



Radial Bond  
Gamma Ray  
CCL, Temp

Company PDC Energy  
Well Brant Federal 18C  
Field Wattenberg  
County Adams State Colorado

Location: 2260 FNL & 329' FEL  
API #: 05-001-10329  
Other Services: None

Company PDC Energy  
Well Brant Federal 18C  
Field Wattenberg  
County Adams  
State Colorado

Date 20-May-2023  
Run Number One  
Depth Driller 23409 FT  
Depth Logger 8124 FT  
Bottom Logged Interval 8121 FT  
Top Log Interval Surface  
Open Hole Size 8.5  
Type Fluid Water  
Density / Viscosity 8.33  
Max Recorded Temp. 232 Degree/F  
Estimated Cement Top See log  
Time Well Ready ROA  
Time Logger on Bottom 06:15  
Equipment Number 303  
Location Brant Federal  
Recorded By G. Lueck  
Witnessed By Lee Damon

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

Casing Record	Size	Wd/Ft	Top	Bottom
Surface String	9 5/8"	36	Surface	2154 FT
Prot. String	5 1/2"	20	Surface	23403 FT
Production String				
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 ran at Customer Request

Depth Reference to Kelly Bushing at 25 FT

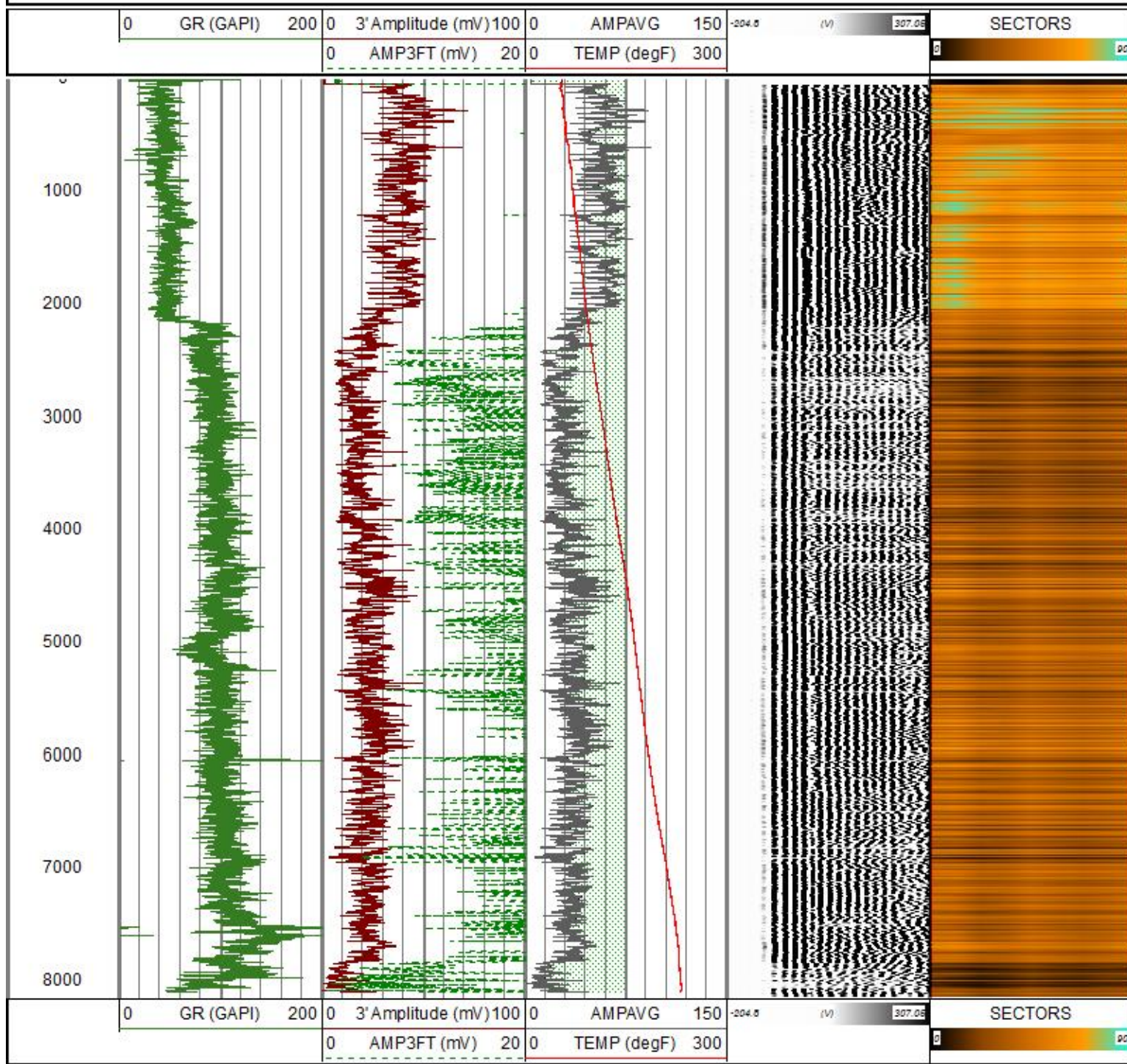
Marker Joint at 7193 FT to 7207 FT

Thank You For Using GO Wireline



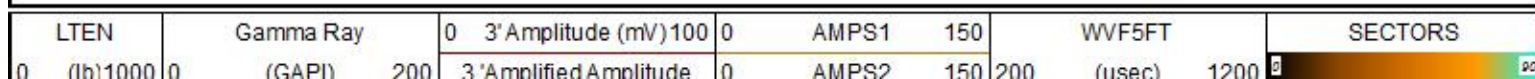
Main Pass

Database File brant federal\brant federal 18c final\pdc\_brantfederal\_18c\_rcbl\_20\_may\_2023\_final.db  
 Dataset Pathname pass4.1  
 Presentation Format rbl\_1inch\_2020\_t  
 Dataset Creation Sat May 20 07:38:10 2023  
 Charted by Depth in Feet scaled 1:15000

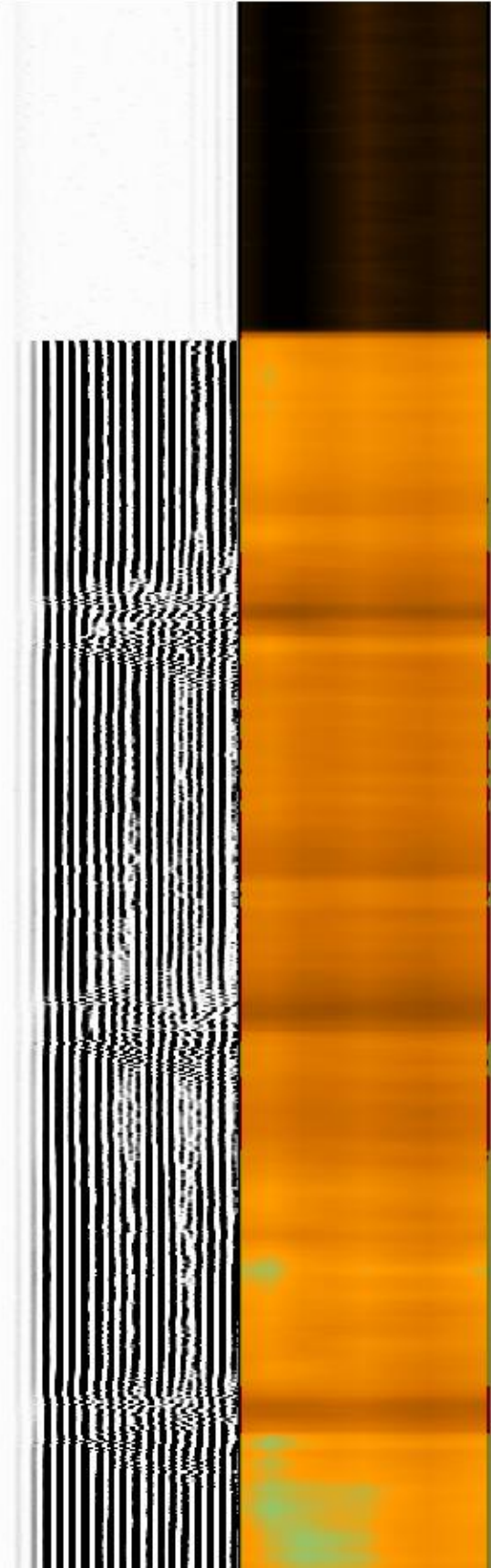
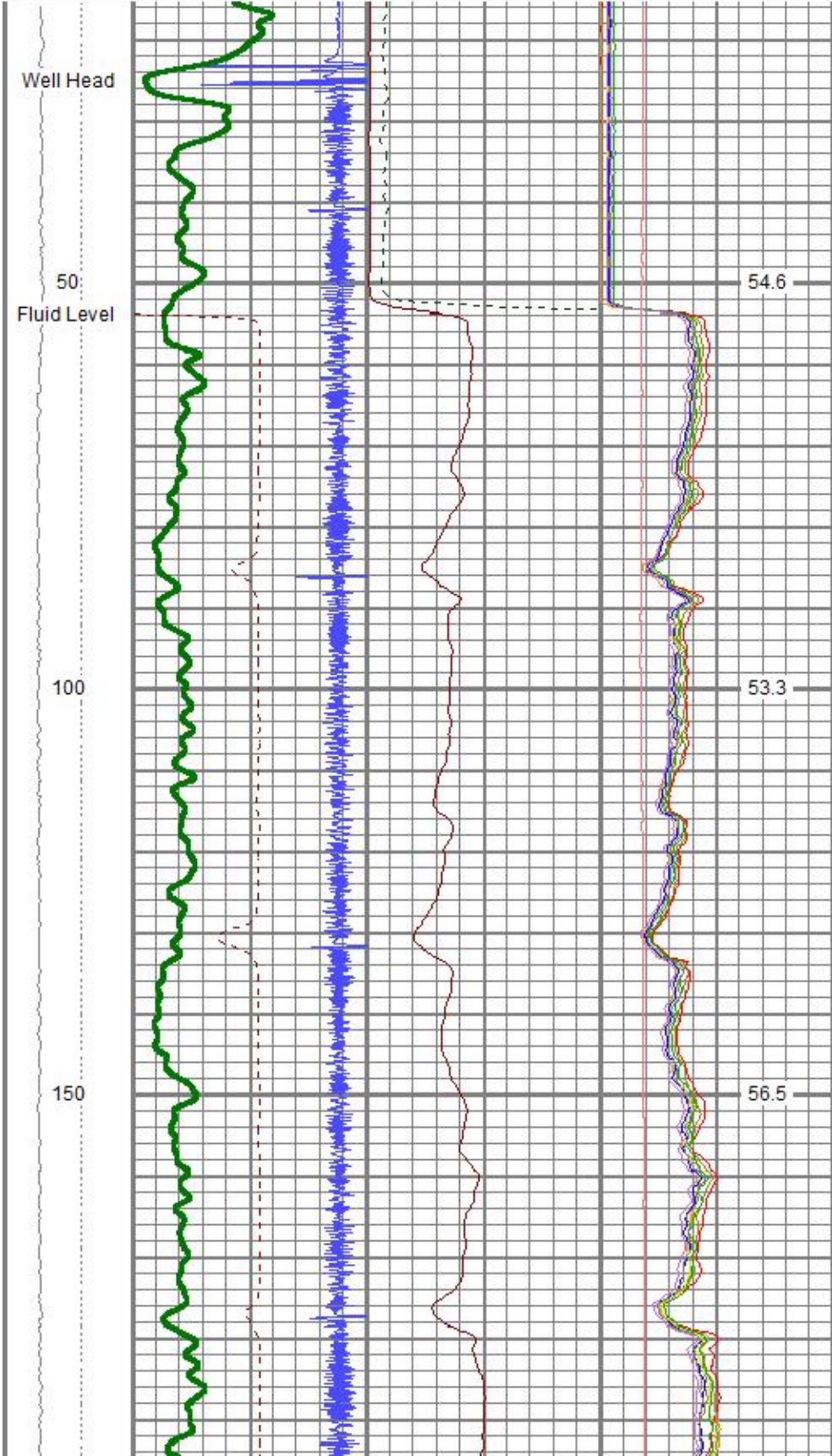


# Main Pass

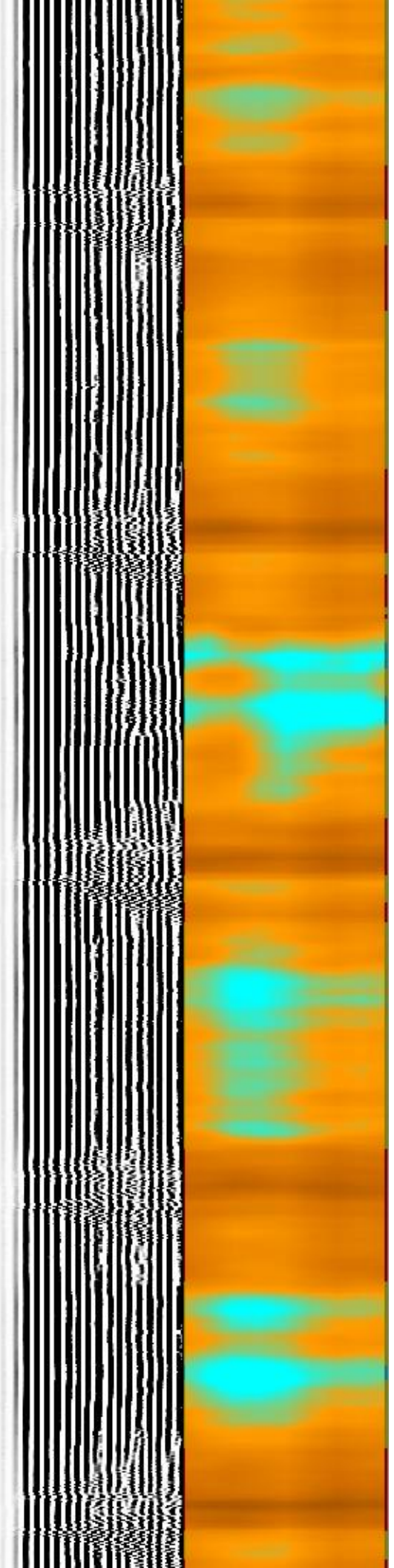
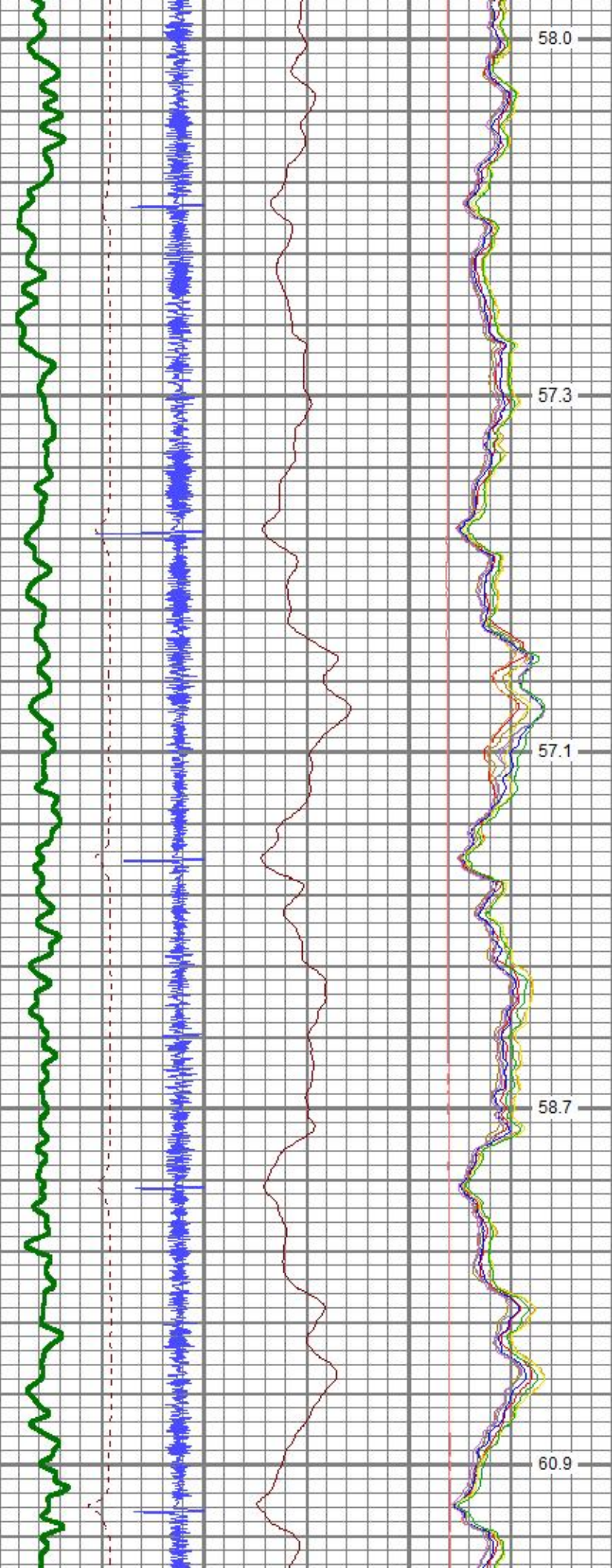
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 Dataset Pathname pass4.1  
 Presentation Format rbl\_all\_8\_2020\_t  
 Dataset Creation Sat May 20 07:38:10 2023  
 Charted by Depth in Feet scaled 1:240



LSPD (ft/min)	380	TT3FT (usec)	180	0	(mV)	20	0	AMPS3	150
		CCL					0	AMPS4	150
500	-500						0	AMPS5	150
							0	AMPS6	150
							0	AMPS7	150
							0	AMPS8	150
							0	TEMP (degF)	300
								TEMP (degF)	



