



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

Company Noble Energy

Well Five Rivers K07-63-1HN

Field Wattenberg

County Weld State Colorado

Location: API #: 05-123-38257

BHL: 990' FSL & 535' FWL

SEC 8 TWP 4 N RGE 66 W

Permanent Datum Ground Level Elevation 4701'
Log Measured From Kelly Bushing 16' APD
Drilling Measured From Kelly Bushing

Other Services
Elevation
K.B. 4717'
D.F. 4716'
G.L. 4701'

Date Feb 27, 2014

Run Number One

Depth Driller 16535'

Depth Logger 7394'

Bottom Logged Interval 7381'

Top Log Interval Surface

Open Hole Size 8 3/4"

Type Fluid Water

Density / Viscosity 8.33

Max. Recorded Temp. 219DegF

Estimated Cement Top 1020'

Time Well Ready 0800

Time Logger on Bottom 0900

Equipment Number 13034

Location Brighton, CO

Recorded By Robert Grissom

Witnessed By Bill Mansfield

Run Number Bit From To Size Weight From To

Casing Record Size Wgt/Ft Top Bottom

Surface String 9 5/8" 36# Surface 619'

Prot. String 7" 26# Surface 7503'

Production String 4.5" 11.6# Surface 16535'

Liner 4.5" 6164' 6179'

Short Joint

<<< Fold Here >>>

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 16' KB

Main Pass Logged Under 2000PSI

Released Pressure to 0 PSI @ 119'

Logged at 120 fpm (Requested by Customer)

Thank You for using Allied Wireline
(303)659-4609



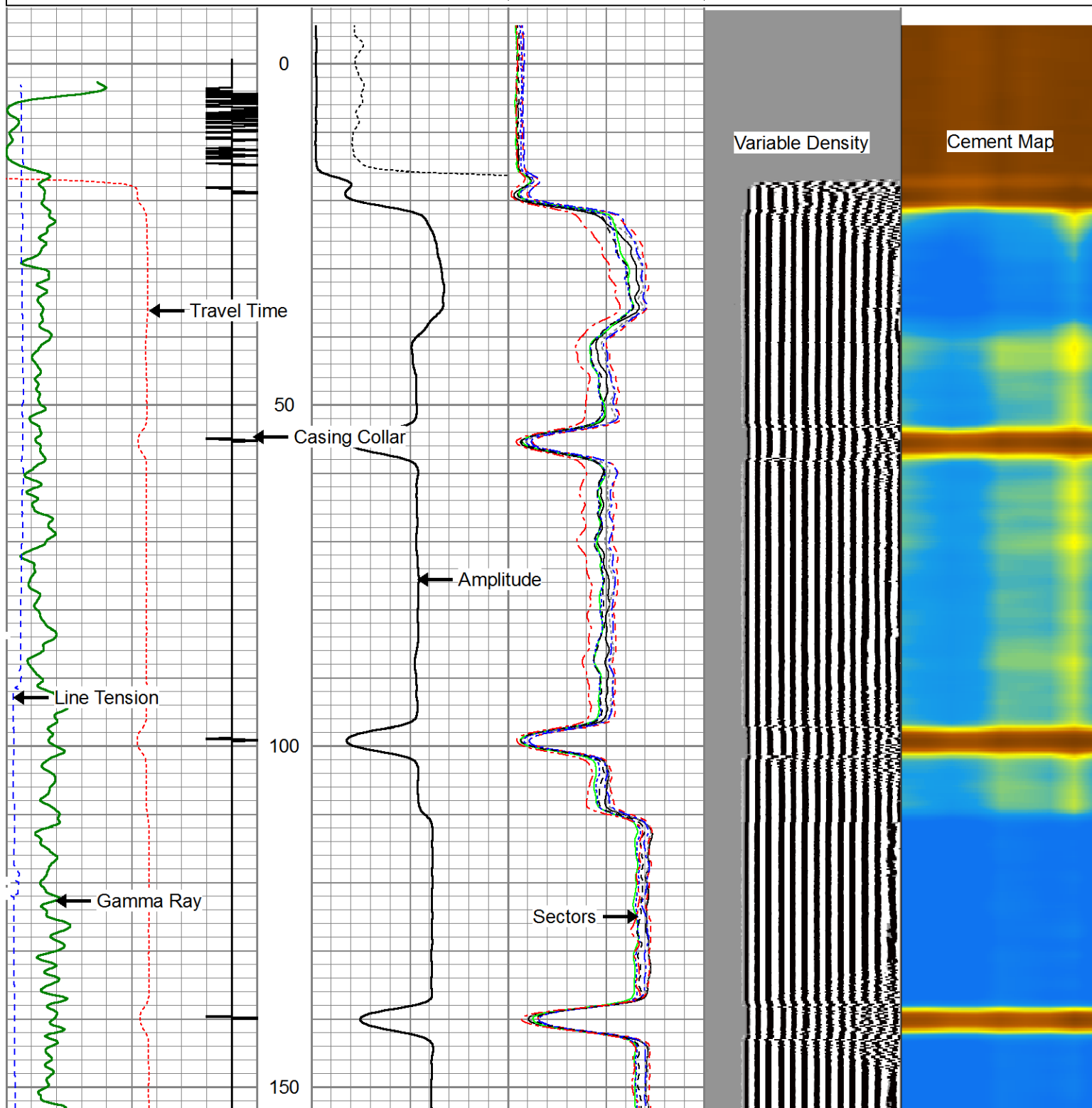
Main Pass (2000 PSI)

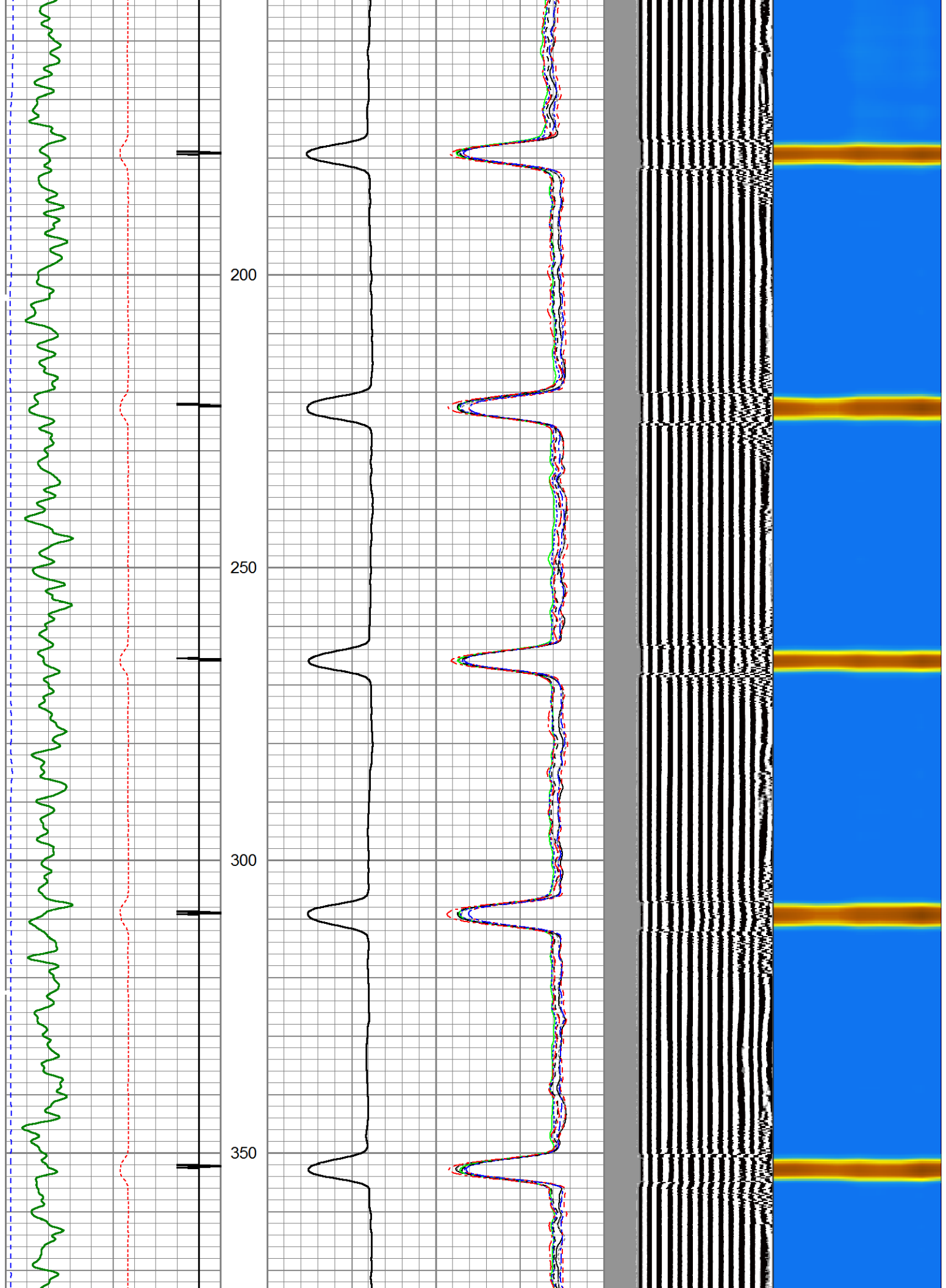
Database File: c:\users\engineers\desktop\noble five rivers k07-63-1hn_rcbl.db
Dataset Pathname: pass4.7
Presentation Format: scbl03
Dataset Creation: Thu Feb 27 13:40:20 2014 by Calc 7.0 B1
Charted by: Depth in Feet scaled 1:240

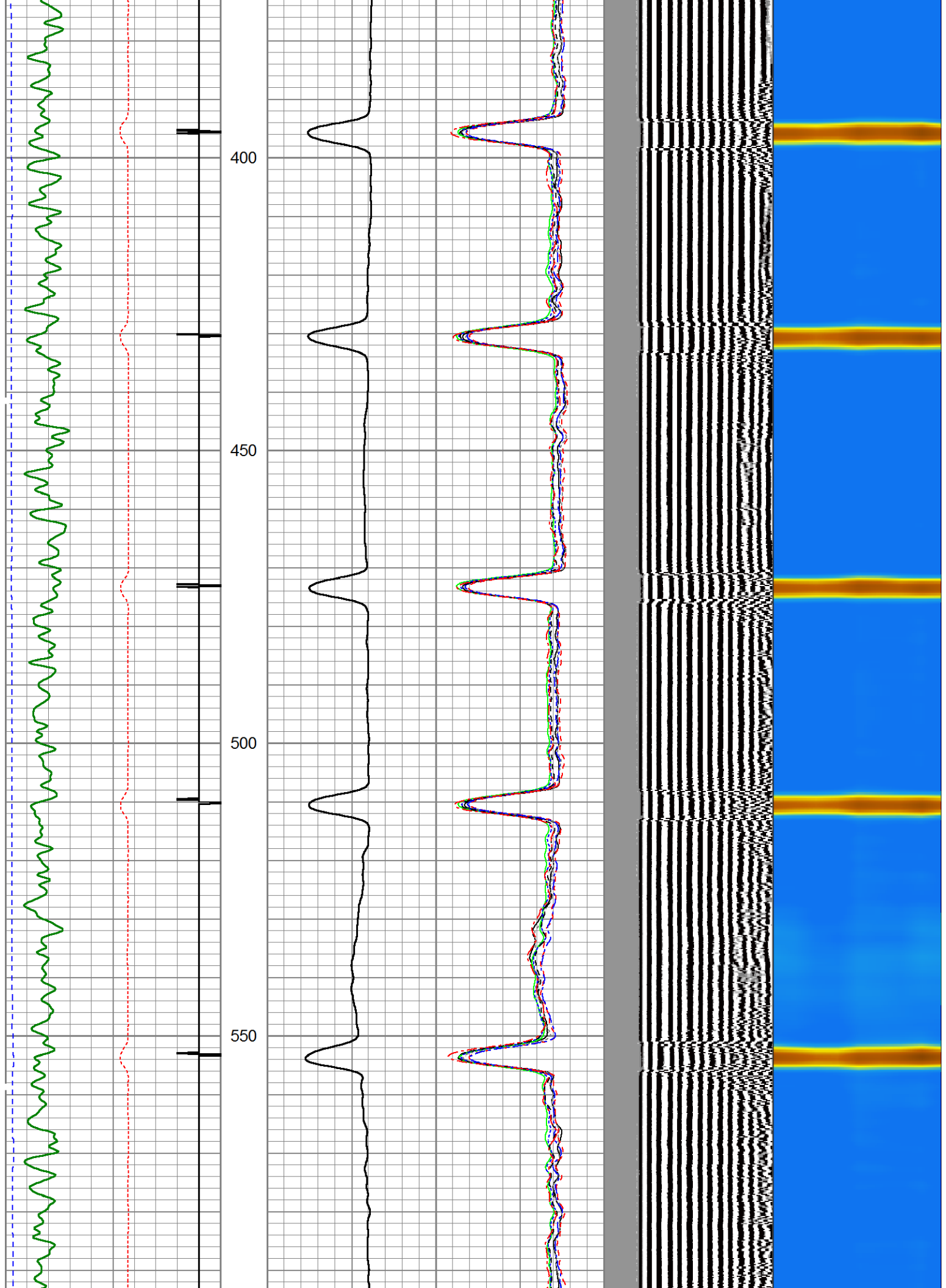
400 Travel Time (usec) 200
9 Casing Collar -1
0 Gamma Ray (GAPI) 150
0 Line Tension (lb) 5000

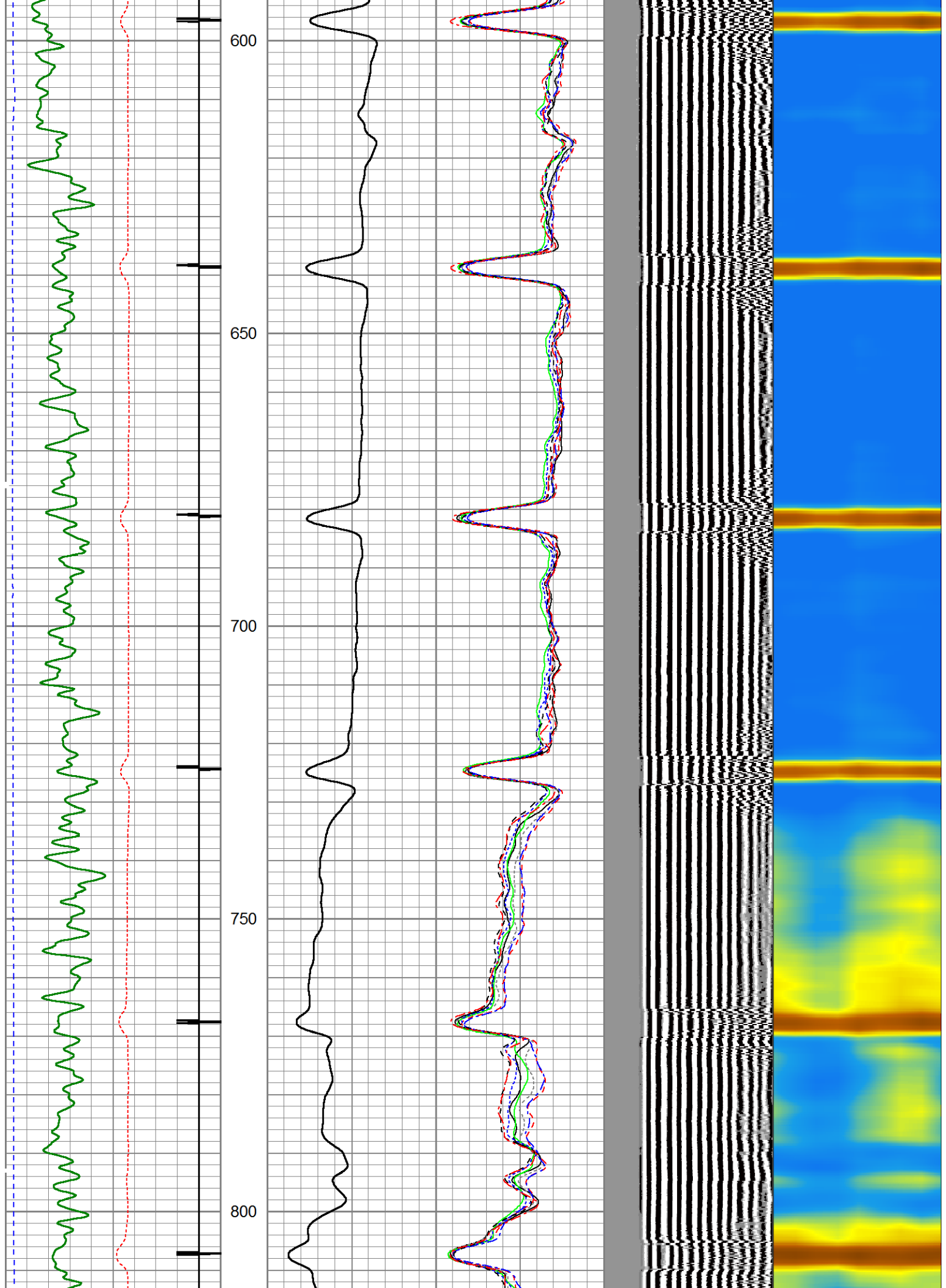
0	Amplitude (mV)	100	-5	AMPS1	150
Amplified Amplitude		-5	AMPS2	150	
0	(mV)	10	-5	AMPS3	150
		-5	AMPS4	150	
		-5	AMPS5	150	
		-5	AMPS6	150	
		-5	AMPS7	150	
		-5	AMPS8	150	

