



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

Company ANTERO RESOURCES CORPORATION  
 Well REMINGTON UNIT 2H  
 Field MARCELLUS  
 County TYLER  
 State W.V.

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 Field MARCELLUS  
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Location: API #: 47095025350000

Other Services

SEC	TWP	RGE	Elevation	N/A	Elevation
Permanent Datum	G.L.		K.B.	N/A	
Log Measured From	K.B.		D.F.	N/A	
Drilling Measured From	K.B. OF 25'		G.L.	N/A	

Date	3/30/19				
Run Number	ONE				
Depth Driller	16432'				
Depth Logger	6310'				
Bottom Logged Interval	6310'				
Top Log Interval	SURFACE				
Open Hole Size	N/A				
Type Fluid	H2O				
Density / Viscosity	N/A				
Max. Recorded Temp.	140 DEG				
Estimated Cement Top	190'				
Time Well Ready	N/A				
Time Logger on Bottom	15.15				
Equipment Number	340				
Location	BRIDGEPORT, WV				
Recorded By	JBOGGS				
Witnessed By	MR. BOB REED				

**Borehole Record**

**Casing Record**

Run Number	Bit	From	To	Size	Weight	From	To
				20"	94LB	SURFACE	95'
				13 3/8"	54.5LB	SURFACE	362'
				9 5/8"	36LB	SURFACE	2561'
				5 1/2"	23LB	SURFACE	16432'

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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**

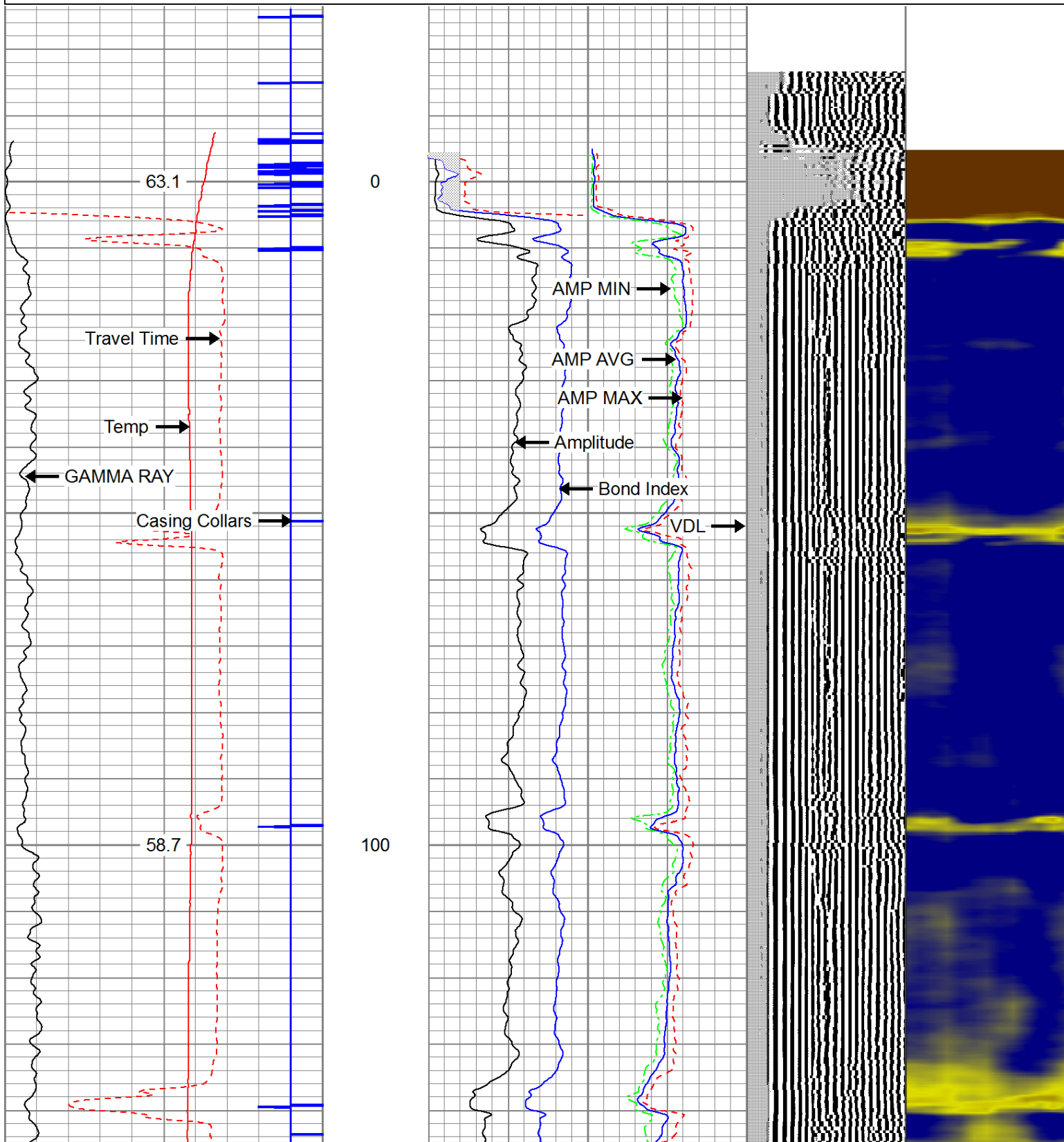
THANK YOU FOR USING KLX ENERGY SERVICES  
 LOG WAS RAN ON 5 1/2" CASING WITH 1500PSI ON CASING  
 TOP OF CEMENT- 190'  
 BOTTOM HOLE TEMP- 140 DEG  
 MARKER JOINT ON LOG @ 4592'-4602'  
 CORRECTED UP HOLE 20' TO PUT MARKER ON DEPTH WITH PIPE TALLY

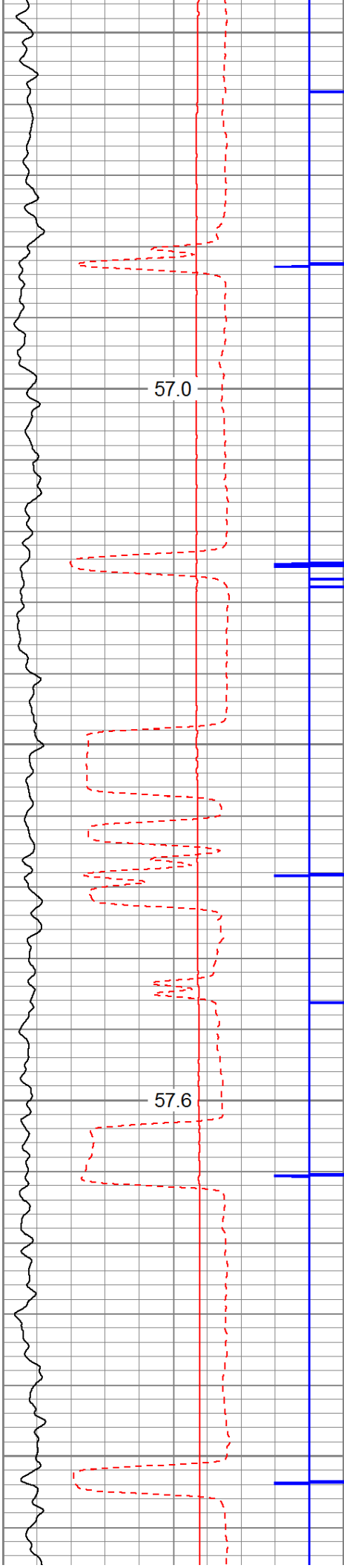


**Main Pass @ 1500 PSI**

Database File: c:\warrior\data\2019 antero\antero-remington unit 2h.db  
 Dataset Pathname: pass3.4  
 Presentation Format: antero f  
 Dataset Creation: Mon Apr 01 08:23:12 2019 by Calc Std Casedhole 10081  
 Charted by: Depth in Feet scaled 1:240

280	Travel Time (usec)	180	Amplitude	0	Amp Avg	150	200	VDL	1200	1	Sector Map	12
9	Casing Collars	-1	(mV)	100	Amp Max	150				20		80
0	Gamma Ray	180	0	AmpX5 (mV)	20	Amp Min	150					
0	TEMP (degF)	100	1	BONDIX	0							



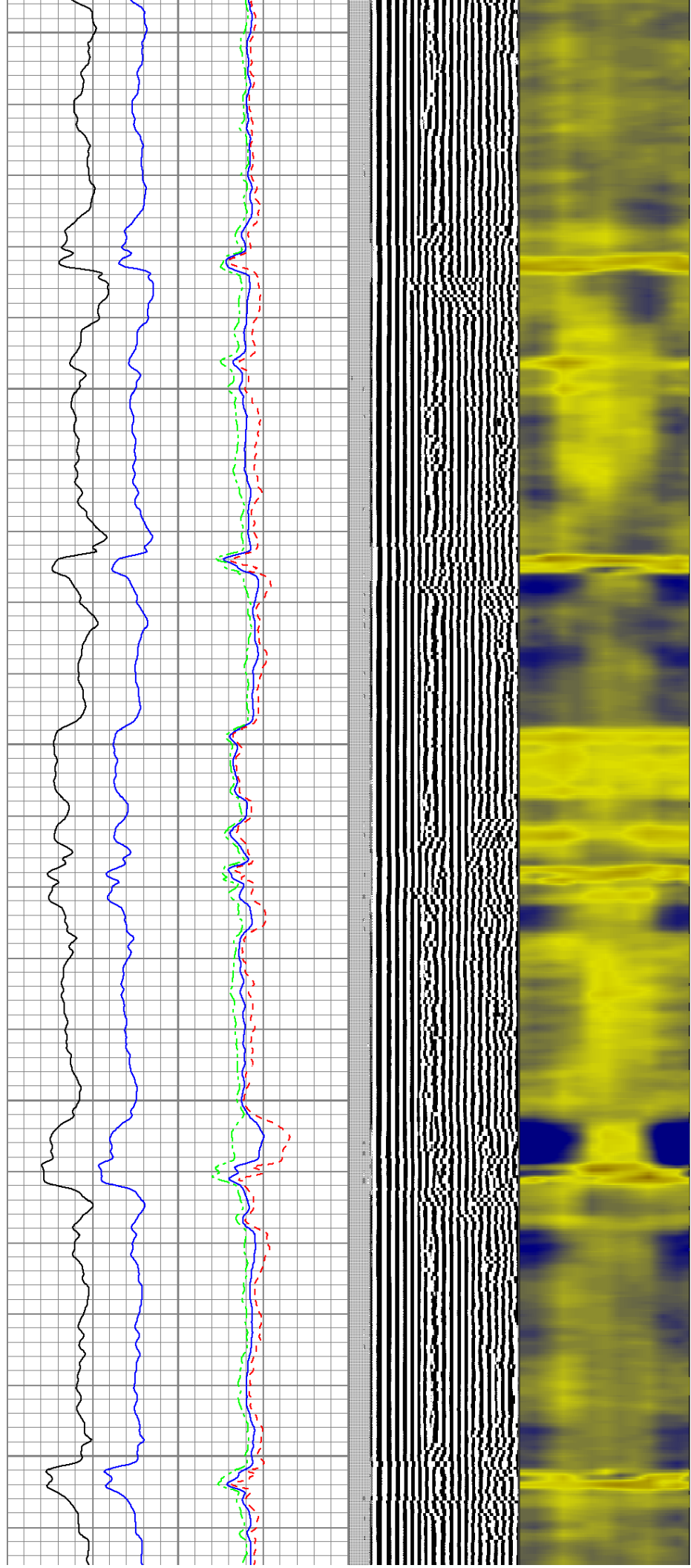


200

300

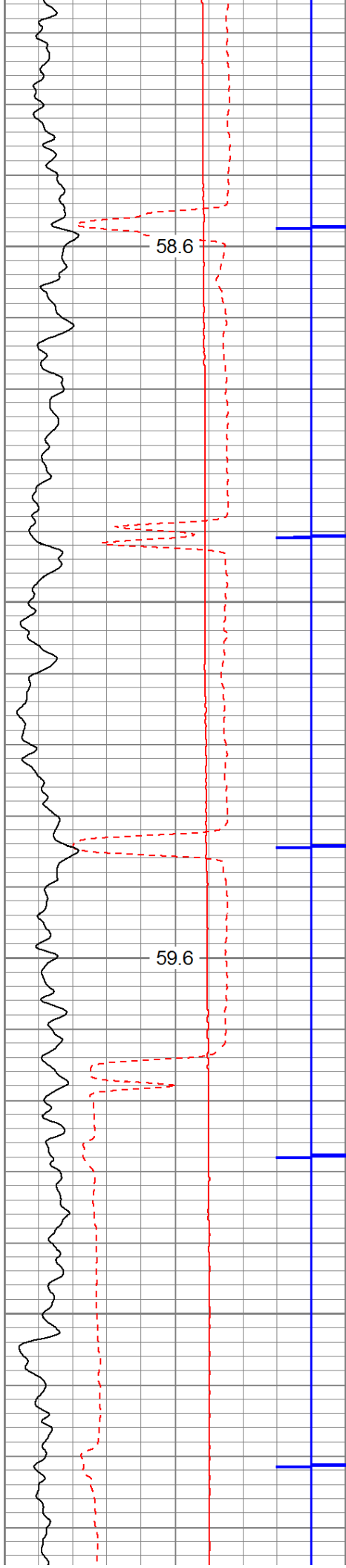
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57.6



