



Radial Cement Bond
Gamma Ray CCL
Temperature Log

Company Antero Resources Corporation Well Mule Unit 3H Field South Canton County Doddridge State WV	Company Antero Resources Corporation Well Mule Unit 3H Field South Canton County Doddridge State WV			
	API # : 47-017-06918-00-00 AFE # : A11801 Location (LAT,LON): 39.314563, -80.762847 Township: West Union			Other Services None
	Permanent Datum Ground Level Elevation 1216' Log Measured From KB = 30' Drilling Measured From KB			Elevation K.B. 1246' D.F. 1246' G.L. 1216'
	Date			
Run Number				One
Depth Driller (ft)				16109
Depth Logger (ft)				7297
Bottom Logged Interval (ft)				7285
Top Log Interval				Surface
Open Hole Size (in)				6.75
Type Fluid				Water
Density / Viscosity (lb/gal)				8.4
Max. Recorded Temp. (°F)				149.5
Estimated Cement Top (ft)				5426
Time Well Ready				09:00 AM
Time Logger on Bottom				12:25 PM
Equipment Number				8018
Location				Delmont, PA
Recorded By				T. Trump
Witnessed By				D. Fenstermaker
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	334
Intermediate String	7.625	26.4	Surface	2617
Production String	5	18	Surface	16089
Inclination Information (Approximated Values from Directional Survey)				
KOP	30°	60°	90°	
1040'	6650'	7150'	7600'	
THANK YOU FOR USING GR ENERGY SERVICES				

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 +4'
Marker Joint Located @ 6285' - 6295'

Maximum Temperature Recorded was 149.5°F
Maximum Tension 1856 lbs

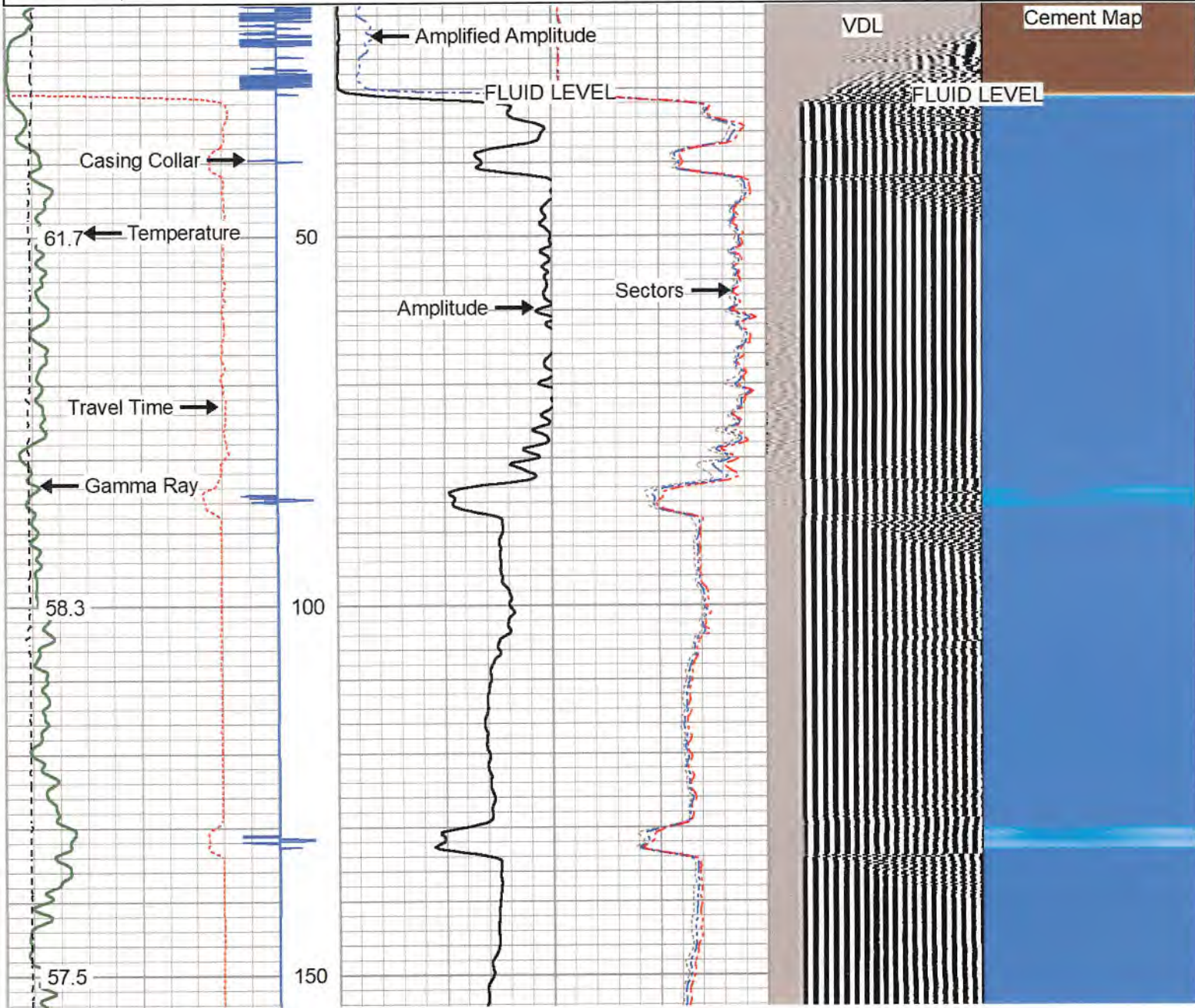
Estimated Top of Cement @ 2291'

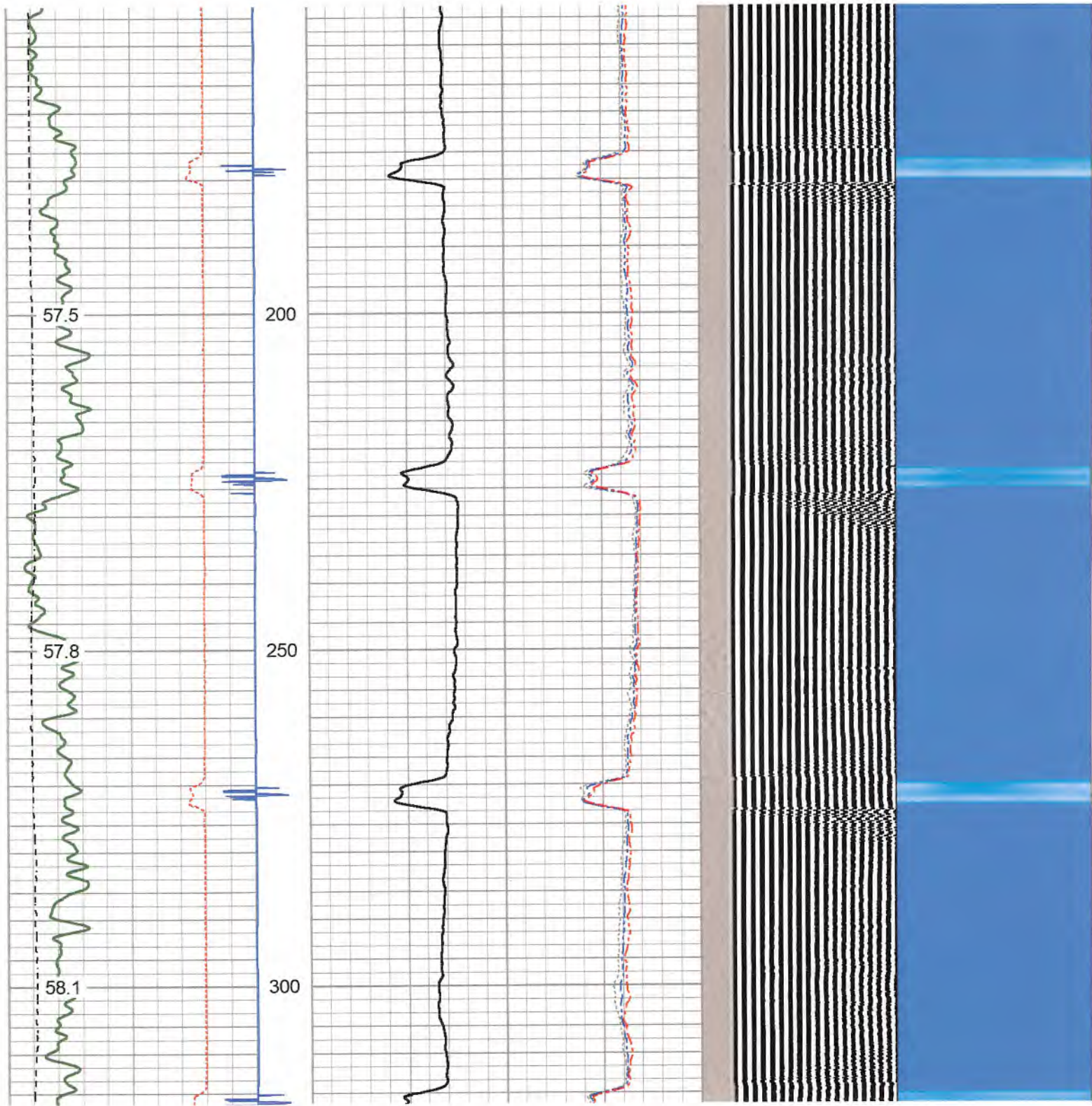


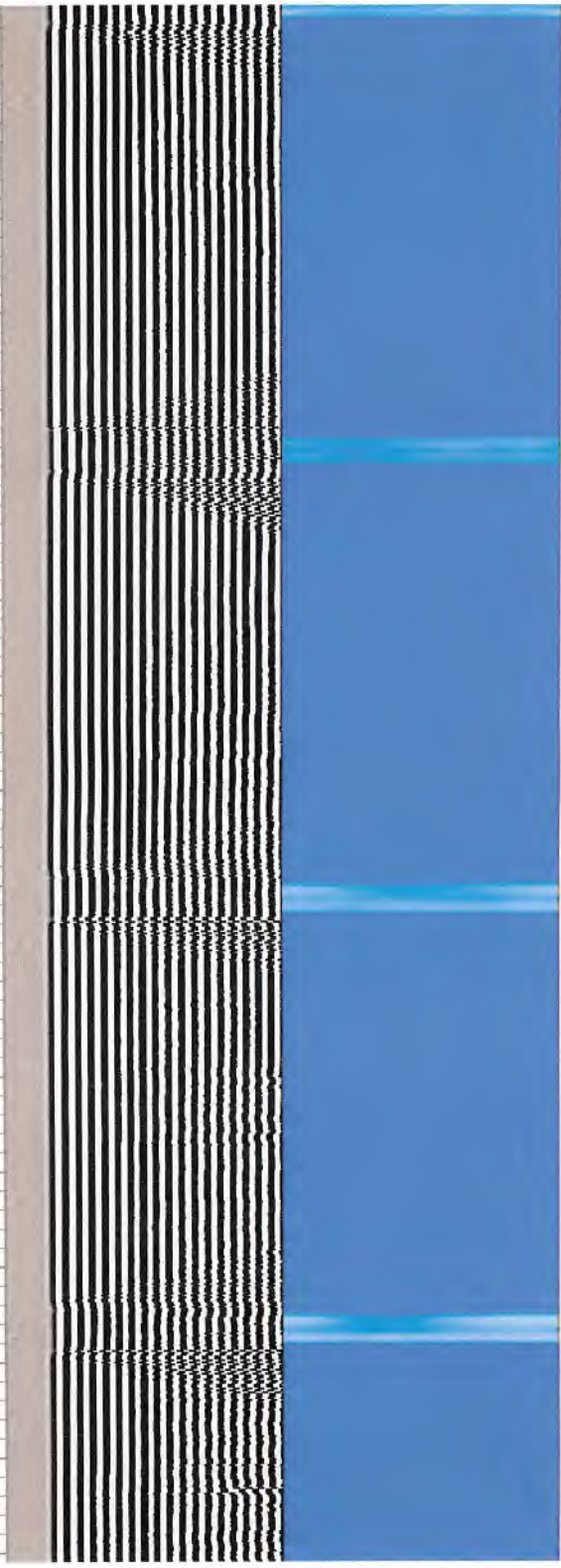
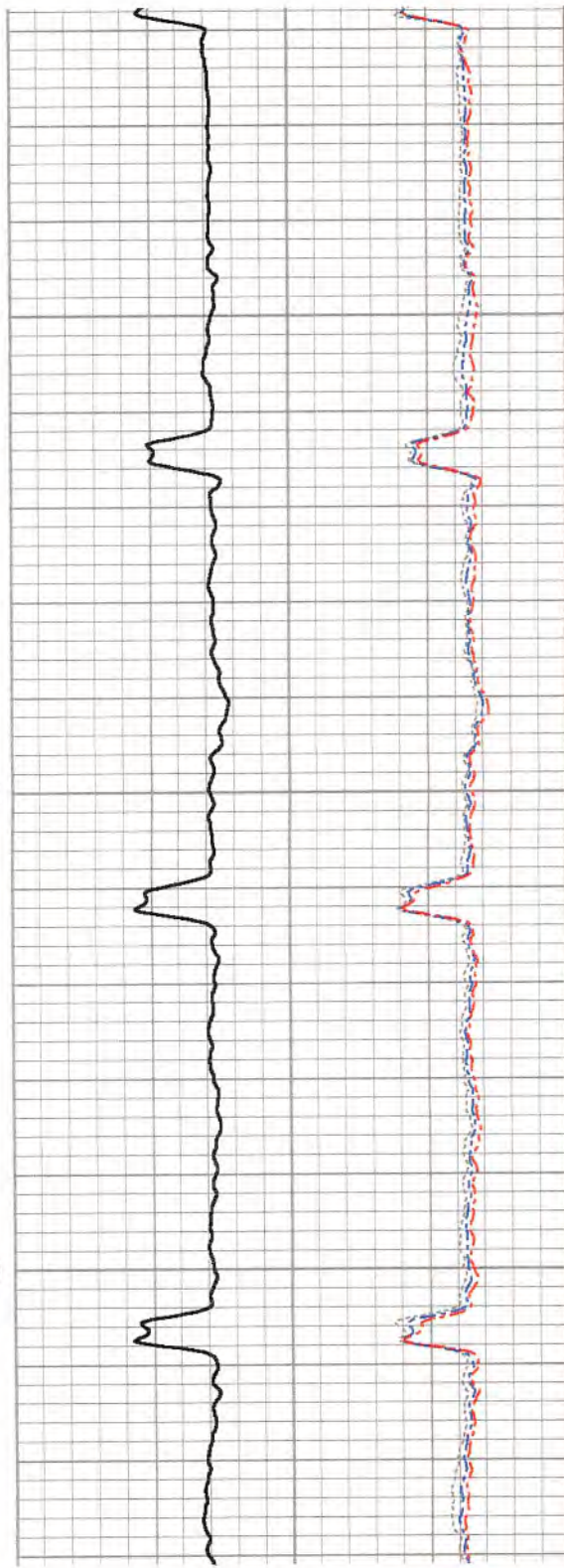
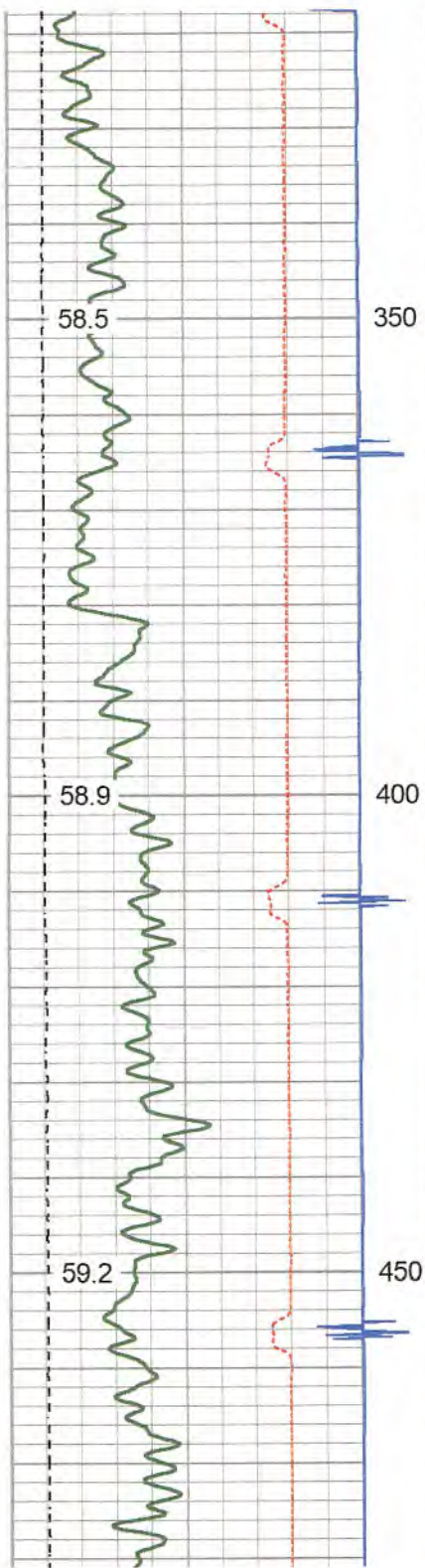
Main Pass (1500 PSI)

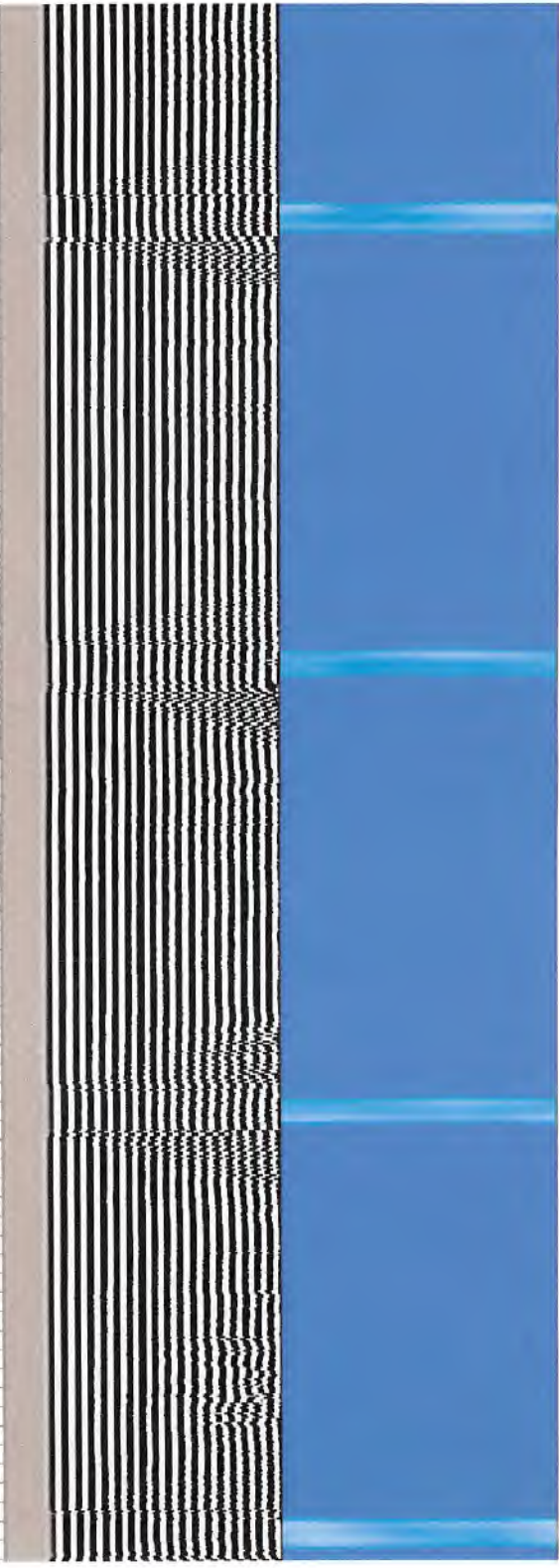
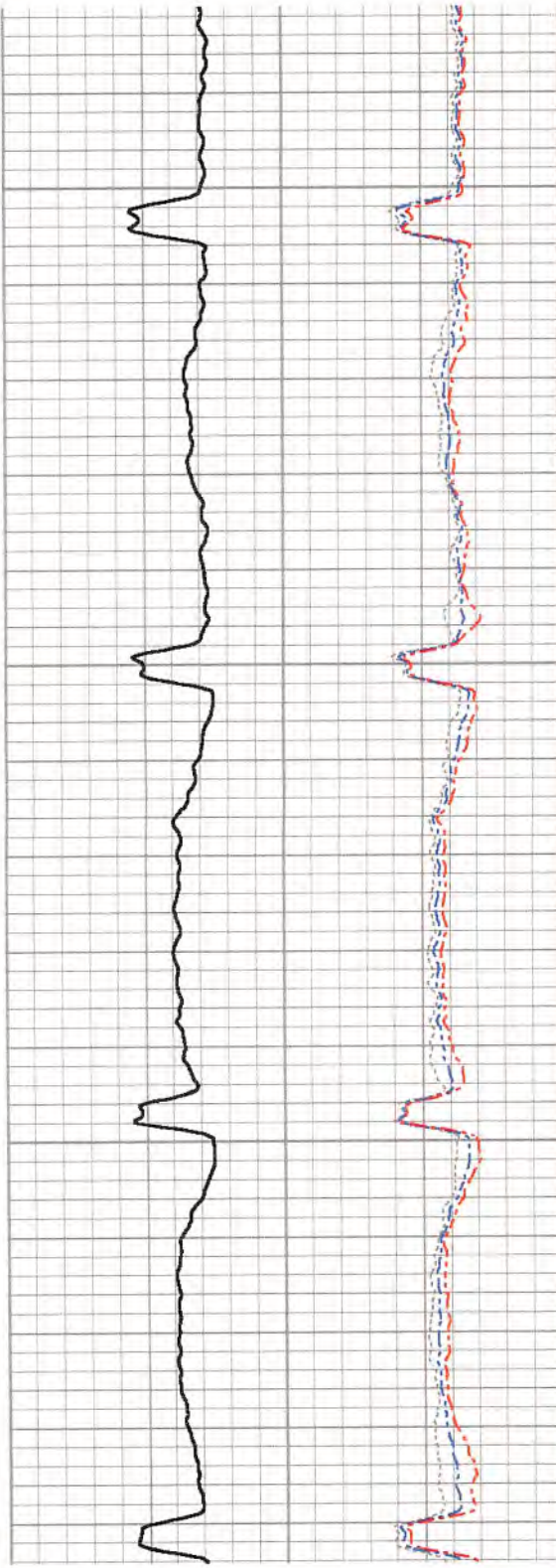
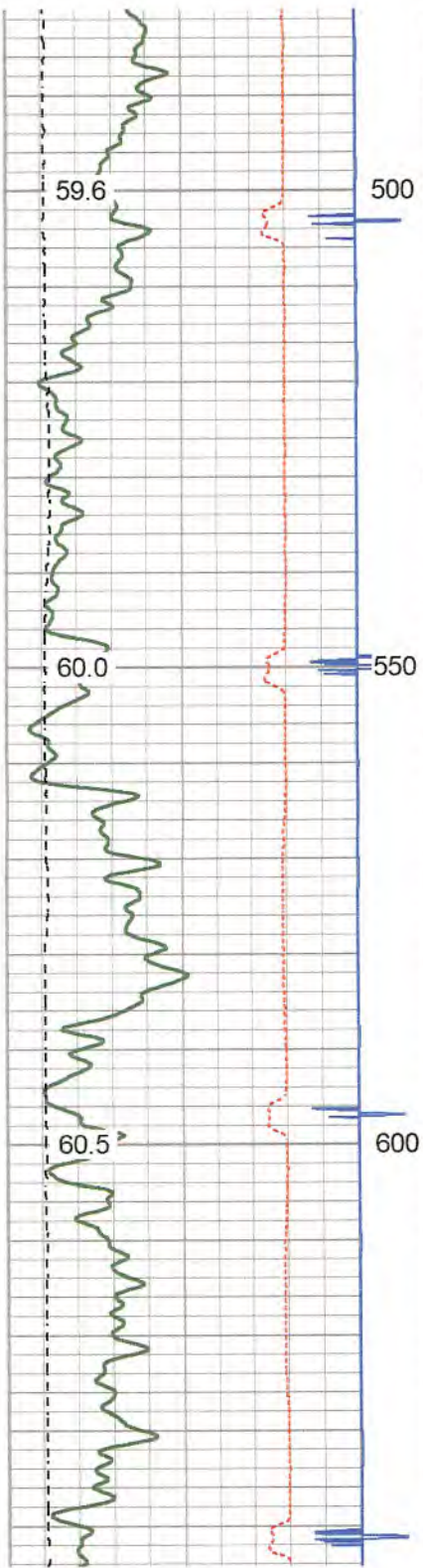
Database File	c:\users\logbox\desktop\antero gaspar\ant_gaspar_mule_3h.db
Dataset Pathname	rcbl/pass4
Presentation Format	tt_rcbl_std_bw
Dataset Creation	Sun Jul 17 12:23:08 2022
Charted by	Depth in Feet scaled 1:240

