



RADIAL BOND LOG

Company ANTERO	Company ANTERO		
Well GRIBBEN UNIT 2H	Well GRIBBEN UNIT 2H		
Field MARCELLUS	Field MARCELLUS		
County WETZEL	County WETZEL		
State WV	State WV		
Location: API #: 47103034270000			
Other Services GR CCL			
SEC	TWP	RGE	Elevation
Permanent Datum	GL	Elevation	30'
Log Measured From	KB	K.B. 1338'	
Drilling Measured From	KB	D.F. 1337'	
		G.L. 1308'	

Date	JAN-16-2022
Run Number	ONE
Depth Driller	18,945'
Depth Logger	7356'
Bottom Logged Interval	7342'
Top Log Interval	SURFACE
Open Hole Size	8.50"
Type Fluid	PRODUCED
Density / Viscosity	8.3#
Max. Recorded Temp.	147°F
Estimated Cement Top	5416'
Time Well Ready	05:40
Time Logger on Bottom	06:20
Equipment Number	TK 111
Location	CHARLEROI, PA
Recorded By	D. JOSEPHIK
Witnessed By	REDGIE TAYLOR

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	13.375"	54.5#	SURFACE	665'
Prot. String	9.625"	36#	SURFACE	2598'
Production String	5.5"	20#	SURFACE	18,925'
Liner				

<<< Fold Here >>>

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 MARKER JOINT (6183'-6193') PER CASING FALLING OFF
Office of Oil and Gas

FEB 07 2023
WV Department of Environmental Protection

100% FREE = 71.9MV
100% BOND = 2.2MV
ETOC = 5416'

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
CHD	23.96		CHD-Titan Standard 1 7/16" Cable Head	1.02	1.44	1.00
CENT	22.94					

[Handwritten signature]

				CENT-BC275-0000 Probe 2.75" Bowspring Centralizer	2.83	2.75	24.00
RBT HeadVolt	20.11 20.05						
Temp	17.20						
WVFS8	14.97			RBT-Probe275T (FW1312-32) Probe 2.75" Radial with Integral Temperature Sub	9.39	2.75	90.00
WVFS7	14.97						
WVFS6	14.97						
WVFS5	14.97						
WVFS4	14.97						
WVFS3	14.97						
WVFS2	14.97						
WVFS1	14.97						
WVF3FT	14.97						
WVF5FT	13.97						
CENT	10.72						
WVFCAL	10.72						
HEADVOLT	10.72			CENT-BC275-0000 Probe 2.75" Bowspring Centralizer	2.83	2.75	24.00
GR	7.89						
CCL	6.98						
GR	5.64			GR-Probe (FW1211-86) Probe 2 3/4" Logging Gamma Ray	4.78	2.75	57.00
CENT	3.10						
				CENT-BC275-0000 Probe 2.75" Bowspring Centralizer	2.83	2.75	24.00
Bull_Plug	0.27			Bull_Plug-1_7/16_GO Titan 1 7/16" Female Bull Plug	0.27	1.44	1.00

Dataset: antero_dogwood_gribben2h_rcbl-1-15-22.db: field/well/RCBL/MAIN
 Total length: 23.96 ft
 Total weight: 221.00 lb
 O.D.: 2.75 in



MAIN LOG

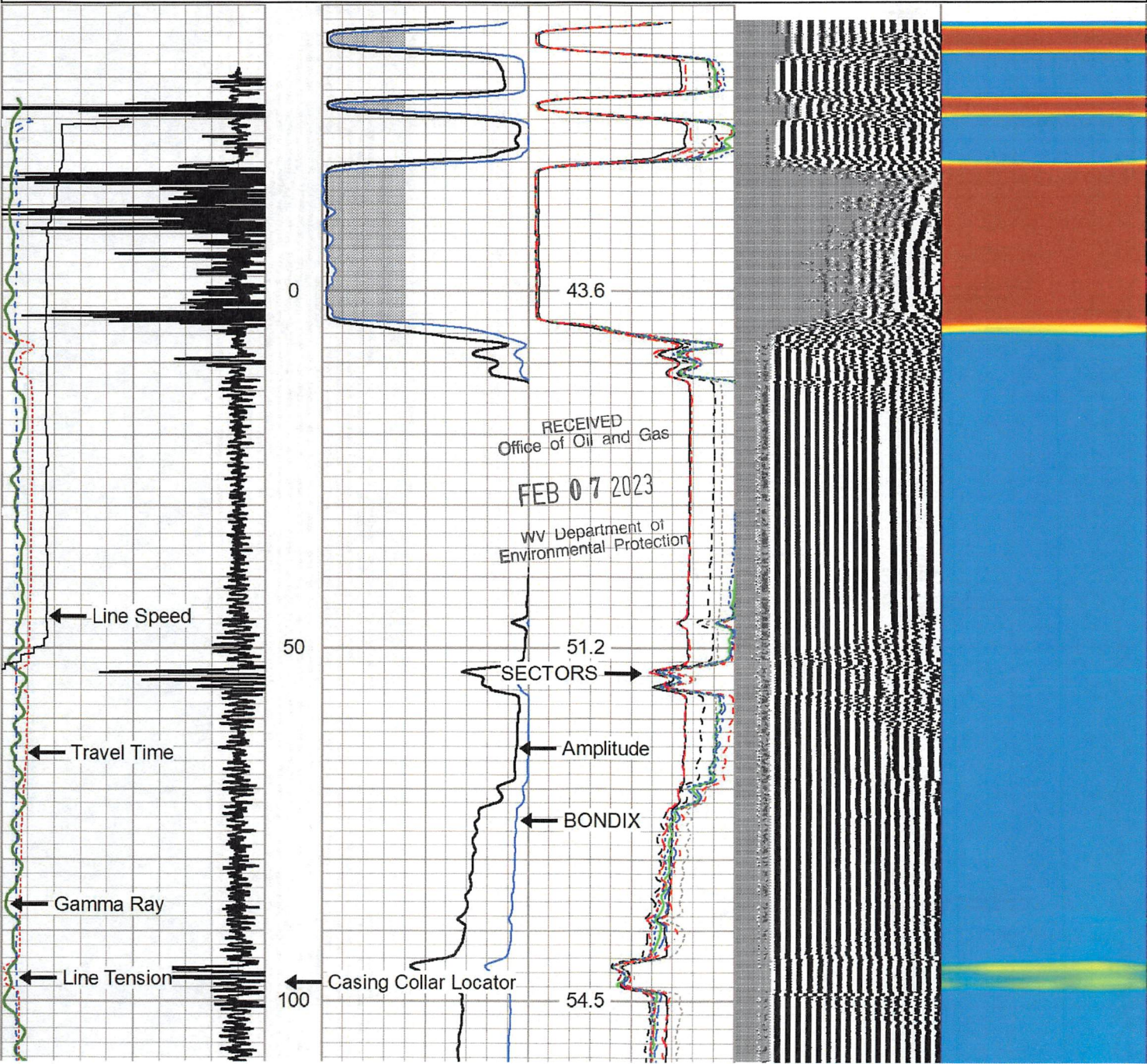
1500 PSI APPLIED

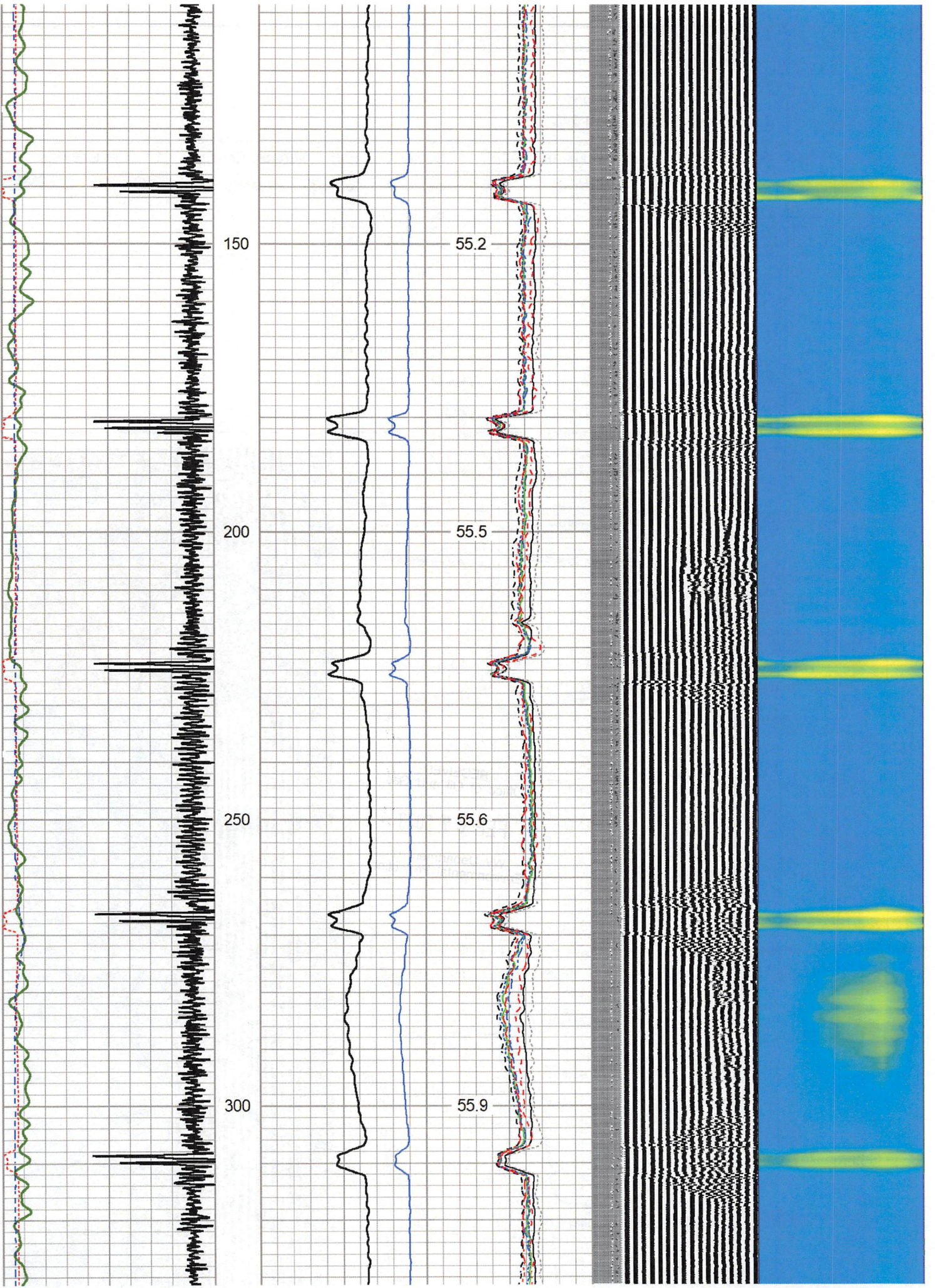
Database File antero_dogwood_gribben2h_rcbl-1-15-22.db
 Dataset Pathname RCBL/MAIN
 Presentation Format rcbl 2
 Dataset Creation Sun Jan 16 07:44:12 2022
 Charted by Depth in Feet scaled 1:240

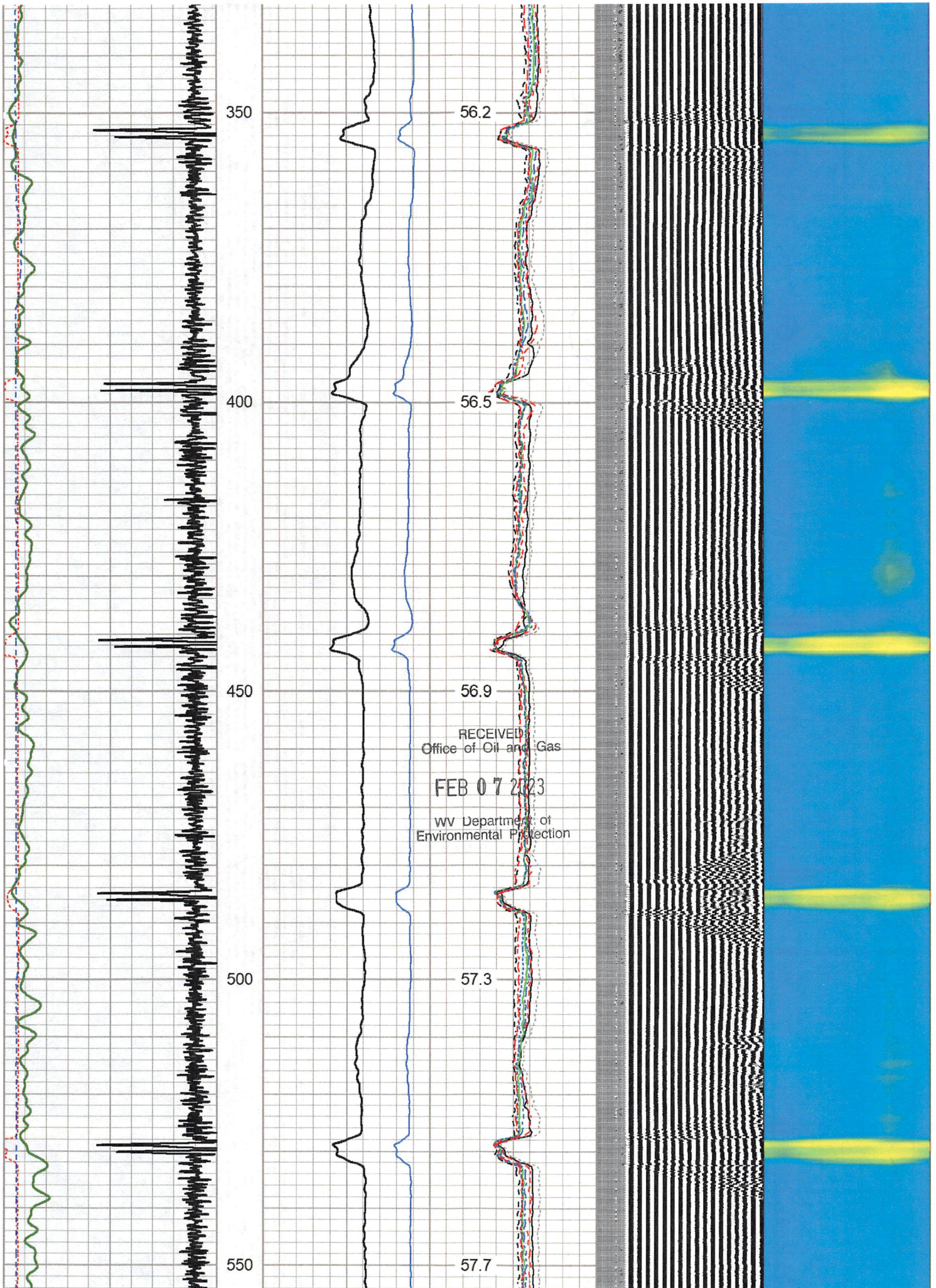
297	Travel Time (usec)	197
9	Casing Collar	-1
0	Gamma Ray (GAPI)	150
0	Line Tension (lb)	5000
-100	LSPD (ft/min)	100

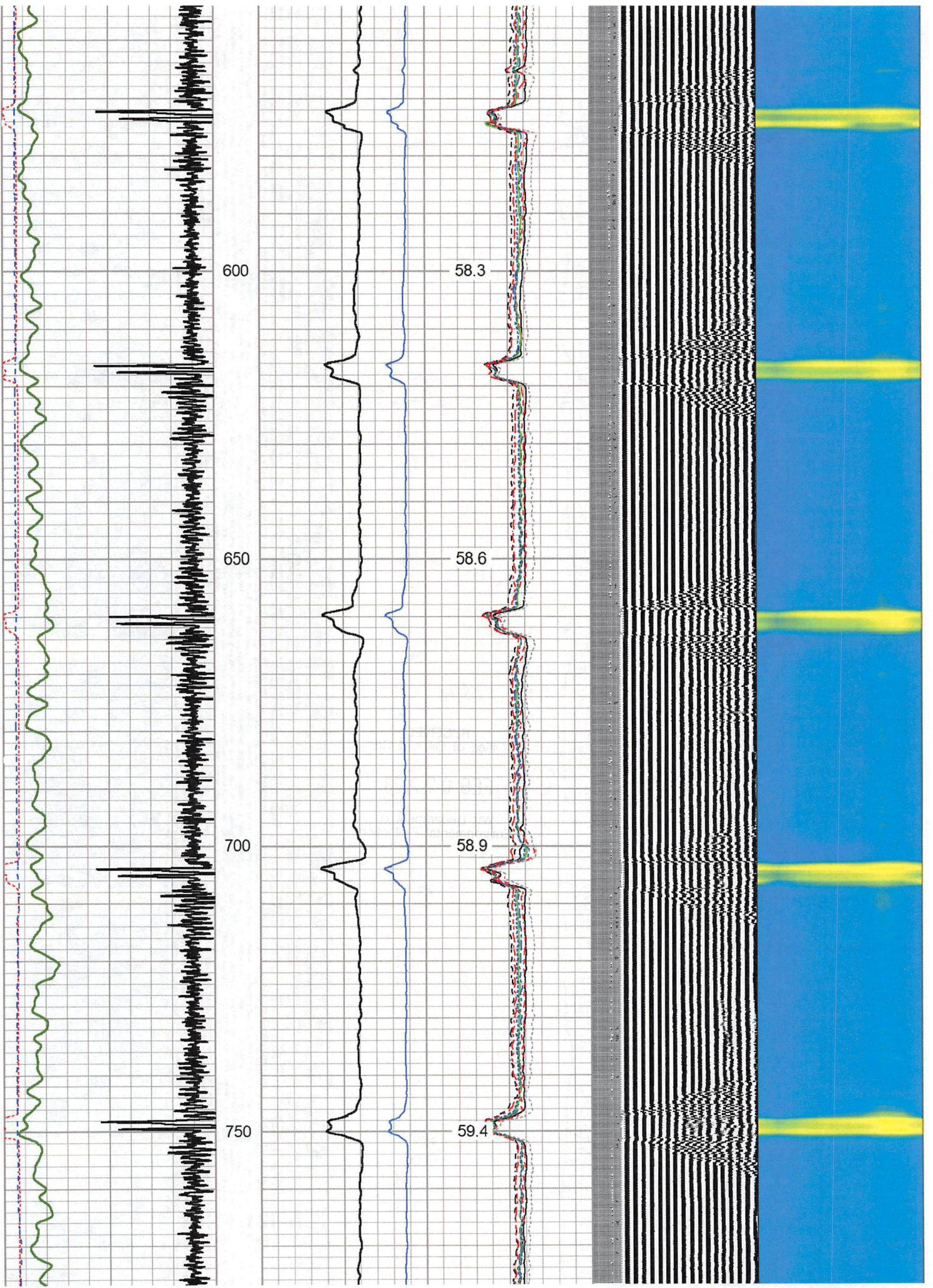
0	Amplitude (mV)	100	-5	Sector 1	150
1	BONDIX	0	-5	Sector 2	150
			-5	Sector 3	150
			-5	Sector 4	150
			-5	Sector 5	150
			-5	Sector 6	150
			-5	Sector 7	150
			-5	Sector 8	150
TEMP					
(degF)					

