



SECTOR CEMENT BOND
GAMMA RAY
CCL LOG

Company	OCCIDENTAL PETROLEUM		
Well	HSR-COGBURN 2-29A		
Field	WATTENBERG		
County	WELD	State	COLORADO
Location:	API # : 05-123-19181		Other Services
SEC 29 TWP 3N RGE 6TW			
Permanent Datum	G.L.	Elevation	4779'
Log Measured From	G.L. 0	Above Perm. Datum	
Drilling Measured From	N/A	K.B. N/A D.F. N/A G.L. 4779'	
Comp.	OCCIDENTAL PETROLEUM		
Well	HSR-COGBURN 2-29A		
Field	WATTENBERG		
Co.	WELD		
State	COLORADO		

Date of Service	5-NOVEMBER-2022		
Run Number	ONE		
Depth Driller or PBTID	10000'		
Depth Logger	7020'		
Bottom Log Interval	7000'		
Top Log Interval	SURFACE		
Open Hole Size	7.875"		
Type Fluid	WATER		
Fluid Level	SURFACE		
Fluid Density	N/A		
Max. Recorded Temperature	222 DEG.F.		
Max. Wellhead Pressure	0		
Wellhead Connection	7-1/16" 5K		
Estimated Cement Top	3770'		
Unit Number	1096		
Wireline Size	9/32"		
Location	BRIGHTON,CO		
Recorded By	B.HARPER		
Witnessed By	FIDEL		
Size	Wt Ft	Top	Bottom
Surface Casing	8-5/8"		SURFACE
Production Casing	4.5"	11.6#	SURFACE
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.

THANK YOU FOR USING RANGER ENERGY SERVICES! FIELD TICKET #

Your Ranger Energy Services Crew	Tool Data - Services	Serial Number
Engineer: B.HARPER	TETKO SCBL	0111
Operator: B.HECHT	TETKO CCL	0111
Operator: J.BAILEY	TETKO GAMMA RAY	0111
Operator:		

Casing	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb/ft)
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Log Variables

DatabaseC:\ProgramData\Warrior\Data\occidental_hsr-cogburn 2-29a_05-123-19181.db
Dataset field/well/run1/pass3/_vars_

Top - Bottom

BHTEMP_Src TEMP	BOREID in 8.75	BOTTEMP degF 222	CASEOD in 4.5	CASETHCK in 0.408	CASEWGHT lb/ft 11.6	MAXAMPL mV 81	MINAMPL mV 0.6
MINATTN db/ft 0.8	PERFS No	PPT usec 220	SRFTEMP degF 28	TDEPTH ft 7000			

Variable Description

BHTEMP_Src : BHTEMP Input Source Selector
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

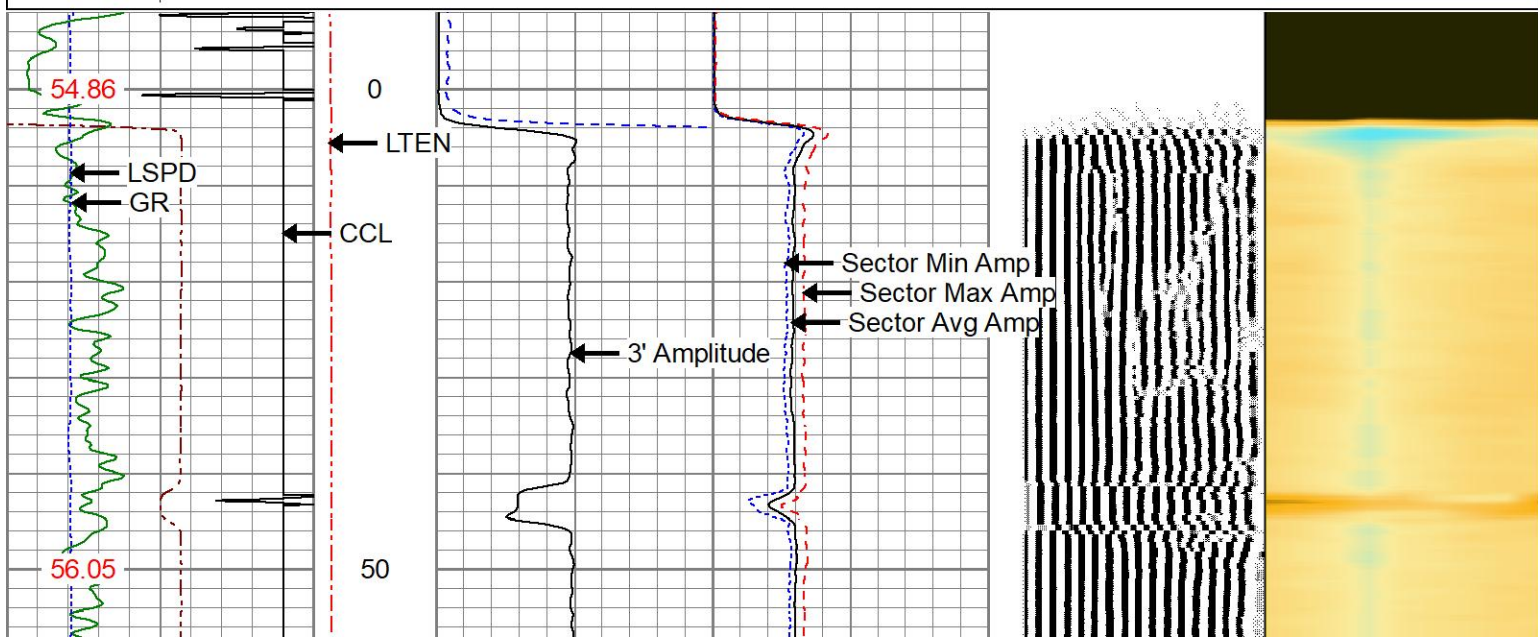


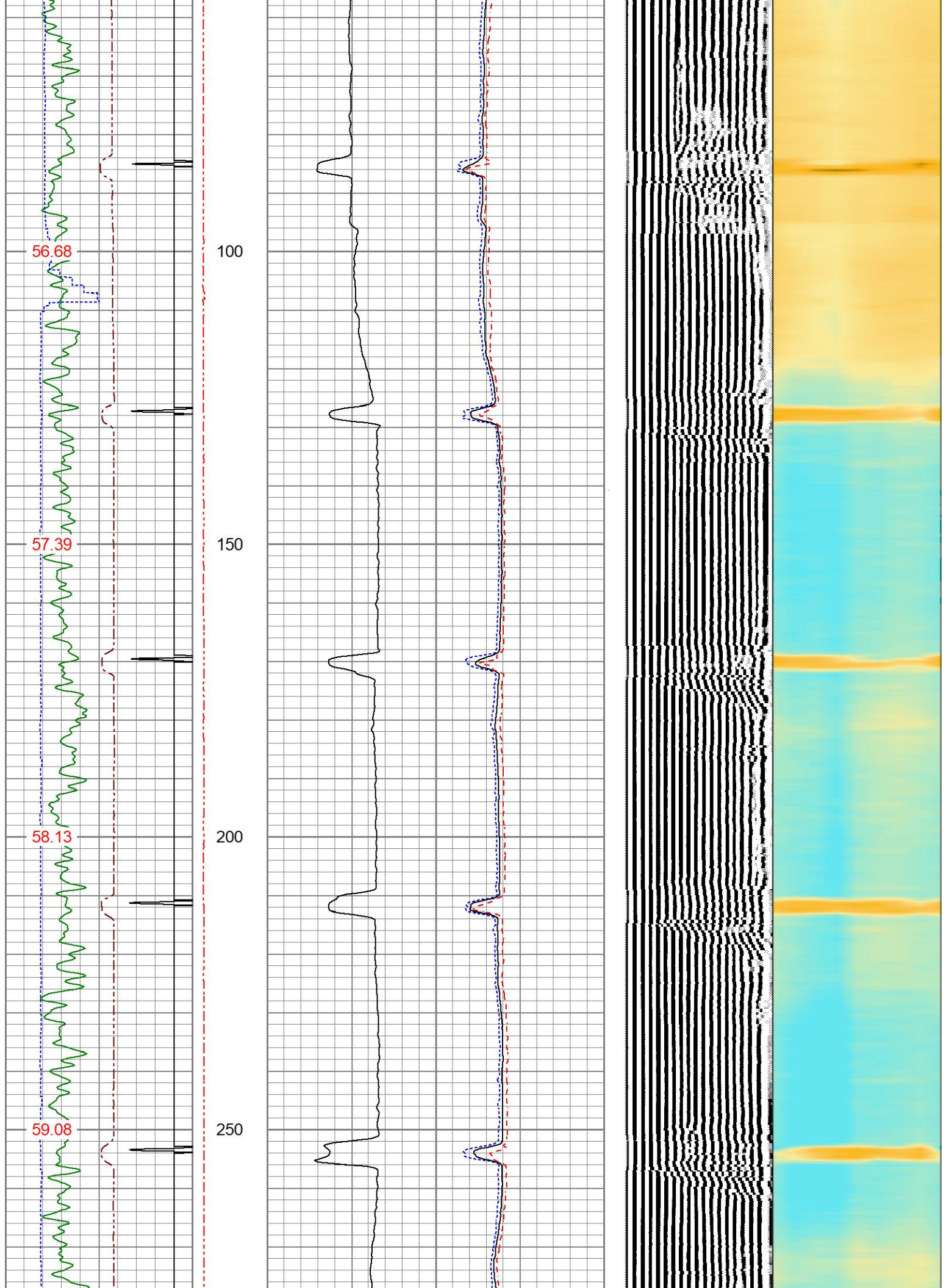
MAIN PASS

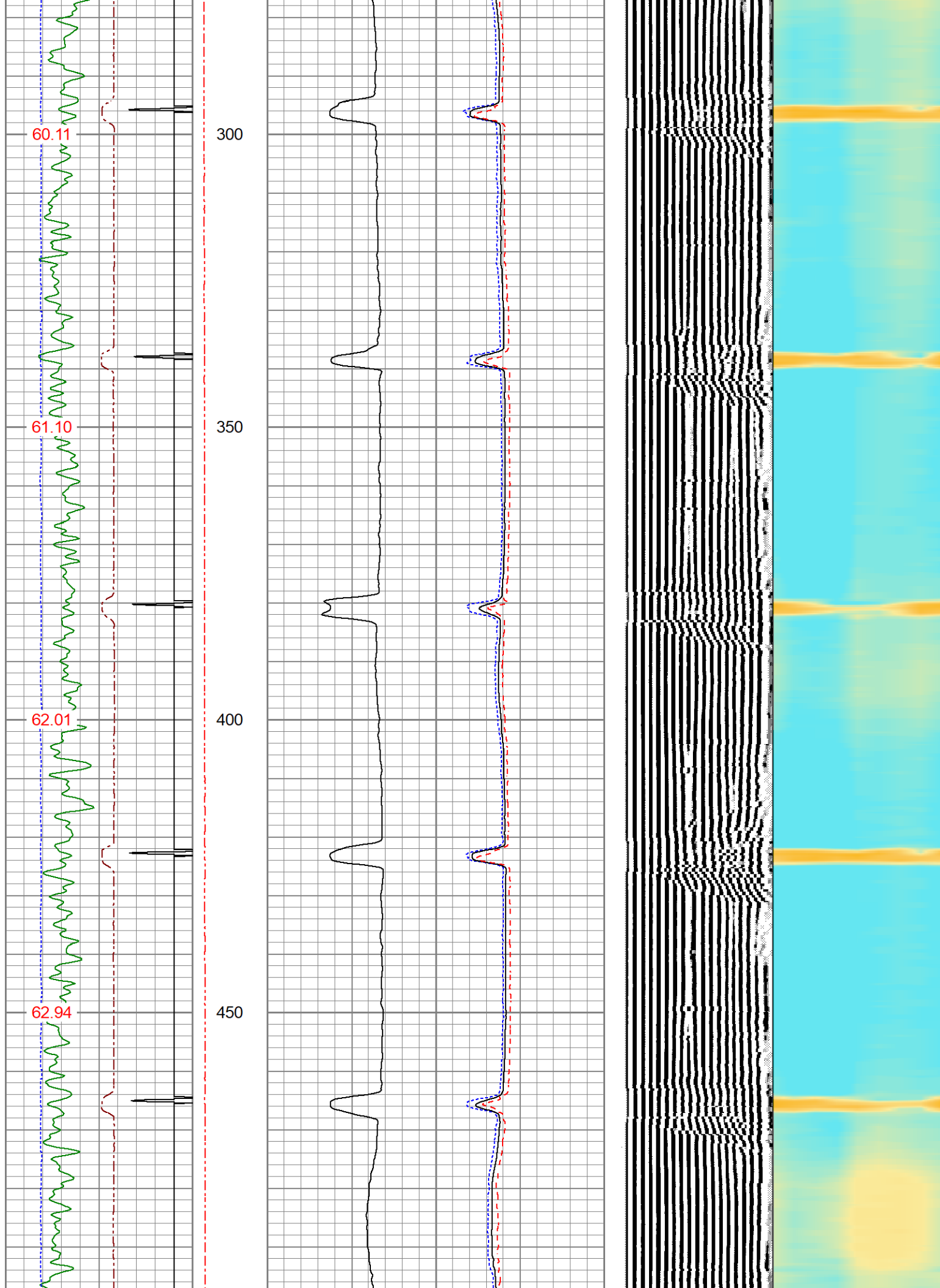
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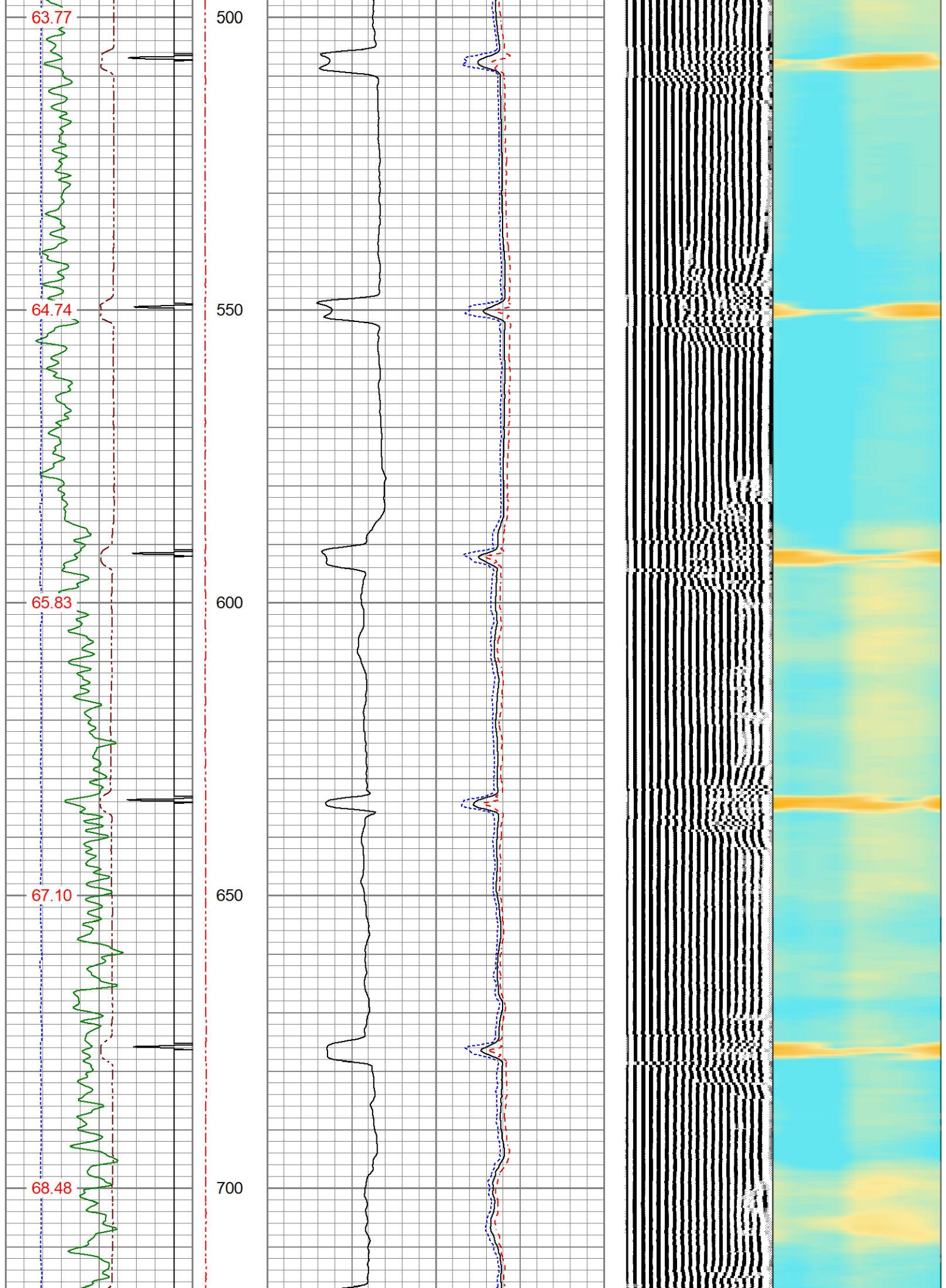
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Dataset Pathname pass 8
Presentation Format res_scb1 8sec
Dataset Creation Sat Nov 05 10:31:42 2022
Charted by Depth in Feet scaled 1:240

