



**SECTOR CEMENT BOND
GAMMA RAY
CCL LOG**

Company OCCIDENTAL PETROLEUM
Well FREELAND 3-2A
Field WATTENBERG
County WELD State CO

Location: API #: 05-123-15938
 NE NW
 SEC 2 TWP 3N RGE 66W
 Permanent Datum G.L. Elevation 4861'
 Log Measured From K.B. 10' Above Perm. Datum
 Drilling Measured From K.B. G.L. 4871'
 Other Services
 Elevation
 K.B. 4871'
 D.F. 4871'
 G.L. 4861'

Date of Service	31 MARCH 2025		
Run Number	1		
Depth Driller or PBTD	7935'		
Depth Logger	6500'		
Bottom Log Interval	6500'		
Top Log Interval	SURFACE		
Open Hole Size	NA		
Type Fluid	H2O		
Fluid Level	SURFACE		
Fluid Density	NA		
Max. Recorded Temperature	NA		
Max. Wellhead Pressure	0 PSI		
Wellhead Connection	7-1/16 5K		
Estimated Cement Top	SEE LOG		
Unit Number	172458		
Wireline Size	1/4"		
Location	BRIGHTON		
Recorded By	TC HATHAWAY		
Witnessed By	JARROD BISHOP		
Surface Casing	Size	WFt	Bottom
Production Casing	4.5"	11.6#	7735'
Liner Casing			
Tubing Record			

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All interpretations are opinions based on inferences from electrical or other measurements and Ranger Energy Services cannot and does not guarantee the accuracy or correctness of any interpretation, and Ranger Energy Services will not 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.

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.
 LOG ZERO @ SURFACE

THANK YOU FOR USING RANGER ENERGY SERVICES! FIELD TICKET #

Your Ranger Energy Services Crew	Tool Data - Services	Serial Number
Engineer: TC HATHAWAY Operator: BRIAN MORGAN Operator: JAMES SMITH Operator:	SEE TOOL DIAGRAM	

Quantity	Offset (ft)	Substrate	Description	Length (ft)	O.D. (in)	Weight (lb)
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Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)	
ErrCt	17.60		Cable_Head-1_7/16 Titan 1 7/16" Cable Head	1.02	1.44	3.31	
IntTemp	15.34						
WVFS8	12.09			RBT-Probe (070150) Probe Radii Bond Tool with Digital Telemetry	8.75	2.75	90.00
WVFS7	12.09						
WVFS6	12.09						
WVFS5	12.09						
WVFS4	12.09						
WVFS3	12.09						
WVFS2	12.09						
WVFS1	12.09						
WVFCAL	12.09						
WV3FT	12.09						
WV5FT	11.09						
CCL	6.89						
GR	5.65			GR_analog-GR275B (071129) 275 Gamma-CCL (Pulse) Top Detector	4.57	2.75	55.00
			Centralizers-Sondex PRC 2.75" Roller Centralizers Tekco 2 3/4" Adjustable Centralizer	3.00	2.75	25.00	
			Bull_Plug-1_7/16_GO Titan 1 7/16" Female Bull Plug	0.27	1.44	1.00	

Dataset: oxy_freeland 3-2a_0512315938_20250331_rcbl.db: field/well/RCBL1/MAIN2
 Total length: 17.60 ft
 Total weight: 174.31 lb
 O.D.: 2.75 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\oxy_freeland 3-2a_0512315938_20250331_rcbl.db
 Dataset field/well/RCBL1/MAIN2/_vars_

Top - Bottom

BOREID in 8.75	BOTTEMP degF 100	CASEOD in 4.5	CASETHCK in 0.25	CASEWGHT lb/ft 11.6	MAXAMPL mV 81.2	MINAMPL mV 1	MINATTN db/ft 0.8
PERFS No	PPT usec 0	SRFTEMP degF 50	TDEPTH ft 6500				

Variable Description

BOREID : Borehole I.D.
 BOTTEMP : Bottom Hole Temperature
 CASEOD : Casing O.D.
 CASETHCK : Casing Thickness

CASEWGHT : Casing Weight
 MAXAMPL : Maximum Amplitude
 MINAMPL : Minimum Amplitude
 MINATTN : Minimum Attenuation

PERFS : Perforation Flag
 PPT : Predicted Pipe Time
 SRFTEMP : Surface Temperature
 TDEPTH : Total Depth

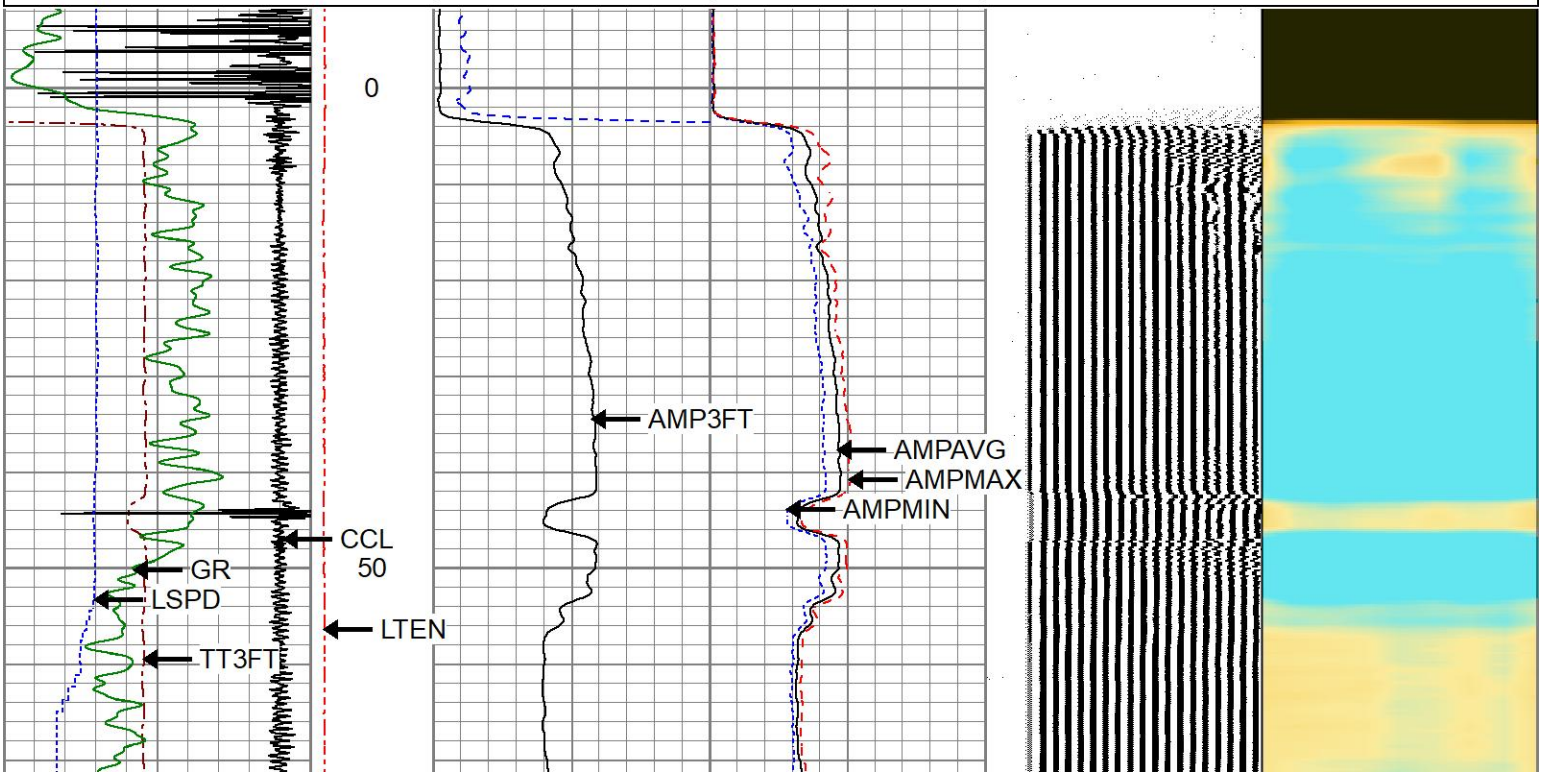


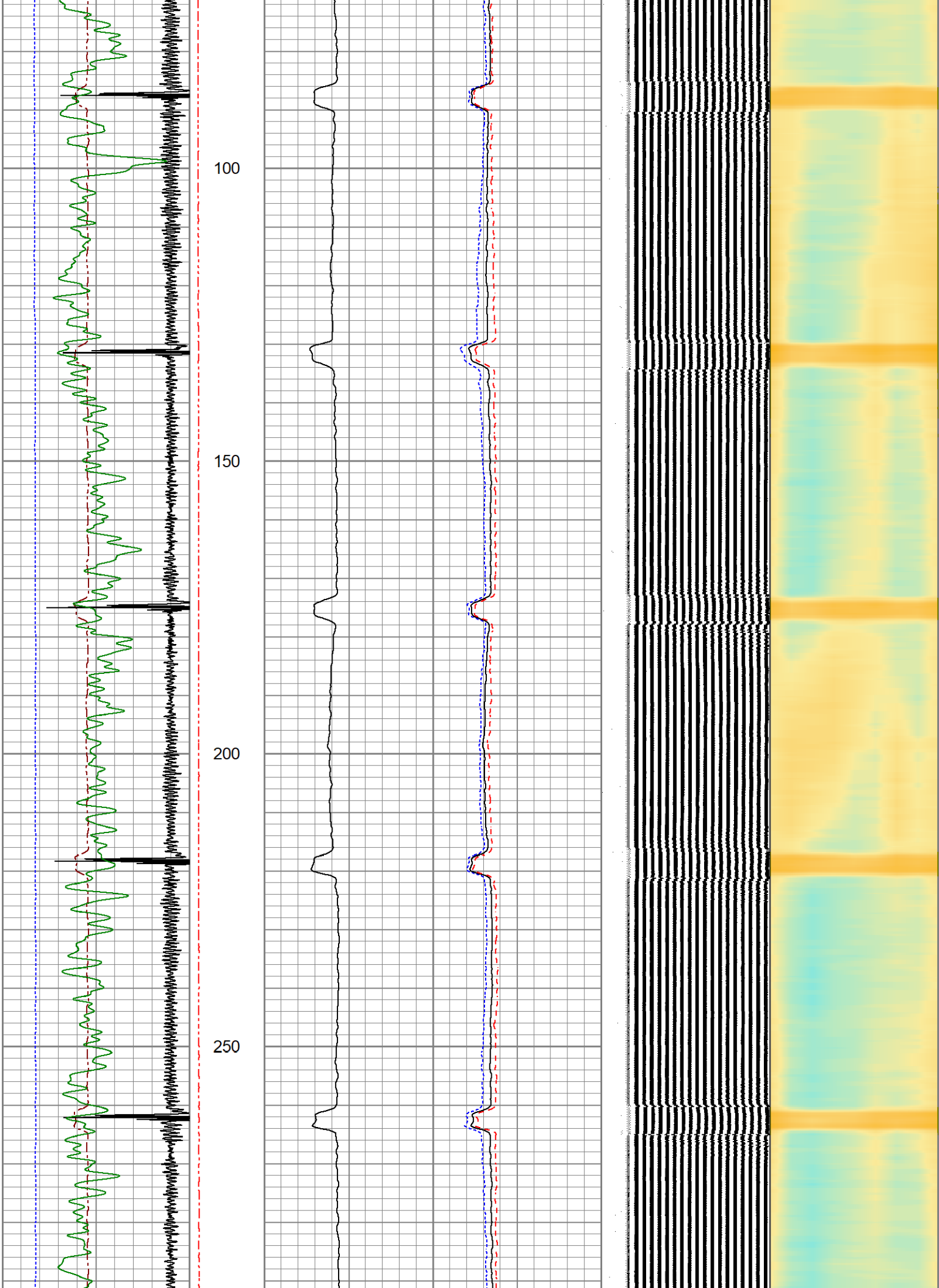
MAIN PASS

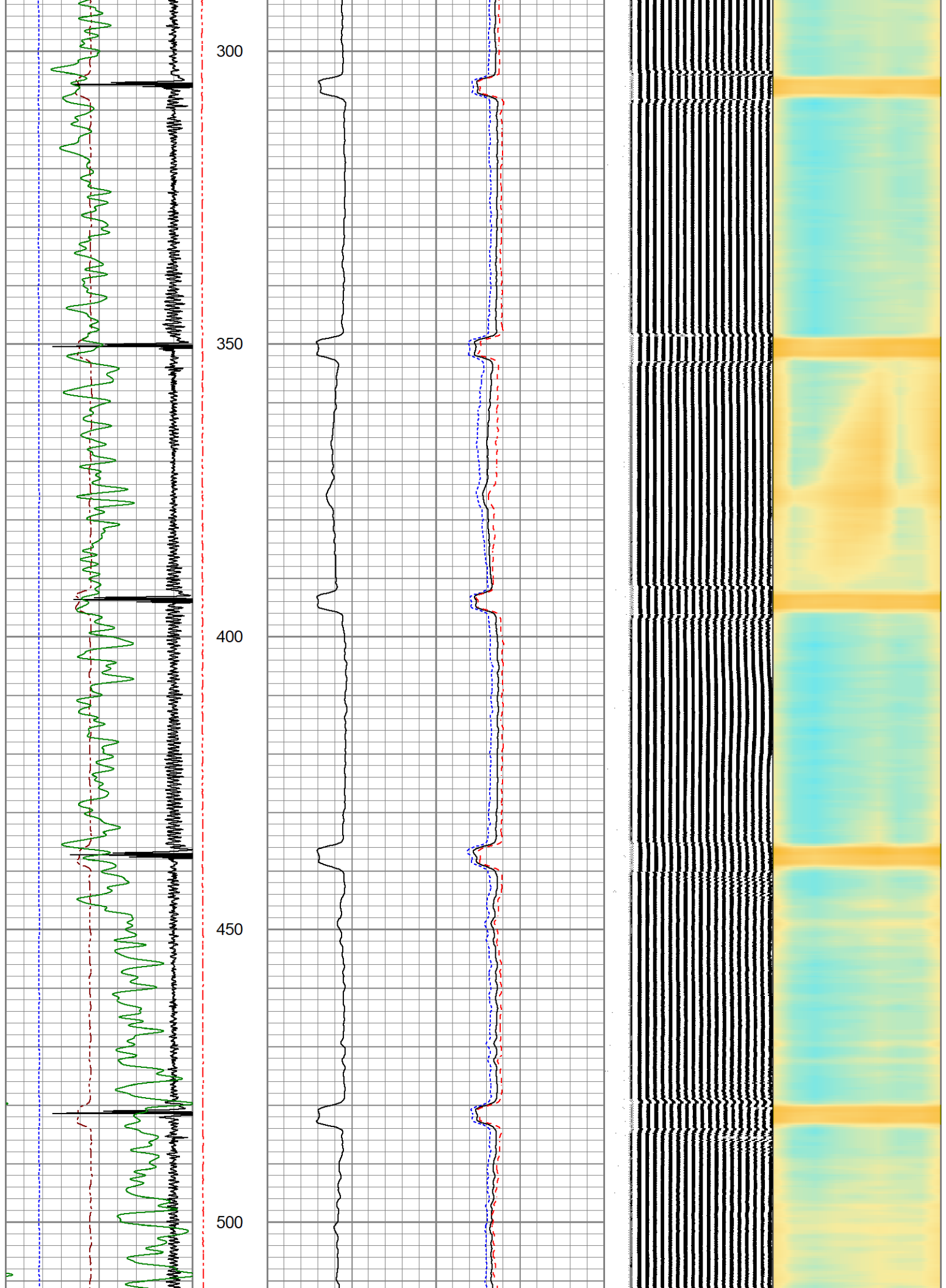
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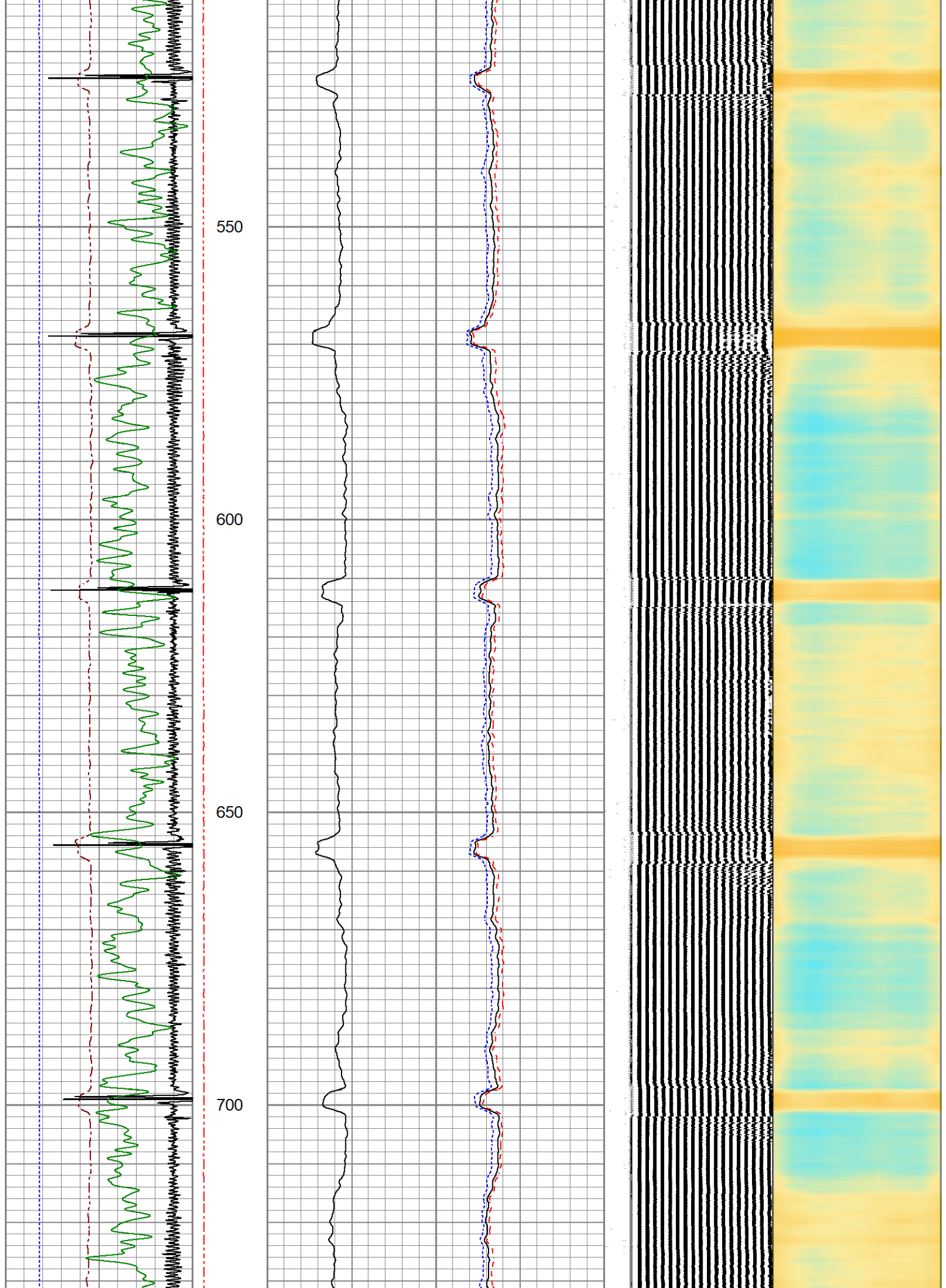
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 Presentation Format res_scb1 8sec
 Dataset Creation Mon Mar 31 14:35:02 2025
 Charted by Depth in Feet scaled 1:240

