



# RADIAL CEMENT BOND LOG

Company ANTERO	Country USA	Company ANTERO	
Well Prosper 1H		Well Prosper 1H	
Field RABBIT EARS		Field RABBIT EARS	
County TYLER		County TYLER	
State WEST VIRGINIA		State WEST VIRGINIA Country USA	
Location:		API #: 47-095-02699-0000	
		Other Services GR CCL TEMP	
SEC	TWP	RGE	Elevation
Permanent Datum	GL	Elevation	25'
Log Measured From	KB	K.B.	N/A
Drilling Measured From	KB	D.F.	N/A
		G.L.	N/A

Date	7-NOV-2020
Run Number	ONE
Depth Driller	20,968'
Depth Logger	6,902'
Bottom Logged Interval	6,936'
Top Log Interval	SURFACE
Open Hole Size	8.50"
Type Fluid	FRESH WATER
Density / Viscosity	8.4#
Max. Recorded Temp.	144 Deg. F.
Estimated Cement Top	
Time Well Ready	19:40
Time Logger on Bottom	20:40
Equipment Number	TK-127 / P2,G1
Location	CHARLEROI,PA
Recorded By	Matt McNally
Witnessed By	JERRAKO EVANS

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record		Size	Wgt/Ft	Top	Bottom		
Surface String		17 1/2"	N/A	105'	391'		
Prot. String							
Production String		5 1/2"	23#	SURFACE	20,968'		
Liner							

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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 @ 5,804'-5,814'  
 Depth Correction -6'  
 100%FREE PIPE=71.9mv  
 100%BOND=3.4mv

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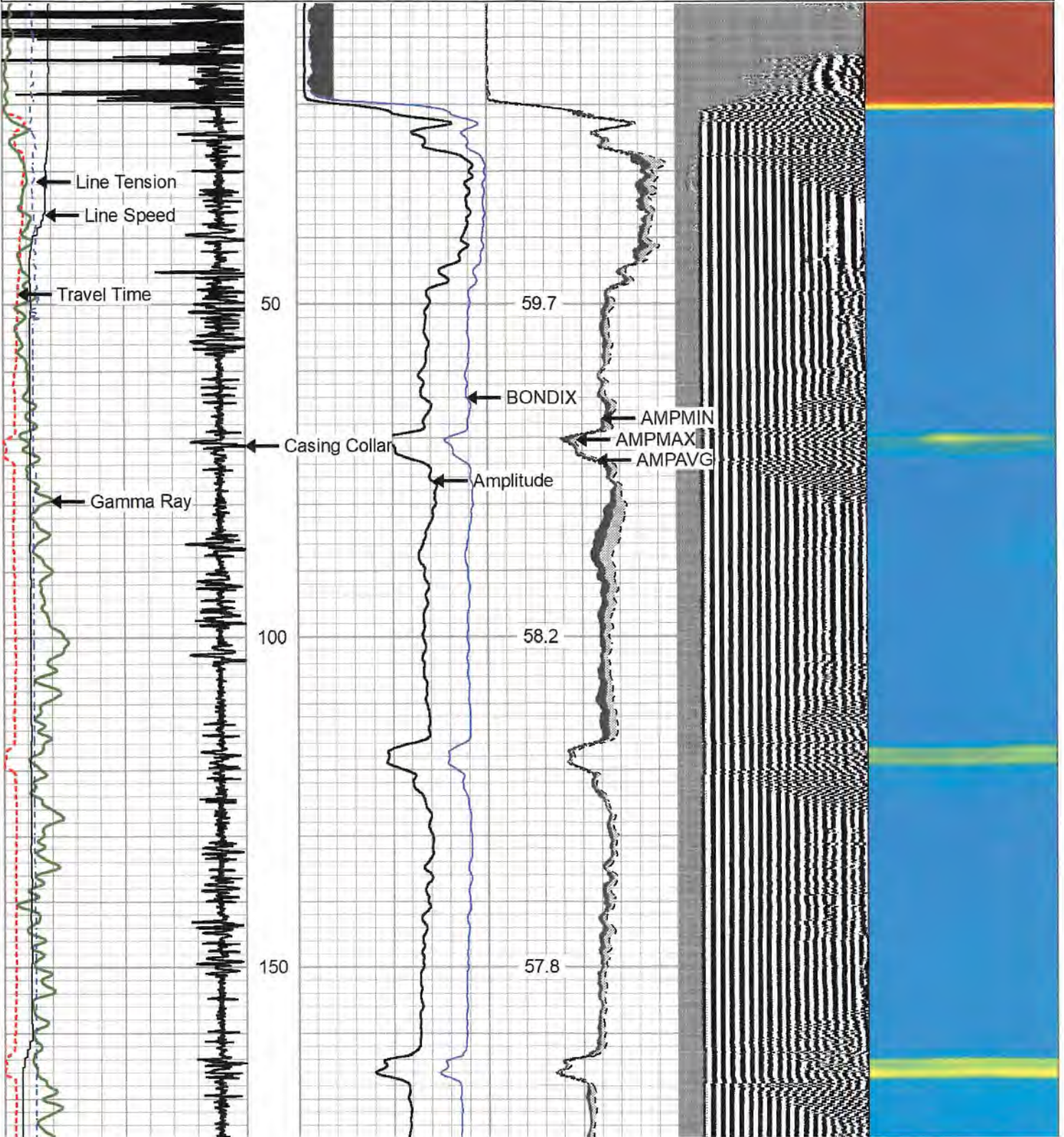
# Main Pass 1,500 PSI

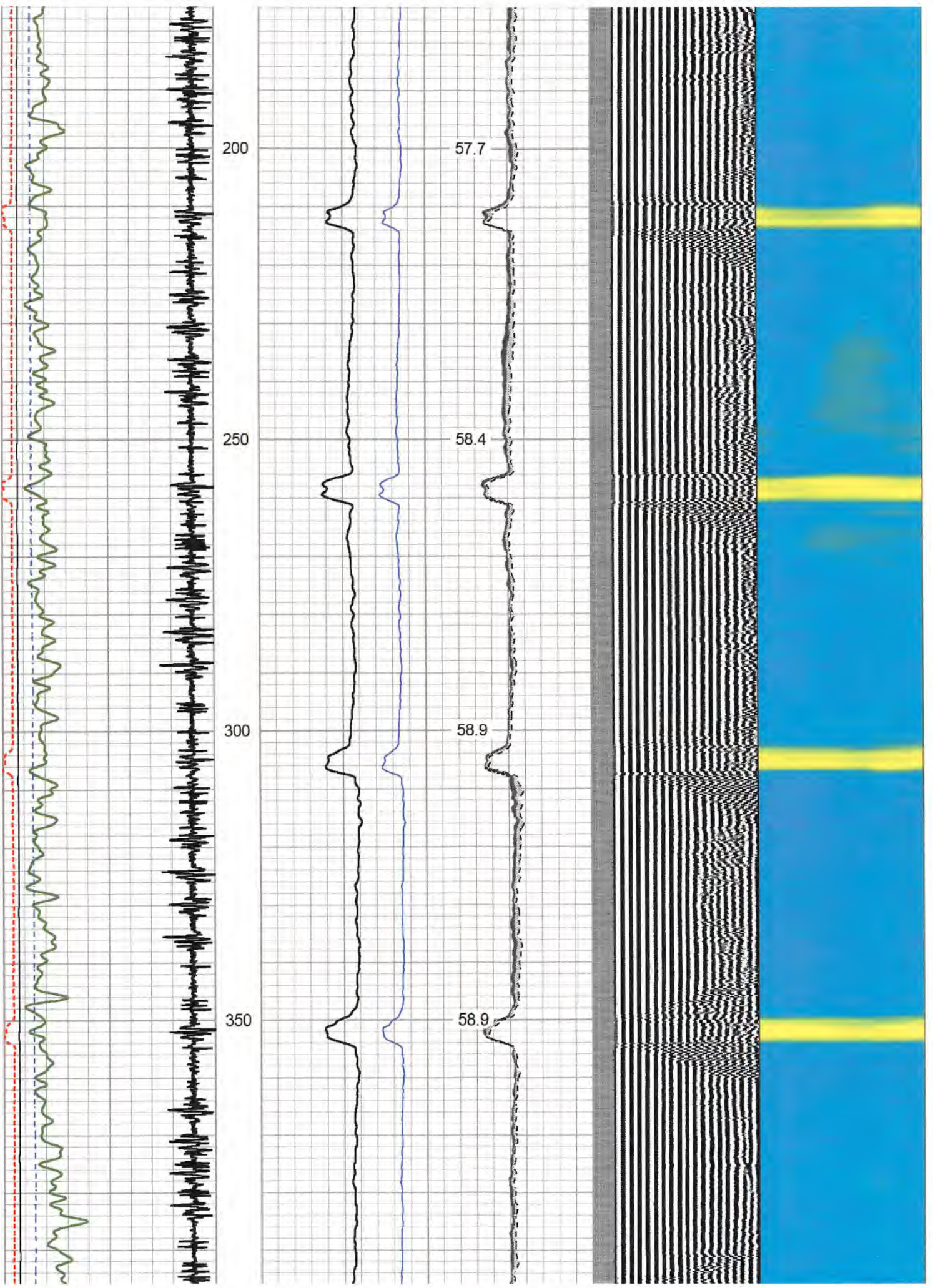
Database File antero\_prosper\_1h\_nov\_7\_2020\_cbl.db  
 Dataset Pathname Rabbit\_Ears/Prosper\_1h/rcbl/pass8  
 Presentation Format rcbl-bond index for antero 1020  
 Dataset Creation Sat Nov 07 20:45:19 2020  
 Charted by Depth in Feet scaled 1:240

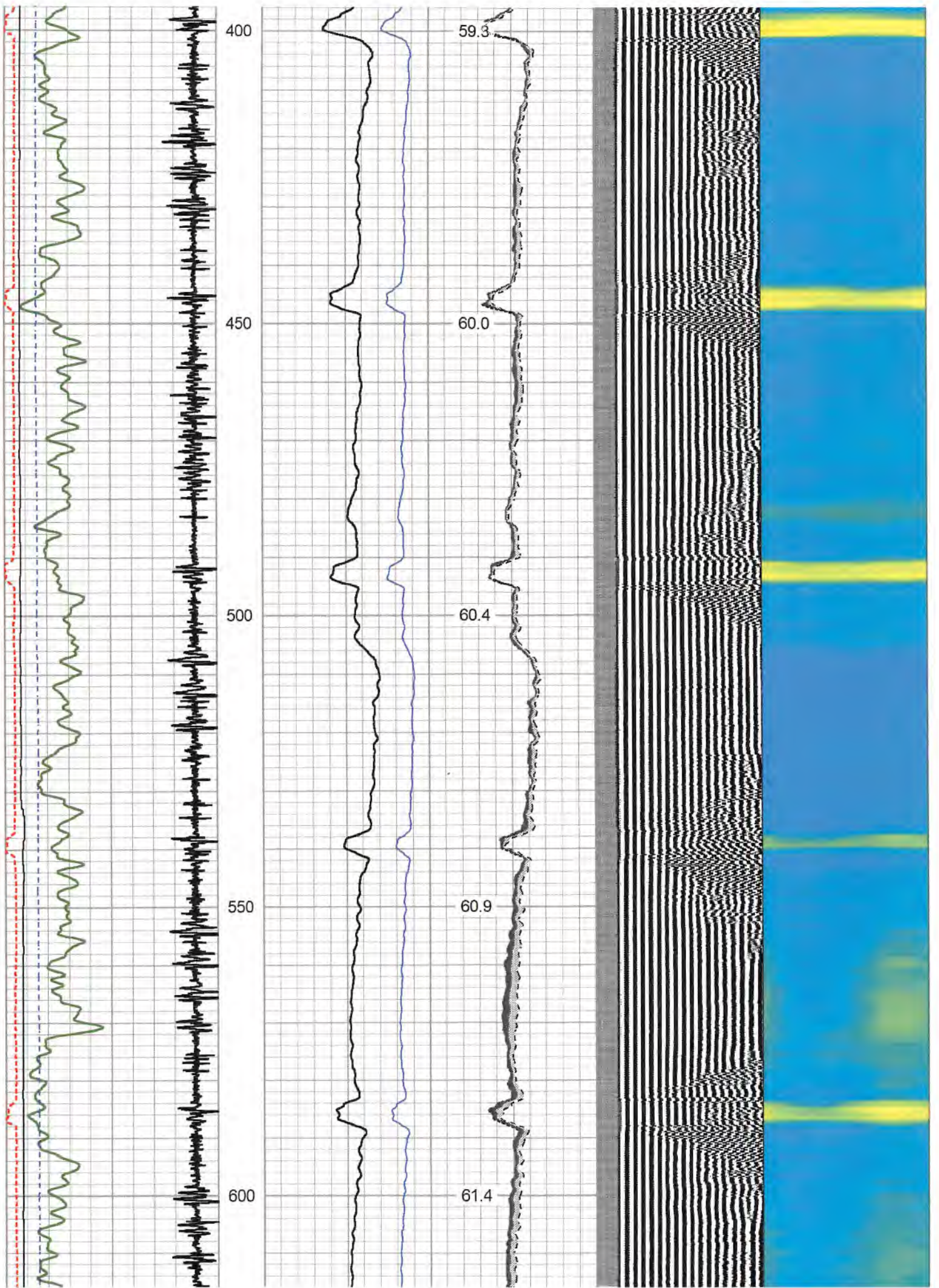
265	Travel Time (usec)	165
9	Casing Collar	-1
0	Gamma Ray (GAPI)	150
Line Speed		
-100	(ft/min)	100
0	Line Tension (lb)	2000

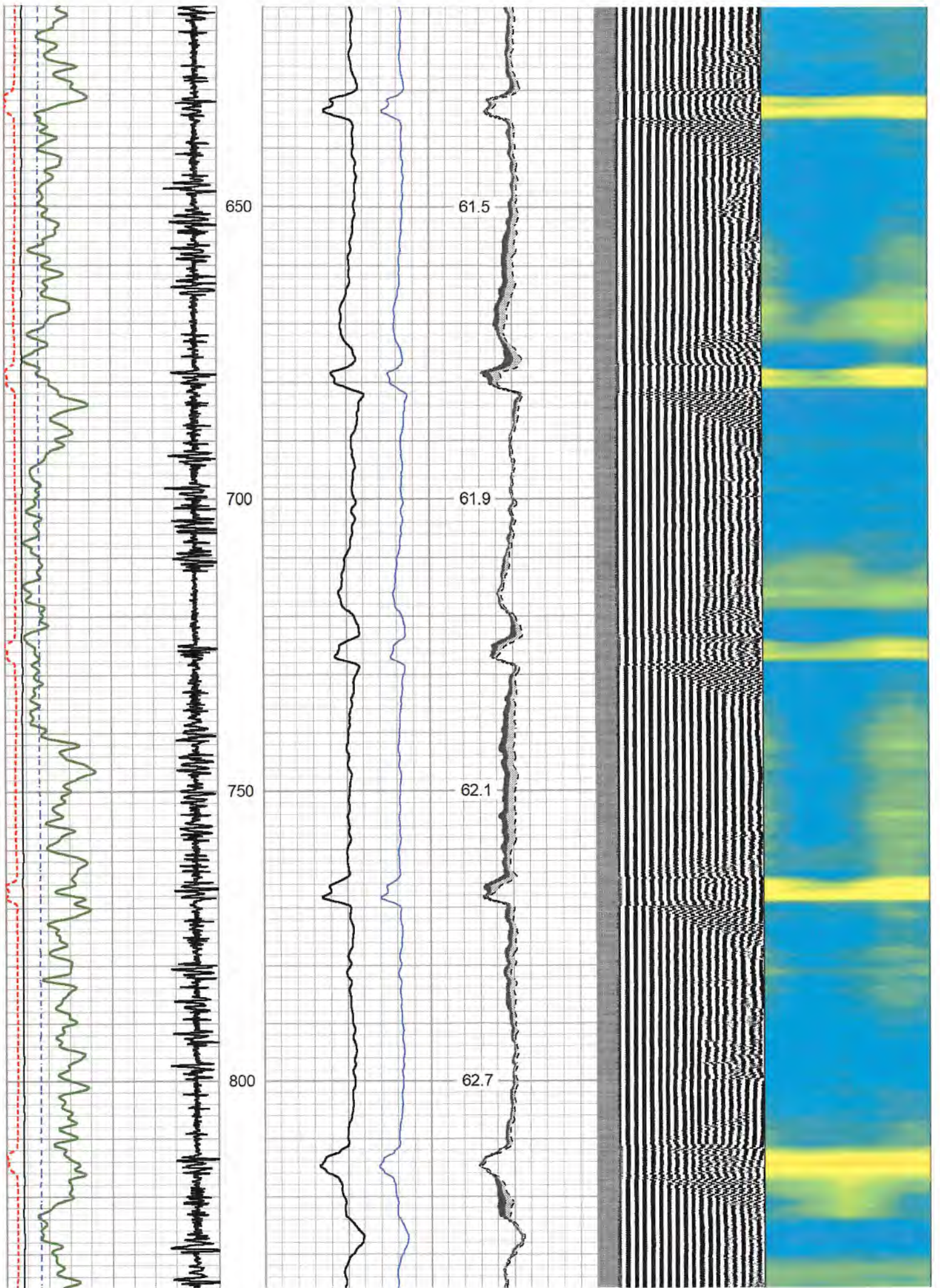
0	Amplitude (mV)	100	0	AMPMIN	150
1	BONDIX	0	0	AMPMAX	150
			0	AMPAVG	150
TEMP					
(degF)					

