



**RADIAL CEMENT BOND LOG
GAMMA RAY / CCL /VDL**

Company ANTERO RESOURCES CORPORATION
Well HORST 3H
Field TYLER
County TYLER
State W.V.

Company ANTERO RESOURCES CORPORATION
Well HORST 3H
Field TYLER
County TYLER State W.V.

Location: API #: 47-095-02531-0000 Other Services

AFE# A06312

SEC TWP RGE

Permanent Datum G.L. Elevation 827'
Log Measured From K.B. OF 30'
Drilling Measured From K.B. Elevation
K.B. 1084'
D.F. 1084'
G.L. 1114'

Date	5/4/19						
Run Number	ONE						
Depth Driller	16186'						
Depth Logger	7027'						
Bottom Logged Interval	7027'						
Top Log Interval	SURFACE						
Open Hole Size	8.5"						
Type Fluid	WATER						
Density / Viscosity	N/A						
Max. Recorded Temp.	141 DEG						
Estimated Cement Top	1310'						
Time Well Ready	N/A						
Time Logger on Bottom	N/A						
Equipment Number	624874						
Location	BRIDGEPORT W.V.						
Recorded By	P DAVIDSON						
Witnessed By	J BURKS						
Borehole Record			Casing Record				
Run Number	Bit	From	To	Size	Weight	From	To
				5.5"	23	16186'	SURFACE
				9.625"		2612'	SURFACE
				13.375"		831'	SURFACE

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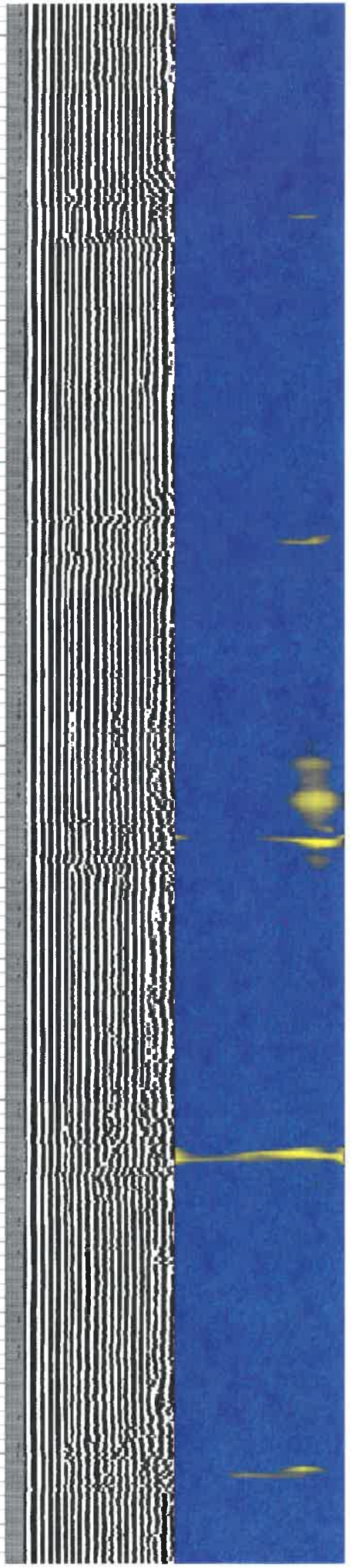
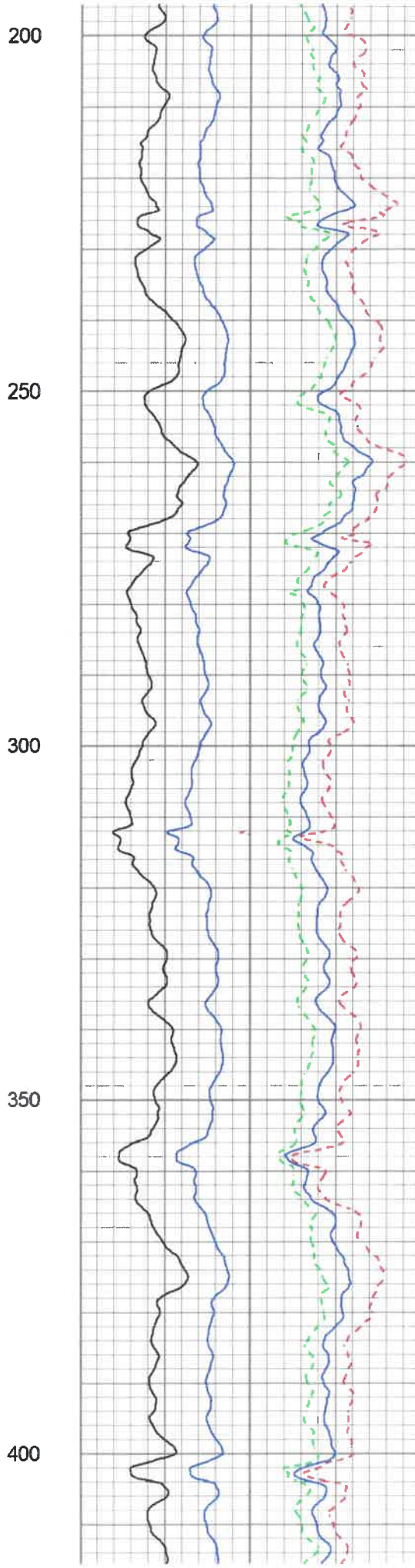
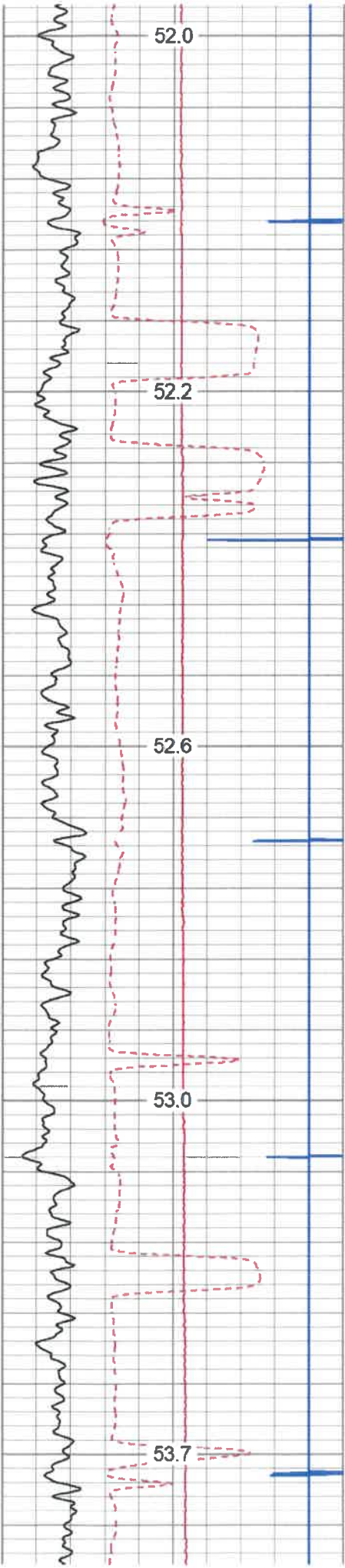
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

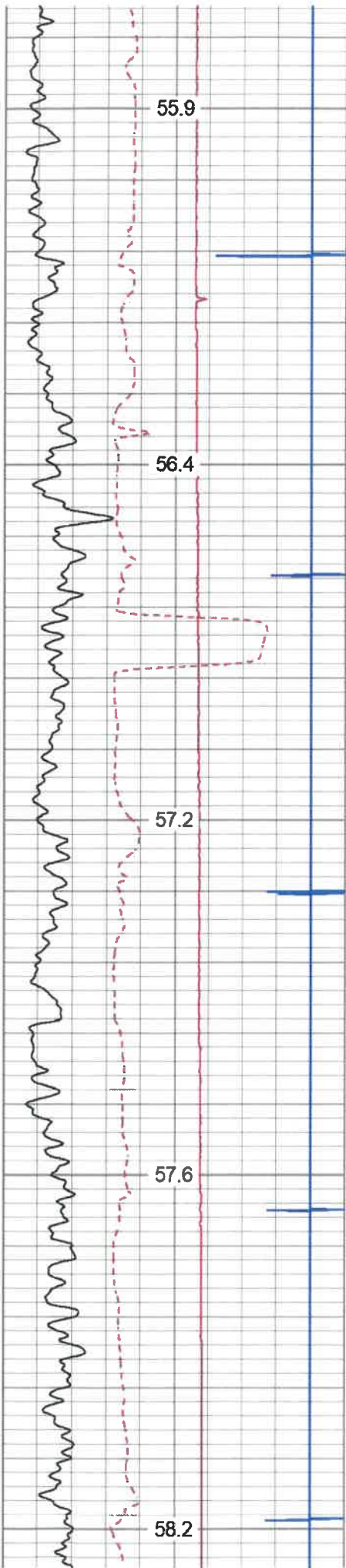
Comments

THANK YOU FOR USING KLX ENERGY SERVICES
LOG WAS RAN ON 5.5 CASING WITH 1500PSI ON WELL
ZERO AT K.B. OF 30 FT
MARKER JOINT @ 5943'-5953'
LOG WAS SHIFTED DOWN 8'



MAIN PASS





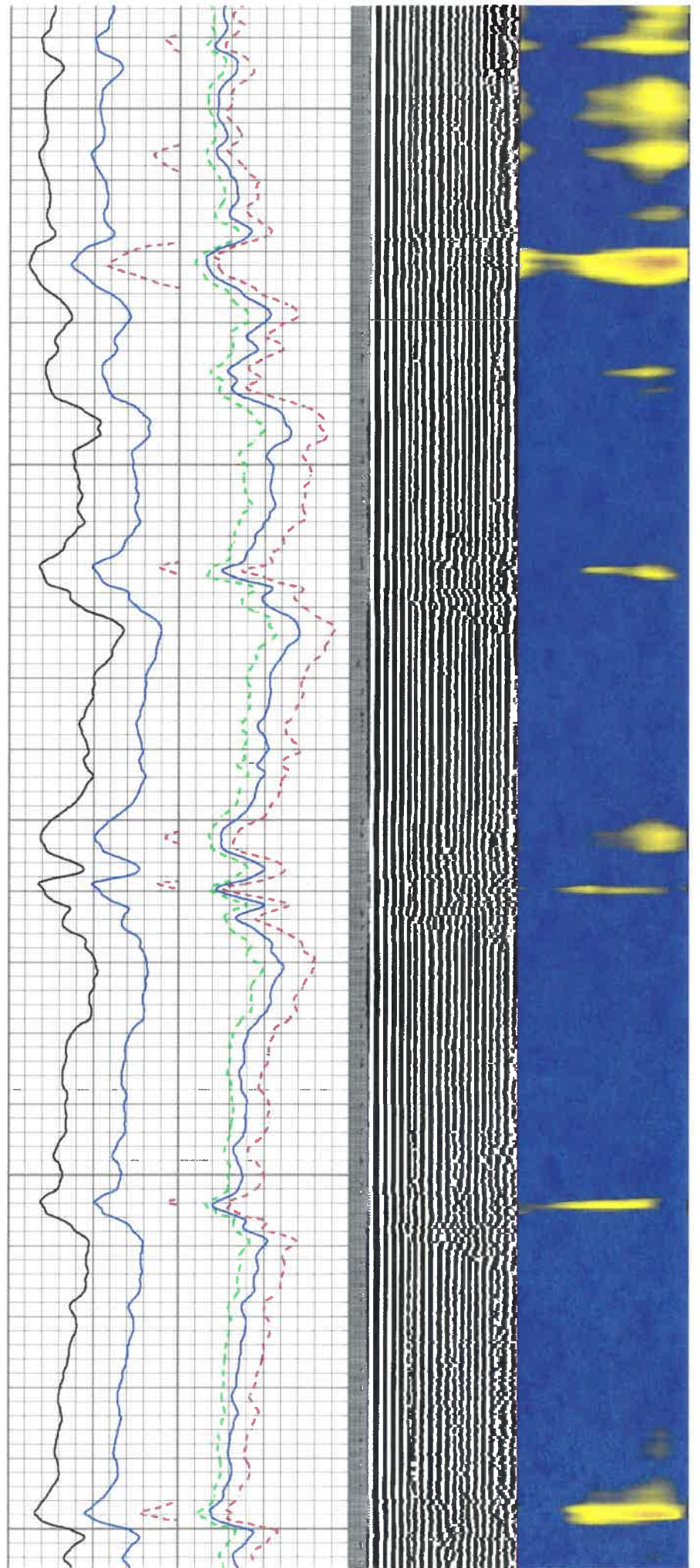
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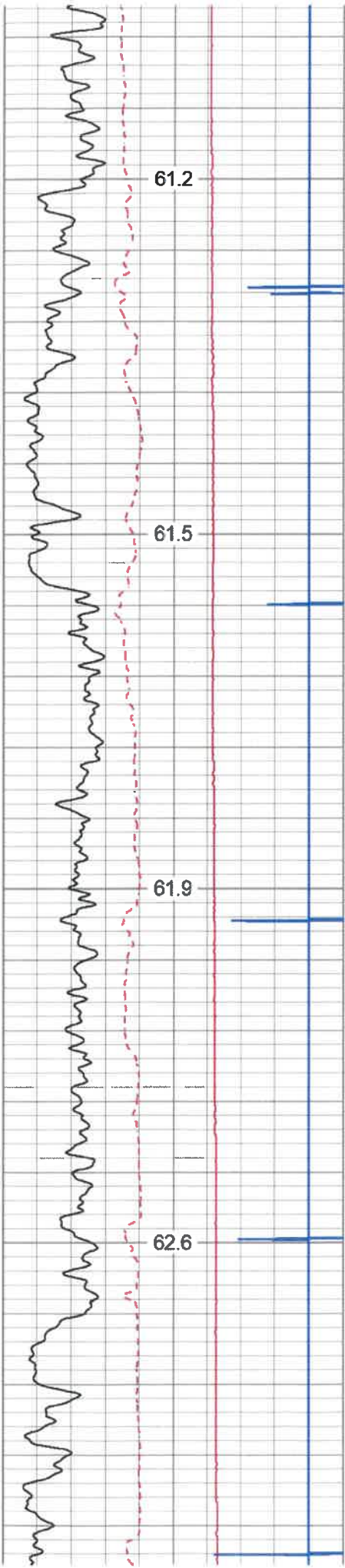
700

