

Pioneer Energy Services

PIONEER**GAMMA RAY CCL
CEMENT BOND VDL
SECTOR MAP**

Company	EnCana Oil & Gas (USA) Inc.	Country	USA
Well	Date 4E-20H-0264		
Field	Wattenberg		
County	Weld		
State	Colorado		
Location:	APL # : 05-123-39723	Other Services	None
SHL: 337' FSL & 1776' FEL SWSE			
SEC 20 TWP 2N RGE 64W			
Permanent Datum	GL	Elevation	4958
Log Measured From	KB		K.B. 4983 D.F. 4983 G.L. 4958
Drilling Measured From	KB		

Date	October 22, 2014
Run Number	1
Depth Driller	11700
Depth Logger	7240
Bottom Logged Interval	7240
Top Log Interval	0
Open Hole Size	8-3/4"
Type Fluid	WBM
Density / Viscosity	11.1 / 36
Max. Recorded Temp.	NA
Estimated Cement Top	1130
Time Well Ready	0600
Time Logger on Bottom	0650
Equipment Number	49
Location	Ft. Morgan, CO
Recorded By	Shaun Stump
Witnessed By	Joe Nielson

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record	Size	Wgt/Ft	Top	Bottom			
Surface String	16	80	0	30			
Prot. String	9 5/8	40	0	1121			
Production String	7"	26 lbs	0	7515			
Liner							

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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 & P 278

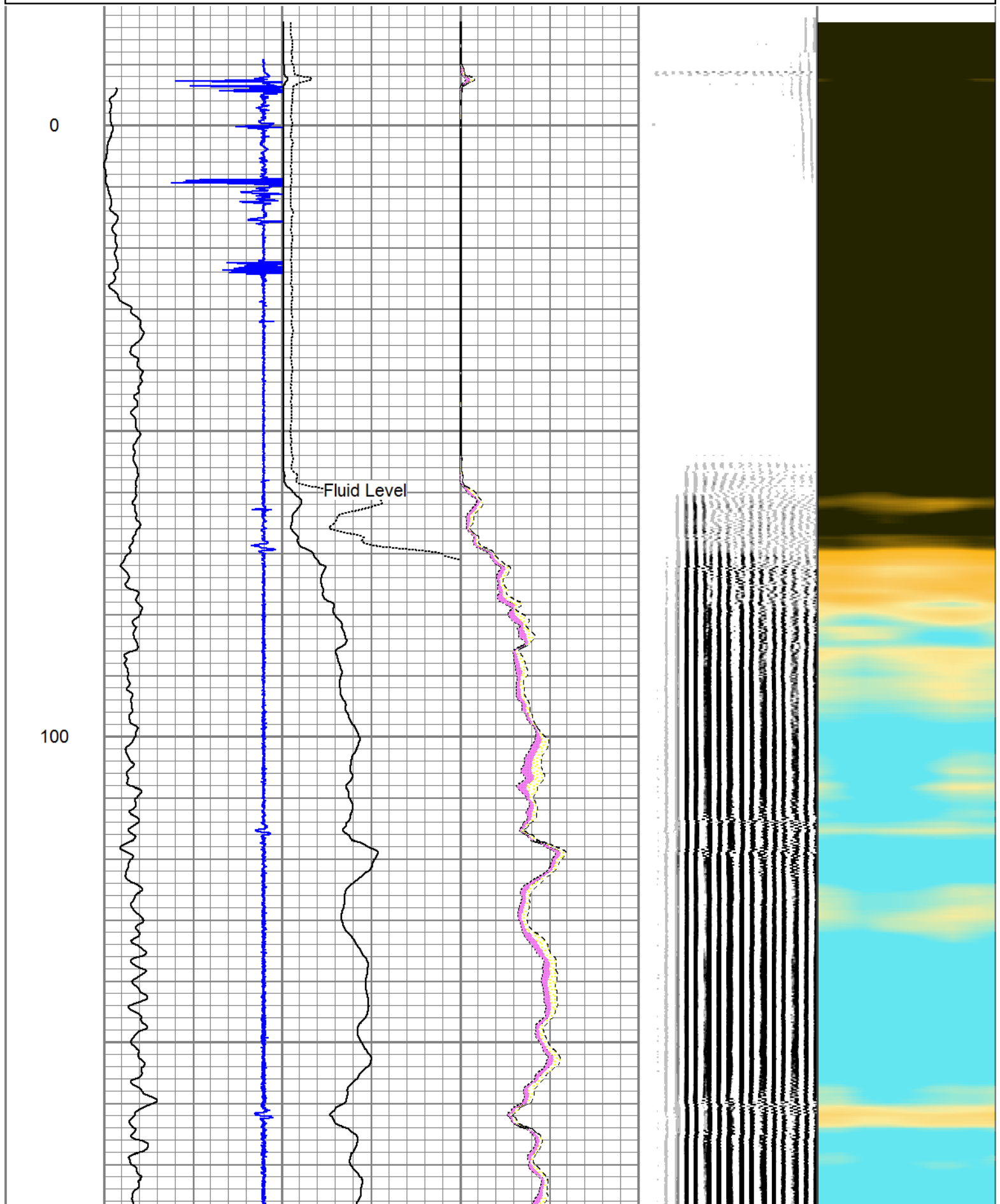
Thank You for using Pioneer Energy Services

SO# 2-013697

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

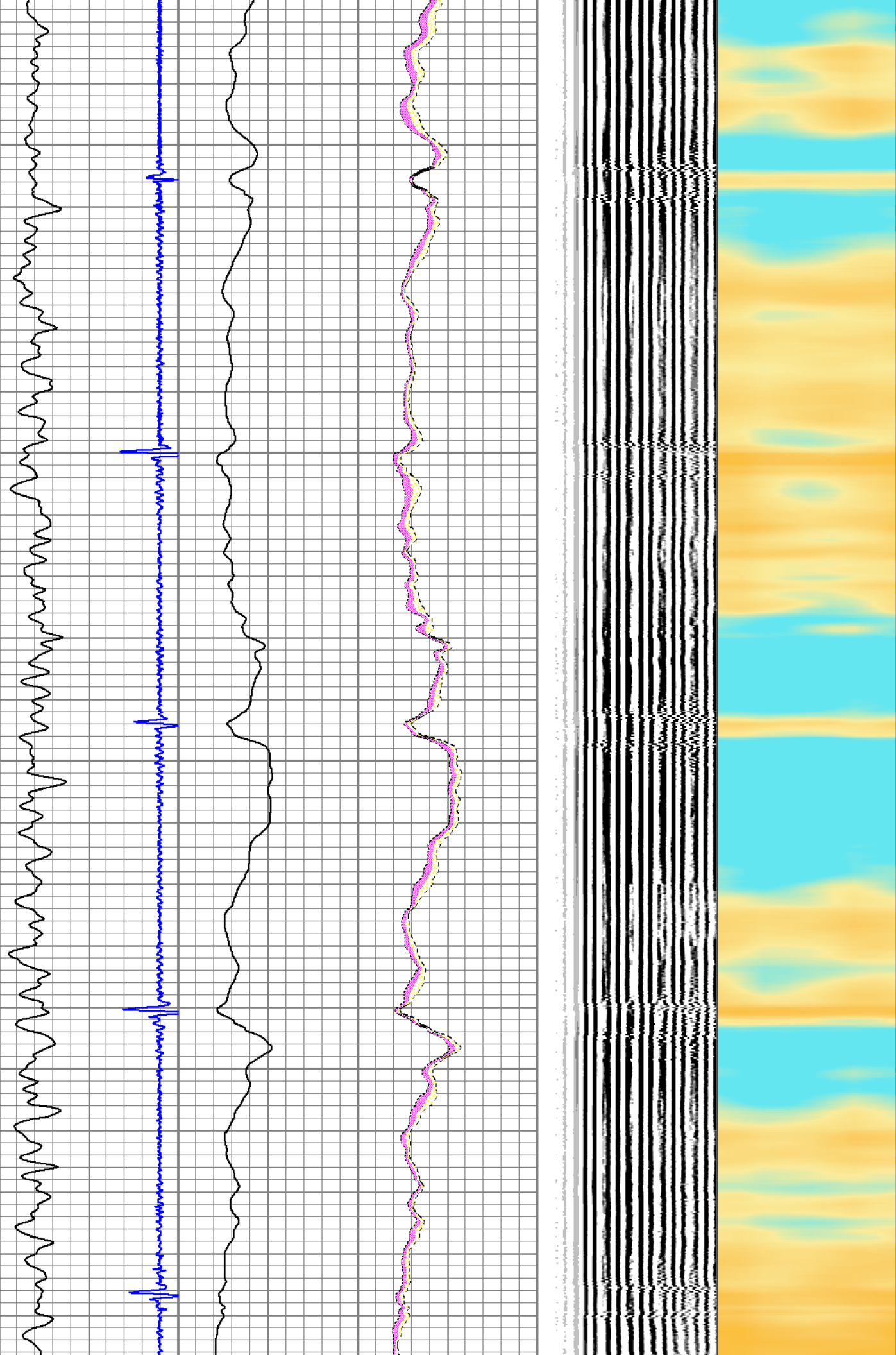
			CENT #2 -A (1)	2.83	2.75	20.00
IntTemp	14.66					
TEMP	13.64					
			RBT-RBT-C3 (130584) Probe Radii Bond Tool with Digital Telemetry	9.33	2.75	90.00
WVF3FT	11.41					
WVFCAL	11.41					
WVFS1	11.41					
WVFS2	11.41					
WVFS3	11.41					
WVFS4	11.41					
WVFS5	11.41					
WVFS6	11.41					
WVFS7	11.41					
WVFS8	11.41					
WVF5FT	10.41					
			CENT-A (1)	2.83	2.75	20.00
CCL	3.92					
			GR-probe 2.75 (51013) probe Digital CCL Gamma	4.33	2.75	100.00
GR	1.13					
Dataset: 13697.db: field/well/run1/pass2 Total Length: 19.32 ft Total Weight: 230.00 lb O.D. 2.75 in						