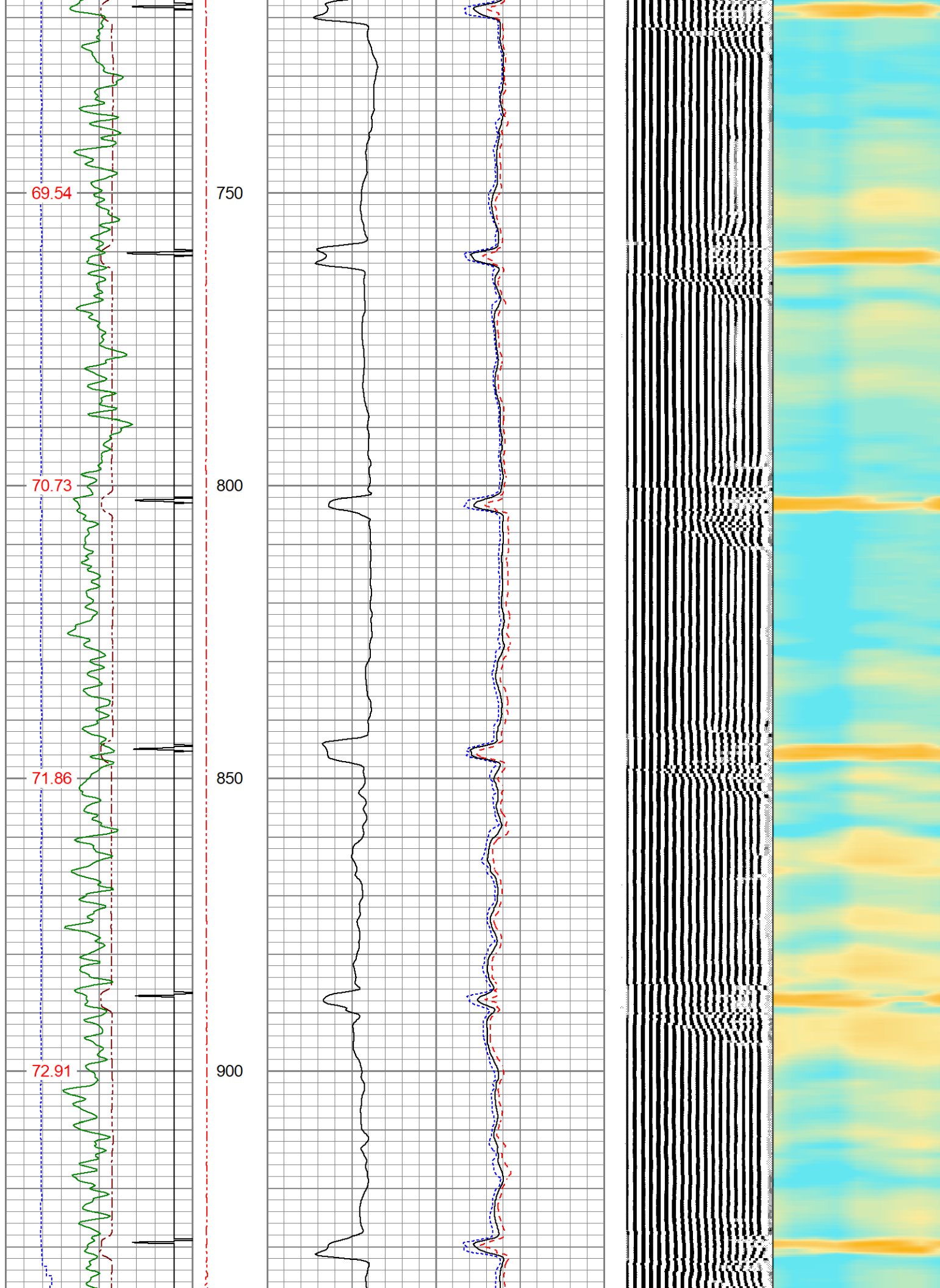
270 3FT TT (usec) 170	LTEN	3' Amplitude	0 Sector Min Amp150	200 VDL (usec) 1200	1 Sector Map 8
-9 CCL 1	(lb)	(mV) 100	Sector Avg Amp		
0 GR 150	0 2000	3' Amplified Amplitude X 5	0 150		
-150 LSPD (ft/min) 150			Sector Max Amp		
TEMP		(mV) 20	0 150		
(degF)					

