



**RADIAL CEMENT BOND LOG
VARIABLE DENSITY LOG
GAMMA/CCL/TEMP**

Company ANTERO RESOURCES		Company ANTERO RESOURCES	
Well CONIFER 2H		Well CONIFER 2H	
Field WEST UNION		Field WEST UNION	
County DODDRIDGE		County DODDRIDGE	
State WV		State WV	
Location: 39.2566436, -80.791916 (ENTERANCE)		API #: 47-017-06929	
SEC TWP RGE		Other Services	
Permanent Datum GROUND LEVEL Elevation 25.5"		K.B. 1155.5	
Log Measured From KELLY BUSHING		D.F. 1145.5	
Drilling Measured From KELLY BUSHING		G.L. 1121	
Date	NOVEMBER 15, 2022		
Run Number	ONE		
Depth Driller	14.320'		
Depth Logger	7.232'		
Bottom Logged Interval	7.226'		
Top Log Interval	SURFACE		
Open Hole Size	NA		
Type Fluid	FRESH WATER		
Density / Viscosity	8.6 LB/GAL		
Max. Recorded Temp.	144.1		
Estimated Cement Top	2.426'		
Time Well Ready	UPON ARRIVAL		
Time Logger on Bottom	7:00		
Equipment Number	116		
Location	CHARLEROI, PA		
Recorded By	C. DRUMMOND		
Witnessed By	Keith Stansbury		
Borehole Record		Tubing Record	
Run Number	Bit	From	To
		Size	Weight
			From
			To
Casing Record	Size	Wgt/Ft	Top
Conductor String	13.375"	54.5 LBS.	SURFACE
Surface String	9.625"	36 LBS.	SURFACE
Intermediate String	5.5	20 LBS.	SURFACE
Intermediate String			
Production String			Bottom
			336'
			2.663'
			14.320'

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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
DEPTH SHIFT +3
MARKER JOINT 5,935' - 5,946'
MAIN PASS LOGGED WITH 1500 PSI
REPEAT PASS LOGGED WITH 0 PSI

THANK YOU FOR USING NINE ENERGY SERVICES

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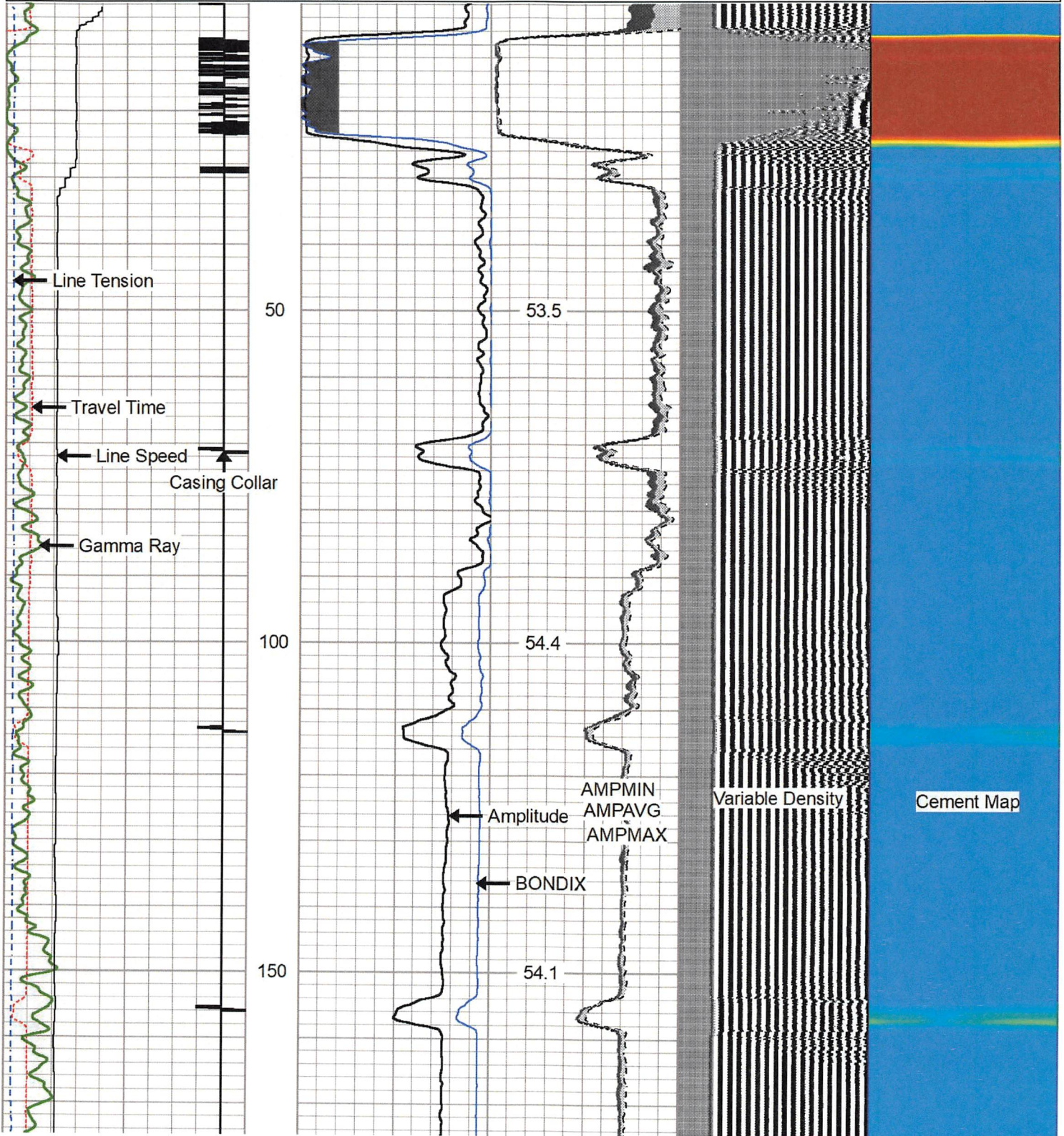
Main Pass 1500 PSI

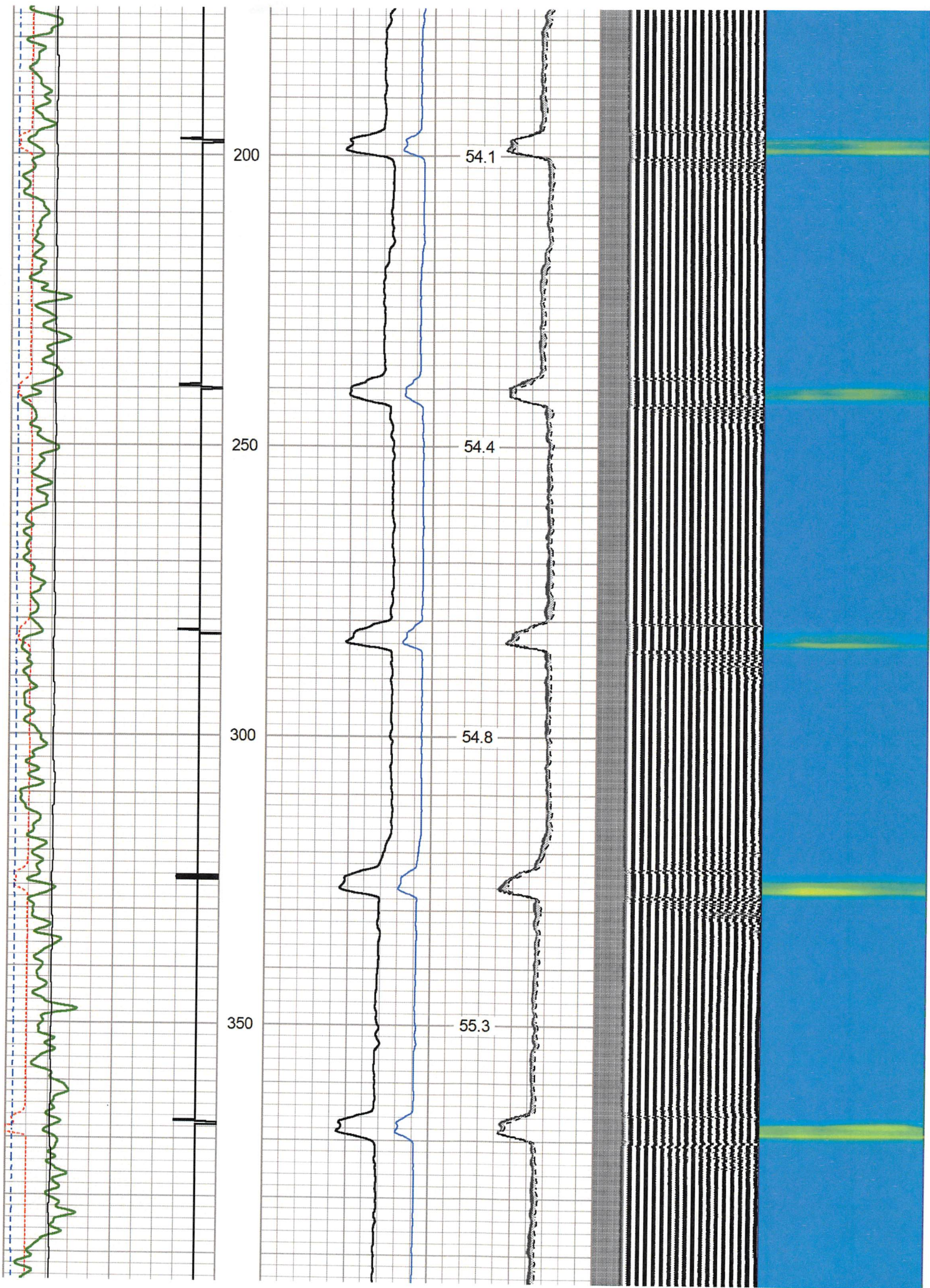
Database File antero_conifer_2h_rcbl_15_nov_2022.db
 Dataset Pathname pass7
 Presentation Format rcbl-bond index for antero 1020
 Dataset Creation Tue Nov 15 07:33:42 2022
 Charted by Depth in Feet scaled 1:240

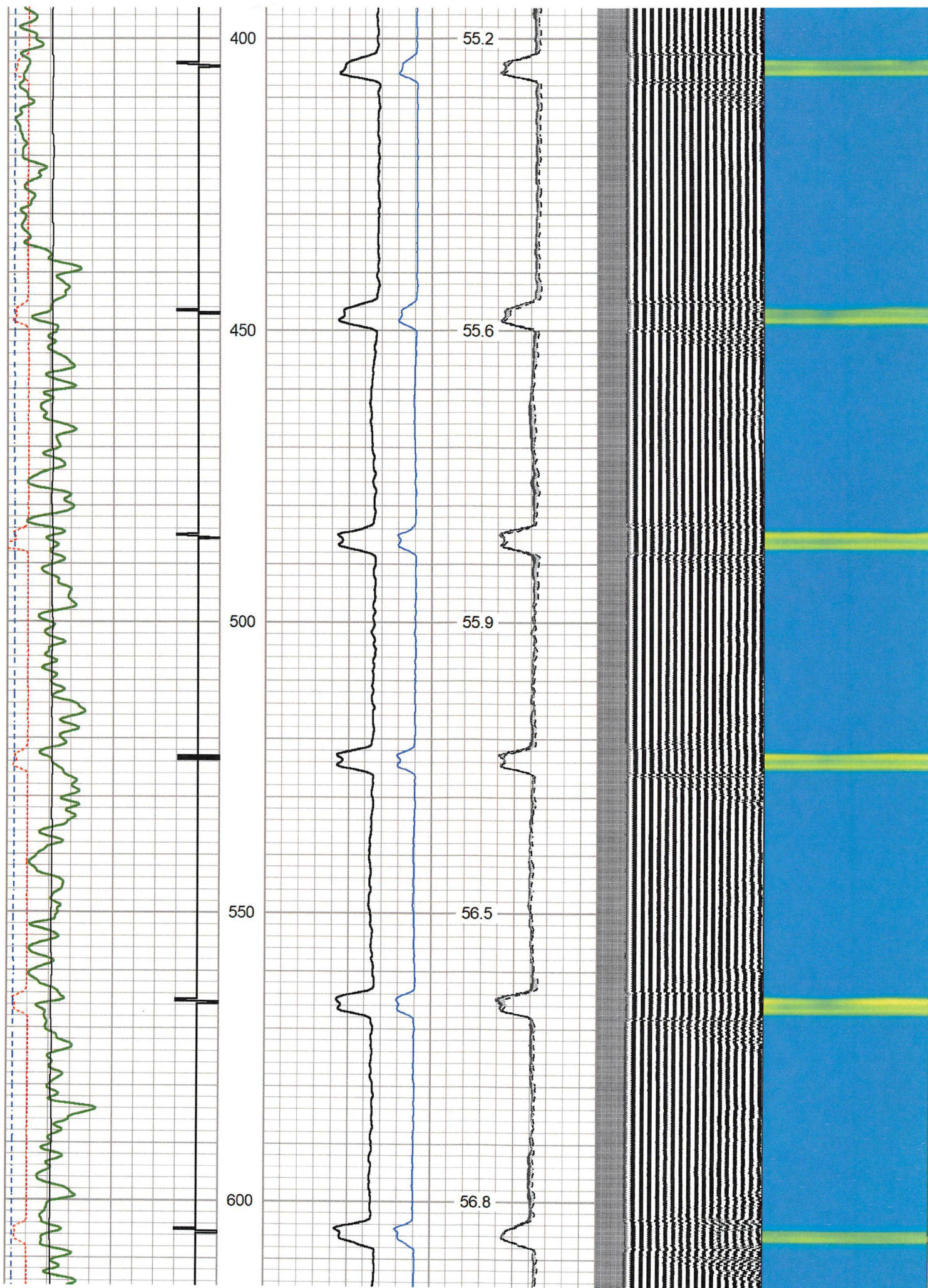
267	Travel Time (usec)	167
9	Casing Collar	-1
0	Gamma Ray (GAPI)	150
Line Speed		
-200	(ft/min)	200
0	Line Tension (lb)	5000

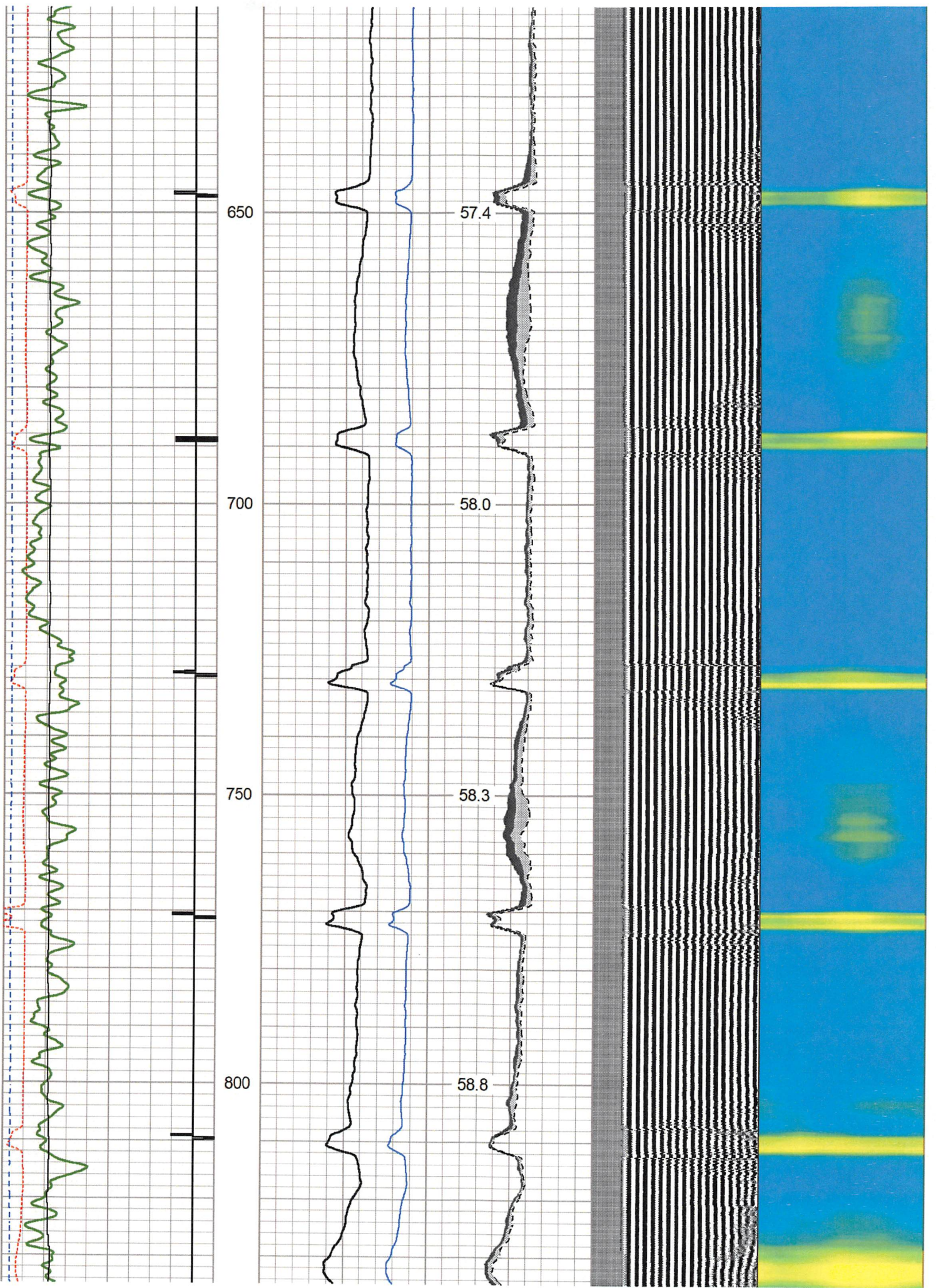
0	Amplitude (mV)	100	-5	AMPMIN	150
1	BONDIX	0	-5	AMPMAX	150
			-5	AMPAVG	150
TEMP					
(degF)					

