



Radial Cement Bond
Gamma Ray CCL
Temperature Log

Company Antero Resources Corporation		Well Elklick Unit 1H		Field White Oak		County Ritchie		State WV	
API # : 47-085-10419-00-00		AFE # : A11907-C		Location (LAT,LON): 39.171458, -80.857949		Township: West Union		Other Services None	
Permanent Datum		Ground Level		Elevation 1019'		Elevation K.B. 1049'		D.F. 1049'	
Log Measured From		KB = 30'				G.L. 1019'			
Drilling Measured From		KB							
Date	17 OCT 2022								
Run Number	One								
Depth Driller (ft)	19454								
Depth Logger (ft)	5775								
Bottom Logged Interval (ft)	5764								
Top Log Interval	Surface								
Open Hole Size (in)	6 7/8								
Type Fluid	Water								
Density / Viscosity (lb/gal)	8.4								
Max. Recorded Temp. (°F)	145.2								
Estimated Cement Top (ft)	4575								
Time Well Ready	09:00 AM								
Time Logger on Bottom	04:00 PM								
Equipment Number	8018								
Location	Delmont, PA								
Recorded By	T. Trump								
Witnessed By	R. Jones								
Casing Record	Size (in)	Weight (lb/ft)	Top (ft)	Bottom (ft)					
Conductor String	16	62.64	Surface	130					
Surface String	10.75	40.5	Surface	331					
Intermediate String	7.625	26.4	Surface	2543					
Production String	5	18	Surface	19402					
Inclination Information (Approximated Values from Directional Survey)									
KOP	30°	60°	90°						
3070'	6150'	6510'	6900'						

THANK YOU FOR USING GR ENERGY SERVICES

05/11/2023

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

Log Correlated to Bottom Log Marker Joint
Log Adjusted +0.5'
Marker Joint Located @ 5514' - 5524'

Maximum Temperature Recorded was 145.2°F
Maximum Tension 1227 lbs

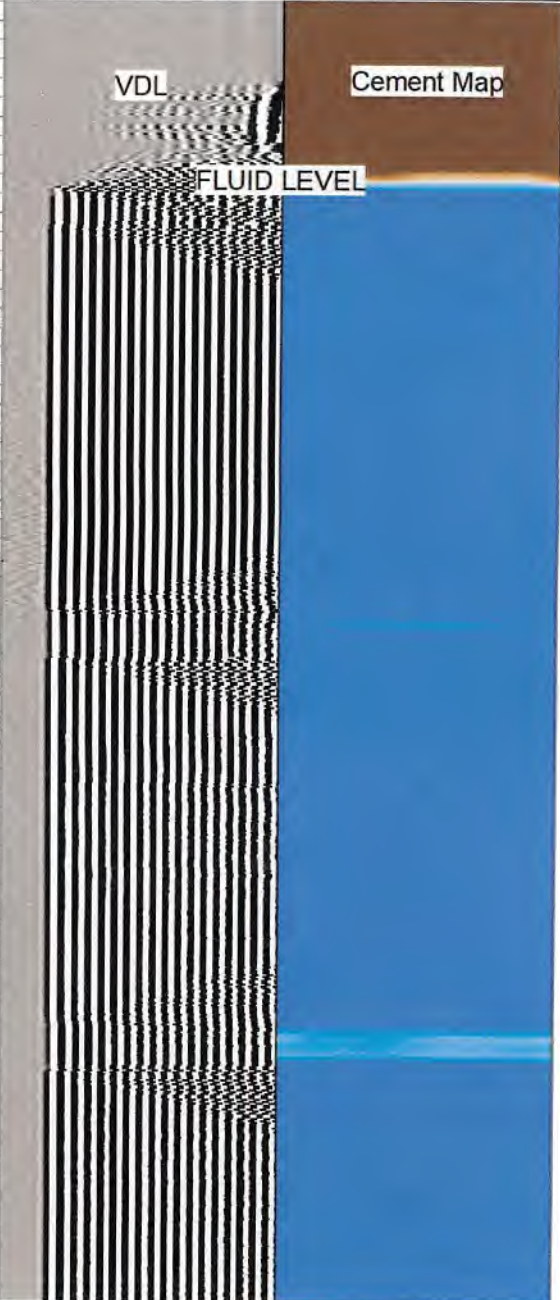
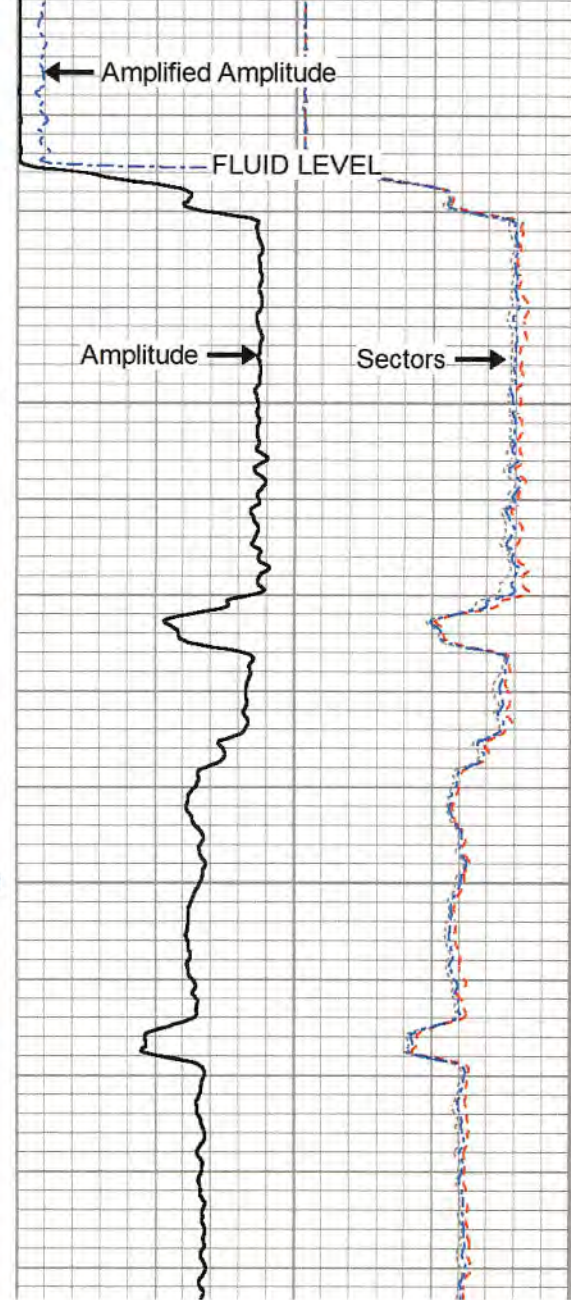
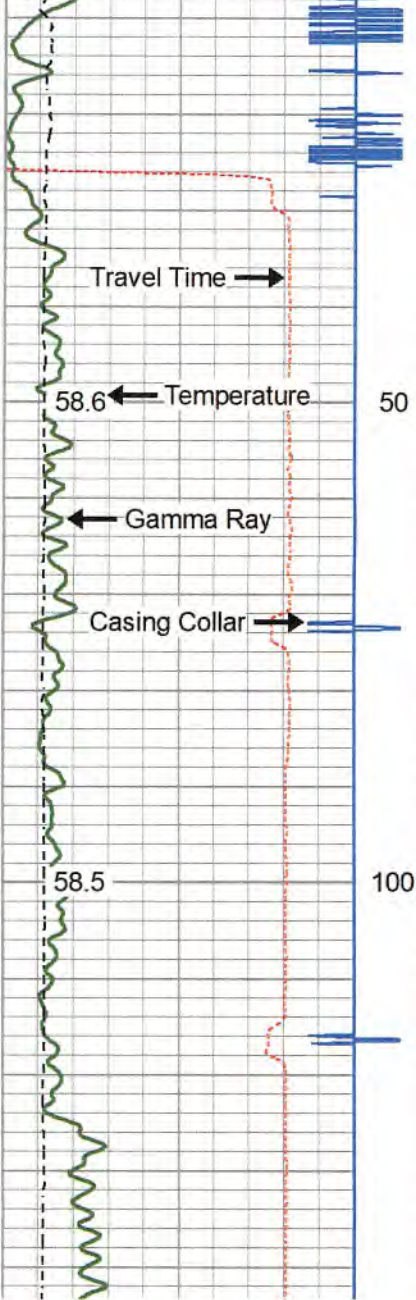
Estimated Top of Cement @ 4575'

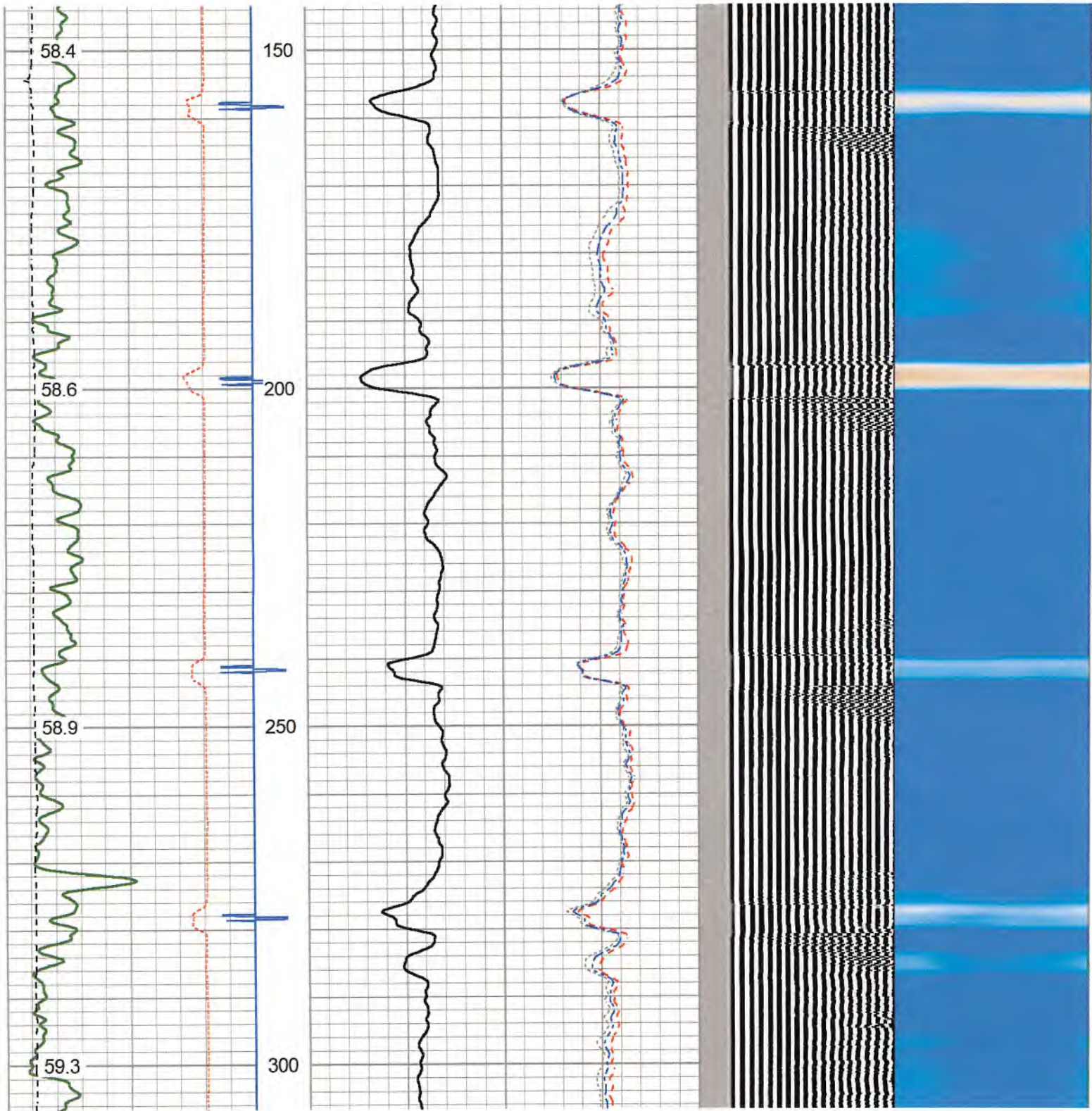


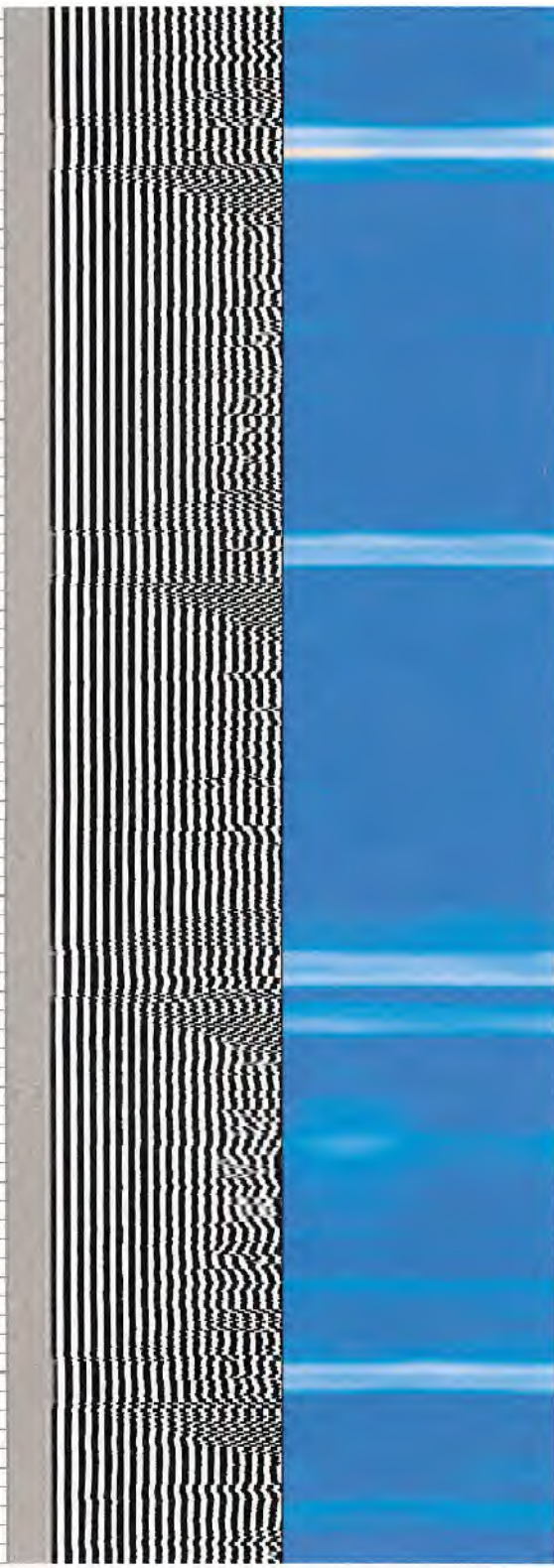
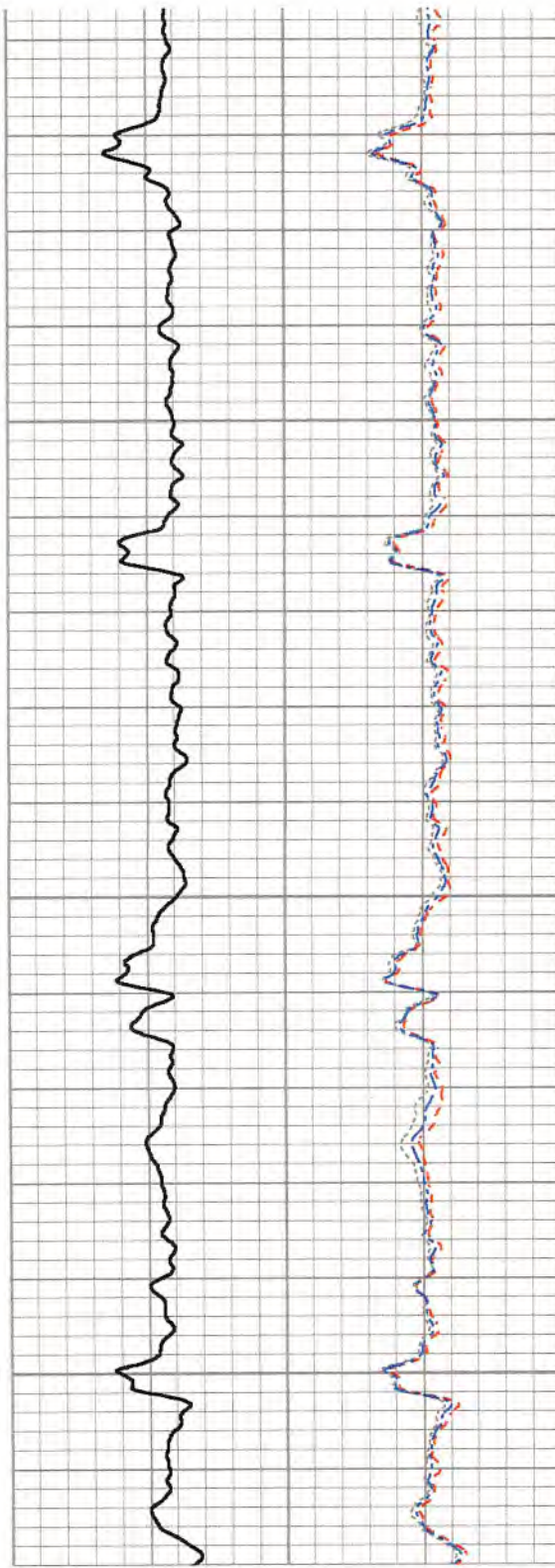
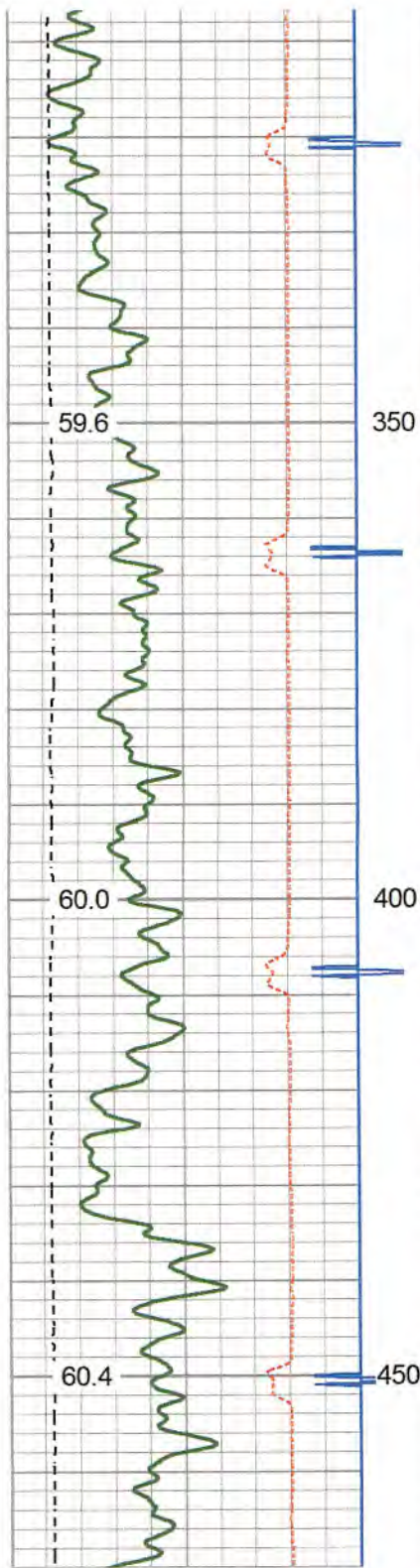
Main Pass (1500 PSI)

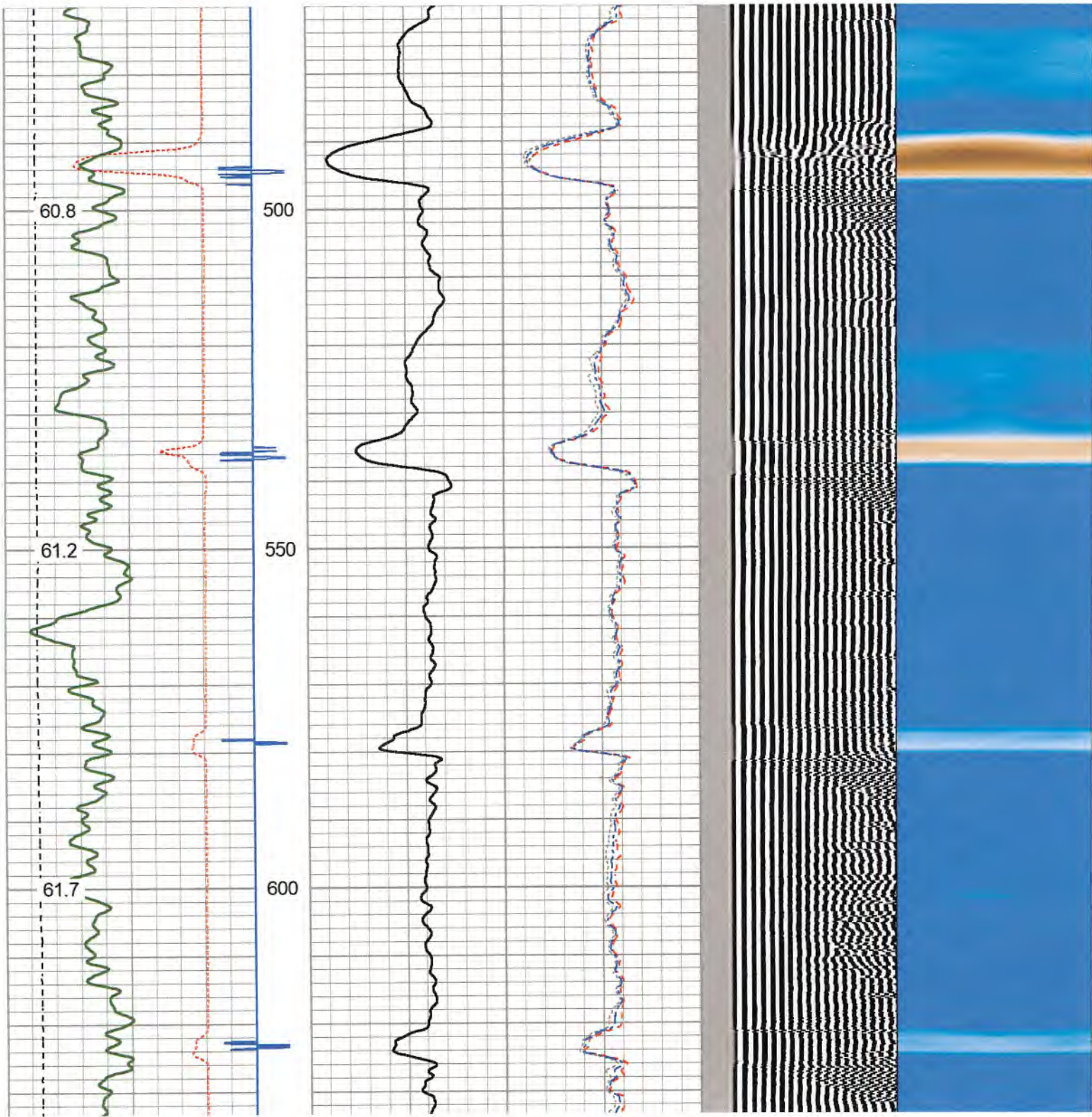
Database File	c:\users\logbox\desktop\cashew\antero_cashew_elklick_1h.db
Dataset Pathname	rcbl/pass5
Presentation Format	rcbl_std_bw_tt
Dataset Creation	Mon Oct 17 16:00:12 2022
Charted by	Depth in Feet scaled 1:240

