



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

Company		Noble Energy	
Well		Five Rivers K07-62-1HN	
Field		Wattenberg	
County		Weld	
State		Colorado	
Location:		API # : 05-123-38086	
Permanent Datum		SEC 8 TWP 4 N RGE 66 W	
Log Measured From		Ground Level Elevation 4702'	
Drilling Measured From		Kelly Bushing 16' APD	
		Kelly Bushing	
		Elevation	
		K.B. 4718'	
		D.F. 4717'	
		G.L. 4702'	
Date		Feb 27, 2014	
Run Number		One	
Depth Driller		16152'	
Depth Logger		7104'	
Bottom Logged Interval		7091'	
Top Log Interval		Surface	
Open Hole Size		8 3/4"	
Type Fluid		Water	
Density / Viscosity		8.33	
Max. Recorded Temp.		221DegF	
Estimated Cement Top		176'	
Time Well Ready		1700	
Time Logger on Bottom		1740	
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	
Surface String		9 5/8"	
Prot. String		7"	
Production String		4.5"	
Liner		4.5"	
Short Joint		4.5"	

<<< 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 @189'

Logged at 120 fpm (Requested by Customer)

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



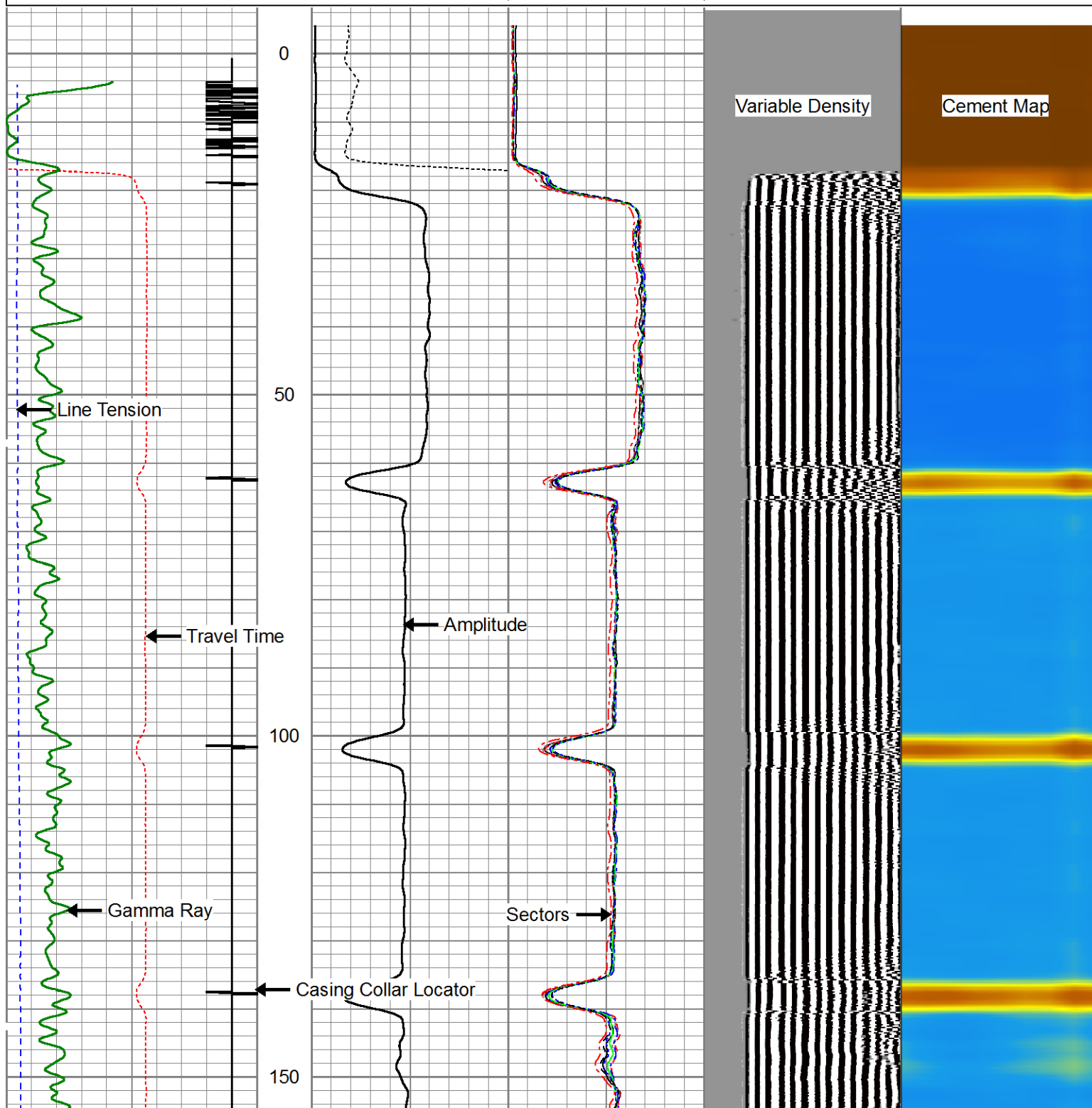
Main Pass (2000 PSI)

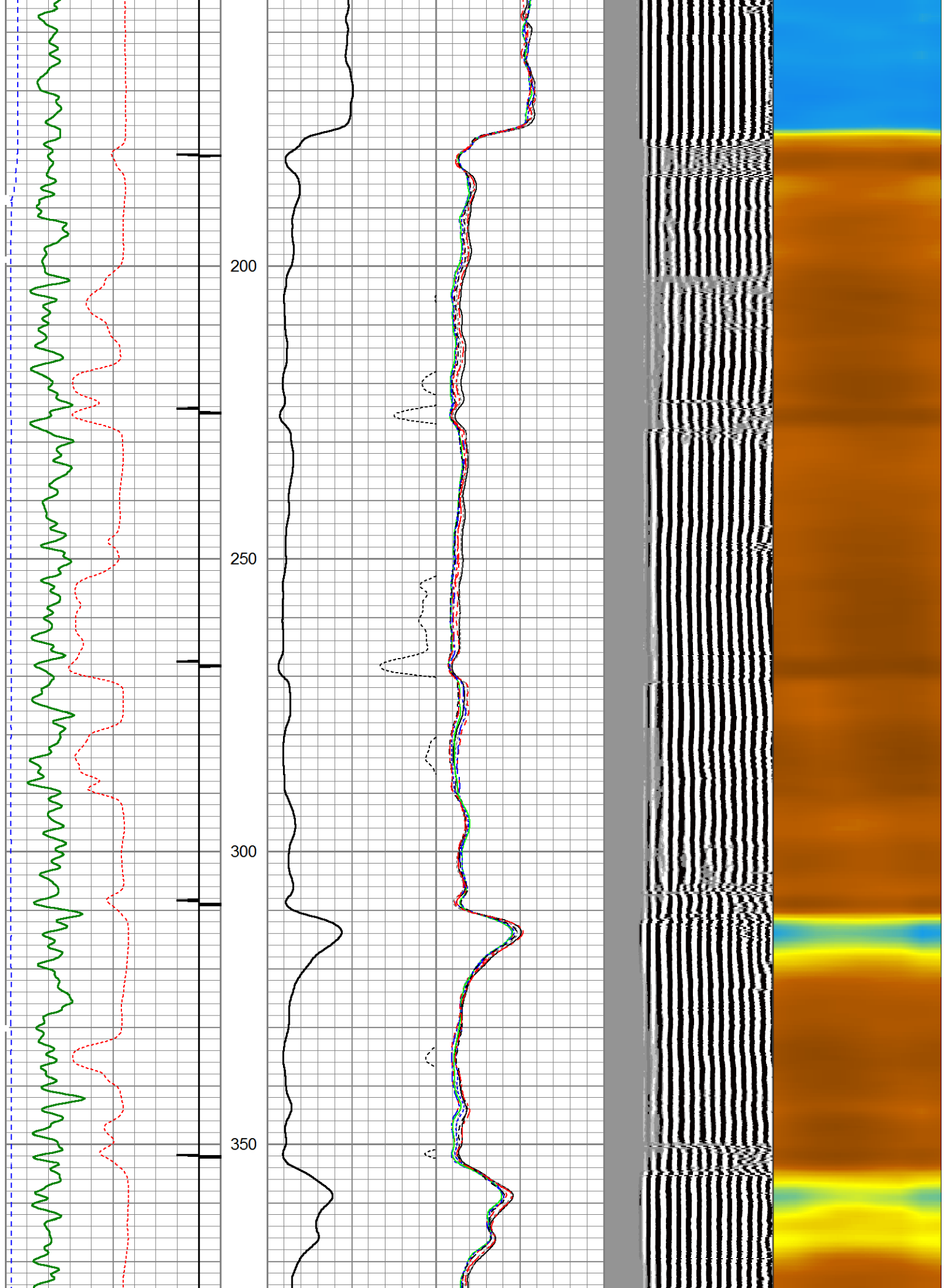
Database File: c:\users\engineers\desktop\noble five rivers k07-62-1hn\_rcbl.db  
Dataset Pathname: pass4  
Presentation Format: scbl03  
Dataset Creation: Thu Feb 27 17:52:50 2014 by Log 7.0 B1  
Charted by: Depth in Feet scaled 1:240

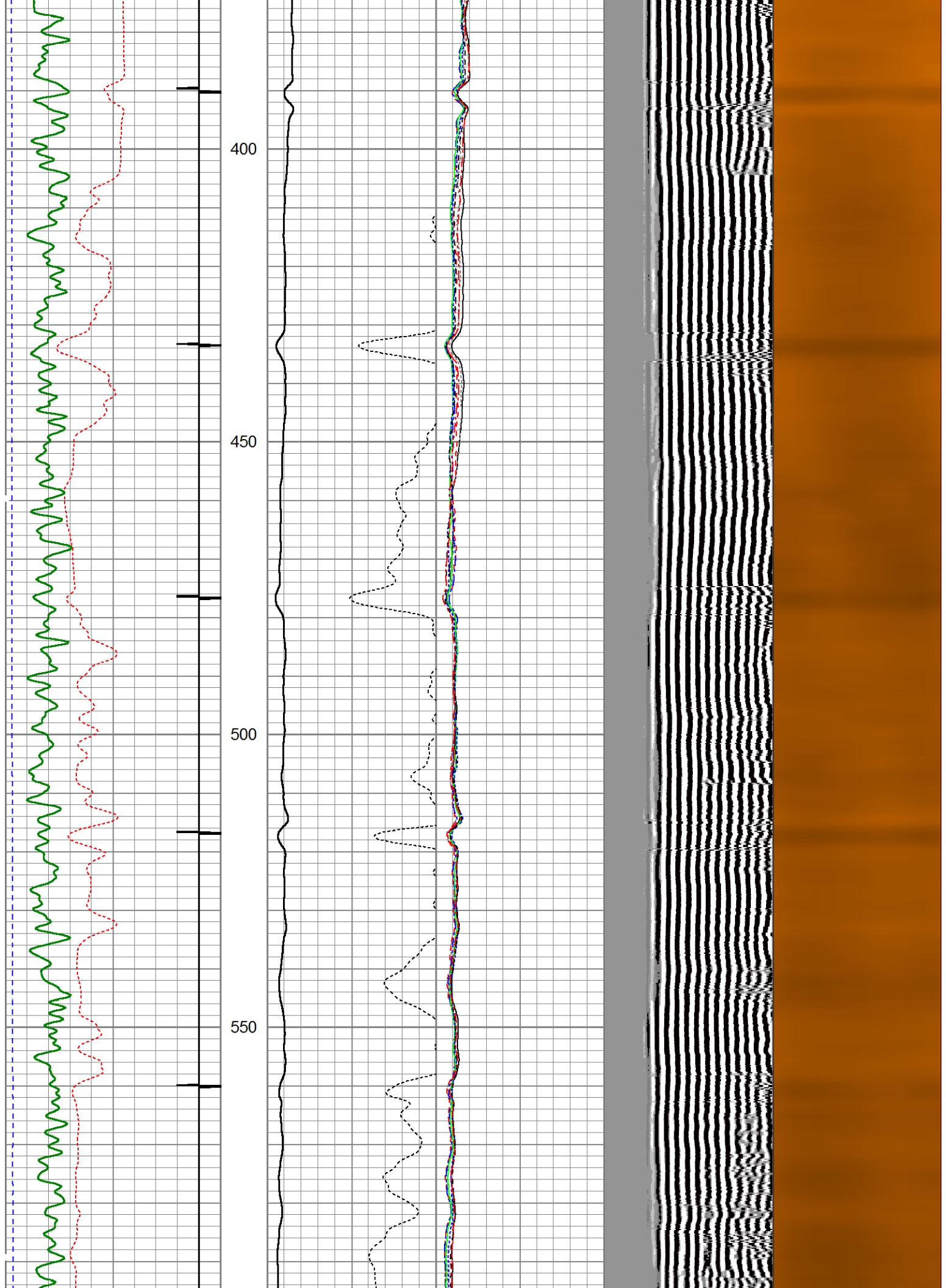
400 Travel Time (usec) 200  
9 Casing Collar -1  
0 Gamma Ray (GAPI) 150  
0 Line Tension (lb) 5000

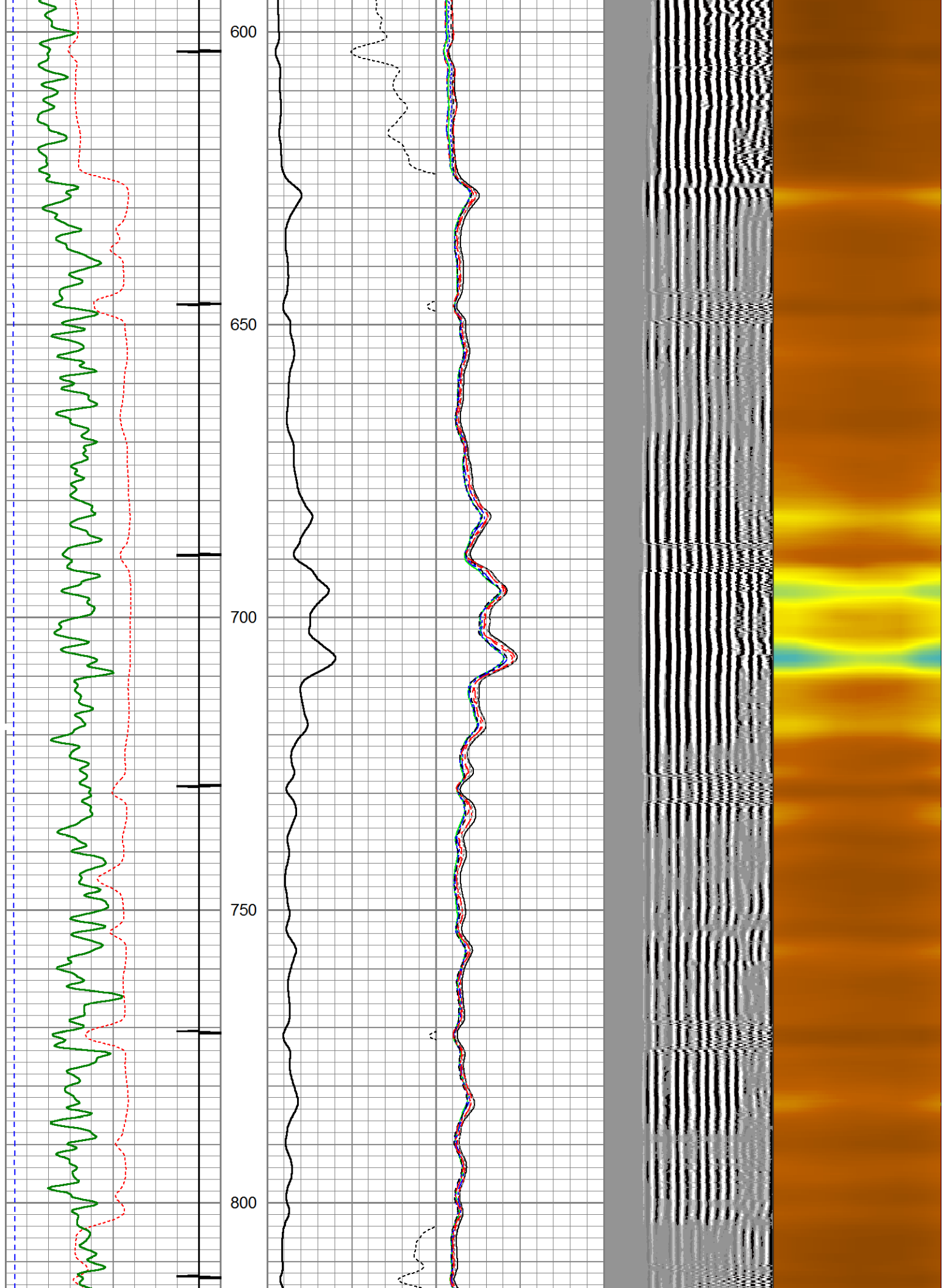
0	Amplitude (mV)	100	-5	AMPS1	150
Amplified Amplitude		-5	AMPS2	150	
0	(mV)	10	-5	AMPS3	150
		-5	AMPS4	150	
		-5	AMPS5	150	
		-5	AMPS6	150	
		-5	AMPS7	150	
		-5	AMPS8	150	

