



**Segmented Radial Cement Bond
W/Gamma Ray, CCL
Log**

Company Antero Resources Corporation Well Kirk Hadley Unit 1H Field Marcellus County Tyler State WV Country US	Company Antero Resources Corporation Well Kirk Hadley Unit 1H Field Marcellus County Tyler State WV Country US
Location: API #: 47095025540000	
SEC TWP RGE	Elevation
Permanent Datum Log Measured From Drilling Measured From	Ground Level R.K.B. 25' R.K.B.
Other Services	

Date	13-NOV-2019						
Run Number	ONE						
Depth Driller	14283'						
Depth Logger	6450'						
Bottom Logged Interval	6450'						
Top Log Interval	Surface						
Open Hole Size	8.25"						
Type Fluid	F/W						
Density / Viscosity	8.6						
Max. Recorded Temp.	134 degF						
Estimated Cement Top	2420'						
Time Well Ready	N/A						
Time Logger on Bottom	N/A						
Equipment Number	214182						
Location	Bridgeport, WV						
Recorded By	S. Butler						
Witnessed By	Jerrako Evans						
Borehole Record		Tubing Record					
Run Number	Bit	From	To	Size	Weight	From	To
ONE	24"	Surface	80'				
TWO	17.5"	80'	451'				
THREE	12.25"	451'	2607'				
FOUR	8.25"	2607'	14283'				
Casing Record	Size	Wgt/Ft	Top	Bottom			
Surface String	13.375"	54.5	Surface	451'			
Prod. String	9.625"	40	Surface	2607'			
Production String	5.5"	20	Surface	14283'			
Liner							

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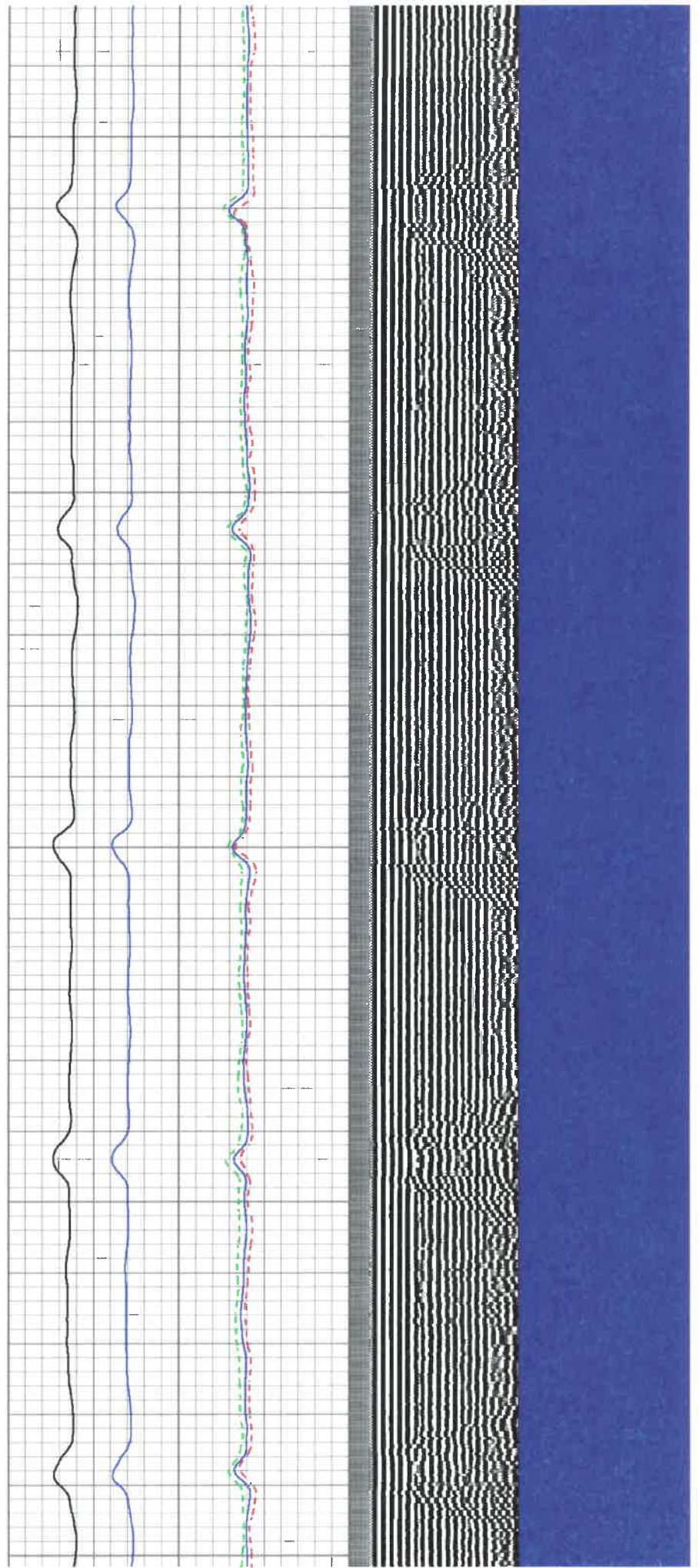
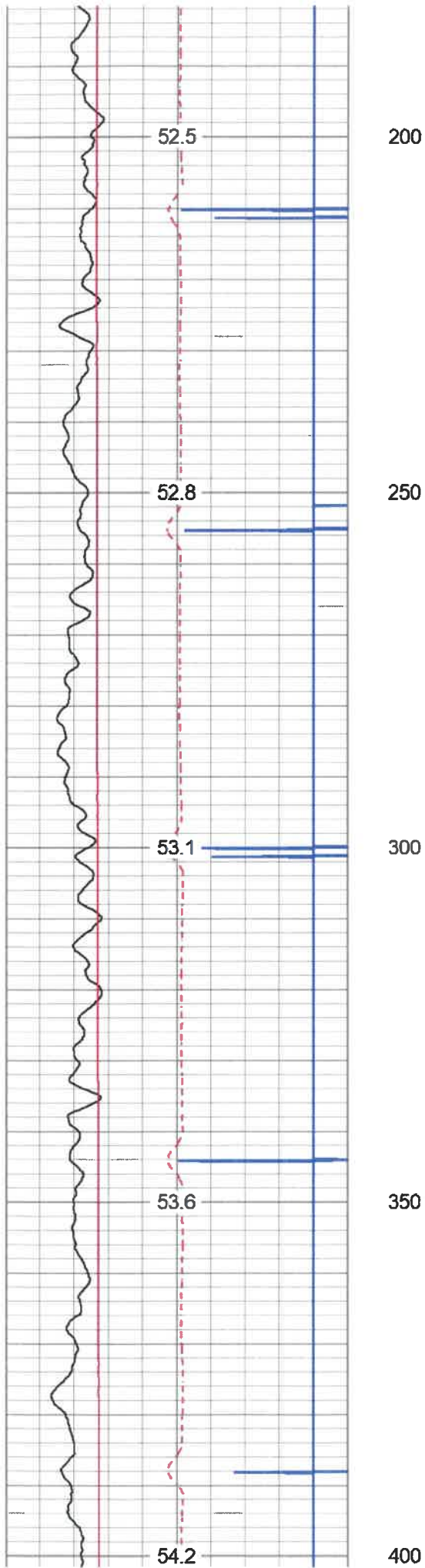
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

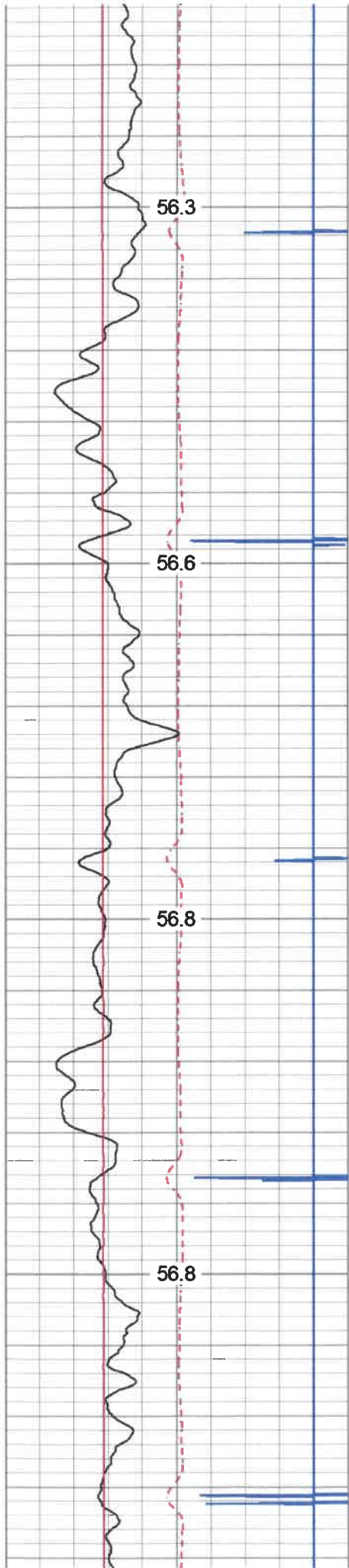
Comments

Zero @ R.K.B. 25'
 Marker Joint 5488 - 5498'
 Log TD 6450'
 Cement Top @ 2420'
 Log Ran Under 1500 PSI



