



**Radial Cement Bond
Gamma Ray CCL
Temperature Log**

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Office of Oil and Gas

FEB 24 2023

WV Department of
Environmental Protection

Company Antero Resources Corporation Well Baldy Unit 1H Field Marcellus County Wetzel State WV	Company Antero Resources Corporation Well Baldy Unit 1H Field Marcellus County Wetzel State WV
API #: 47-103-03478-00-00 AFE #: A11838 Location (LAT, LON): 39.526009, -80.762006 Township: N/A	
Permanent Datum Log Measured From Drilling Measured From	Ground Level Elevation 1207' KB = 26' KB
Other Services	None
Elevation	K.B. 1233' D.F. 1233' G.L. 1207'

Date	13 AUG 2022			
Run Number	One			
Depth Driller (ft)	25744			
Depth Logger (ft)	7092			
Bottom Logged Interval (ft)	7085			
Top Log Interval	Surface			
Open Hole Size (in)	8.5			
Type Fluid	Water			
Density / Viscosity (lb/gal)	8.4			
Max. Recorded Temp. (°F)	149.7			
Estimated Cement Top (ft)	6480			
Time Well Ready	12:00 AM			
Time Logger on Bottom	02:30 AM			
Equipment Number	8060			
Location	Delmont, PA			
Recorded By	T. Trump			
Witnessed By	M. Johnson			
Casing Record	Size (in)	Weight (lb/ft)	Top (ft)	Bottom (ft)
Conductor String	20	78.67	Surface	126
Surface String	13.375	54.5	Surface	938
Intermediate String	9.625	36	Surface	3412
Production String	5.5	23	Surface	25704
Inclination Information (Approximated Values from Directional Survey)				
KOP	30°		60°	90°
6350'	6630'		6950'	7310'

THANK YOU FOR USING GR ENERGY SERVICES

08/11/2023

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 -9'

Marker Joint Located @ 6033' - 6045'

Maximum Temperature Recorded was 149.7°F
Maximum Tension was 850 lbs

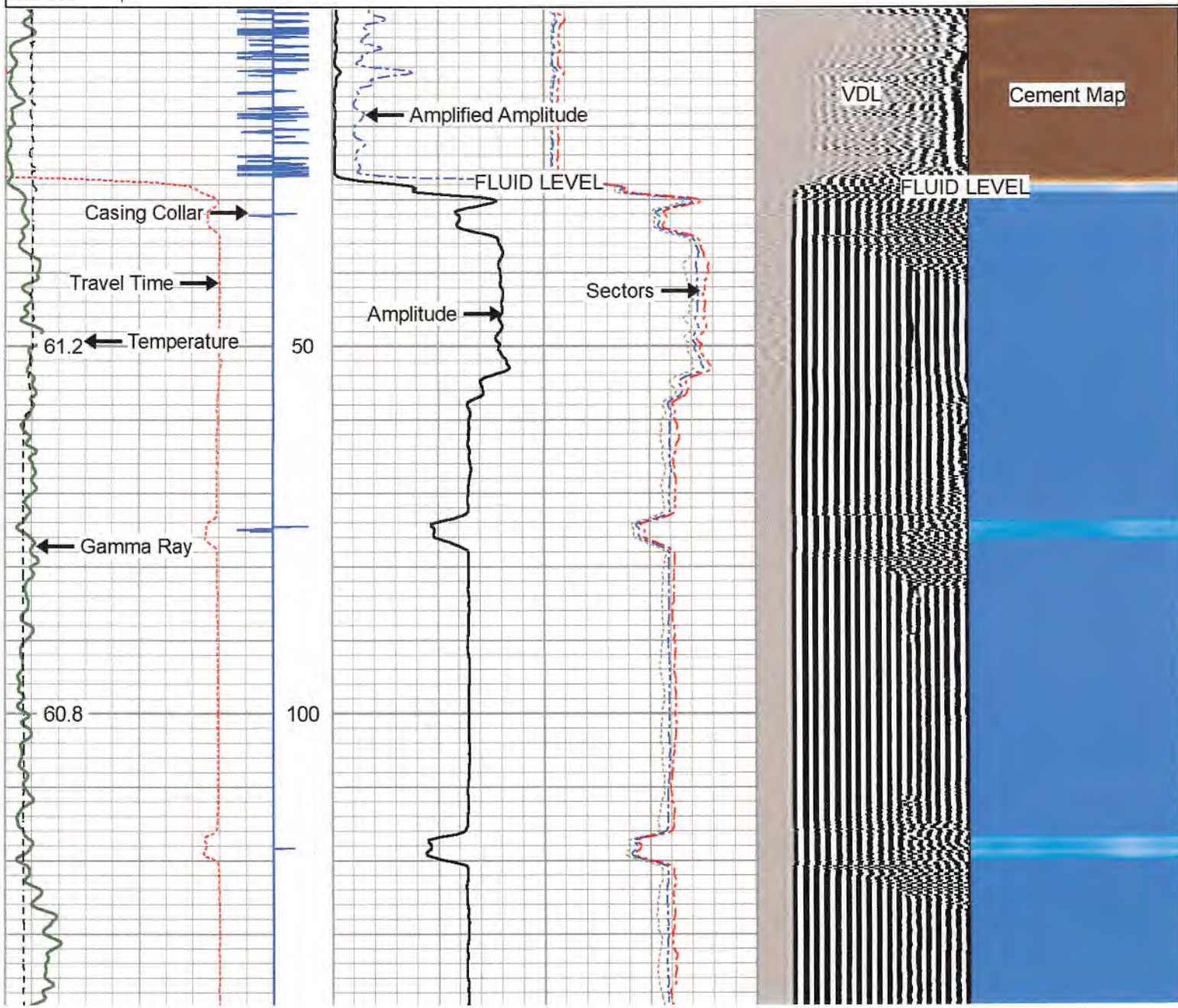
Estimated Top of Cement @ 6480'

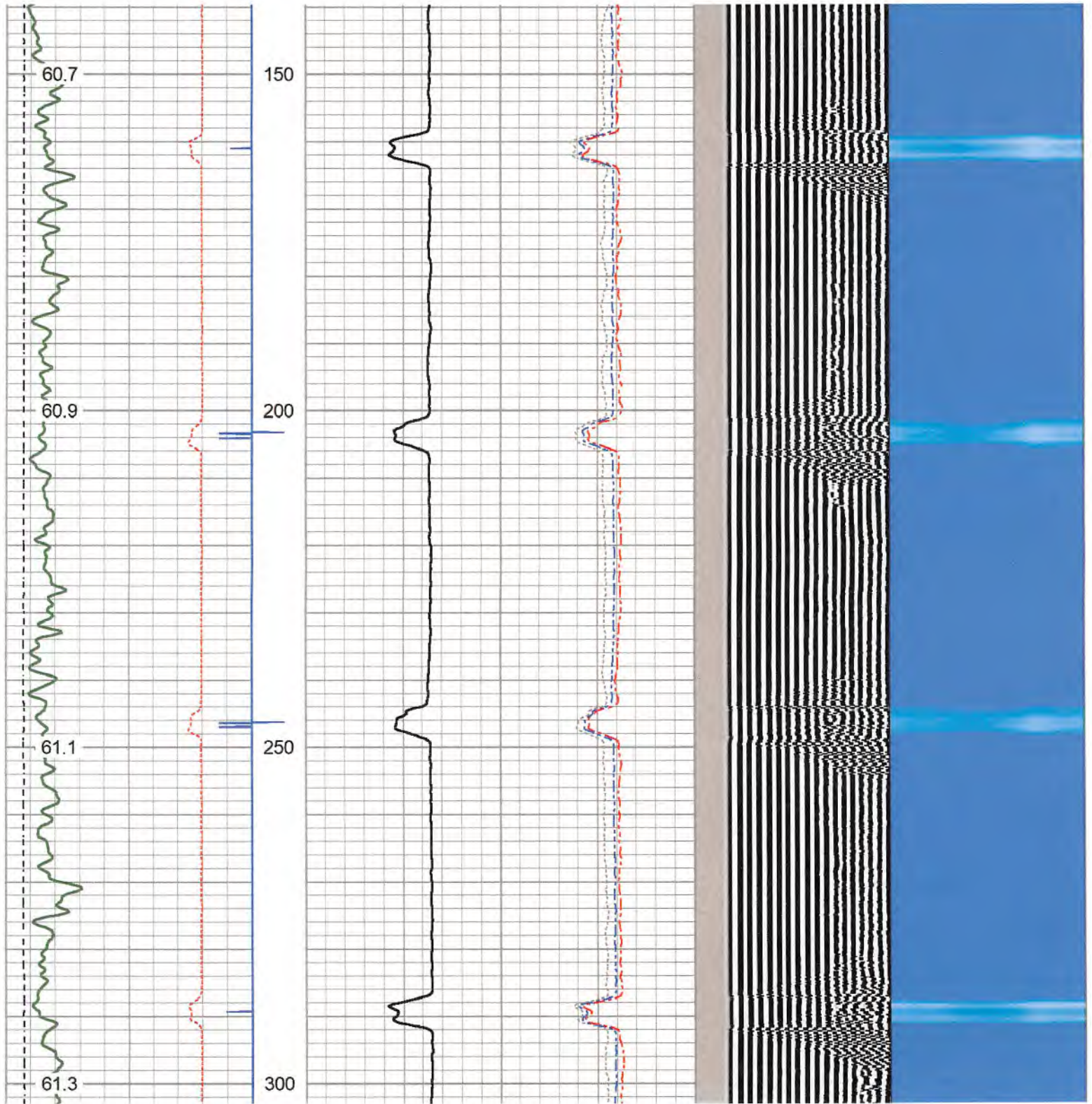


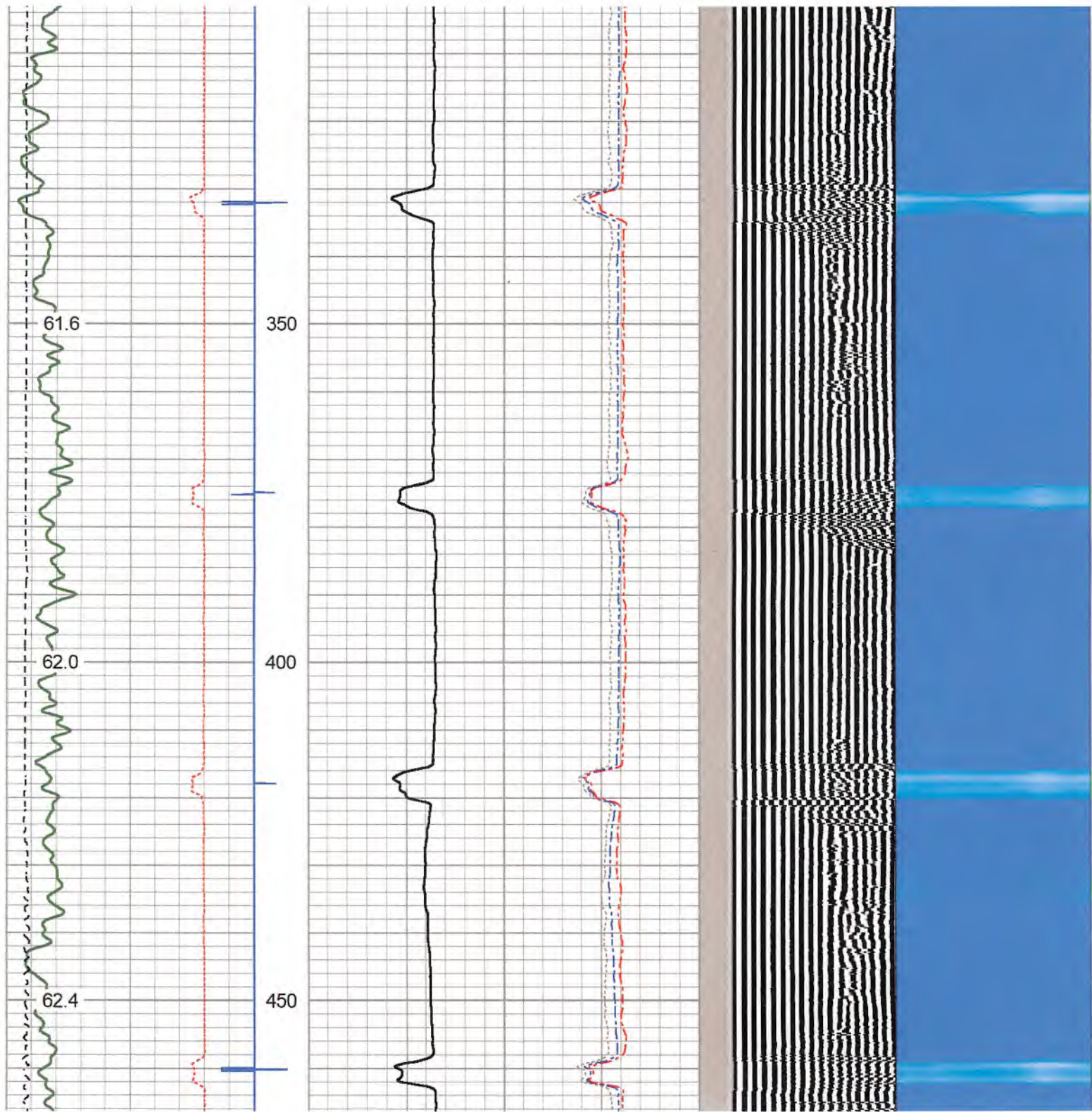
Main Pass (1500 PSI)

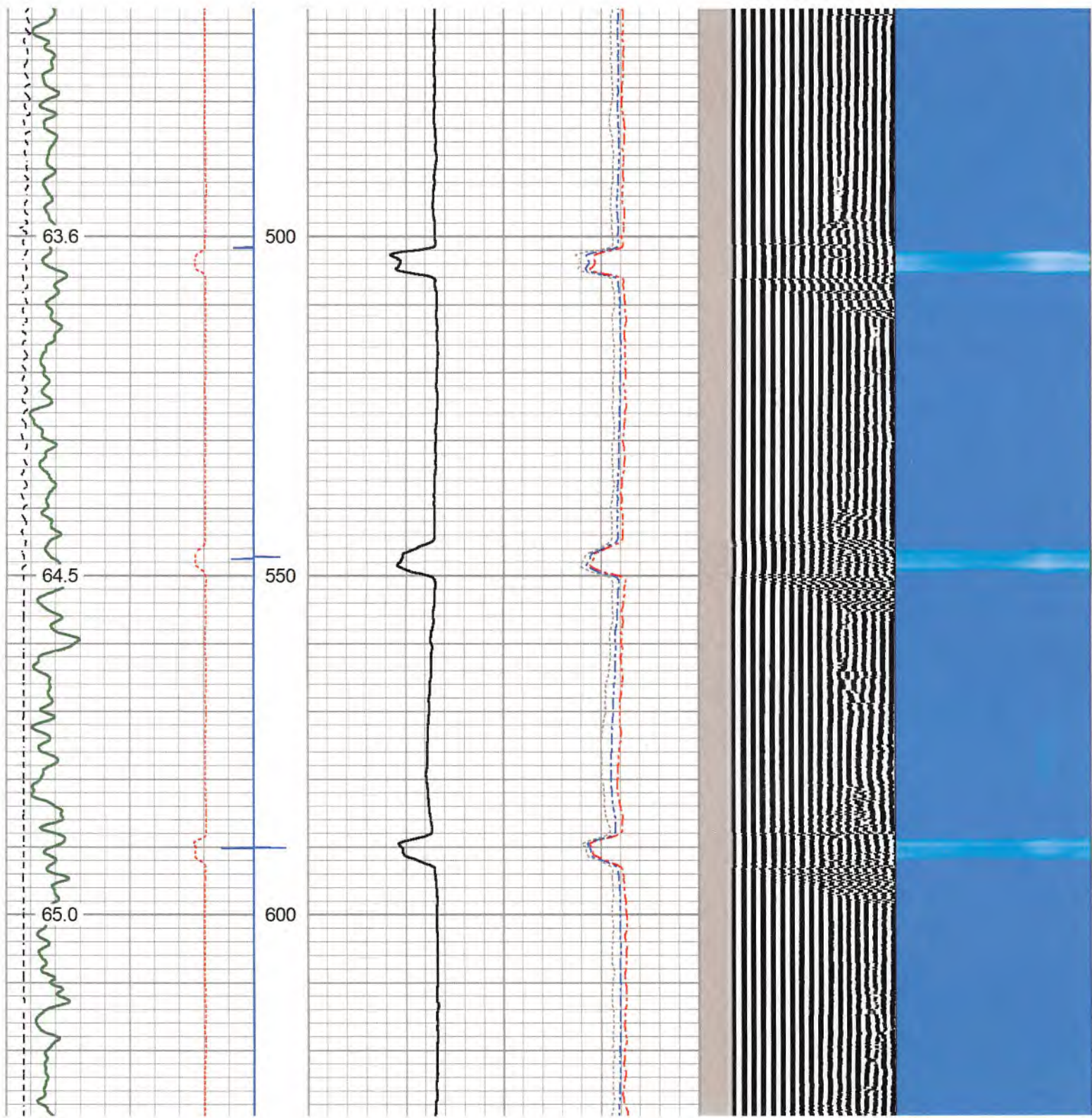
Database File	c:\users\logbox\desktop\antero red lady\antero_rlp_baldy_1h.db
Dataset Pathname	rcbl/pass8
Presentation Format	tt_rcbl_std_bw
Dataset Creation	Sat Aug 13 04:25:33 2022
Charted by	Depth in Feet scaled 1:240

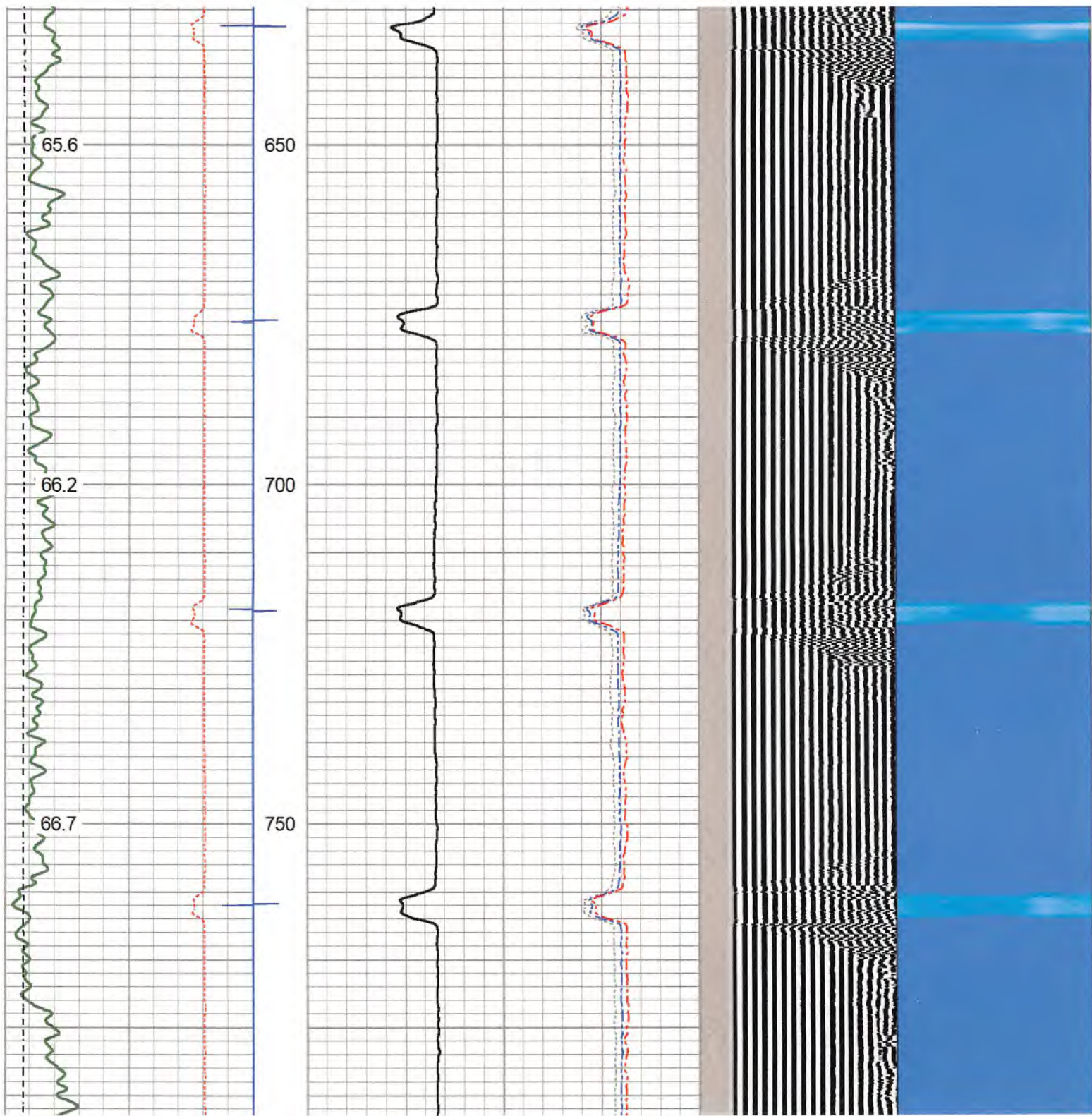
340	Travel Time (usec)	240	0	Amplitude (mV)	100	-5	AMPMin	150	200	VDL (usec)	1200	Cement Map
0	Gamma Ray (GAPI)	150	Amplified Amplitude			-5	AMPAvg	150				
0	Line Tension (lb)	3000	0	(mV)	10	-5	AMPMax	150				
TEMP (degF)		CCL										

