



# Nine

## RADIAL BOND LOG

Company ANTERO  
 Well LANCASTER 1H  
 Field TYLER  
 County TYLER  
 State WEST VIRGINIA

Company ANTERO  
 Well LANCASTER 1H  
 Field TYLER  
 County TYLER  
 State WEST VIRGINIA

Location: API #: 47-095-0264-0000  
 SEC TWP RGE Elevation 1014.5'  
 Log Measured From KB KB  
 Drilling Measured From KB KB  
 Other Services GR CCL  
 Elevation KB. 1040'  
 D.F. 1039'  
 G.L. 1014.5'

Date	19-JUNE-2020						
Run Number	ONE						
Depth Driller	16006'						
Depth Logger	6994'						
Bottom Logged Interval	6986'						
Top Log Interval	SURFACE						
Open Hole Size	6.75"						
Type Fluid	FRESH WATER						
Density / Viscosity	8.3#						
Max. Recorded Temp.	141°F						
Estimated Cement Top	N/A						
Time Well Ready	09:45						
Time Logger on Bottom	10:45						
Equipment Number	TK-122						
Location	CHARLEROI, PA						
Recorded By	D.JOSEPHIK						
Witnessed By	BRYAN HEMARD						
Borehole Record							
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record	Size	Wgt/Ft	Top	Bottom			
Surface String							
Prot. String							
Production String	5"	18#	SURFACE	16006'			
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 CASING TALLY PER C.M.

MARKER JOINT @ 5682'  
 100% BONDED PIPE=2.4mv  
 100%FREE PIPE=77mv

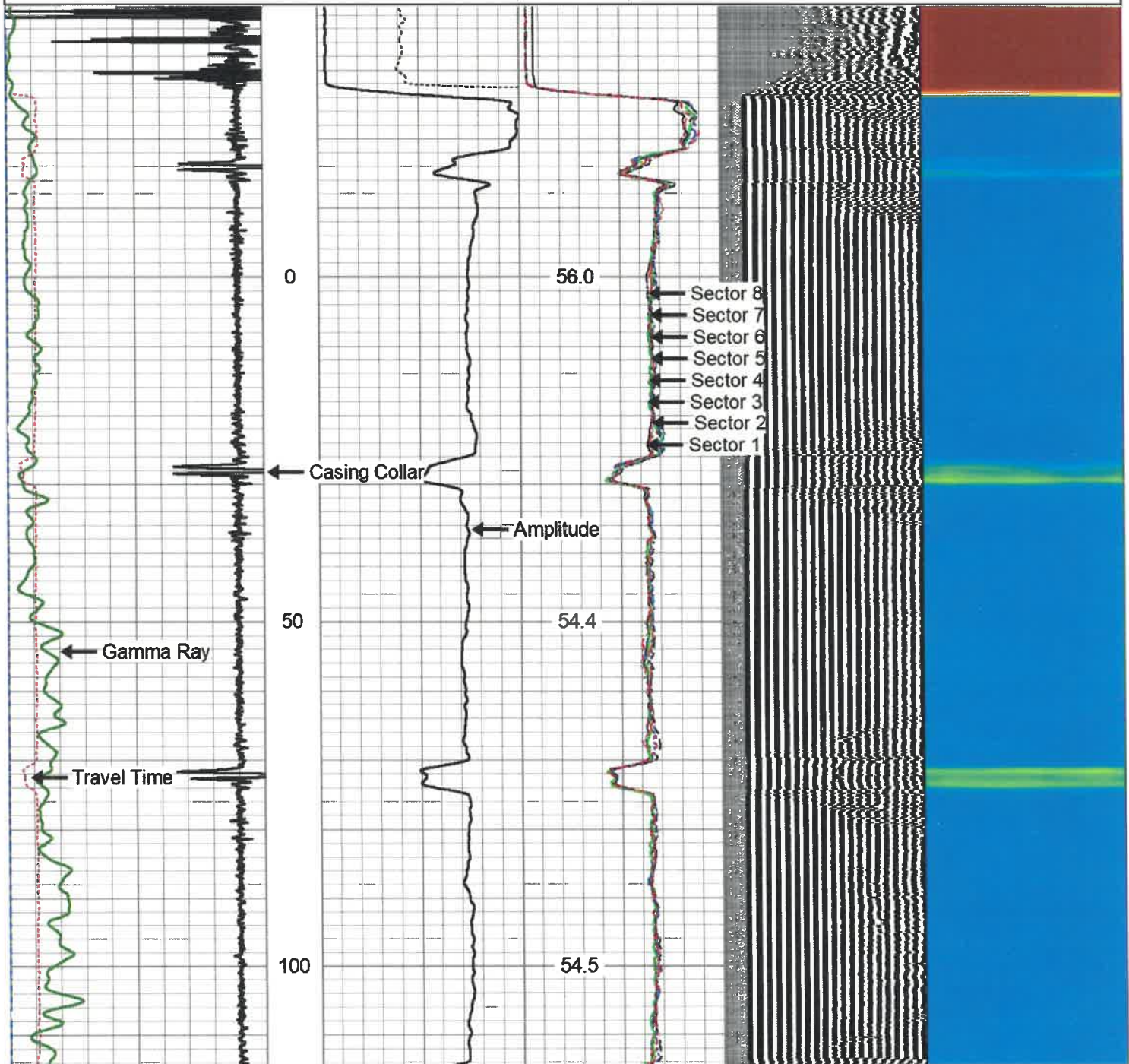


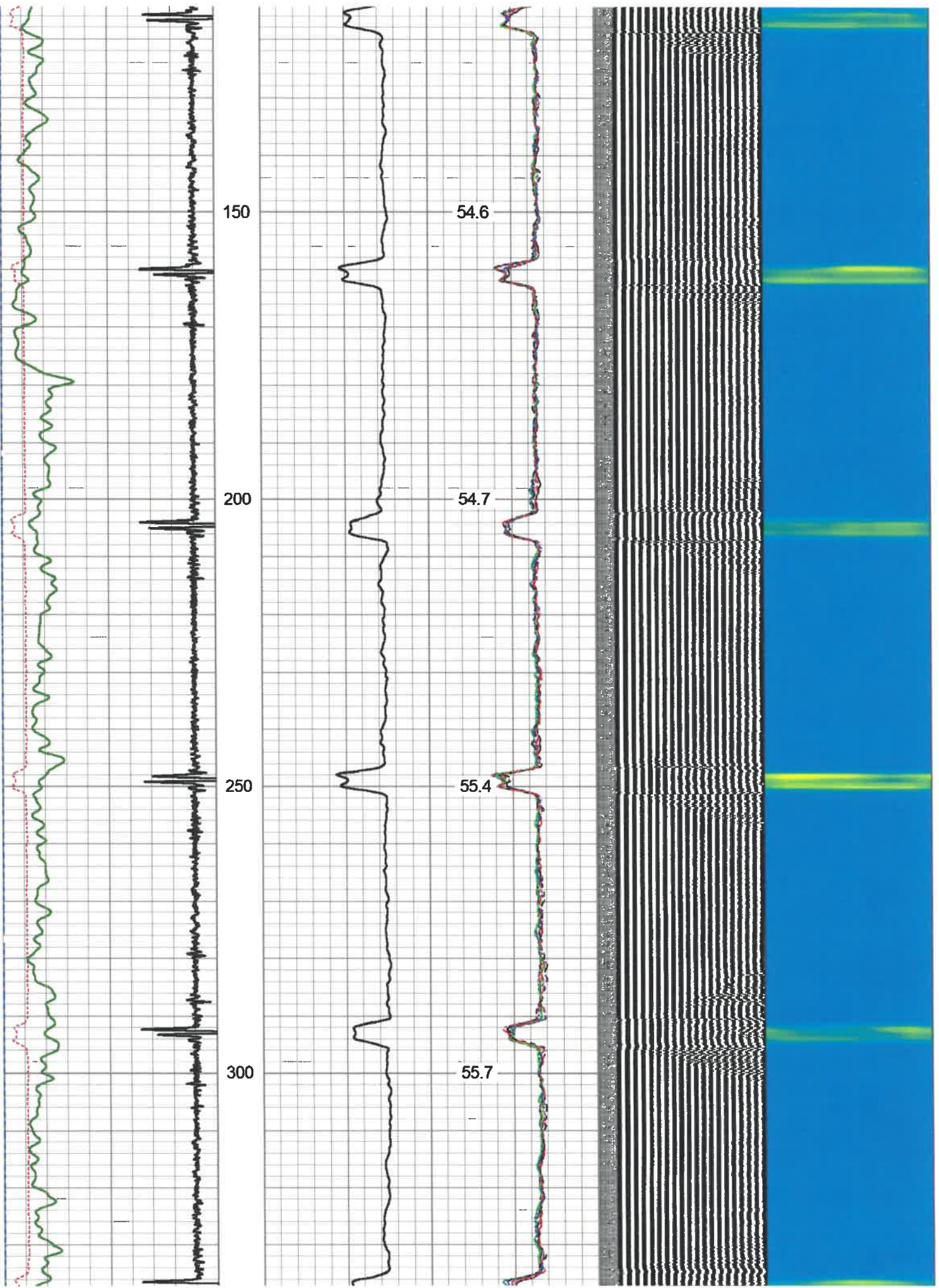
## MAIN LOG

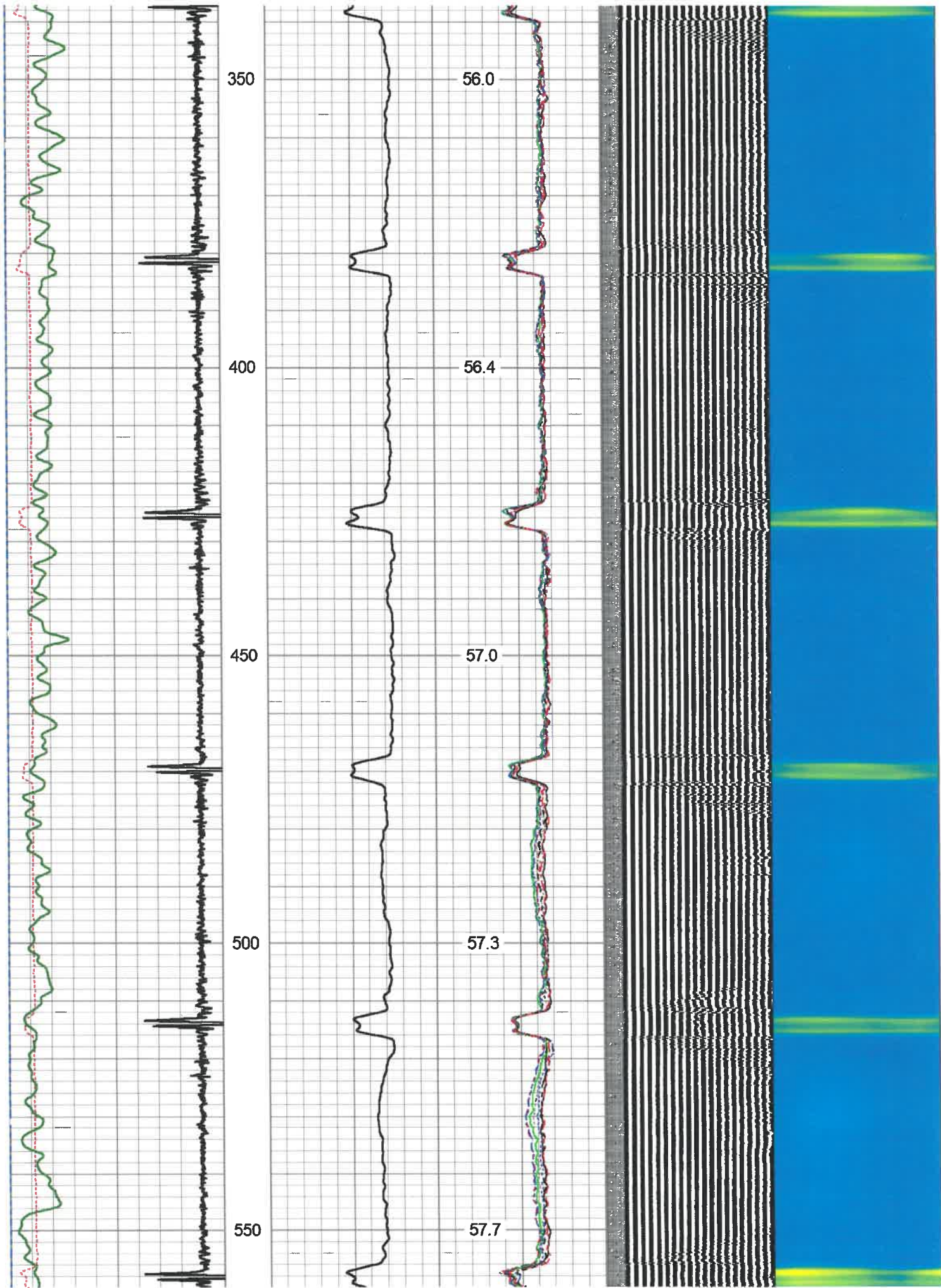
### 1500 PSI

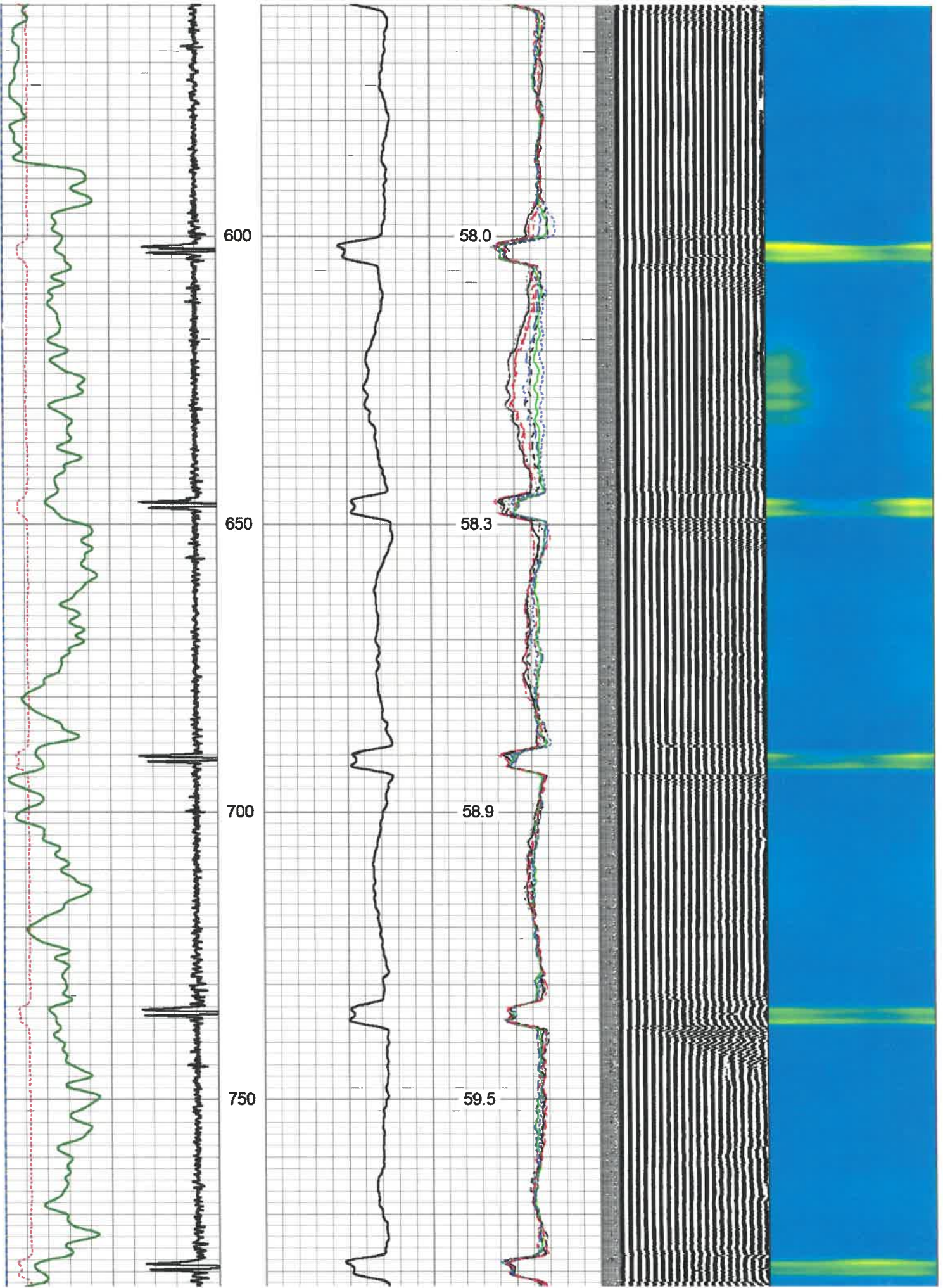
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 Dataset Pathname pass6  
 Presentation Format 9rcbl  
 Dataset Creation Fri Jun 19 10:51:51 2020  
 Charted by Depth in Feet scaled 1:240

