



CEMENT BOND
GAMMA RAY/CCL
LOG

Company NOBLE ENERGY
Well ROHN STATE LD03-63HN
Field WATTENBERG
County WELD State COLORADO

Location:

API # : 05-123-37453

BHL: 1320' FSL & 660' FEL

Other Services
NONE

SEC 4 TWP 9N RGE 58W

Permanent Datum GROUND LEVEL Elevation 4705'
Log Measured From KELLY BUSHING = 24'
Drilling Measured From KELLY BUSHING

Elevation
K.B. 4729'
D.F. 4728'
G.L. 4705'

Date 30 OCTOBER 2014

Run Number	ONE		
Depth Driller	10164'		
Depth Logger	10080'		
Bottom Logged Interval	10080'		
Top Log Interval	5650'		
Open Hole Size	5650'		
Type Fluid	WATER		
Density / Viscosity	~8.3#		
Max. Recorded Temp.	-		
Estimated Cement Top	-		
Time Well Ready	ROA		
Time Logger on Bottom	SEE LOG		
Equipment Number	W-202		
Location	AULT, COLORADO		
Recorded By	Z. EMICK		
Witnessed By	B. MANSFIELD		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	13.5"	0'	1223'				
TWO	8.75"	1223'	6030'				
THREE	6.125"	6030'	10168'				
Casing Record	Size	Wgt/Ft	Top	Bottom			
Surface String	8.625"	36#	0'	1213'			
Prot. String							
Production String	7"	26#	0'	6020'			
Liner	4.5"	11.6#	5790'	10164'			

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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.

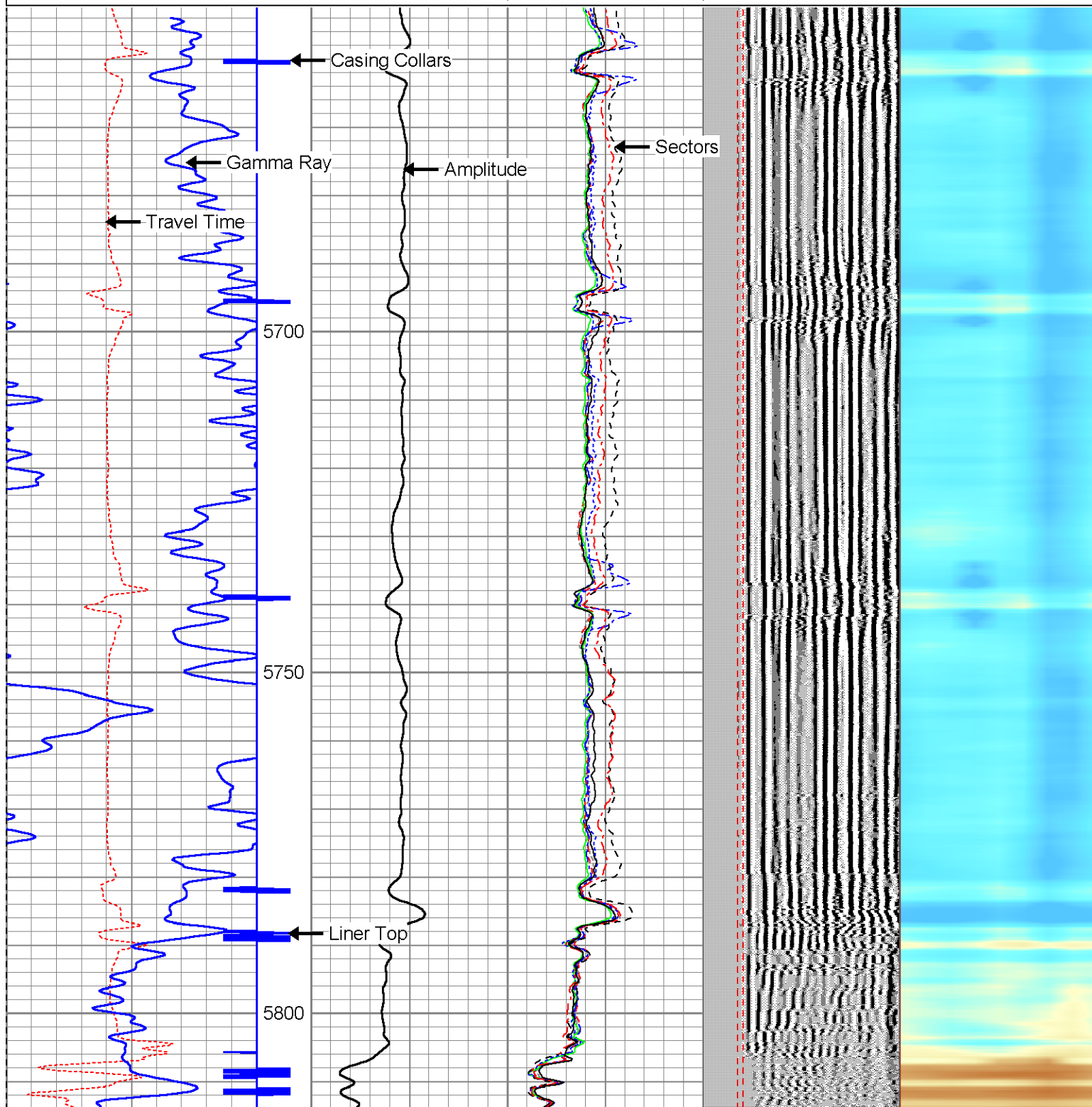
Comments

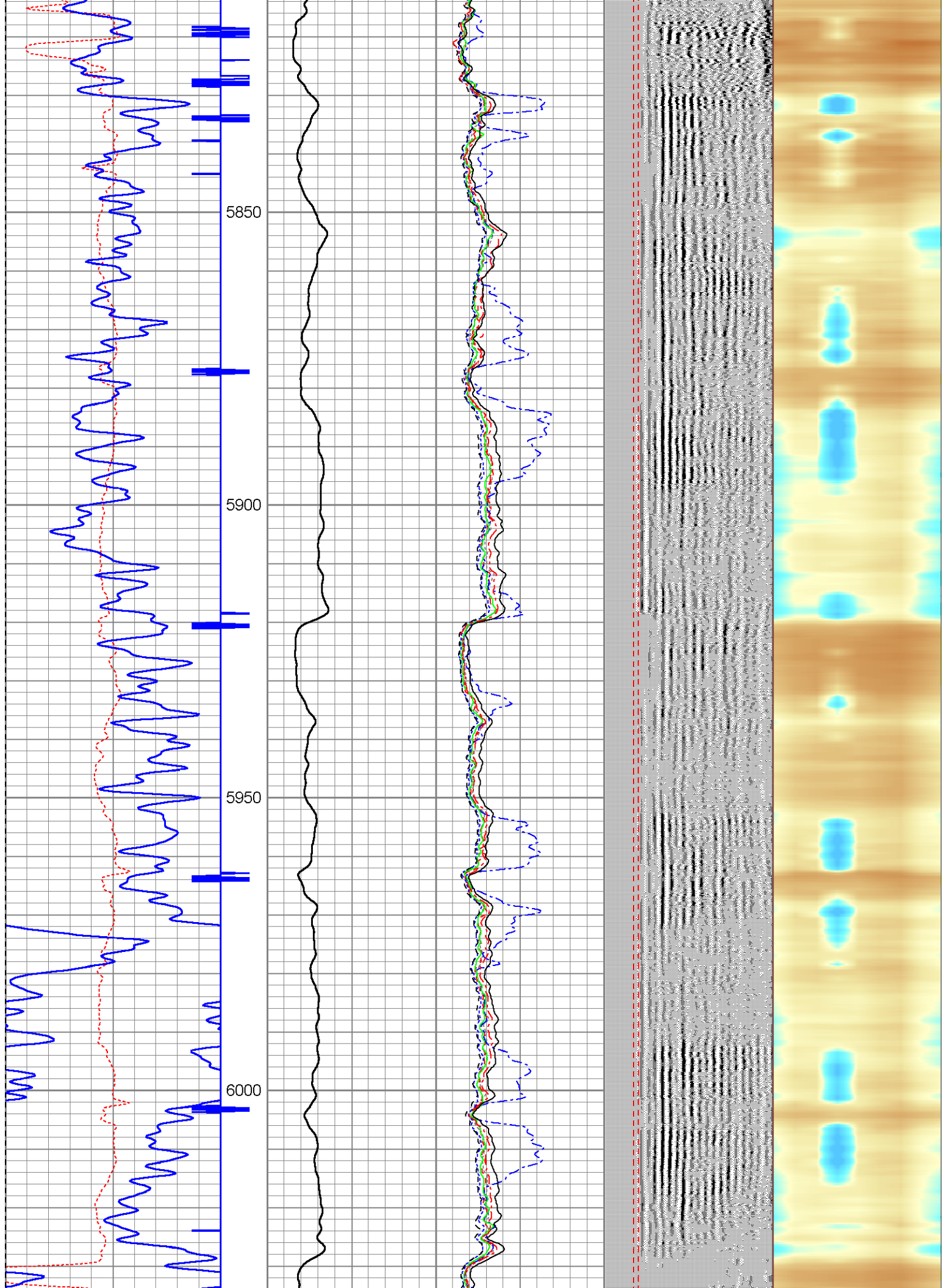
*****THANK YOU FOR USING CUTTERS WIRELINE*****
LOG RAN AS PRIMARY LOG IN WELL
LOGGED HORIZONTAL LINER 4.5" 11.6#

