



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

Company	Noble Energy	
Well	Furrow State USX AB16-62-1HNL	
Field	Wattenberg	
County	Weld	State
State	Colorado	Colorado
Company	Noble Energy	
Well	Furrow State USX AB16-62-1HNL	
Field	Wattenberg	
County	Weld	State
State	Colorado	Colorado
Location:	API # : 05-123-36125	Other Services
	330' FSL & 535' FWL	
	NE/NE	None
Permanent Datum	SEC 22 TWP 7 N RGE 64 W	
Log Measured From	Ground Level	Elevation 4830'
Drilling Measured From	Kelly Bushing 24' APD	K.B. 4854'
	Kelly Bushing	D.F. 4855'
		G.L. 4830'
Date	02-March-2013	
Run Number	One	
Depth Driller	16367'	
Depth Logger	7226'	
Bottom Logged Interval	7196'	
Top Log Interval	Surface	
Open Hole Size	8 3/4"	
Type Fluid	Water	
Density / Viscosity	-	
Max. Recorded Temp.	-	
Estimated Cement Top	3714'	
Time Well Ready	1230	
Time Logger on Bottom	1355	
Equipment Number	Truck # 12029	
Location	Brighton, CO	
Recorded By	R.Grisson	
Witnessed By	Bill Mansfield	
Run Number	Bit	From
1	26"	Surface
2	13.75"	124'
3	8.75"	714'
4	6.125"	7352'
Casing Record	Size	Wgt/Ft
Surface String	9 5/8"	36#
Prot. String		
Production String	7"	26#
Liner	4.5"	11.6#
Short Joint		5947'

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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

Well logged using 24' KB

Main Pass and Repeat Pass logged with zero pressure on surface.

Your Crew For Today: Grissom, Rall, Medina

Thank You for using Allied Wireline...!!!

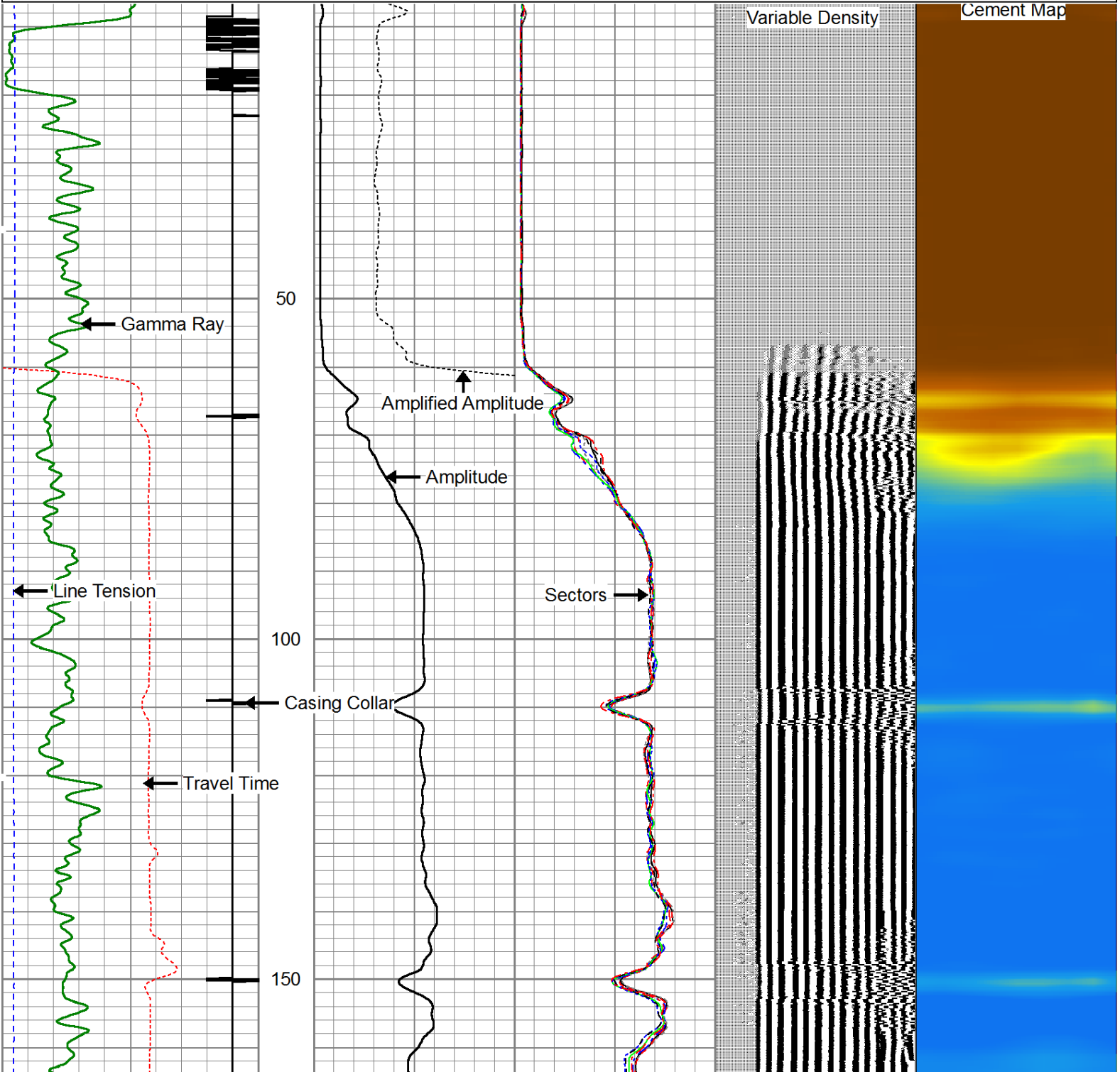
(303) 659-4609

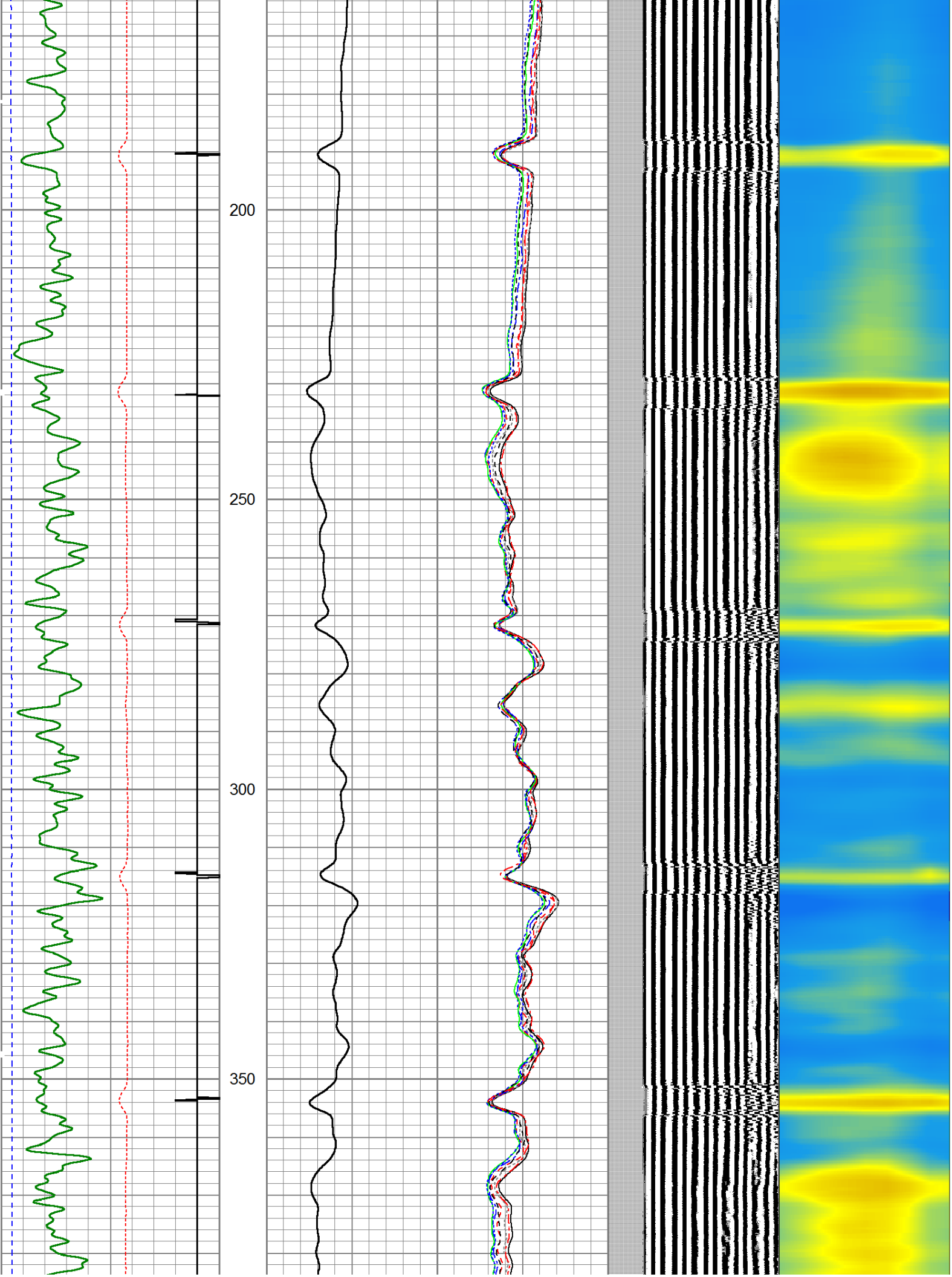


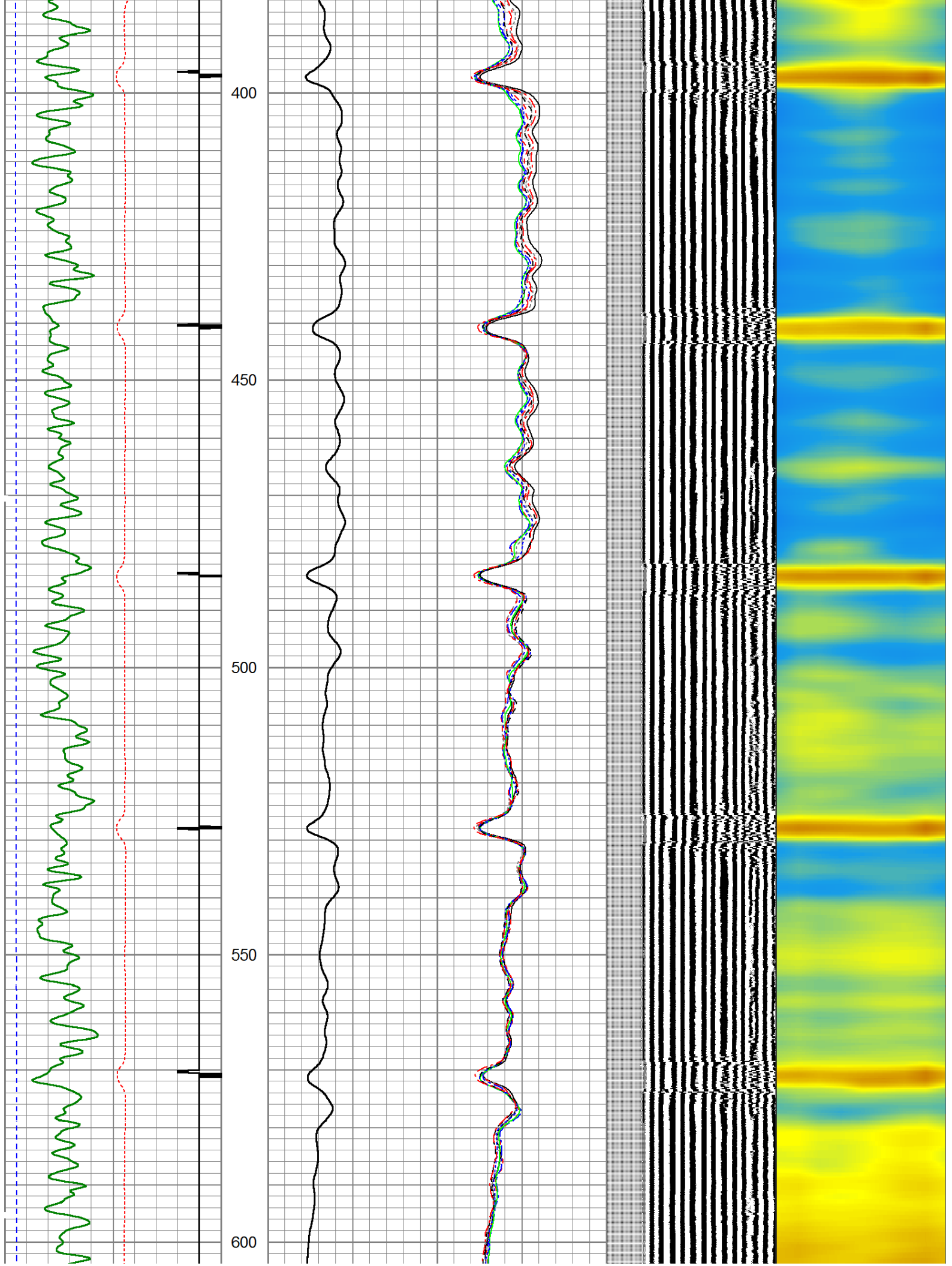
Main Pass ( 0 PSI )

Database File: noble\_furrow\_state\_usx\_ab16\_62\_1hnl.db  
Dataset Pathname: pass7  
Presentation Format: scbl03  
Dataset Creation: Sat Mar 02 15:07:09 2013 by Calc SCH 120126  
Charted by: Depth in Feet scaled 1:240

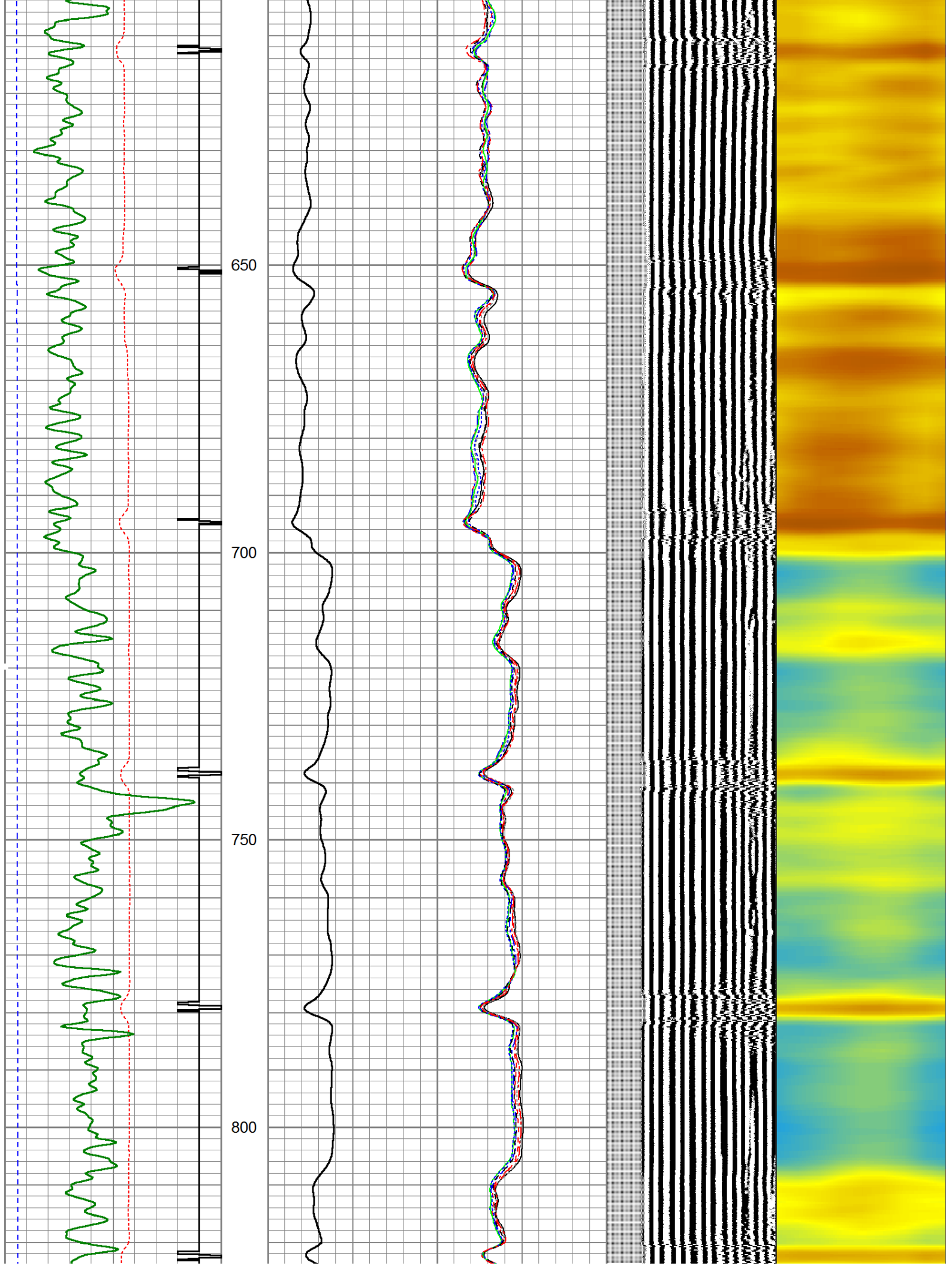
400	Travel Time (usec)	200	0	Amplitude (mV)	100	-5	AMPS1	150	Variable Density	1	Cement Map	8
9	Casing Collar	-1		Amplified Amplitude		-5	AMPS2	150	200	1200	0	100
0	Gamma Ray (GAPI)	150	0	(mV)	10	-5	AMPS3	150				
0	Line Tension (lb)	5000				-5	AMPS4	150				
						-5	AMPS5	150				
						-5	AMPS6	150				
						-5	AMPS7	150				
						-5	AMPS8	150				