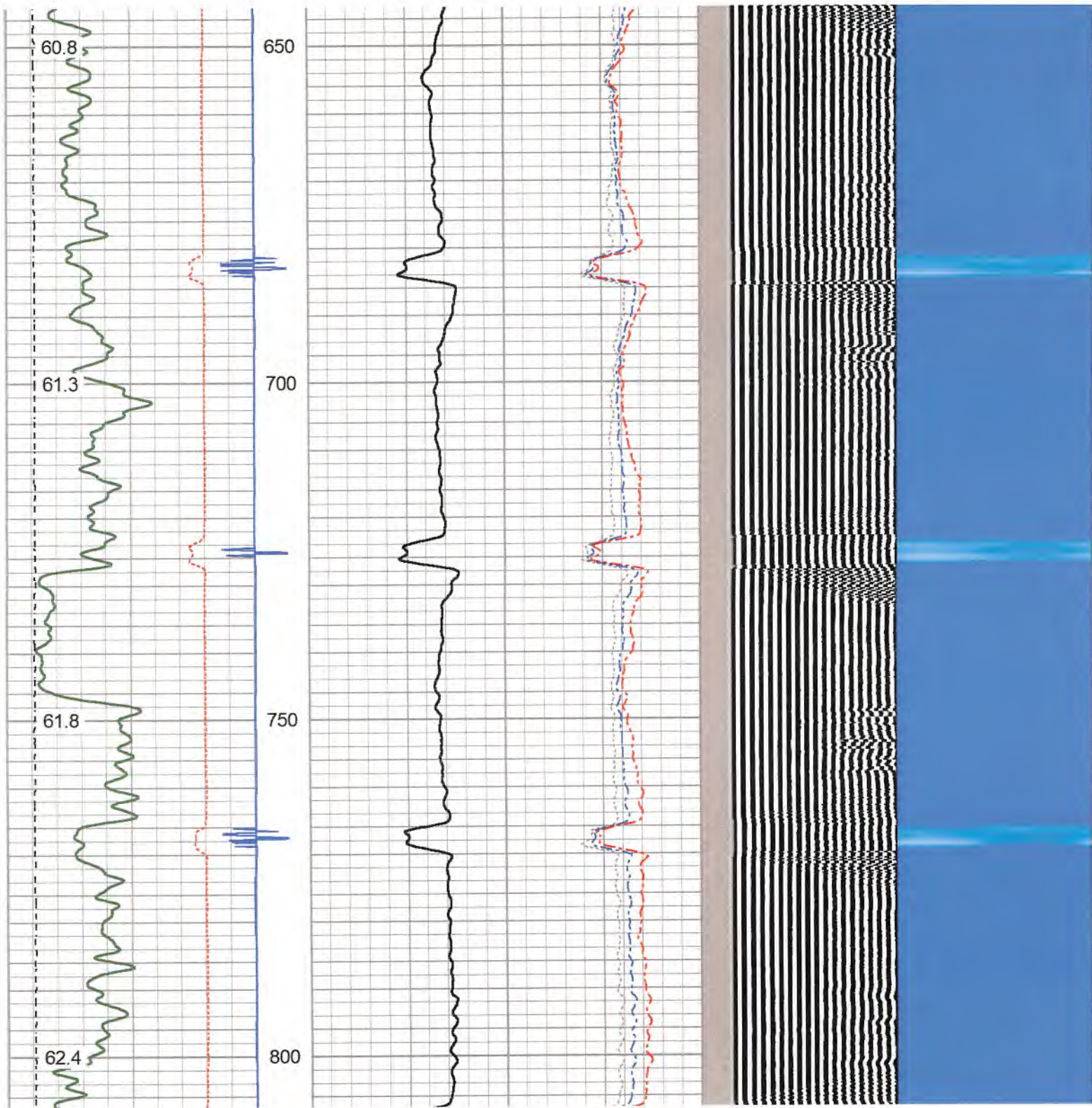
333	Travel Time (usec)	233	0	Amplitude (mV)	100	-5	AMPMin	150	200	VDL (usec)	1200	Cement Map
0	Gamma Ray (GAPI)	150		Amplified Amplitude		-5	AMPAvg	150				
0	Line Tension (lb)	3000	0	(mV)	10	-5	AMPMax	150				
TEMP		CCL										
(degF)												

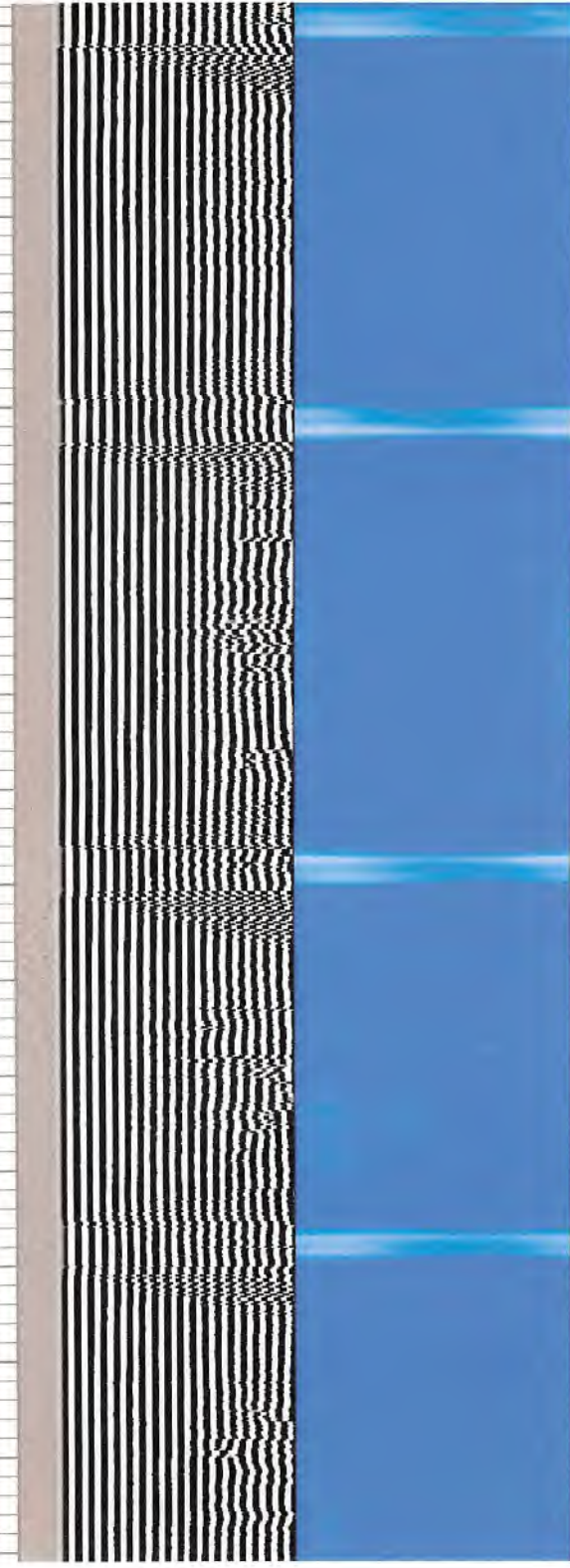
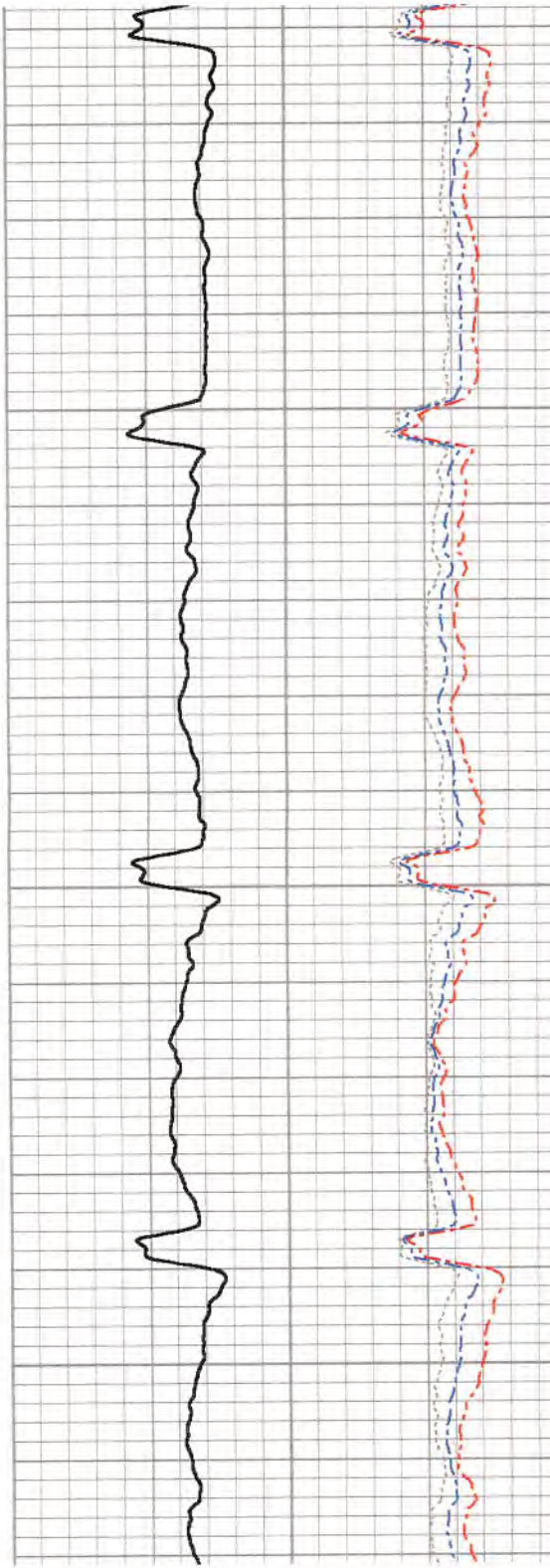
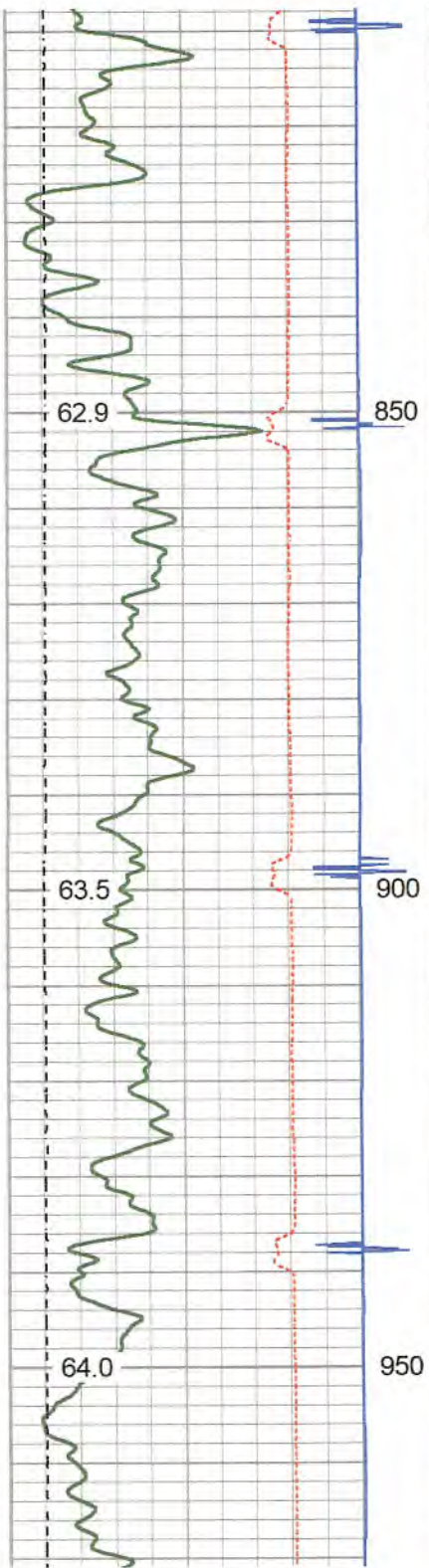


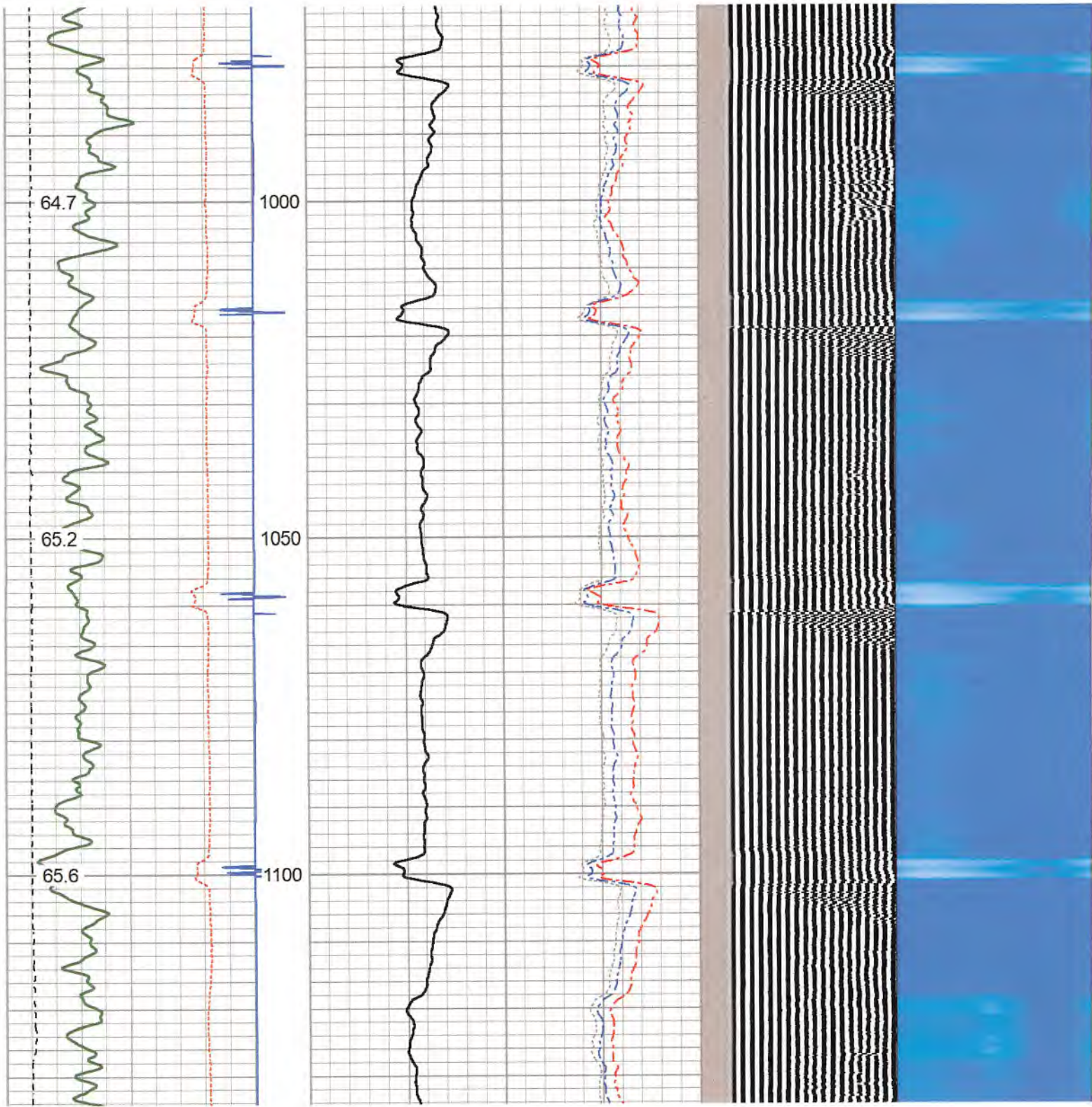


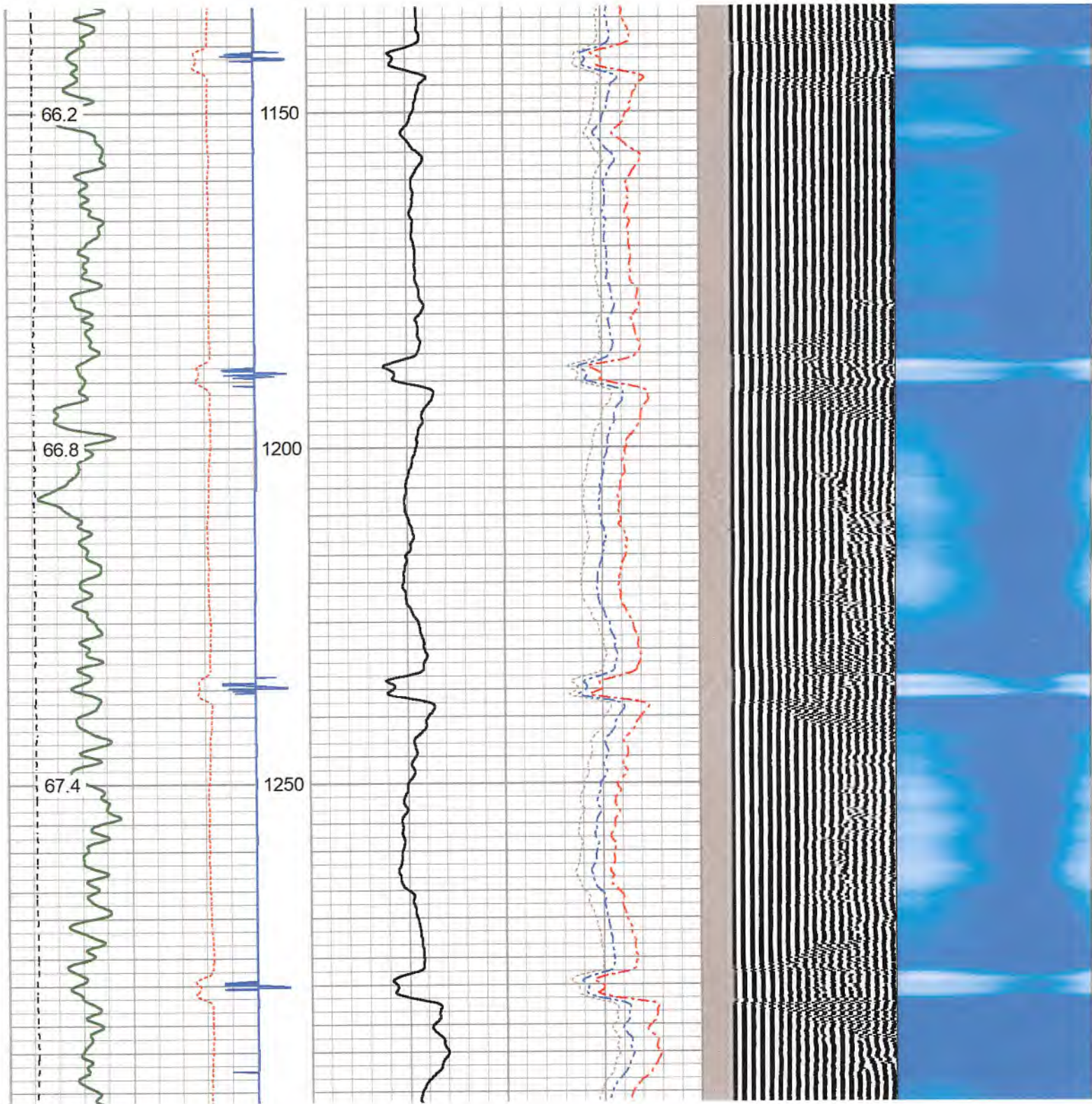


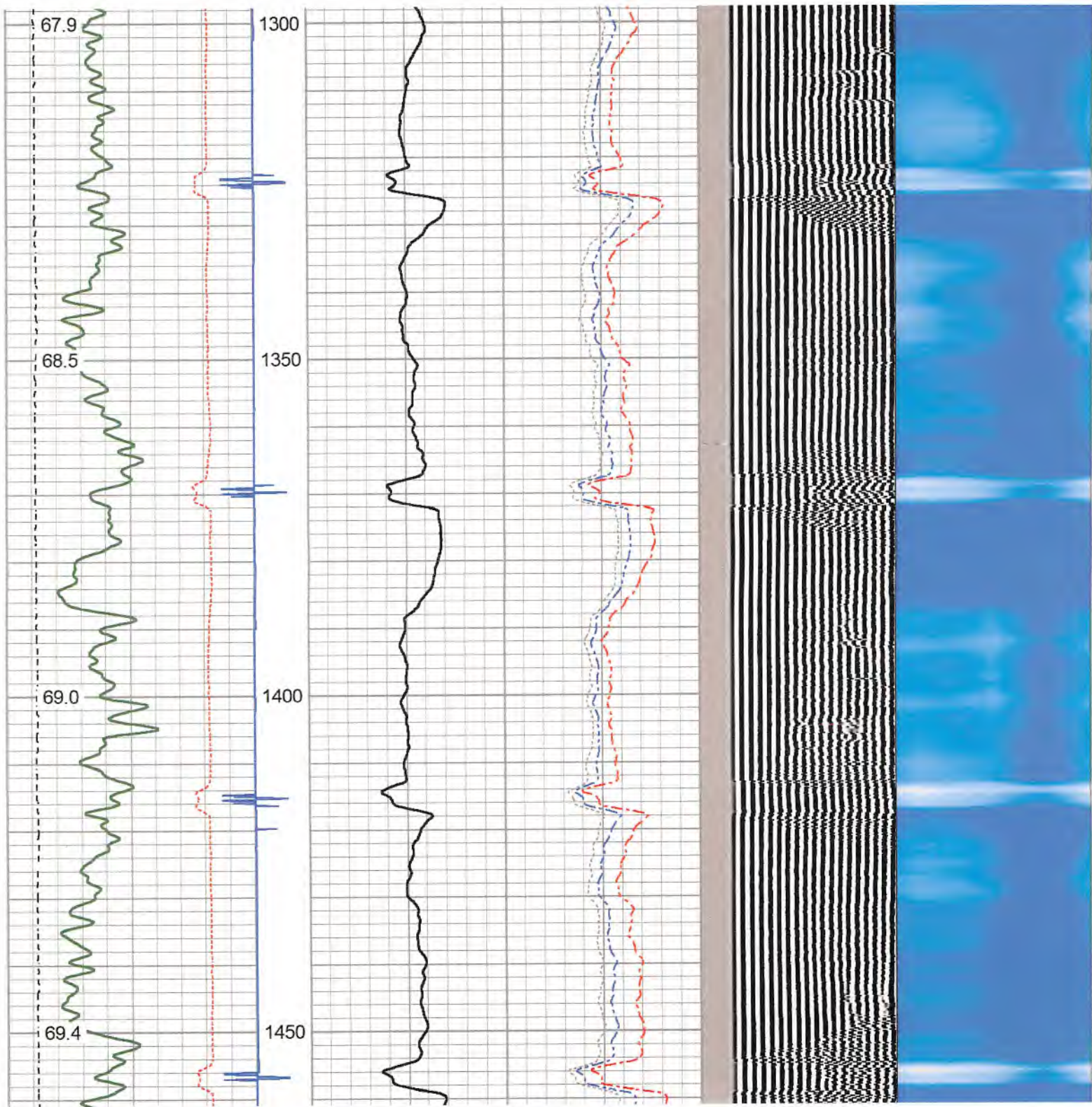


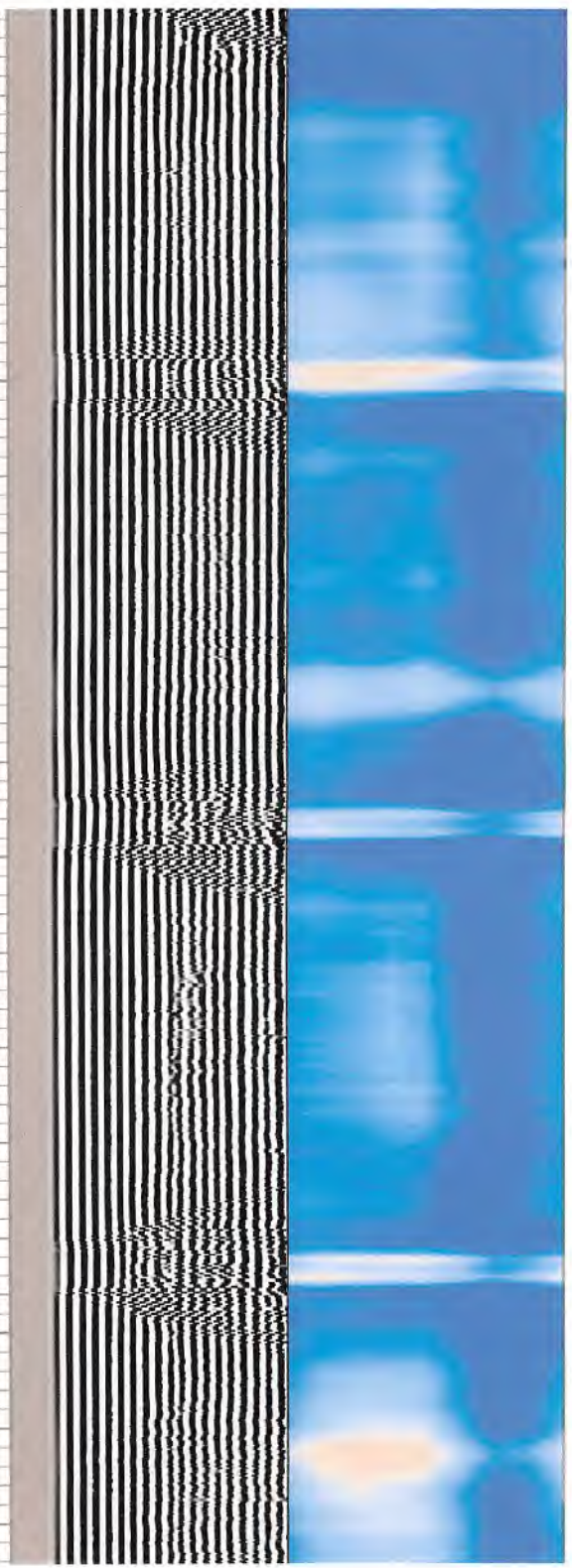
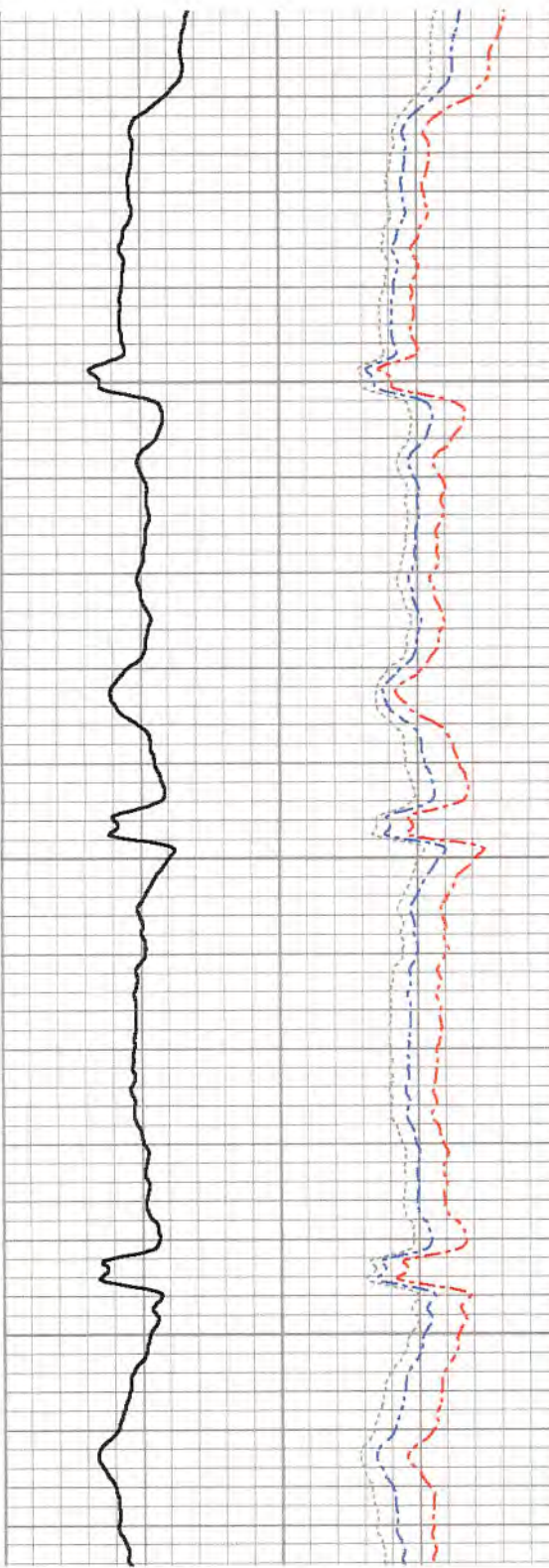
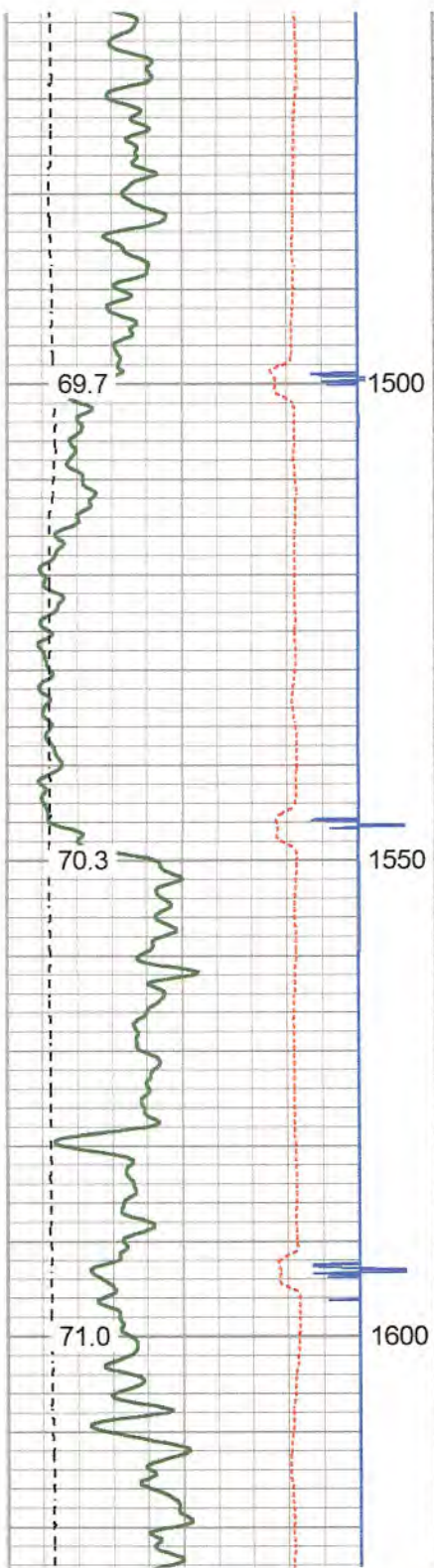