750

800

850



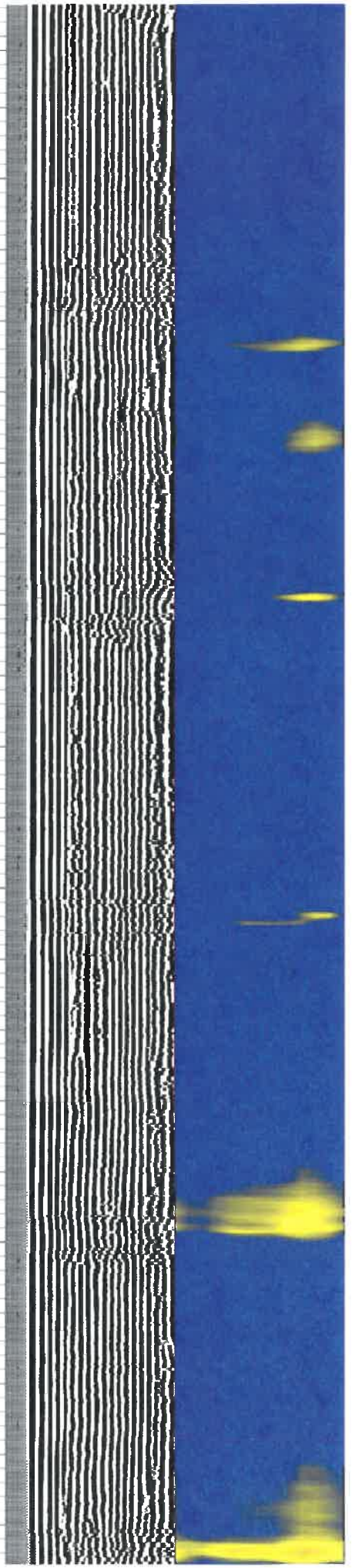
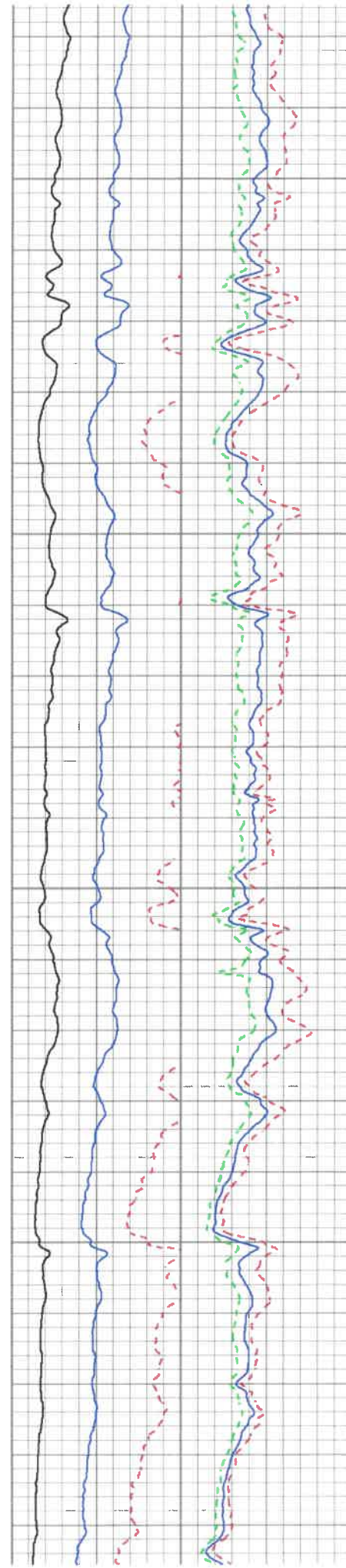


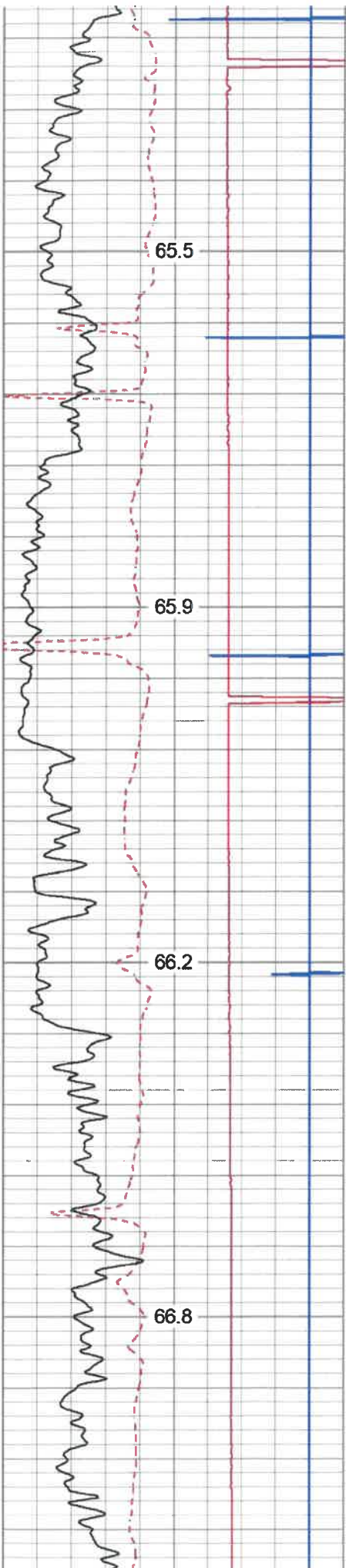
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1150