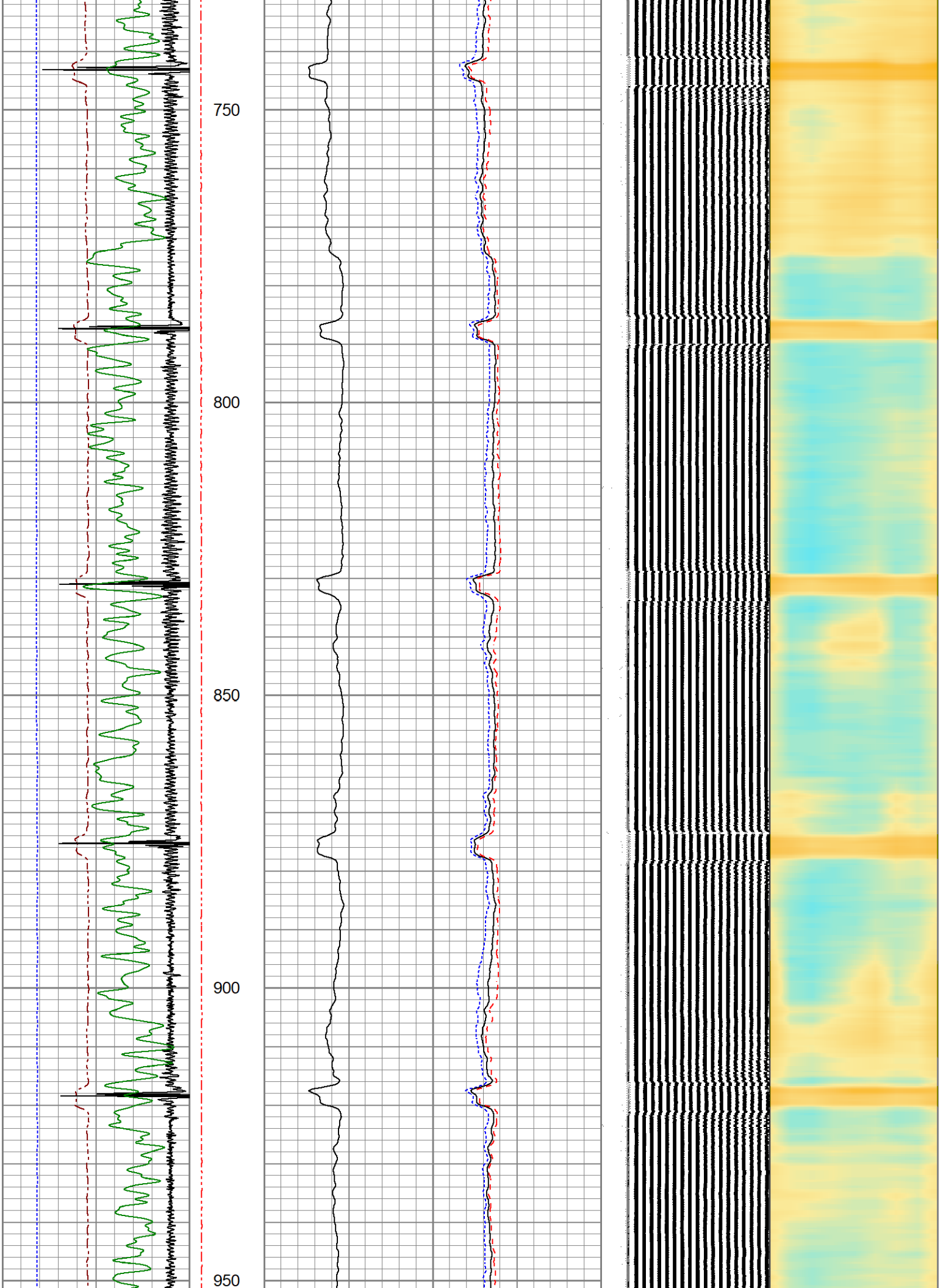
280 3FT TT (usec) 180	LTEN	3' Amplitude	0 Sector Min Amp 150	200 VDL (usec) 1200	1 Sector Map 8
-9 CCL 1	(lb)	(mV) 100	Sector Avg Amp		
0 GR (GAPI) 150	0 2000	3' Amplified	0 150		
-150 LSPD (ft/min) 150		Amplitude X 5	Sector Max Amp		
		(mV) 20	0 150		

