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OCT 27 2023

WV Department of
Environmental Protection



Radial Cement Bond
Gamma Ray CCL
Temperature Log

Company	Antero Resources Corporation	Company	Antero Resources Corporation
Well	Stope Unit 2H	Well	Stope Unit 2H
Field	White Oak	Field	White Oak
County	Doddridge	County	Doddridge
State	WV	State	WV
API # :	47-017-06948-00-00	Permanent Datum	Ground Level
AFE # :	A12498-C	Log Measured From	KB = 30' above GL
Location (LAT, LON):	39.177444, -80.833747	Drilling Measured From	KB
Township:	N/A	Elevation	1100'
Other Services	None	K.B.	1130'
		D.F.	1130'
		G.L.	1100'

Date	09 JUNE 2023
Run Number	One
Depth Driller (ft)	17808
Depth Logger (ft)	6997
Bottom Logged Interval (ft)	6986
Top Log Interval	Surface
Open Hole Size (in)	8.5
Type Fluid	Water
Density / Viscosity (lb/gal)	8.4
Max. Recorded Temp. (°F)	145.1
Estimated Cement Top (ft)	1316
Time Well Ready	06:00 AM
Time Logger on Bottom	05:20 PM
Equipment Number	8018
Location	Smithton, PA
Recorded By	T. Trump
Witnessed By	R. Reed

Casing Record	Size (in)	Weight (lb/ft)	Top (ft)	Bottom (ft)
Conductor String	20	91.59	Surface	130
Surface String	13.375	54.5	Surface	431
Intermediate String	9.625	36	Surface	2931
Production String	5.5	23	Surface	17768

Inclination Information (Approximated Values from Directional Survey)			
KOP	30°	60°	90°
1060'	6470'	6820'	7400'

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

damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our clients, 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 -6'

Marker Joint Located @ 5841' - 5851'

Maximum Temperature Recorded was 145.1°F
Maximum Tension was 1275 lbs

Estimated Top of Cement @ 1316'

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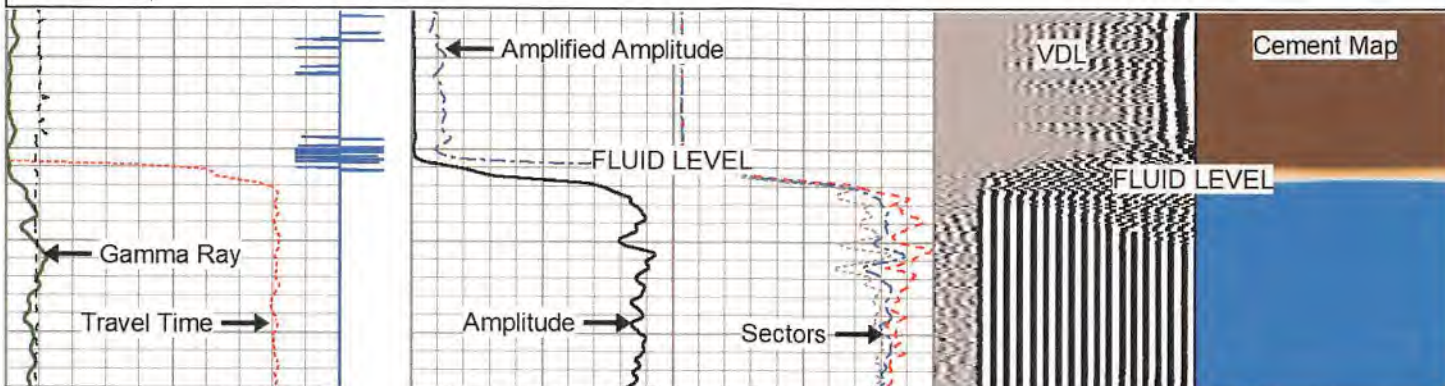


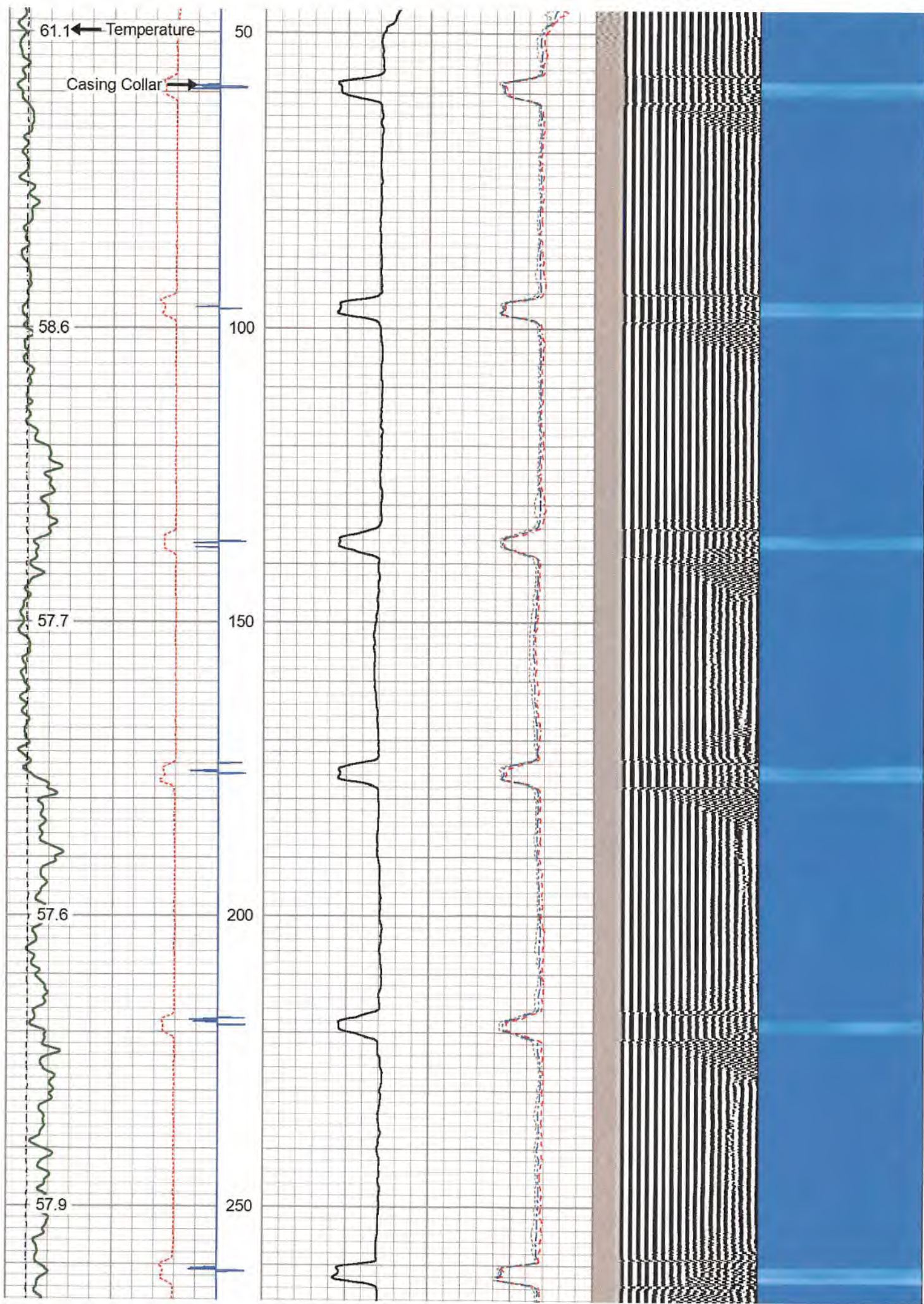
Main Pass

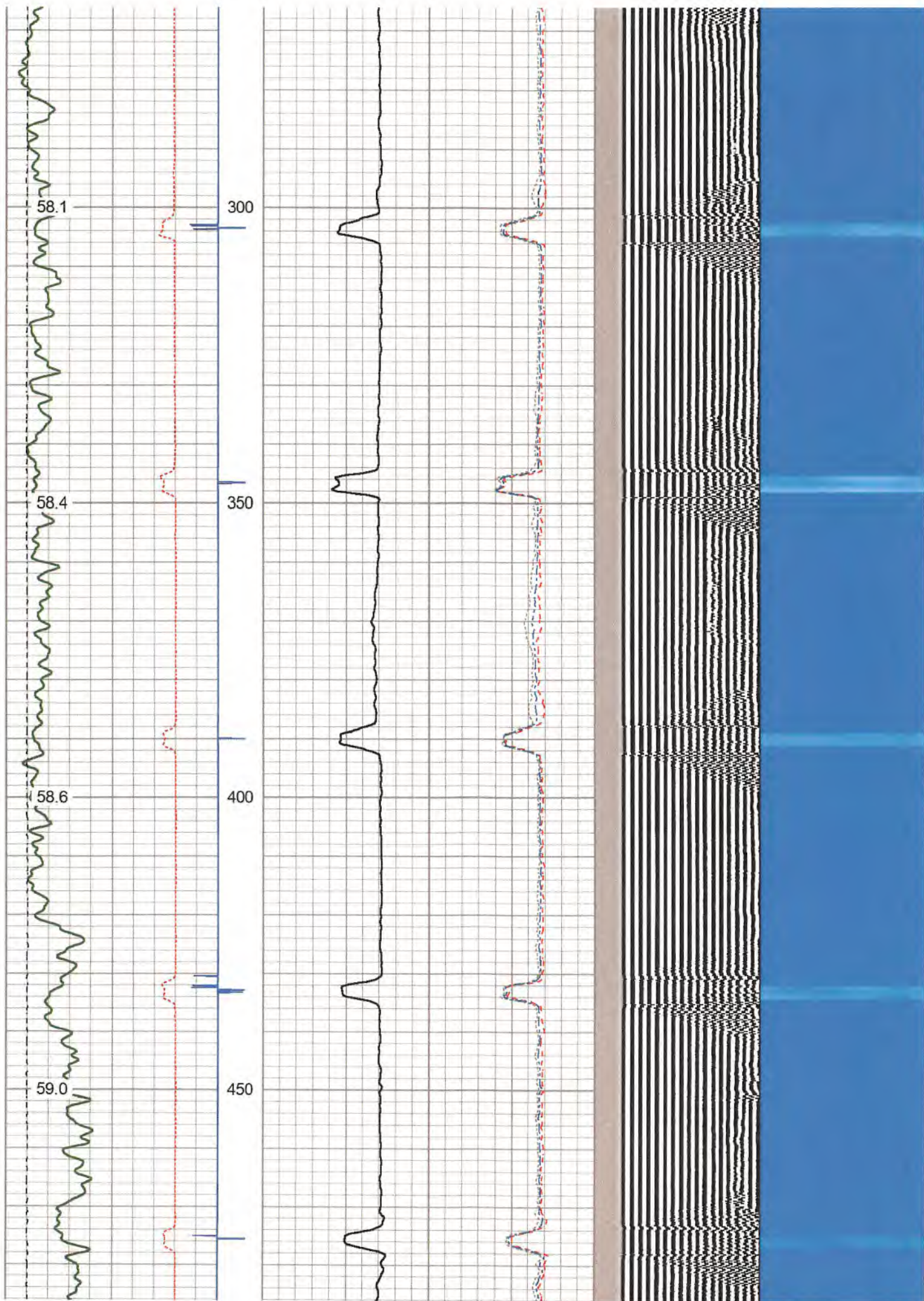
(1500 PSI)

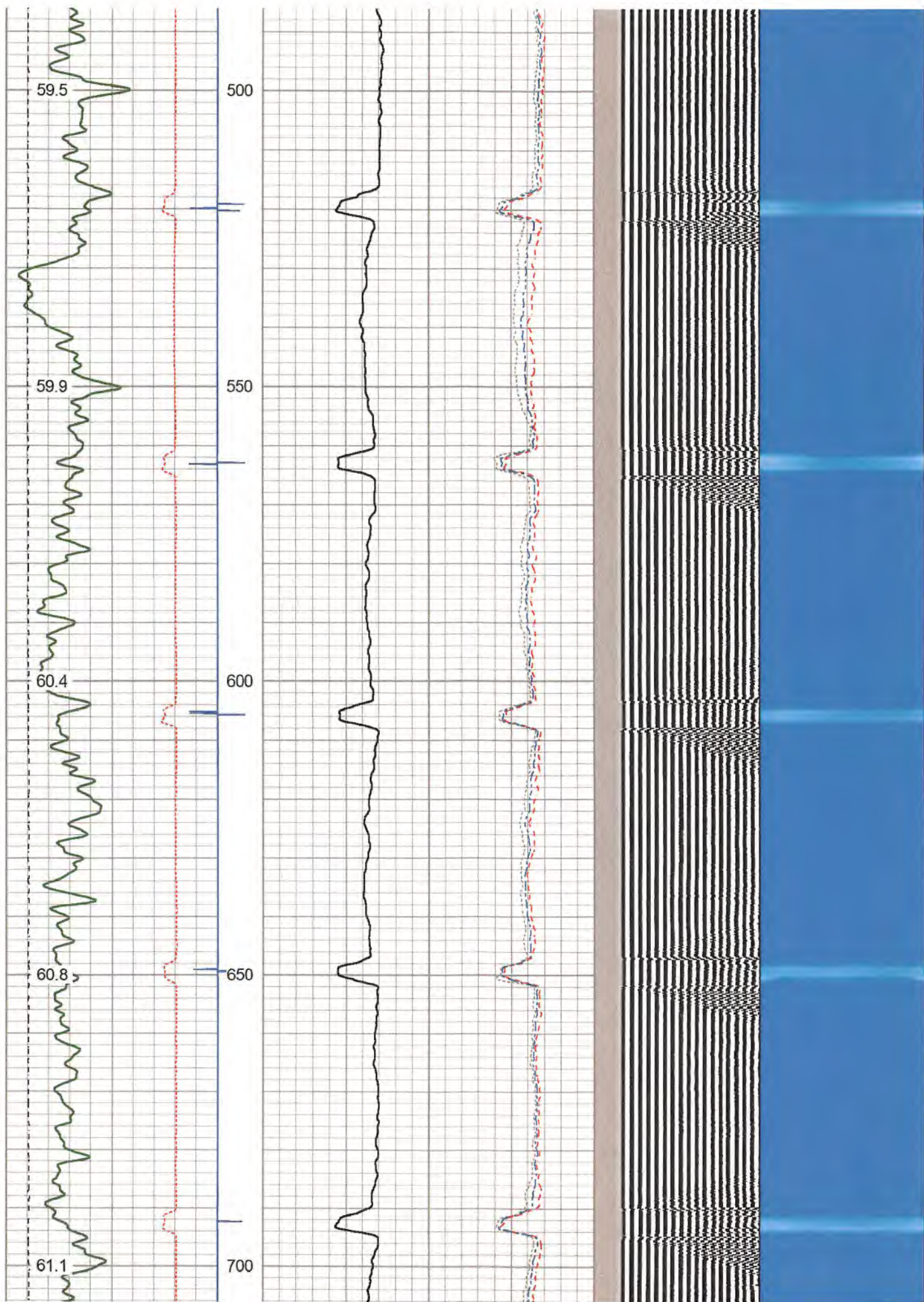
Database File c:\users\logbox\desktop\antero\antero_stope_2h.db
Dataset Pathname rcbl/pass8
Presentation Format rcbl_std_bw_tt
Dataset Creation Fri Jun 09 17:21:07 2023
Charted by Depth in Feet scaled 1:240

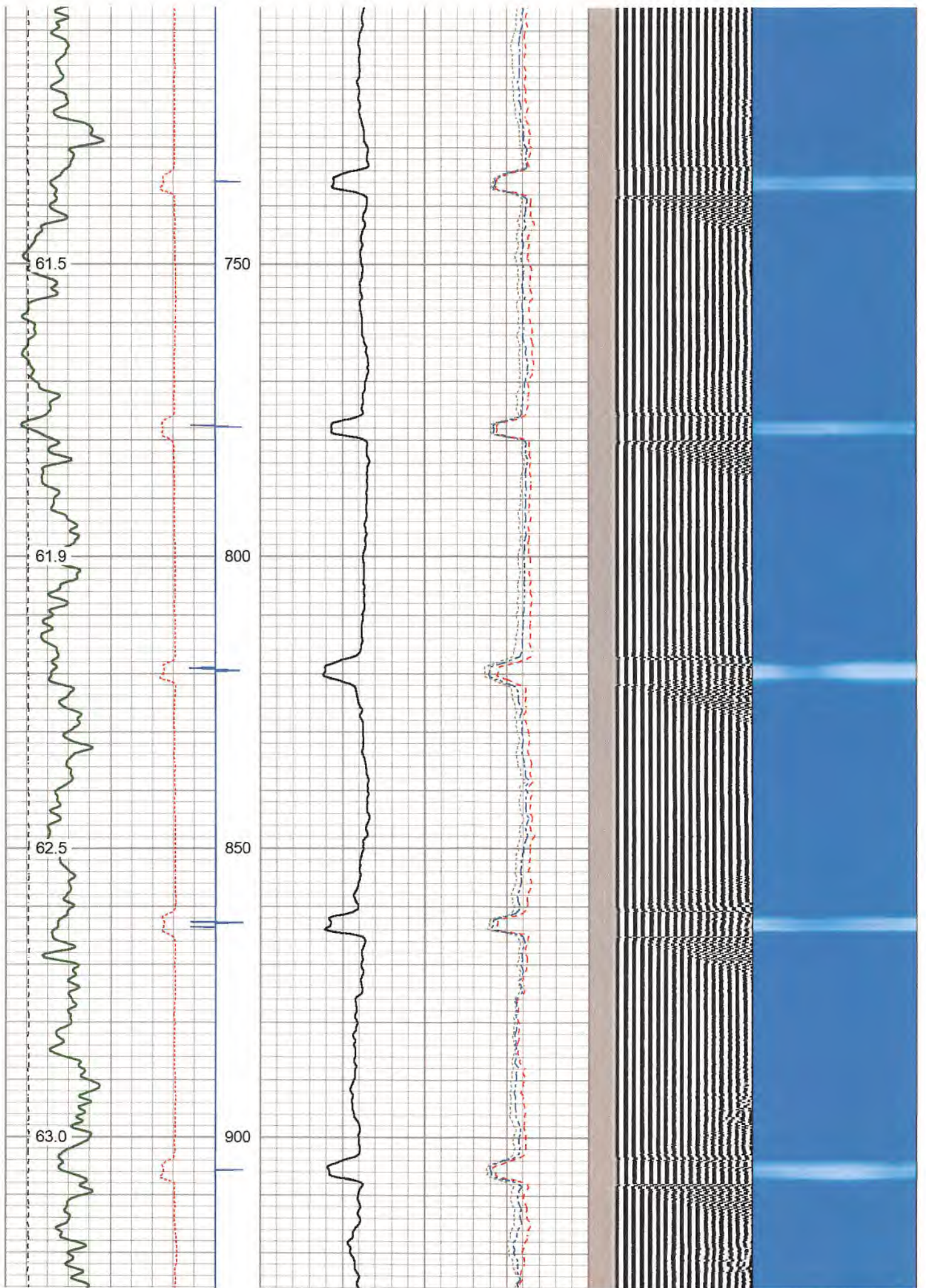
340	TT (usec)	240	Amplitude	-5	AMPMIn	150	200	VDL (usec)	1200	Cement Map
0	GR (GAPI)	150	(mV)	100	-5	AMPMax	150			
0	LTEN (lb)	3000	Amplified Amplitude	-5	AMPAvg	150				
TEMP (degF)	CCL		(mV)	10						