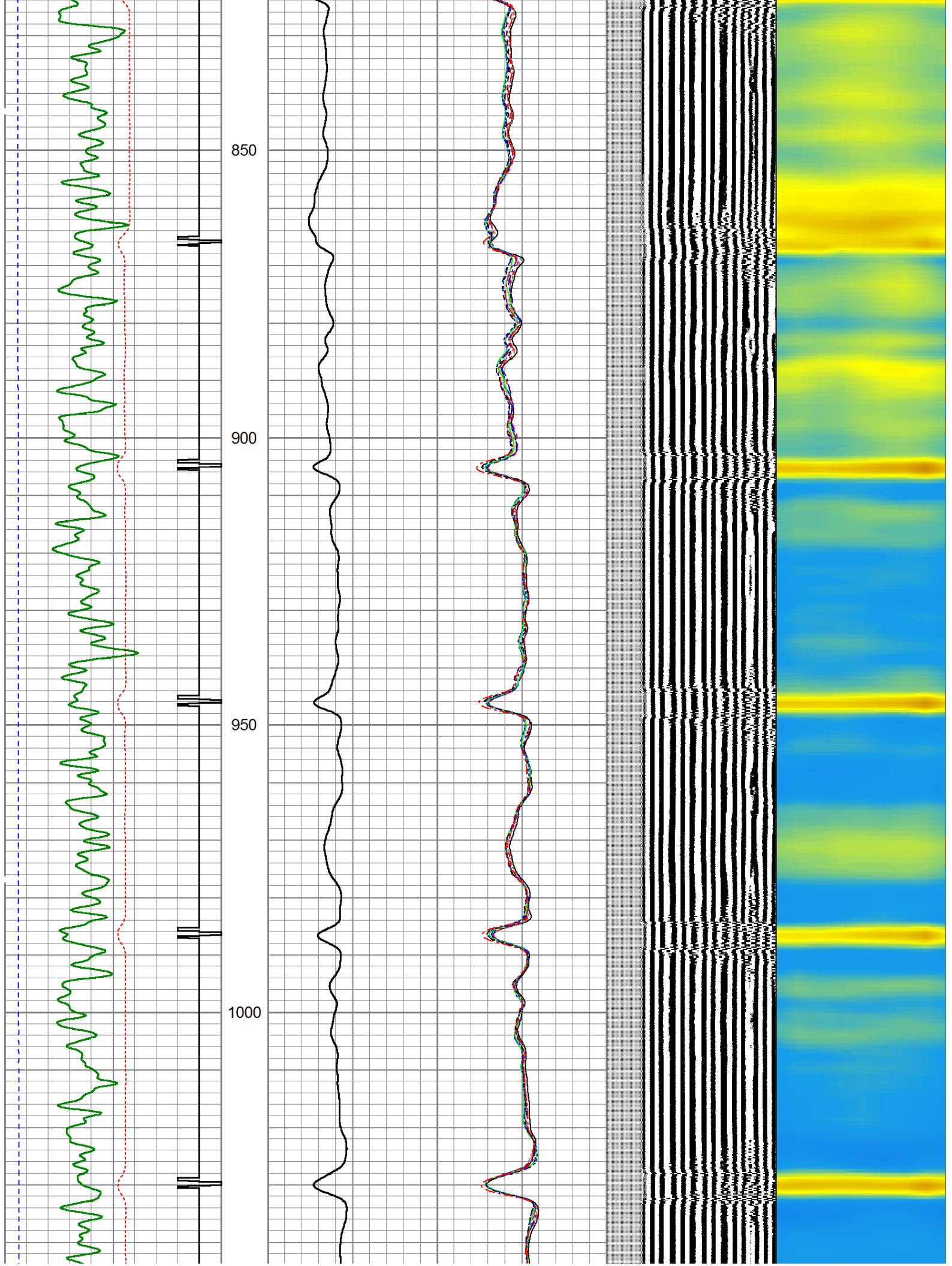


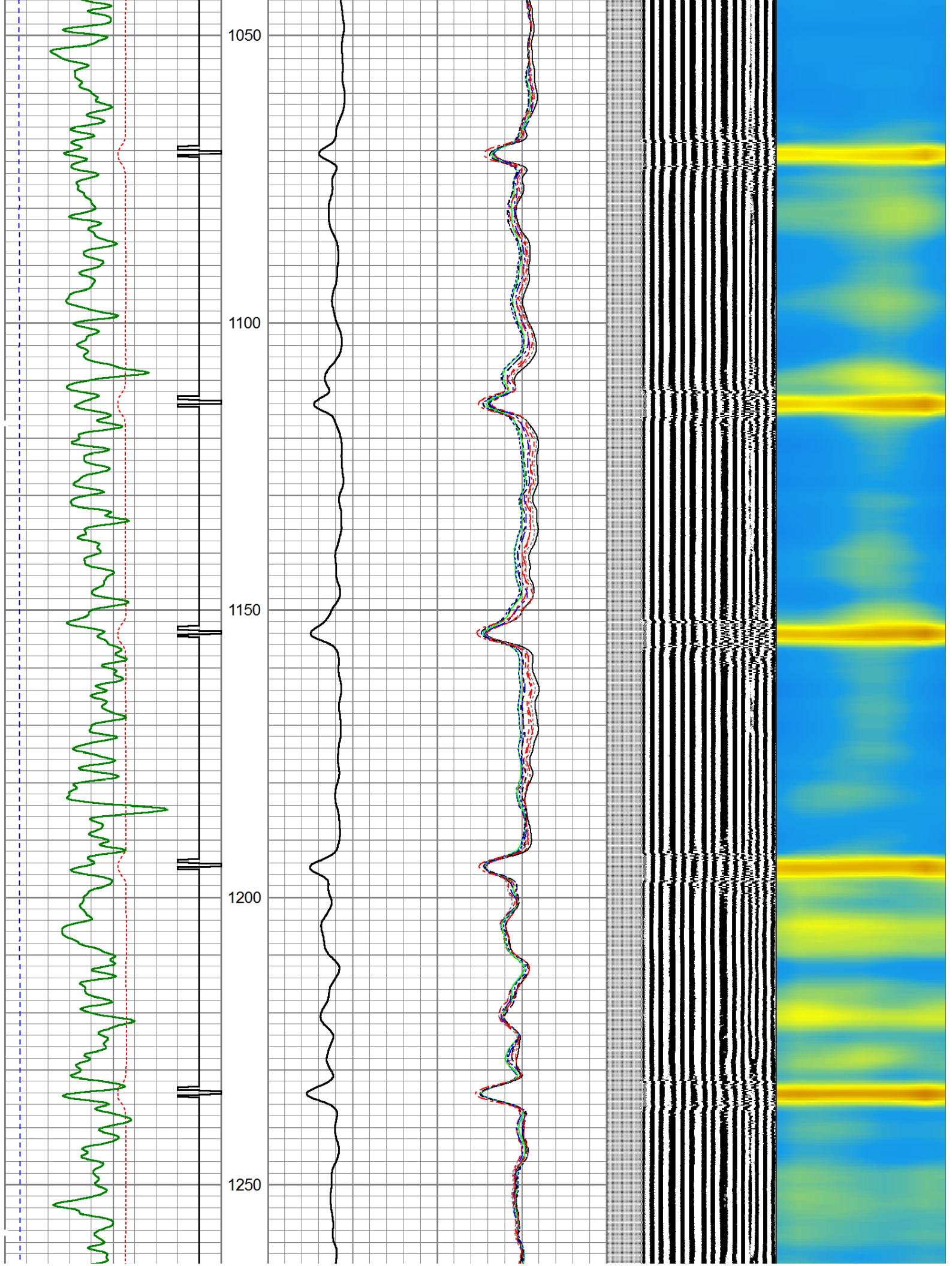




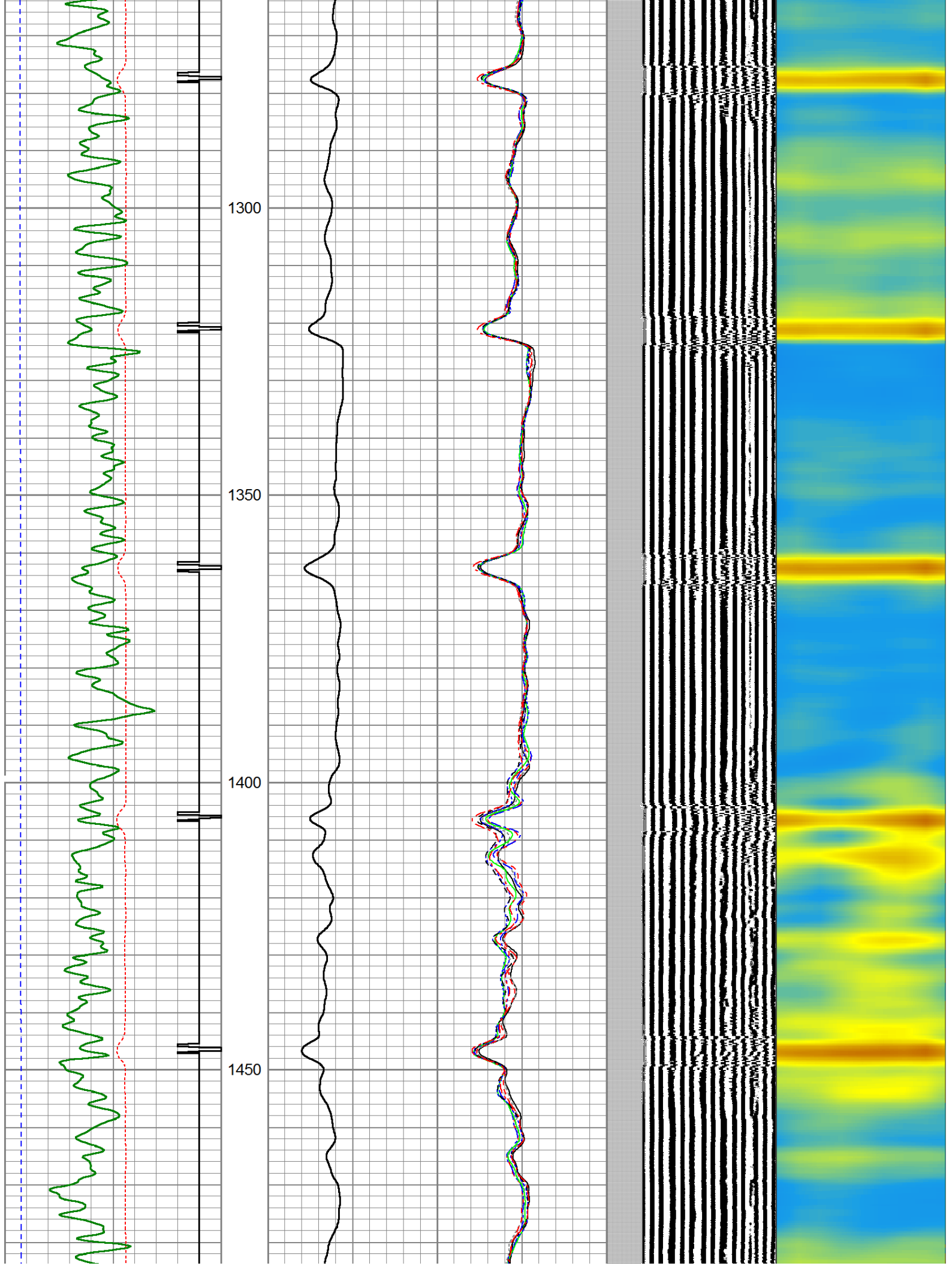




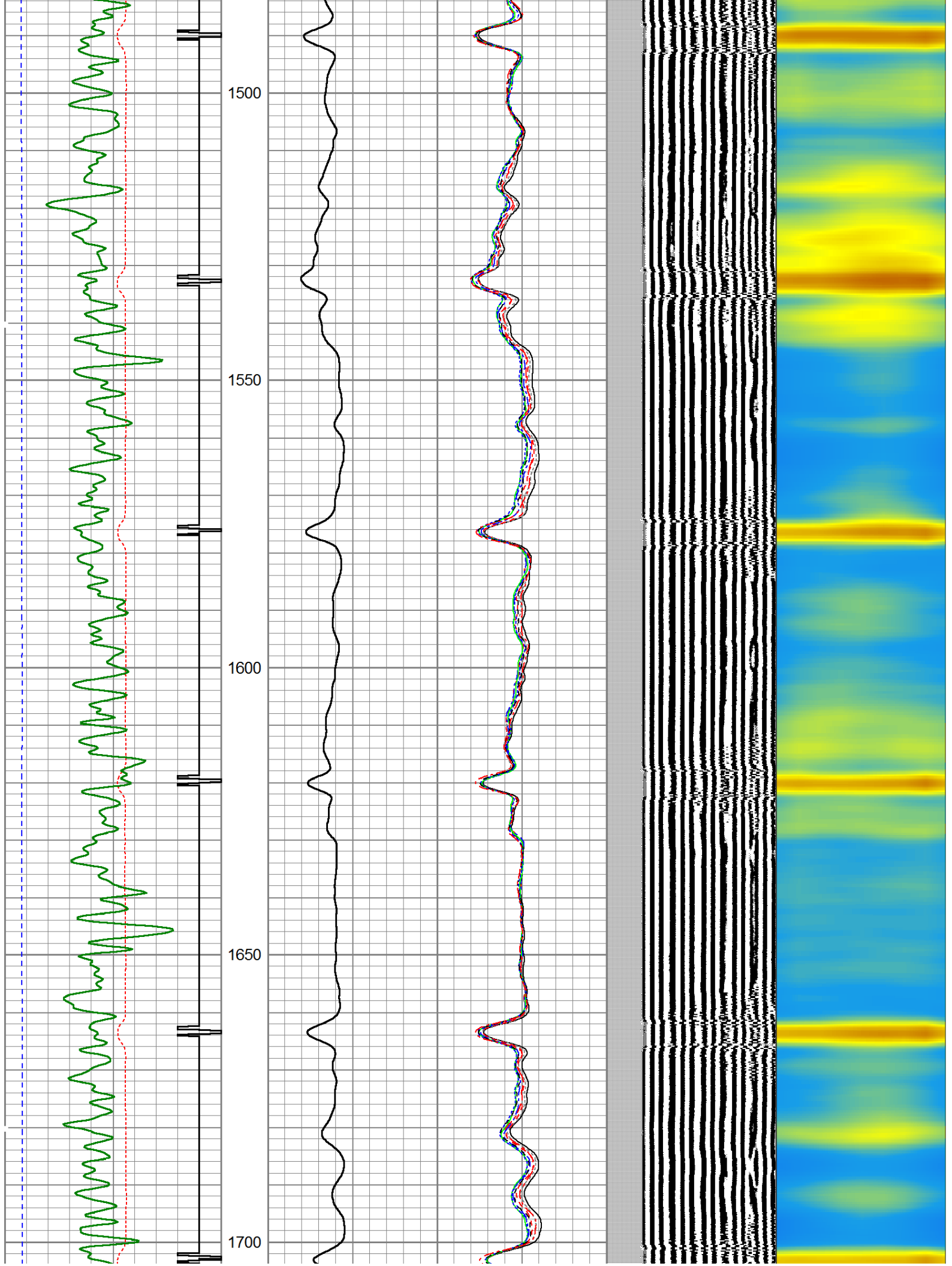


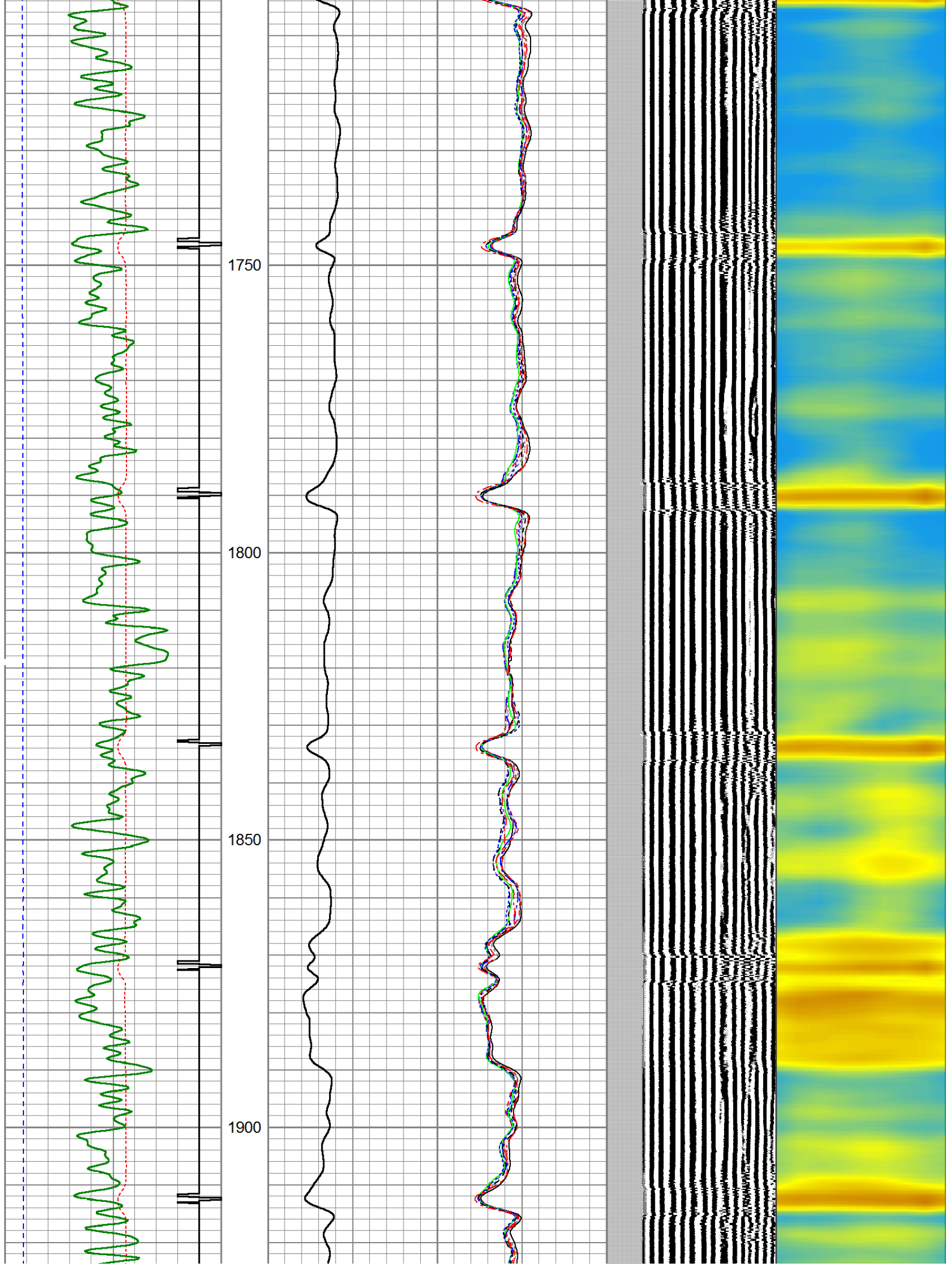


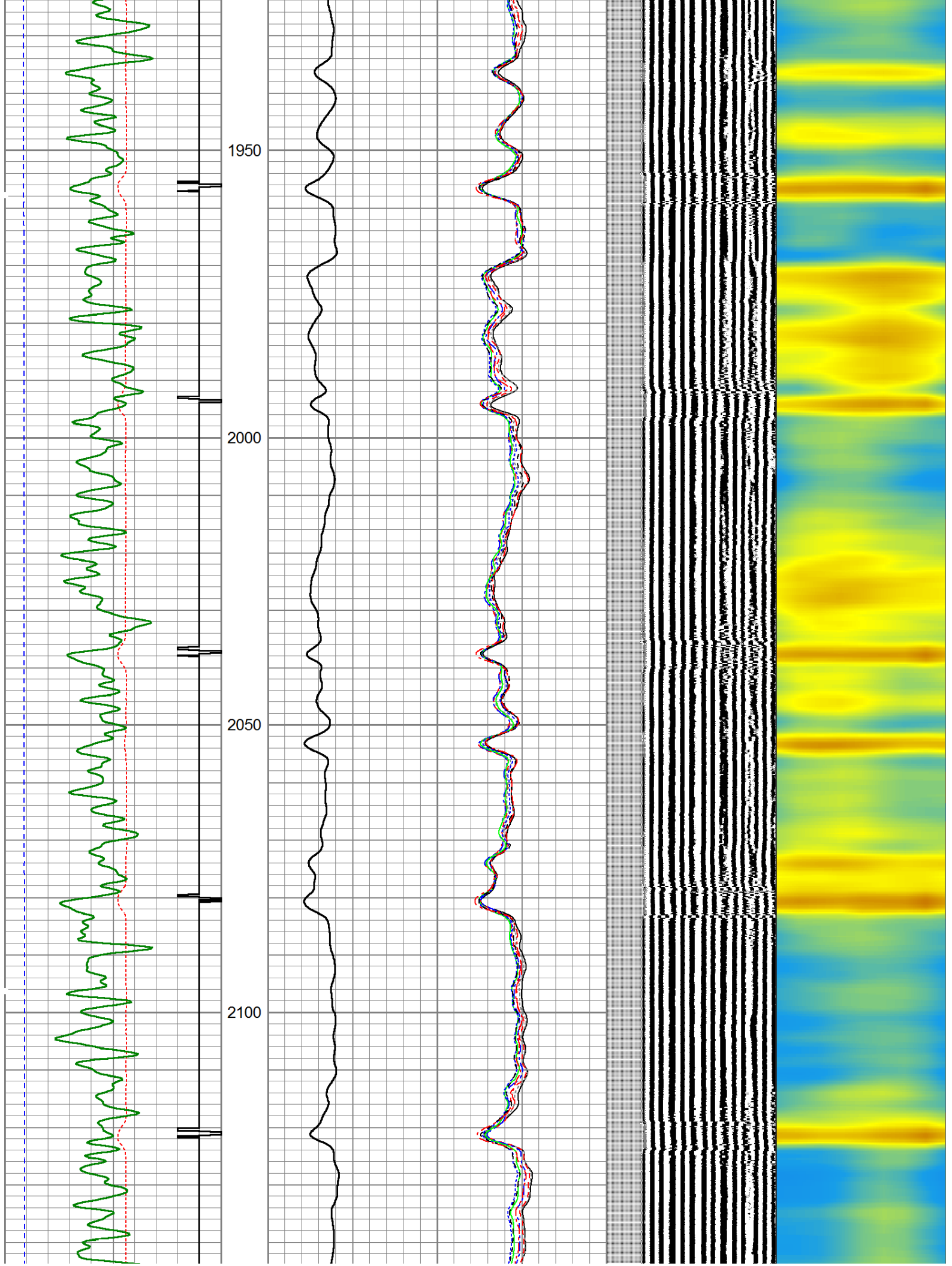




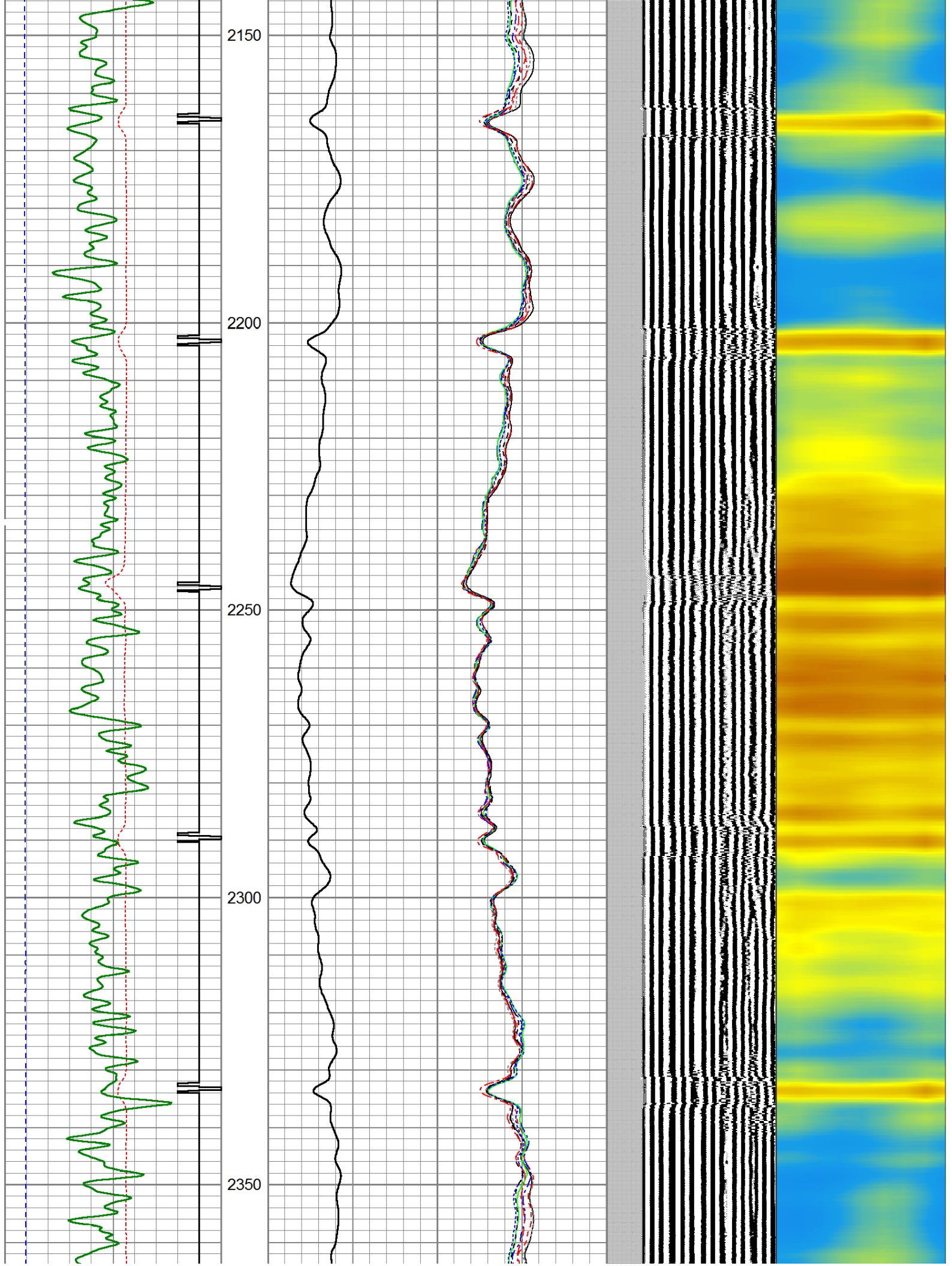




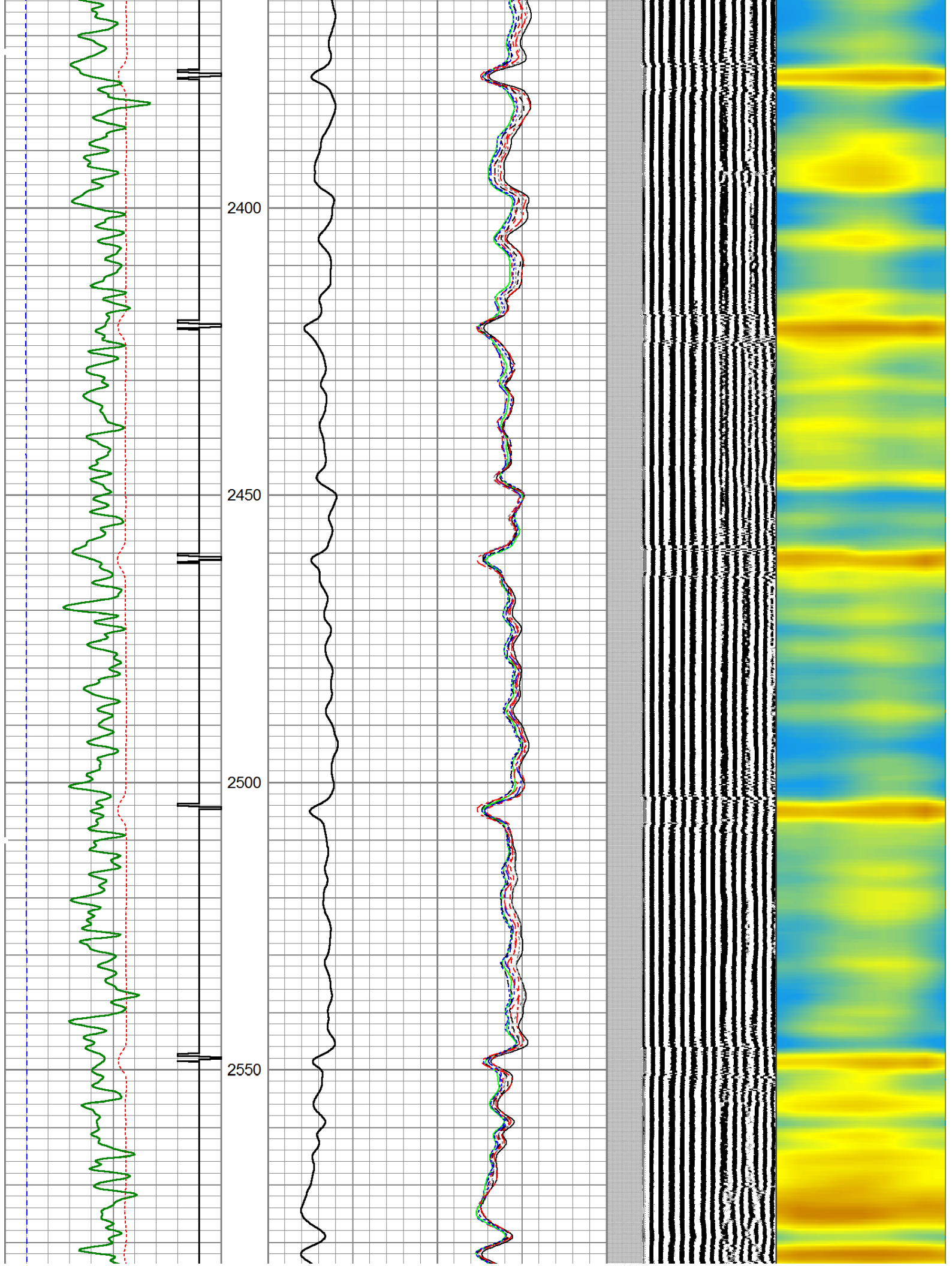


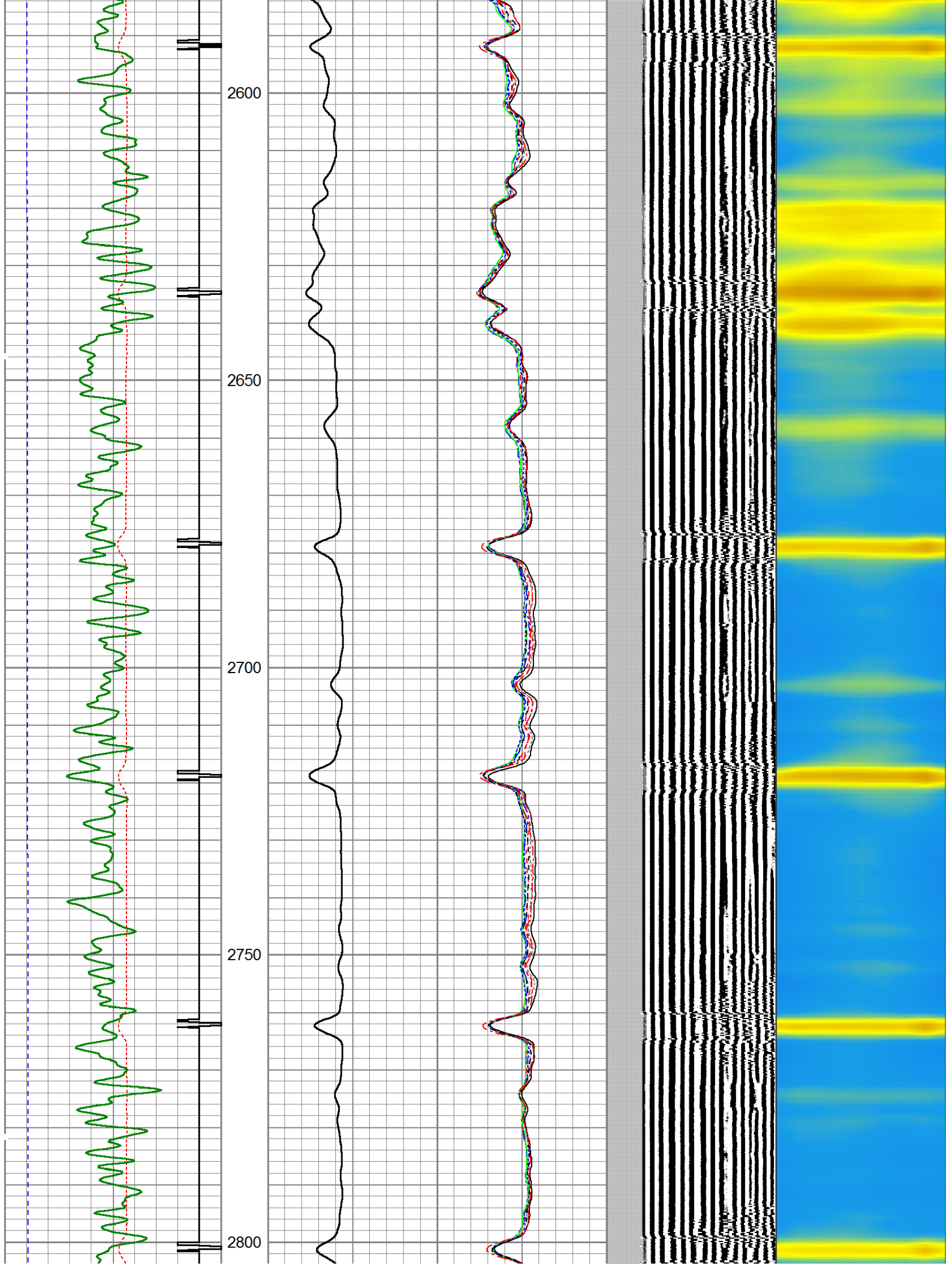


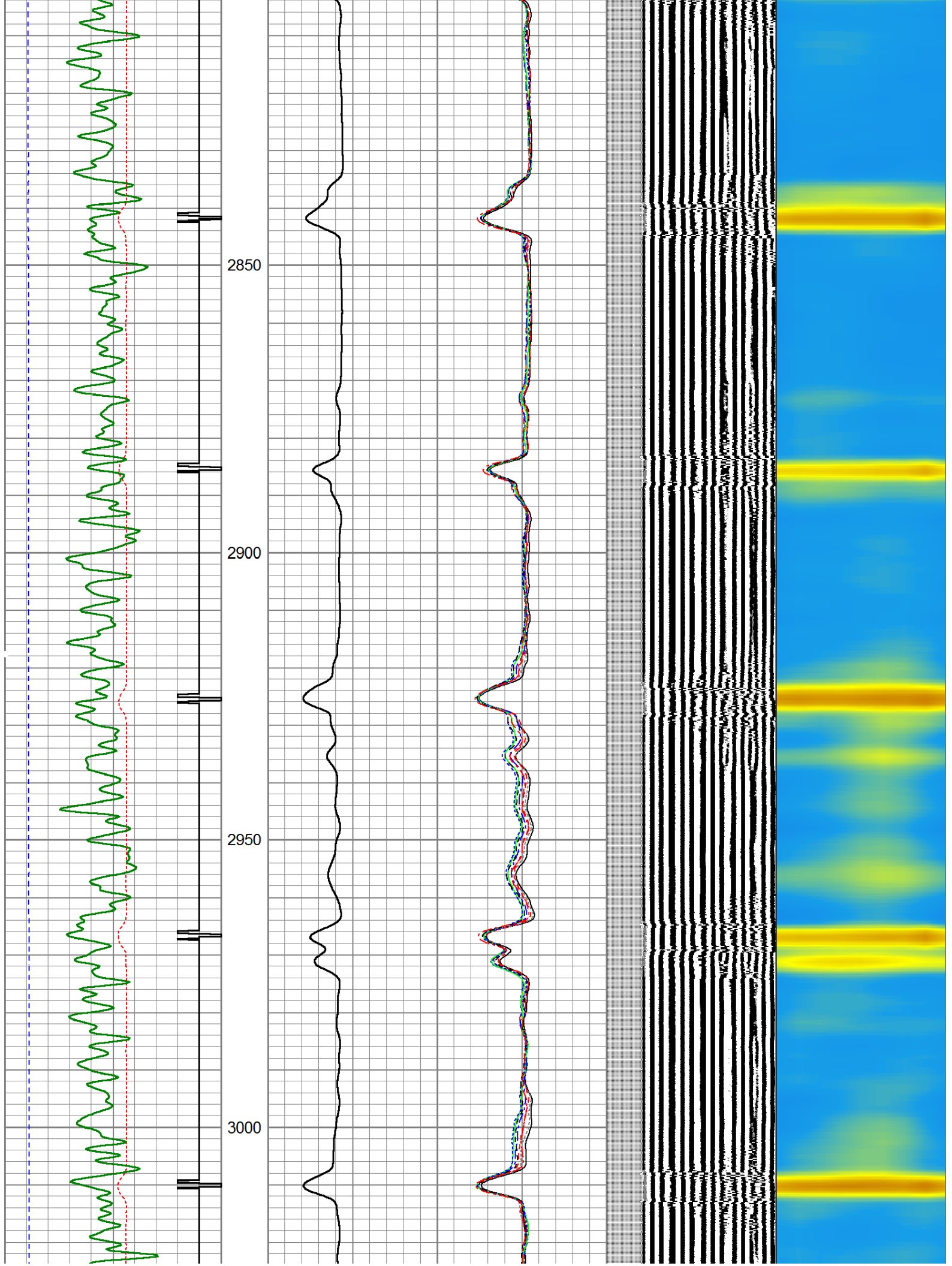




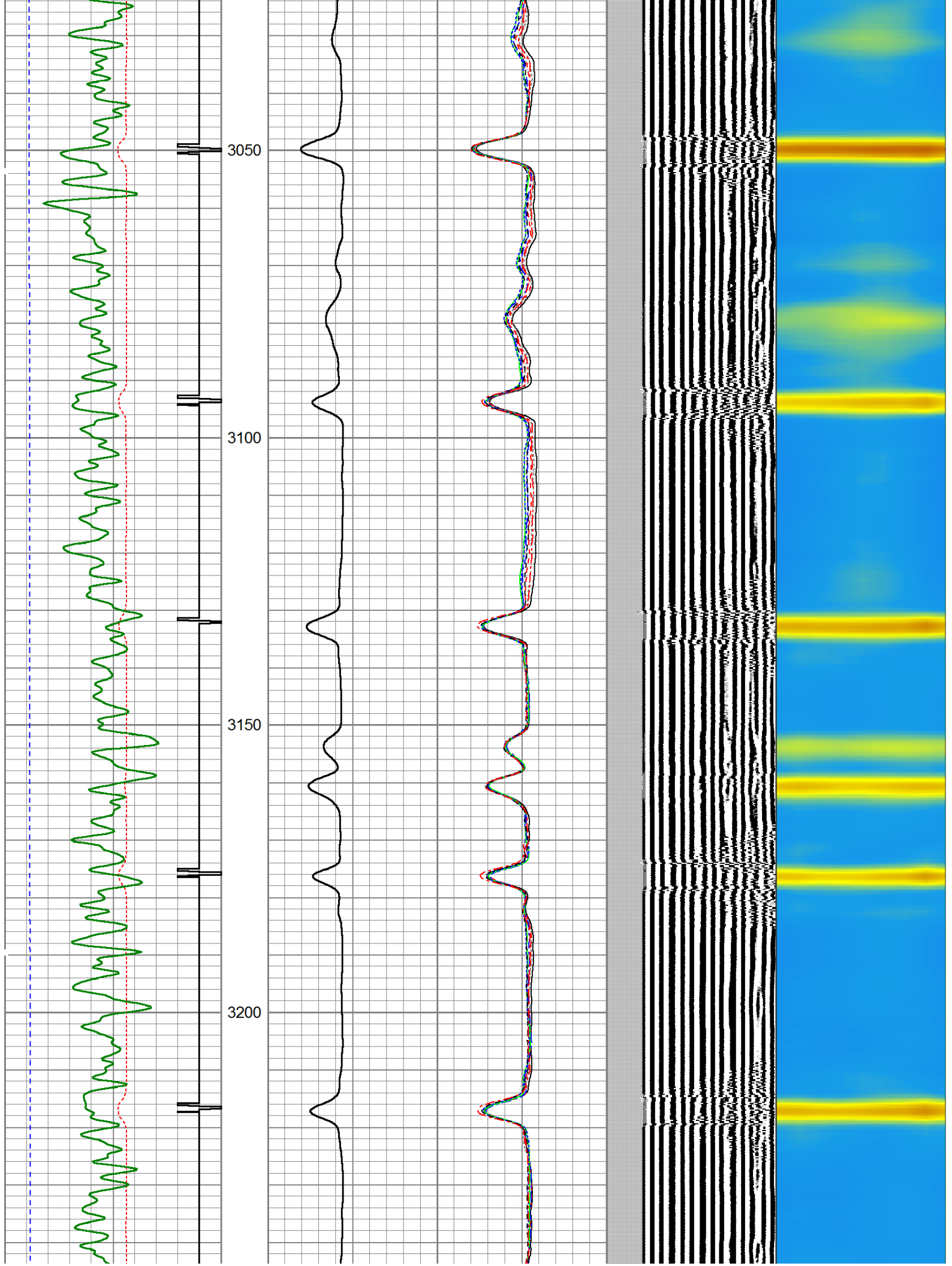




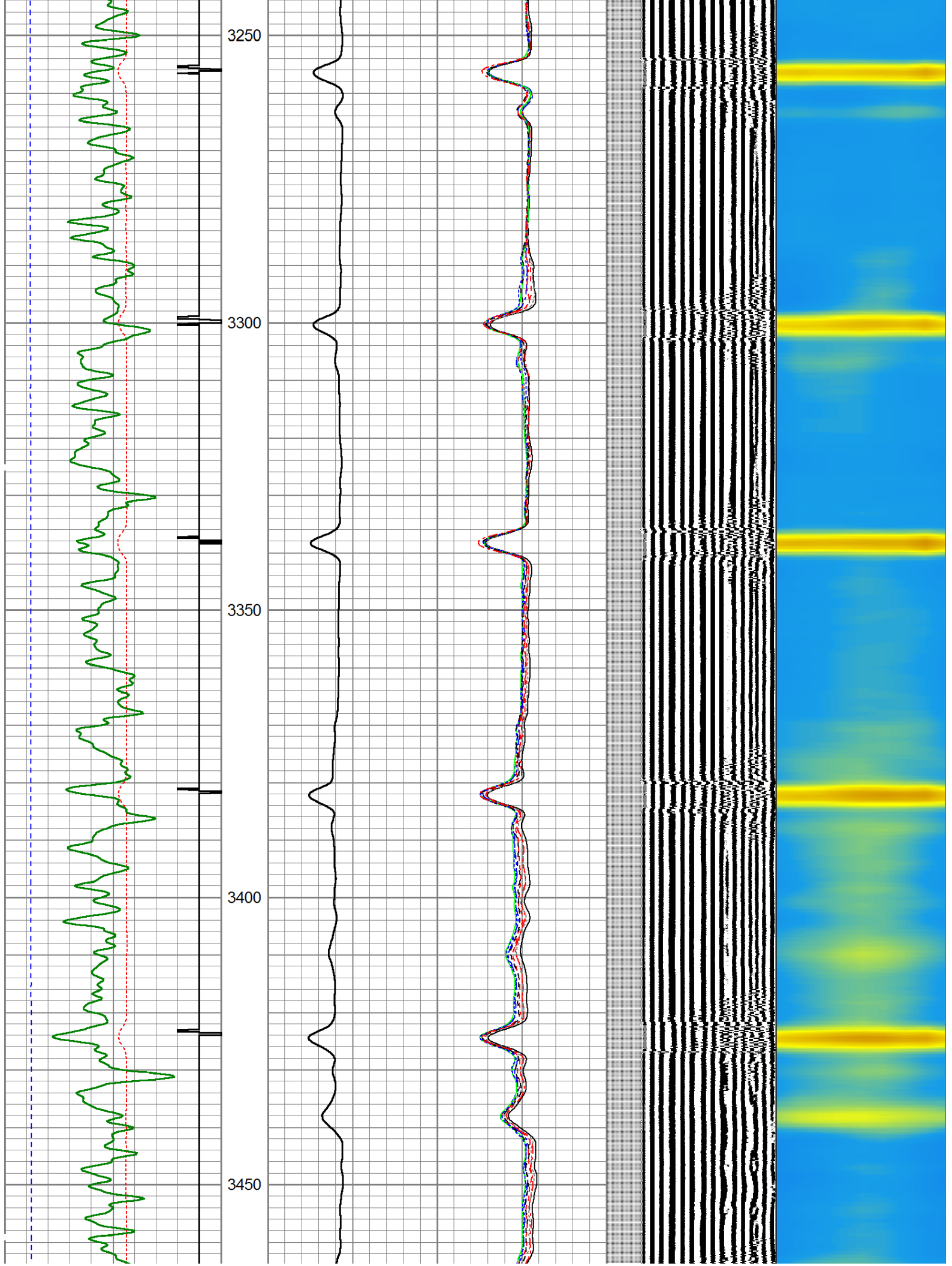


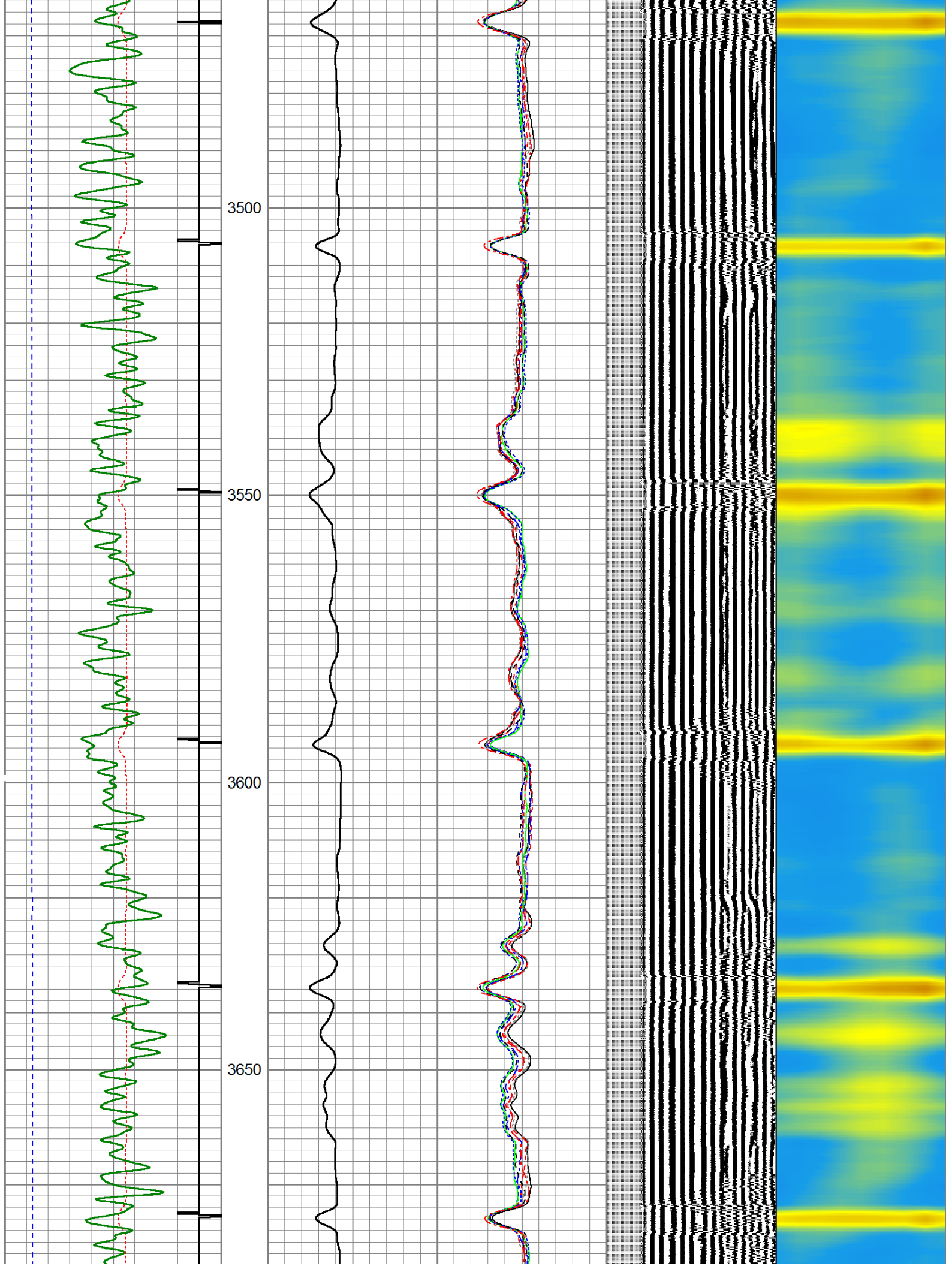


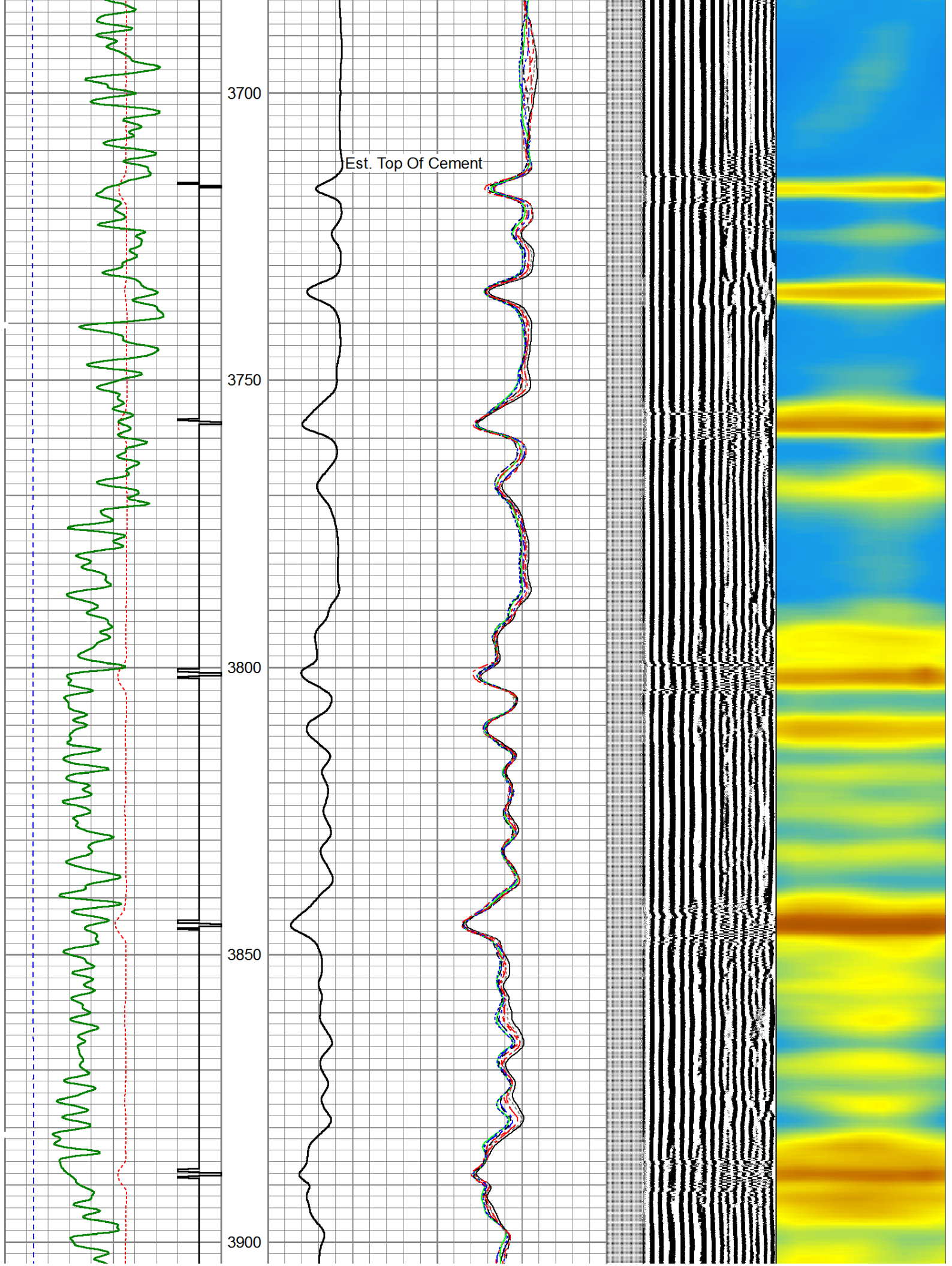




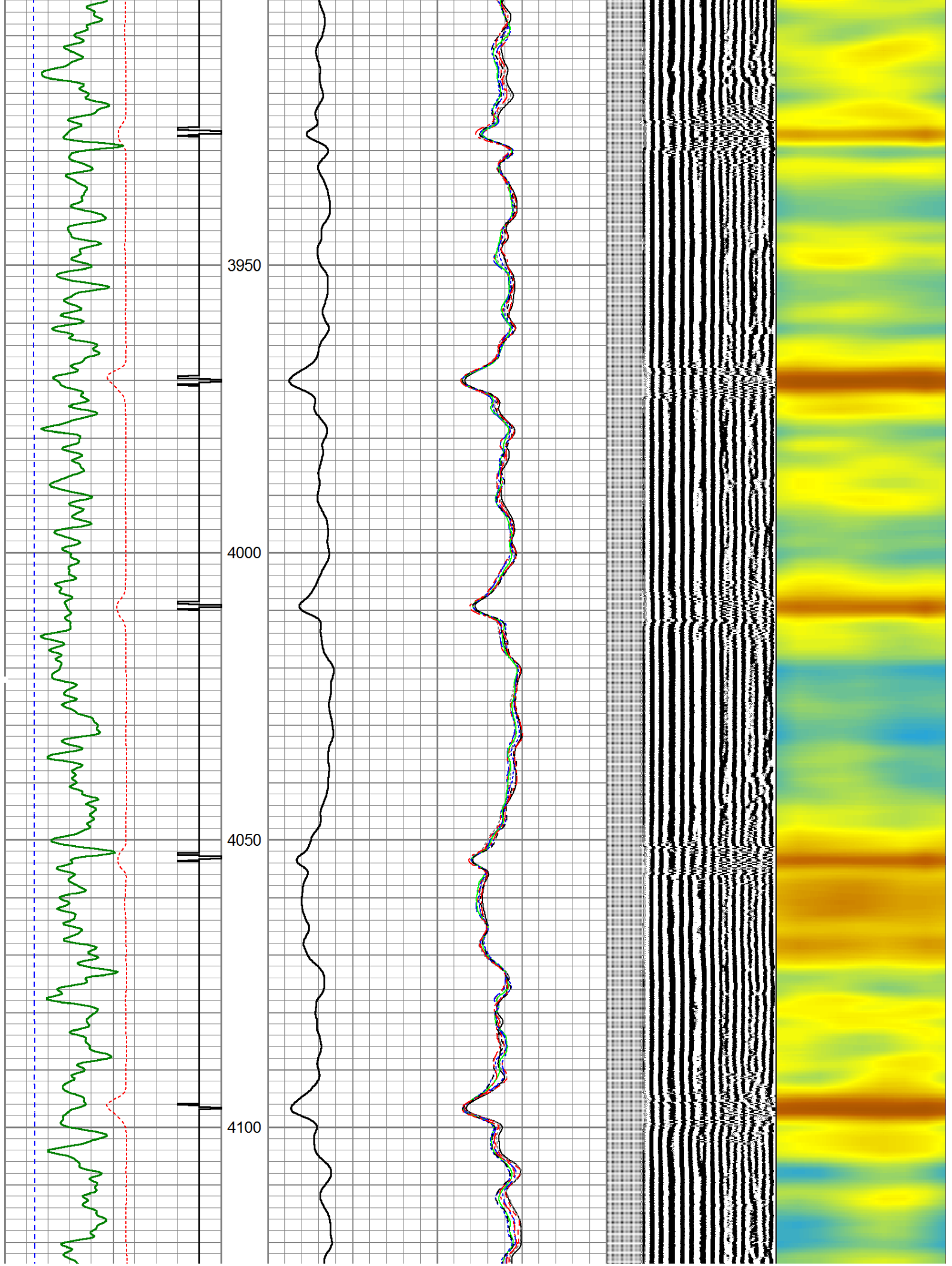