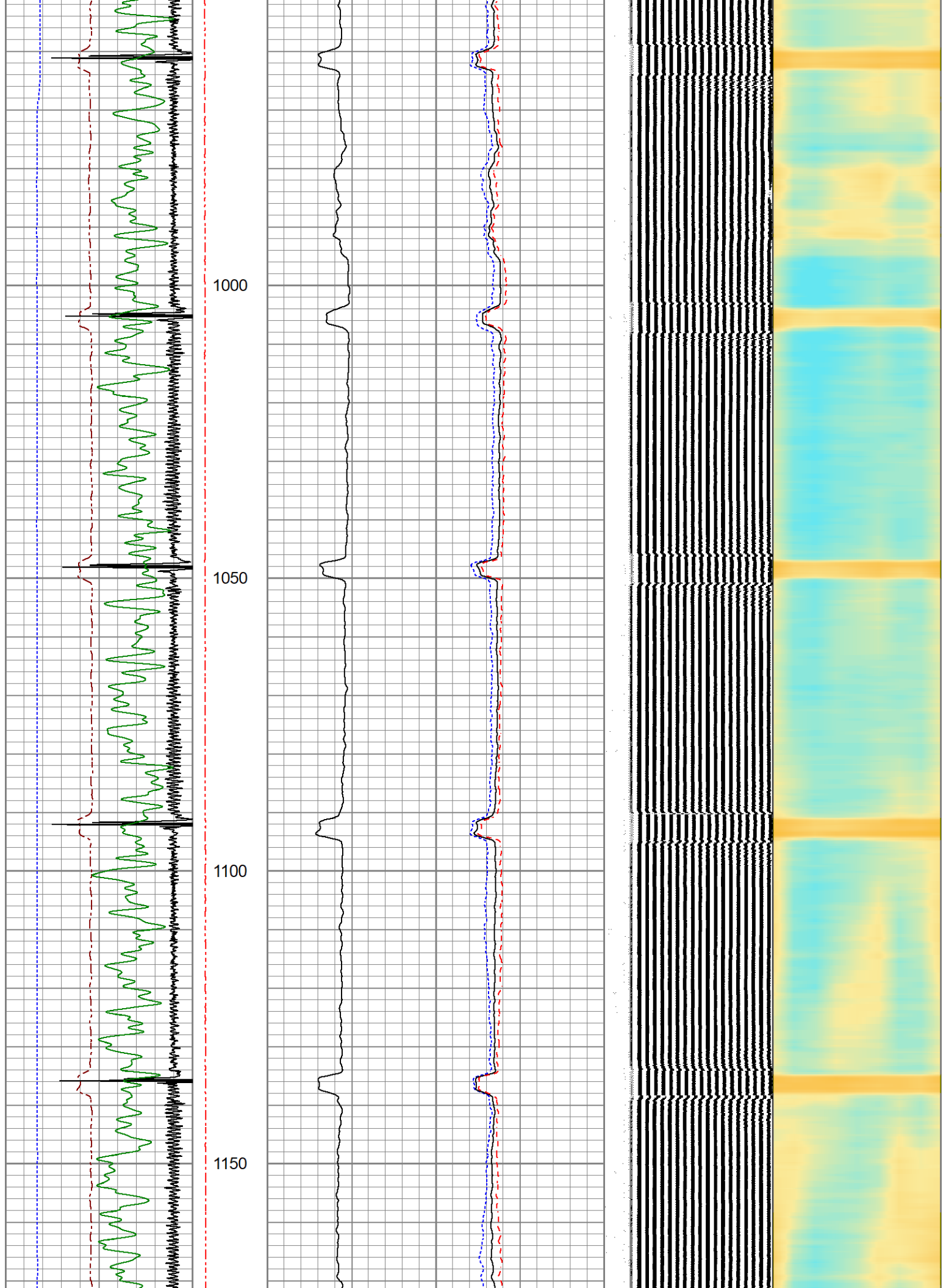


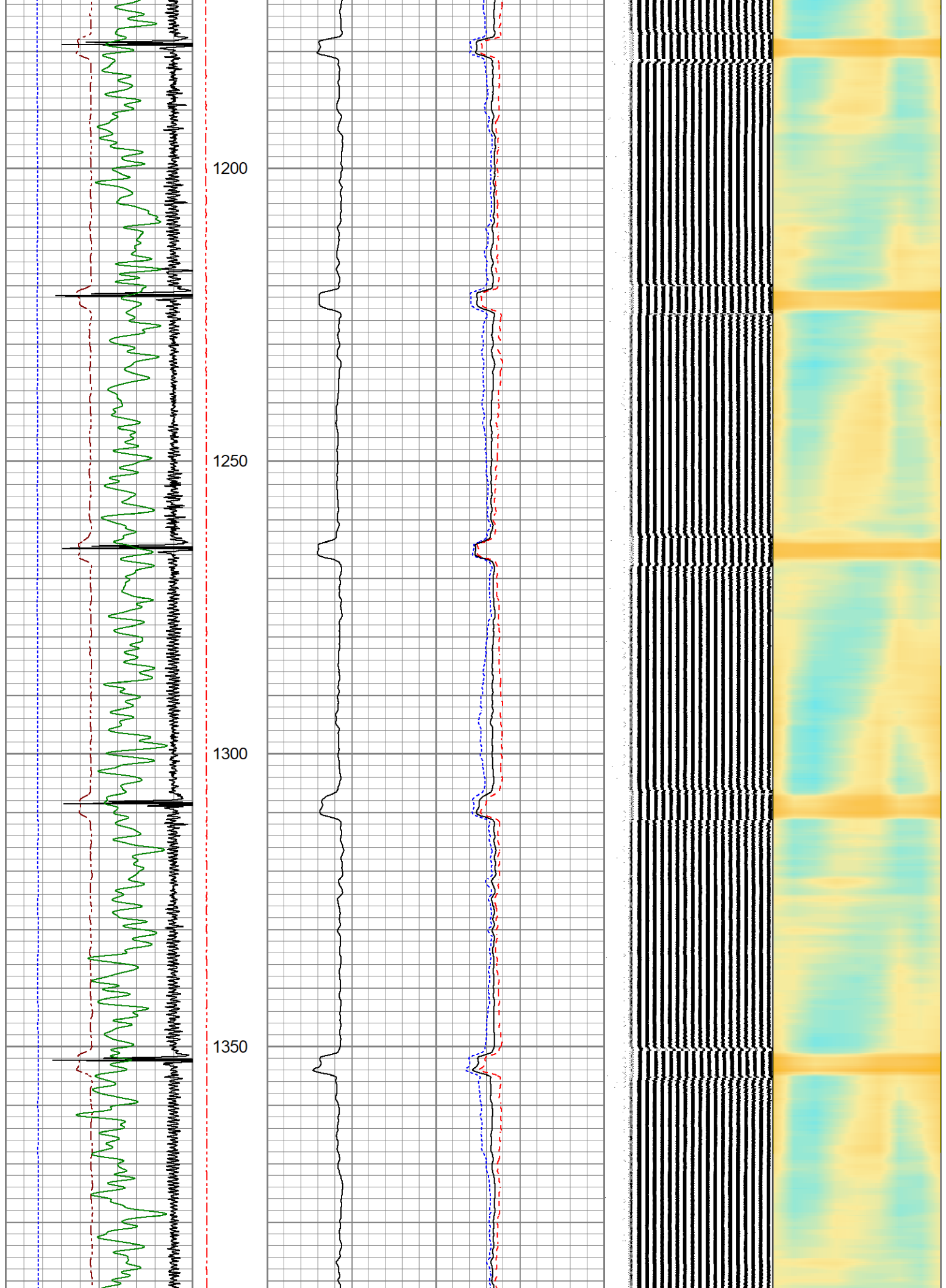


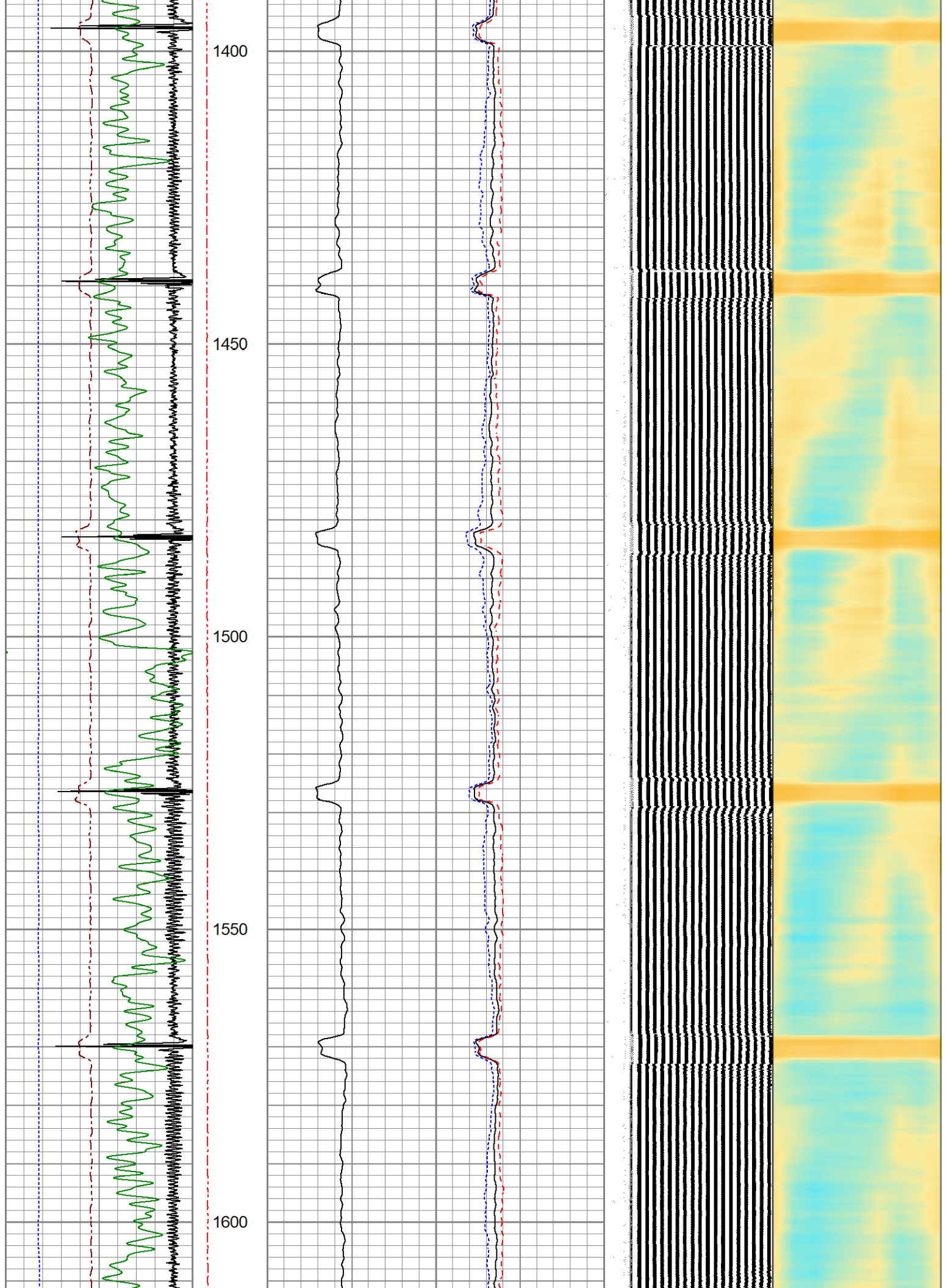


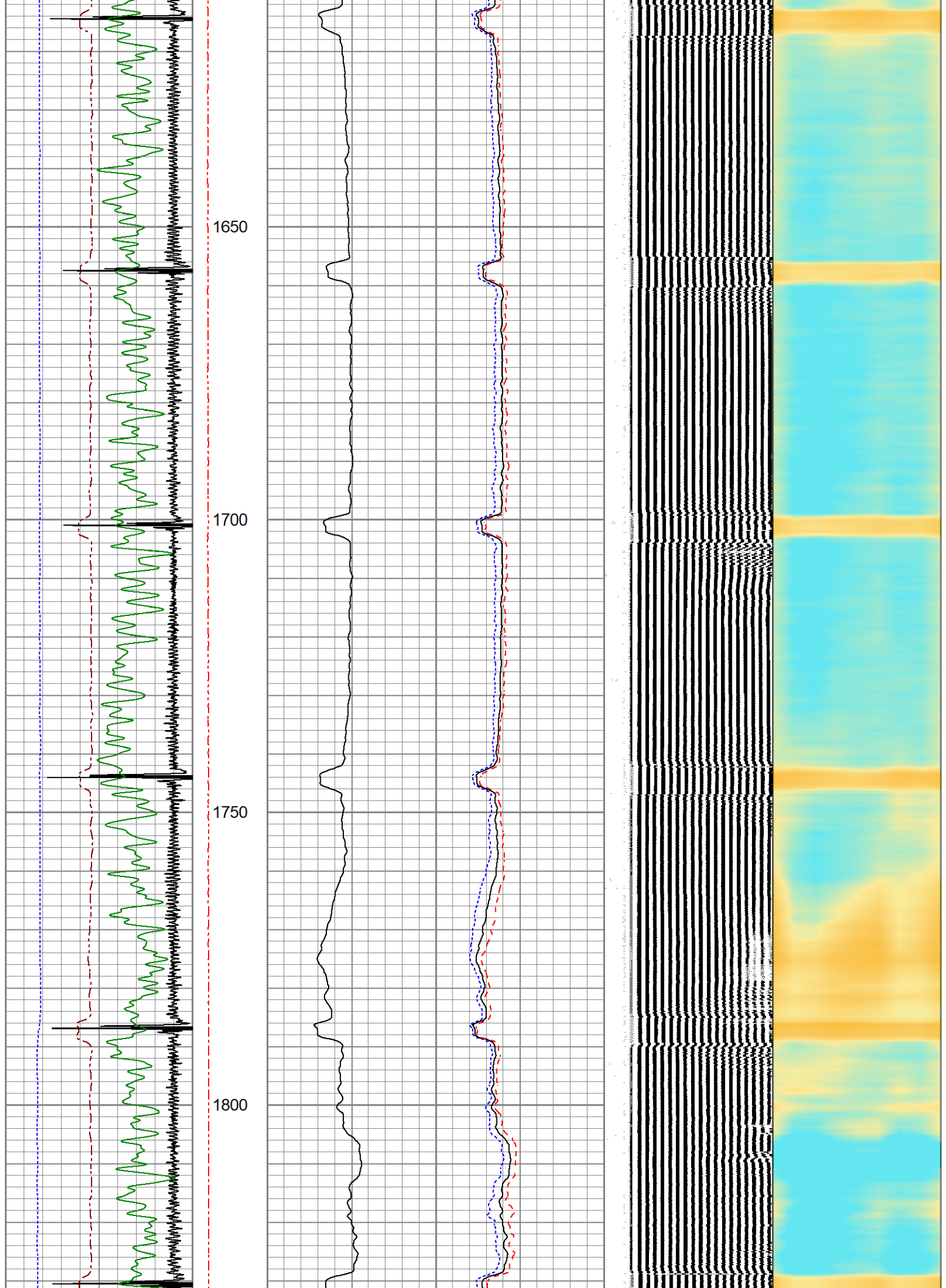


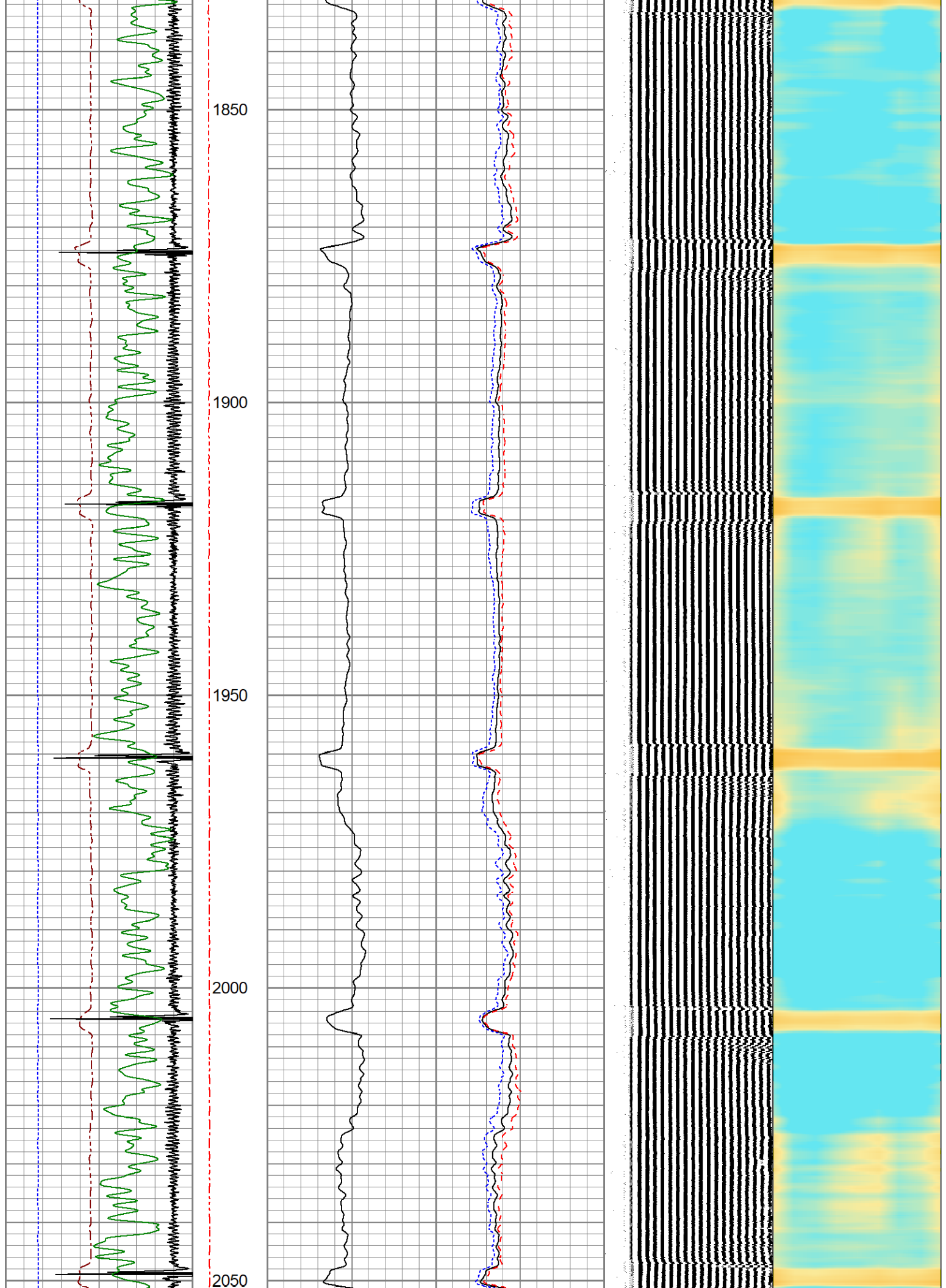


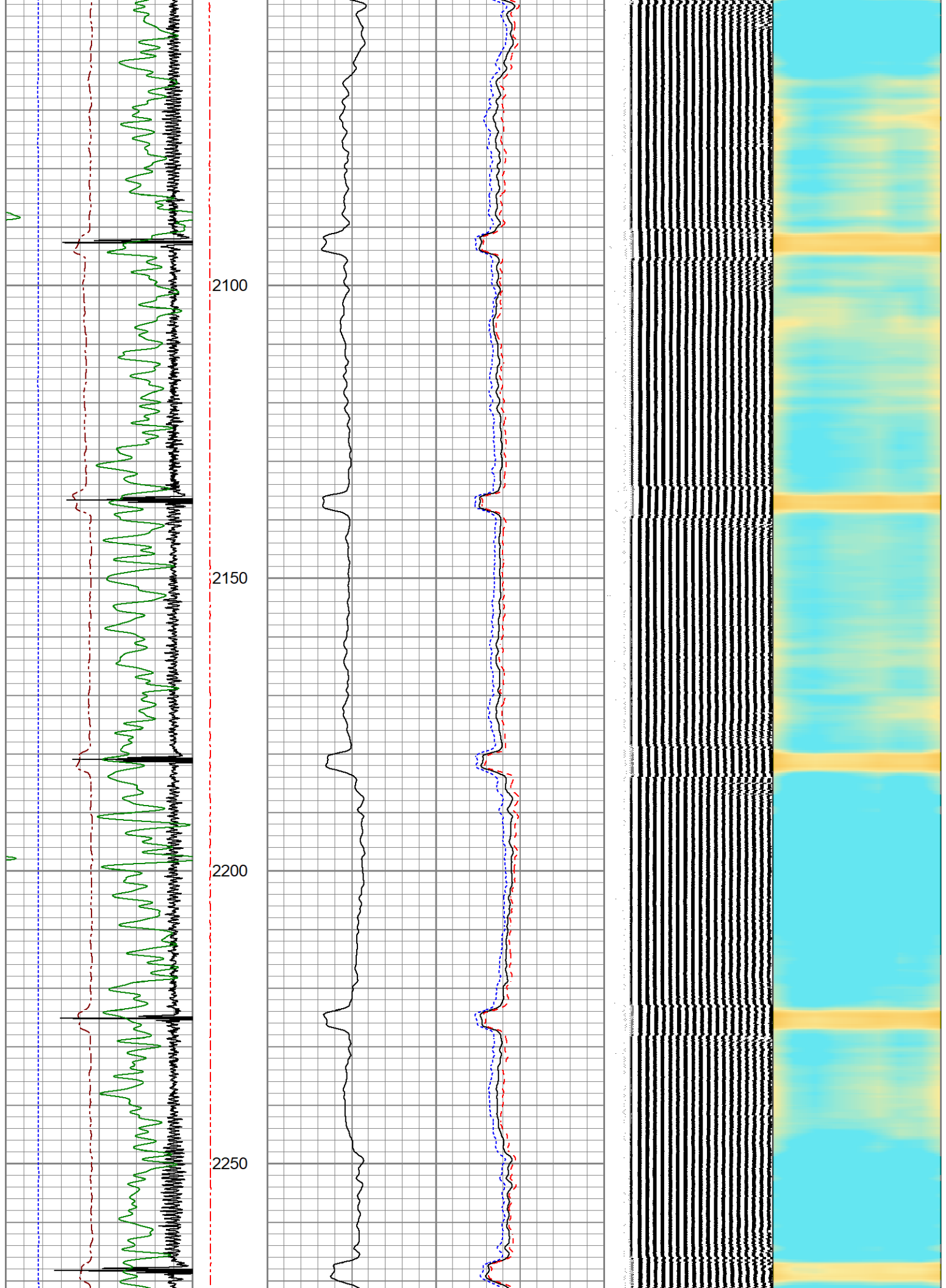


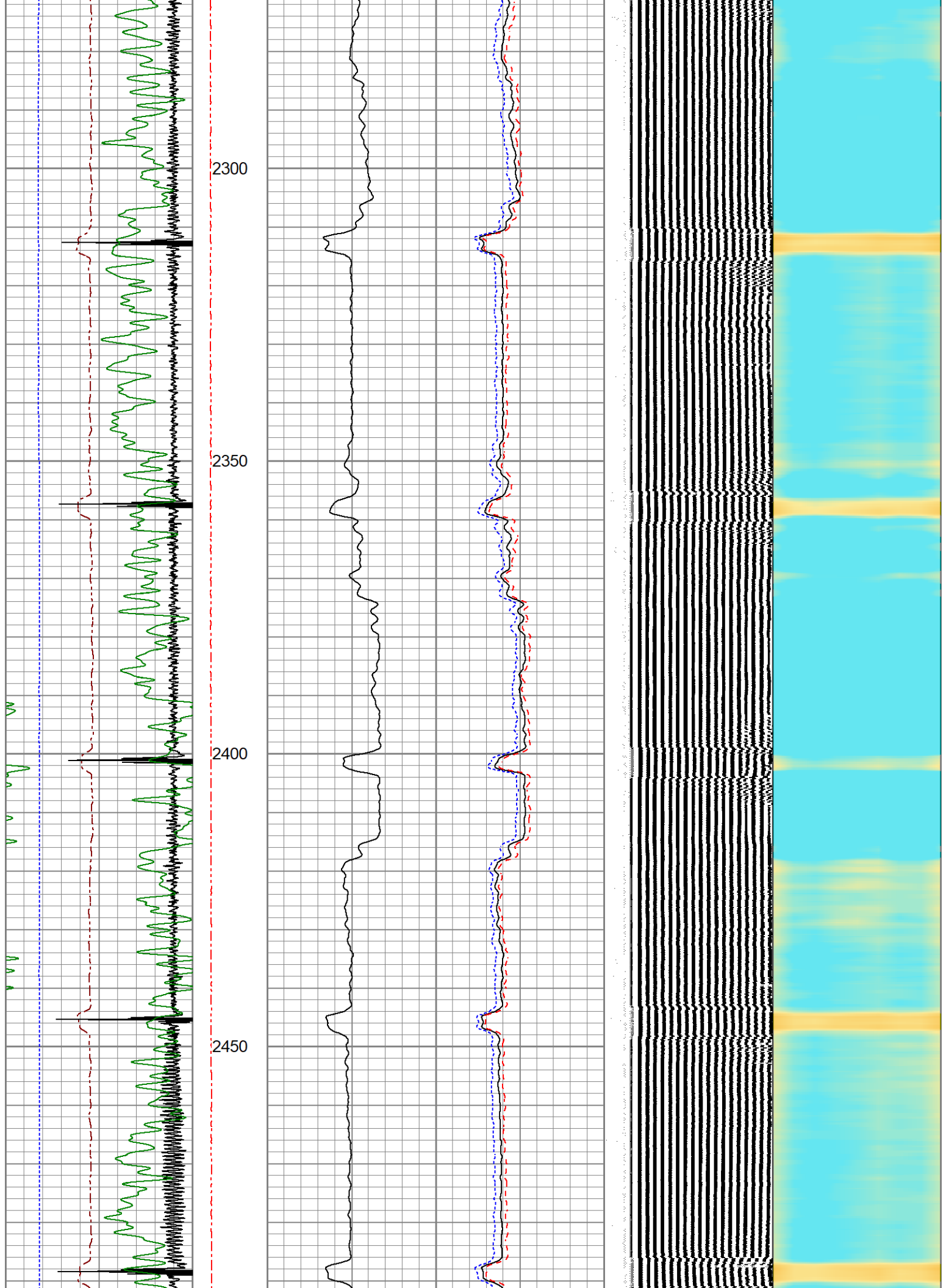


