



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

Company		Noble Energy	
Well		Rohn State LD04-68-1HN	
Field		Wattenburg	
County		Weld	
State		Colorado	
Location:		API # : 05-123-37479	
SEC 4 TWP 9N RGE 58W		990' FNL & 675' FEL	
Permanent Datum		Ground Level	
Log Measured From		Elevation	
Drilling Measured From		4748	
Other Services		None	
Elevation		K.B. 4778	
		D.F. 4777	
		G.L. 4748	
Date		24-Sept-2013	
Run Number		1	
Depth Driller		14802'	
Depth Logger		6100'	
Bottom Logged Interval		6047'	
Top Log Interval		0'	
Open Hole Size		8.125	
Type Fluid		Fresh Water	
Density / Viscosity		8.33	
Max. Recorded Temp.		215	
Estimated Cement Top		540'	
Time Well Ready		11:30	
Time Logger on Bottom		12:30	
Equipment Number		13033	
Location		Brighton	
Recorded By		R. Grissom	
Witnessed By		B. Mansfield	
Borehole Record		Tubing Record	
Run Number		Bit	
One		26"	
Two		13.75"	
Three		8.75"	
Four		6.125"	
Casing Record		Size	
Surface String		9.625"	
Prot. String		7"	
Production String		4.5"	
Liner		Short Joint	

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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 30' KB.

Main Pass and Repeat Pass logged with zero pressure on surface

Estimated top of cement 540'.

Unable to fall below liner top.

Thank you for using Allied Wireline



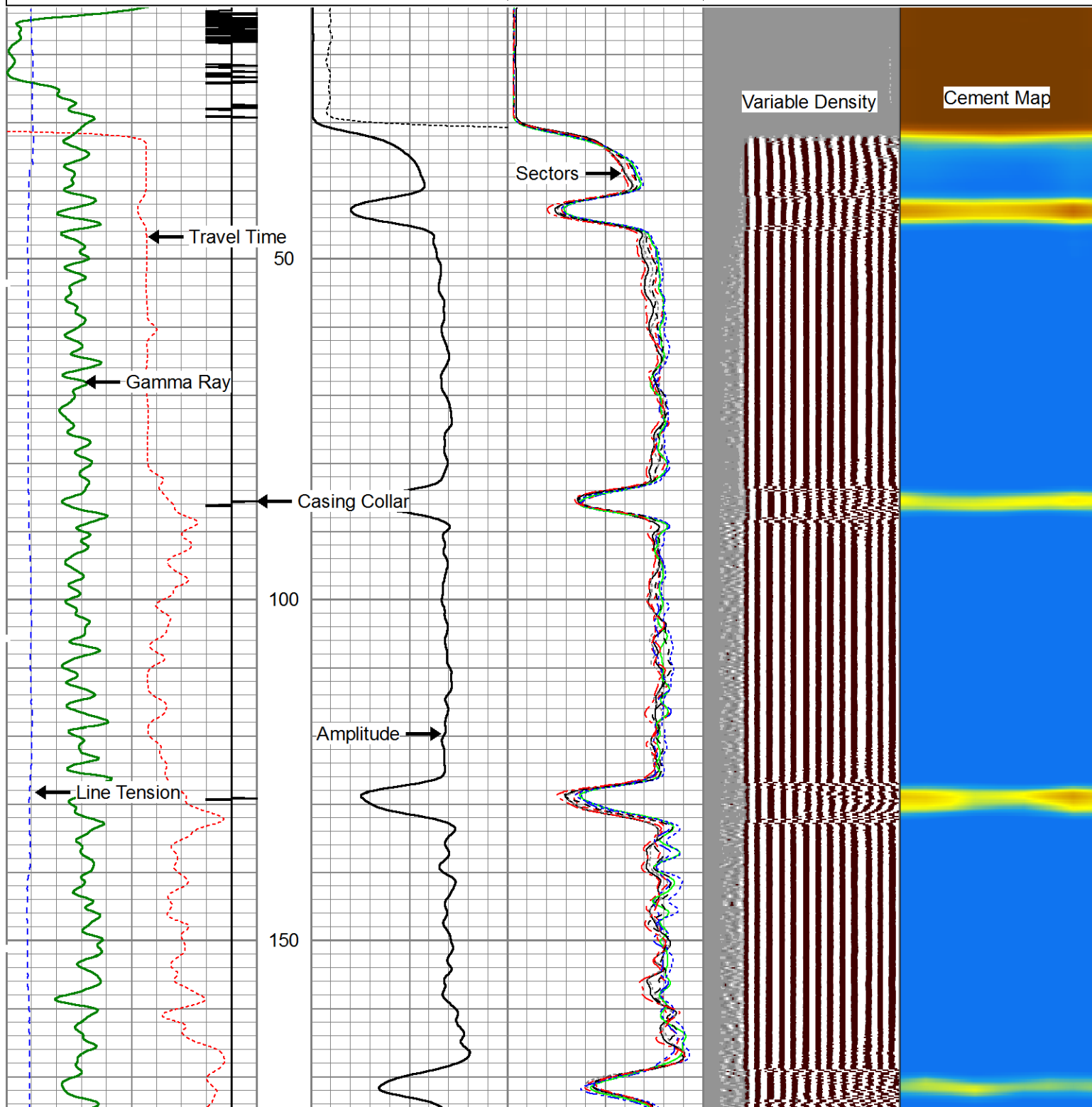
Main Pass (0 PSI)

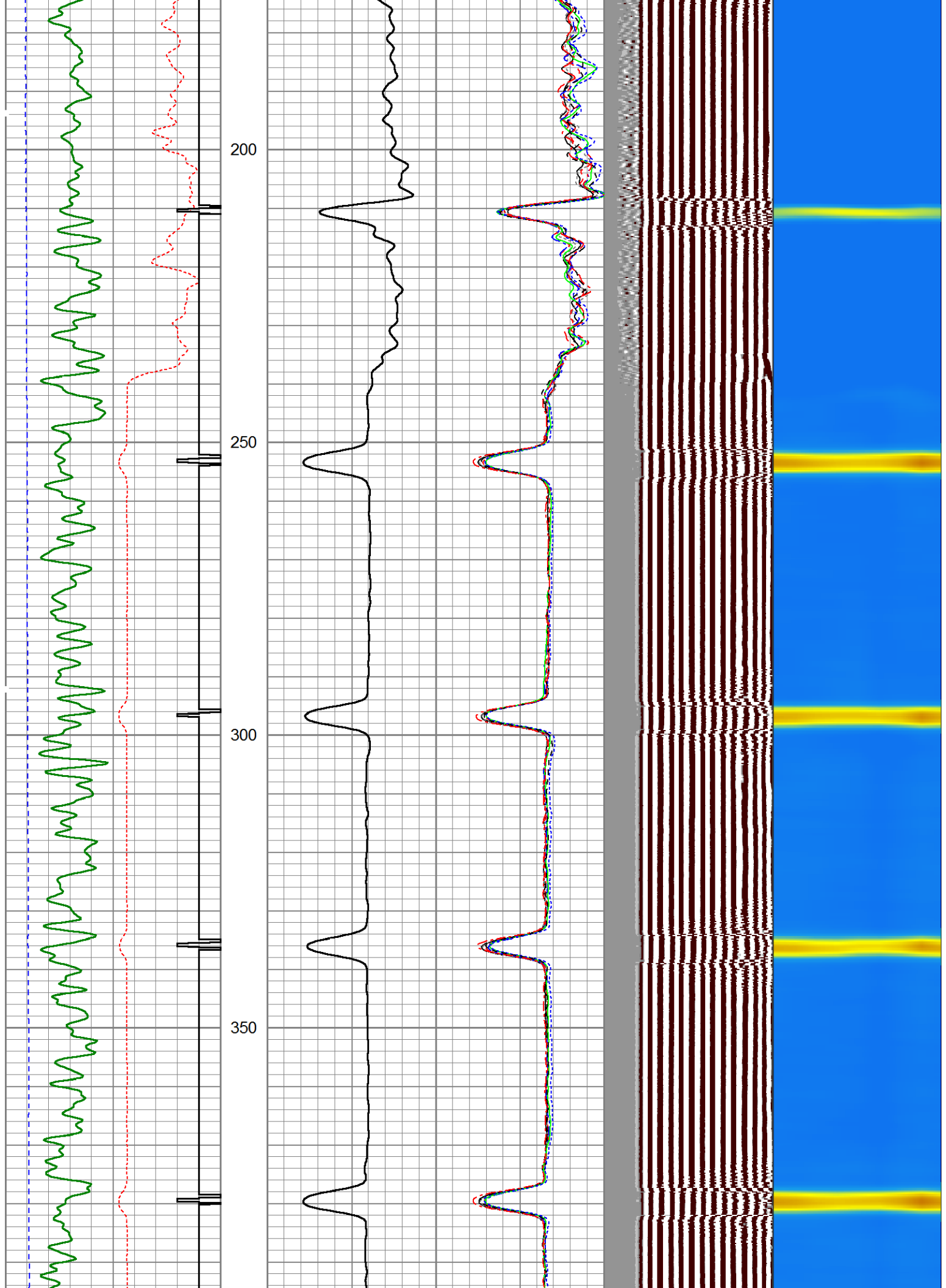
Database File: c:\warrior\data\cased hole\noble\noble_rohn_state_id04_68-1hn\noble_rohn_state_id04_68-1hn.db
Dataset Pathname: pass7.2
Presentation Format: scbl03
Dataset Creation: Tue Sep 24 13:50:26 2013 by Calc 0
Charted by: Depth in Feet scaled 1:240

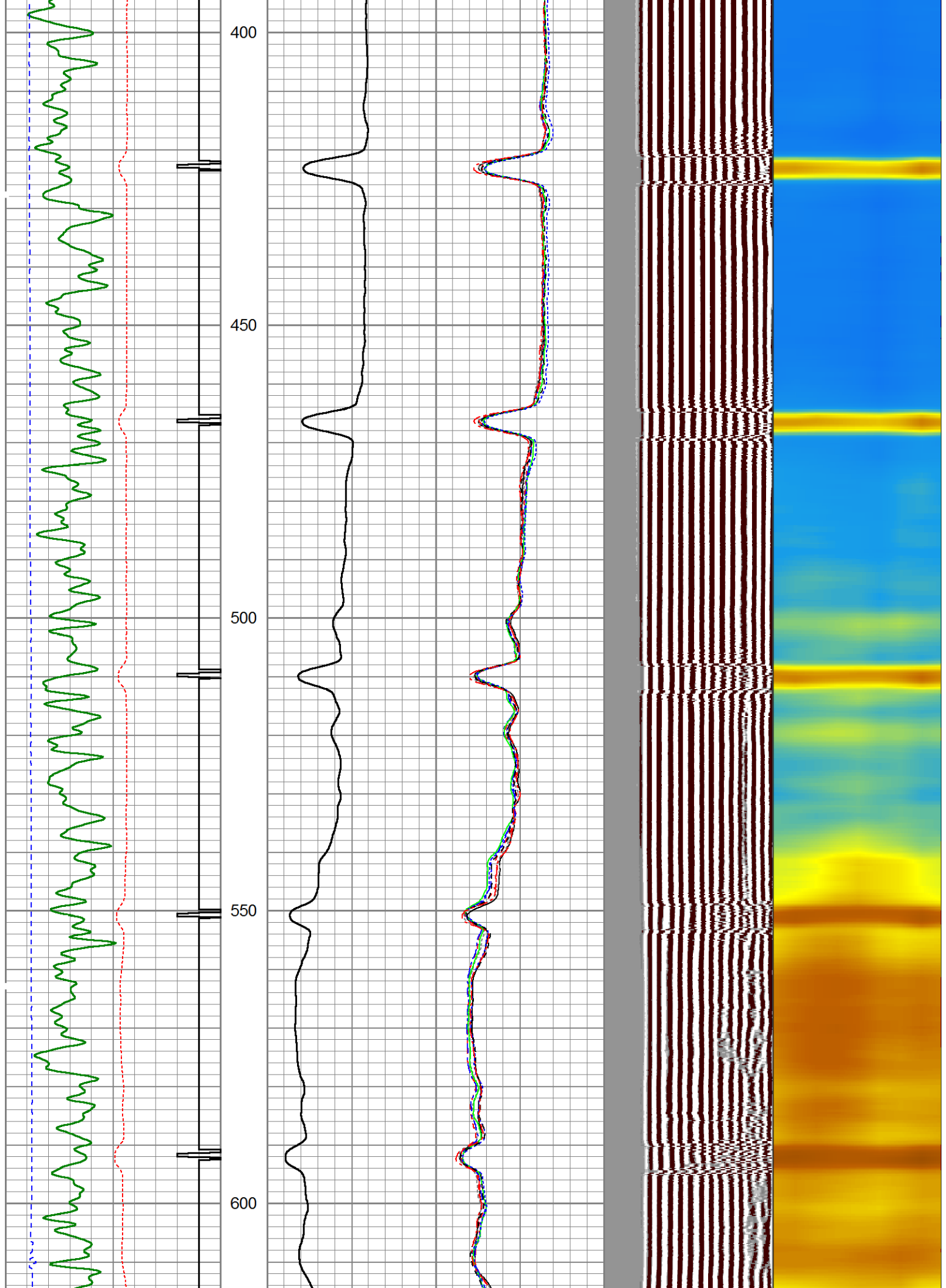
400 Travel Time (usec) 200
9 Casing Collar -1
0 Gamma Ray (GAPI) 150
0 Line Tension (lb) 2000

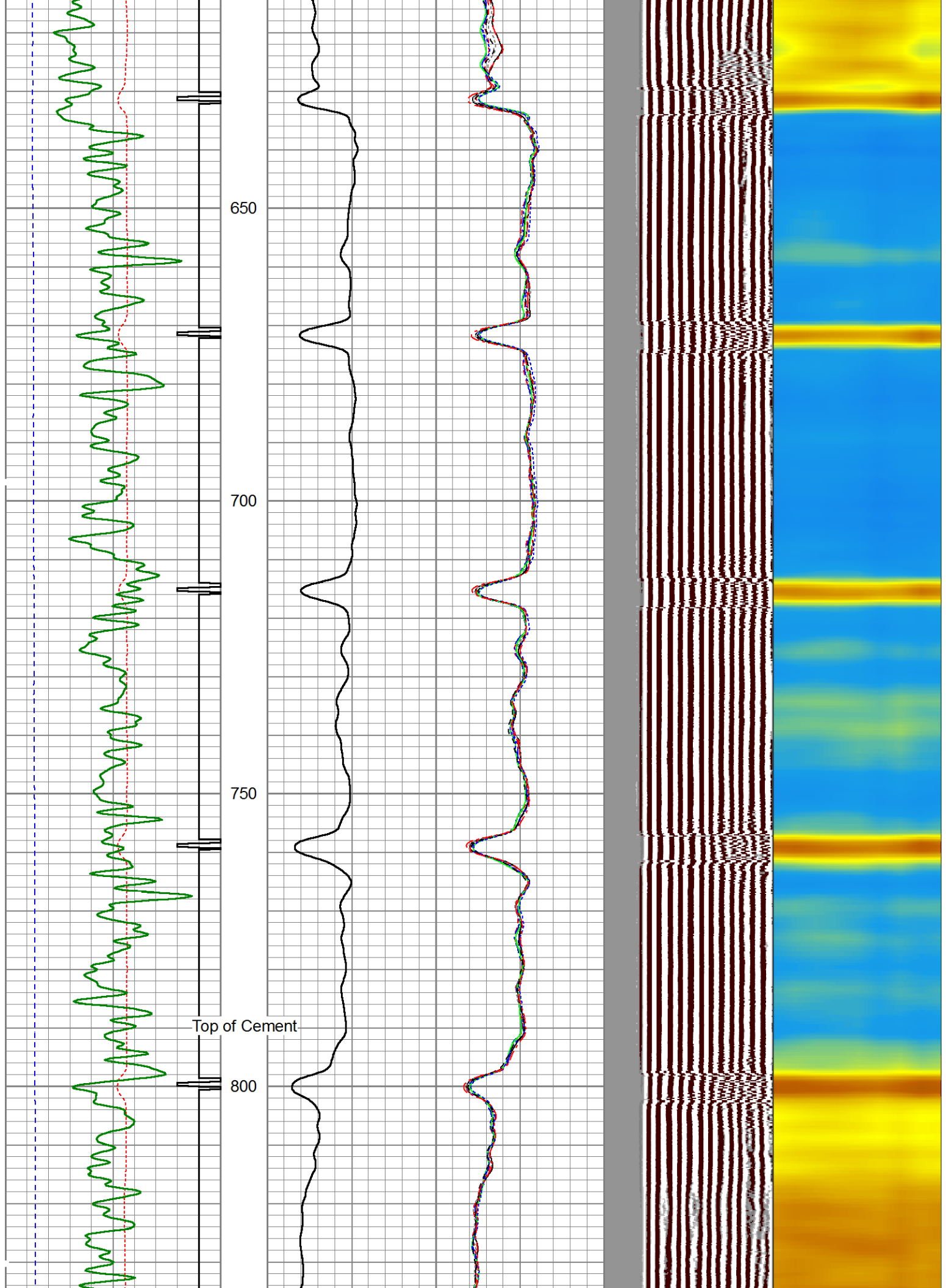
0	Amplitude (mV)100	-5	AMPS1	150	
Amplified Amplitude		-5	AMPS2	150	
0	(mV)	10	-5	AMPS3	150
		-5	AMPS4	150	
		-5	AMPS5	150	
		-5	AMPS6	150	
		-5	AMPS7	150	
		-5	AMPS8	150	