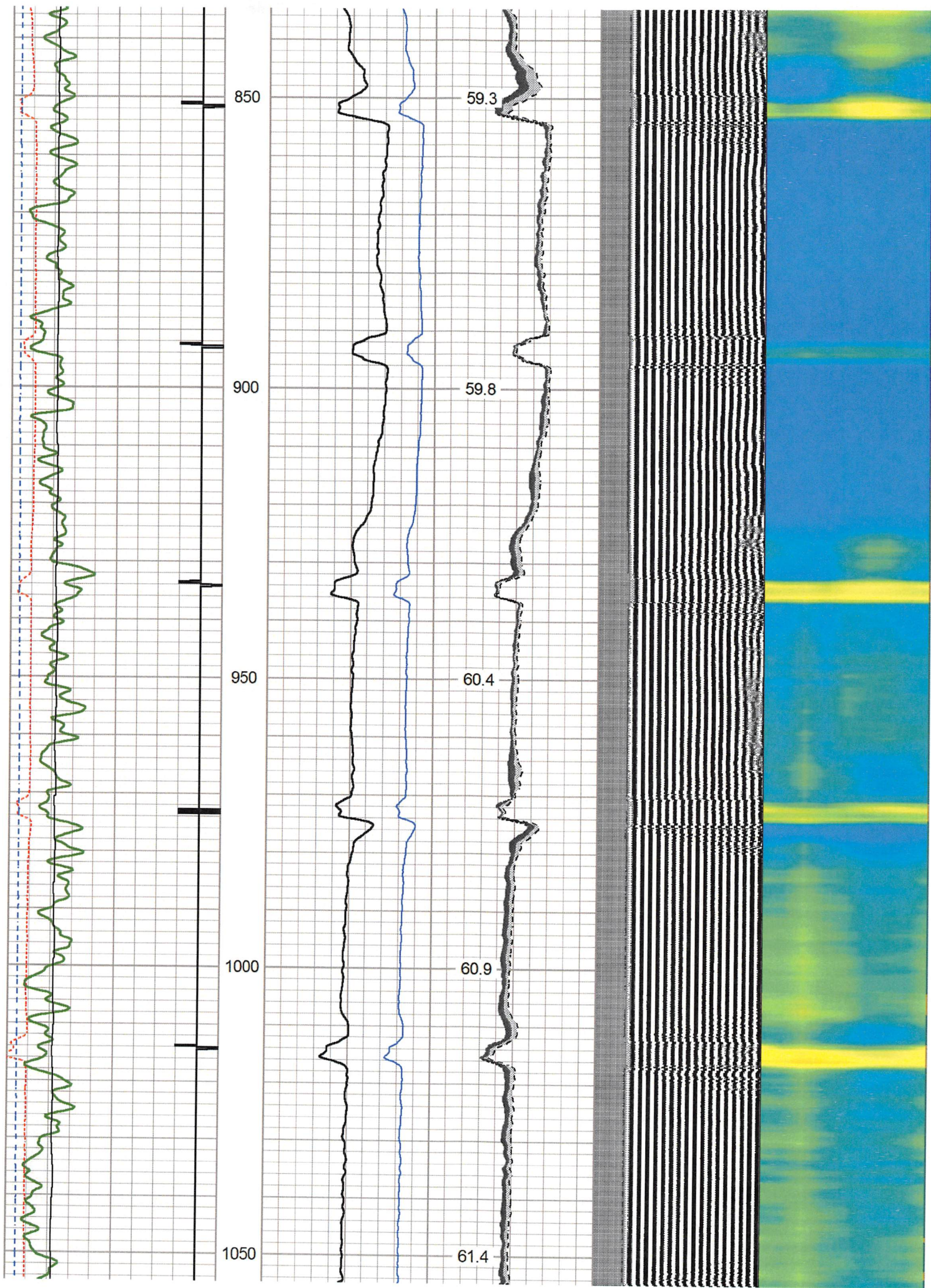
Variable Density	1	Cement Map	8
200 (usec)	1200		

