



Radial Cement Bond
Variable Density Log
W/Gamma Ray/CCL

Company		Noble Energy	
Well	Wells Ranch AA26-65-1HN		
Field	Wattenberg		
County	Weld	State	Colorado
Location:		API # : 05-123-37569	
SEC 25 TWP 6N RGE 63W		TEMP	
Permanent Datum	Ground Level	Elevation	4791'
Log Measured From	24' Kelly Bushing	Elevation K.B. 4815'	
Drilling Measured From	Kelly Bushing	D.F. 4814'	
		G.L. 4791'	
Date	December 3, 2013		
Run Number	1		
Depth Driller	11204'		
Depth Logger	6909'		
Bottom Logged Interval	6898'		
Top Log Interval	Surface		
Open Hole Size	8.125		
Type Fluid	Fresh Water		
Density / Viscosity	8.33		
Max. Recorded Temp.	209 Deg F		
Estimated Cement Top	784'		
Time Well Ready	11:18		
Time Logger on Bottom	12:02		
Equipment Number	13033		
Location	Brighton		
Recorded By	C. Rail		
Witnessed By	Bill Mansfield		
Borehole Record			
Run Number	Bit	From	To
One			
Two			
Three			
Four			
Casing Record	Size	Wgt/Ft	Top
Surface String	9 5/8	36#	Surface
Prot. String			
Production String	7	26#	Surface
Liner	4 1/2	11 6#	6920'
Short Joint			5652'

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, 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. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

Primary Log on Well. Well Logged using 24' KB.

Main Pass and Repeat Pass Logged with Zero Pressure on Surface.

Short Joint @ 5652' To 5676'

Estimated Top of Cement @ 784'

Thank you for using Allied Wireline.
(303)659-4609



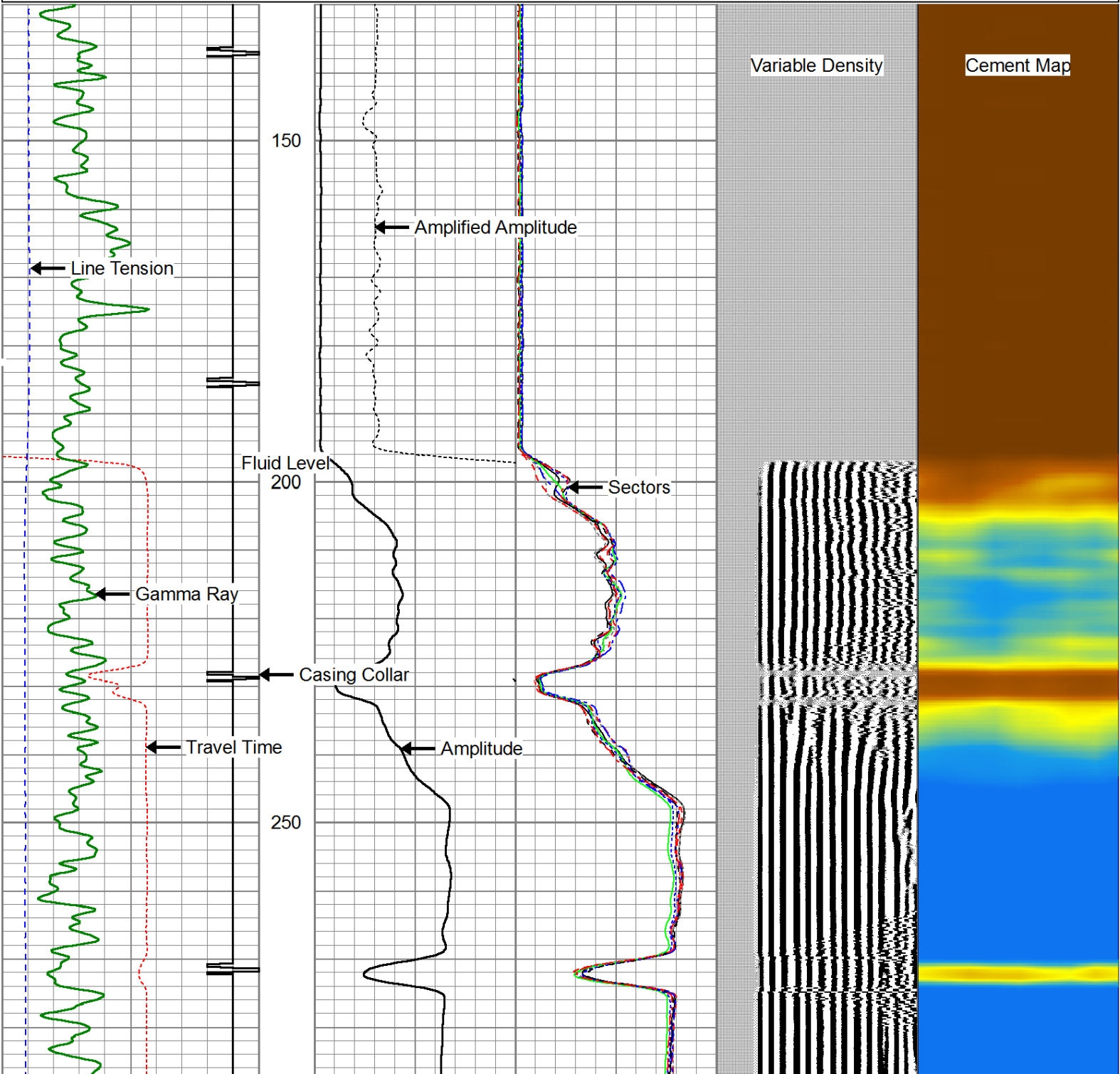
Main Pass (0 PSI)

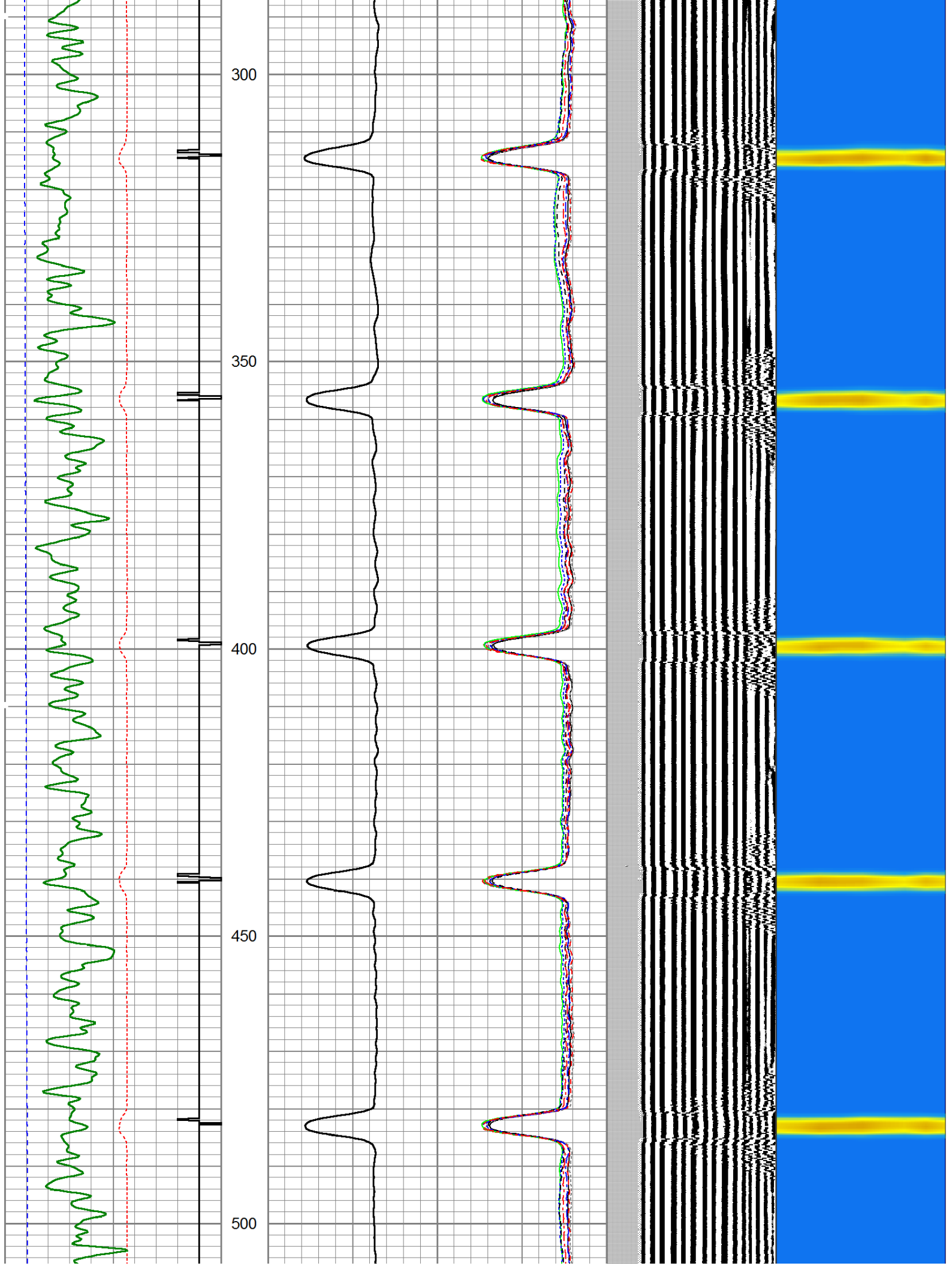
Database File: noble energy wells ranch aa26-65-1hn.db
Dataset Pathname: pass7.1
Presentation Format: scbl03
Dataset Creation: Tue Dec 03 13:28:15 2013 by Calc 0
Charted by: Depth in Feet scaled 1:240

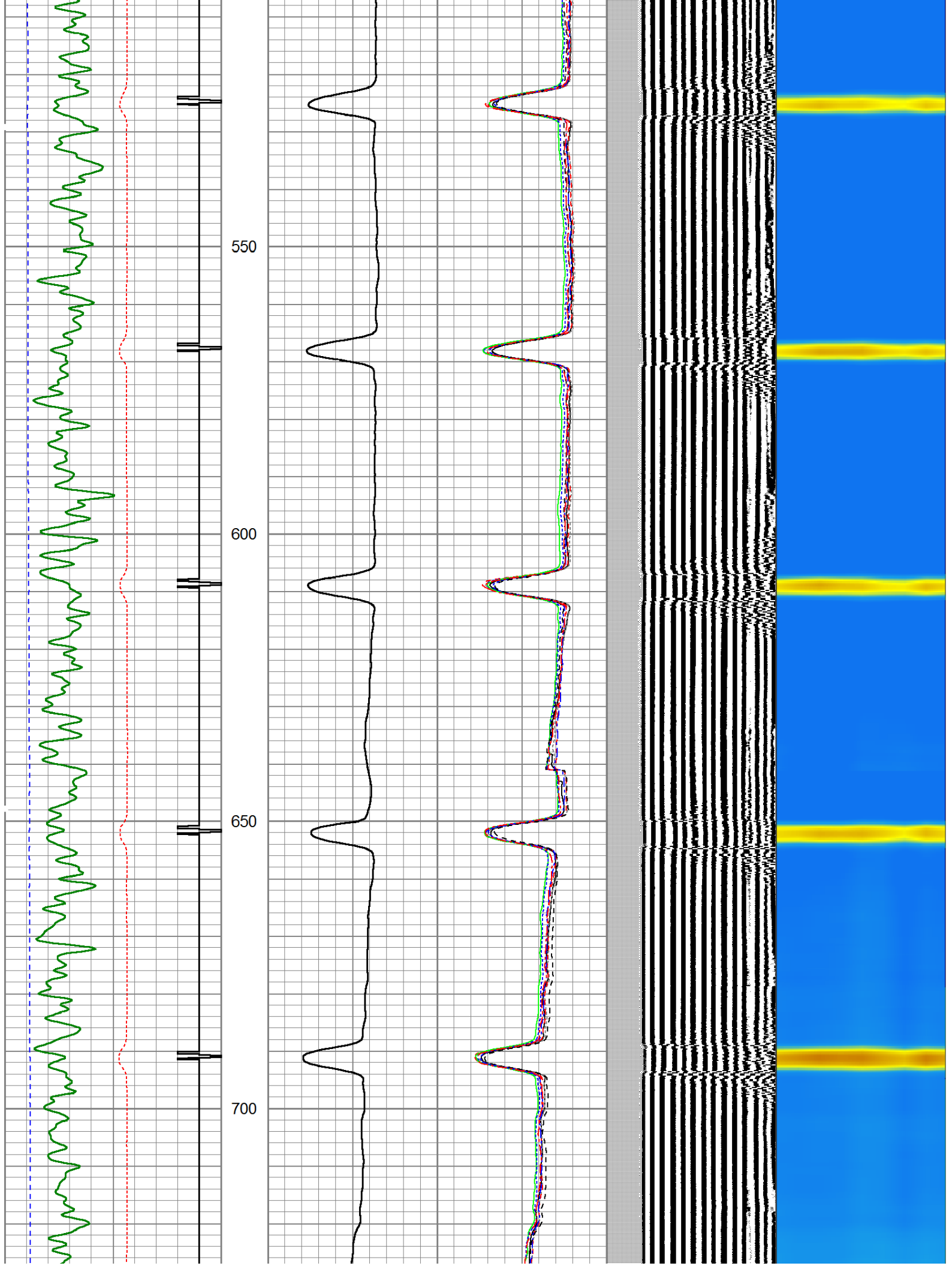
400	Travel Time (usec)	200
9	Casing Collar	-1
0	Gamma Ray (GAPI)	150
0	Line Tension (lb)	2000

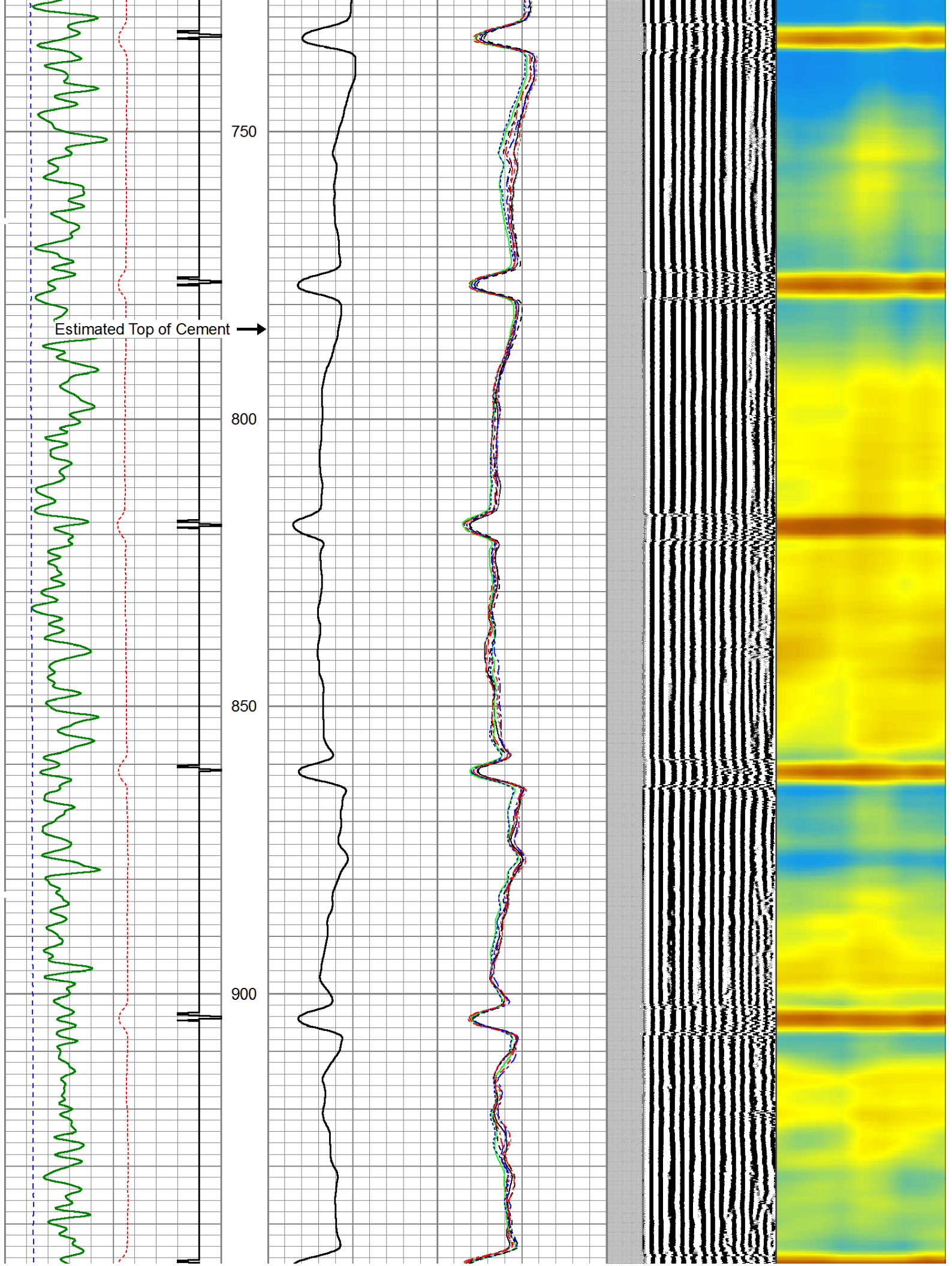
0	Amplitude (mV)	100	-5	AMPS1	150
	Amplified Amplitude		-5	AMPS2	150
0	(mV)	10	-5	AMPS3	150
			-5	AMPS4	150
			-5	AMPS5	150
			-5	AMPS6	150
			-5	AMPS7	150
			-5	AMPS8	150