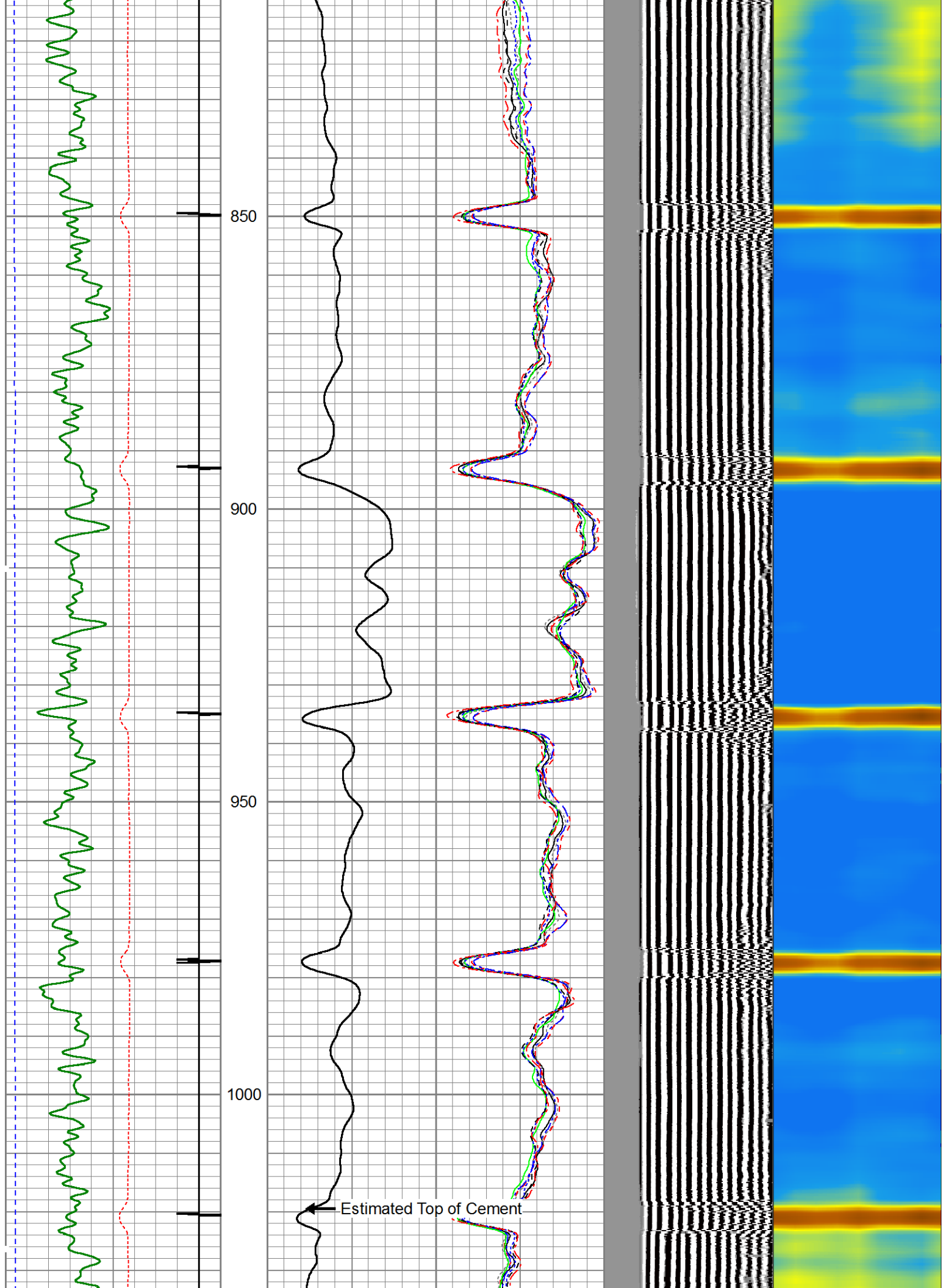
Variable Density 1 Cement Map 8
200 1200 0 100

