



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

Company	Noble Energy		
Well	Wells Ranch AA26-62-1HN		
Field	Wattenberg		
County	Weld	State	Colorado
Location:	API # : 05-123-37567		Other Services
SEC 25 TWP 6N RGE 63W		TEMP	
Permanent Datum	Ground Level	Elevation	4793'
Log Measured From	24' Kelly Bushing		
Drilling Measured From	Kelly Bushing		
Date	December 2, 2013		
Run Number	1		
Depth Driller	11808'		
Depth Logger	7063'		
Bottom Logged Interval	7050'		
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	1268'		
Time Well Ready	13:45		
Time Logger on Bottom	14:45		
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#	7078'
Short Joint			5850'

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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

Estimated Top of Cement @ 1268'


Short Joint @ 5850' To 5865'

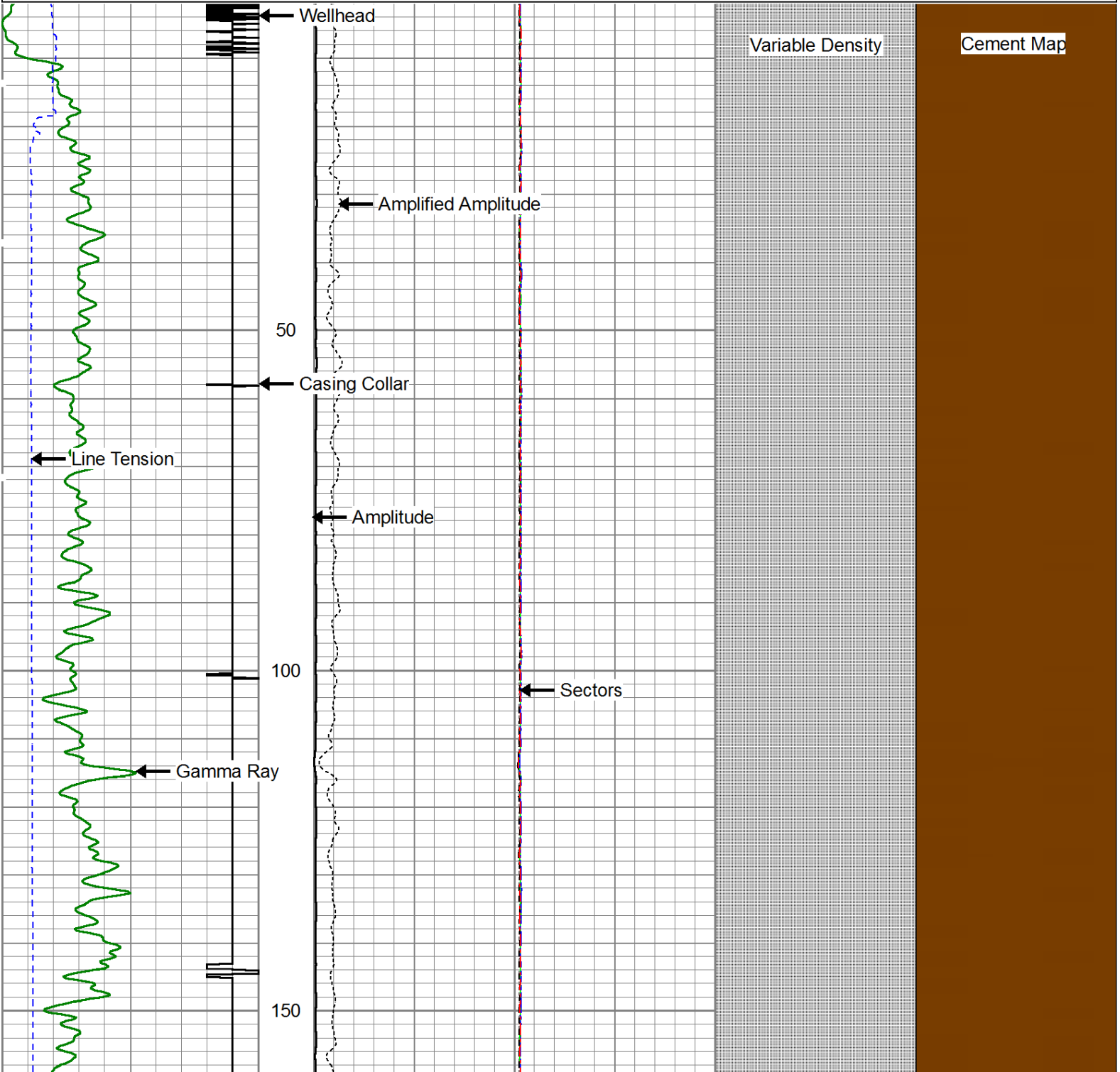
Thank you for using Allied Wireline.
(303)659-4609

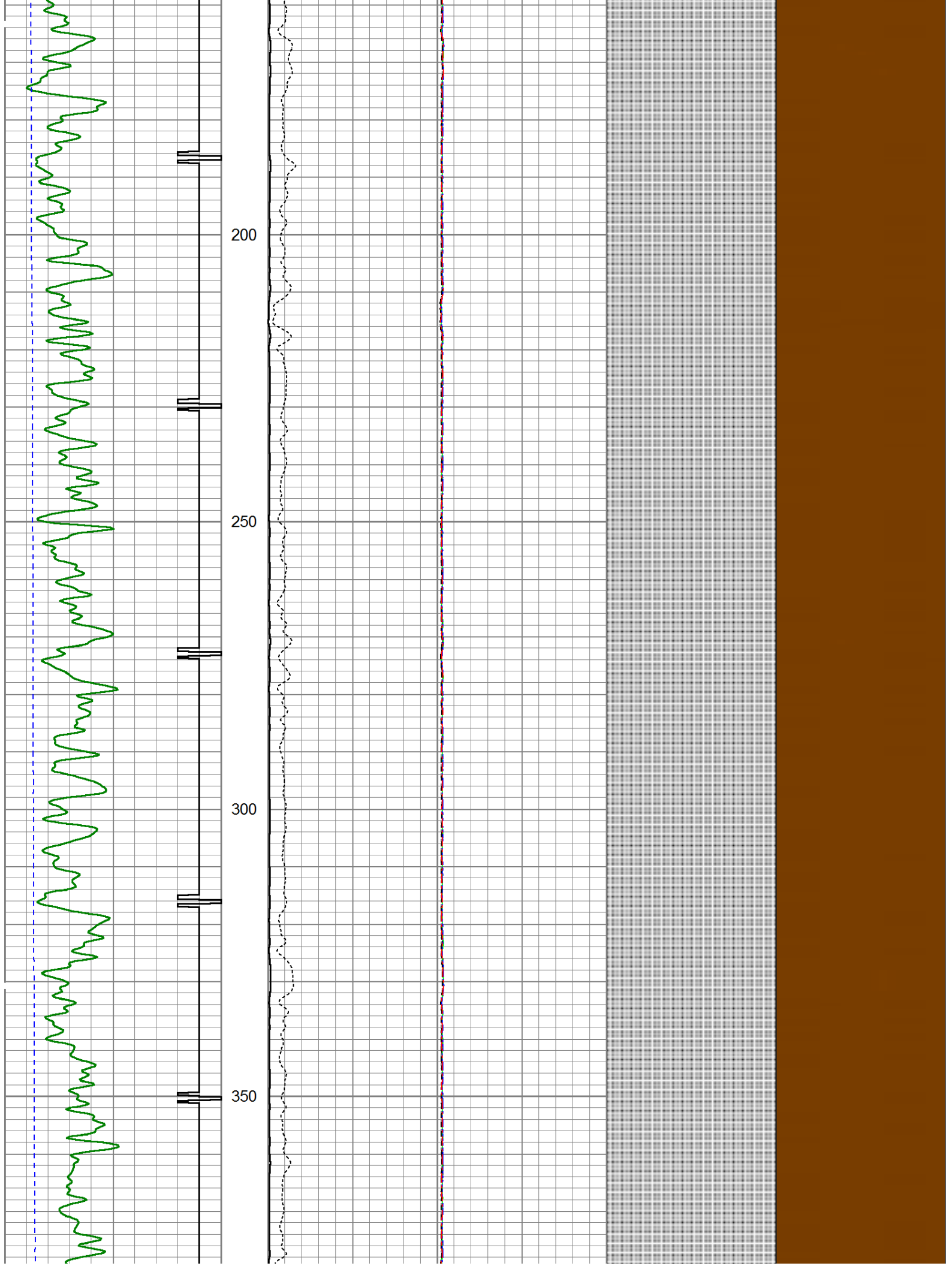


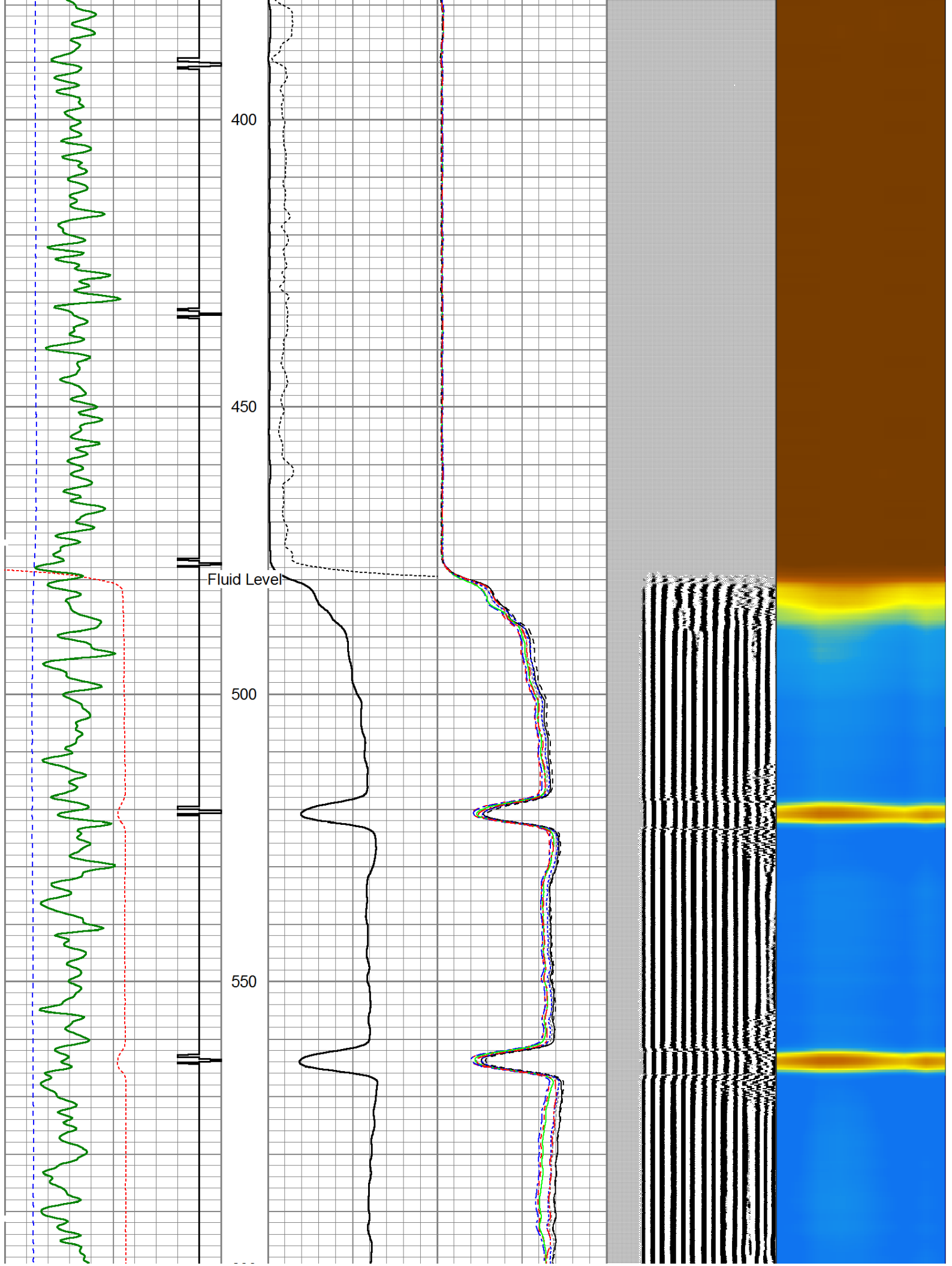
Main Pass (0 PSI)

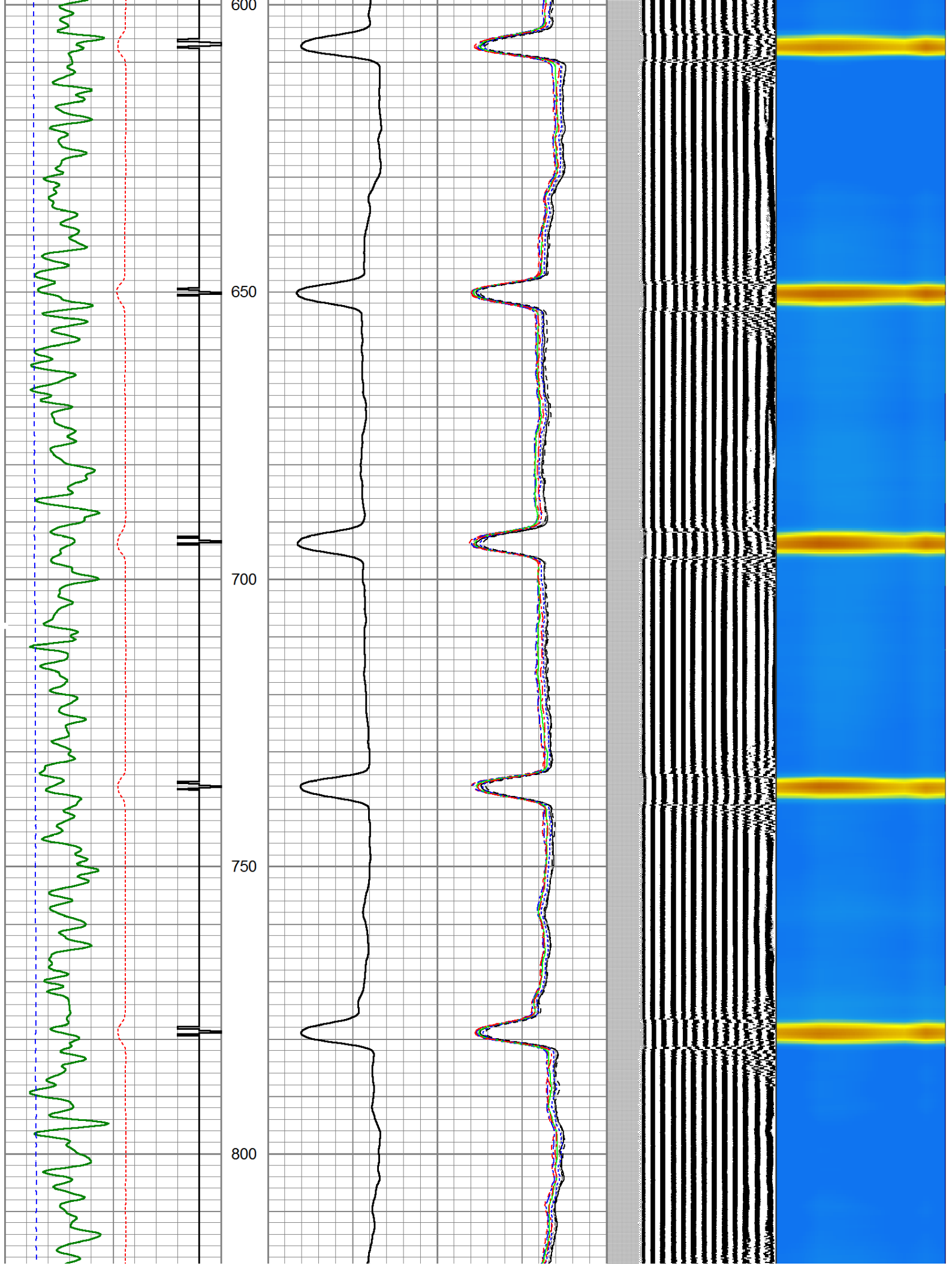
Database File: noble energy wells ranch aa26-62-1hn_rcbl.db
Dataset Pathname: pass5
Presentation Format: scbl03
Dataset Creation: Mon Dec 02 14:39:58 2013 by Log 0
Charted by: Depth in Feet scaled 1:240