-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

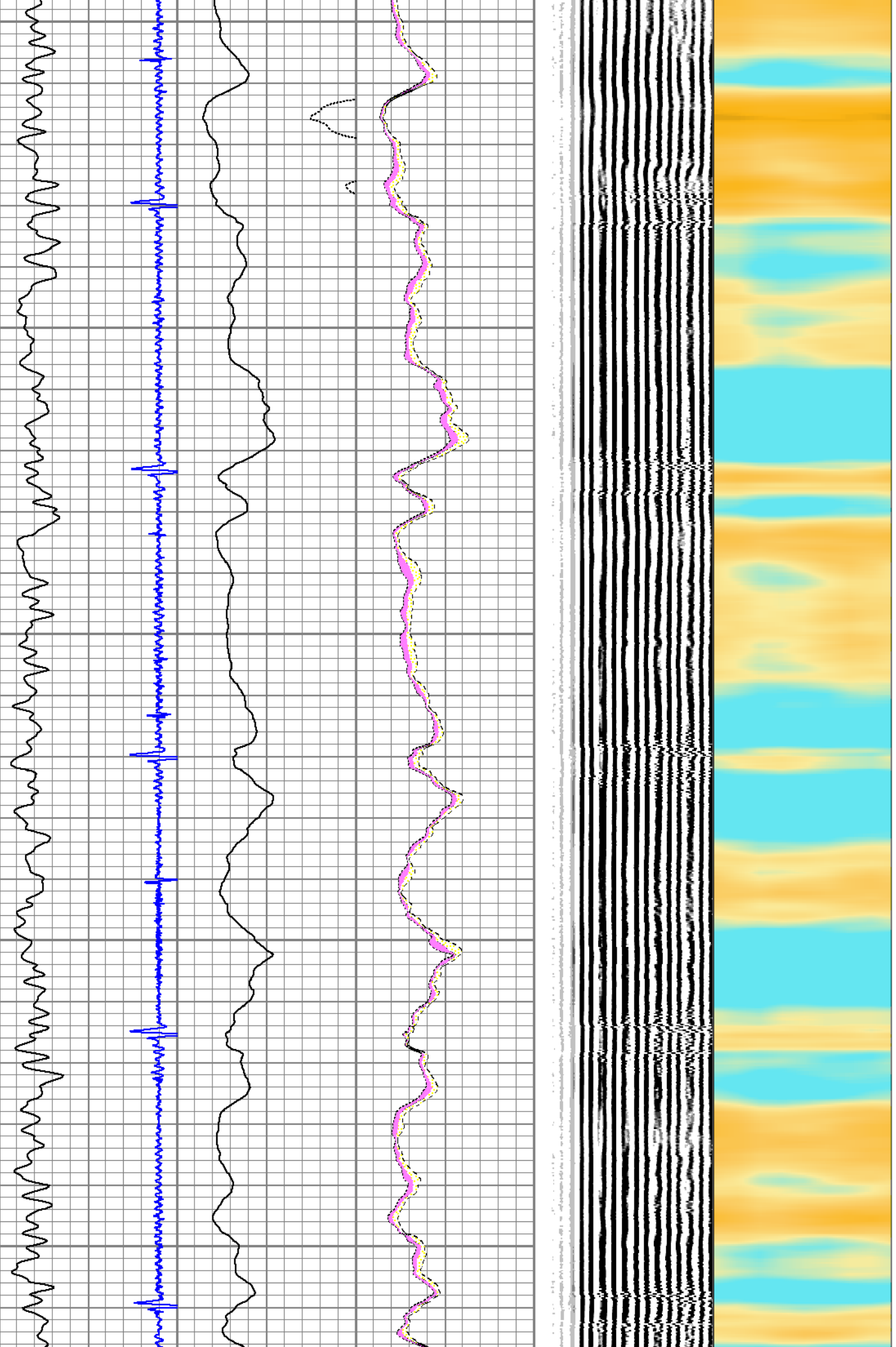
300



400

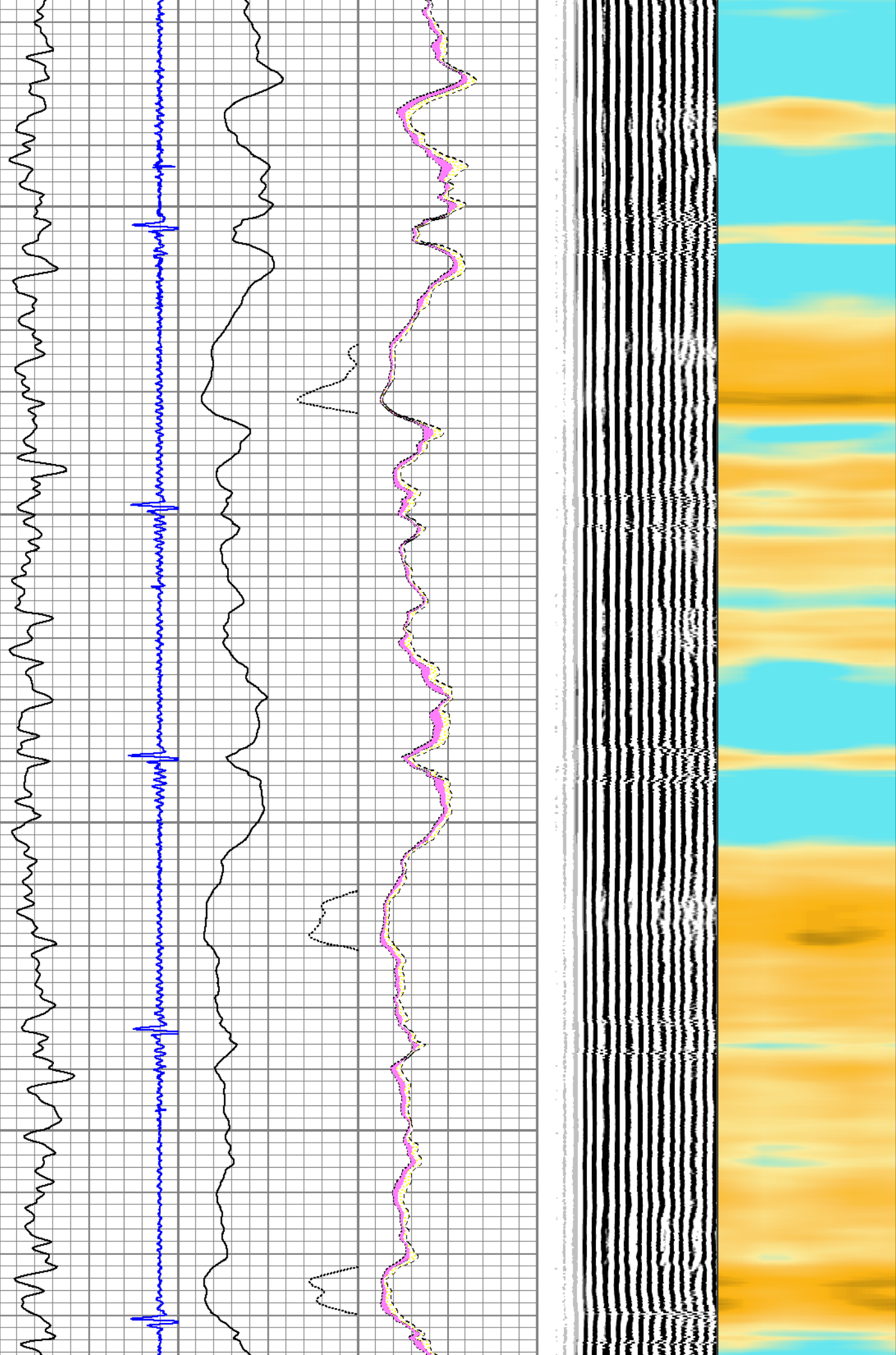
500

600



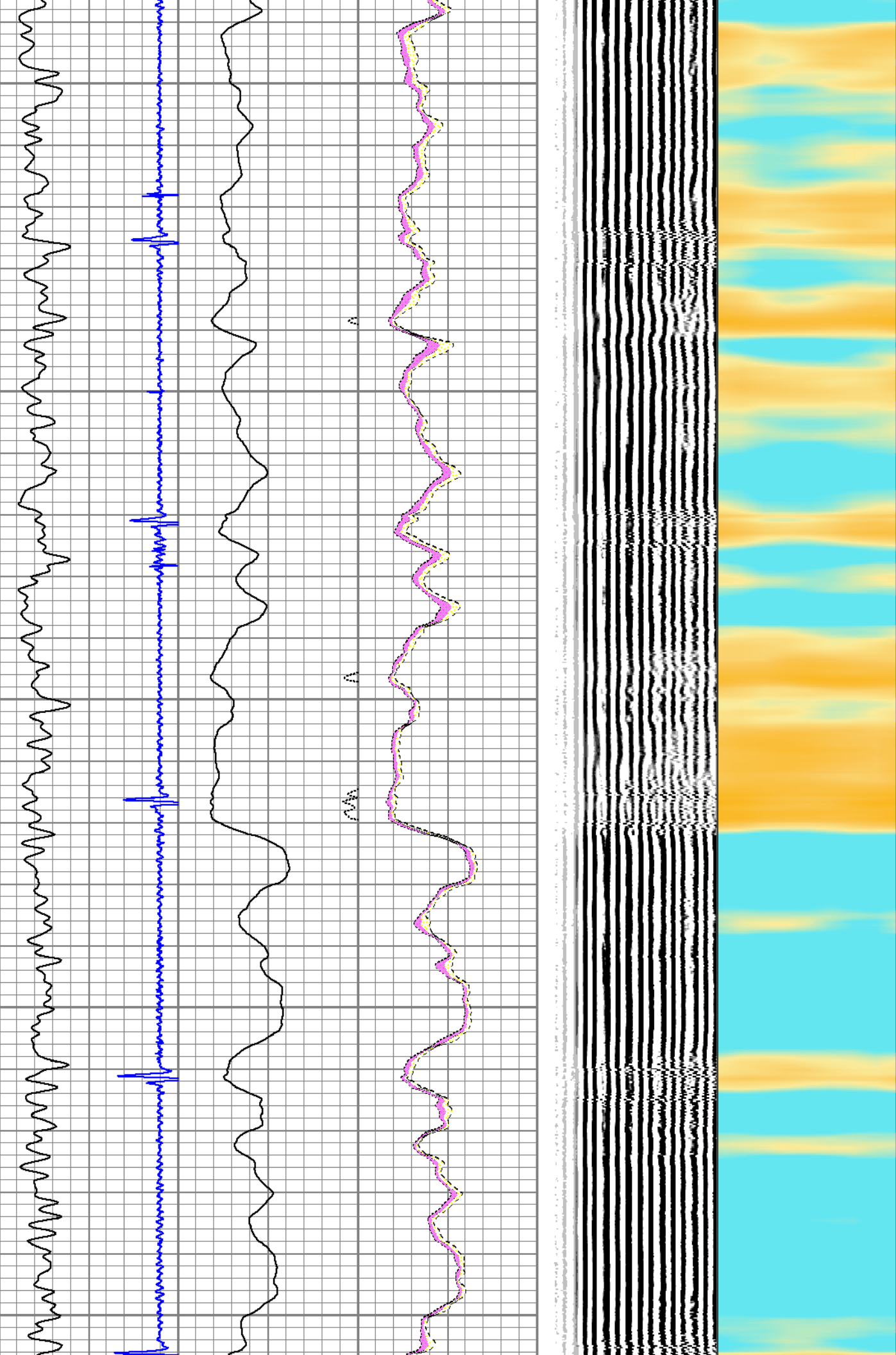
700

800



900

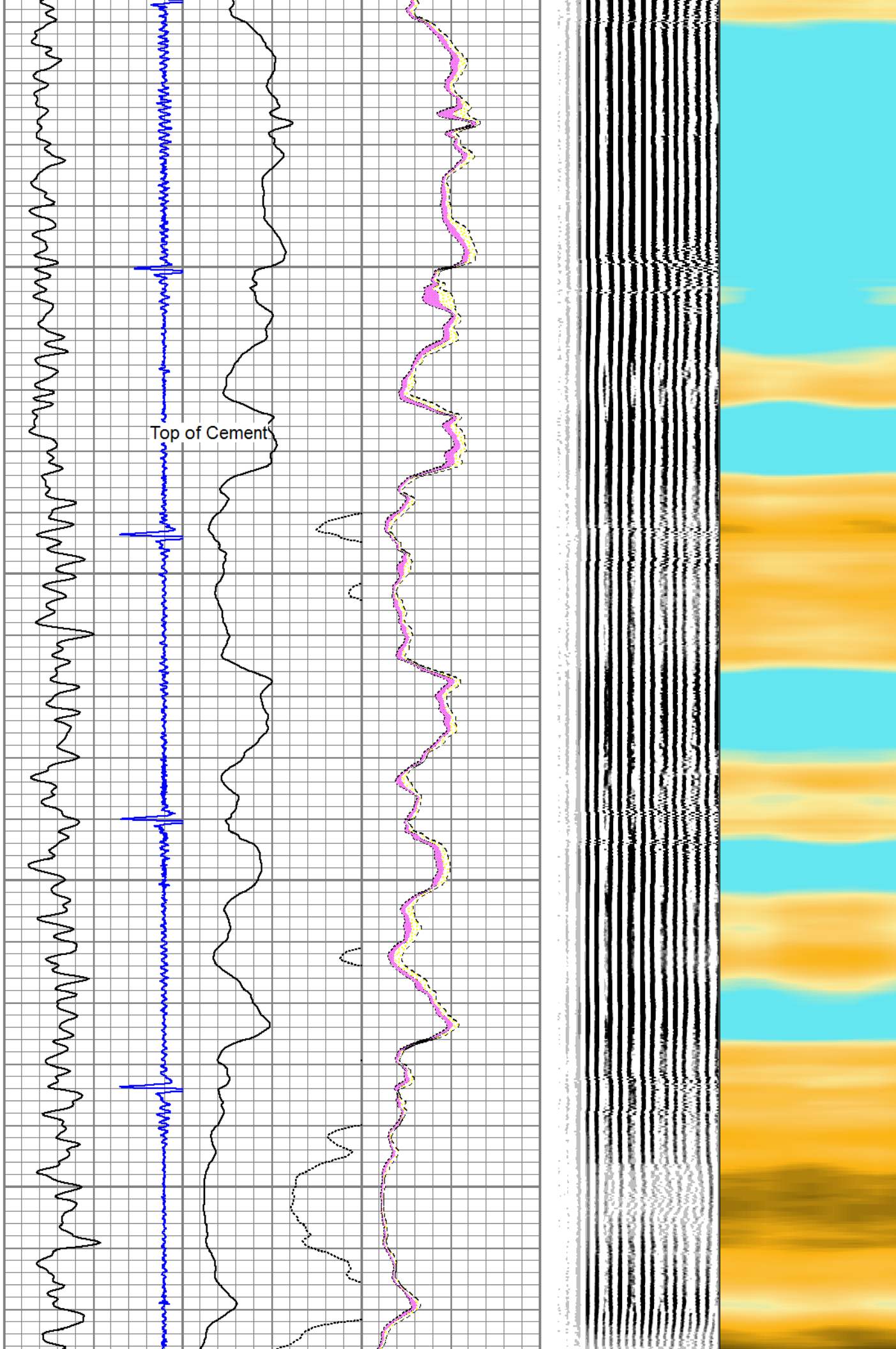
1000



1100

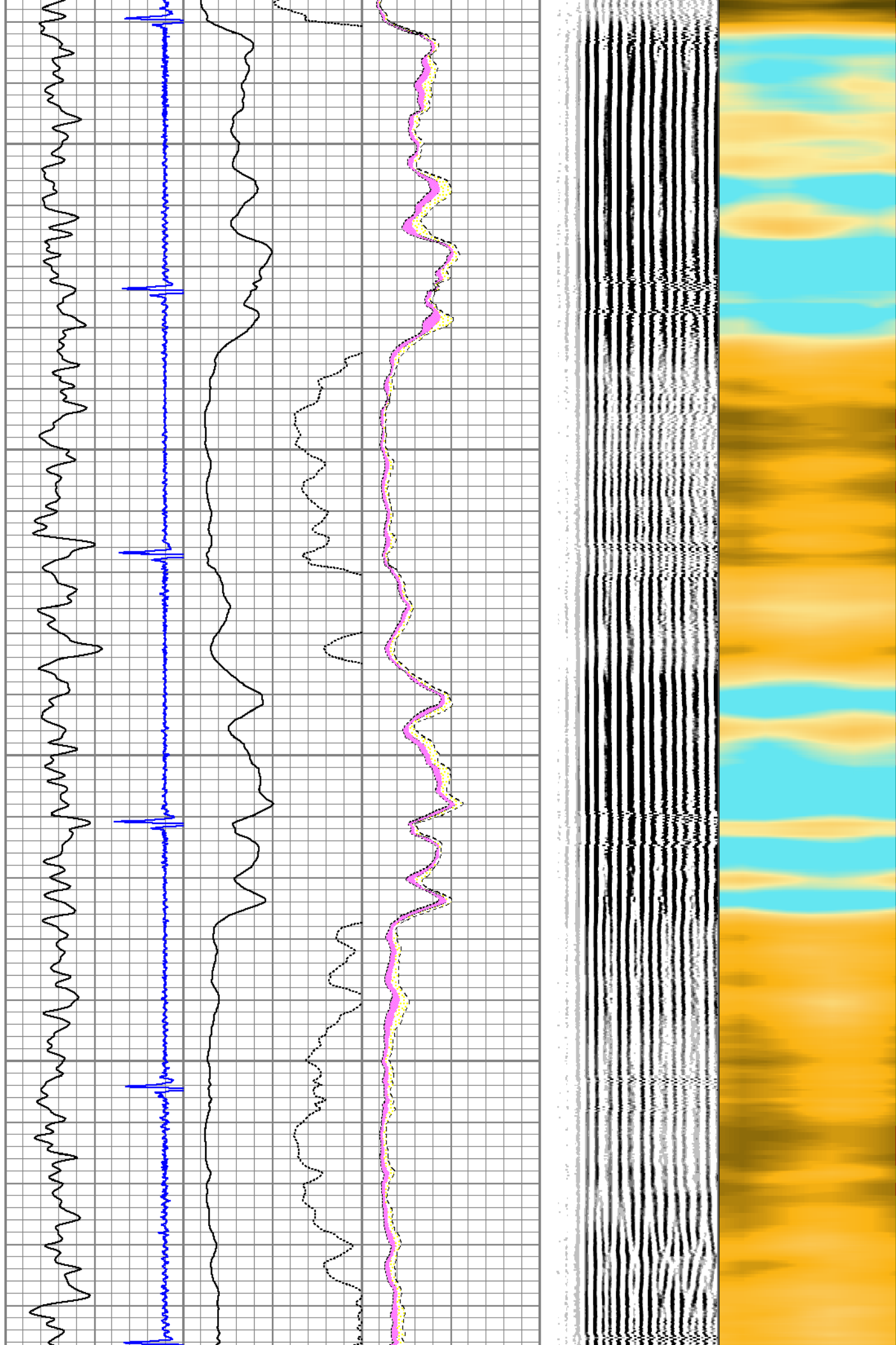
1200

Top of Cement



1300

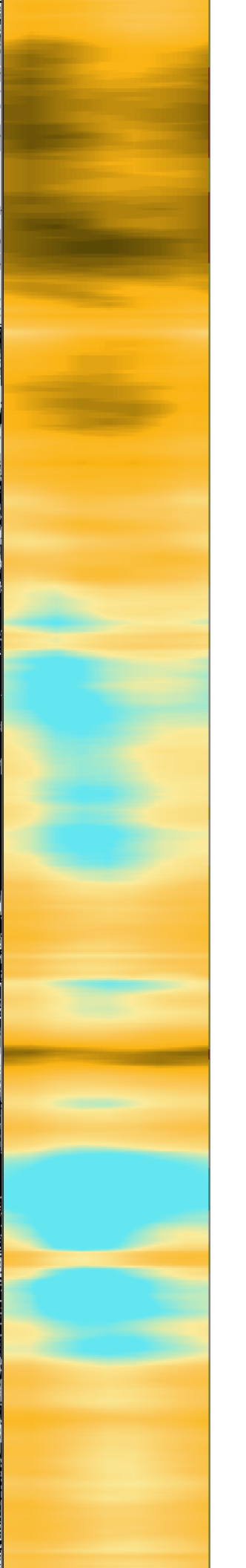
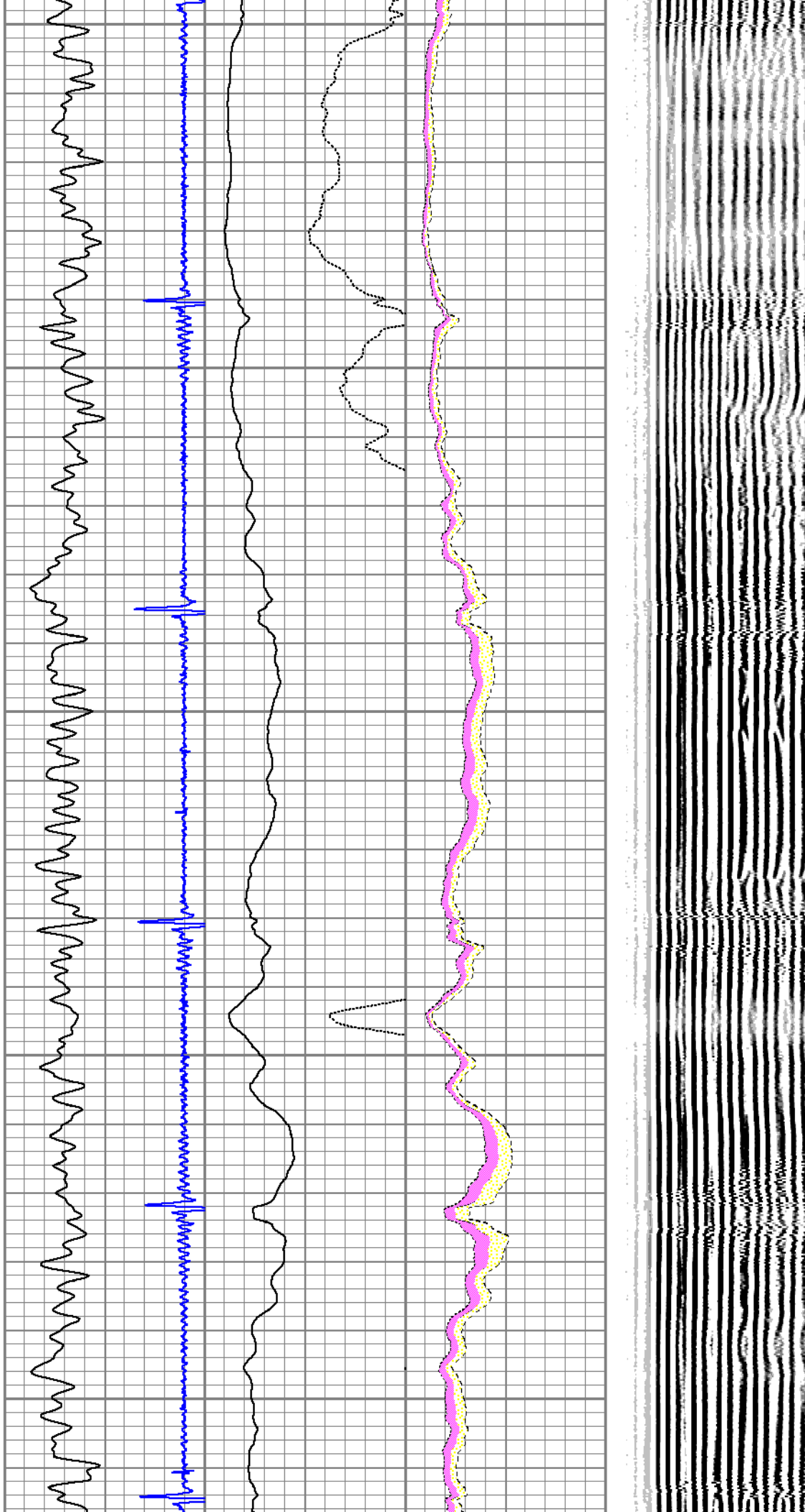
1400