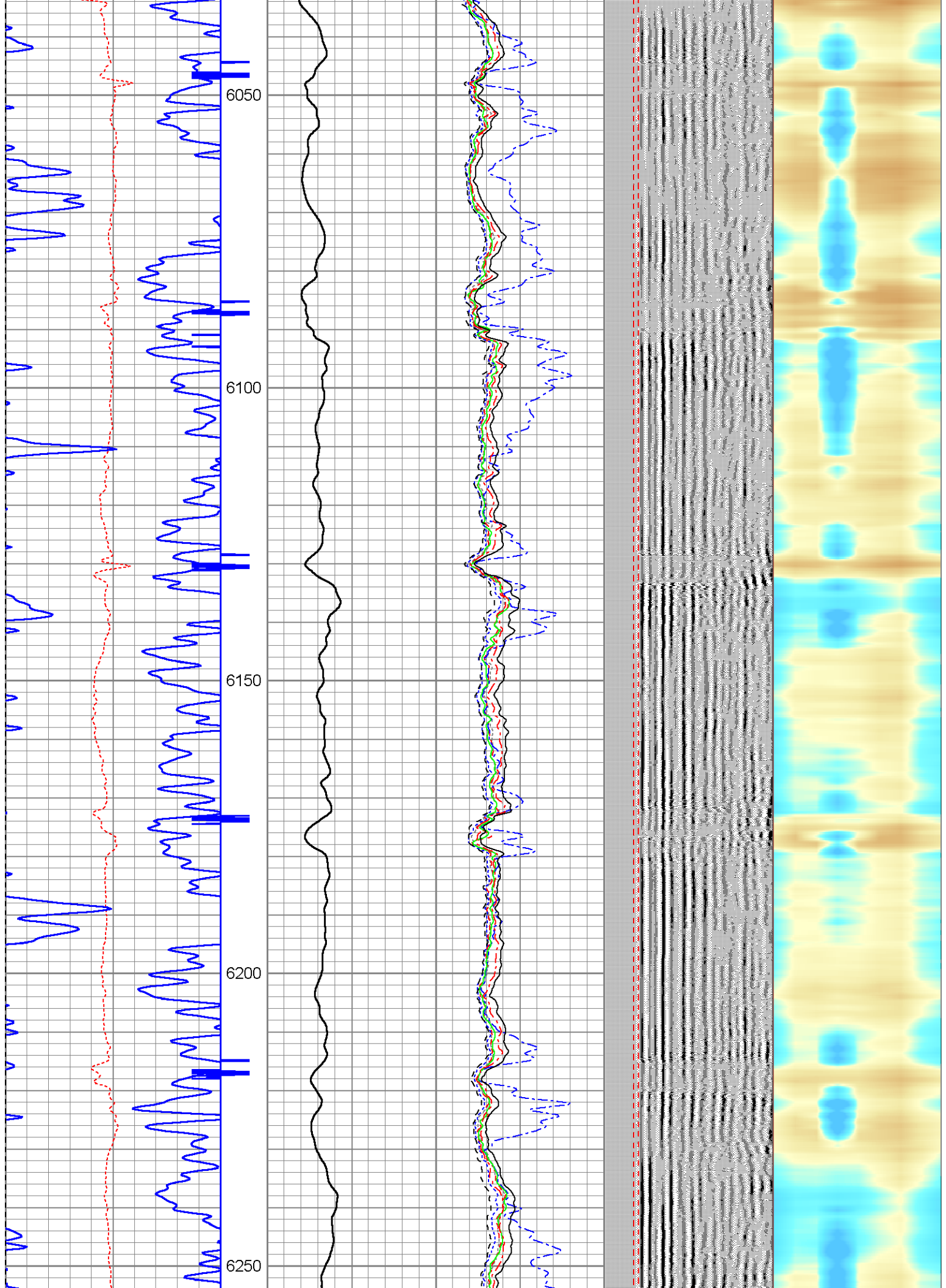


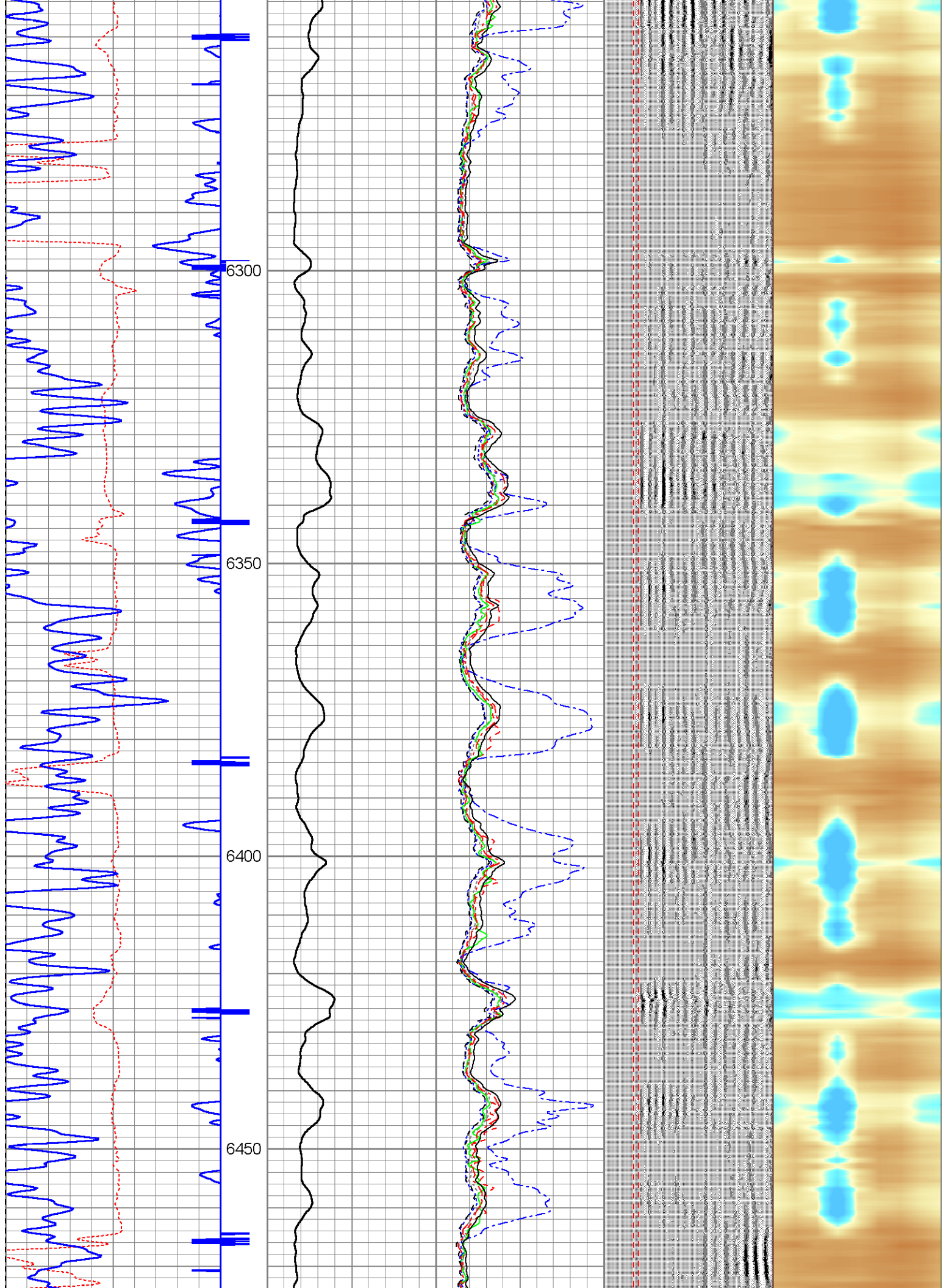
MAIN PASS 5"=100'

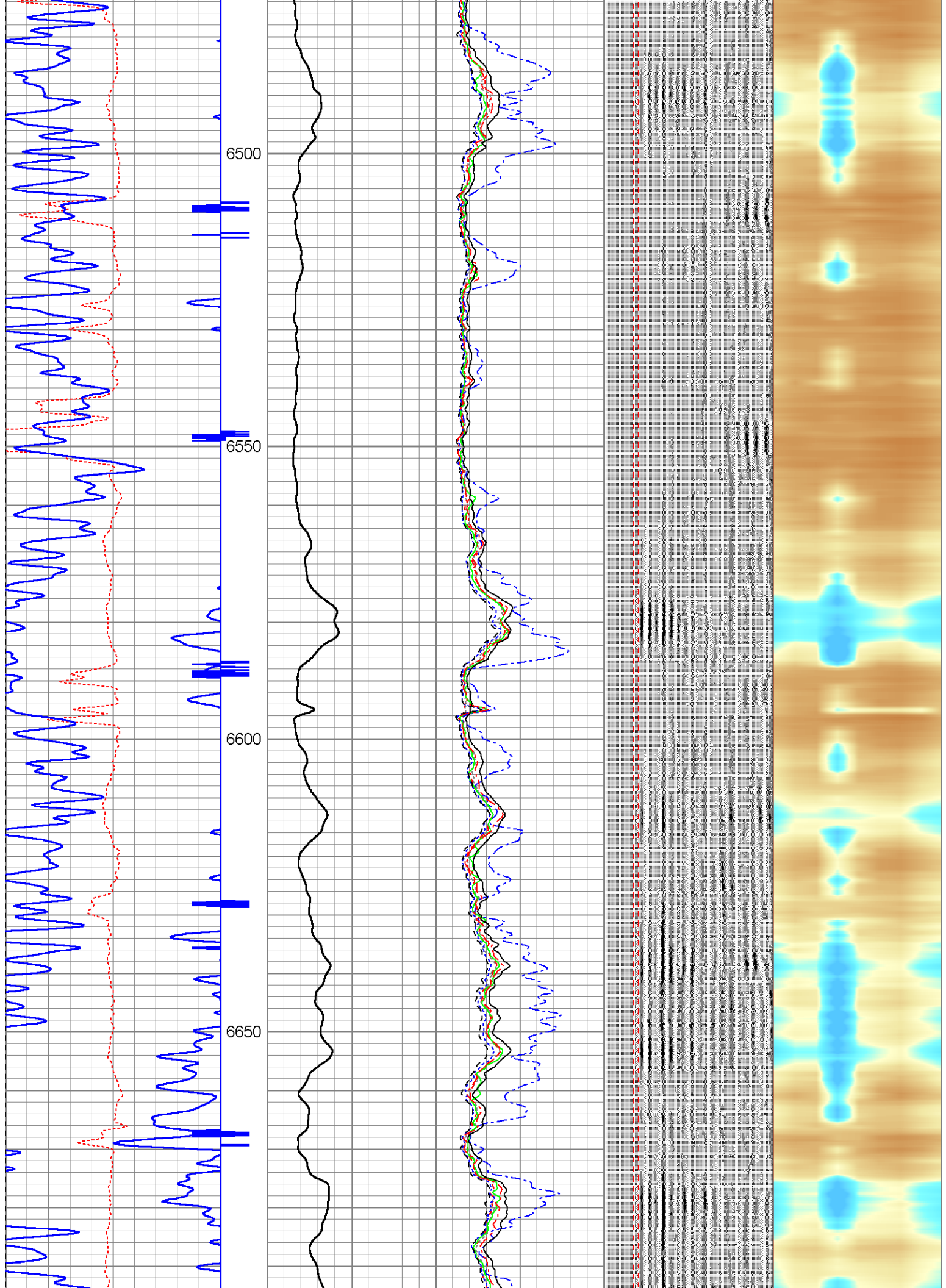
343	TT (usec)	243	0	Amplitude (mV)	100	-5	AMPS2	150	200	VDL	1200	Cement Map	
0	GR (GAPI)	150	Amplified Amplitude			-5	AMPS3	150			1	80	
0	LTEN (lb)	4000	0	(mV)	10	-5	AMPS4	150	Free Pipe Gate				
		CCL				-5	AMPS5	150					
						-5	AMPS6	150					
						-5	AMPS7	150					
						-5	AMPS8	150					
						-5	AMPS1	150					