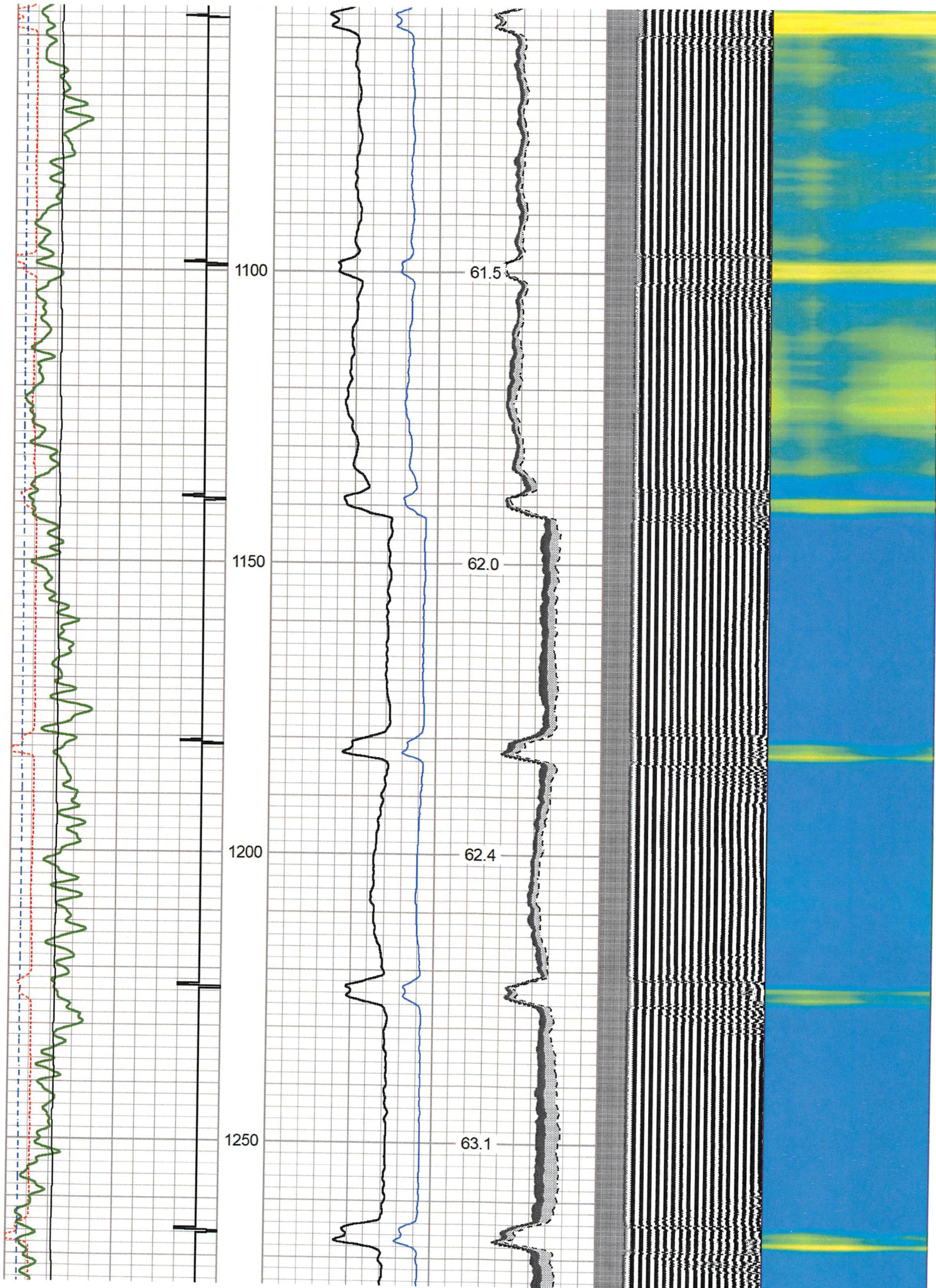


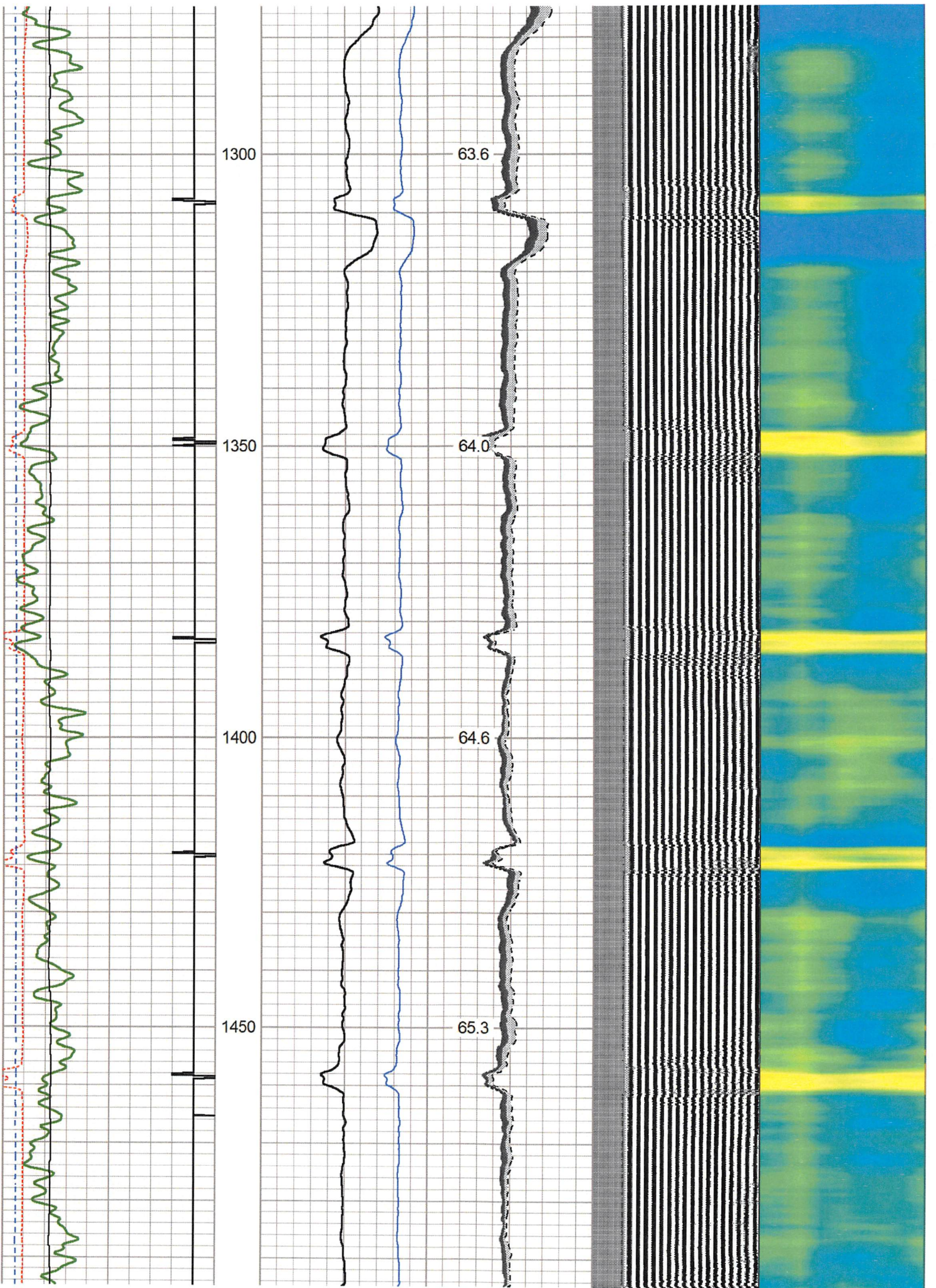


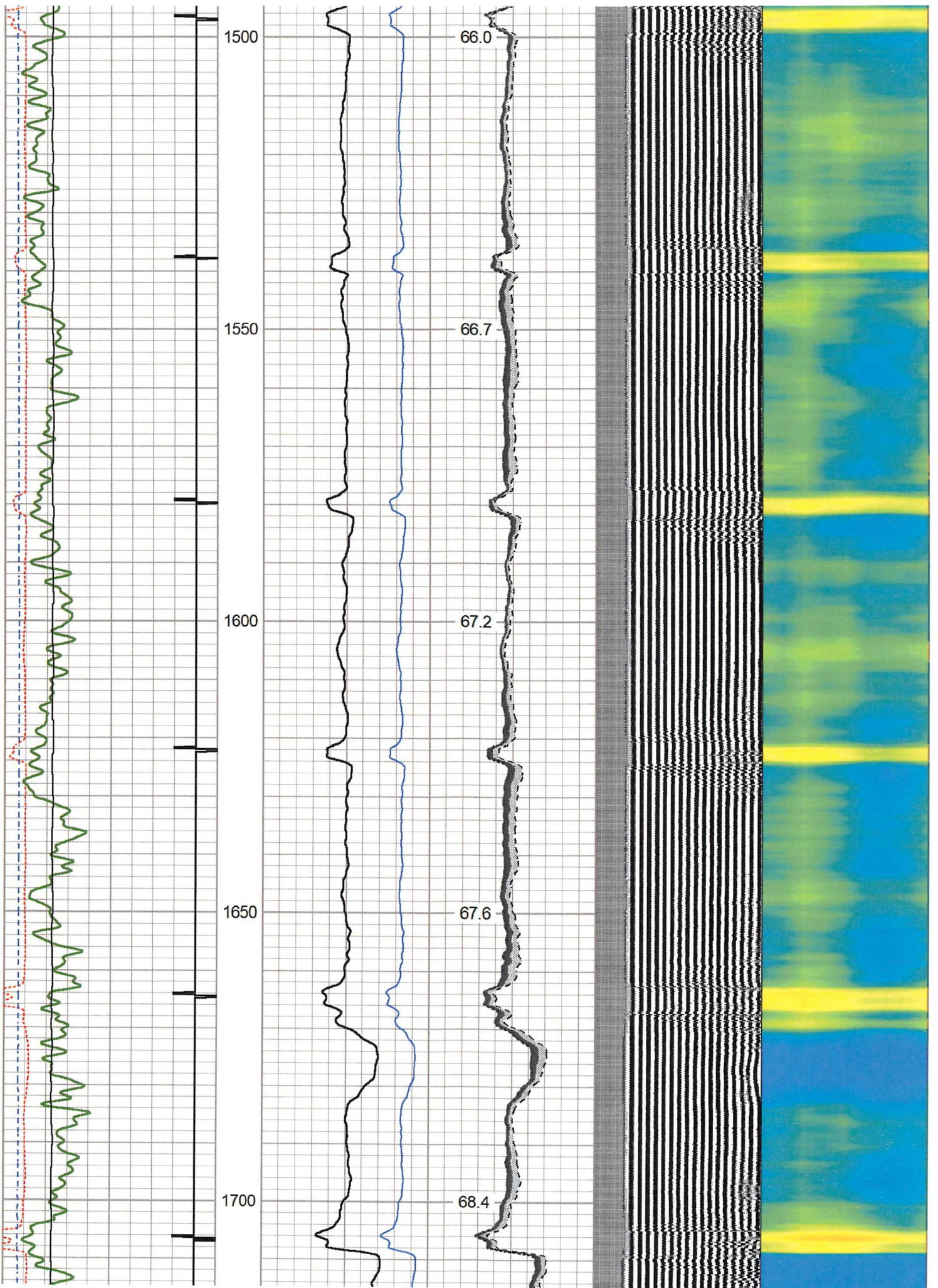


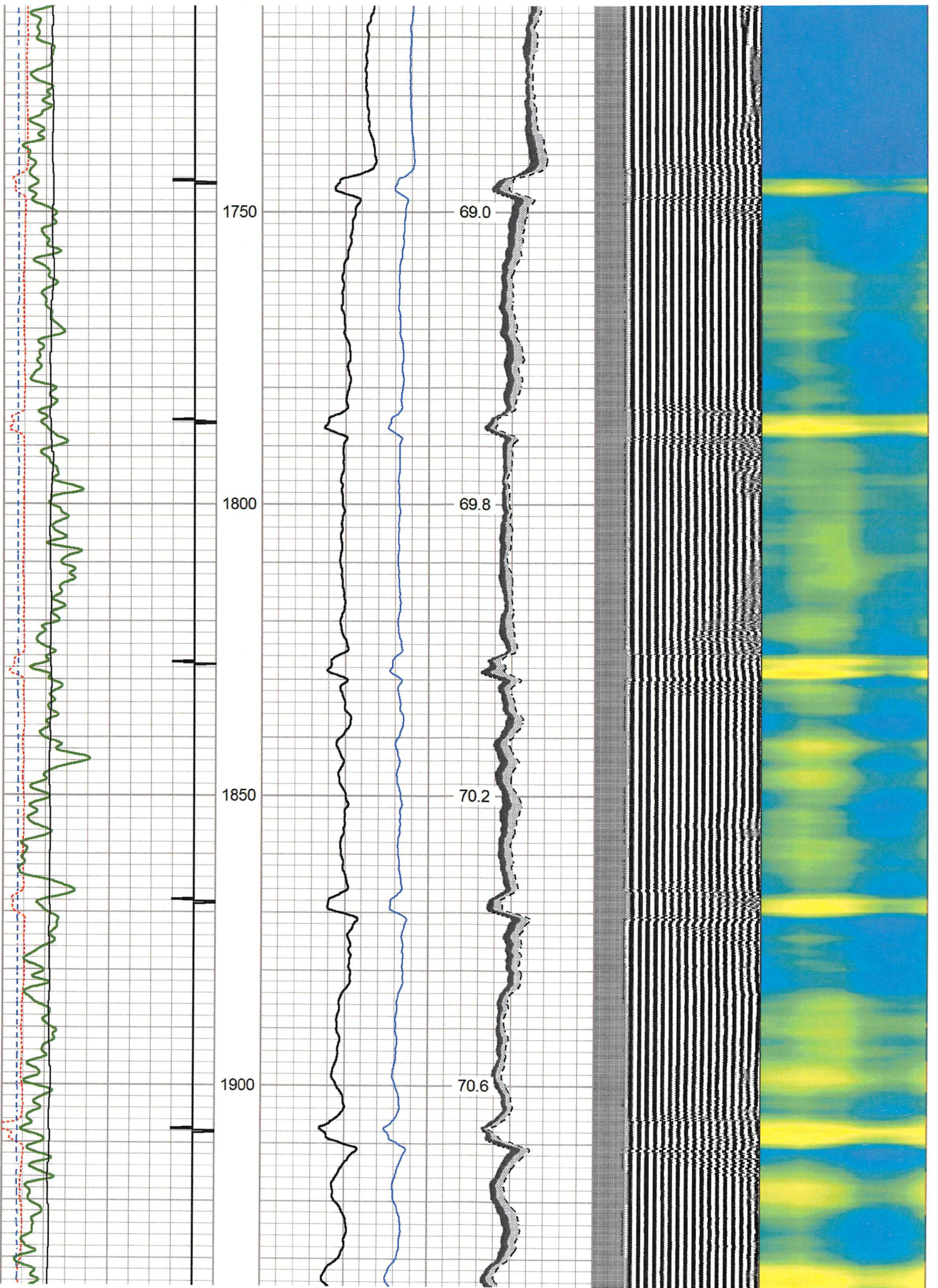


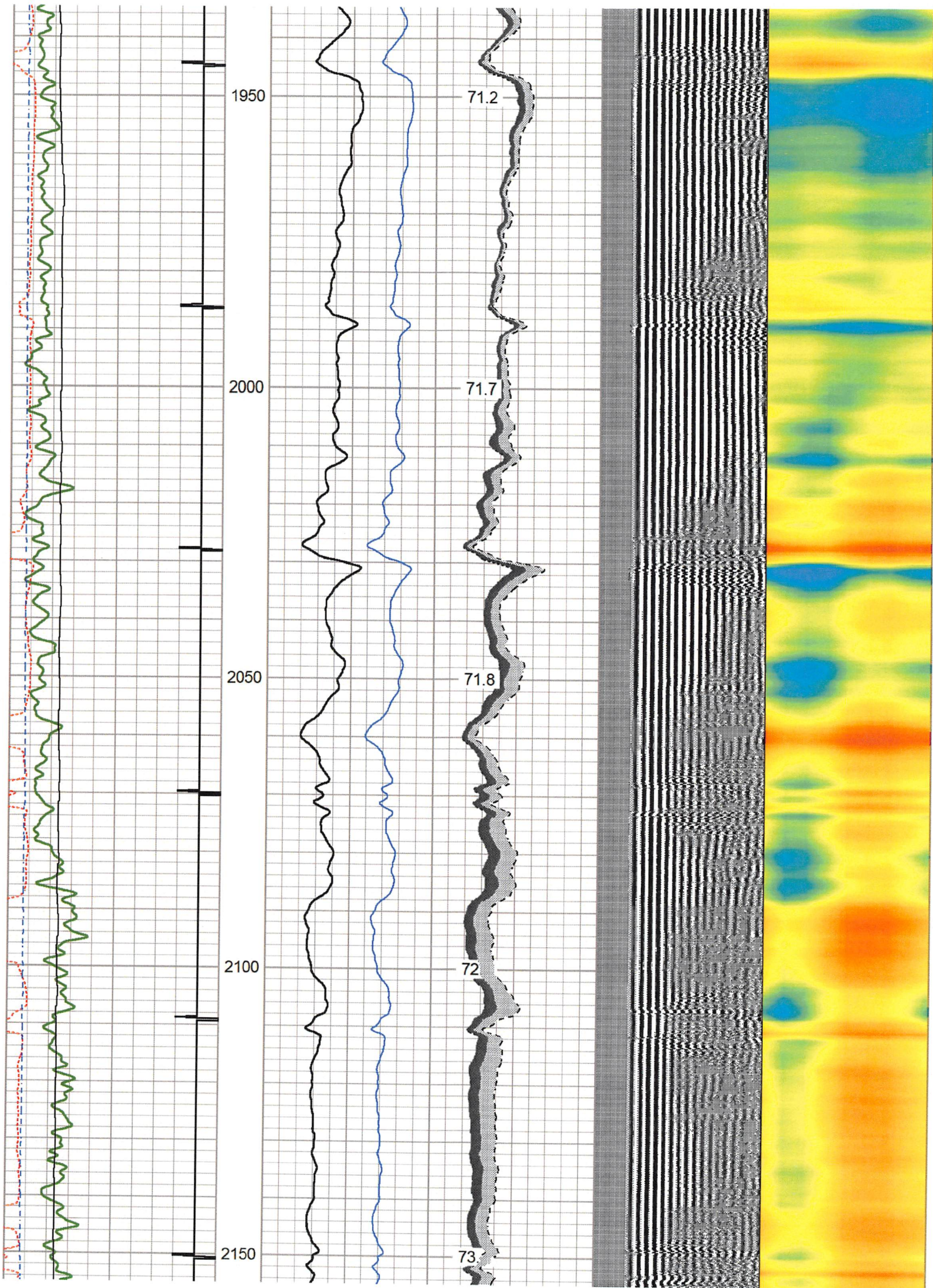


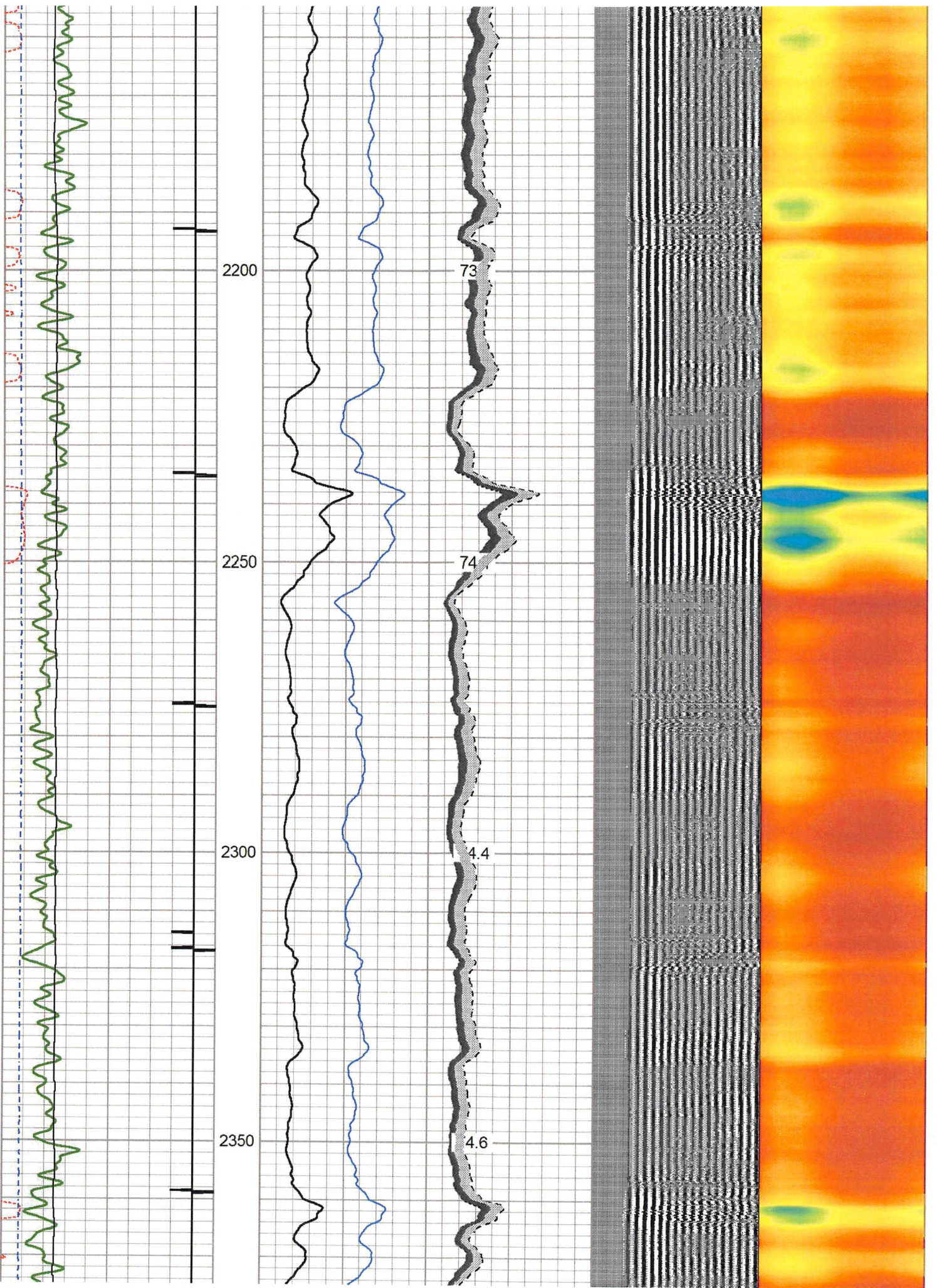