Main Pass



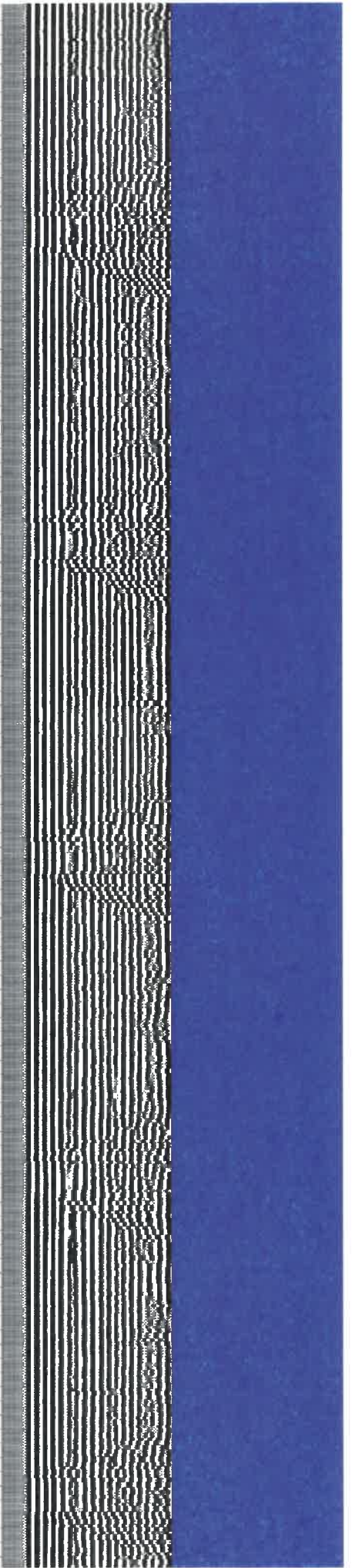
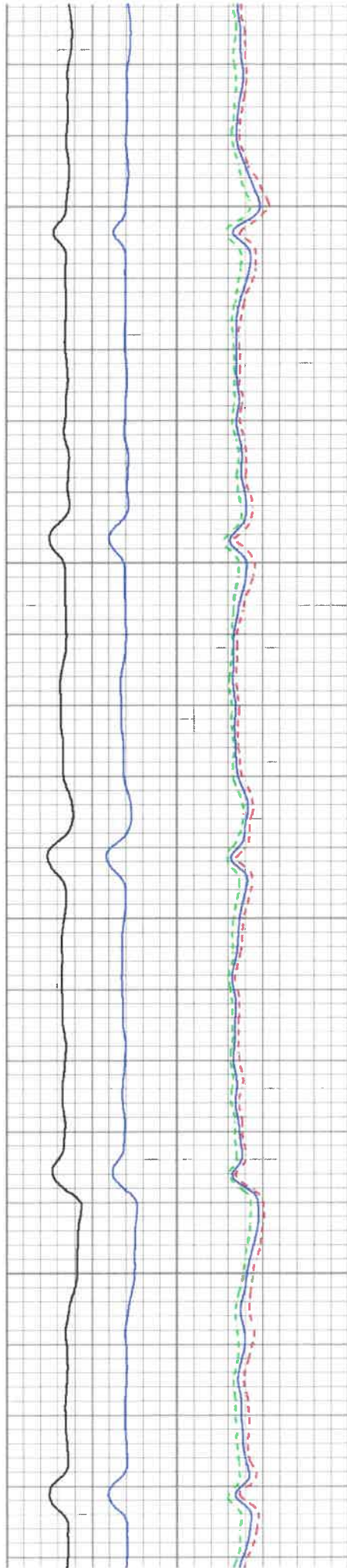


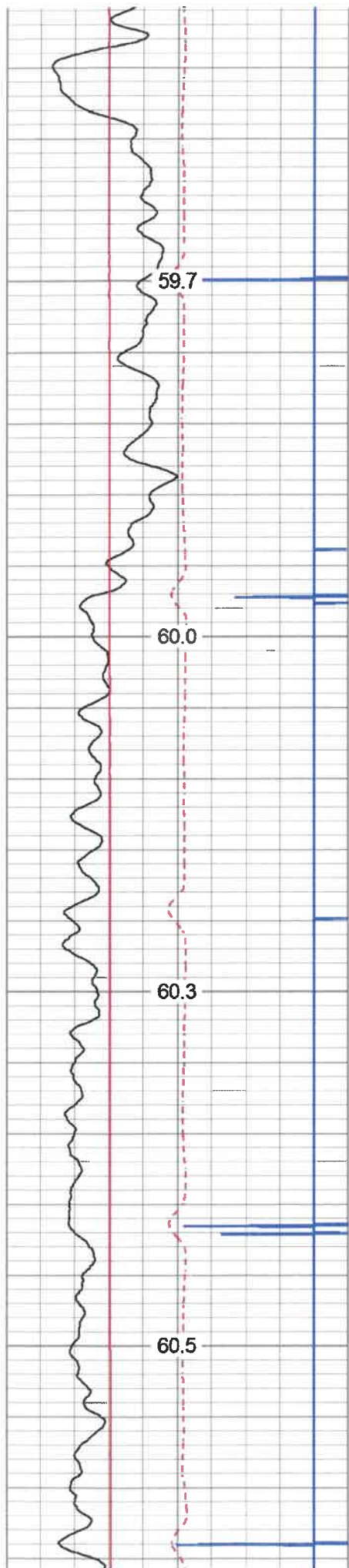
650

700

750

800



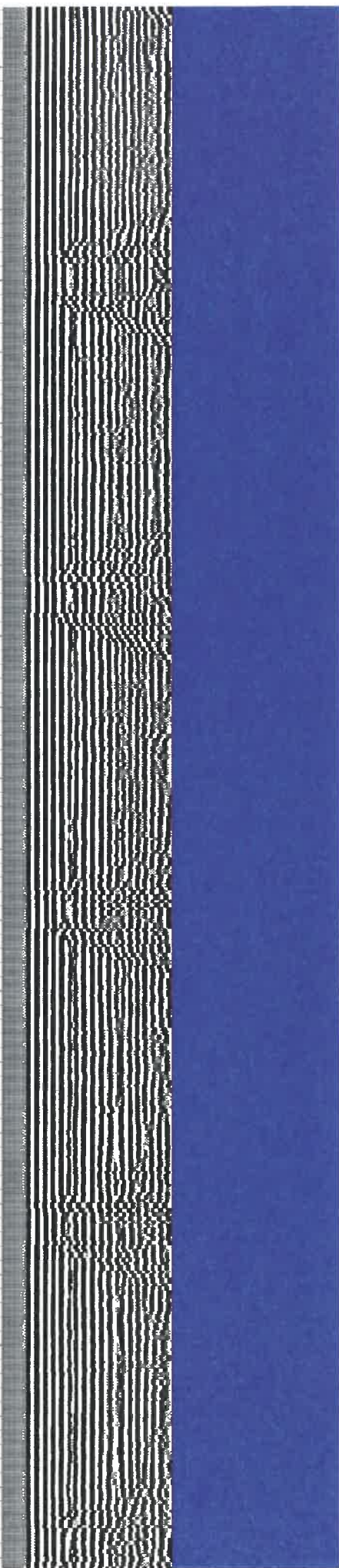
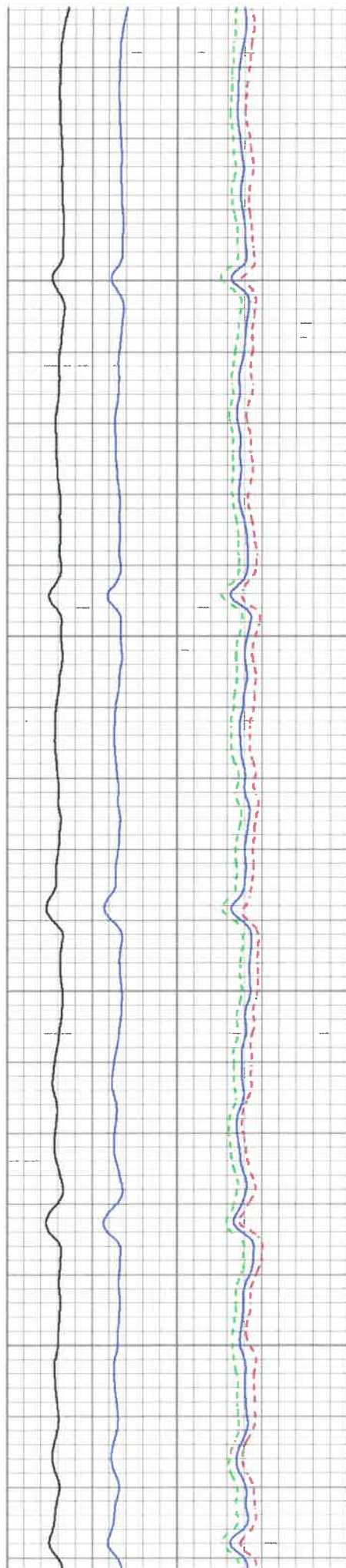