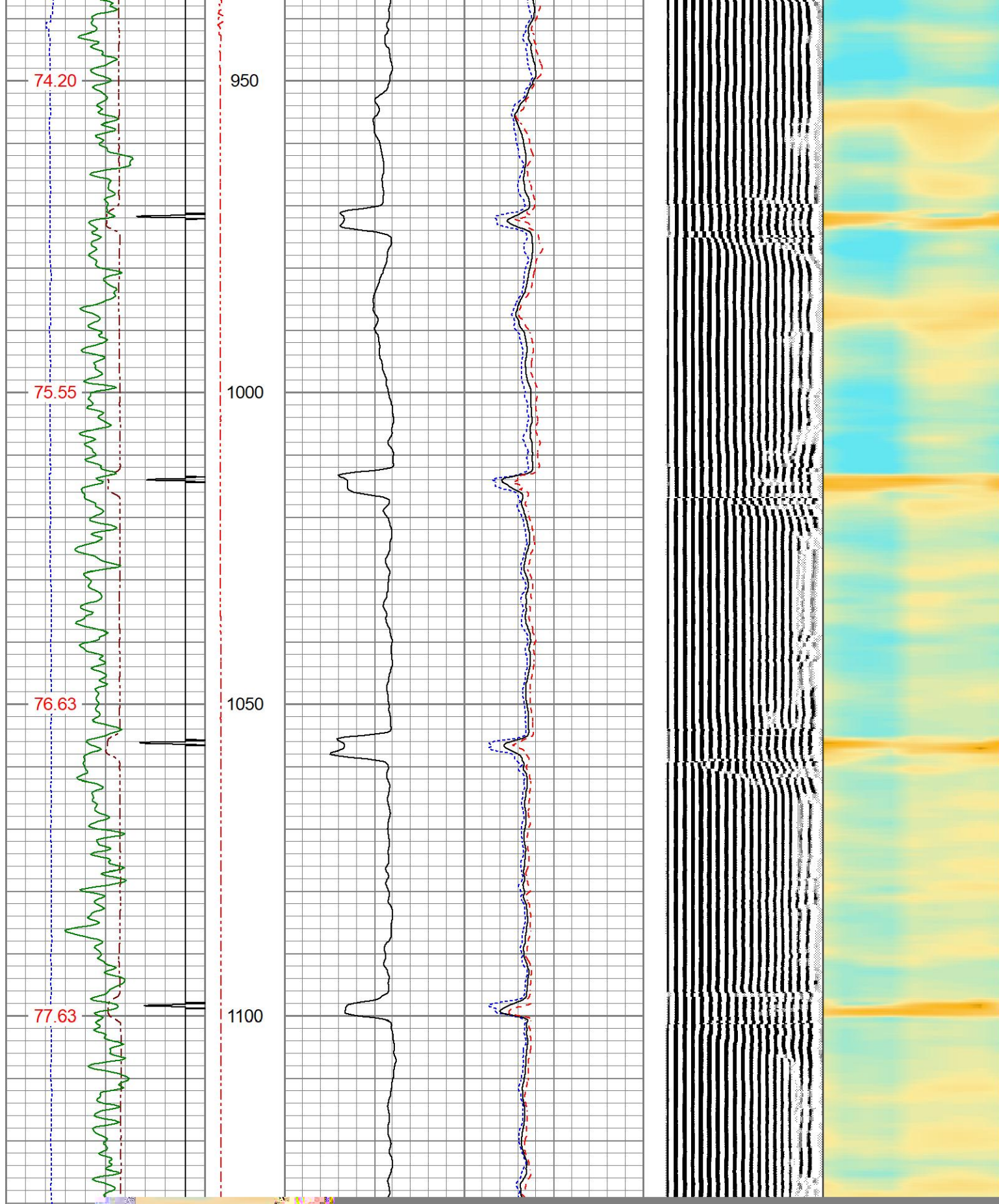


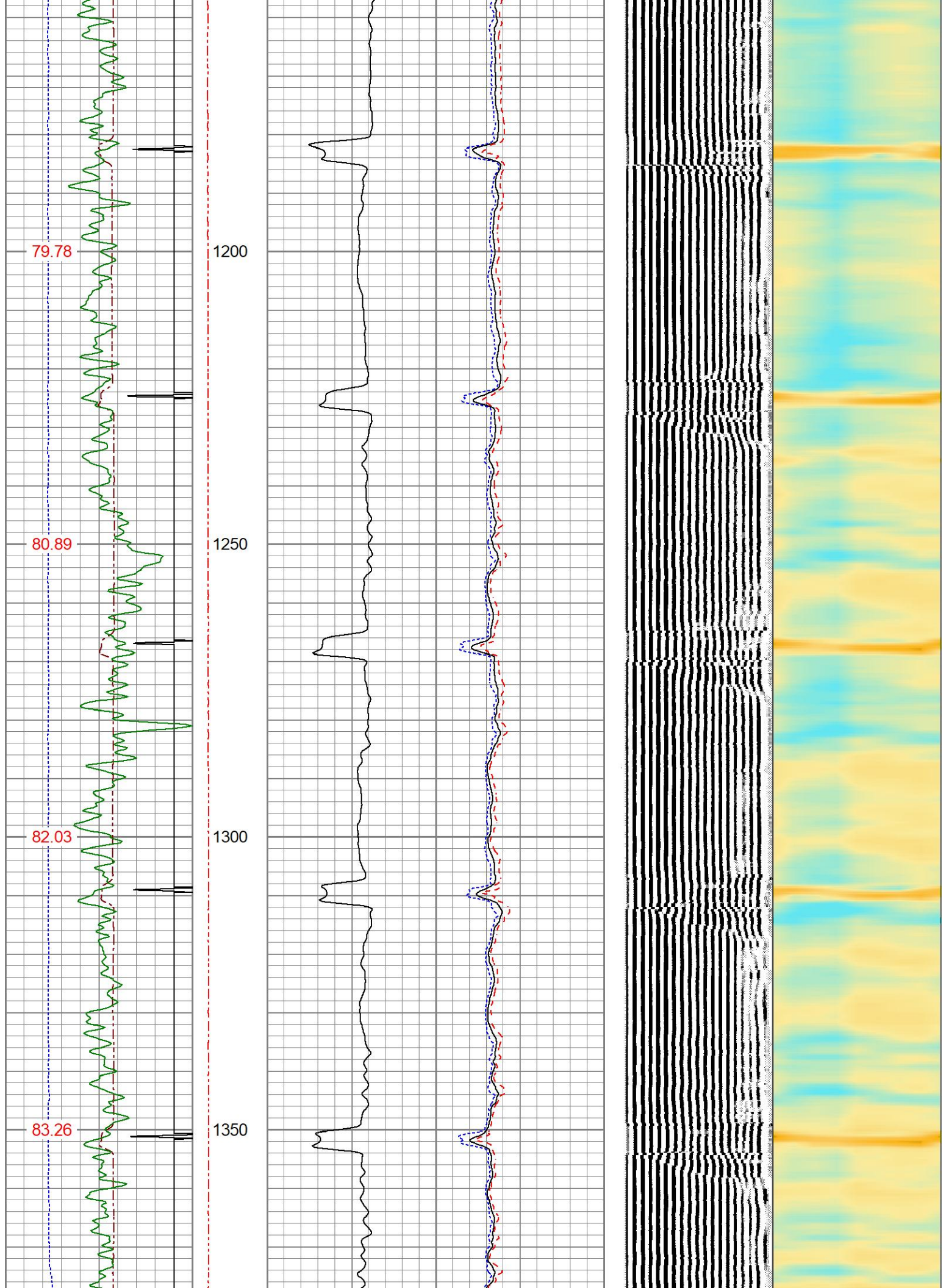


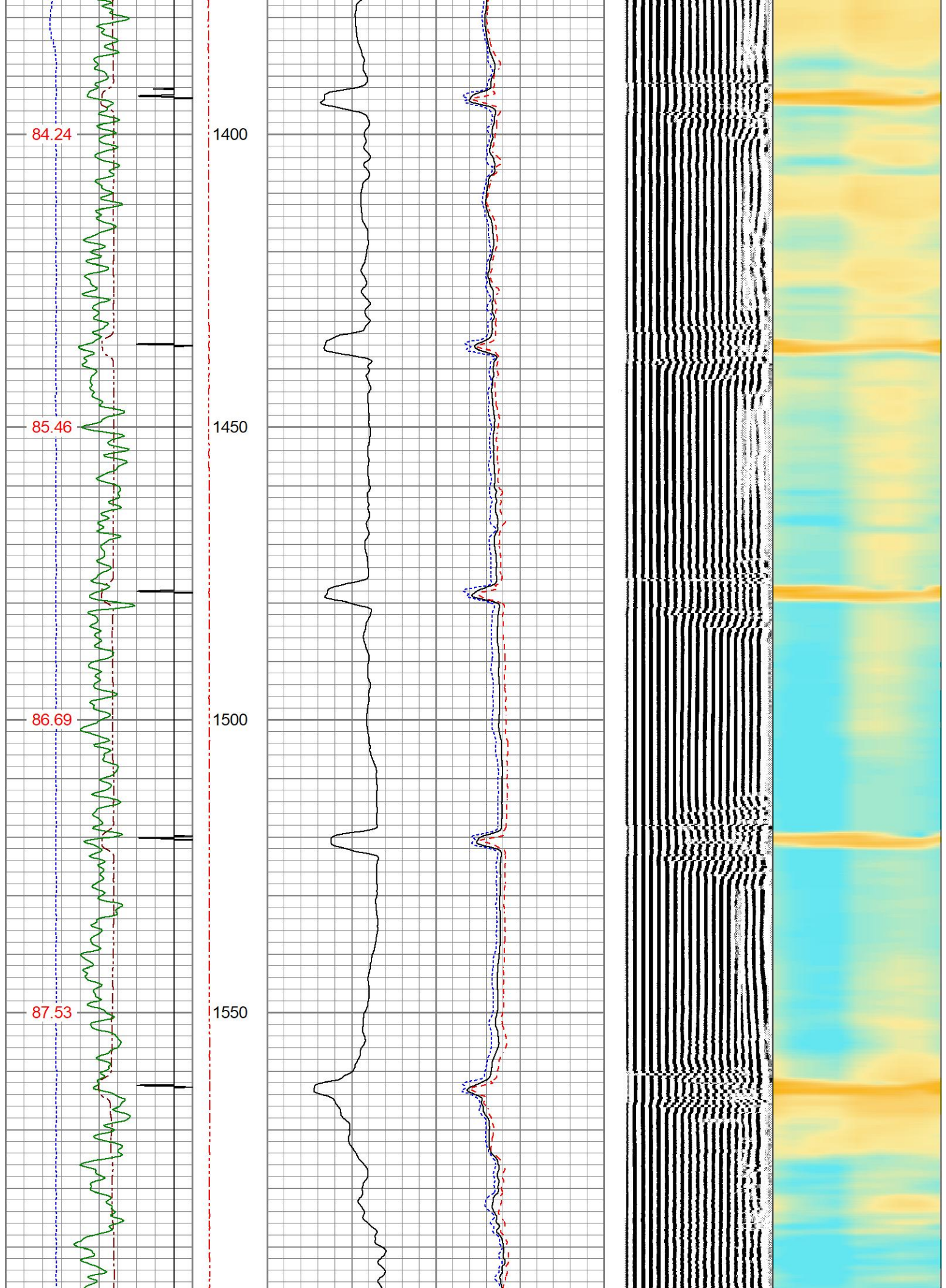


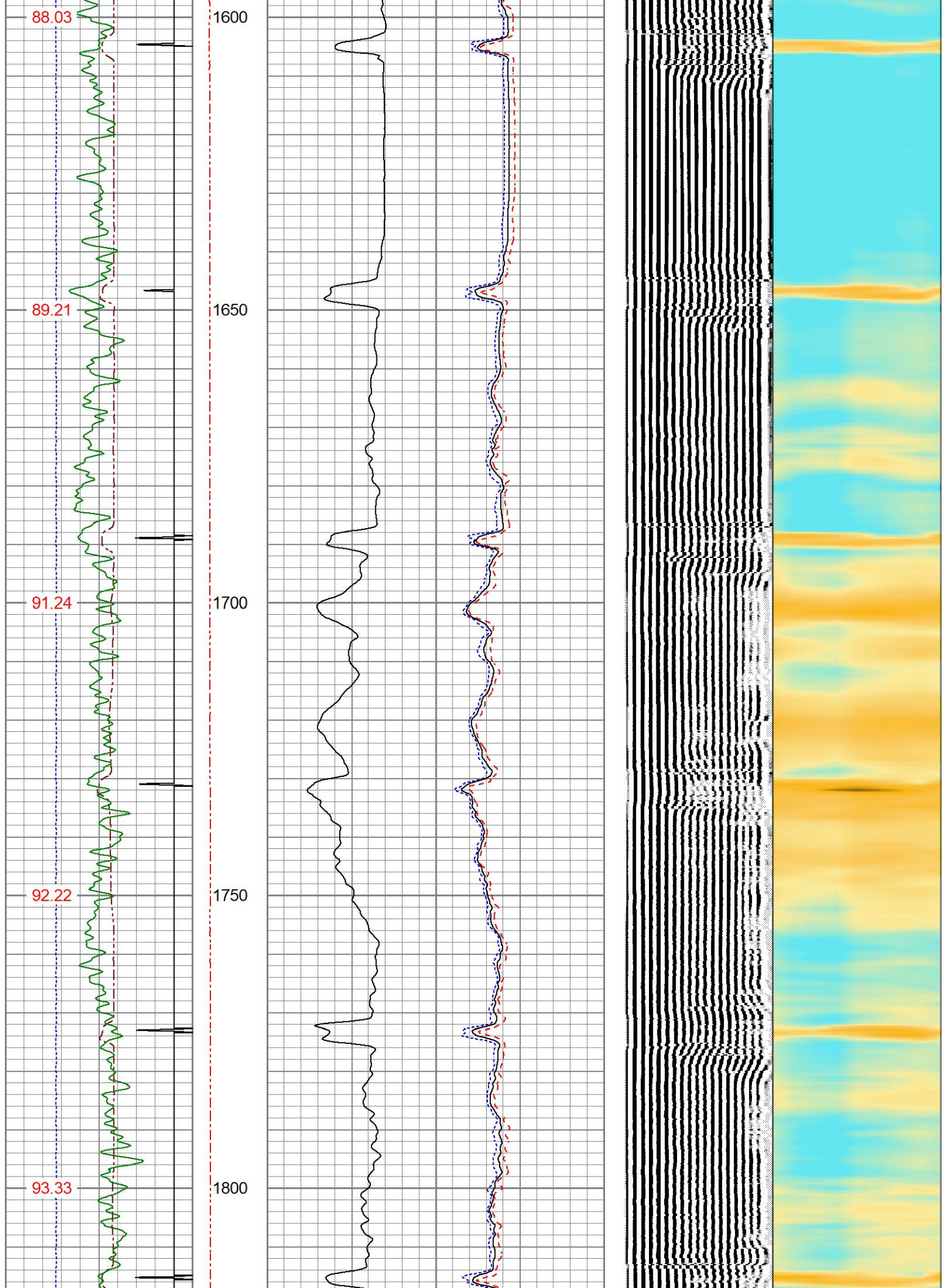


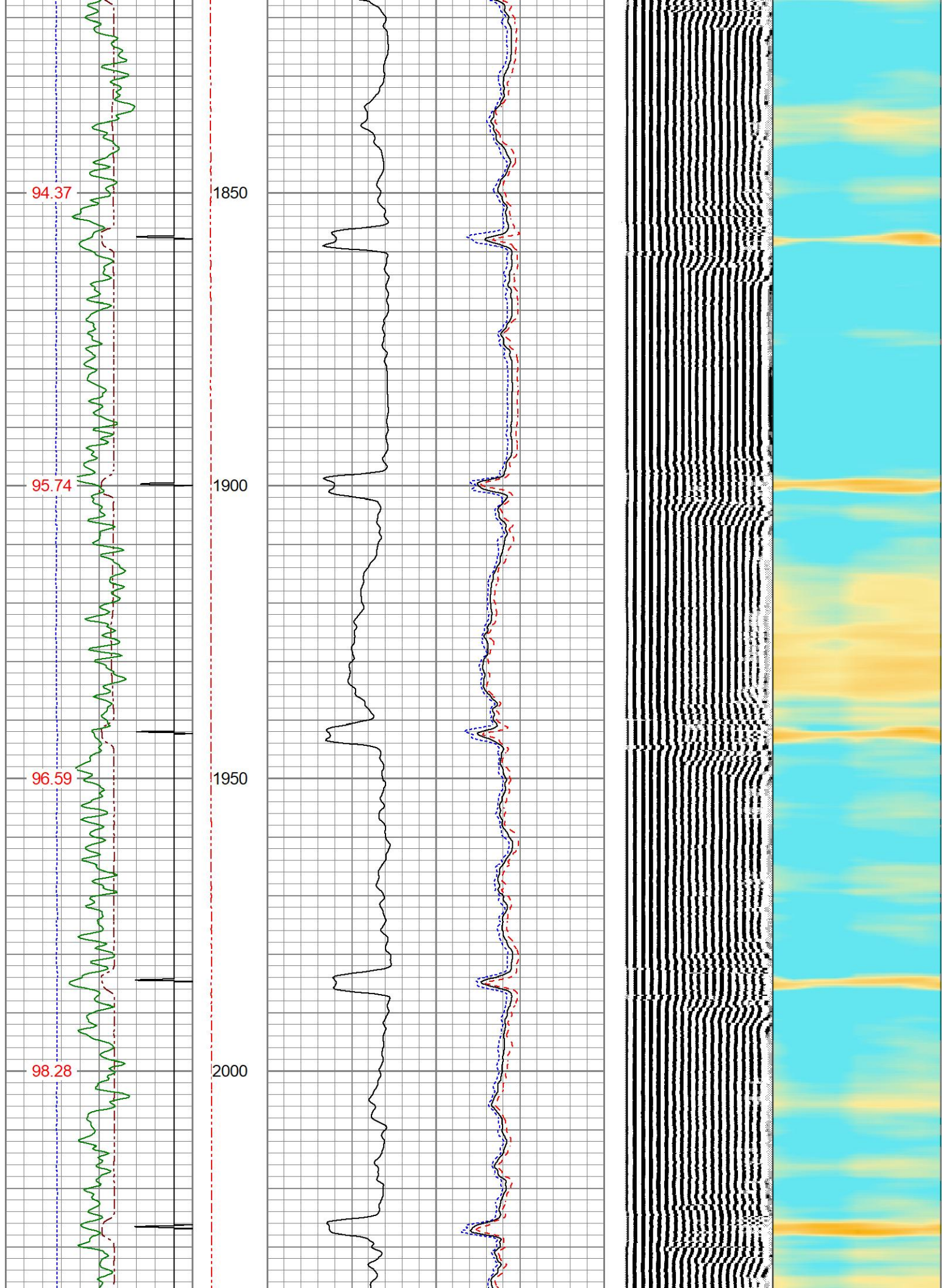


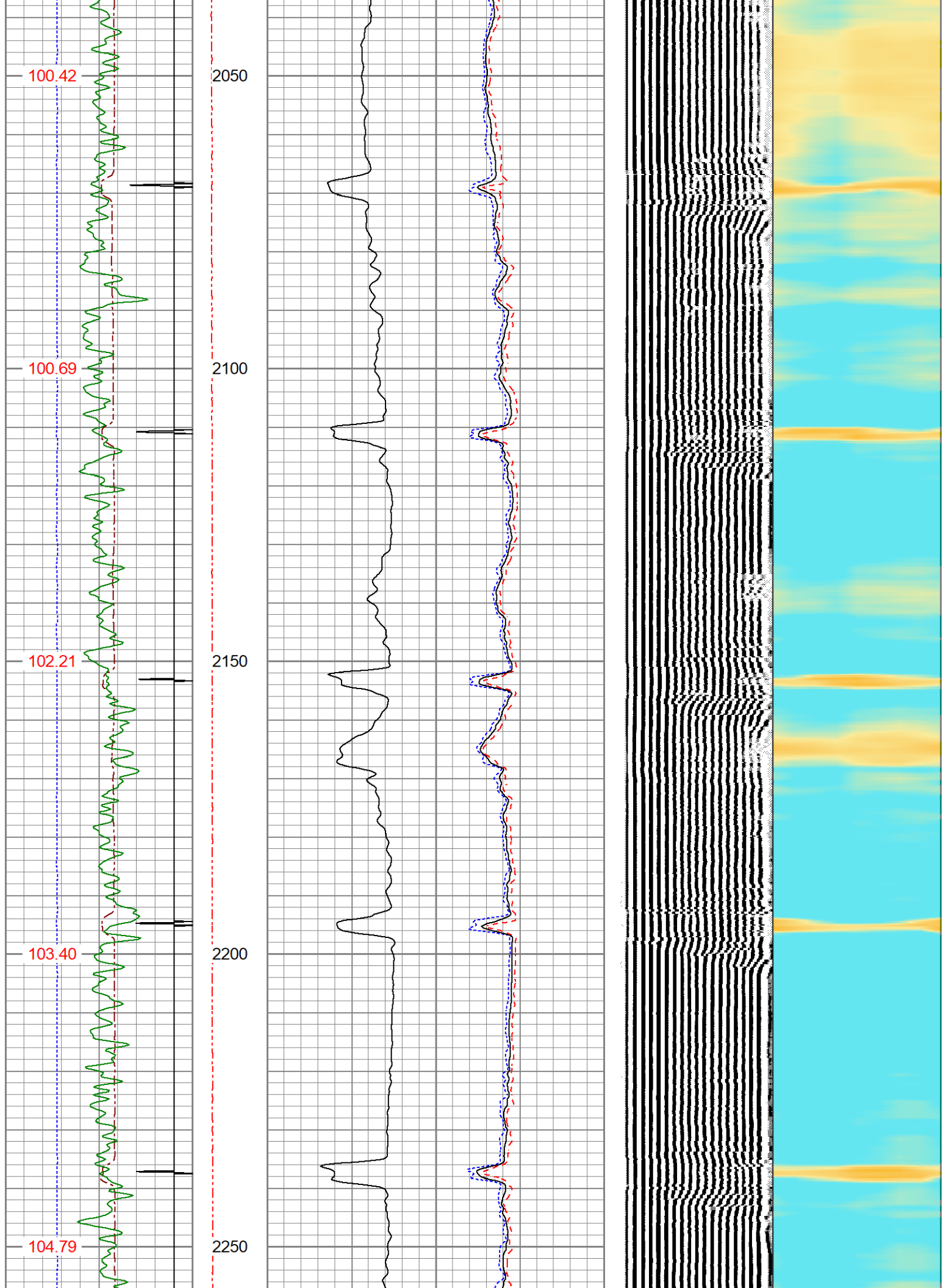


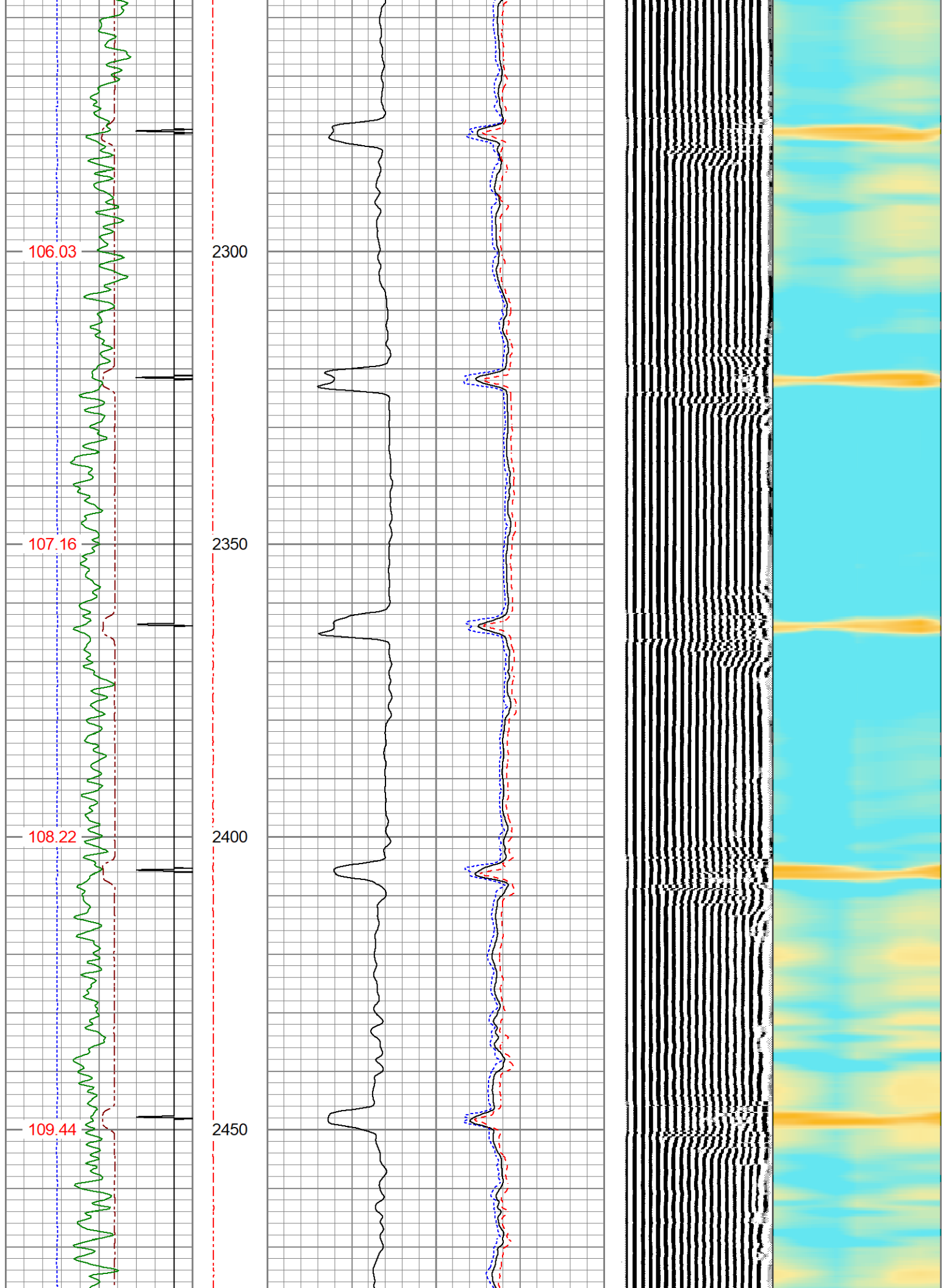


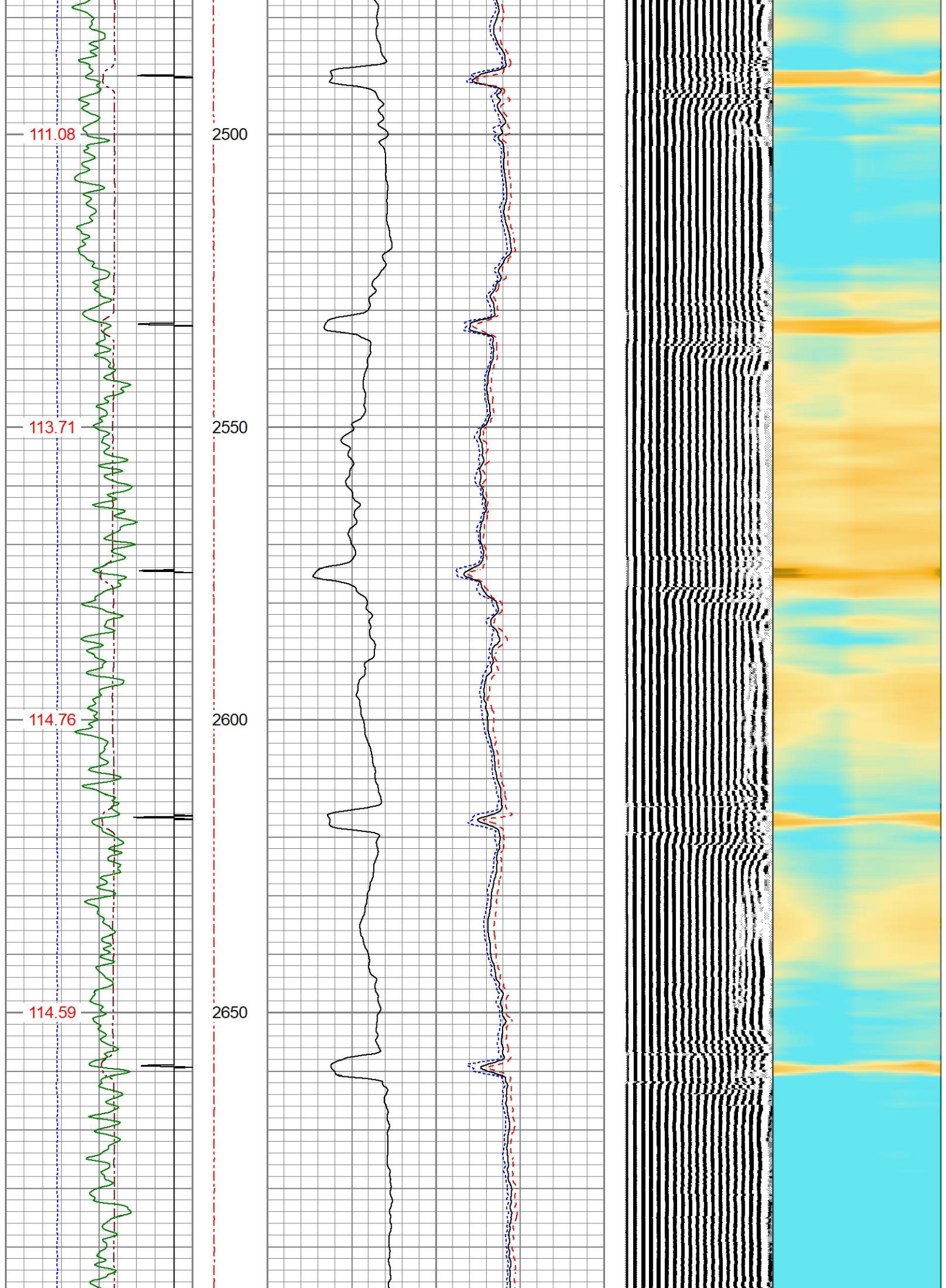


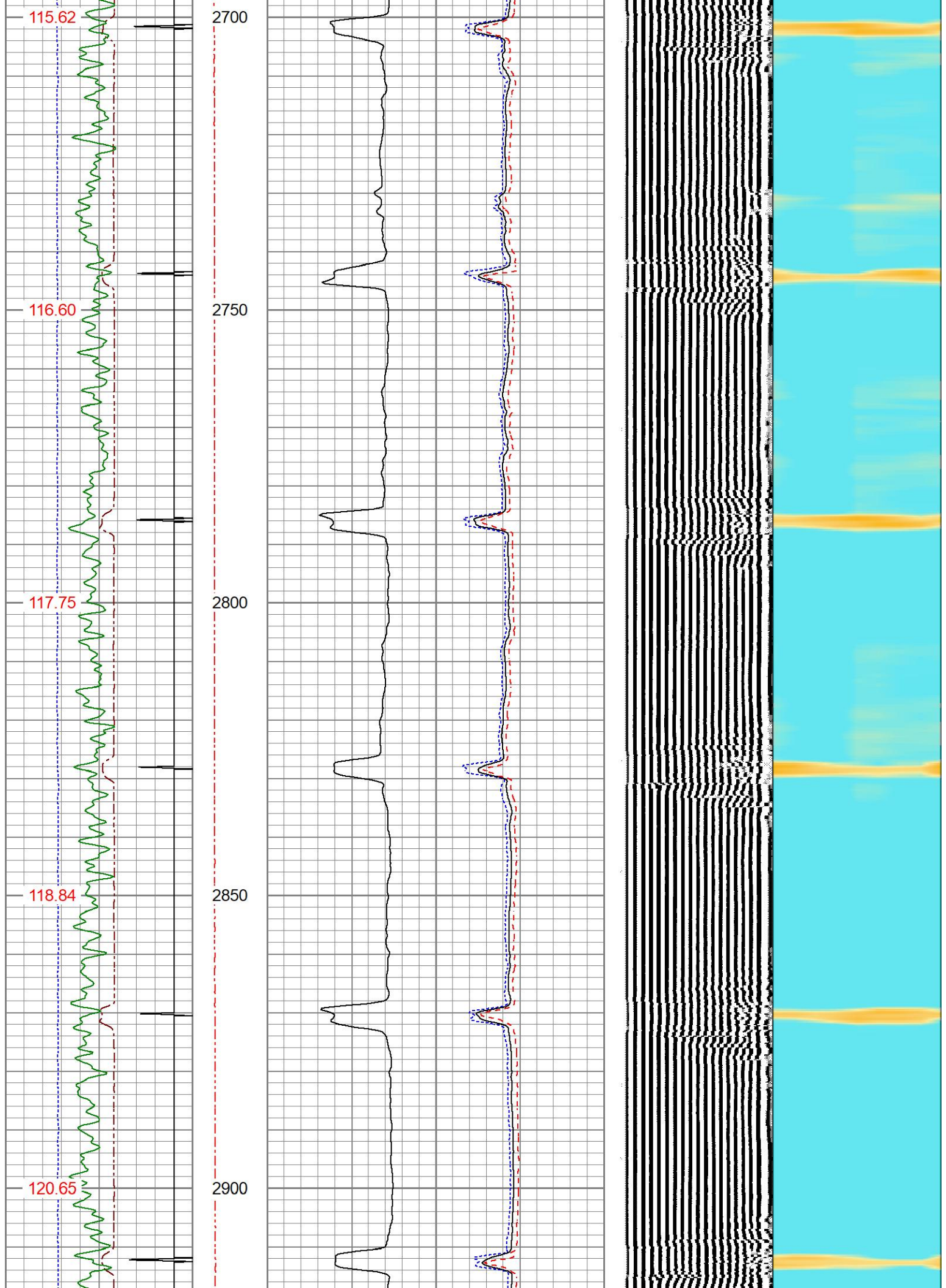