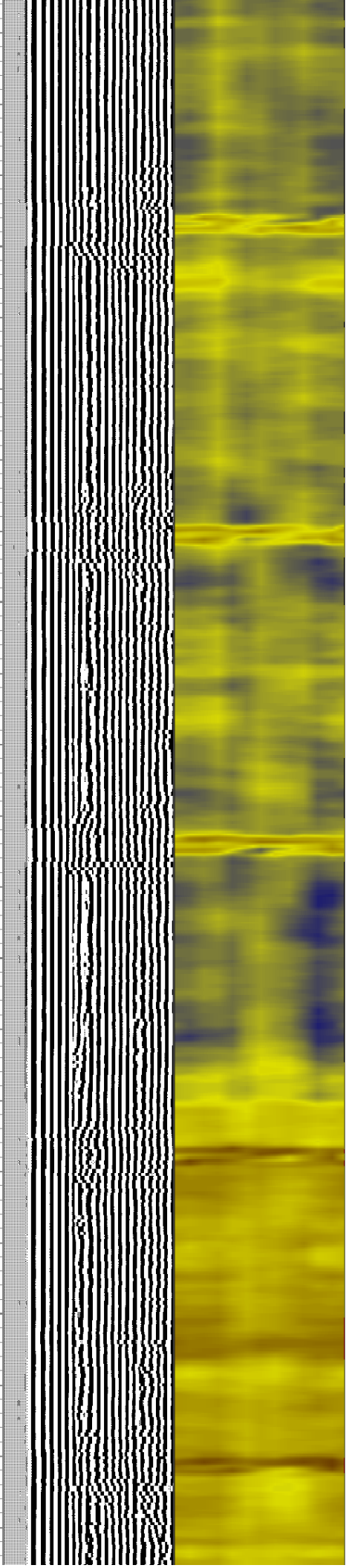
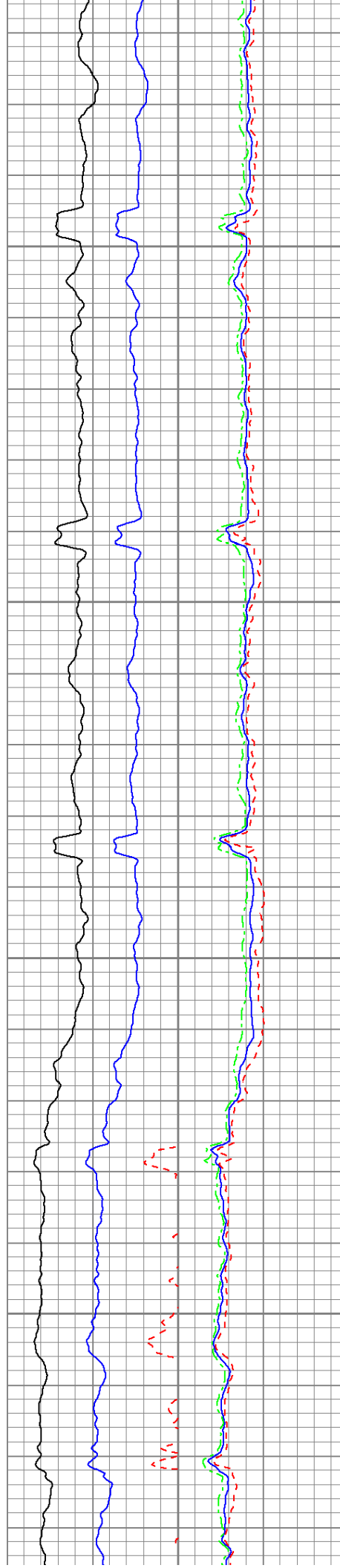
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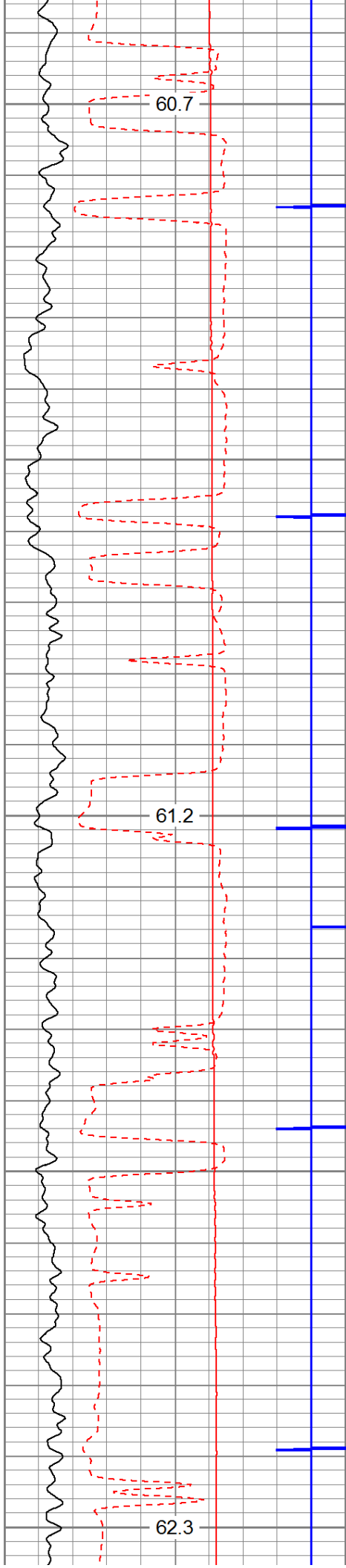
300



400

500

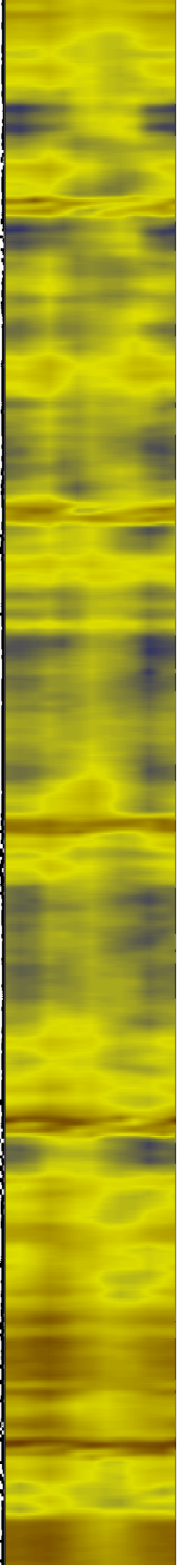
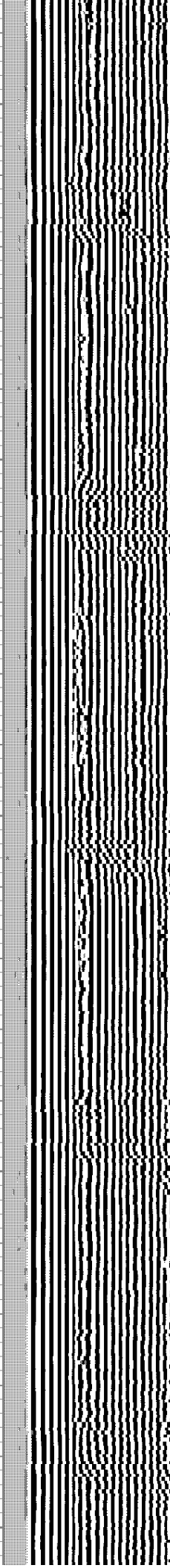
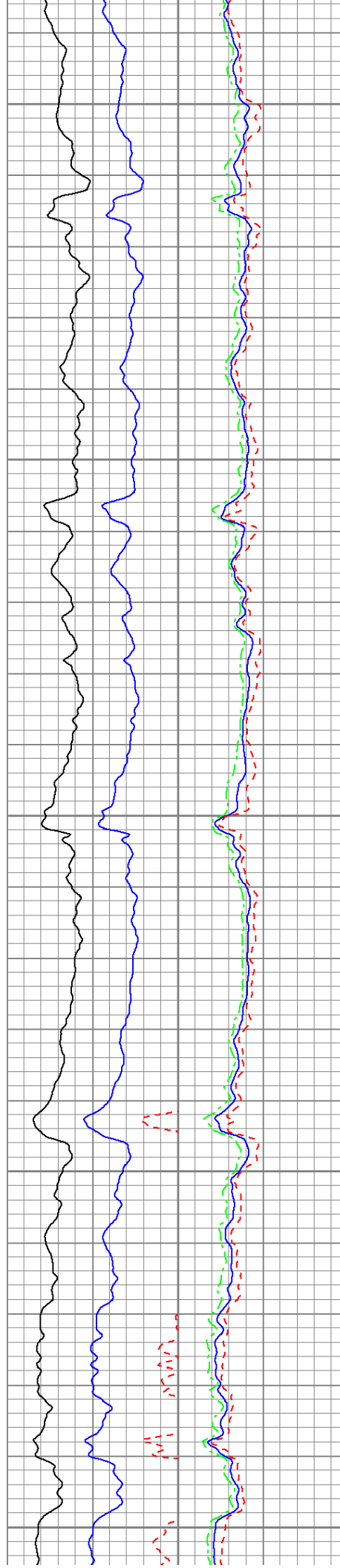