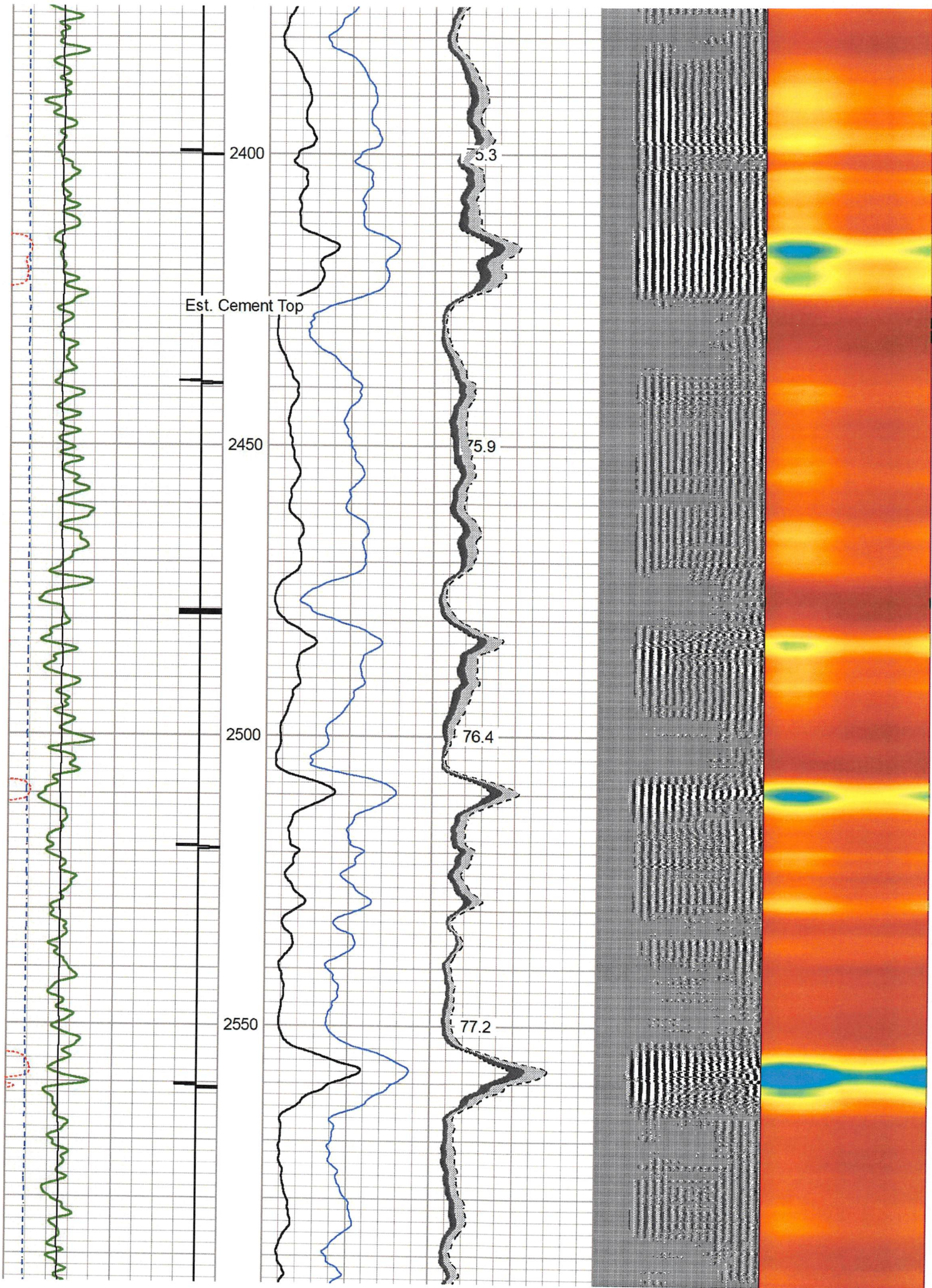


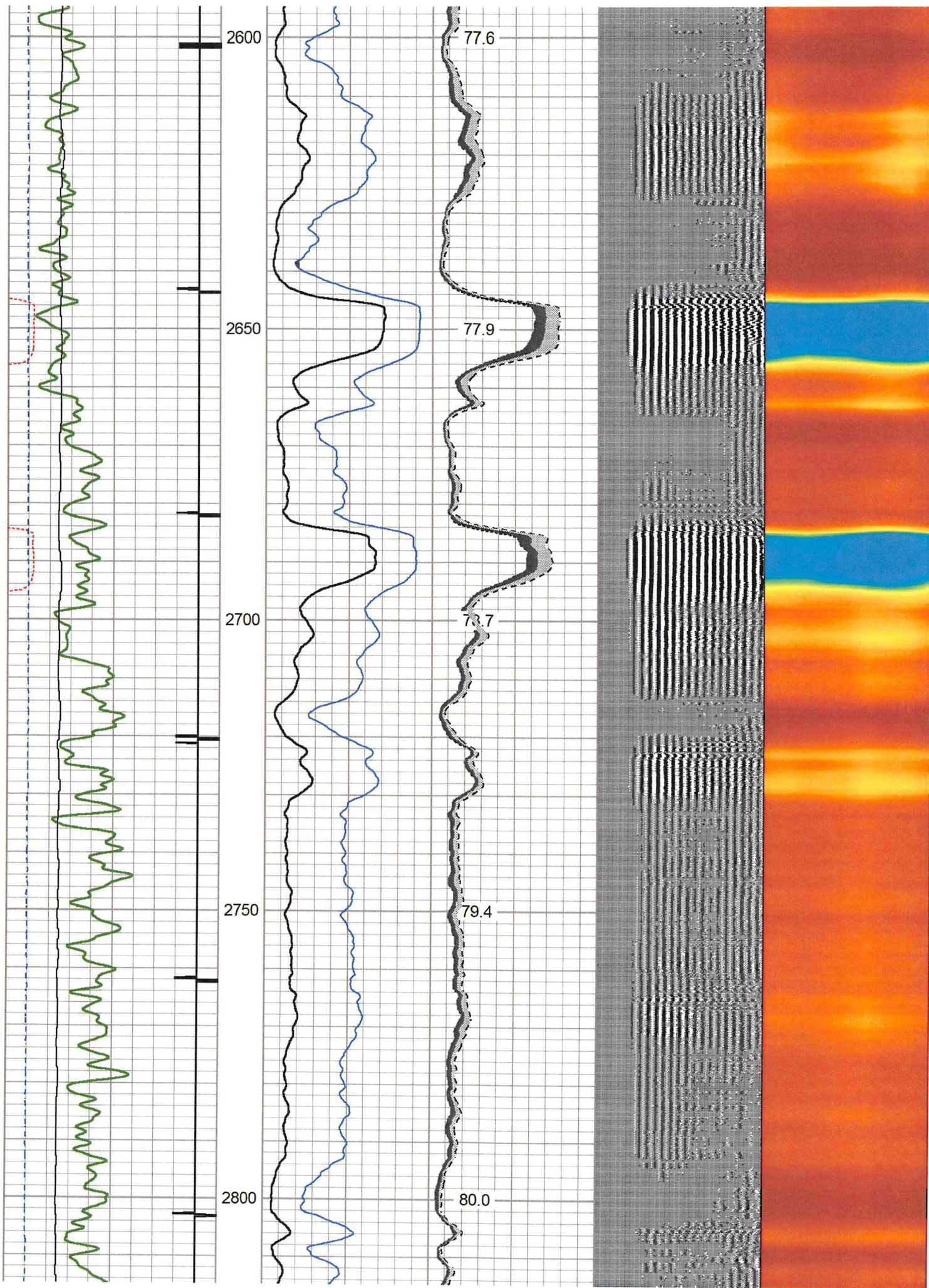


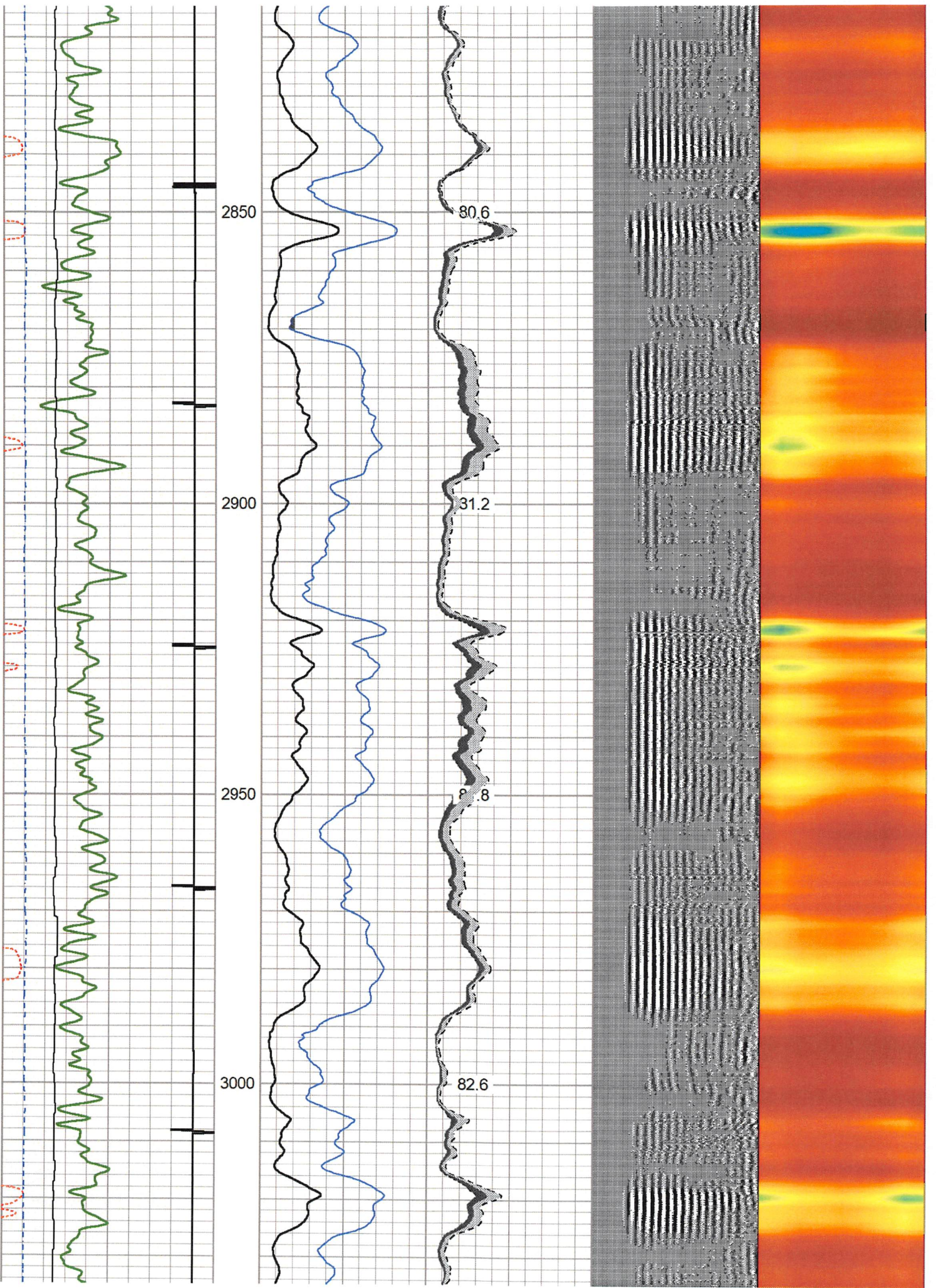


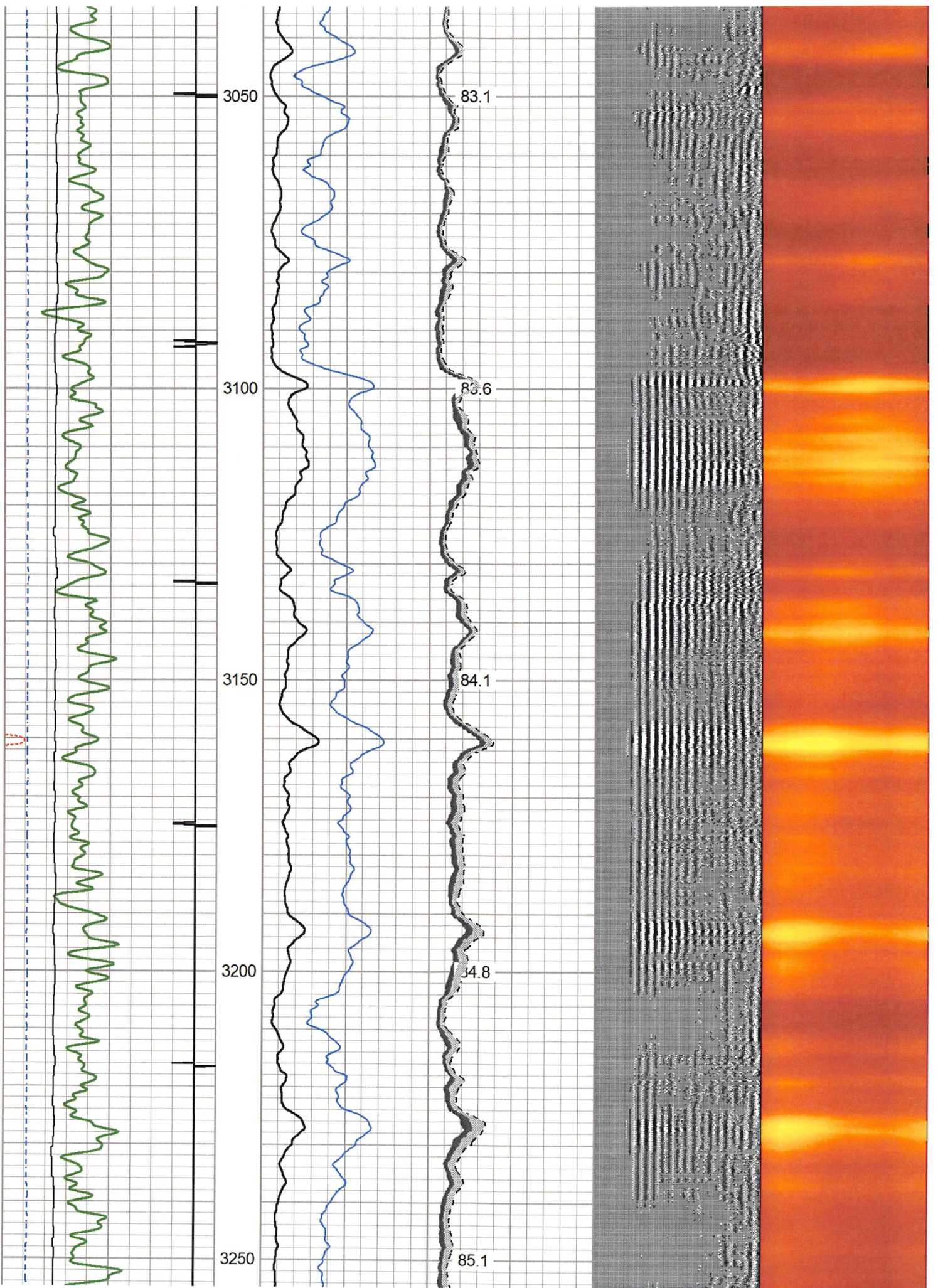


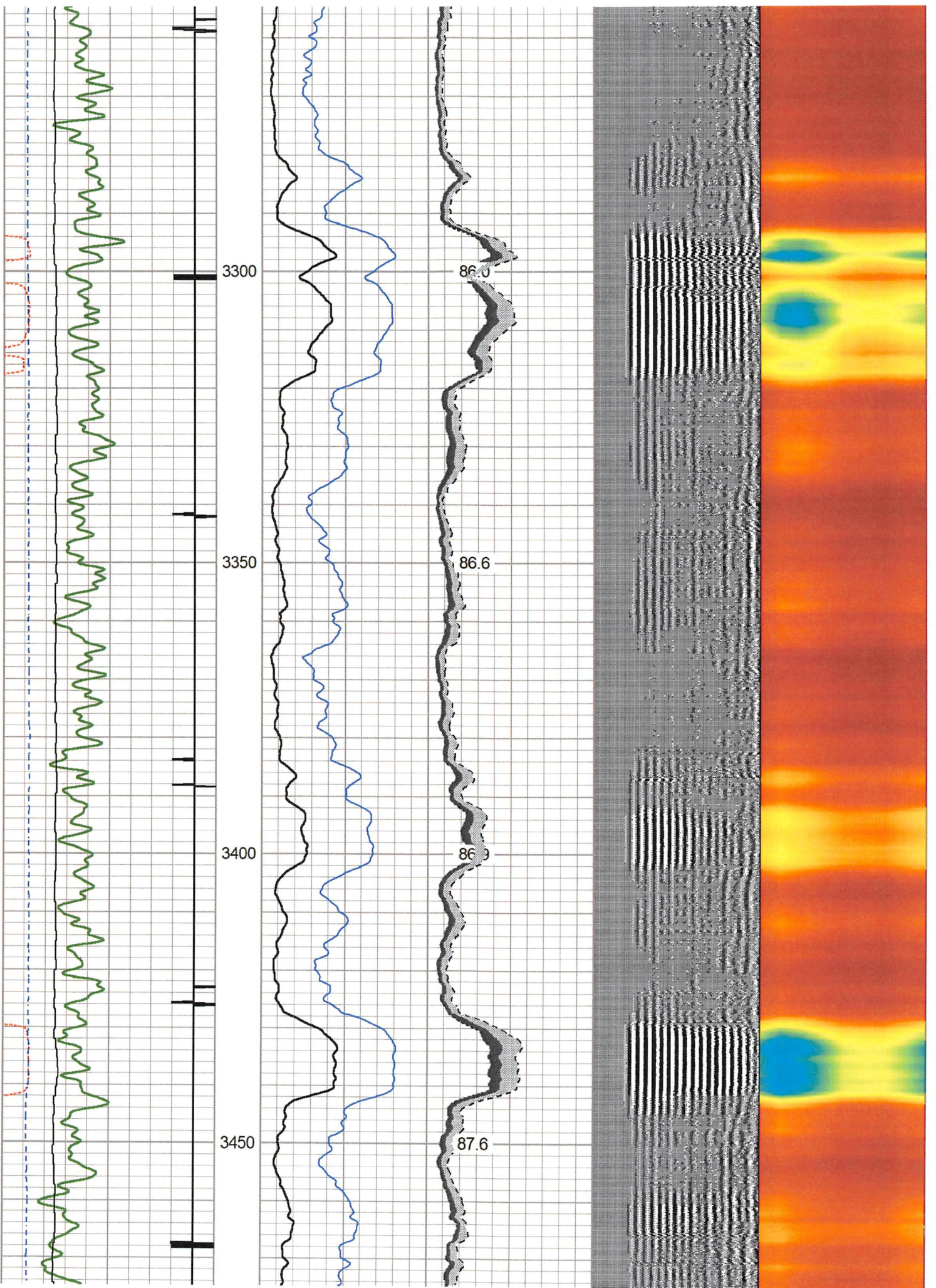