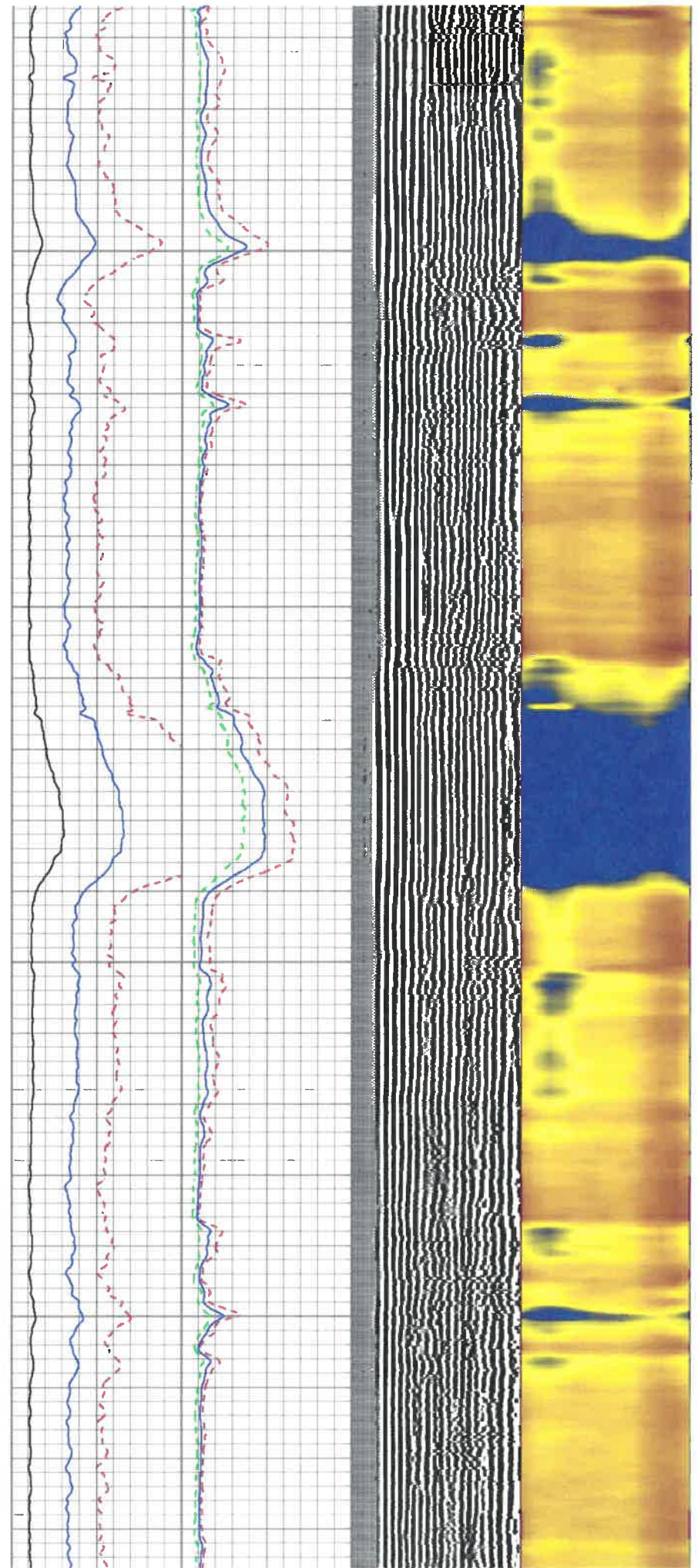
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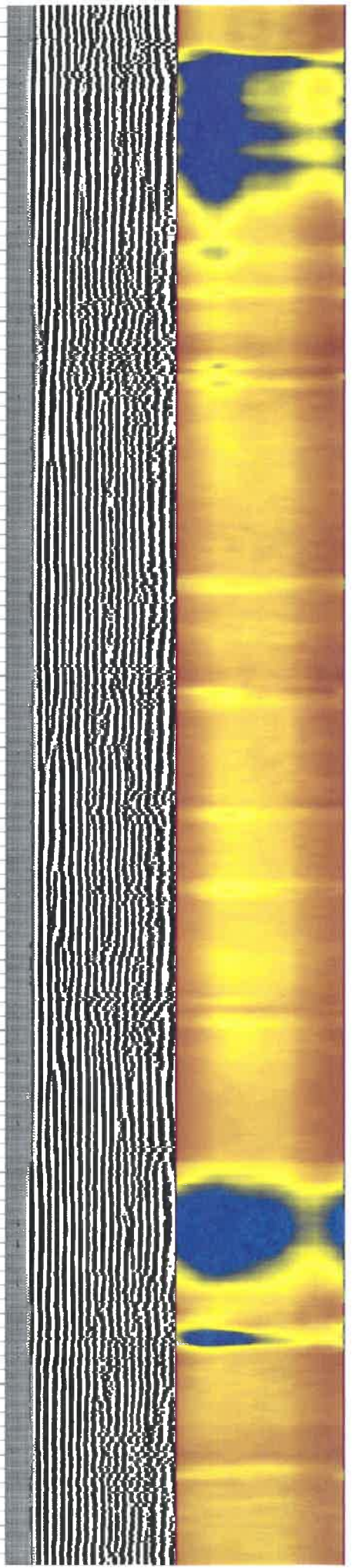
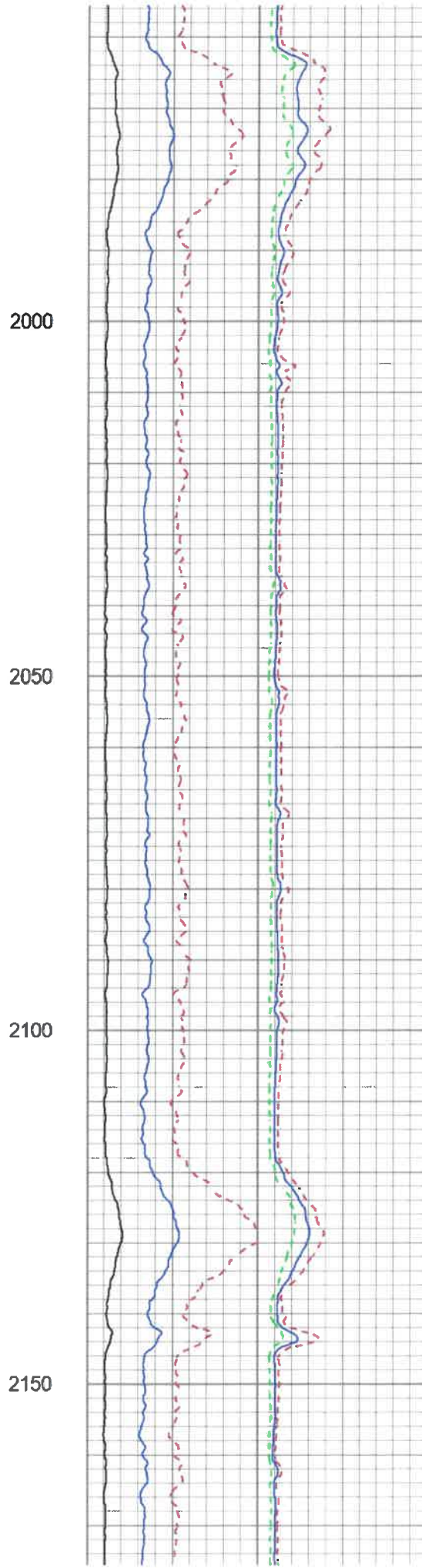
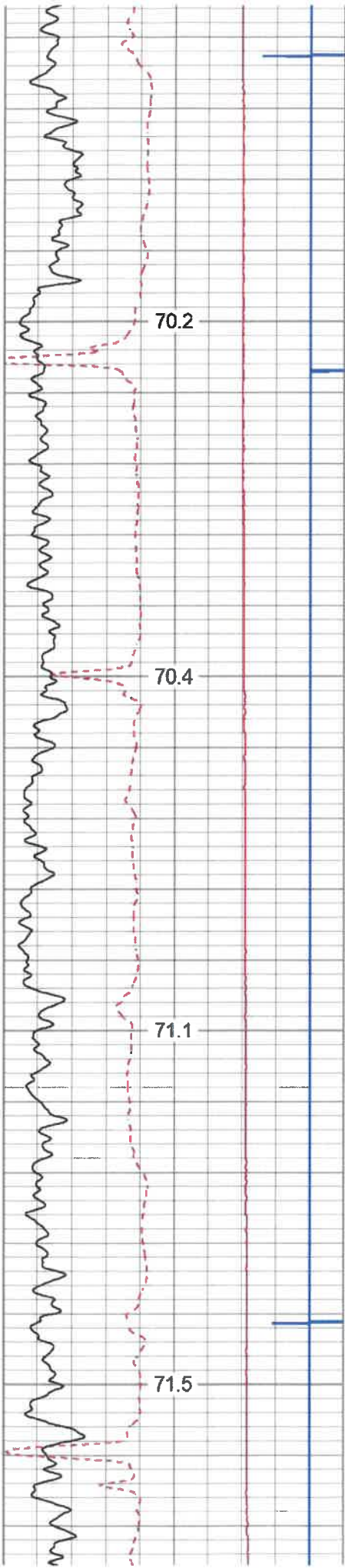
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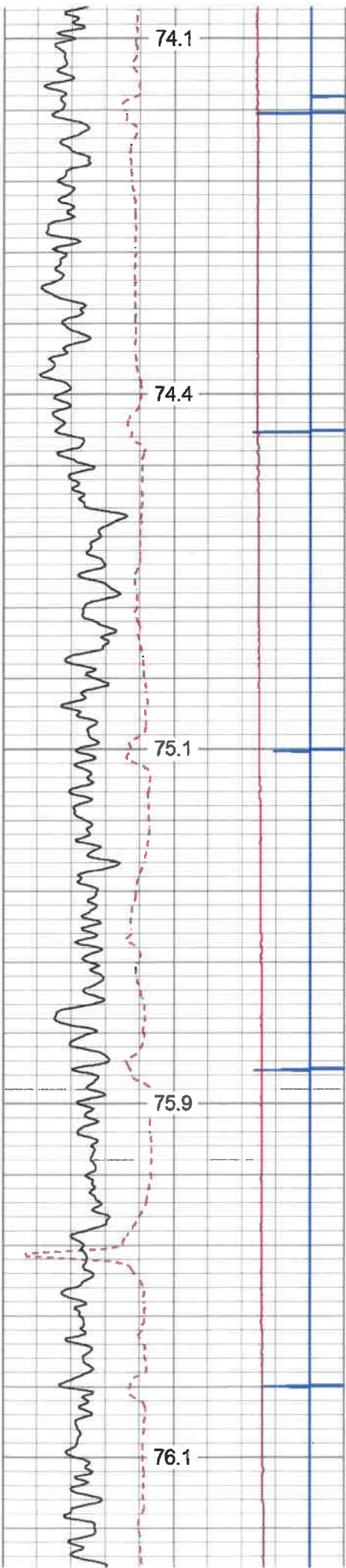




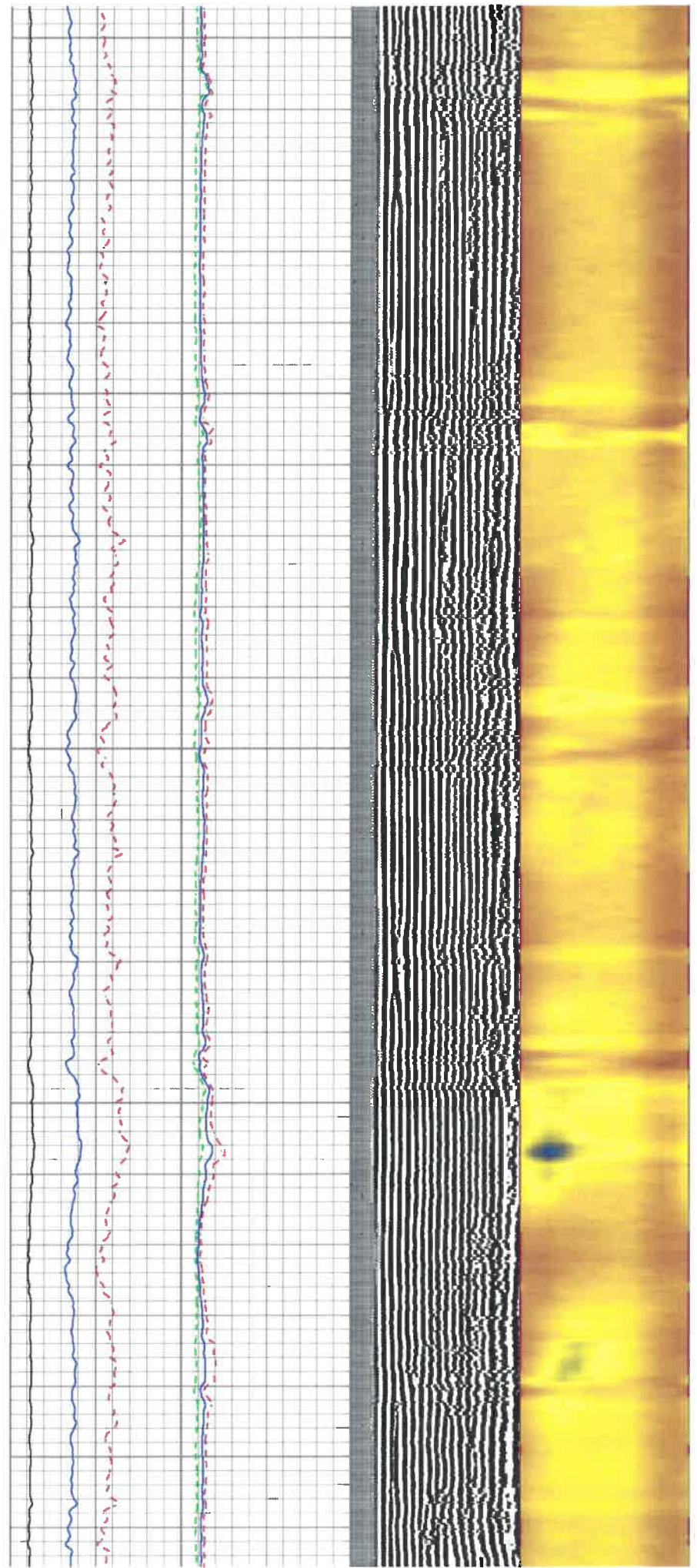
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1600
1650
1700