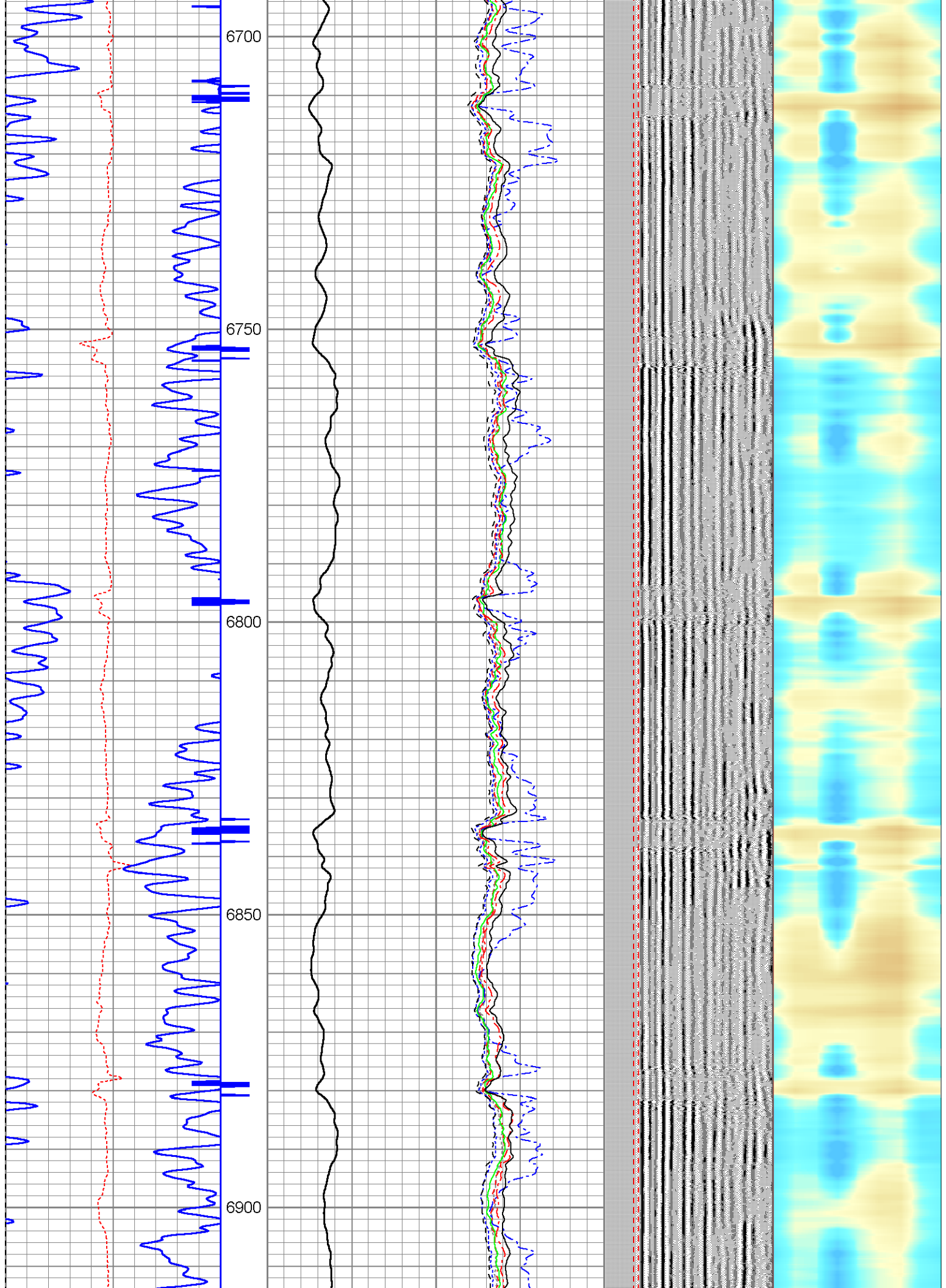


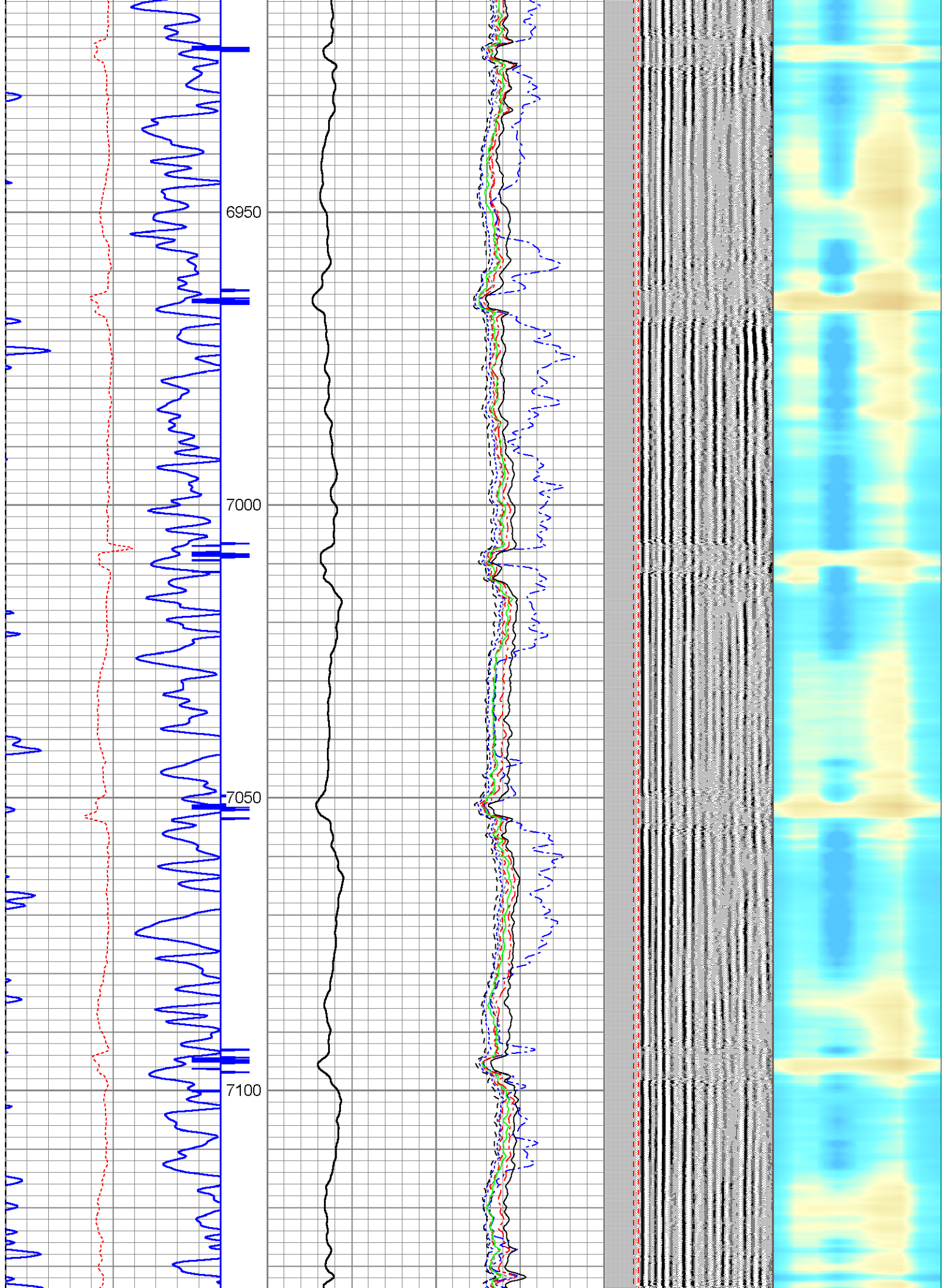


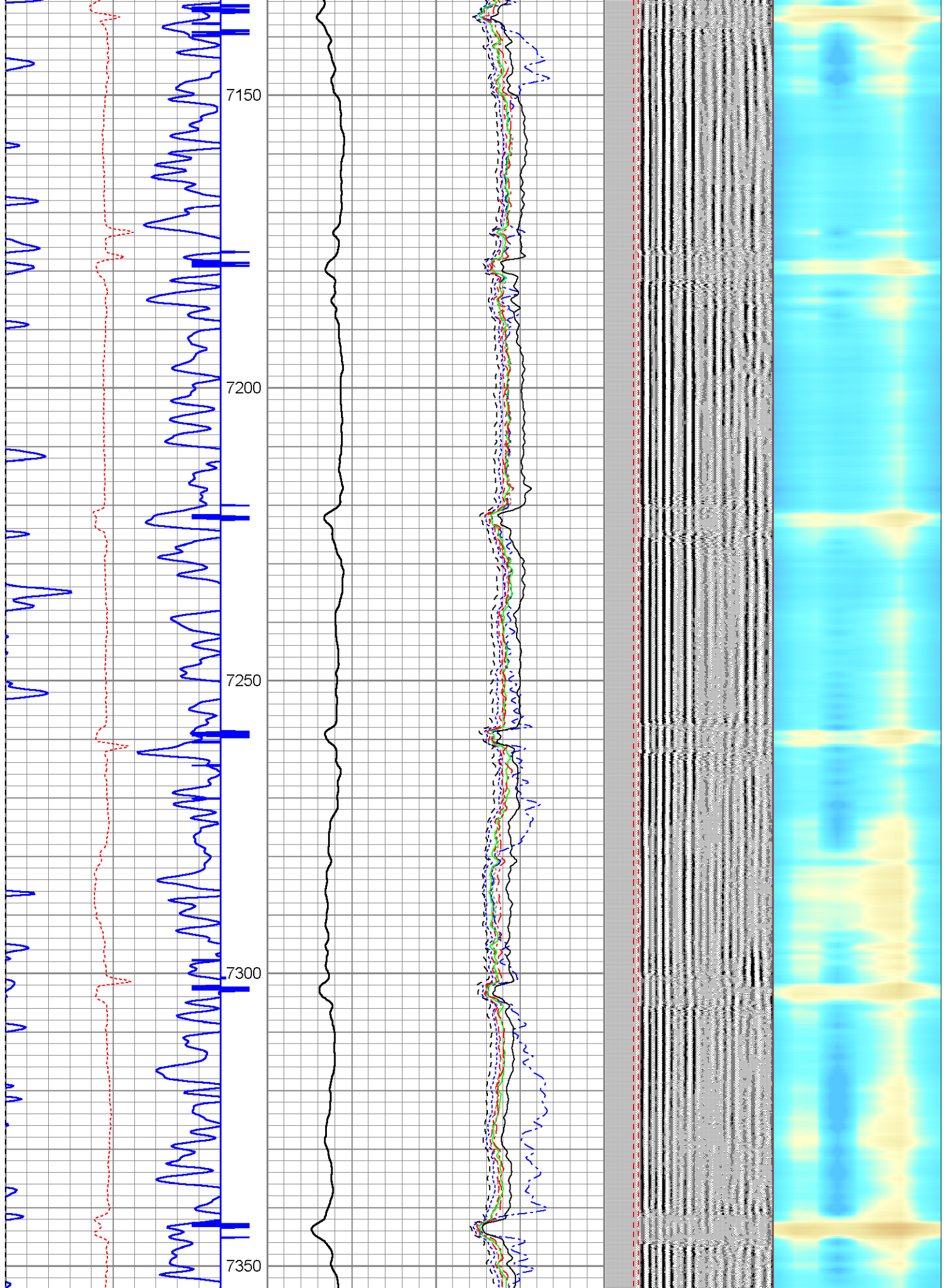


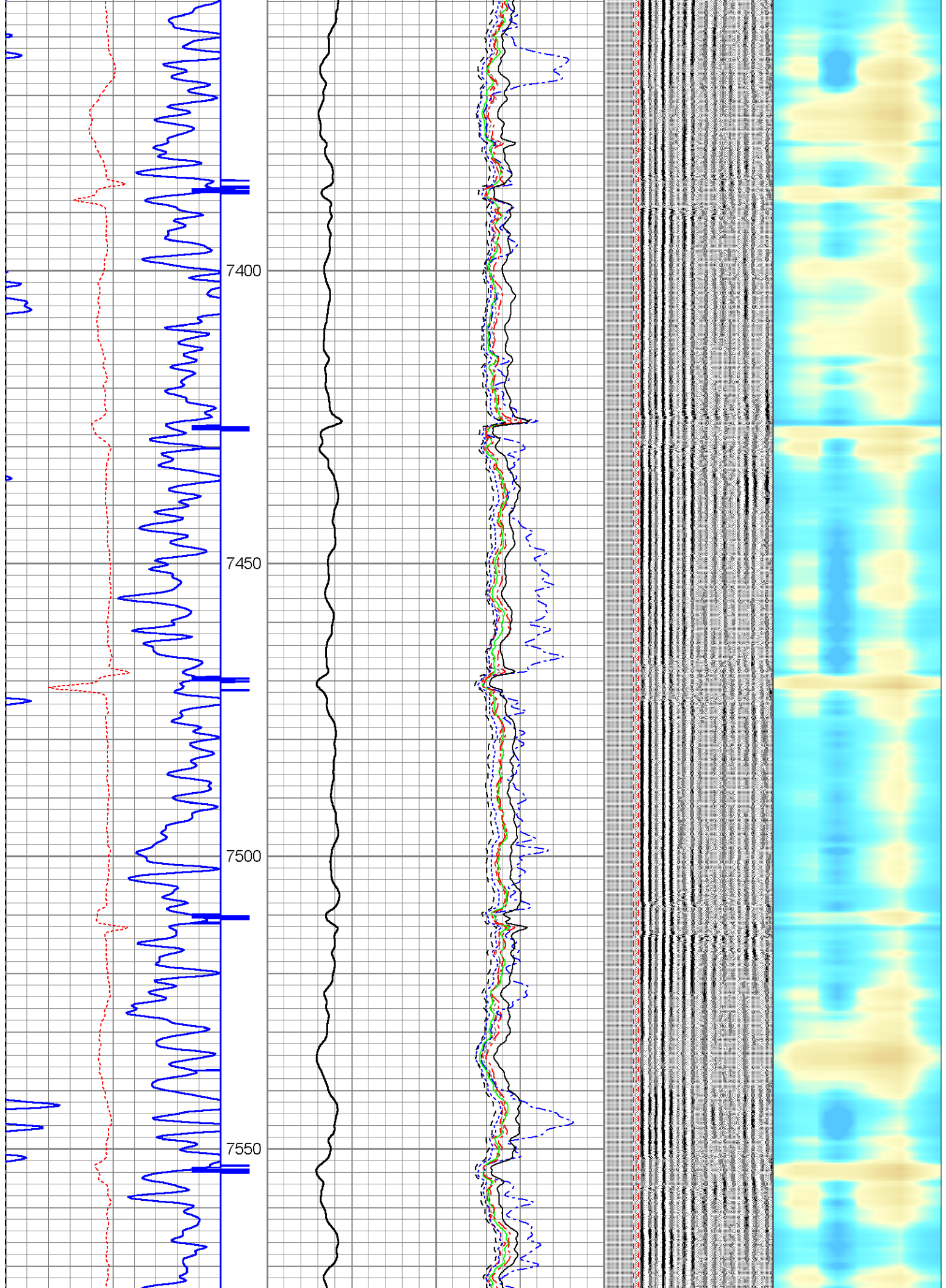


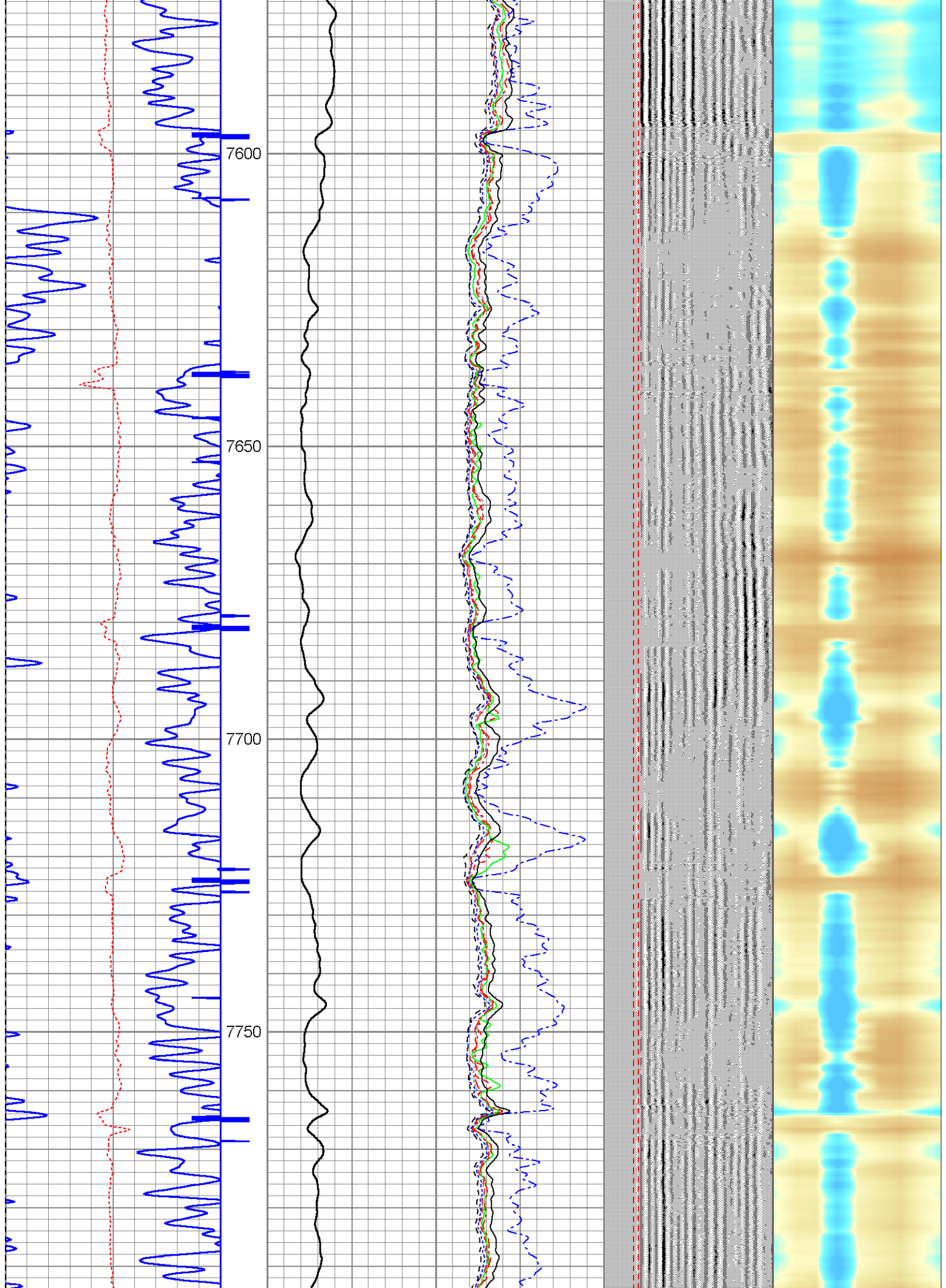


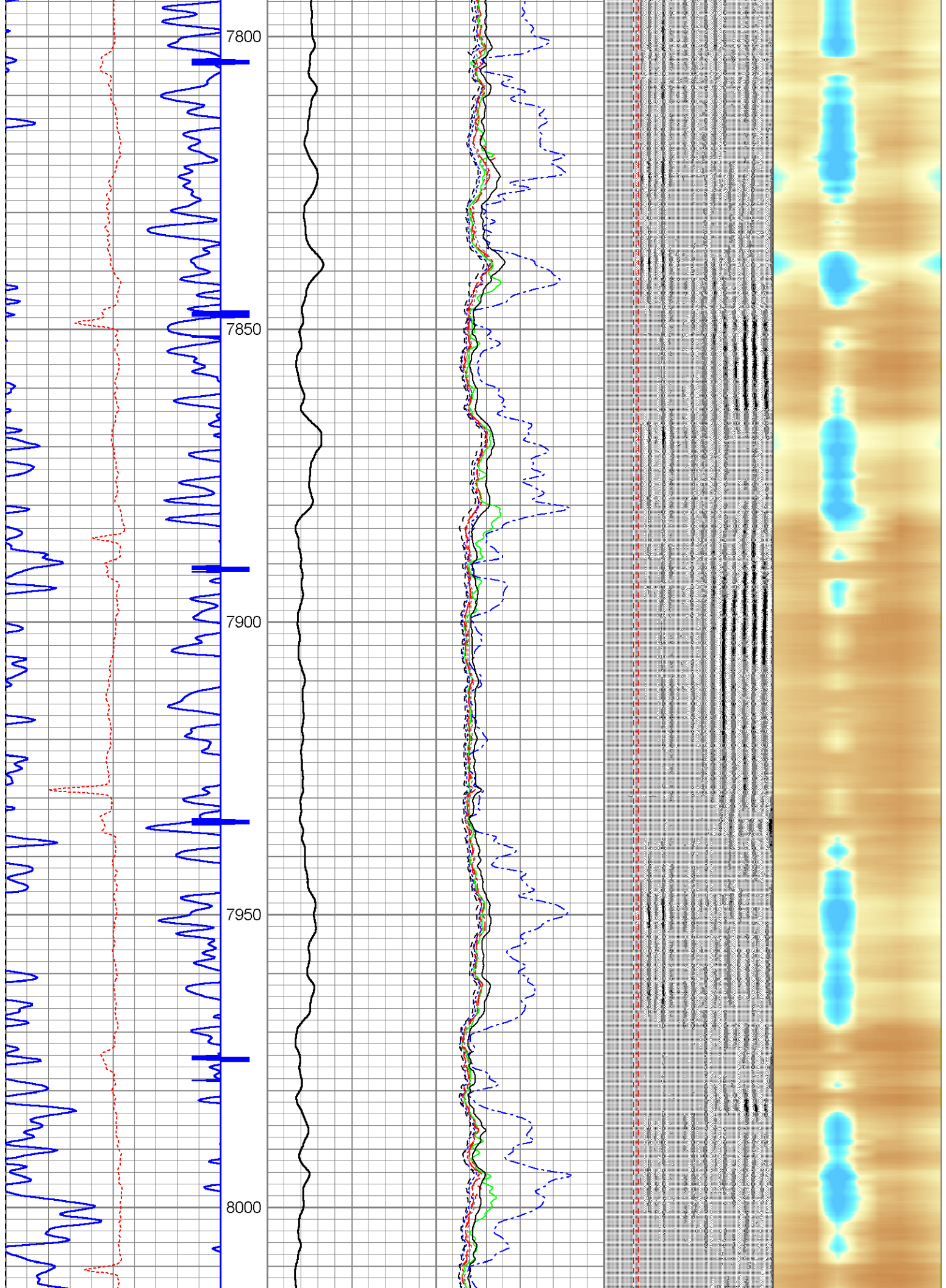


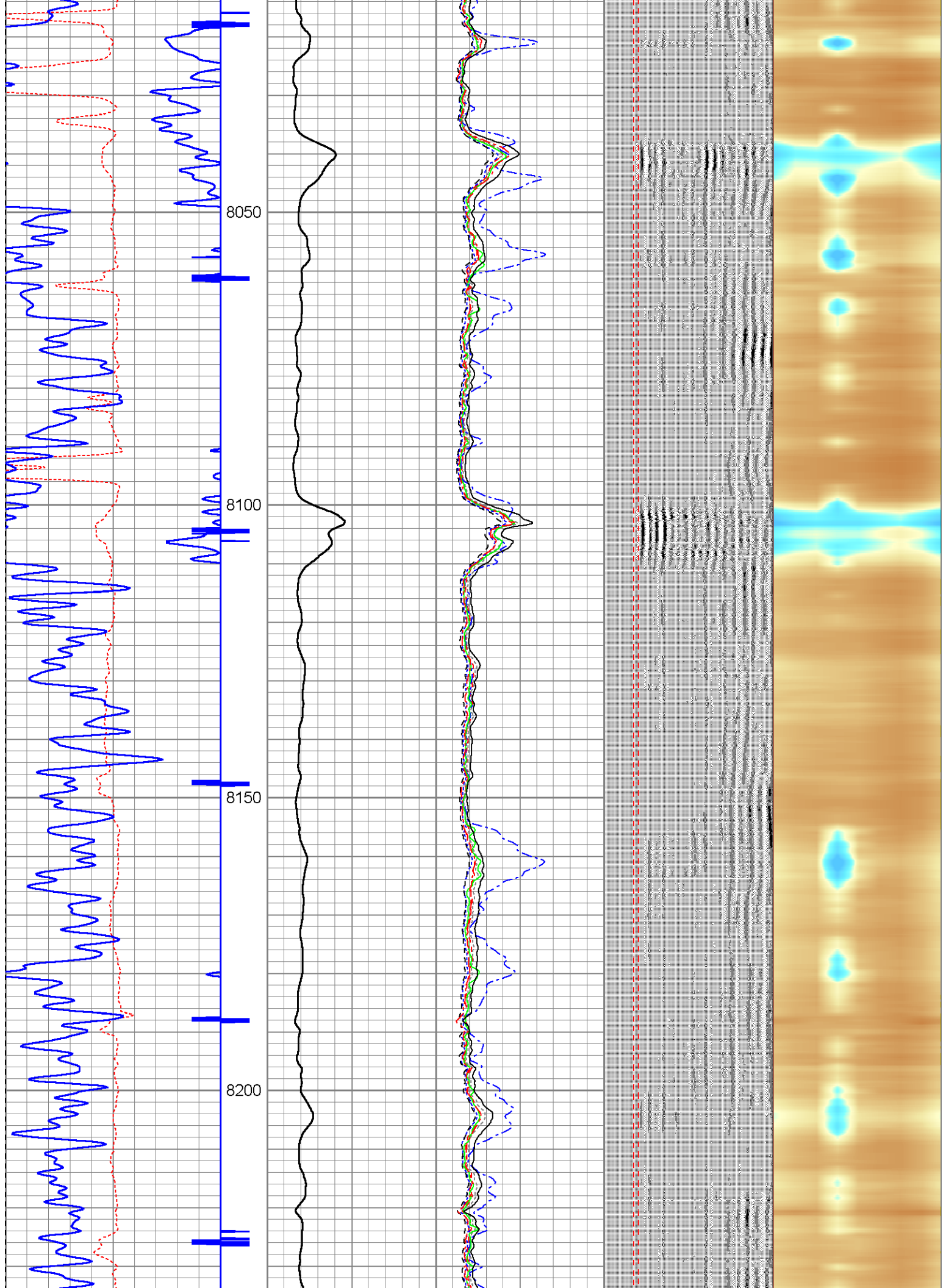


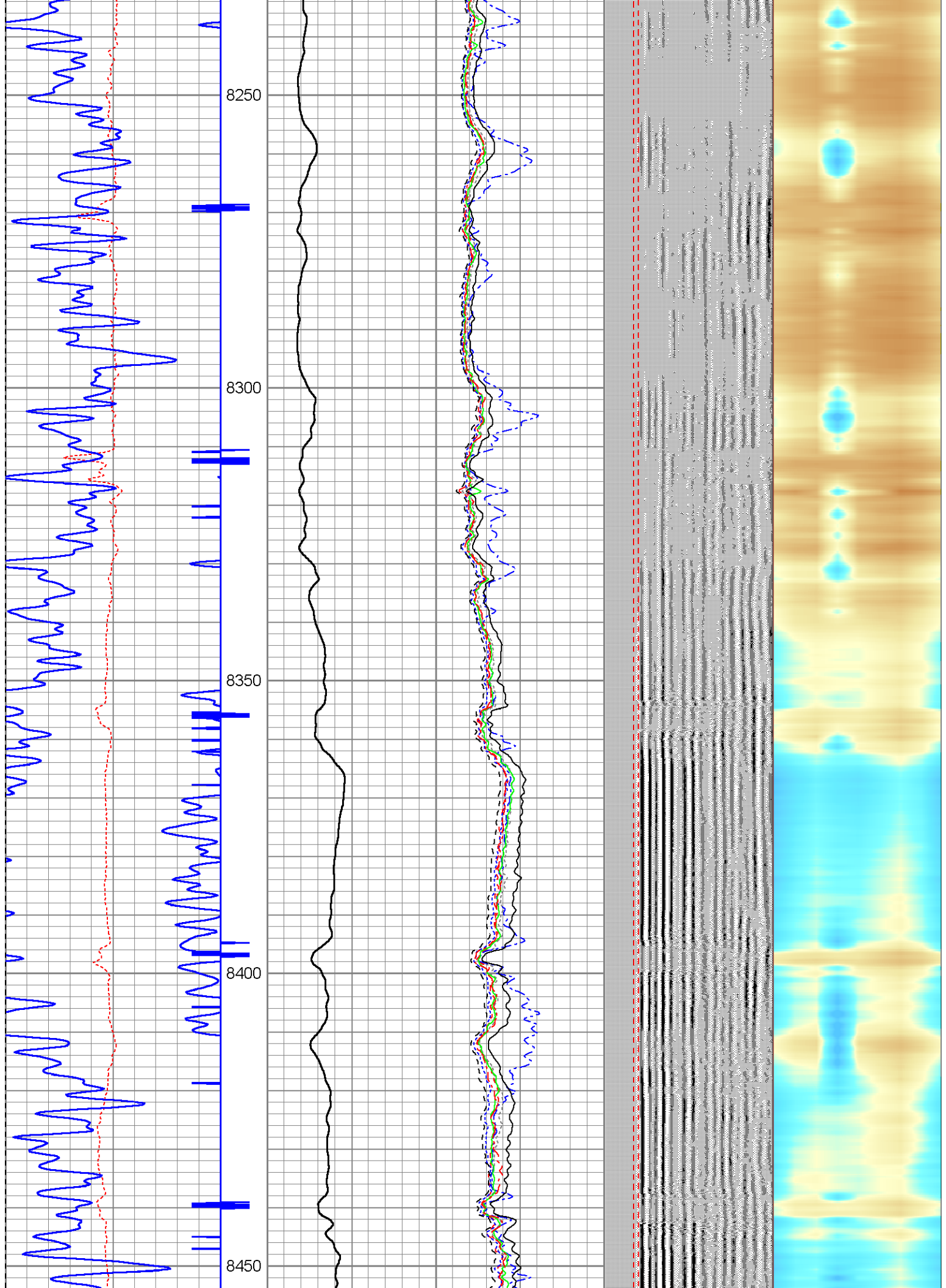


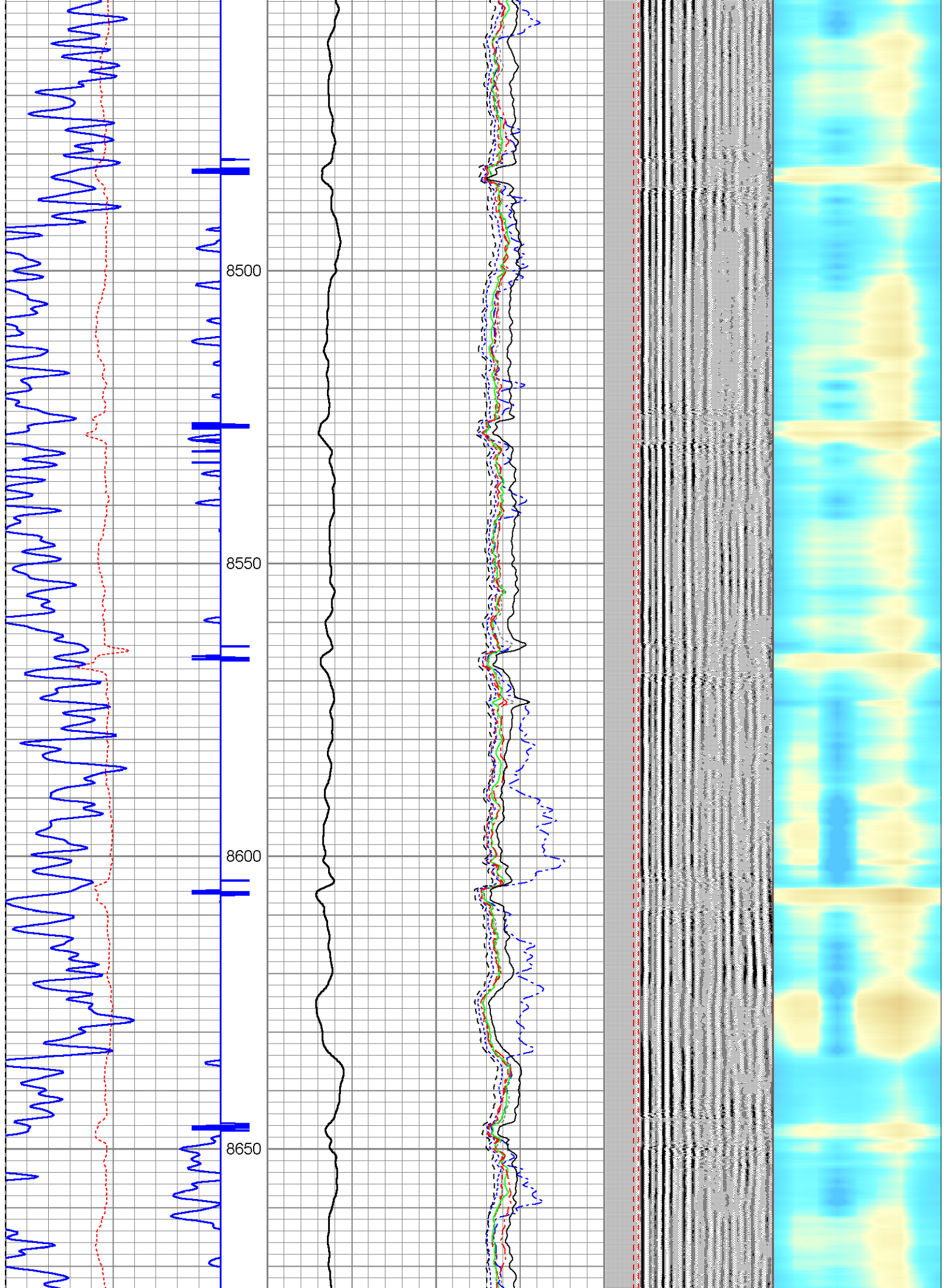


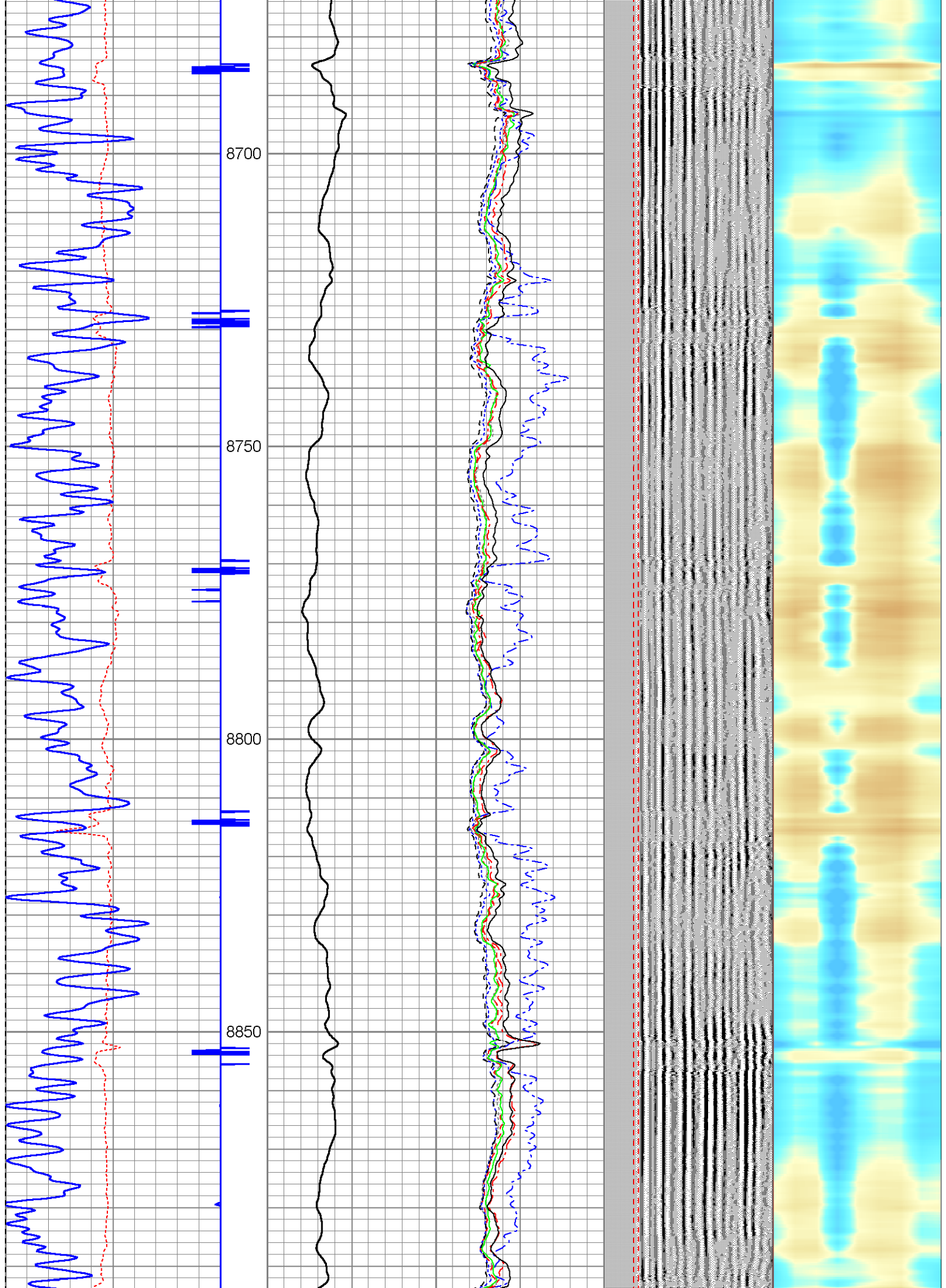


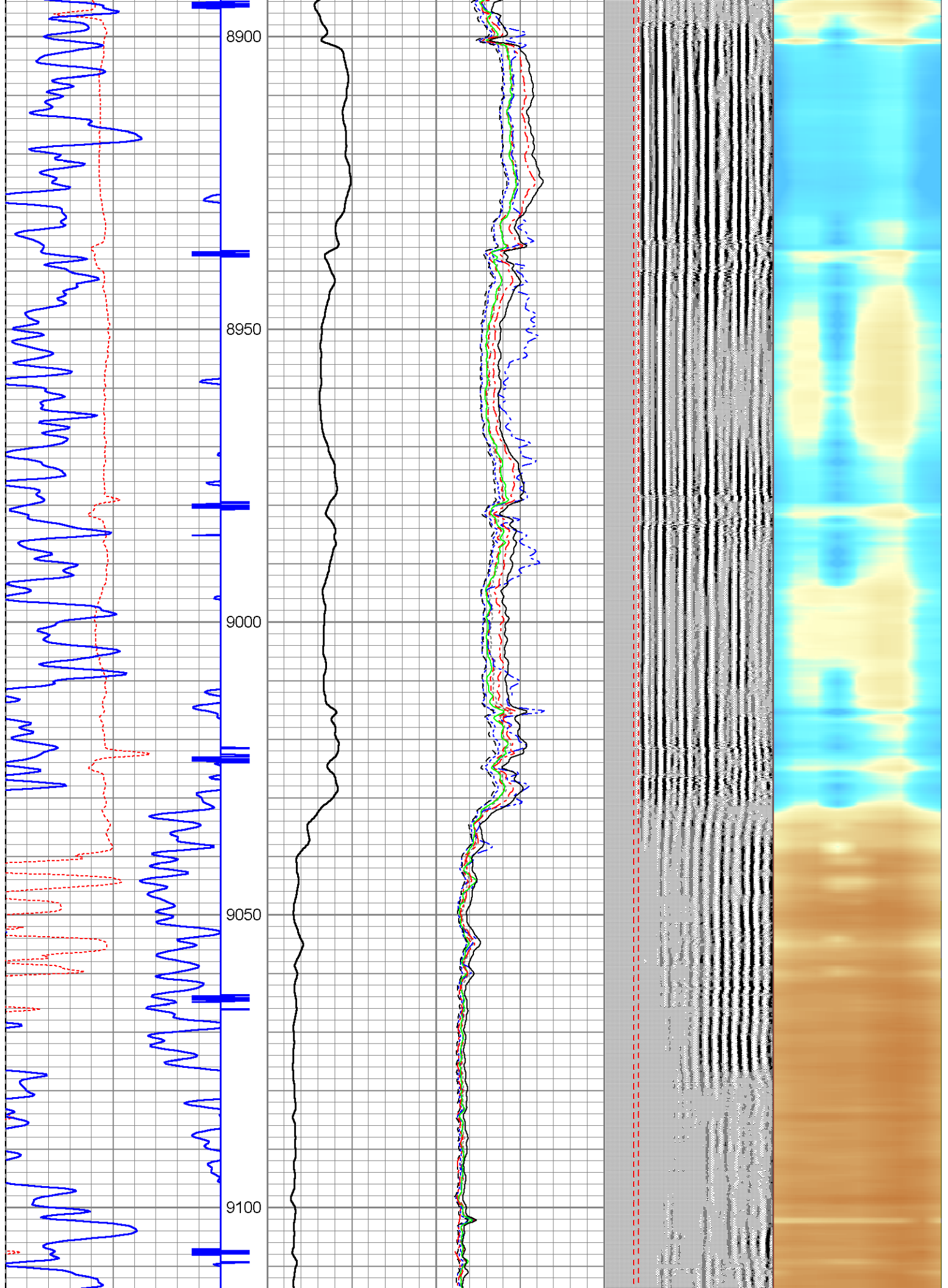


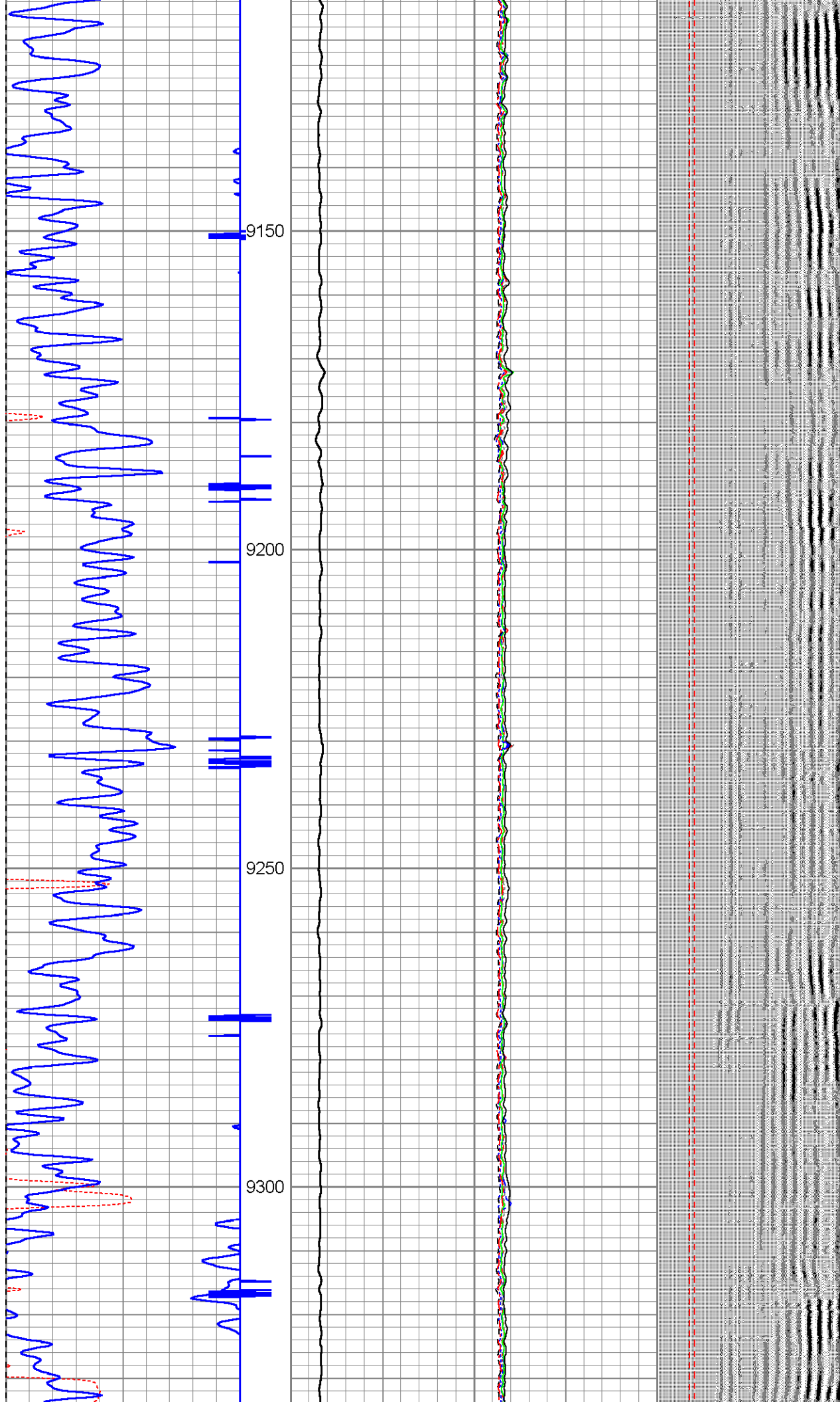