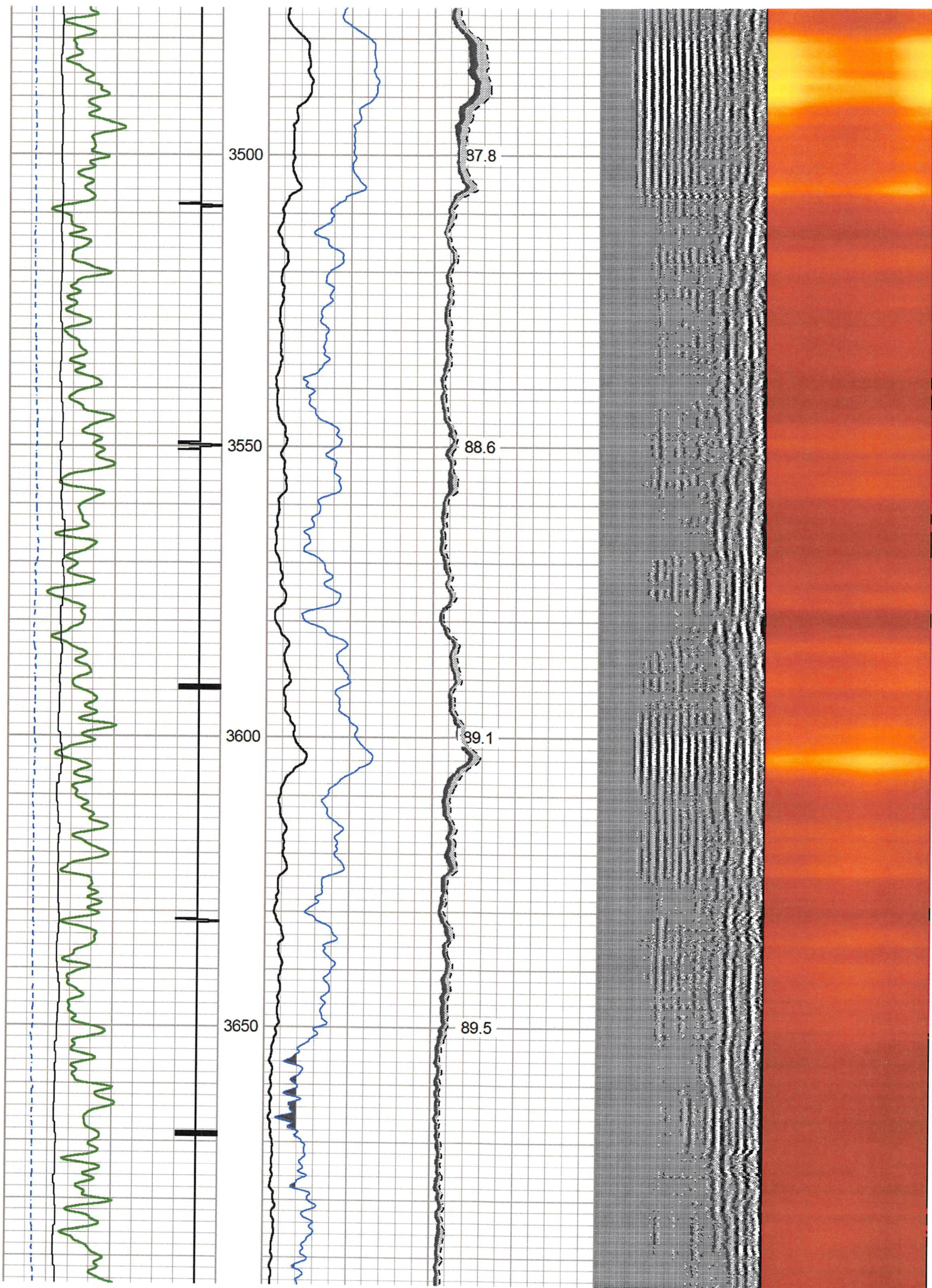


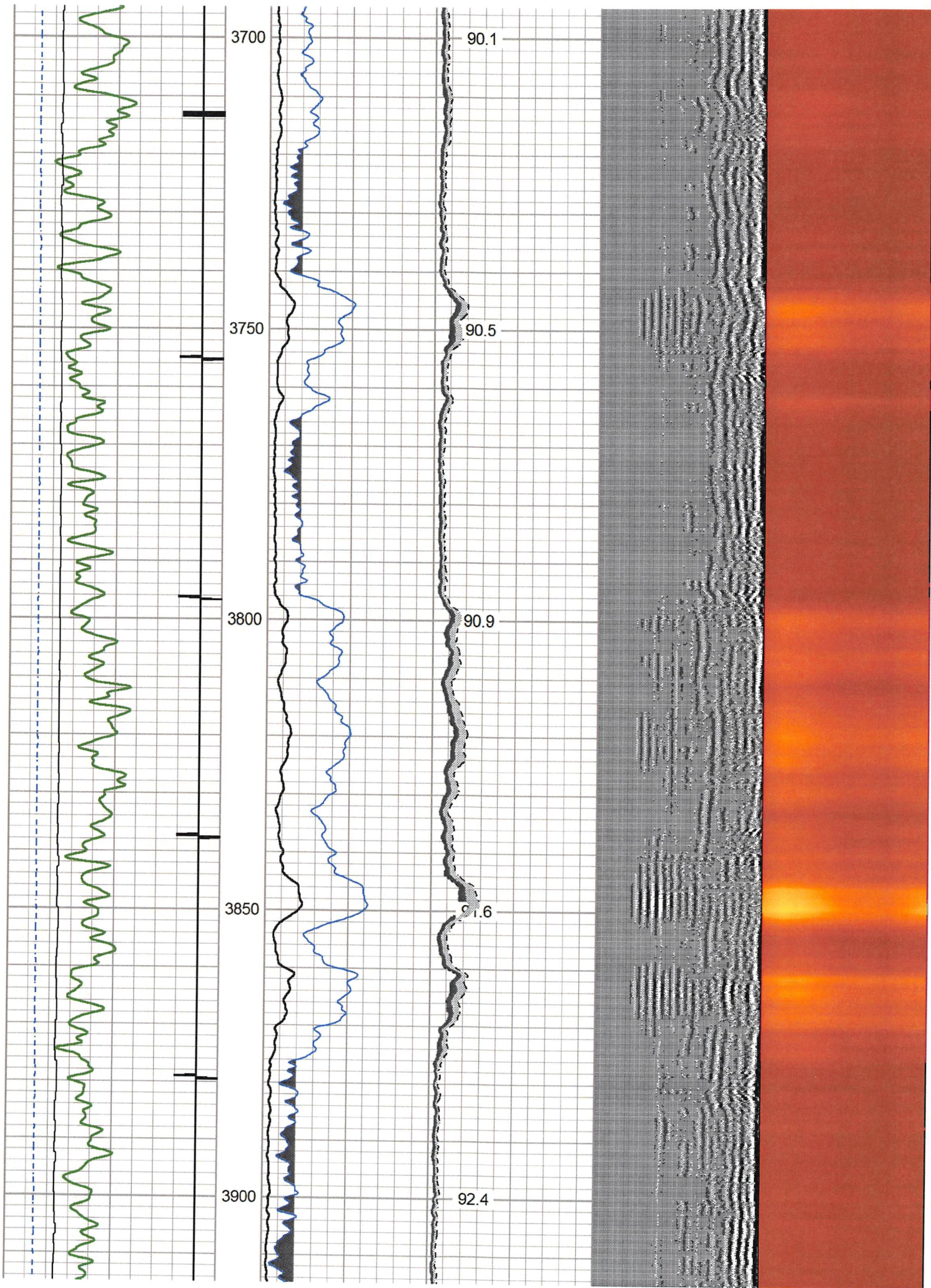


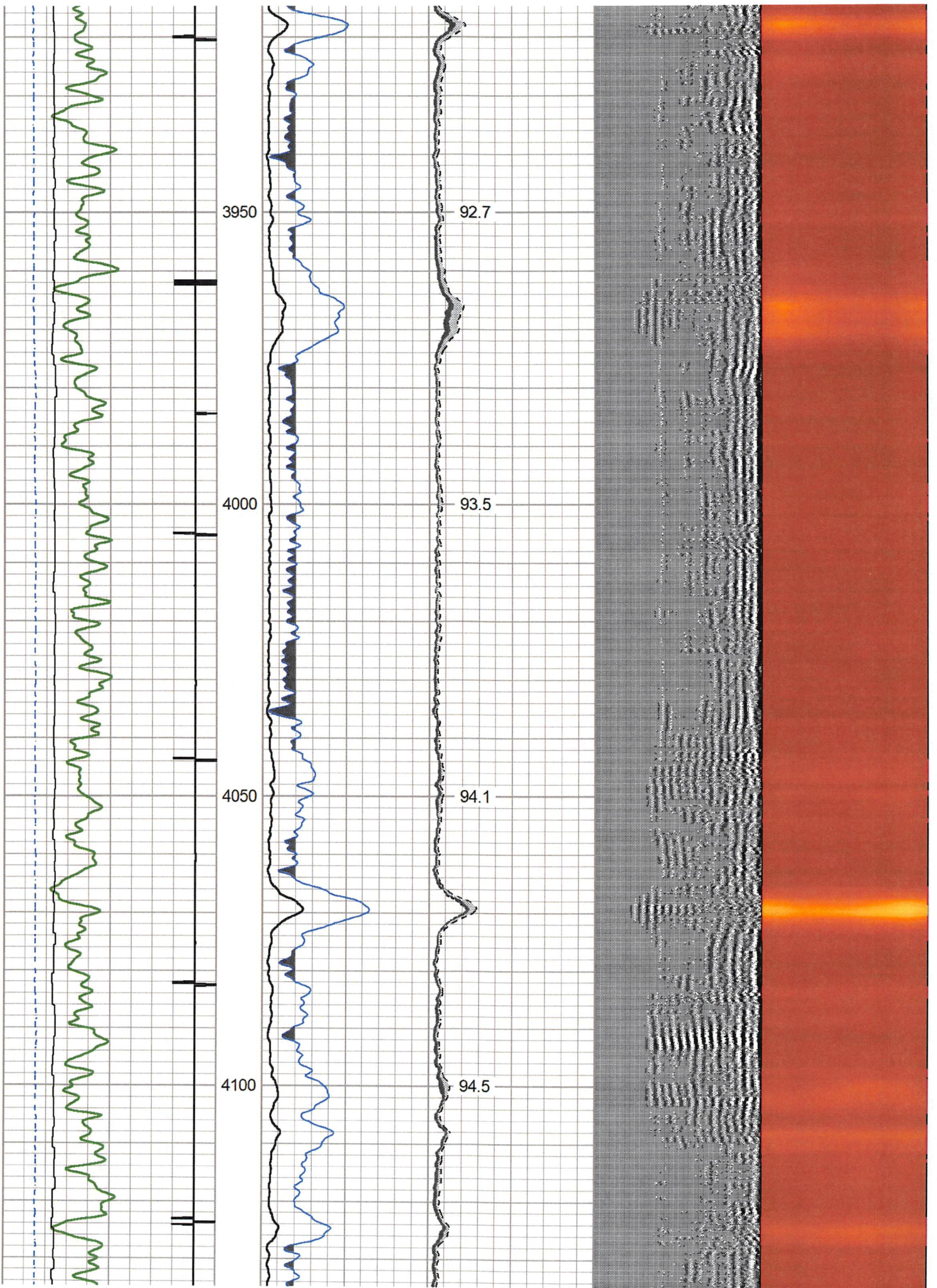


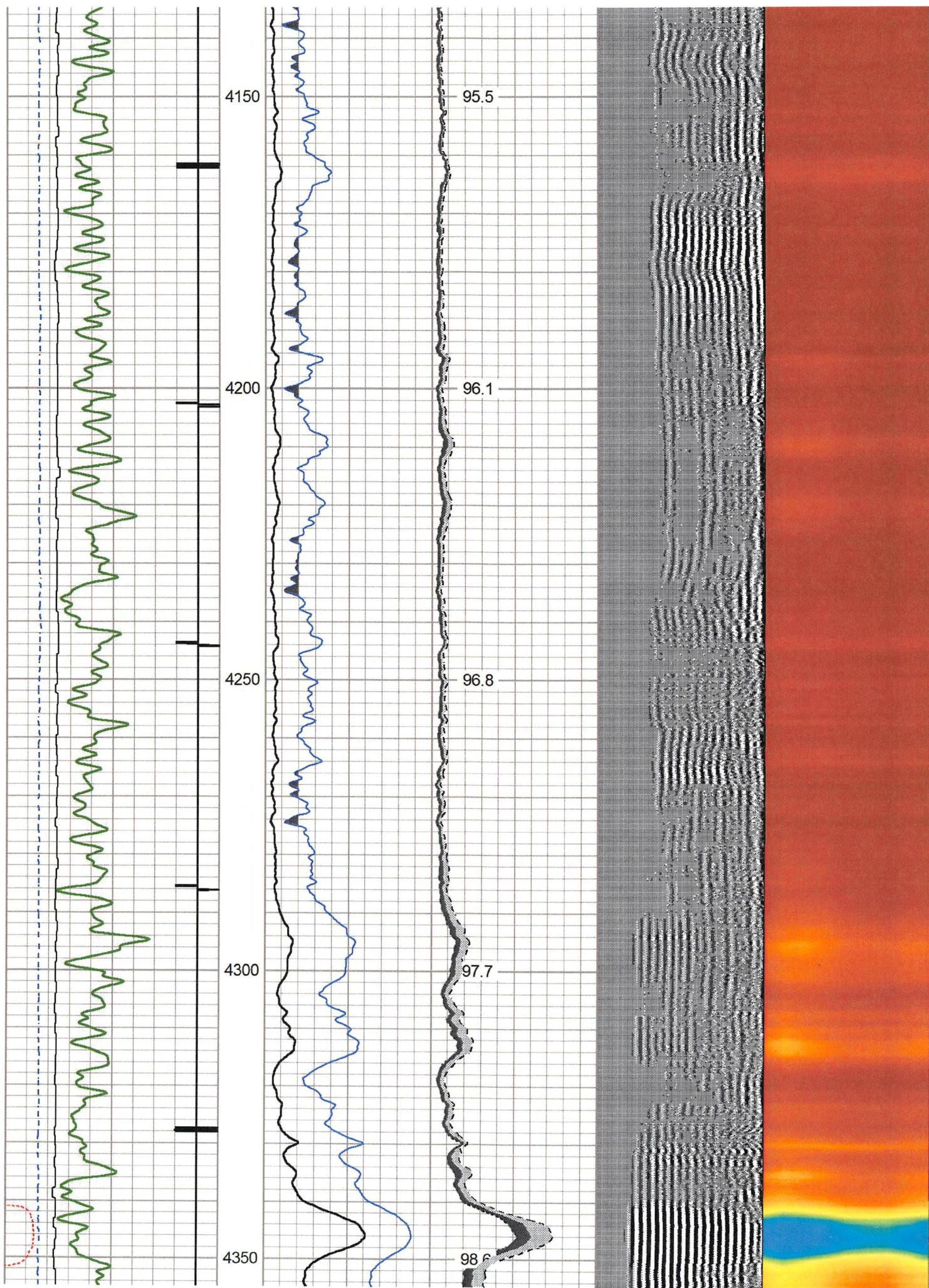


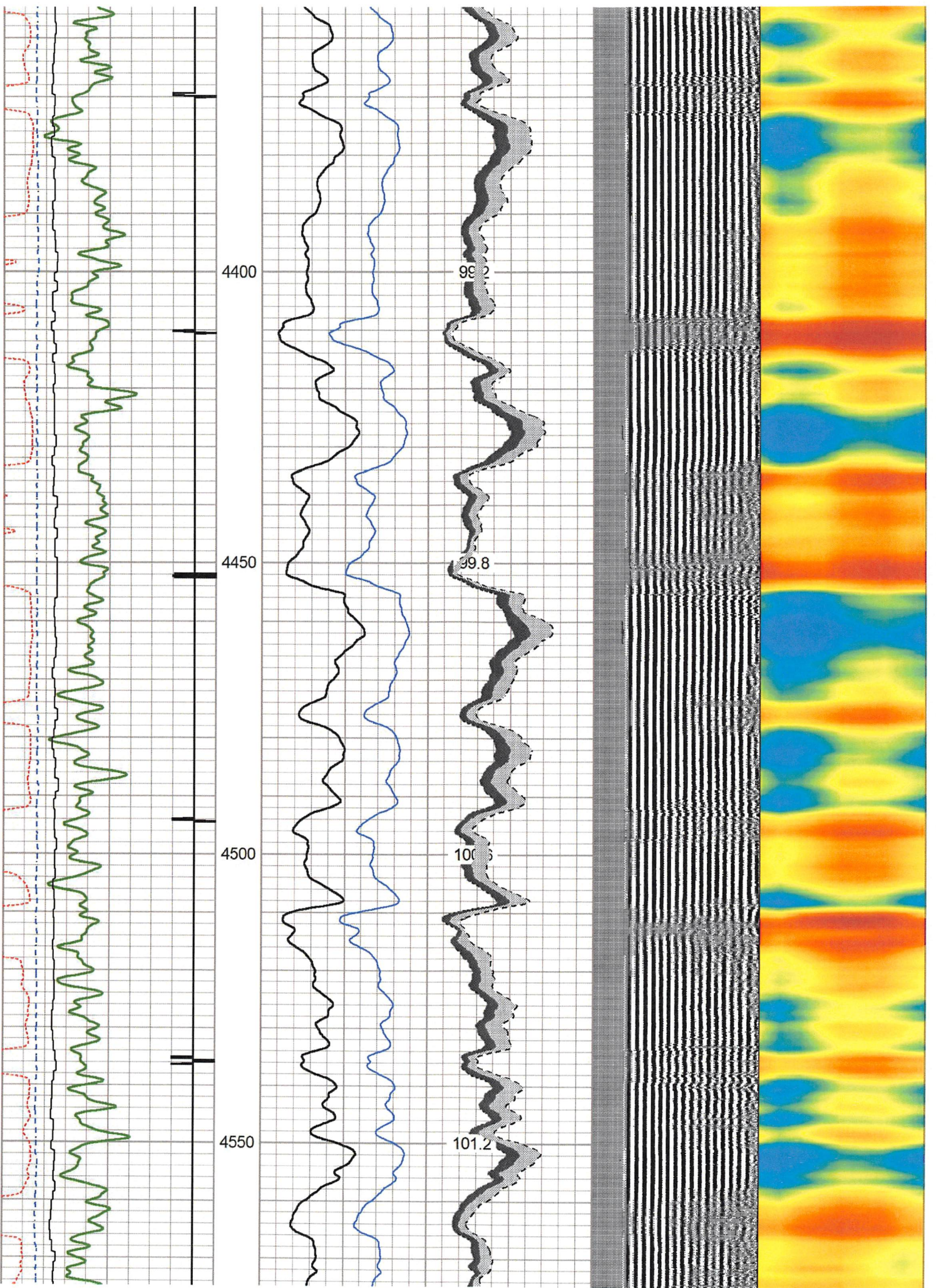


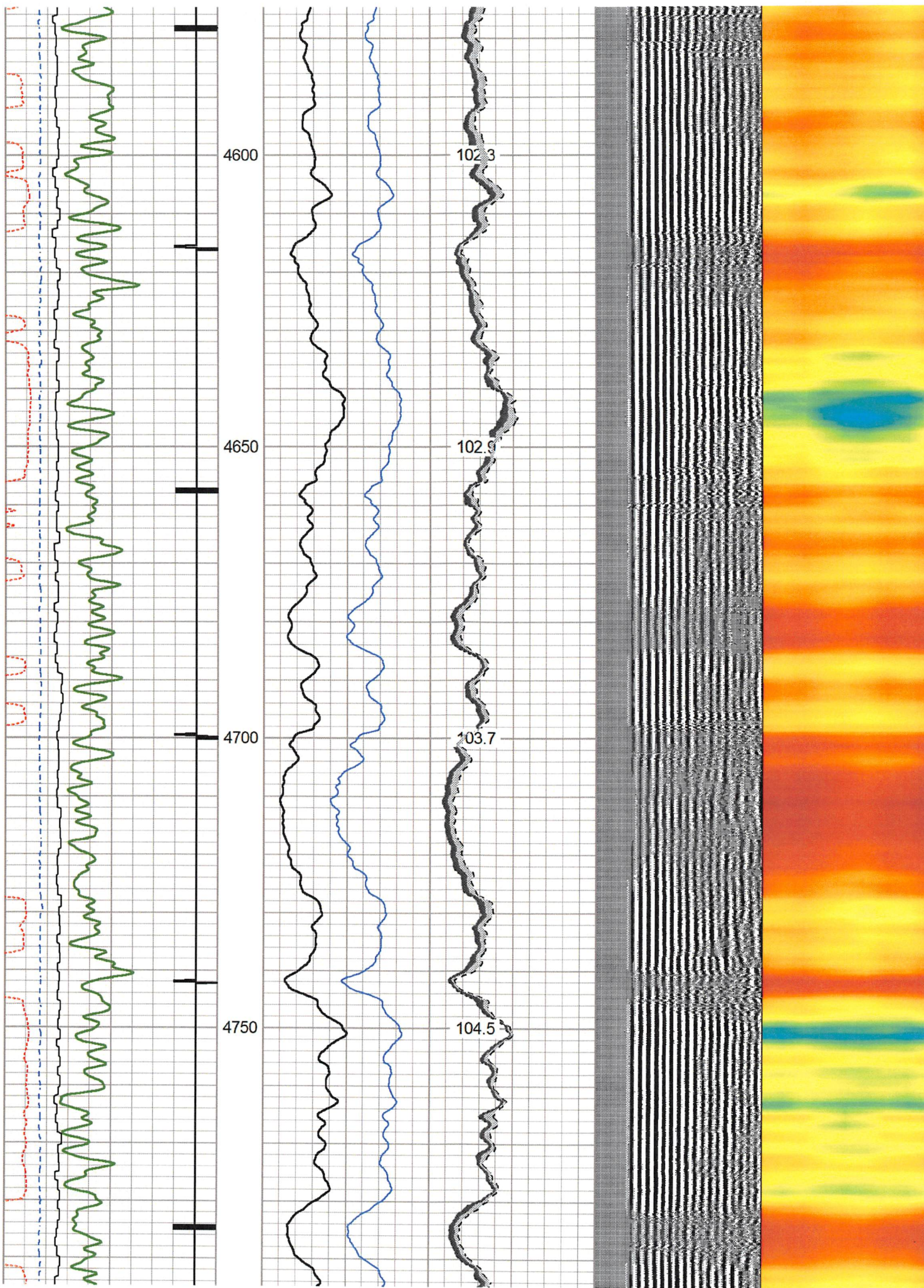