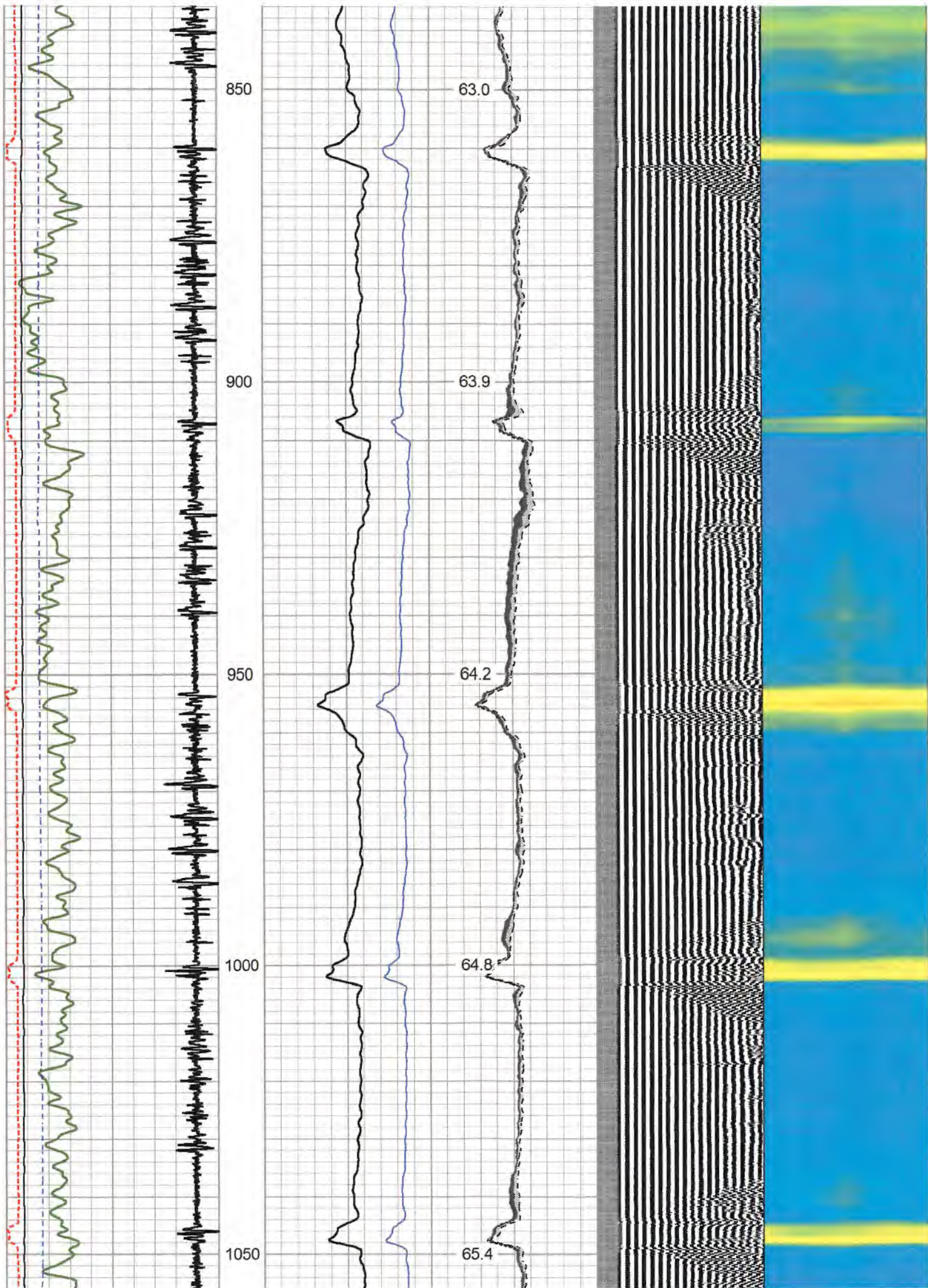
Variable Density 1 Cement Map 8  
 200 (usec) 1200