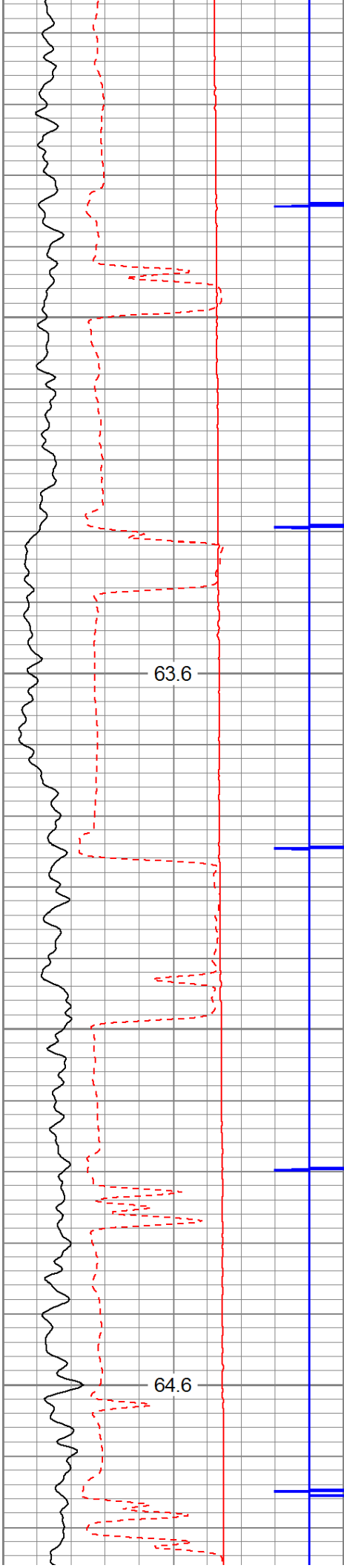


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700

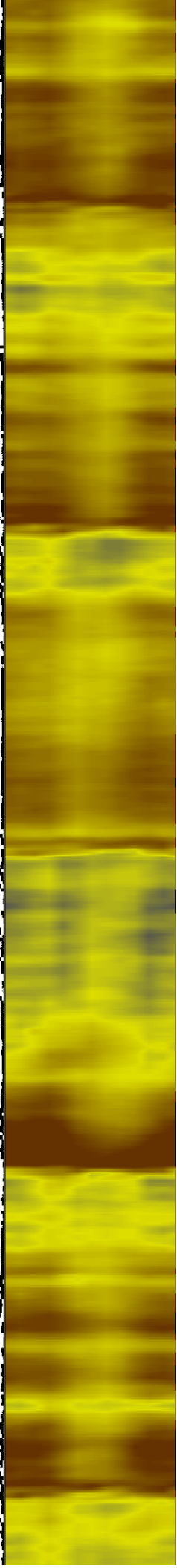
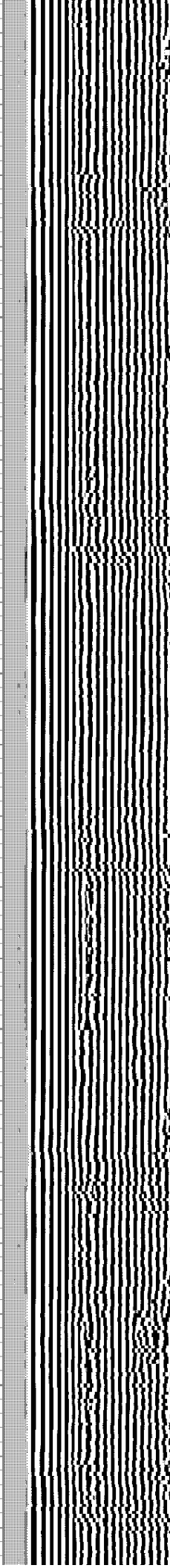
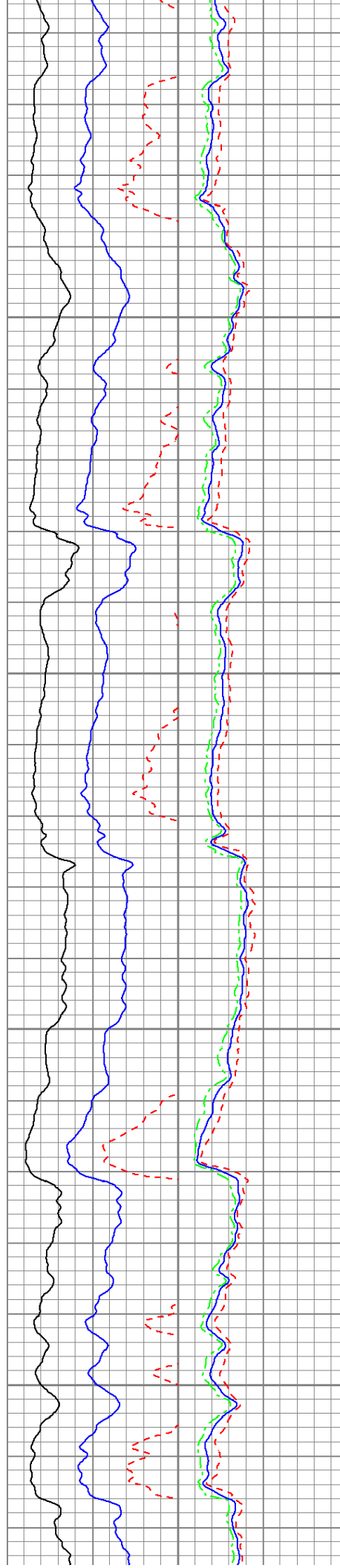
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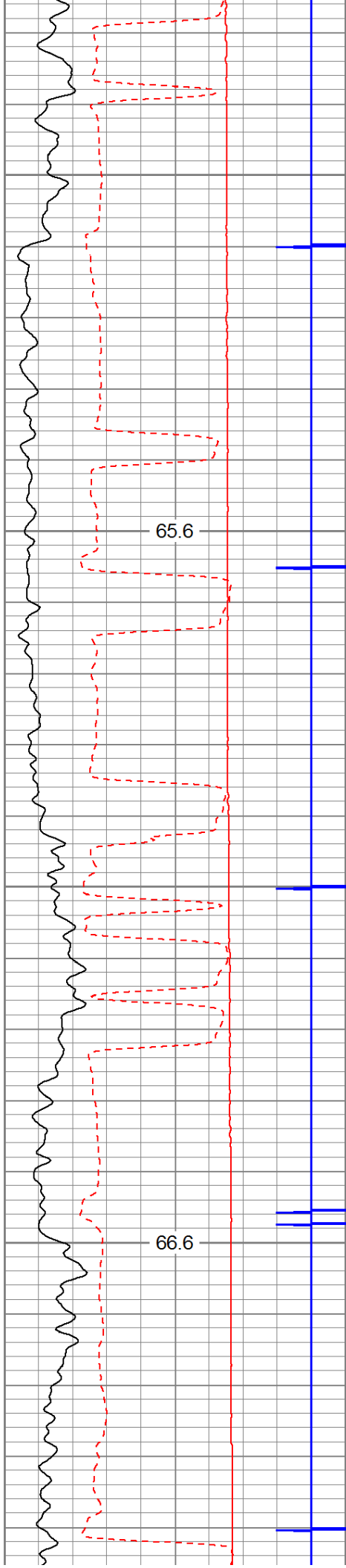




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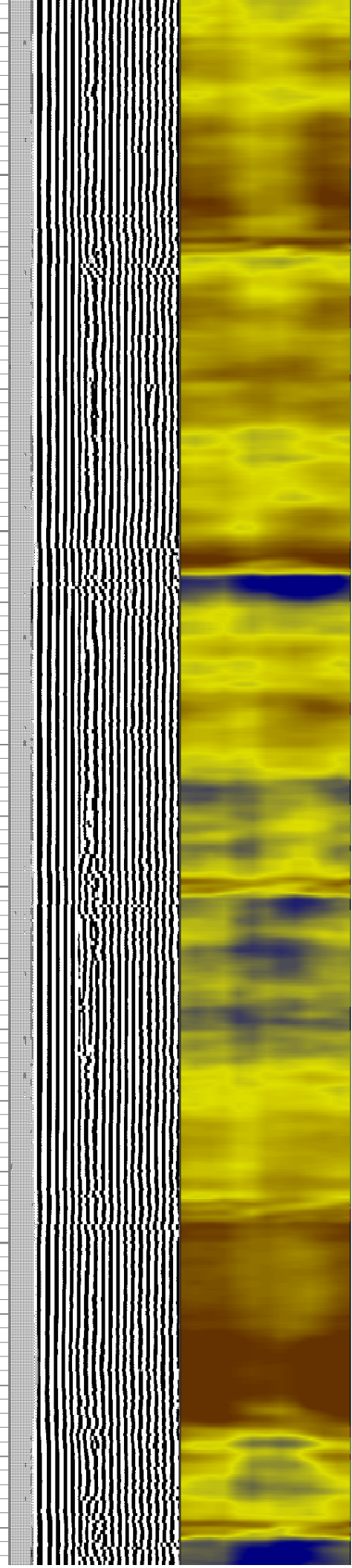
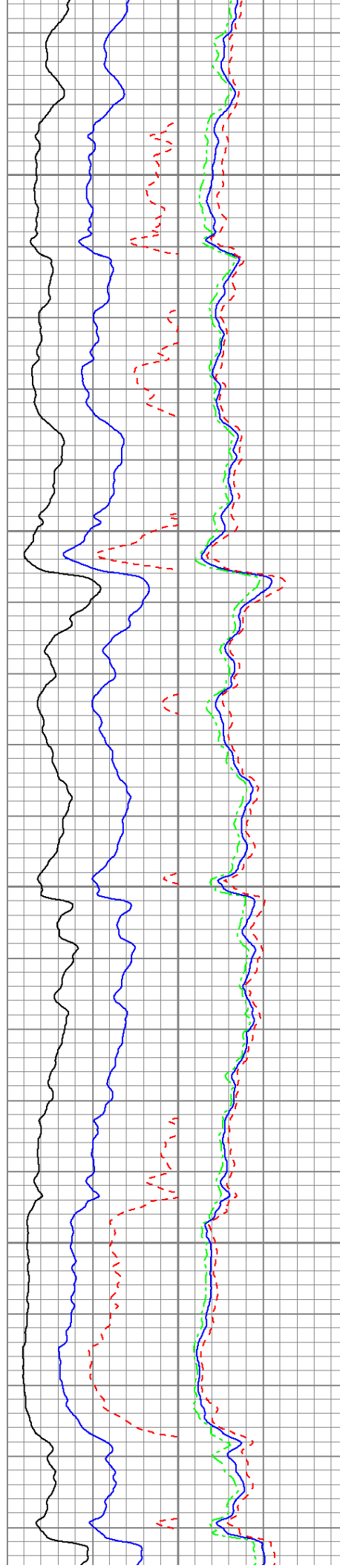
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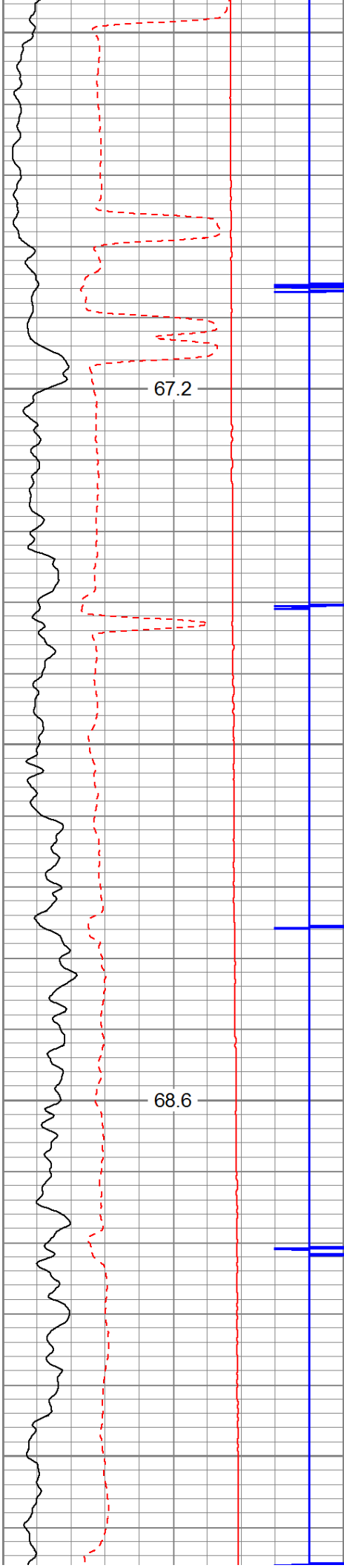




