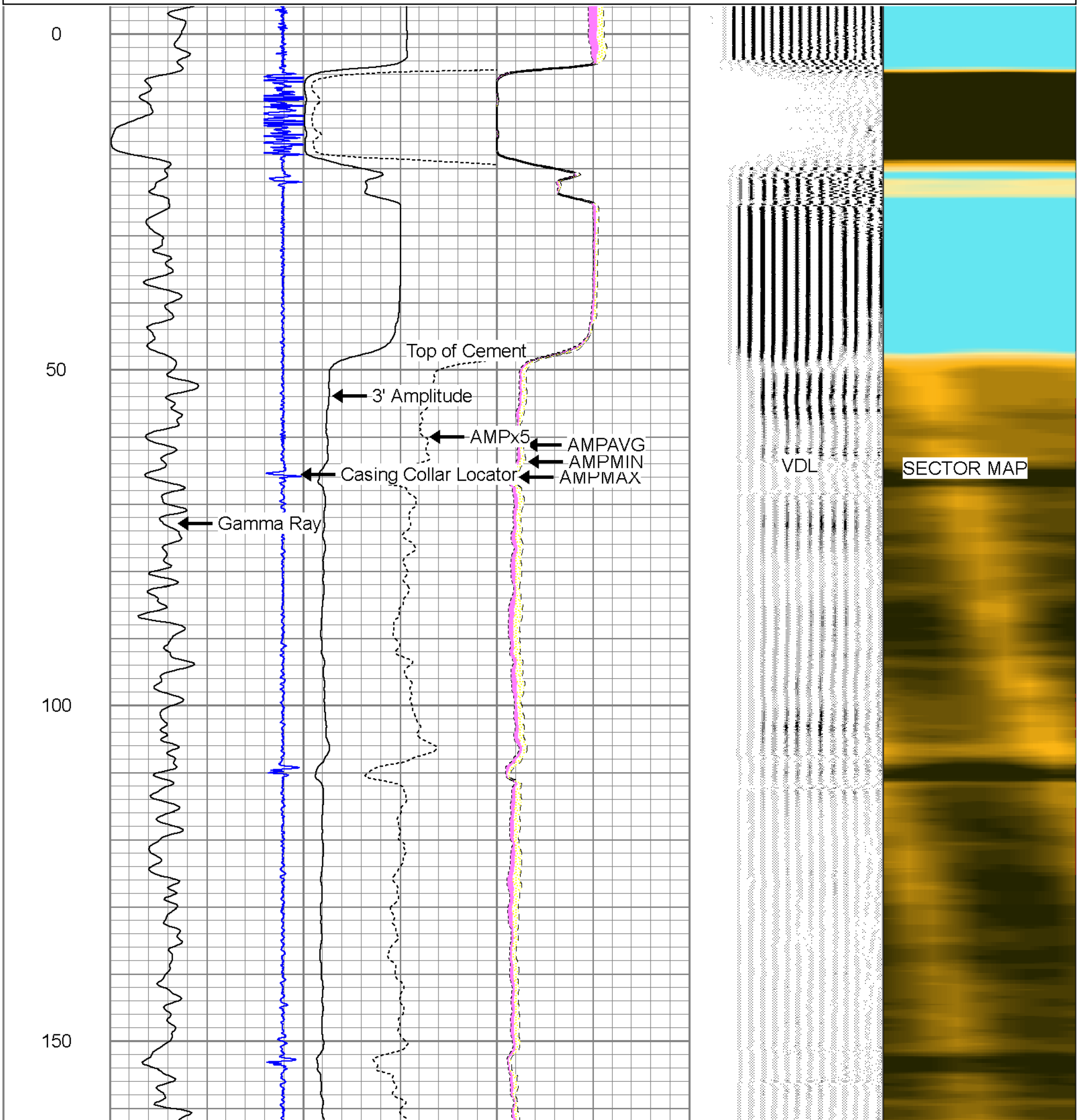
MULGA 28C-23HZ

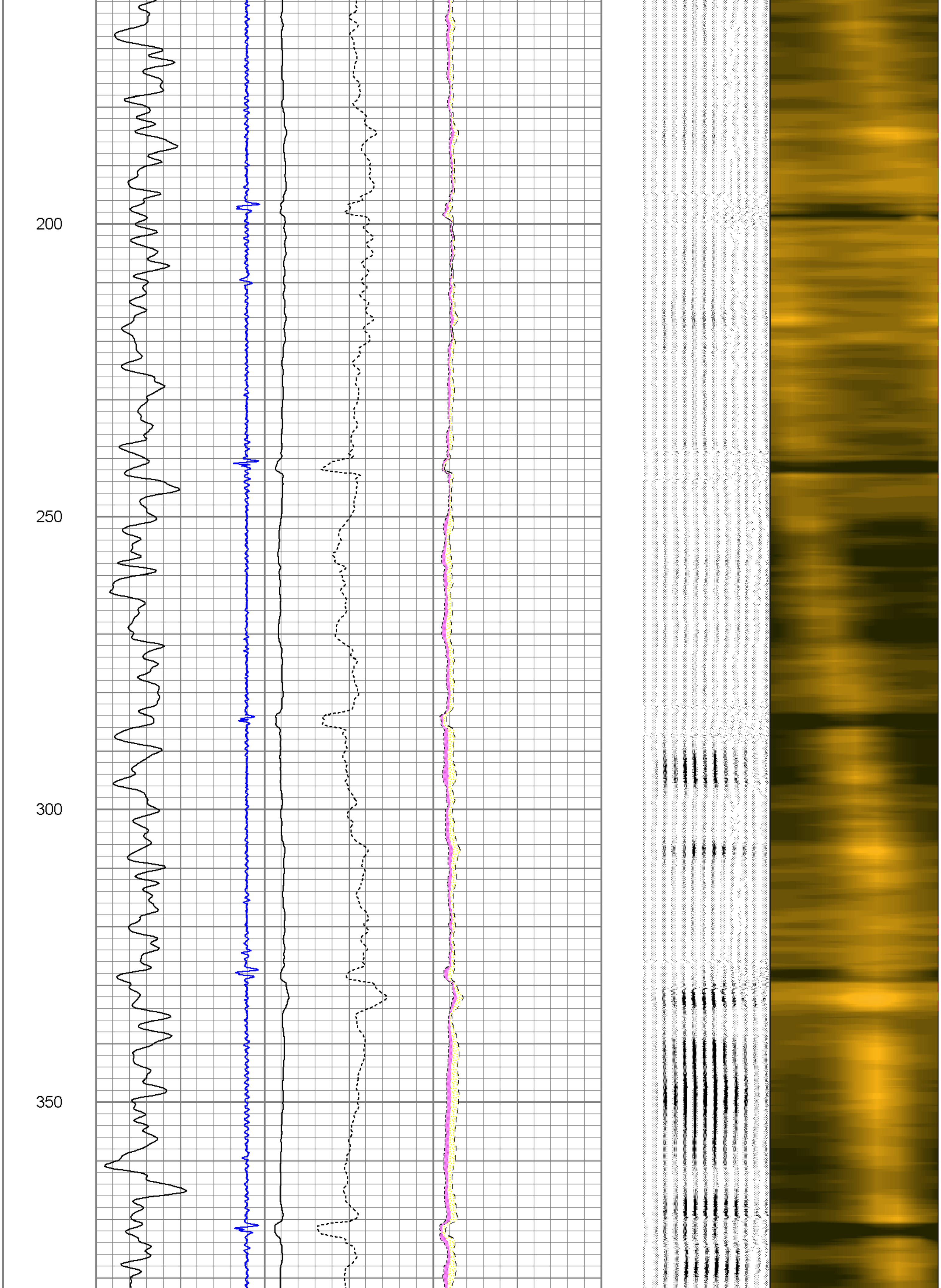
LOGGED UNDER 2800 PSI

Pioneer Energy Services

Database File:	mulga_28c-23hz_0512339255.db
Dataset Pathname:	pass1
Presentation Format:	scbl02
Dataset Creation:	Fri Aug 15 13:09:16 2014 by Log 7.0 B1
Charted by:	Depth in Feet scaled 1:240

-9 CCL 1	3' Amplitude	0 AMPAVG 150	200 VDL 1200	1 SECTOR MAP 8
Gamma Ray	0 (mV) 100	0 AMPMAX 150		10 60
0 (GAPI) 200	0 AMPx5 (mV) 20	0 AMPMIN 150		

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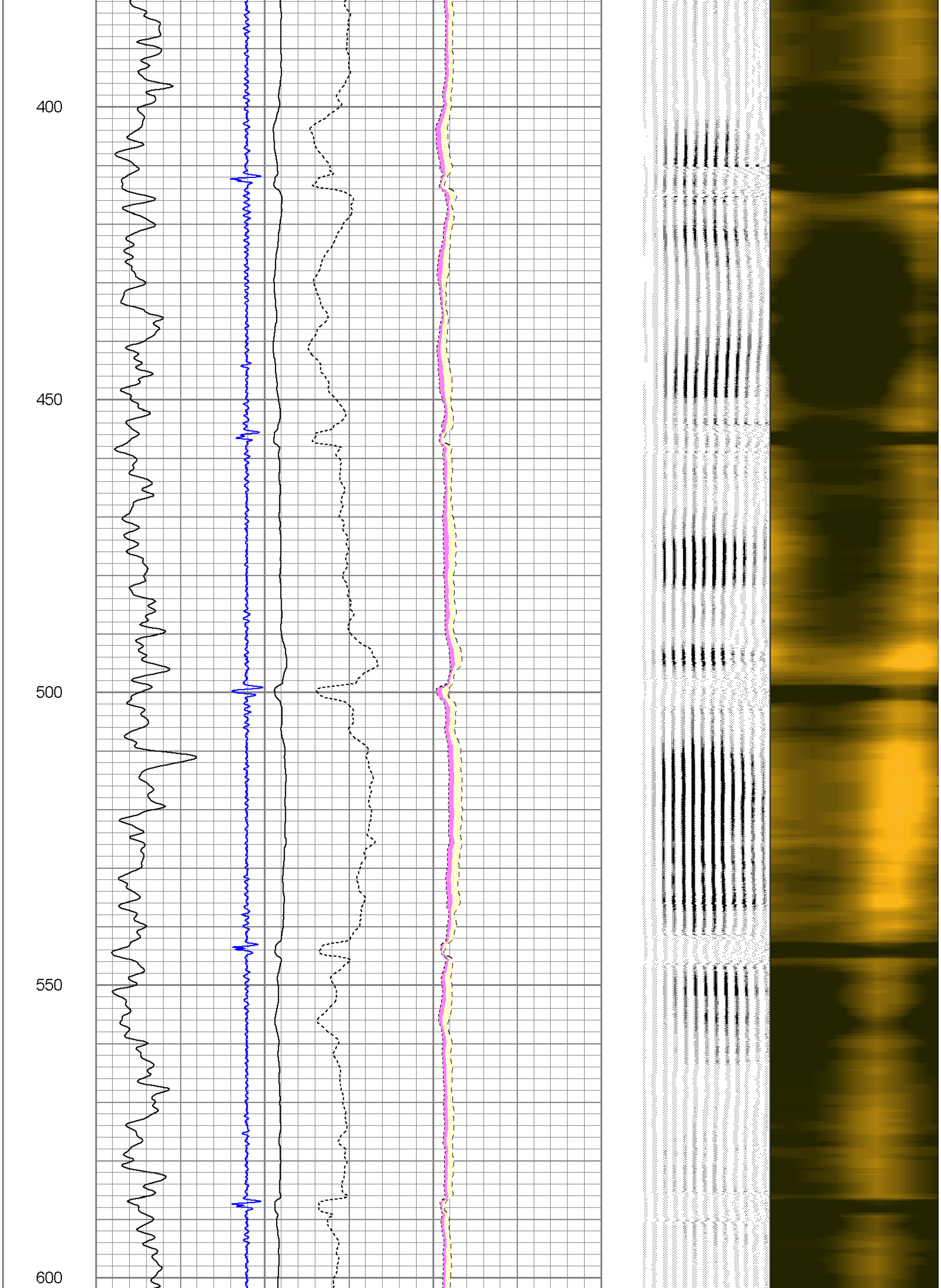