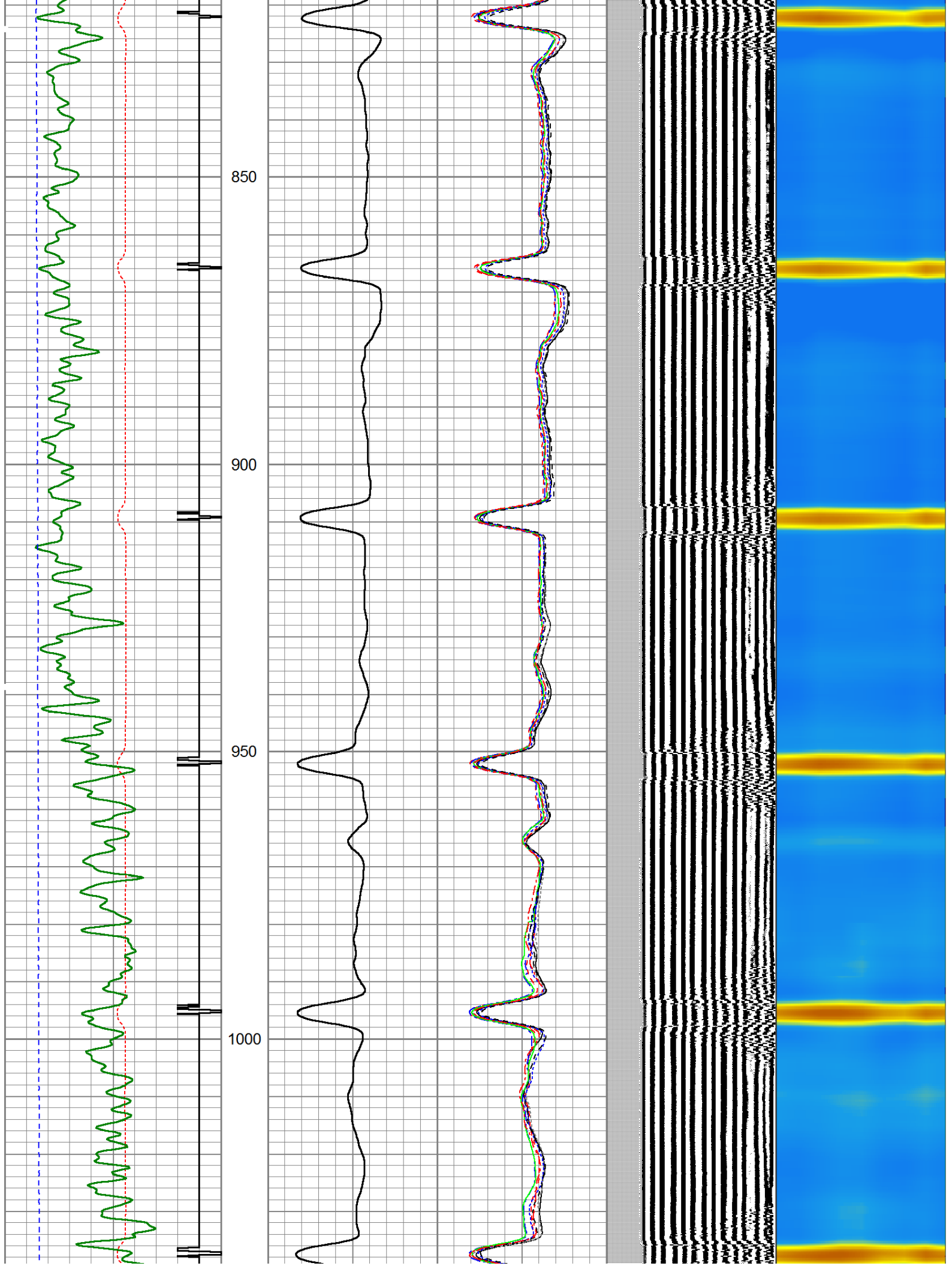
400	Travel Time (usec)	200	0	Amplitude (mV)	100	-5	AMPS1	150	Variable Density	1	Cement Map	8
9	Casing Collar	-1	Amplified Amplitude		-5	AMPS2	150	200		1200	0	
0	Gamma Ray (GAPI)	150	0	(mV)	10	-5	AMPS3	150				
0	Line Tension (lb)	2000			-5	AMPS4	150					
					-5	AMPS5	150					
					-5	AMPS6	150					
					-5	AMPS7	150					
					-5	AMPS8	150					