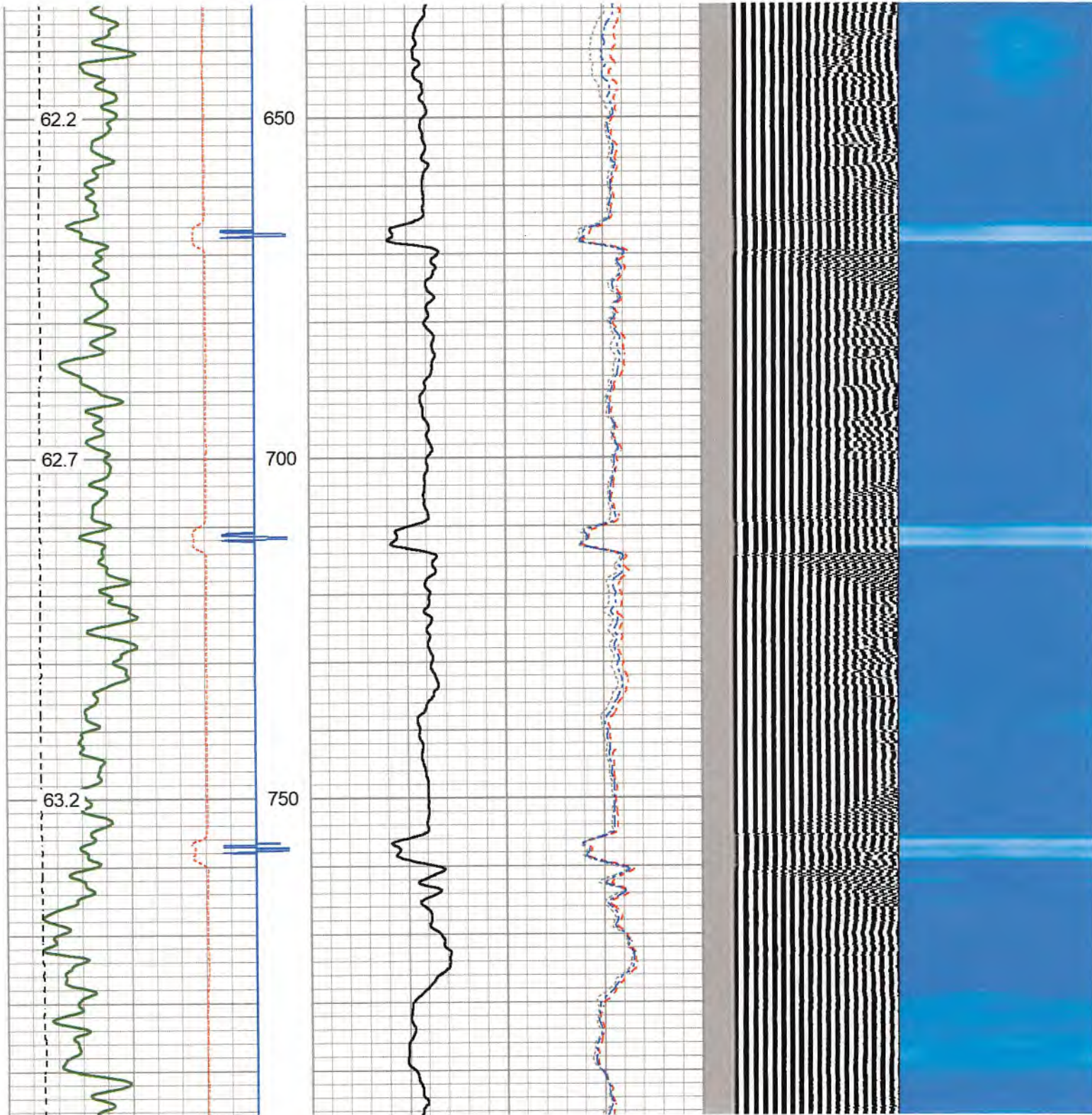
333	TT (usec)	233	0	Amplitude (mV)	100	-5	AMPMin	150	200	VDL (usec)	1200	Cement Map
0	GR (GAPI)	150		Amplified Amplitude		-5	AMPMax	150				
0	LTEN (lb)	3000	0	(mV)	10	-5	AMPAvg	150				
TEMP (degF)		CCL										