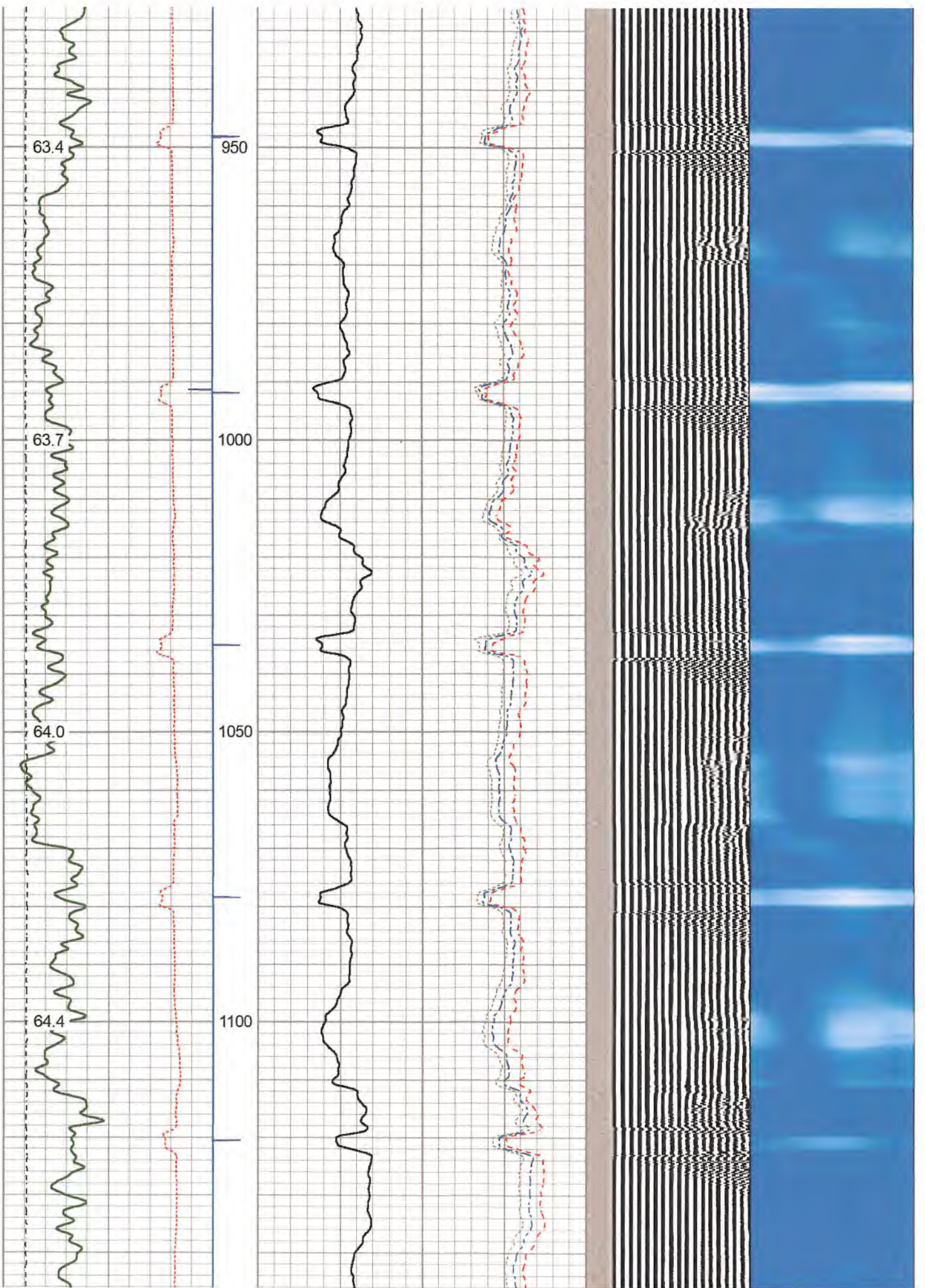


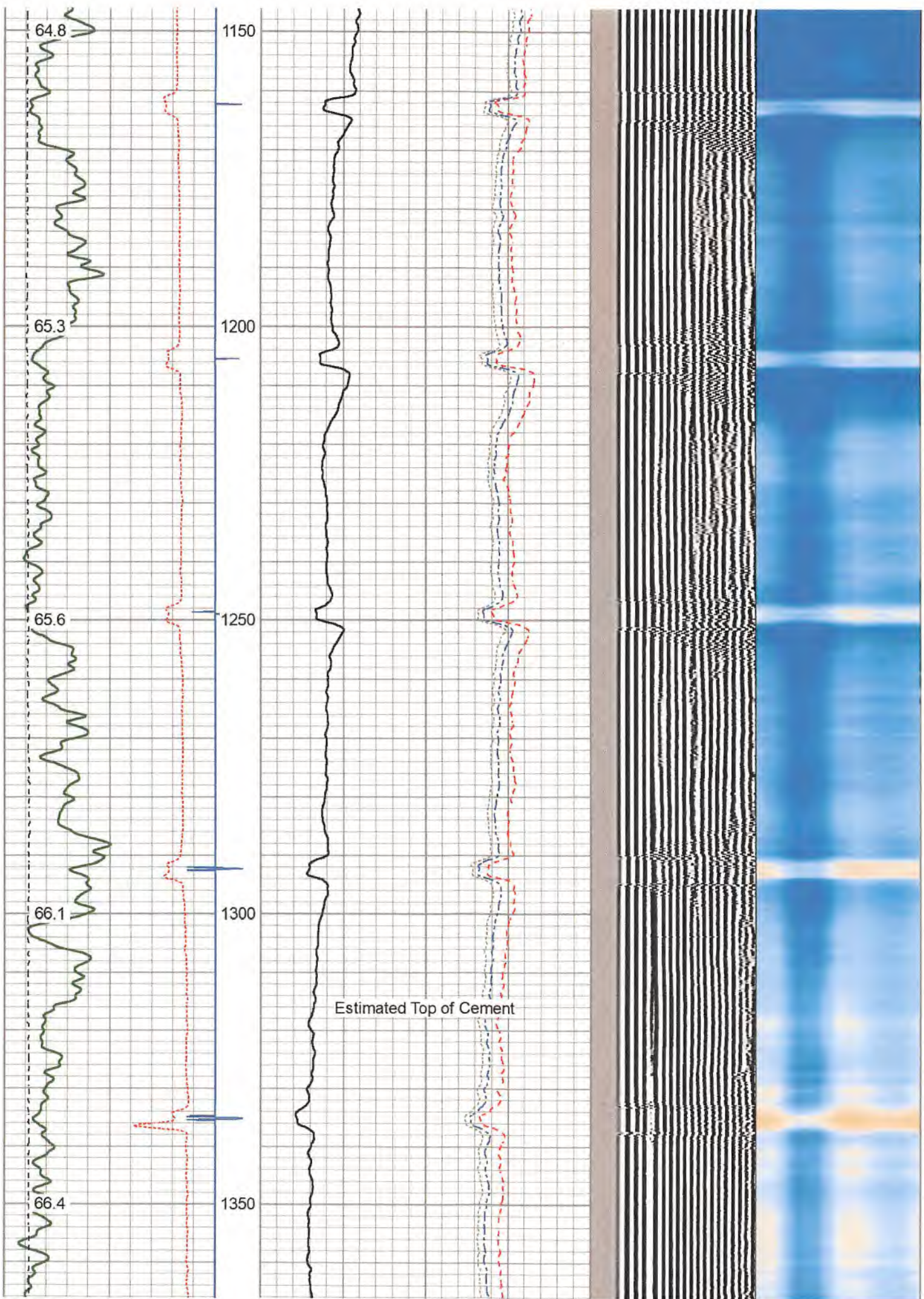


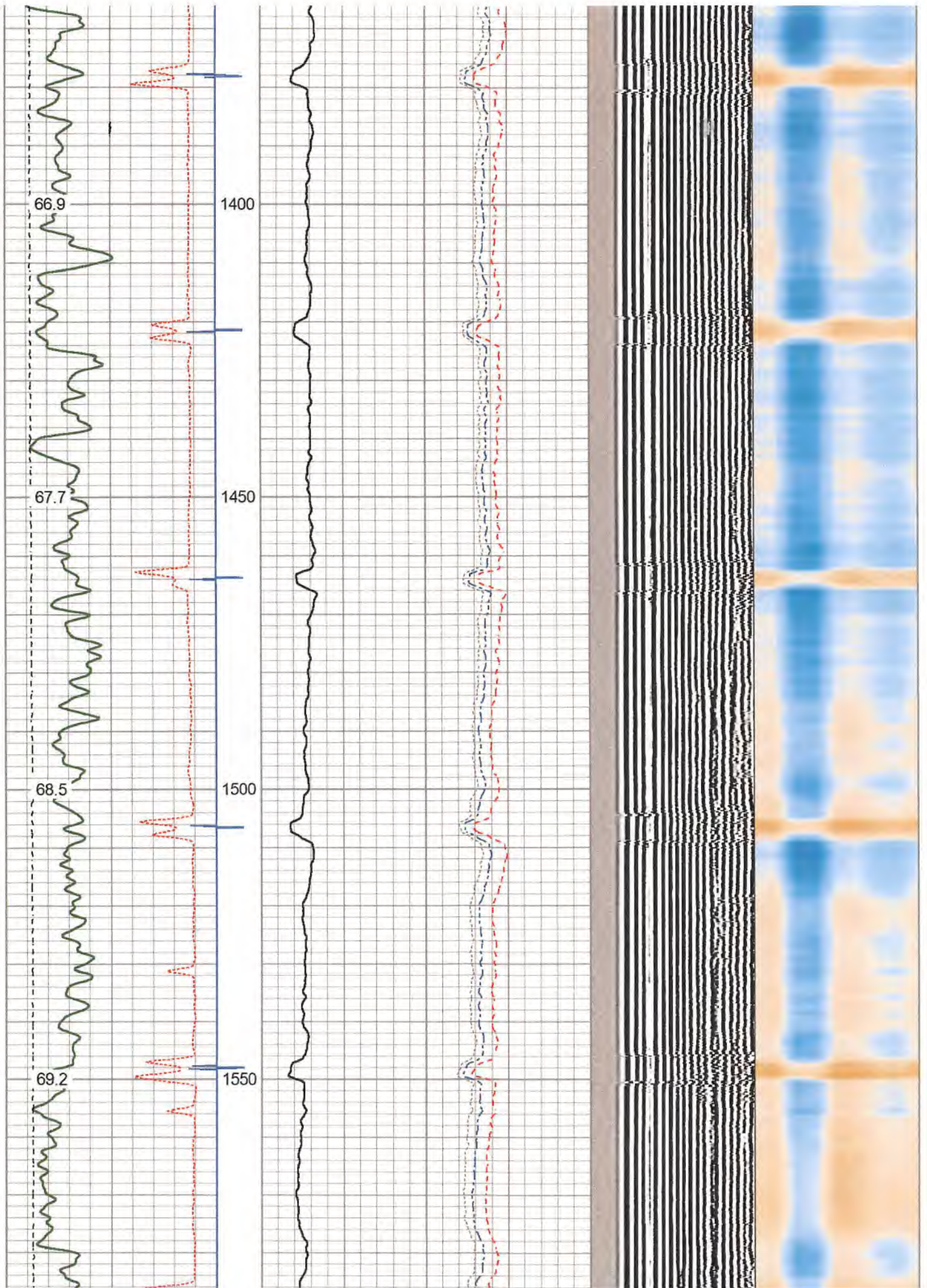


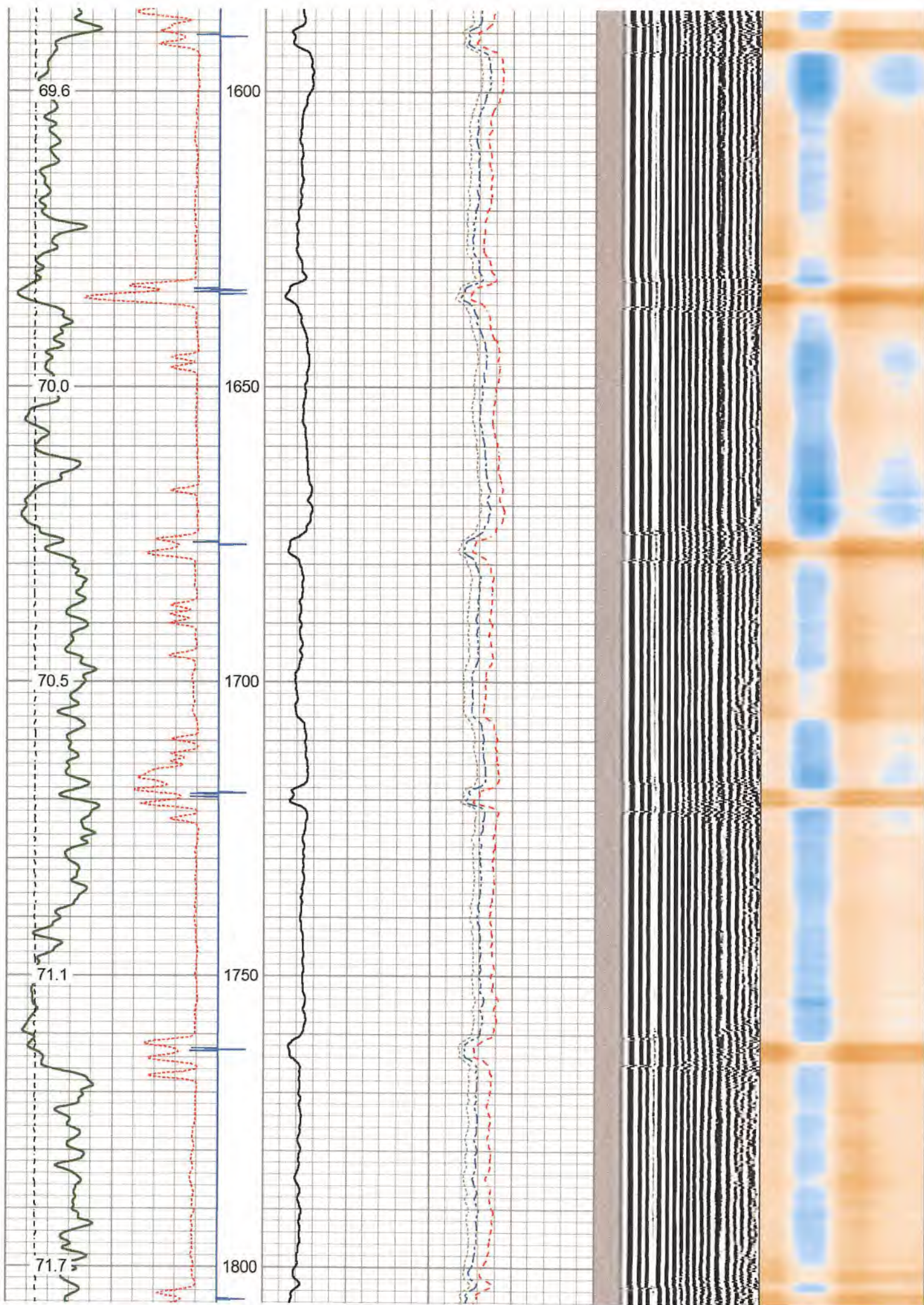


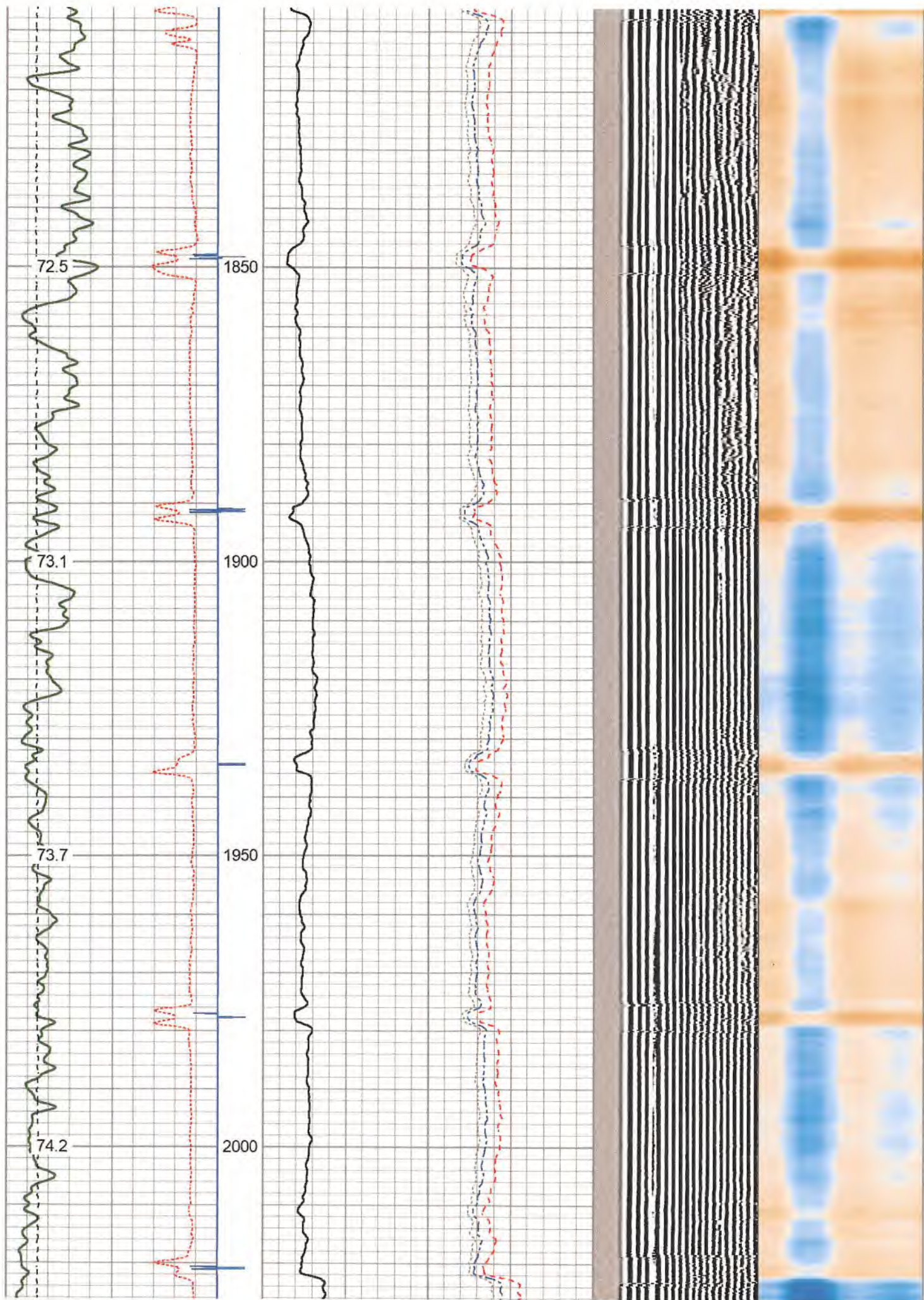


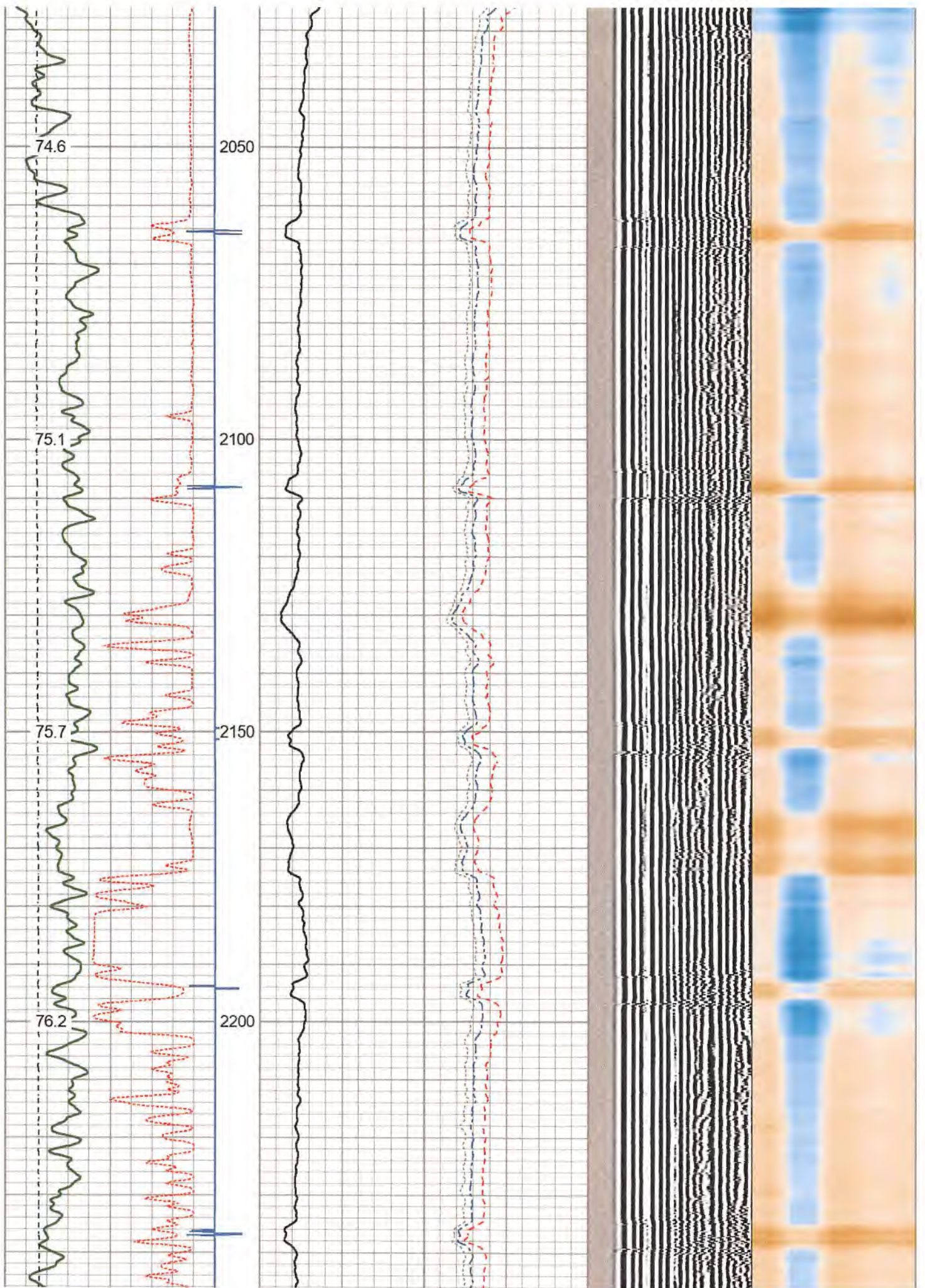


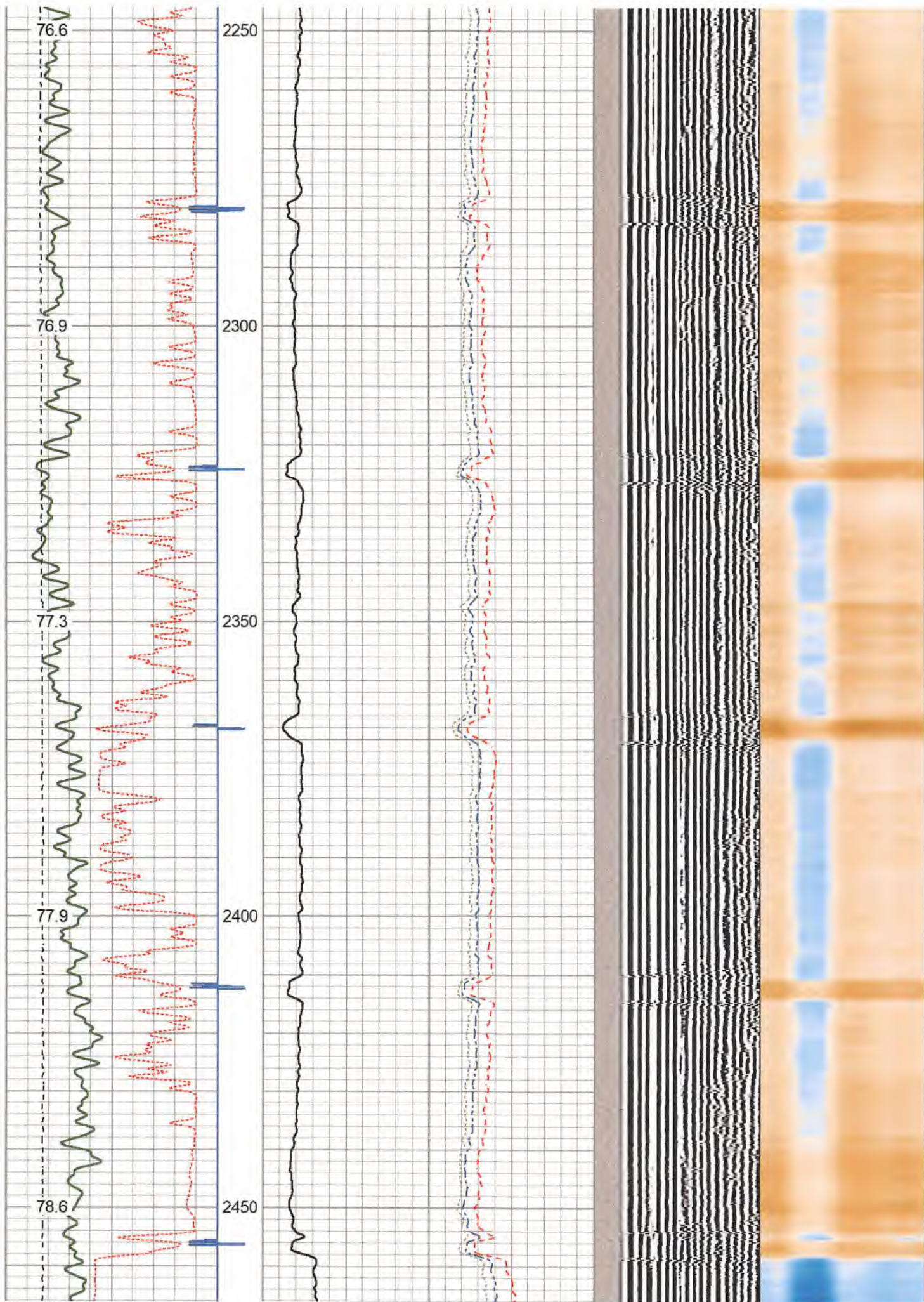


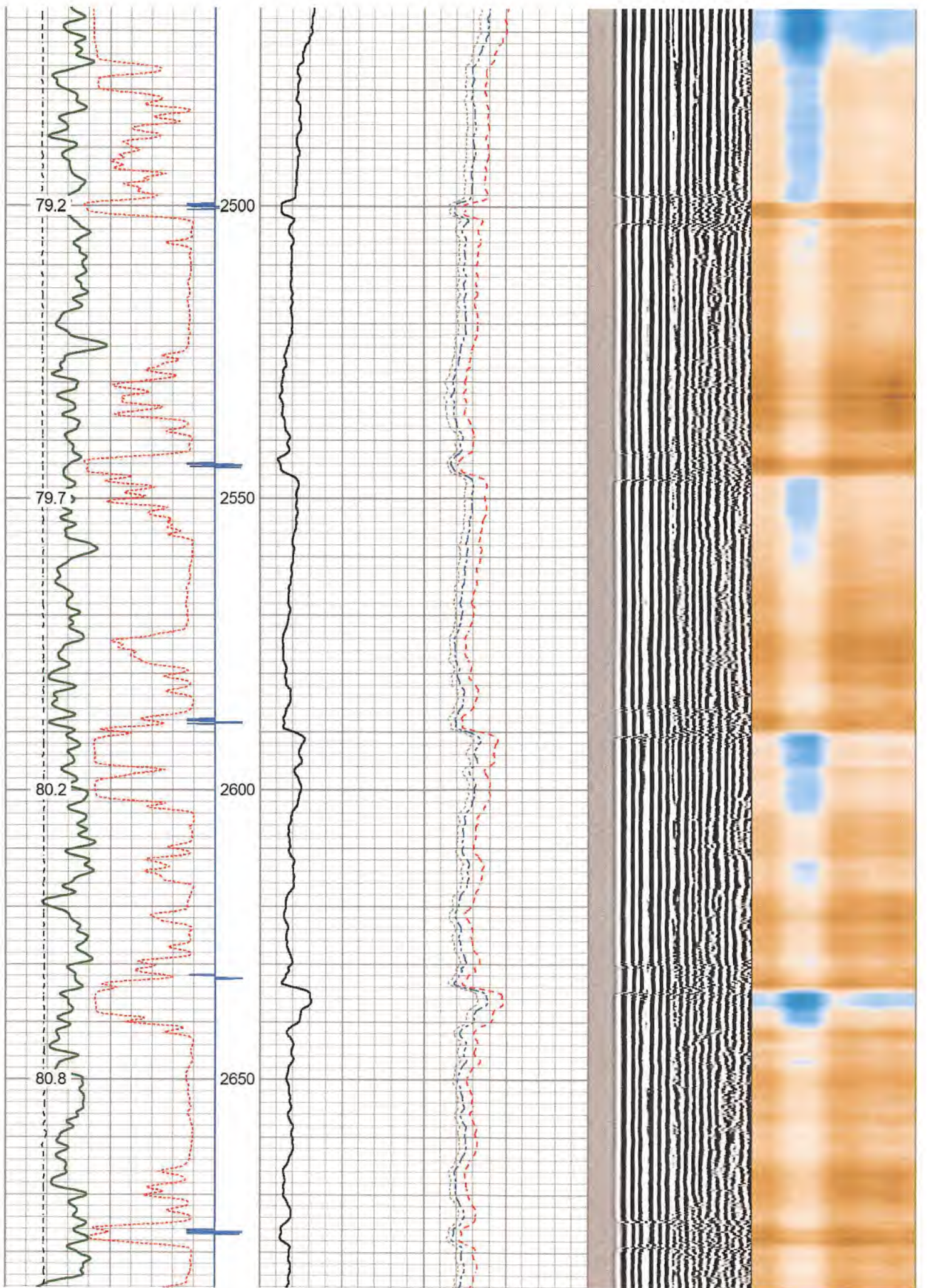


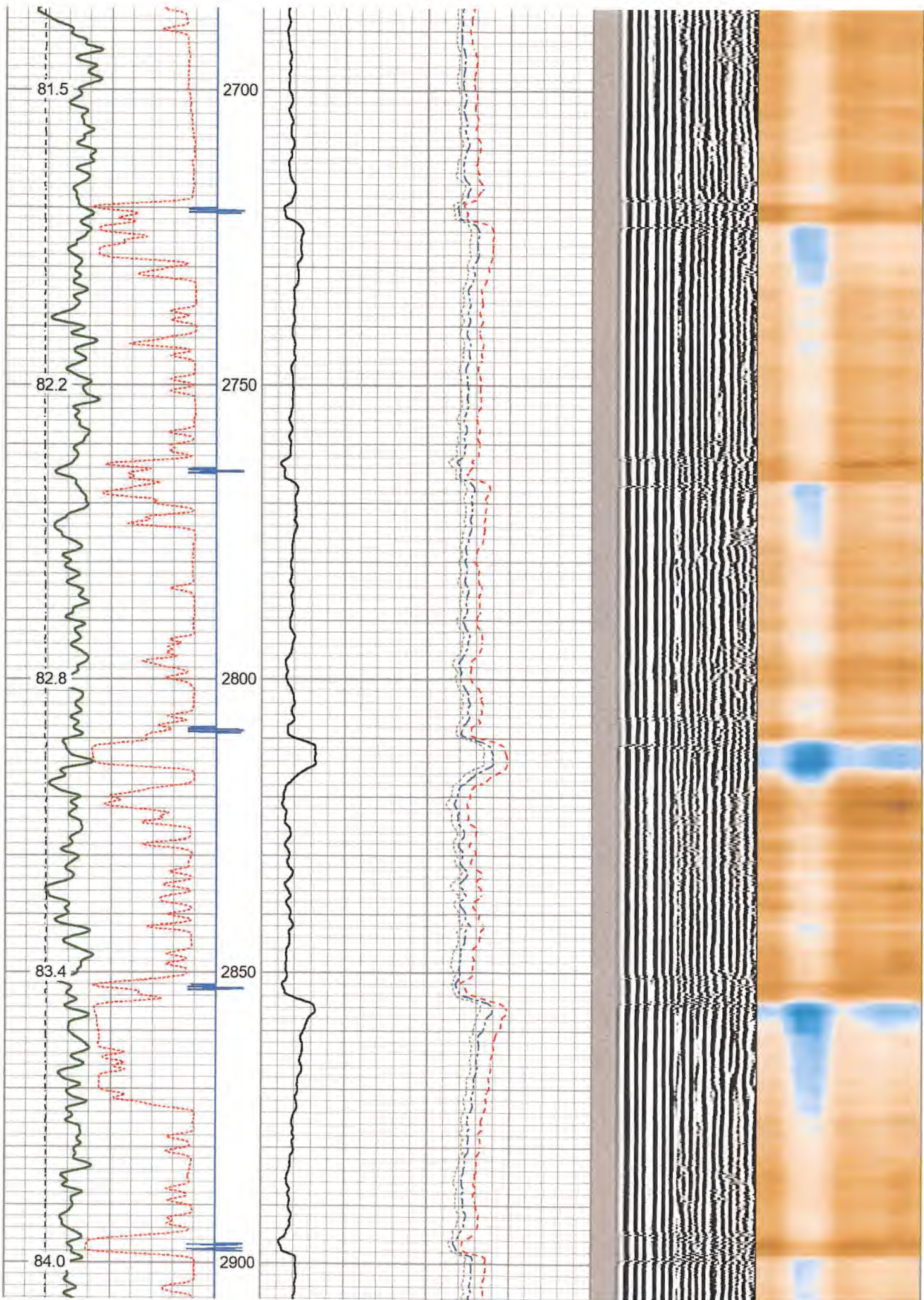


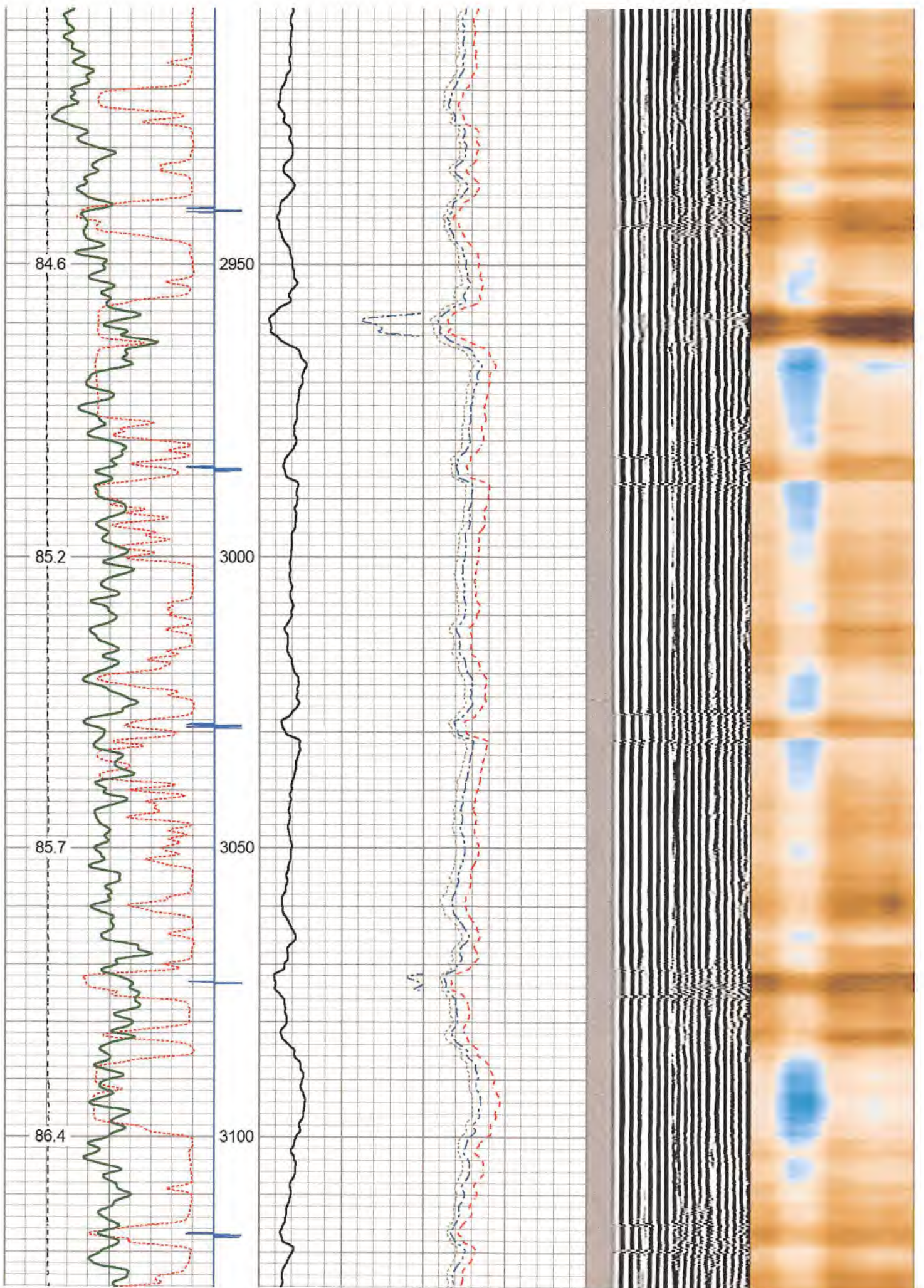


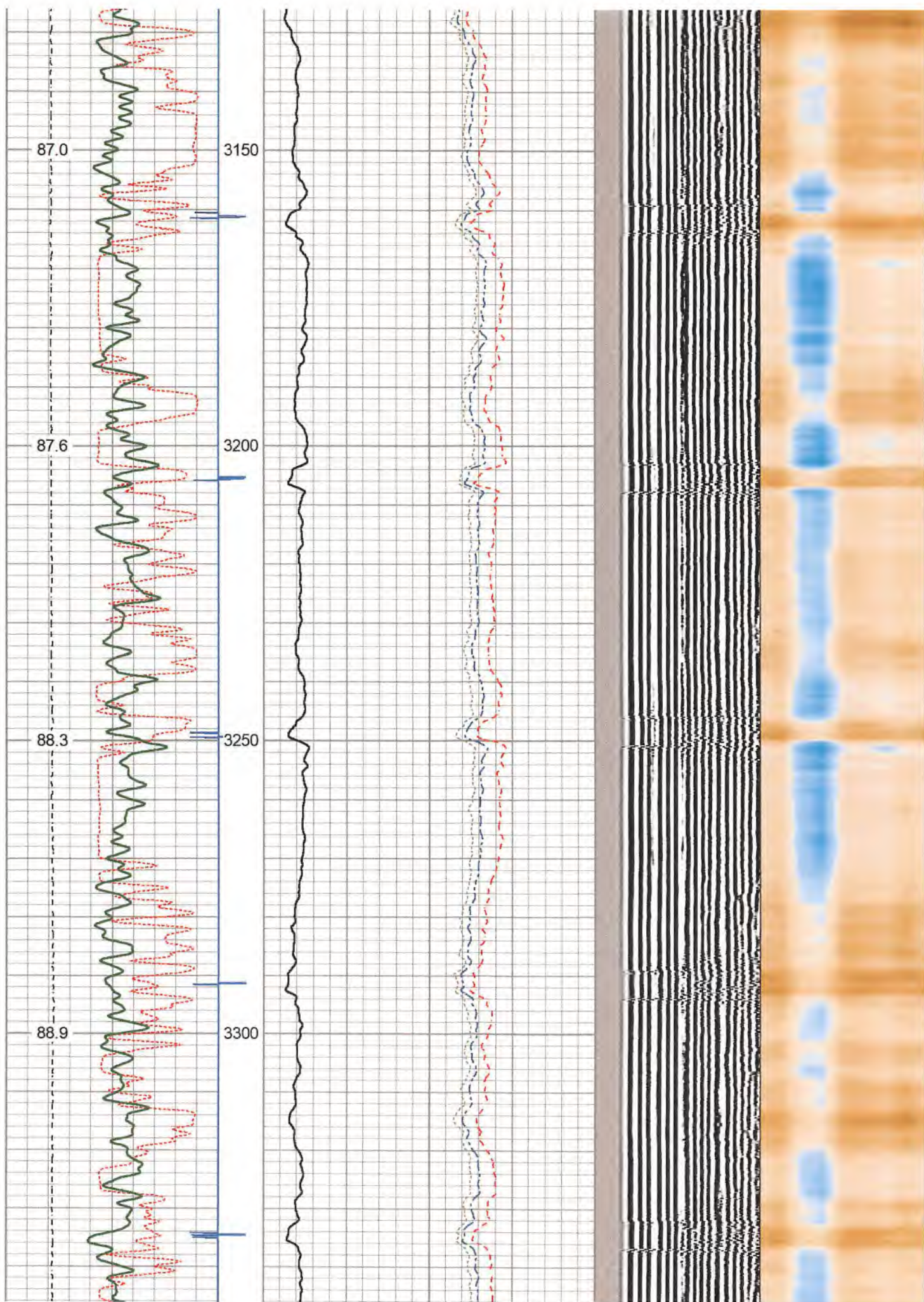


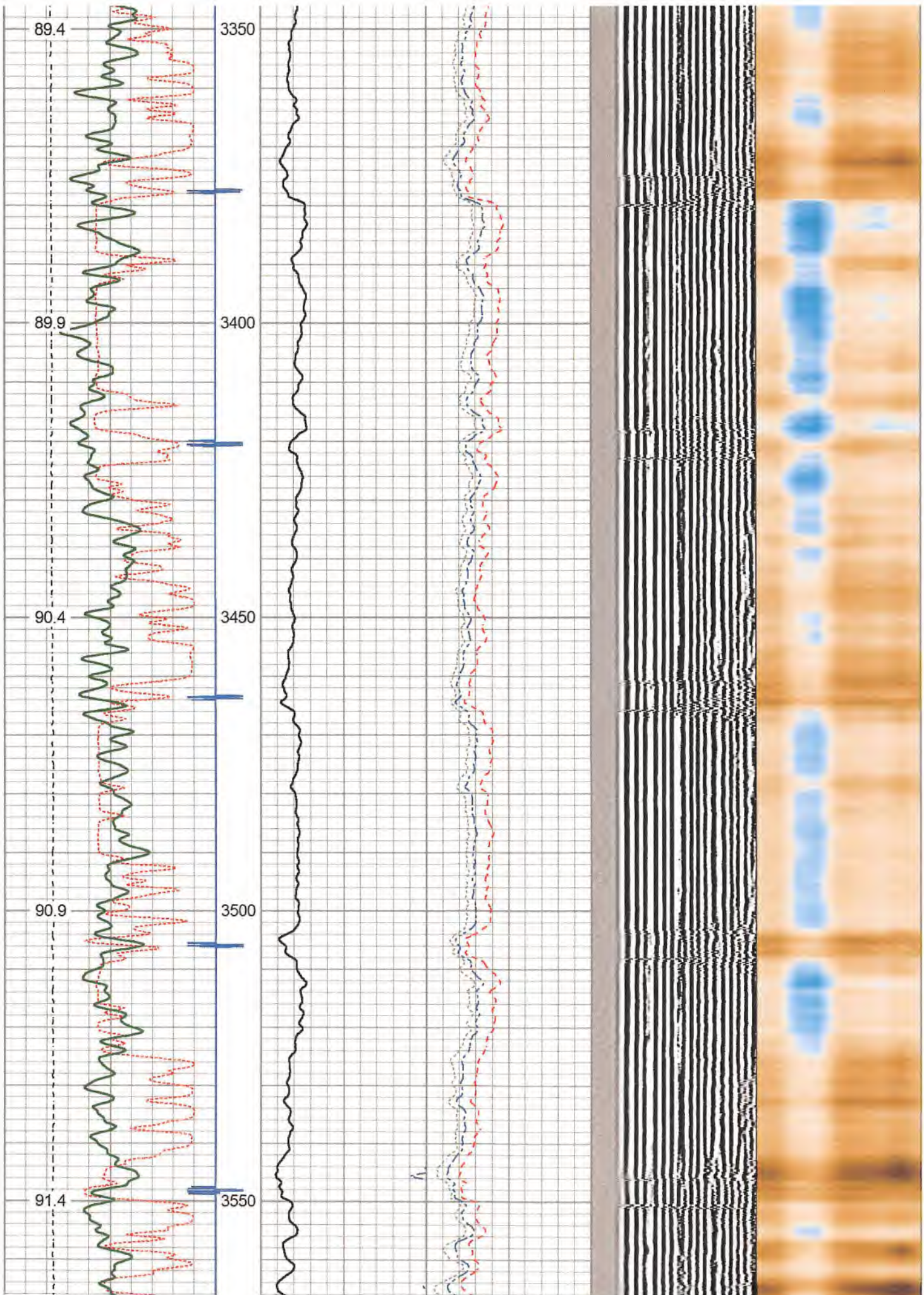


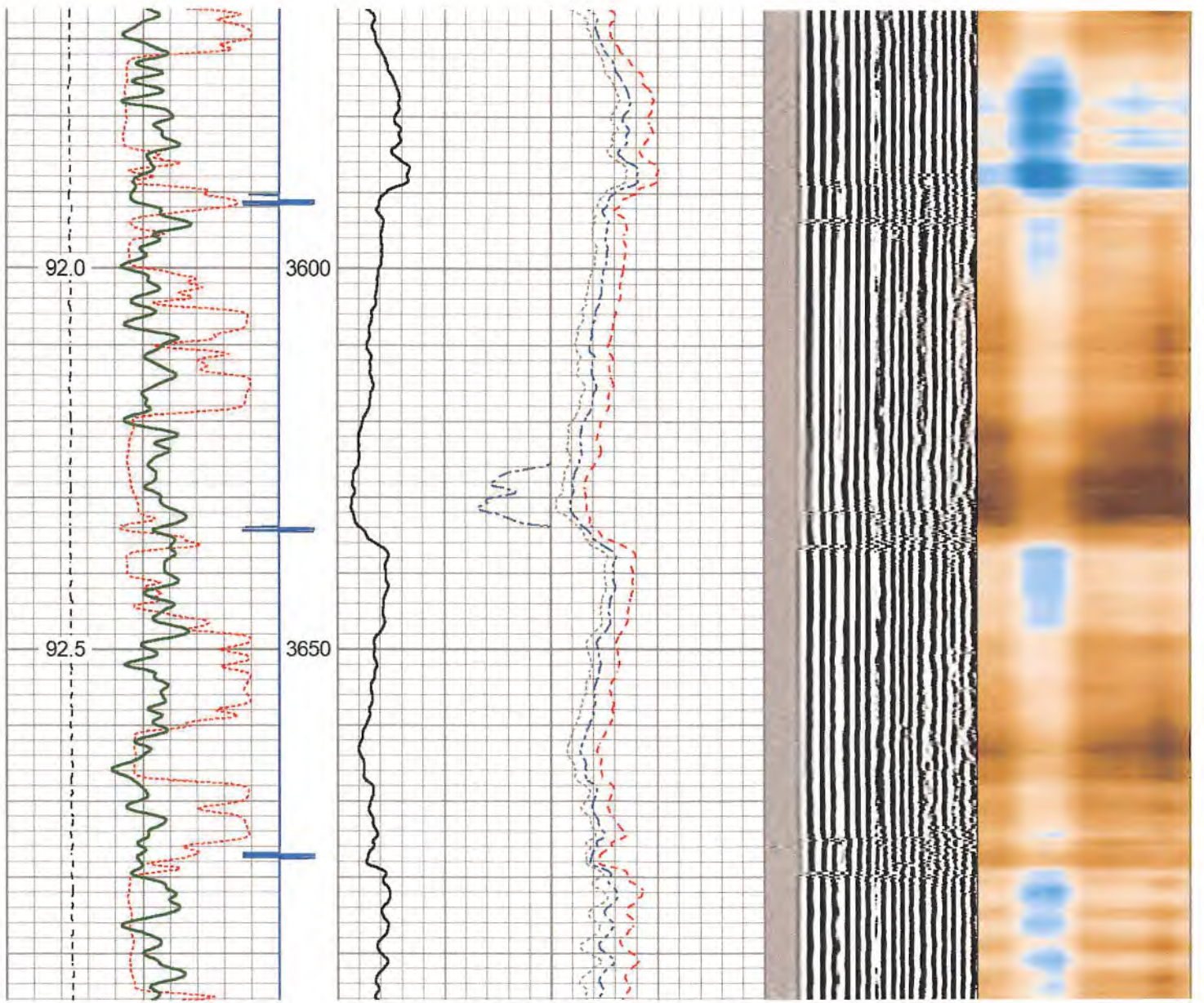