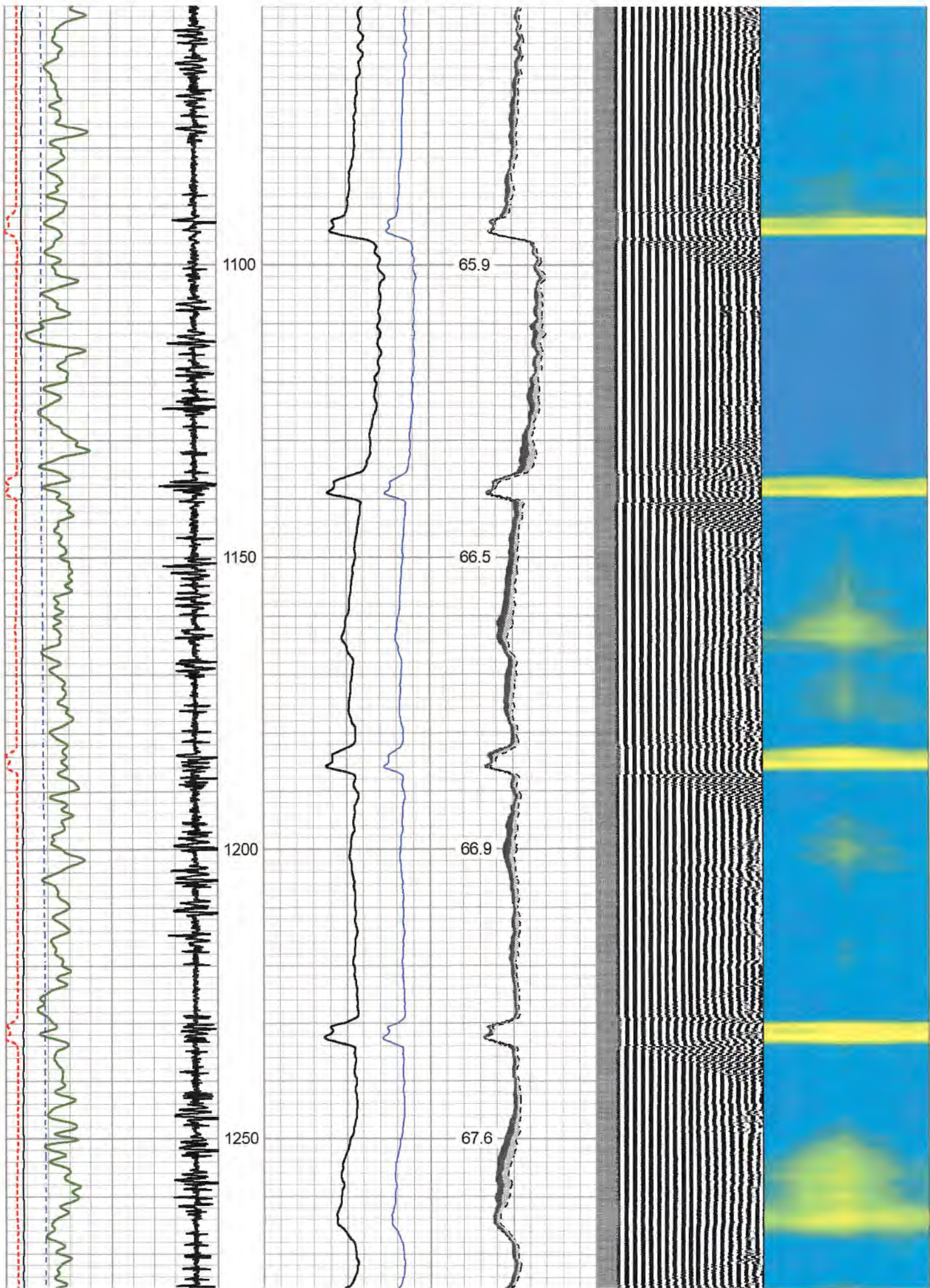


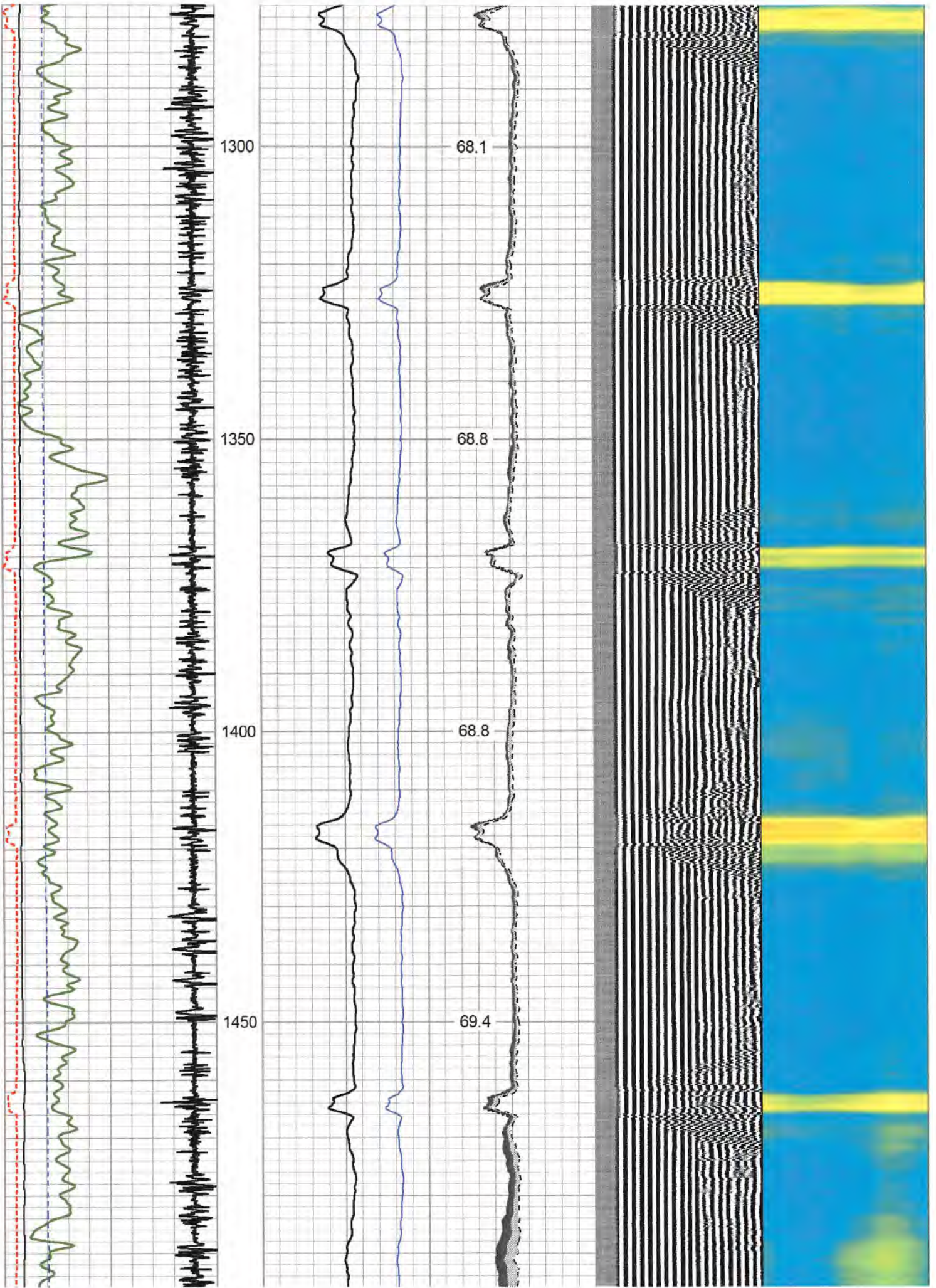




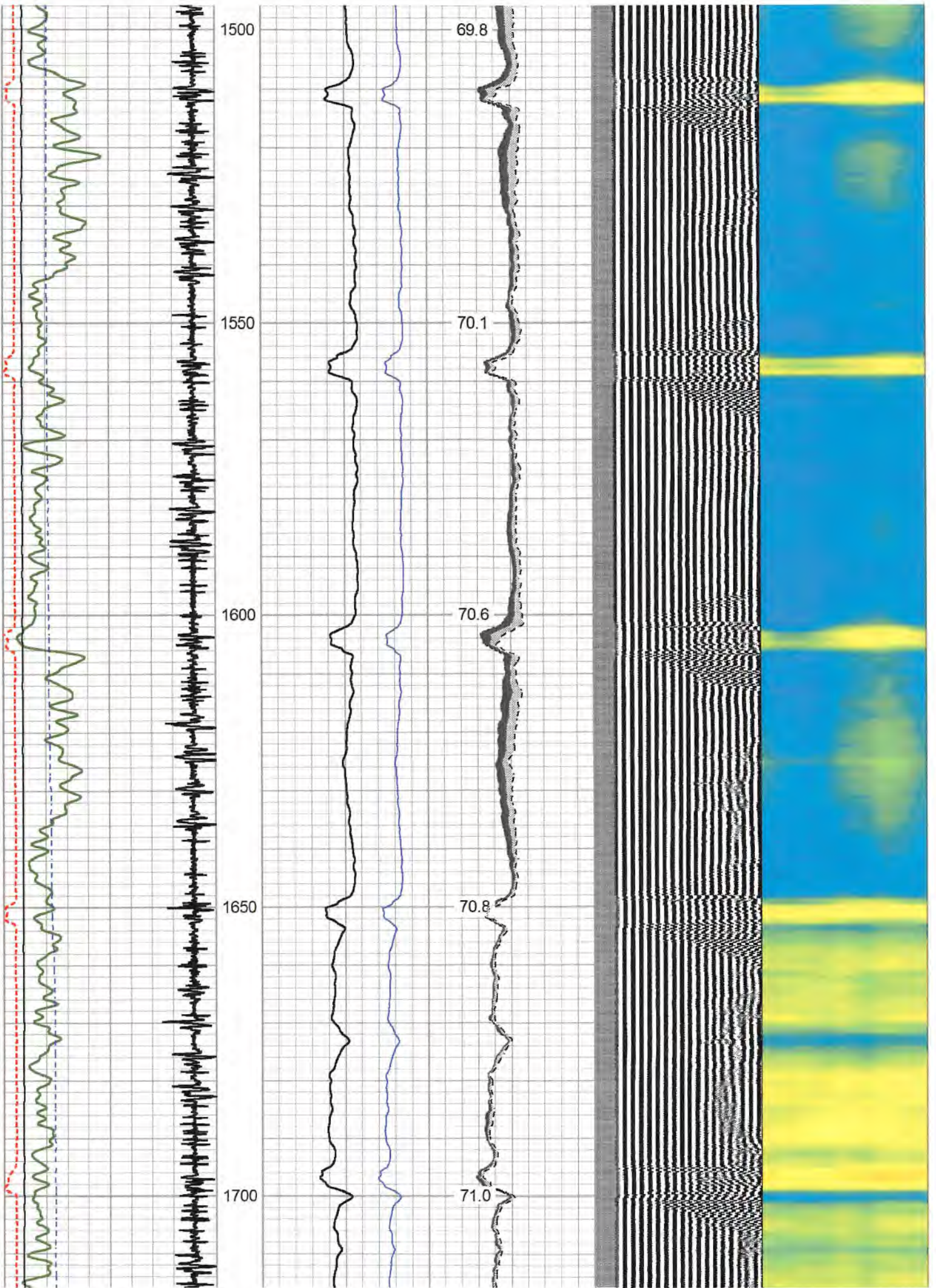


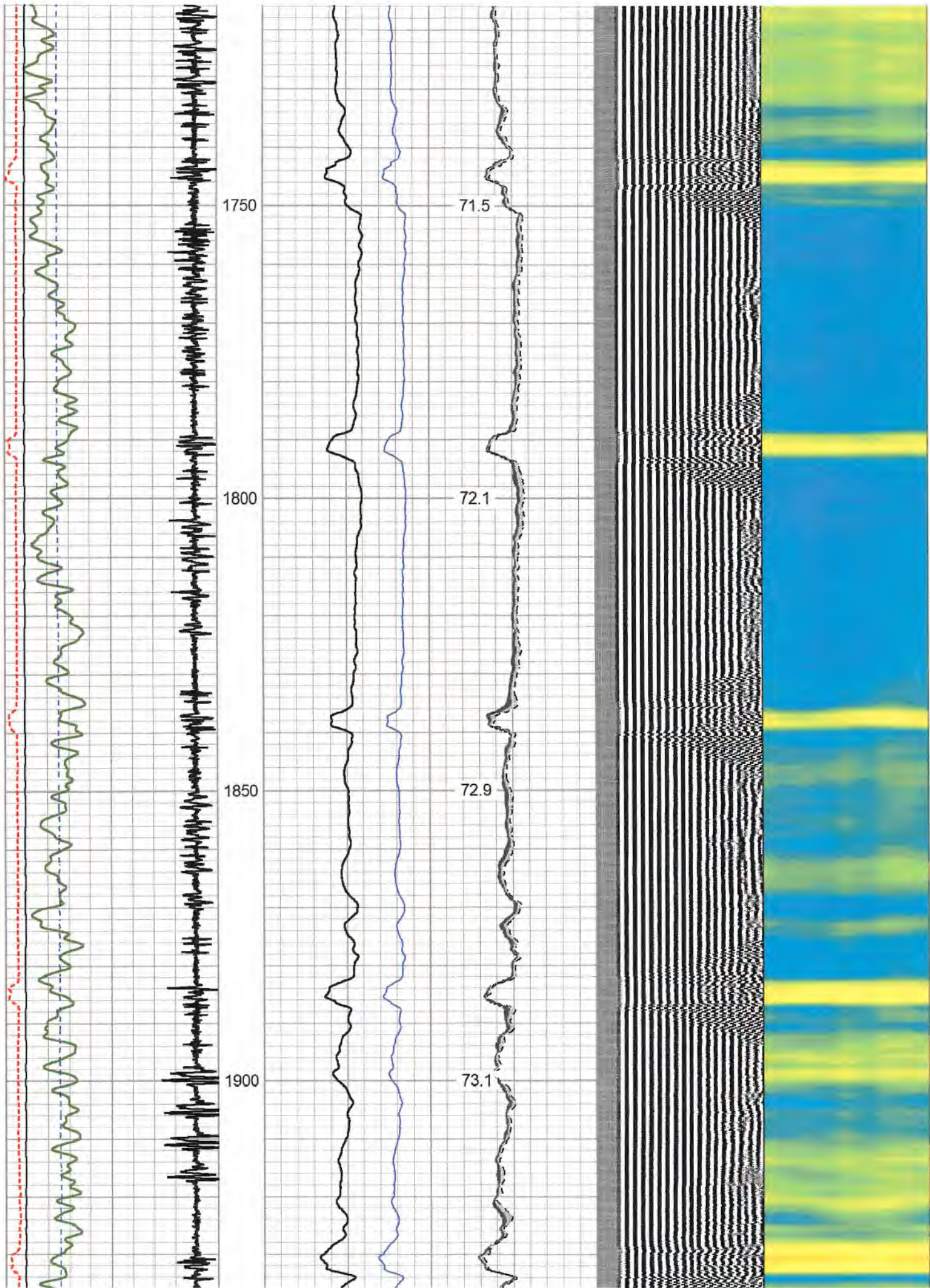


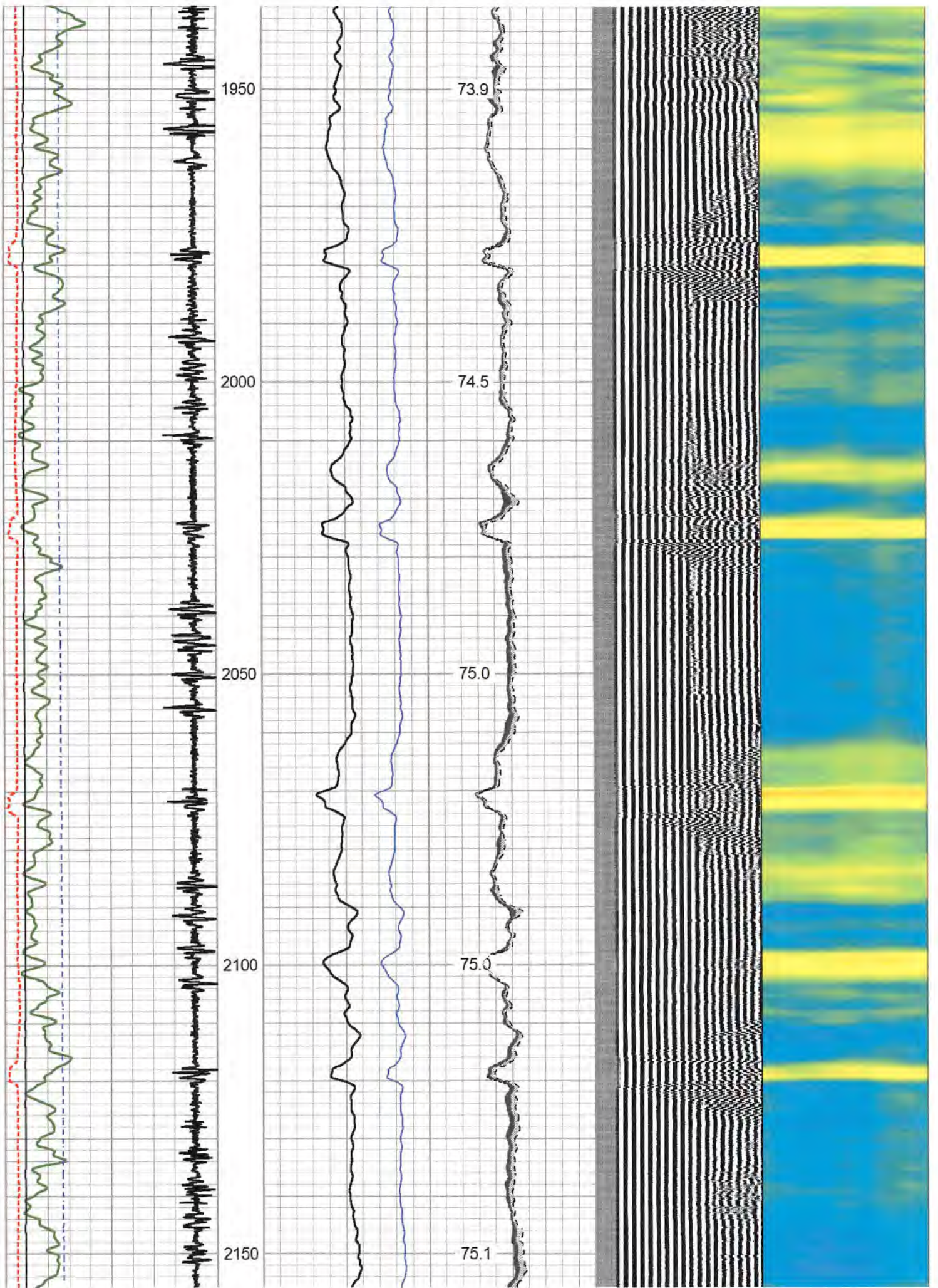


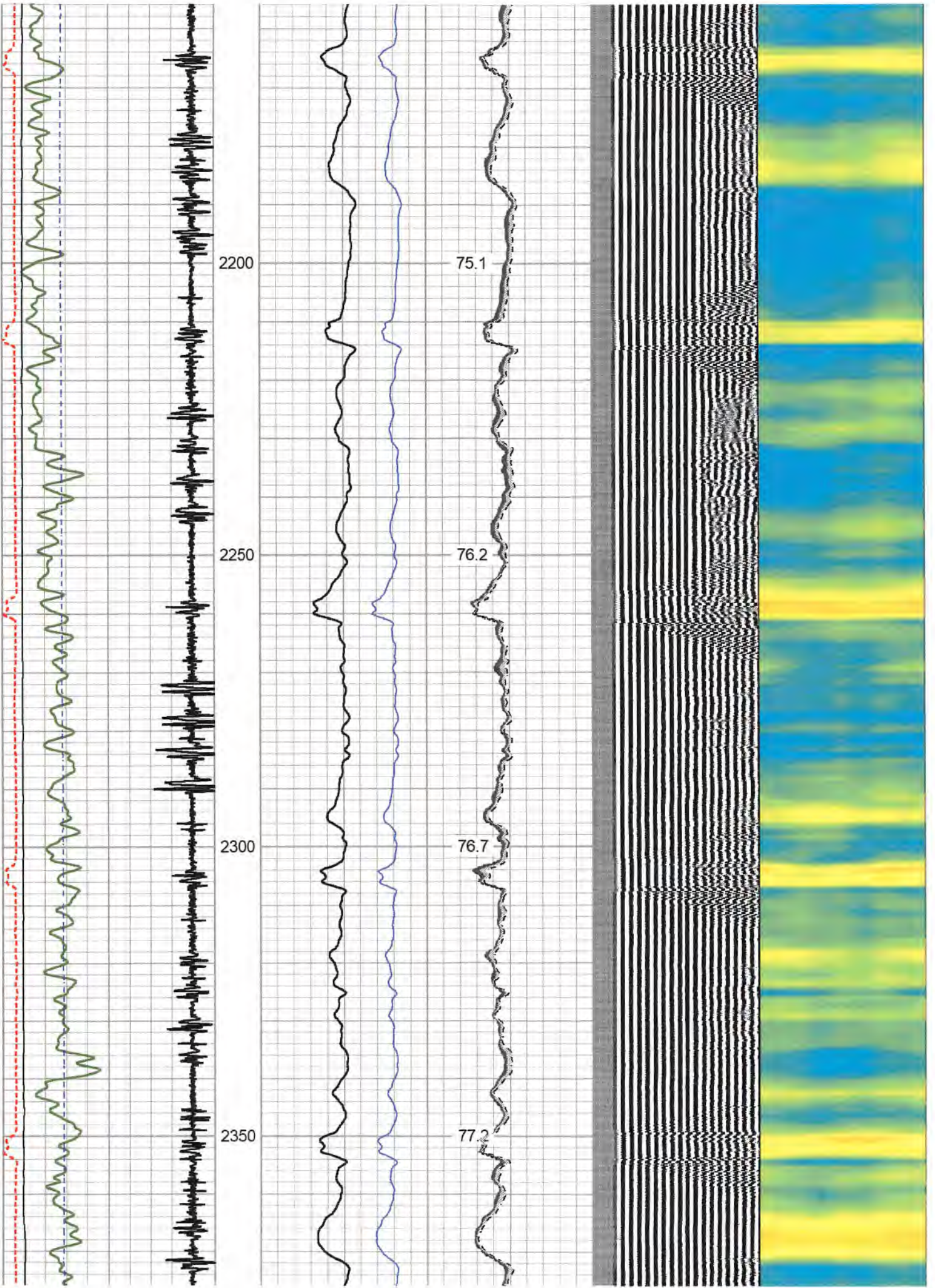


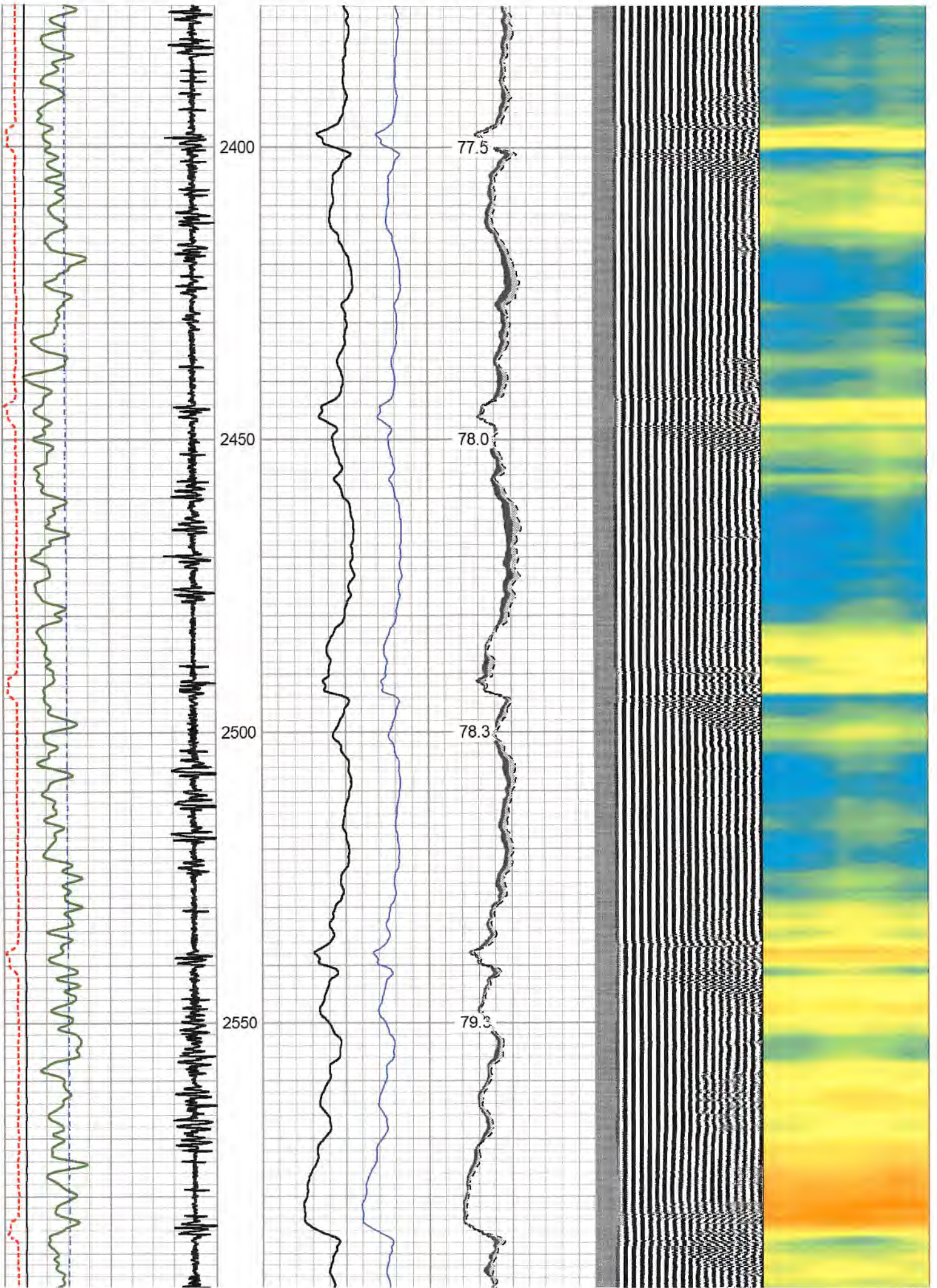


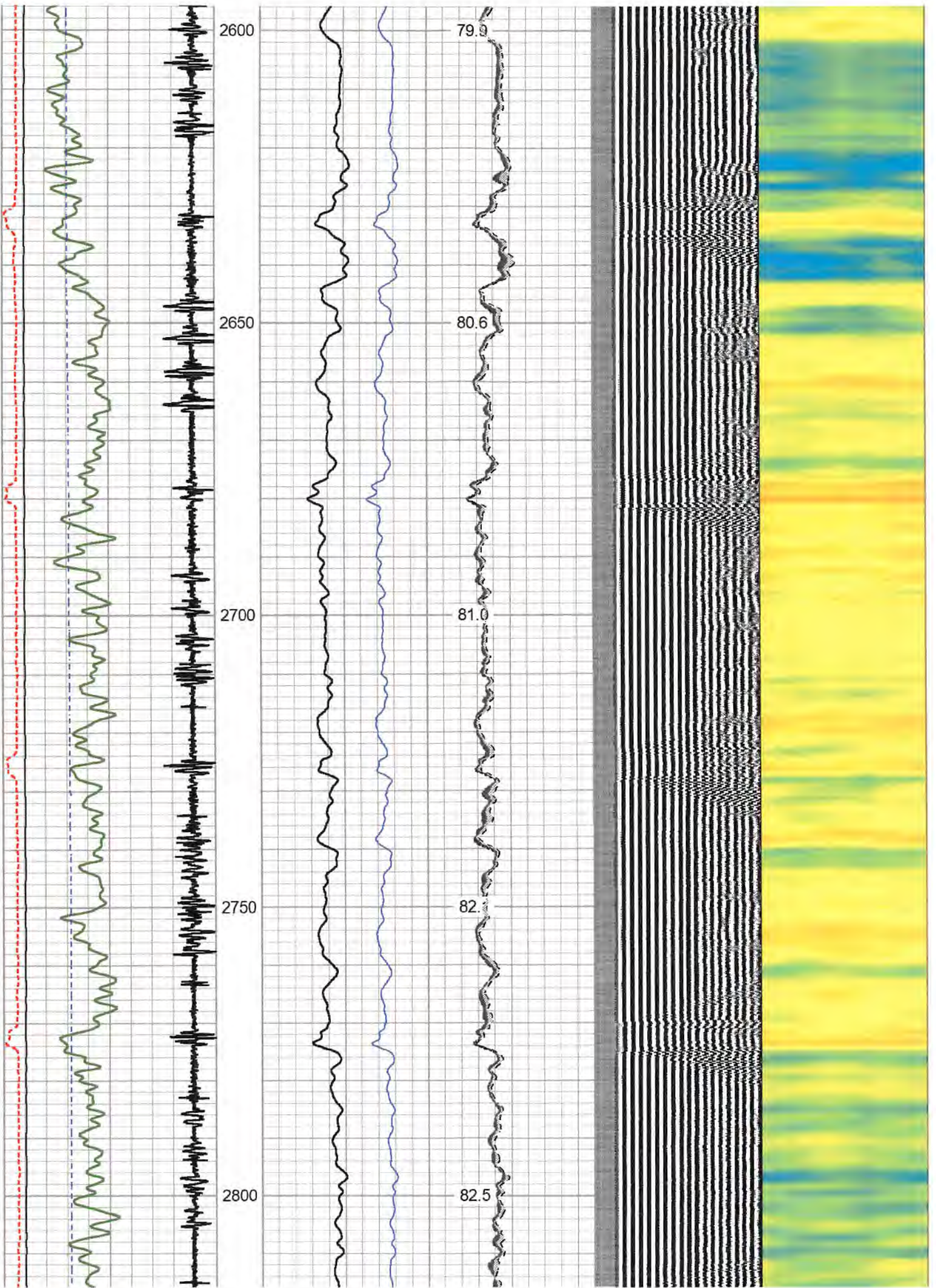


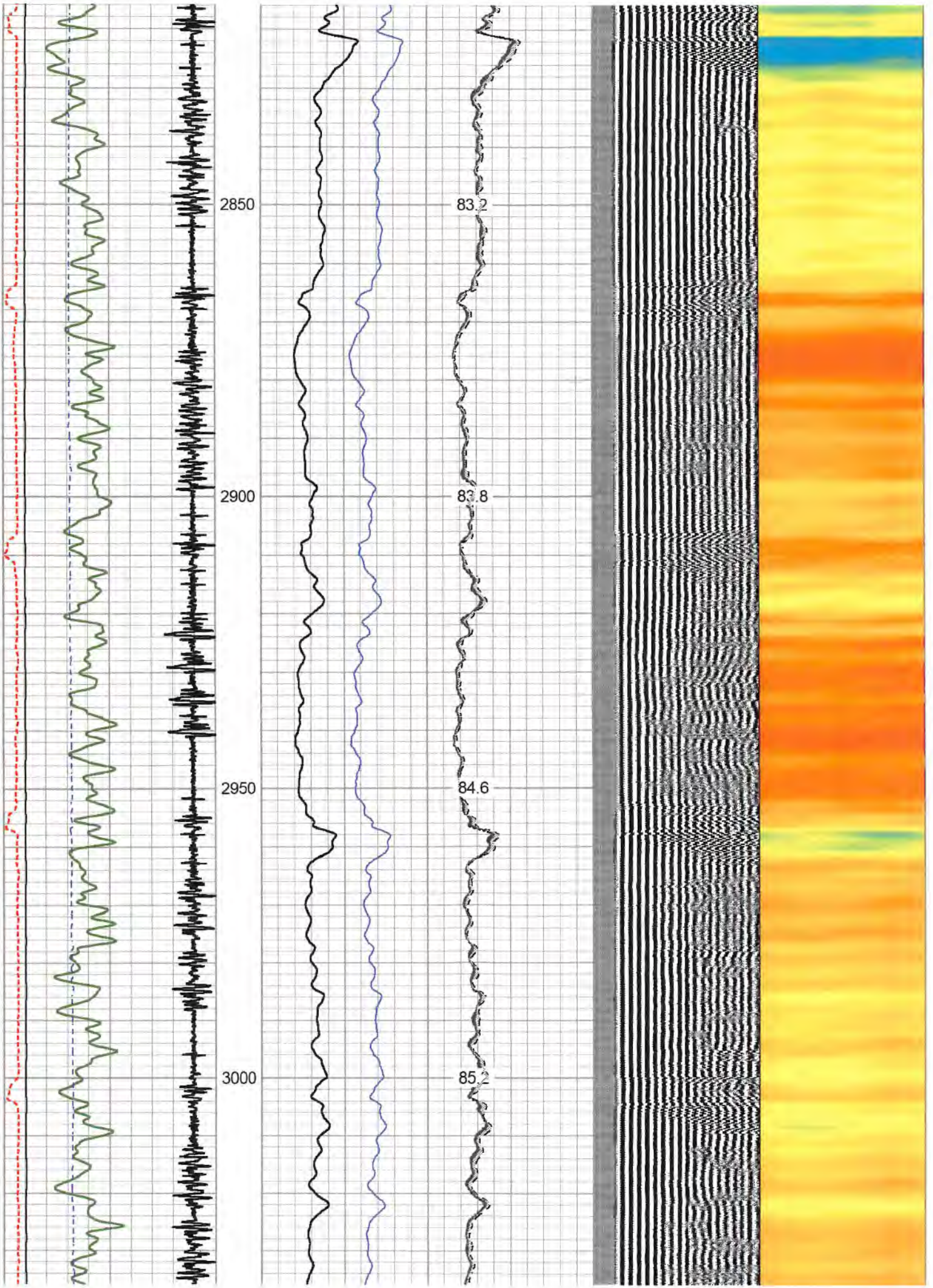


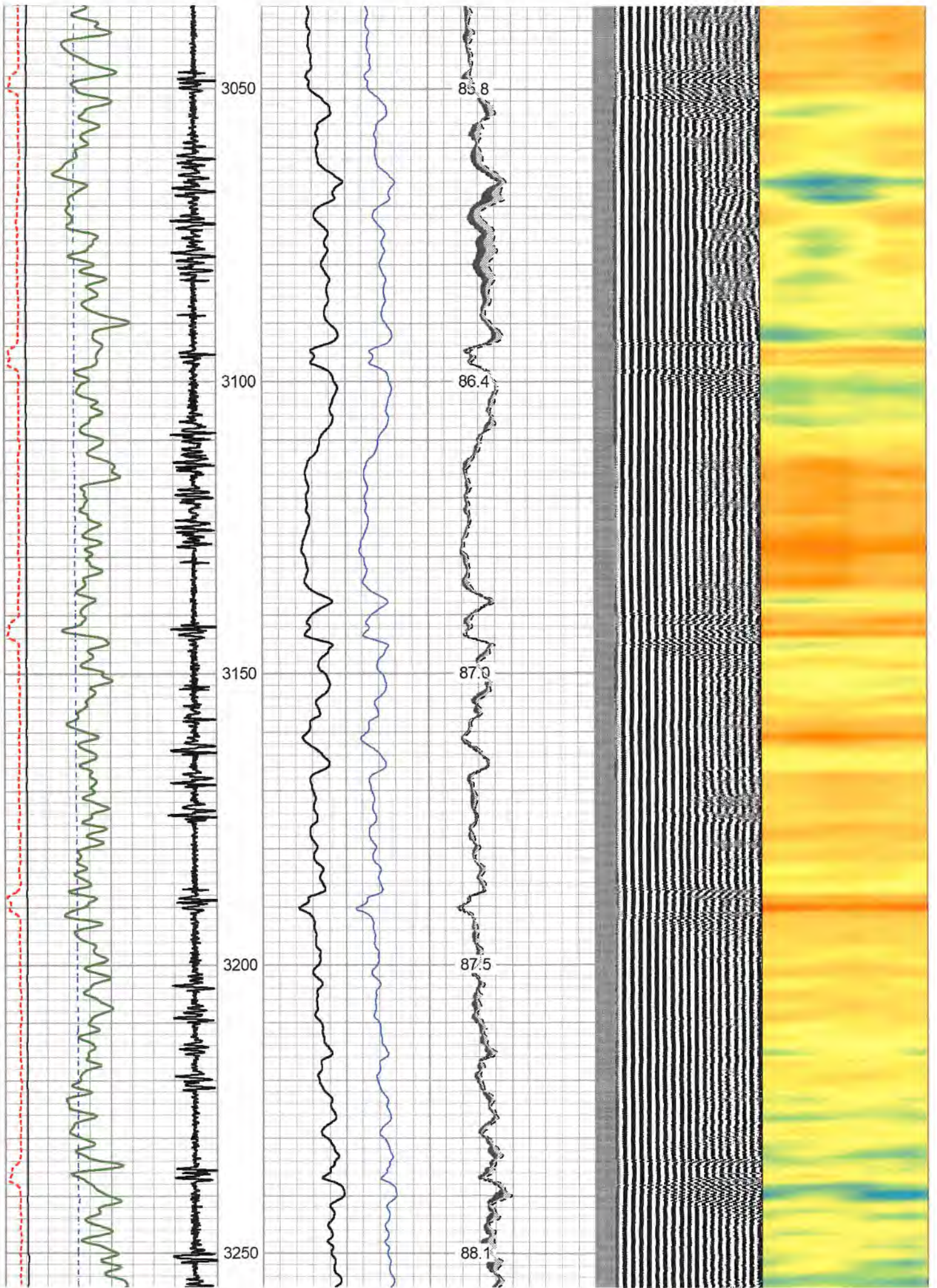




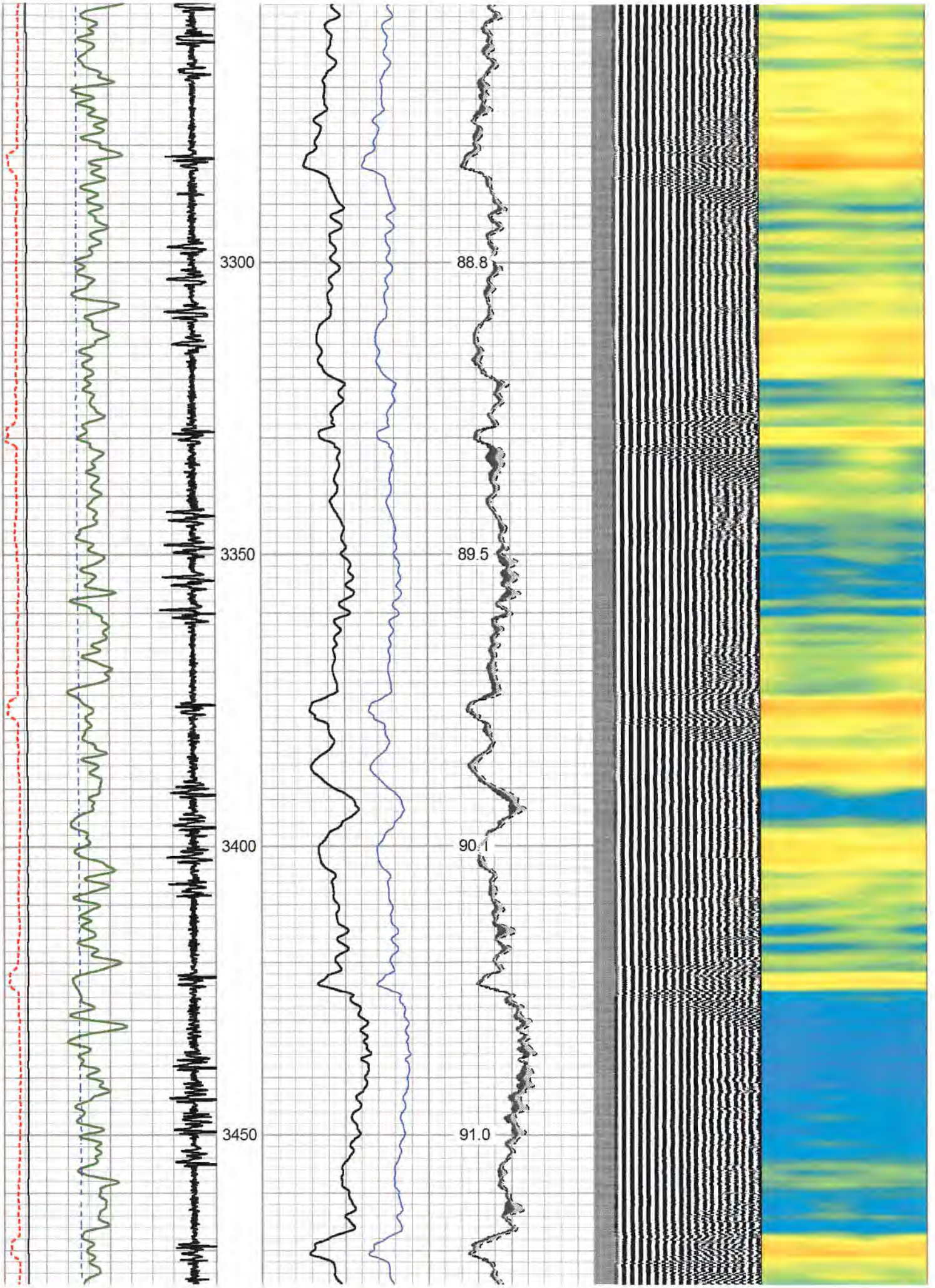


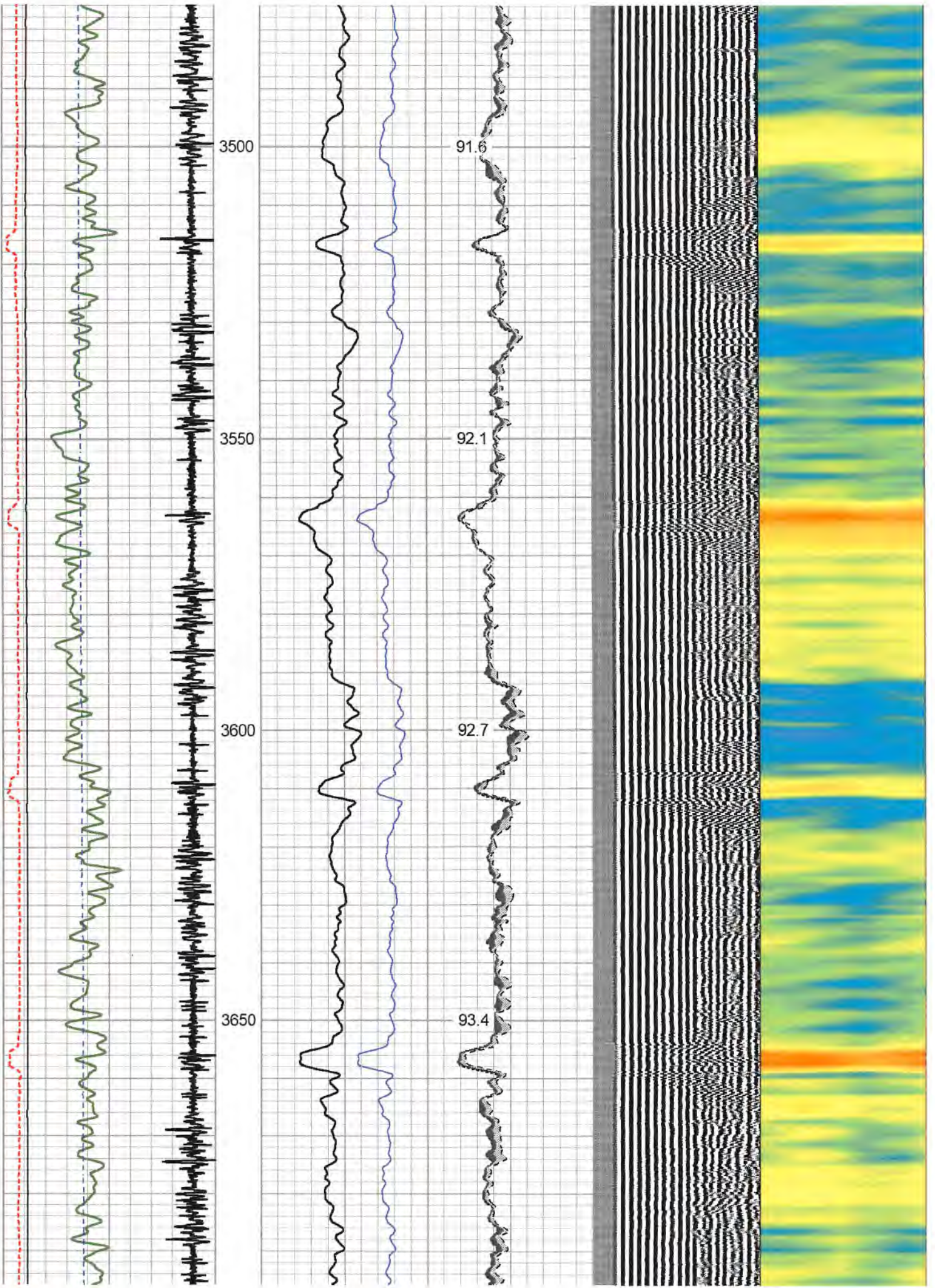


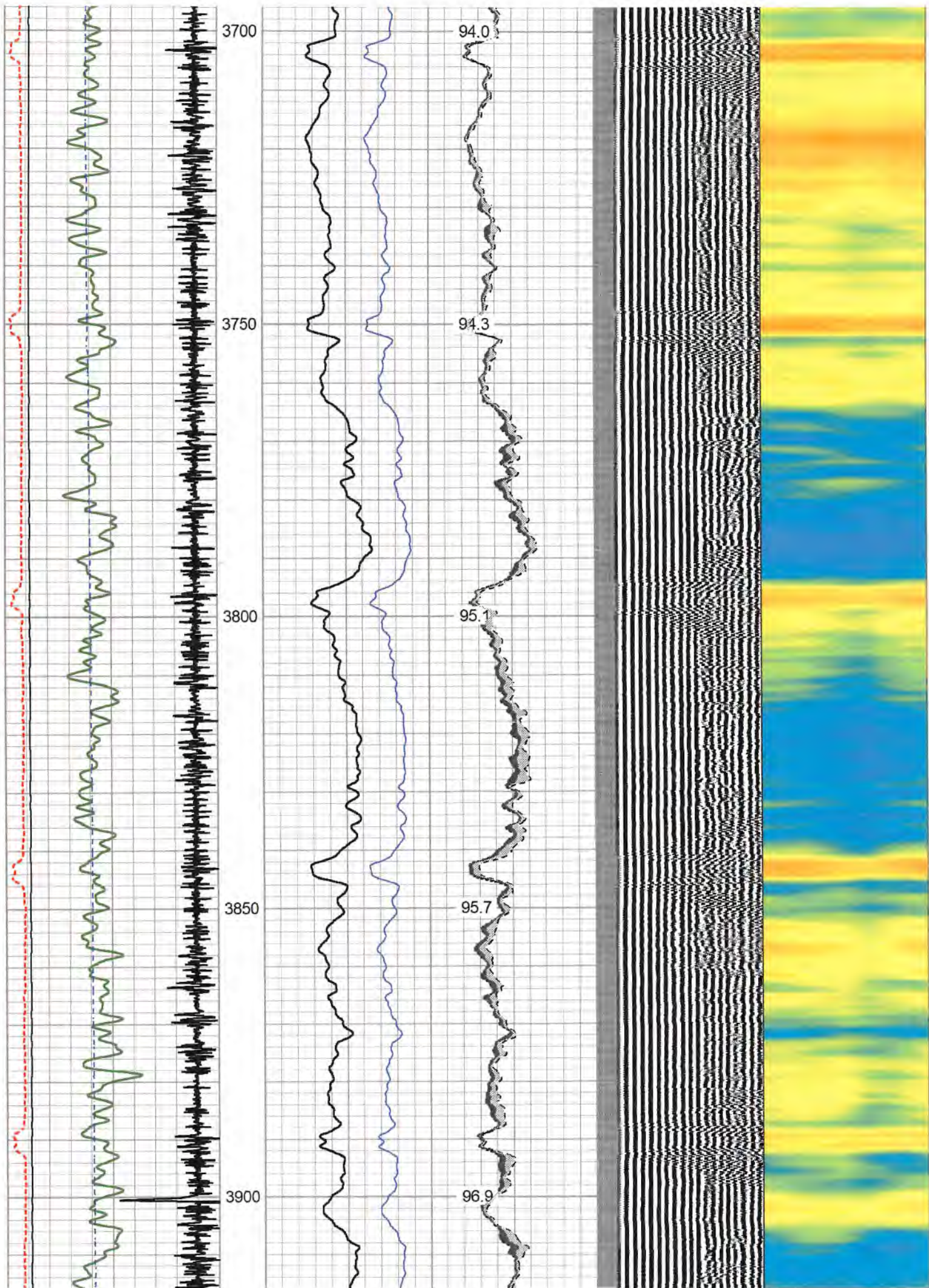


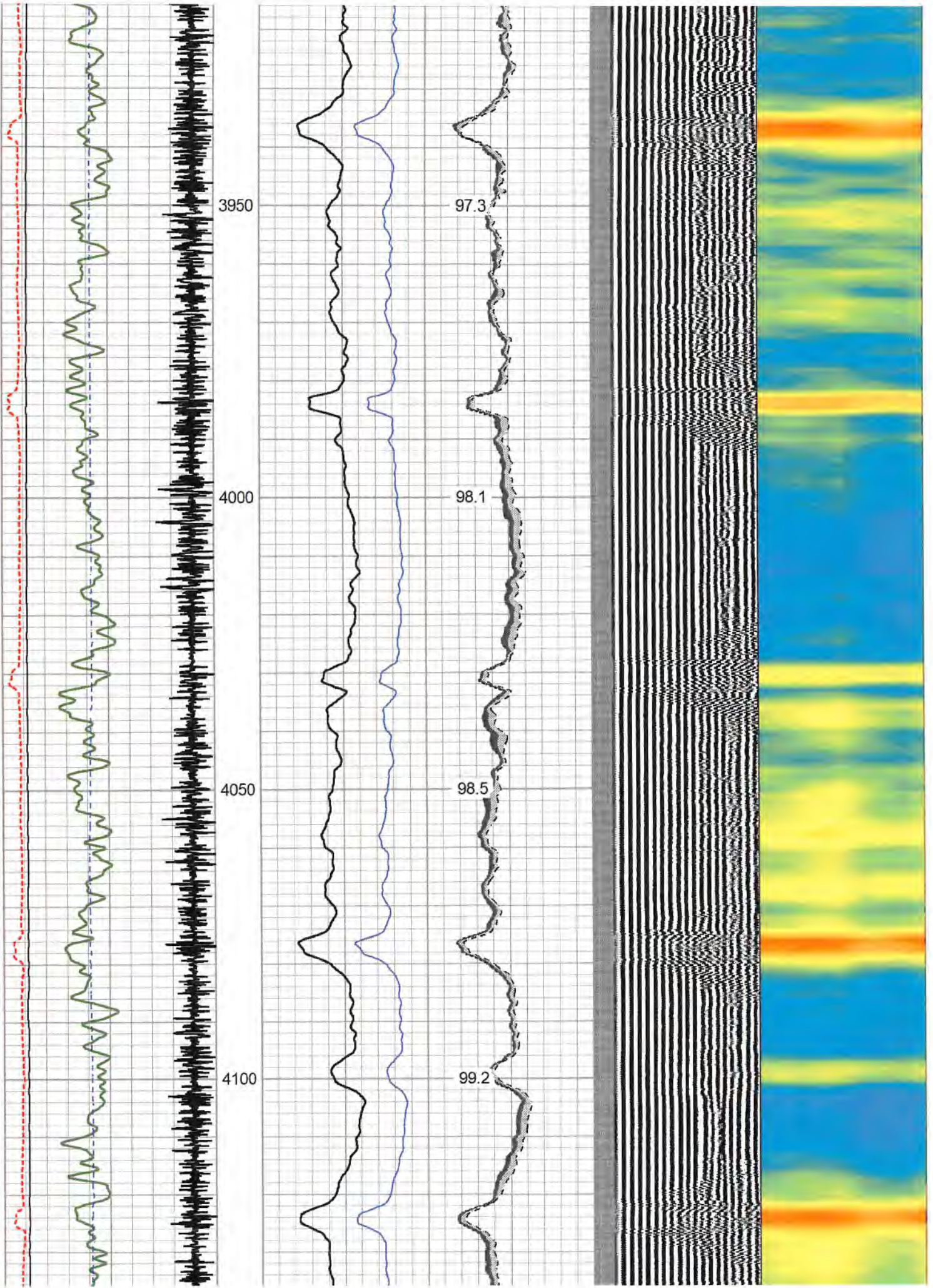


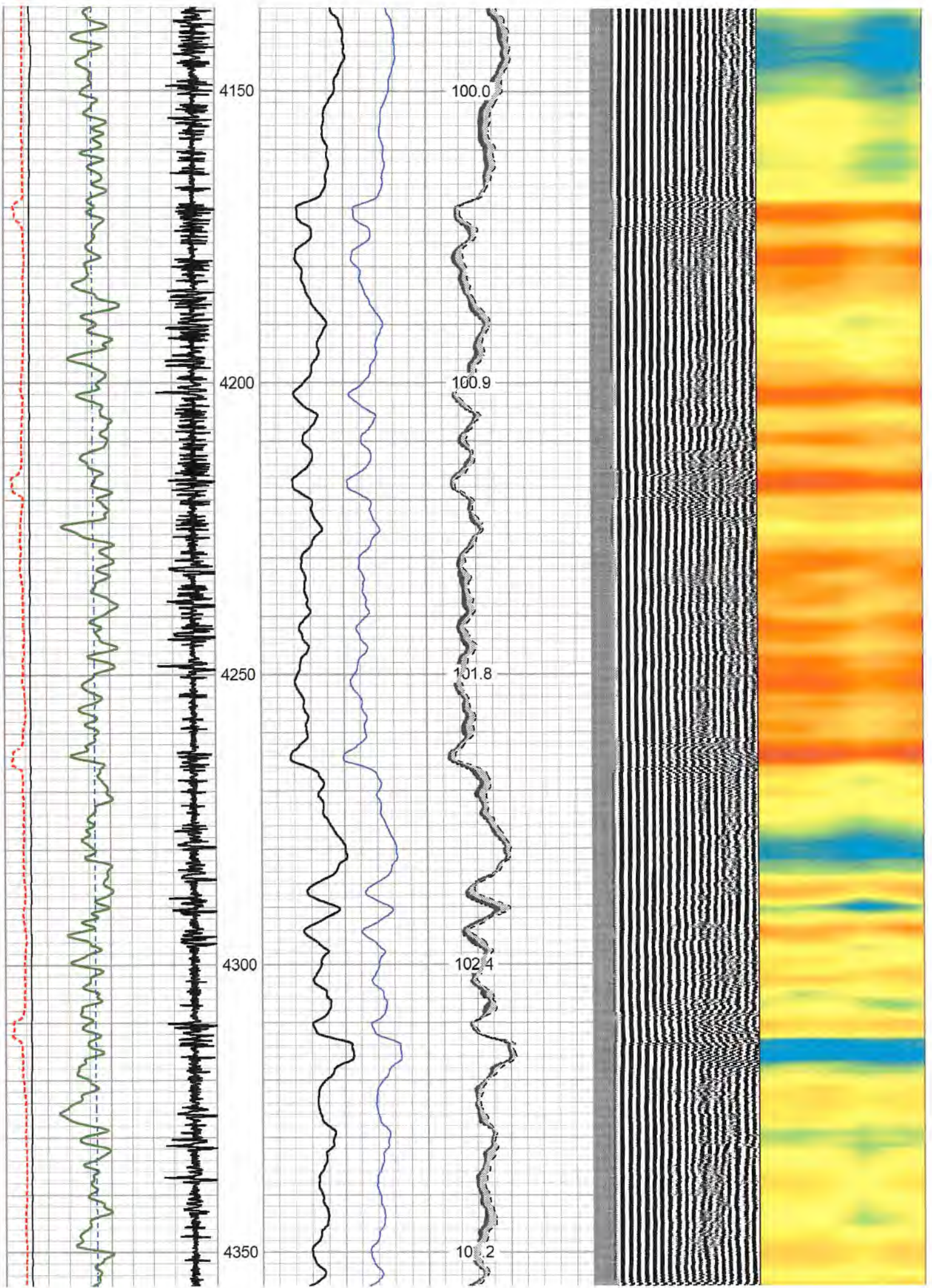


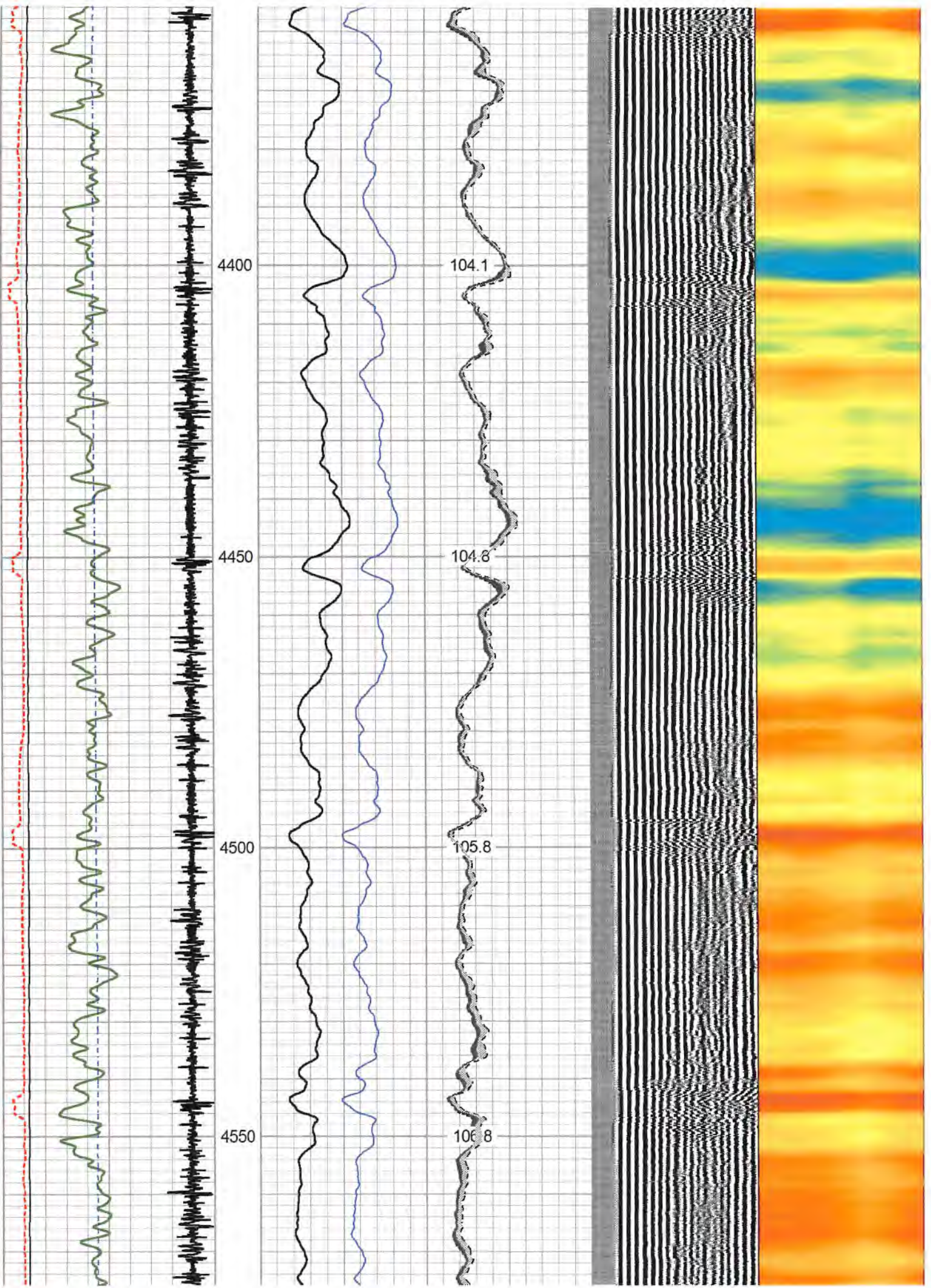


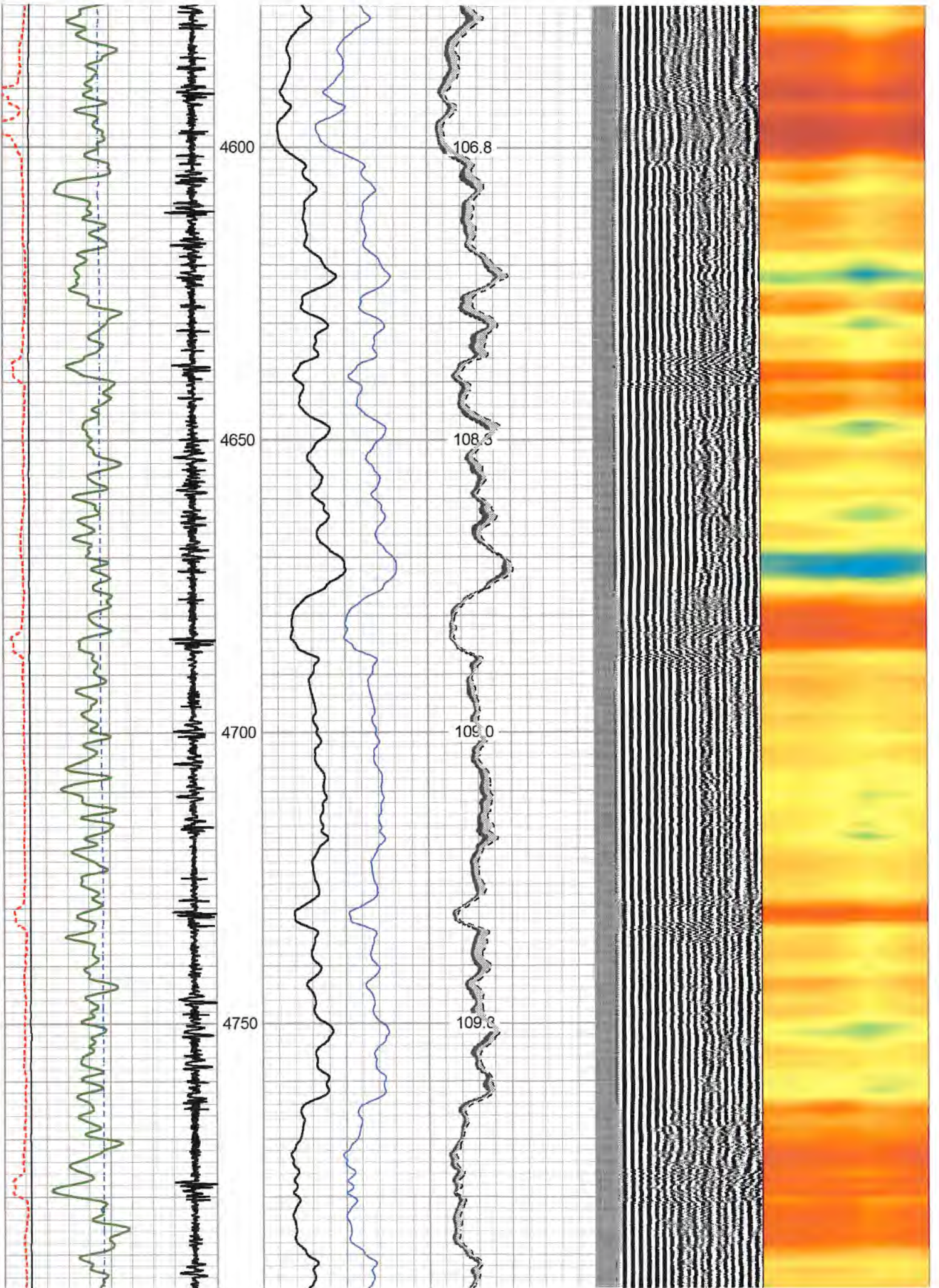


