



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

Company Noble Energy

Well NCLP PC AA04-69-1HN

Field Wattenberg

County Weld State Colorado

Location: API #: 05-123-37179

150' FNL

535' FEL

SEC 4 TWP 6N RGE 63W

Permanent Datum Ground Level Elevation 4710'

Log Measured From Kelly Bushing 30' APD

Drilling Measured From Kelly Bushing

Other Services
None

Elevation

K.B. 4740'

D.F. 4739'

G.L. 4710'

Date 09-JAN-2014

Run Number One

Depth Driller 16290

Depth Logger N/A

Bottom Logged Interval 6983

Top Log Interval Surface

Open Hole Size 8 3/4"

Type Fluid Water

Density / Viscosity 8.4

Max. Recorded Temp. NA

Estimated Cement Top 1694'

Time Well Ready 6:00

Time Logger on Bottom 8:30

Equipment Number 13034

Location Brighton, CO

Recorded By Jarod Lee

Witnessed By Bill Mansfield

Borehole Record

Run Number

Bit

From

To

Size

Weight

From

To

Tubing Record

Run Number

Bit

From

To

Size

Weight

From

To

Casing Record

Run Number

Bit

From

To

Size

Weight

From

To

Surface String

Run Number

Bit

From

To

Size

Weight

From

To

Prot. String

Run Number

Bit

From

To

Size

Weight

From

To

Production String

Run Number

Bit

From

To

Size

Weight

From

To

Liner

Run Number

Bit

From

To

Size

Weight

From

To

Short Joint

Run Number

Bit

From

To

Size

Weight

From

To

Comments

Well Correlated to 30' Drilling Rig KB

Main Pass and Repeat Pass logged with zero Pressure on surface

Thank You for using Allied Wireline

(303)659-4609



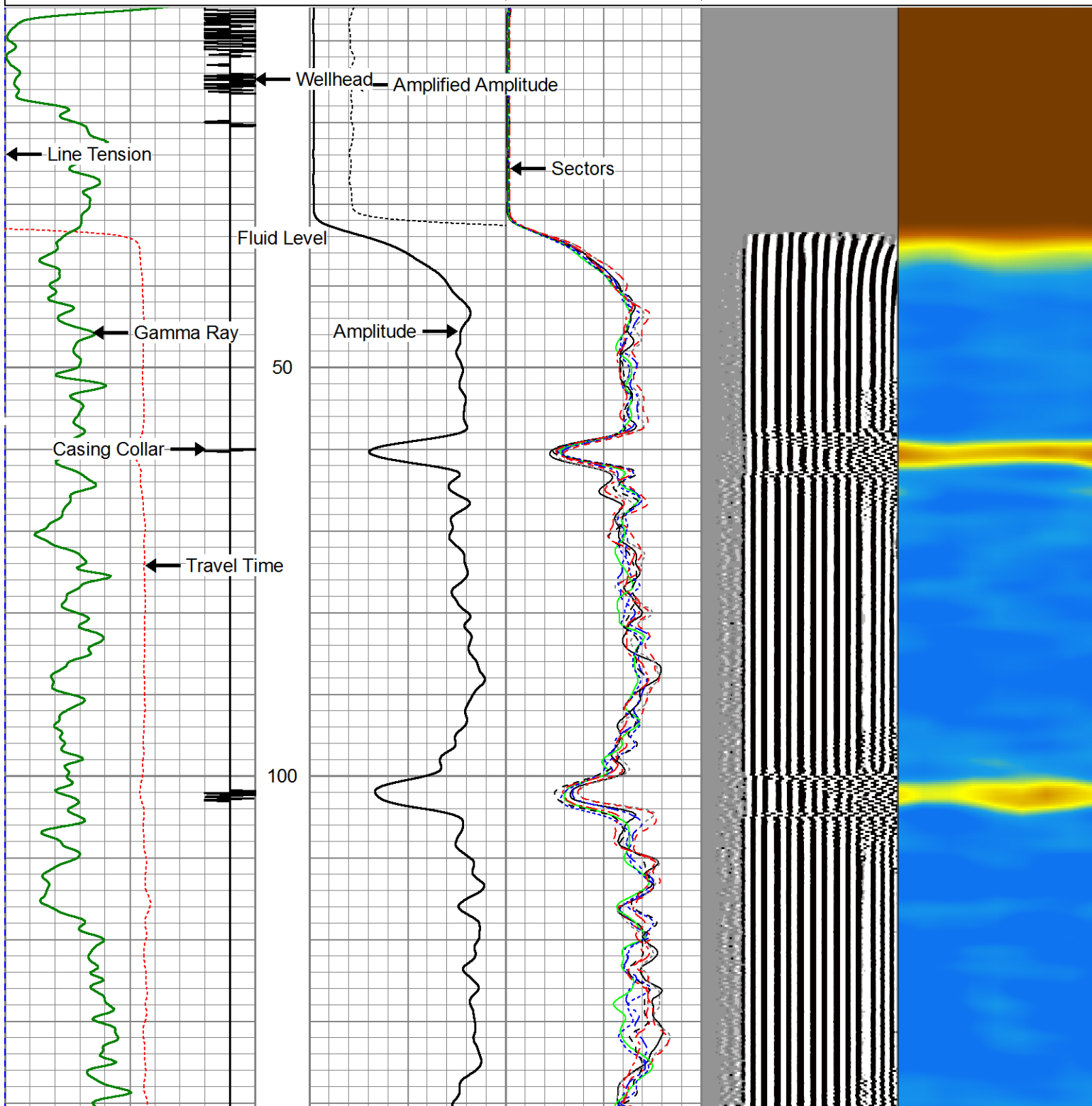
Main Pass (0 PSI)

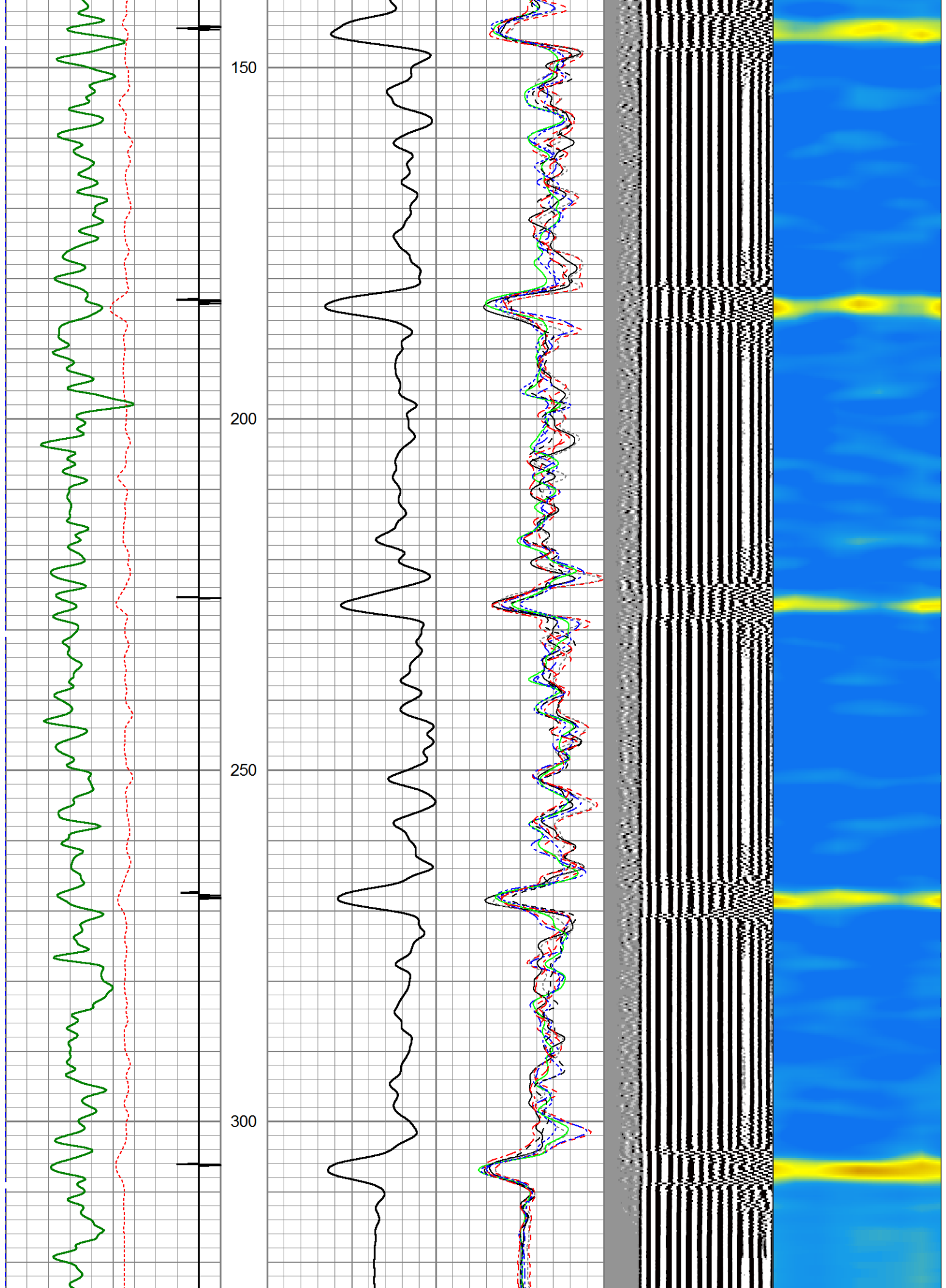
Database File: k:\noble\nc\p pc aa04-69-1hn_rcbl\noble nc\p pc aa04-69-1hn.db
Dataset Pathname: merge1.6
Presentation Format: scbl03
Dataset Creation: Mon Jan 13 10:45:54 2014 by Calc Sondex V7.03
Charted by: Depth in Feet scaled 1:200

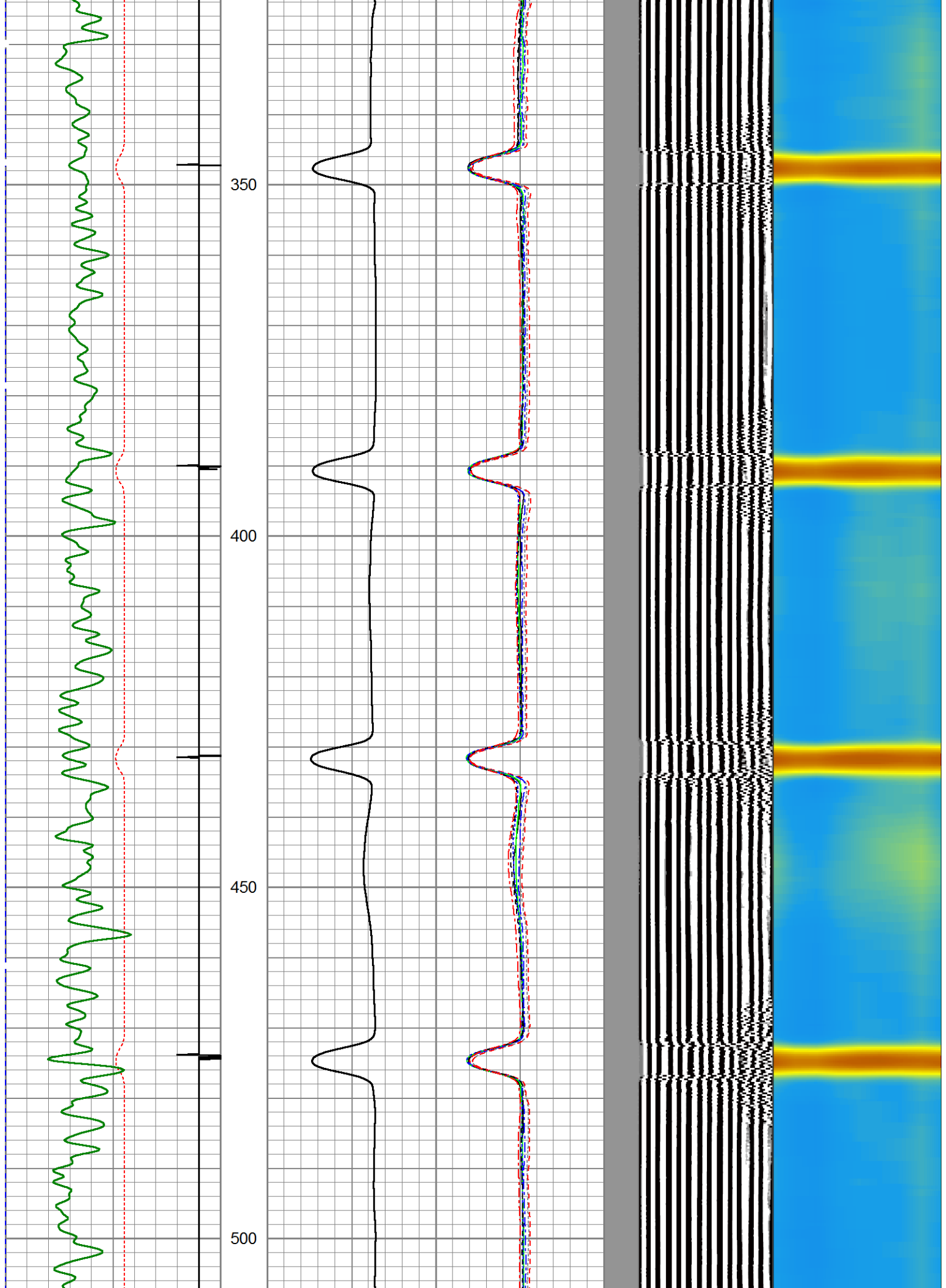
400 Travel Time (usec) 200
9 Casing Collar -1
0 Gamma Ray (GAPI) 150
0 Line Tension (lb) 5000

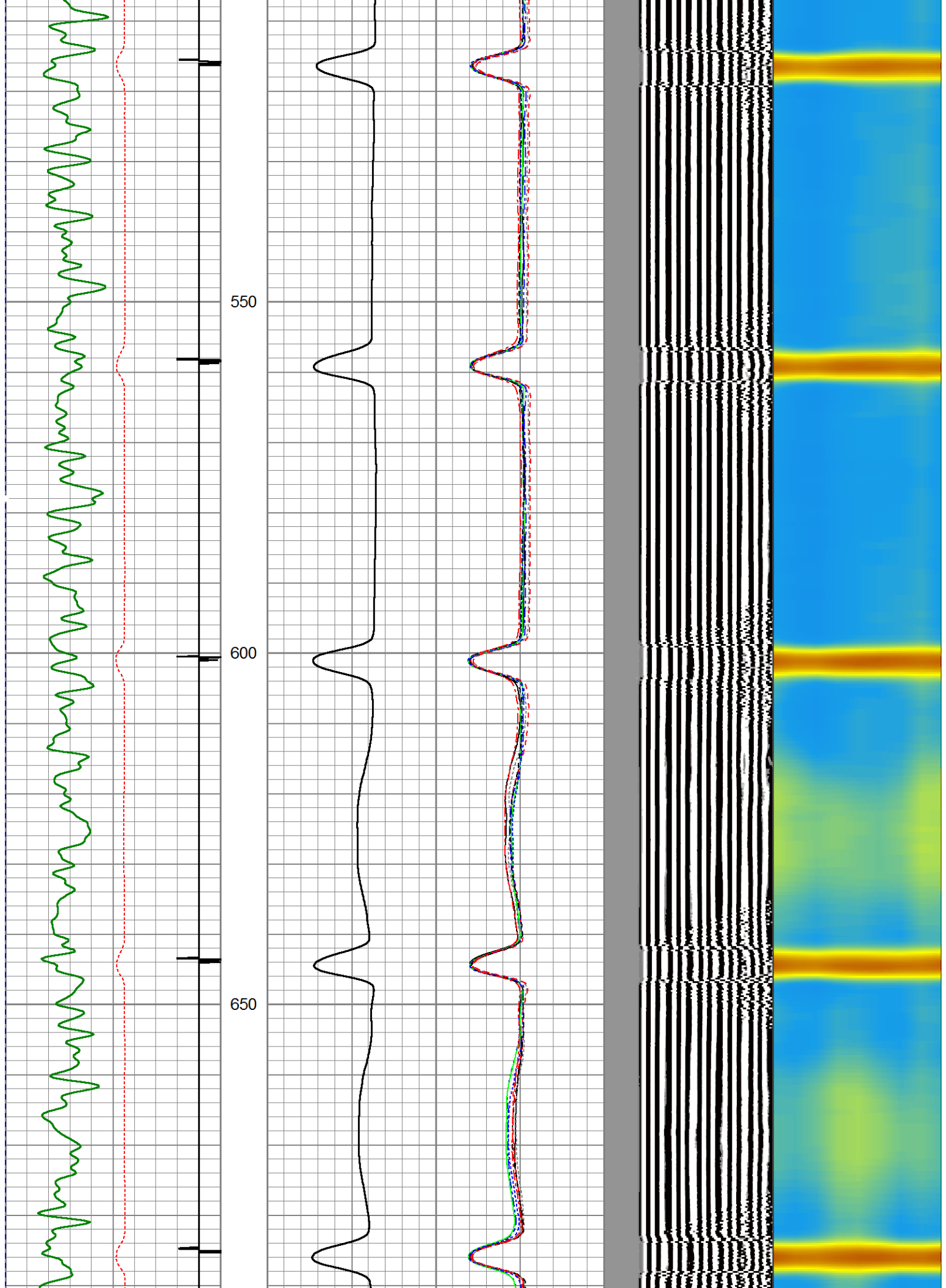
0	Amplitude (mV)	100	-5	AMPS1	150
Amplified Amplitude		-5	AMPS2	150	
0	(mV)	10	-5	AMPS3	150
		-5	AMPS4	150	
		-5	AMPS5	150	
		-5	AMPS6	150	
		-5	AMPS7	150	
		-5	AMPS8	150	

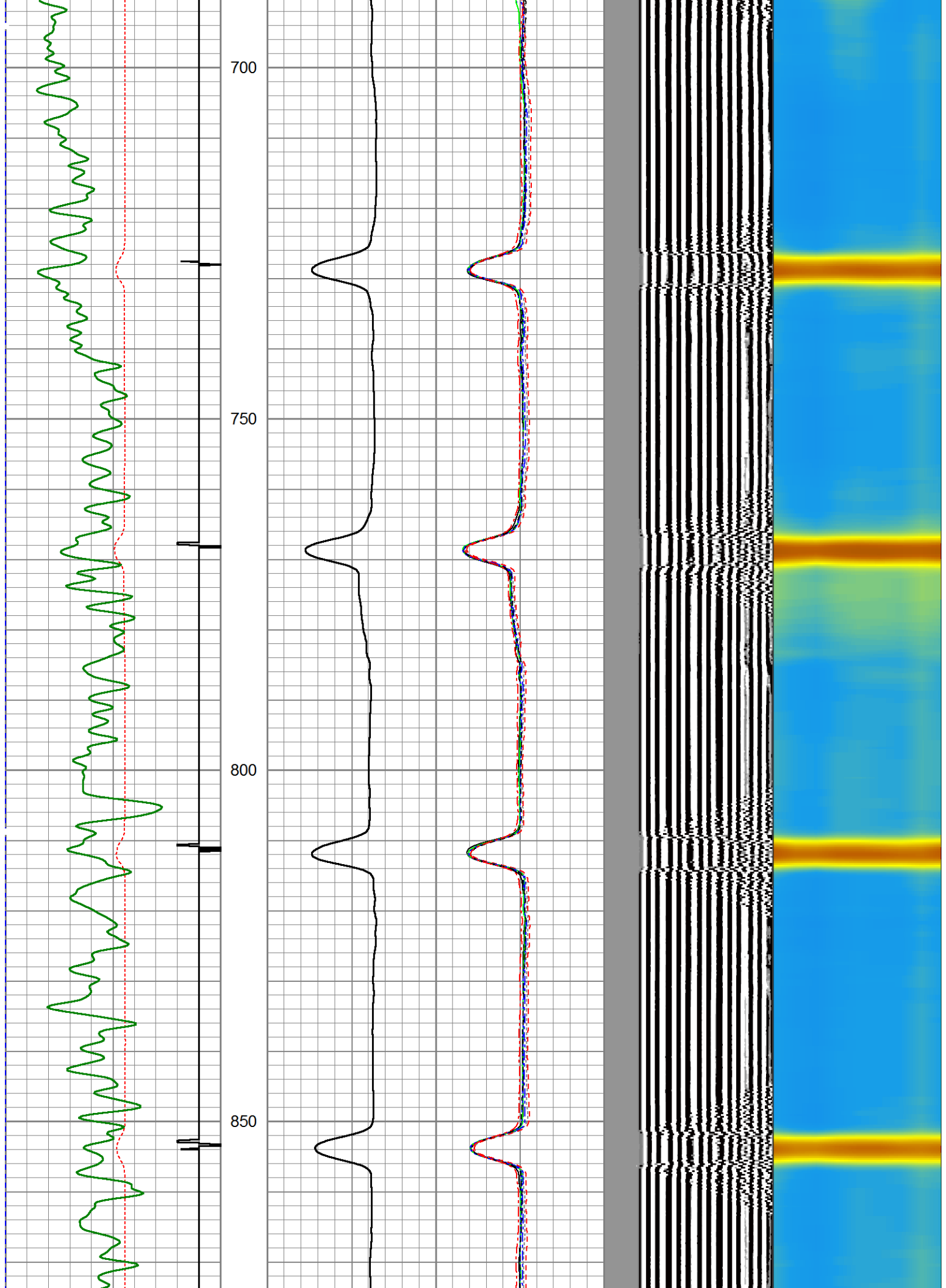
Variable Density 200 1200
1 Cement Map 8
0 100