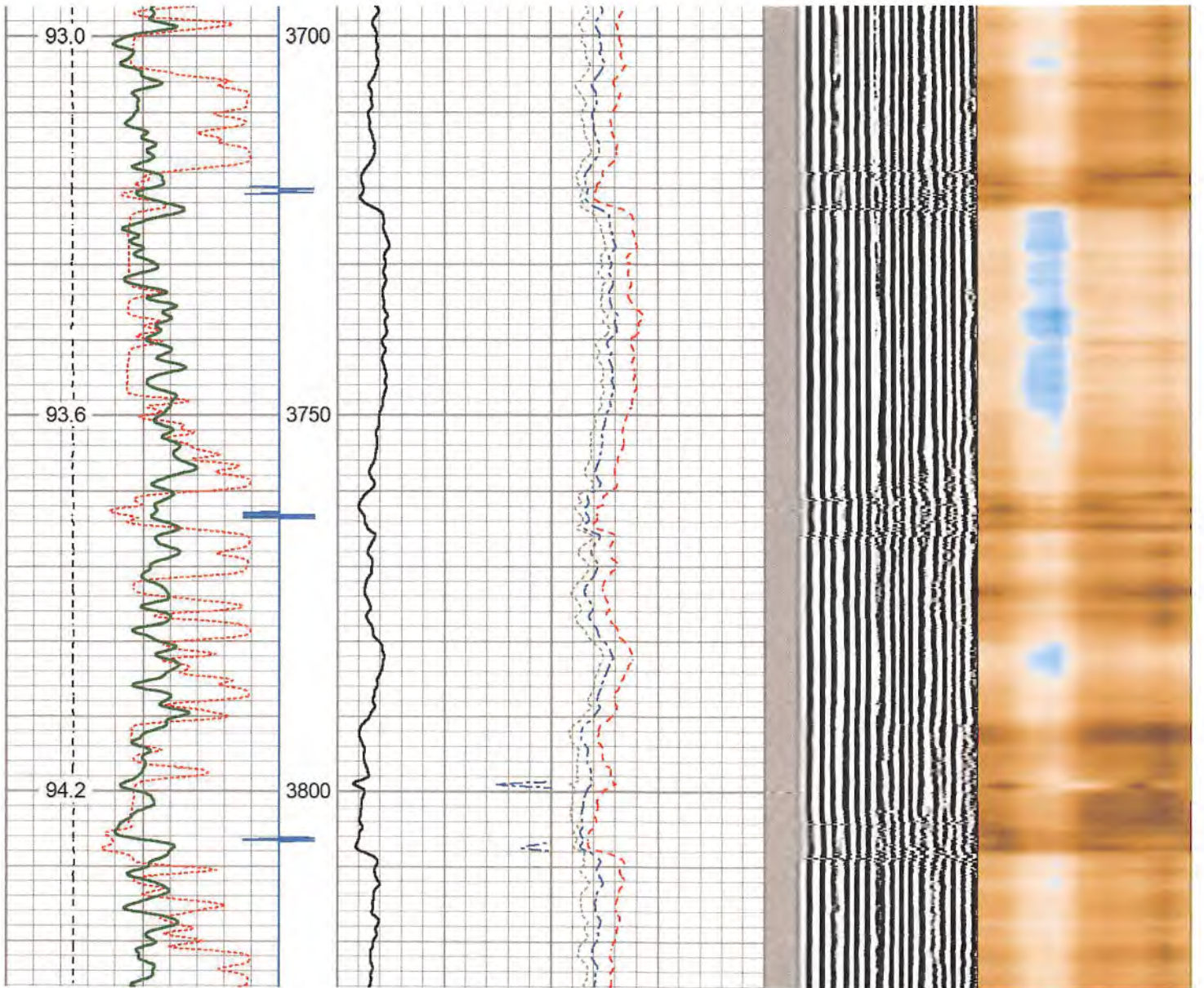


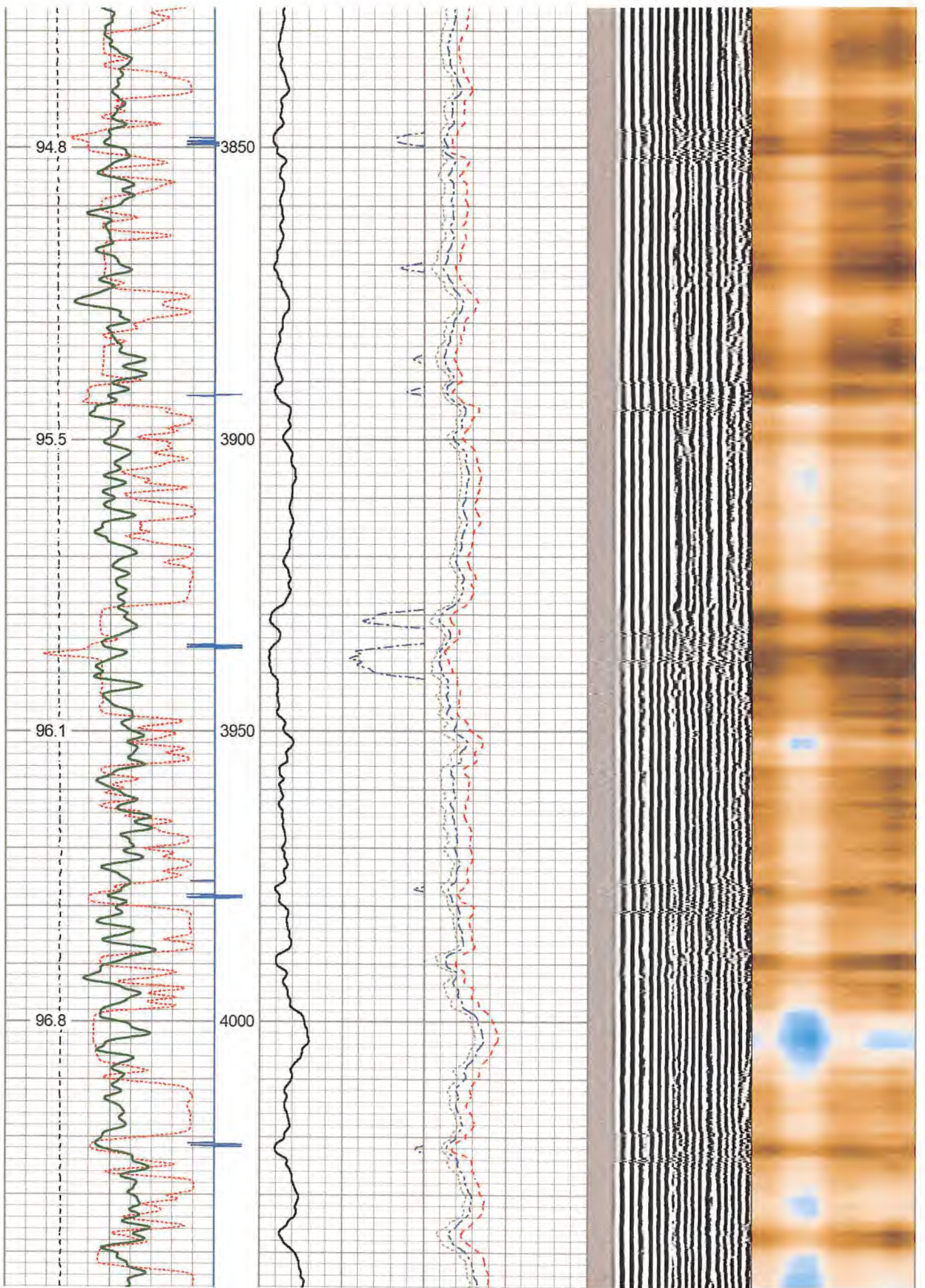


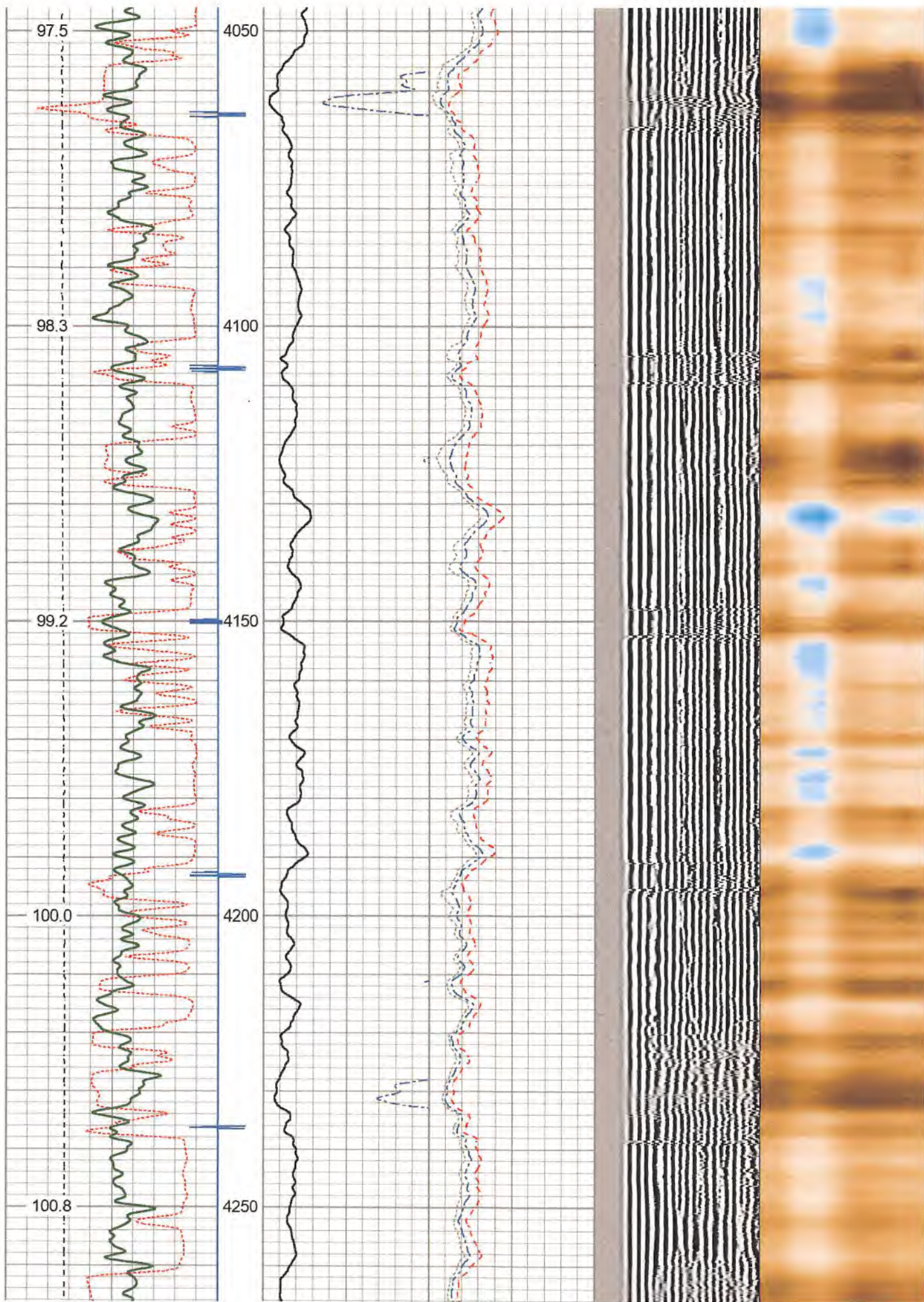


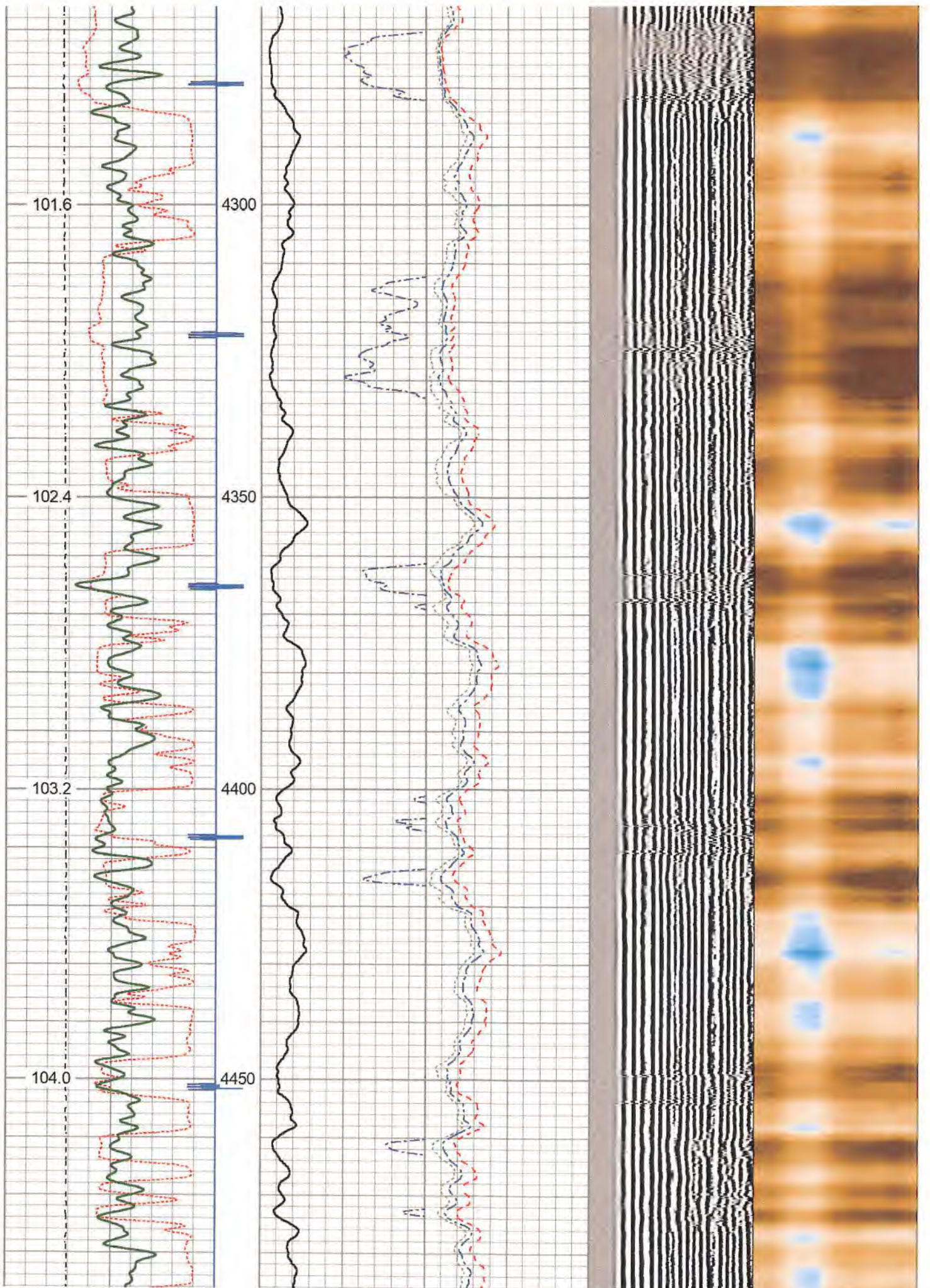


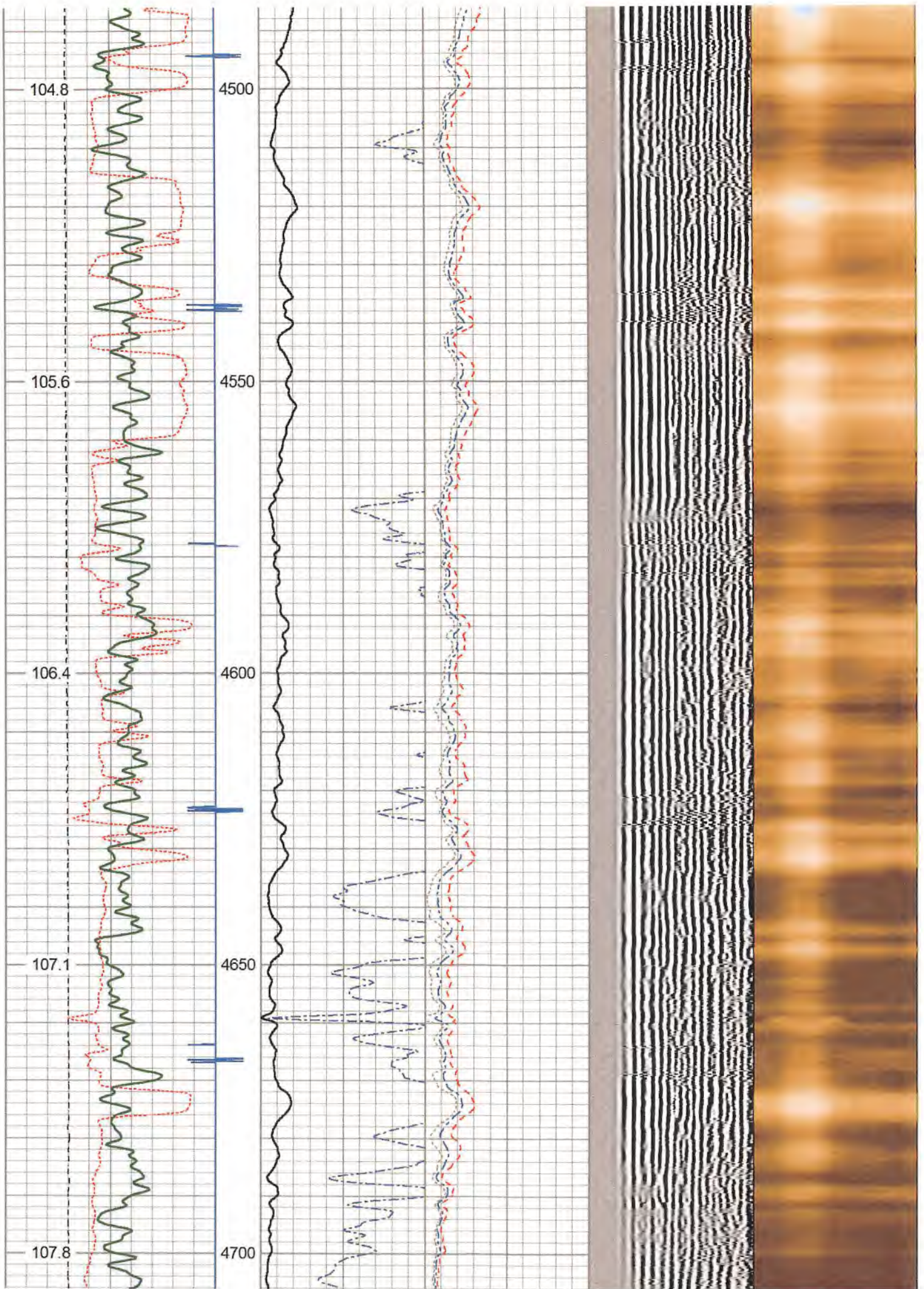


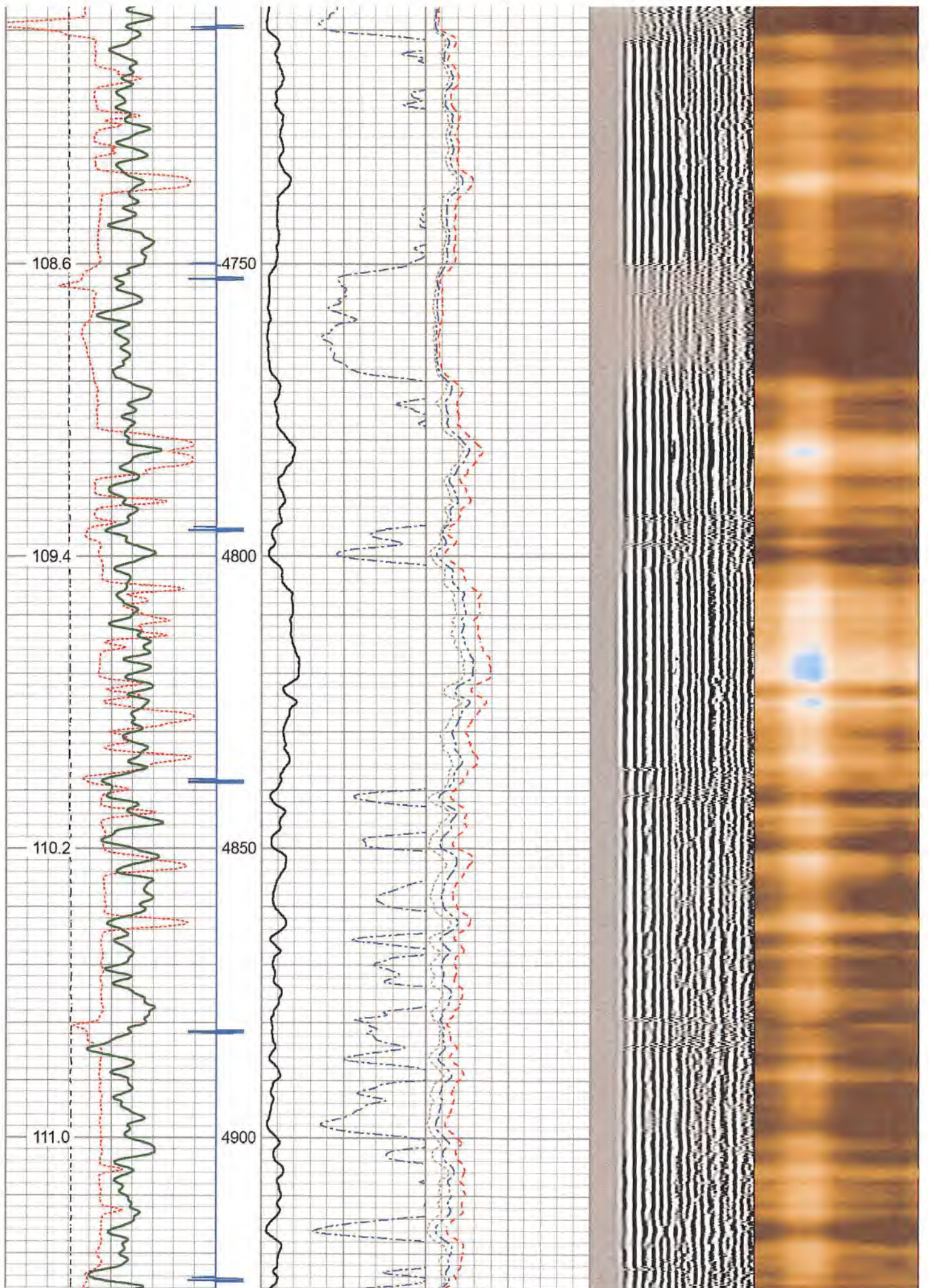


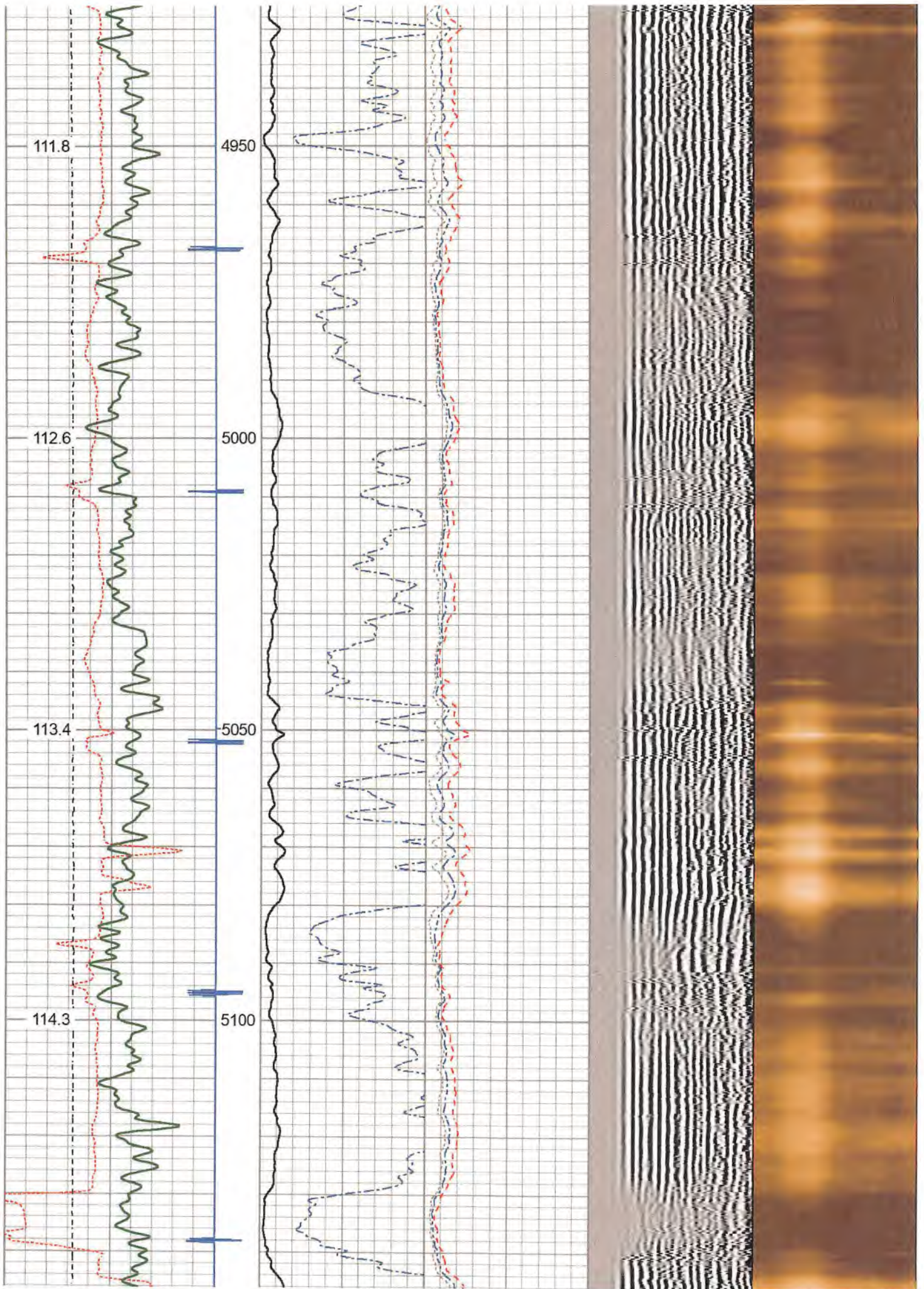


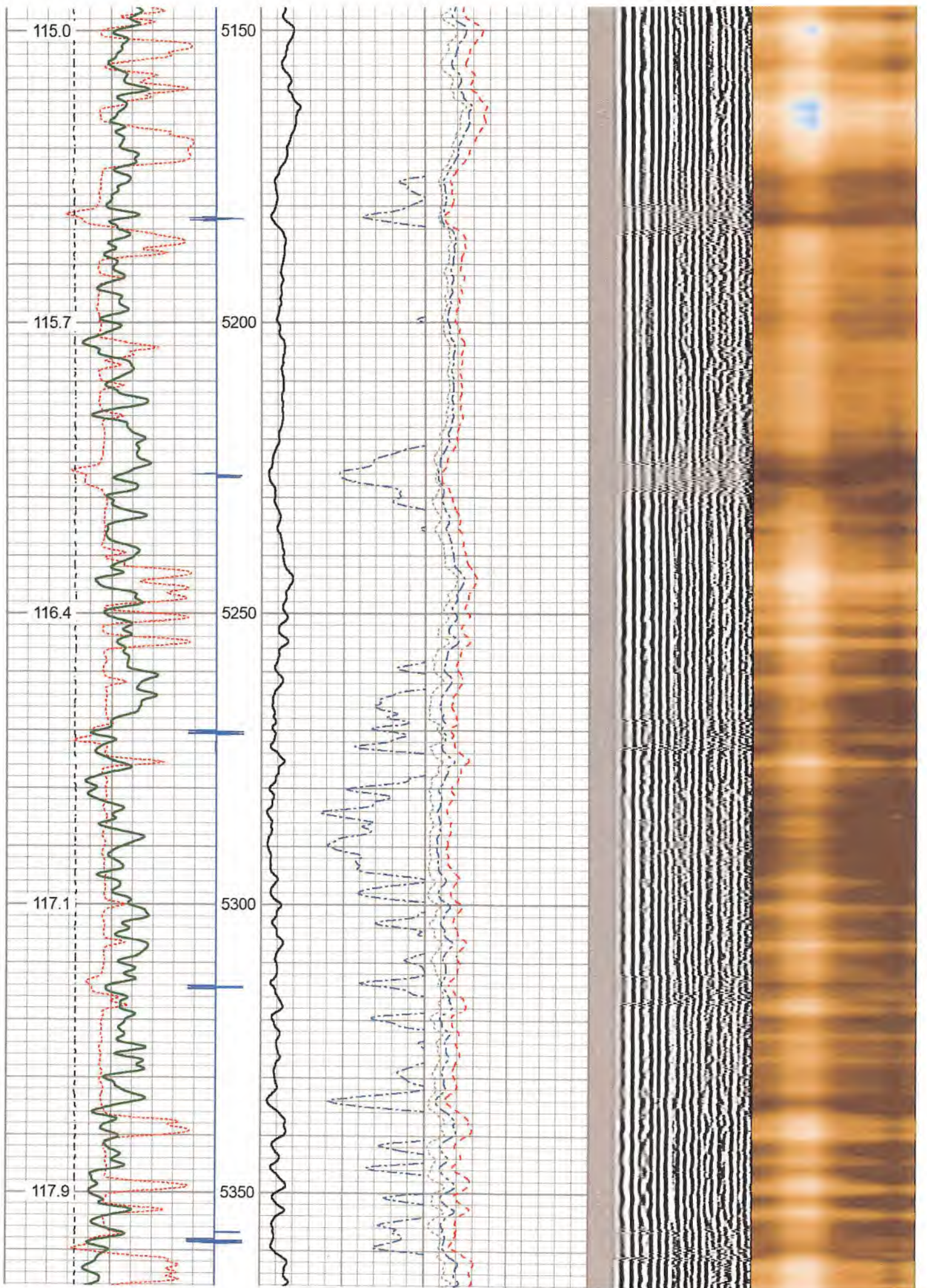


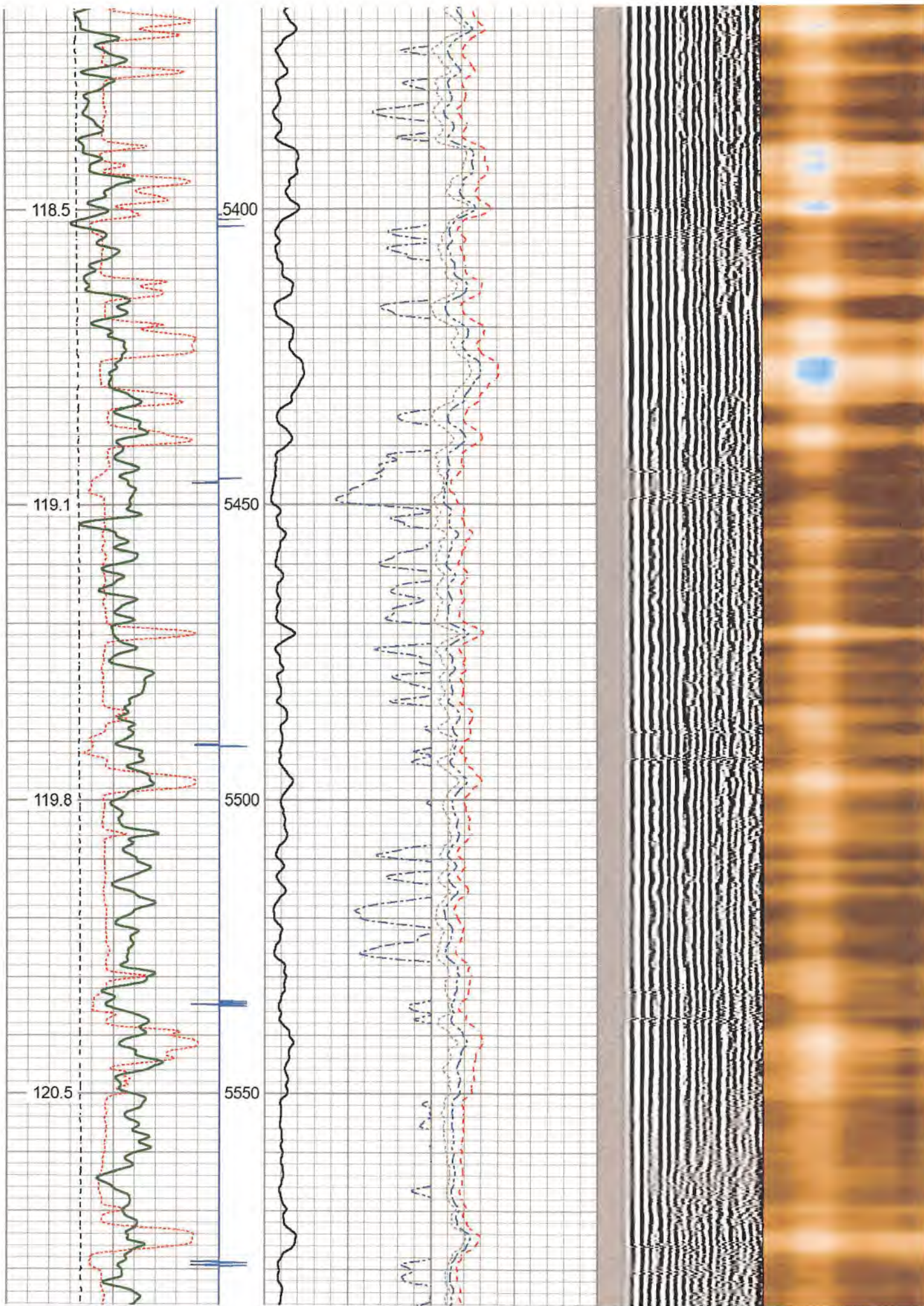


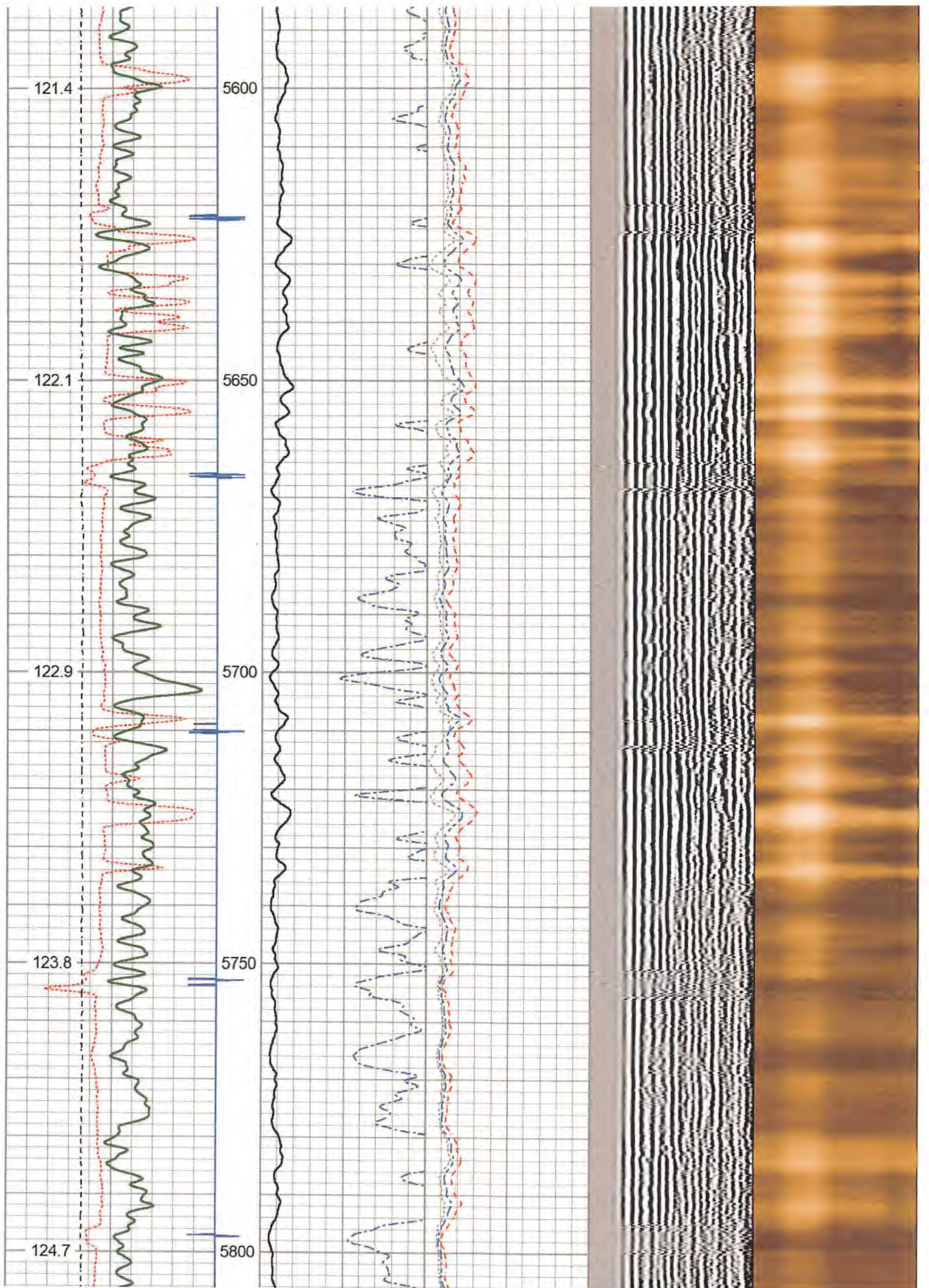


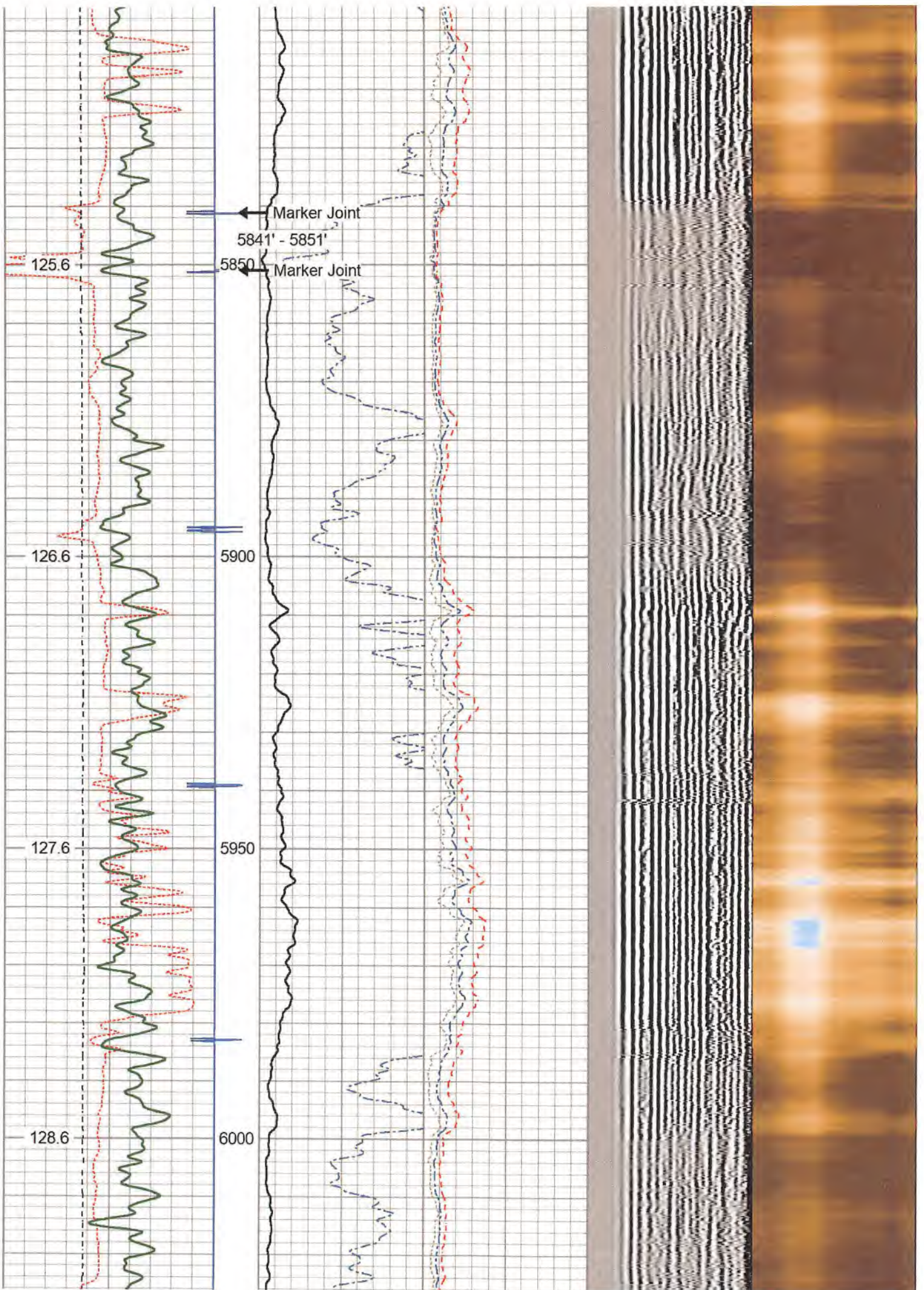


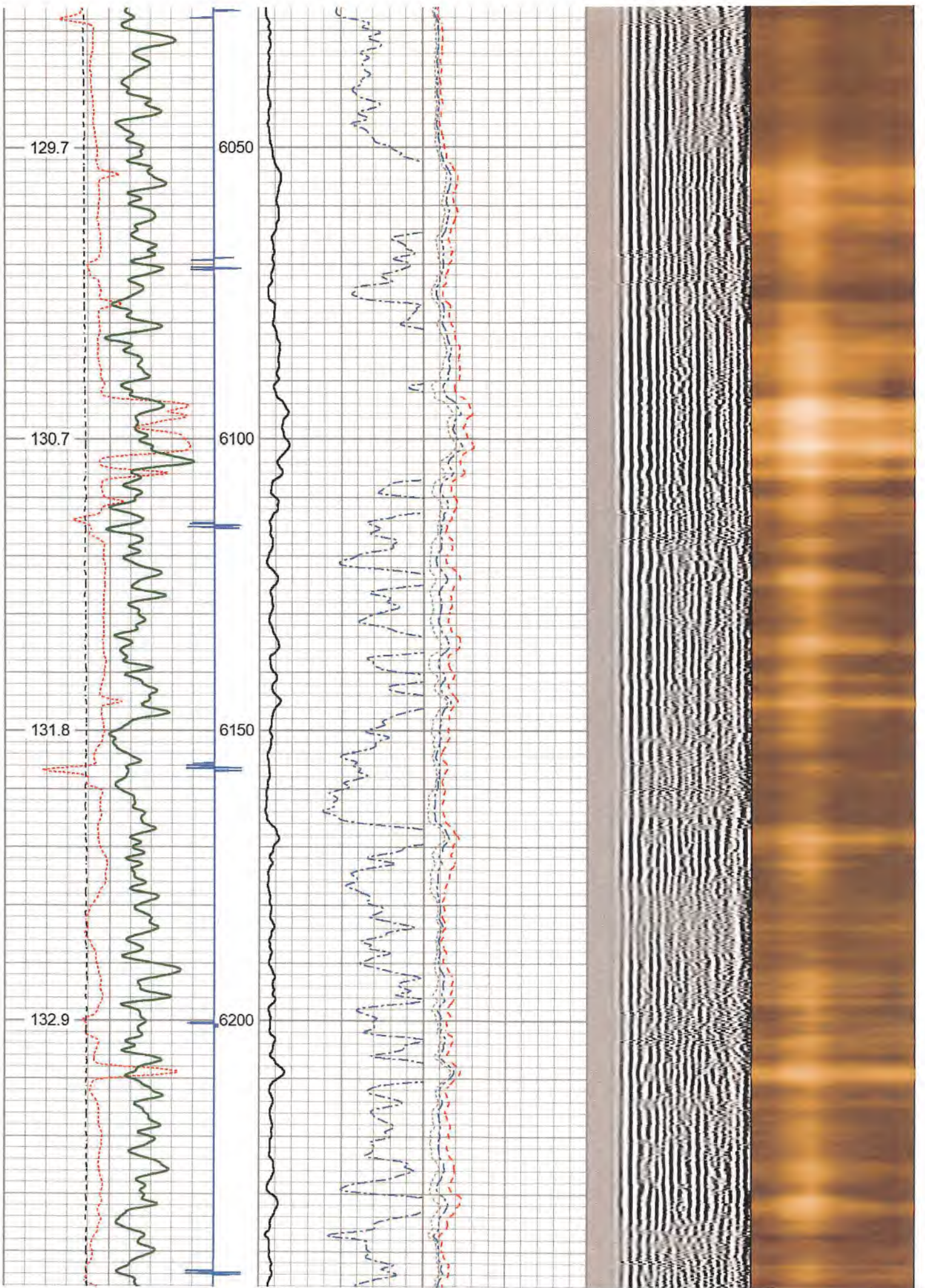


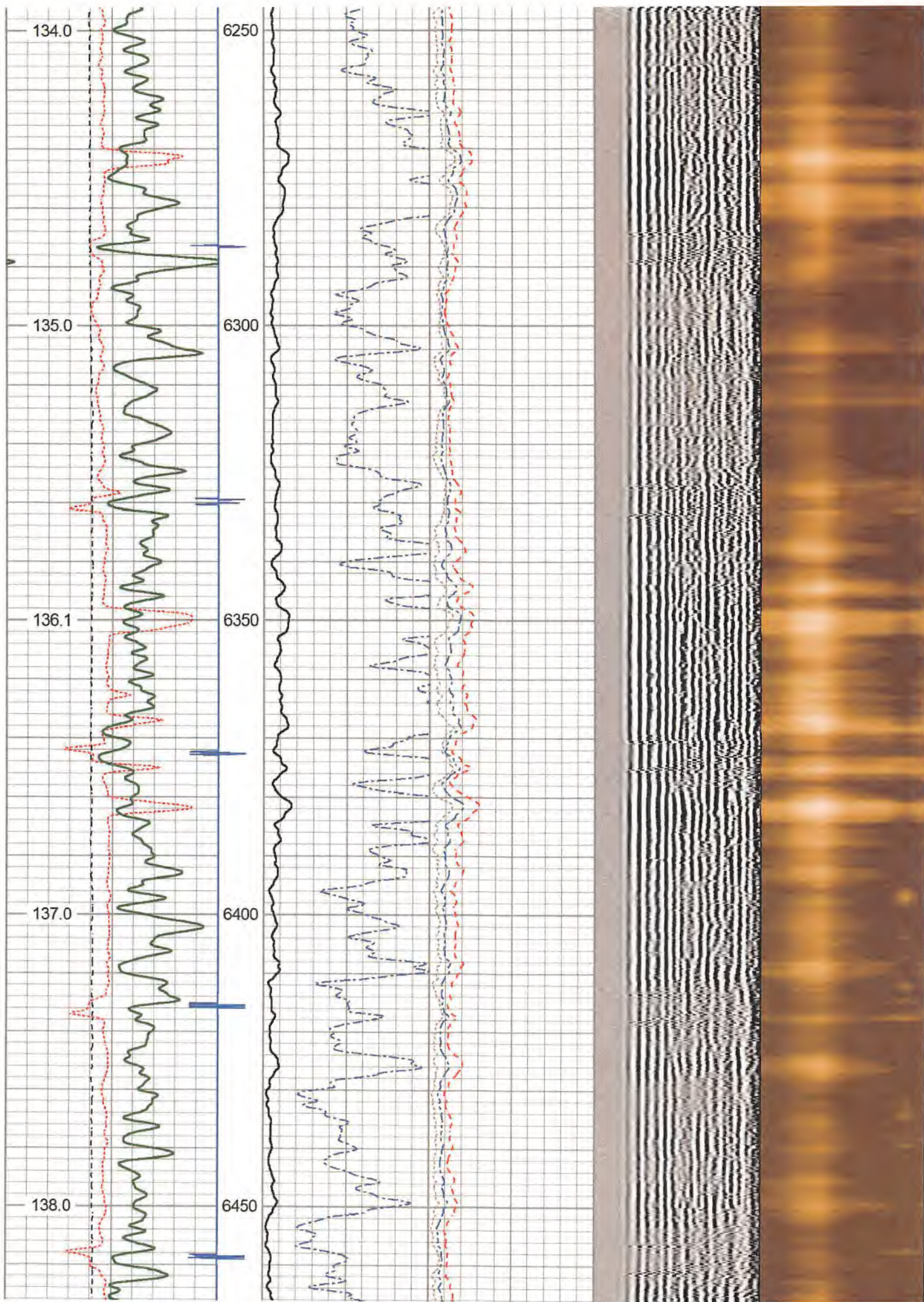