200  
250  
300  
350  
400



450

500

550

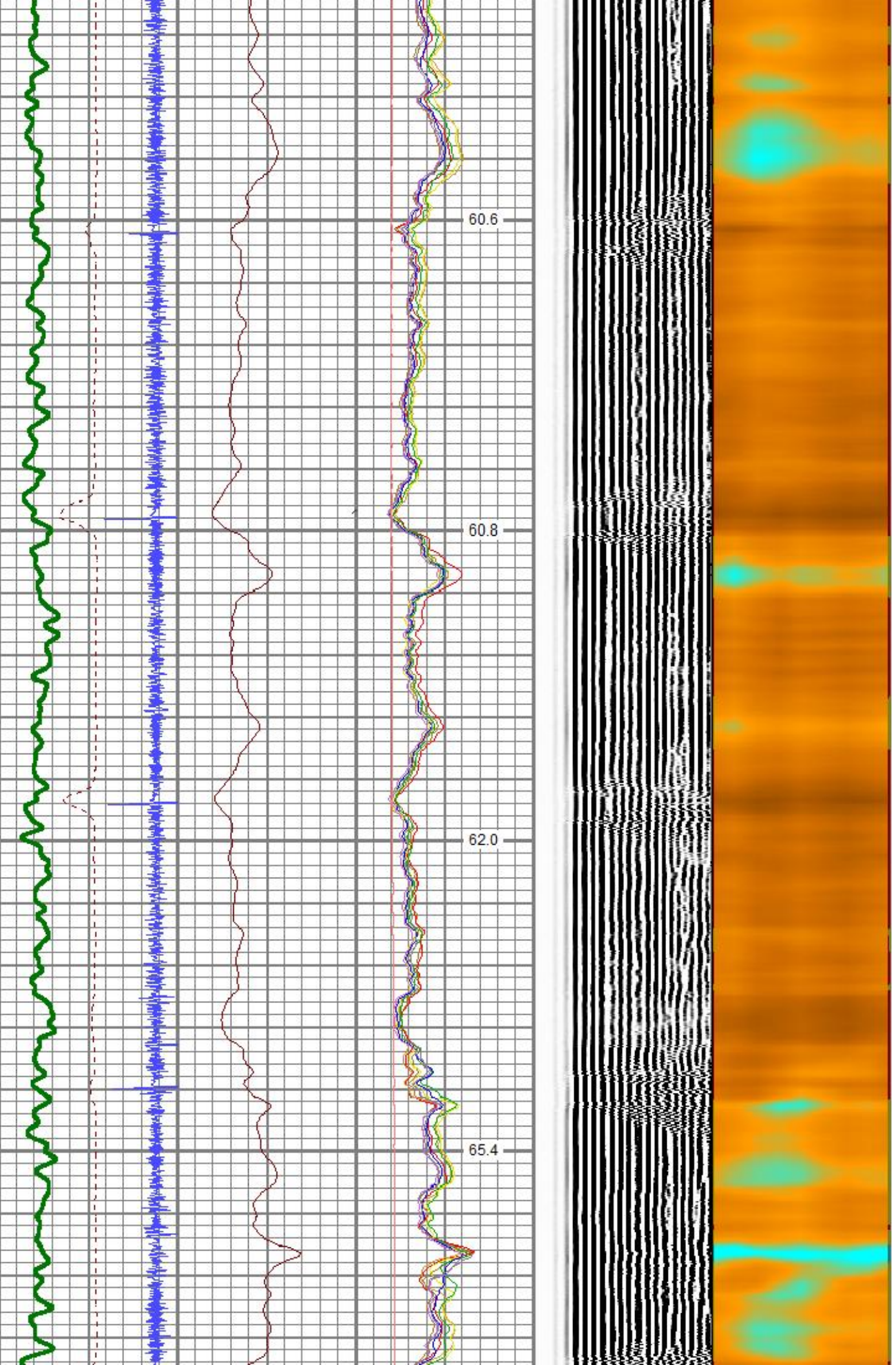
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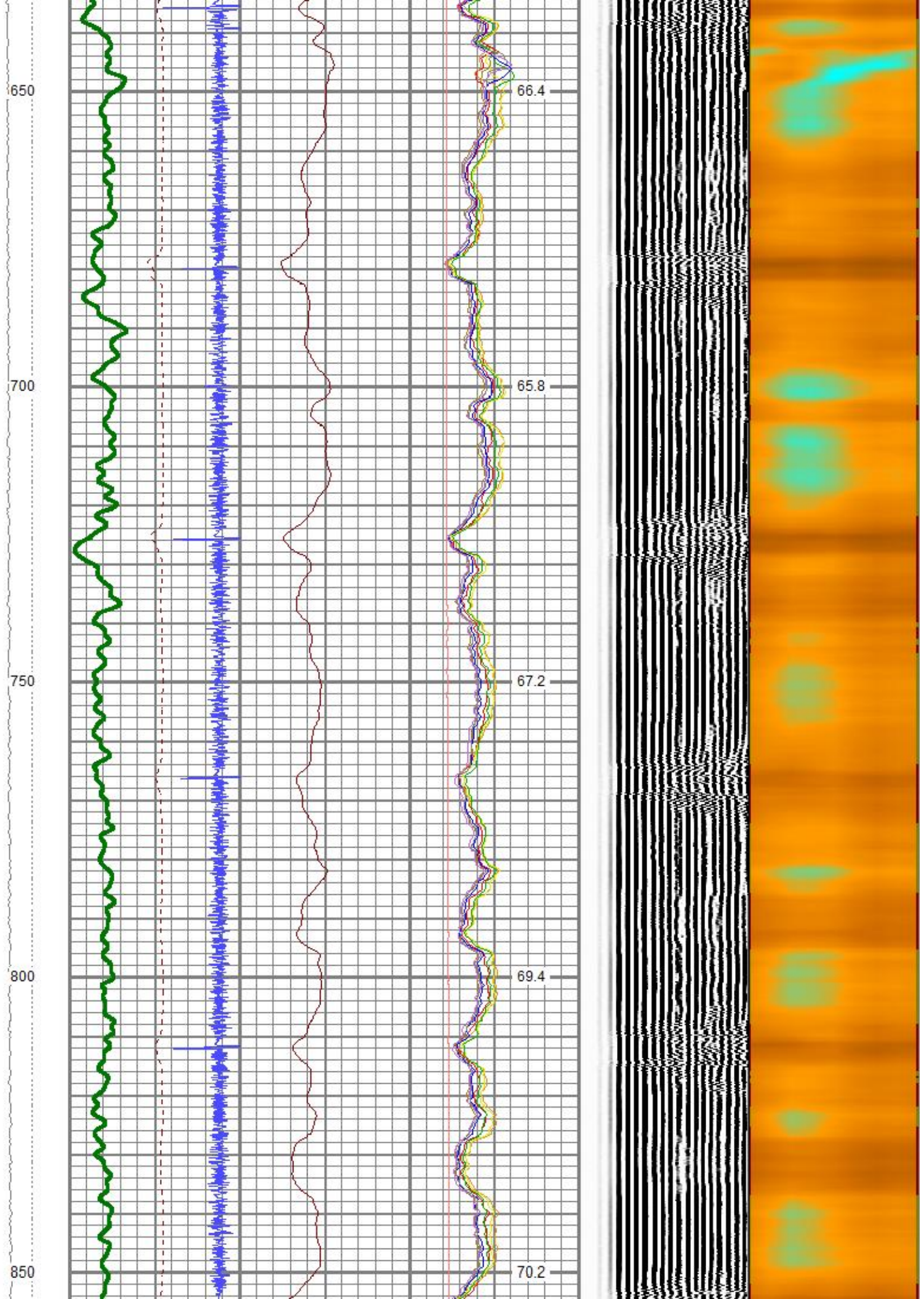
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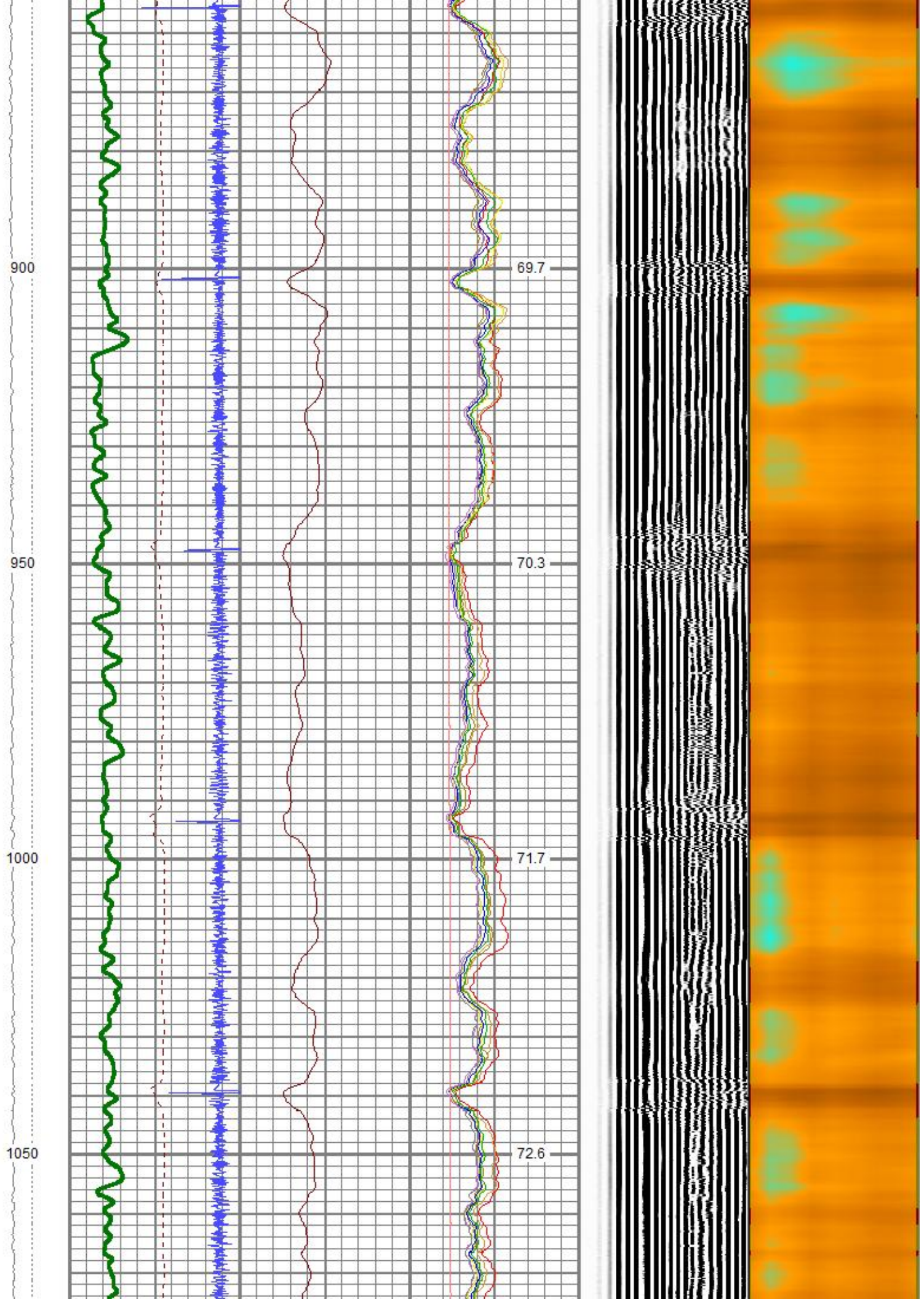
60.8

62.0

65.4







1100

1150

1200

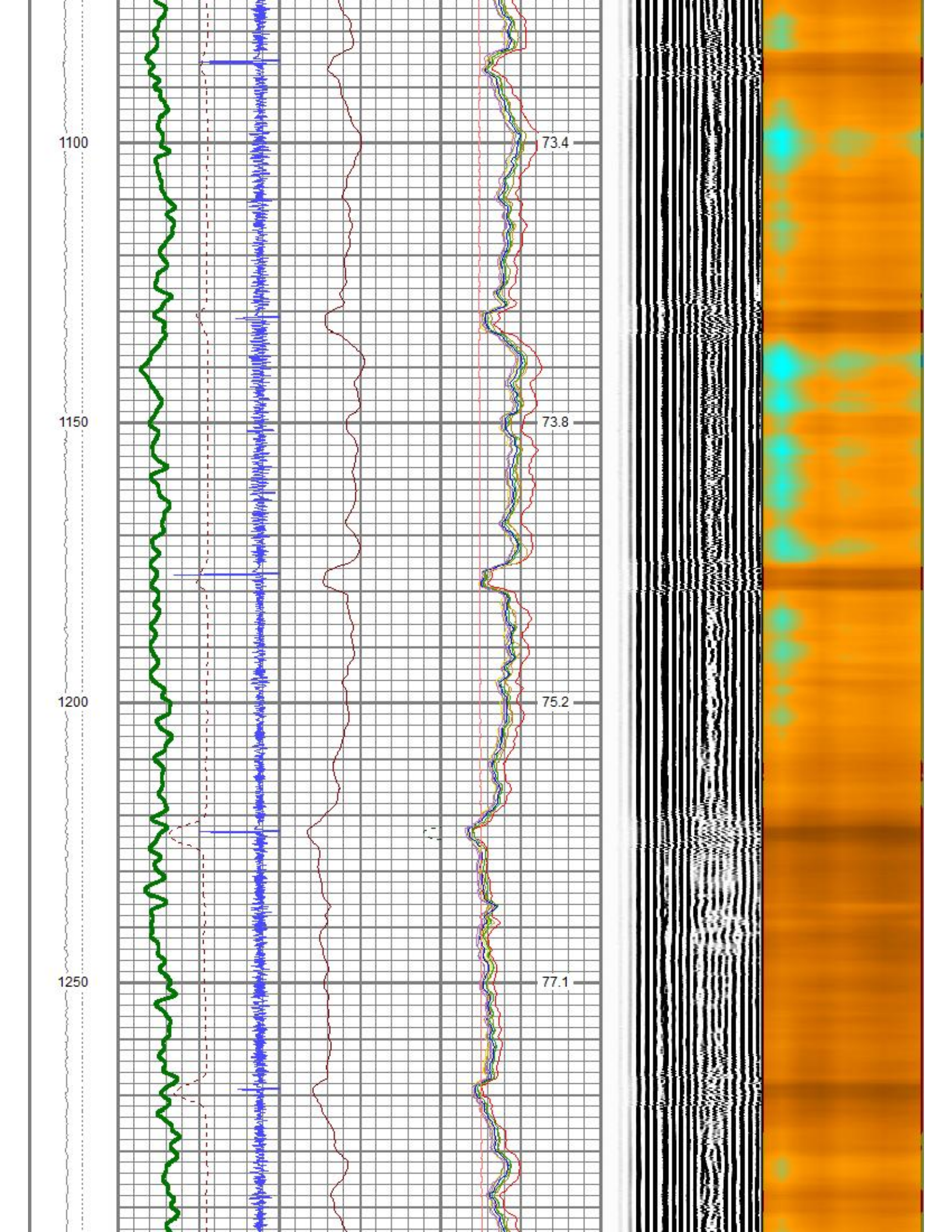
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73.4

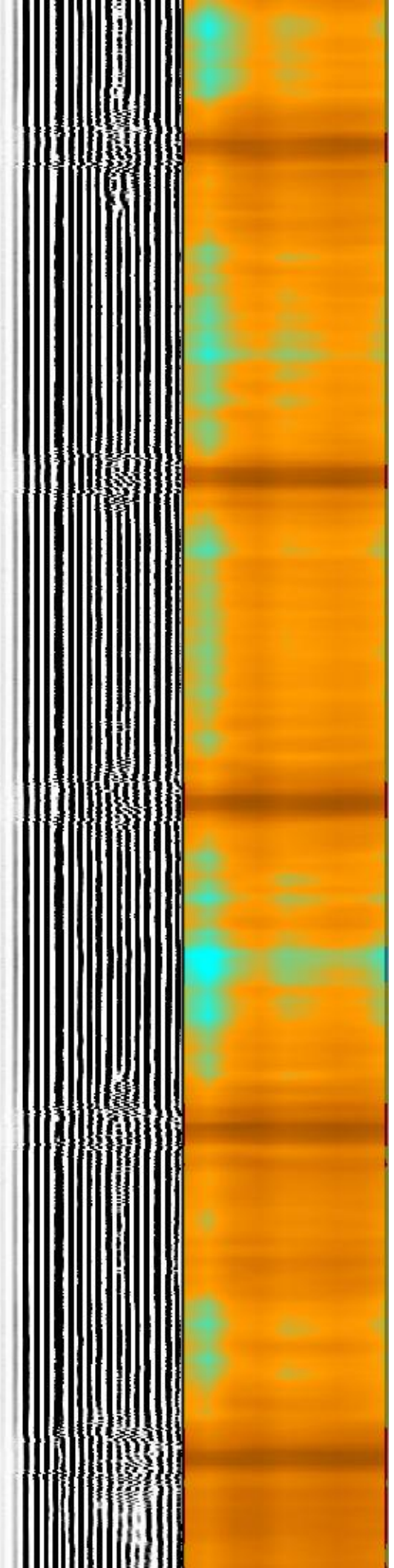
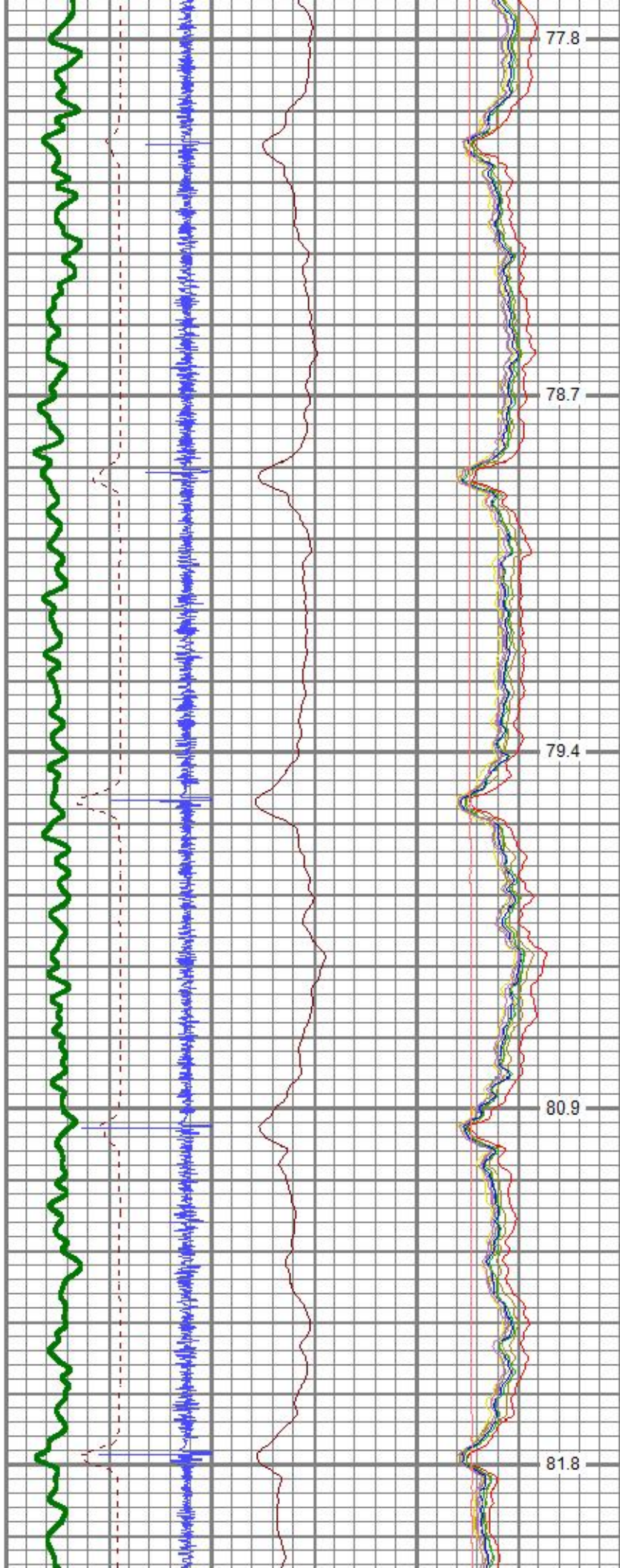
73.8