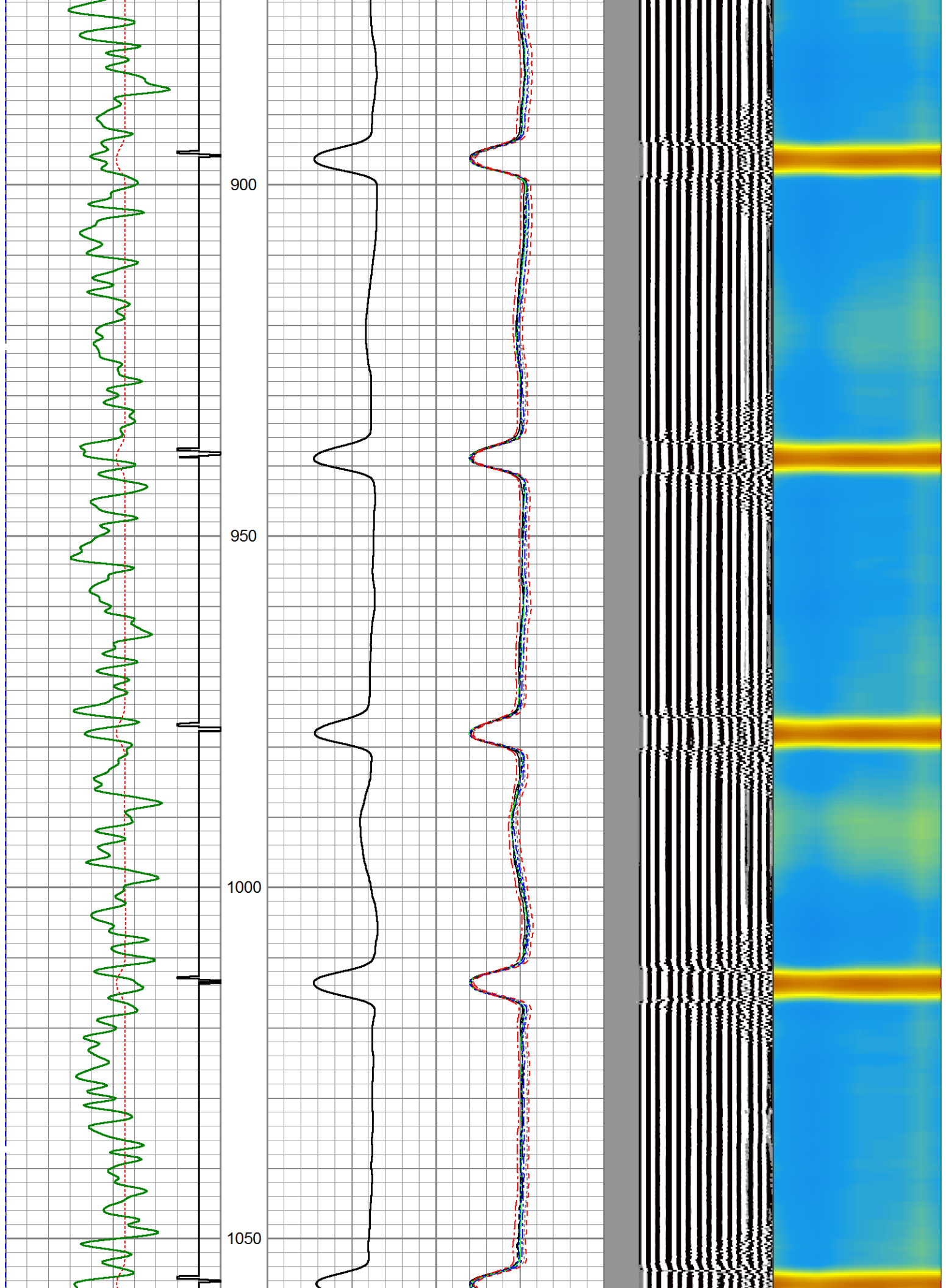


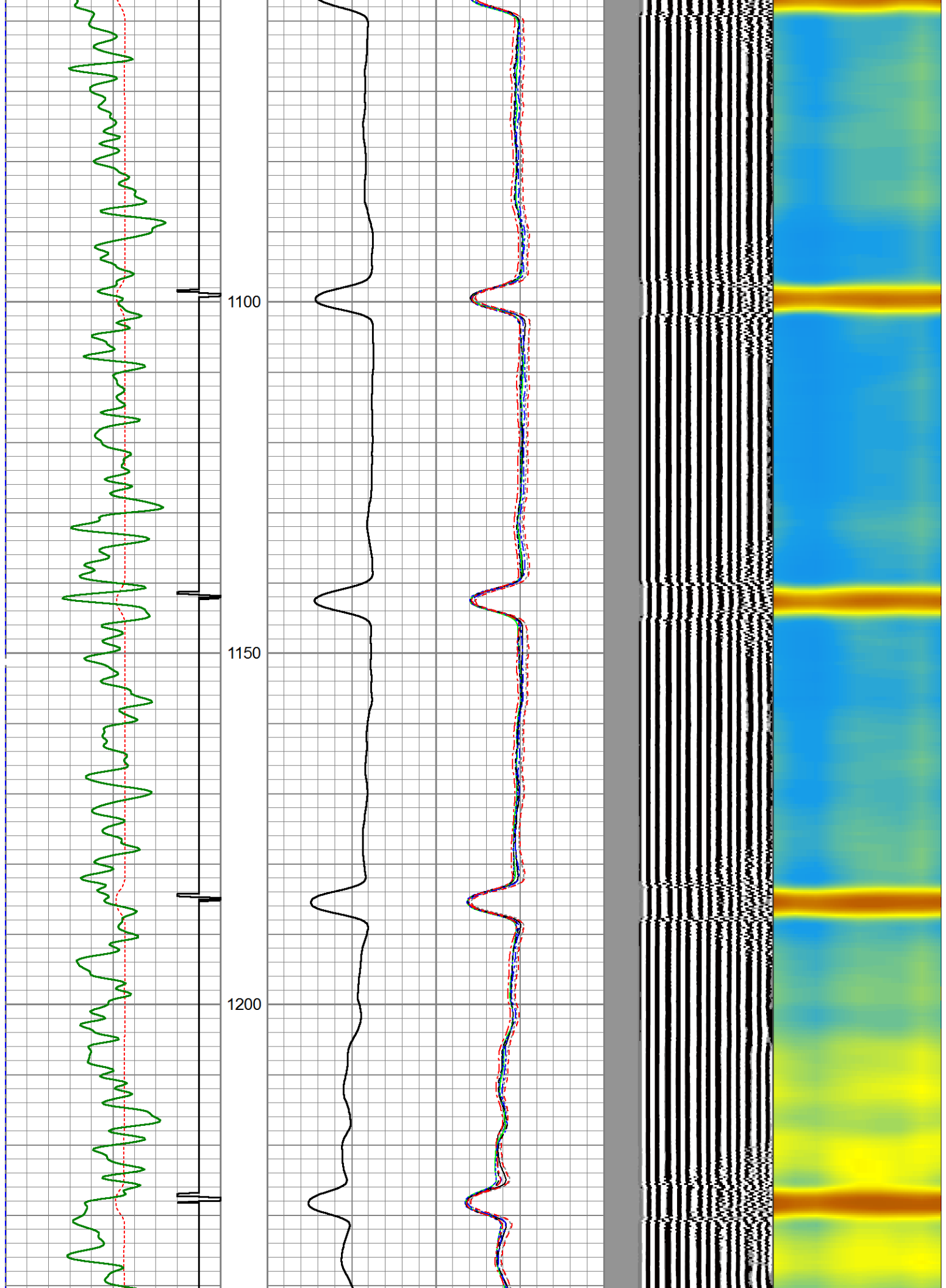


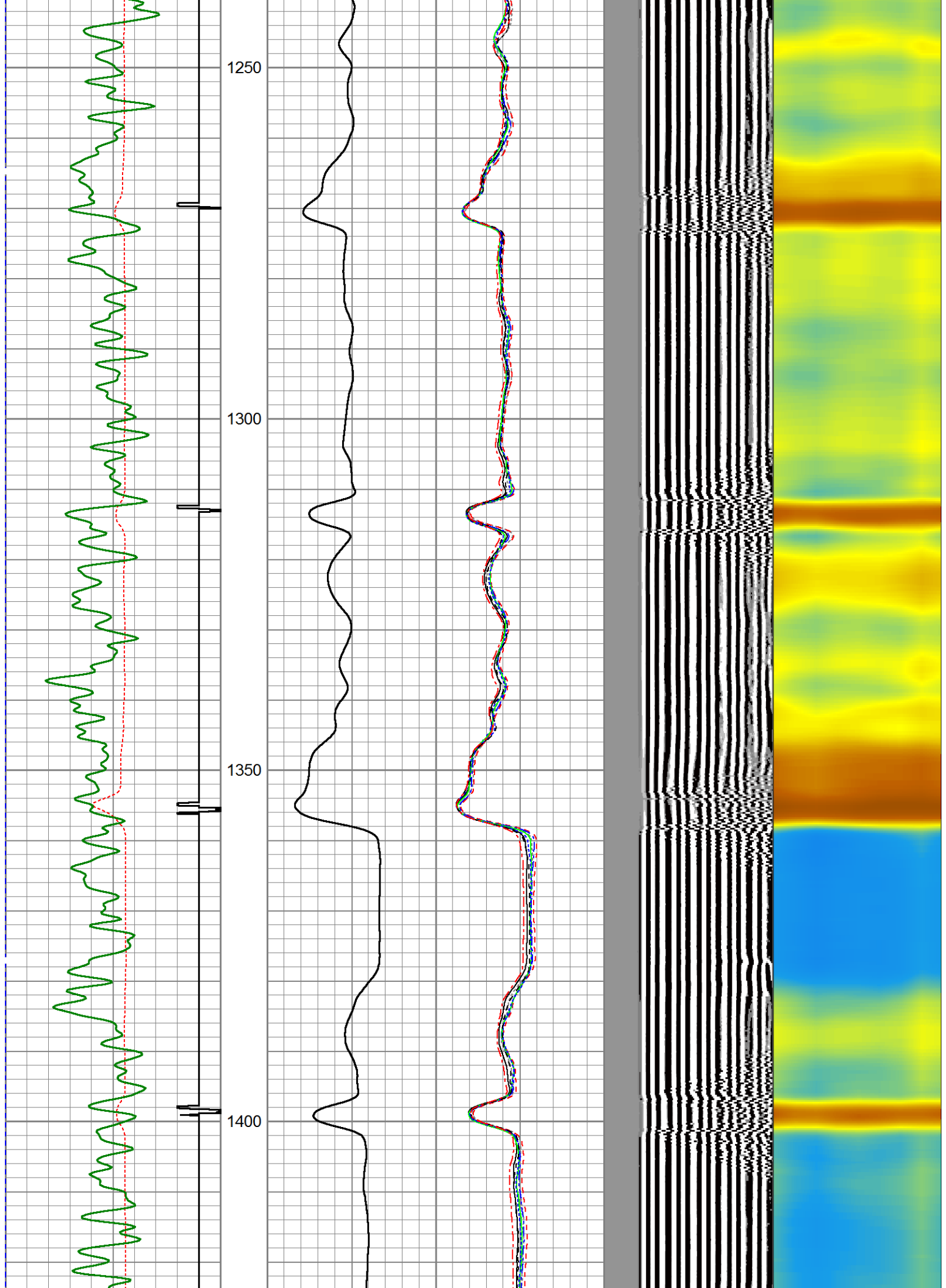


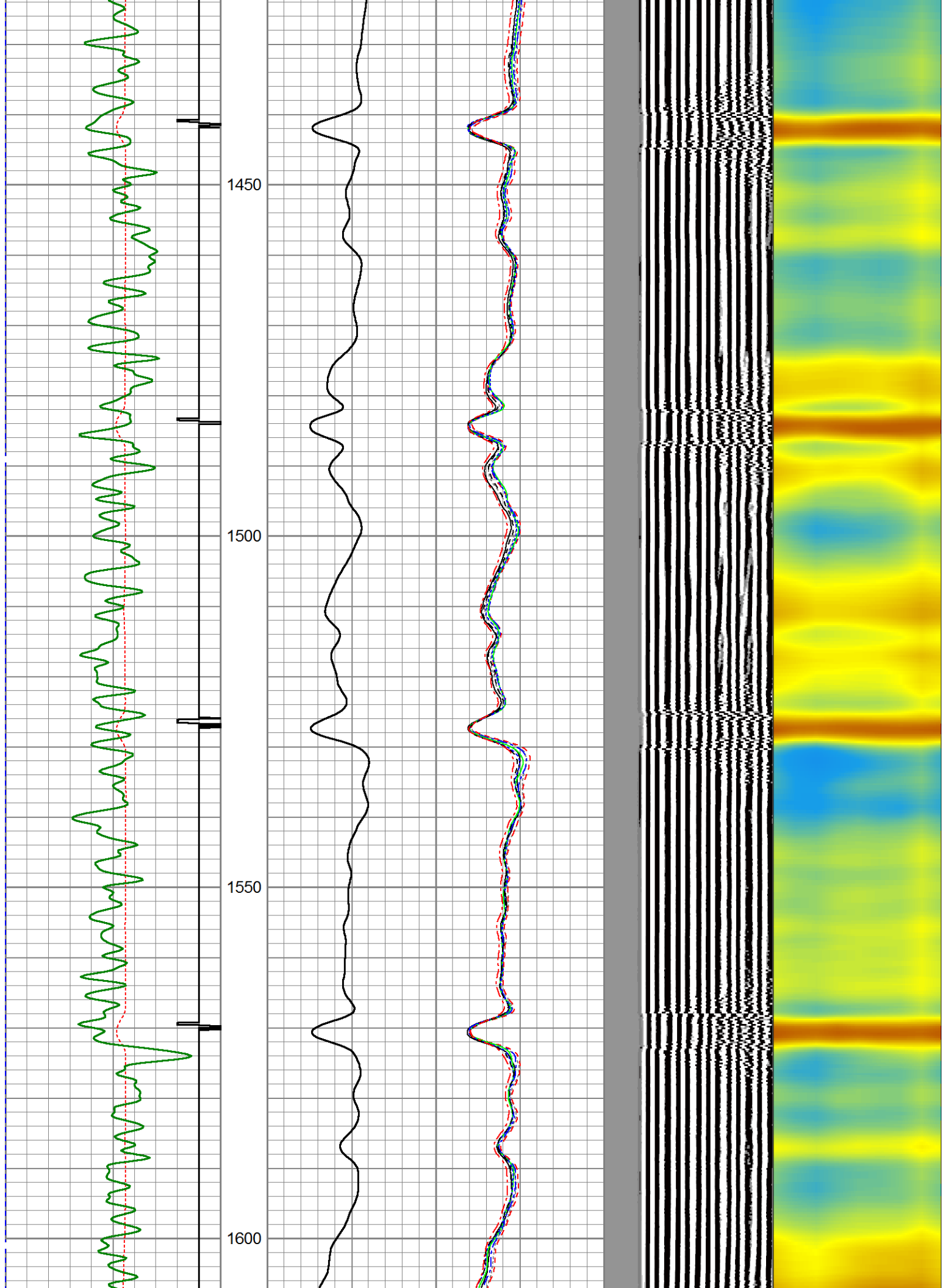


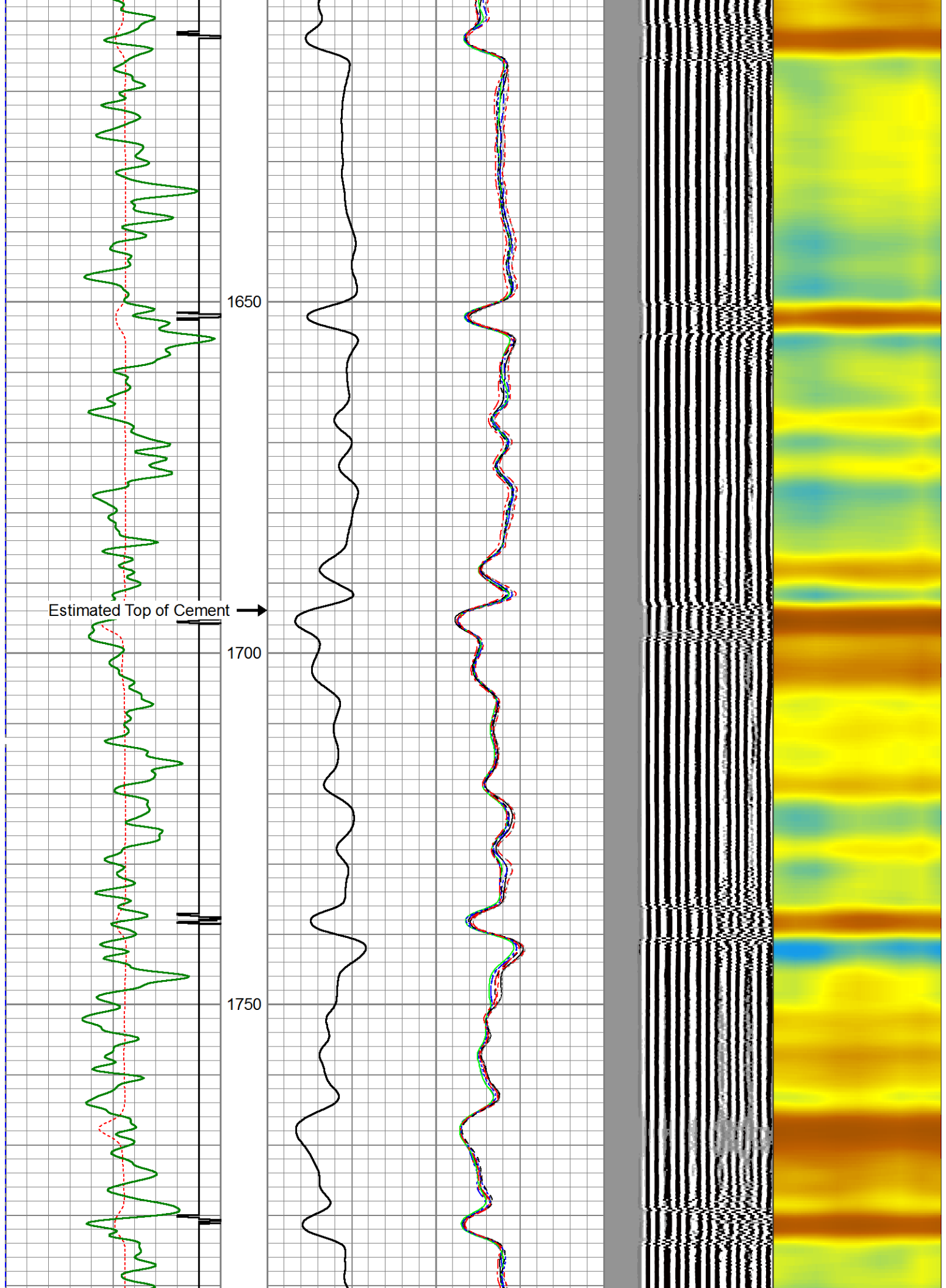


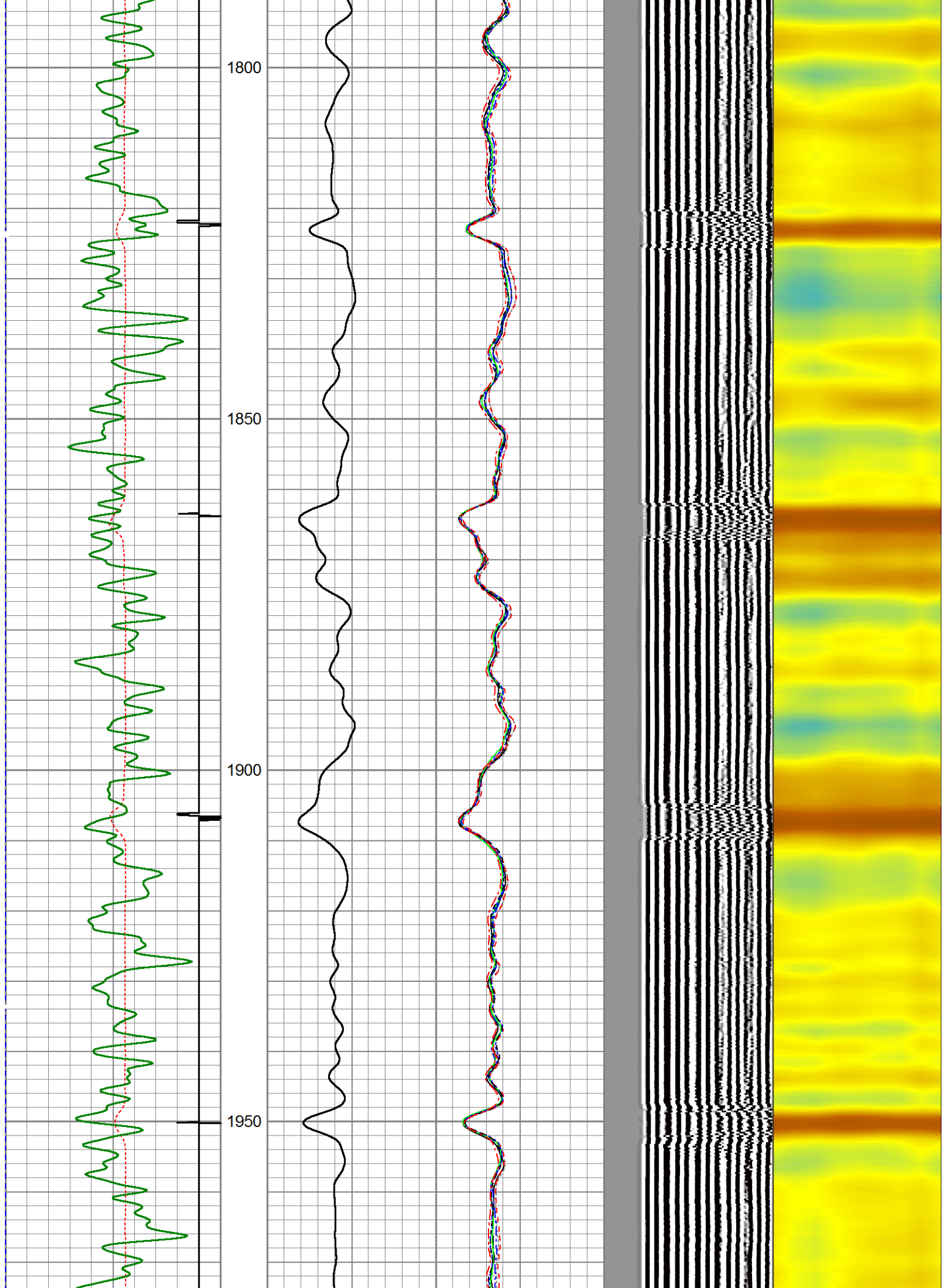


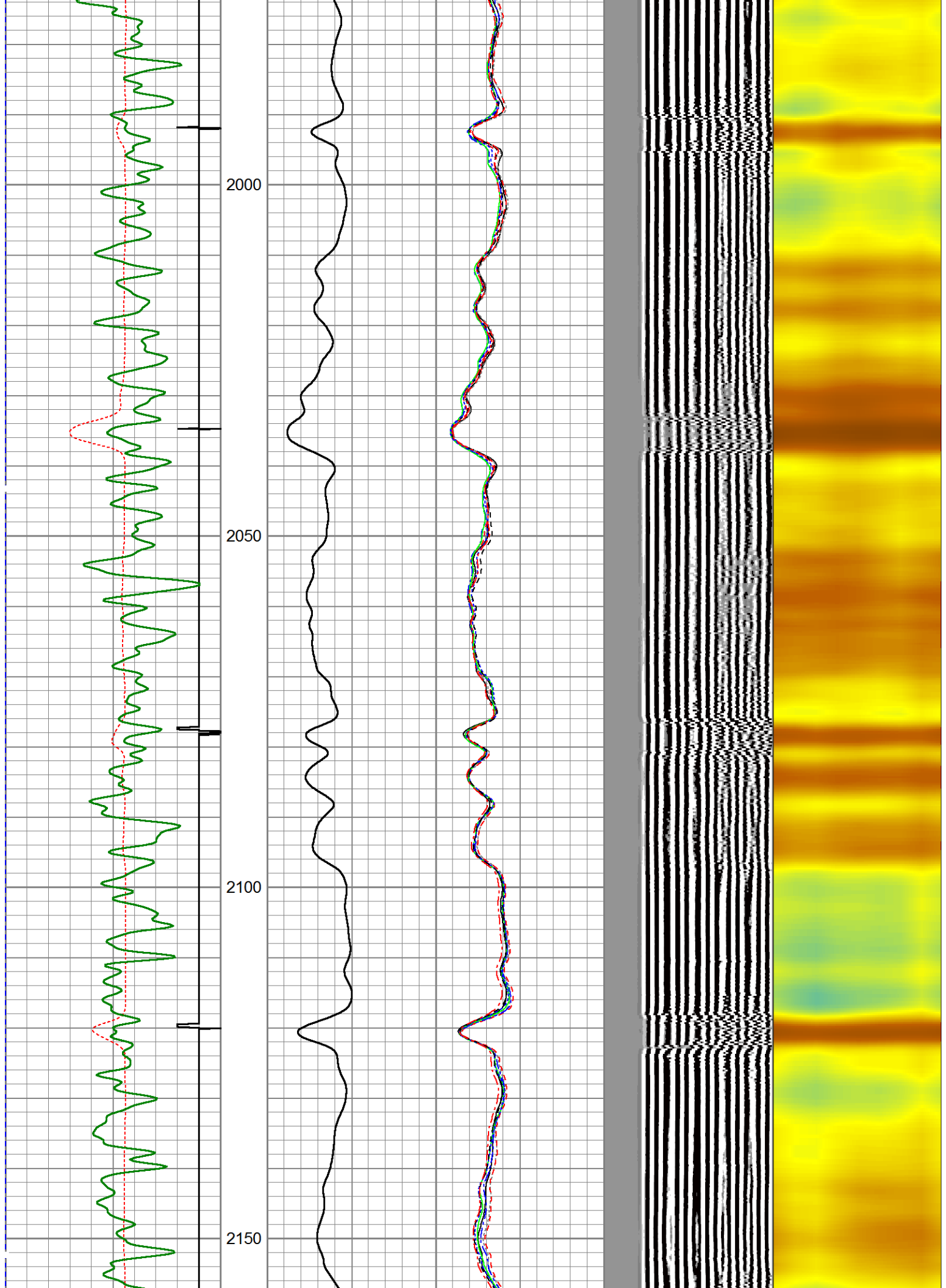