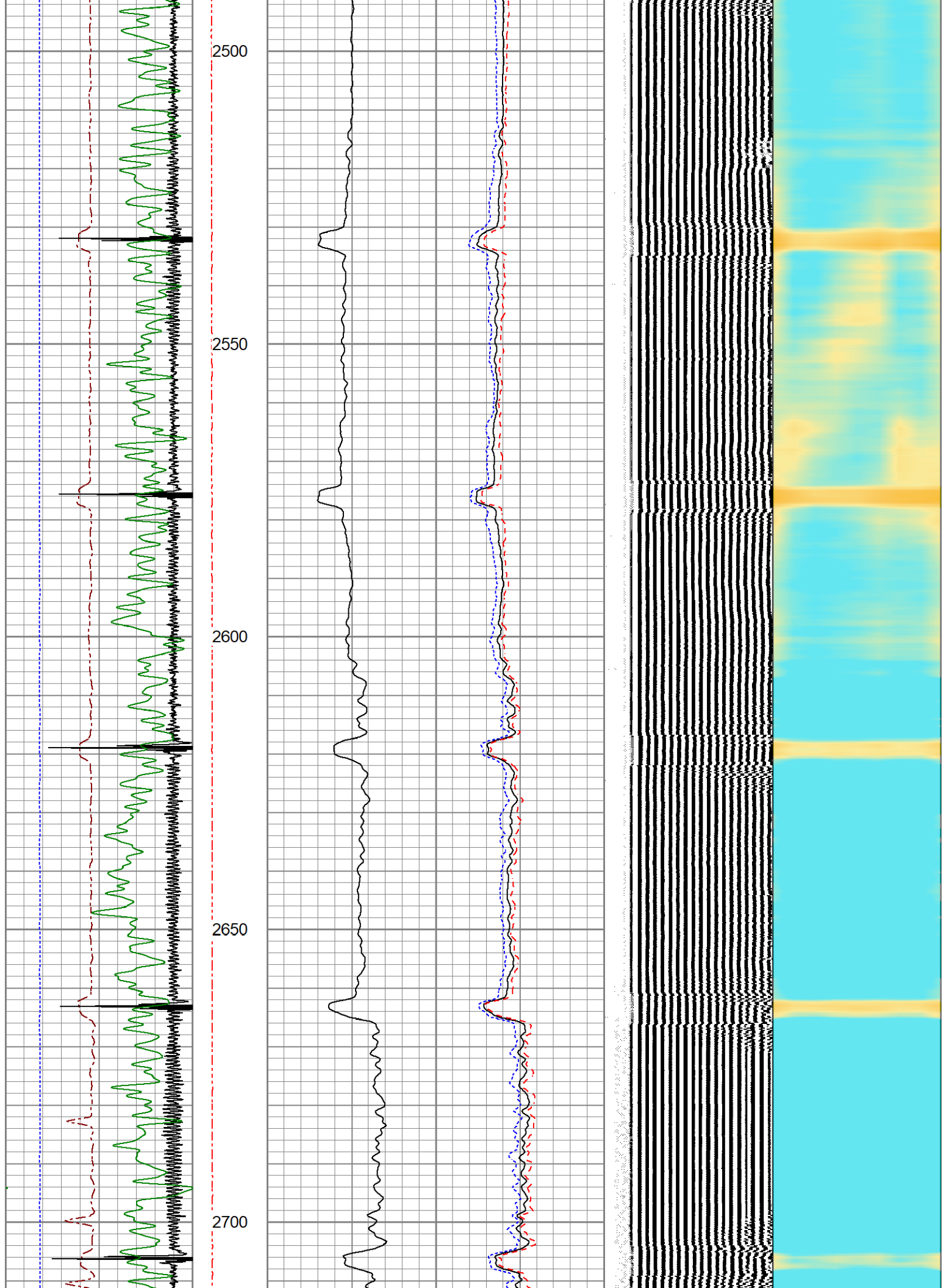


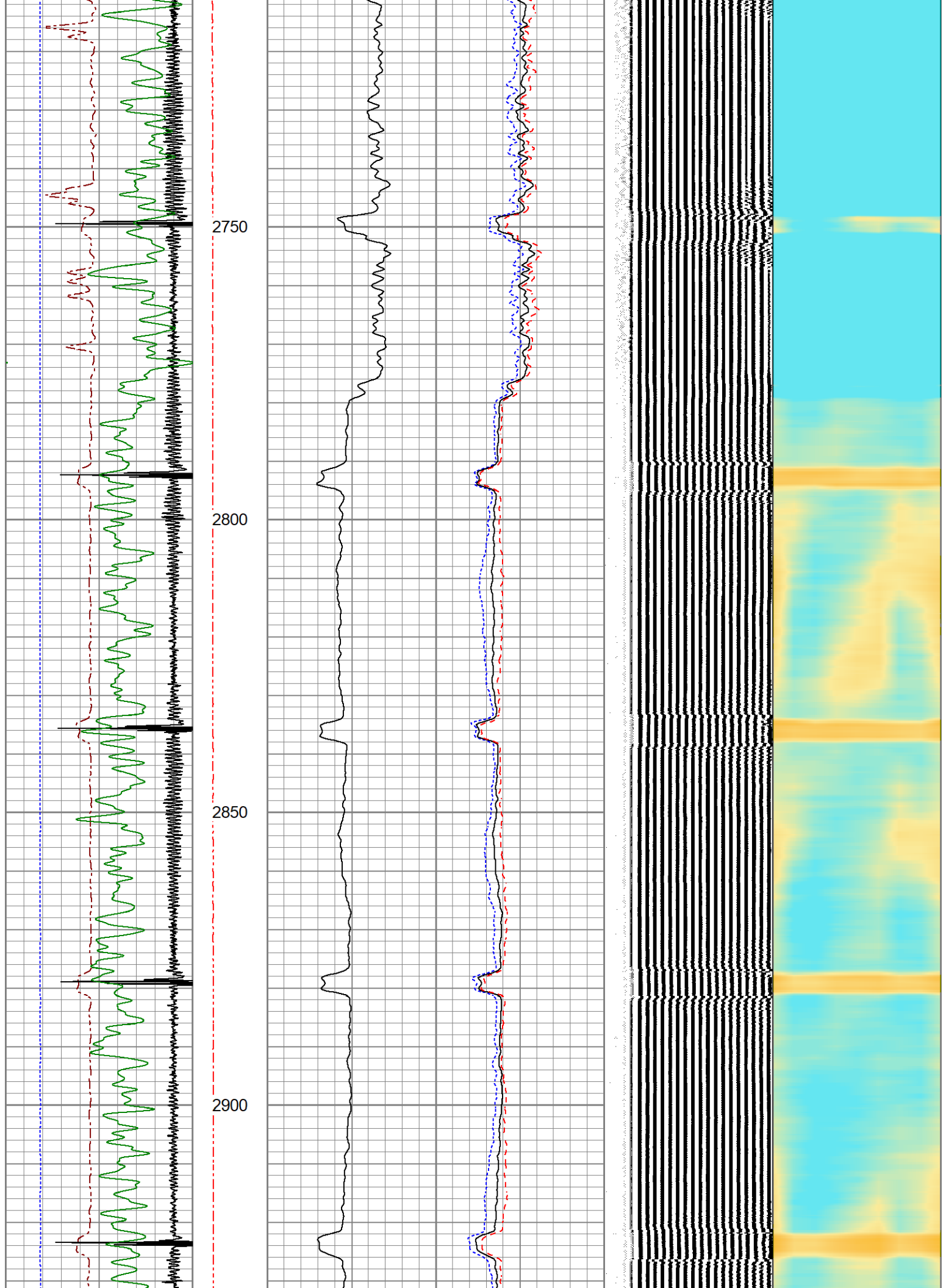


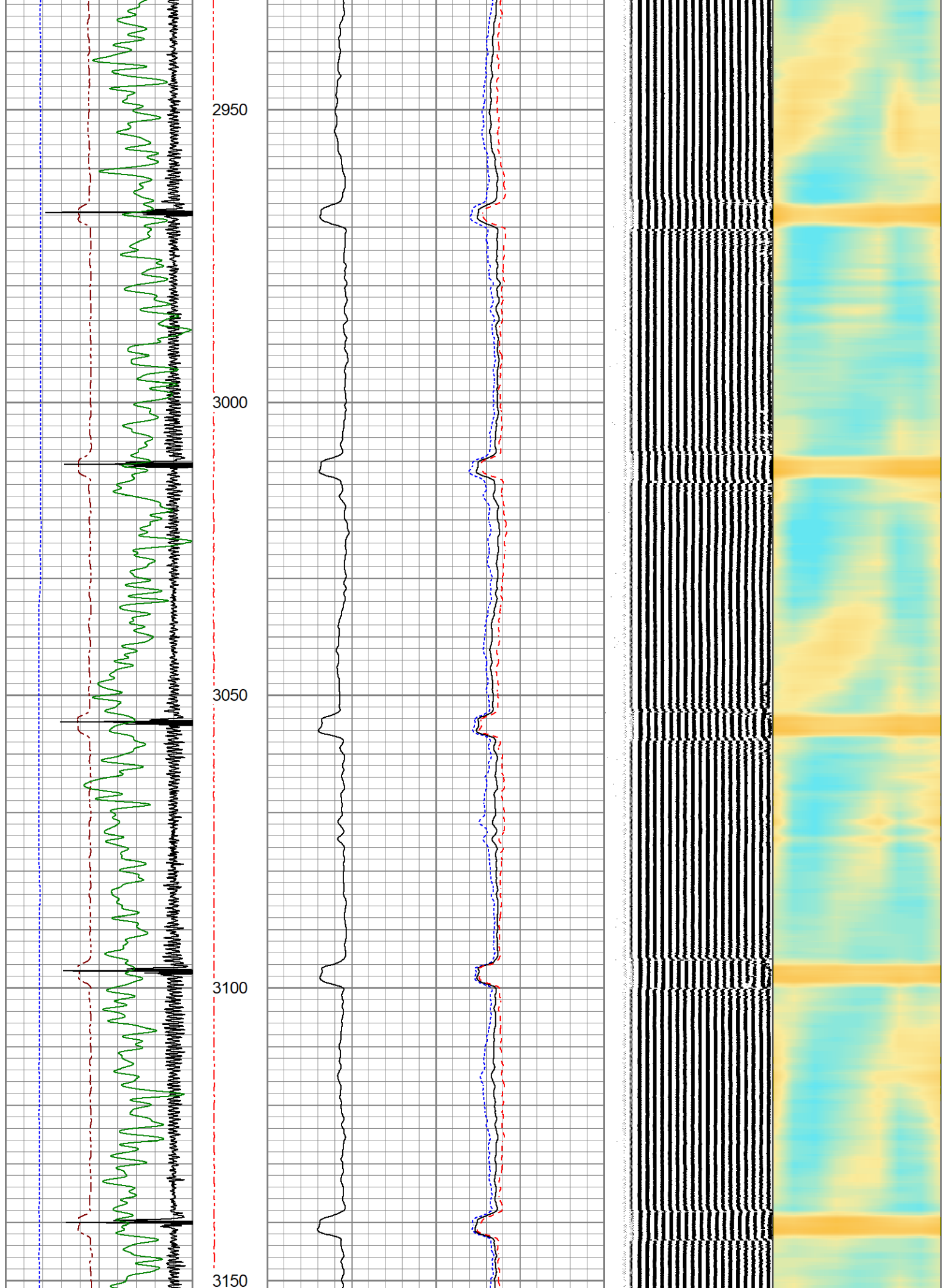


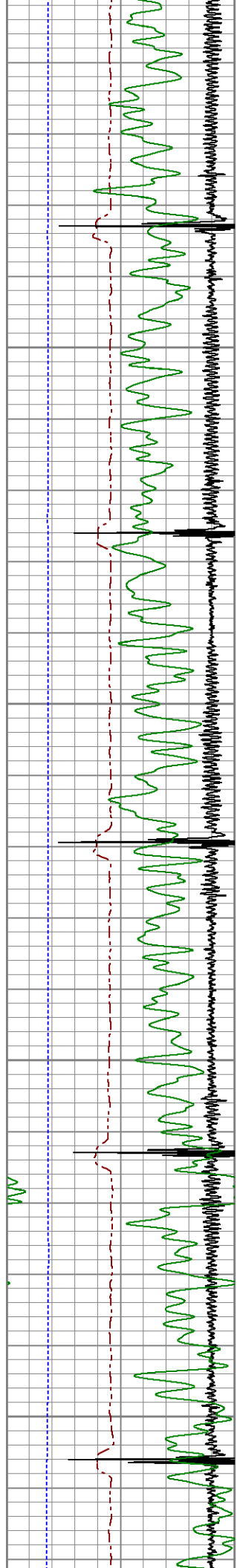




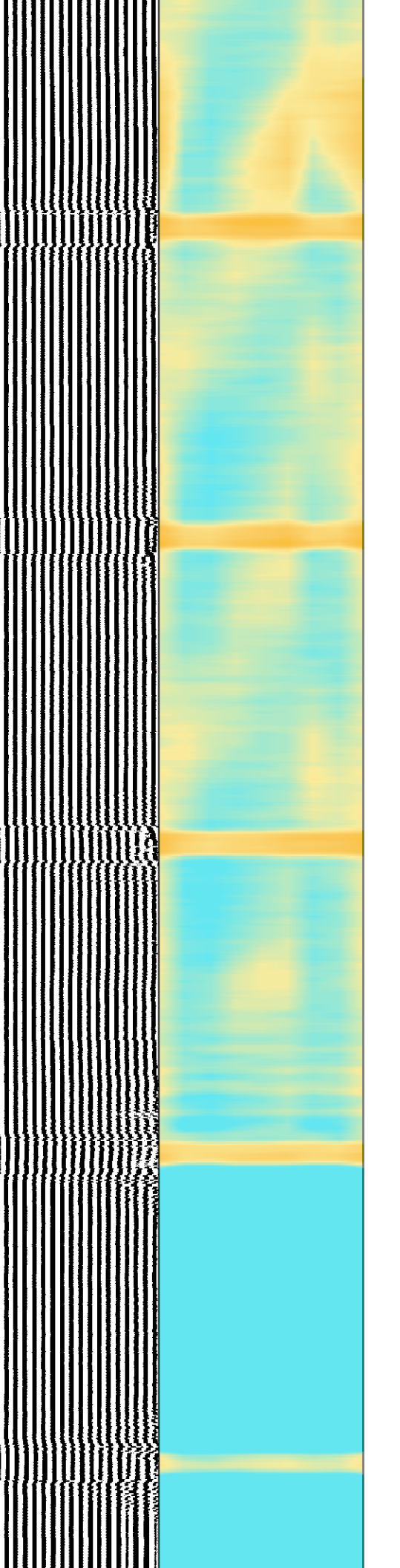
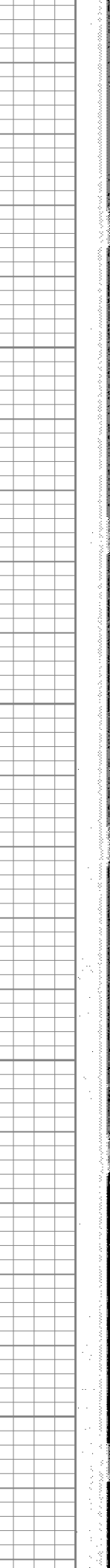
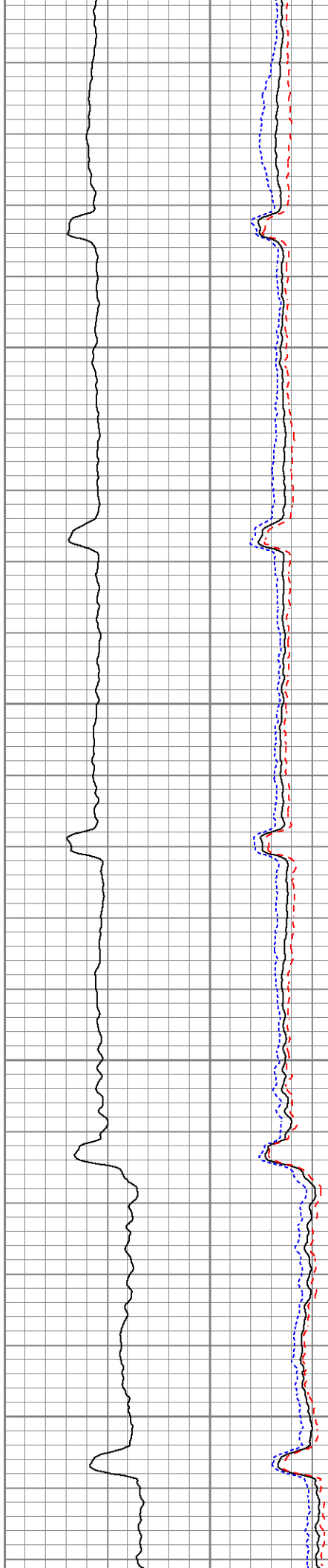


