



Radial Cement Bond  
Variable Density Log  
W/Gamma Ray/CCL/Temp

Company Antero Resources  
Well Marron 2H  
Field Utica  
County Tyler  
State WV

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Well Marron 2H  
Field Utica  
County Tyler  
State WV

Location: API #: 47-095-027570000

Other Services

SEC	TWP	RGE	Elevation
Log Measured From	Ground Level	Elevation	K.B.
Drilling Measured From	Kelly Bushing 25' A.P.D.		D.F.
	Kelly Bushing		G.L.

Date	22-Mar-2022	one		
Run Number		23.523'		
Depth Driller		7.150'		
Depth Logger		7.150'		
Bottom Logged Interval		Surface		
Top Log Interval		NA		
Open Hole Size		Water		
Type Fluid		NA		
Density / Viscosity		151 Deg.F.		
Max. Recorded Temp.		5.117'		
Estimated Cement Top		12.15		
Time Well Ready		12:55		
Time Logger on Bottom		138 (P1 G4)		
Equipment Number		Charleroi, PA		
Location		Calvin Drummond		
Recorded By		Chris Young		
Witnessed By				
Borehole Record		Tubing Record		
Run Number	Bit	From	To	Size
				Weight
				From
				To
Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String				
Prot. String	5 1/2"	23#	Surface	
Production String				
Liner				24.329'

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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 Kelly Bushing  
Marker Joint Found at 6,118' - 6,129'  
Casing Tally Marker Joint at 6,120' - 6,130'

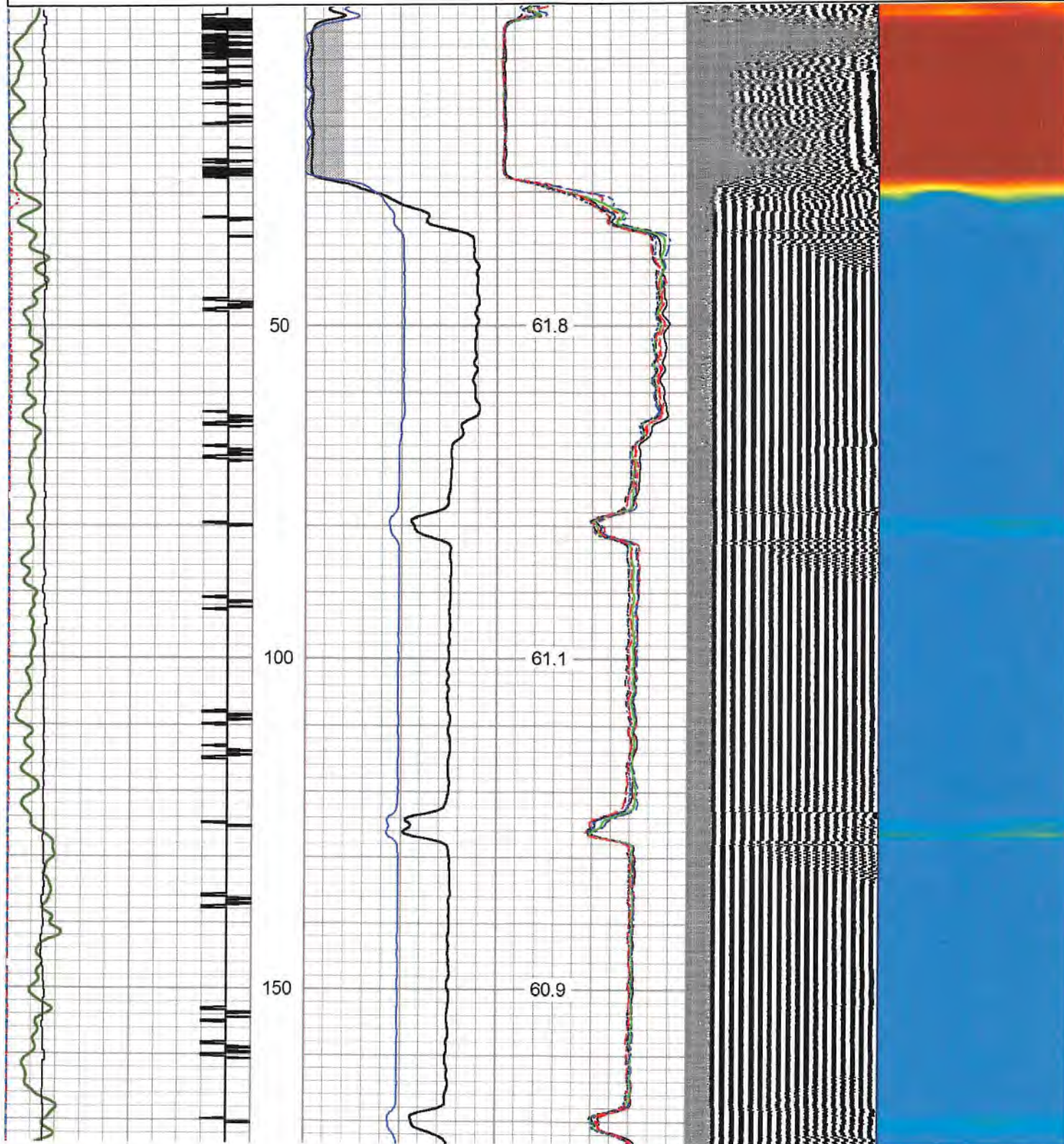
Database File antero\_maroon\_2h\_rcbl\_22\_march\_2022.db  
Dataset Pathname pass4.8  
Presentation Format rcbl-bond index for antero 1020  
Dataset Creation Thu Mar 24 15:15:44 2022  
Charted by Depth in Feet scaled 1:240

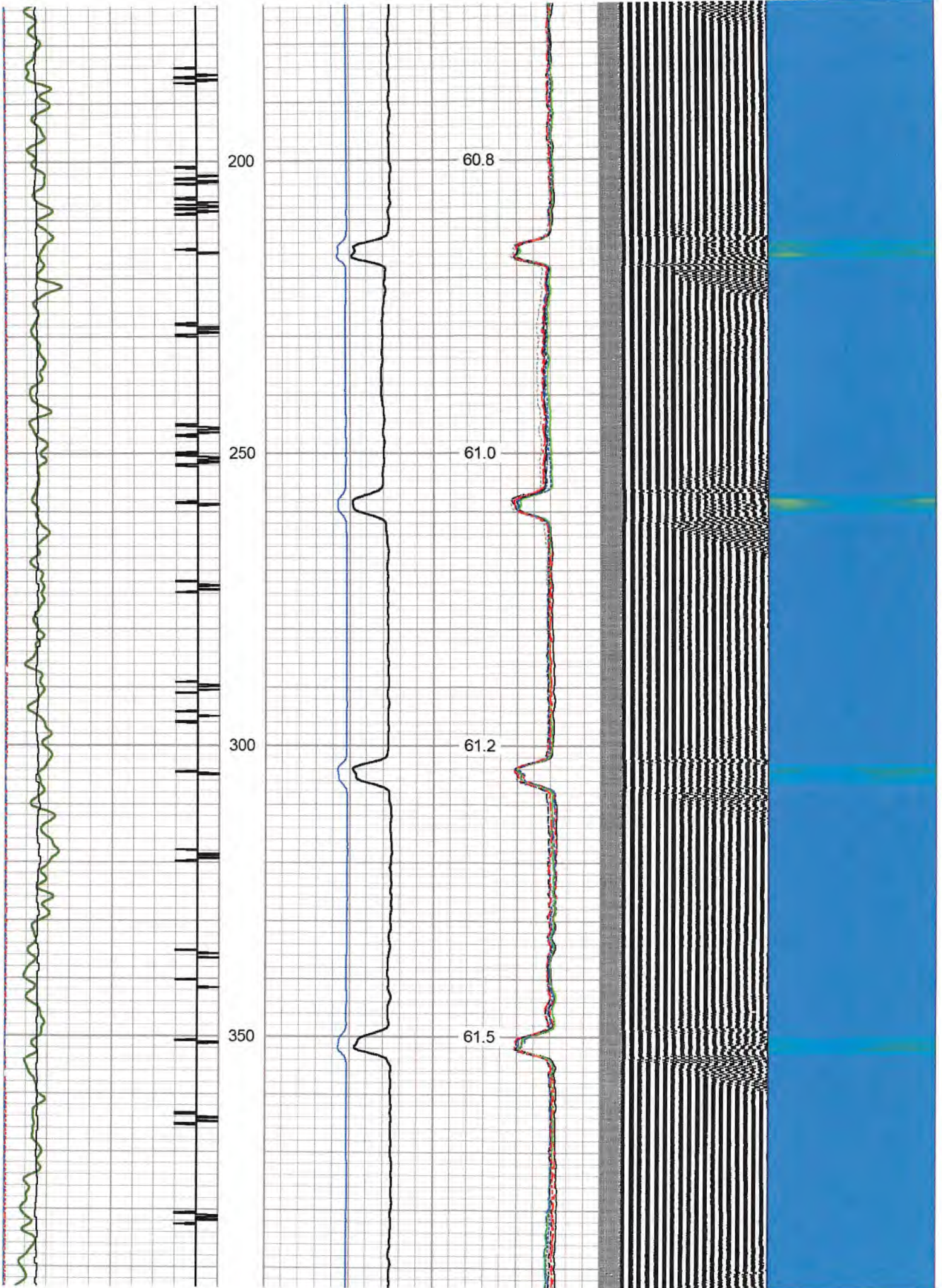
262	Travel Time (usec)	62
9	Casing Collar	-1
0	Gamma Ray (GAPI)	150
0	Line Tension (lb)	5000
-100	LSPD (ft/min)	100

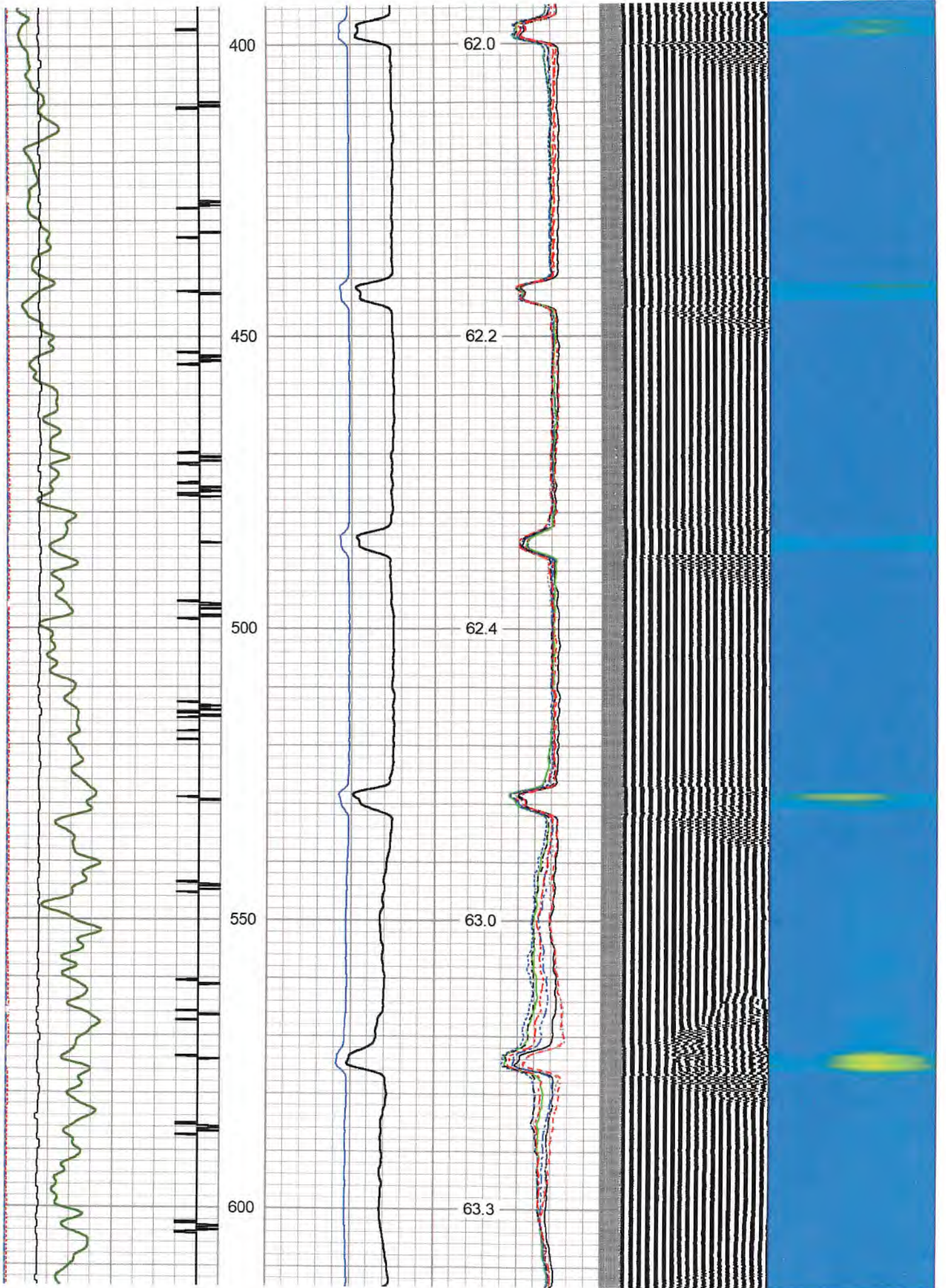
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1	BONDIX	0	-5	Sector 2	150
			-5	Sector 3	150
			-5	Sector 4	150
			-5	Sector 5	150
			-5	Sector 6	150
			-5	Sector 7	150
			-5	Sector 8	150

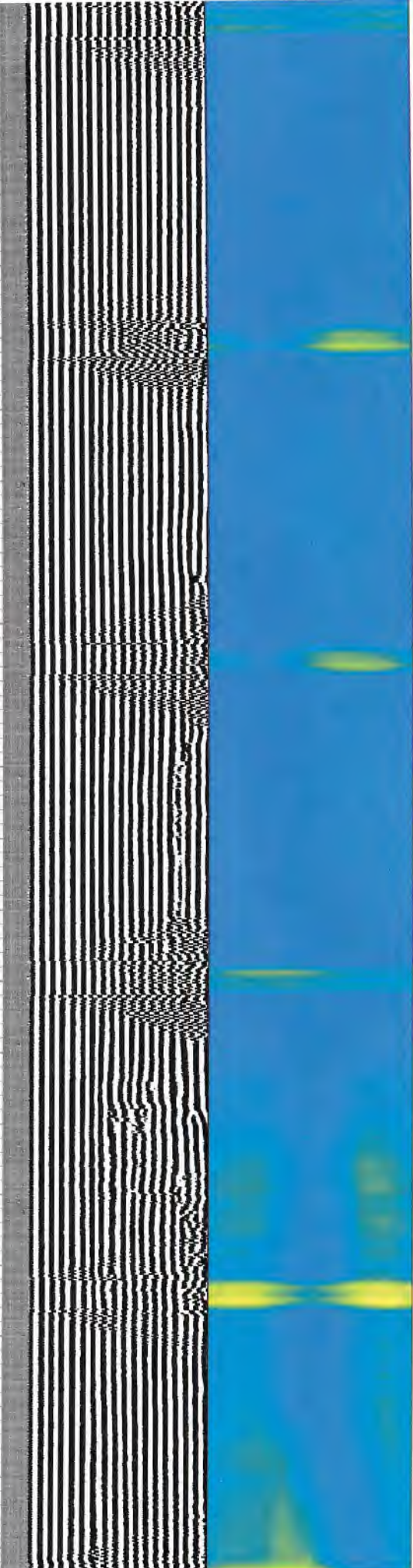
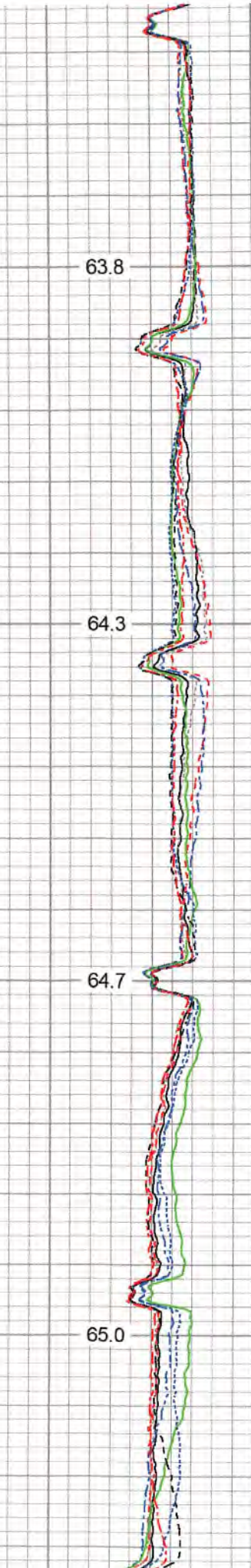
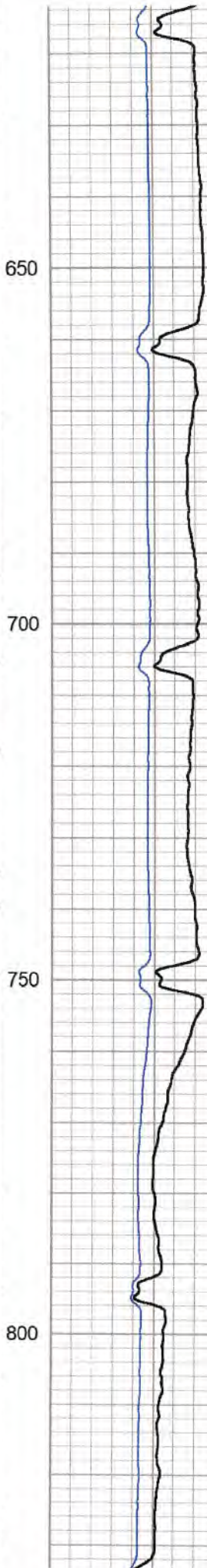
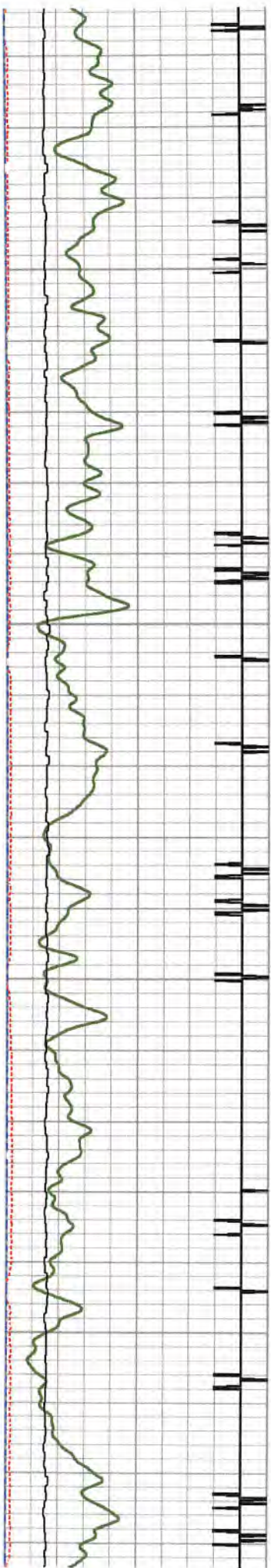
Variable Density 1 Cement Map 8  
 200 (usec) 1200