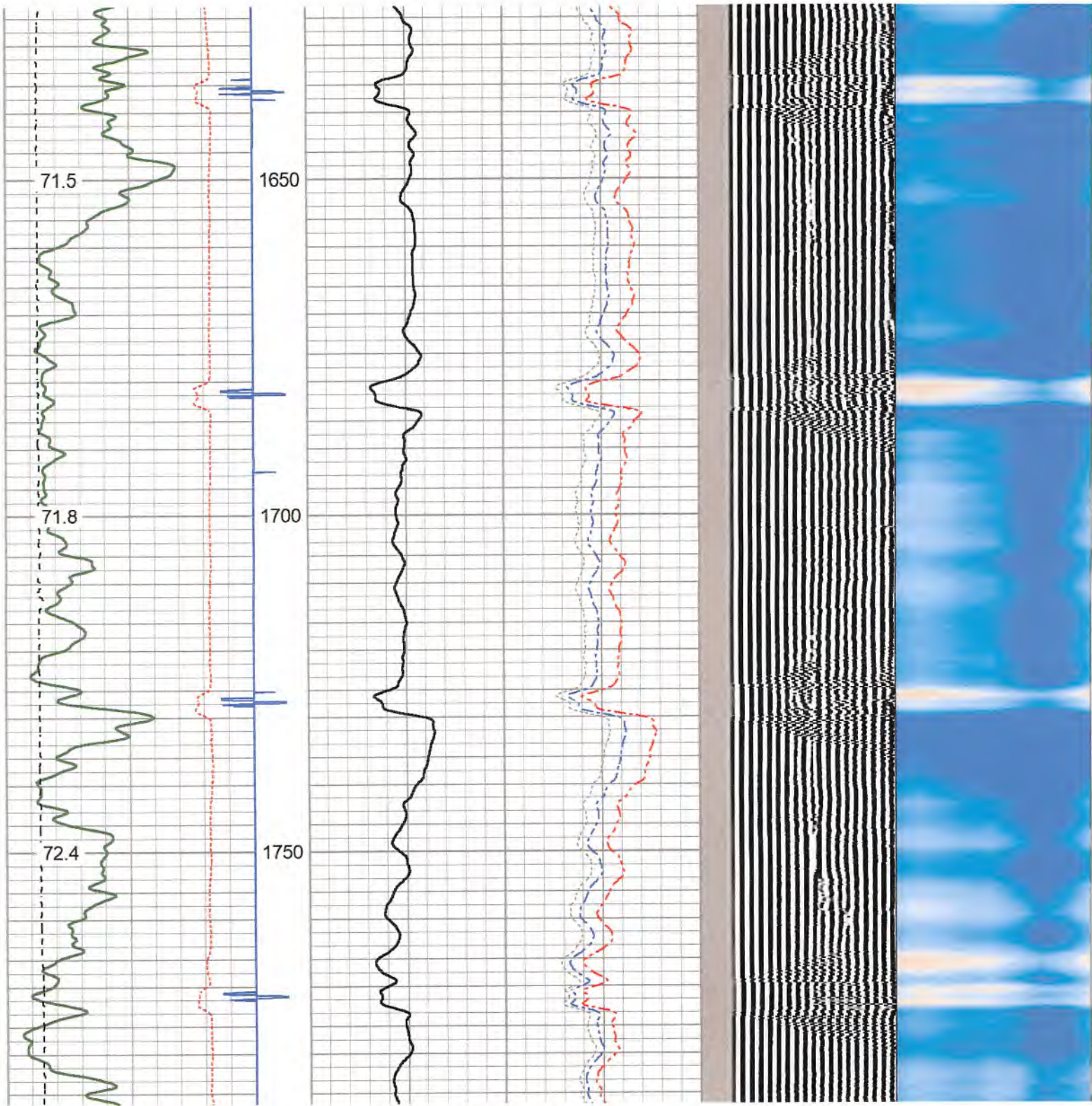


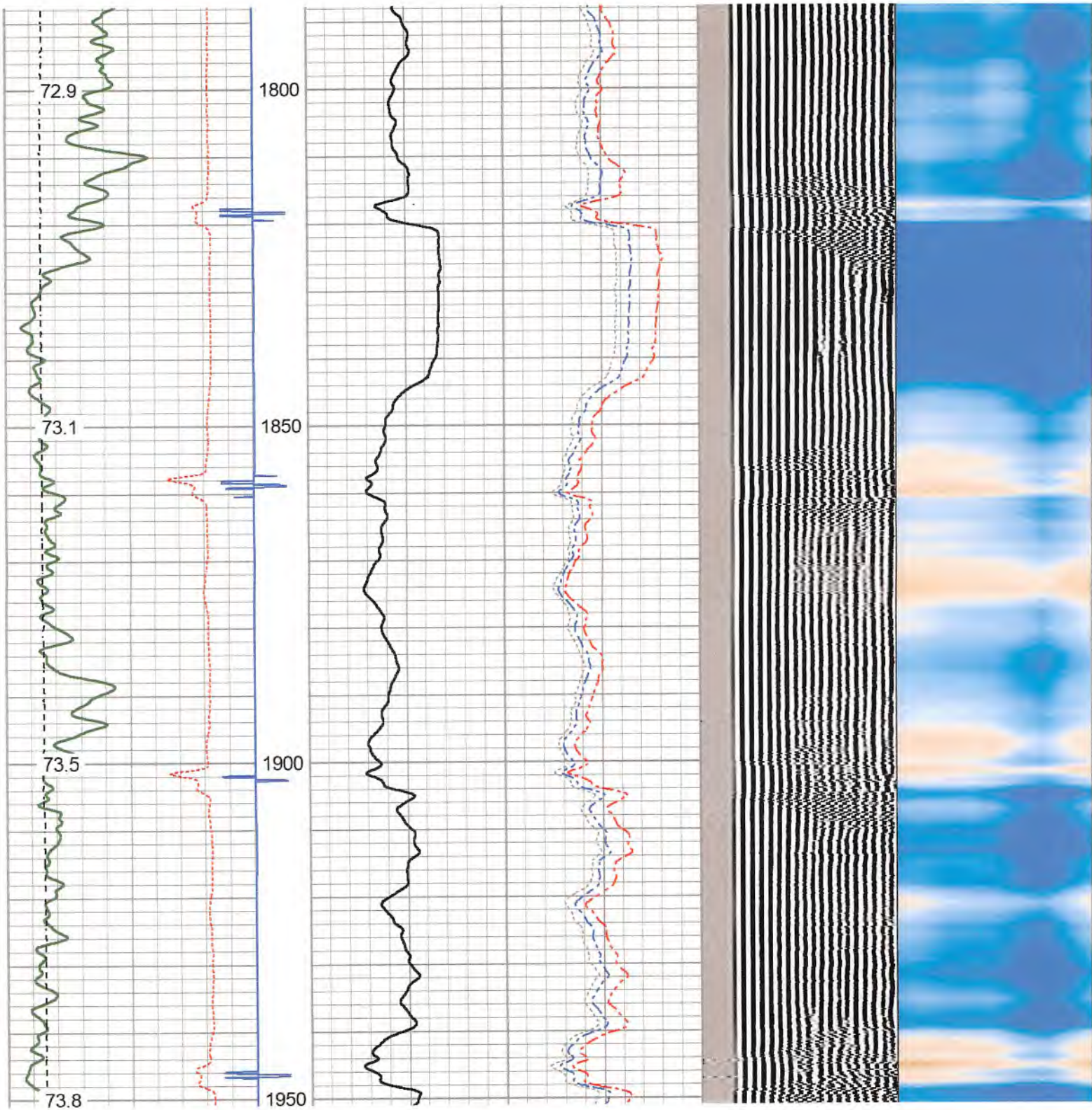


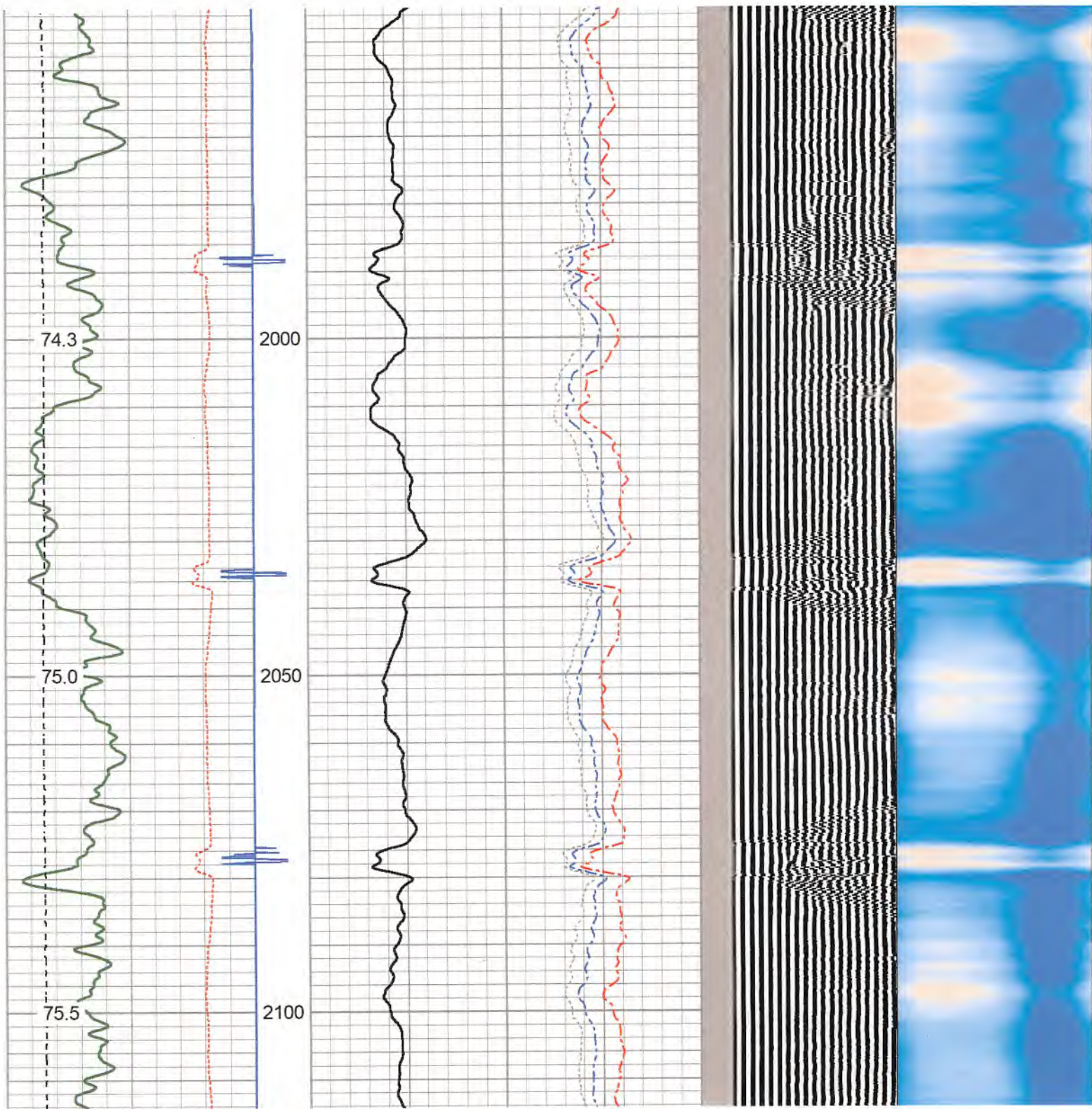


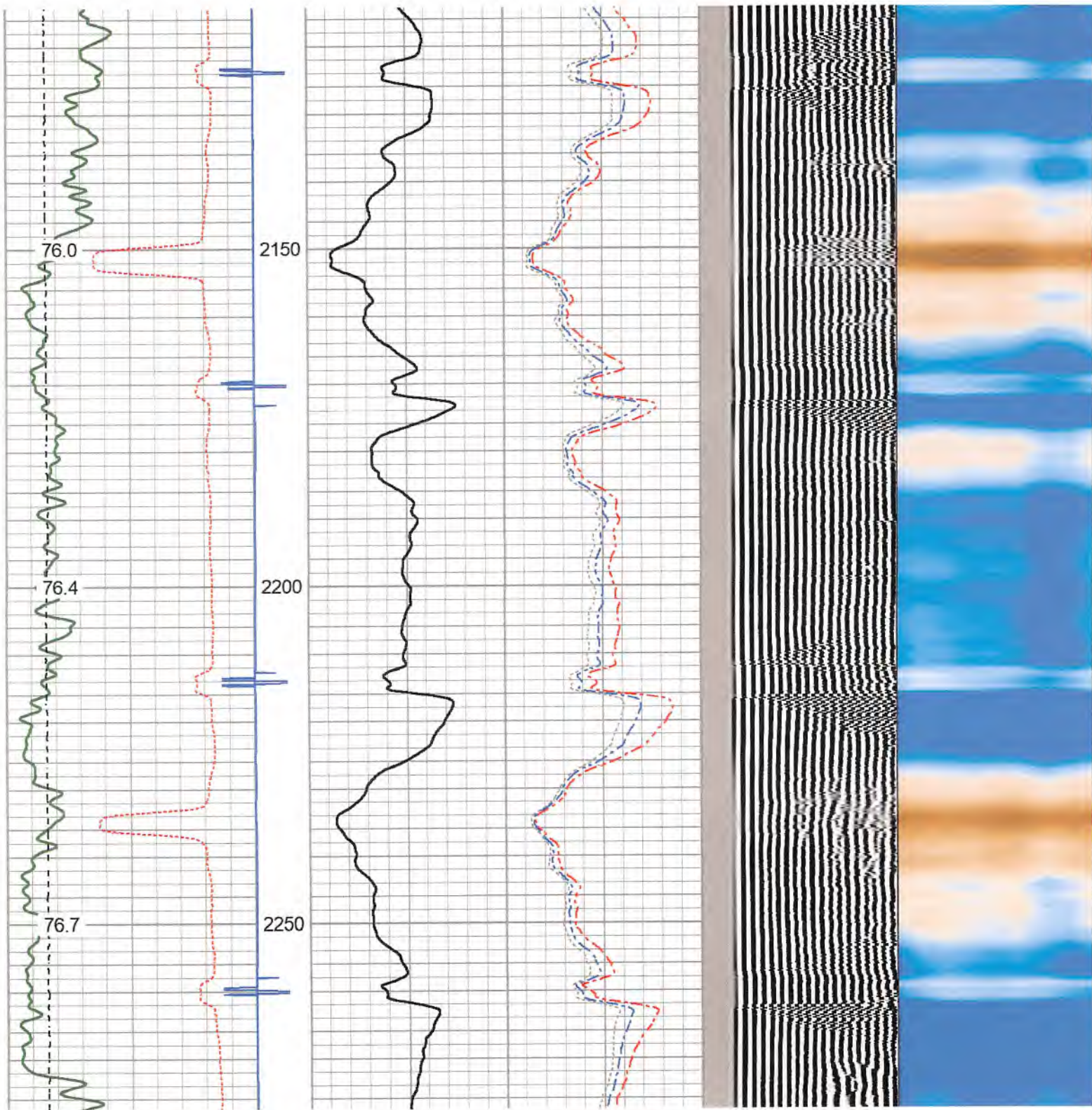


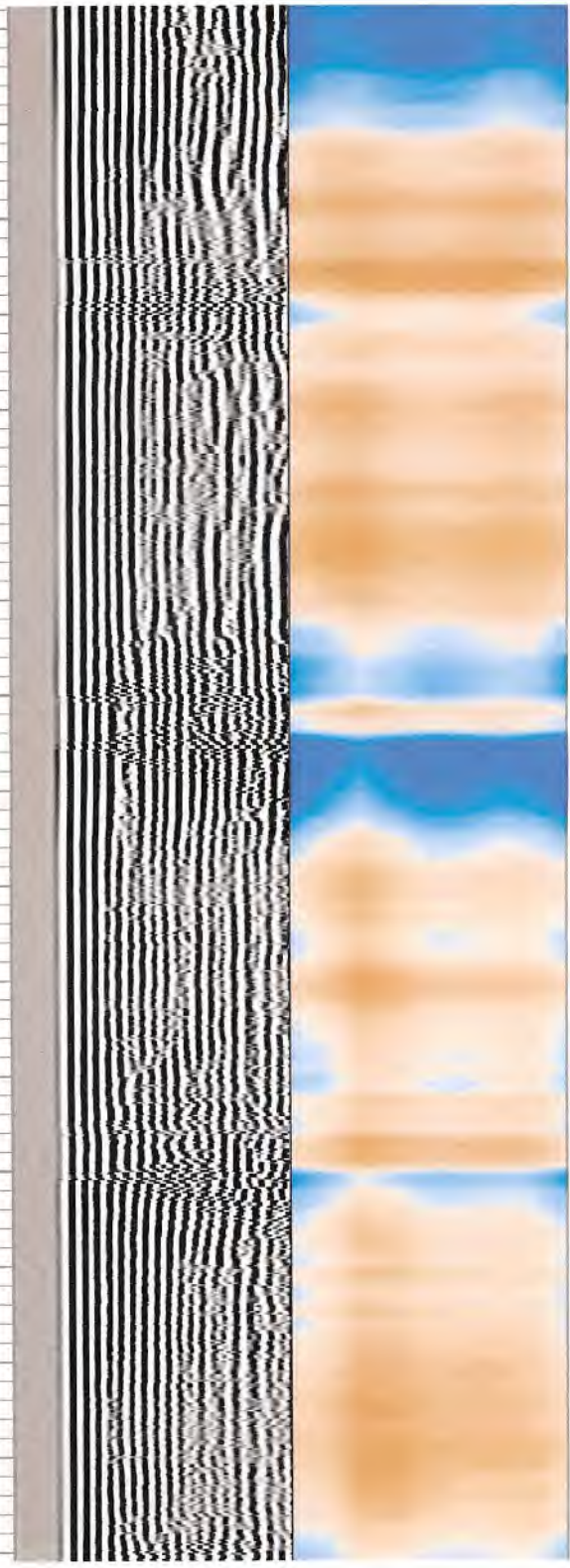
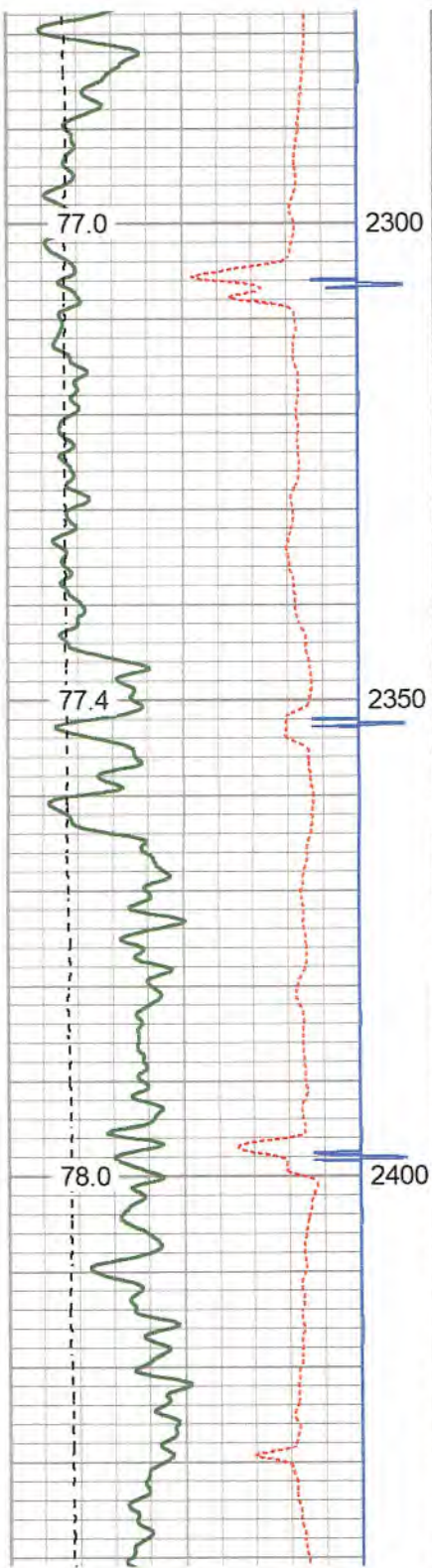