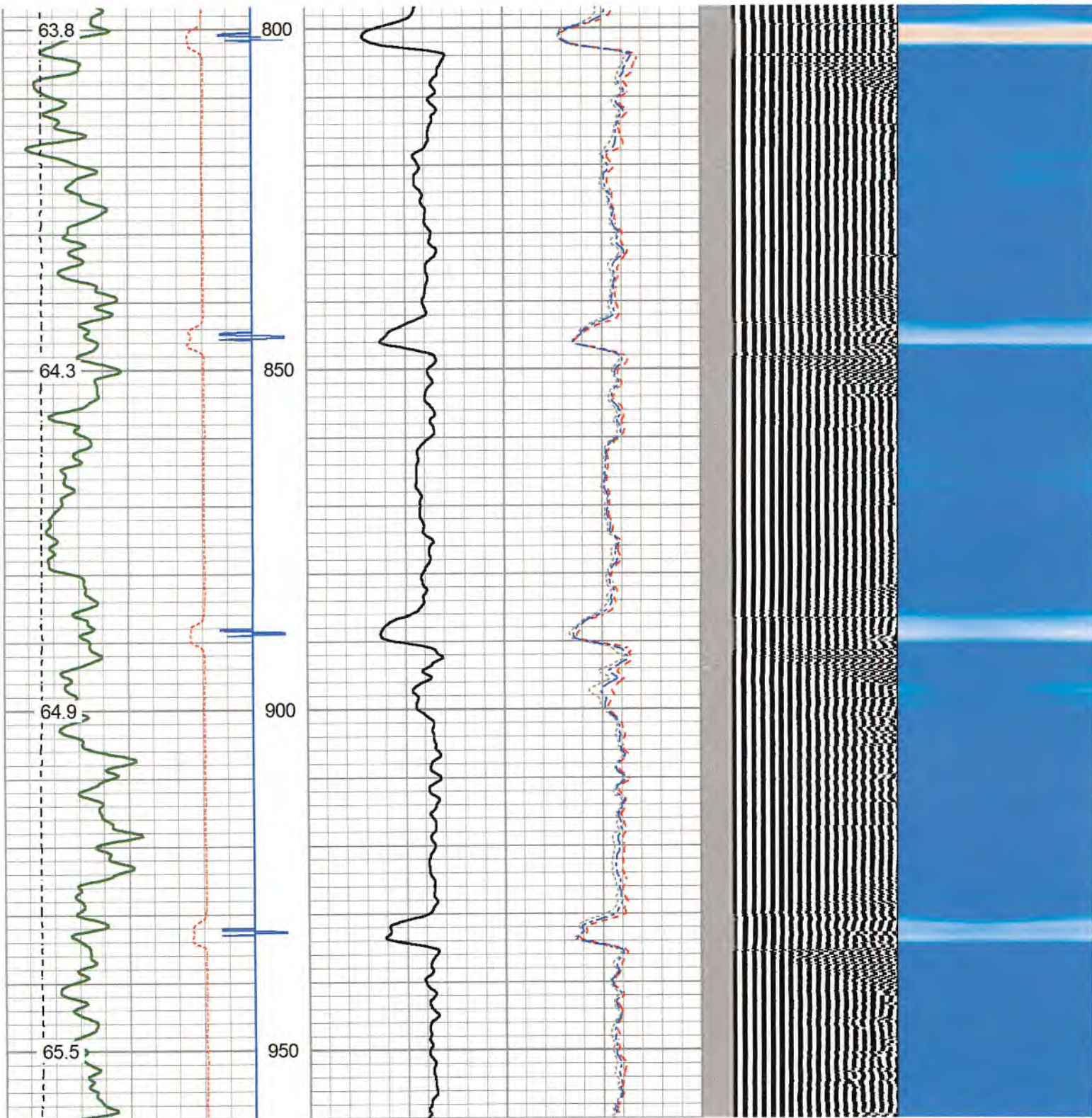


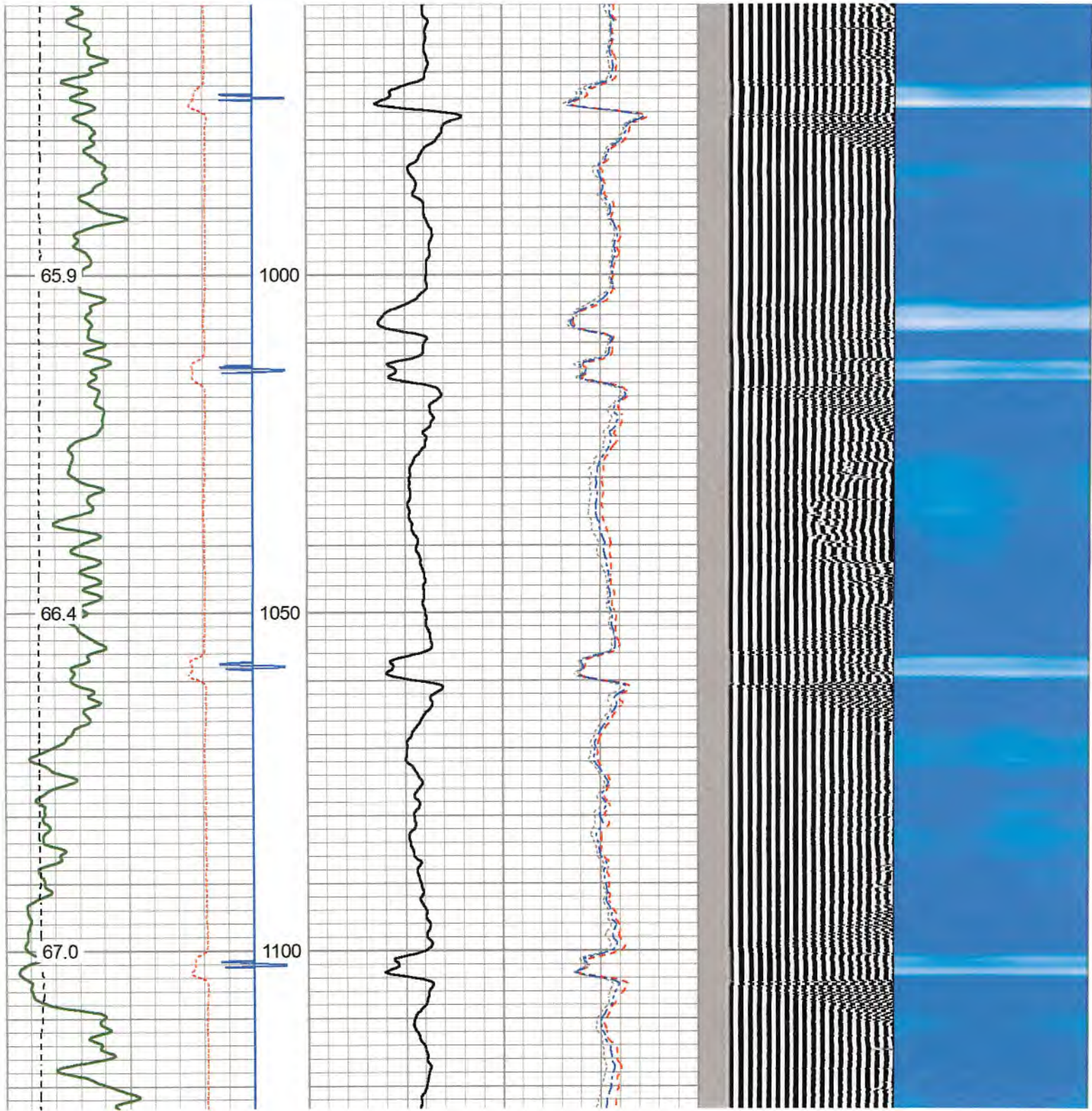


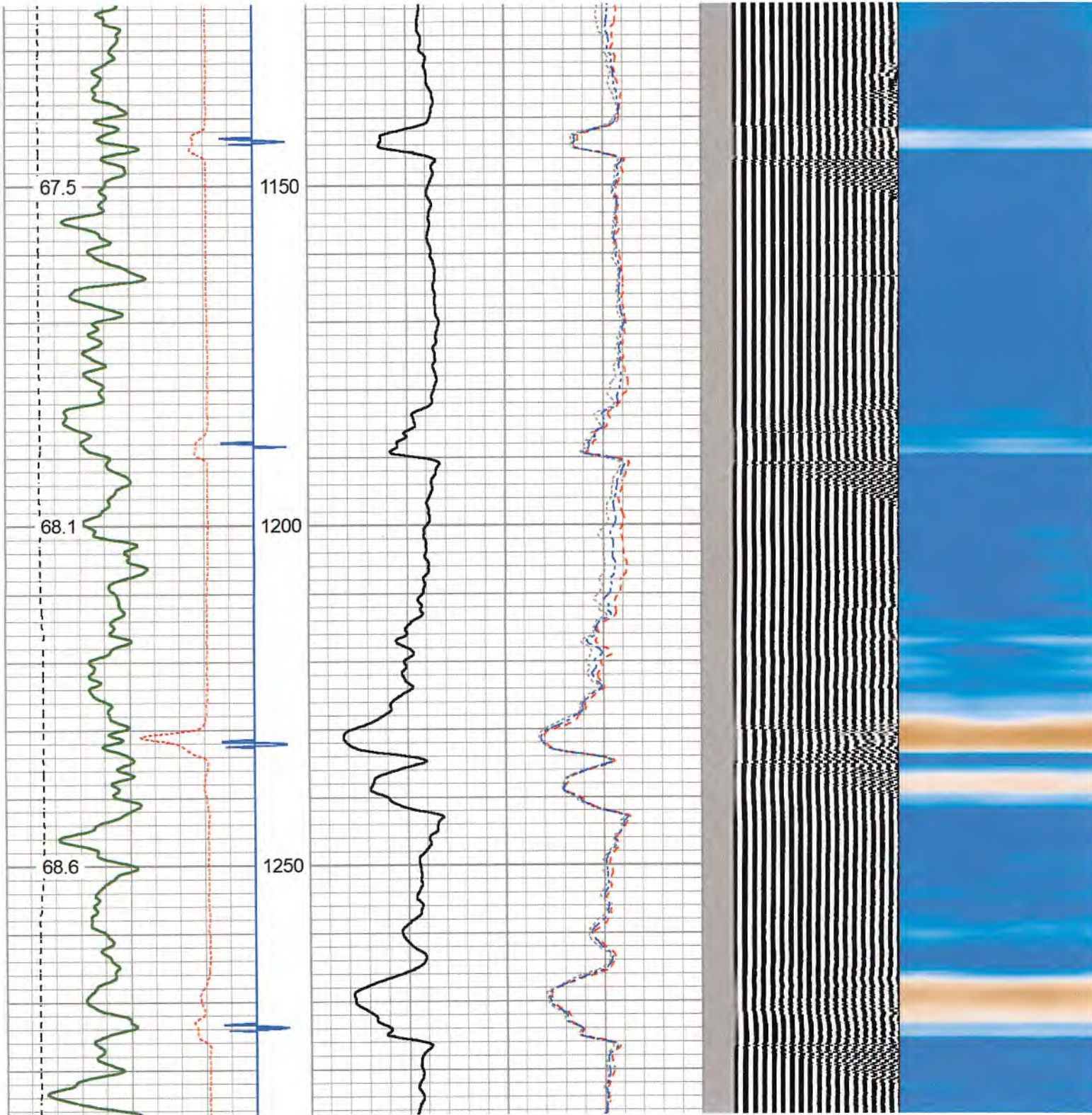


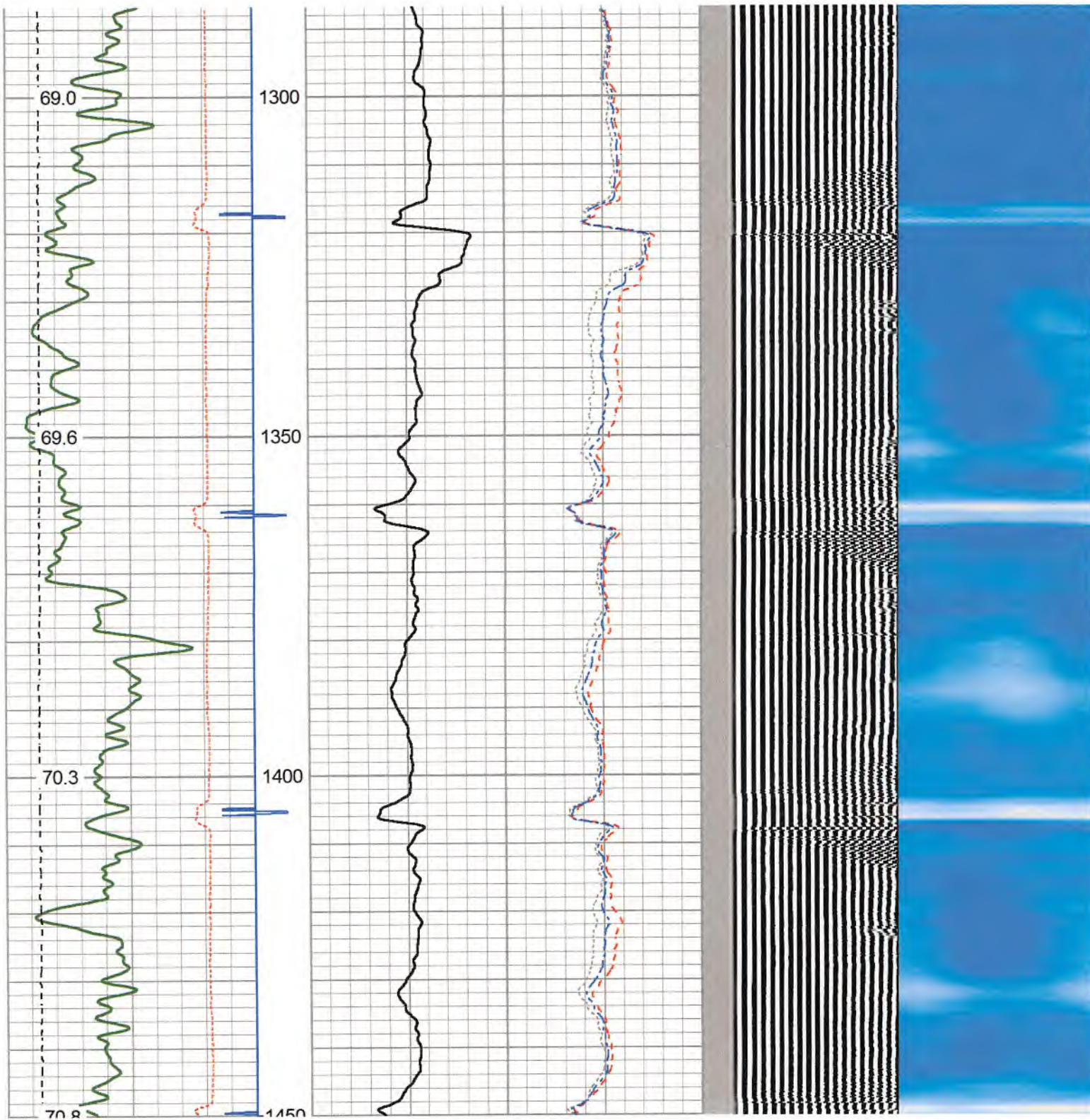


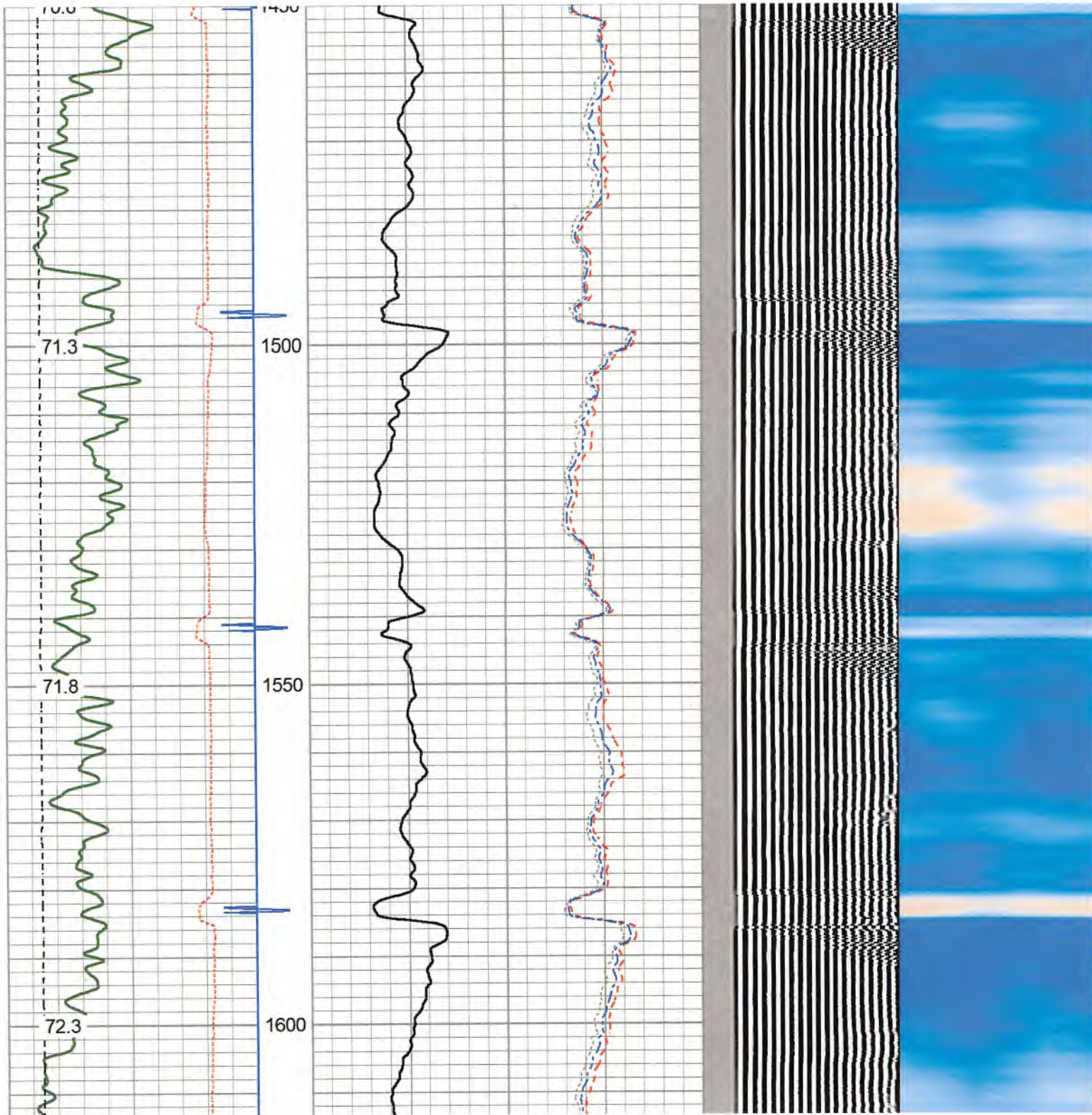


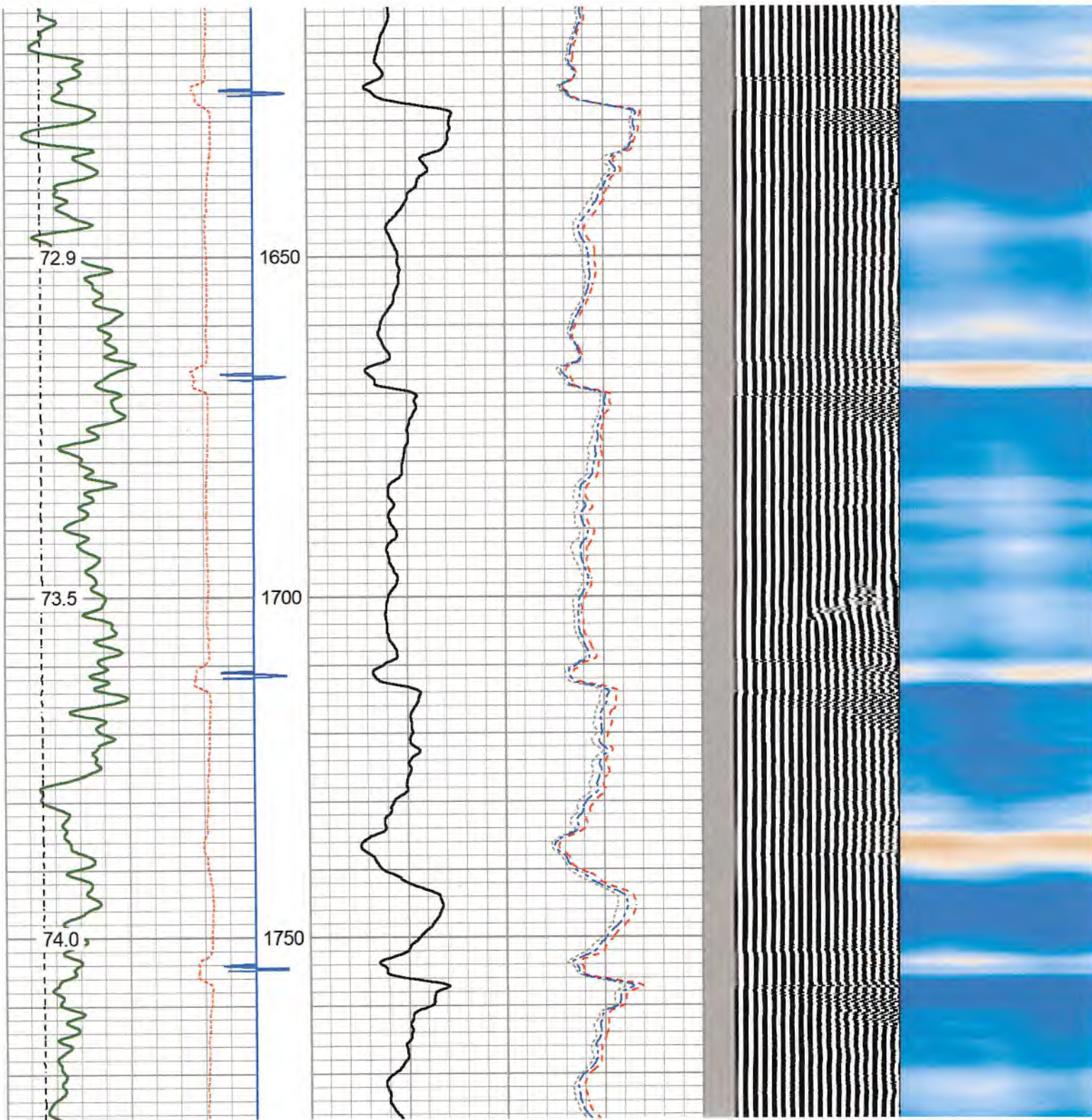


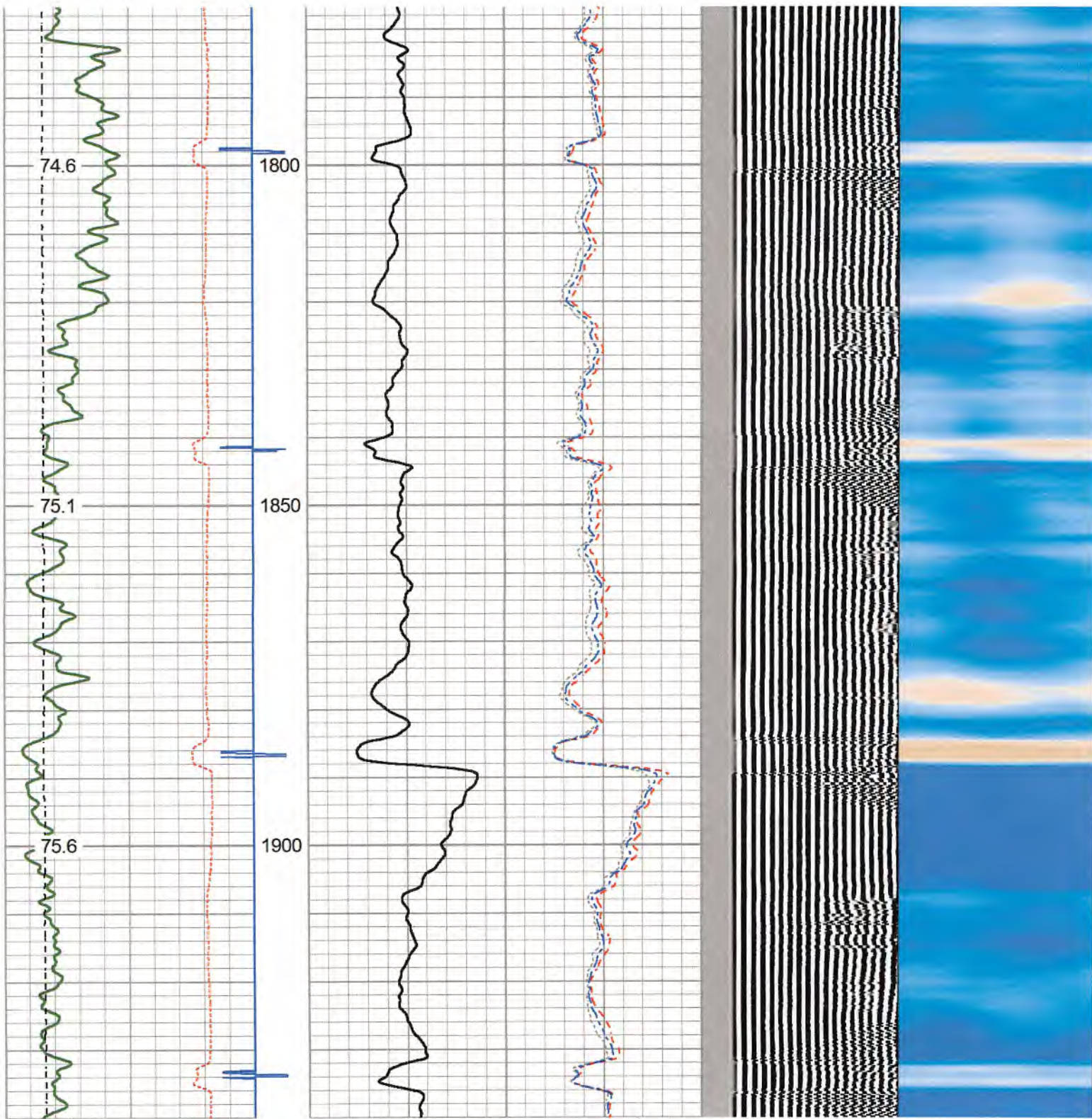


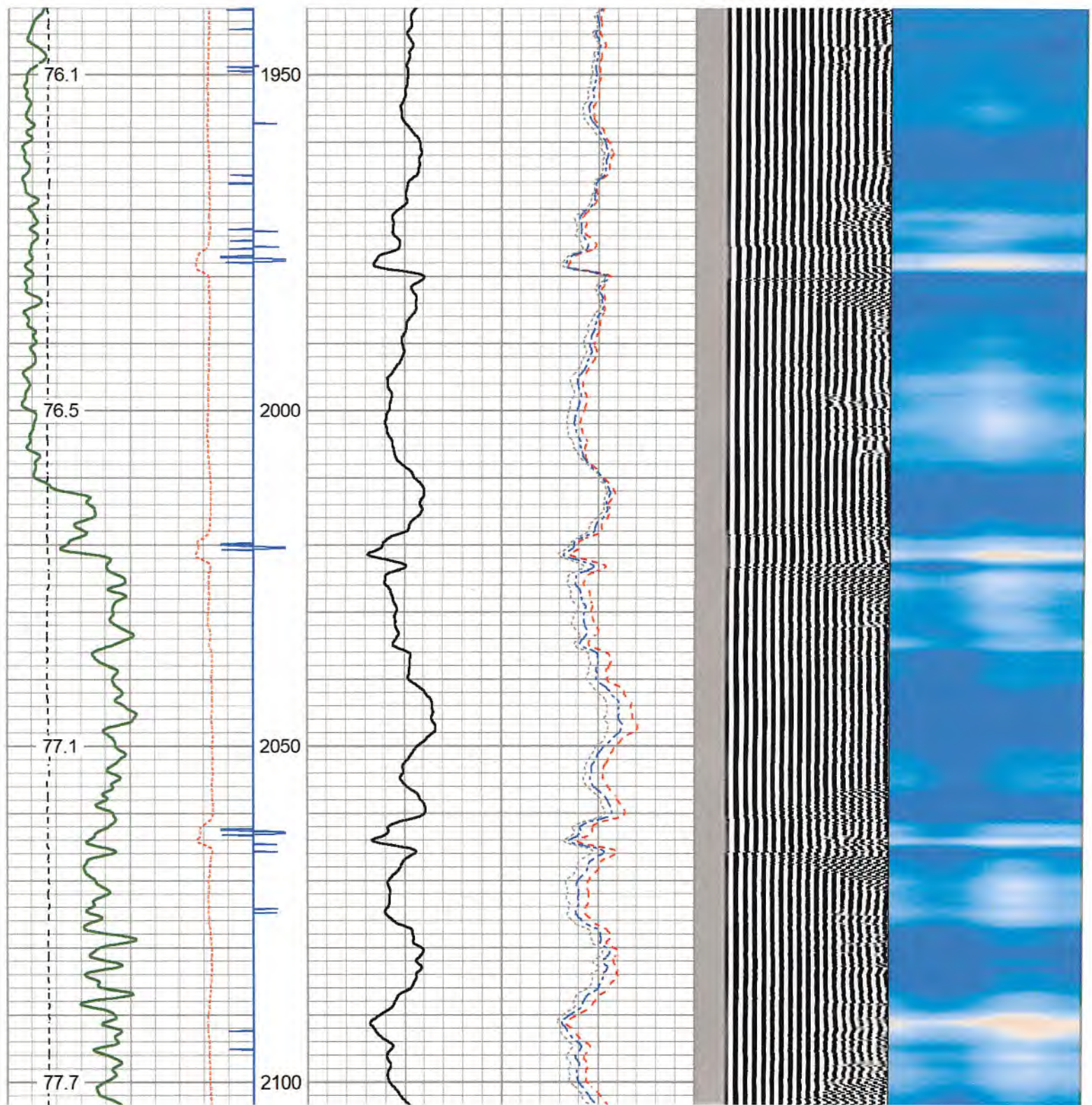