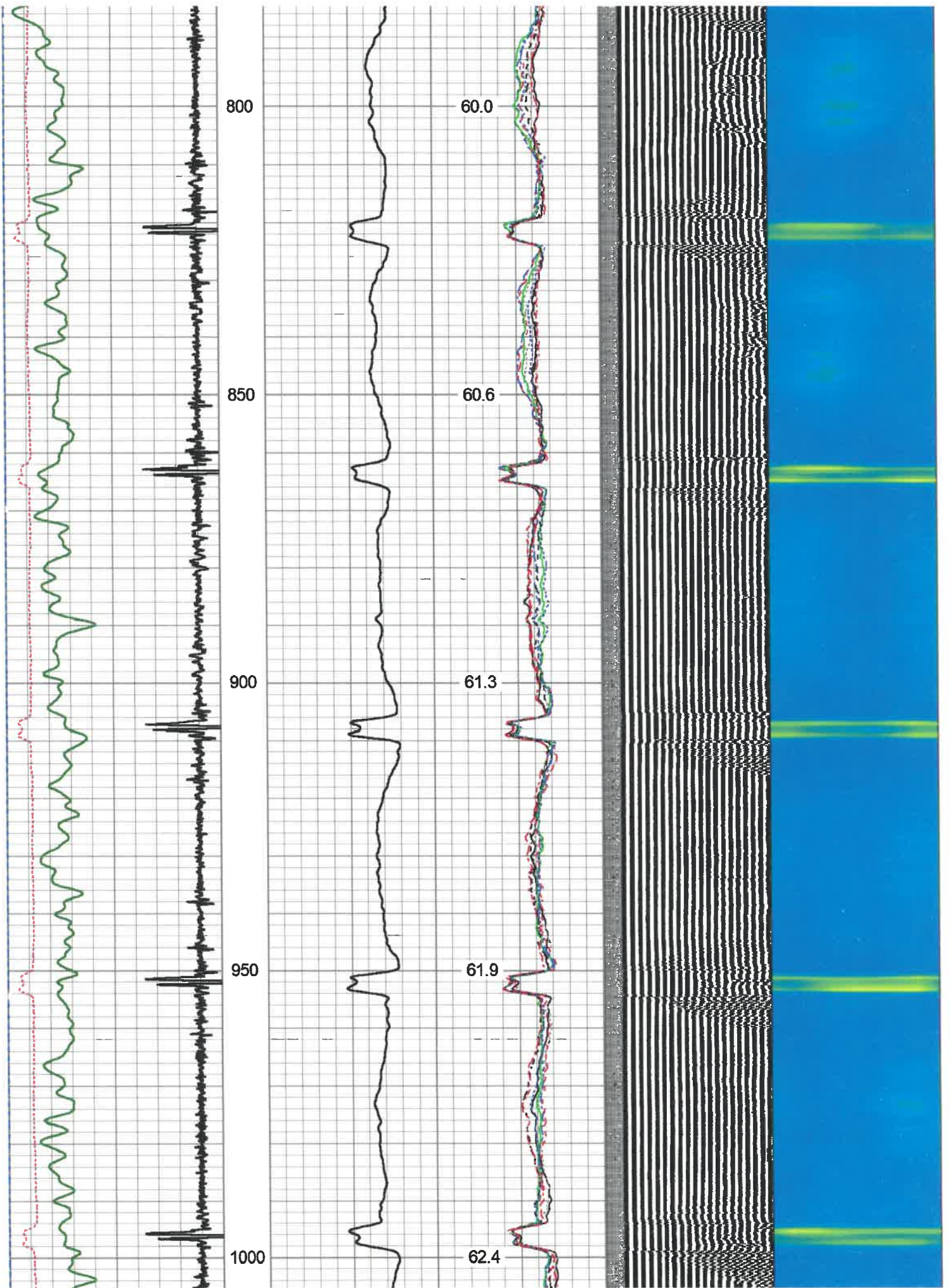
265	Travel Time (usec)	165	0	Amplitude (mV)	100	-5	Sector 1	150	Variable Density	1	Cement Map	8
9	Casing Collar	-1		Amplified Amplitude		-5	Sector 2	150	200	(usec)	1200	
0	Gamma Ray (GAPI)	150	0	(mV)	10	-5	Sector 3	150				
0	Line Tension (lb)	5000				-5	Sector 4	150				
						-5	Sector 5	150				
						-5	Sector 6	150				
						-5	Sector 7	150				
						-5	Sector 8	150				
							TEMP					
							(degF)					