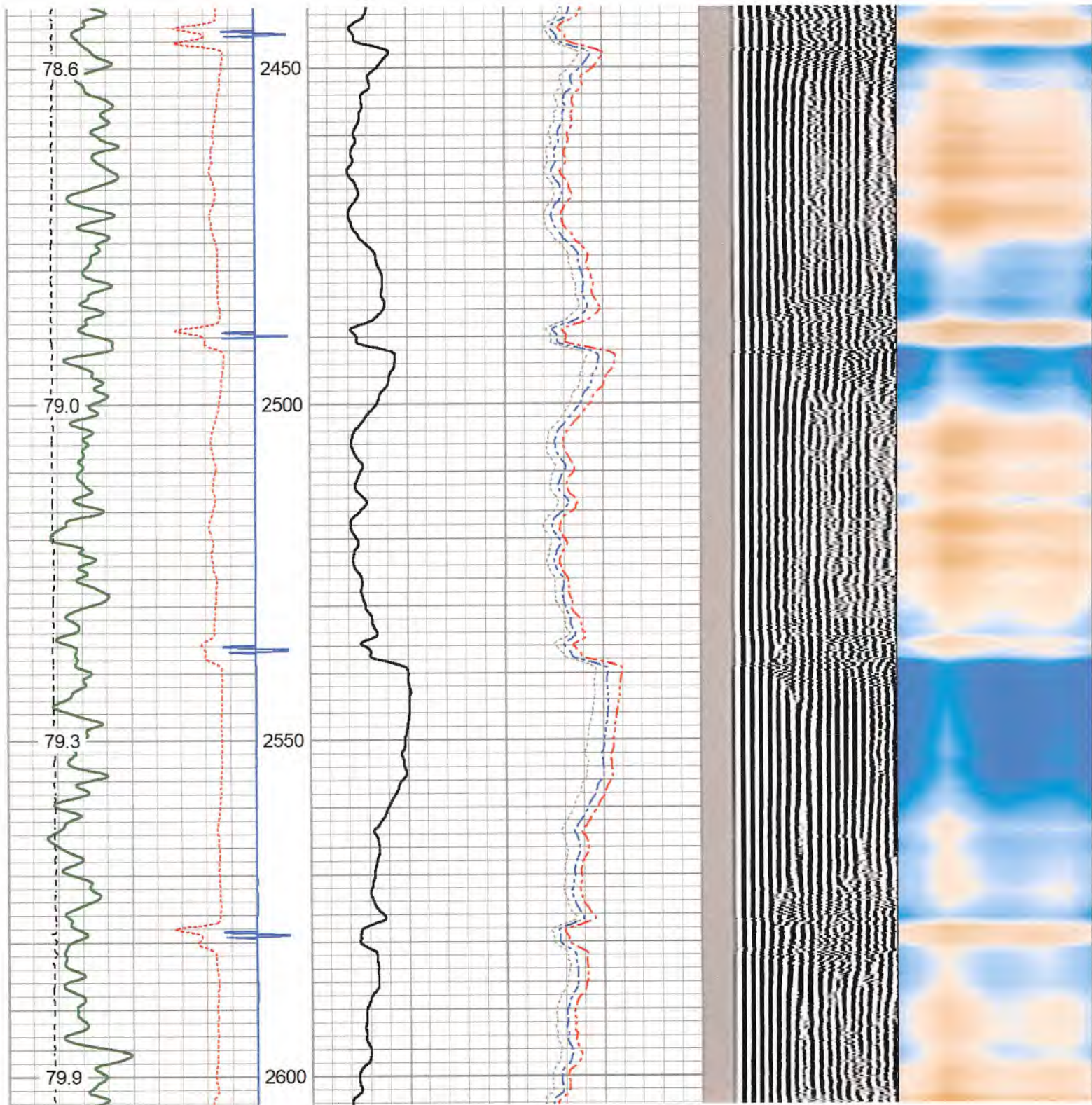


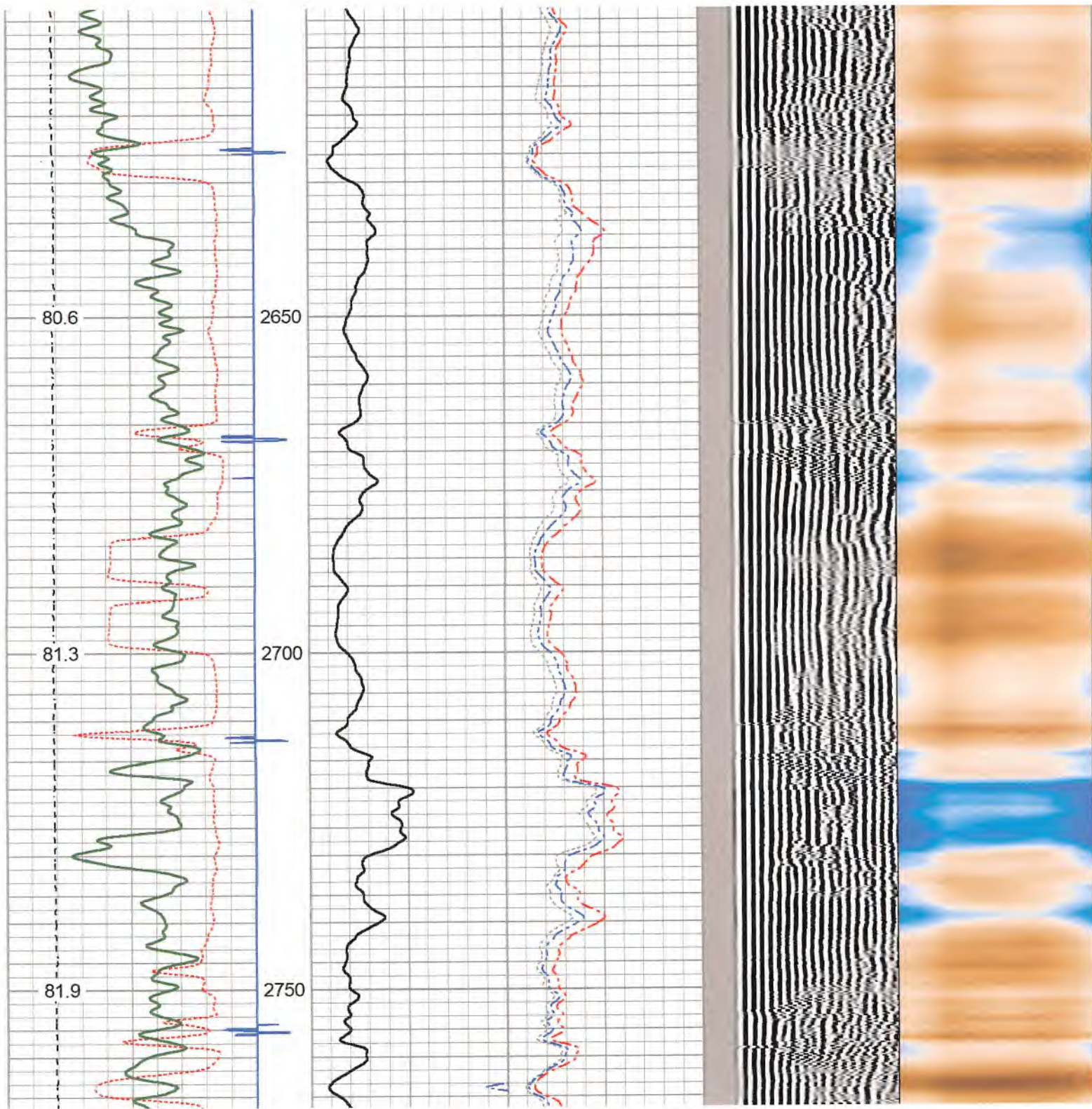


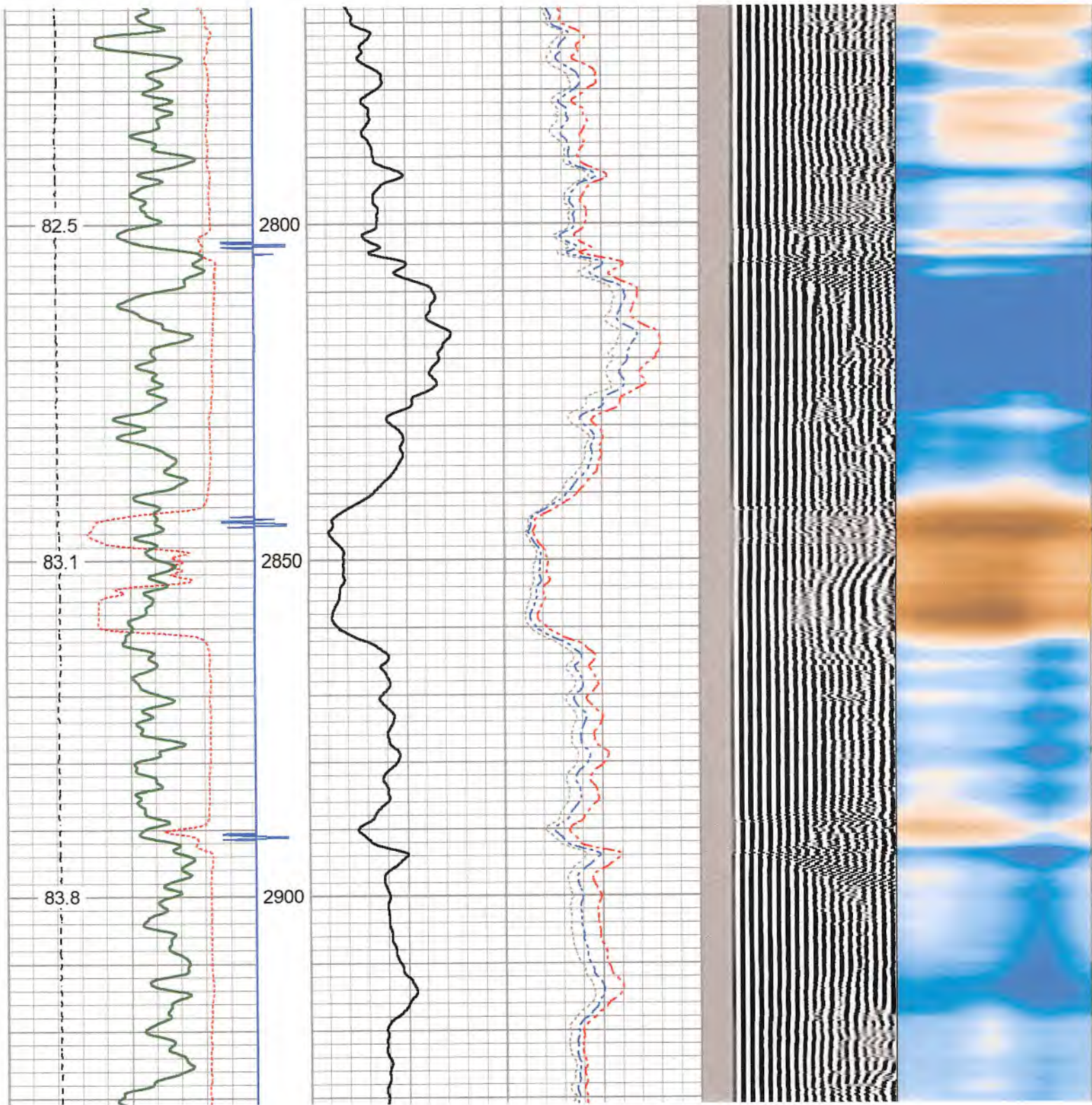


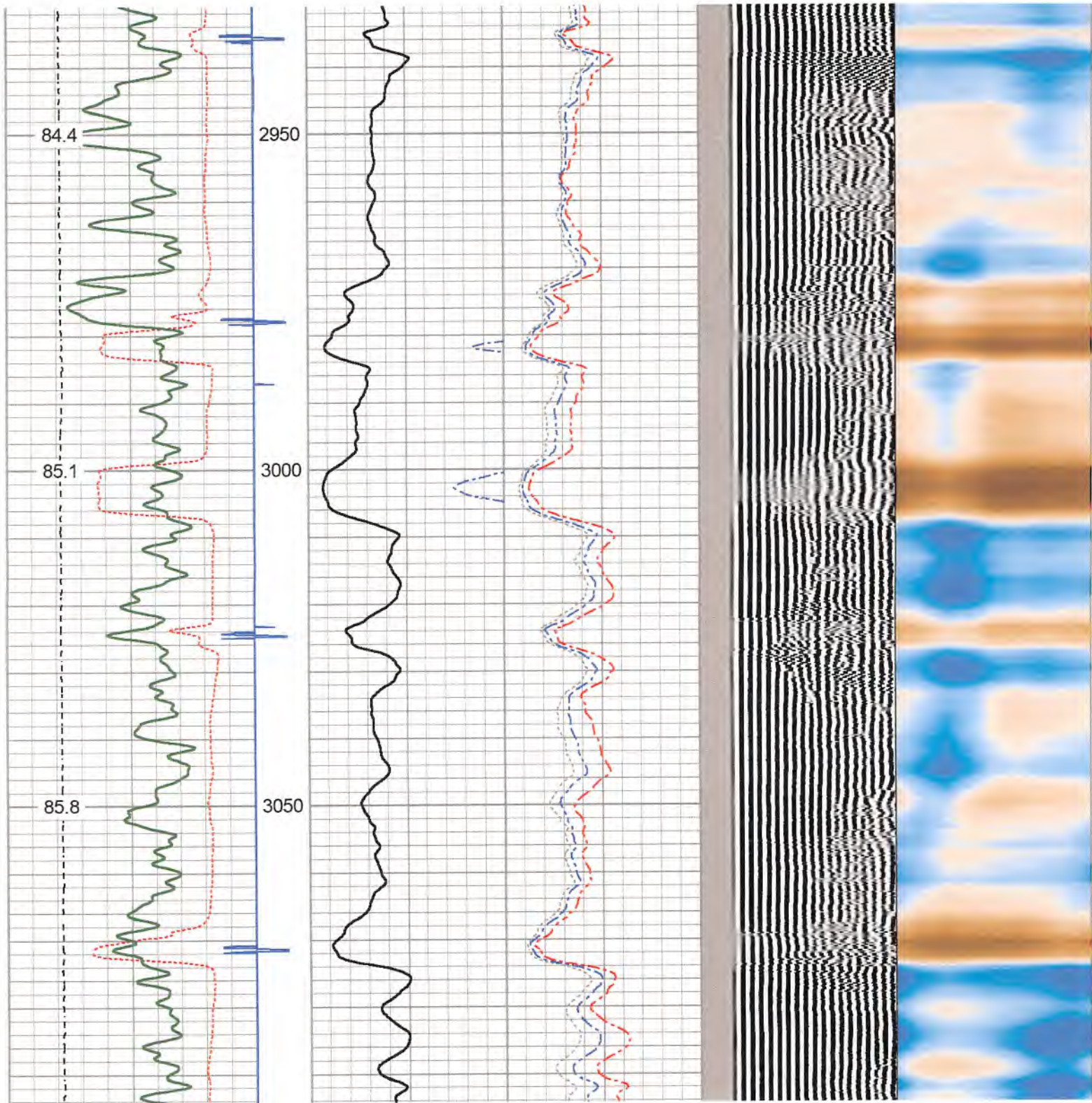


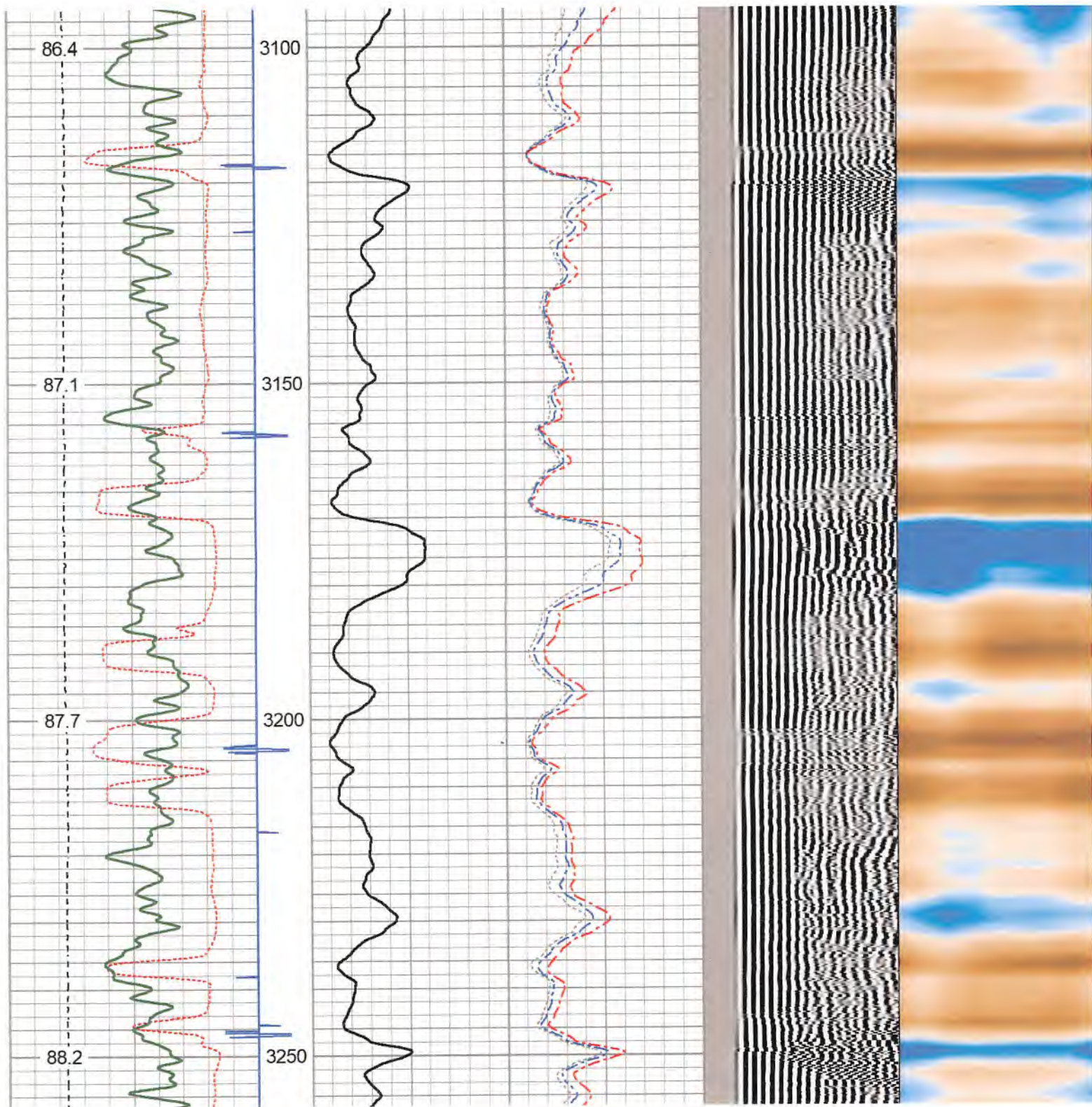


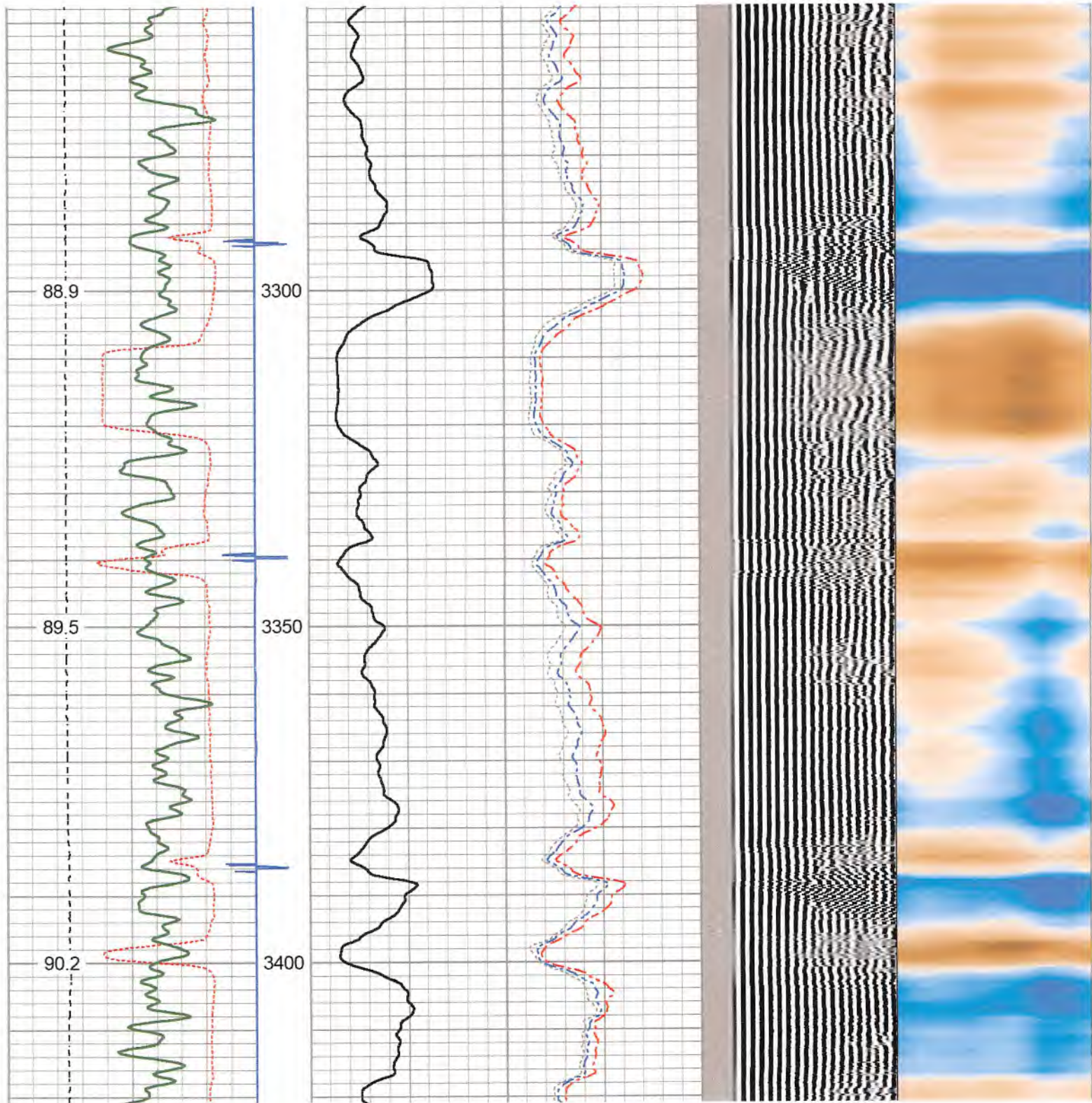


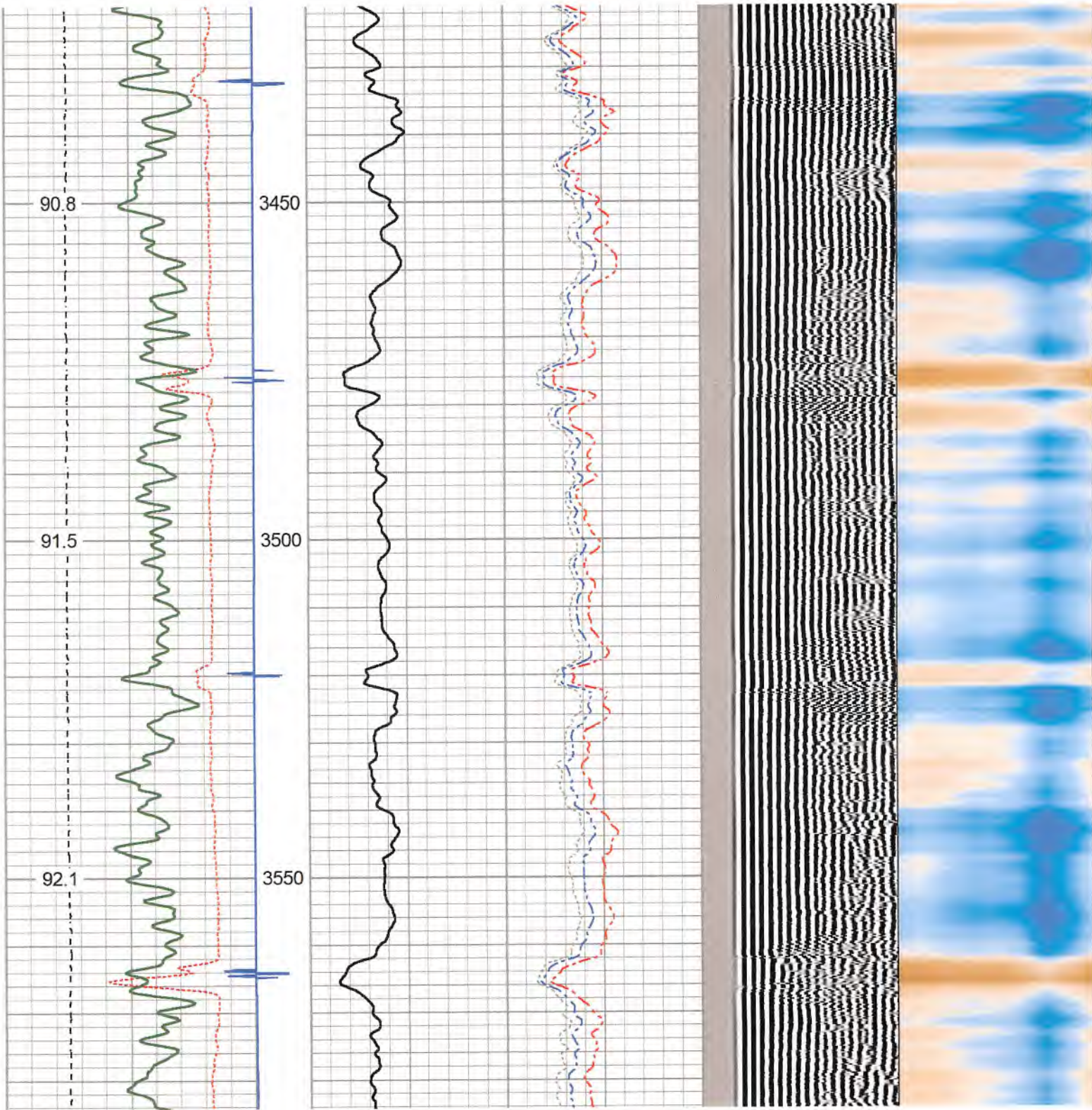


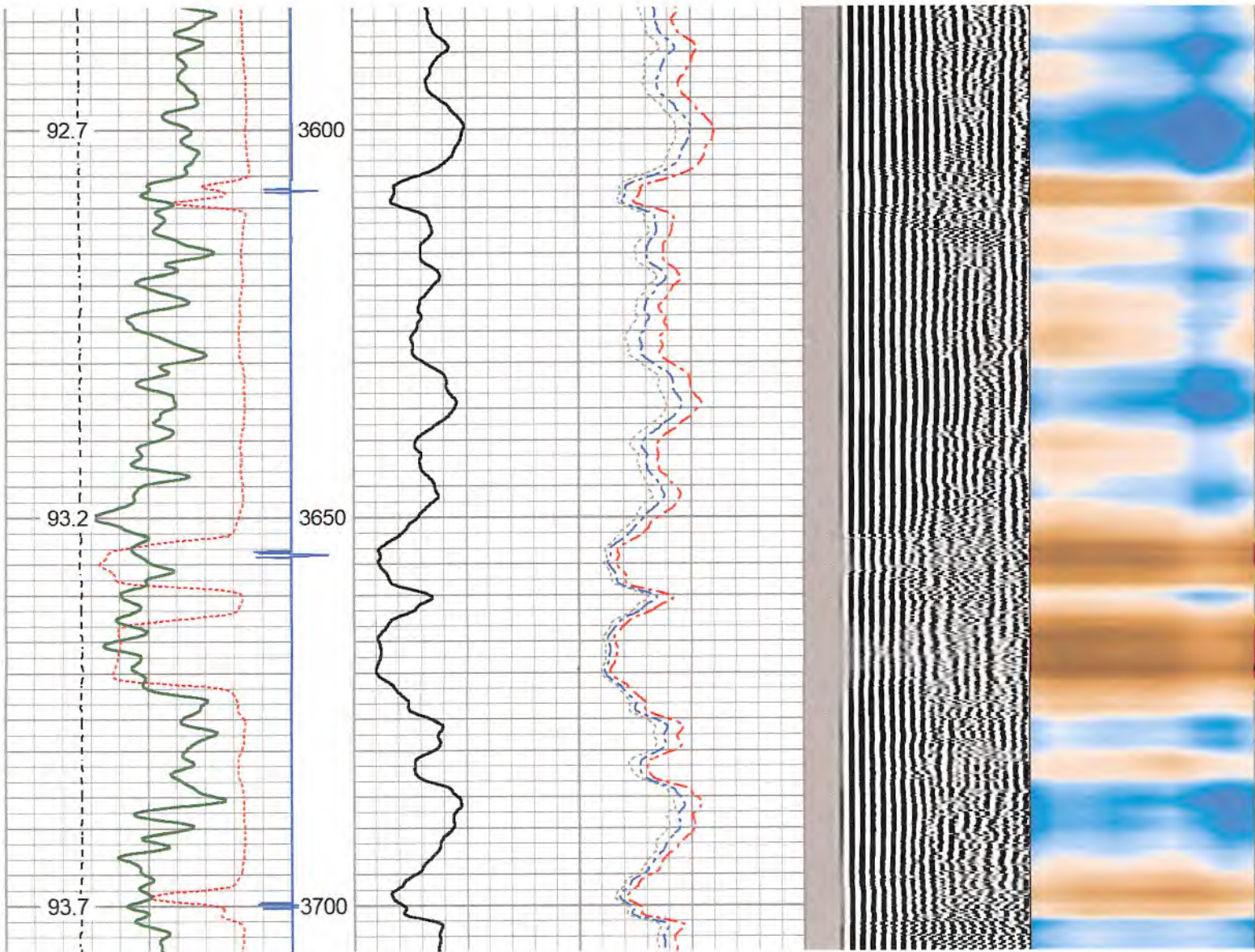


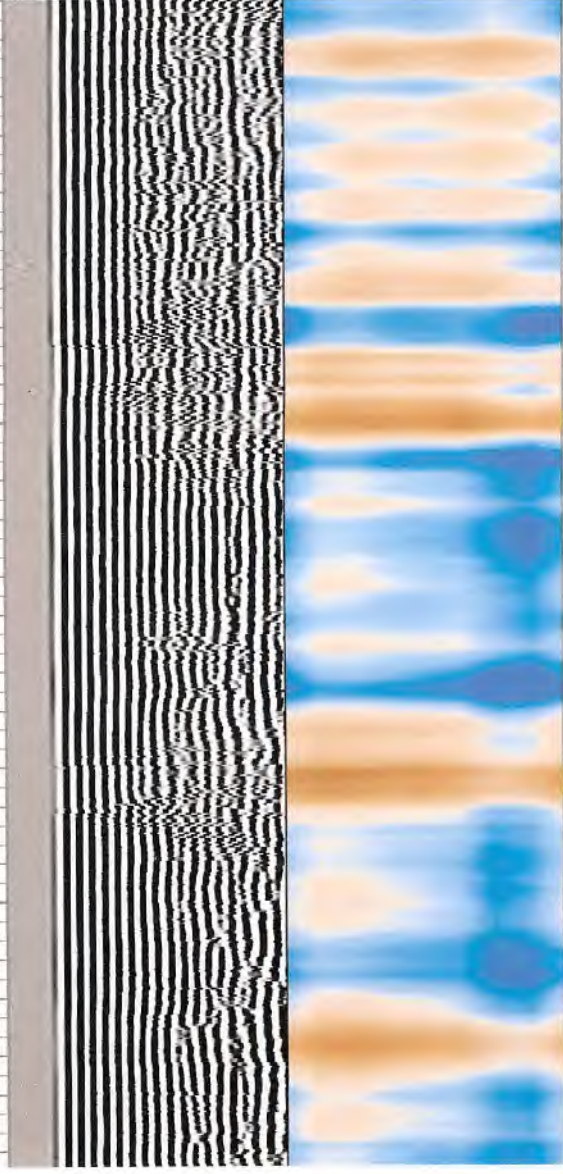
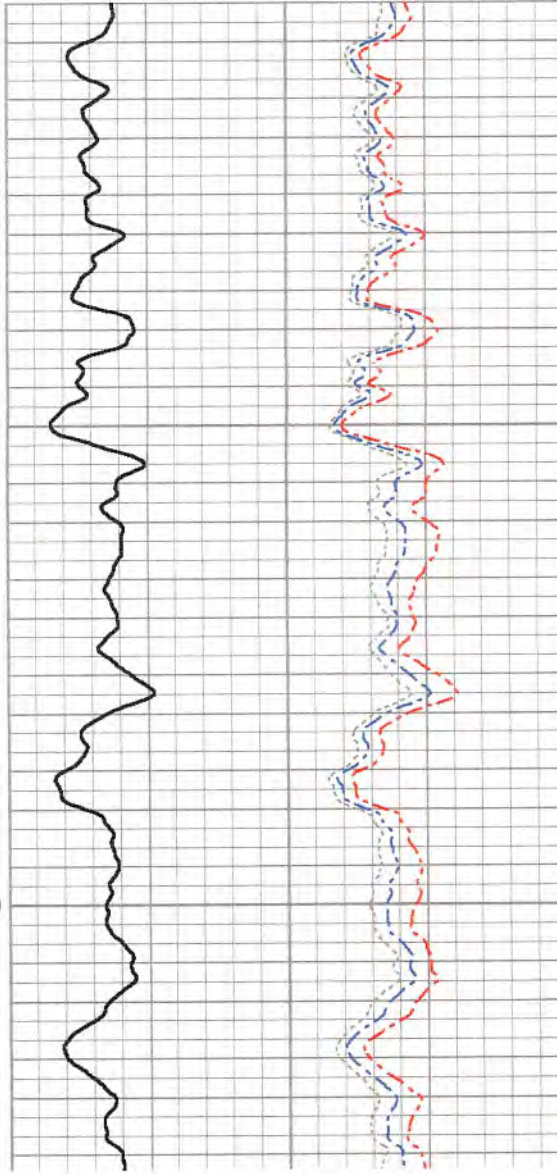
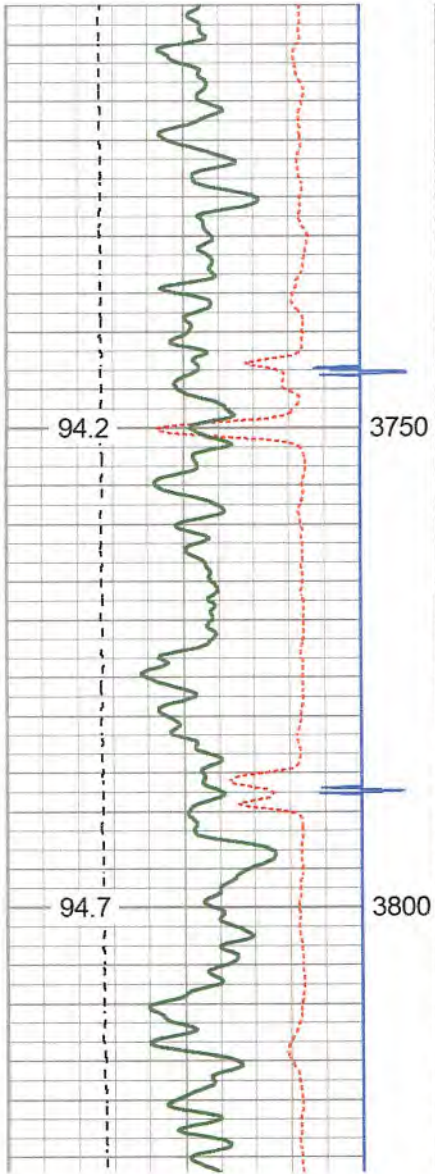