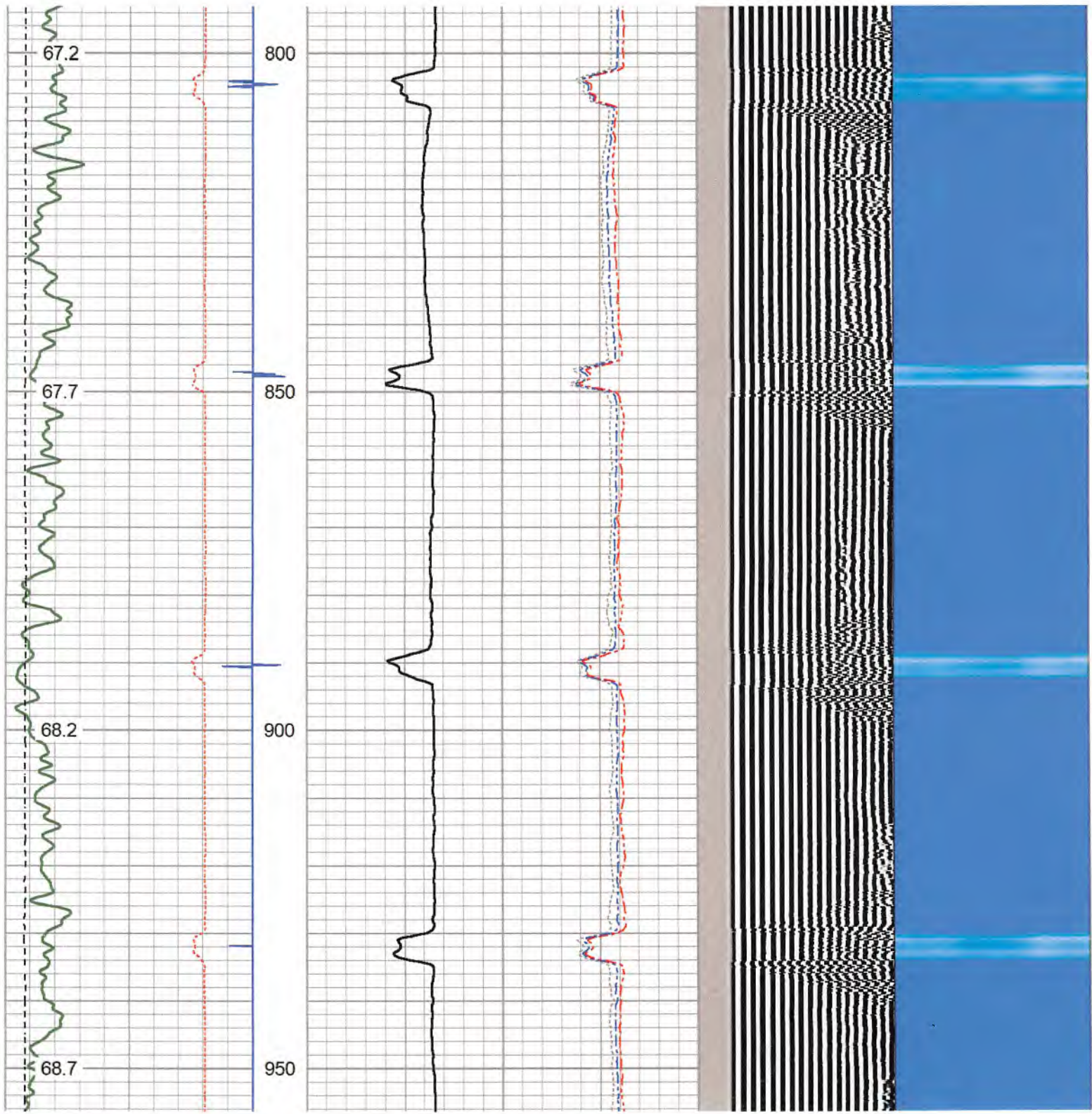


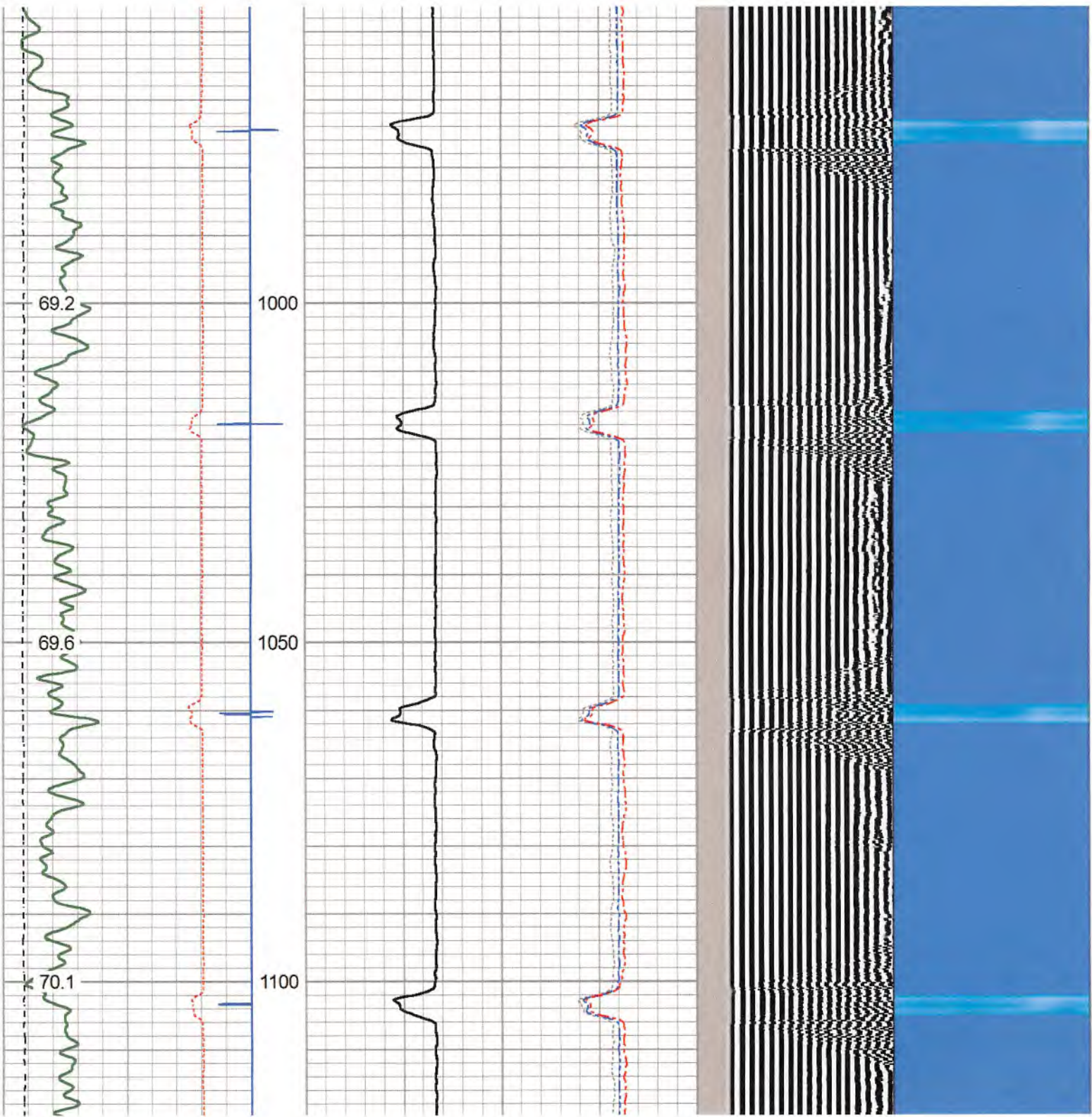


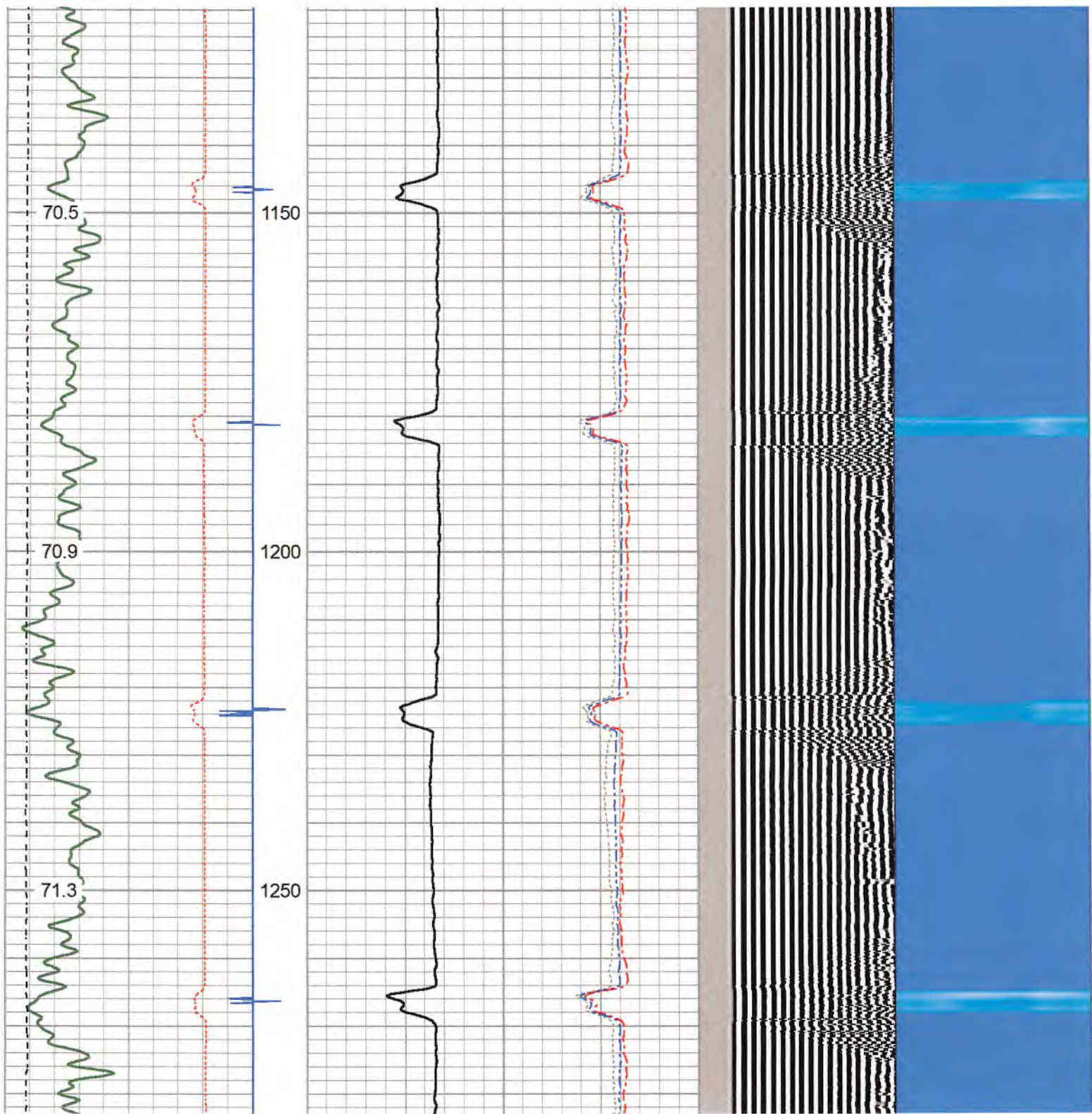


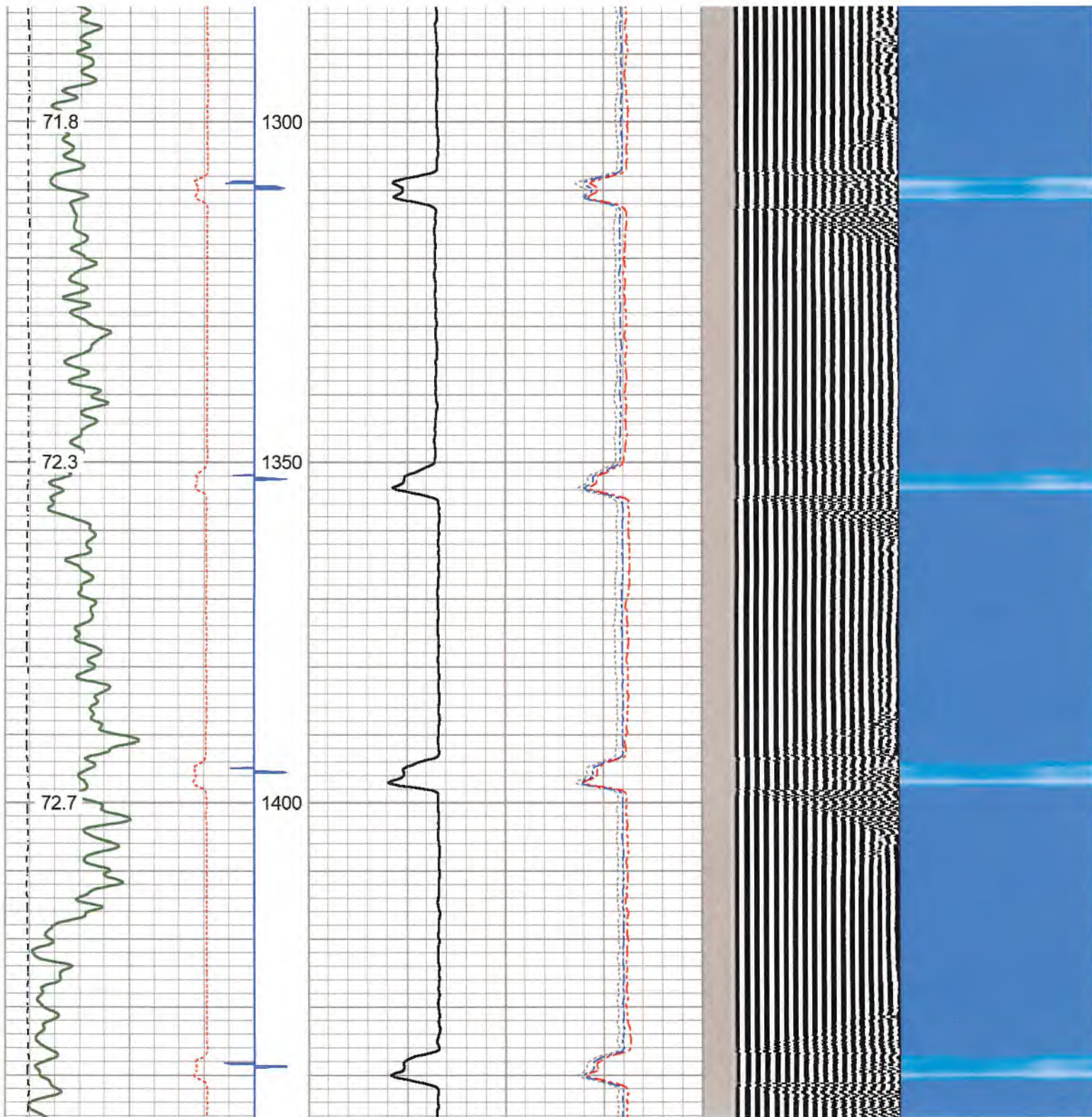


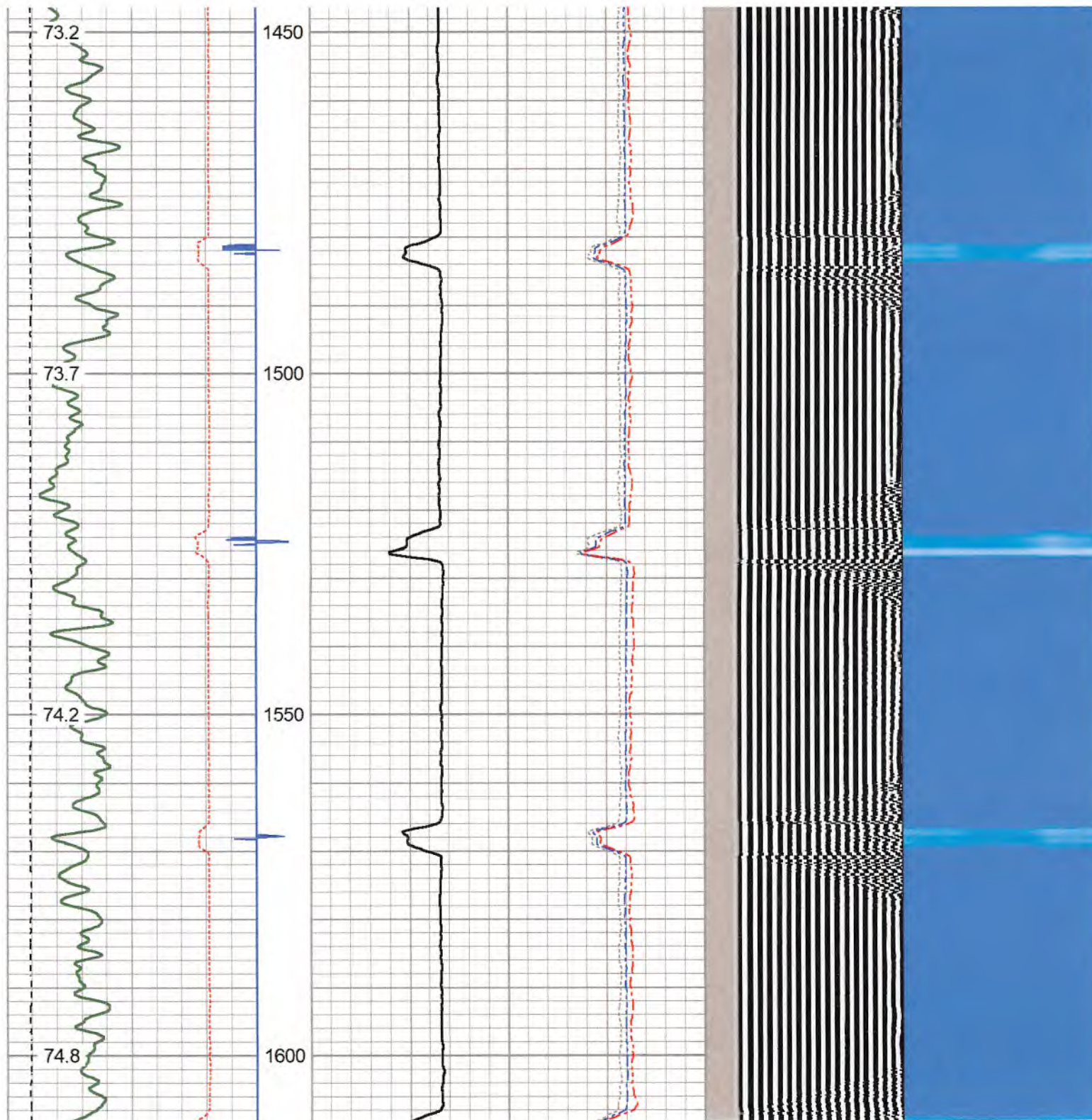


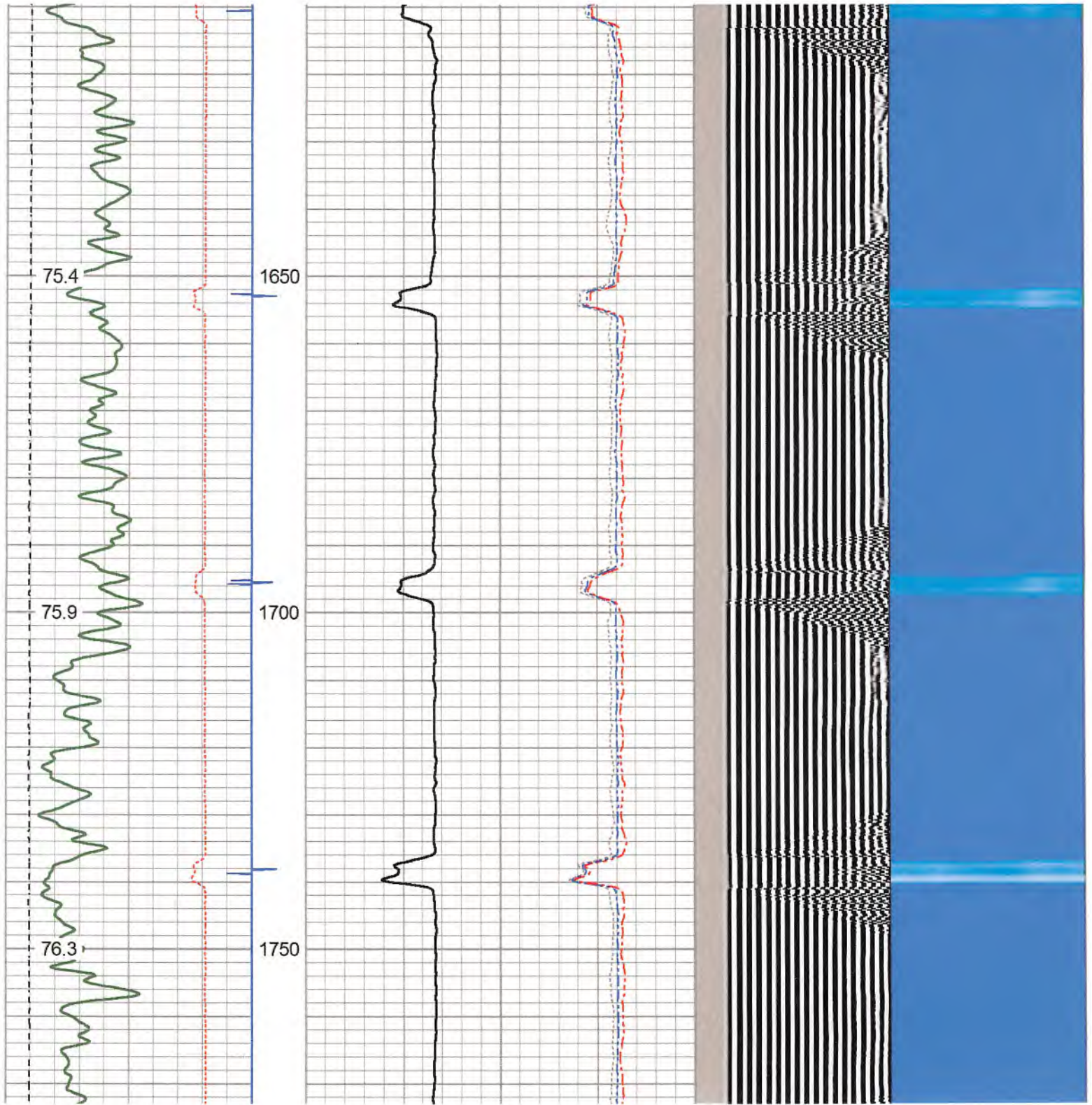


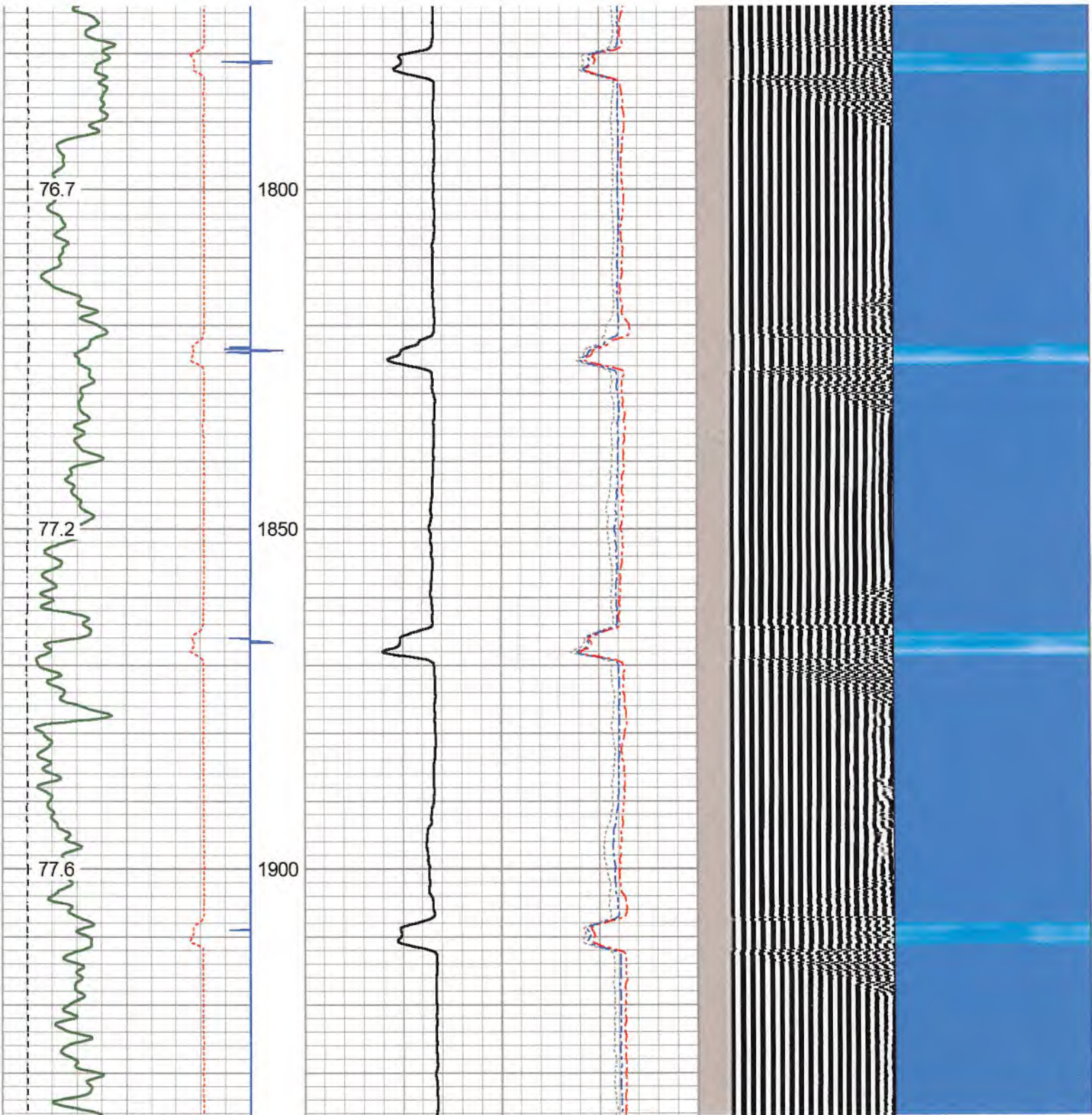


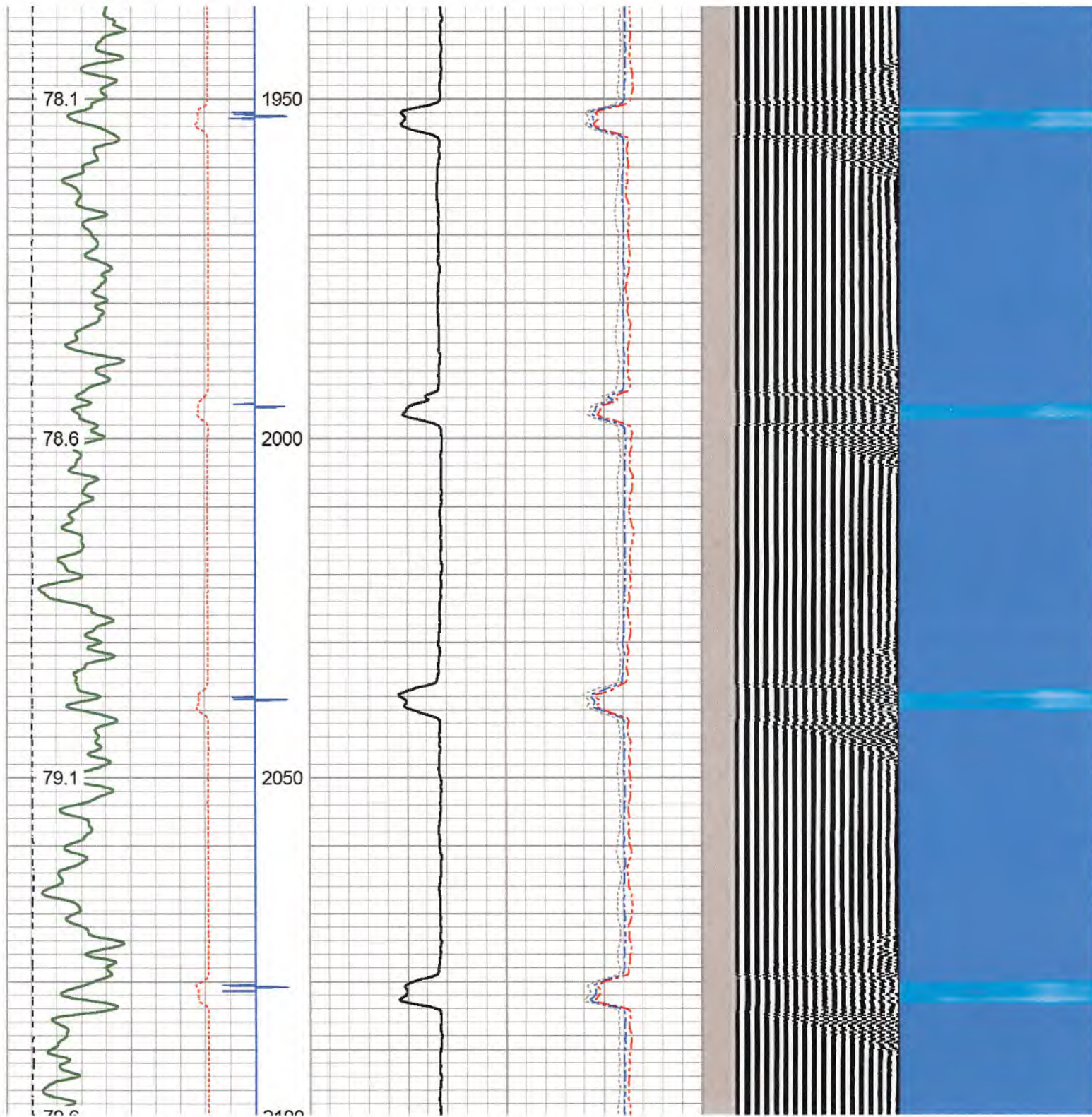


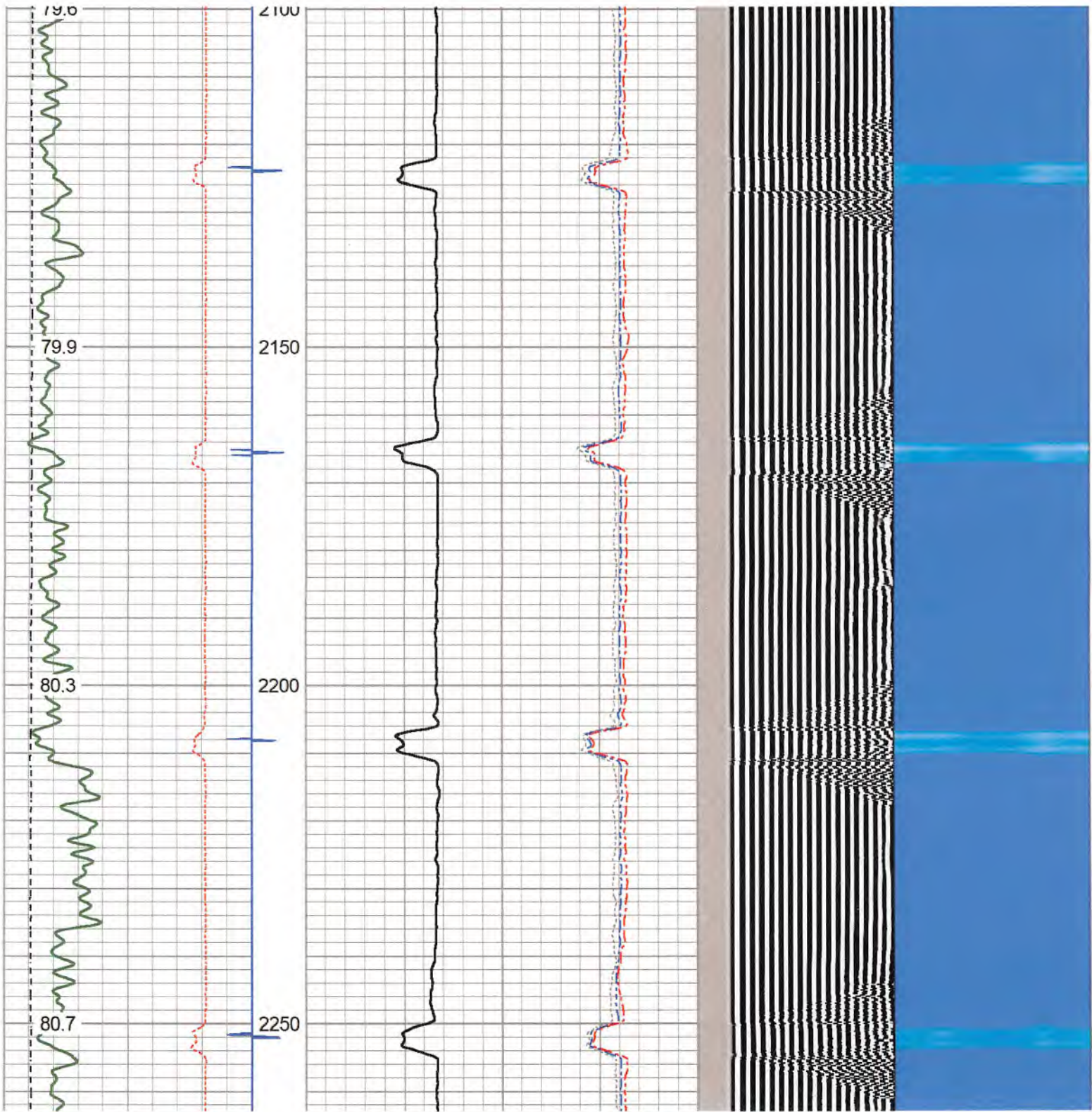


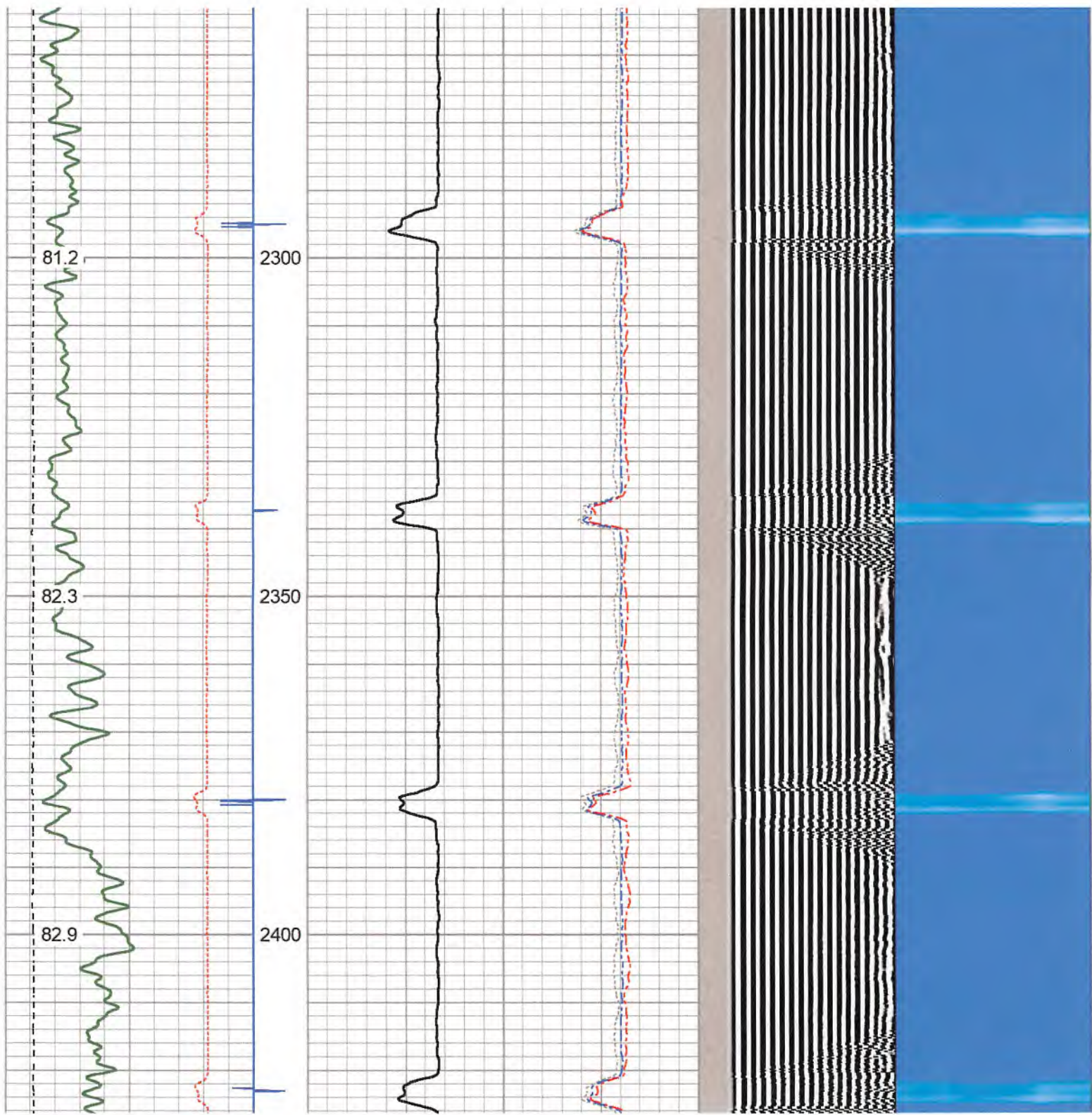


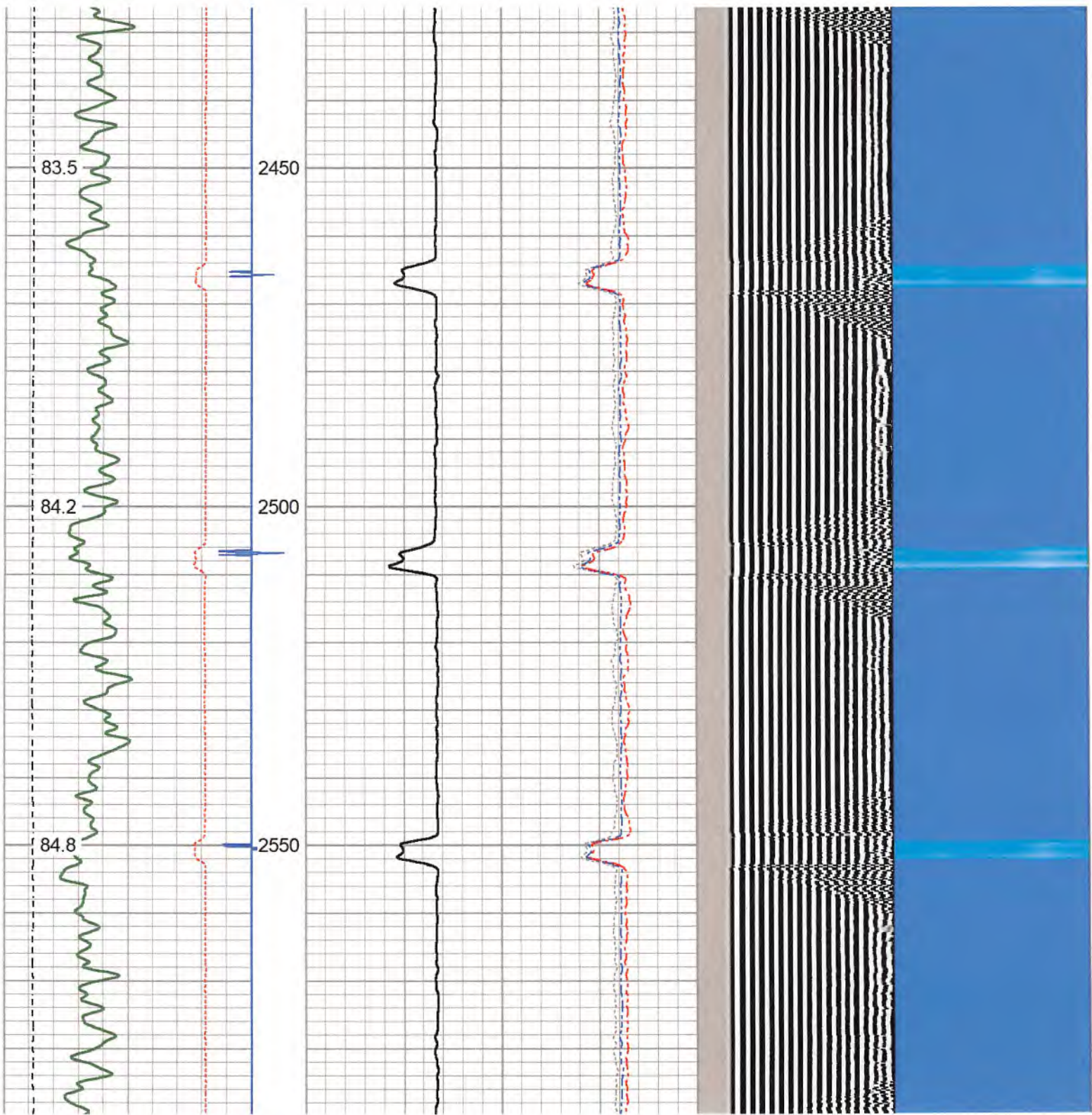


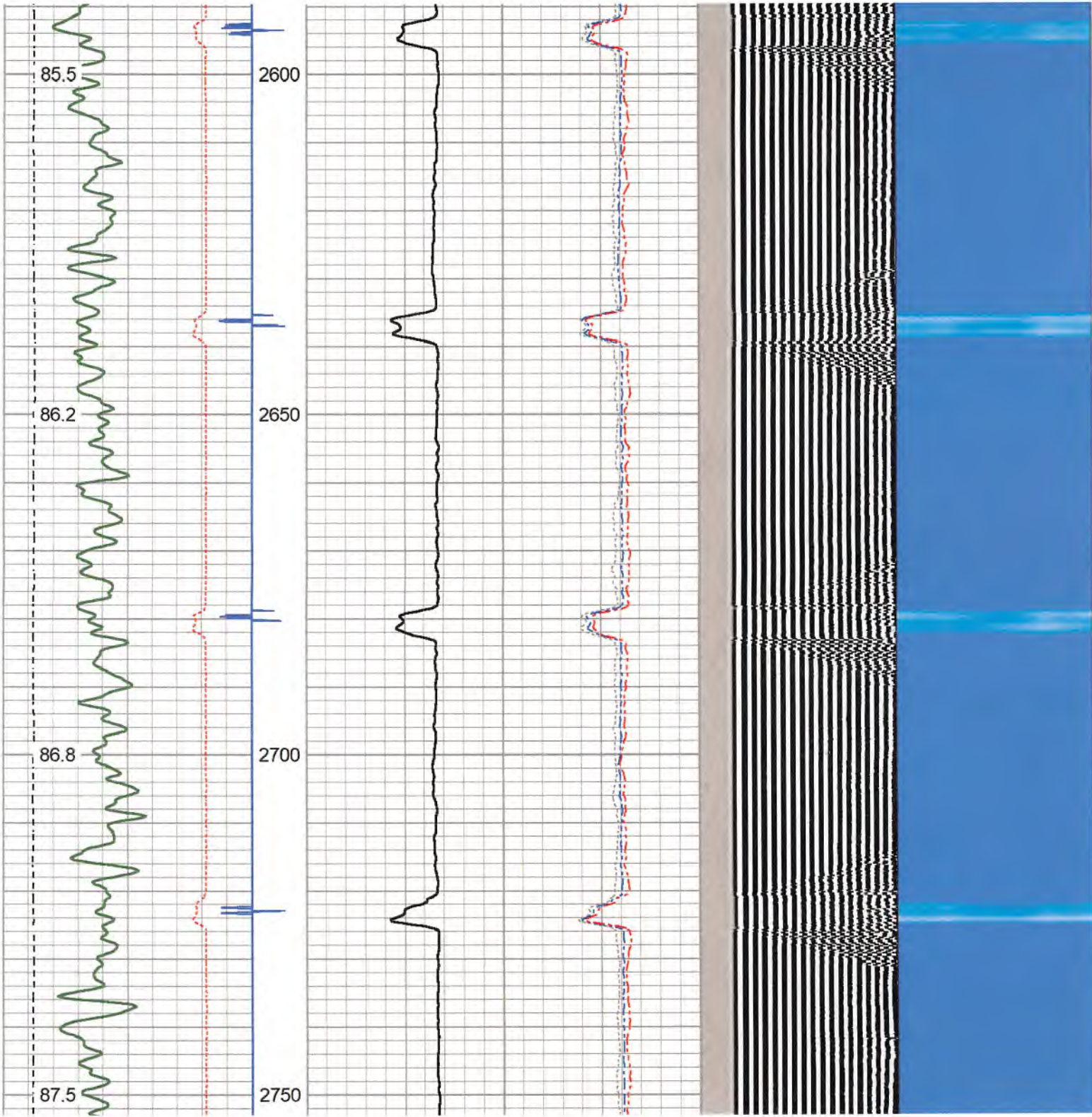


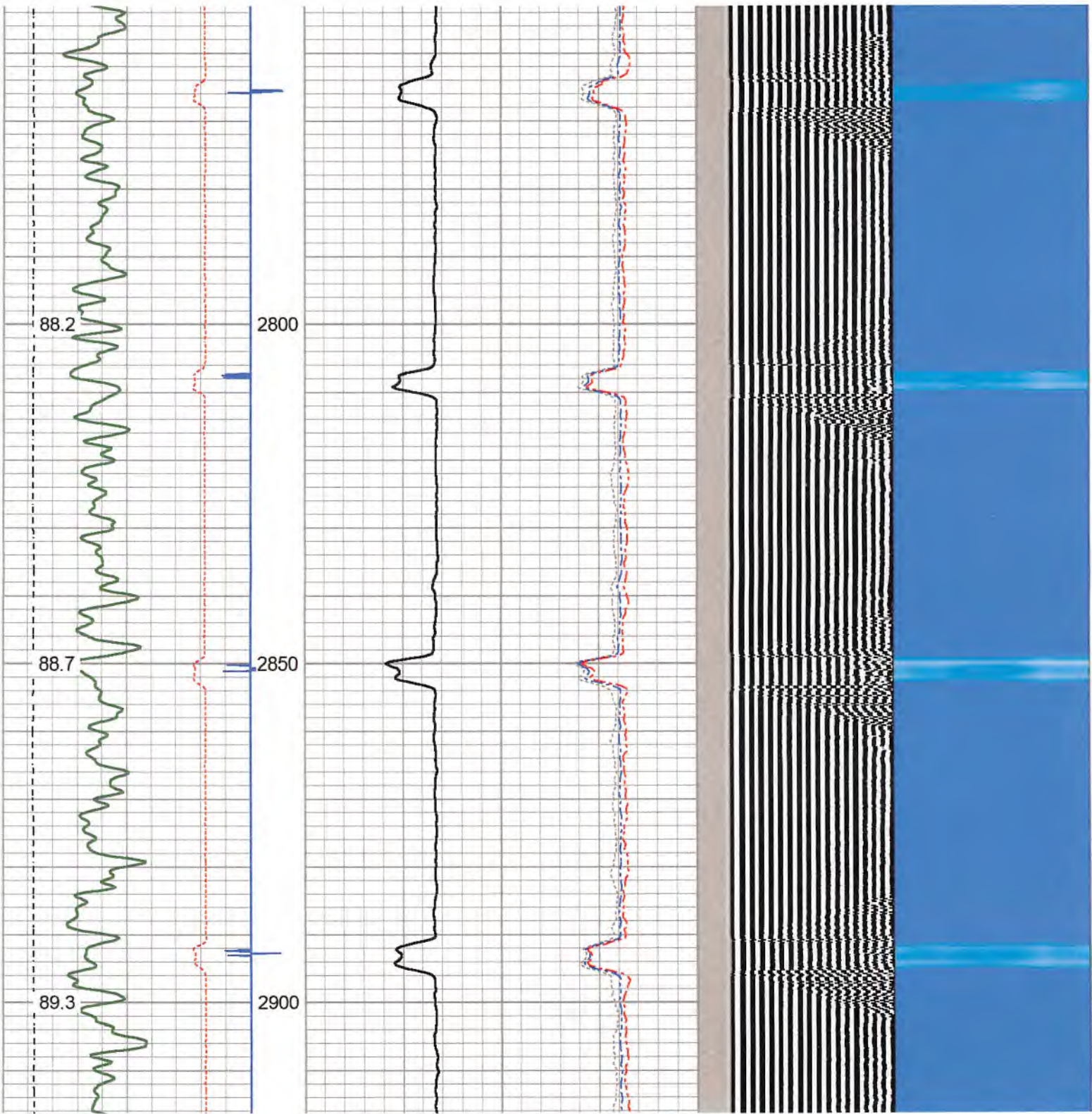


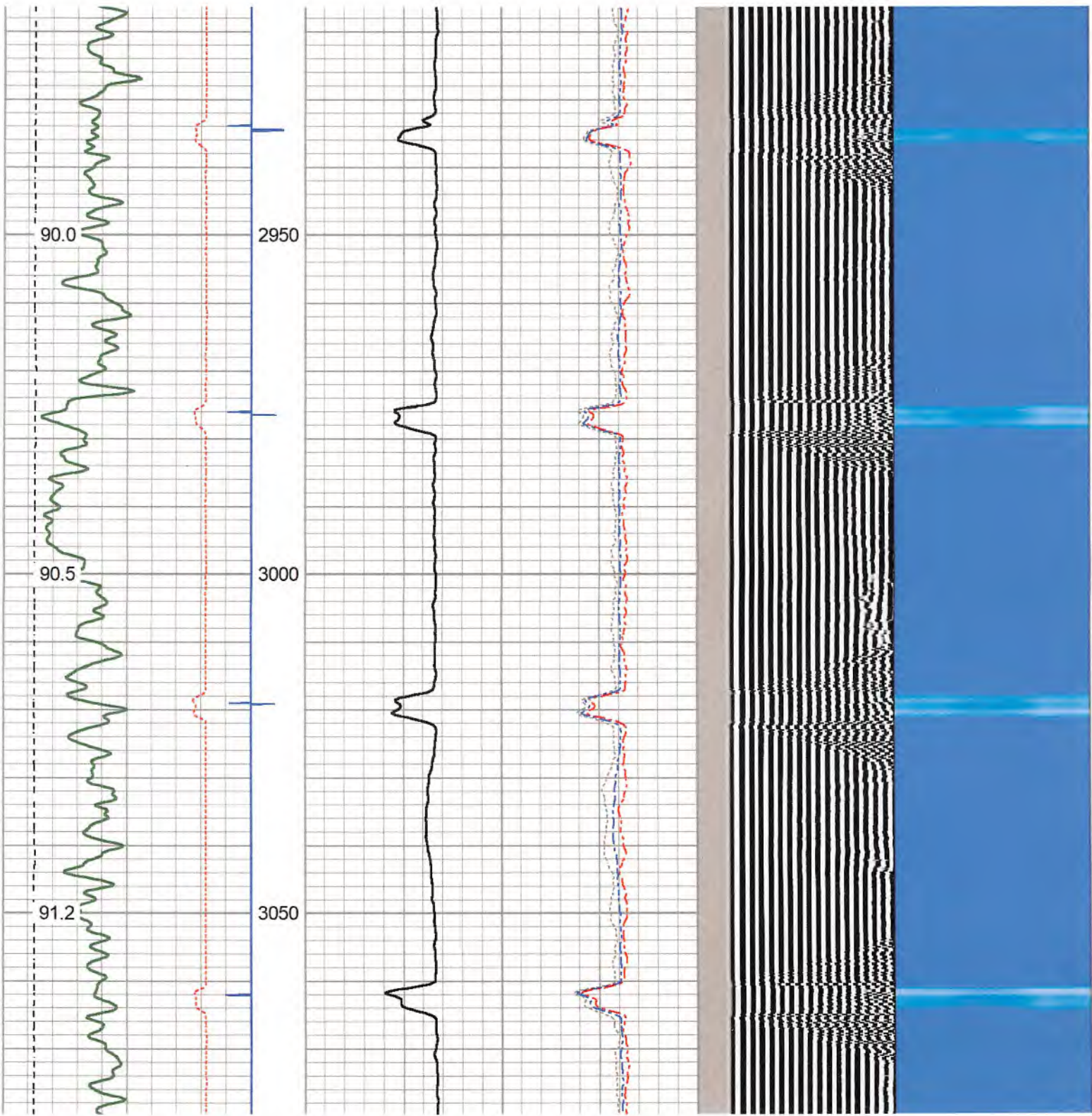


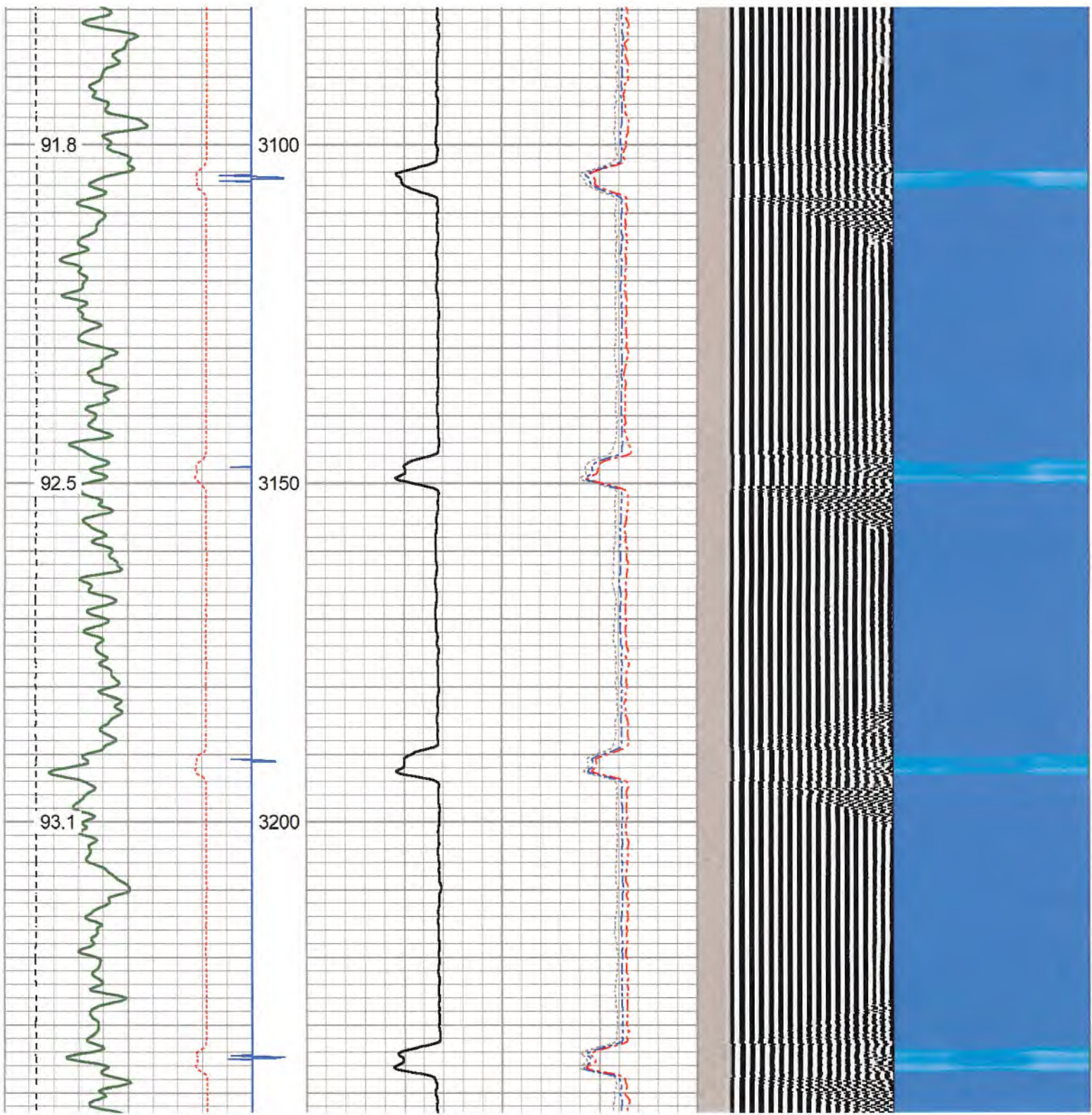


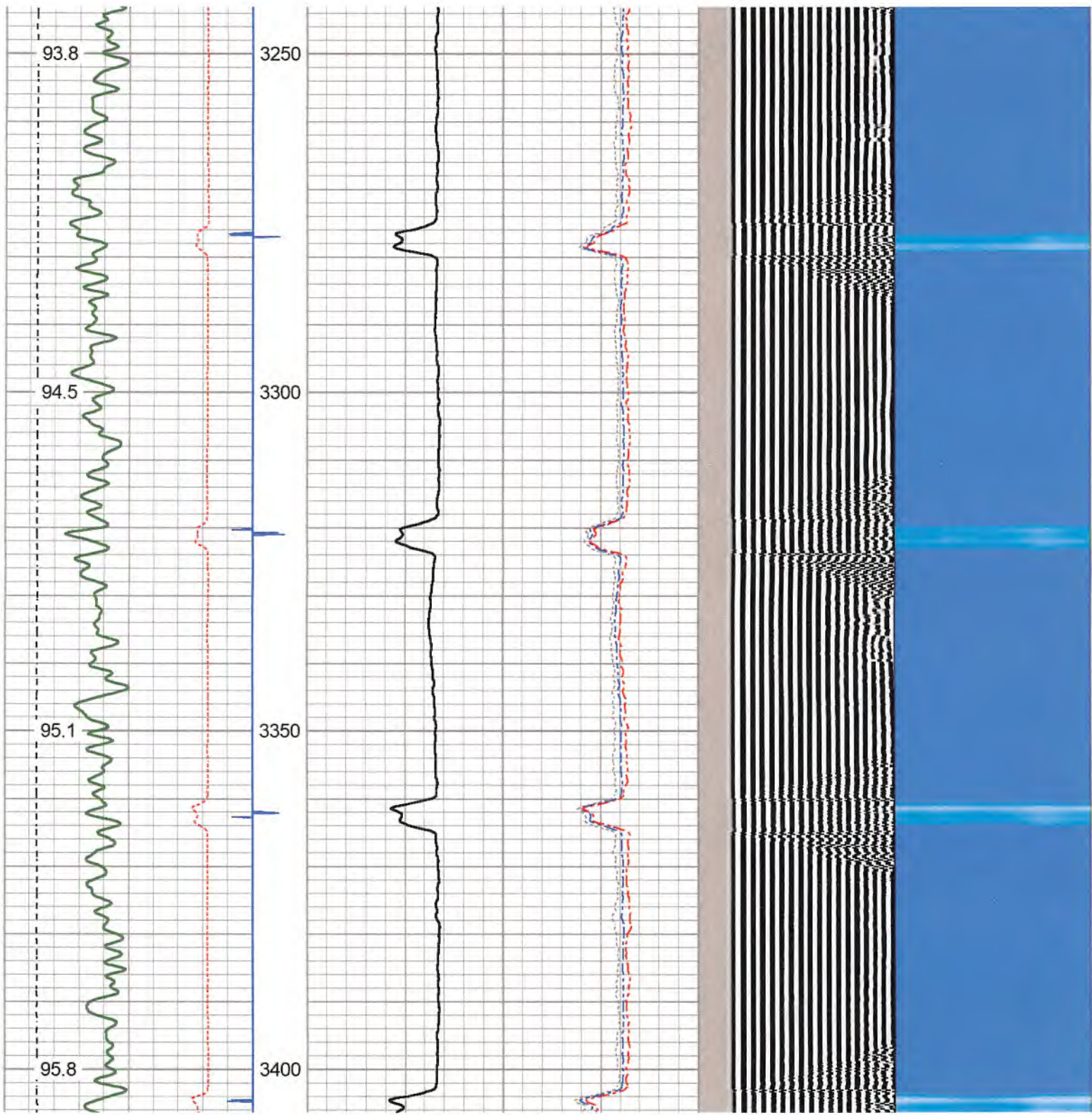


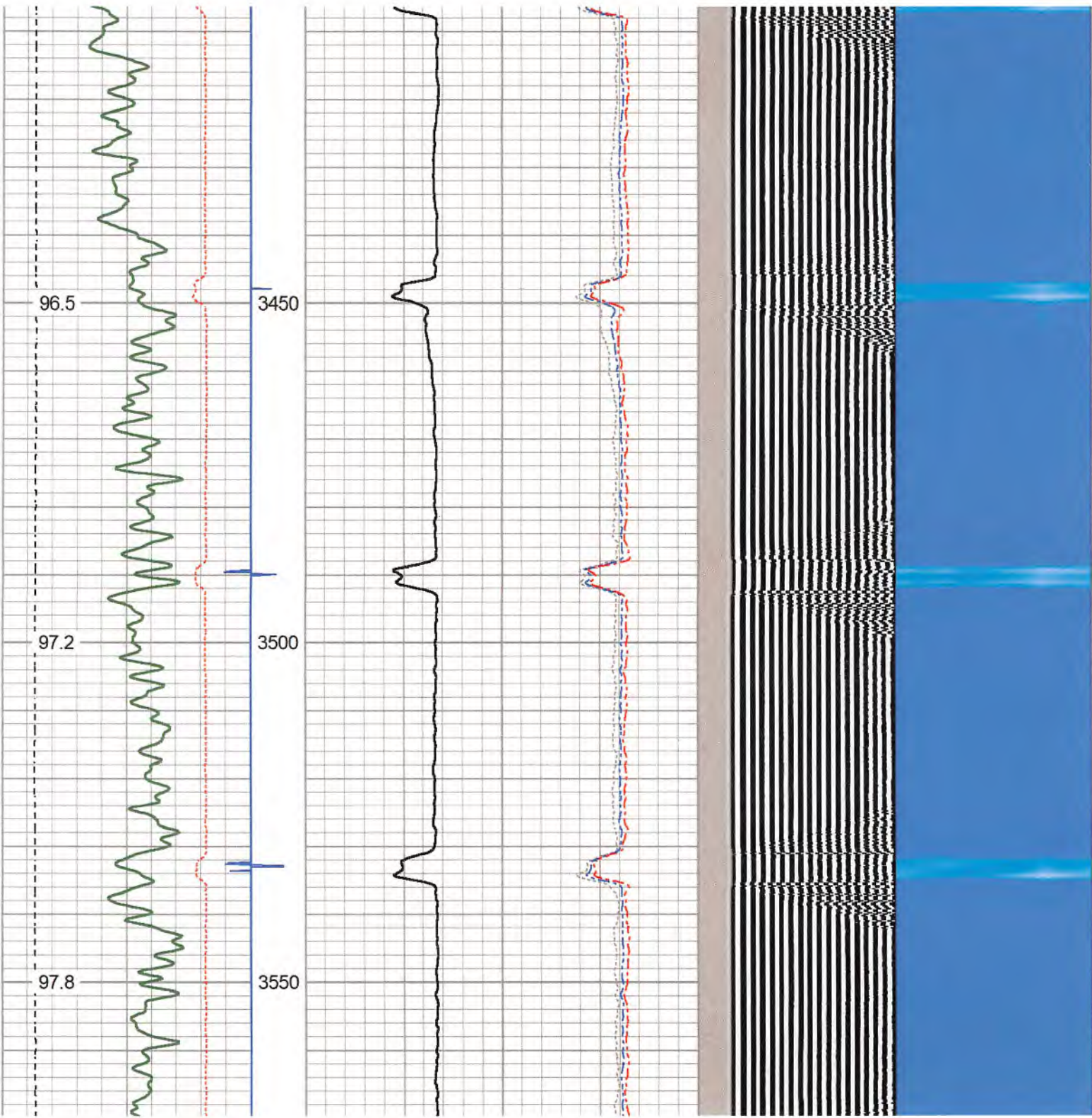