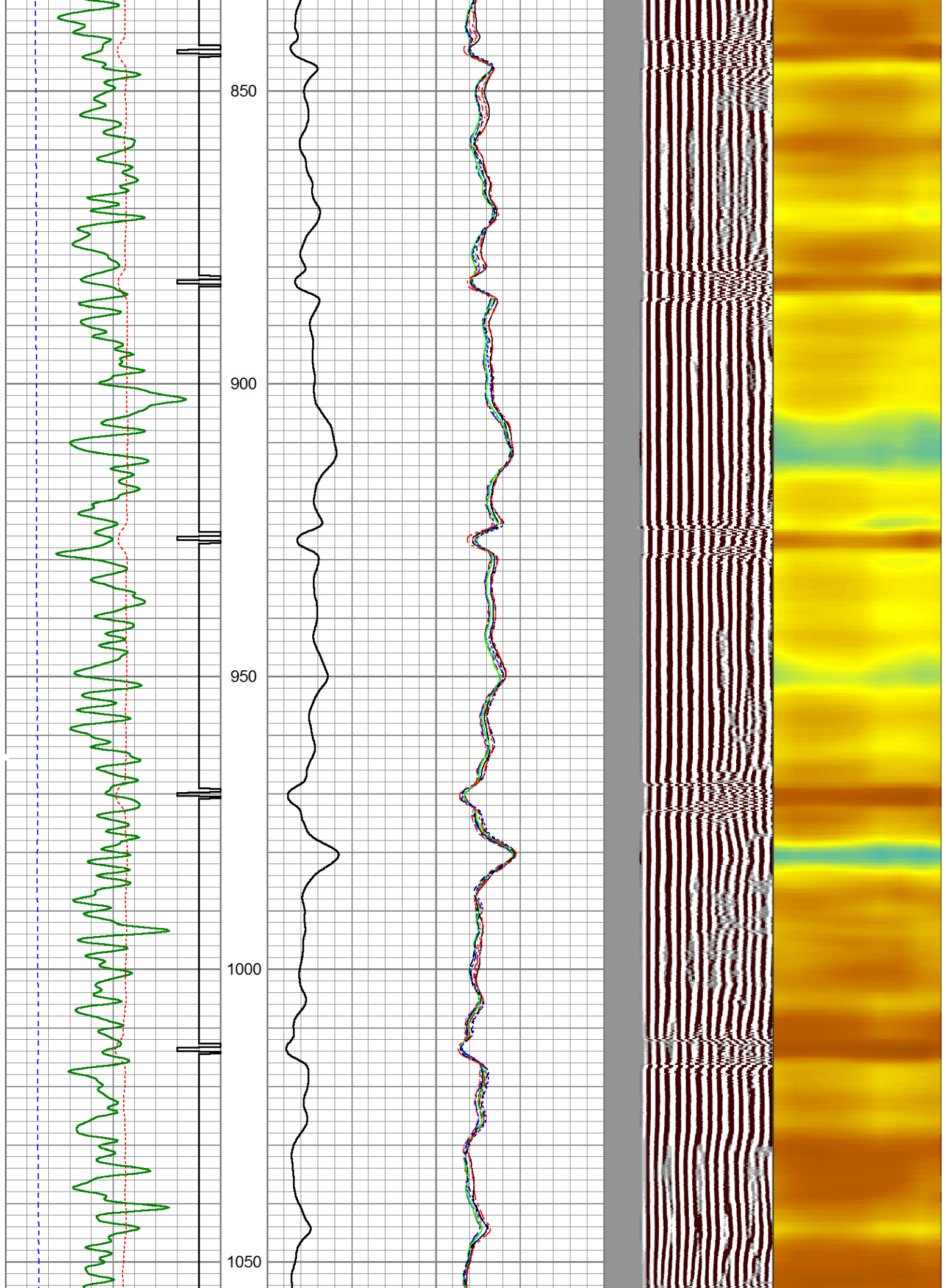
Variable Density 1 Cement Map 8
200 1200 0 100