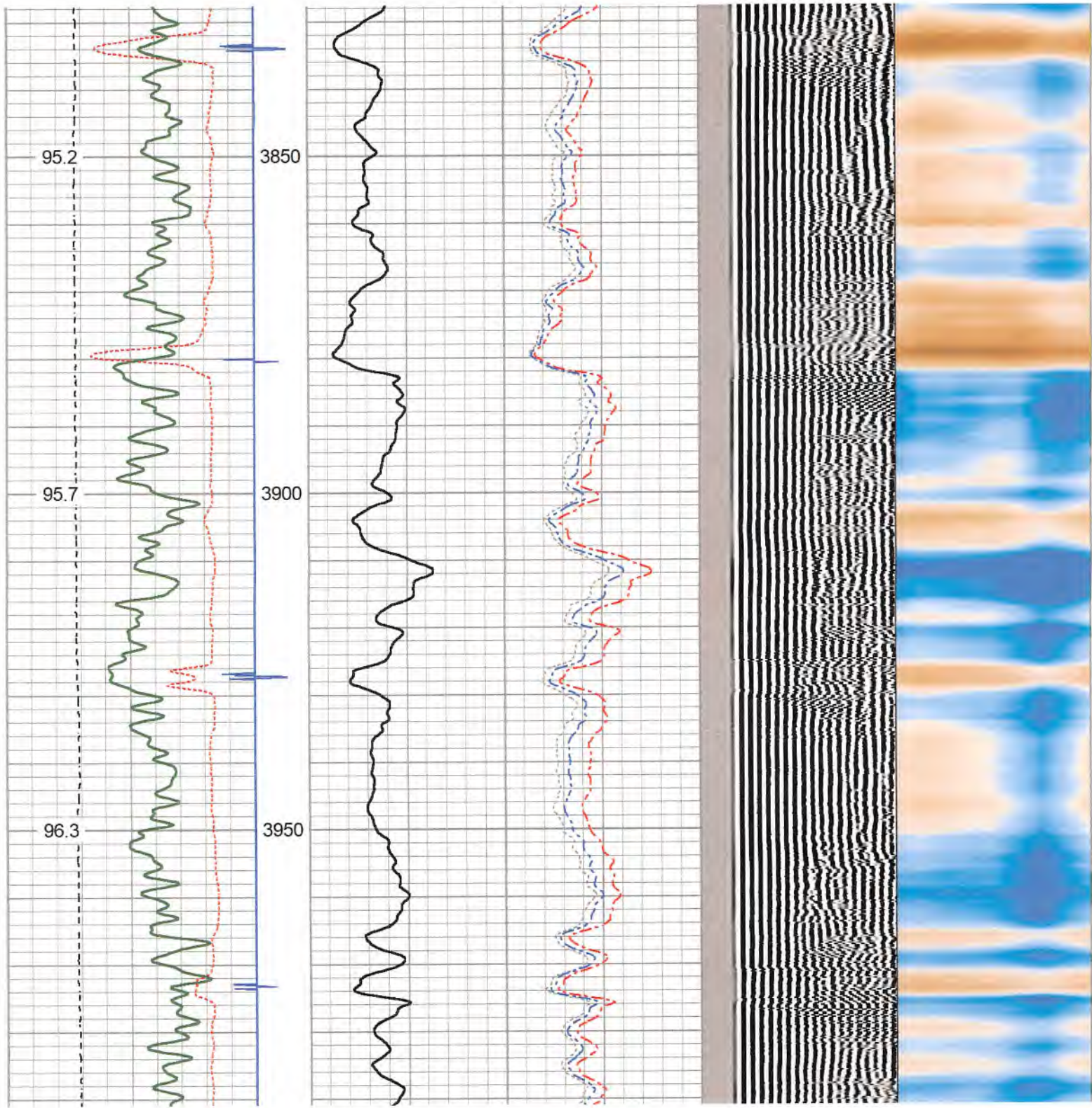


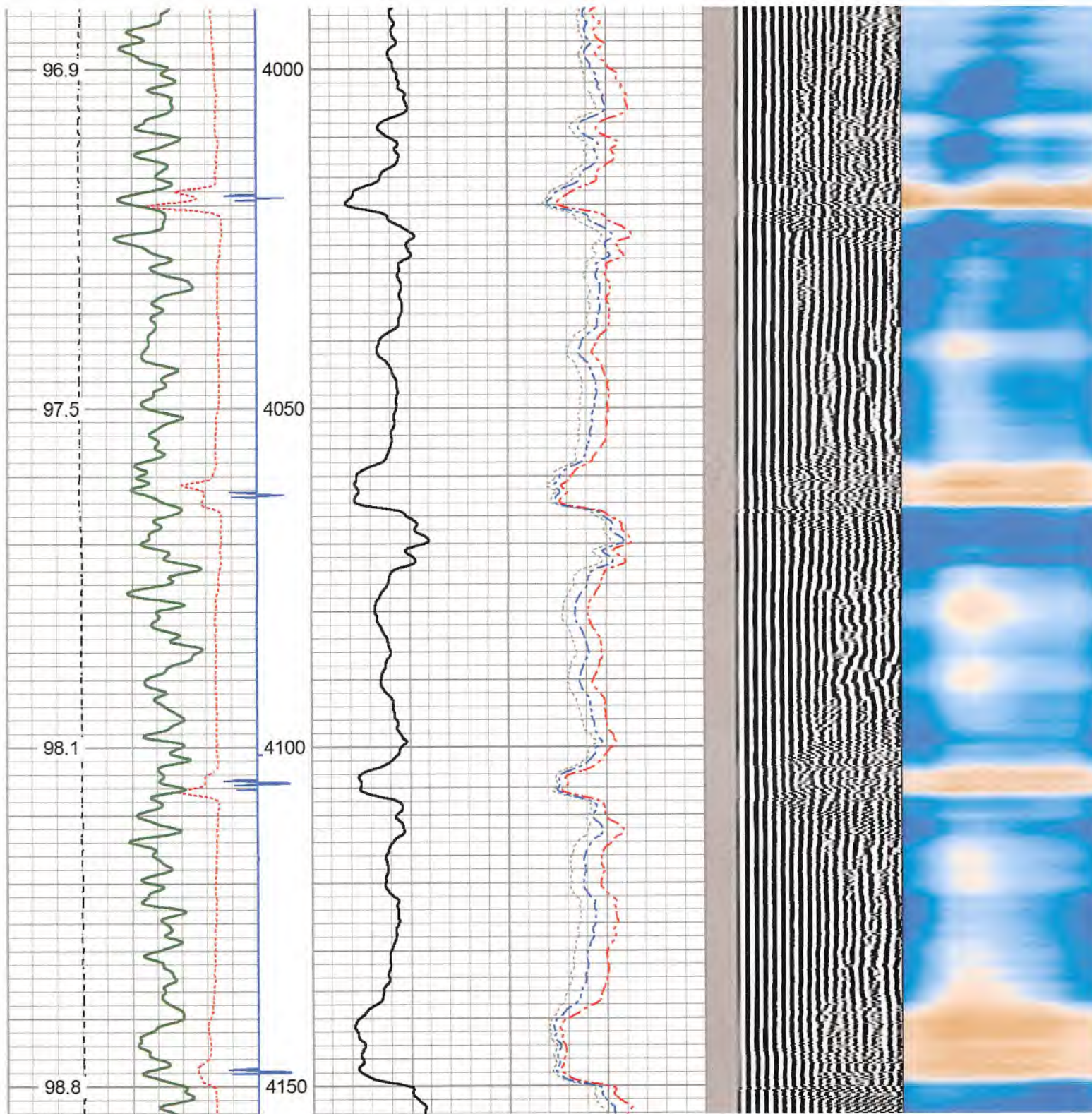


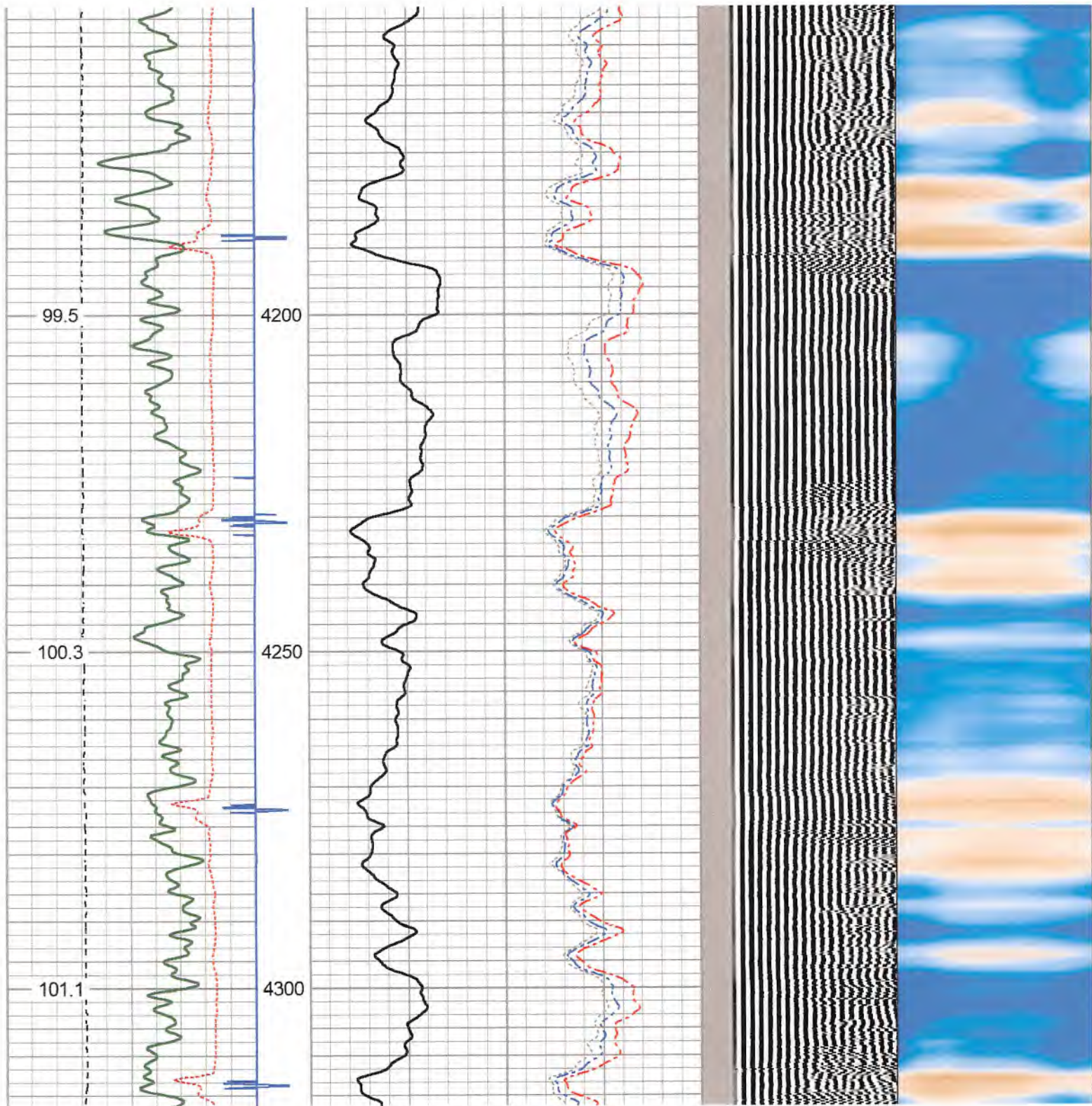


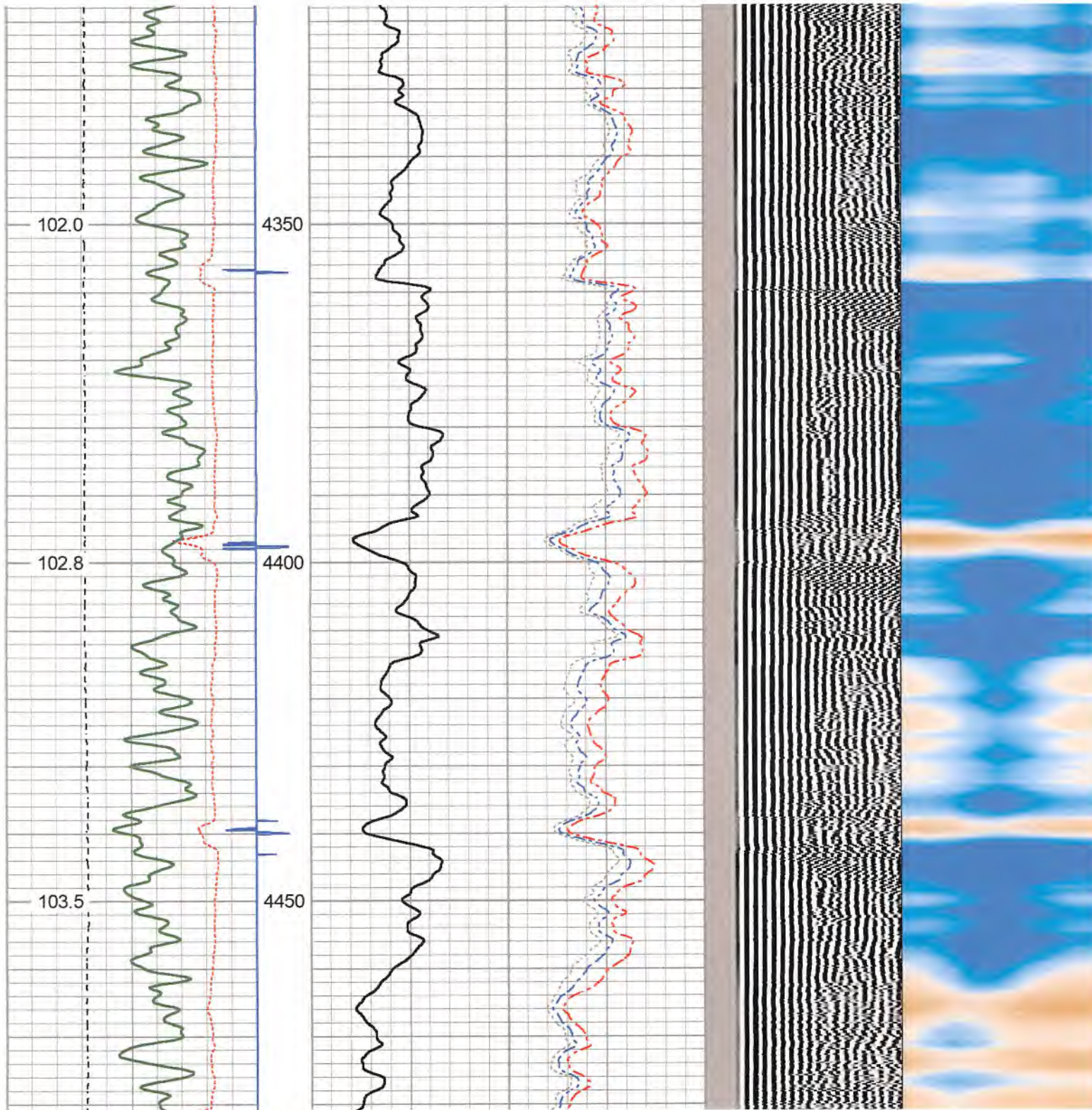


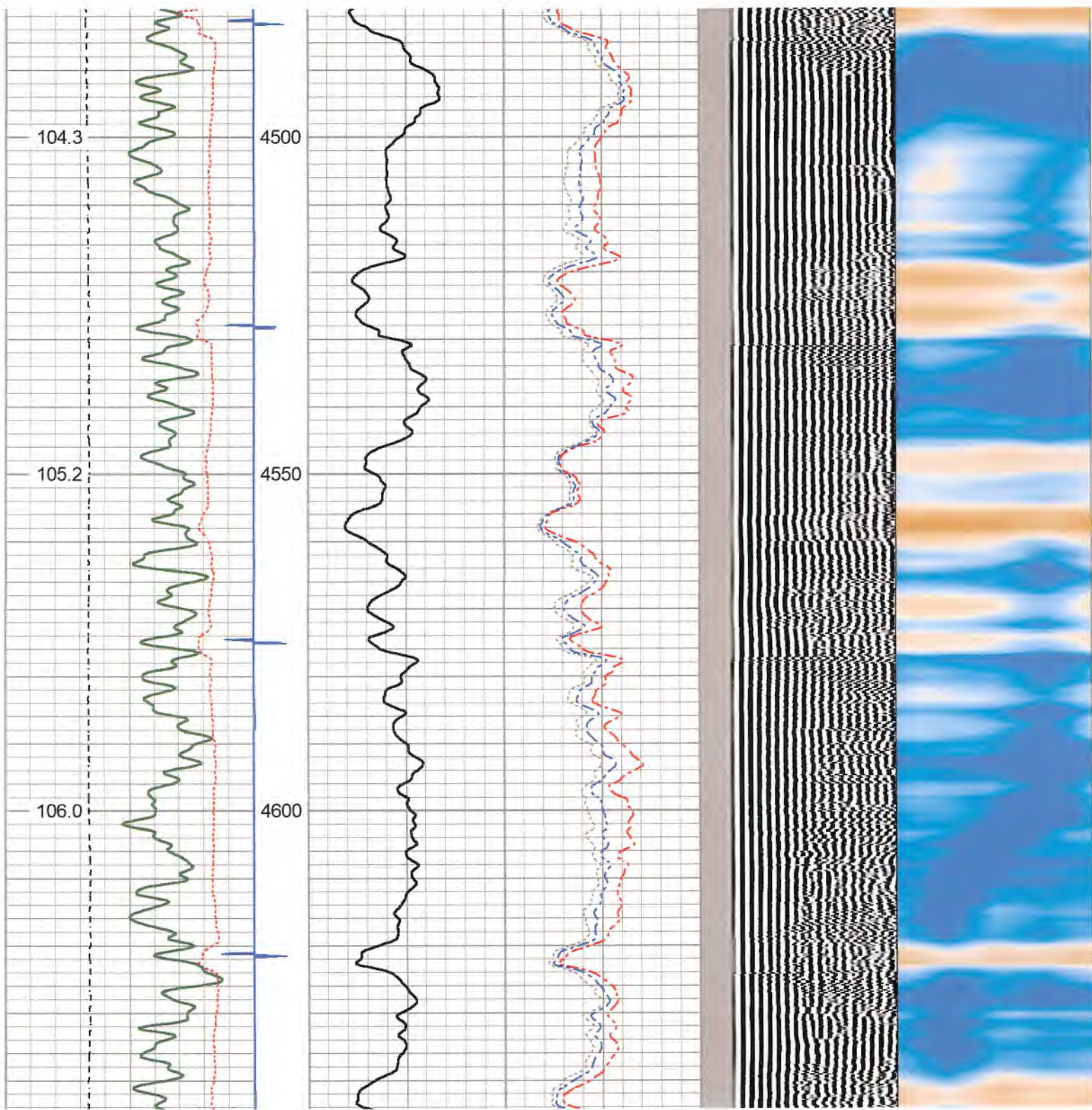


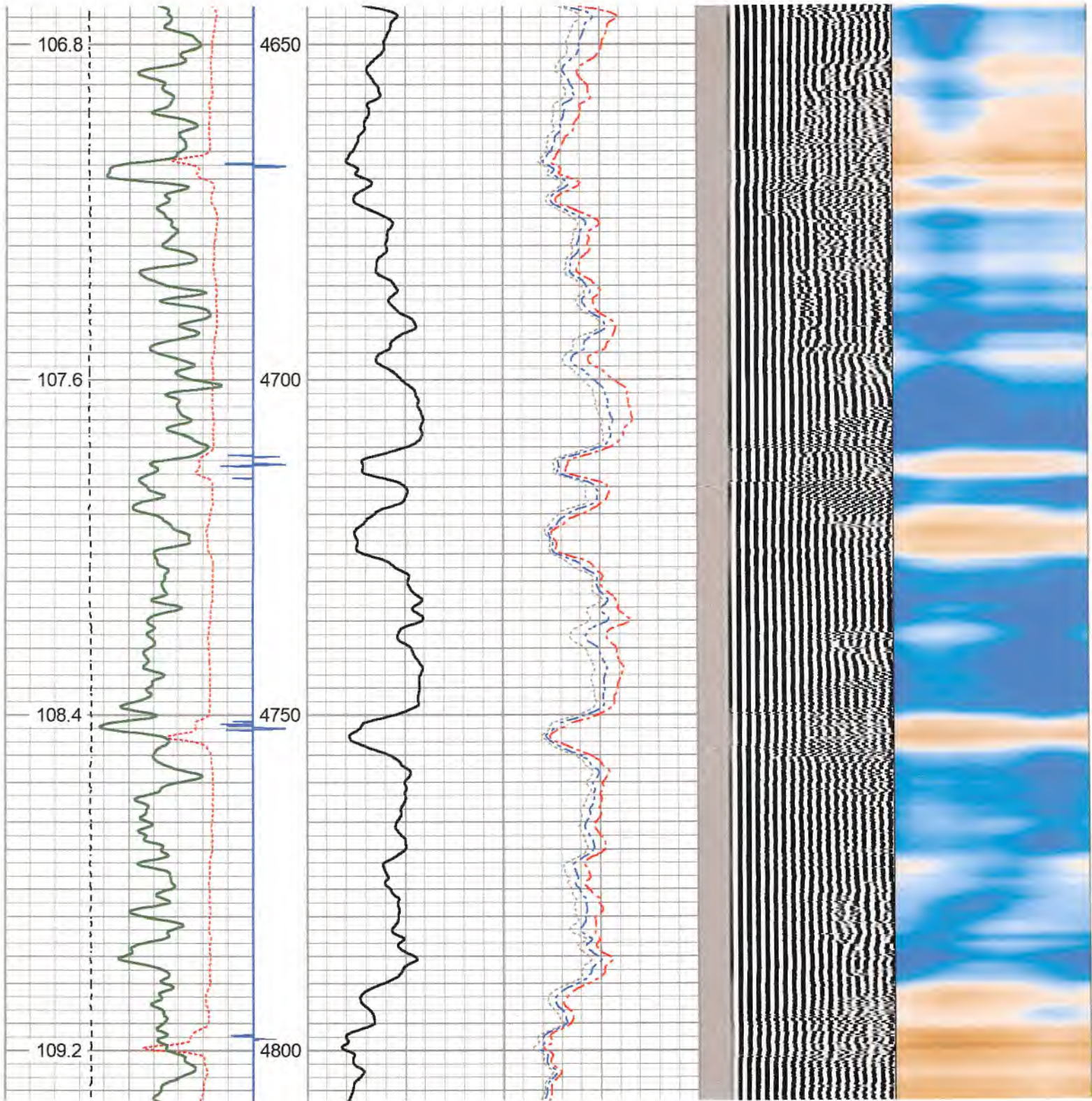


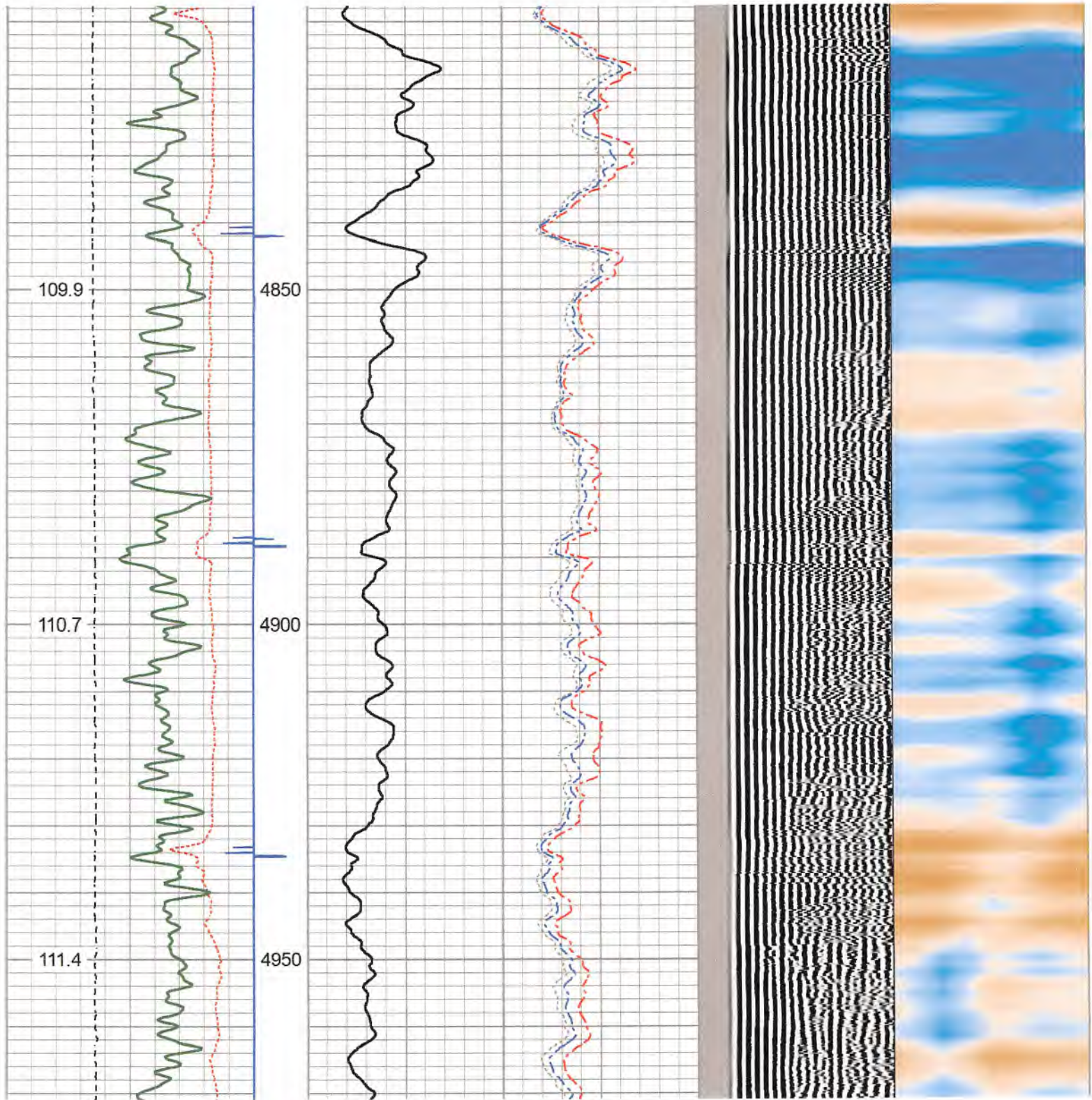