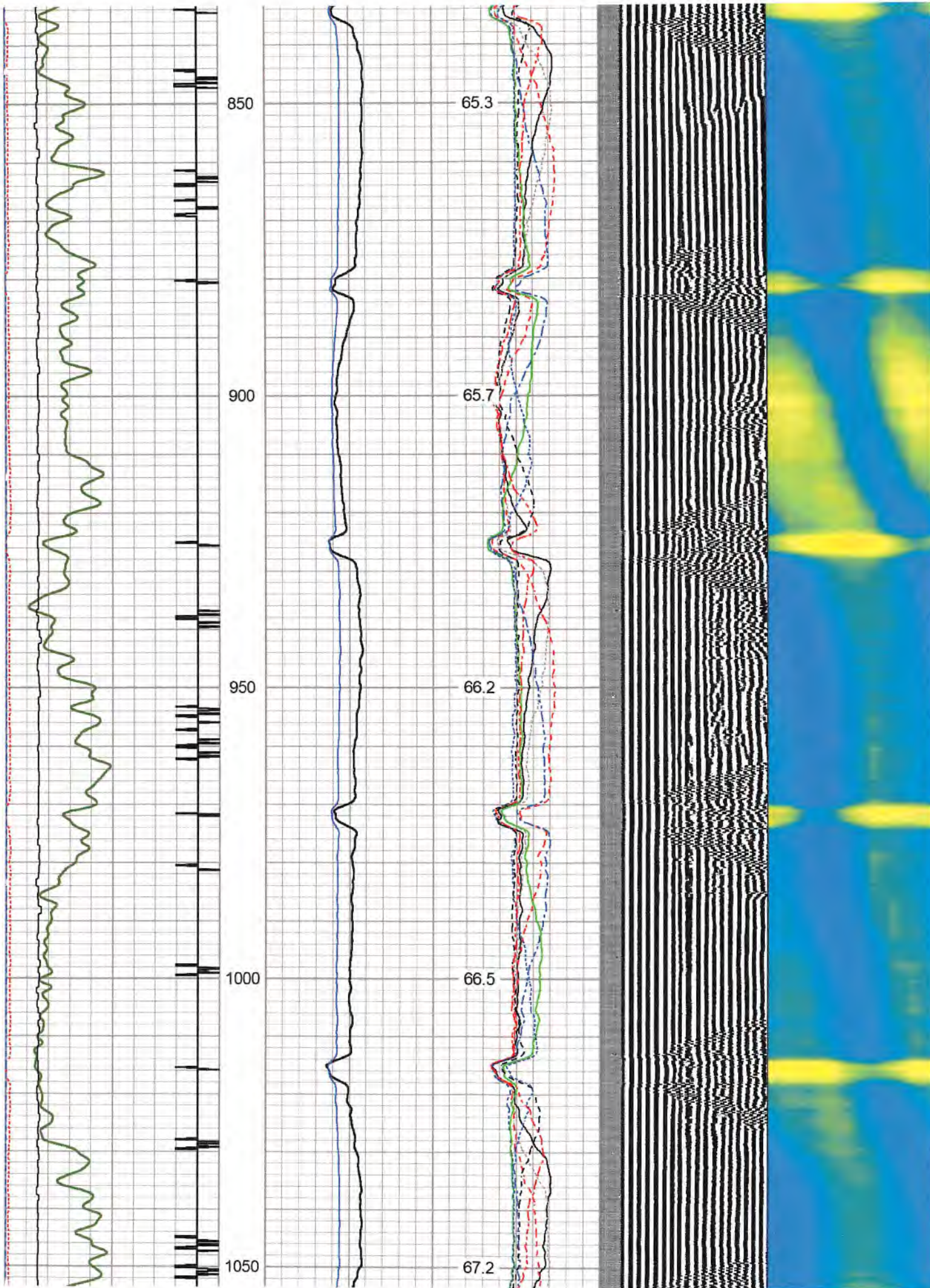
TEMP  
(degF)