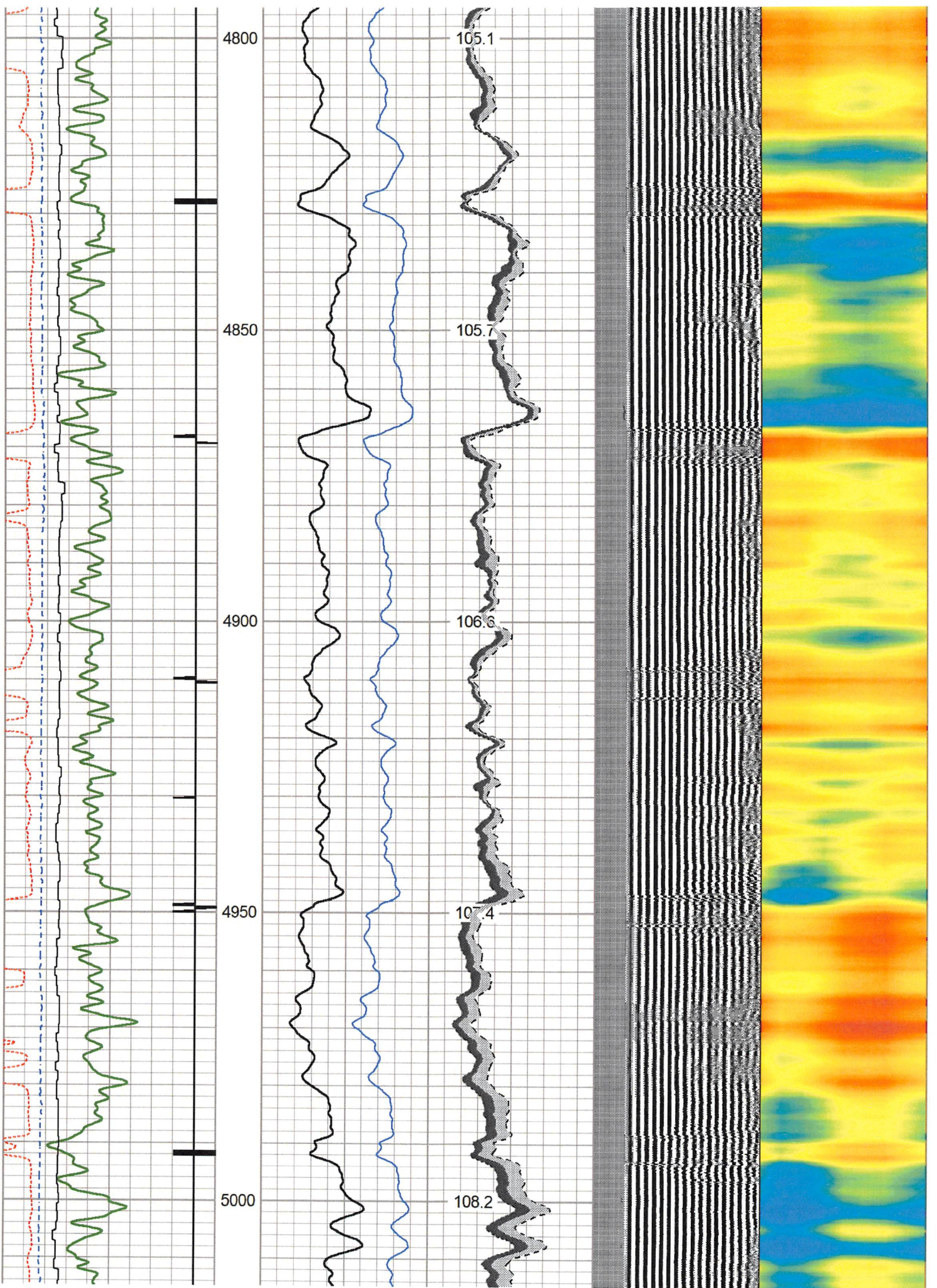


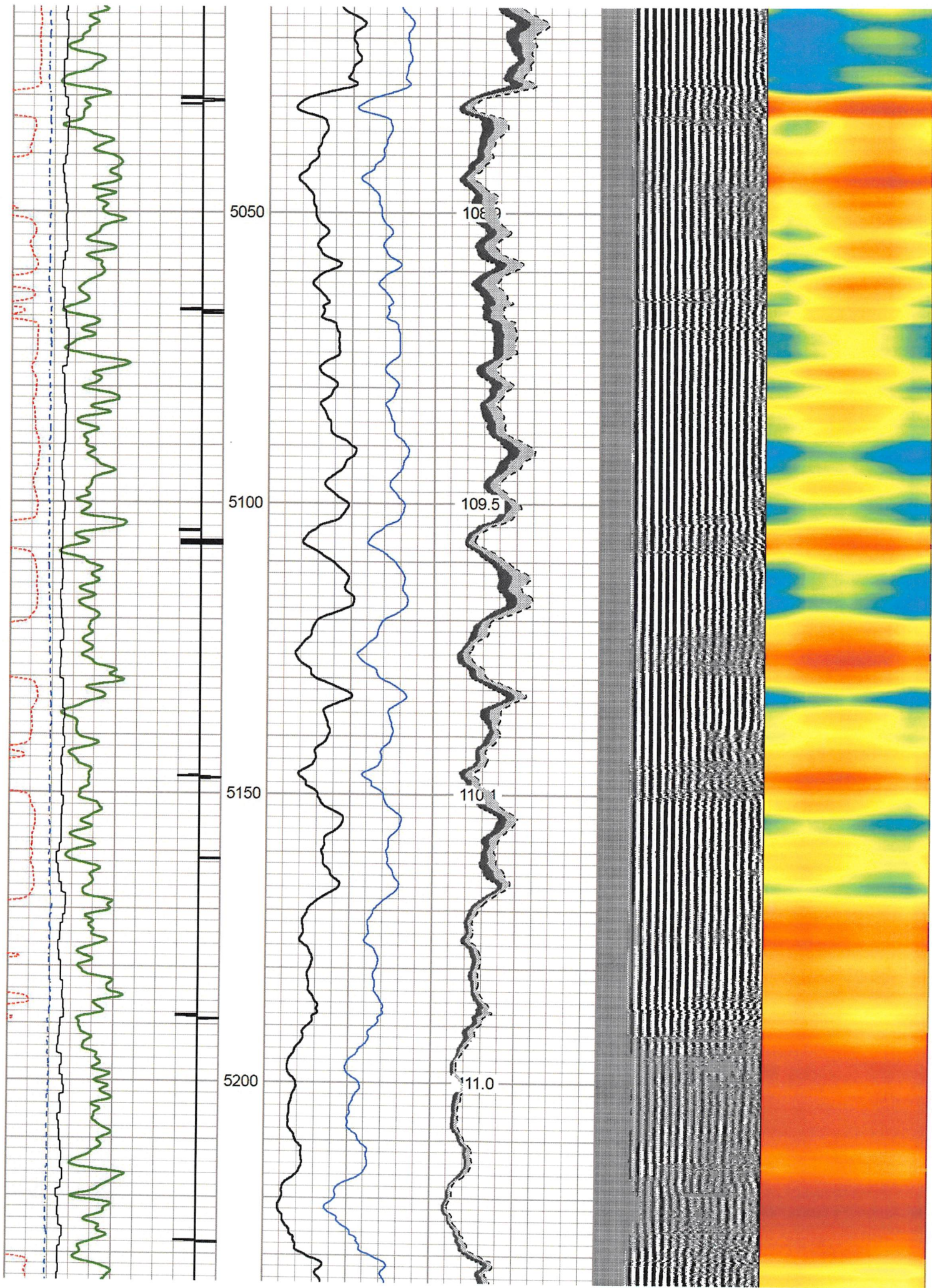


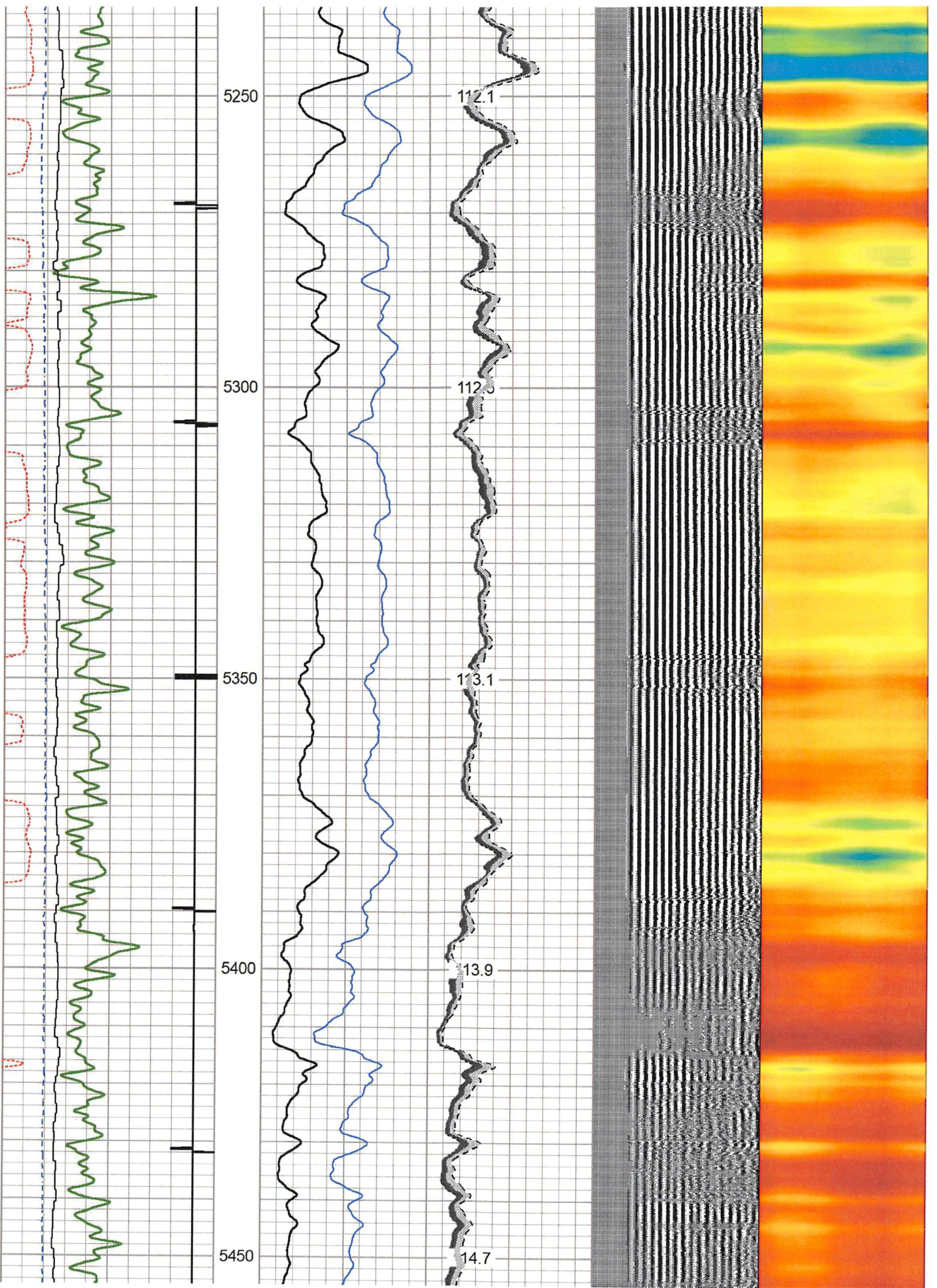


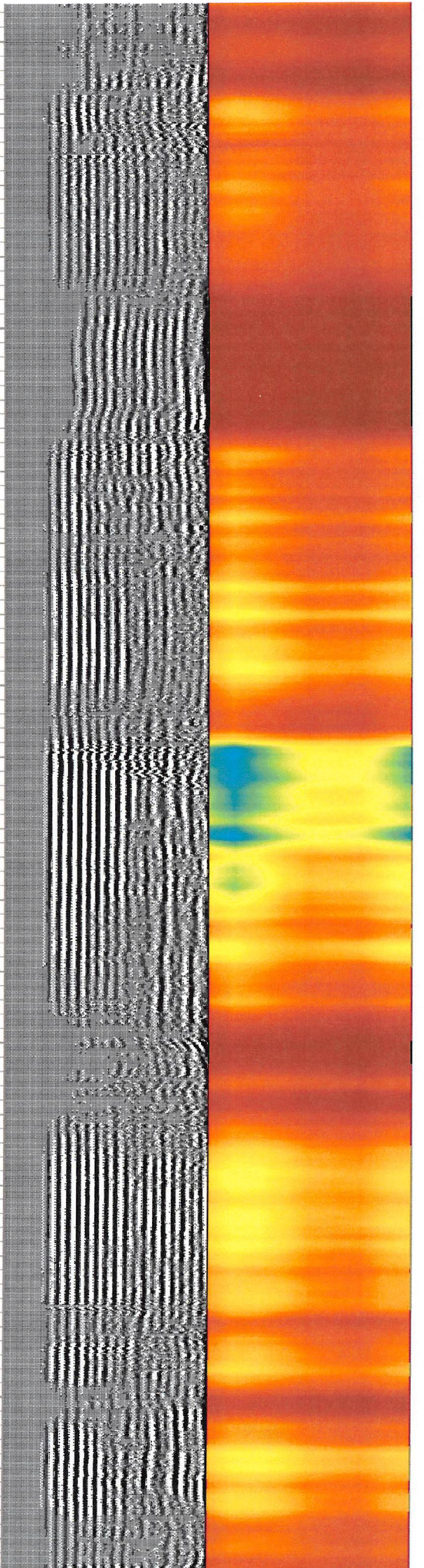
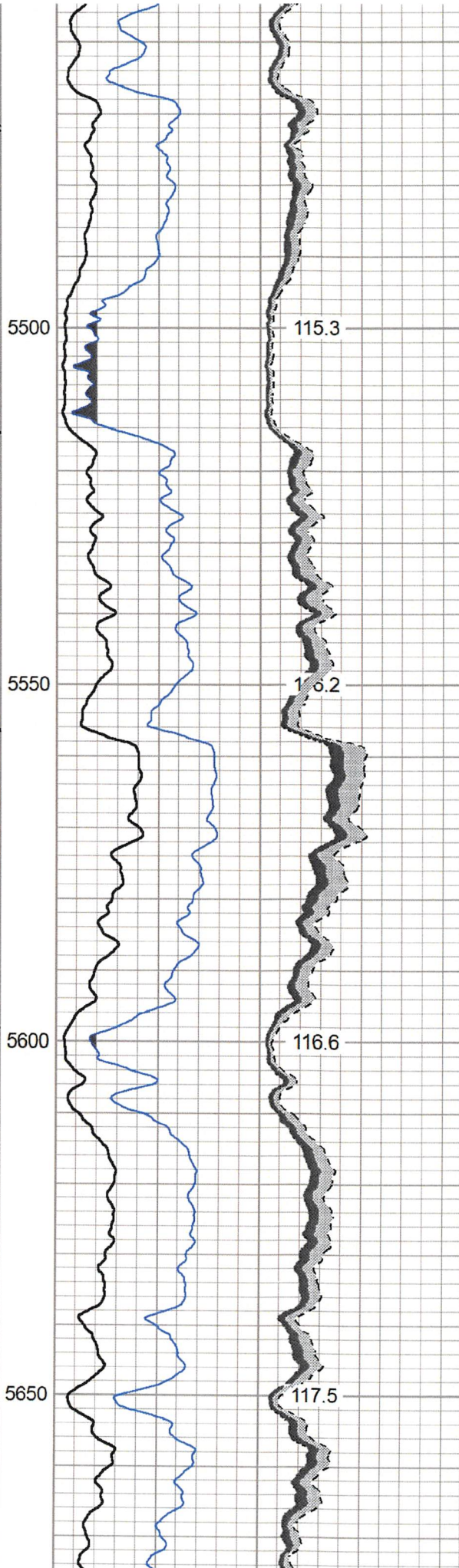
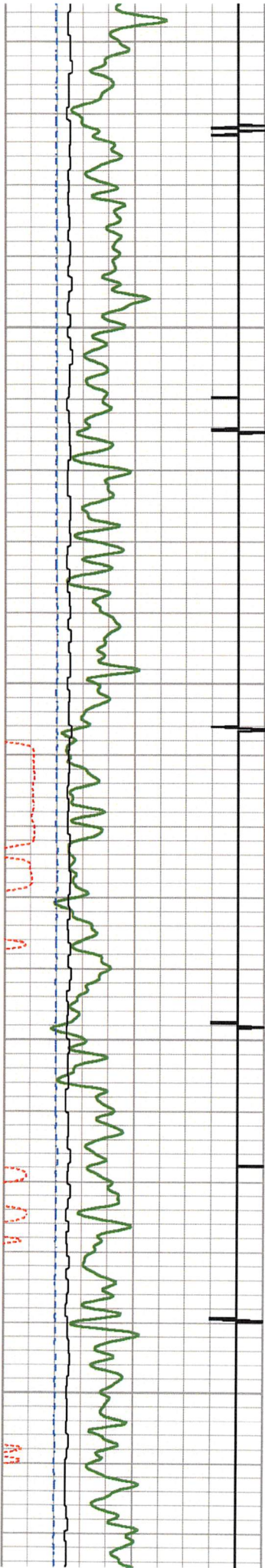