75.2

77.1



1300  
1350  
1400  
1450  
1500



1550

1600

1650

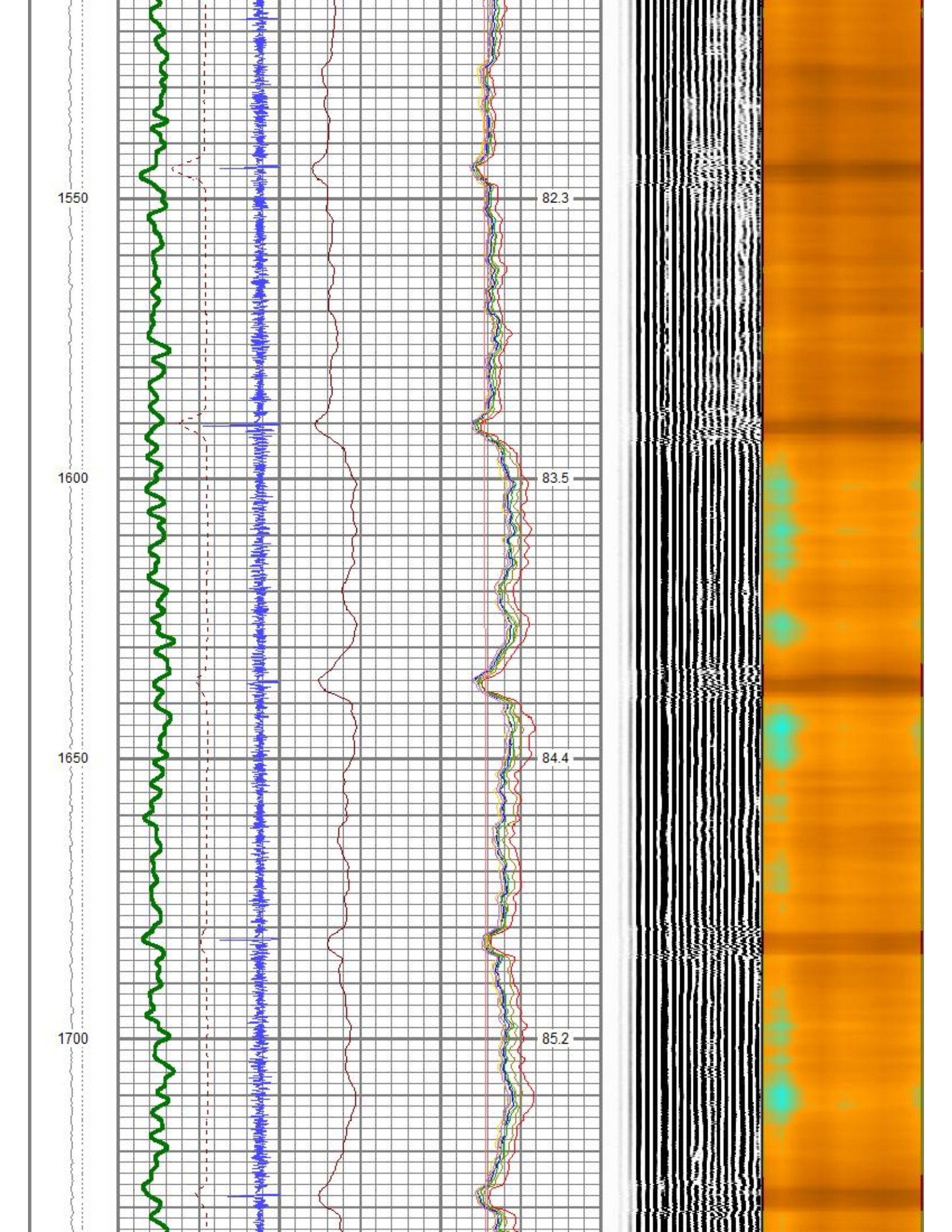
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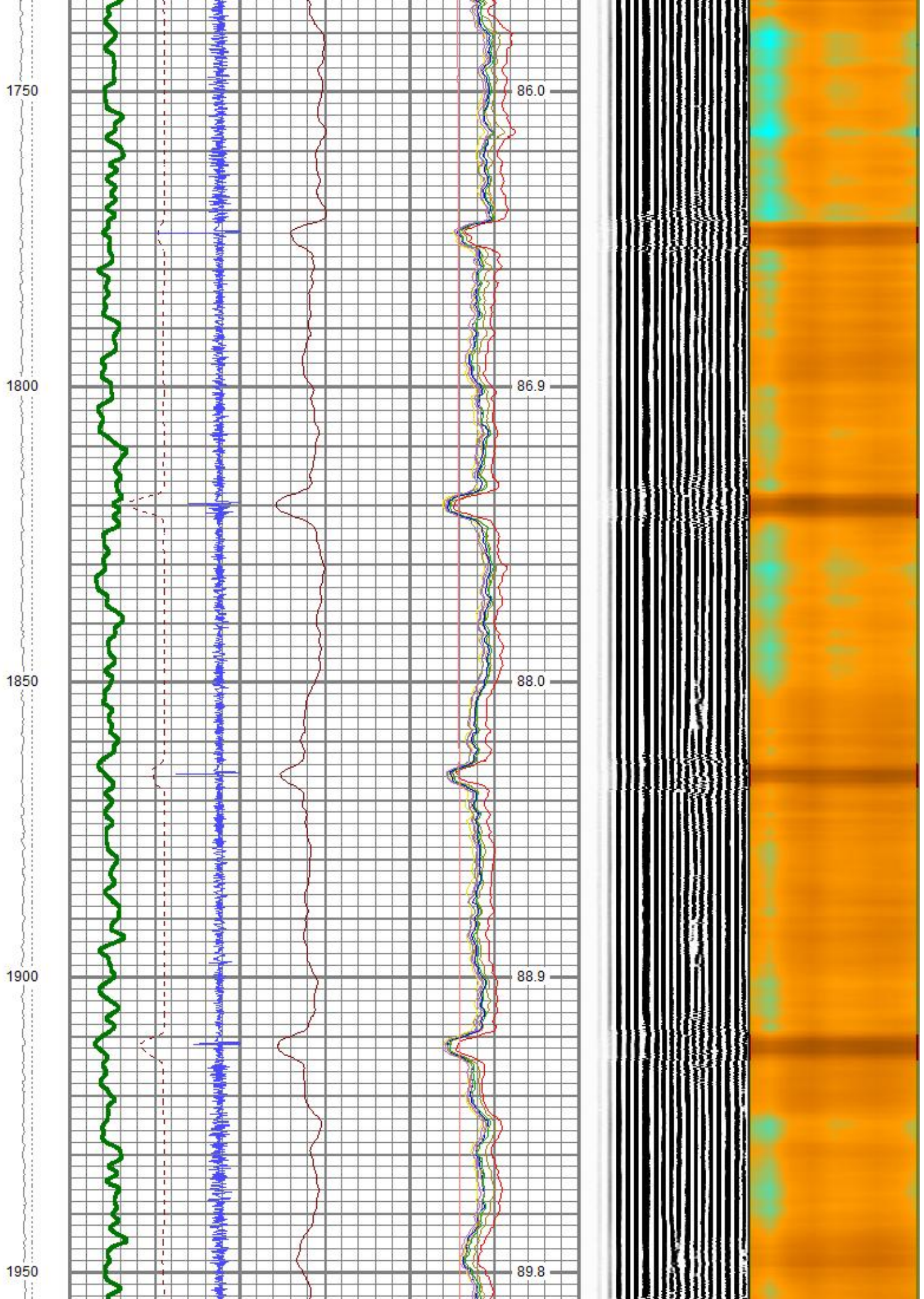
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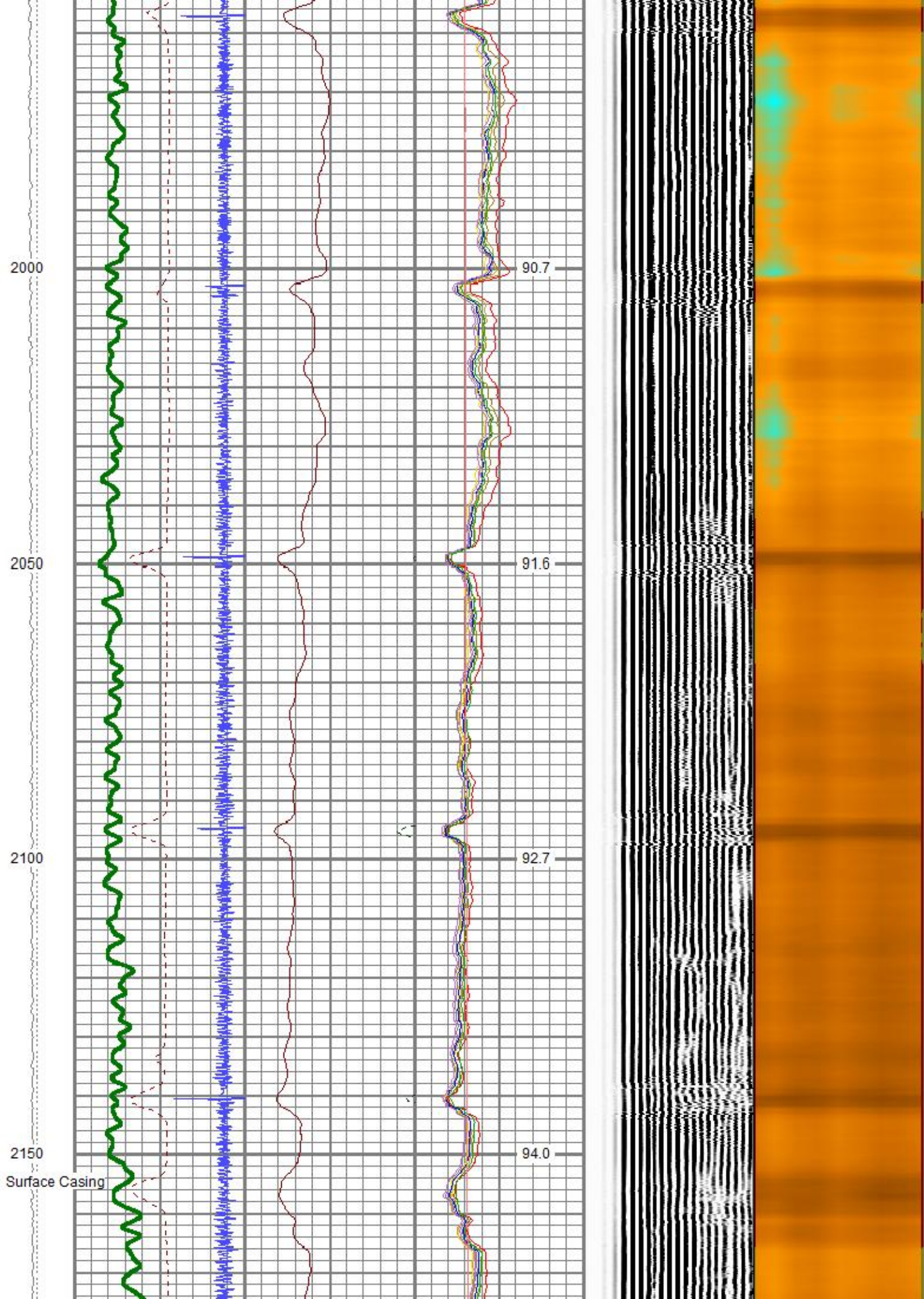
83.5

84.4

85.2







2200

2250

2300

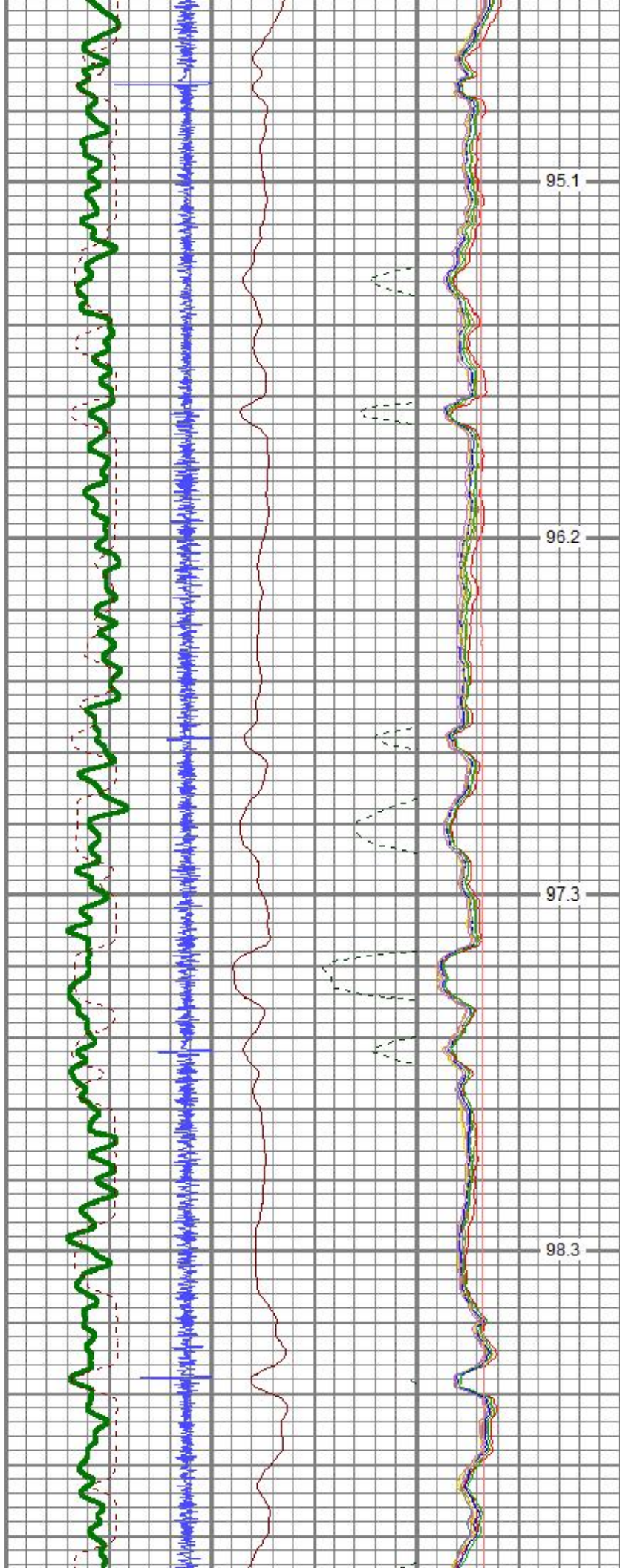
2350

95.1

96.2

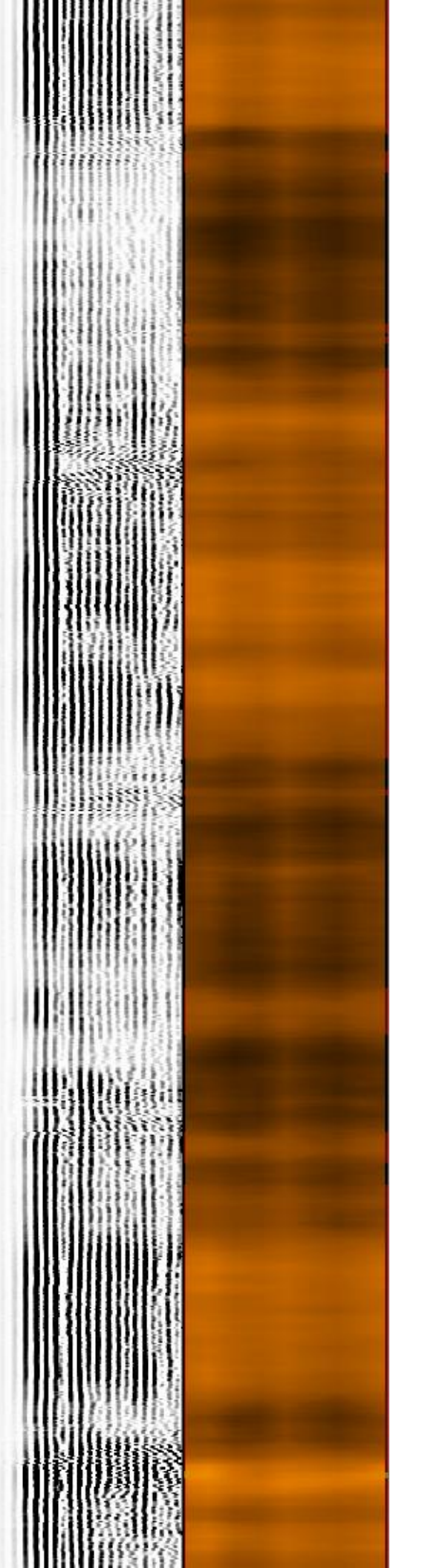
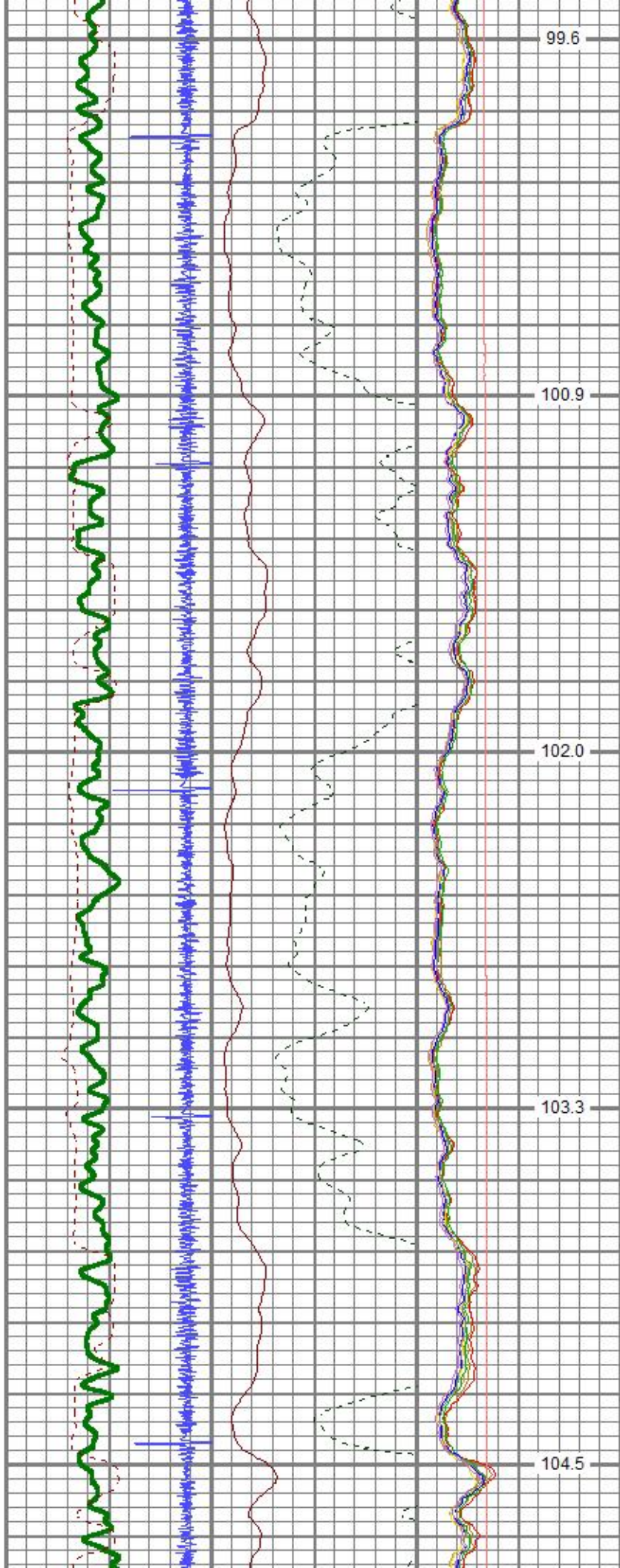
97.3