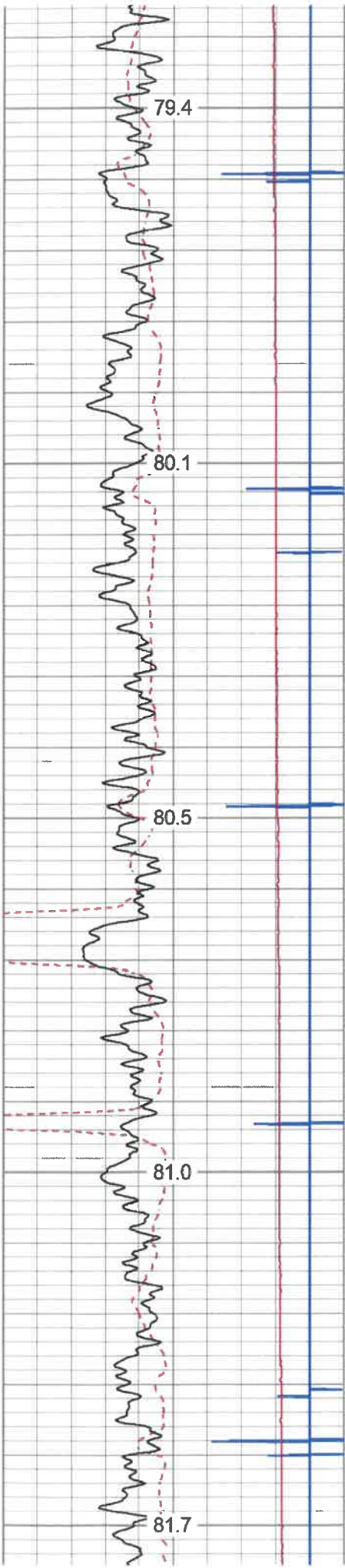




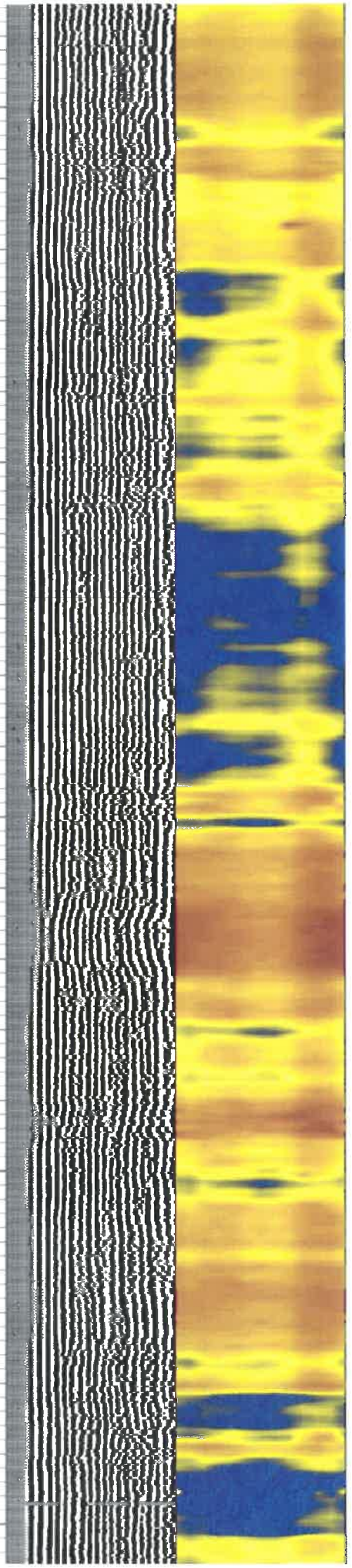
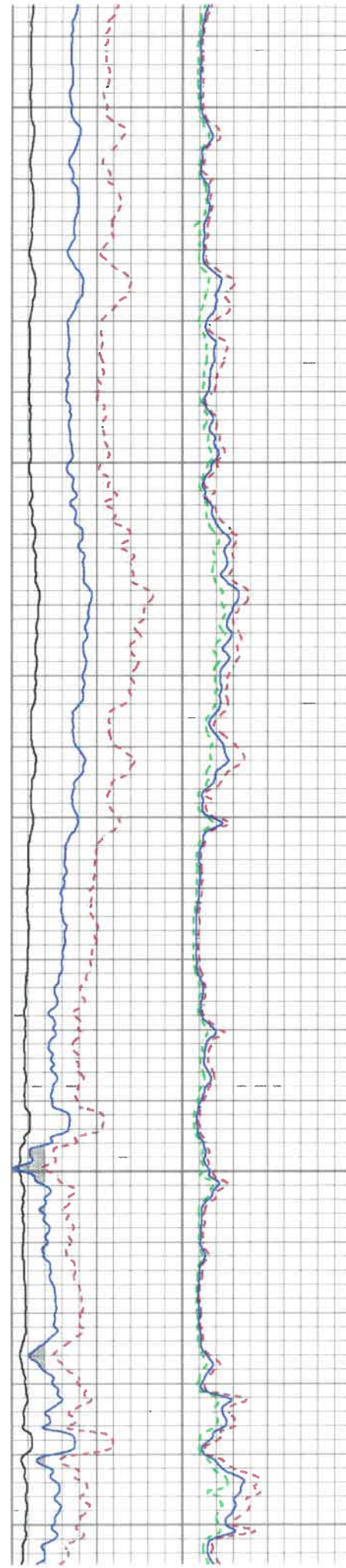


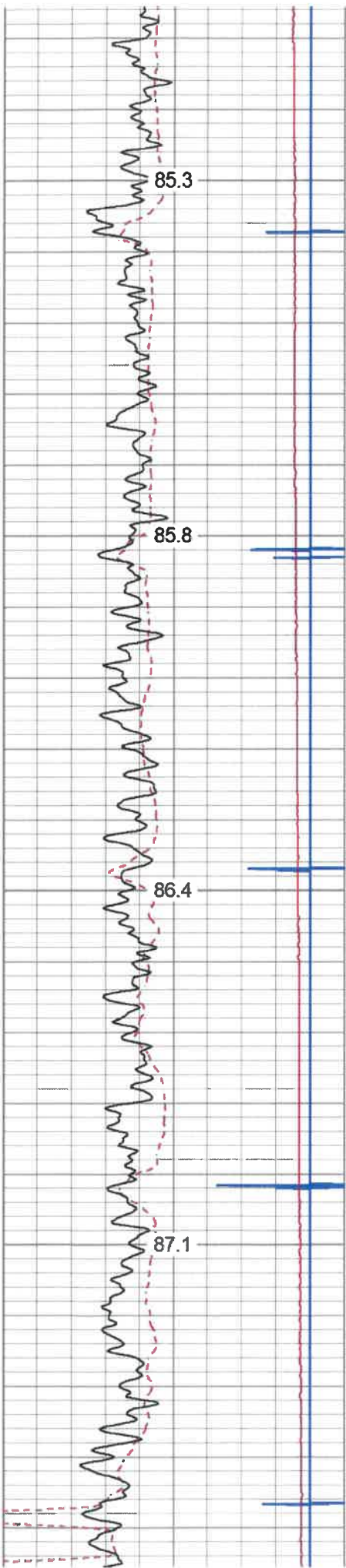
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2450
2500
2550
2600





2850
2900
2950
3000
3050



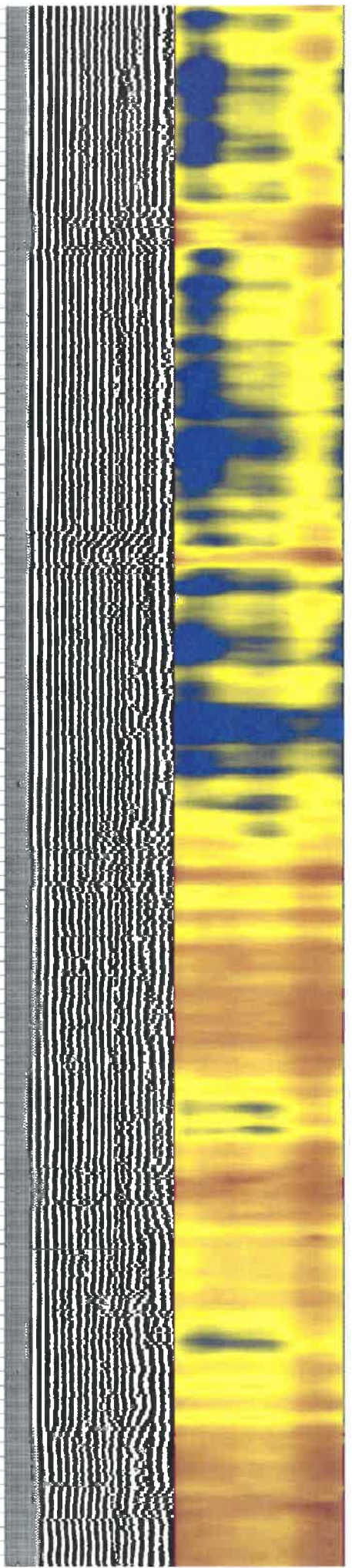
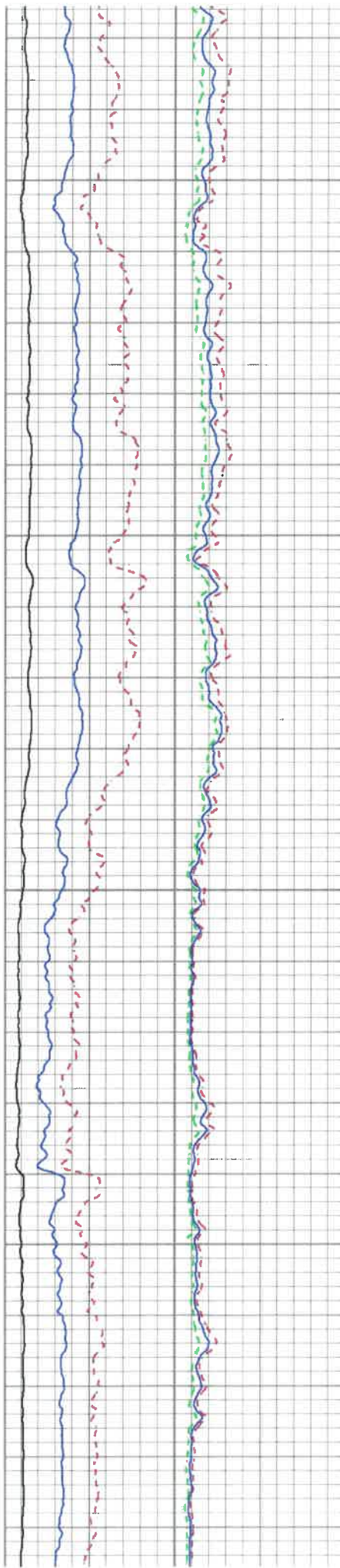


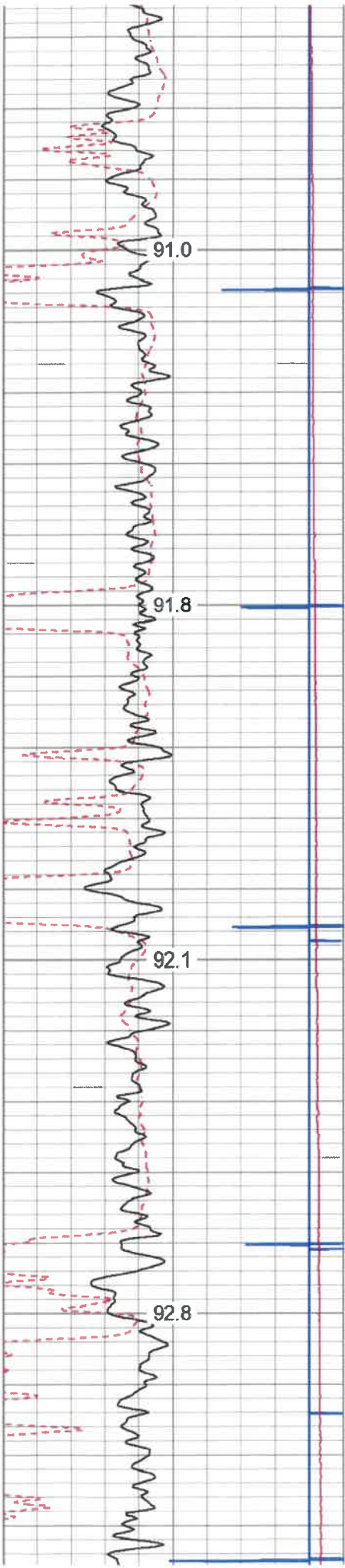
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3350