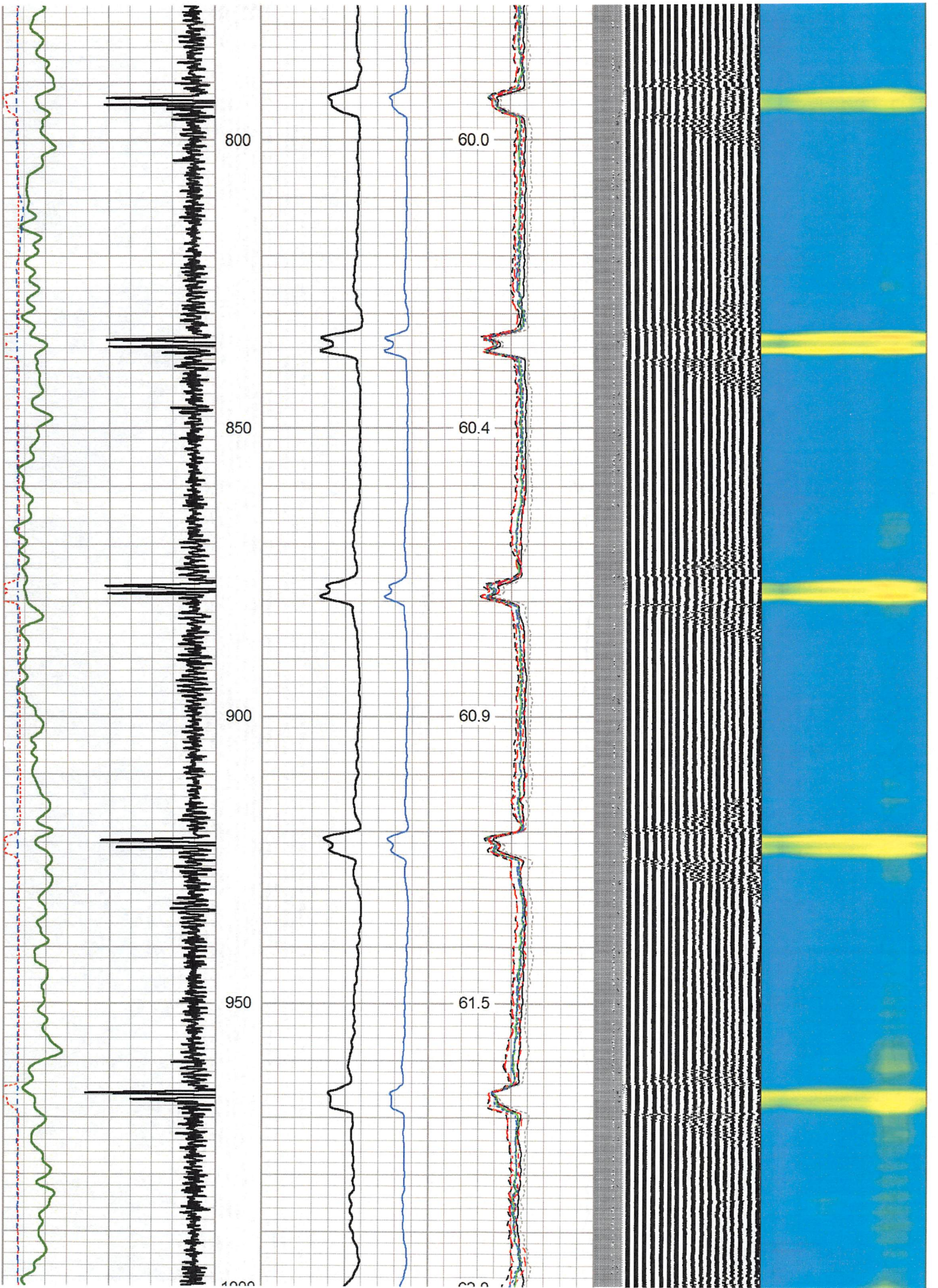
Variable Density 1 Cement Map 8
 200 (usec) 1200