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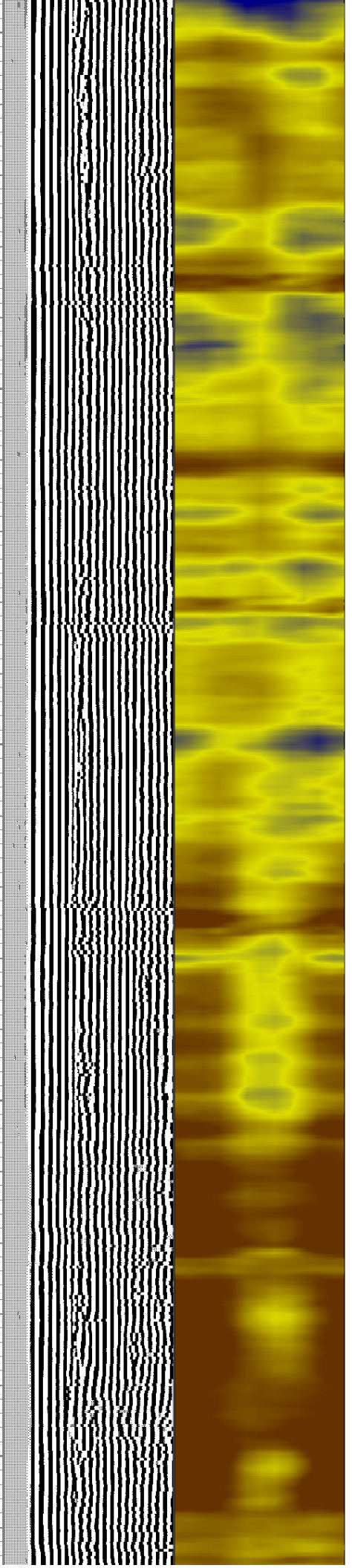
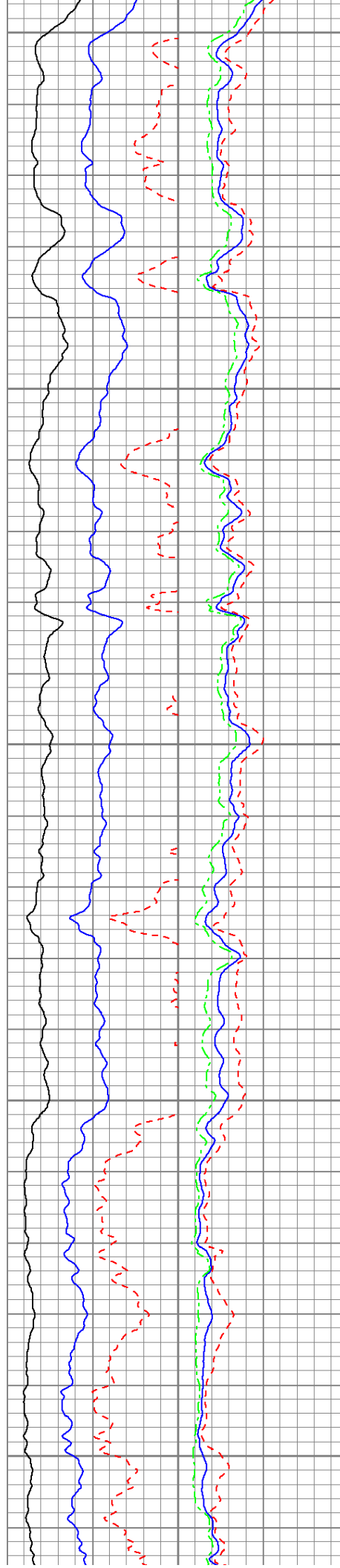
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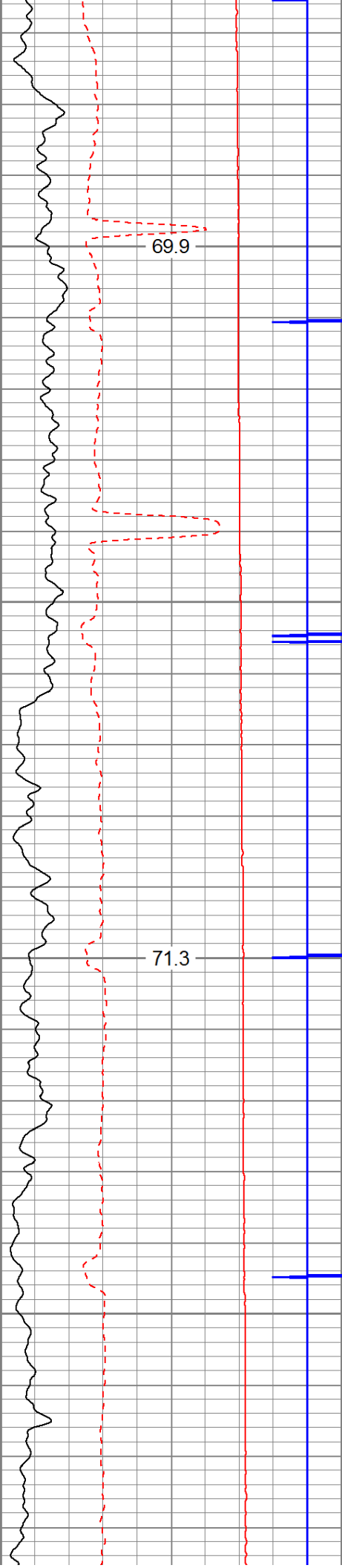


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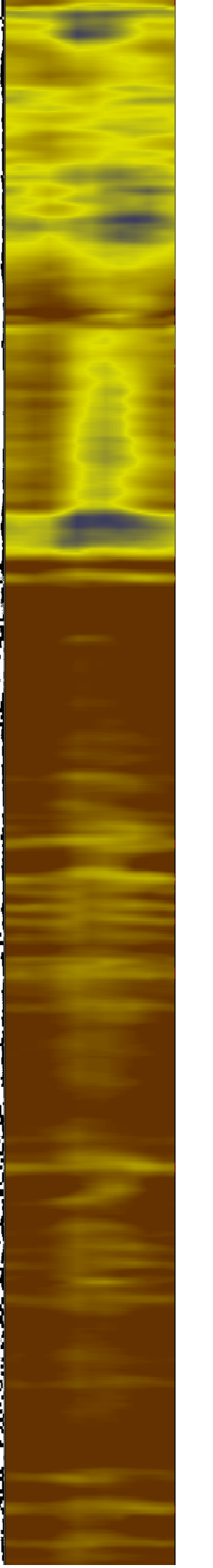
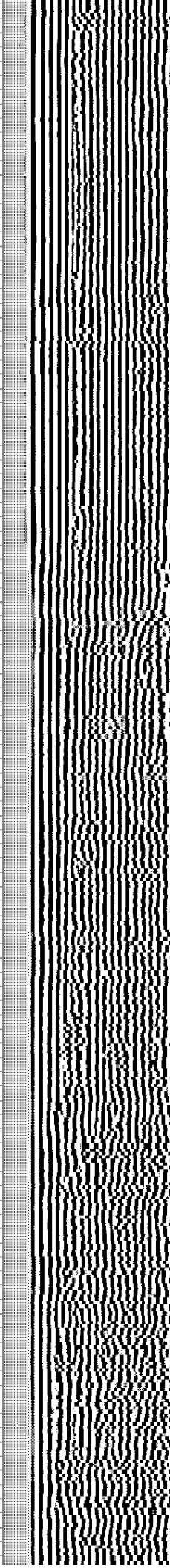
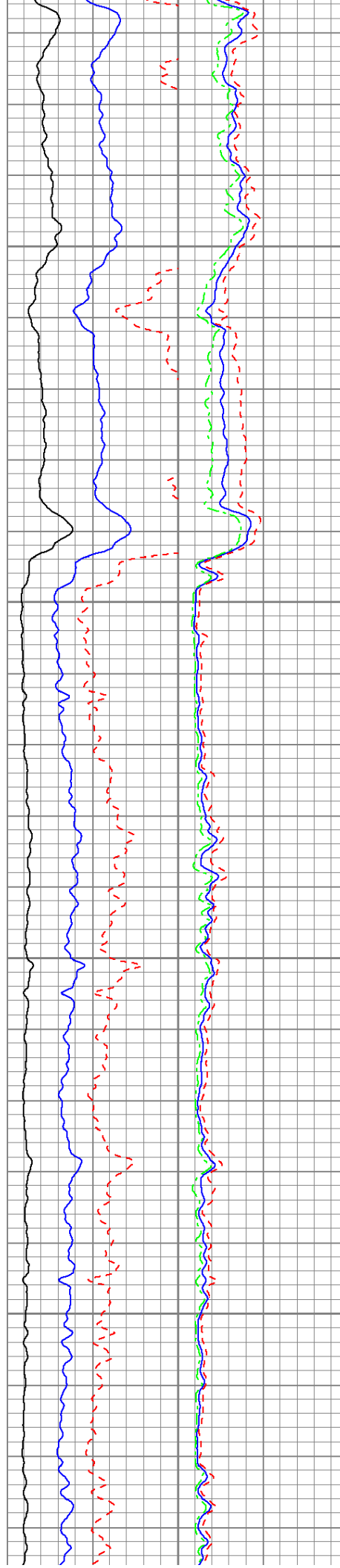


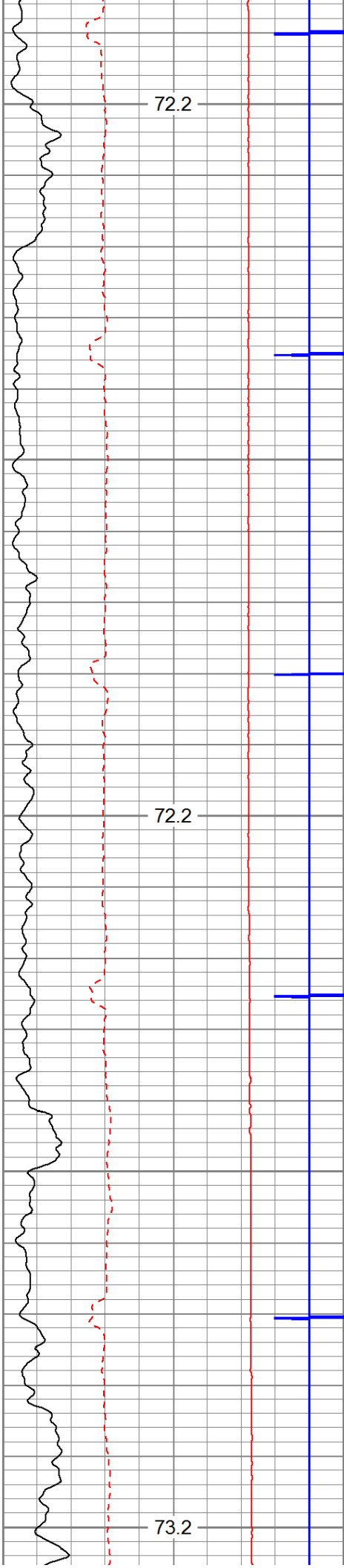




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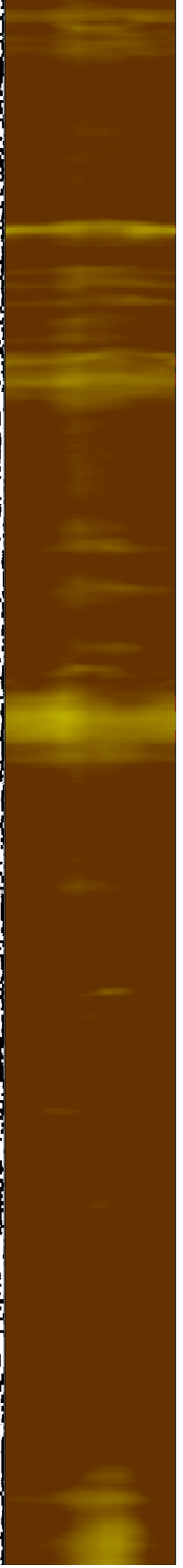
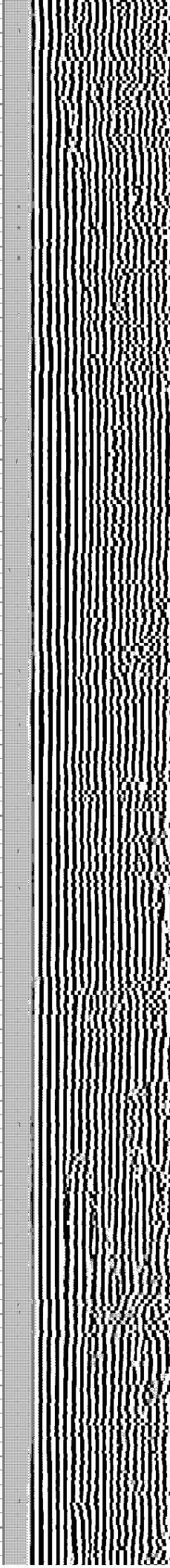
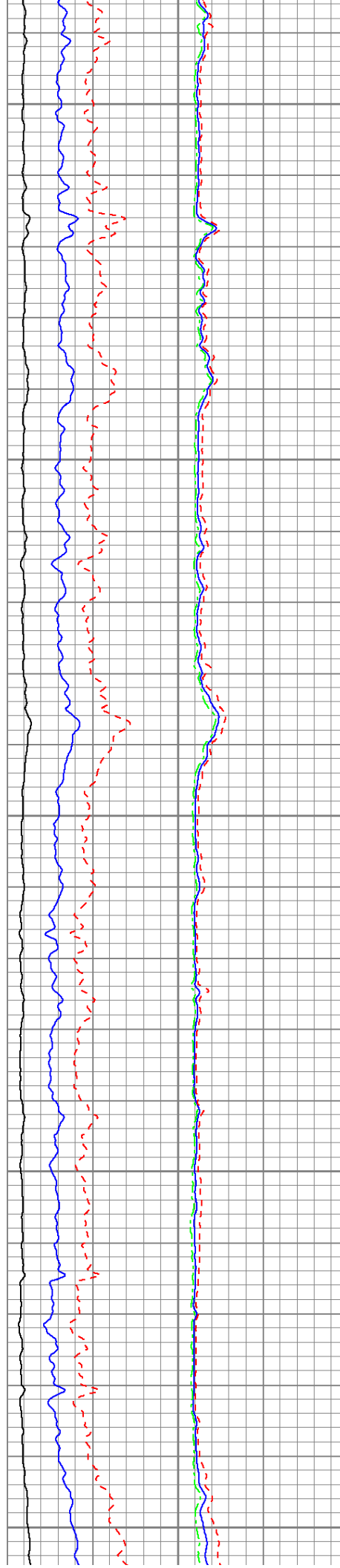