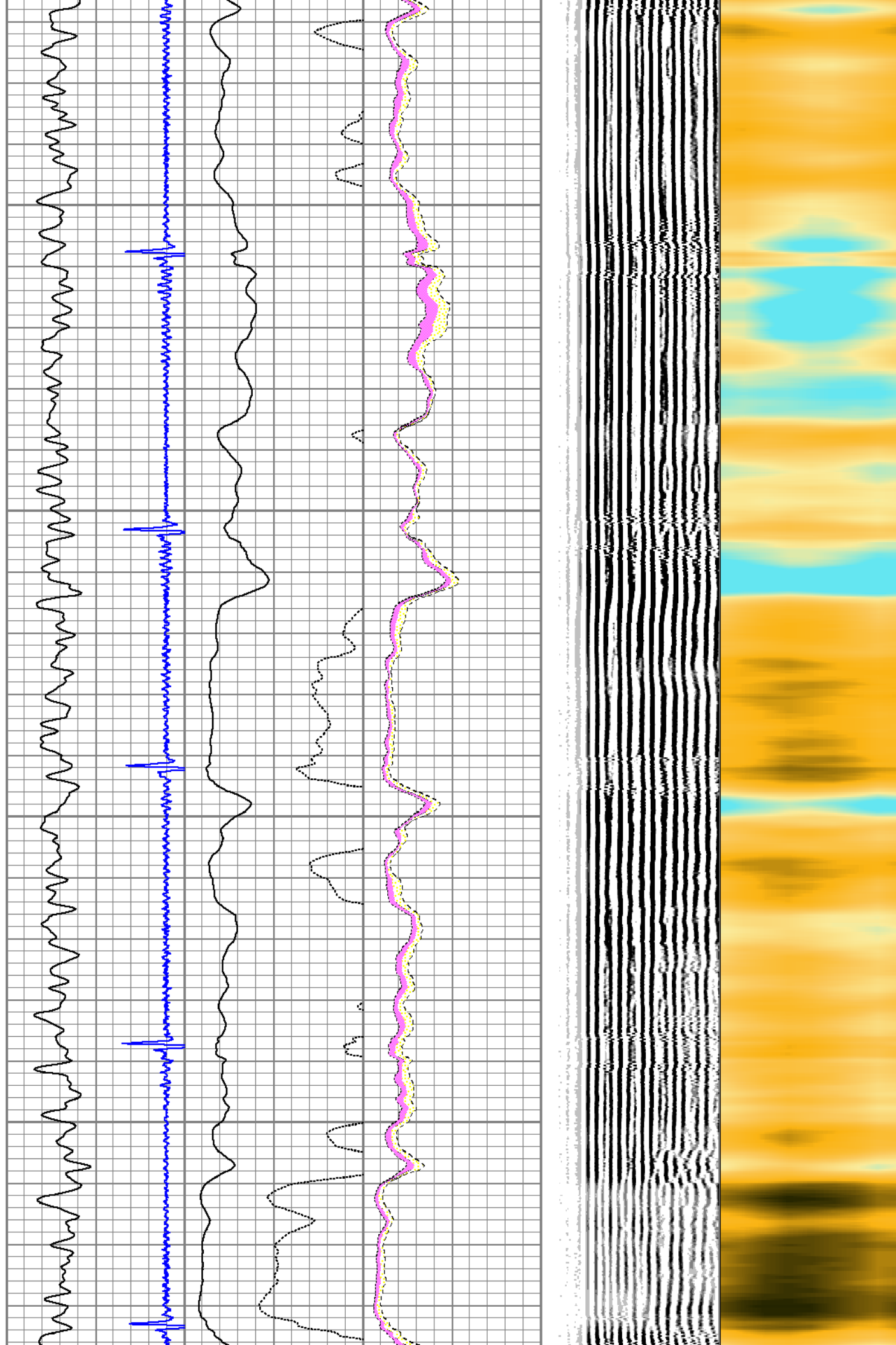
1500

1600

1700

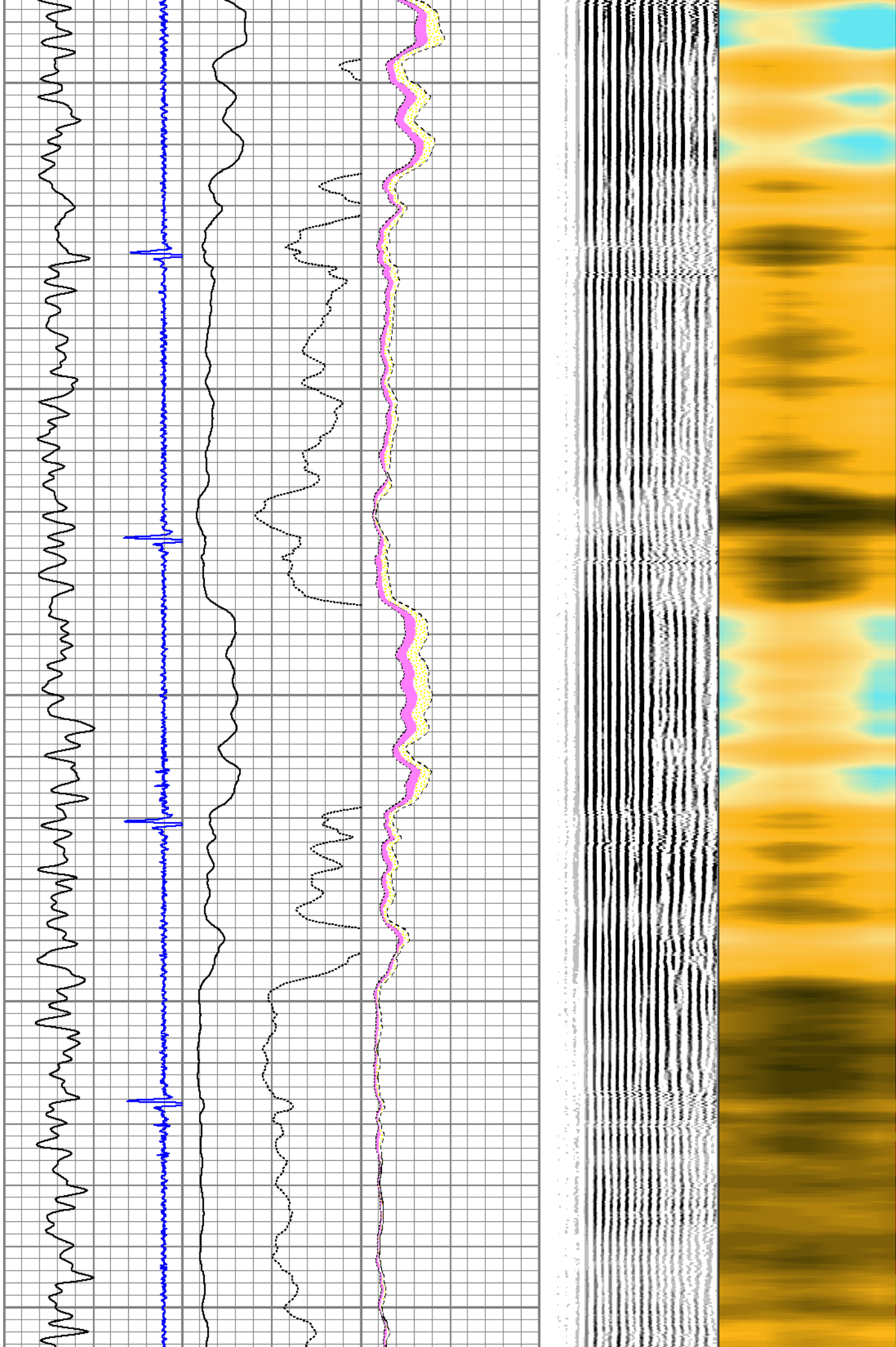


1900



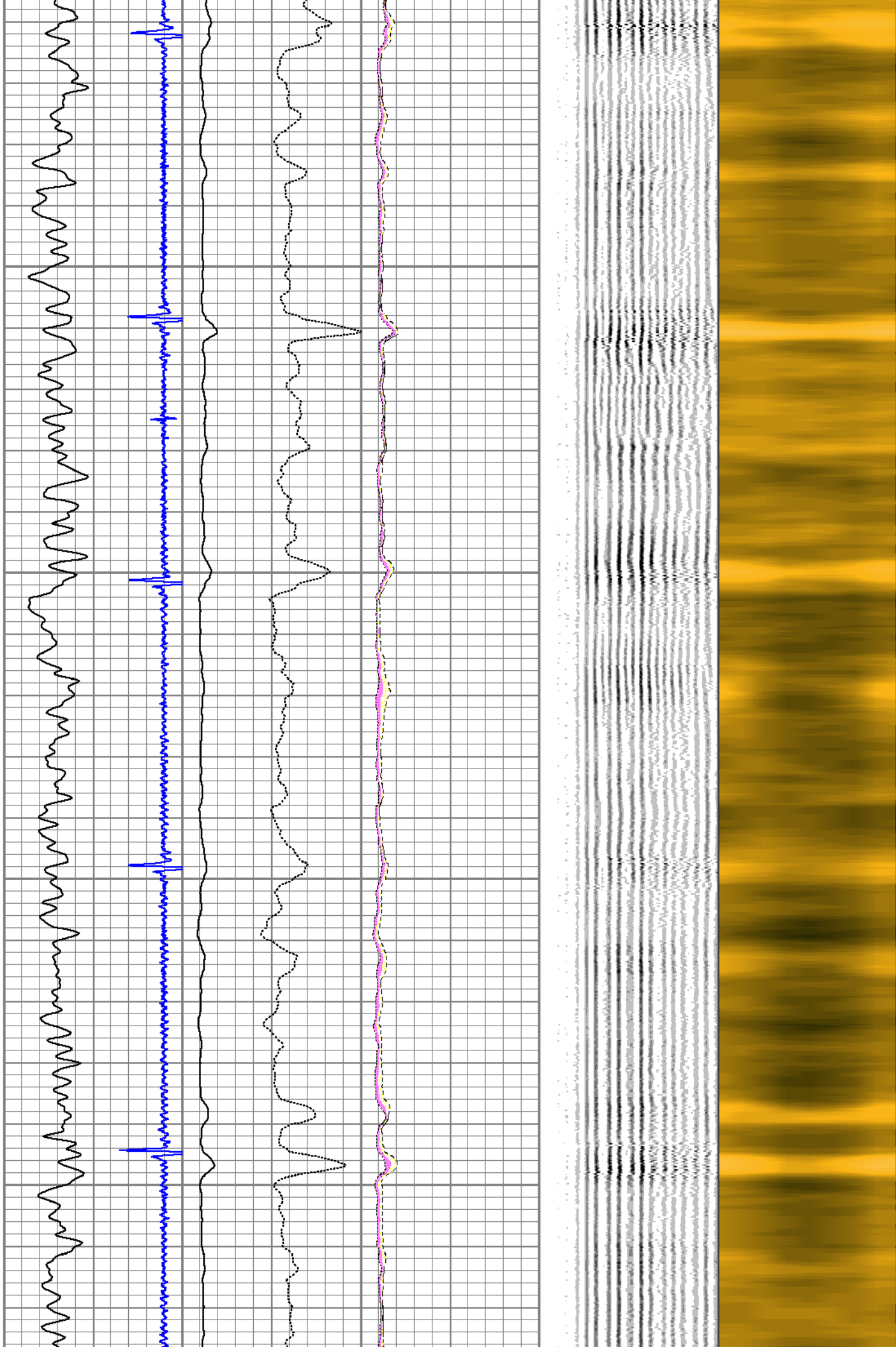
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2100