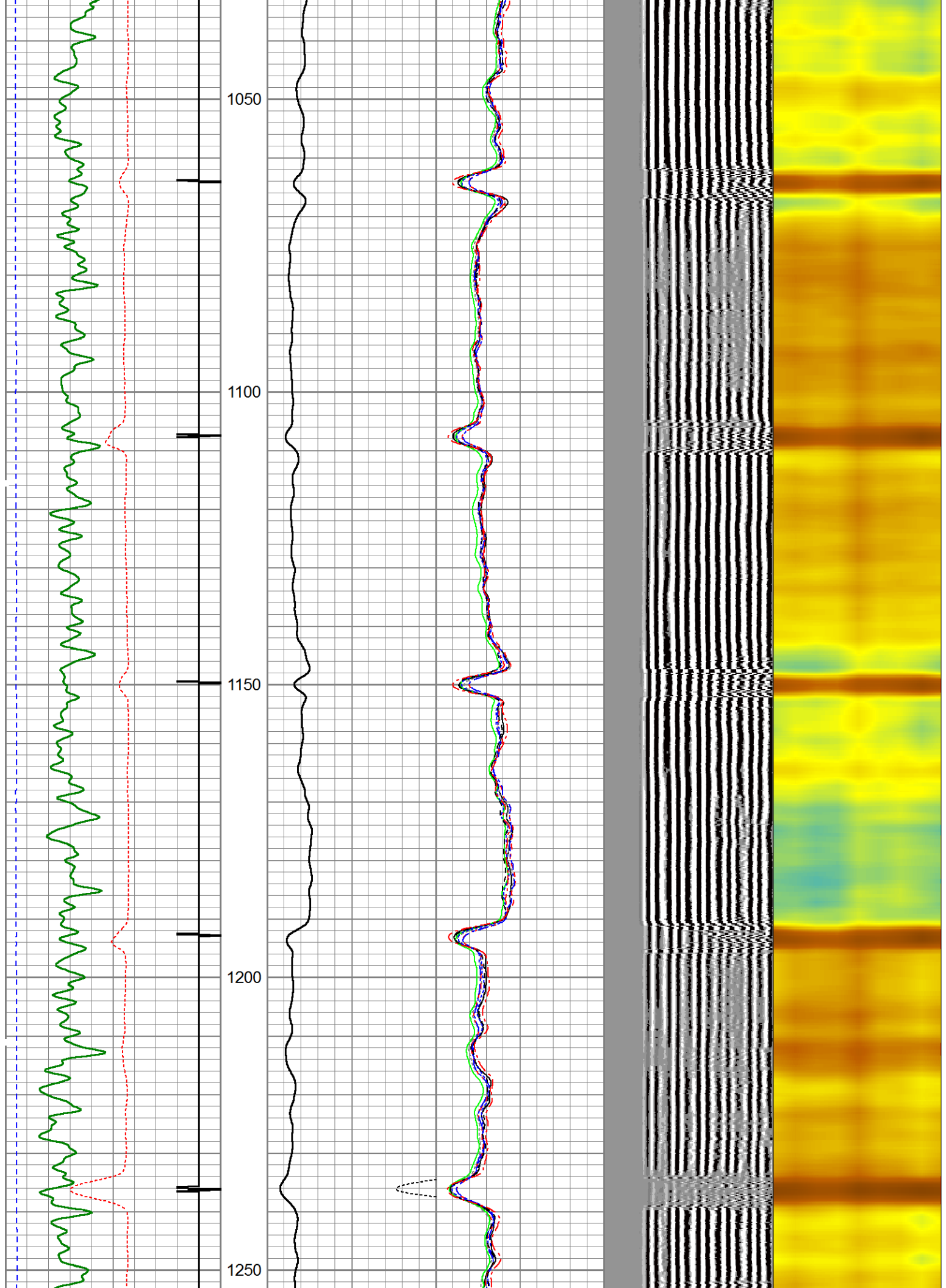


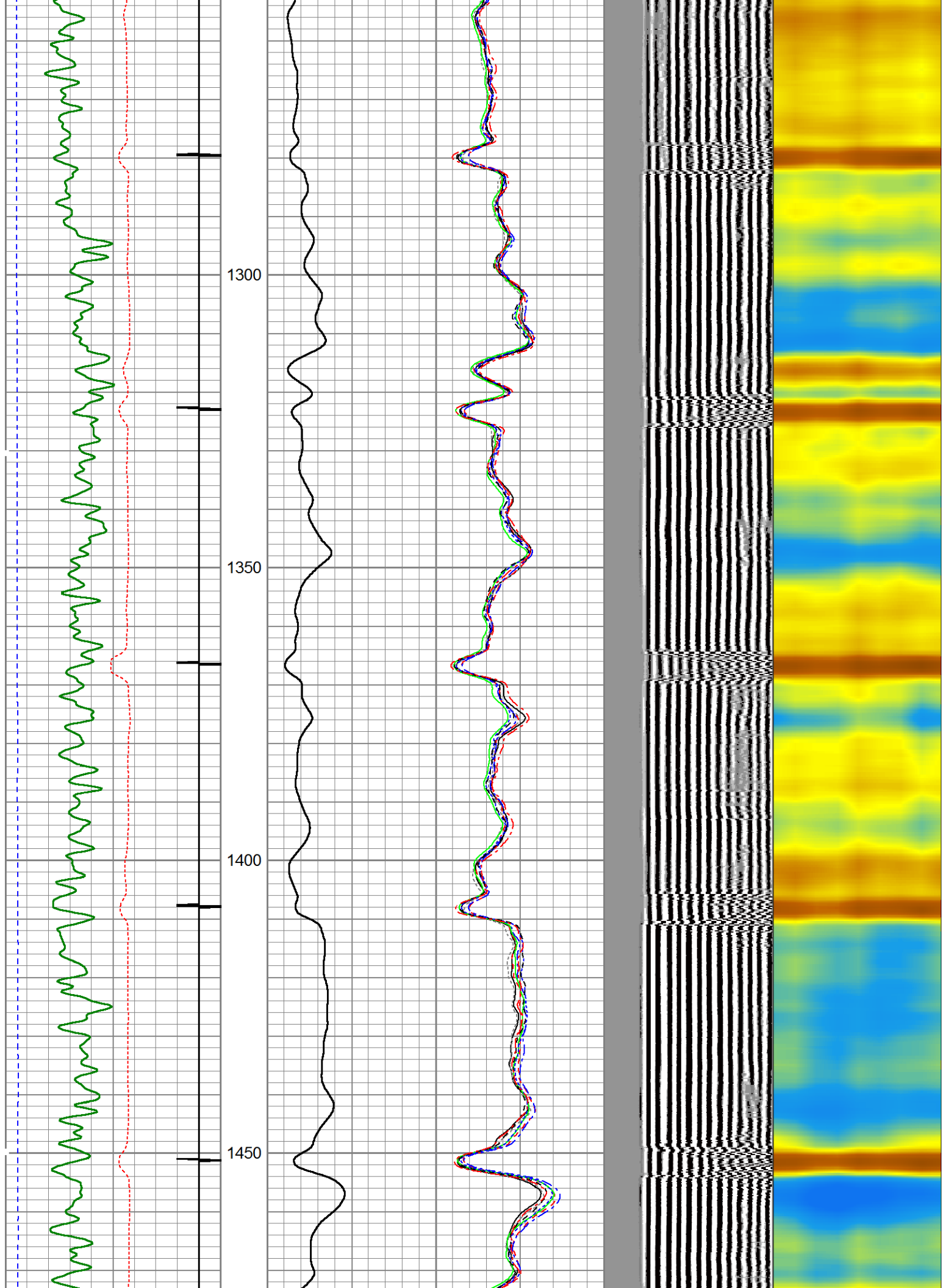


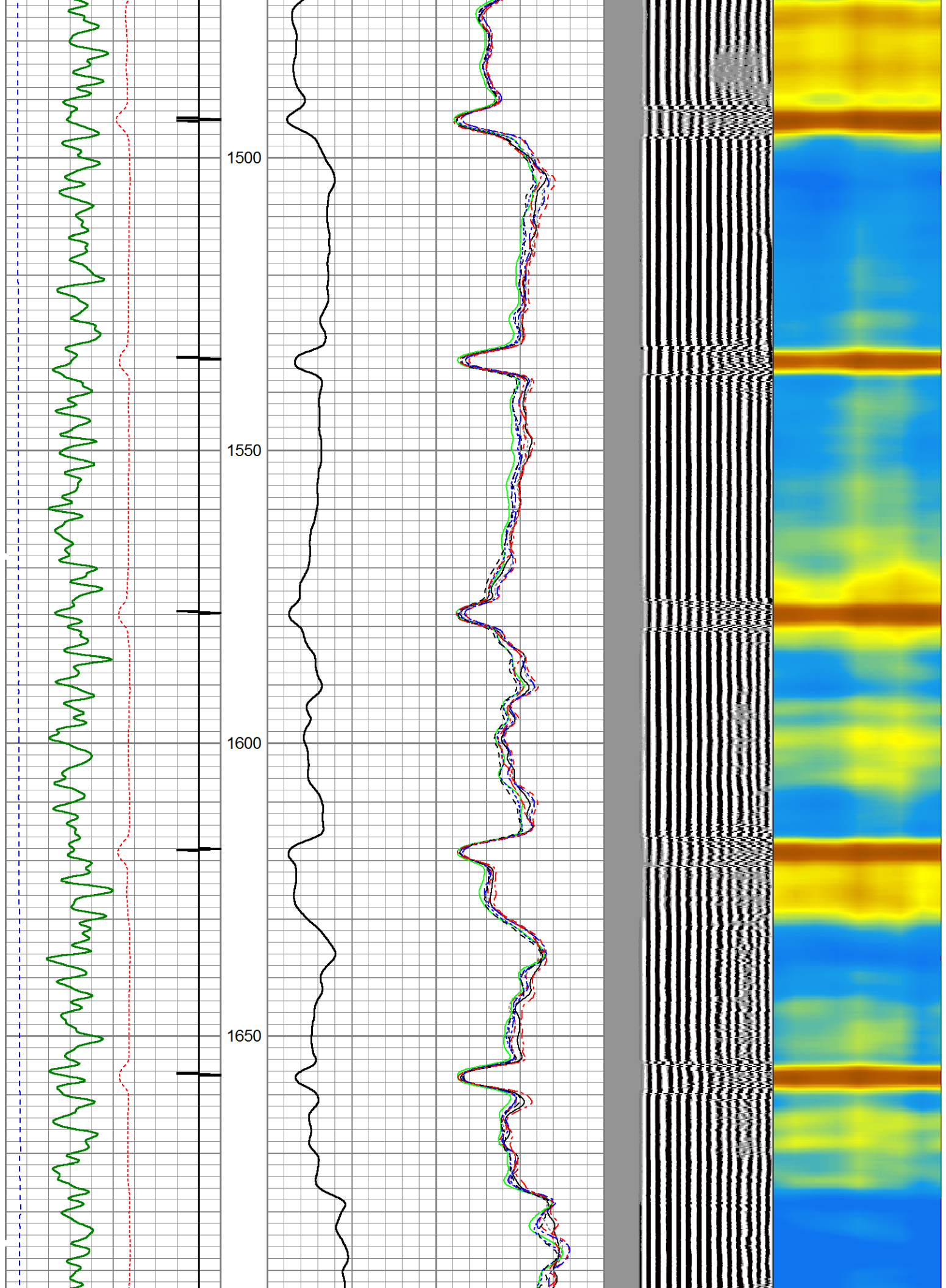


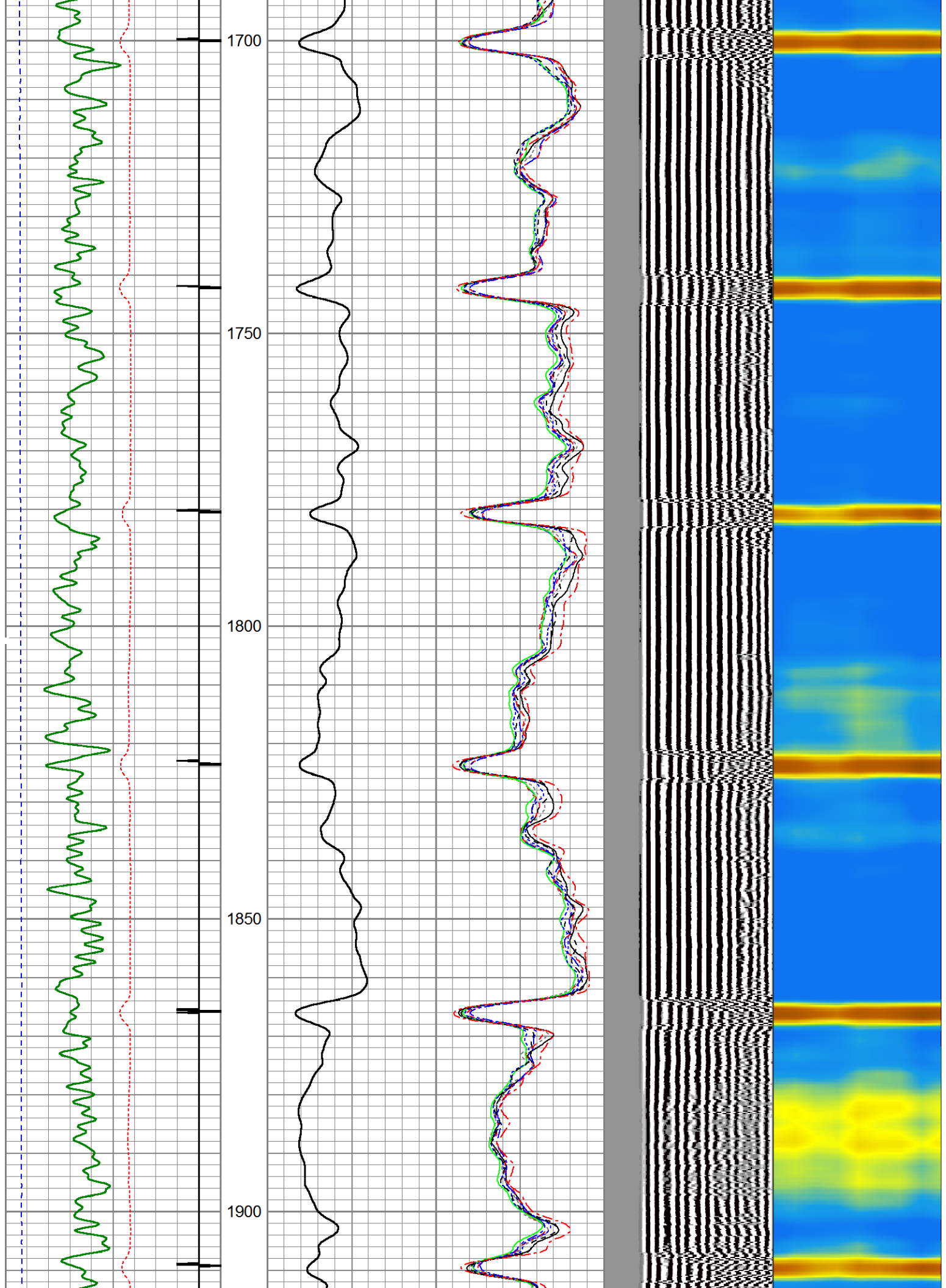


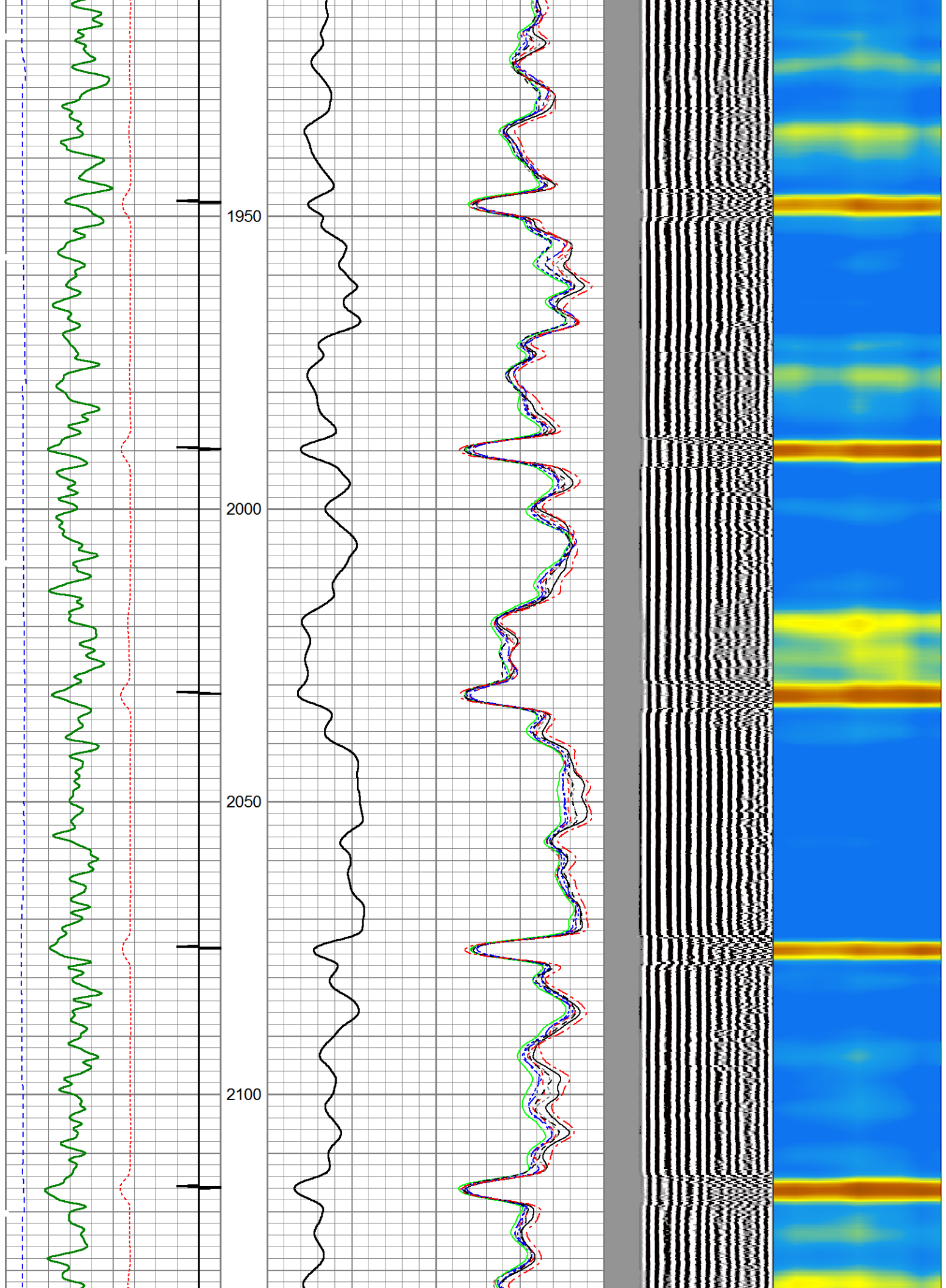


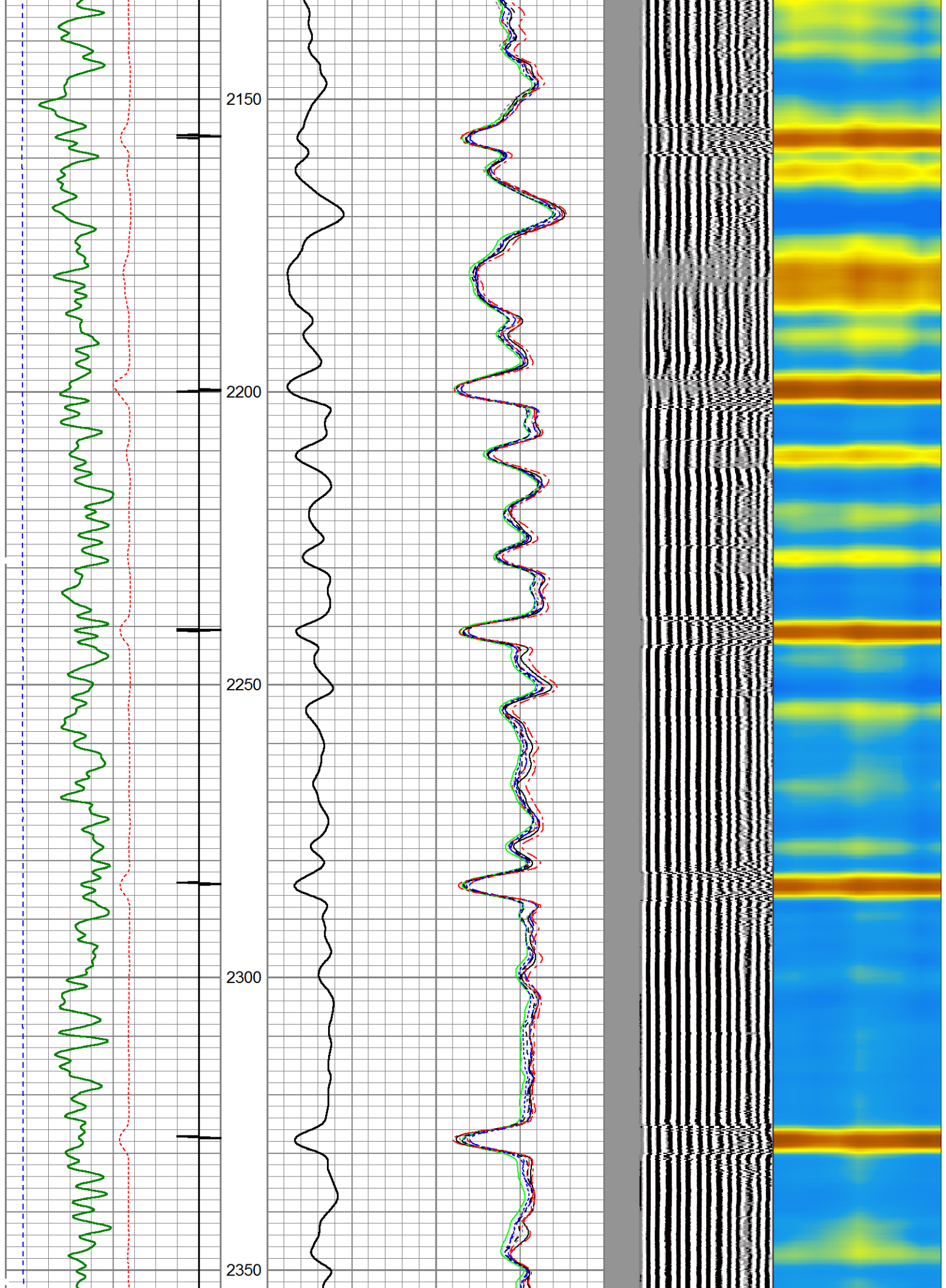


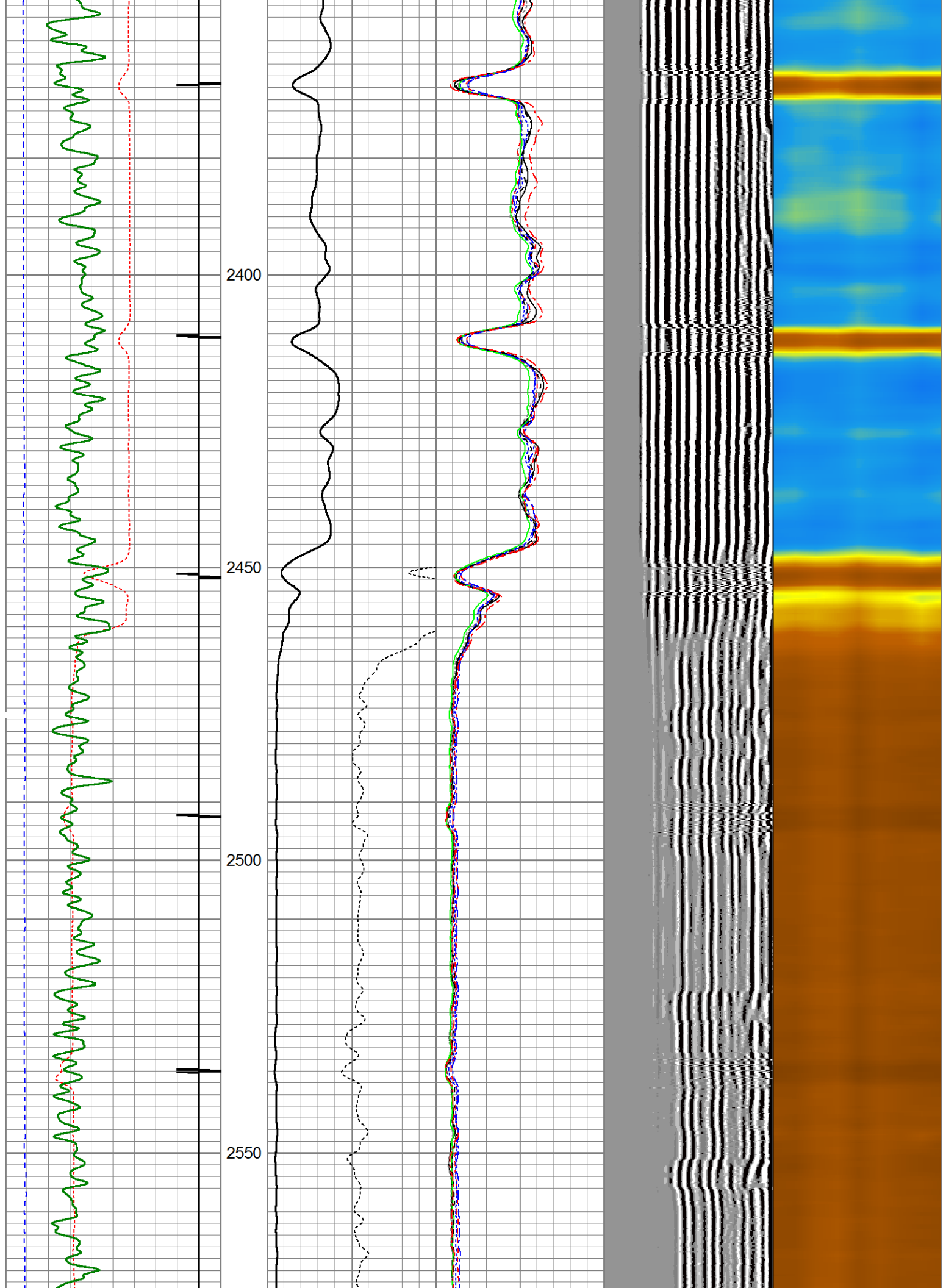


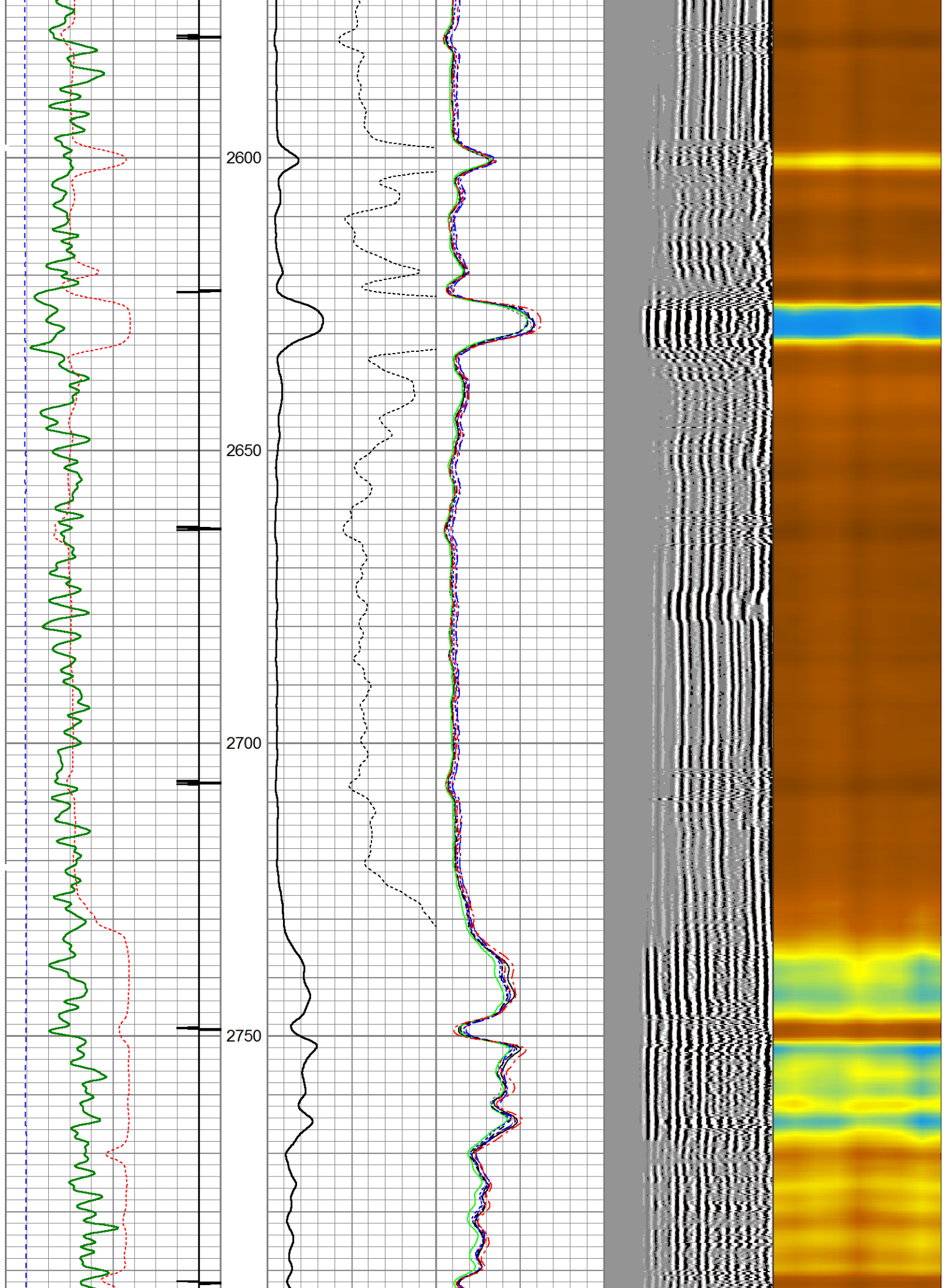


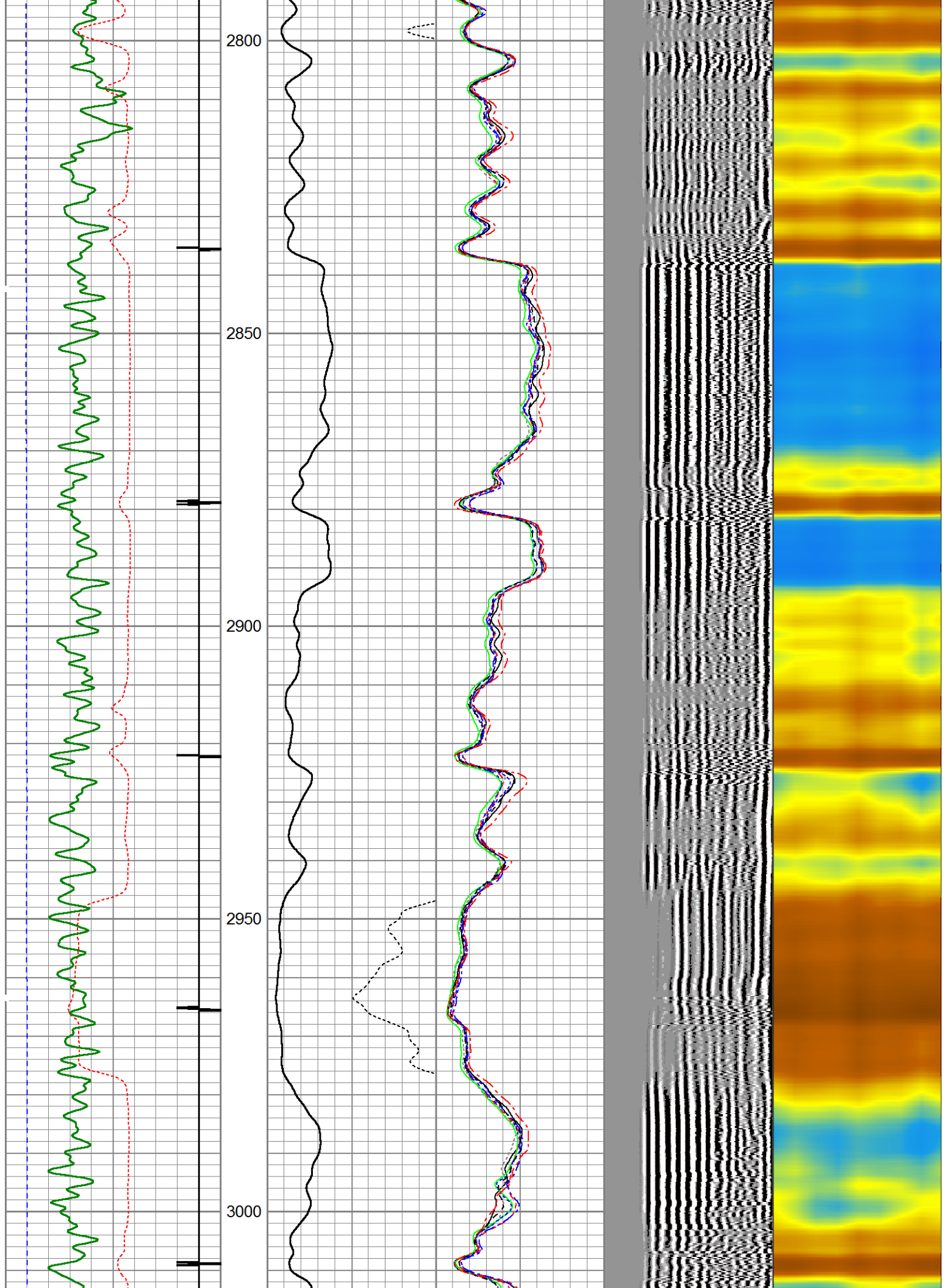


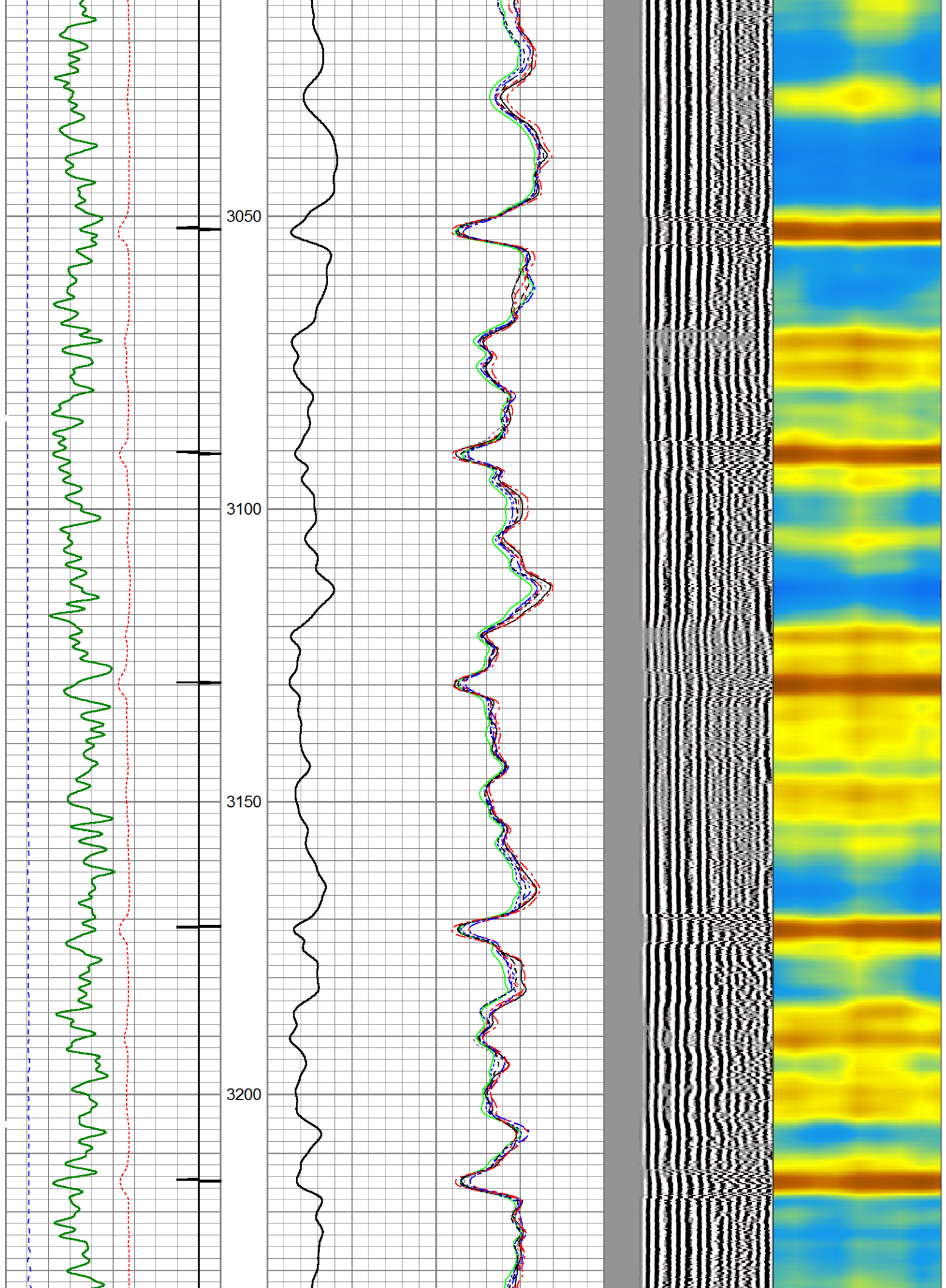


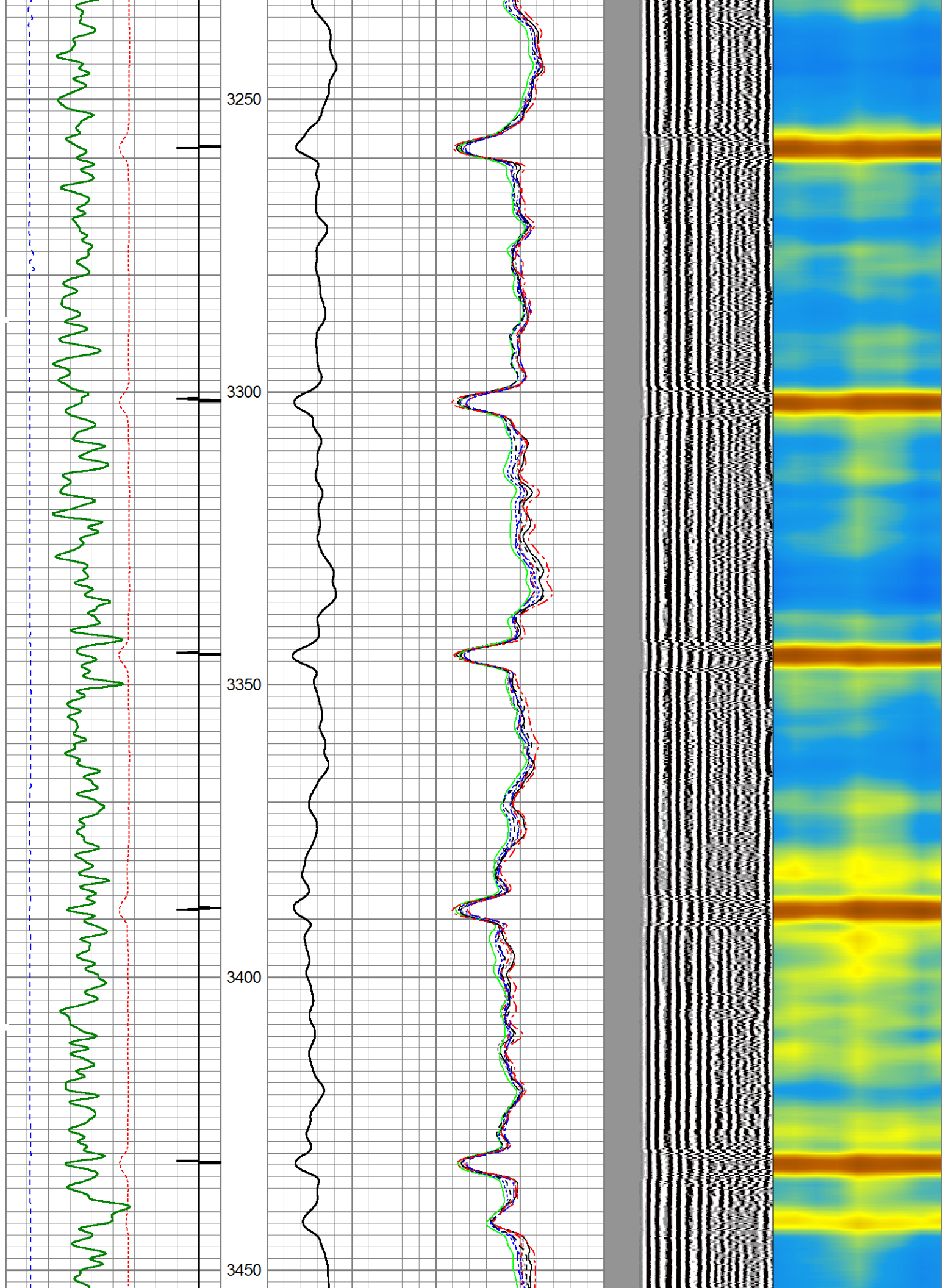


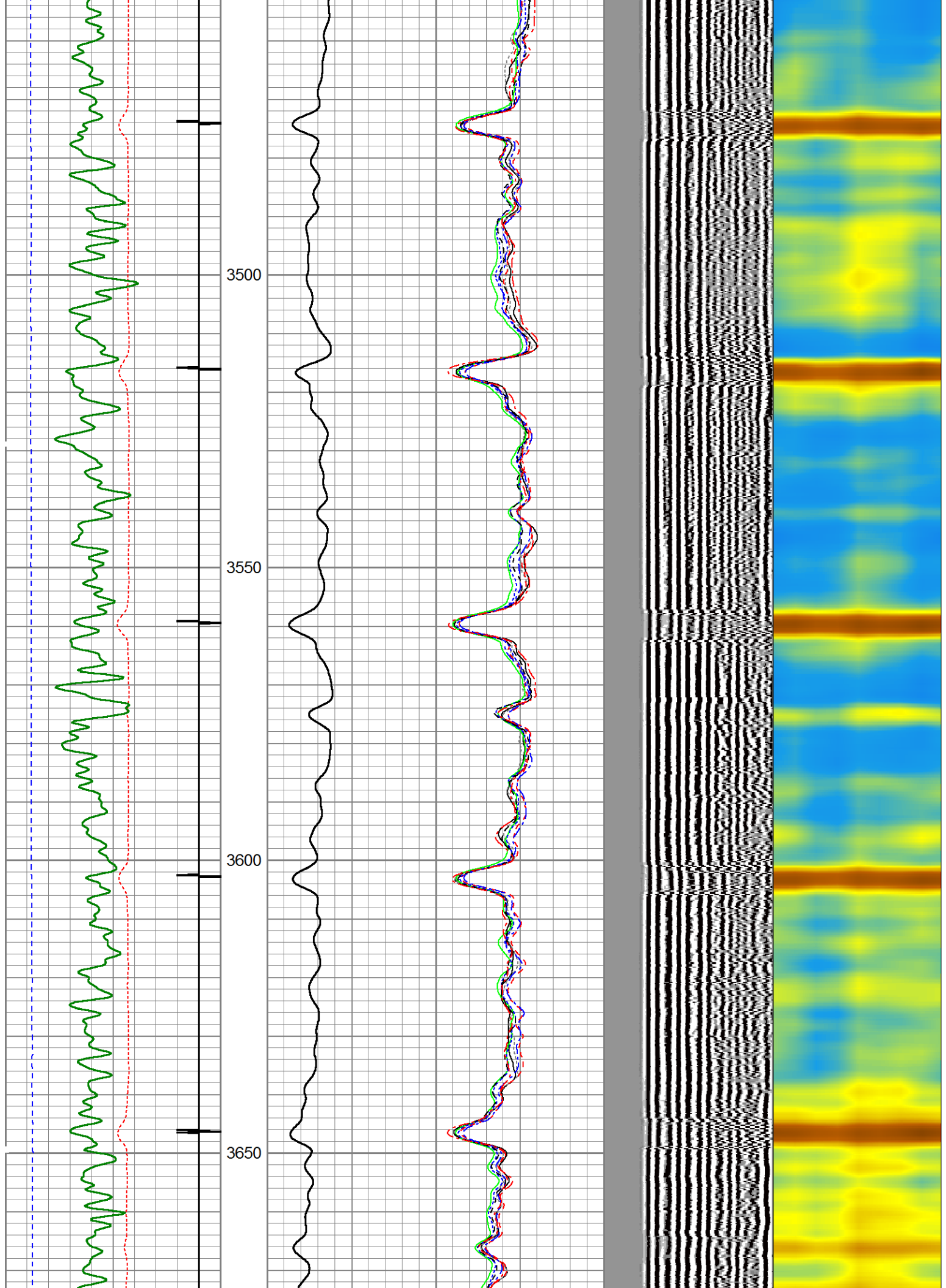


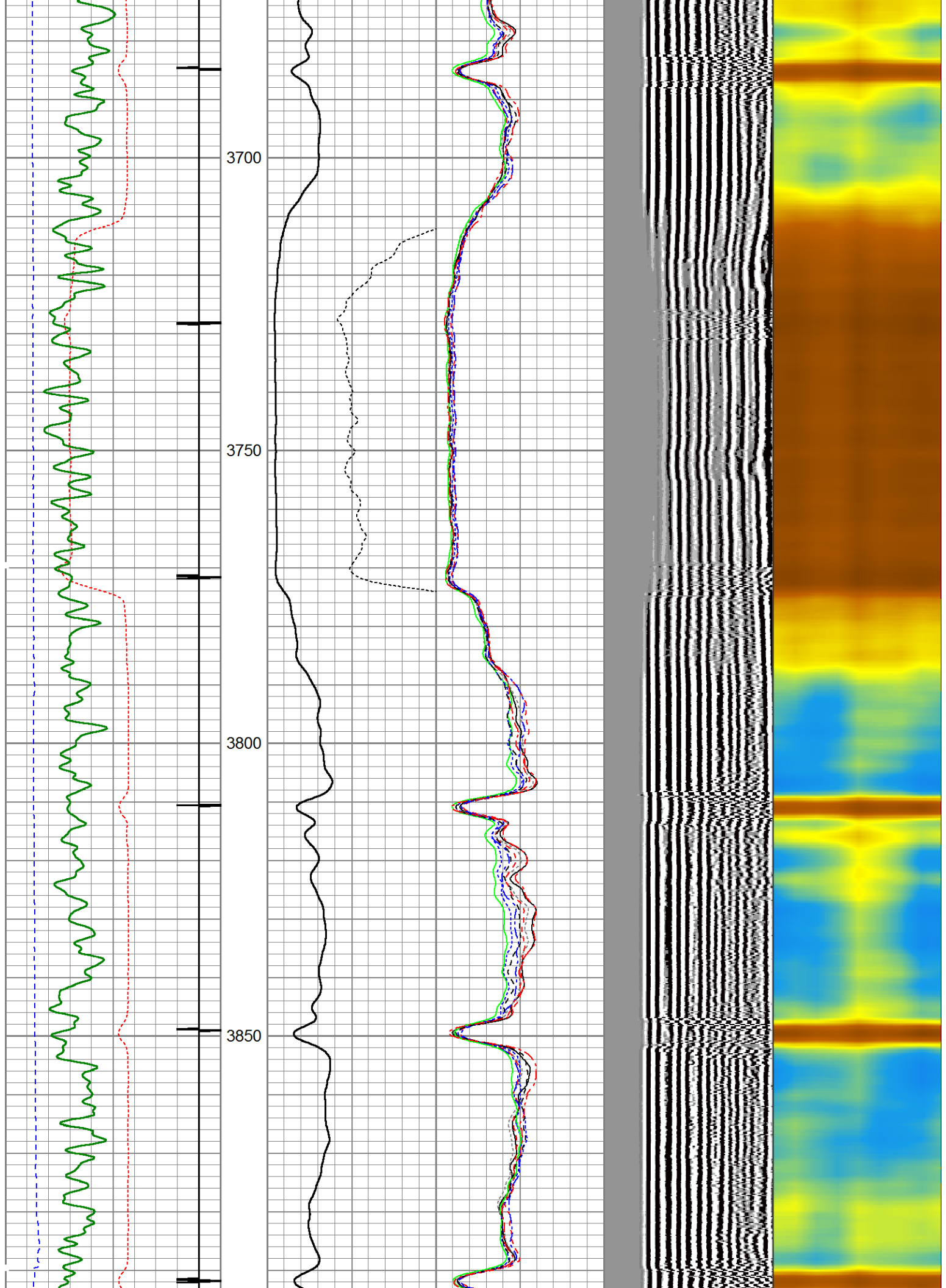