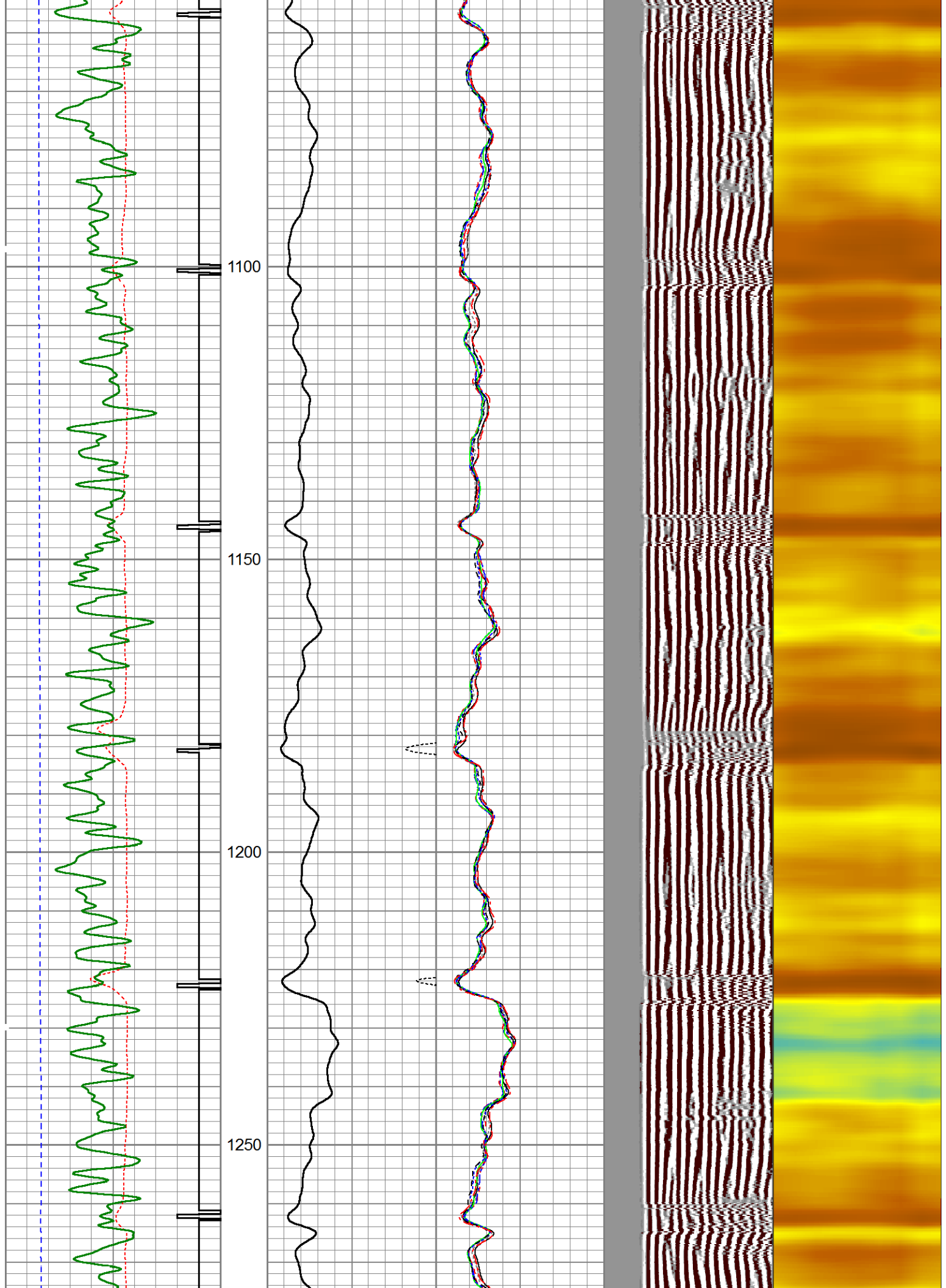


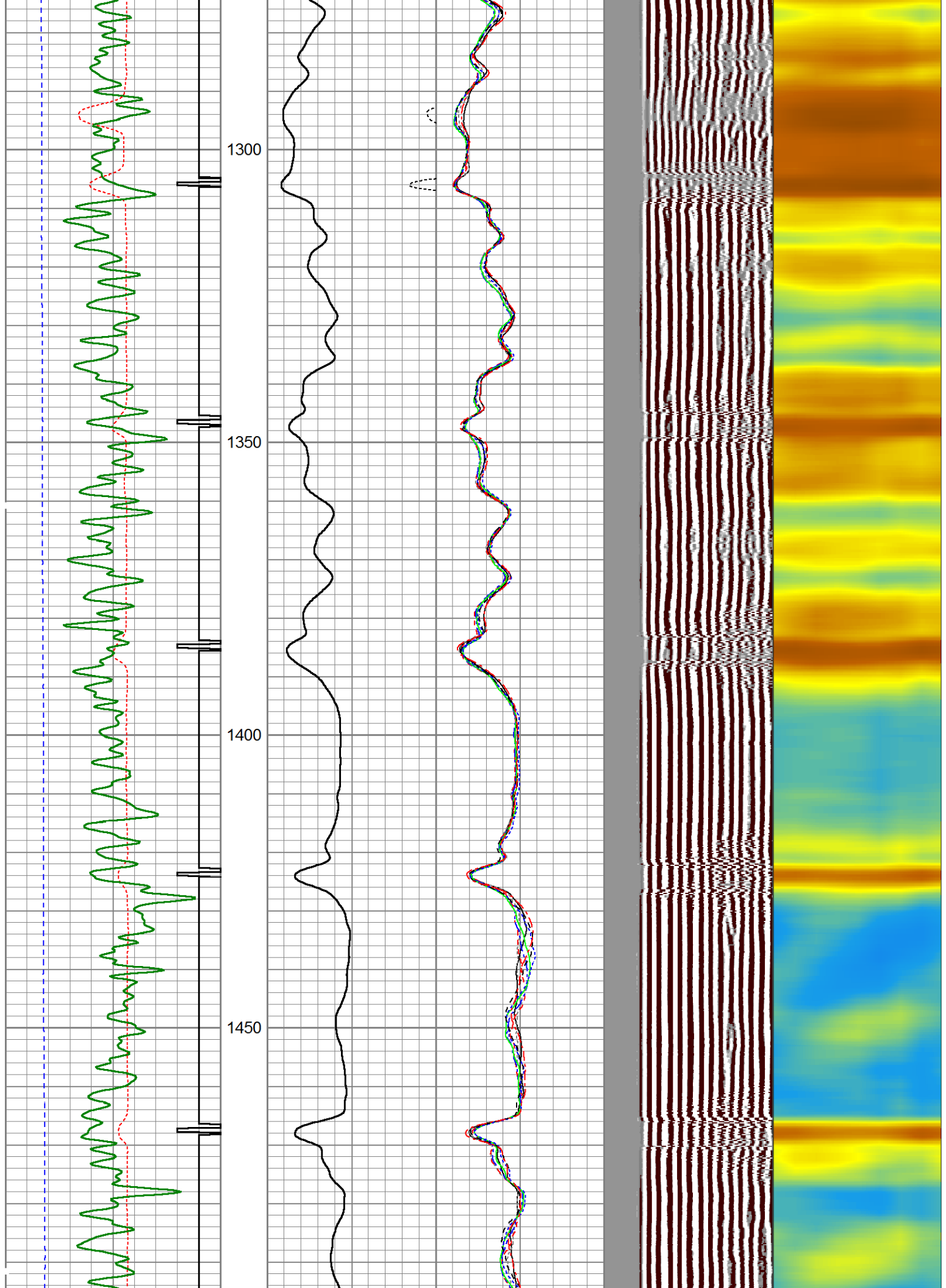


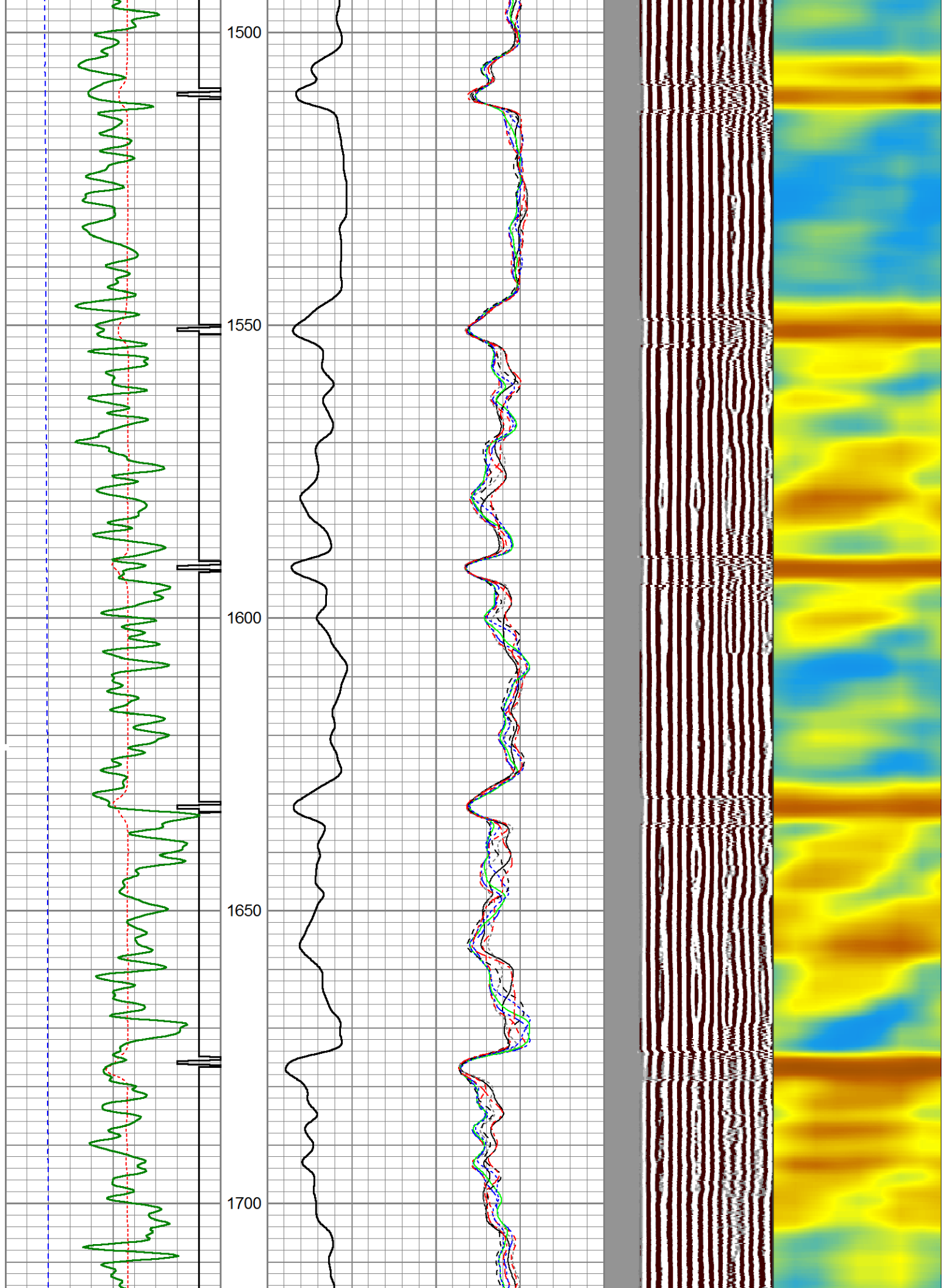


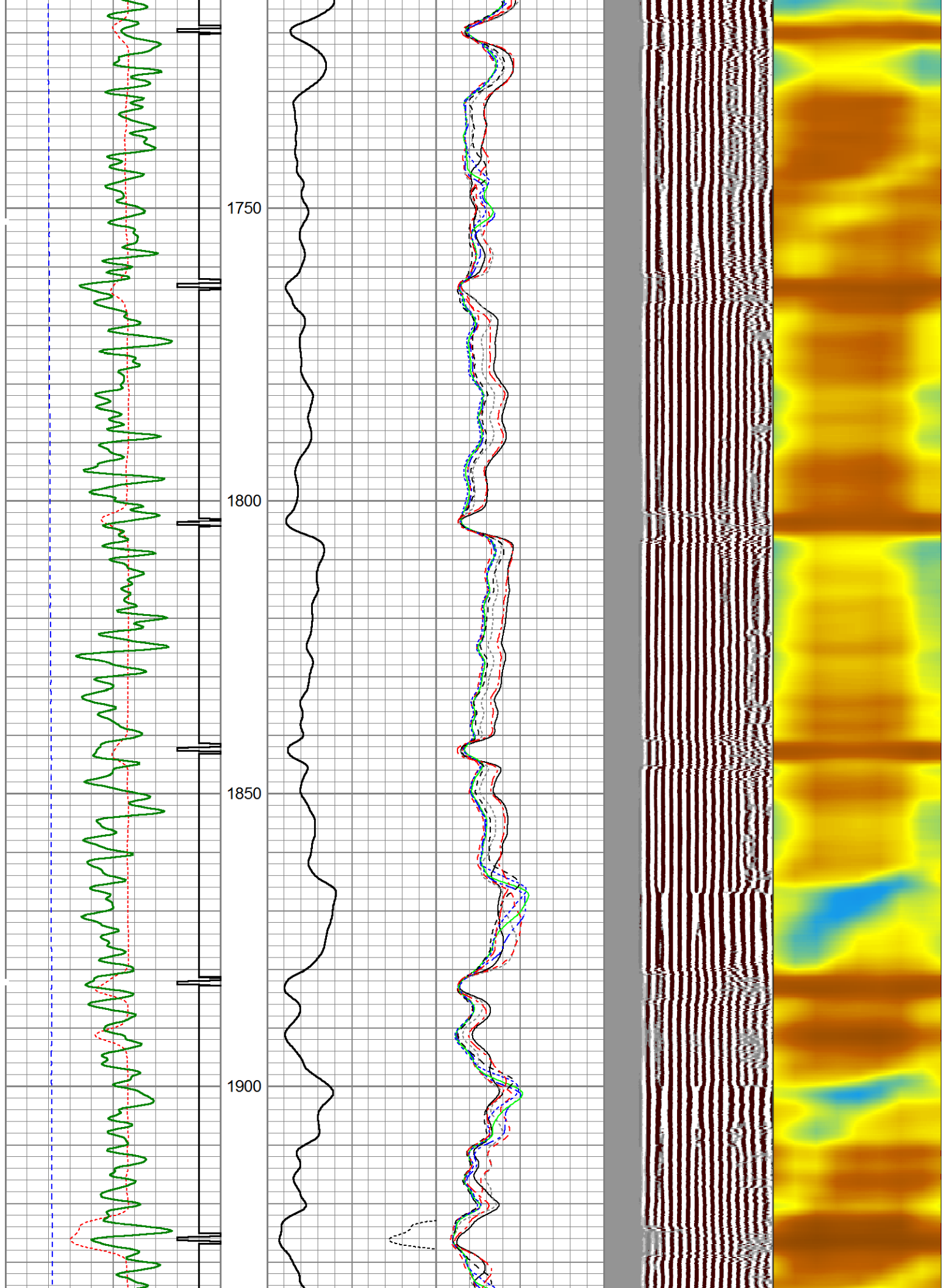


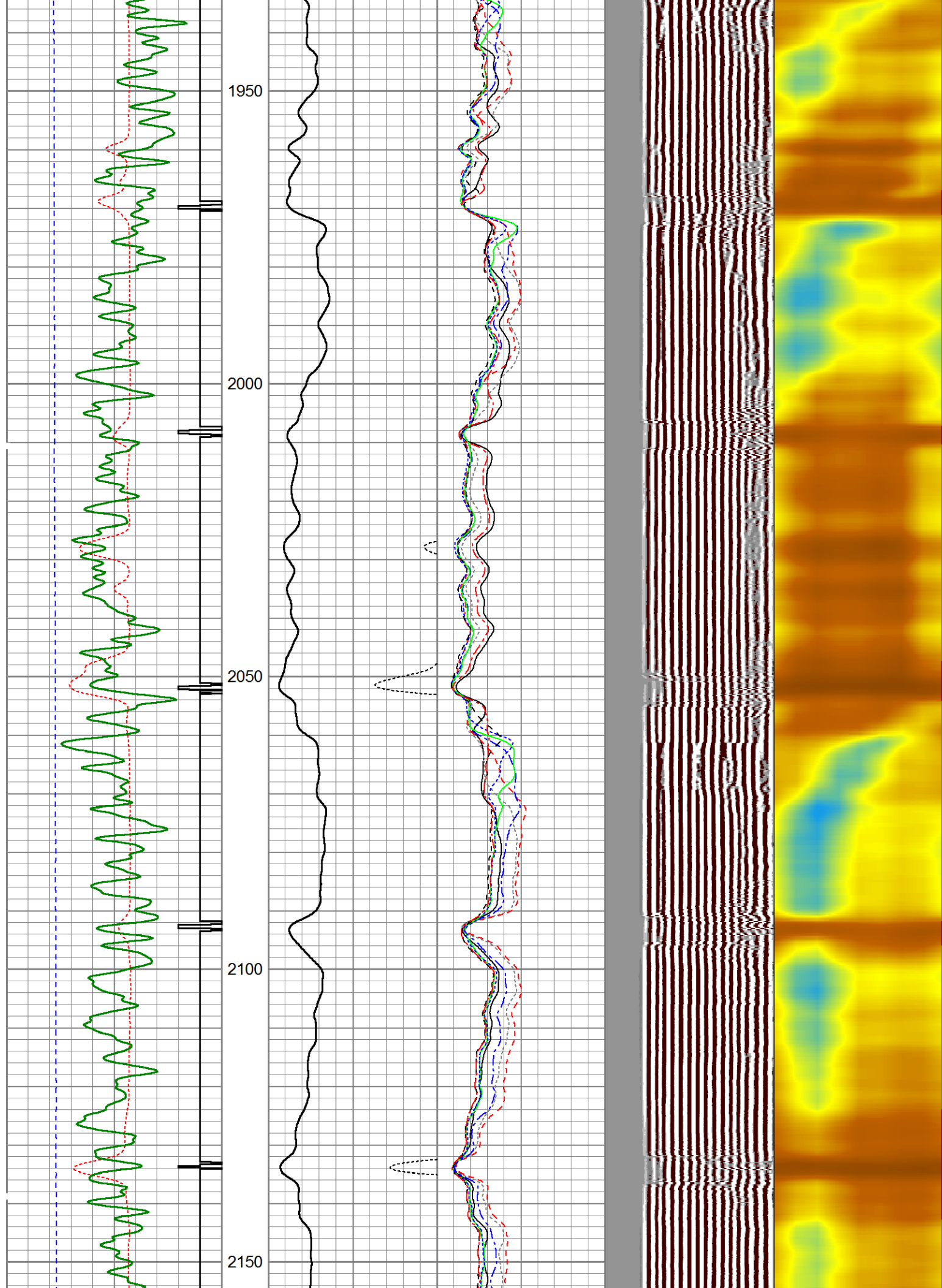