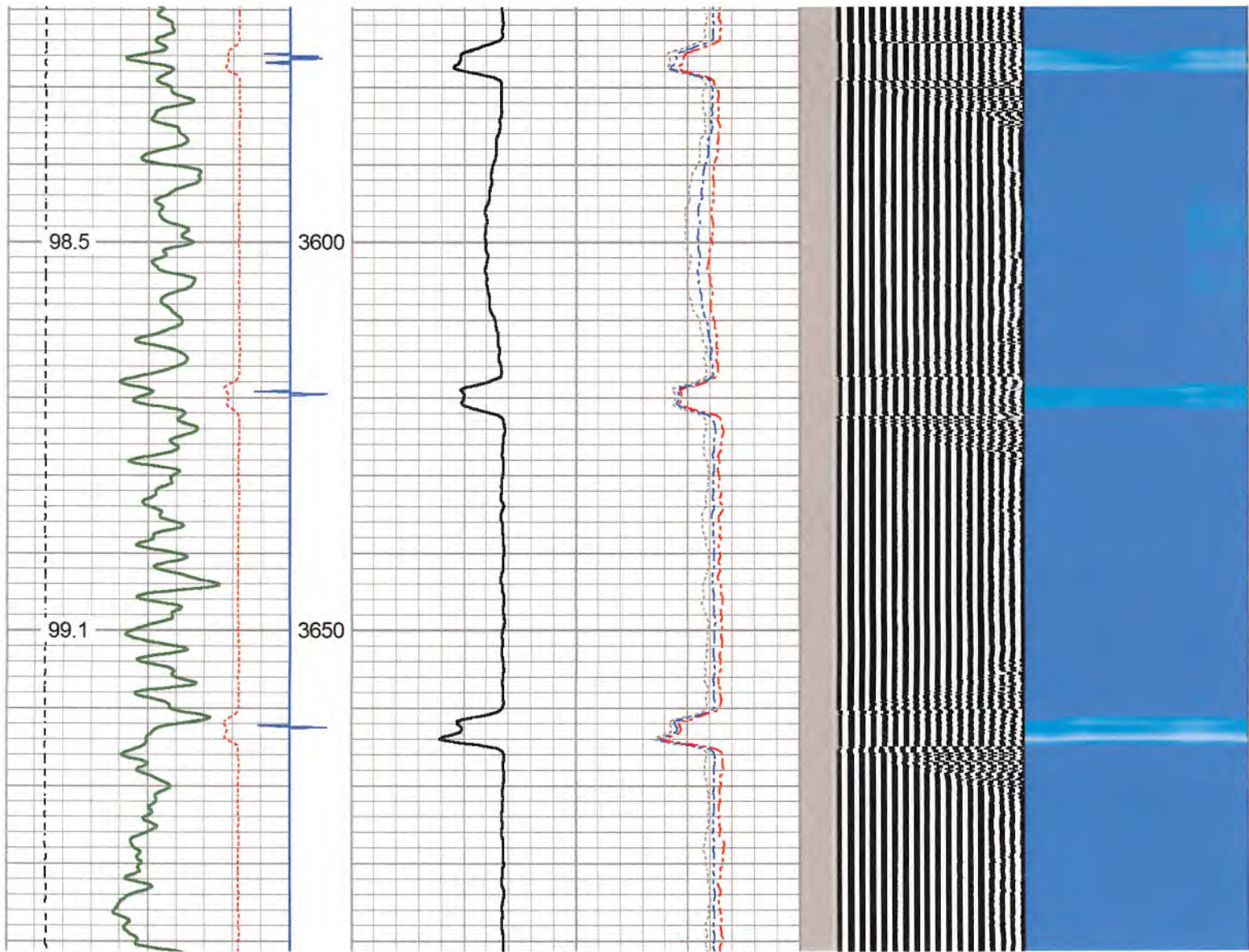


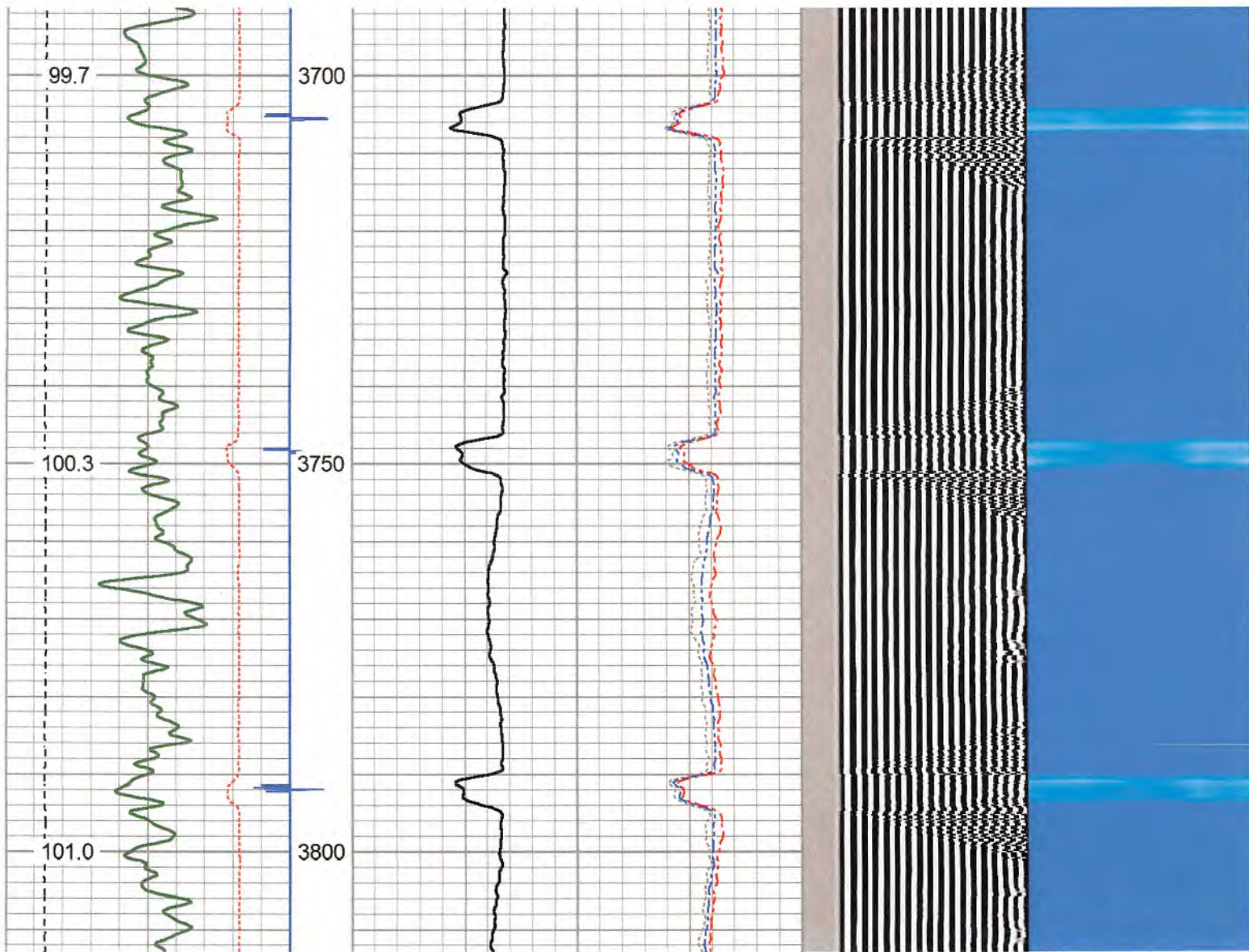


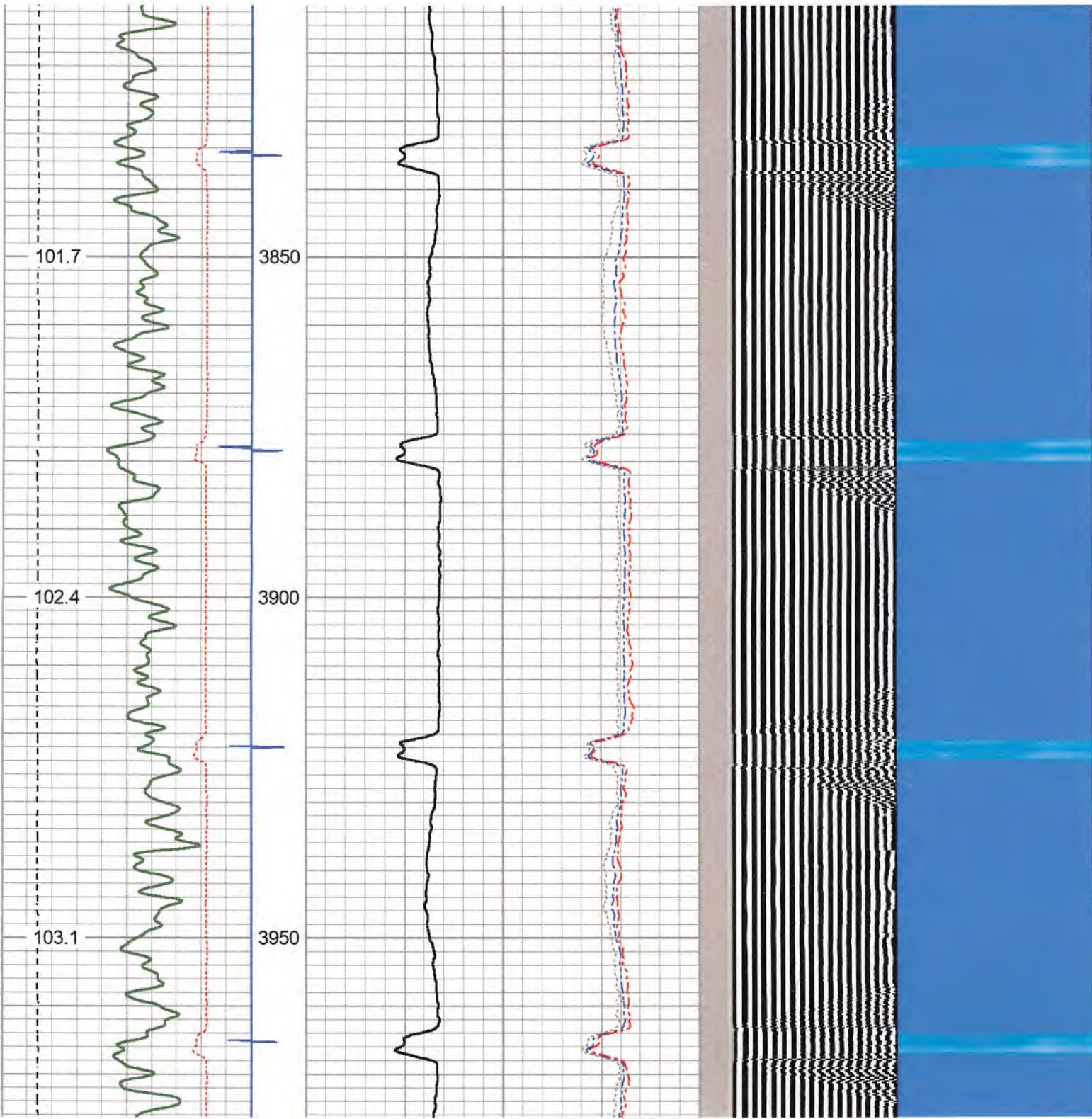


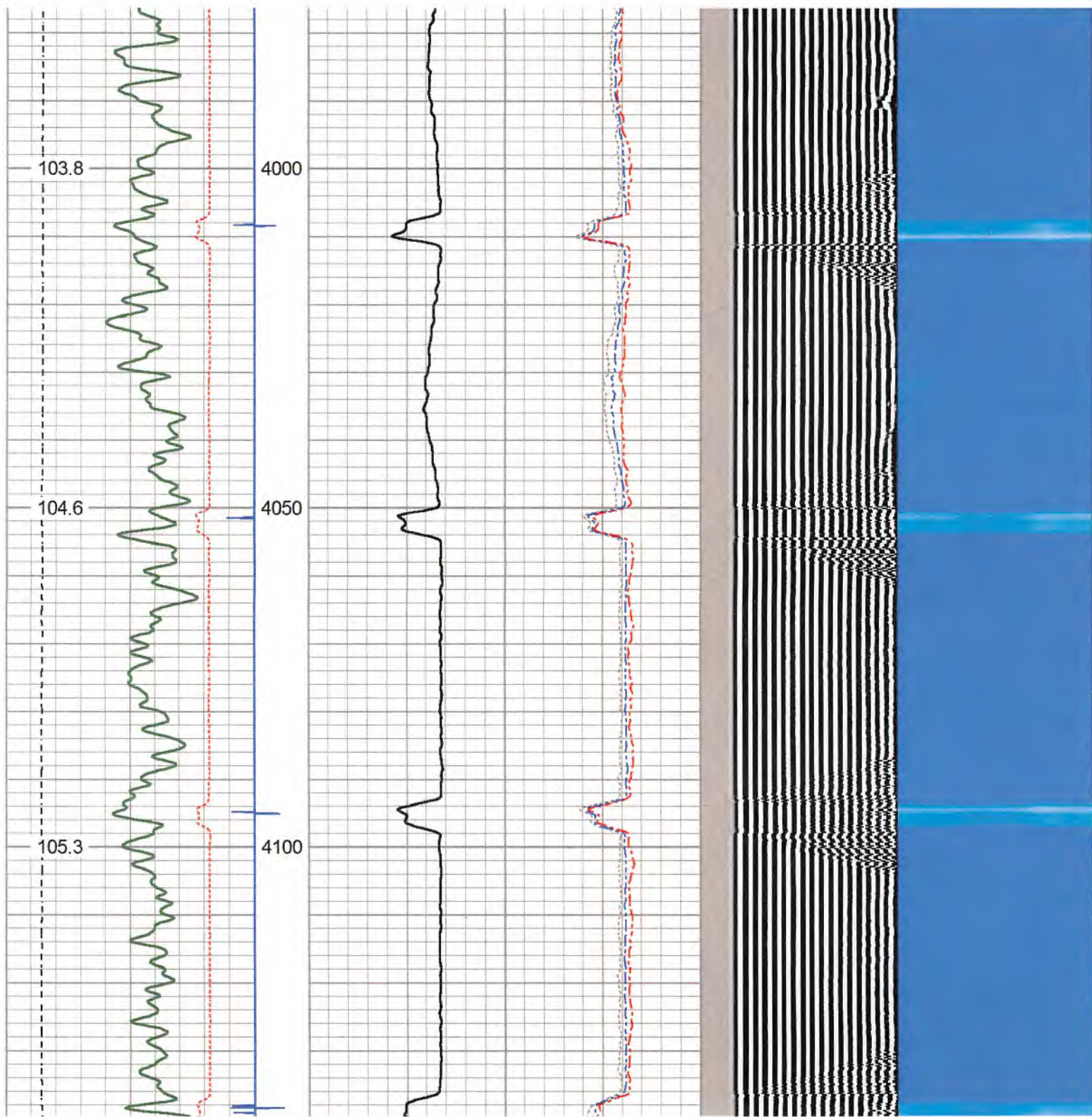


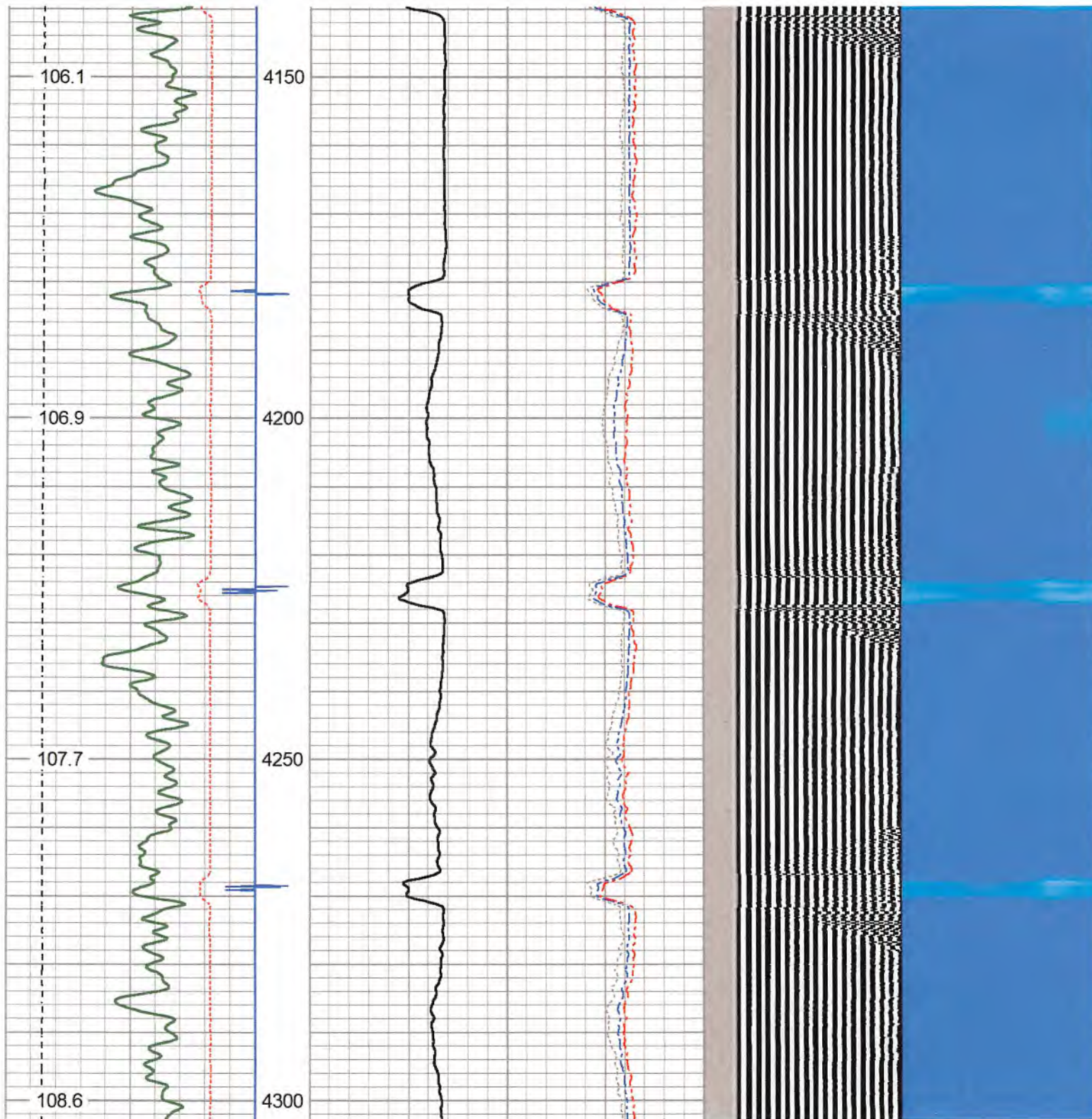


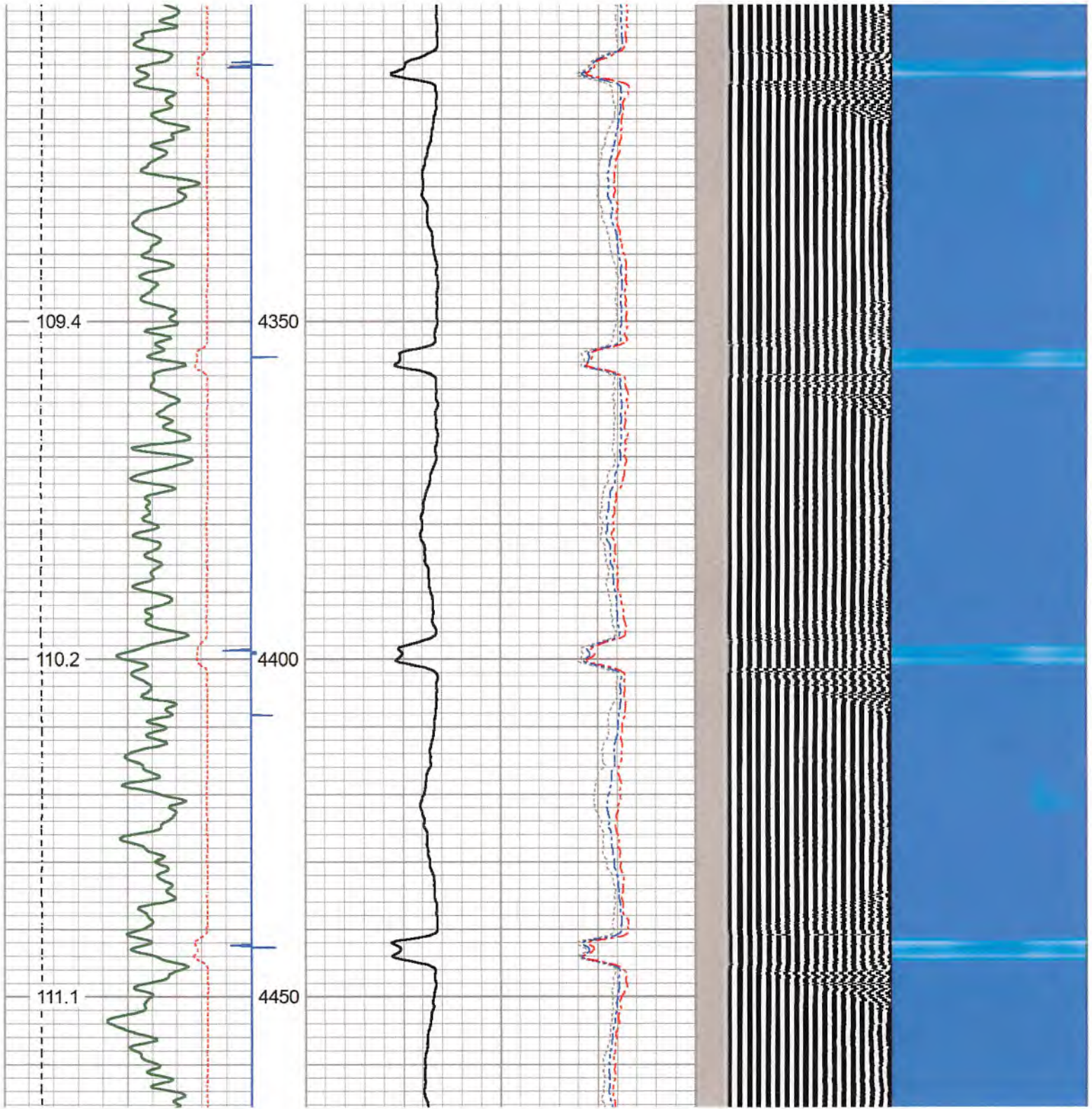


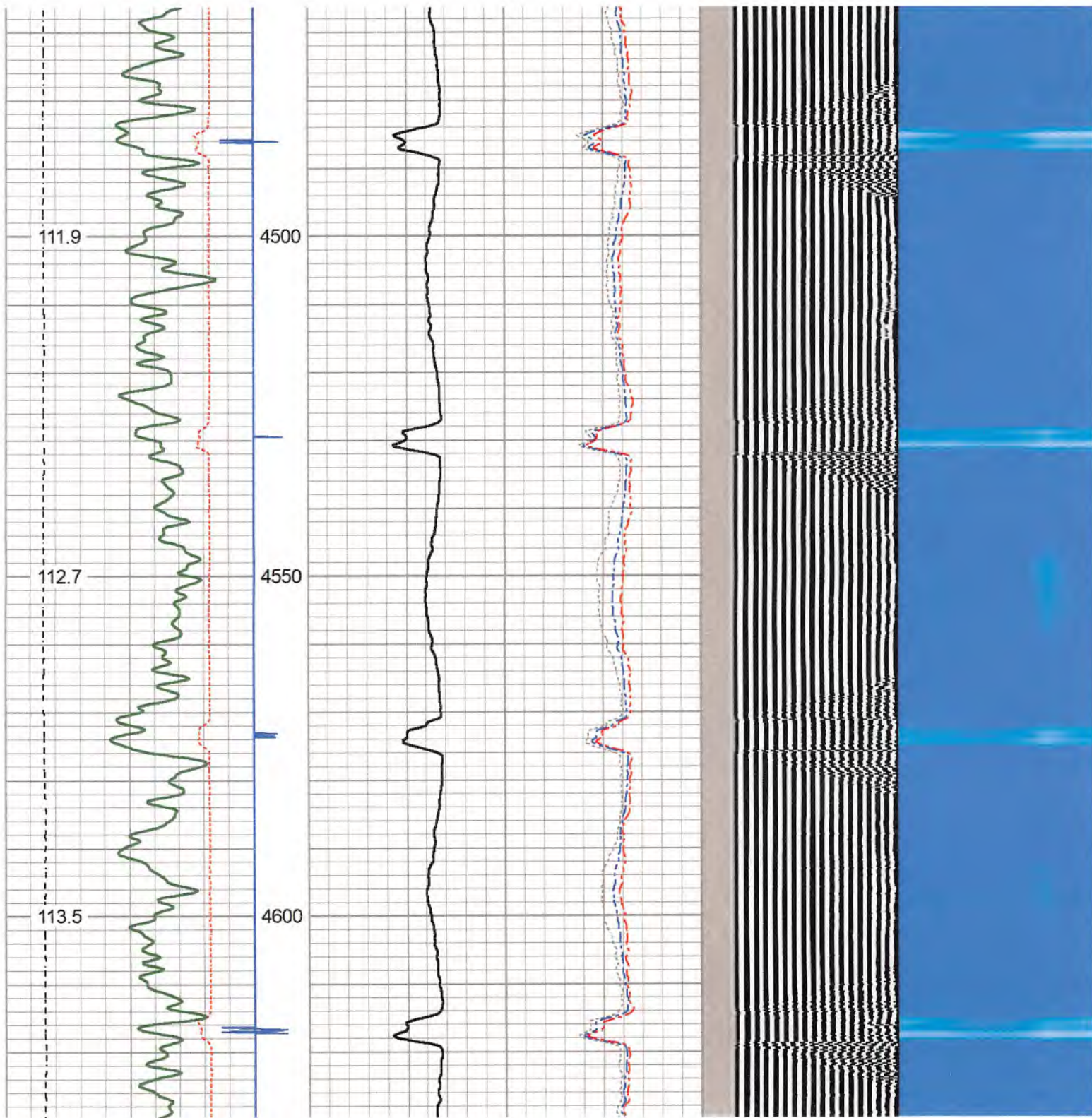


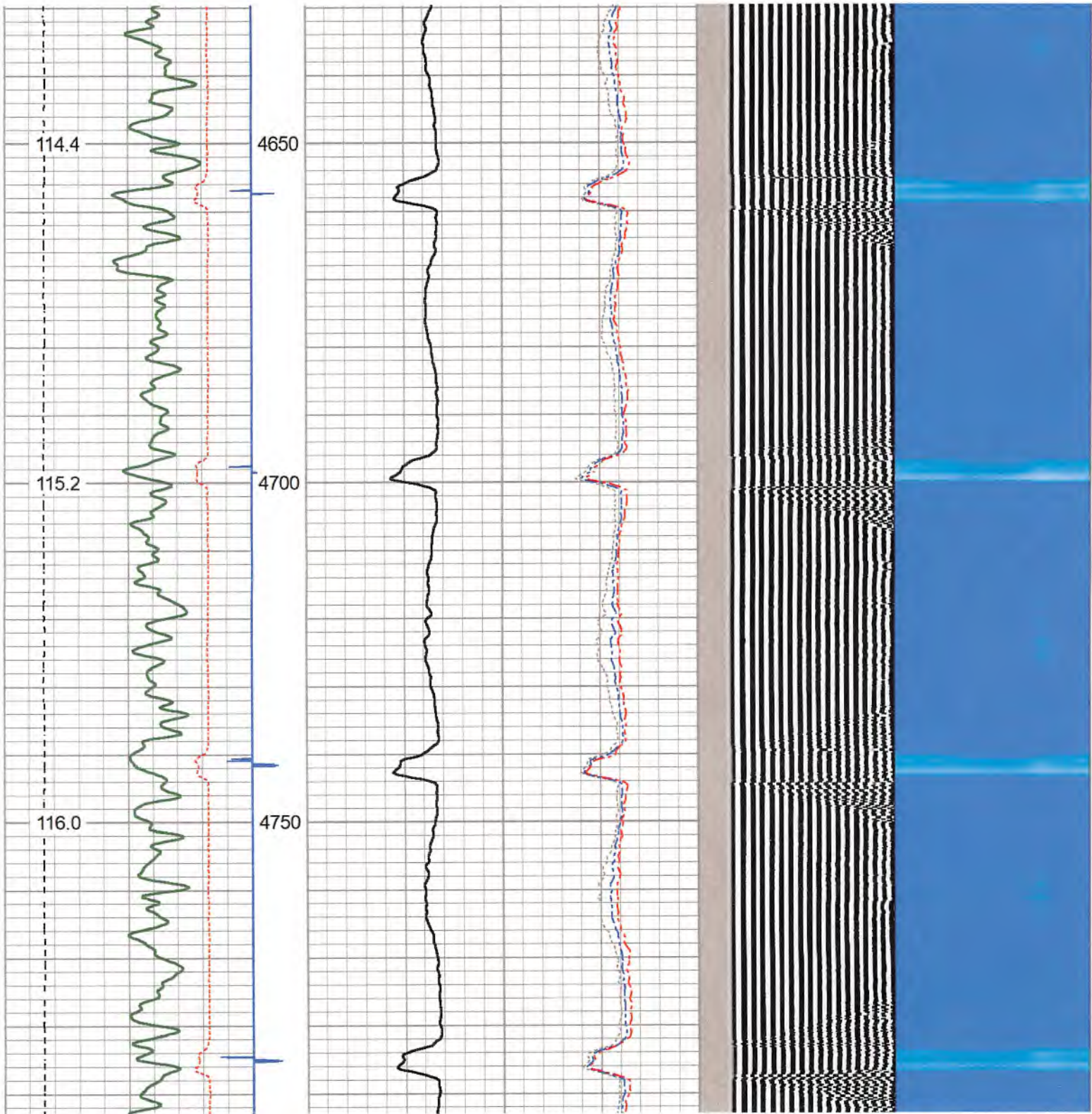


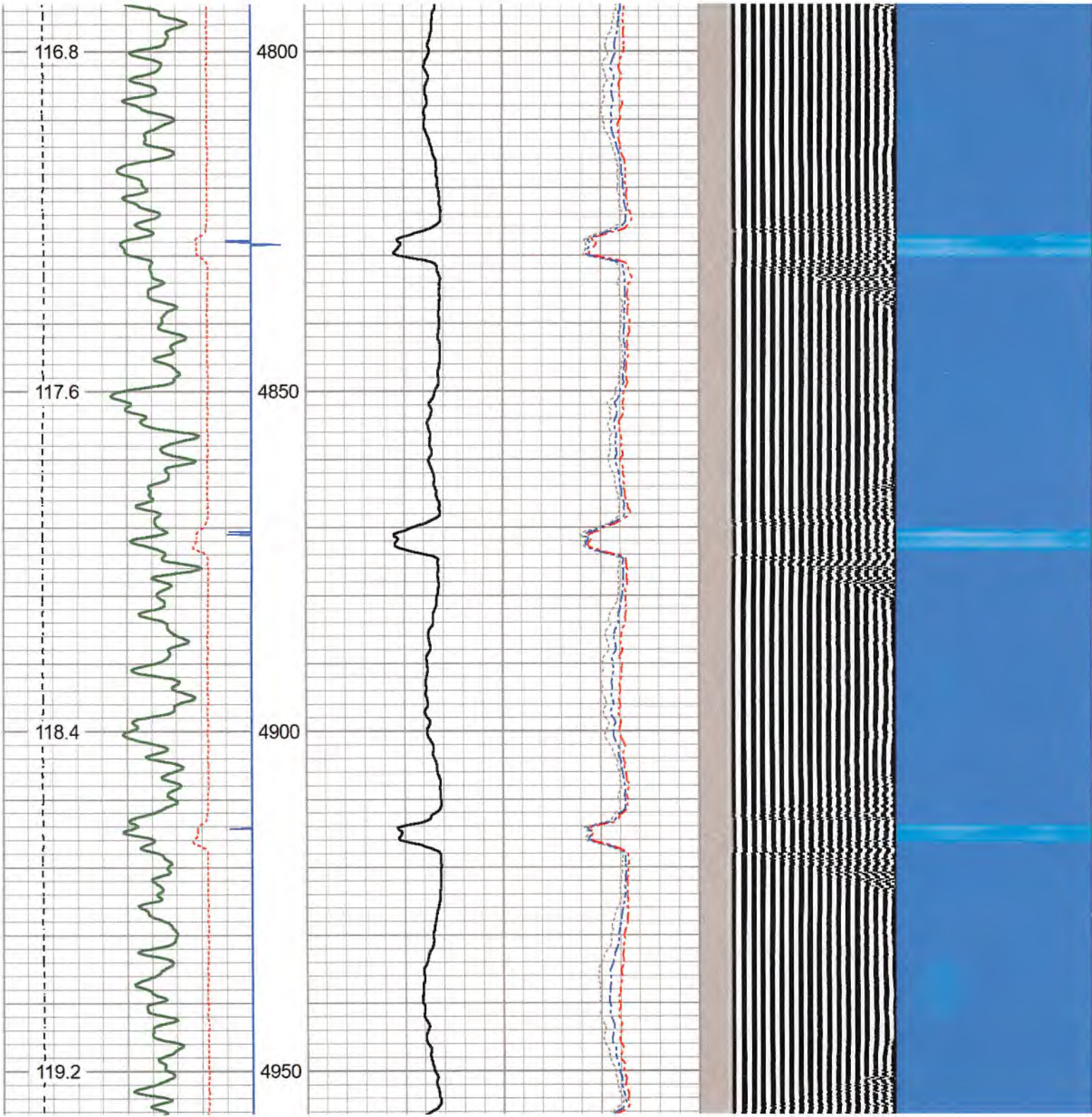


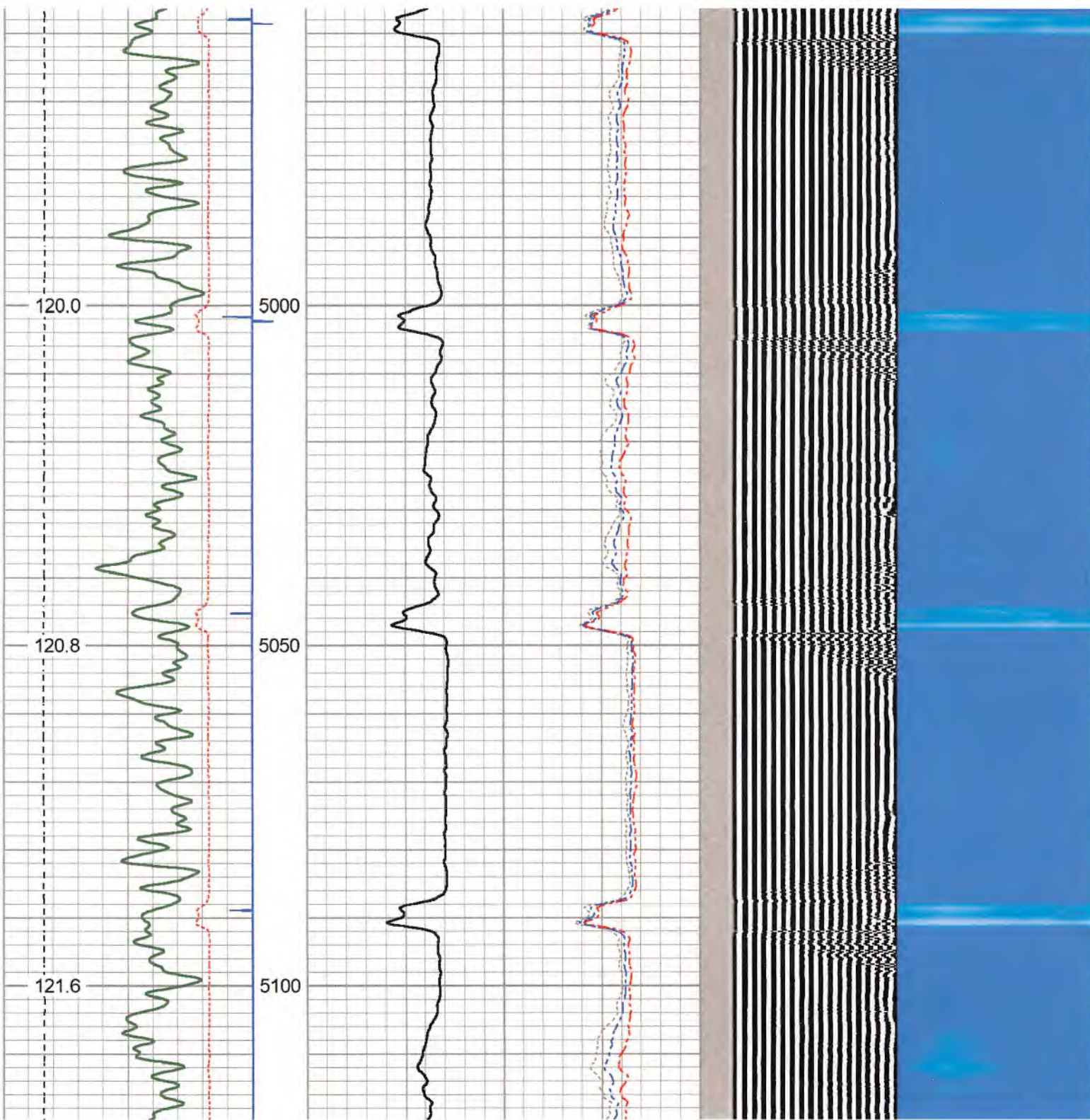


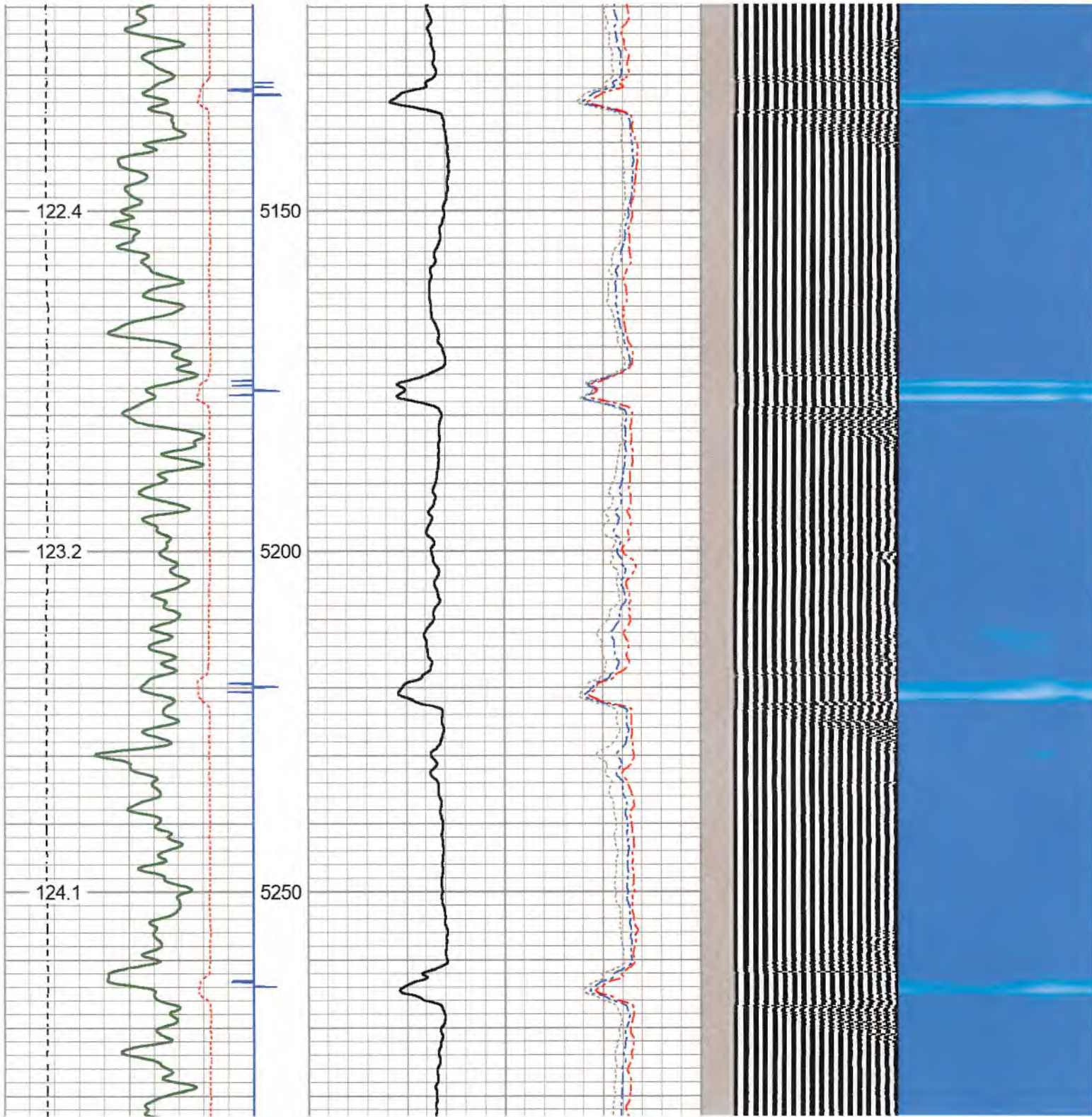


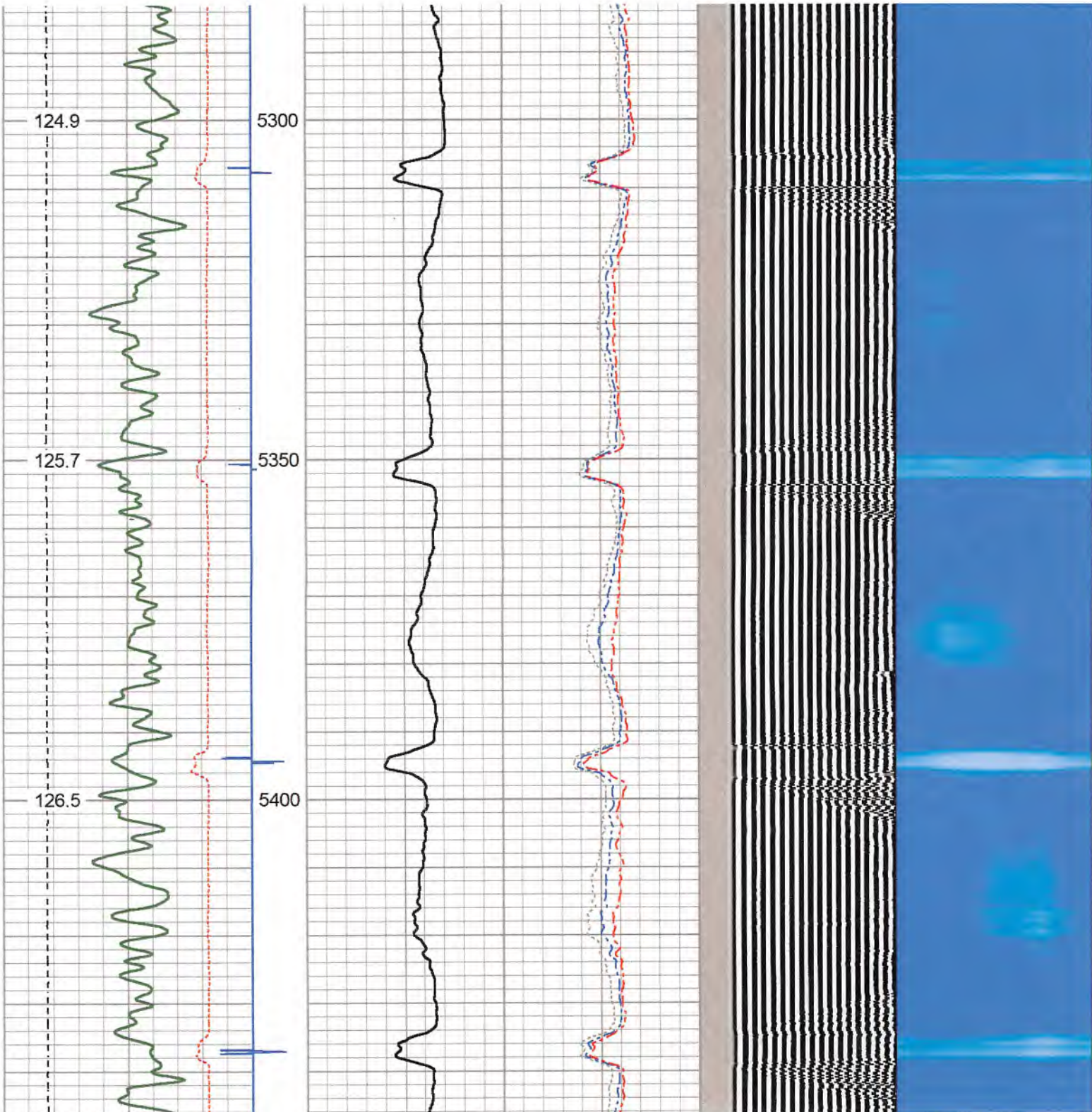


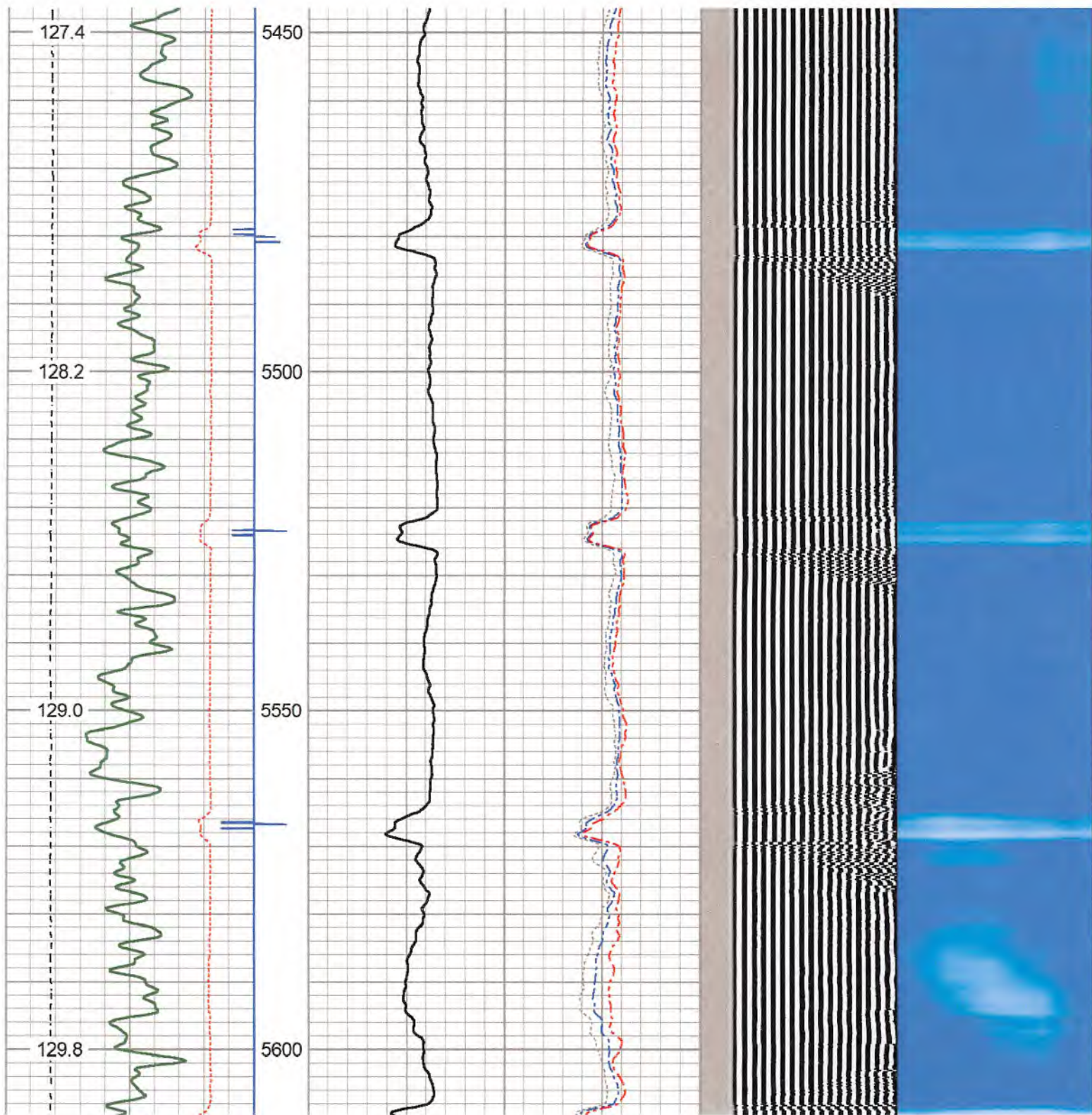


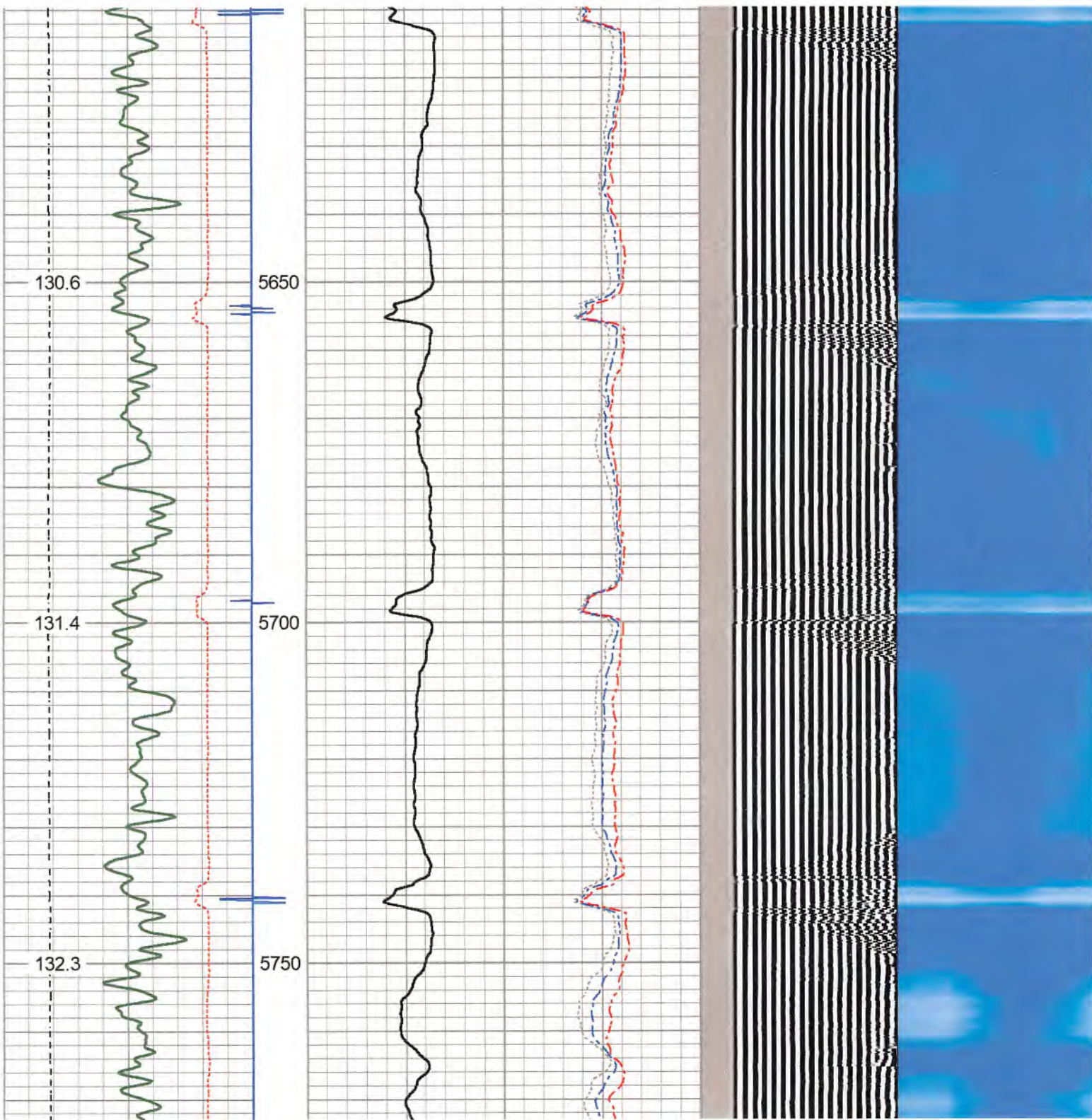


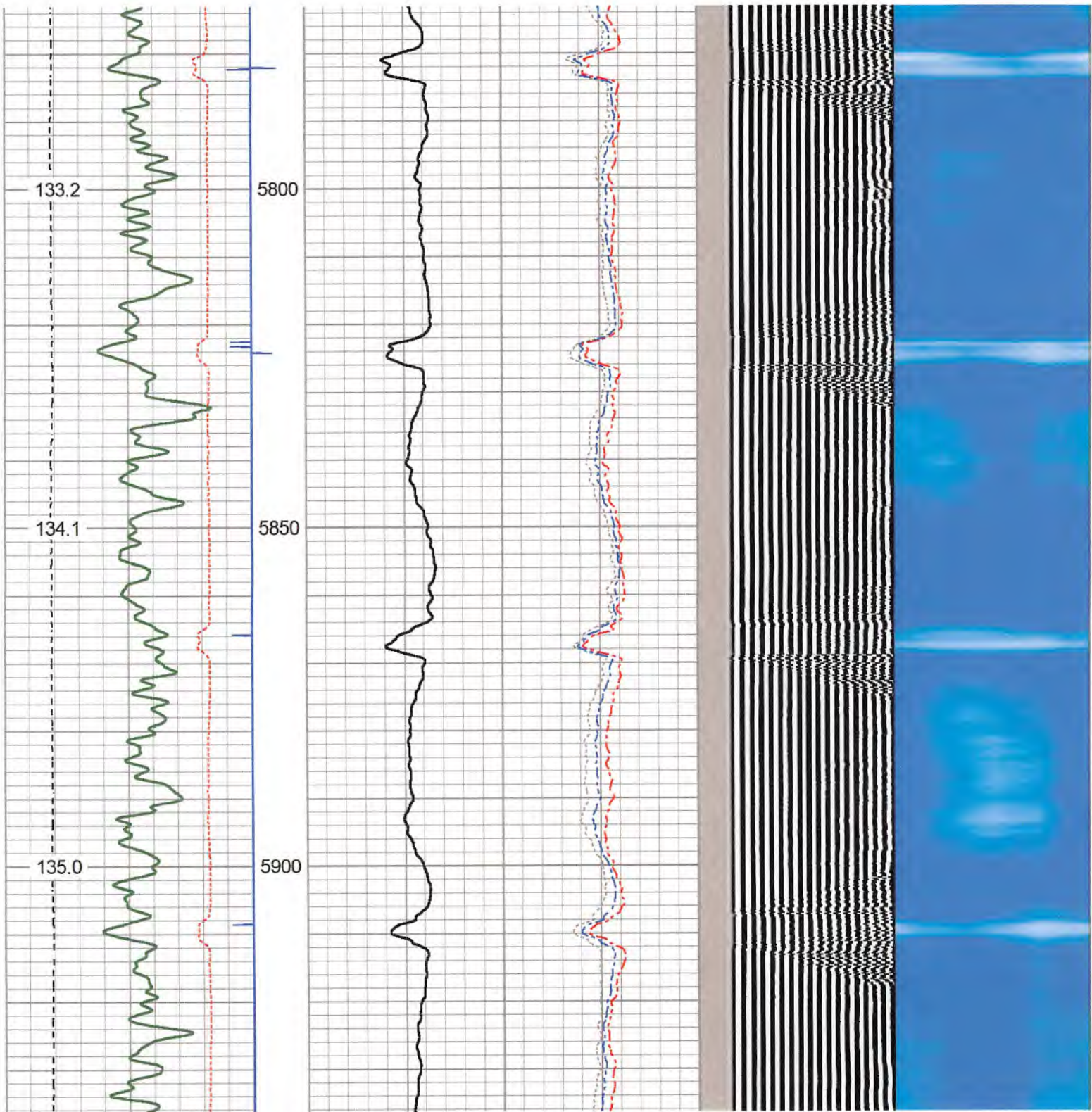


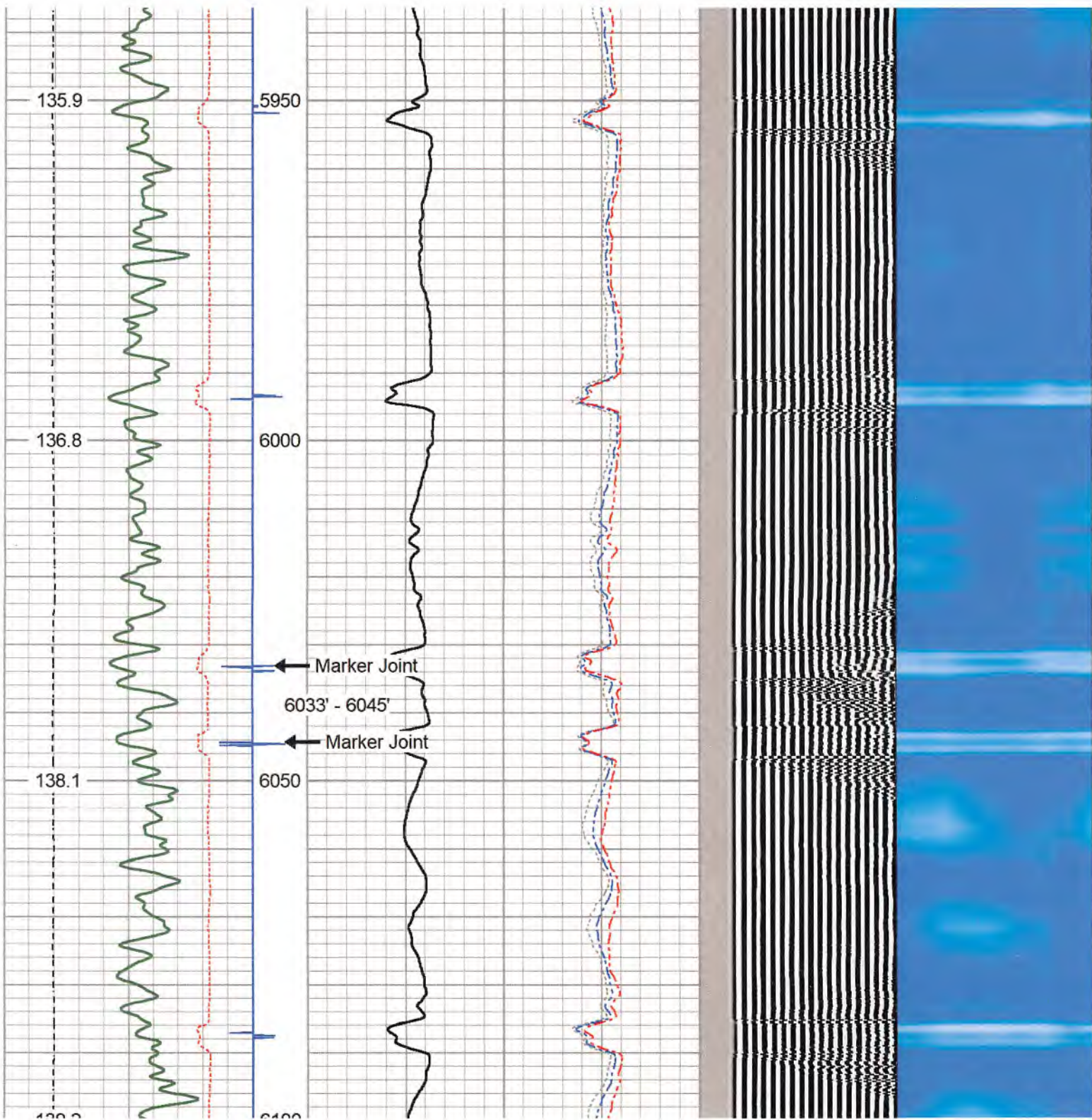