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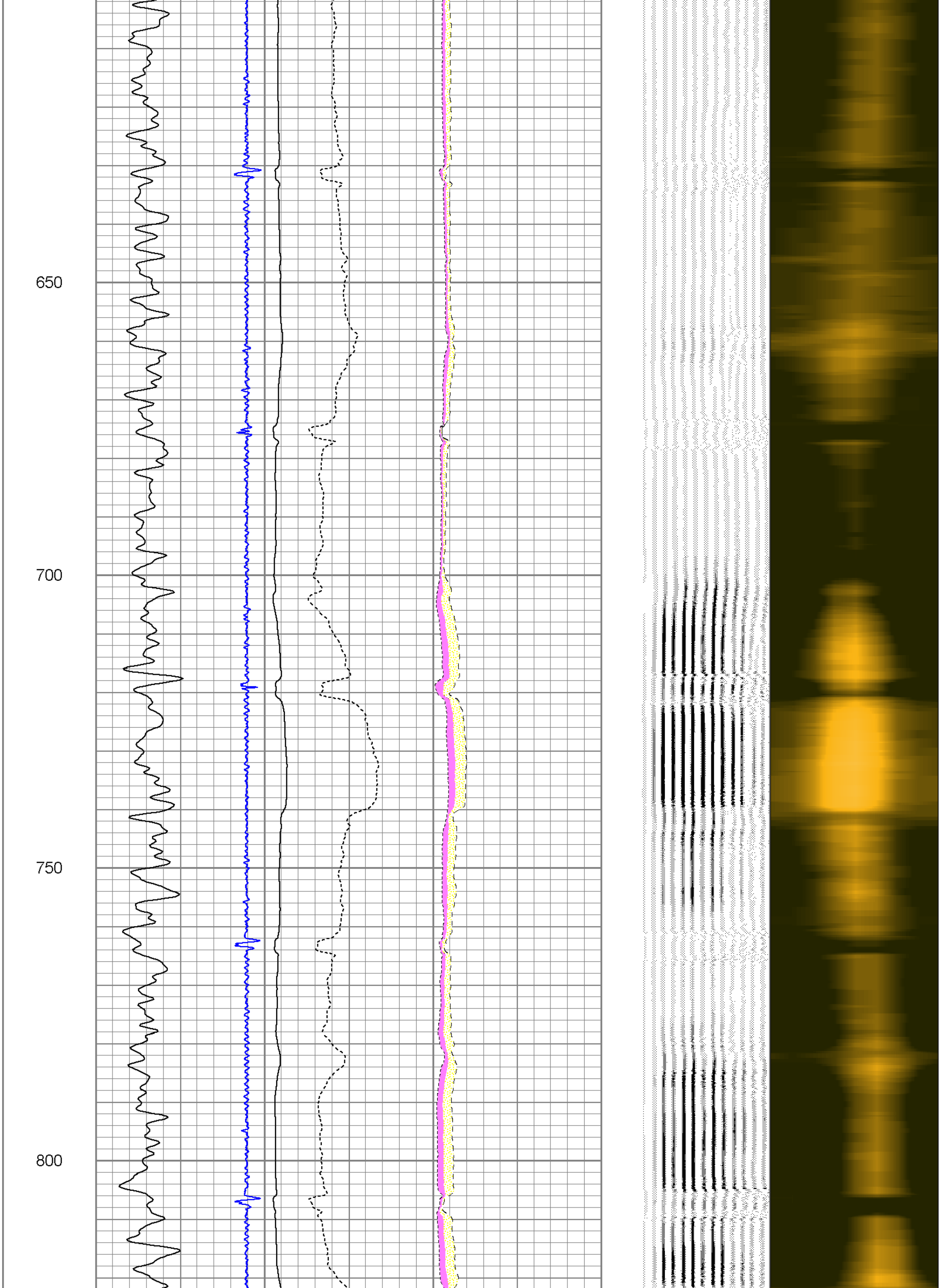
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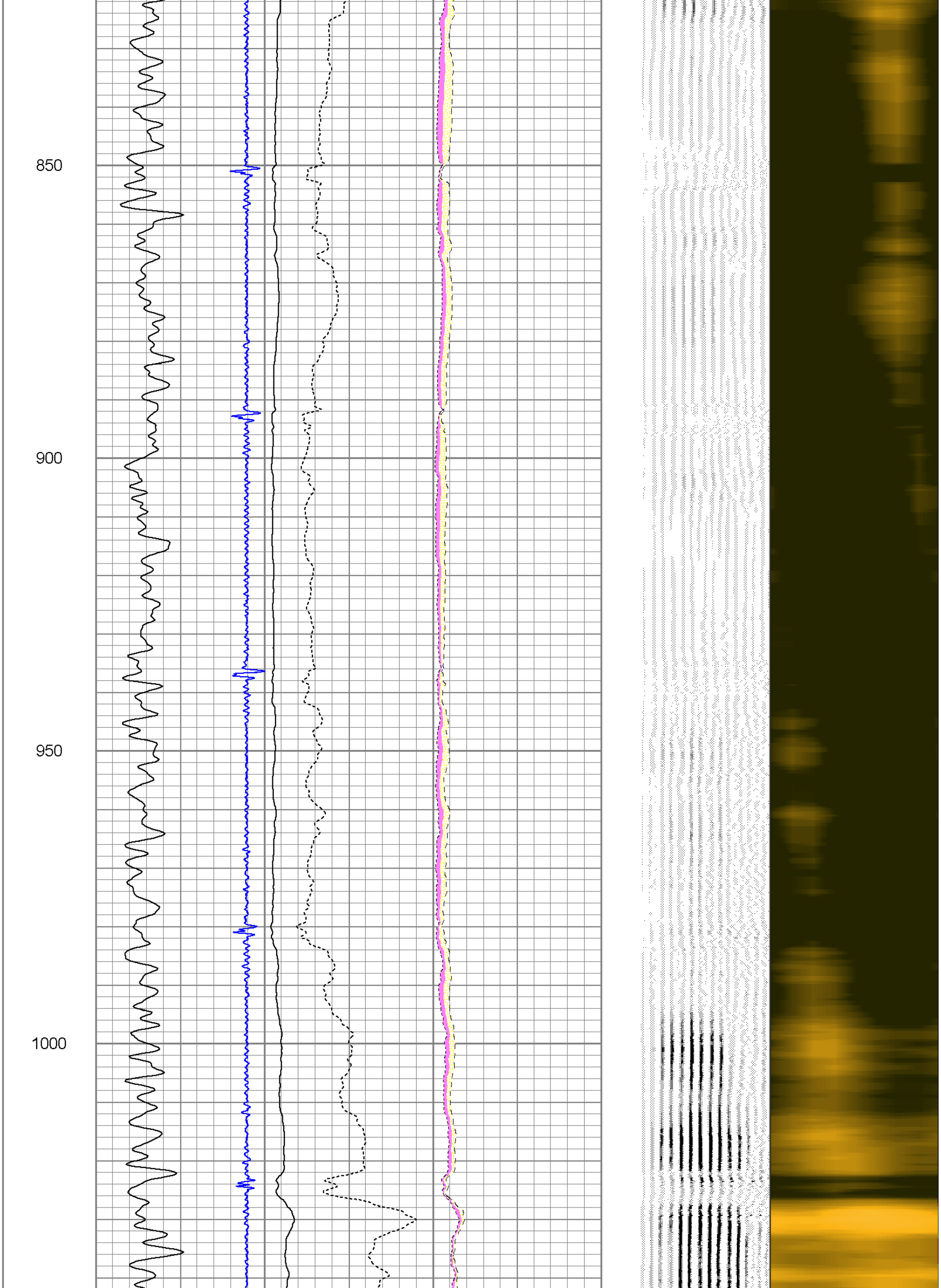