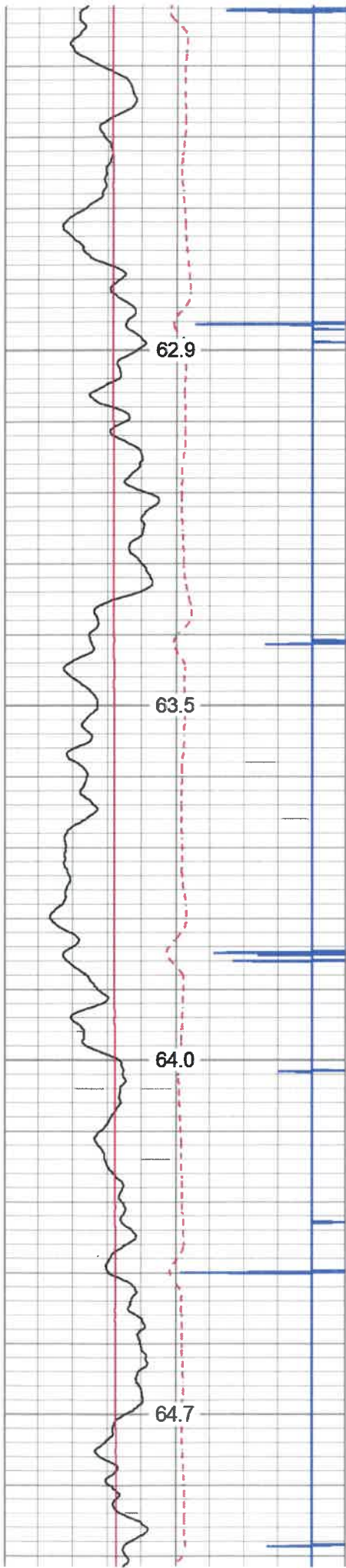
1100

1150

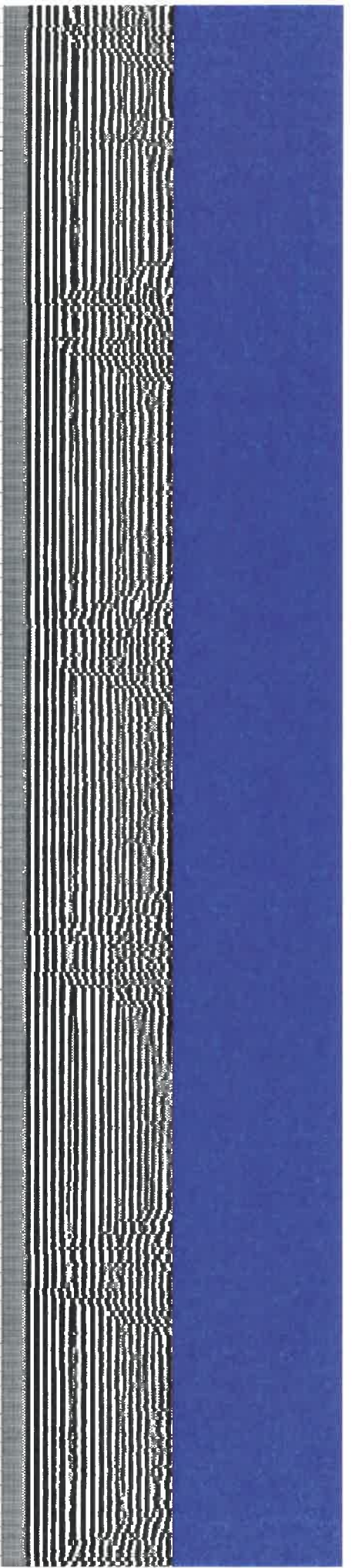
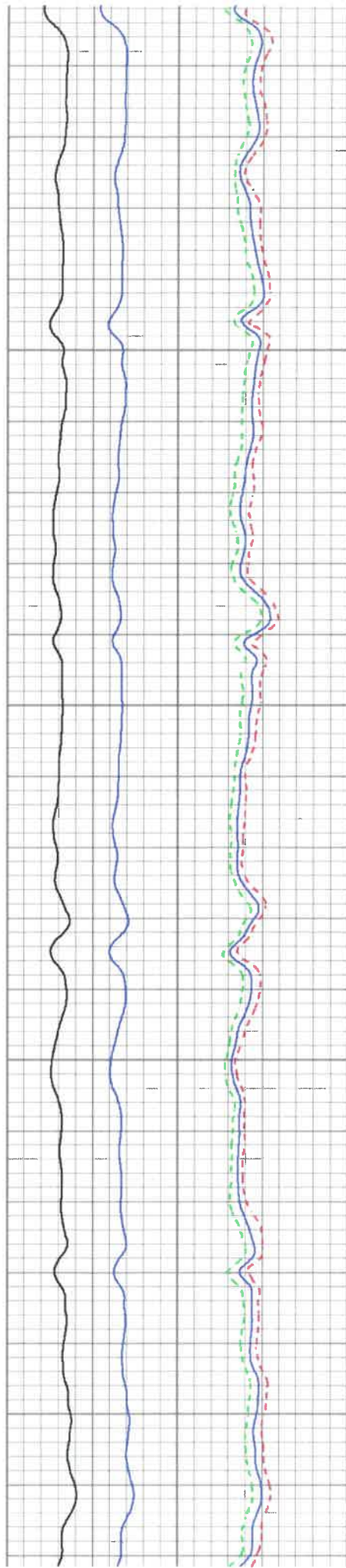
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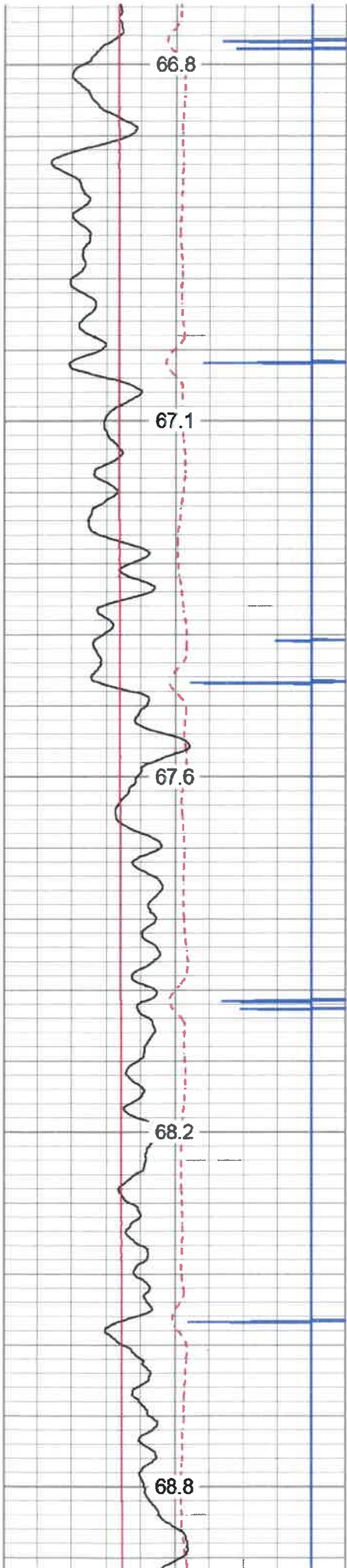
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1550
1600
1650
1700





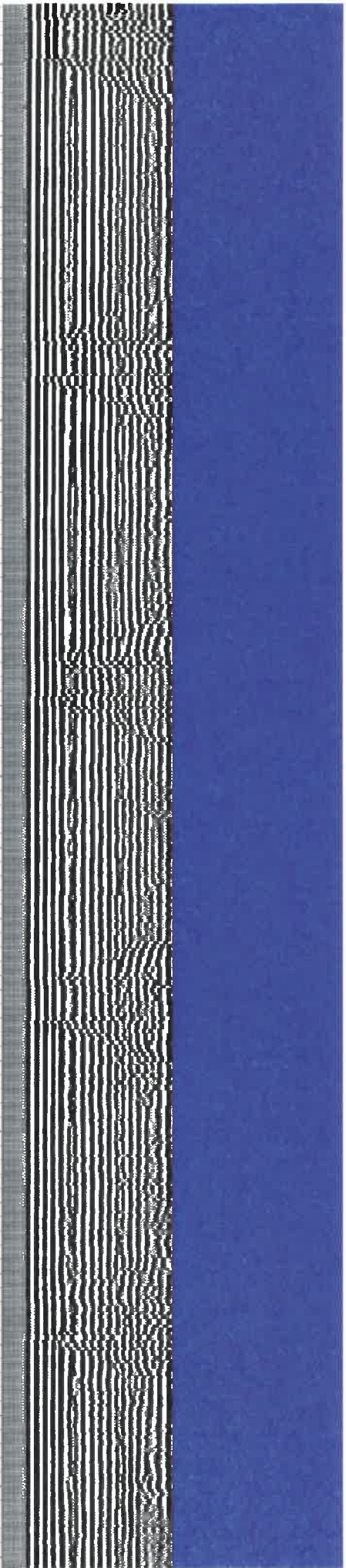
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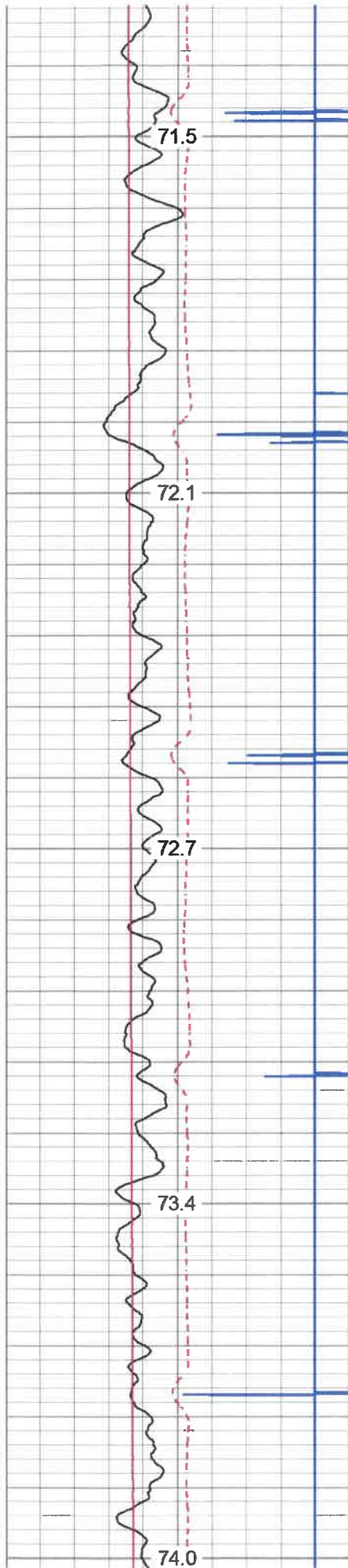
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2050

2100

2150





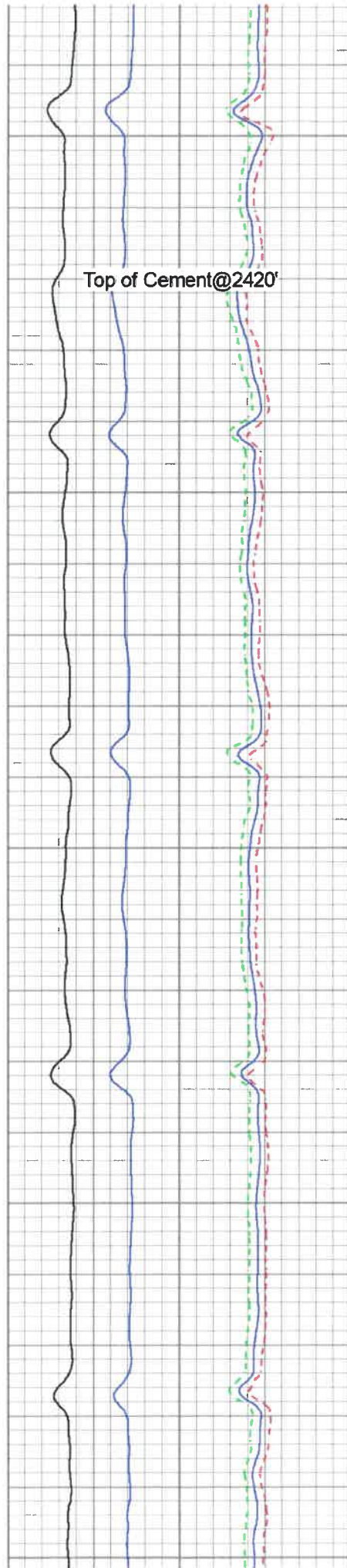
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2450