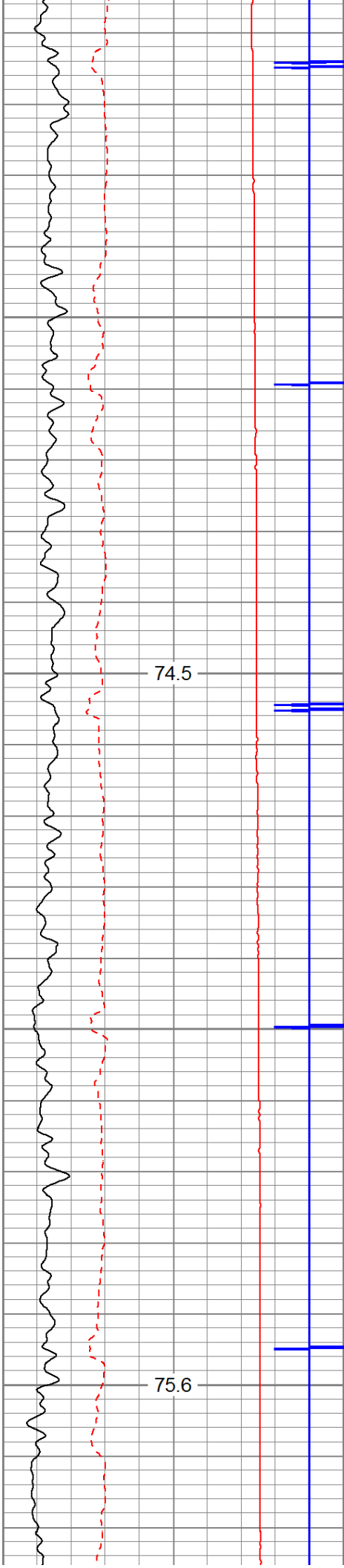


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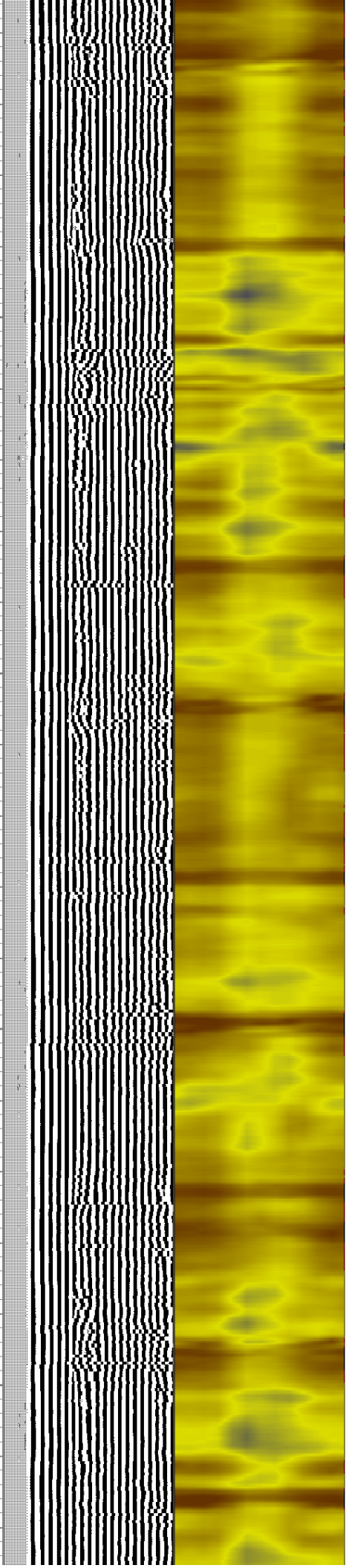
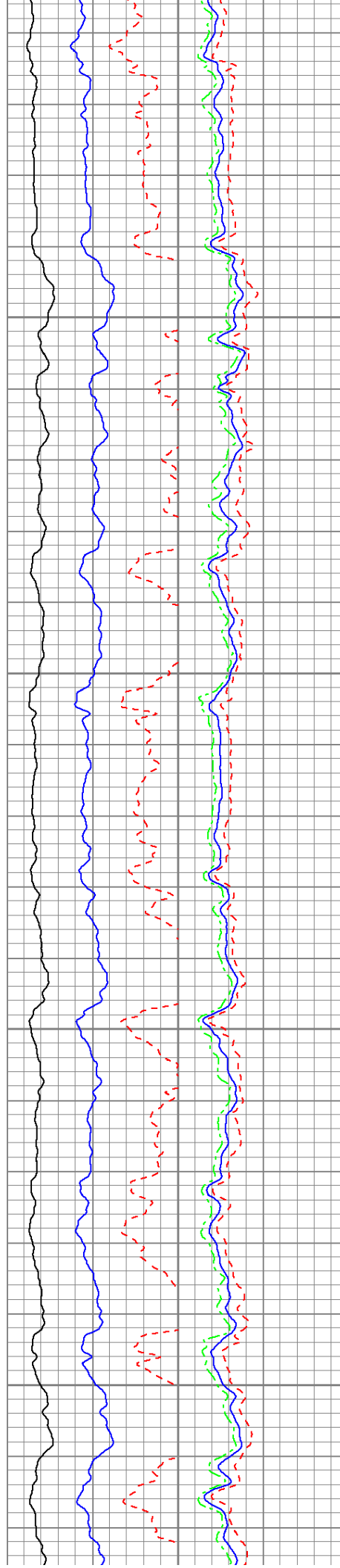
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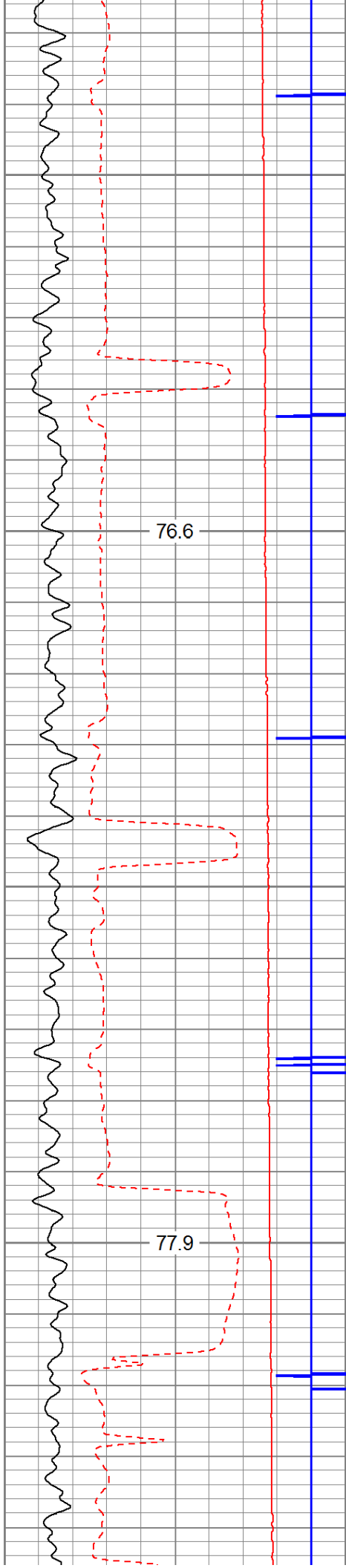




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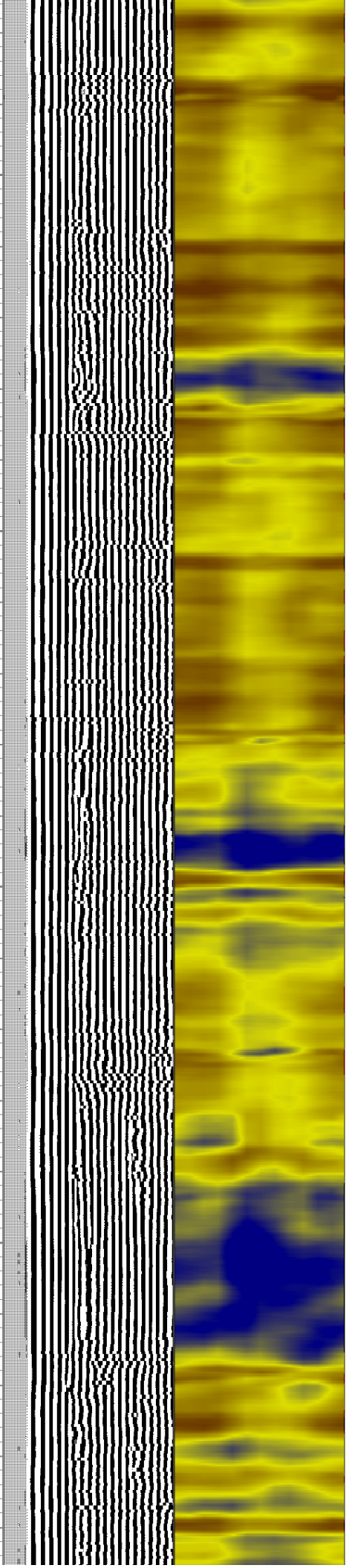
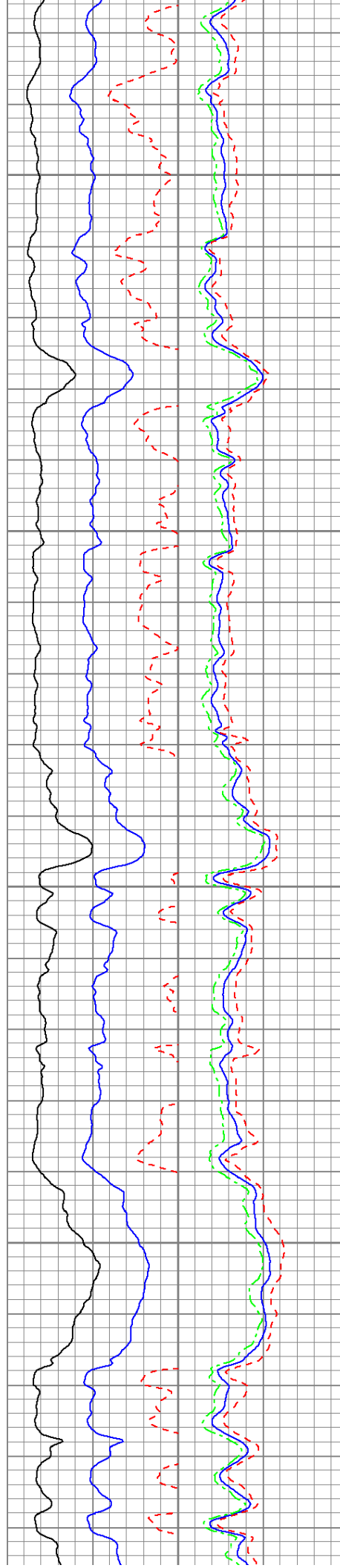
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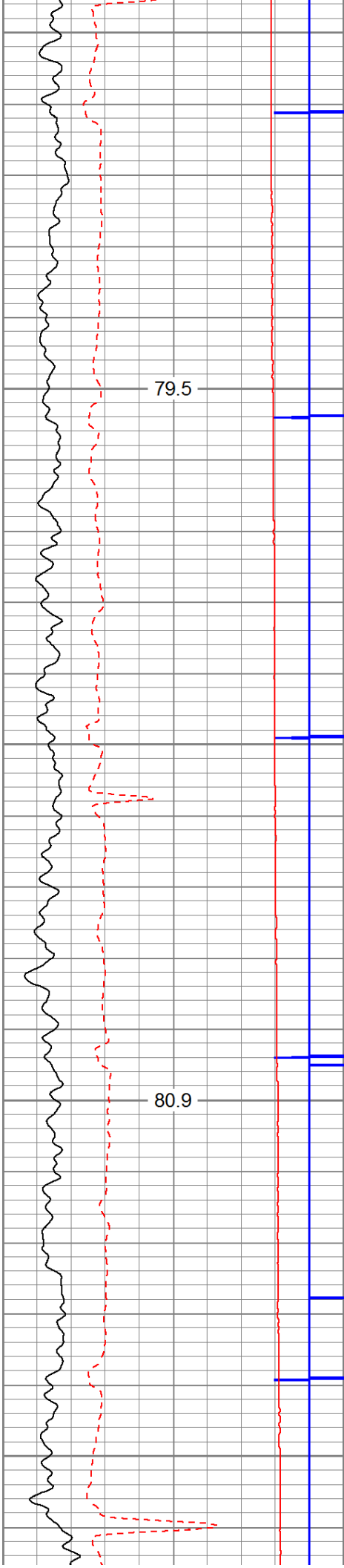