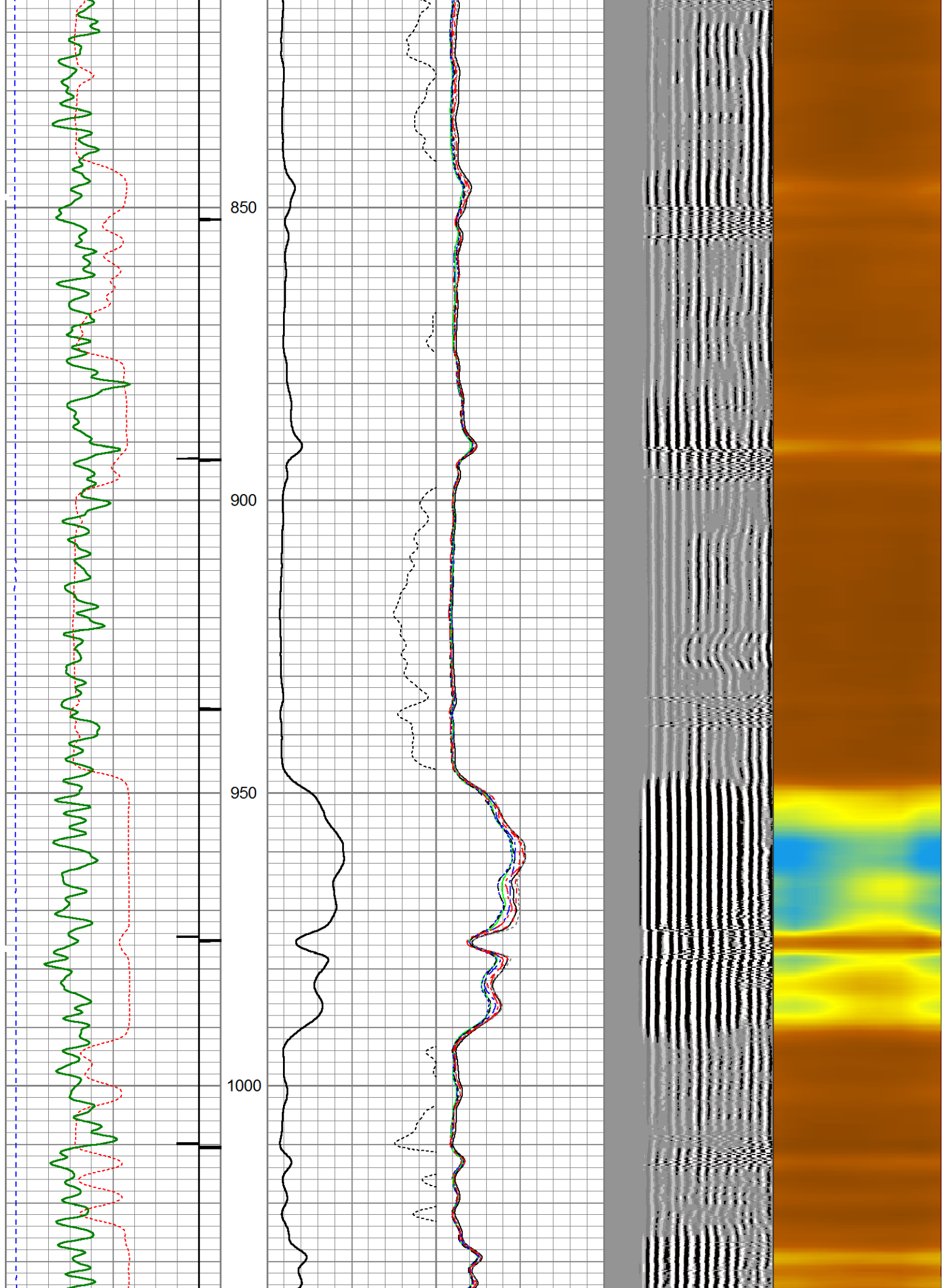
Variable Density 1 Cement Map 8  
200 1200 0 100