98.3



2400  
2450  
2500  
2550  
2600

99.6  
100.9  
102.0  
103.3  
104.5



2650

2700

2750

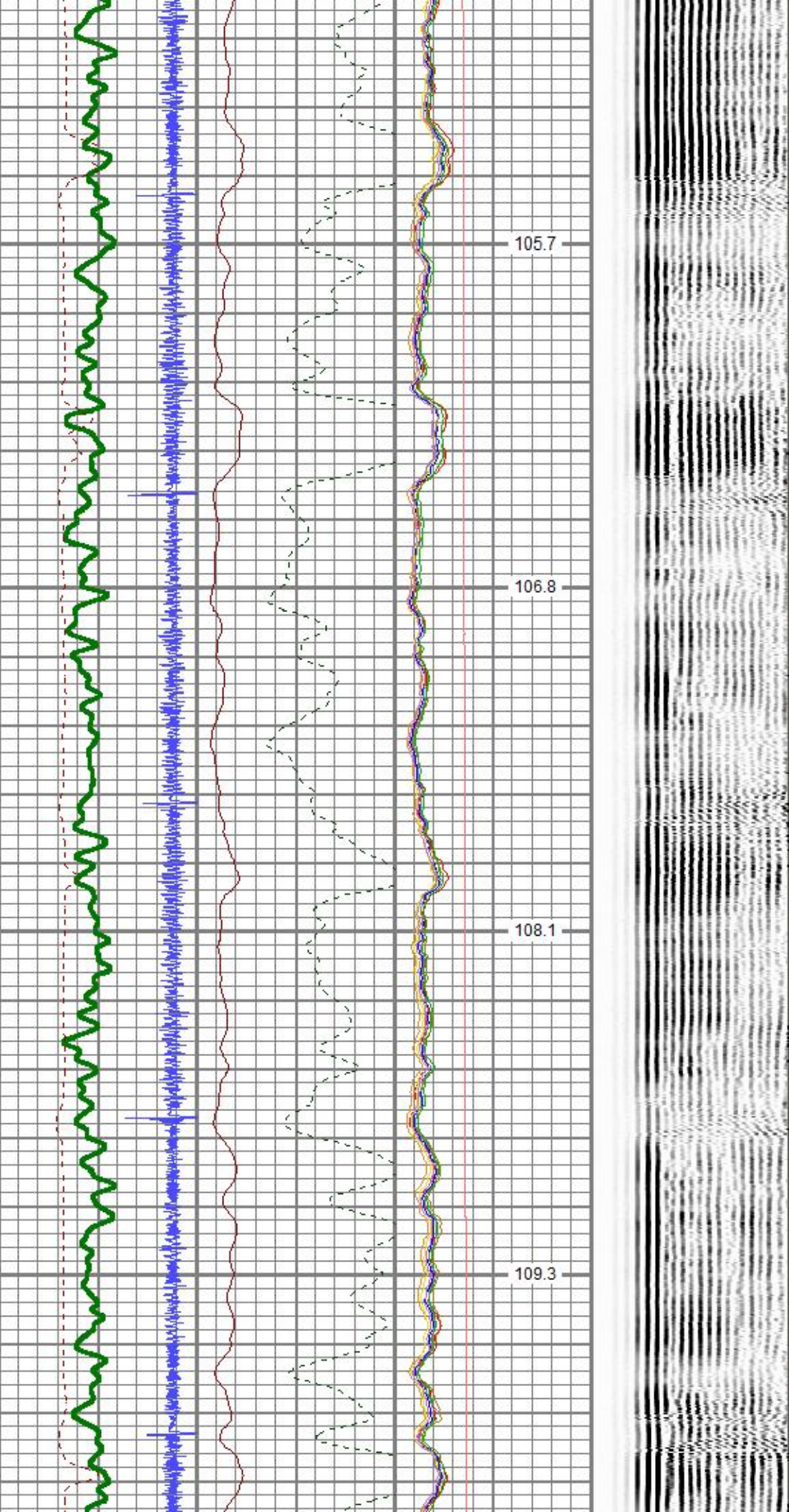
2800

105.7

106.8

108.1

109.3



2850

110.6

2900

112.1

2950

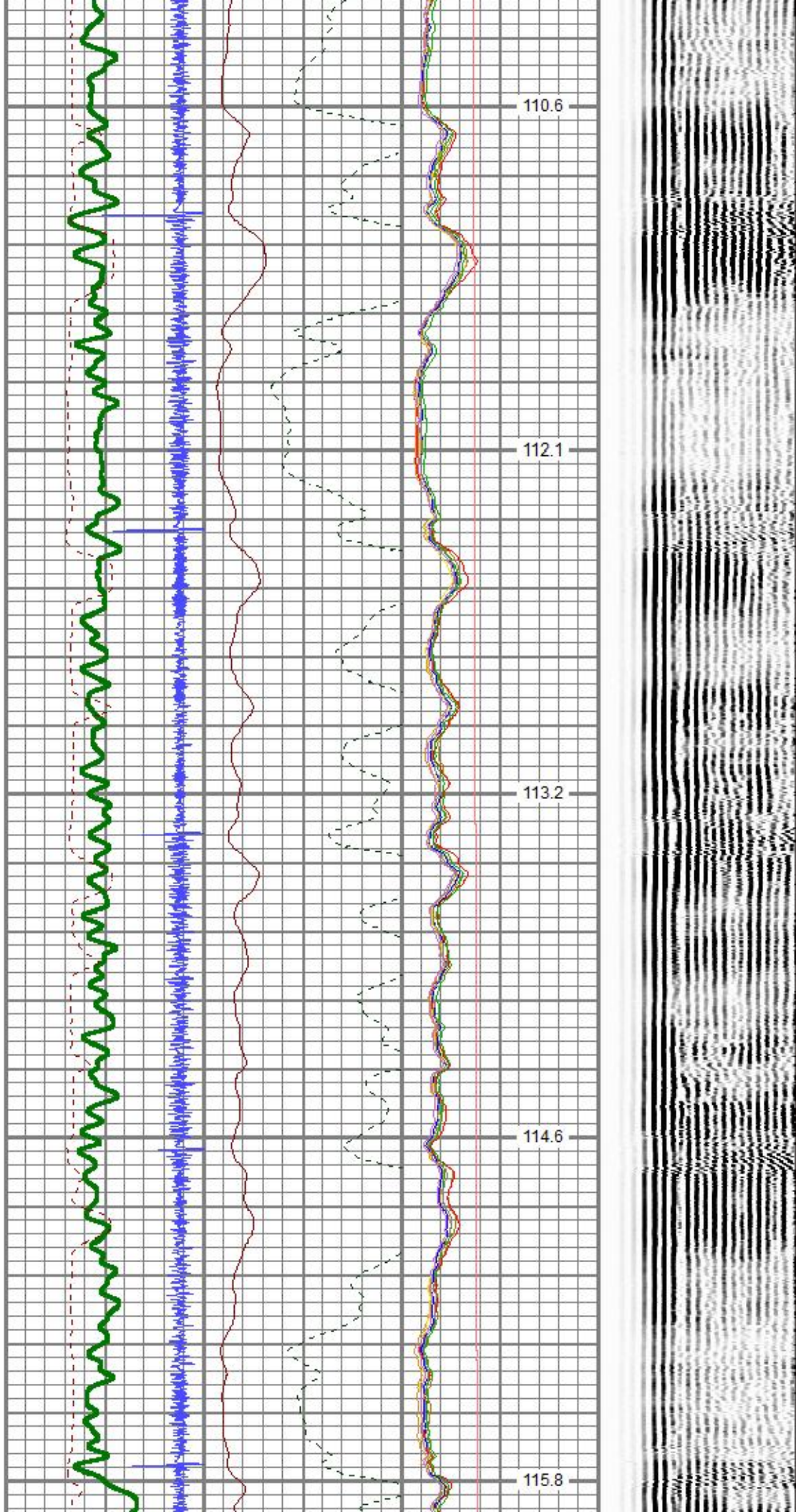
113.2

3000

114.6

3050

115.8

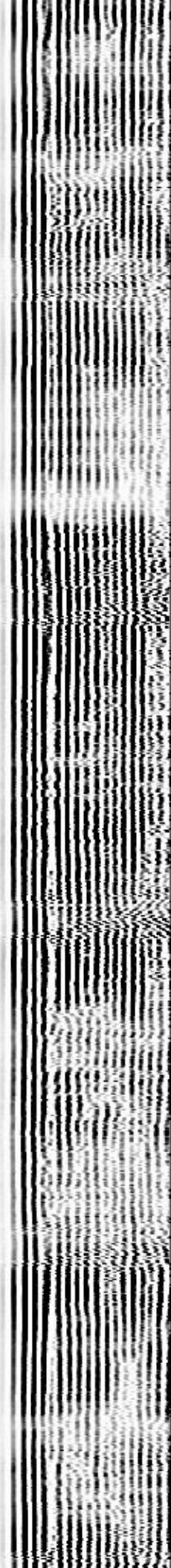
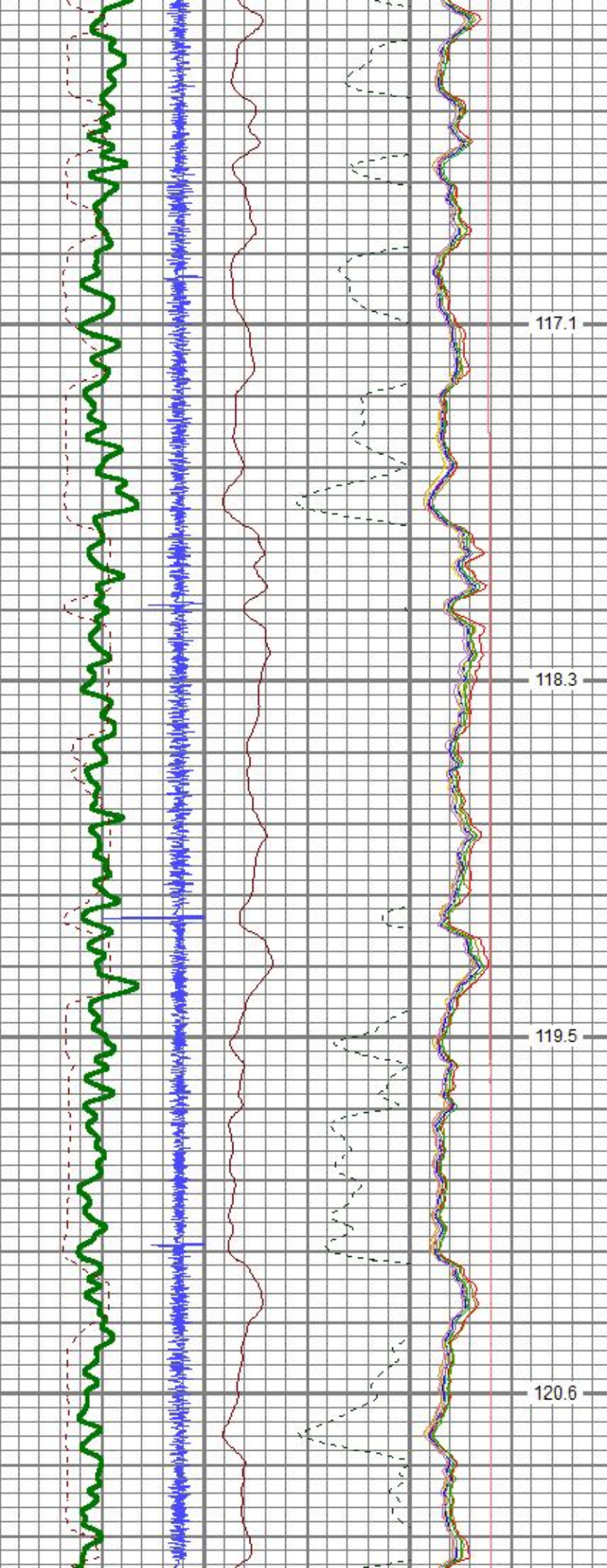


3100

3150

3200

3250



3300

3350

3400

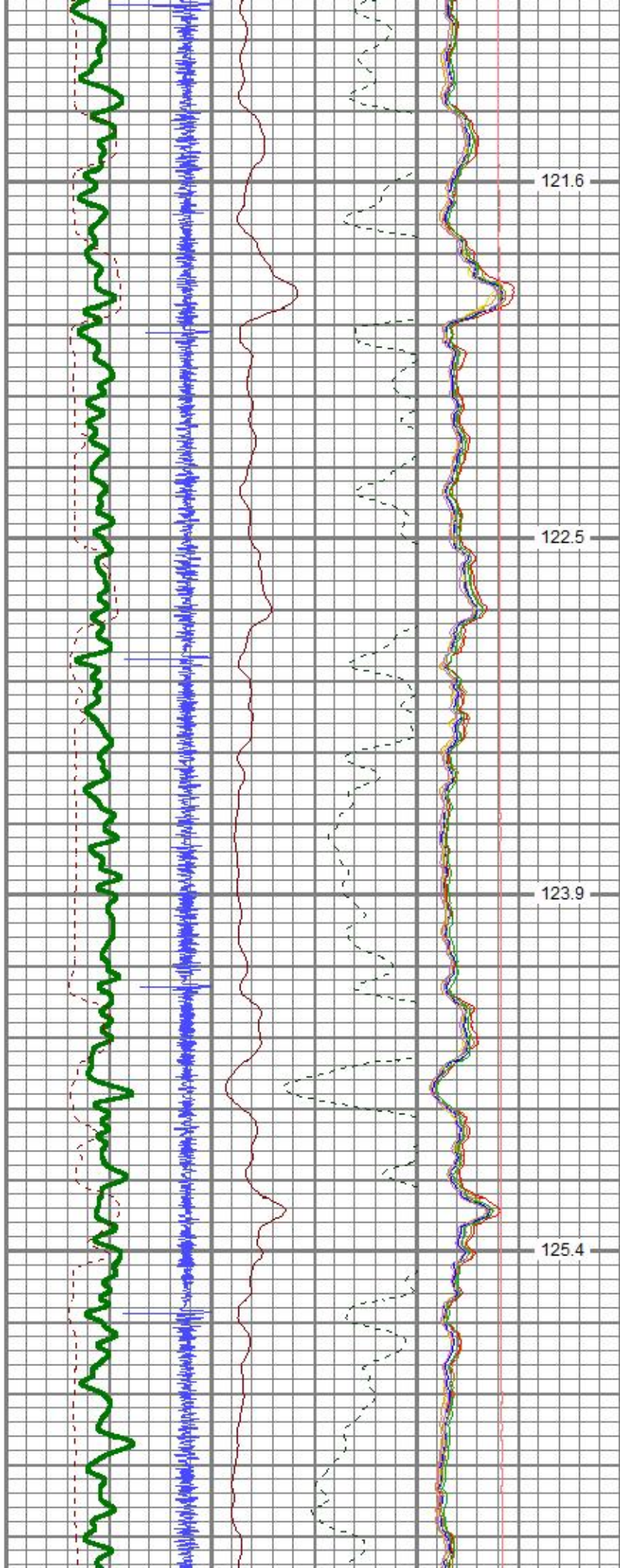
3450

121.6

122.5

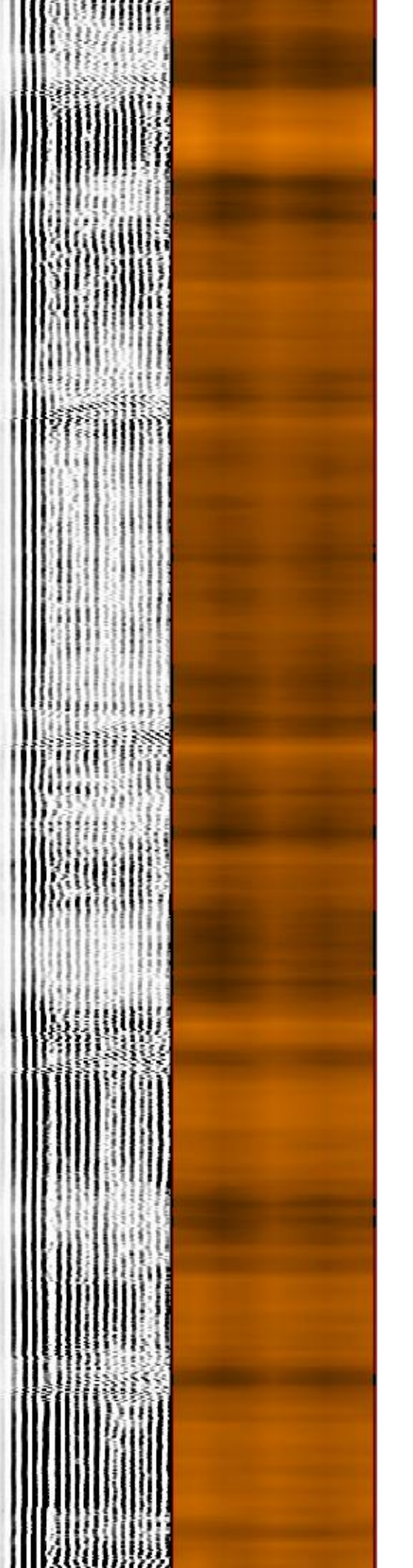
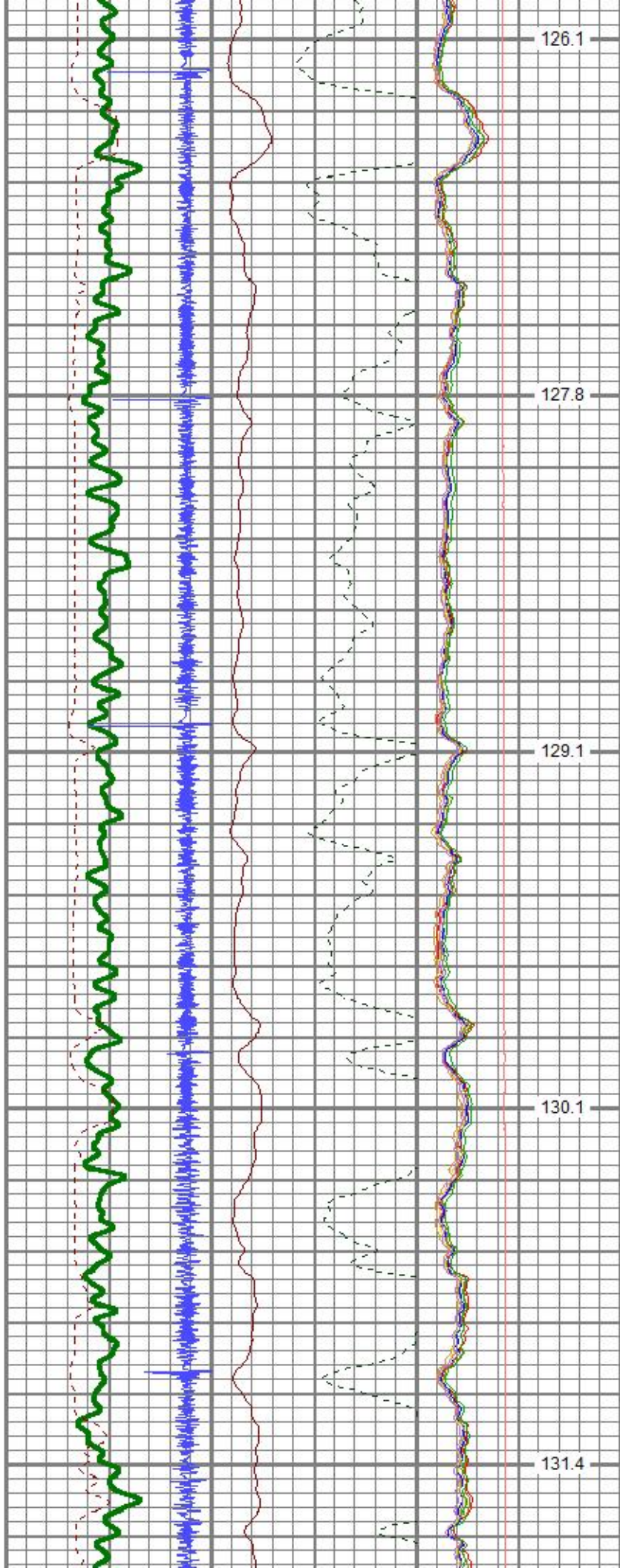
123.9