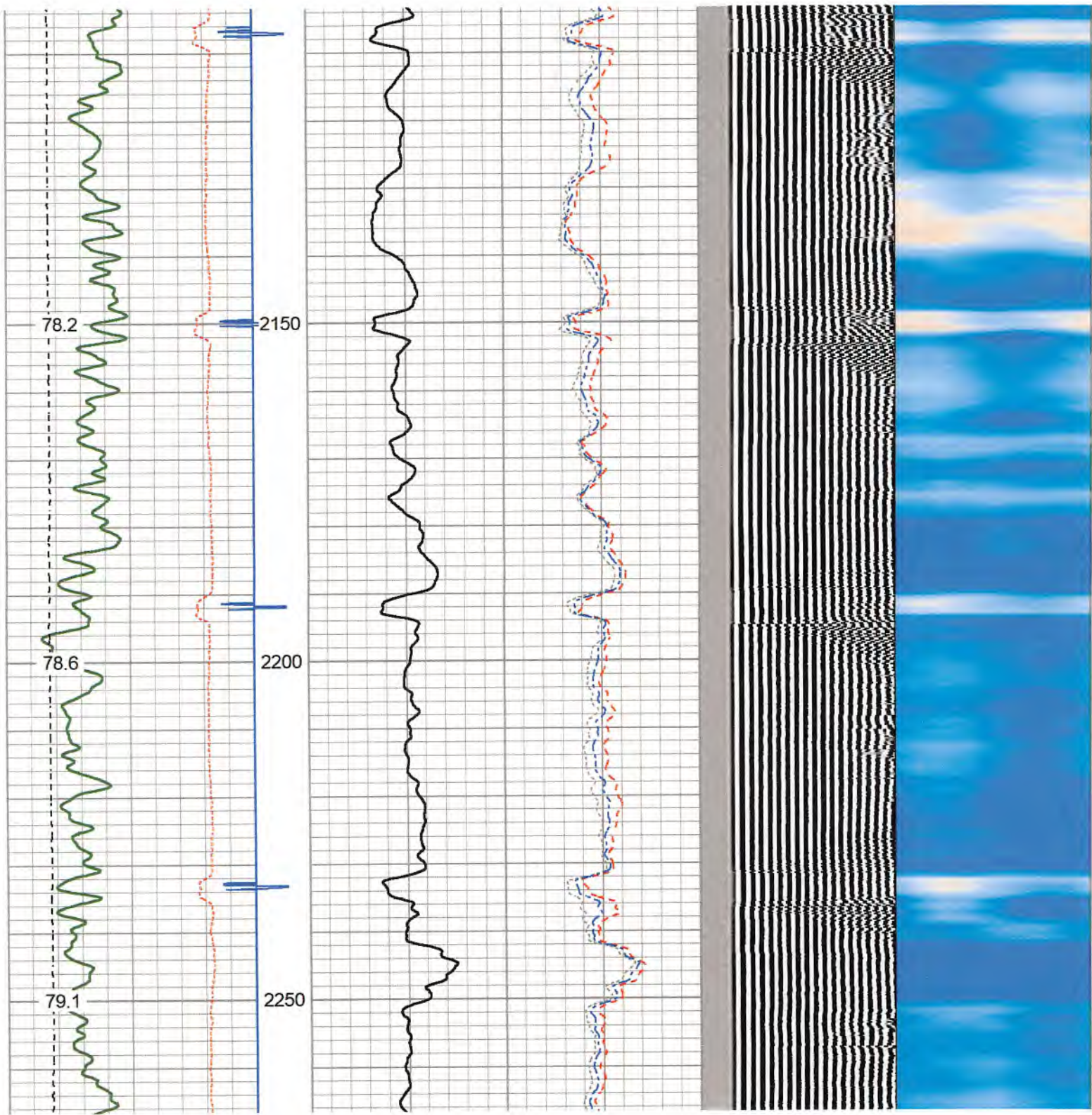


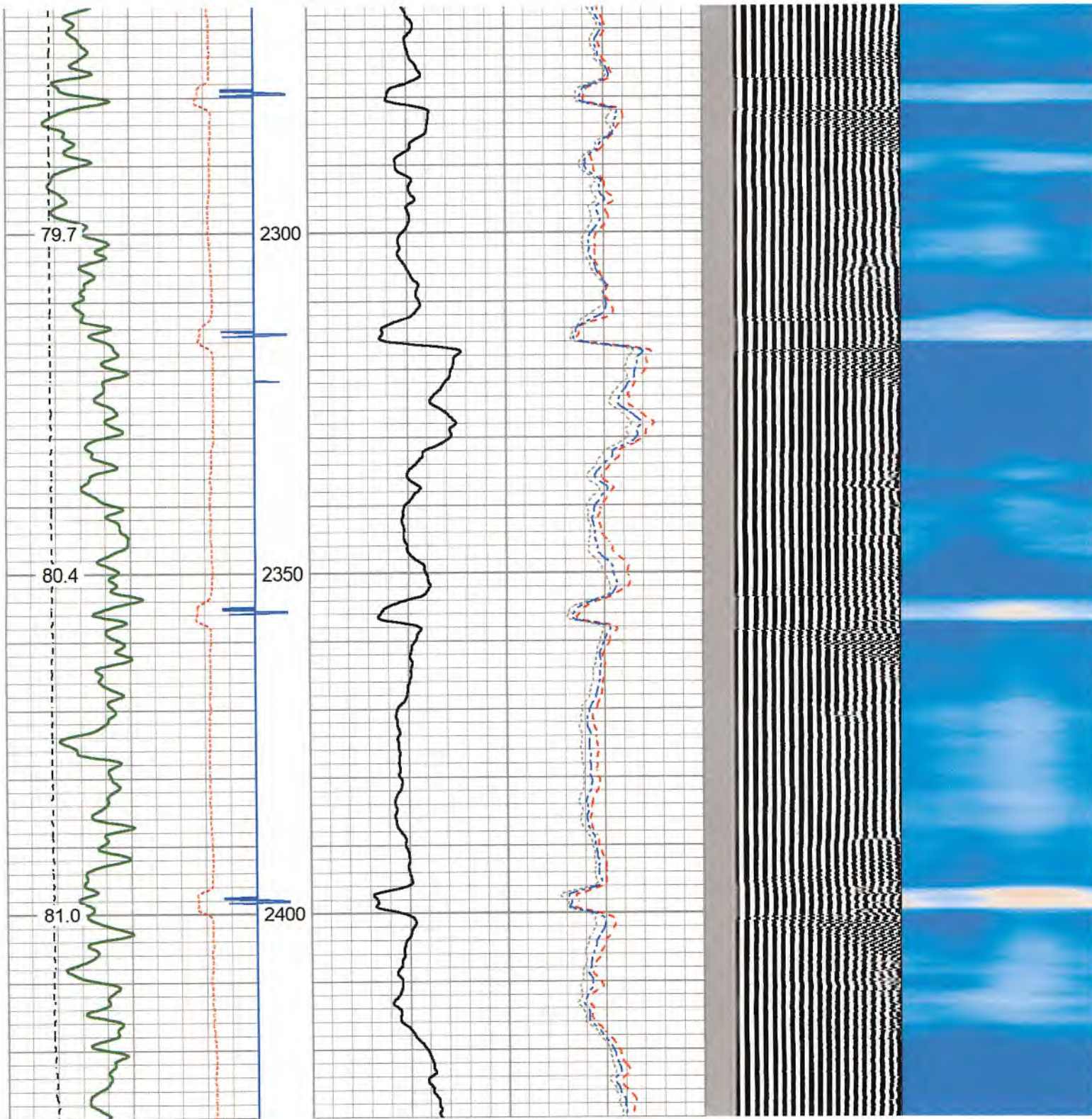


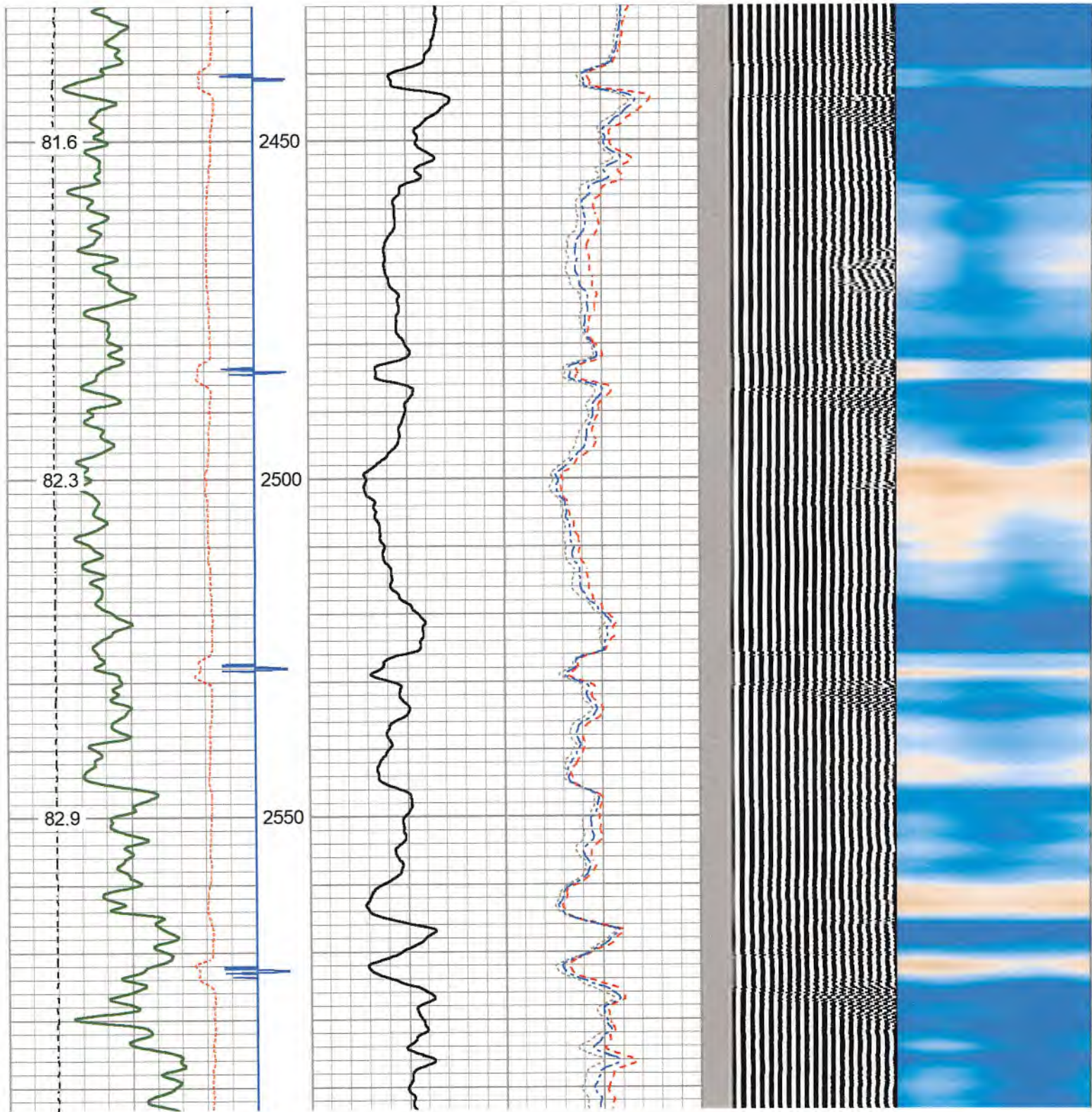


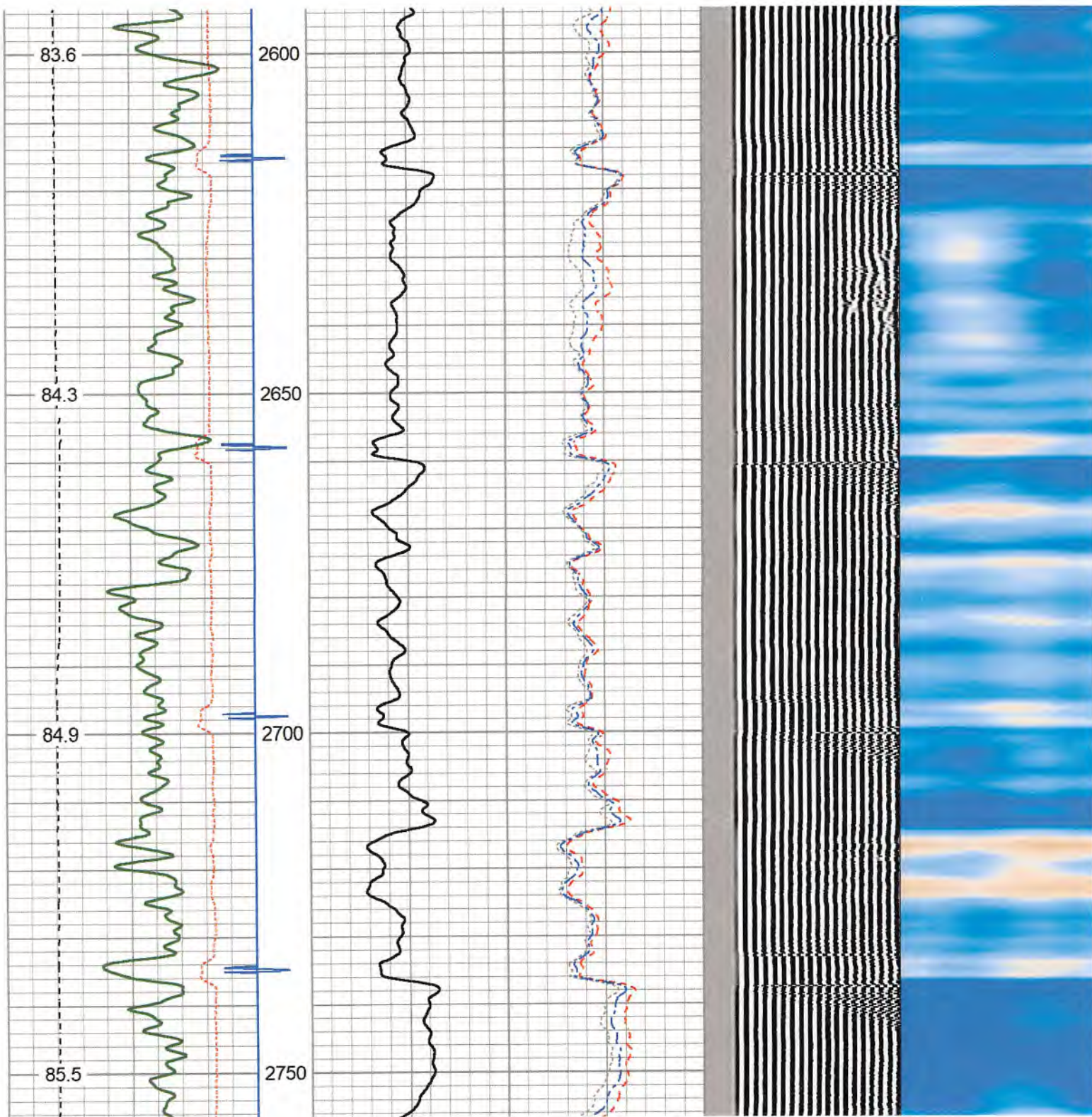


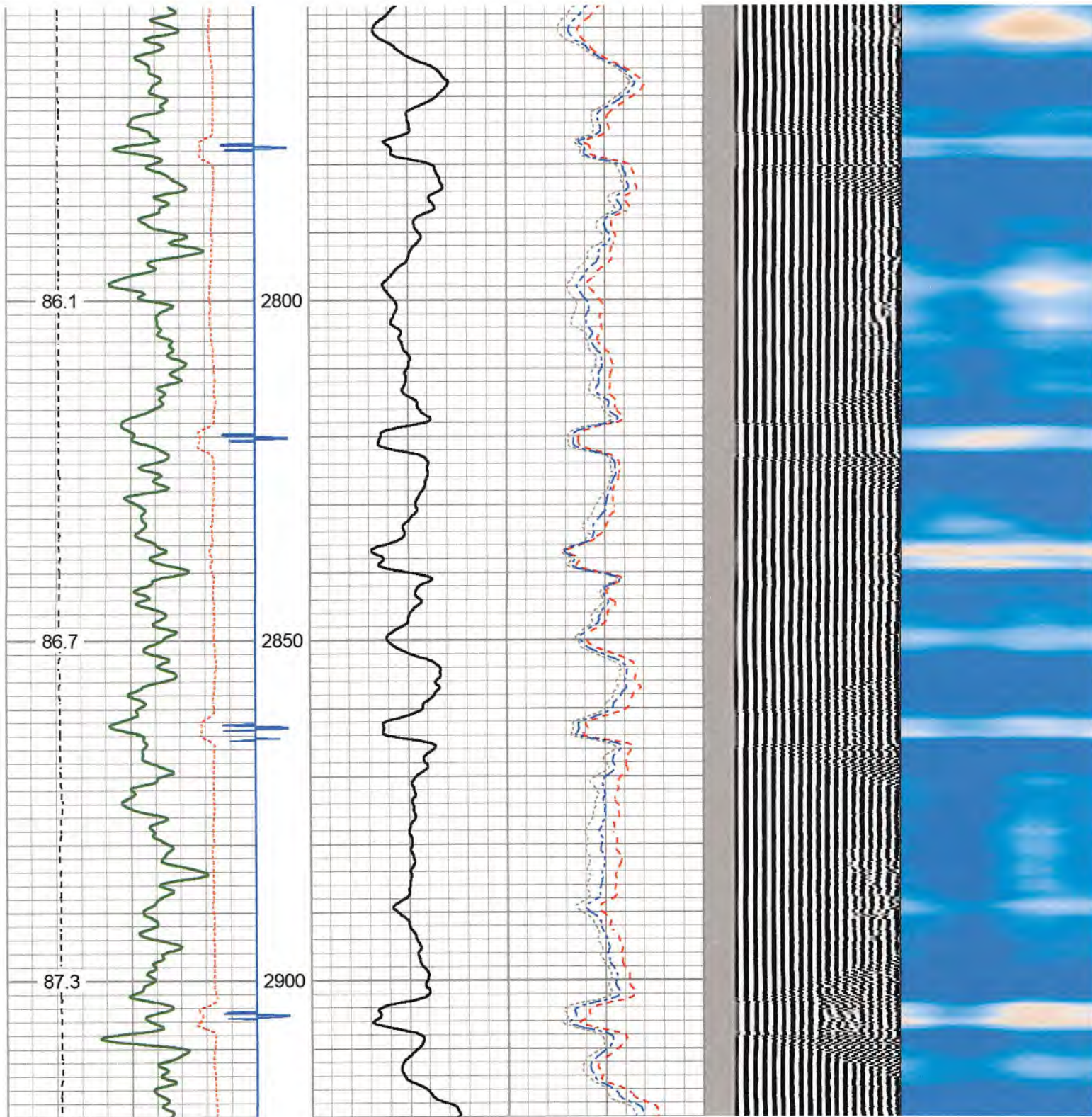


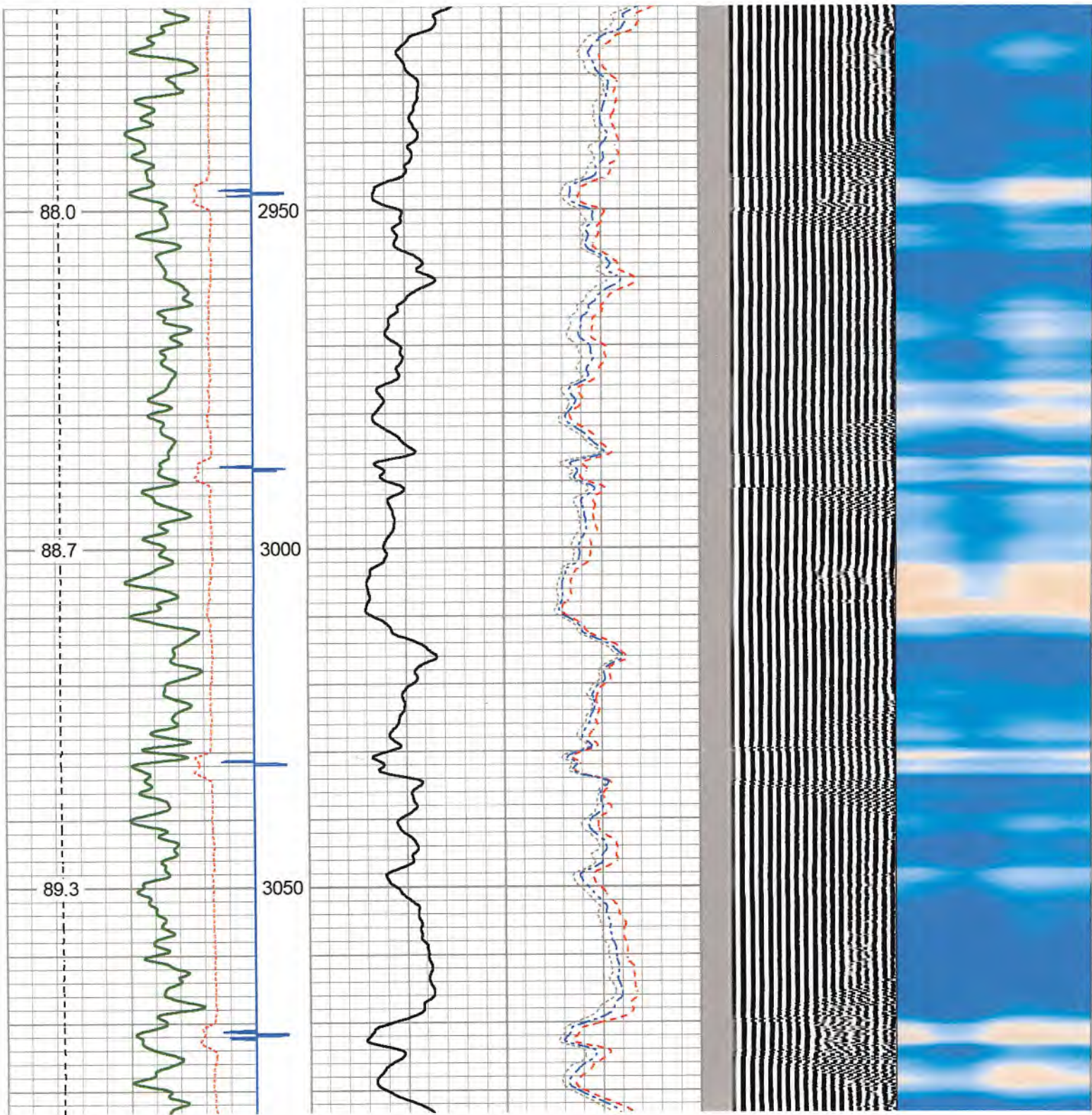


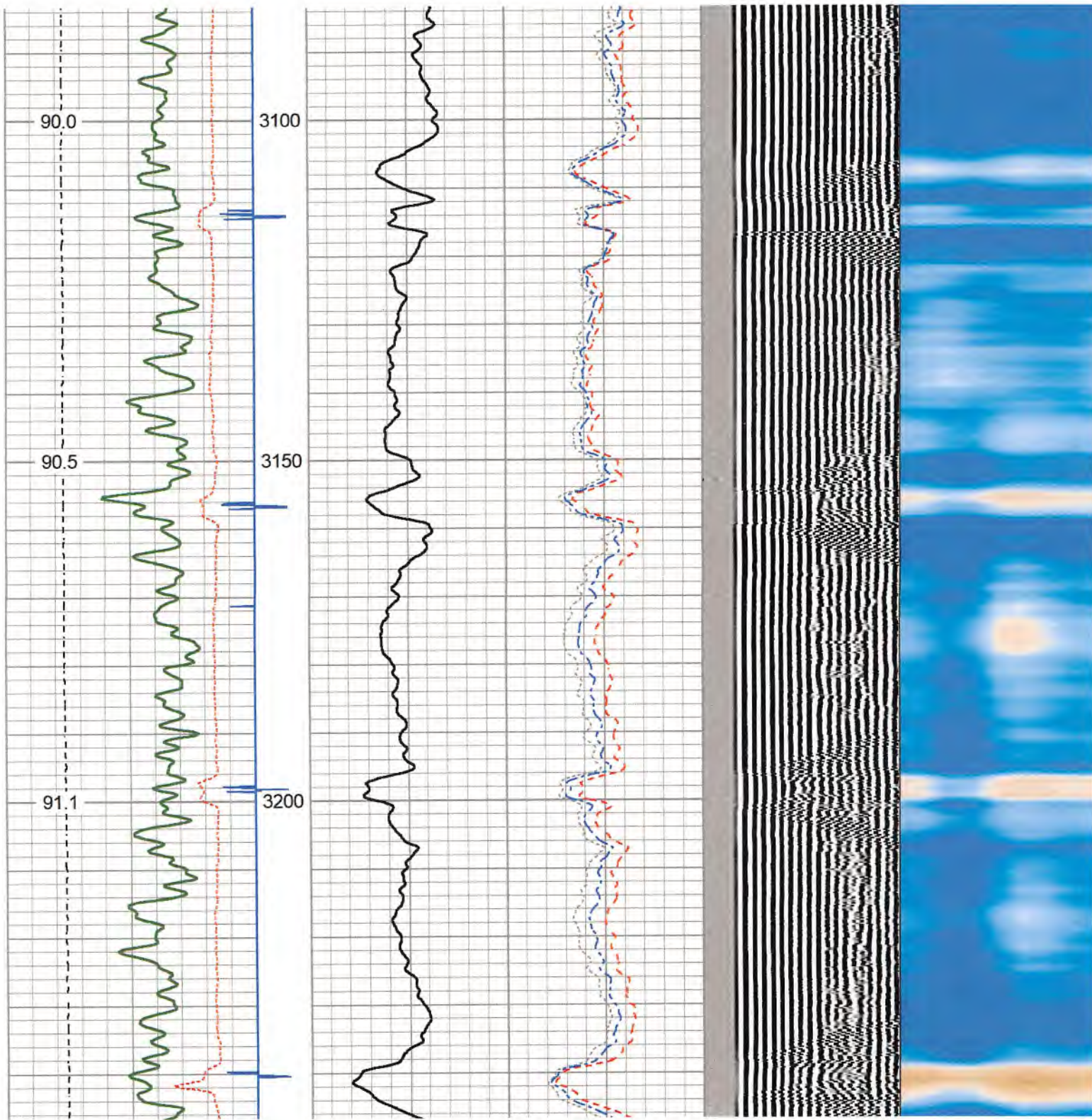