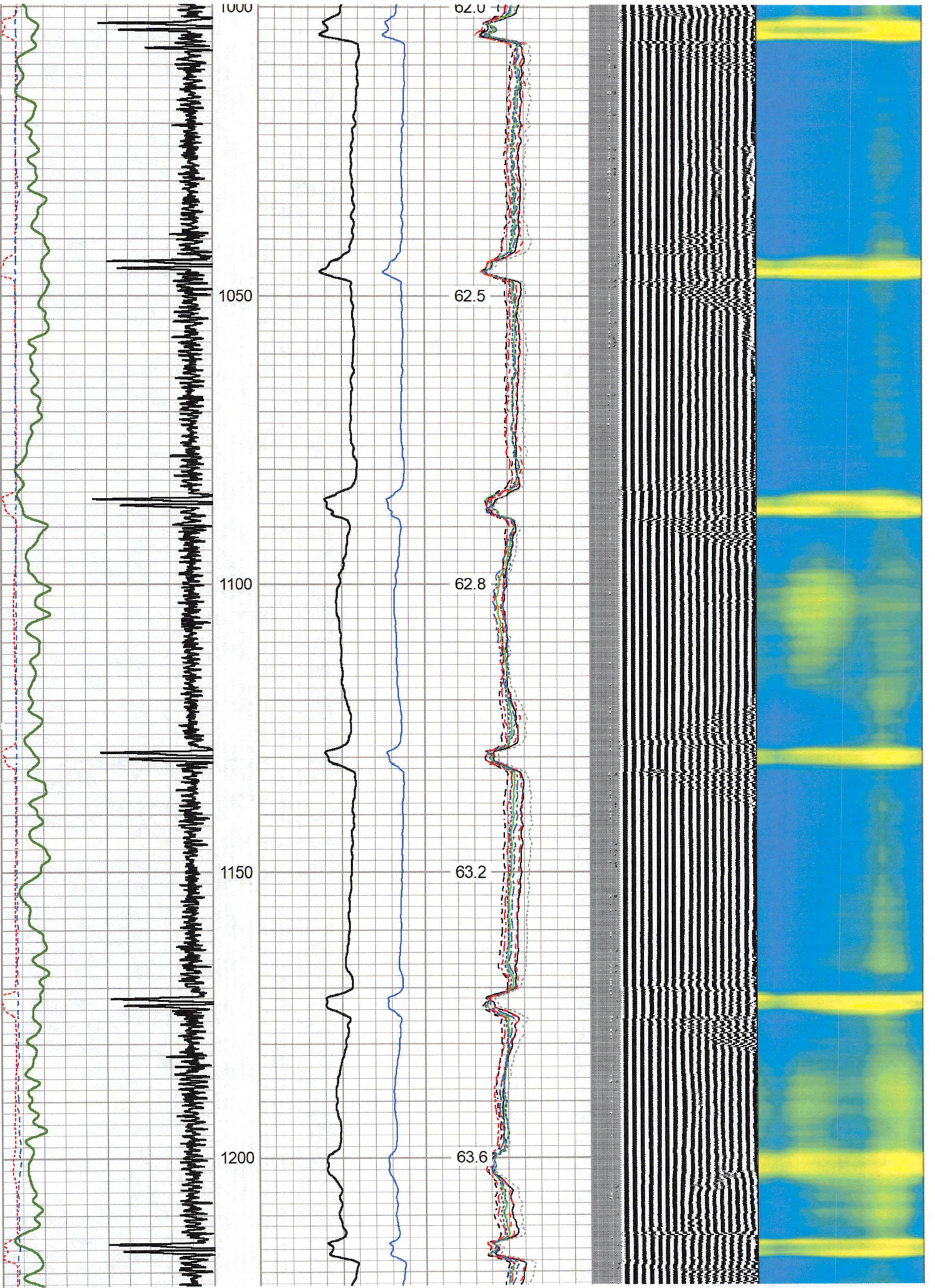


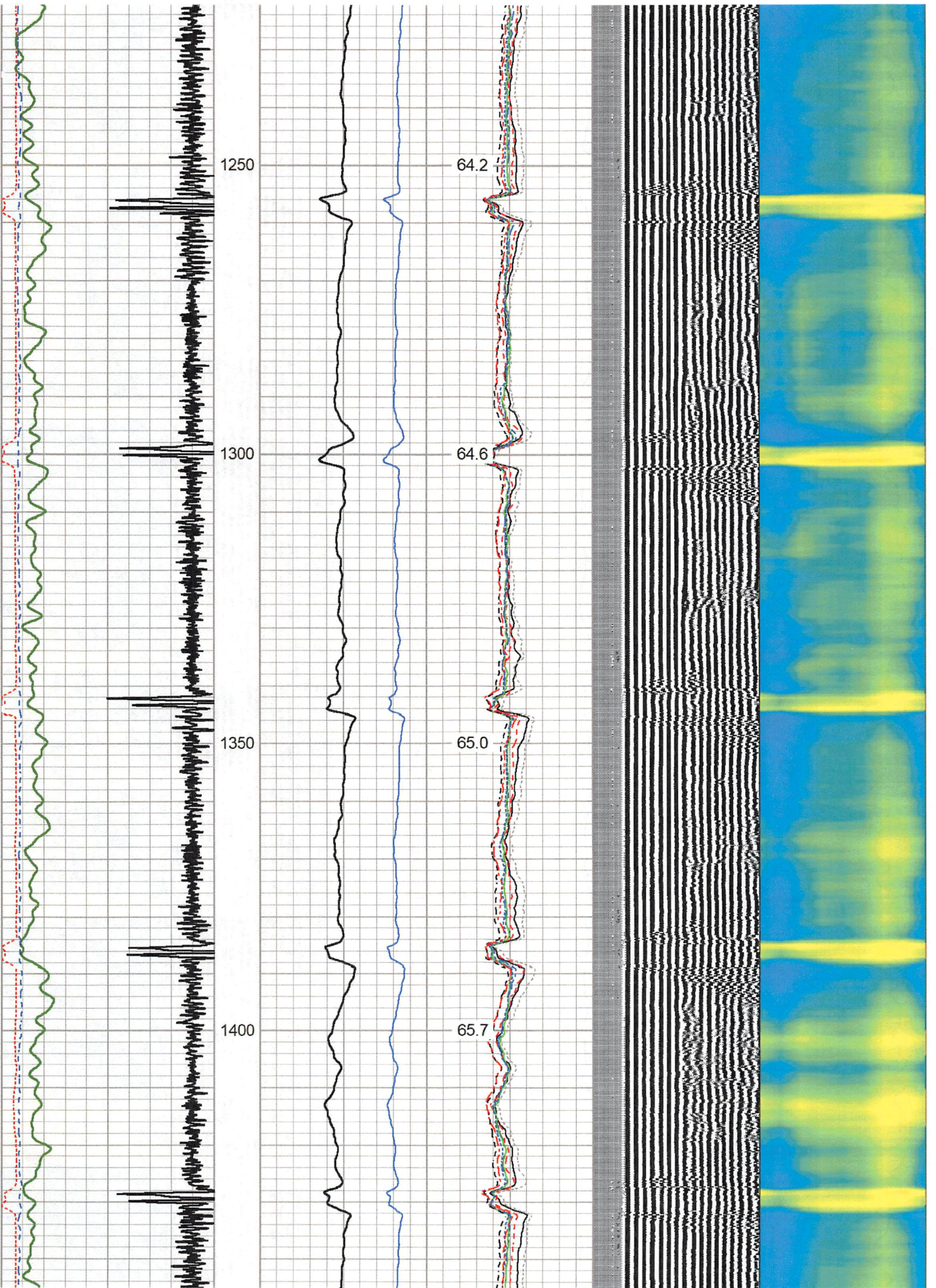


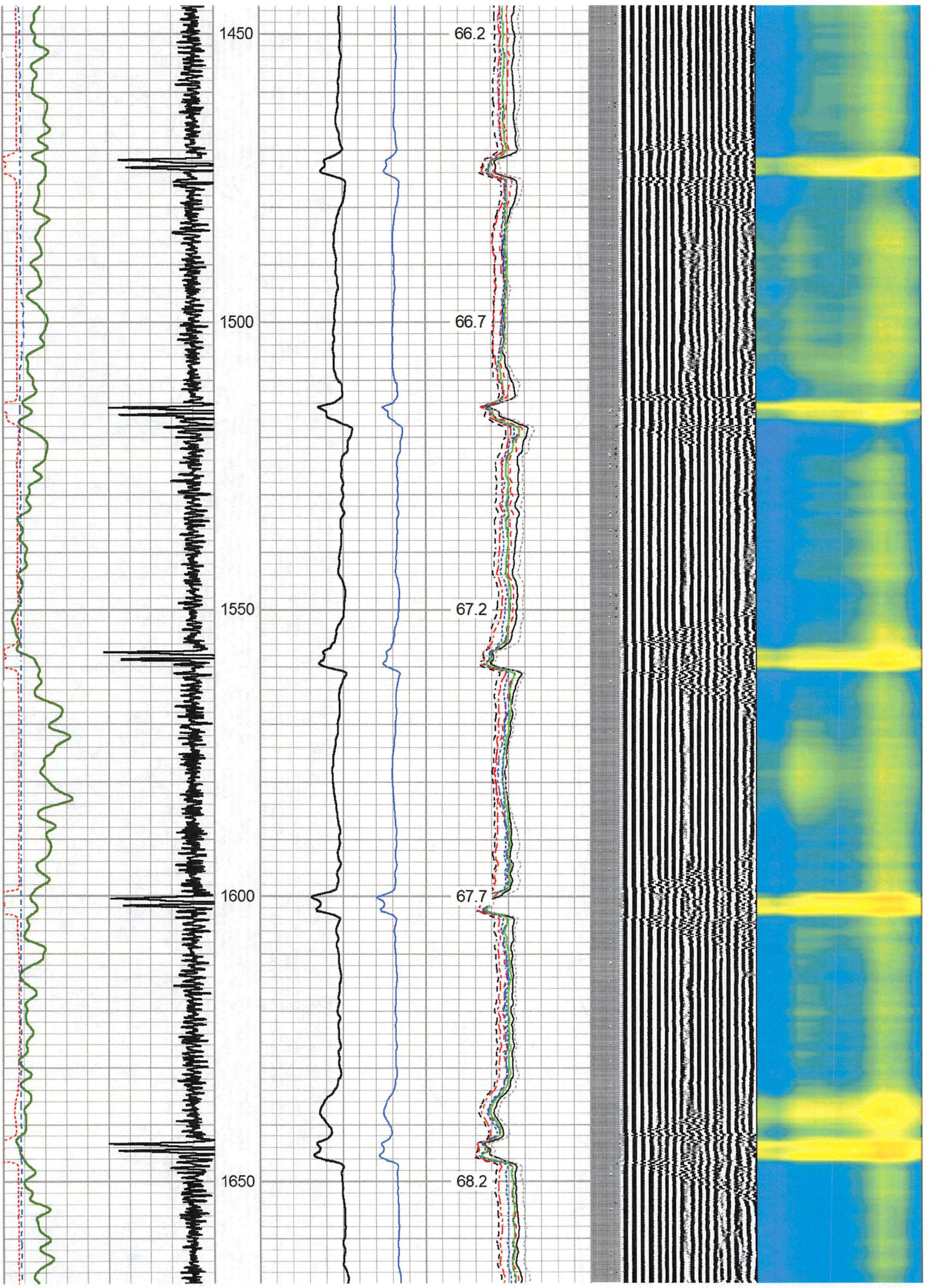


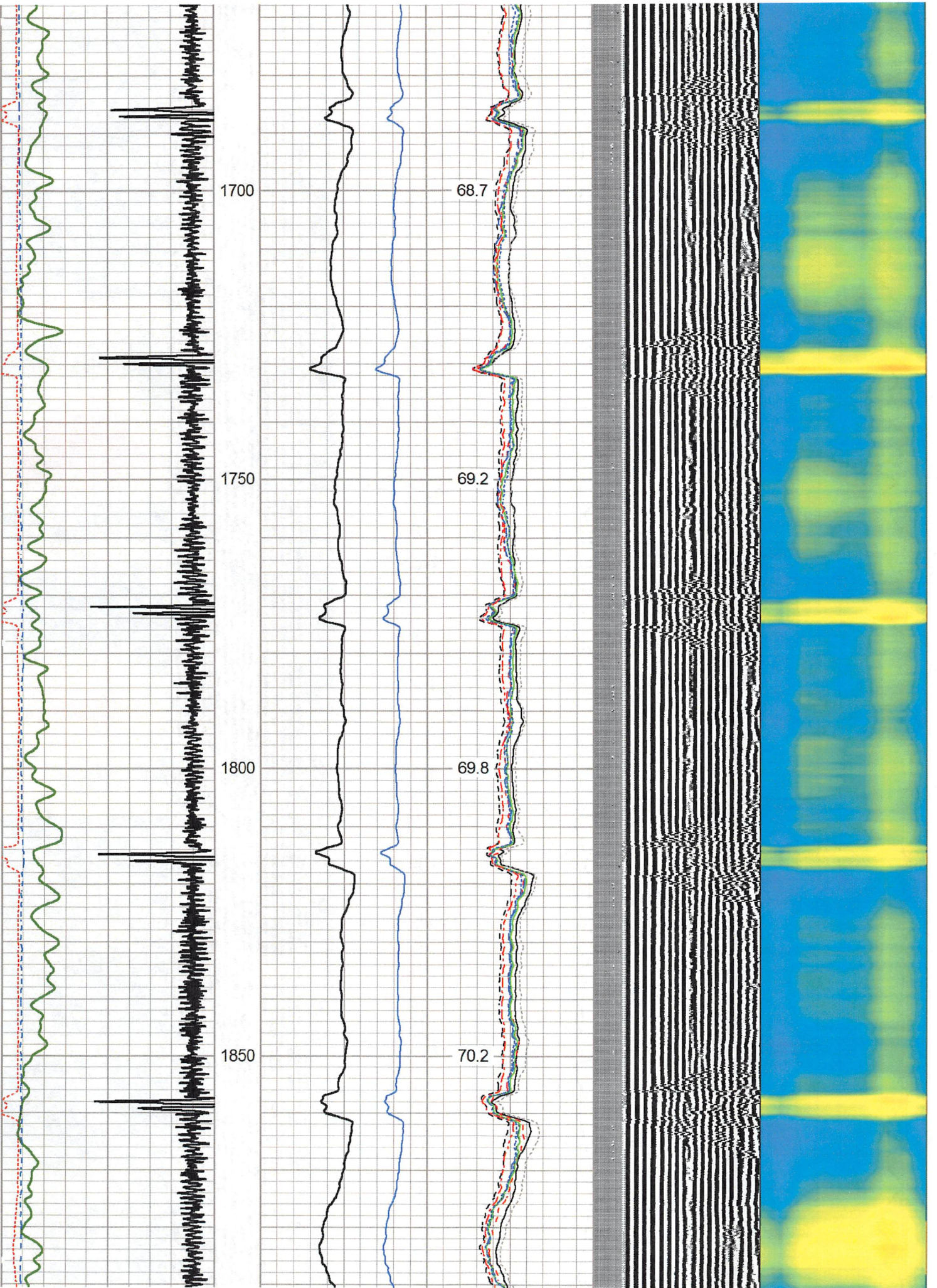


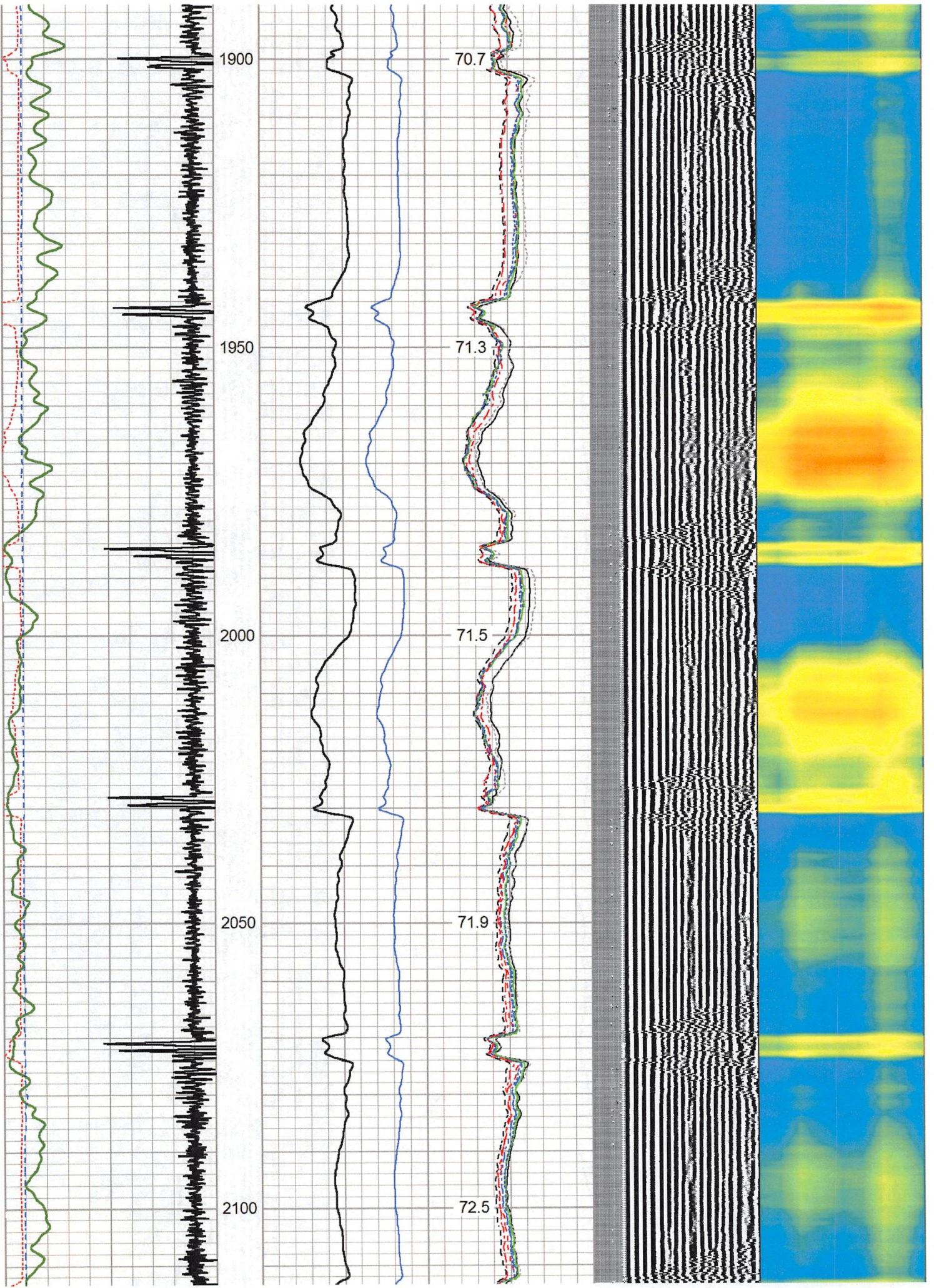


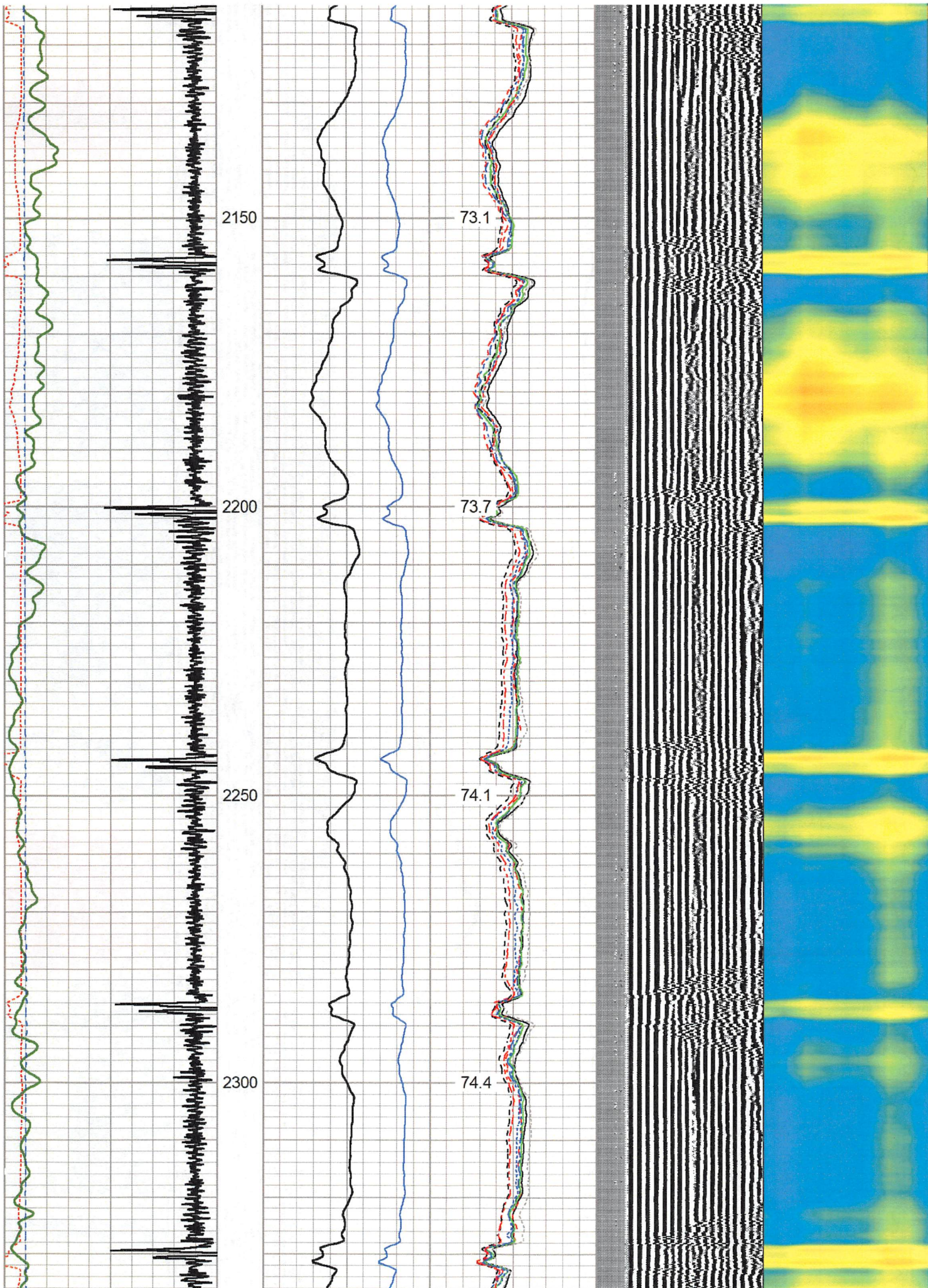


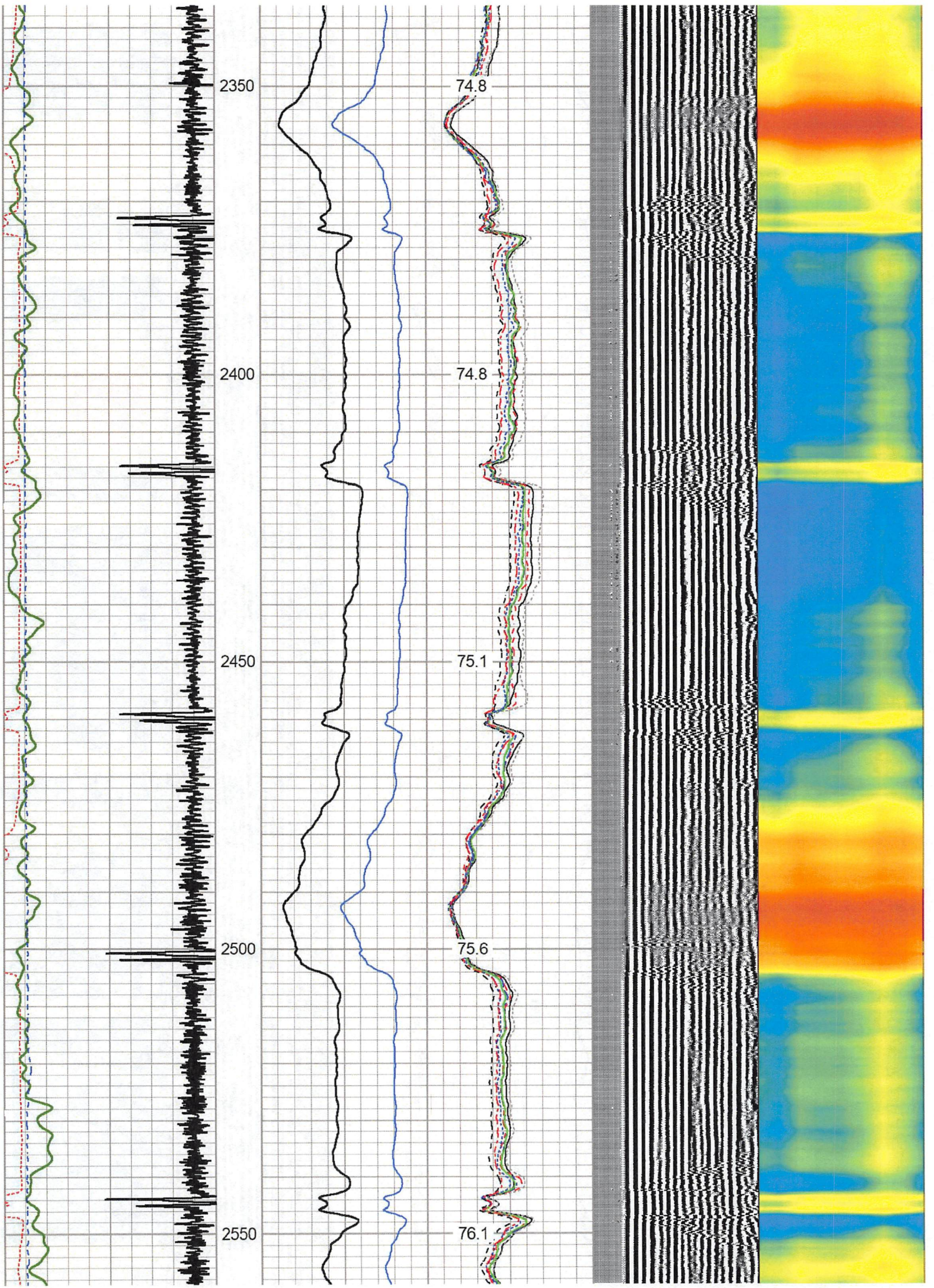


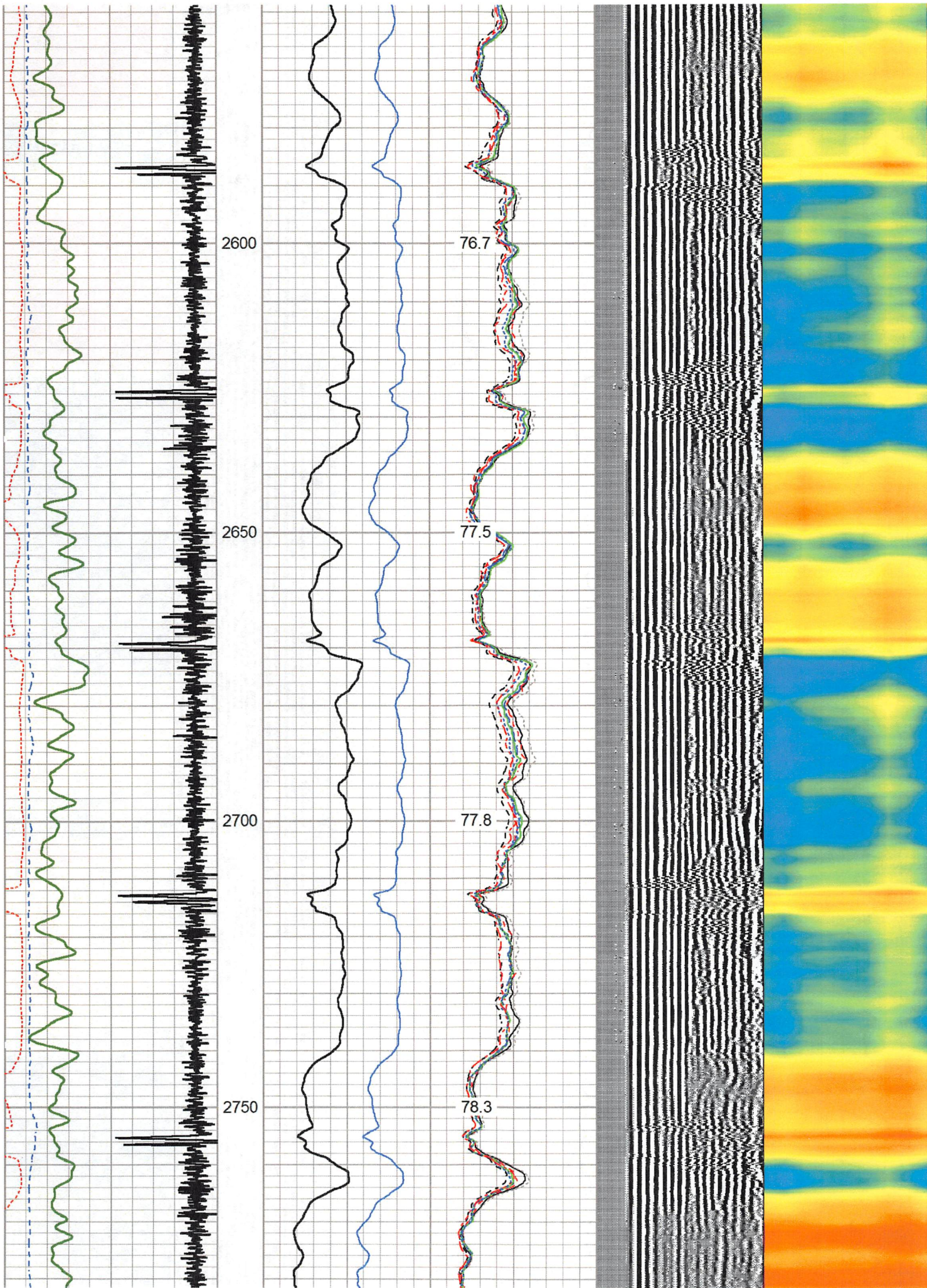


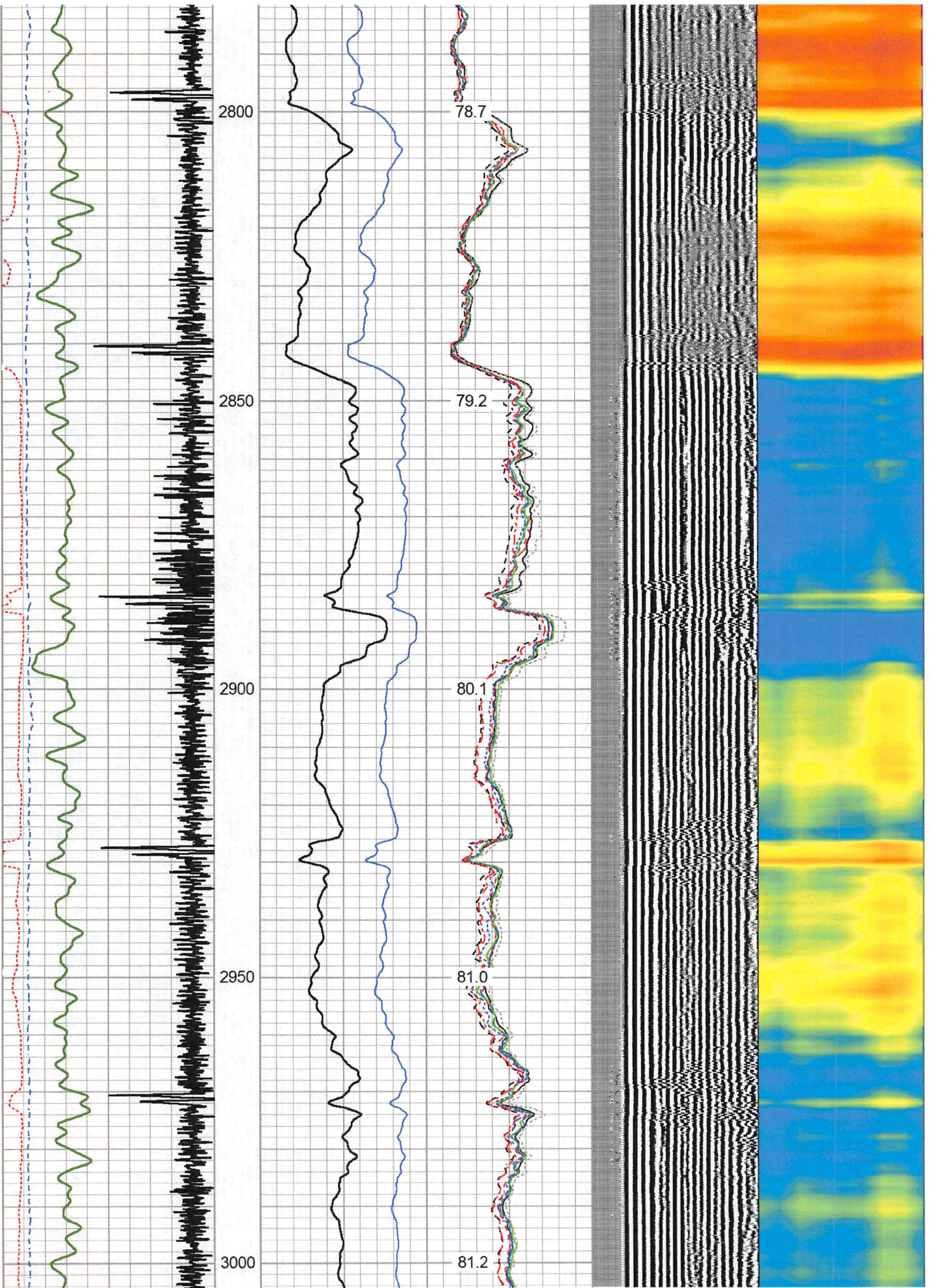


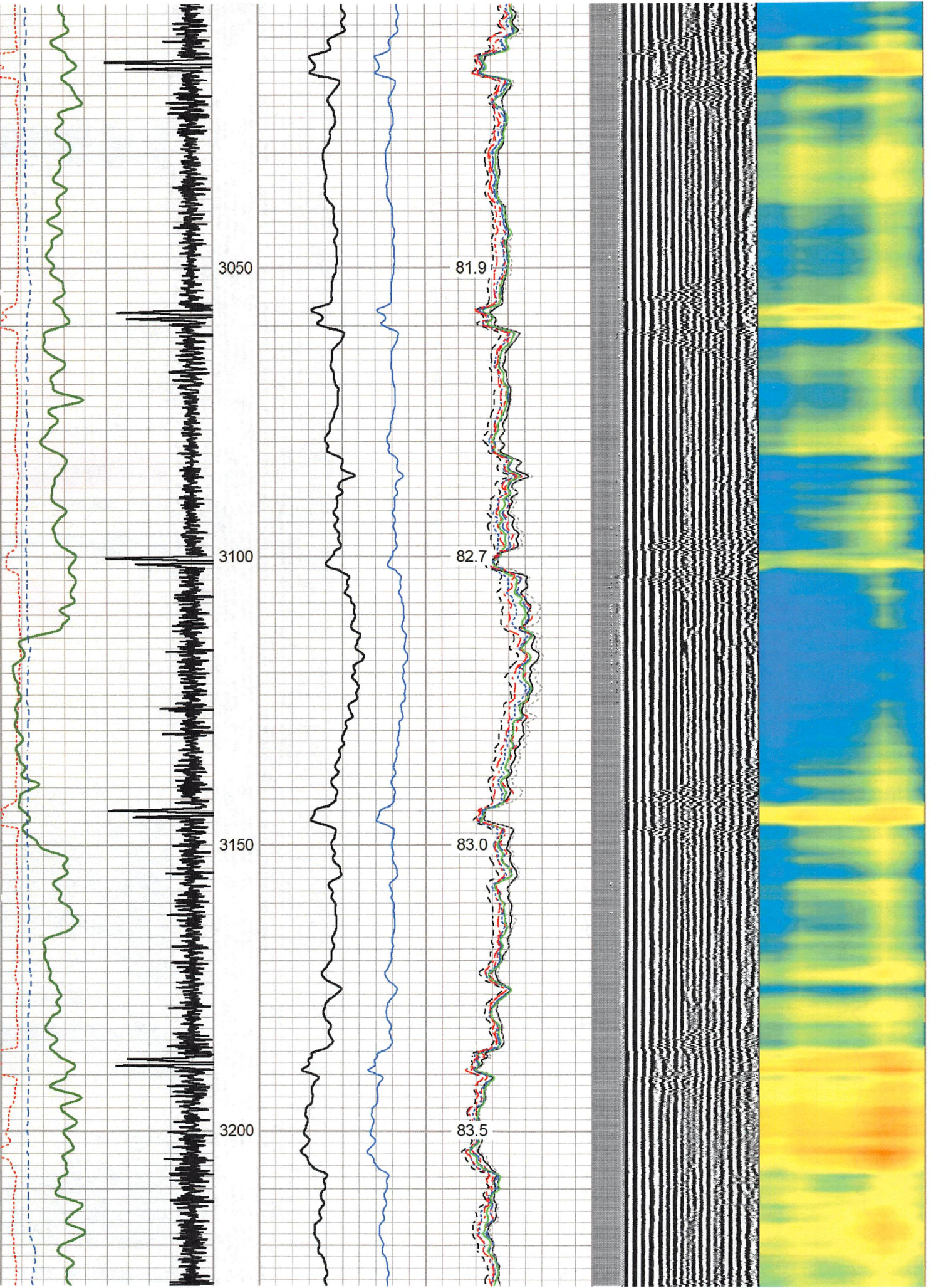


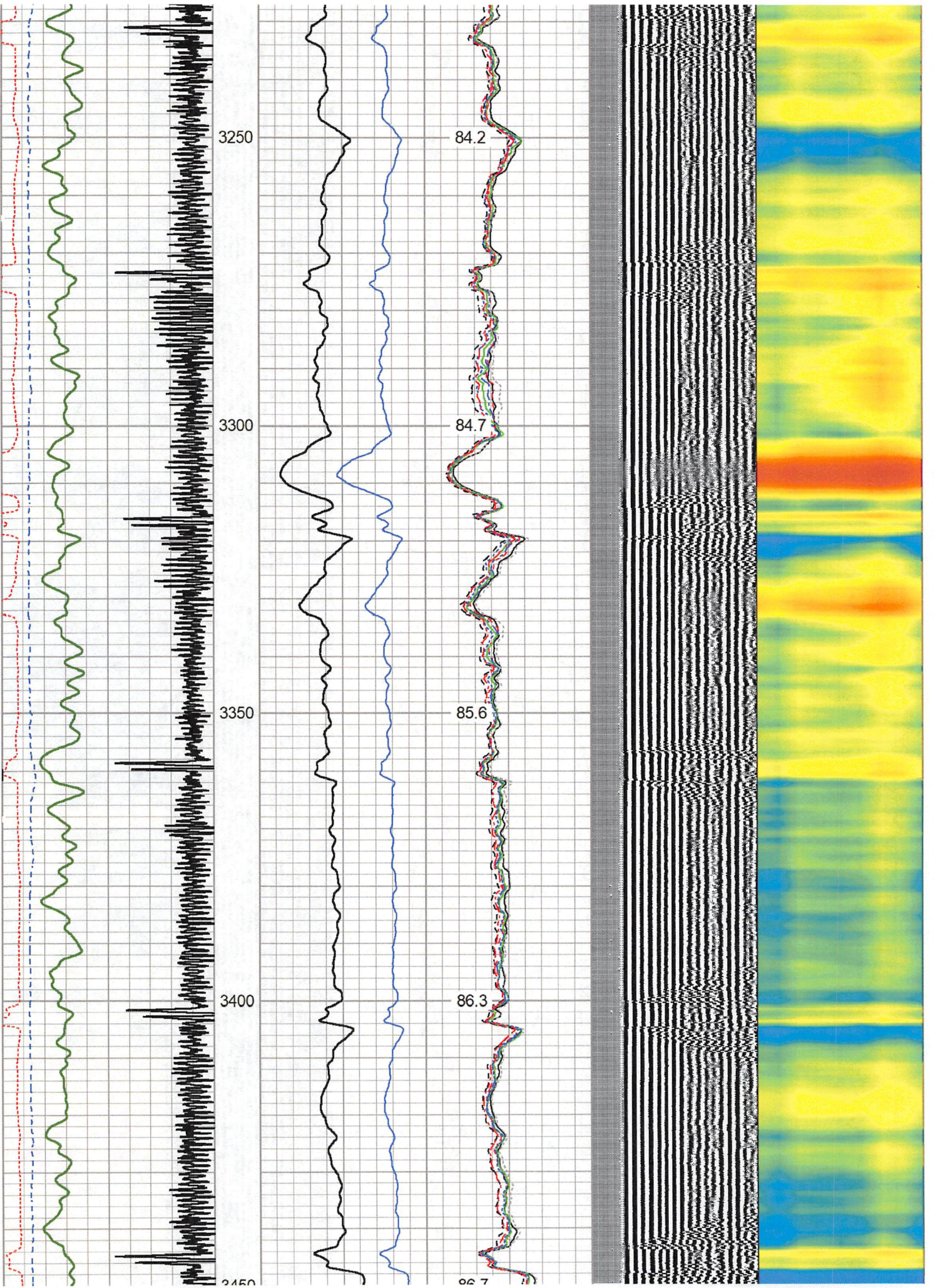


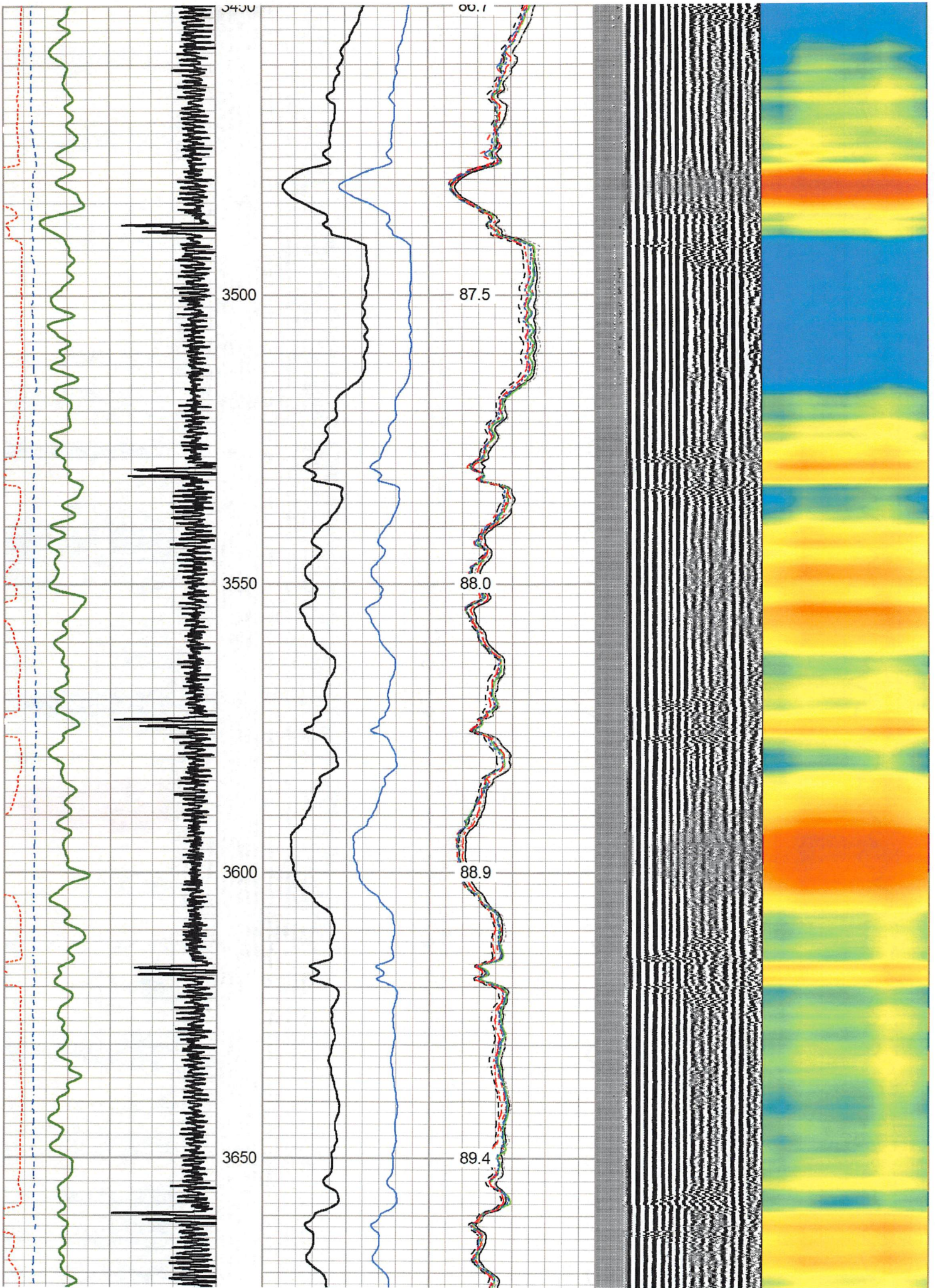


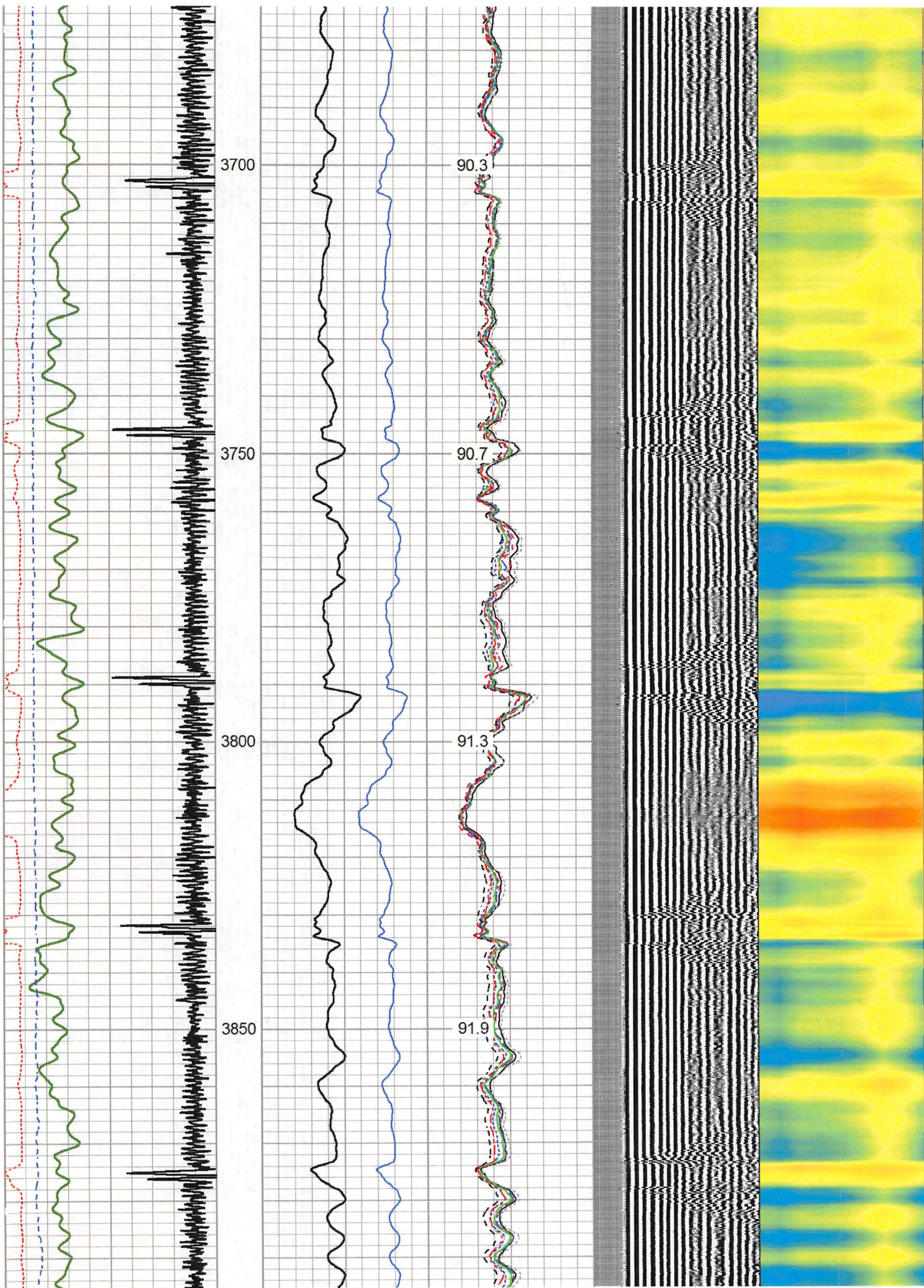


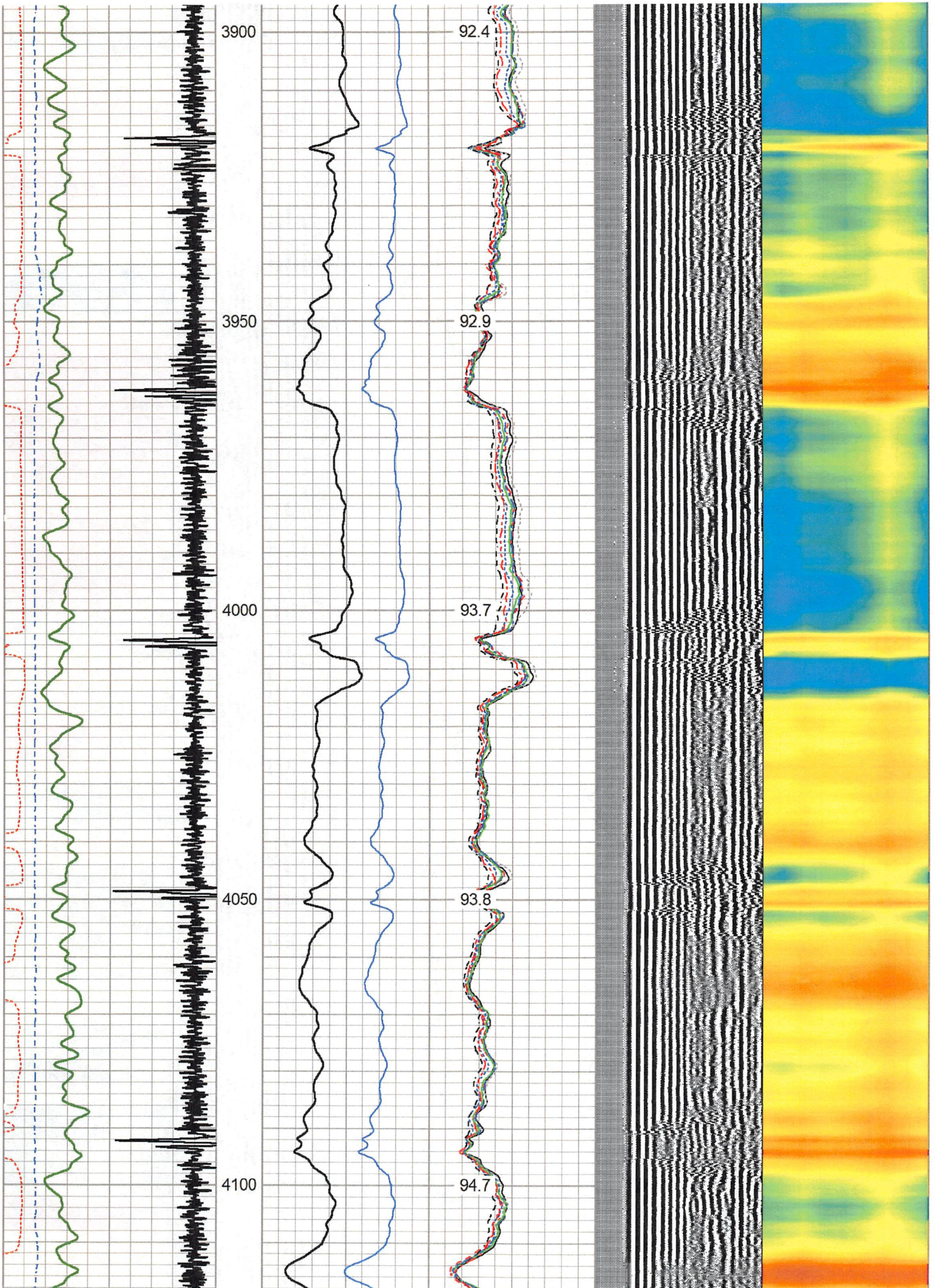


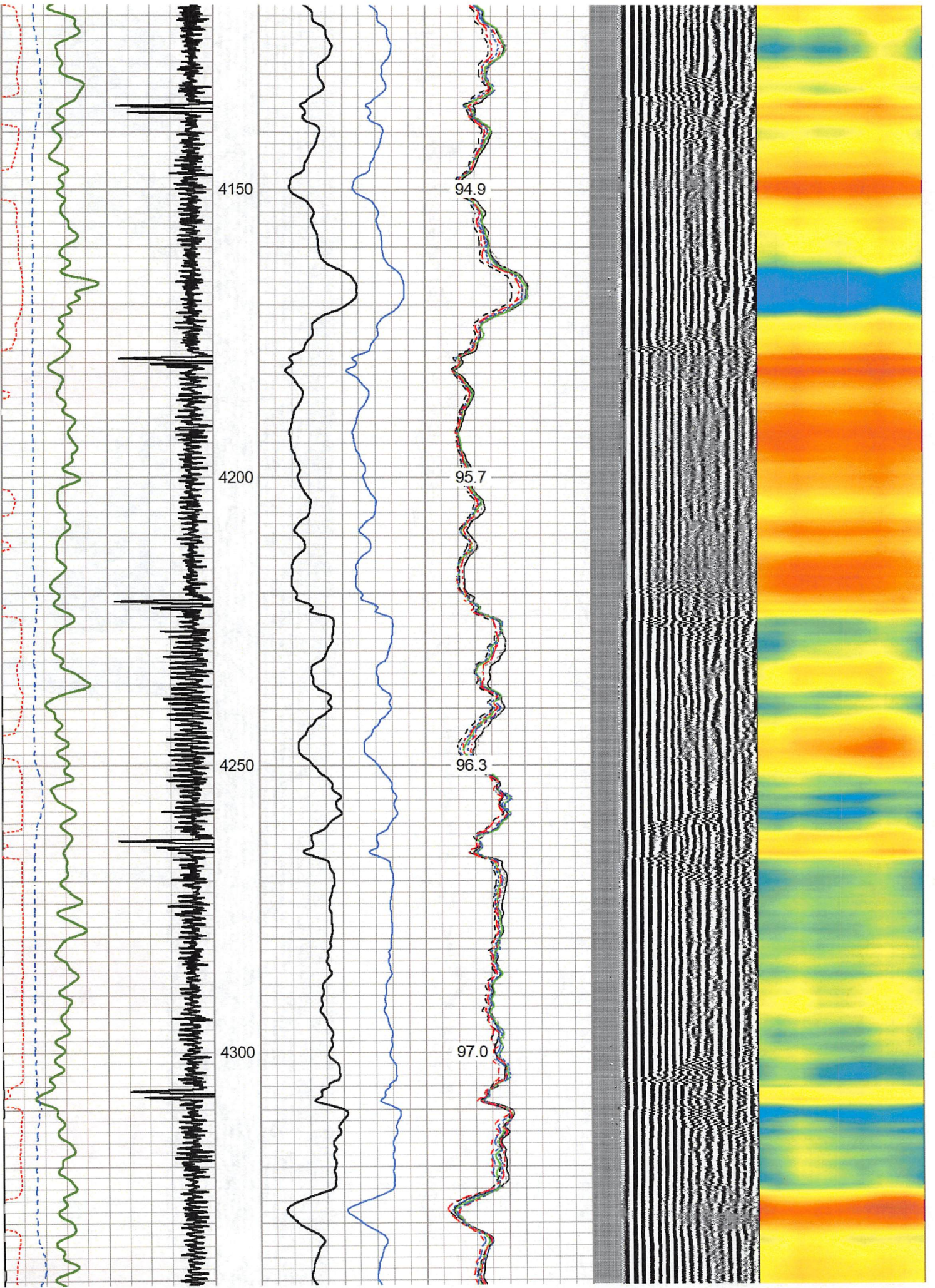


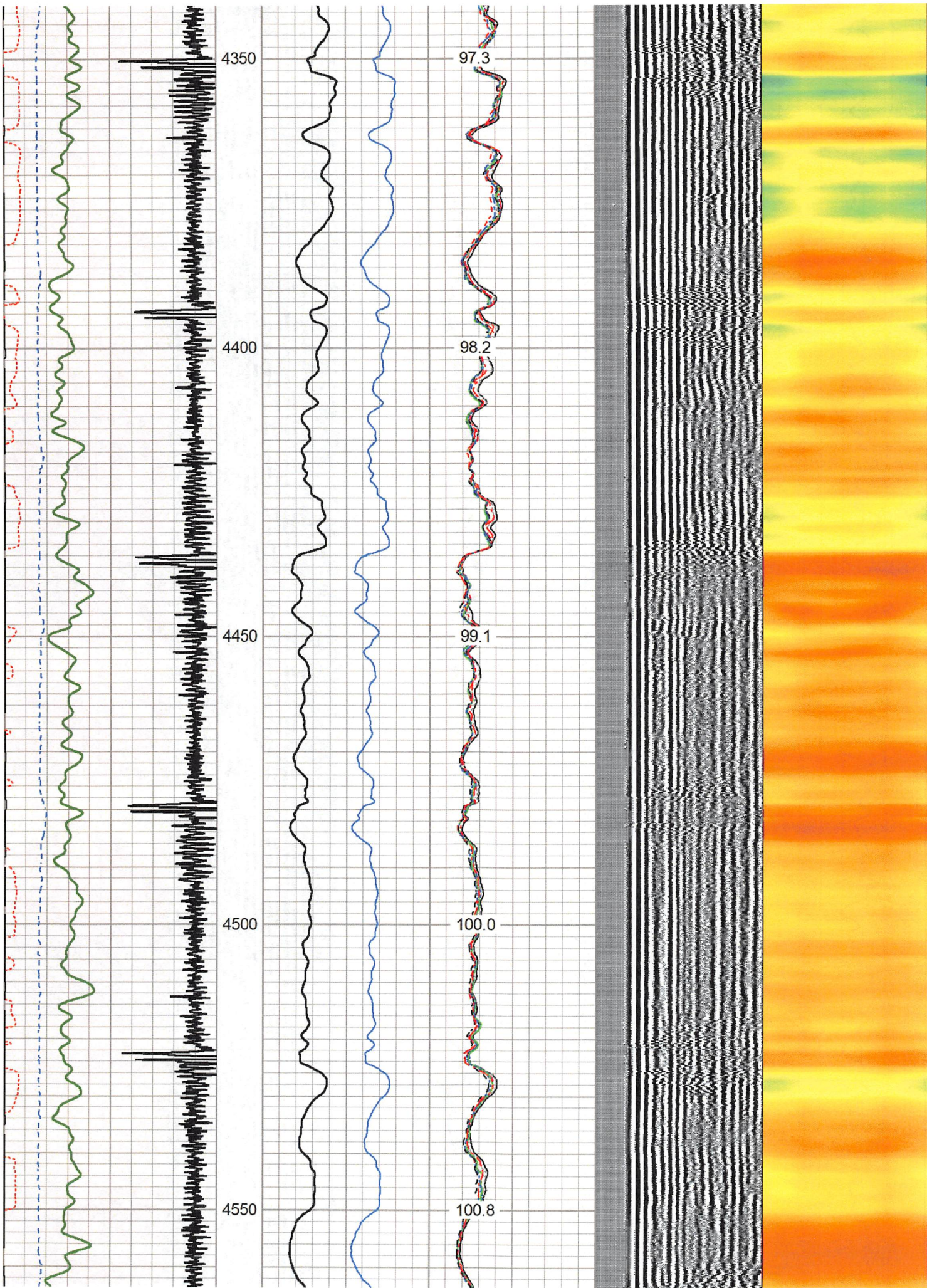


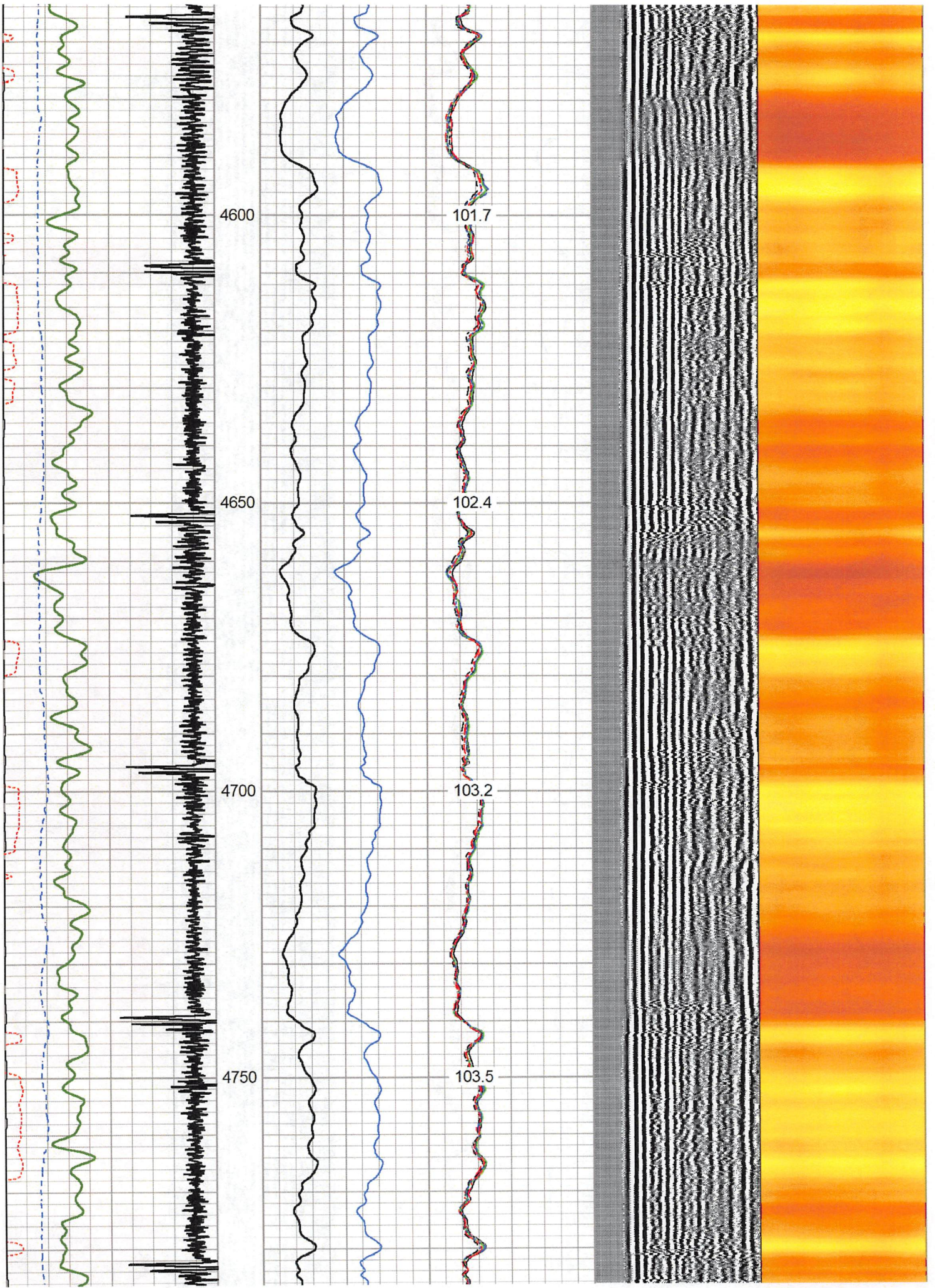