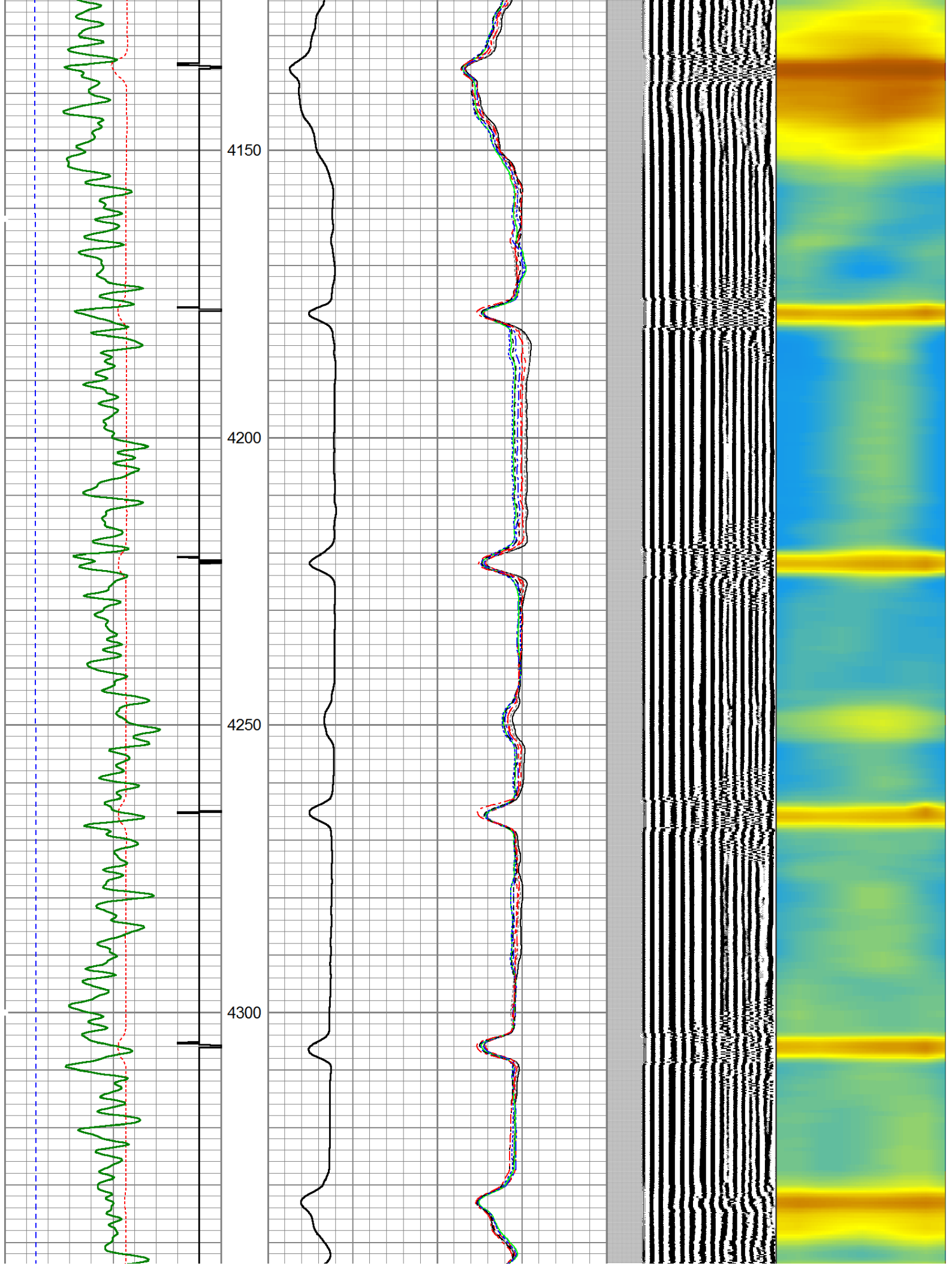


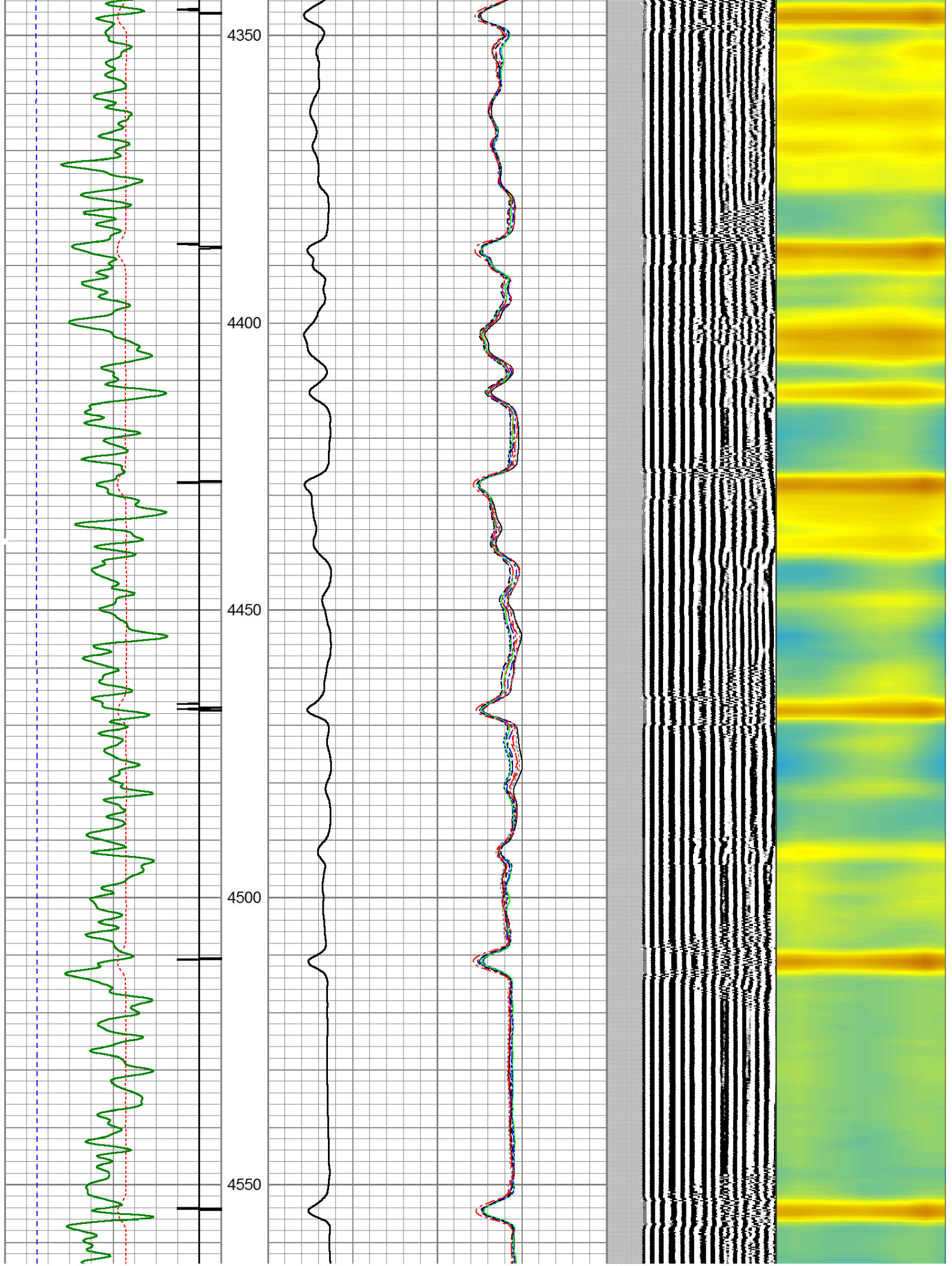


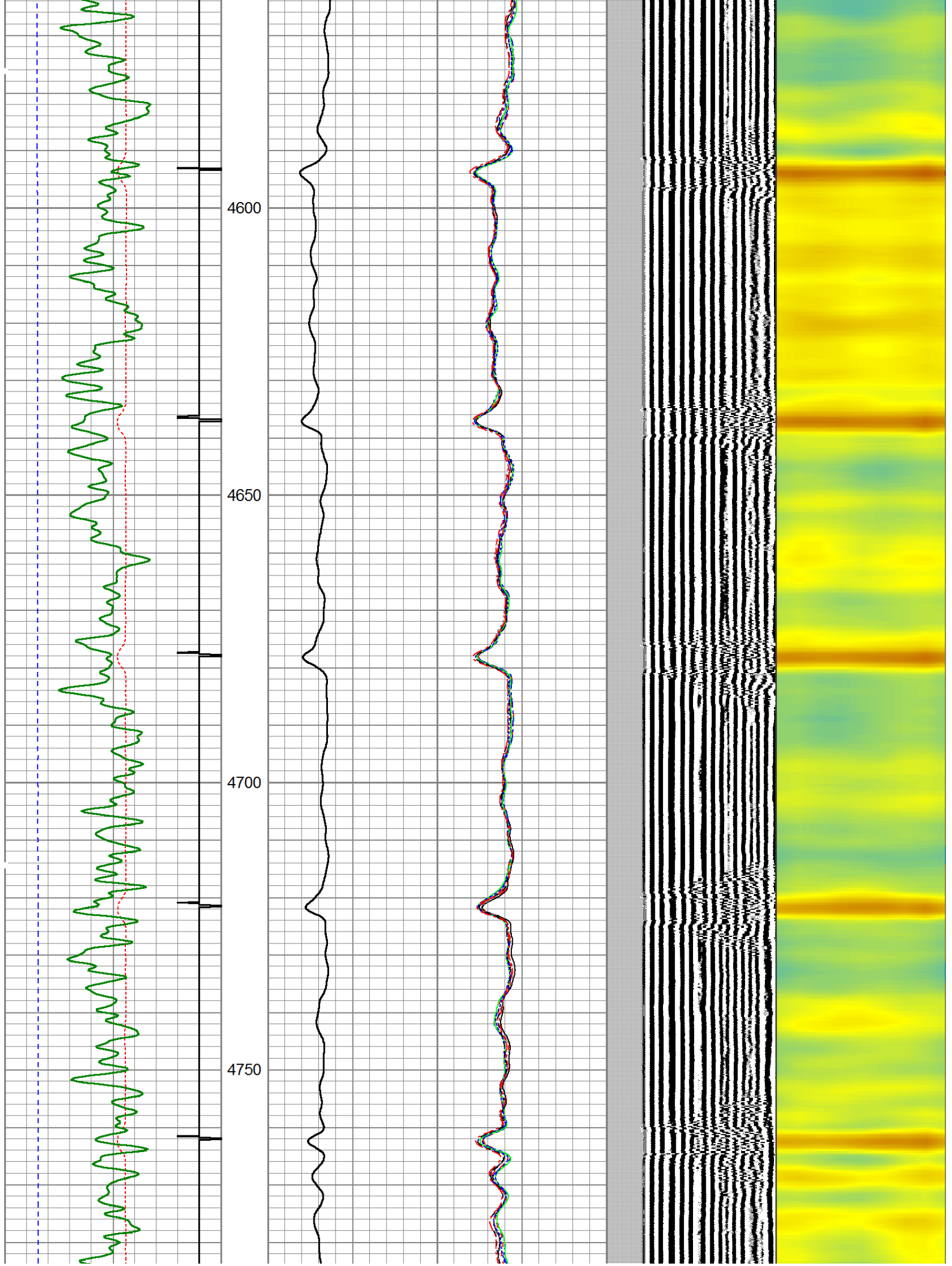




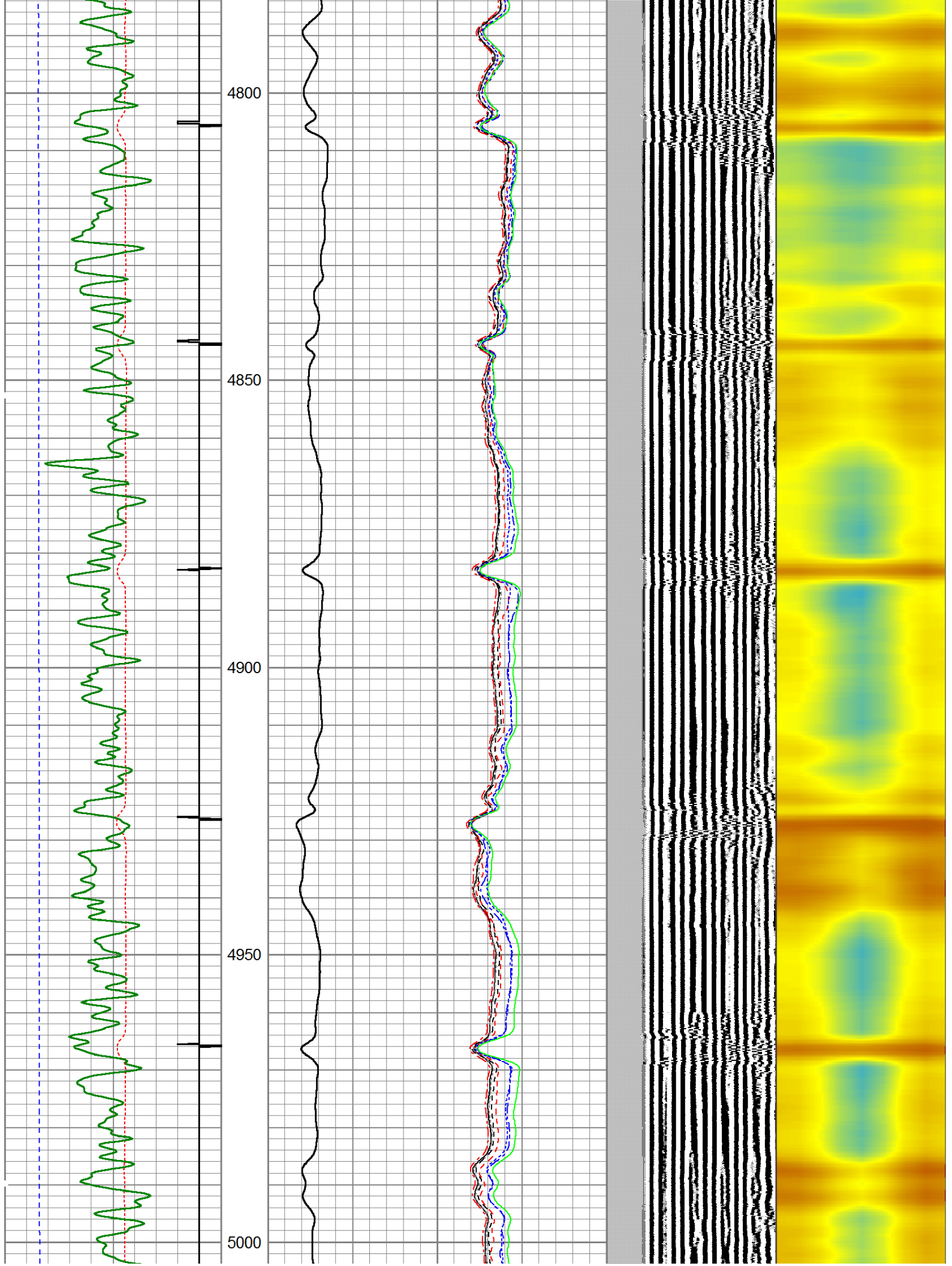


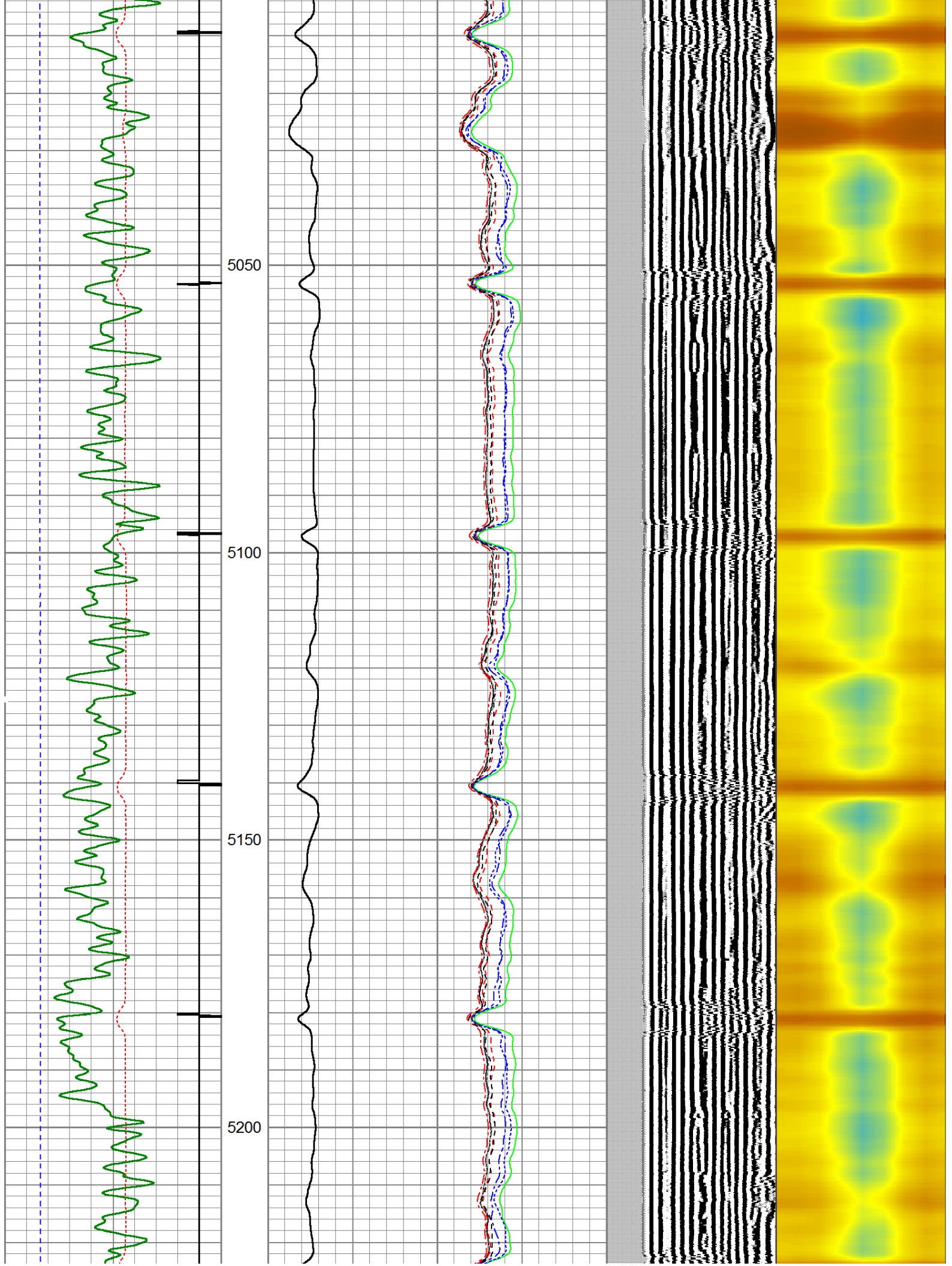


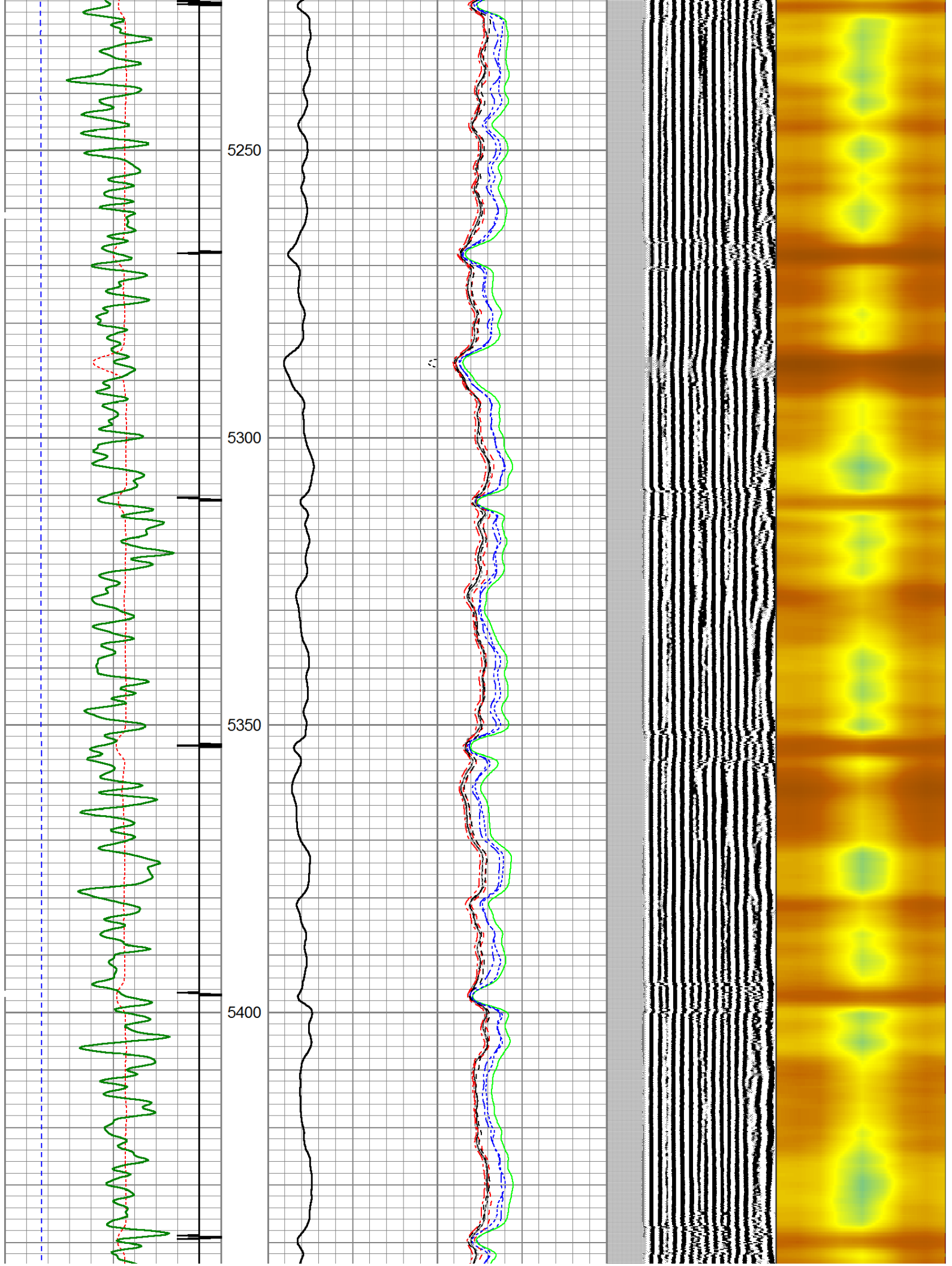




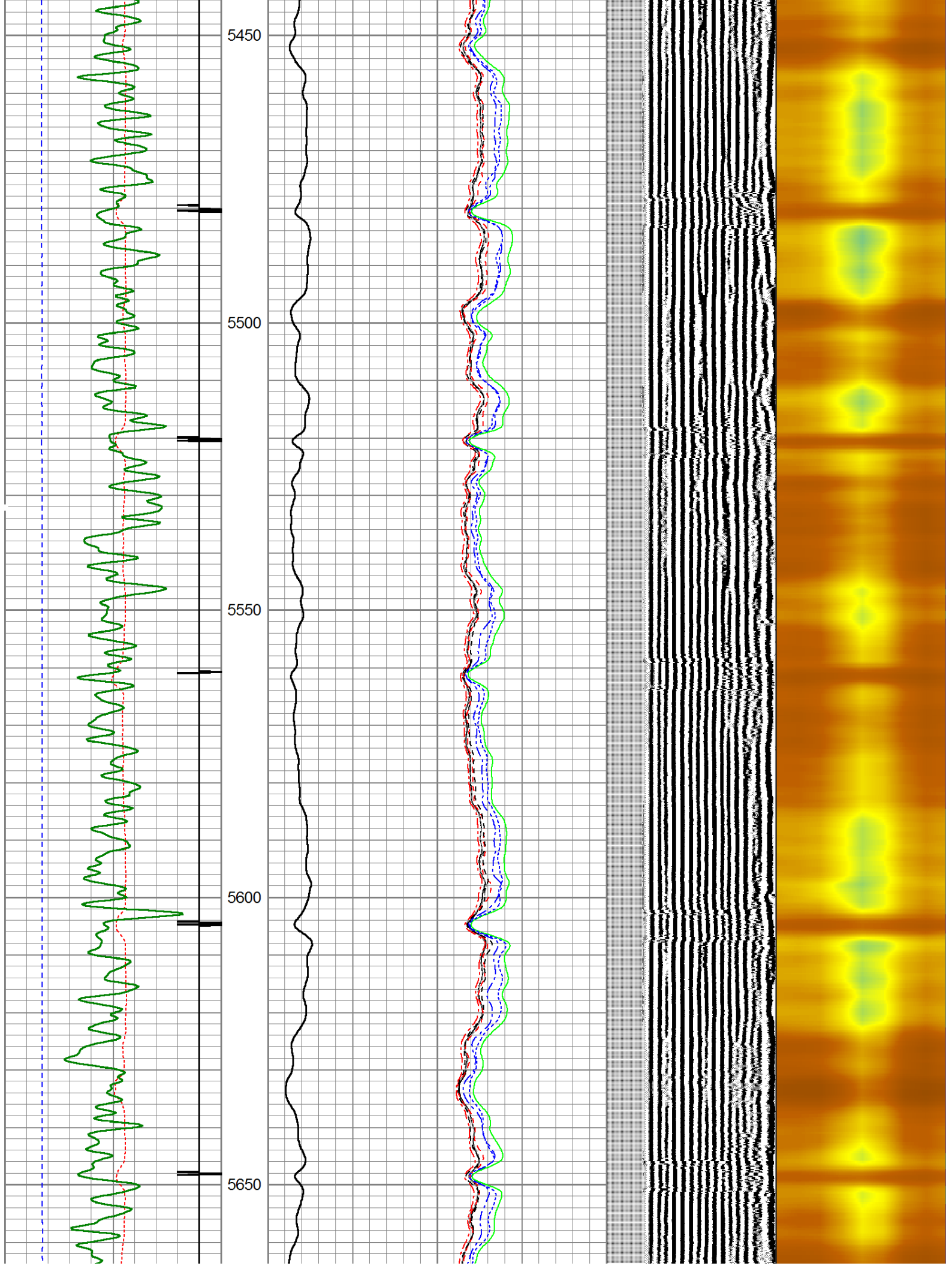


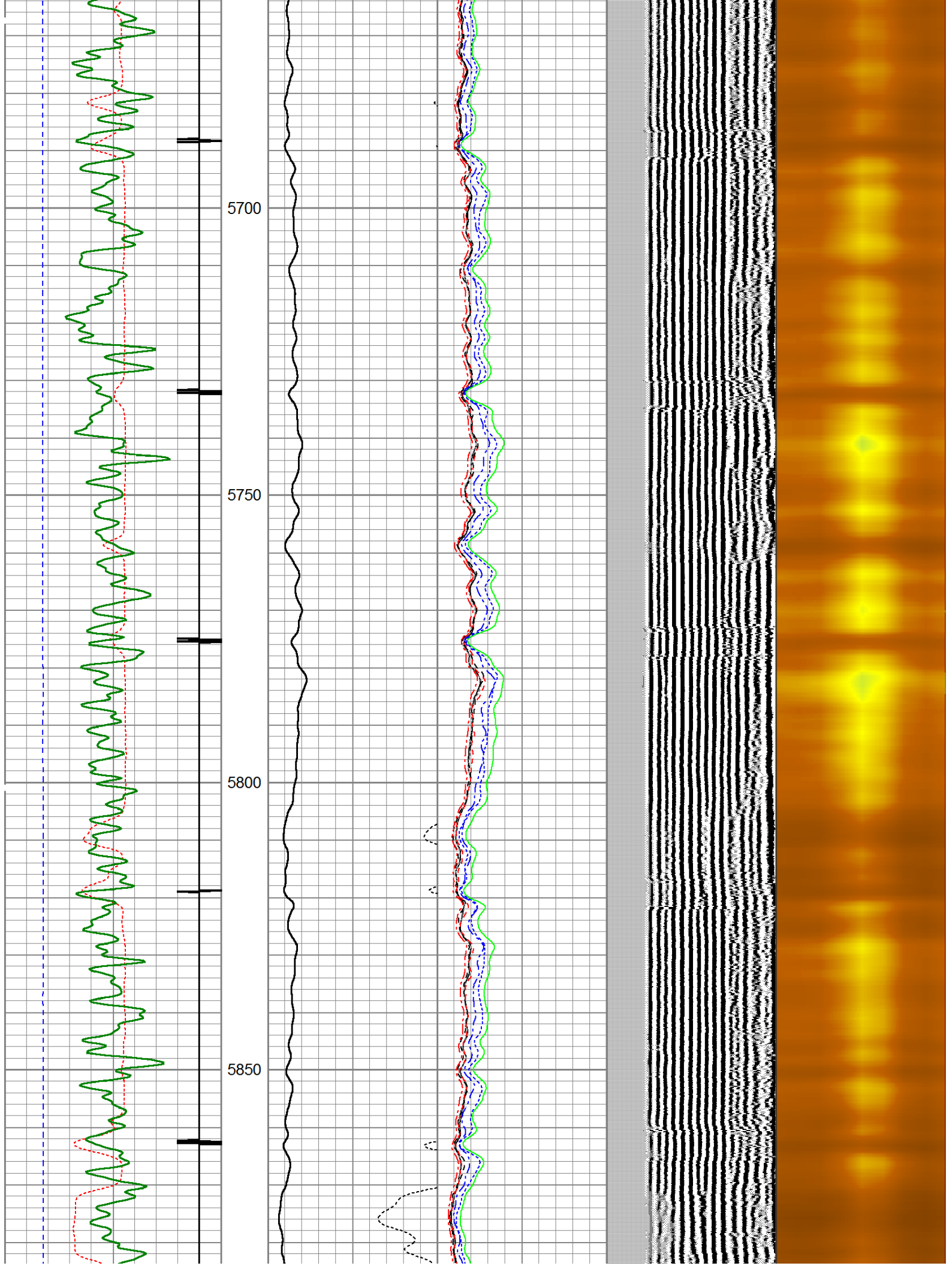


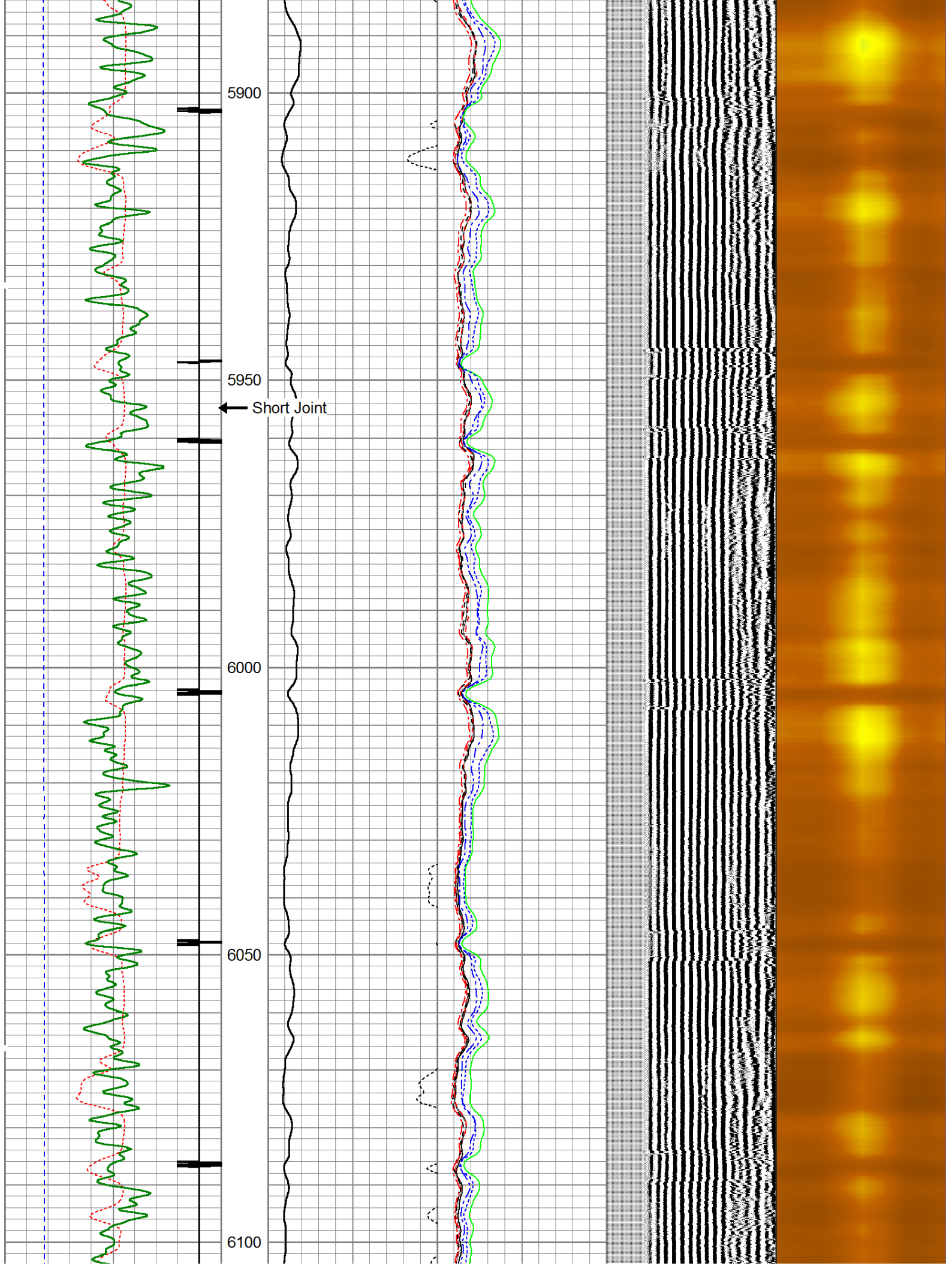




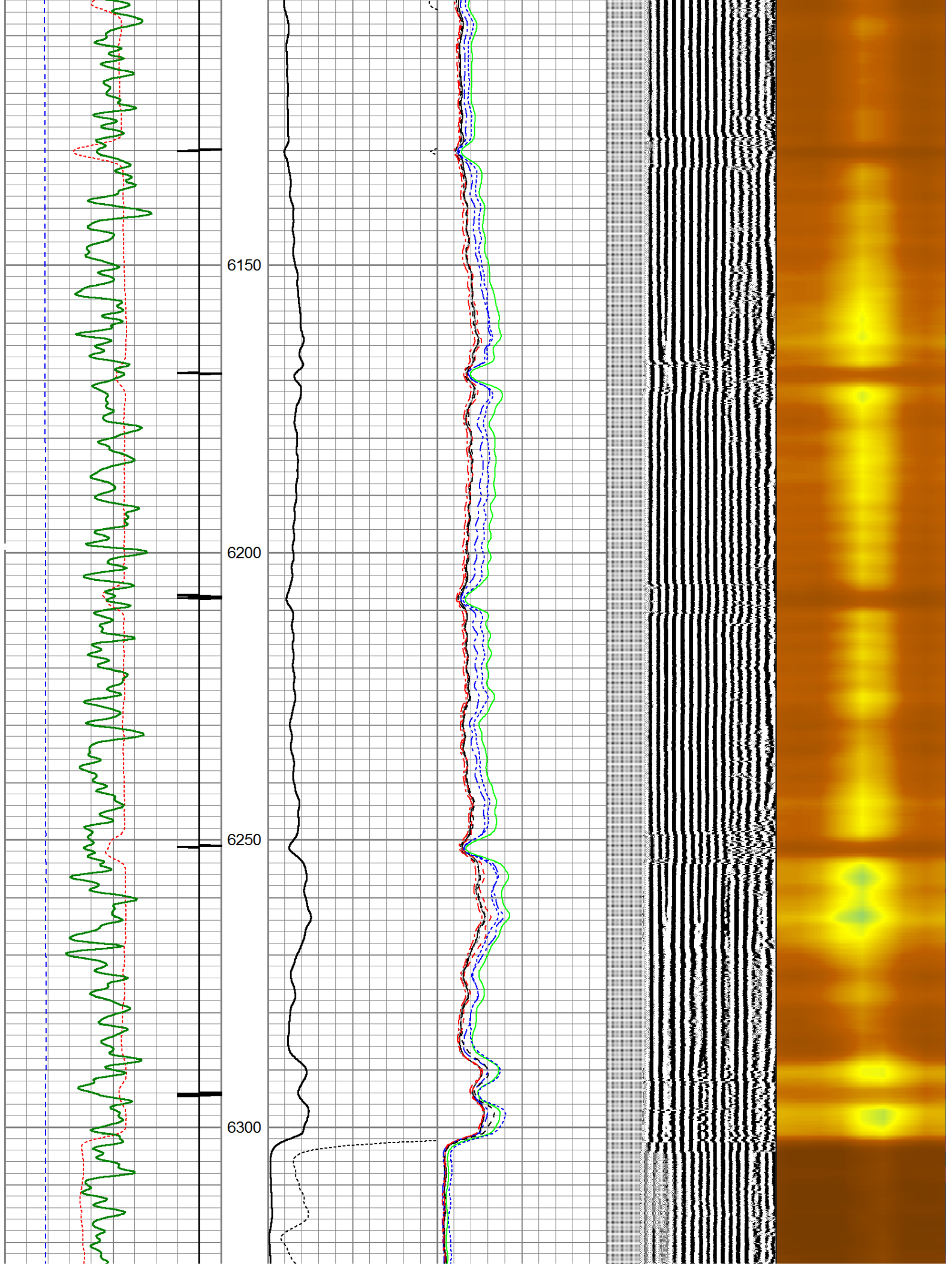


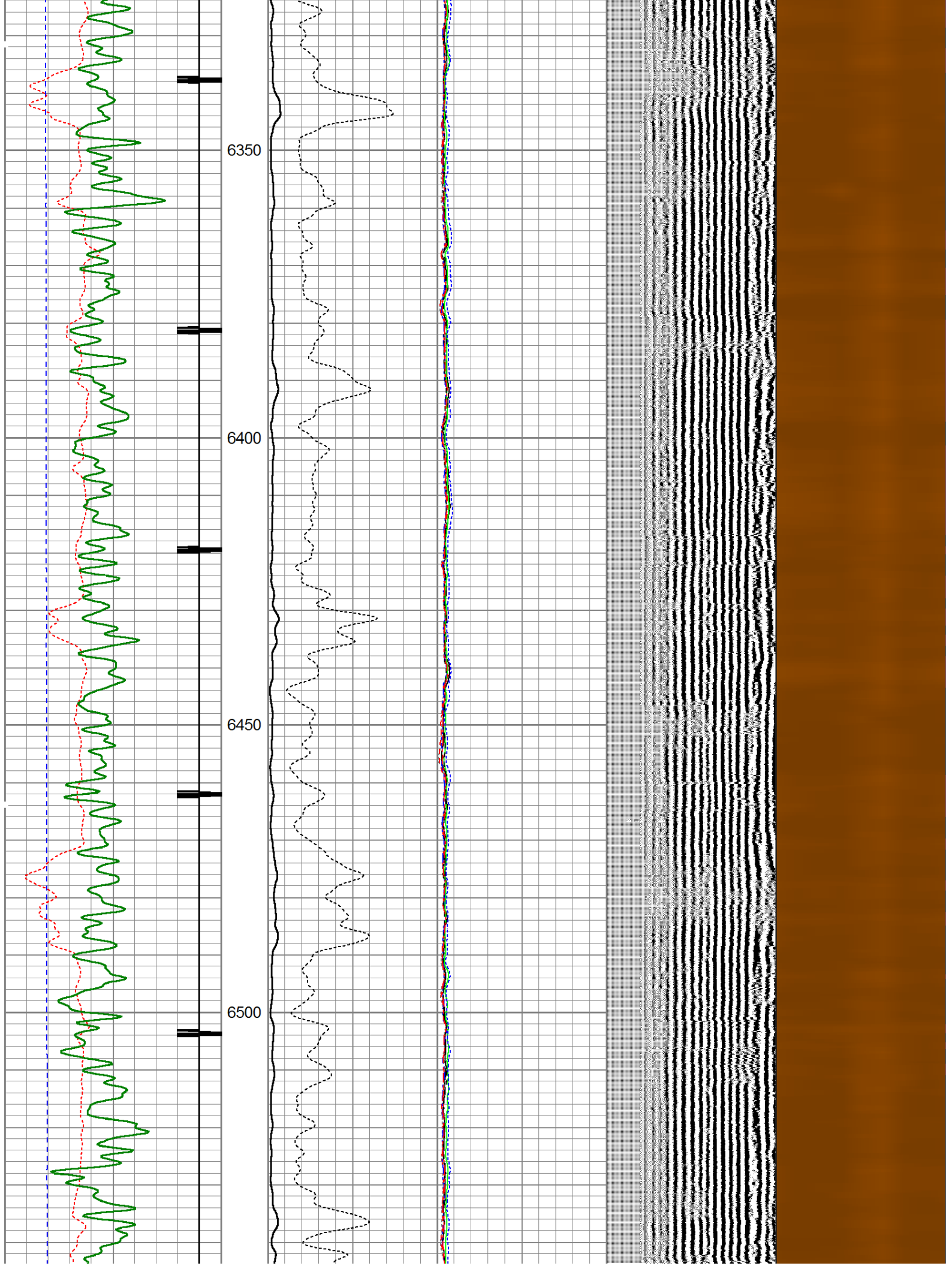




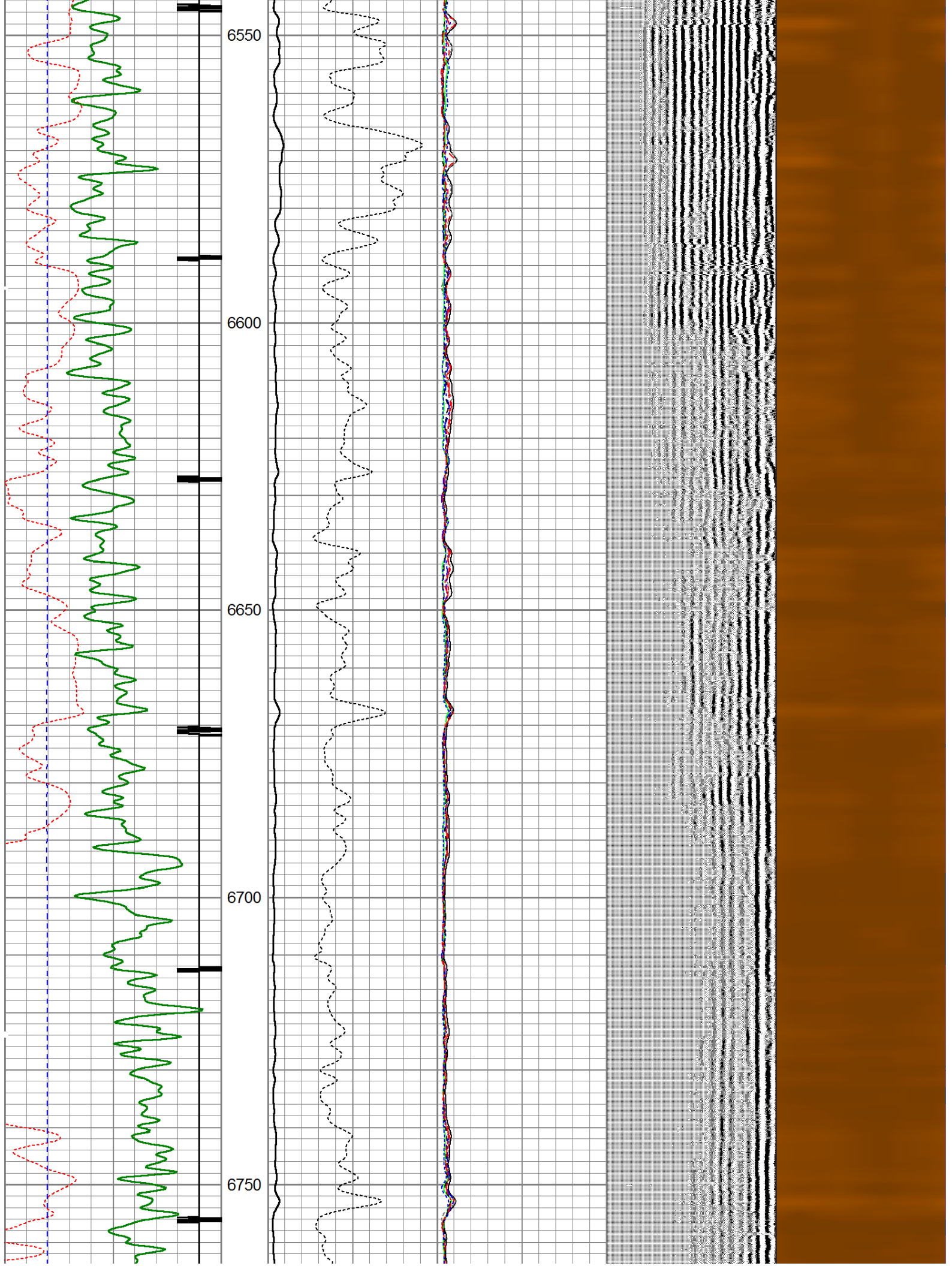




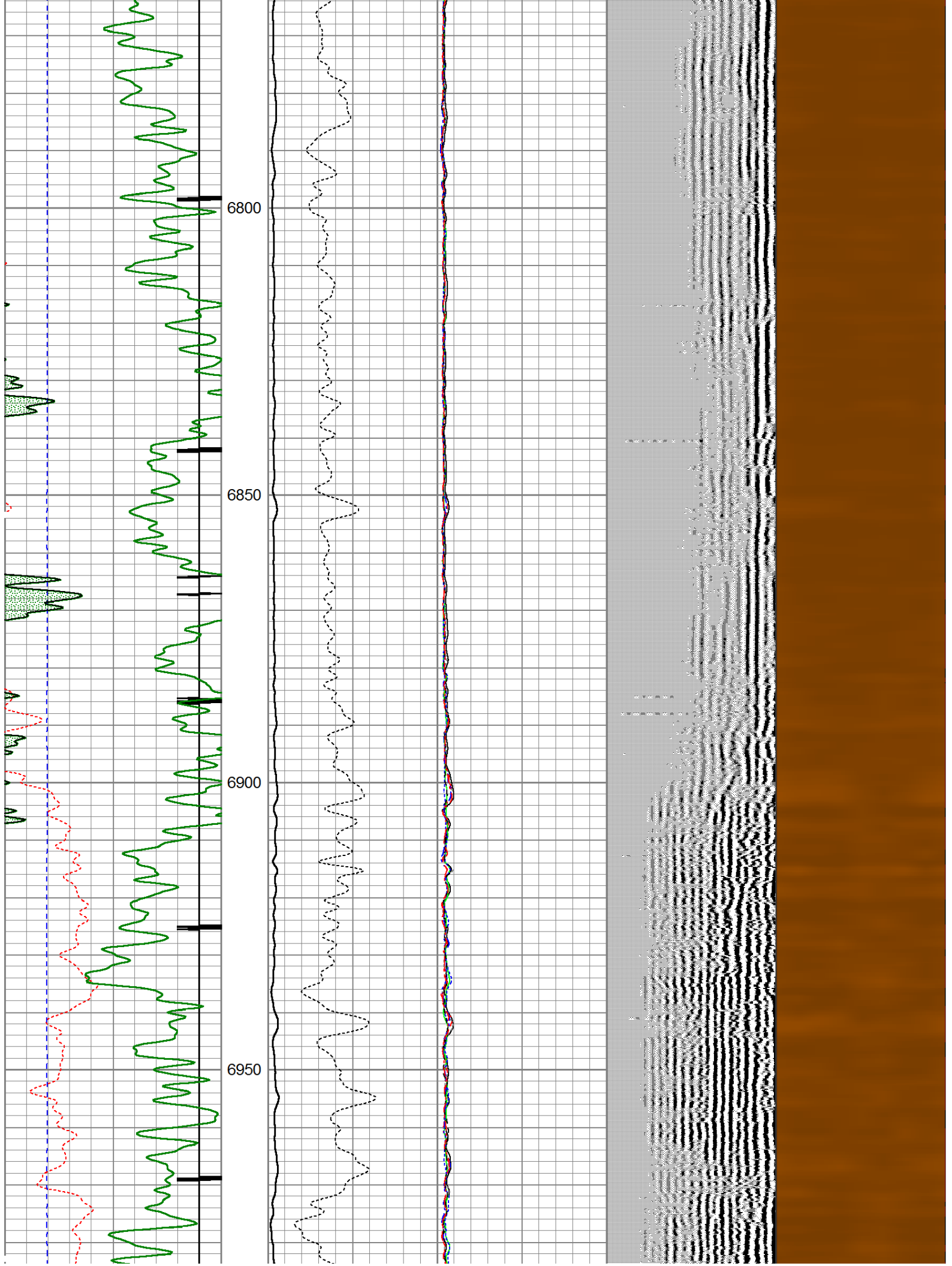


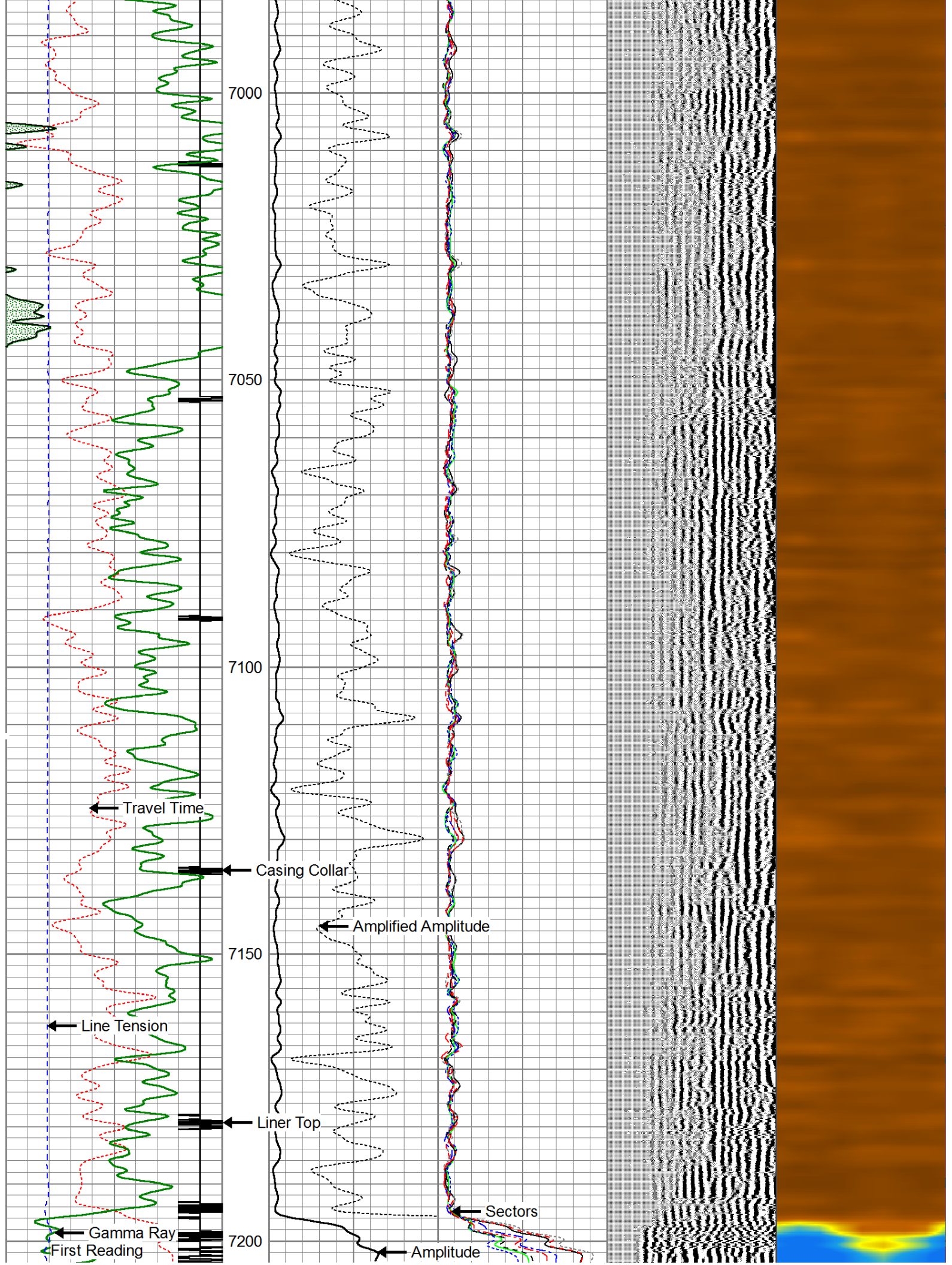