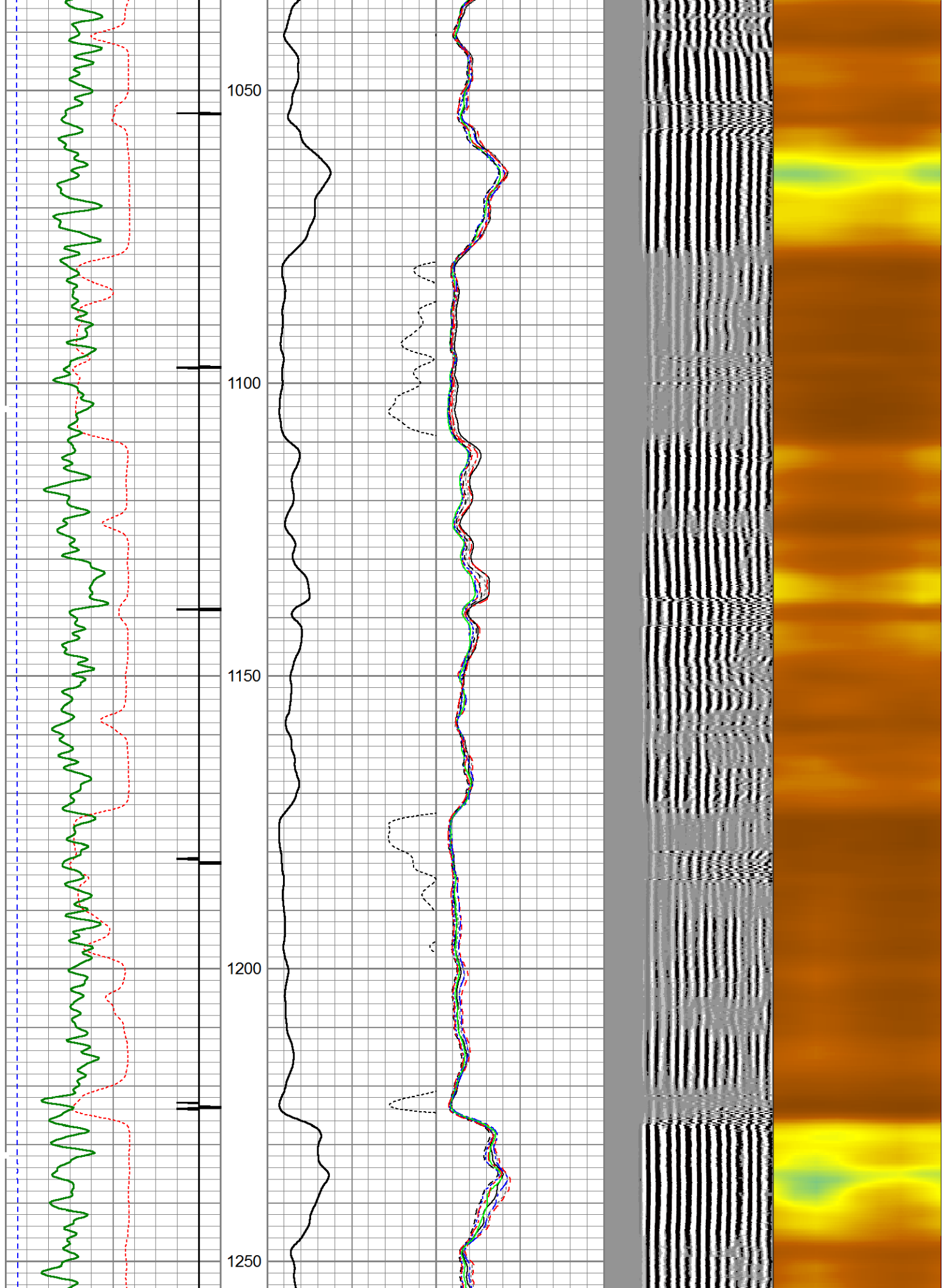


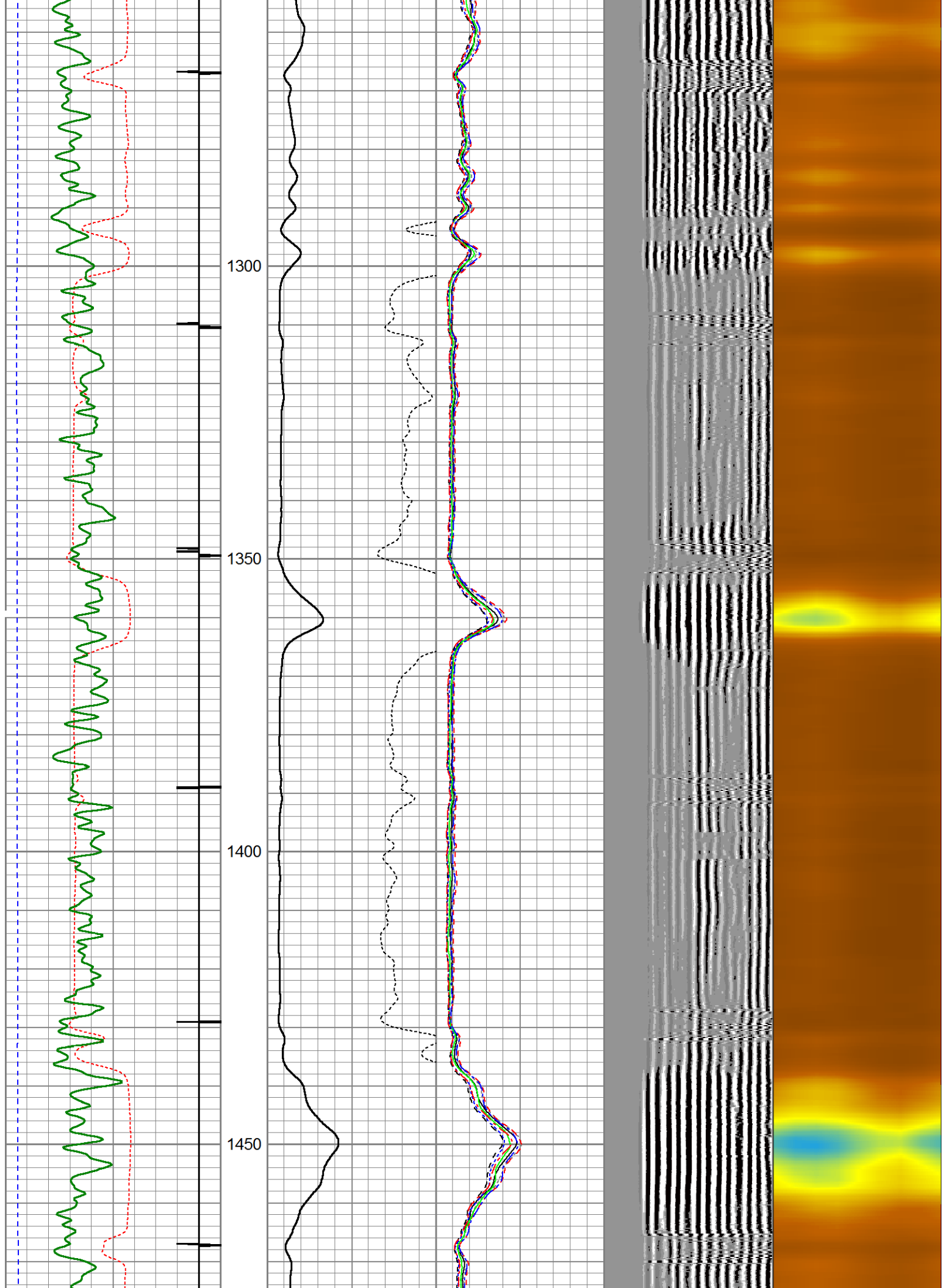




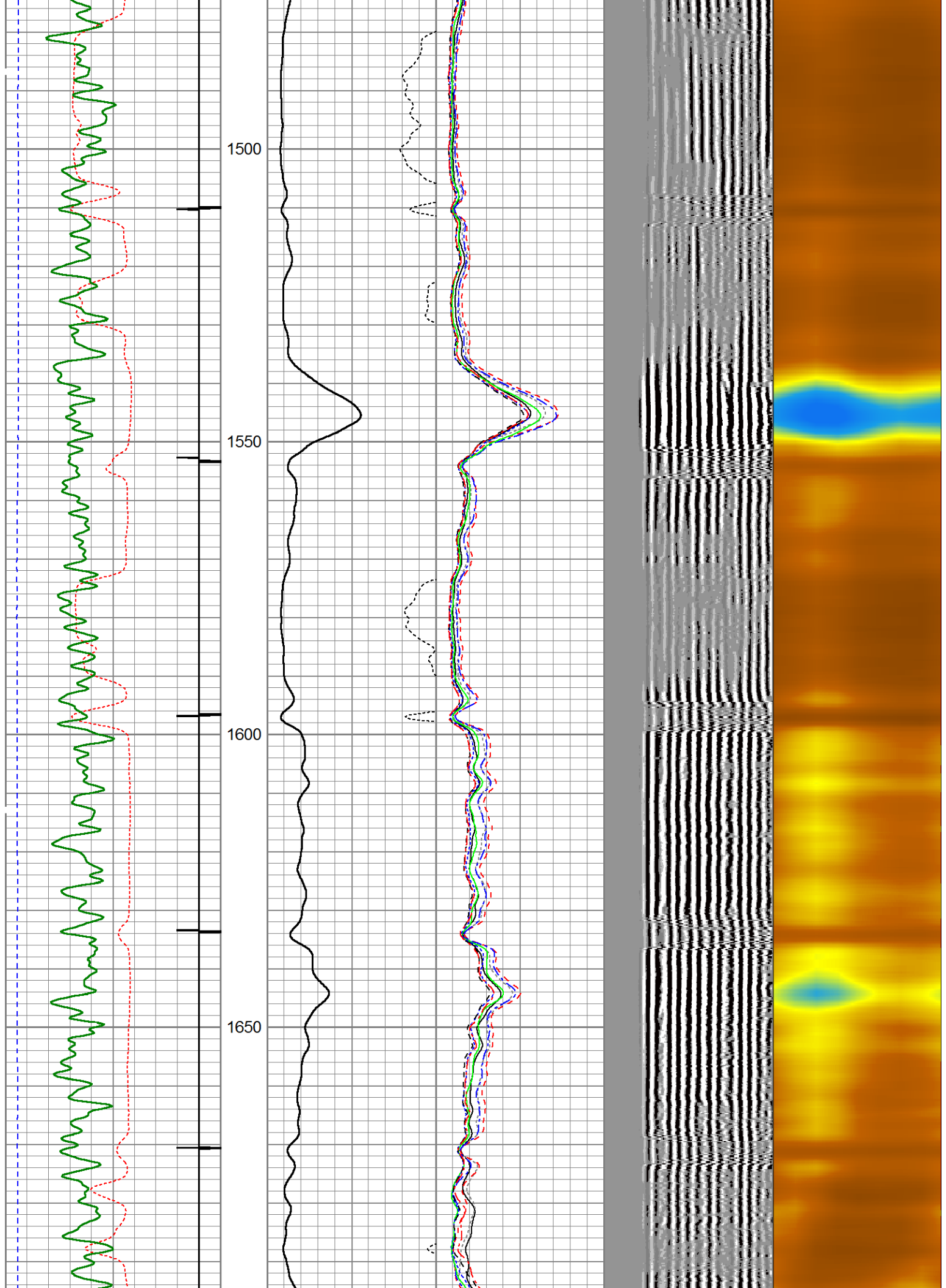


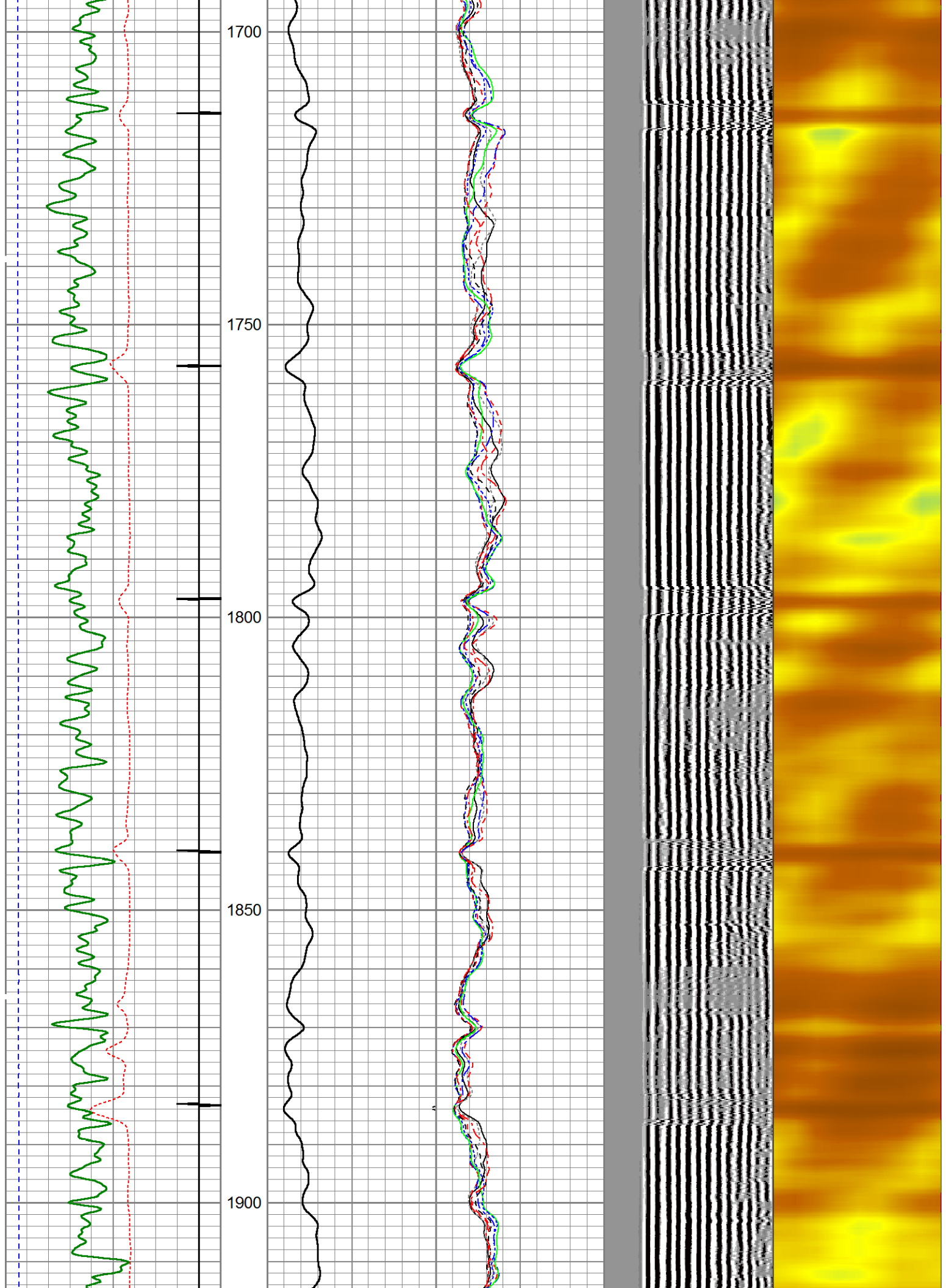


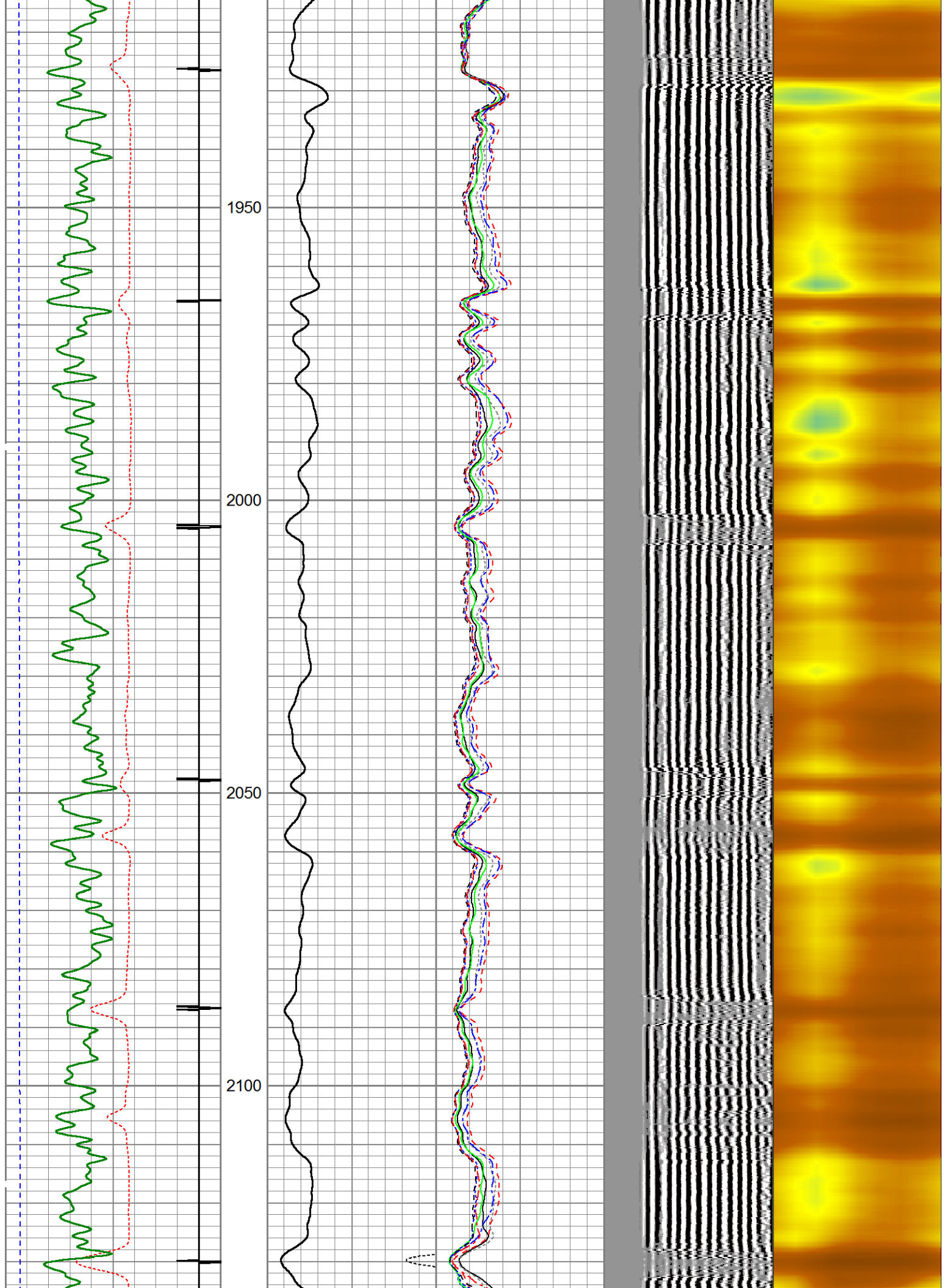


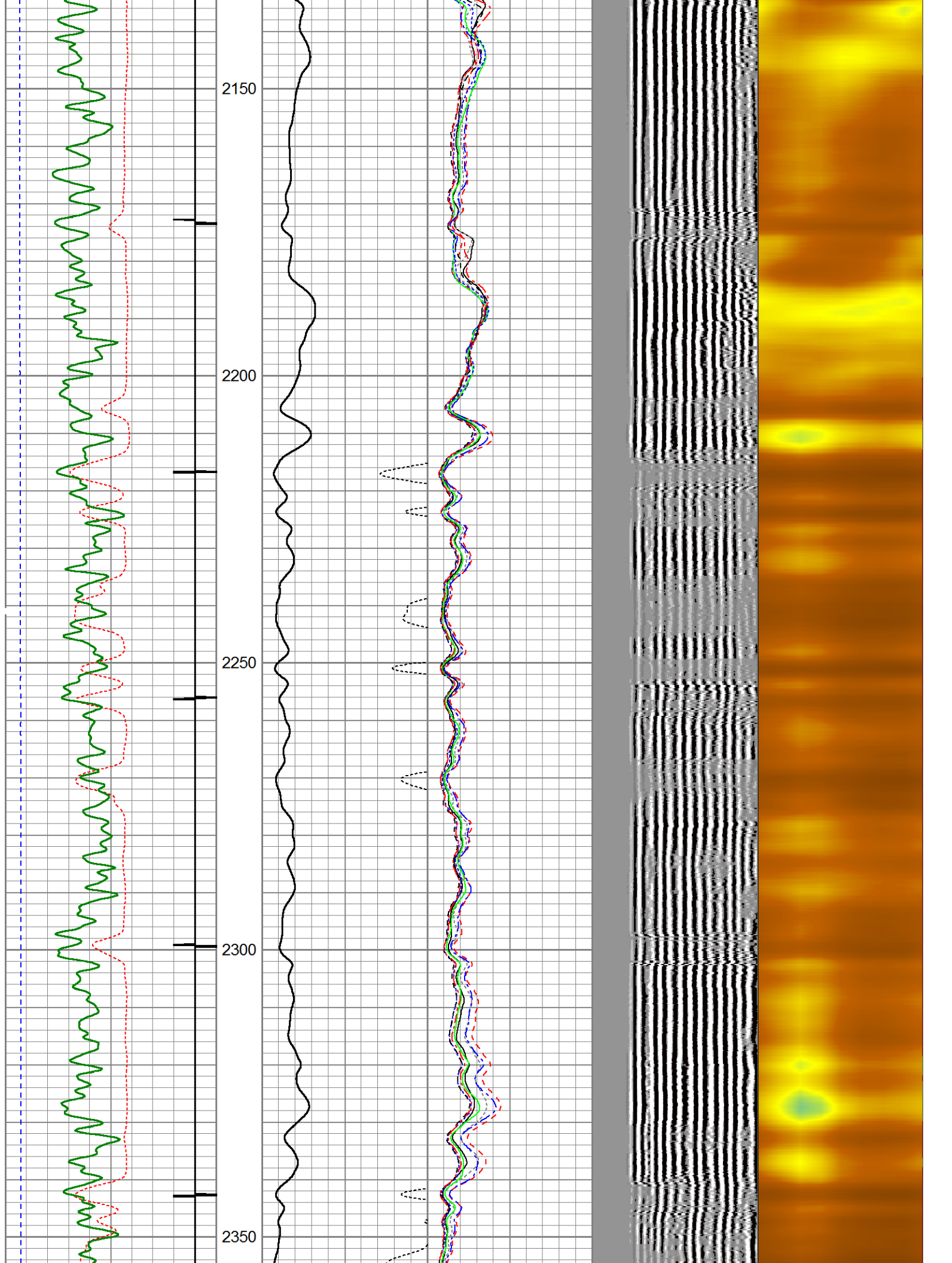




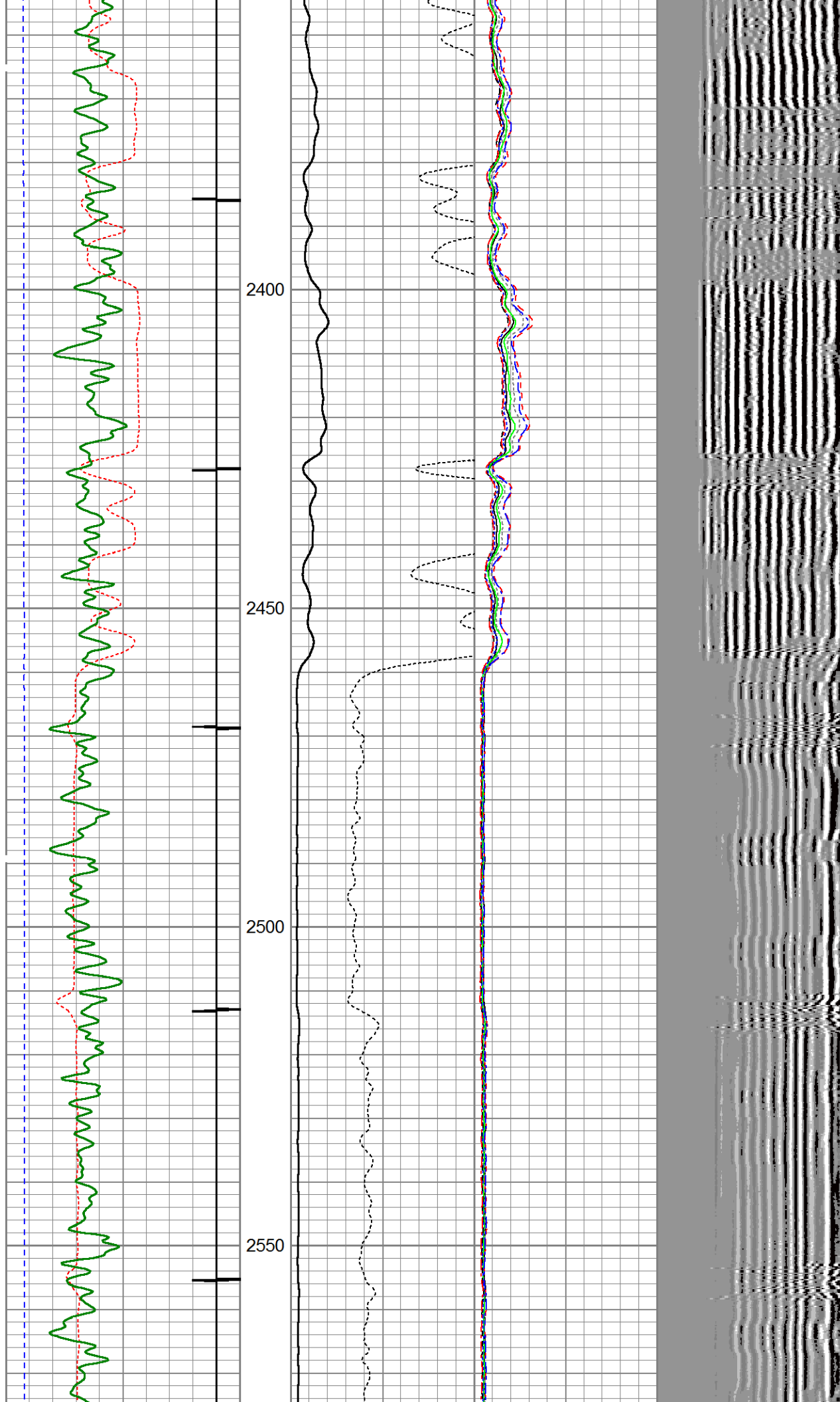




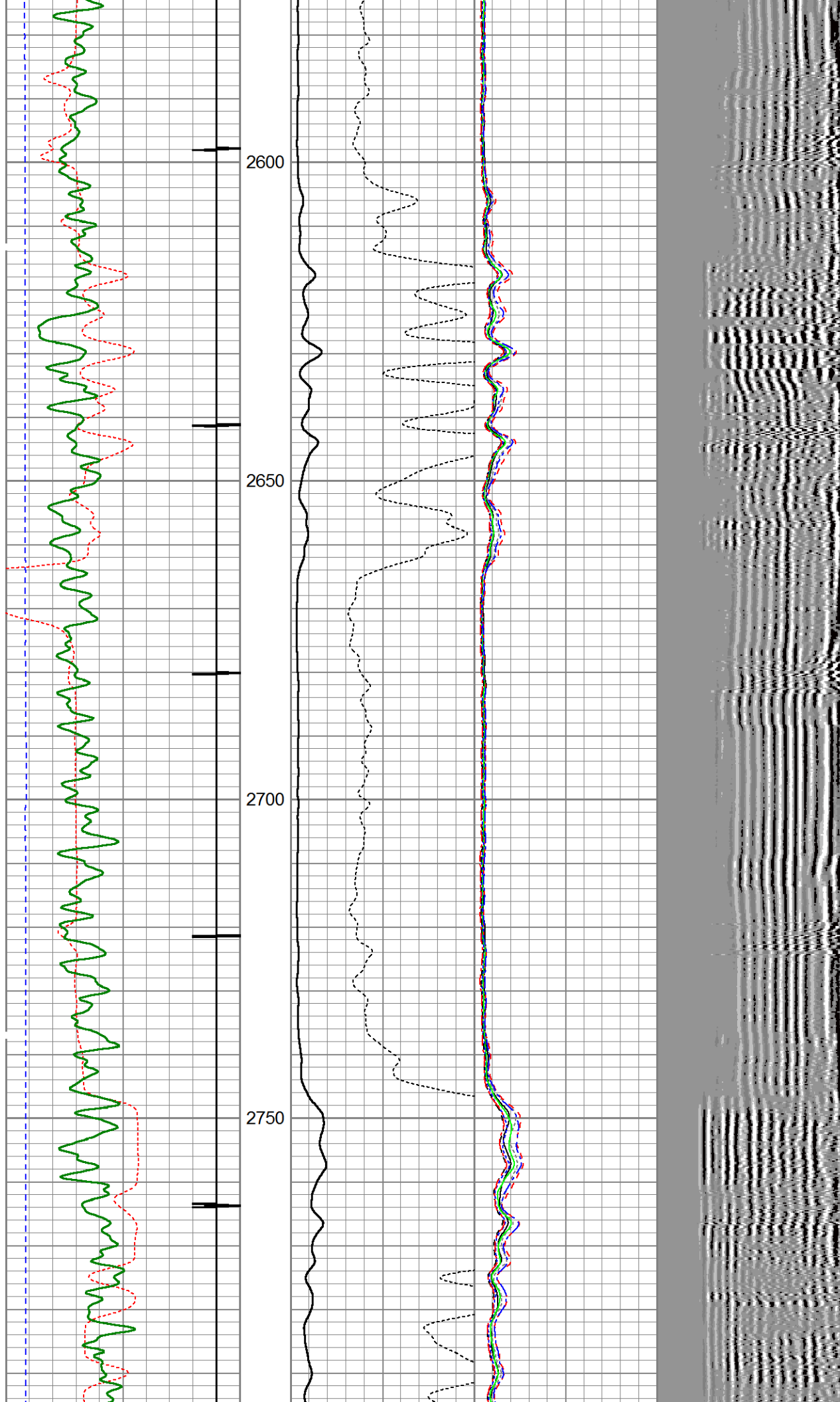


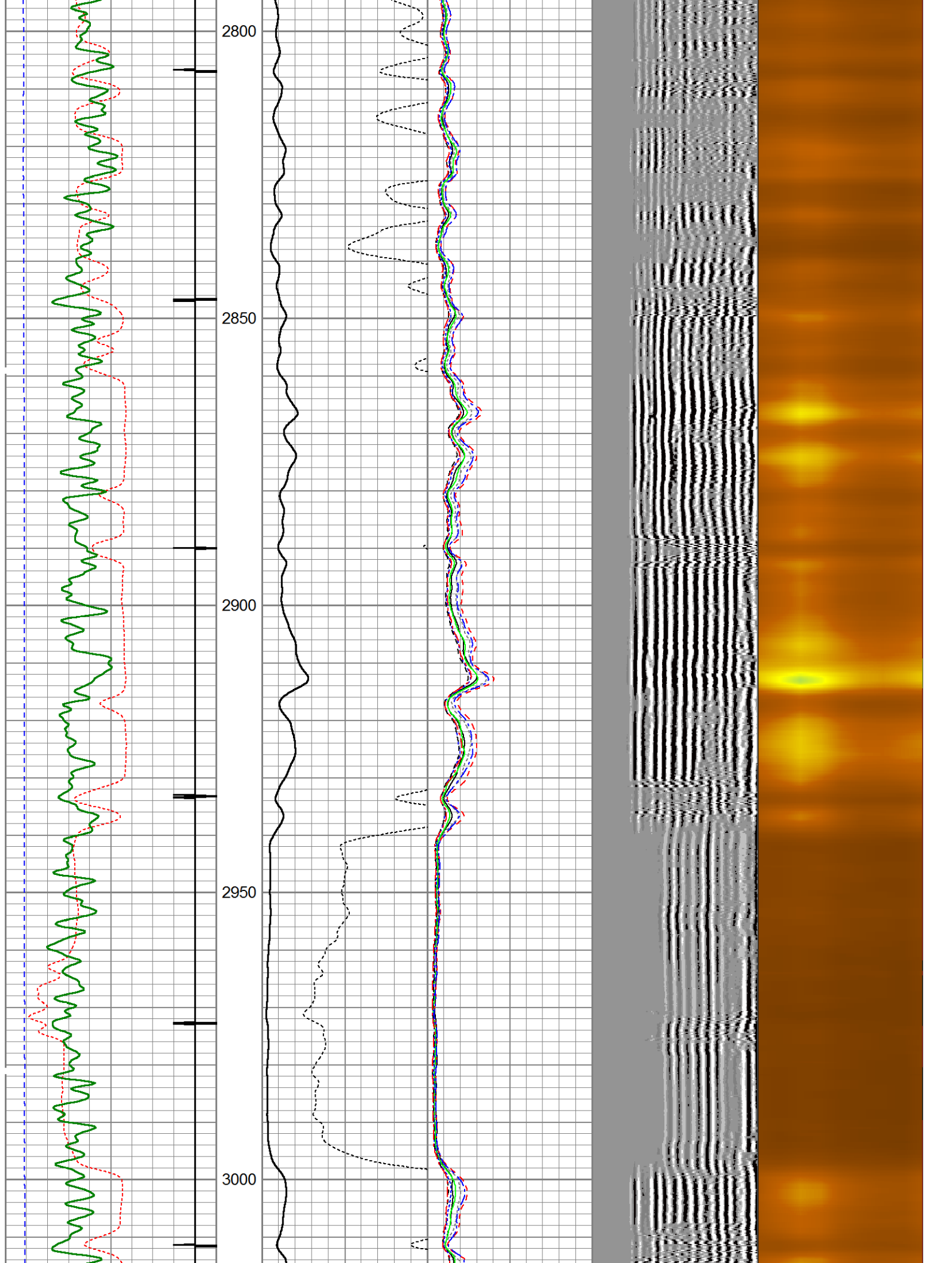


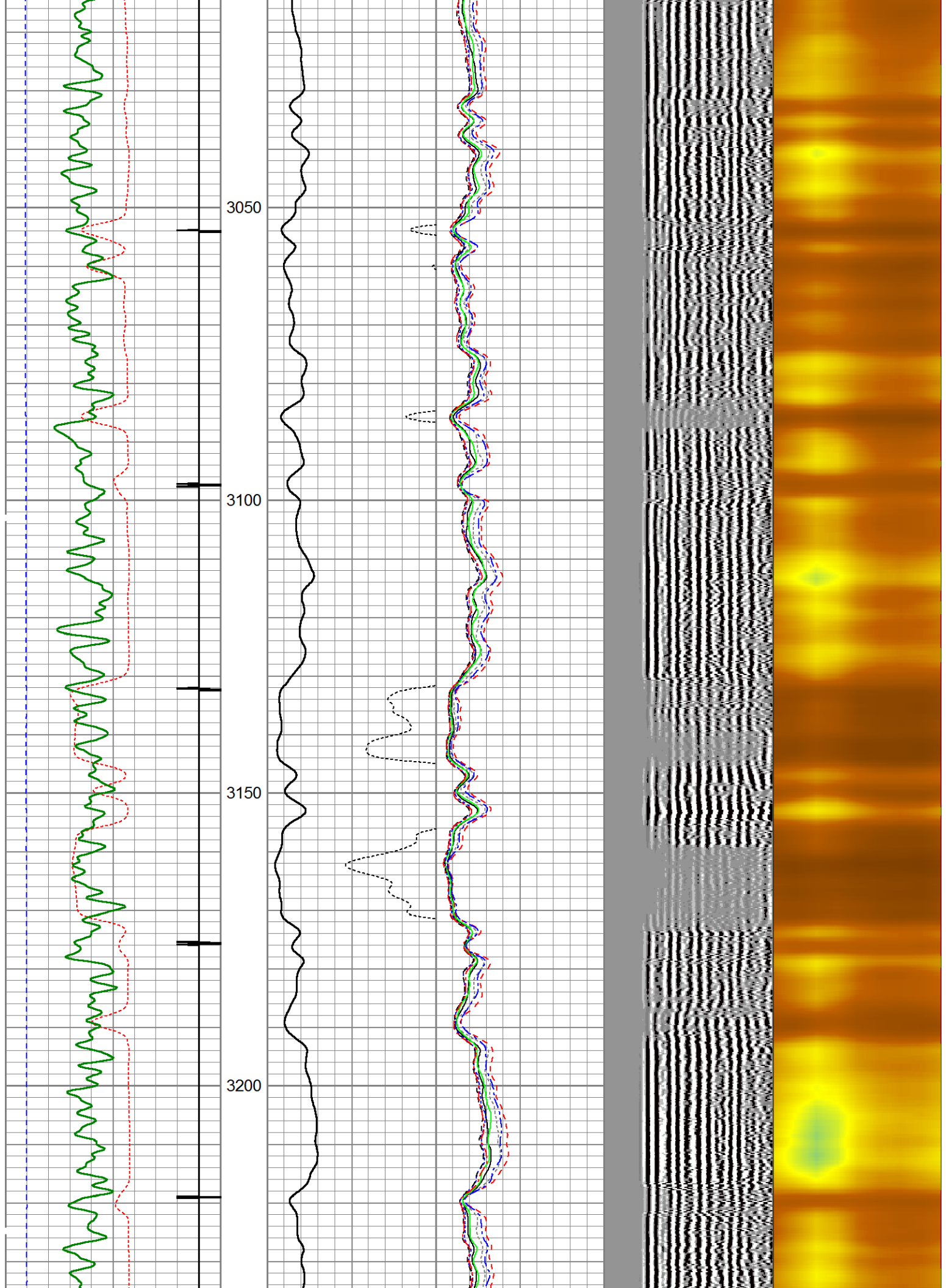


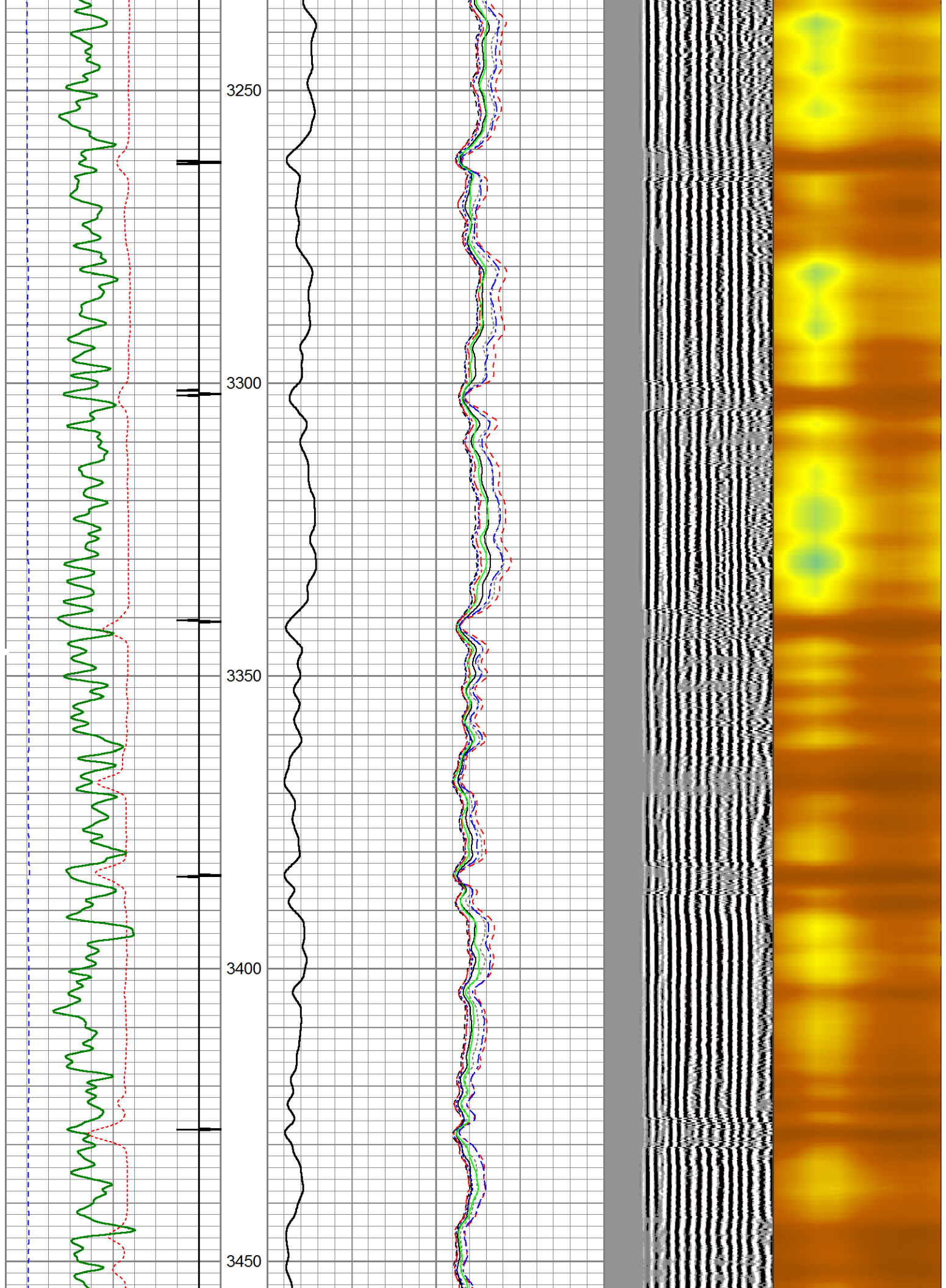




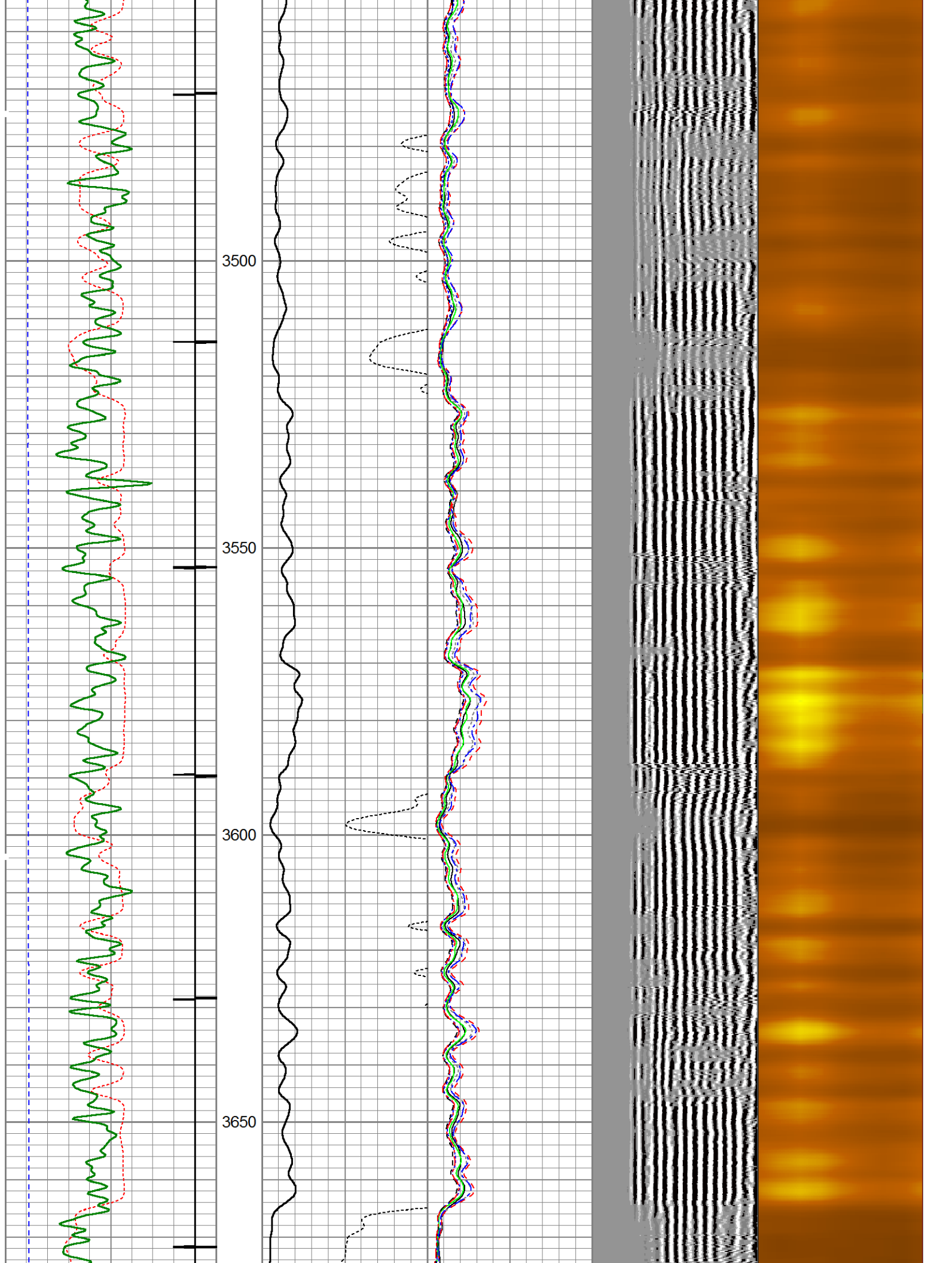