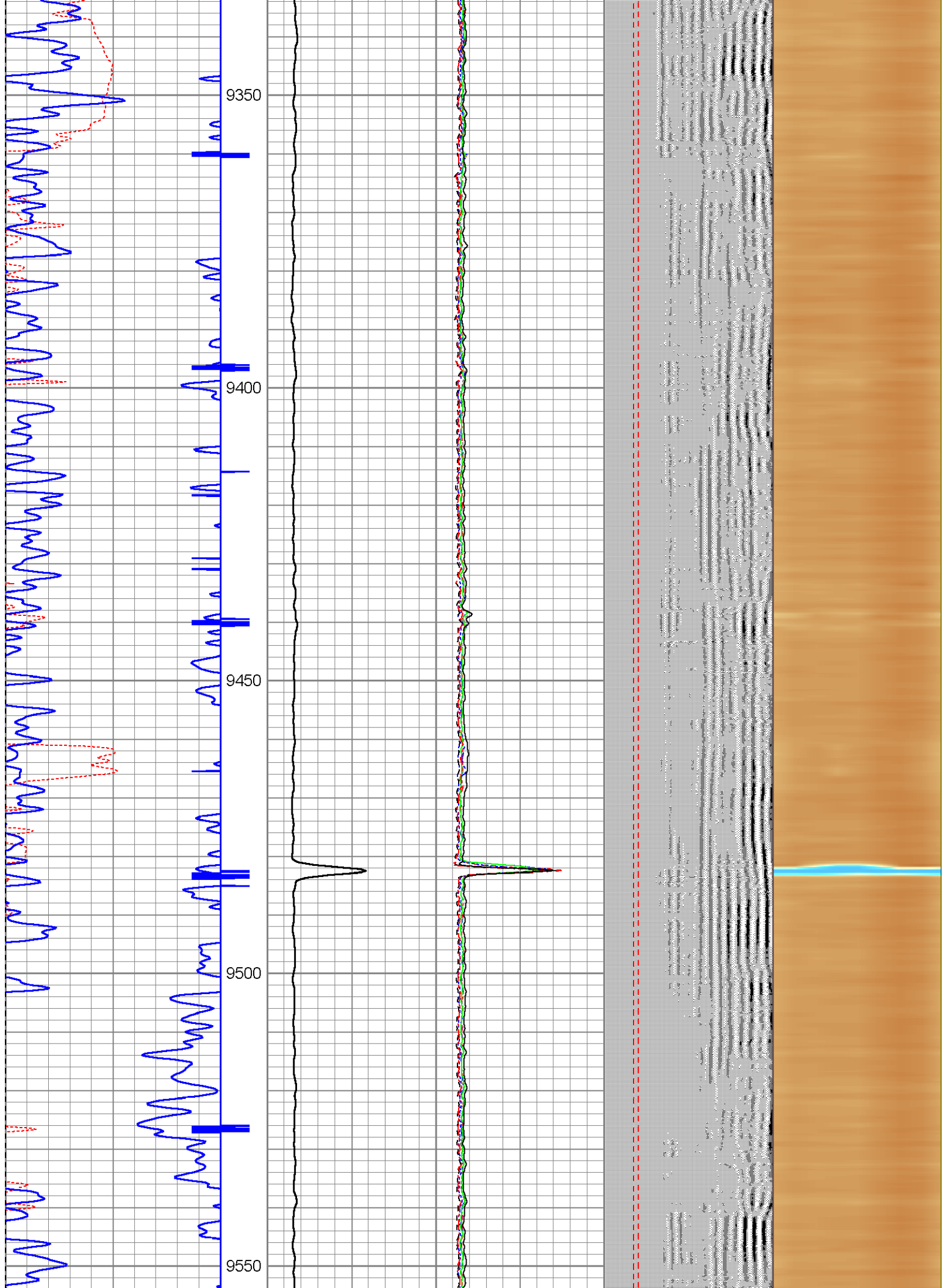


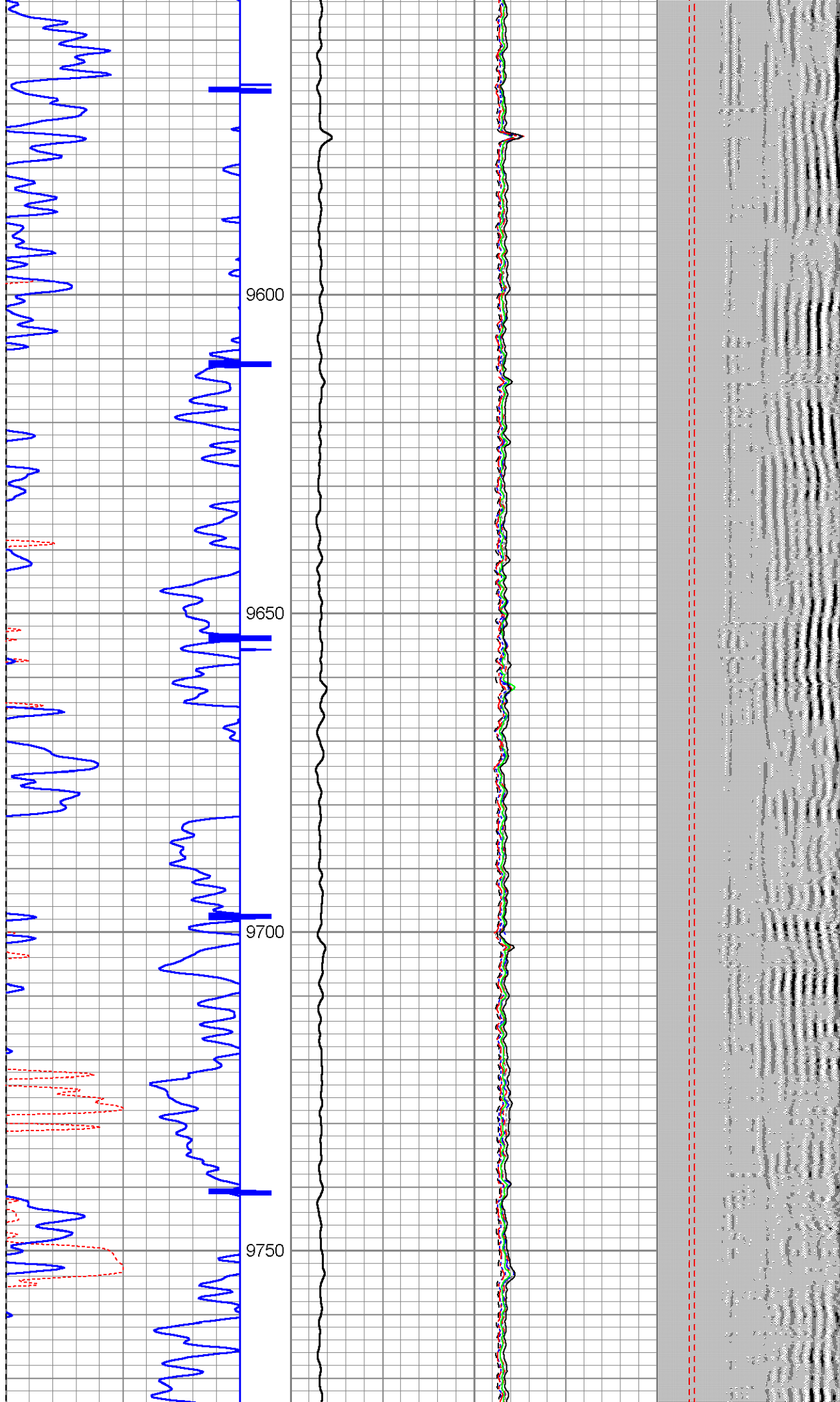


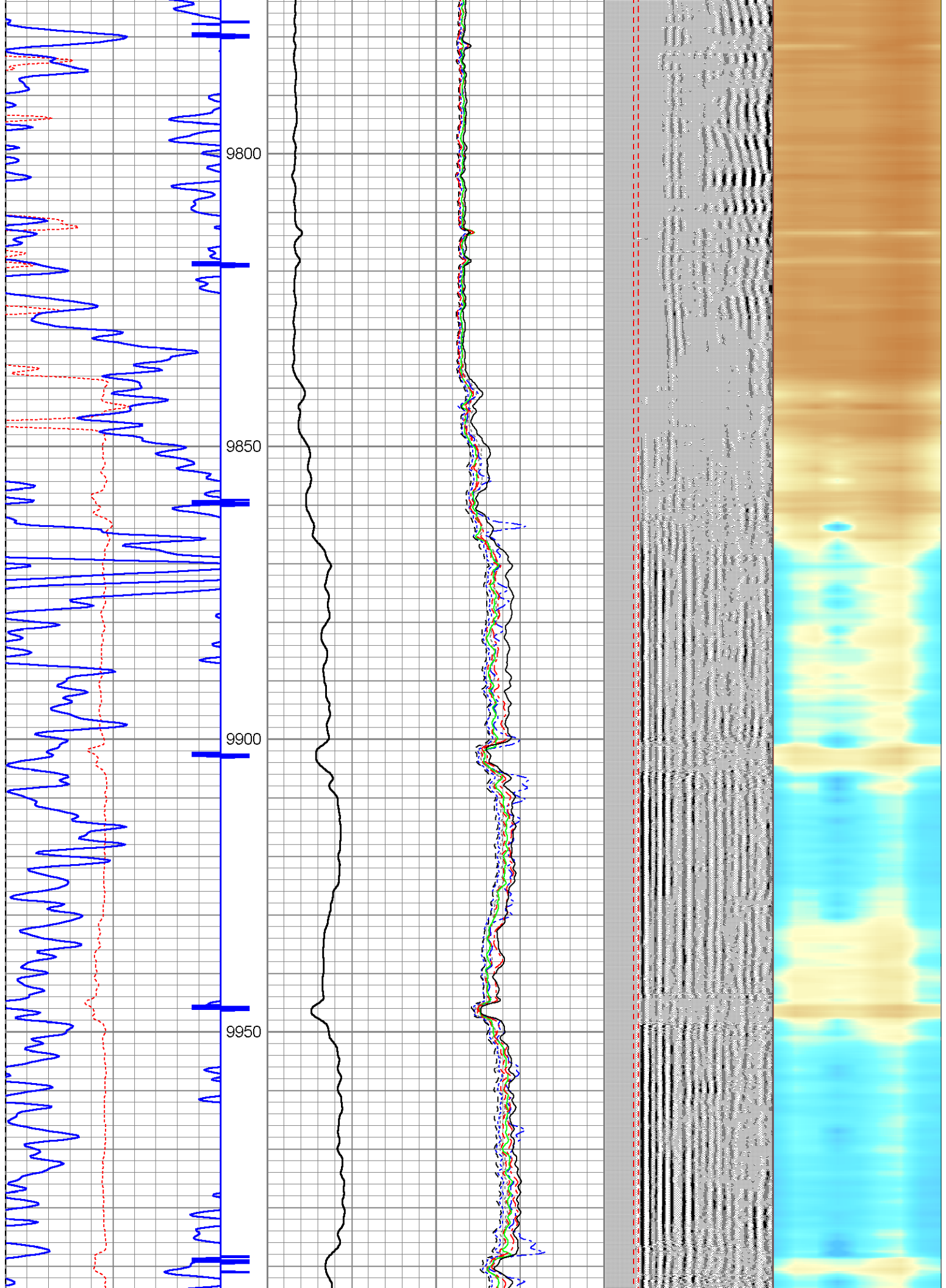


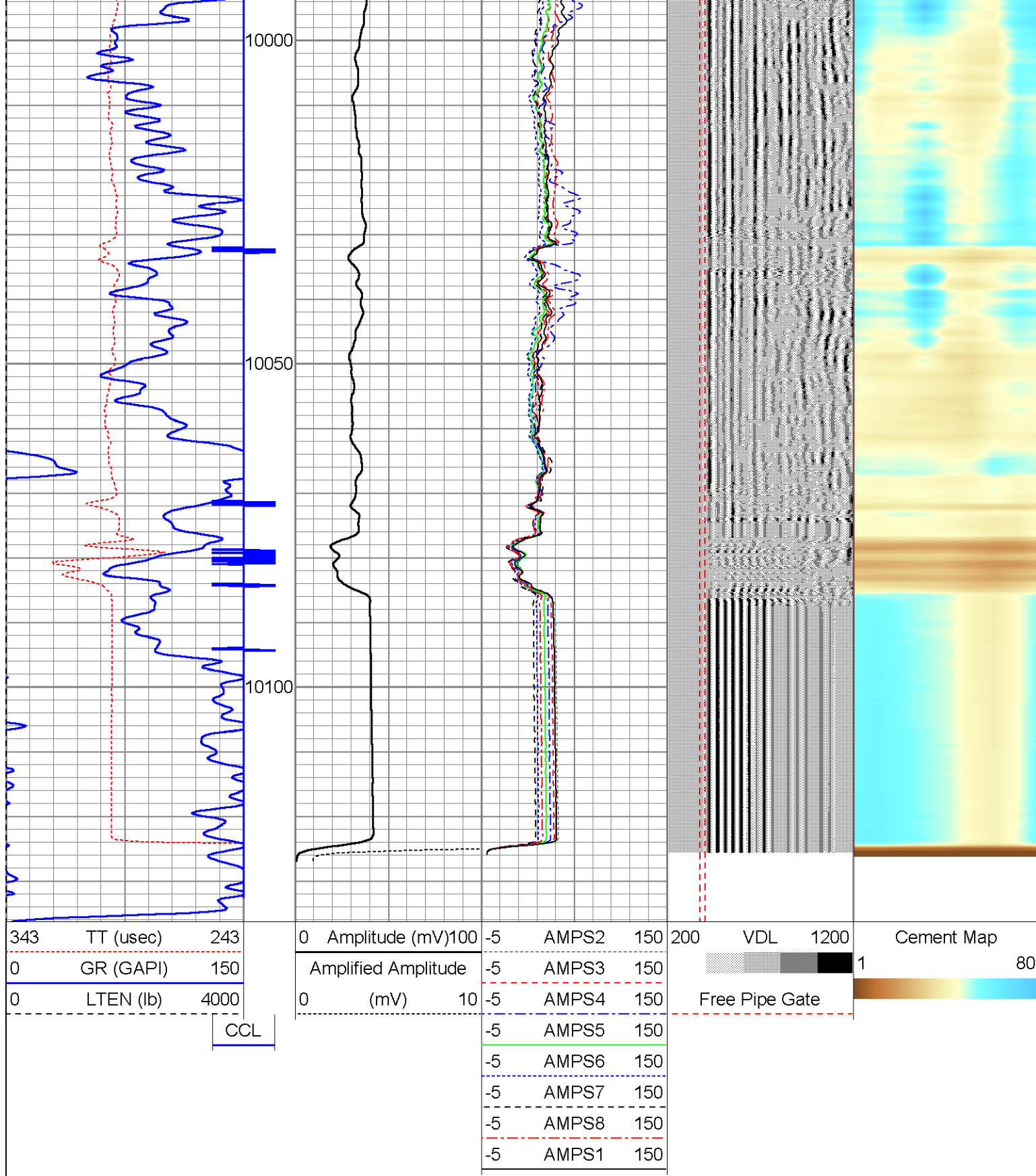












Log Variables

Database: C:\Warrior\Data\rohn state Id03-63hn.db
Dataset: field/well/run1/pass2

Top - Bottom

PPT uSec	CASEWGHT lb/ft	MAXAMPL mV	MINAMPL mV	MINATTN db/ft	SRFTEMP degF	CASEOD in	PERFS
0	11.6	0	1	0.8	0	4.5	0
TDEPTH	BOTTEMP	BOREID					

ft	degF	in
0	100	6.125

Calibration Report