2200

2300



2400

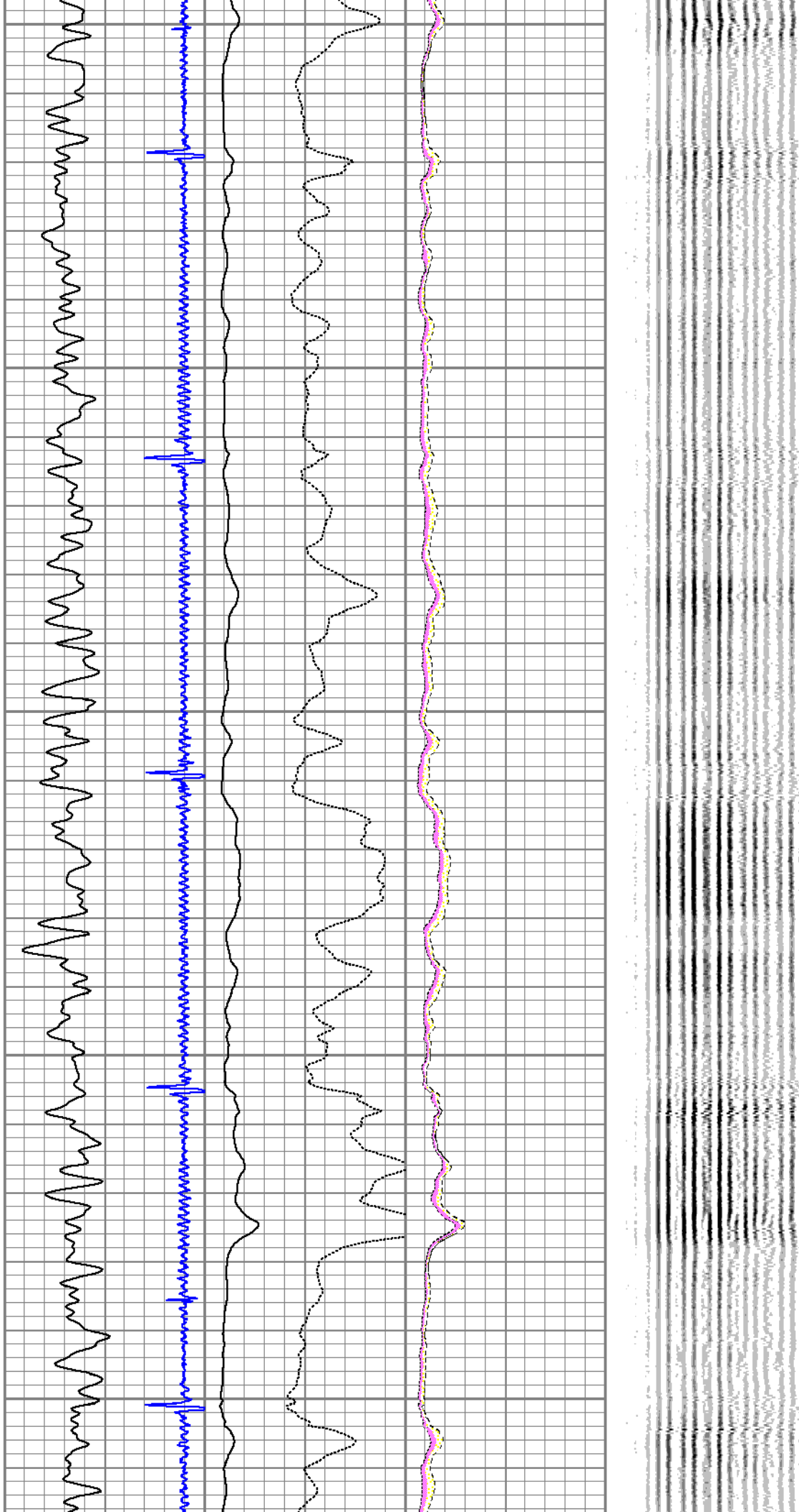
2500



2600

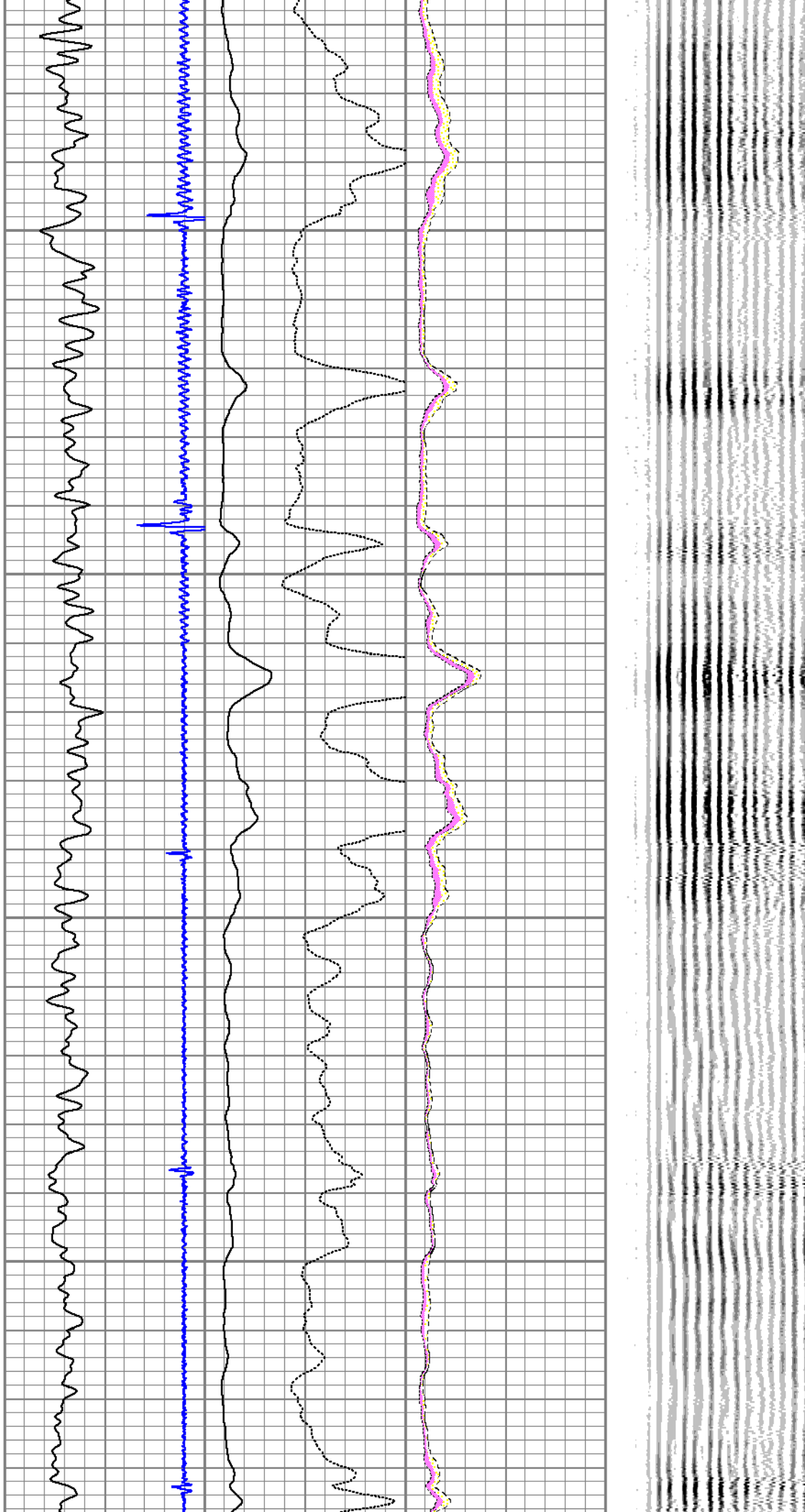
2700

2800



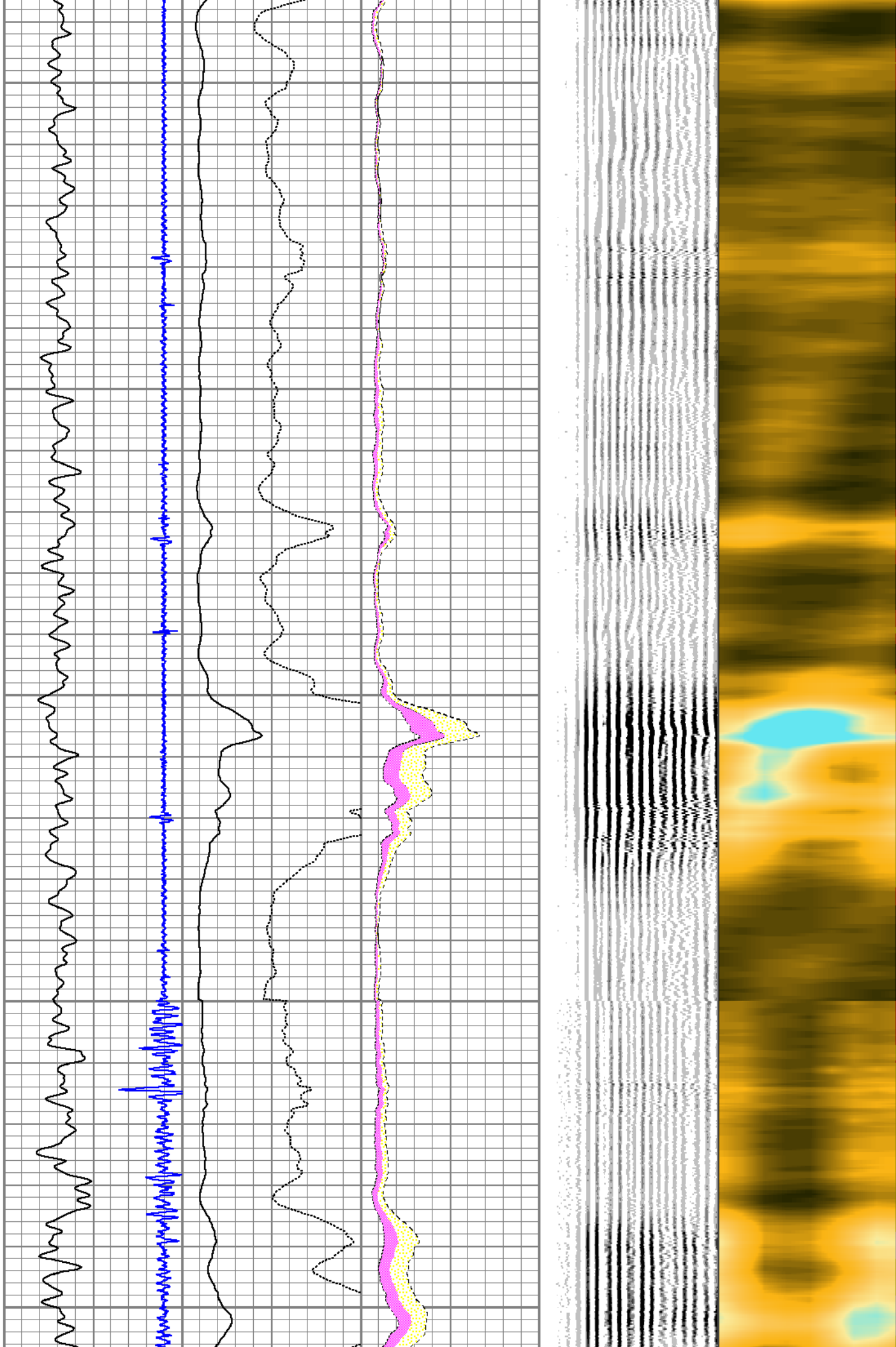
2900

3000



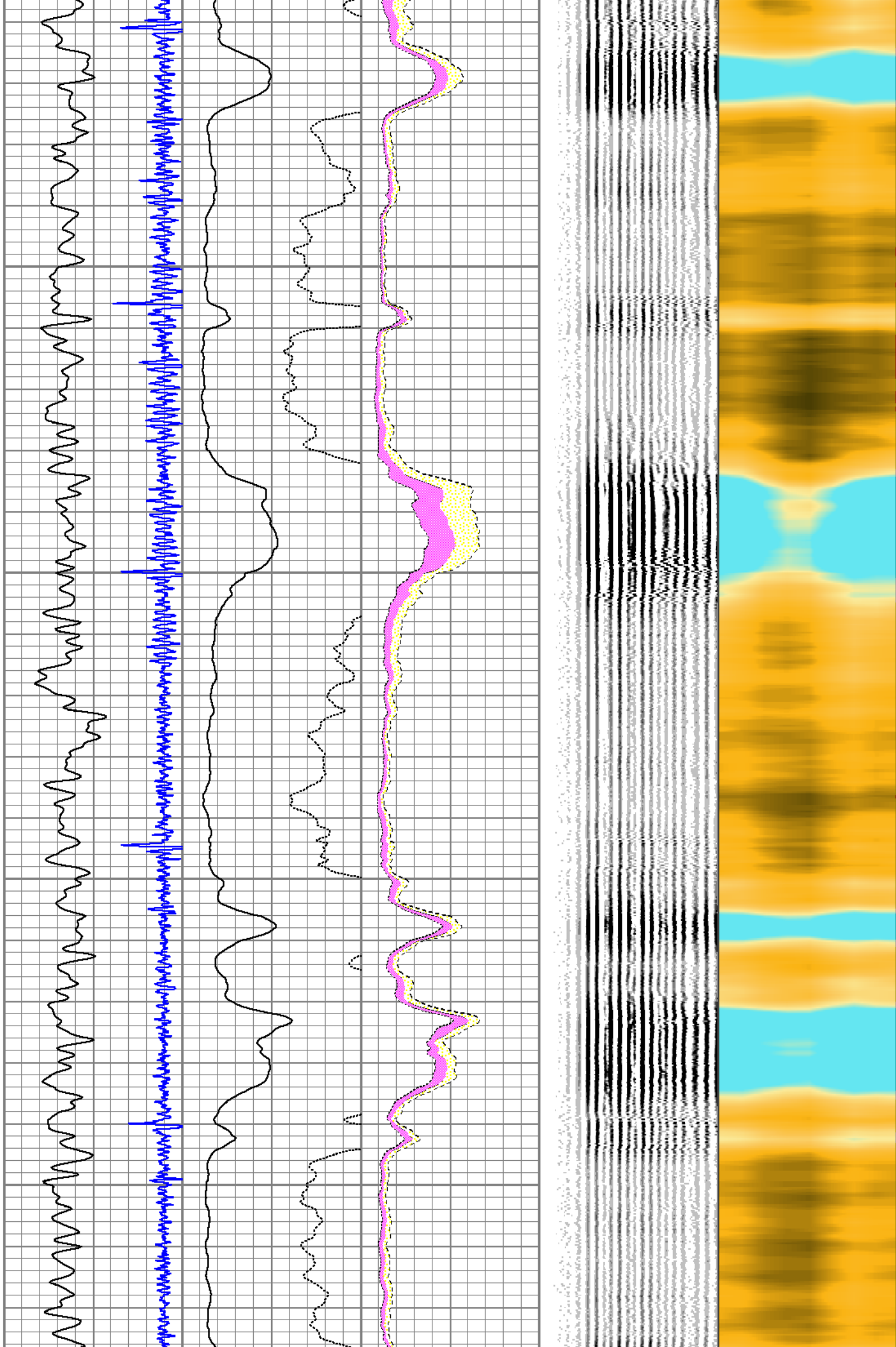