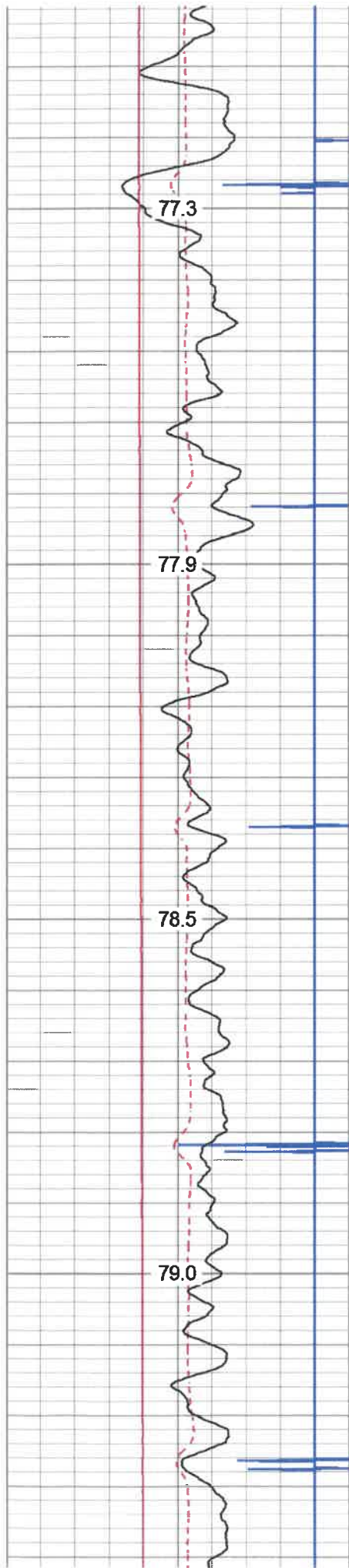
2500

2550

2600



Top of Cement@2420'

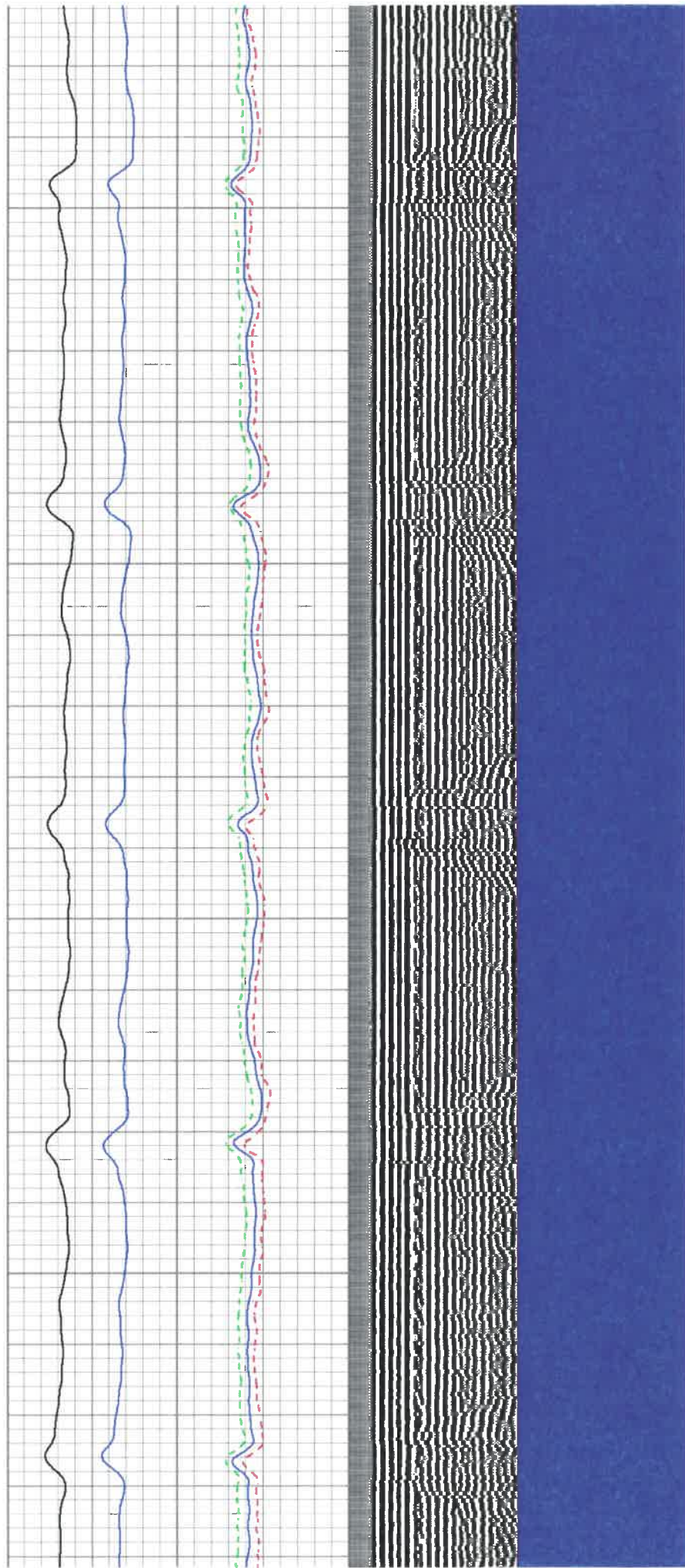


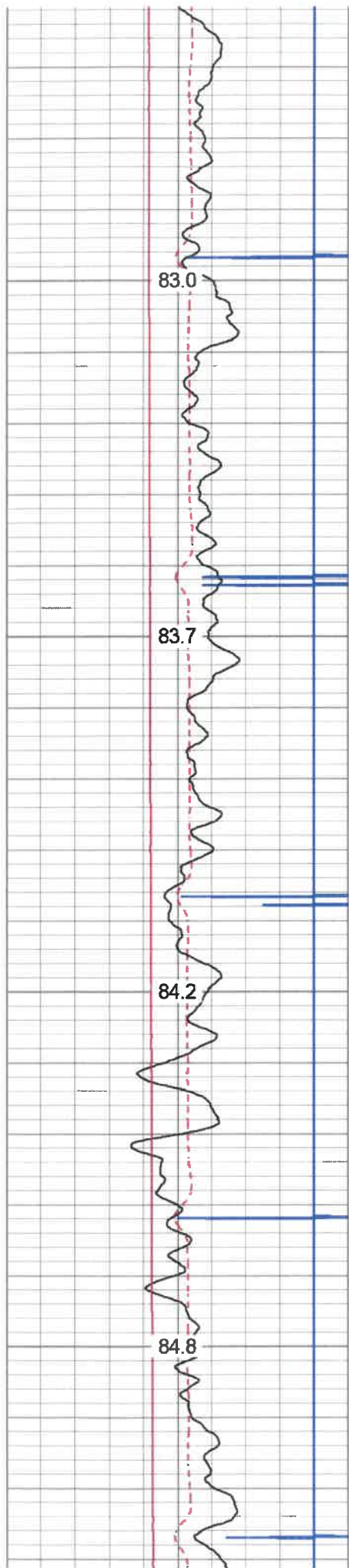
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2900

2950

3000



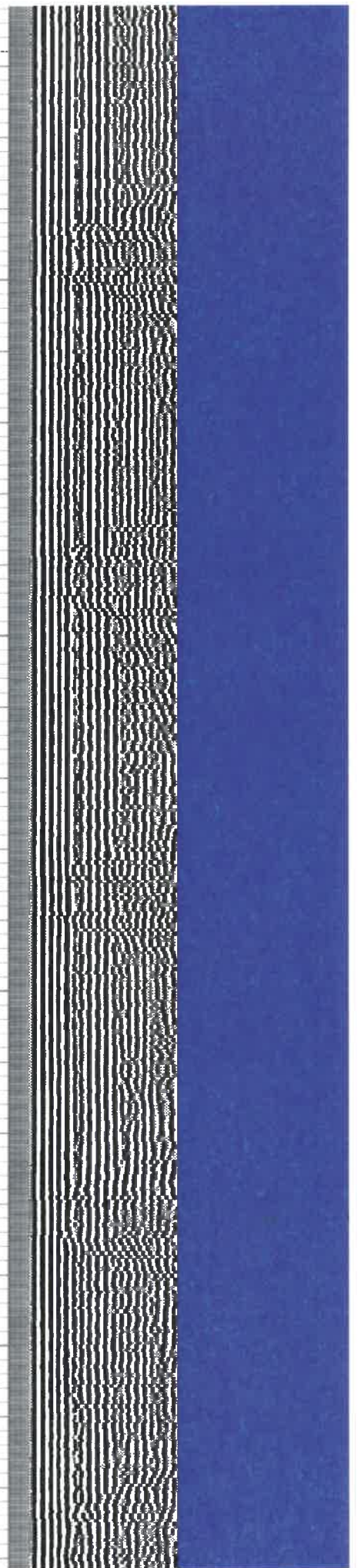


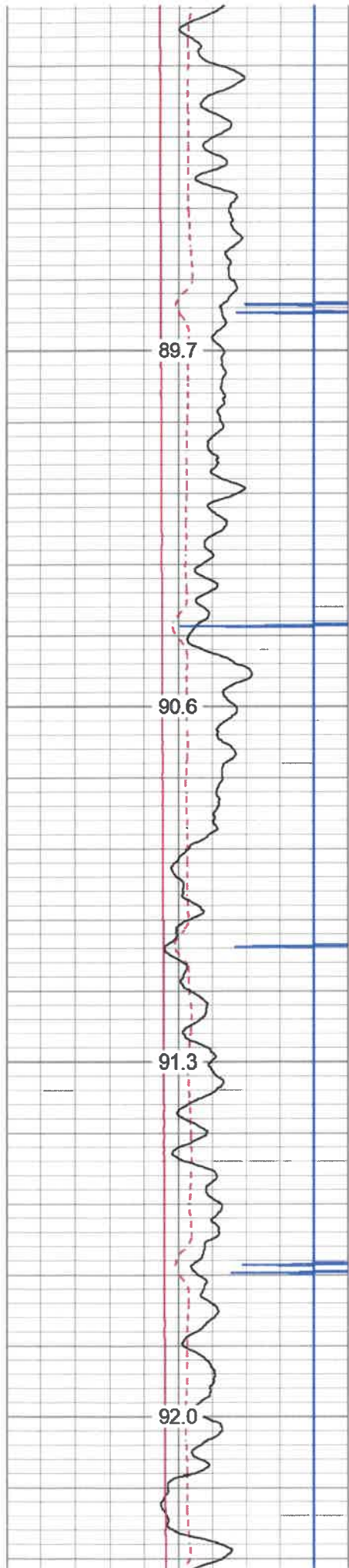
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3400