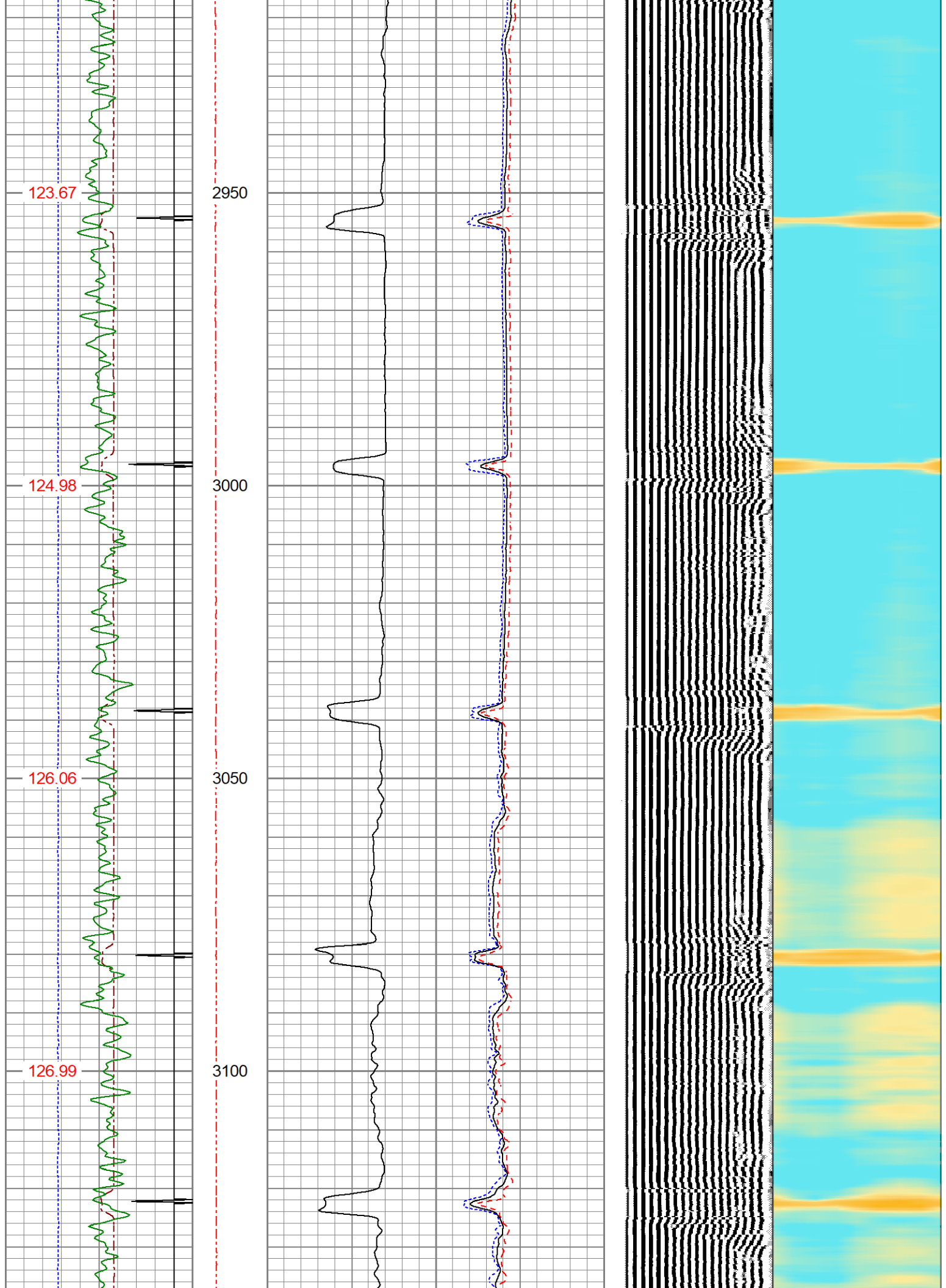


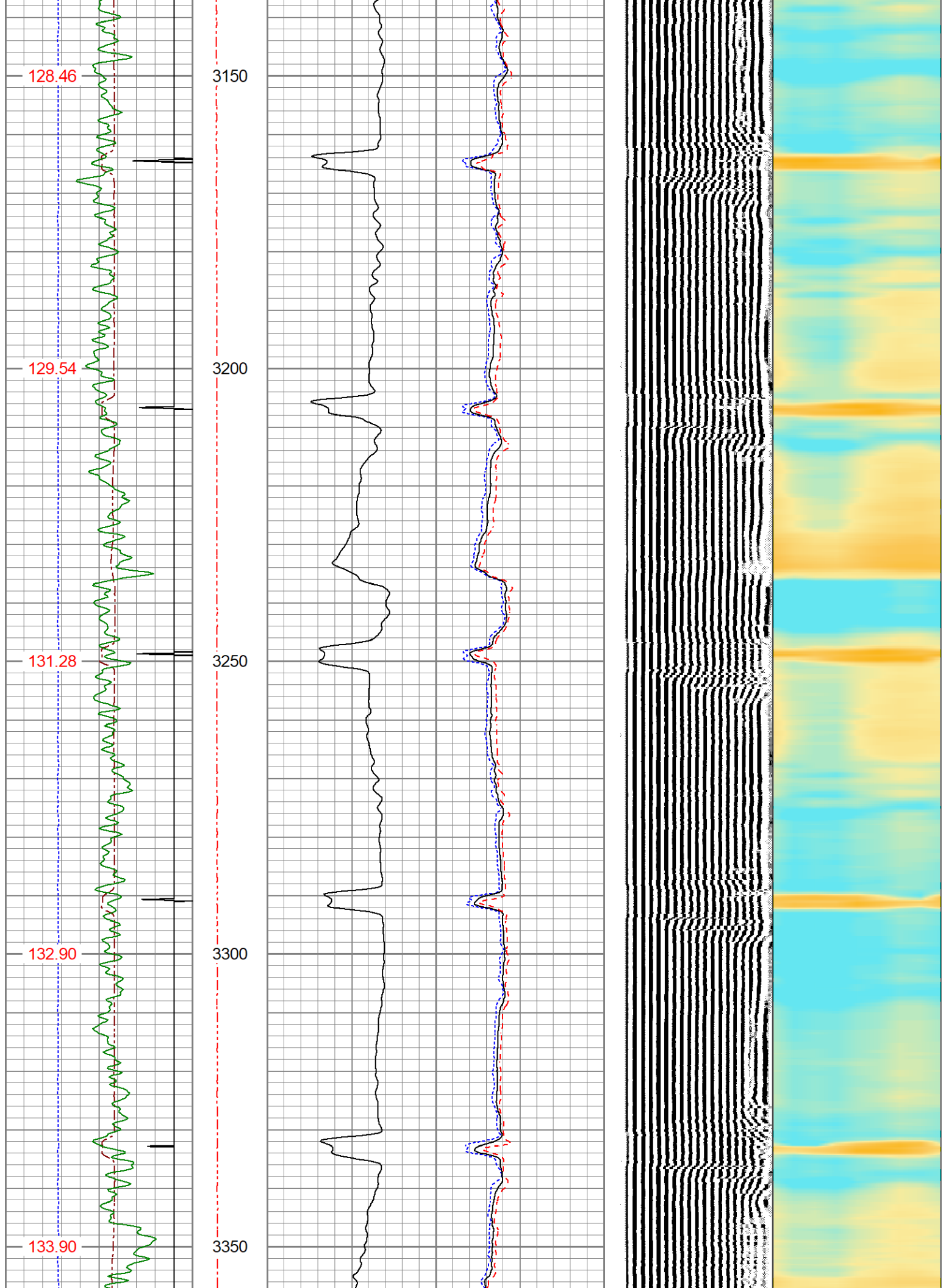


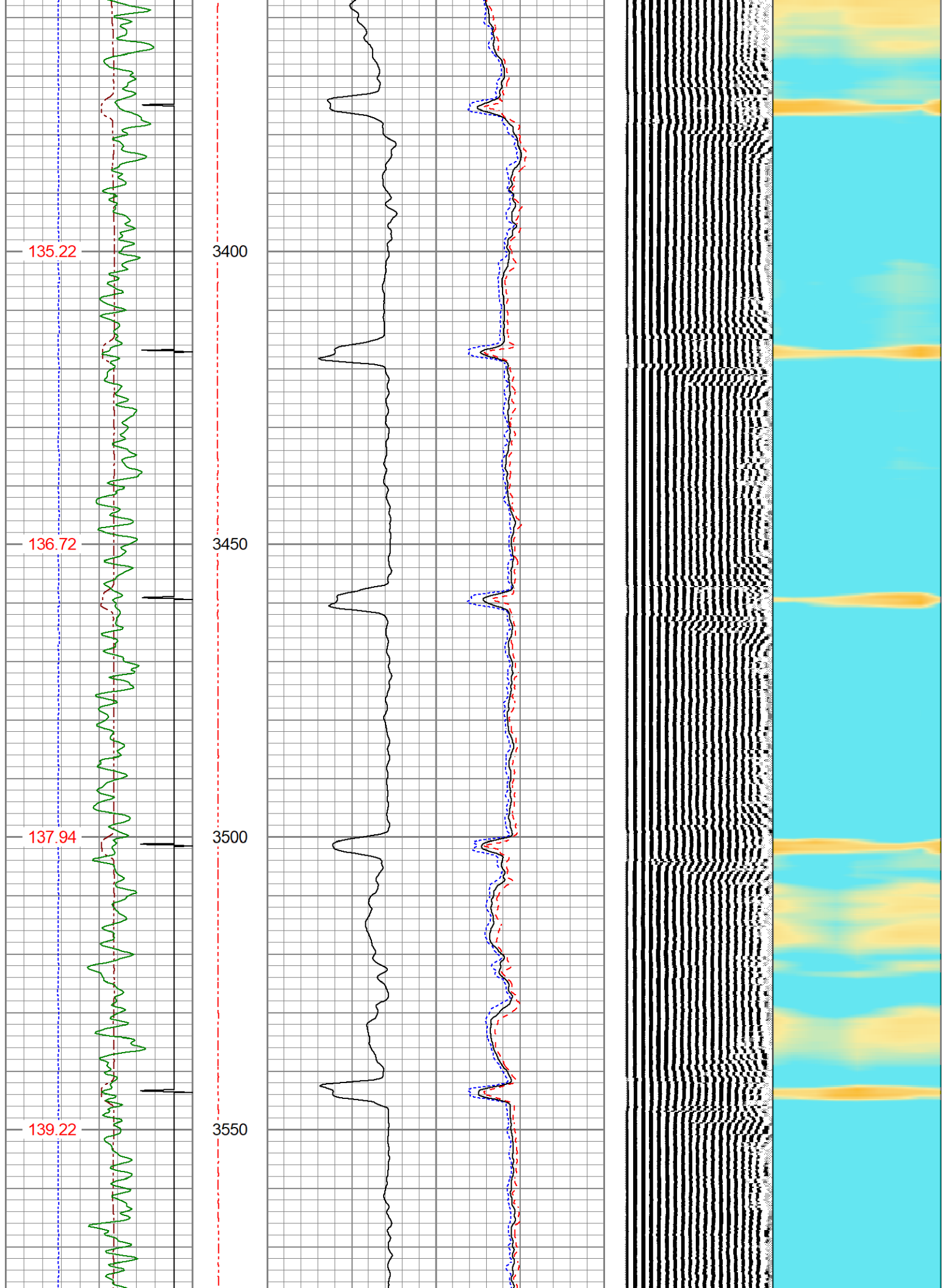


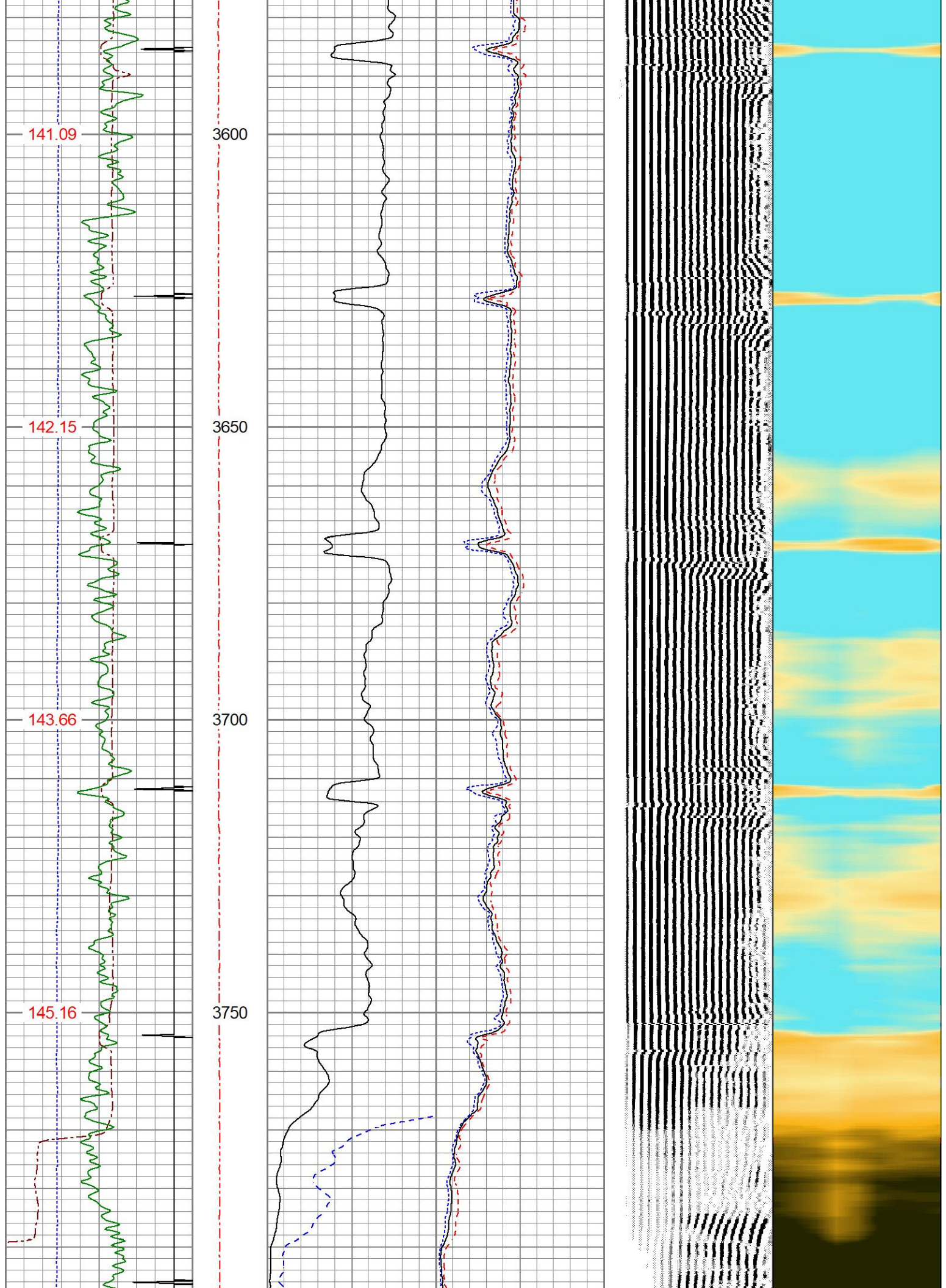


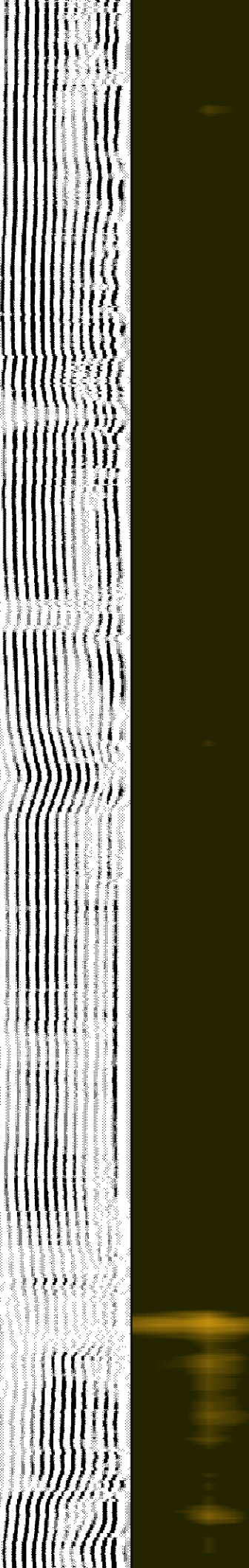
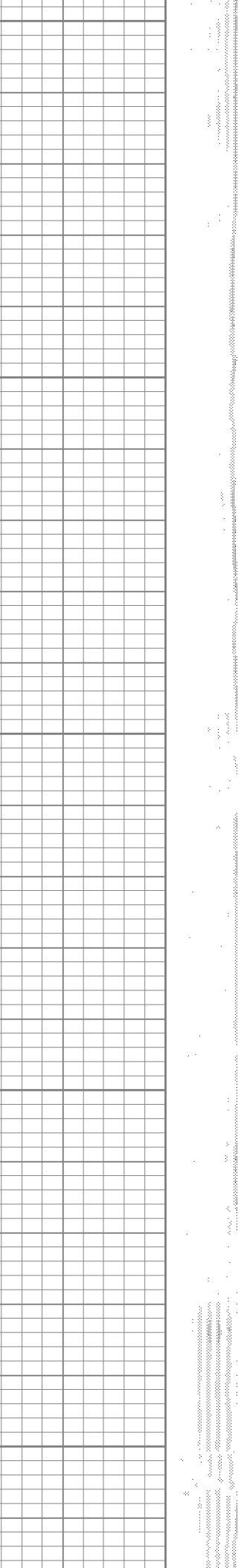
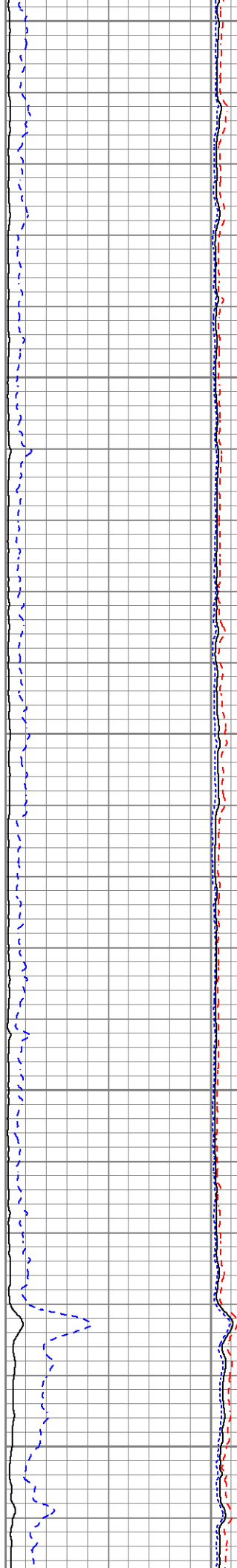
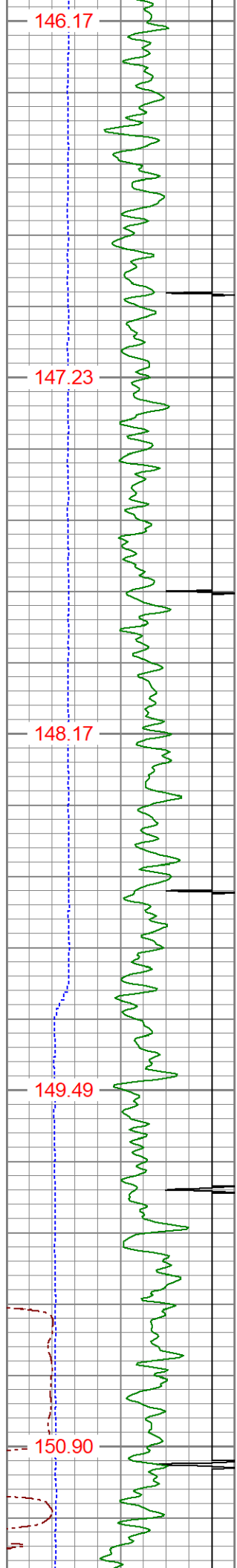


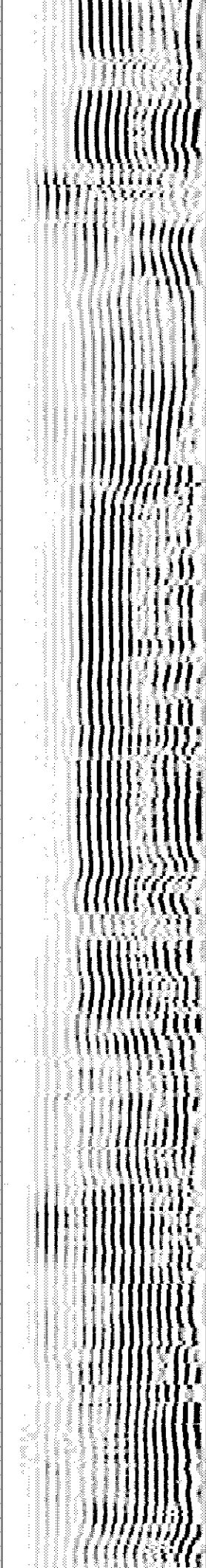
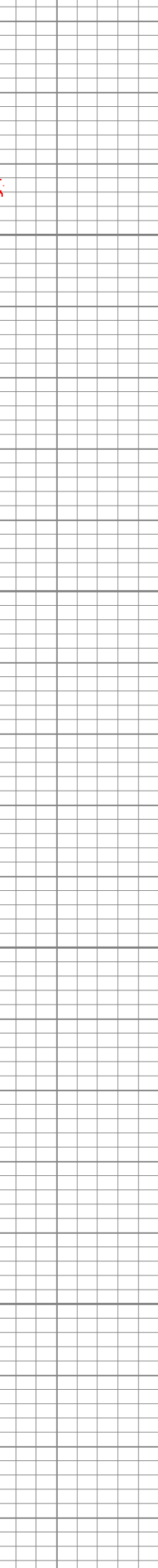