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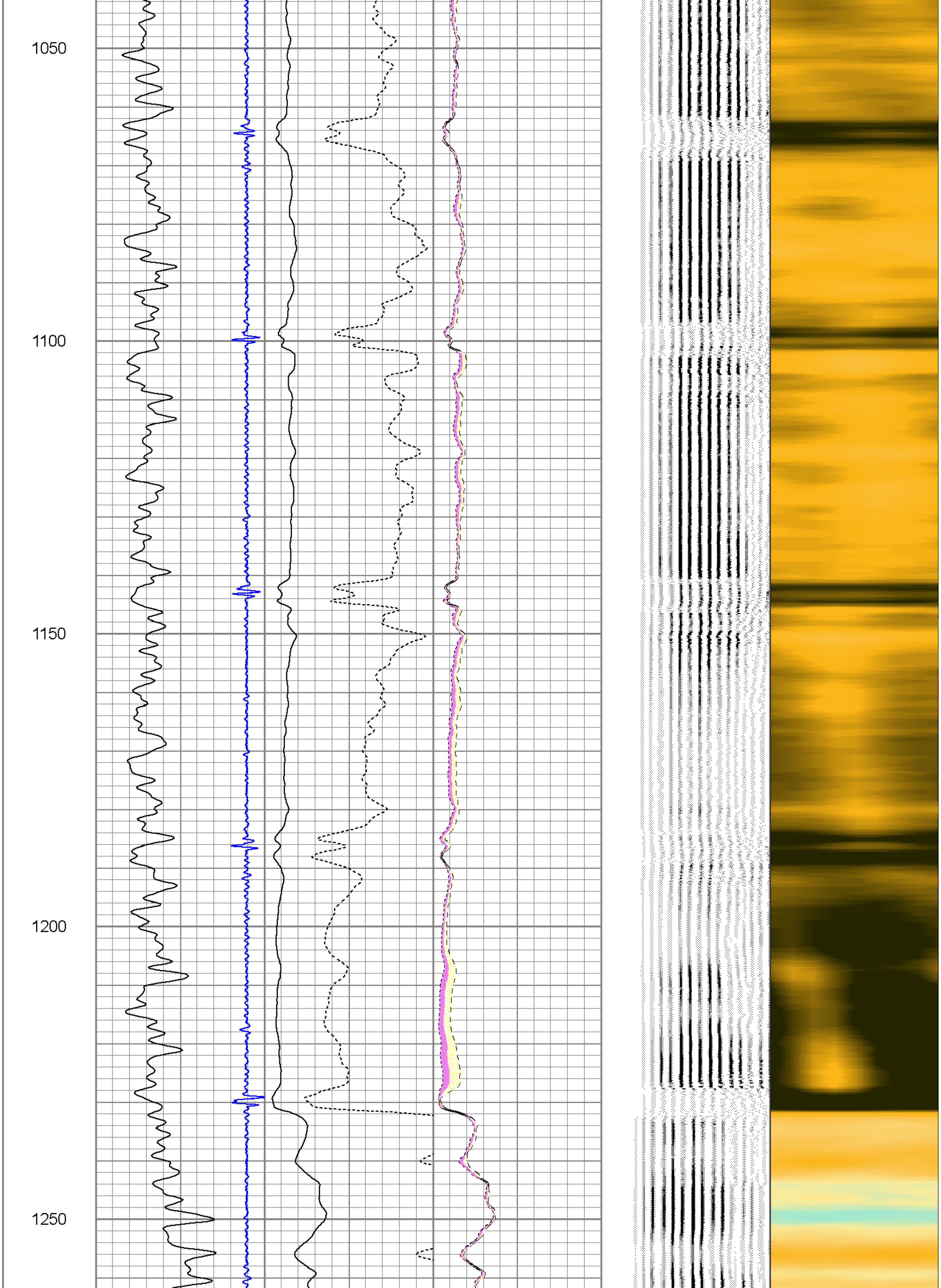
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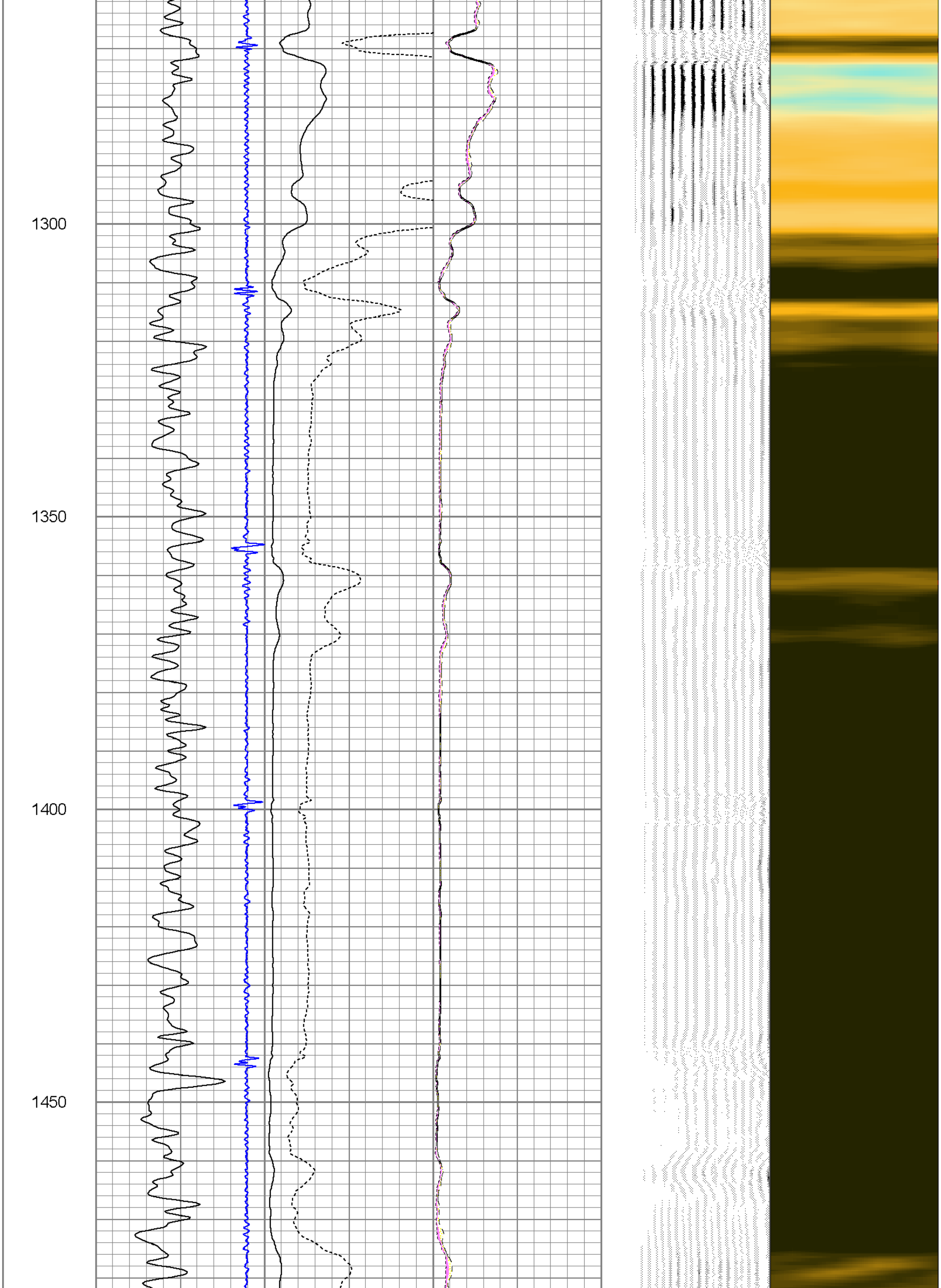
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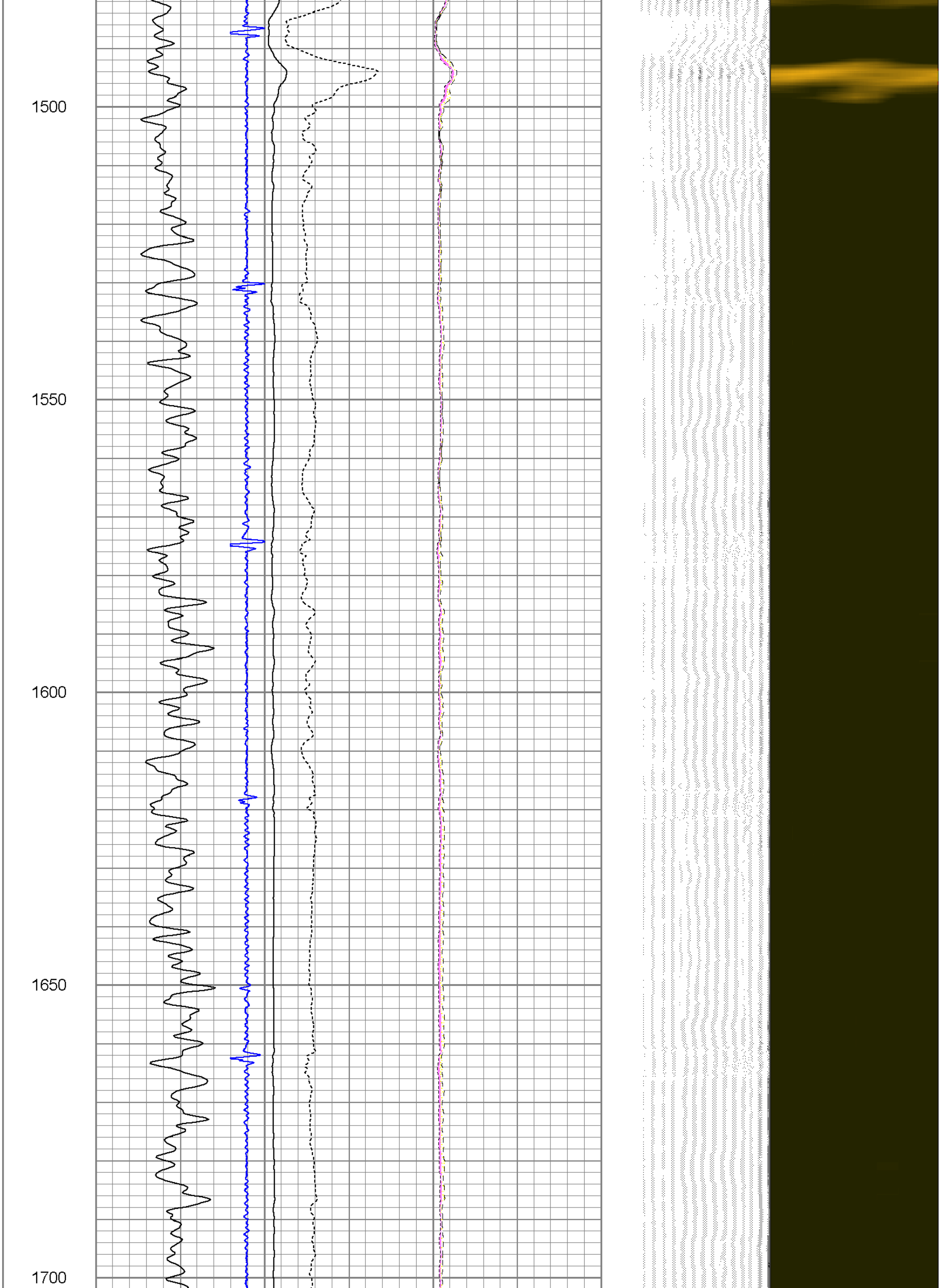
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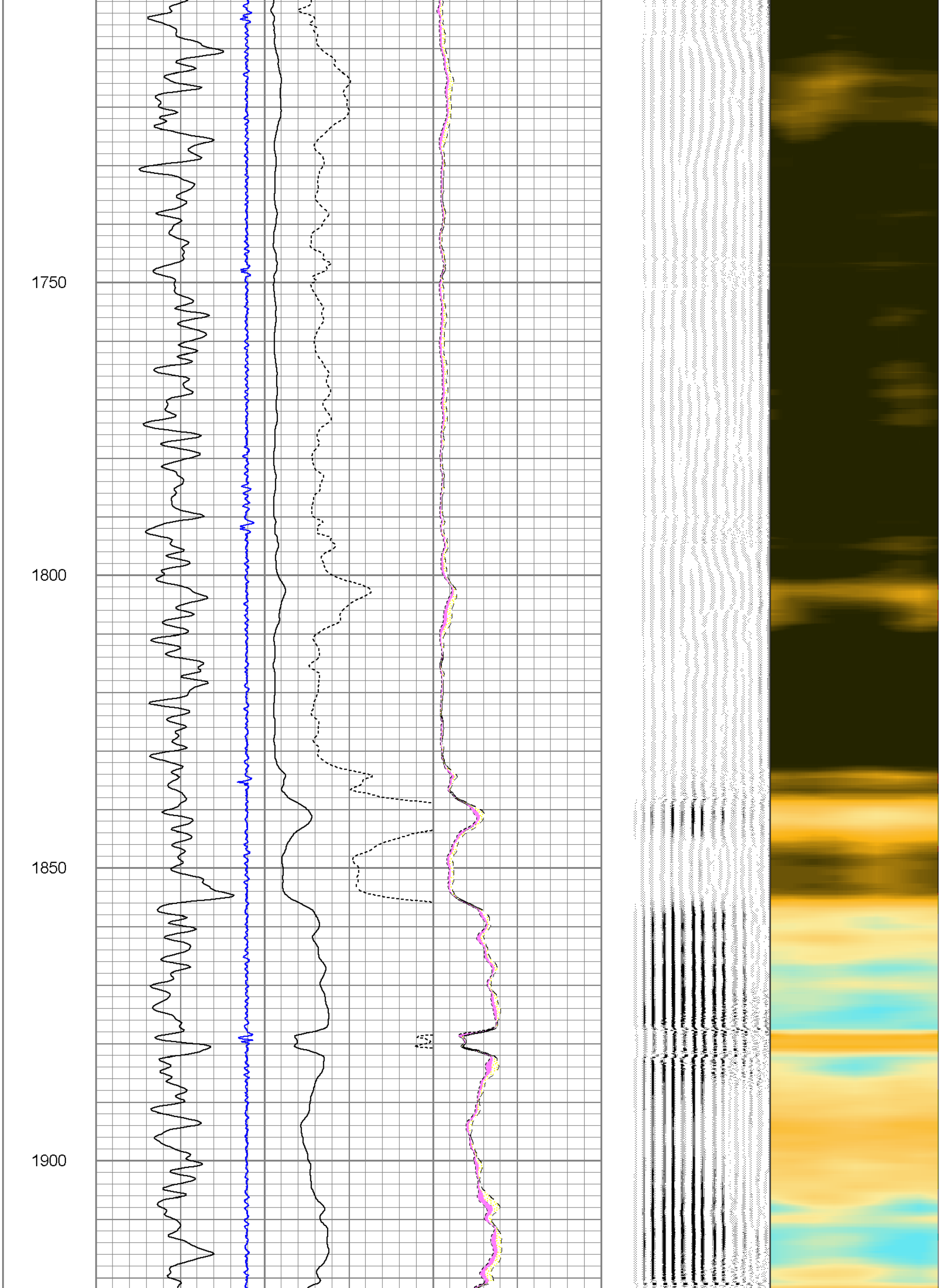
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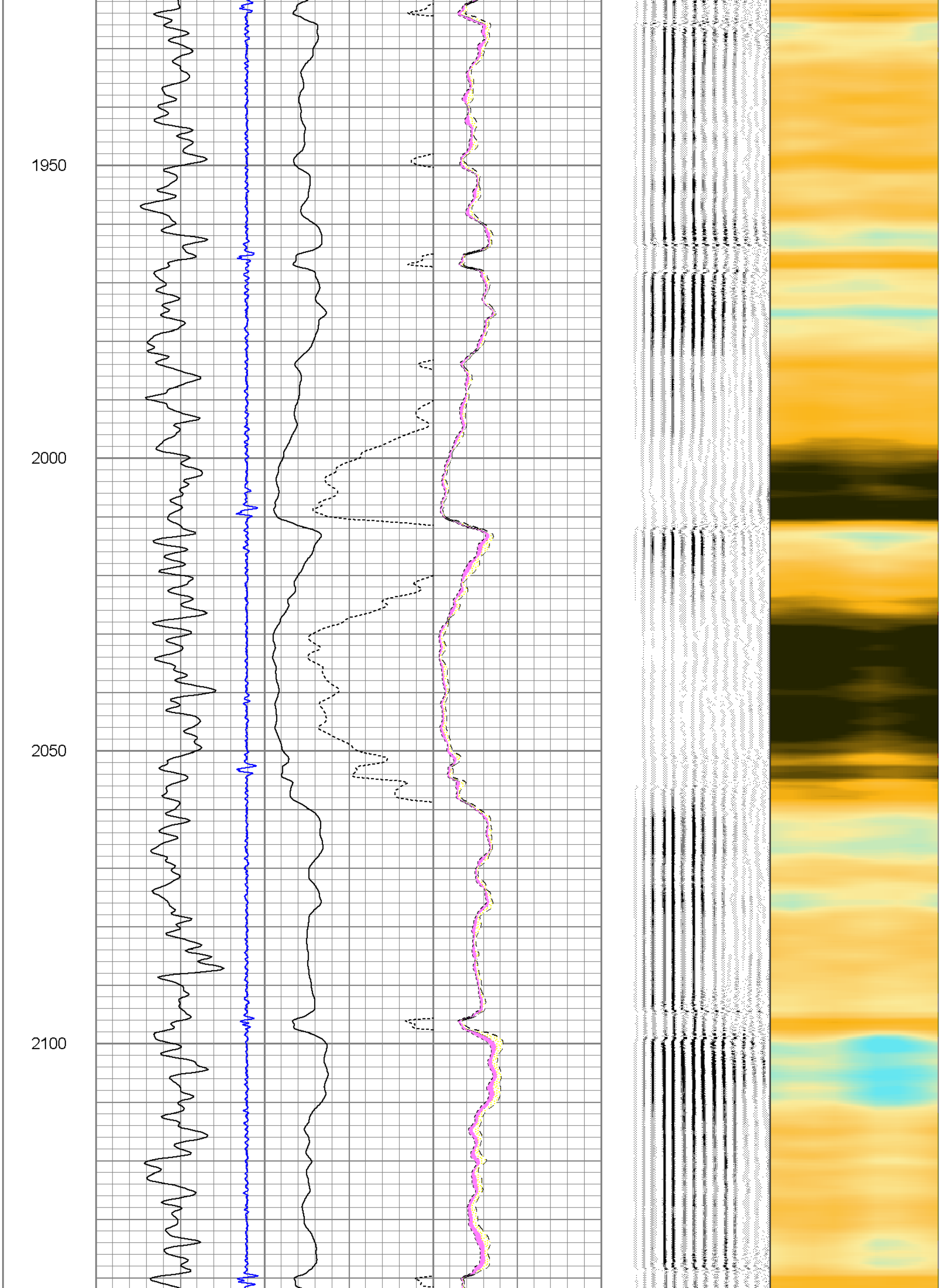
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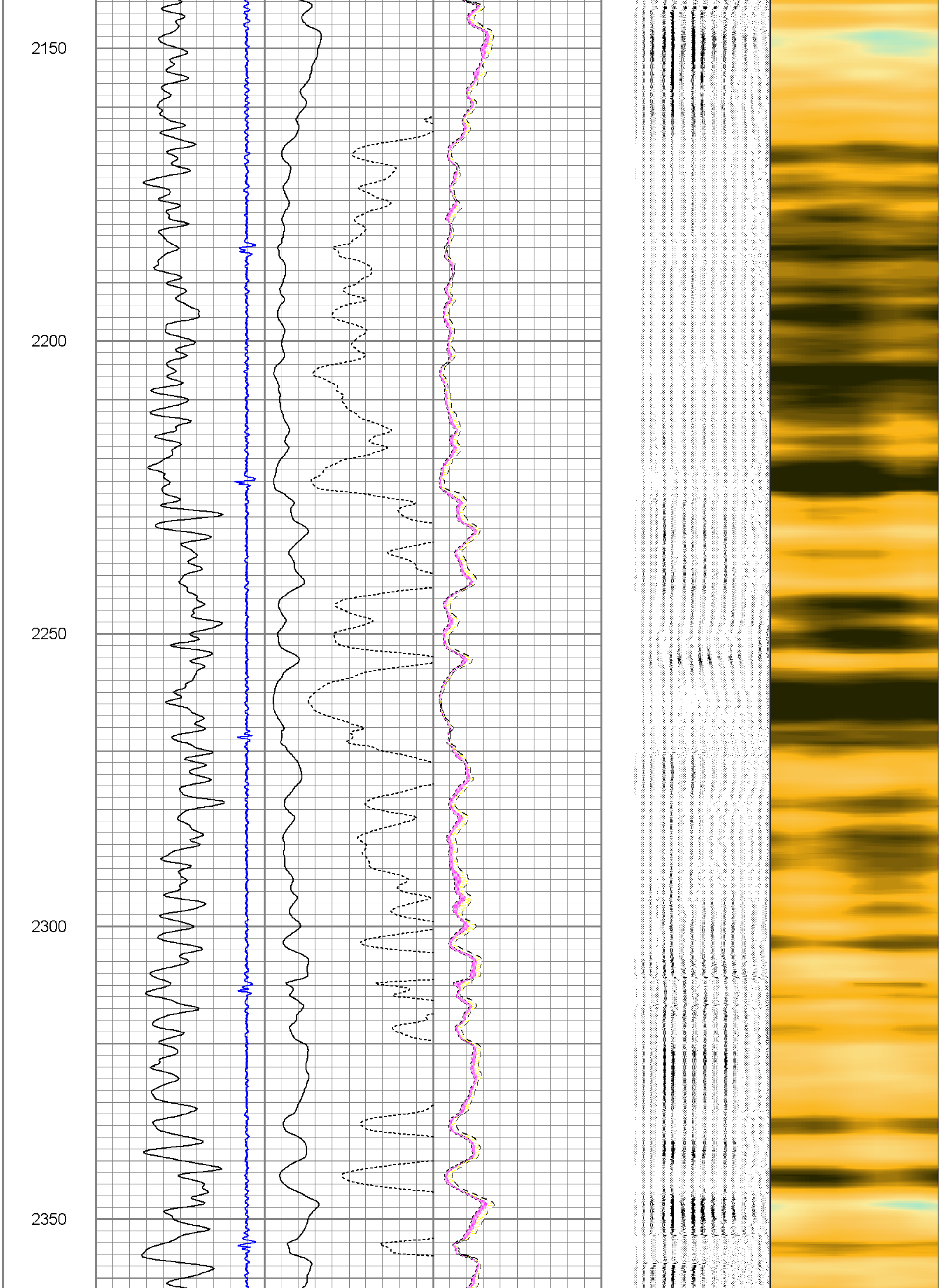
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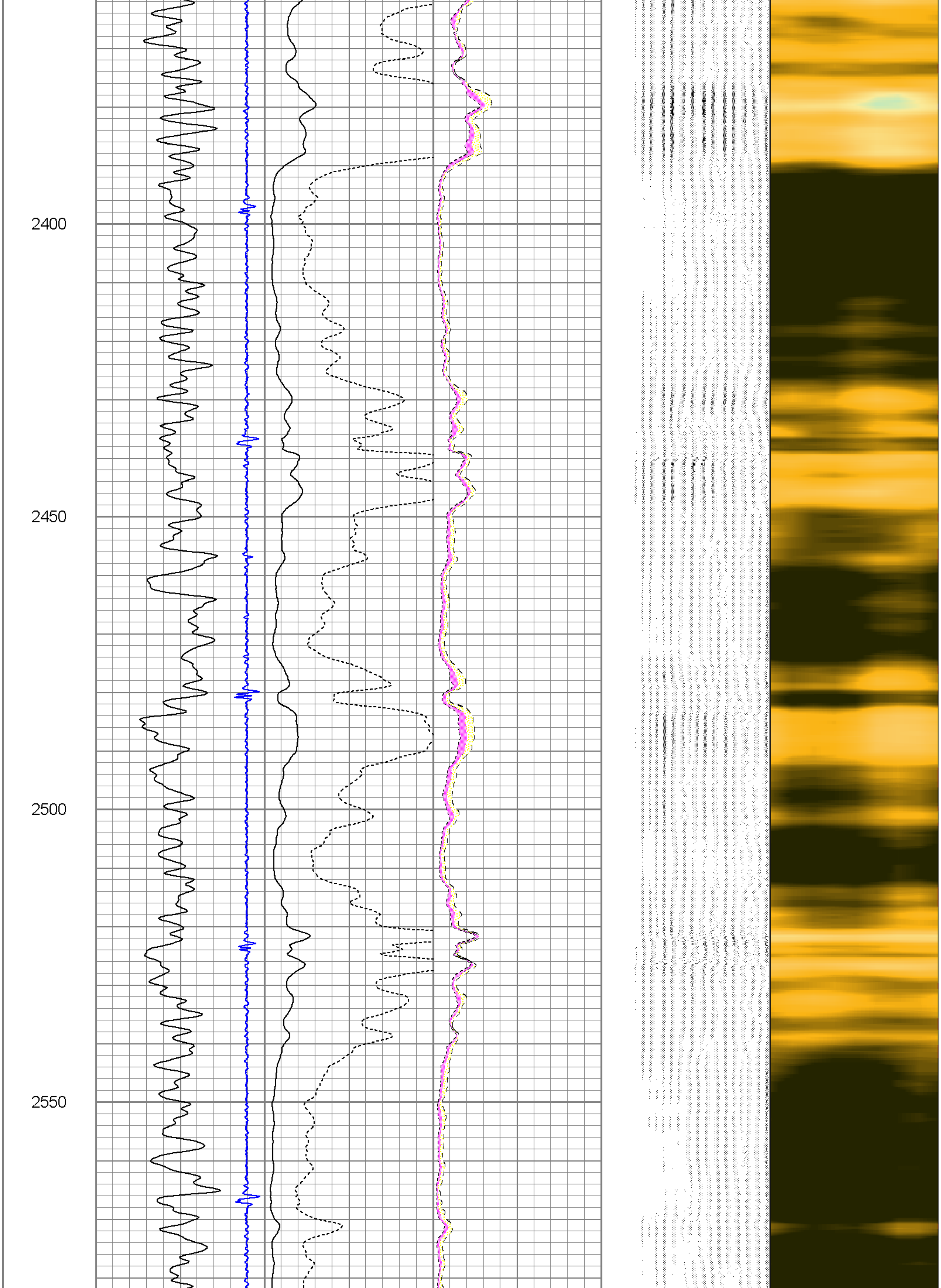