125.4



3500  
3550  
3600  
3650  
3700

126.1  
127.8  
129.1  
130.1  
131.4



3750

3800

3850

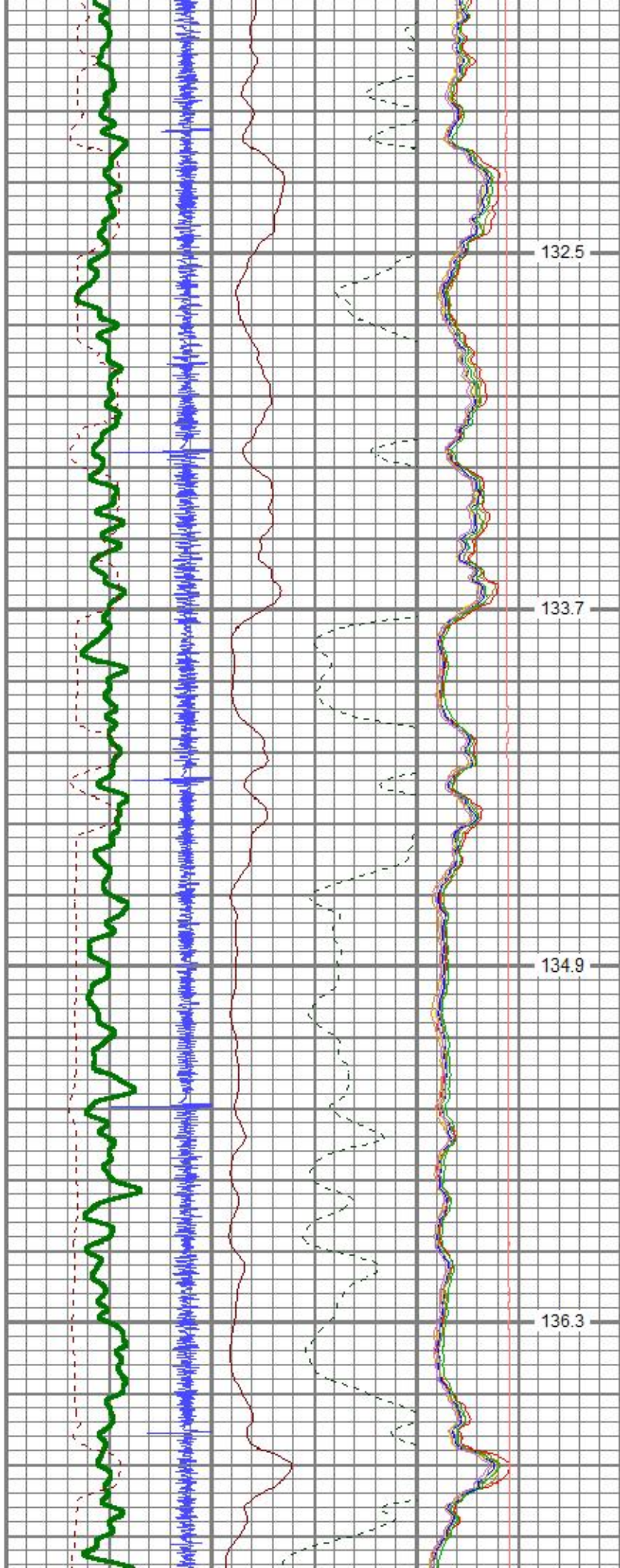
3900

132.5

133.7

134.9

136.3



3950

4000

4050

4100

4150

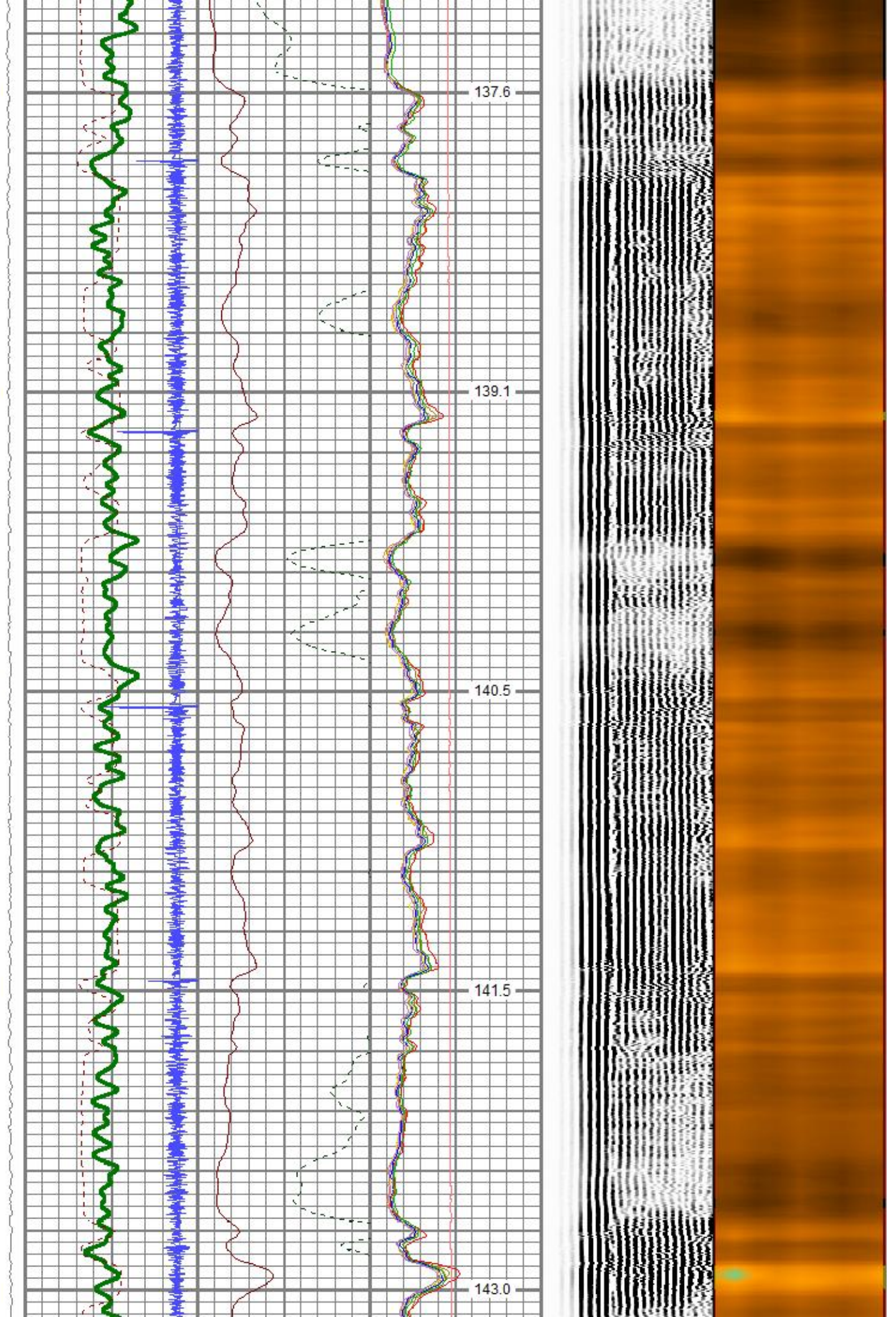
137.6

139.1

140.5

141.5

143.0



4200

4250

4300

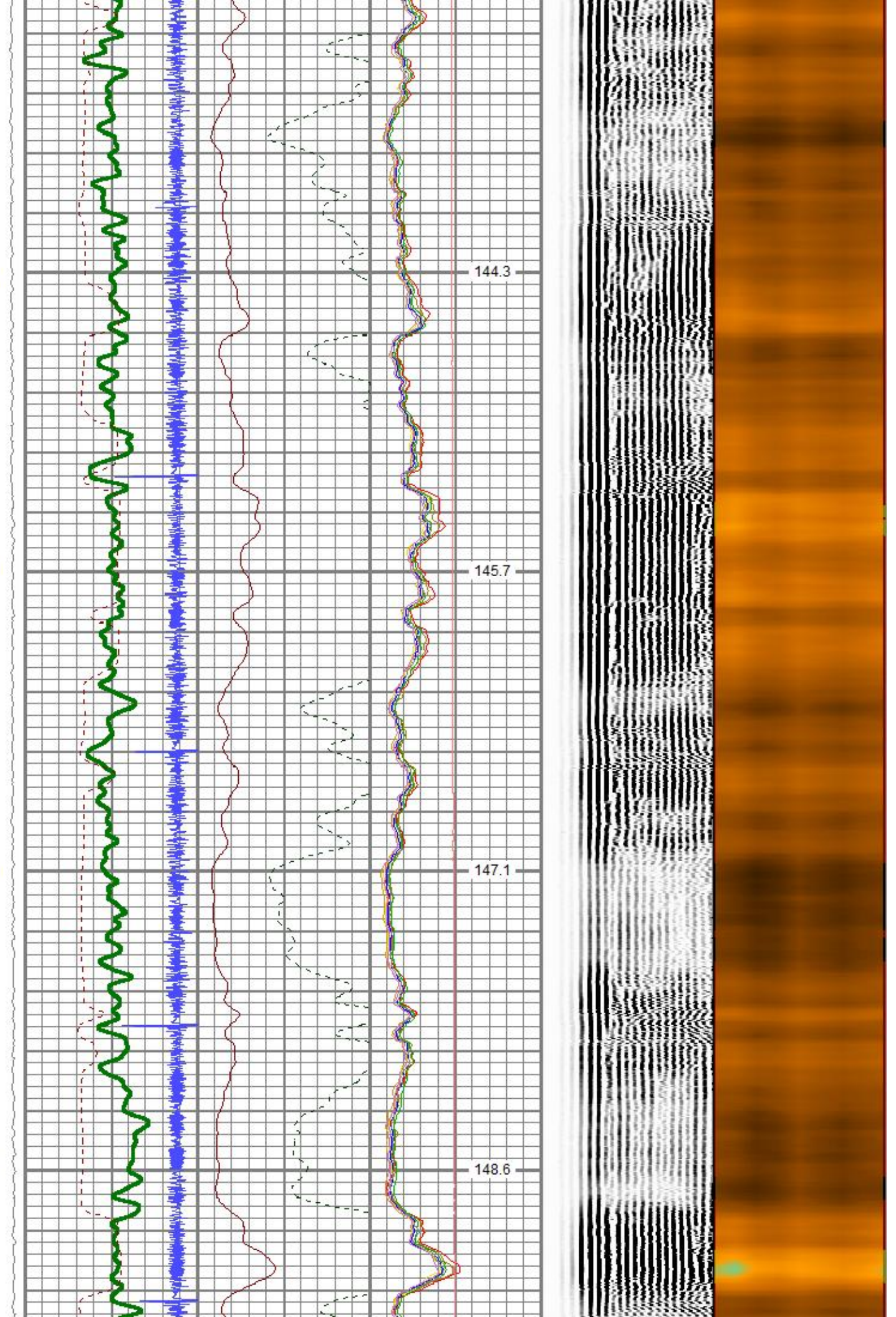
4350

144.3

145.7

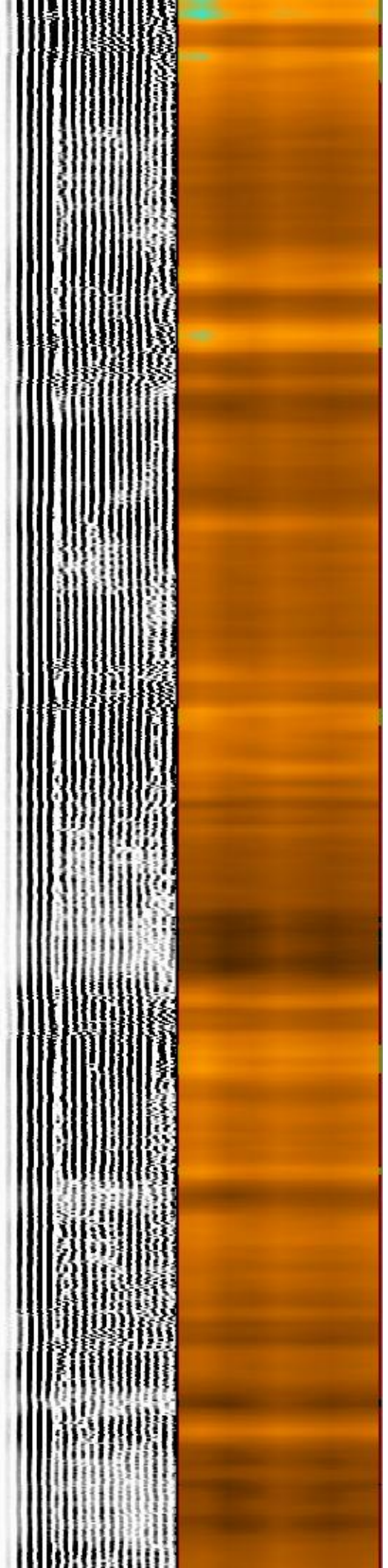
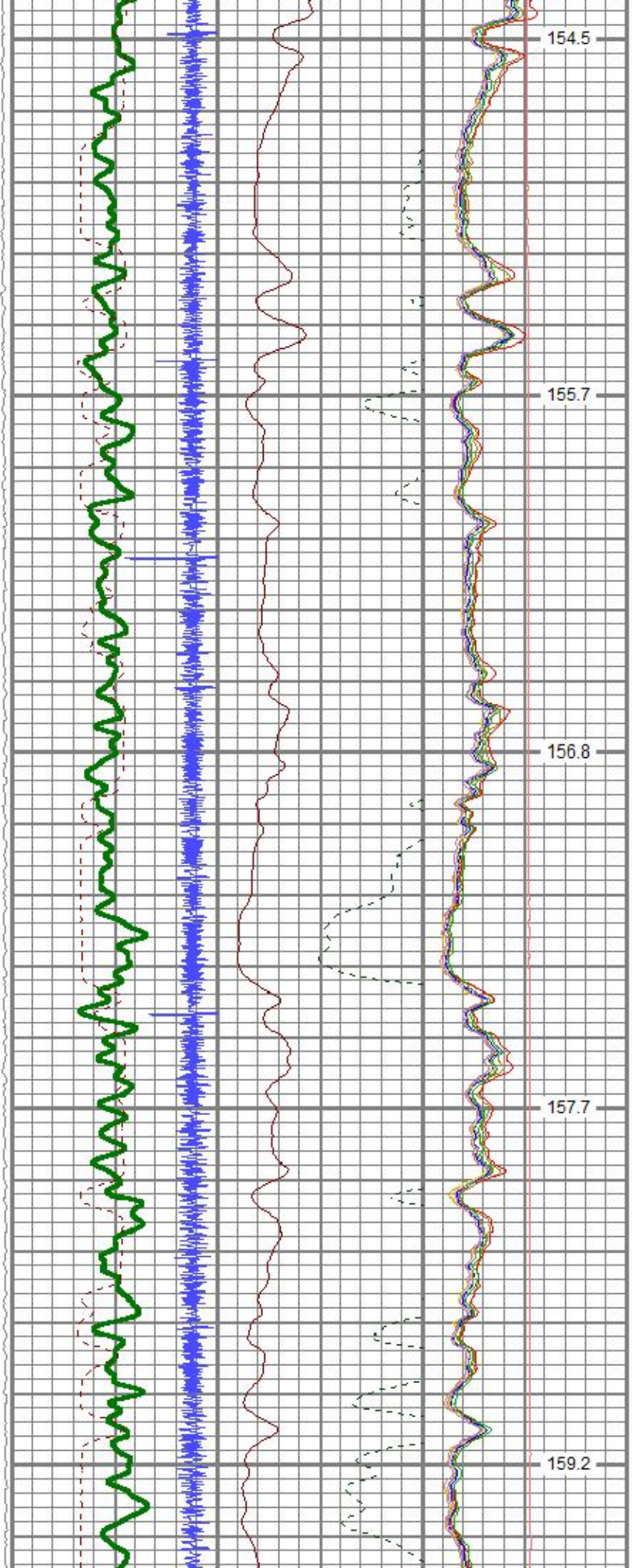
147.1

148.6





4600  
4650  
4700  
4750  
4800



4850

4900

4950

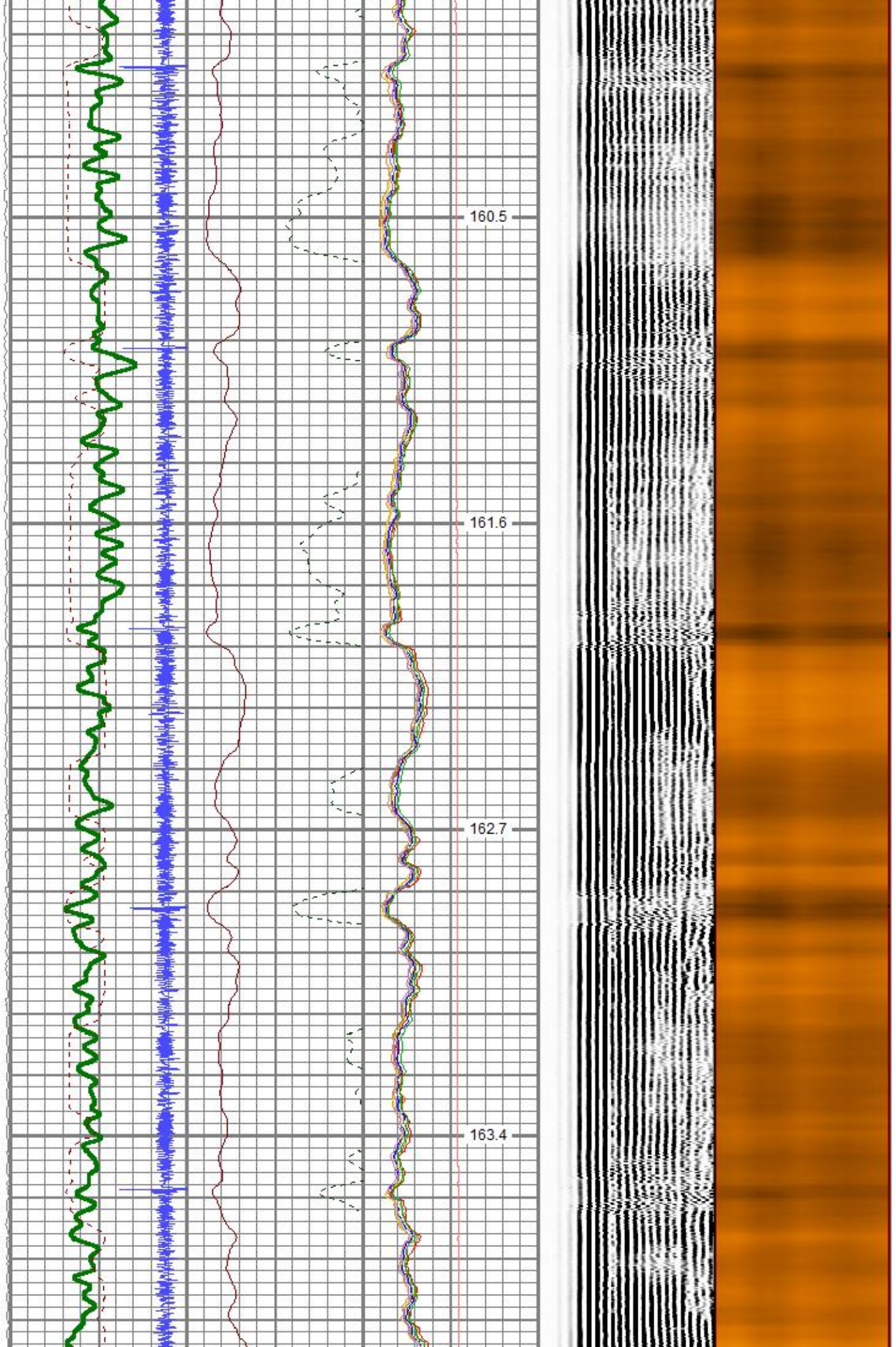
5000

160.5

161.6

162.7

163.4



5050

5100

5150

5200

5250

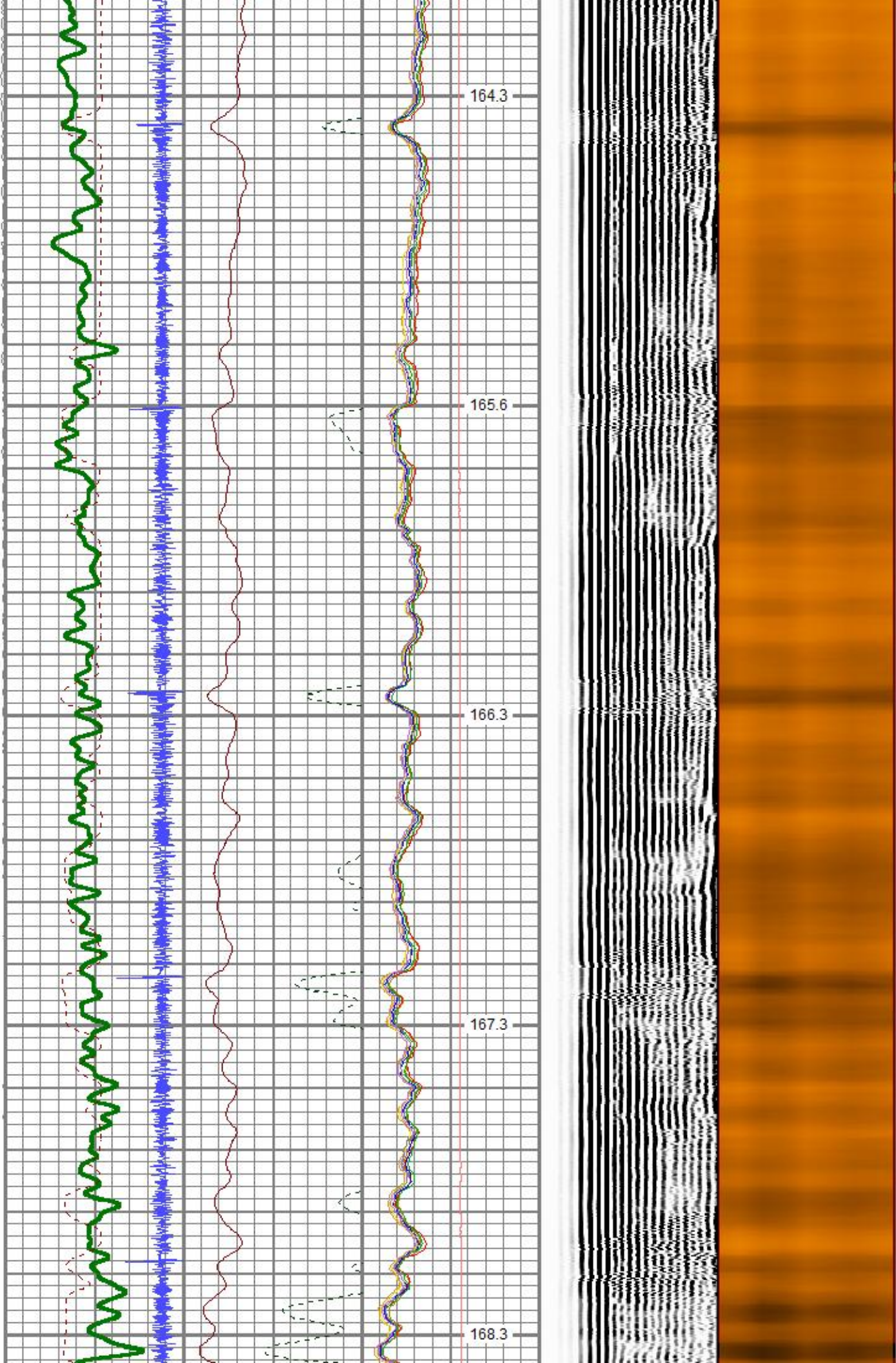
164.3

165.6

166.3

167.3

168.3



5300

5350

5400

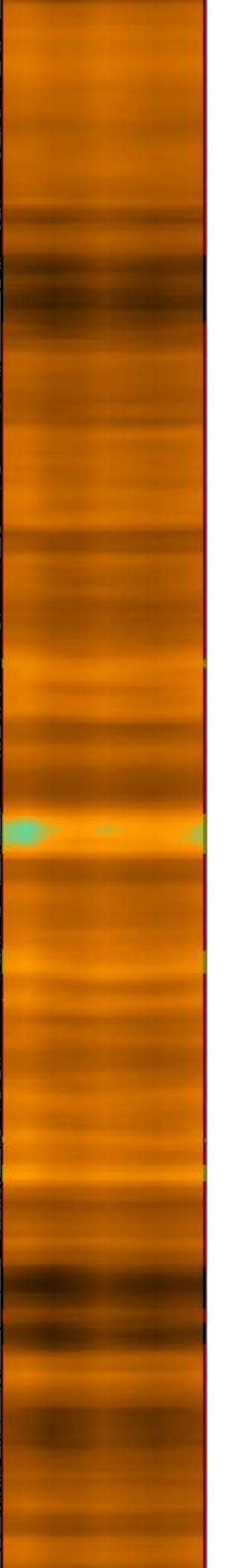
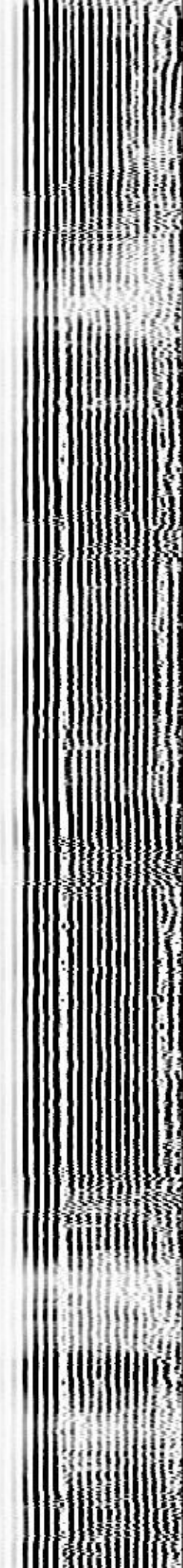
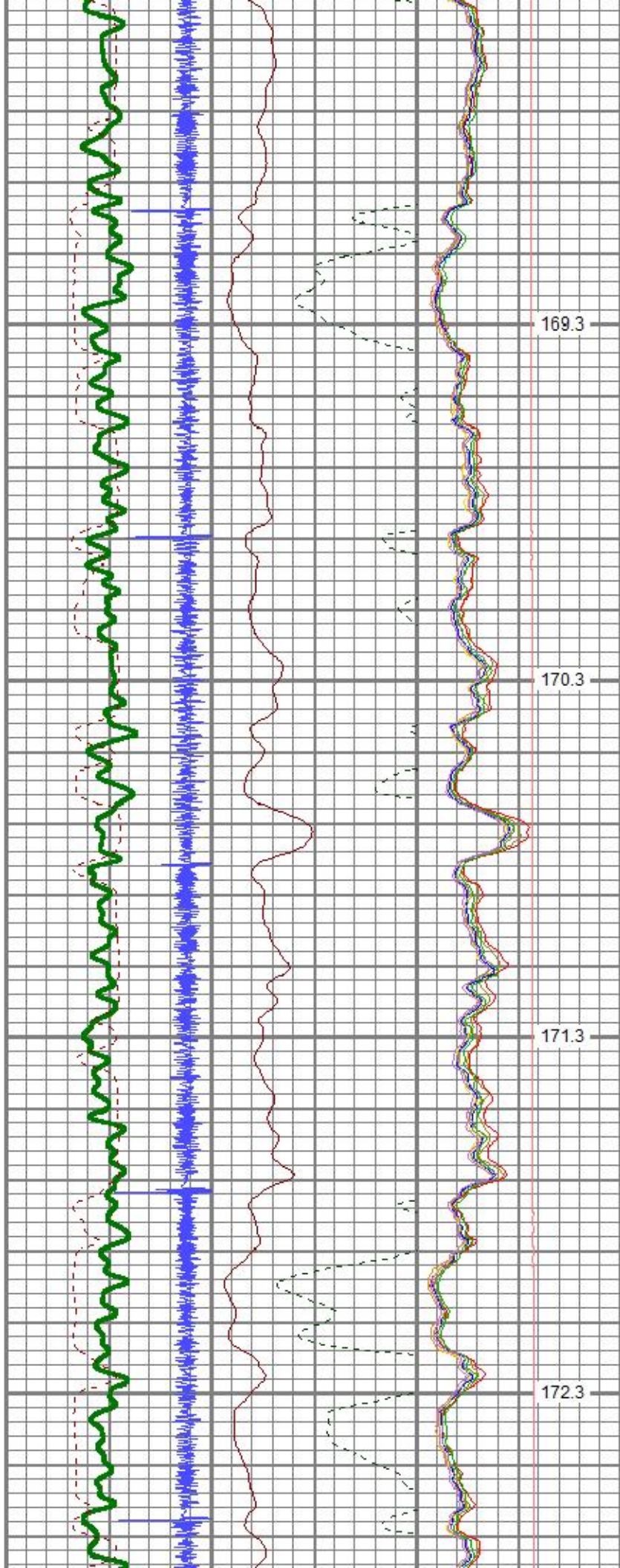
5450

