

Pioneer Energy Services

PIONEER

GAMMA RAY CCL  
CEMENT BOND VDL  
SECTOR MAP

Company	EnCana Oil & Gas (USA) Inc.	Country	USA
Well	Mumby State 4E-36H P266		
Field	Wattenberg		
County	Weld		
State	Colorado		
Location:	AP1 #: 05-123-39216	Other Services	None
	1234' FSL & 993' FEL SESE		
SEC 36	TWP 2N	RGE 66W	
Permanent Datum	GL	Elevation	5018
Log Measured From	KB		
Drilling Measured From	KB		
		K.B. 5048	
		D.F. 5047	
		G.L. 5018	

Date	August 1, 2014
Run Number	1
Depth Driller	12030
Depth Logger	7781
Bottom Logged Interval	7780
Top Log Interval	0
Open Hole Size	8-3/4"
Type Fluid	Drilling Mud
Density / Viscosity	12.5 / 42
Max. Recorded Temp.	NA
Estimated Cement Top	1152
Time Well Ready	1515
Time Logger on Bottom	1620
Equipment Number	49
Location	Brighton, CO
Recorded By	Clint Christensen
Witnessed By	Kevin Bergeron

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record	Size	Wgt/Ft	Top	Bottom			
Surface String							
Prot. String							
Production String	7"	26 lbs	0	7932'			
Liner							

&lt;&lt;&lt; Fold Here &gt;&gt;&gt;

All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees.

## Comments

Depth Correlated to 7" Tally

H&amp;P Rig 522

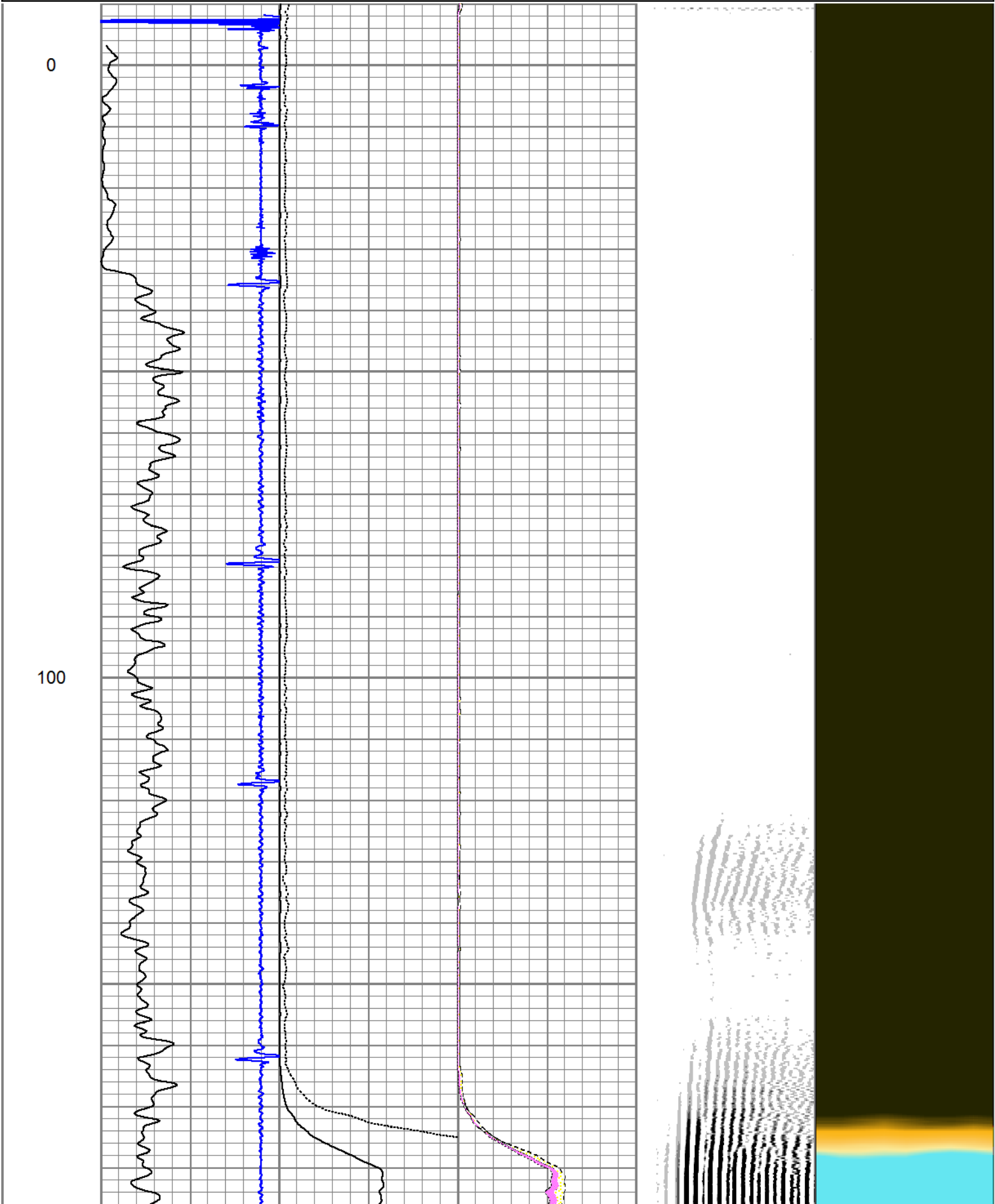
Thank You for using Pioneer Energy Services

SO# 2-013616

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			CEMENT #2 -A (1)	2.83	2.75	20.00

[illegible]

-9	CCL	1	0	AMP (mV)	100	0	AMPAVG	150	200	VDL	1200	1	SECTOR MAP	8
0	GR (GAPI)	200	0	AMPx5 (mV)	20	0	AMPMAX	150				10		60
						0	AMPMIN	150						



200

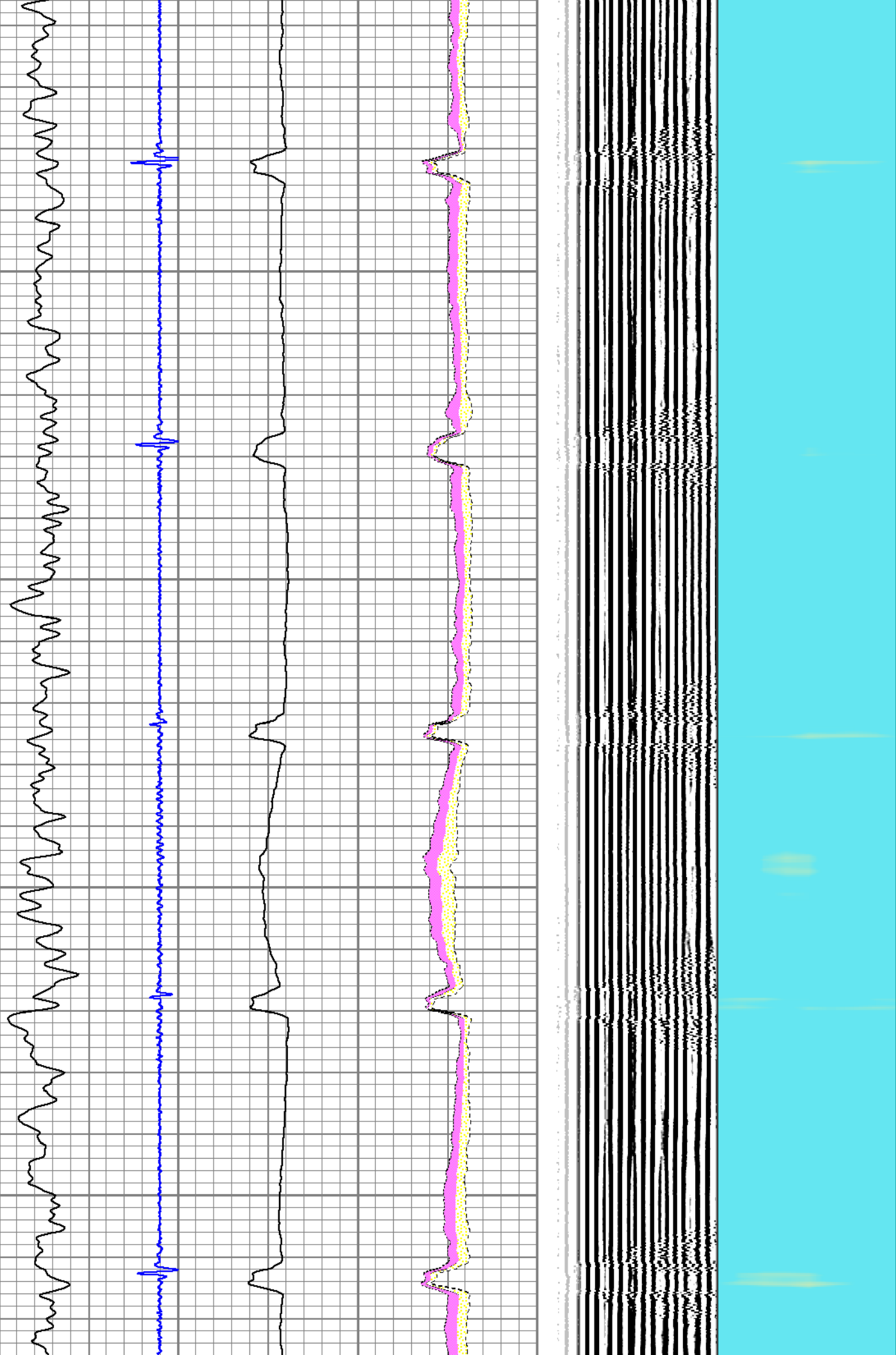
300

400



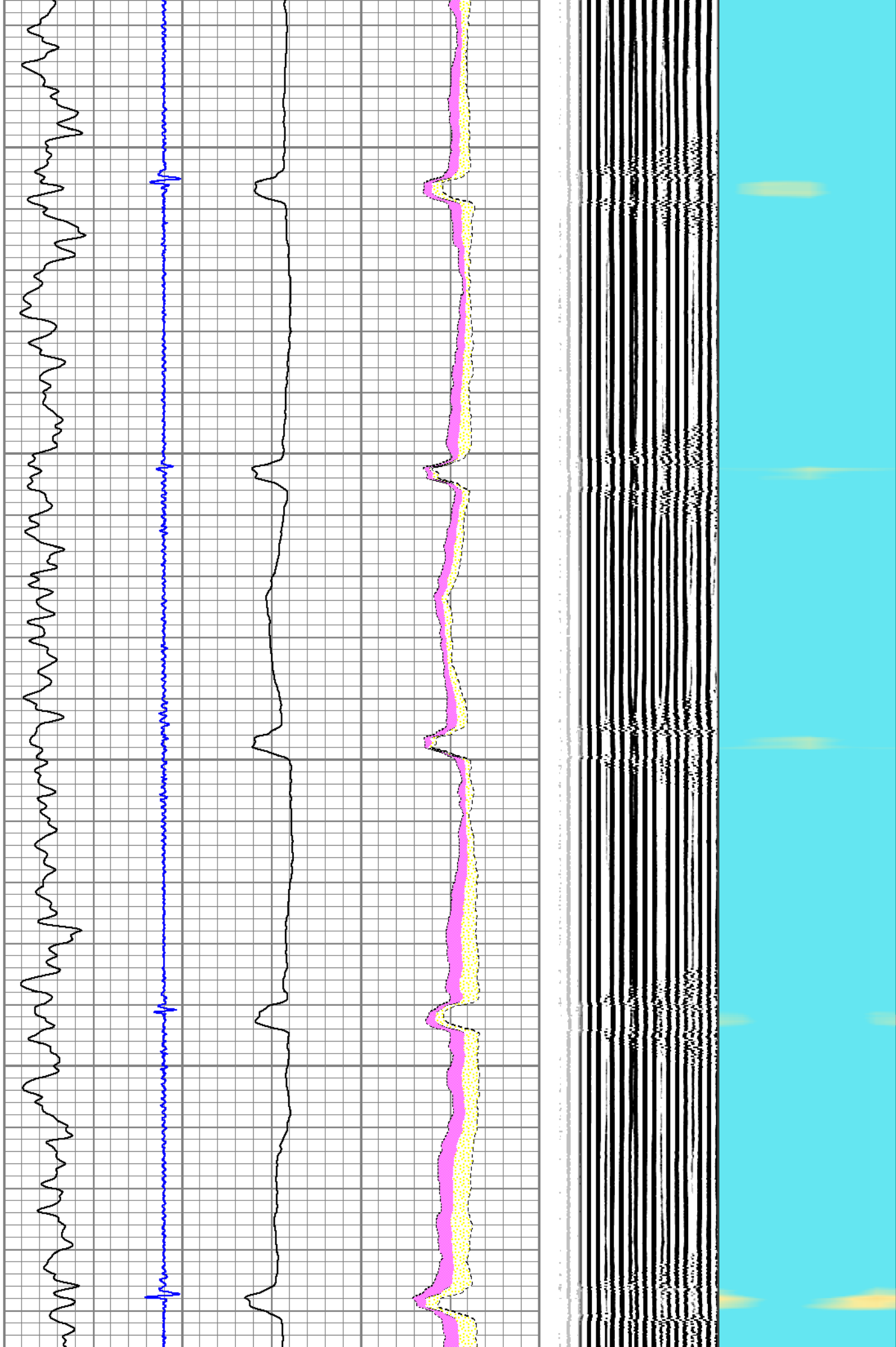
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600



700

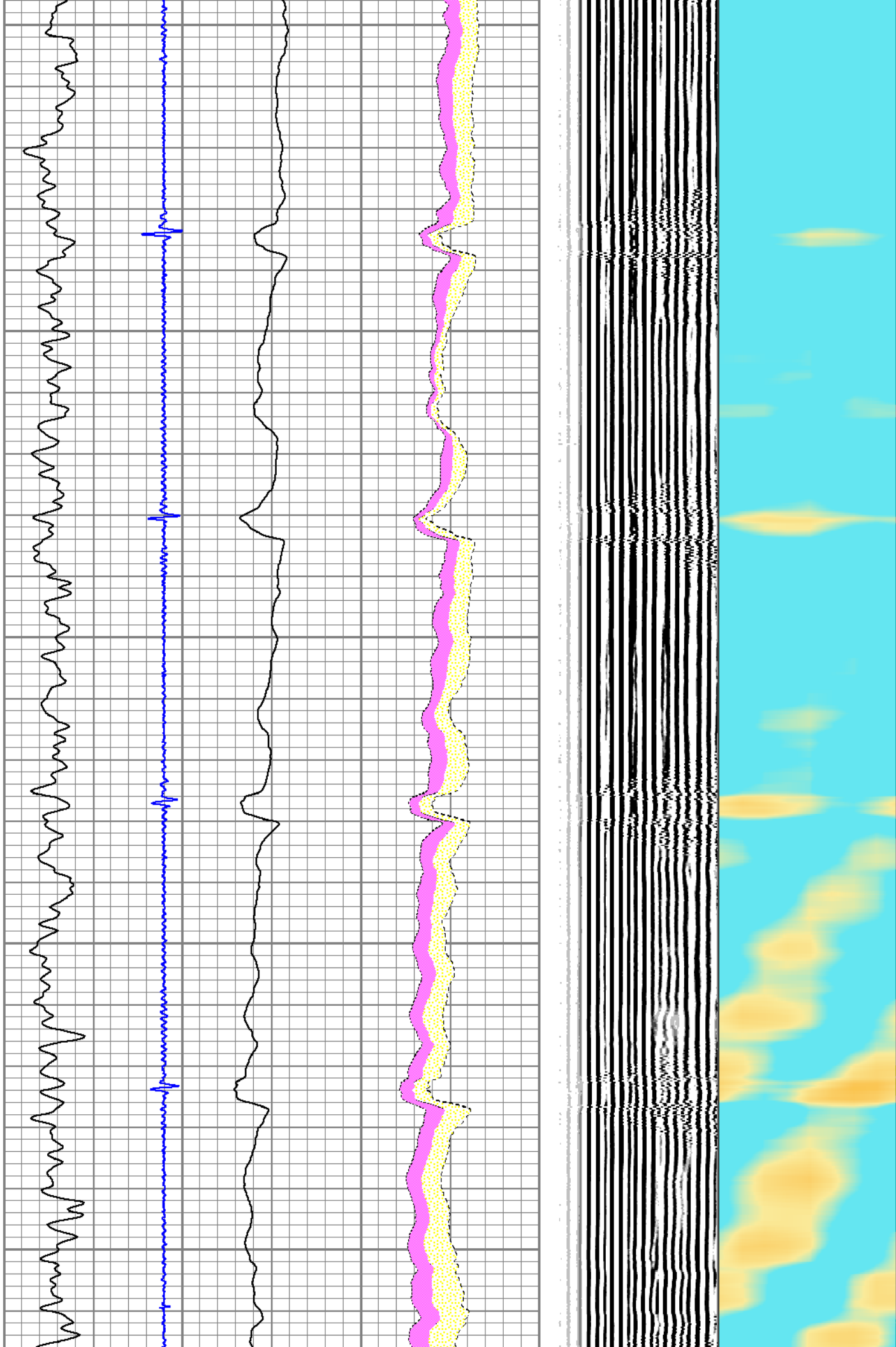
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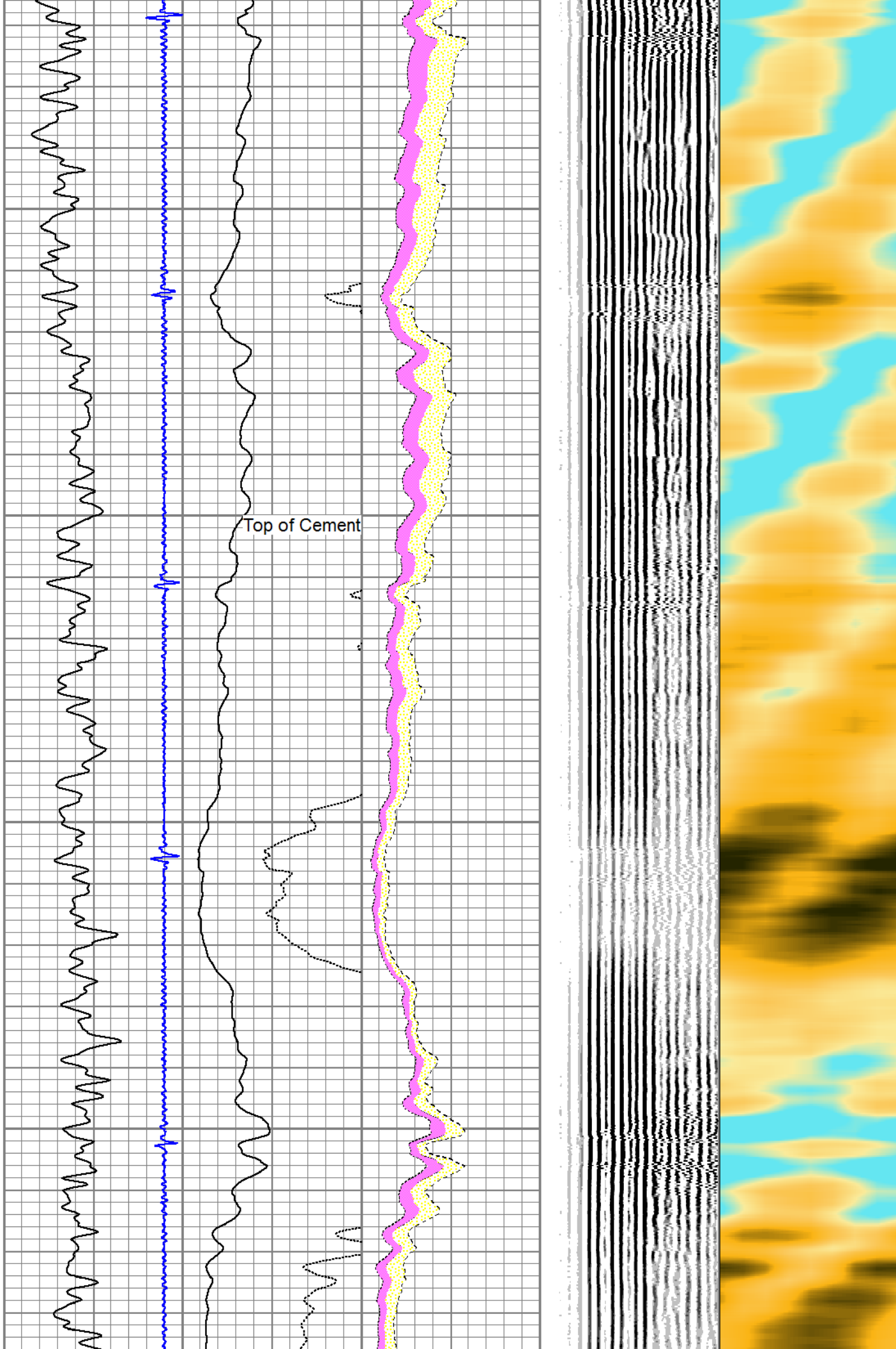
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1000