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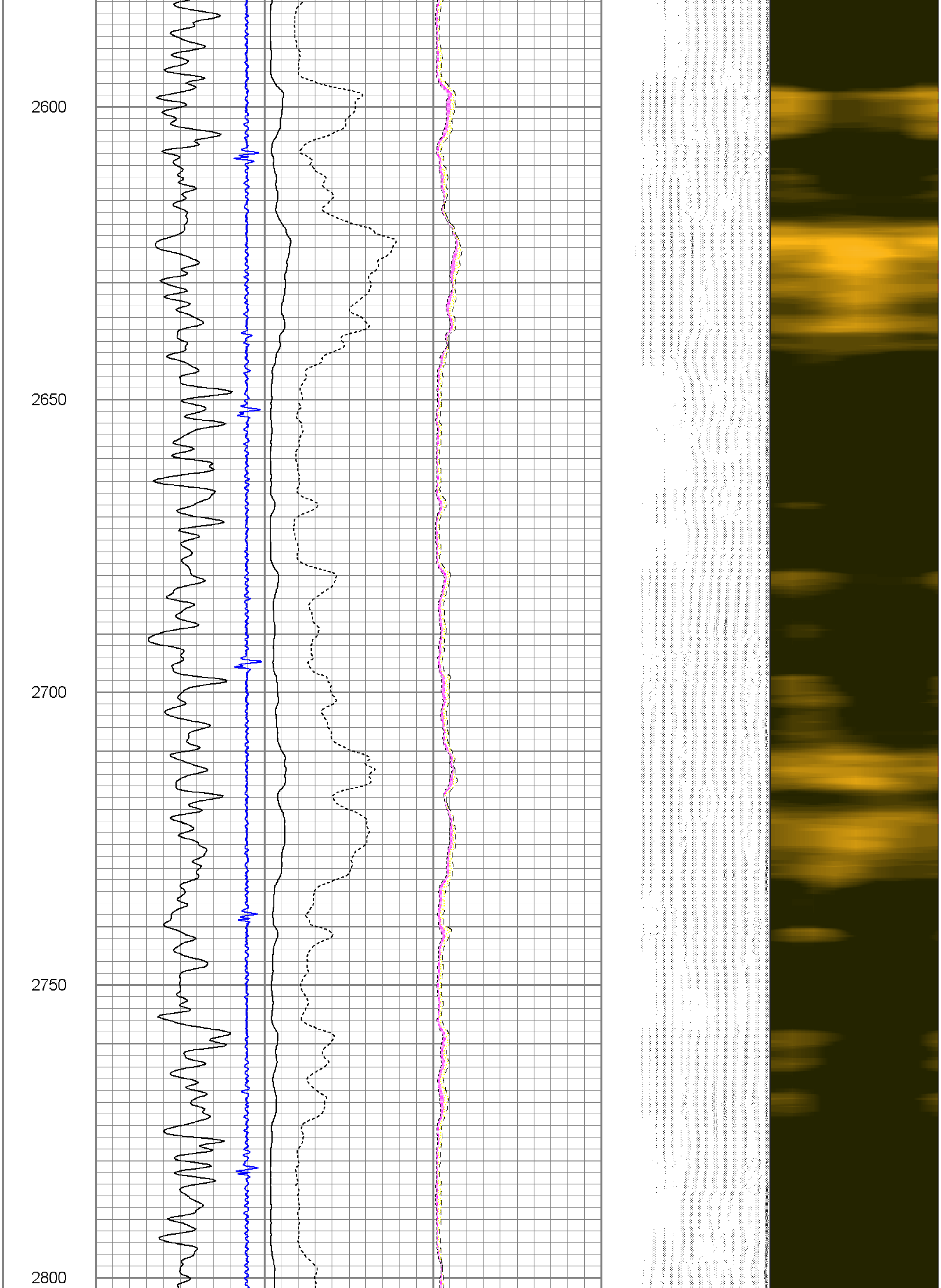
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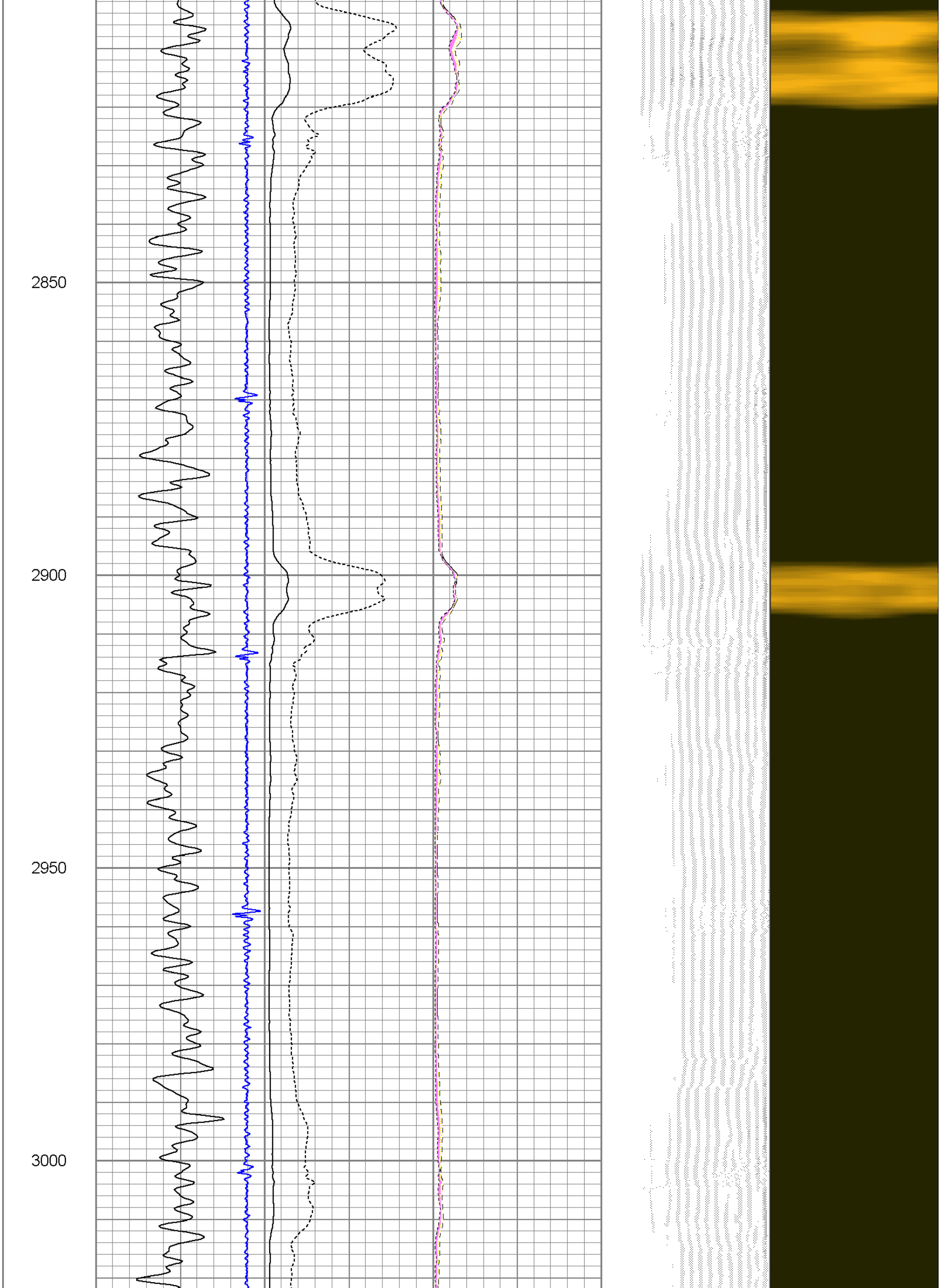
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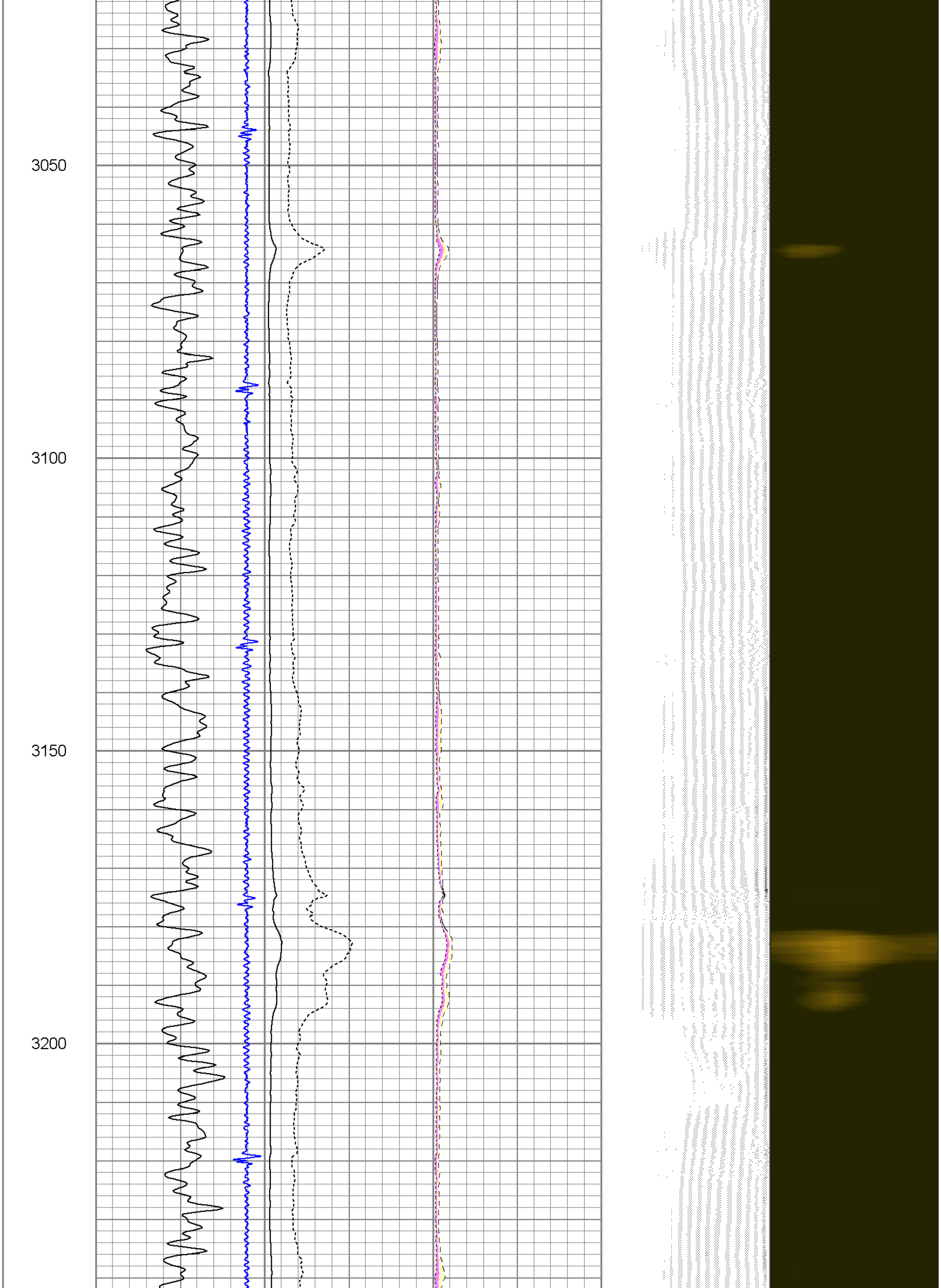
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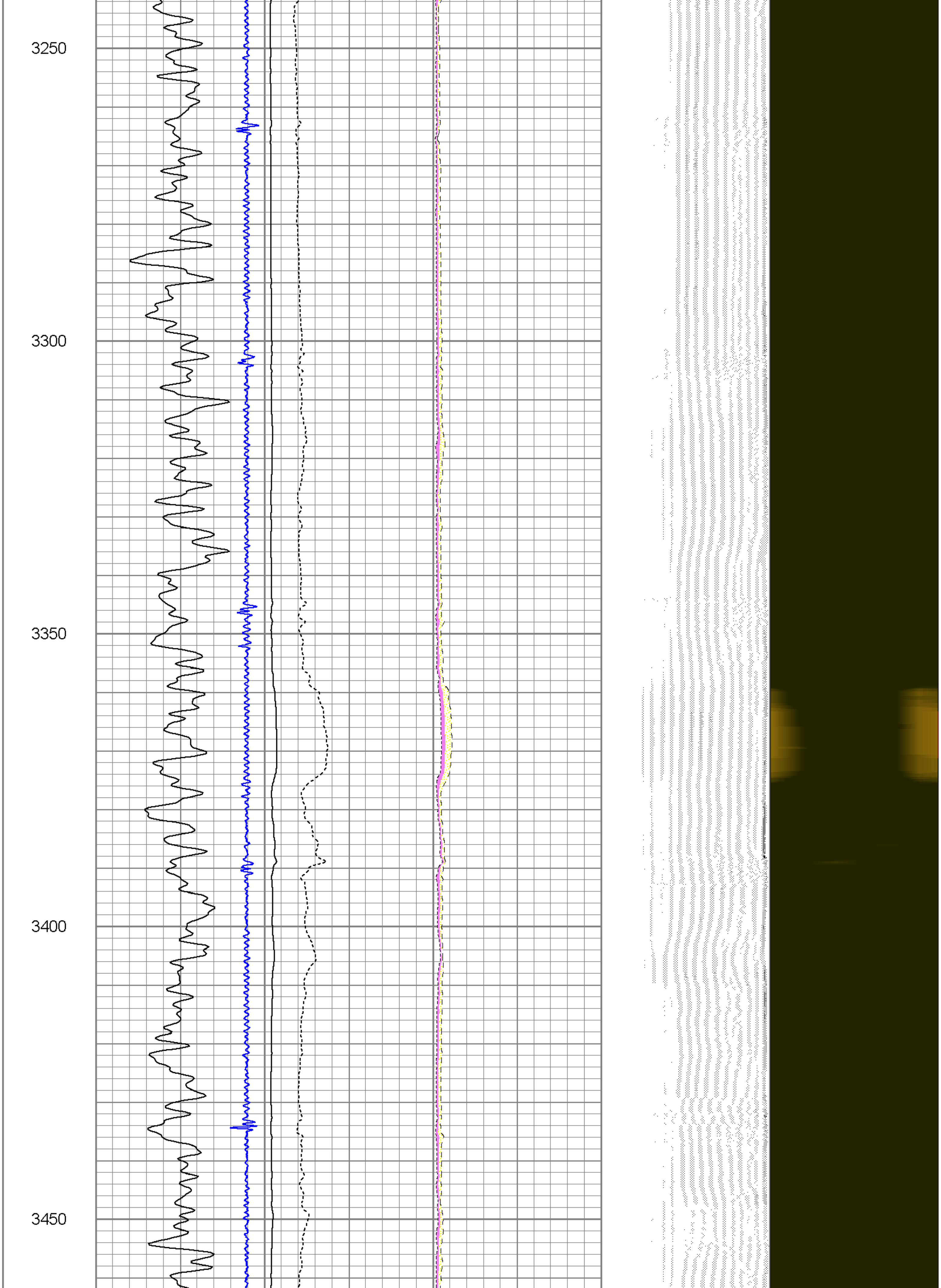