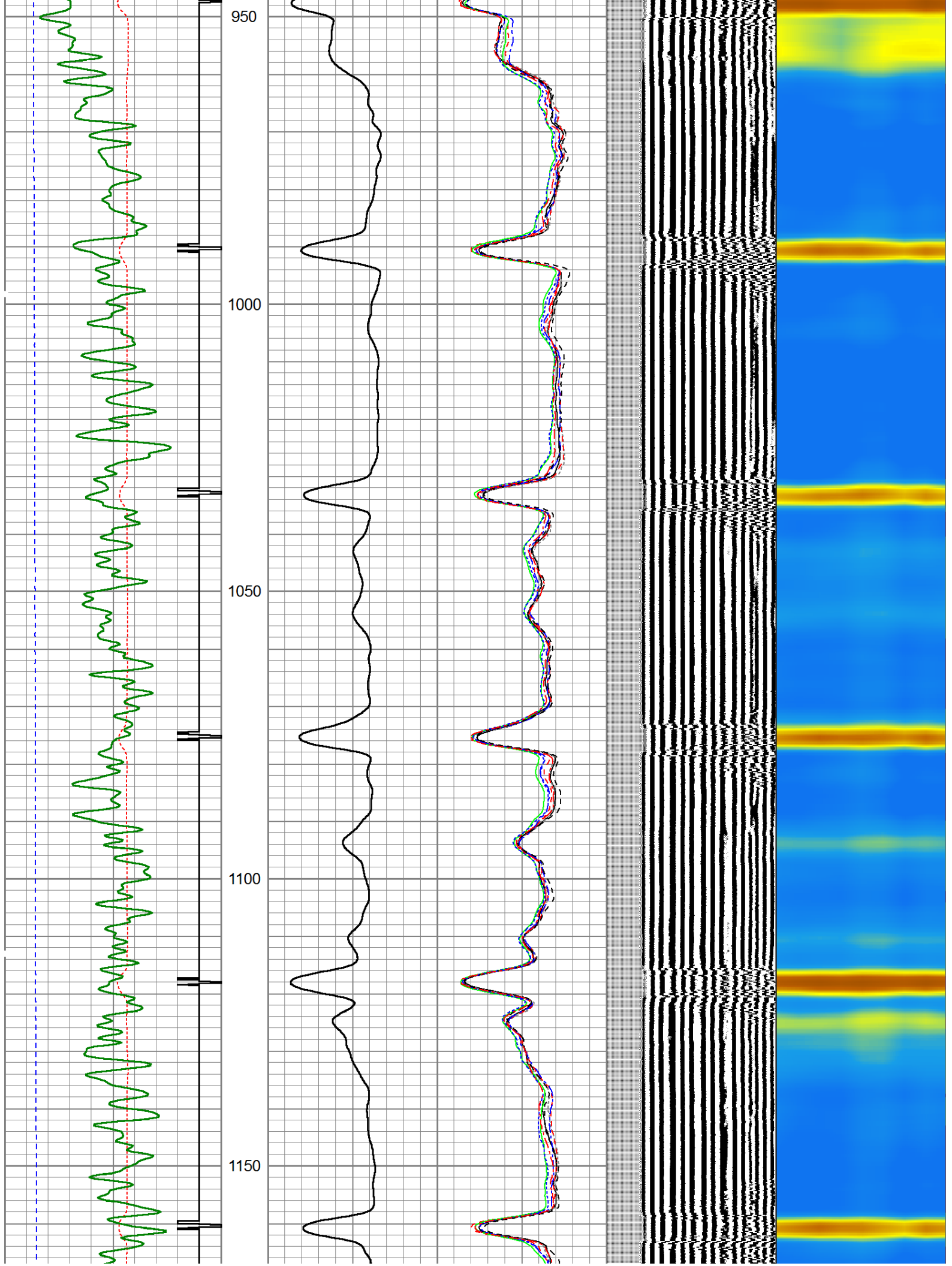
Variable Density	1	Cement Map	8
200	1200	0	100