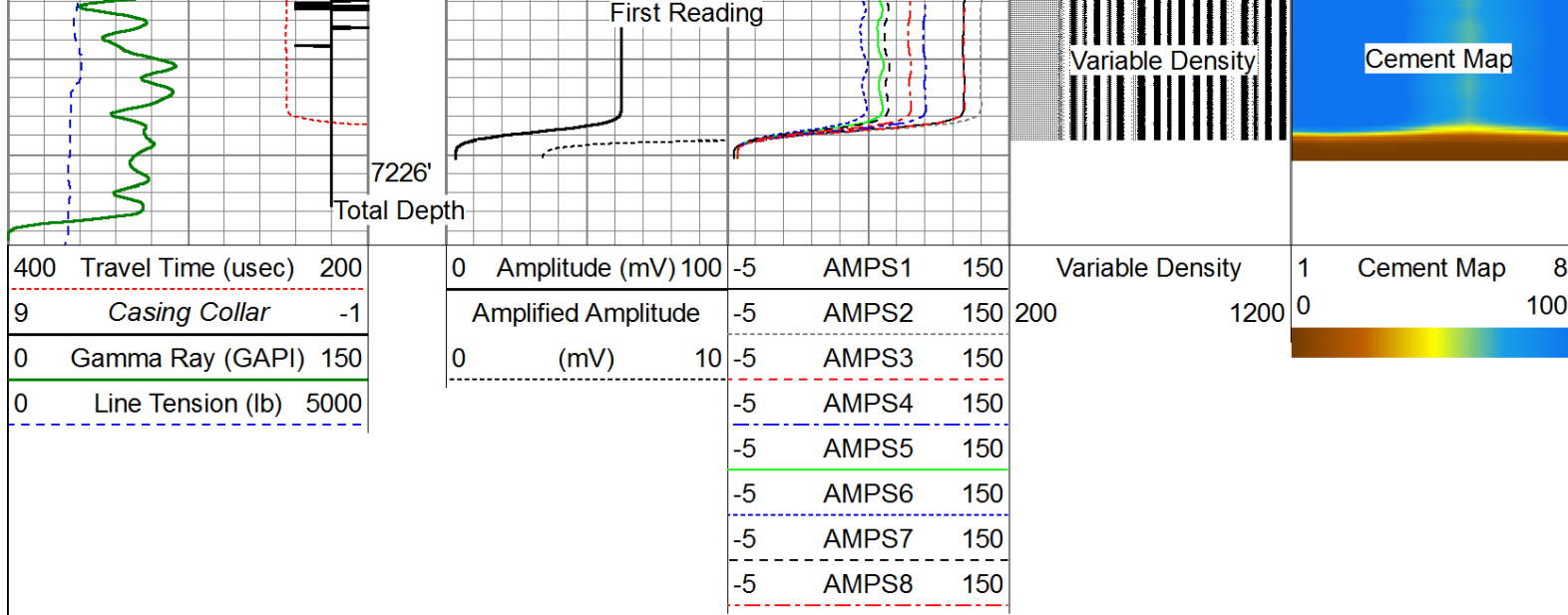















# Repeat Pass ( 0 PSI )

Database File: noble\_furrow\_state\_usx\_ab16\_62\_1hnl.db

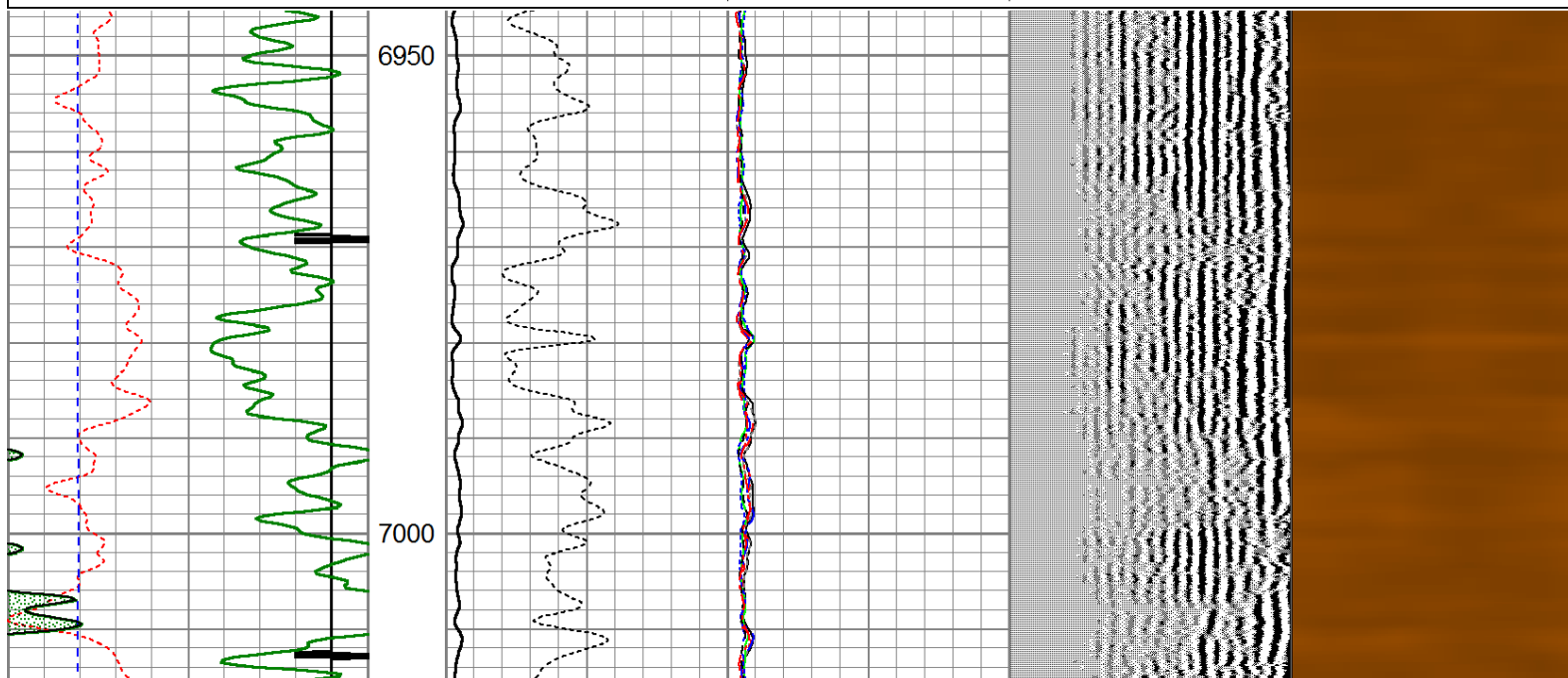
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Presentation Format: scbl03

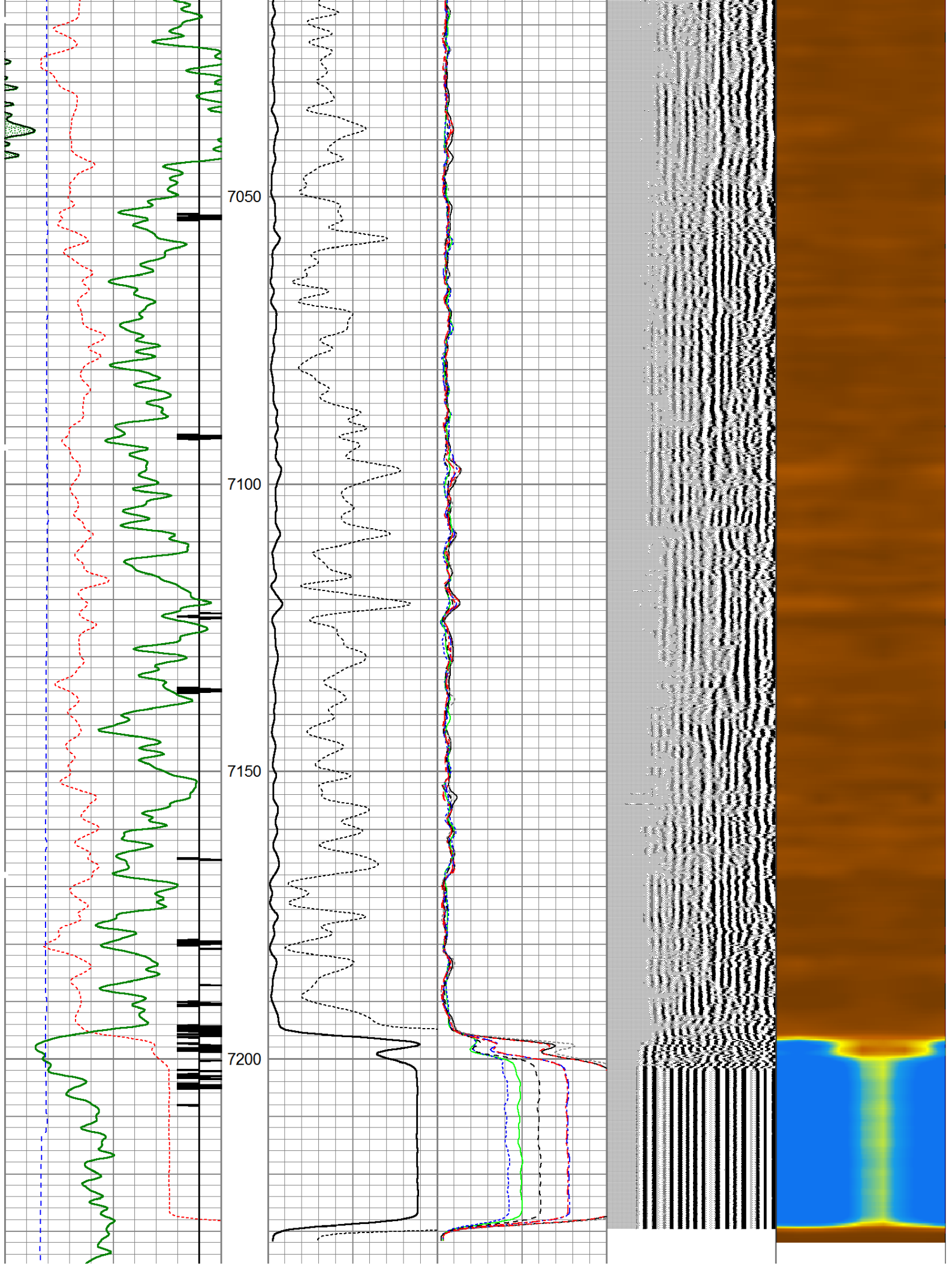
Dataset Creation: Sat Mar 02 13:55:17 2013 by Log SCH 120126

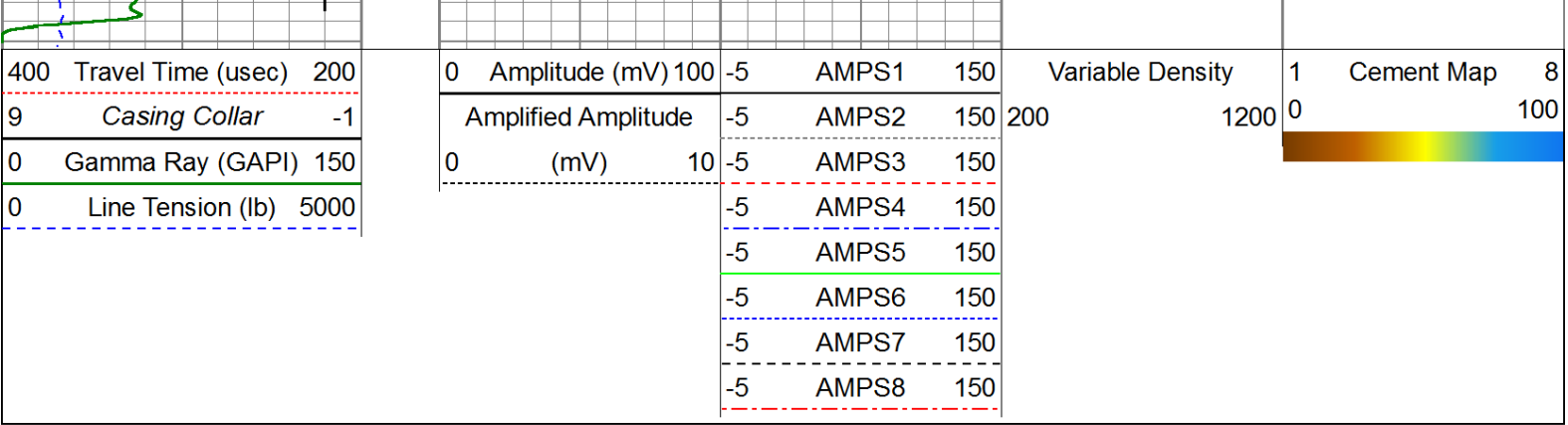
Charted by: Depth in Feet scaled 1:240

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	100
0	Gamma Ray (GAPI)	150	0	(mV)	10	-5	AMPS3	150				
0	Line Tension (lb)	5000				-5	AMPS4	150				
						-5	AMPS5	150				
						-5	AMPS6	150				
						-5	AMPS7	150				