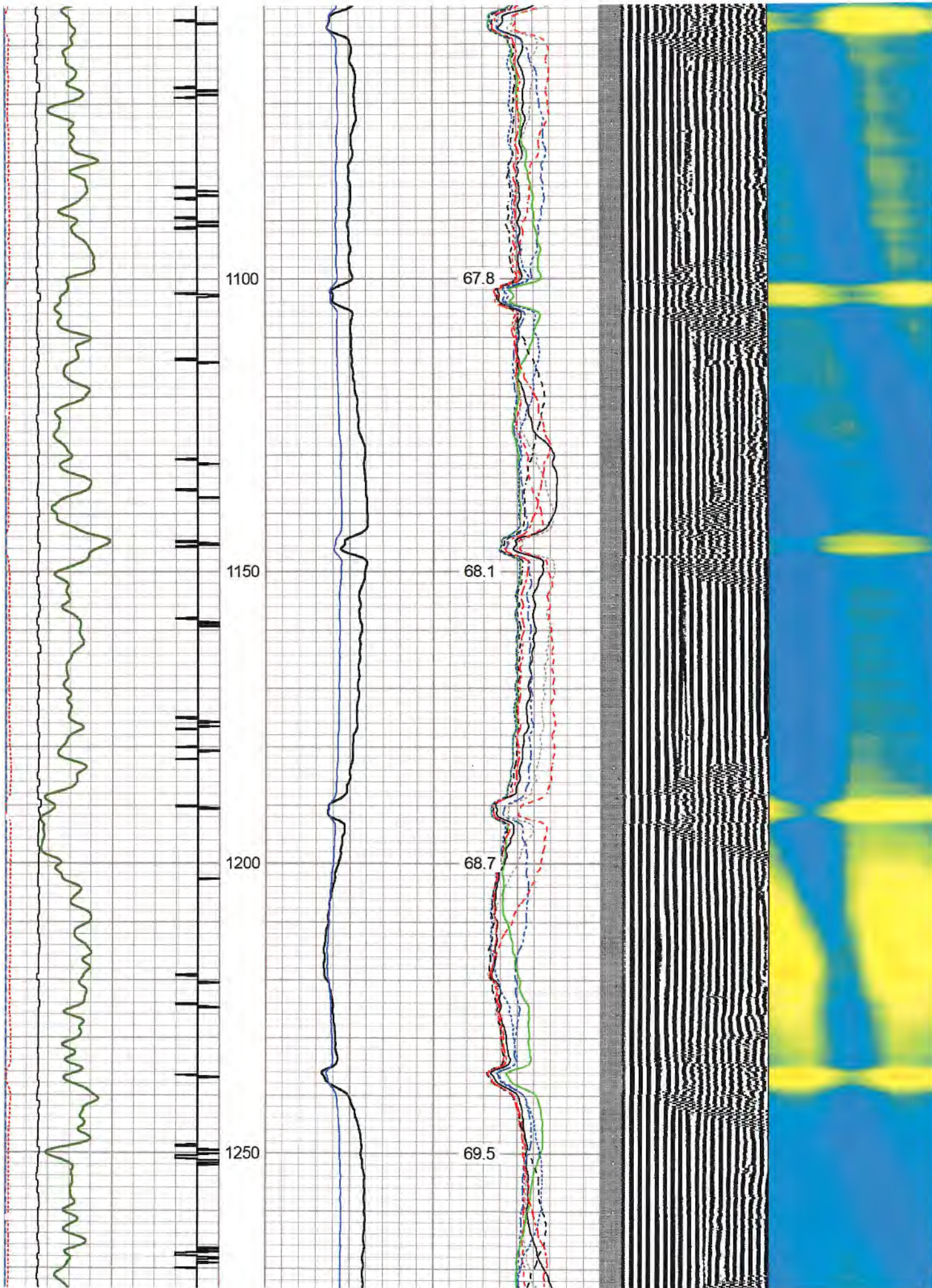


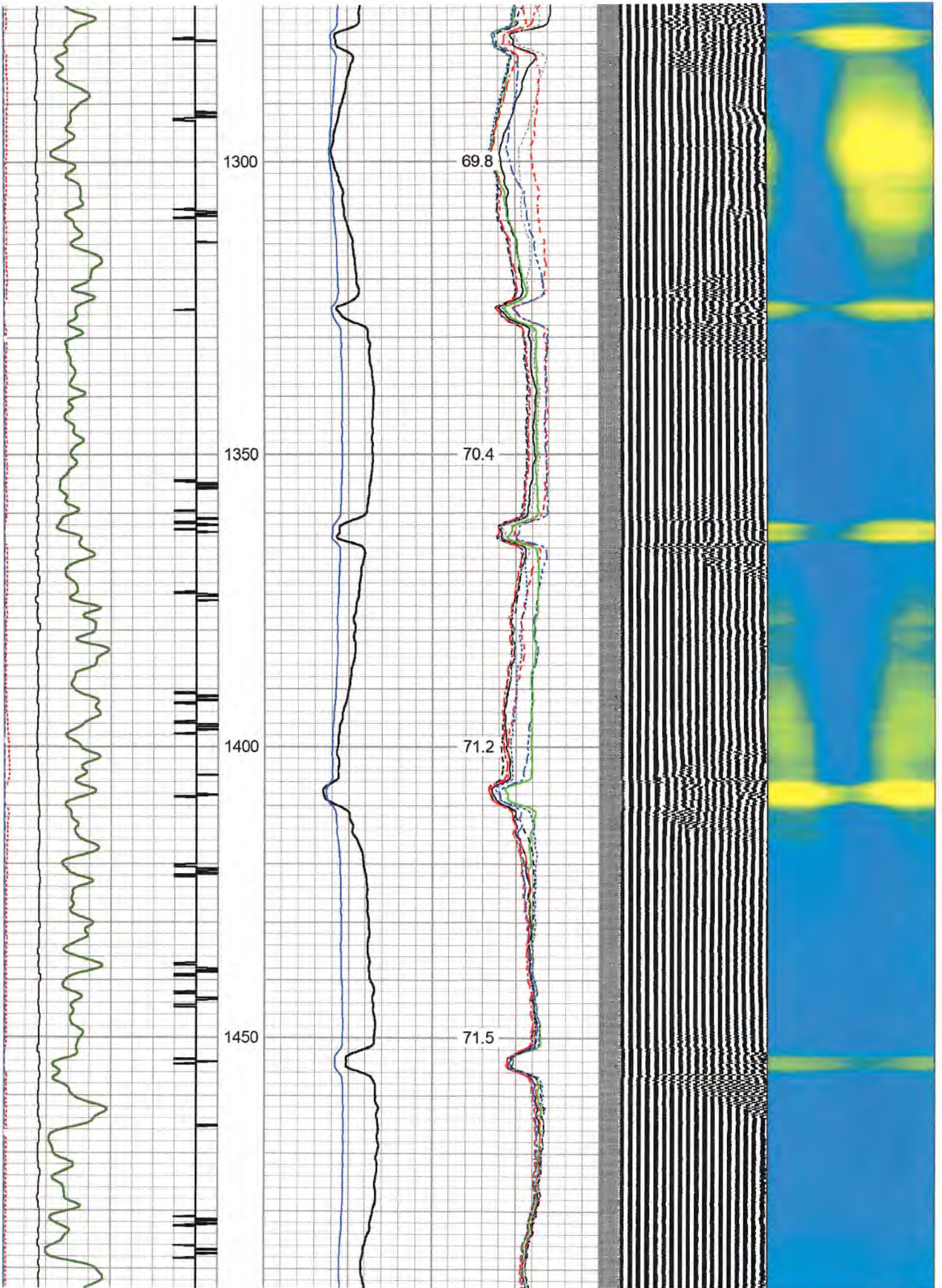




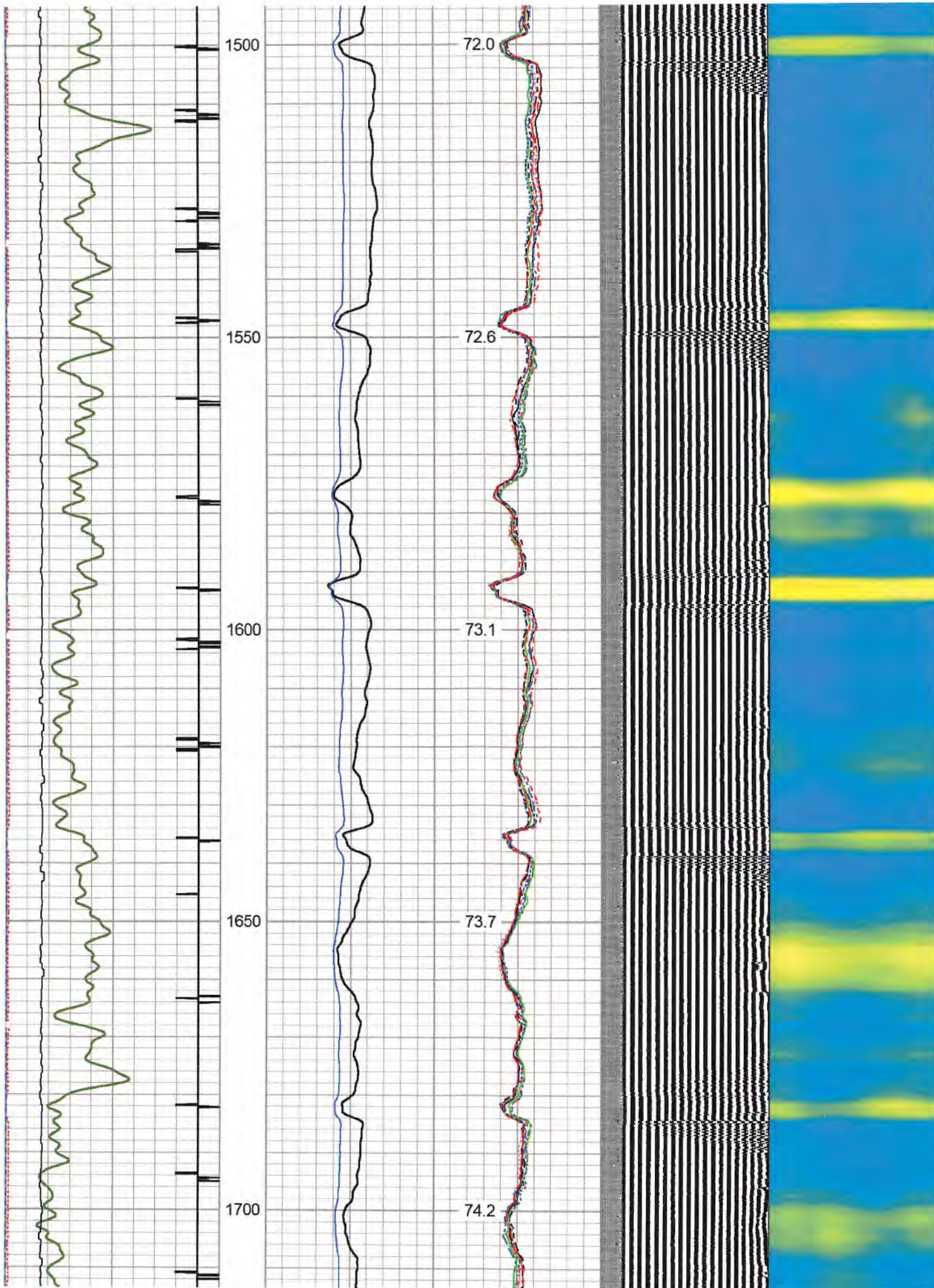


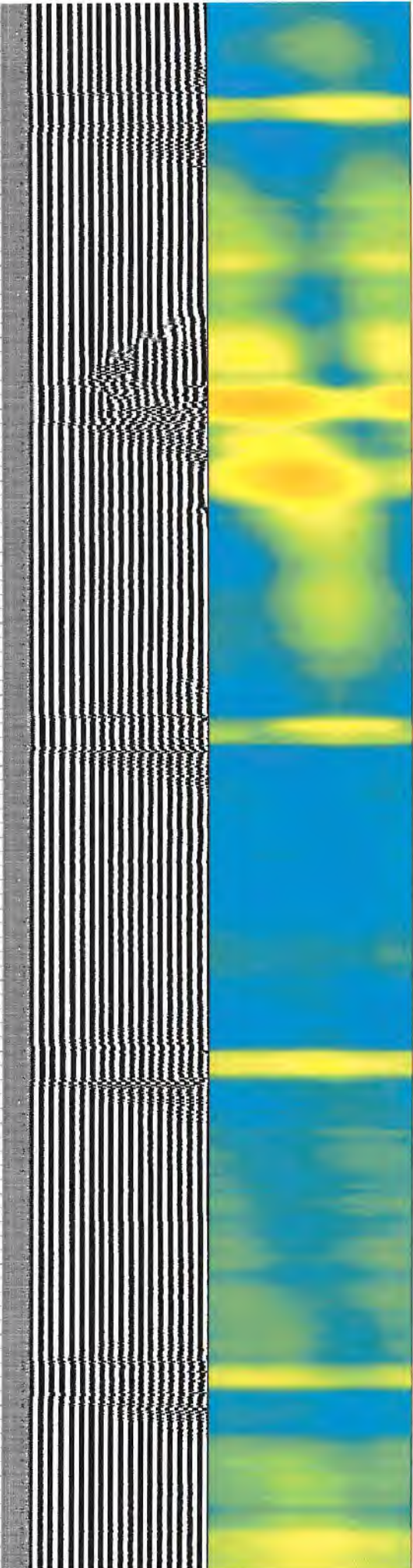
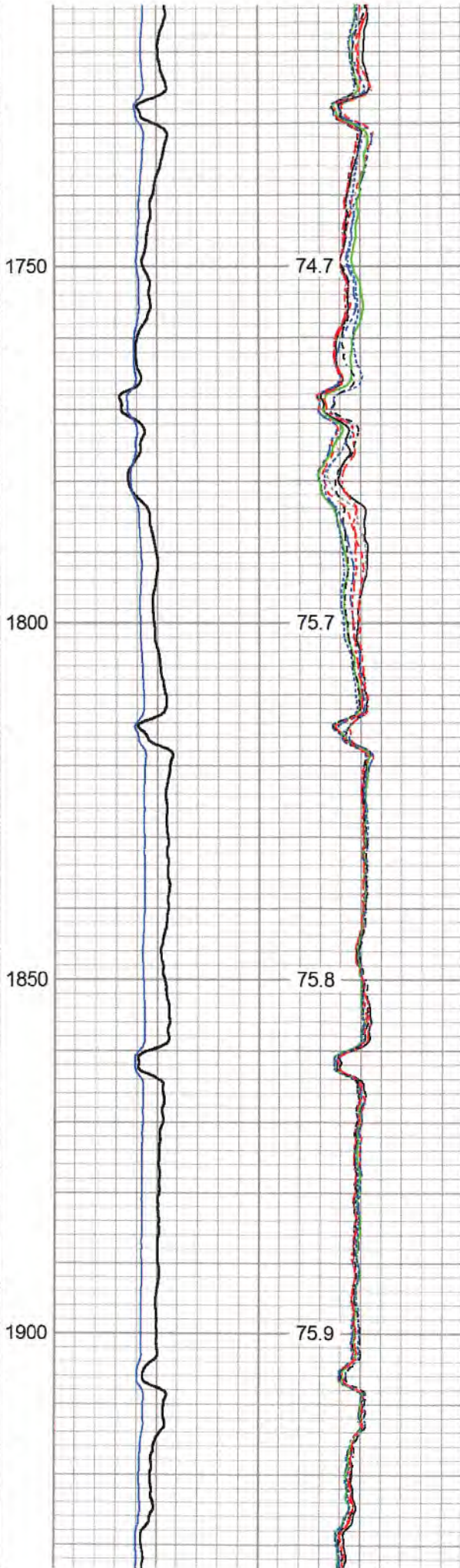
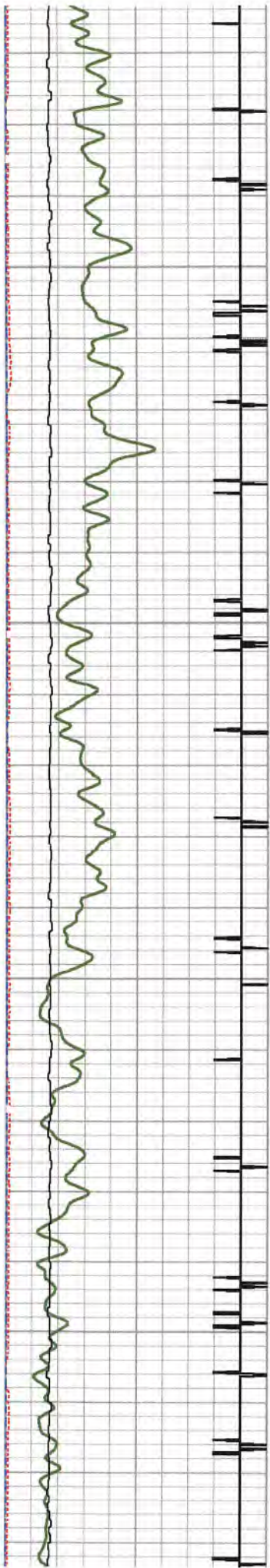