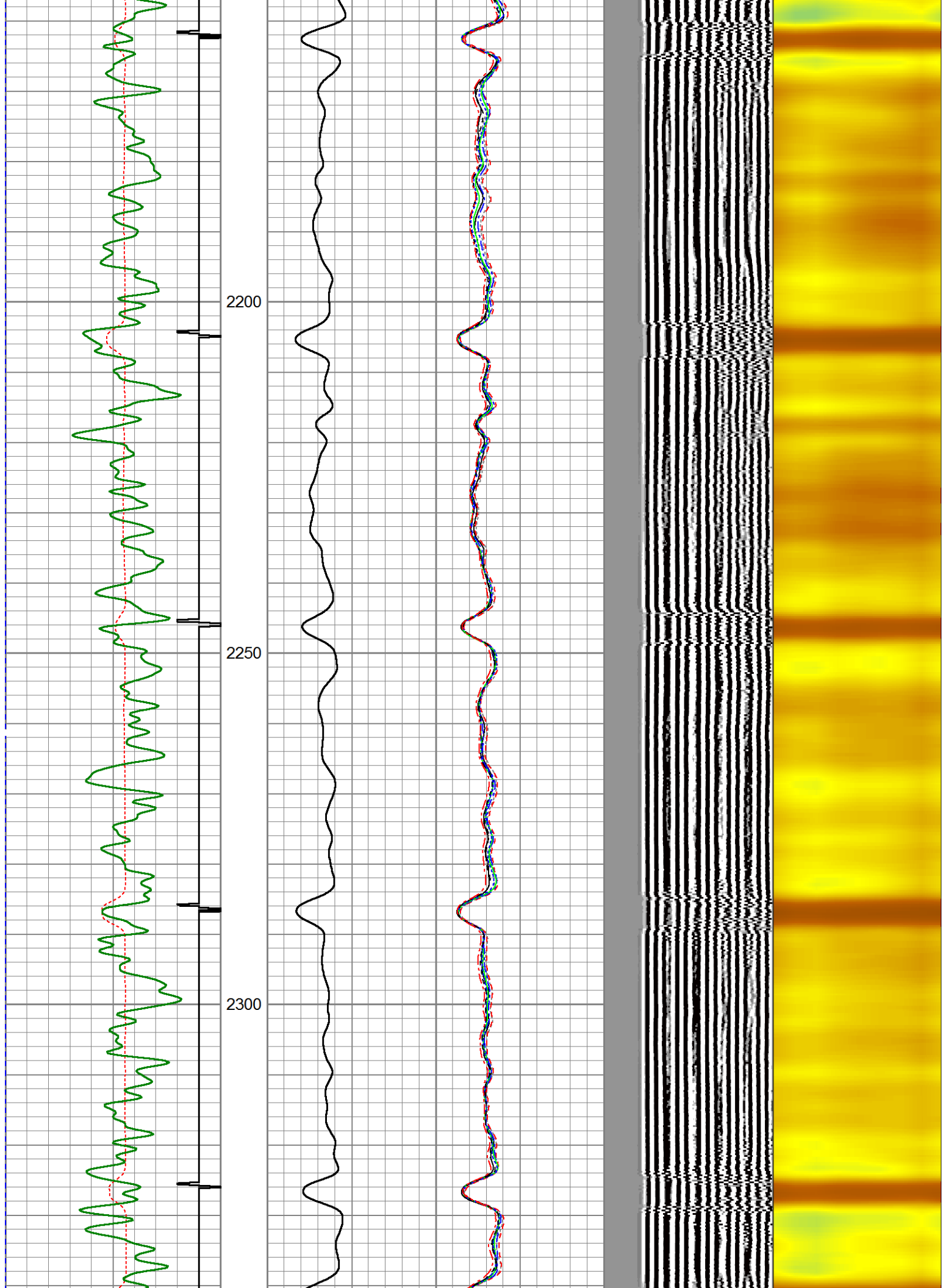


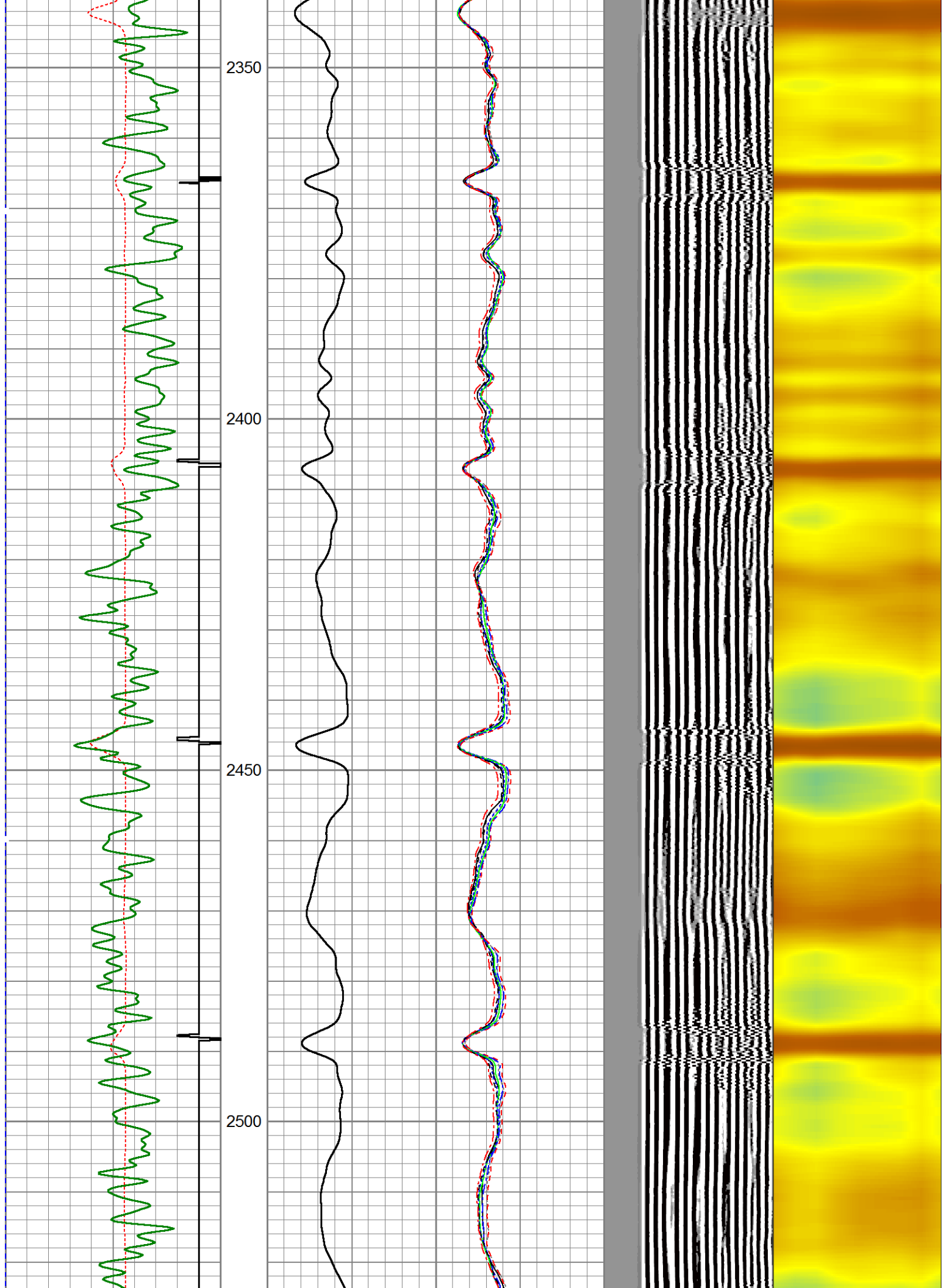


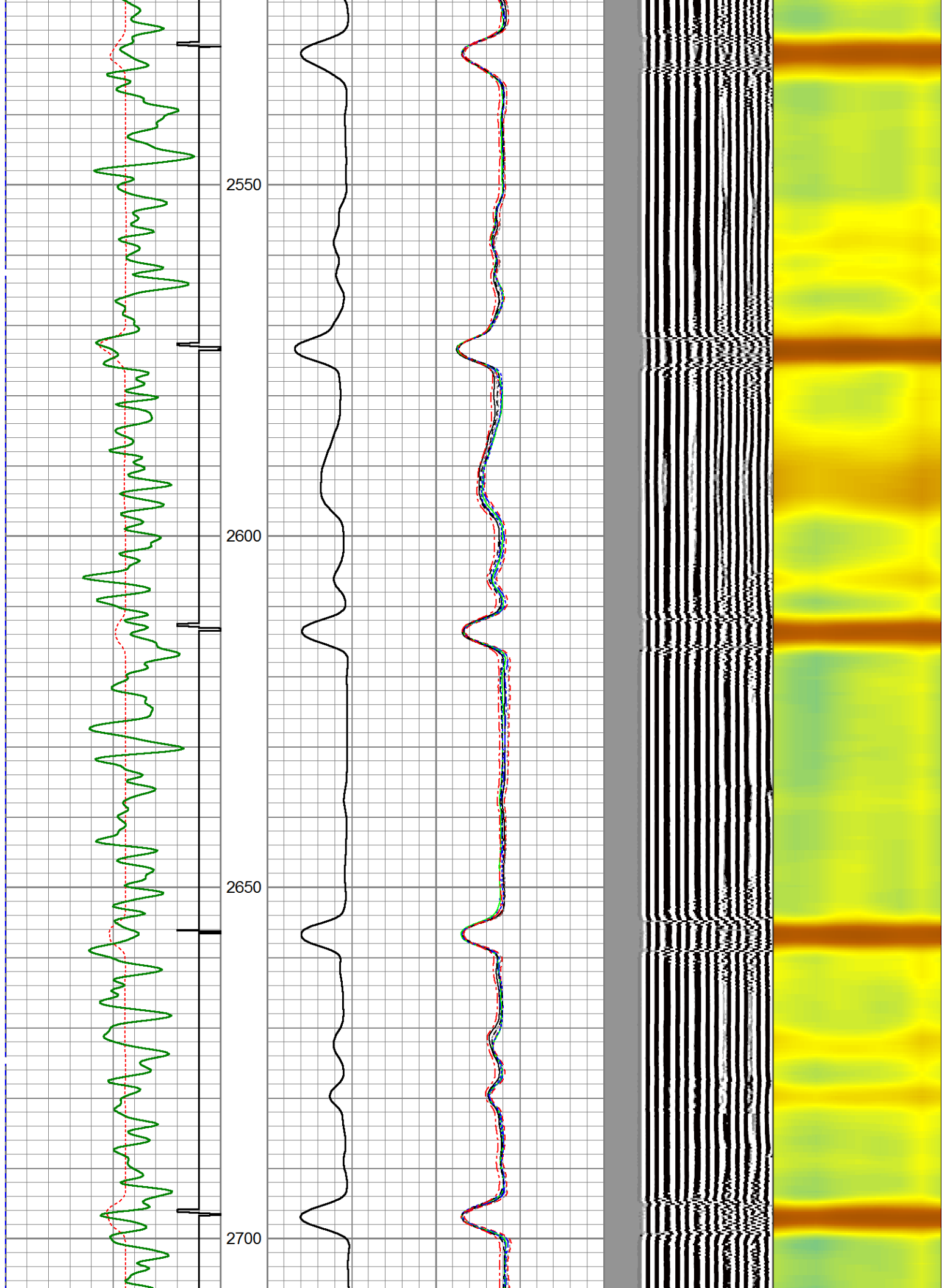


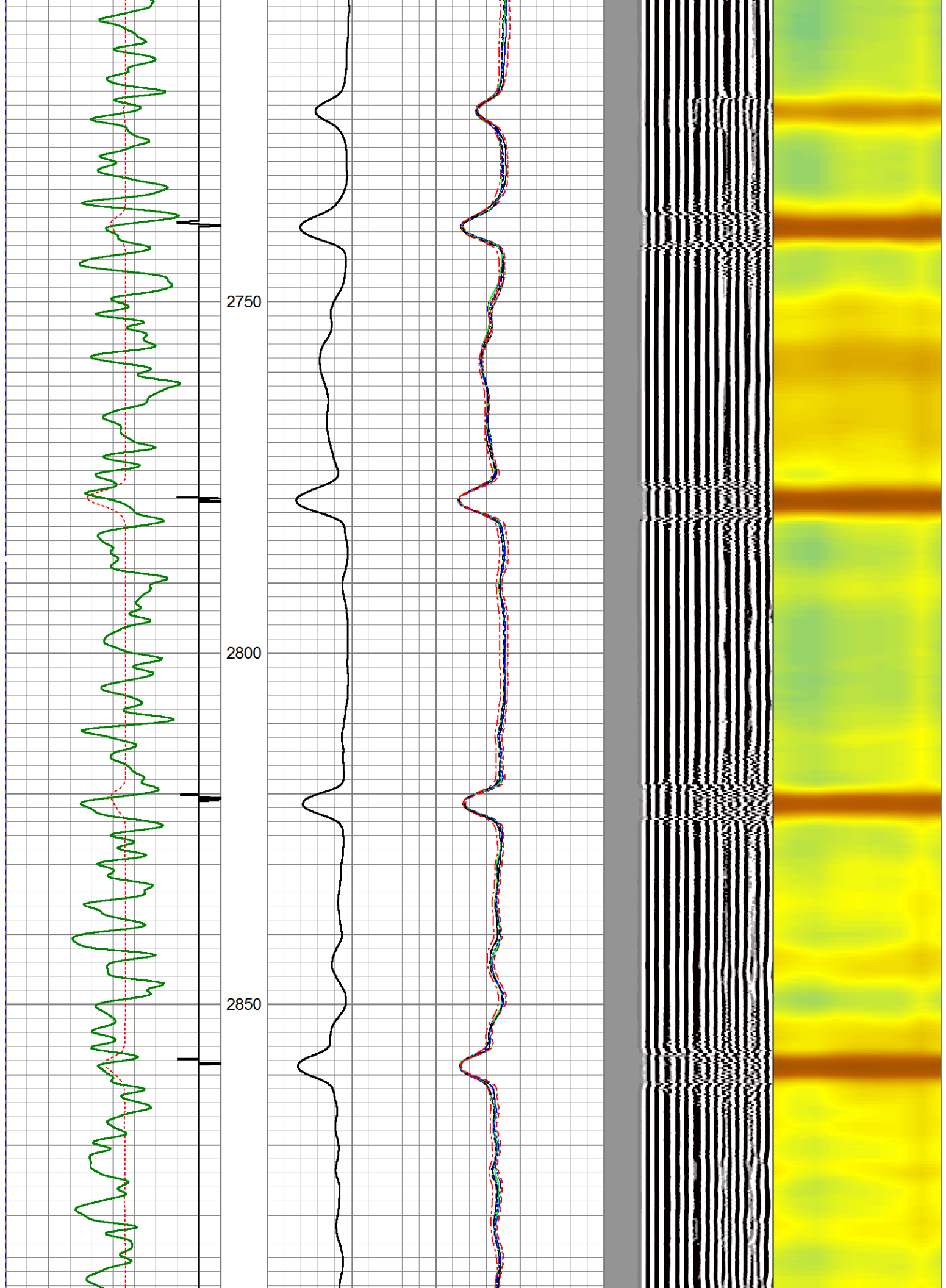


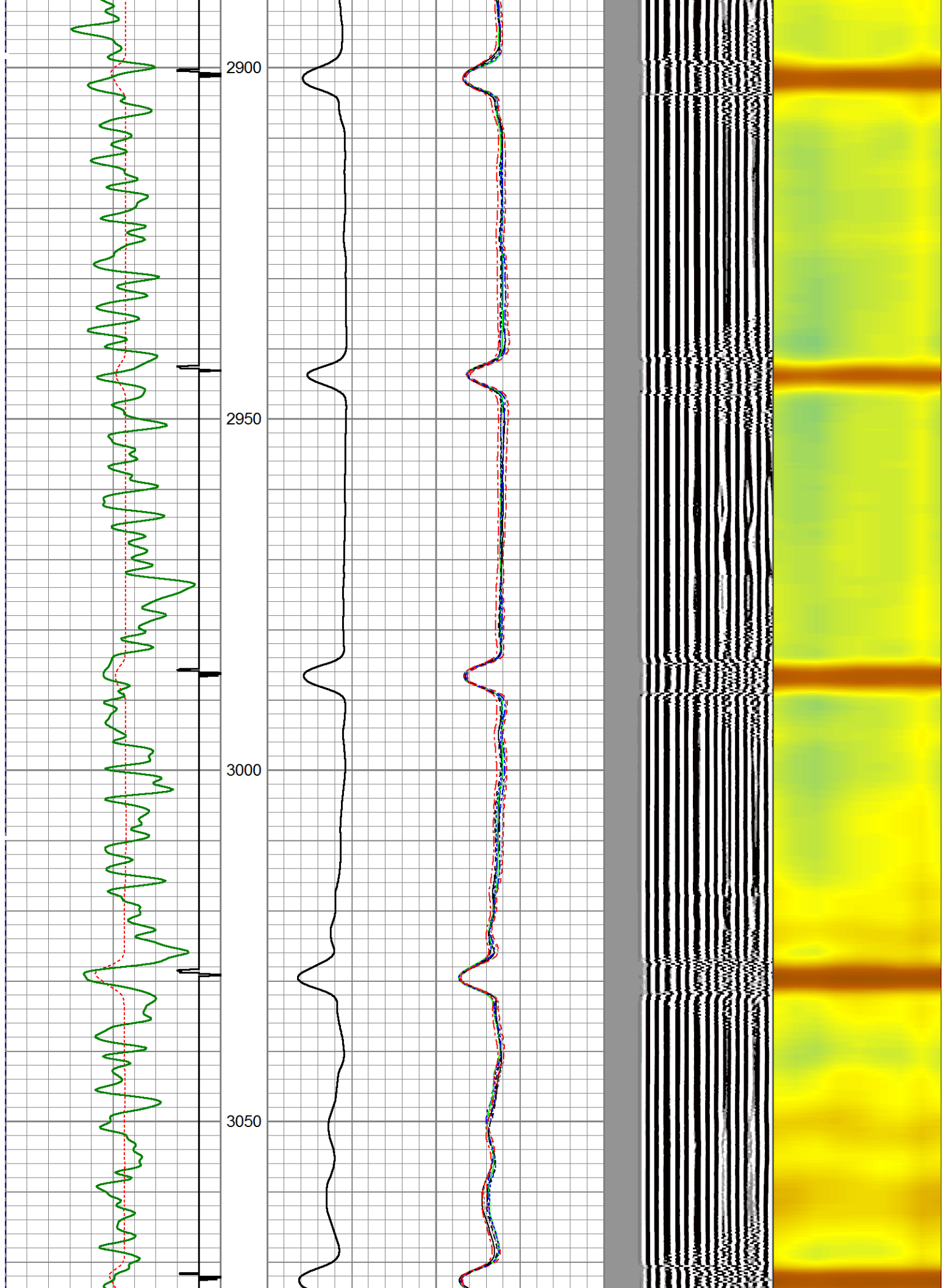


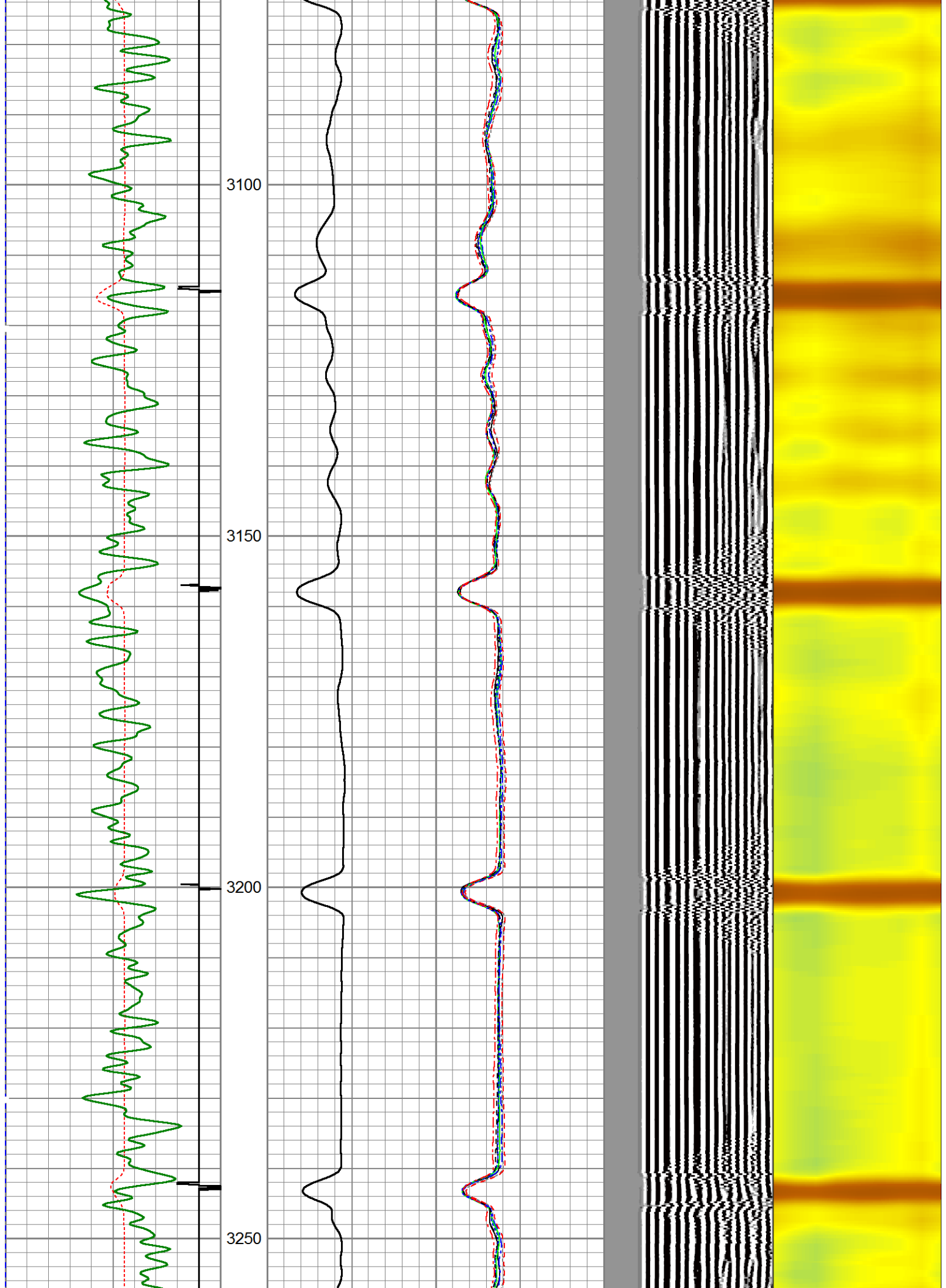