3450



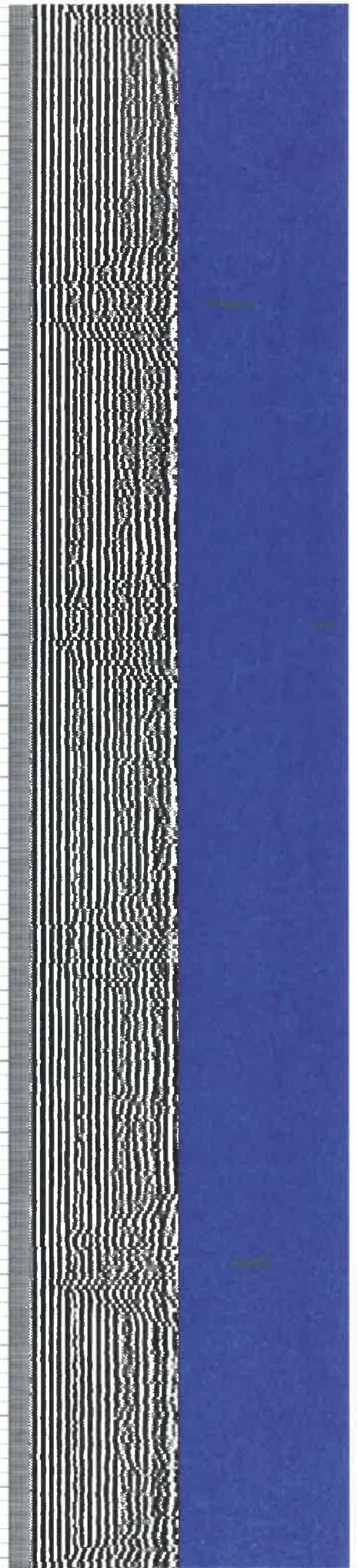
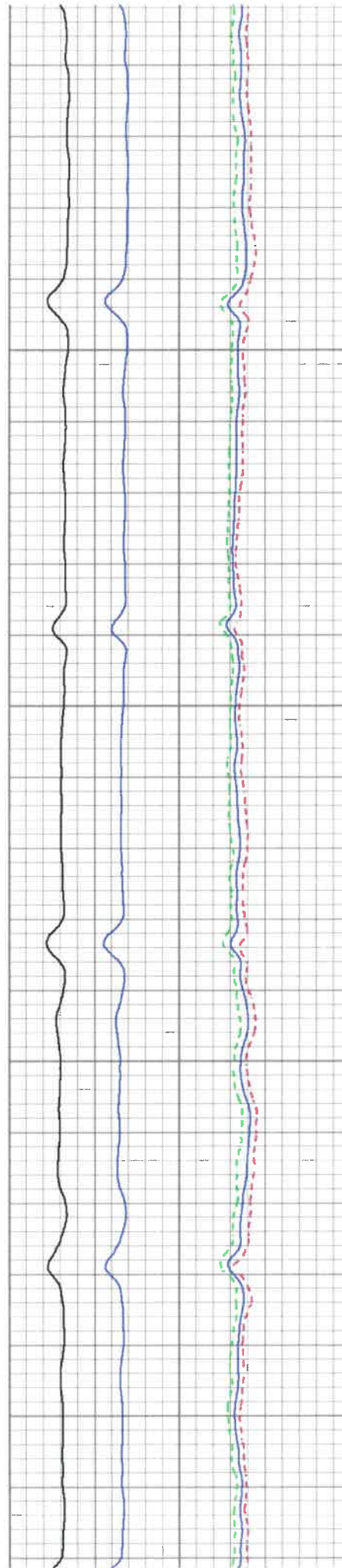


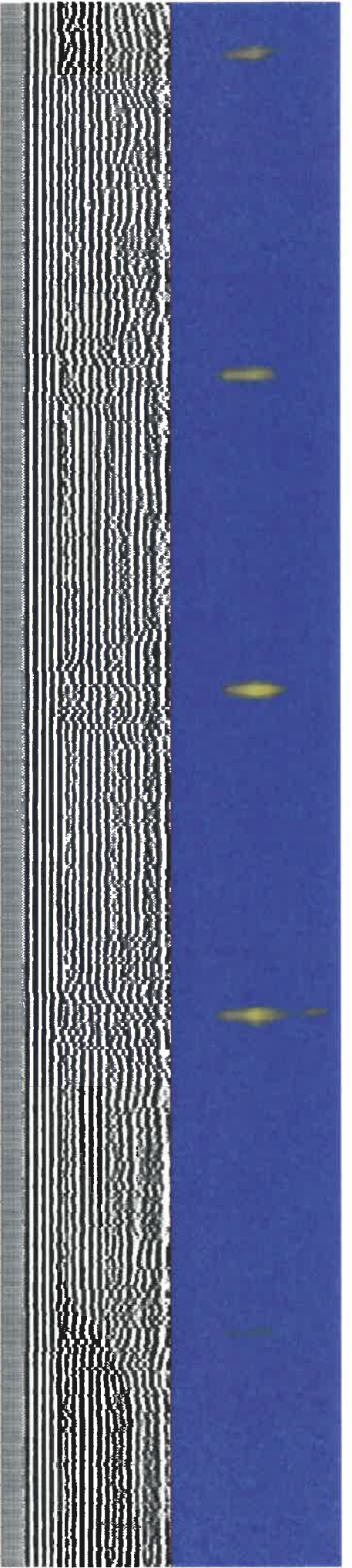
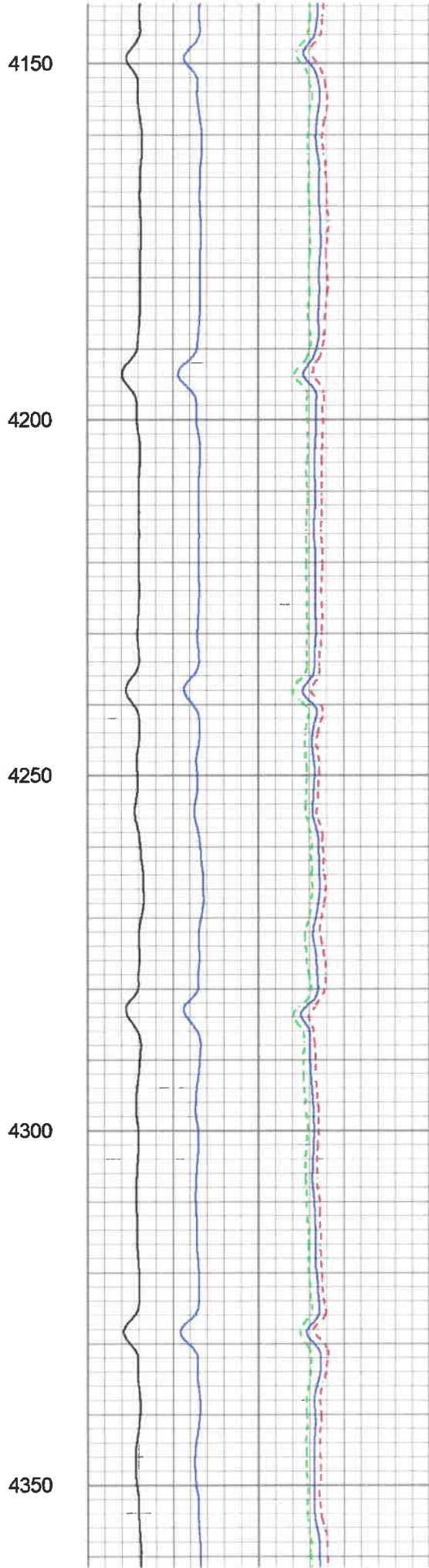
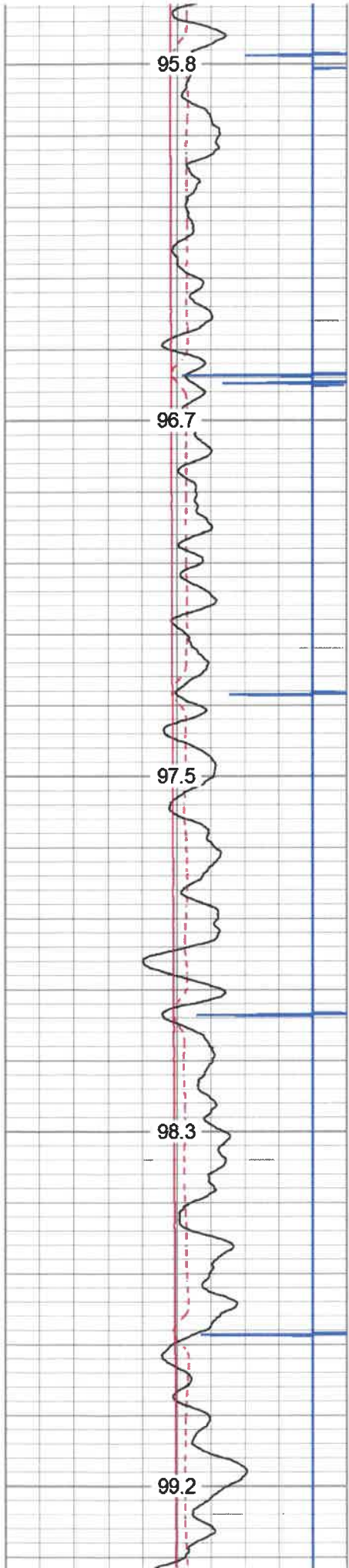
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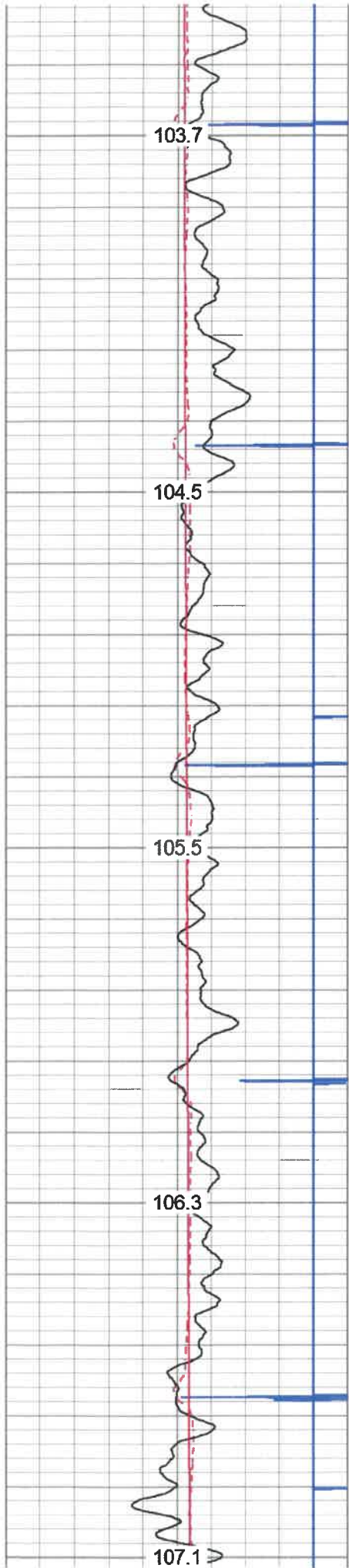
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3850