1100

1200

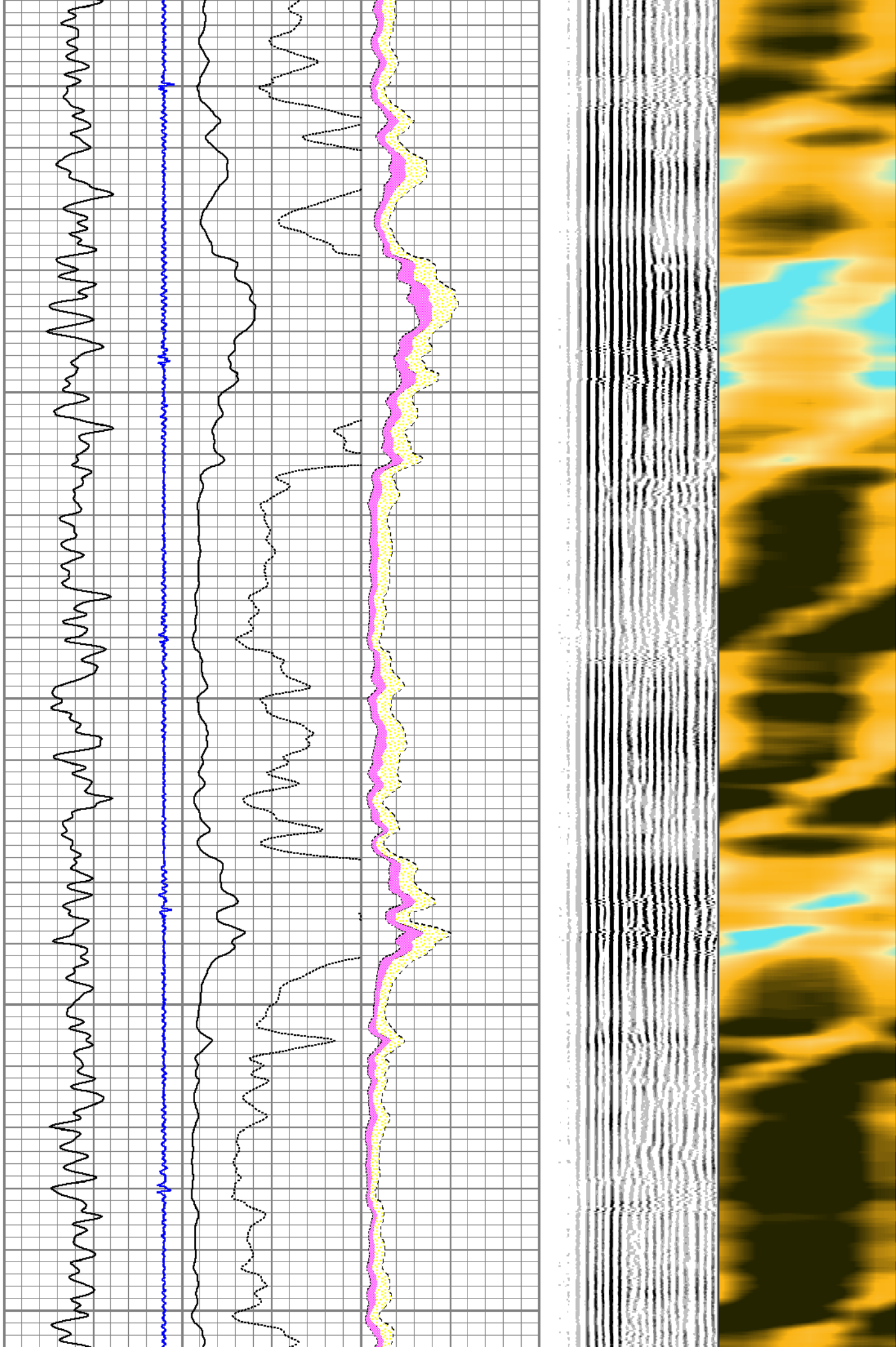




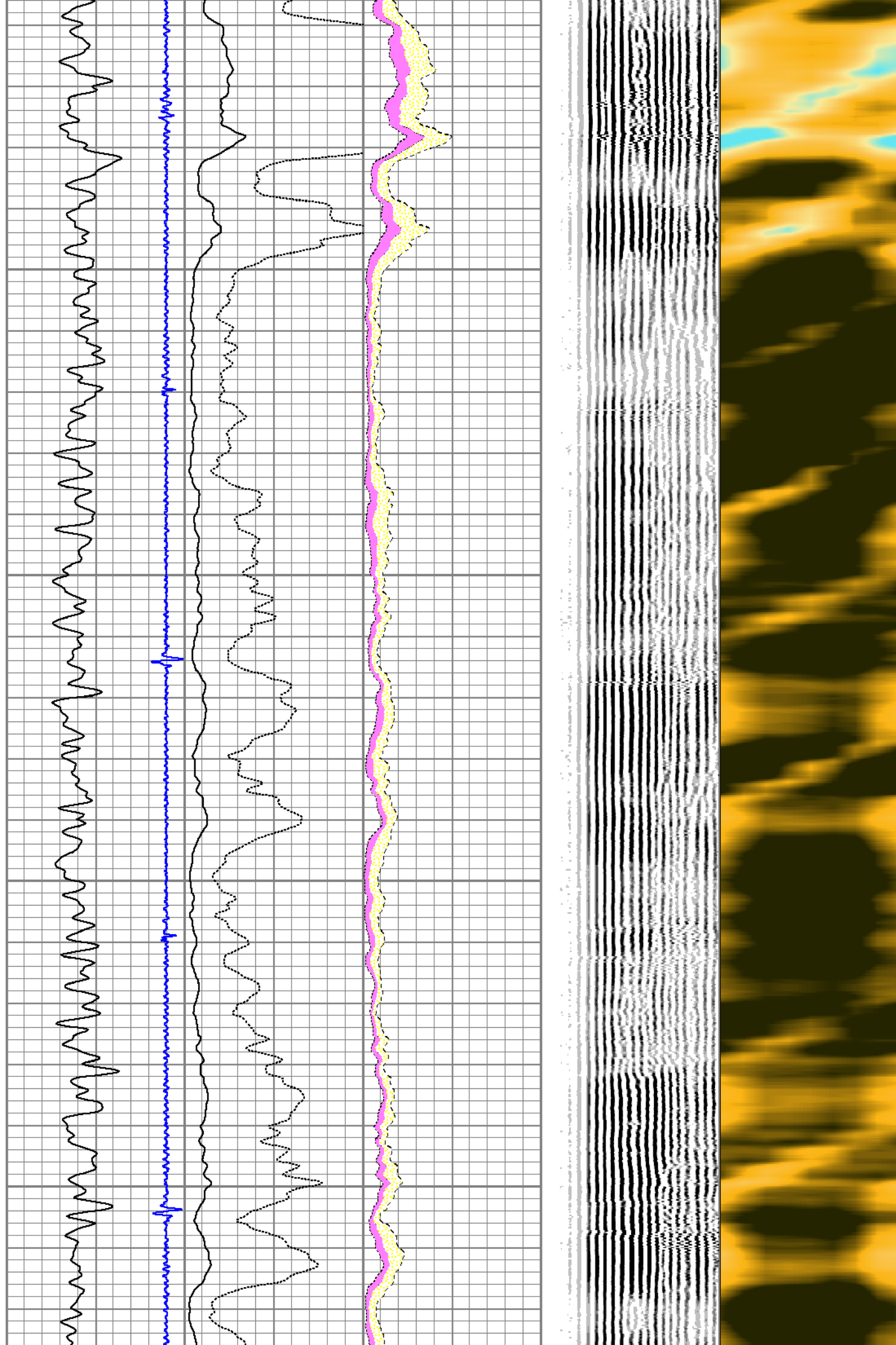
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1400

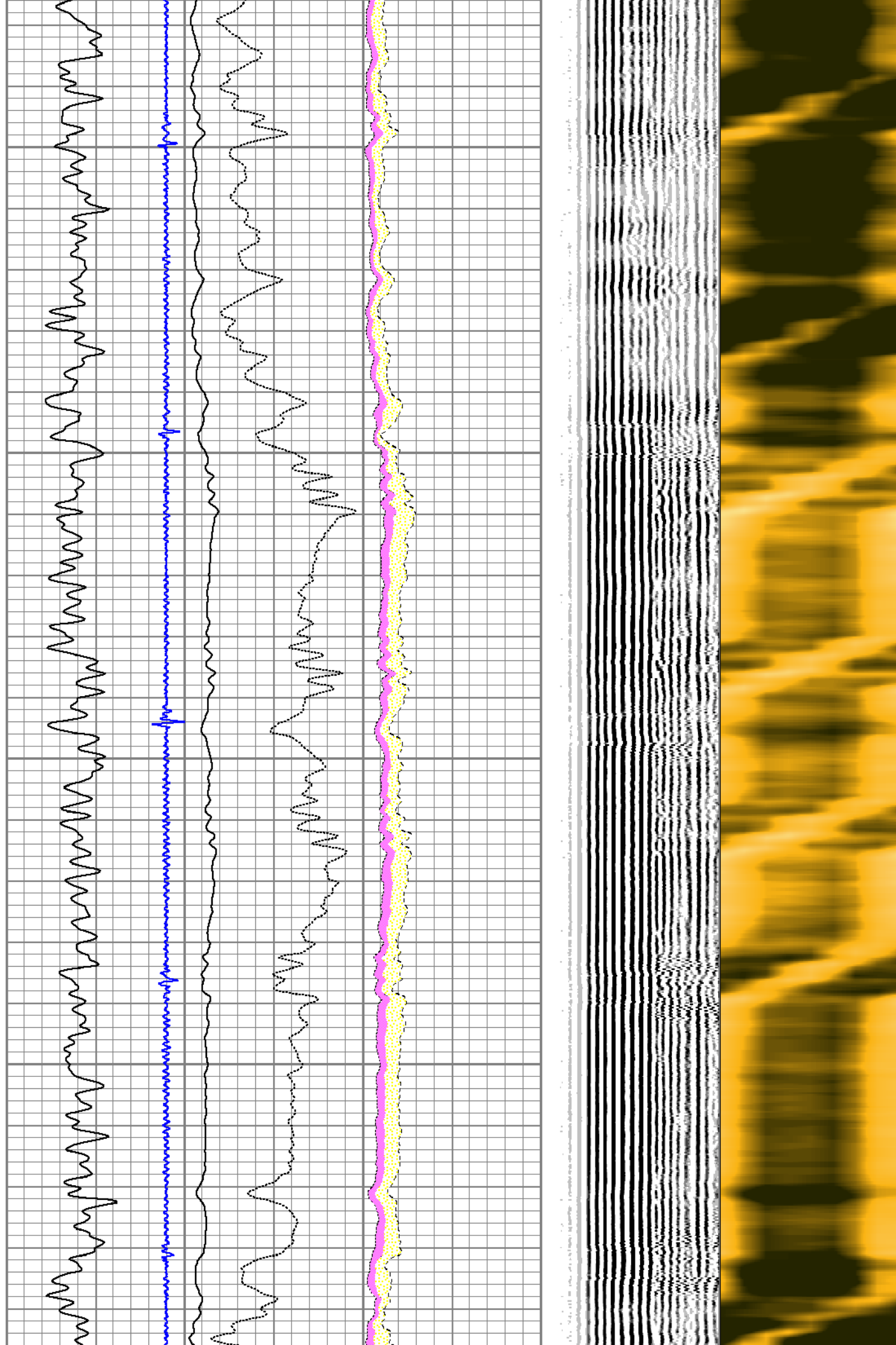
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1700