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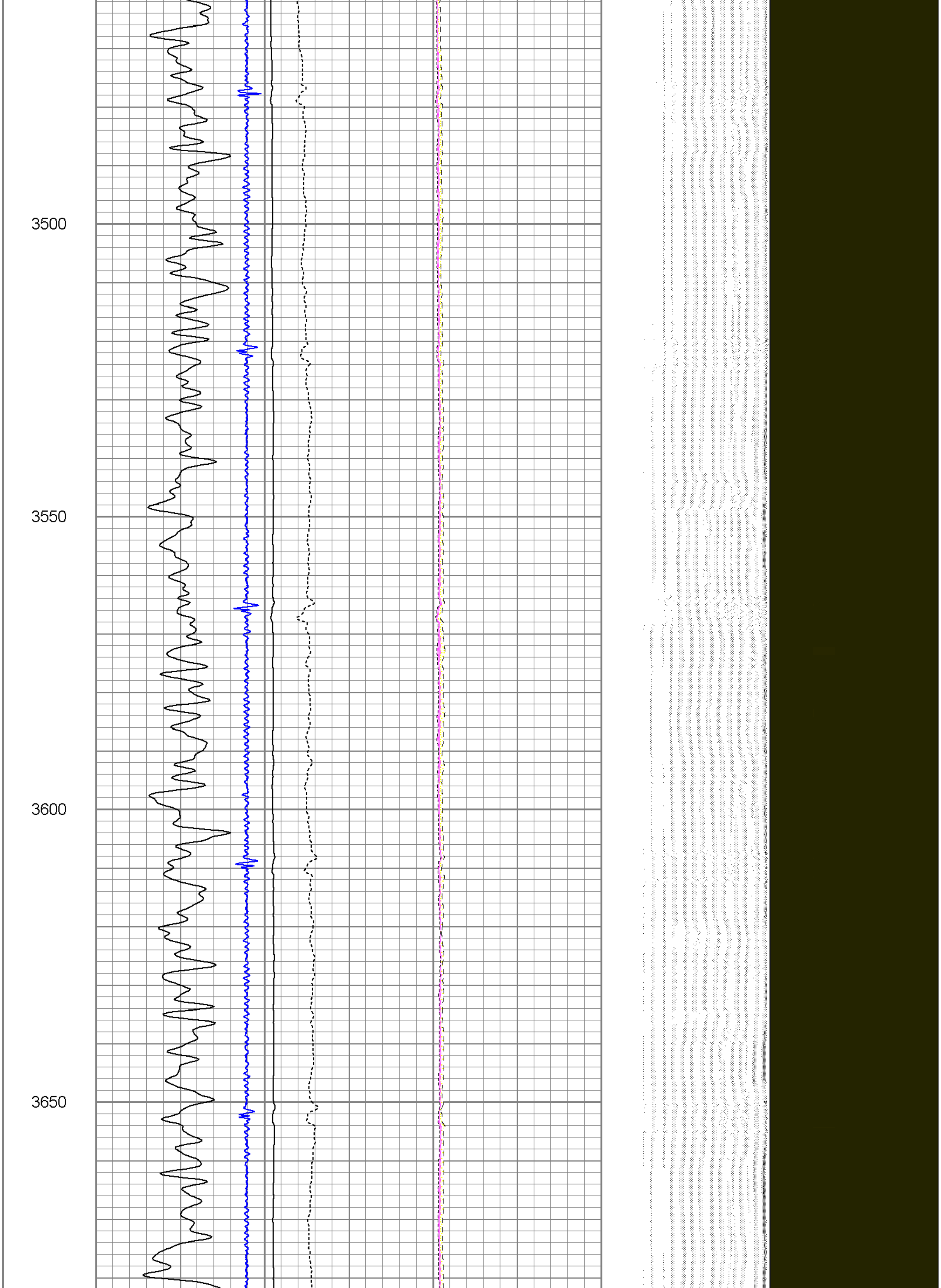
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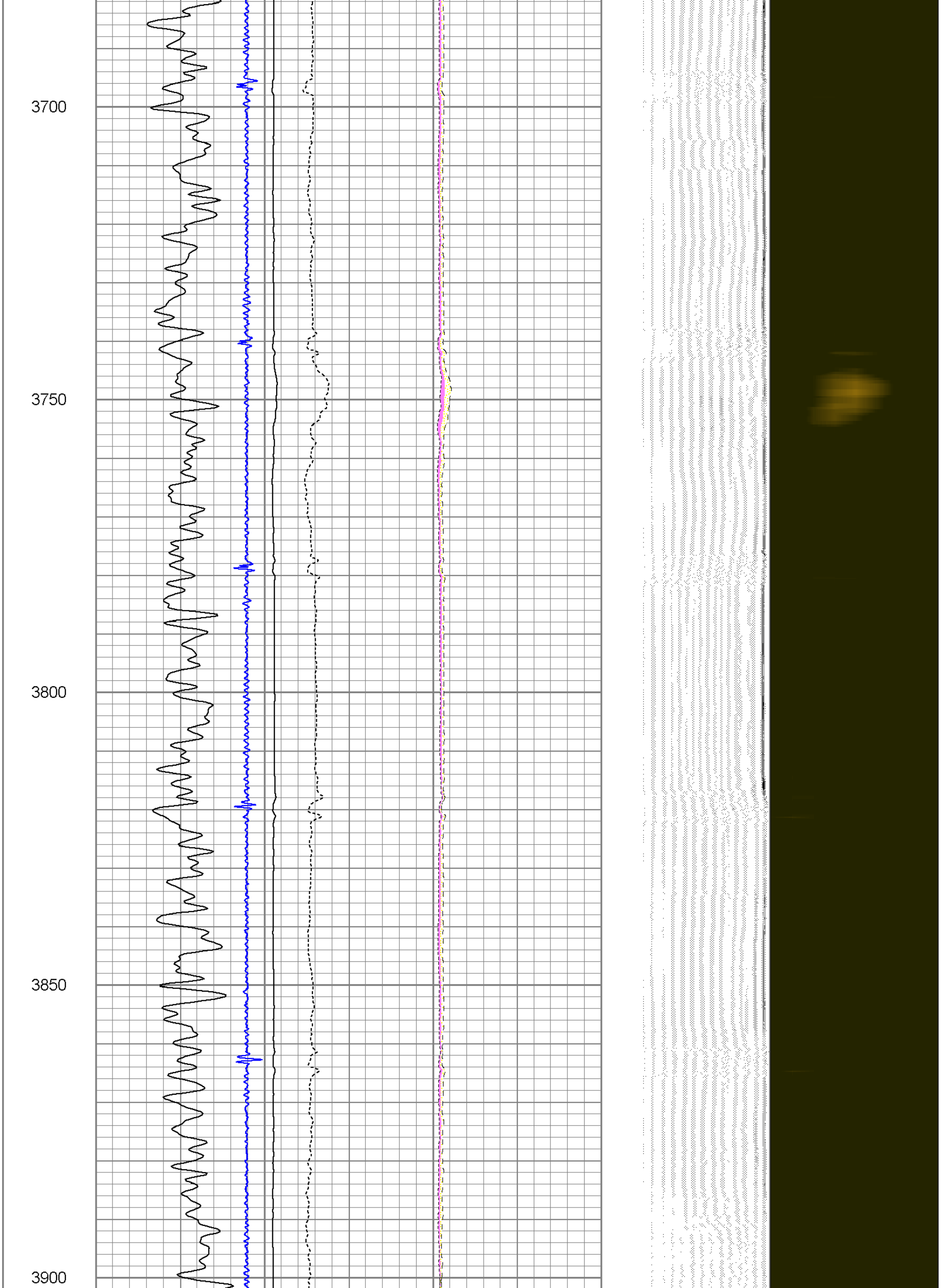
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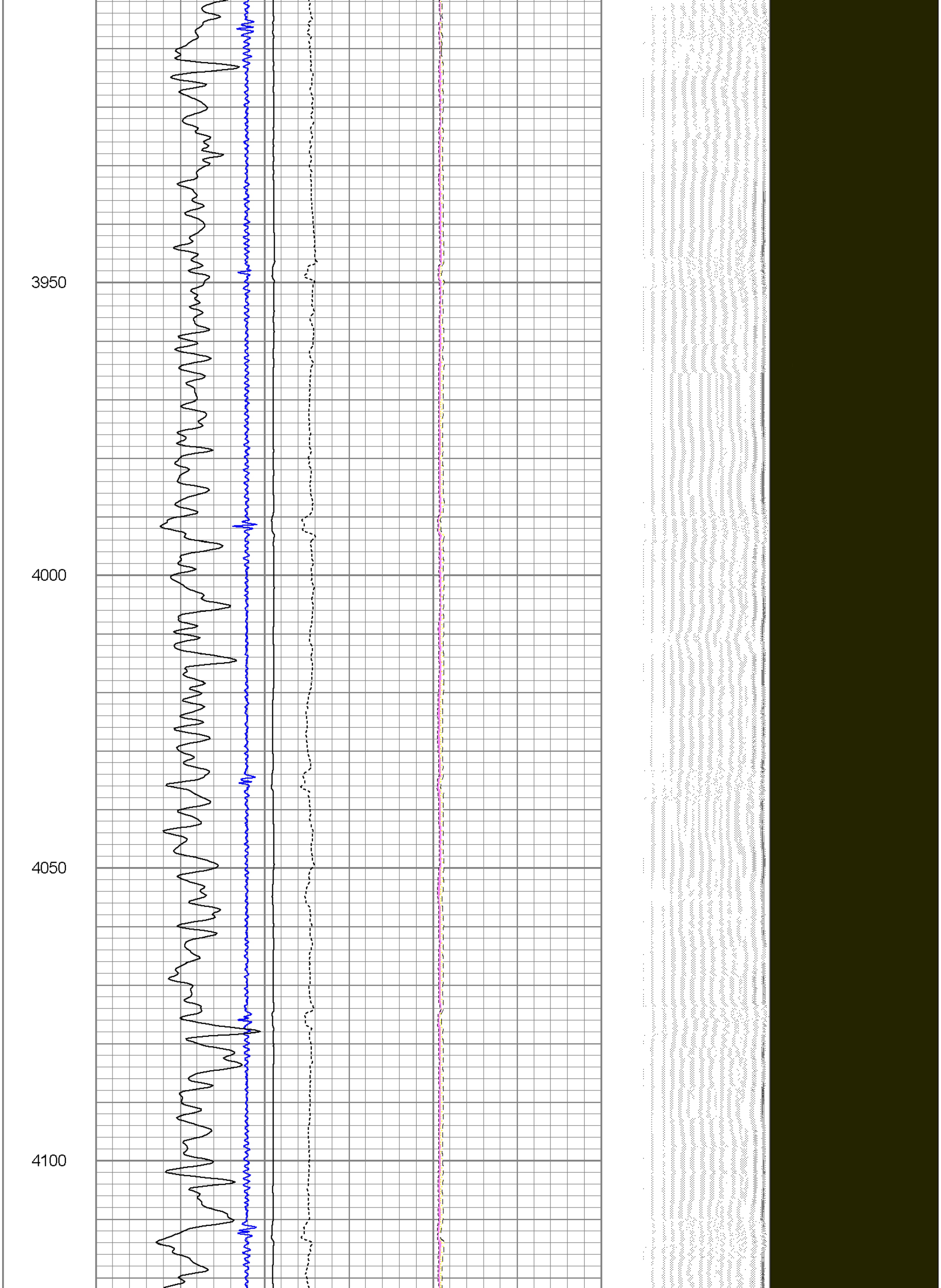
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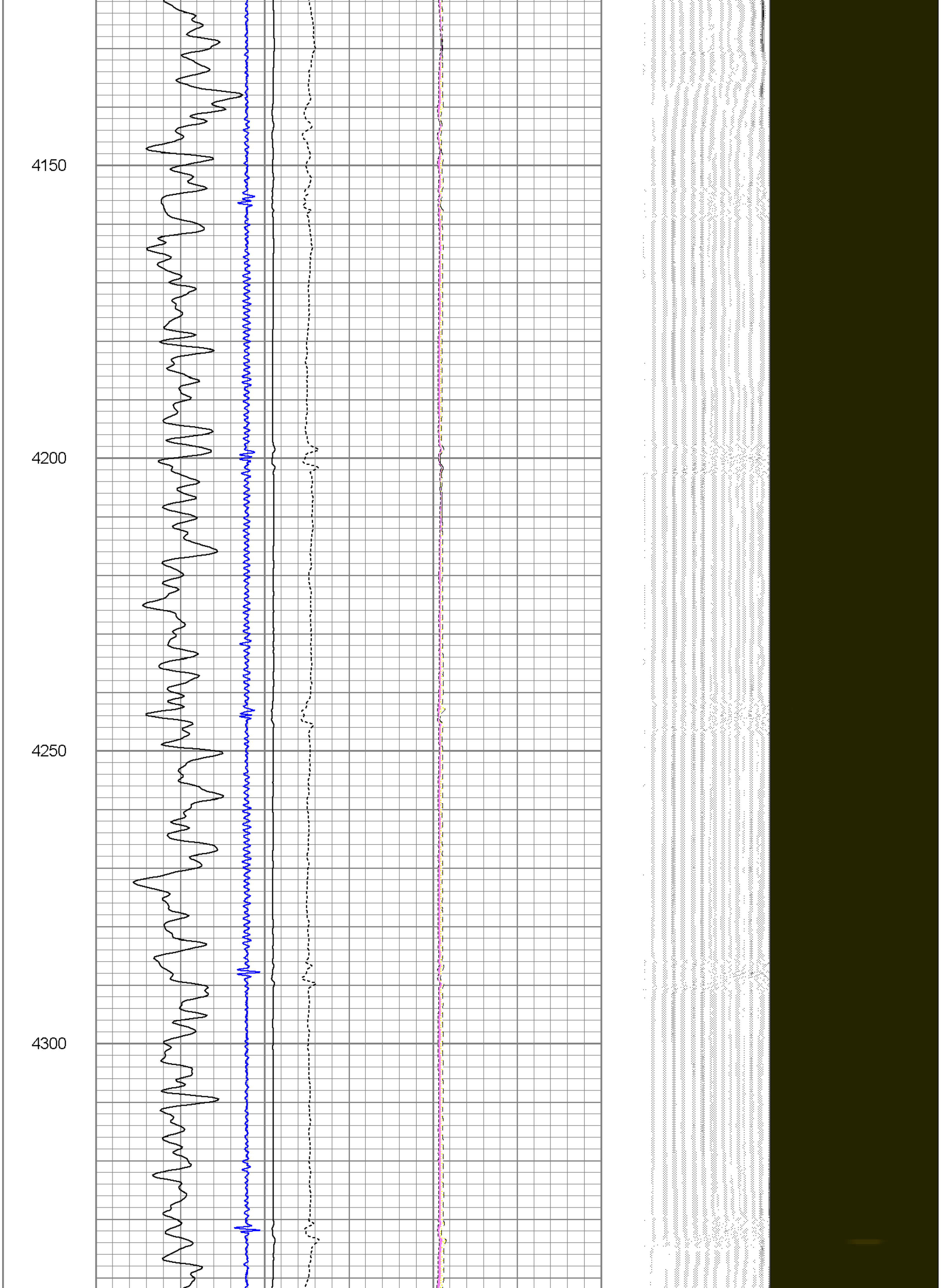
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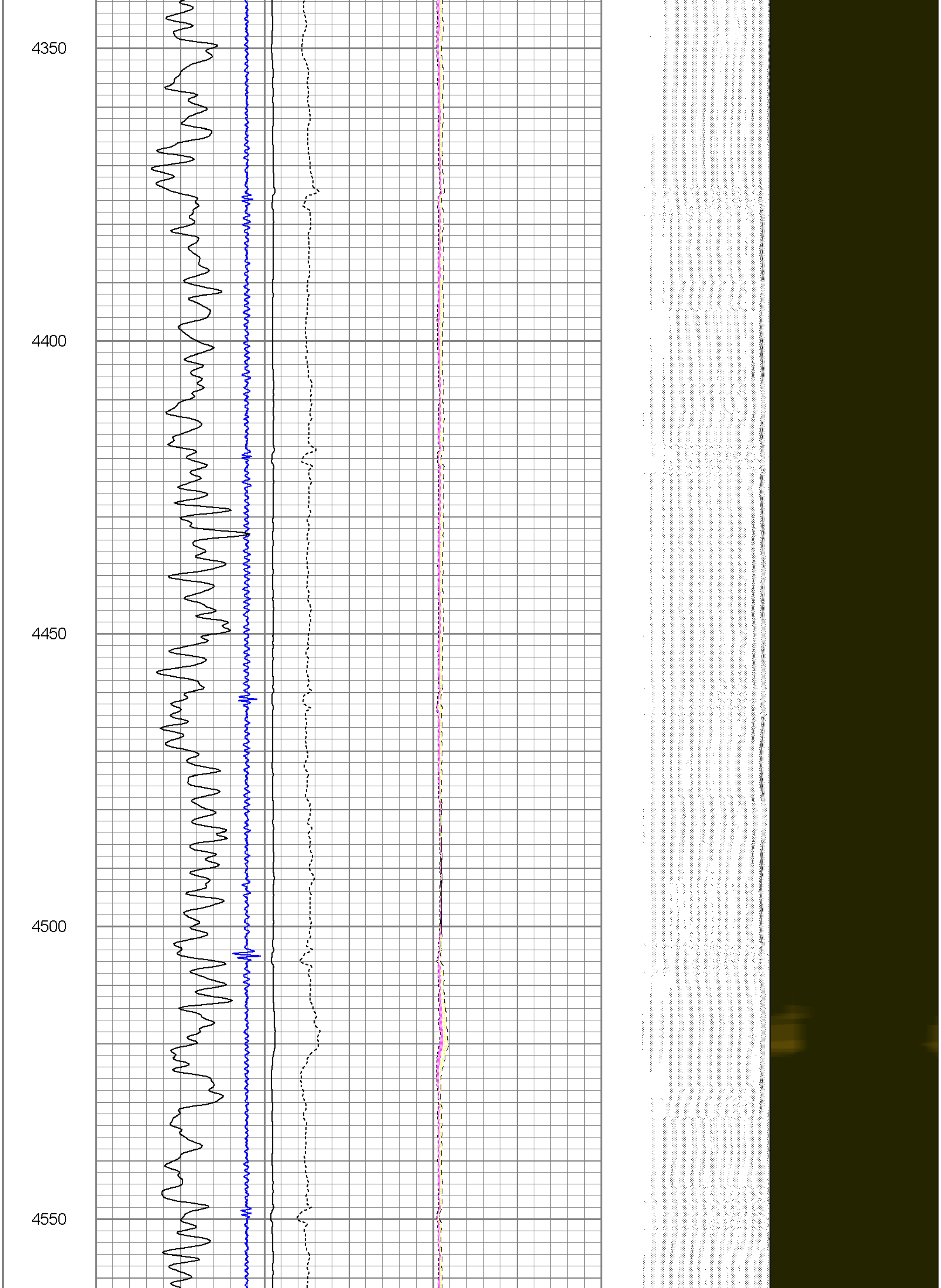