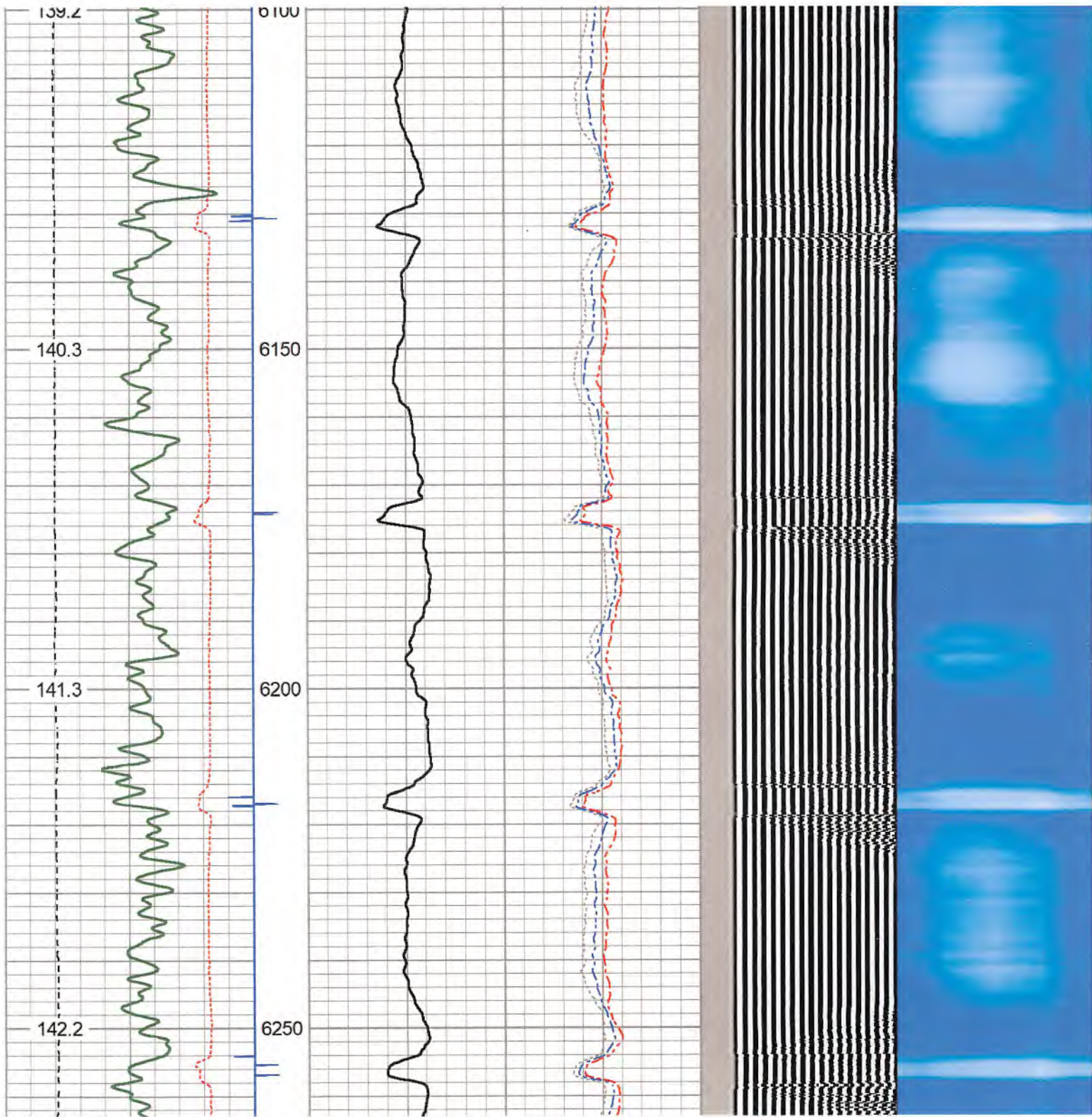


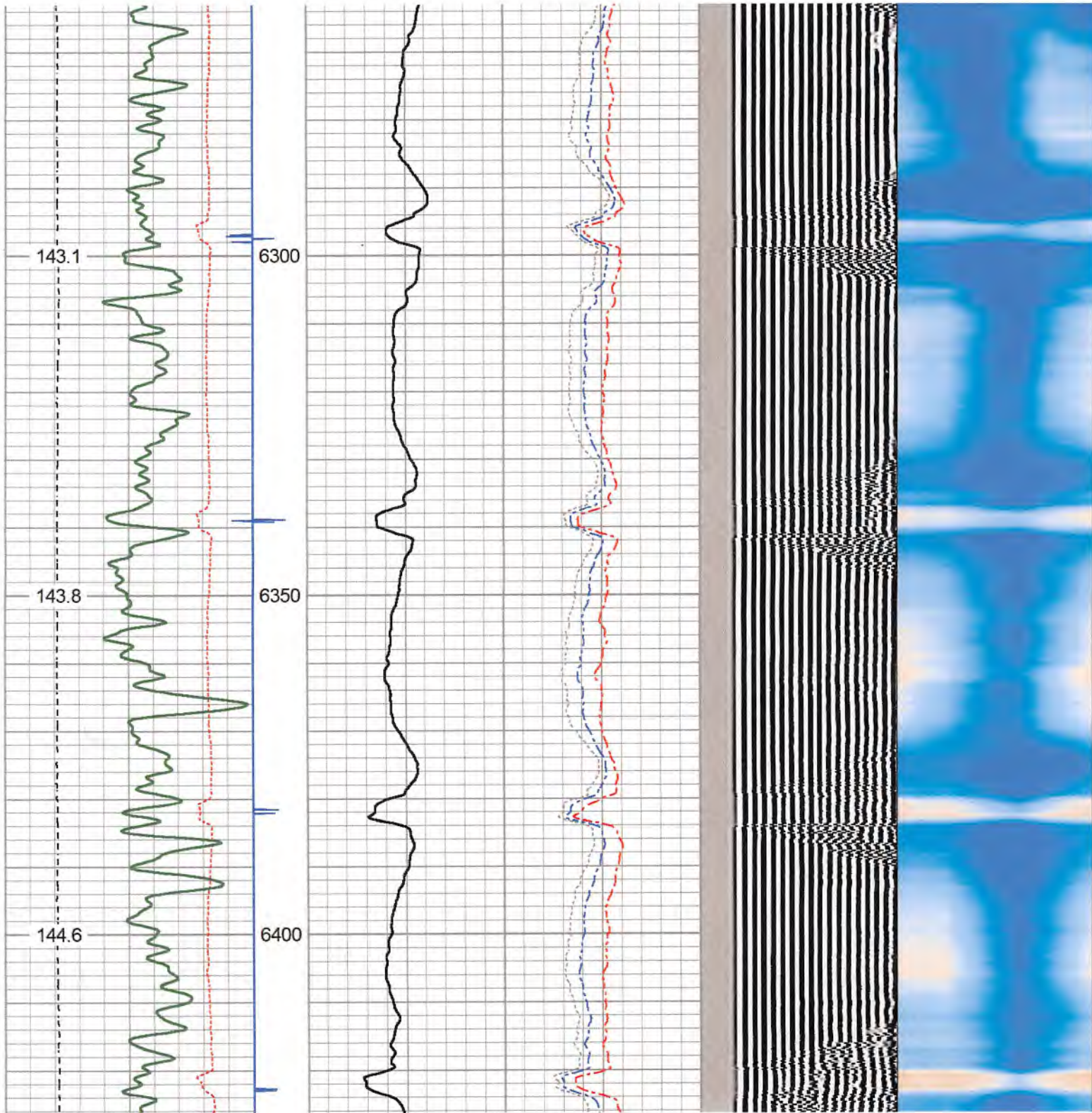


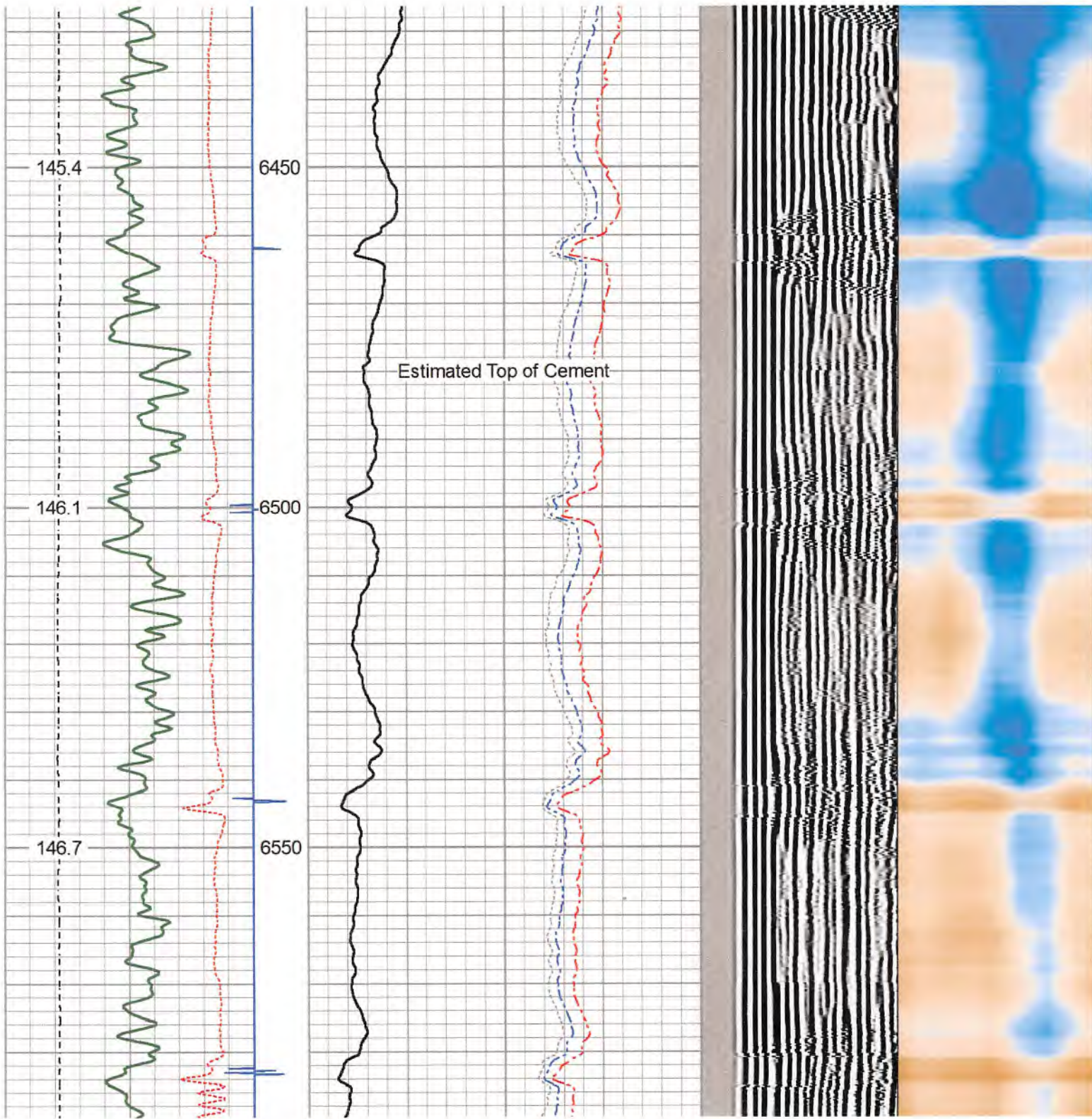


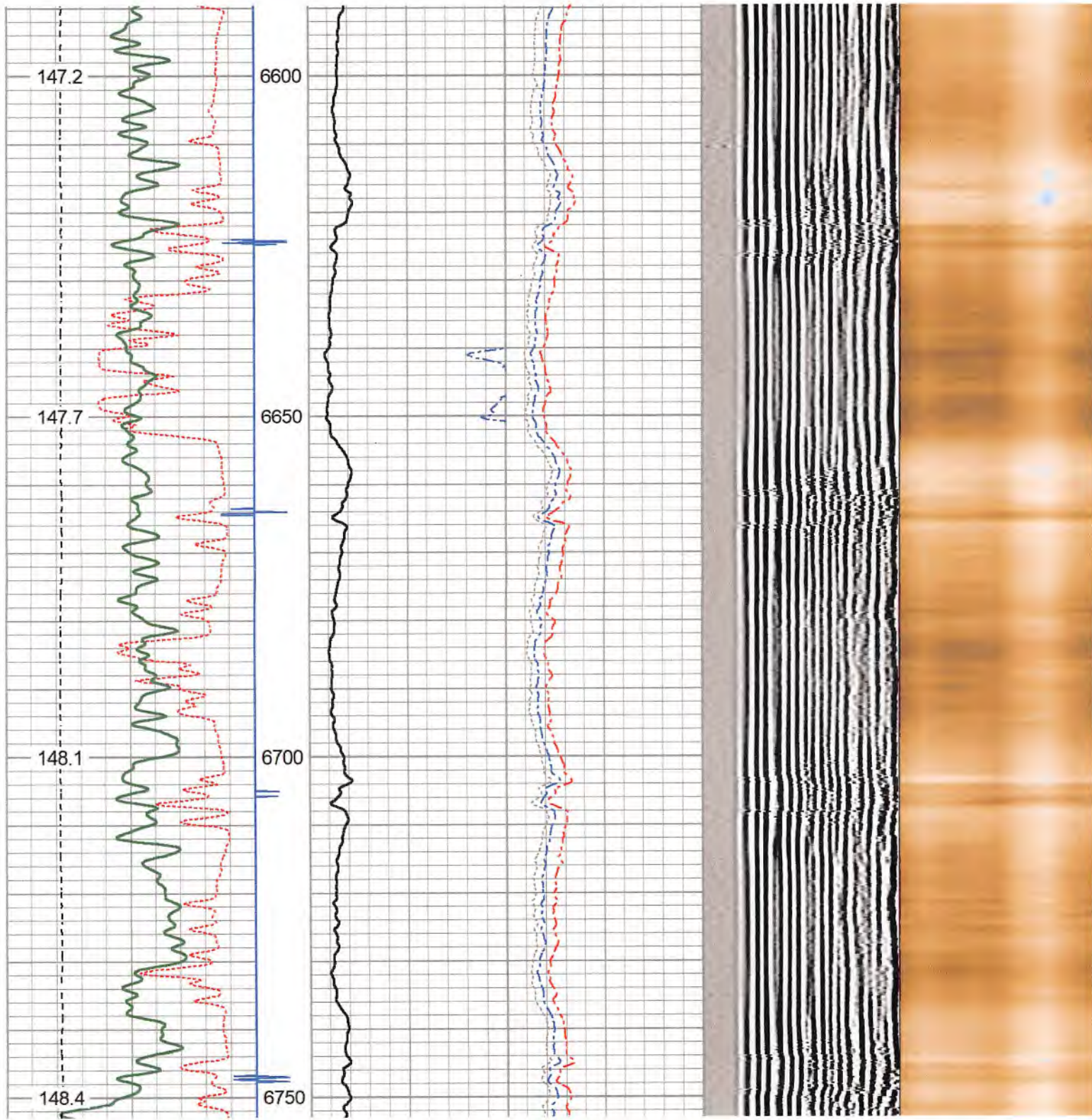


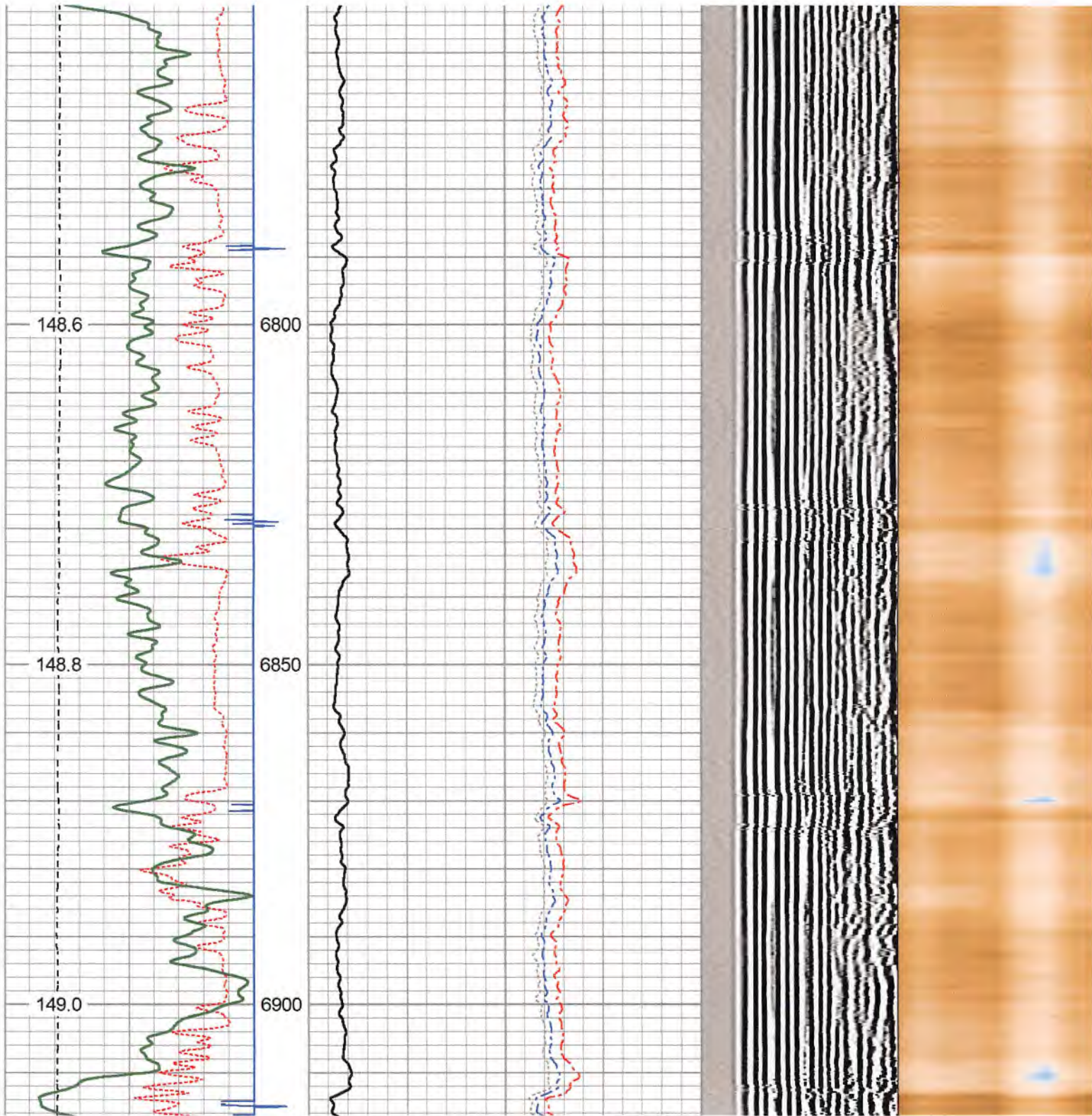


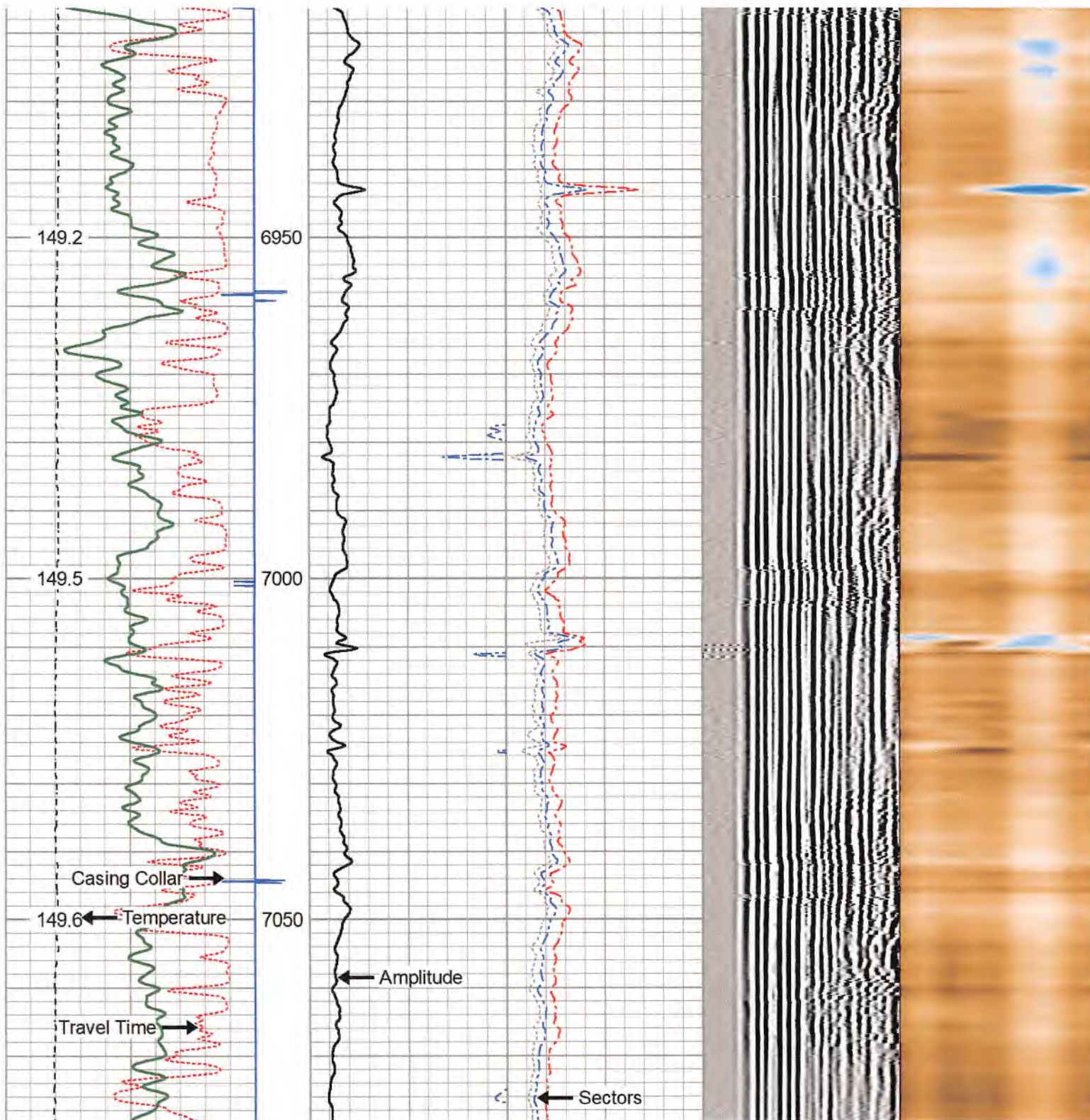


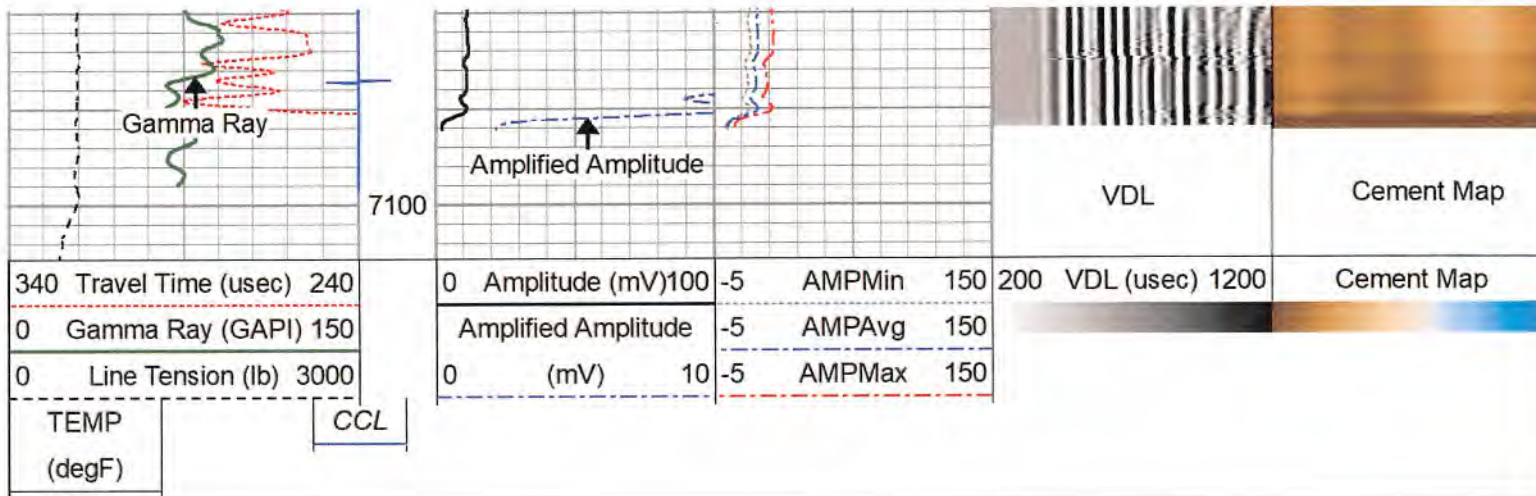






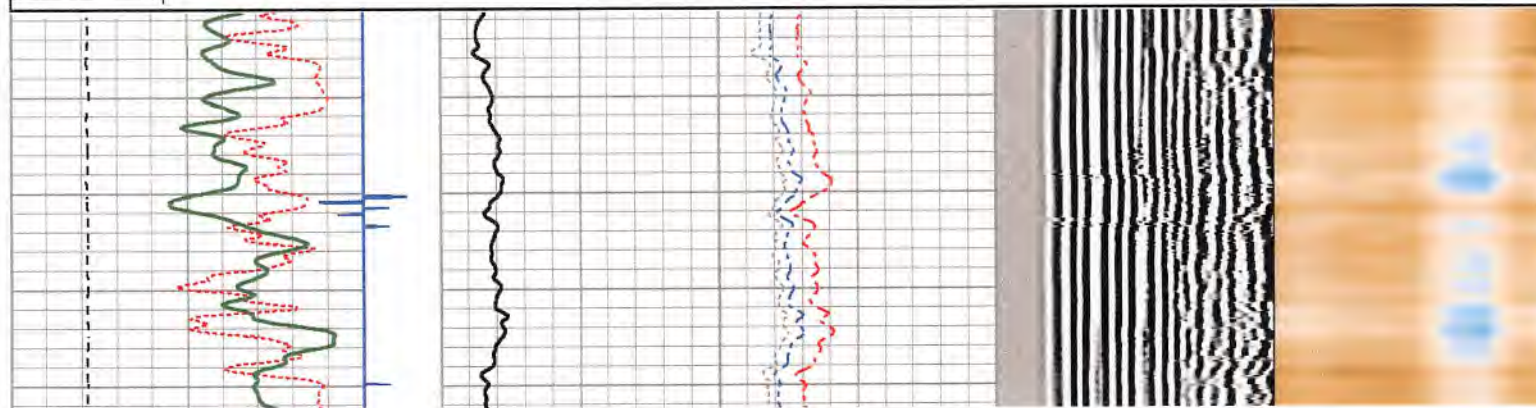
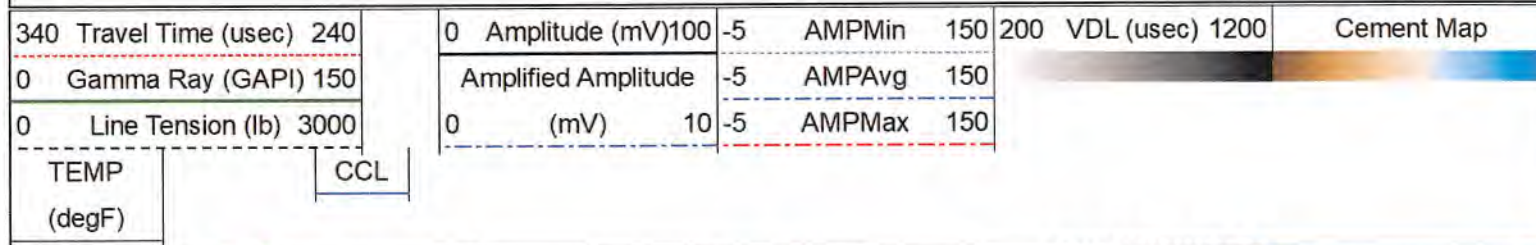


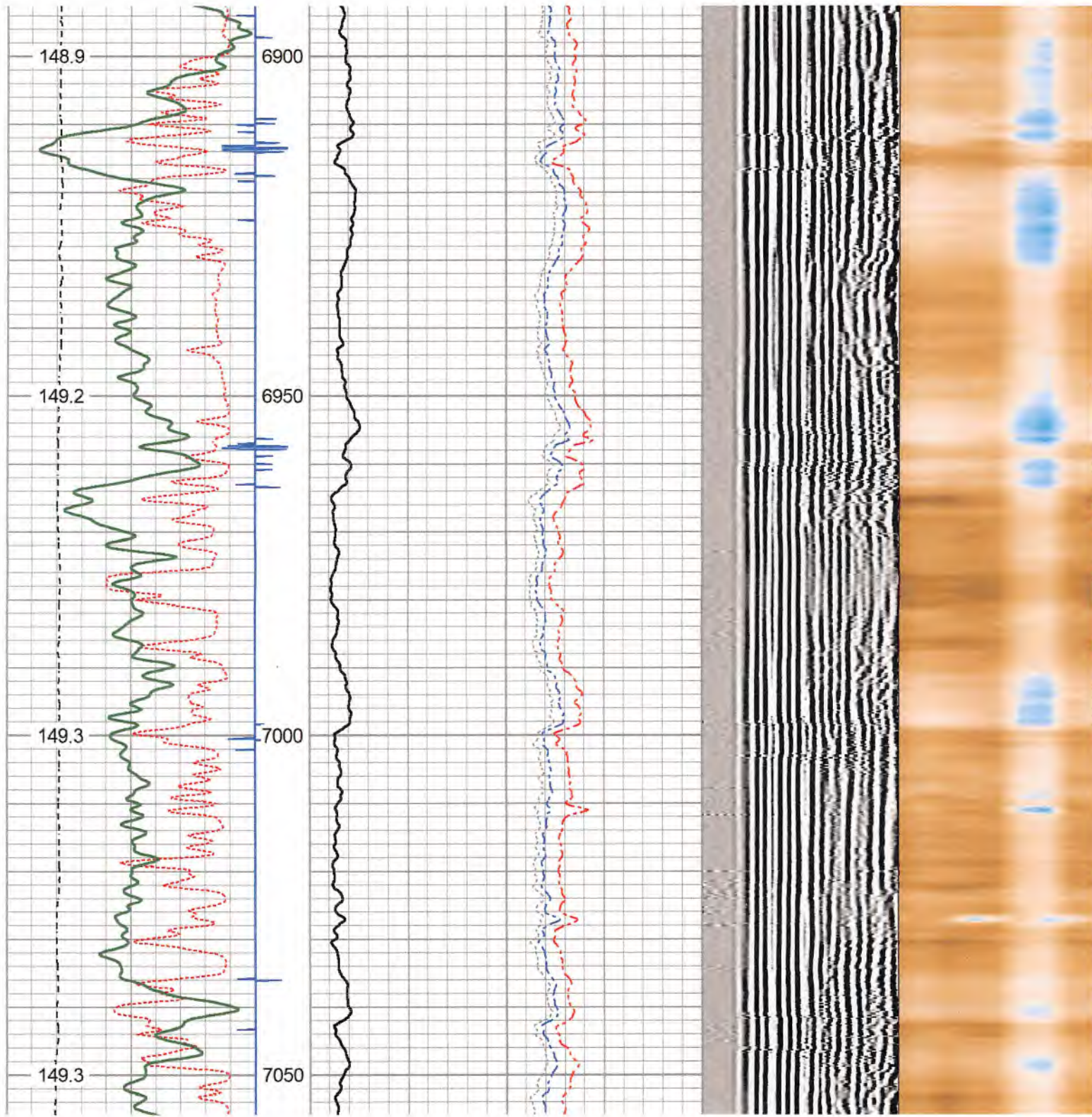


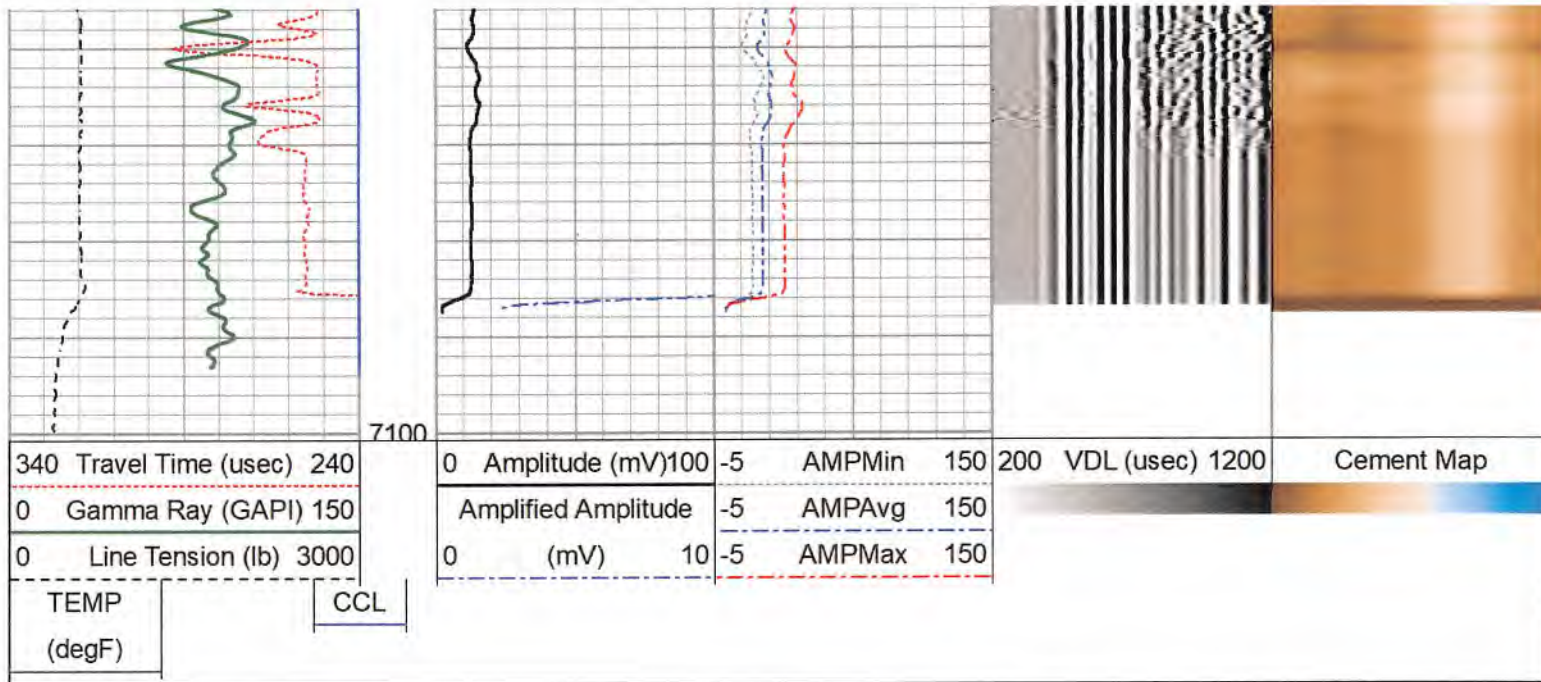


Repeat Pass (1500 PSI)

Database File c:\users\logbox\desktop\antero red lady\antero_rlp_baldy_1h.db
 Dataset Pathname rcbl/pass2
 Presentation Format tt_rcbl_std_bw
 Dataset Creation Sat Aug 13 02:35:19 2022
 Charted by Depth in Feet scaled 1:240