3400

3450



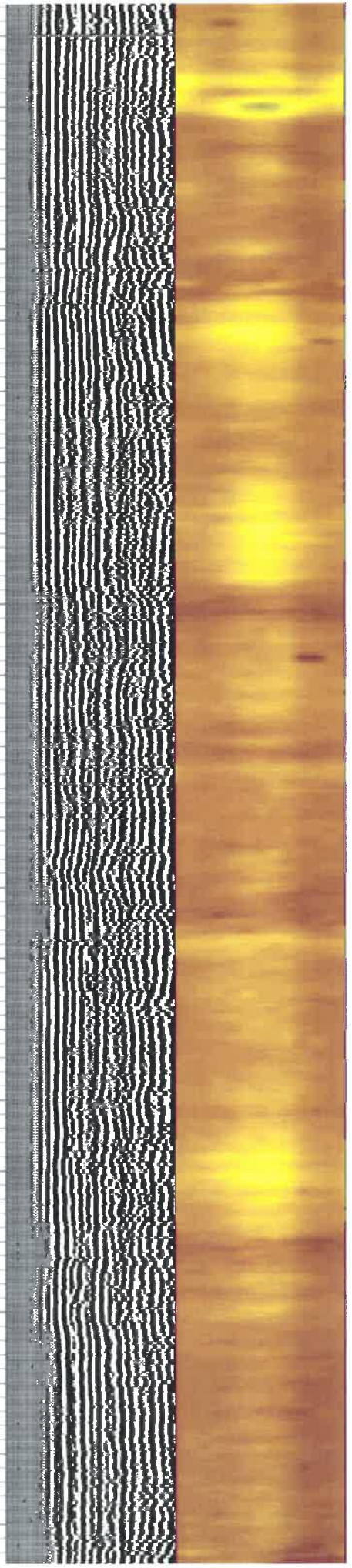
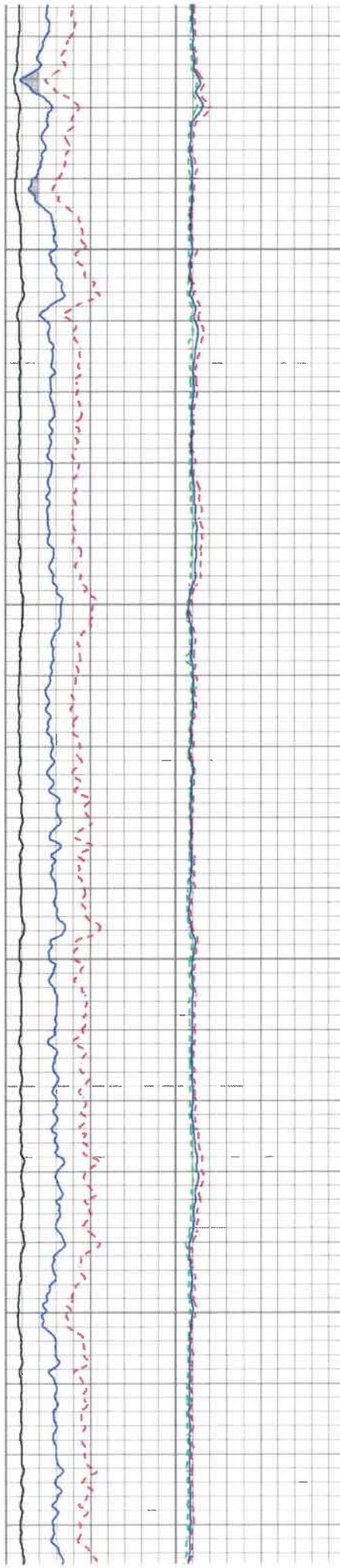


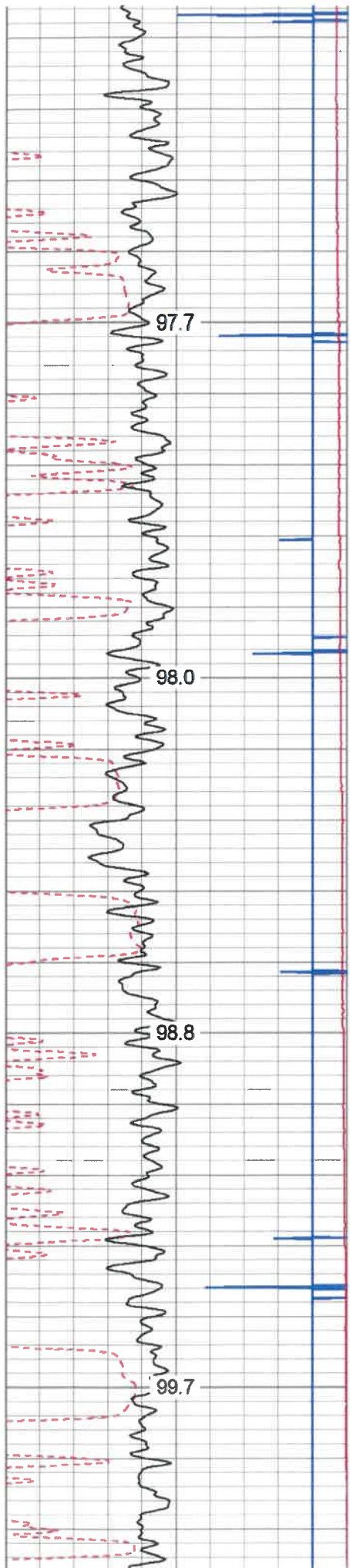
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3800

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3900



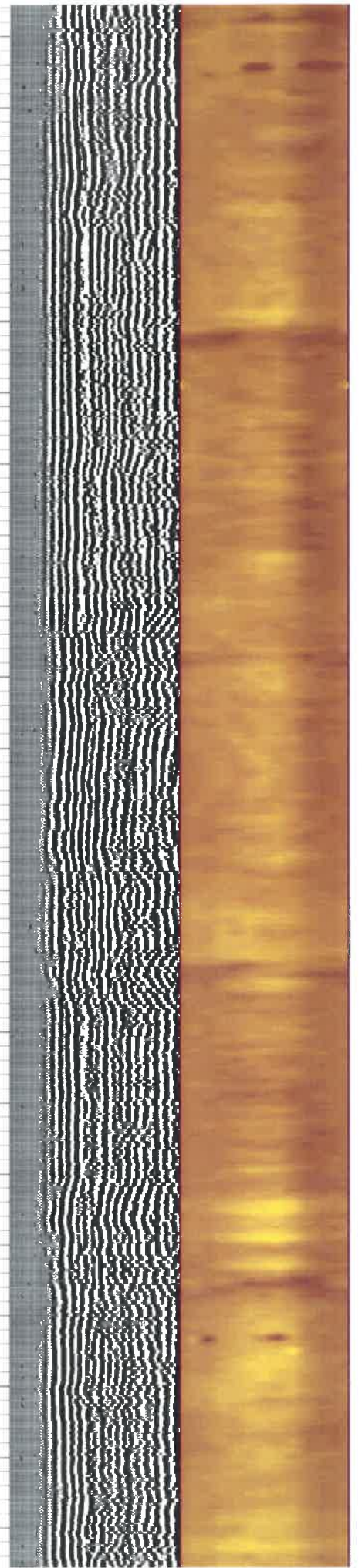
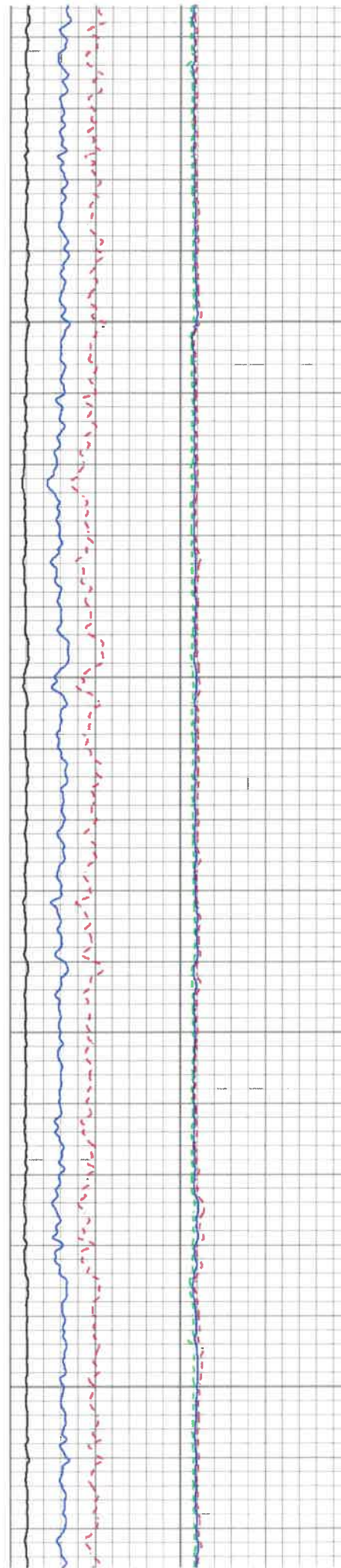