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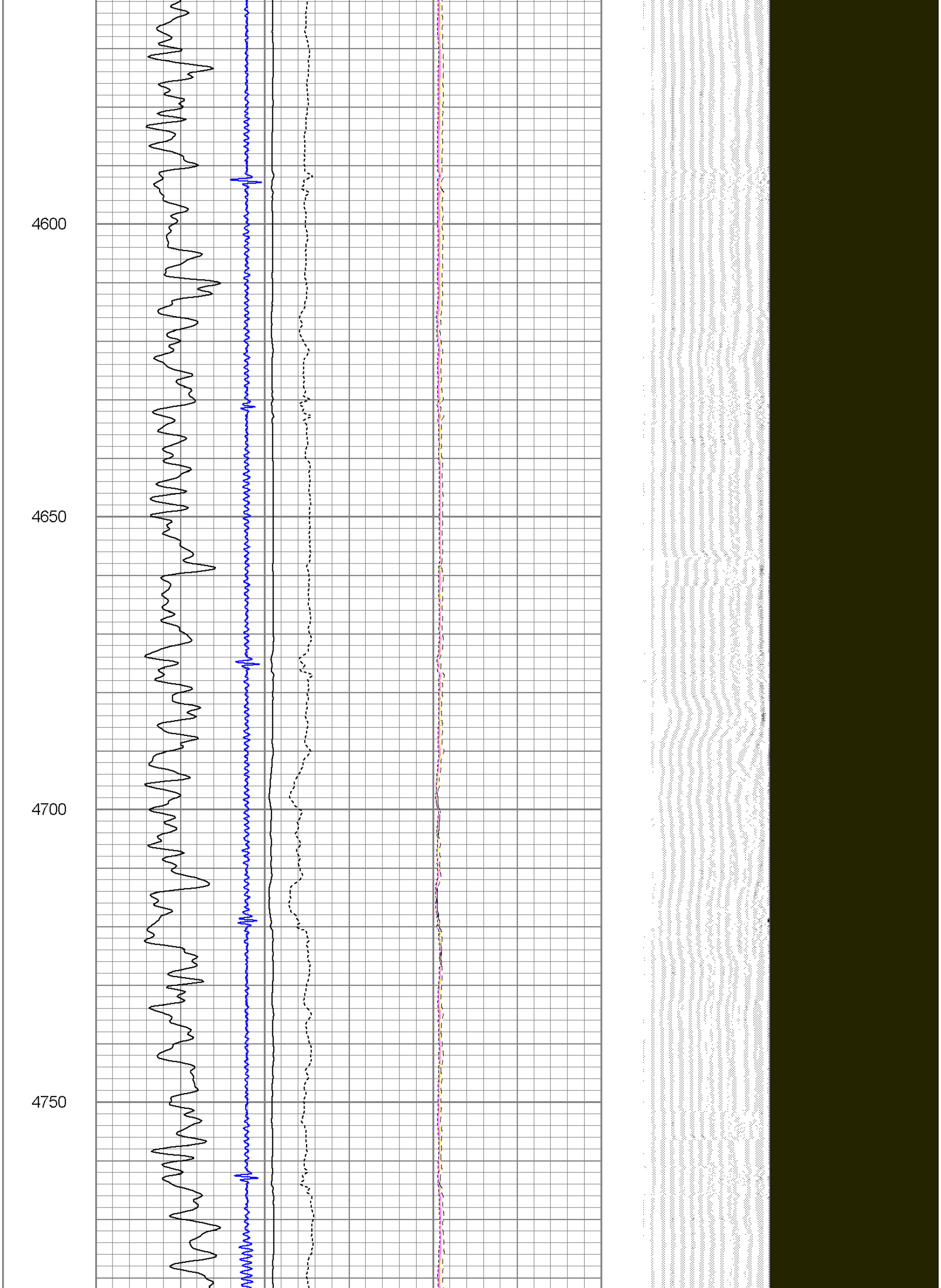
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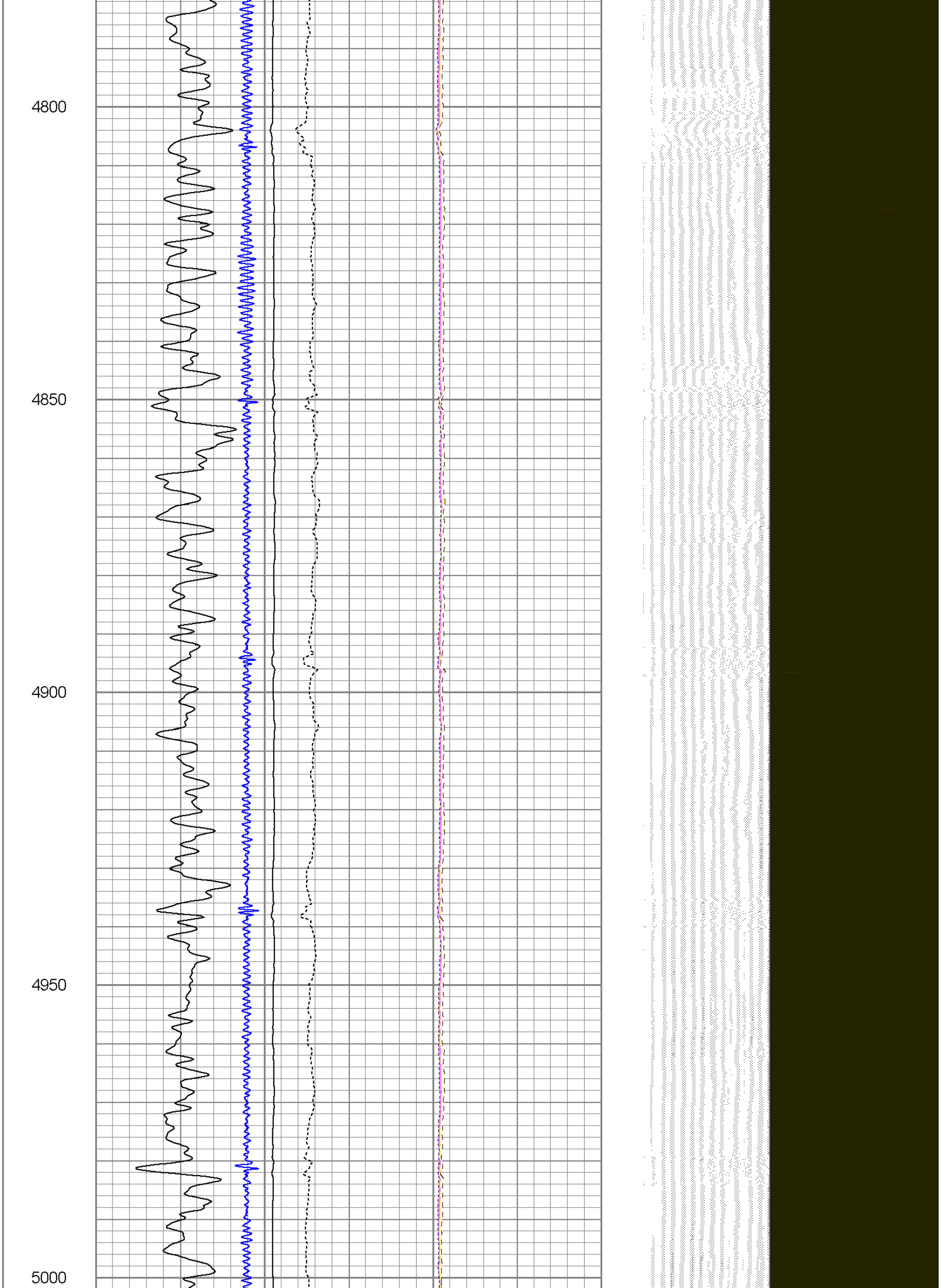
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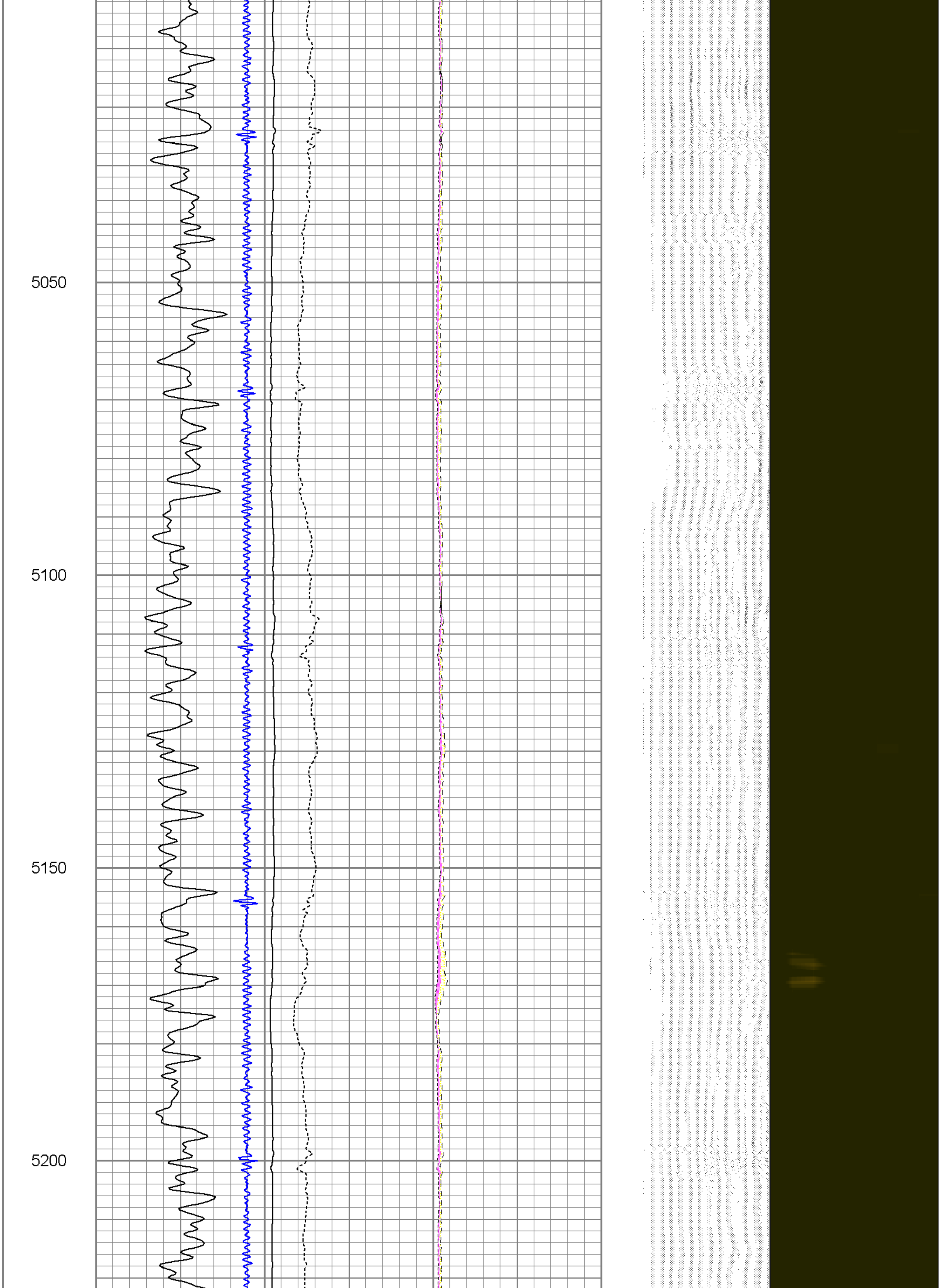
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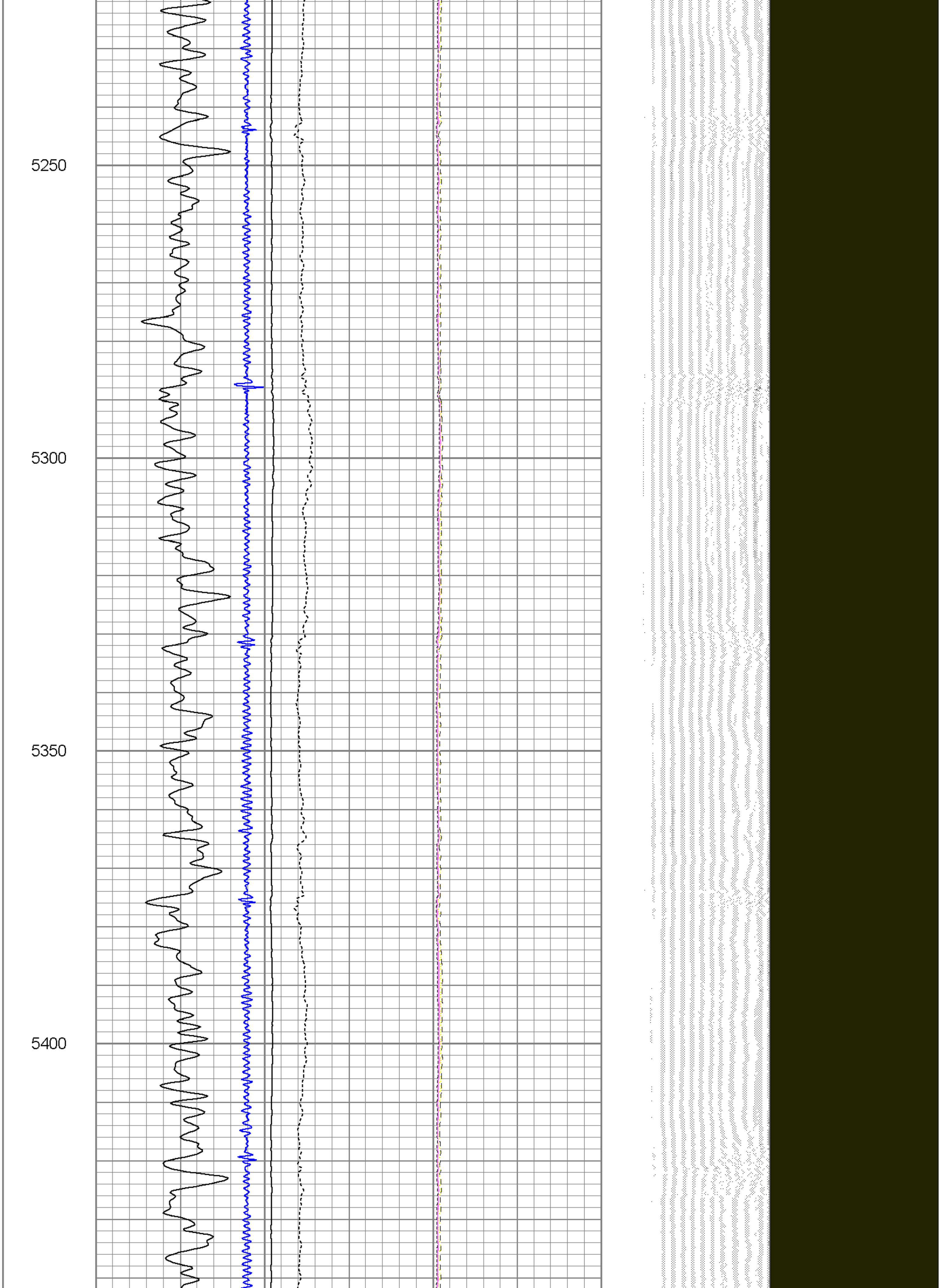
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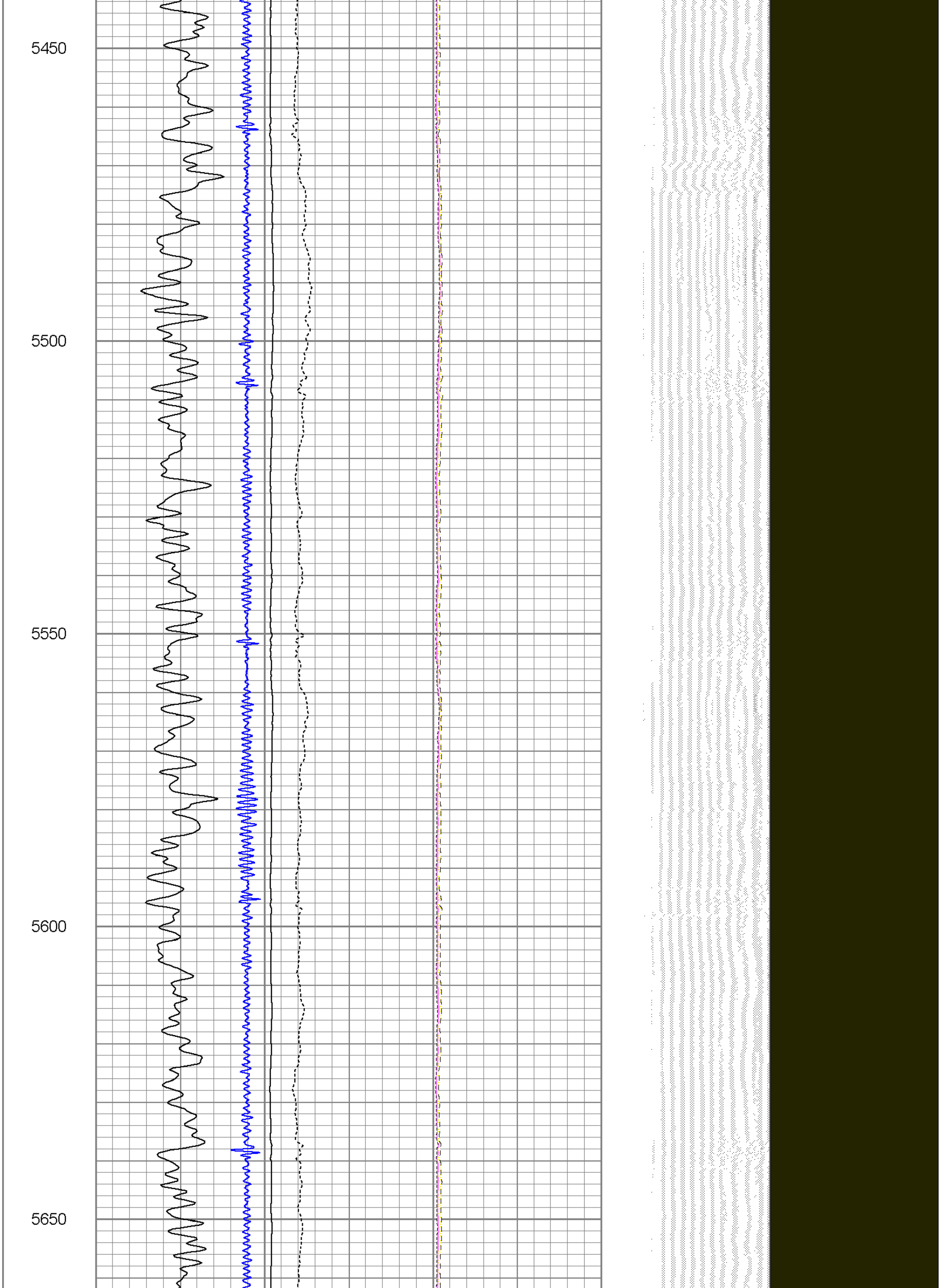
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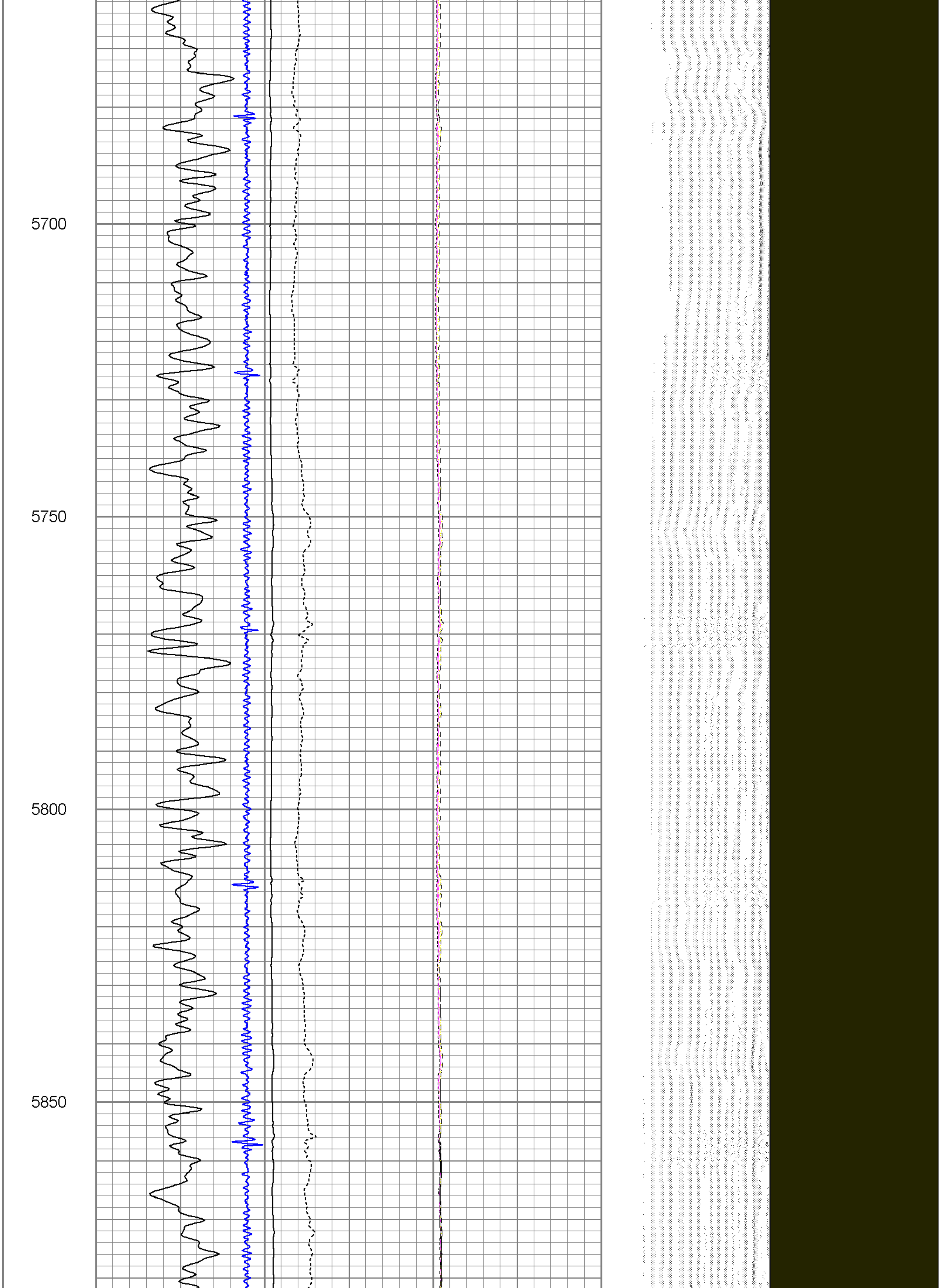