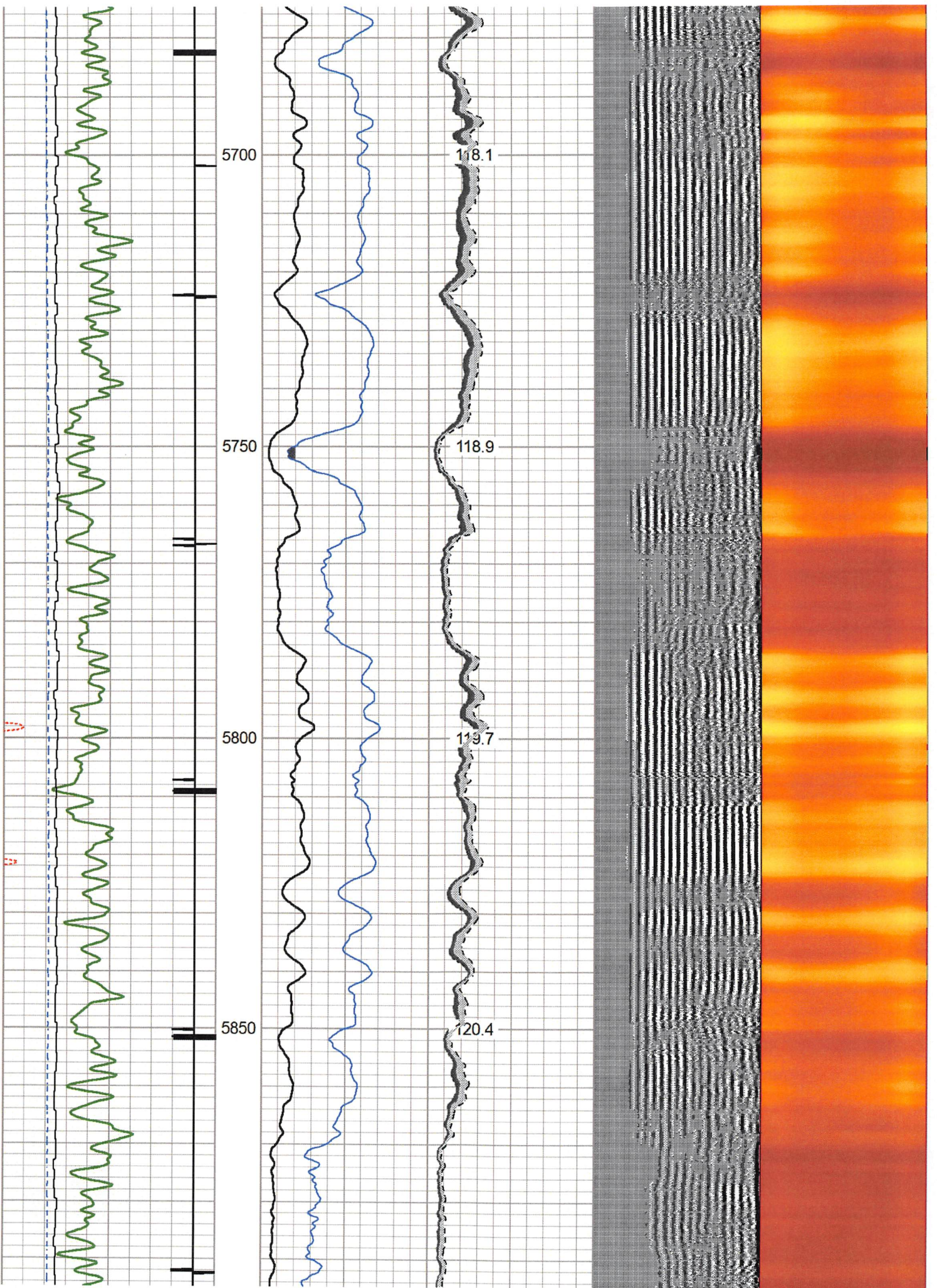


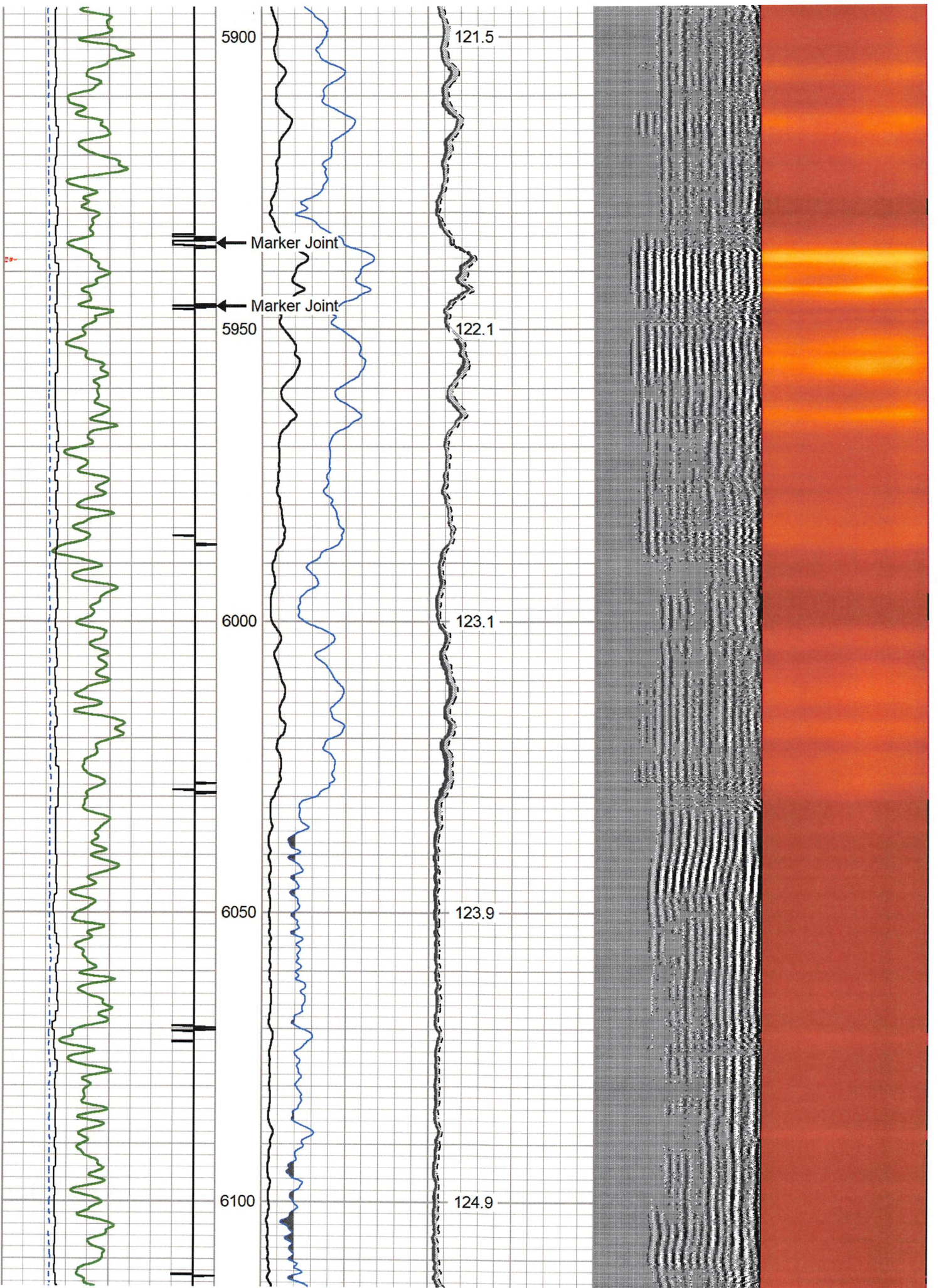


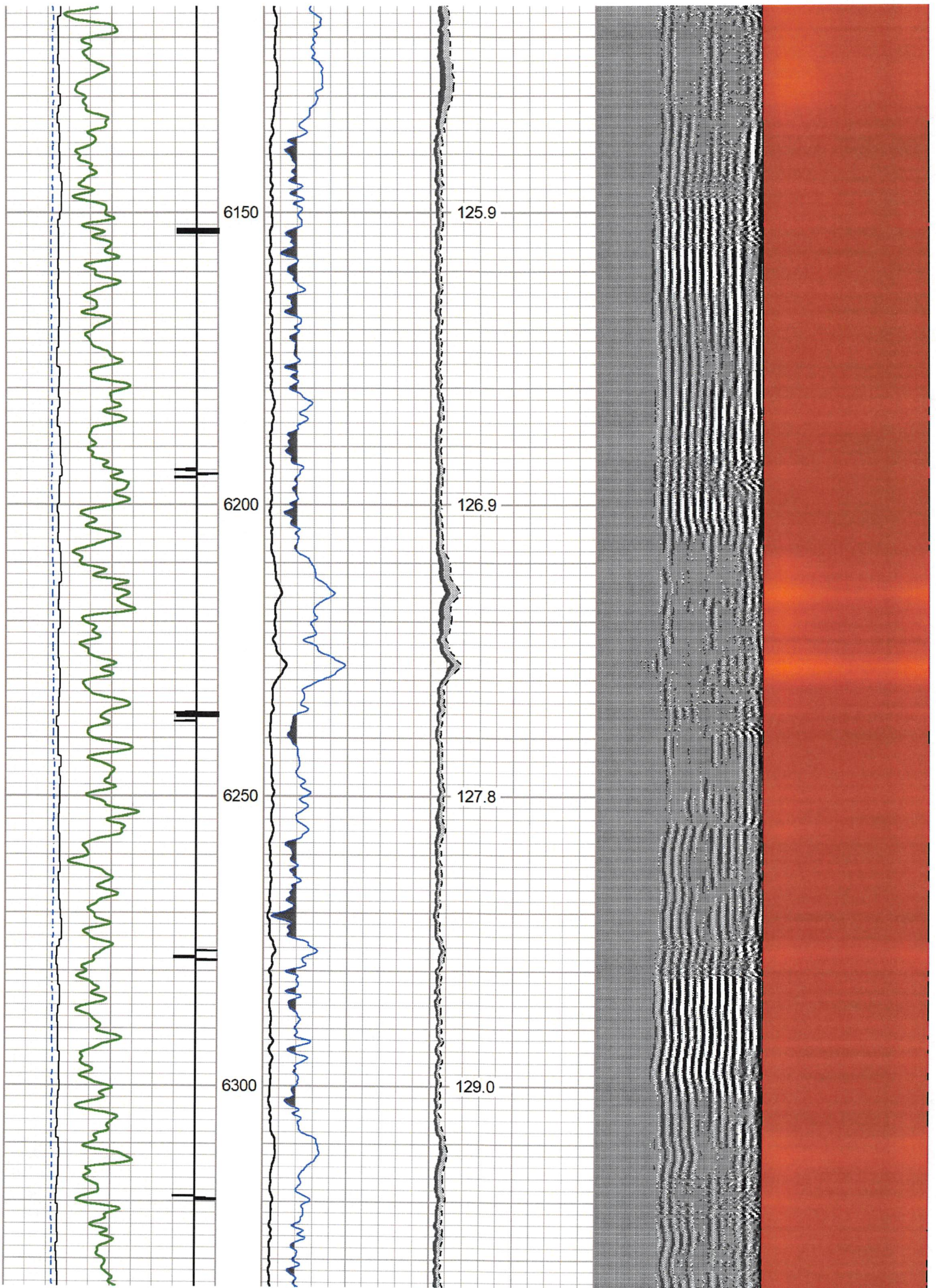


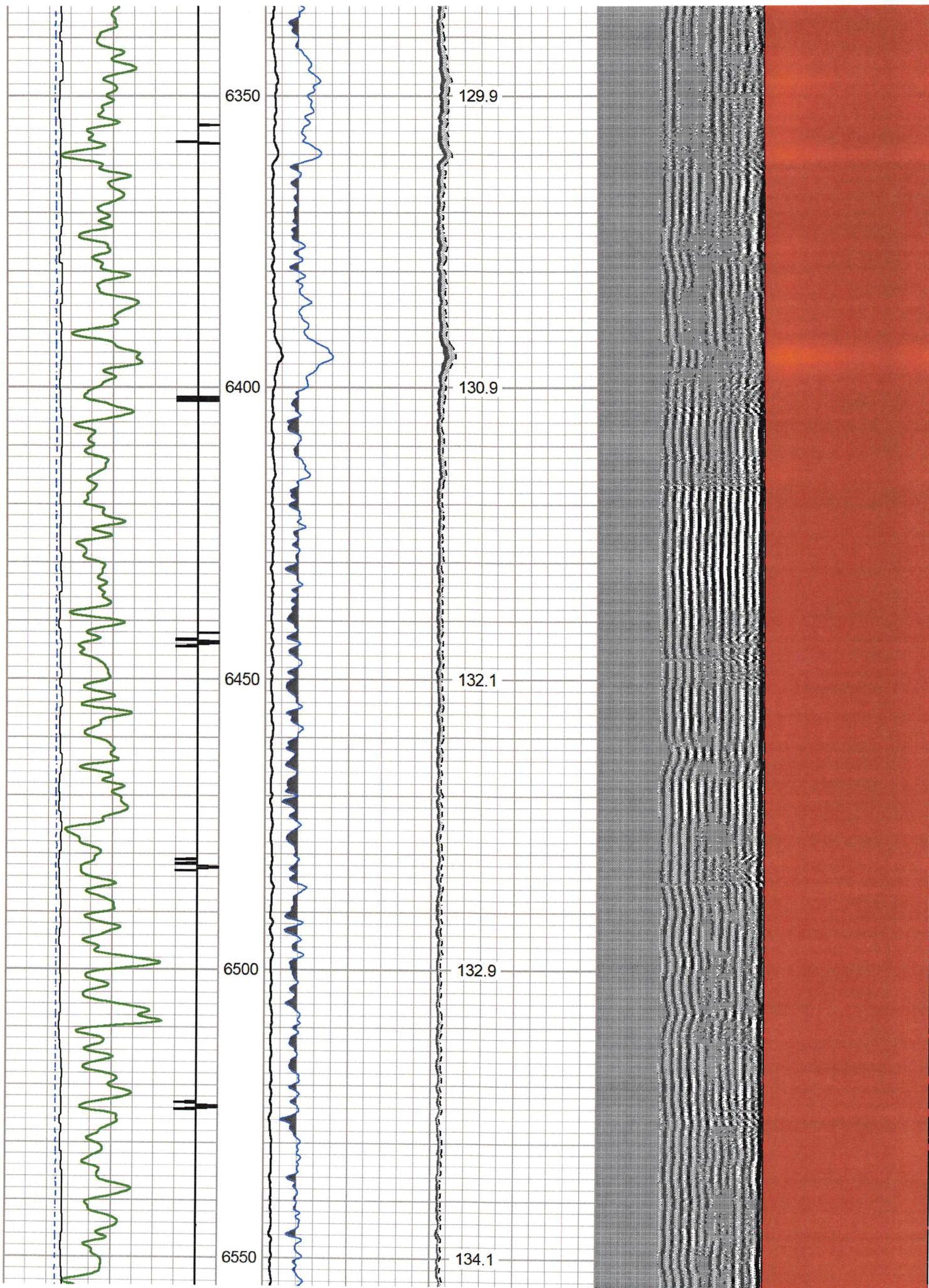


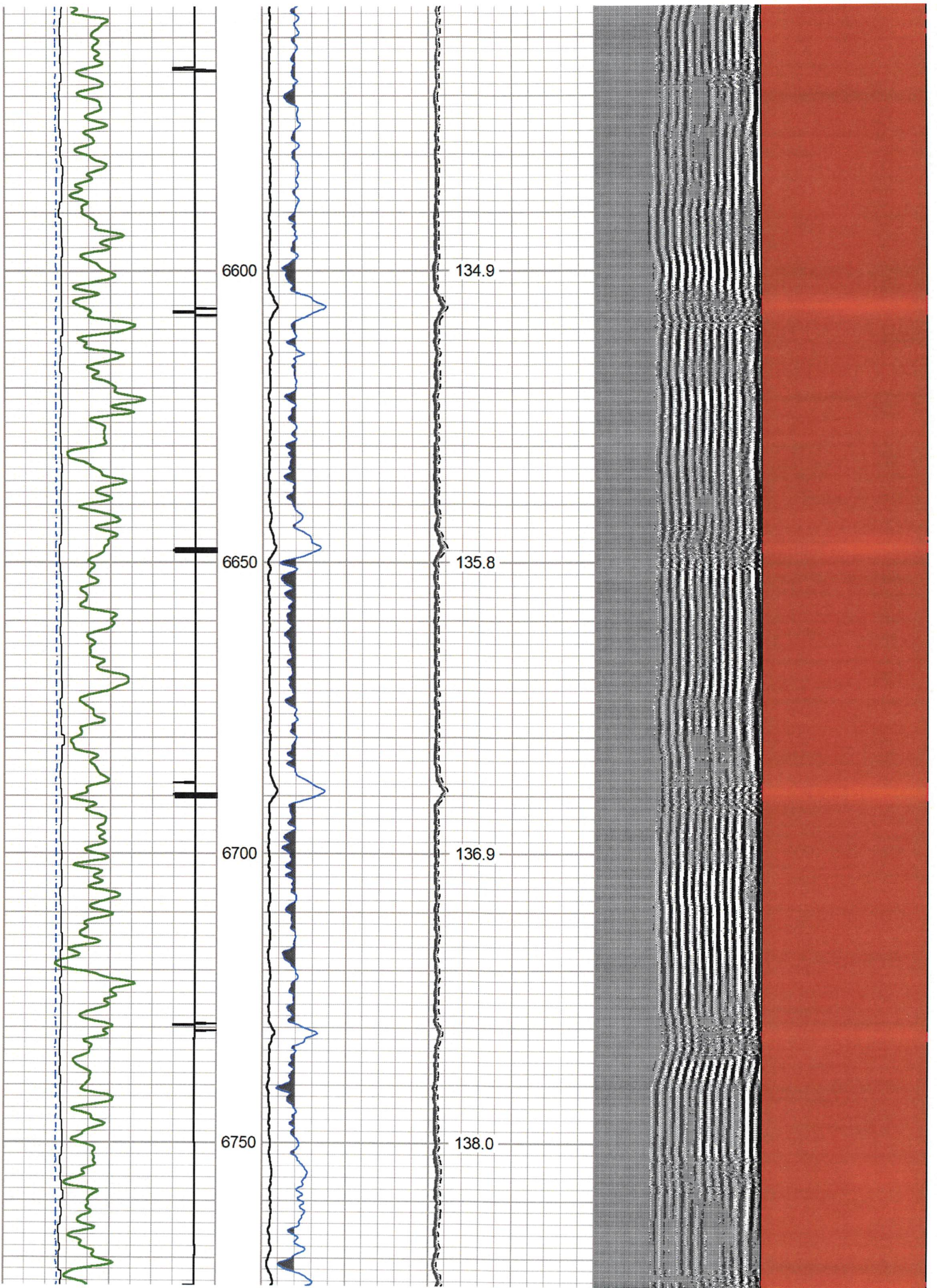


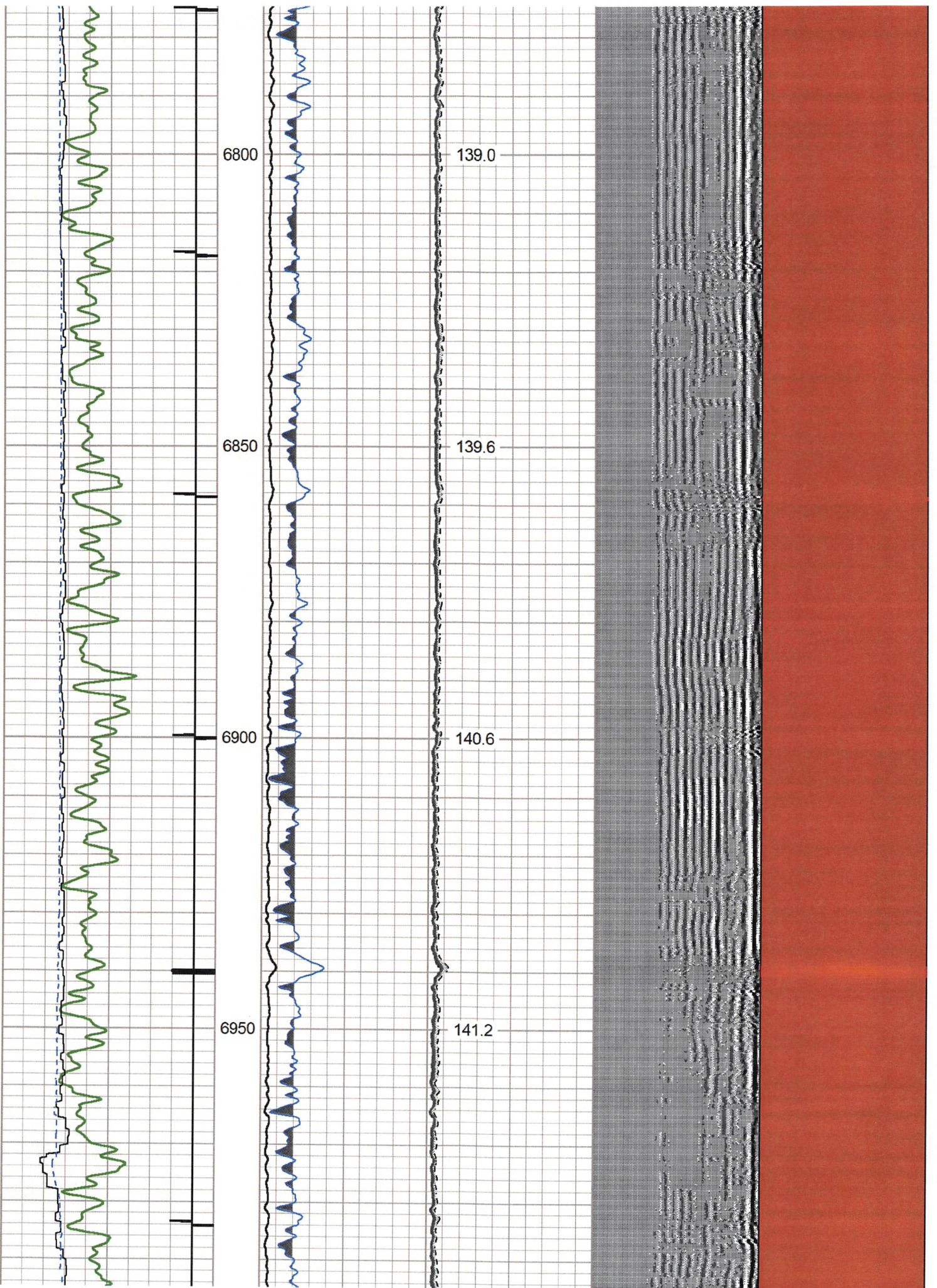


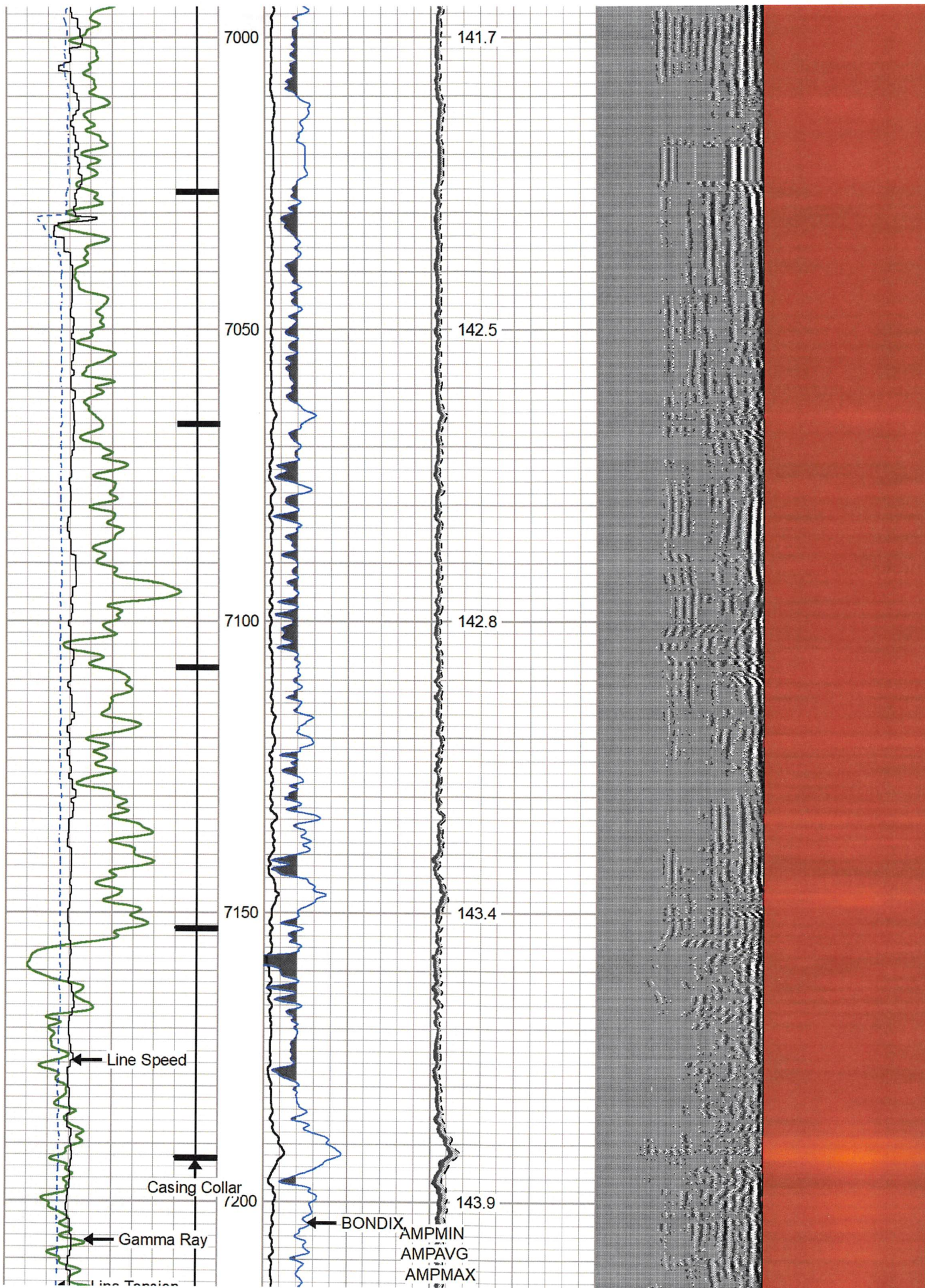


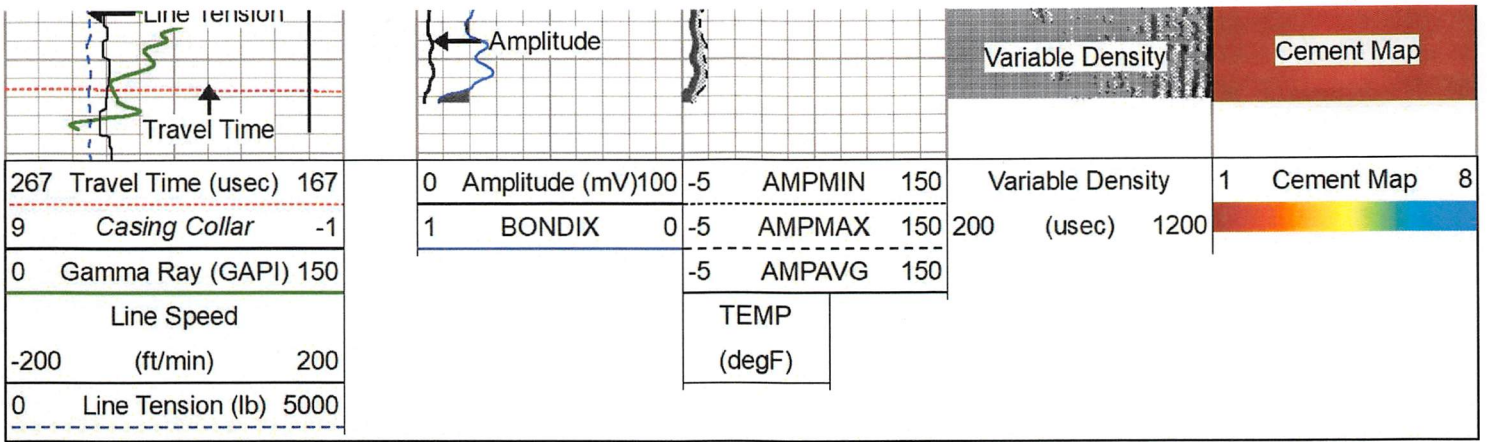






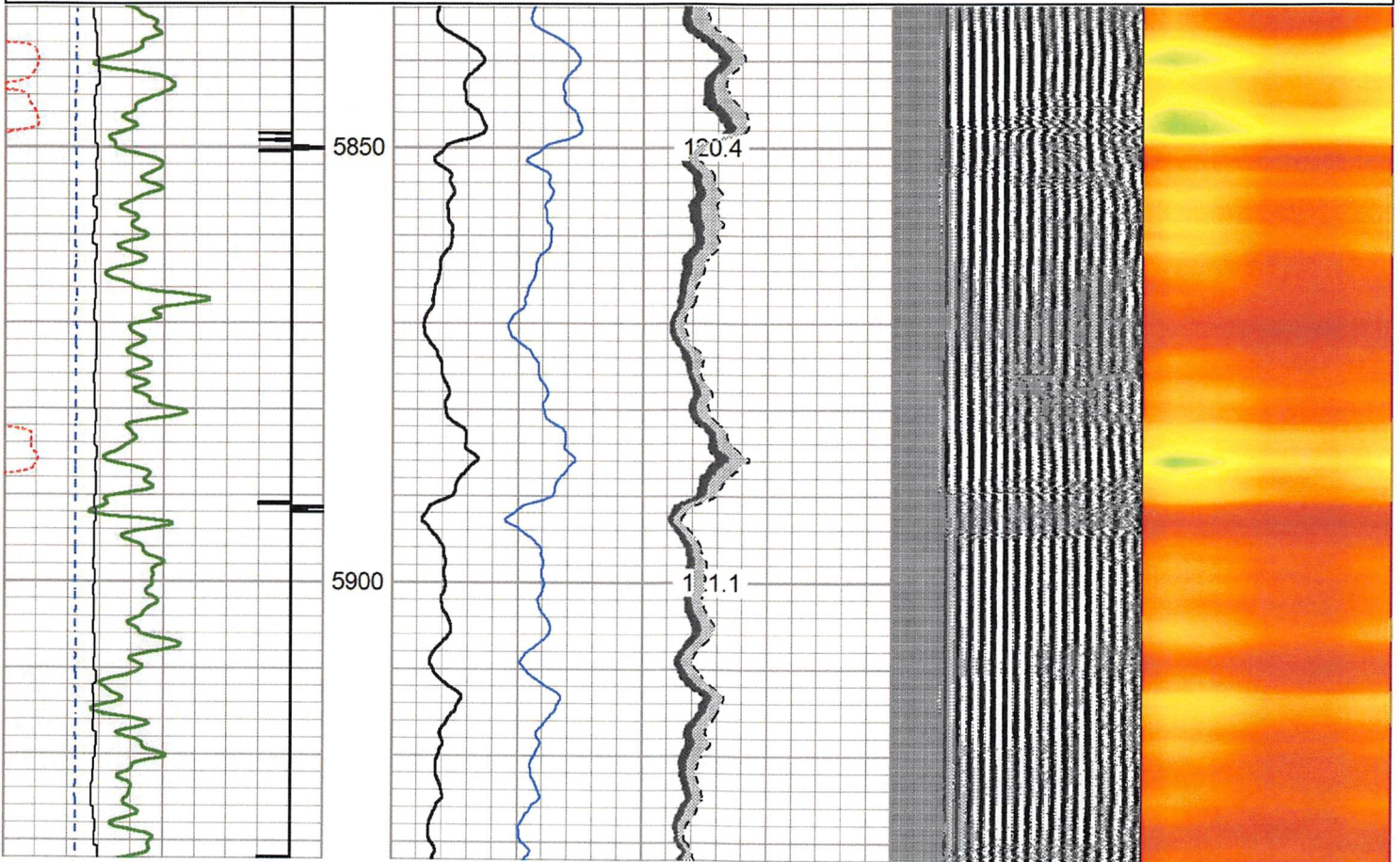
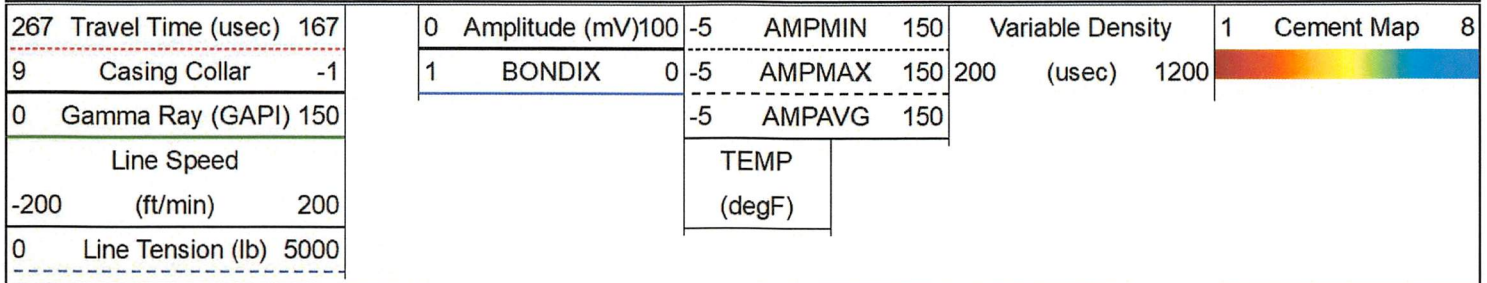


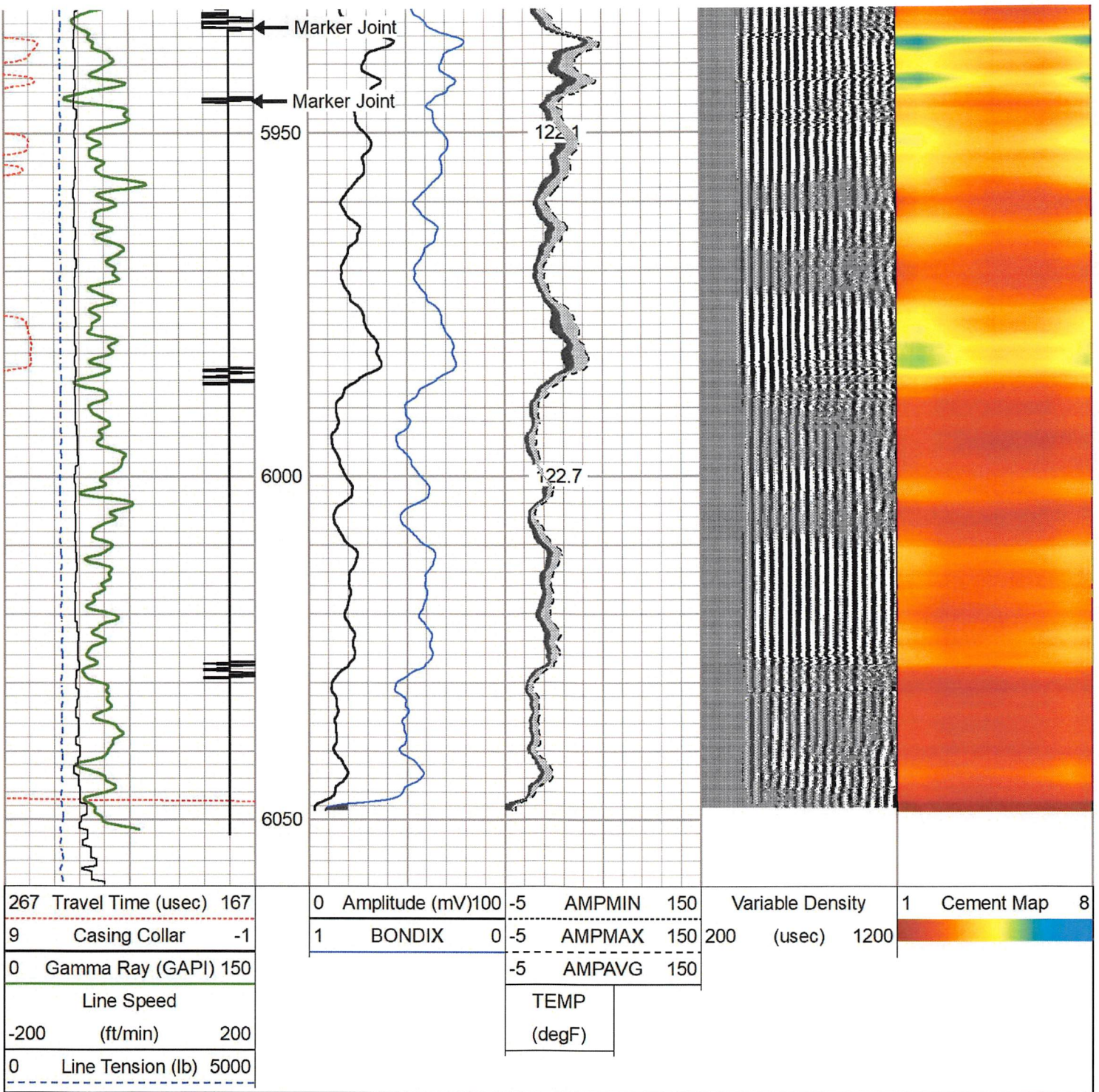





Repeat Pass 0 PSI

Database File antero_conifer_2h_rcbl_15_nov_2022.db
 Dataset Pathname pass5
 Presentation Format rcbl-bond index for antero 1020
 Dataset Creation Tue Nov 15 07:21:54 2022
 Charted by Depth in Feet scaled 1:240





Log Variables

DatabaseC:\ProgramData\Warrior\Data\antero_conifer_2h_rcbl_15_nov_2022.db
 Dataset field/well/run1/pass7/_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 ID

MINAMPL : Minimum Amplitude

BOREID : Borehole I.D.
 BOTTEMP : Bottom Hole Temperature
 CASEOD : Casing O.D.
 CASETHCK : Casing Thickness
 CASEWGHT : Casing Weight
 MAXAMPL : Maximum Amplitude

MINATTN : Minimum Attenuation
 PERFS : Perforation Flag
 PPT : Predicted Pipe Time
 SRFTEMP : Surface Temperature
 TDEPTH : Total Depth

Calibration Report

Database File antero_conifer_2h_rcbl_15_nov_2022.db
 Dataset Pathname pass7
 Dataset Creation Tue Nov 15 07:33:42 2022

Gamma Ray Calibration Report

Serial Number: FW1211-86
 Tool Model: Probe
 Performed: Sun Nov 13 11:04:25 2022

 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: 2.75"
 Tool Model: Probe275T

 Calibration Casing Diameter: 5.500 in
 Calibration Depth: 312.475 ft

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Master Calibration, performed Tue Nov 15 07:01:53 2022:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.004	0.356	2.200	71.921	193.389	3.005