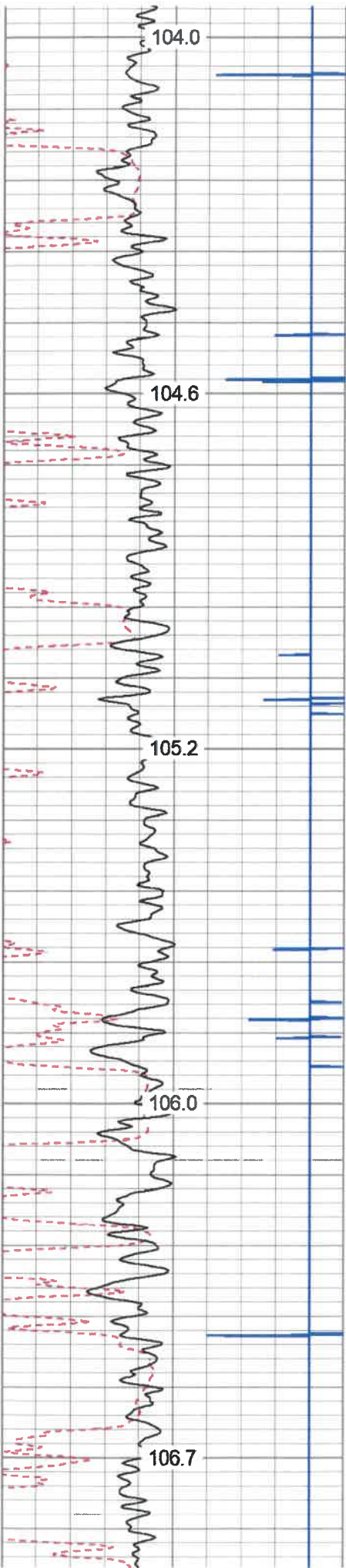
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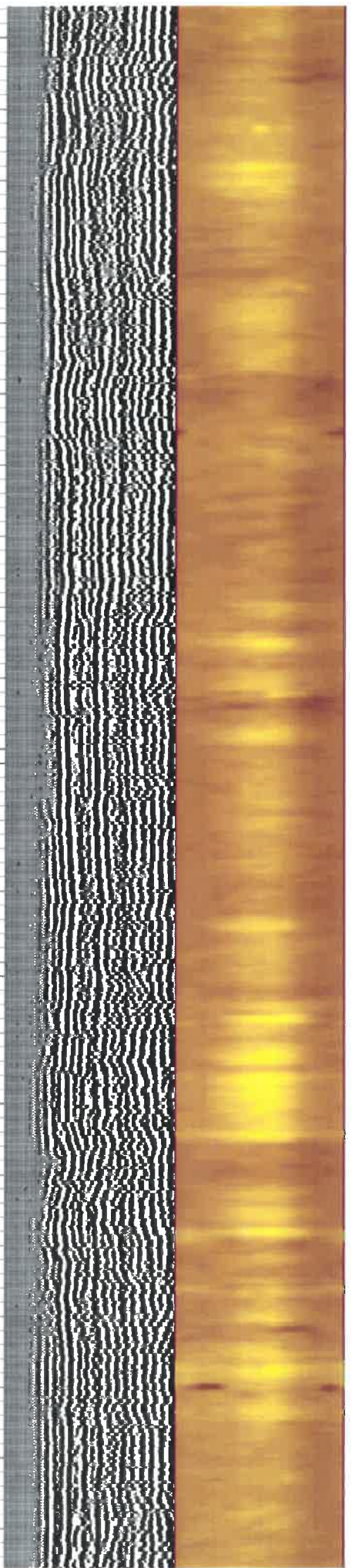
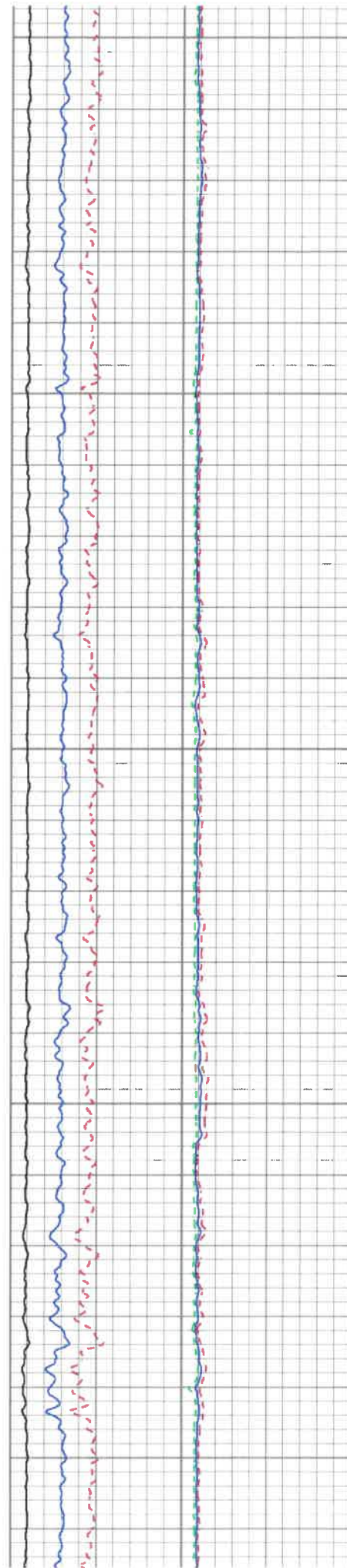
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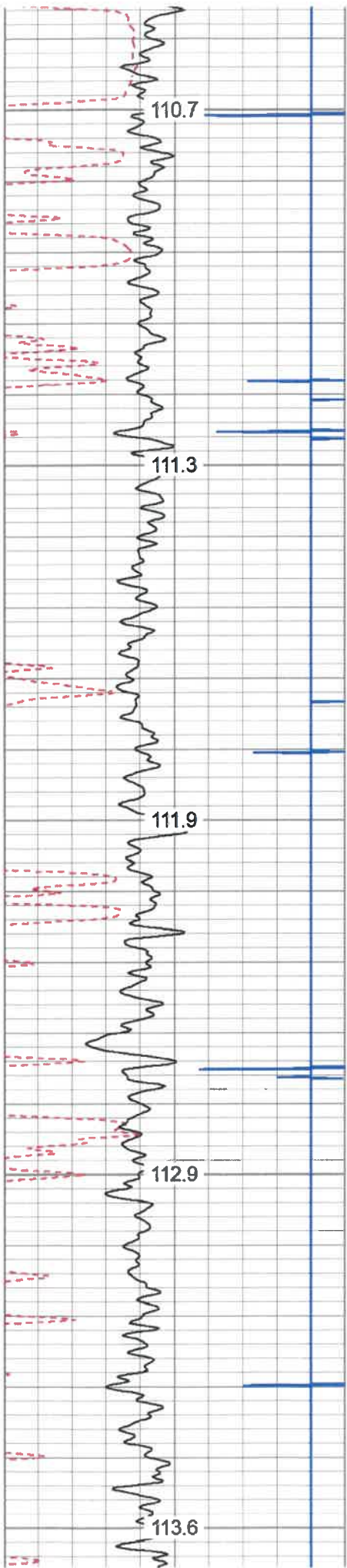
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4700
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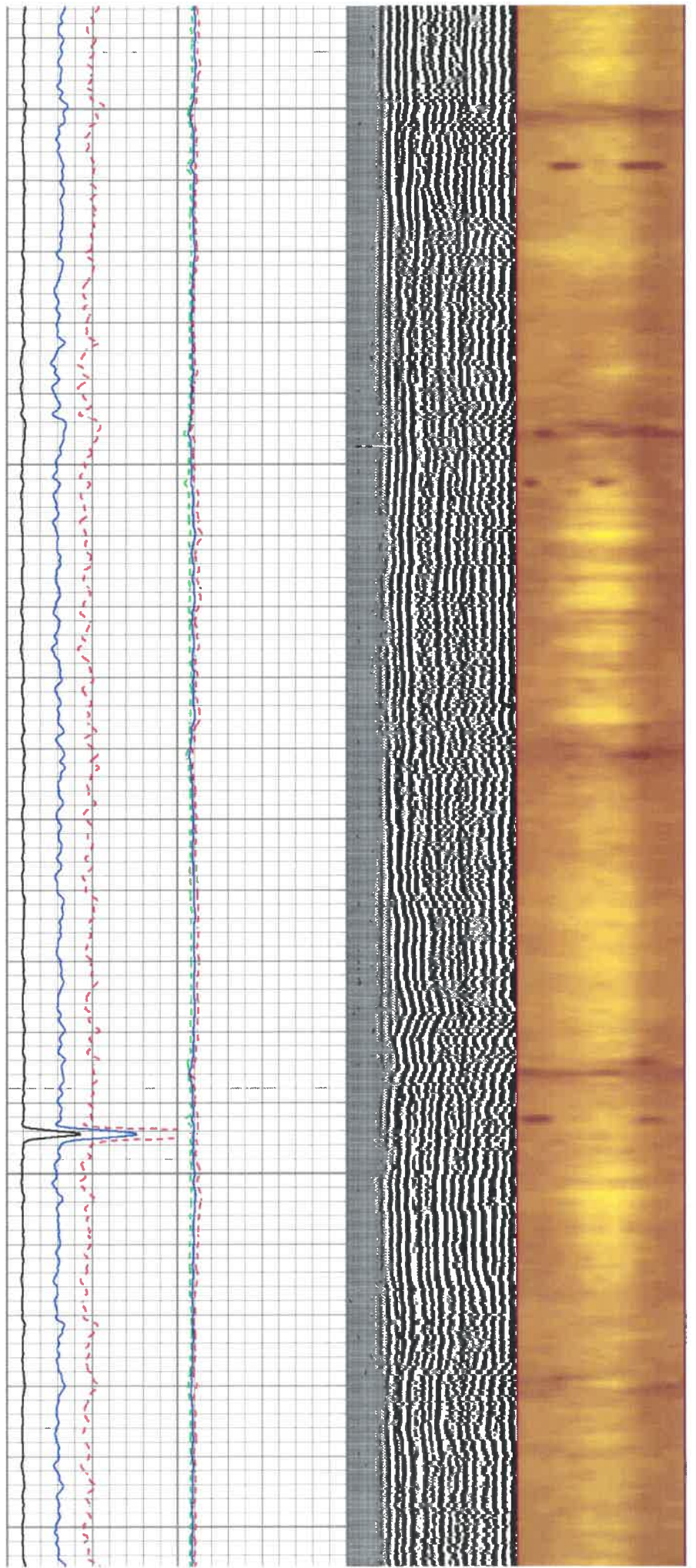
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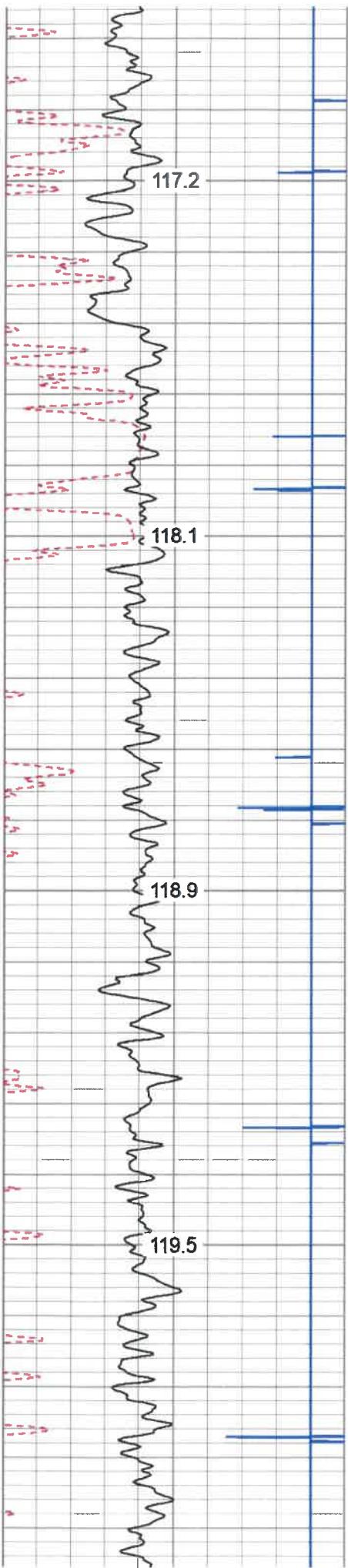
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5200