3900







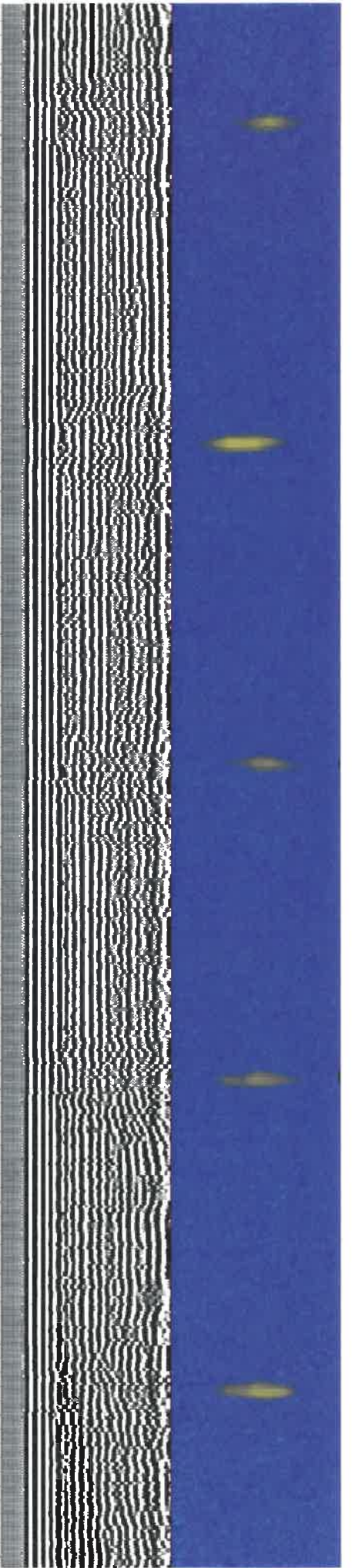
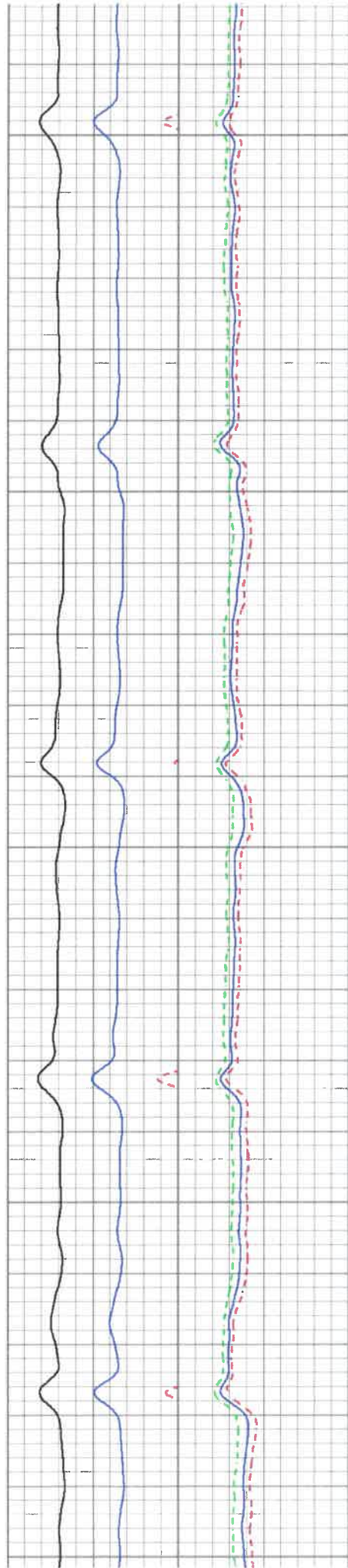
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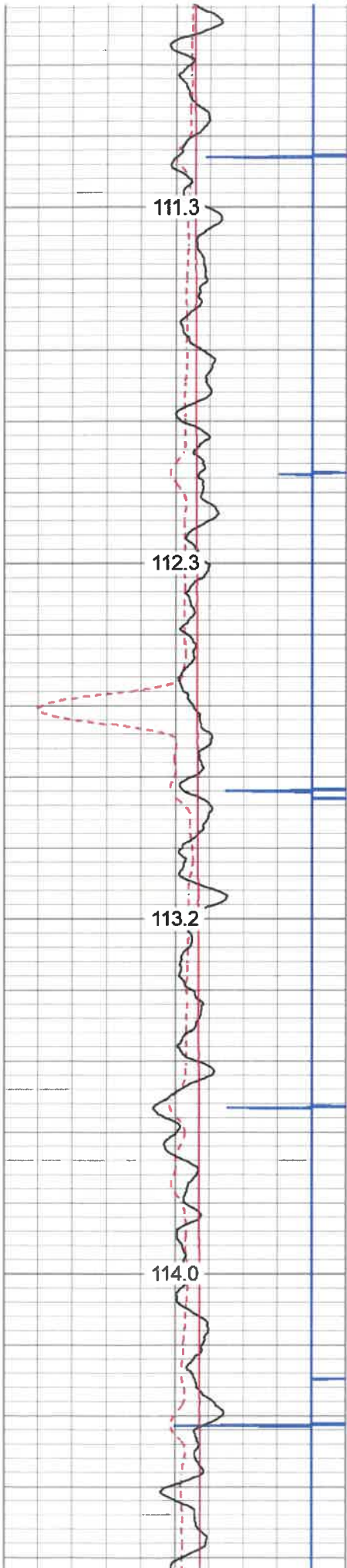
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4800



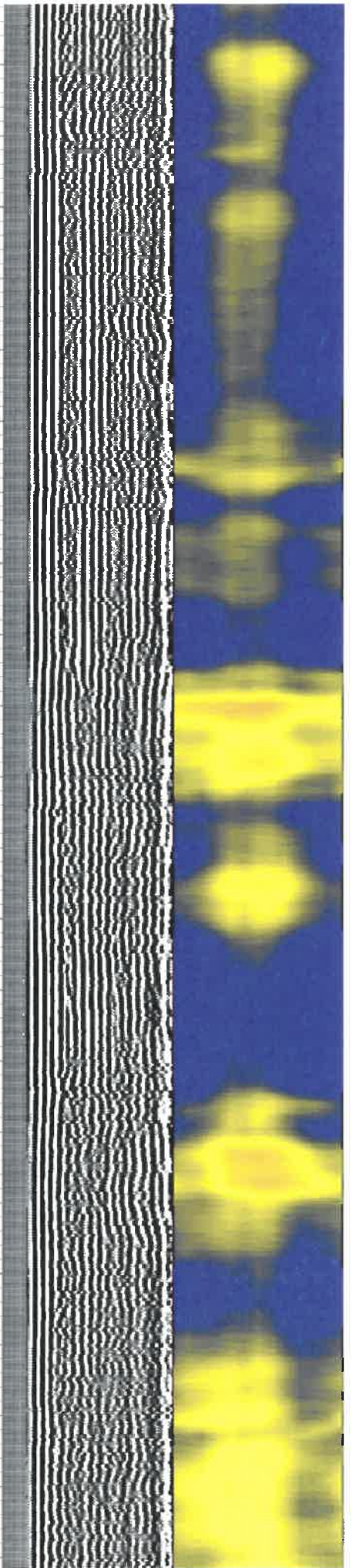
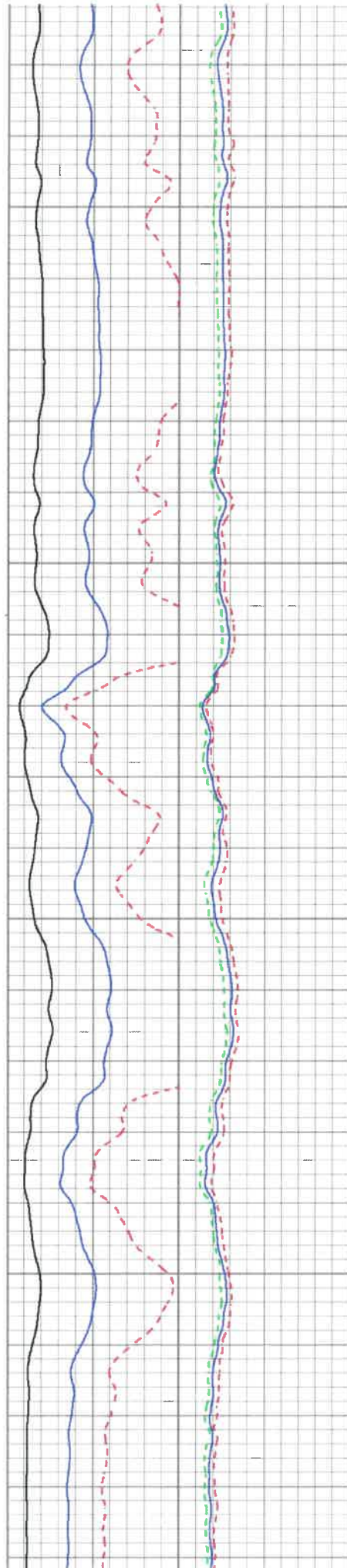