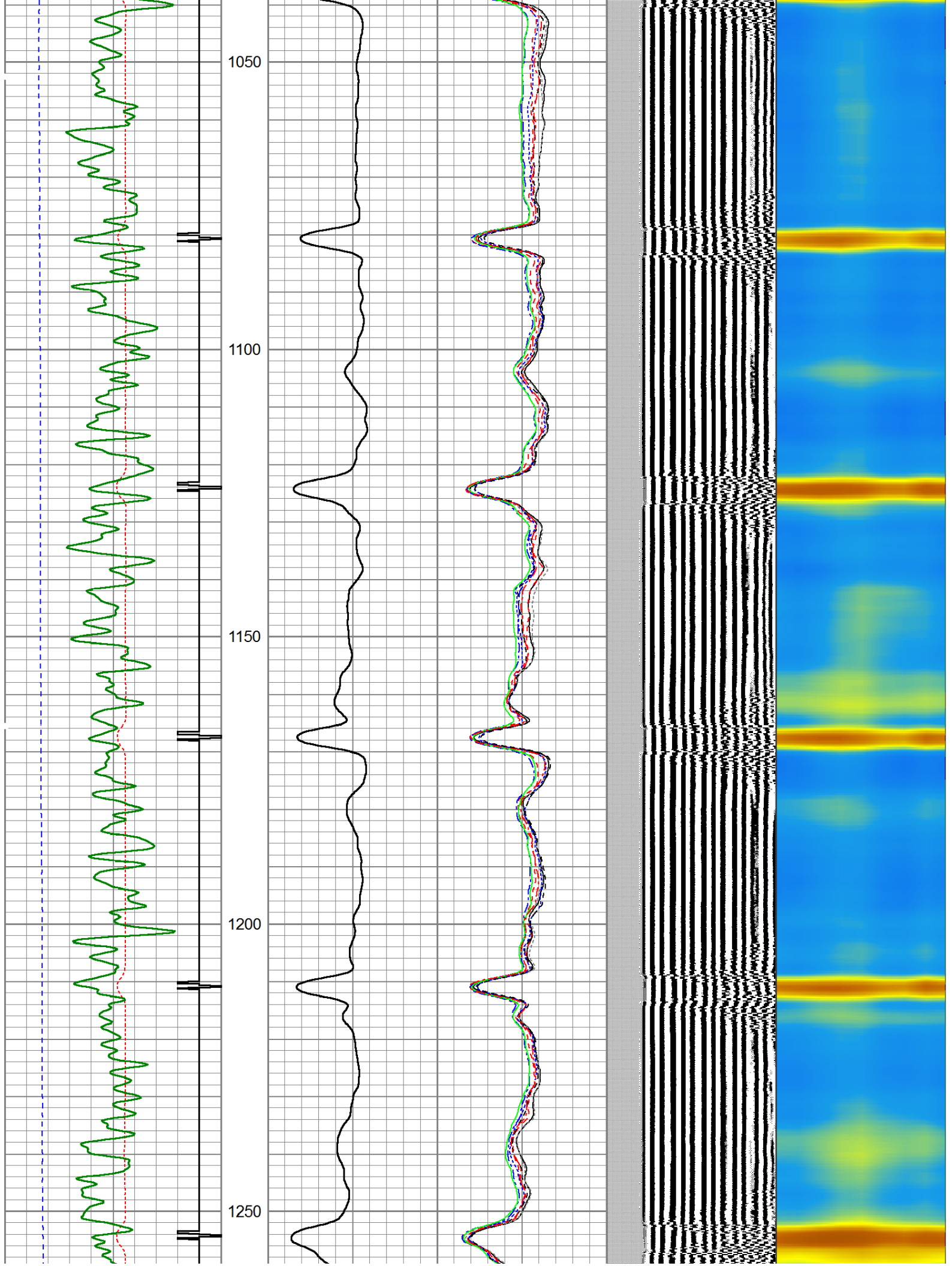


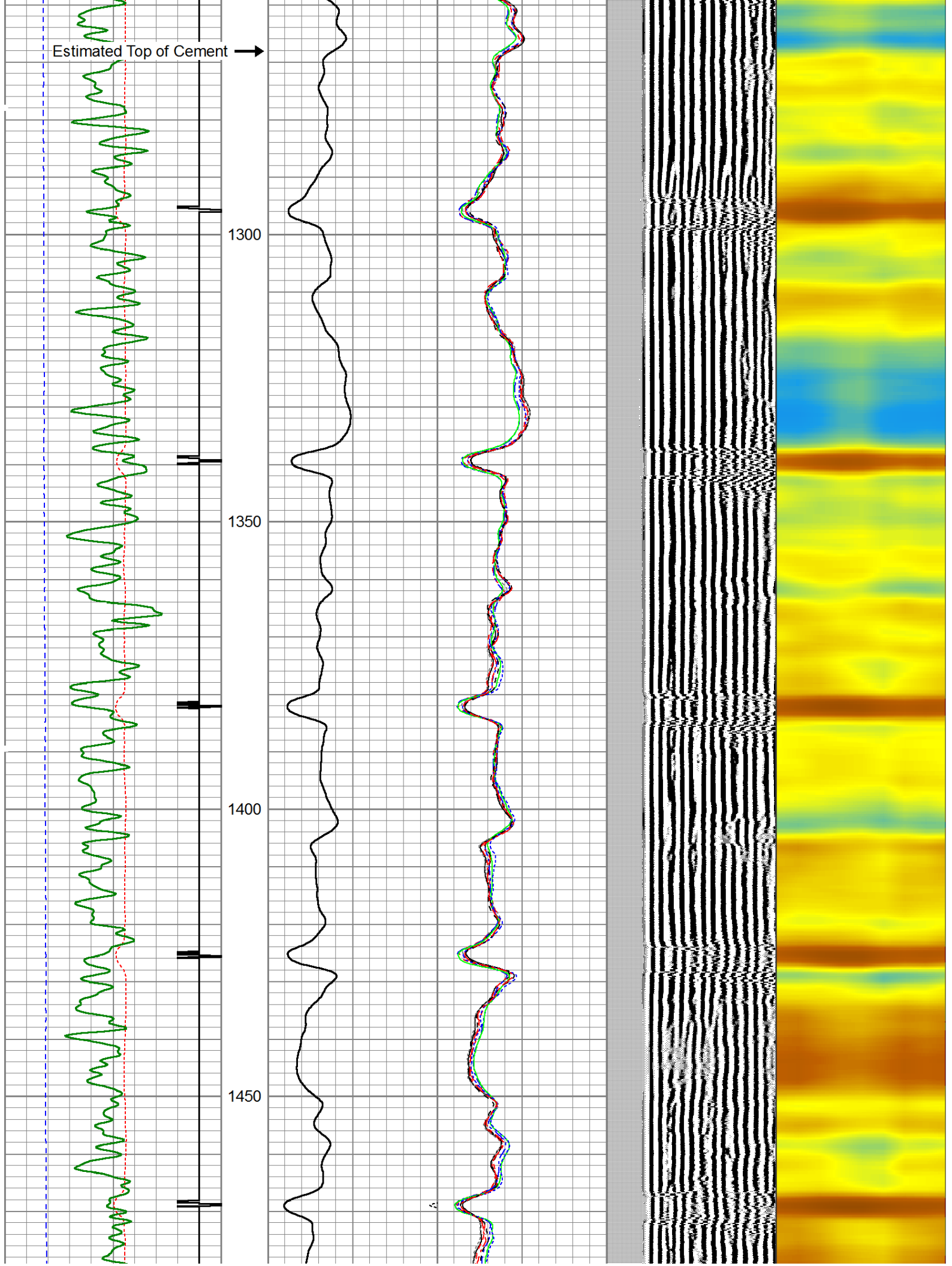


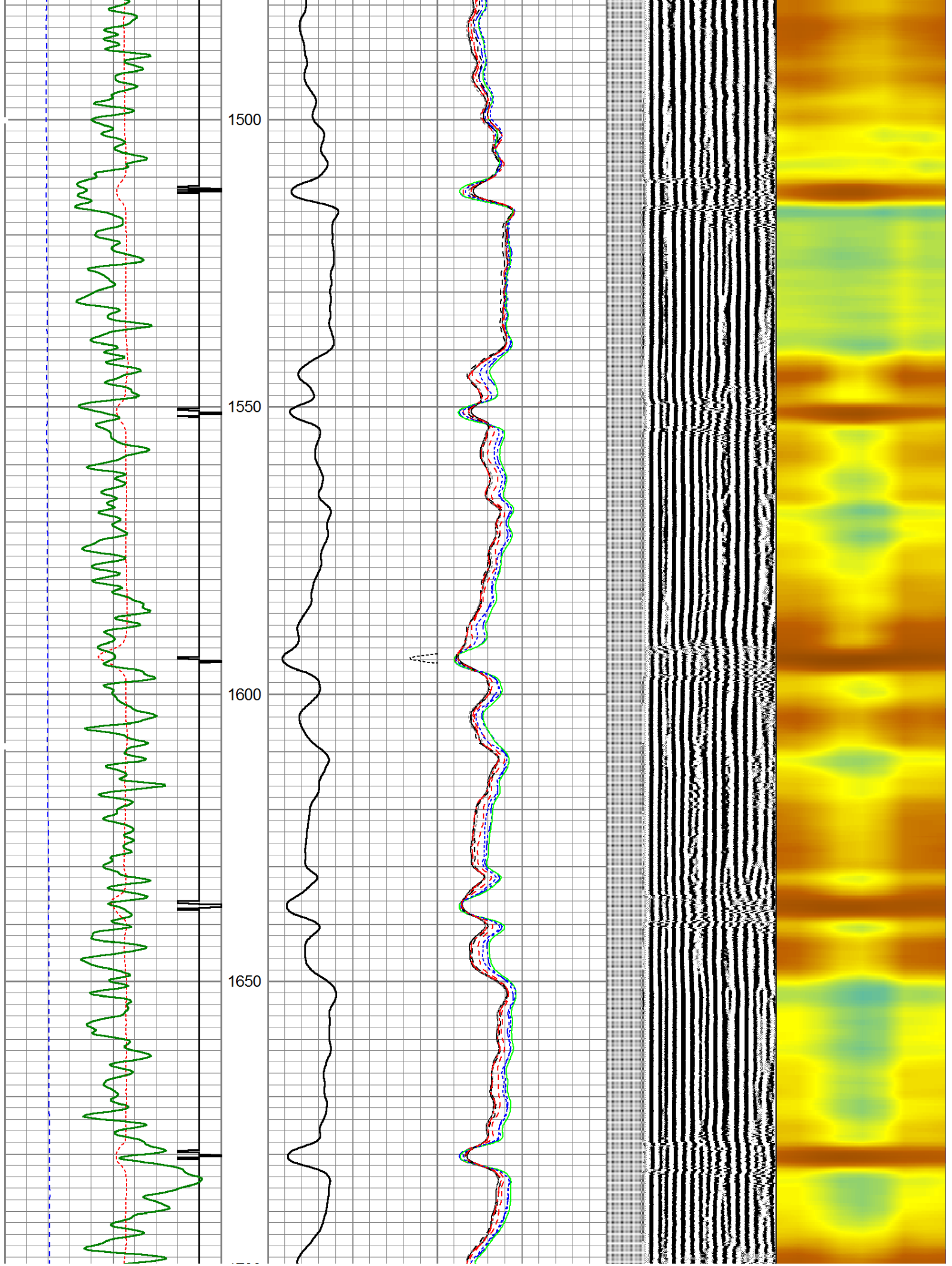


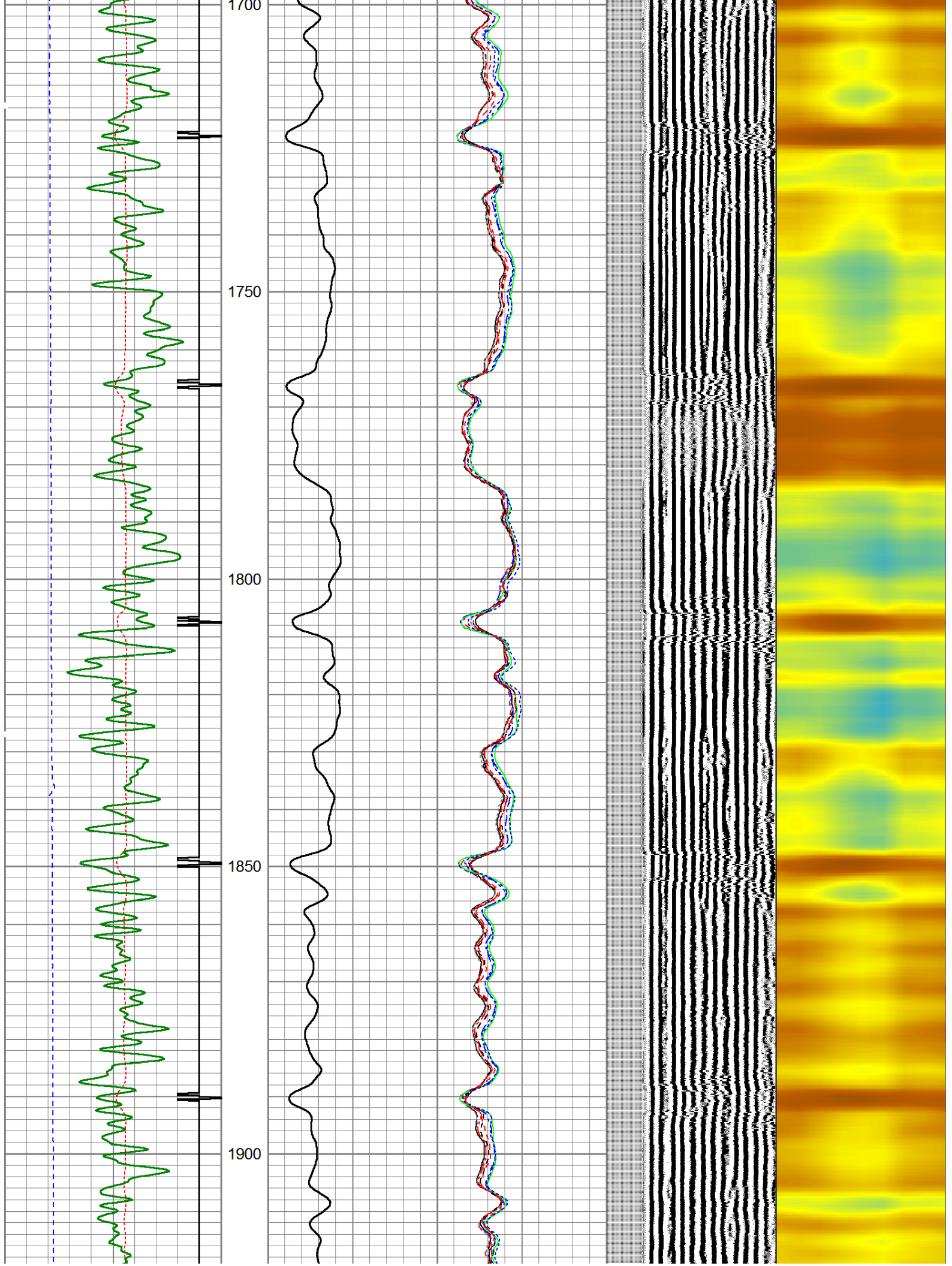


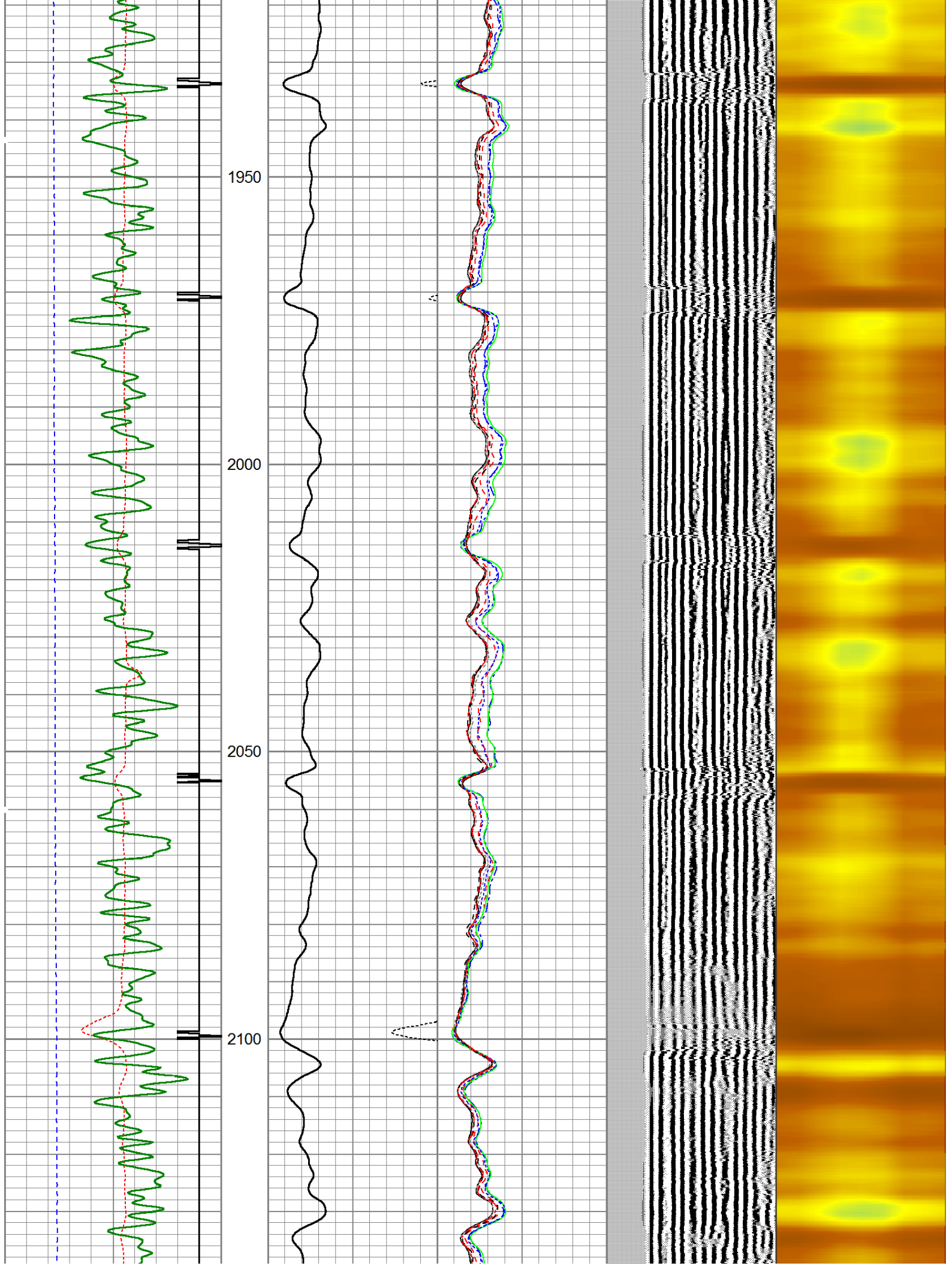


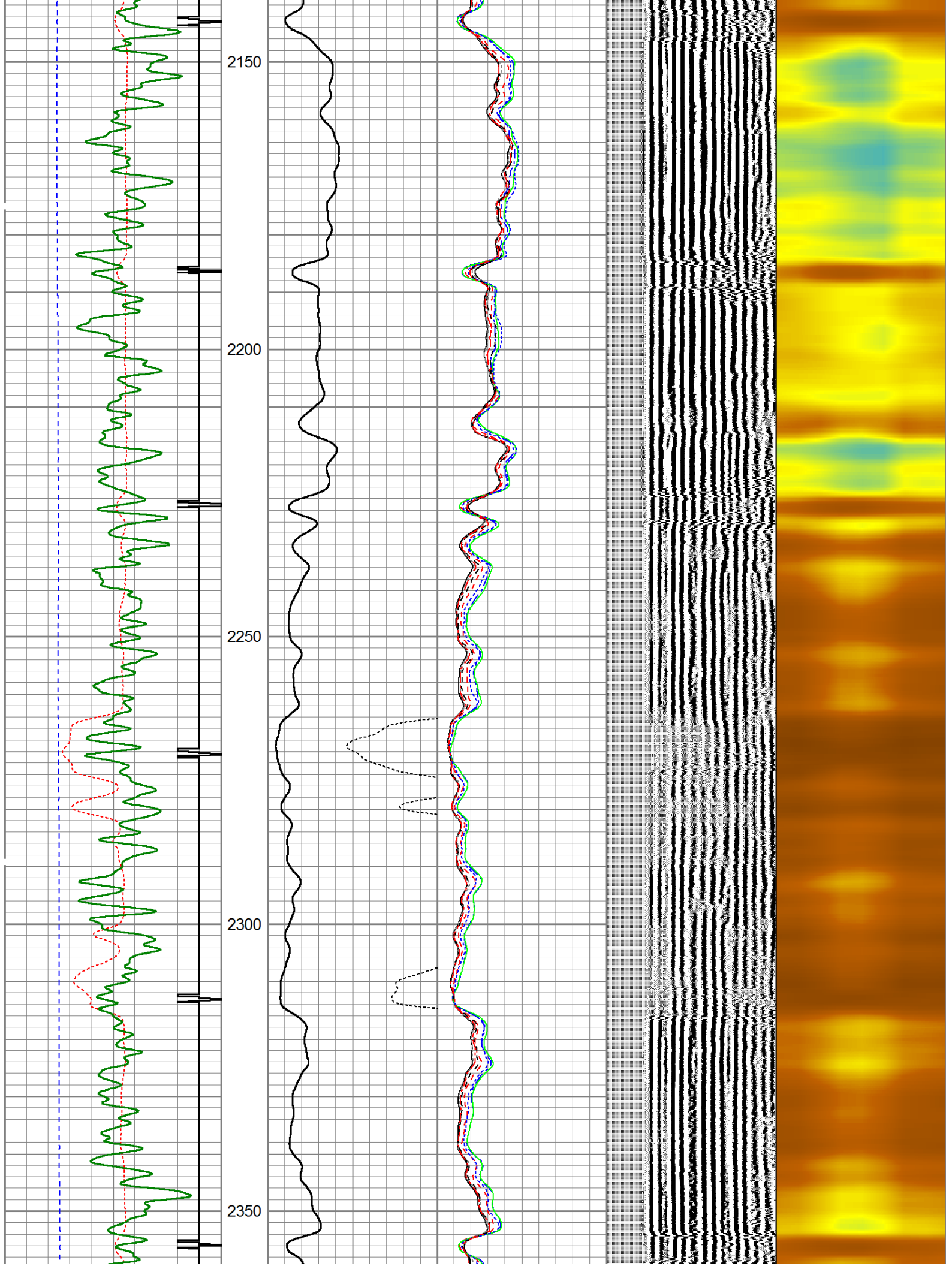


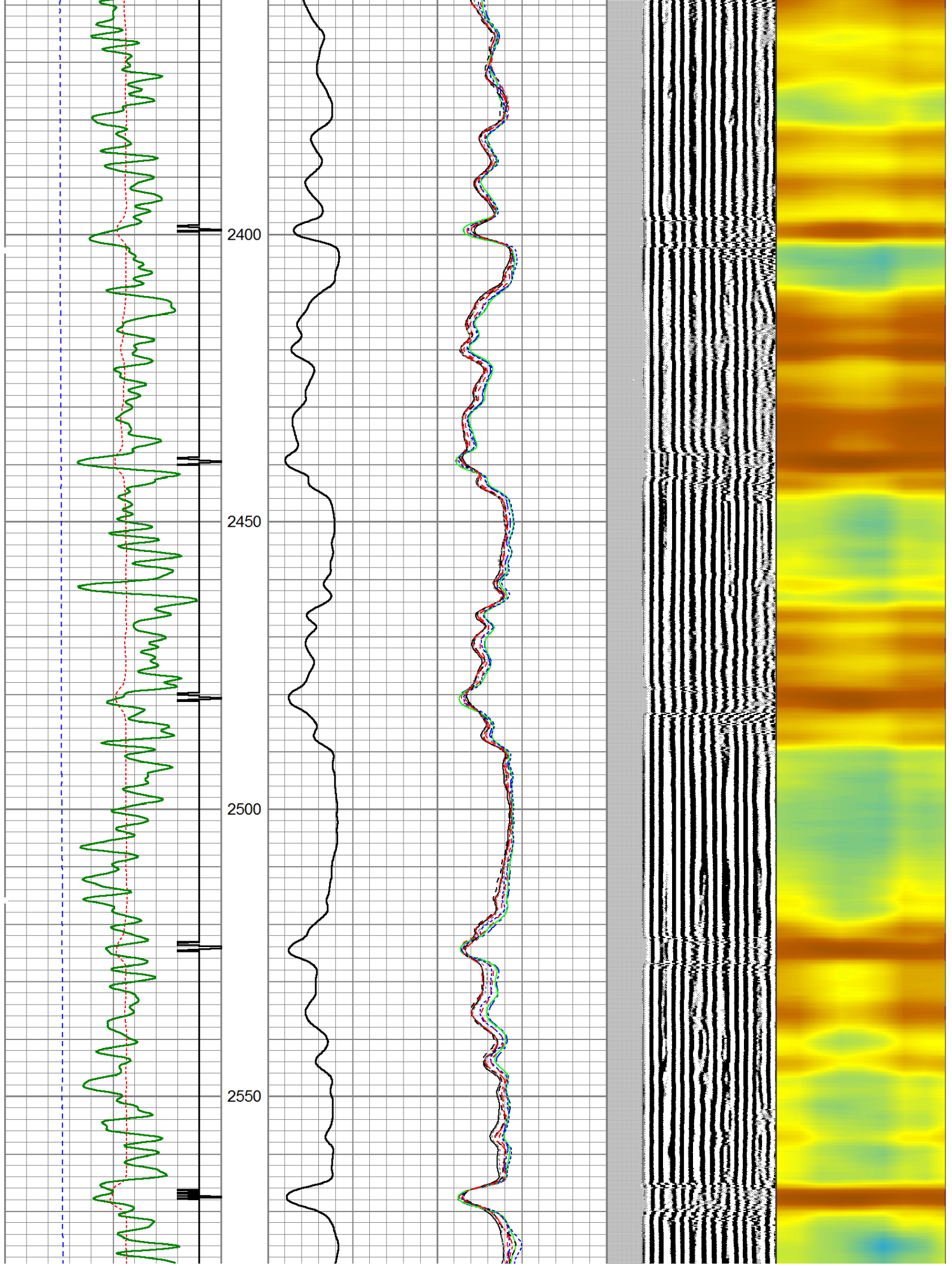


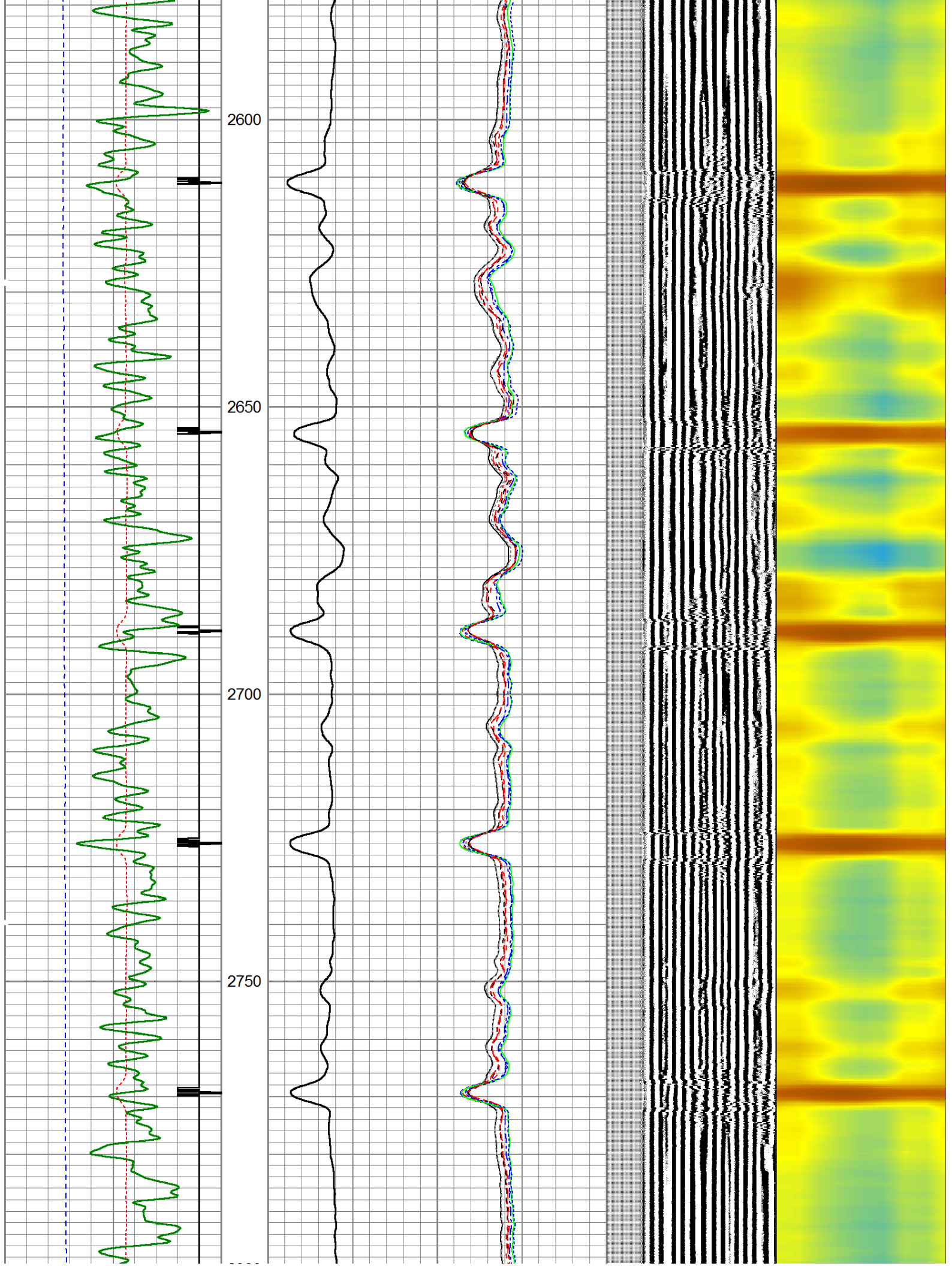


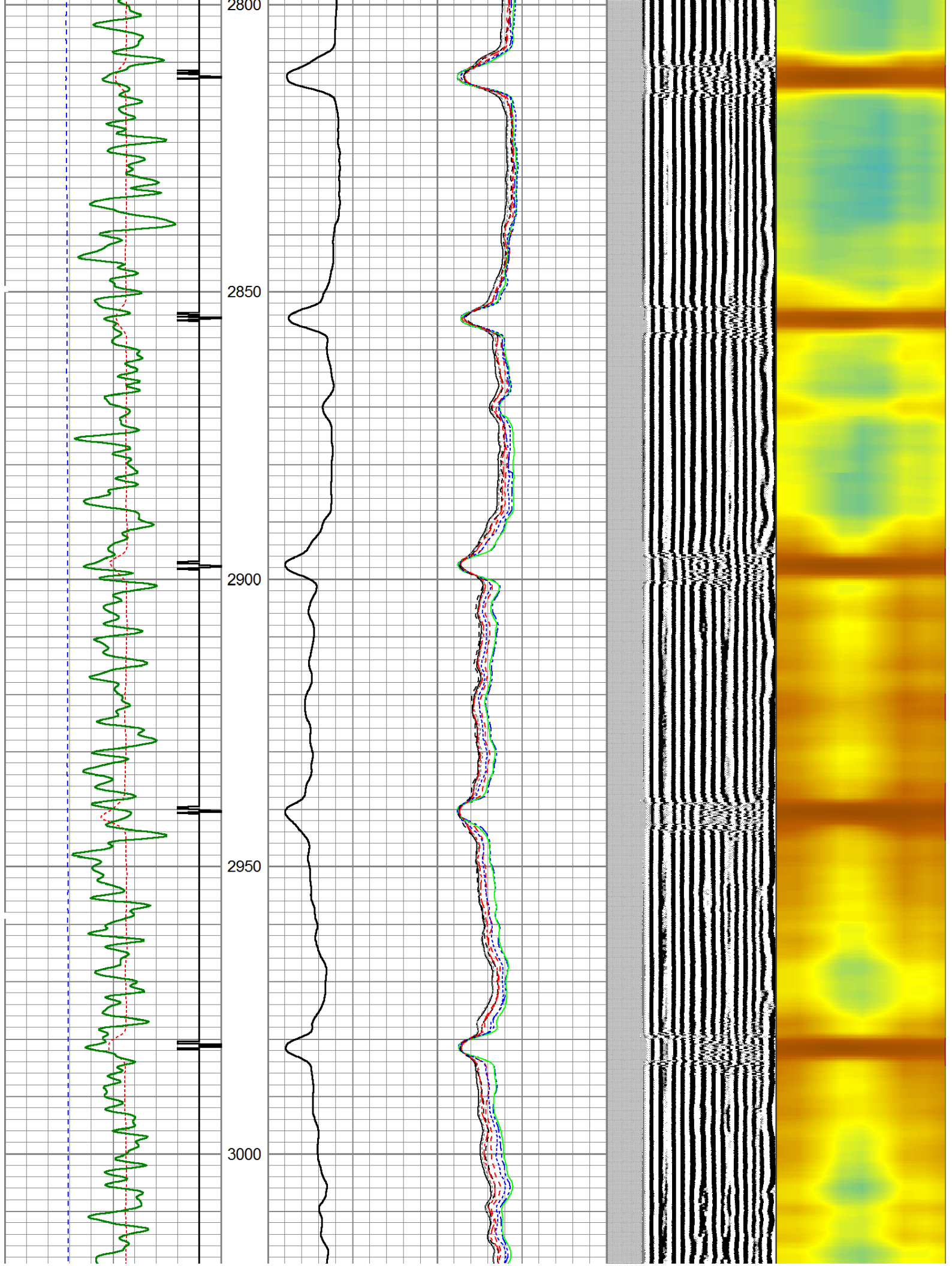


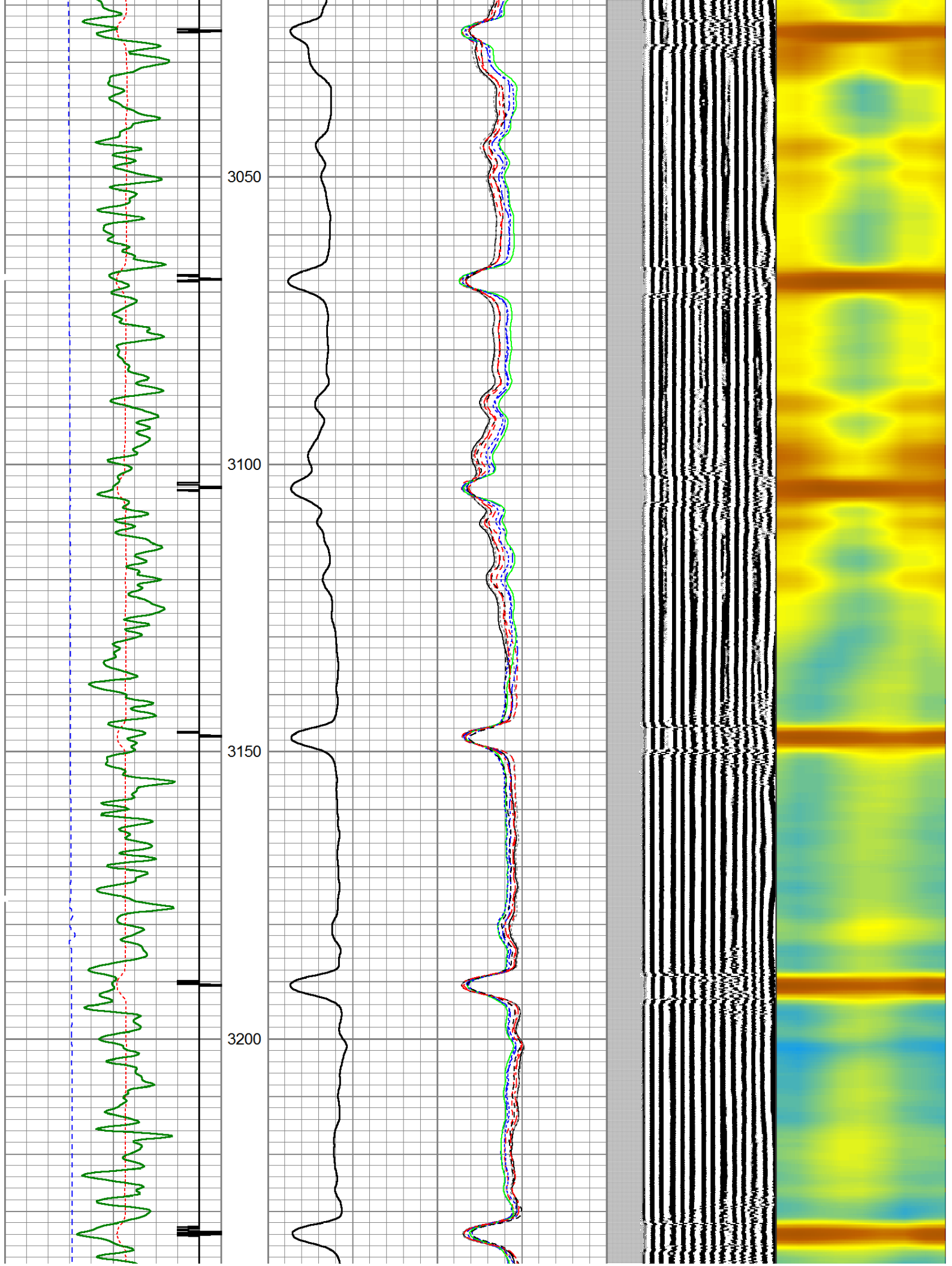


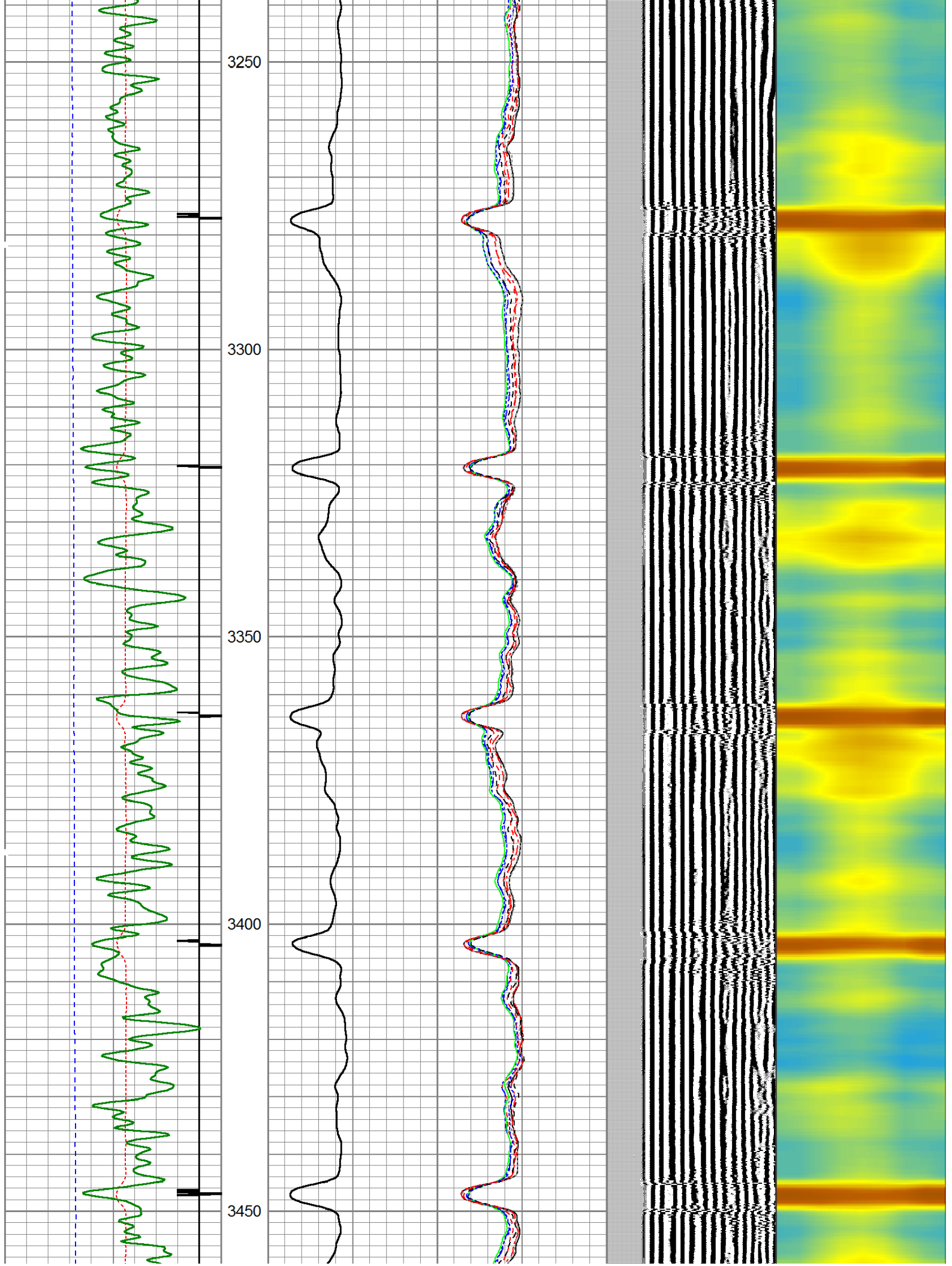


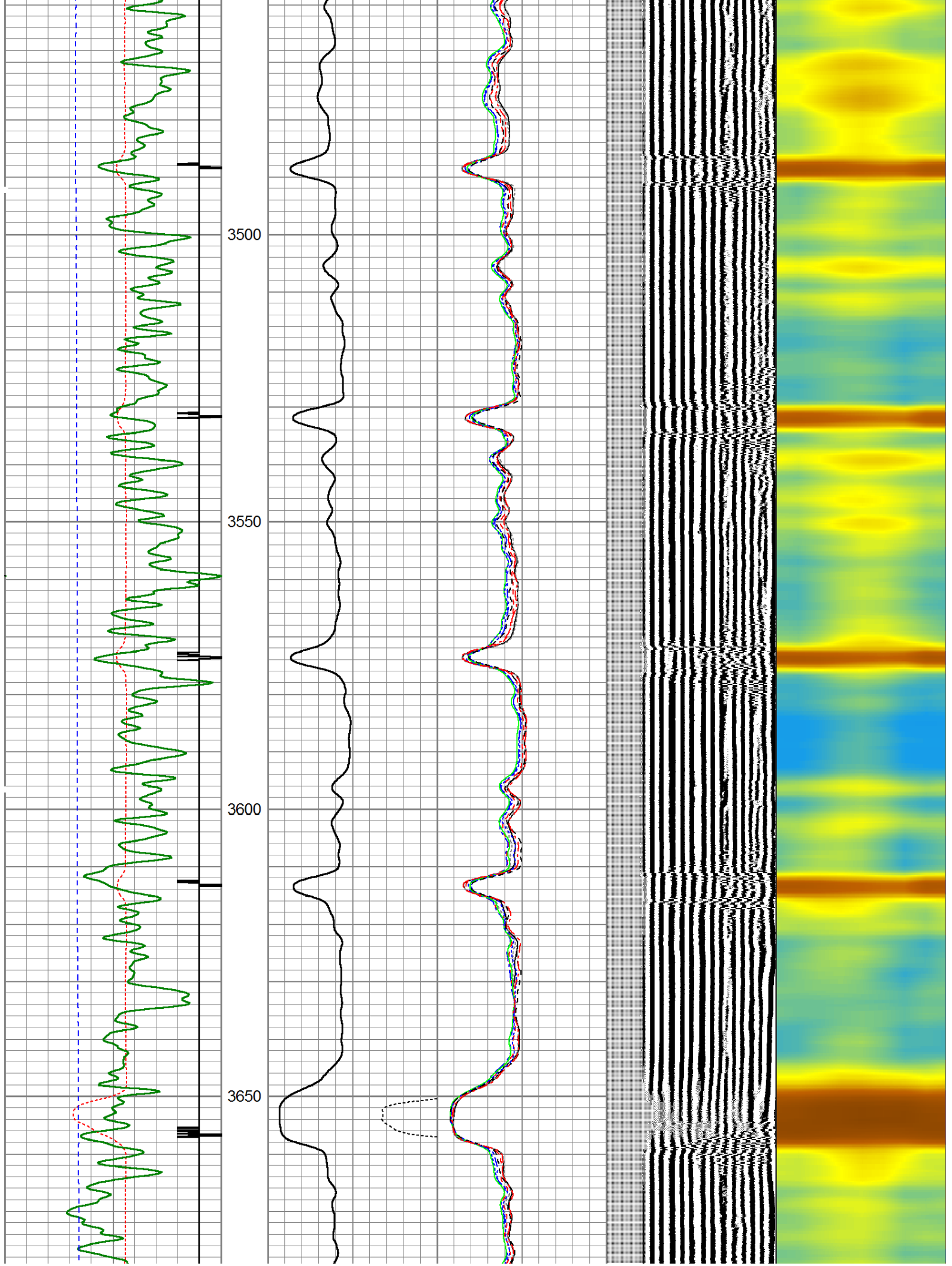