5250



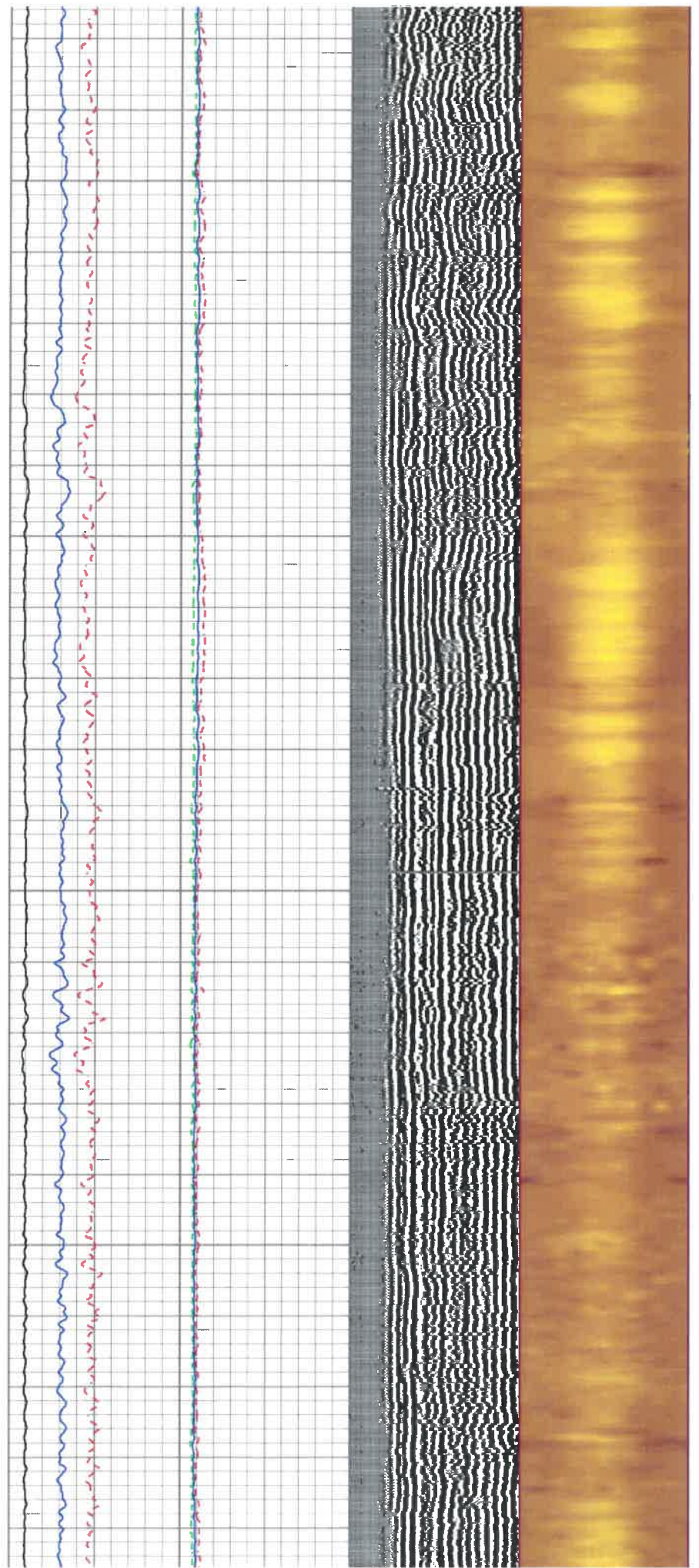


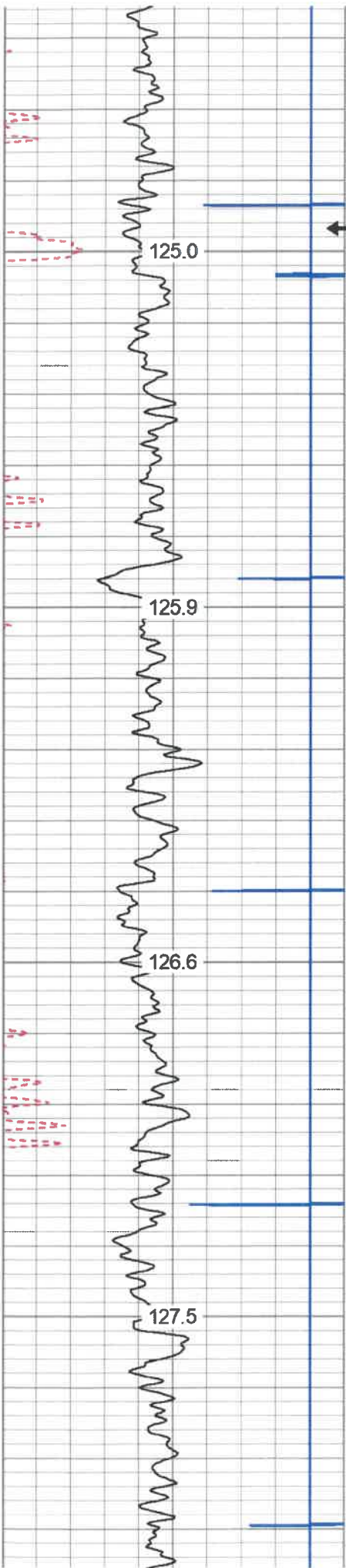
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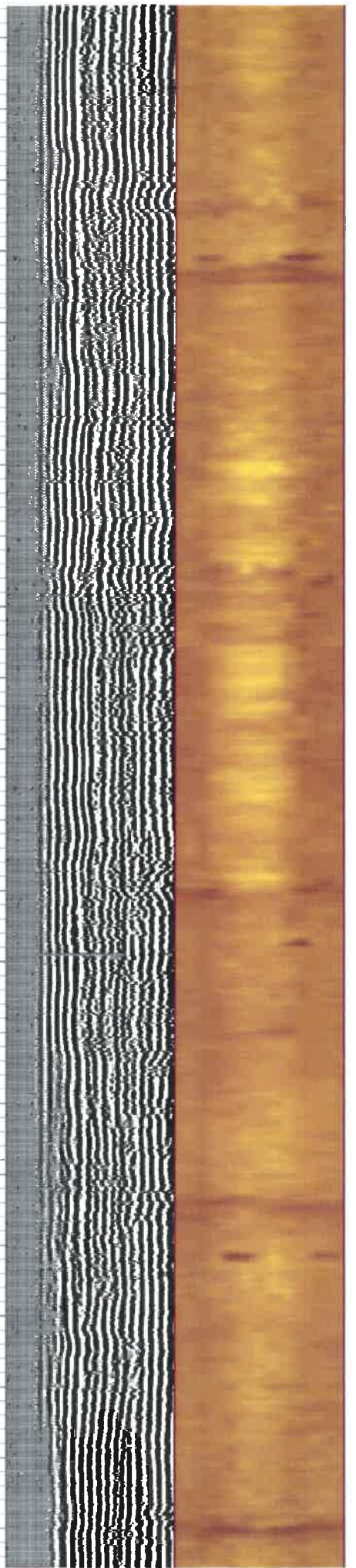
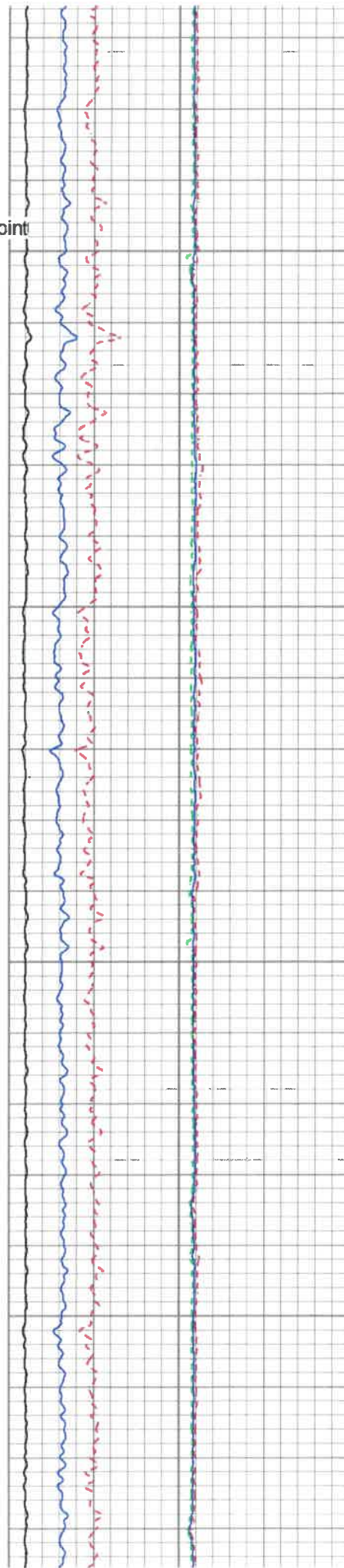
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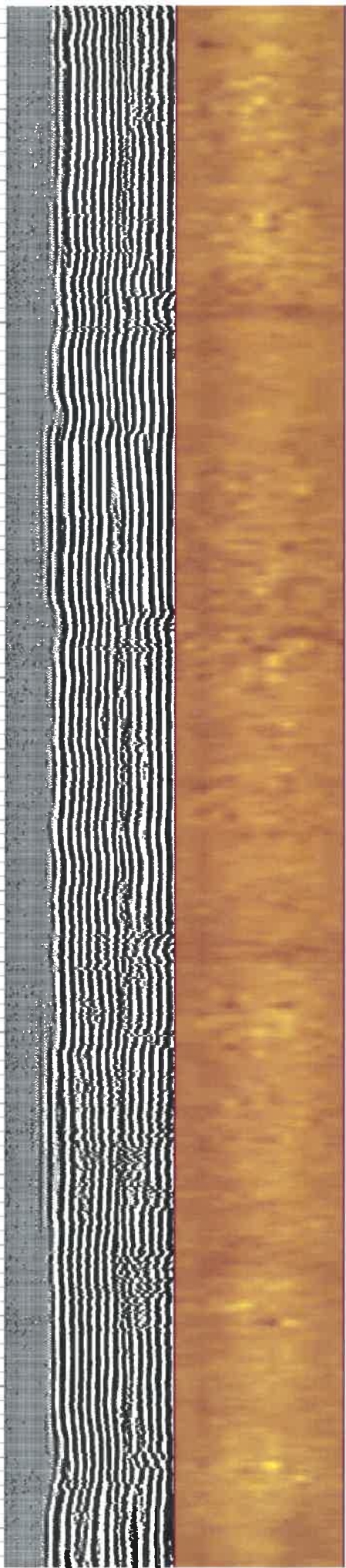
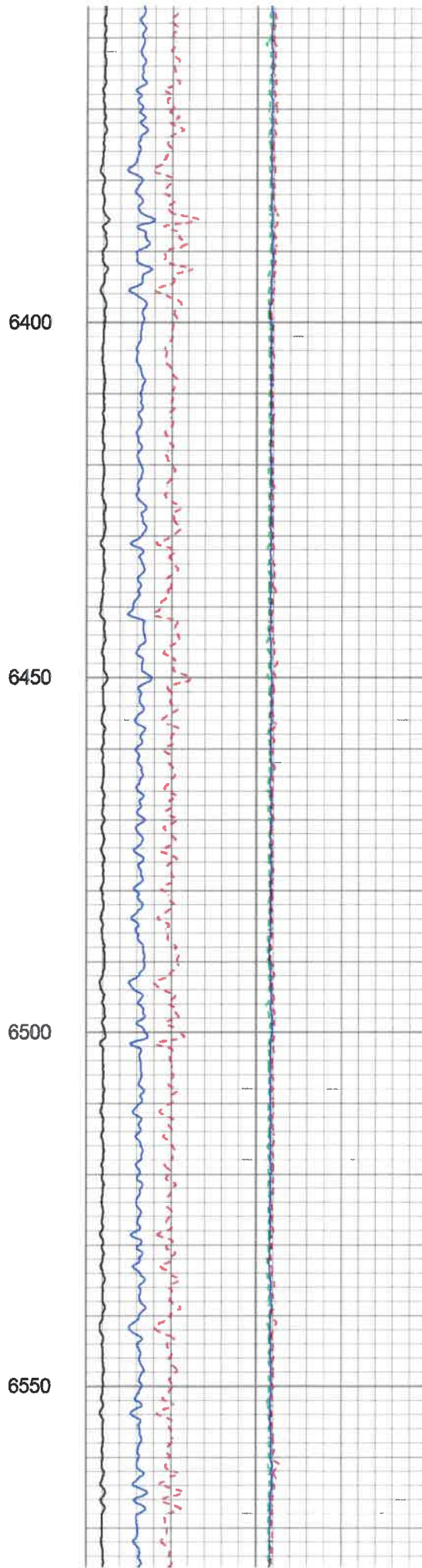
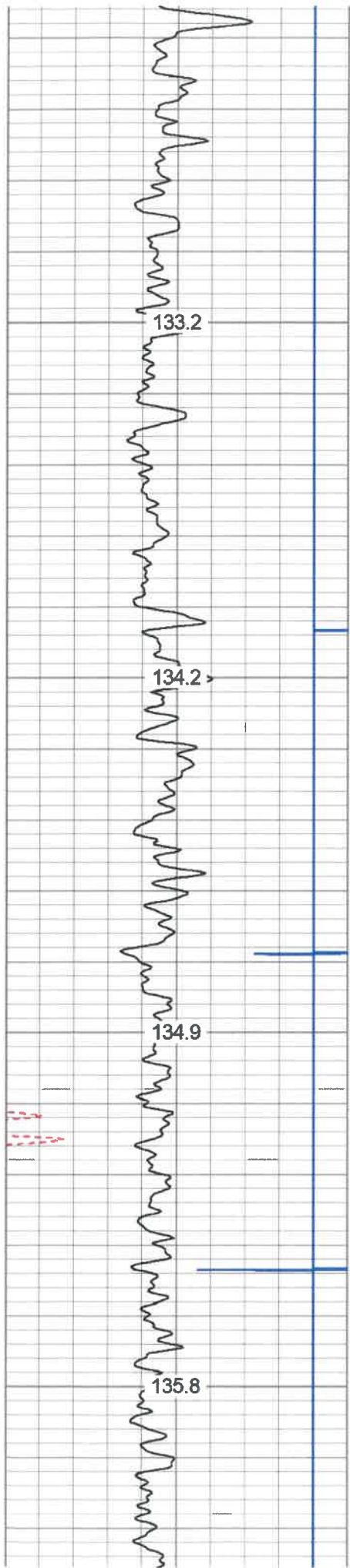
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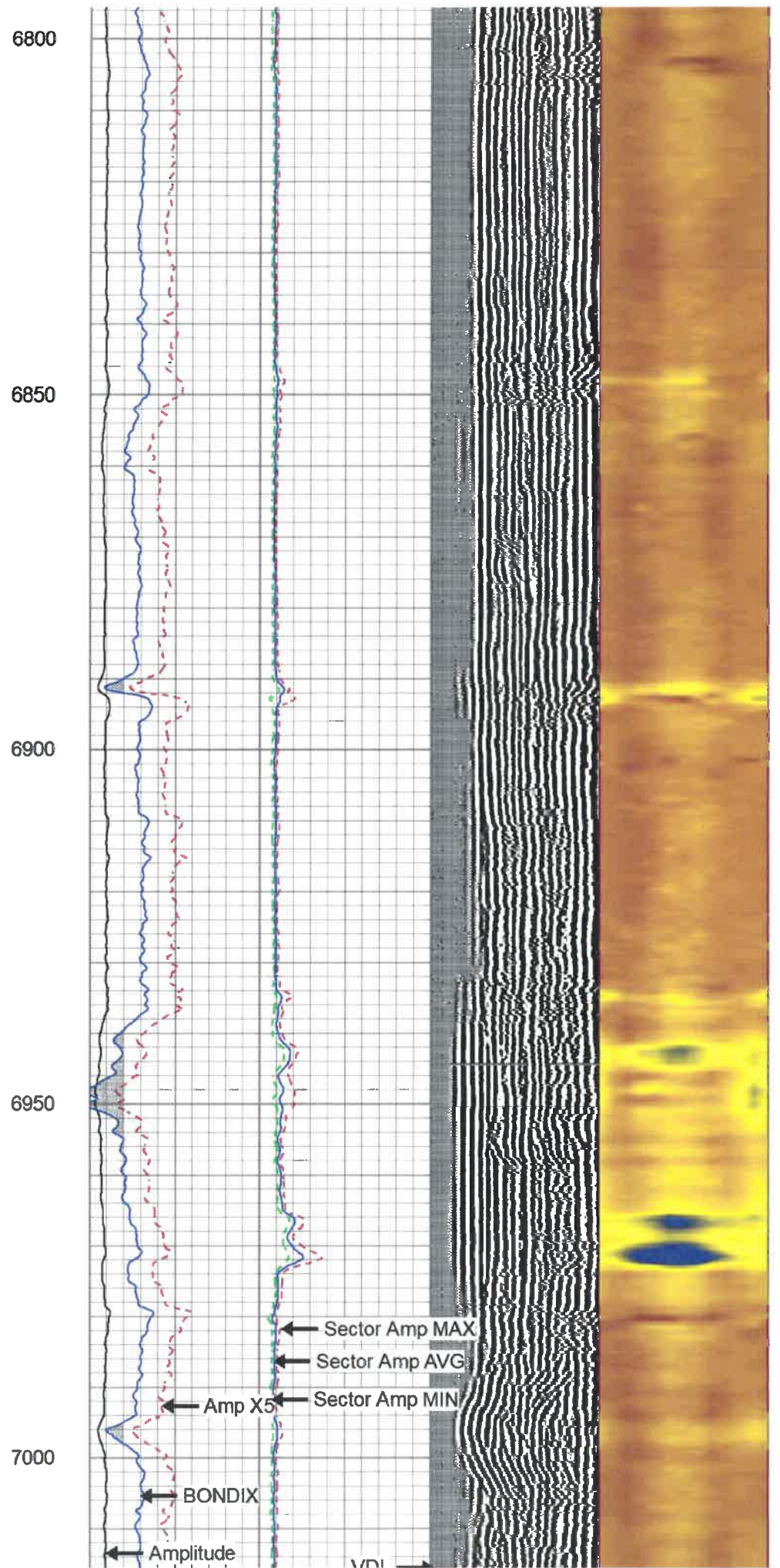
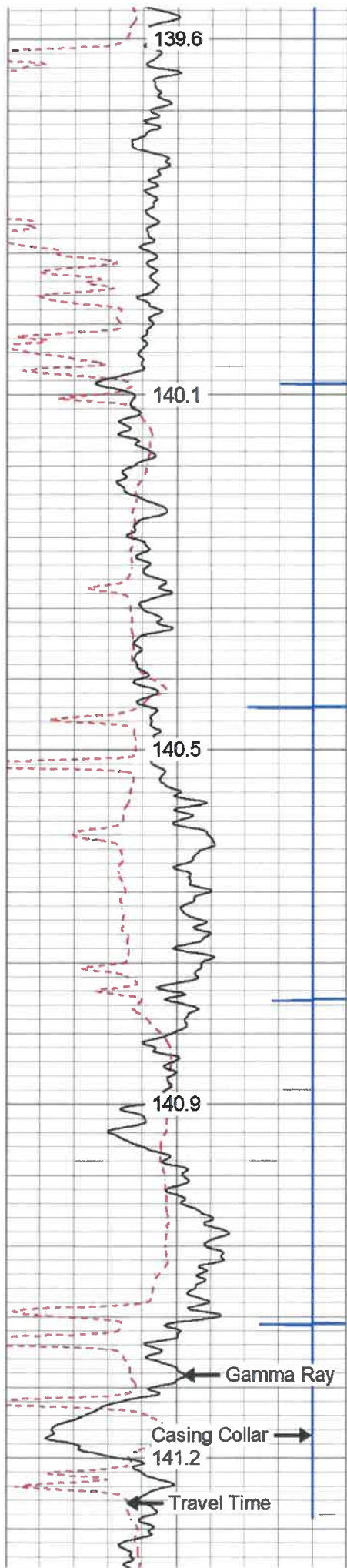