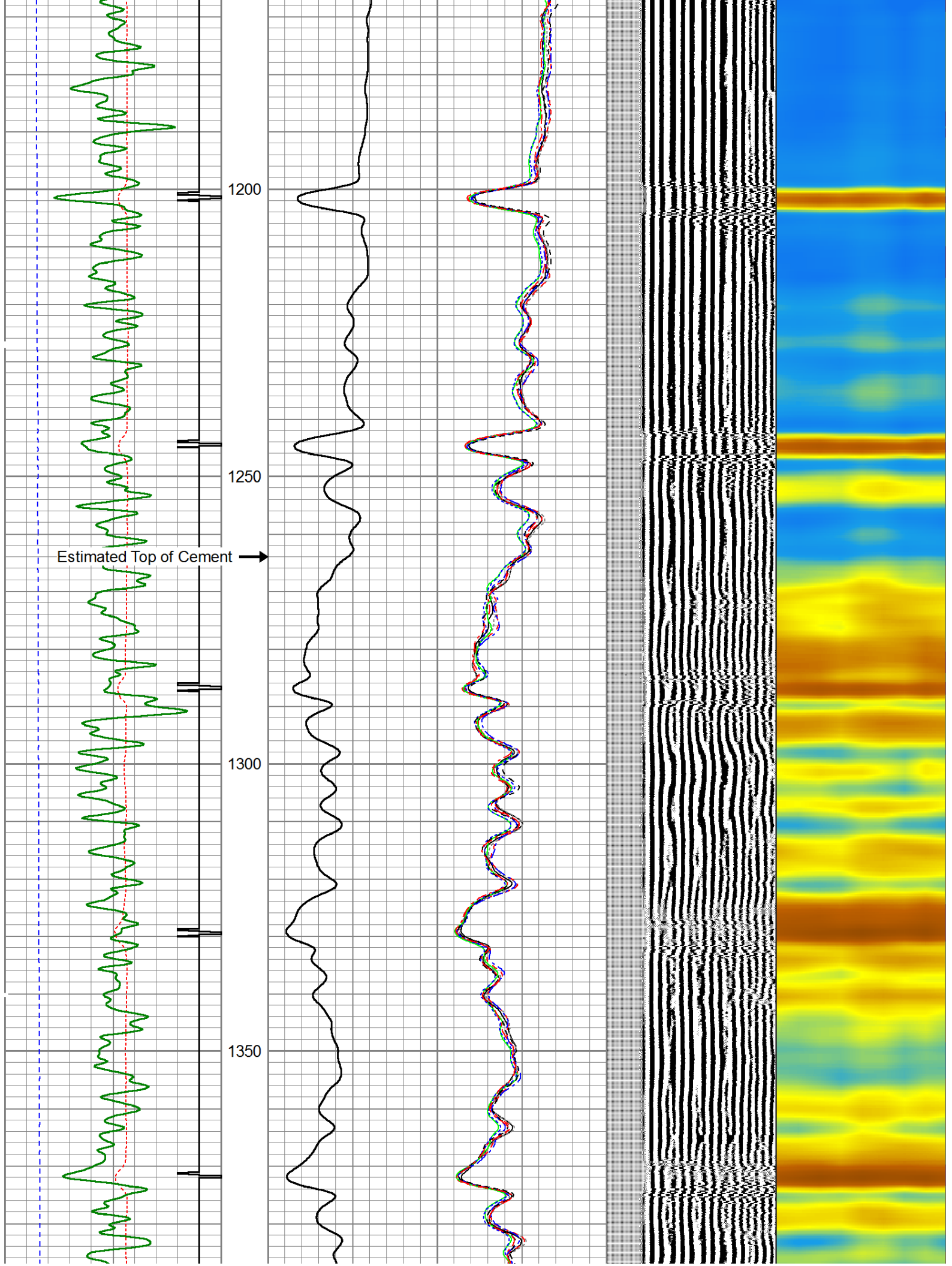


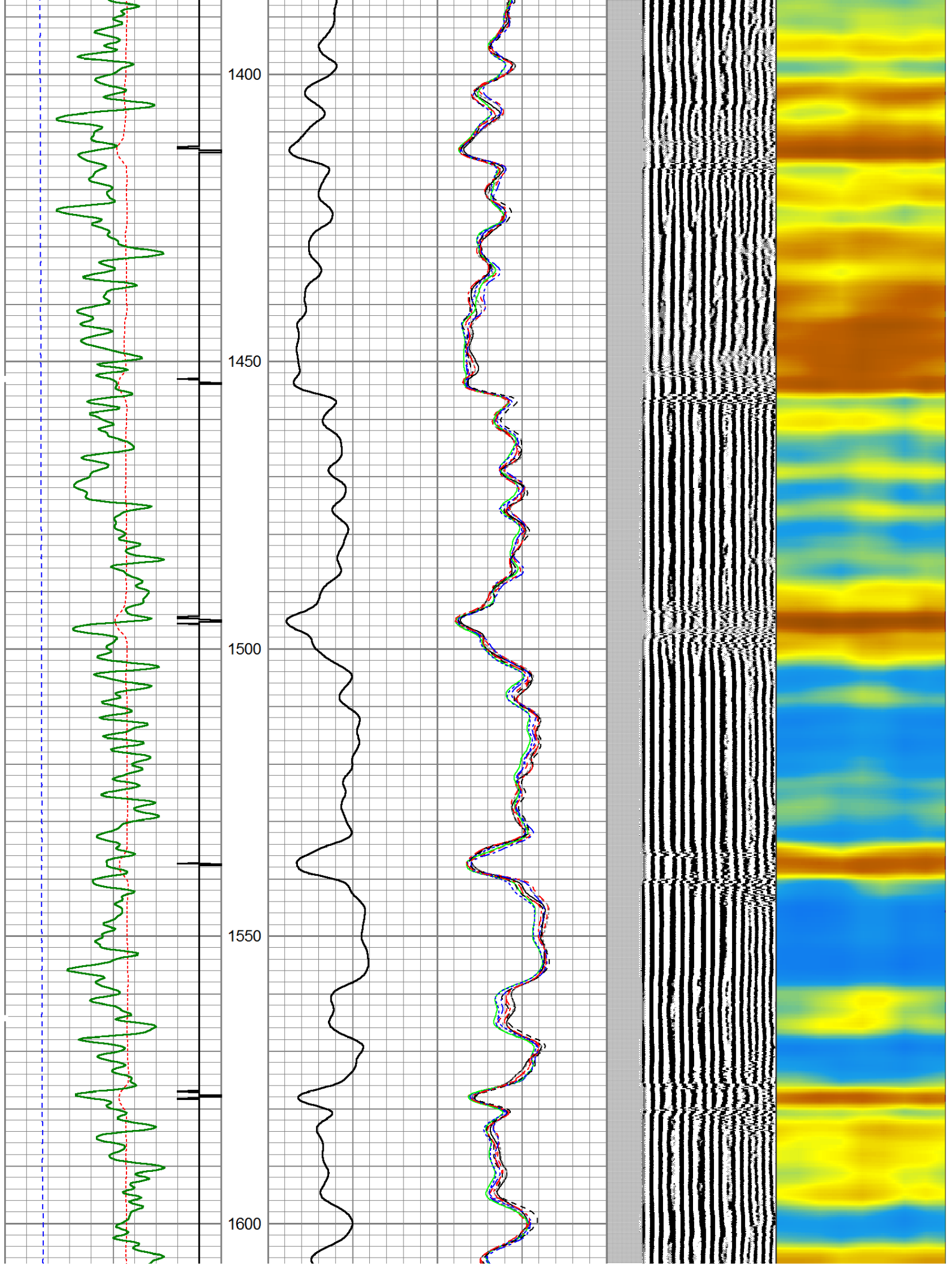


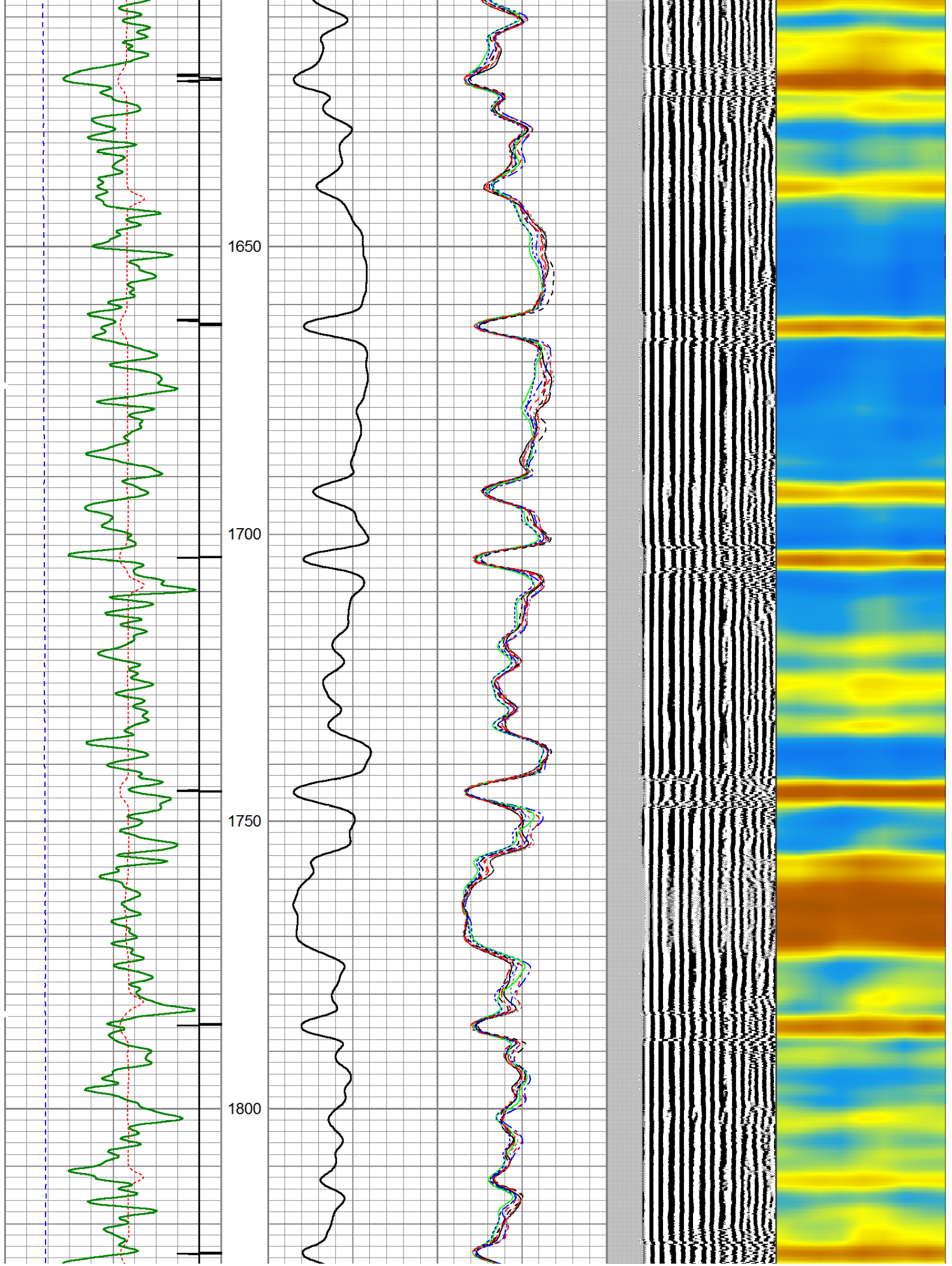


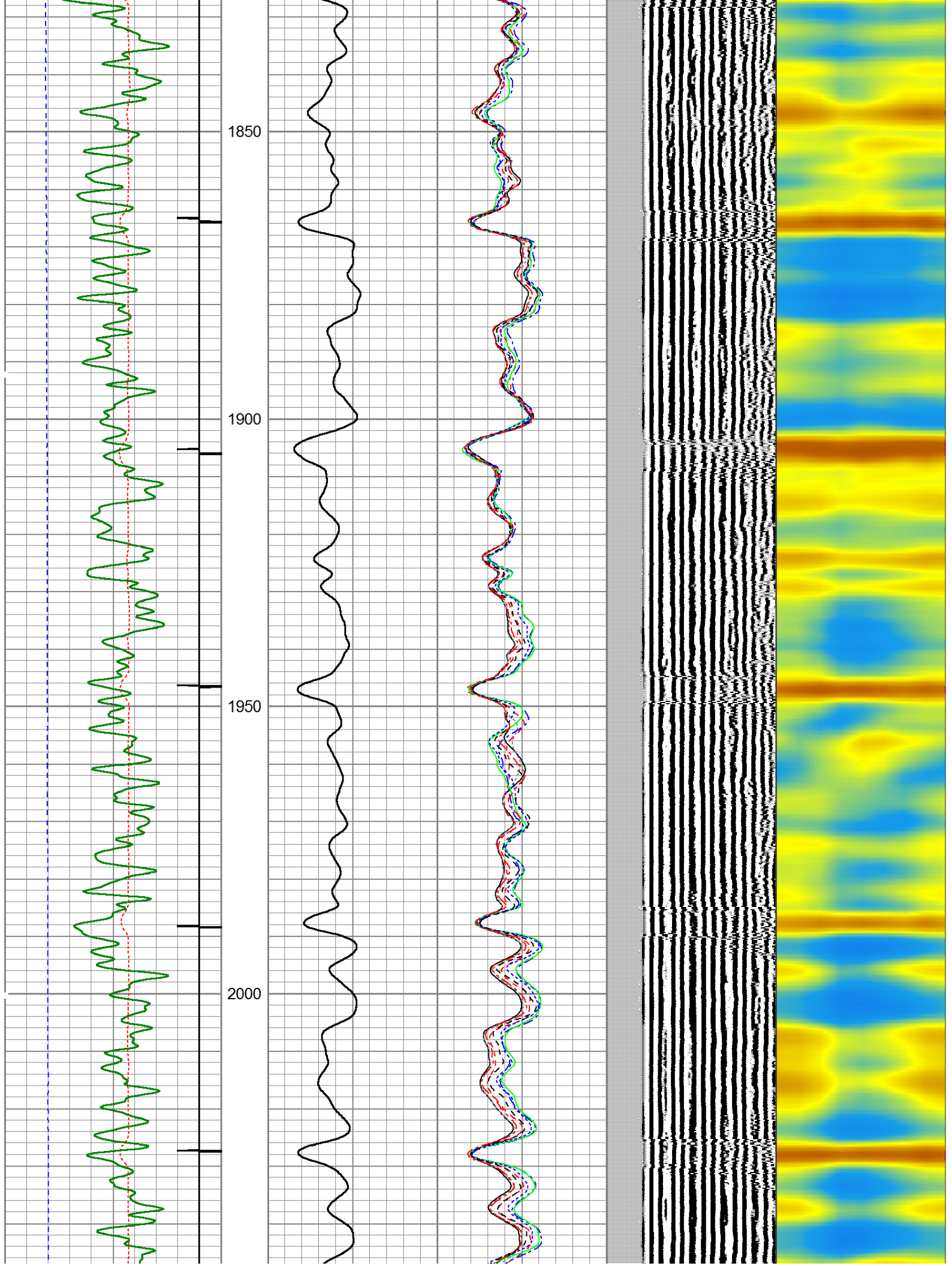


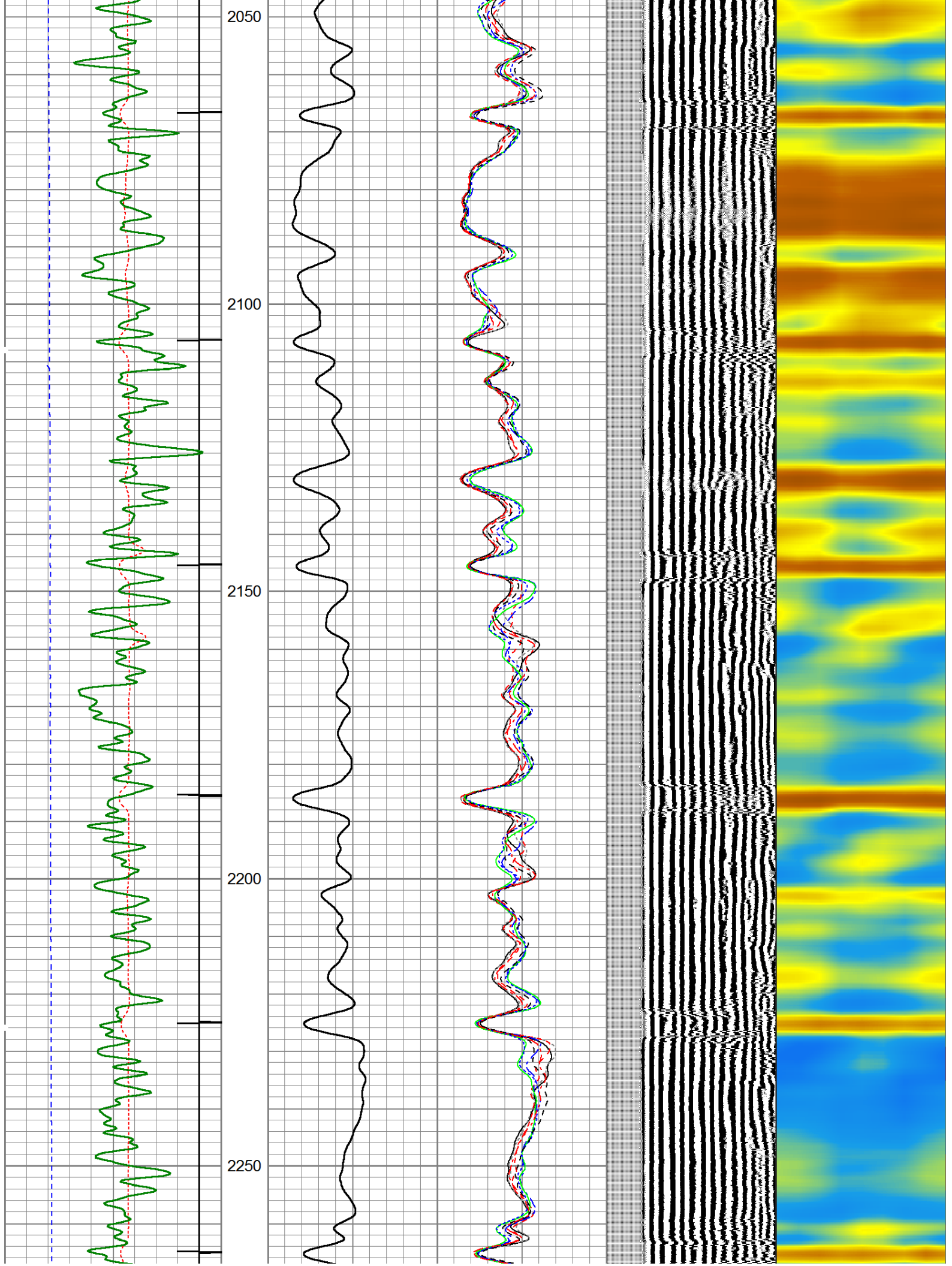


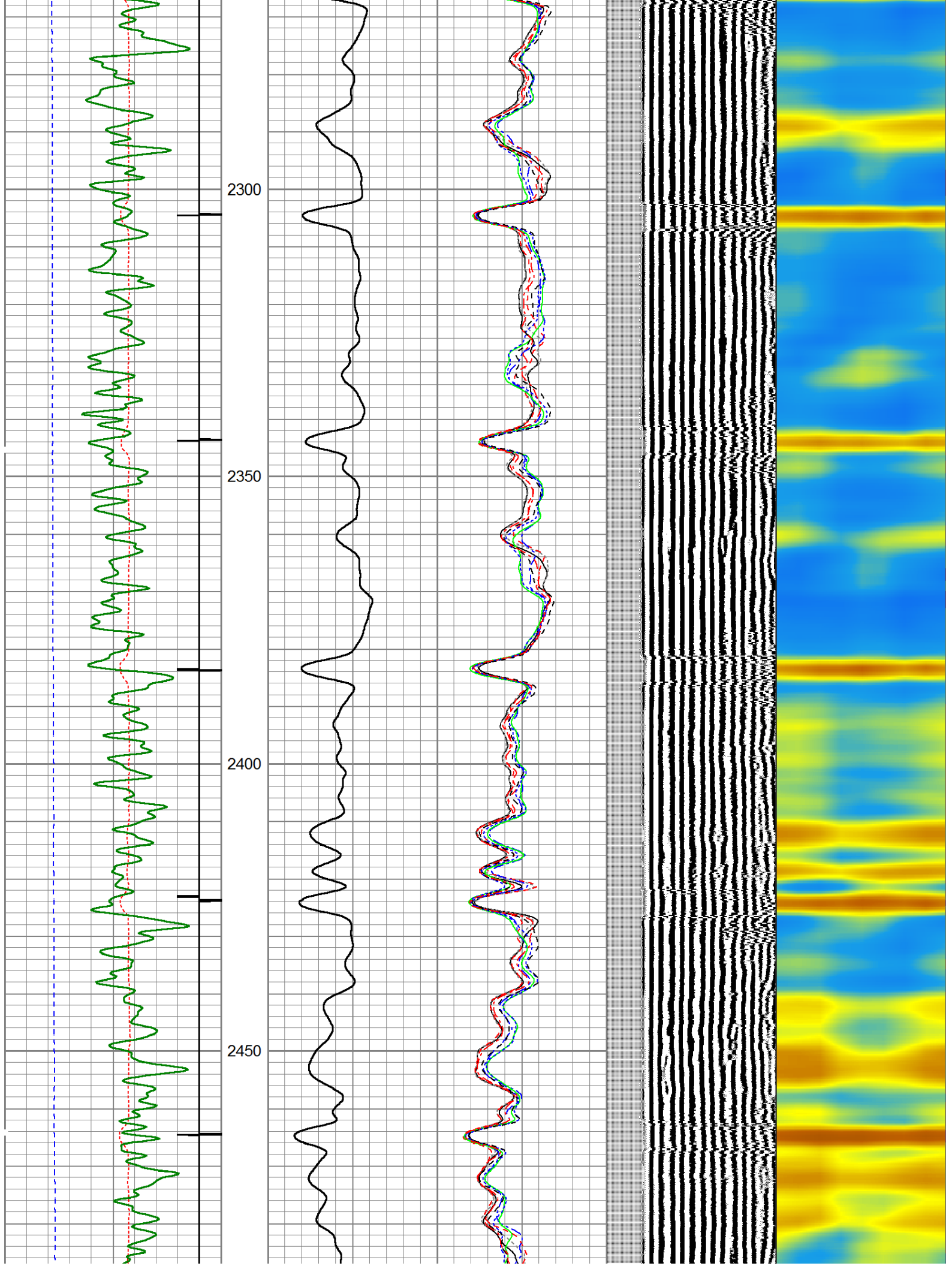


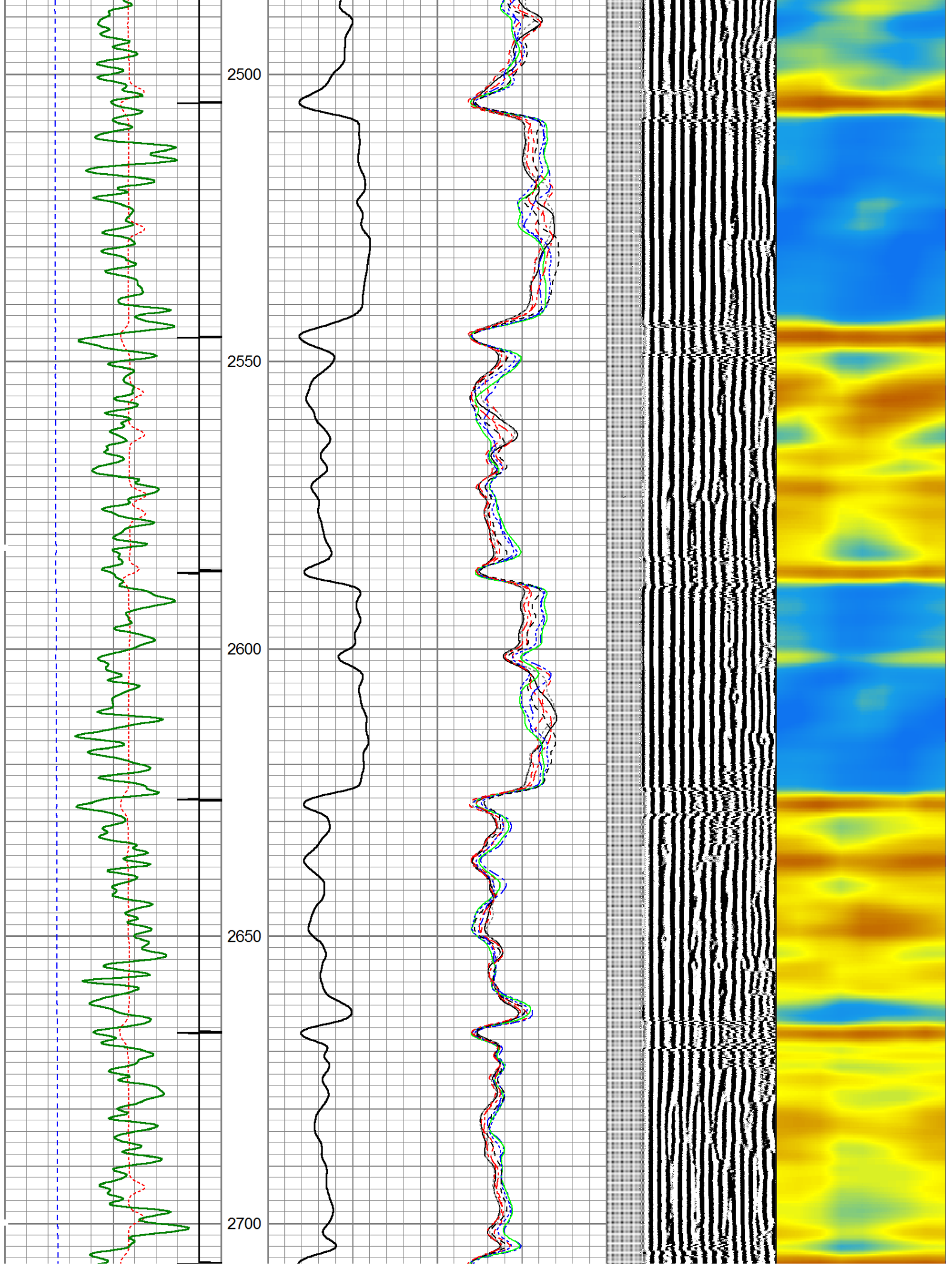


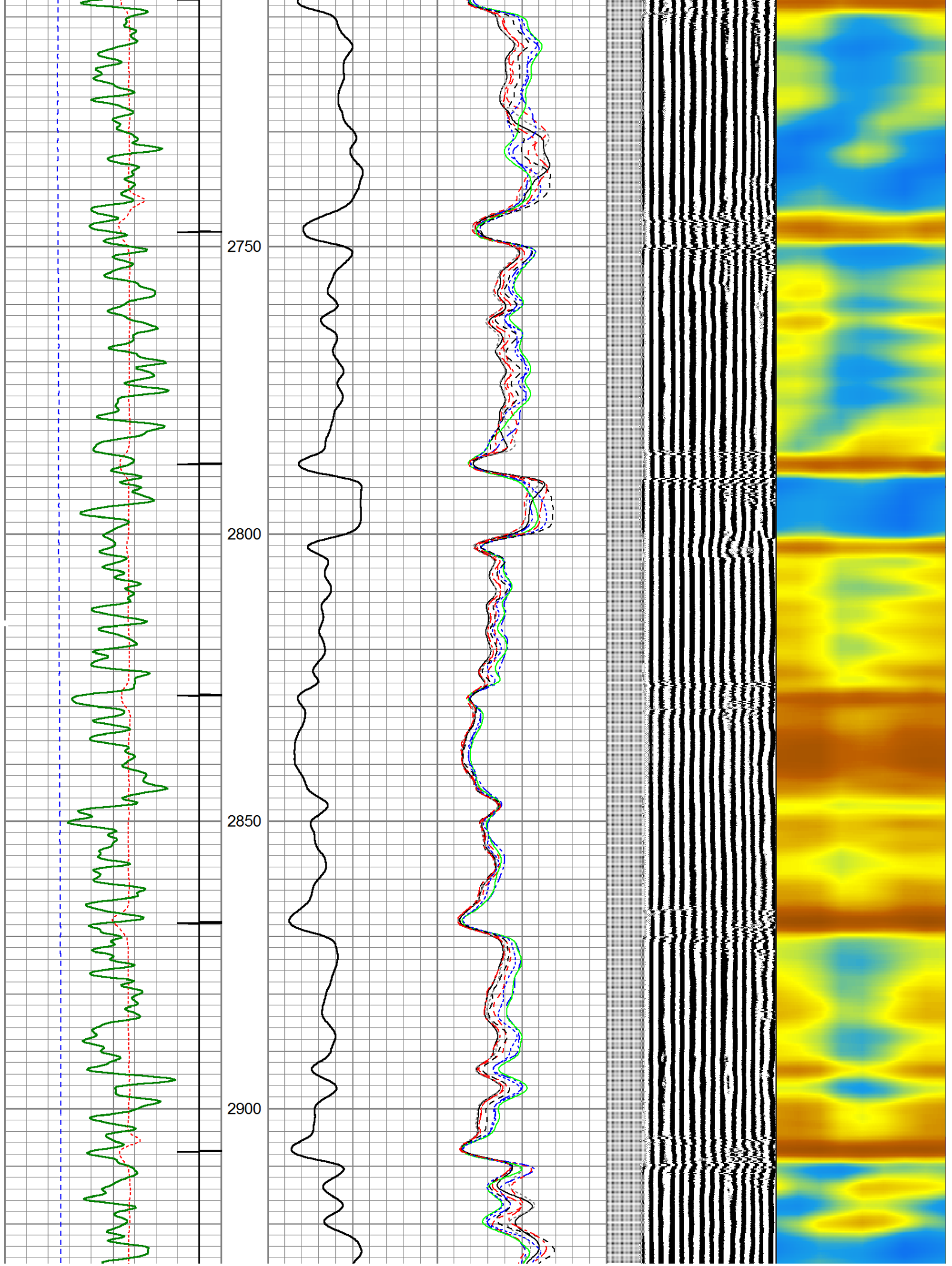


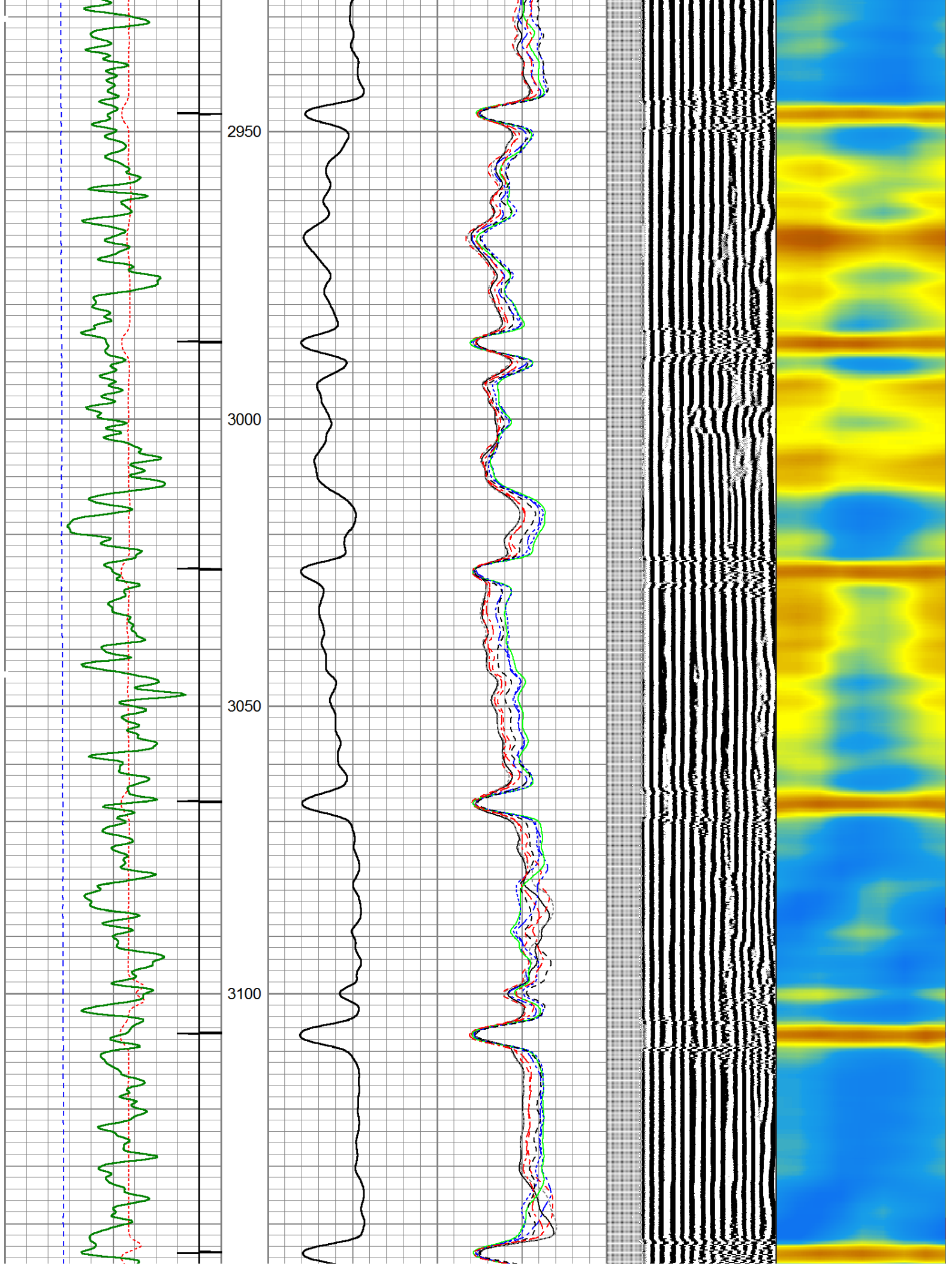


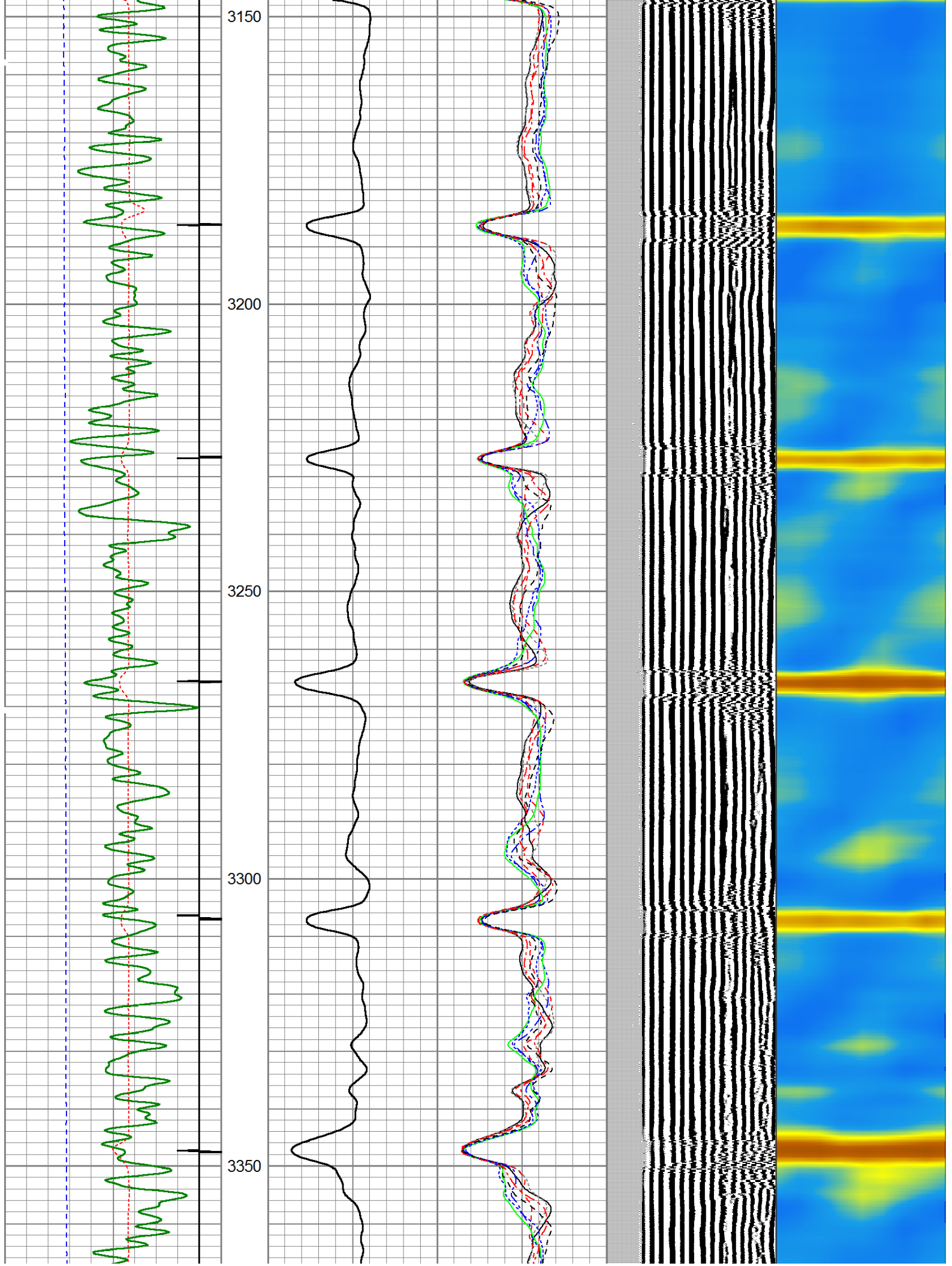


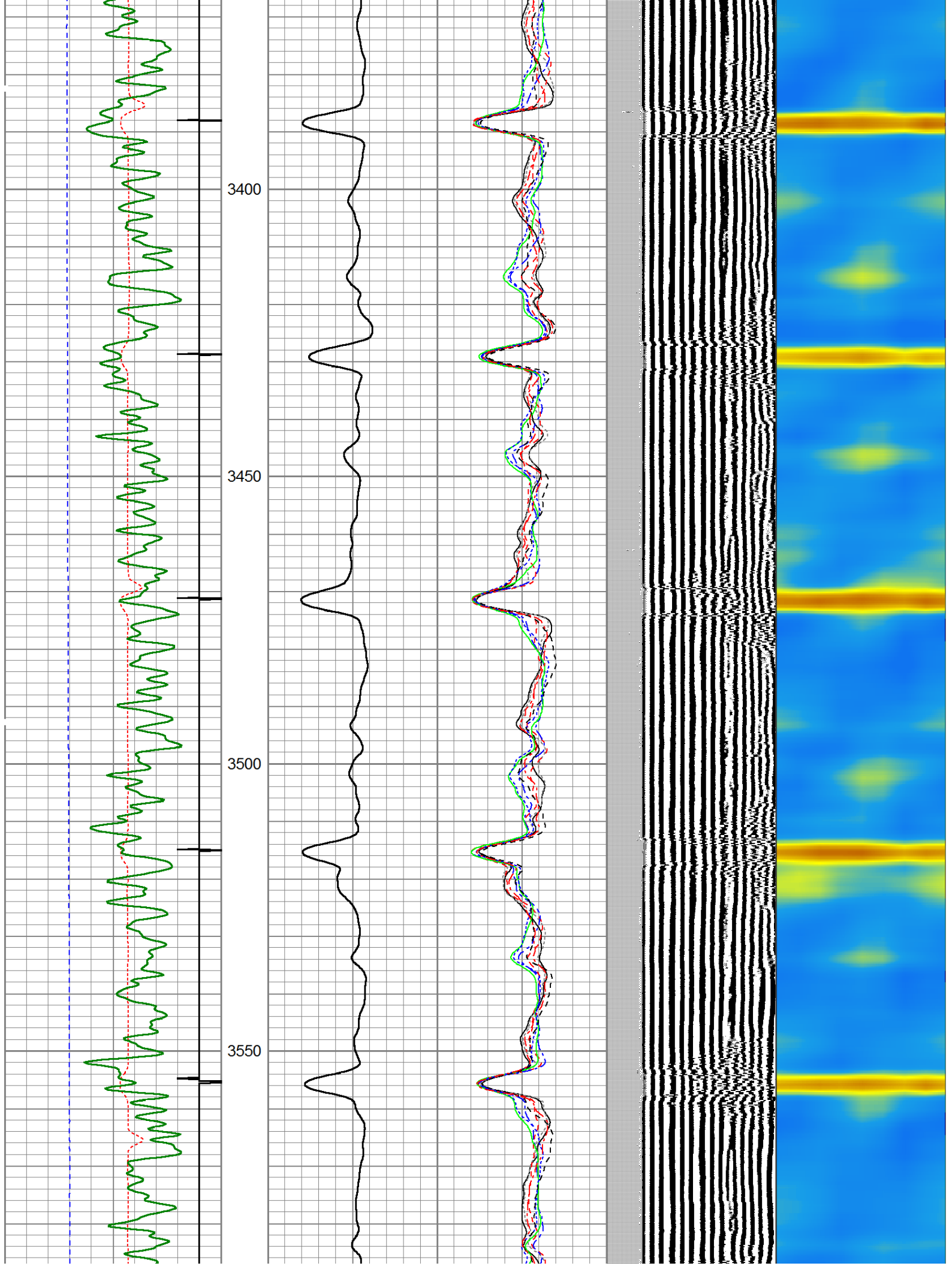


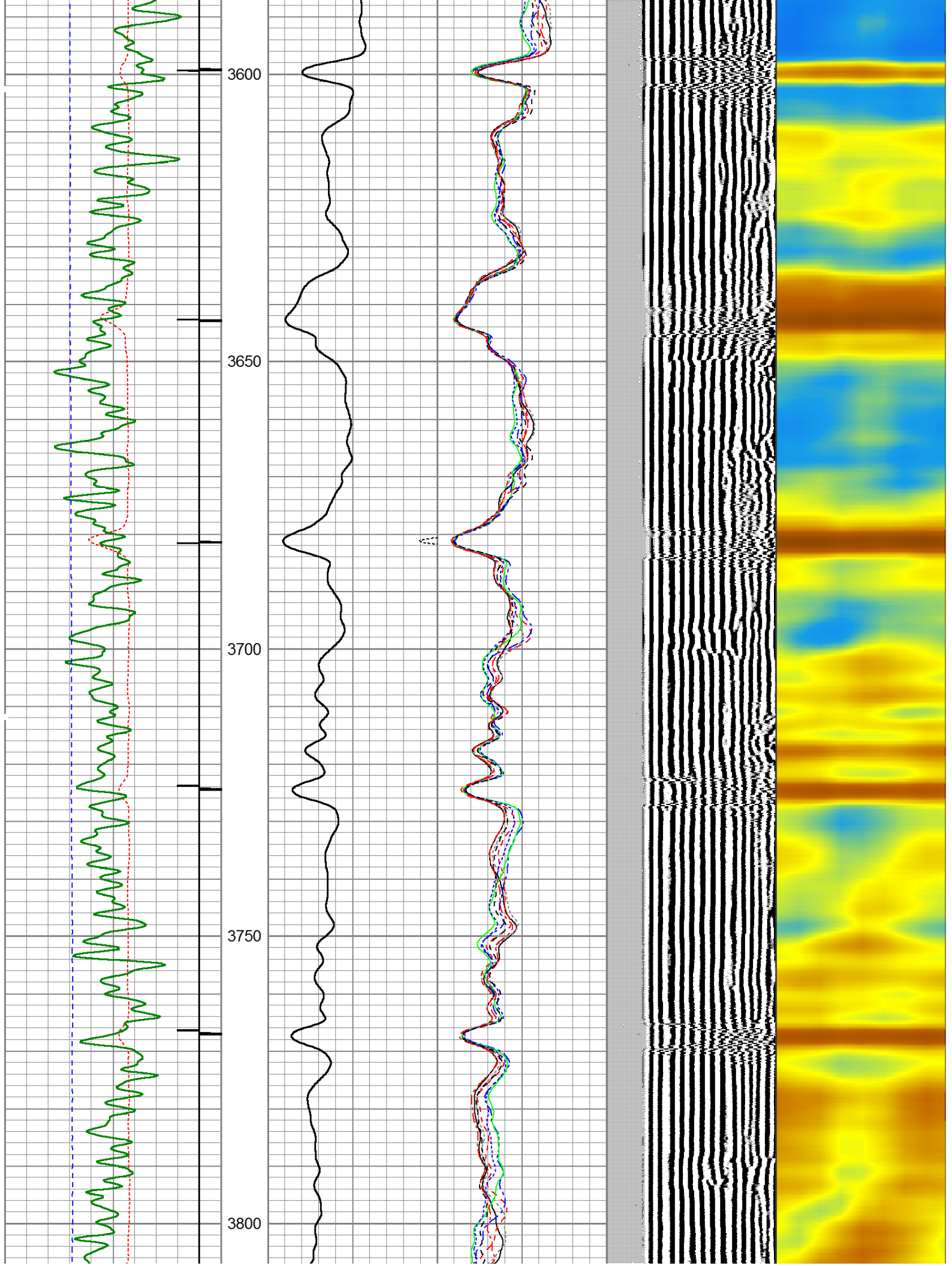


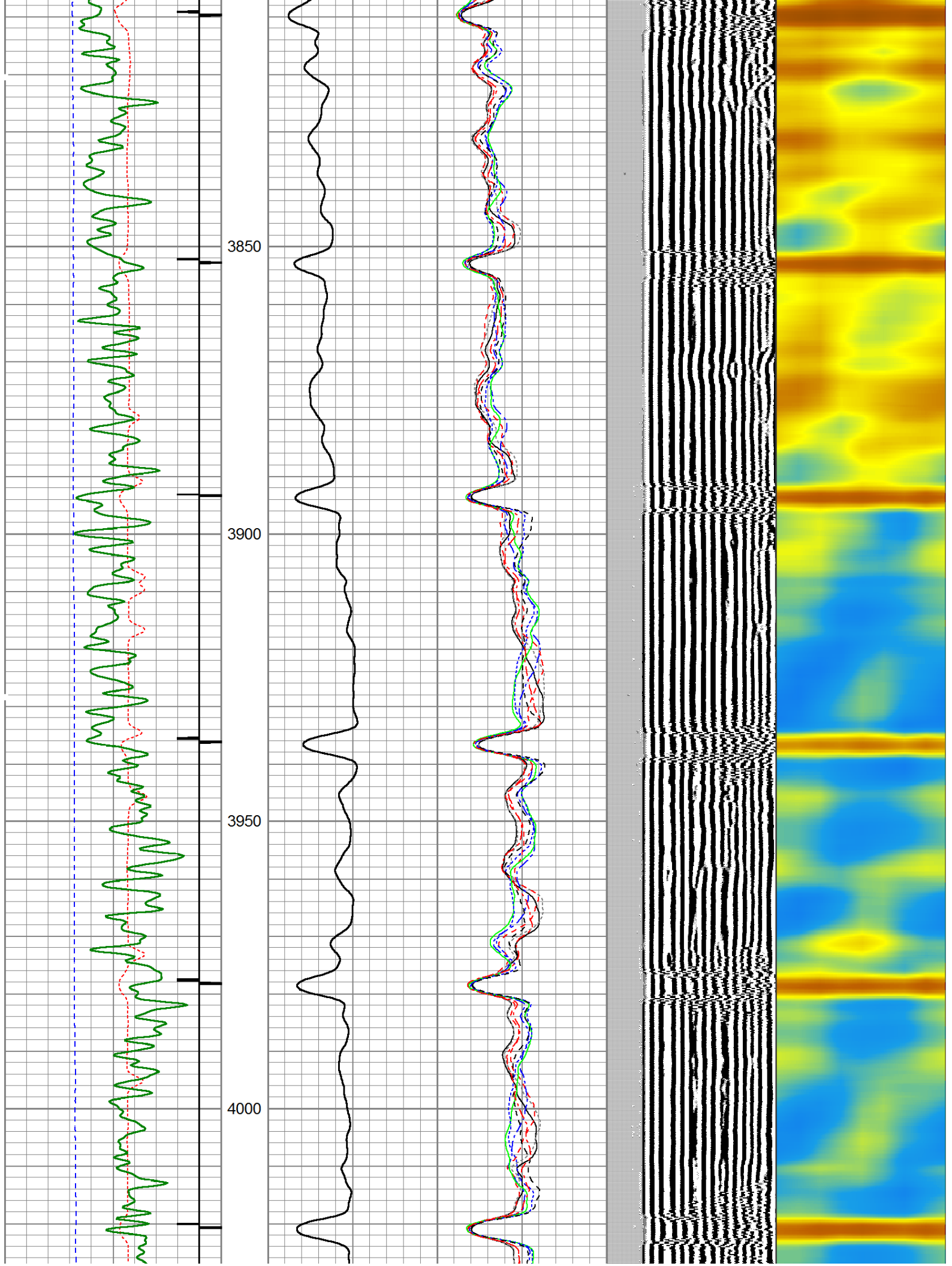


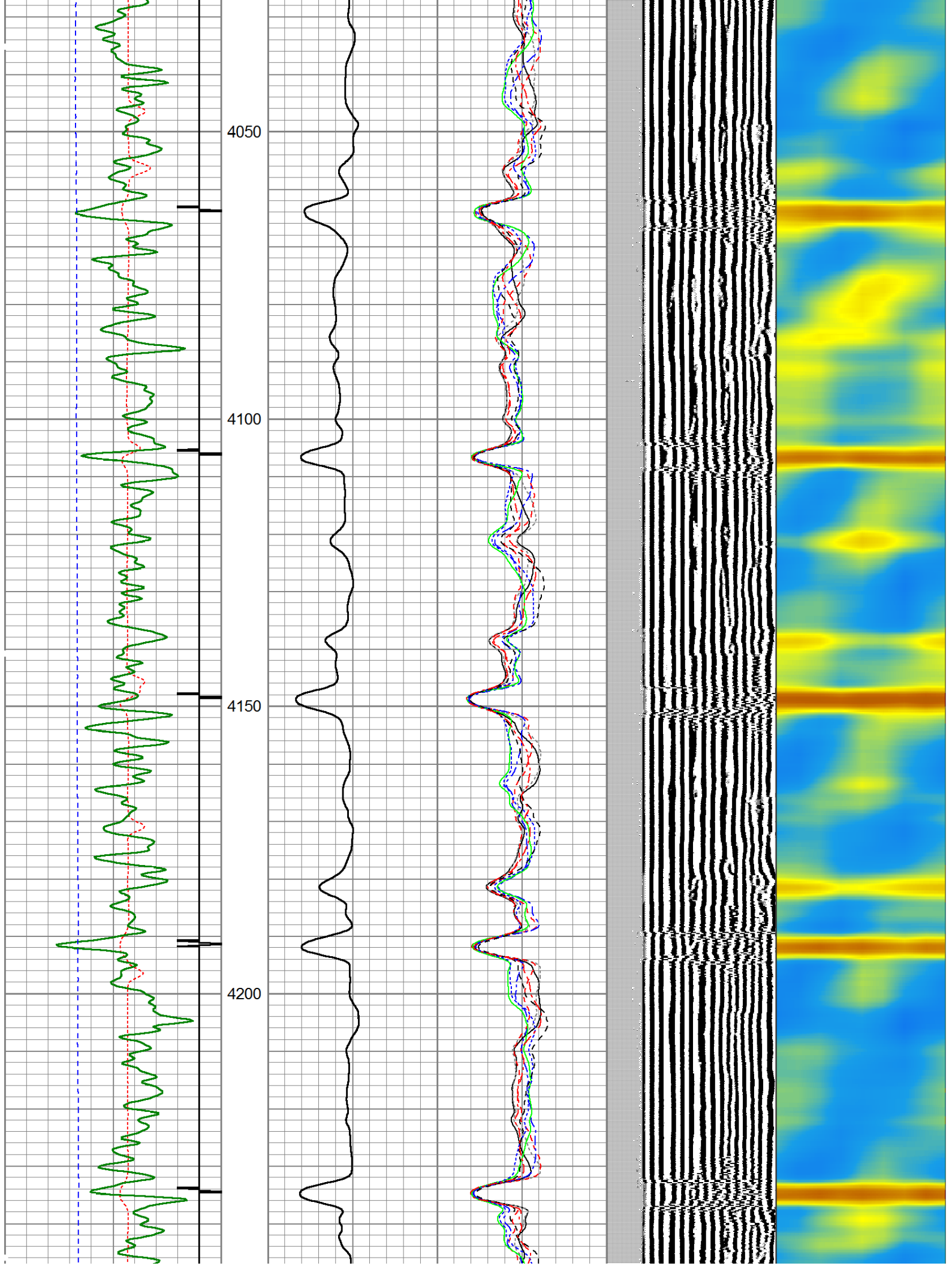


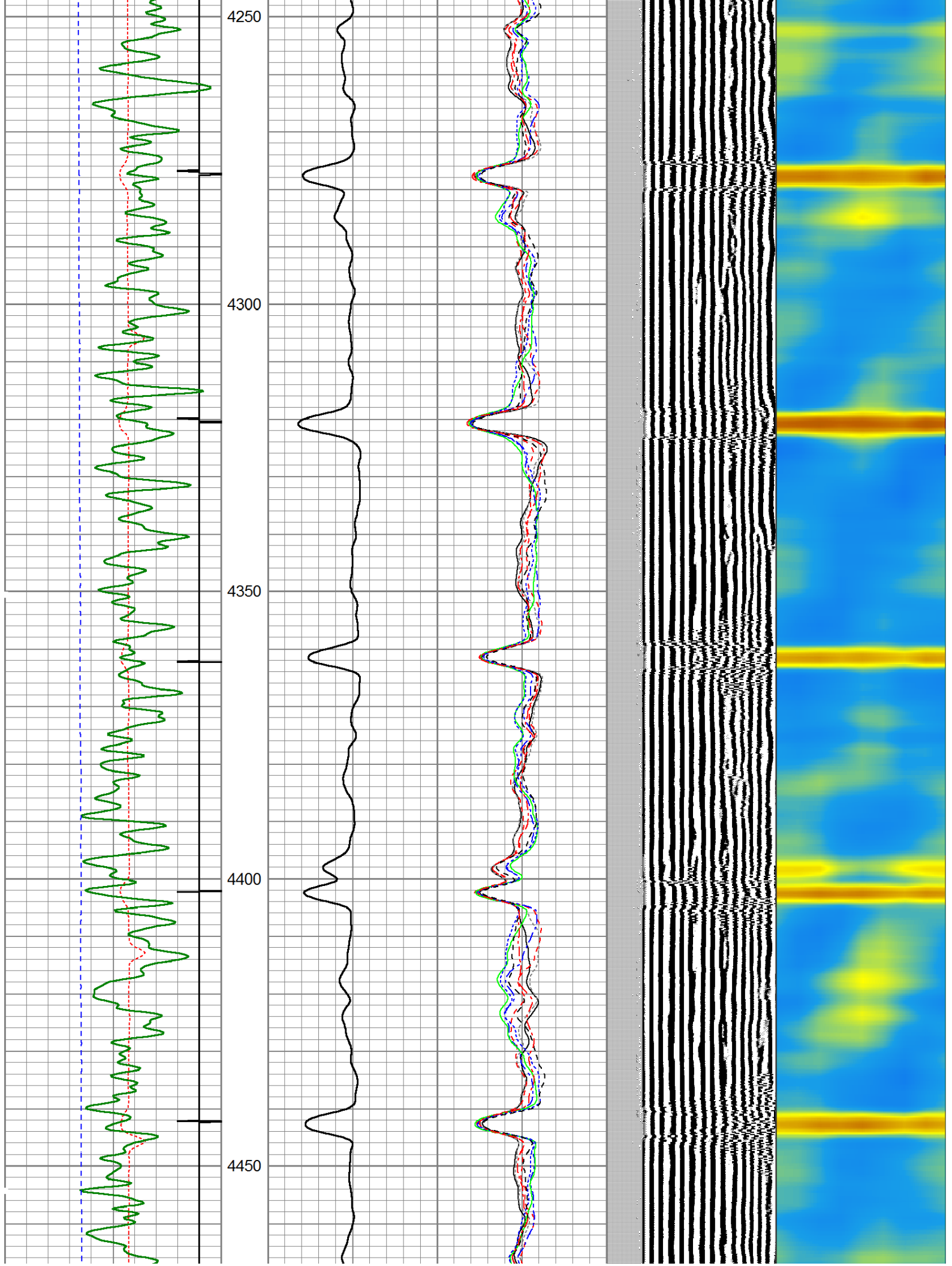


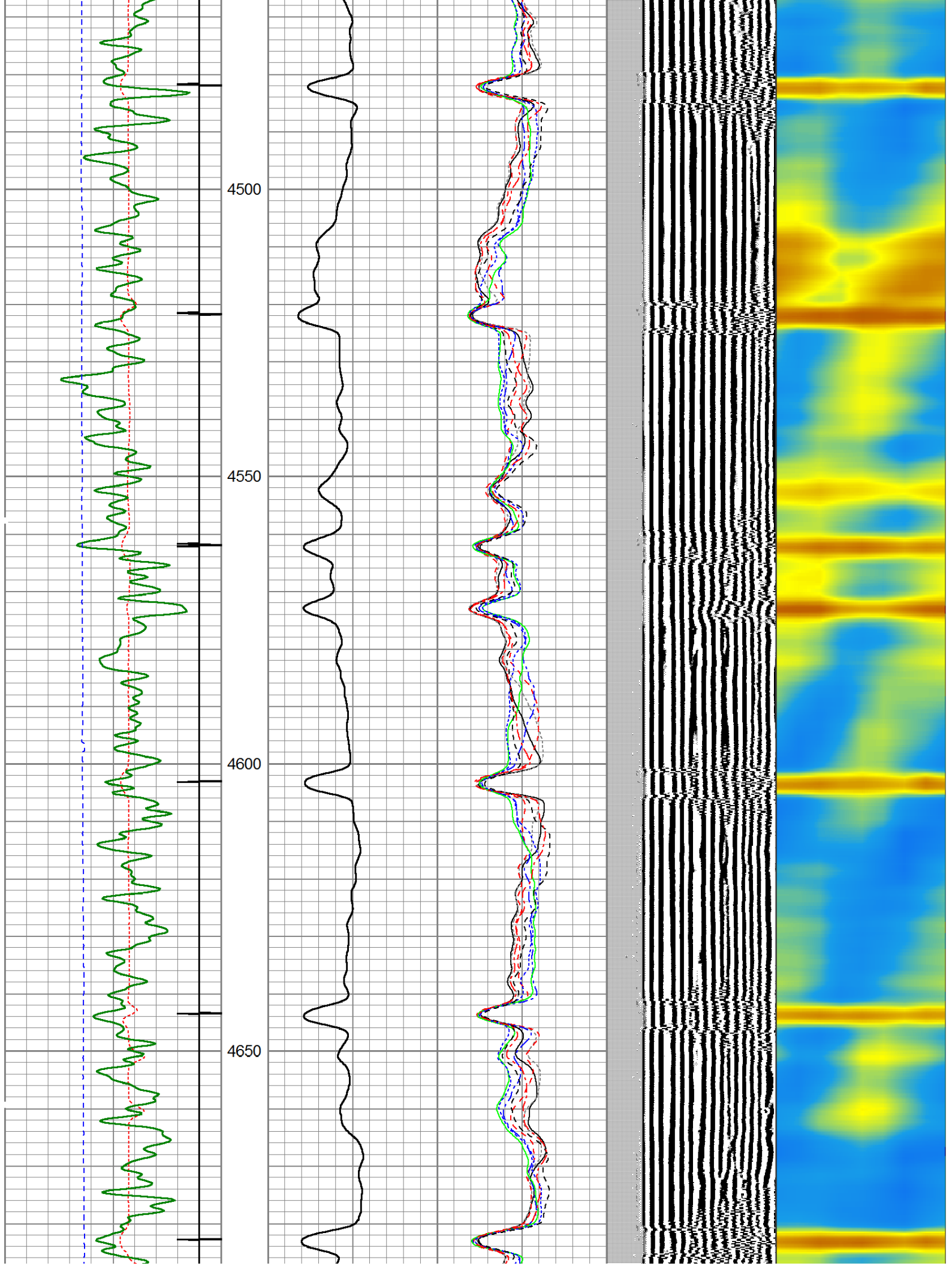