169.3

170.3

171.3

172.3



5500

5550

5600

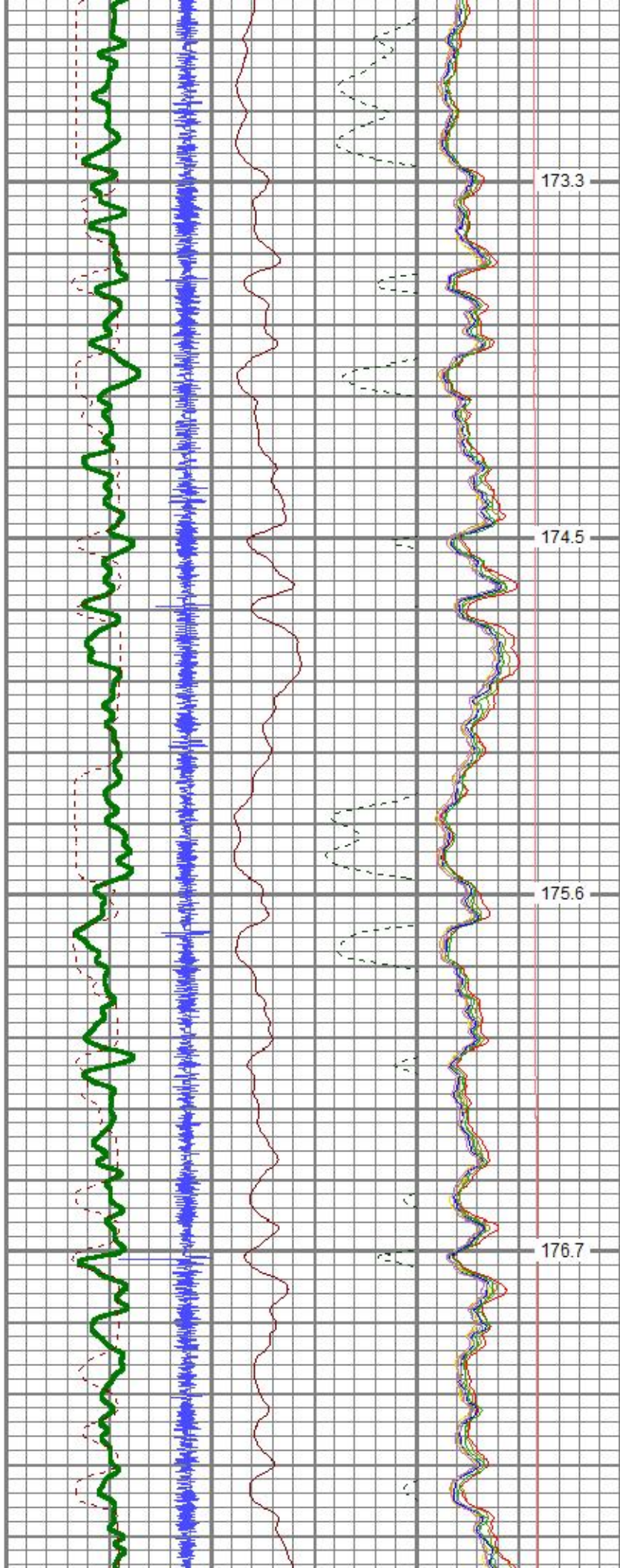
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173.3

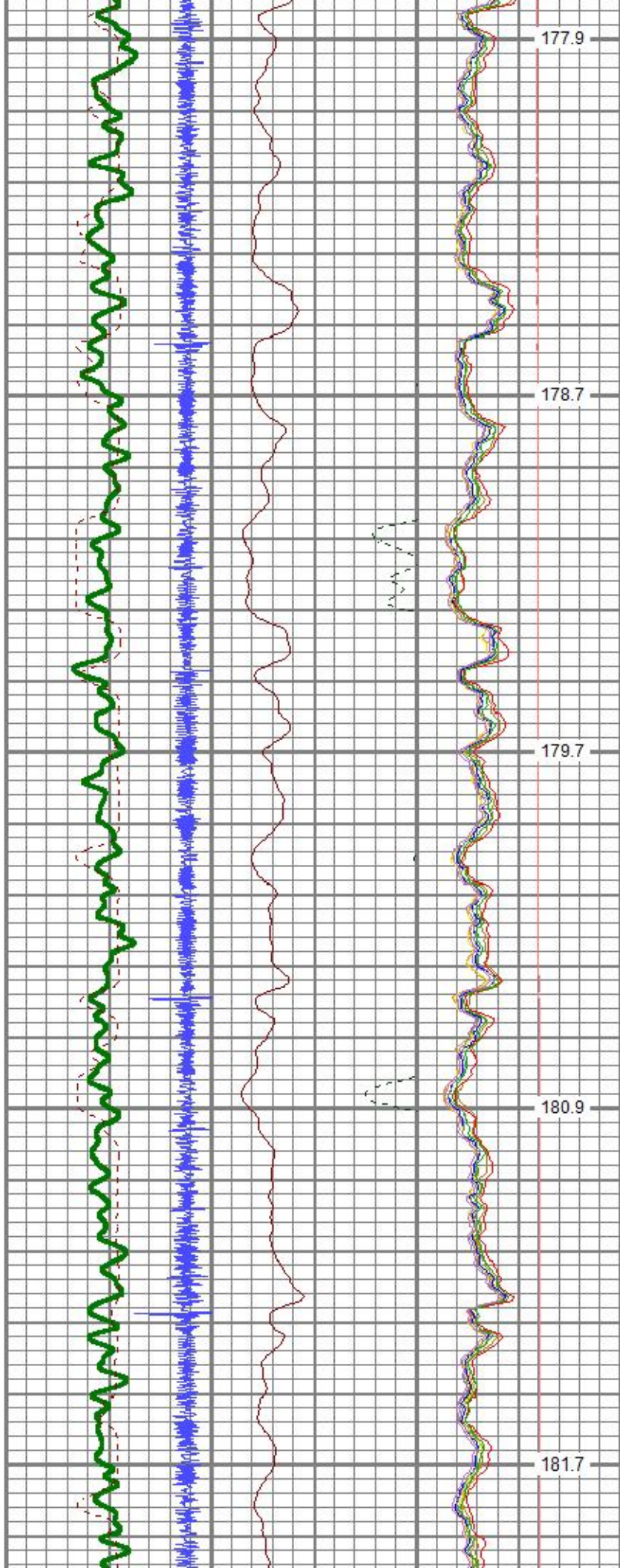
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175.6

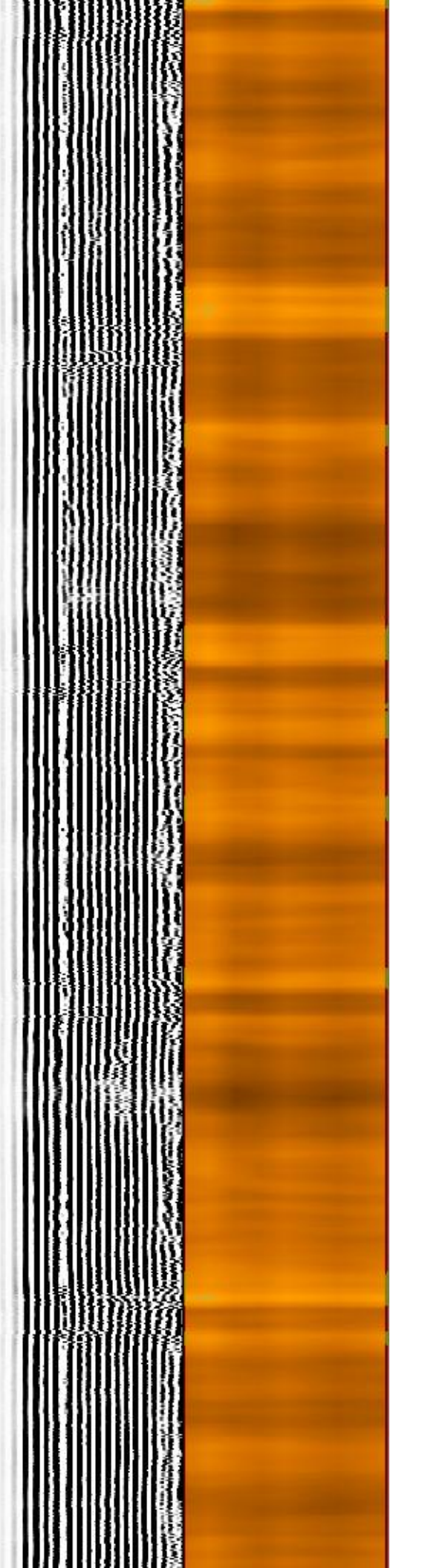
176.7



5700  
5750  
5800  
5850  
5900



177.9  
178.7  
179.7  
180.9  
181.7



5950

6000

6050

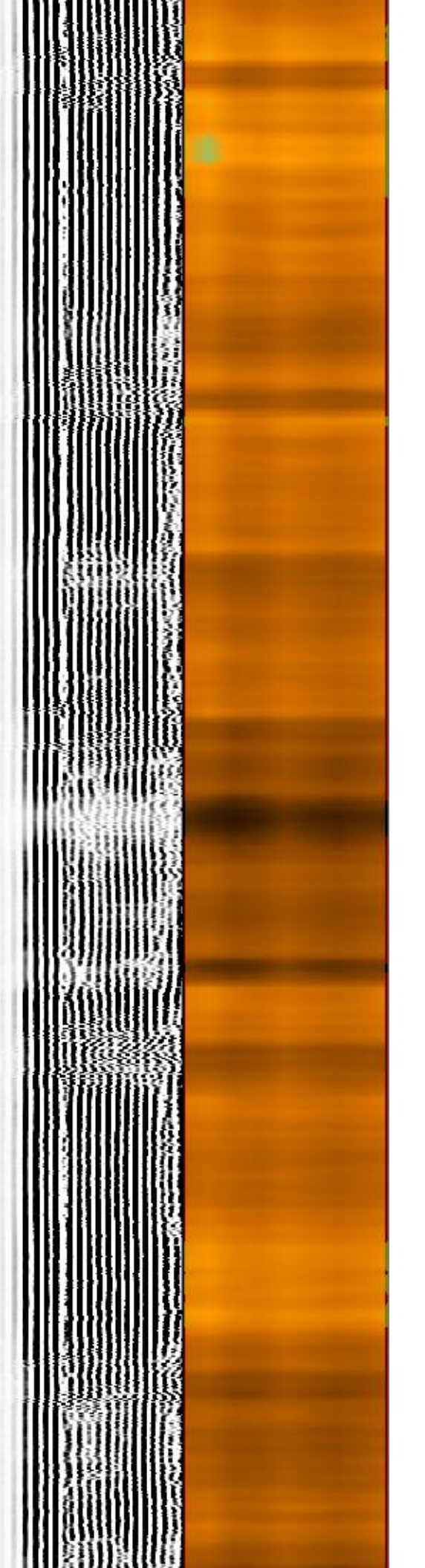
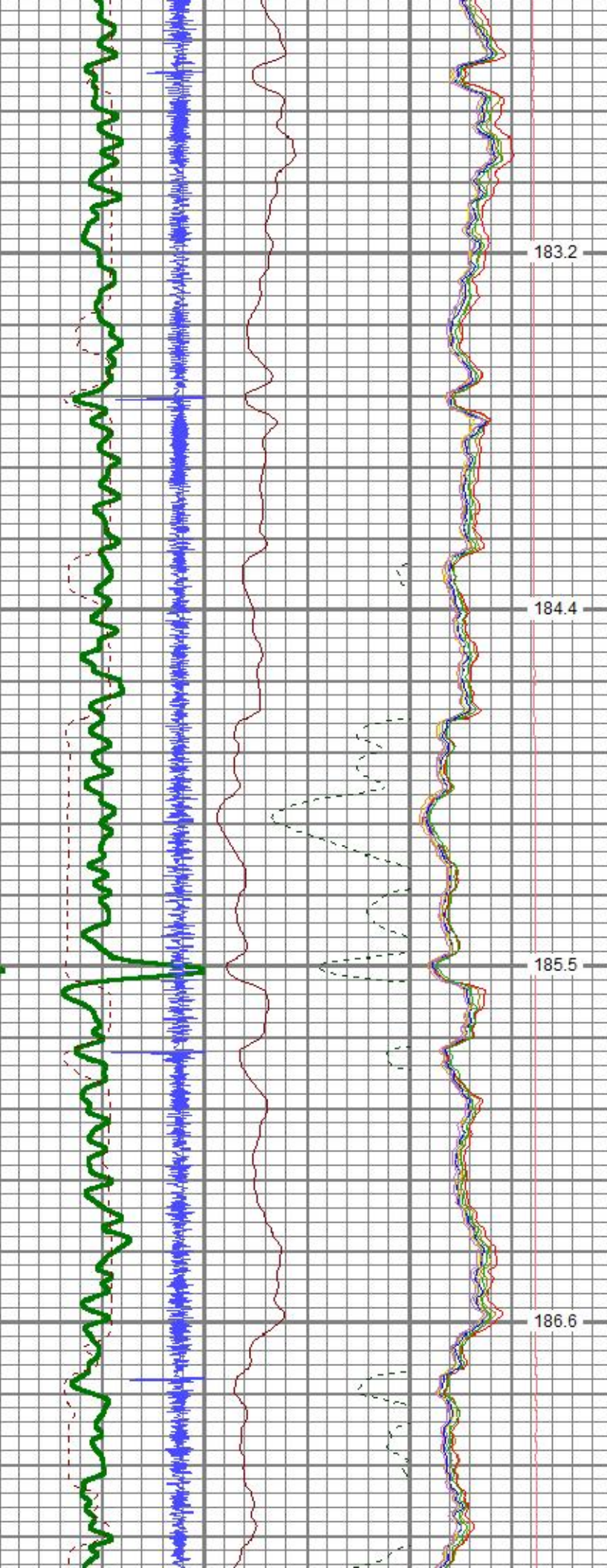
6100

183.2

184.4

185.5

186.6



6150

6200

6250

6300

6350

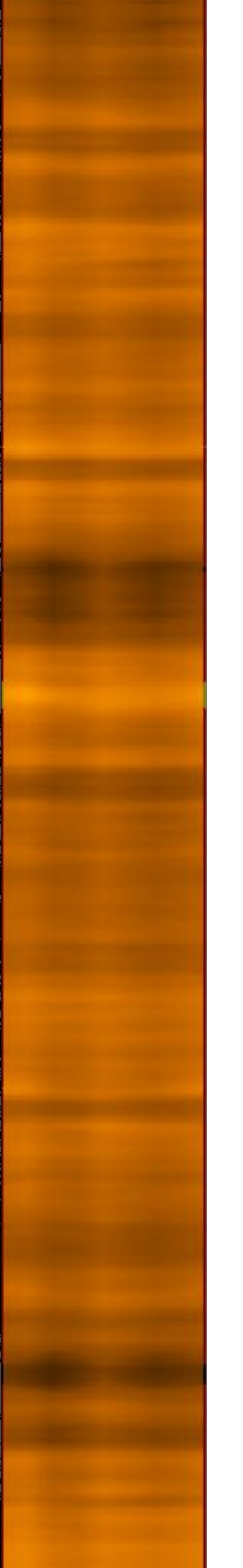
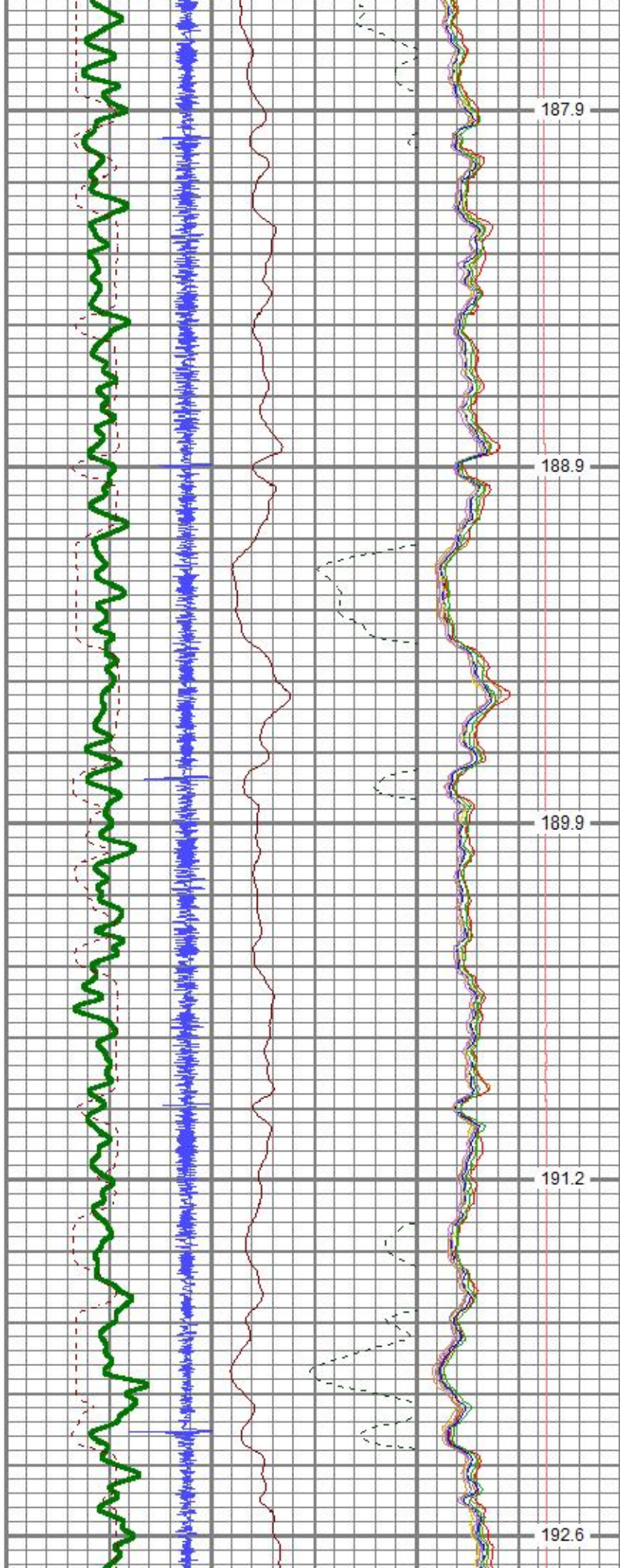
187.9