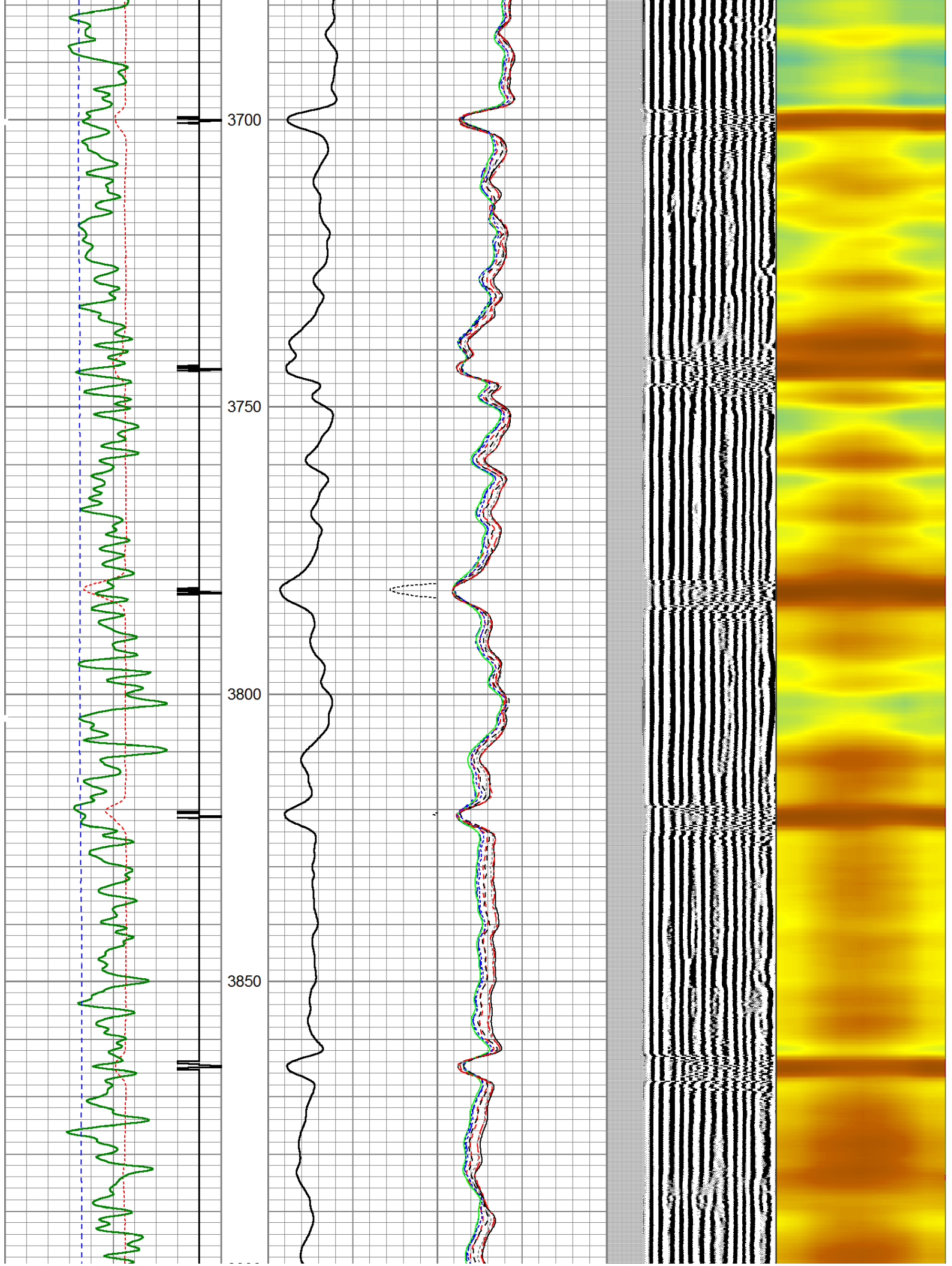


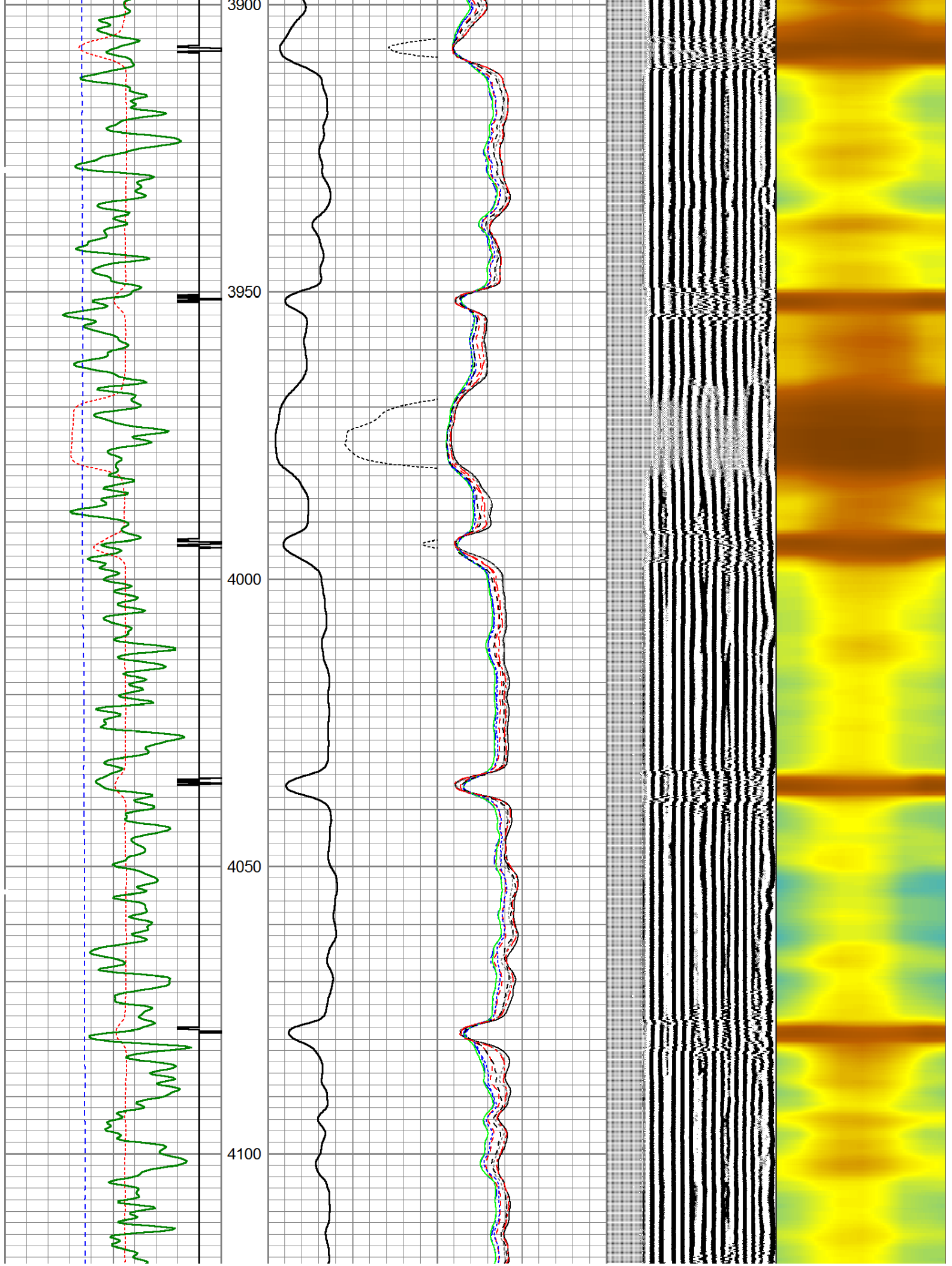


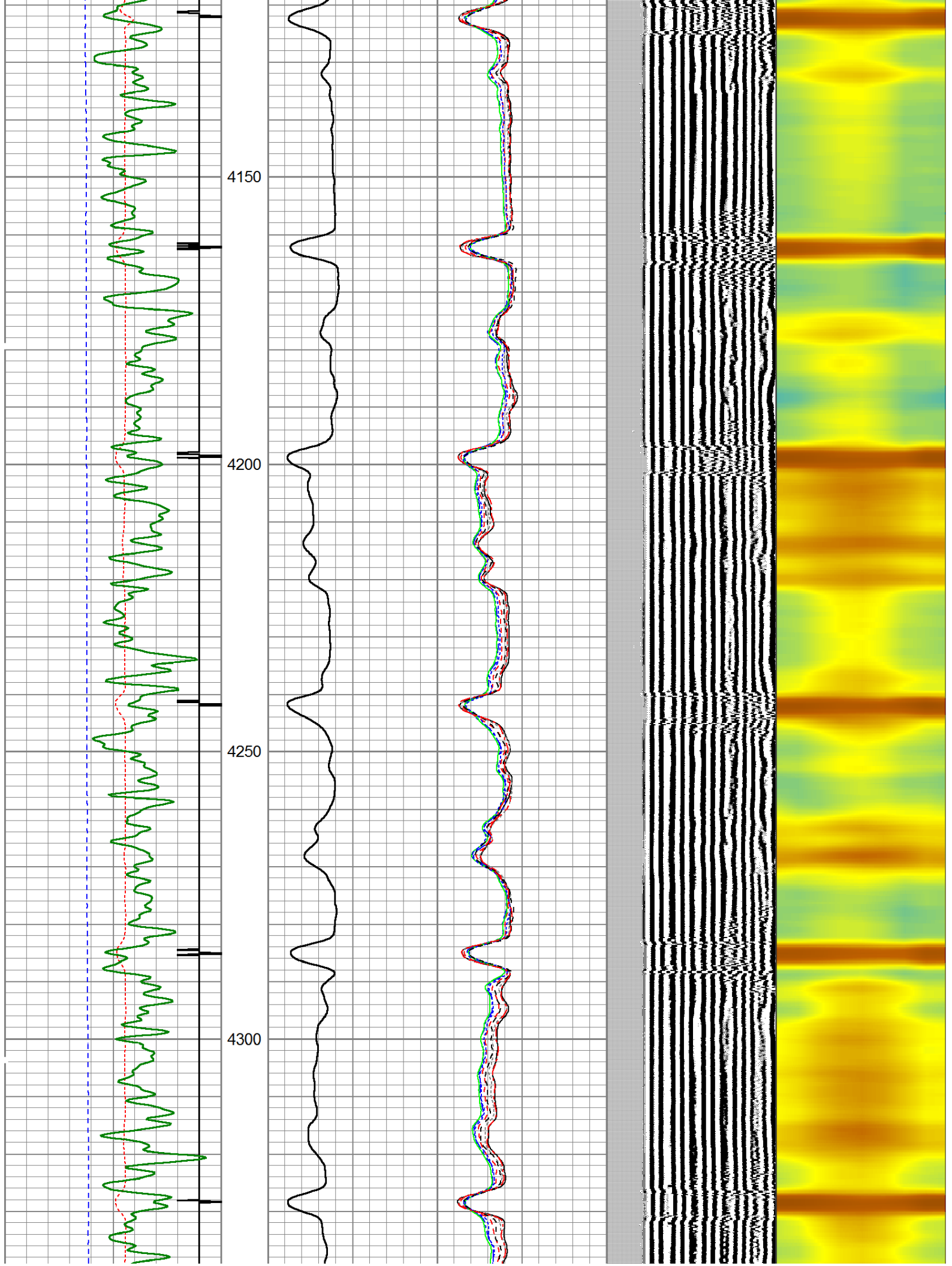


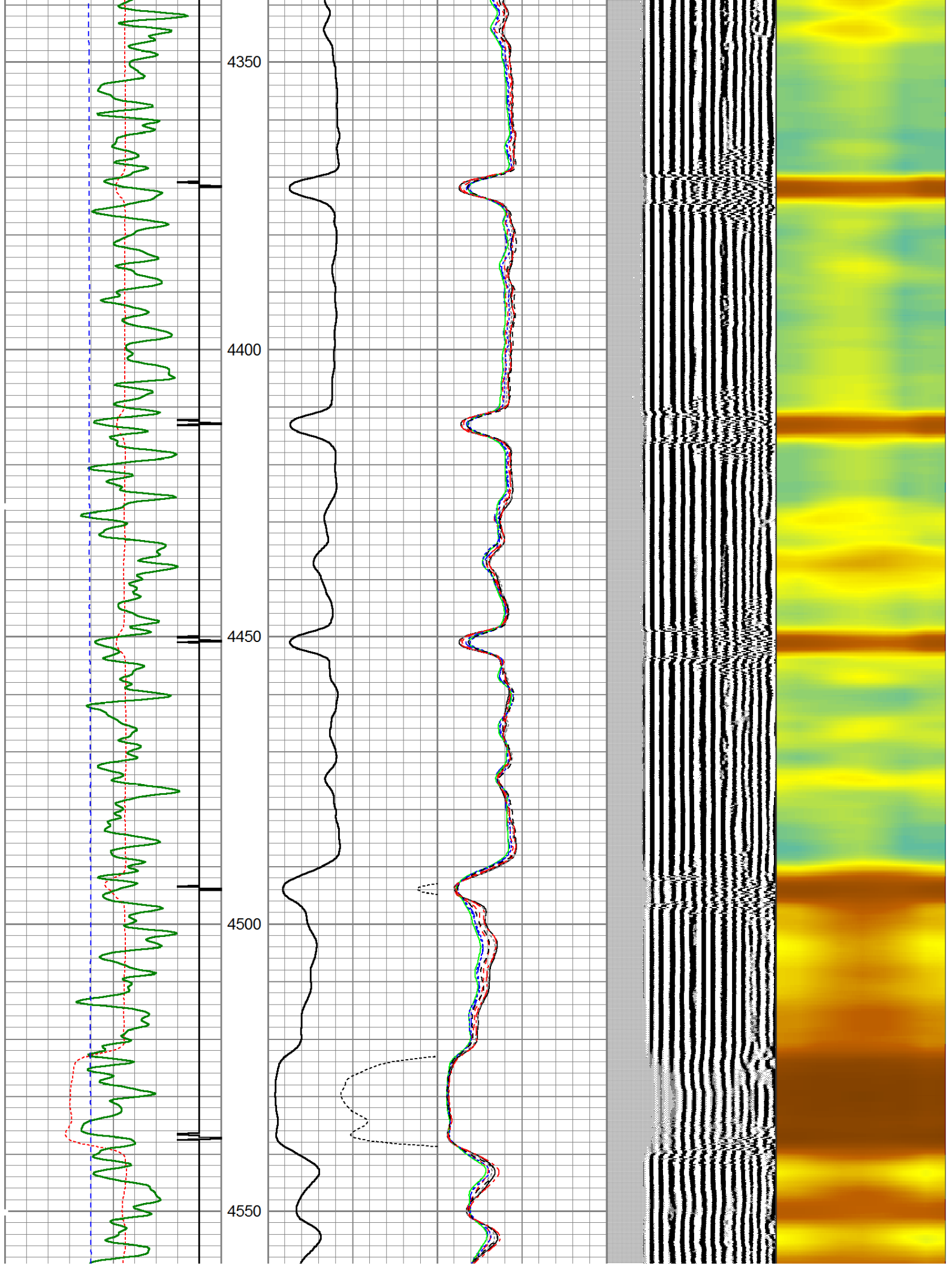


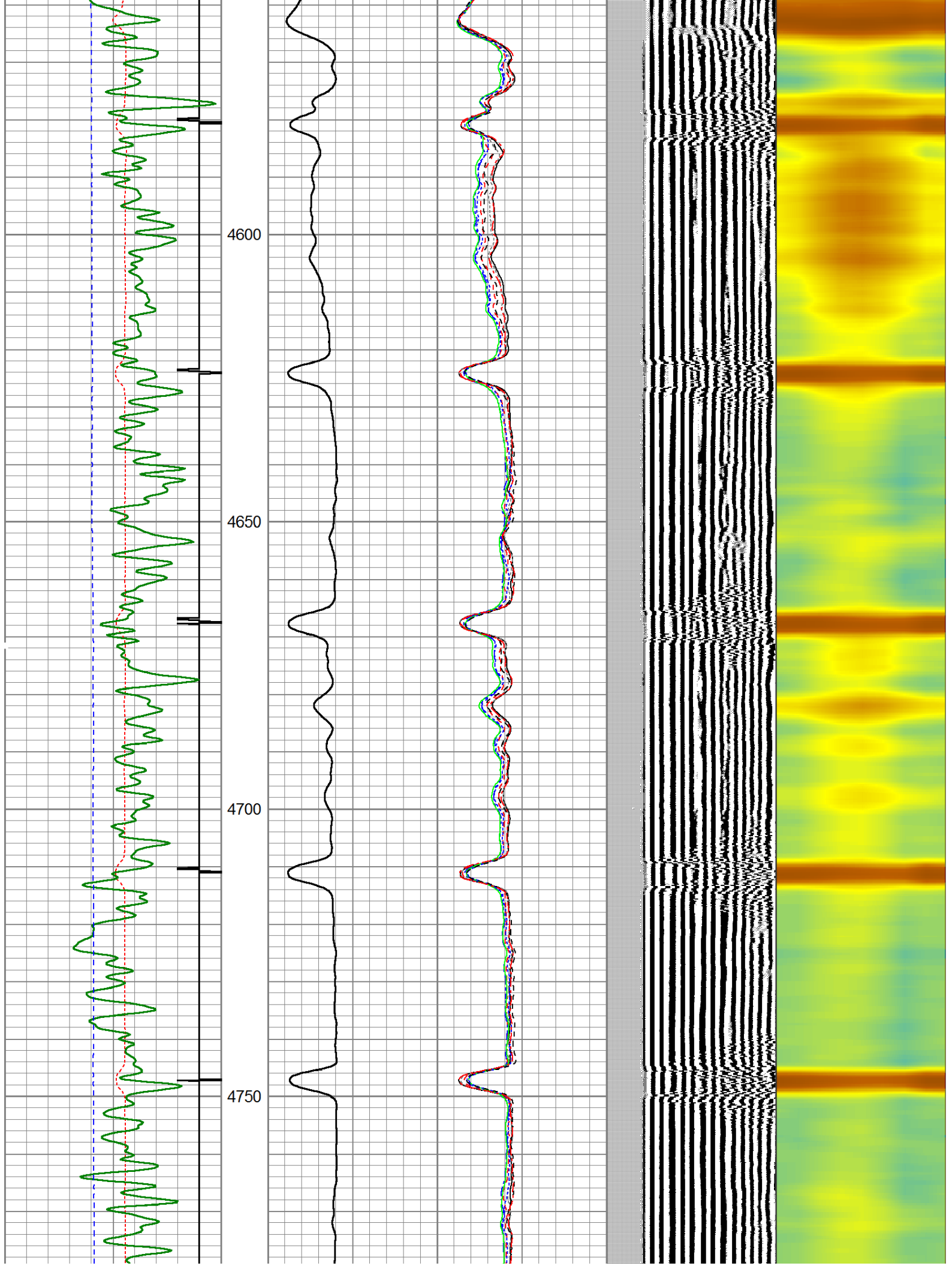


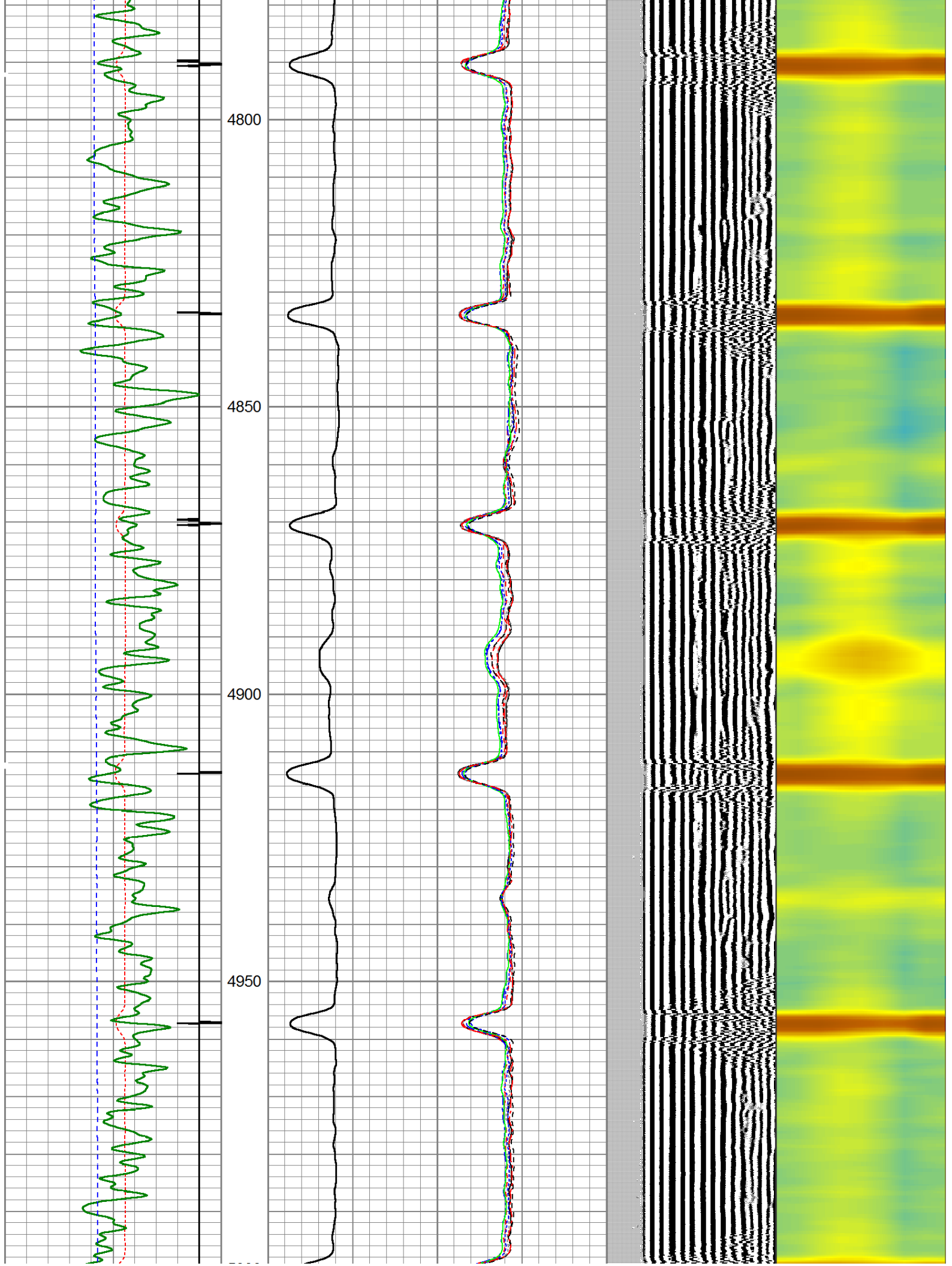


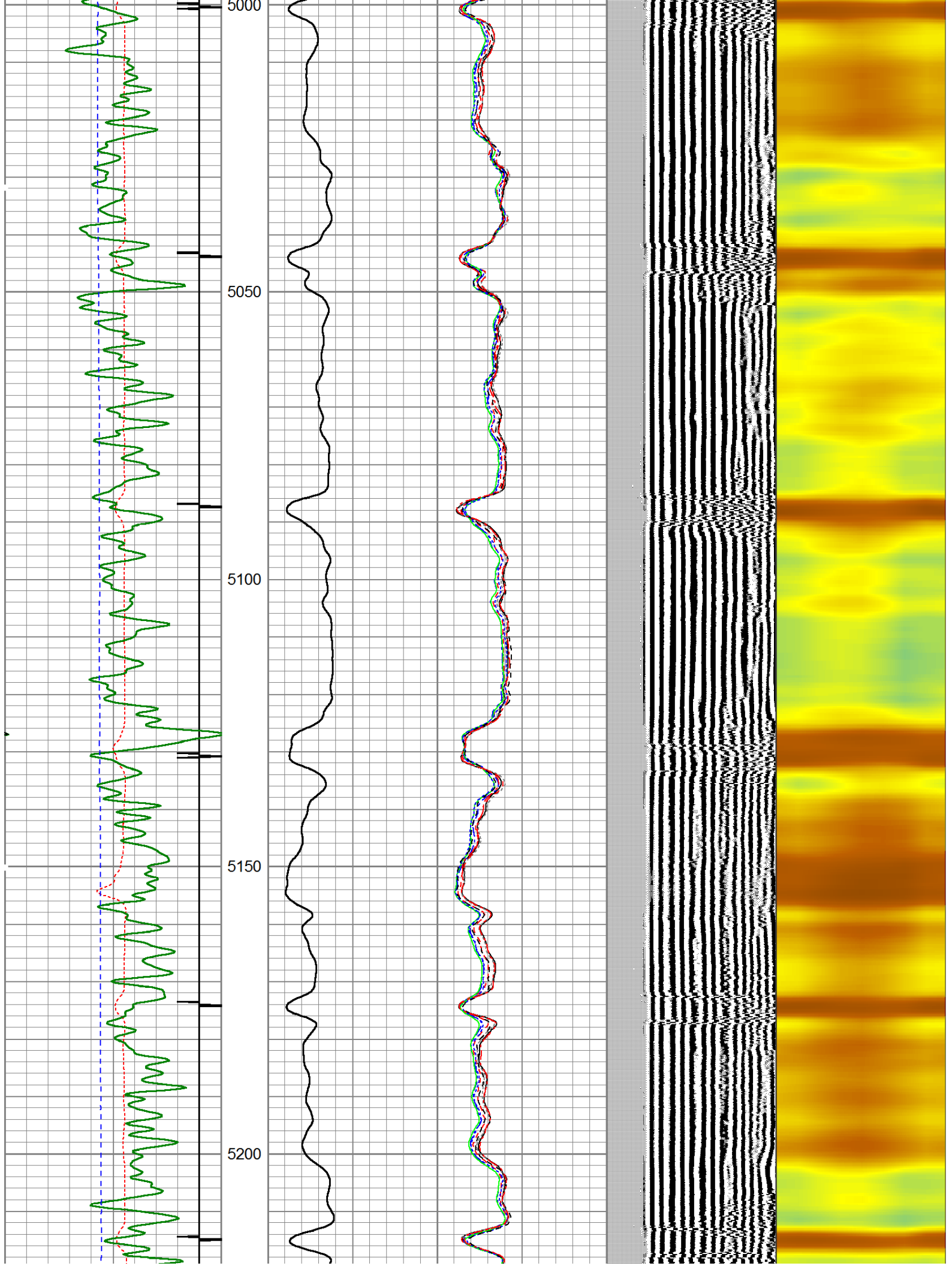


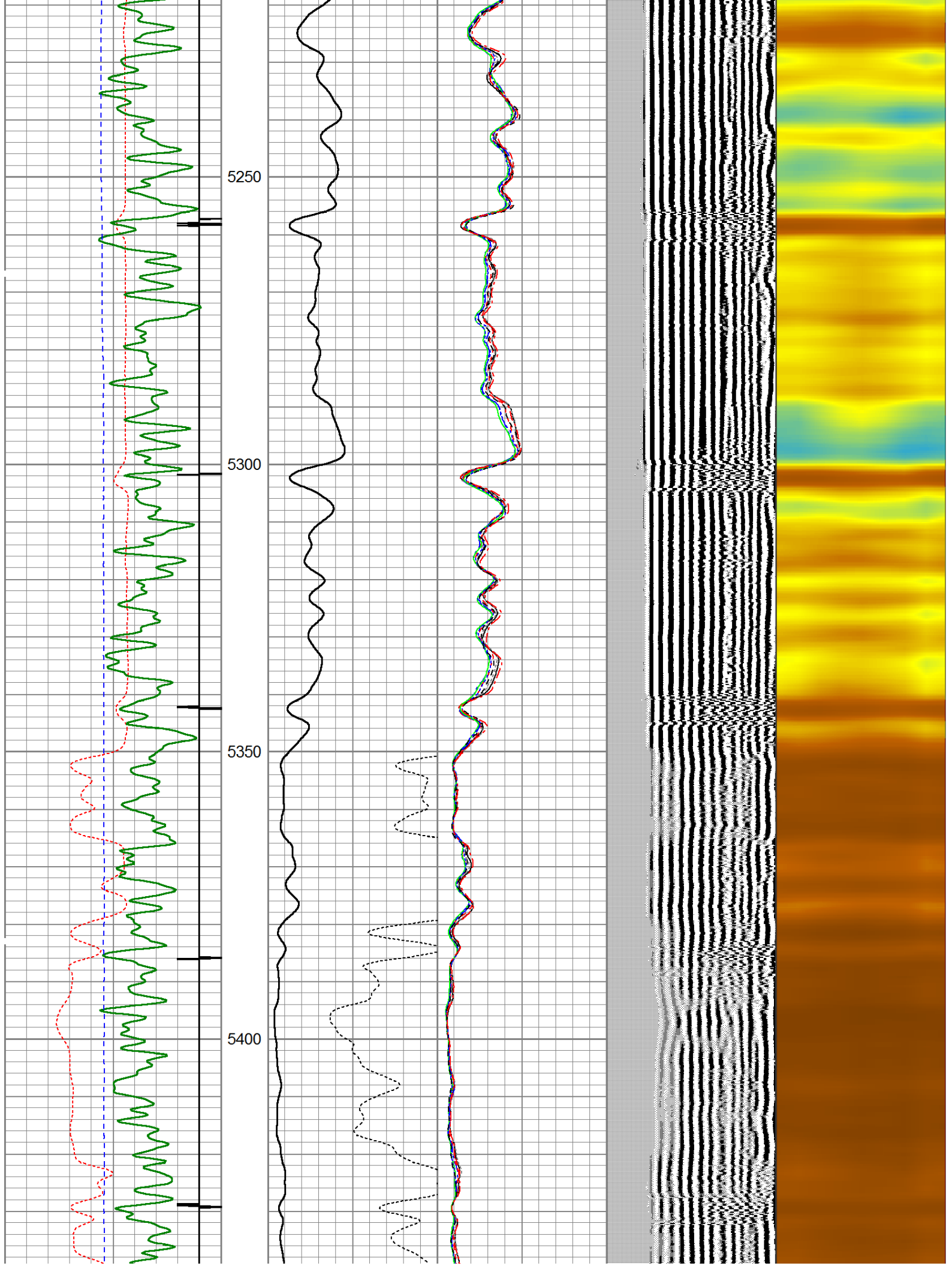


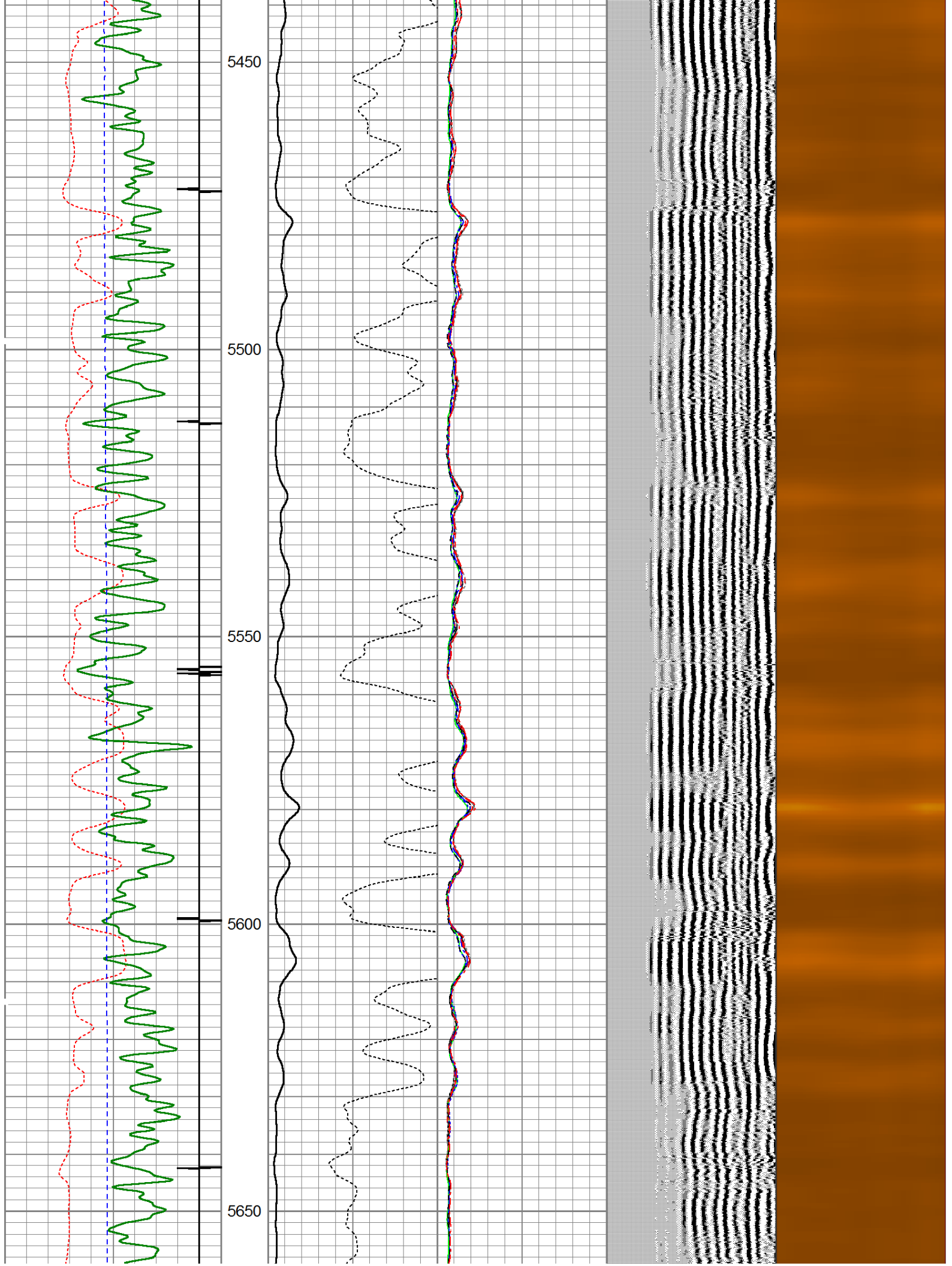


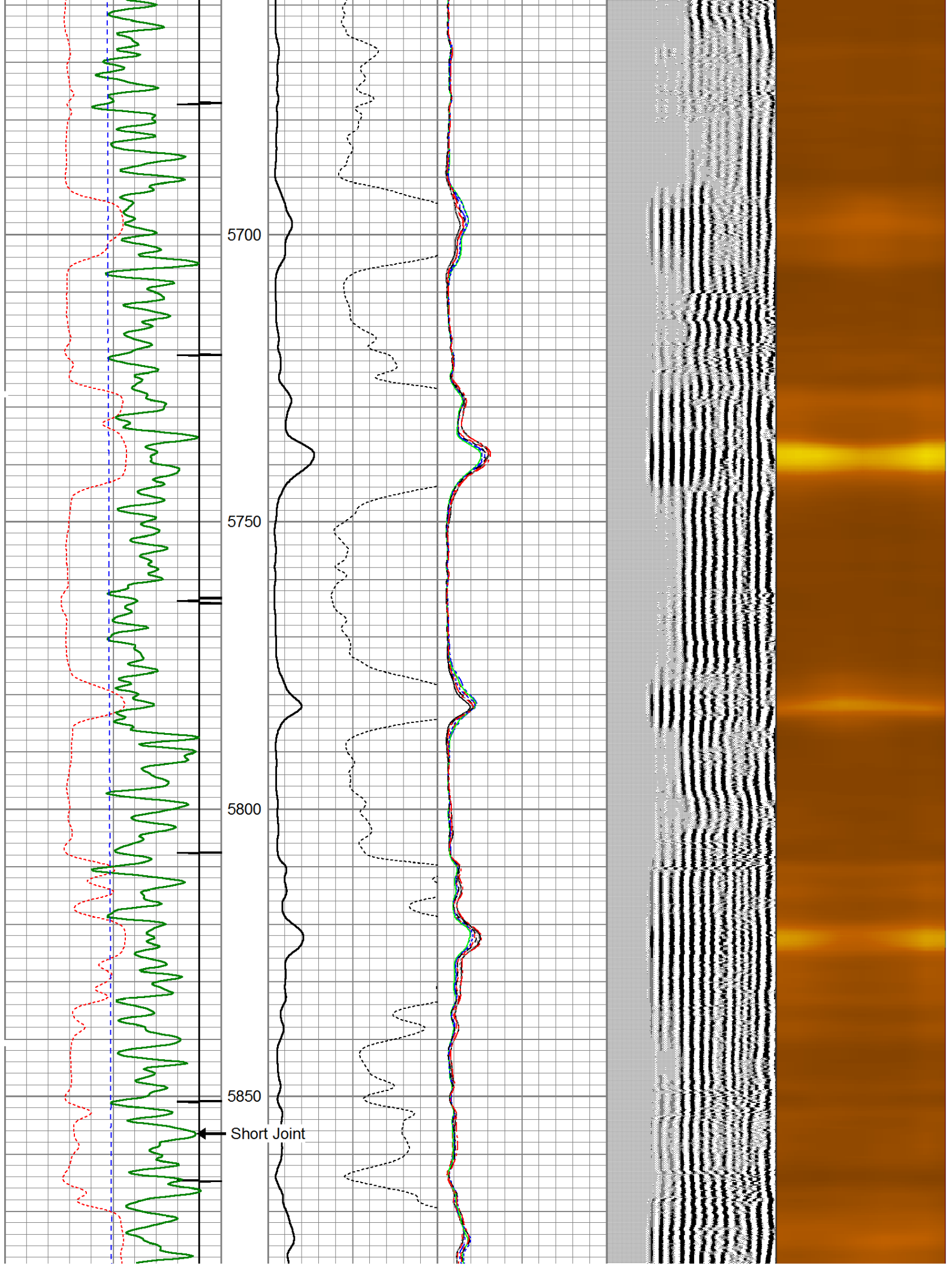


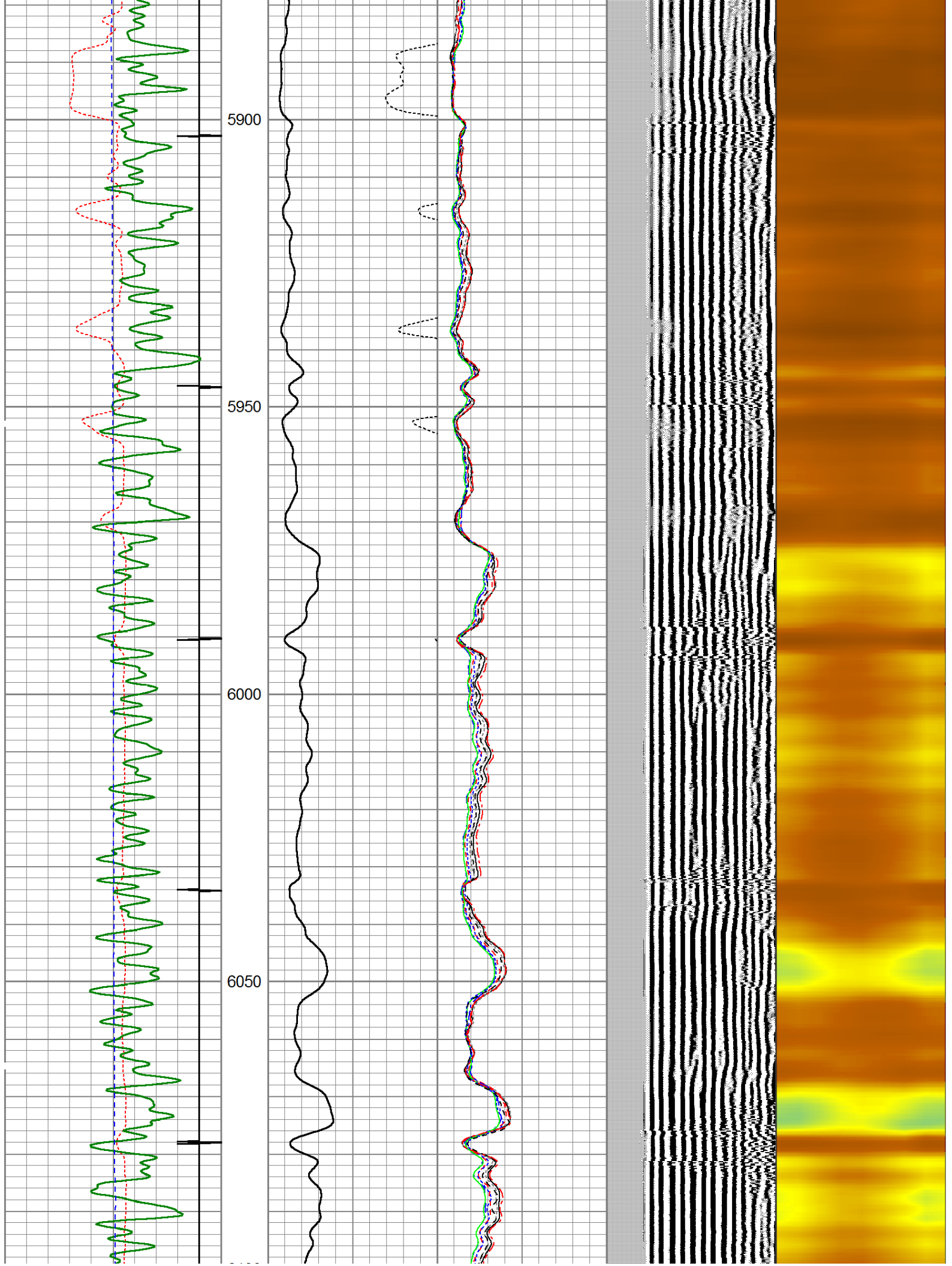


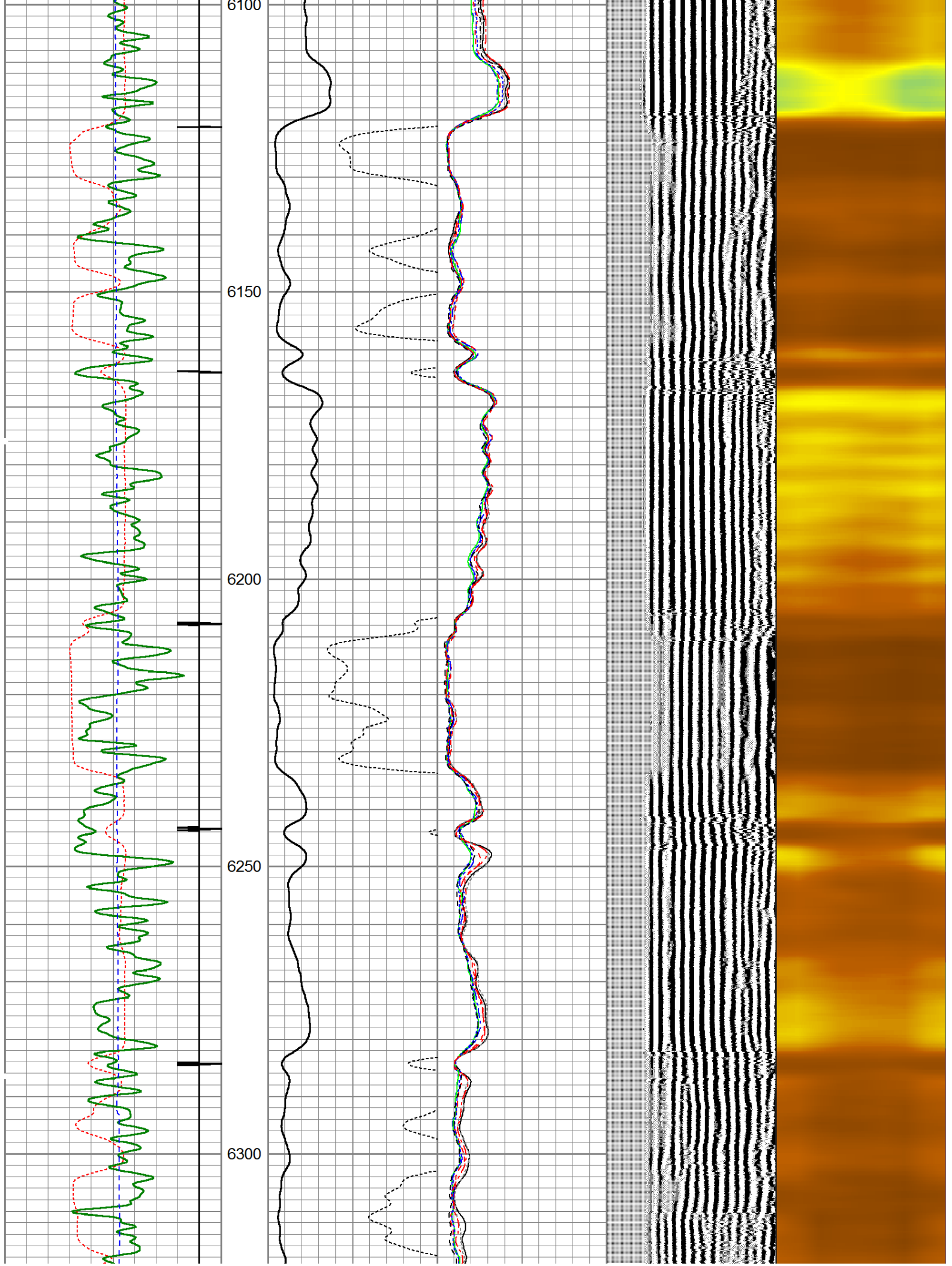


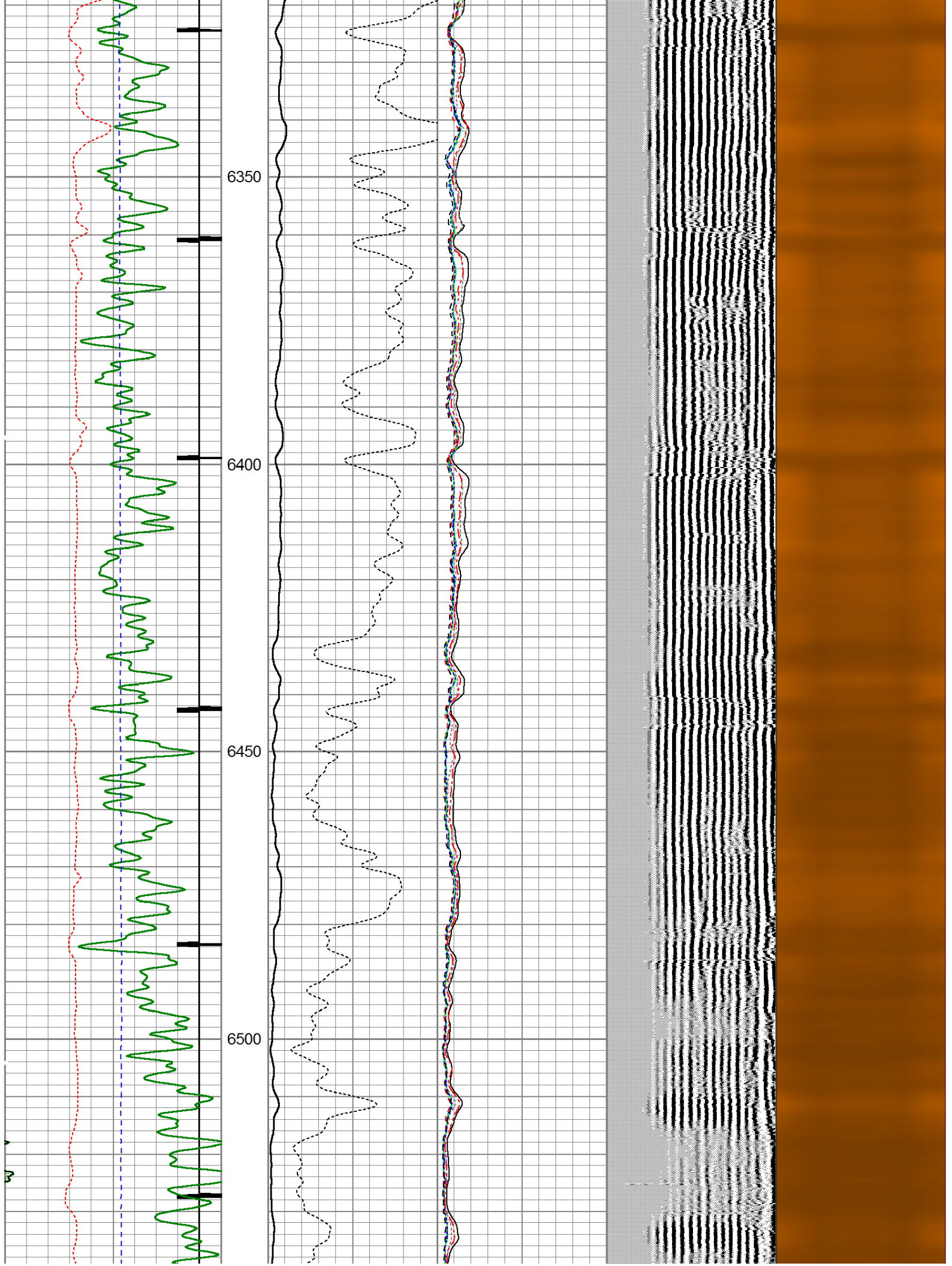