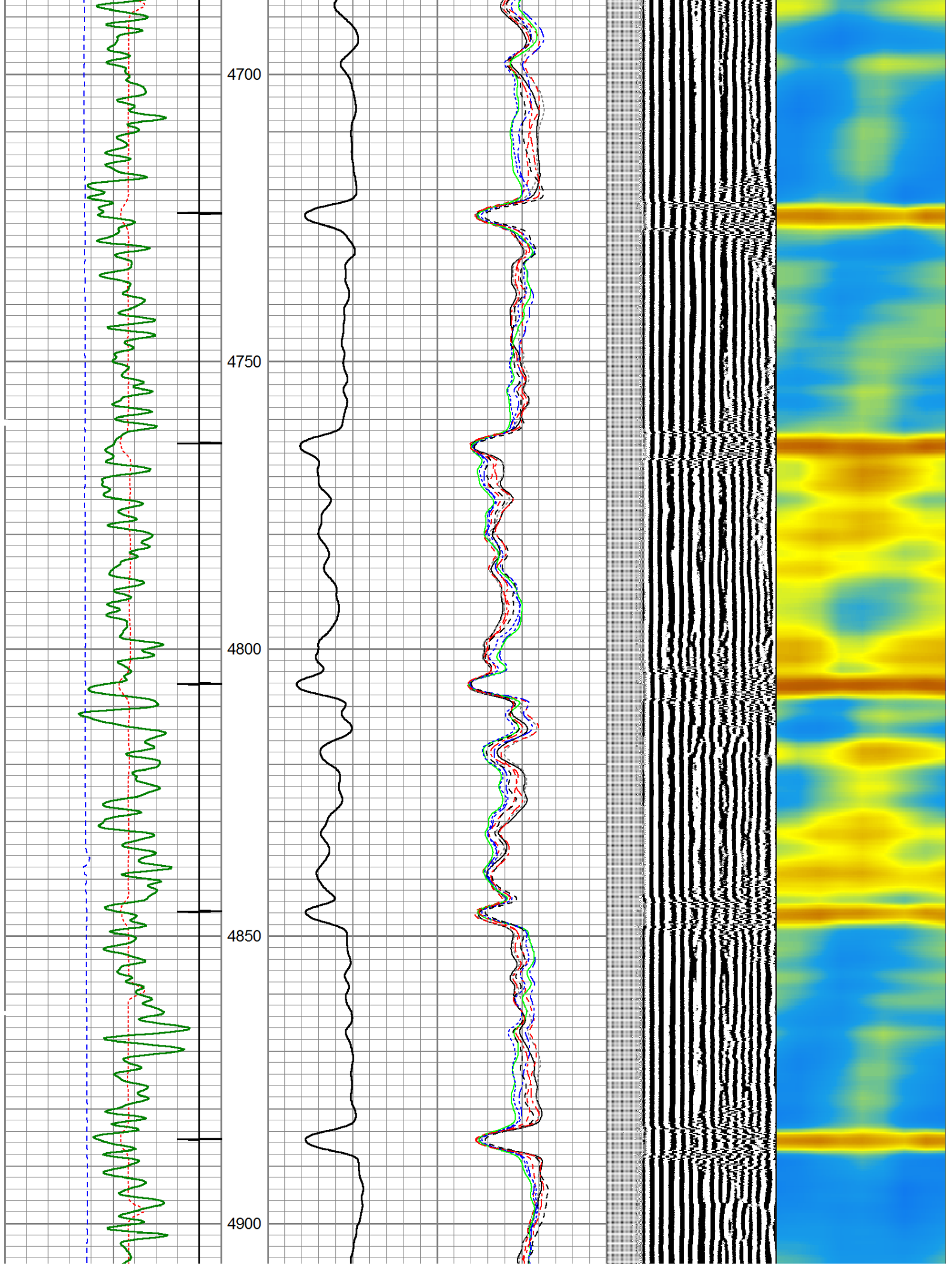


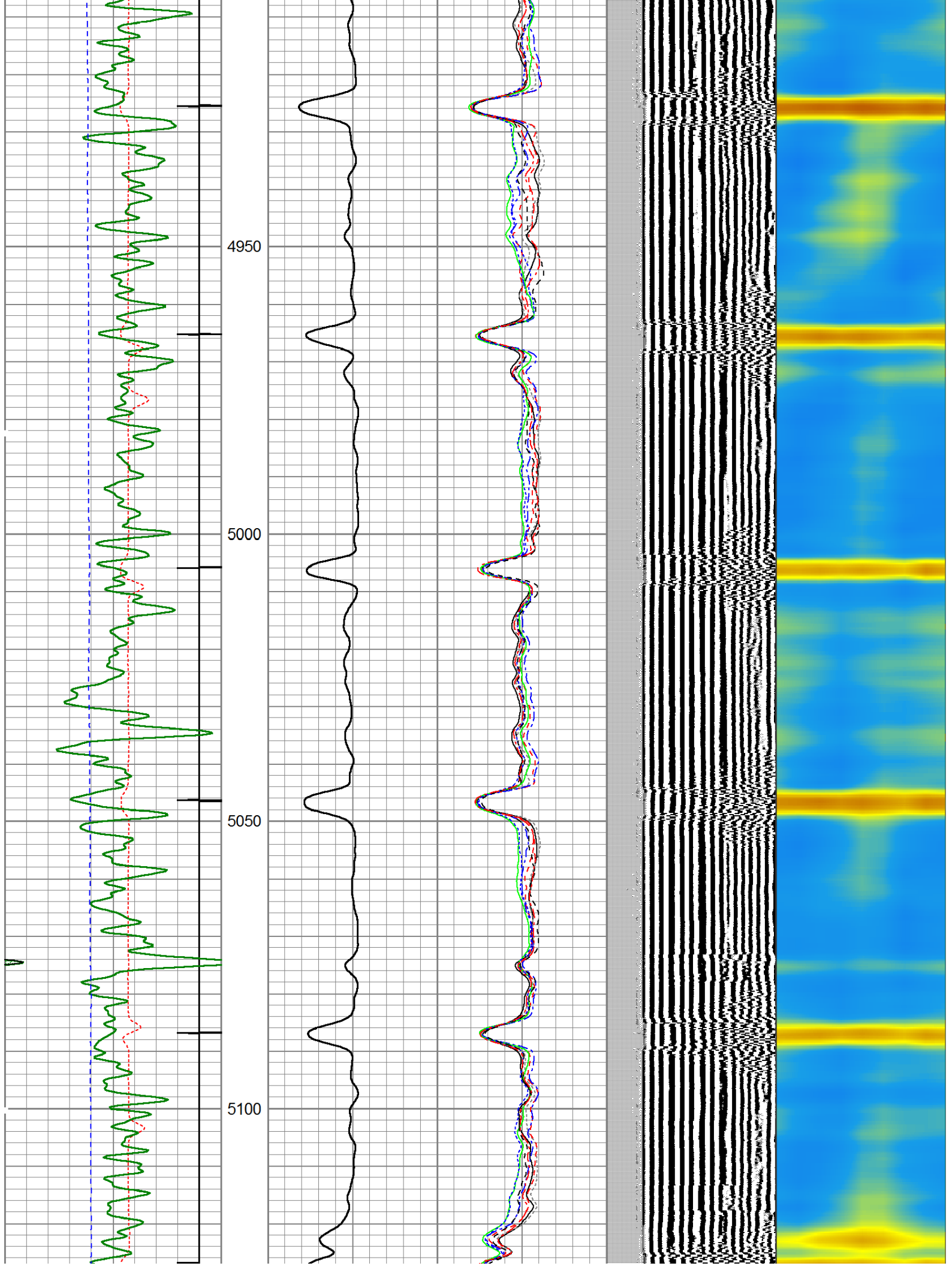


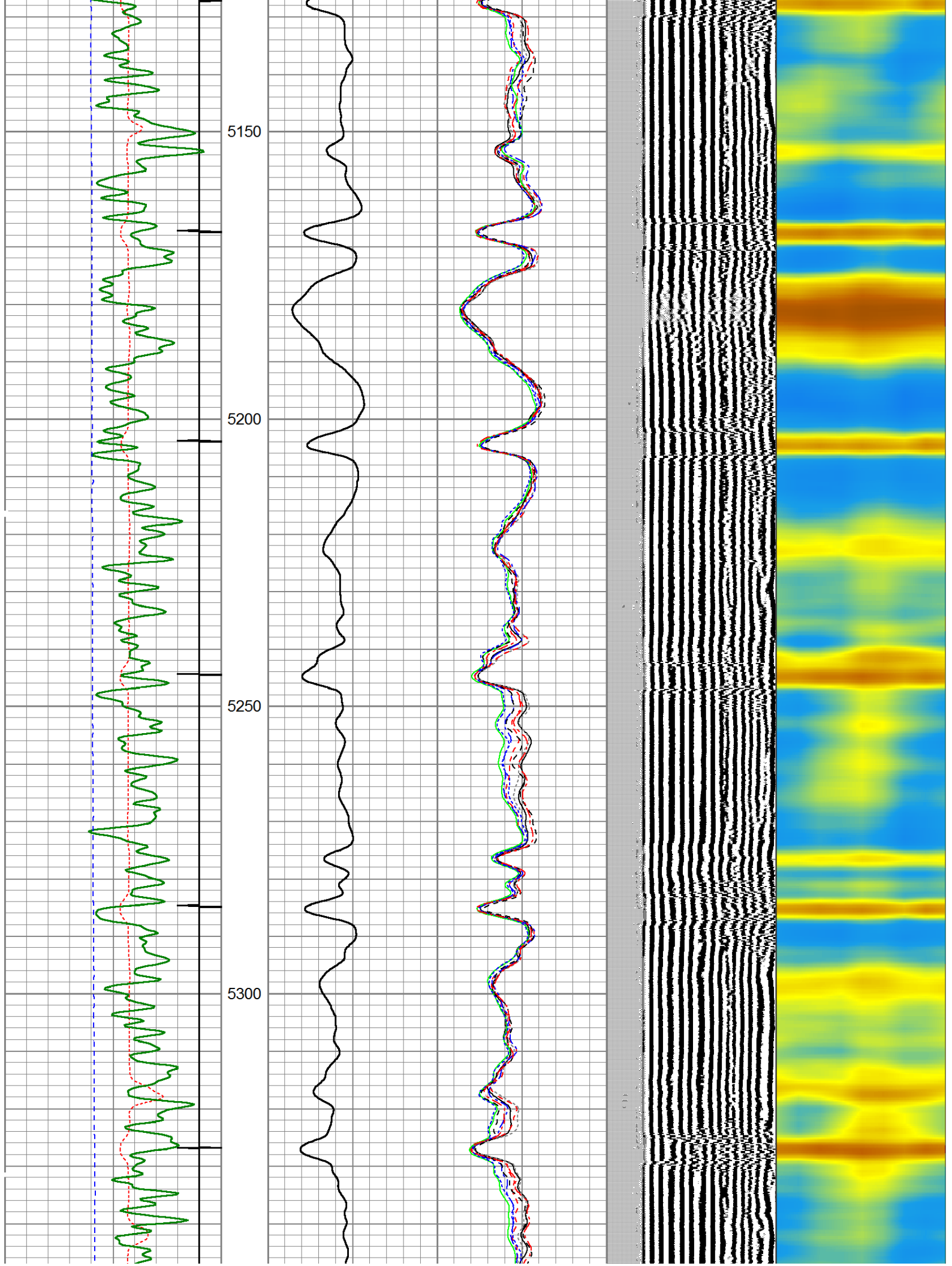


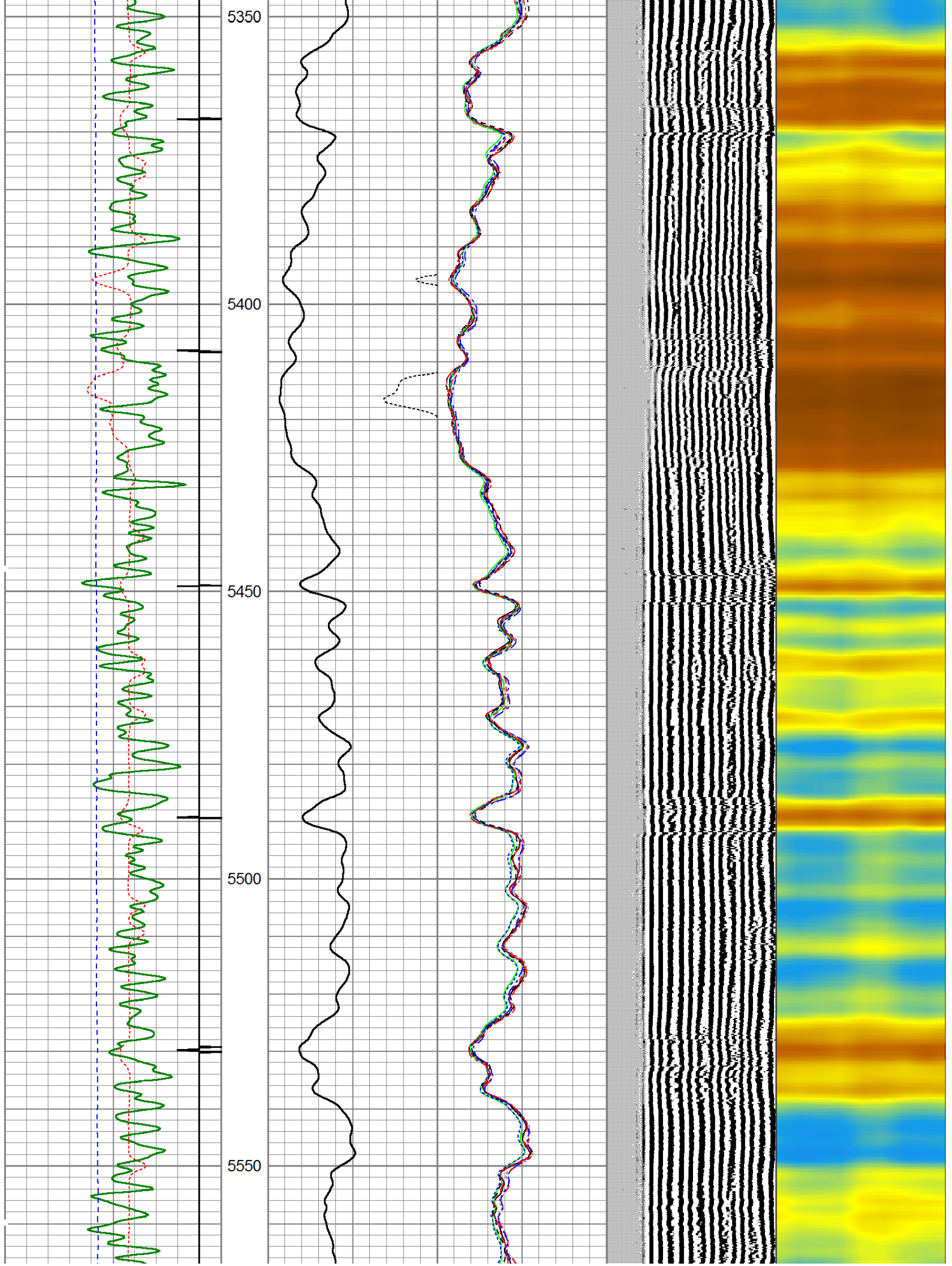


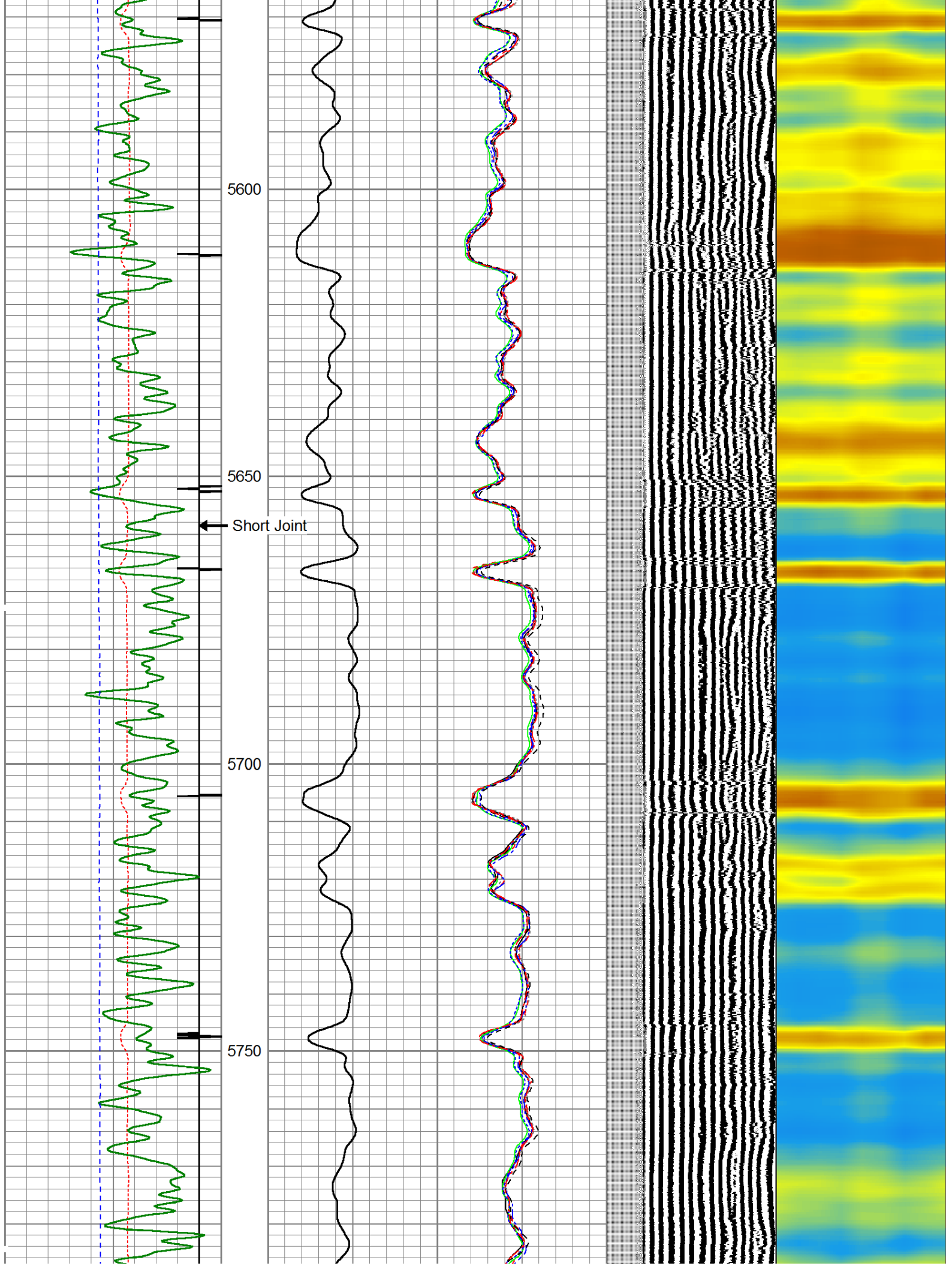


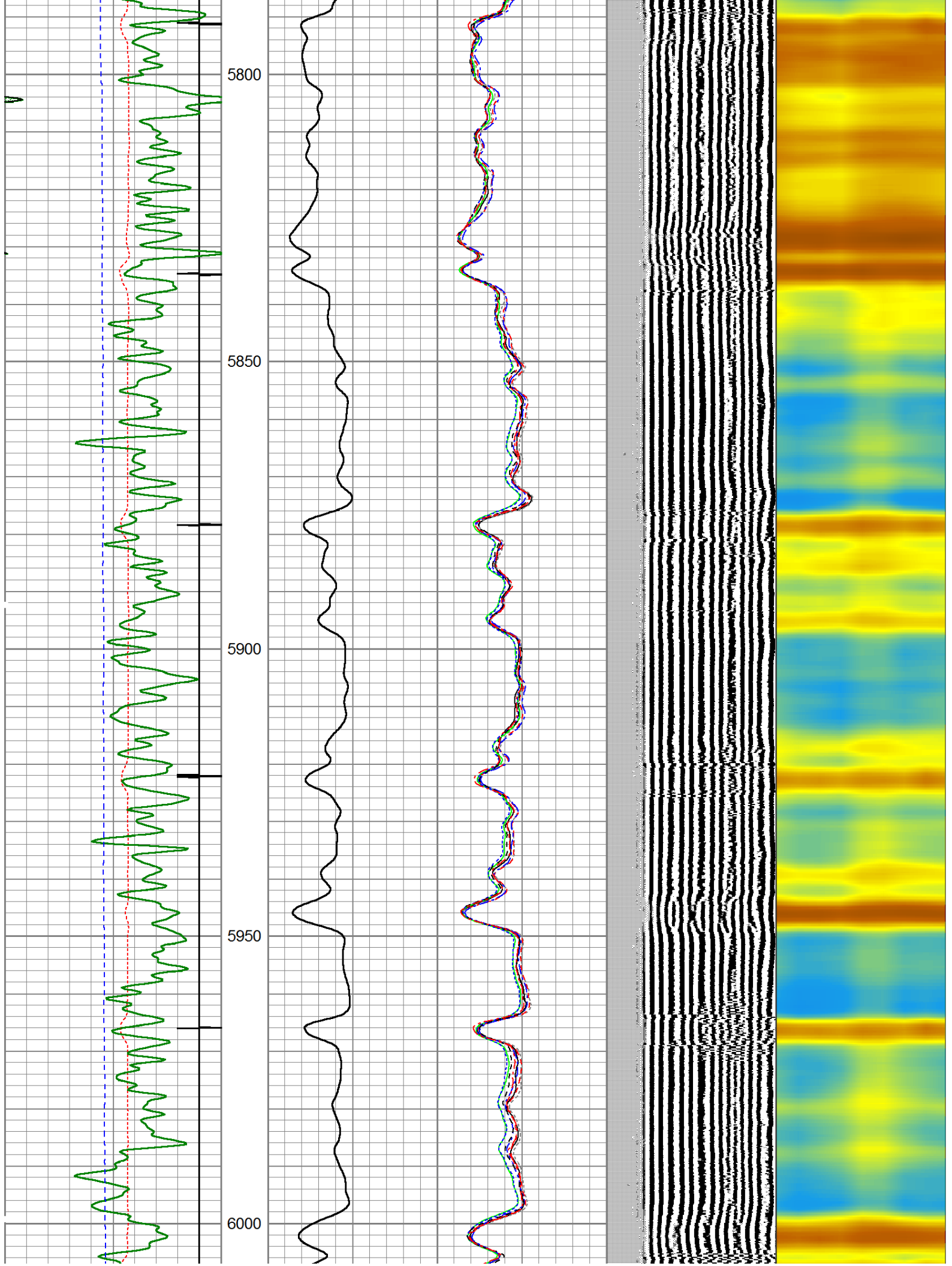


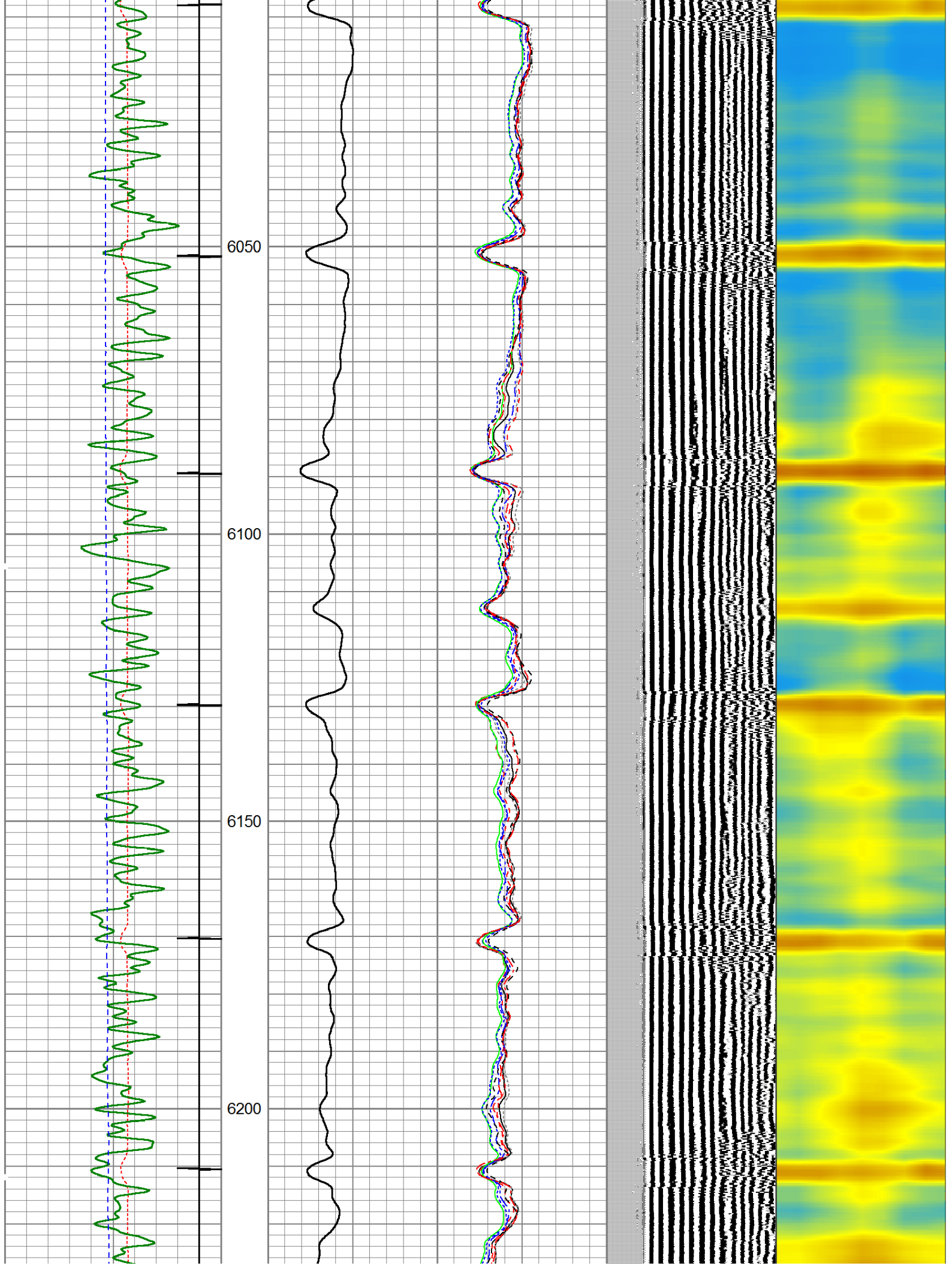


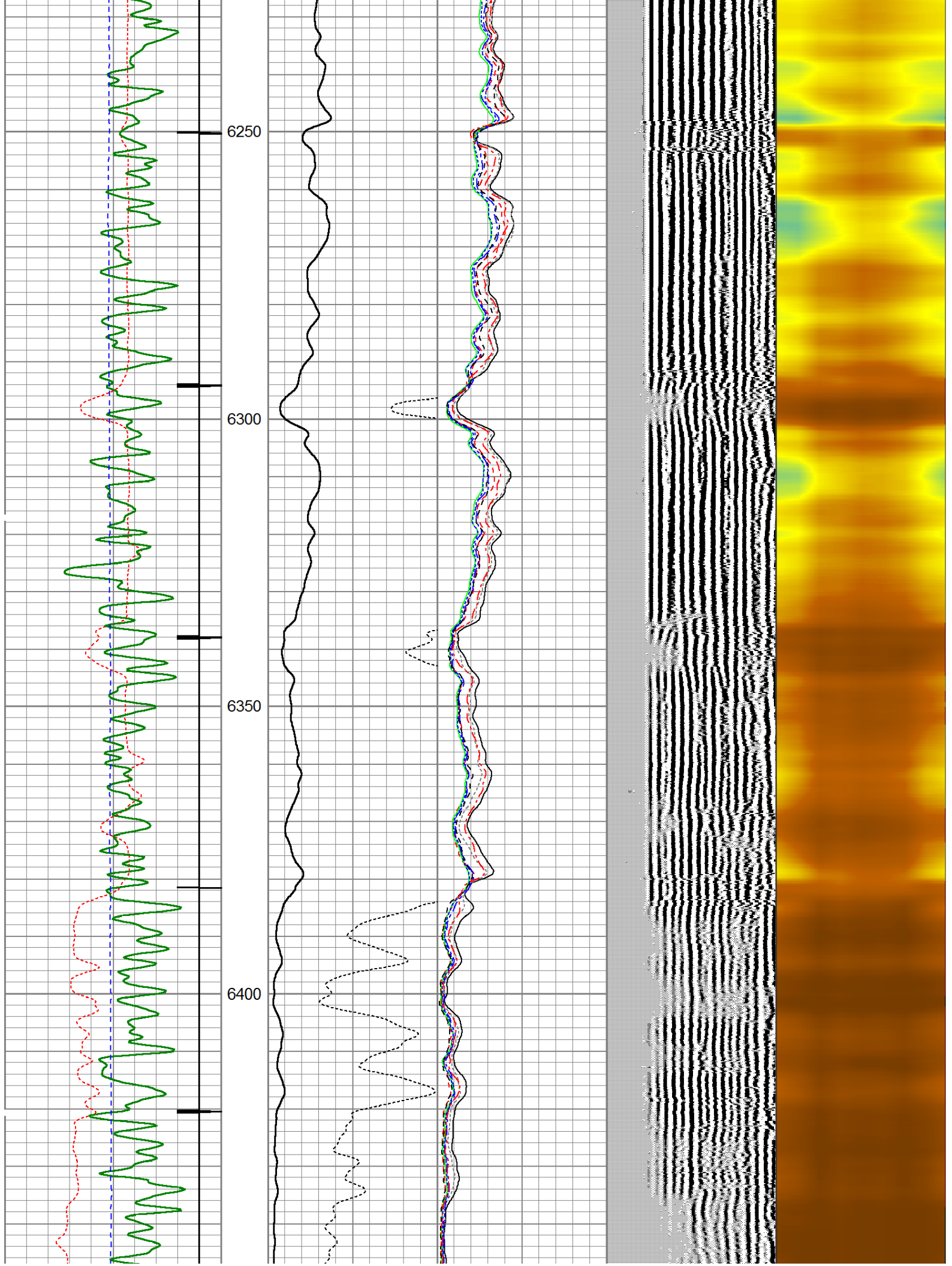


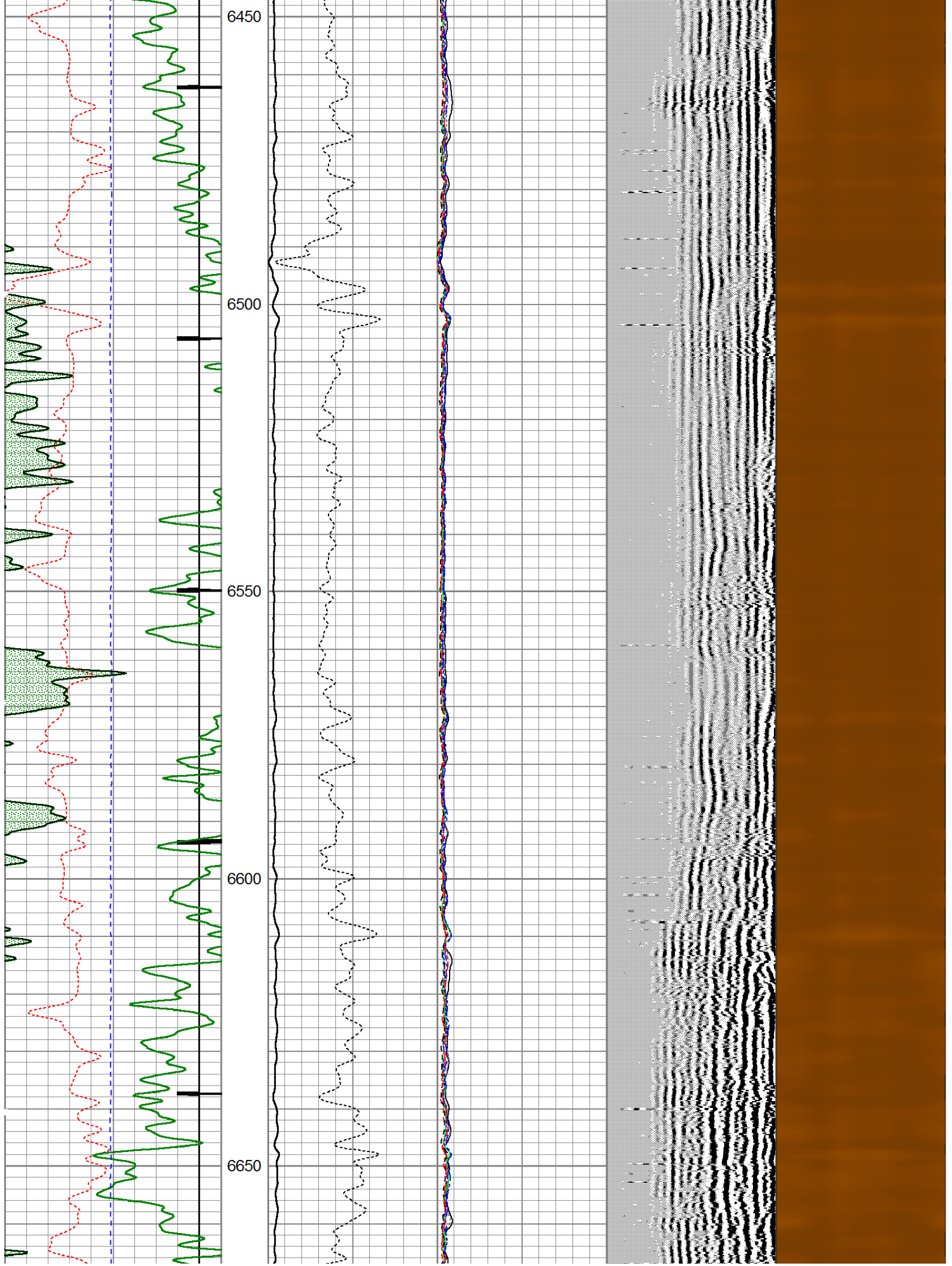


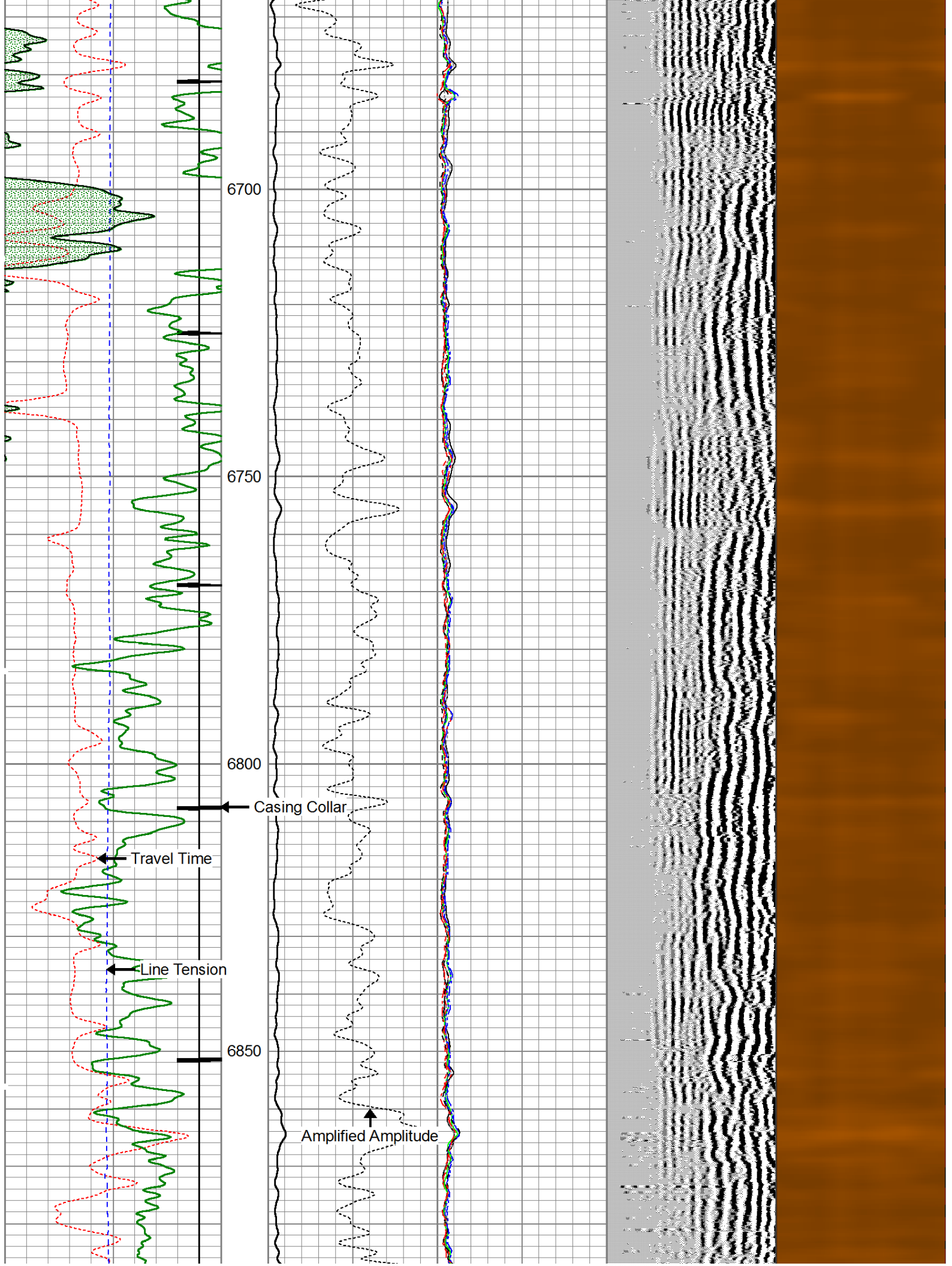


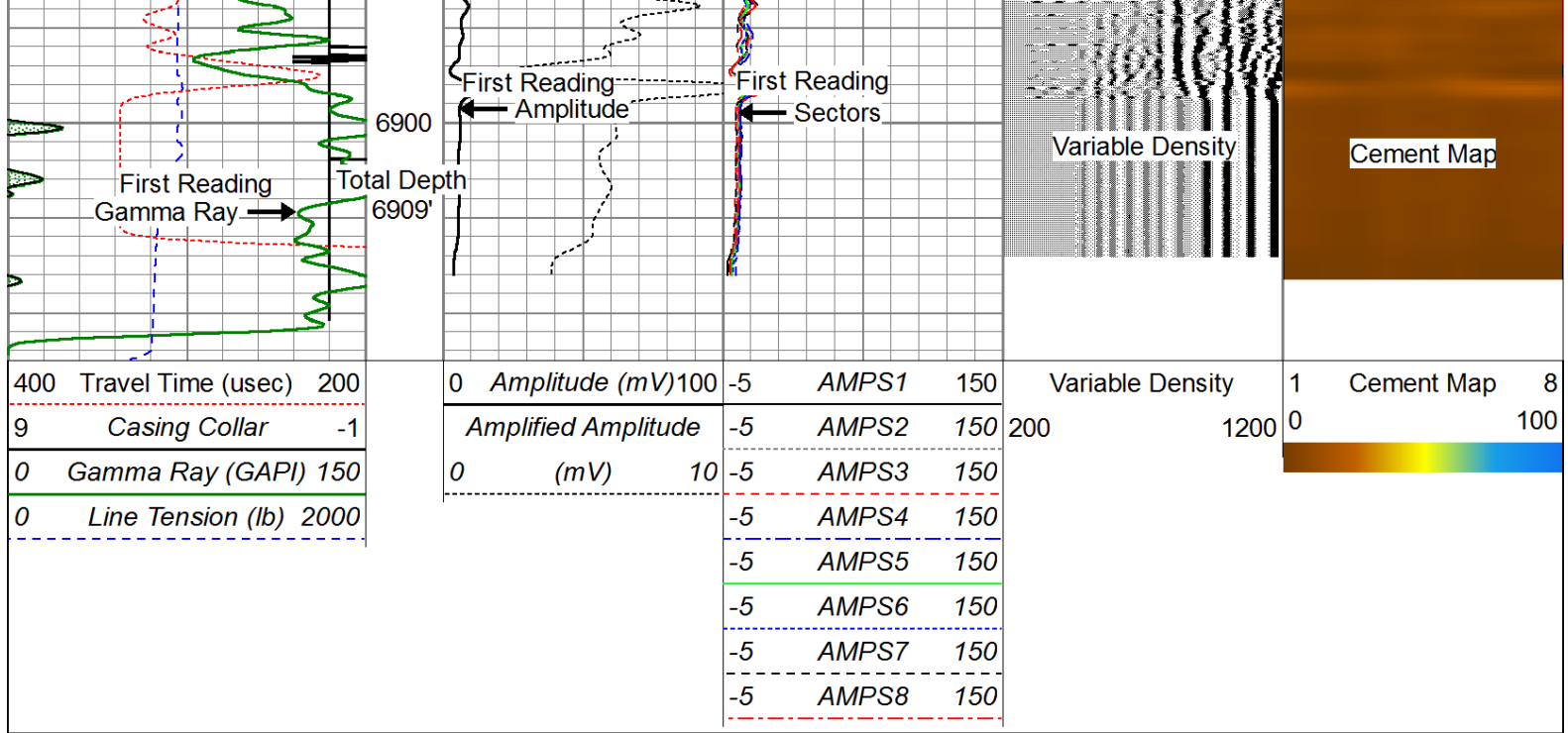






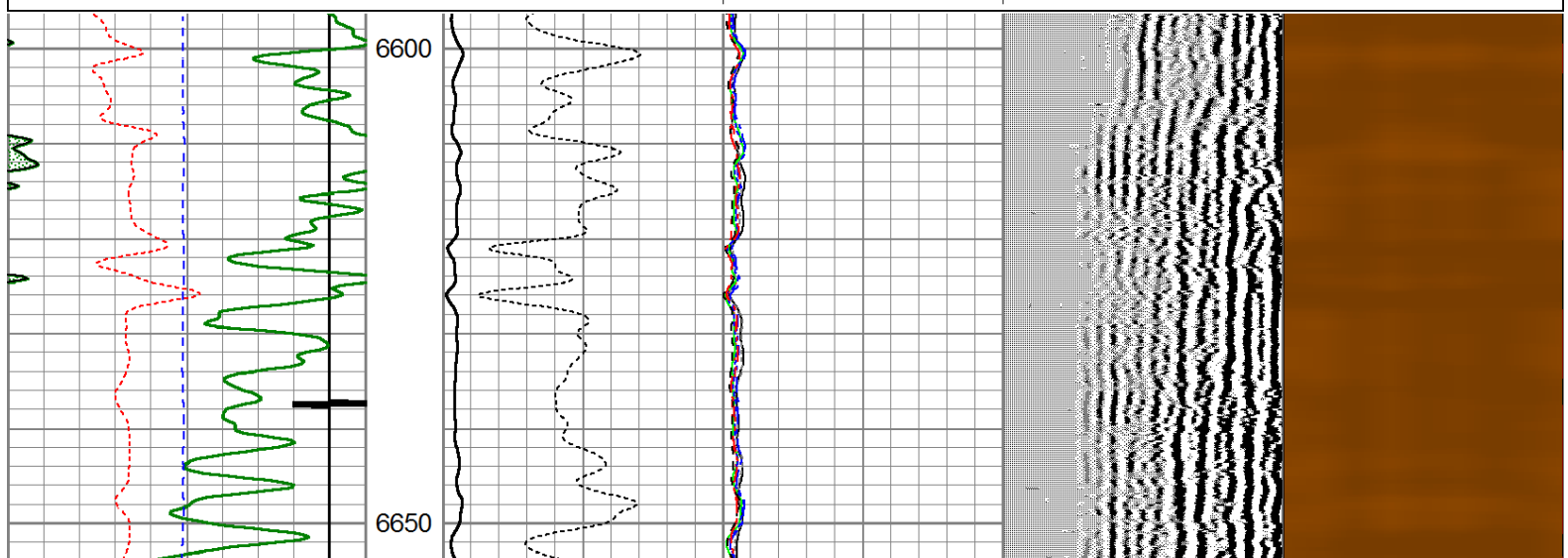
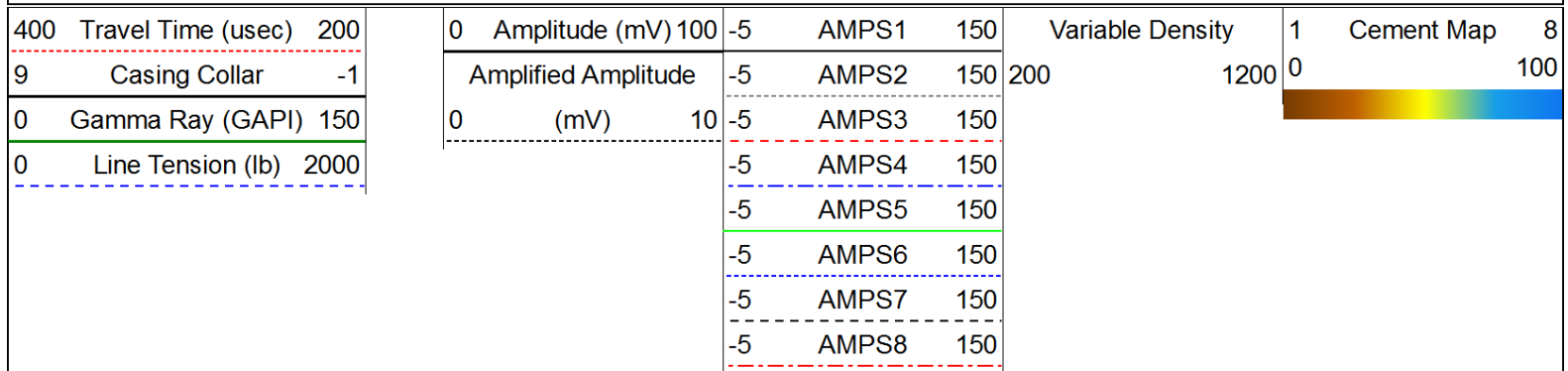


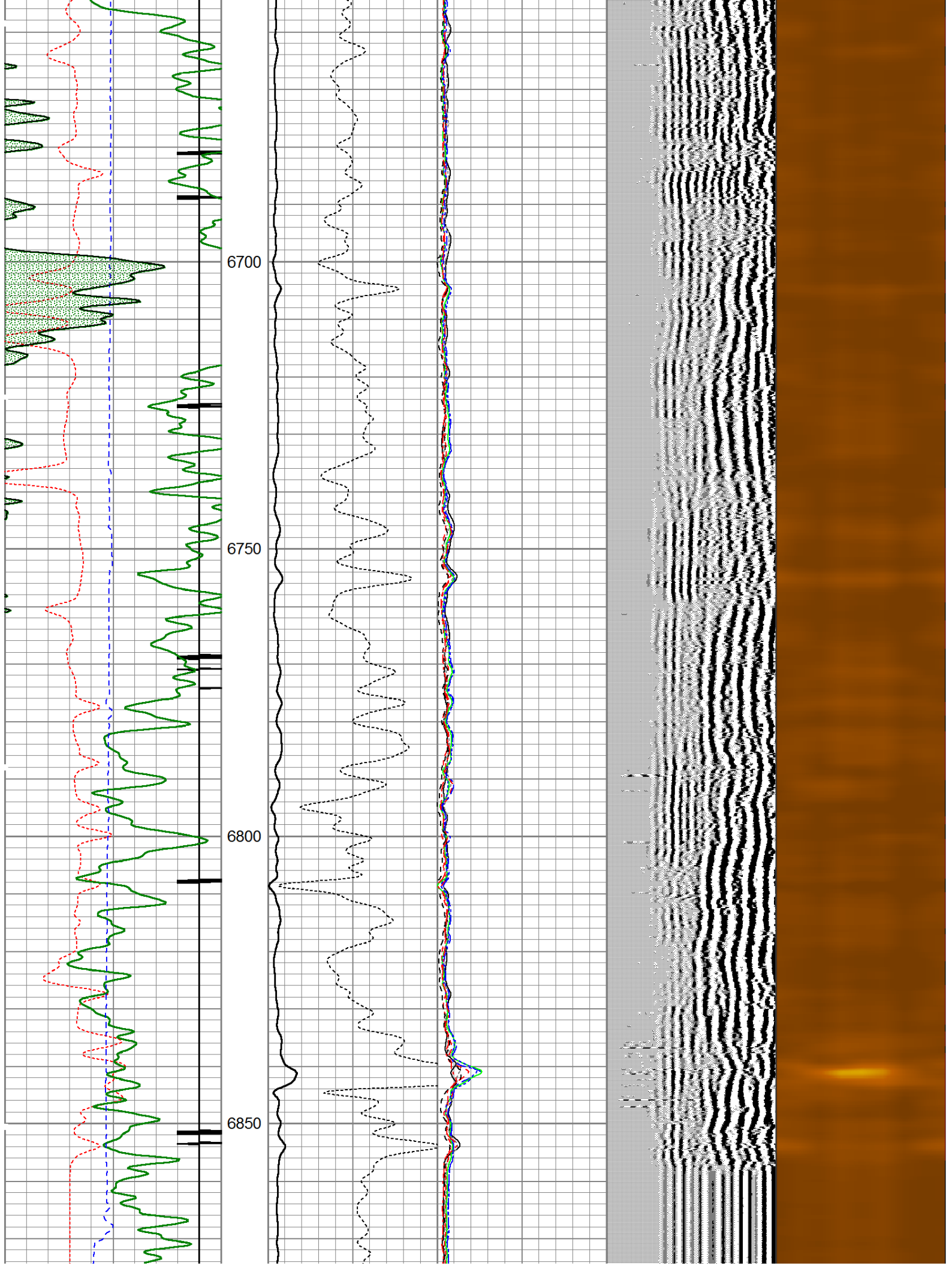


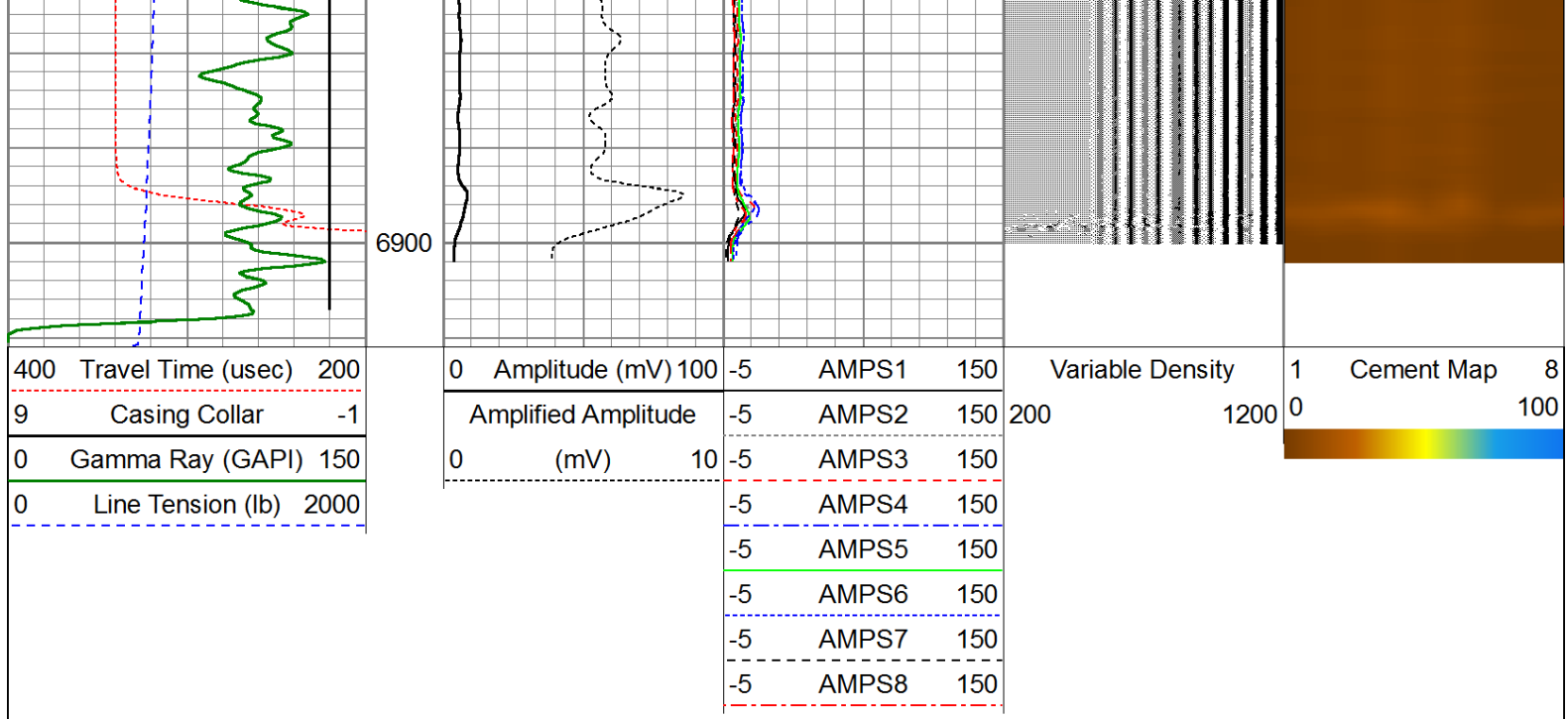


Repeat Pass (0 PSI)

Database File: noble energy wells ranch aa26-65-1hn.db