3100

3200



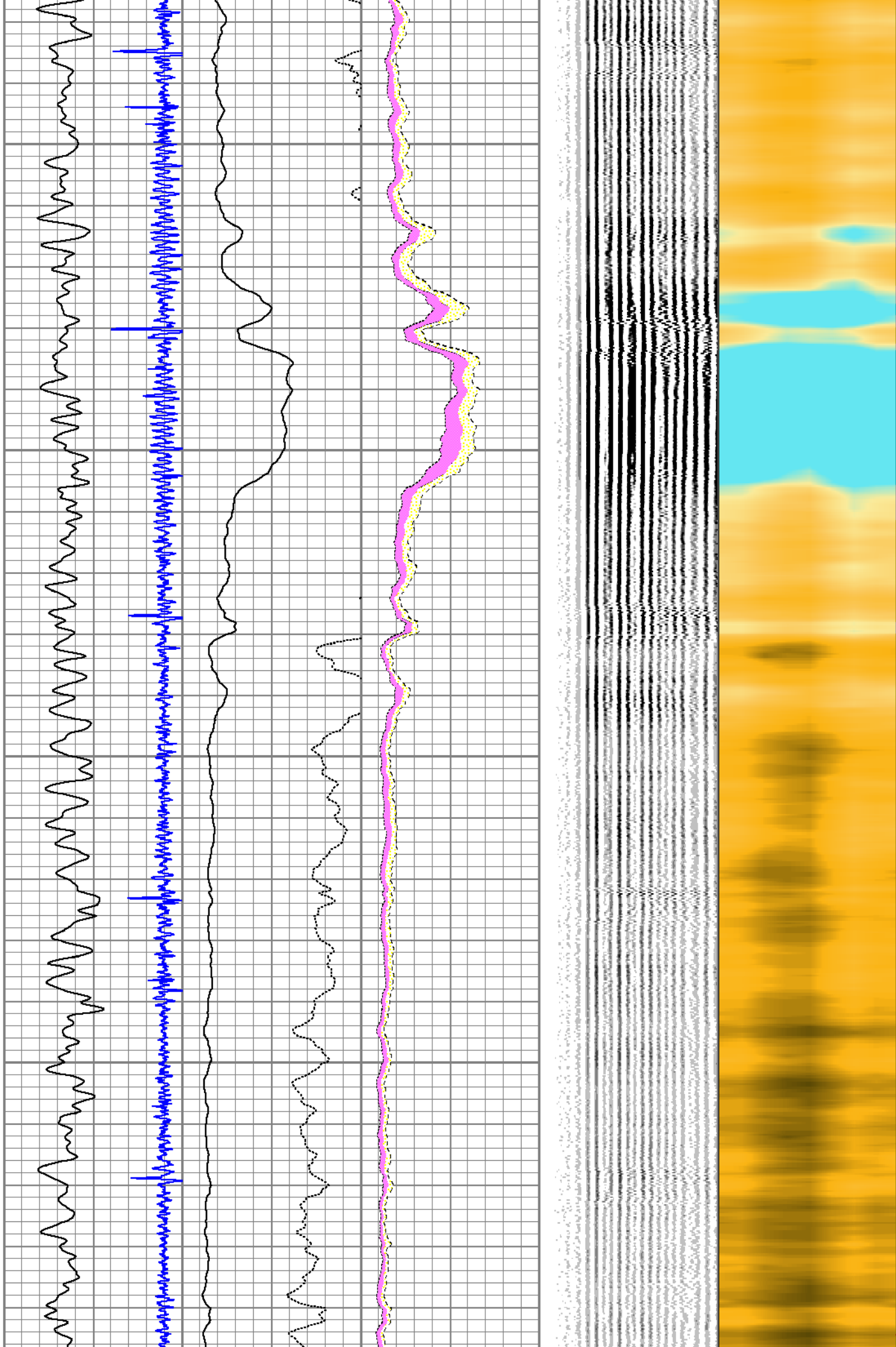
3300

3400



3500

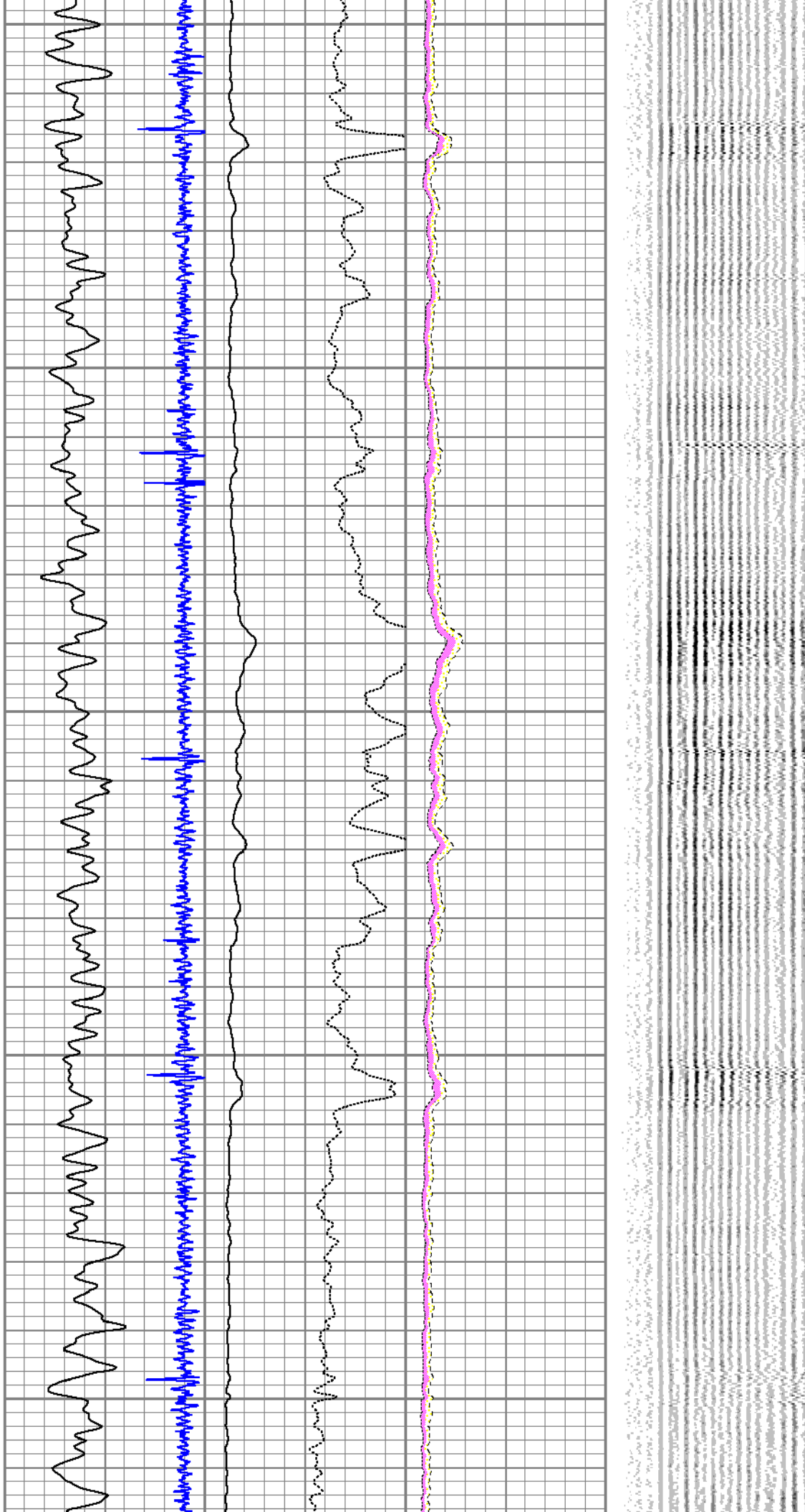
3600



3700

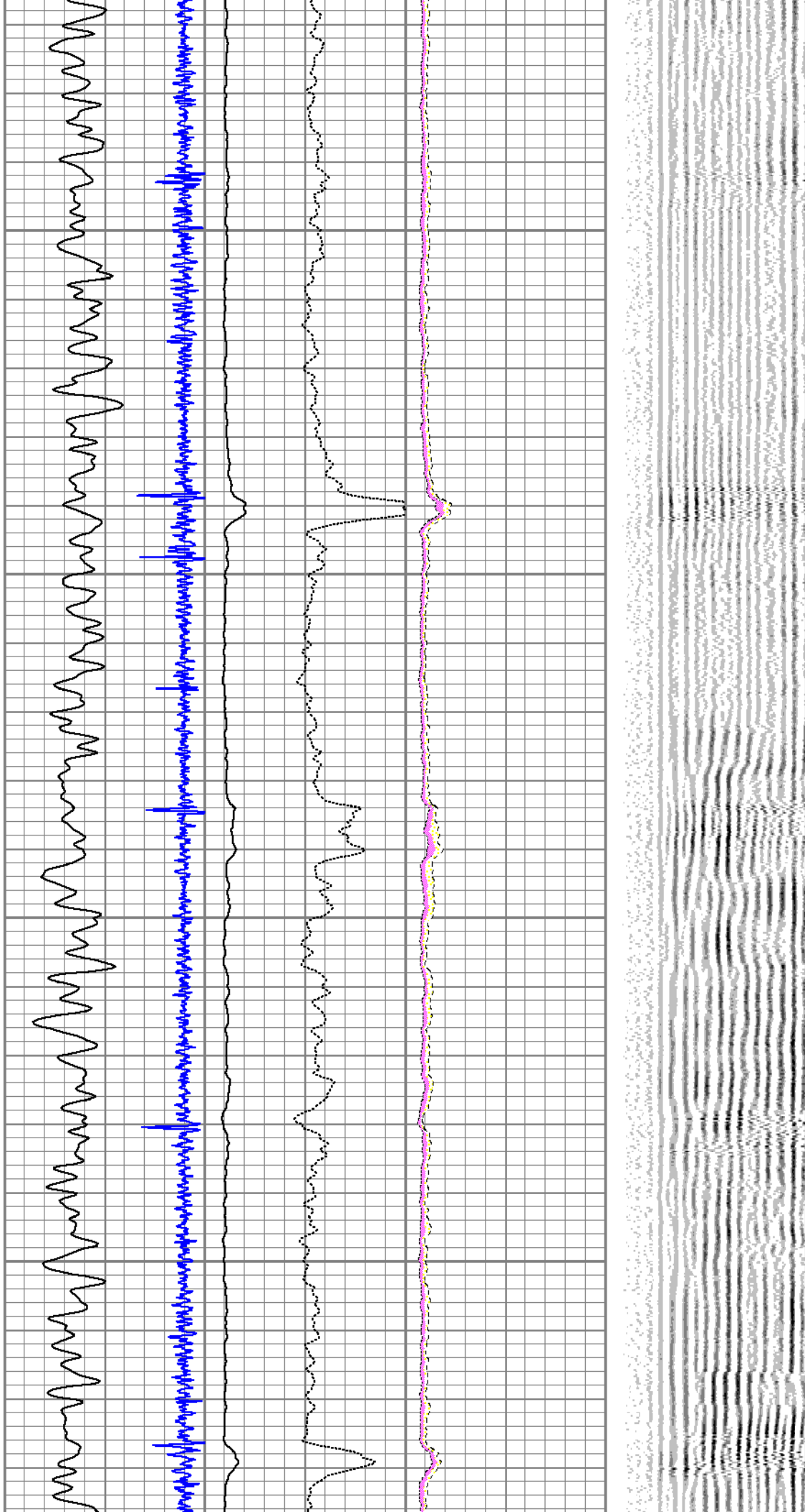
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3900