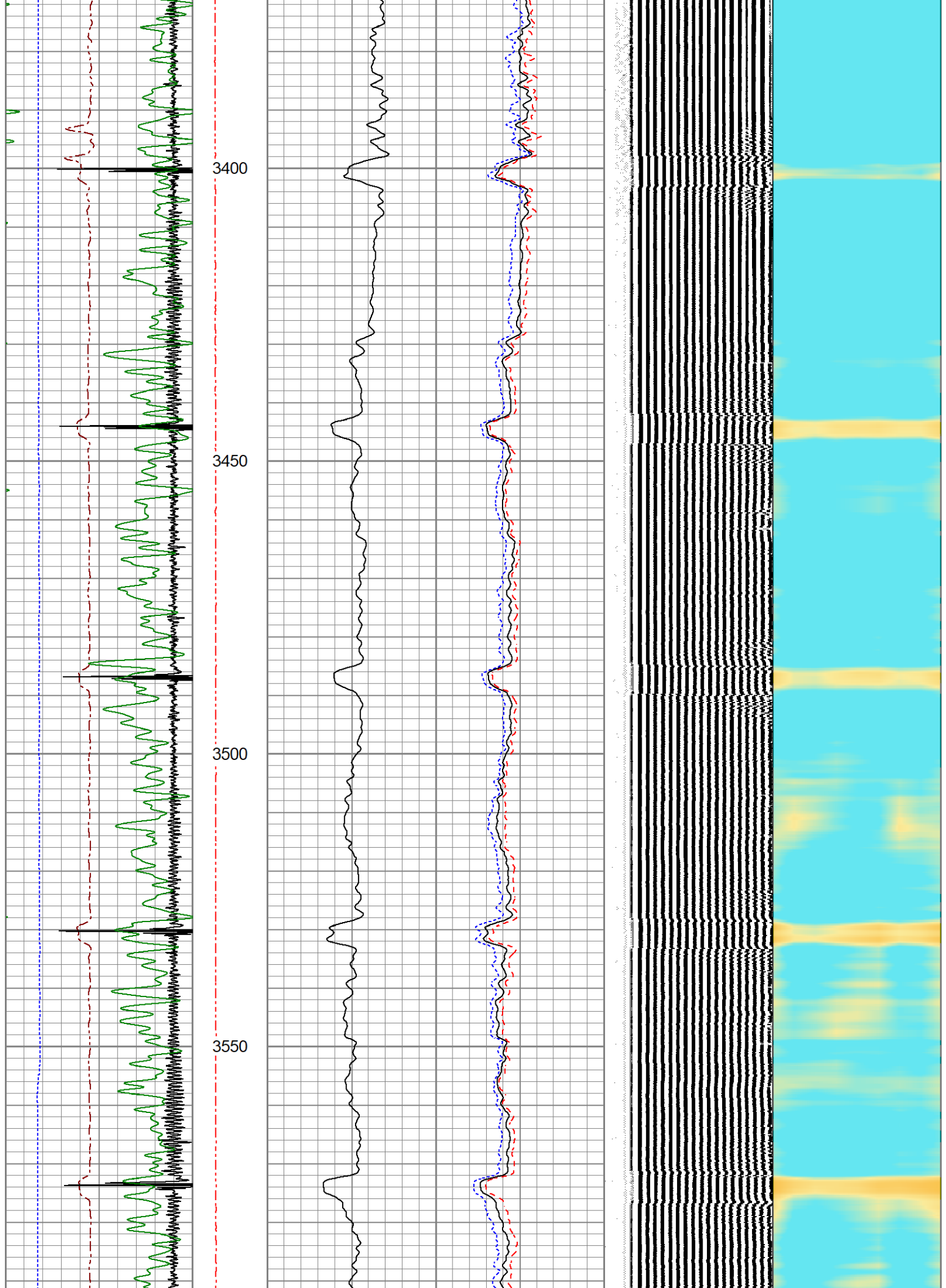


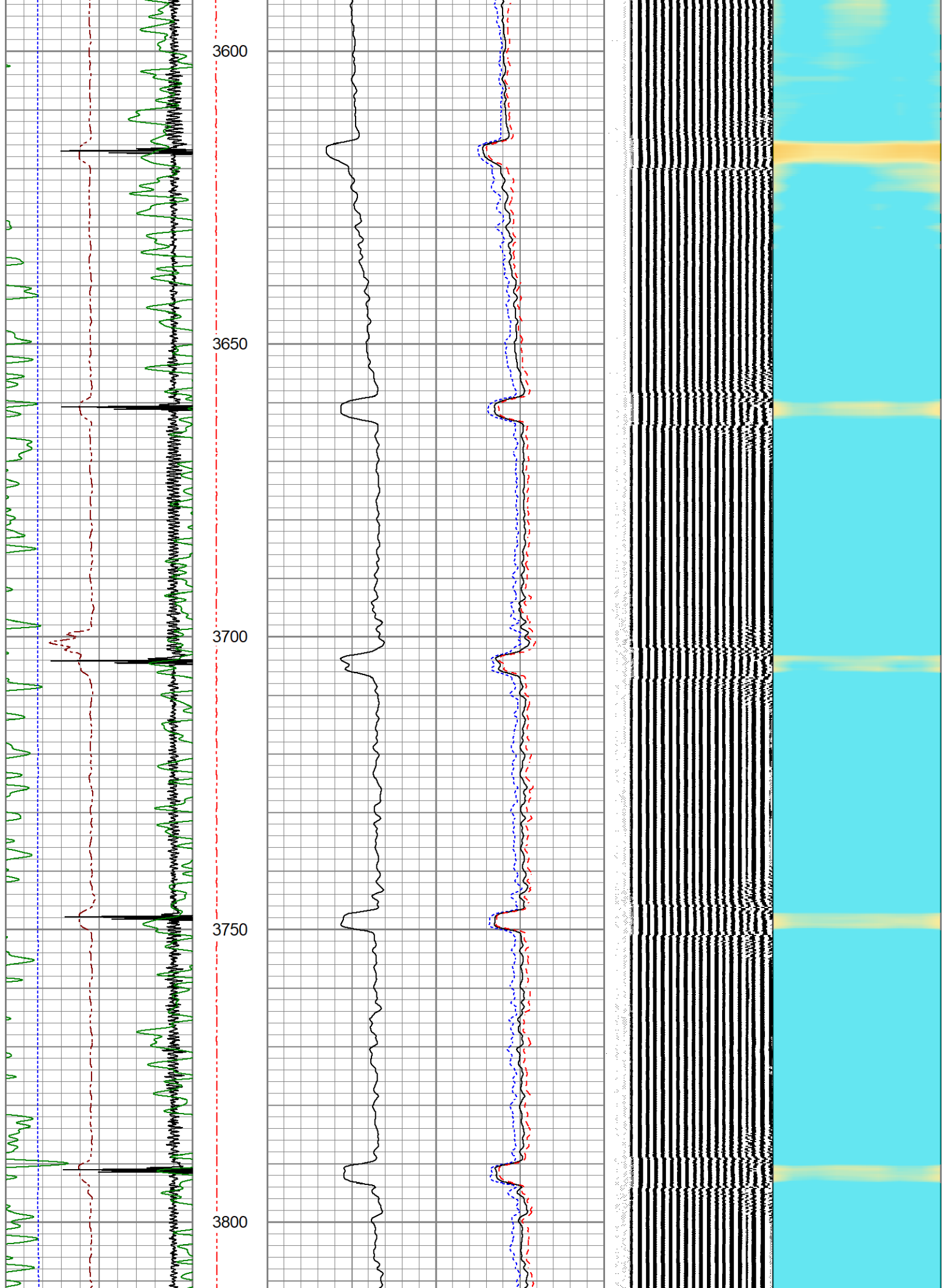


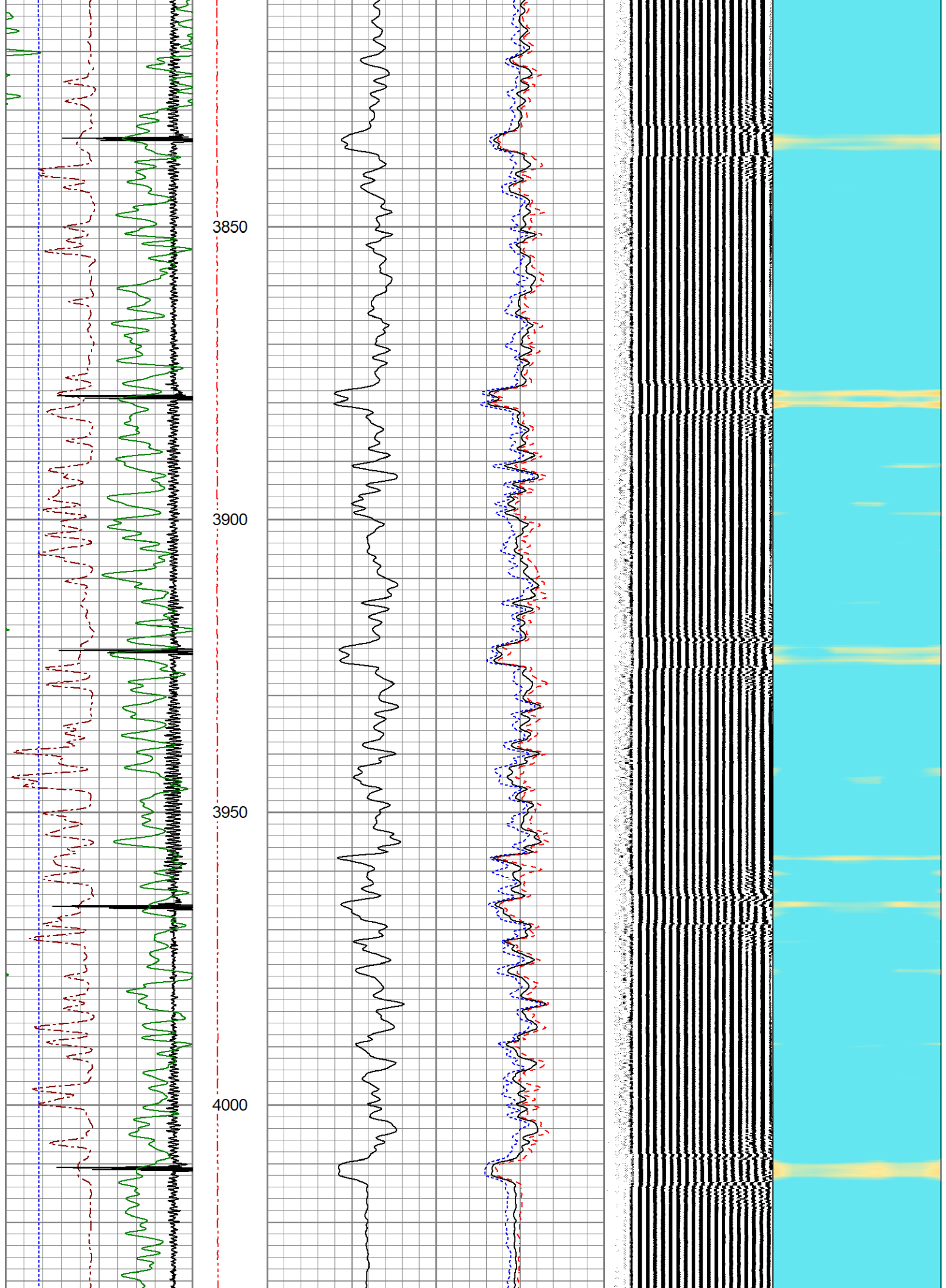


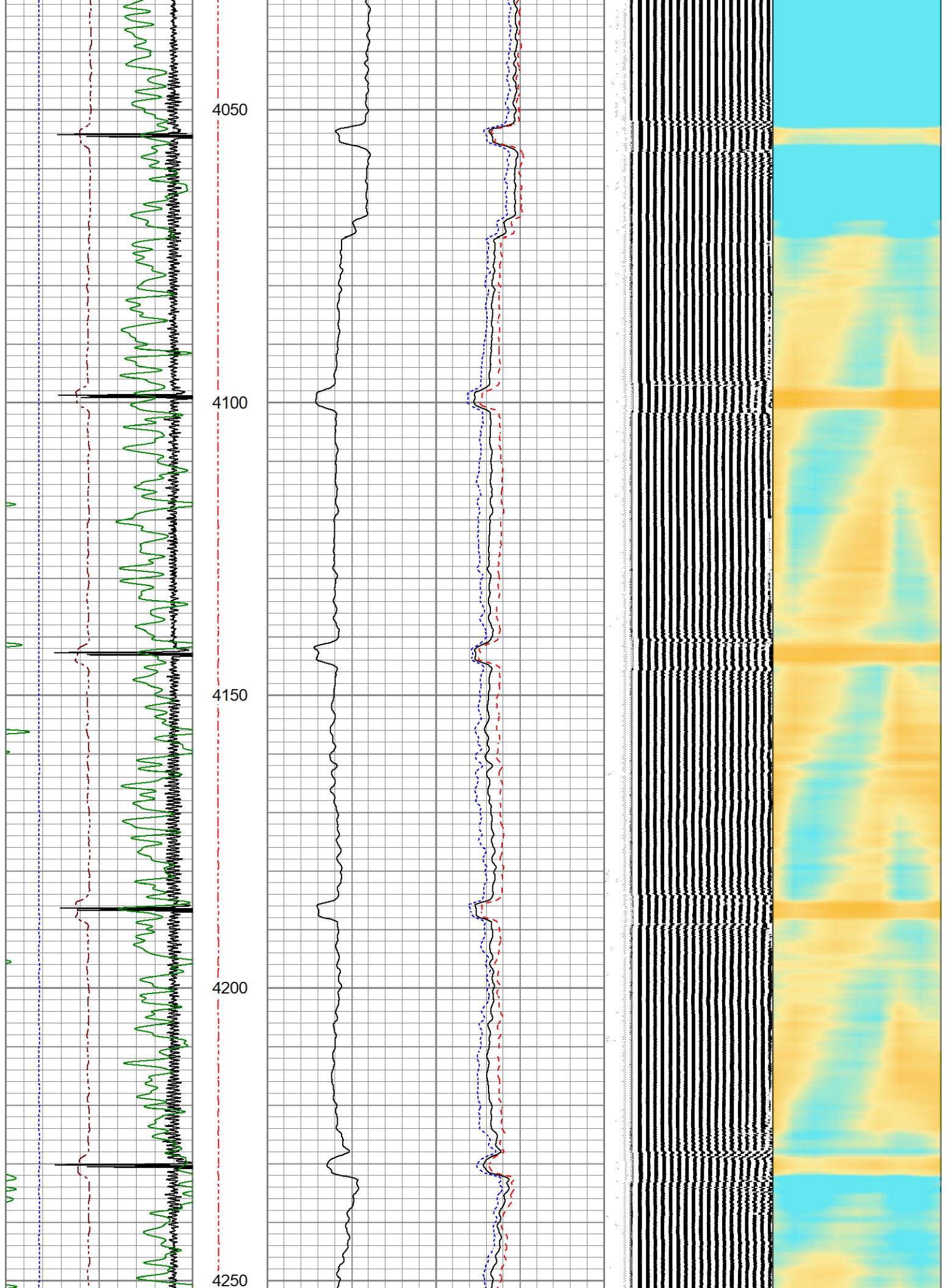
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3350