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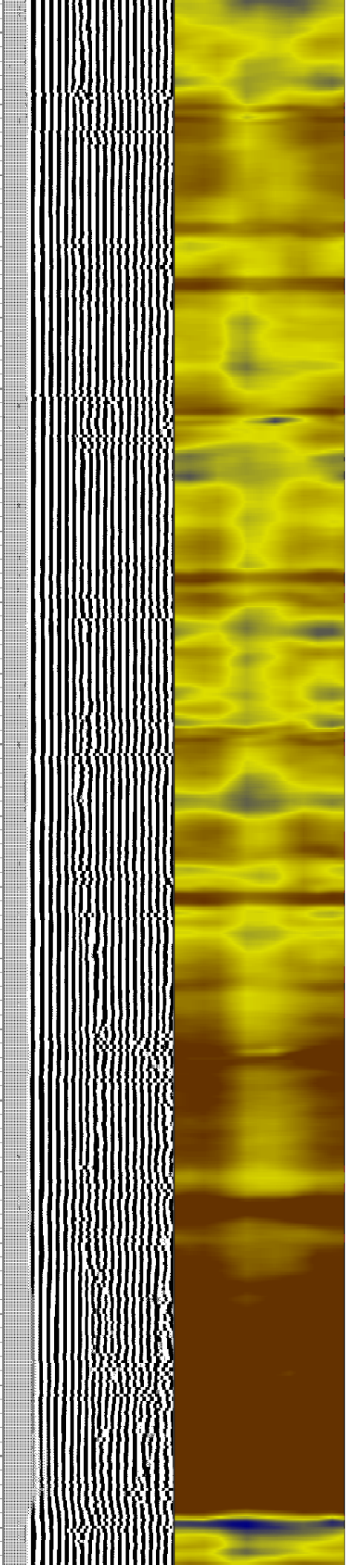
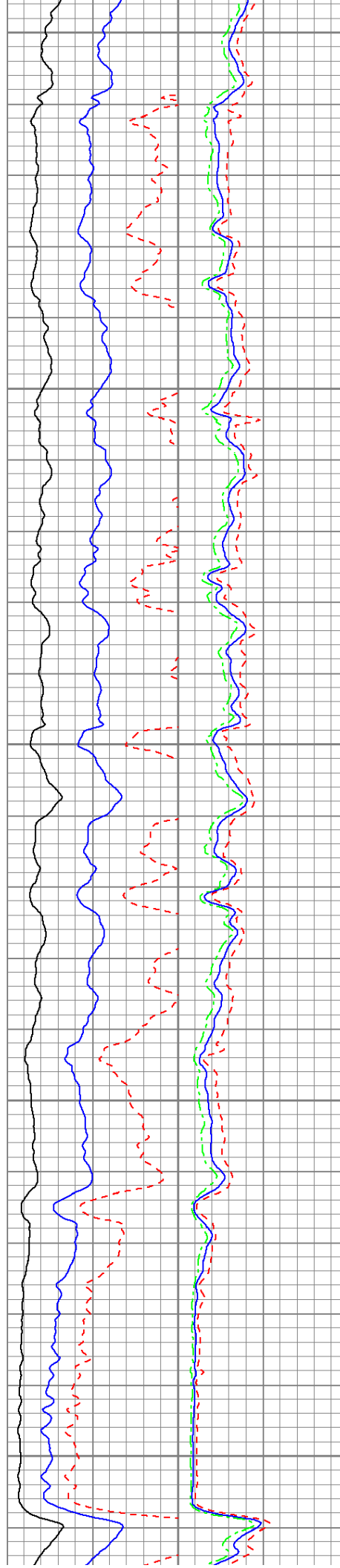
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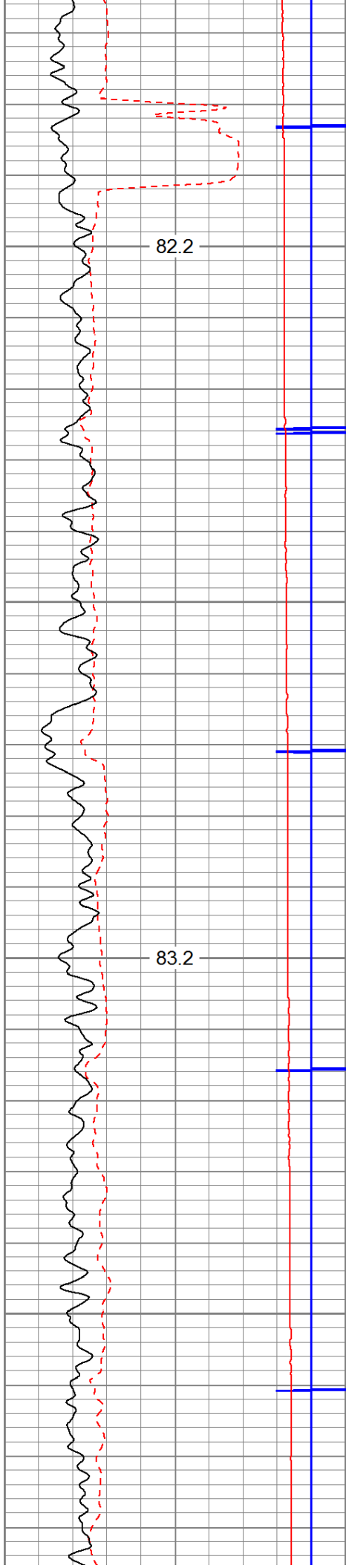




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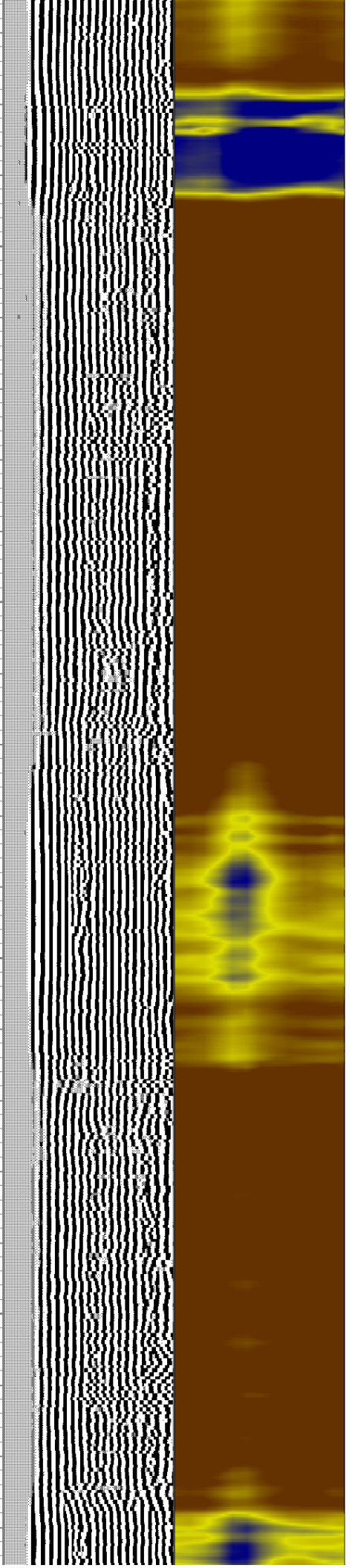
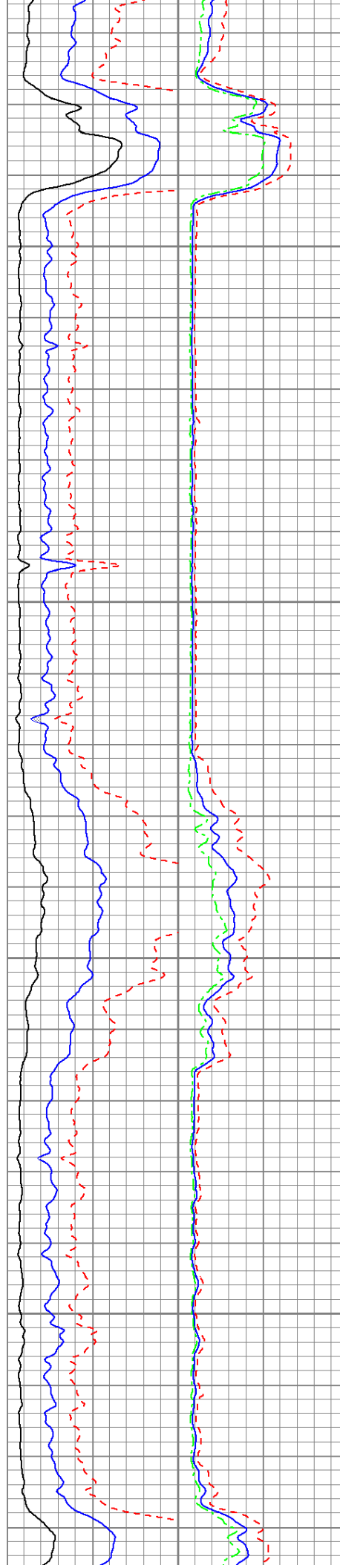
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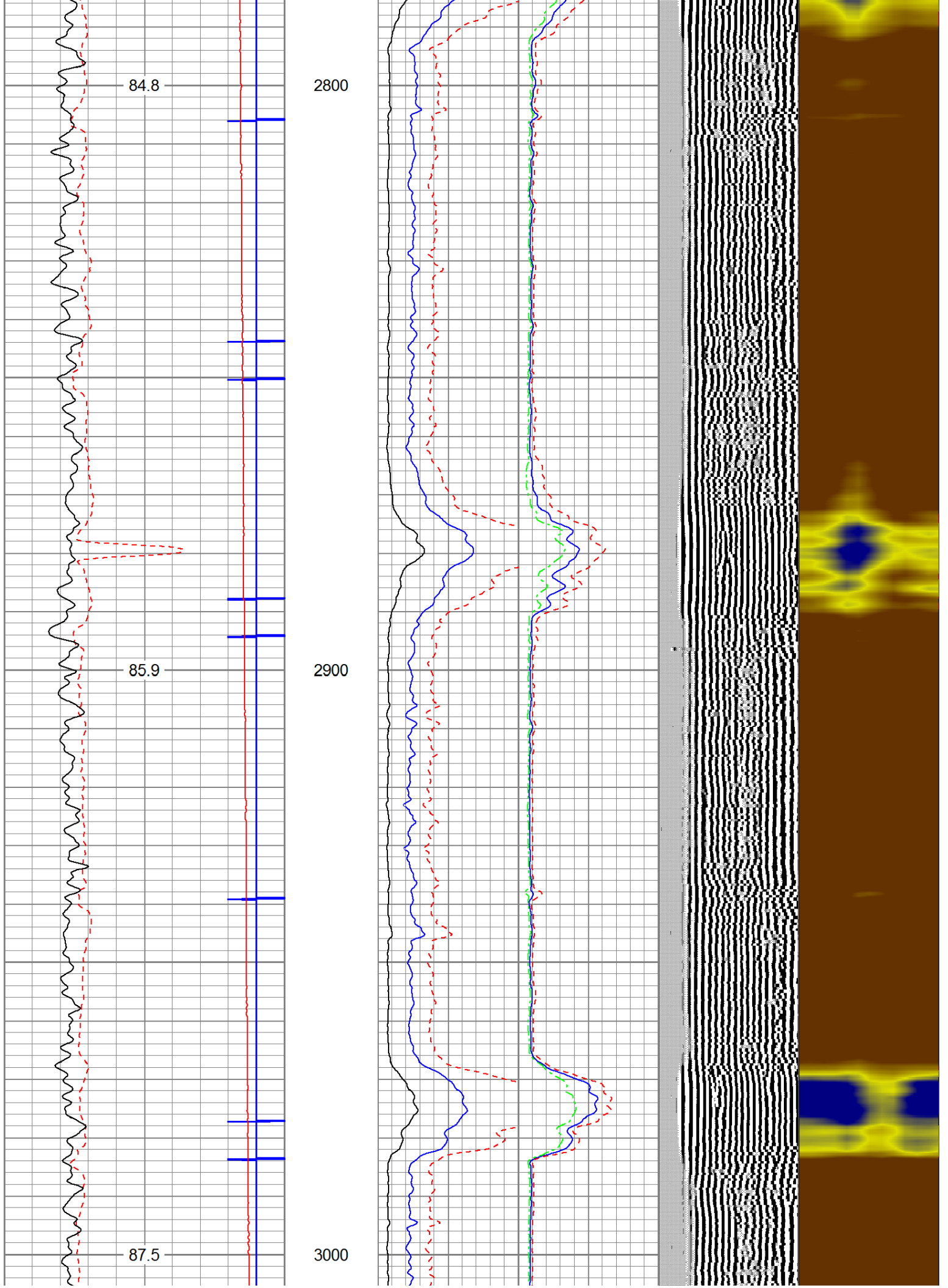