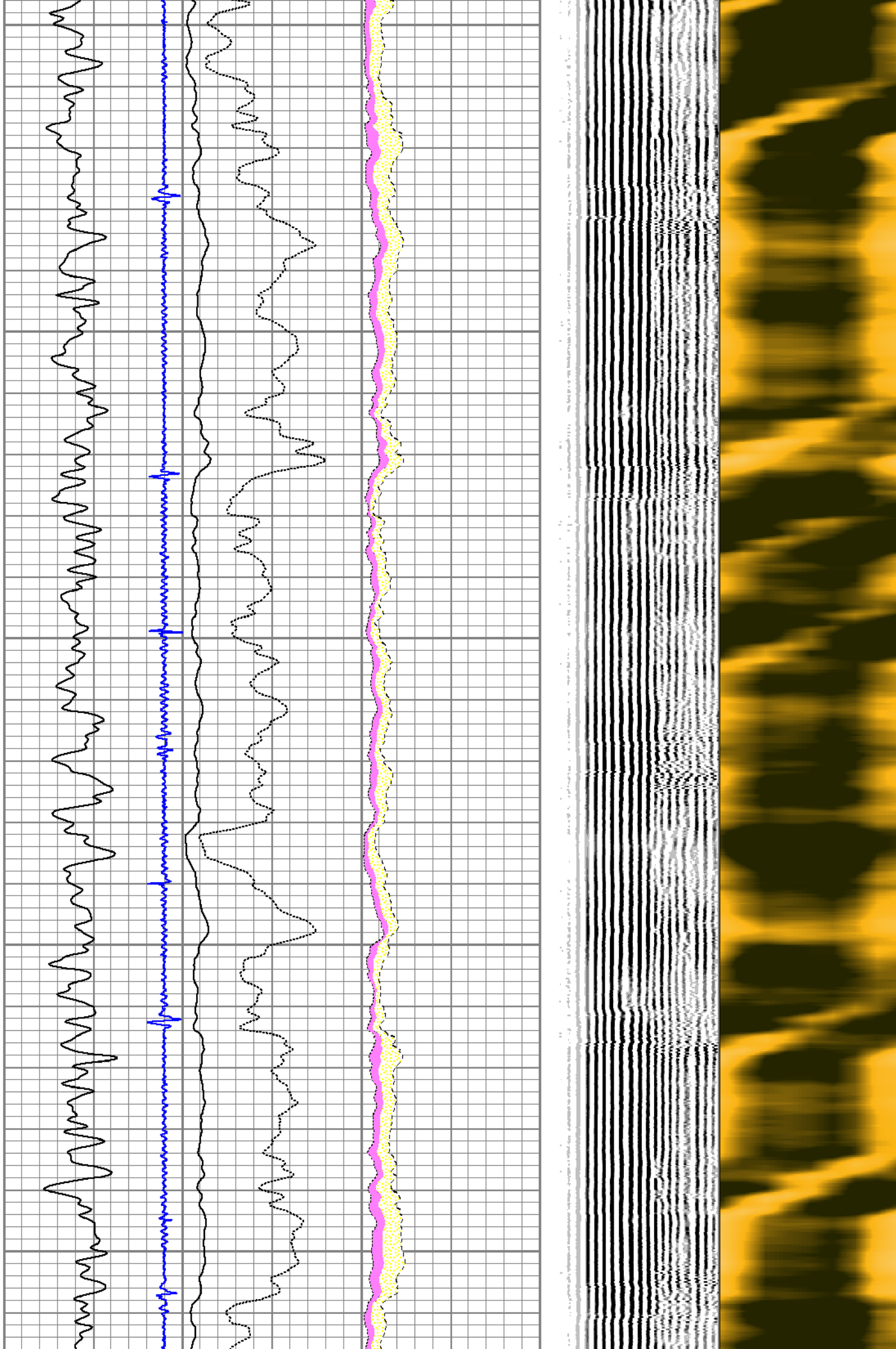
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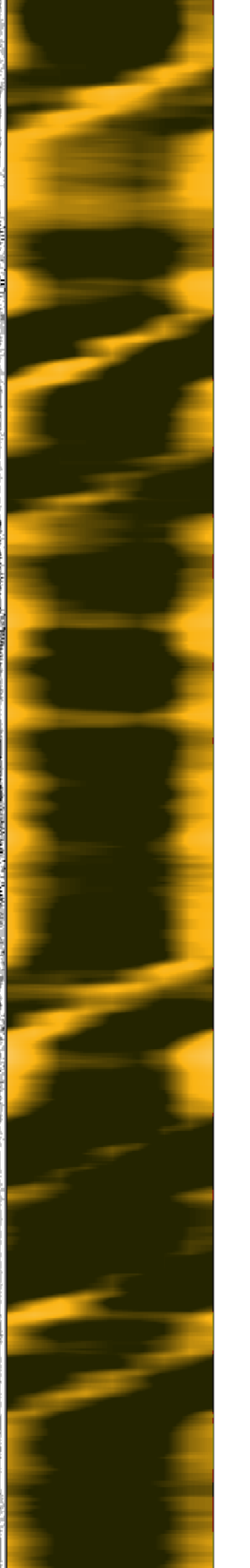
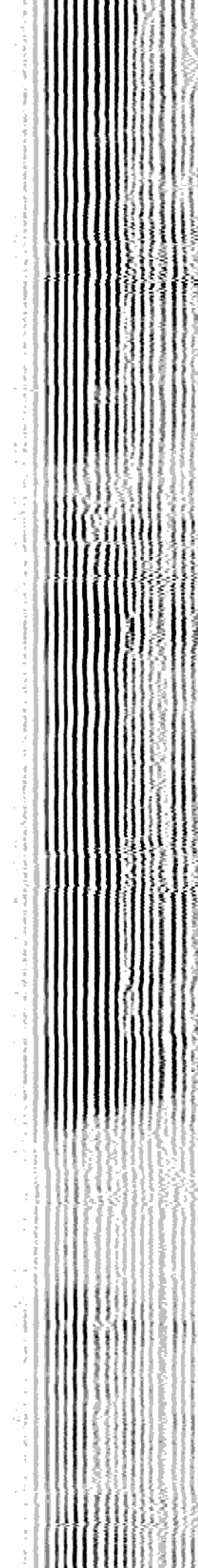
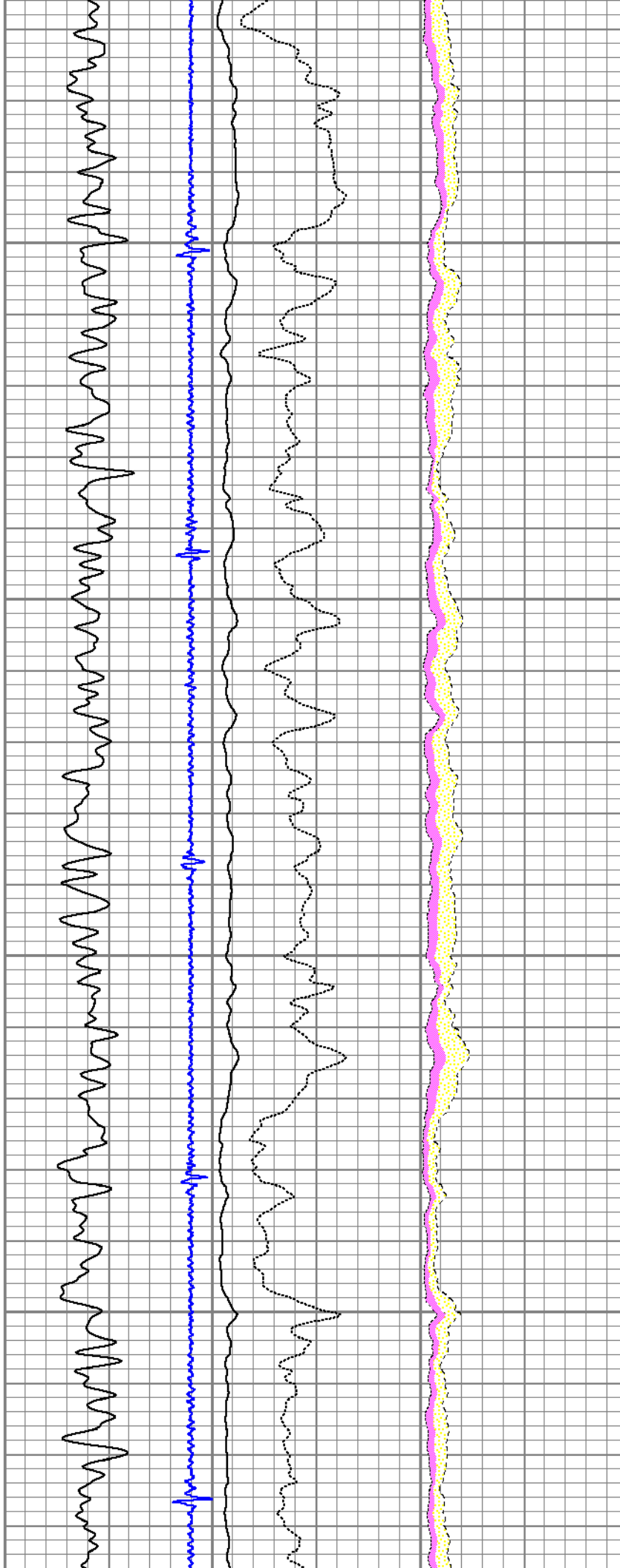
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2100



2200

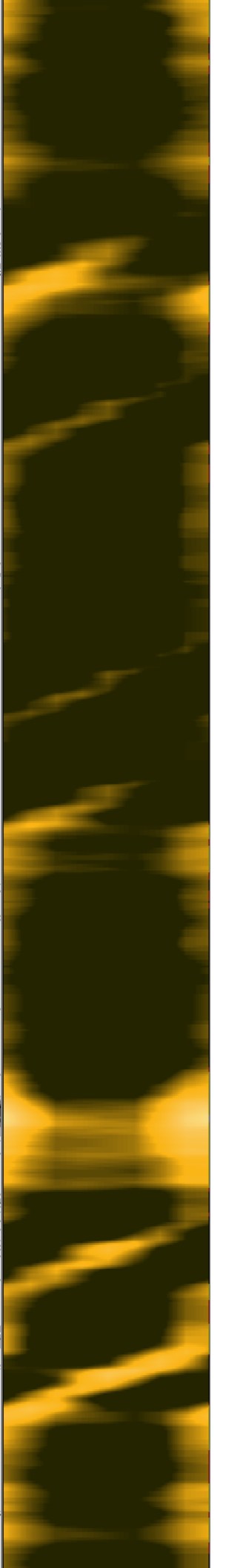
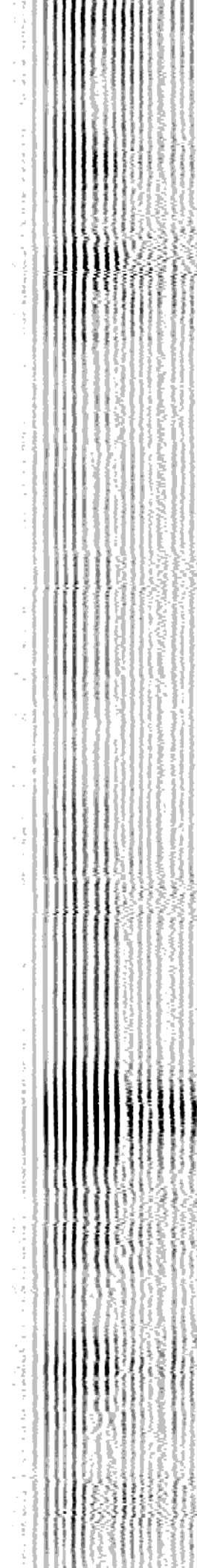
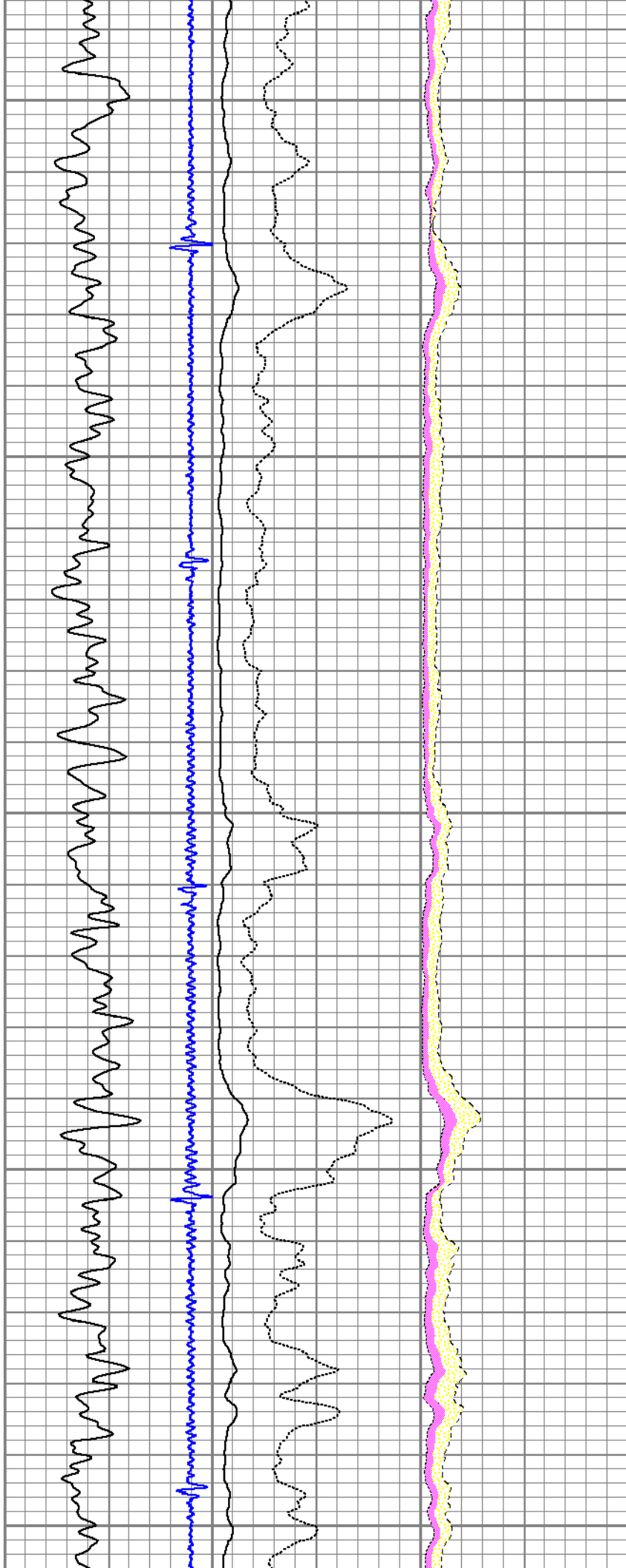
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2400