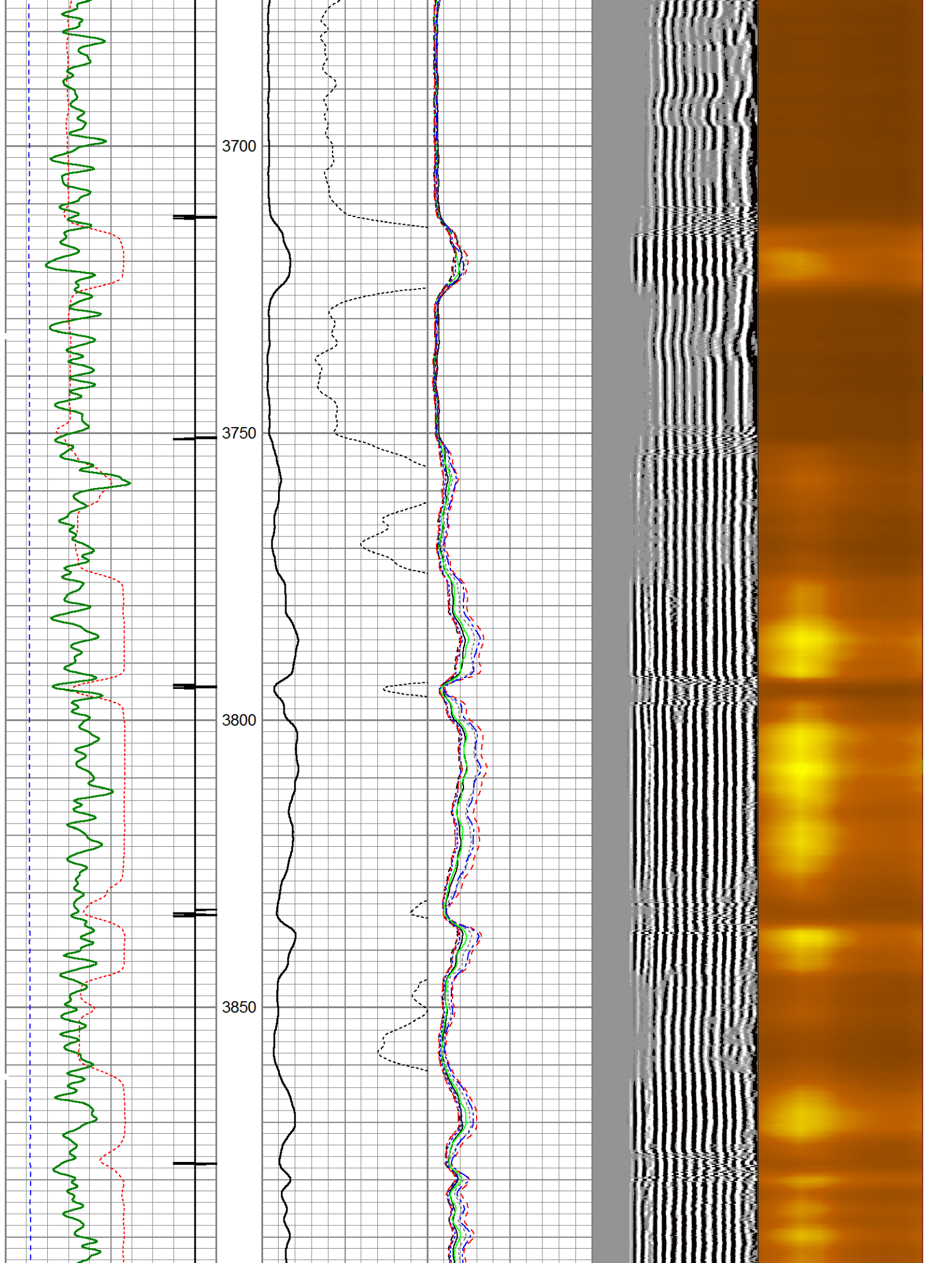


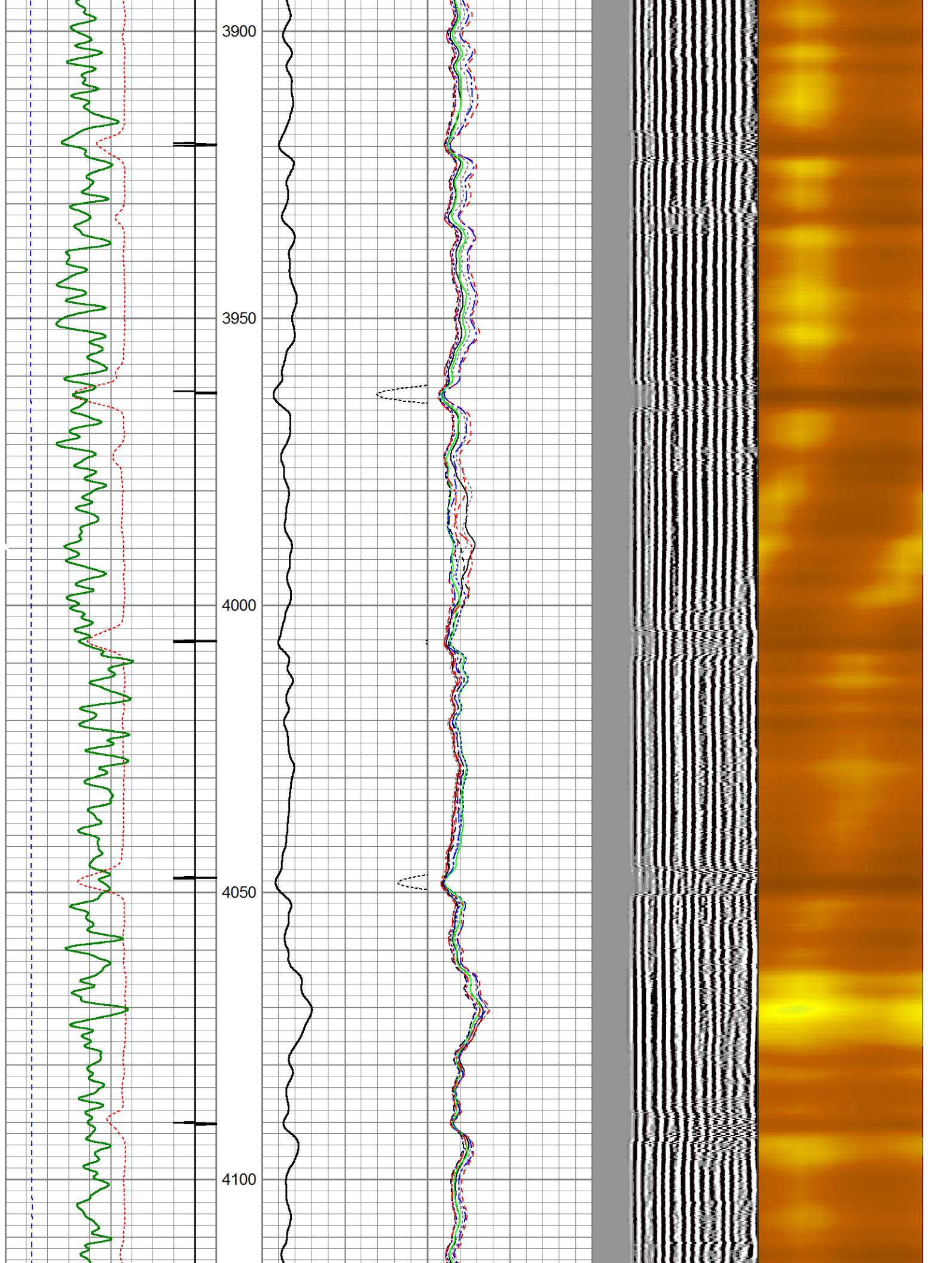


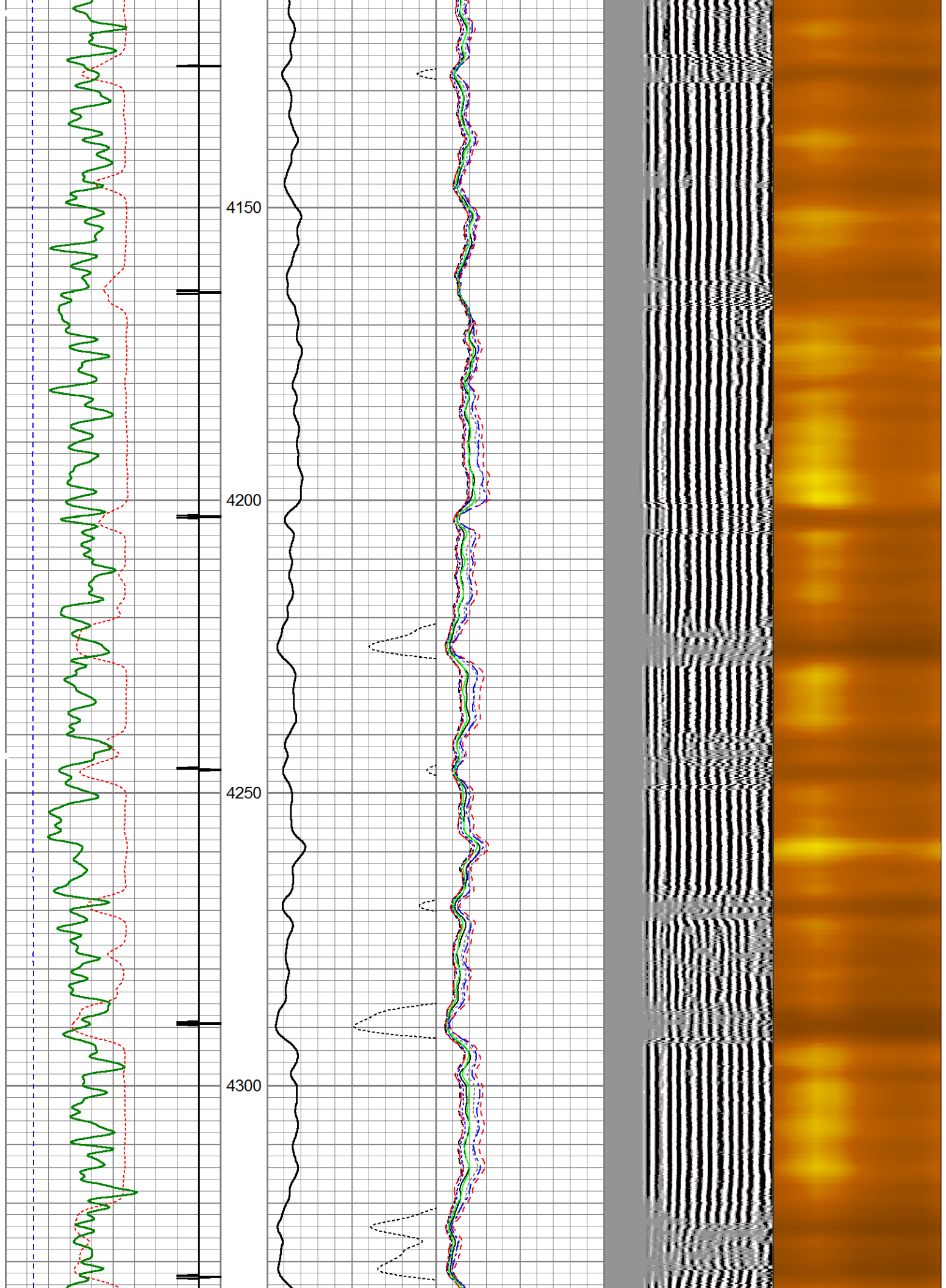


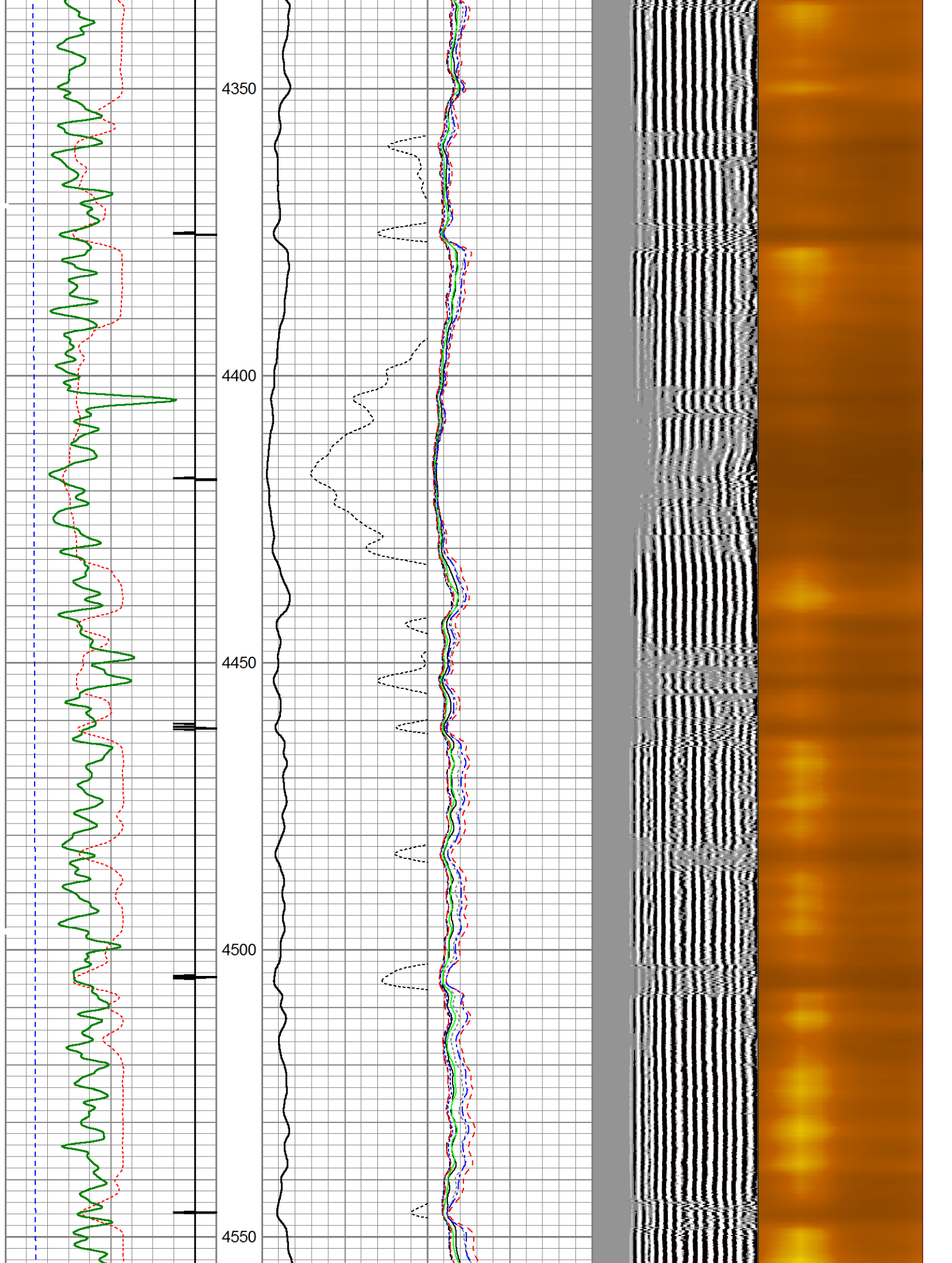




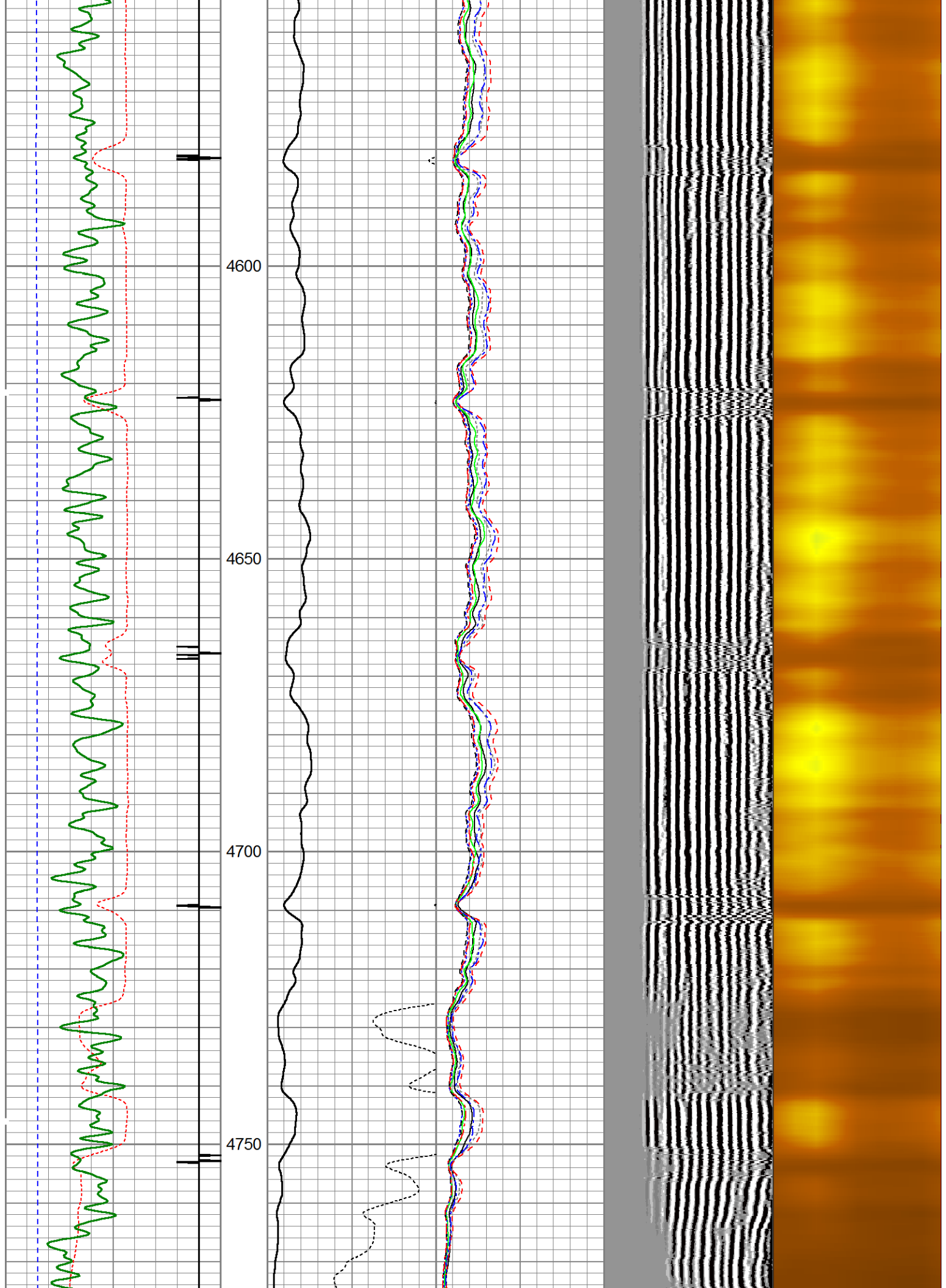




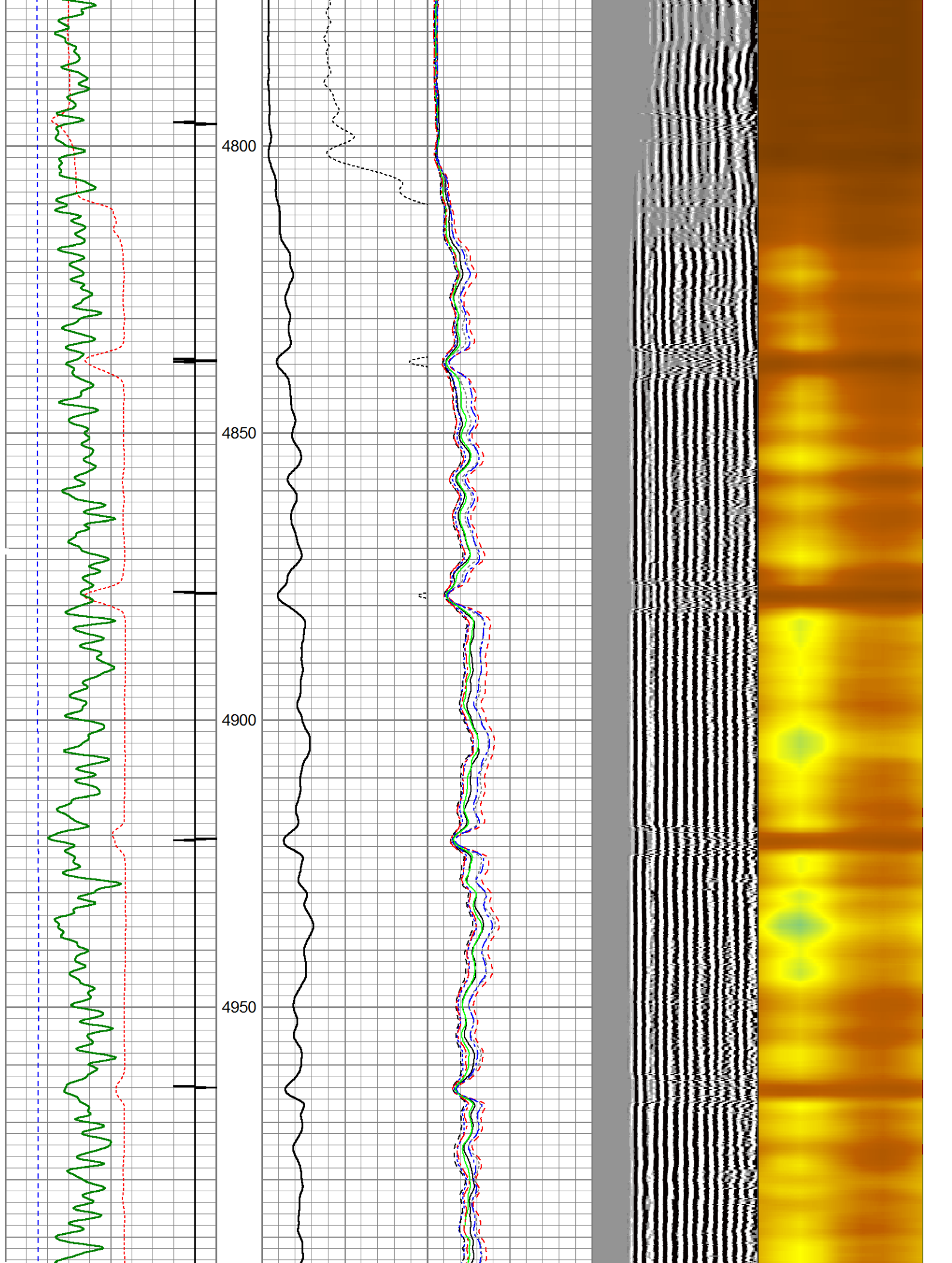


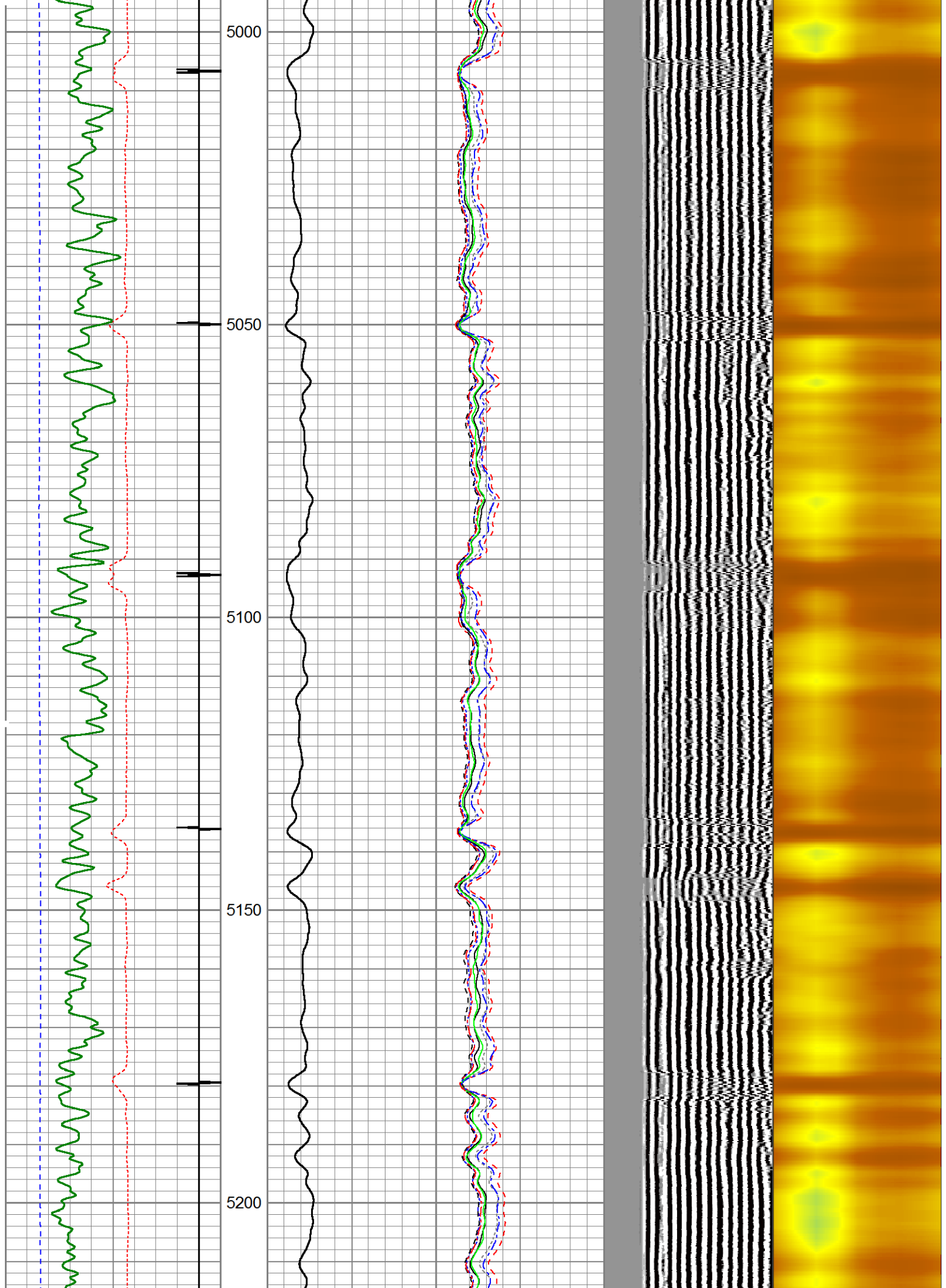


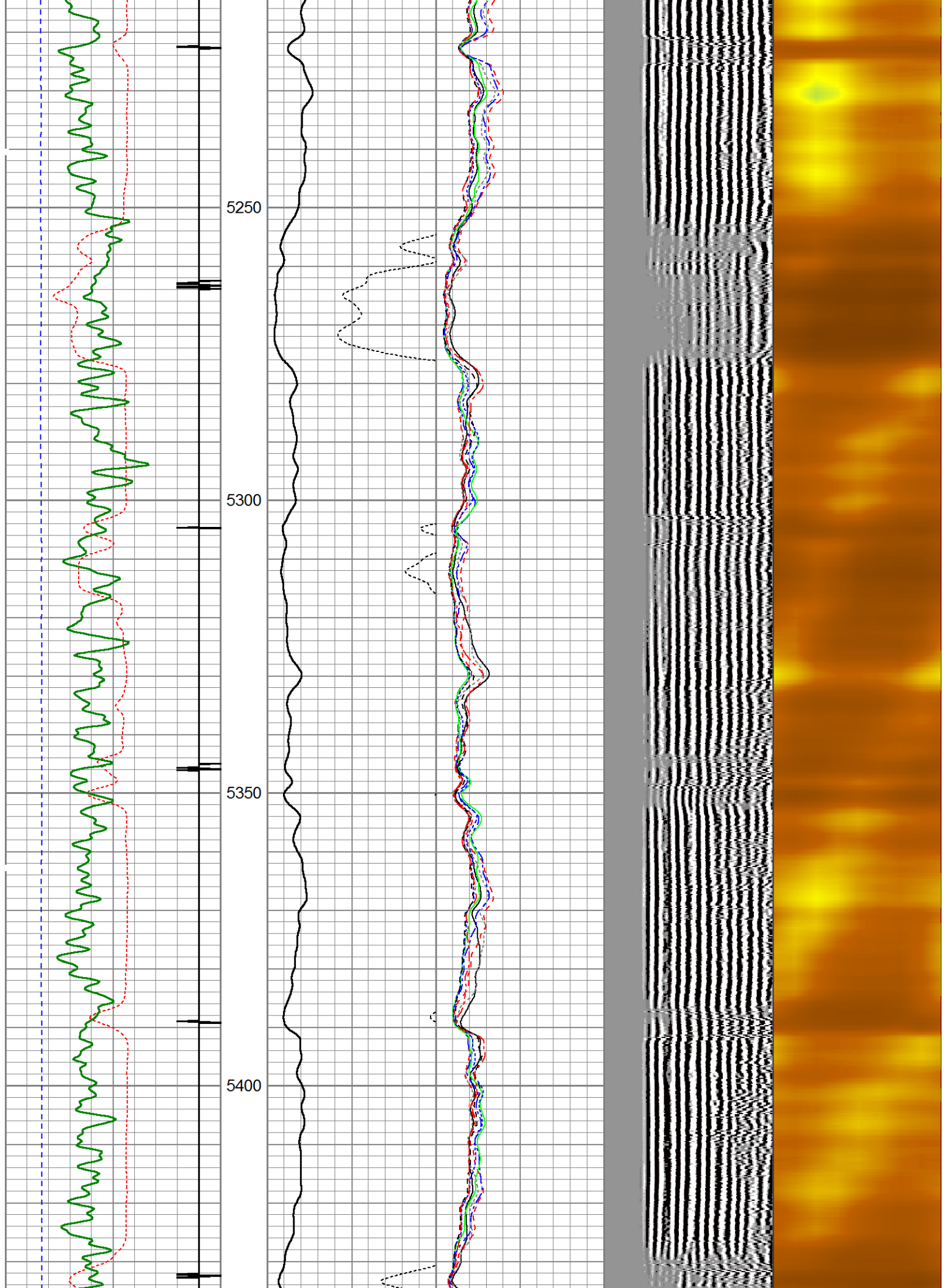


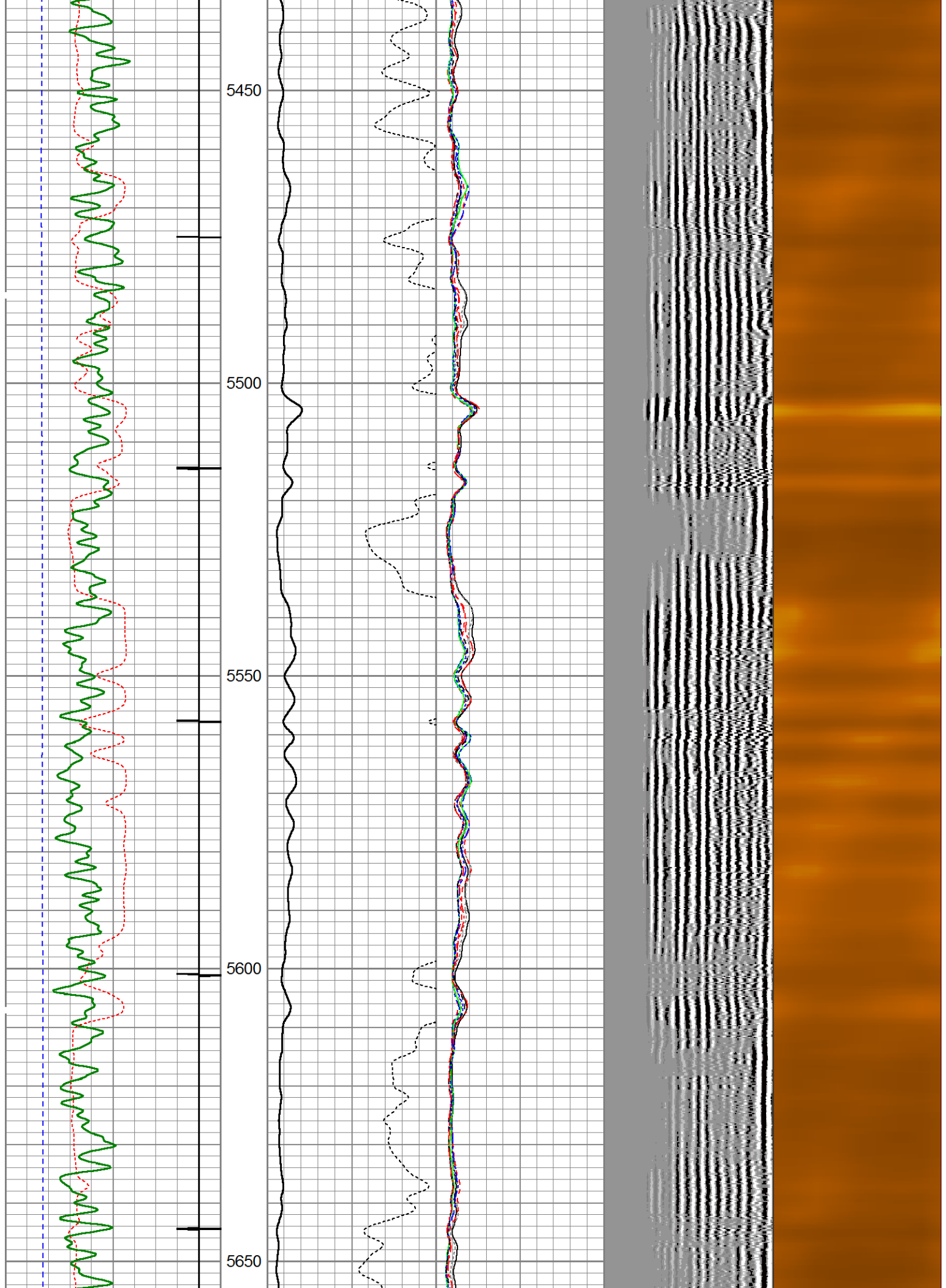




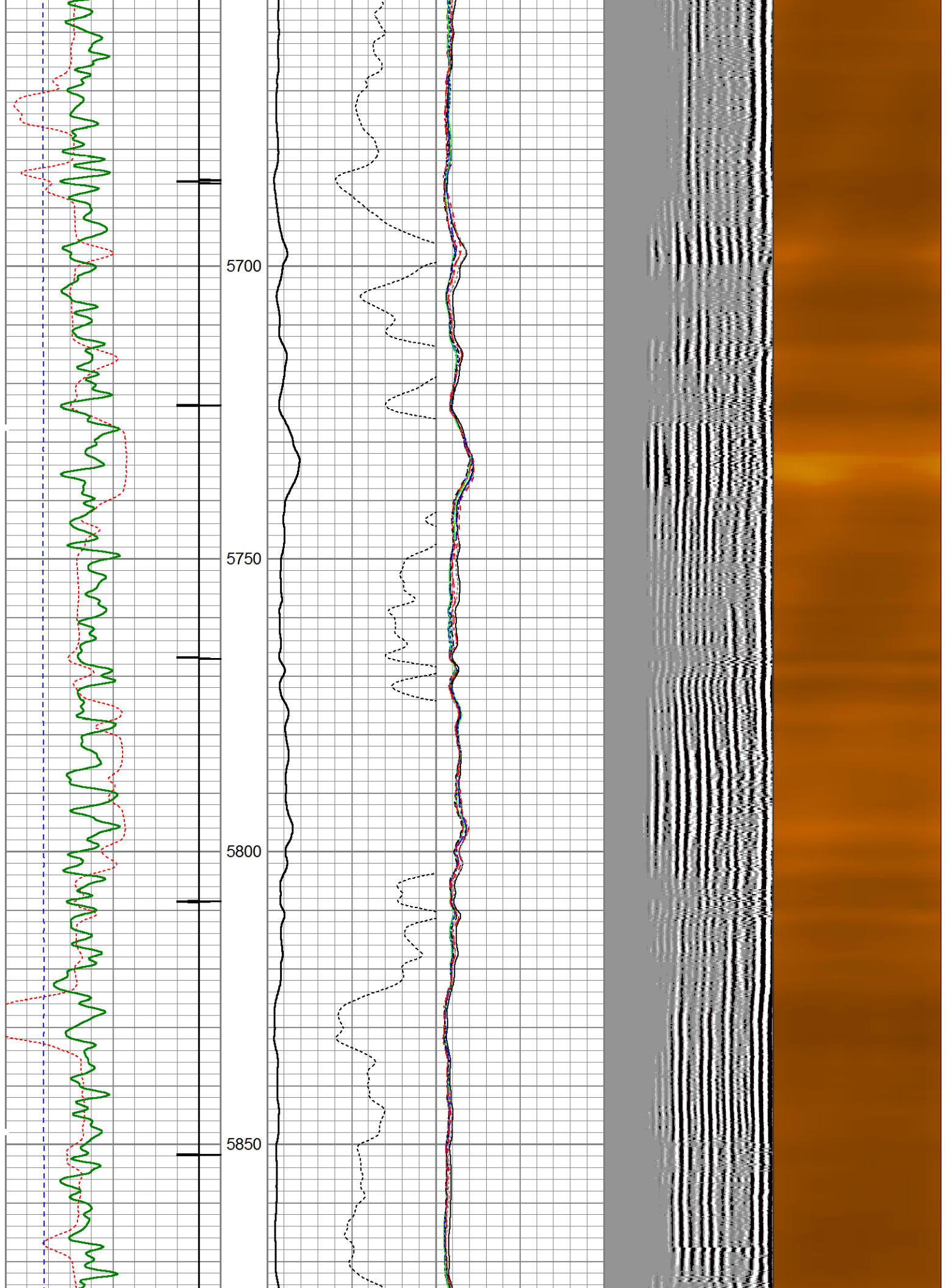




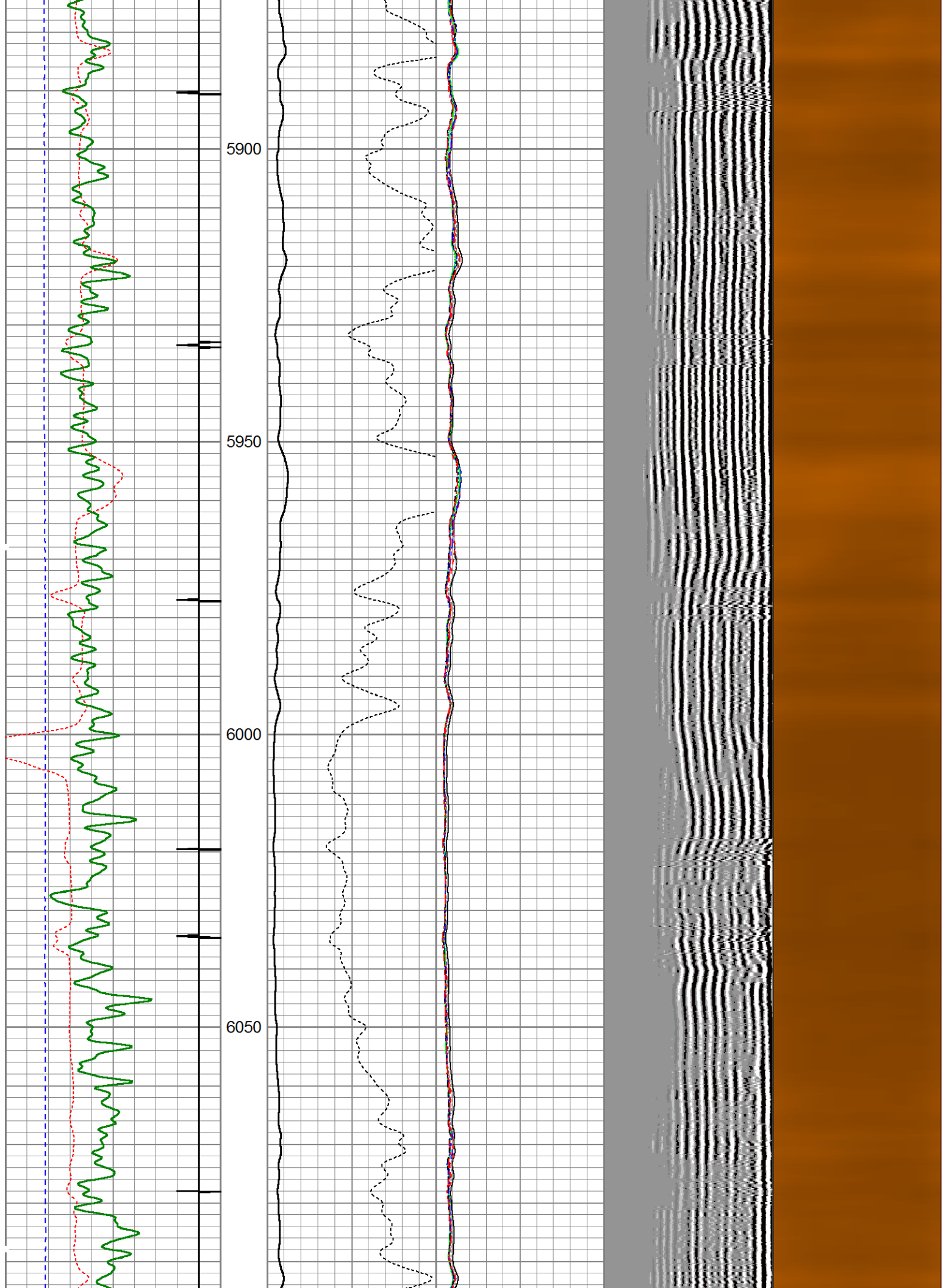


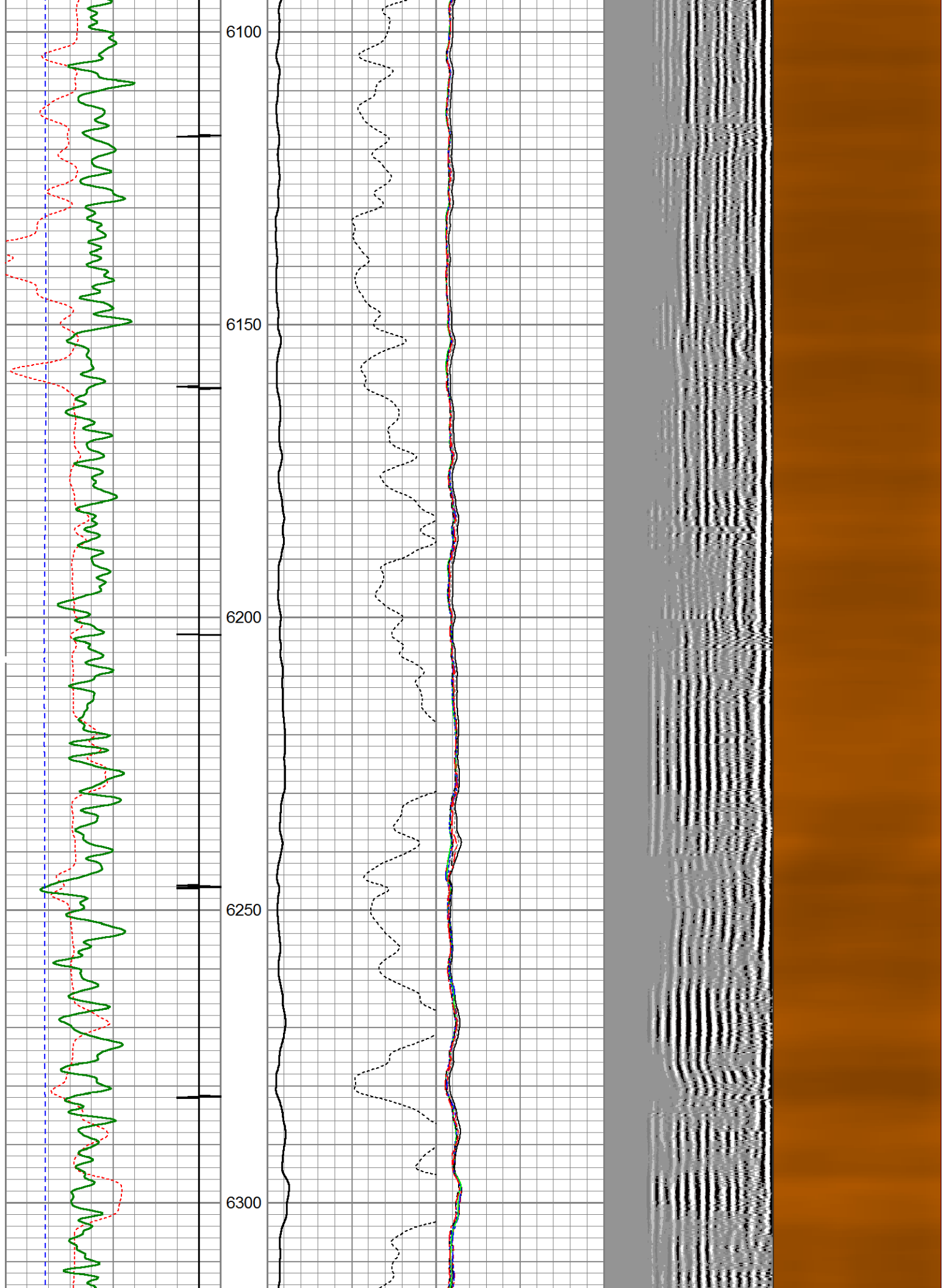