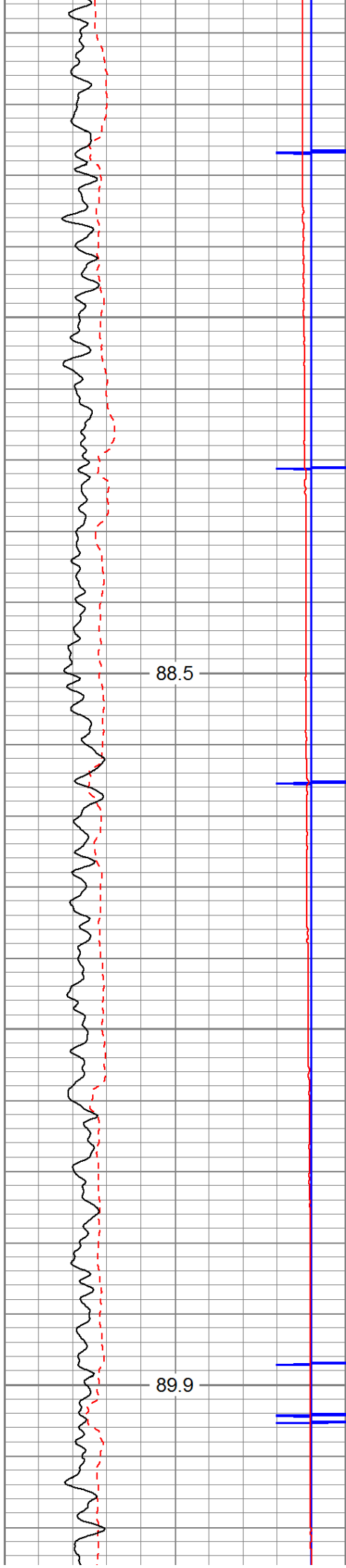


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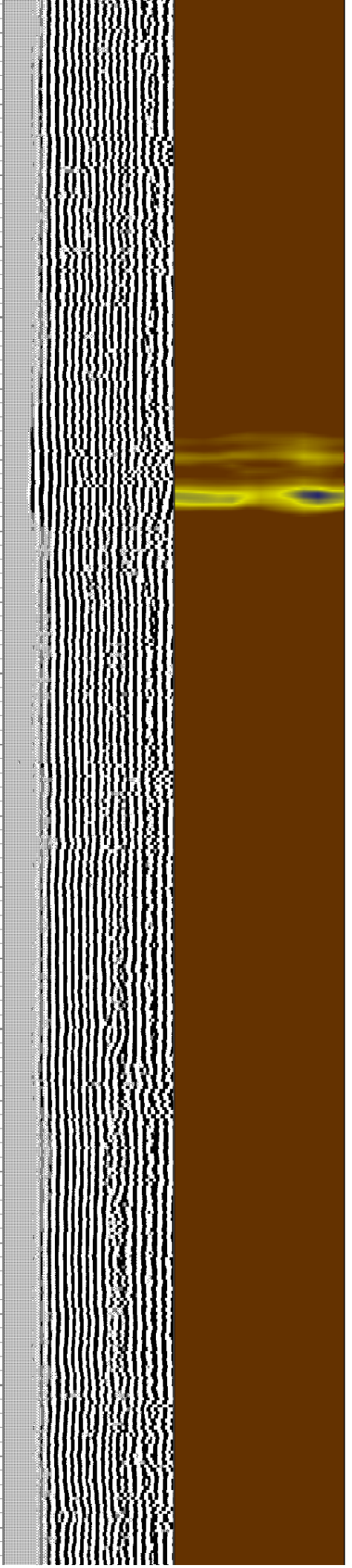
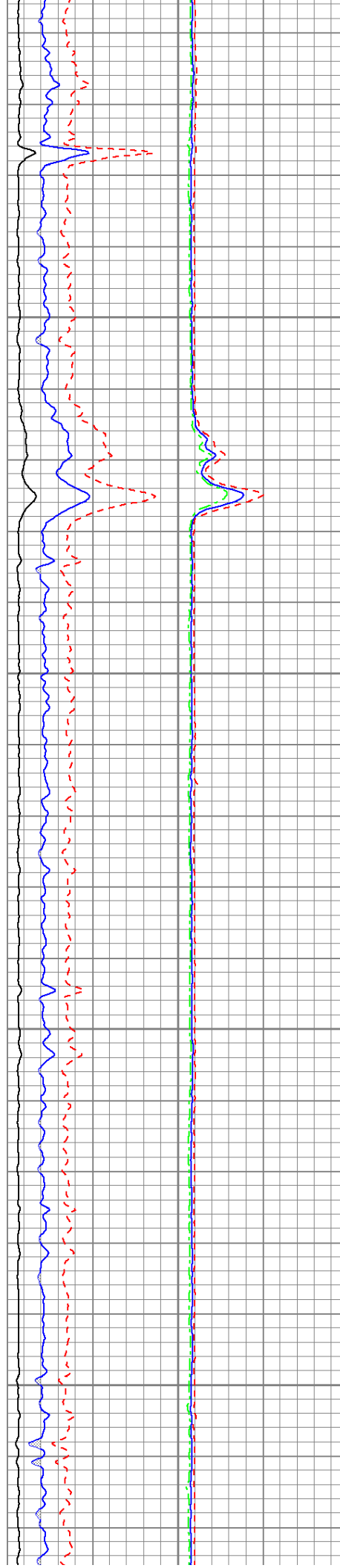




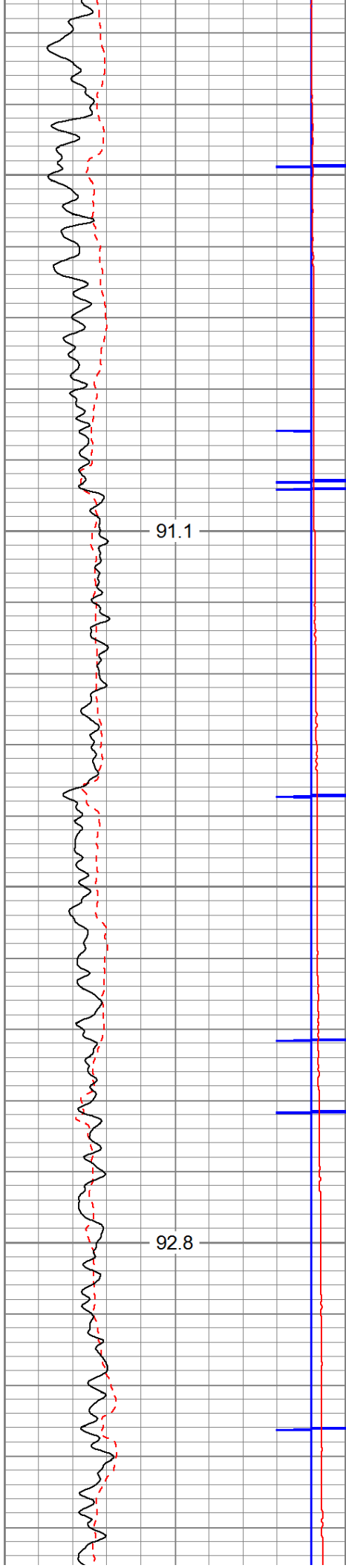


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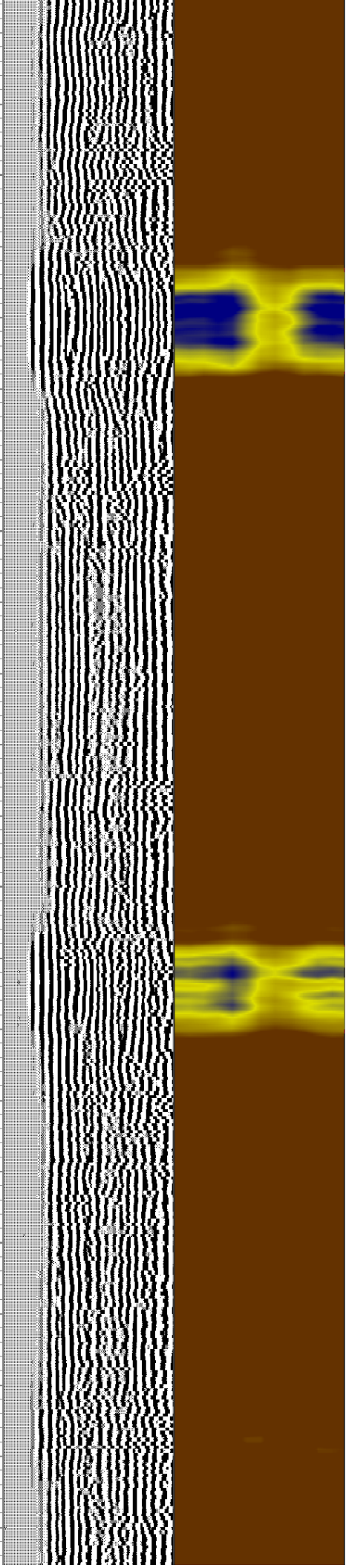