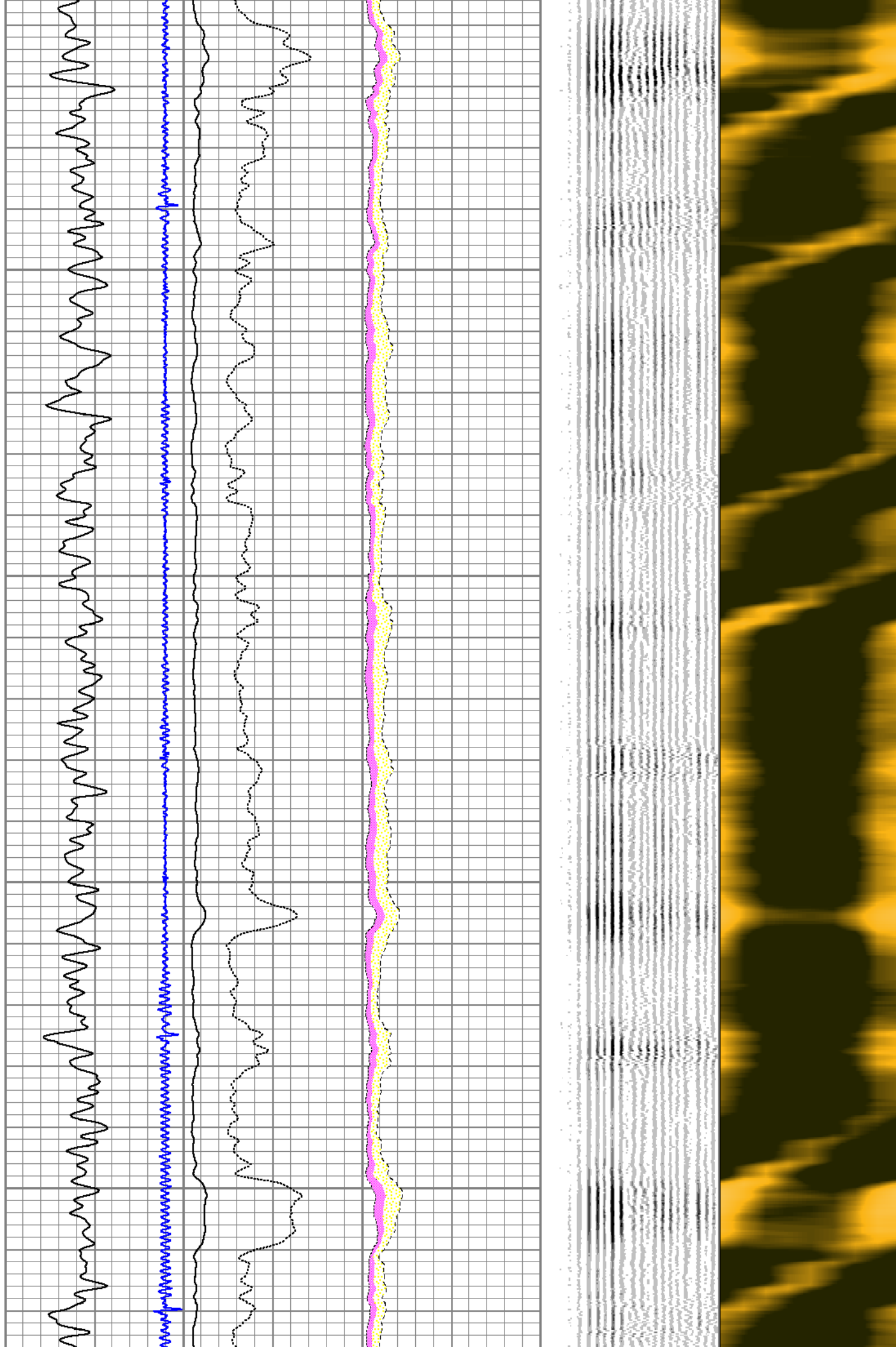
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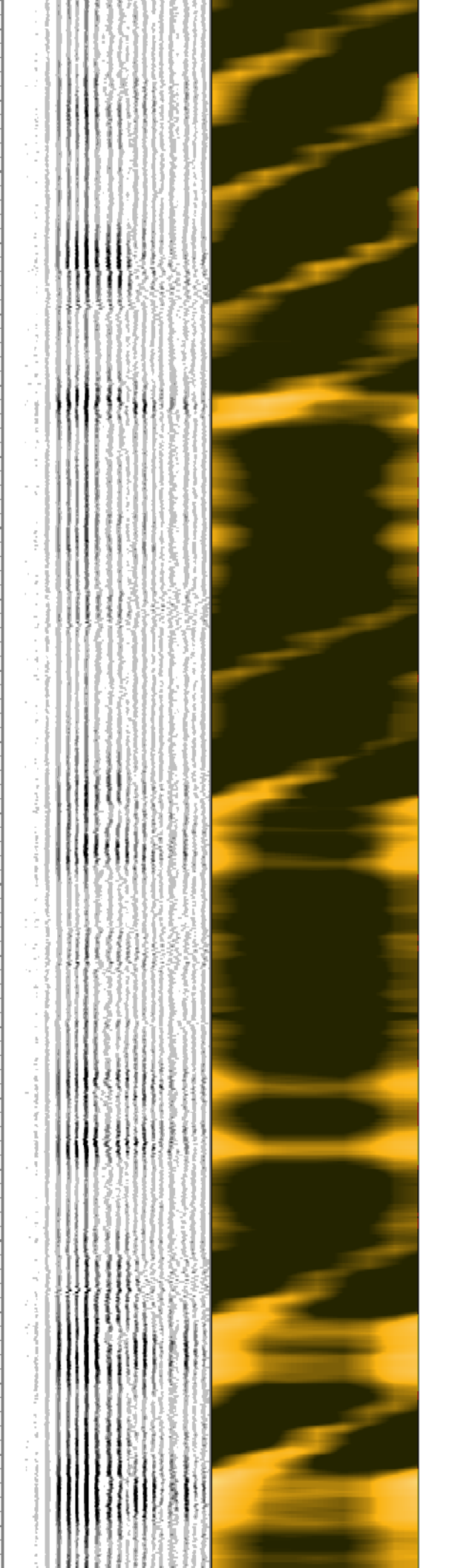
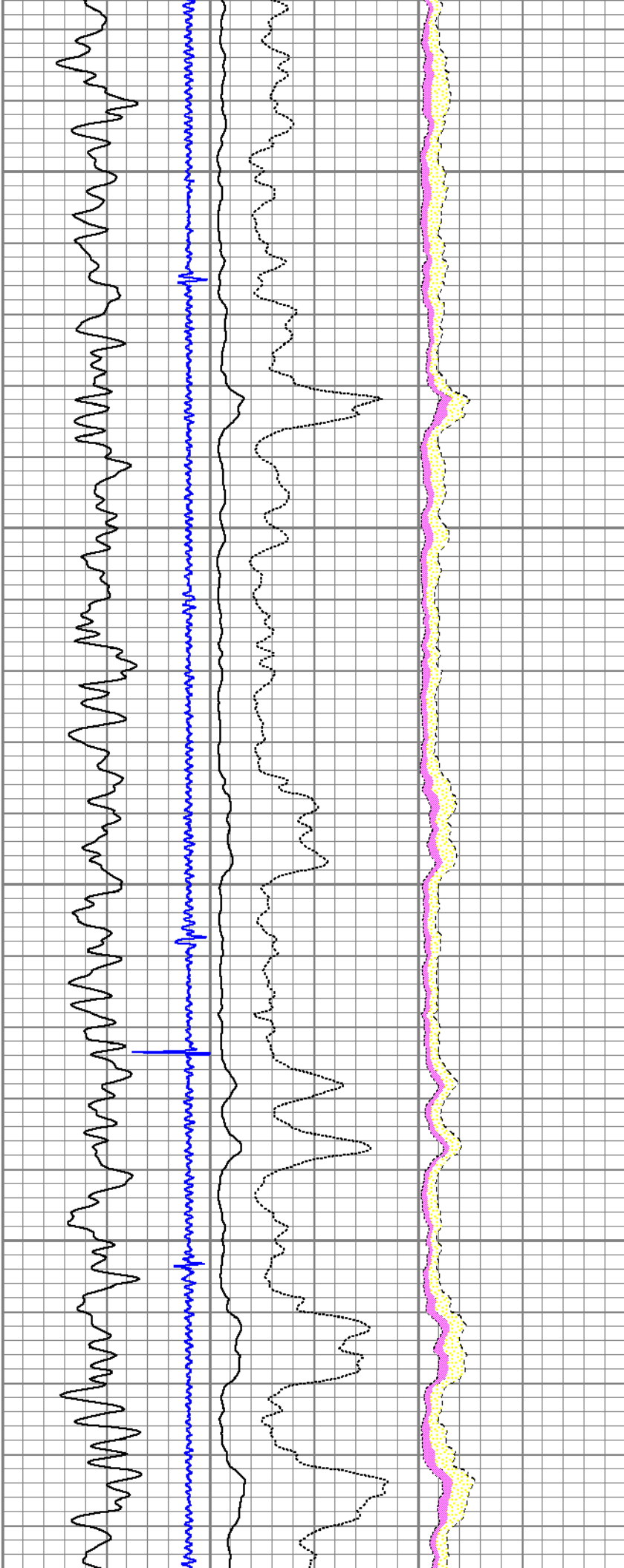
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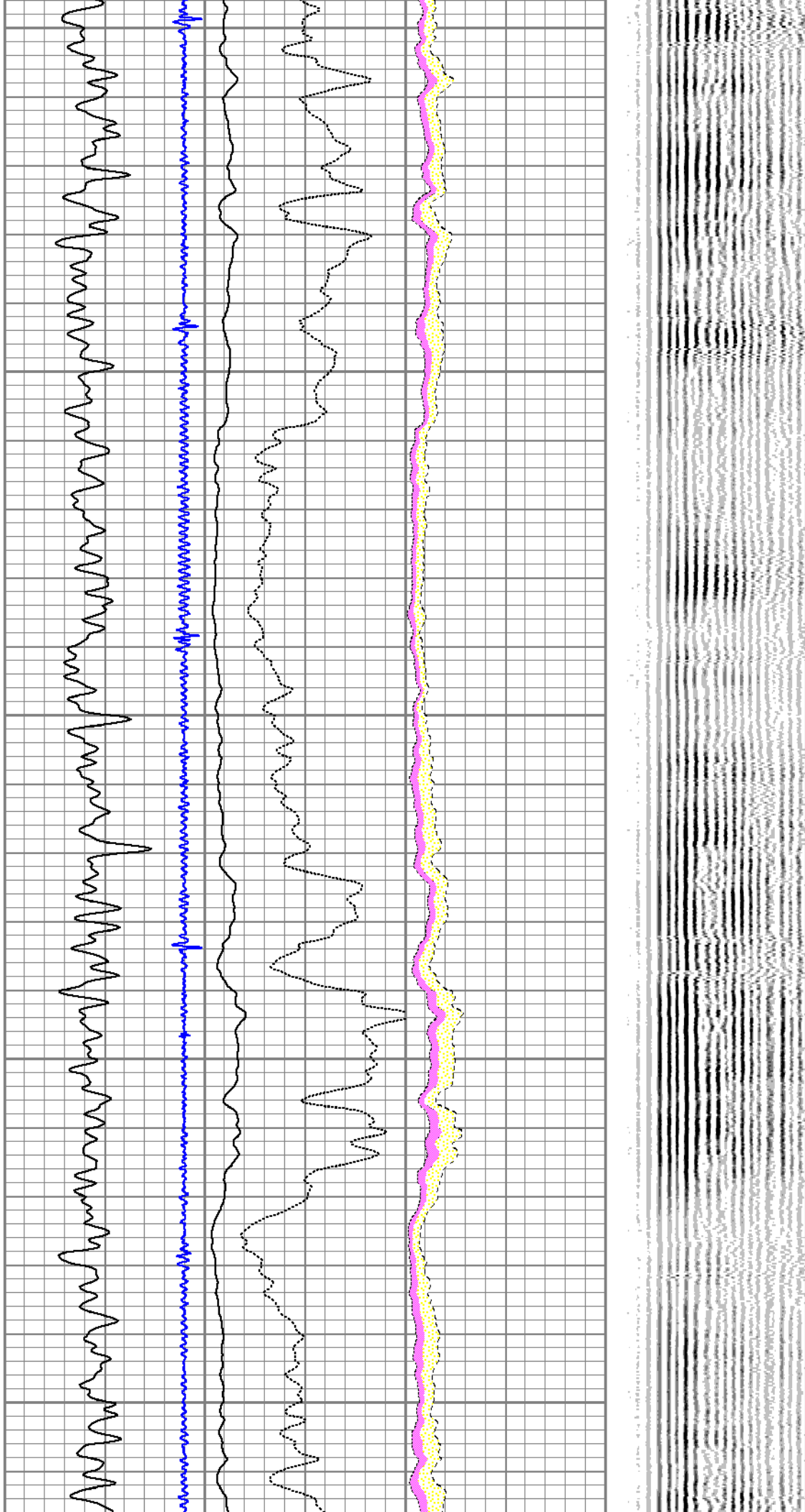
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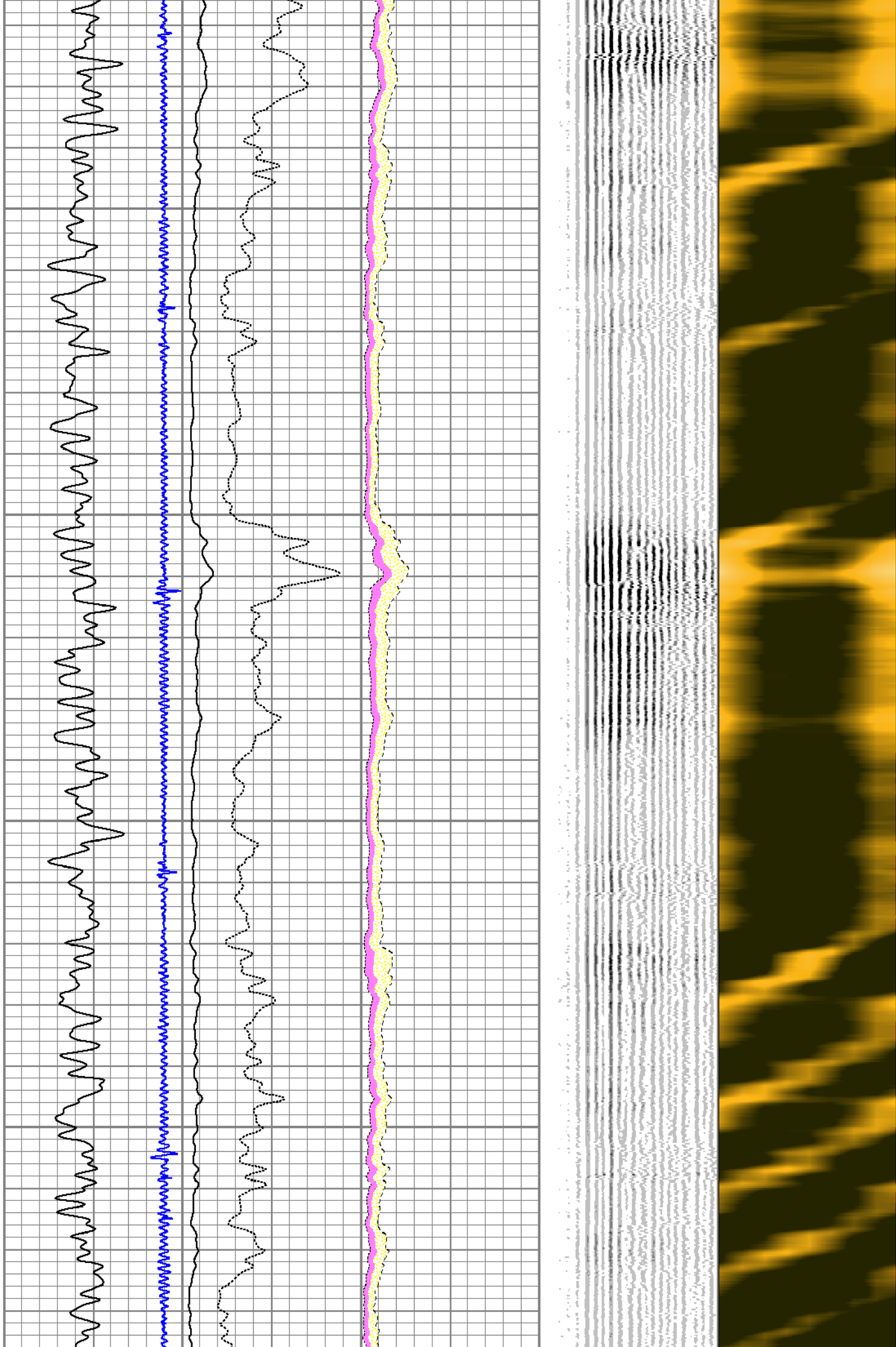
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3200



3300

3400

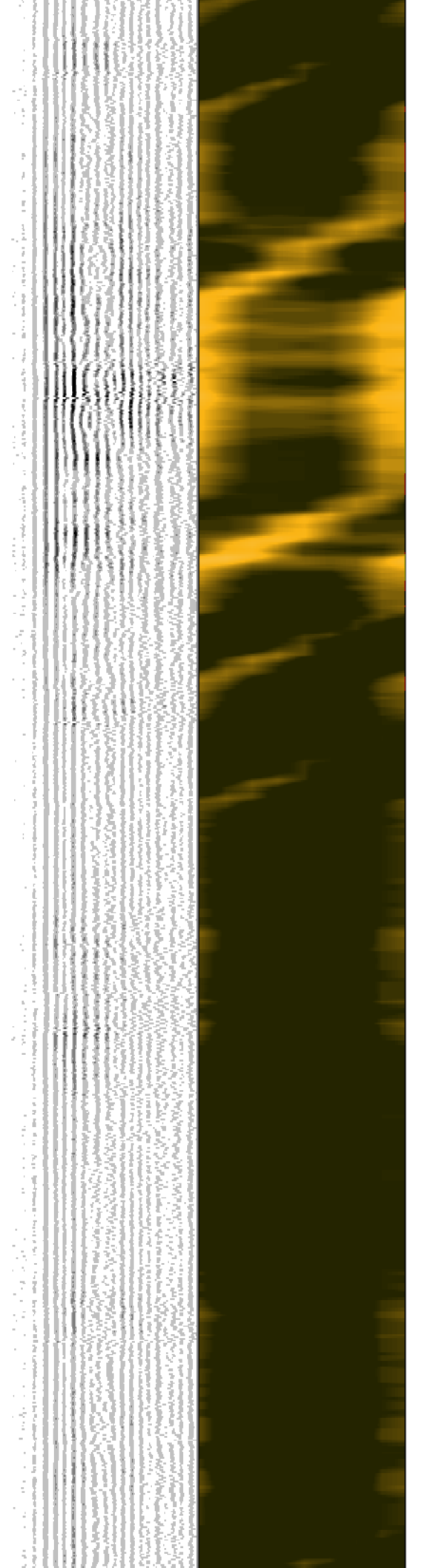
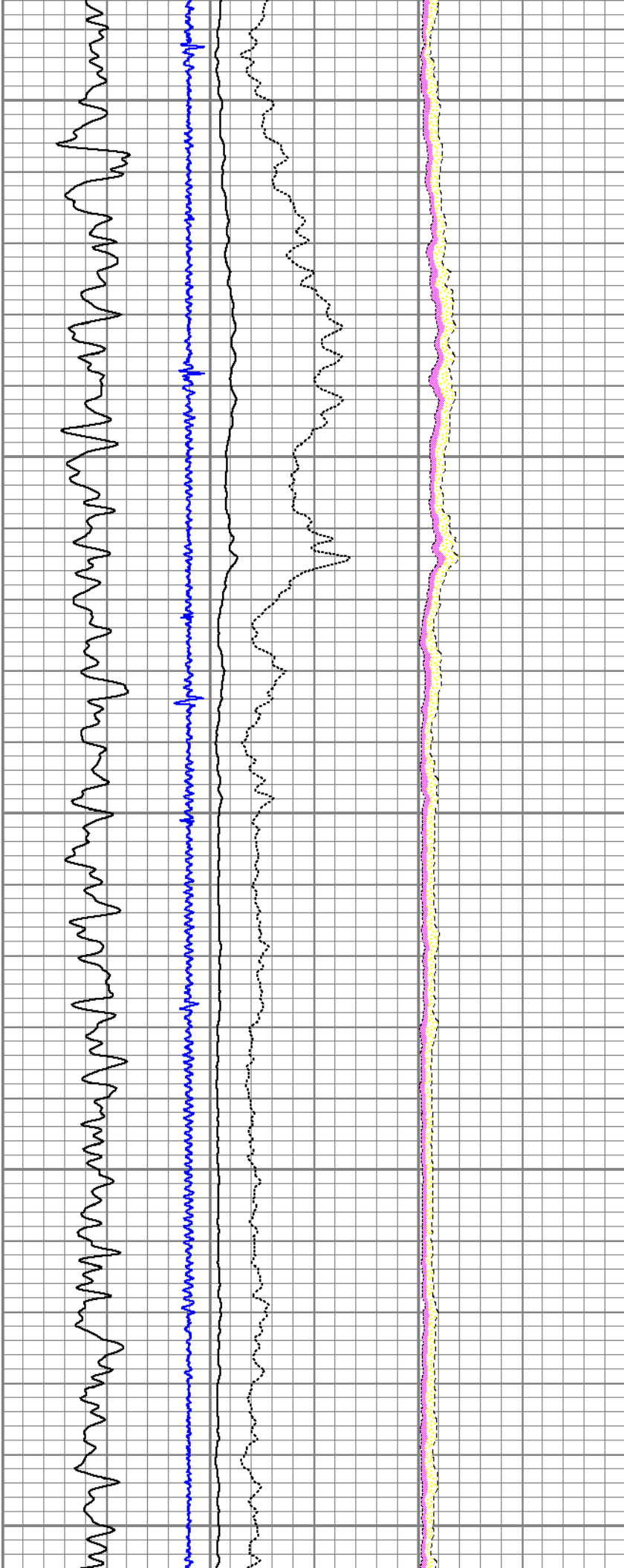




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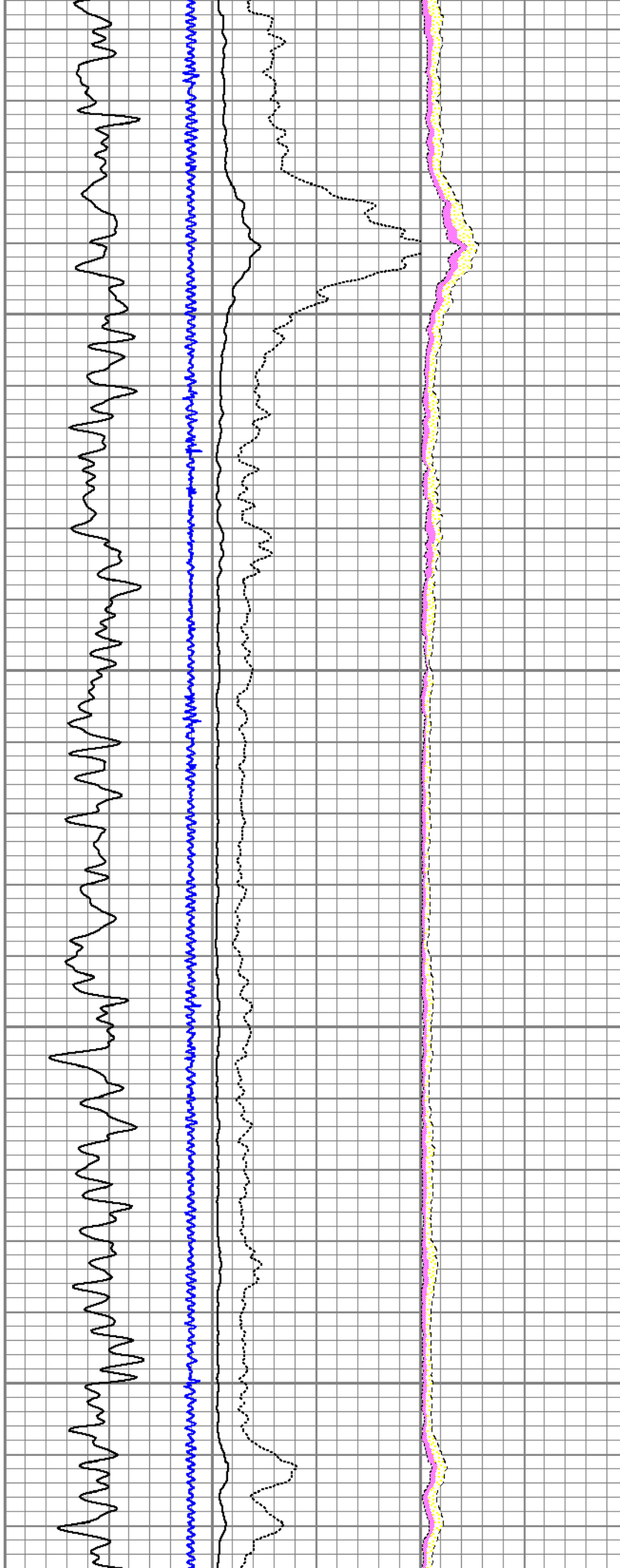
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3700