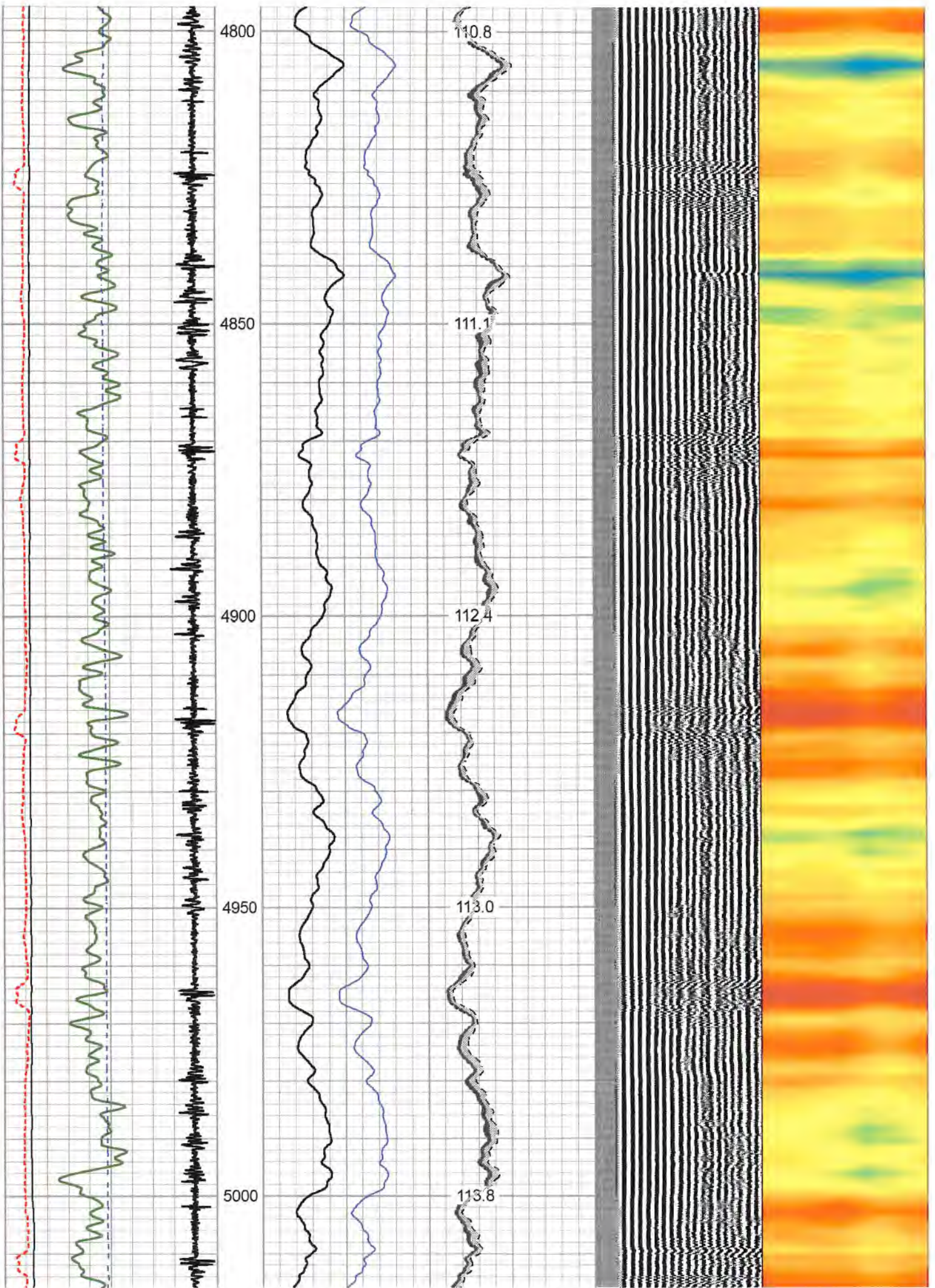




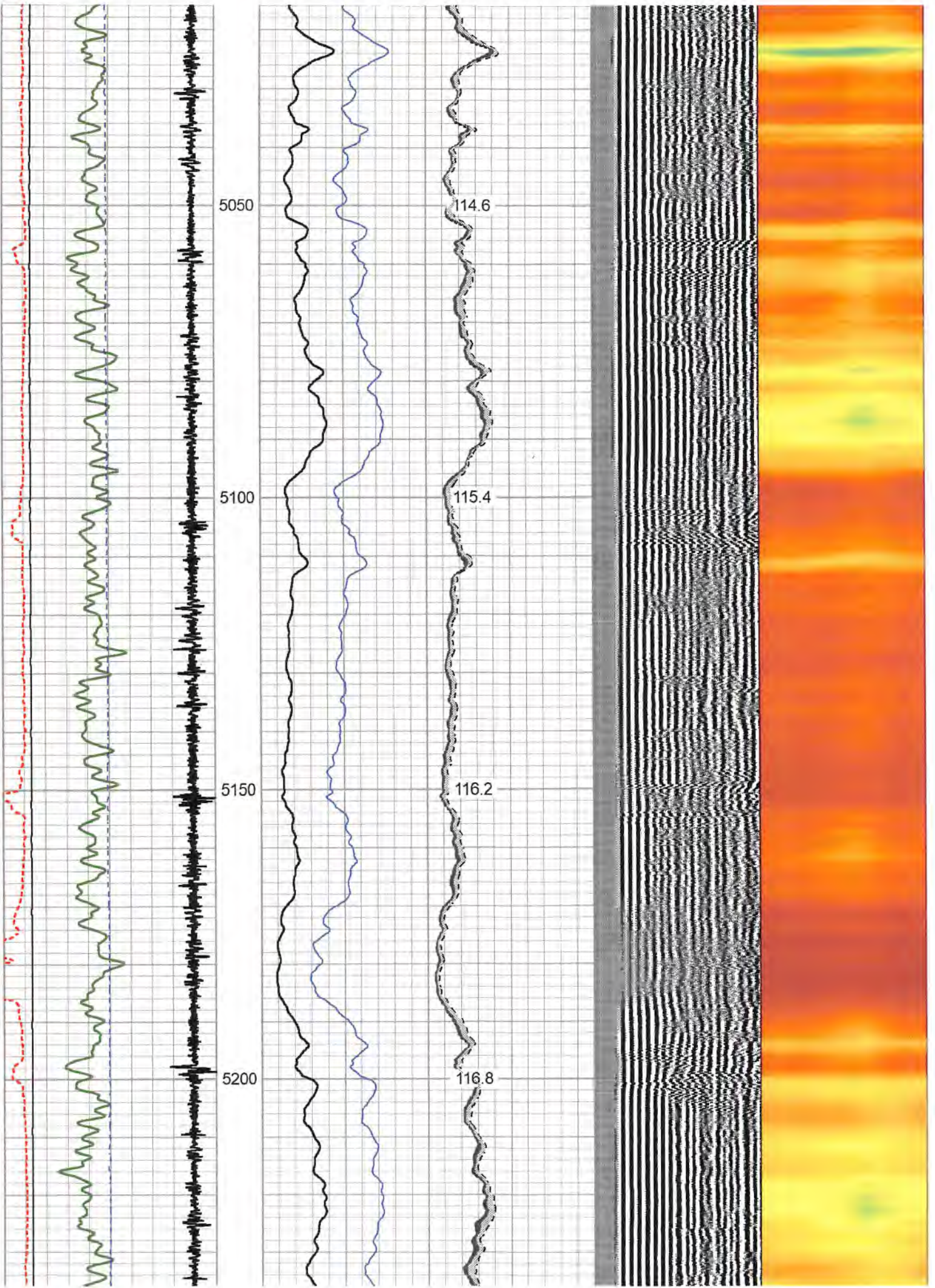


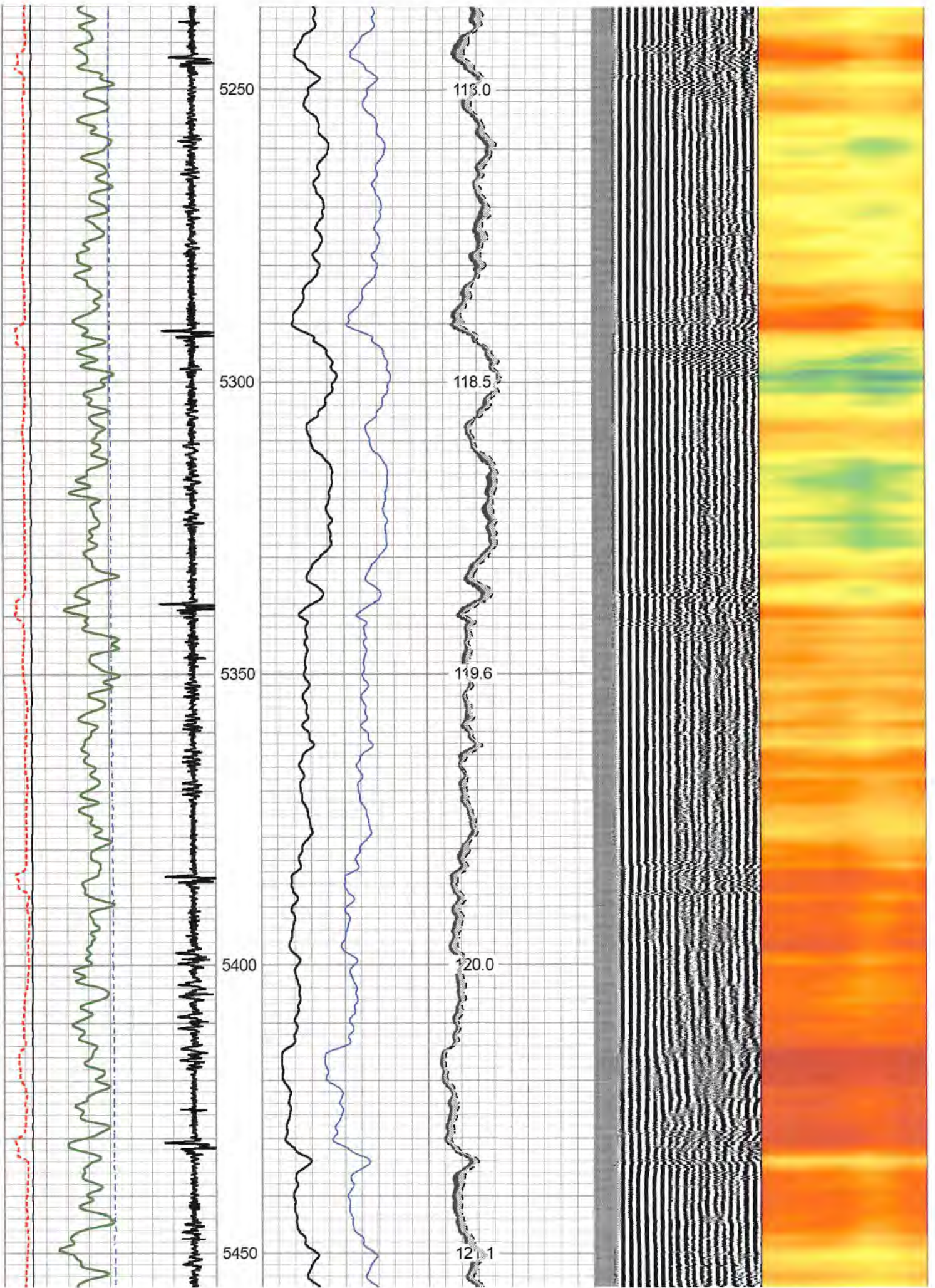


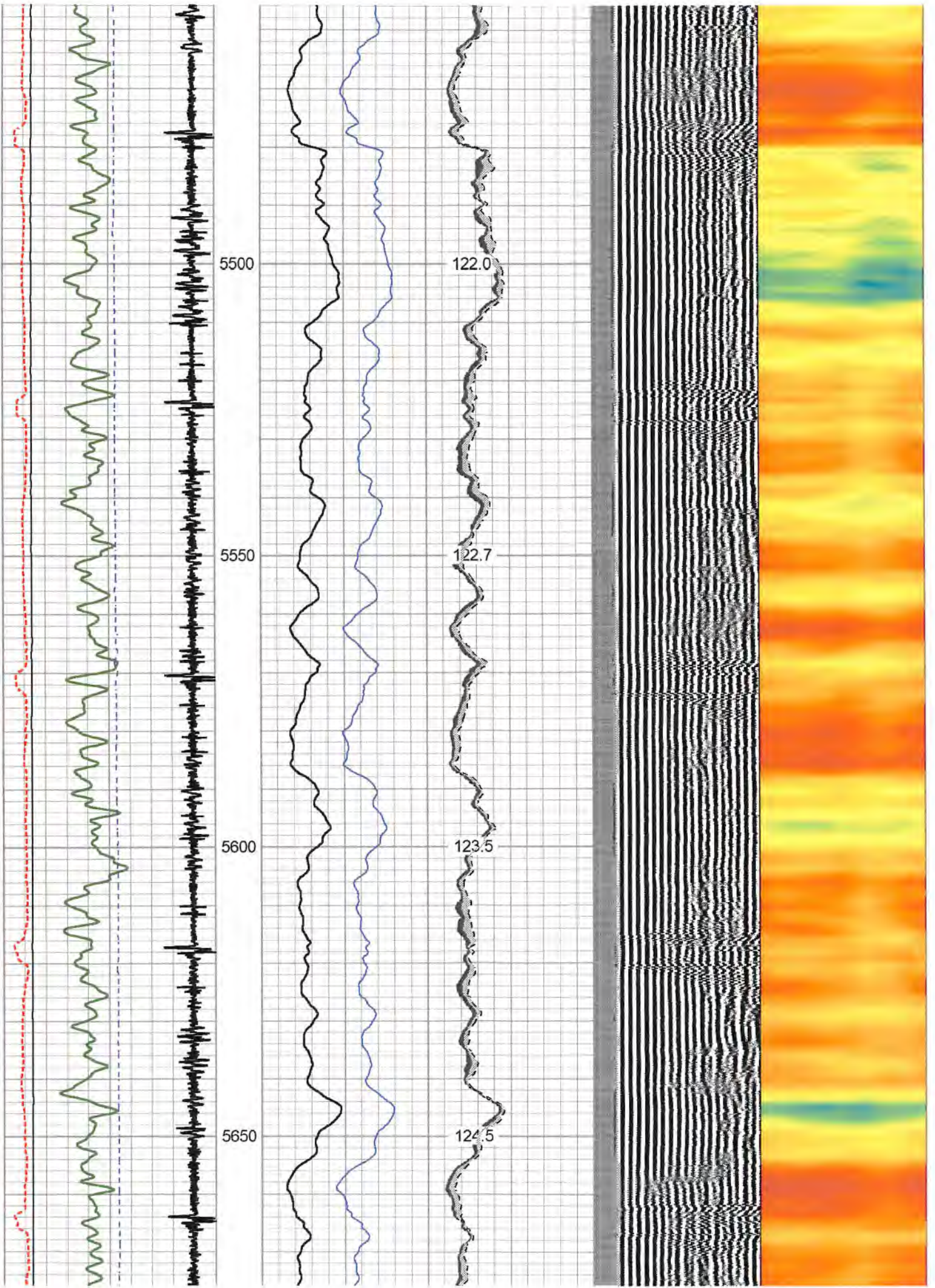


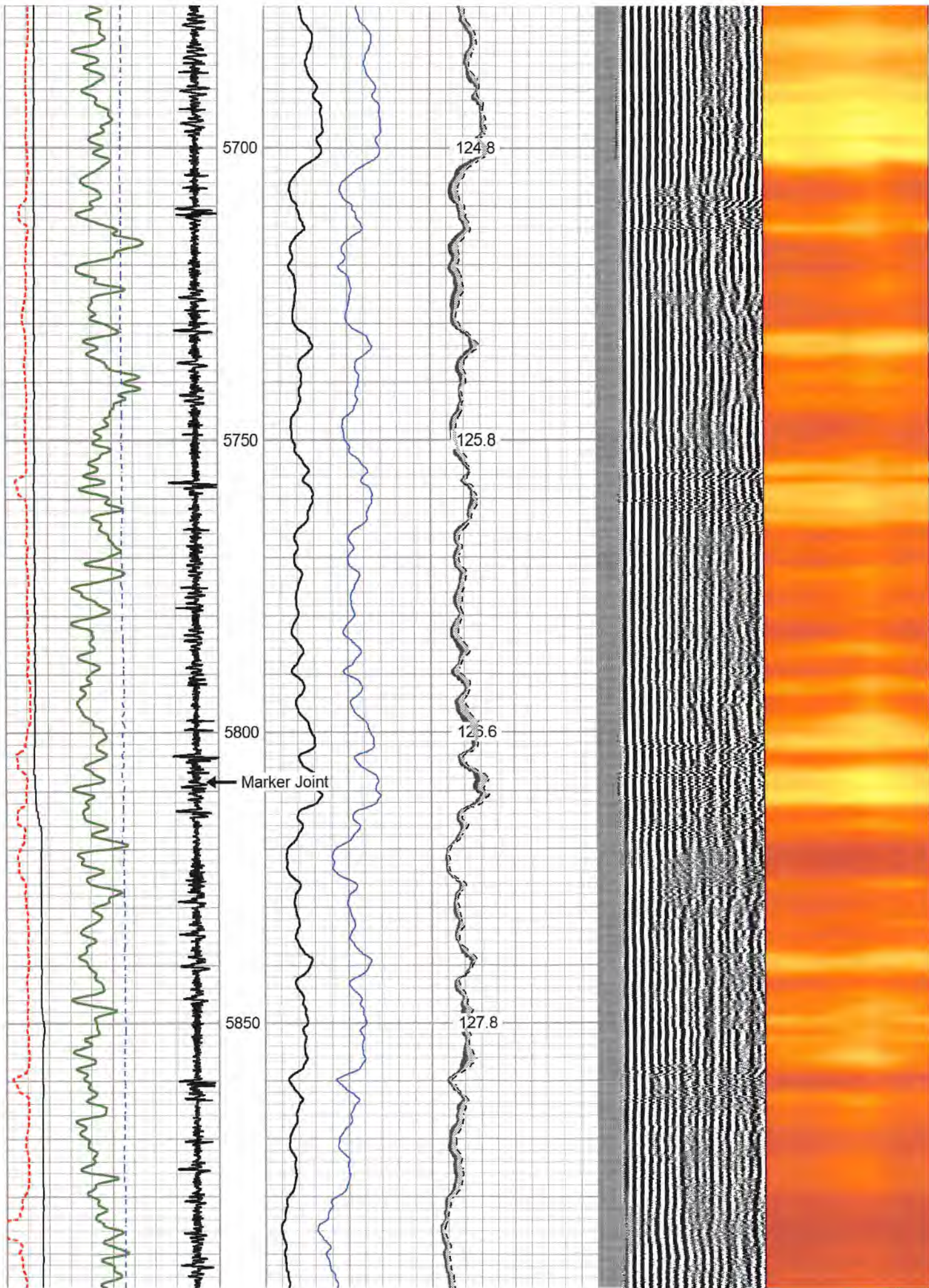


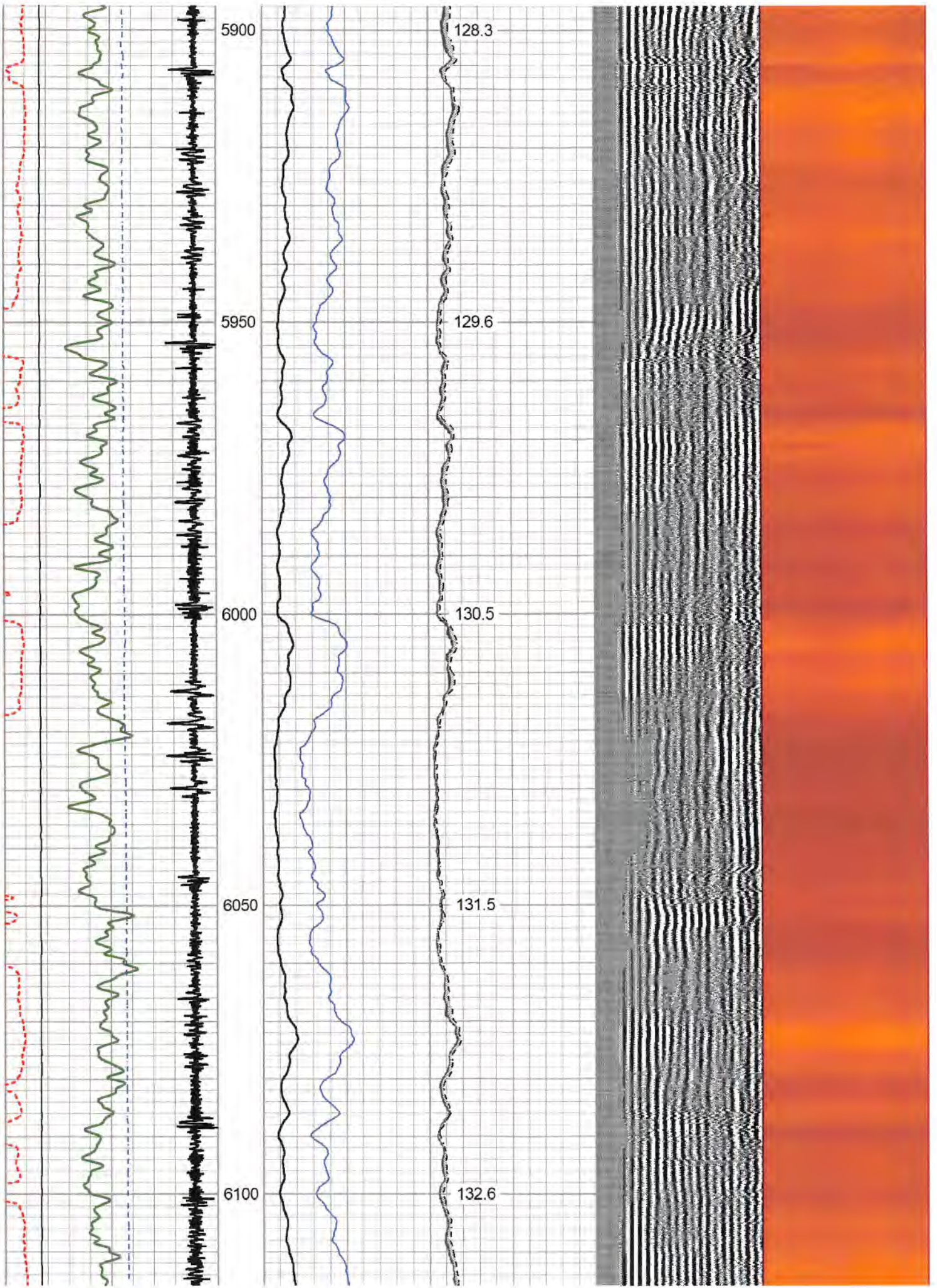


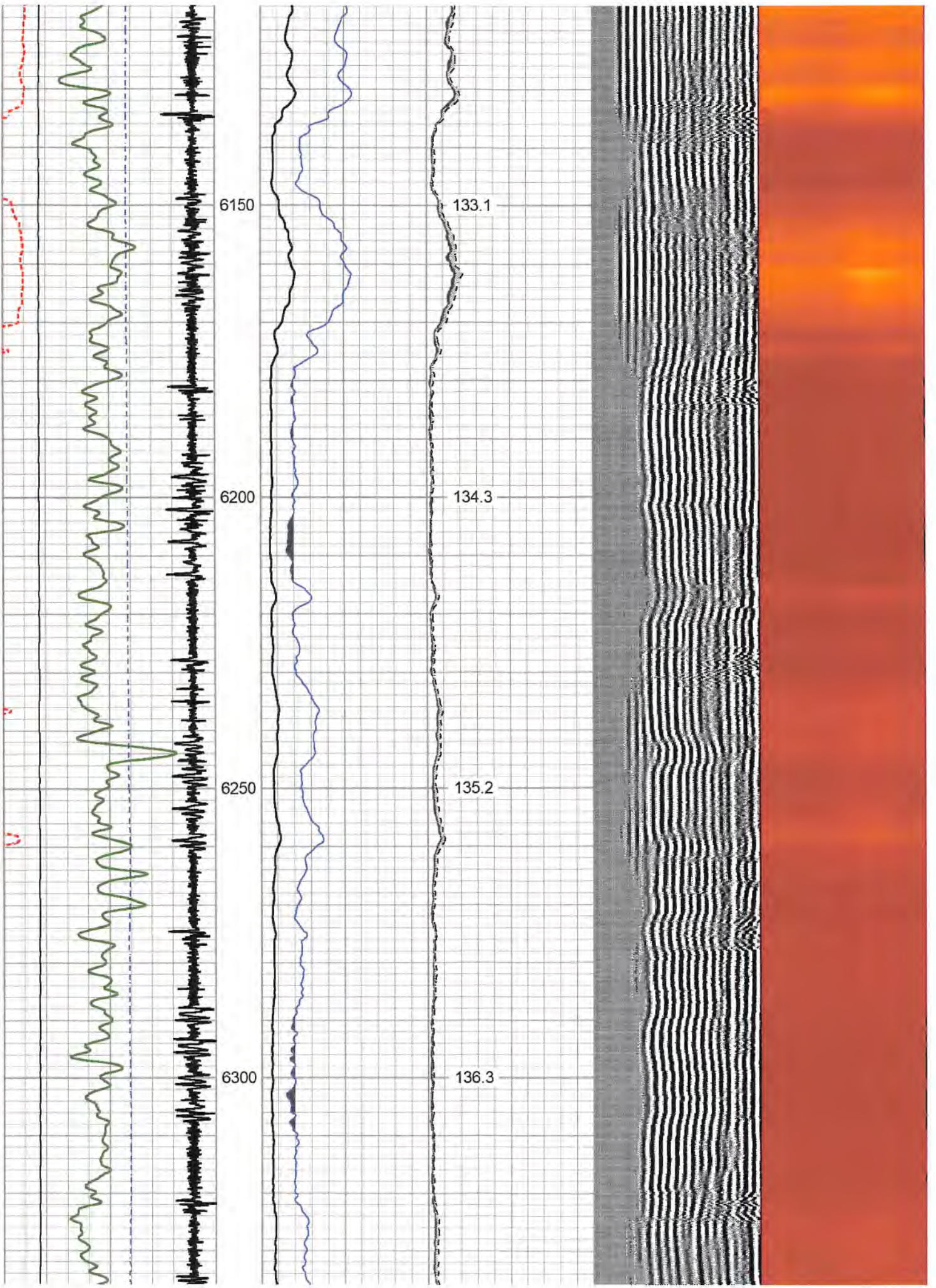


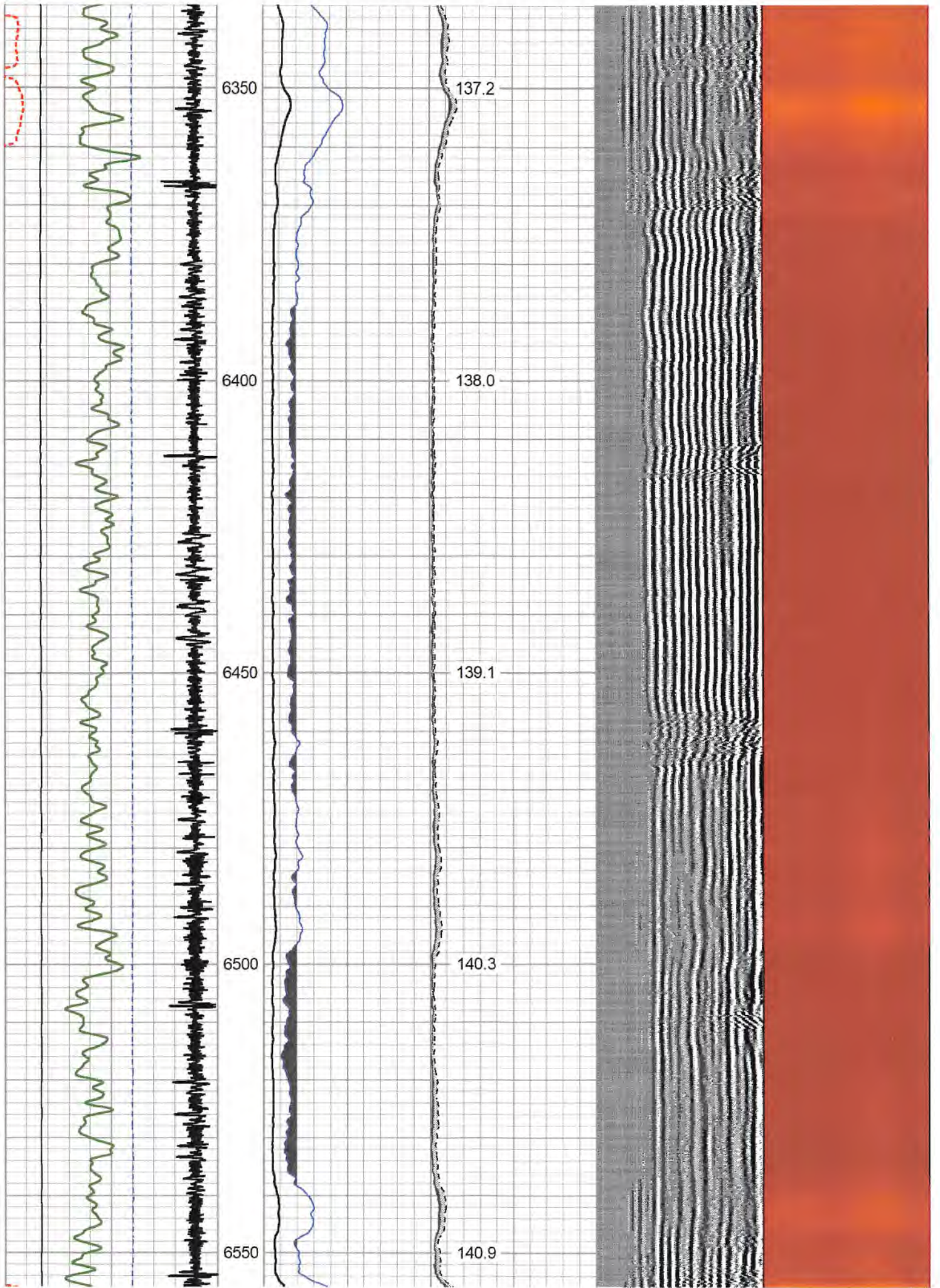


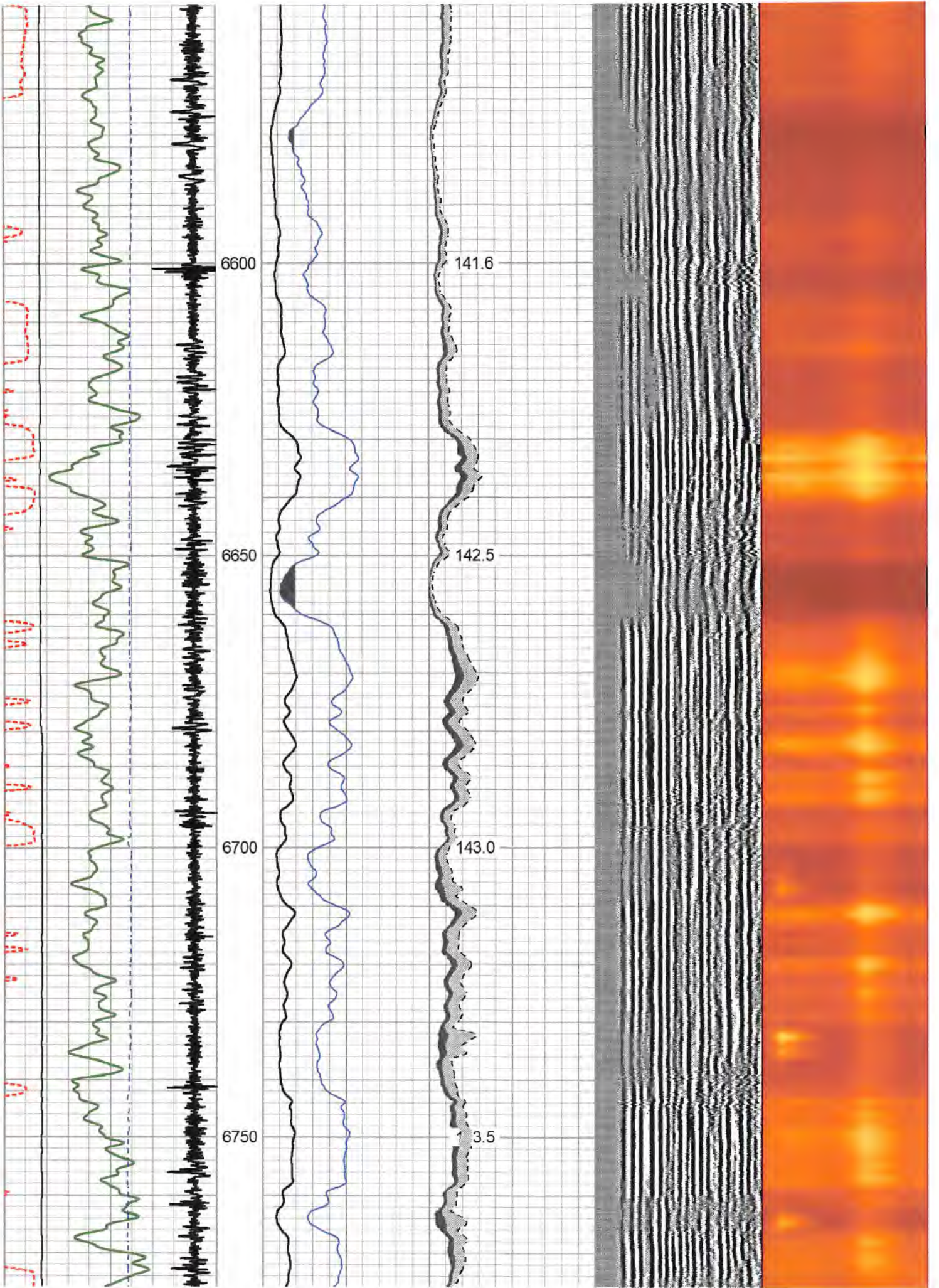




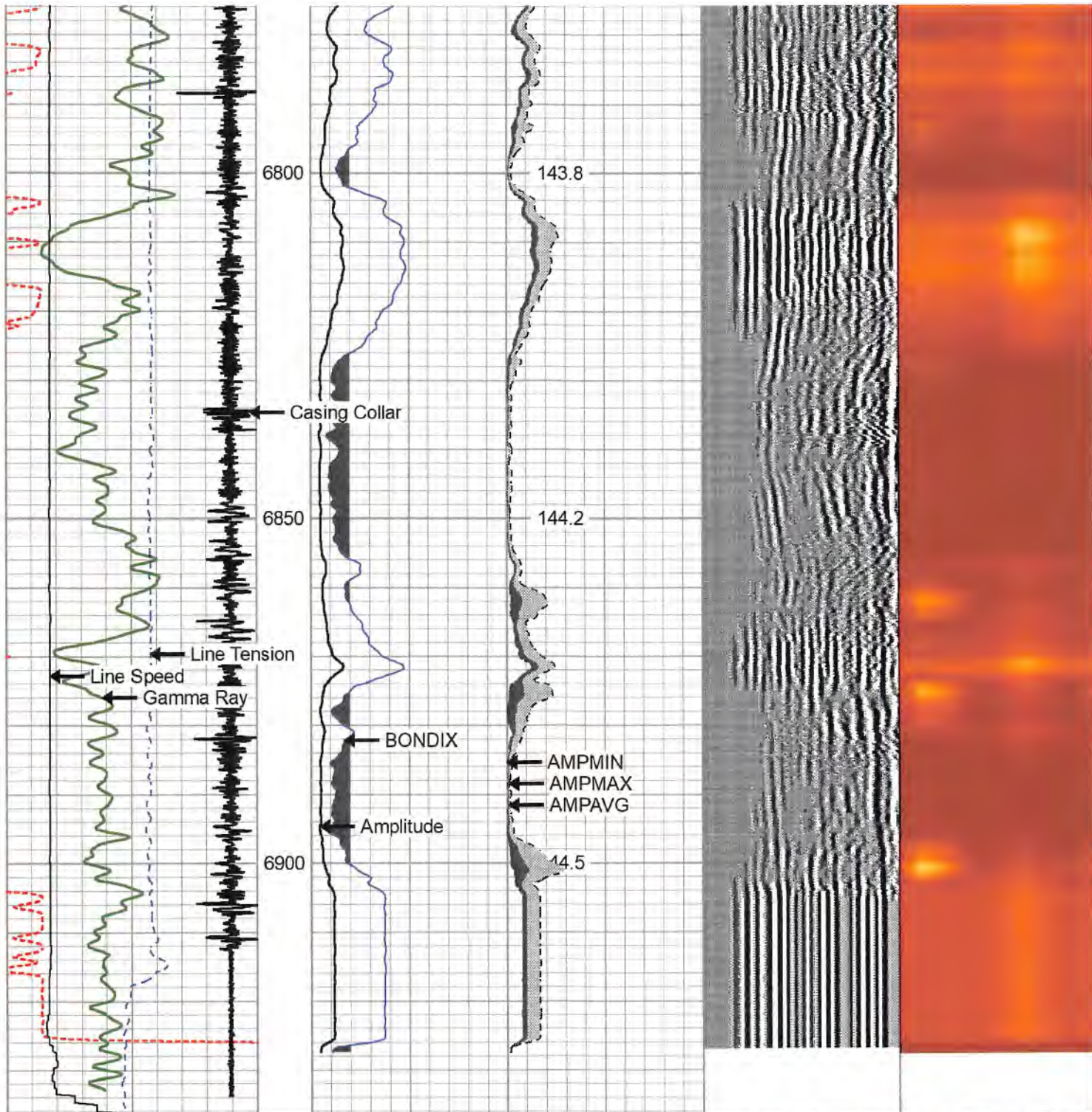










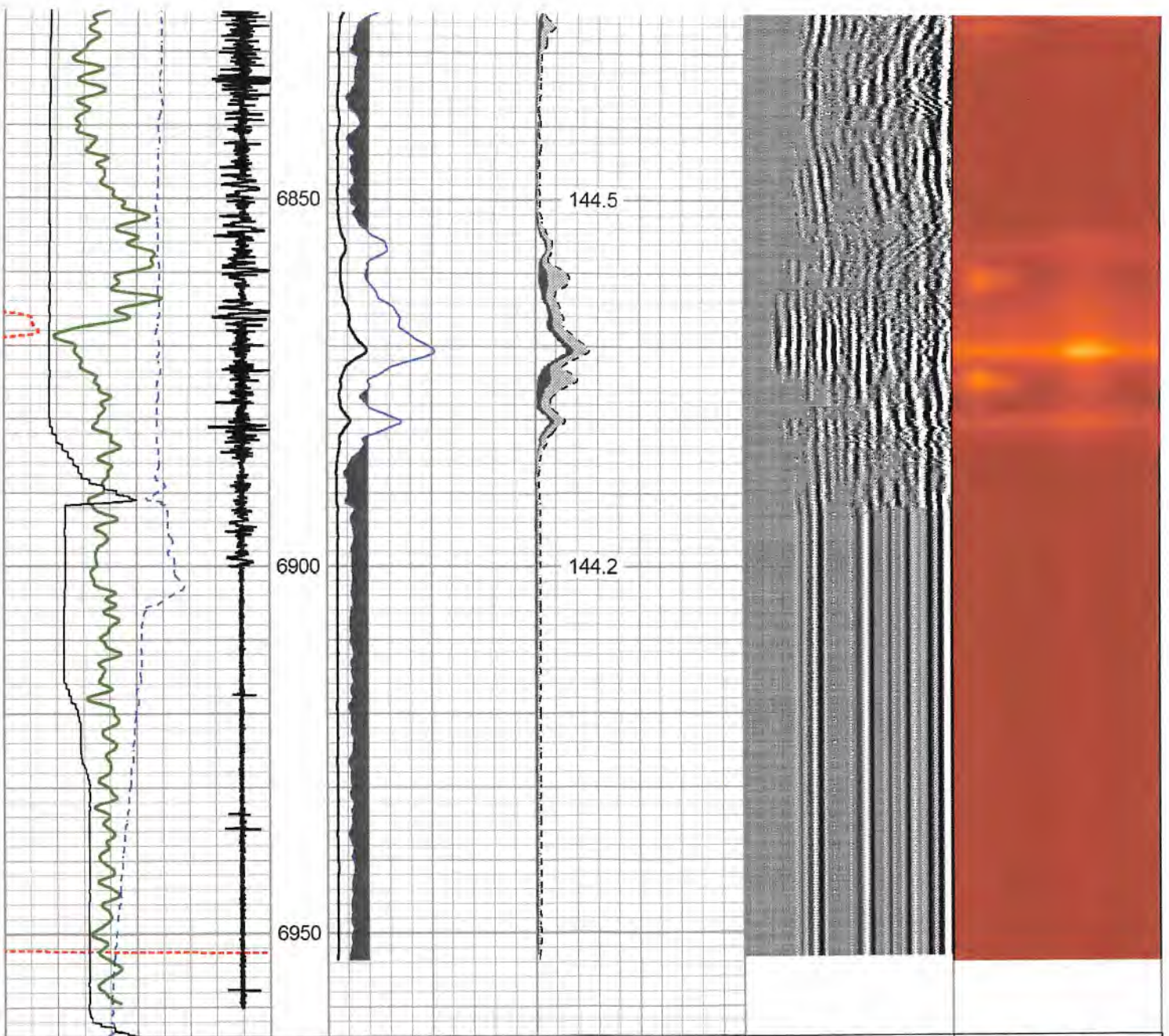


265	Travel Time (usec)	165	0	Amplitude (mV)	100	0	AMPMIN	150	Variable Density	1	Cement Map	8
9	Casing Collar	-1	1	BONDIX	0	0	AMPMAX	150	200	(usec)	1200	
0	Gamma Ray (GAPI)	150	0	AMPAVG	150							
	Line Speed			TEMP								
-100	(ft/min)	100		(degF)								
0	Line Tension (lb)	2000										