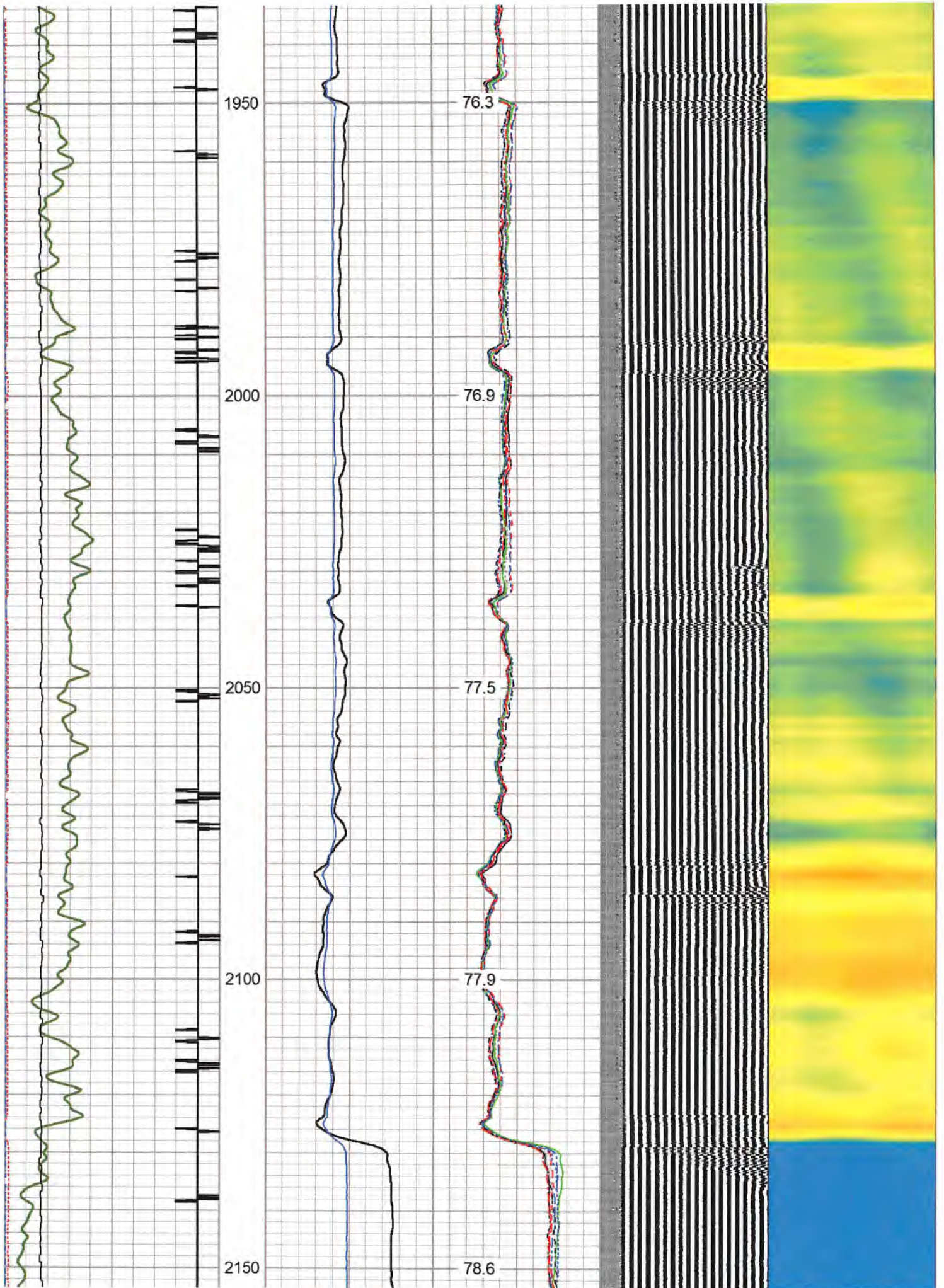


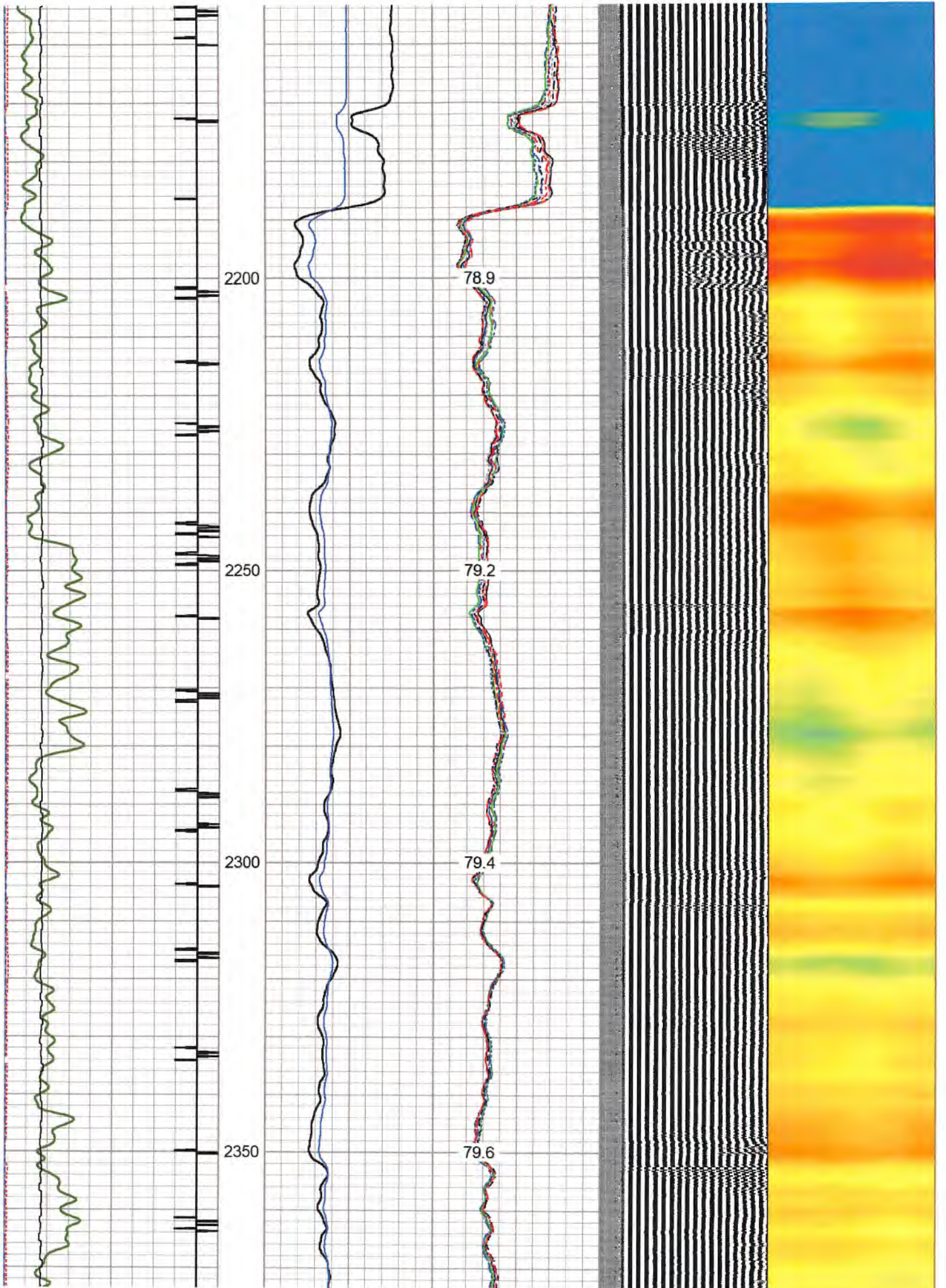


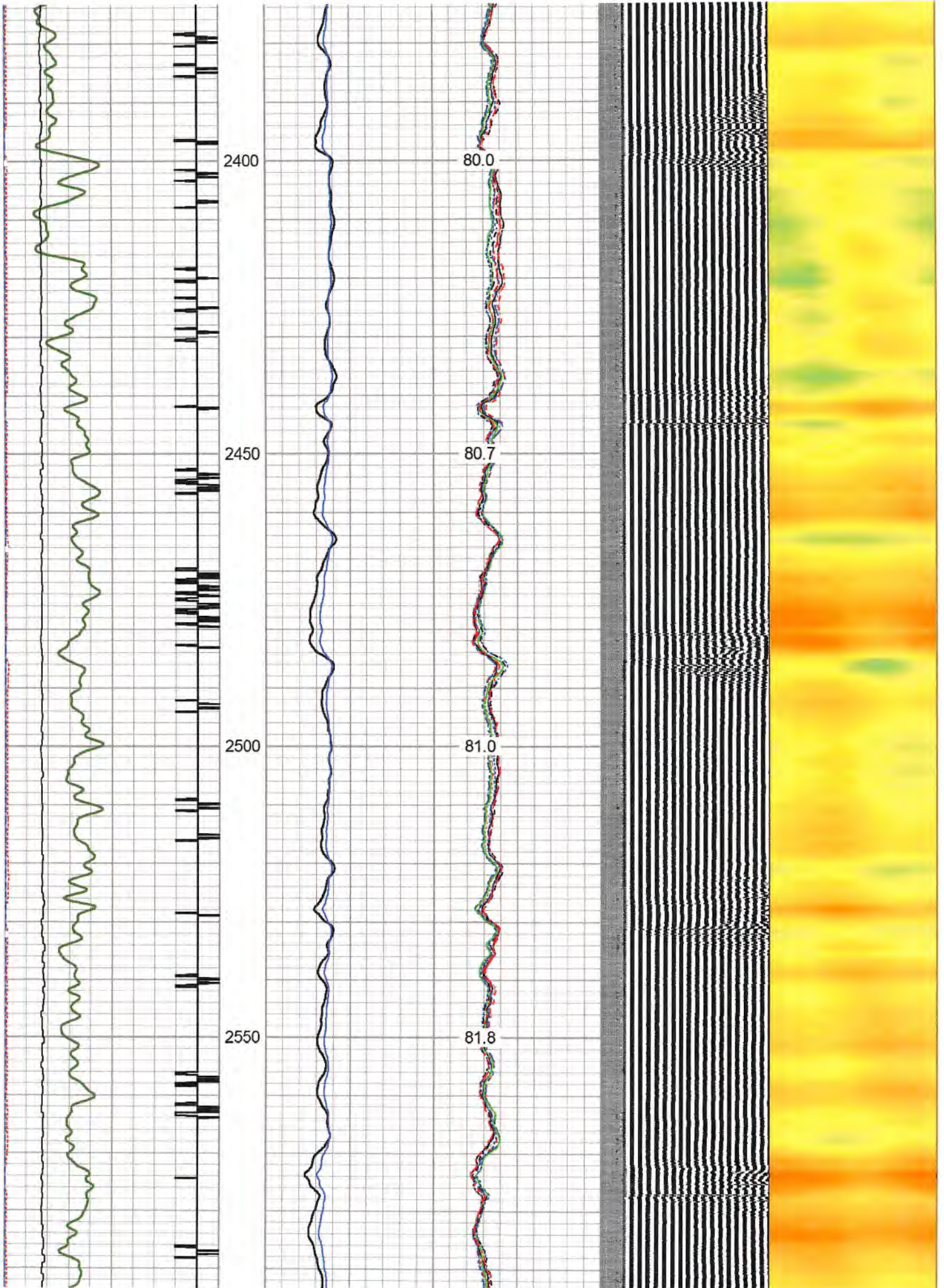


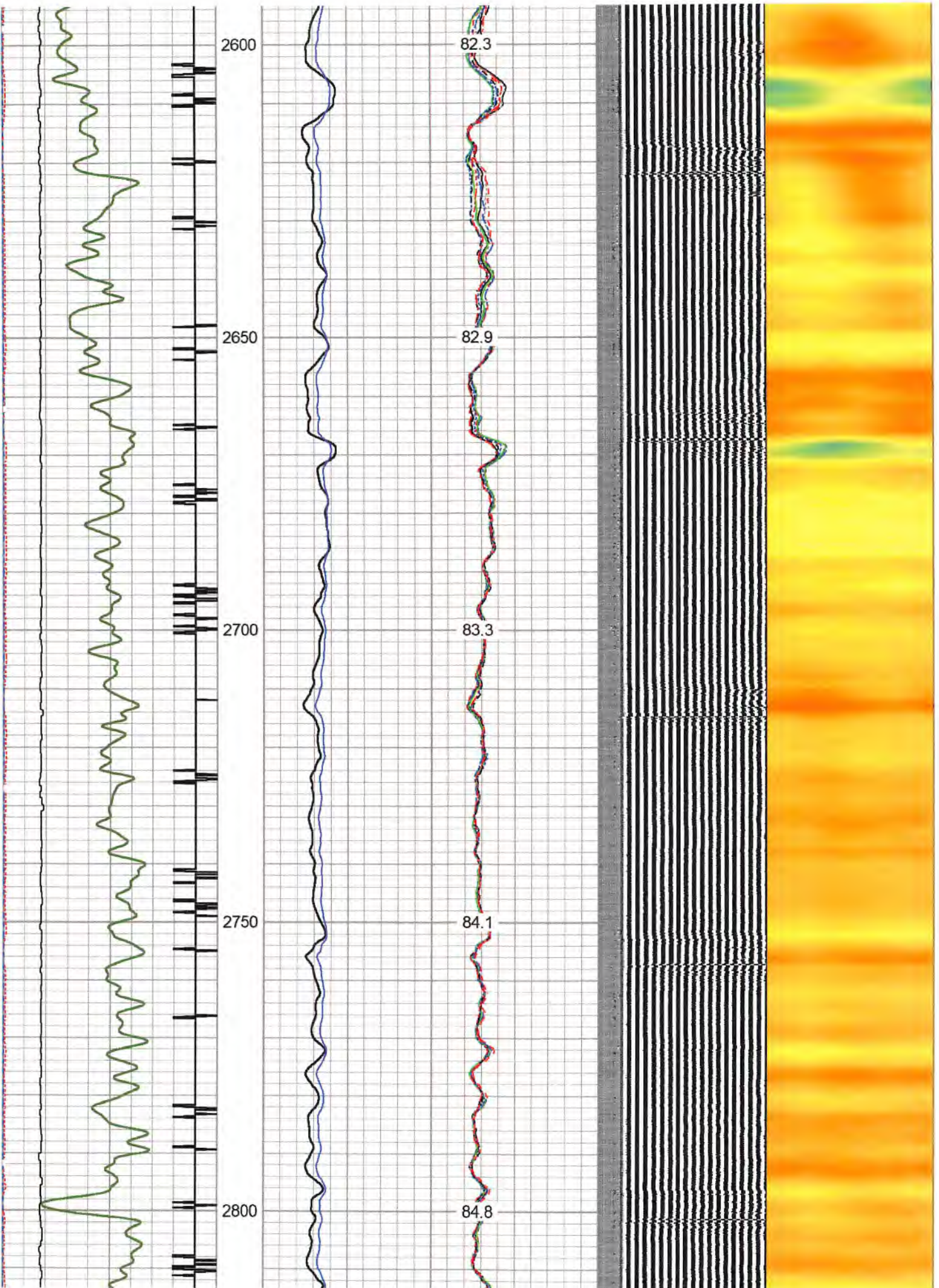


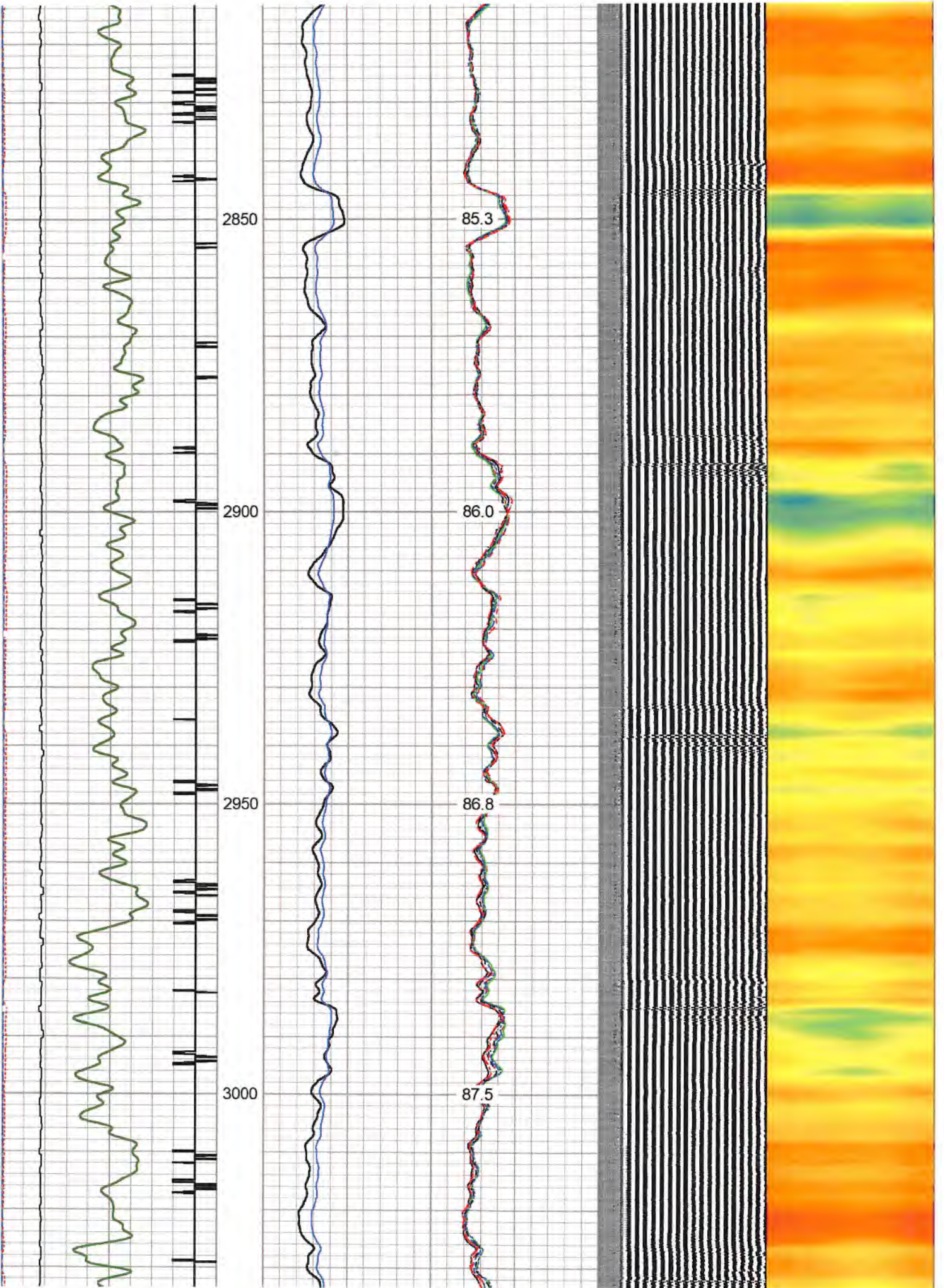


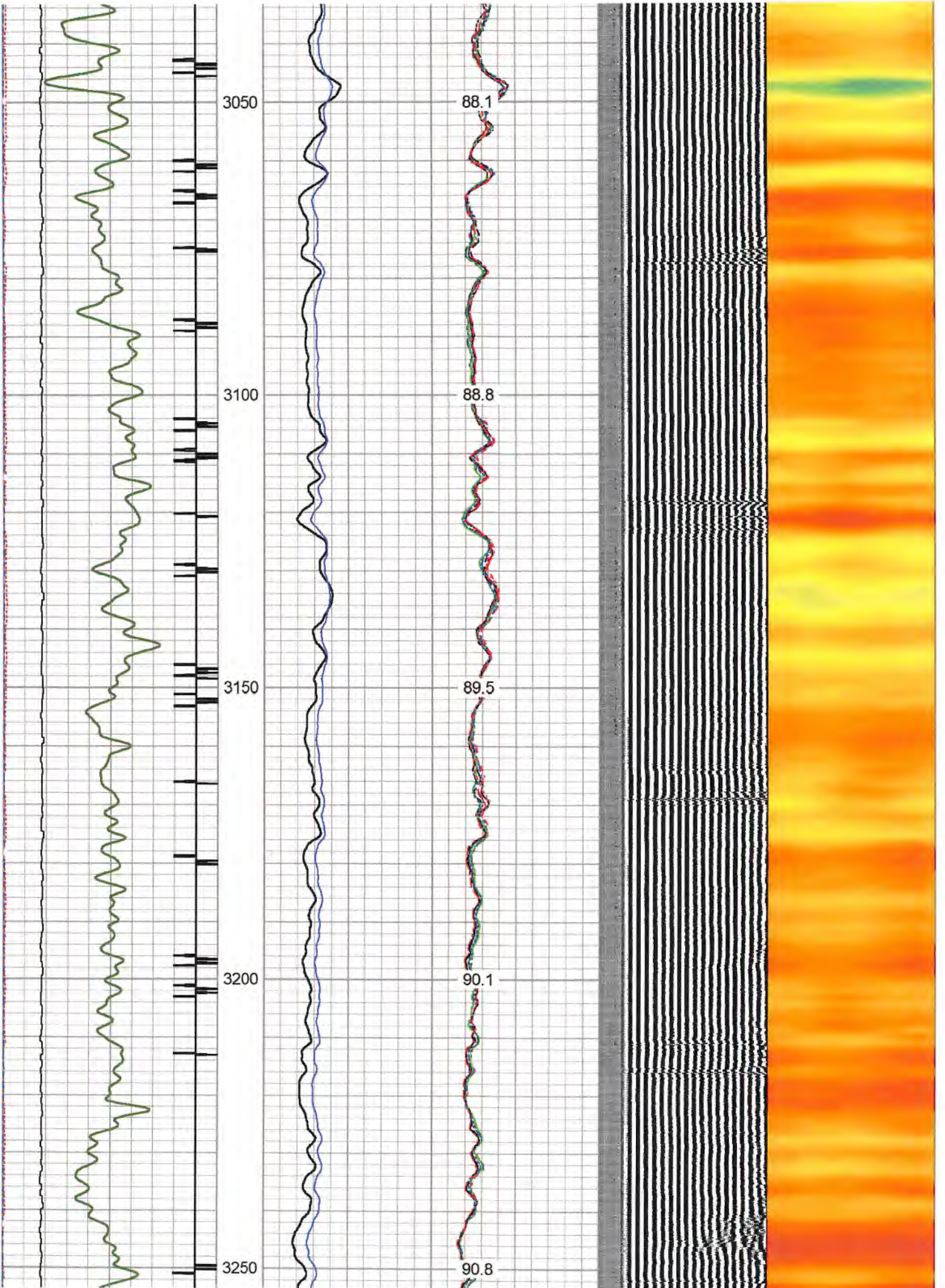




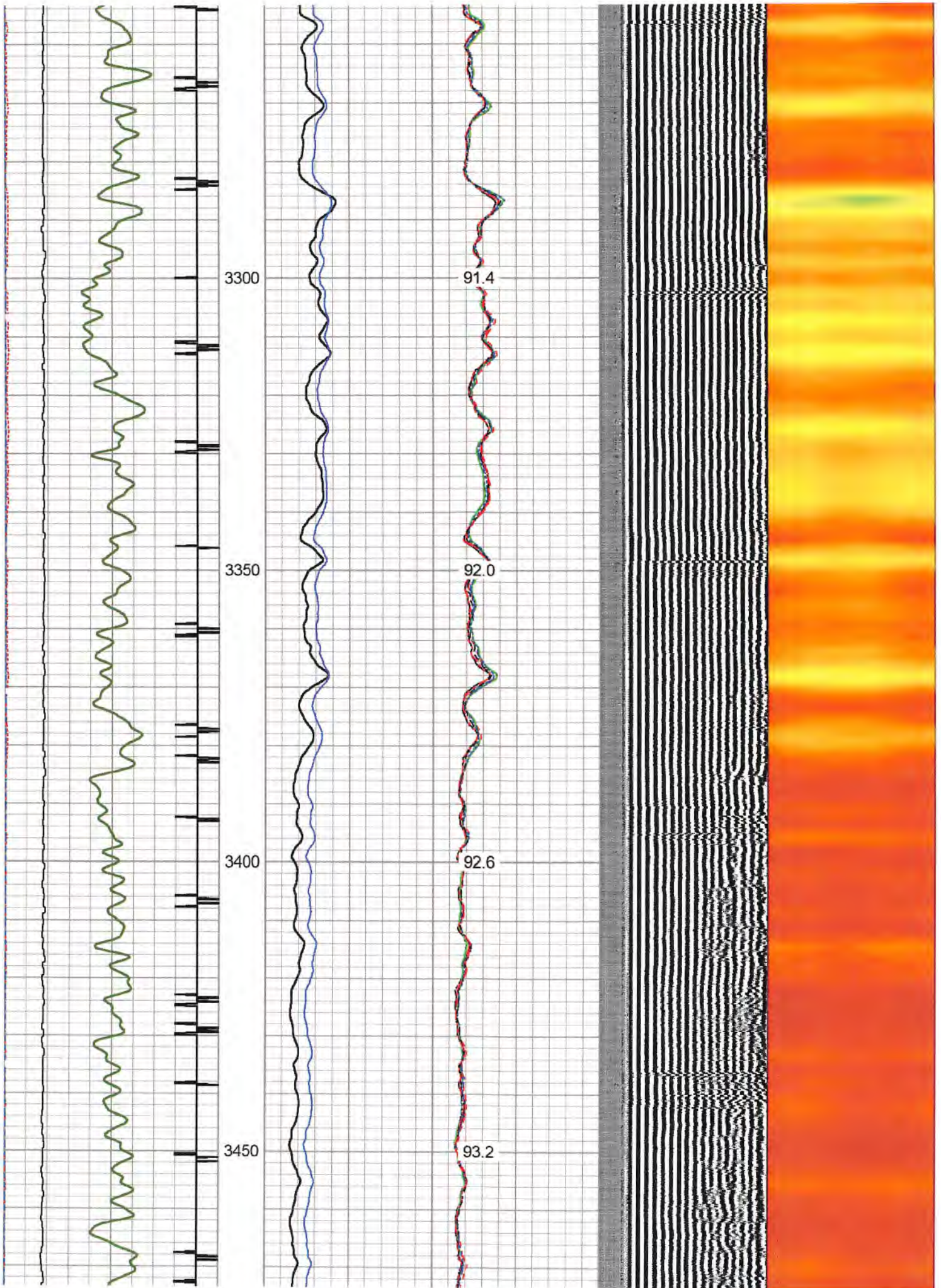


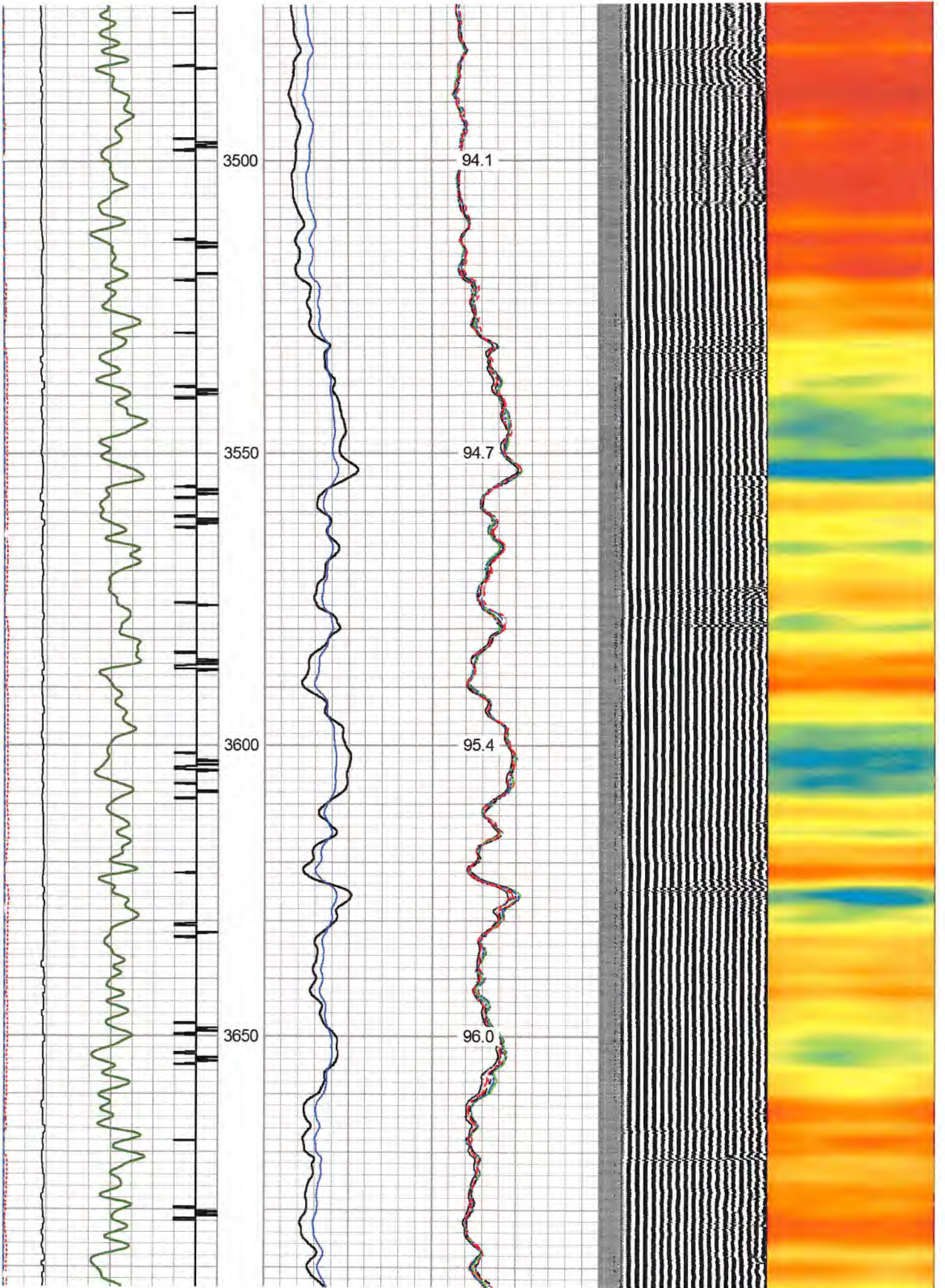


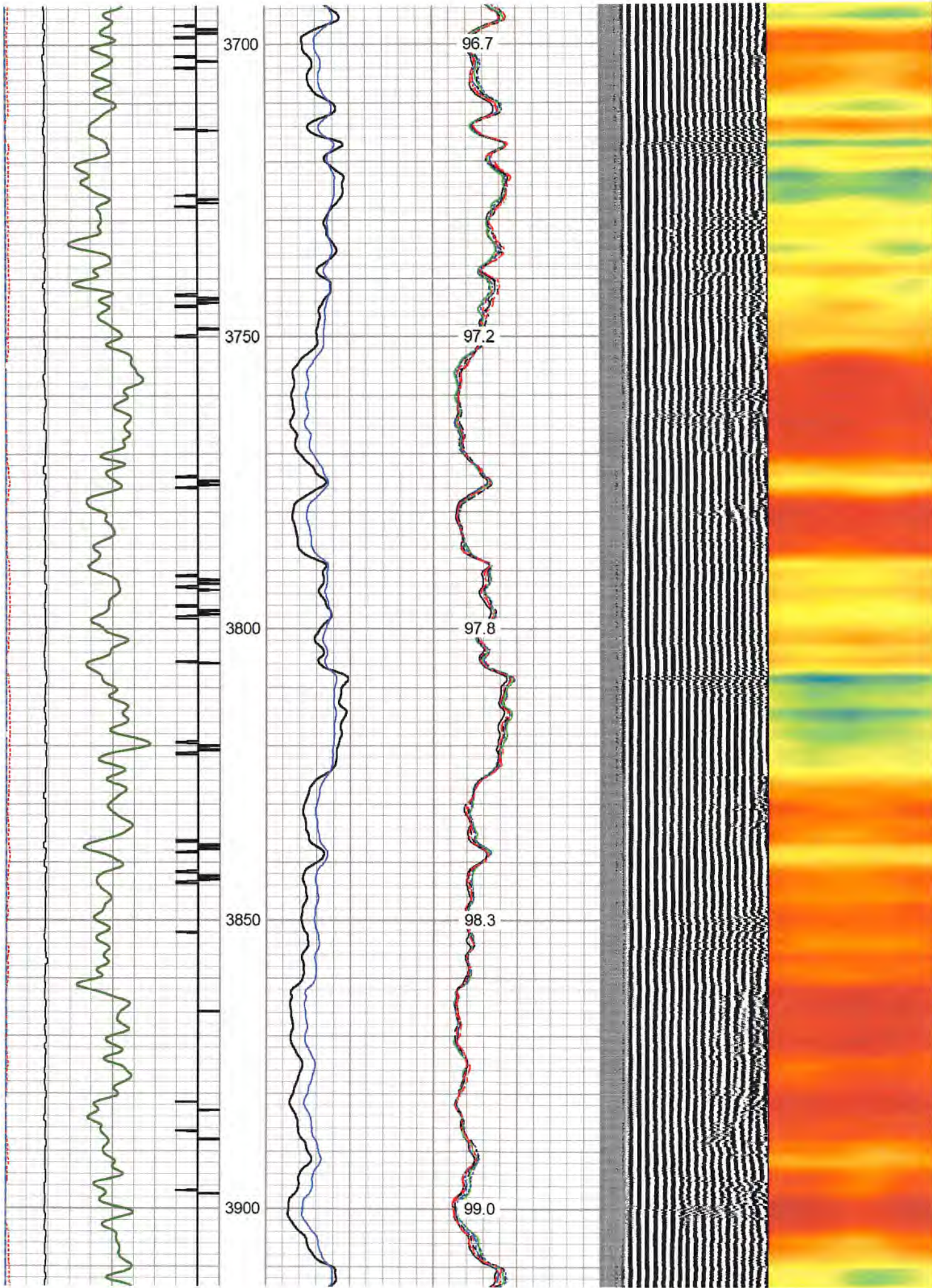


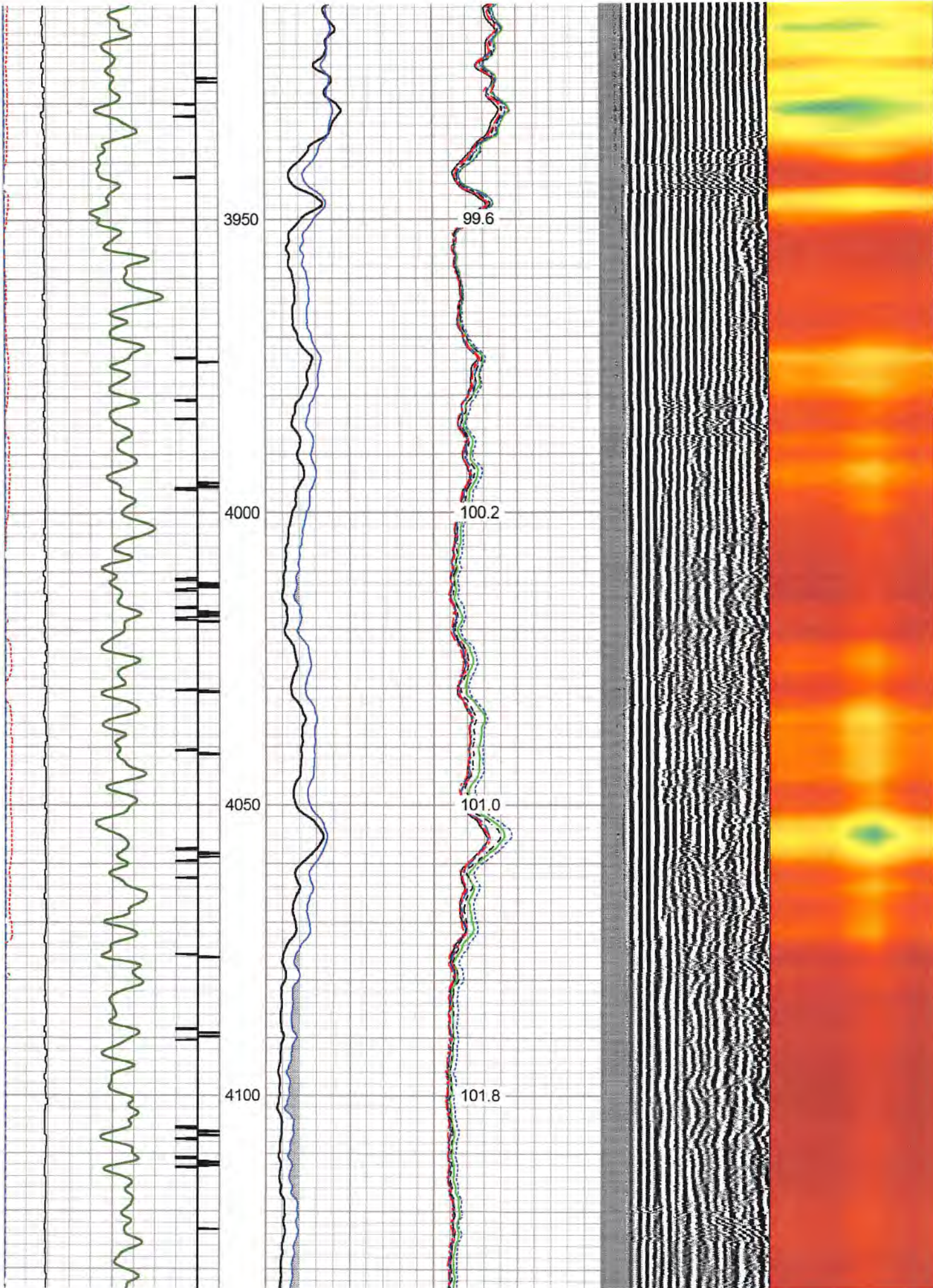


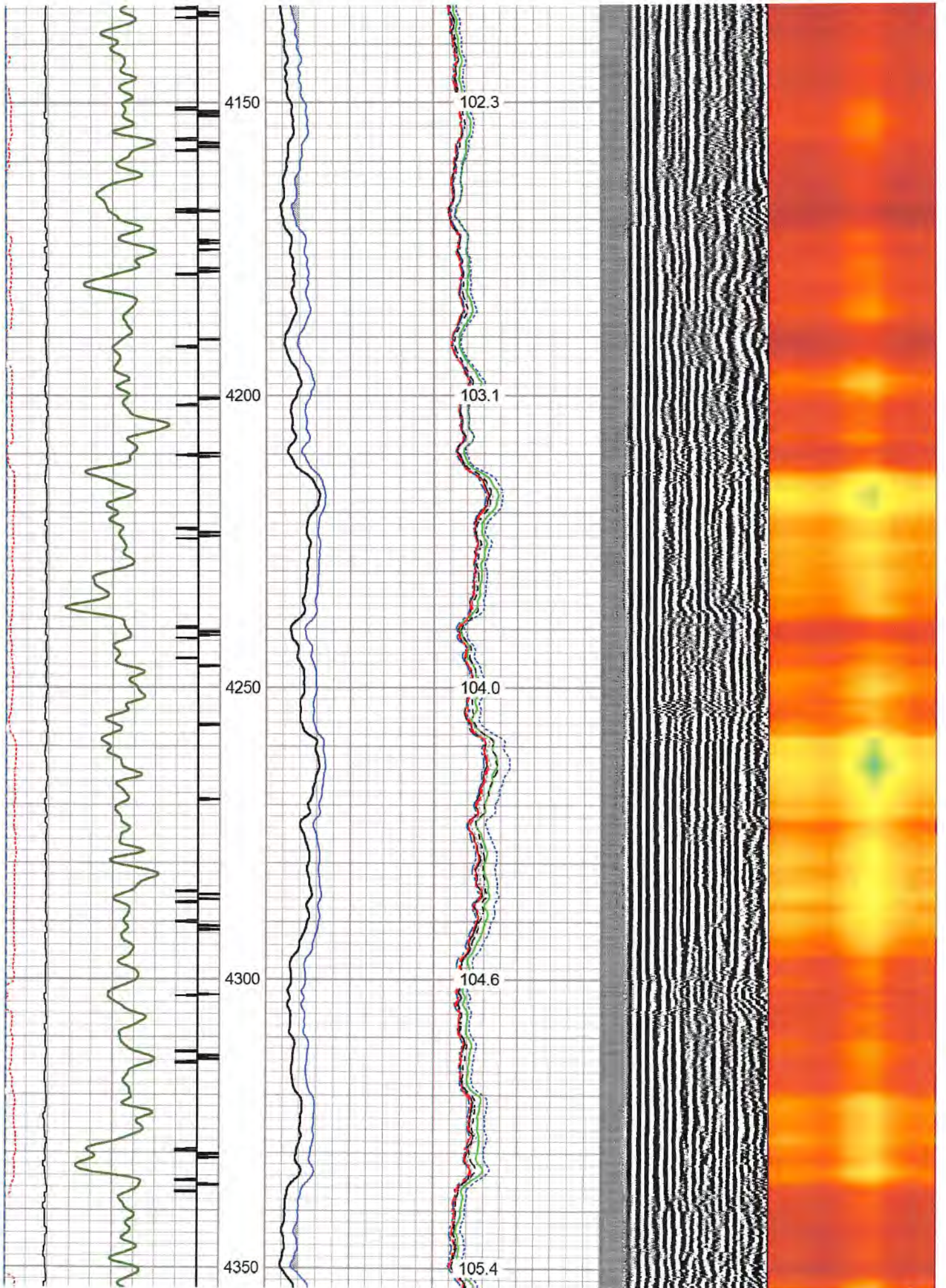


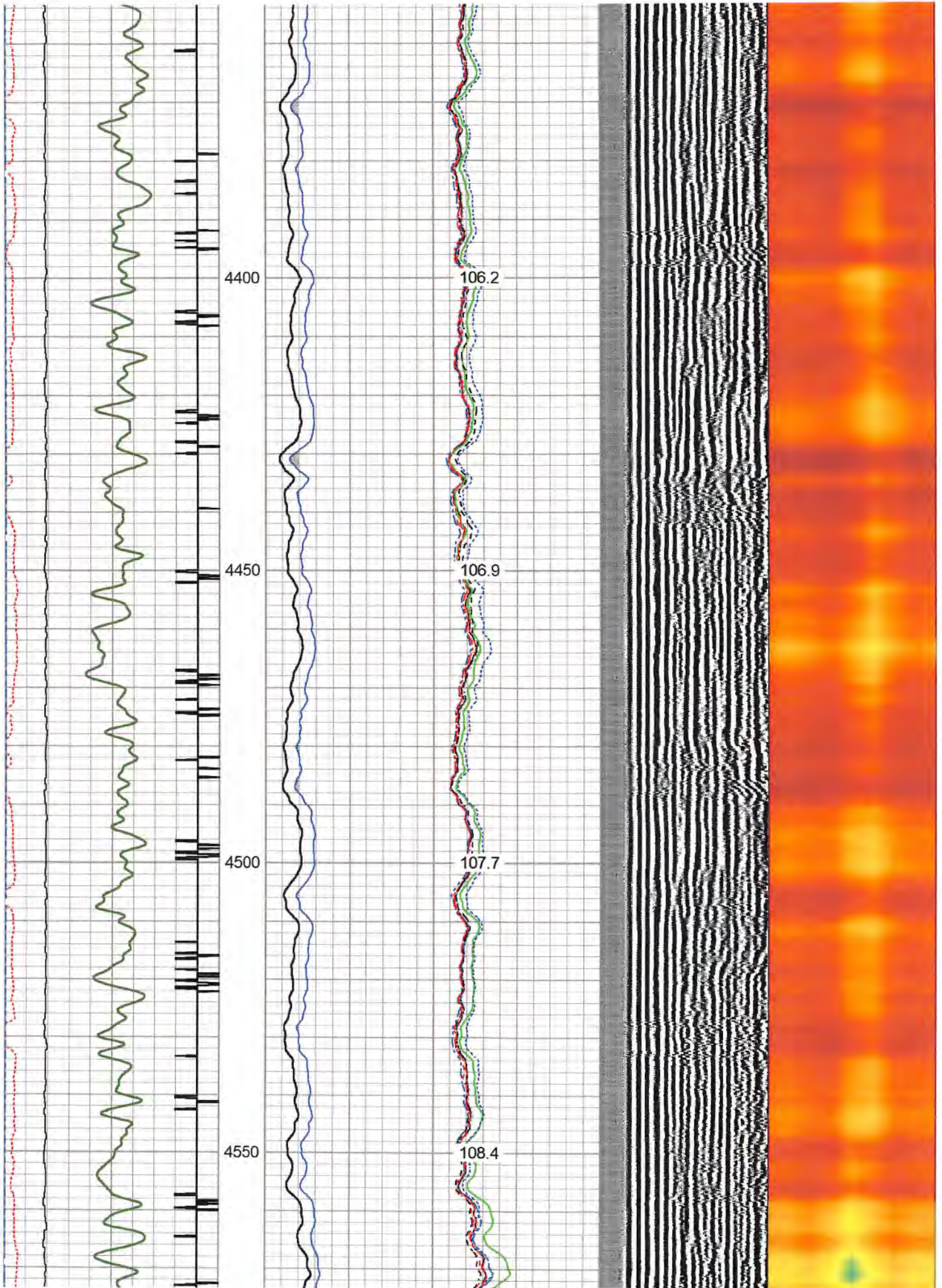


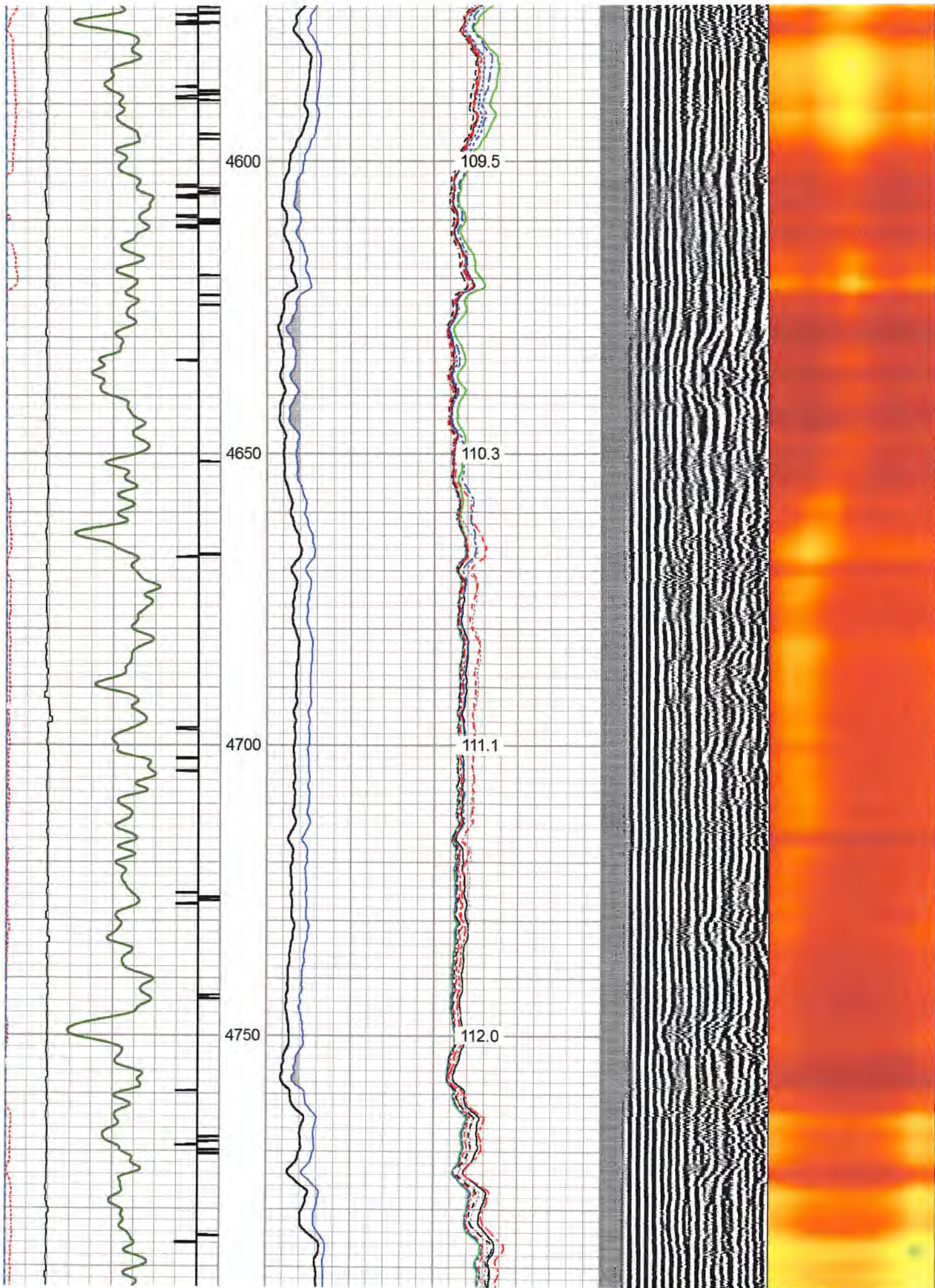


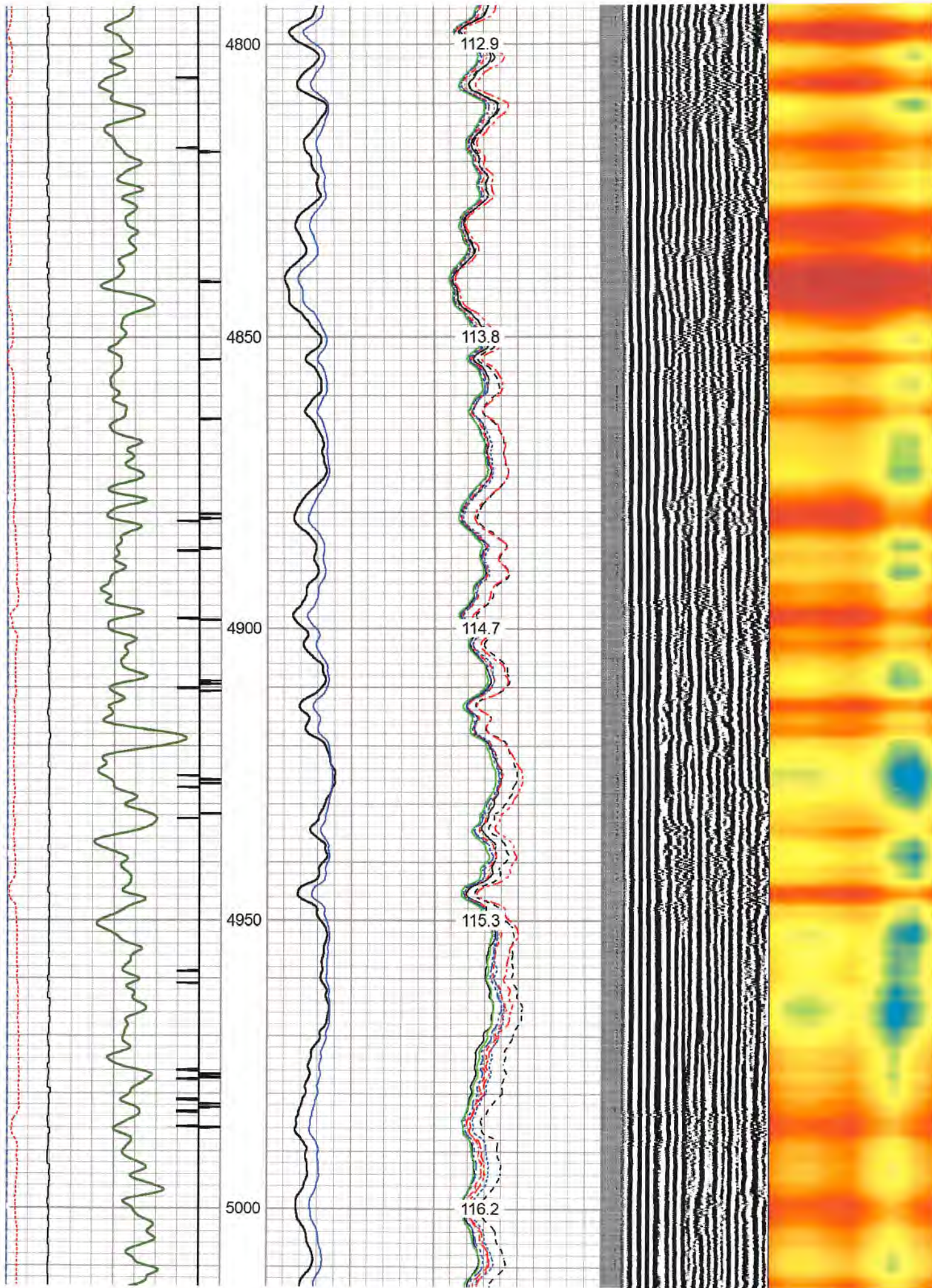




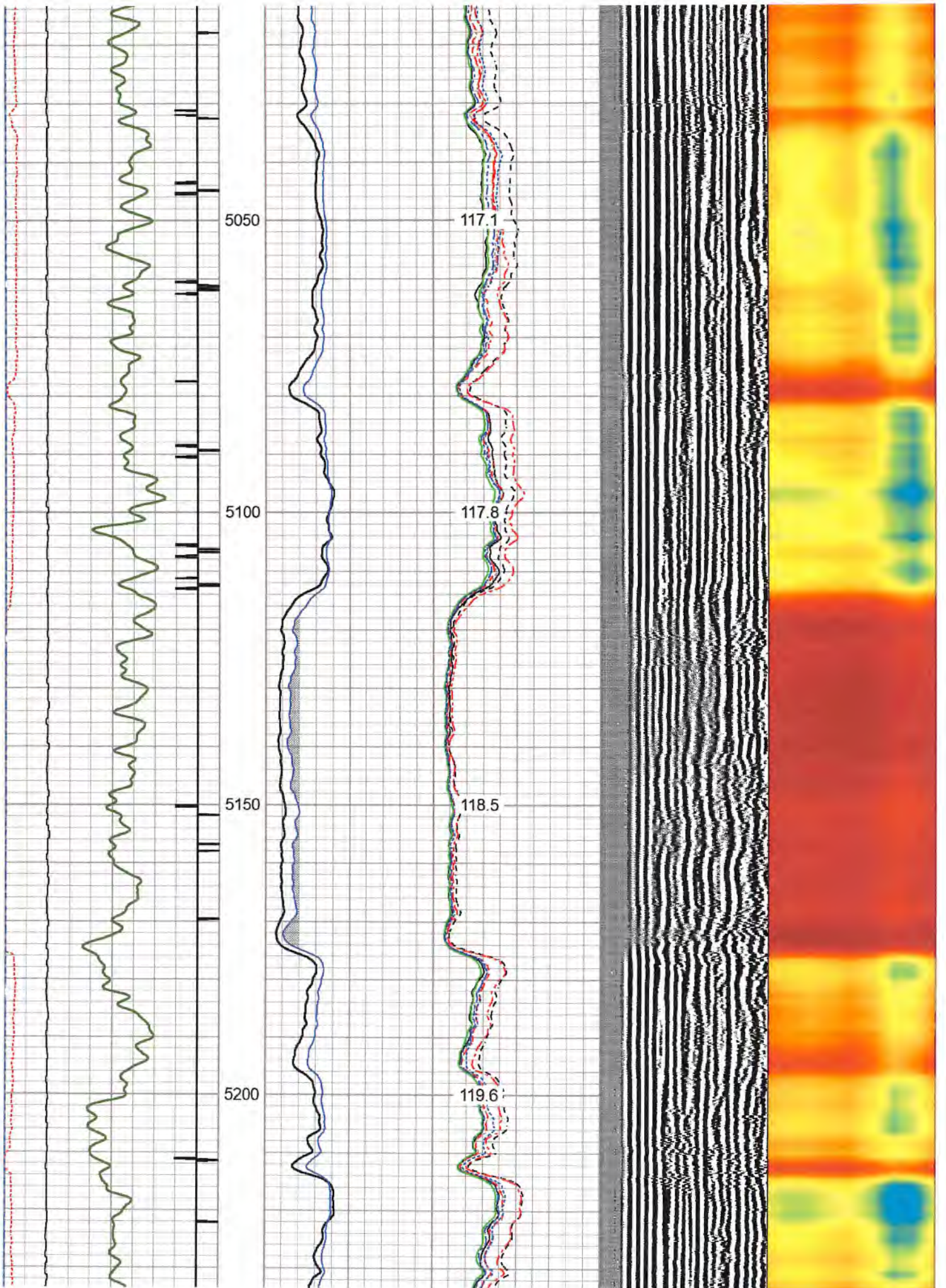


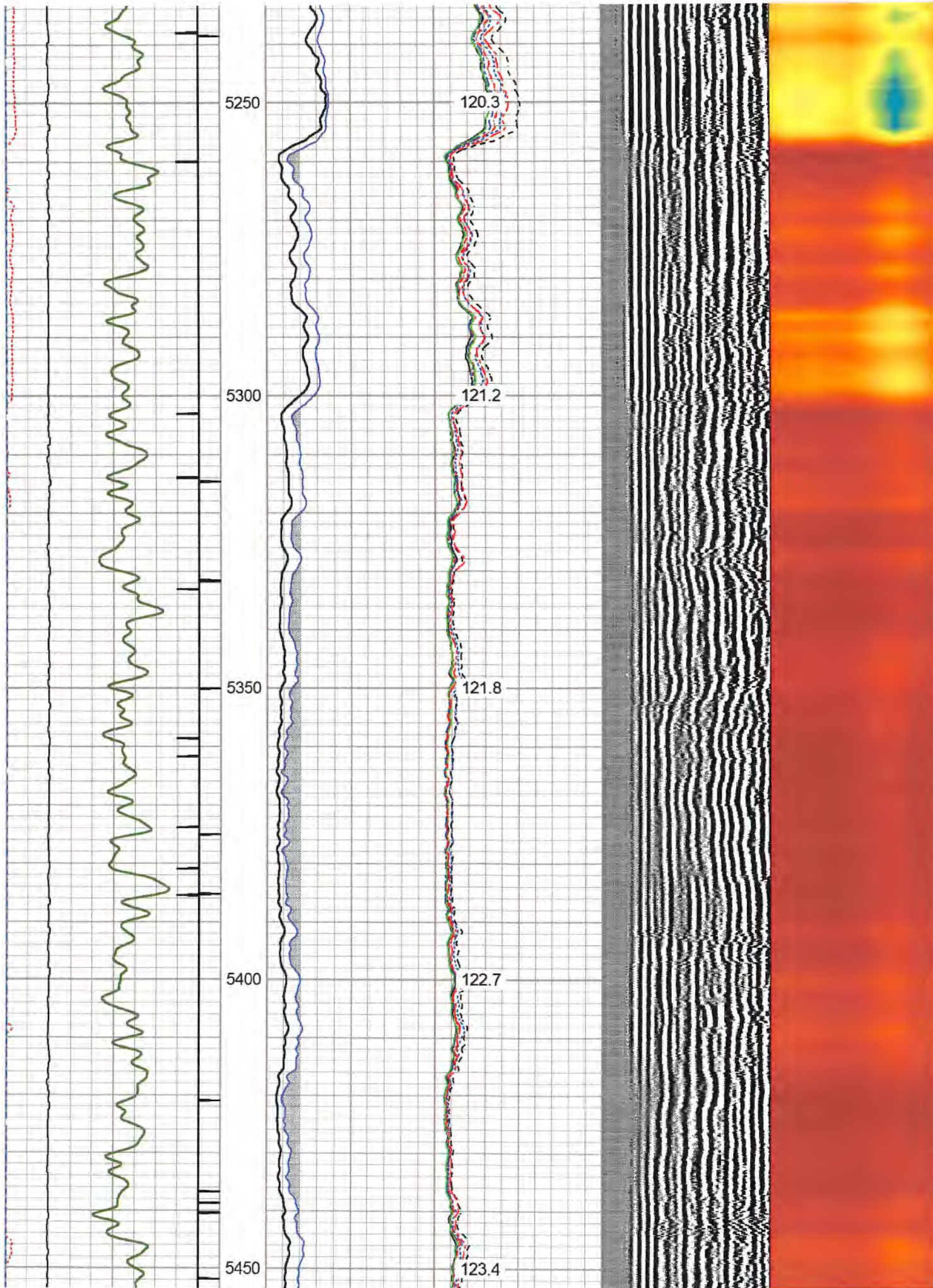


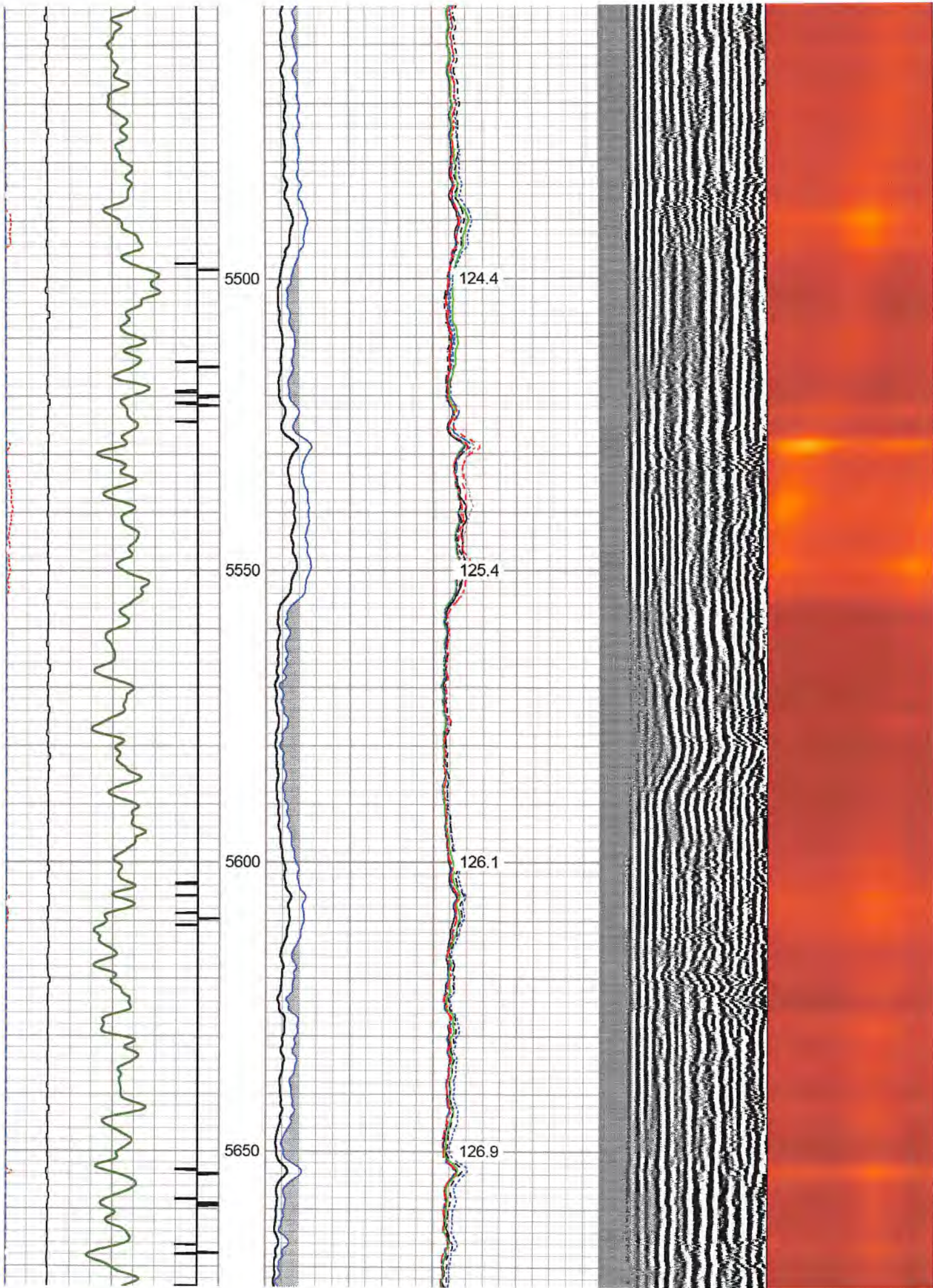


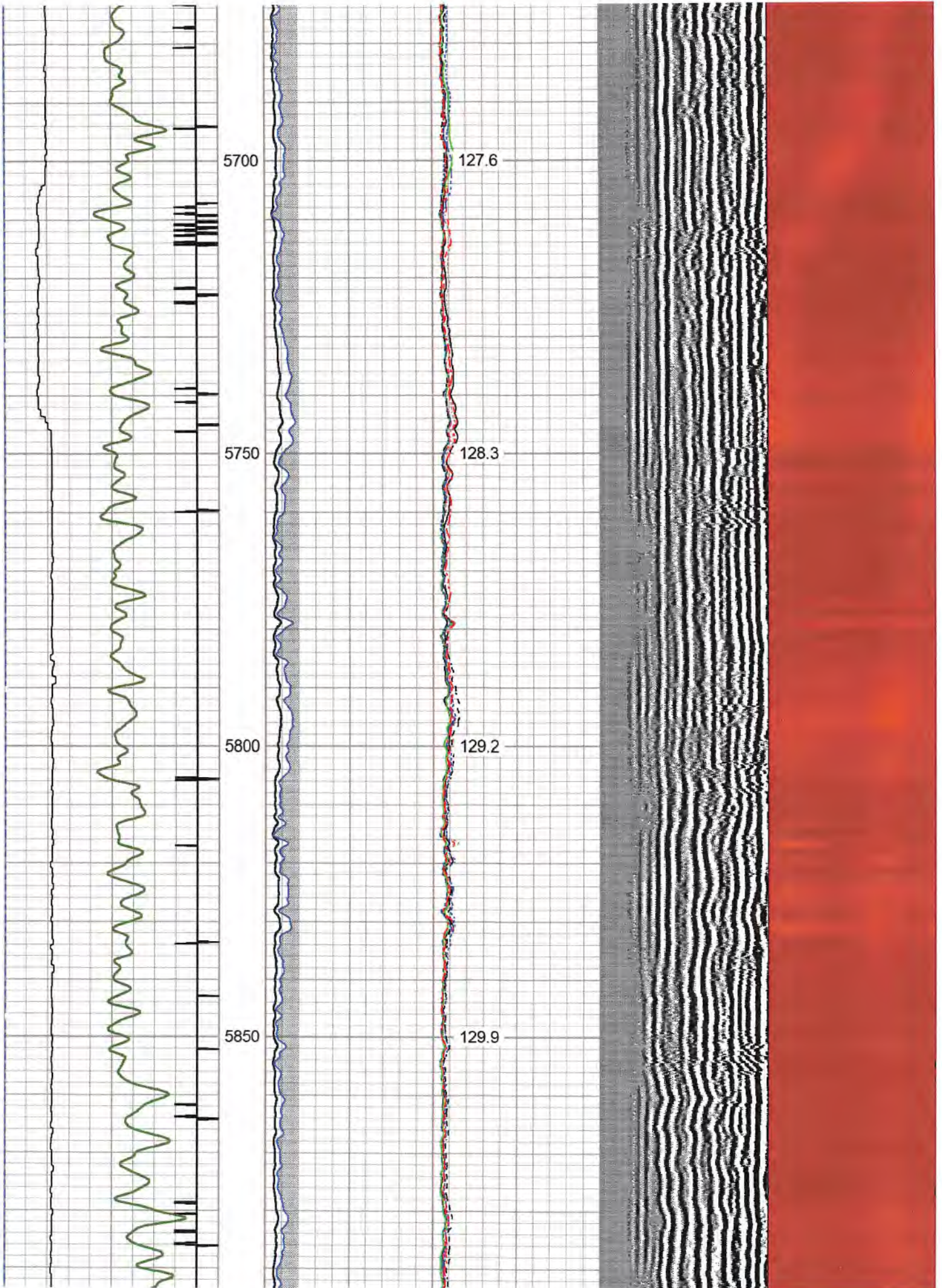


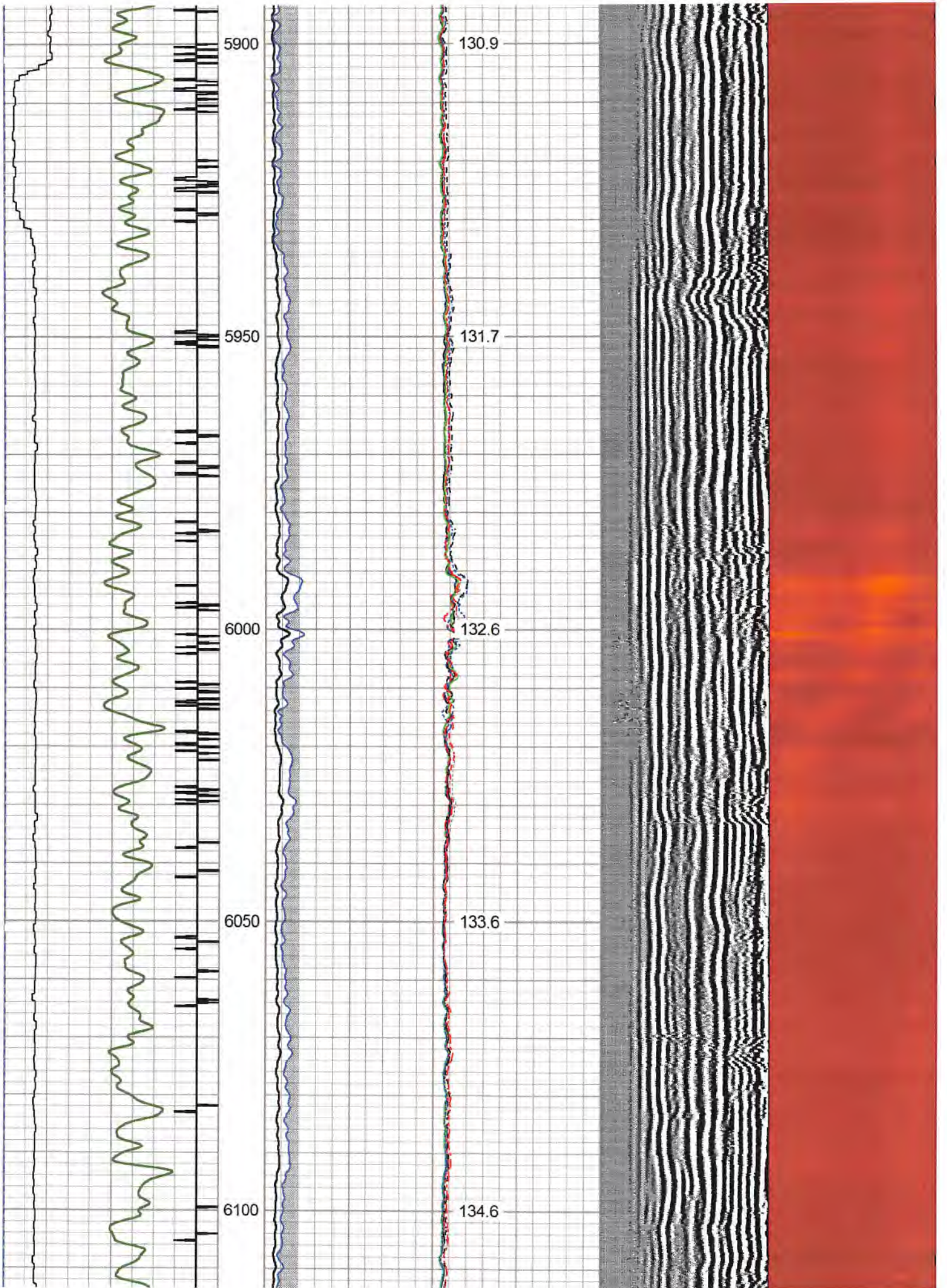


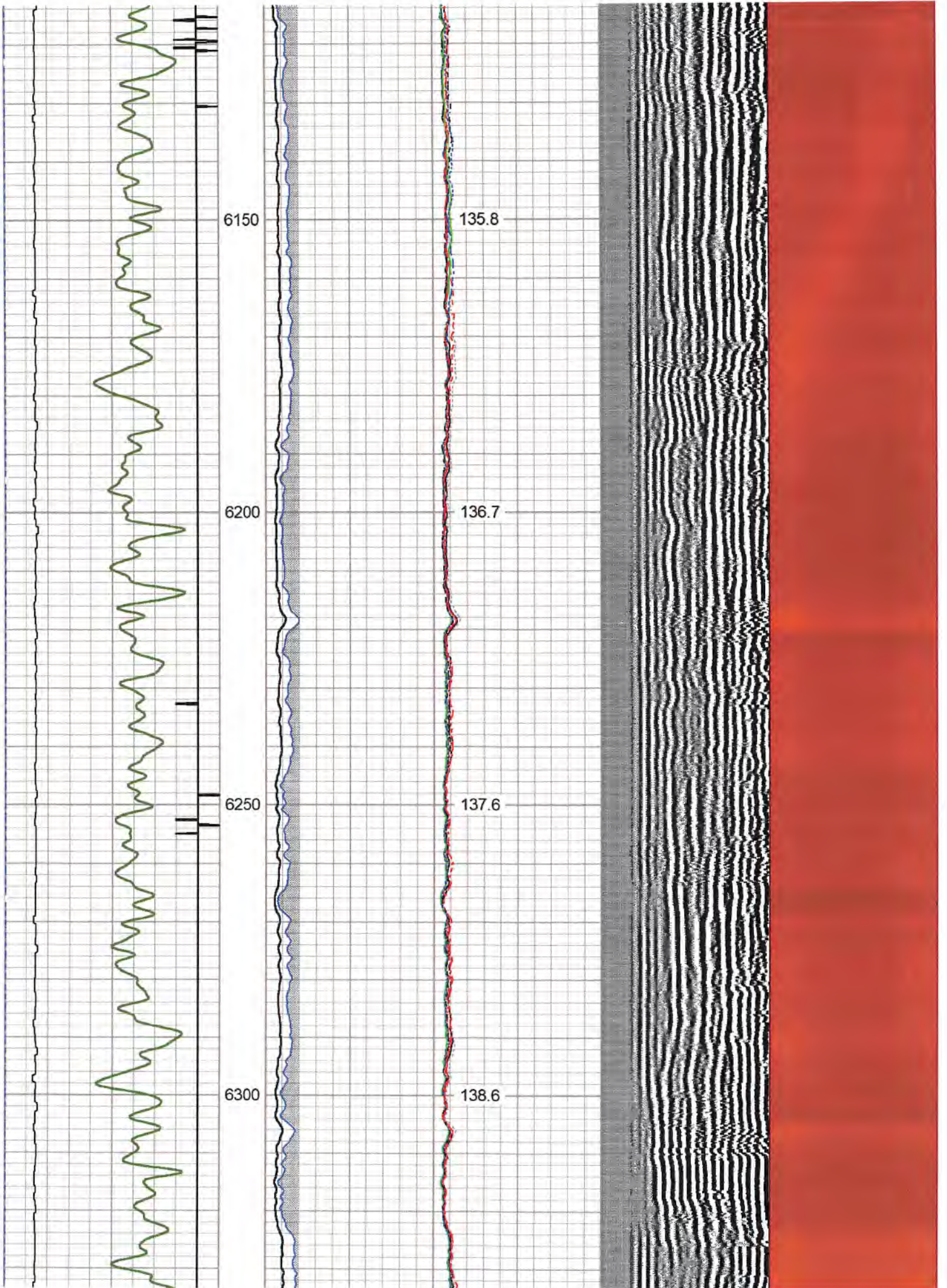


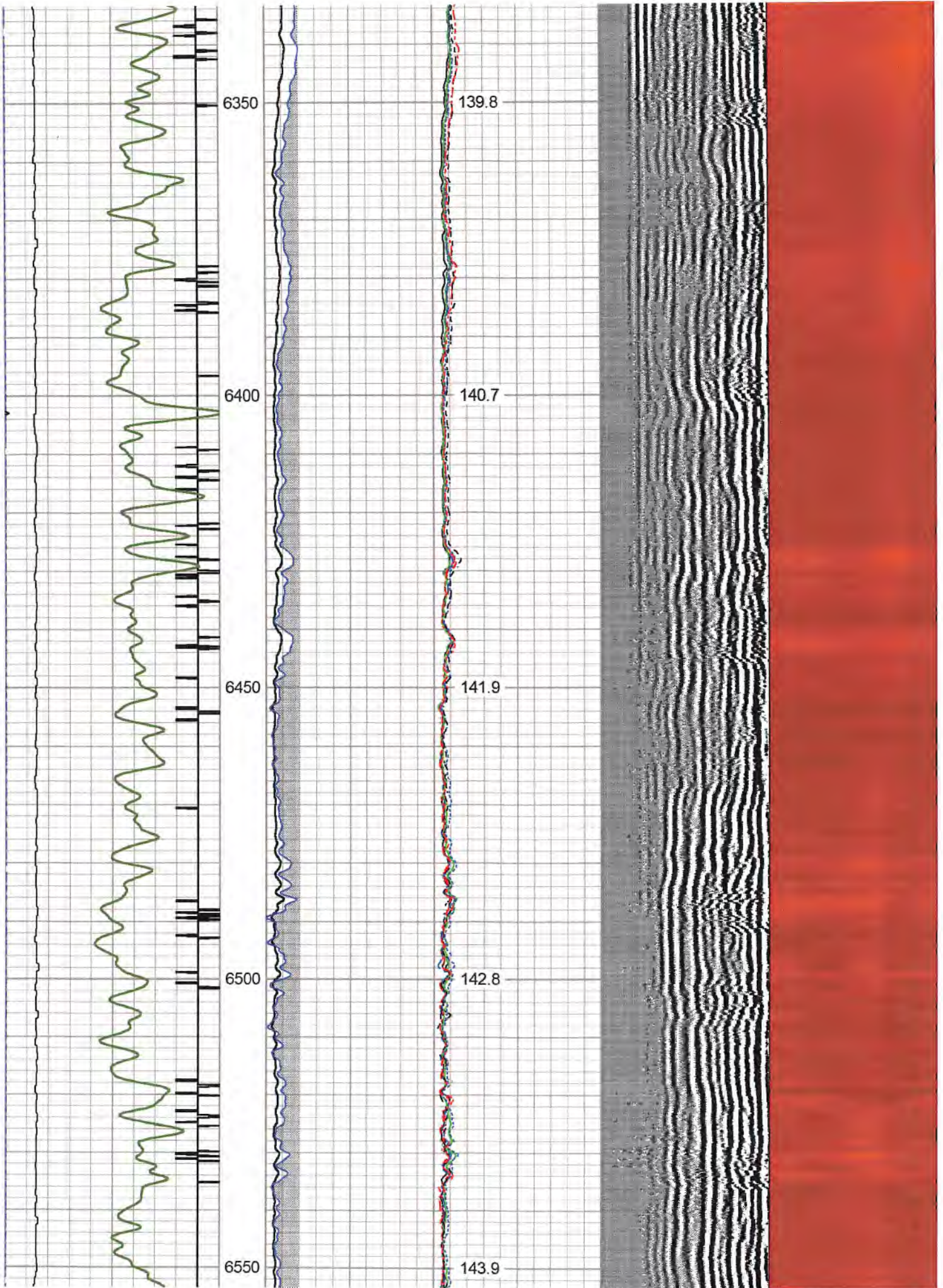