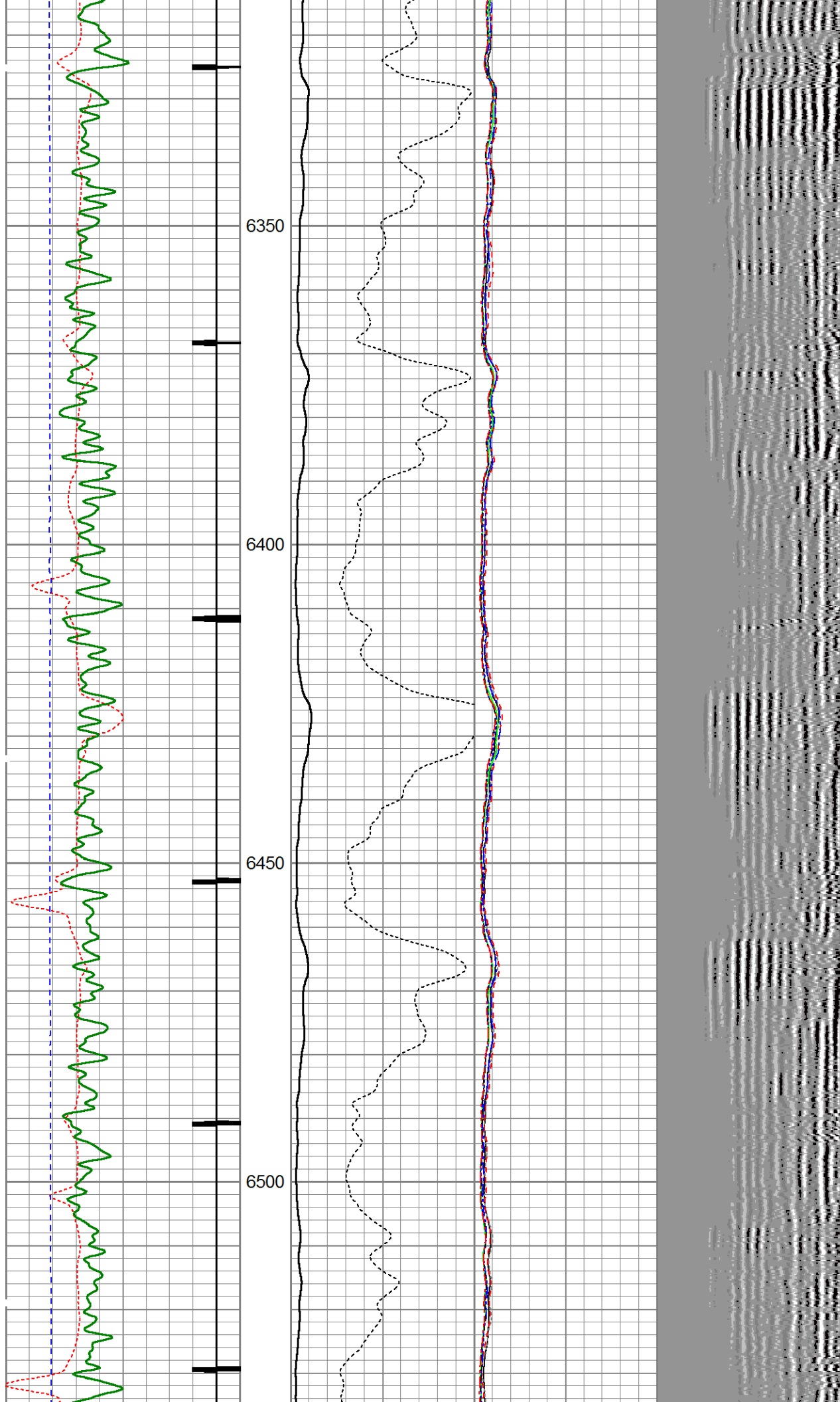


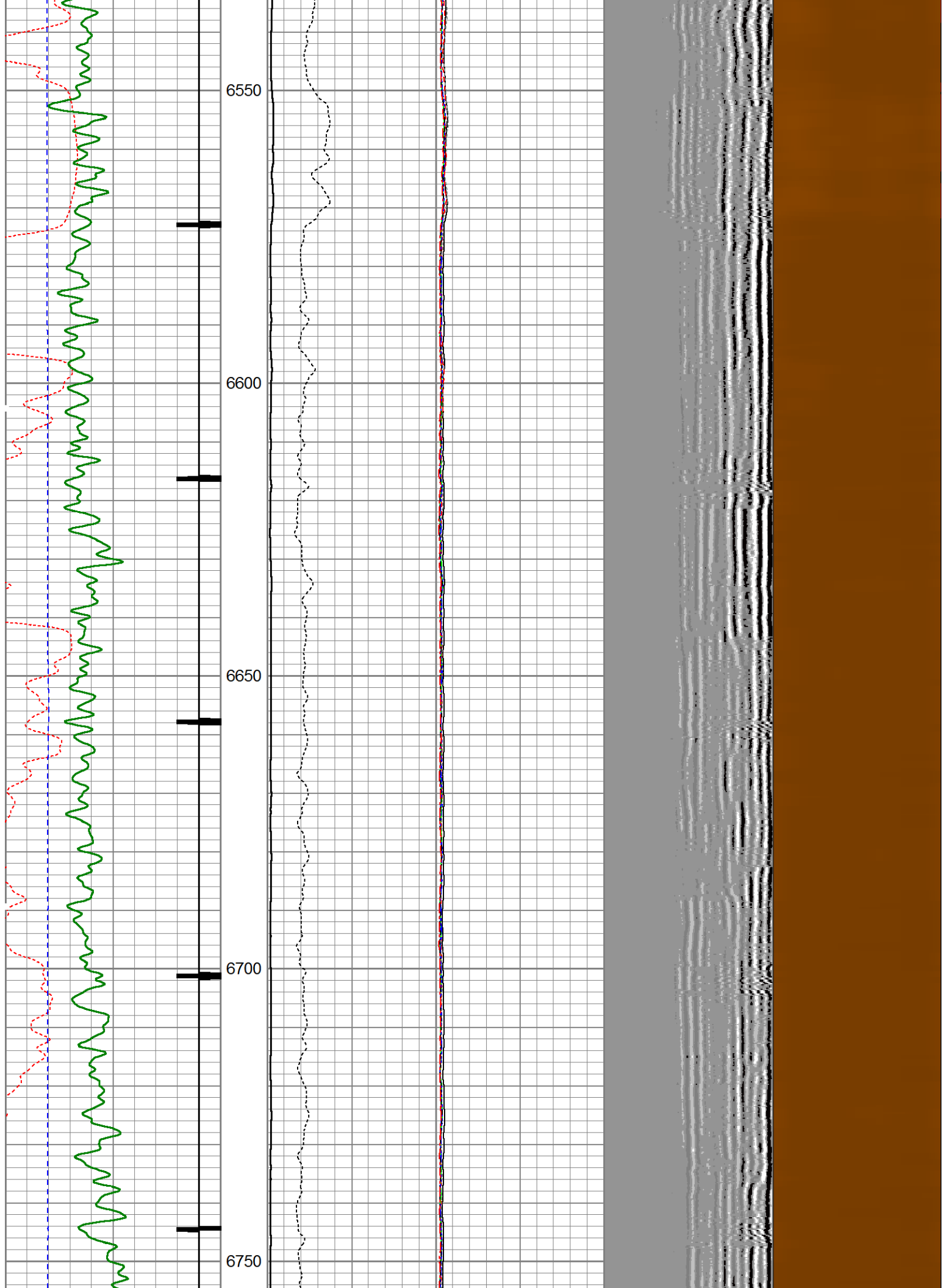


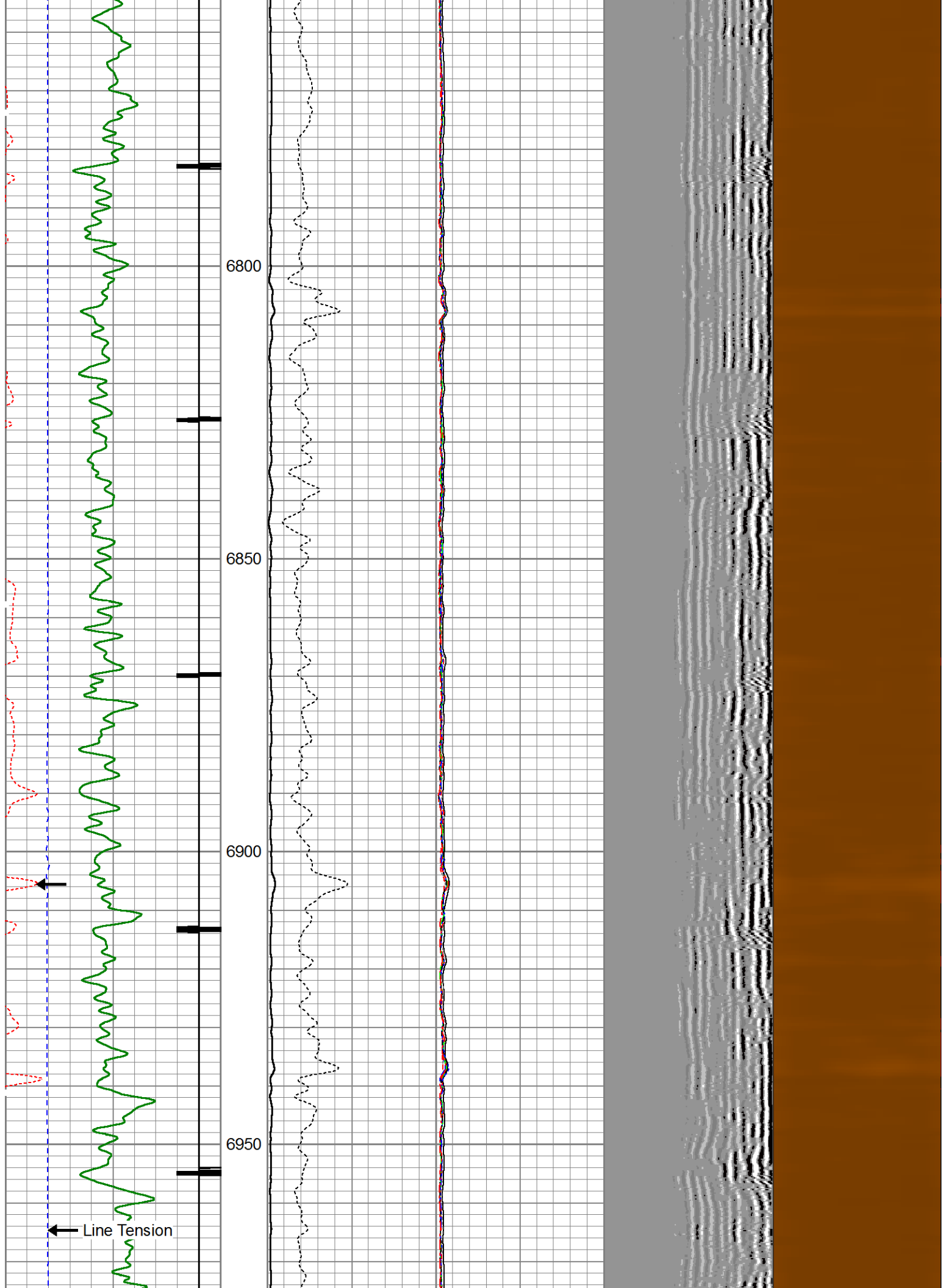




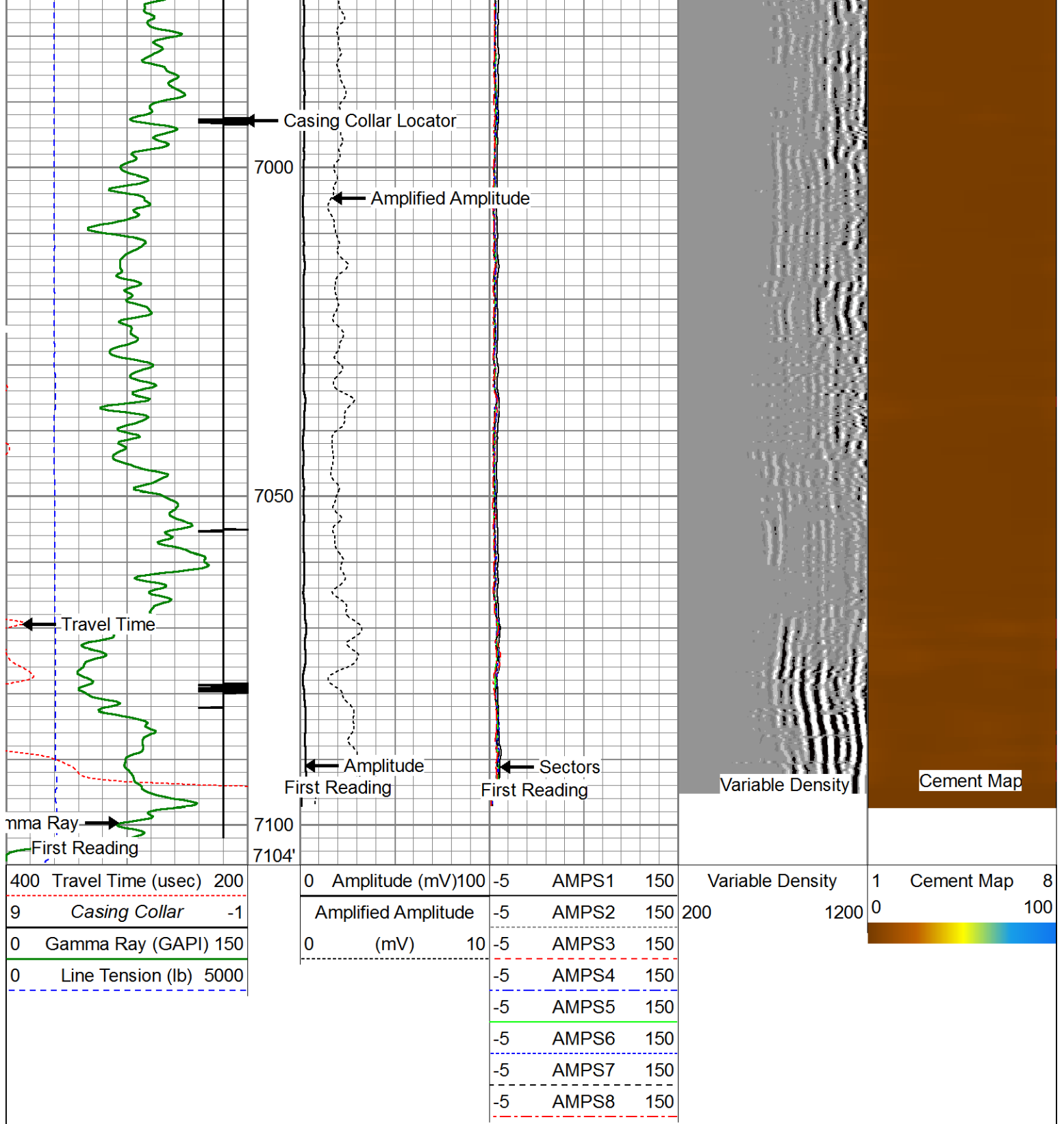












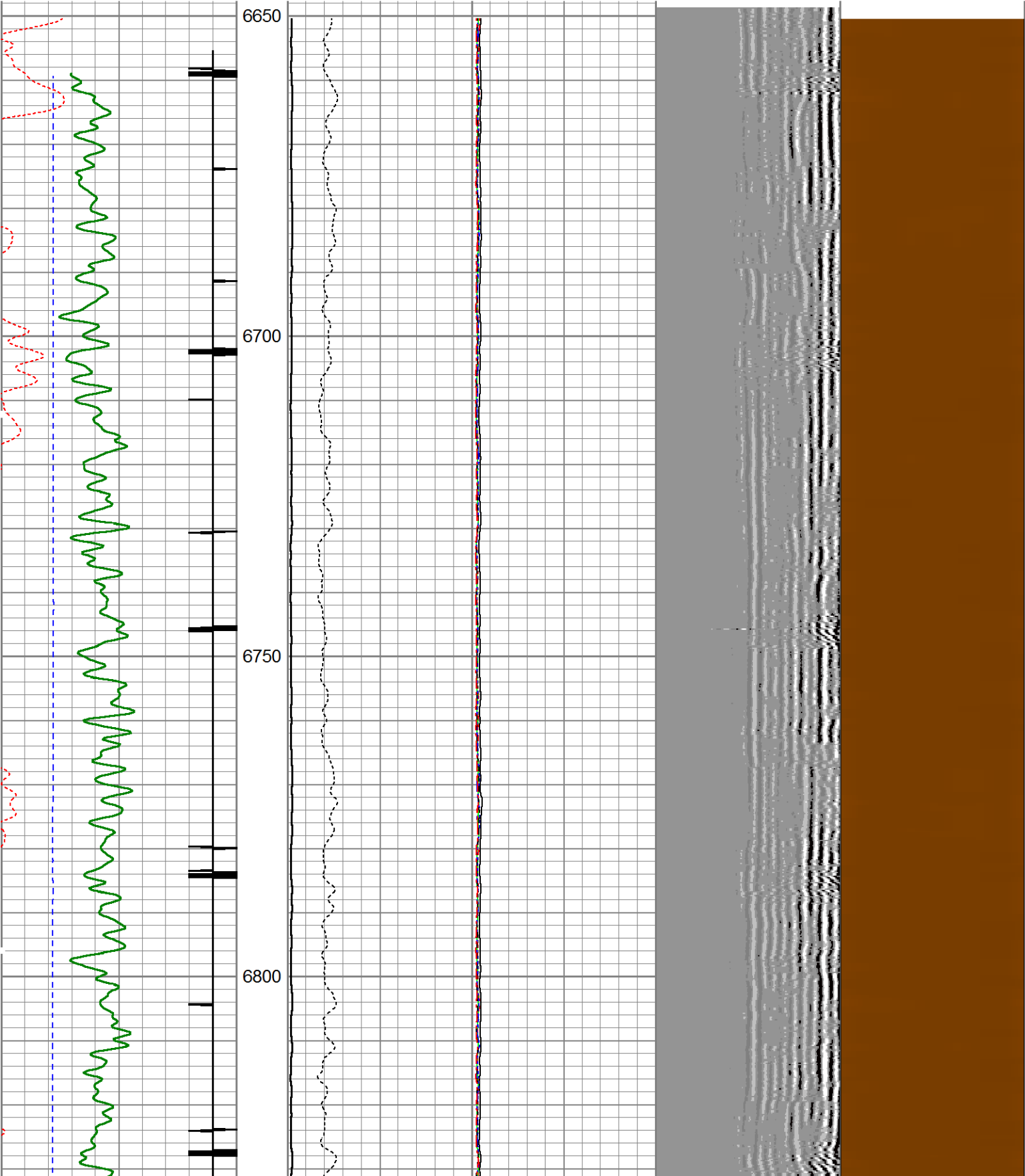
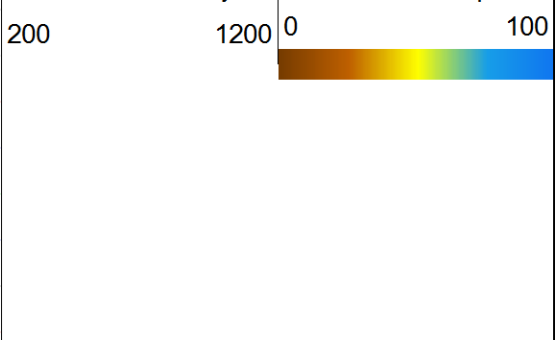
# Repeat Section (0 PSI)

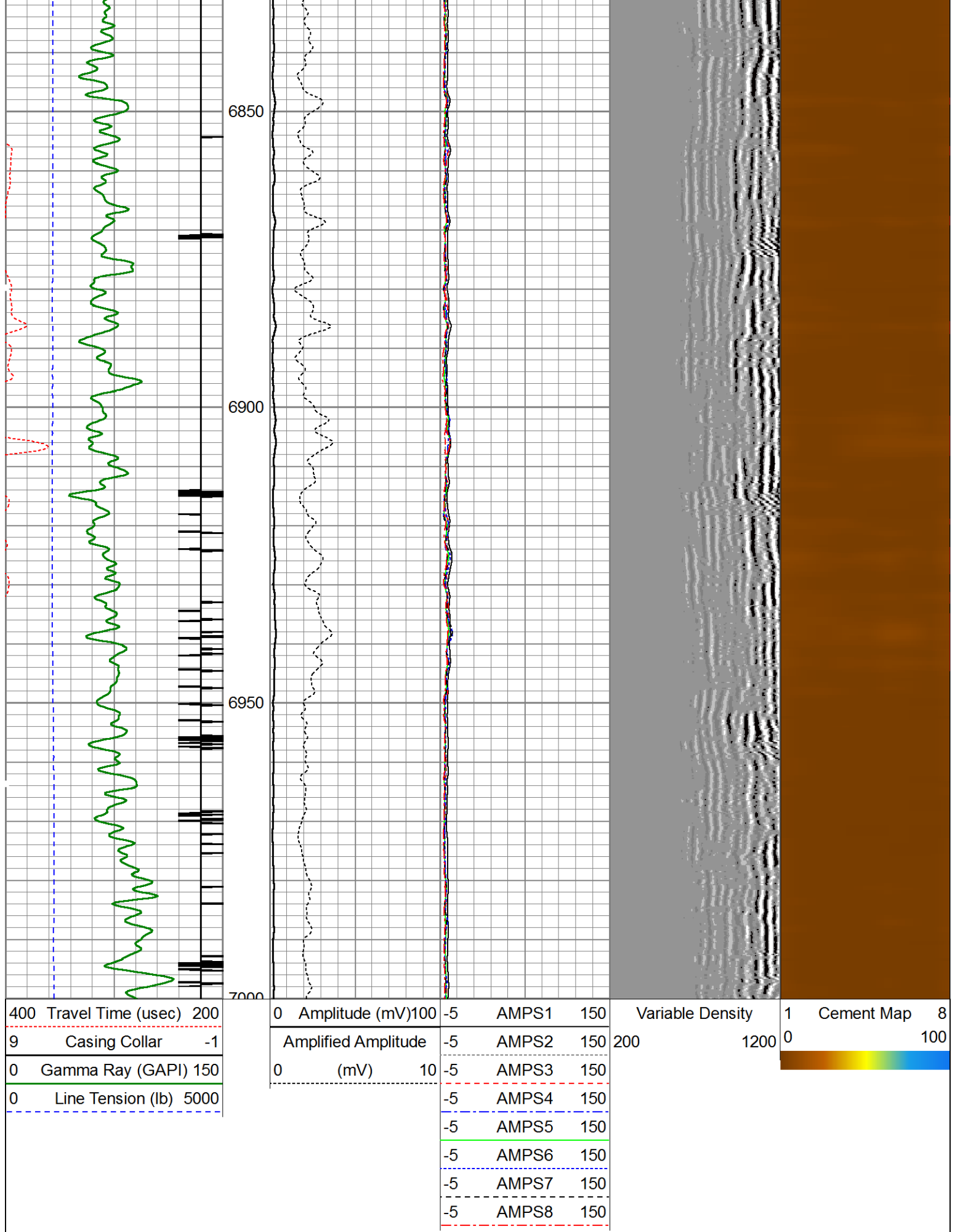
Database File: c:\users\engineers\desktop\noble five rivers k07-62-1hn\_rcbl.db  
 Dataset Pathname: pass2  
 Presentation Format: scbl03  
 Dataset Creation: Thu Feb 27 17:34:22 2014 by Log 7.0 B1  
 Charted by: Depth in Feet scaled 1:240