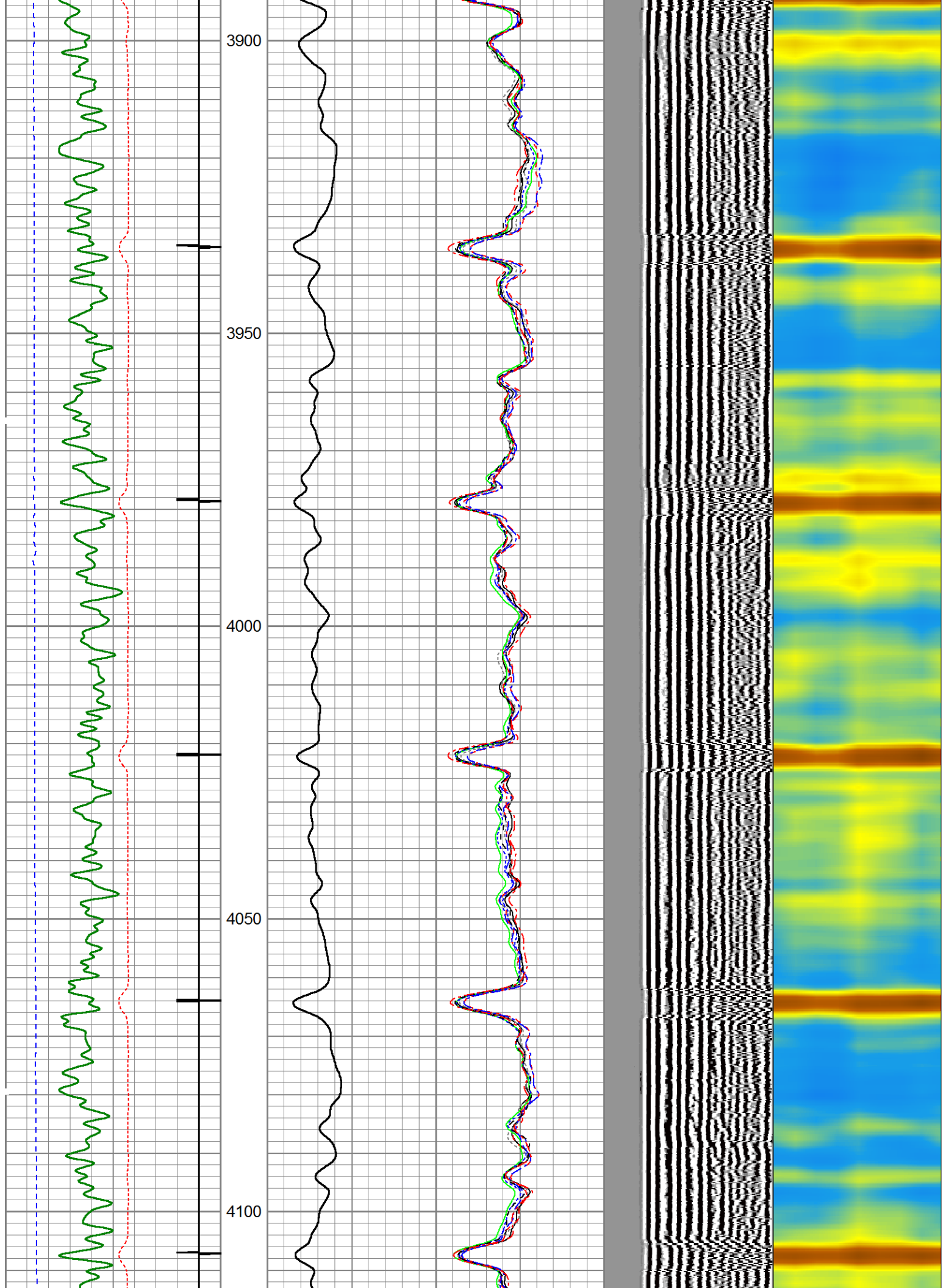


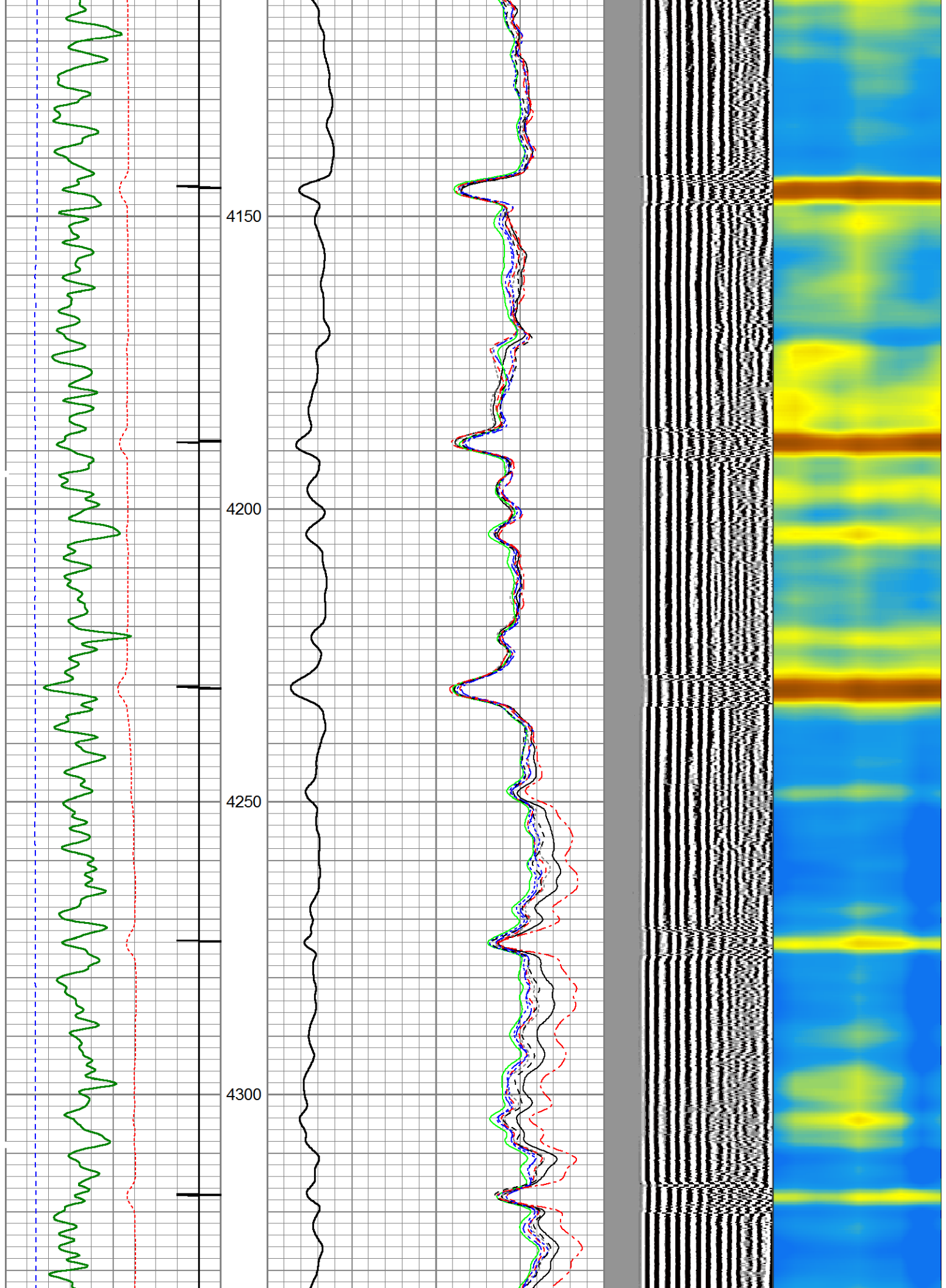


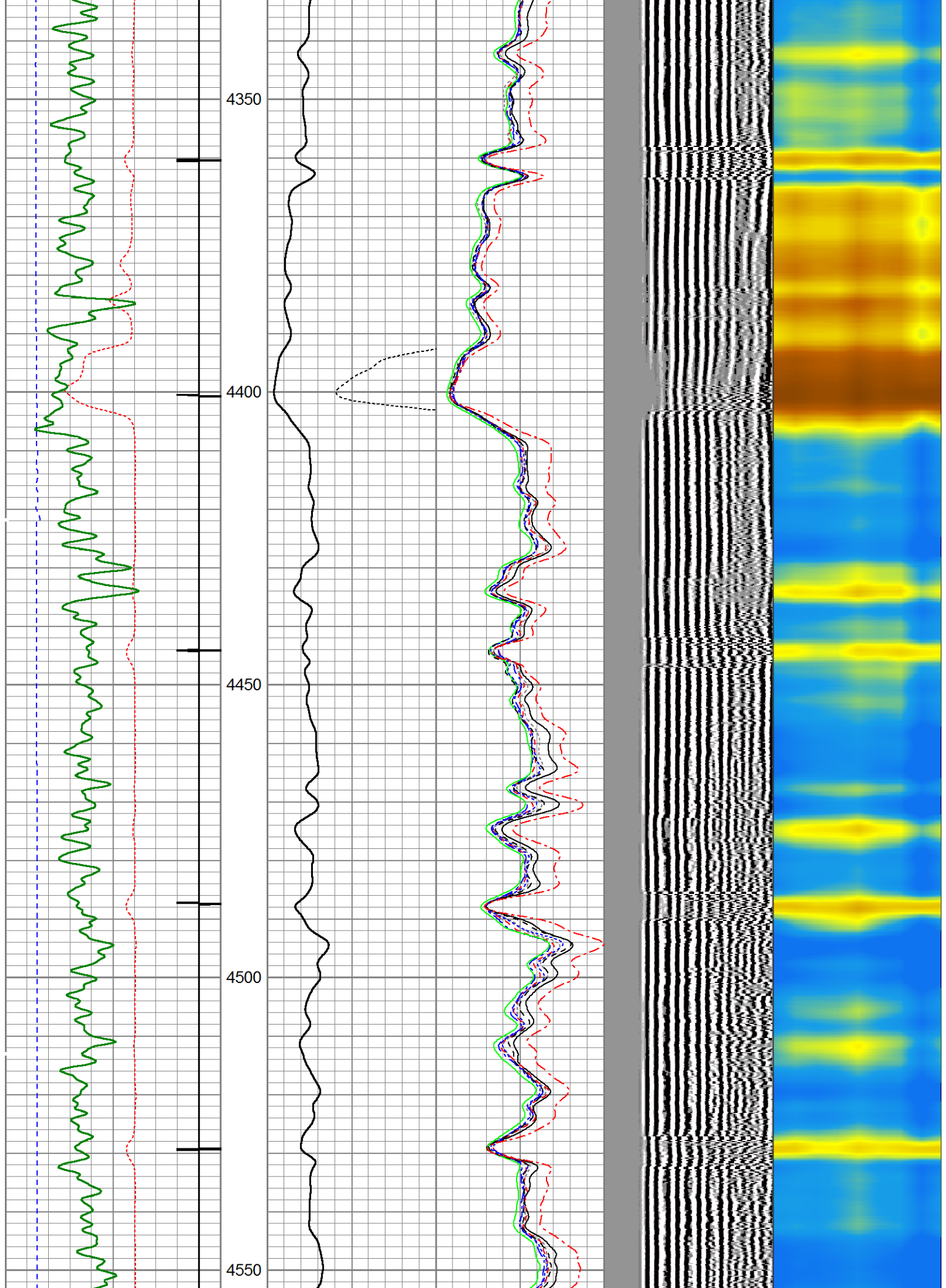


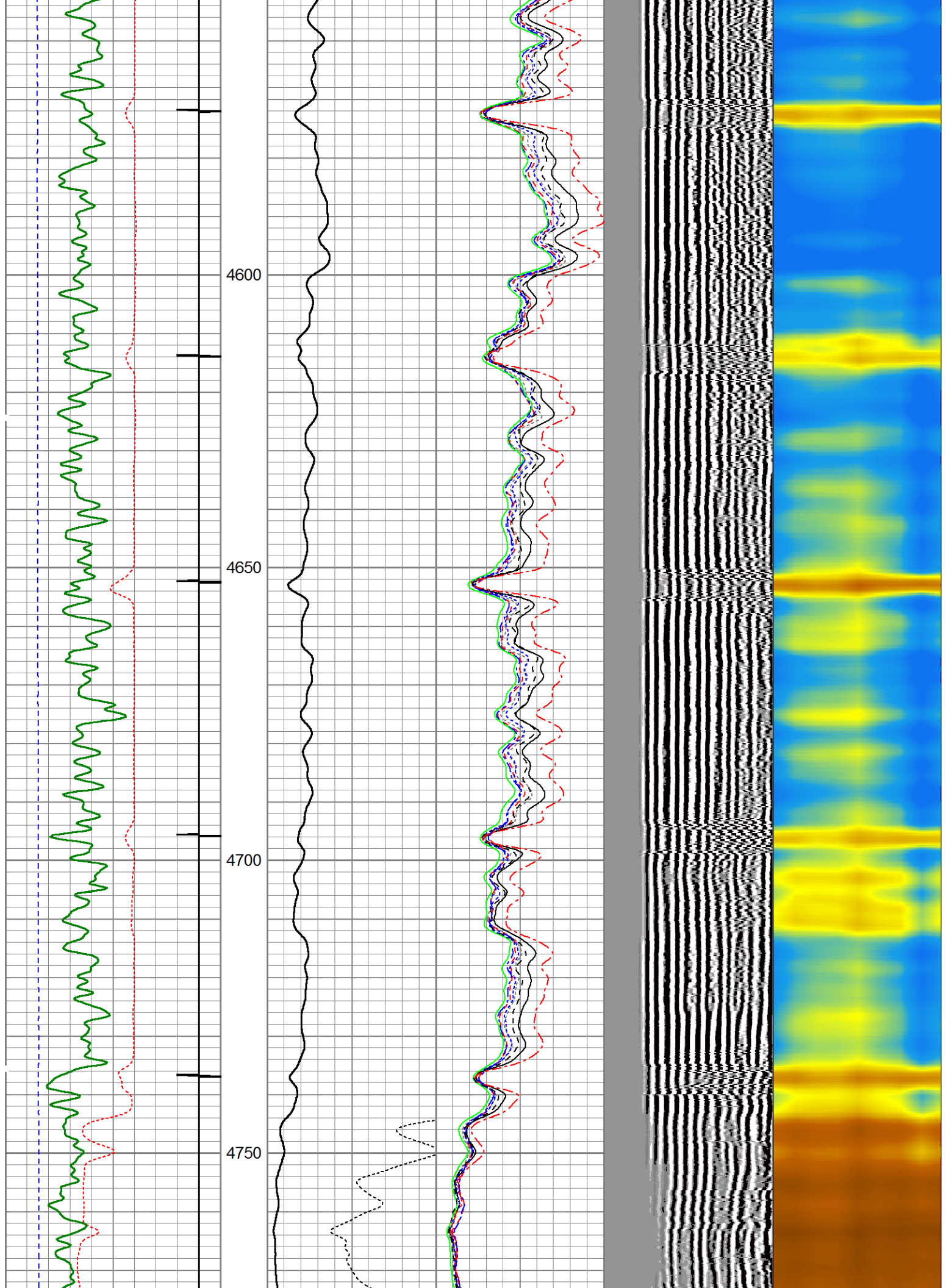


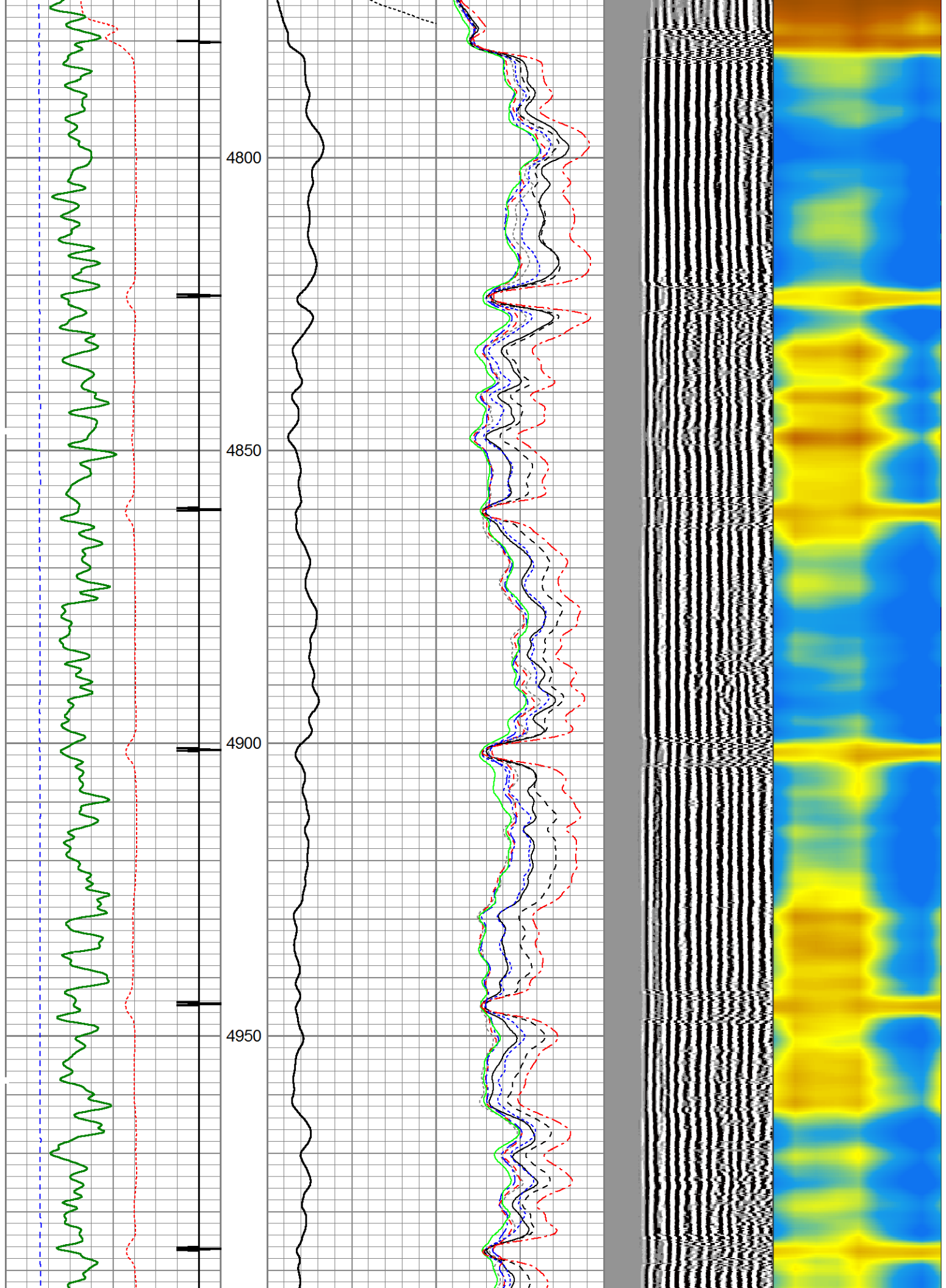


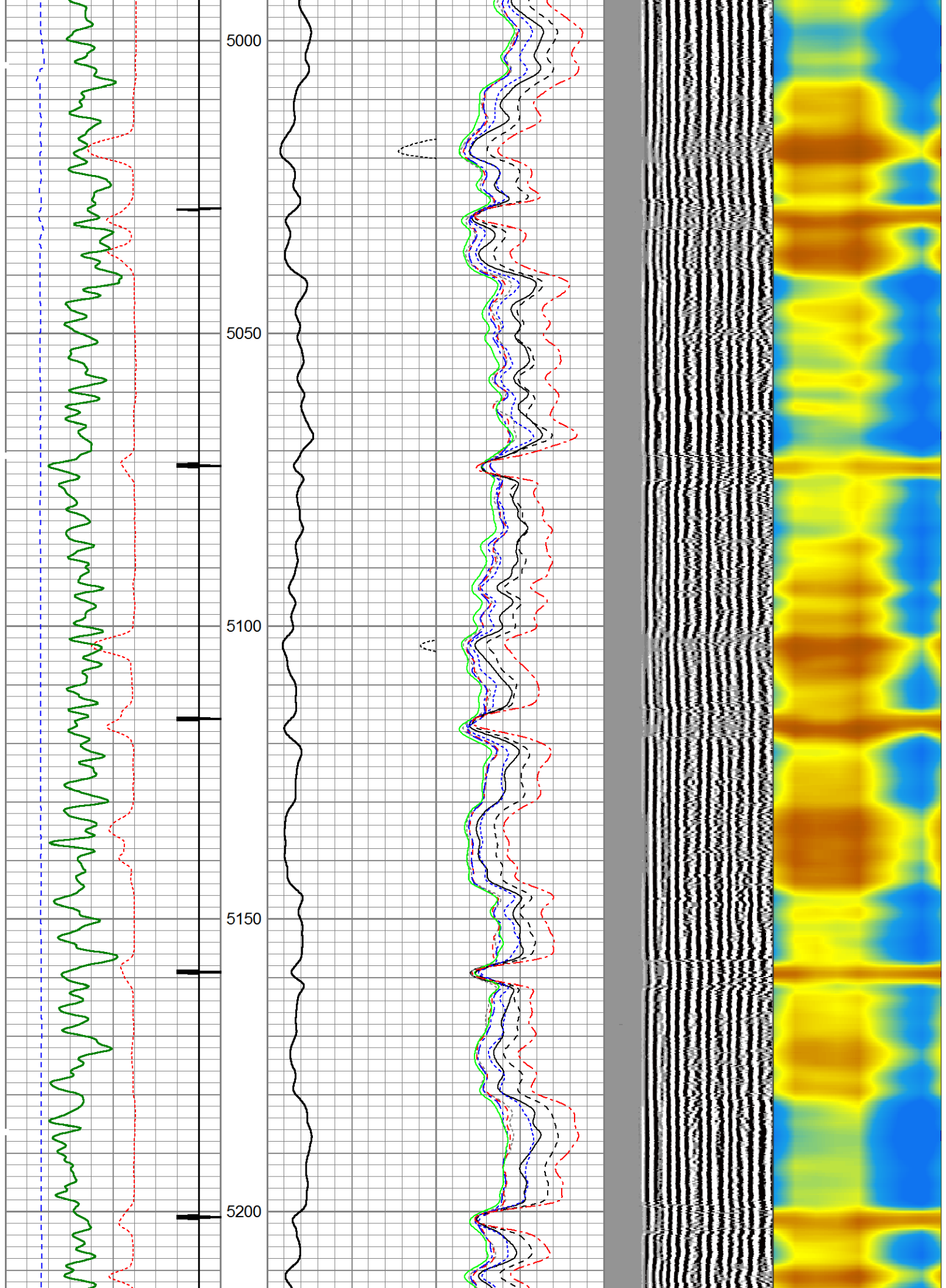


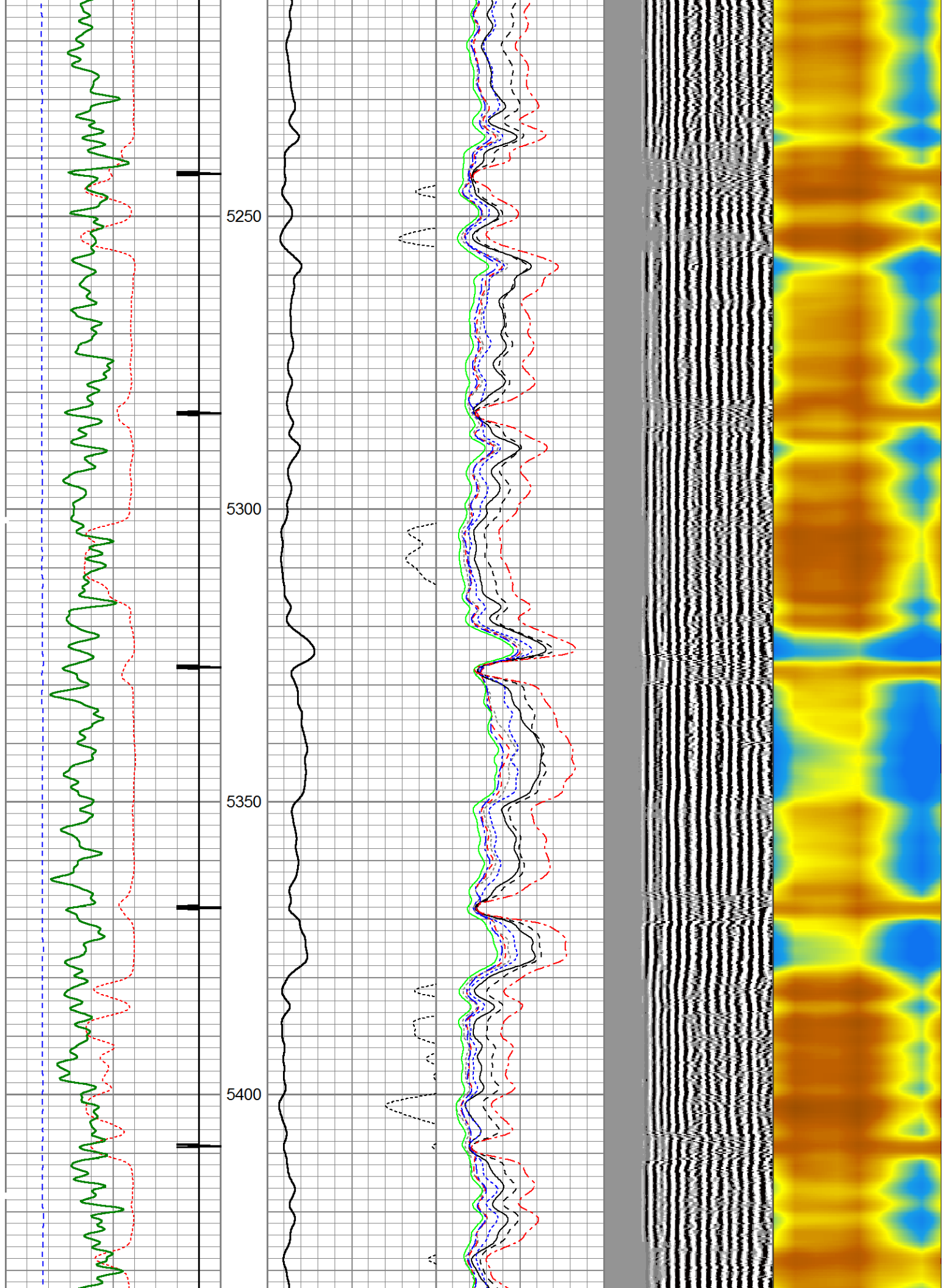


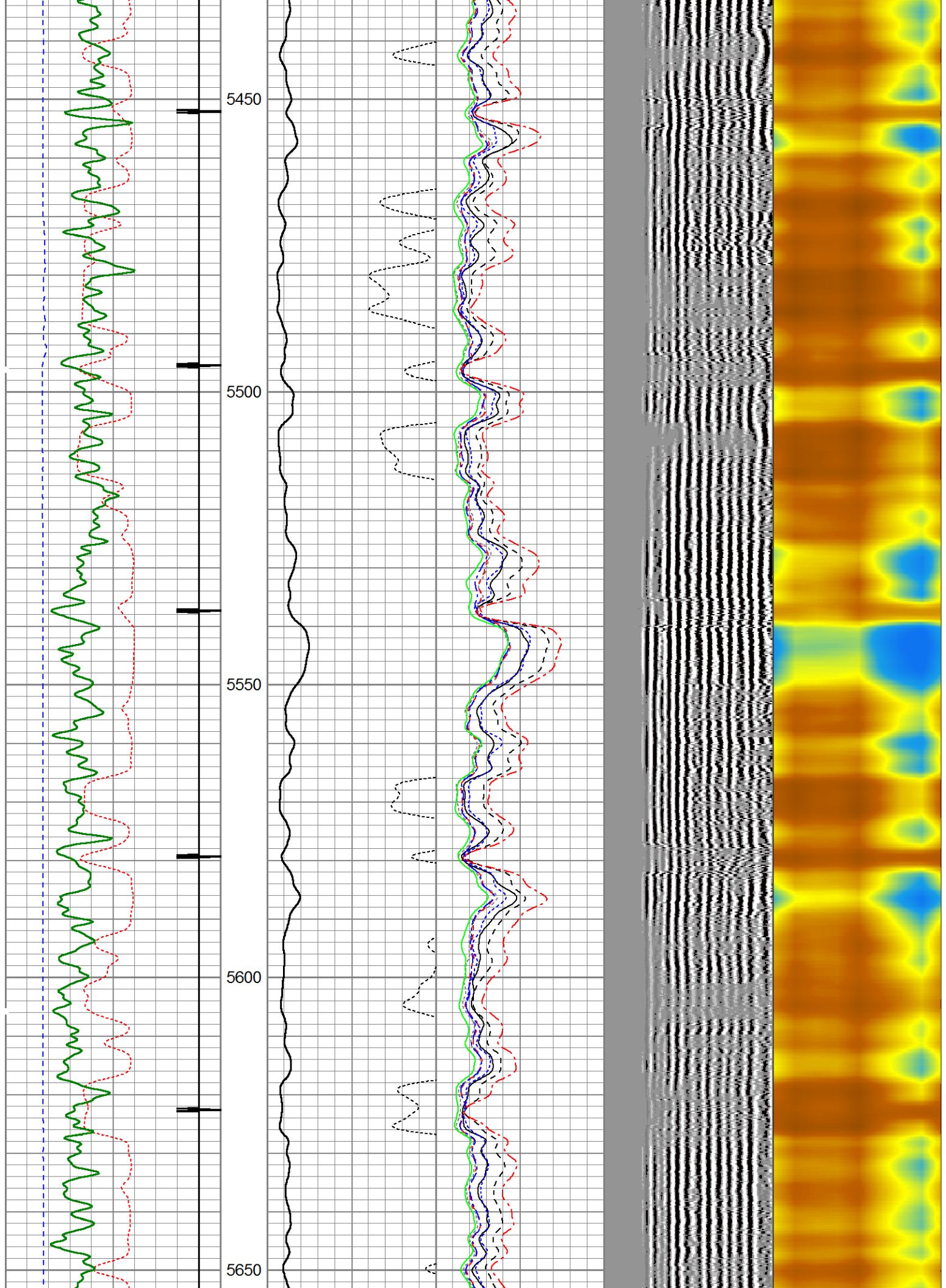


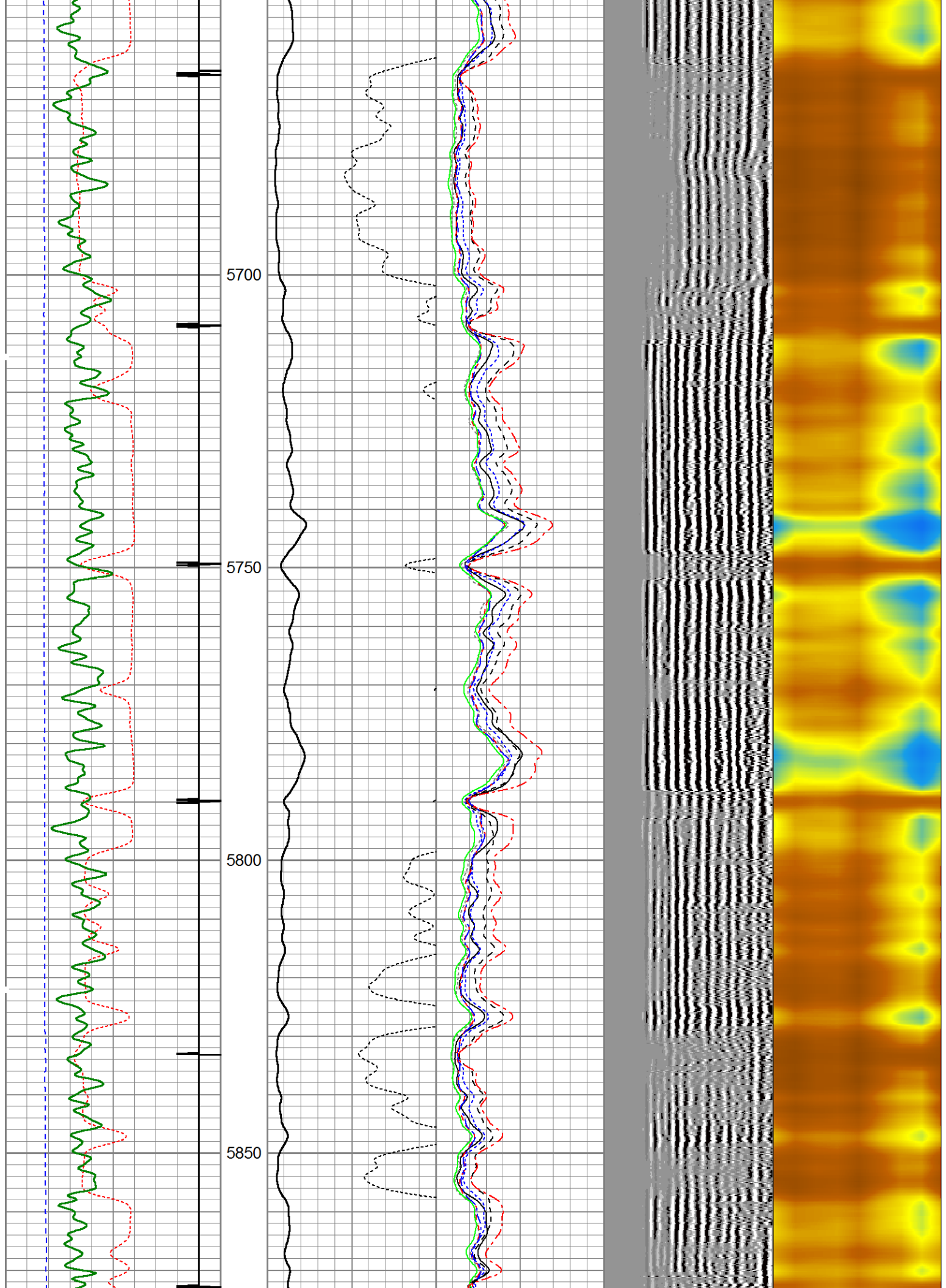


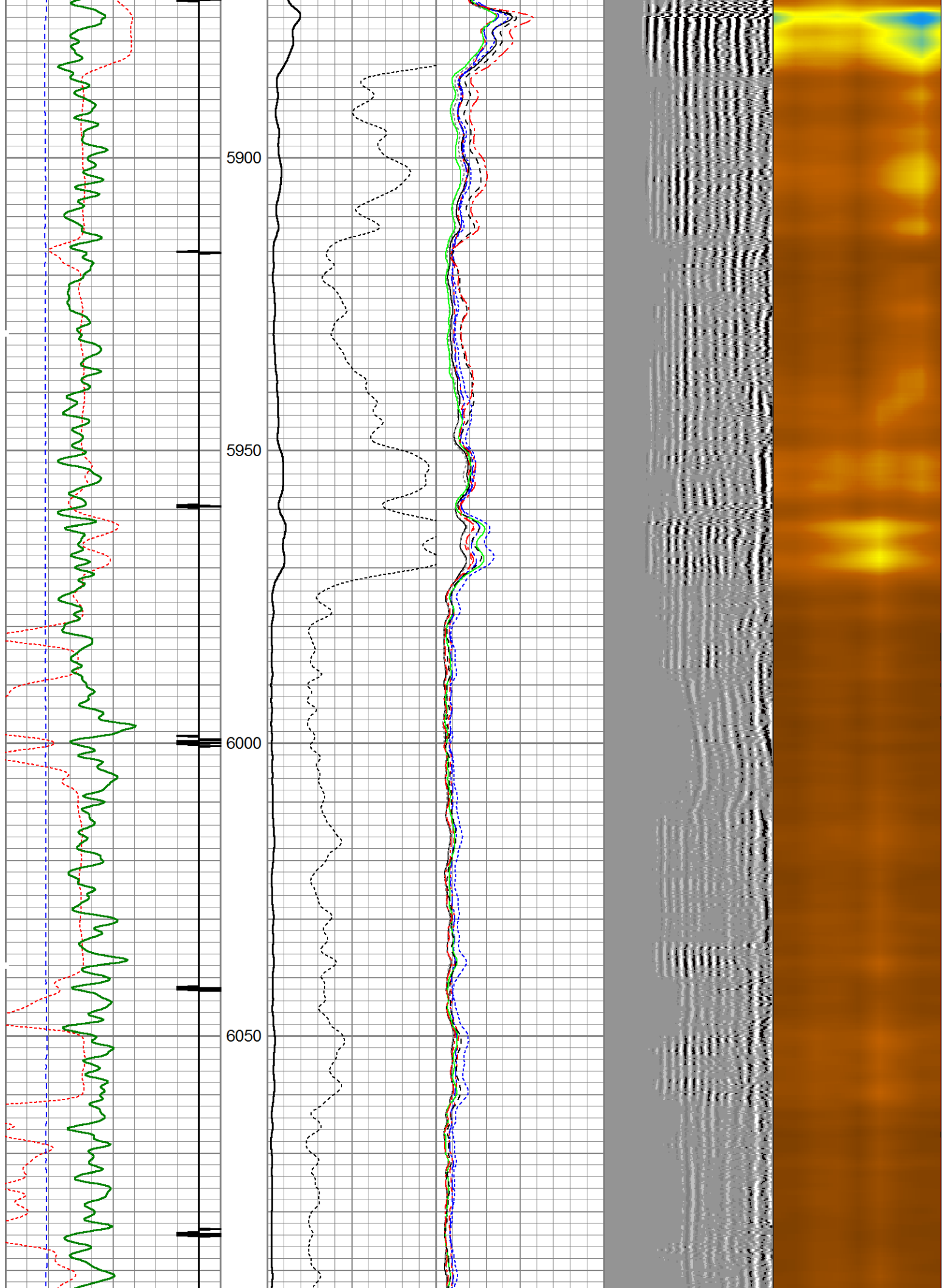


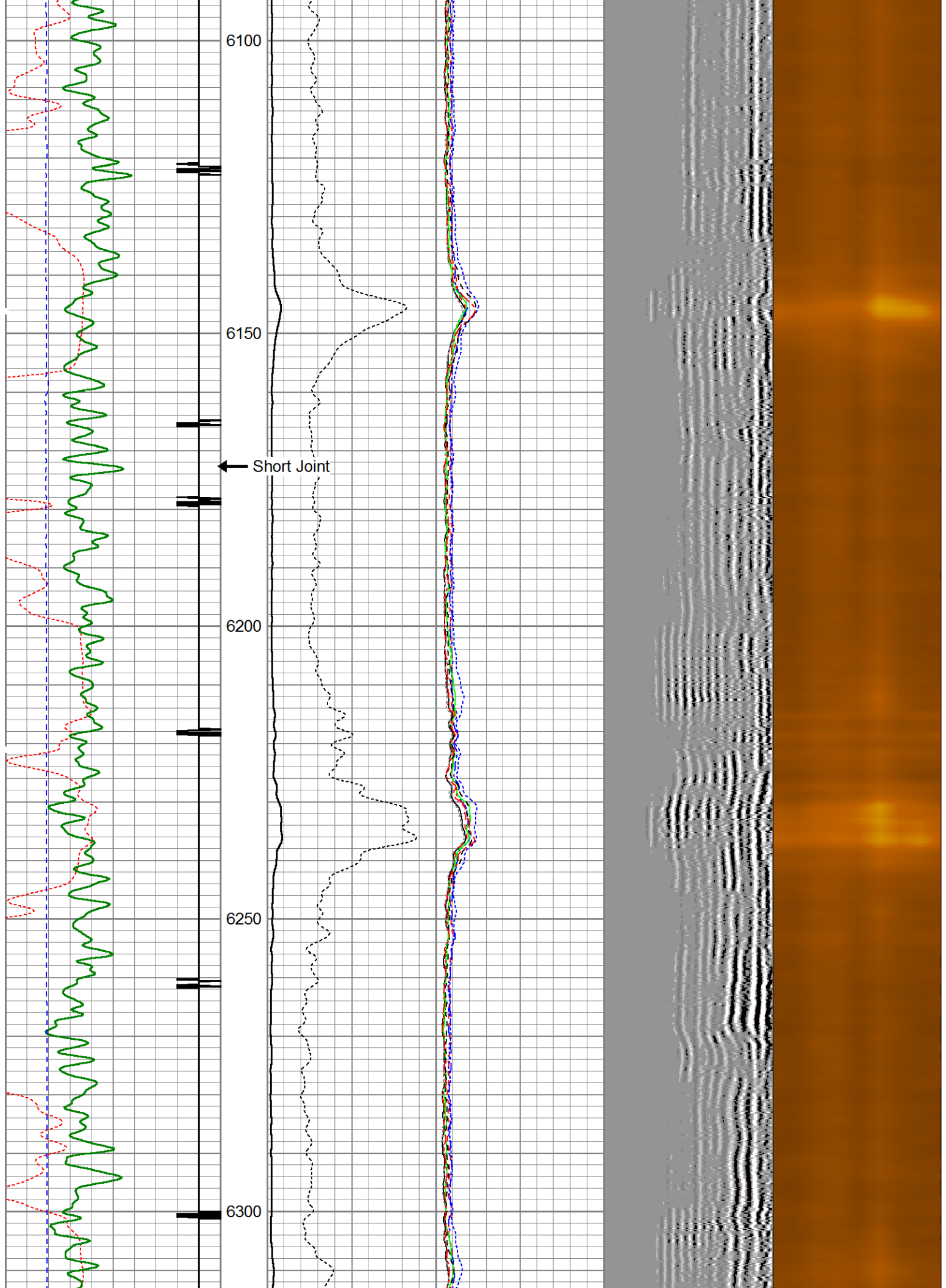


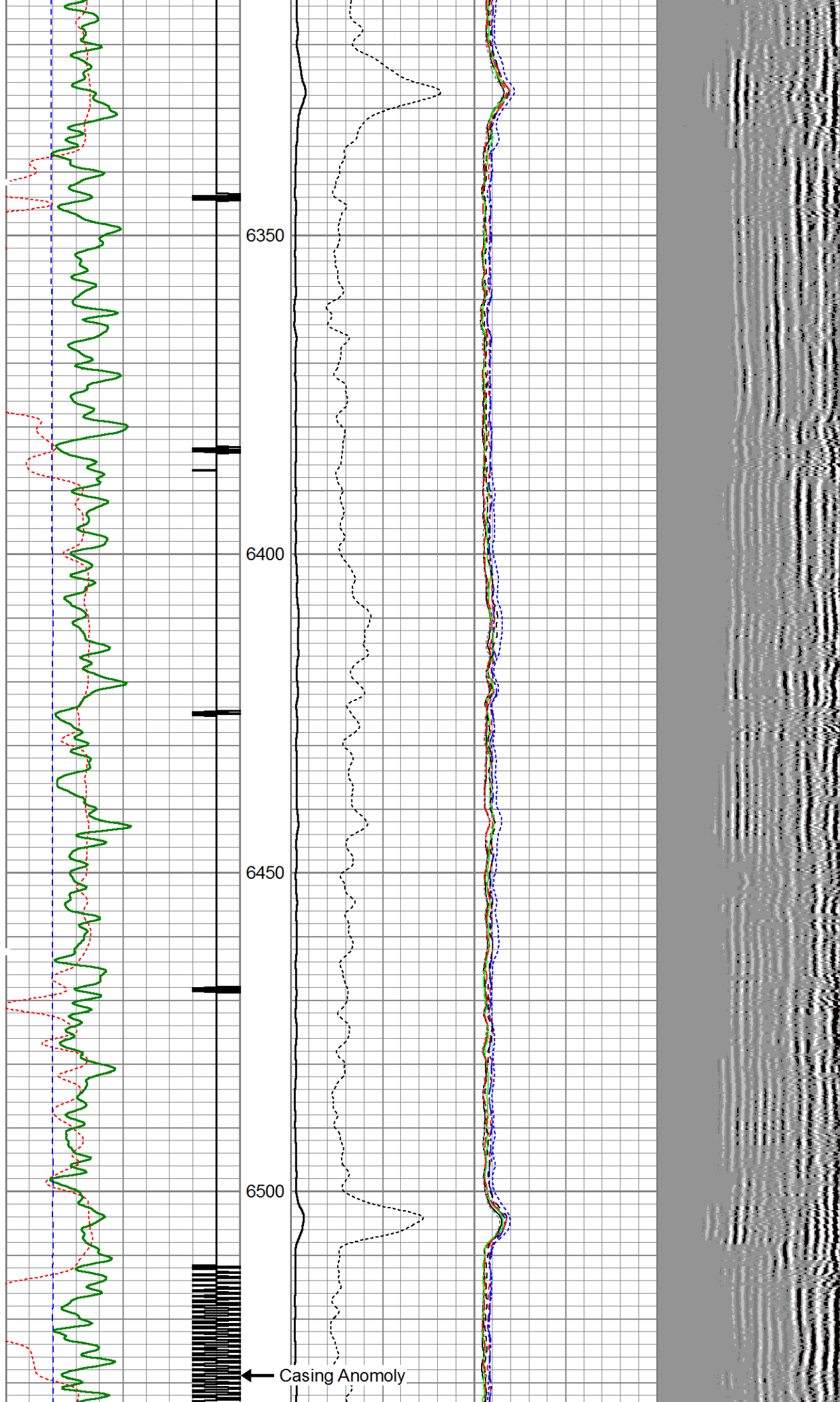


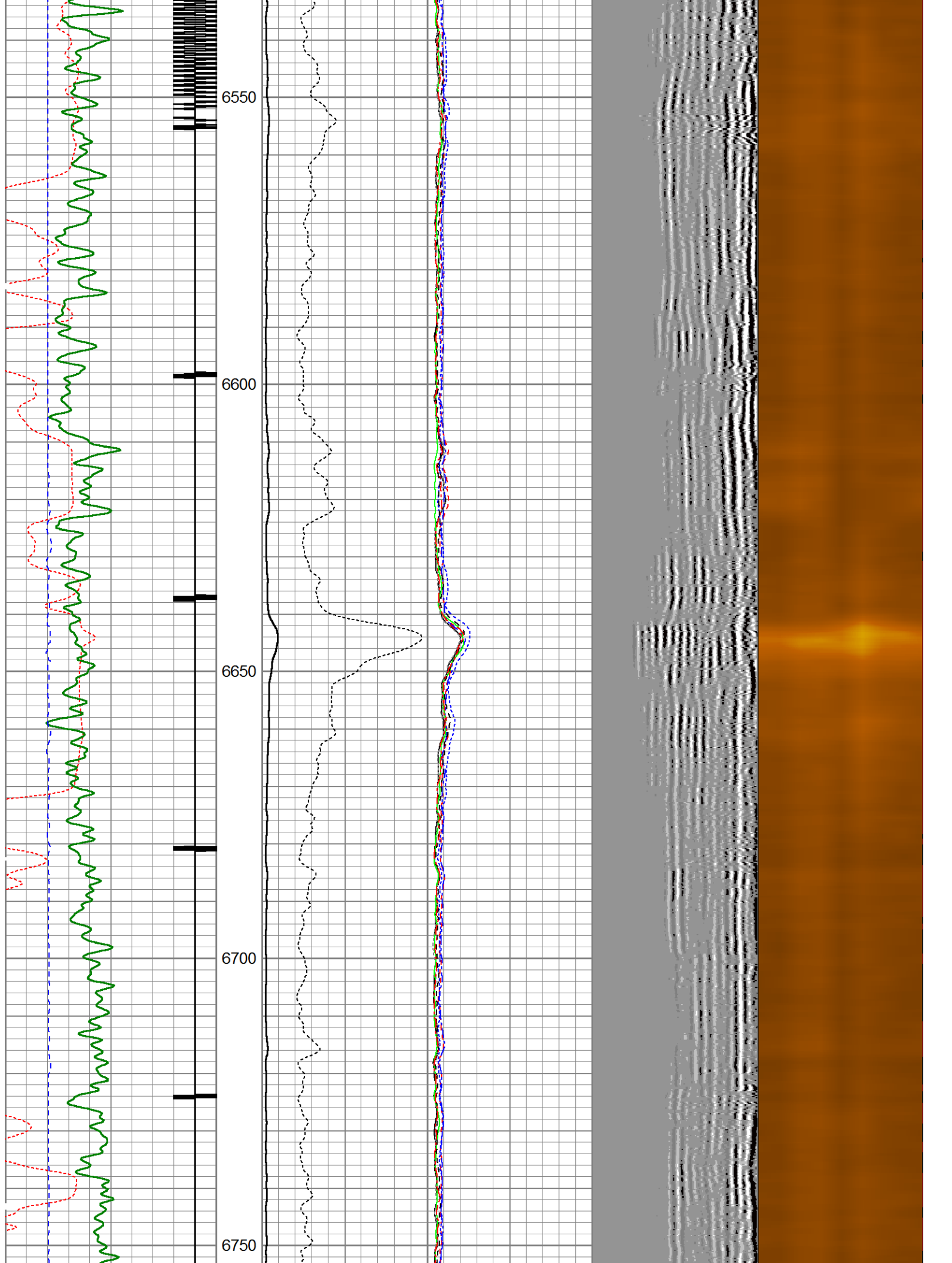