Log Variables Database: c:\users\logbox\desktop\antero red lady\antero_rlp_baldy_1h.db
Dataset: field/well/rcbl/pass8/_vars_

Top - Bottom

BOREID in 8.5	BOTTEMP degF 149.7	CASEOD in 5.5	CASETHCK in 0.42	CASEWGHT lb/ft 23	MAXAMPL mV 72	MINAMPL mV 1	MINATTN db/ft 0.8
PERFS No	PPT uSec 368	SRFTEMP degF 68	TDEPTH ft 7092				

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\antero red lady\antero_rlp_baldy_1h.db
Dataset Pathname	rcbl/pass8
Dataset Creation	Sat Aug 13 04:25:33 2022

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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: 5.500 in
 Calibration Depth: 634.170 ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.011	0.668	1.000	71.921	104.438	2.164
CAL	-0.012	0.854				
5'	-0.013	0.553	1.000	71.921	125.285	2.688
SUM						
S1	-0.024	0.689	0.000	100.000	140.316	3.378
S2	-0.048	0.682	0.000	100.000	137.011	6.573
S3	-0.013	0.659	0.000	100.000	148.749	1.928
S4	-0.012	0.636	0.000	100.000	154.388	1.857
S5	-0.012	0.651	0.000	100.000	150.814	1.827
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S6	-0.012	0.674	0.000	100.000	145.857	1.744
S7	-0.010	0.750	0.000	100.000	131.620	1.344
S8	-0.010	0.734	0.000	100.000	134.312	1.381

Internal Reference Calibration, performed Fri Aug 12 14:34:50 2022:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.012	0.854	1.000	0.000