3800

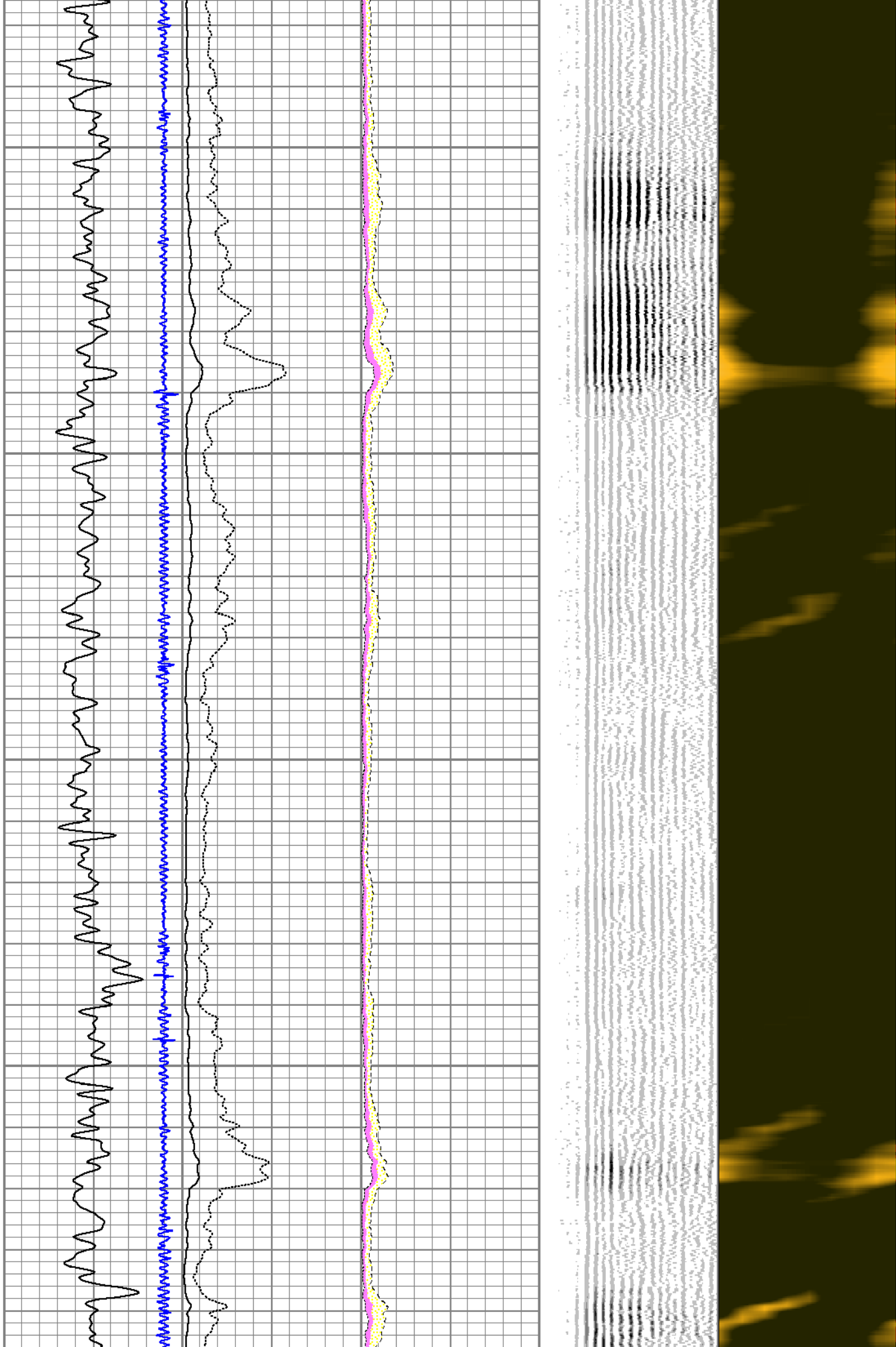
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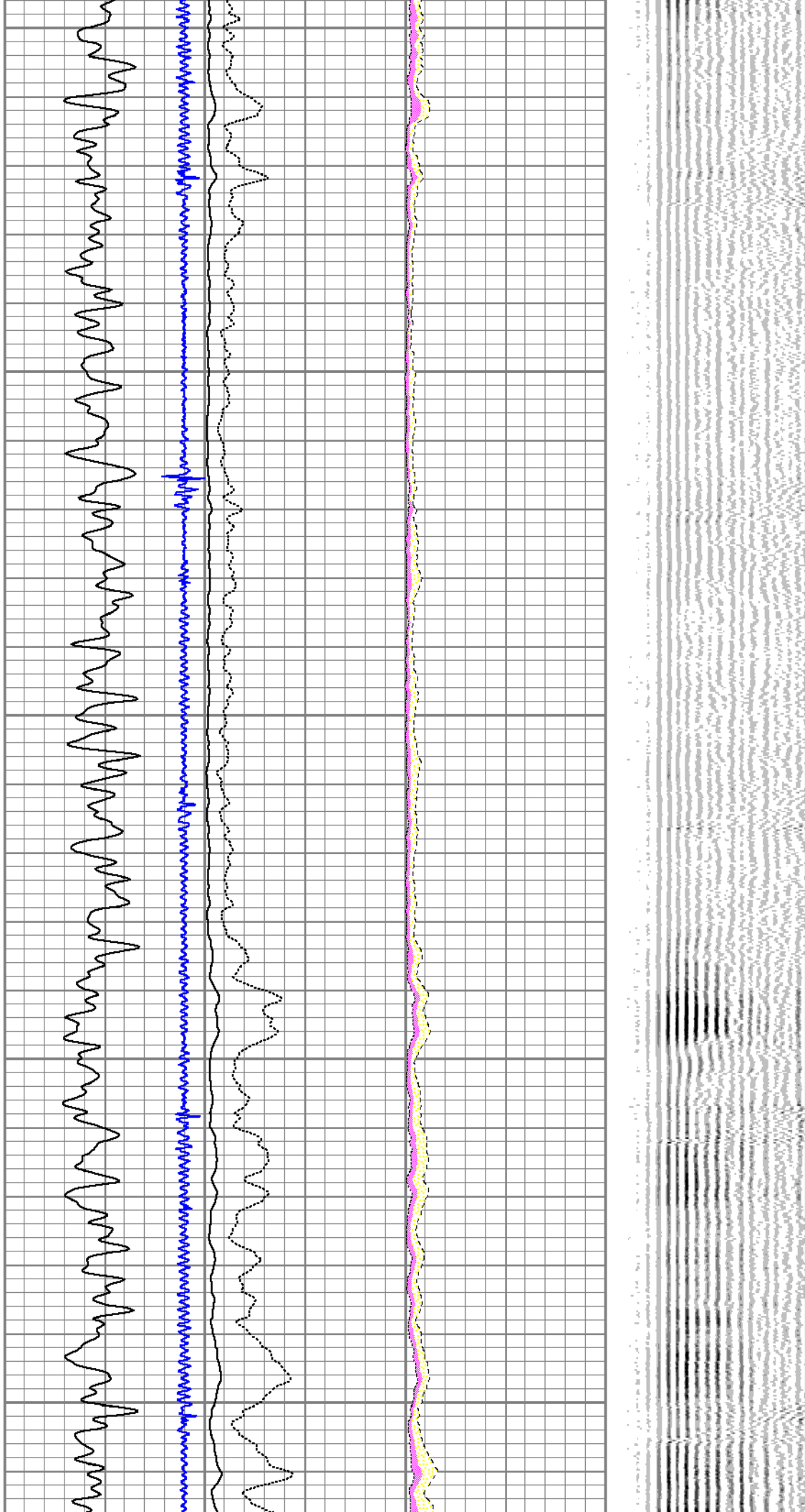
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4100



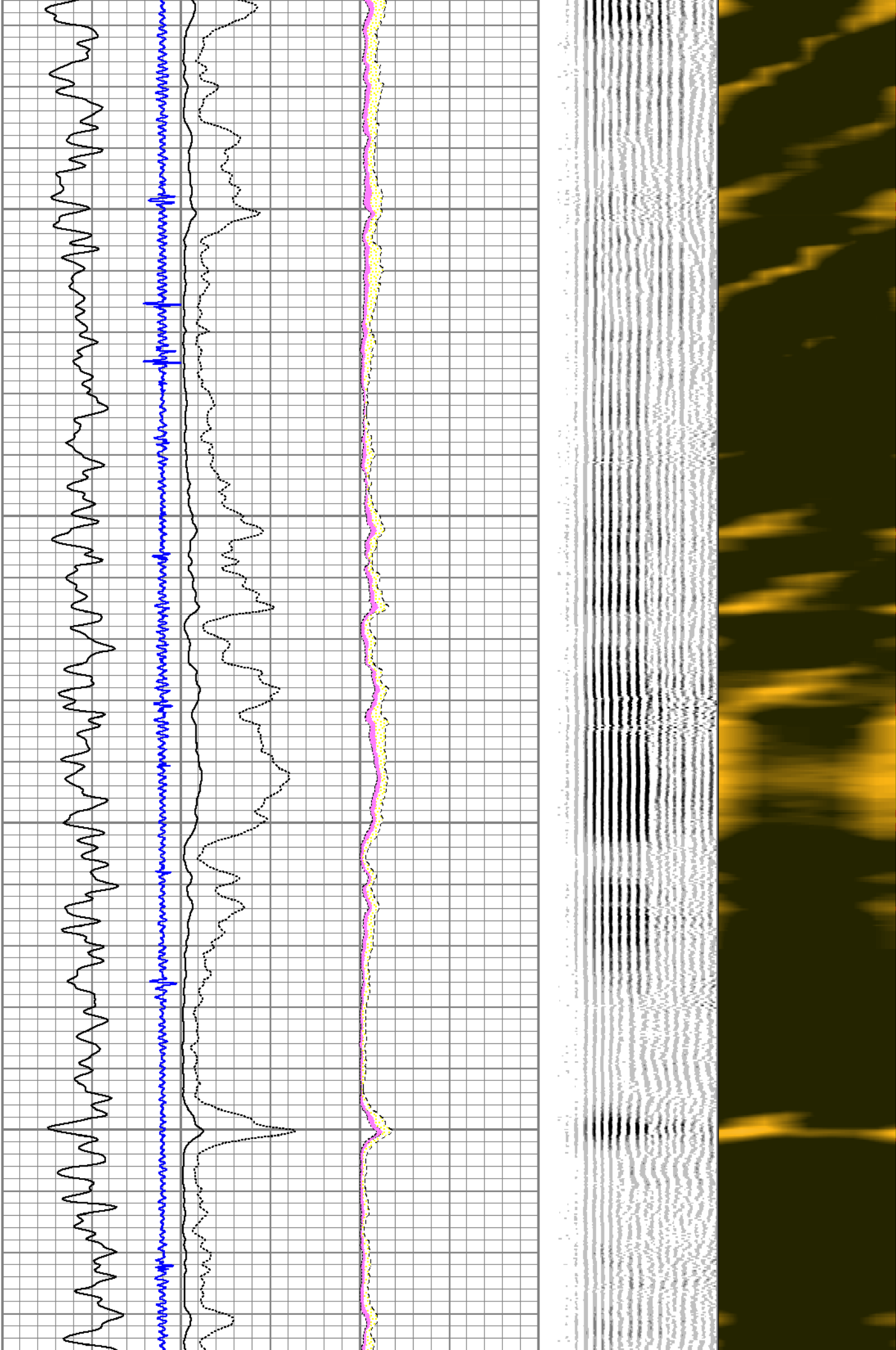
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4300



4400

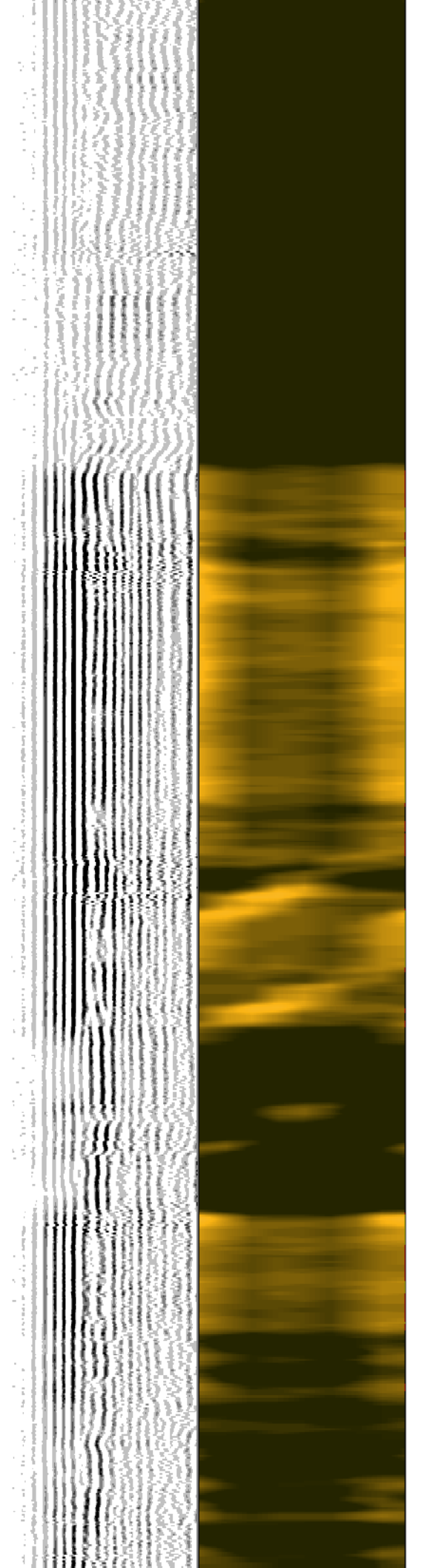
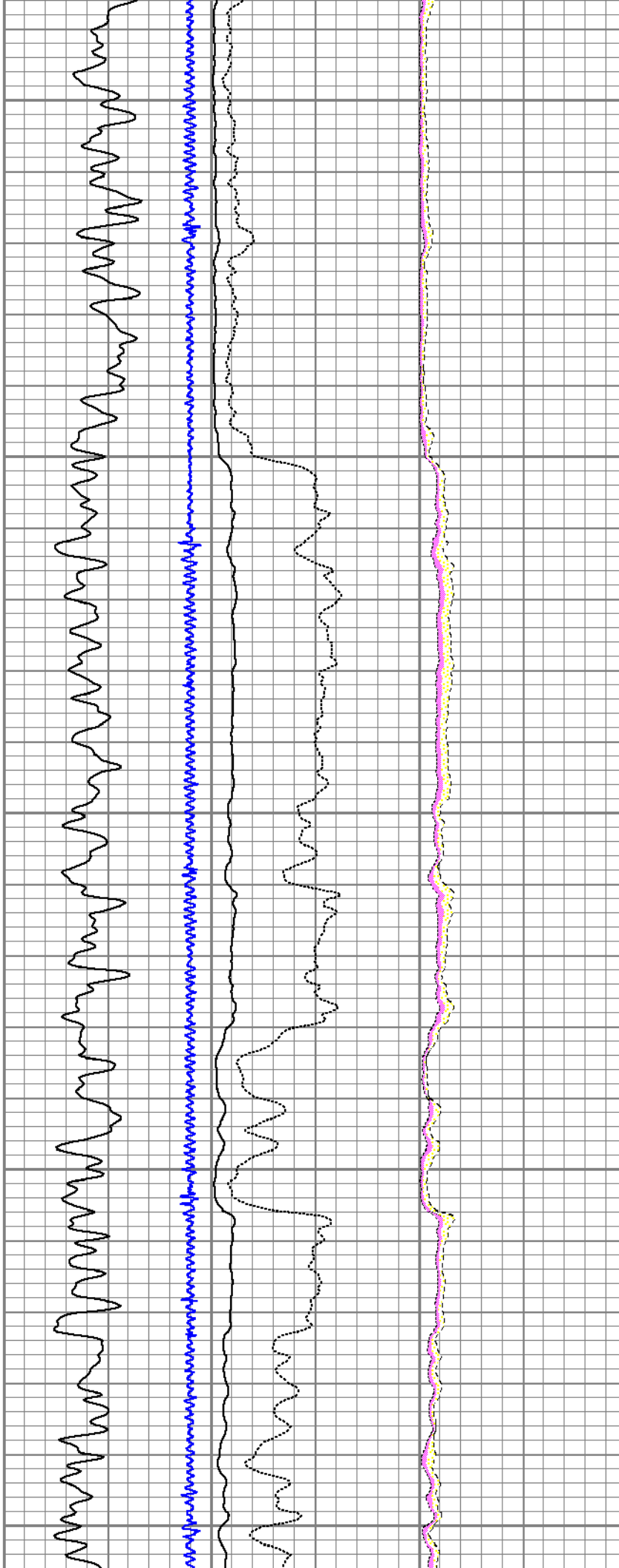
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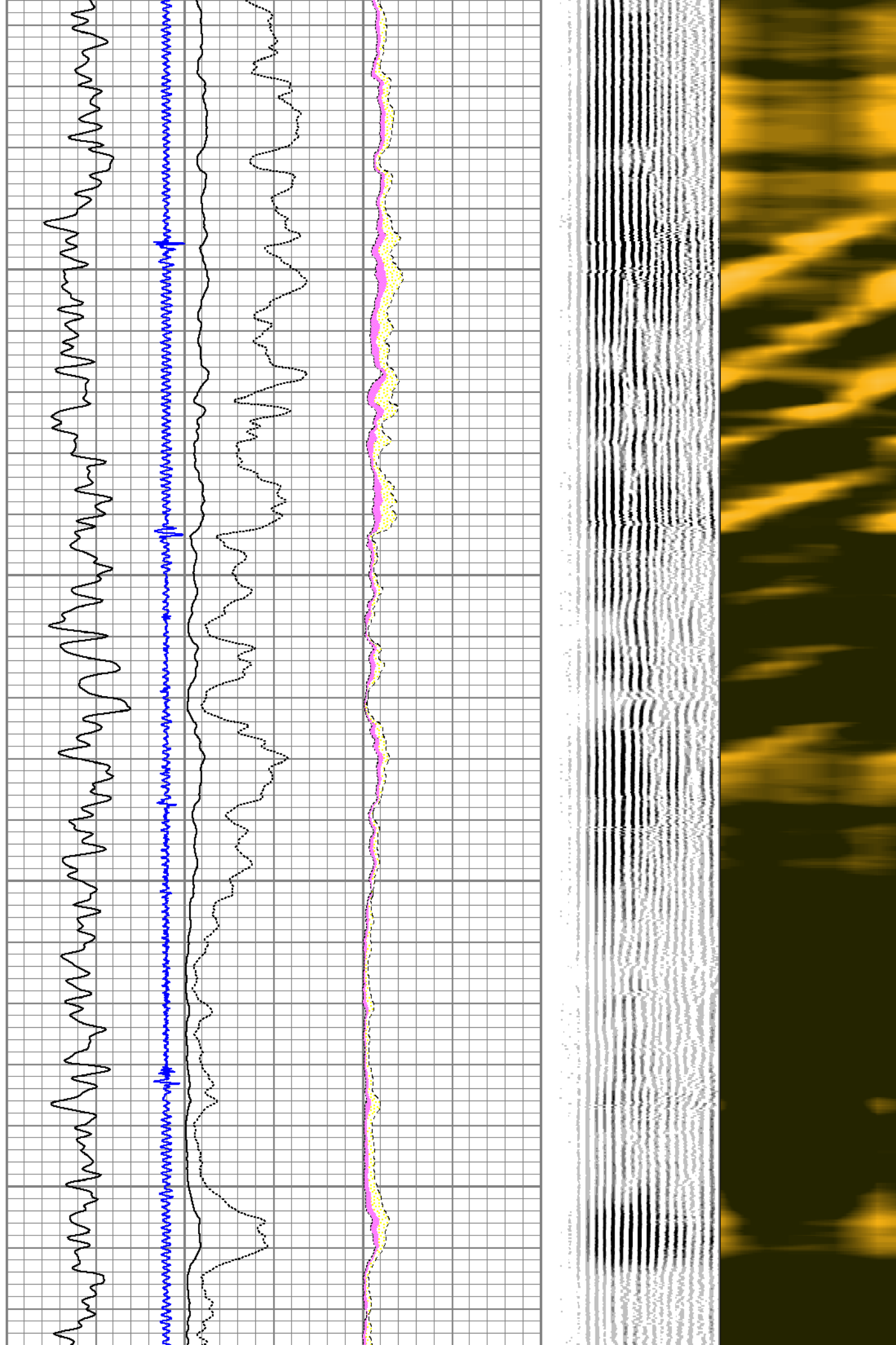
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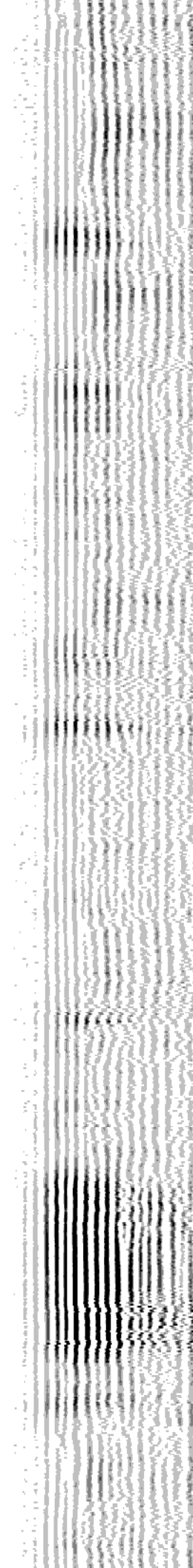
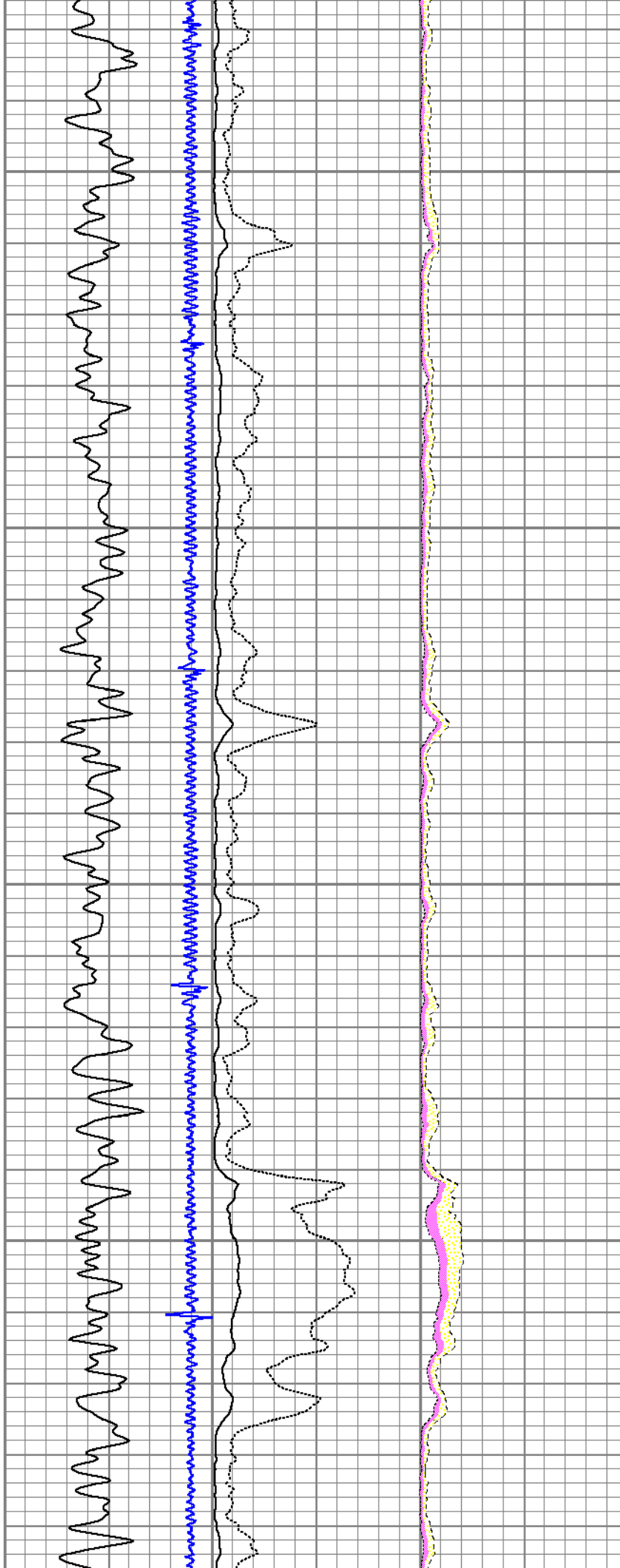