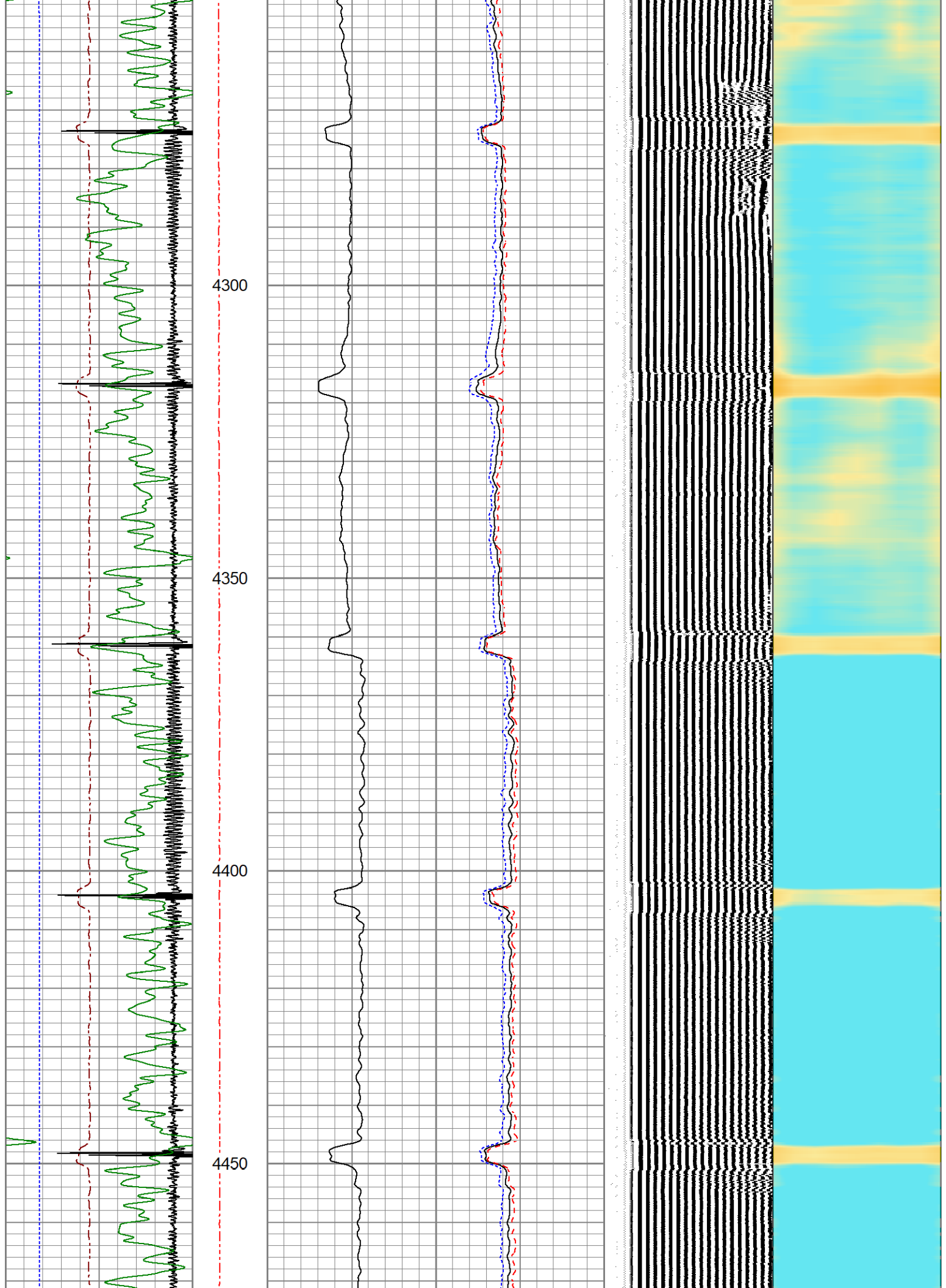


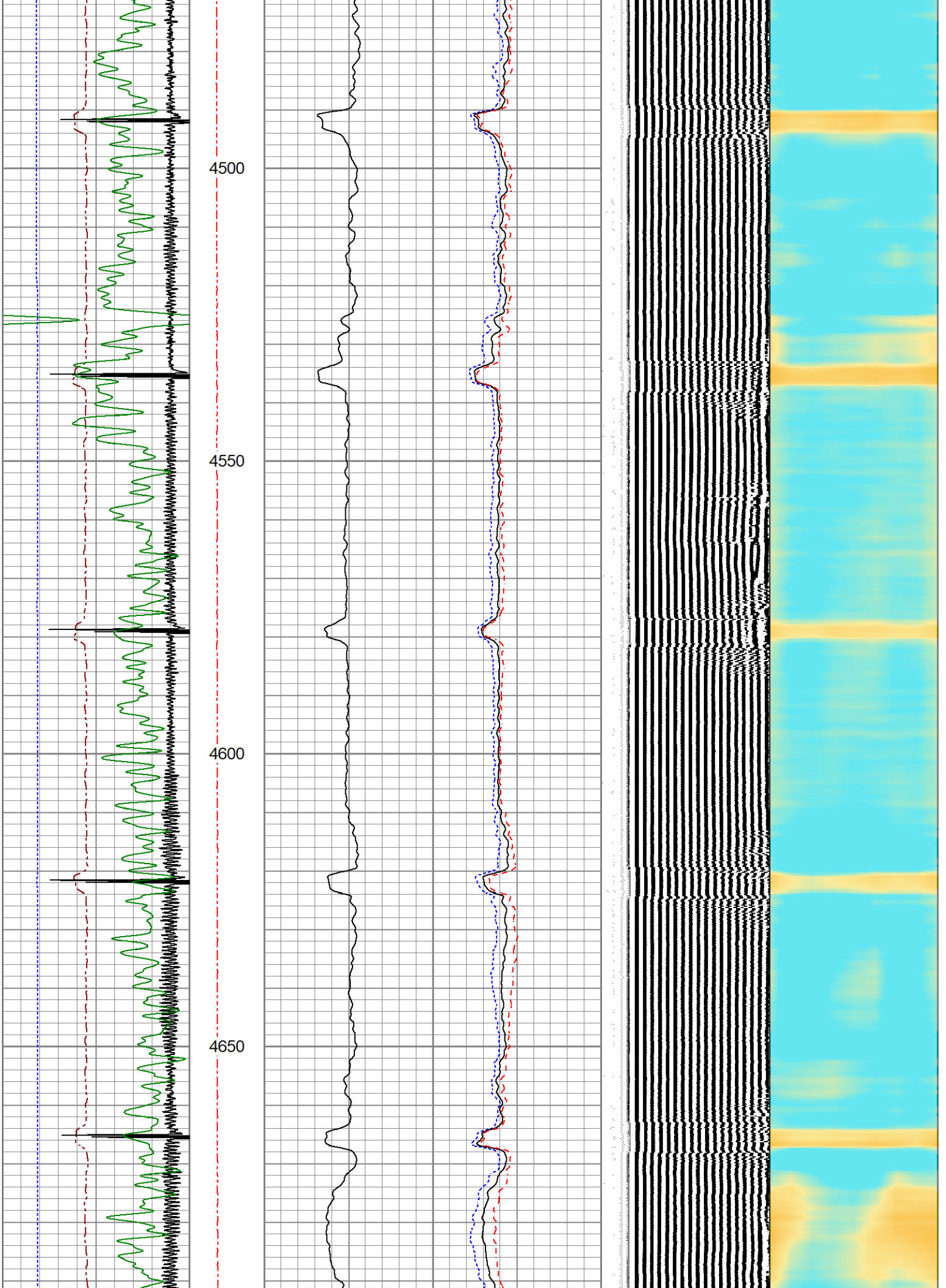


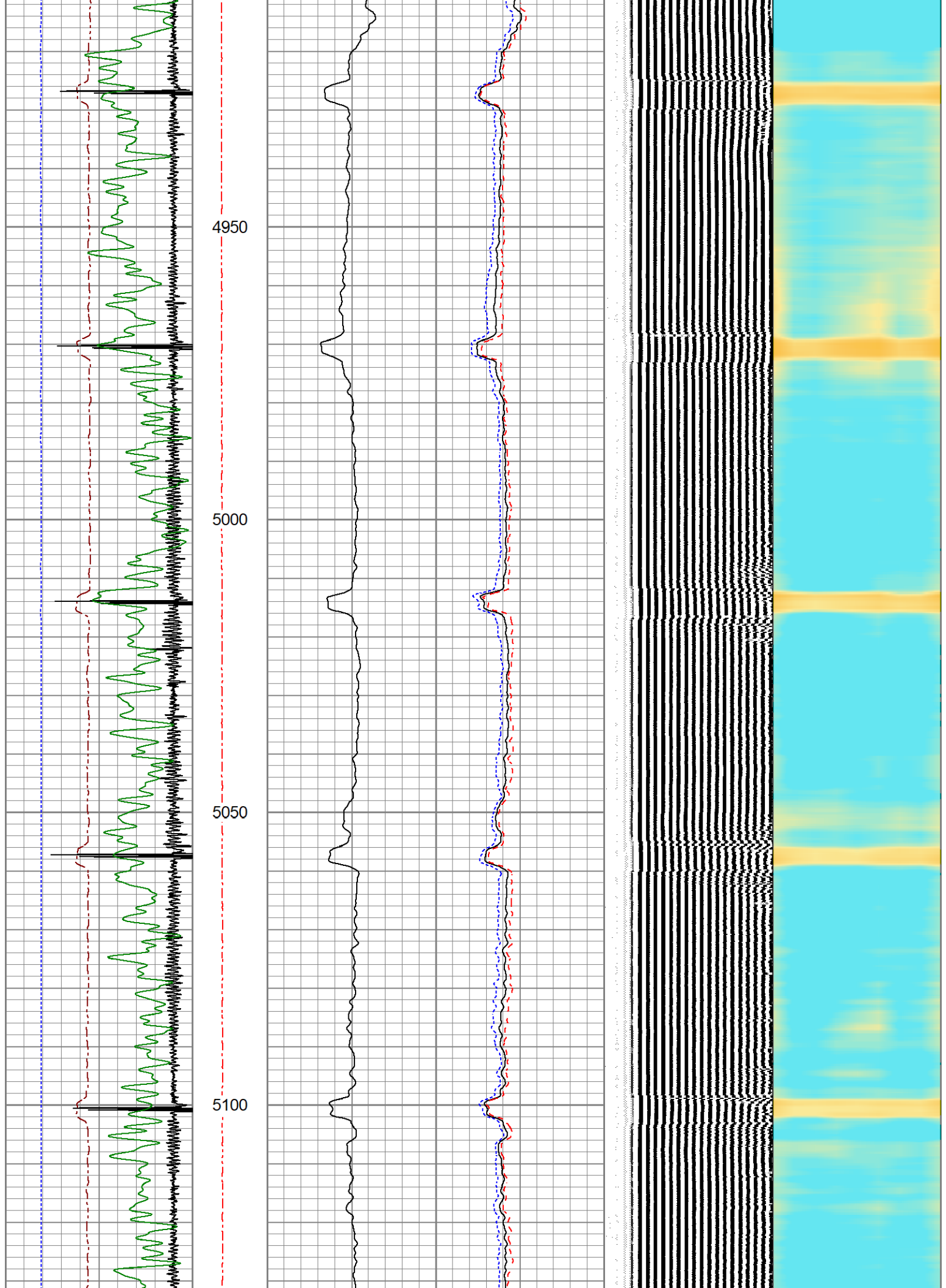


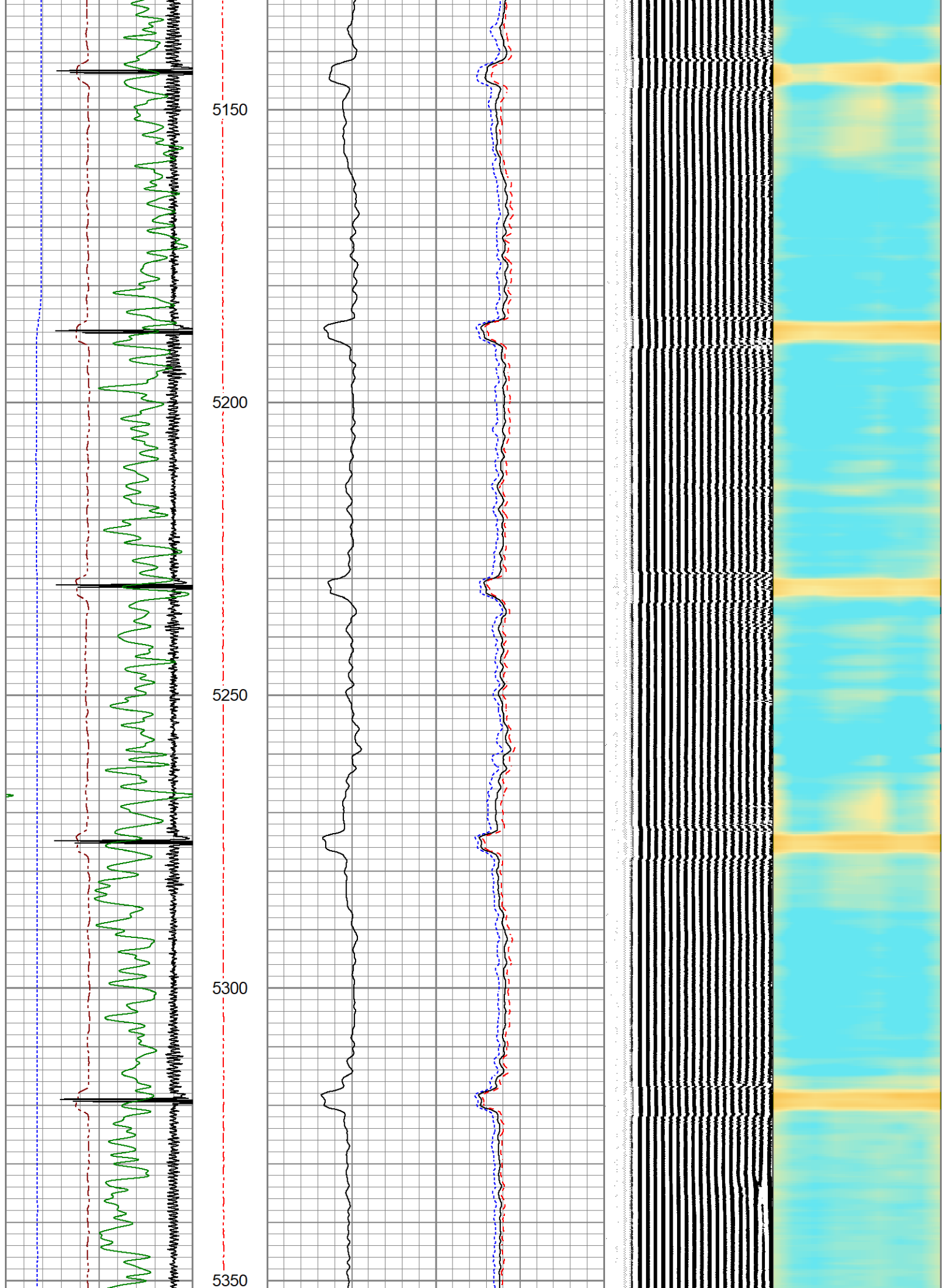


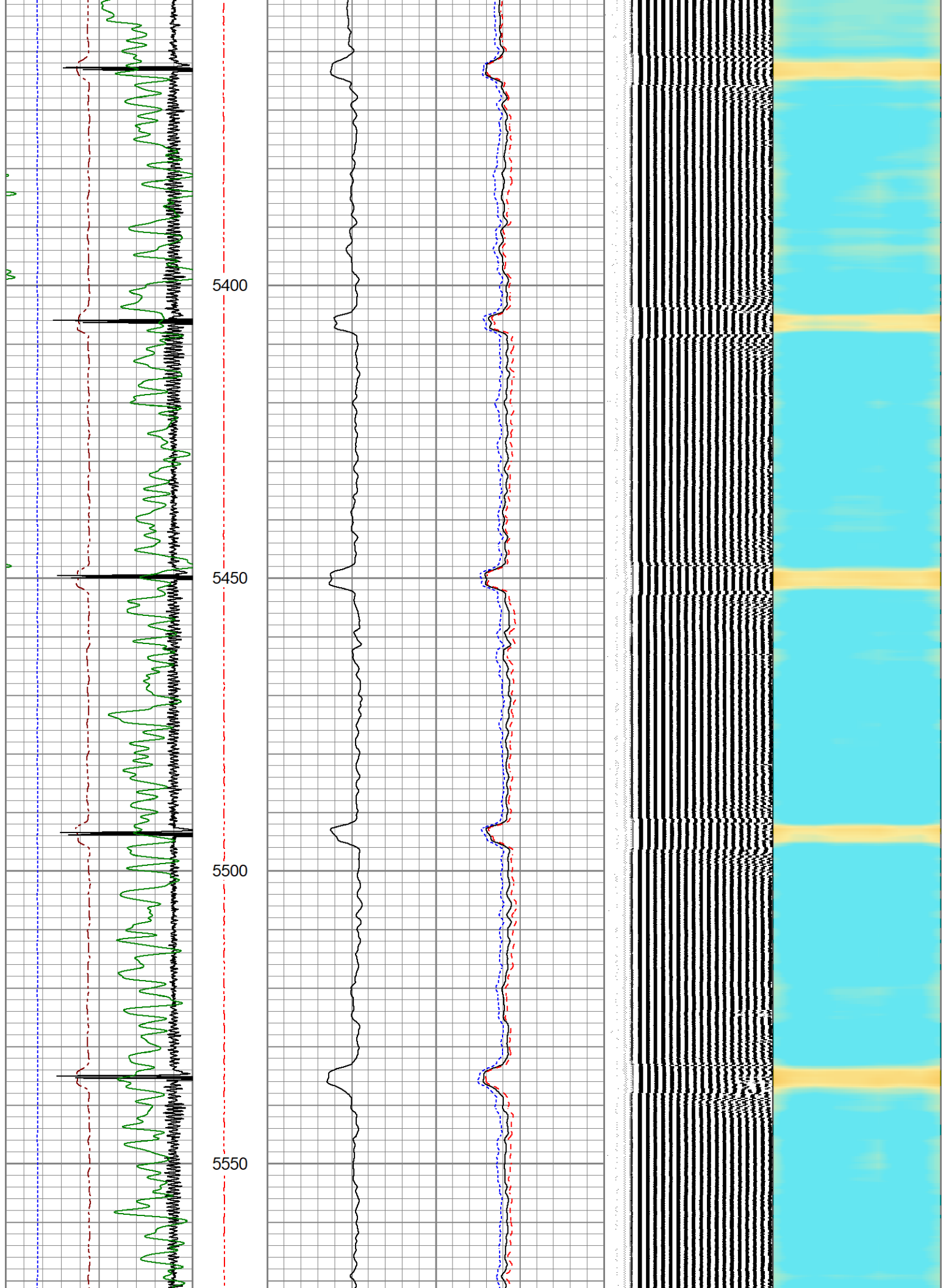