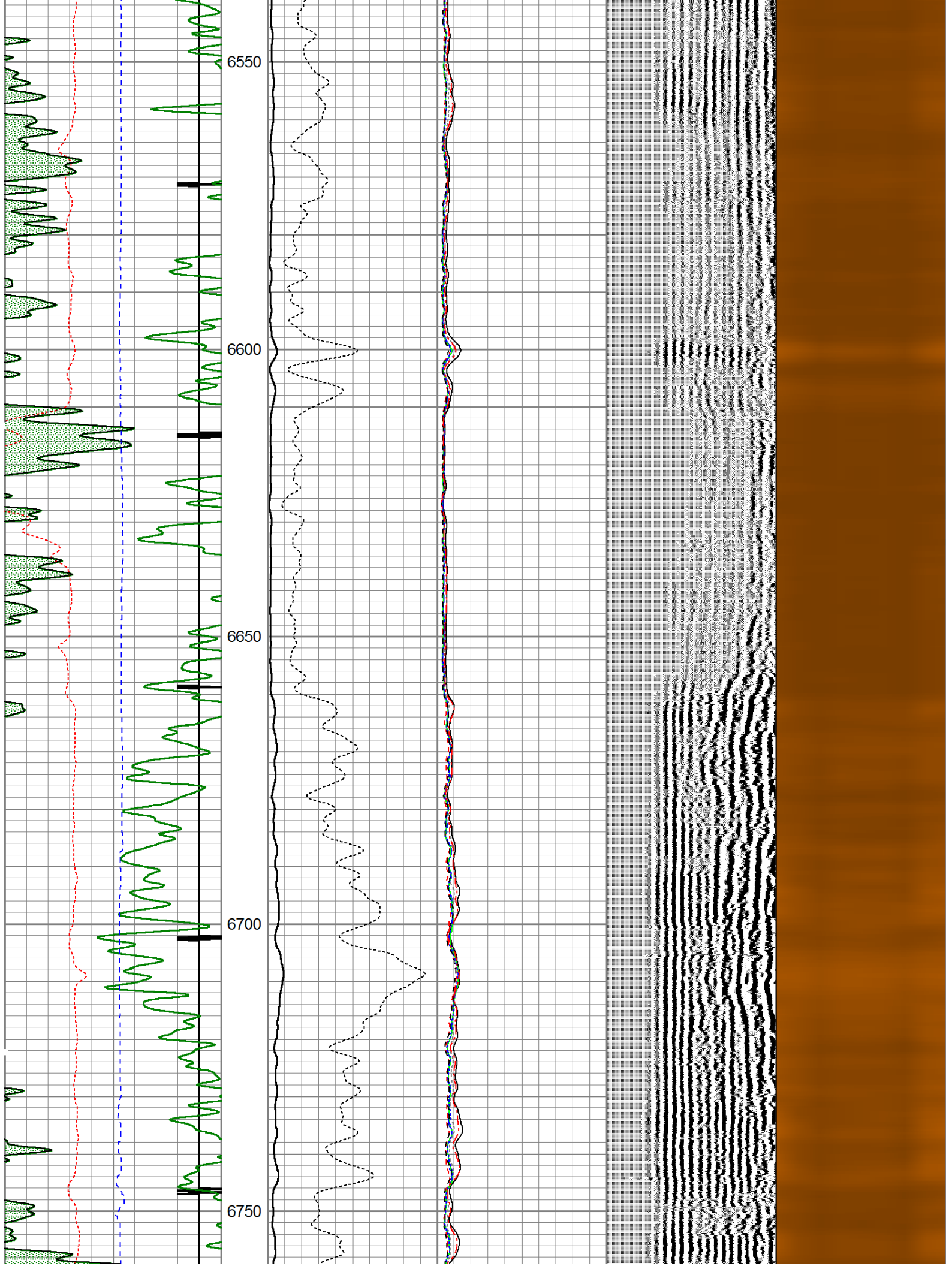


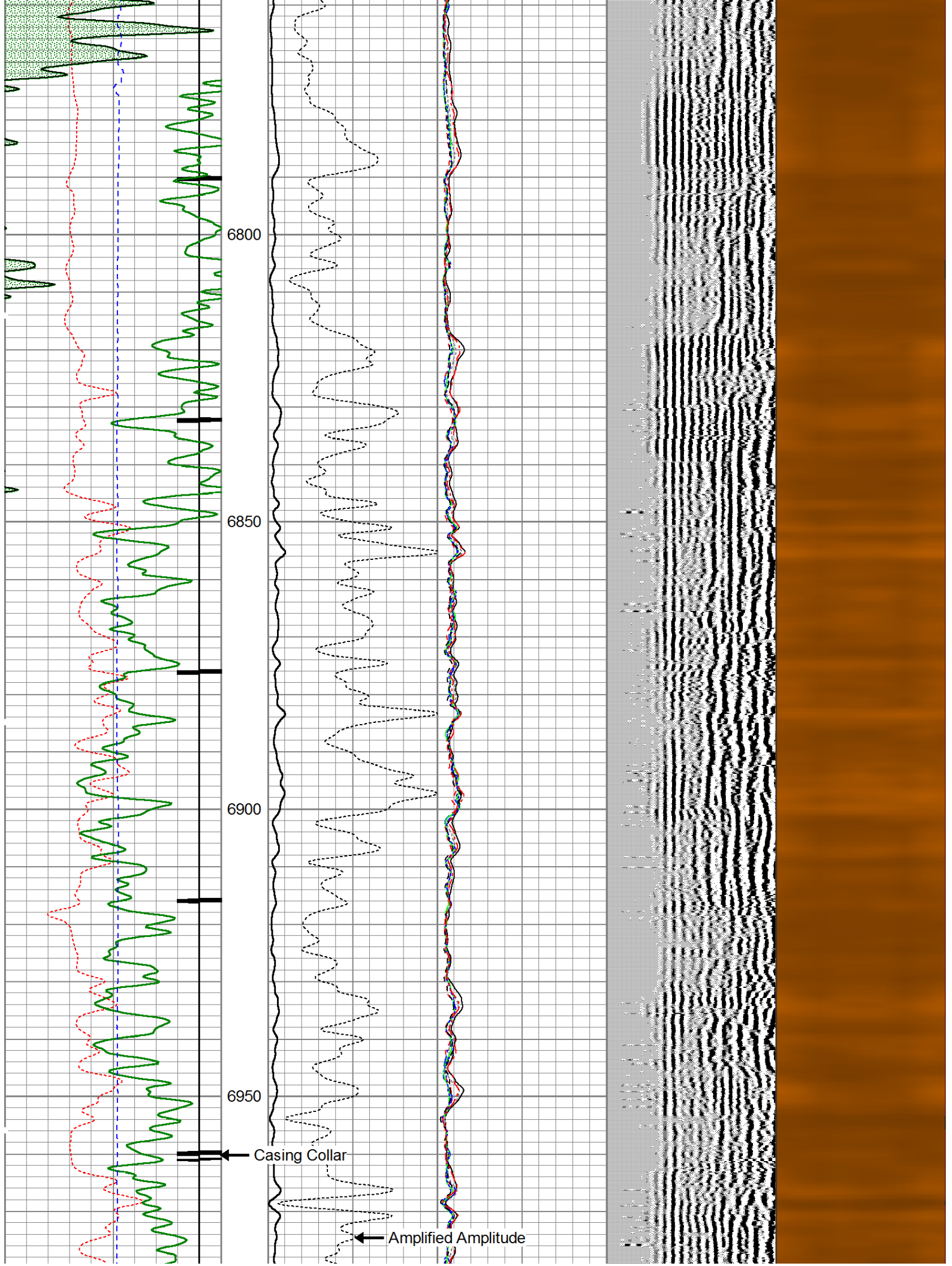


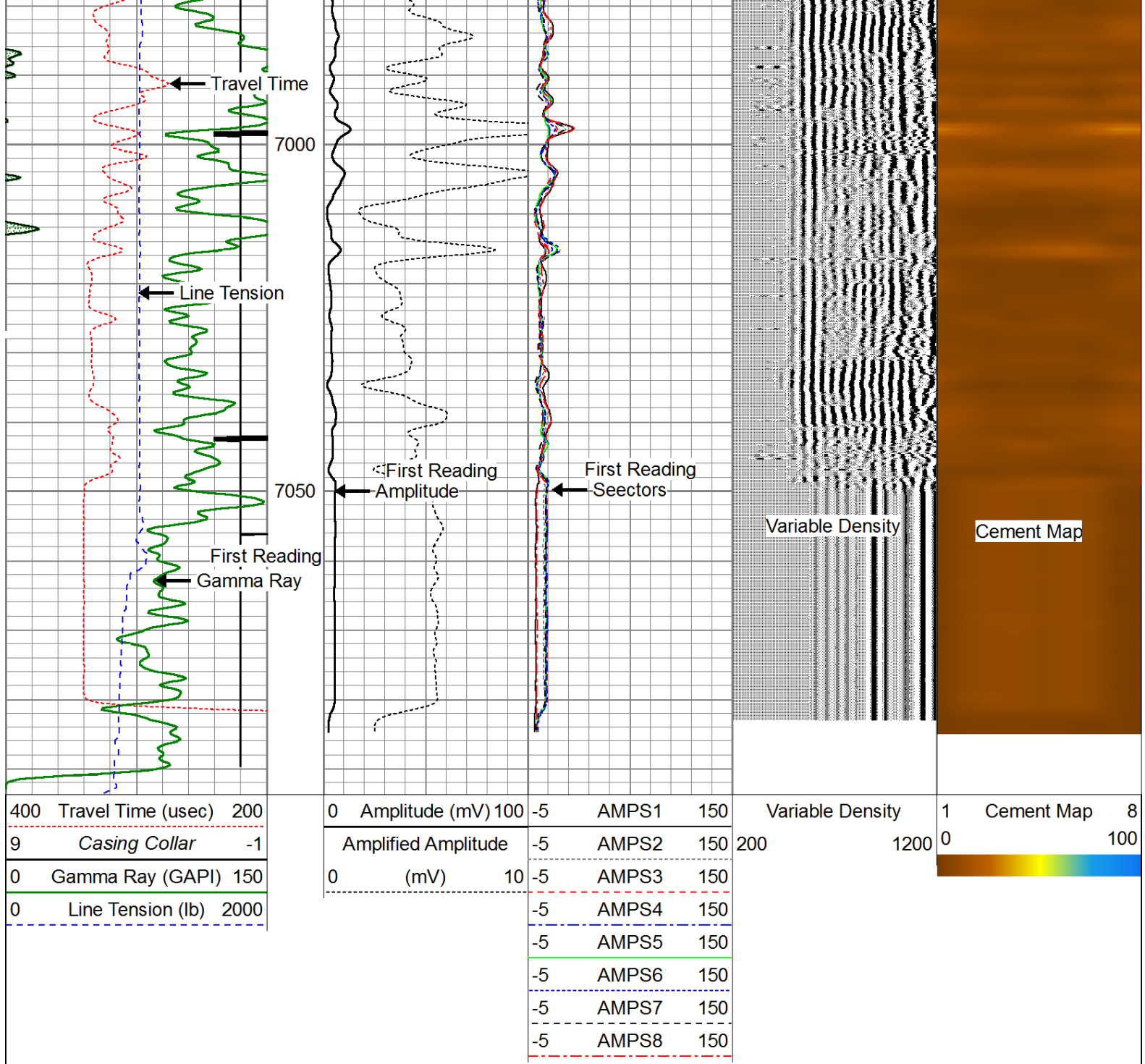






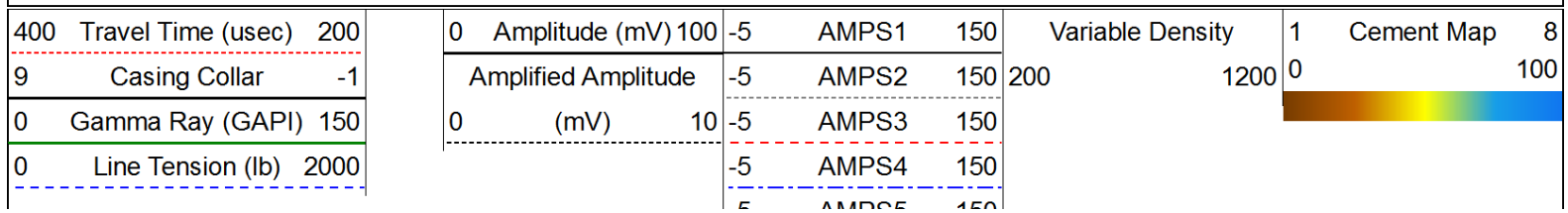




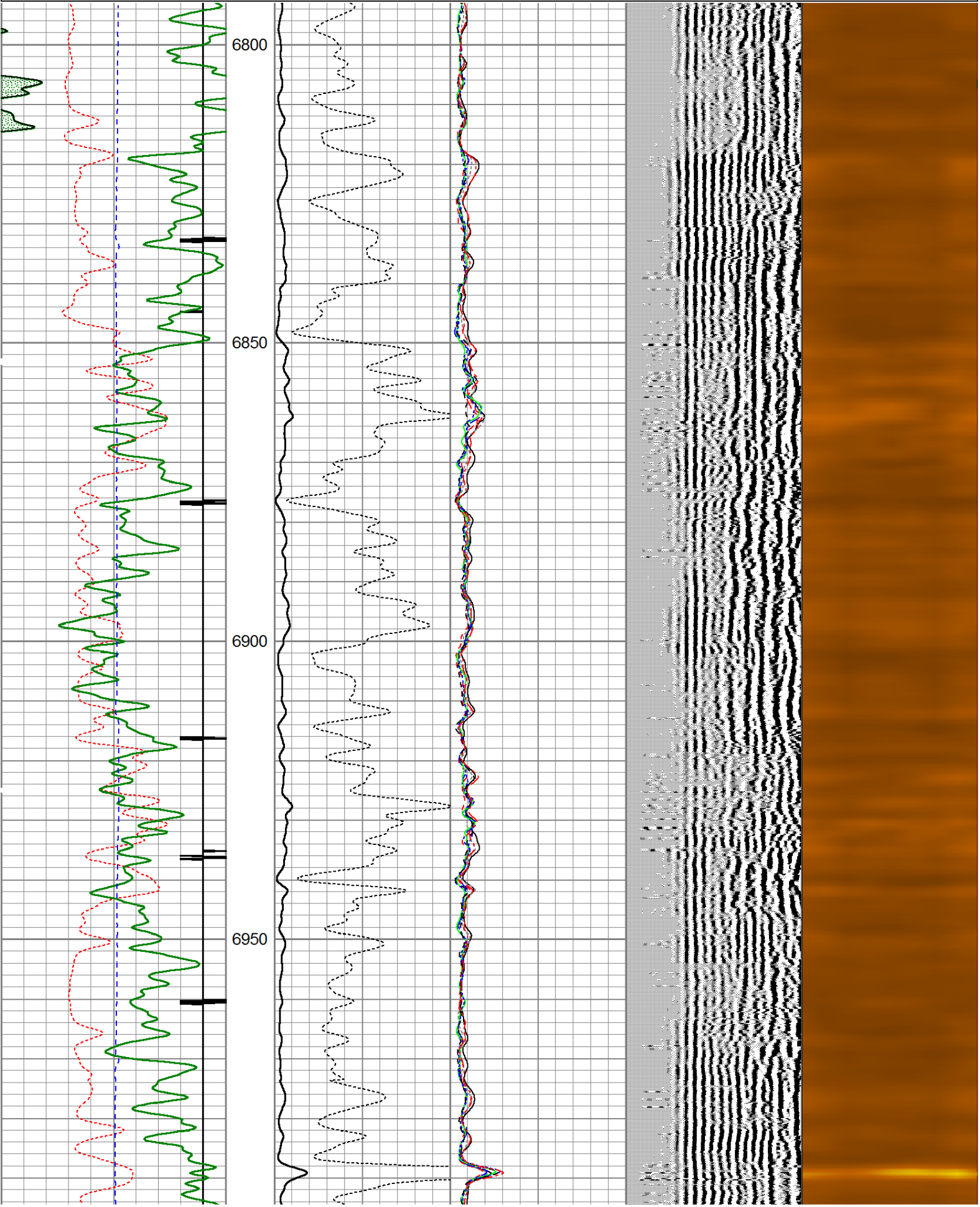


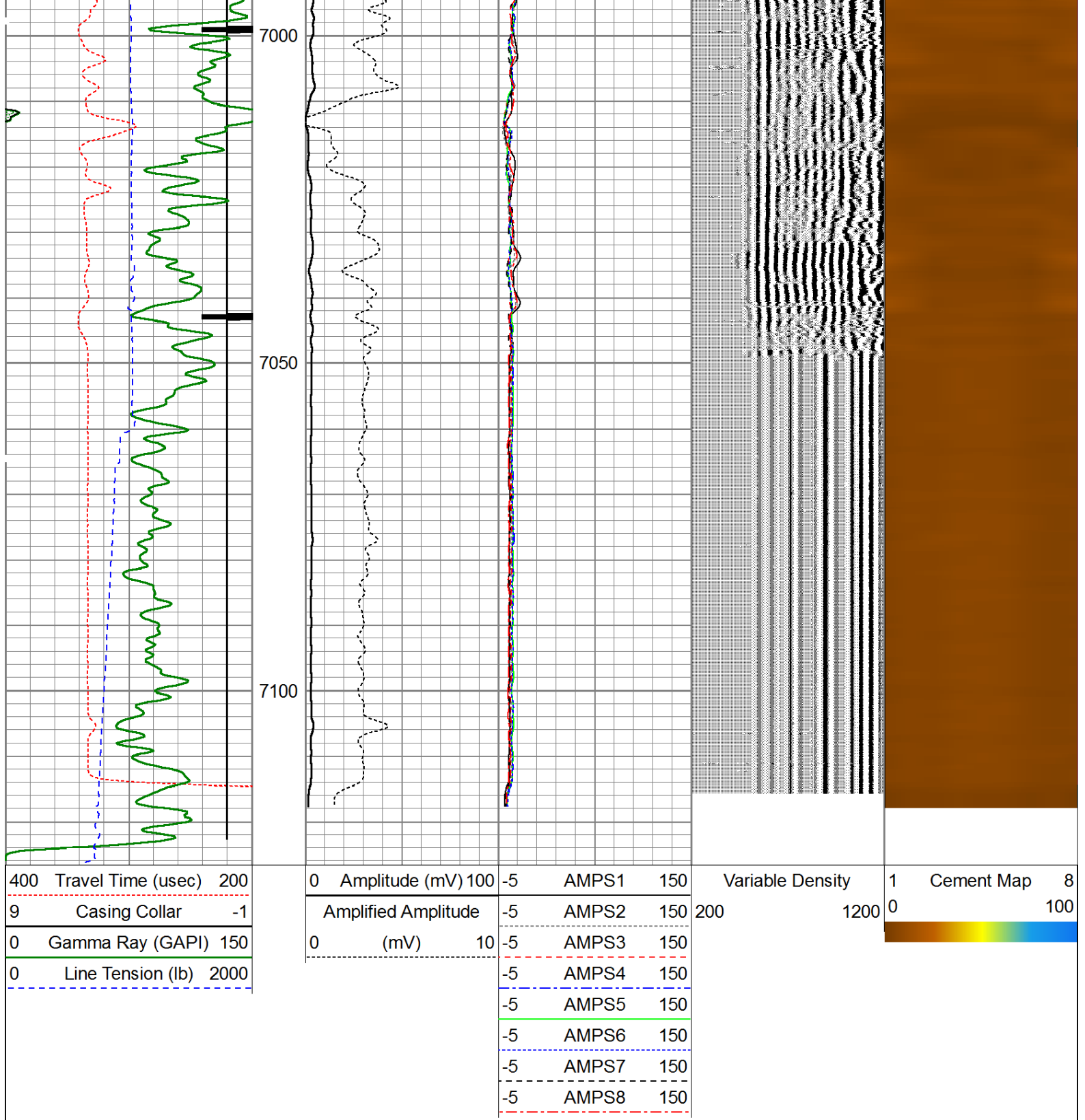
Repeat Pass (0 PSI)

Database File: noble energy wells ranch aa26-62-1hn_rcbl.db
 Dataset Pathname: pass3
 Presentation Format: scbl03
 Dataset Creation: Mon Dec 02 14:32:21 2013 by Log 0
 Charted by: Depth in Feet scaled 1:240



-5	AMPS5	150
-5	AMPS6	150