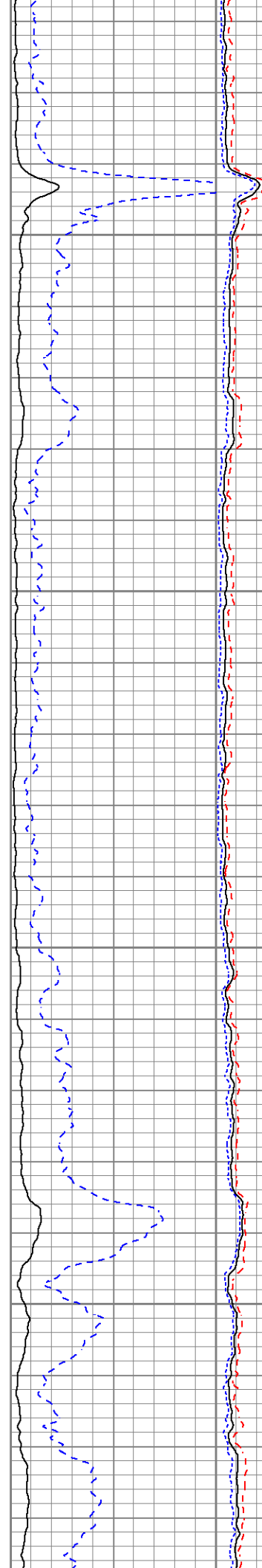
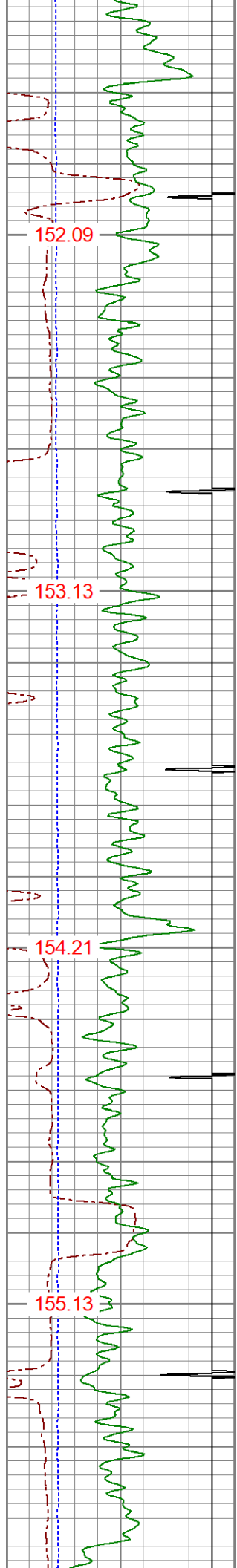


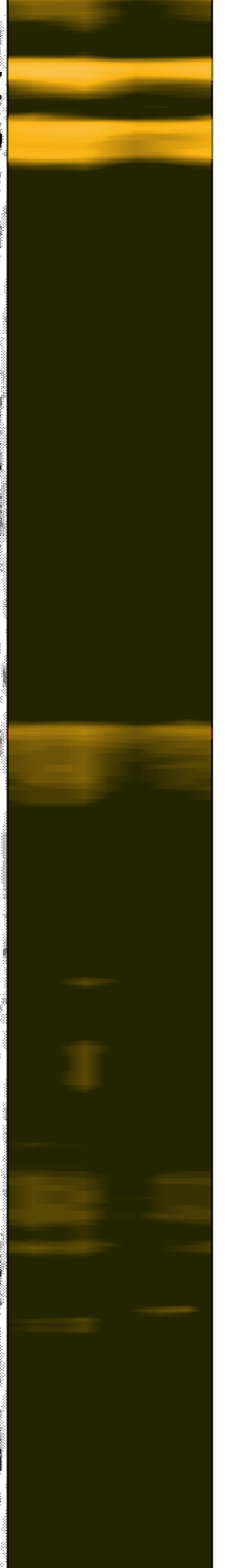
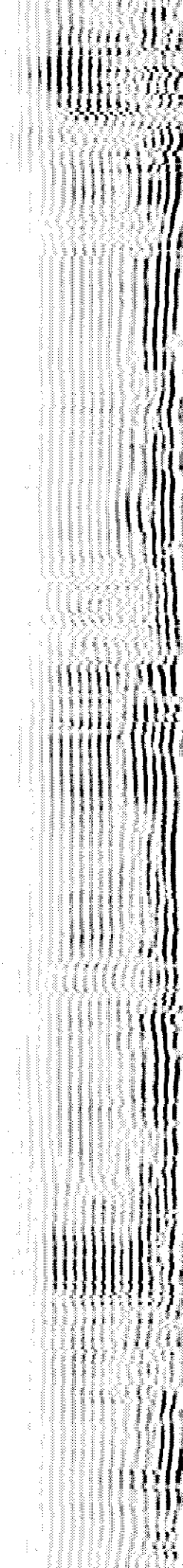
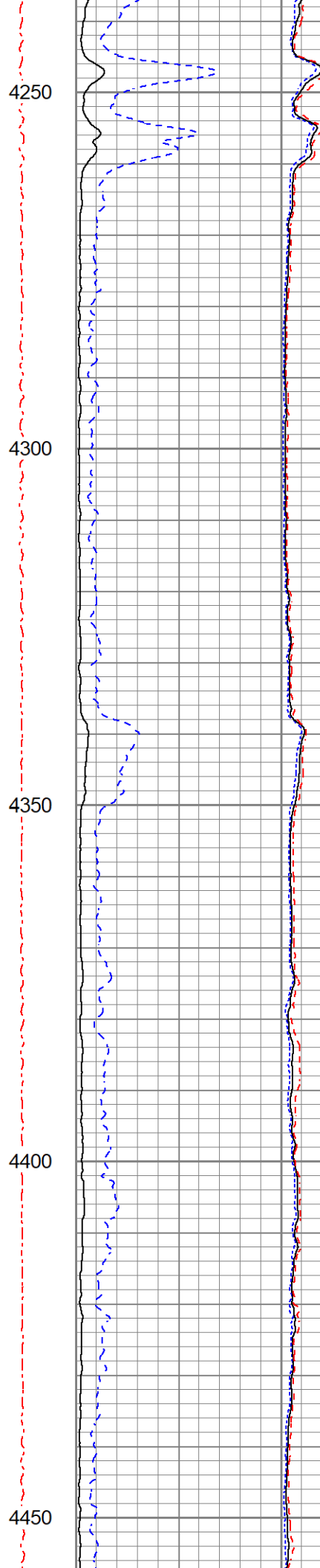
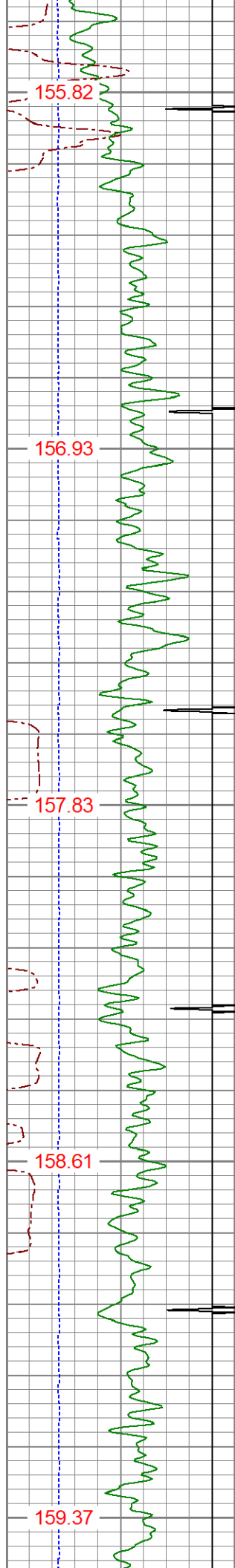


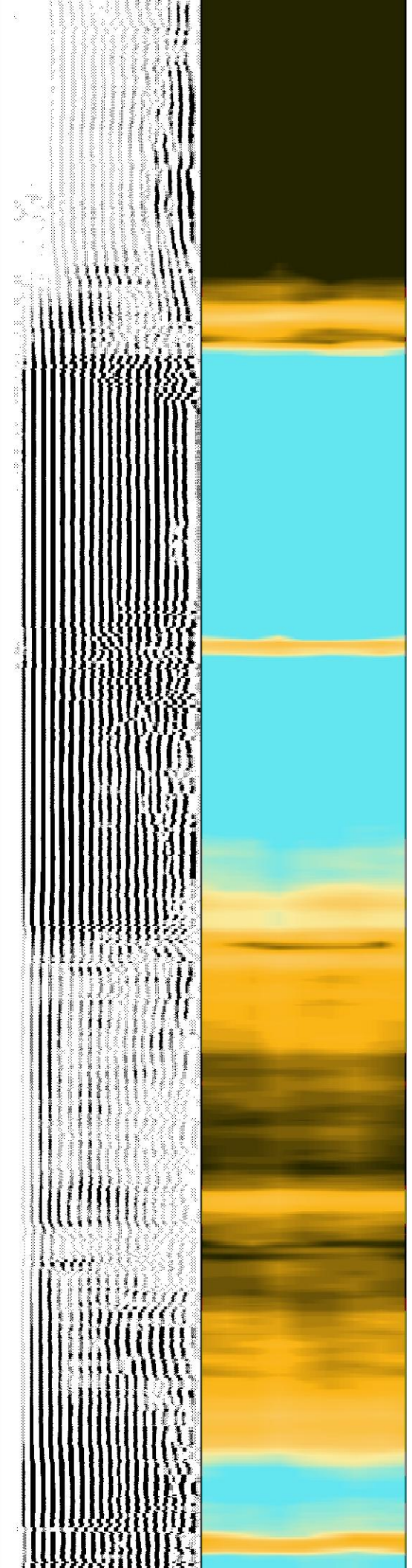
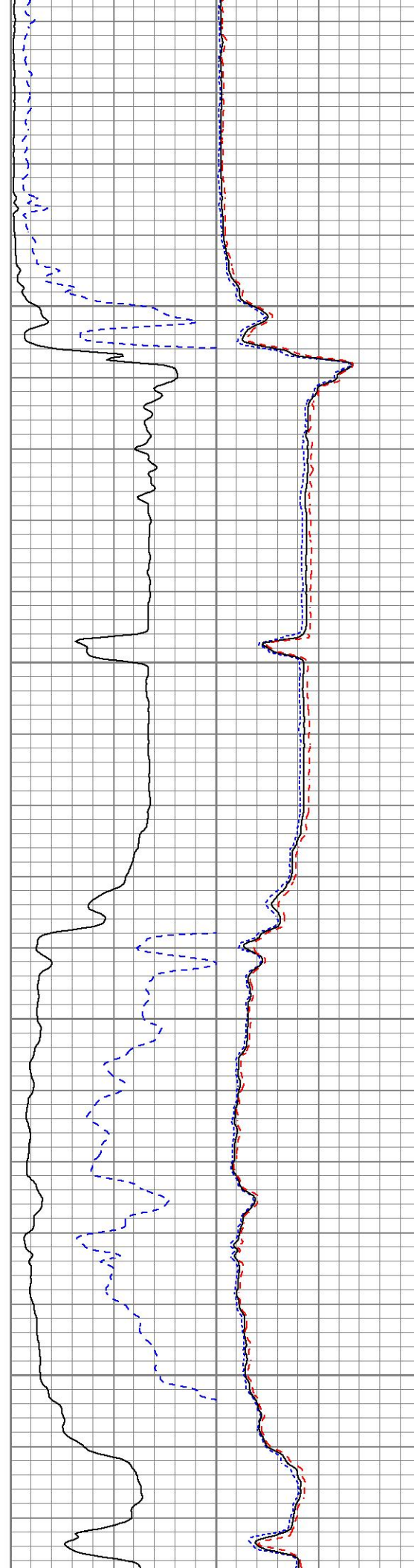
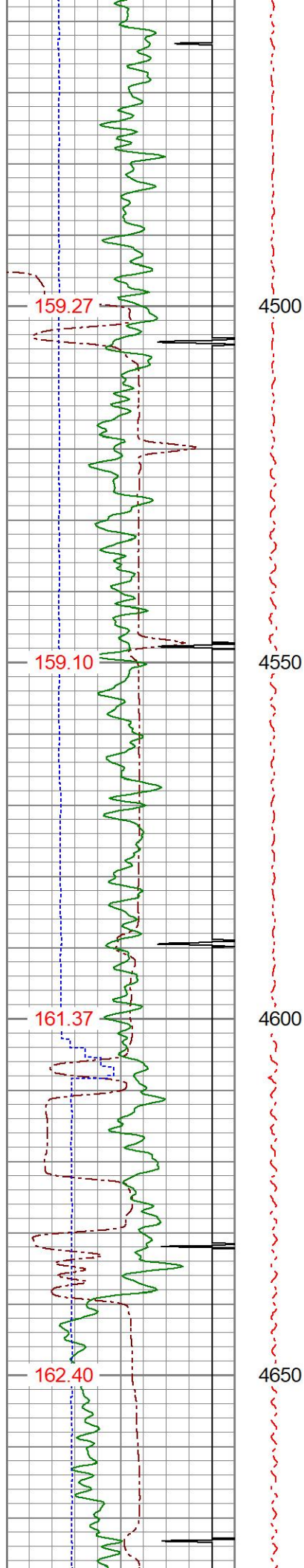