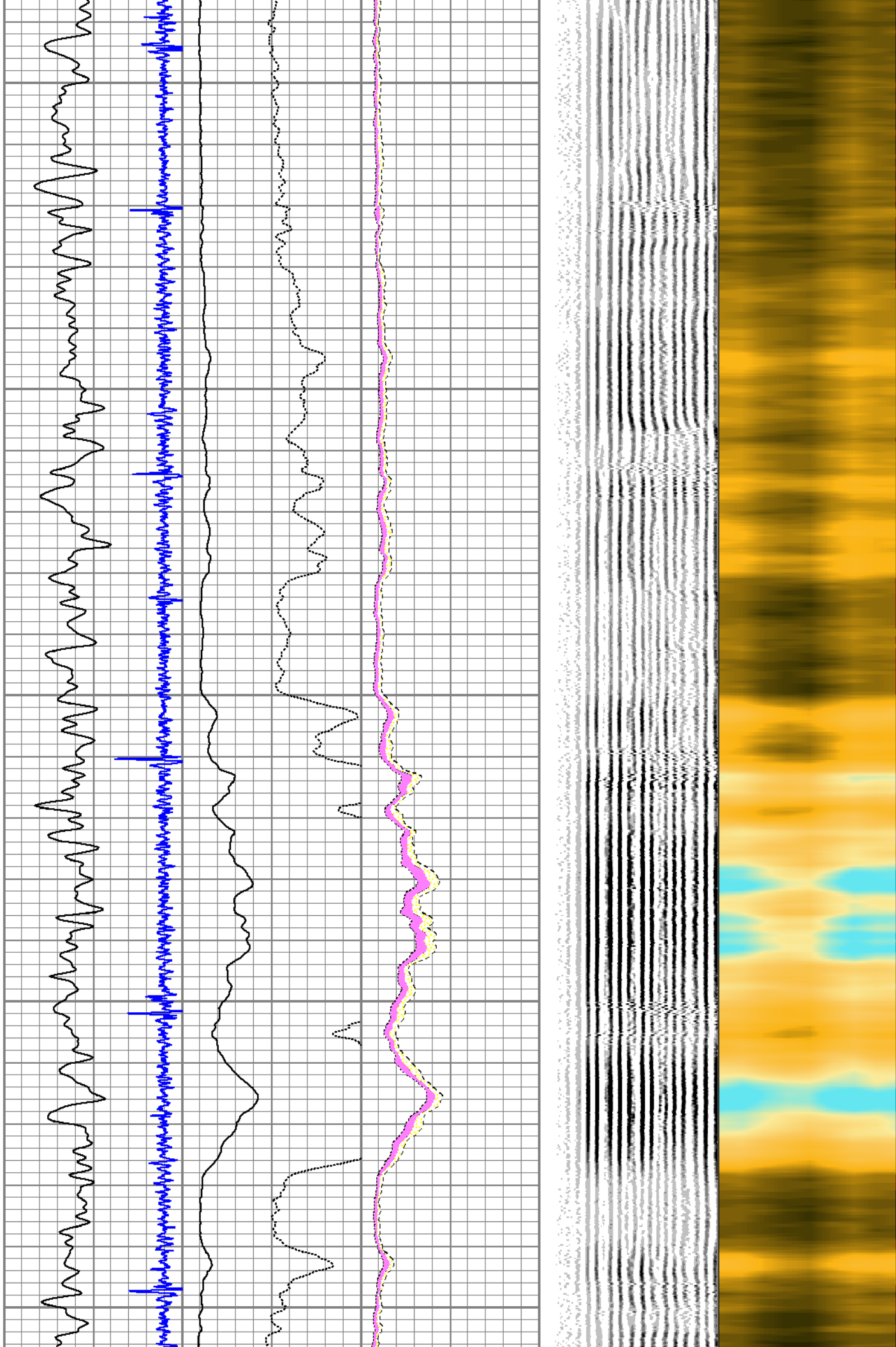
4000

4100



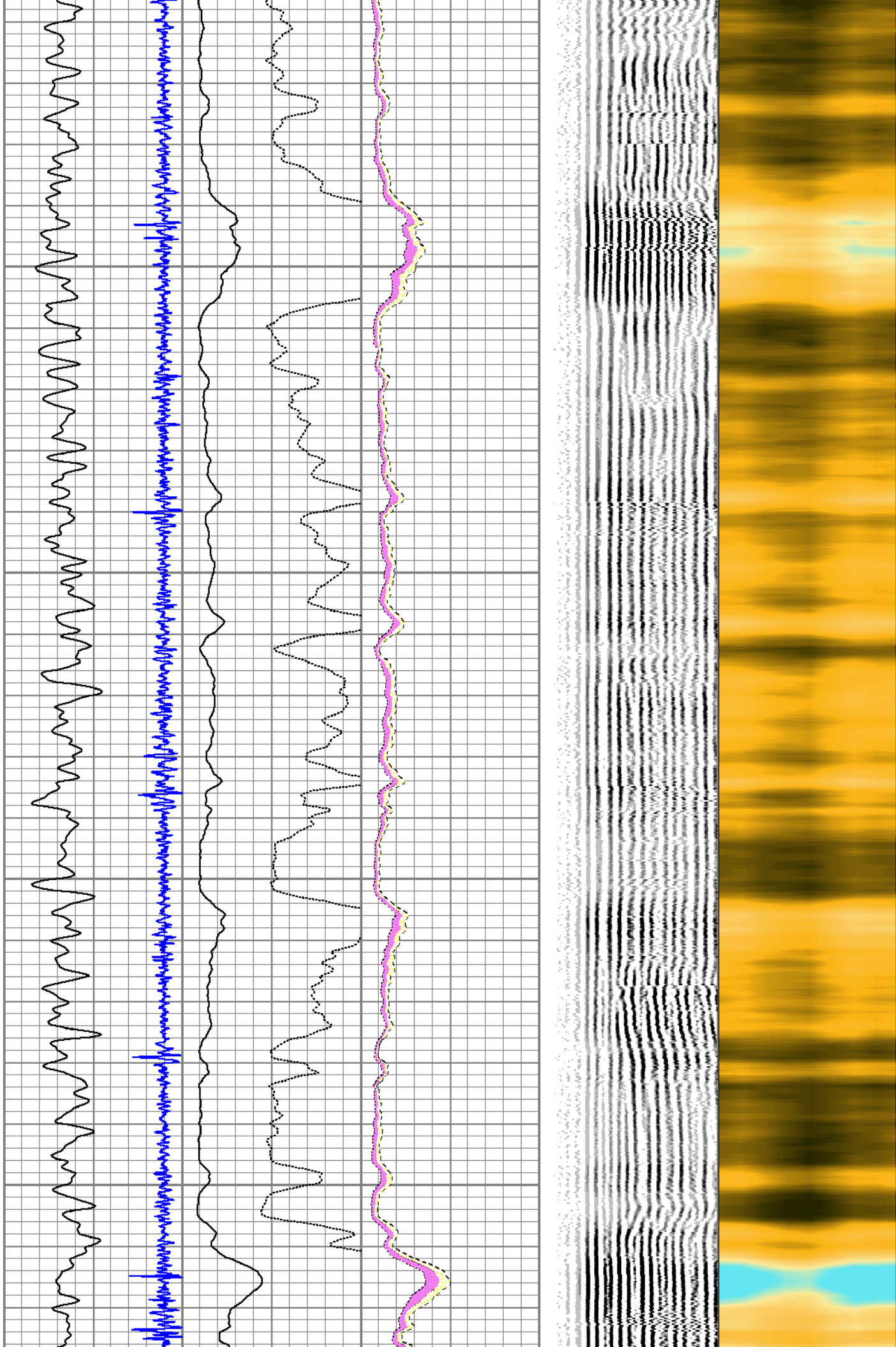
4200

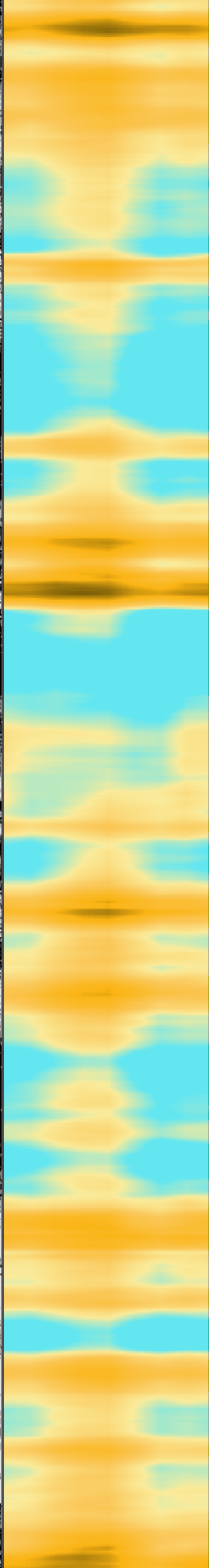
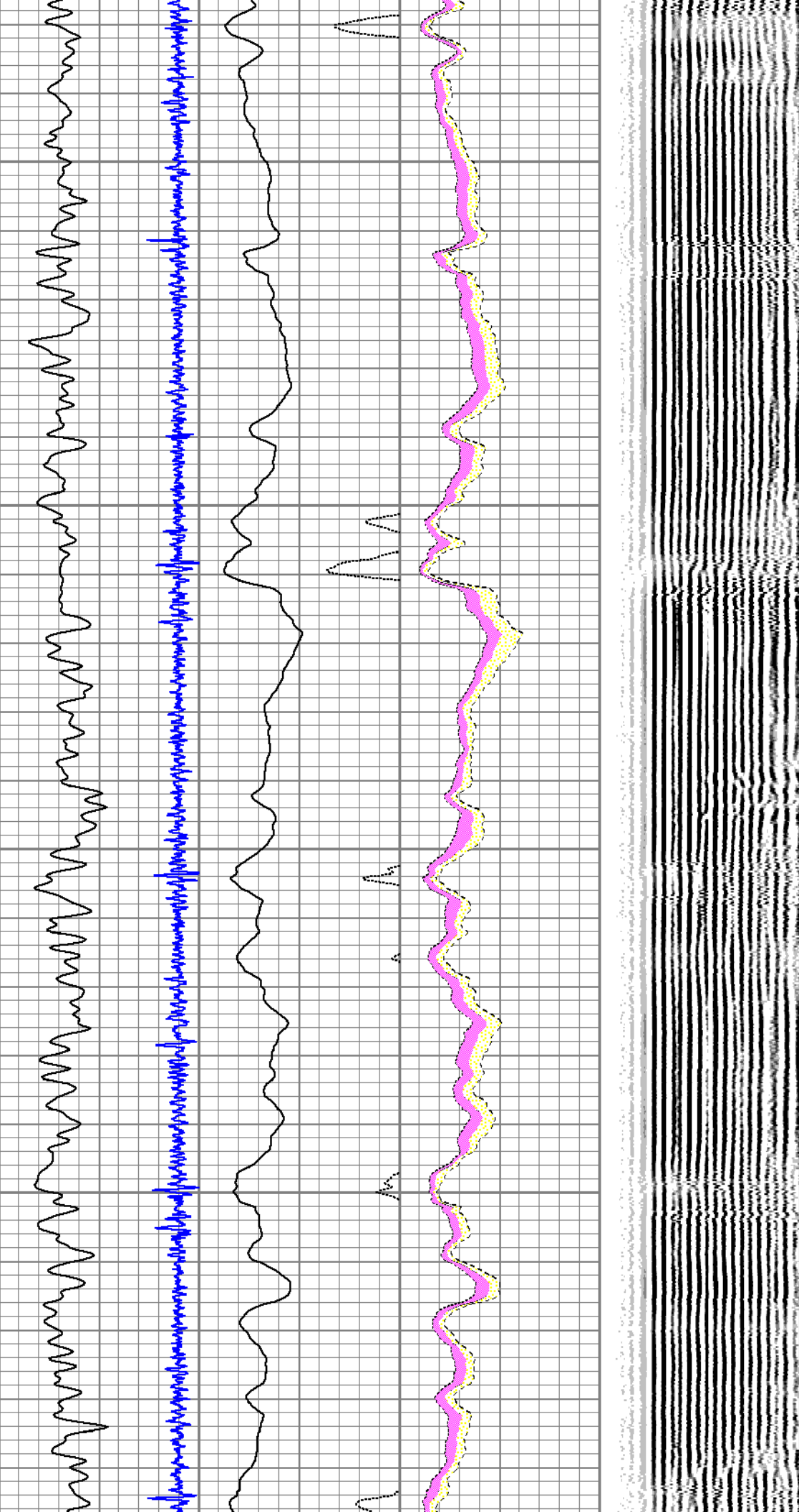
4300



4400

4500

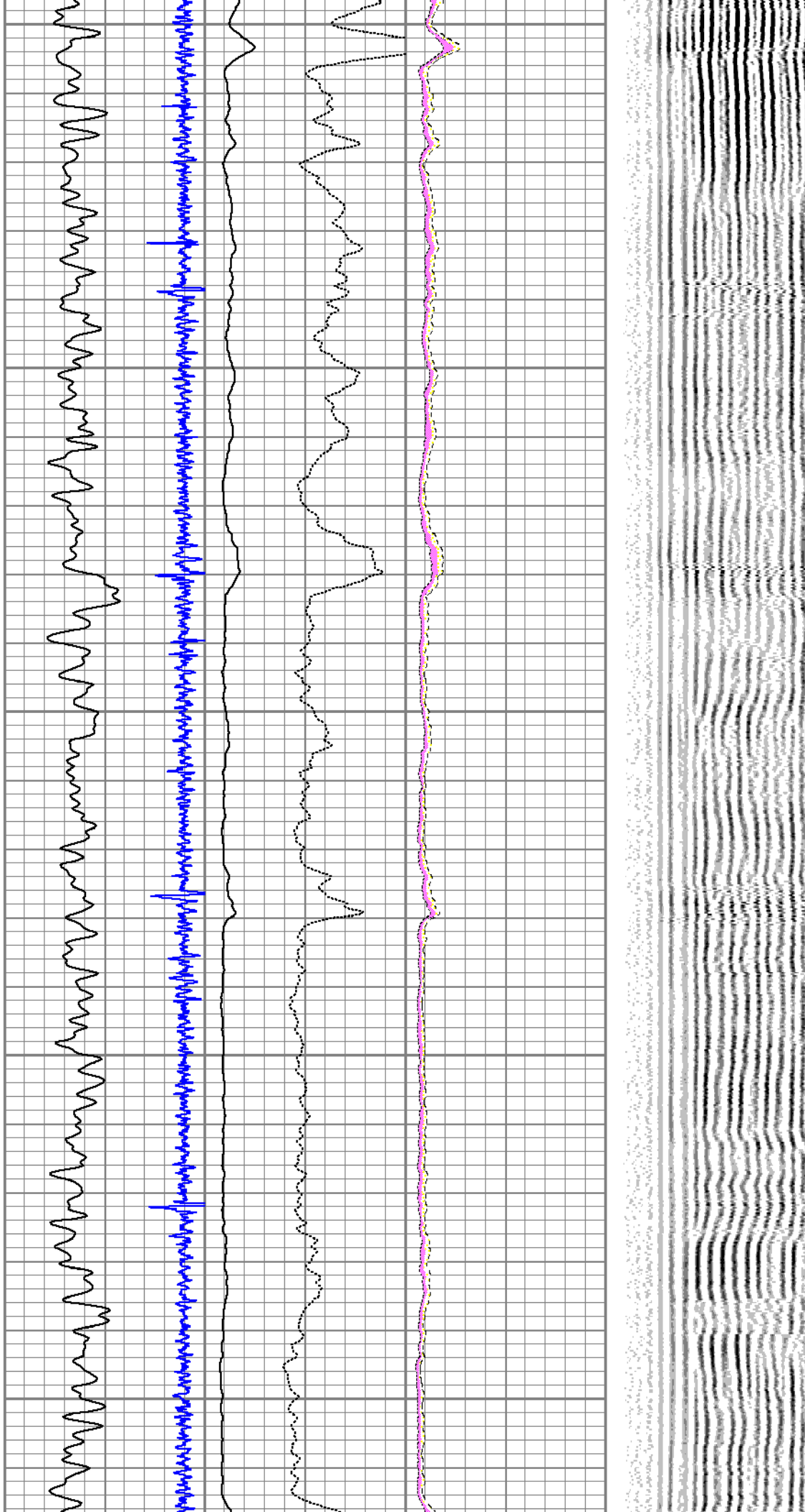




4800

4900

5000



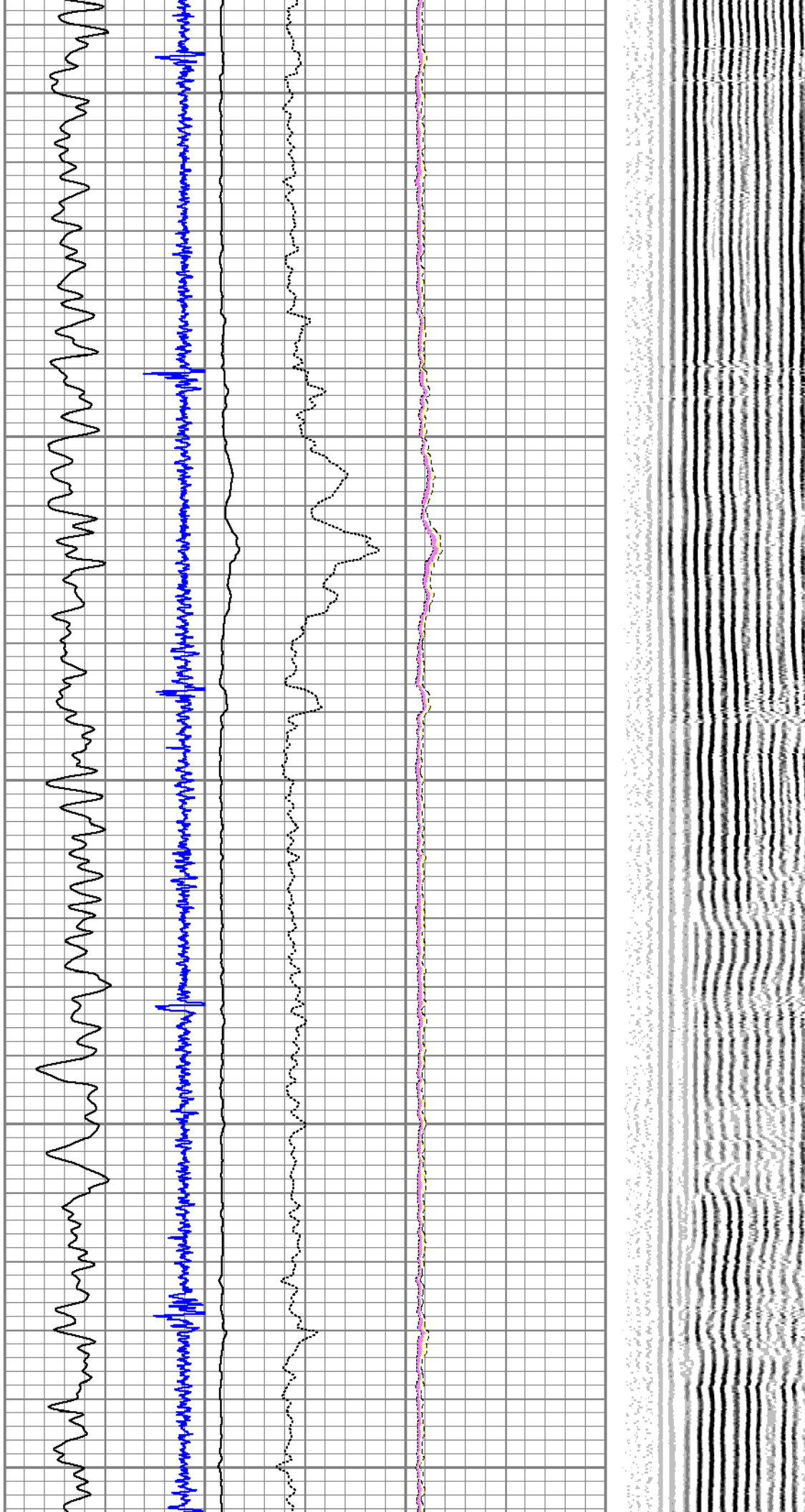
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5200



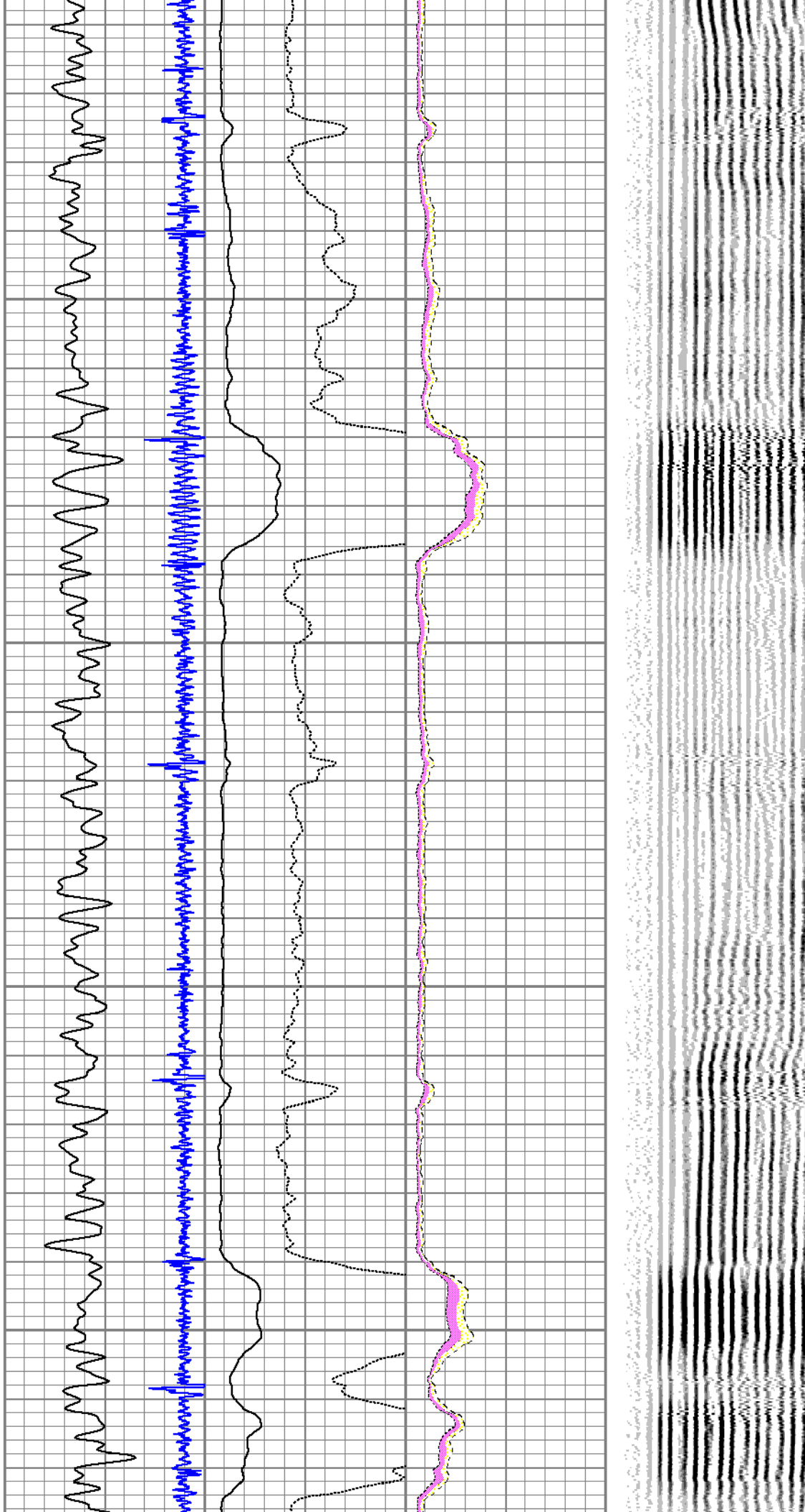
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5400