 Dataset Pathname: pass5
 Presentation Format: scbl03
 Dataset Creation: Tue Dec 03 11:58:11 2013 by Log 0
 Charted by: Depth in Feet scaled 1:240







Calibration Report

Database File: noble energy wells ranch aa26-65-1hn.db
 Dataset Pathname: pass7.1
 Dataset Creation: Tue Dec 03 13:28:15 2013 by Calc 0

Gamma Ray Calibration Report

Serial Number: 110108-Dig
 Tool Model: Probe275
 Performed: Fri Nov 29 14:39:10 2013

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 0.8500 GAPI/cps

Temperature Calibration Report

Serial Number: 110108-Dig
 Tool Model: Probe275
 Performed: Sun Jun 13 13:33:21 1993

	Reference	Reading
Low Reference:	0.00 degF	0.00 cps
High Reference:	1.00 degF	1.00 cps

Gain: 1.00
 Offset: 0.00
 Delta Spacing: 2

Segmented Cement Bond Log Calibration Report

Serial Number: 101225
 Tool Model: Probe

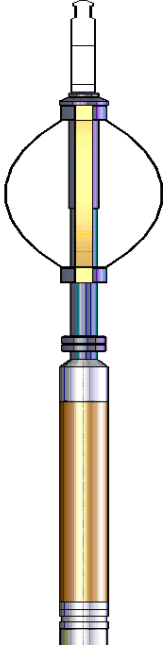
Calibration Casing Diameter: 7.000 in
 Calibration Depth: 736.092 ft

Master Calibration, performed Tue Dec 03 11:33:25 2013:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.036	0.609	1.000	62.165	70.285	3.891
CAL	-0.028	1.313				
5'	-0.016	0.462	1.000	62.165	128.032	2.996
SUM						
S1	0.014	0.658	0.000	100.000	125.143	-2.121
S2	-0.002	0.611	0.000	100.000	133.106	0.311
S3	0.001	0.580	0.000	100.000	142.911	-0.236
S4	-0.015	0.563	0.000	100.000	142.885	2.596
S5	-0.003	0.596	0.000	100.000	128.027	0.495