						-5	AMPS8	150				









Calibration Report

Database File: noble\_furrow\_state\_usx\_ab16\_62\_1hnl.db

Dataset Pathname: pass7

Dataset Creation: Sat Mar 02 15:07:09 2013 by Calc SCH 120126

Gamma Ray Calibration Report			
Serial Number:	101230-Dig		
Tool Model:	Probe275		
Performed:	Fri Jun 11 16:02:47 2004		
Calibrator Value:	138.0	GAPI	
Background Reading:	37.7	cps	
Calibrator Reading:	241.8	cps	
Sensitivity:	0.6763	GAPI/cps	

Segmented Cement Bond Log Calibration Report			
Serial Number:	120424		
Tool Model:	Probe		
Calibration Casing Diameter:	7.000	in	
Calibration Depth:	6751.217	ft	

Master Calibration, performed Sat Mar 02 14:12:41 2013:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.015	0.716	1.200	62.165	70.885	3.449
CAL	-0.009	0.866				
5'	-0.005	0.695	1.200	62.165	87.002	1.656
SUM						
S1	-0.071	0.728	0.000	100.000	138.972	-1.237
S2	-0.005	0.692	0.000	100.000	143.425	0.688
S3	-0.005	0.692	0.000	100.000	143.440	0.699
S4	-0.004	0.704	0.000	100.000	141.266	0.543
S5	-0.005	0.718	0.000	100.000	138.266	0.662
S6	-0.005	0.724	0.000	100.000	137.056	0.729
S7	-0.006	0.727	0.000	100.000	136.458	0.805
S8	-0.005	0.712	0.000	100.000	139.322	0.757

Internal Reference Calibration, performed Mon Oct 10 09:42:03 2005:						