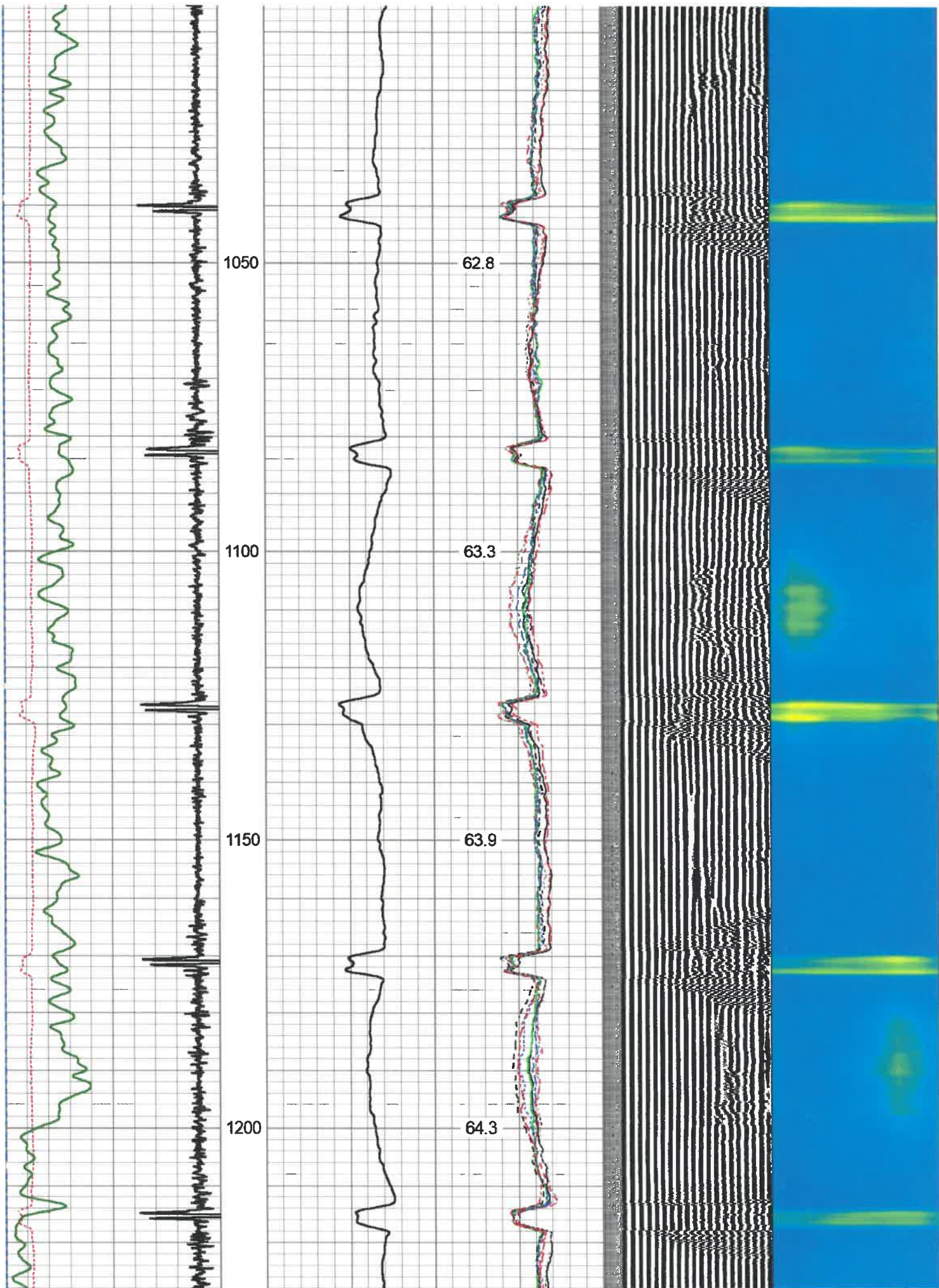


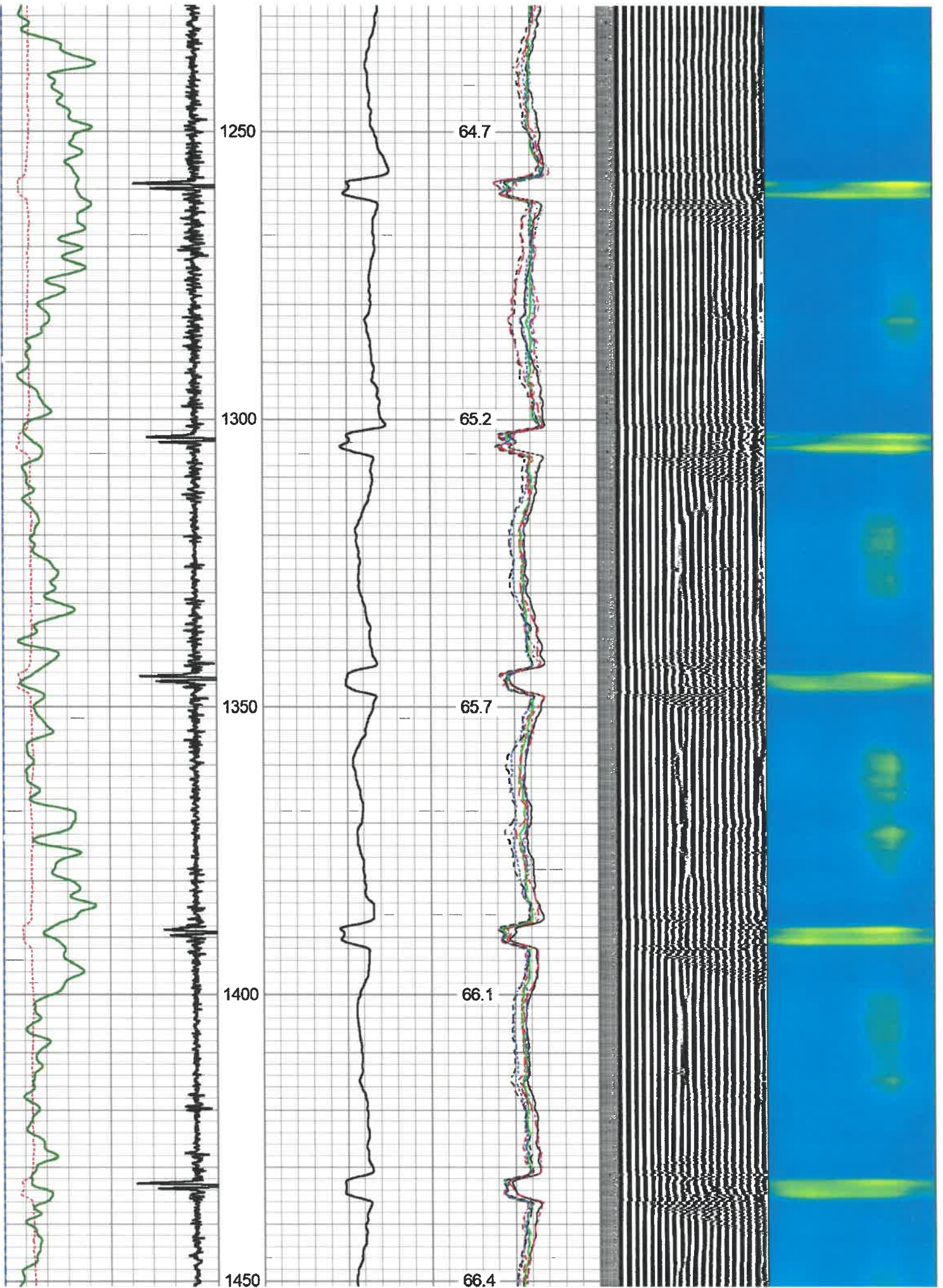




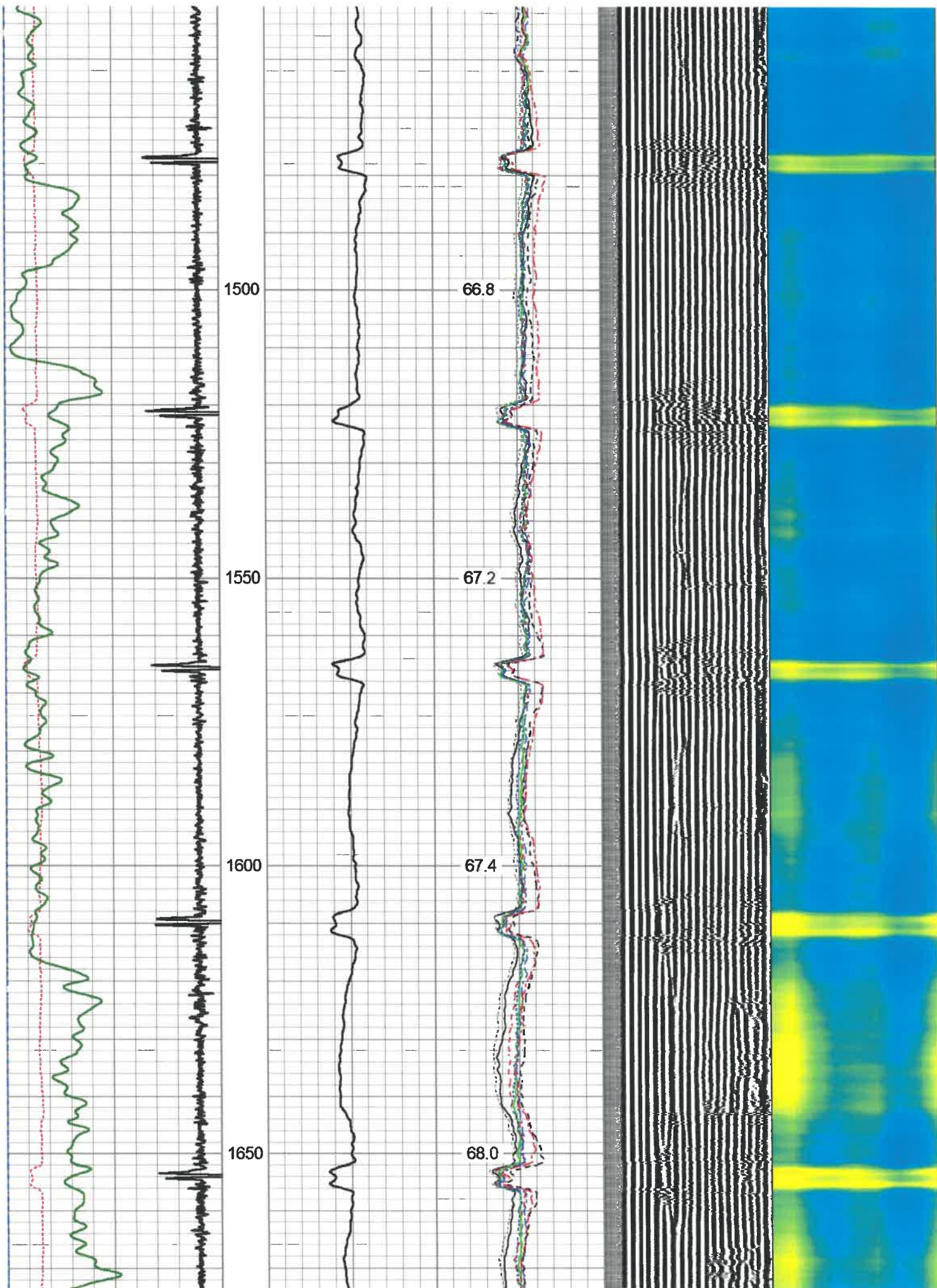


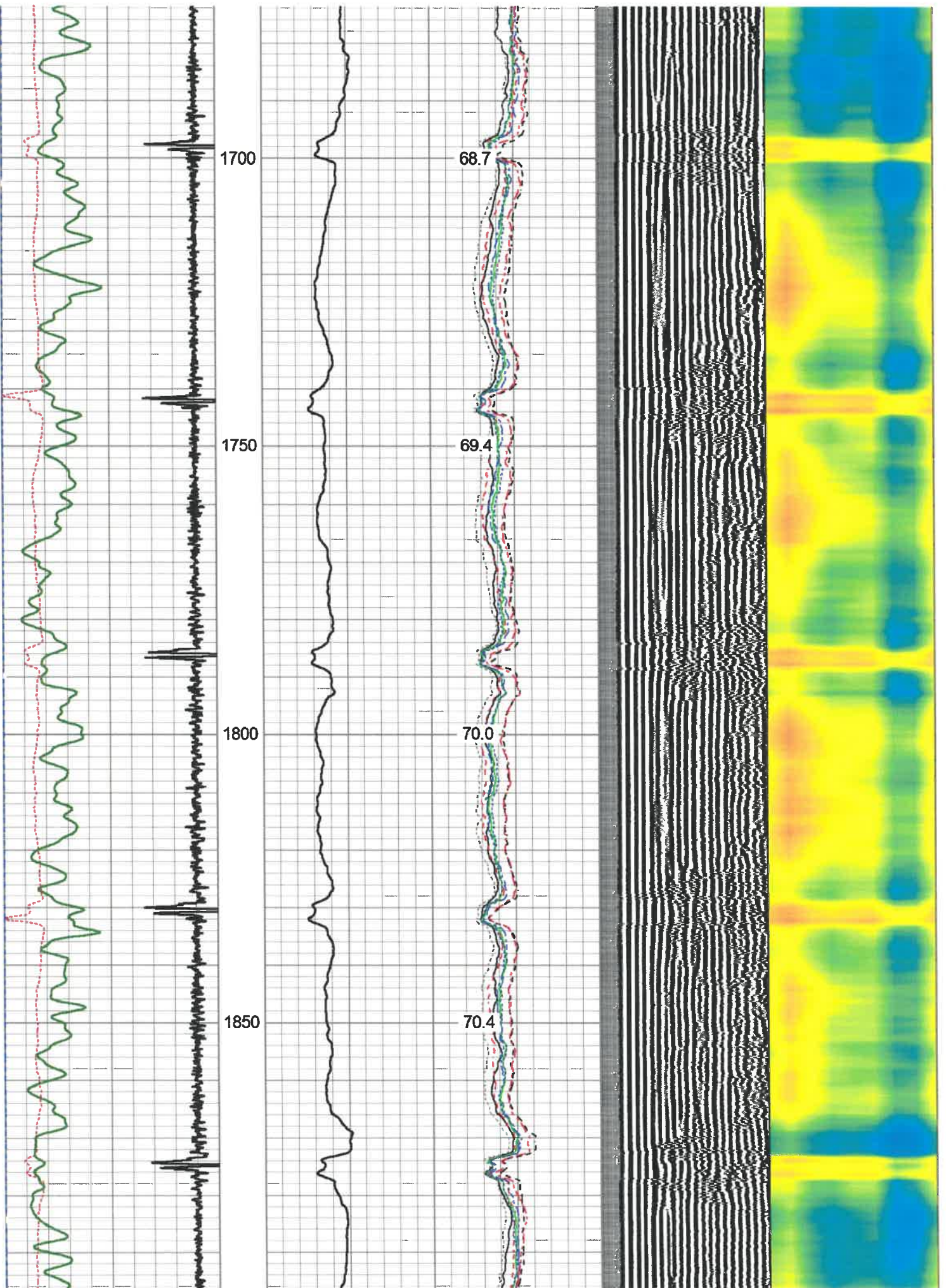


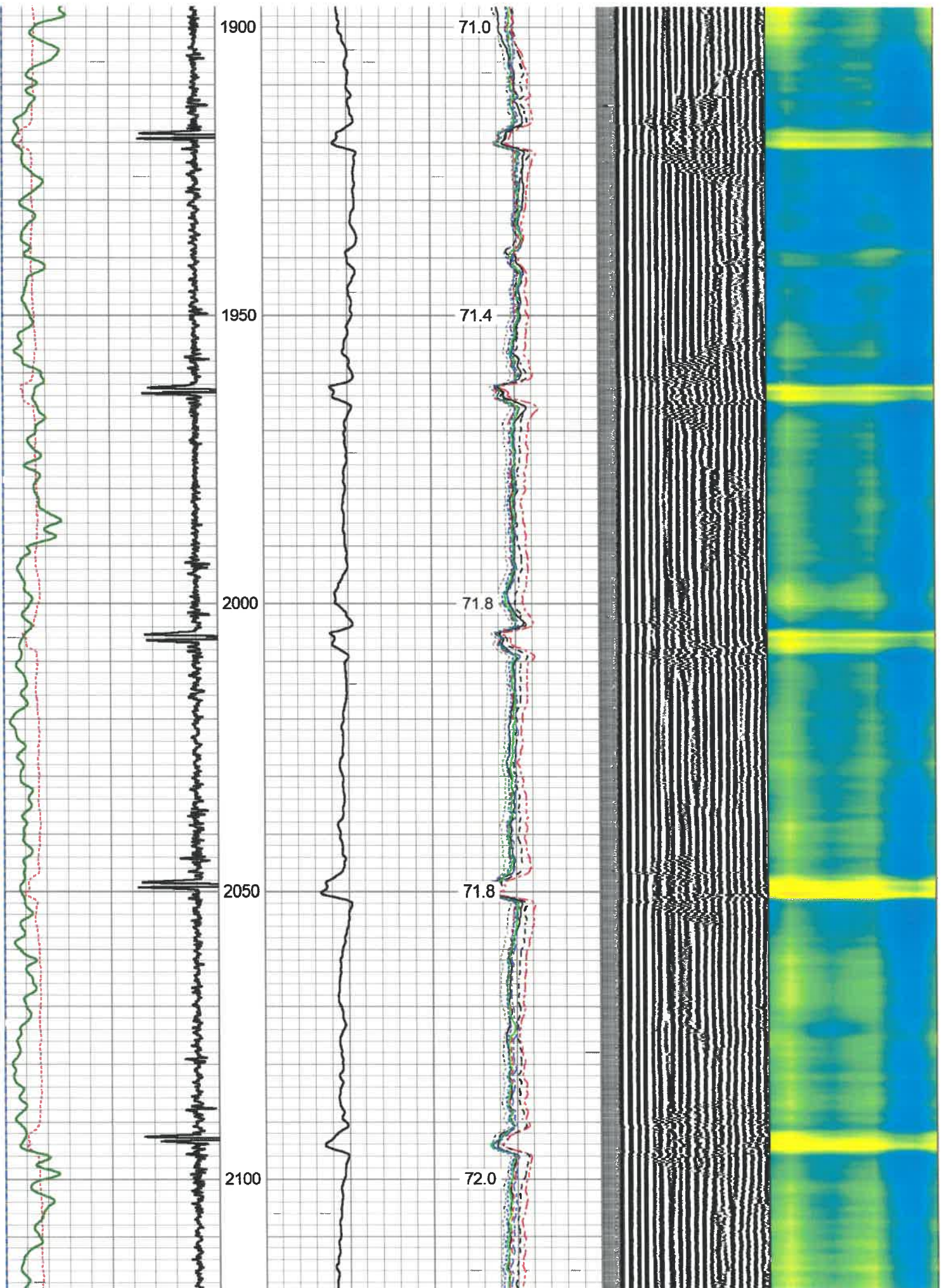


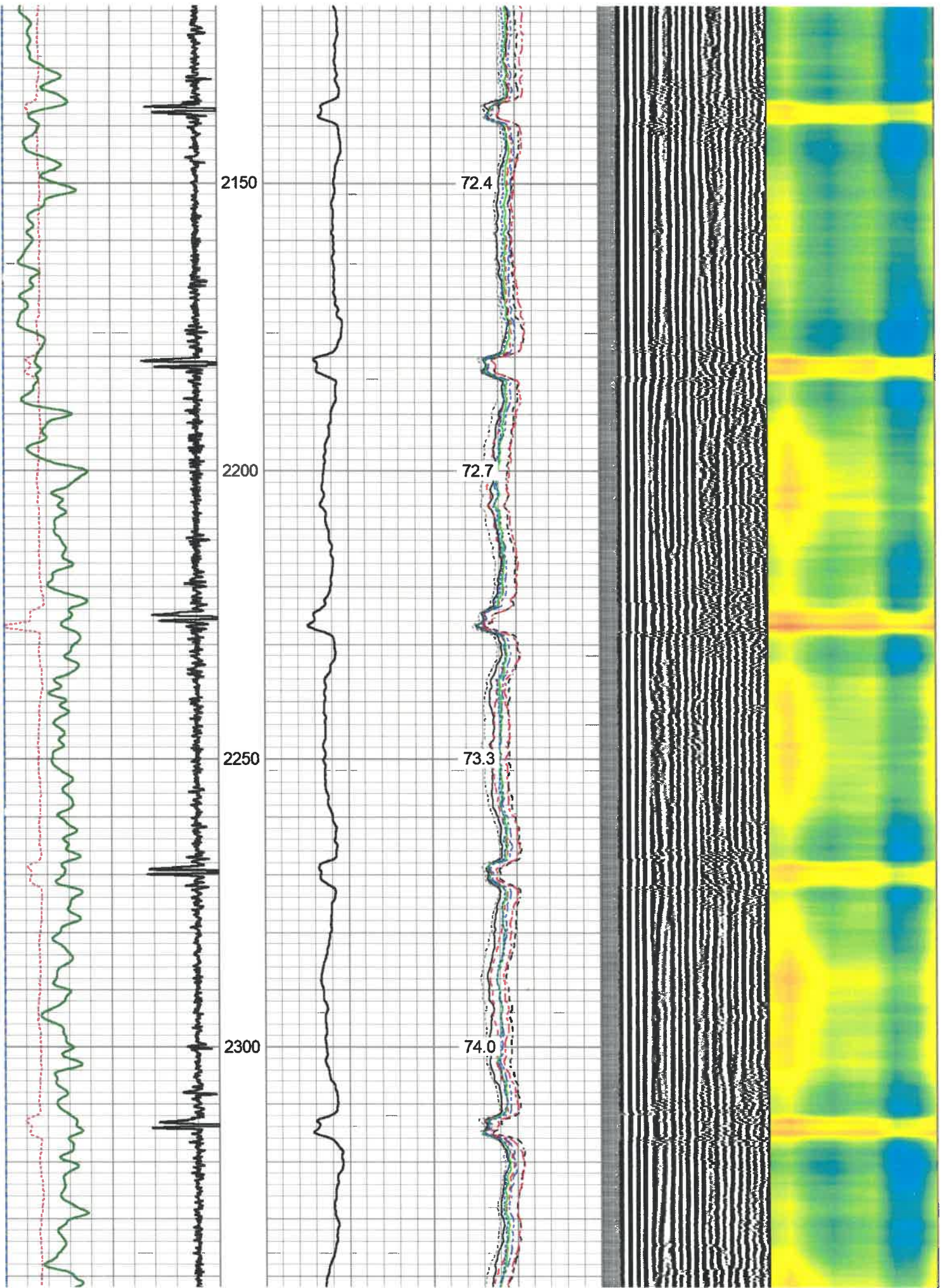


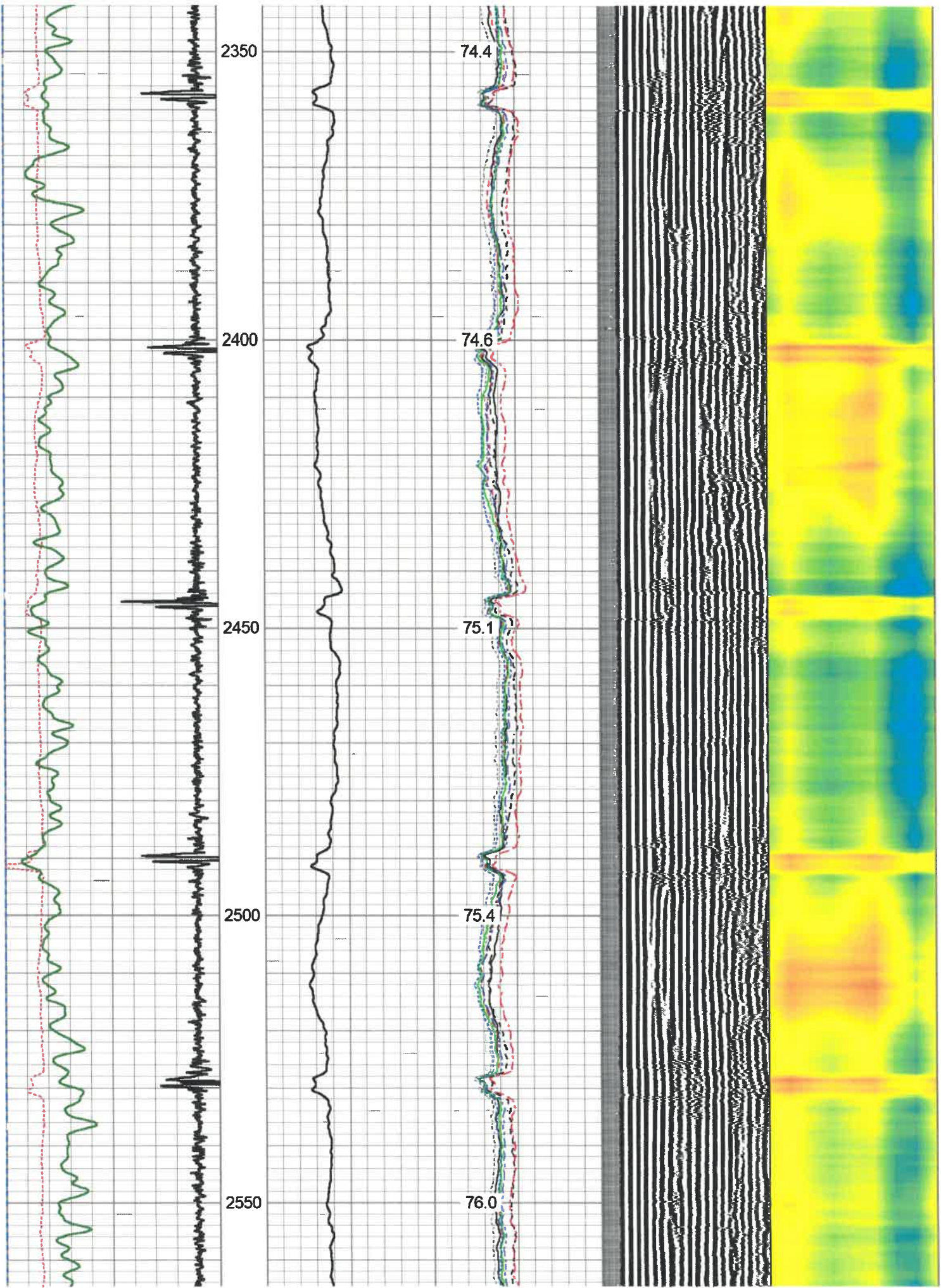


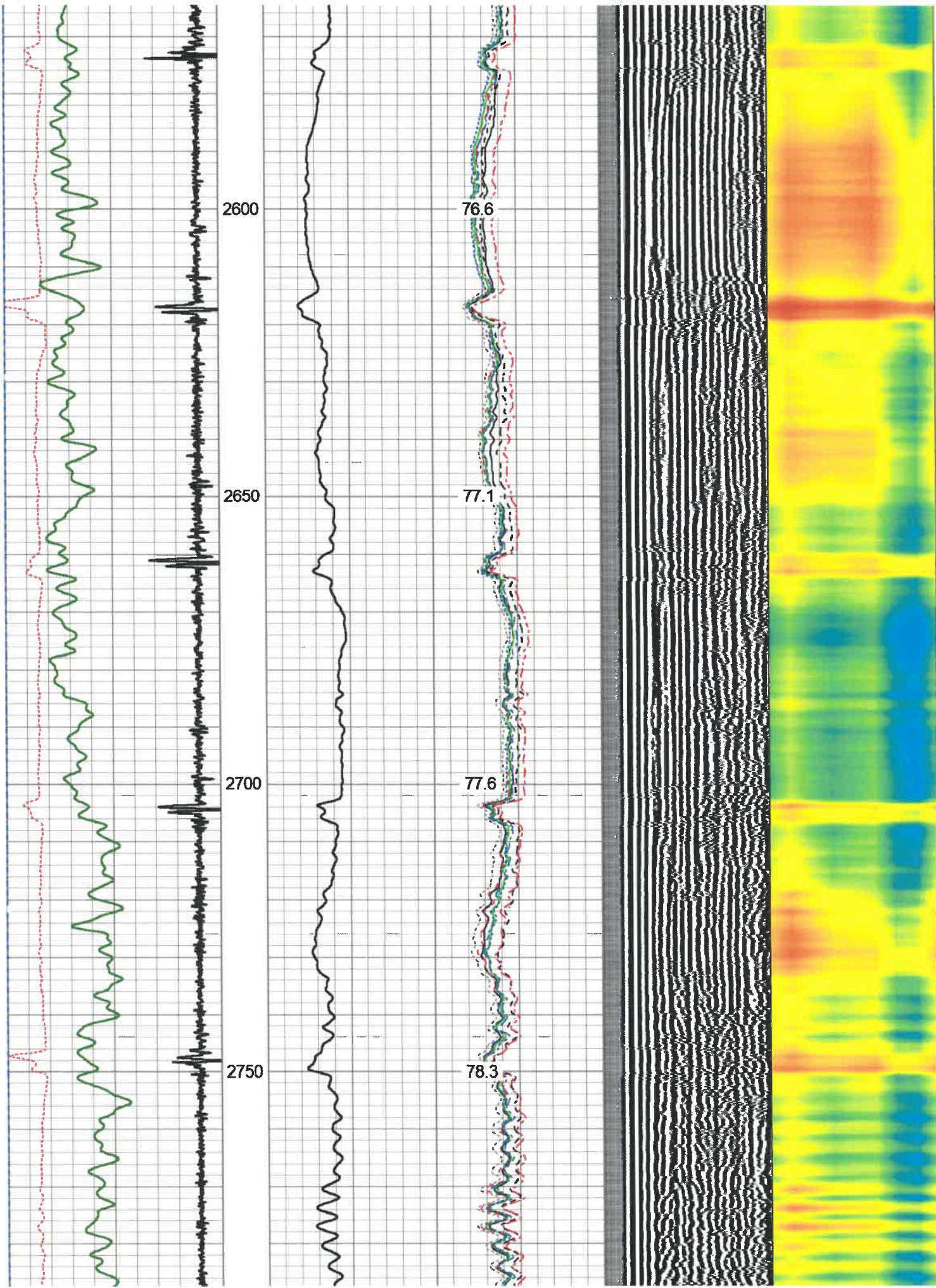


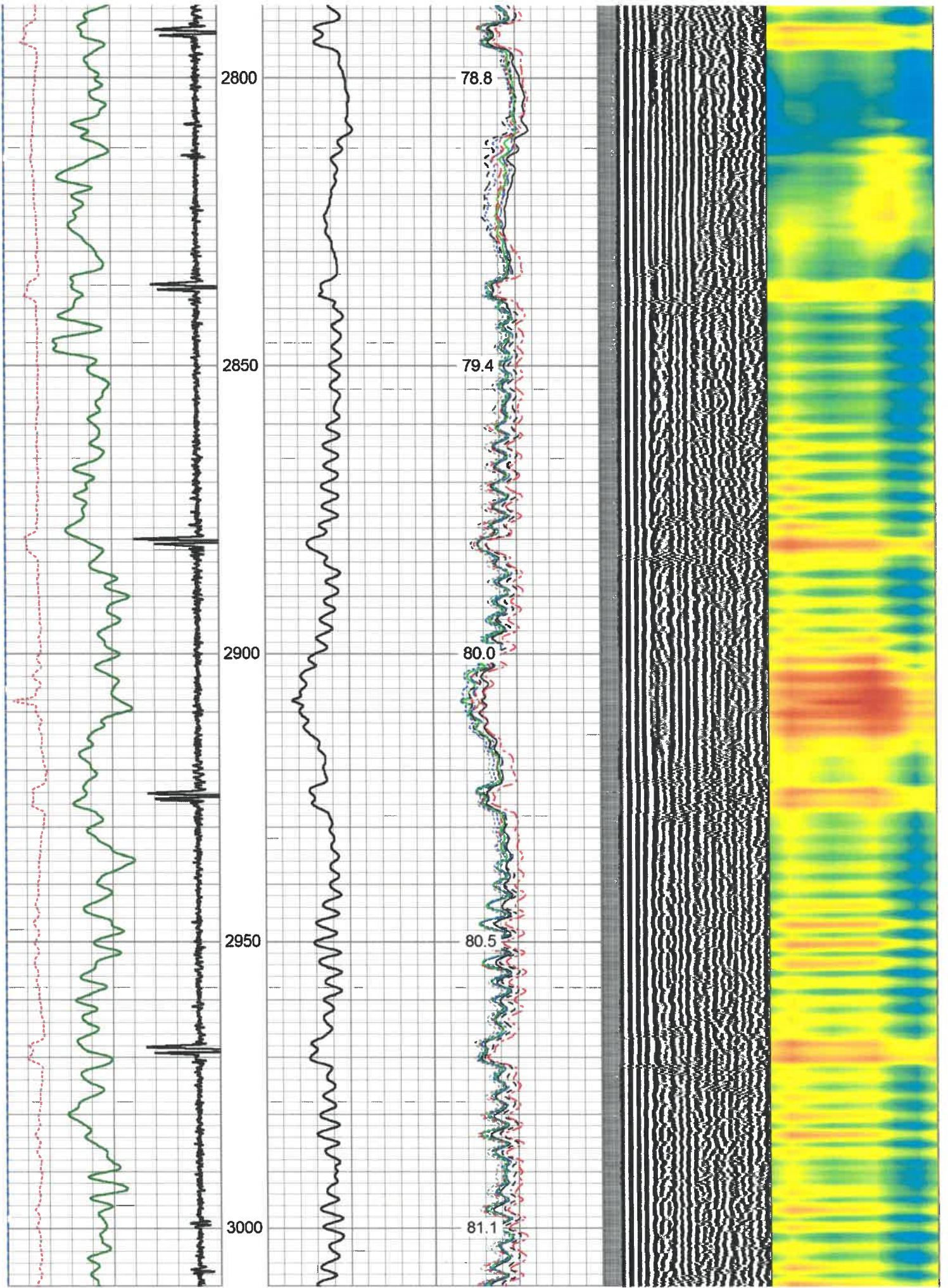






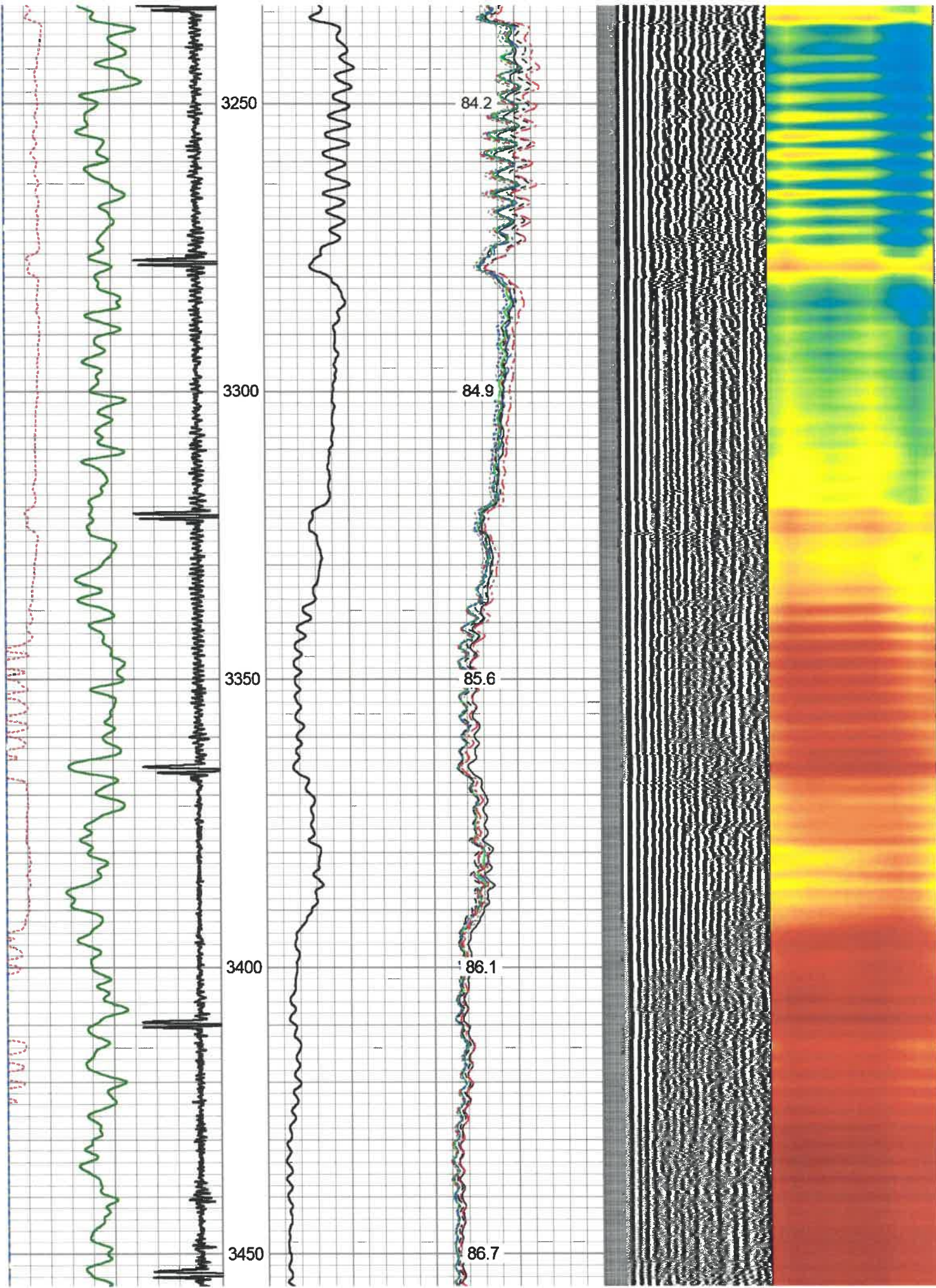


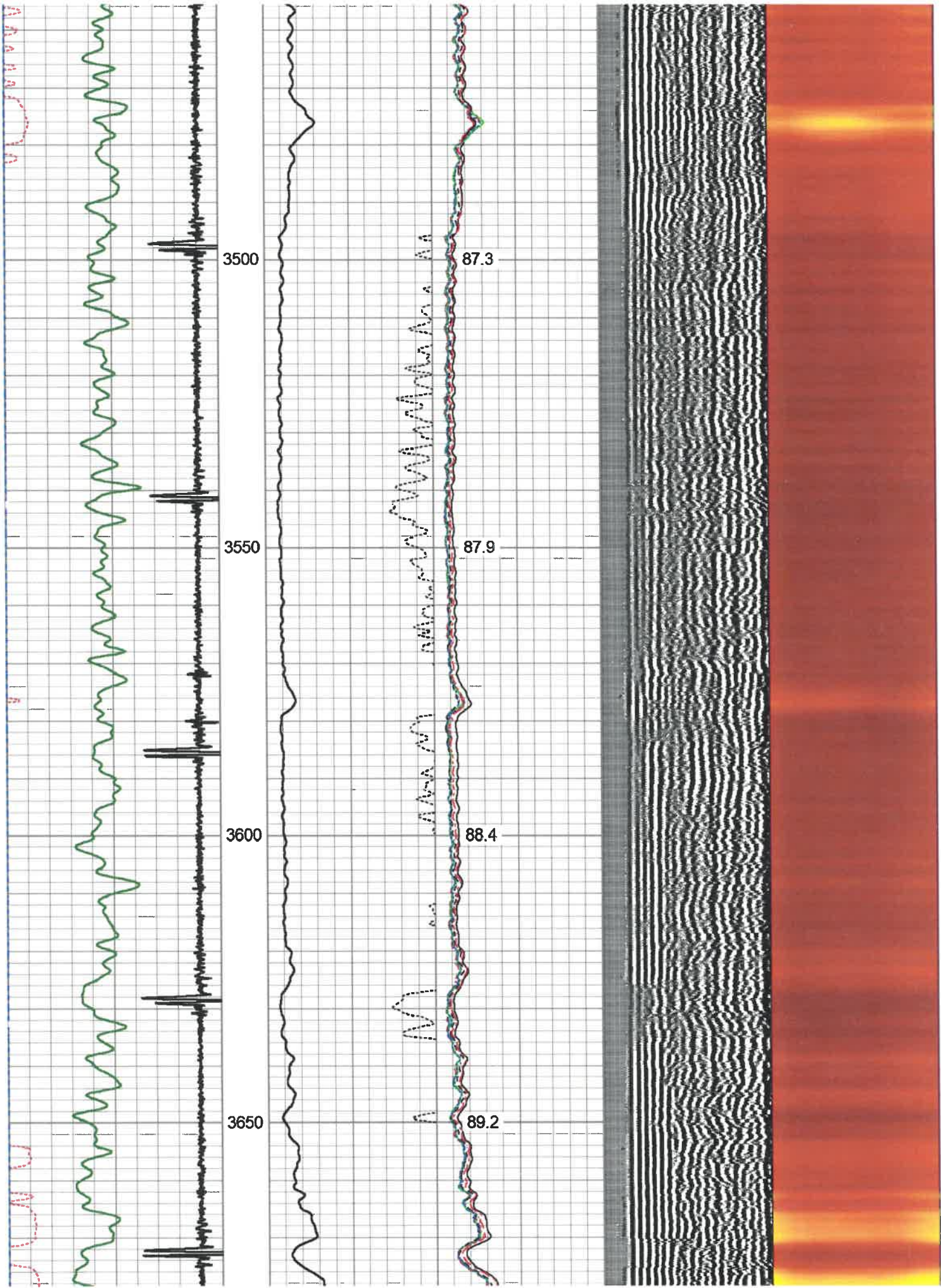




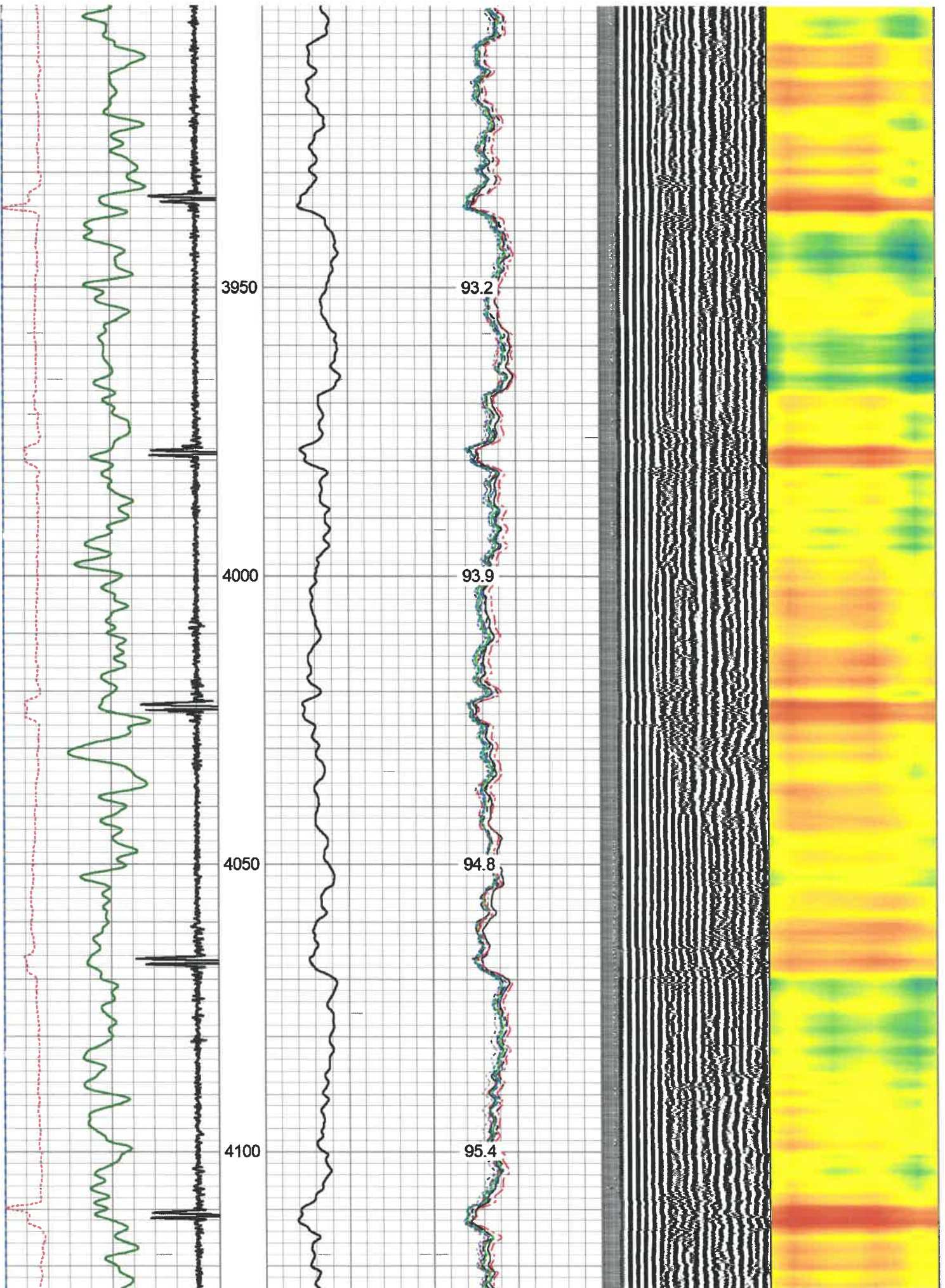


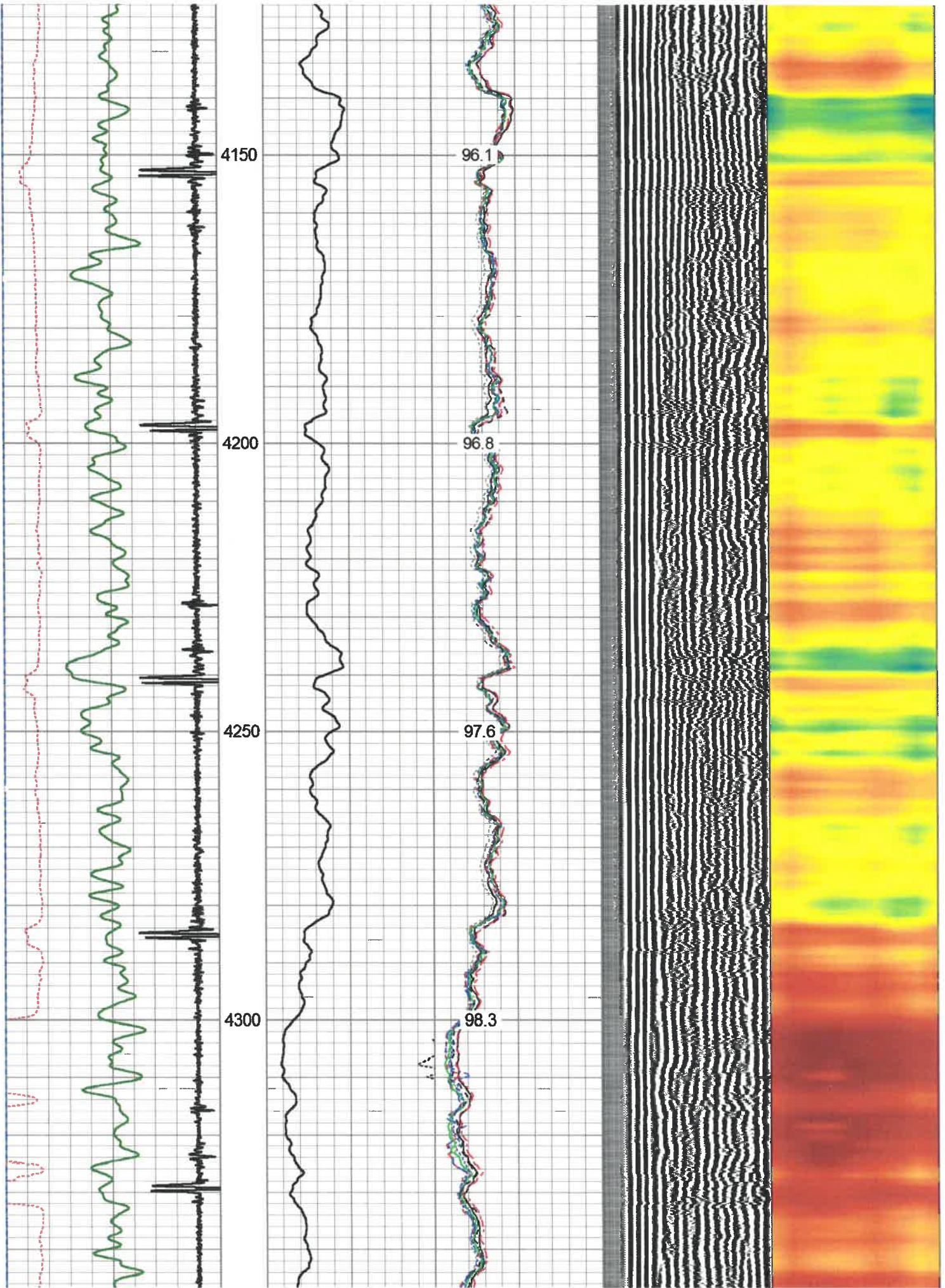