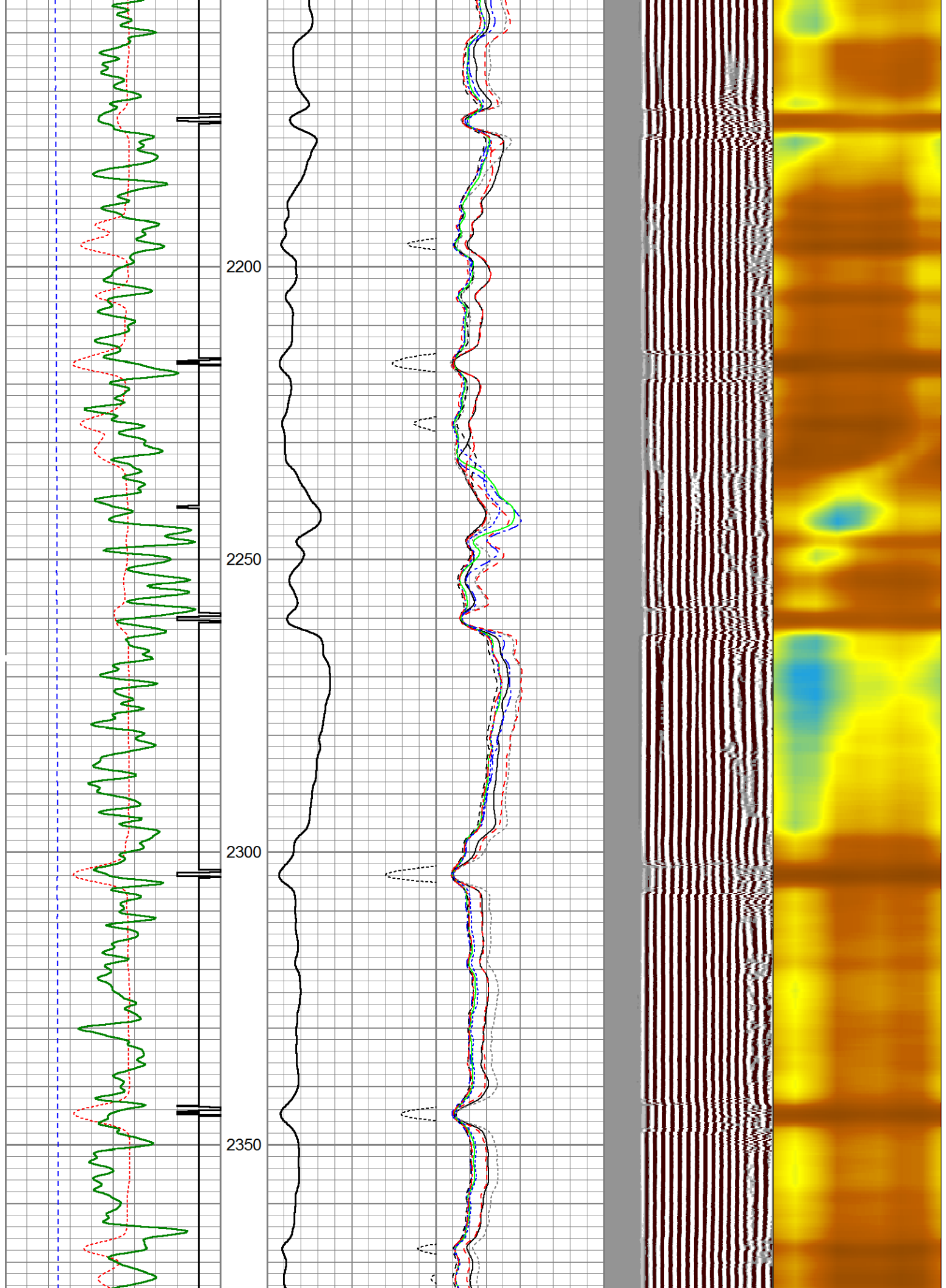


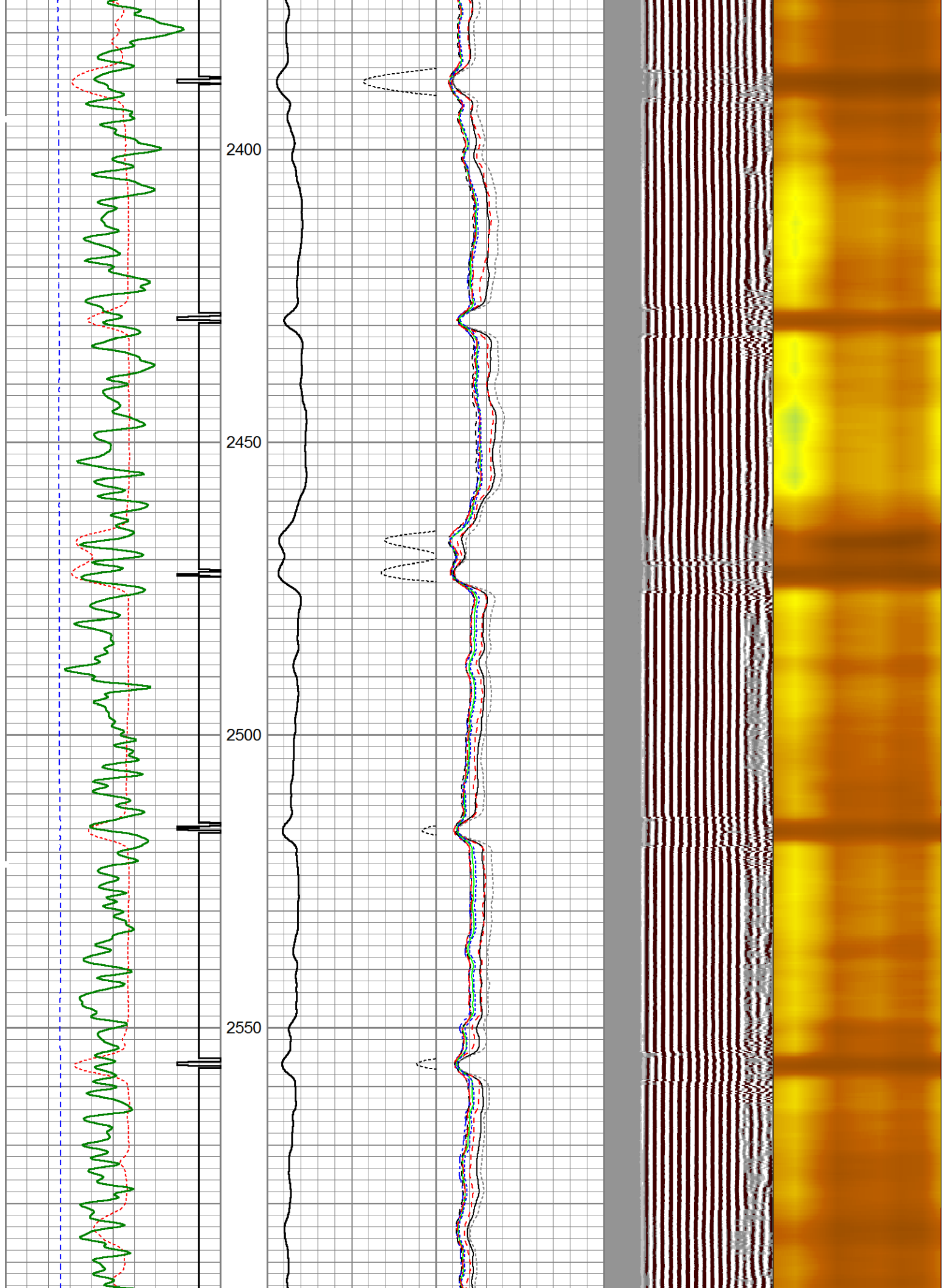


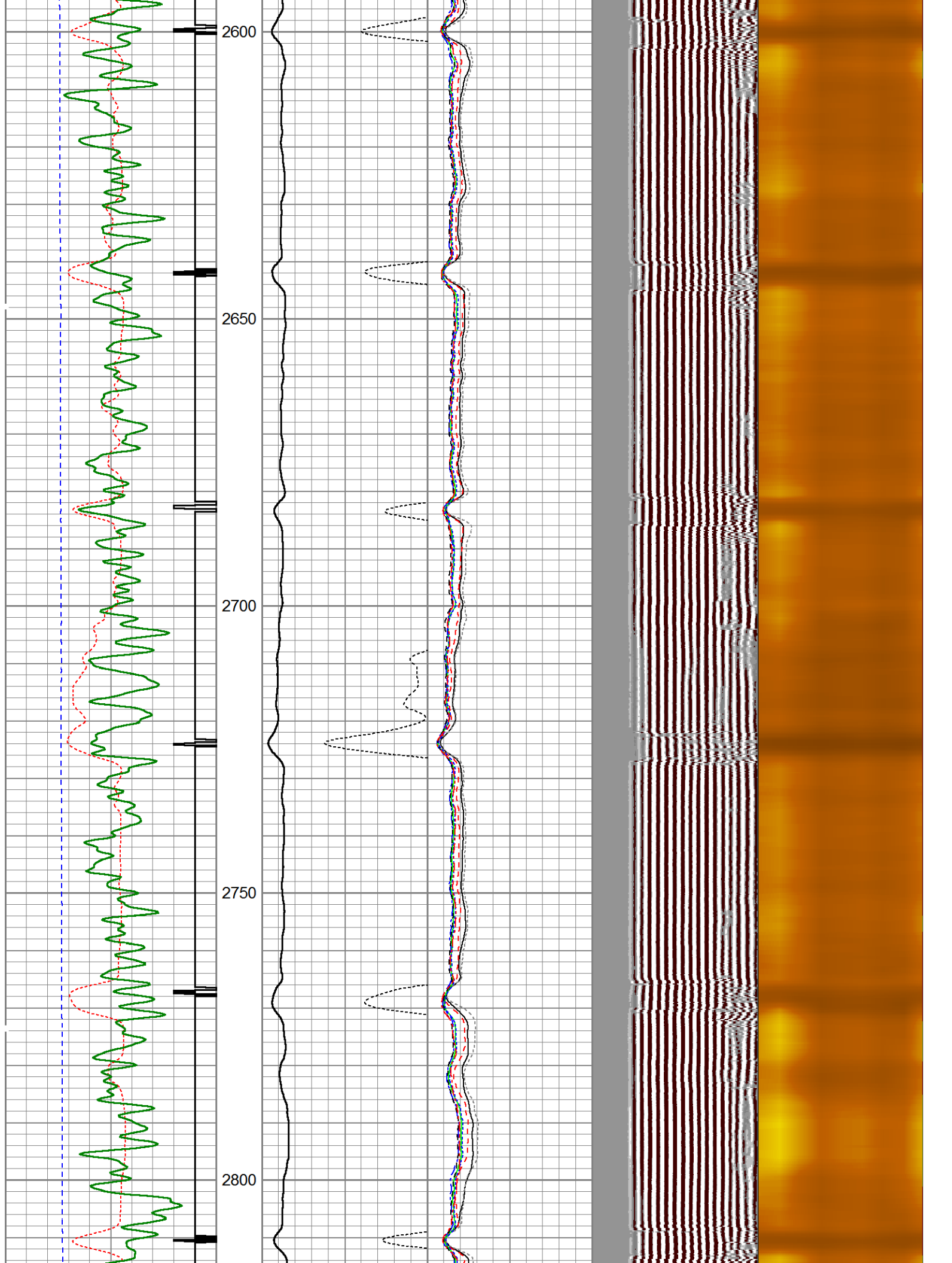


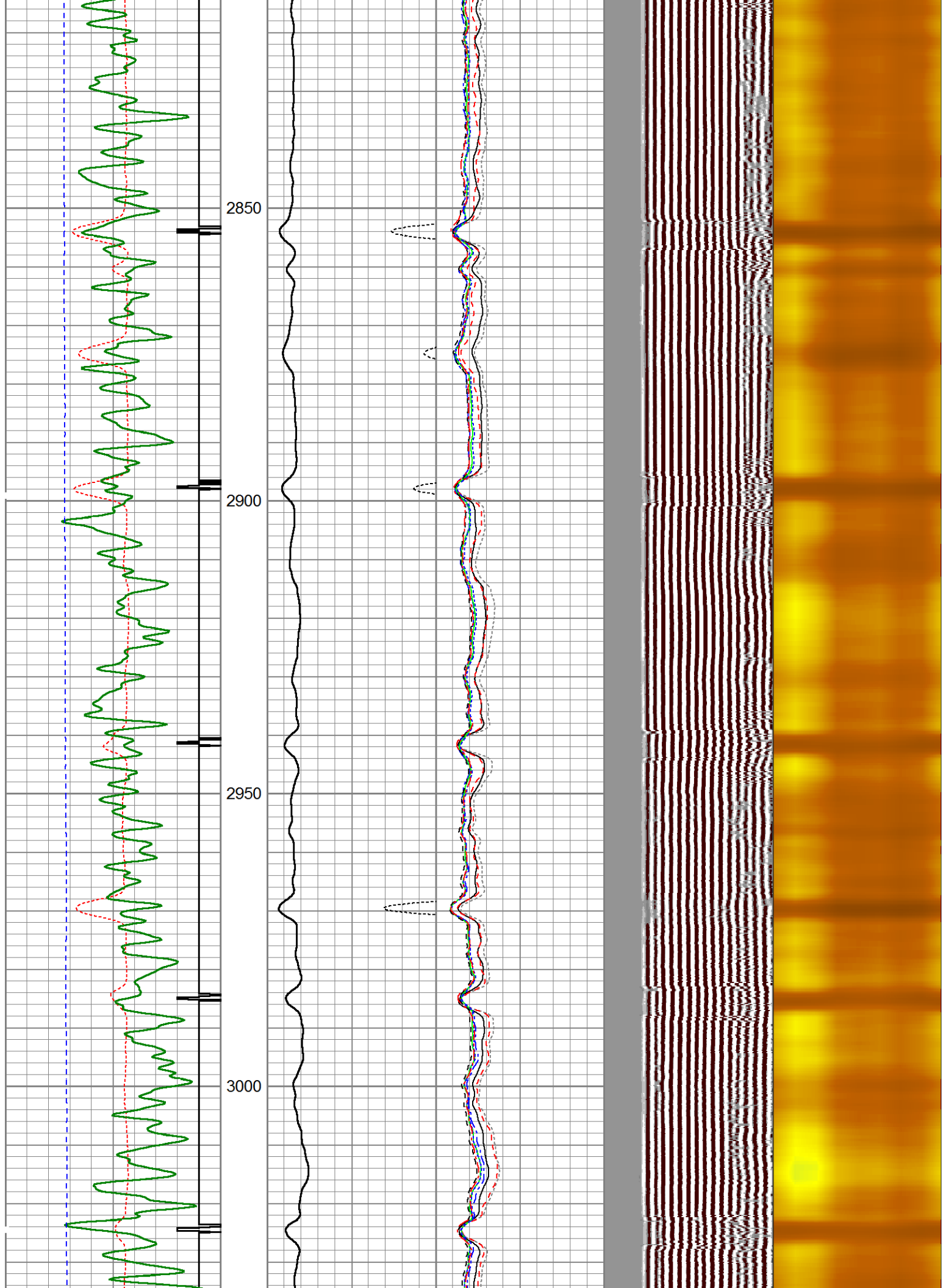


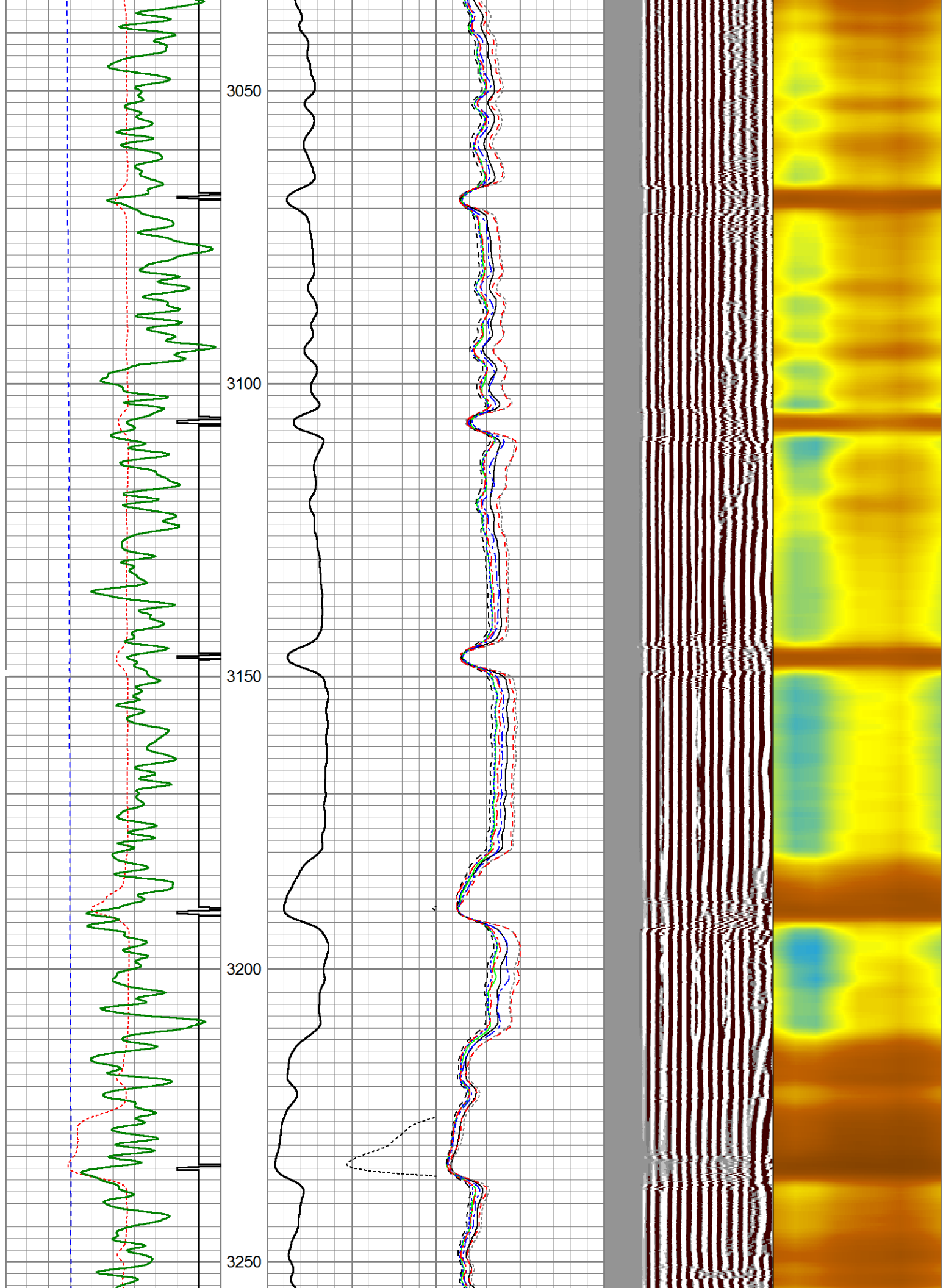