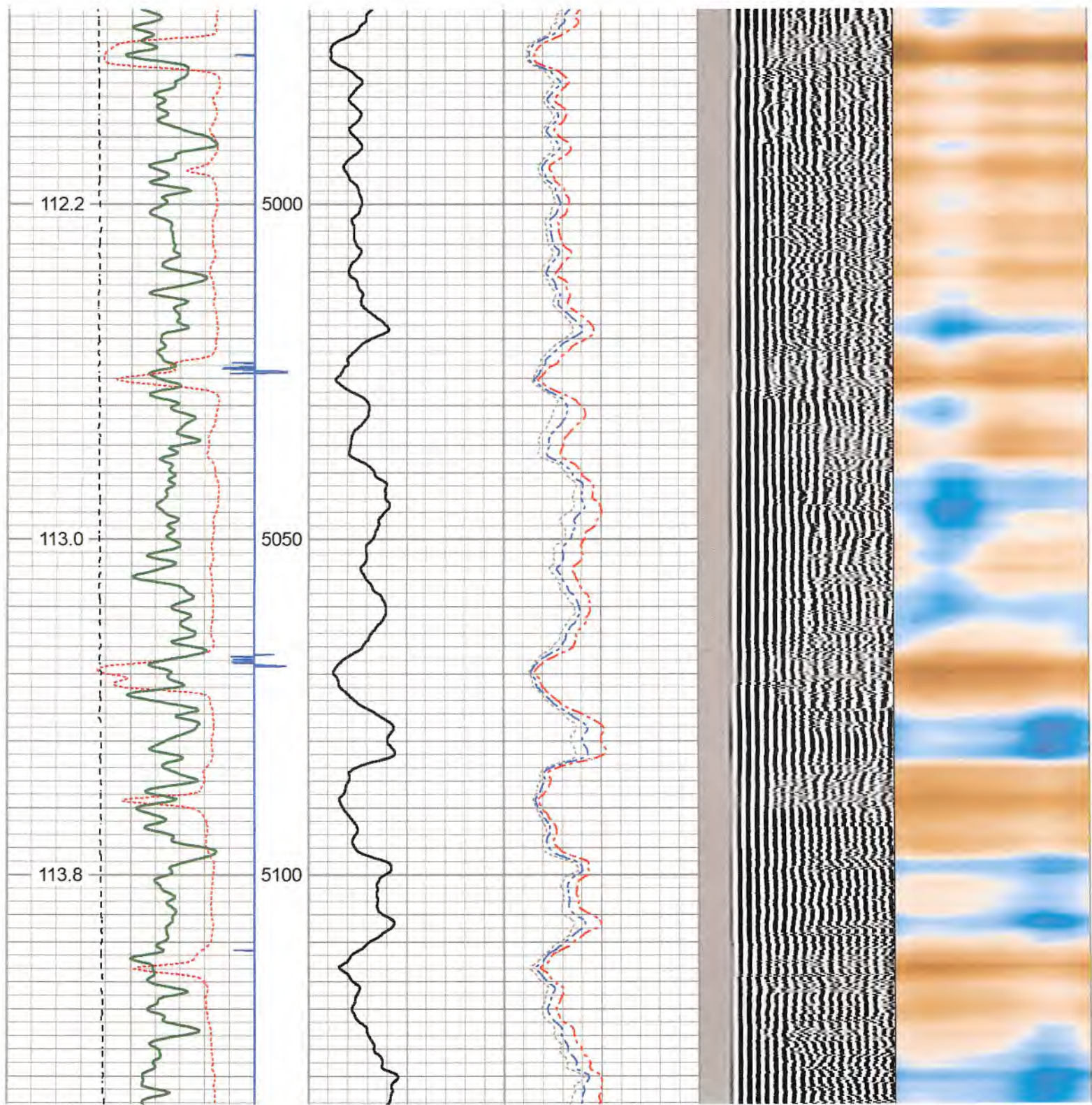


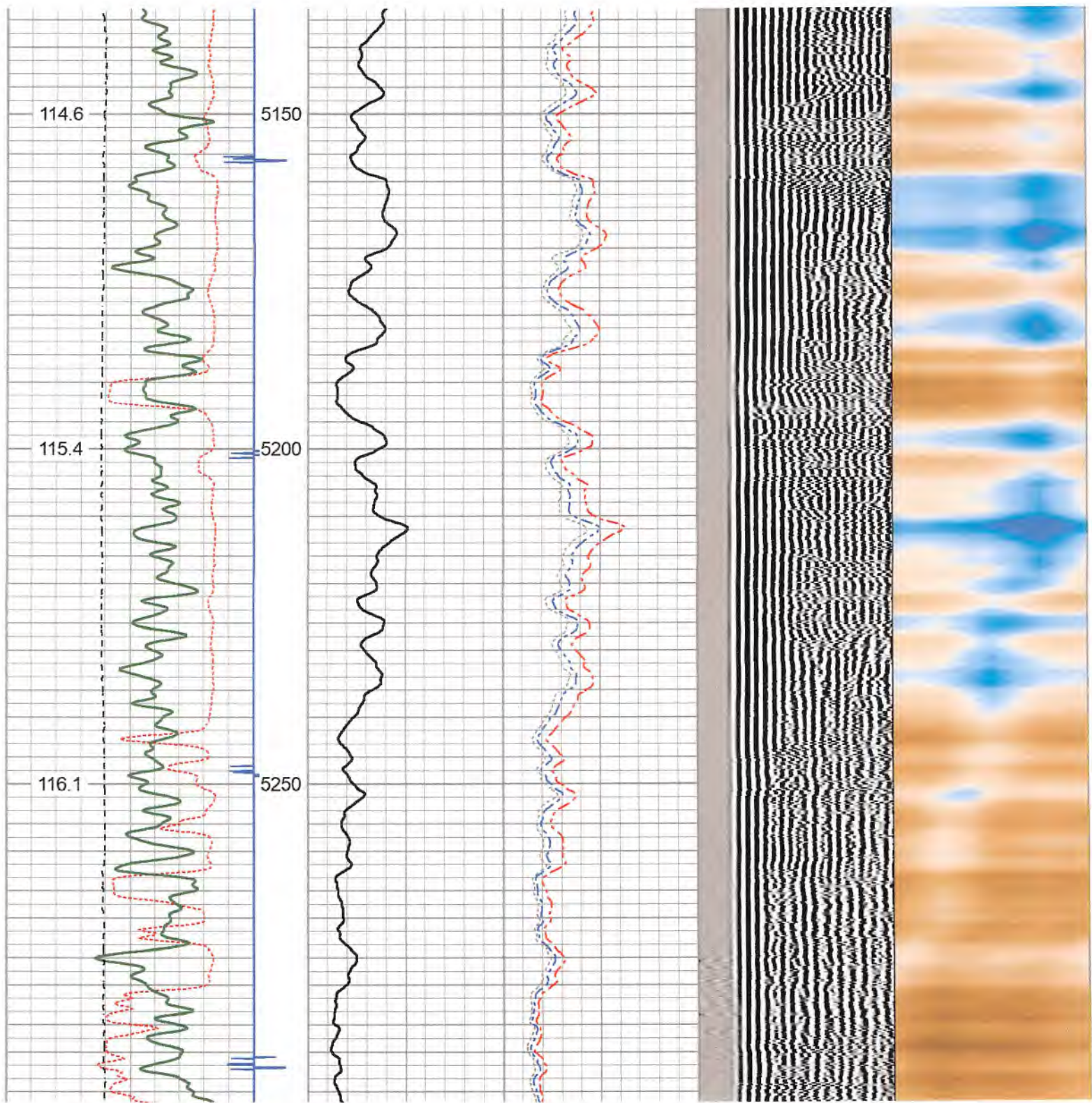


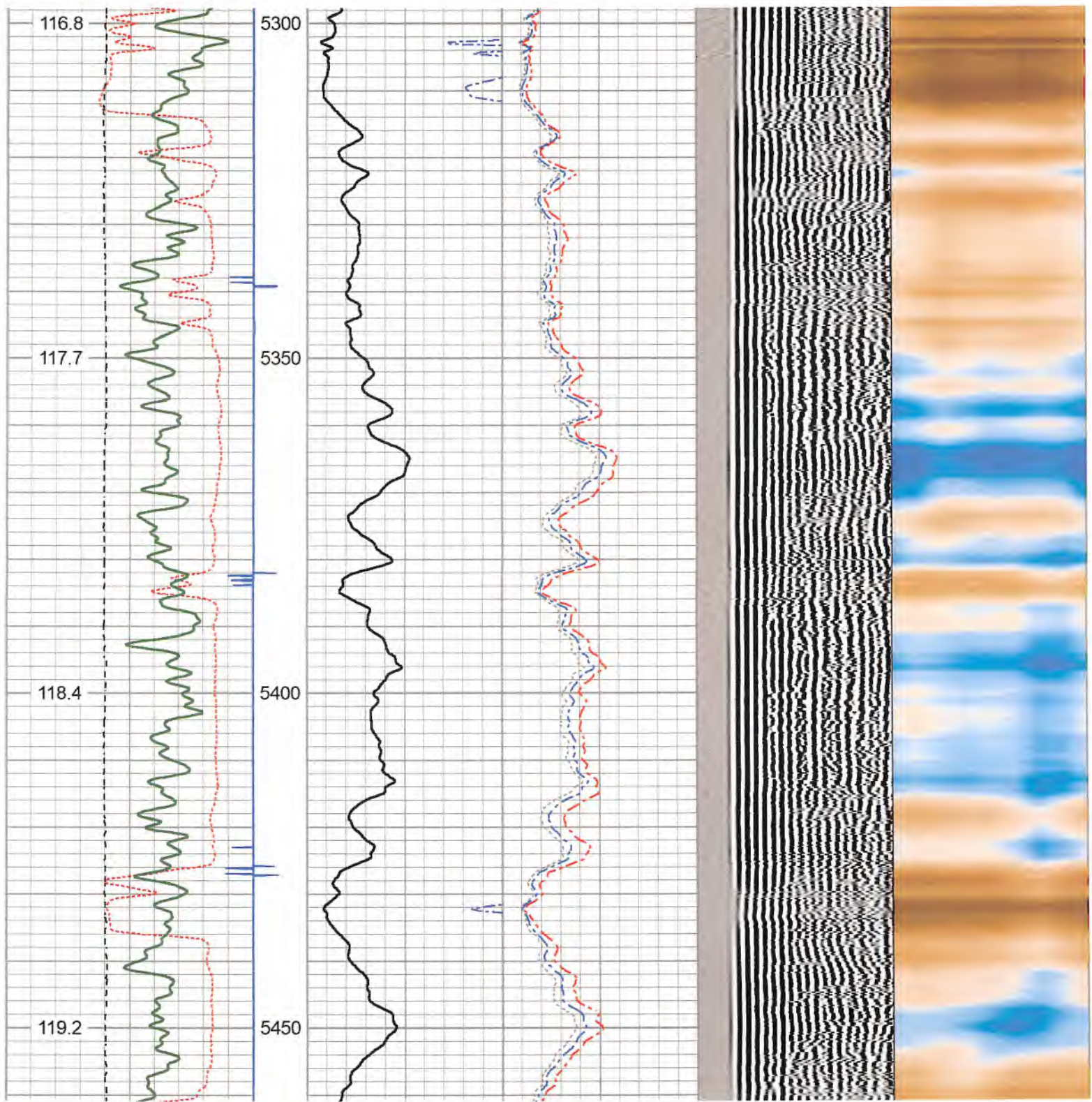


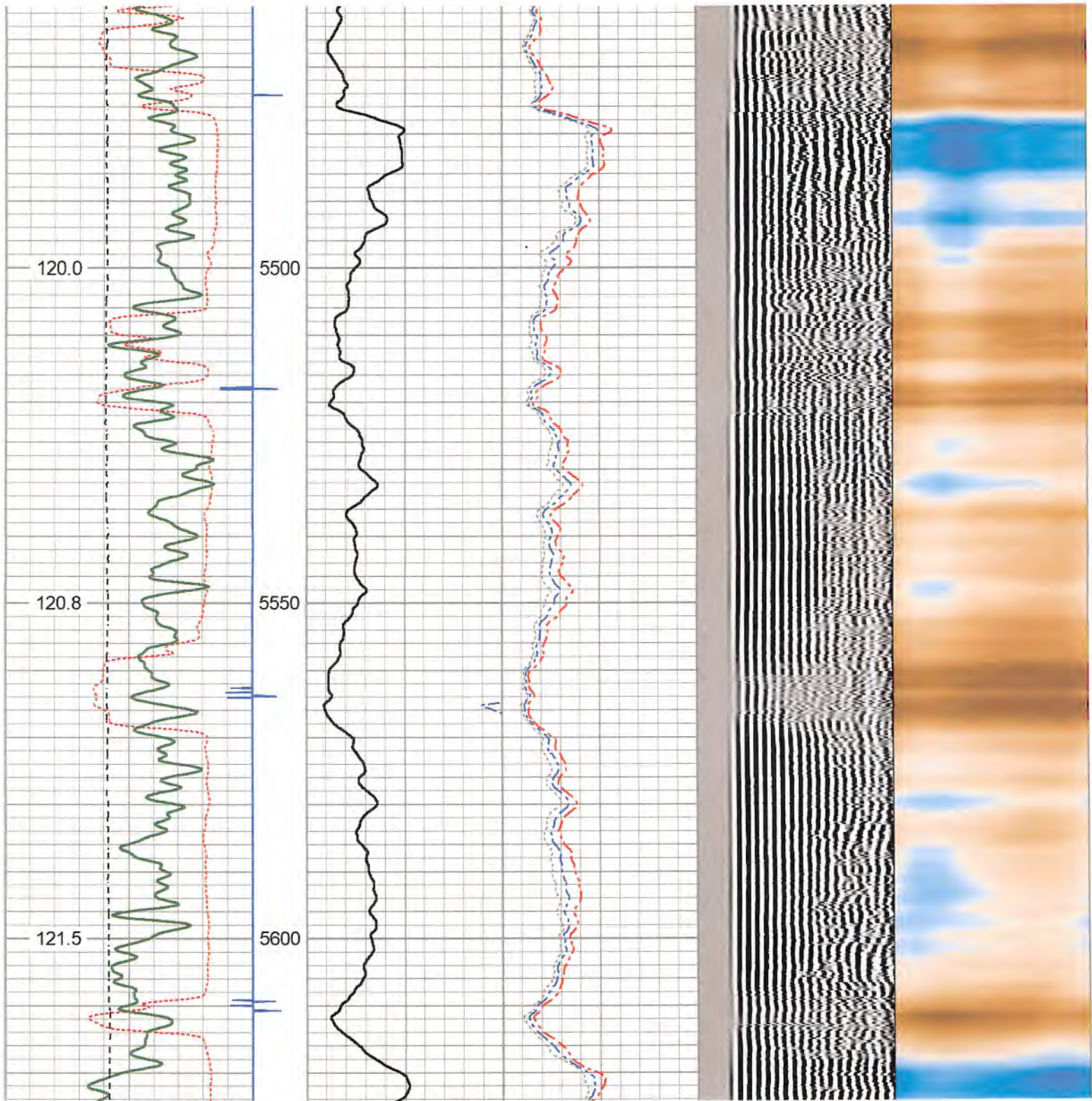


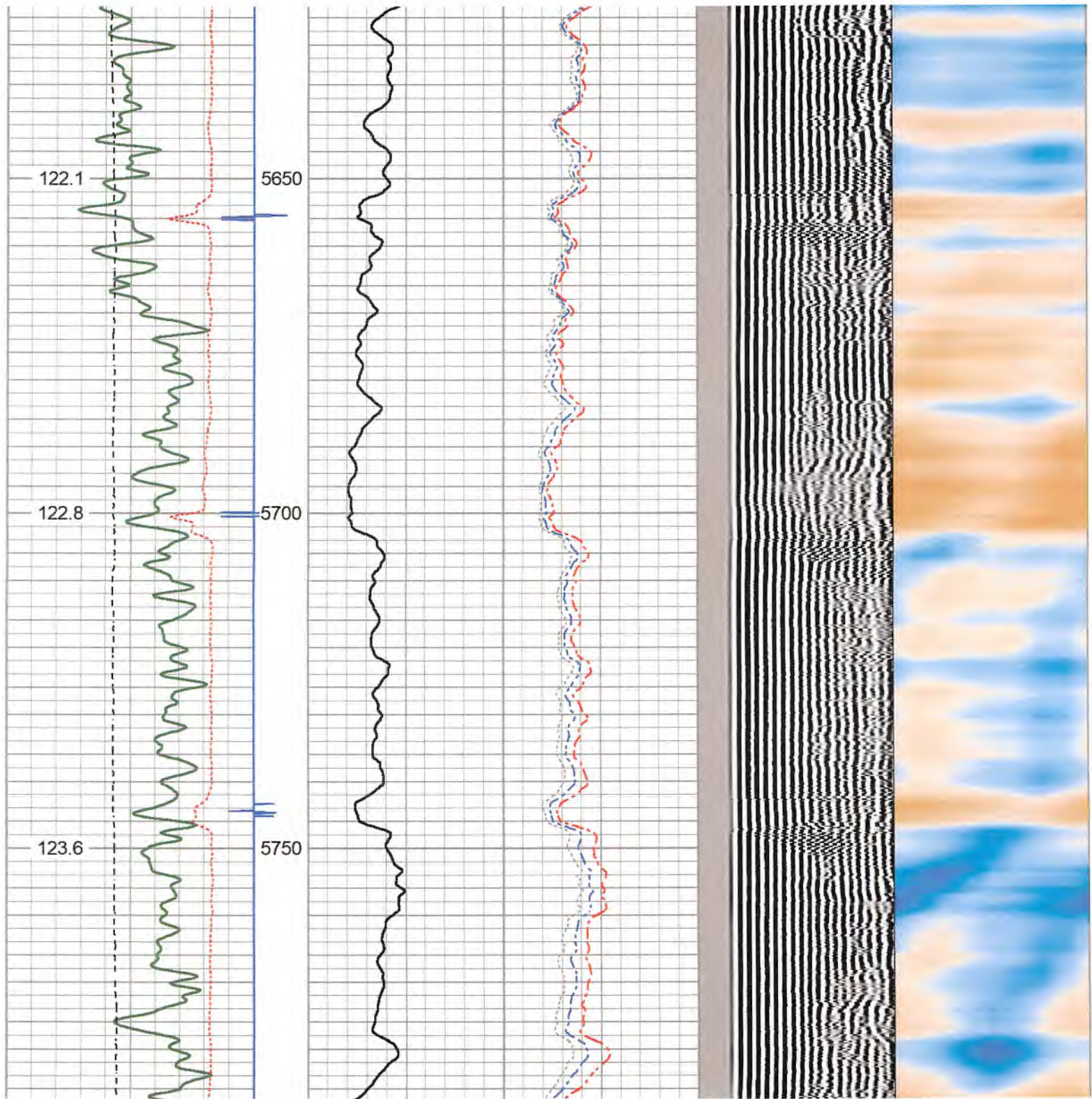


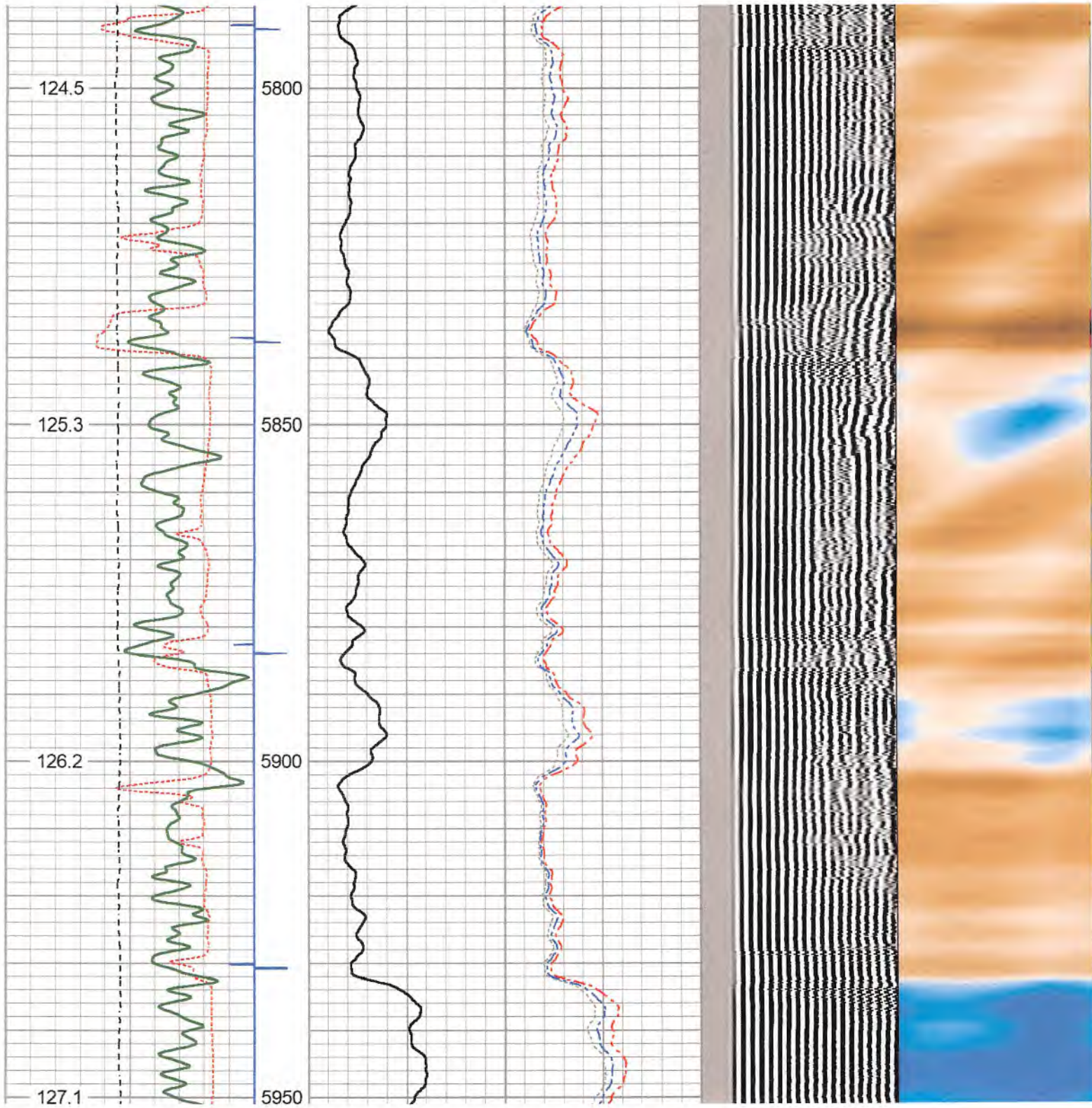


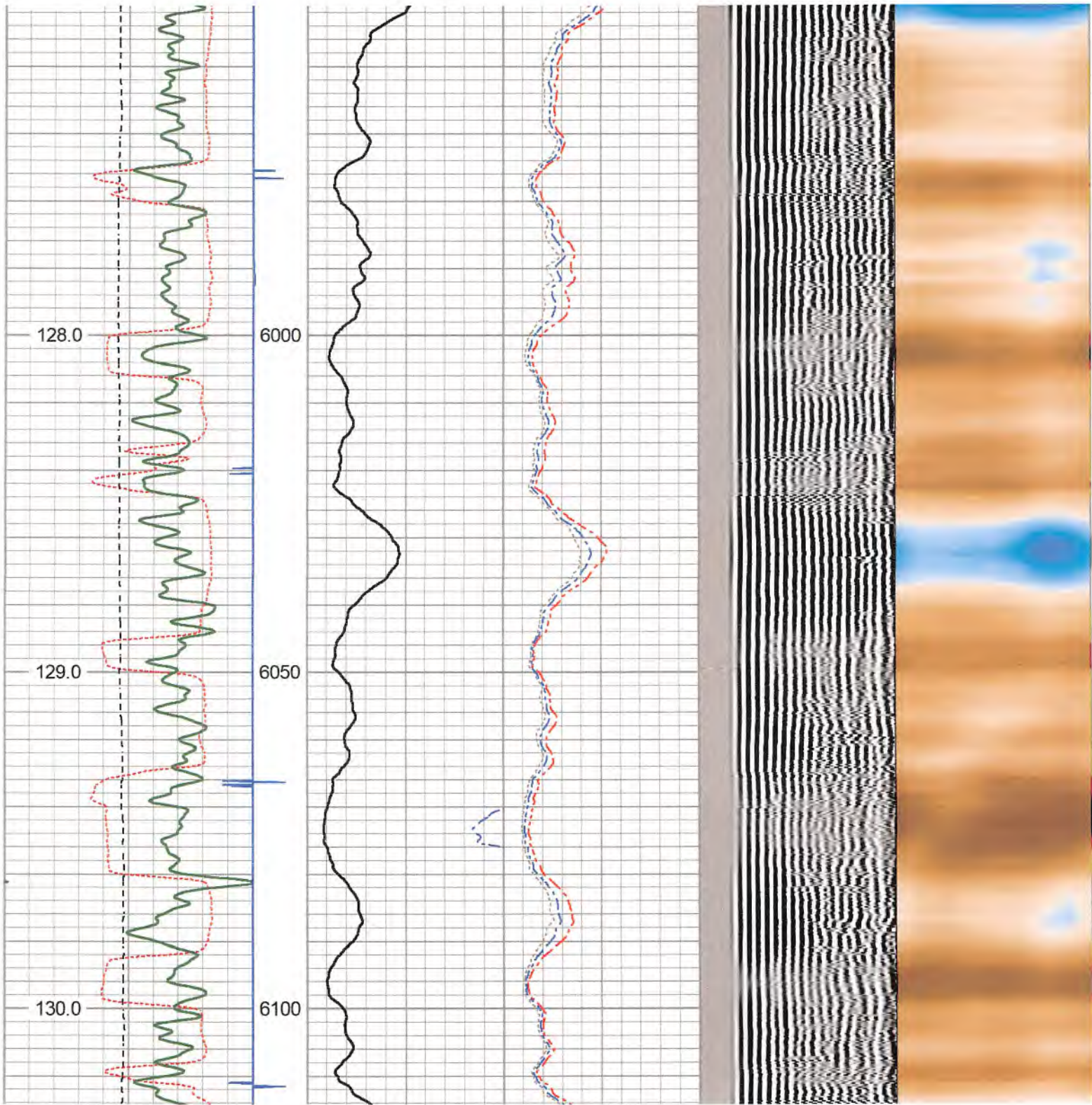


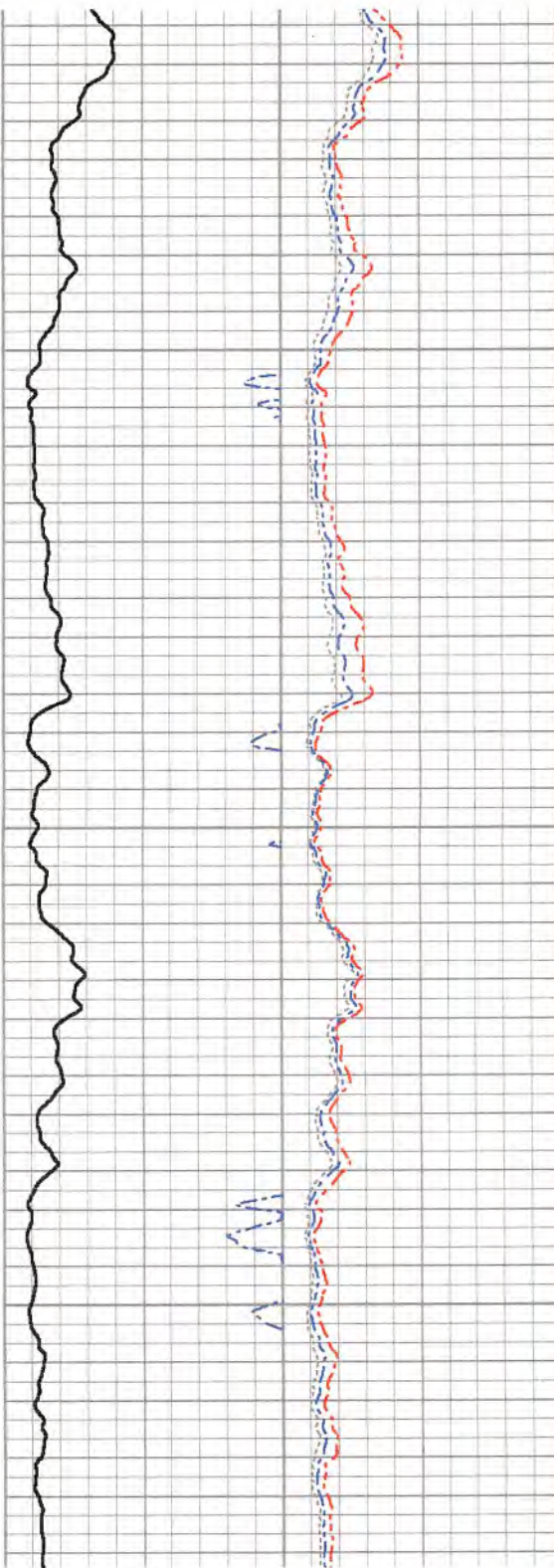