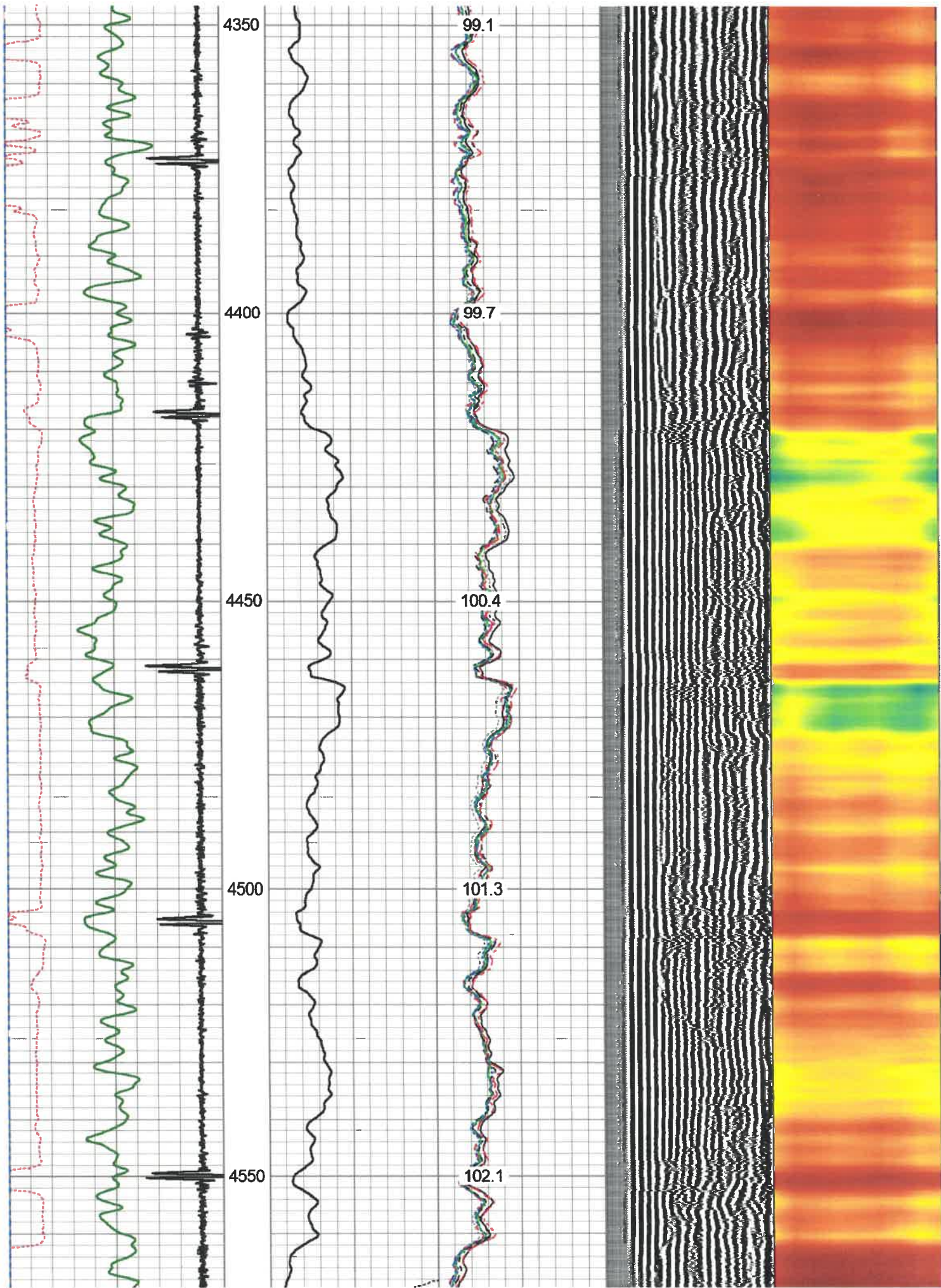


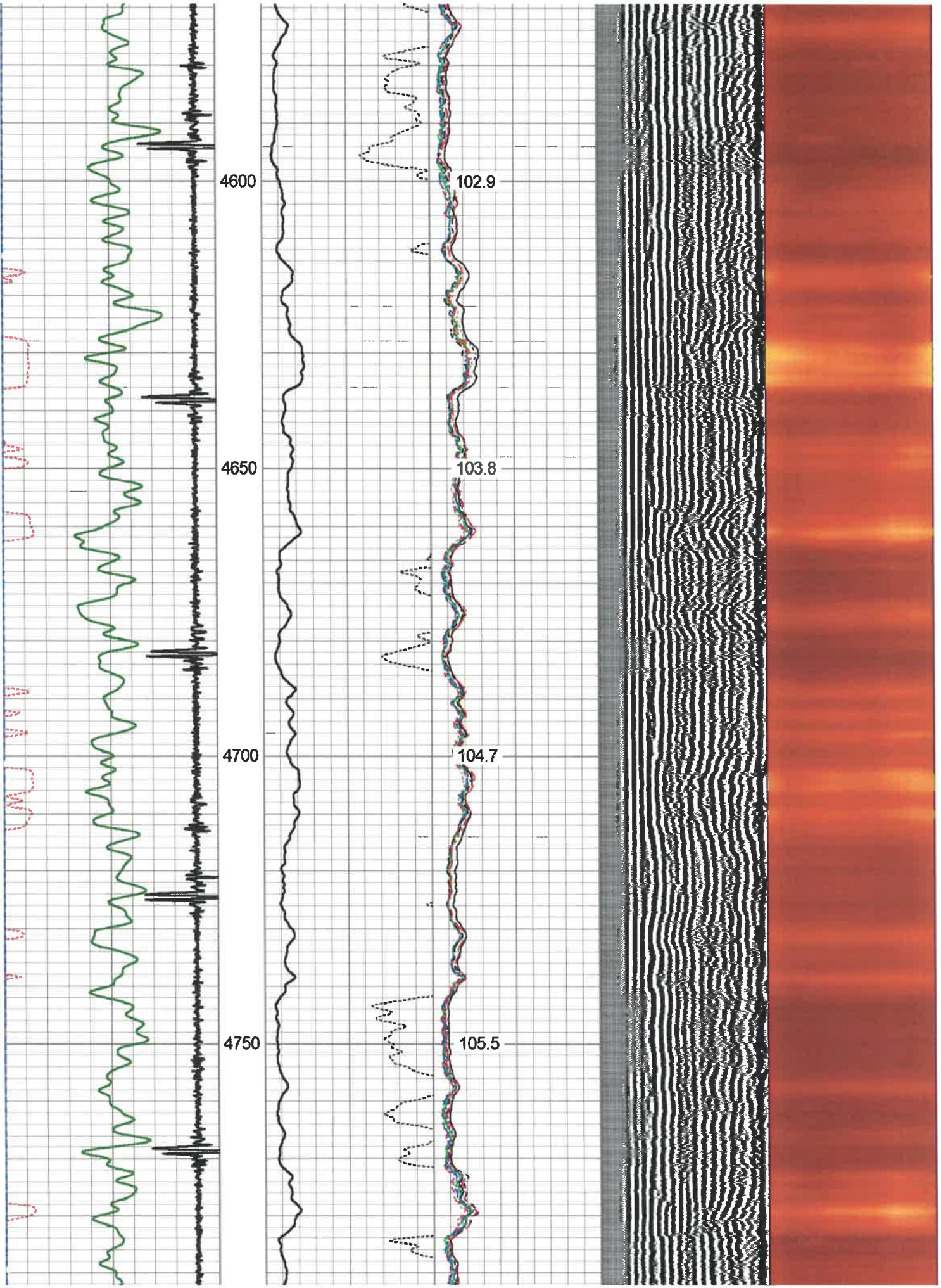


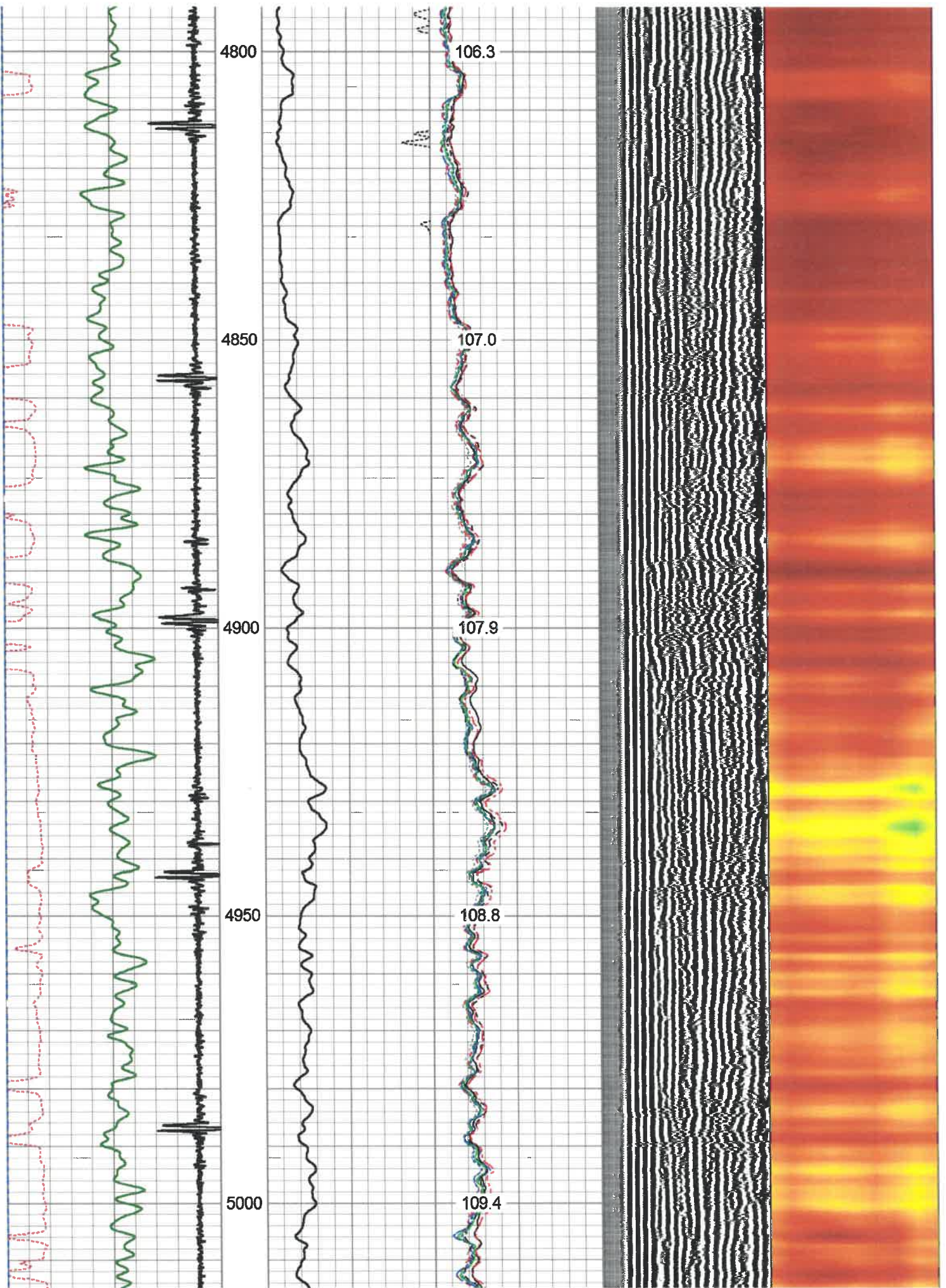




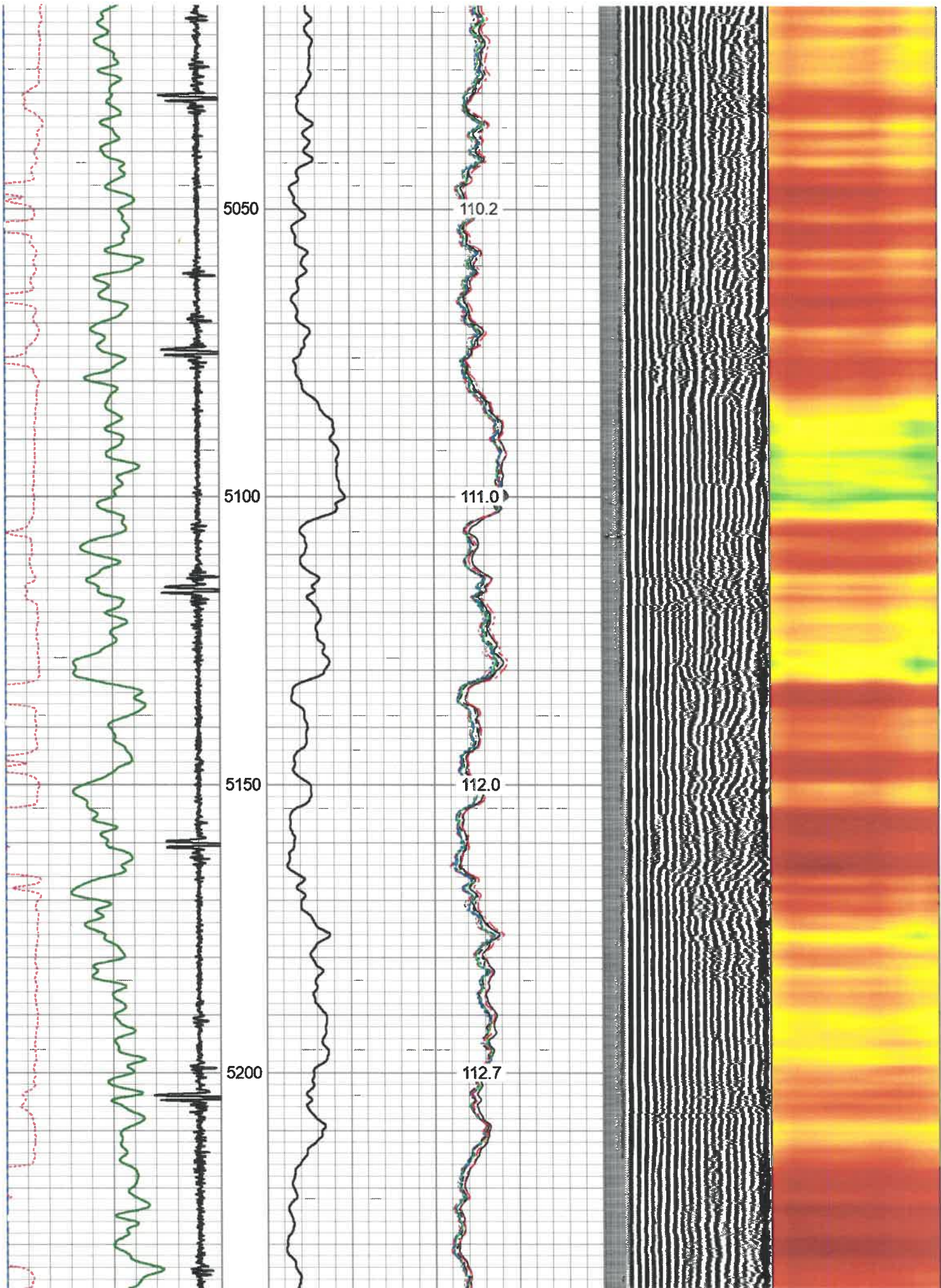


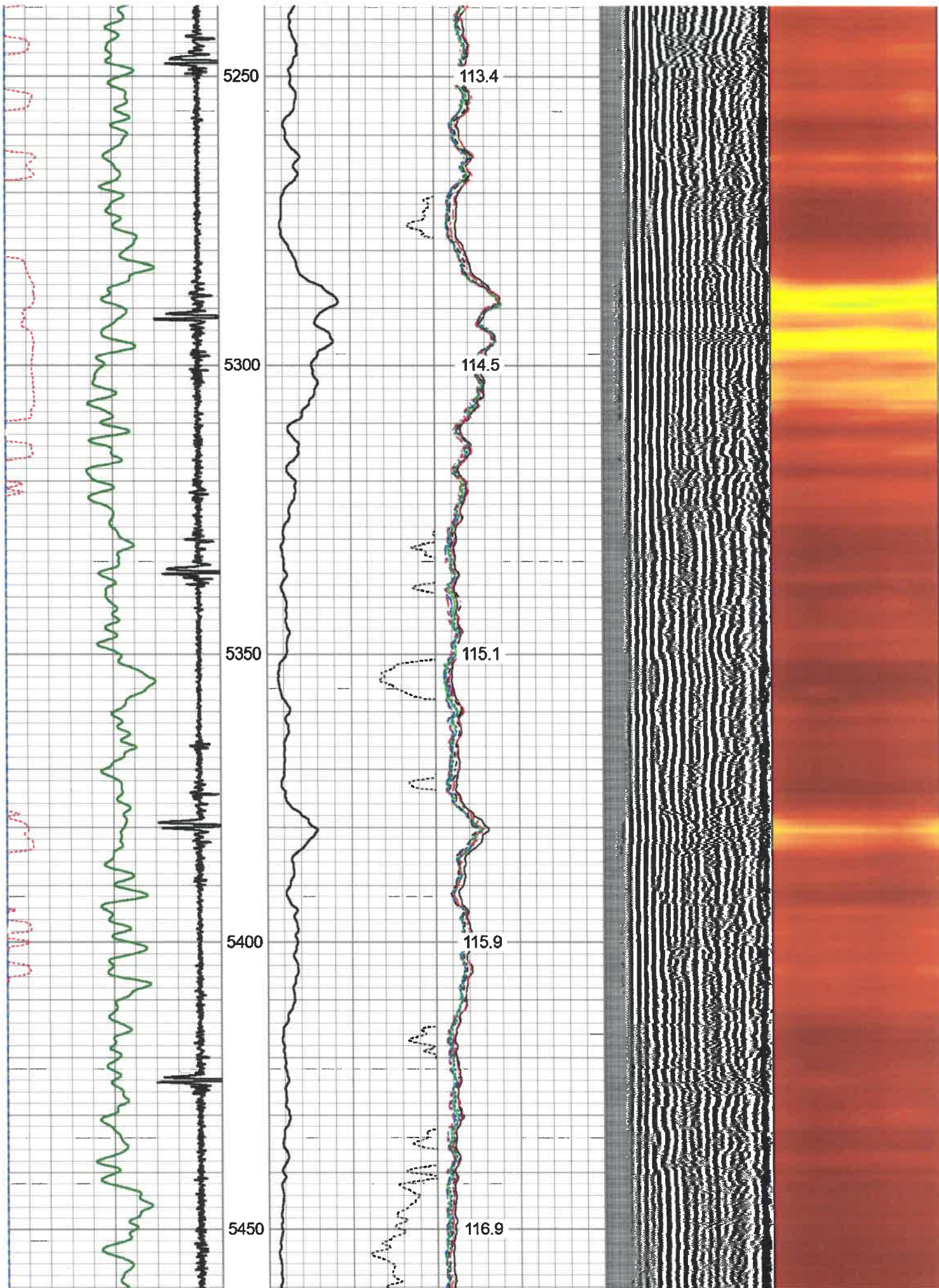


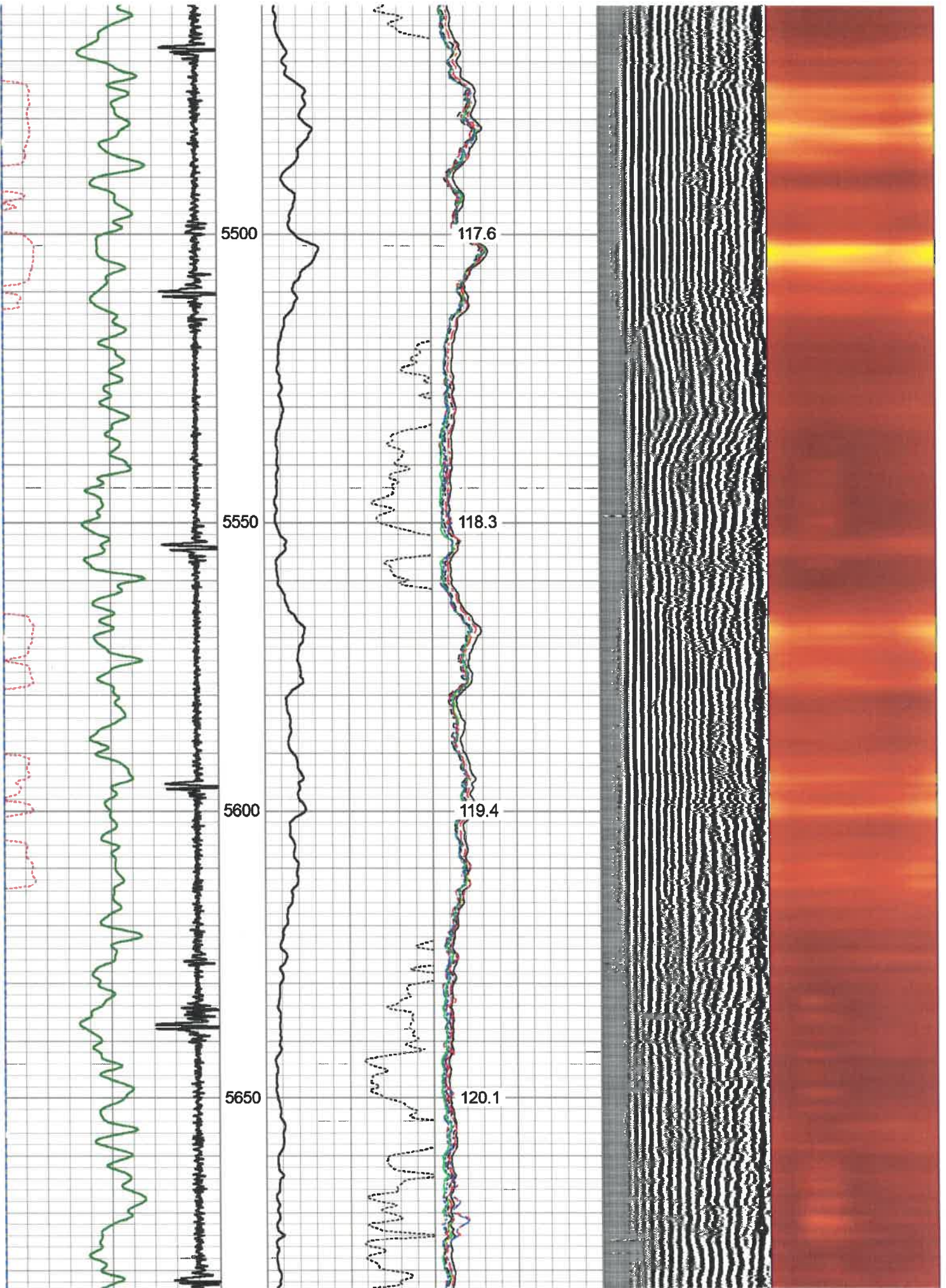


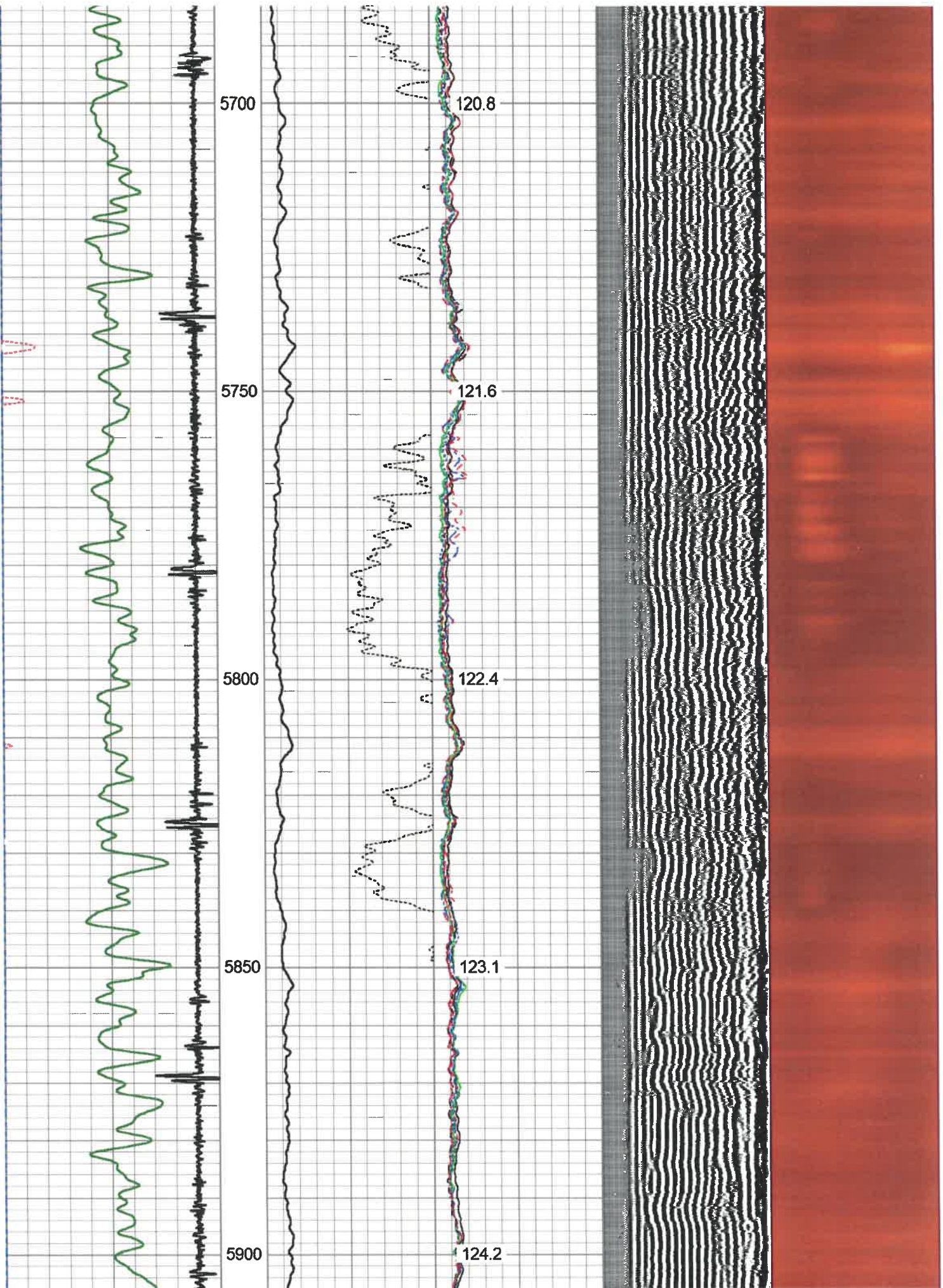


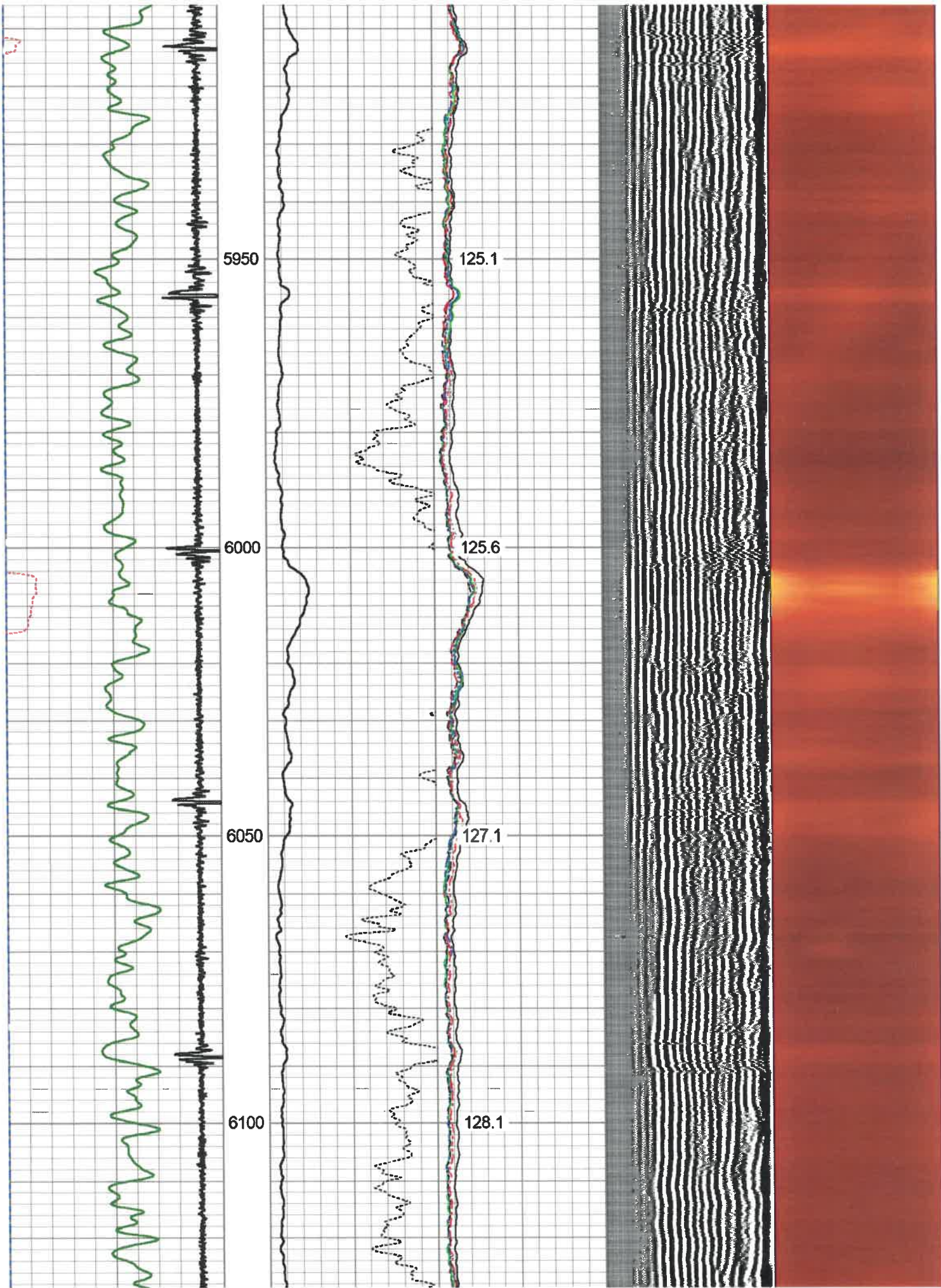




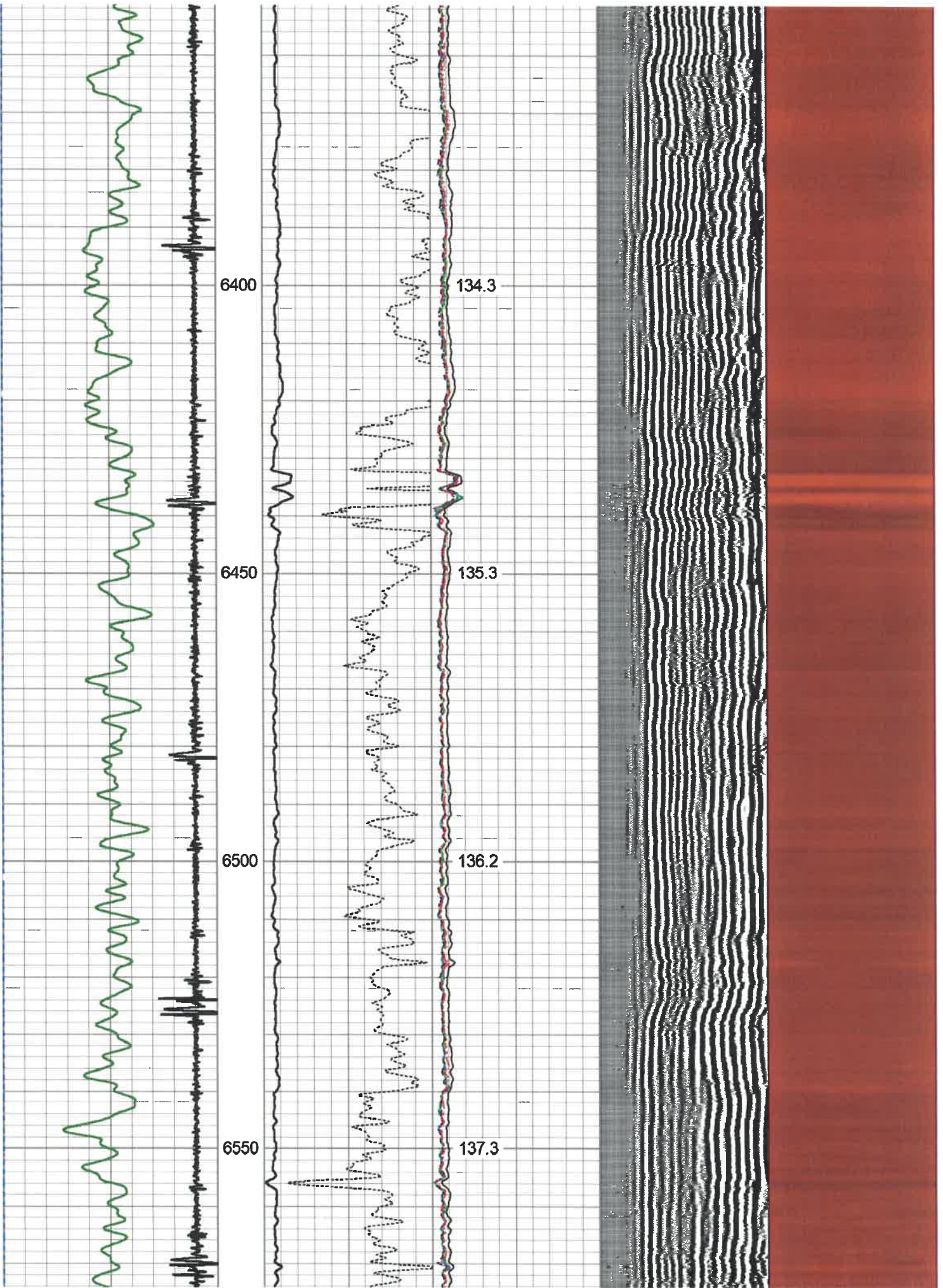


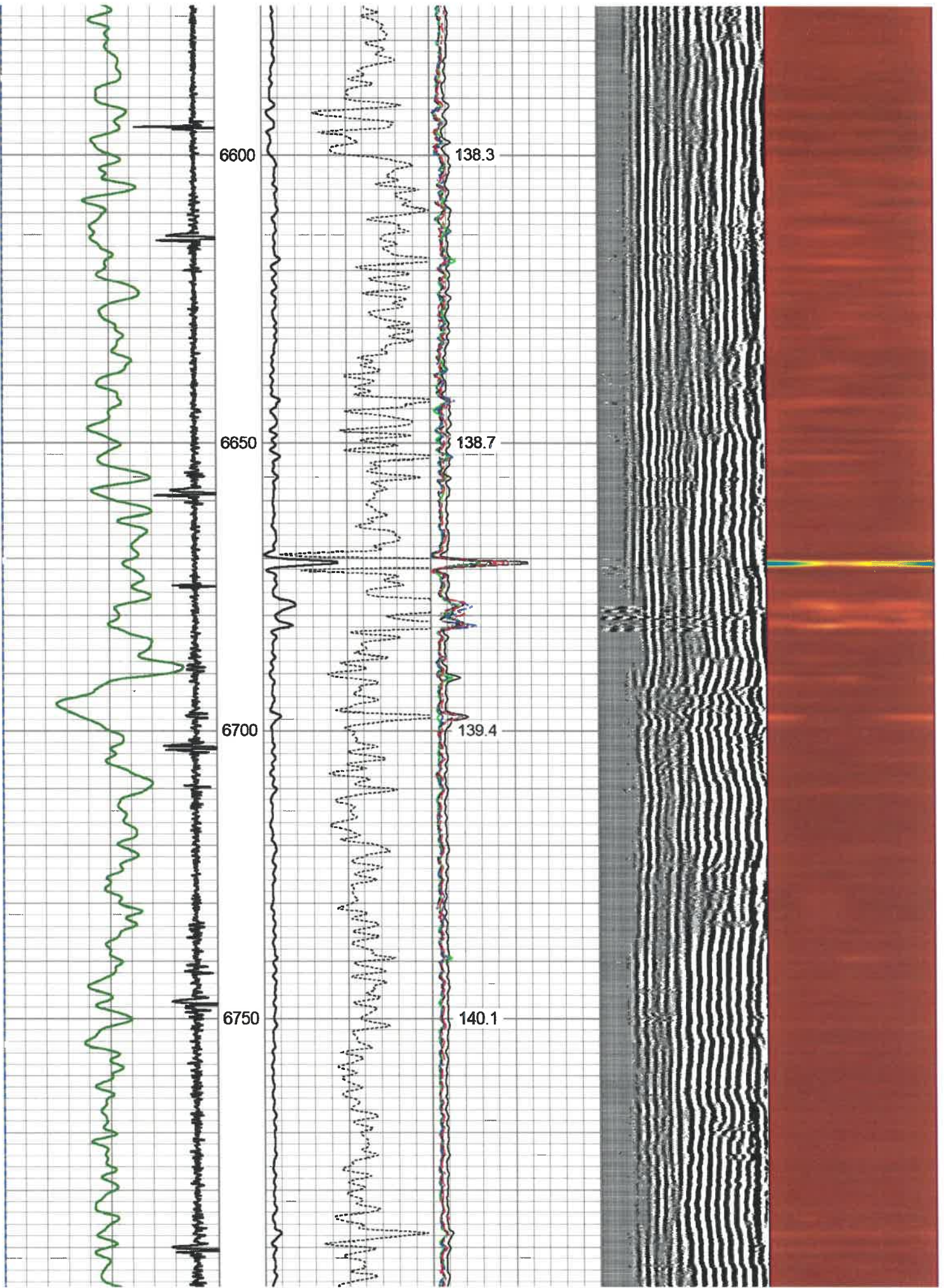




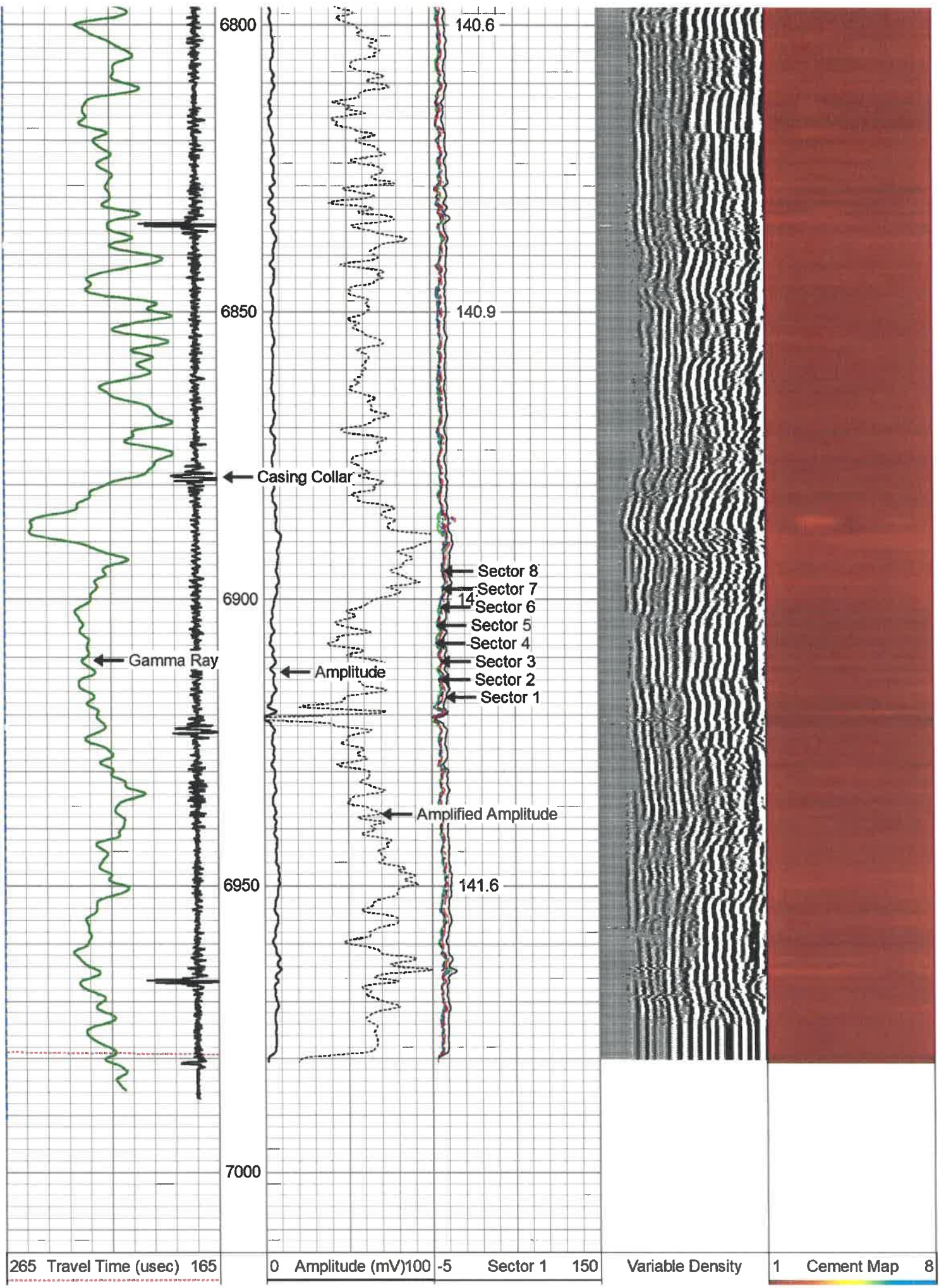












9	Casing Collar	-1	Amplified Amplitude	-5	Sector 2	150	200	(usec)	1200	
0	Gamma Ray (GAPI)	150	0	(mV)	10	-5	Sector 3	150		