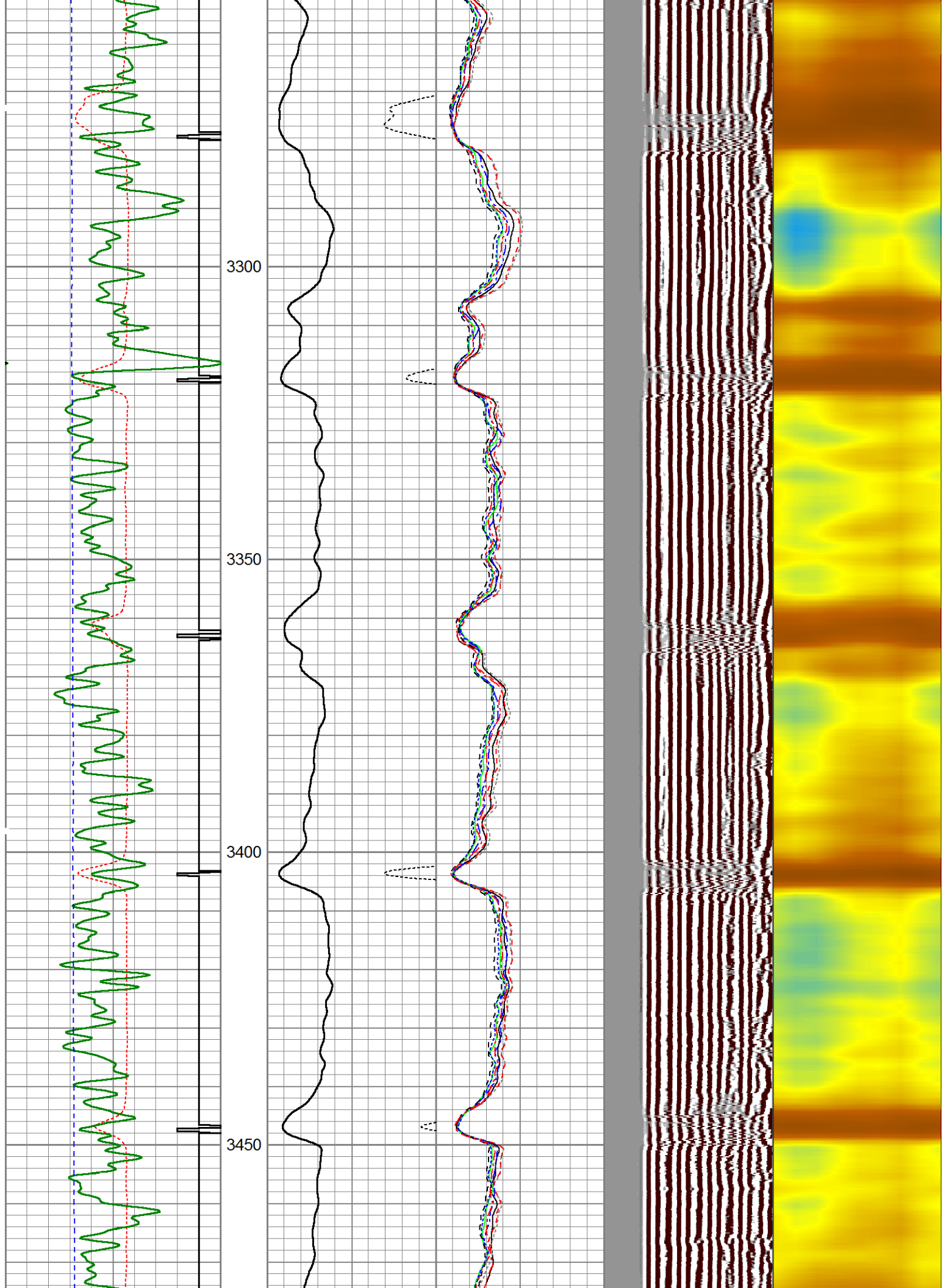


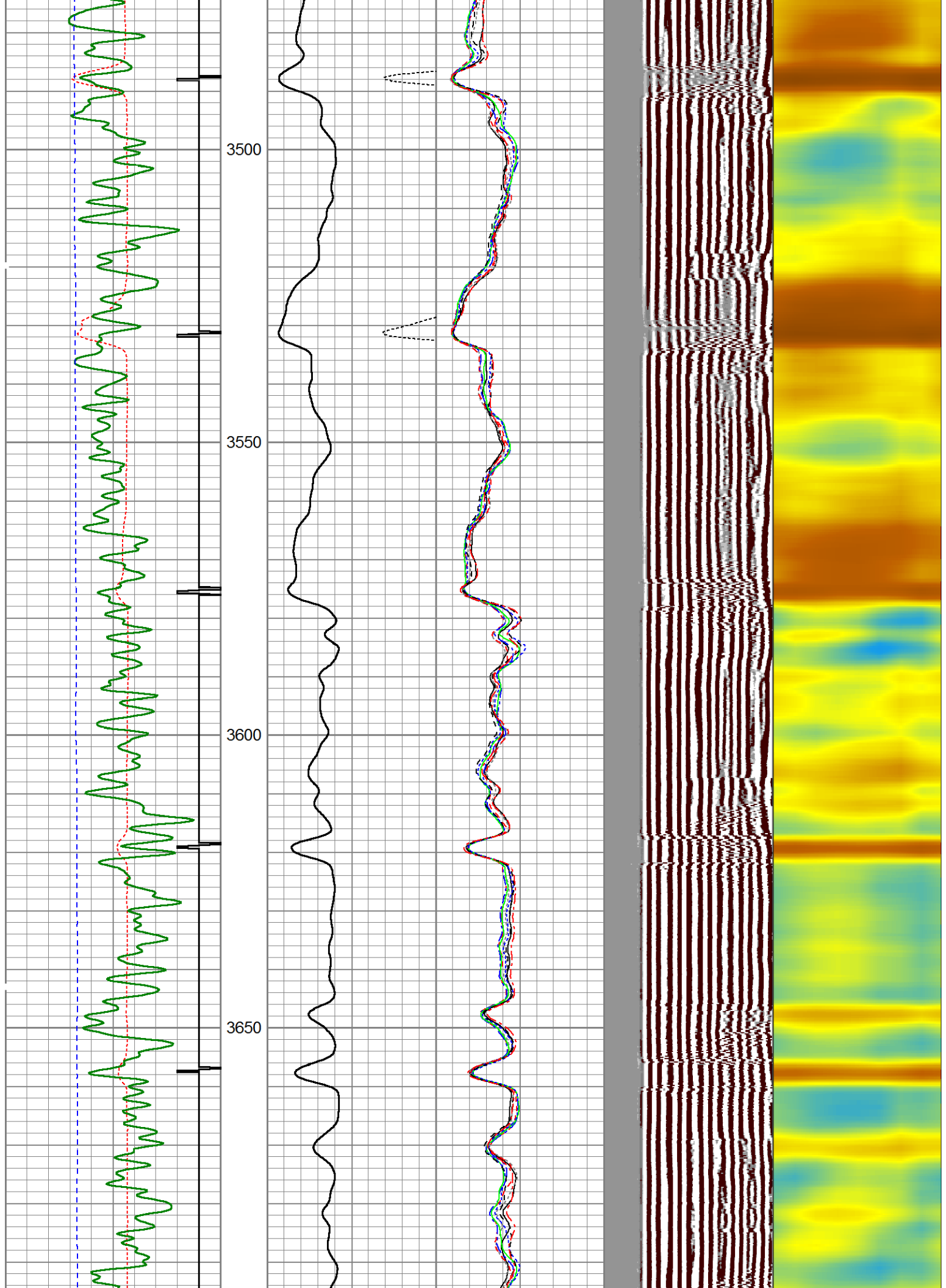


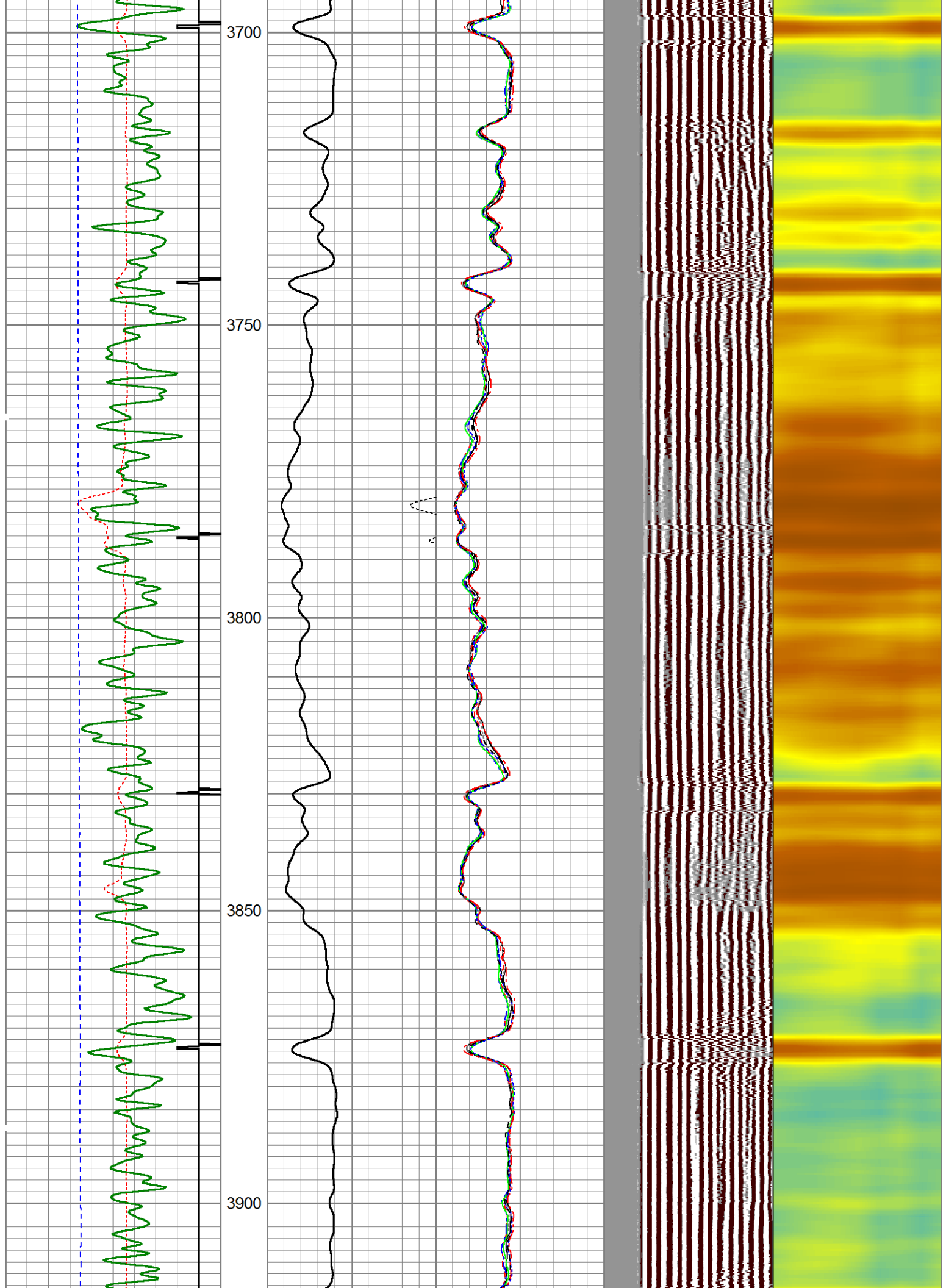


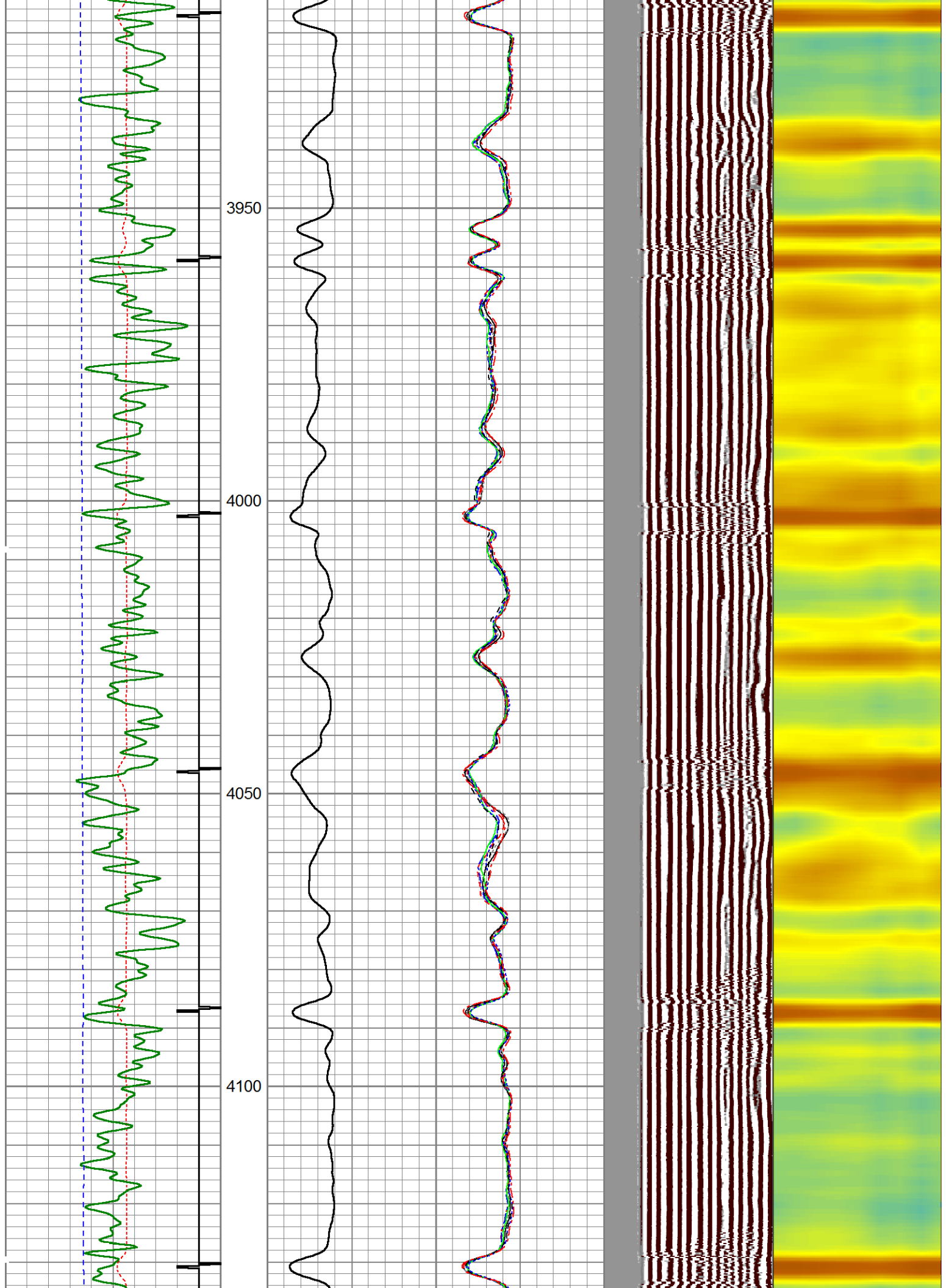