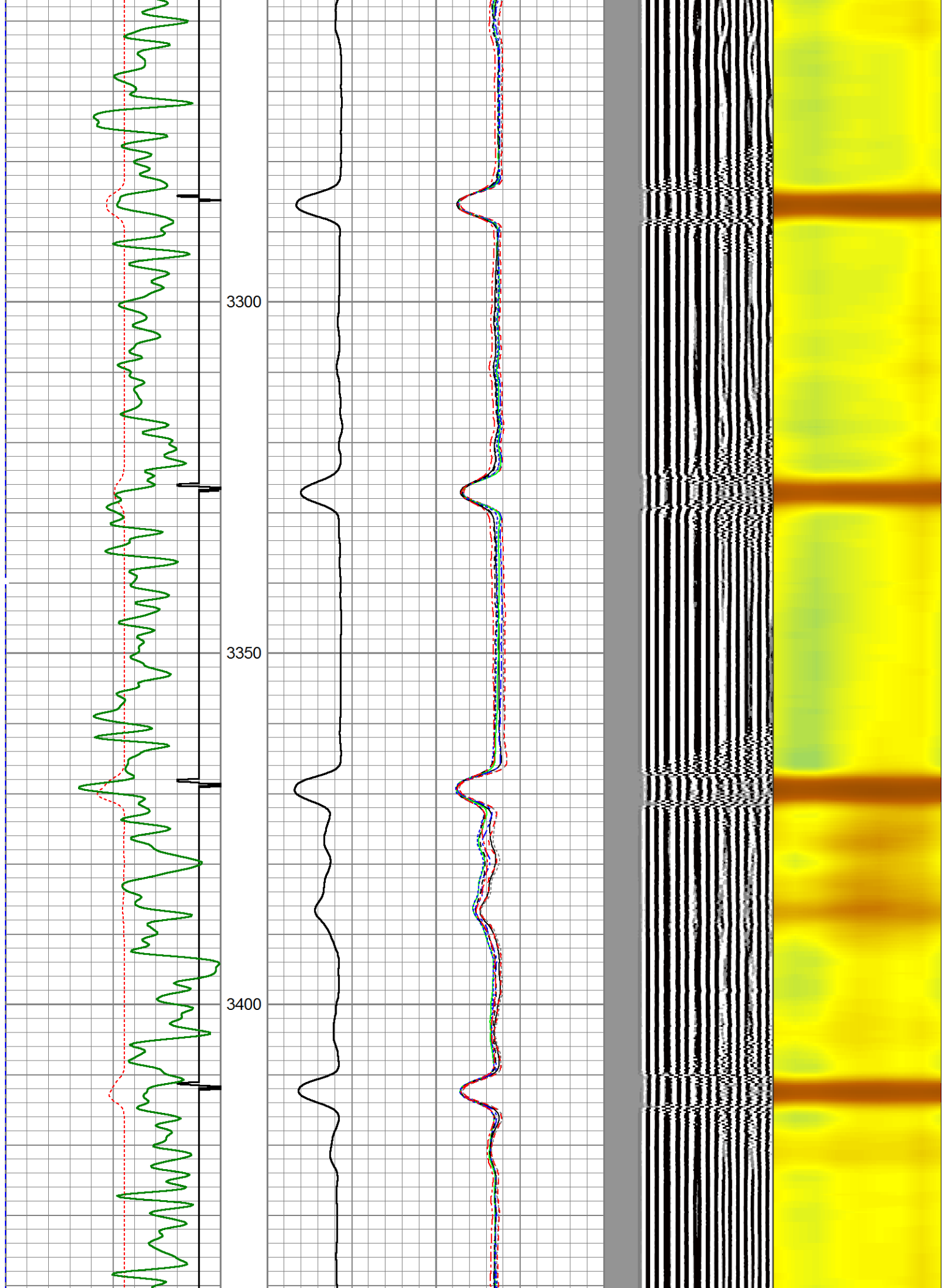


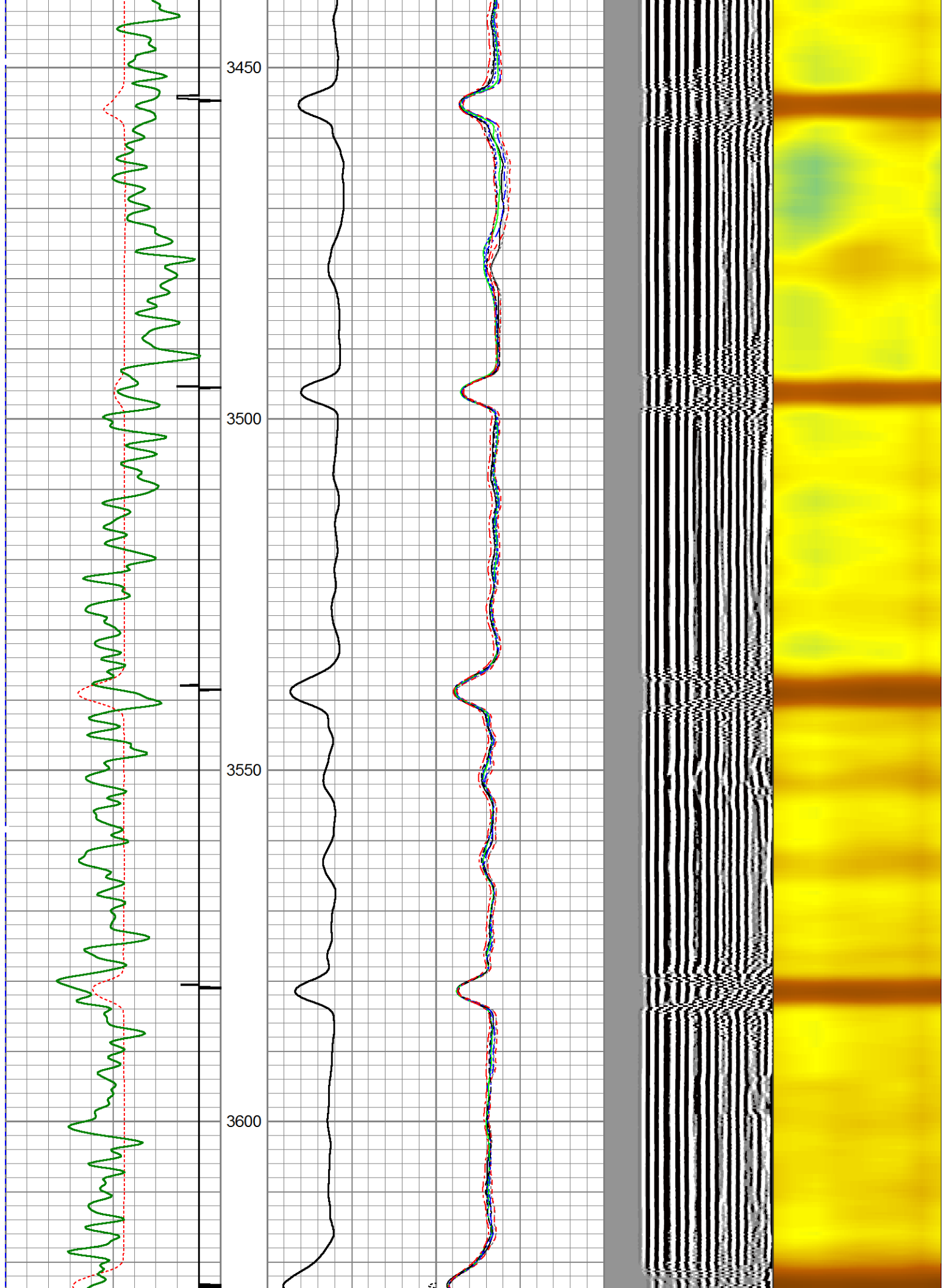


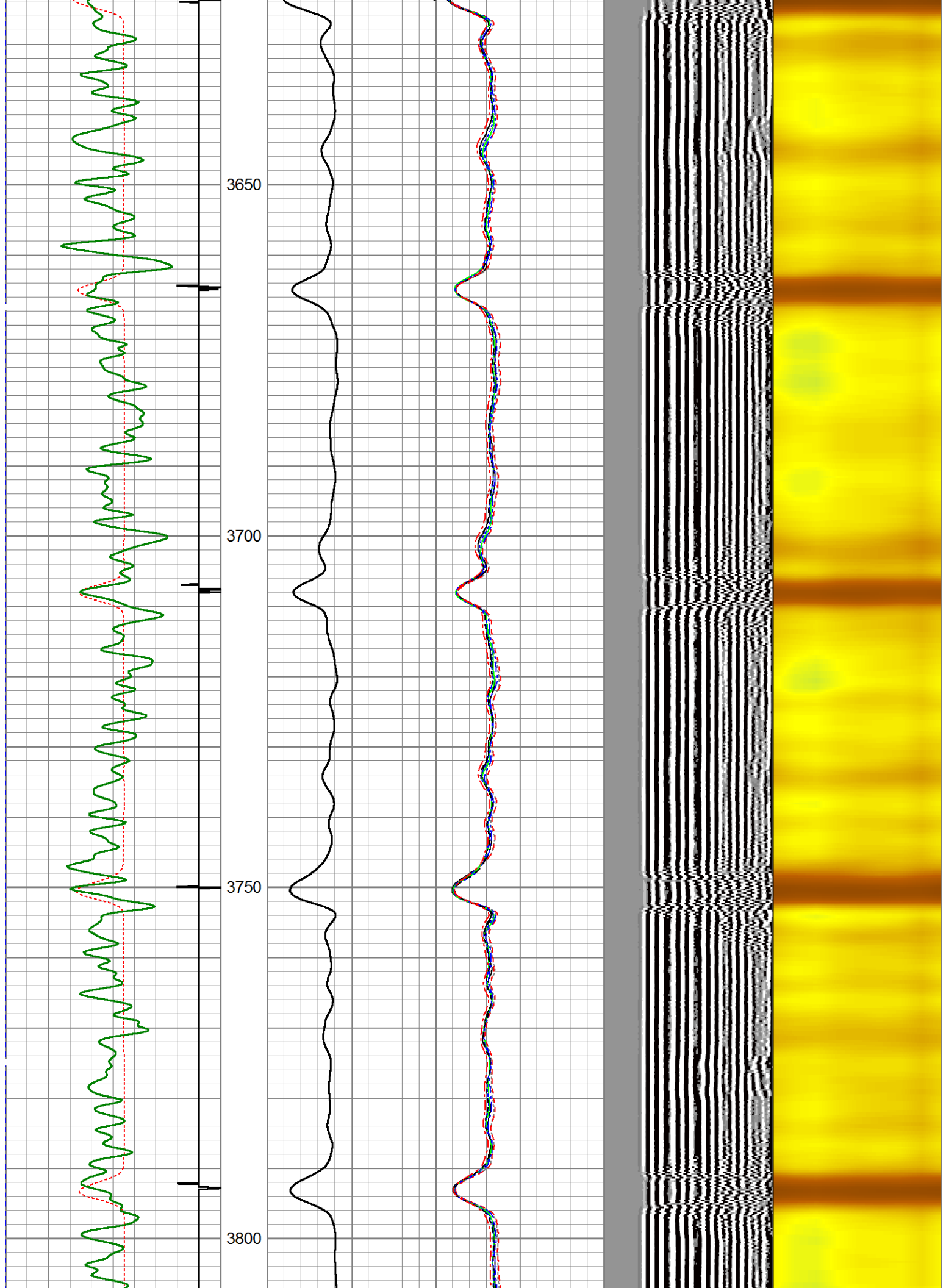


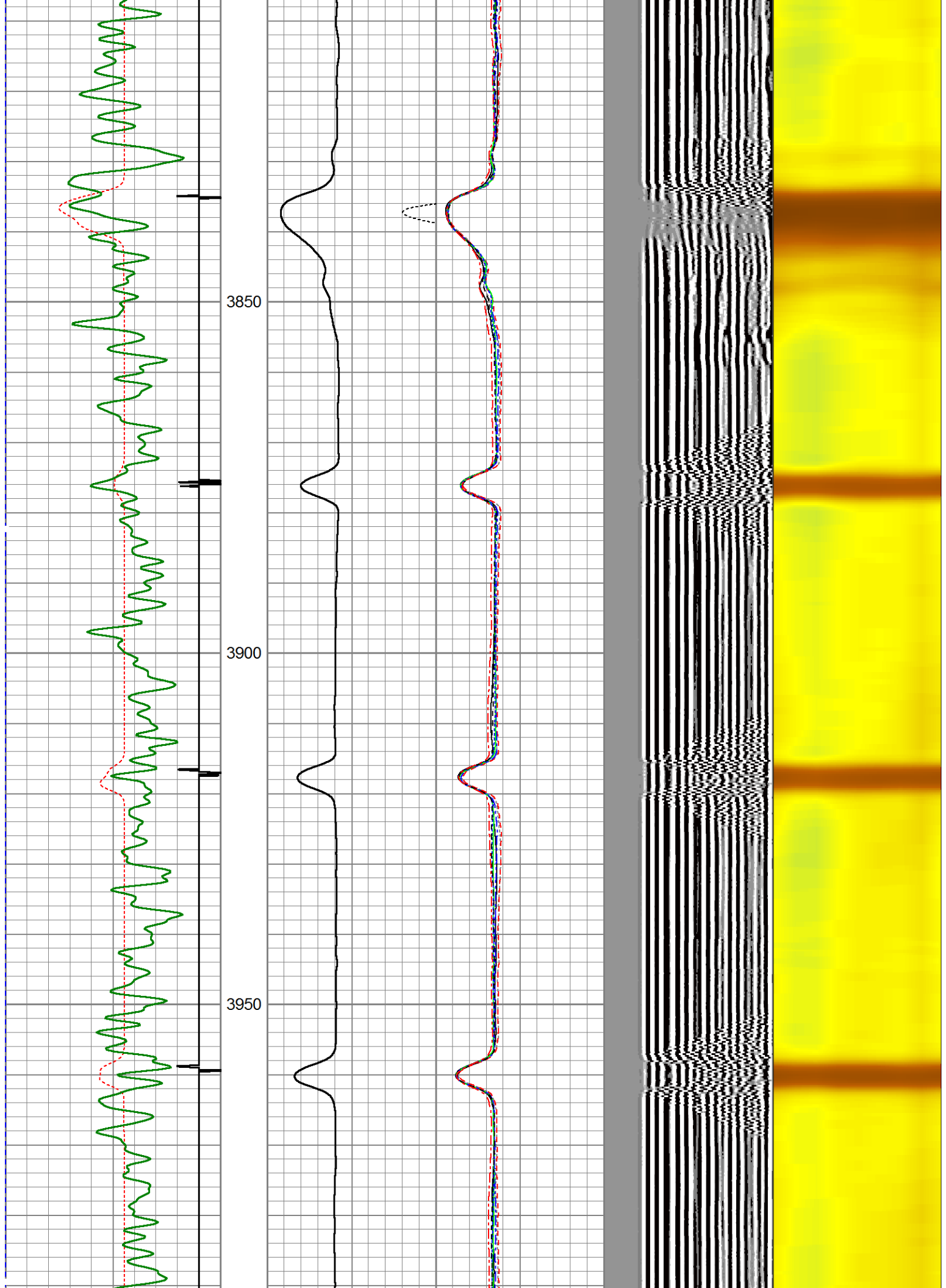


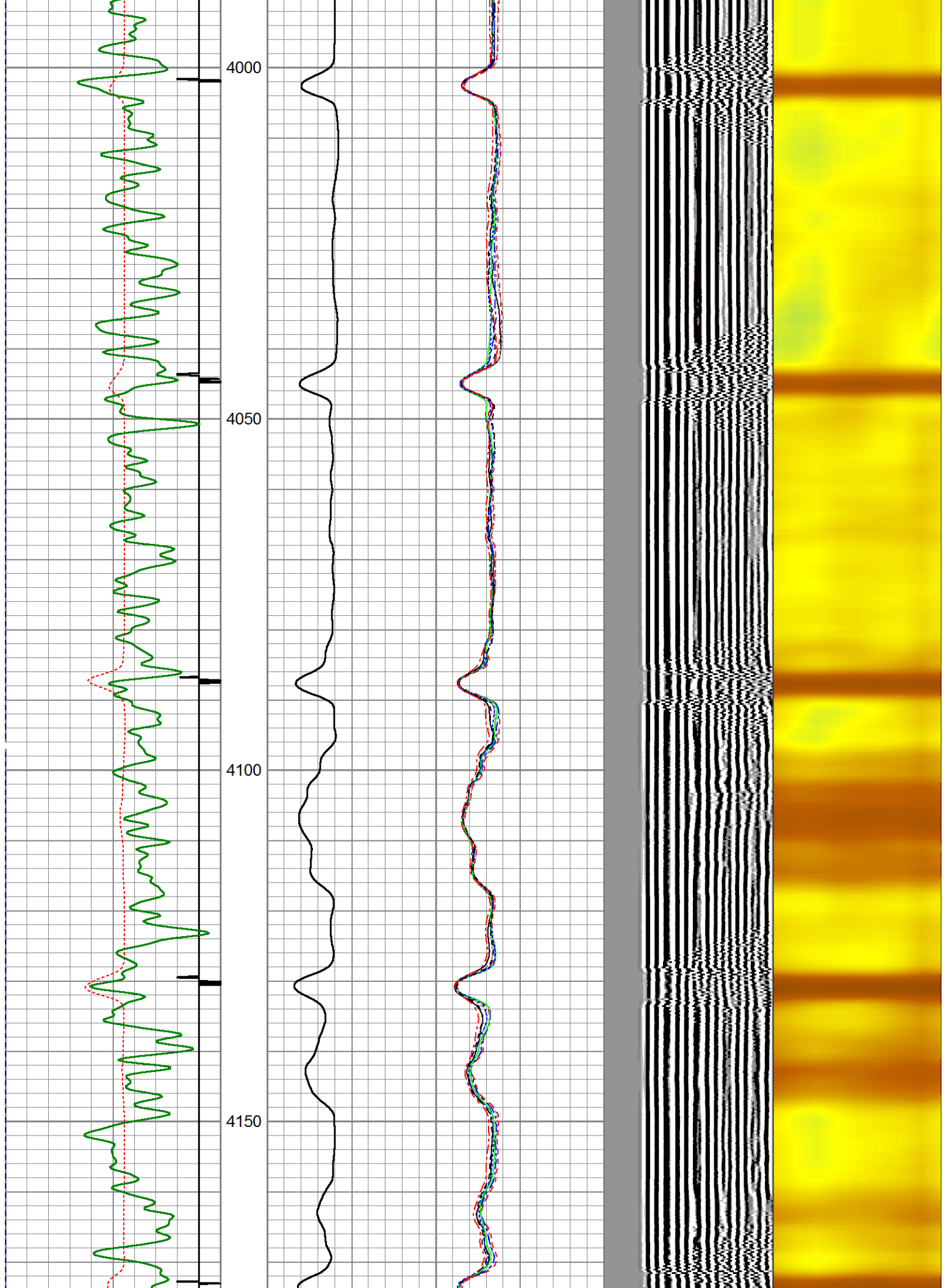


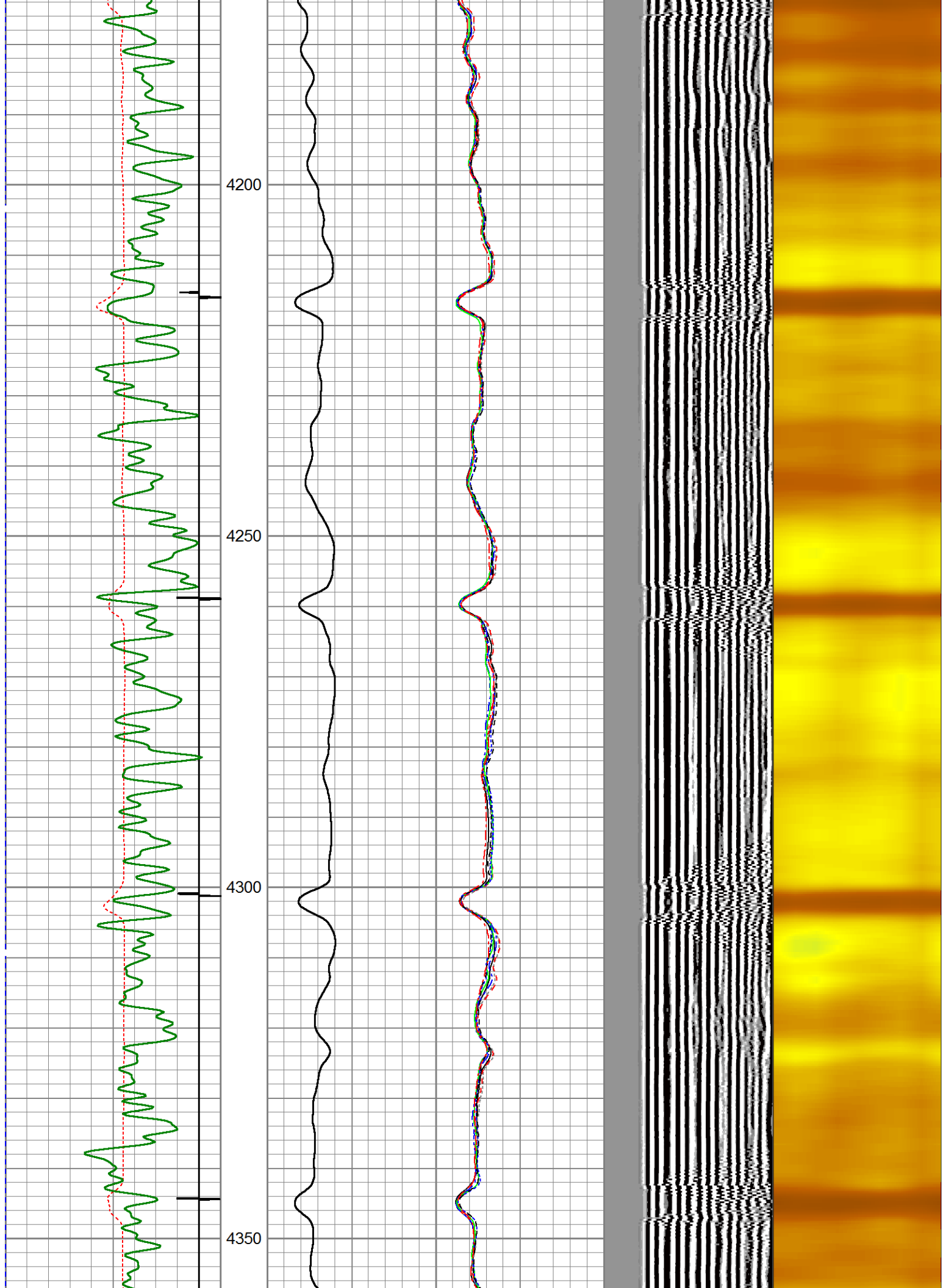


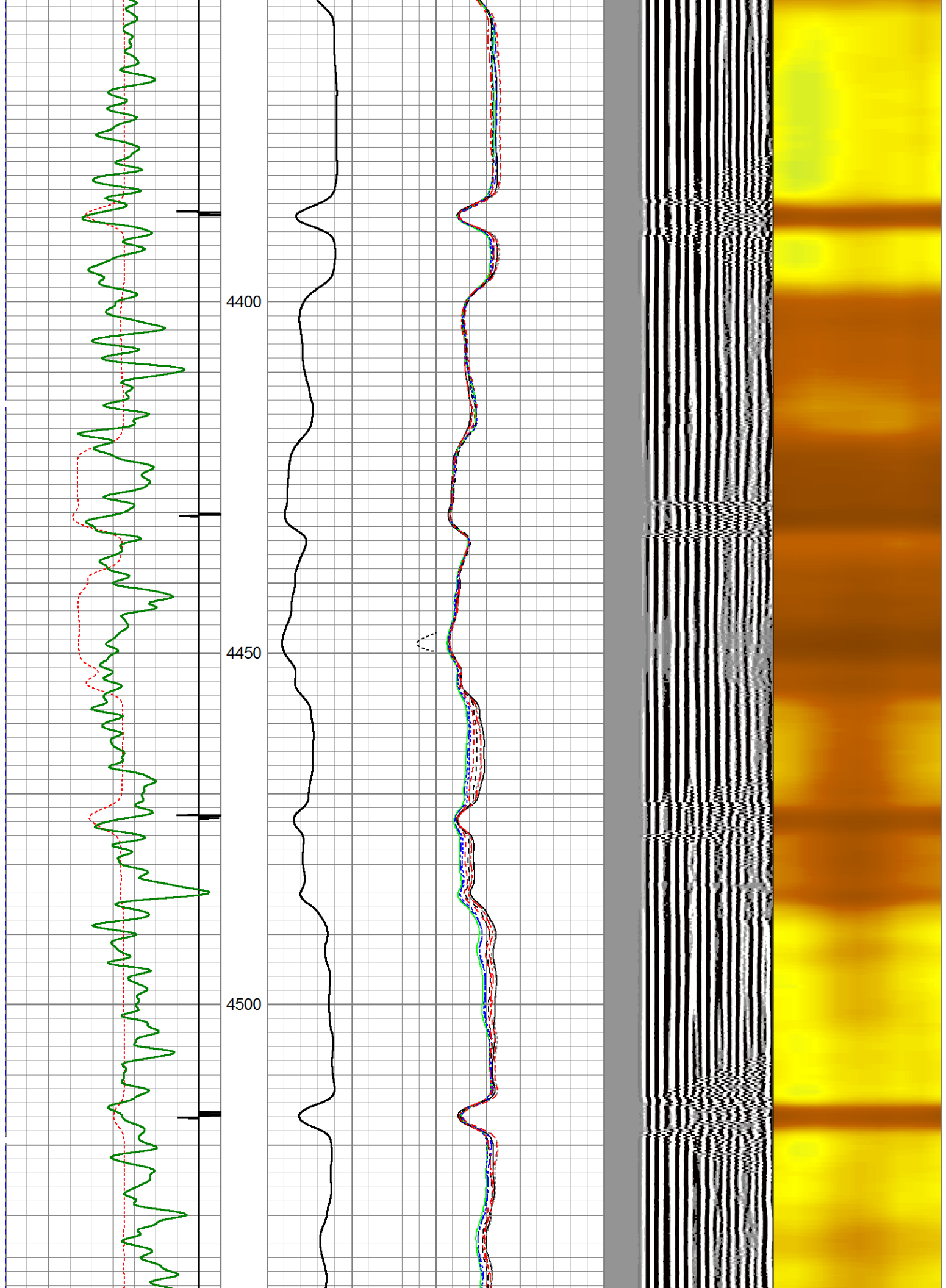