CAL	0.593	0.594				
5'	-0.009	0.352	2.200	71.921	193.310	3.849
SUM						
S1	0.029	0.355	0.000	100.000	306.369	-8.845
S2	-0.012	0.321	0.000	100.000	300.966	3.498
S3	-0.007	0.347	0.000	100.000	282.512	1.880
S4	-0.007	0.360	0.000	100.000	272.069	1.943
S5	-0.007	0.386	0.000	100.000	254.647	1.809
S6	-0.010	0.390	0.000	100.000	260.321	2.411
S7	-0.006	0.374	0.000	100.000	263.146	1.674
S8	-0.008	0.347	0.000	100.000	281.618	2.379

Internal Reference Calibration, performed Wed Nov 23 14:17:52 2011:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.593	0.594	1.000	0.000

Air Zero Calibration, performed Tue Nov 15 06:41:00 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

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
HeadVolt	17.53		CHD-Titan Standard 1 7/16" Cable Head	1.02	1.44	1.00
			Centralizer-2.75_Overbody	1.67	3.12	5.00
Temp	14.68		RBT-Probe 275T (2.75") Probe 2.75" Radial with Integral Temperature Sub	9.39	2.75	90.00
WVFS8	12.45					
WVFS7	12.45					
WVFS6	12.45					
WVFS5	12.45					
WVFS4	12.45					
WVFS3	12.45					
WVFS2	12.45					
WVFS1	12.45					
WVF3FT	12.45					
WVF5FT	11.45					
WVFCAL	8.20					
HEADVOLT	8.20					
CCL	7.29					
GR	5.96	GR-Probe (FW1211-86) Probe 2 3/4" Logging Gamma Ray	4.78	2.75	57.00	
		Centralizer-2.75_Overbody	1.67	3.12	5.00	

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APR 24 2023
WV Department of
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Centralizers-5419-312-S600
Titan 3 1/8" Adjustable Centralizer

3.42

3.13

34.00

Dataset: antero_conifer_2h_rcbl_15_nov_2022.db: field/well/run1/pass7
Total length: 18.61 ft
Total weight: 192.00 lb
O.D.: 3.13 in



Company ANTERO RESOURCES
Well CONIFER 2H
Field WEST UNION
County DODDRIDGE
State WV

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