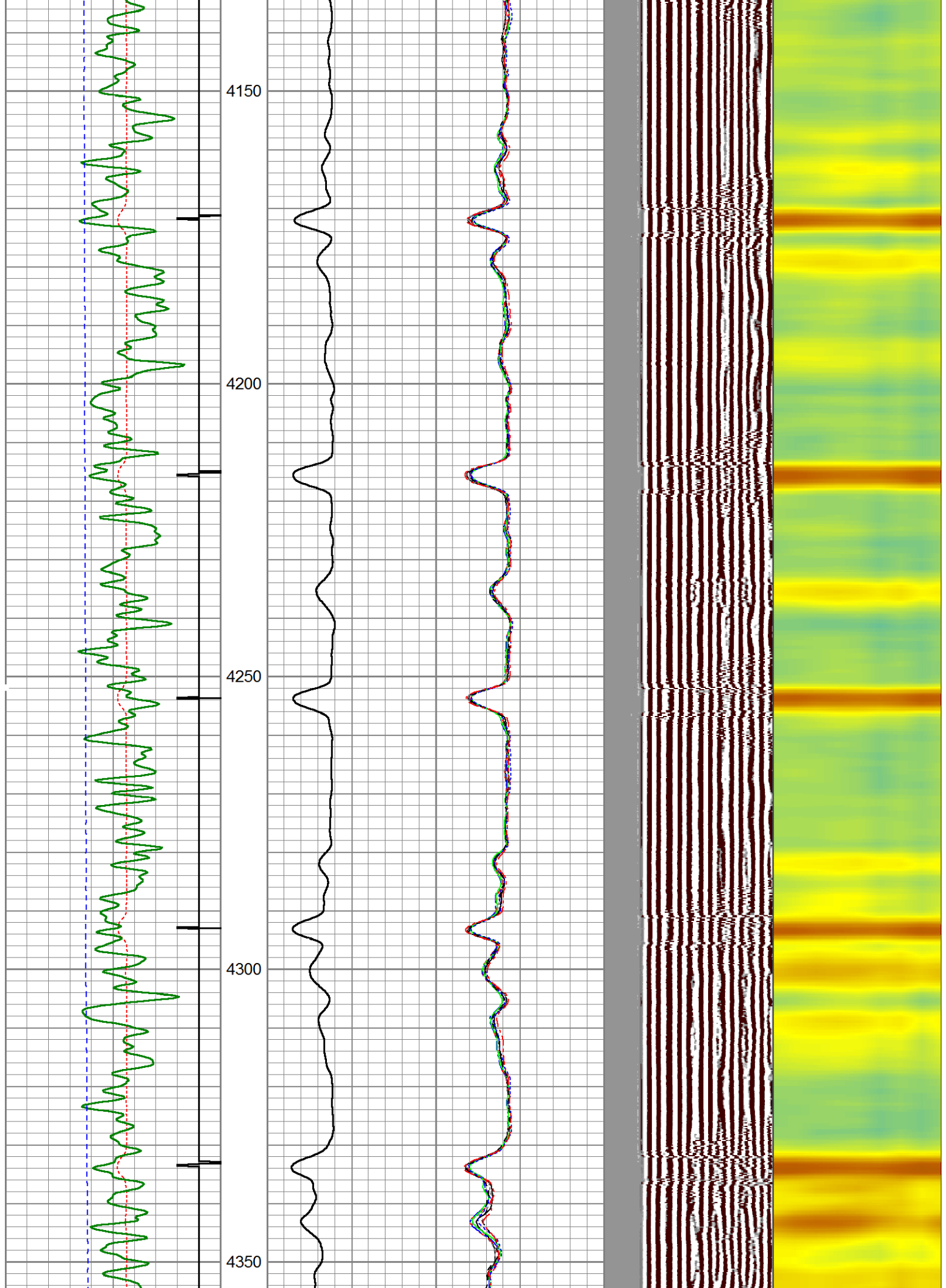


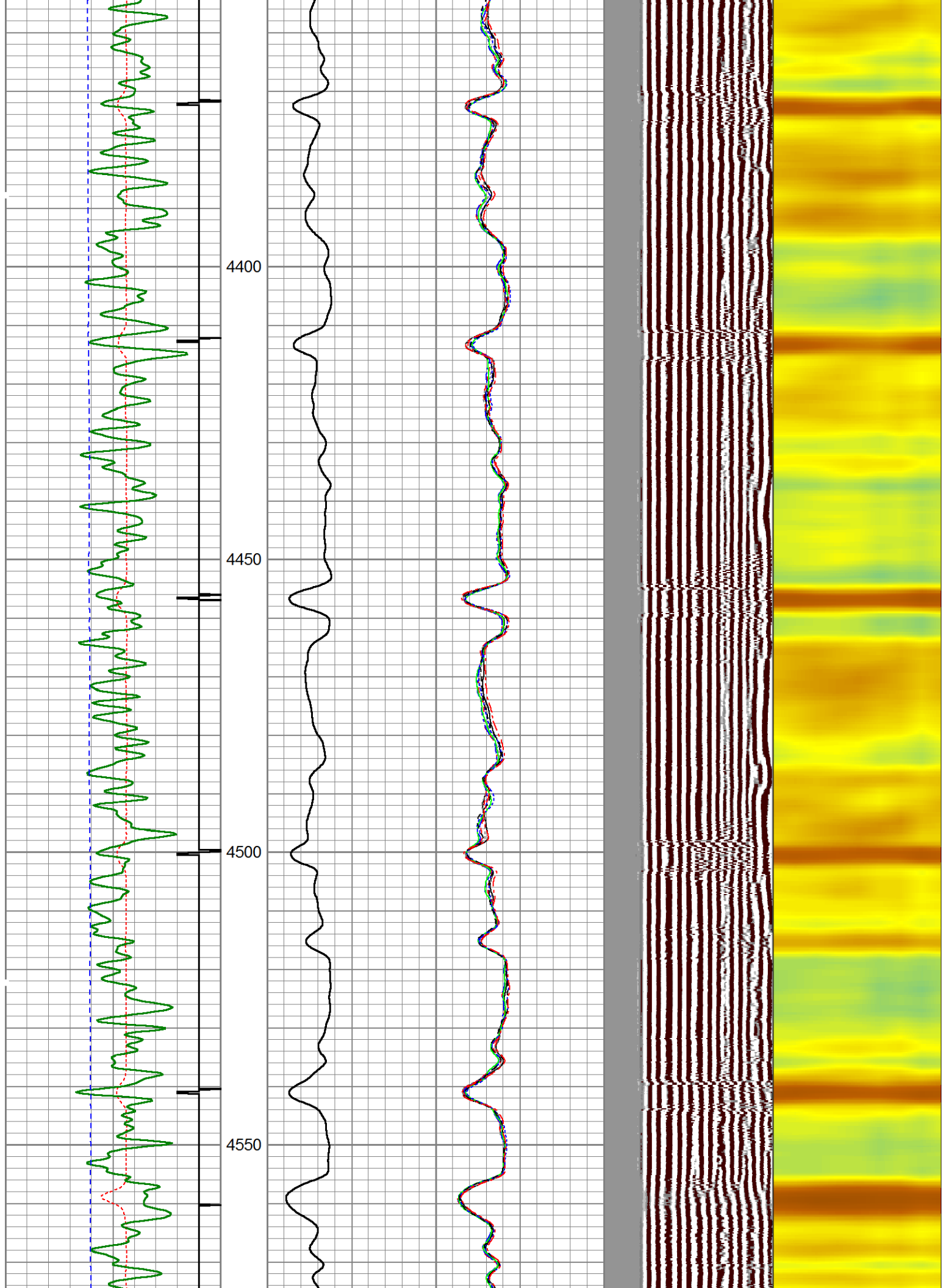


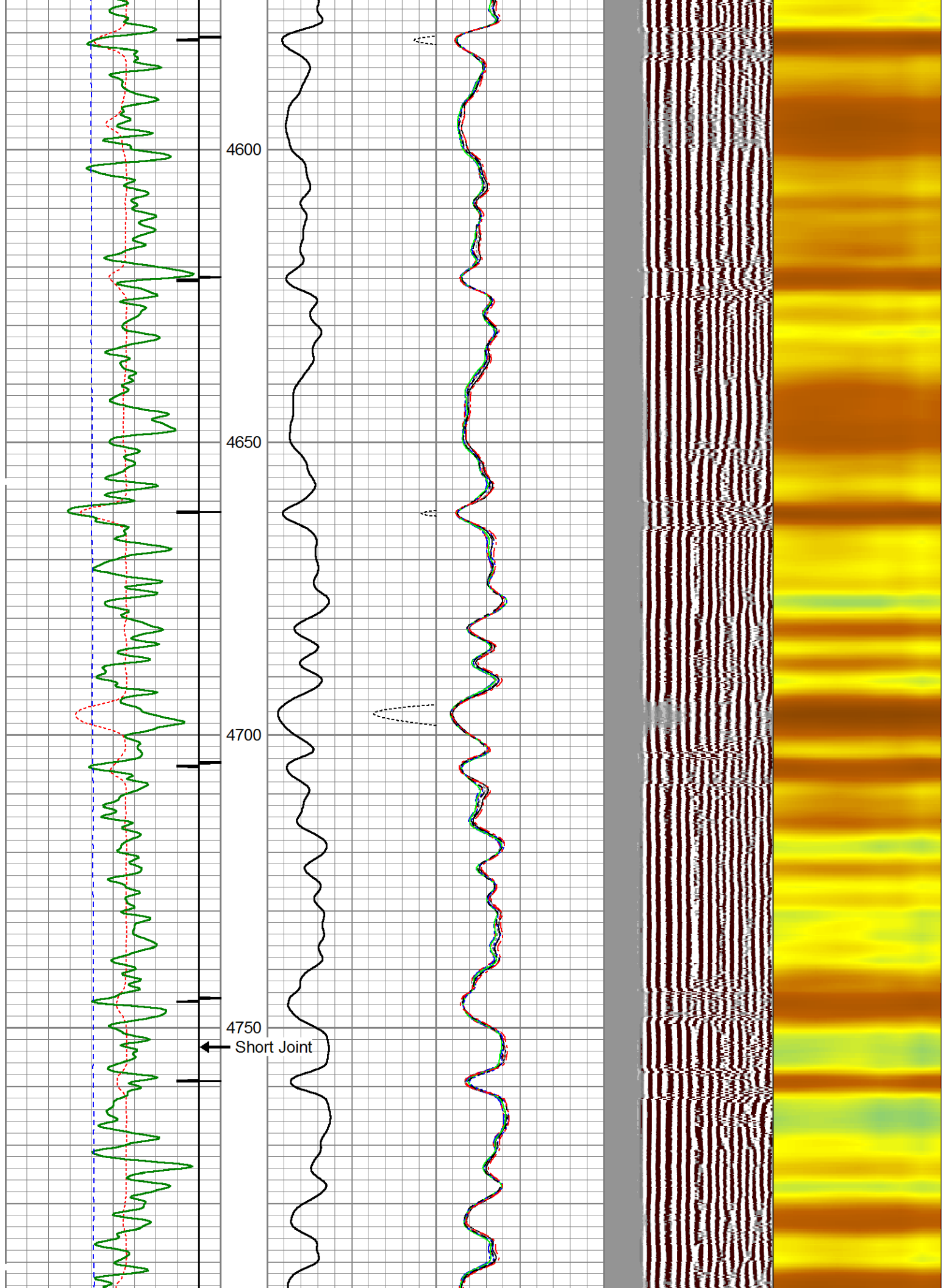


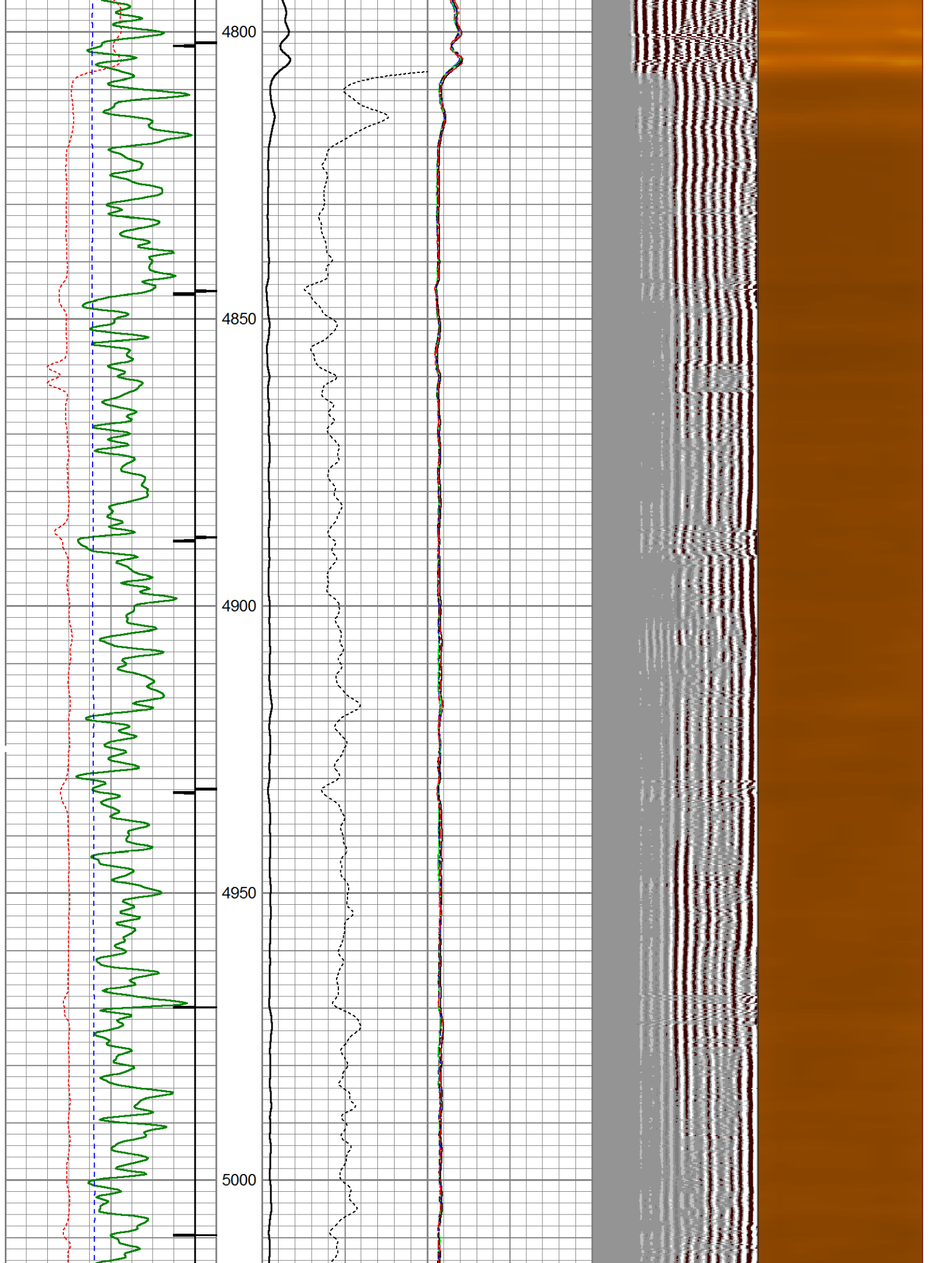


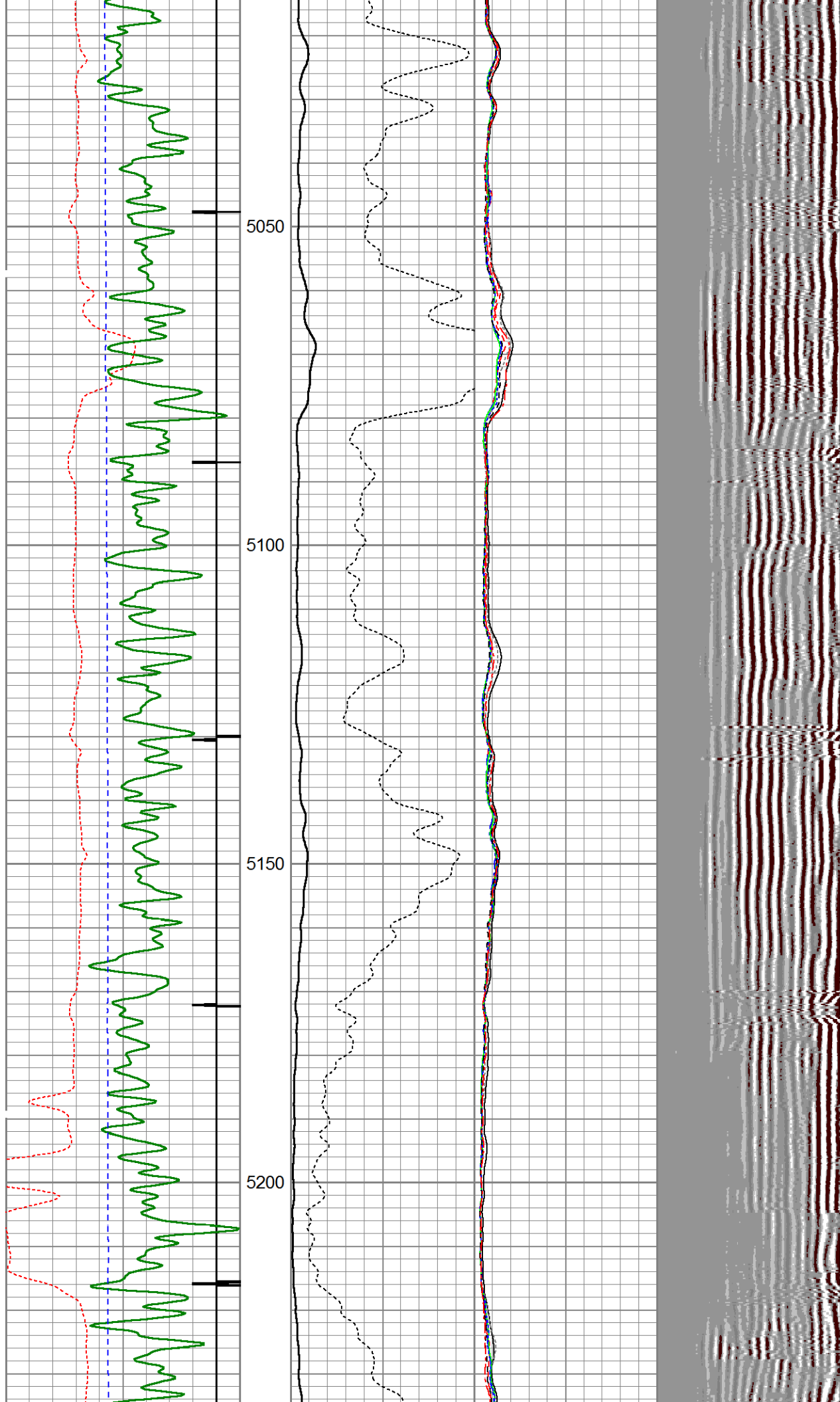