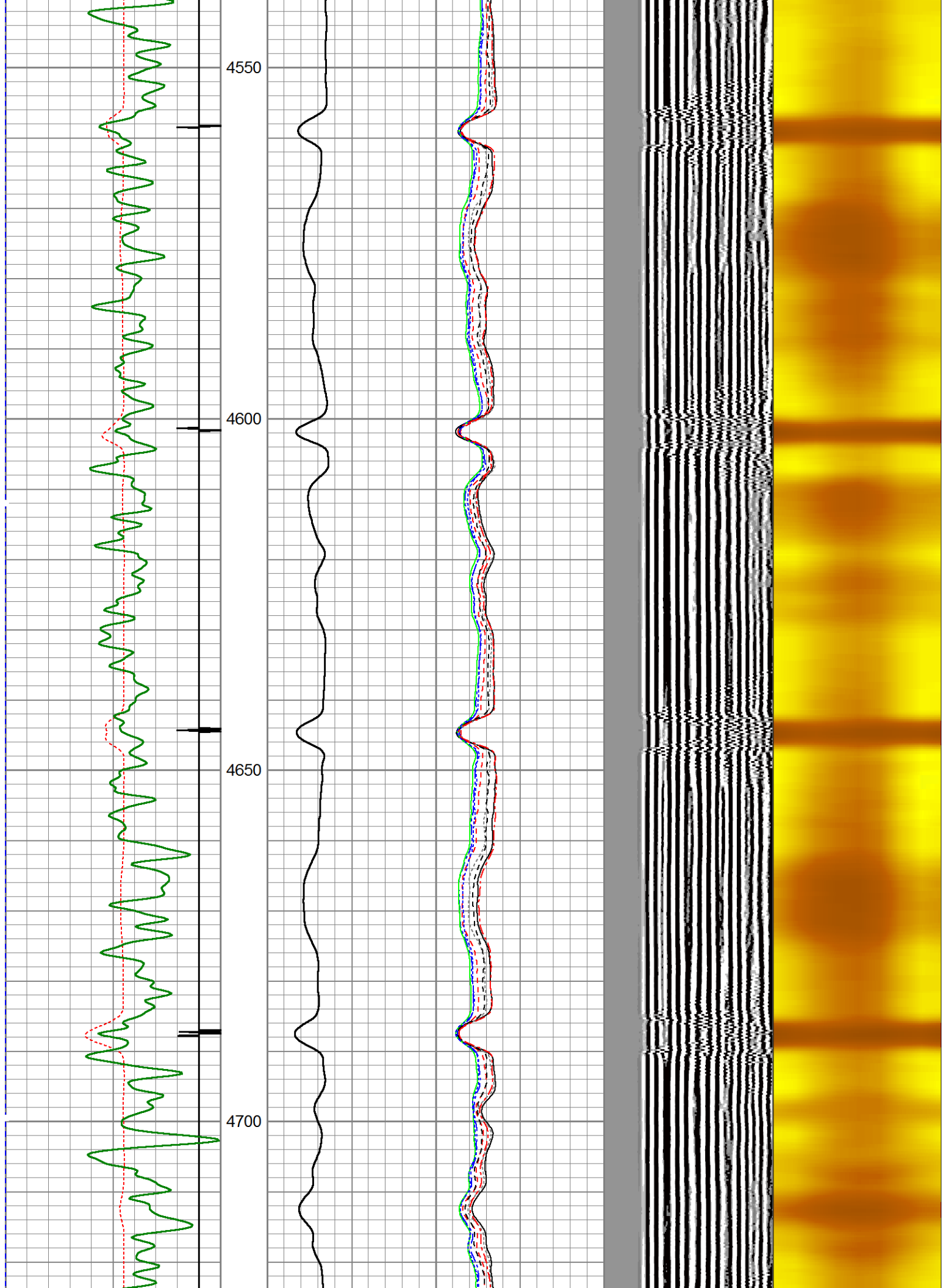


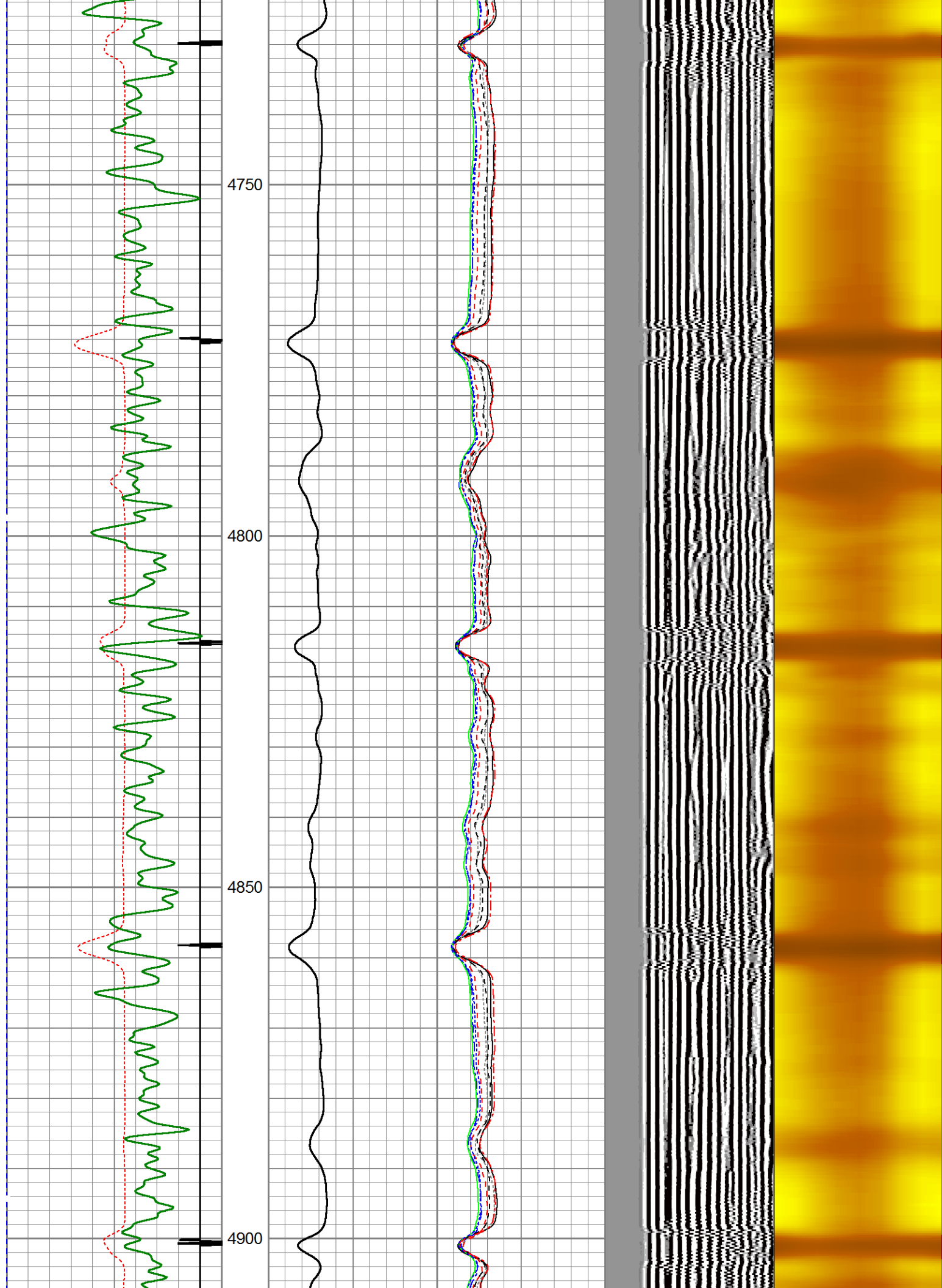


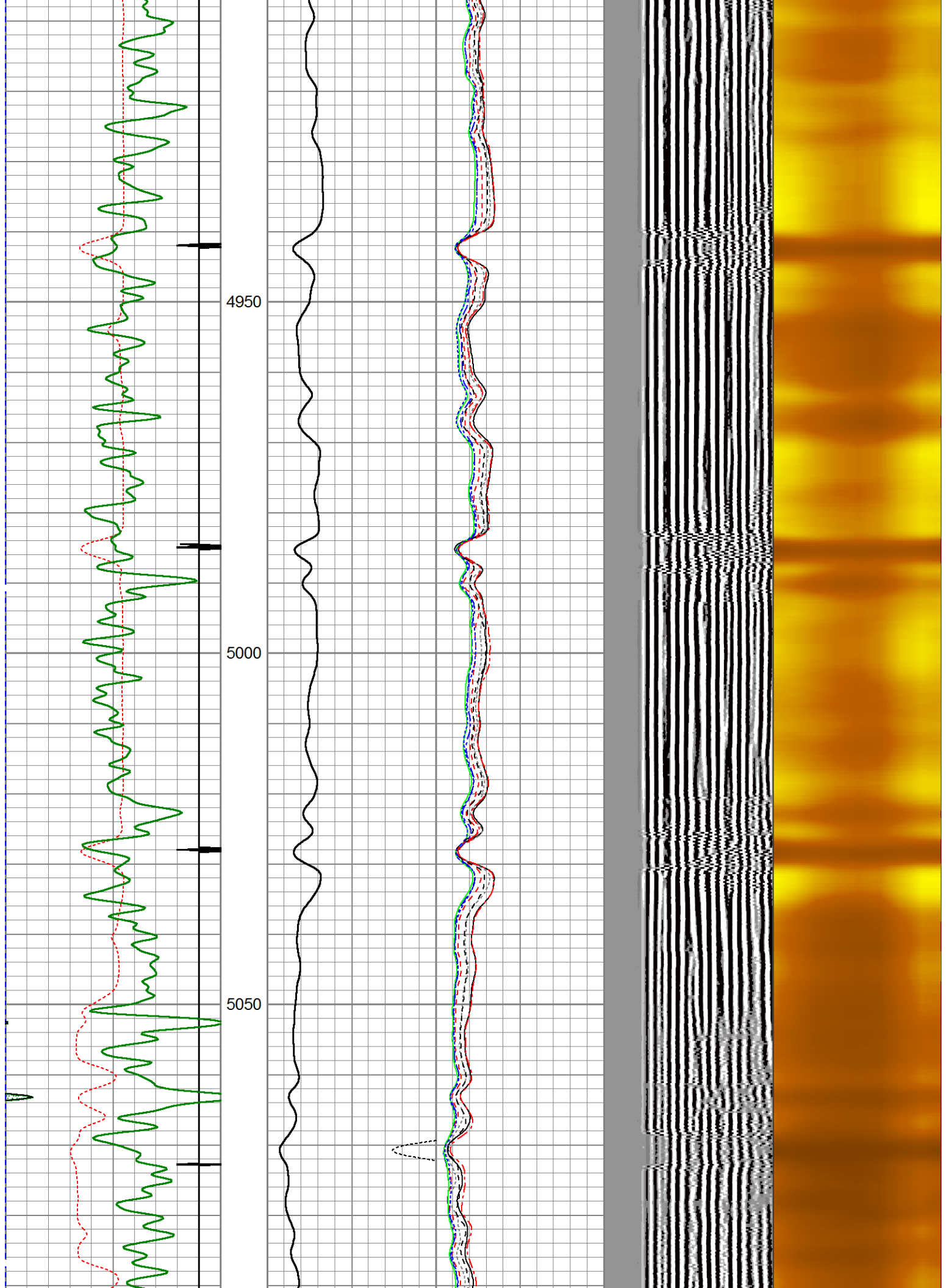


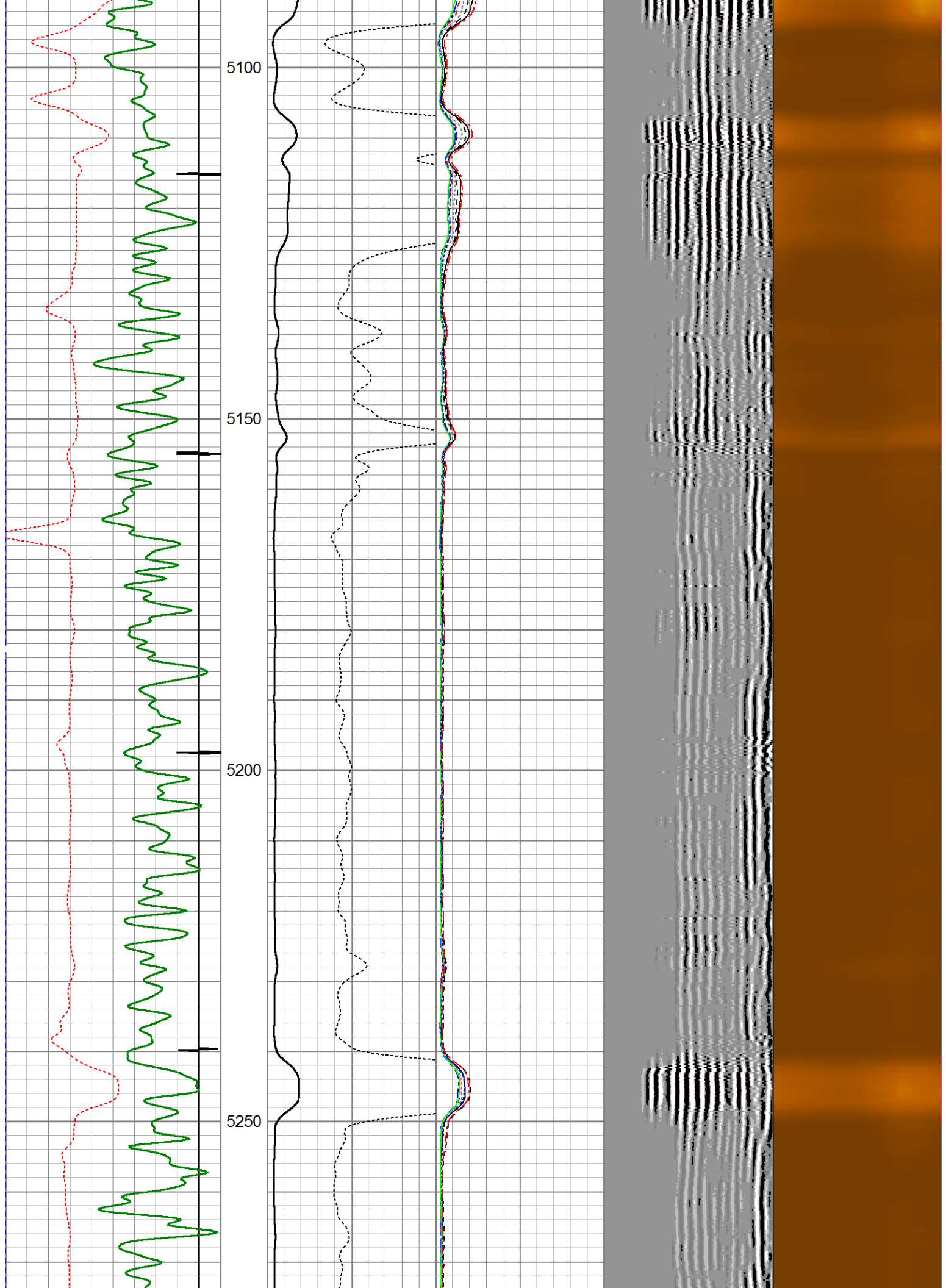


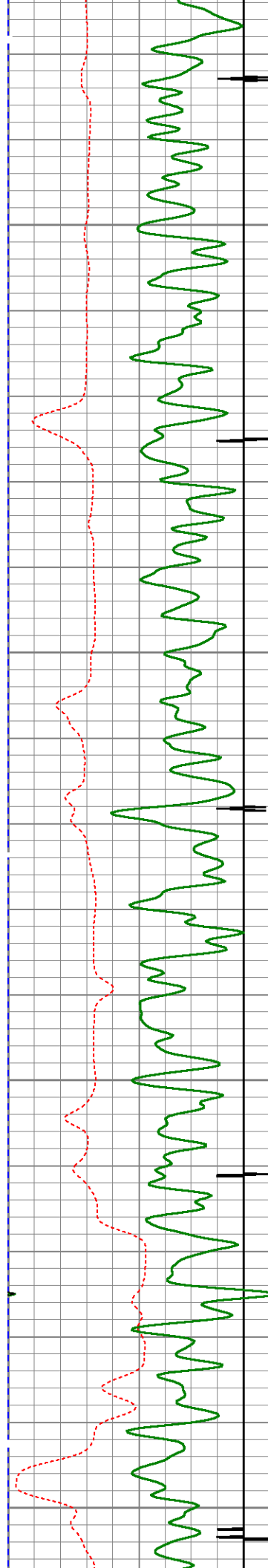










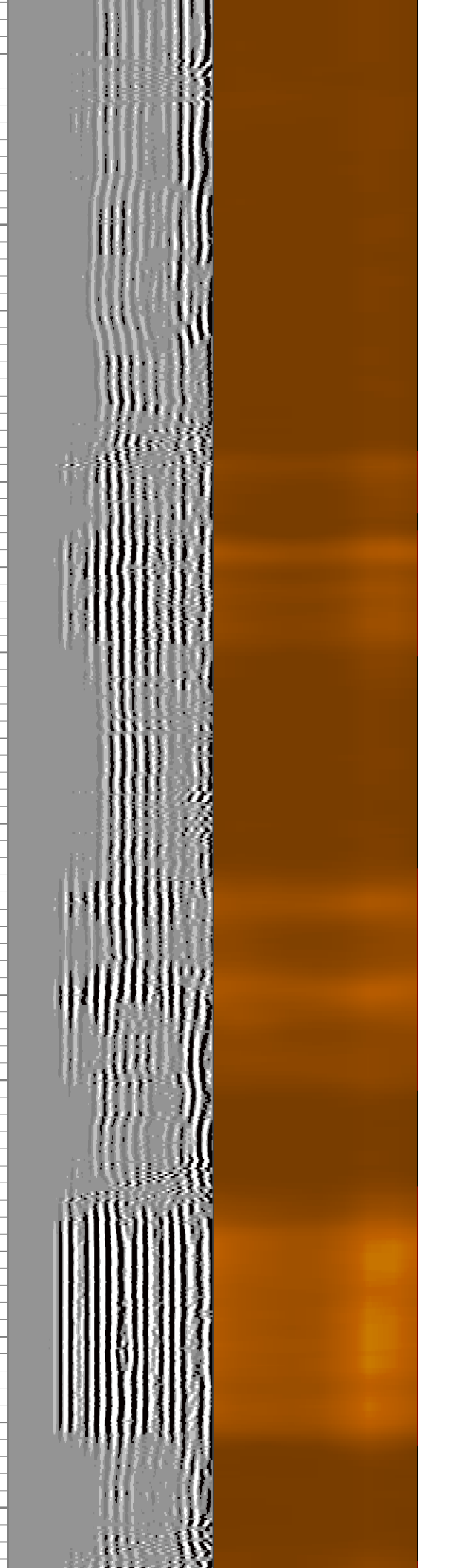