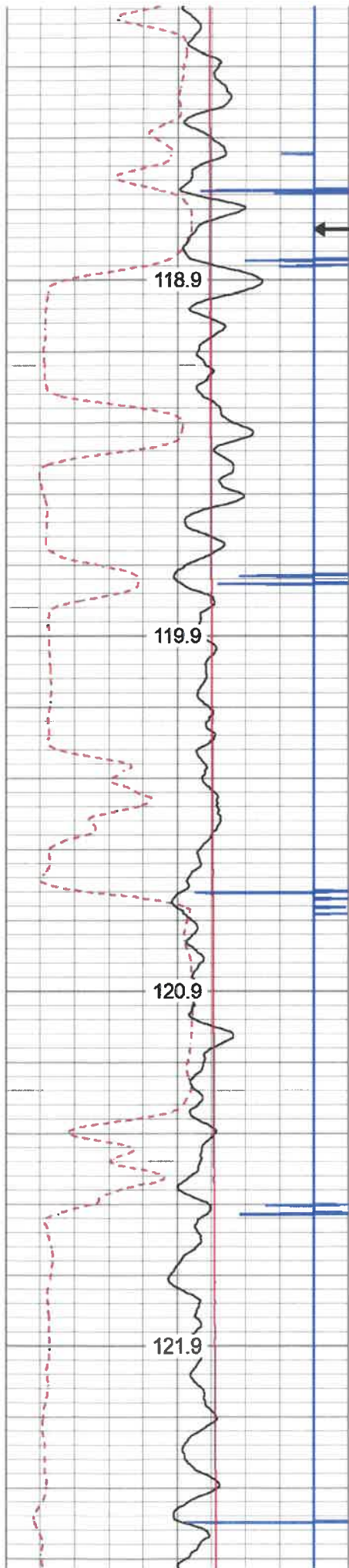
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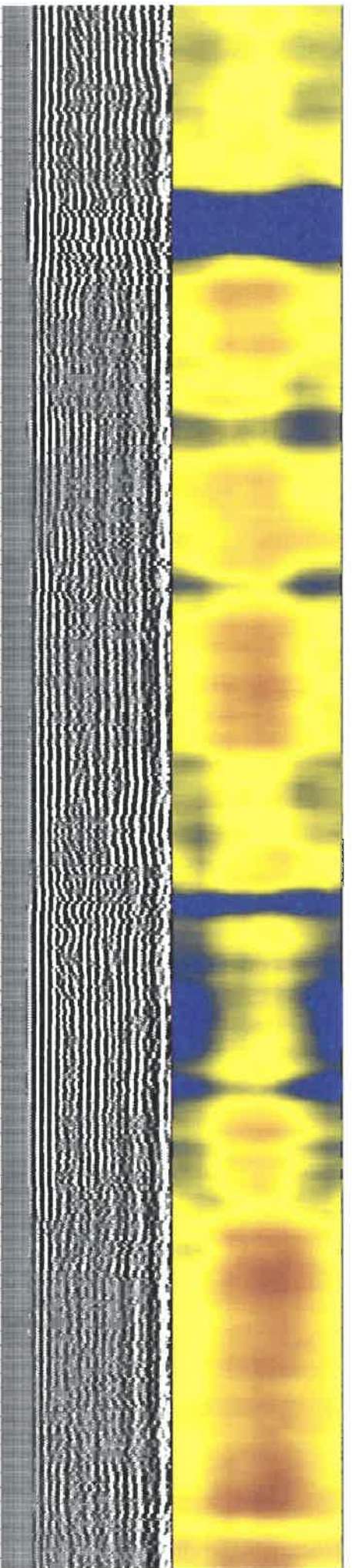
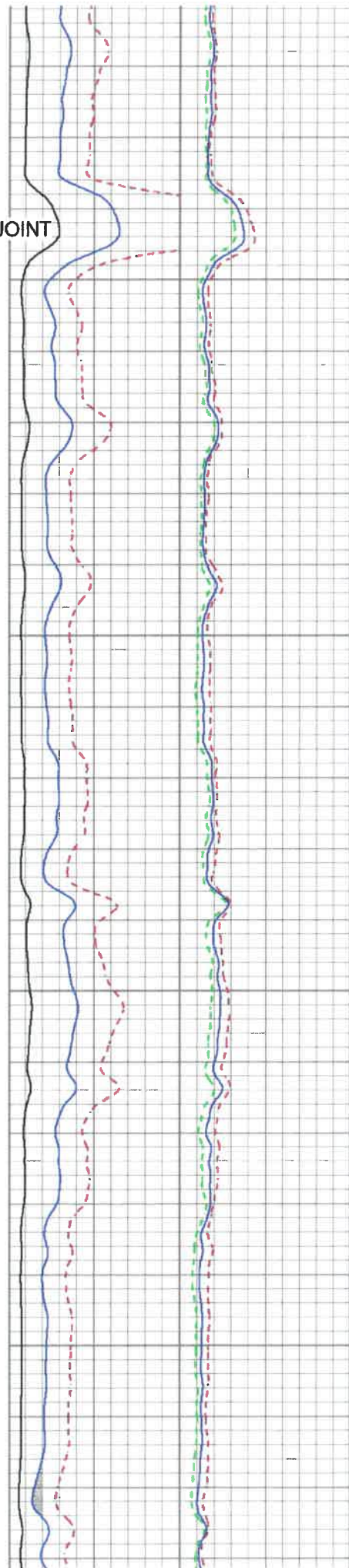
MARKER JOINT