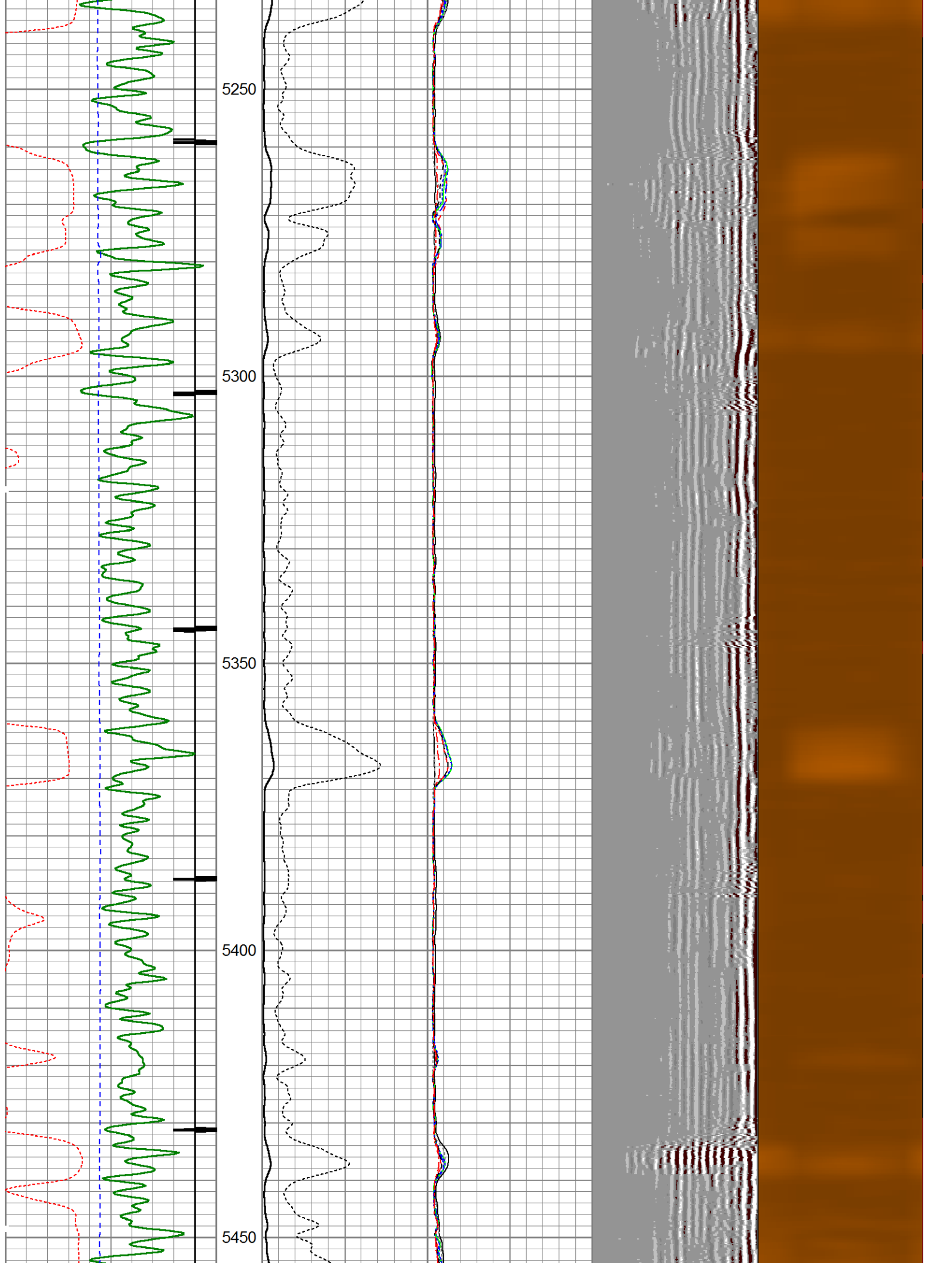


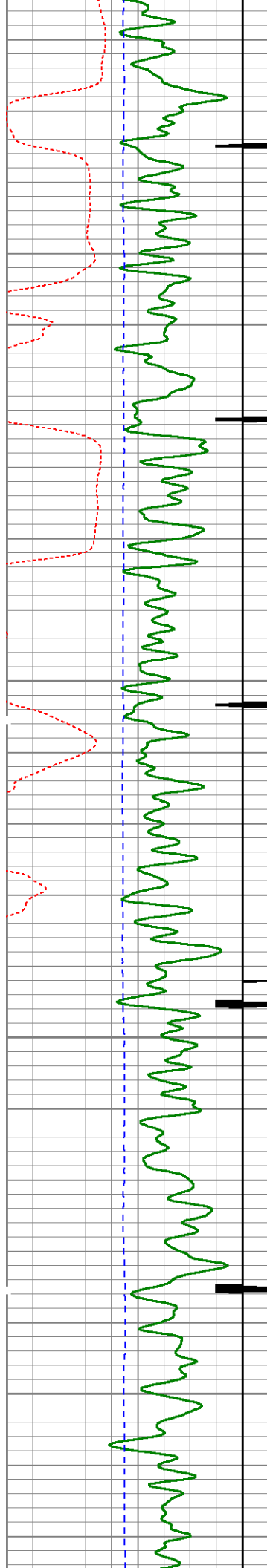










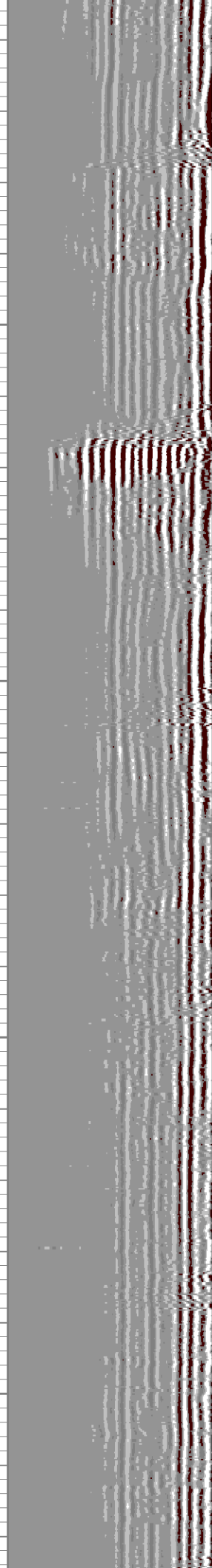
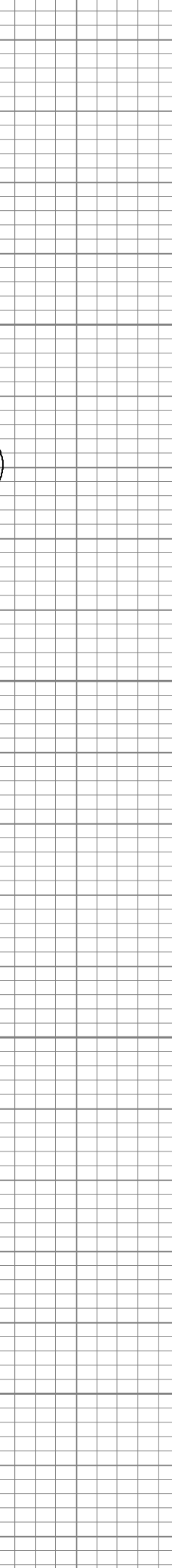
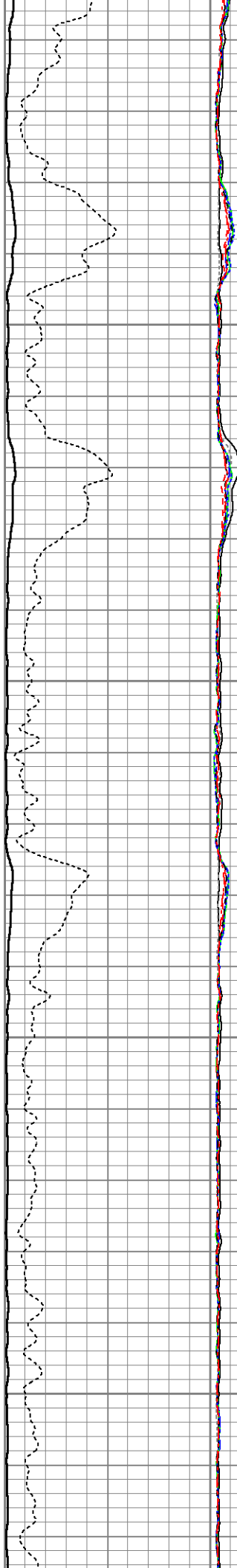