188.9

189.9

191.2

192.6



6400

6450

6500

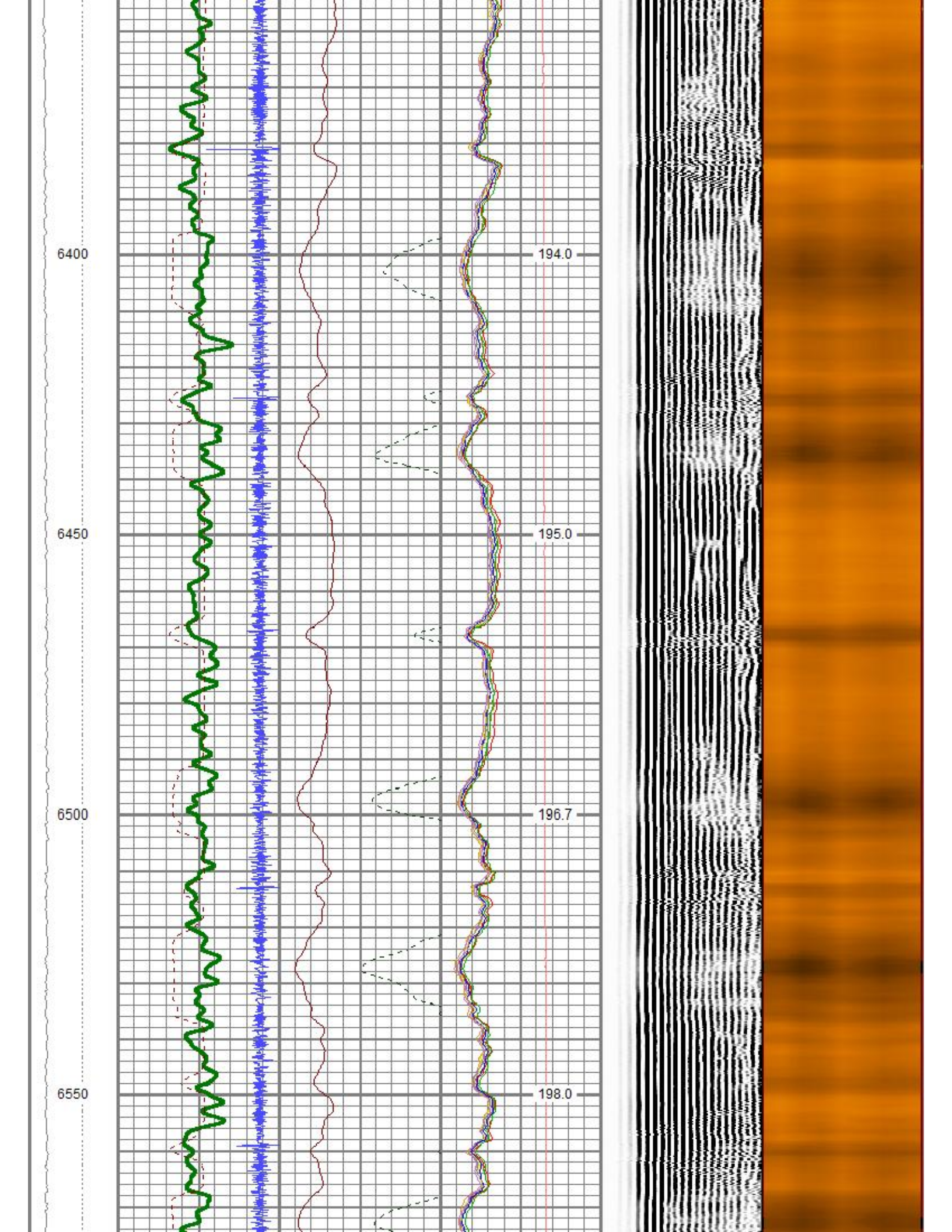
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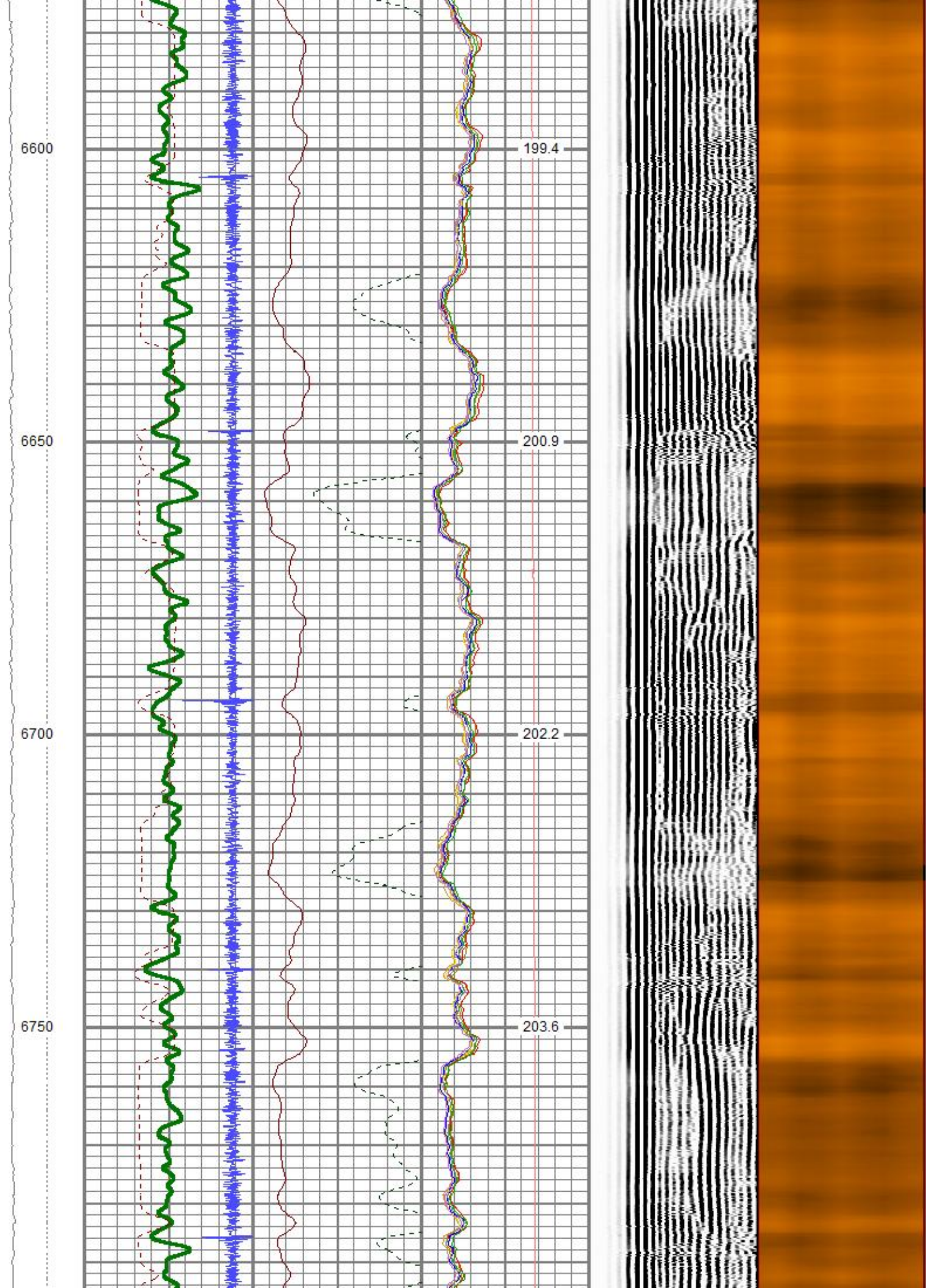
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195.0

196.7

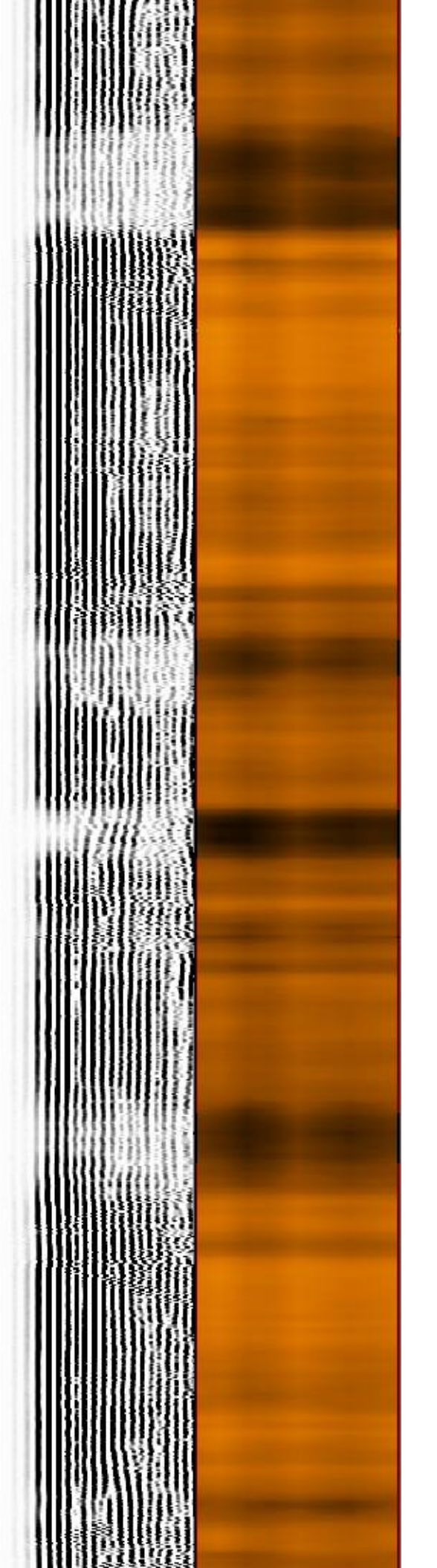
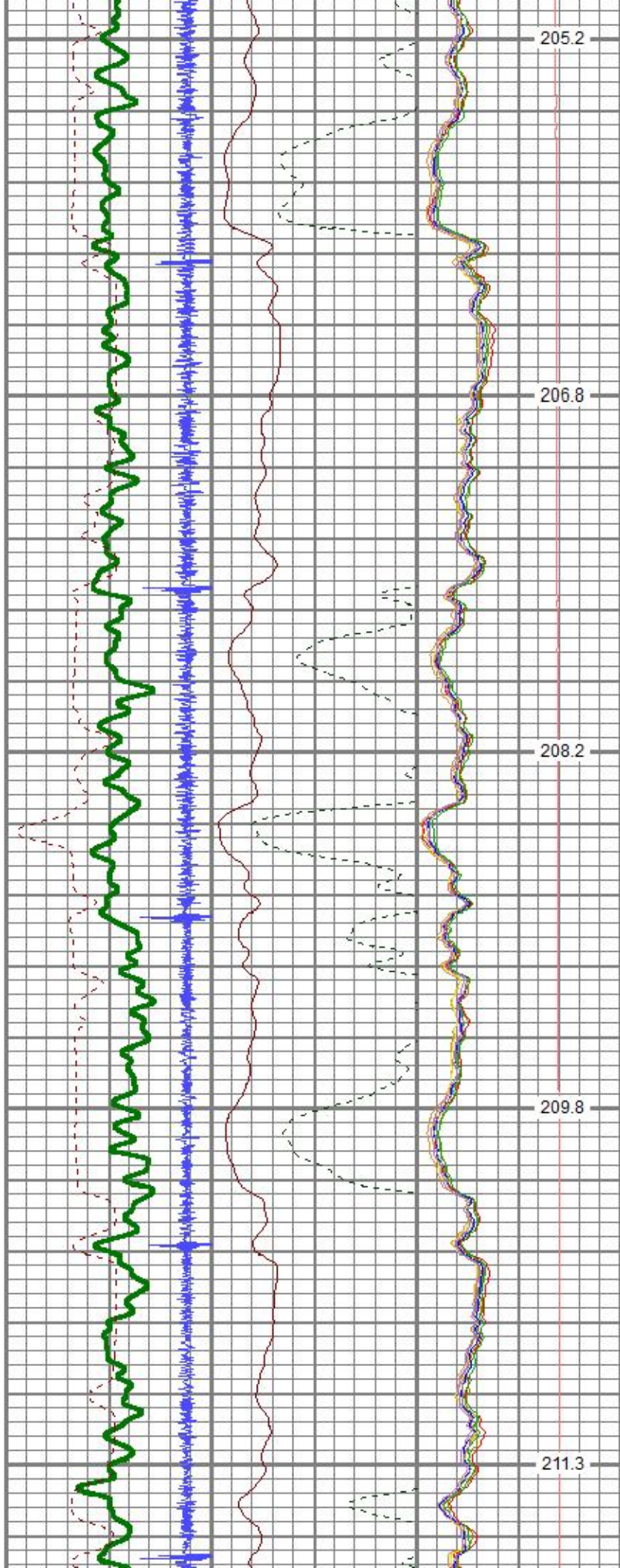
198.0