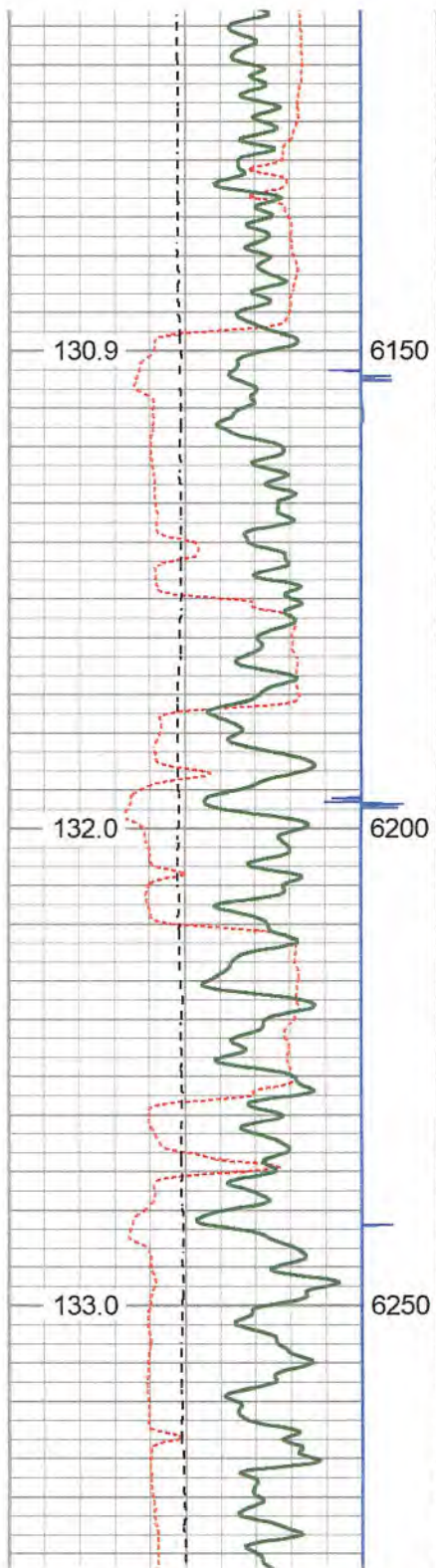


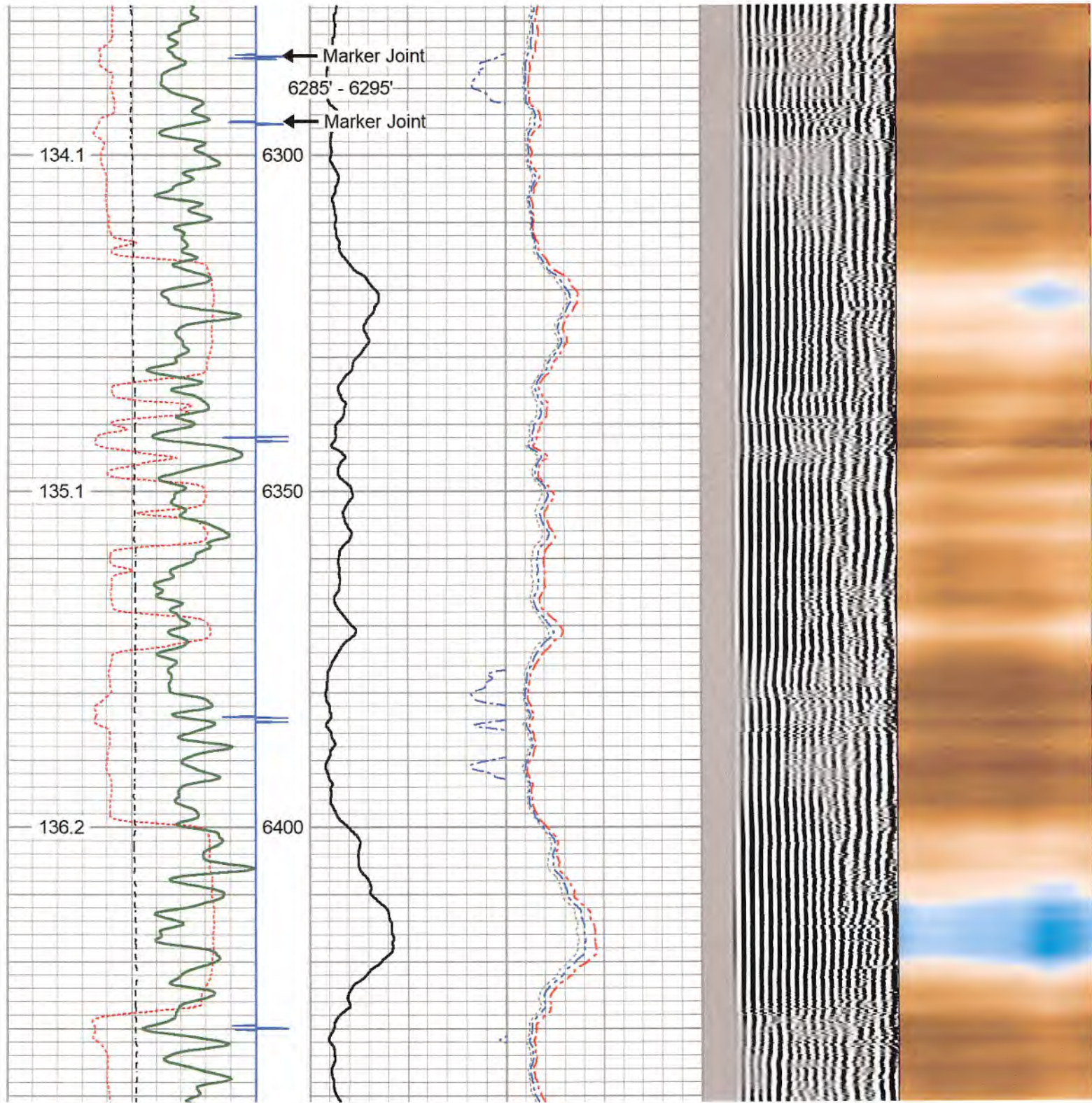


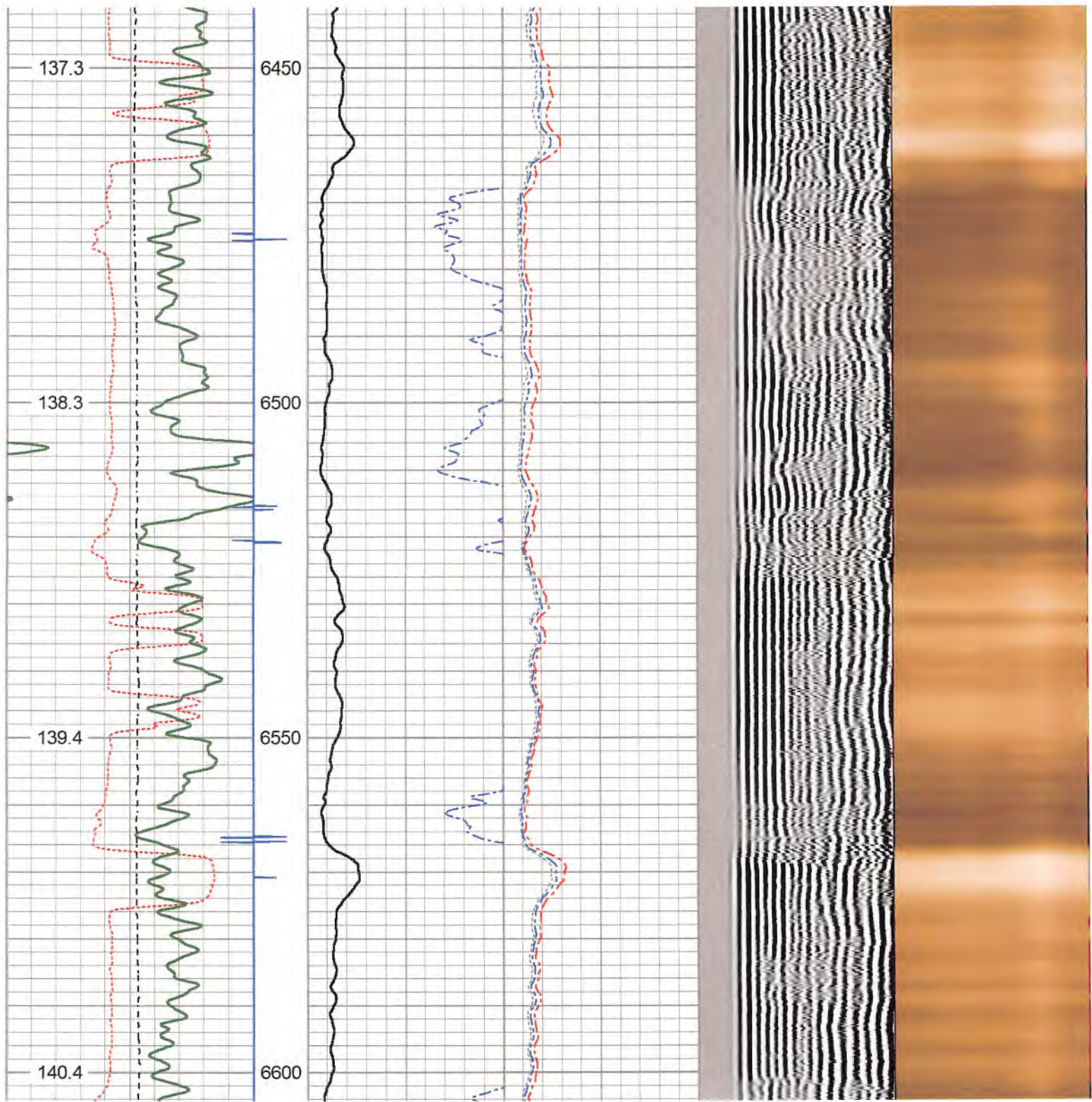


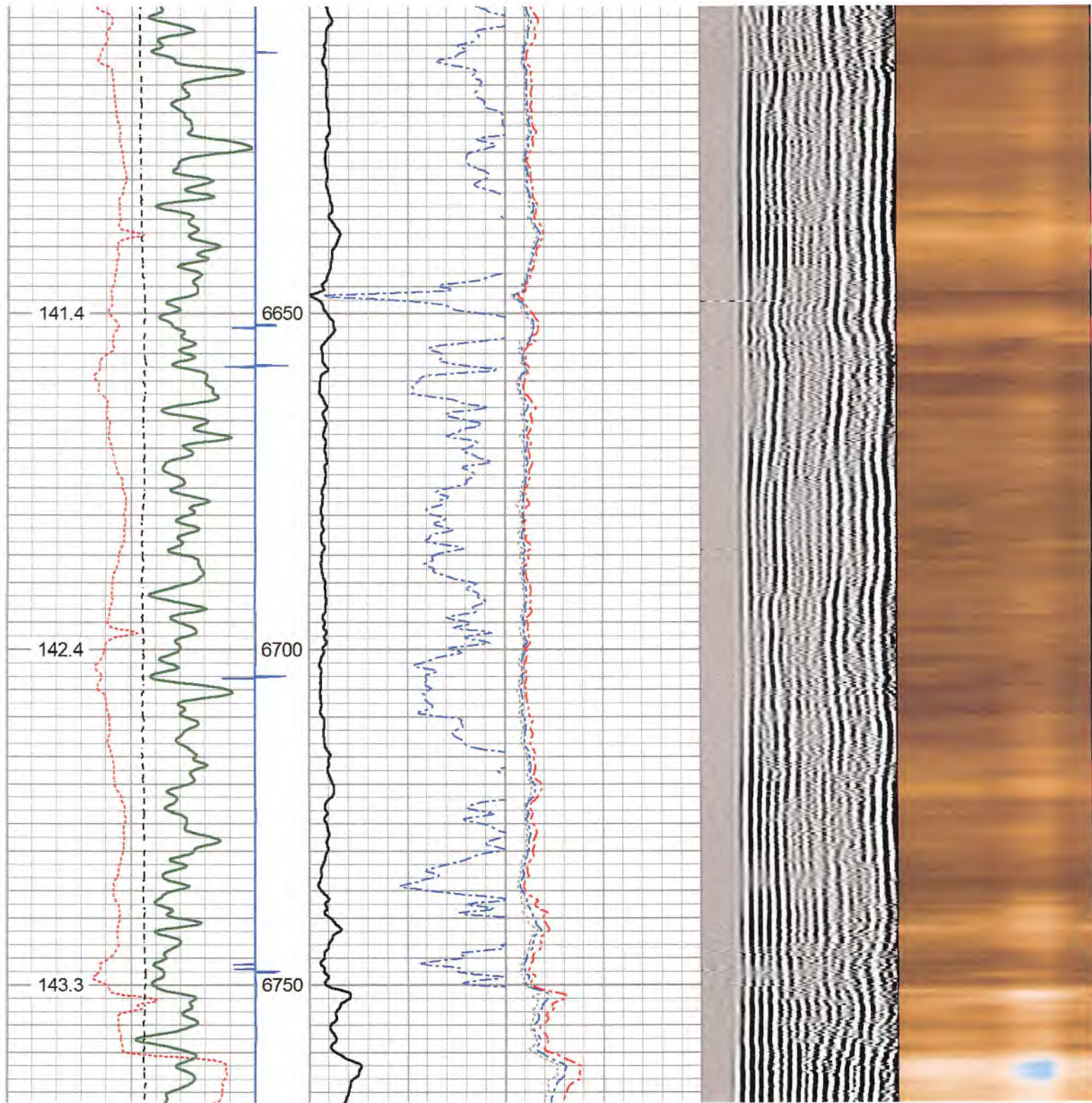


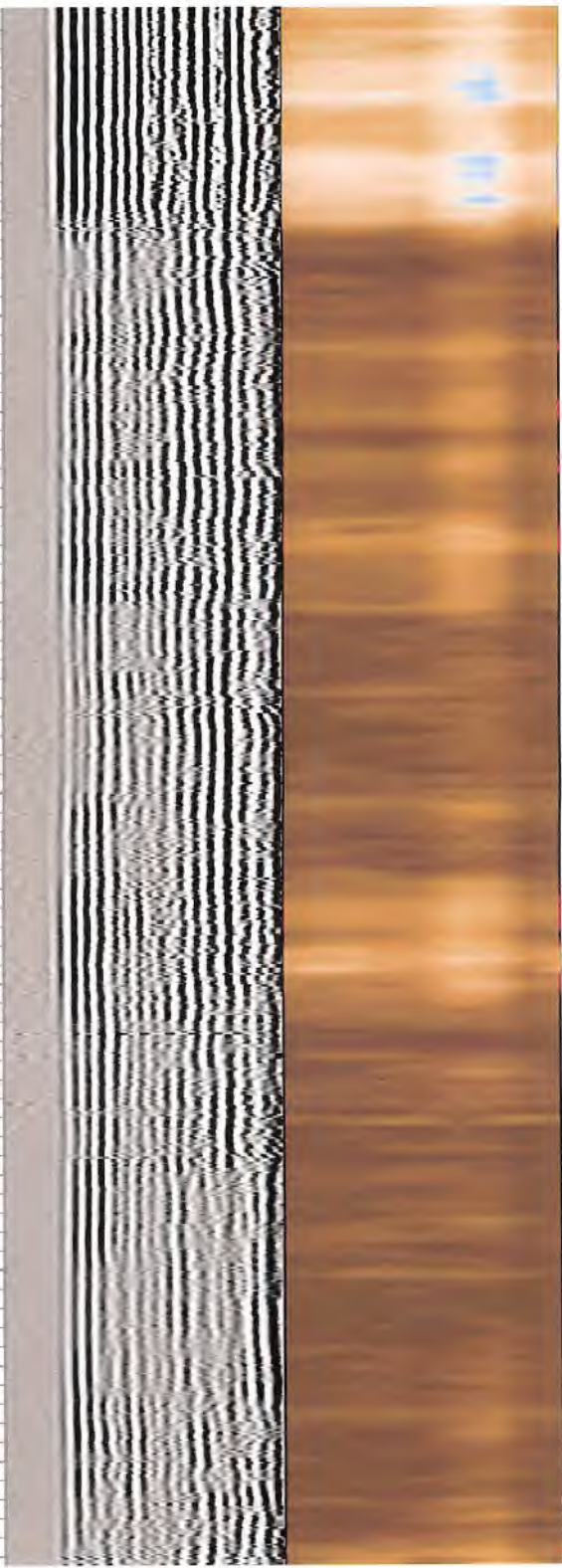
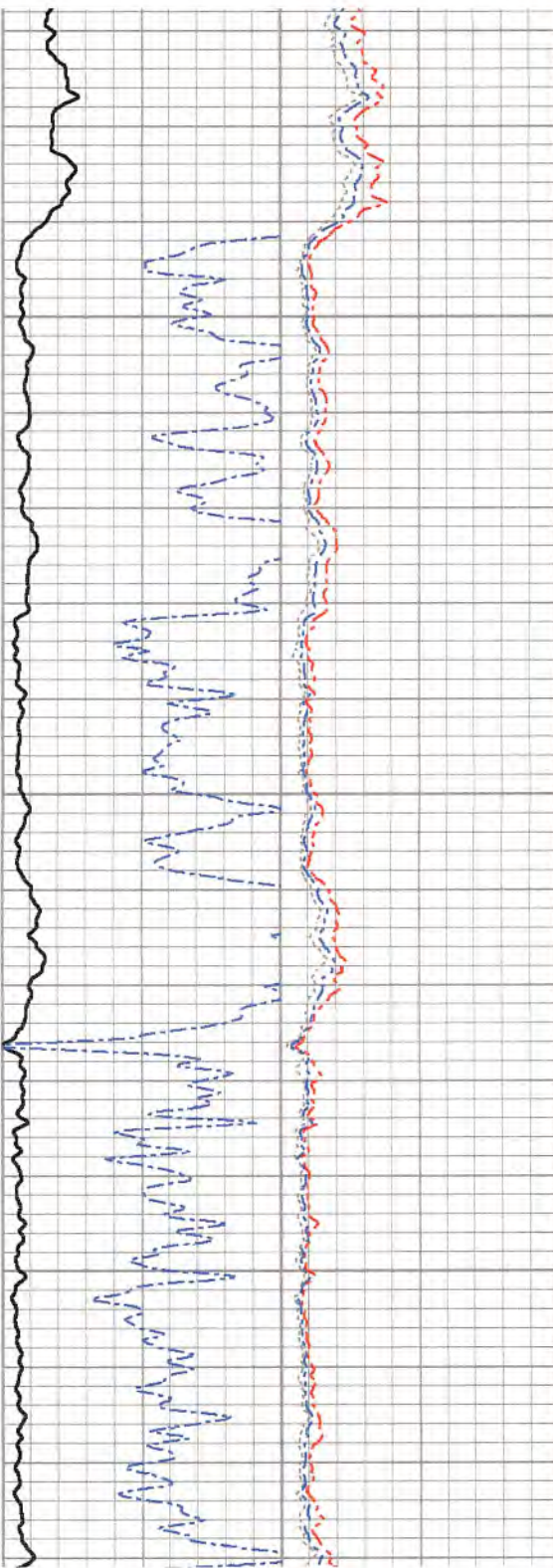
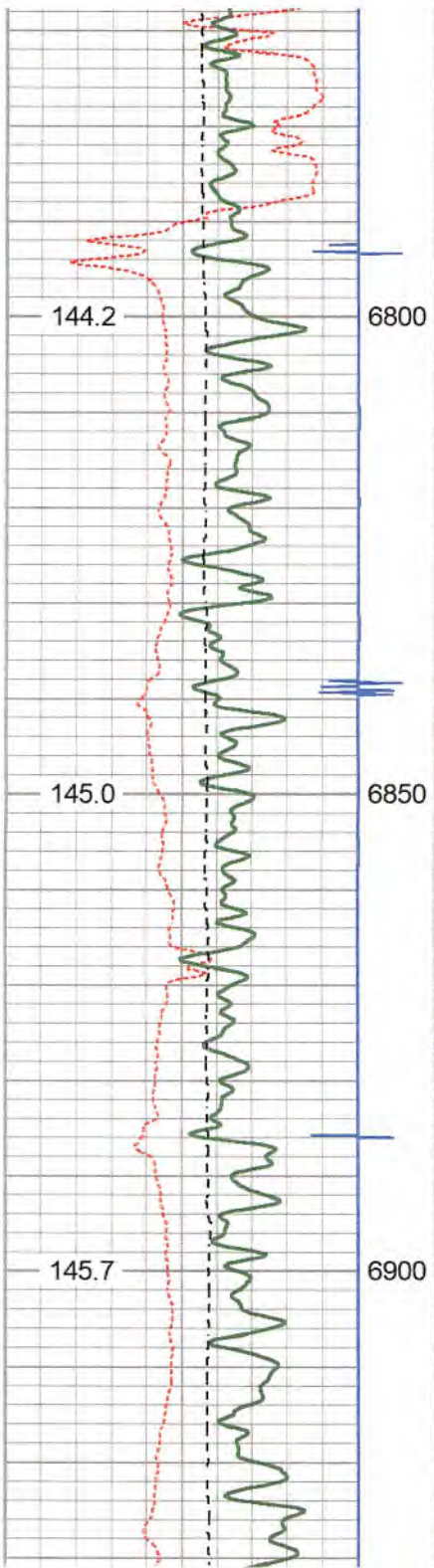