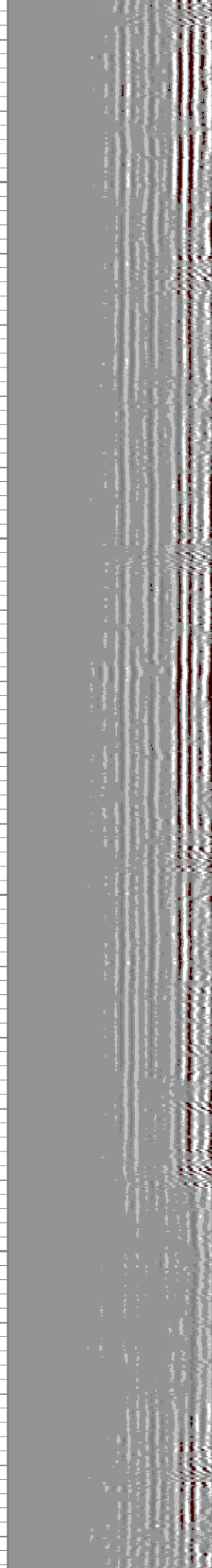
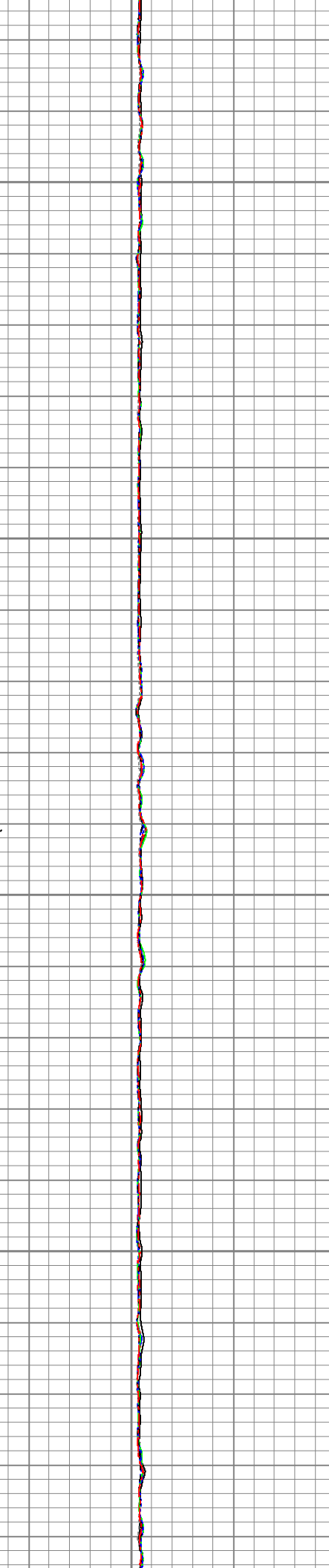
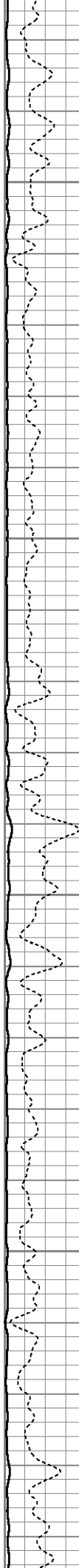
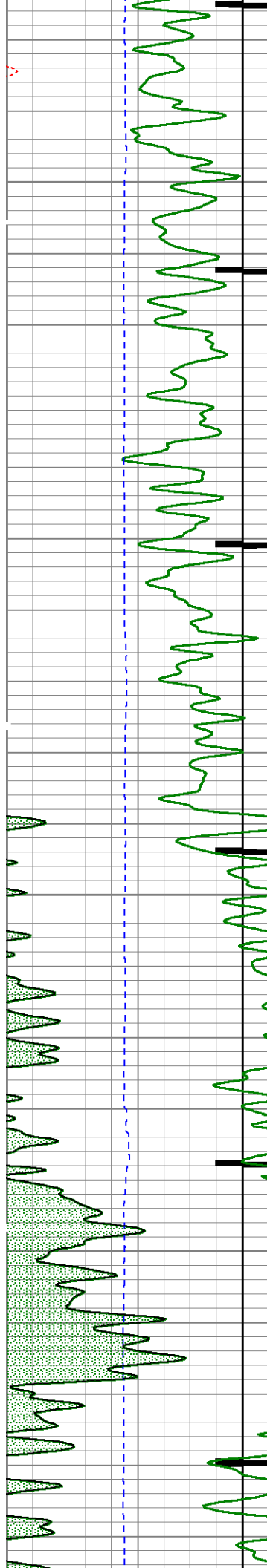
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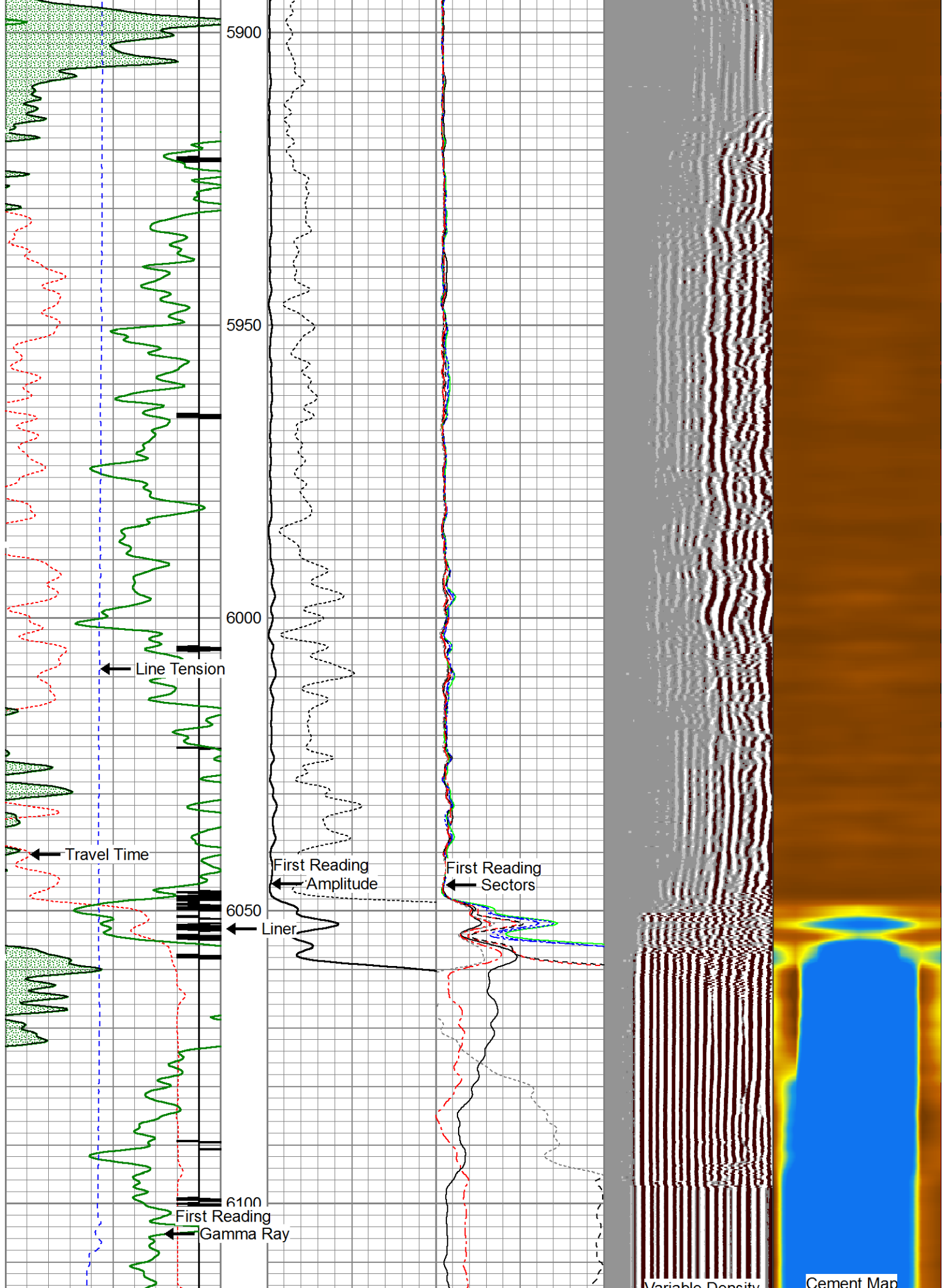
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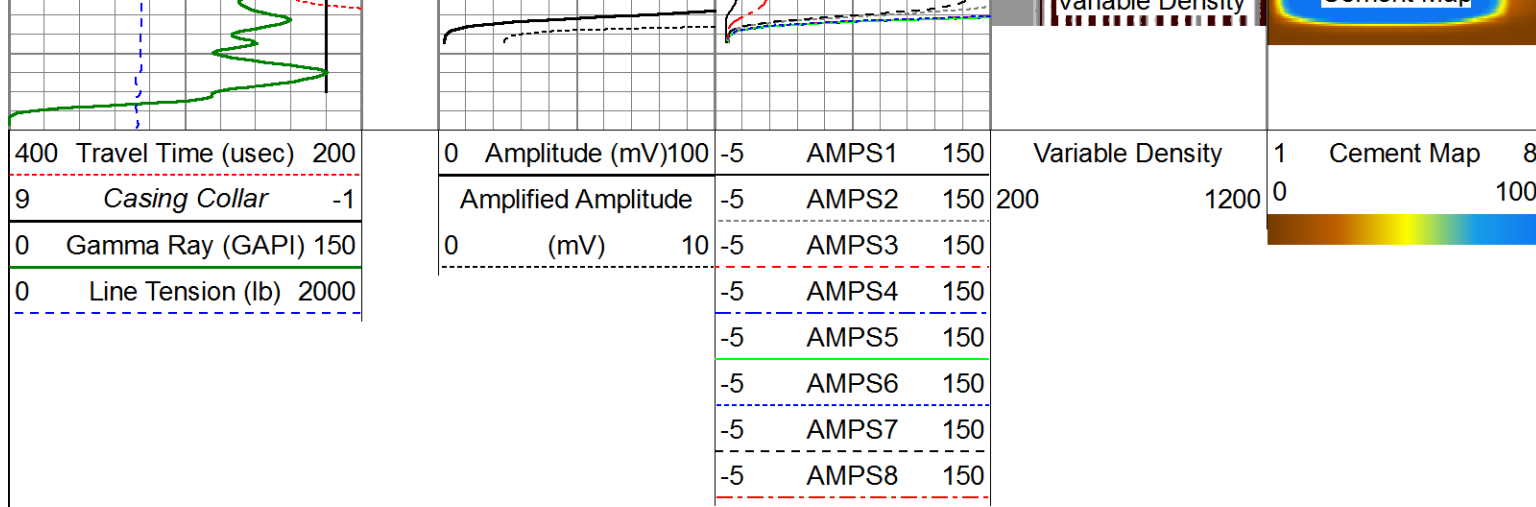
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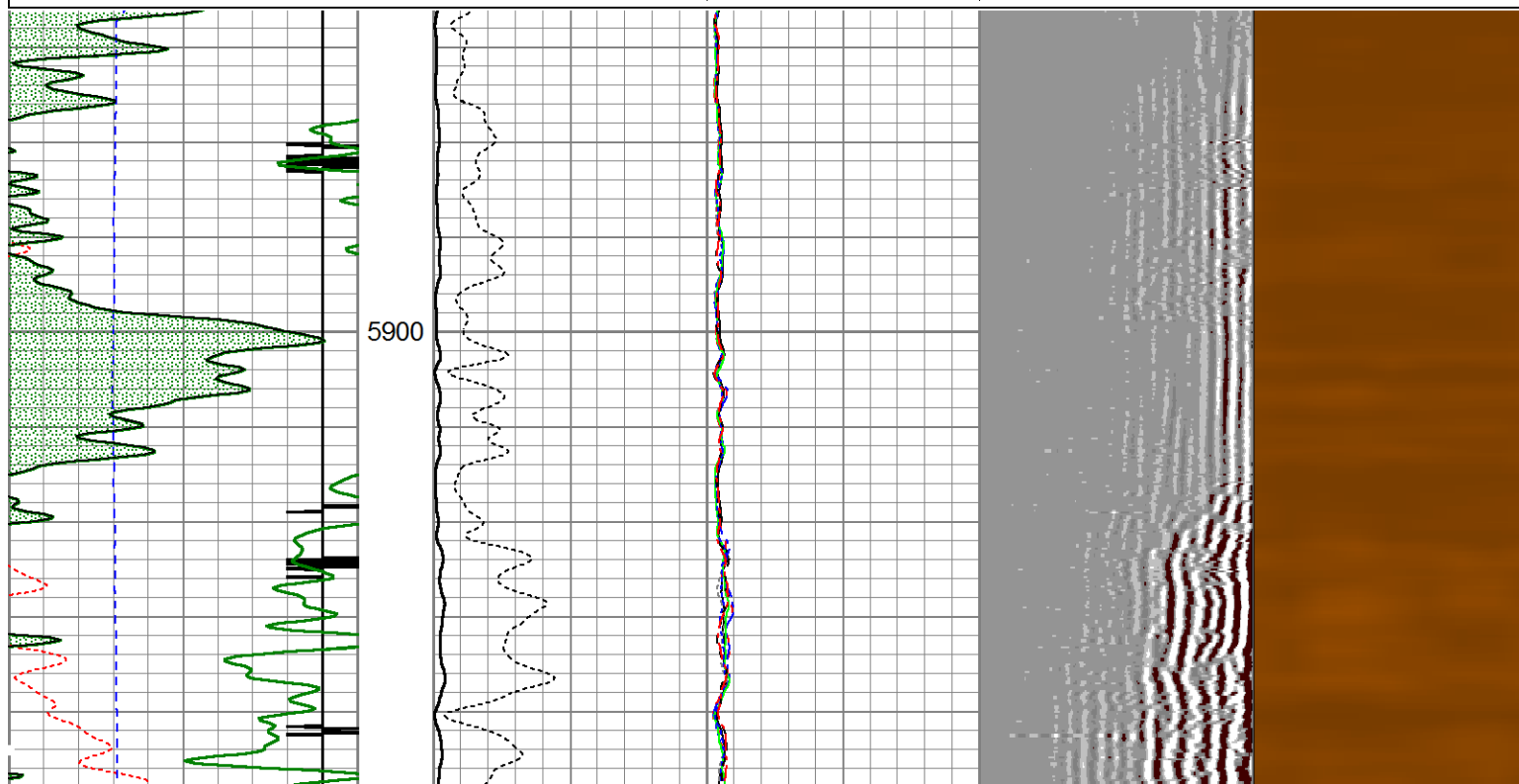
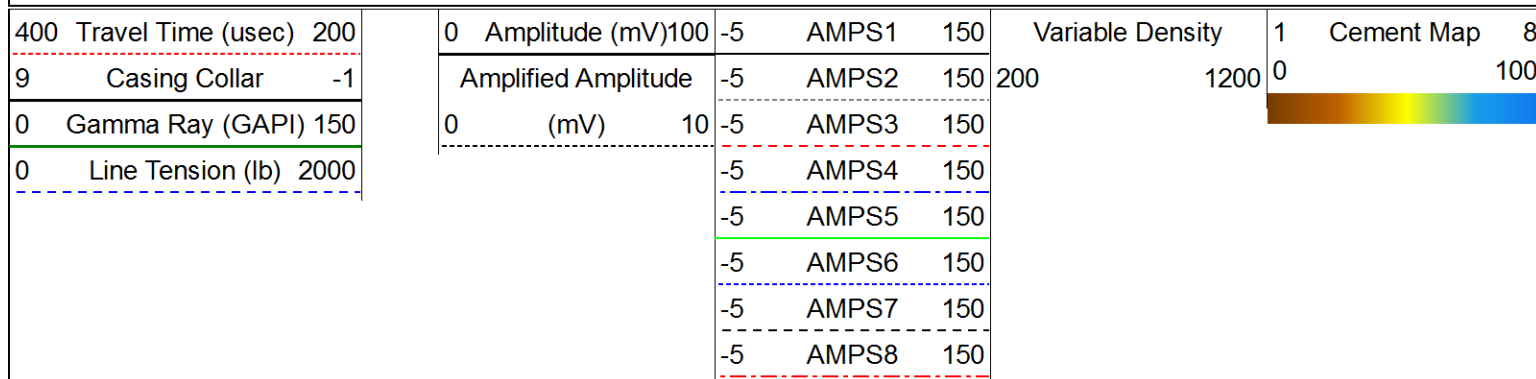


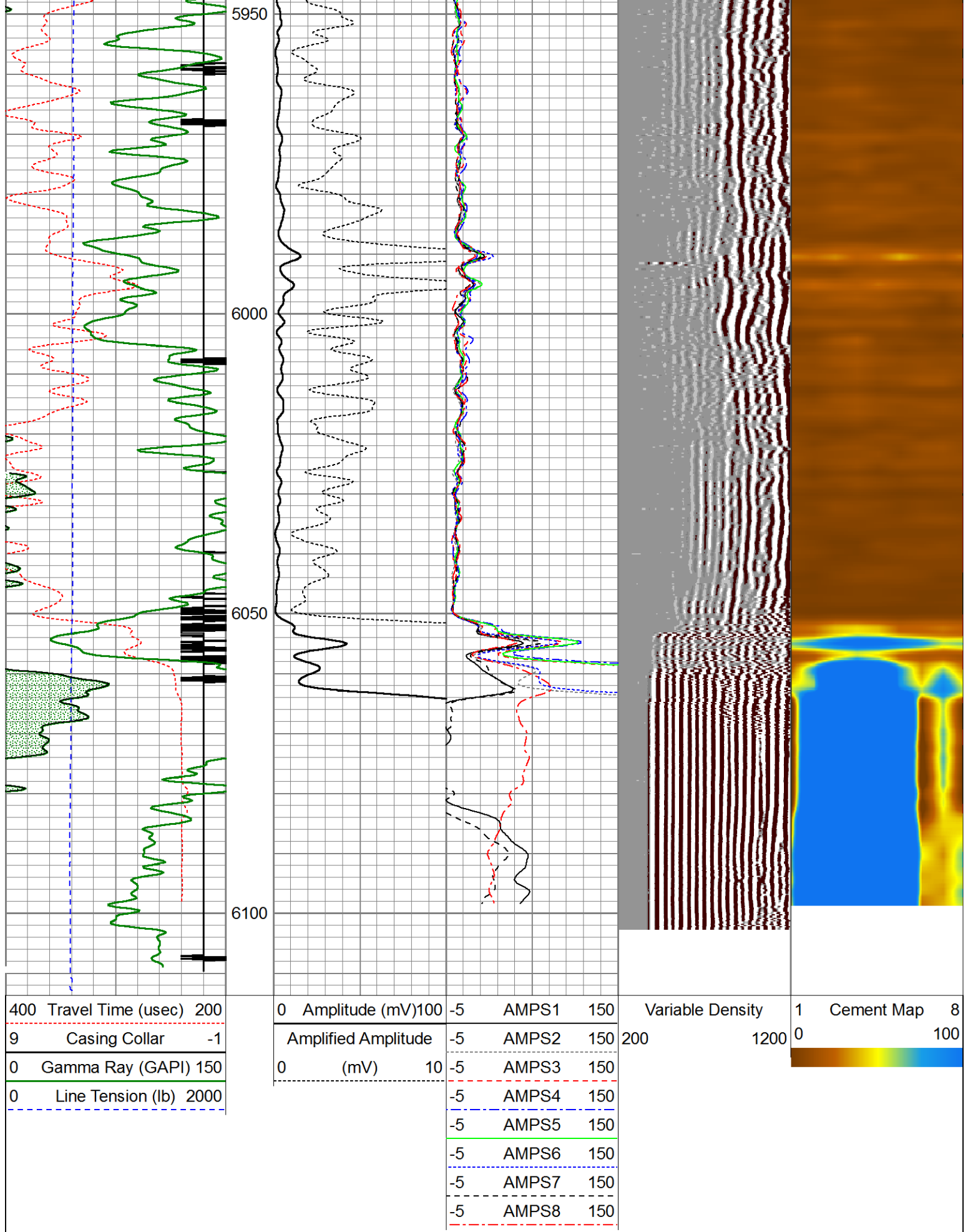




Repeat Pass (0 PSI)

Database File: c:\warrior\data\cased hole\noble\noble_rohn_state_id04_68-1hn\noble_rohn_state_id04_68-1hn.db
 Dataset Pathname: pass5
 Presentation Format: scbl03
 Dataset Creation: Tue Sep 24 12:16:10 2013 by Log 0
 Charted by: Depth in Feet scaled 1:240





Calibration Report

Database File: C:\Warrior\Data\Cased Hole\Noble\noble_rohn_state_Id04_68-1hn\noble_rohn_state_Id04_68-1hn.db

Gamma Ray Calibration Report

Serial Number: 110108-Dig
 Tool Model: Probe275
 Performed: Mon Jul 01 16:56:15 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: 101224
 Tool Model: Probe

Calibration Casing Diameter: 7.000 in
 Calibration Depth: 752.062 ft

Master Calibration, performed Tue Sep 24 10:07:33 2013:

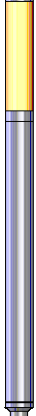
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.009	0.615	1.500	62.165	90.238	2.393
CAL	-0.030	0.745				
5'	-0.019	0.629	1.500	62.165	93.671	3.241
SUM						
S1	-0.011	0.688	0.000	100.000	135.024	1.616
S2	-0.014	0.605	0.000	100.000	153.123	2.282
S3	-0.018	0.545	0.000	100.000	168.126	3.131
S4	-0.018	0.550	0.000	100.000	164.272	3.090
S5	-0.018	0.578	0.000	100.000	154.338	2.959
S6	-0.018	0.628	0.000	100.000	144.926	2.826
S7	-0.017	0.668	0.000	100.000	132.279	2.481
S8	-0.018	0.668	0.000	100.000	139.453	2.577

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	-0.030	0.745	1.000	0.000

	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
WVFS3FT	11.84		RBT-Probe (101224) 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					
			Probe275 2.75" Centralizer	2.88	2.75	20.00

CCL	3.88		4.78	2.75	57.00
TEMP	3.00				
GR	2.54				
Dataset: noble_rohn_state_Id04_68-1hn.db: field/well/run1/pass7.2 Total Length: 20.28 ft Total Weight: 197.00 lb O.D. 2.75 in					