S6	-0.007	0.644	0.000	100.000	115.420	1.131
S7	0.021	0.673	0.000	100.000	113.184	-1.151
S8	0.004	0.641	0.000	100.000	126.866	-0.592

Internal Reference Calibration, performed Mon Oct 10 09:42:03 2005:						
	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.028	1.313	1.000	0.000

Air Zero Calibration, performed Mon Dec 02 13:51:13 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)
			Titan Cable_head	1.00	1.44	10.00
			Probe275 2.75" Centralizer	2.88	2.75	20.00

Tool Name	Start Depth (ft)	End Depth (ft)	Tool Length (ft)	Tool Weight (lb)	Tool O.D. (in)
WVF3FT	11.84	11.84	0.00	0.00	0.00
WVFCAL	11.84	11.84	0.00	0.00	0.00
WVFS1	11.84	11.84	0.00	0.00	0.00
WVFS2	11.84	11.84	0.00	0.00	0.00
WVFS3	11.84	11.84	0.00	0.00	0.00
WVFS4	11.84	11.84	0.00	0.00	0.00
WVFS5	11.84	11.84	0.00	0.00	0.00
WVFS6	11.84	11.84	0.00	0.00	0.00
WVFS7	11.84	11.84	0.00	0.00	0.00
WVFS8	11.84	11.84	0.00	0.00	0.00
WVF5FT	10.84	11.84	1.00	0.00	0.00
RBT-Probe (101225)	8.75	11.84	3.09	0.00	0.00
Probe Radii Bond Tool with Digital Telemetry					
Probe275	2.88	5.63	2.75	0.00	0.00
2.75" Centralizer					
CCL	3.88	3.88	0.00	0.00	0.00
TEMP	3.00	3.00	0.00	0.00	0.00
GR	2.54	3.00	0.46	0.00	0.00
GR-Probe275 (110108-Dig)	4.78	7.53	2.75	0.00	0.00
Probe 2 3/4" Logging Gamma Ray					
Dataset: noble energy wells ranch aa26-65-1hn.db: field/well/run1/pass7.1 Total Length: 20.28 ft Total Weight: 197.00 lb O.D.: 2.75 in					