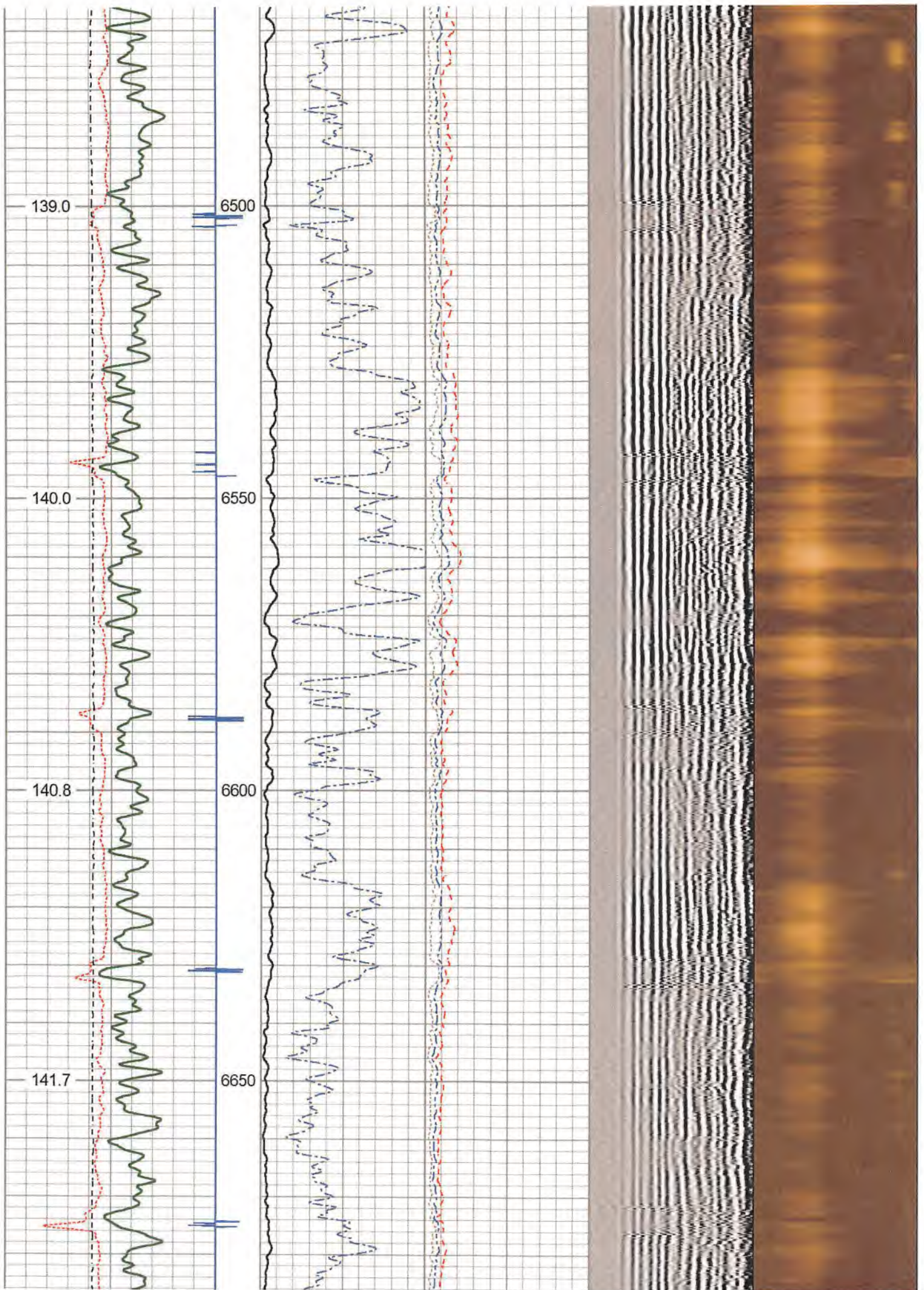


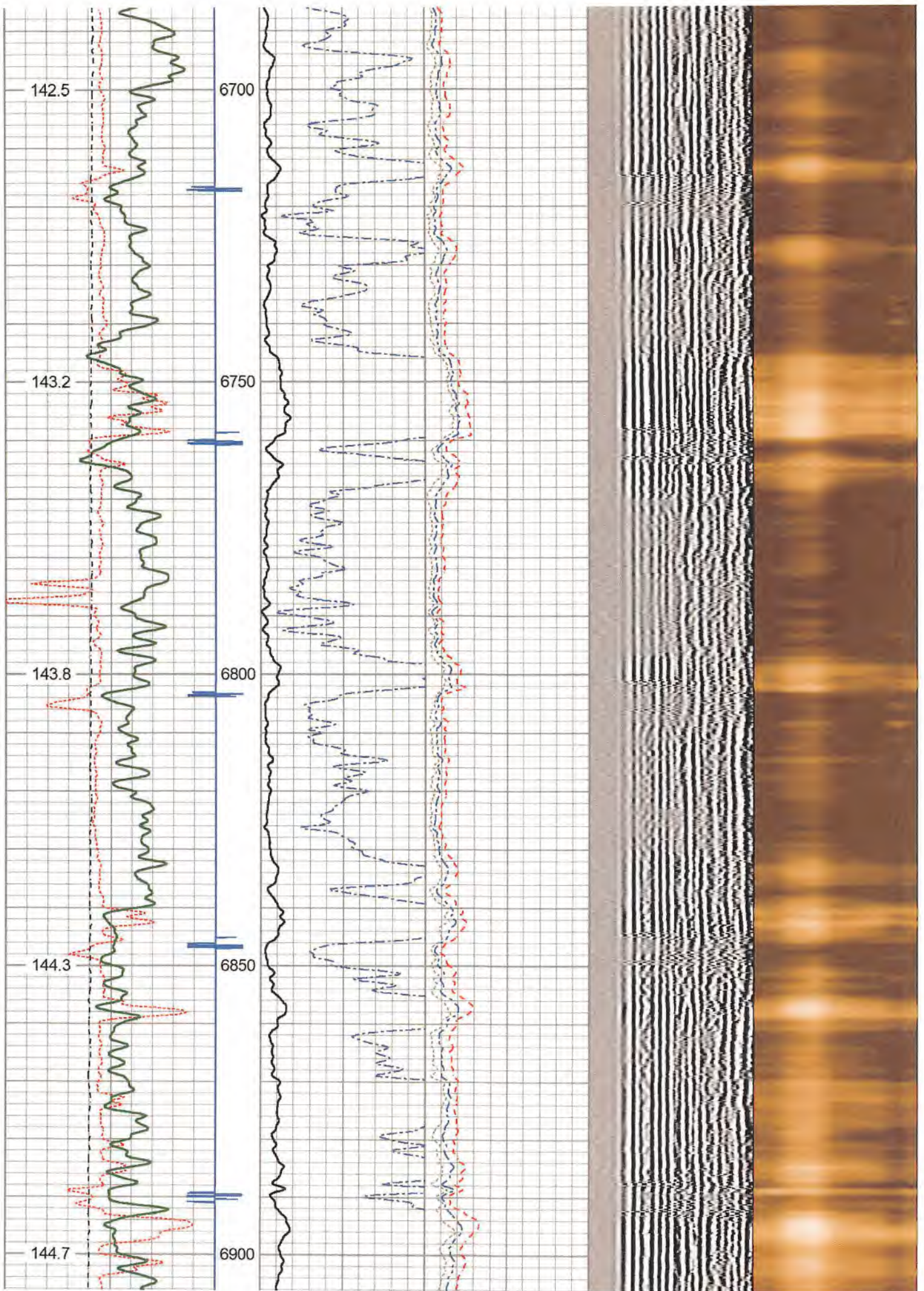


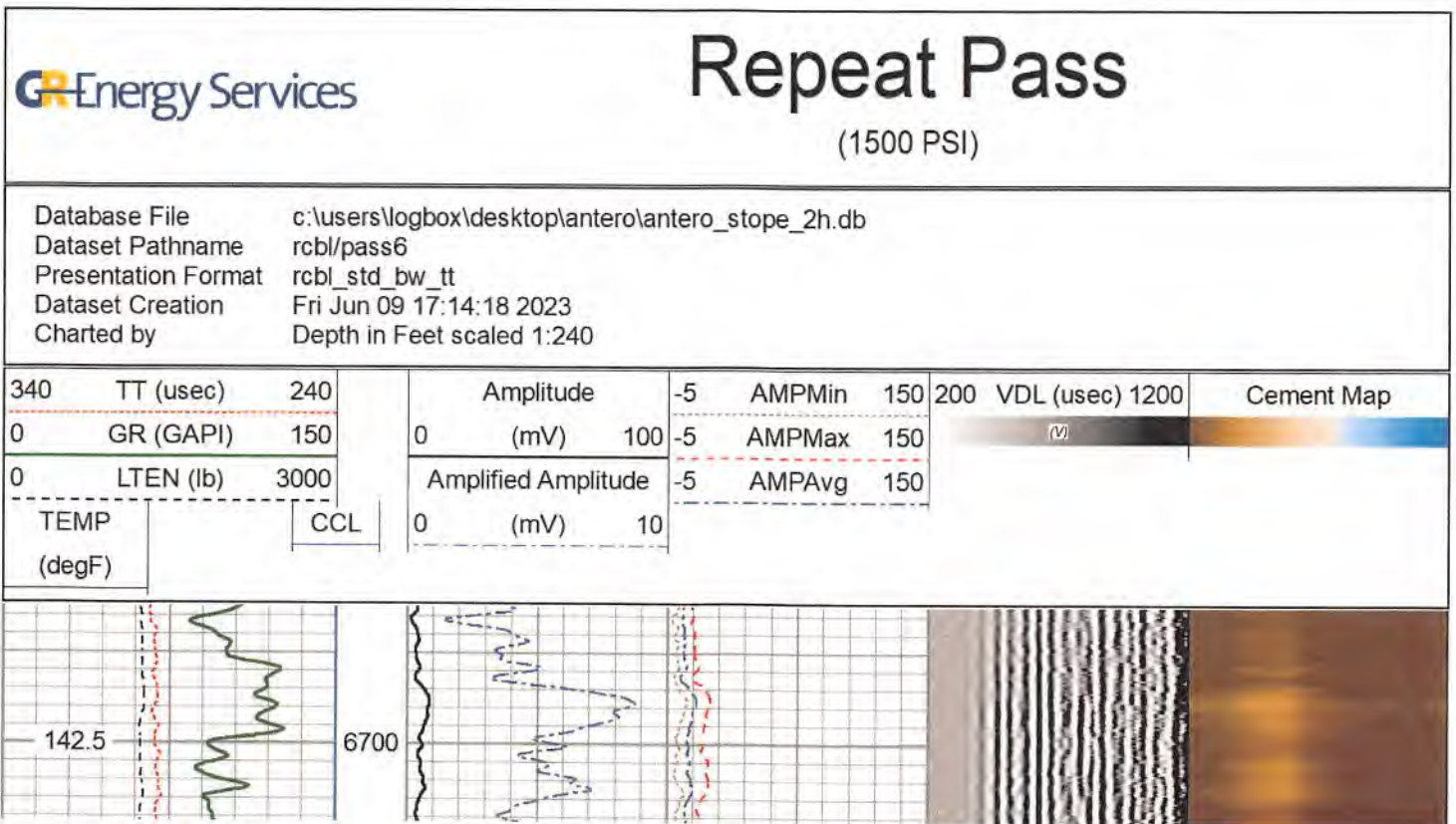
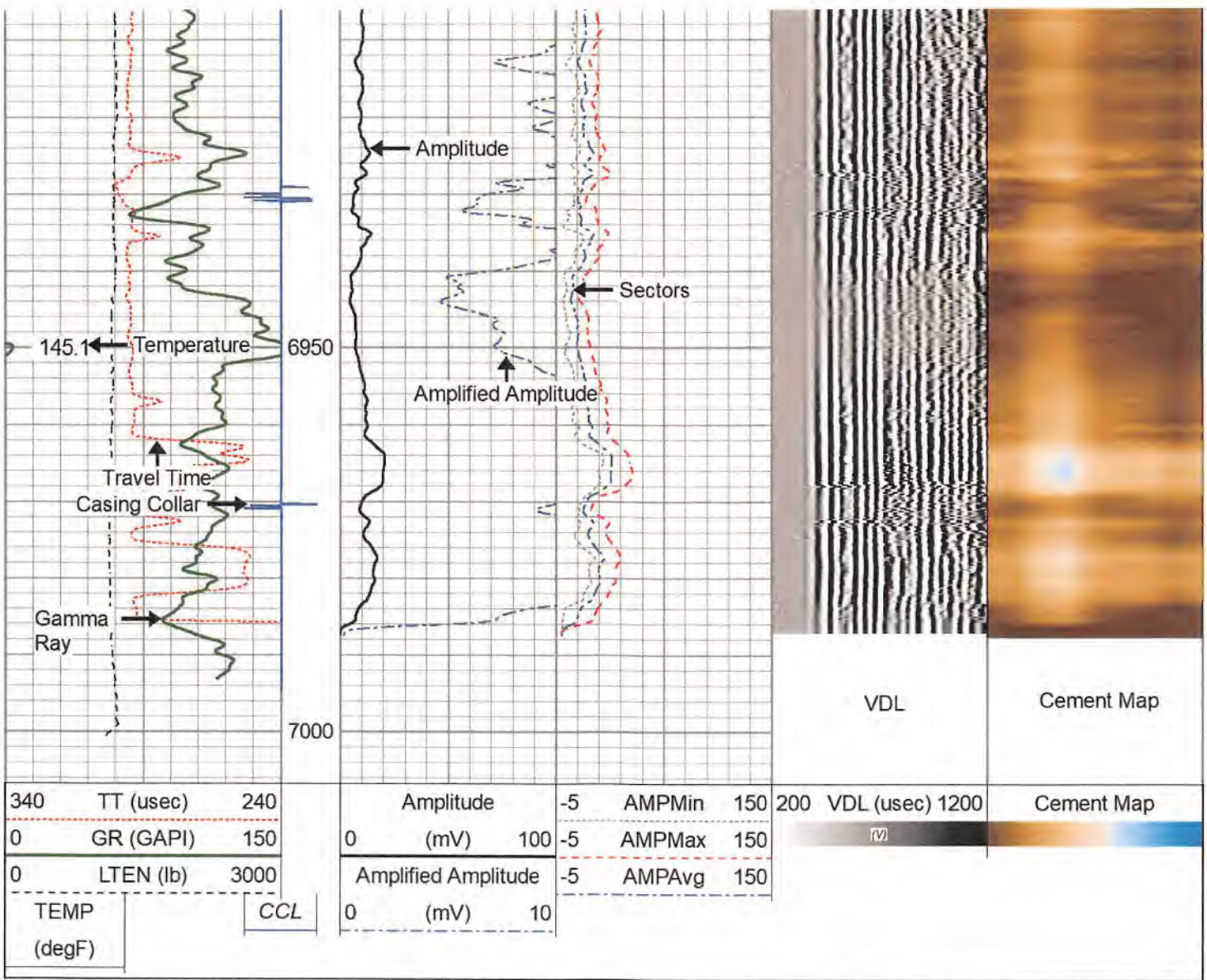


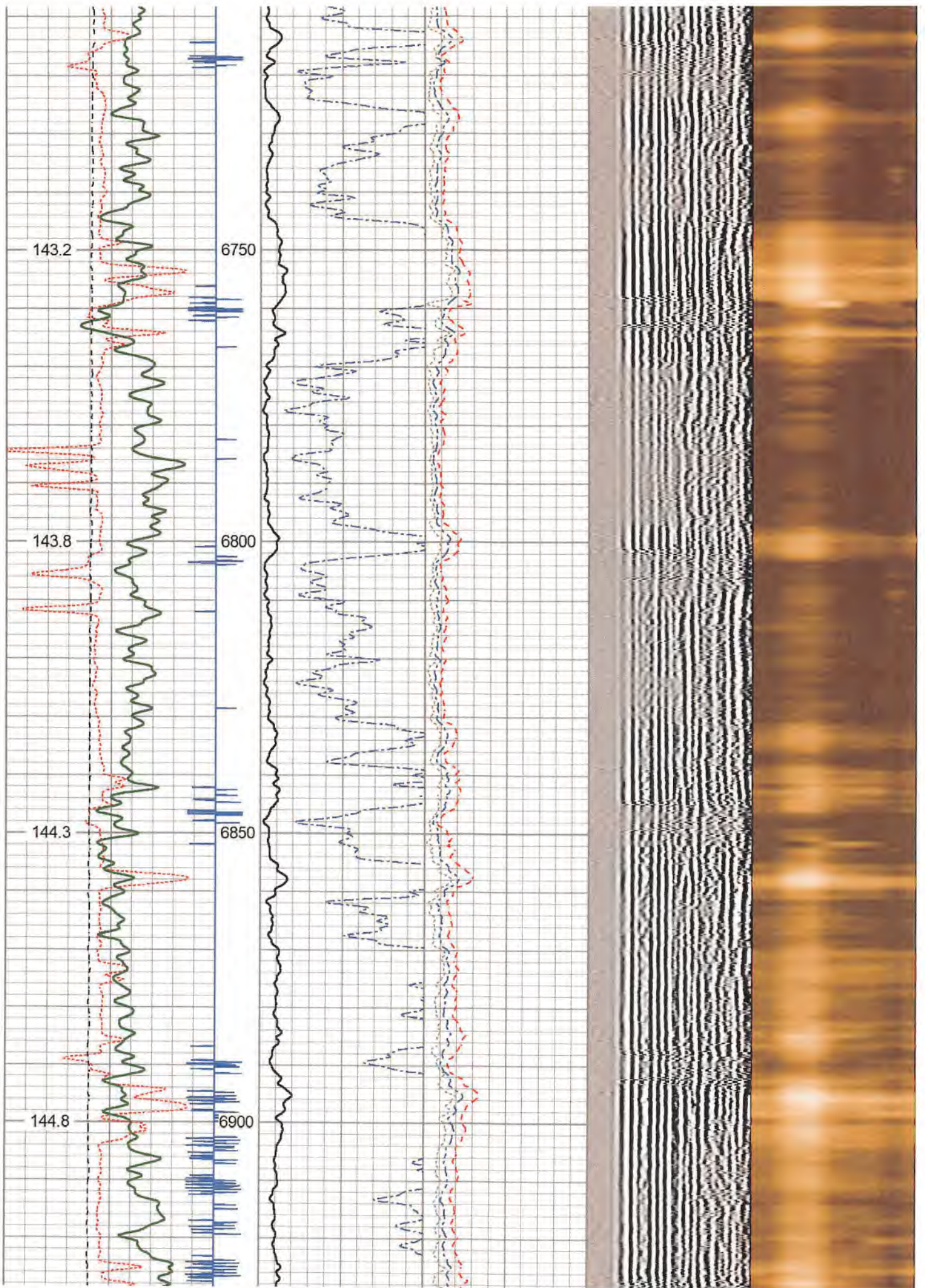


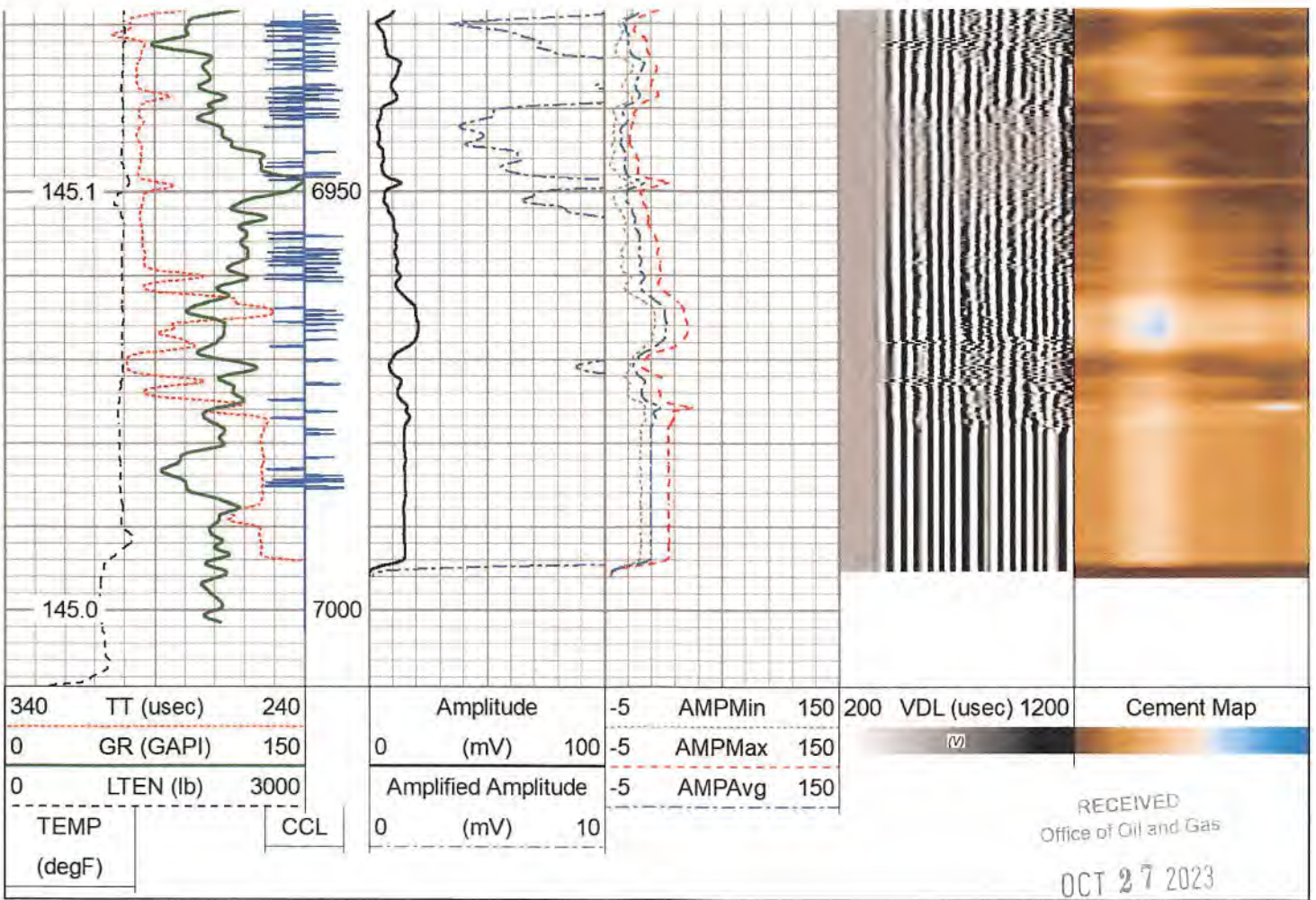












Log Variables

Database: \users\logbox\desktop\antero\antero_stope_2h.db
 Dataset: field/well/rcbl/pass8/_vars_

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Top - Bottom							
BOREID in 8.5	BOTTEMP degF 100	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 84	TDEPTH ft 6997				