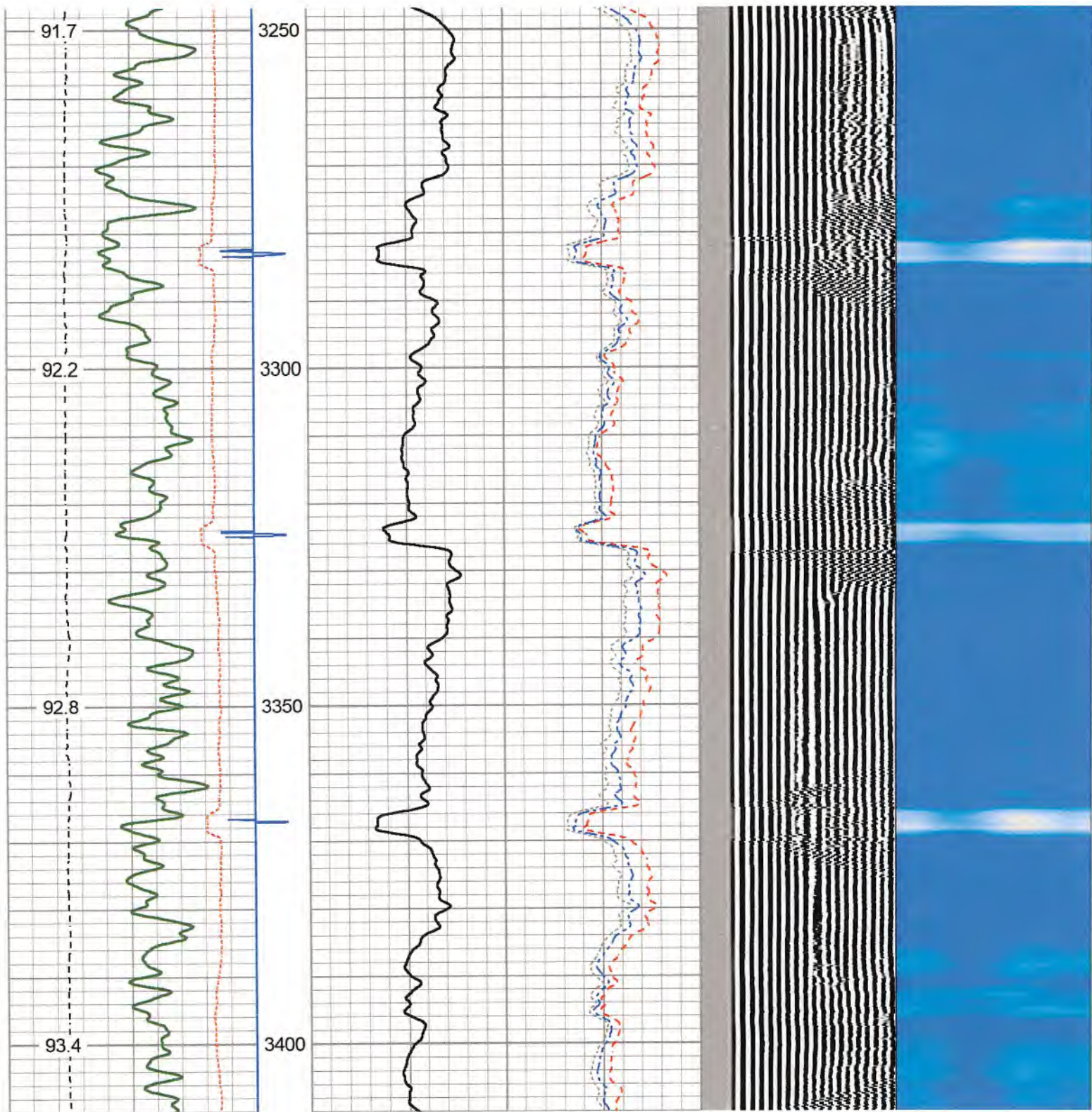


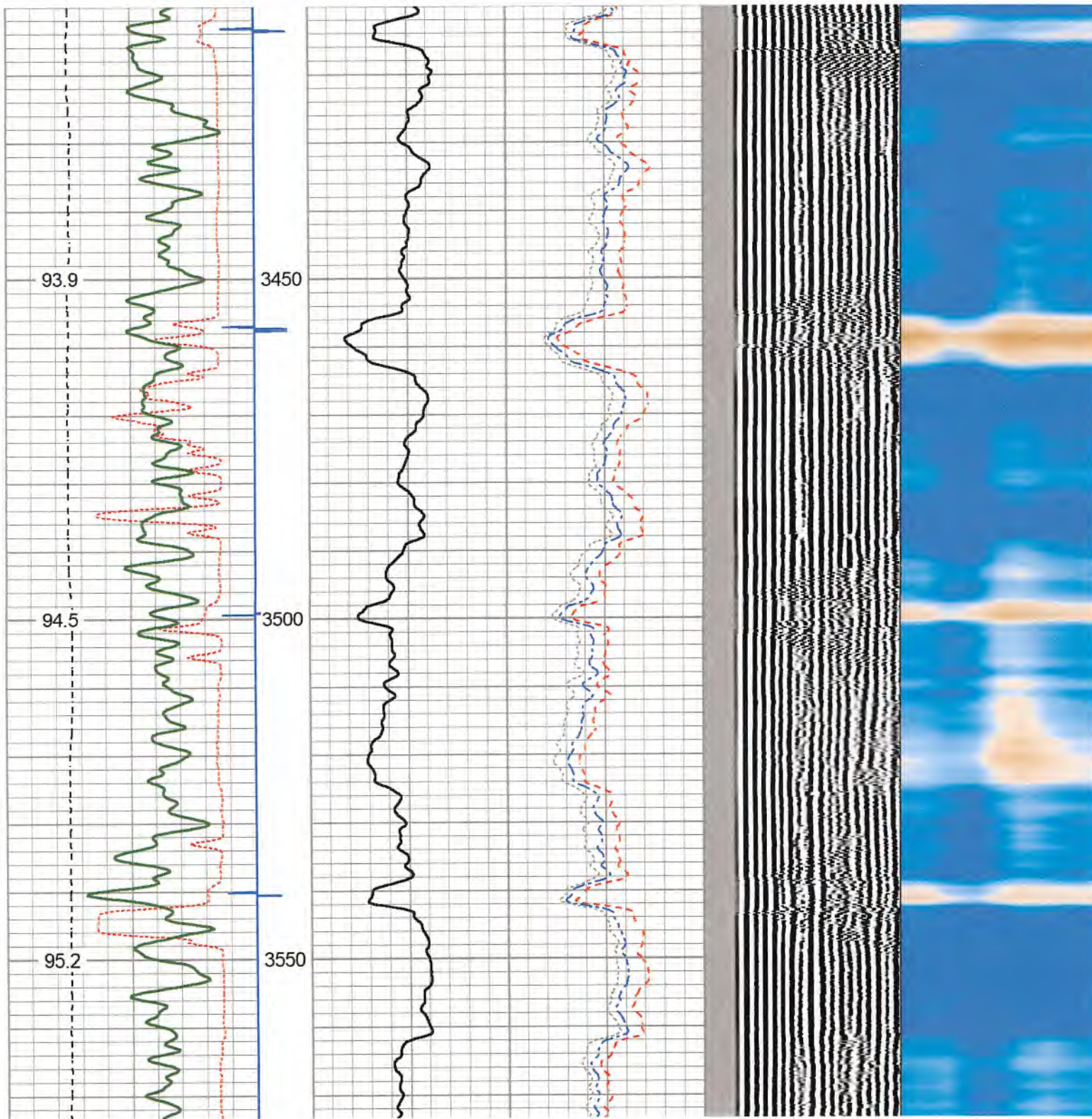


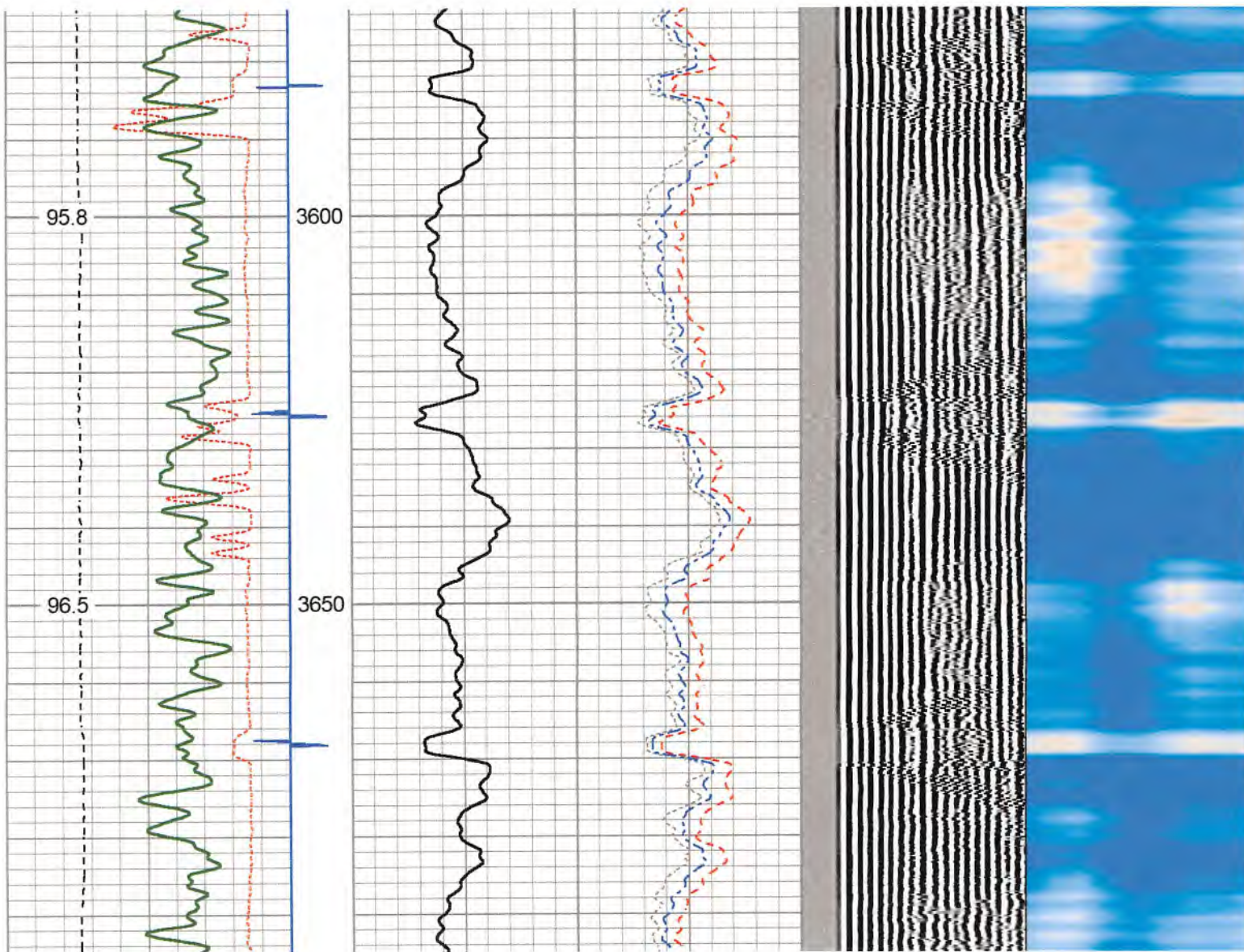


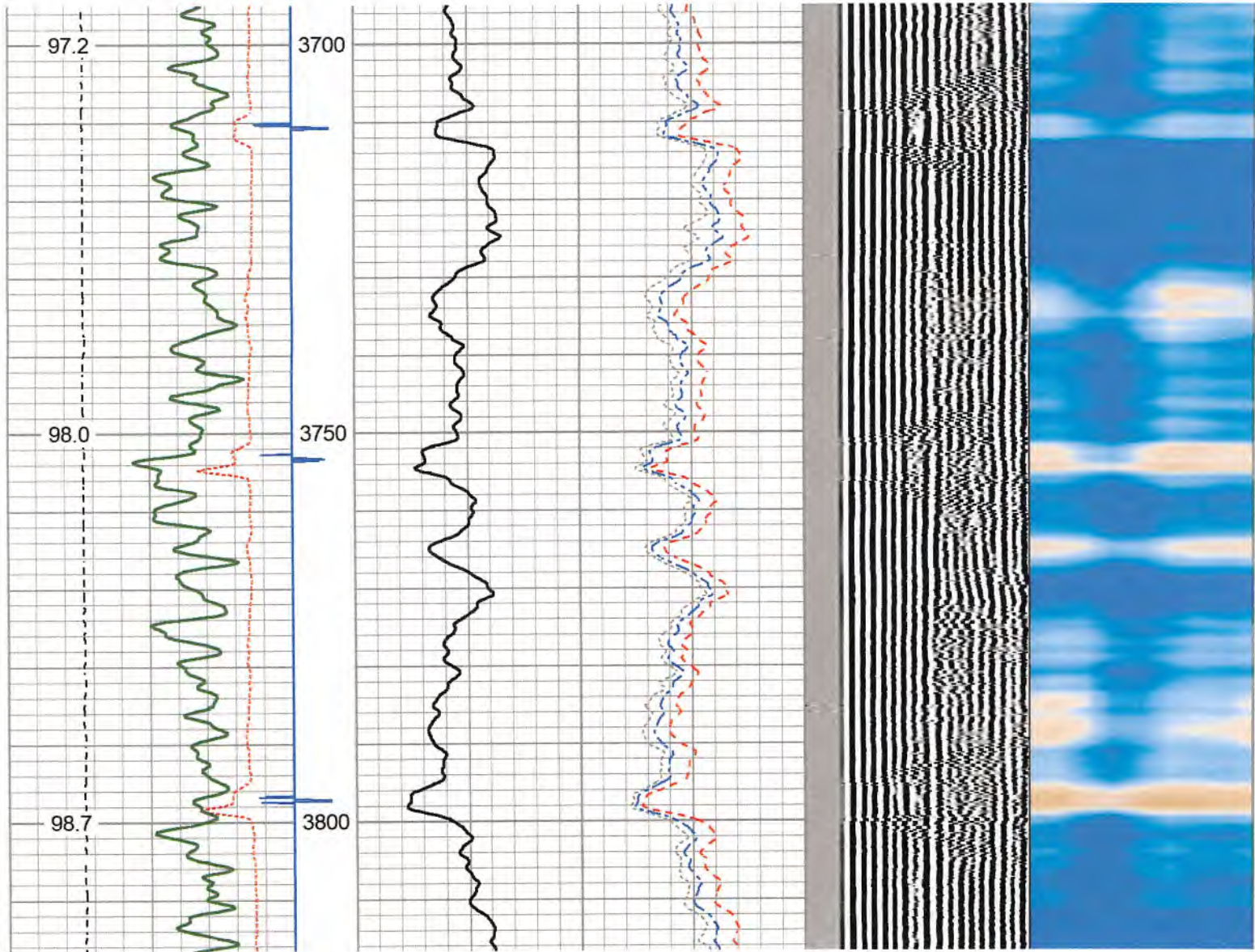


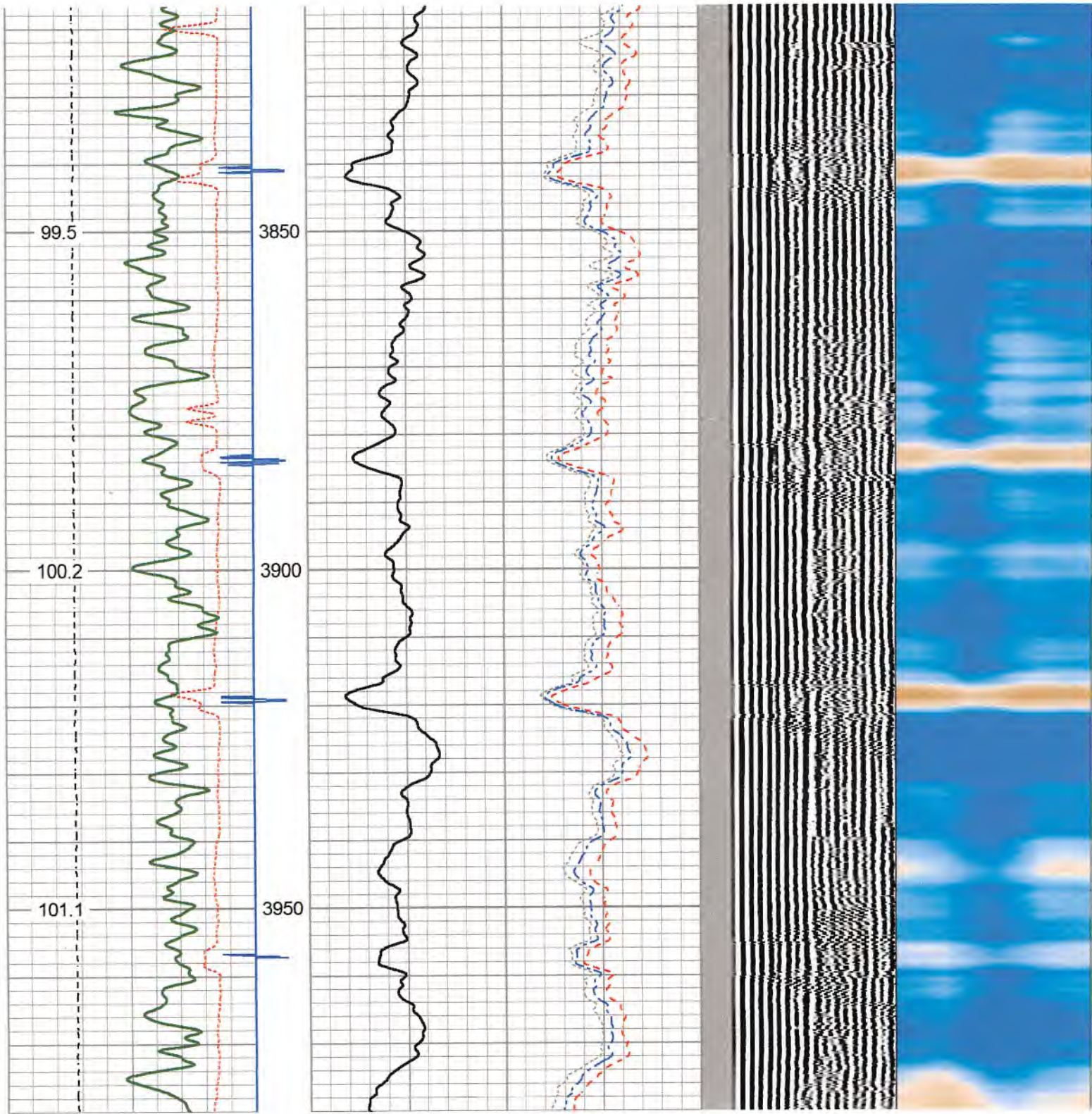


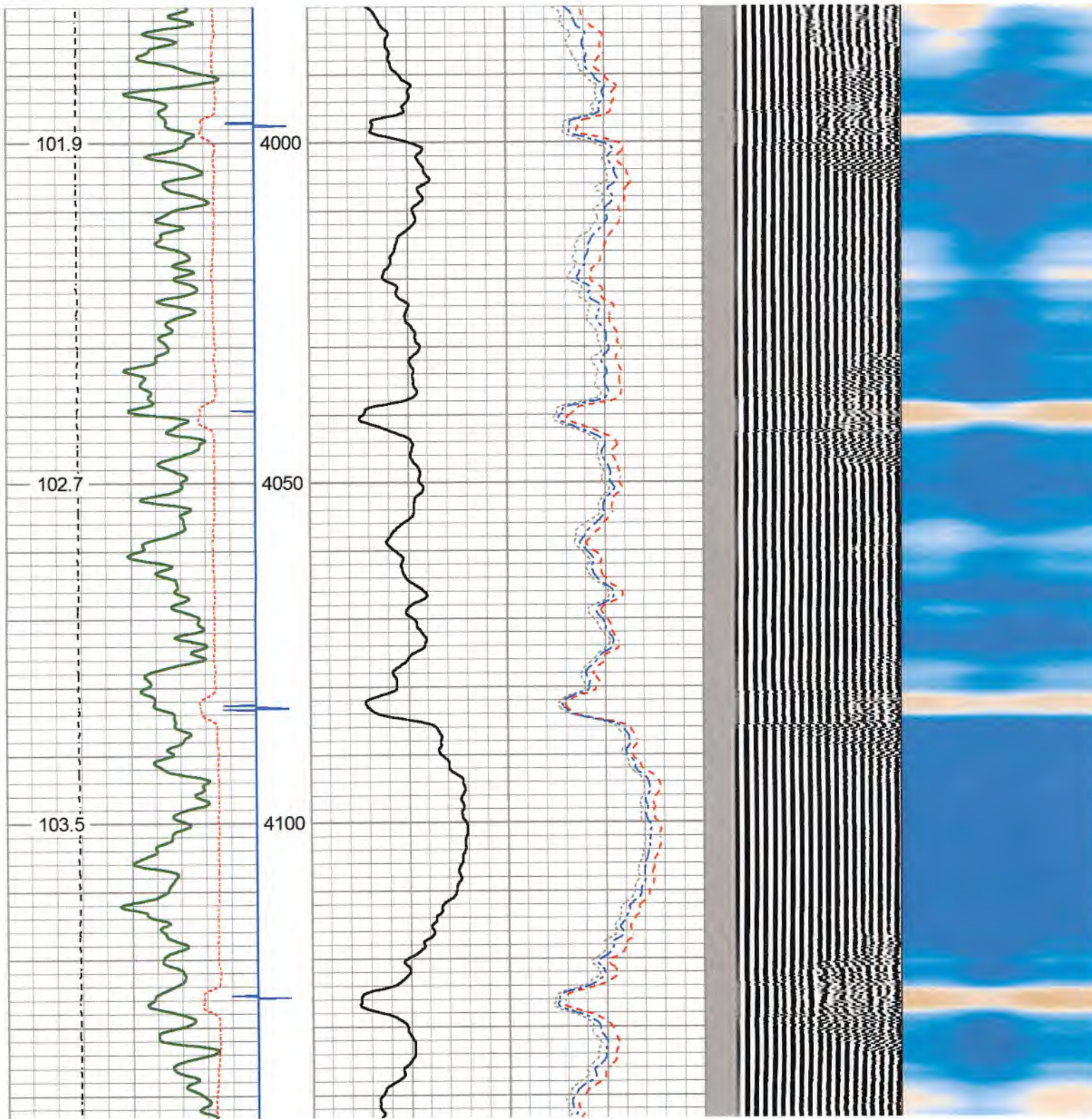


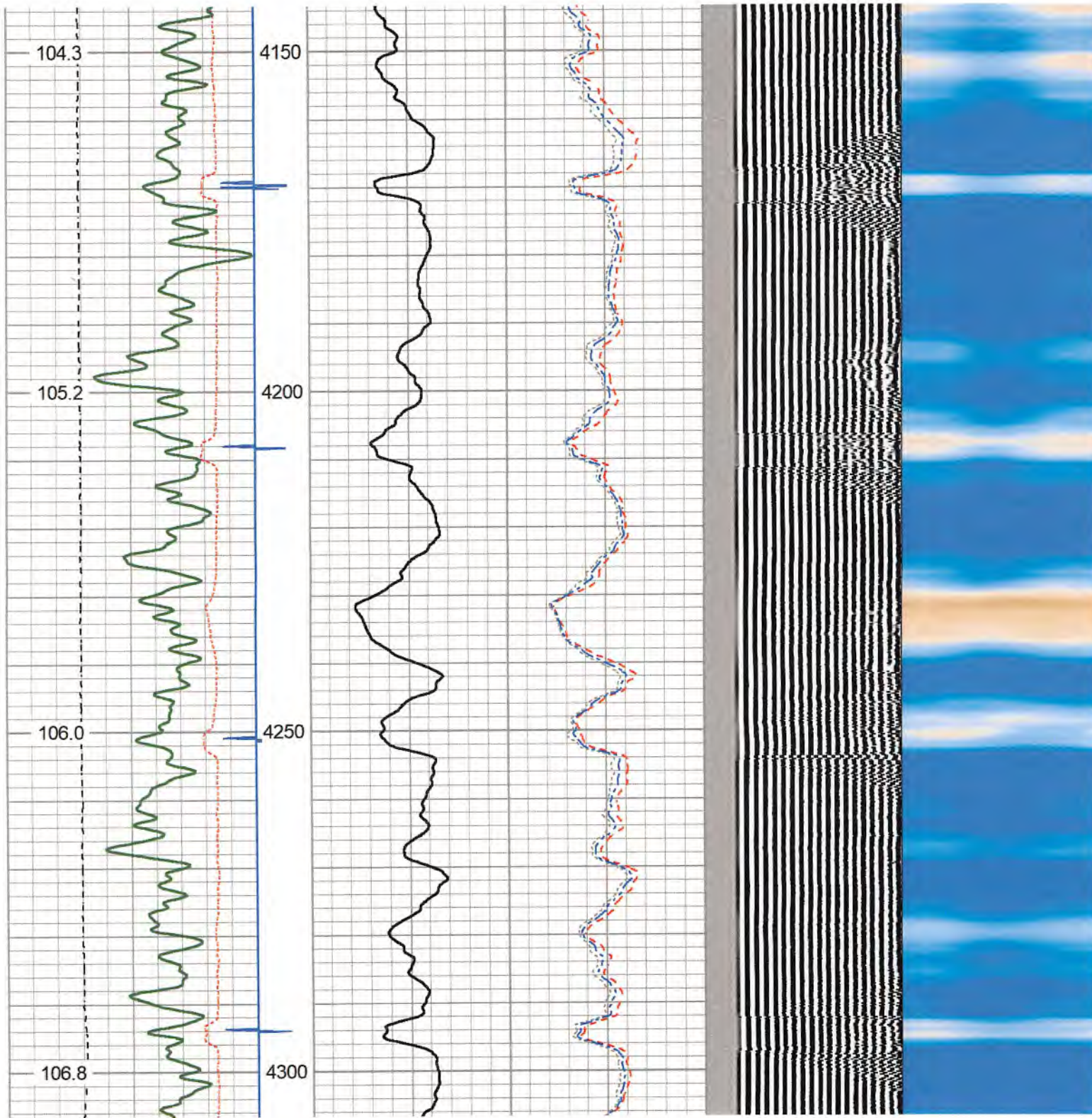


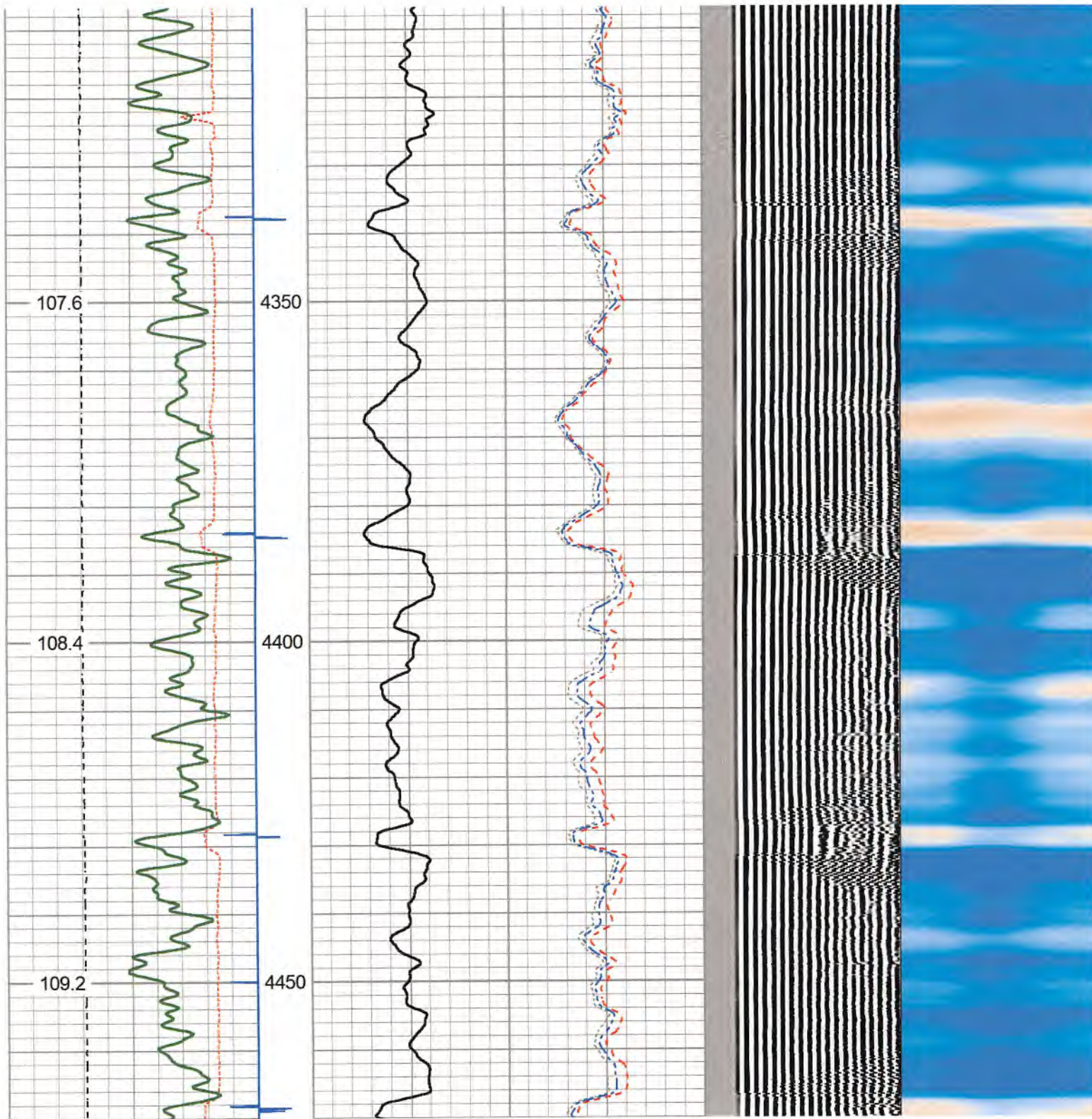