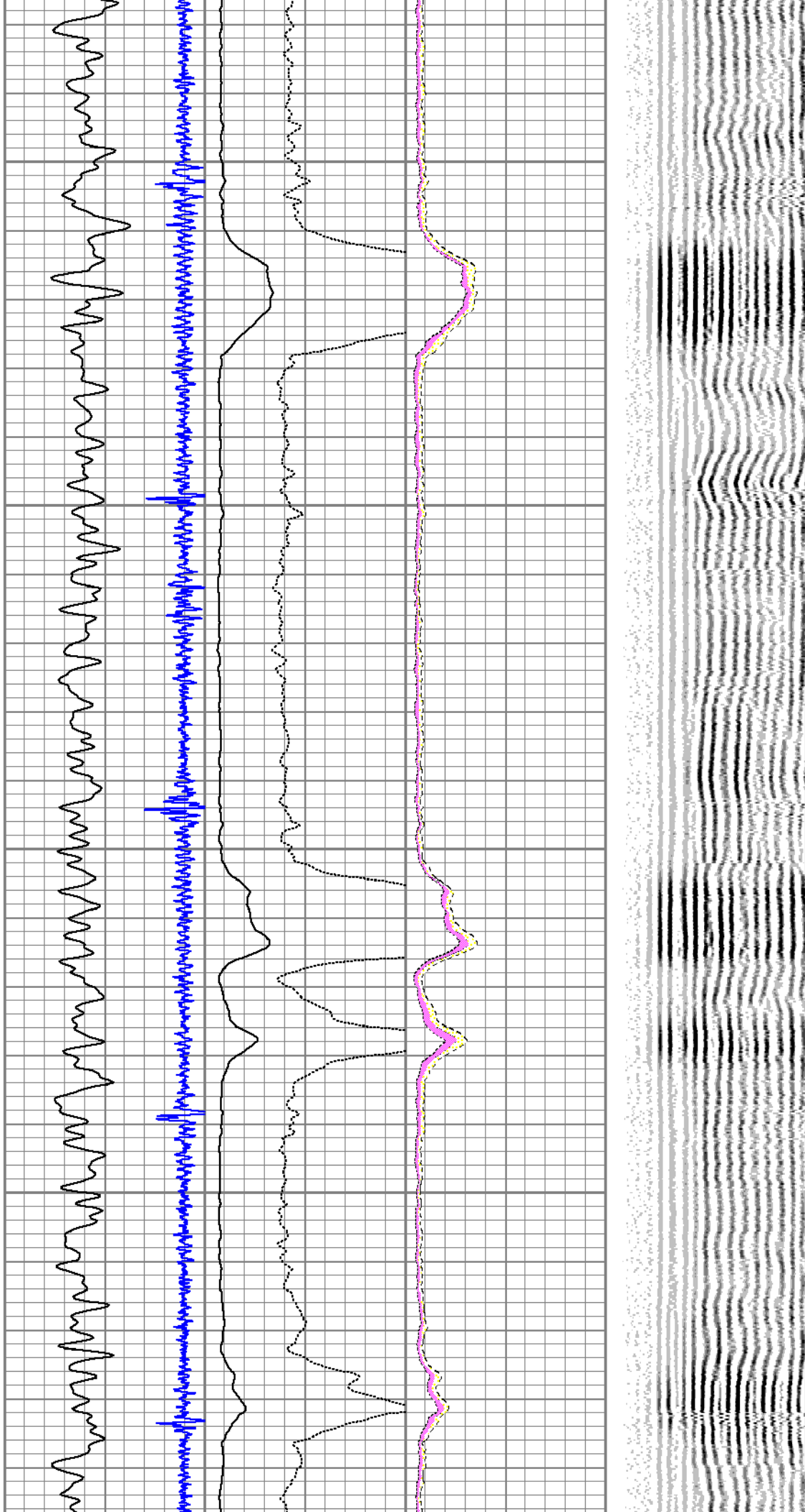
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5600



5700

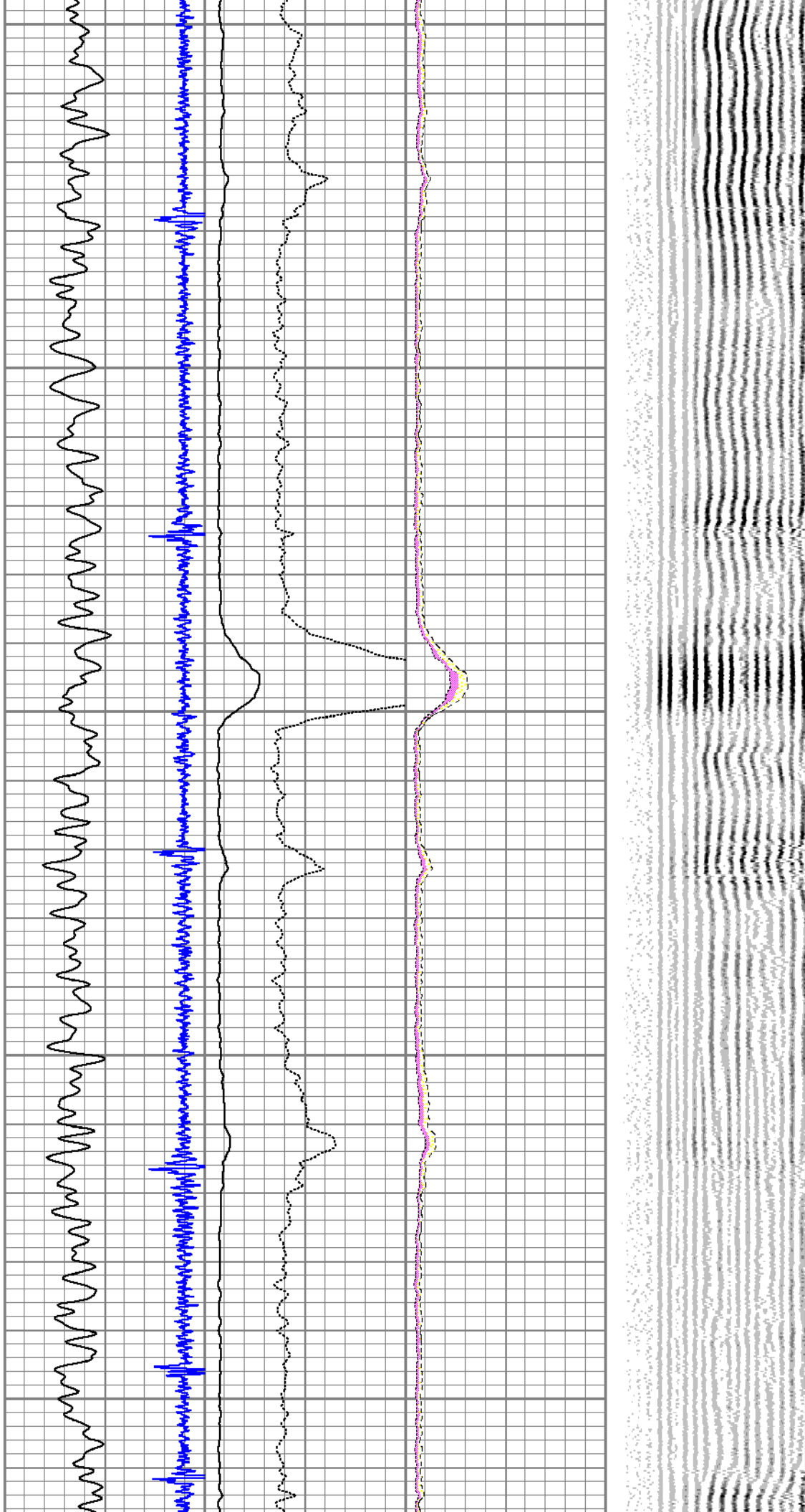
5800



5900

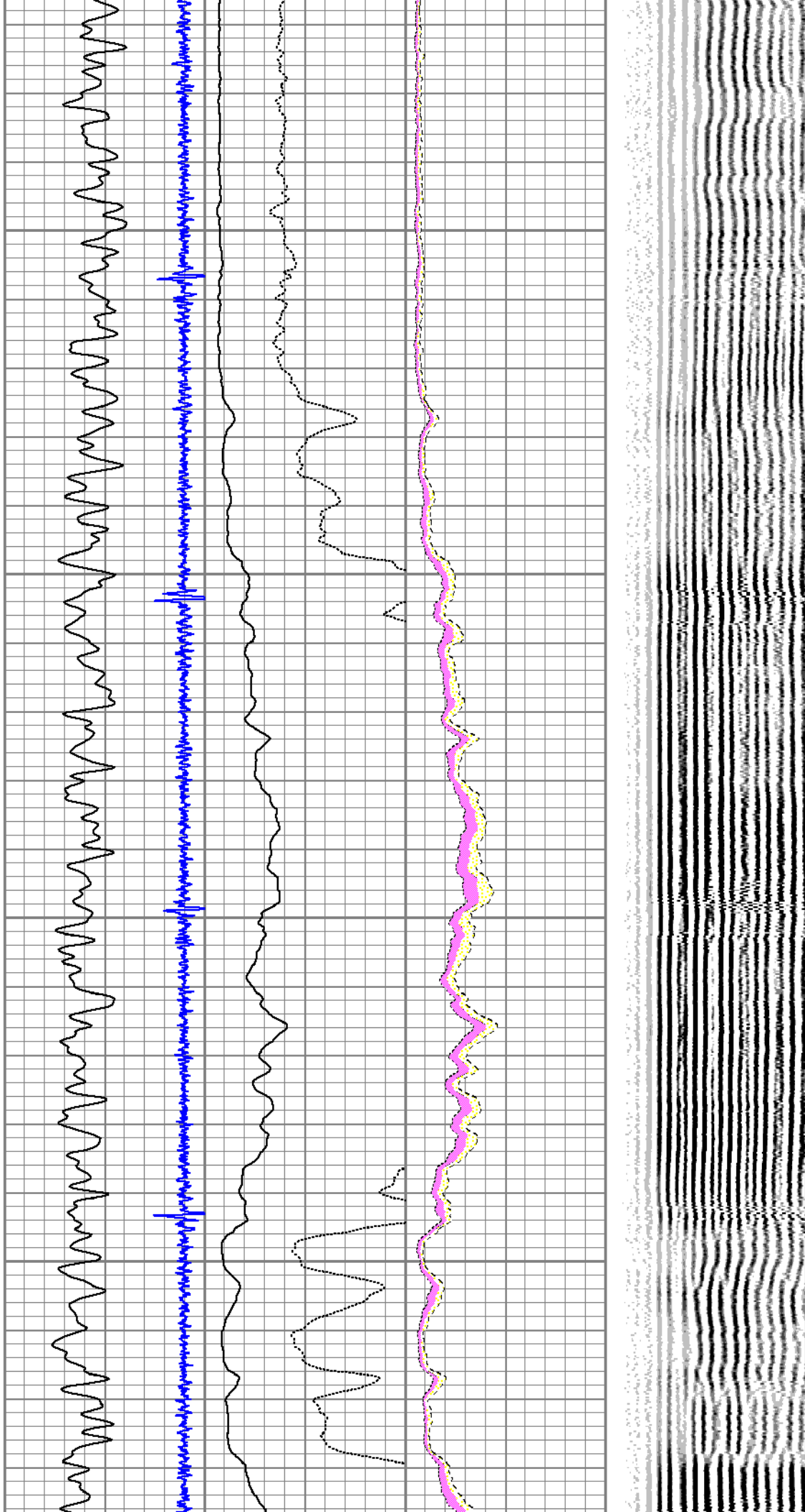
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6100