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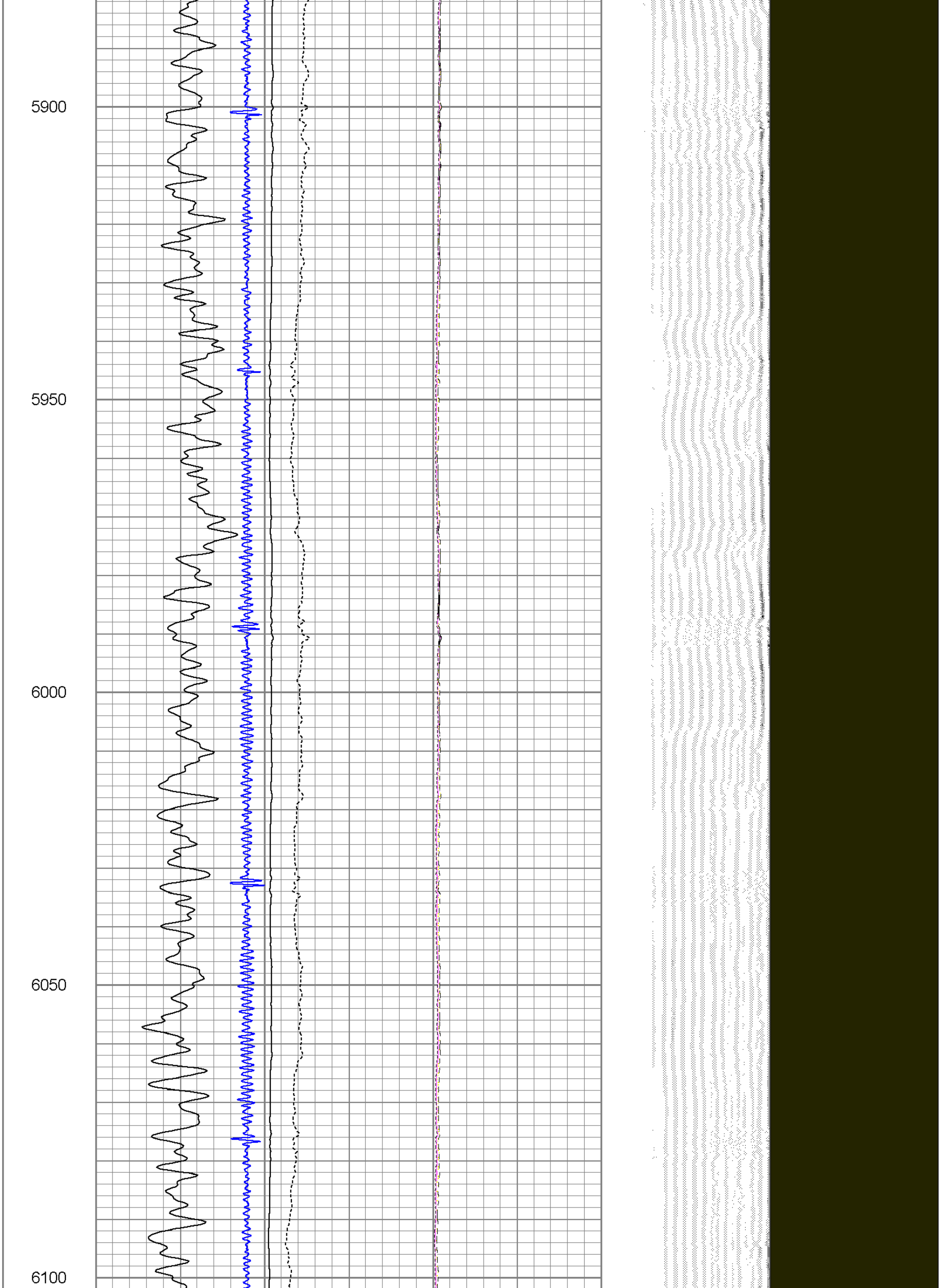
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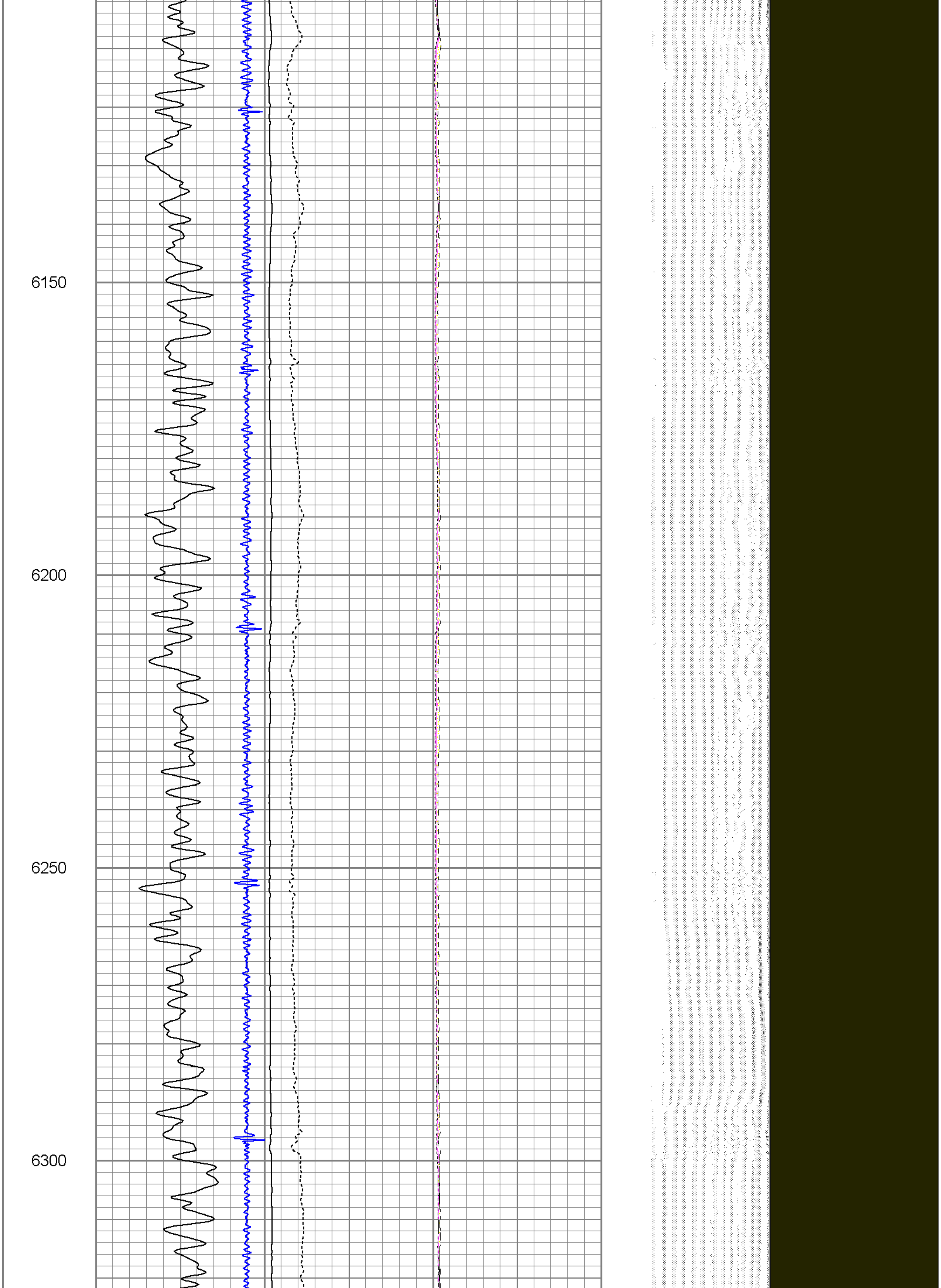
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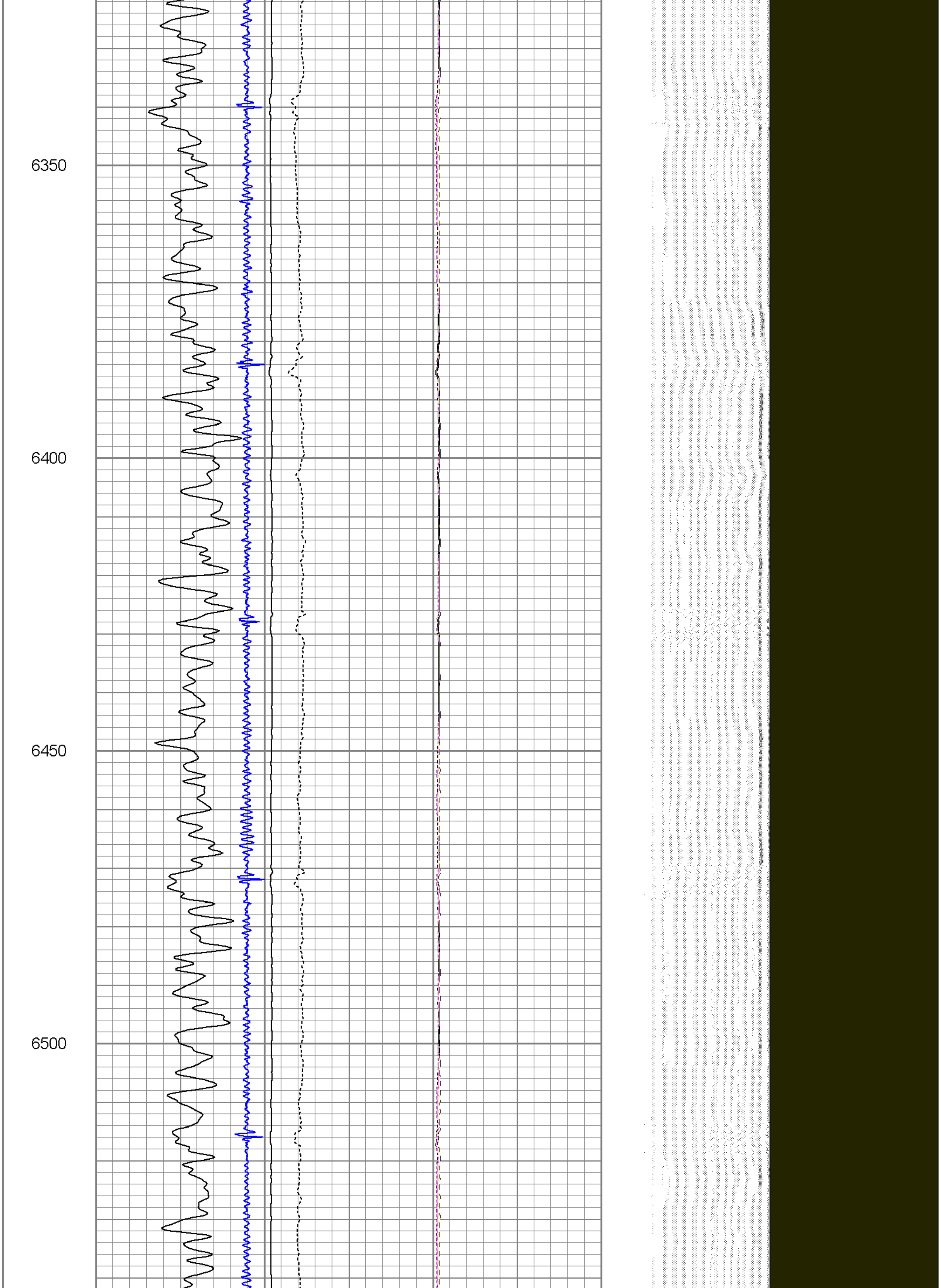
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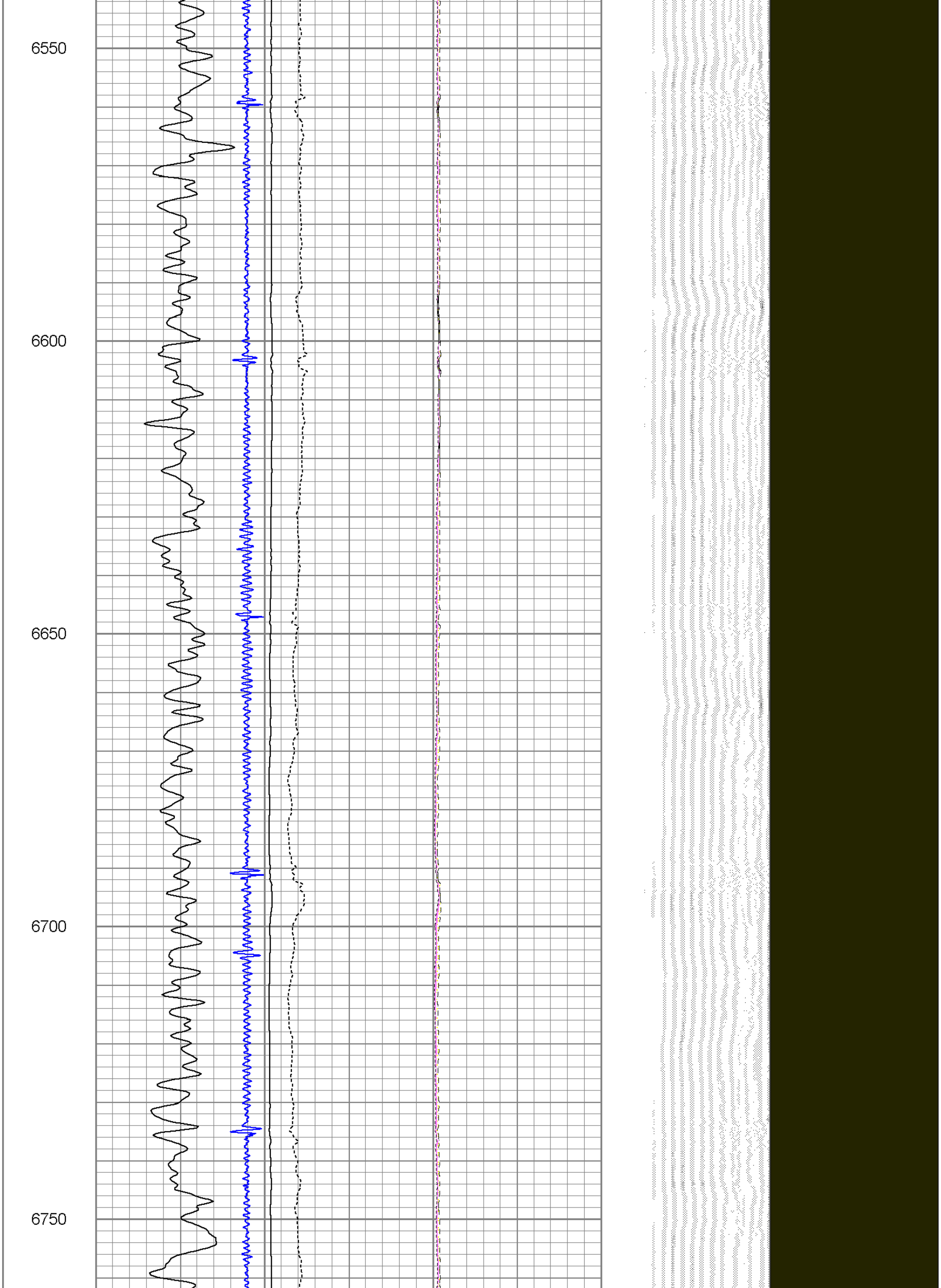
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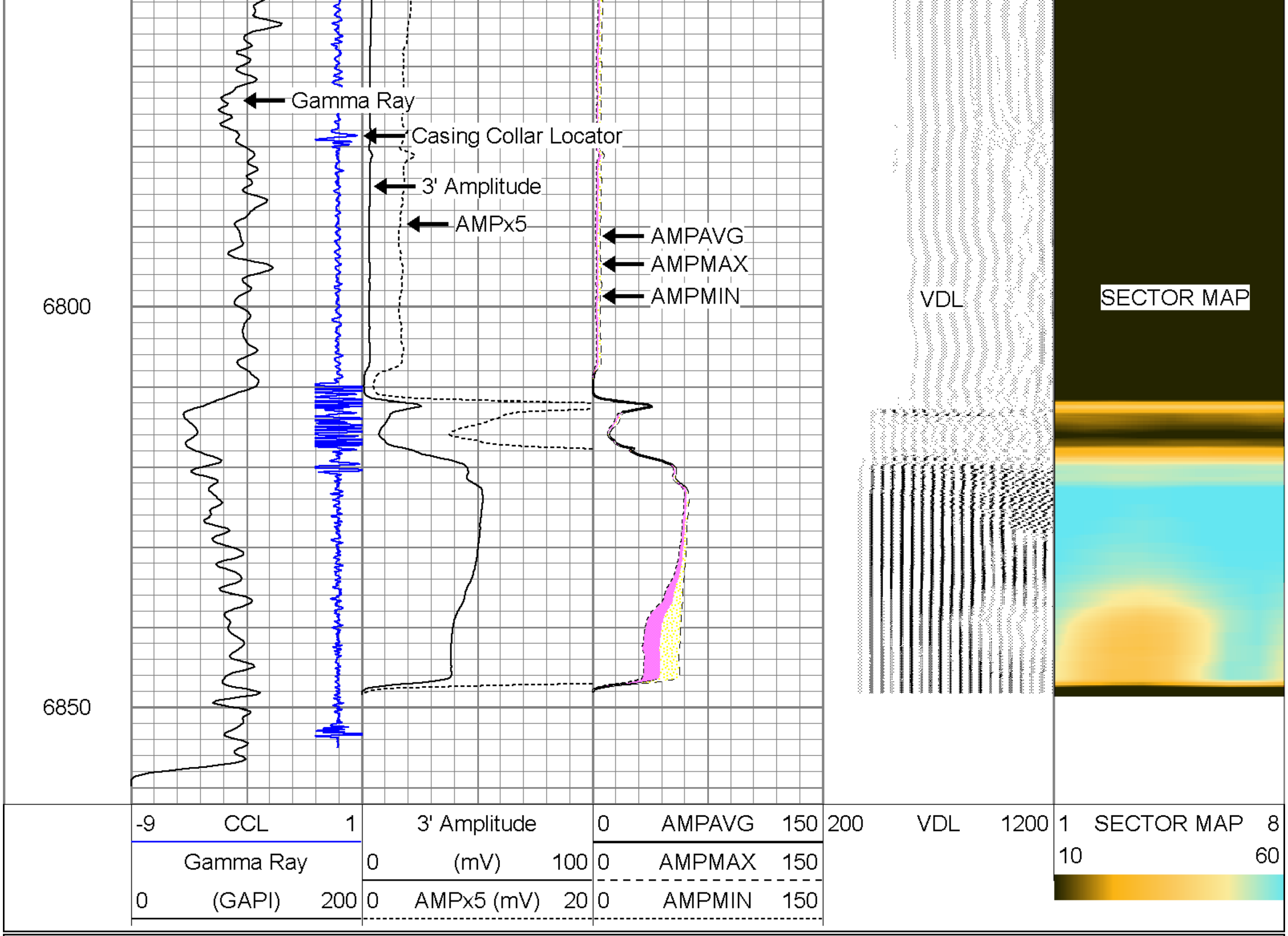