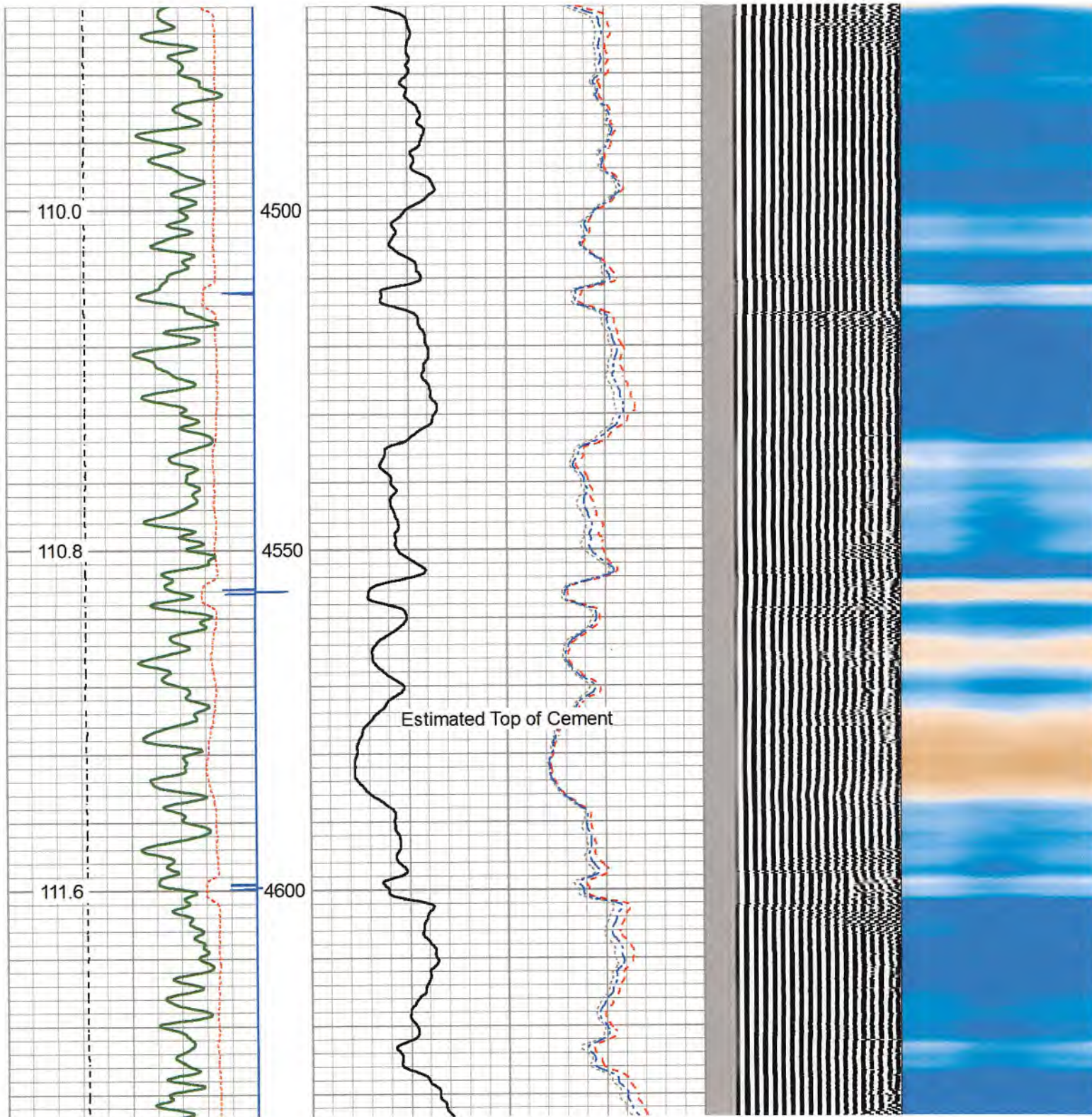


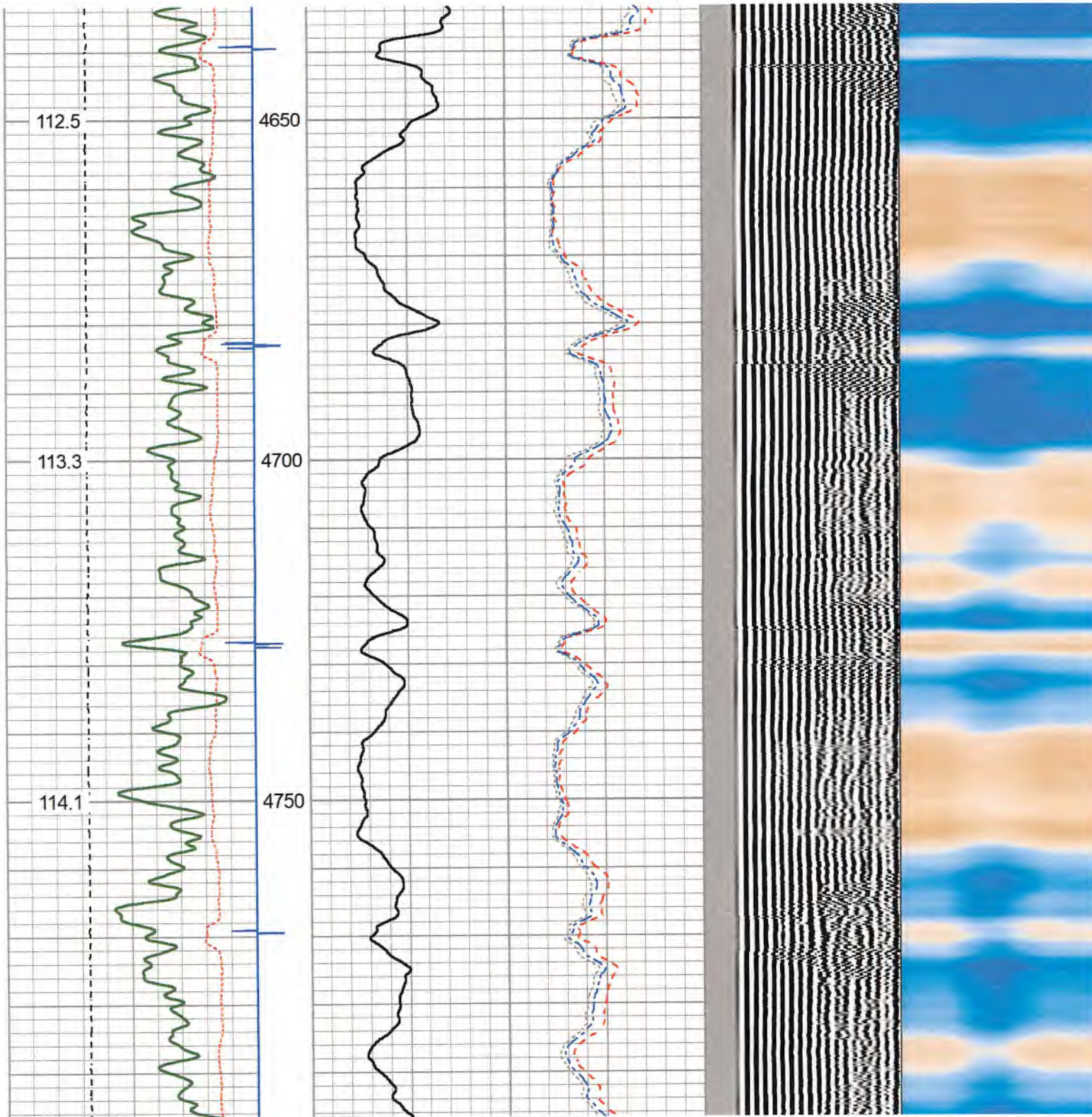


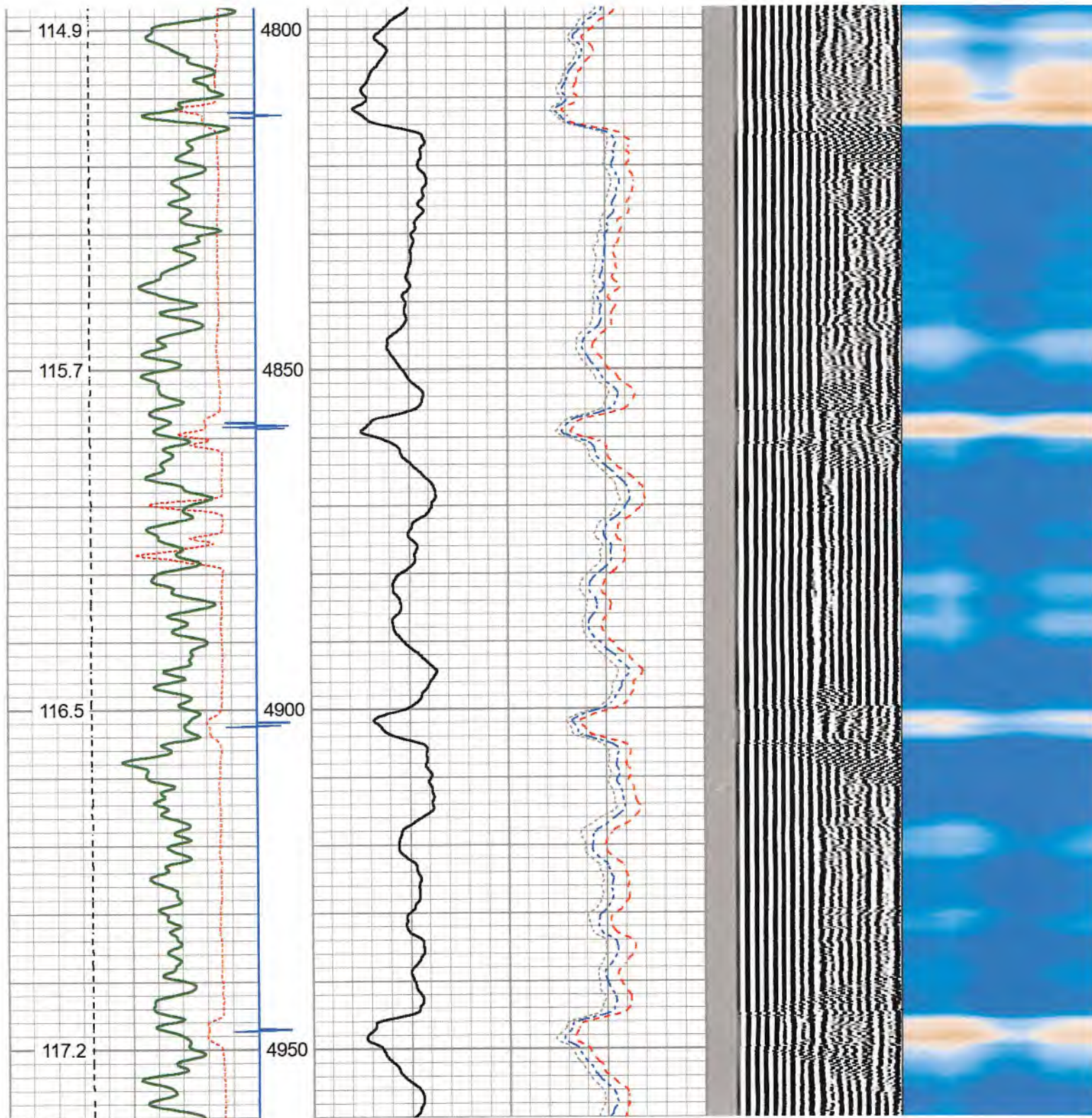


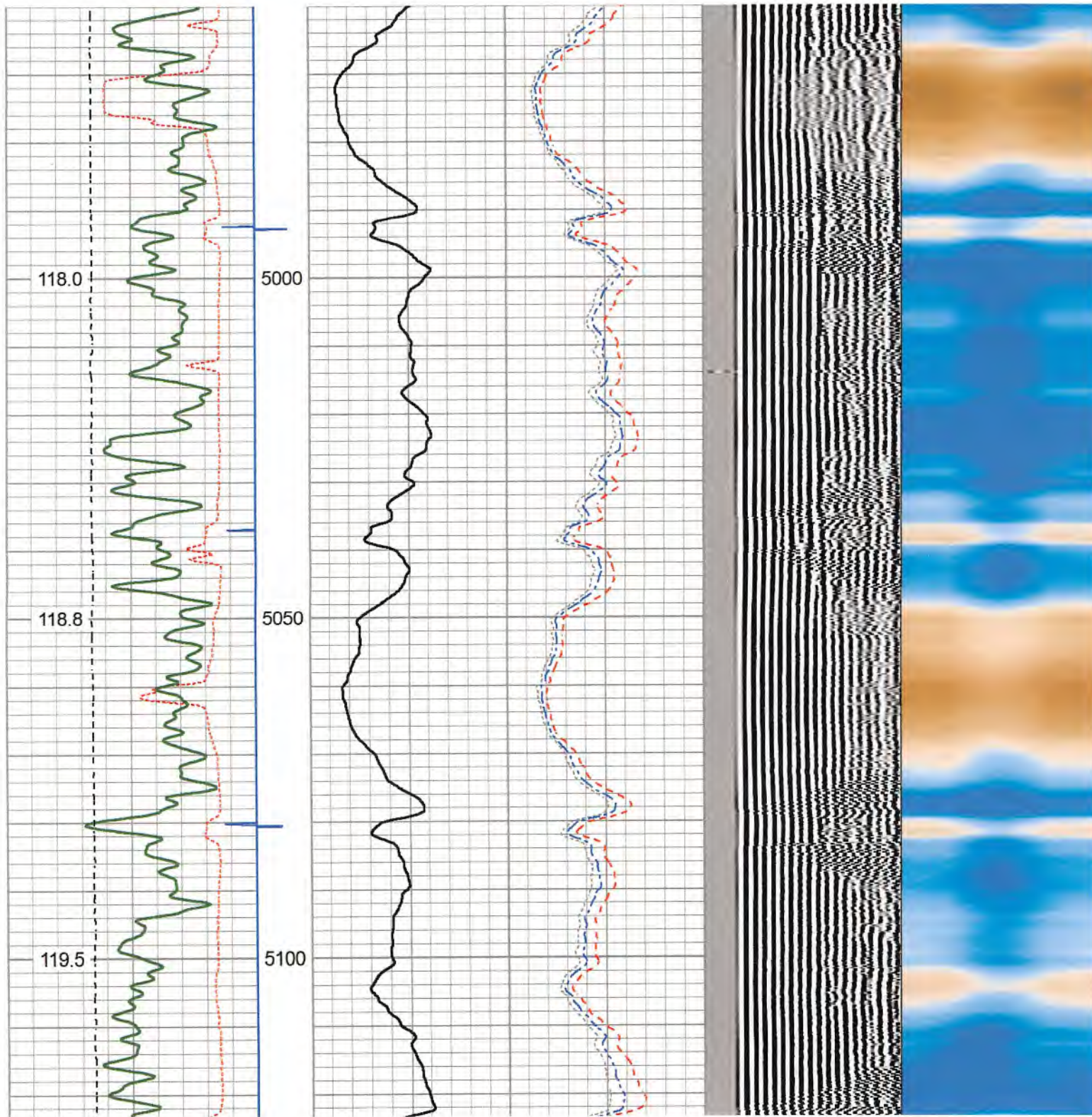


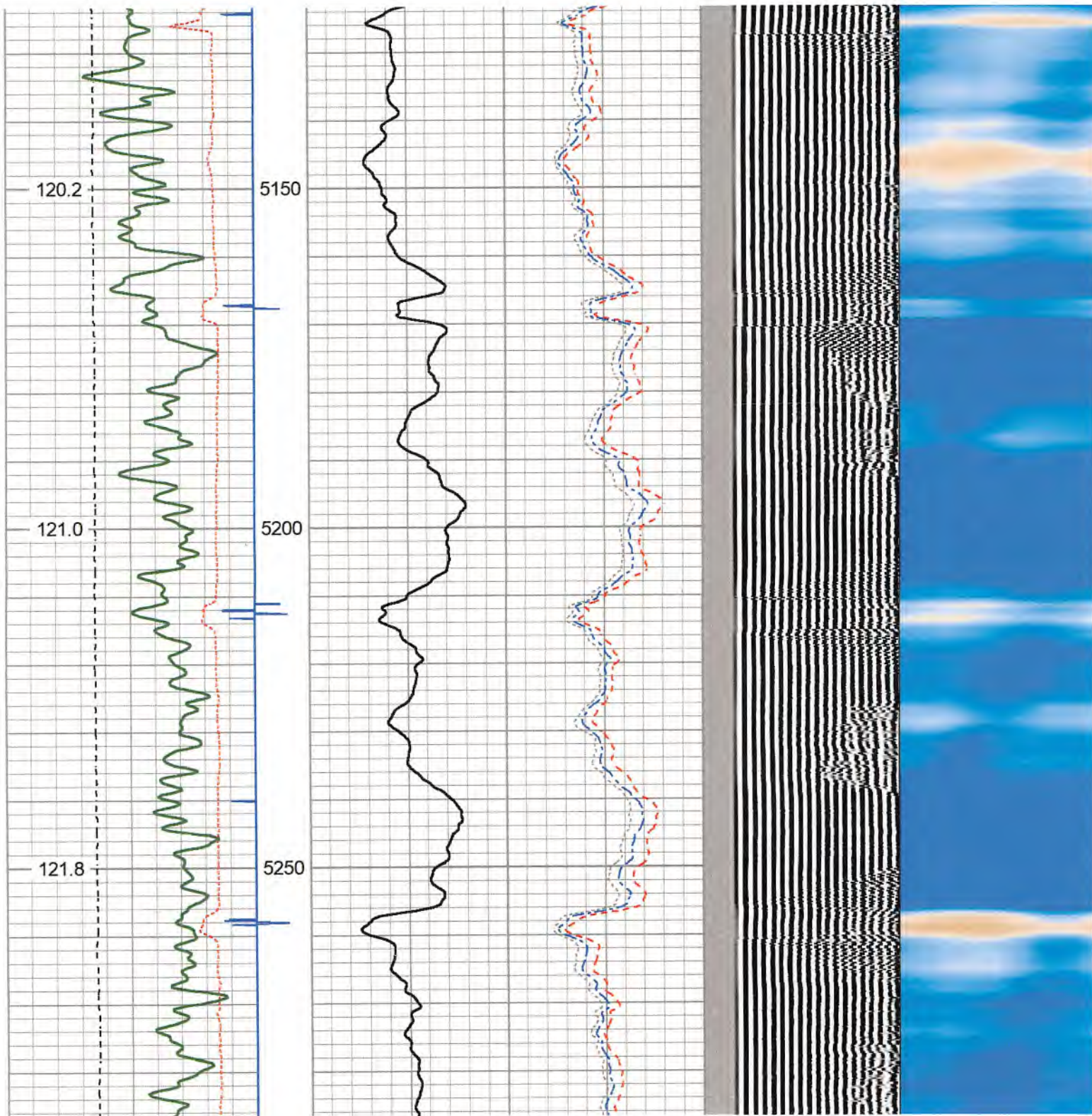


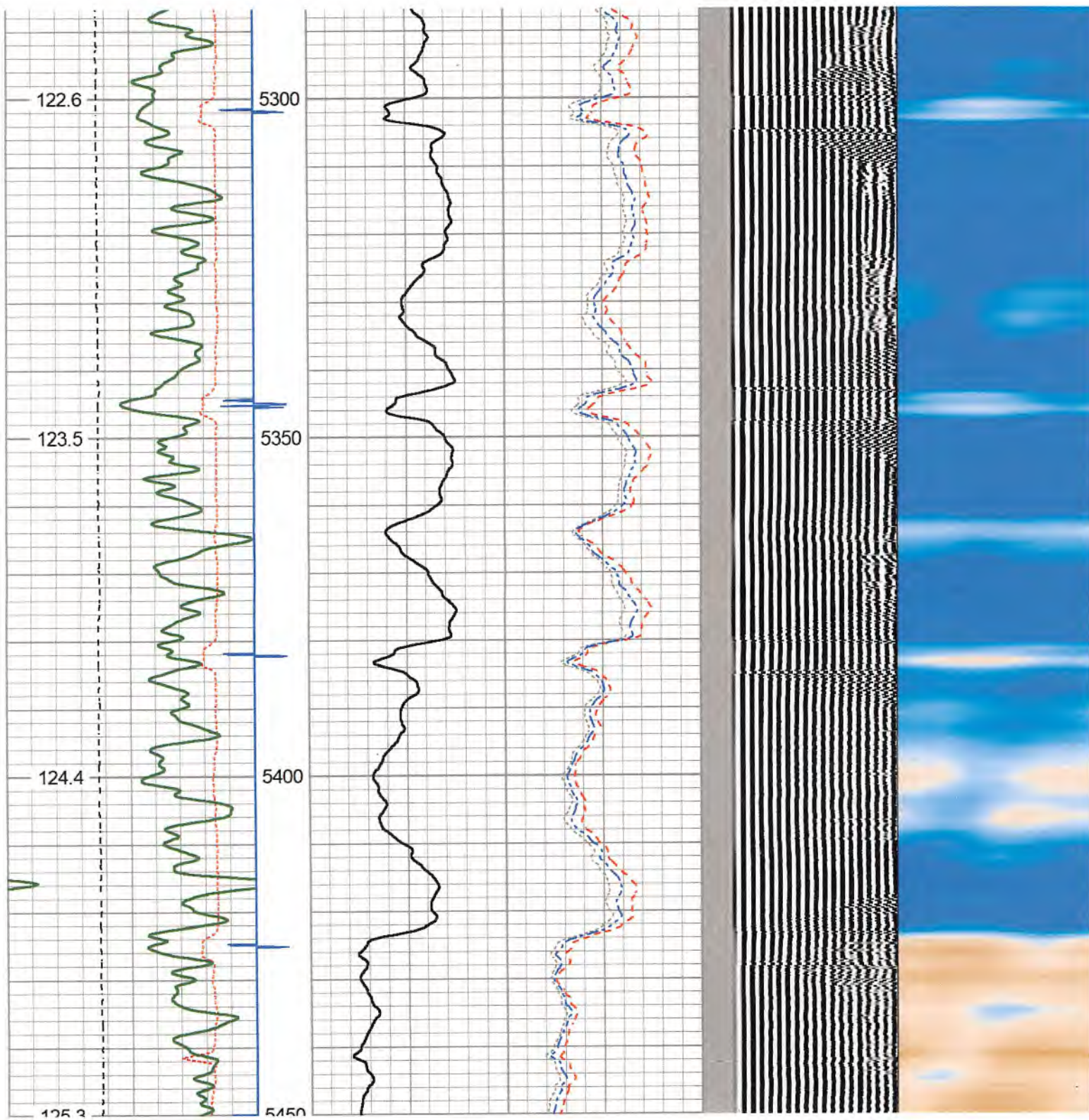


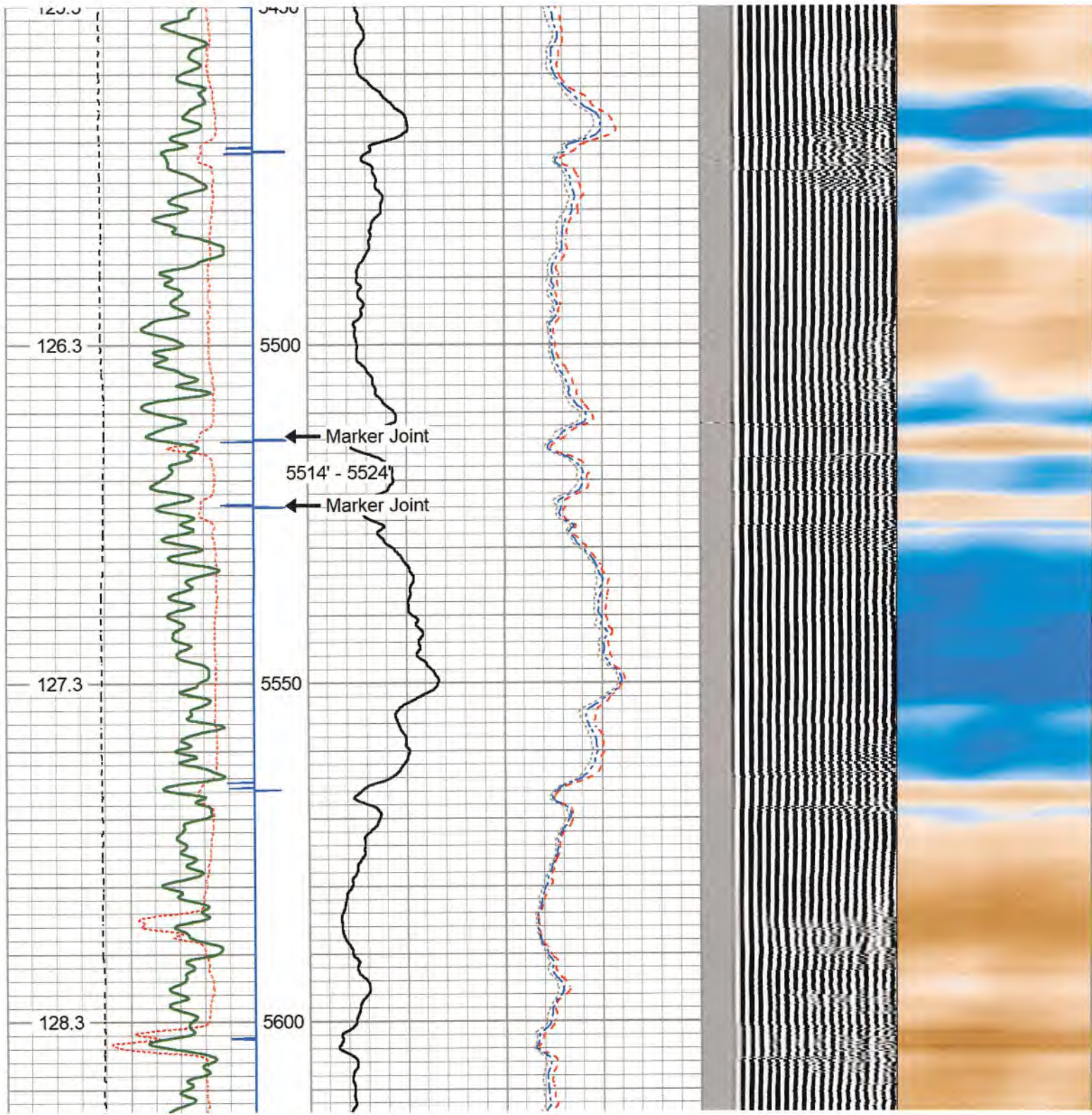