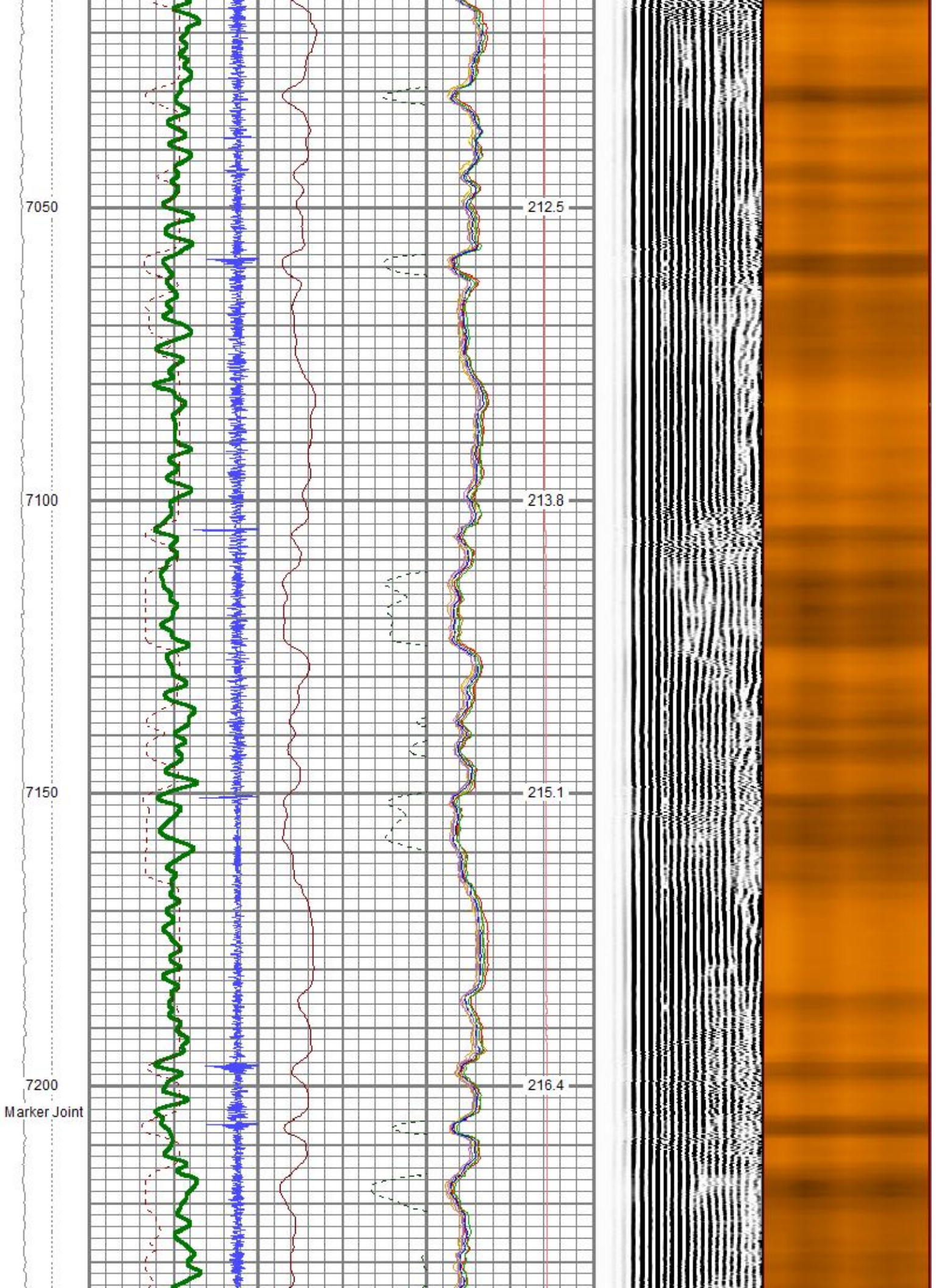




6800  
6850  
6900  
6950  
7000

205.2  
206.8  
208.2  
209.8  
211.3





7250

7300

7350

7400

7450

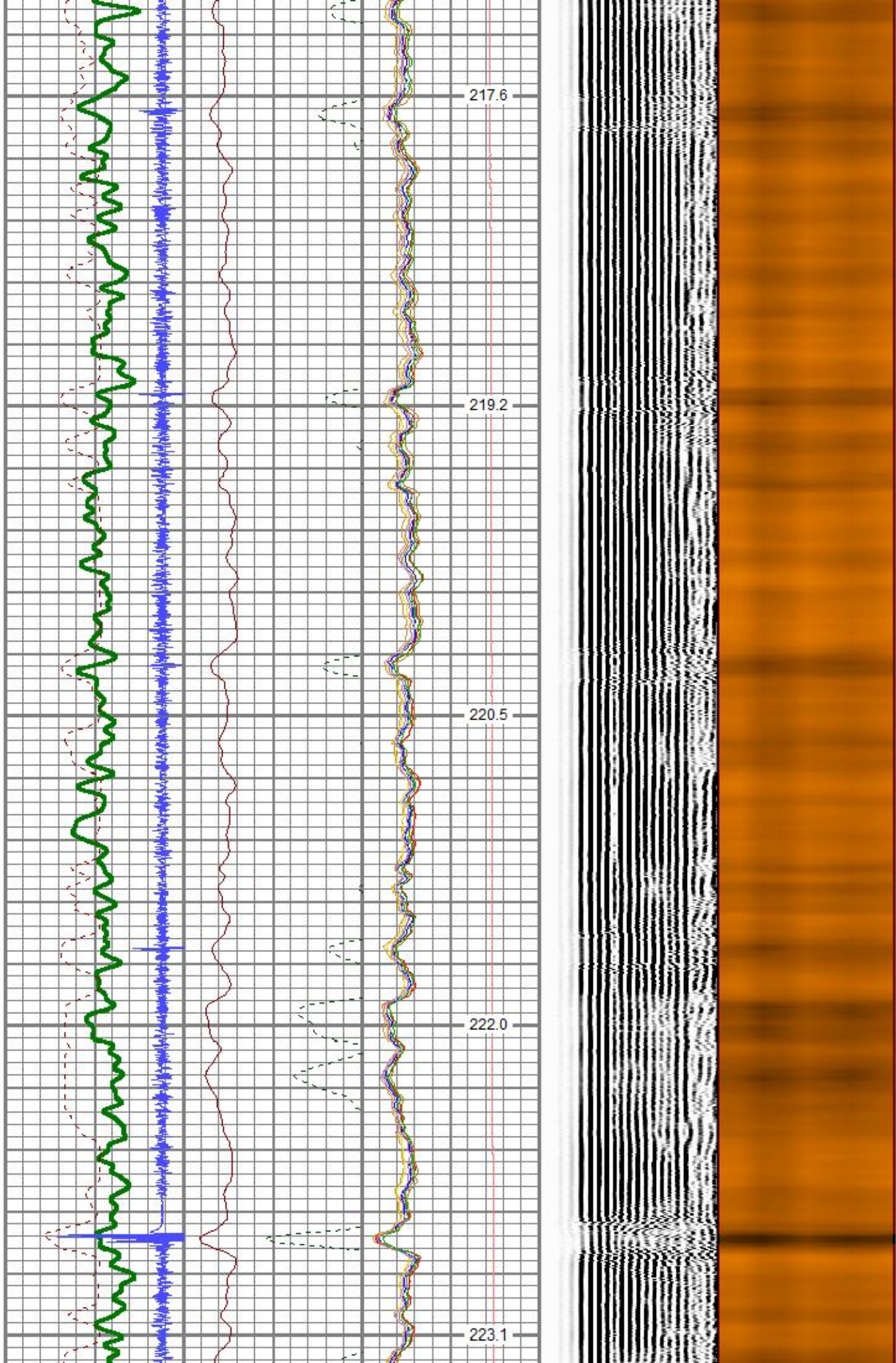
217.6

219.2

220.5

222.0

223.1



7500

7550

7600

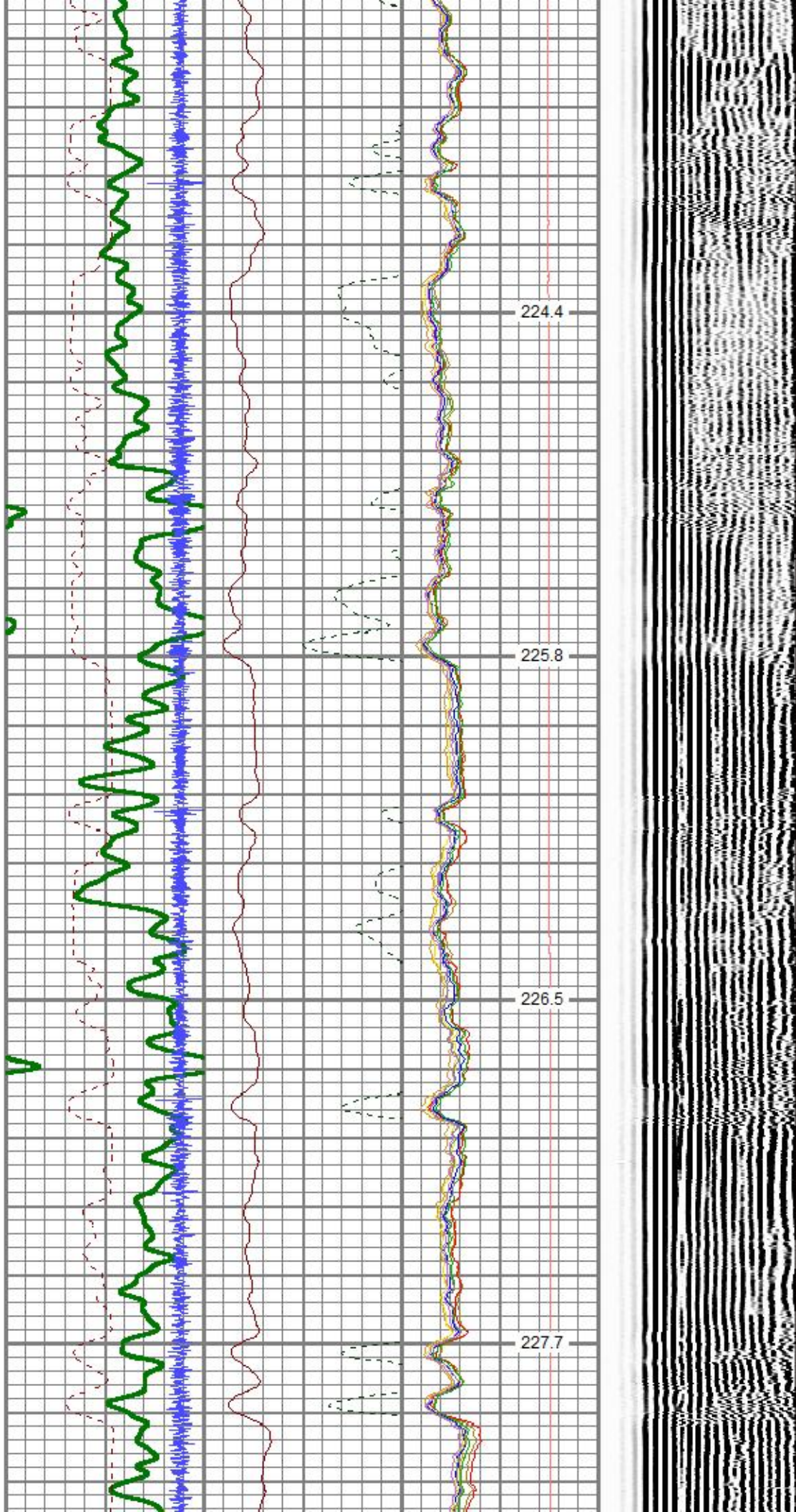
7650

224.4

225.8

226.5

227.7



7700

7750

7800

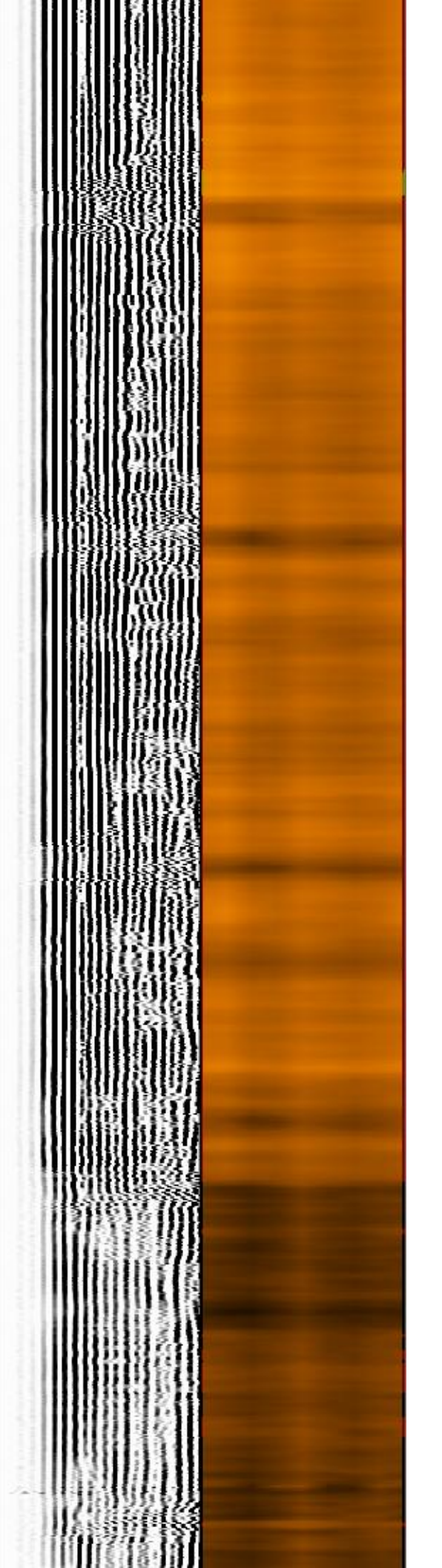
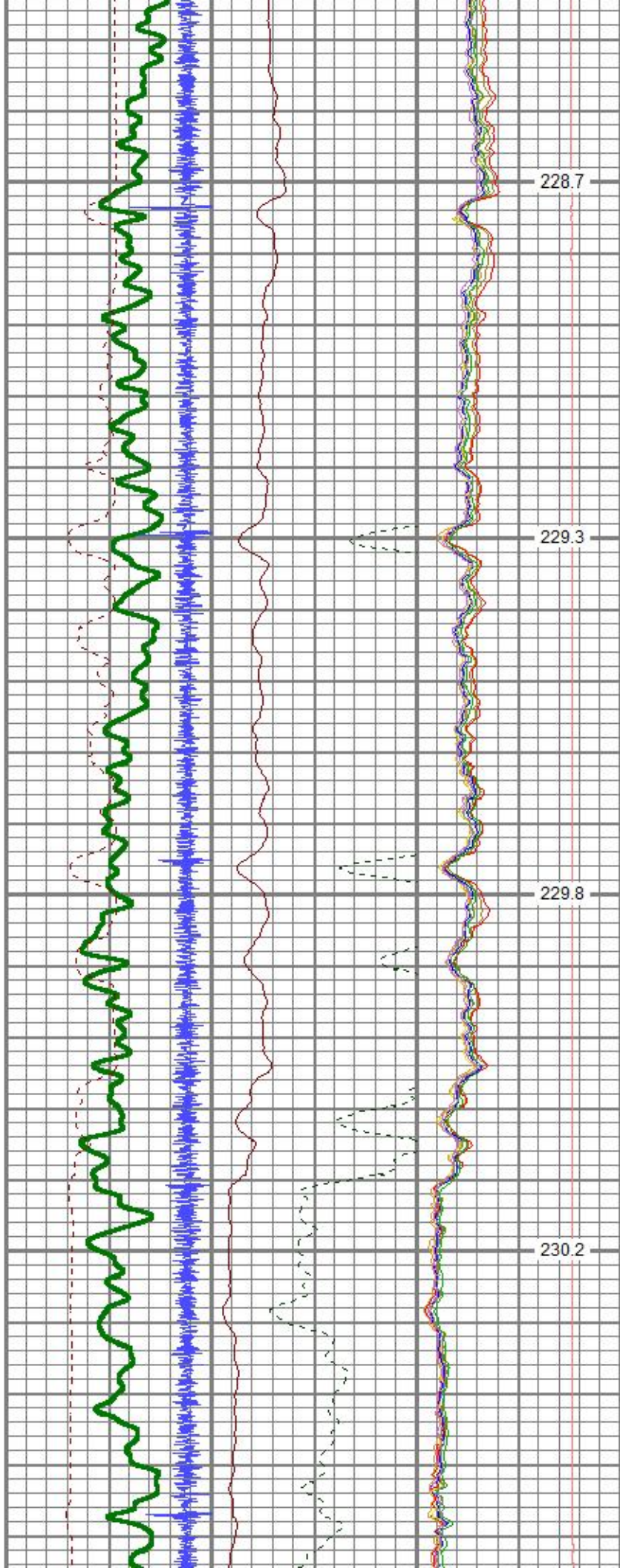
7850

228.7

229.3

229.8

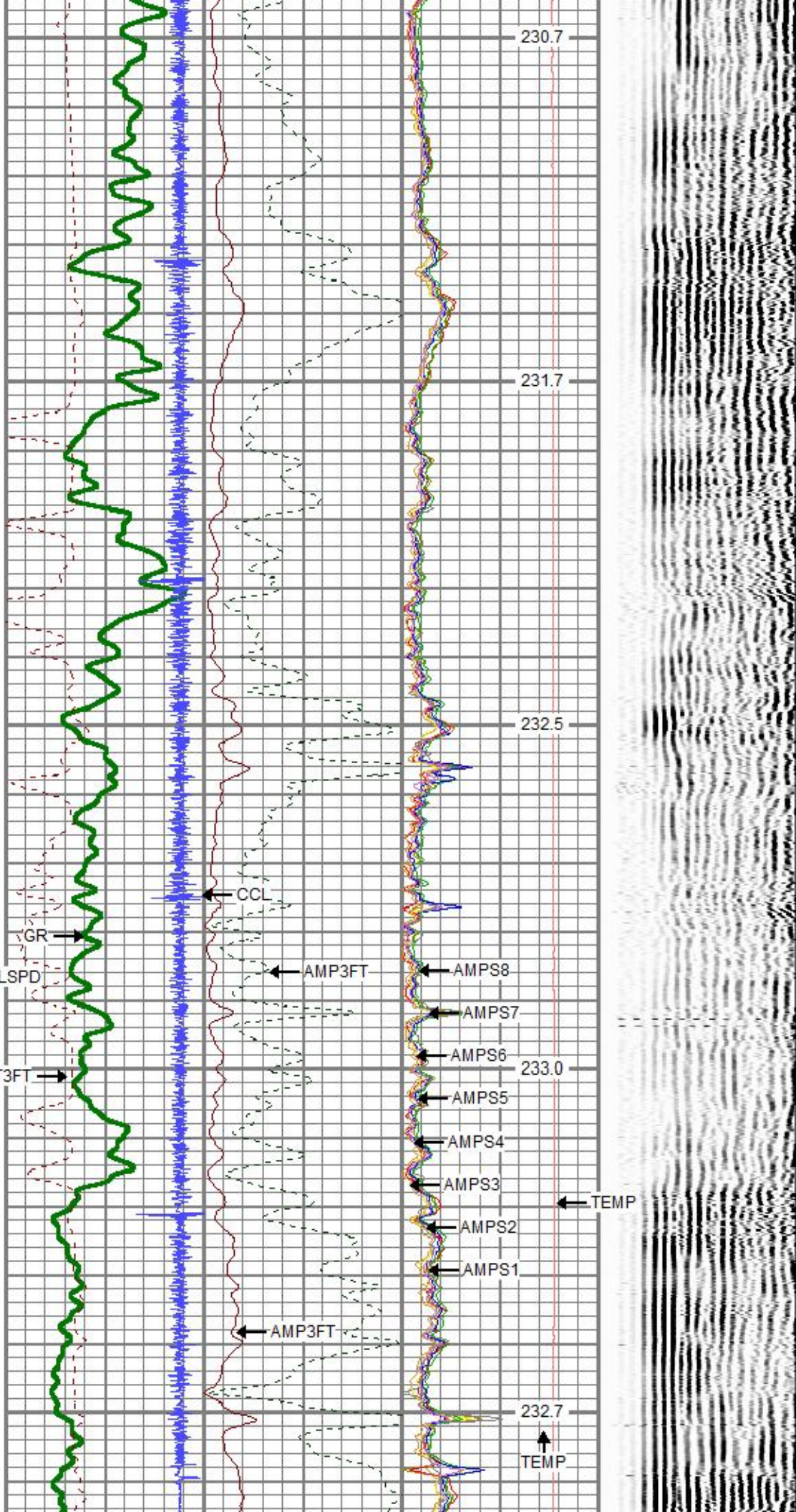
230.2

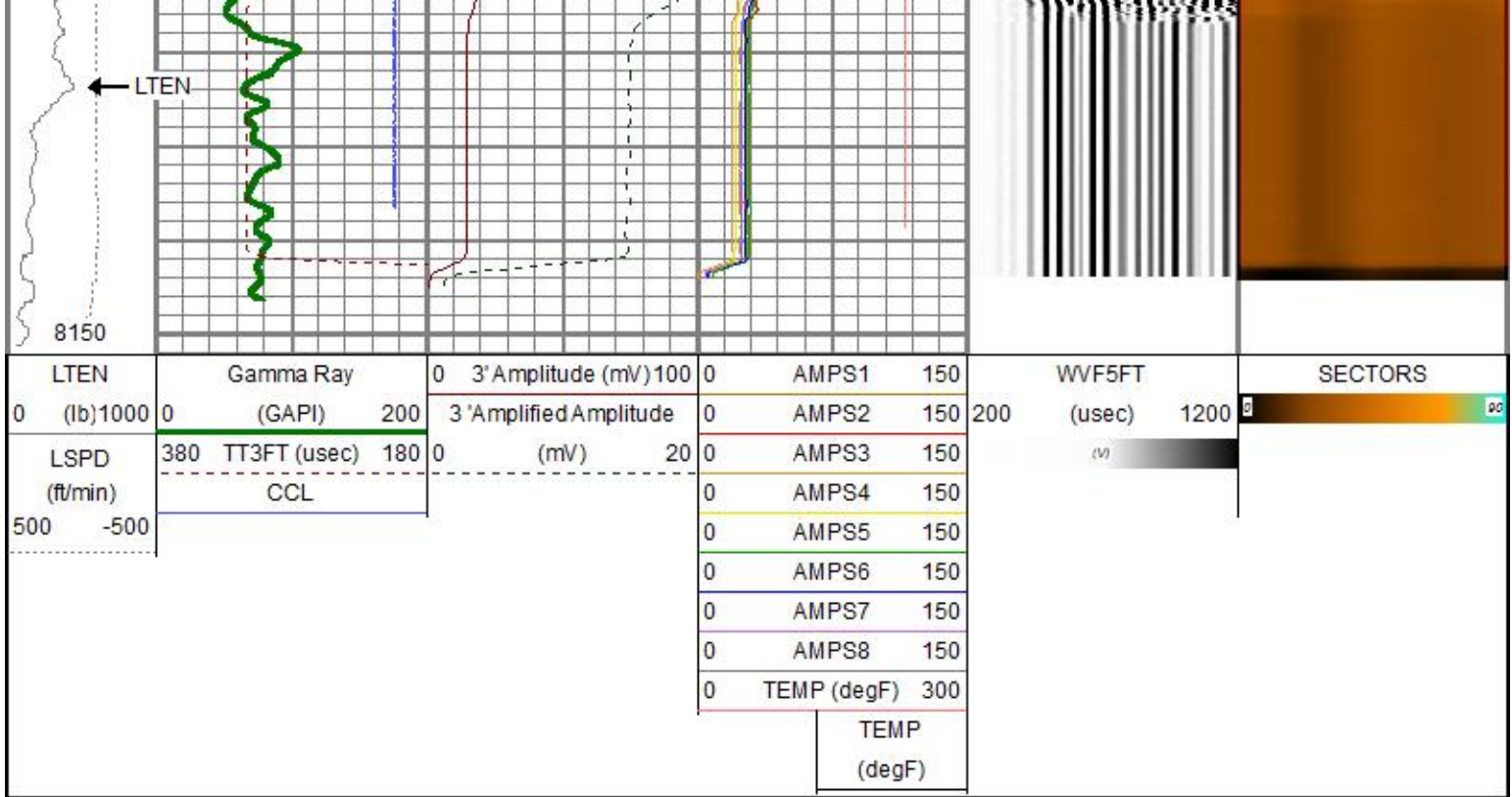


7900  
7950  
8000  
8050  
8100

230.7  
231.7  
232.5  
233.0  
232.7

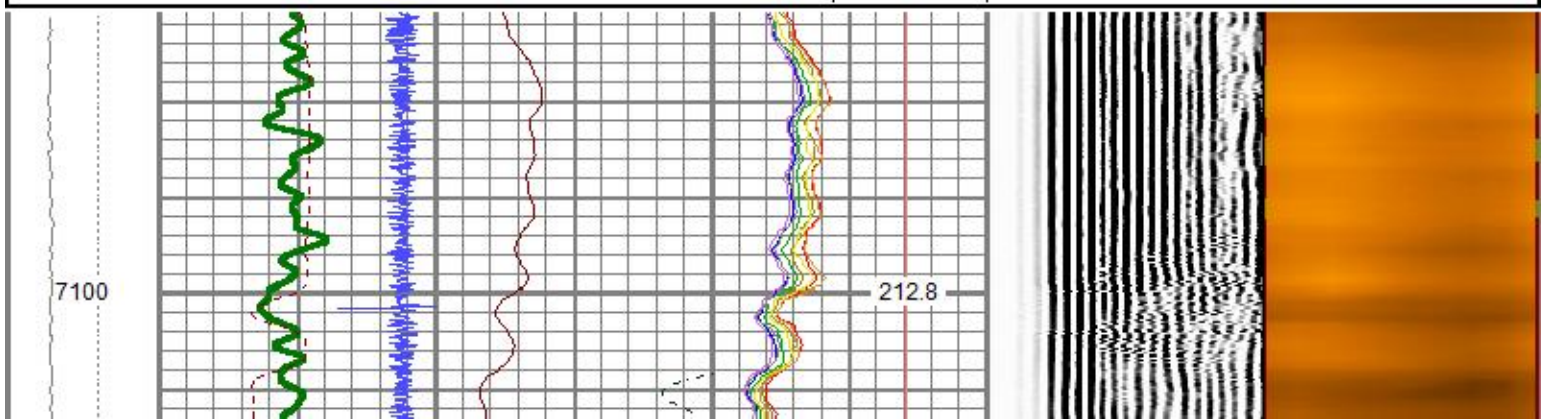
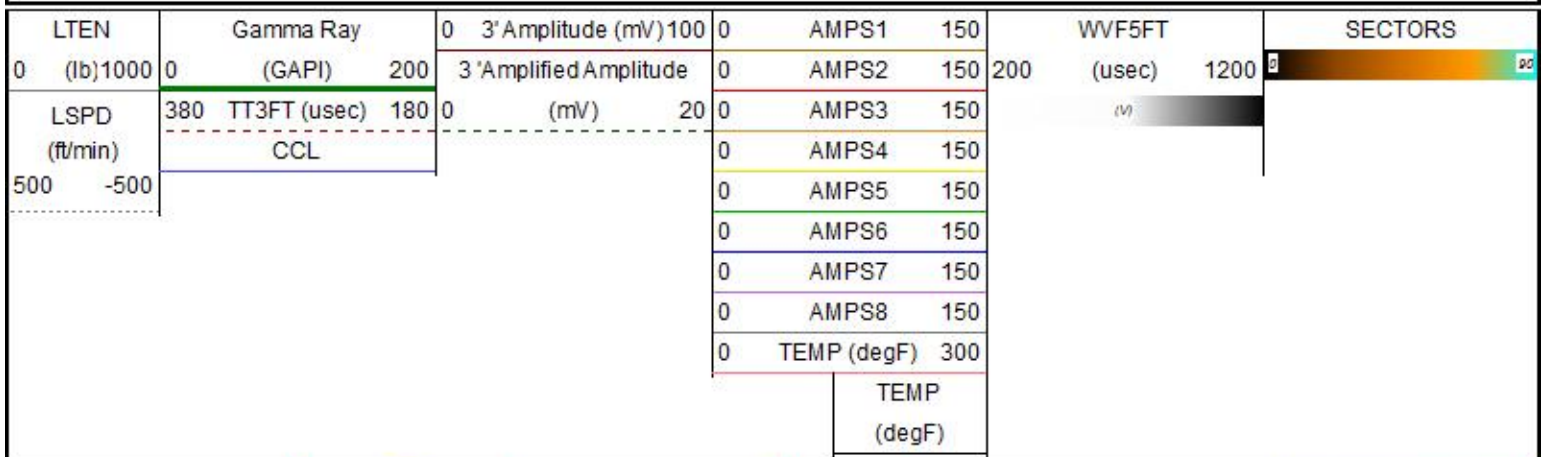
LSPD →  
GR →  
TT3FT →  
CCL →  
AMP3FT →  
AMP3FT →  
AMPS8 →  
AMPS7 →  
AMPS6 →  
AMPS5 →  
AMPS4 →  
AMPS3 →  
AMPS2 →  
AMPS1 →  
TEMP ←  
TEMP ↑





# Repeat Pass

Database File brant federal\brant federal 18c final\pdc\_brantfederal\_18c\_rcbl\_20\_may\_2023\_final.db  
 Dataset Pathname pass2  
 Presentation Format rbl\_all\_8\_2020\_t  
 Dataset Creation Sat May 20 06:09:21 2023  
 Charted by Depth in Feet scaled 1:240



7150

7200

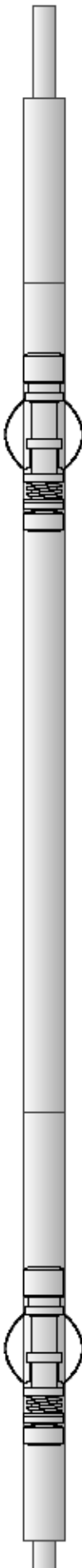
7250

213.6

214.1

213.9

LTEN 0 (lb)1000	Gamma Ray (GAPI) 200	0 3' Amplitude (mV) 100	0 AMPS1 150	WVF5FT 200 (usec) 1200	SECTORS
LSPD (ft/min) 500 -500	380 TT3FT (usec) 180 CCL	3' Amplified Amplitude (mV) 20	0 AMPS2 150		
			0 AMPS3 150		
			0 AMPS4 150		
			0 AMPS5 150		
			0 AMPS6 150		
			0 AMPS7 150		
			0 AMPS8 150		
			0 TEMP (degF) 300		
			TEMP (degF)		

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Cable Head-Titan_144 1 7/16" Titan Cable Head	1.03	1.44	2.00
CCL	15.20		PROBE-CCL-ANALOG-CCL-A (Probe-CCL-A1) Probe 2 3/4" Logging CCL	2.04	2.75	10.00
			CENT-overbody	2.00	4.50	3.00
TEMP	11.56					
			PROBE-RBT-DIGITAL-RBL-DCT (130373) Probe 2 3/4" Radii Bond with Temp-Corrosion Package	9.21	2.75	105.00
WVFS8	9.27					
WVFS7	9.27					
WVFS6	9.27					
WVFS5	9.27					
WVFS4	9.27					
WVFS3	9.27					
WVFS2	9.27					
WVFS1	9.27					
WVFCAL	9.27					
WVF3FT	9.27					
WVF5FT	8.27					
DCCL	4.20					
GCT_TEMP	3.41					
GR	2.72		PROBE-GR/CCL-DIGITAL-275 Probe GCT (130588) Probe 2 3/4" Gamma Ray/Temp/CCL 6 Pin	4.75	2.75	60.00
		CENT-overbody	2.00	4.50	3.00	
		Bullnose-PROBE Probe Go Pin Pressure Cap	0.33	1.38	1.00	

Dataset: pdc\_brantfederal\_18c\_rcbl\_20\_may\_2023\_final.db: field/well/run1/pass4.1  
Total length: 17.36 ft  
Total weight: 184.00 lb

Calibration Report

Database File C:\ProgramData\Warrior\Data\BRANT FEDERAL\Brant Federal 18C final\pdc\_brantfederal\_18c\_rcbl\_20\_may\_2023\_final.d  
 Dataset Pathname pass4.1  
 Dataset Creation Sat May 20 07:38:10 2023

Gamma Ray Calibration Report

Serial Number: 130588  
 Tool Model: 275 Probe GCT  
 Performed: (Not Performed)

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
 Calibrator Reading: 1.0 cps

Sensitivity: 1.0000 GAPI/cps

Temperature Calibration Report

Serial Number: 130373  
 Tool Model: RBL-DCT  
 Performed: Fri Mar 10 10:04:46 2023

	Reference	Reading
Low Reference:	0.00 degF	0.00 degF
High Reference:	1.00 degF	1.00 degF

Gain: 0.90  
 Offset: 0.00  
 Delta Spacing 1



<b>Company</b>	PDC Energy	
<b>Well</b>	Brant Federal 18C	
<b>Field</b>	Wattenberg	
<b>County</b>	Adams	
<b>State</b>	Colorado	<b>Country</b>