400	Travel Time (usec)	200	0	Amplitude (mV)	100	-5	AMPS1	150	Variable Density	1	Cement Map	8
-----	--------------------	-----	---	----------------	-----	----	-------	-----	------------------	---	------------	---

9	Casing Collar	-1
0	Gamma Ray (GAPI) 150	
0	Line Tension (lb) 5000	

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





Gamma Ray Calibration Report

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:

0.5357

GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:

101254

Tool Model:

Probe

Calibration Casing Diameter:

7.000

in

Calibration Depth:

5092.708

ft

Master Calibration, performed Thu Feb 27 14:41:03 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.018	0.620	1.000	62.165	101.492	0.803
CAL	0.004	0.660				
5'	0.023	0.610	1.000	62.165	104.135	-1.357
SUM						
S1	0.015	0.634	0.000	100.000	161.658	-2.496
S2	0.014	0.596	0.000	100.000	171.682	-2.406
S3	0.014	0.554	0.000	100.000	185.205	-2.625
S4	0.013	0.529	0.000	100.000	193.783	-2.422
S5	0.013	0.567	0.000	100.000	180.417	-2.368
S6	0.012	0.635	0.000	100.000	160.564	-1.999
S7	0.015	0.679	0.000	100.000	150.710	-2.265
S8	0.019	0.624	0.000	100.000	165.095	-3.083

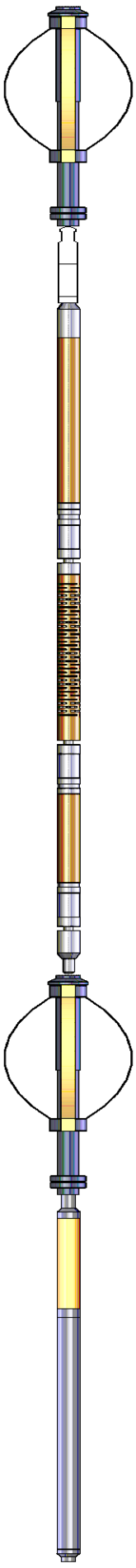
Internal Reference Calibration, performed Mon Oct 10 09:42:03 2005:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.004	0.660	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	GR-Probe275 (111111) Probe 2 3/4" Logging Gamma Ray	4.78	2.75	57.00	



Dataset:	noble five rivers k07-62-1hn_rcbl.db: field/well/run1/pass4
Total Length:	20.28 ft
Total Weight:	197.00 lb
O.D.	2.75 in