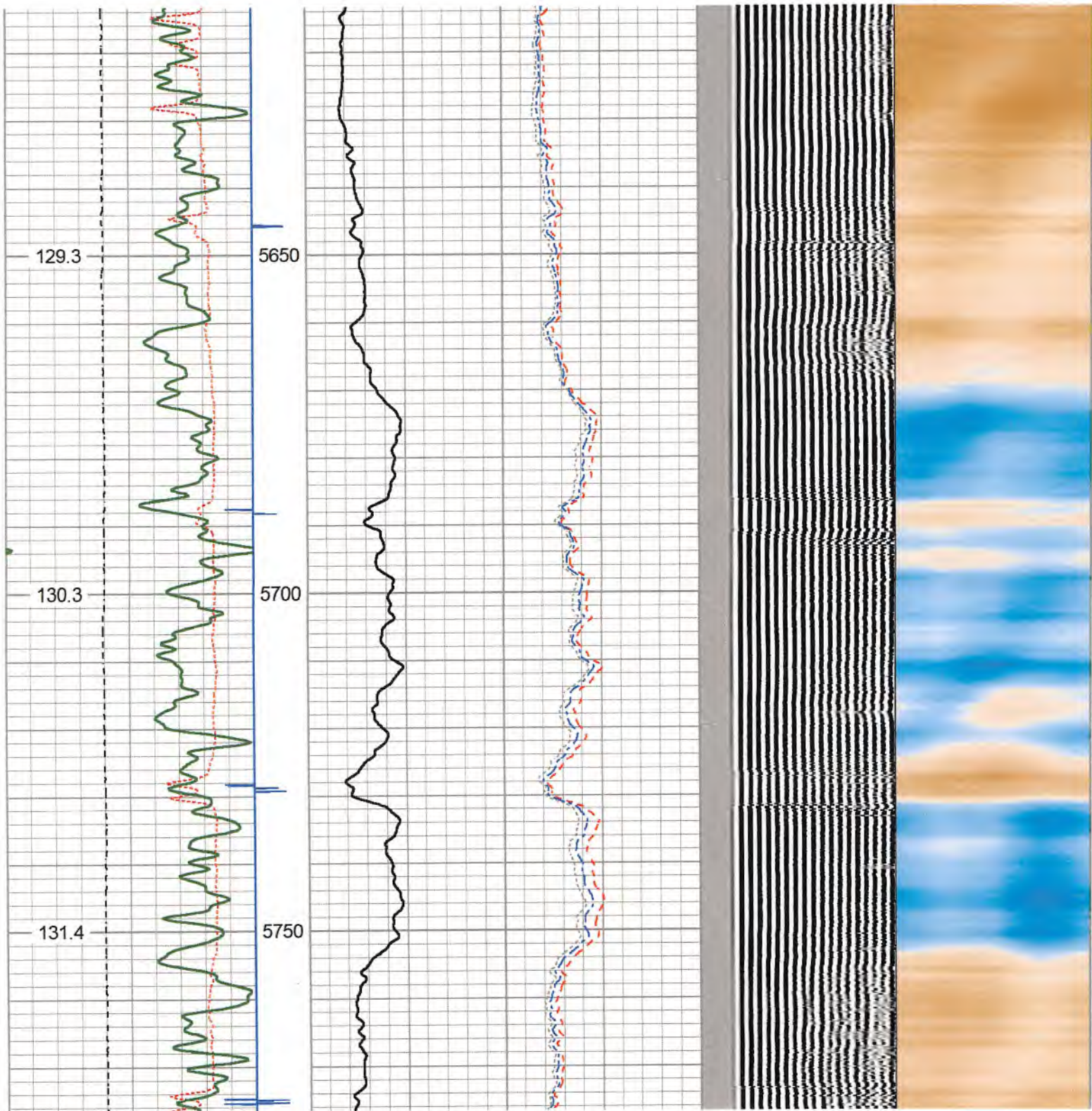


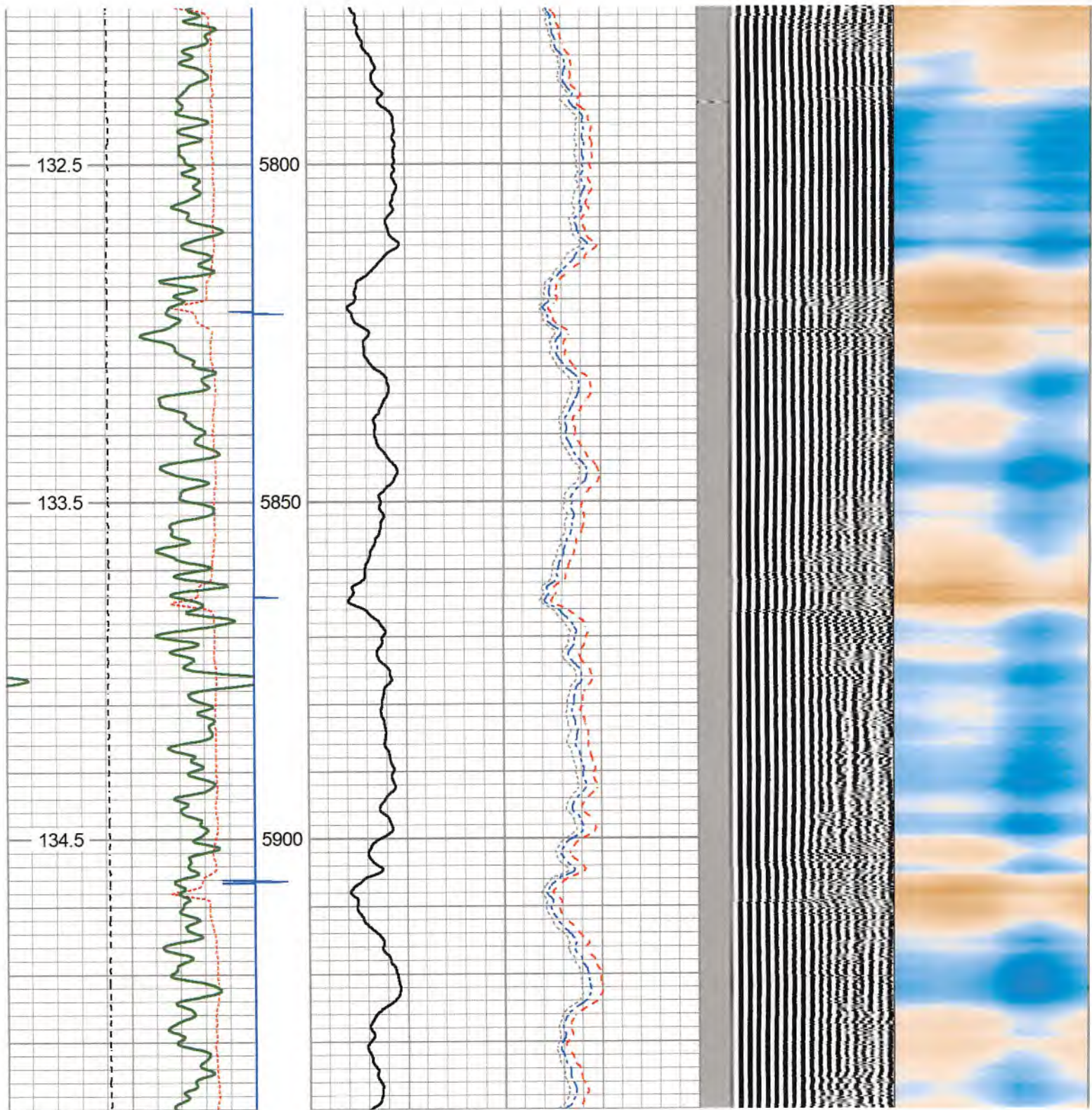


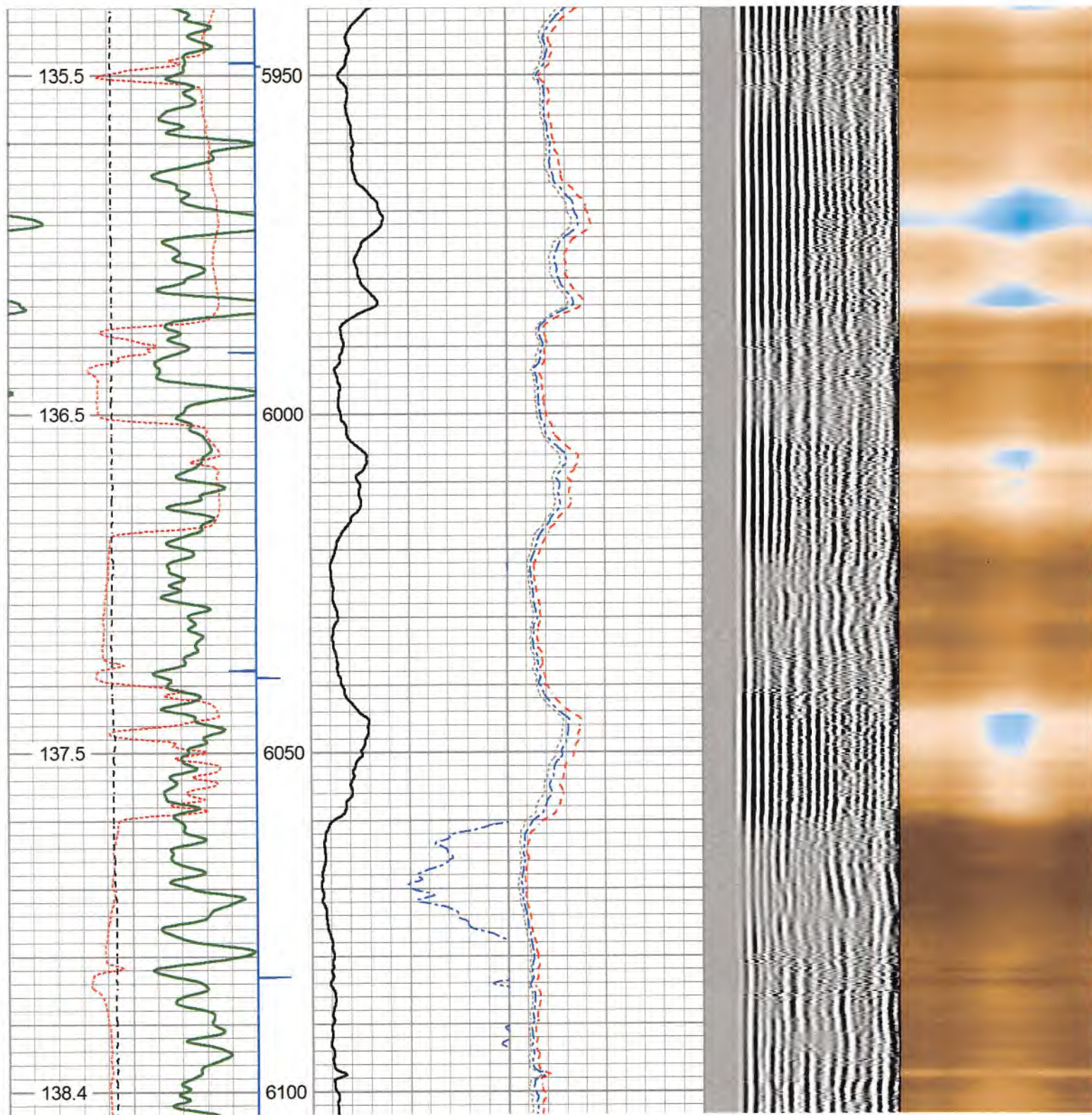


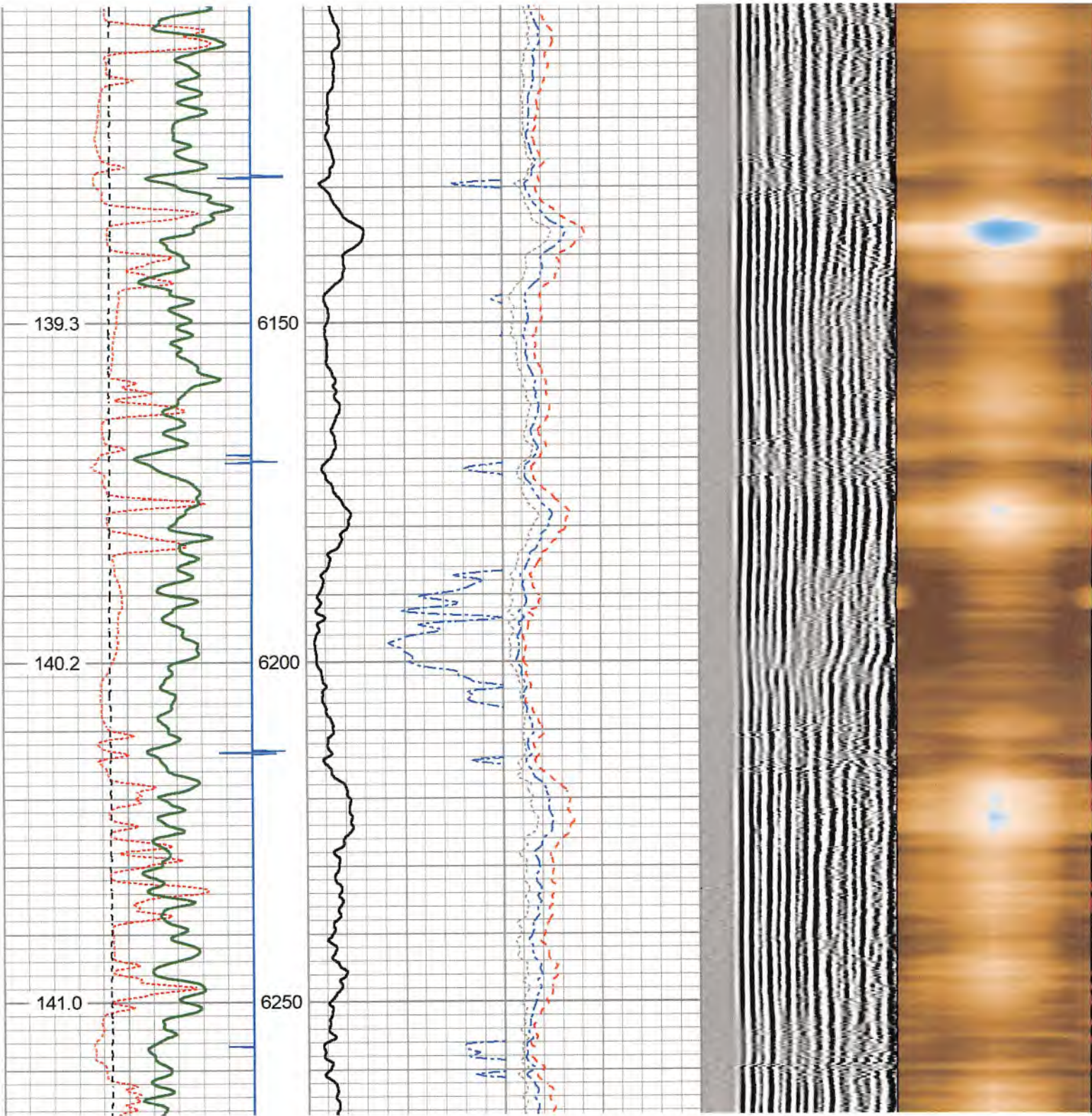


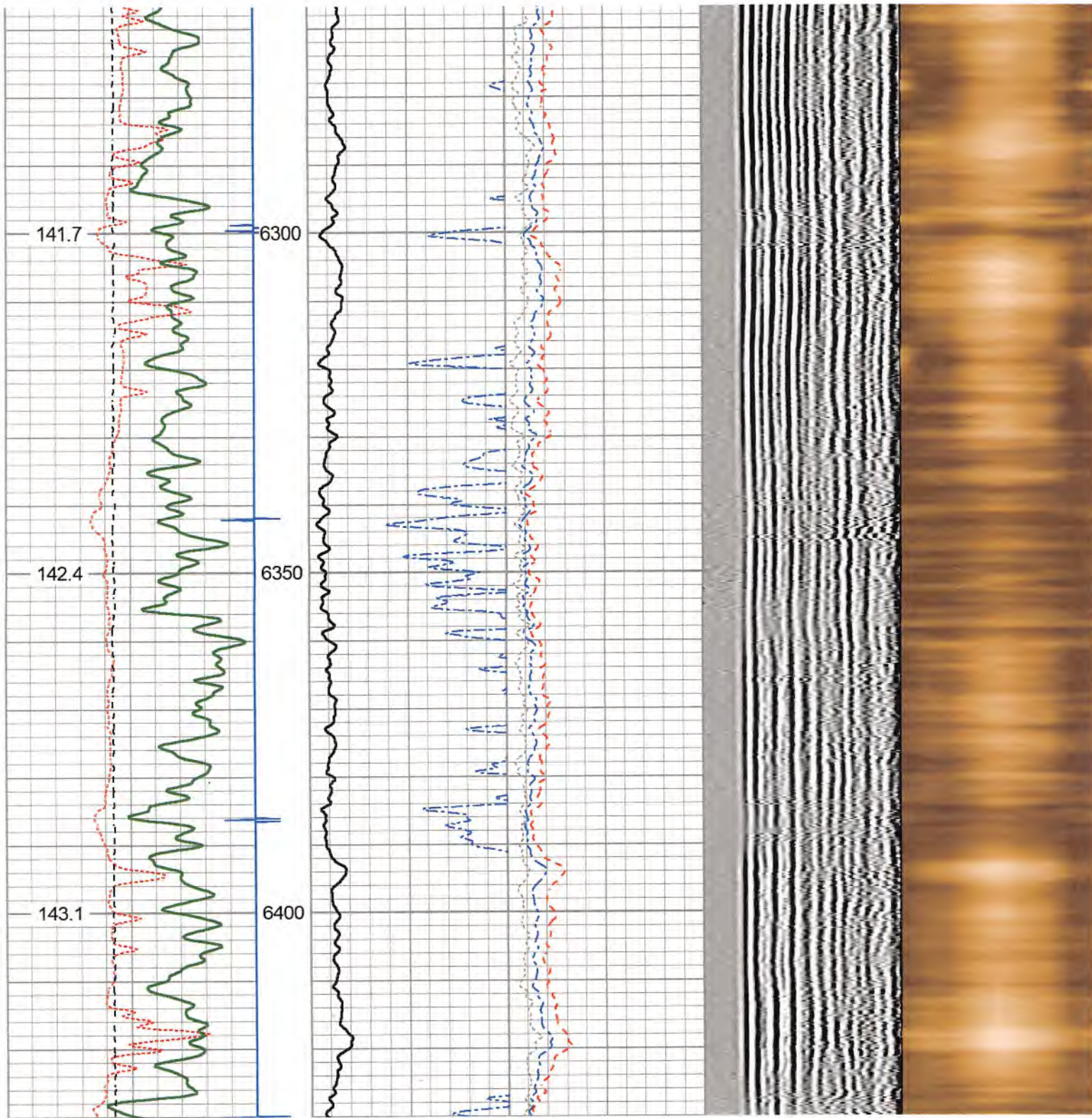


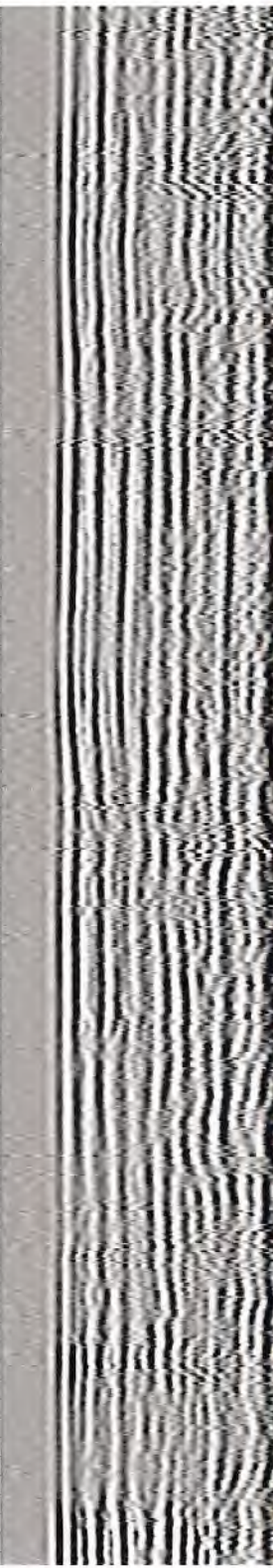
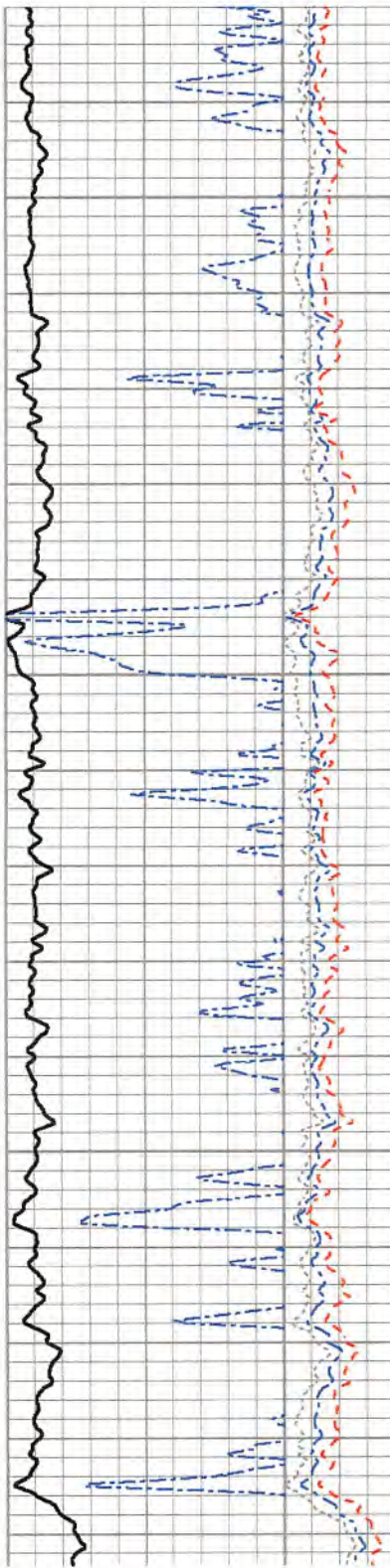
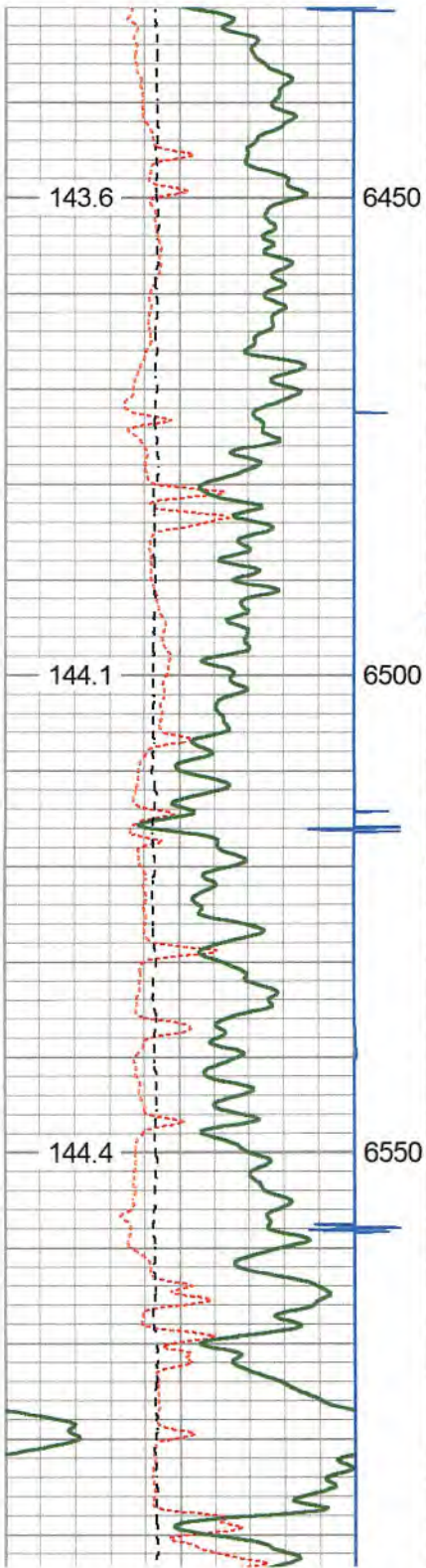