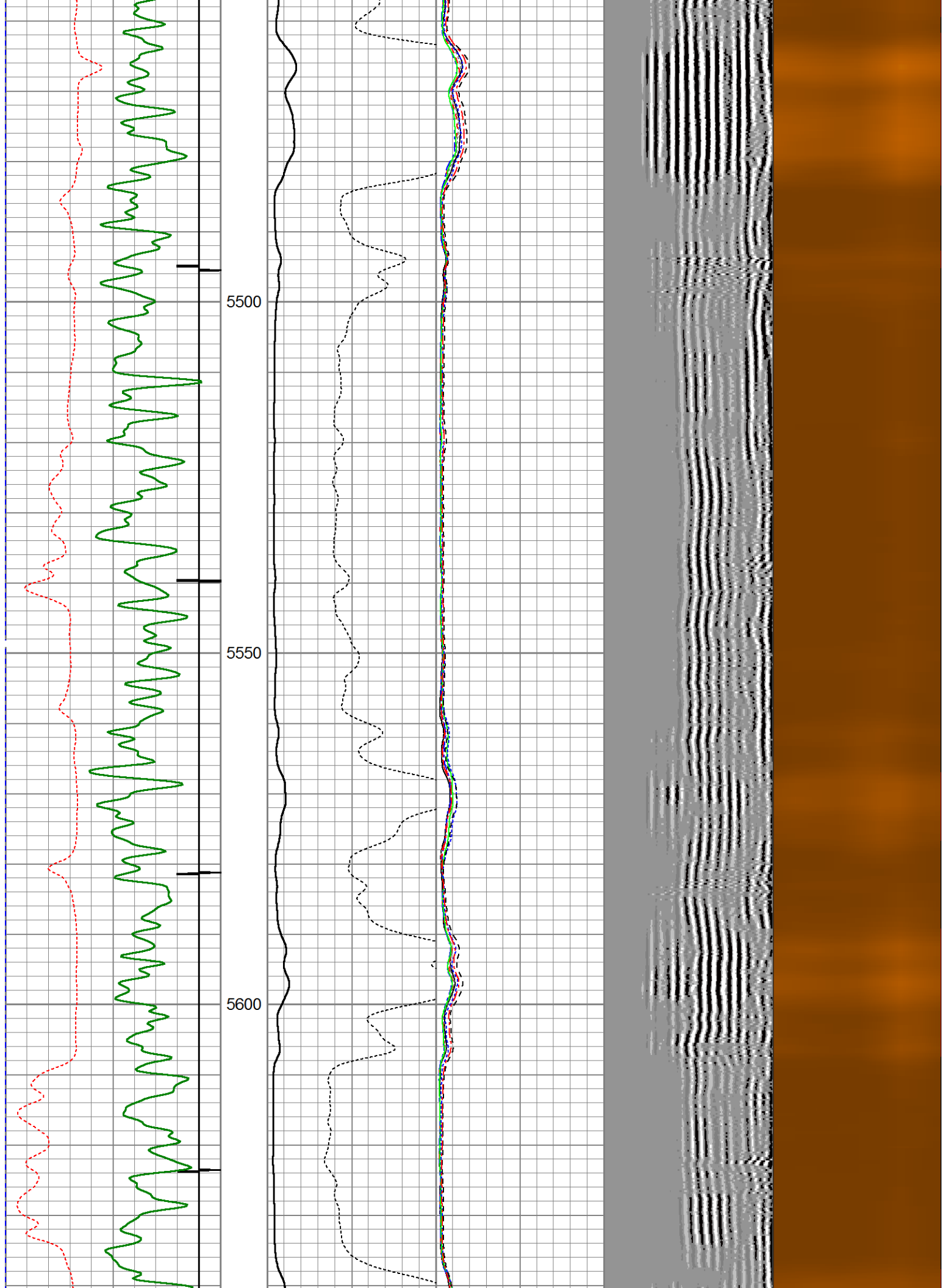
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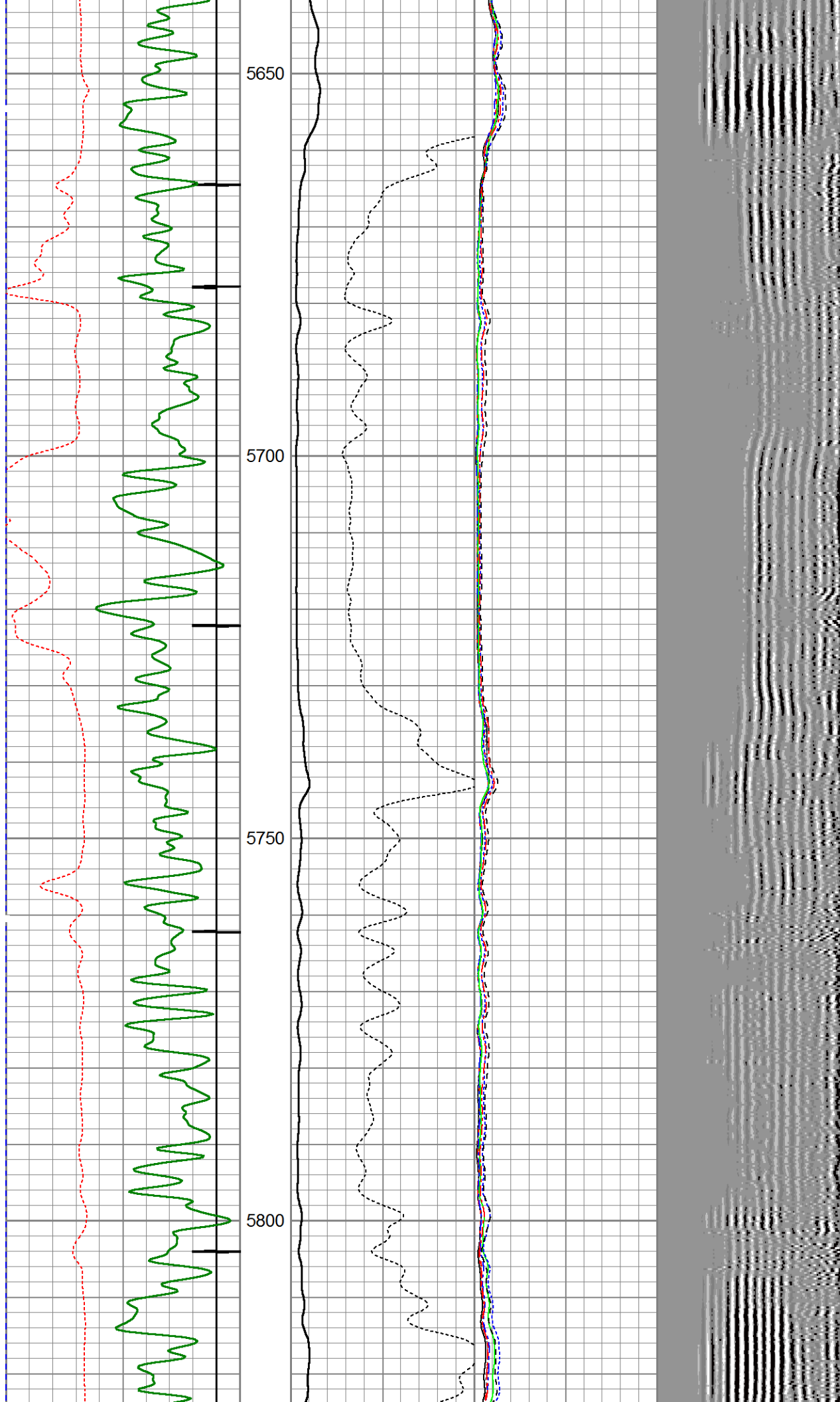
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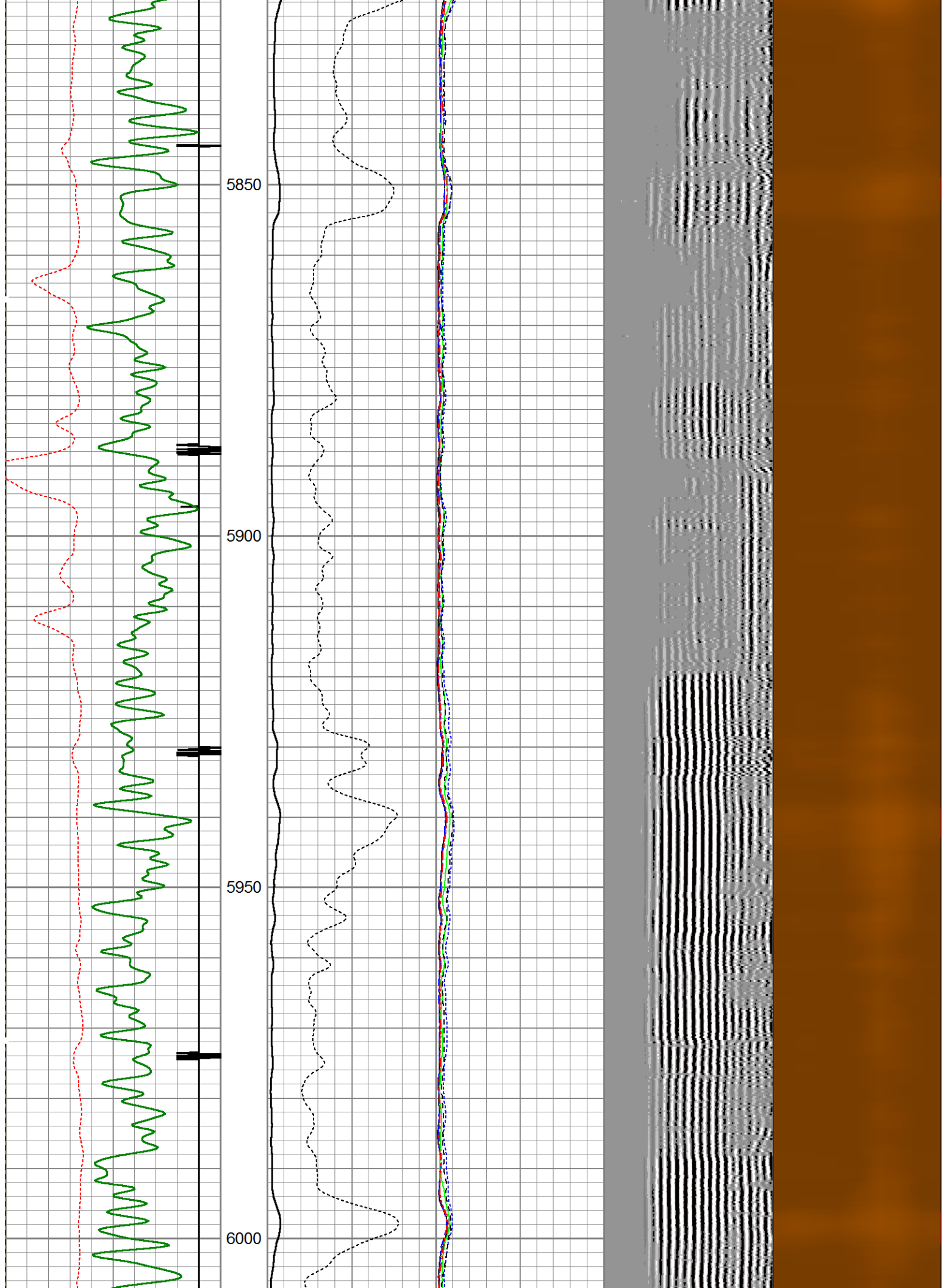
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