	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.015	0.716	1.200	62.165	70.885	3.449
CAL	-0.009	0.866				
5'	-0.005	0.695	1.200	62.165	87.002	1.656
SUM						
S1	-0.071	0.728	0.000	100.000	138.972	-1.237
S2	-0.005	0.692	0.000	100.000	143.425	0.688
S3	-0.005	0.692	0.000	100.000	143.440	0.699
S4	-0.004	0.704	0.000	100.000	141.266	0.543
S5	-0.005	0.718	0.000	100.000	138.266	0.662
S6	-0.005	0.724	0.000	100.000	137.056	0.729
S7	-0.006	0.727	0.000	100.000	136.458	0.805
S8	-0.005	0.712	0.000	100.000	139.322	0.757

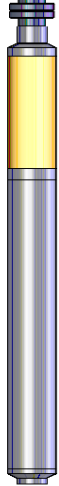
CAL 0.000 0.000 -0.009 0.866 1.000 0.000

Air Zero Calibration, performed Sat Mar 02 07:59:55 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)
			Titan Cable_head	1.00	1.44	10.00
			Probe275 2.75" Centralizer	2.88	2.75	20.00
WVF3FT	12.02		RBT-Probe (120424) Probe Radii Bond Tool with Digital Telemetry	8.75	2.75	90.00
WVFCAL	12.02					
WVFS1	12.02					
WVFS2	12.02					
WVFS3	12.02					
WVFS4	12.02					
WVFS5	12.02					
WVFS6	12.02					
WVFS7	12.02					
WVFS8	12.02					
WVF5FT	11.02					
			Probe275 2.75" Centralizer	2.88	2.75	20.00



CCL	4.00		GR-Probe275 (101230-Dig) Probe 2 3/4" Digital Gamma Ray/CCL	4.96	2.75	57.00
GR	2.54					
Dataset: noble_furrow_state_usx_ab16_62_1hnl.db: field/well/run1/pass7 Total Length: 20.46 ft Total Weight: 197.00 lb O.D.: 2.75 in						