-5	AMPS7	150
-5	AMPS8	150





Calibration Report

Database File: noble energy wells ranch aa26-62-1hn_rcbl.db
Dataset Pathname: pass5
Dataset Creation: Mon Dec 02 14:39:58 2013 by Log 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				

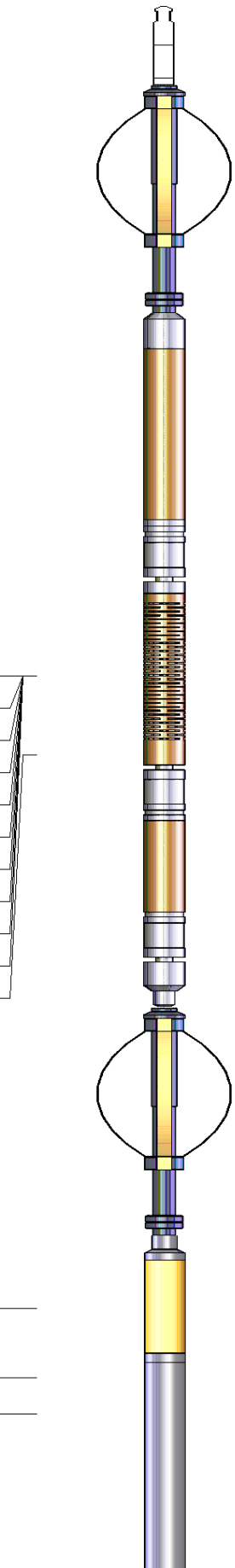
Segmented Cement Bond Log Calibration Report					
Serial Number:	101225				
Tool Model:	Probe				
Calibration Casing Diameter:	7.000		in		
Calibration Depth:	924.057		ft		