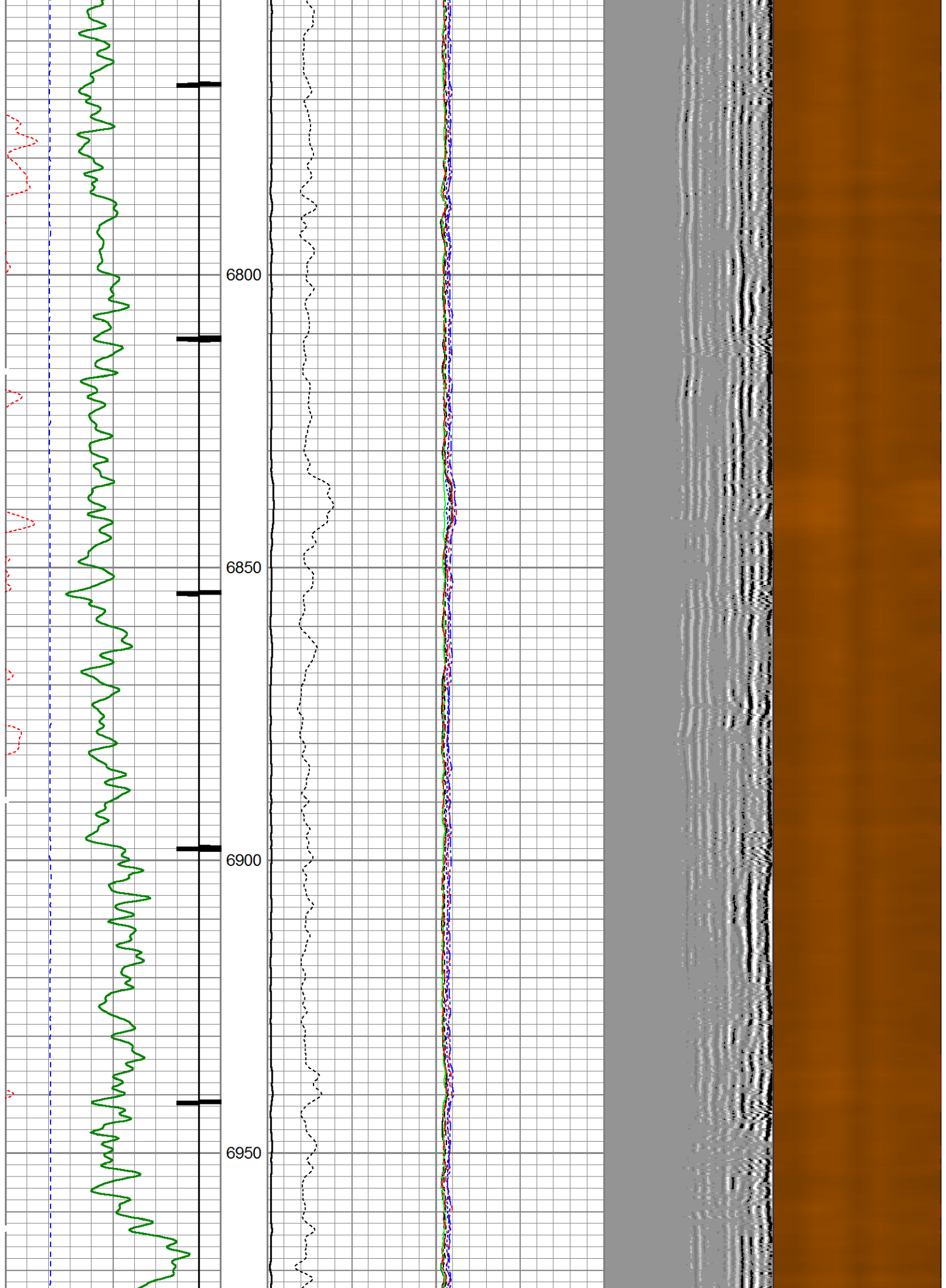


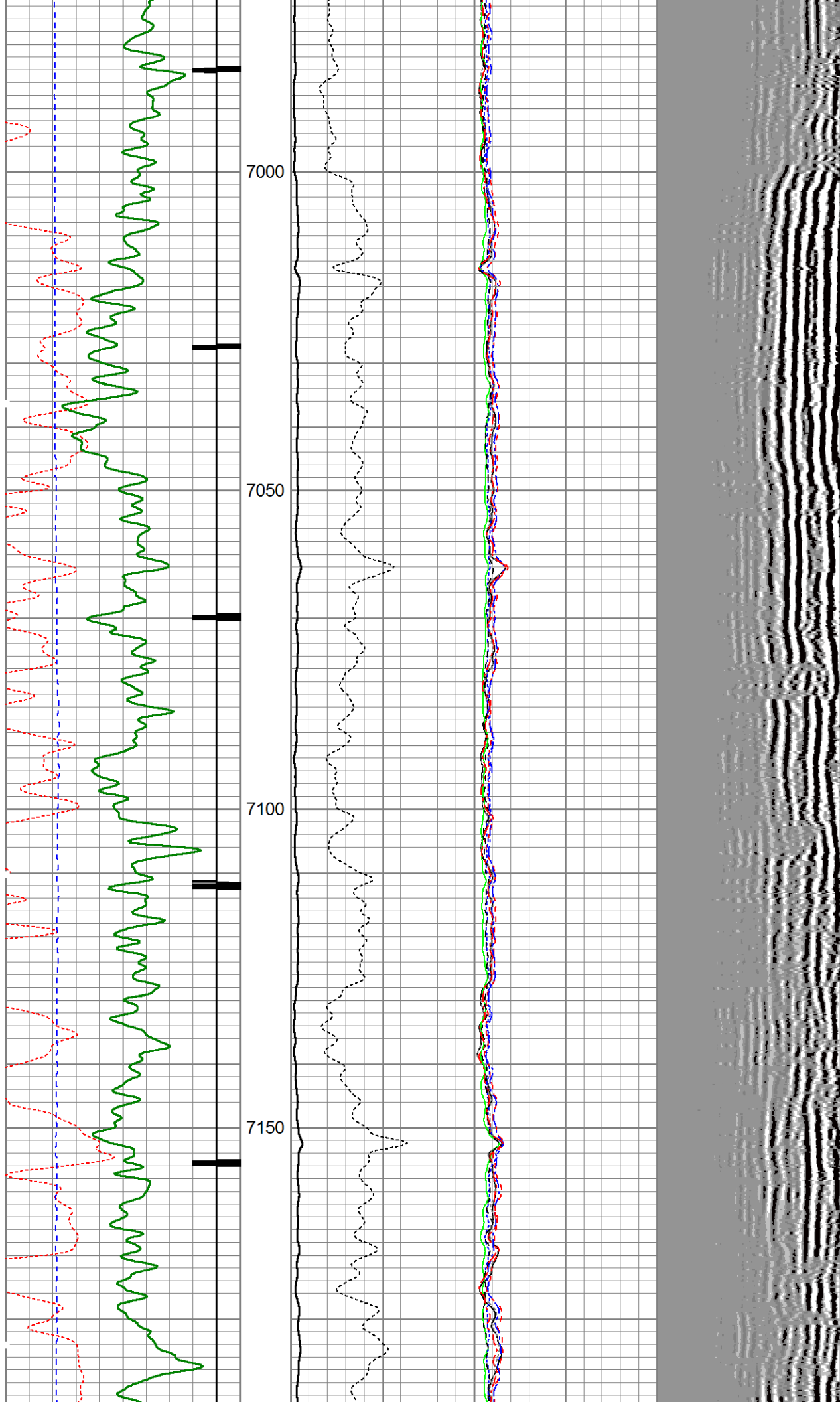


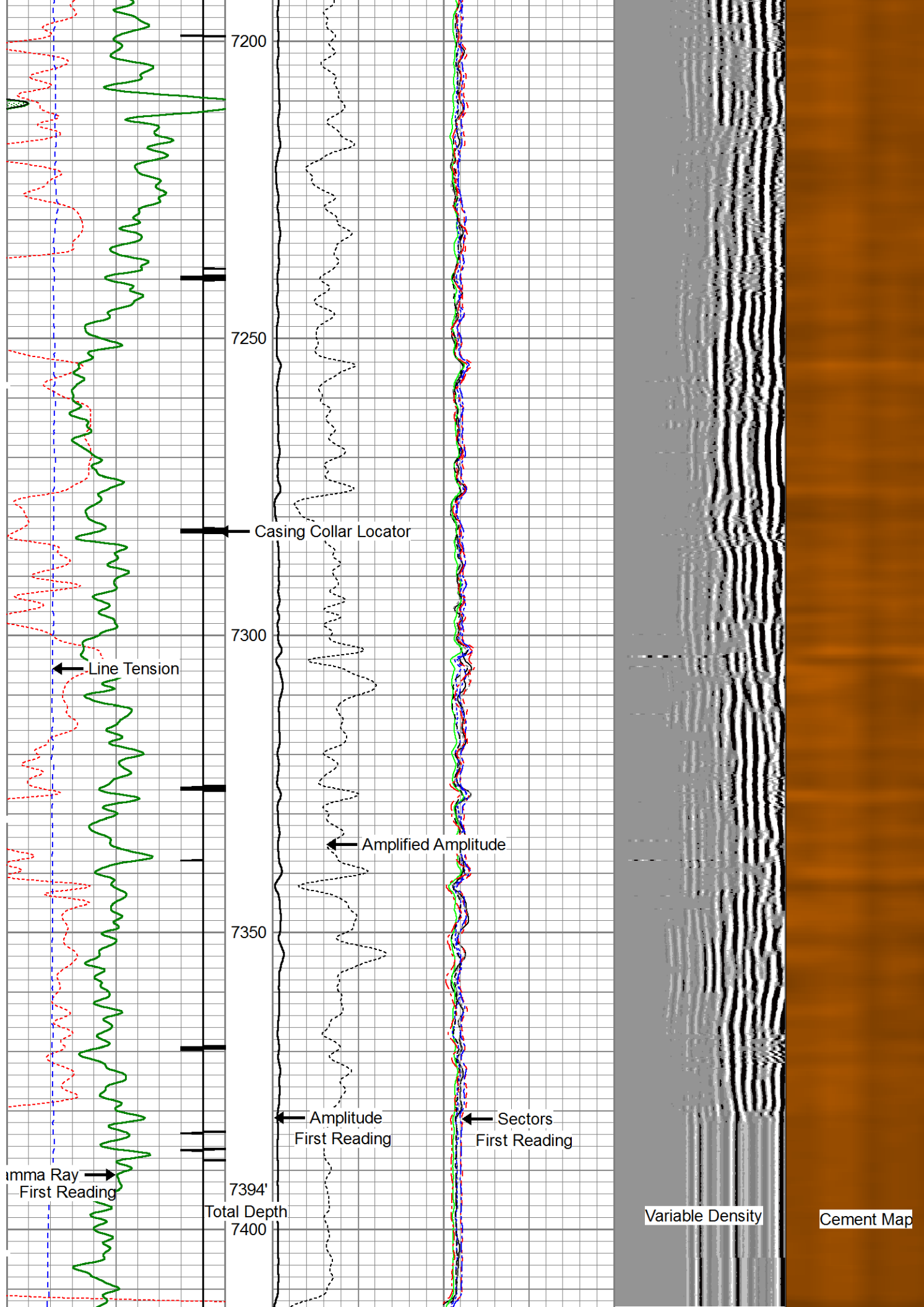


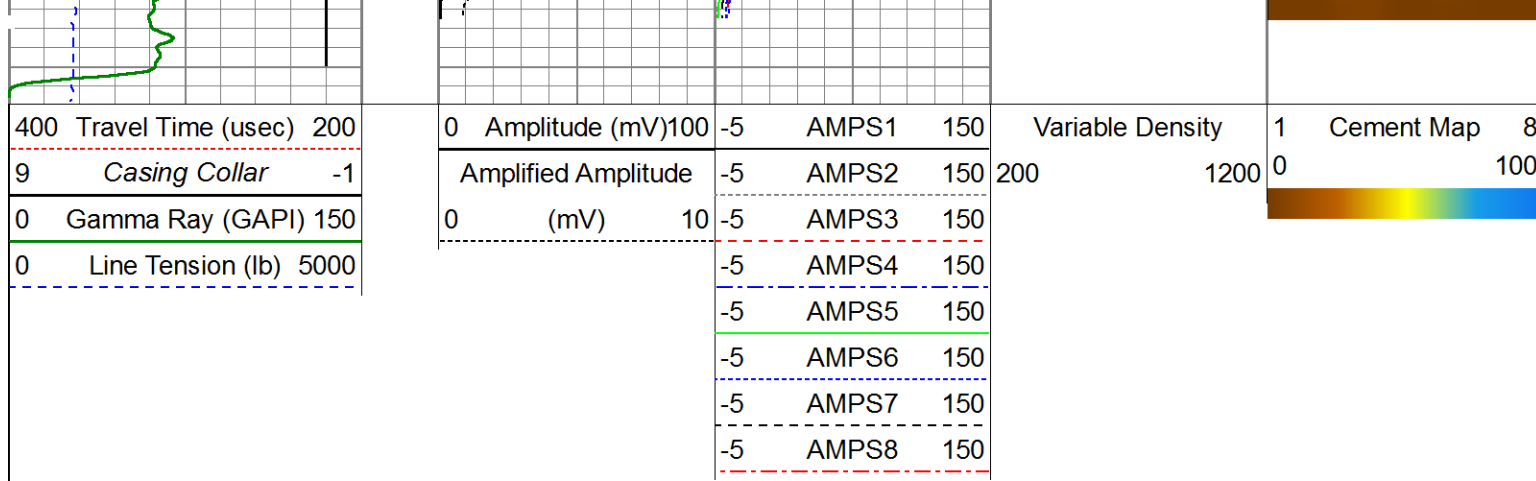






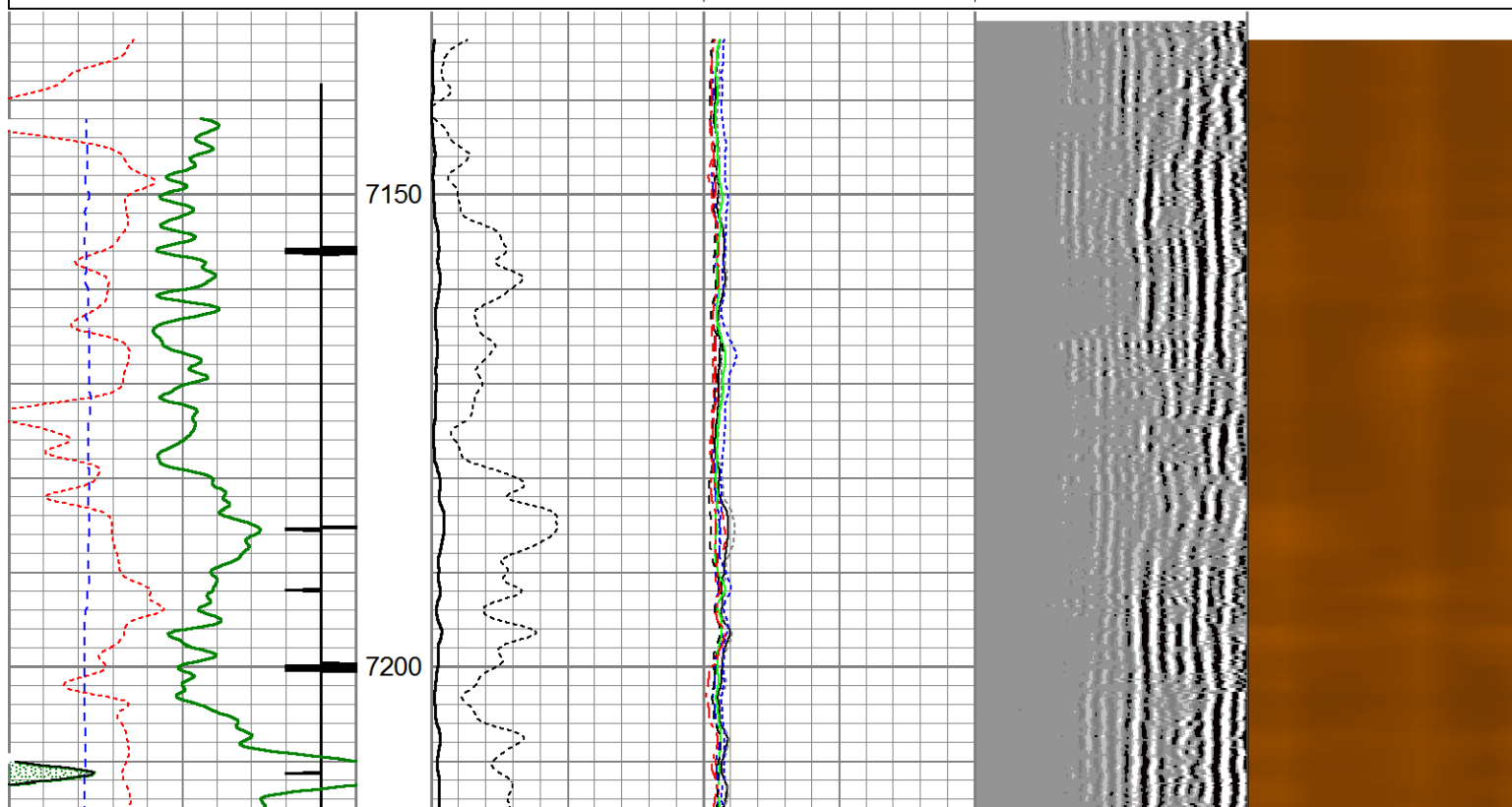
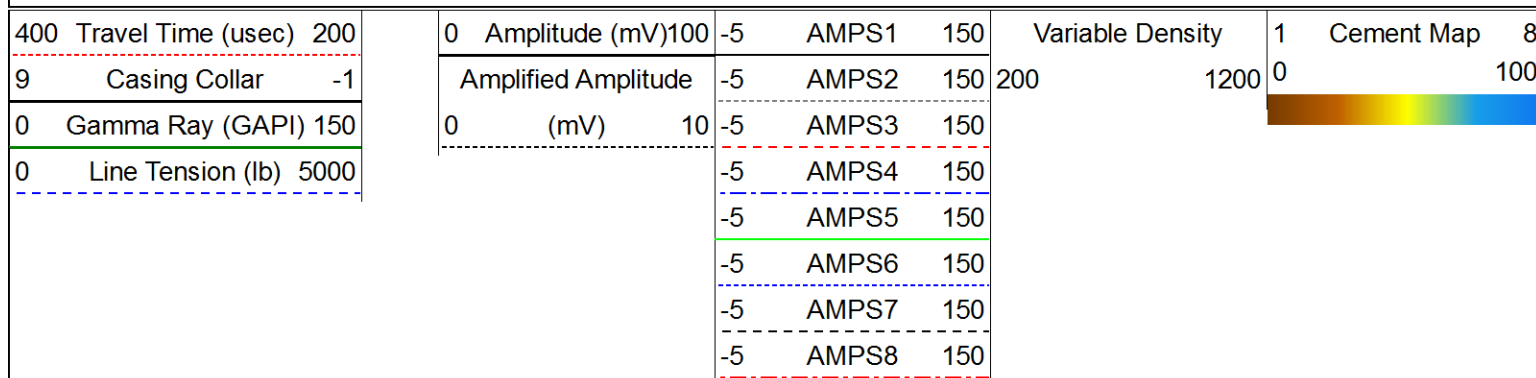


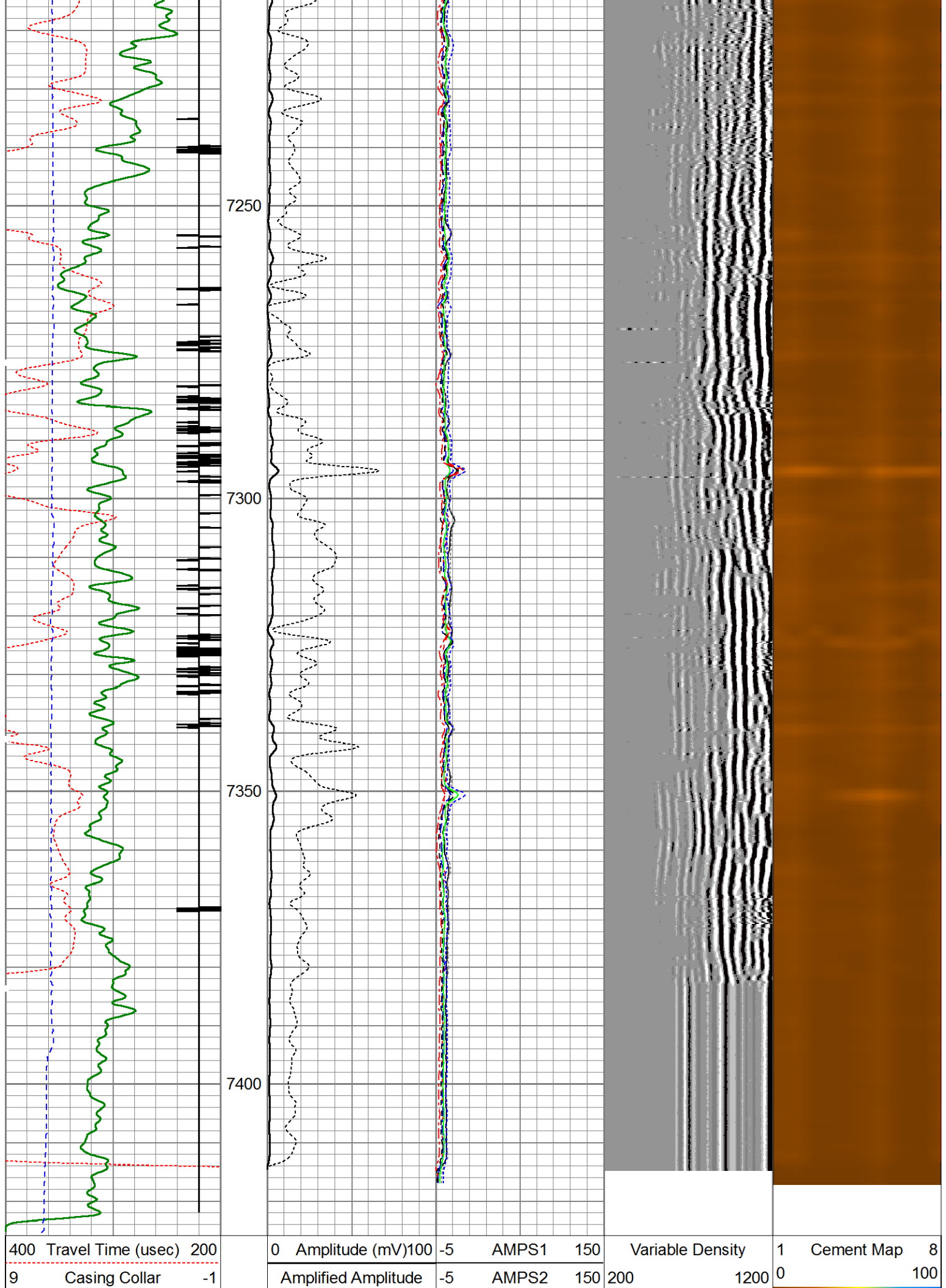




Repeat Section (0 PSI)

Database File: c:\users\engineers\desktop\noble five rivers k07-63-1hn_rcbl.db
 Dataset Pathname: pass3
 Presentation Format: scbl03
 Dataset Creation: Thu Feb 27 08:48:47 2014 by Log 7.0 B1
 Charted by: Depth in Feet scaled 1:240