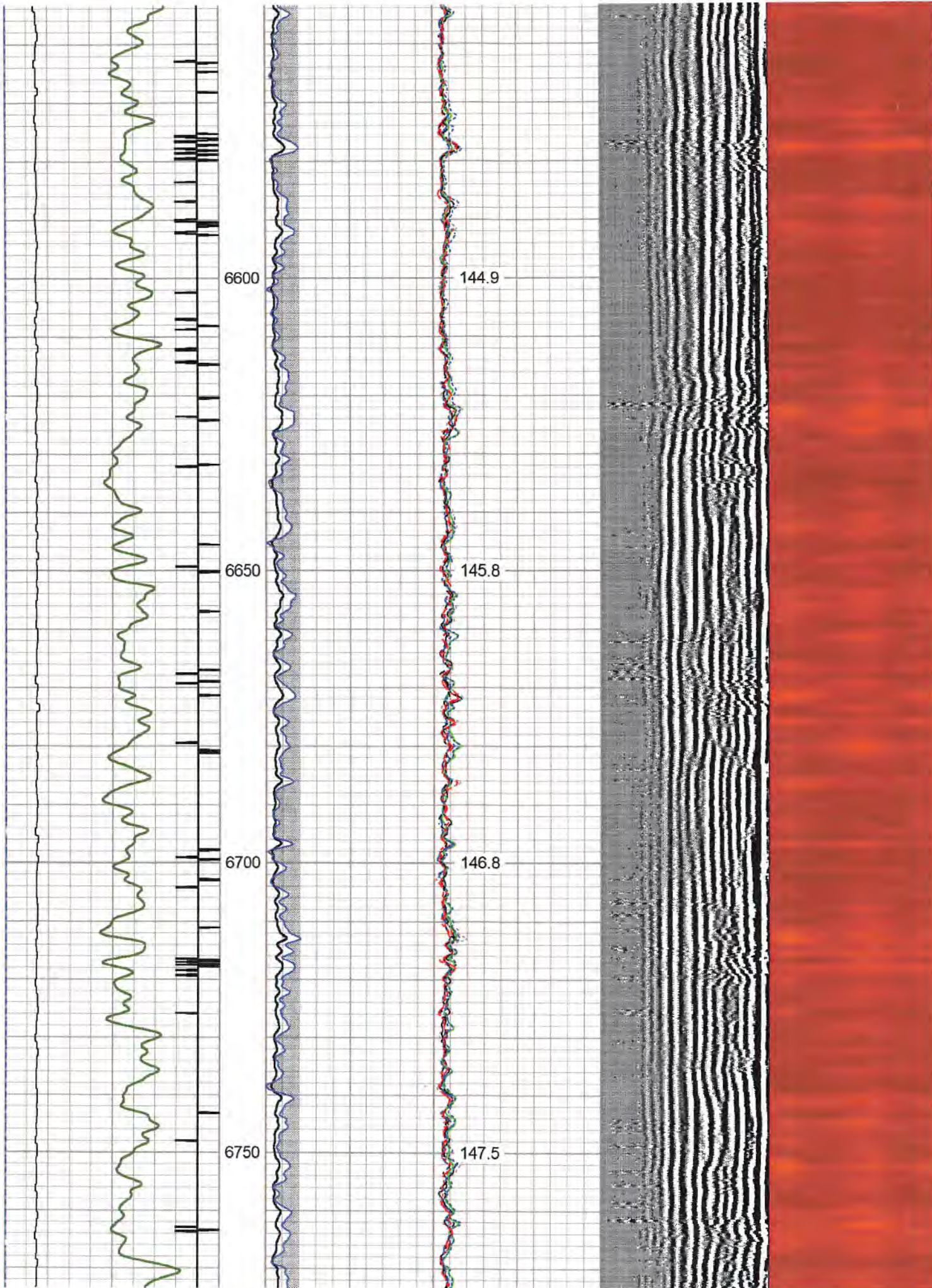




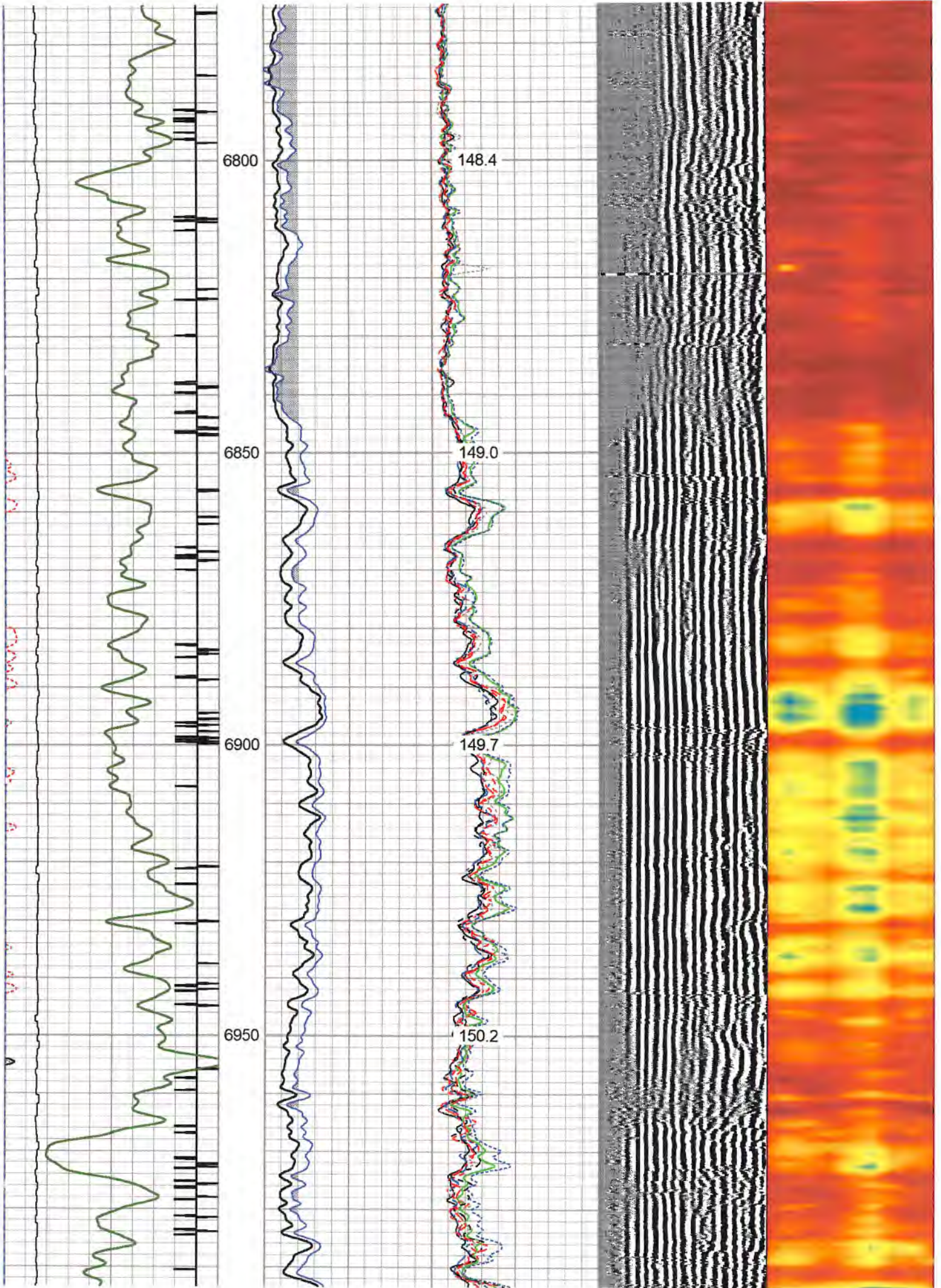


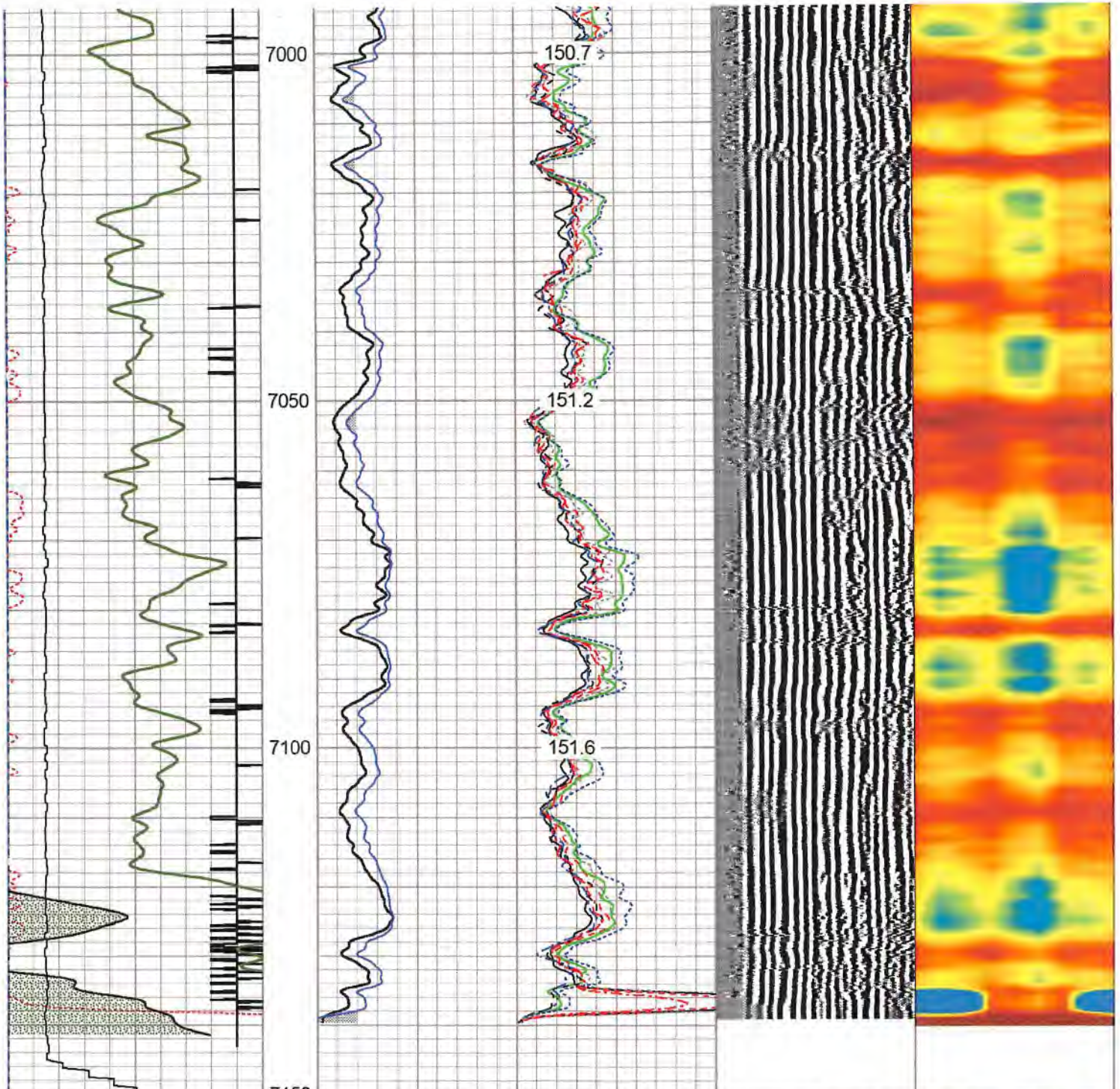












262	Travel Time (usec)	62
9	Casing Collar	-1
0	Gamma Ray (GAPI)	150
0	Line Tension (lb)	5000
-100	LSPD (ft/min)	100

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		

Presentation Format rcbl-bond index for antero 1020  
 Dataset Creation Thu Mar 24 15:17:31 2022  
 Charted by Depth in Feet scaled 1:240

262	Travel Time (usec)	62
9	Casing Collar	-1
0	Gamma Ray (GAPI)	150
0	Line Tension (lb)	5000
-100	LSPD (ft/min)	100

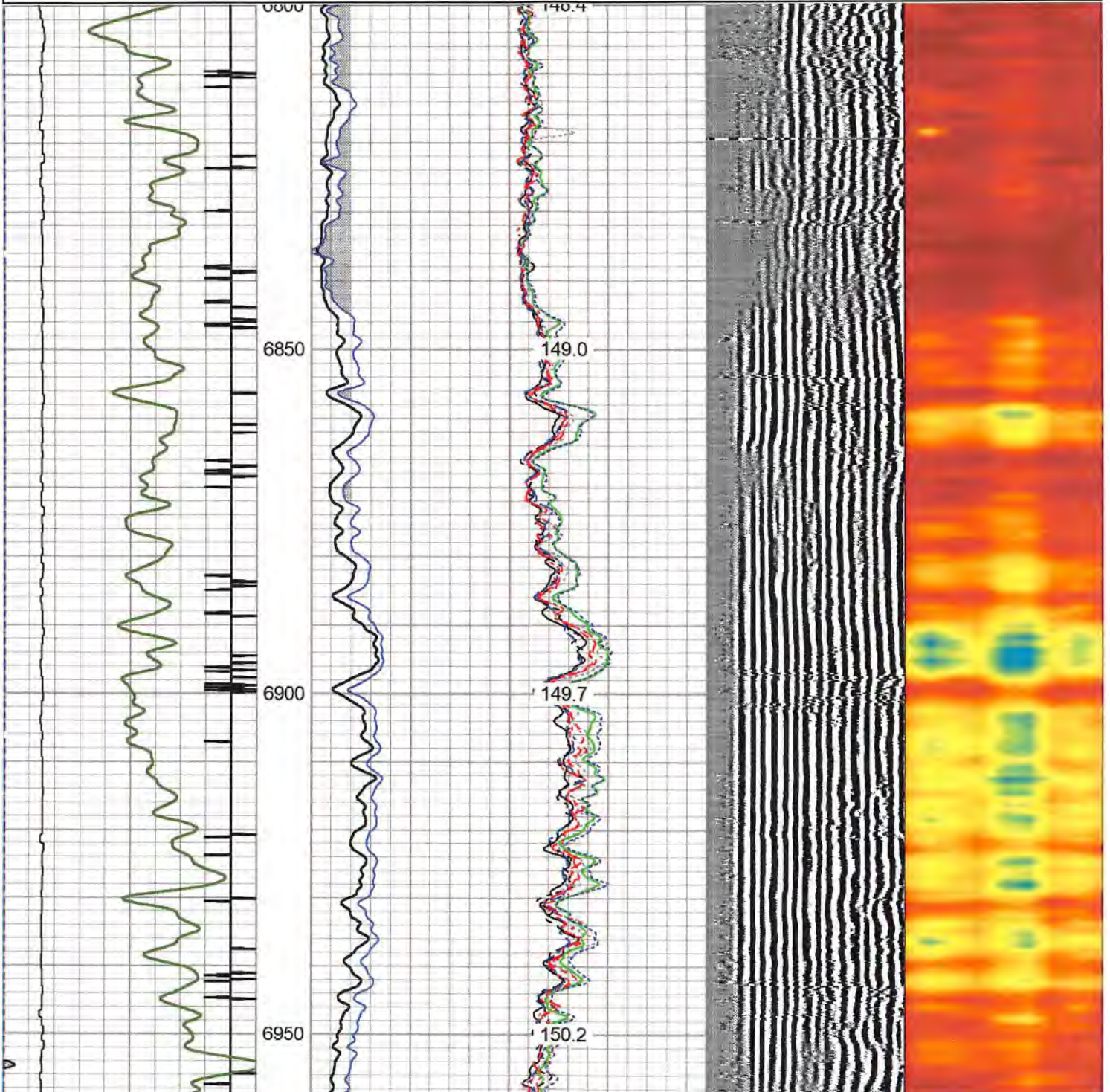
0	Amplitude (mV)	100	-5	Sector 1	150
1	BONDIX	0	-5	Sector 2	150
			-5	Sector 3	150
			-5	Sector 4	150
			-5	Sector 5	150
			-5	Sector 6	150
			-5	Sector 7	150
			-5	Sector 8	150

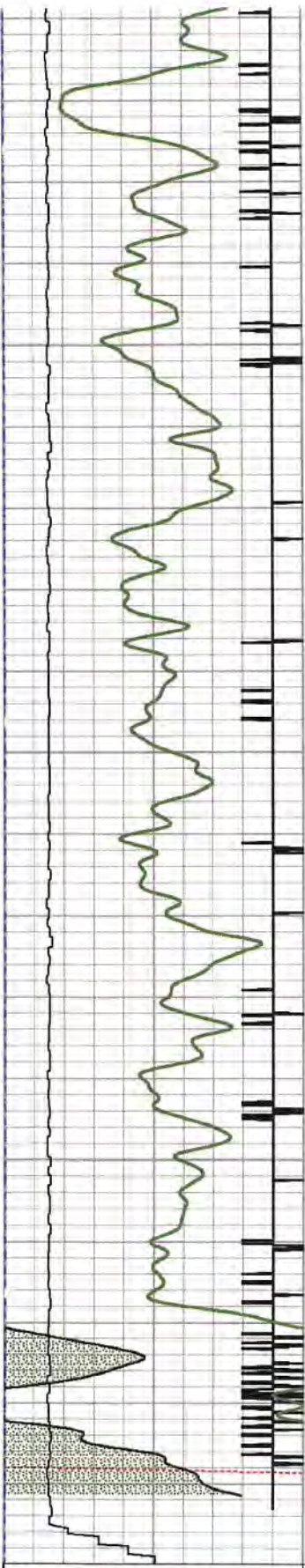
Variable Density  
 200 (usec) 1200

1 Cement Map 8

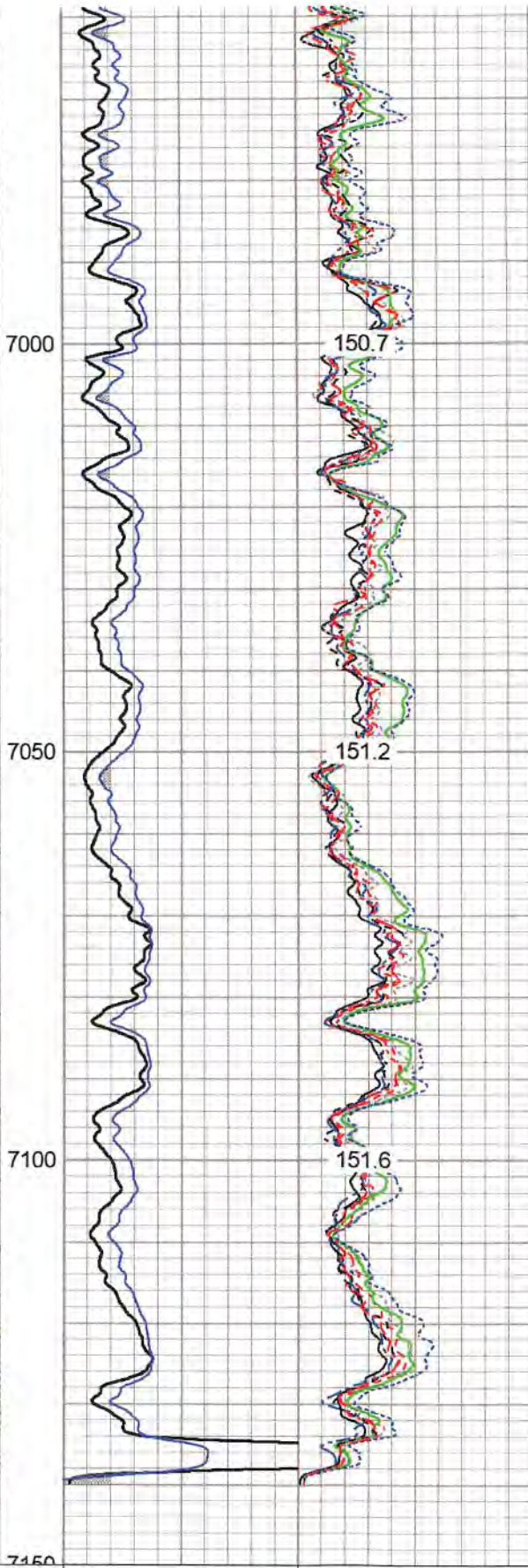