Master Calibration, performed Mon Dec 02 14:34:40 2013:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.005	0.608	1.000	62.165	101.408	2.512
CAL	-0.025	0.960				
5'	-0.017	0.570	1.000	62.165	104.180	2.788
SUM						
S1	-0.003	0.664	0.000	100.000	159.930	-1.445
S2	-0.015	0.629	0.000	100.000	165.237	1.335
S3	-0.015	0.589	0.000	100.000	165.502	2.459
S4	-0.018	0.566	0.000	100.000	171.320	3.112
S5	-0.016	0.604	0.000	100.000	161.524	2.518
S6	-0.017	0.658	0.000	100.000	147.998	2.585
S7	-0.010	0.682	0.000	100.000	144.607	1.435
S8	-0.014	0.633	0.000	100.000	154.674	2.145

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	-0.025	0.960	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)
				1.00	1.44	10.00
				2.88	2.75	20.00
WVFS3FT	11.84		RBT-Probe (101225) Probe Radii Bond Tool with Digital Telemetry	8.75	2.75	90.00
WVFCAL	11.84					
WVFS1	11.84					
WVFS2	11.84					
WVFS3	11.84					
WVFS4	11.84					
WVFS5	11.84					
WVFS6	11.84					
WVFS7	11.84					
WVFS8	11.84					
WVFS5FT	10.84					
				2.88	2.75	20.00
CCL	3.88					
TEMP	3.00					
GR	2.54		GR-Probe275 (110108-Dig) Probe 2 3/4" Logging Gamma Ray	4.78	2.75	57.00