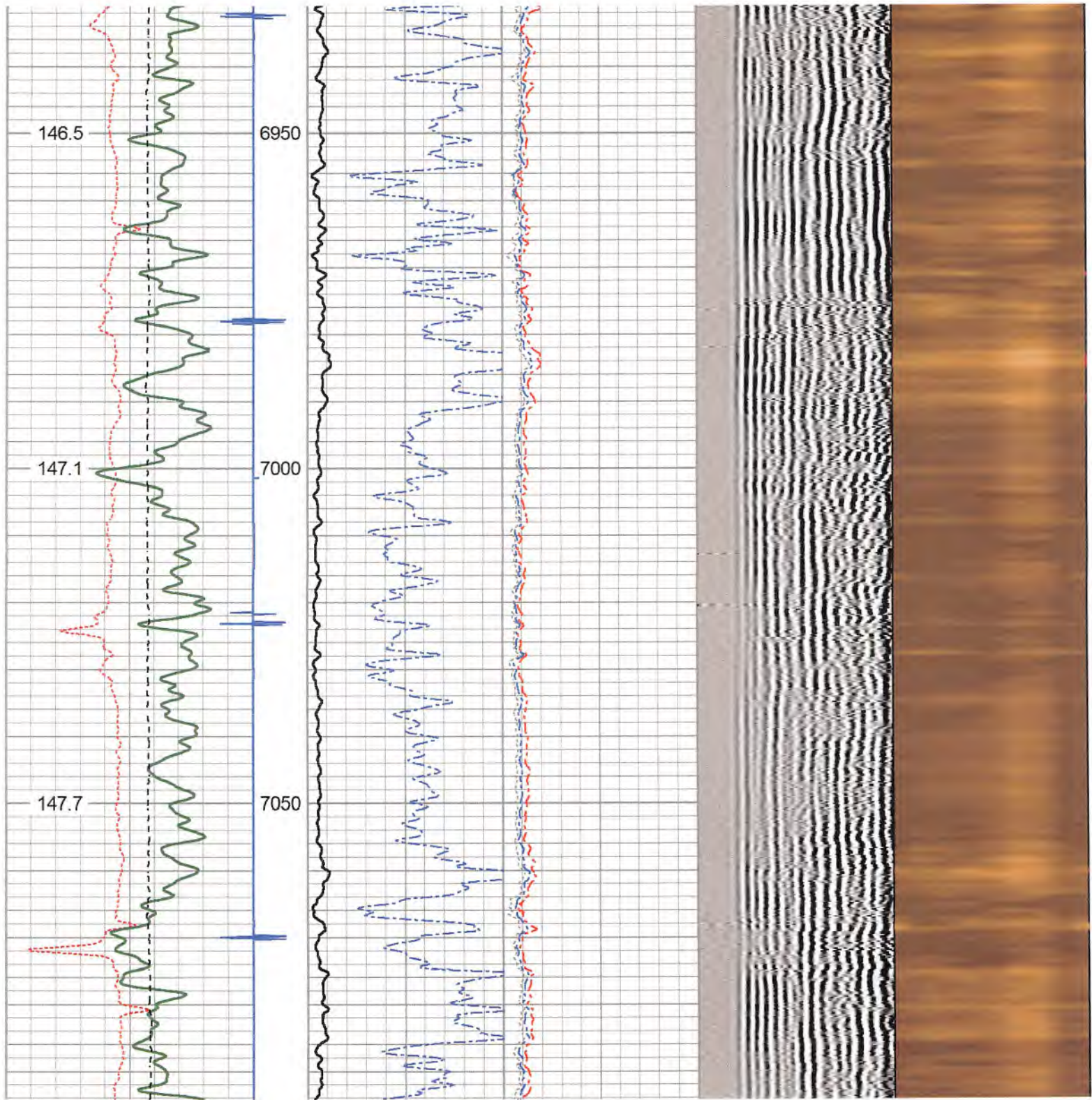


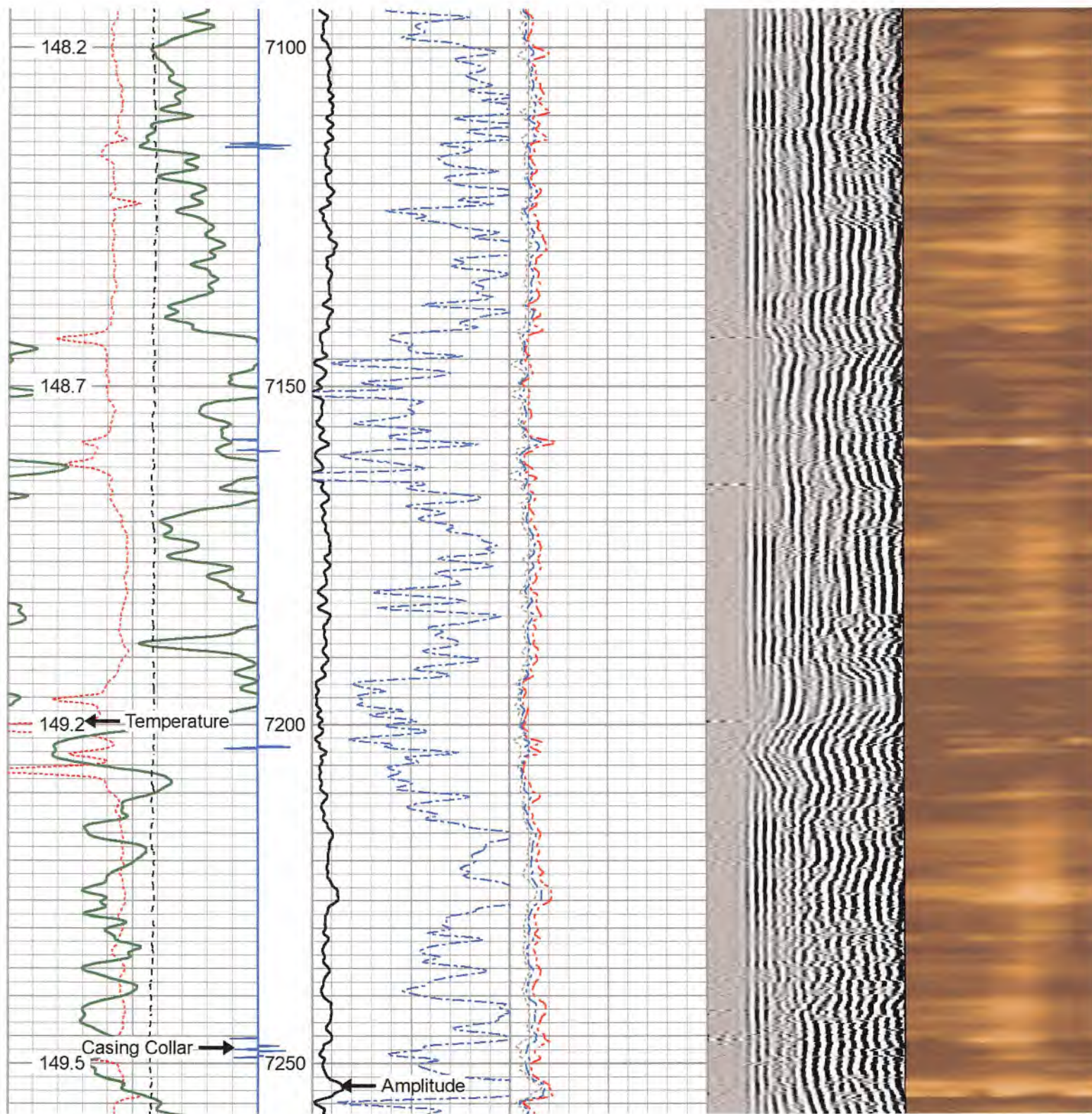


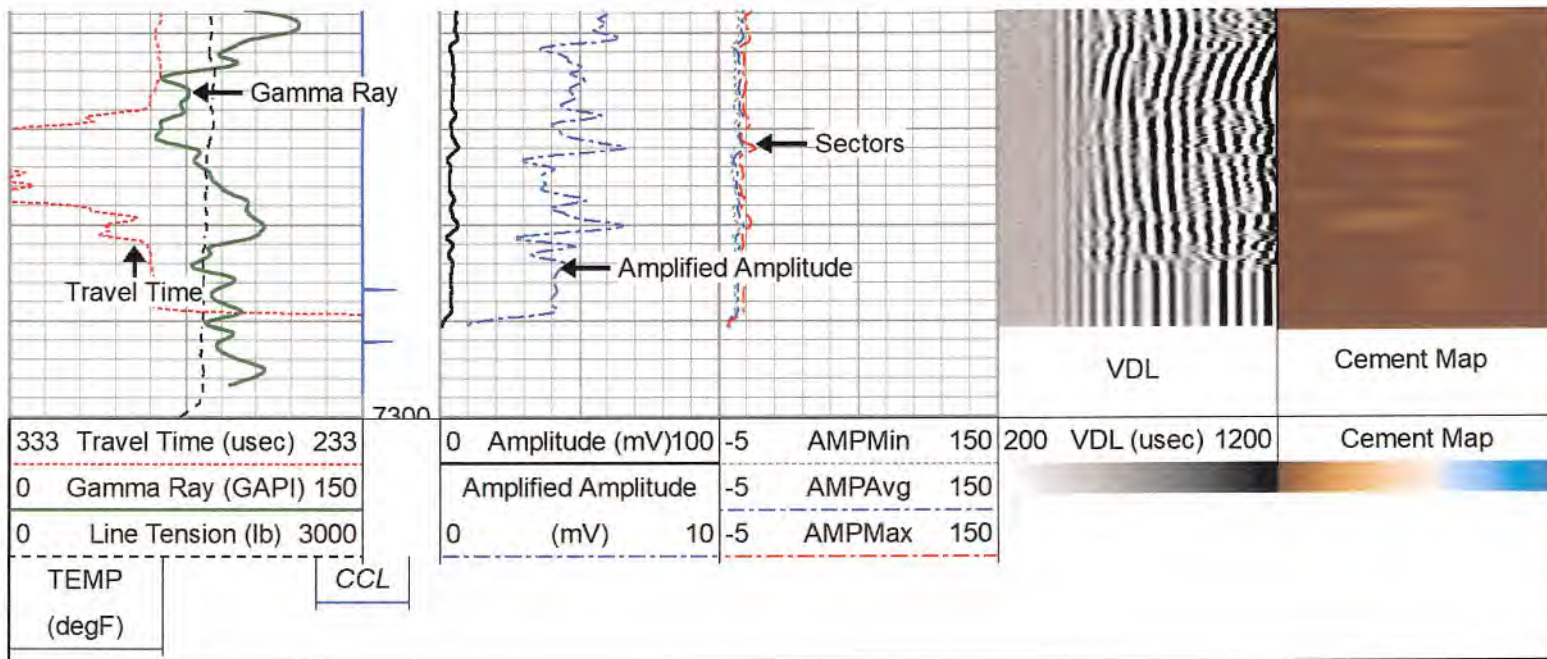








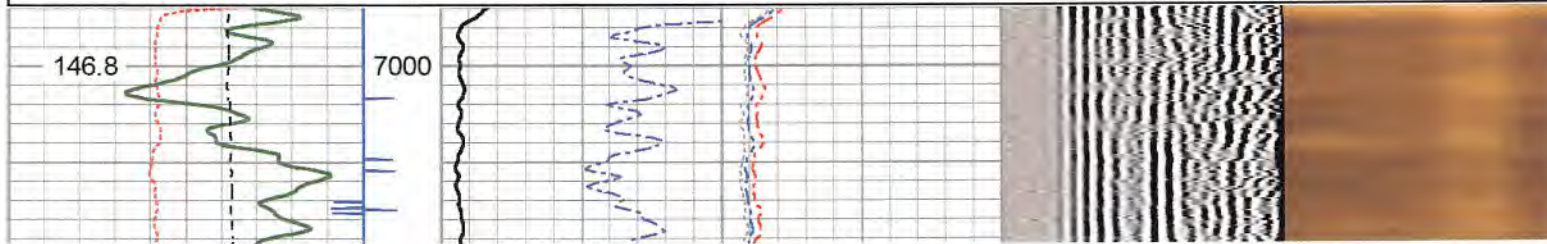
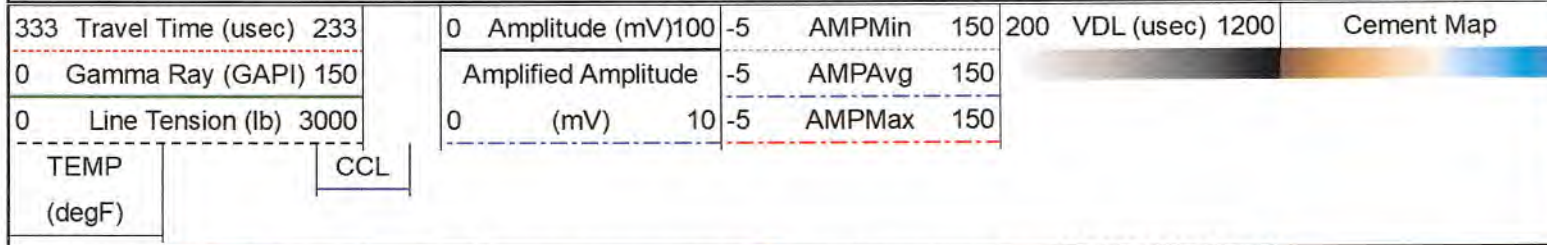


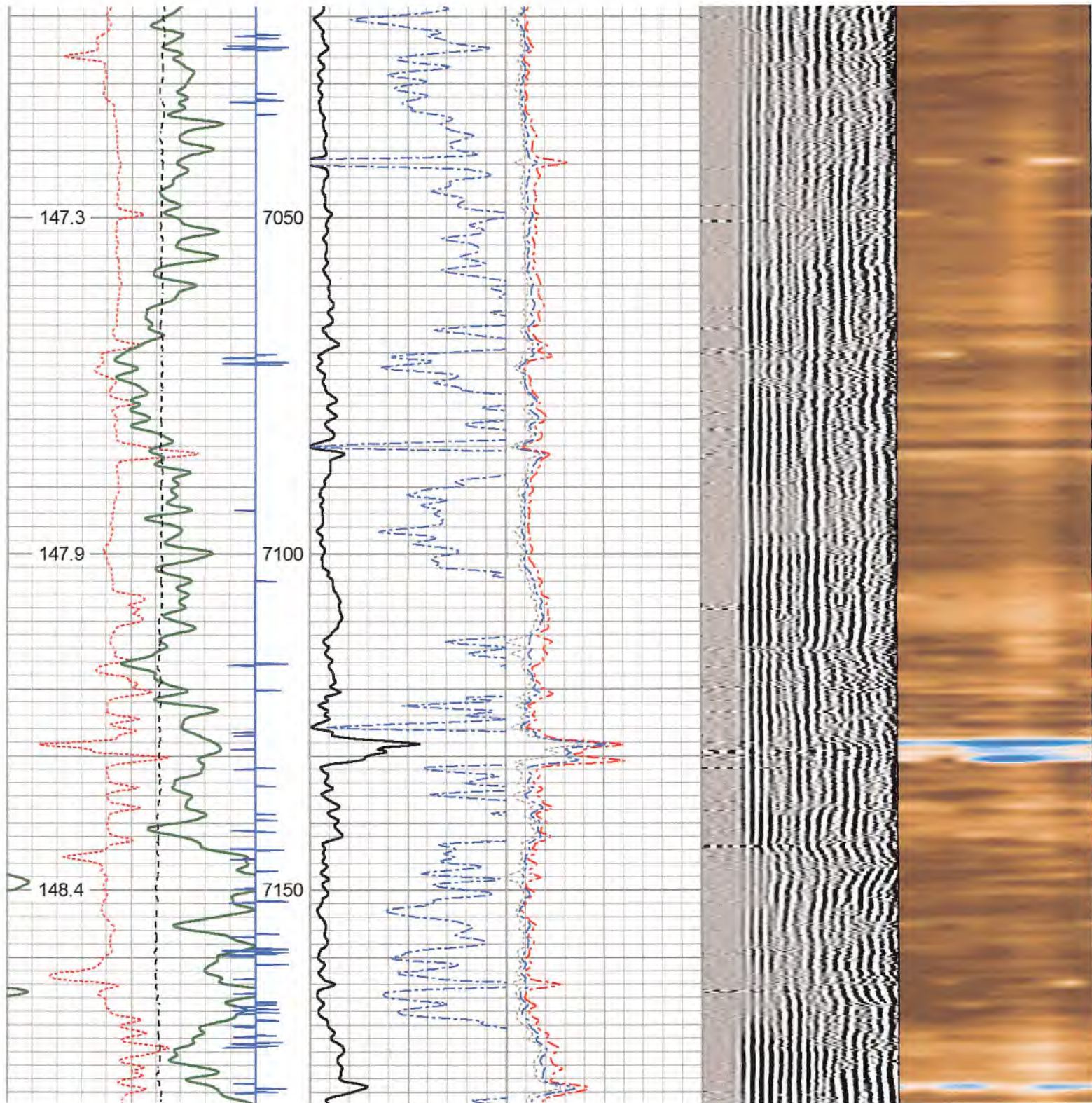


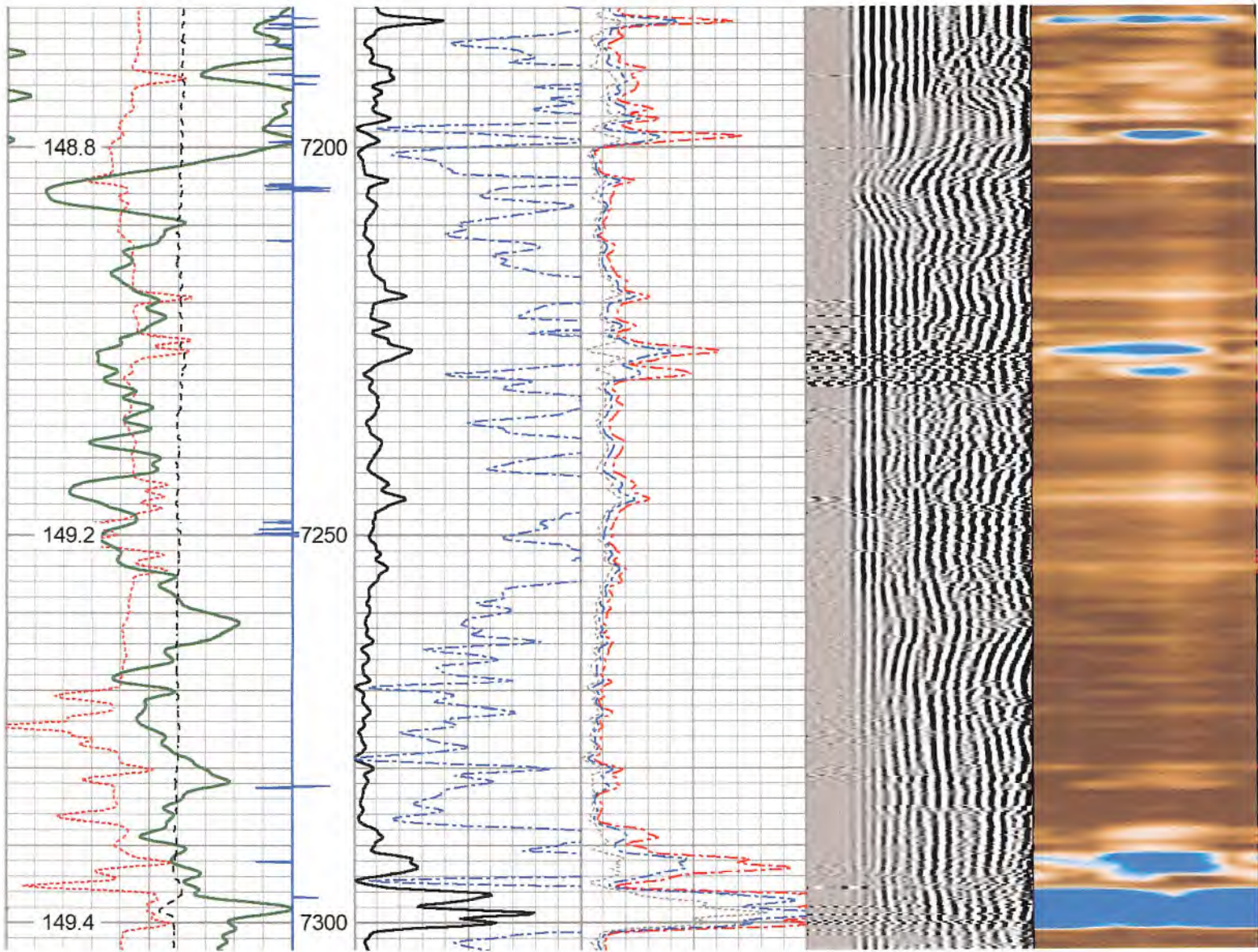
Energy Services

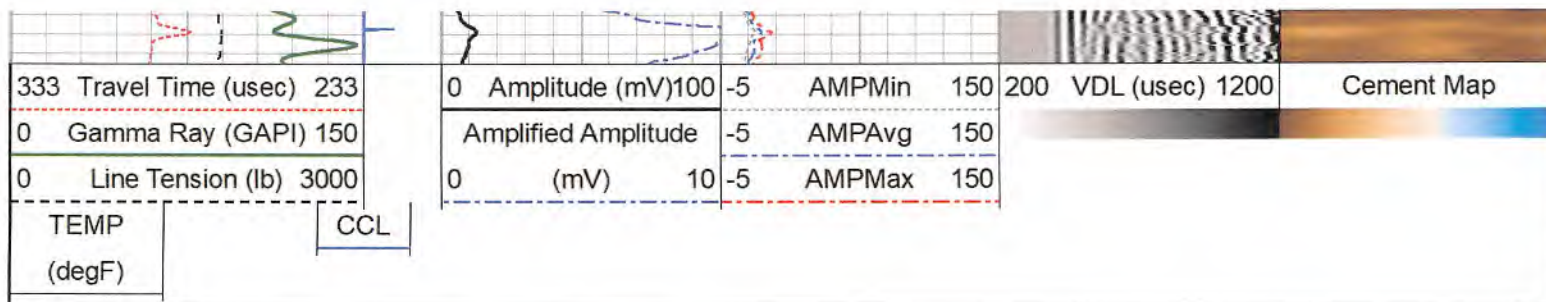
Repeat Pass (0 PSI)

Database File c:\users\logbox\desktop\antero gaspar\ant_gaspar_mule_3h.db
 Dataset Pathname rcb/pass2
 Presentation Format tt_rcbl_std_bw
 Dataset Creation Sun Jul 17 12:04:57 2022
 Charted by Depth in Feet scaled 1:240









Log Variables		Database:\users\logbox\desktop\antero gaspar\ant_gaspar_mule_3h.db					
		Dataset field/well/rcbl/pass4/_vars_					
Top - Bottom							
BOREID	BOTTEMP	CASEOD	CASETHCK	CASEWGHT	MAXAMPL	MINAMPL	MINATTN
in	degF	in	in	lb/ft	mV	mV	db/ft
6.75	149.5	5	0.362	18	76	1	0.8
PERFS	PPT	SRFTEMP	TDEPTH				
	usec	degF	ft				
No	362	79	7297				
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 gaspar\ant_gaspar_mule_3h.db
 Dataset Pathname rcbl/pass4
 Dataset Creation Sun Jul 17 12:23:08 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: 320.292 ft

Master Calibration, performed Sun Jul 17 09:21:56 2022:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	0.601	1.000	75.921	124.777	0.942
CAL	-0.000	0.866				
5'	0.000	0.568	1.000	75.921	131.851	0.982
SUM						
S1	-0.005	0.636	0.000	100.000	156.106	0.720
S2	0.002	0.634	0.000	100.000	158.147	-0.239
S3	0.001	0.601	0.000	100.000	166.779	-0.208
S4	-0.000	0.567	0.000	100.000	176.373	0.022
S5	0.000	0.556	0.000	100.000	179.854	-0.024
S6	0.001	0.572	0.000	100.000	175.114	-0.201
S7	-0.000	0.594	0.000	100.000	168.176	0.053
S8	0.000	0.651	0.000	100.000	153.693	-0.047

Internal Reference Calibration, performed Sat Jul 16 09:45:49 2022:

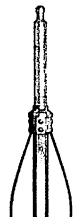
	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.000	0.866	1.000	0.000

Air Zero Calibration, performed Sun Jul 17 08:48:10 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)
			Cable_Head-1_7/16 Titan 1 7/16" Cable Head	1.02	1.44	3.31

RBT_HV	19.19		CENT-BC275-0000 Probe 2.75" Bowspring Centralizer	2.83	2.75	24.00
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		CENT-BC275-0000 Probe 2.75" Bowspring Centralizer	2.83	2.75	24.00
RBT_ACCY	10.44					
RBT_ACCX	10.44					
WVFSYNC	10.44					
WVFCAL	10.44					
GCT_HV	7.60		GC-GCT275-0000 (GCT275-0000_base) Probe Gamma Ray - CCL w/ Temp	4.77	2.75	55.00
CCL\$2	6.64					
CCL\$1	6.64					
GCT_Temp	6.09					
GR	5.22					

			<p>CENT-BC275-0000 Probe 2.75" Bowspring Centralizer</p>	2.83	2.75	24.00
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<p>Dataset: Total length: Total weight: O.D.:</p>	<p>ant_gaspar_mule_3h.db: field/well/rcbl/pass4 23.04 ft 130.31 lb 2.75 in</p>
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	Company	Antero Resources Corporation	
	Well	Mule Unit 3H	
	Field	South Canton	
	County	Doddridge	
	State	WV	Country USA