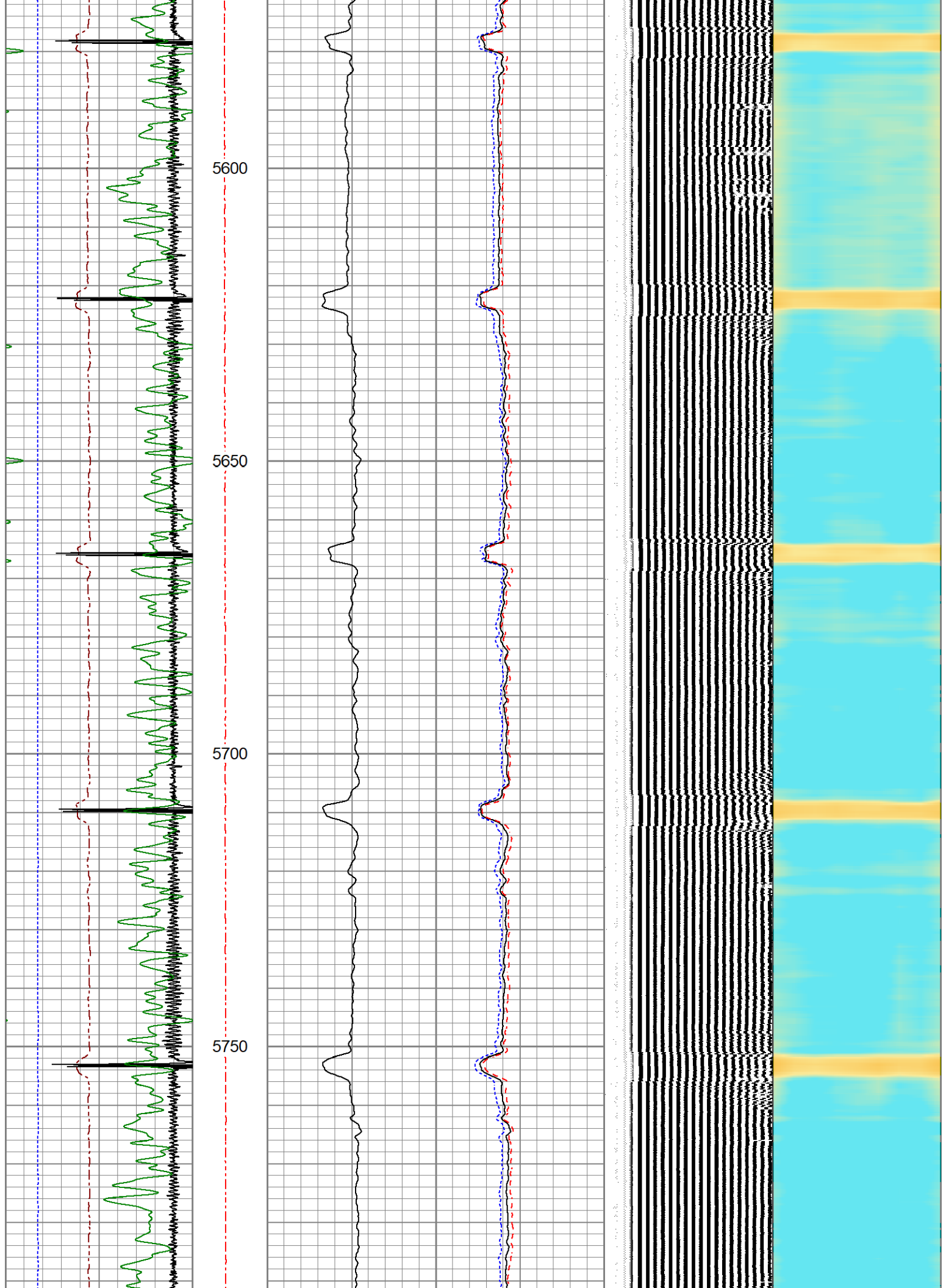


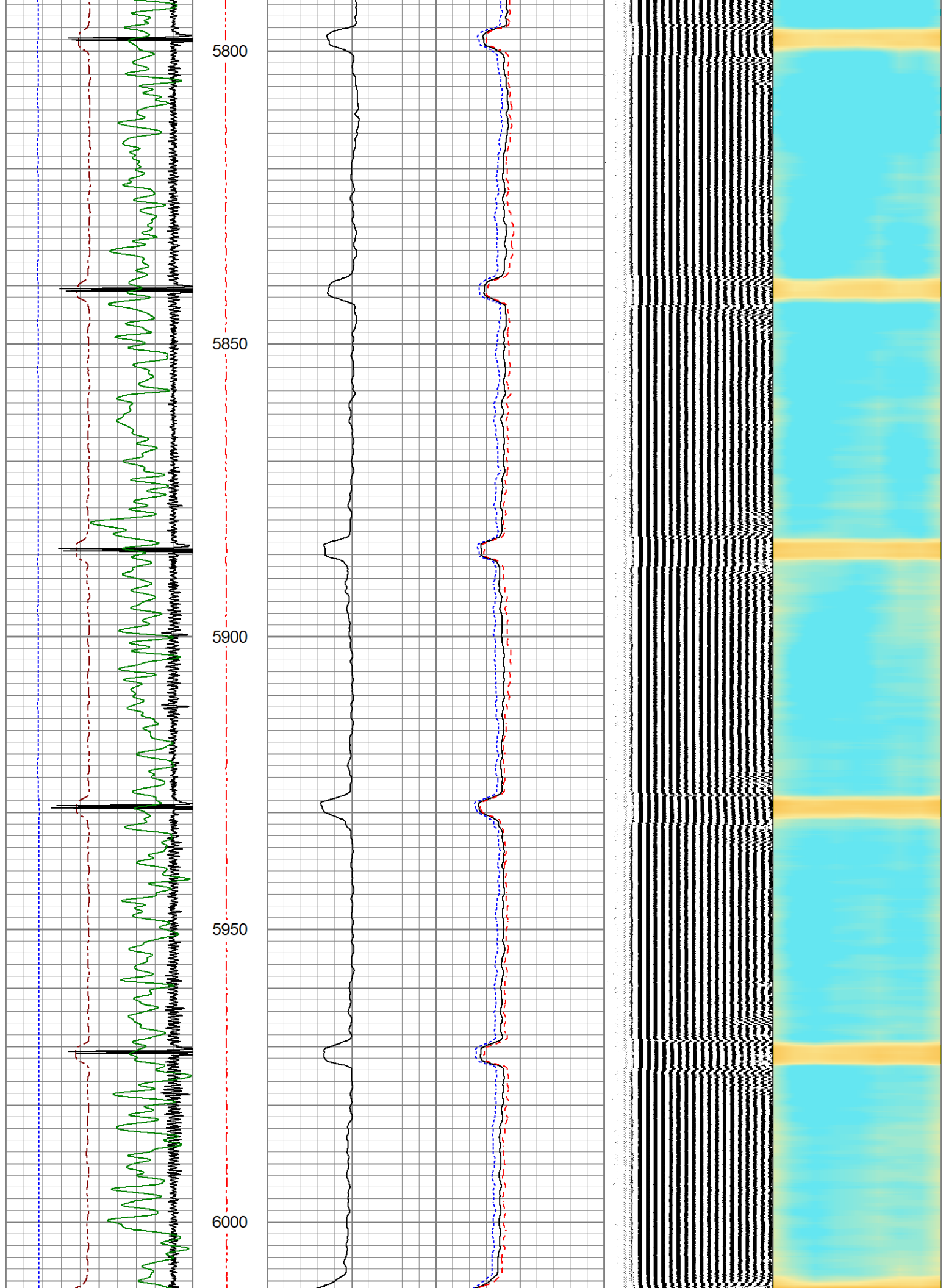


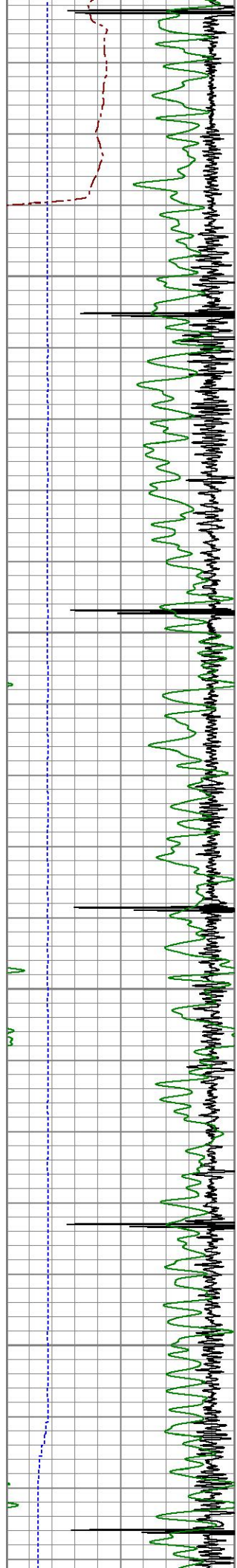










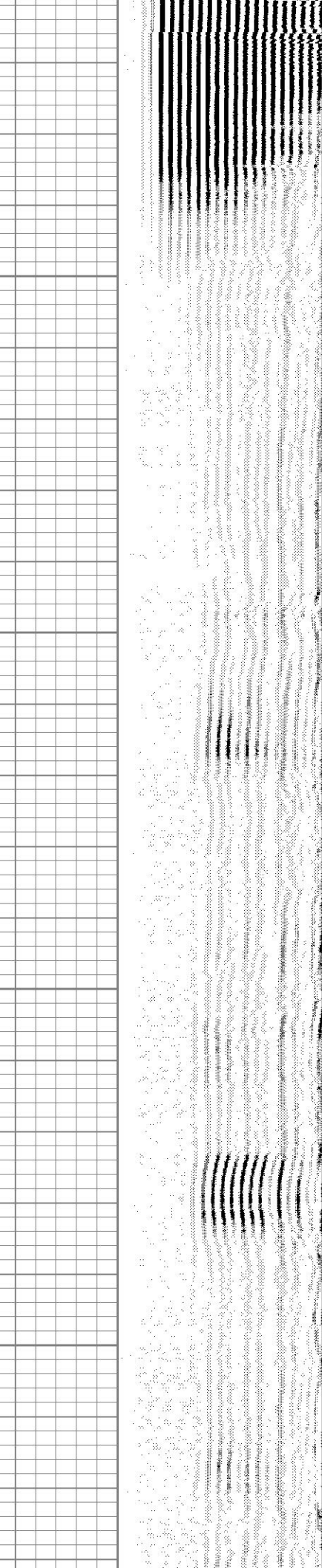
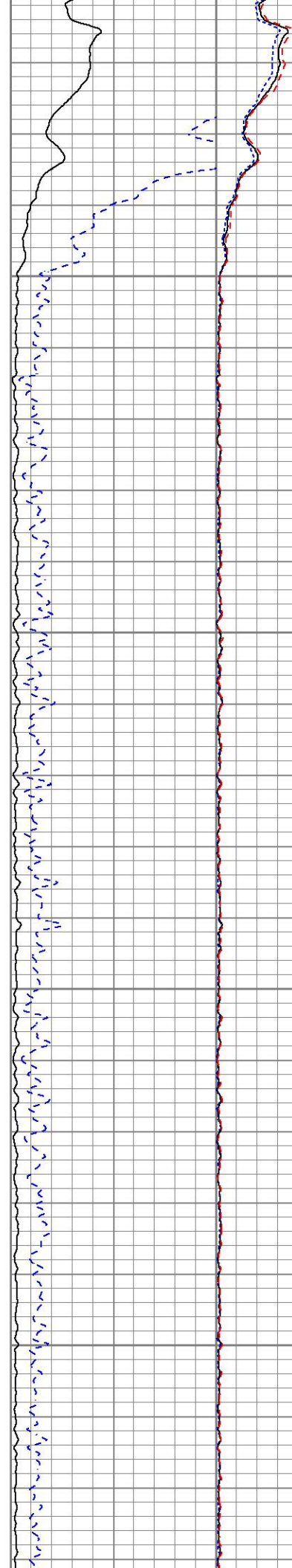