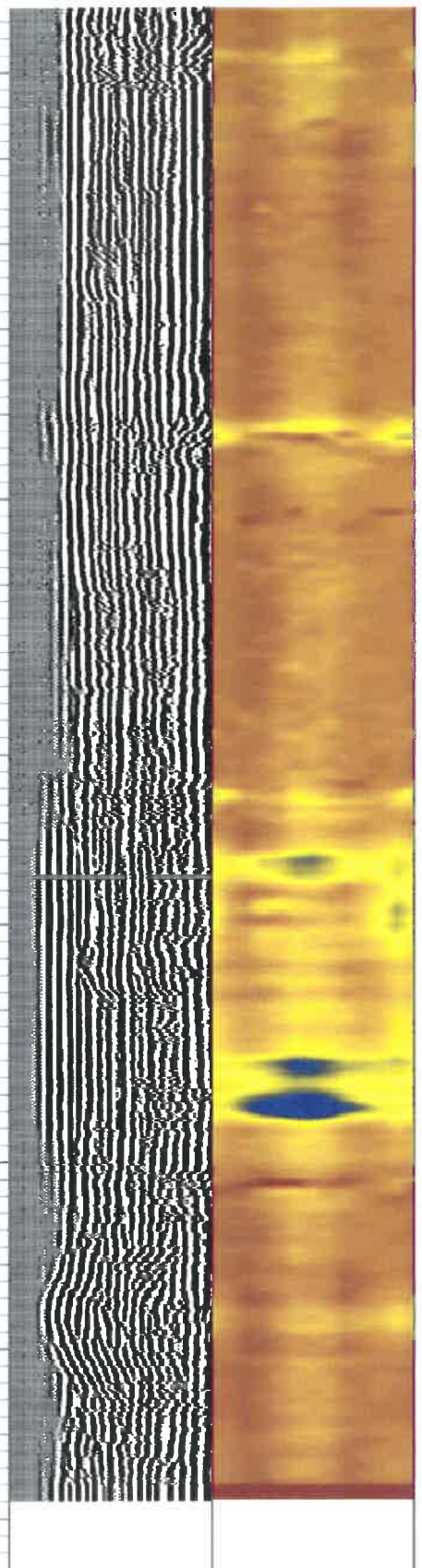
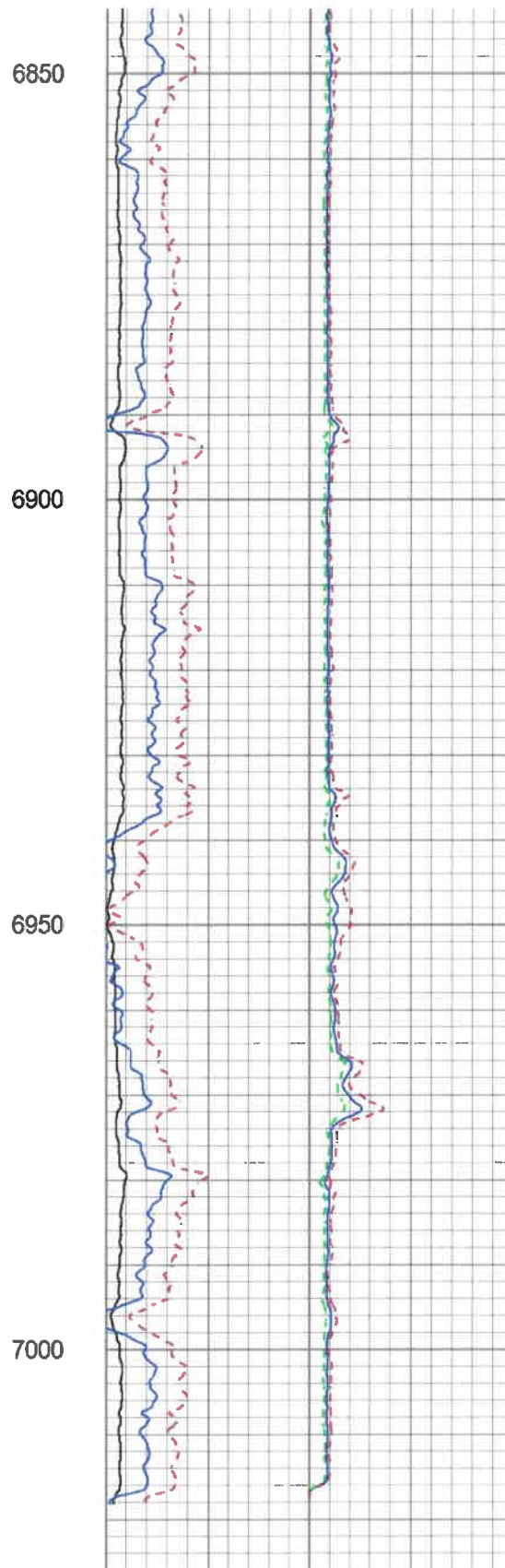
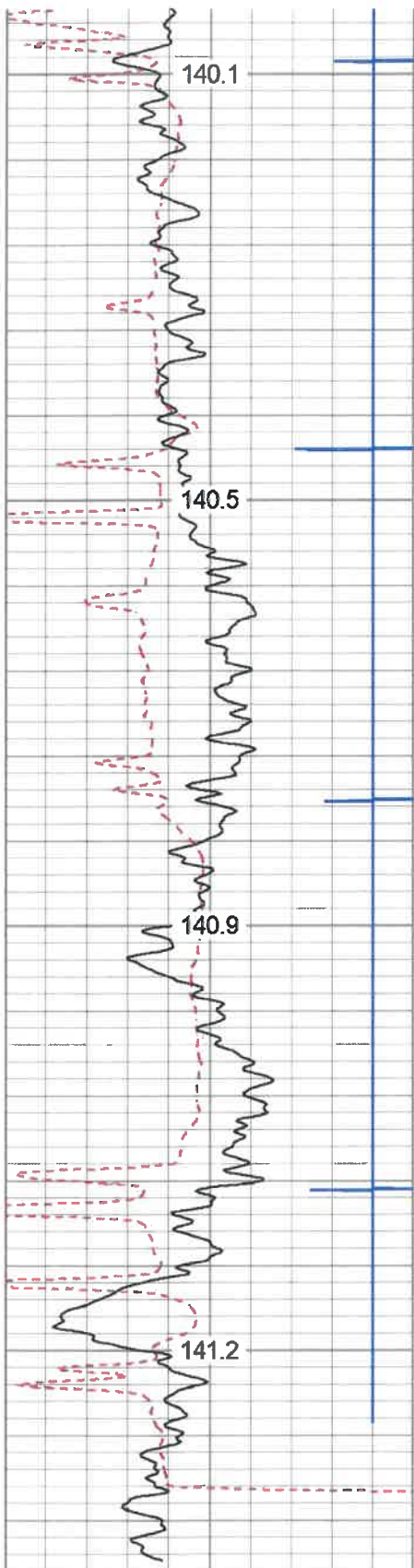


Marker Joint
5950









280	Travel Time (usec)	180
9	Casing Collar	-1
0	Gamma Ray (GAPI)	180
0	TEMP (degF)	100
180	GR (GAPI)	360

TEMP
(degF)

0	Amplitude (mV)	100
0	Amp X5 (mV)	20
1	BONDIX	0

Sector Amp AVG
Sector Amp MAX
Sector Amp MIN

VDL	200	(usec)	1200
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1 Sector Map 12



Gain: 0.33
 Offset: 0.00
 Delta Spacing 2

Log Variables

Database: C:\ProgramData\Warrior\Data\horst3h.db
 Dataset field/well/run1/pass1.4/_vars_



Top - Bottom

BHTEMP_Src	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	CASEWGHT lb/ft	MAXAMPL mV	MINAMPL mV	
TEMP	7.875	100	5.5	0	23	71.9	3.5	
MINATTN db/ft	PERFS	PPT usec	SRFTEMP degF	TDEPTH ft				
0.8	No	219	0	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

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
CCL	19.20		Titan-1.4375 1 7/16 Titan Type II Cable Head	1.03	1.44	5.00
			CCL-312tekco (101) Tekco 3 1/8" 450 Deg. "F" SmCo Logging CCL	1.82	3.12	25.00
			Tek-2.75 2 3/4" Tekco Adjustable Centralizer	2.73	2.75	25.00
TEMP	13.04		SCBL-Tek12 (T12_01) Tekco 400 Deg F 12 Sector RIB with Temp	9.13	3.25	135.00
WVFSYNC	13.04					
WVFCAL	13.04					
WVFS12	11.75					
WVFS11	11.75					
WVFS10	11.75					
WVFS9	11.75					
WVFS8	11.75					
WVFS7	11.75					
WVFS6	11.75					