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5100

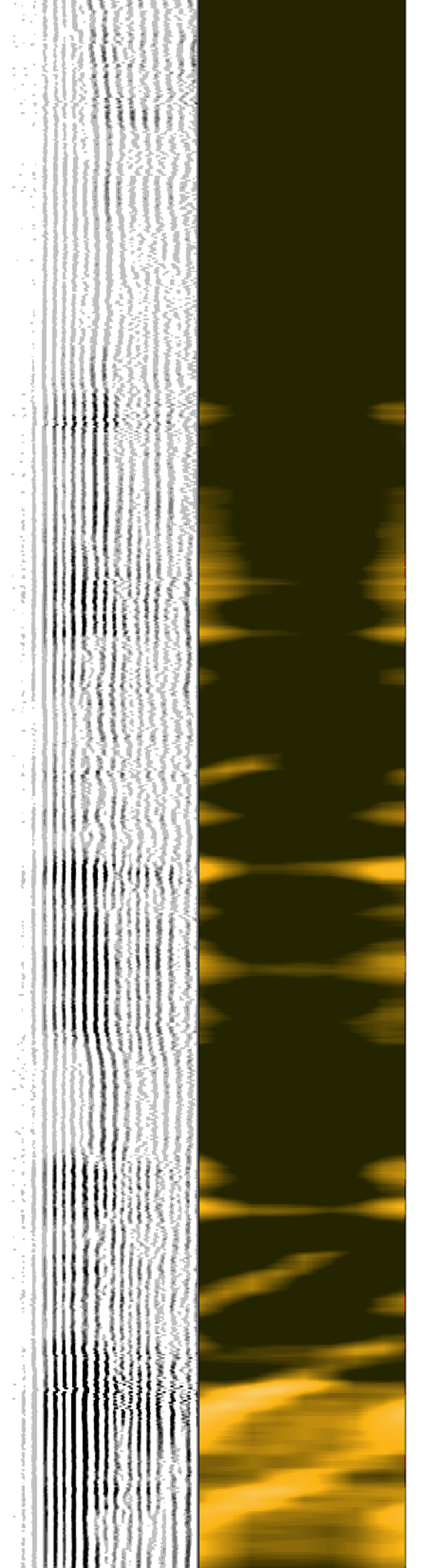
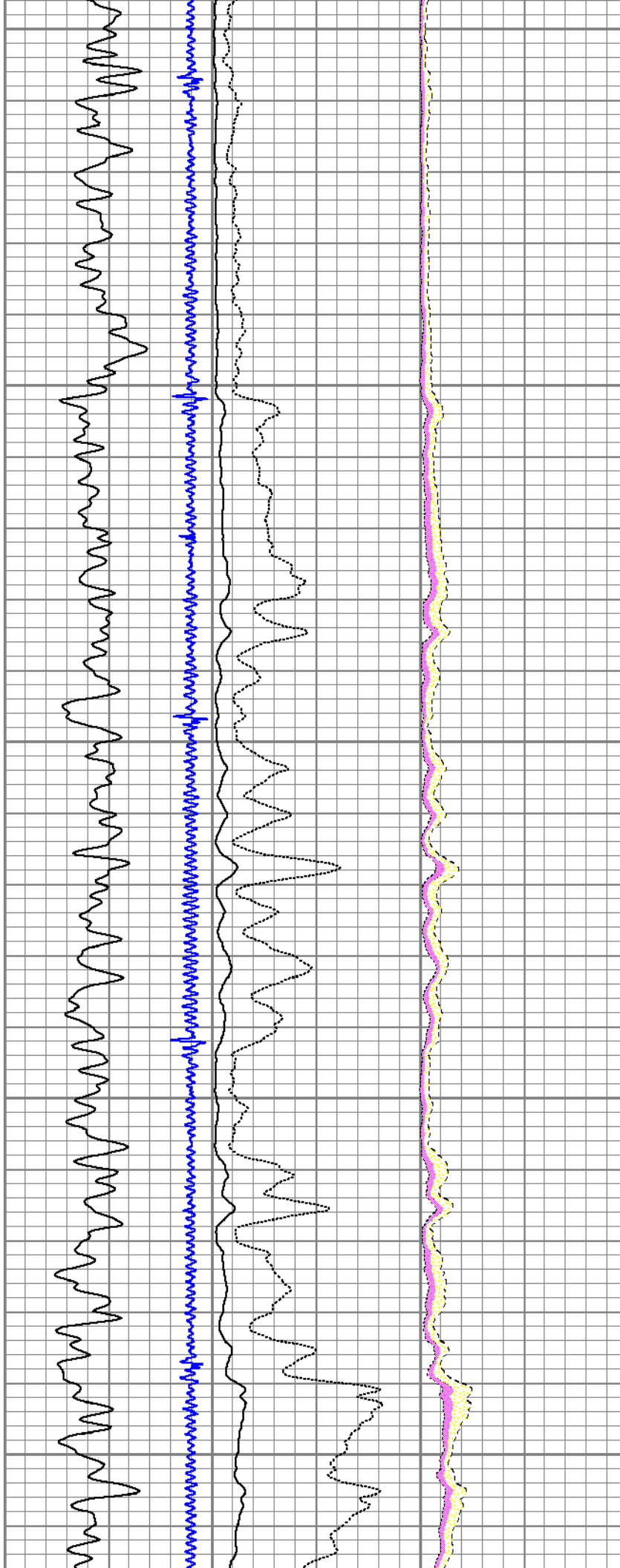
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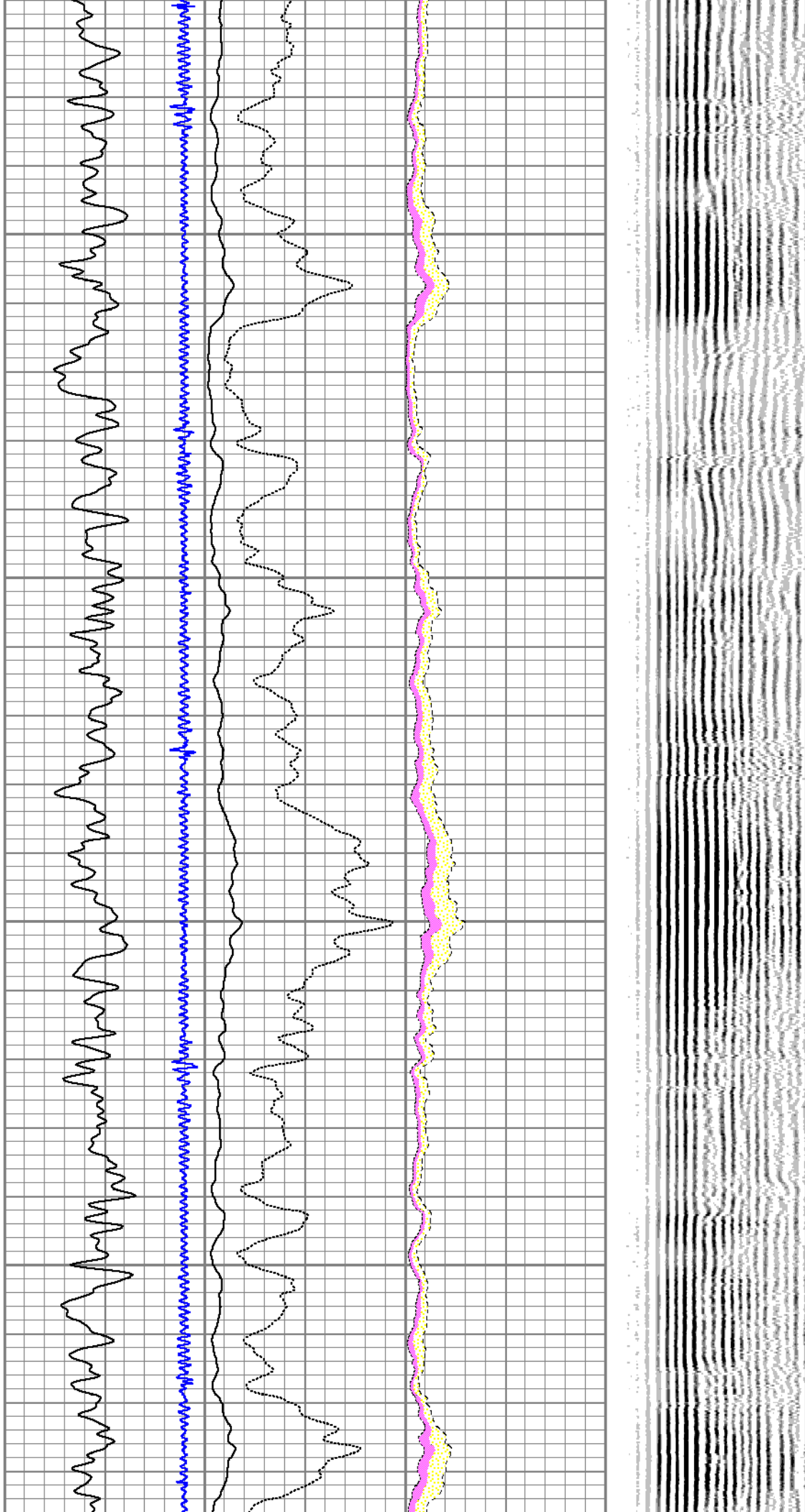
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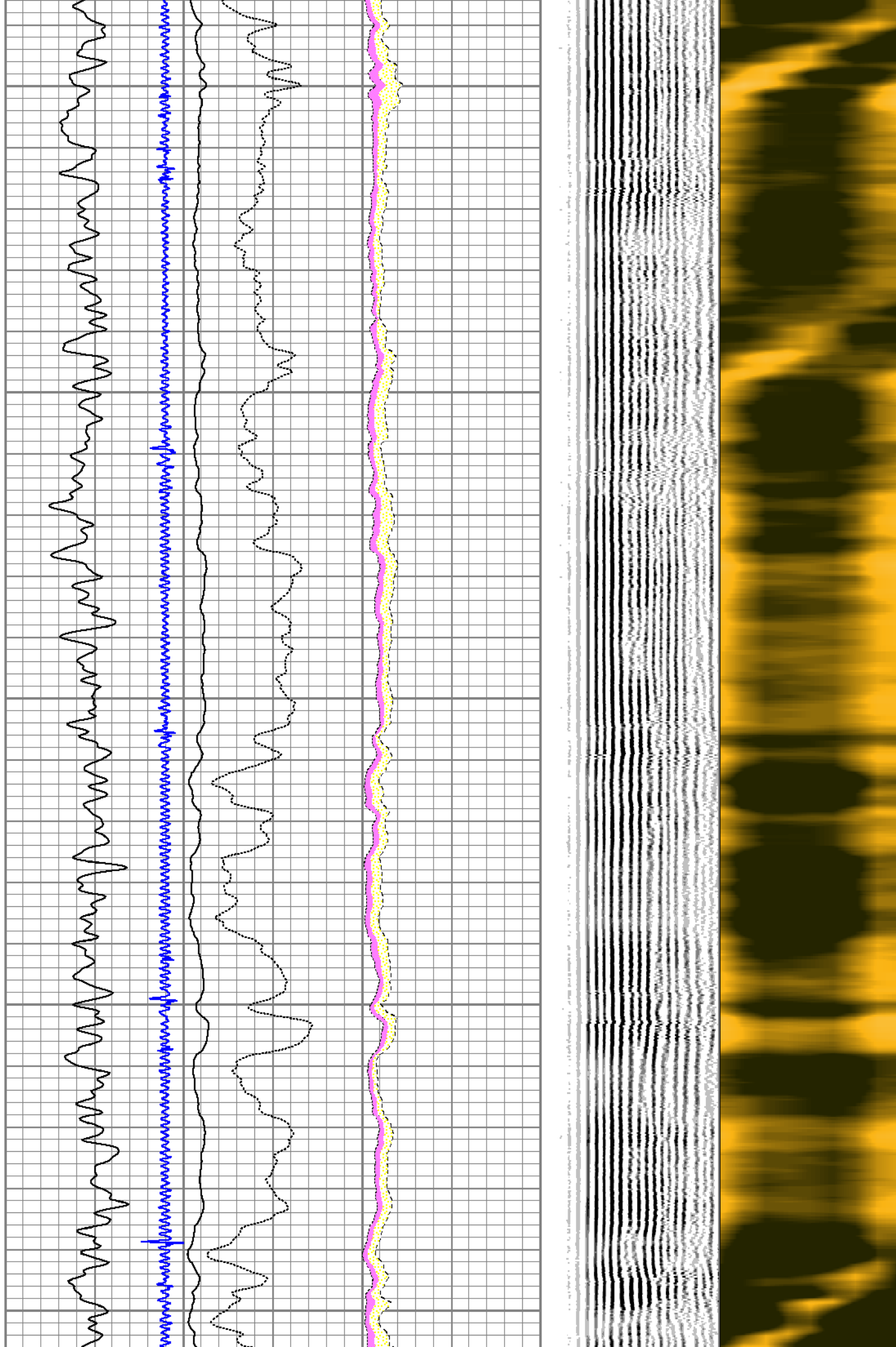
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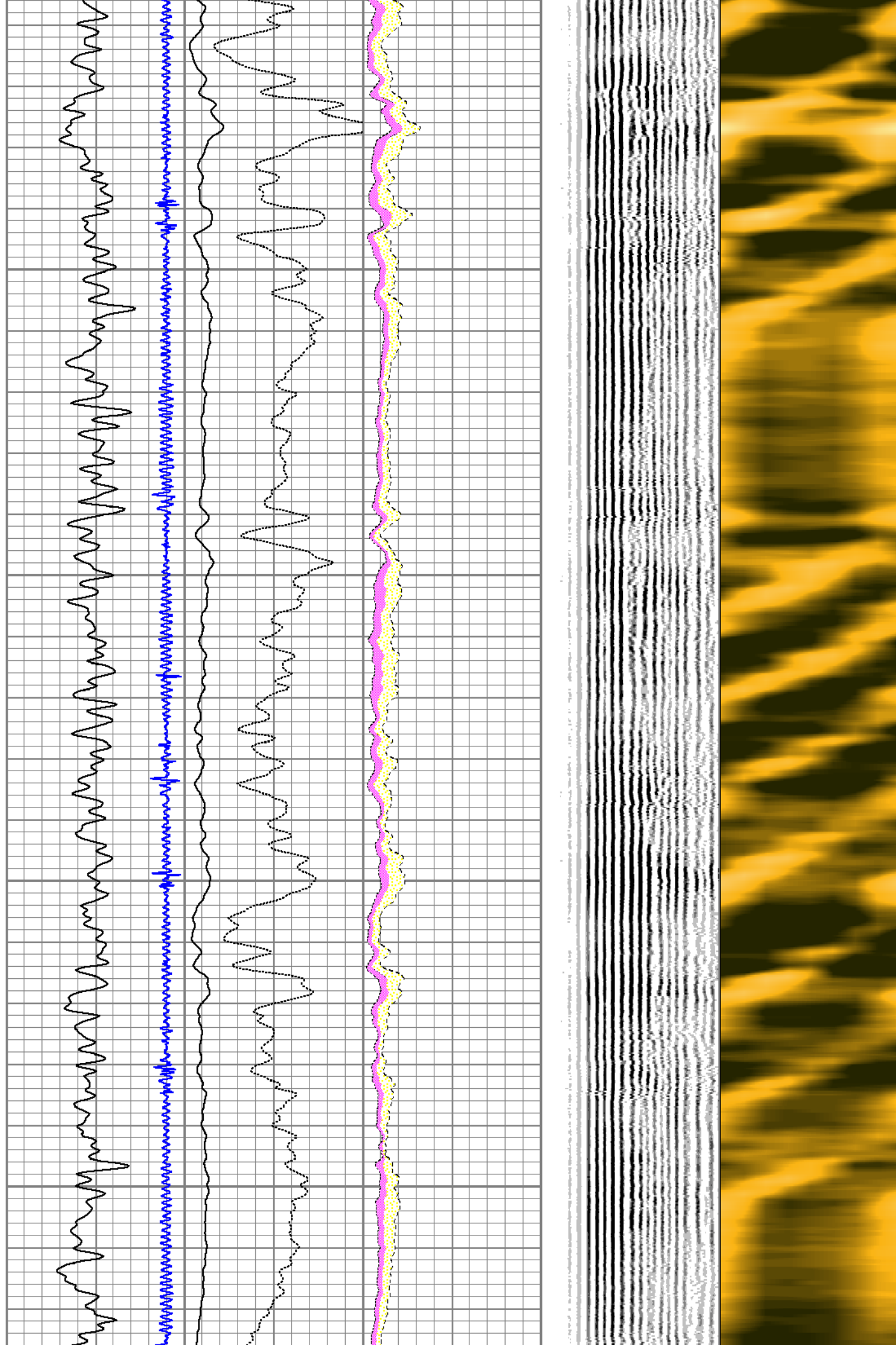