TEMP  
 (degF)





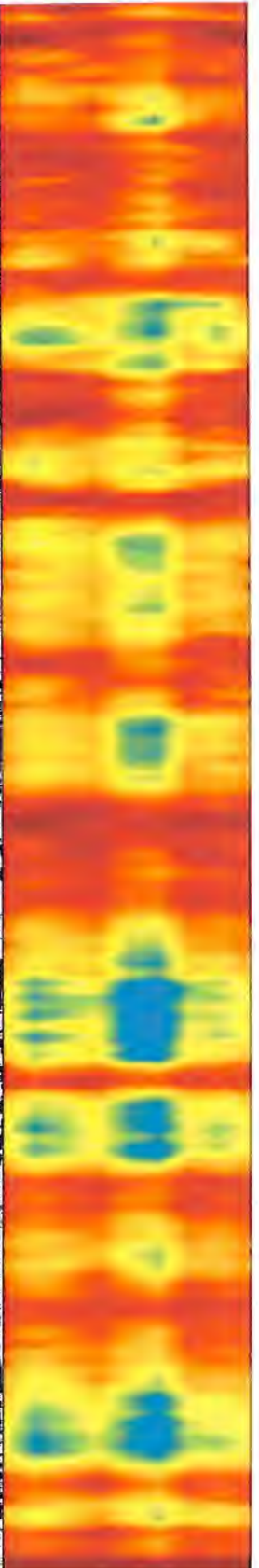
262	Travel Time (usec)	62
9	Casing Collar	-1
0	Gamma Ray (GAPI)	150
0	Line Tension (lb)	5000
-100	LSPD (ft/min)	100



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



Variable Density	200	(usec)	1200
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1	Cement Map	8
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-5	Sector 7	150
-5	Sector 8	150
TEMP		
(degF)		

**Calibration Report**

Database File antero\_maroon\_2h\_rcbl\_22\_march\_2022.db  
 Dataset Pathname pass4  
 Dataset Creation Tue Mar 22 13:12:09 2022

**Gamma Ray Calibration Report**

Serial Number: 275  
 Tool Model: Probe  
 Performed: Mon Mar 21 14:37:34 2022

Calibrator Value: 100.0 GAPI

Background Reading: 35.0 cps  
 Calibrator Reading: 160.0 cps

Sensitivity: 0.7000 GAPI/cps

**Segmented Cement Bond Log Calibration Report**

Serial Number: FW1312-32  