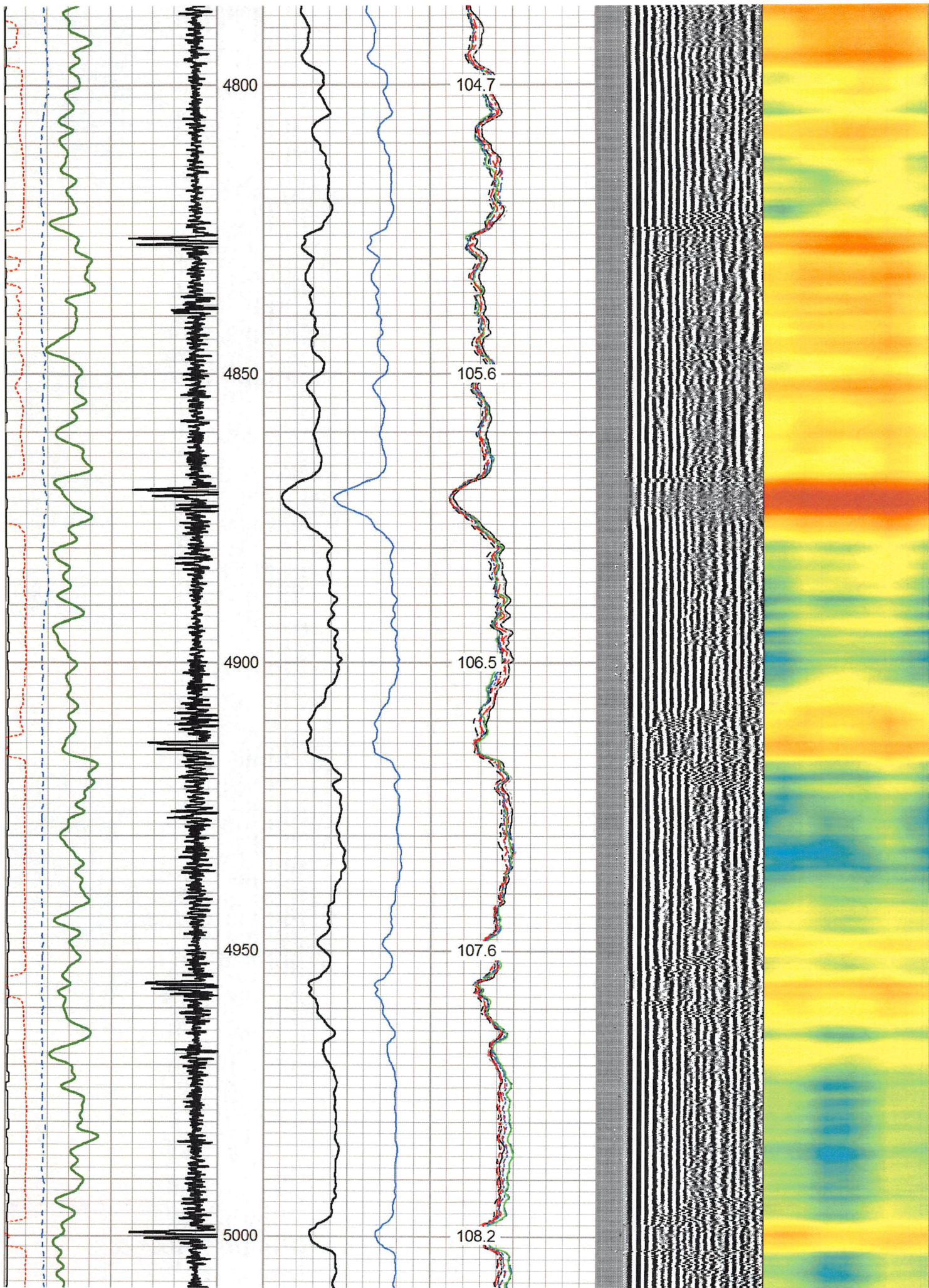


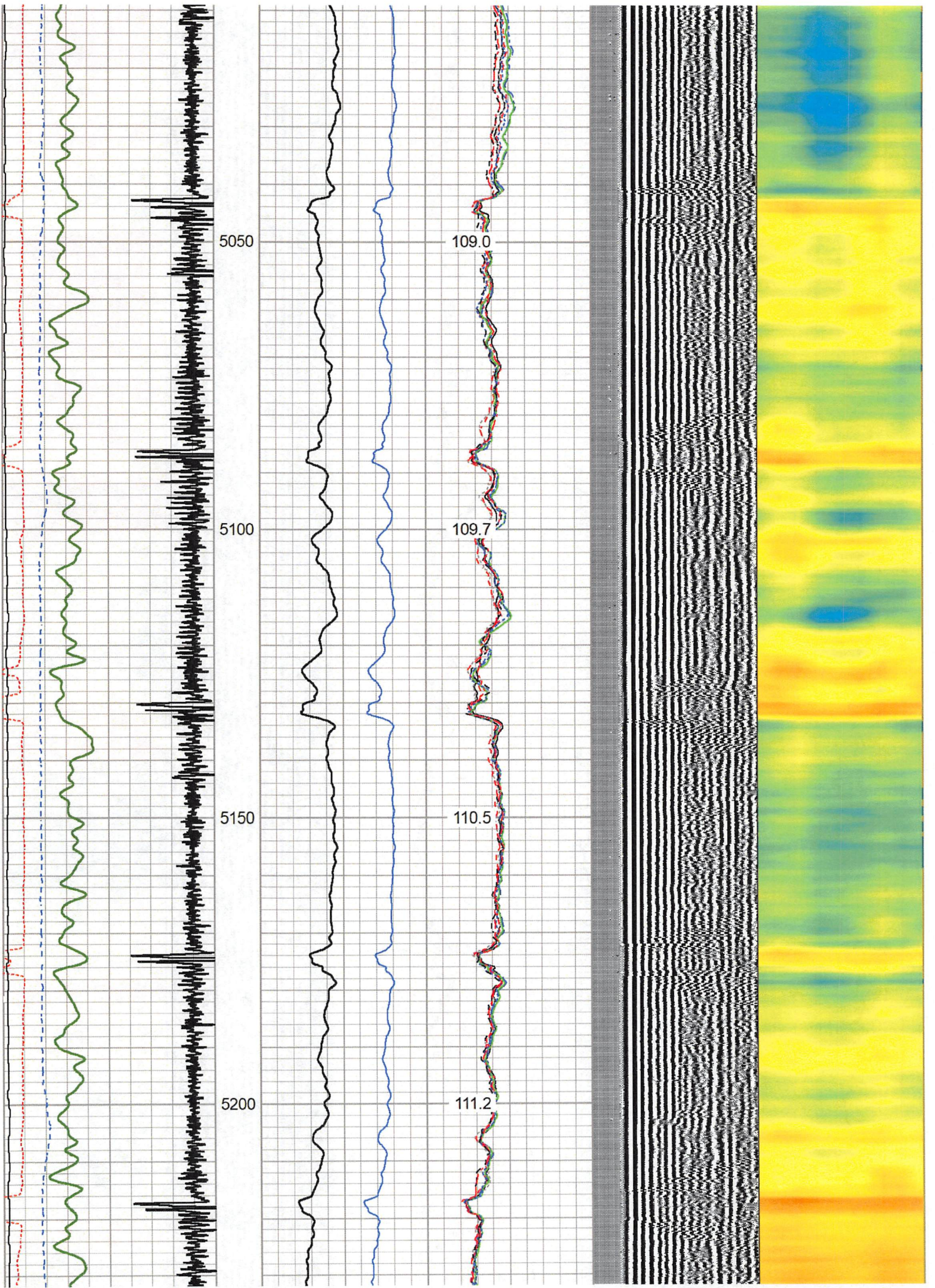


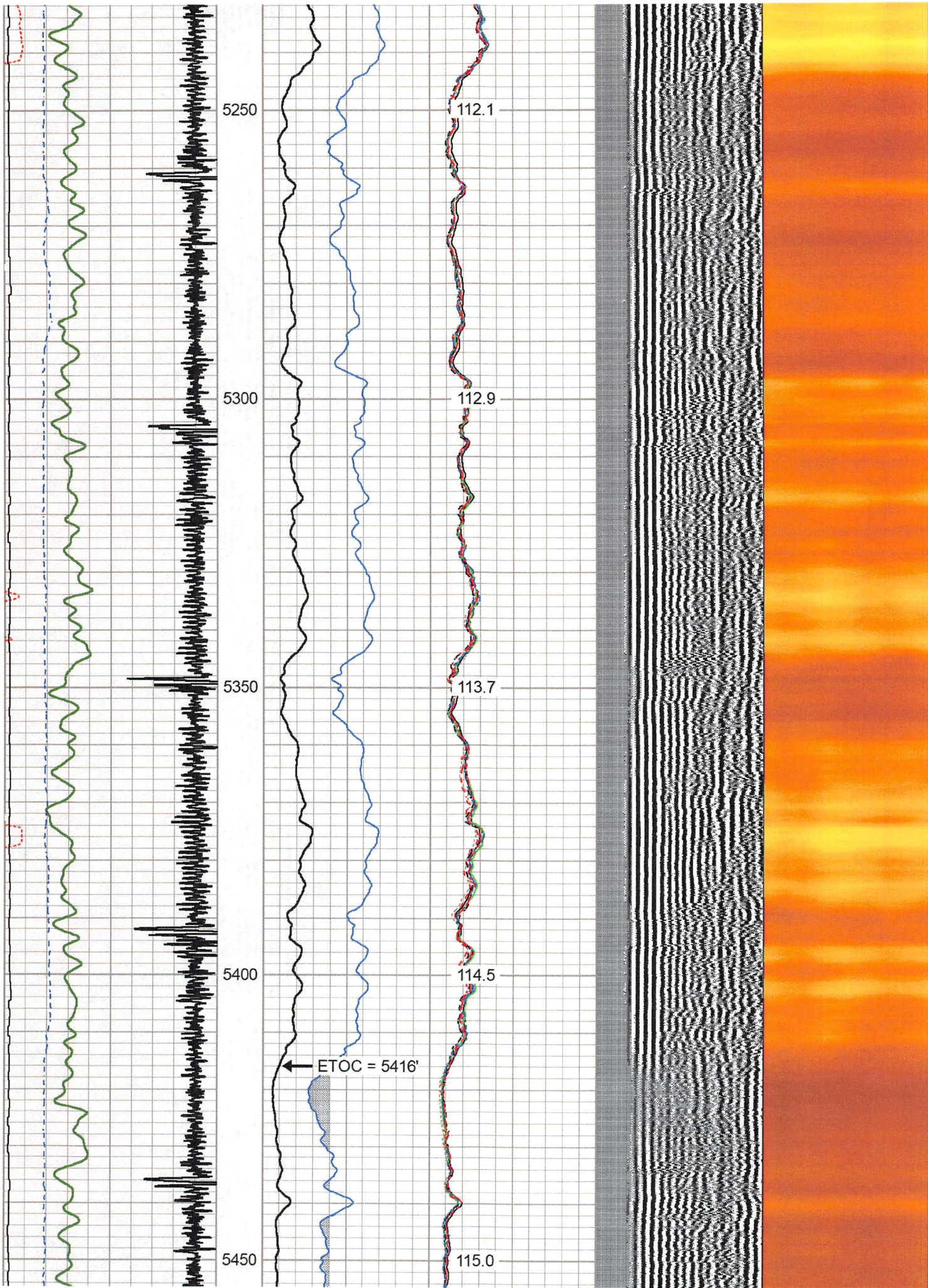


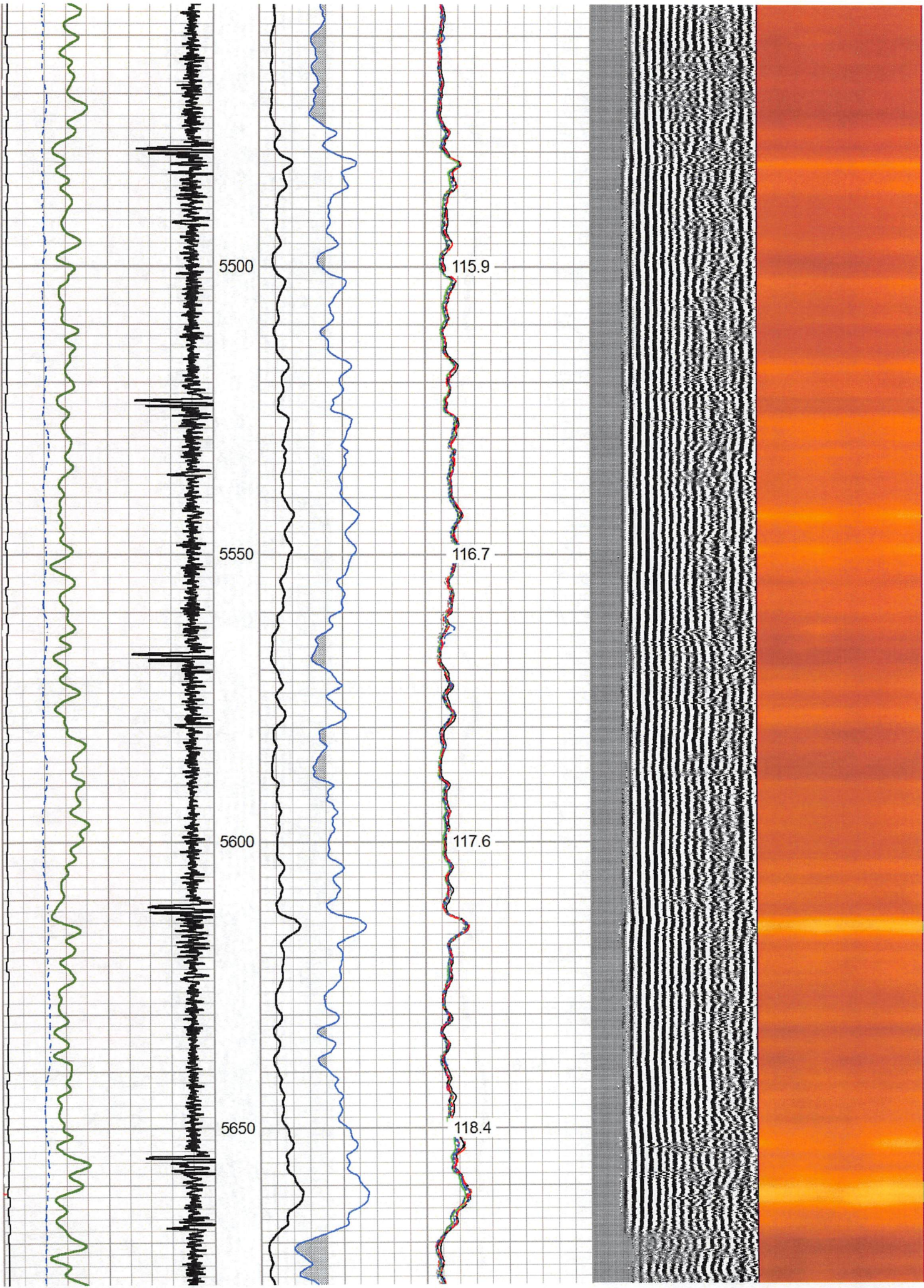


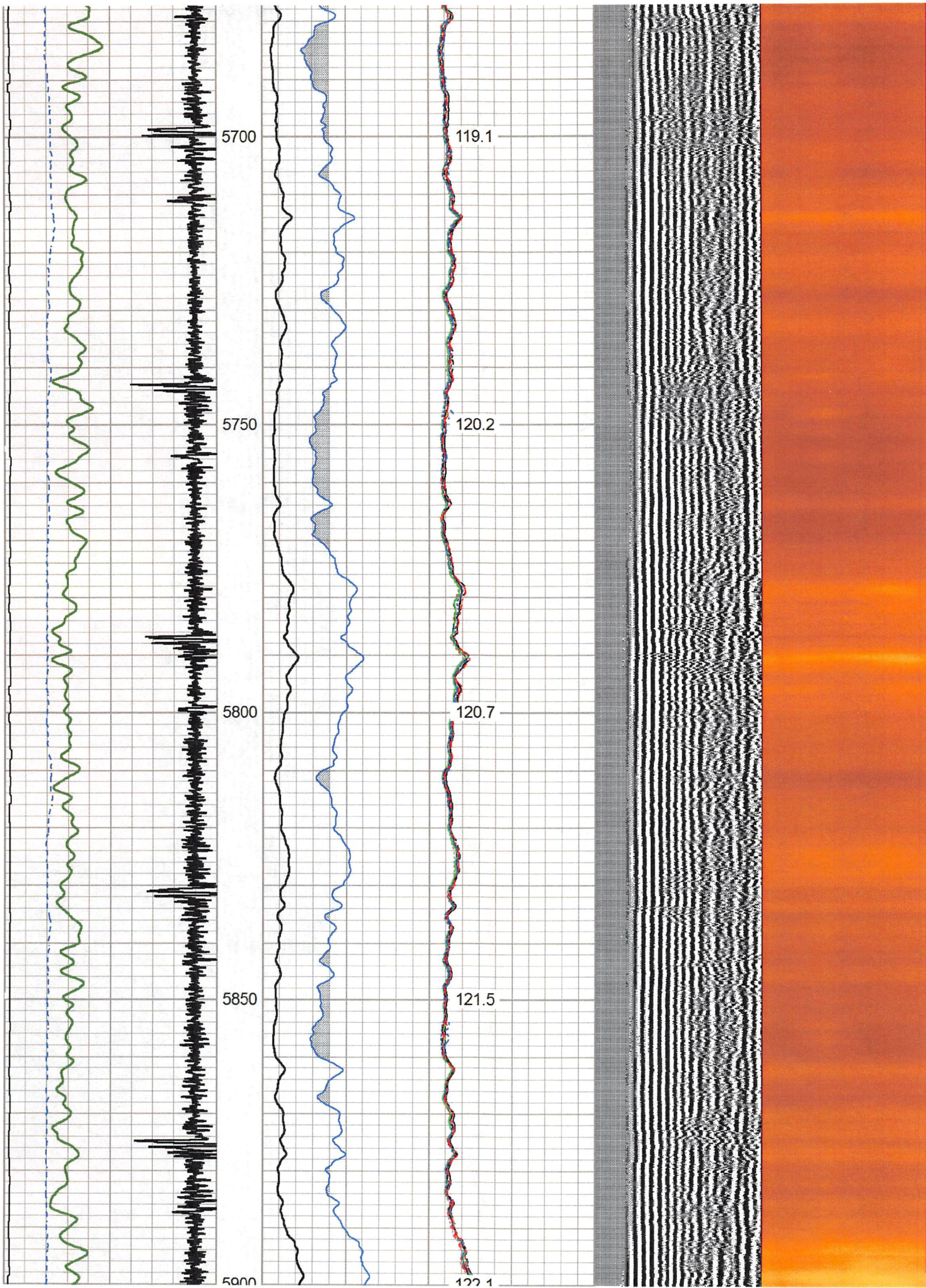


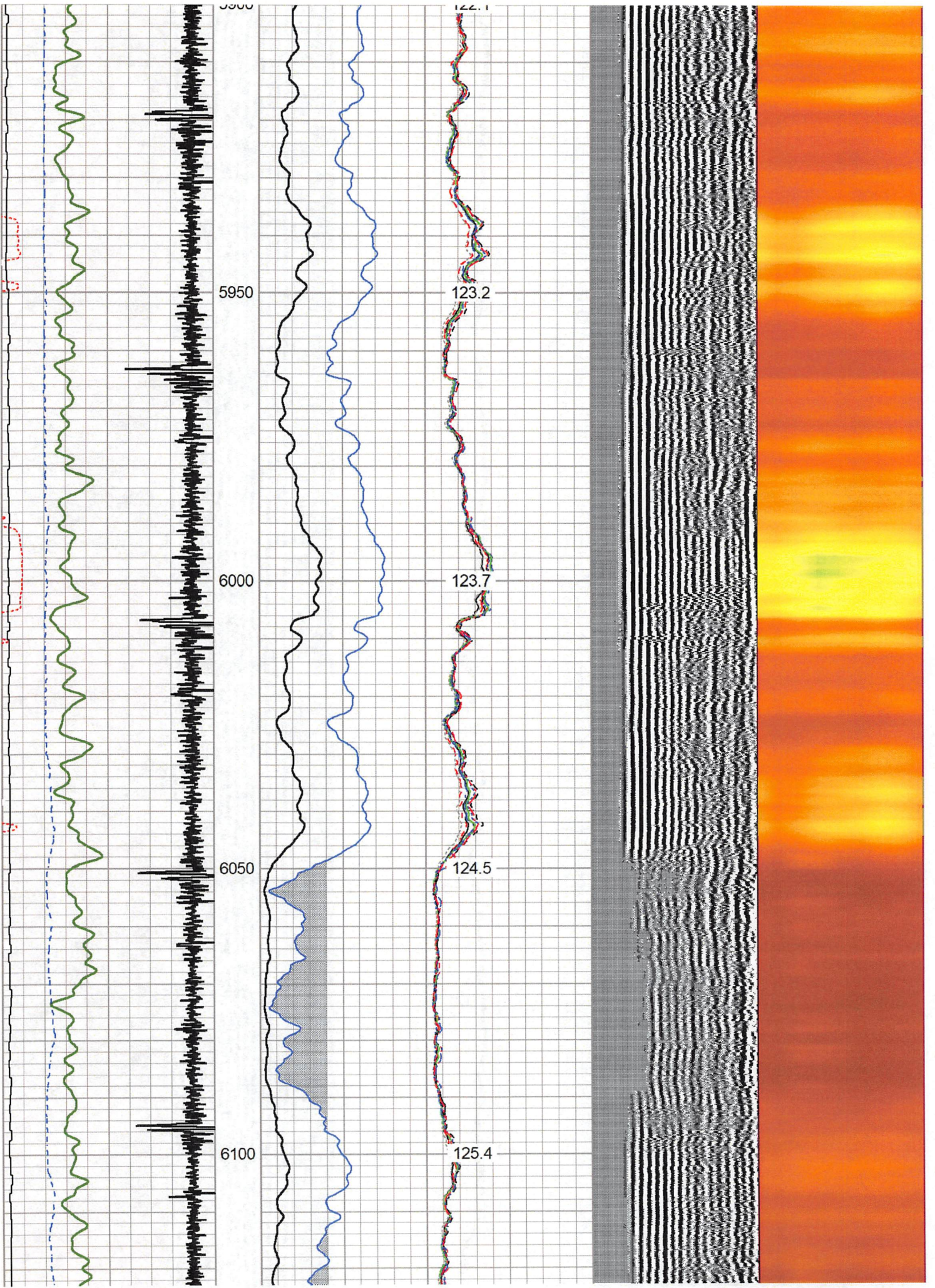


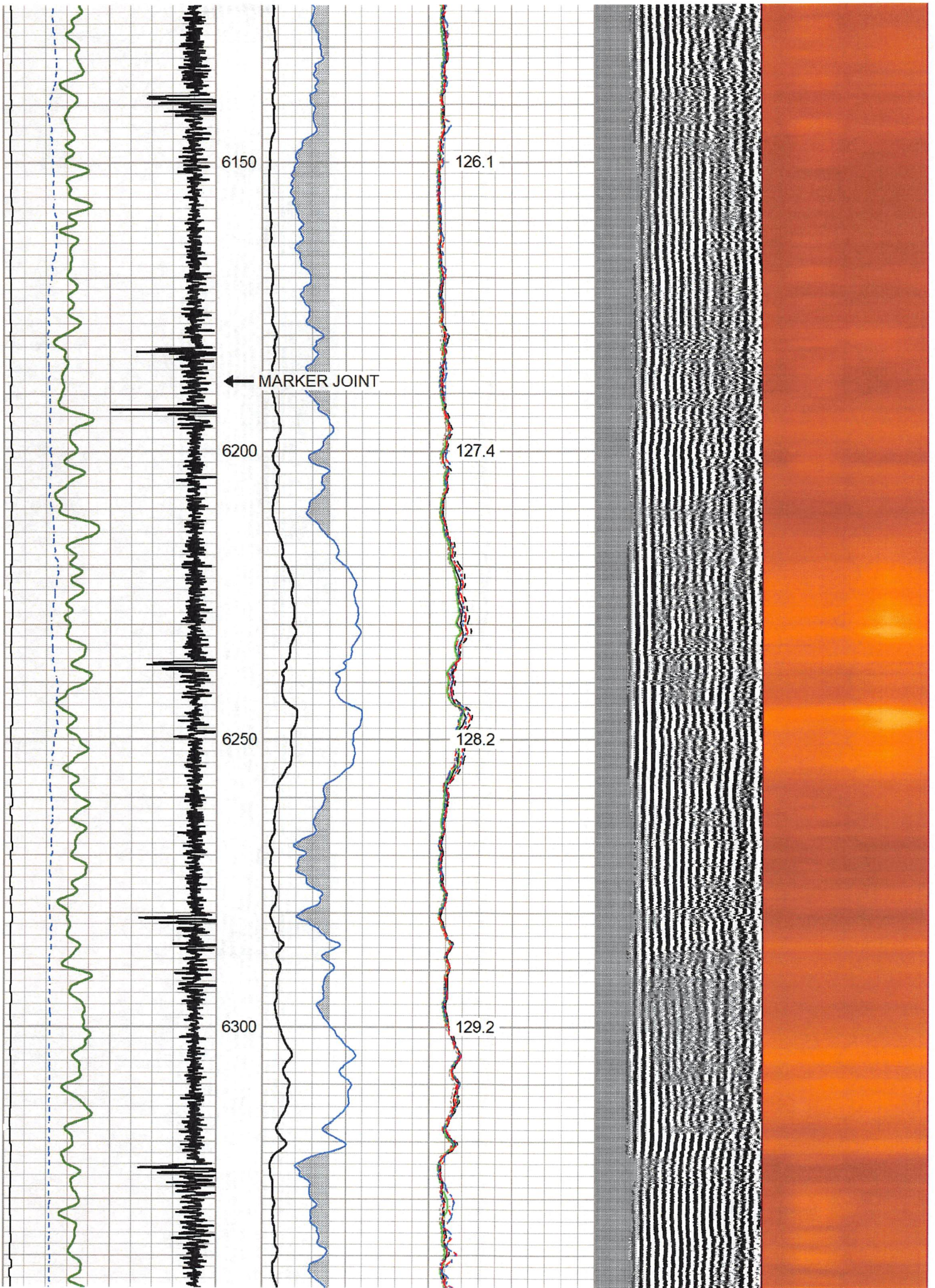


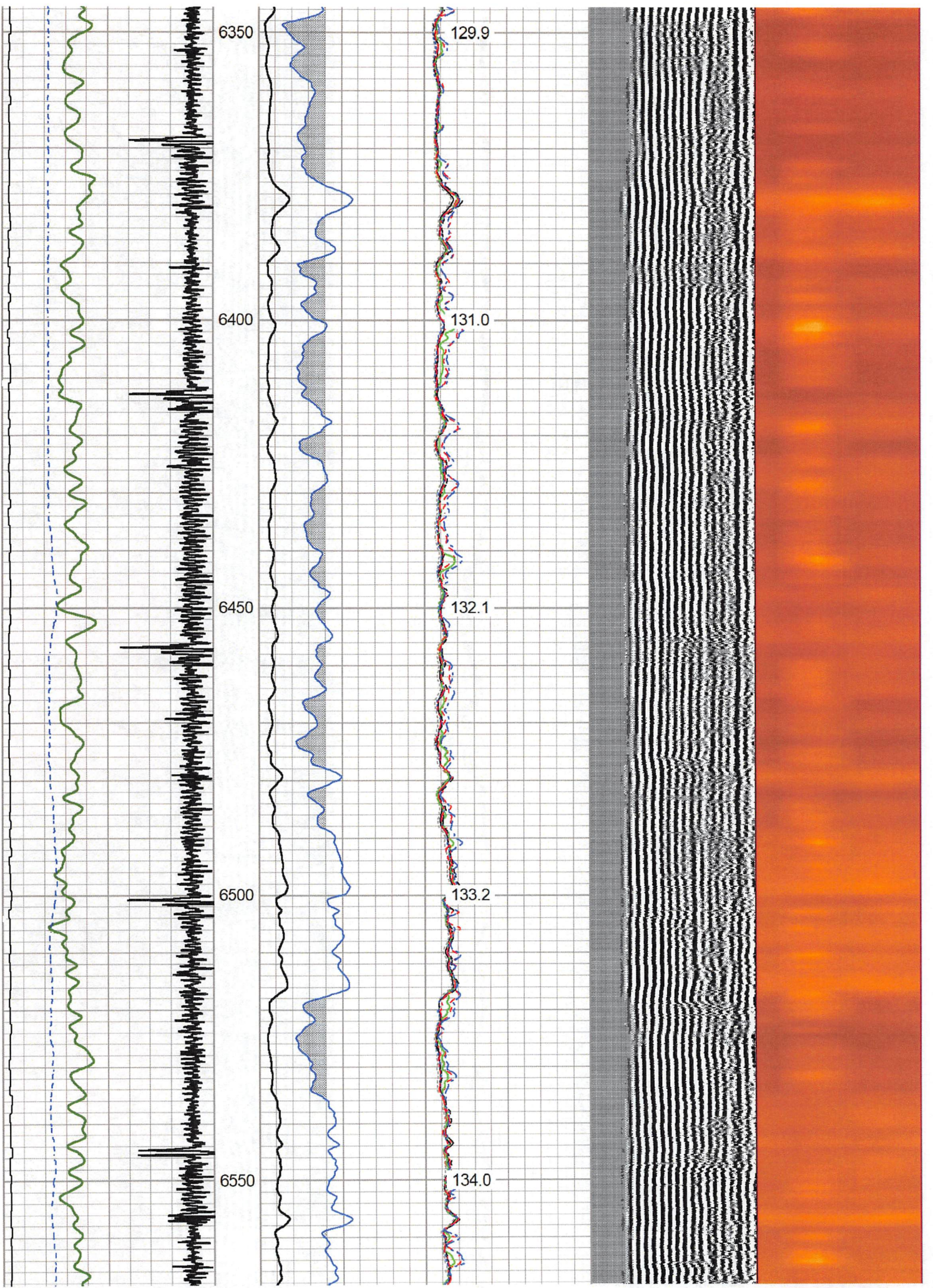


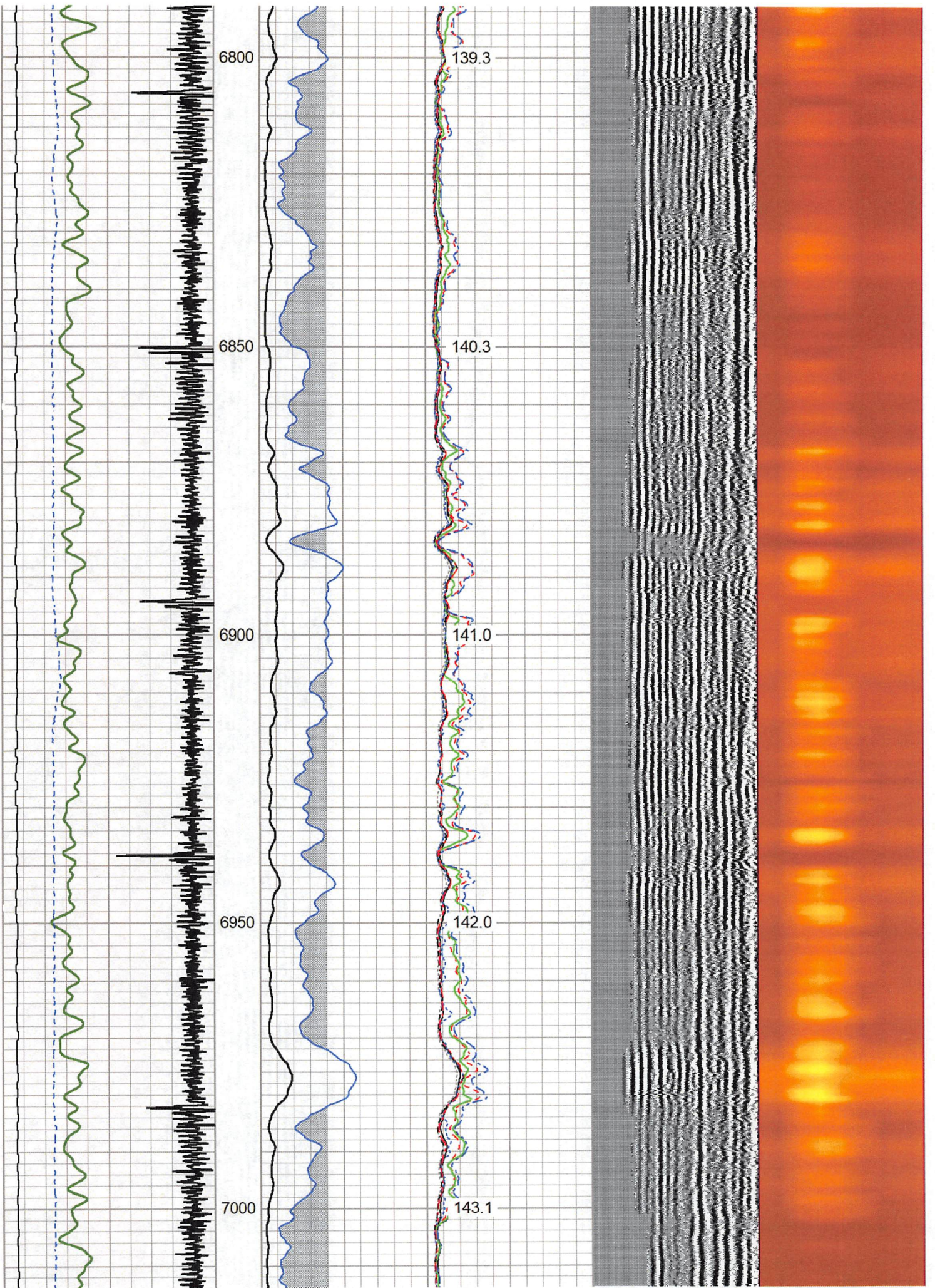


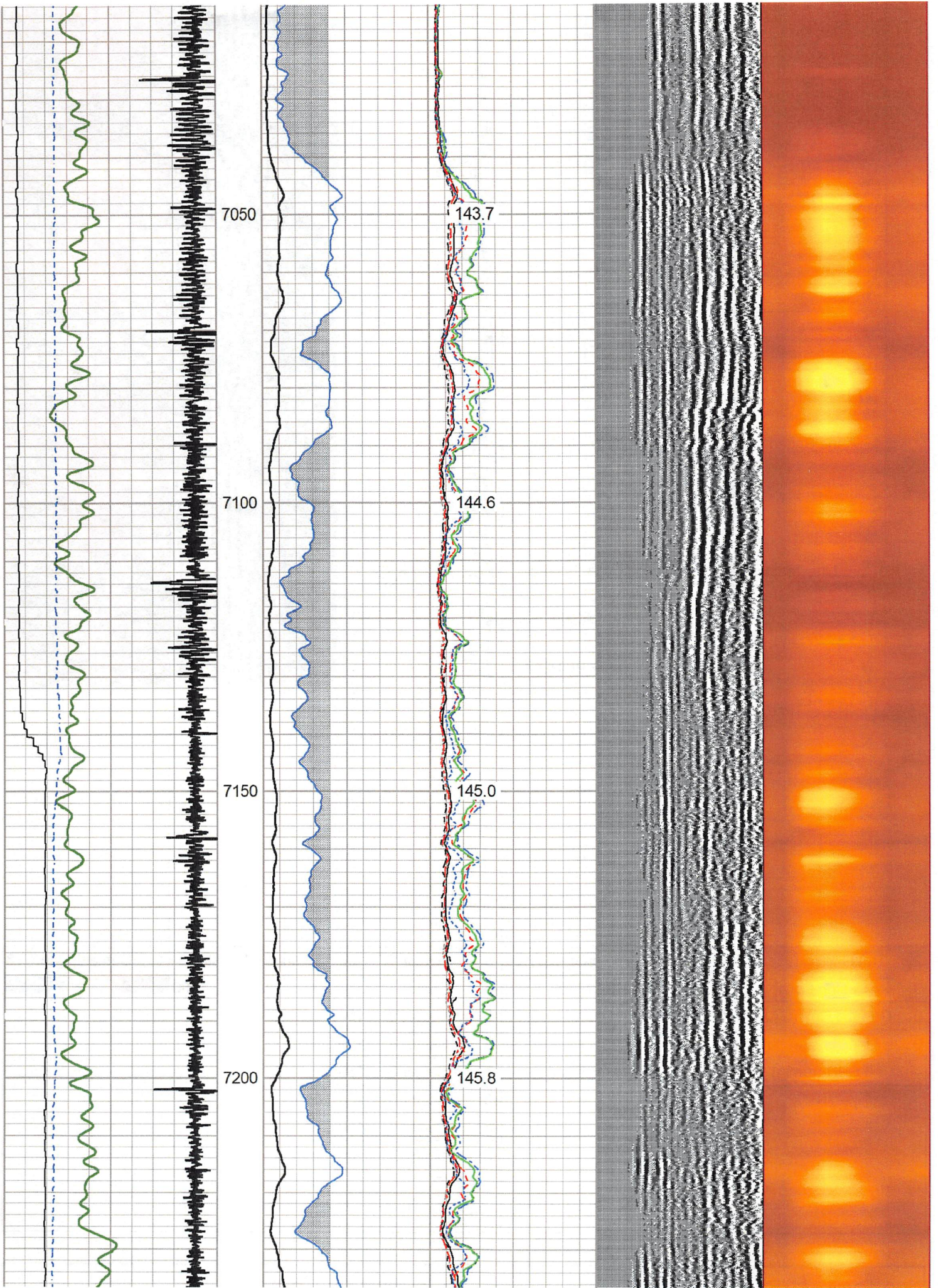


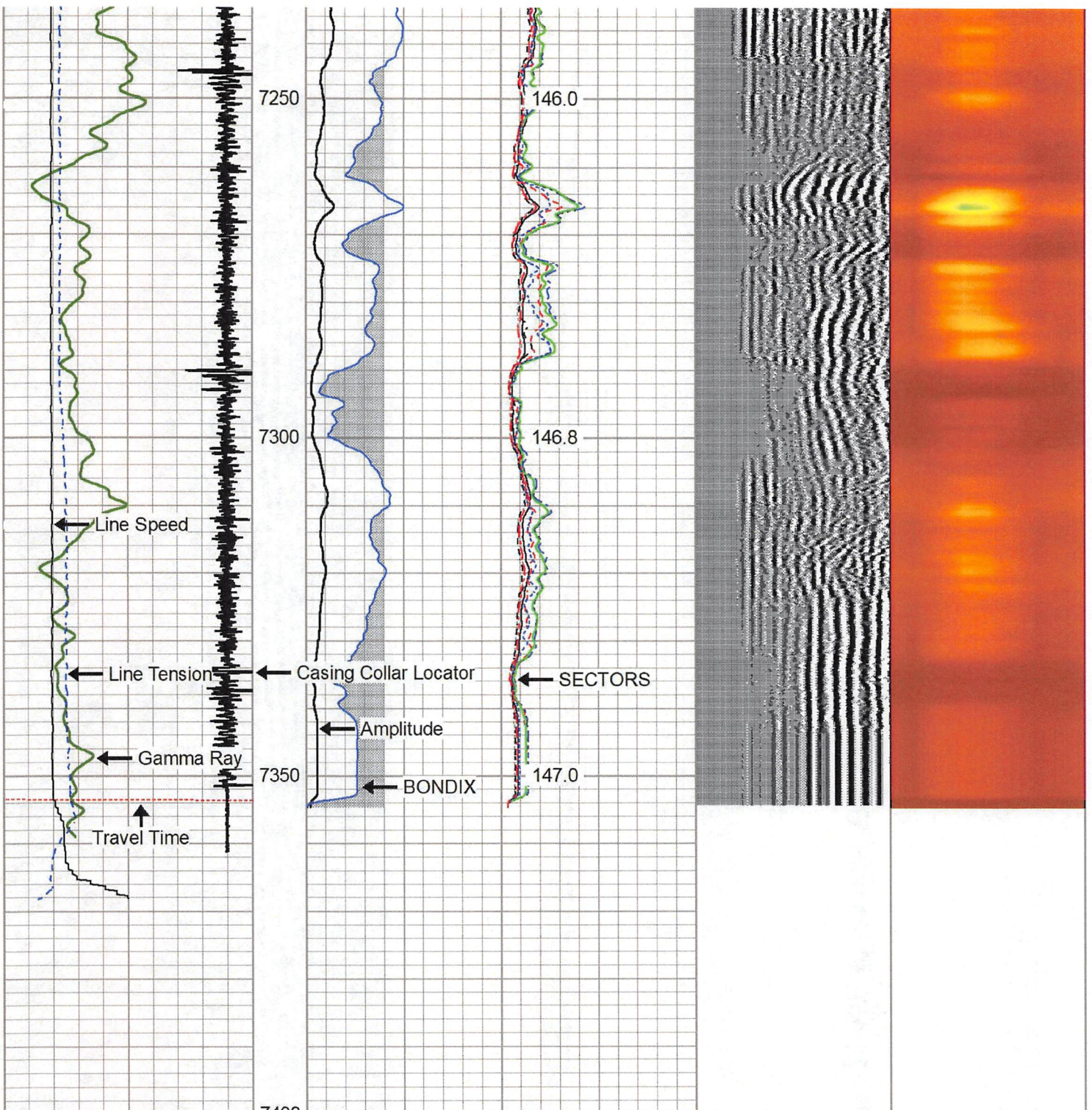












297	Travel Time (usec)	197
9	Casing Collar	-1
0	Gamma Ray (GAPI)	150
0	Line Tension (lb)	5000
-100	LSPD (ft/min)	100

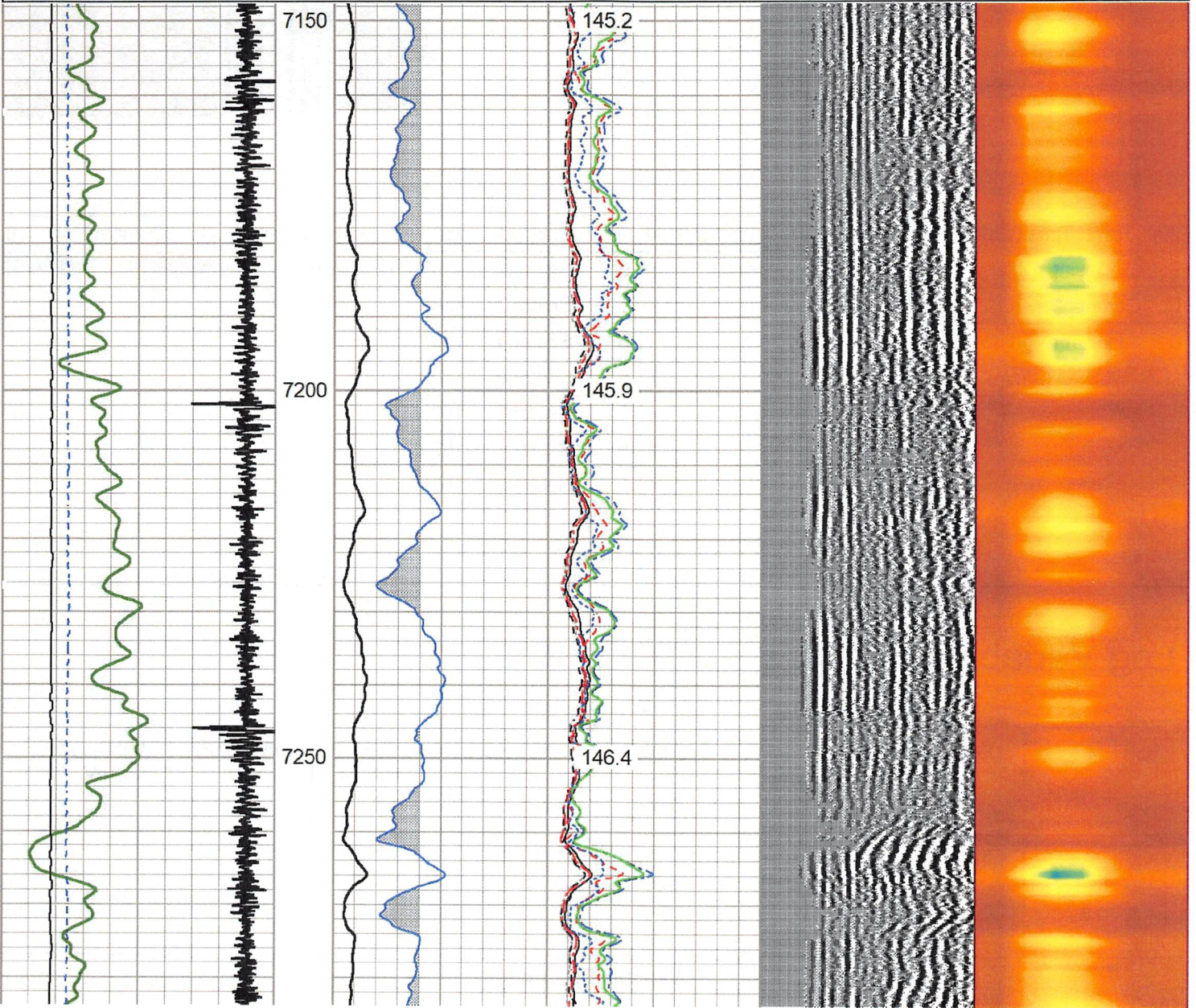
0	Amplitude (mV)	100	-5	Sector 1	150
1	BONDIX	0	-5	Sector 2	150
			-5	Sector 3	150
			-5	Sector 4	150