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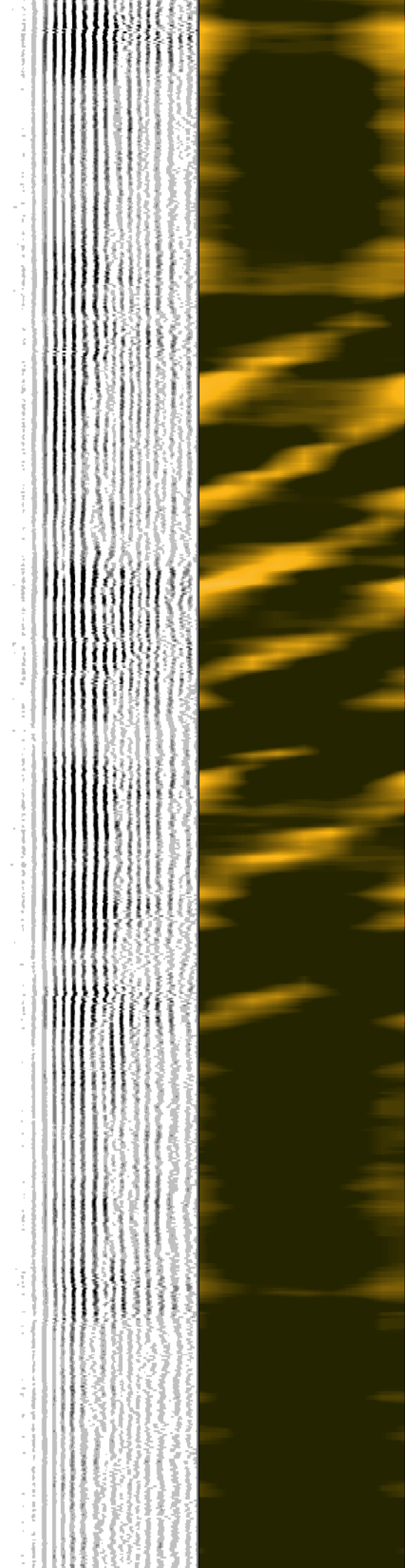
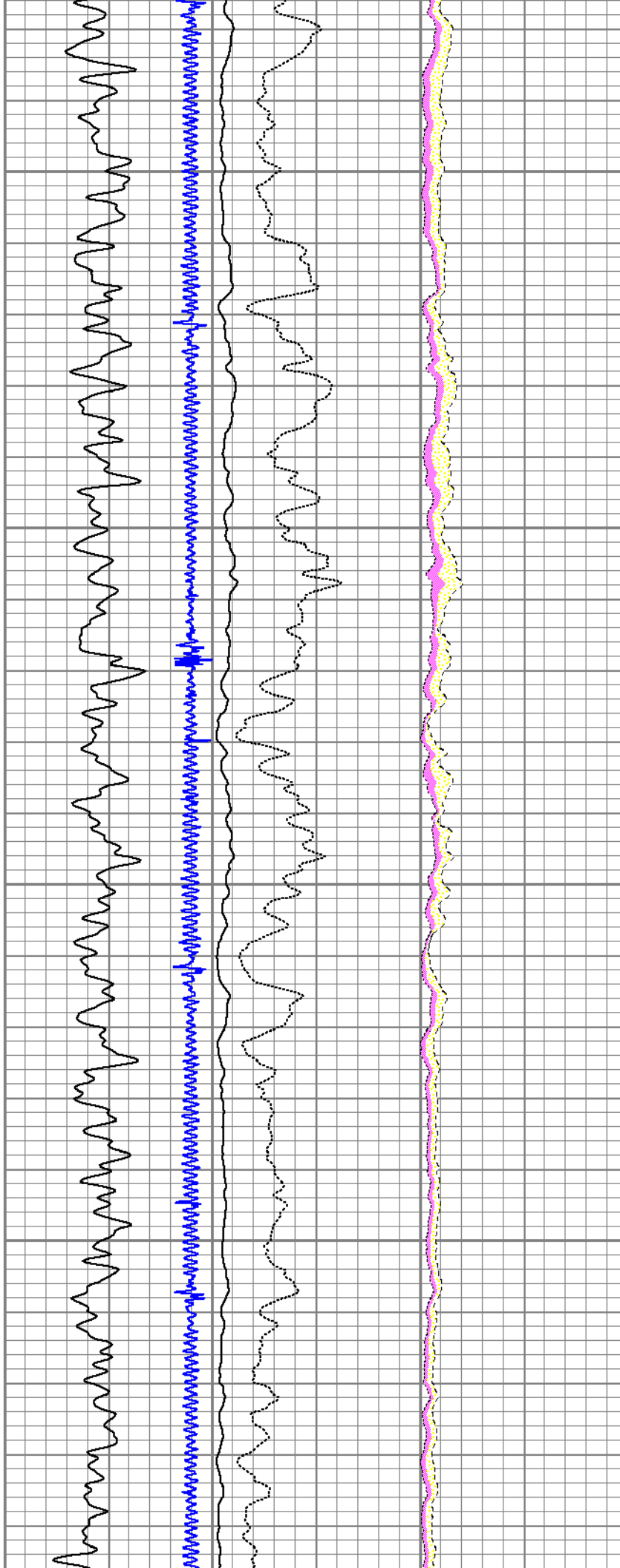
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6200

6300

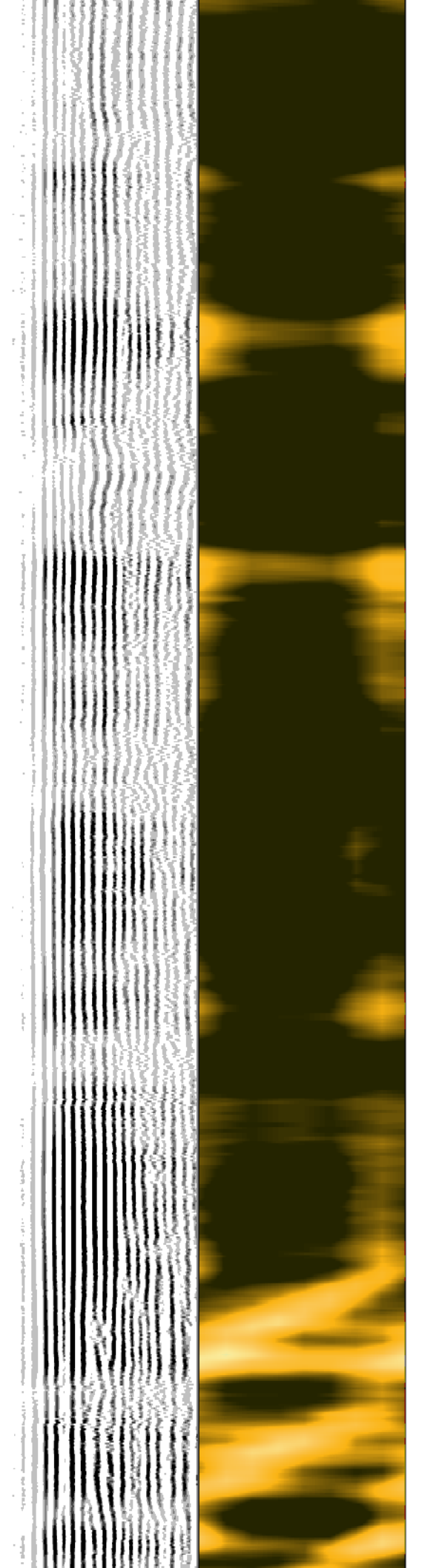
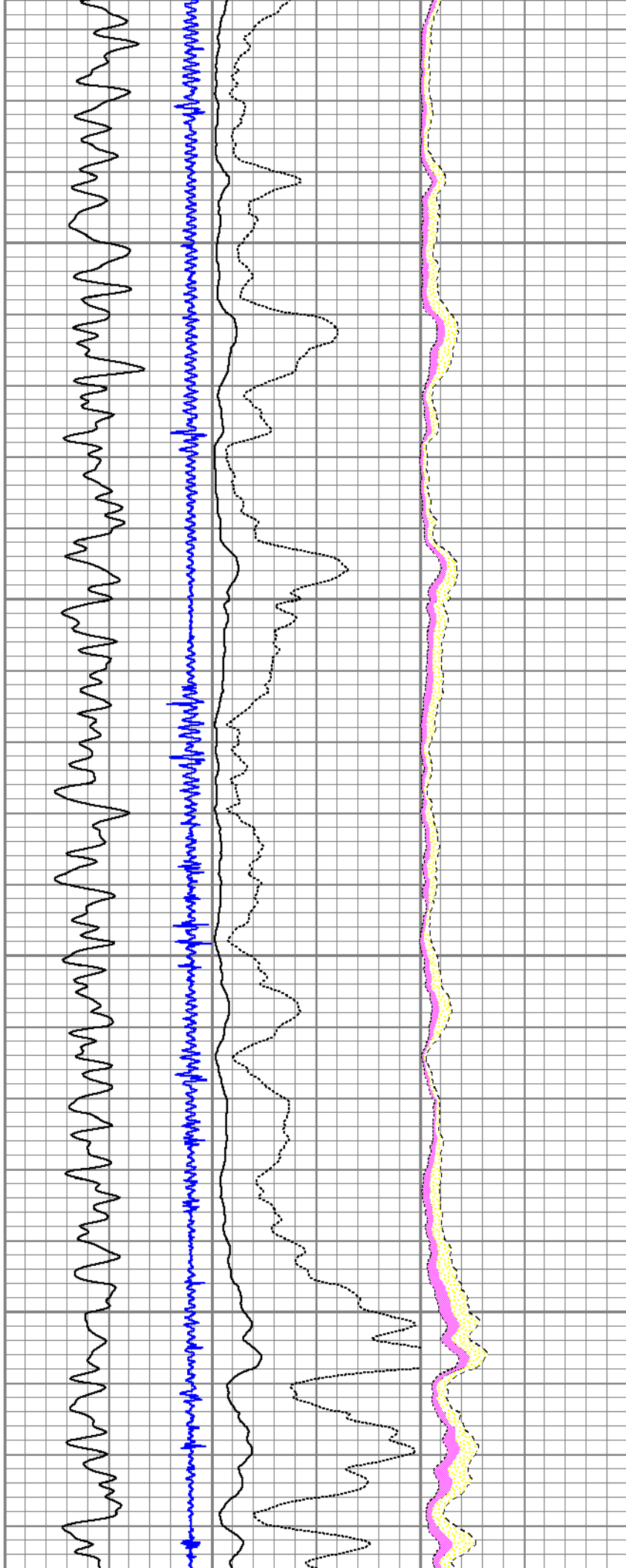