Database File: rohn state Id03-63hn.db

Dataset Pathname: pass2

Dataset Creation: Thu Oct 30 13:45:31 2014 by Log 7.0 B1

Gamma Ray Calibration Report

Serial Number: 275_080526
Tool Model: Probe275
Performed: Fri Mar 16 09:12:36 2012

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.8000 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: Pro101111
Tool Model: Probe

Calibration Casing Diameter: 4.500 in
Calibration Depth: 780.933 ft

Master Calibration, performed Wed Oct 29 11:14:06 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	0.662	1.000	81.196	121.214	0.973
CAL	0.000	0.900				
5'	0.000	0.534	1.000	81.196	150.219	0.987
SUM						
S1	0.000	0.652	0.000	100.000	153.288	-0.007
S2	0.000	0.649	0.000	100.000	154.028	-0.011
S3	0.000	0.674	0.000	100.000	148.478	-0.027
S4	0.000	0.676	0.000	100.000	147.988	-0.020
S5	0.000	0.684	0.000	100.000	146.322	-0.032
S6	0.000	0.697	0.000	100.000	143.453	-0.016
S7	0.000	0.698	0.000	100.000	143.244	-0.024
S8	0.000	0.655	0.000	100.000	152.645	-0.013

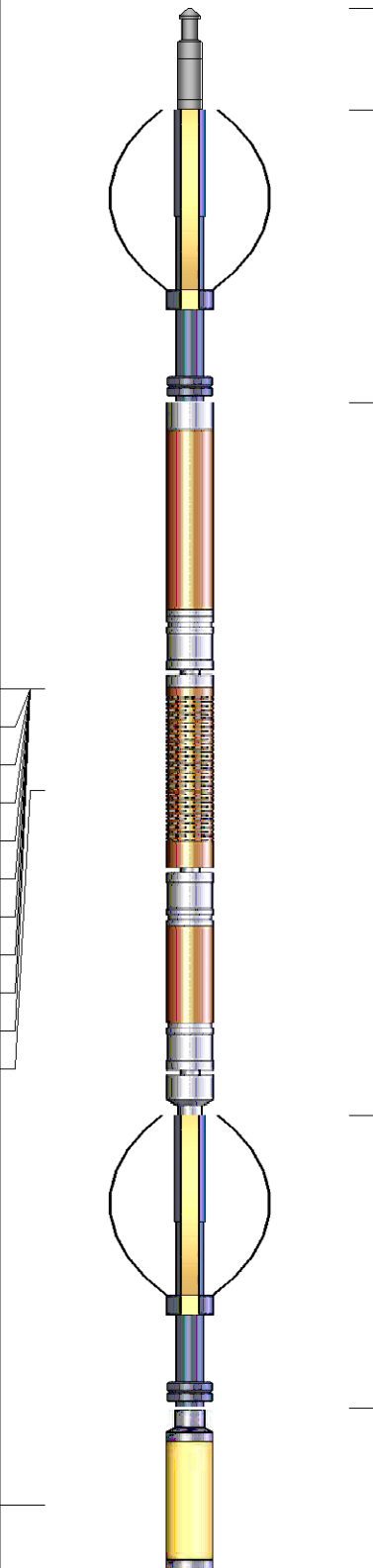
Internal Reference Calibration, performed Wed Dec 31 17:00:00 1969:


	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.000	0.900	1.000	0.000


Air Zero Calibration, performed Wed Oct 29 09:39:17 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)
WVF3FT WVFCAL WVFS1 WVFS2 WVFS3 WVFS4 WVFS5 WVFS6 WVFS7 WVFS8 WVF5FT	11.65 11.65 11.65 11.65 11.65 11.65 11.65 11.65 11.65 11.65 10.65		1.4375CHD Titan Cable Head 1 7/16	1.00	1.44	10.00
			Probe Probe 2 3/4 Centralizer	2.88	2.75	20.00
			RBT-Probe (Pro101111) Probe 2.75" Radii Bond Tool	7.00	2.75	90.00
			Probe Probe 2 3/4 Centralizer	2.88	2.75	20.00
CCL	3.63		GR-Probe275 (275_080526) Probe Gamma Ray CCL Analog Bottom Det	4.58	2.75	57.00

GR	0.83		Probe Camera Ray GCL / Analog Bottom Det.			
Dataset: rohn state ld03-63hn.db: field/well/run1/pass2 Total Length: 18.33 ft Total Weight: 197.00 lb O.D. 2.75 in						

	Company	NOBLE ENERGY
	Well	ROHN STATE LD03-63HN
	Field	WATTENBERG
	County	WELD
	State	COLORADO