0	Line Tension (lb)	5000				-5	Sector 4	150		
						-5	Sector 5	150		
						-5	Sector 6	150		
						-5	Sector 7	150		
						-5	Sector 8	150		
							TEMP			
							(degF)			

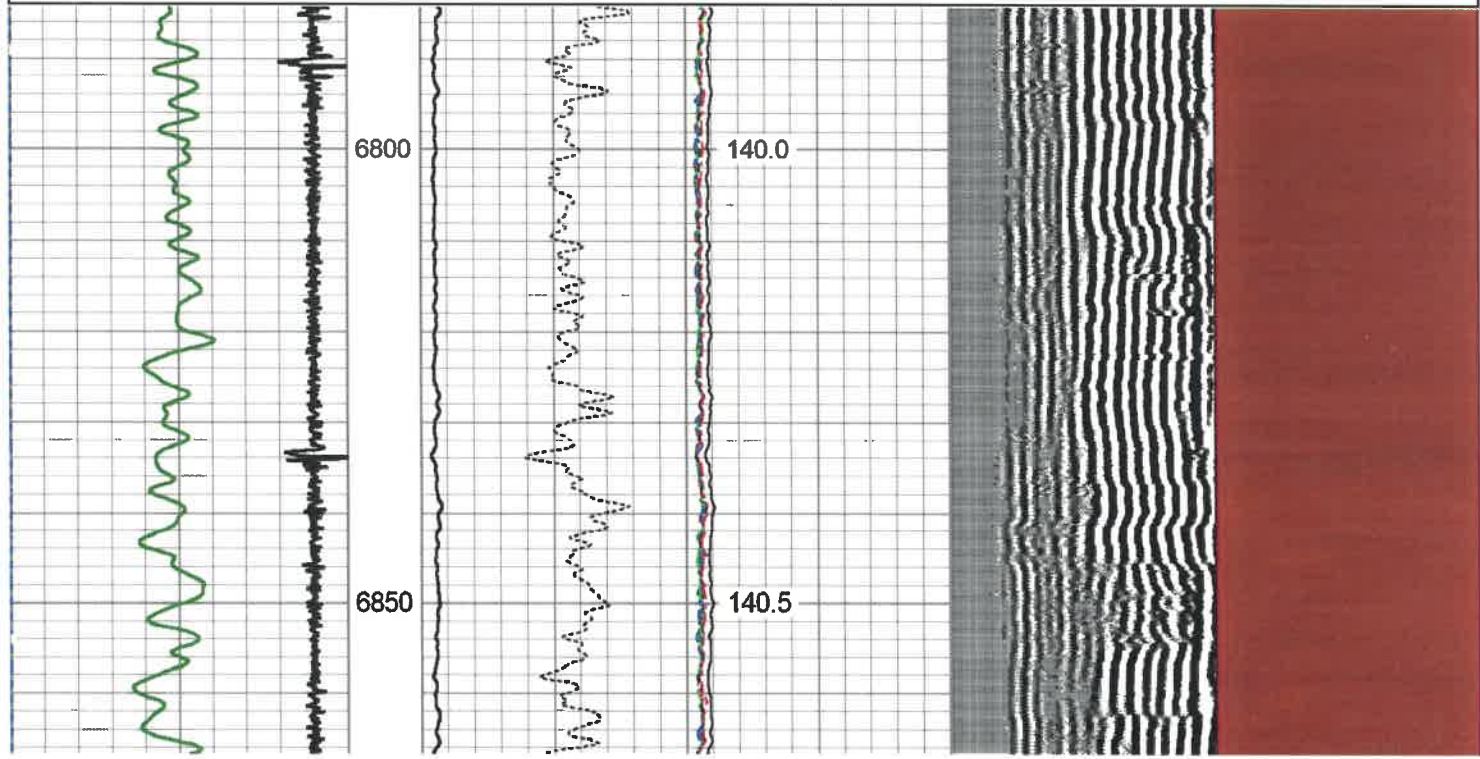


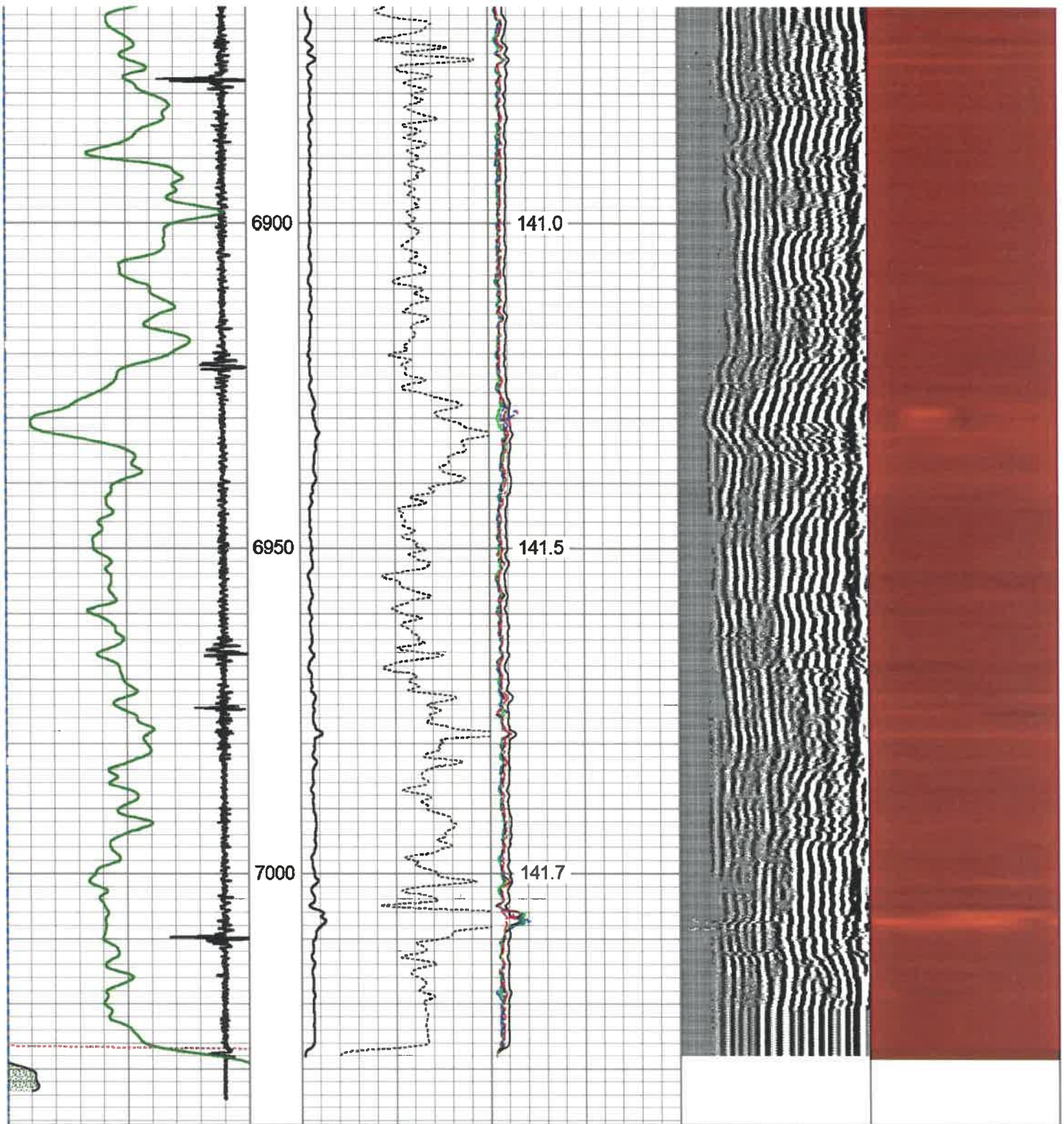
## REPEAT LOG

### 1500 PSI

Database File e:\antero\_hogue\_lancaster\_1h\_june-19-2020.db  
 Dataset Pathname pass4  
 Presentation Format 9rcbl  
 Dataset Creation Fri Jun 19 10:45:23 2020  
 Charted by Depth in Feet scaled 1:240

265	Travel Time (usec)	165	0	Amplitude (mV)	100	-5	Sector 1	150	Variable Density	1	Cement Map	8