			-5	Sector 5	150
			-5	Sector 6	150
			-5	Sector 7	150
			-5	Sector 8	150

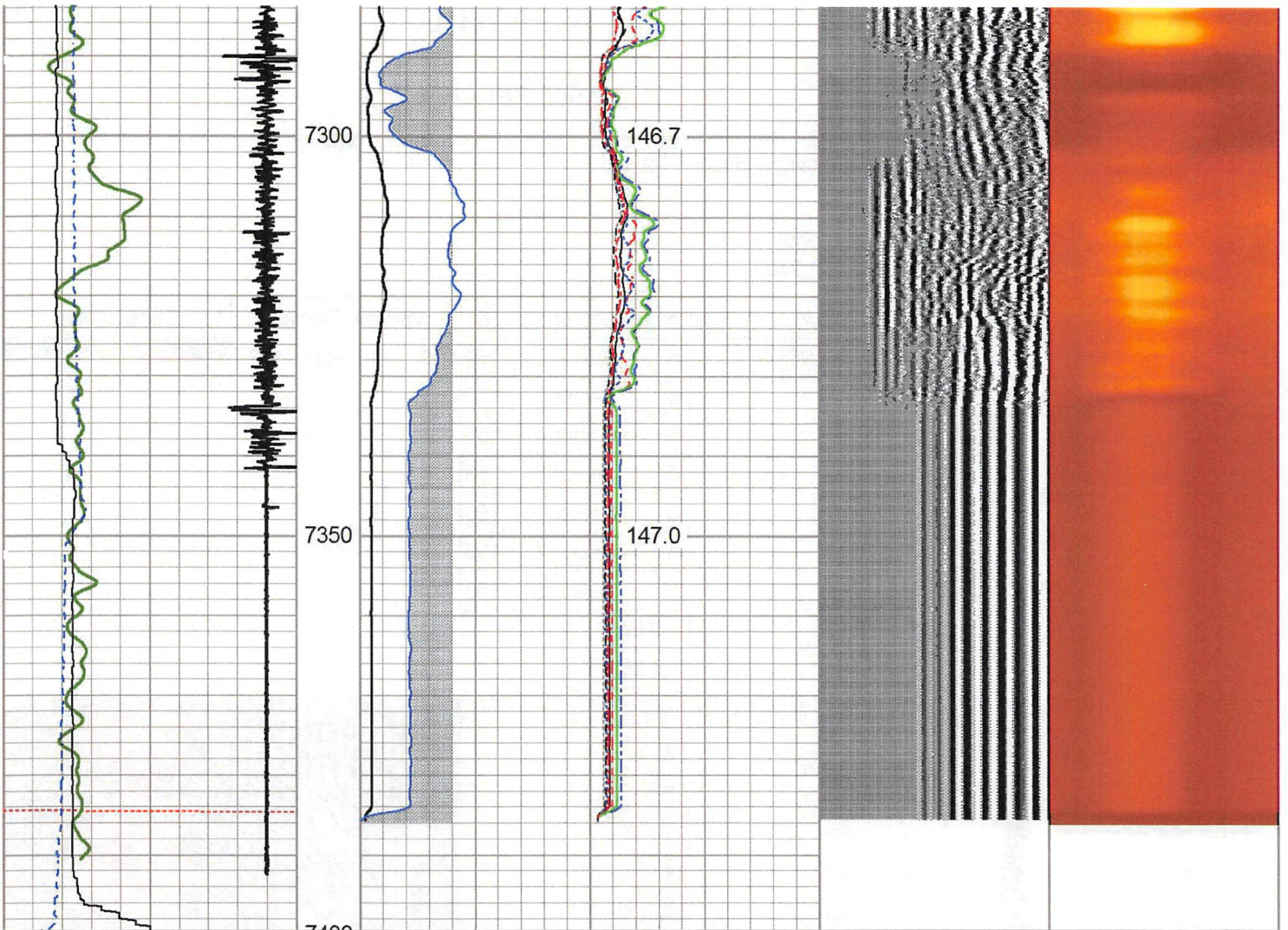
Variable Density	1	Cement Map	8
200 (usec)	1200		

TEMP
(degF)

Database File antero_dogwood_gribben2h_rcbl-1-15-22.db
 Dataset Pathname RCBL/REPEAT
 Presentation Format rcbl 2
 Dataset Creation Sun Jan 16 07:38:24 2022
 Charted by Depth in Feet scaled 1:240

297	Travel Time (usec)	197	0	Amplitude (mV)	100	-5	Sector 1	150	Variable Density	1	Cement Map	8
9	Casing Collar	-1	1	BONDIX	0	-5	Sector 2	150				
0	Gamma Ray (GAPI)	150				-5	Sector 3	150				
0	Line Tension (lb)	5000				-5	Sector 4	150				
-100	LSPD (ft/min)	100				-5	Sector 5	150				
						-5	Sector 6	150				
						-5	Sector 7	150				