PIONEER

Pioneer Energy Services

MULGA 28C-23HZ

LOGGED UNDER 2800 PSI
MAIN PASS

Calibration Report

Database File: mulga_28c-23hz_0512339255.db
Dataset Pathname: pass1
Dataset Creation: Fri Aug 15 13:09:16 2014 by Log 7.0 B1

Temperature Calibration Report

Serial Number: 0001
Tool Model: 1.375TEMP
Performed: Mon Jun 23 08:05:16 2014

	Reference	Reading
Low Reference:	56.00 degF	596.00 cps
High Reference:	100.00 degF	1200.00cps

Gain: 0.07
Offset: 12.58
Delta Spacing 2

Gamma Ray Calibration Report

Serial Number: 111205
Tool Model: Probe

Performed:	Sun Jun 13 13:33:21 1993	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.0000	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	Base	
Tool Model:	Probe	
Calibration Casing Diameter:	7.000	in
Calibration Depth:	525.760	ft

Master Calibration, performed Fri Aug 15 12:46:56 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.013	1.127	1.000	62.165	54.926	0.275
CAL	0.012	0.316				
5'	0.013	1.177	1.000	62.165	52.545	0.301
SUM						
S1	0.013	1.131	0.000	95.000	85.026	-1.123
S2	0.013	1.170	0.000	95.000	82.170	-1.098
S3	0.013	1.215	0.000	95.000	79.033	-1.054
S4	0.013	1.224	0.000	95.000	78.471	-1.034
S5	0.013	1.201	0.000	95.000	80.002	-1.067
S6	0.013	1.168	0.000	95.000	82.286	-1.099
S7	0.013	1.127	0.000	95.000	85.316	-1.133
S8	0.013	1.104	0.000	95.000	87.060	-1.142

Internal Reference Calibration, performed Wed Aug 21 11:08:58 2013:

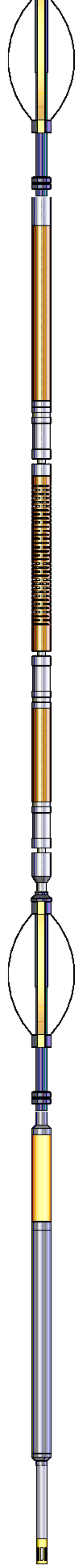
	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.012	0.316	1.000	0.000

Air Zero Calibration, performed Mon Dec 09 06:54:41 2013:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.000	0.000	0.000
5'	0.000	0.000	0.000
SUM			
S1	0.000	0.000	0.000
S2	0.000	0.000	0.000
S3	0.000	0.000	0.000
S4	0.000	0.000	0.000
S5	0.000	0.000	0.000
S6	0.000	0.000	0.000
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
						

WVF3FT	12.96
WVFCAL	12.96
WVFS1	12.96
WVFS2	12.96
WVFS3	12.96
WVFS4	12.96
WVFS5	12.96
WVFS6	12.96
WVFS7	12.96
WVFS8	12.96
WVF5FT	11.88
CCL	4.88
GR	2.15
TEMP	0.08



PTS275	2.83	2.75	
RBT-Probe (Base) Probe Radii Bond Tool with Digital Telemetry	8.92	2.75	90.00
PTS275	2.83	2.75	
GR_CCL-Probe (111205) Probe Gamma CCL	4.54	2.75	100.00
TEMP-1.375TEMP (0001) Temperature Tool	1.25	1.38	30.00

Dataset: mulga_28c-23hz_0512339255.db: field/well/run1/pass1
Total Length: 20.38 ft
Total Weight: 220.00 lb
O.D. 2.75 in