9	Casing Collar	-1	Amplified Amplitude	-5	Sector 2	150	200	(usec)	1200			
0	Gamma Ray (GAPI)	150	0	(mV)	10	-5	Sector 3	150				
0	Line Tension (lb)	5000				-5	Sector 4	150				
						-5	Sector 5	150				
						-5	Sector 6	150				
						-5	Sector 7	150				
						-5	Sector 8	150				
							TEMP					
							(degF)					





265	Travel Time (usec)	165
9	Casing Collar	-1
0	Gamma Ray (GAPI)	150
0	Line Tension (lb)	5000

0	Amplitude (mV)	100	-5	Sector 1	150
	Amplified Amplitude		-5	Sector 2	150
0	(mV)	10	-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  
200 (usec) 1200

1 Cement Map 8



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-Probe275 2.75" Centralizer	2.88	2.75	20.00	
HeadVolt	16.99						
Temp	14.14						
				RBT-Probe275T (FW1312-32) Probe 2.75" Radial with Integral Temperature Sub	9.39	2.75	90.00
WVFS8	11.91						
WVFS7	11.91						
WVFS6	11.91						
WVFS5	11.91						
WVFS4	11.91						
WVFS3	11.91						
WVFS2	11.91						
WVFS1	11.91						
WV3FT	11.91						
WV5FT	10.91						
WVFCAL	7.66						
HEADVOLT	7.66						
			CENT-Probe275 2.75" Centralizer	2.88	2.75	20.00	
CCL	3.88						
GR	2.54		GR-Probe (FW1211-86) Probe 2 3/4" Logging Gamma Ray	4.78	2.75	57.00	

Dataset: antero\_hogue\_lancaster\_1h\_june-19-2020.db: field/well/run1/pass4  
 Total length: 20.92 ft  
 Total weight: 192.00 lb

O.D.: 2.75 in

# Log Variables

DatabaseE:\antero\_hogue\_lancaster\_1h\_june-19-2020.db  
Dataset field/well/run1/pass6/\_vars\_

## Top - Bottom

BHTEMP_Src TEMP	BOREID in 6.75	BOTTEMP degF 100	CASEOD in 5	CASETHCK in 0	CASEWGHT lb/ft 18	MAXAMPL mV 77	MINAMPL mV 2.4
MINATTN db/ft 0.8	PERFS No	PPT usec 215	SRFTEMP degF 0	TDEPTH 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



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