# Repeat Pass 1,500 PSI





265	Travel Time (usec)	165	0	Amplitude (mV)	100	0	AMPMIN	150	Variable Density	1	Cement Map	8
9	Casing Collar	-1	1	BONDIX	0	0	AMPMAX	150	200	(usec)	1200	
0	Gamma Ray (GAPI)	150	0	AMPAVG	150		TEMP					
	Line Speed						(degF)					
-100	(ft/min)	100										
0	Line Tension (lb)	2000										

Log Variables		Database:\programdata\warrior\data\antero_prosper_1h_nov_7_2020_cbl.db					
		Dataset Rabbit_Ears/Prosper_1h/rcbl/pass8/_vars_					
Top - Bottom							
BHTEMP_Src	BOREID	BOTTEMP	CASEOD	CASETHCK	CASEWGHT	MAXAMPL	MINAMPL
TEMP	in 8.5	degF 144	in 5.5	in 0	lb/ft 23	mV 71.9	mV 3.4
MINATTN	PERFS	PPT	SRFTEMP	TDEPTH			
db/ft 0.8	No	usec 260	degF 0	ft 6902			

**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\_prosper\_1h\_nov\_7\_2020\_cbl.db  
 Dataset Pathname Rabbit\_Ears/Prosper\_1h/rcbl/pass8  
 Dataset Creation Sat Nov 07 20:45:19 2020

**Gamma Ray Calibration Report**

Serial Number: FW1211-86  
 Tool Model: Probe  
 Performed: Sun Sep 13 14:03:29 2020

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: 151.433 ft

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Master Calibration, performed Sat Nov 07 19:53:22 2020:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.021	0.992	3.400	71.921	67.672	4.817
CAL	-0.021	1.415				
5'	-0.021	0.944	3.400	71.921	71.007	4.880
SUM						
S1	-0.021	0.966	0.000	100.000	101.349	2.113
S2	-0.021	0.955	0.000	100.000	102.520	2.143
S3	-0.021	0.946	0.000	100.000	103.378	2.168
S4	-0.021	0.969	0.000	100.000	101.043	2.103