Database File: c:\users\engineers\desktop\noble five rivers k07-63-1hn_rcbl.db
Dataset Pathname: pass4.7
Dataset Creation: Thu Feb 27 13:40:20 2014 by Calc 7.0 B1

Serial Number:	111111	
Tool Model:	Probe275	
Performed:	Thu Feb 27 07:45:18 2014	
Calibrator Value:	796.0	GAPI
Background Reading:	125.3	cps
Calibrator Reading:	1611.3	cps
Sensitivity:	0.5057	GAPI/cps

Serial Number:	101254	
Tool Model:	Probe	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	-101.983	ft

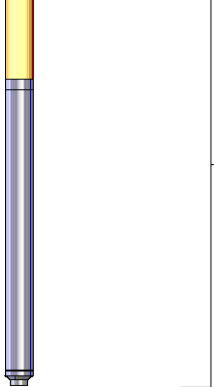
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.034	0.714	1.000	71.921	96.205	0.920
CAL	0.006	0.751				
5'	0.015	0.680	1.000	71.921	112.870	-1.787
SUM						
S1	0.062	0.408	0.000	100.000	288.880	-6.987
S2	0.048	0.398	0.000	100.000	285.310	-2.598
S3	0.031	0.375	0.000	100.000	291.388	2.140
S4	0.024	0.370	0.000	100.000	288.471	2.816
S5	0.023	0.405	0.000	100.000	261.986	-2.151
S6	0.011	0.453	0.000	100.000	226.184	1.427
S7	0.019	0.468	0.000	100.000	223.132	-0.342
S8	0.019	0.302	0.000	100.000	322.814	-2.681

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.006	0.751	1.000	0.000

Air Zero Calibration performed Mon Oct 10 09:41:05 2005:

	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)
CENT	20.28		Probe275 2.75" Centralizer	2.88	2.75	20.00
CHD	17.41		Titan Cable_head	1.00	1.44	10.00
WVF3FT	11.84		RBT-Probe (101254) 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					
WVF5FT	10.84					
CENT	7.66					
			Probe275 2.75" Centralizer	2.88	2.75	20.00
GR	4.78					

CCL	3.88				
GR	2.54		4.78	2.75	57.00
Dataset: noble five rivers k07-63-1hn_rcbl.db: field/well/run1/pass4.7 Total Length: 20.28 ft Total Weight: 197.00 lb O.D. 2.75 in					