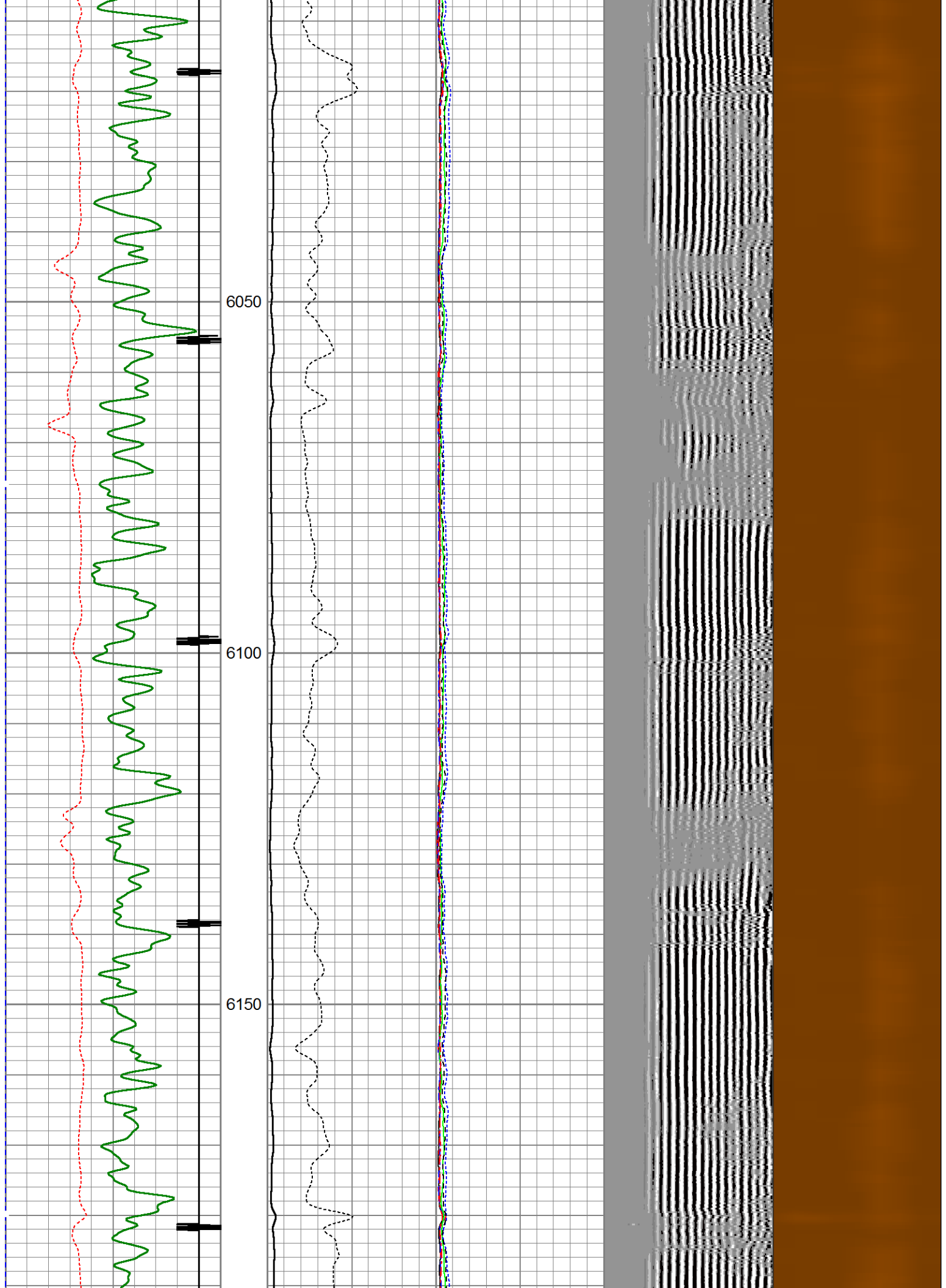
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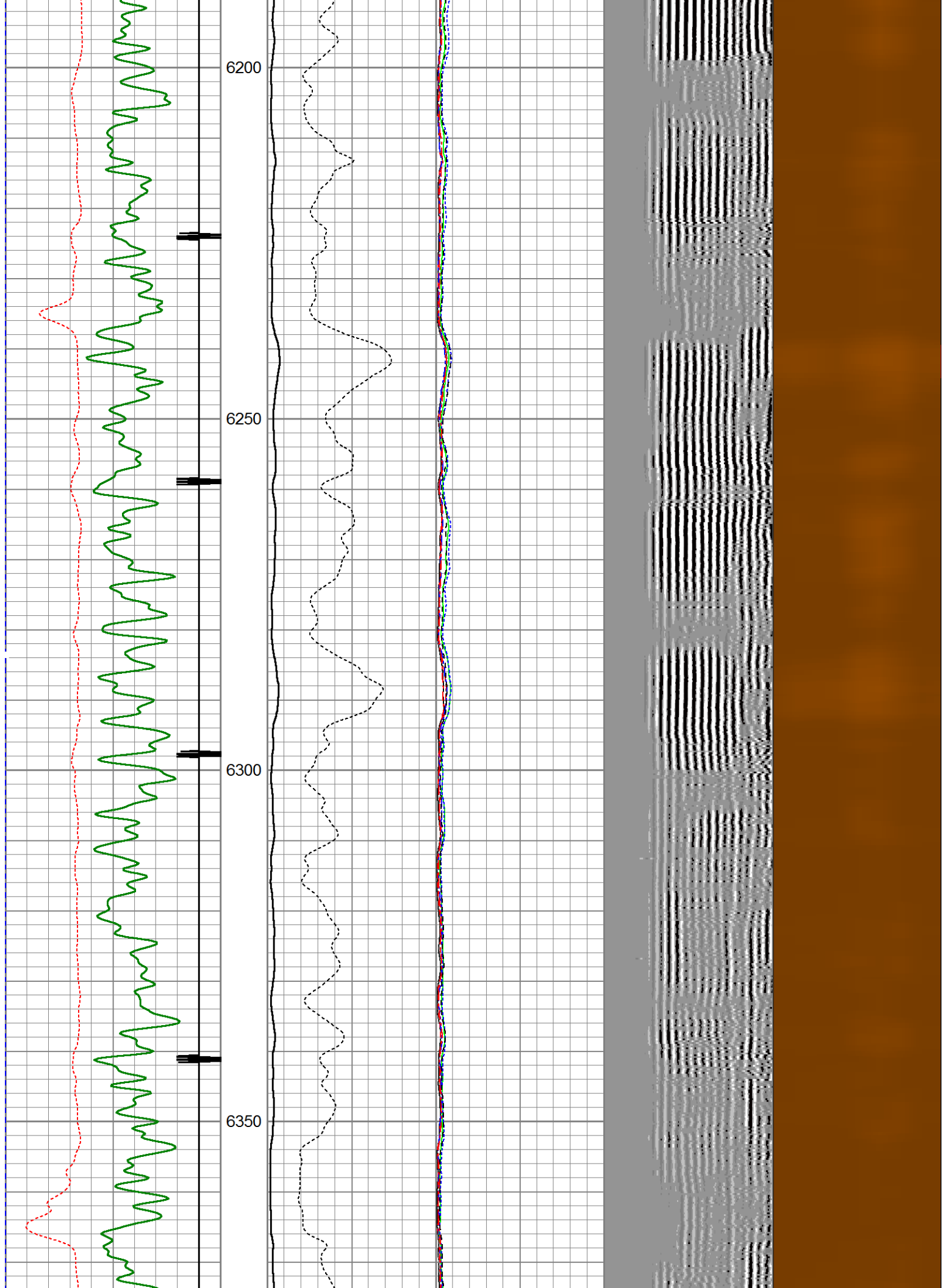


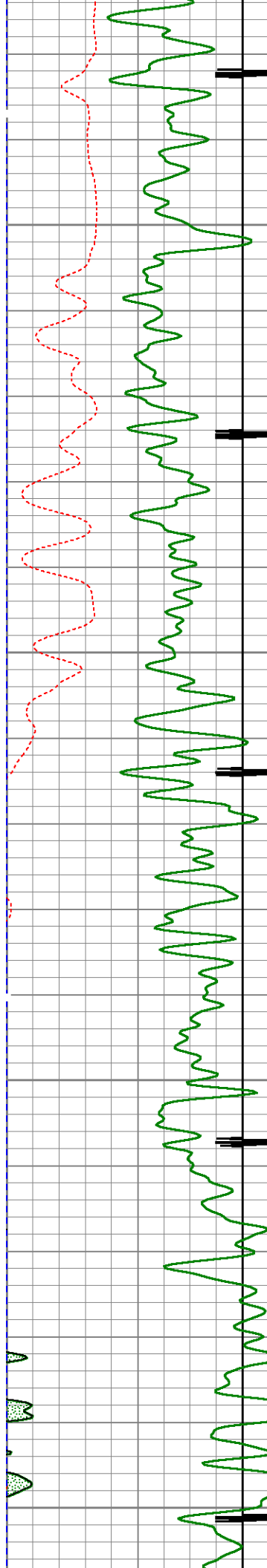










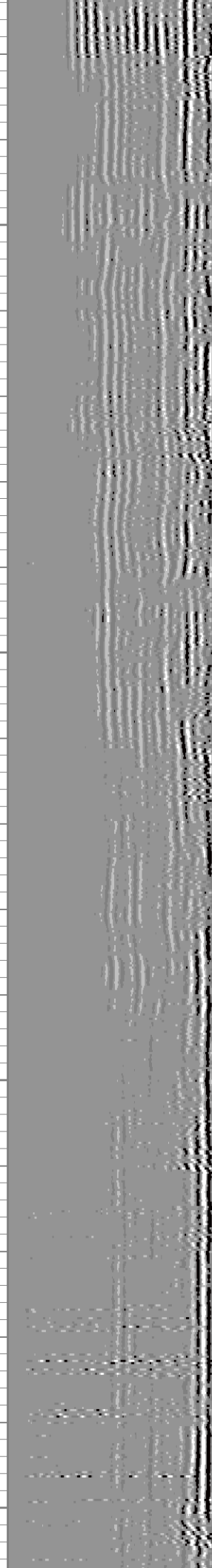
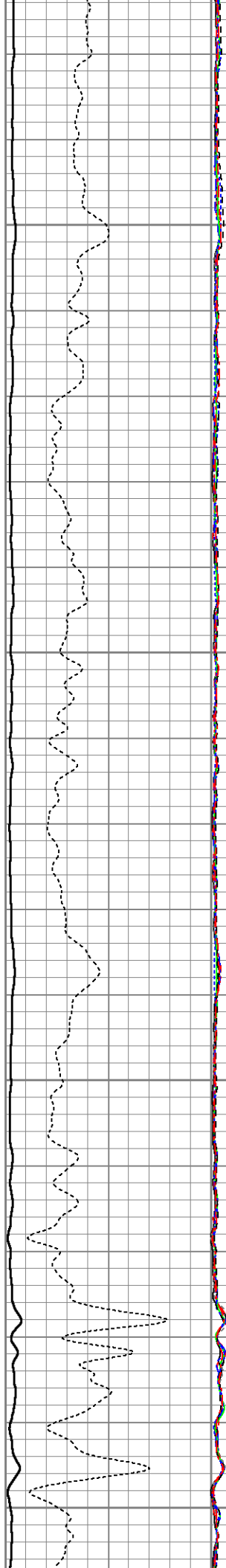