 Tool Model: Probe275T

Calibration Casing Diameter: 5.500 in  
 Calibration Depth: 152.308 ft

**Master Calibration, performed Tue Mar 22 12:19:58 2022:**

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.011	0.887	3.400	71.921	78.224	2.516
CAL	1.109	1.497				
5'	0.012	0.814	3.400	71.921	85.440	2.415
SUM						
S1	0.028	0.800	0.000	100.000	129.575	-3.646
S2	0.012	0.816	0.000	100.000	124.410	-1.496
S3	0.012	0.840	0.000	100.000	120.740	-1.416
S4	0.012	0.892	0.000	100.000	113.588	-1.334
S5	0.014	0.943	0.000	100.000	107.594	-1.463
S6	0.013	0.990	0.000	100.000	102.325	-1.318
S7	0.012	0.942	0.000	100.000	107.535	-1.280
S8	0.015	0.893	0.000	100.000	113.866	-1.699

**Internal Reference Calibration, performed (Not Performed):**

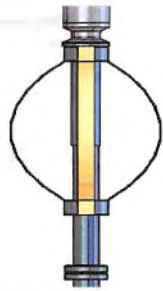
	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	1.109	1.497	1.000	0.000

**Air Zero Calibration, performed Mon Mar 21 15:14:33 2022:**

Raw (v)	Calibrated (v)	Results
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	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	2.86	2.75	35.00	
HeadVolt	16.95						
Temp	14.10			RBT-Probe275T (FW1312-32) Probe 2.75" Radial with Integral Temperature Sub	9.39	2.75	90.00
WVFS8	11.86						
WVFS7	11.86						
WVFS6	11.86						
WVFS5	11.86						
WVFS4	11.86						
WVFS3	11.86						
WVFS2	11.86						
WVFS1	11.86						
WVF3FT	11.86						
WVF5FT	10.86						
WVFCAL	7.61						
HEADVOLT	7.61						
CCL	6.71						
GR	5.38		GR-Probe (275) Probe 2 3/4" Logging Gamma Ray	4.78	2.75	57.00	



CENT-PTS275  
2 3/4" Probe Centralizer

2.83

2.75

20.00

Dataset: antero\_maroon\_2h\_rcbl\_22\_march\_2022.db: field/well/run1/pass4  
Total length: 20.87 ft  
Total weight: 207.00 lb  
O.D.: 2.75 in



Nine

Company Antero Resources  
Well Marron 2H  
Field Utica  
County Tyler  
State WV