						-5	Sector 8	150				
							TEMP					
							(degF)					





297	Travel Time (usec)	197
9	Casing Collar	-1
0	Gamma Ray (GAPI)	150
0	Line Tension (lb)	5000
-100	LSPD (ft/min)	100

0	Amplitude (mV)	100	-5	Sector 1	150
1	BONDIX	0	-5	Sector 2	150
			-5	Sector 3	150
			-5	Sector 4	150
			-5	Sector 5	150
			-5	Sector 6	150
			-5	Sector 7	150
			-5	Sector 8	150

Variable Density	1	Cement Map	8
(usec)	1200		

TEMP
(degF)

Log Variables

DatabaseC:\ProgramData\Warrior\Data\antero_dogwood_gribben2h_rcbl-1-15-22.db
Dataset field/well/RCBL/MAIN/_vars_

Top - Bottom

BHTEMP_Src	BOREID	BOTTEMP	CASEOD	CASETHCK	CASEWGHT	MAXAMPL	MINAMPL
TEMP	in 7.875	degF 100	in 5.5	in 0	lb/ft 20	mV 71.9	mV 2.2
MINATTN	PERFS	PPT	SRFTEMP	TDEPTH			
db/ft 0.8	No	usec 261	degF 0	ft 0			

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

Calibration Report

Database File antero_dogwood_gribben2h_rcbl-1-15-22.db
 Dataset Pathname RCBL/MAIN
 Dataset Creation Sun Jan 16 07:44:12 2022

Gamma Ray Calibration Report

Serial Number: FW1211-86
 Tool Model: Probe
 Performed: Sun Aug 29 01:22:07 2021
 Calibrator Value: 1.0 GAPI
 Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps
 Sensitivity: 0.5000 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: FW1312-32
 Tool Model: Probe275T
 Calibration Casing Diameter: 5.500 in
 Calibration Depth: 32.950 ft

Master Calibration, performed Sun Jan 16 05:48:10 2022:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.001	1.535	2.200	71.921	45.372	2.253
CAL	-0.001	0.863				
5'	-0.001	1.861	2.200	71.921	37.438	2.242
SUM						
S1	-0.001	2.001	0.000	100.000	49.958	0.051
S2	-0.001	1.635	0.000	100.000	61.138	0.068
S3	-0.001	1.426	0.000	100.000	70.076	0.076
S4	-0.001	1.361	0.000	100.000	73.432	0.084
S5	-0.001	1.358	0.000	100.000	73.590	0.090
S6	-0.001	1.390	0.000	100.000	71.862	0.087
S7	-0.001	1.640	0.000	100.000	60.938	0.077
S8	-0.001	1.964	0.000	100.000	50.895	0.064

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.001	0.863	1.000	0.000

Air Zero Calibration, performed Sat Jan 15 12:04:54 2022:

Raw (v) Calibrated (v) Results

	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

	Company	ANTERO
	Well	GRIBBEN UNIT 2H
	Field	MARCELLUS
	County	WETZEL
	State	WV