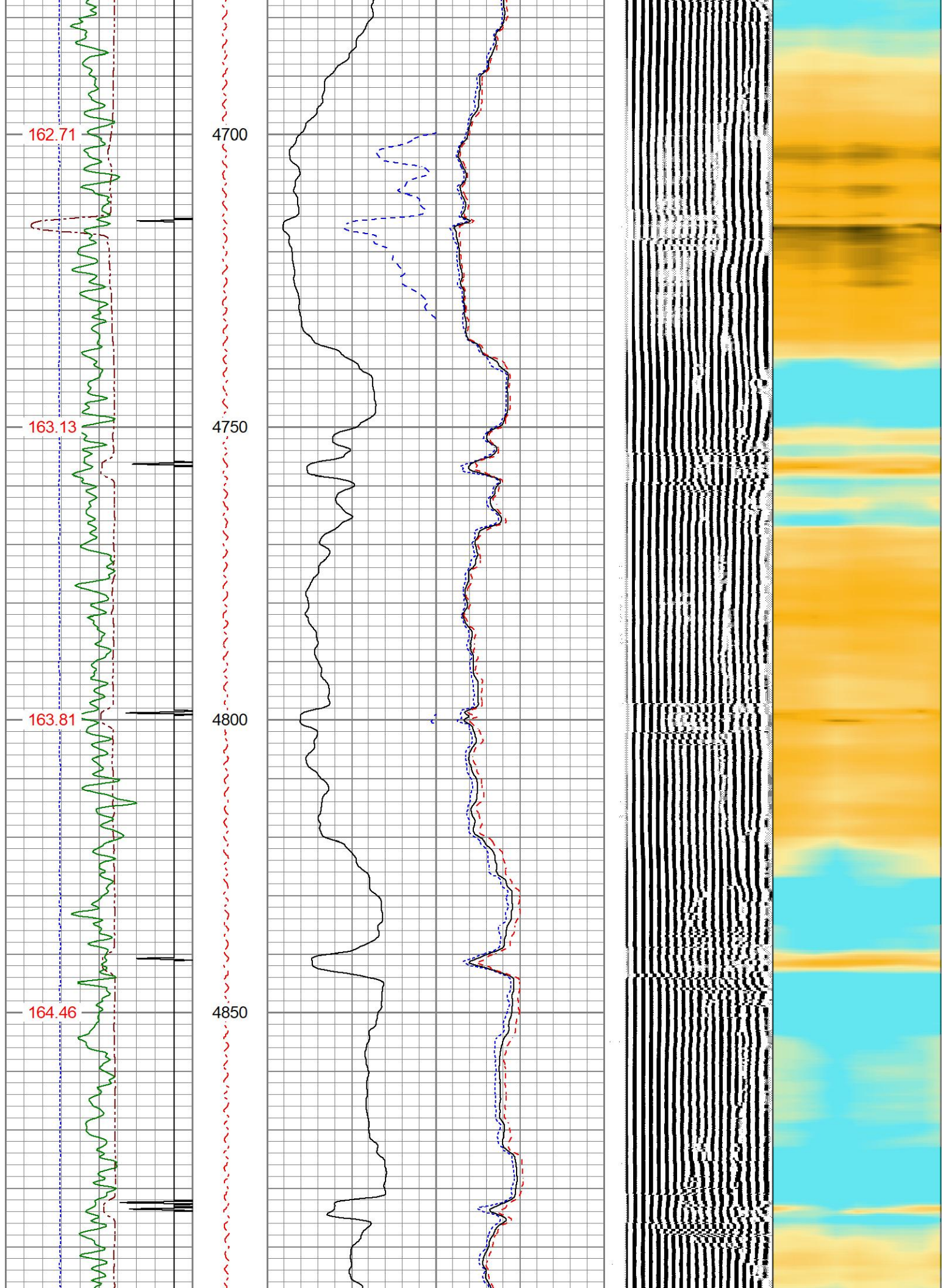


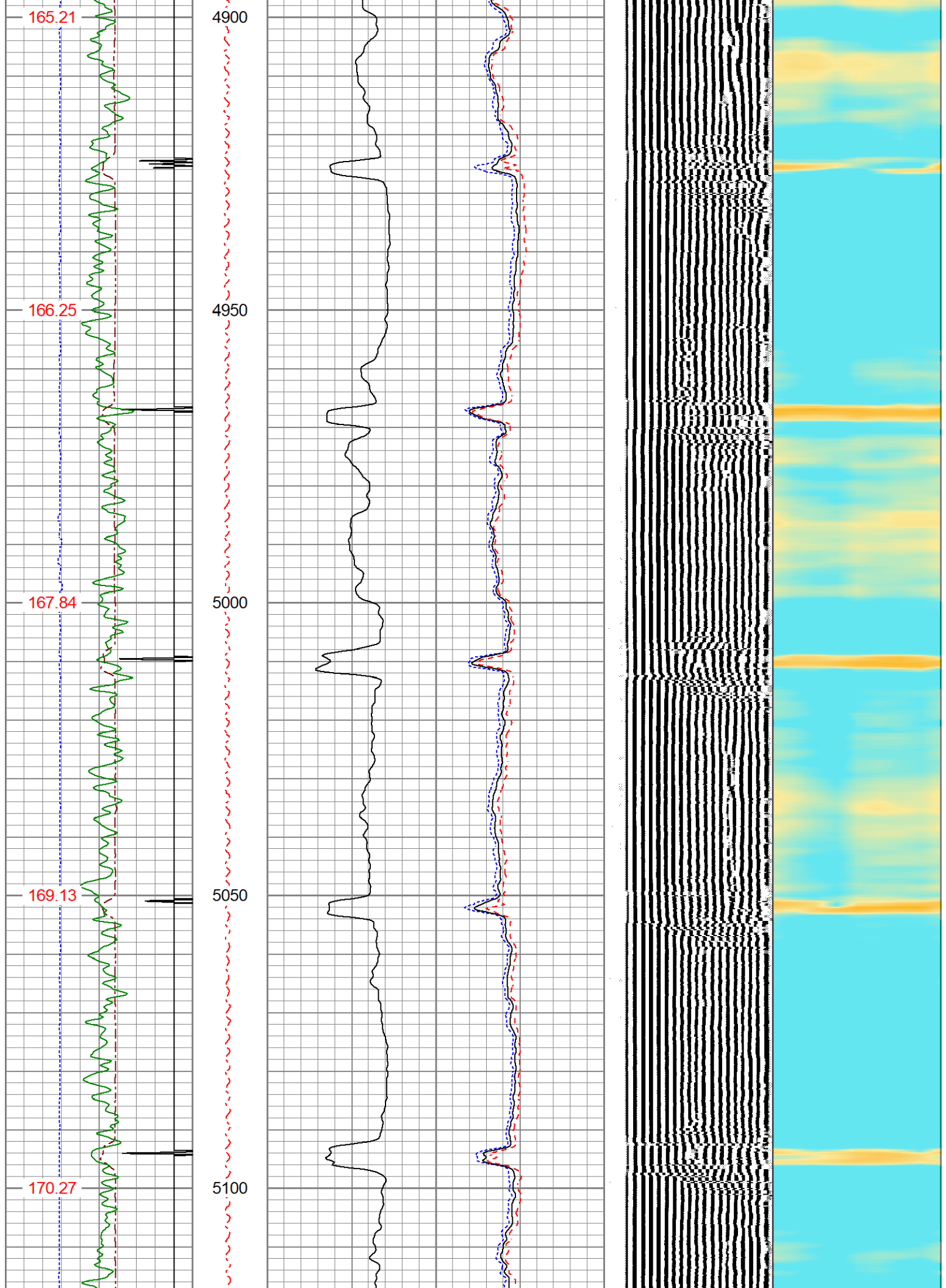


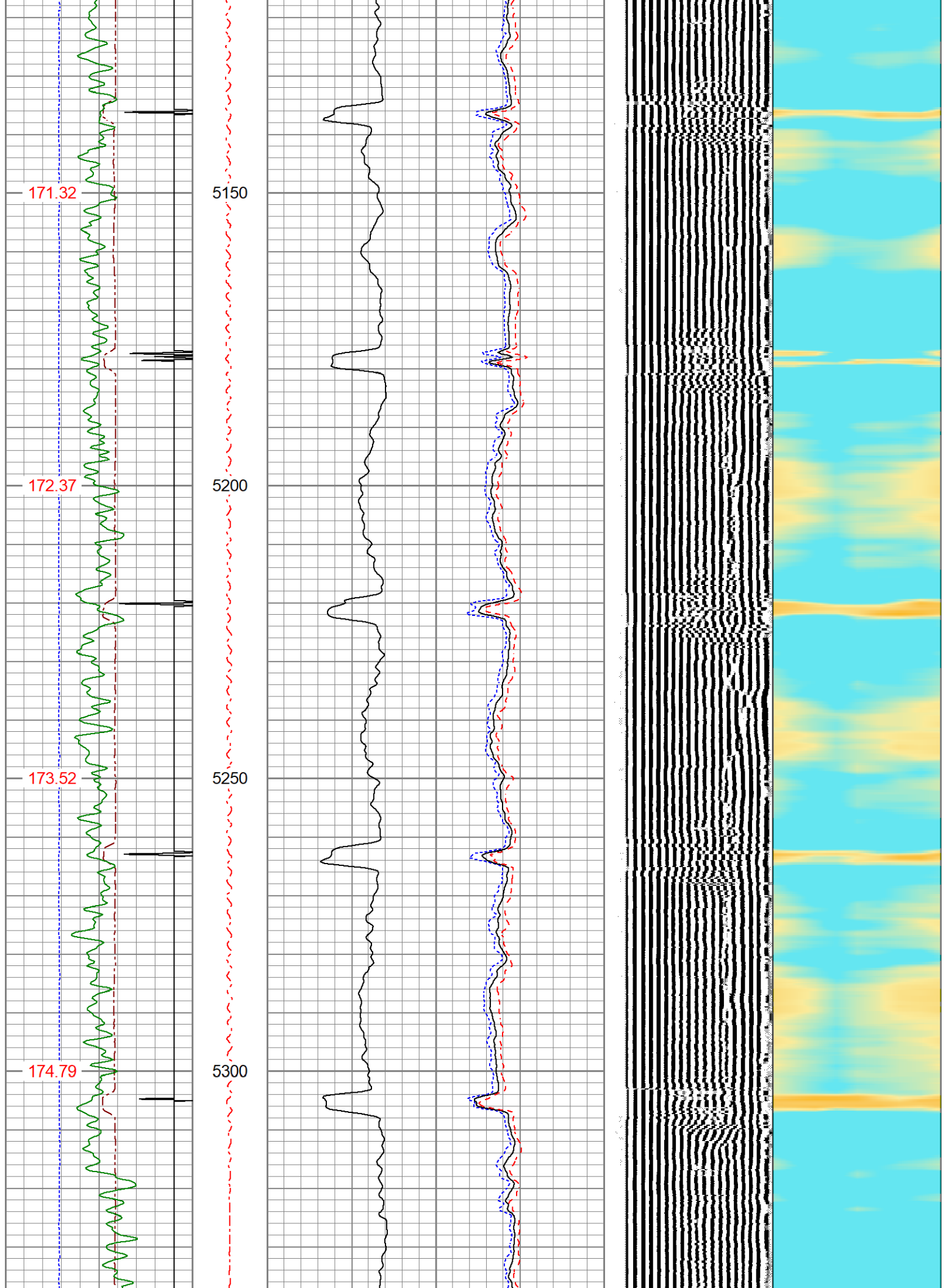


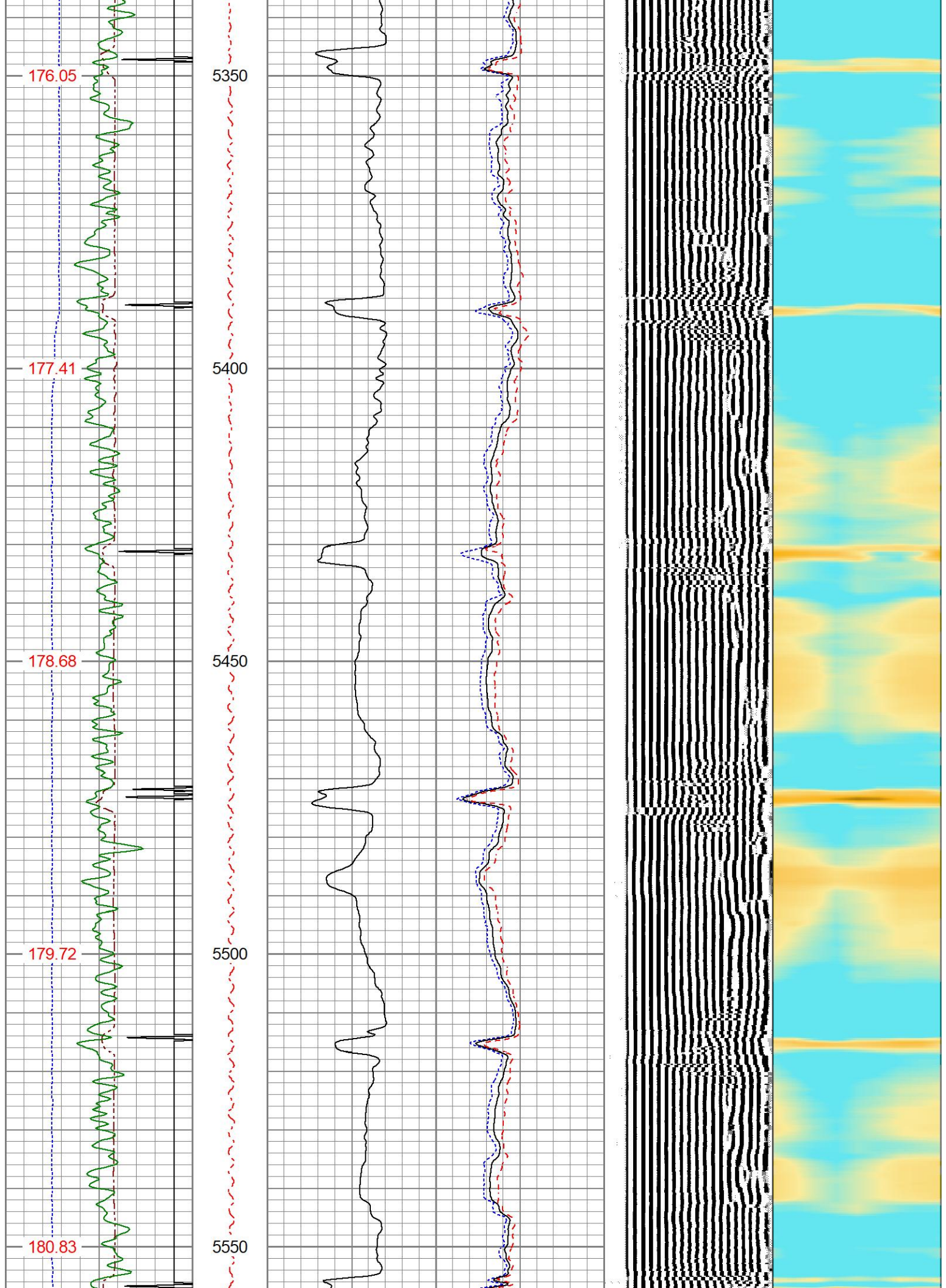


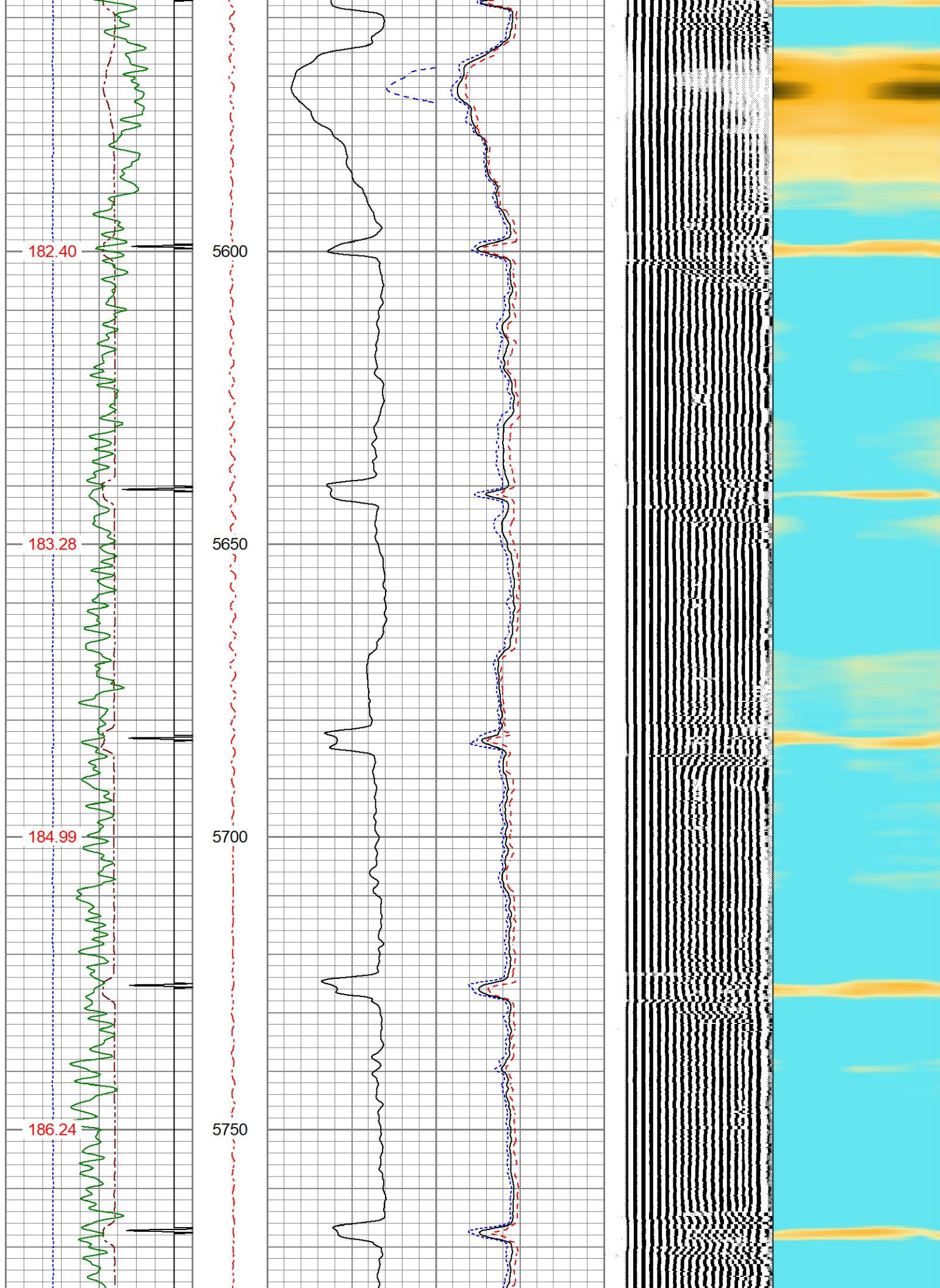


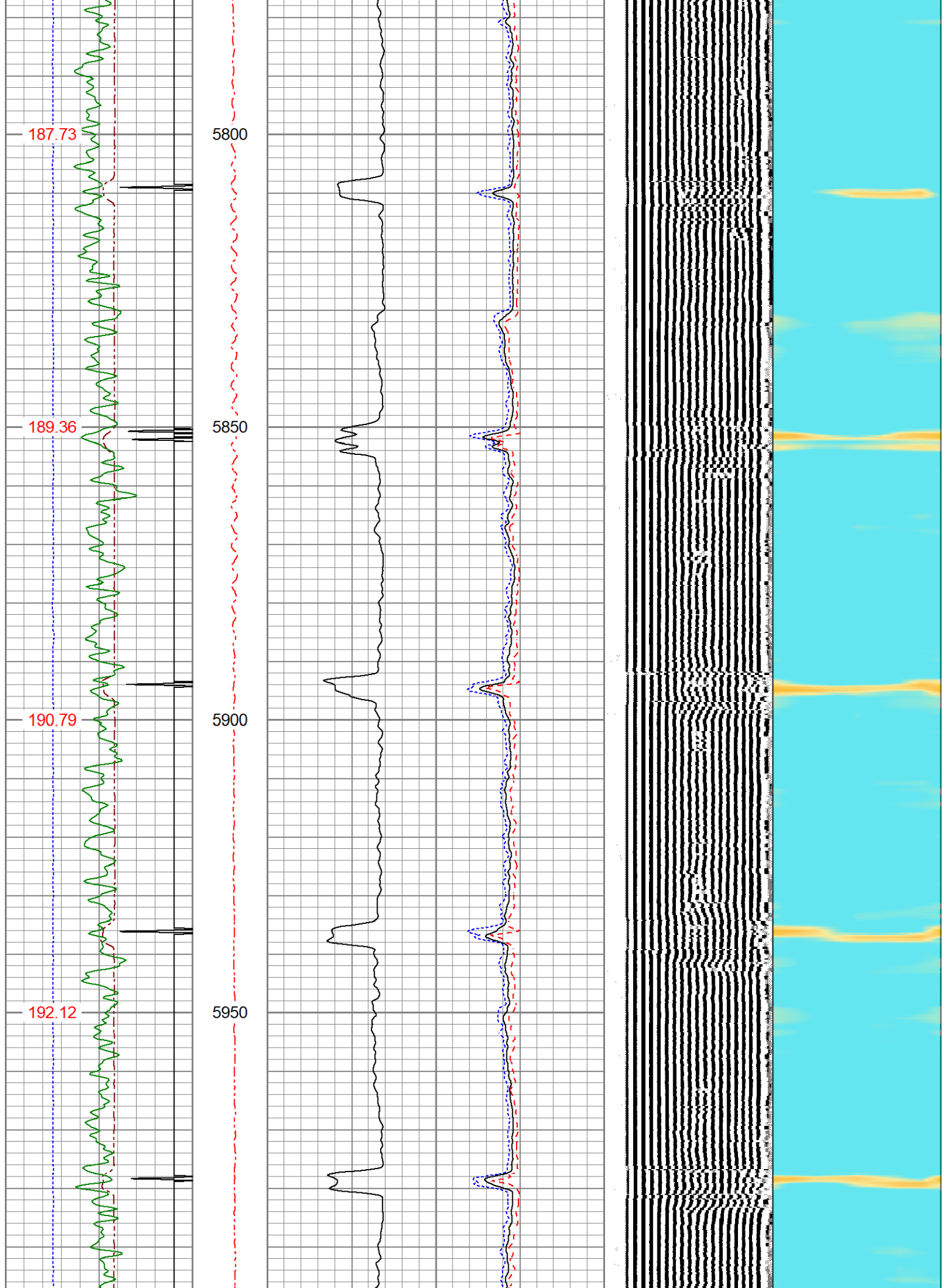