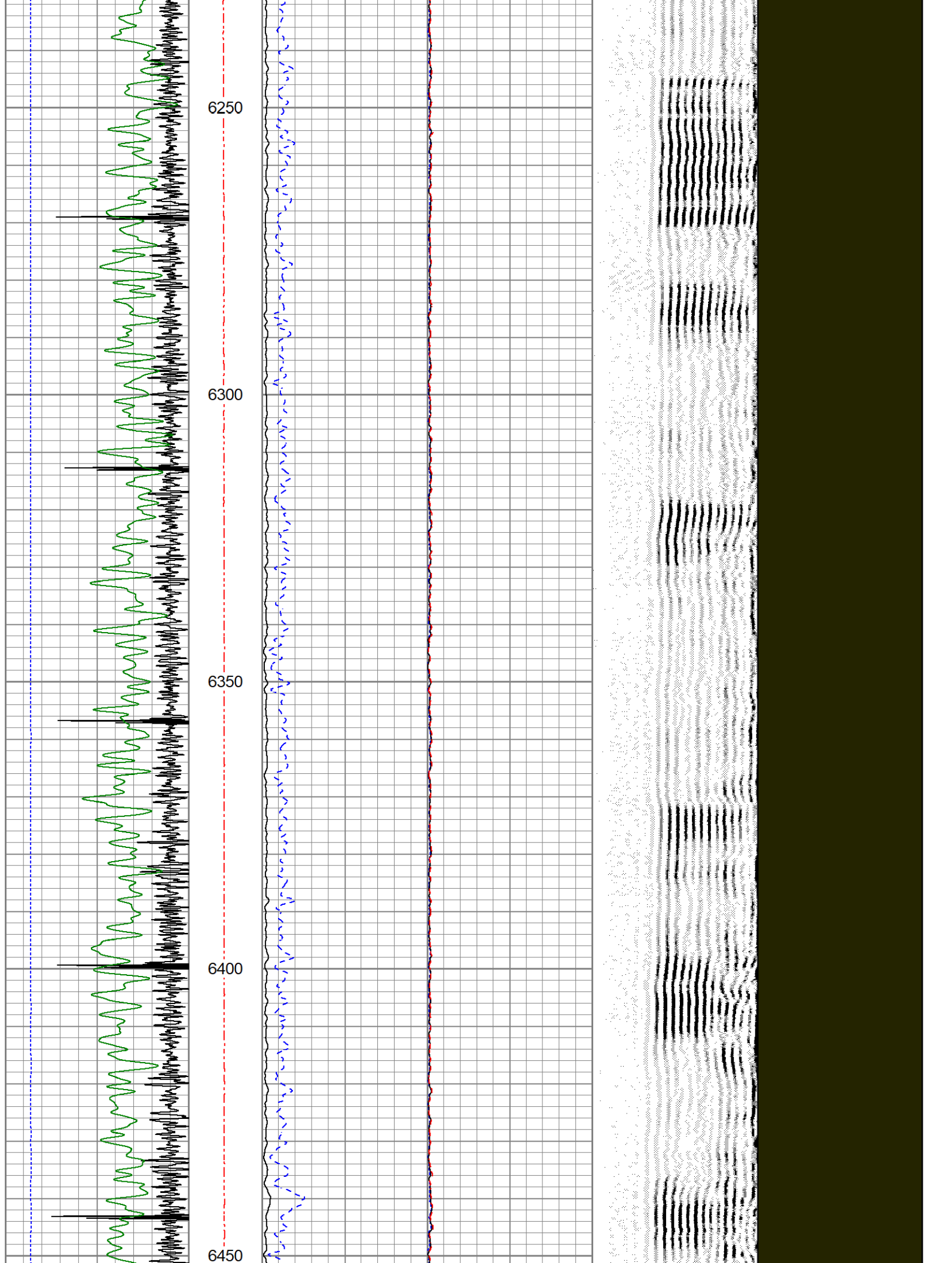
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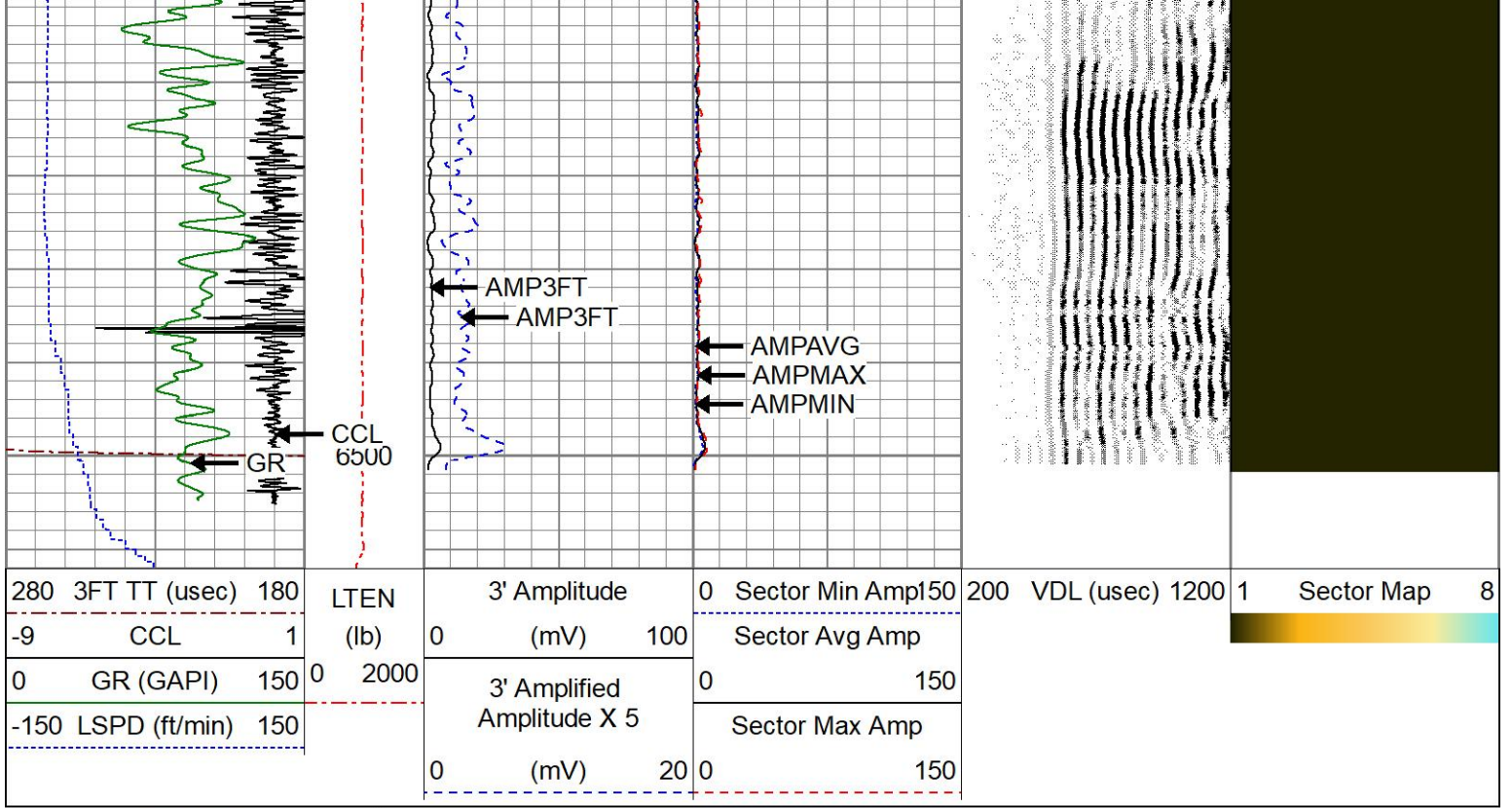
6100

6150

6200







MAIN PASS

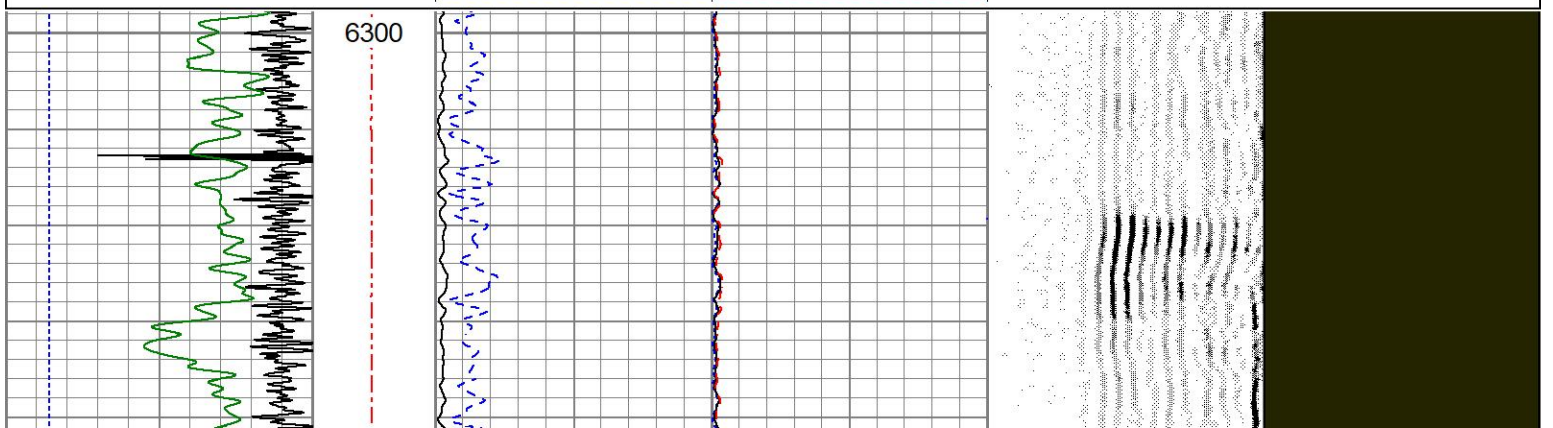
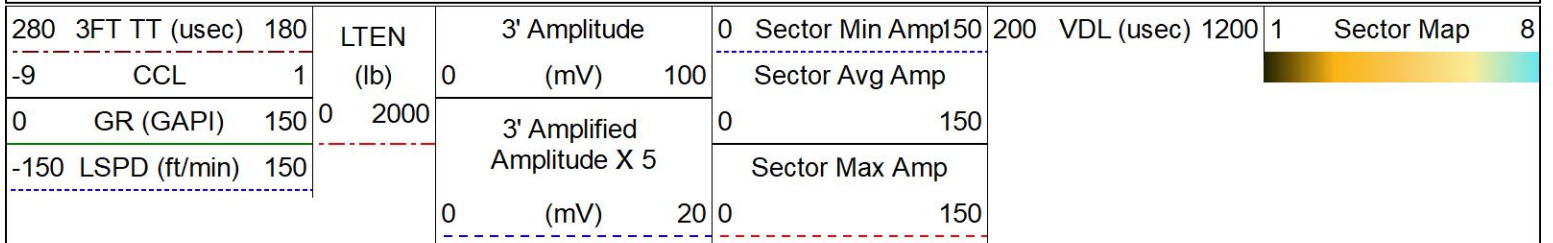
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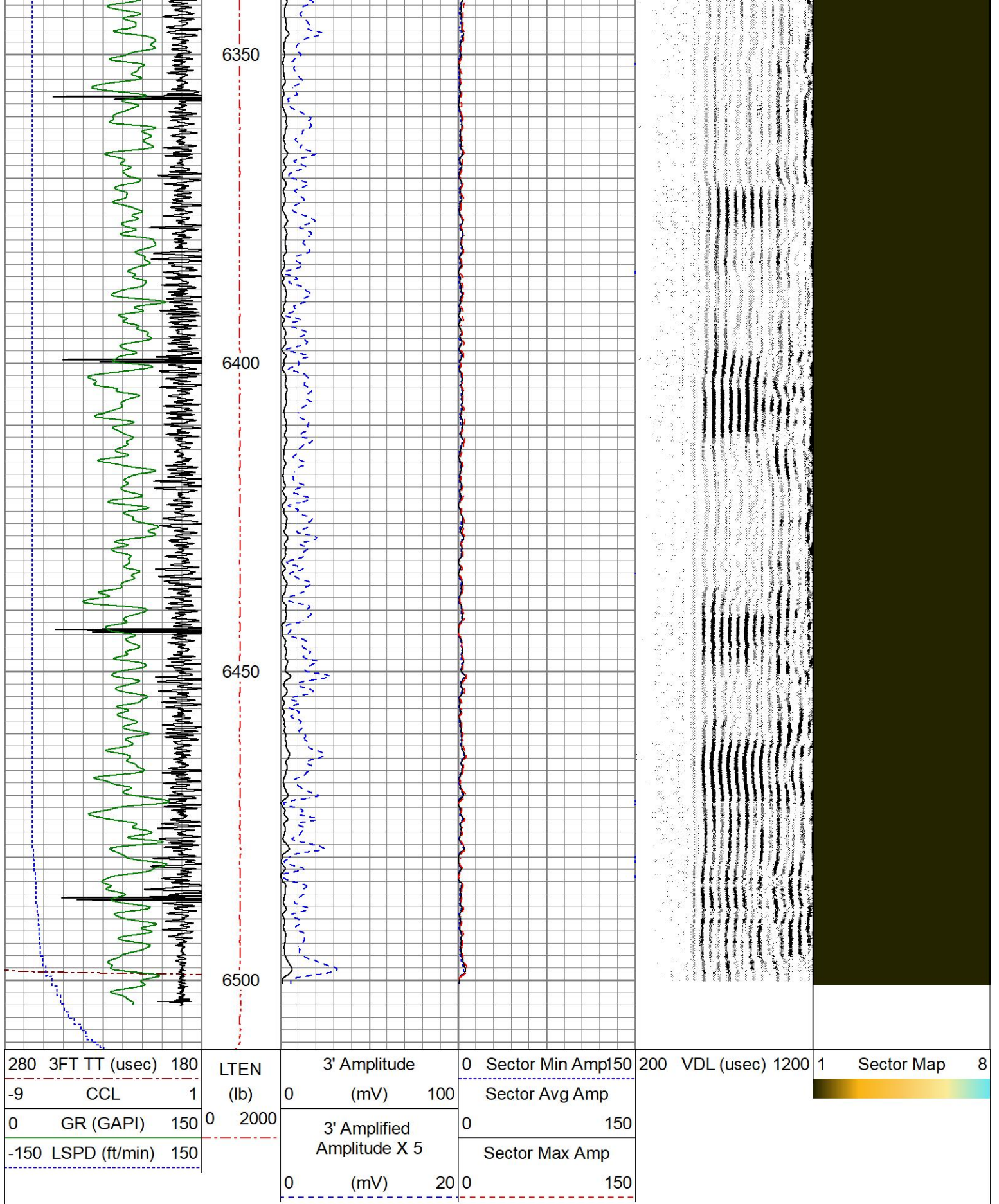


REPEAT PASS

0 PSI APPLIED AT SURFACE

Database File oxy_freeland 3-2a_0512315938_20250331_rcbl.db
 Dataset Pathname RCBL1/REPEAT1
 Presentation Format res_scb1 8sec
 Dataset Creation Mon Mar 31 13:21:32 2025
 Charted by Depth in Feet scaled 1:240





Calibration Report

Database File oxy_freeland 3-2a_0512315938_20250331_rcbl.db
 Dataset Pathname RCBL1/MAIN2.1
 Dataset Creation Mon Mar 31 14:35:02 2025

Gamma Ray Calibration Report

Serial Number: 071129
 Tool Model: GR275B
 Performed: Mon Mar 31 08:06:26 2025

Calibrator Value: 250.0 GAPI

Background Reading: 34.9 cps
 Calibrator Reading: 302.3 cps

Sensitivity: 0.9349 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: 070150
 Tool Model: Probe
 Calibration Casing Diameter: 4.500 in
 Calibration Depth: -3467.020 ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.018	1.564	0.700	81.196	50.861	1.627
CAL	-0.006	1.005				
5'	-0.006	1.559	0.700	81.196	51.430	0.994
SUM						
S1	-0.007	1.730	0.000	100.000	57.579	0.386
S2	-0.017	1.473	0.000	100.000	67.089	1.159
S3	-0.018	1.544	0.000	100.000	63.990	1.178
S4	-0.015	1.687	0.000	100.000	58.765	0.872
S5	-0.022	1.715	0.000	100.000	57.584	1.260
S6	-0.018	1.688	0.000	100.000	58.627	1.030
S7	-0.015	1.460	0.000	100.000	67.819	1.007
S8	-0.020	1.502	0.000	100.000	65.735	1.284

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.006	1.005	1.000	0.000

Air Zero Calibration, performed Mon Mar 31 12:14:49 2025:

	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



Company

OCCIDENTAL PETROLEUM

Well

FREELAND 3-2A

Field

WATTENBERG

County

WELD

State

CO