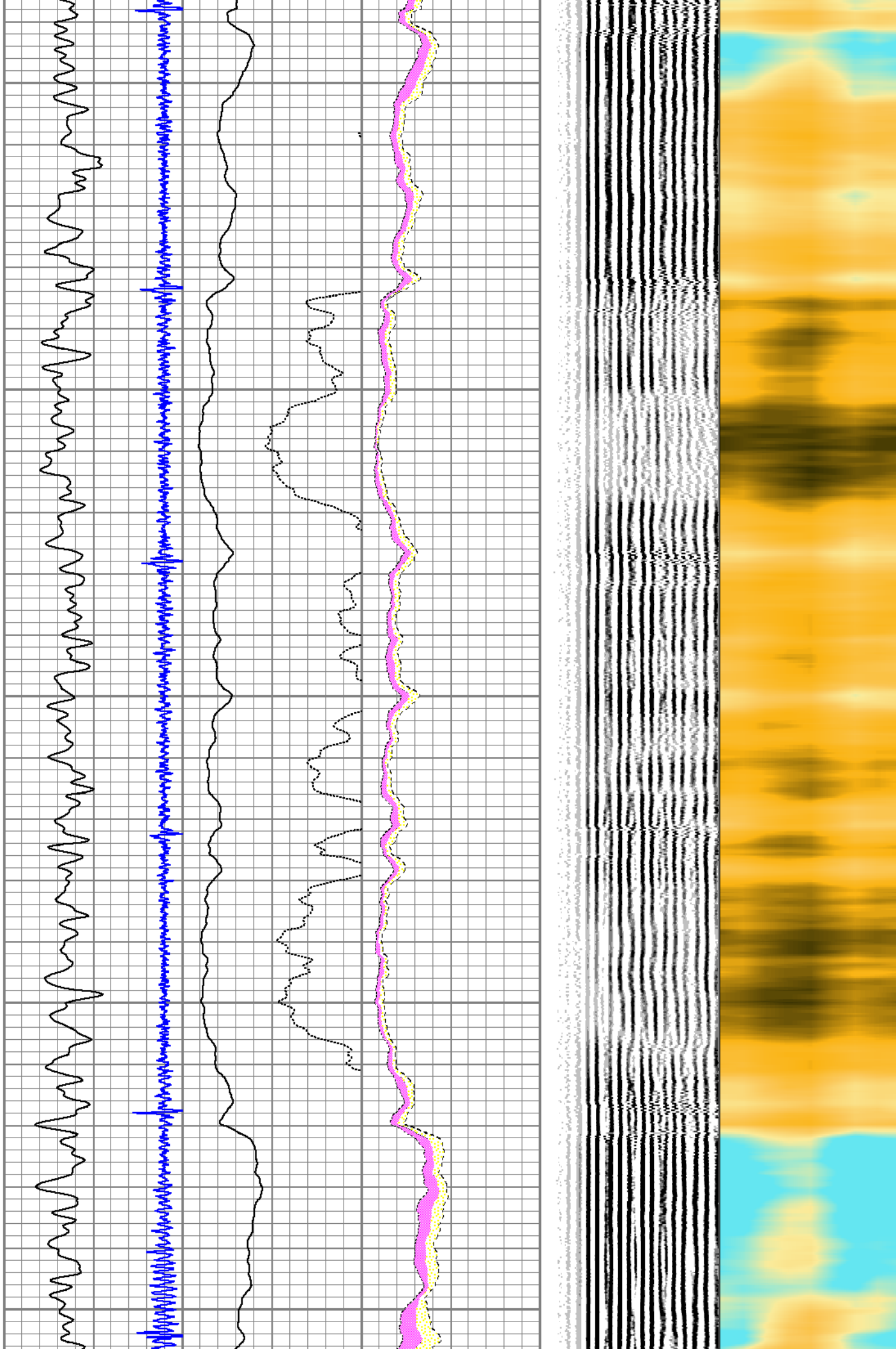
6200

6300



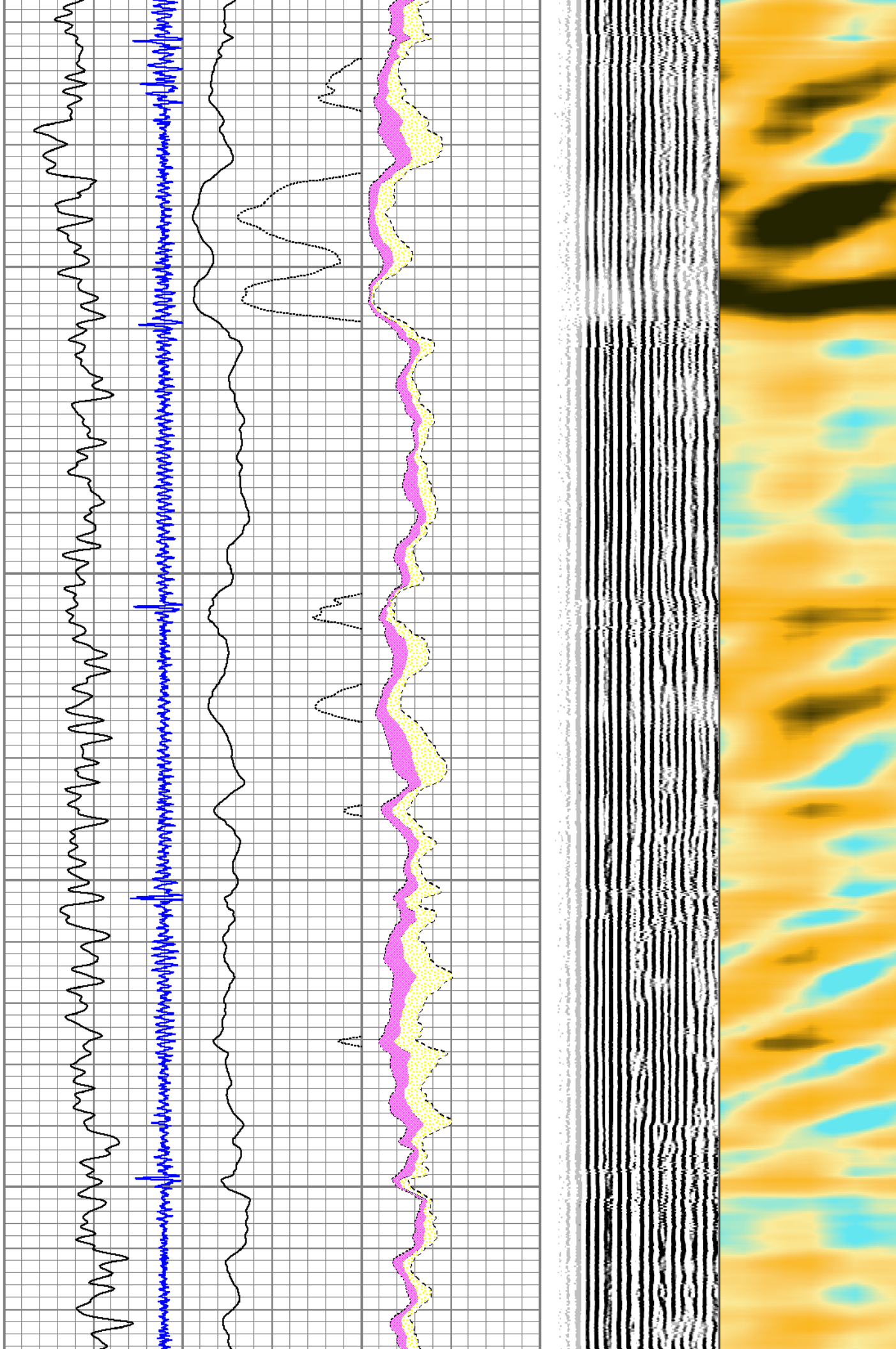
6400

6500



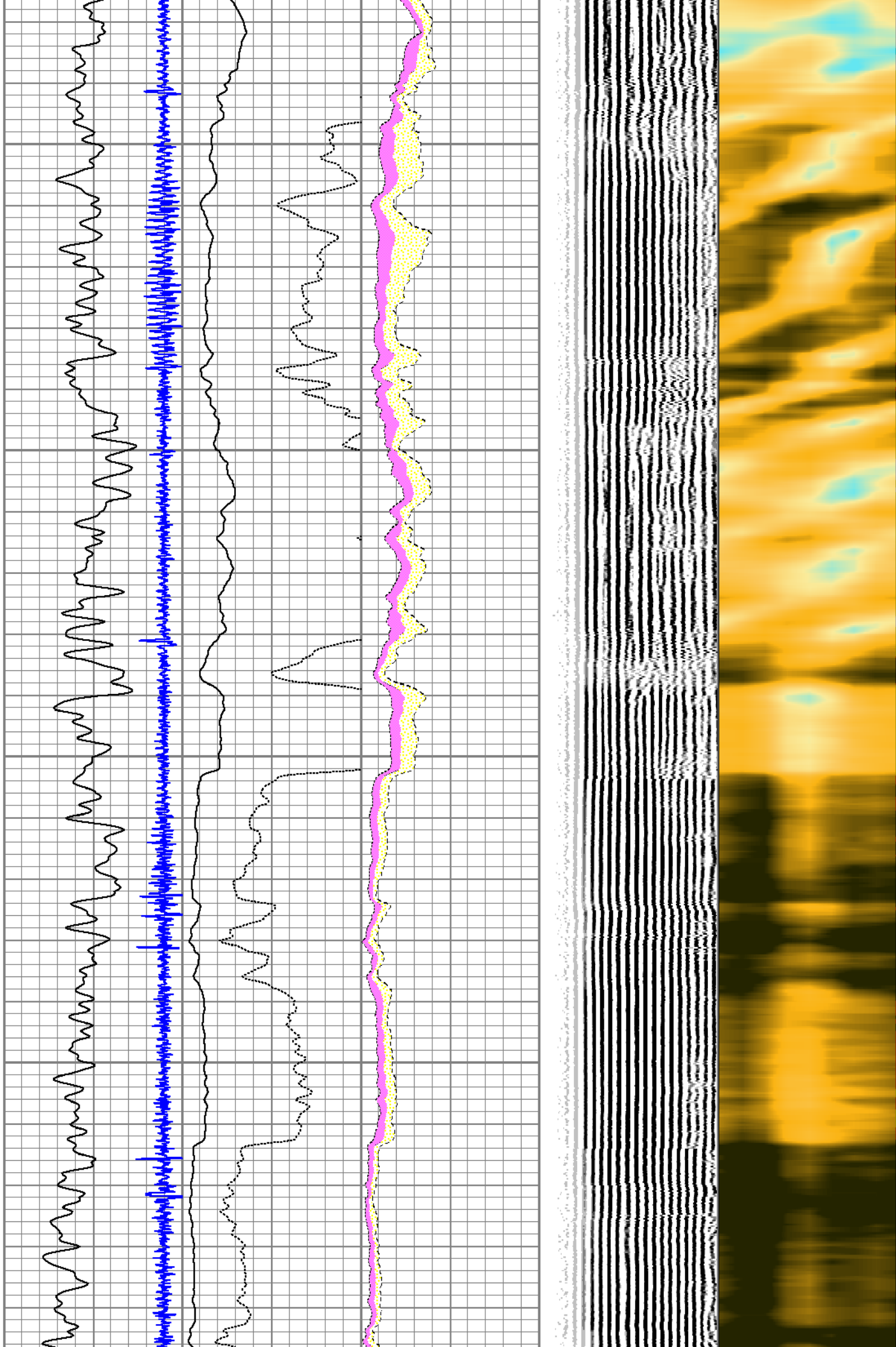
6600

6700



6800

6900



7000

7100

7200

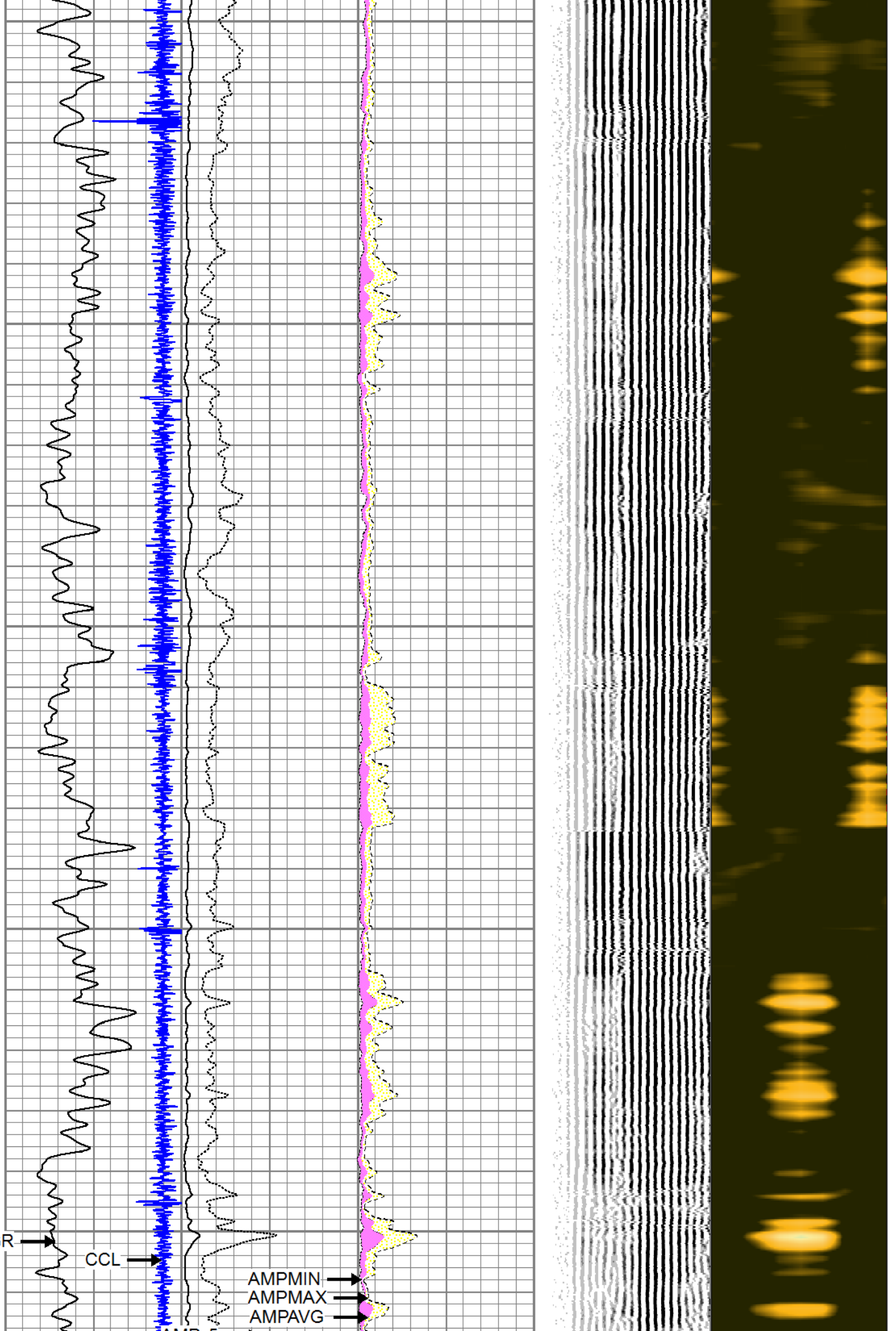
GR

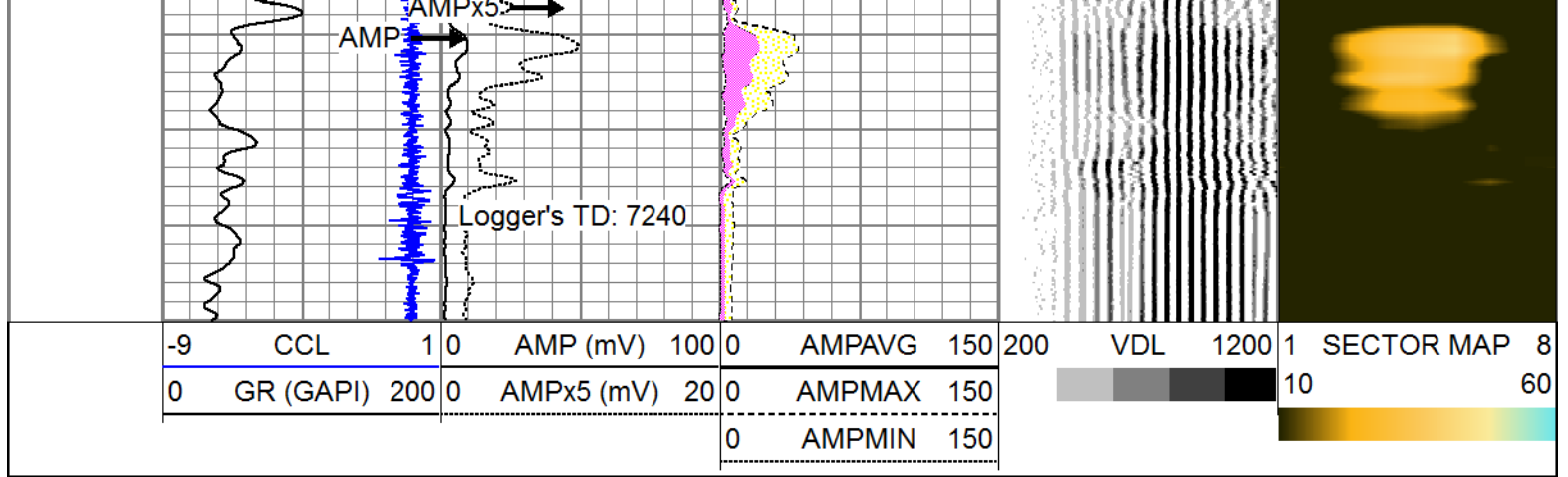
CCL

AMPMIN

AMPMAX

AMPAVG





Calibration Report

Database File: 13697.db
 Dataset Pathname: pass2
 Dataset Creation: Wed Oct 22 06:56:28 2014 by Log 0

Gamma Ray Calibration Report

Serial Number: 51013
 Tool Model: probe 2.75
 Performed: Thu Feb 23 11:03:07 2012

Calibrator Value: 1400.0 GAPI

Background Reading: 26.8 cps
 Calibrator Reading: 1120.0 cps

Sensitivity: 1.0000 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: 130584
 Tool Model: RBT-C3

Calibration Casing Diameter: 7.000 in
 Calibration Depth: 145.996 ft

Master Calibration, performed Tue Oct 14 20:22:31 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.012	0.378	1.500	62.165	69.000	-0.570
CAL	0.012	1.029				
5'	0.012	0.239	1.500	62.165	70.000	-1.811
SUM						
S1	0.010	0.384	0.000	100.000	102.000	-2.698
S2	0.012	0.425	0.000	100.000	101.000	-3.023
S3	0.012	0.441	0.000	100.000	102.500	-2.894
S4	0.012	0.420	0.000	100.000	103.000	-3.034
S5	0.012	0.378	0.000	100.000	104.000	-3.372
S6	0.010	0.352	0.000	100.000	105.000	-2.925
S7	0.012	0.346	0.000	100.000	102.000	-3.679
S8	0.012	0.362	0.000	100.000	103.000	-3.547

Internal Reference Calibration, performed Wed Dec 31 17:00:00 1969:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.012	1.029	1.000	0.000

Air Zero Calibration, performed Mon Sep 08 11:38:23 2014:

	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	

Temperature Calibration Report

Serial Number: 130584
Tool Model: RBT-C3
Performed: Wed Aug 13 16:18:33 2014

	Reference	Reading
Low Reference:	0.00 degF	0.00 degF
High Reference:	1.00 degF	1.00 degF
Gain:	0.77	
Offset:	15.00	
Delta Spacing	1	

Log Variables Database: C:\Warrior\Data\13697.db
Dataset: field/well/run1/pass2

Top - Bottom

PPT usec 0	CASEWGHT lb/ft 26	MAXAMPL mV 0	MINAMPL mV 1	MINATTN db/ft 0.08	CASEOD in 7	PERFS 0
TDEPTH ft 0	BOTTEMP degF 208	BOREID in 7				