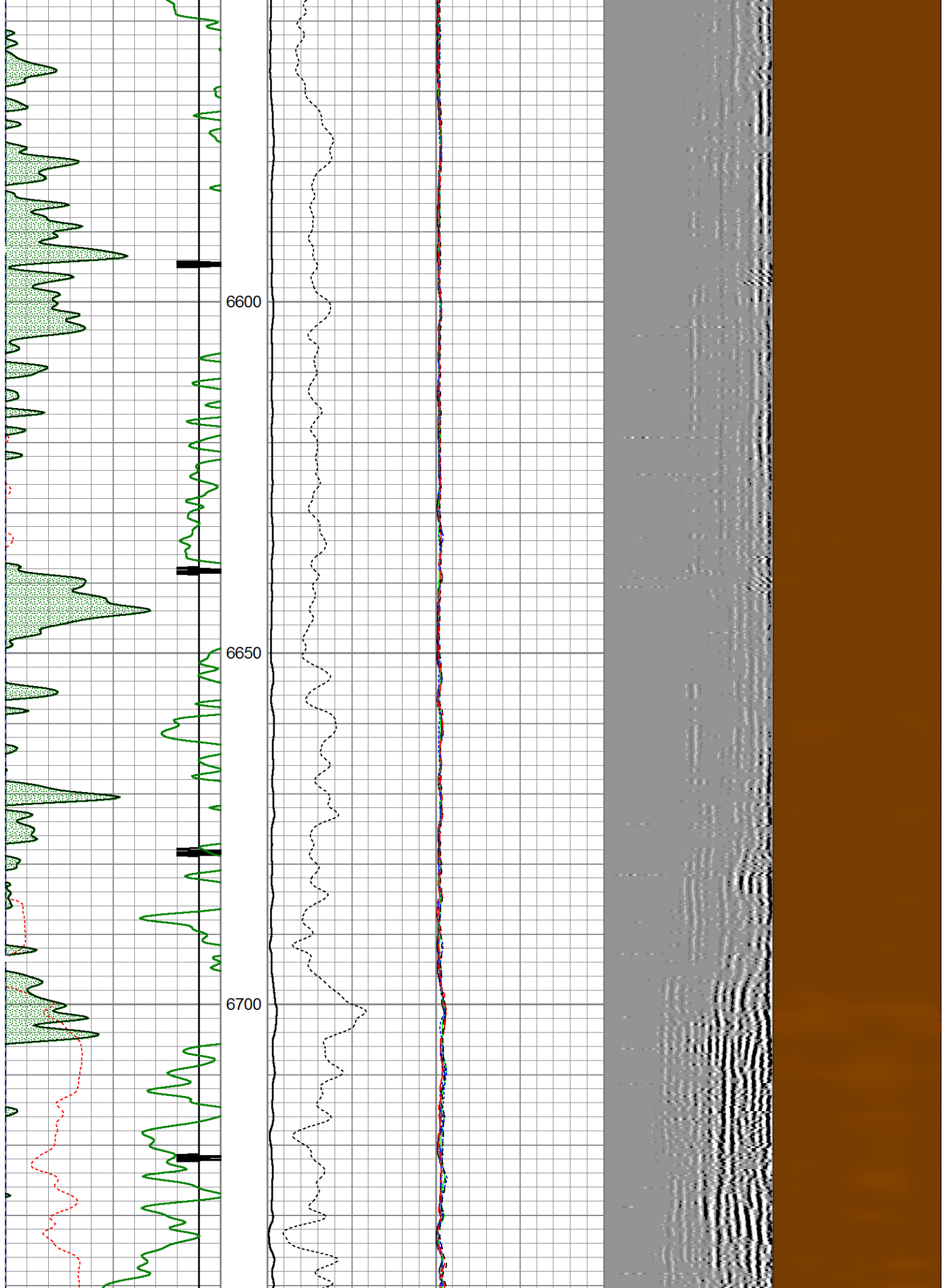
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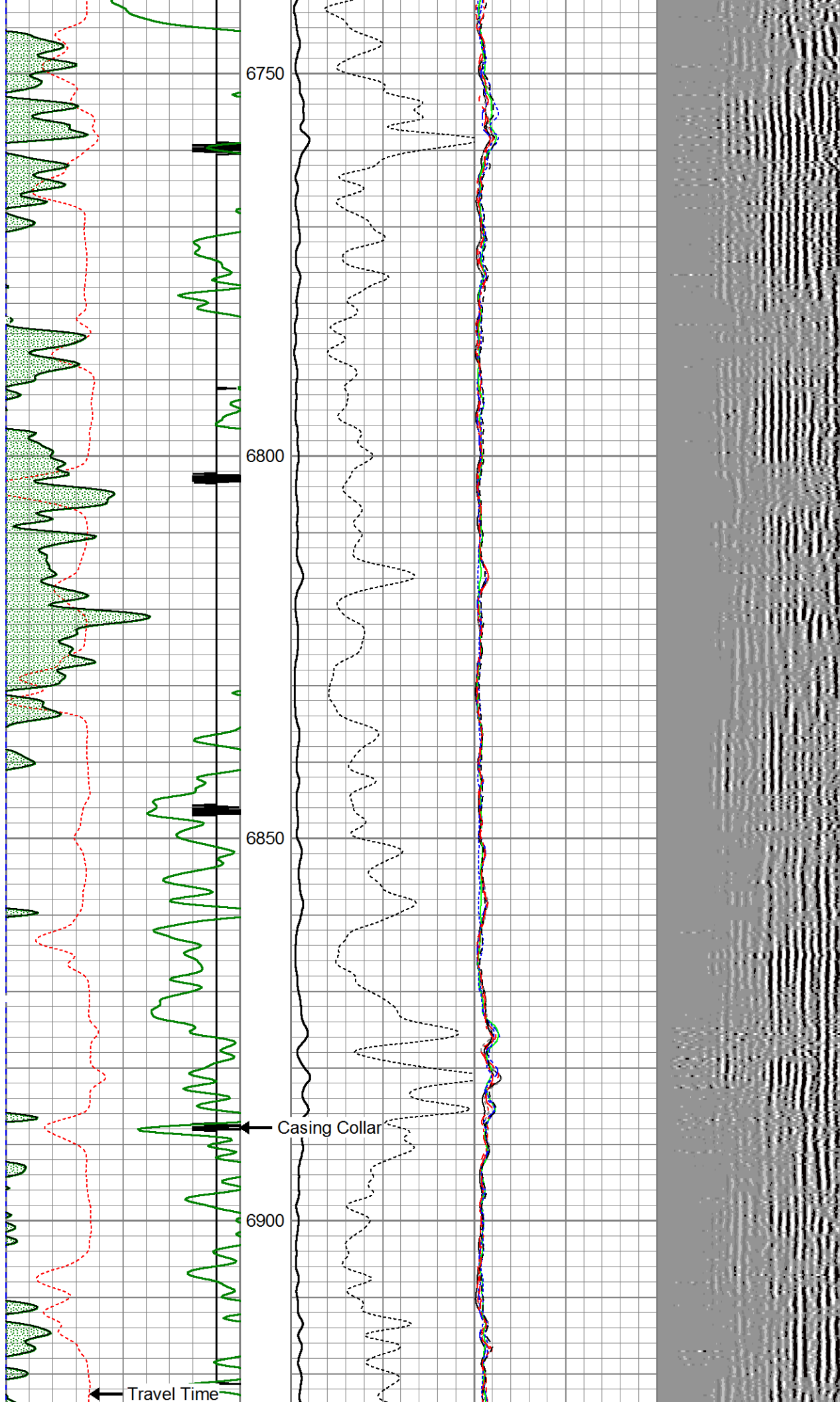
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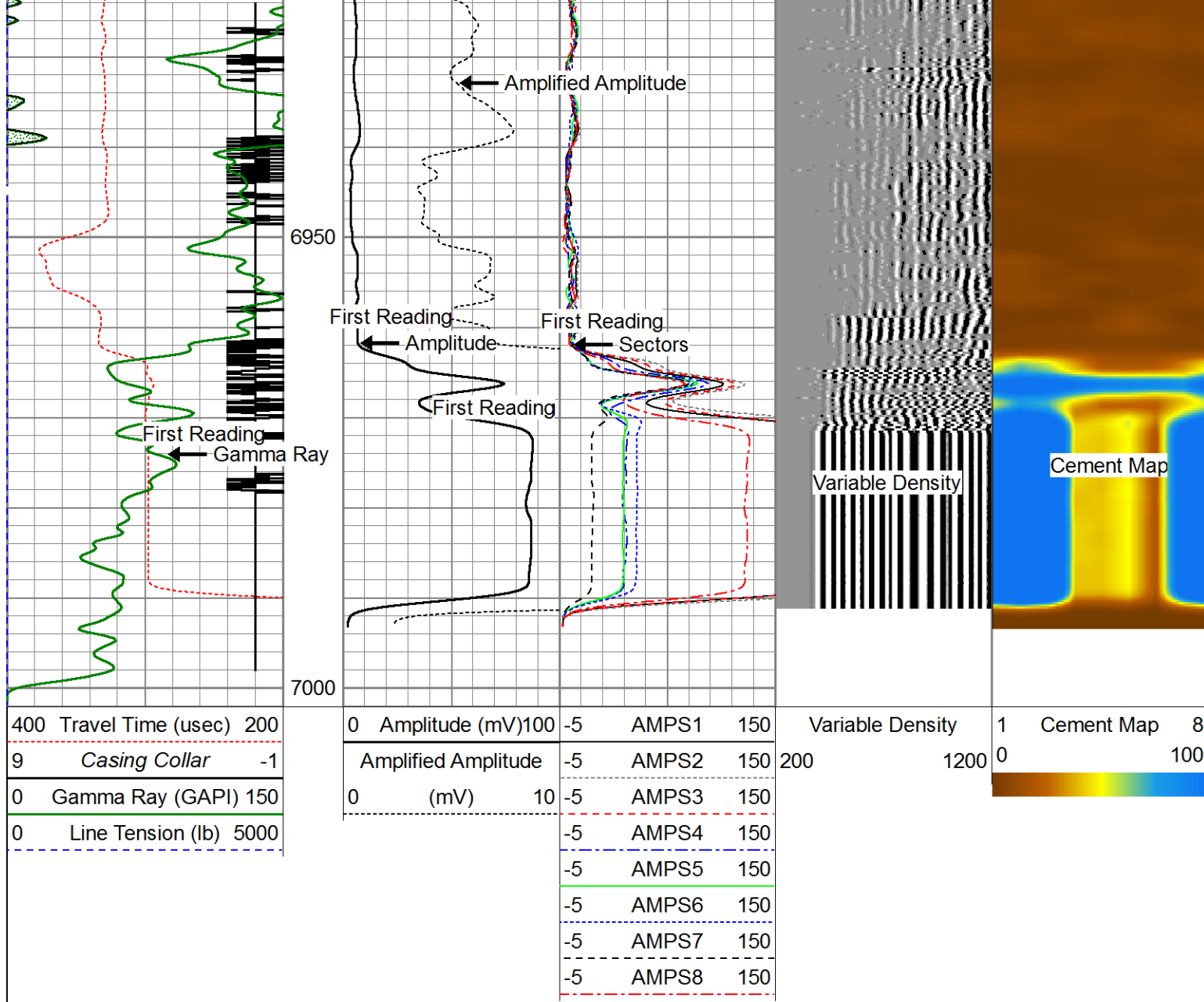
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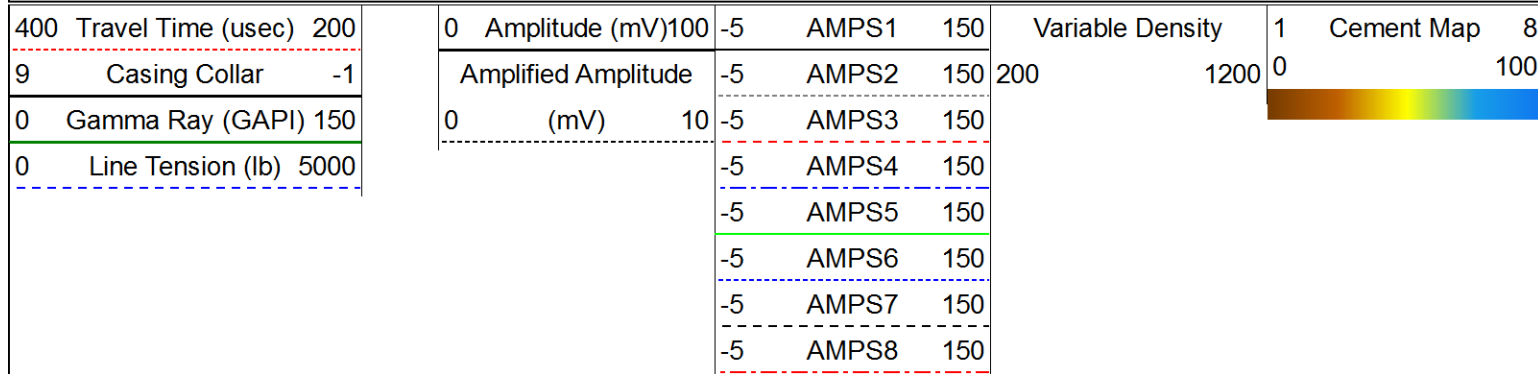


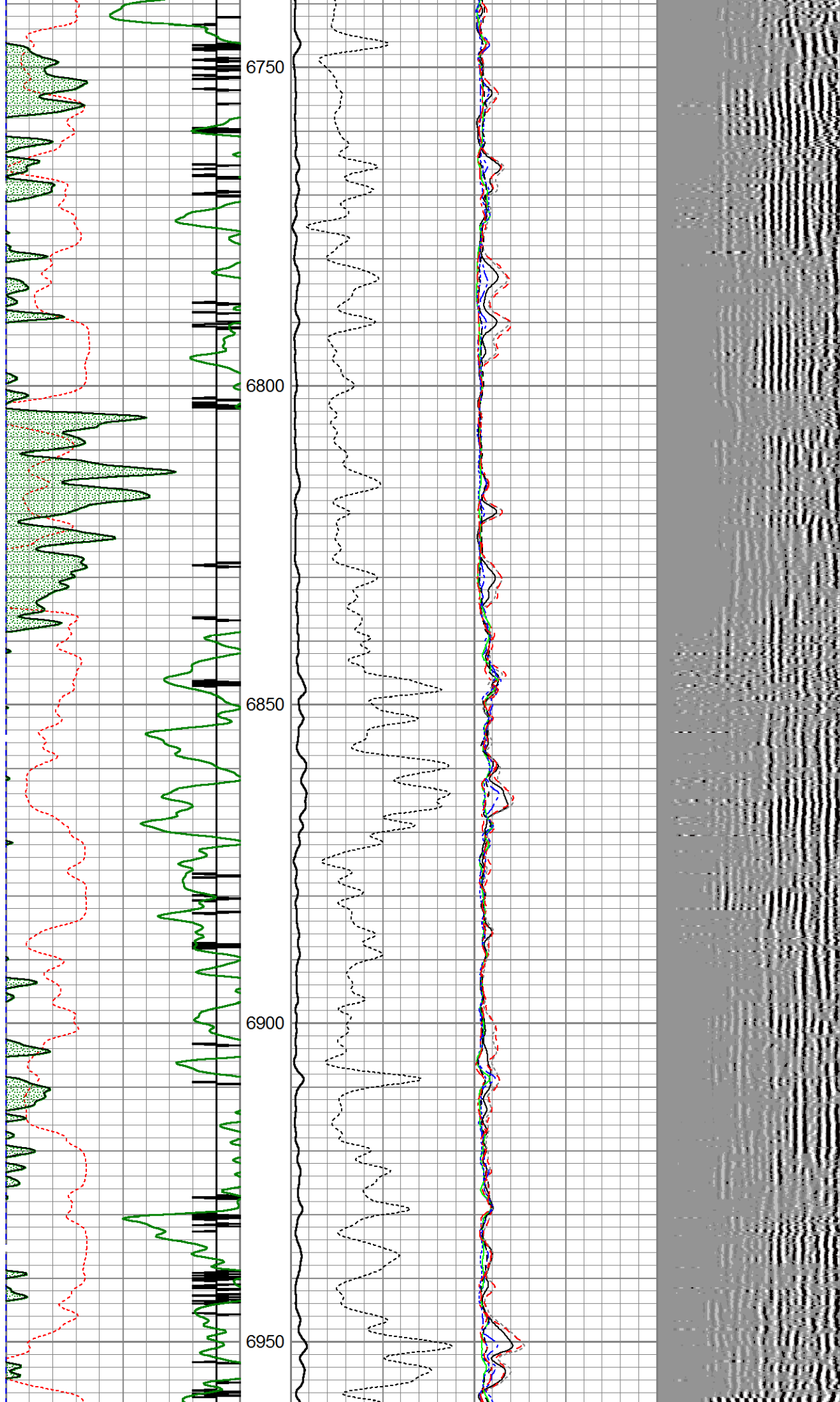


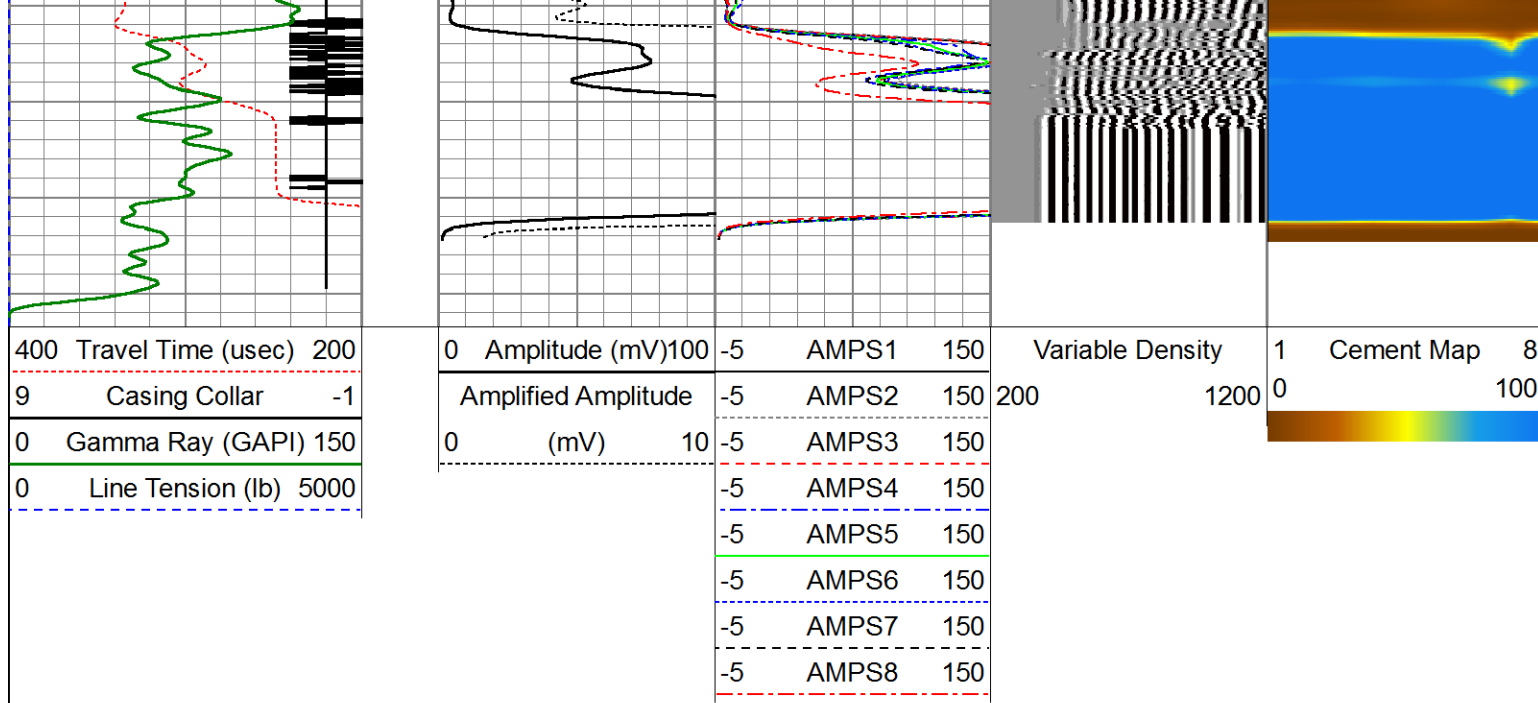


Repeat Pass (0 PSI)

Database File: k:\noble\ncpl pc aa04-69-1hn_rcbl\noble ncpl pc aa04-69-1hn.db
 Dataset Pathname: pass7
 Presentation Format: scbl03
 Dataset Creation: Thu Jan 09 08:43:48 2014 by Log 7.0 B1
 Charted by: Depth in Feet scaled 1:240







Calibration Report

Database File: K:\Noble\NCLP PC AA04-69-1HN_RCBL\noble nclp pc aa04-69-1hn.db
 Dataset Pathname: pass7
 Dataset Creation: Thu Jan 09 08:43:48 2014 by Log 7.0 B1

Gamma Ray Calibration Report		
Serial Number:	101135-Dig	
Tool Model:	Probe275	
Performed:	Wed Jan 08 13:15:34 2014	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.8500	GAPI/cps

Segmented Cement Bond Log Calibration Report		
Serial Number:	101130	
Tool Model:	Probe	
Calibration Casing Diameter:	7.000	in
Calibration Depth:	306.308	ft

Master Calibration, performed Thu Jan 09 08:41:19 2014:							
	Raw (v)		Calibrated (mv)		Results		
	Zero	Cal	Zero	Cal	Gain	Offset	
3'	0.008	1.375	1.000	62.165	164.755	1.649	
CAL	0.008	0.477					
5'	0.008	0.394	1.000	62.165	158.264	-0.240	
SUM							
S1	0.008	0.342	0.000	100.000	299.120	-2.359	
S2	0.008	0.335	0.000	100.000	305.854	-2.397	
S3	0.008	0.338	0.000	100.000	302.791	-2.406	
S4	0.008	0.368	0.000	100.000	277.987	-2.185	
S5	0.008	0.400	0.000	100.000	254.861	-2.022	
S6	0.008	0.418	0.000	100.000	243.541	-1.915	
S7	0.008	0.417	0.000	100.000	244.822	-1.914	

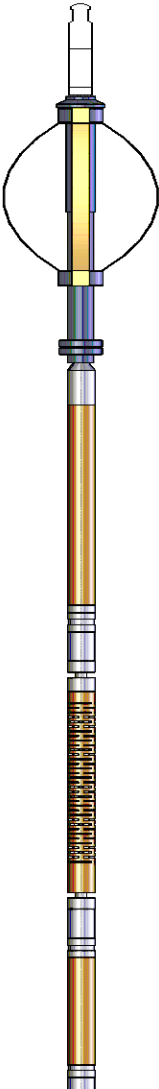

S7	0.008	0.417	0.000	100.000	244.669	-1.944
S8	0.008	0.386	0.000	100.000	264.865	-2.121

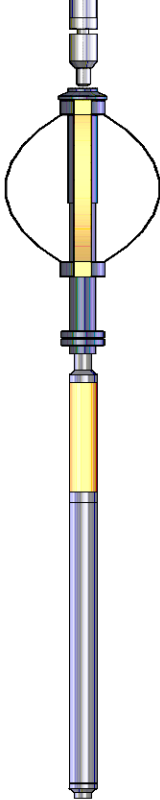
Internal Reference Calibration, performed Mon Oct 10 09:42:03 2005:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.008	0.477	1.000	0.000

Air Zero Calibration, performed Wed Jan 08 17:32:30 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

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
			RBT-Probe (101130) Probe Radii Bond Tool with Digital Telemetry	8.75	2.75	90.00
WVF3FT	11.84					
WVFCAL	11.84					
WVFS1	11.84					
WVFS2	11.84					
WVFS3	11.84					
WVFS4	11.84					
WVFS5	11.84					
WVFS6	11.84					
WVFS7	11.84					

WVFS7	11.84					
WVFS8	11.84					
WVF5FT	10.84					
CCL	3.88		Probe275 2.75" Centralizer	2.88	2.75	20.00
GR	2.54		GR-Probe275 (101135-Dig) Probe 2 3/4" Logging Gamma Ray	4.78	2.75	57.00
Dataset: noble nclp pc aa04-69-1hn.db: field/well/run1/pass7 Total Length: 20.28 ft Total Weight: 197.00 lb O.D.: 2.75 in						

	Company	Noble Energy
	Well	NCLP PC AA04-69-1HN
	Field	Wattenberg
	County	Weld
	State	Colorado