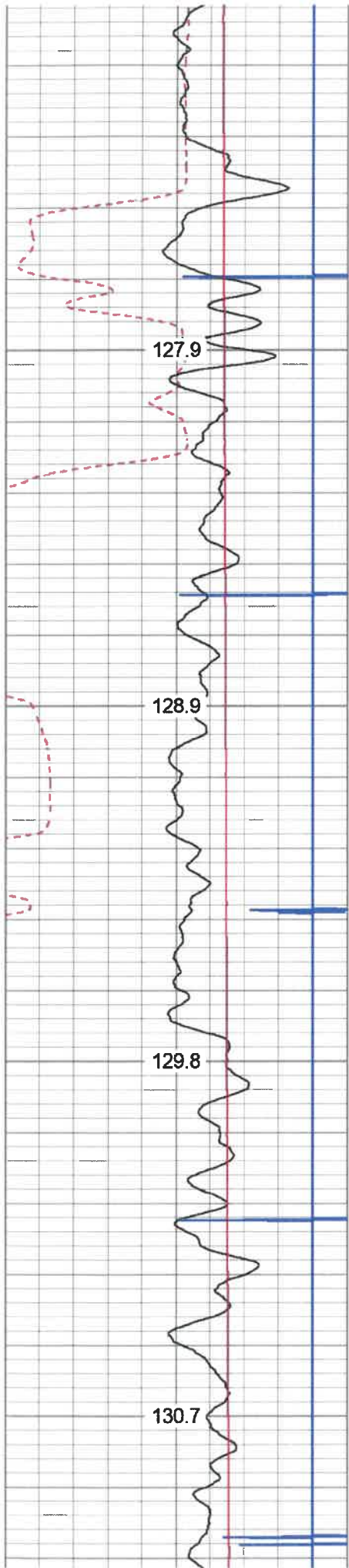
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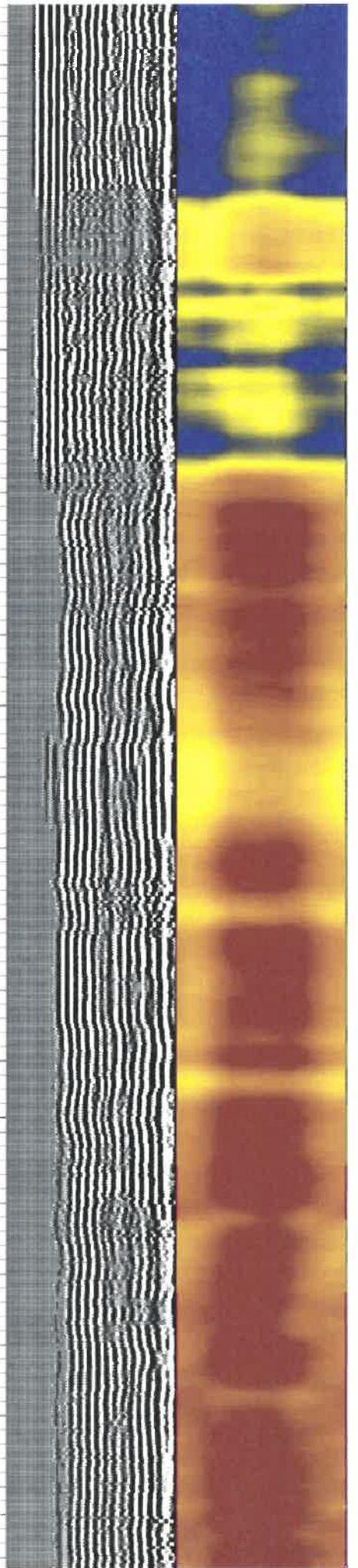
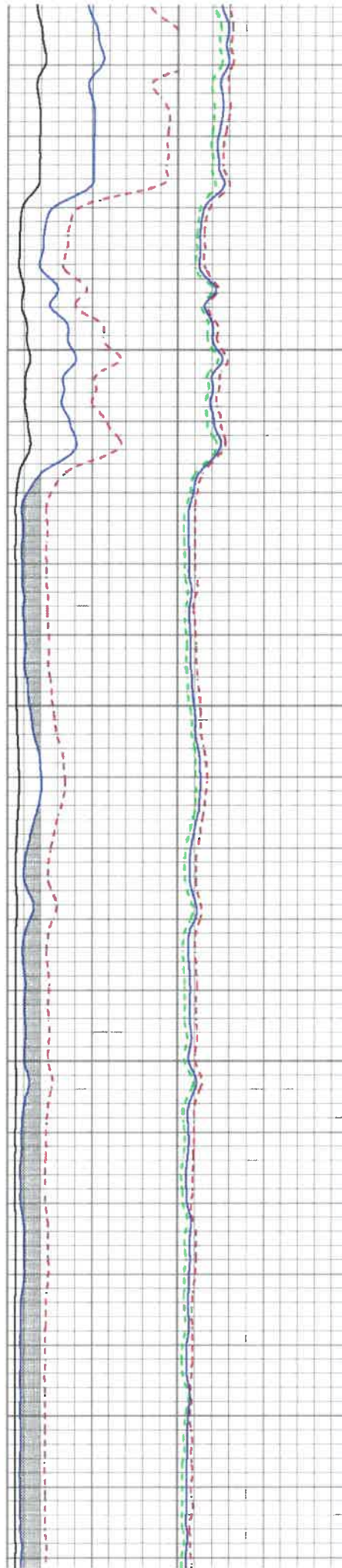
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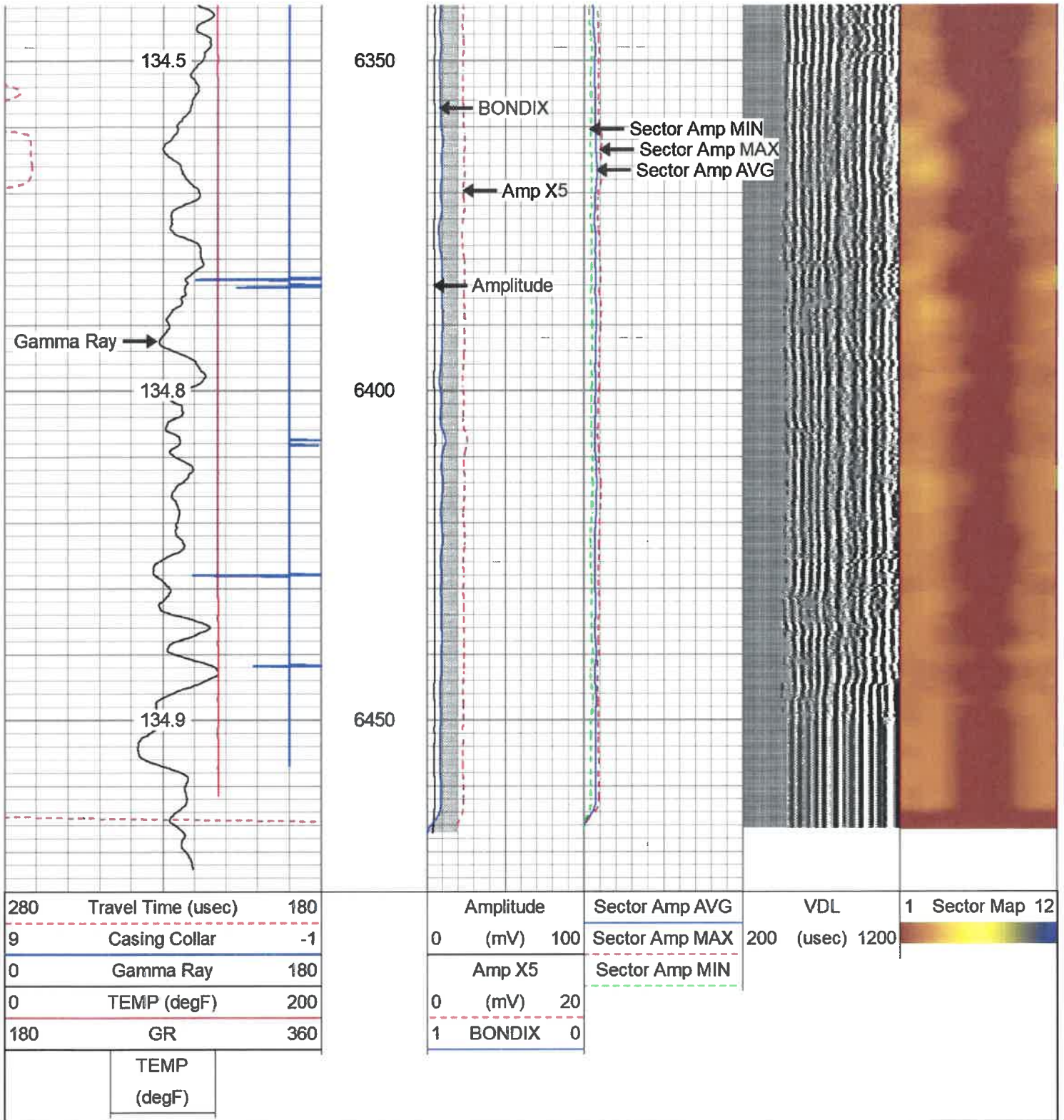
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5950
6000
6050
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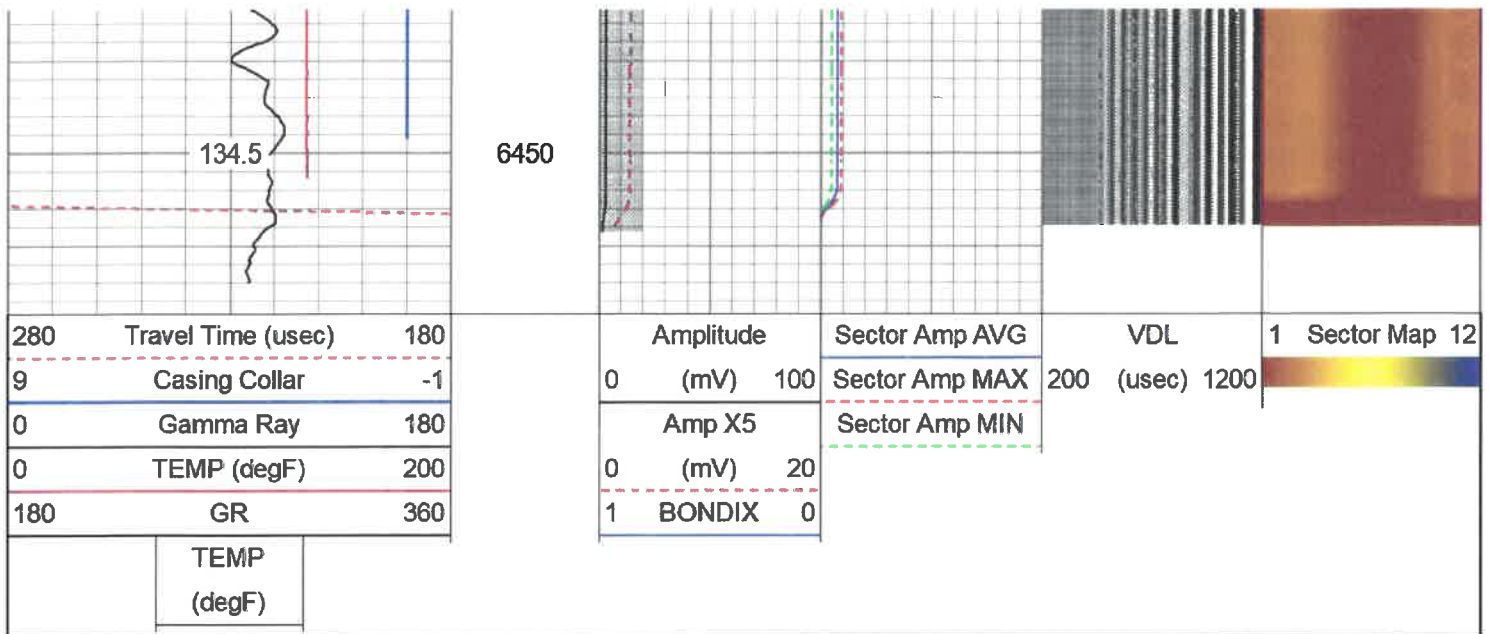




Repeat Pass

Database File antero_kirk_hadley_1h.db
 Dataset Pathname pass2
 Presentation Format antero
 Dataset Creation Wed Nov 13 10:53:02 2019
 Charted by Depth in Feet scaled 1:240

280	Travel Time (usec)	180	Amplitude	Sector Amp AVG	VDL	1	Sector Map 12
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Log Variables

DatabaseC:\ProgramData\Warrior\Data\antero_kirk_hadley_1h.db
 Dataset field/well/run1/pass1/_vars_

Top - Bottom

BHTEMP_Src	BOREID	BOTTEMP	CASEOD	CASETHCK	CASEWGHT	MAXAMPL	MINAMPL
TEMP	in	degF	in	in	lb/ft	mV	mV
	8.25	100	5.5	0	20	71.9	3.5
MINATTN	PERFS	PPT	SRFTEMP	TDEPTH			
db/ft		usec	degF	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

Calibration Report

Database File antero_kirk_hadley_1h.db
 Dataset Pathname pass1
 Dataset Creation Wed Nov 13 11:04:26 2019

Gamma Ray Calibration Report

Serial Number: IPSNO-03
 Tool Model: Tek-Co 2 3/4
 Performed: Tue Nov 12 16:11:18 2019

Calibrator Value: 1.0

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 0.5000 /cps

Segmented Cement Bond Log Calibration Report