S5	-0.021	1.010	0.000	100.000	96.958	2.030
S6	-0.021	1.031	0.000	100.000	95.071	1.983
S7	-0.021	1.067	0.000	100.000	91.911	1.939
S8	-0.021	1.043	0.000	100.000	93.987	1.963

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Internal Reference Calibration, performed Thu Sep 27 16:01:58 2018:


	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.021	1.415	1.000	0.000

Air Zero Calibration, performed Sat Nov 07 10:29:21 2020:


	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)	
			CHD-Titan Titan 1 7/16" GO Cablehead	1.00	1.44	5.00	
			CENT-Titn275Adj Titan 2 3/4" Adjustable Centralizer	2.75	2.75	35.00	
HeadVolt	16.86						
Temp	14.02						
			RBT-Probe275T (FW1312-32) Probe 2.75" Radial with Integral Temperature Sub	9.39	2.75	90.00	
WVFS8	11.78						
WVFS7	11.78						
WVFS6	11.78						
WVFS5	11.78						
WVFS4	11.78						
WVFS3	11.78						
WVFS2	11.78						
WVFS1	11.78						
WVF3FT	11.78						
WVF5FT	10.78						
WVFCAL	7.53						
HEADVOLT	7.53						
			CENT-Titn275Adj Titan 2 3/4" Adjustable Centralizer	2.75	2.75	35.00	

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CCL	3.88		GR-Probe (FW1211-86) Probe 2 3/4" Logging Gamma Ray	4.78	2.75	57.00
GR	2.54					

Dataset: antero\_prosper\_1h\_nov\_7\_2020\_cbl.db: Rabbit\_Ears/Prosper\_1h/rcbl/pass8  
 Total length: 20.67 ft  
 Total weight: 222.00 lb  
 O.D.: 2.75 in

	Company	ANTERO	
	Well	Prosper 1H	
	Field	RABBIT EARS	
	County	TYLER	
	State	WEST VIRGINIA	Country

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