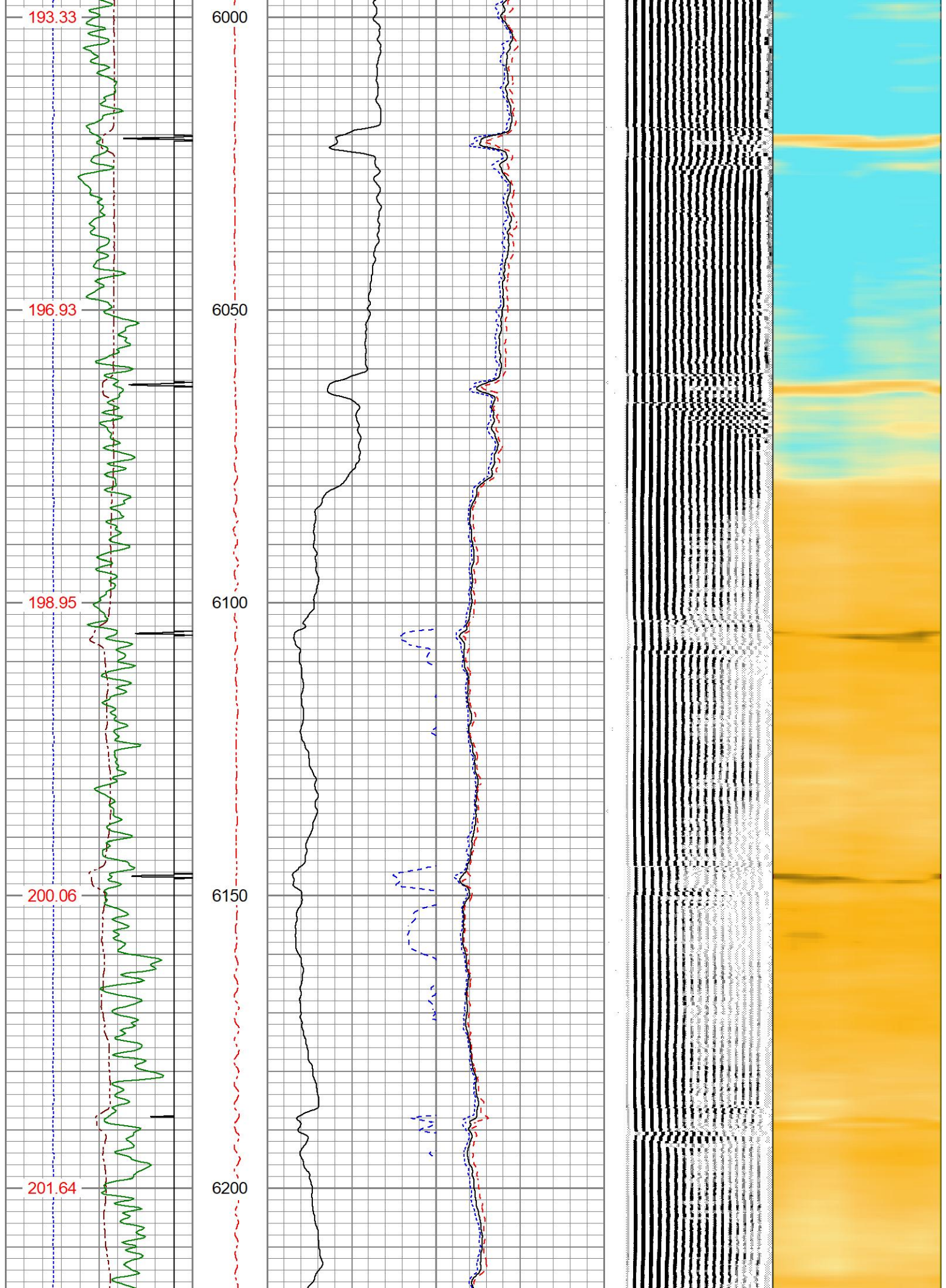


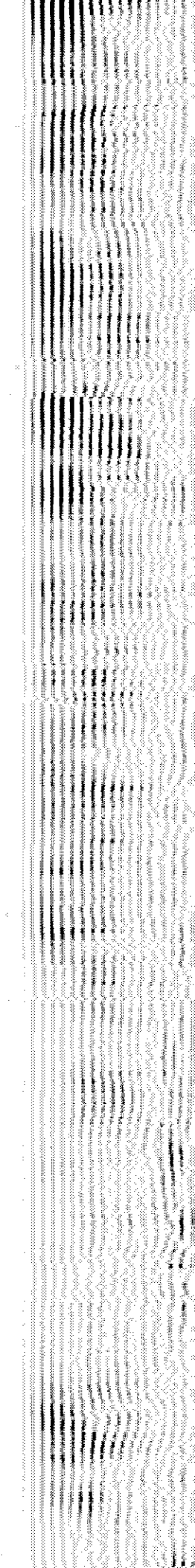
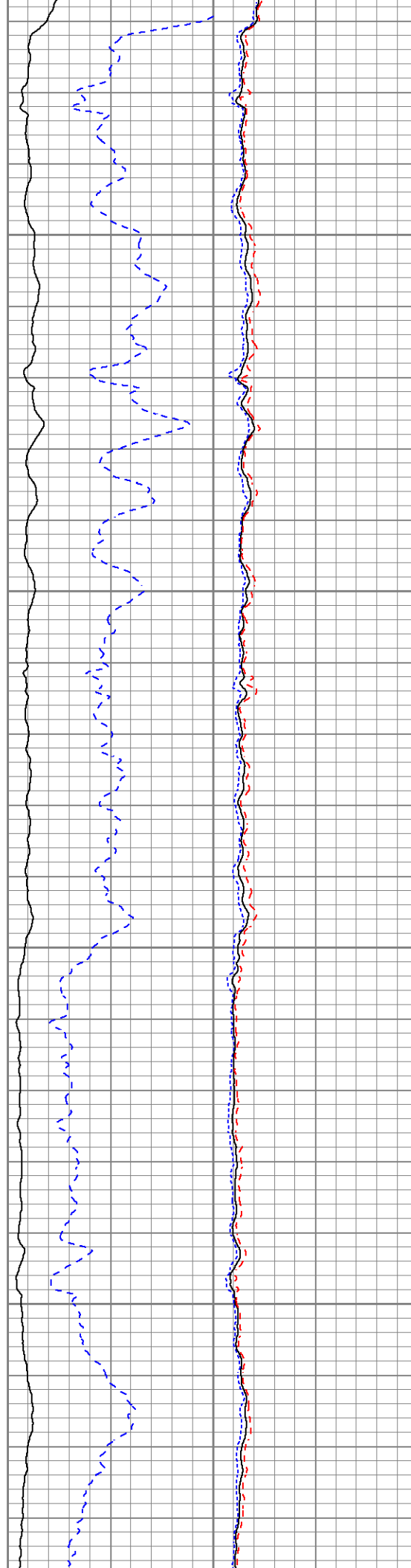
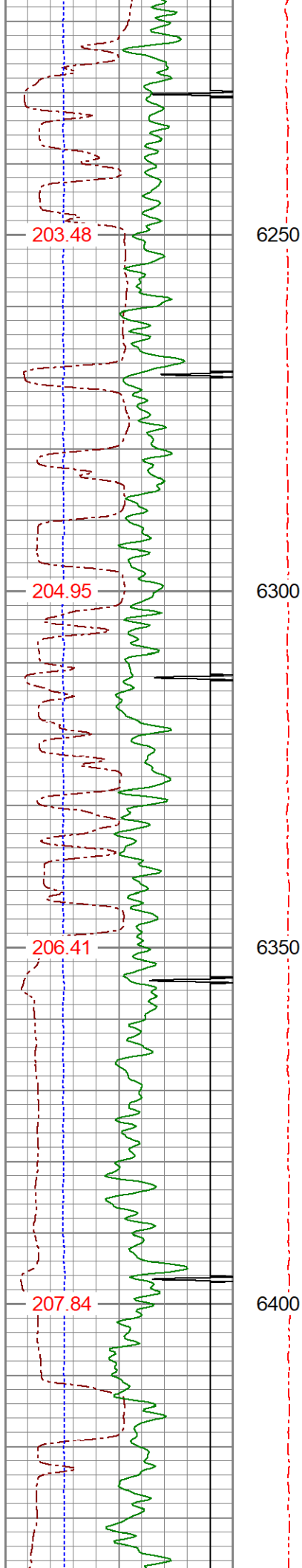


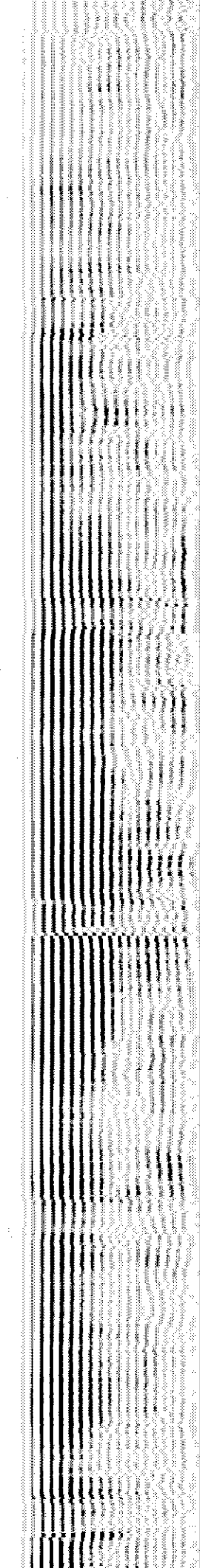
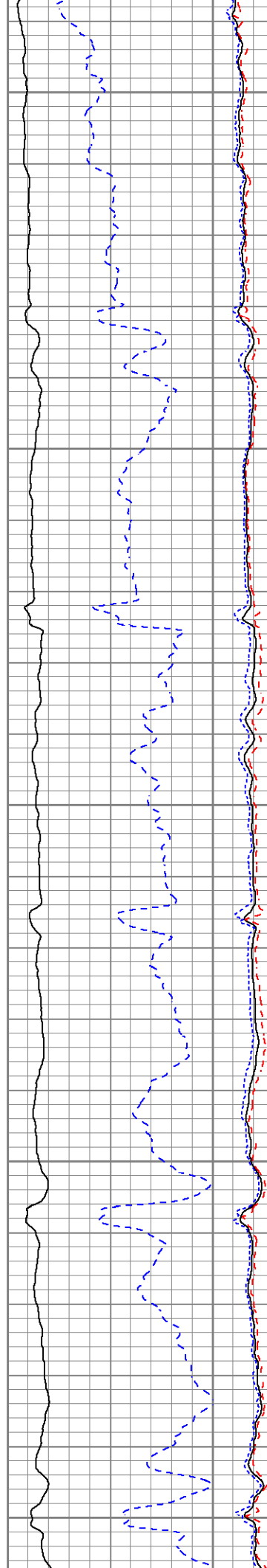
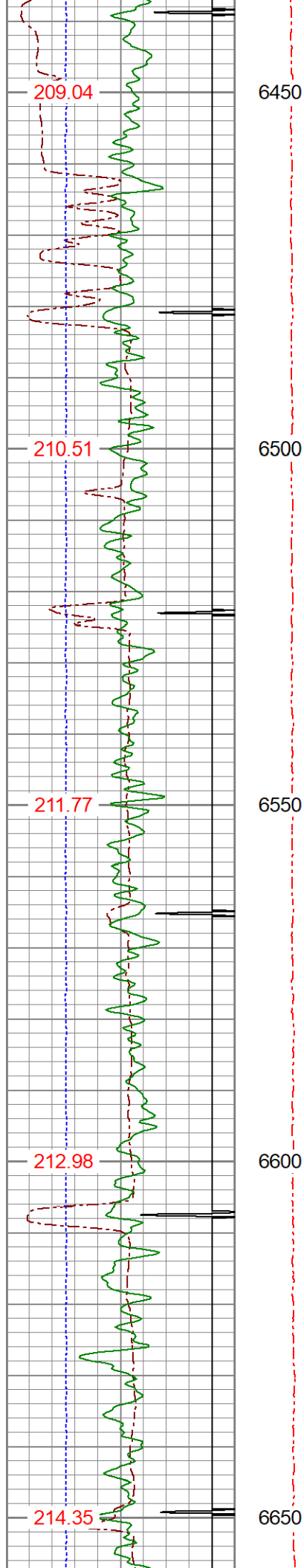