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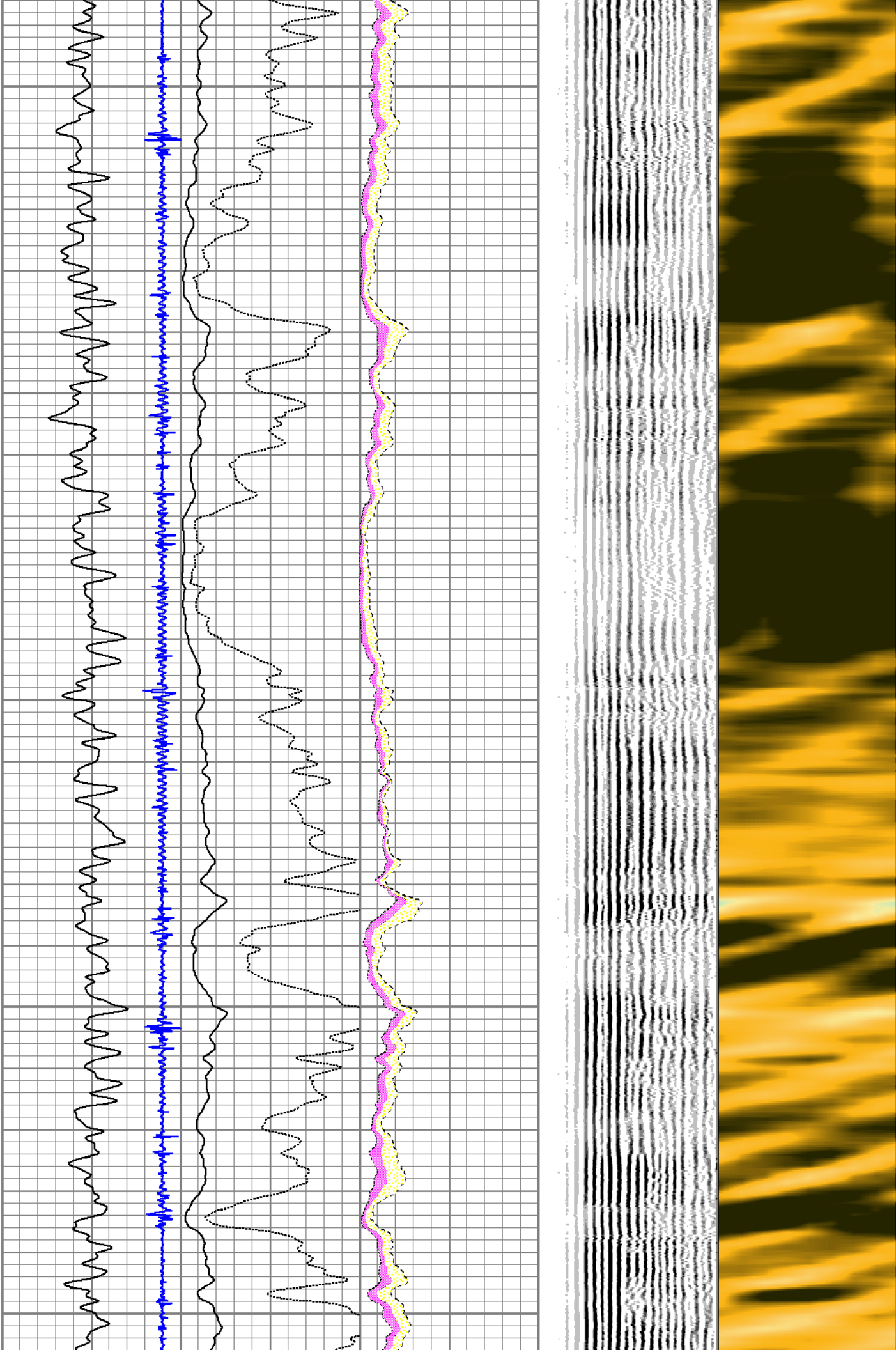
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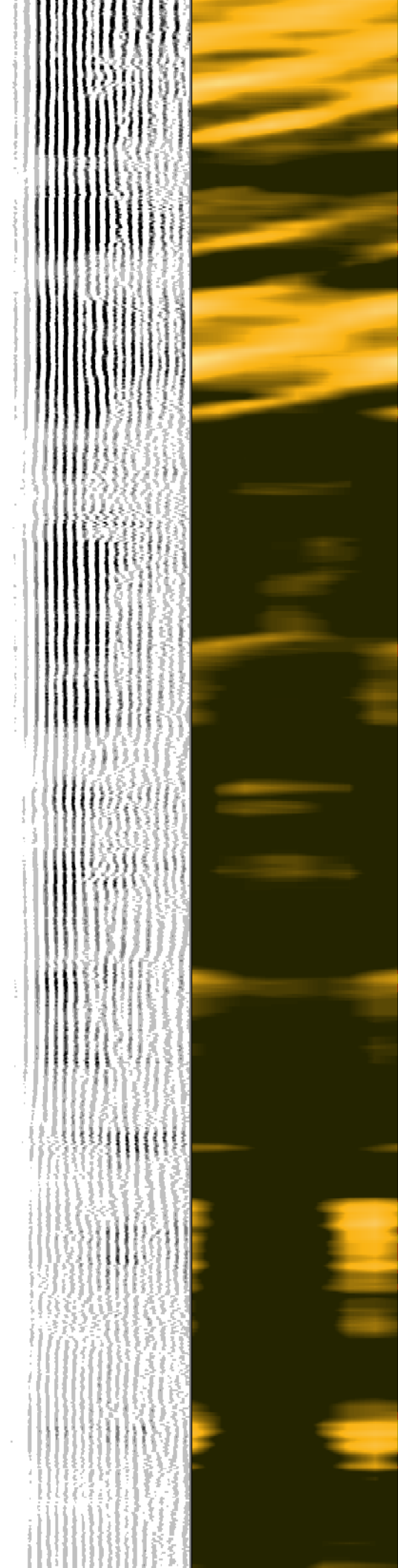
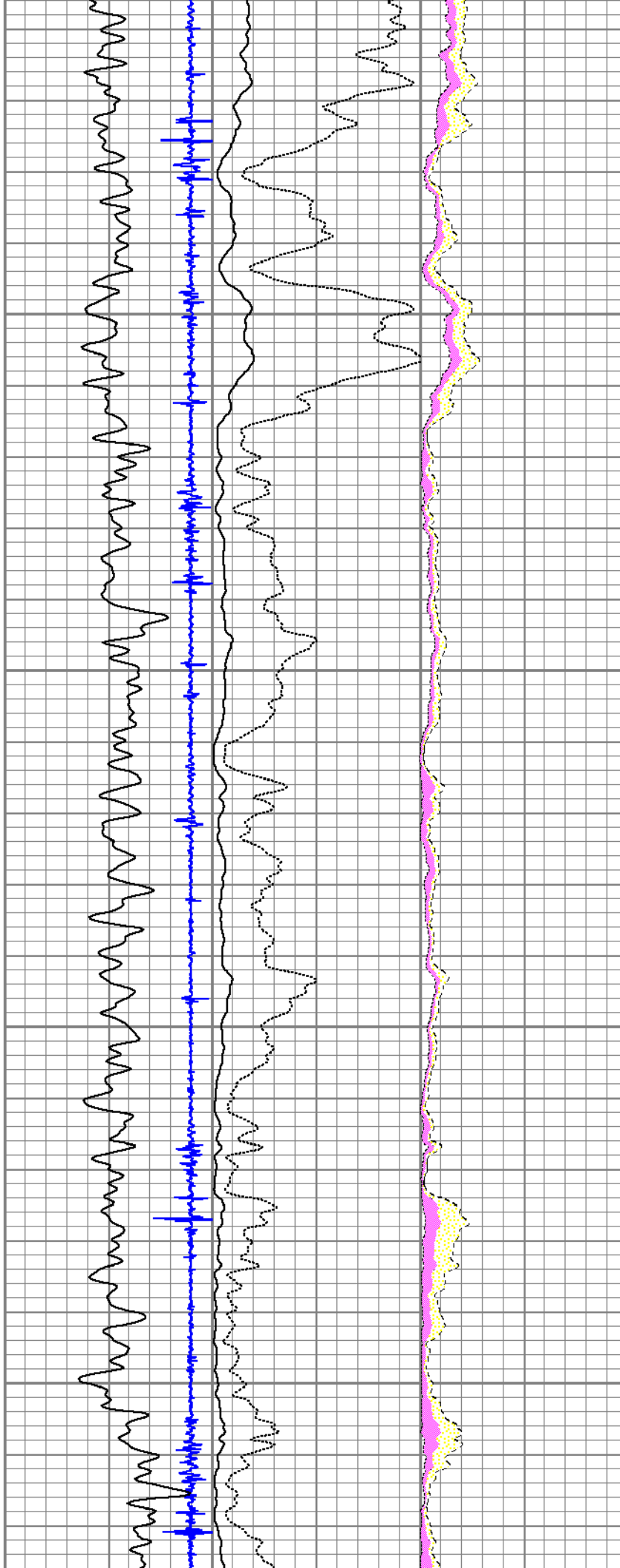
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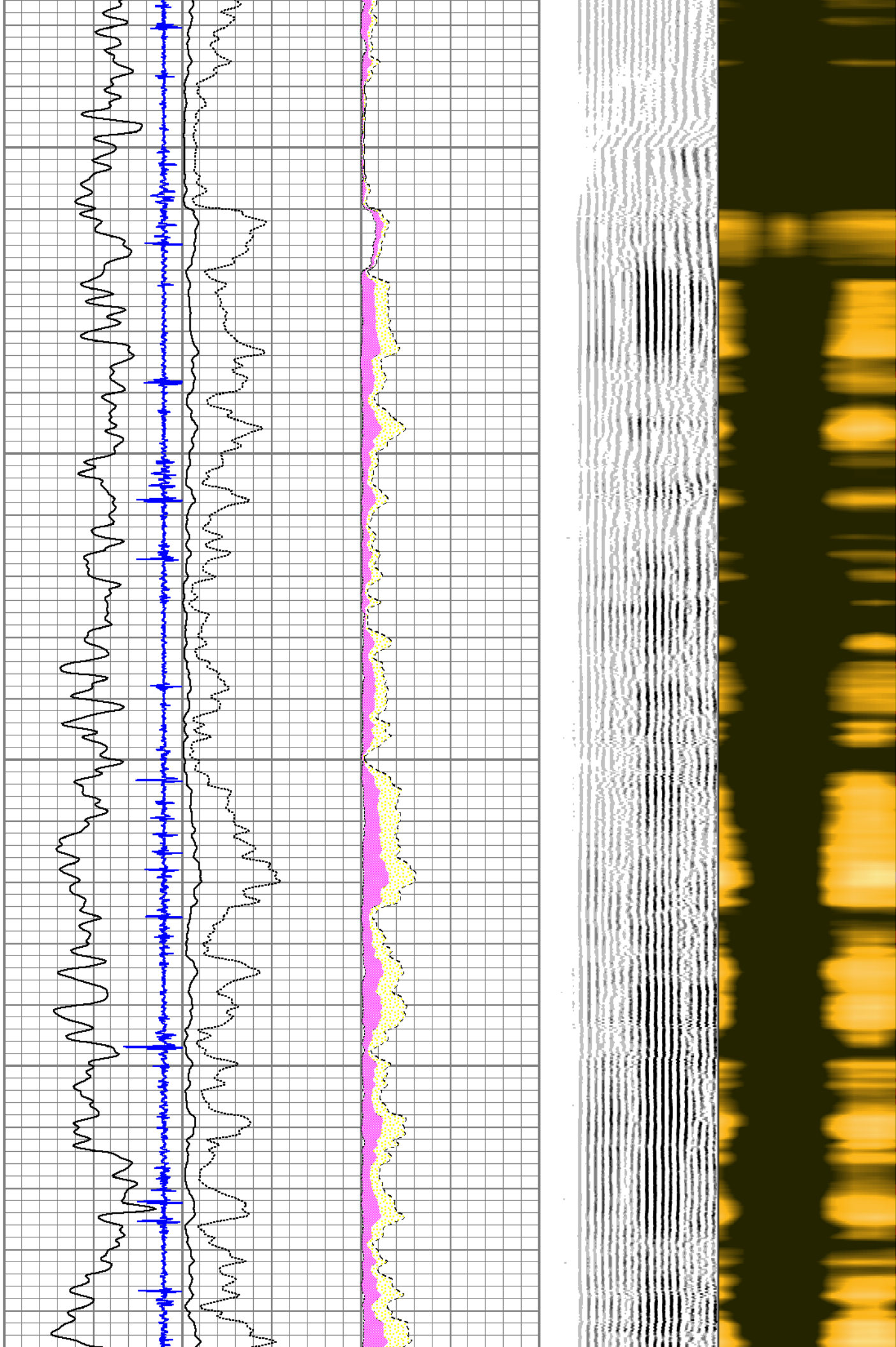
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7200



7300

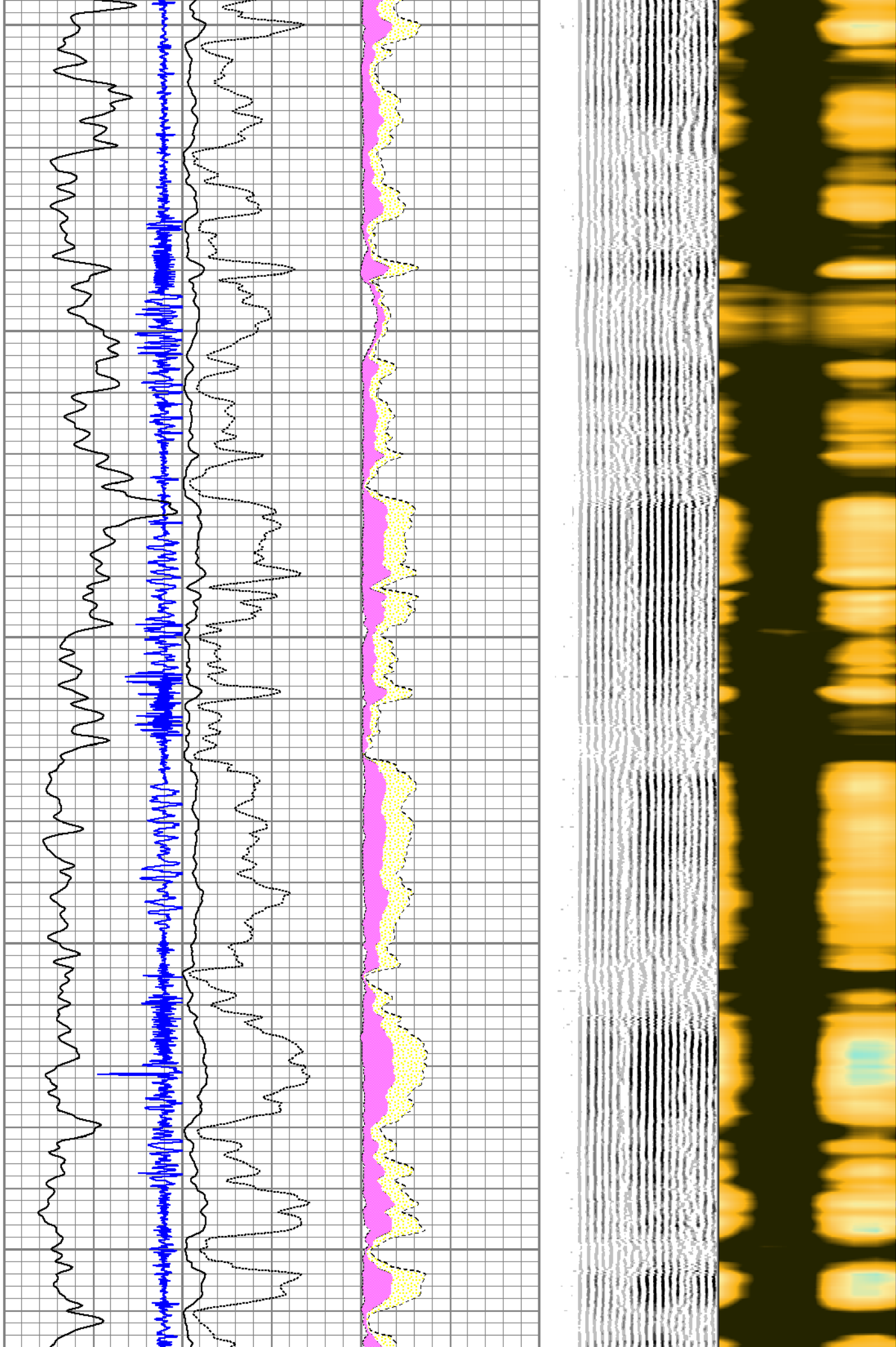
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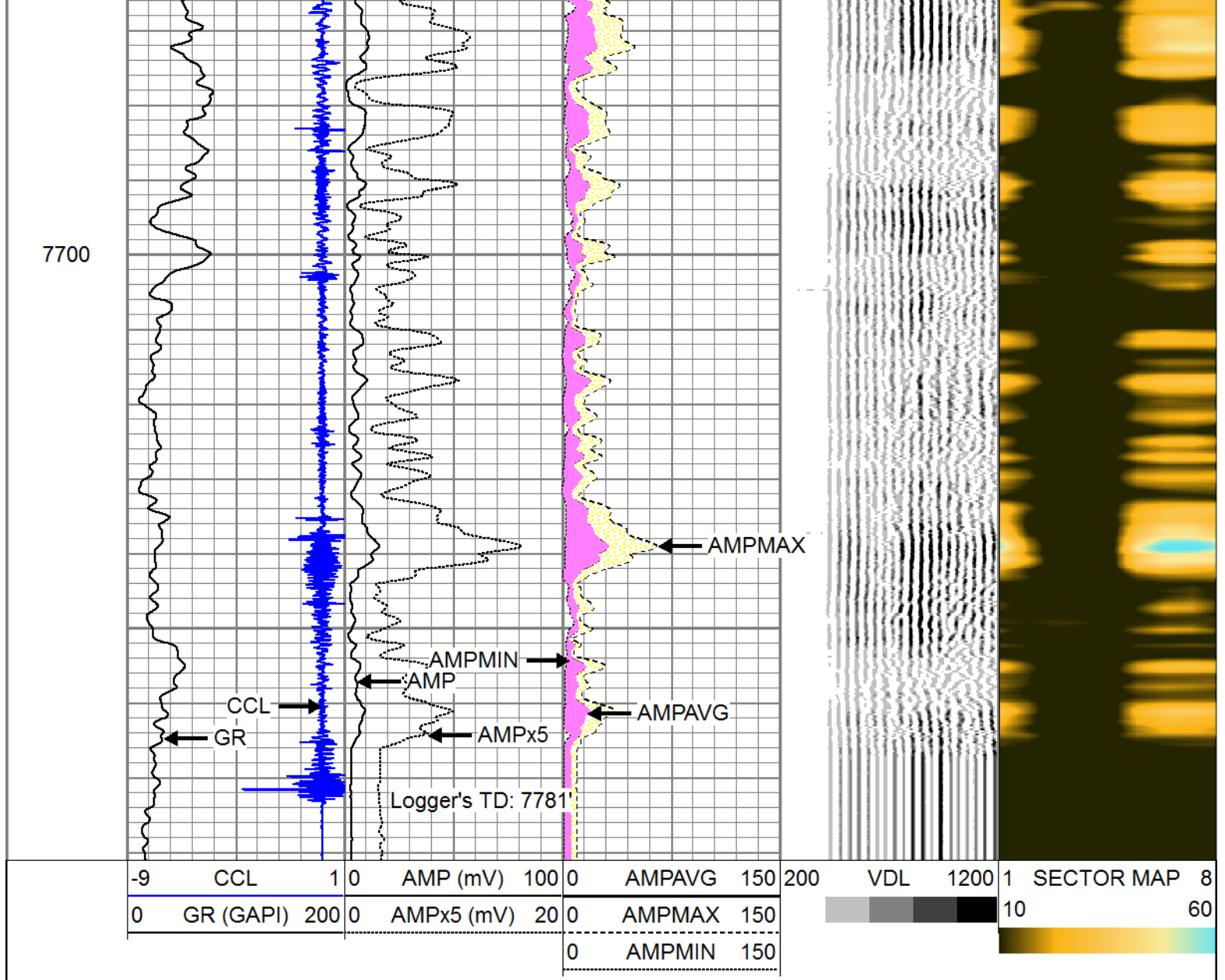




7500

7600





### Calibration Report

Database File: 13616.db  
 Dataset Pathname: Final  
 Dataset Creation: Fri Aug 01 18:30:30 2014

### Gamma Ray Calibration Report

Serial Number: 111205  
 Tool Model: probe 2.75  
 Performed: Fri Aug 01 15:23:21 2014

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: 200.000 ft

## Master Calibration, performed Fri Aug 01 15:53:27 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.012	0.861	0.000	62.200	83.493	-0.454
CAL	0.012	1.015				
5'	0.012	0.934	0.000	62.200	85.165	-0.697
SUM						
S1	0.005	0.969	0.000	100.000	97.180	-1.041
S2	0.012	0.953	0.000	100.000	92.904	-0.714
S3	0.012	0.843	0.000	100.000	89.844	-0.232
S4	0.012	0.764	0.000	100.000	88.509	-0.192
S5	0.012	0.747	0.000	100.000	84.962	-0.205
S6	0.012	0.760	0.000	100.000	91.045	-1.099
S7	0.012	0.821	0.000	100.000	93.599	-1.143
S8	0.012	0.887	0.000	100.000	94.485	-0.838

## Internal Reference Calibration, performed Tue Nov 21 12:42:07 2006:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.012	1.015	1.000	0.000

## Air Zero Calibration, performed Thu Apr 24 09:23:40 2008:

	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	