Air Zero Calibration, performed Fri Aug 12 14:32:56 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 Ref.	High Ref.	
	Low Read.	High Read.			
X Accelerometer	0.00	1.00	0.00	1.00	gee
Y Accelerometer	0.00	1.00	0.00	1.00	gee
Z Accelerometer					

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0.00

1.00

0.00

1.00

gee

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)	
ErrCt	22.02		CENT-BC275-0000 Probe 2.75" Bowspring Centralizer	2.83	2.75	24.00	
RBT_HV	19.19						
WVFS8	14.69			RBT8-RADII-275C (RBT275C_Base) Probe 2.75" RADII 8 Sector Bond Tool	8.75	2.75	
WVFS7	14.69						
WVFS6	14.69						
WVFS5	14.69						
WVFS4	14.69						
WVFS3	14.69						
WVFS2	14.69						
WVFS1	14.69						
WVF3FT	14.69						
WVF5FT	13.69						
RBT_ACCZ	10.44						
RBT_ACCY	10.44						
RBT_ACCX	10.44						
WVFSYNC	10.44						
WVFCAL	10.44						
			RECEIVED Office of Oil and Gas FEB 24 2023 WV Department of Environmental Protection				
			CENT-BC275-0000 Probe 2.75" Bowspring Centralizer	2.83	2.75	24.00	

GCT_HV	7.60					
CCL\$2	6.64					
CCL\$1	6.64					
GCT_Temp	6.09					
GR	5.22					
			GC-GCT275-0000 (GCT275-0000_base) Probe Gamma Ray - CCL w/ Temp	4.77	2.75	55.00
			CENT-BC275-0000 Probe 2.75" Bowspring Centralizer	2.83	2.75	24.00

Dataset: antero_rlp_baldy_1h.db: field/well/rcbl/pass8
 Total length: 22.02 ft
 Total weight: 127.00 lb
 O.D.: 2.75 in



Company	Antero Resources Corporation		
Well	Baldy Unit 1H		
Field	Marcellus		
County	Wetzel		
State	WV	Country	USA