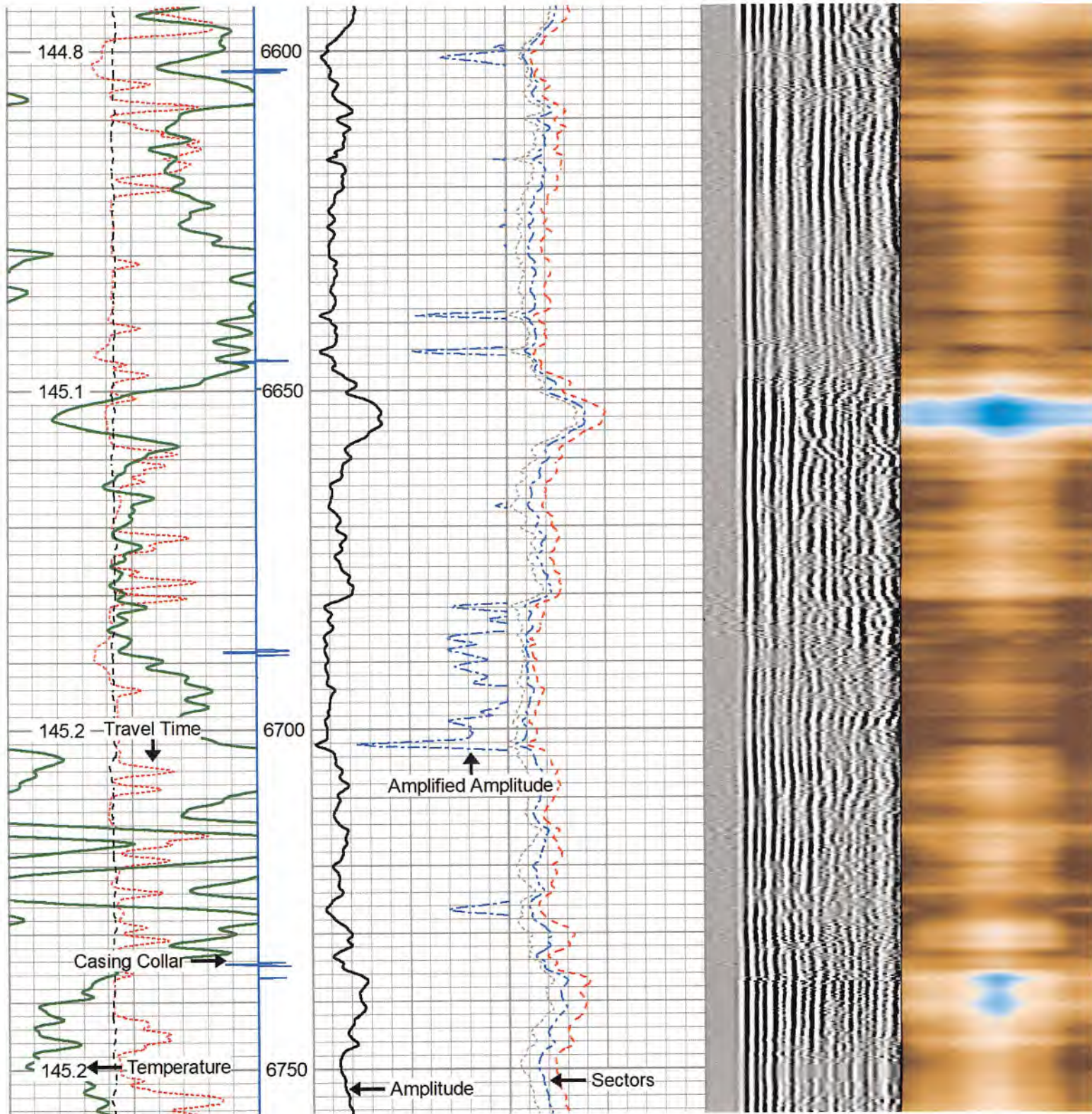


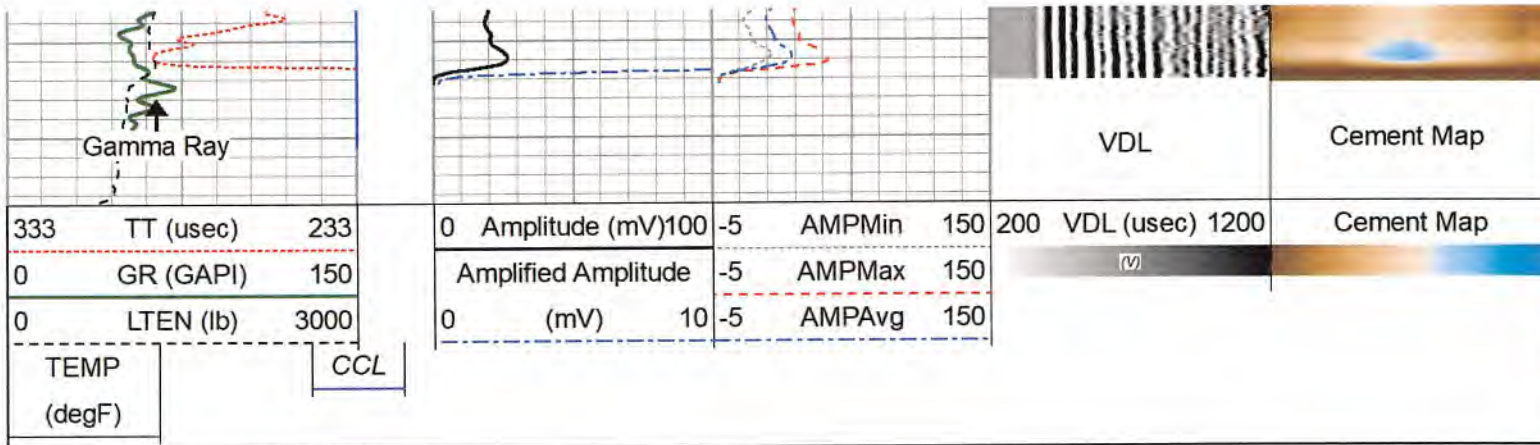






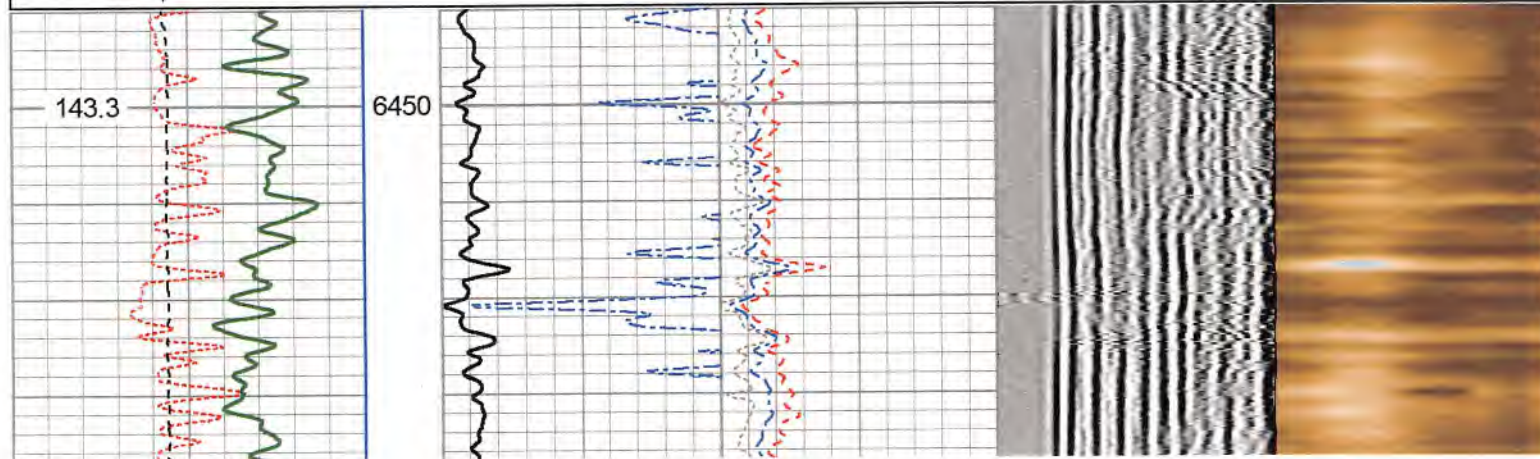
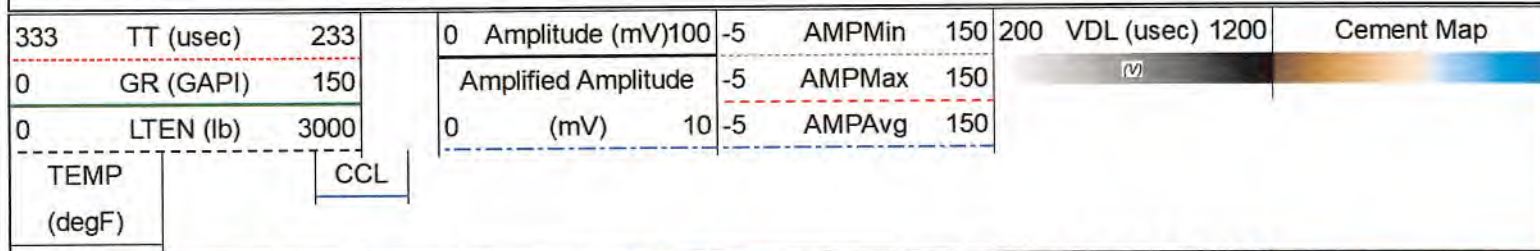


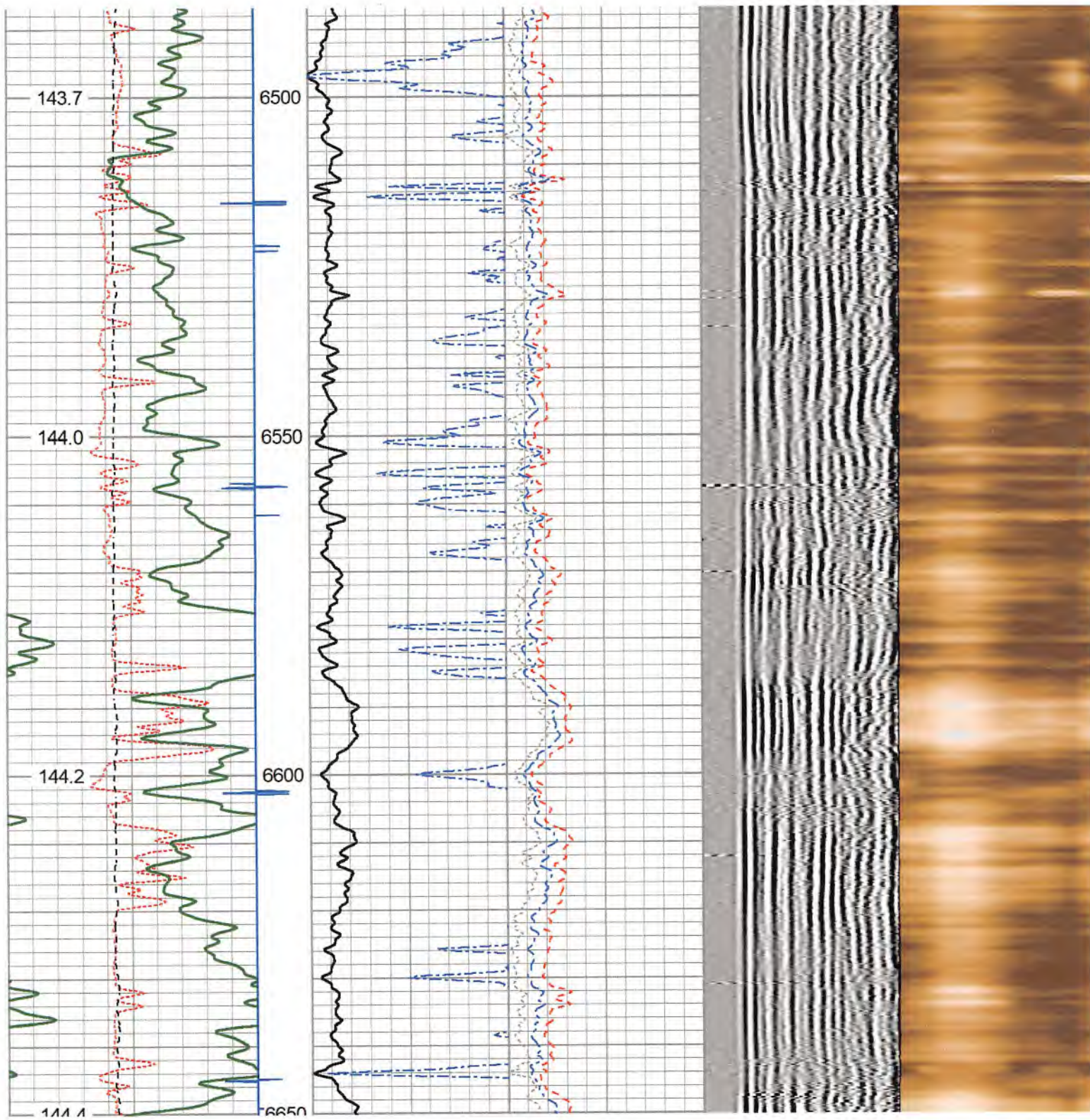


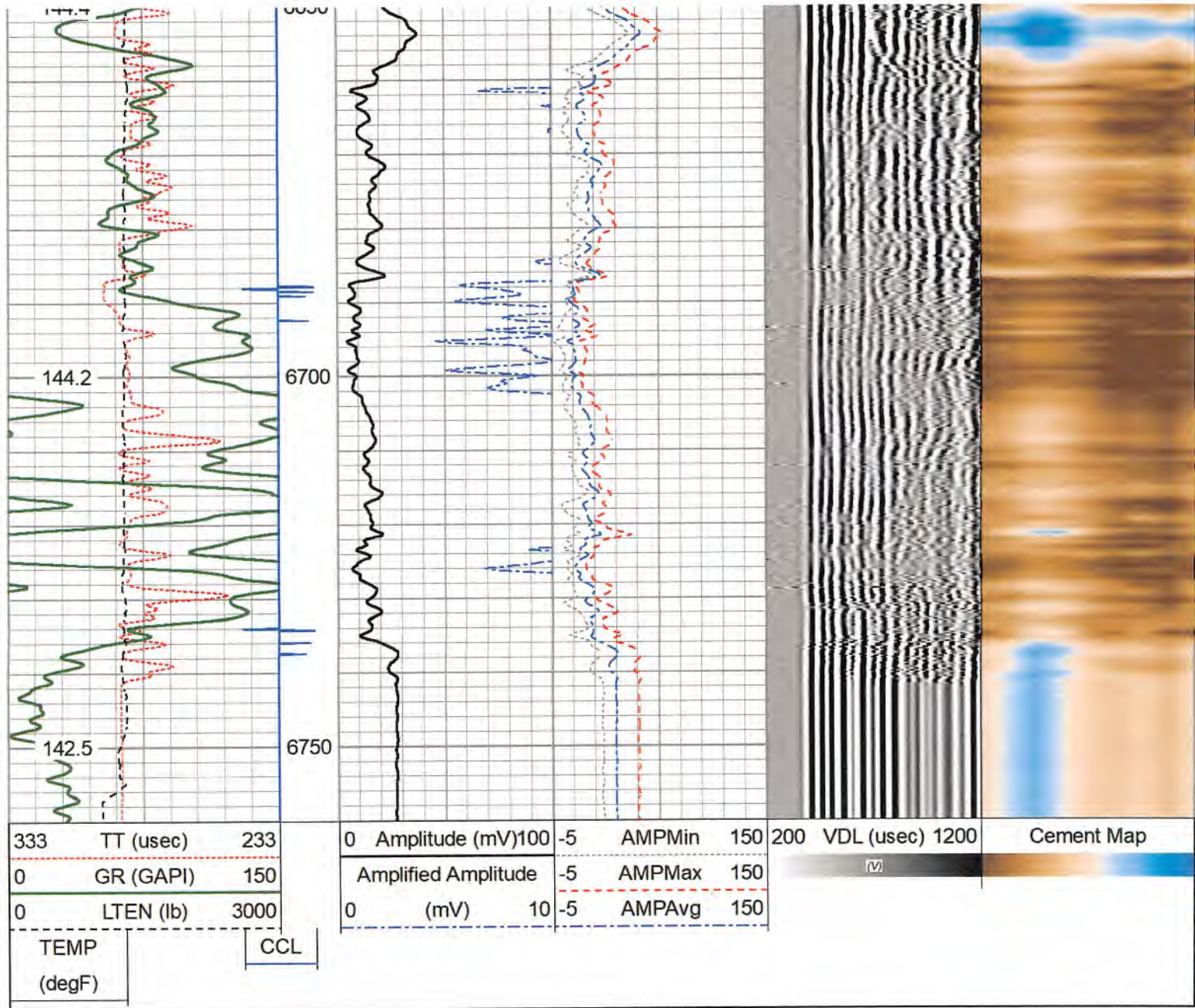


Energy Services **Repeat Pass (1500 PSI)**

Database File c:\users\logbox\desktop\cashew\antero_cashew_elclick_1h.db
 Dataset Pathname rcb1/pass2
 Presentation Format rcb1_std_bw_tt
 Dataset Creation Mon Oct 17 15:53:57 2022
 Charted by Depth in Feet scaled 1:240







Log Variables

Database: \users\logbox\desktop\cashew\antero_cashew_elclick_1h.db
 Dataset: field/well/rcbl/pass5/_vars_

Top - Bottom

BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	CASEWGHT lb/ft	MAXAMPL mV	MINAMPL mV	MINATTN db/ft
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6.75	145	5	0.362	18	76	1	0.8
PERFS	PPT usec	SRFTEMP degF	TDEPTH ft				
No	362	52	6775				

Variable Description

BOREID : Borehole I.D.	CASEWGHT : Casing Weight	PERFS : Perforation Flag
BOTTEMP : Bottom Hole Temperature	MAXAMPL : Maximum Amplitude	PPT : Predicted Pipe Time
CASEOD : Casing O.D.	MINAMPL : Minimum Amplitude	SRFTEMP : Surface Temperature
CASETHCK : Casing Thickness	MINATTN : Minimum Attenuation	TDEPTH : Total Depth

Calibration Report

Database File c:\users\logbox\desktop\cashew\antero_cashew_elklick_1h.db
Dataset Pathname rcbl/pass2
Dataset Creation Mon Oct 17 15:53:57 2022

Gamma Ray Calibration Report

Serial Number: GCT275-0000_base
Tool Model: GCT275-0000
Performed: Wed May 29 12:12:35 2019

Calibrator Value: 1094.2 GAPI

Background Reading: 55.7 cps
Calibrator Reading: 1704.2 cps

Sensitivity: 0.6638 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: RBT275C_Base
Tool Model: RADII-275C

Calibration Casing Diameter: 5.000 in
Calibration Depth: 245.100 ft

Master Calibration, performed Mon Oct 17 13:22:20 2022:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.006	0.590	1.000	75.192	127.026	0.191
CAL	0.005	0.828				

5'	0.005	0.472	1.000	75.192	158.694	0.225
SUM						
S1	0.009	0.579	0.000	100.000	175.666	-1.628
S2	0.007	0.557	0.000	100.000	181.544	-1.190
S3	0.006	0.563	0.000	100.000	179.594	-1.055
S4	0.004	0.565	0.000	100.000	178.479	-0.789
S5	0.006	0.588	0.000	100.000	171.708	-1.044
S6	0.007	0.605	0.000	100.000	167.214	-1.239
S7	0.005	0.607	0.000	100.000	166.126	-0.852
S8	0.004	0.595	0.000	100.000	169.414	-0.734

Internal Reference Calibration, performed Wed Aug 24 11:56:29 2022:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.005	0.828	1.000	0.000

Air Zero Calibration, performed Mon Oct 17 10:08:06 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

Inclinometer Calibration Report

Performed:	(Not Performed)				
	Low Read.	High Read.	Low Ref.	High Ref.	
X Accelerometer	0.00	1.00	0.00	1.00	gee
Y Accelerometer	0.00	1.00	0.00	1.00	gee

Z Accelerometer



0.00

1.00

0.00

1.00

gee

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
RBT_HV	19.19		Cable_Head-1_7/16 Titan 1 7/16" Cable Head	1.02	1.44	3.31
			CENT-BC275-0000 Probe 2.75" Bowspring Centralizer	2.83	2.75	24.00
			RBT8-RADII-275C (RBT275C_Base) Probe 2.75" RADII 8 Sector Bond Tool	8.75	2.75	
WVFS8	14.69					
WVFS7	14.69					
WVFS6	14.69					
WVFS5	14.69					

WWFS4	14.69		CENT. Probe
WWFS3	14.69		
WWFS2	14.69		
WWFS1	14.69		
WWF3FT	14.69		
WWF5FT	13.69		
RBT_ACCZ	10.44		CENT. Probe
RBT_ACCY	10.44		
RBT_ACCX	10.44		
WWFSYNC	10.44		
WWFCAL	10.44		
GCT_HV	7.60		
CCL\$2	6.64		GC-GC Probe
CCL\$1	6.64		
GCT_Temp	6.09		
GR	5.22		

Dataset: antero_cashew_
Total length: 23.04 ft
Total weight: 130.31 lb
O.D.: 2.75 in



Company
Well
Field
County
State

-BC275-0000 2.75" Bowspring Centralizer	2.83	2.75	24.00
2T275-0000 (GCT275-0000_base) Gamma Ray - CCL w/ Temp	4.77	2.75	55.00
-BC275-0000 2.75" Bowspring Centralizer	2.83	2.75	24.00

.elklick_1h.db: field/well/rcbl/pass5

Antero Resources Corporation