Variable Description

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

Calibration Report	
Database File	c:\users\logbox\desktop\antero\antero_stope_2h.db
Dataset Pathname	rcbl/pass8
Dataset Creation	Fri Jun 09 17:21:07 2023
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: 106.308 ft

Master Calibration, performed Fri Jun 9 13:58:16 2023:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.008	0.656	1.000	71.921	109.366	0.156
CAL	0.007	0.896				
5'	0.006	0.602	1.000	71.921	119.005	0.253
SUM						
S1	0.005	0.650	0.000	100.000	155.187	-0.816
S2	0.008	0.640	0.000	100.000	158.318	-1.343
S3	0.008	0.628	0.000	100.000	161.266	-1.230
S4	0.006	0.620	0.000	100.000	162.908	-0.992
S5	0.008	0.622	0.000	100.000	162.808	-1.238
S6	0.009	0.637	0.000	100.000	159.164	-1.354
S7	0.007	0.650	0.000	100.000	155.526	-1.088
S8	0.006	0.660	0.000	100.000	153.001	-0.945

Internal Reference Calibration, performed Mon Apr 17 11:08:13 2023:

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	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.007	0.896	1.000	0.000


Air Zero Calibration, performed Fri Jun 9 09:32:12 2023:

	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	

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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

WVFS2	14.69		RBT8-RADII-275C (RBT275C_Base) Probe 2.75" RADII 8 Sector Bond Tool	8.75	2.75	130.00
WVFS1	14.69					
WVFS8	14.69					
WVFS7	14.69					
WVFS6	14.69					
WVFS5	14.69					
WVFS4	14.69					
WVFS3	14.69					
WV3FT	14.69					
WV5FT	13.69					
RBT_ACCZ	10.44					
RBT_ACCY	10.44					
RBT_ACCX	10.44					
WVFSYNC	10.44					
WVFCAL	10.44					
GCT_HV	7.60	CENT-BC275-0000 Probe 2.75" Bowspring Centralizer	2.83	2.75	24.00	
CCL\$2	6.64	GC-GCT275-0000 (GCT275-0000_base) Probe Gamma Ray - CCL w/ Temp	4.77	2.75	55.00	
CCL\$1	6.64					
GCT_Temp	6.09					
GR	5.22	CENT-BC275-0000 Probe 2.75" Bowspring Centralizer	2.83	2.75	24.00	

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Dataset: antero_stope_2h.db: field/well/rcbl/pass8
 Total length: 23.04 ft
 Total weight: 260.31 lb
 O.D.: 2.75 in



Company Antero Resources Corporation
 Well Stope Unit 2H
 Field White Oak
 County Doddridge
 State WV
 Country USA