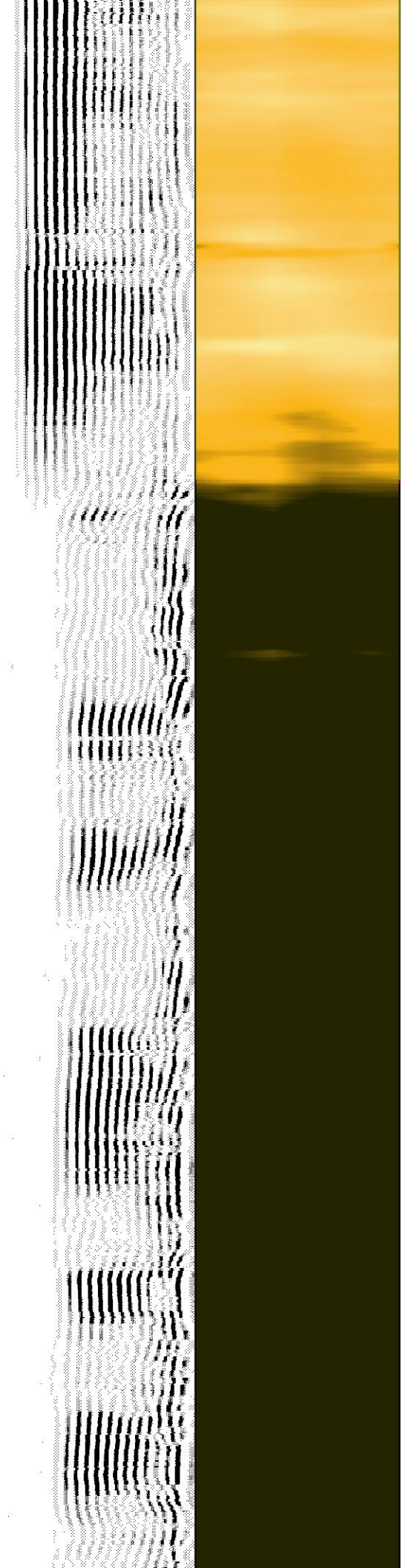
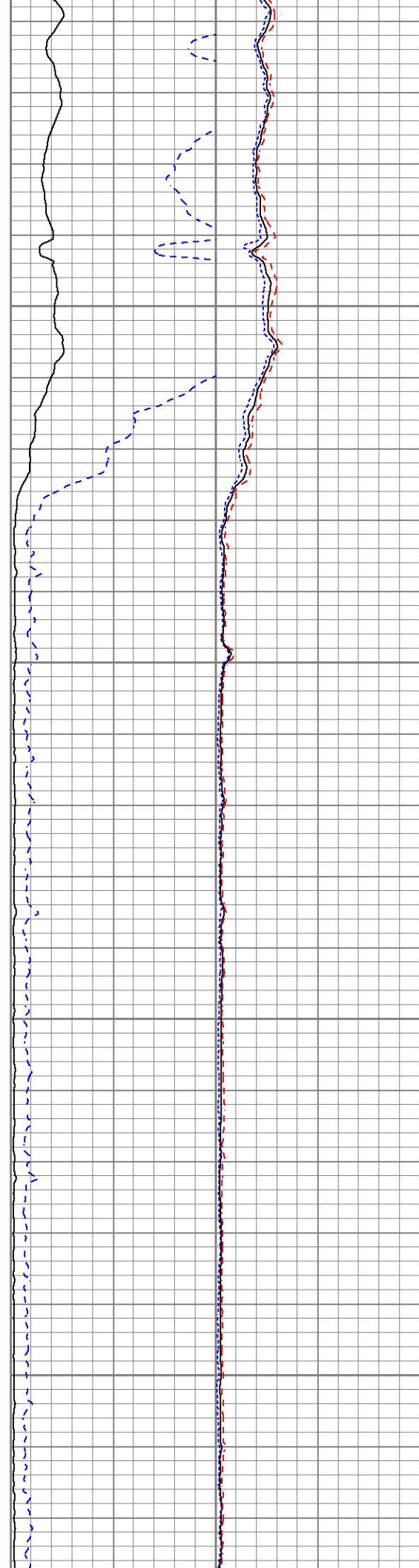
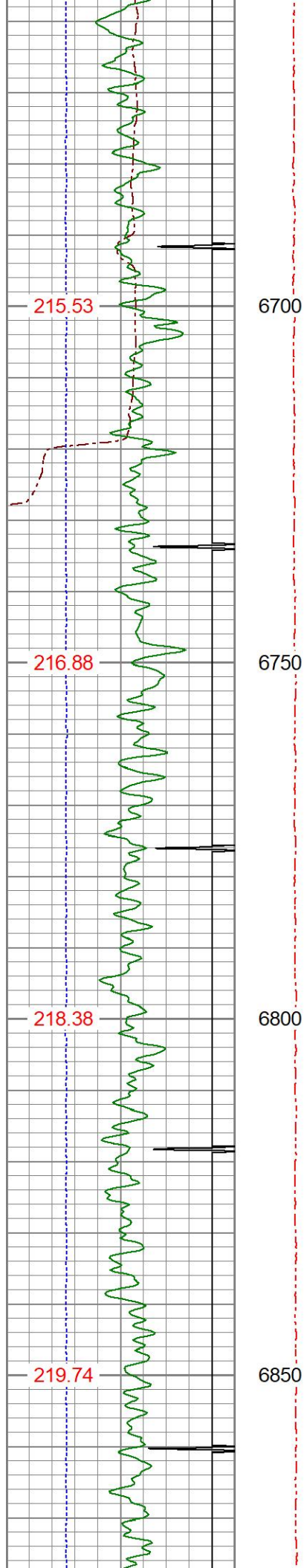


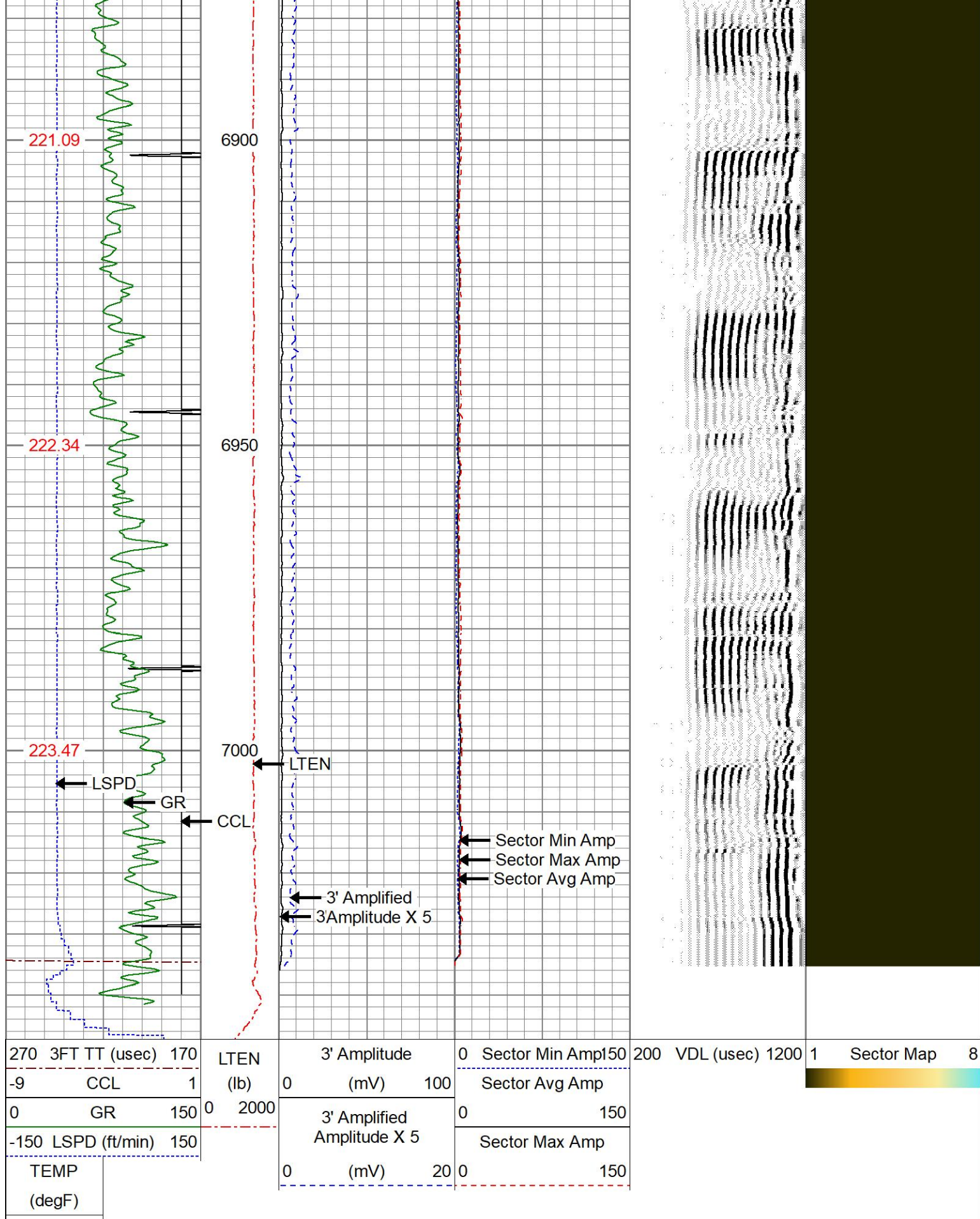












MAIN PASS

0

PSI APPLIED AT SURFACE

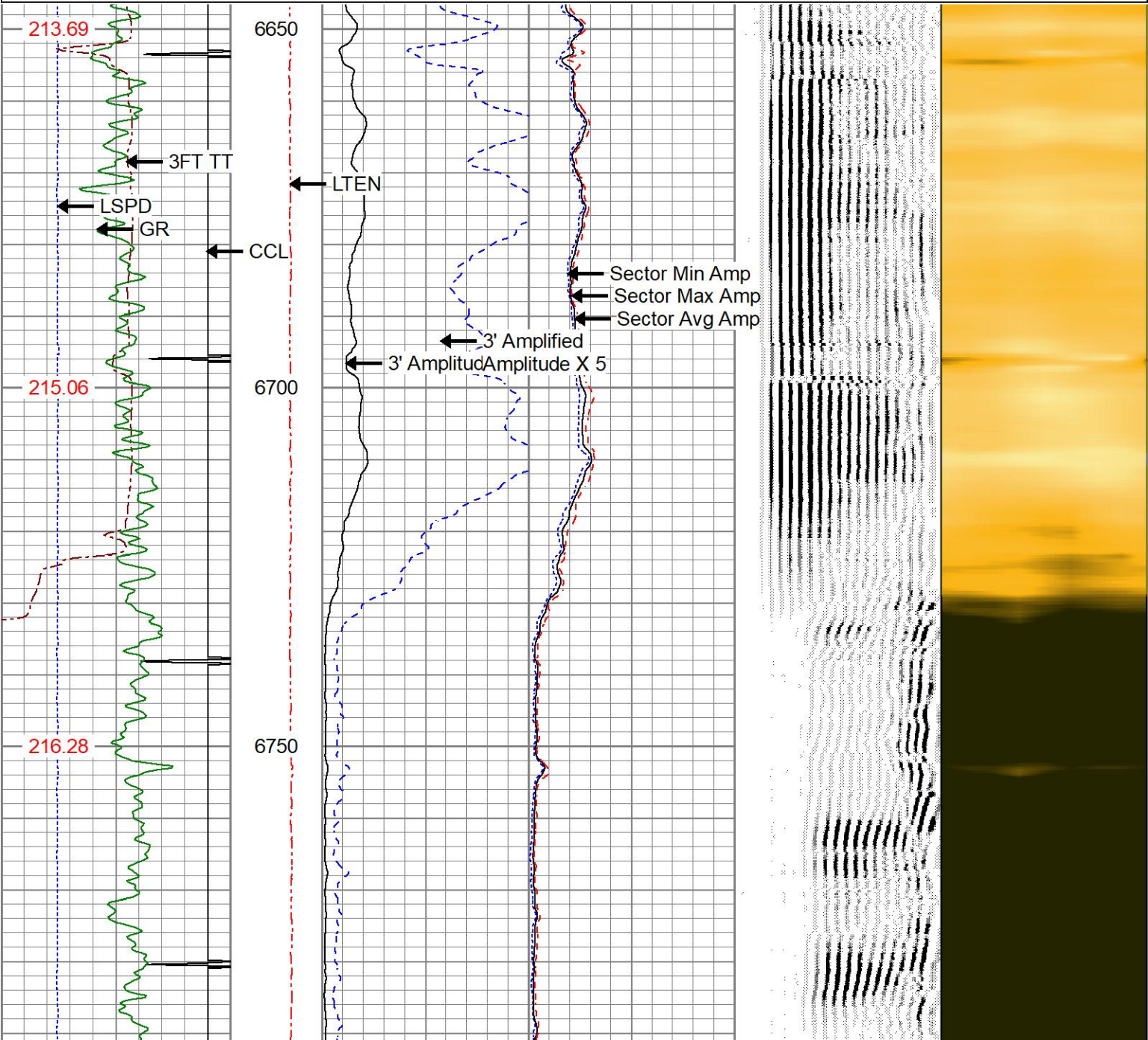


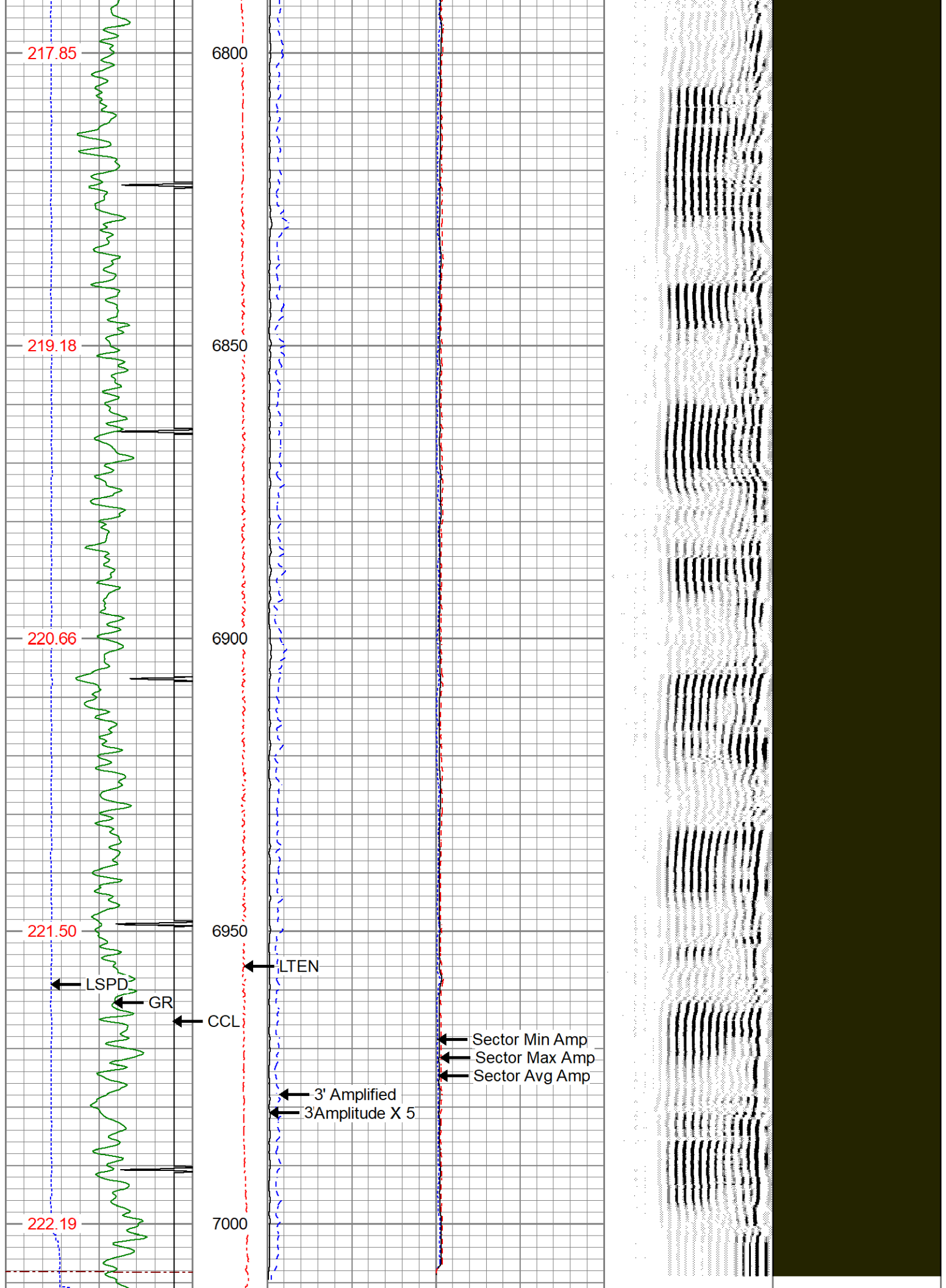
REPEAT PASS

0 PSI APPLIED AT SURFACE


Database File occidental_hsr-cogburn 2-29a_05-123-19181.db
Dataset Pathname pass3
Presentation Format res_scb1 8sec
Dataset Creation Sat Nov 05 07:36:20 2022
Charted by Depth in Feet scaled 1:240

270	3FT TT (usec)	170	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	150	0	2000	3' Amplified Amplitude X 5	0	150						
-150	LSPD (ft/min)	150				Sector Max Amp							
TEMP													
(degF)													





270 3FT TT (usec) 170	LTEN	3' Amplitude	0 Sector Min Amp150	200 VDL (usec) 1200	1 Sector Map	8
-9 CCL 1	(lb)	(mV) 100	Sector Avg Amp			
0 GR 150	0 2000	3' Amplified Amplitude X 5	0 150			
-150 LSPD (ft/min) 150			Sector Max Amp			
TEMP		(mV) 20	0 150			
(degF)						

	REPEAT PASS
	0 PSI APPLIED AT SURFACE

Calibration Report	
Database File	occidental_hsr-cogburn 2-29a_05-123-19181.db
Dataset Pathname	pass3
Dataset Creation	Sat Nov 05 07:36:20 2022

Gamma Ray Calibration Report		
Serial Number:	0111	
Tool Model:	Tek-Co 2 3/4	
Performed:	Thu Oct 13 08:15:27 2022	
Calibrator Value:	1.0	
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.6700	/cps

Segmented Cement Bond Log Calibration Report		
Serial Number:	275001	
Tool Model:	275 Temp JS	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	2366.507	ft

Master Calibration, performed Thu Oct 13 11:07:56 2022:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.003	1.459	0.600	81.196	55.362	0.441
CAL	0.003	1.015				
5'	0.003	2.216	0.600	81.196	36.410	0.502
SUM						
S1	0.003	1.680	0.000	100.000	59.625	-0.191
S2	0.003	1.705	0.000	100.000	58.769	-0.192
S3	0.003	1.642	0.000	100.000	61.025	-0.177
S4	0.003	1.533	0.000	100.000	65.369	-0.217
S5	0.003	1.477	0.000	100.000	67.835	-0.210
S6	0.003	1.476	0.000	100.000	67.918	-0.220
S7	0.003	1.601	0.000	100.000	62.601	-0.203
S8	0.003	1.626	0.000	100.000	61.626	-0.199

Internal Reference Calibration performed (Not Performed):

Internal Reference Calibration, performed (NOT performed).

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.003	1.015	1.000	0.000

Air Zero Calibration, performed Mon Sep 19 09:55:20 2022:

	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	

Temperature Calibration Report

Serial Number: 275001
Tool Model: 275 Temp JS
Performed: Thu Oct 13 08:15:31 2022

	Reference		Reading	
Low Reference:	0.00	degF	0.00	usec
High Reference:	1.00	degF	1.00	usec
Gain:	0.33			
Offset:	0.00			
Delta Spacing	1			



Company	OCCIDENTAL PETROLEUM
Well	HSR-COGBURN 2-29A
Field	WATTENBERG
County	WELD
State	COLORADO