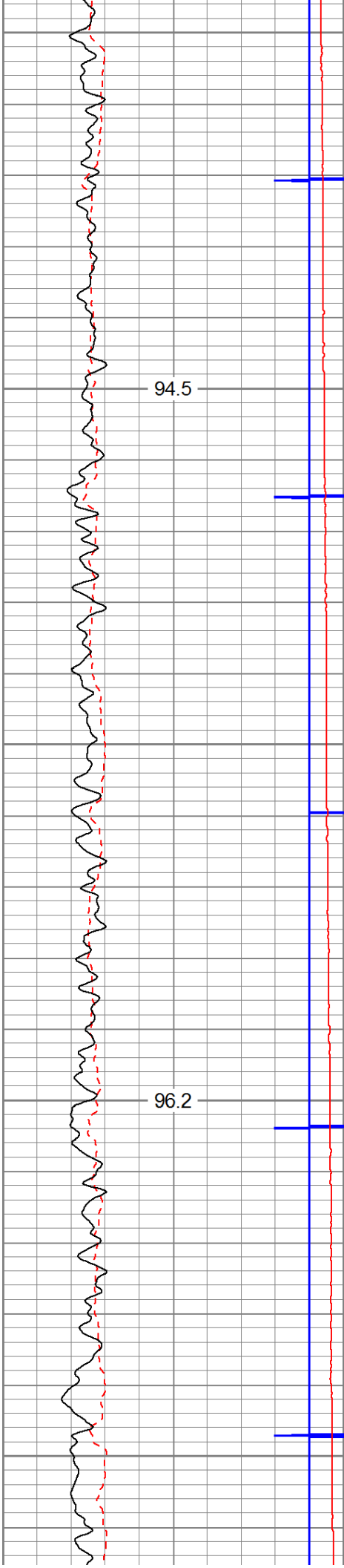




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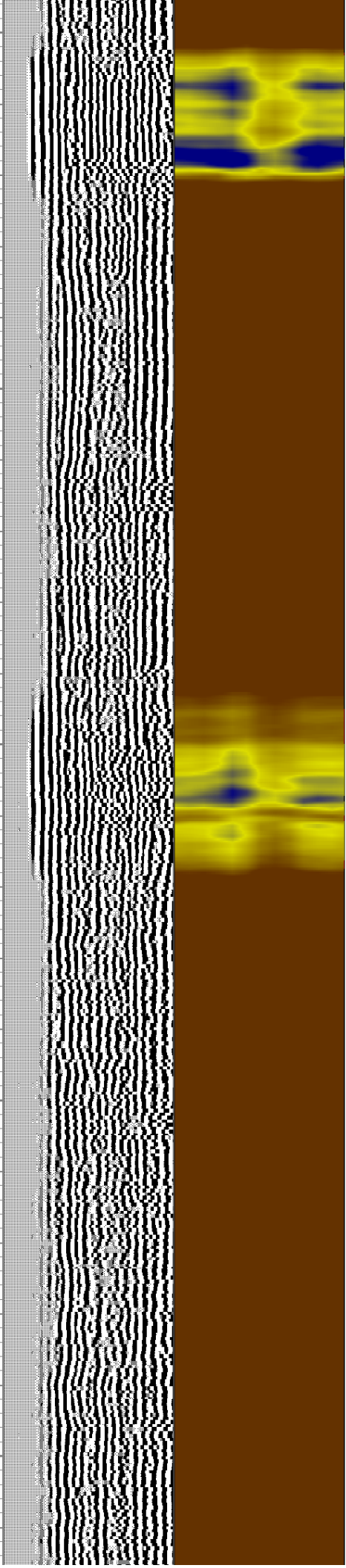
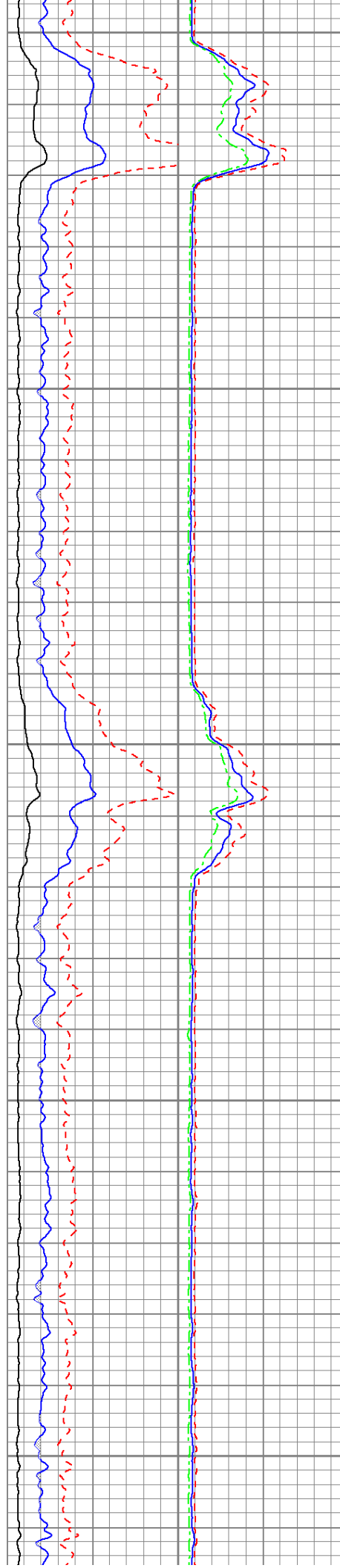
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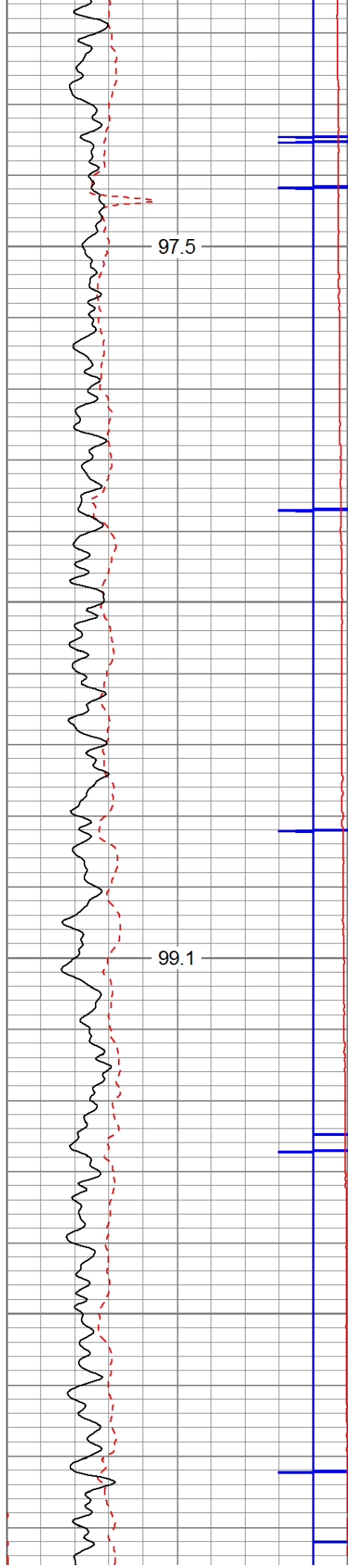




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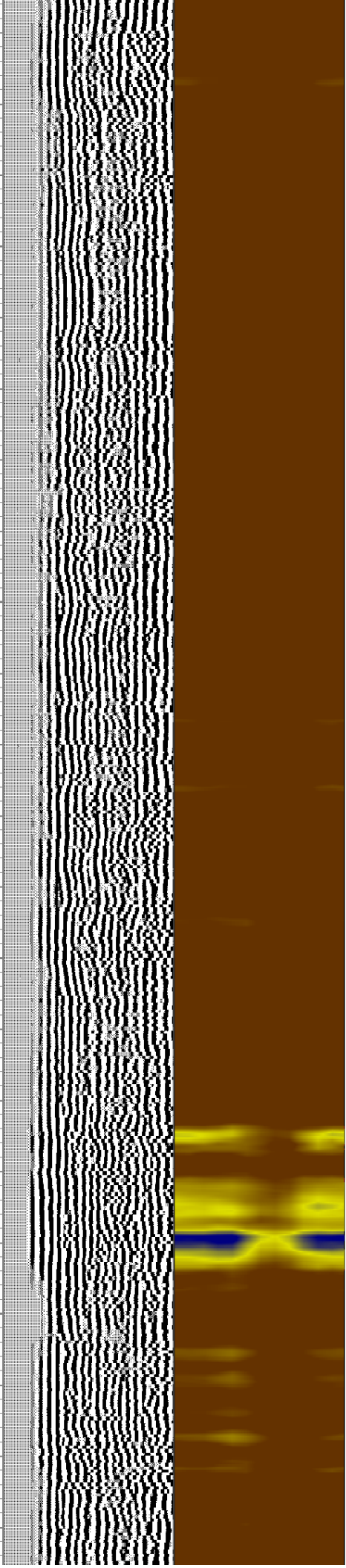
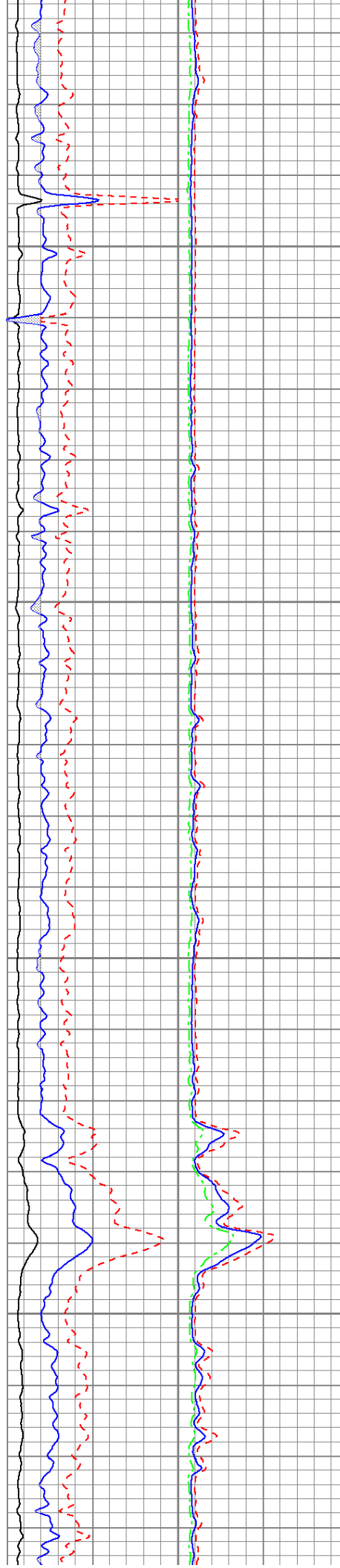
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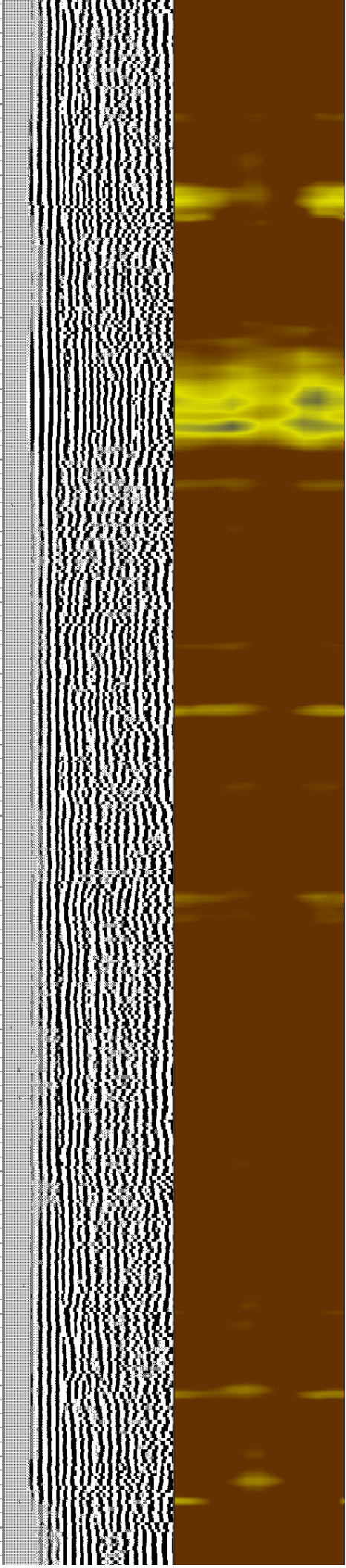
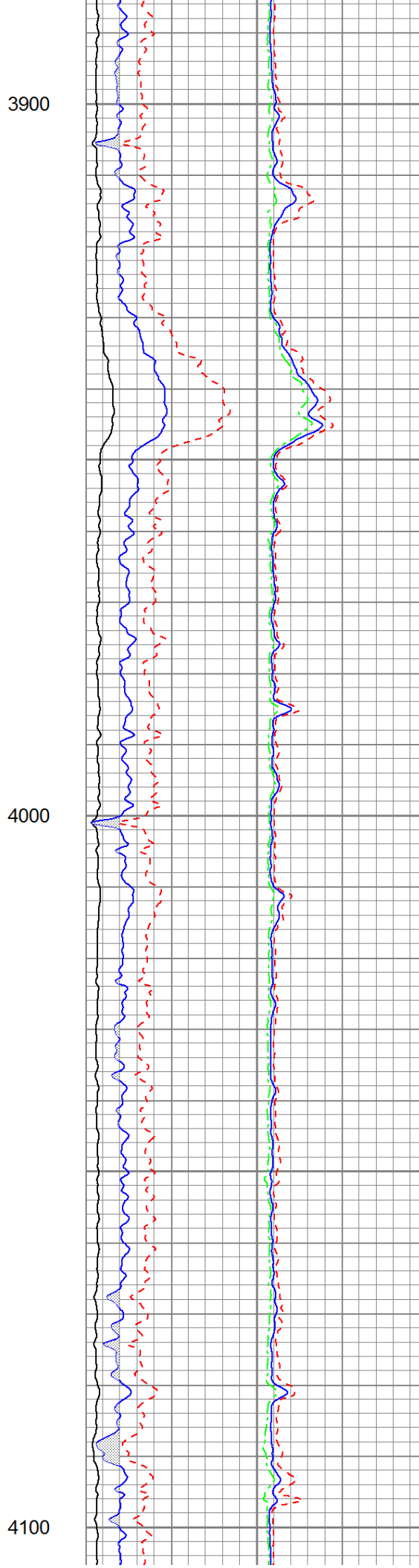
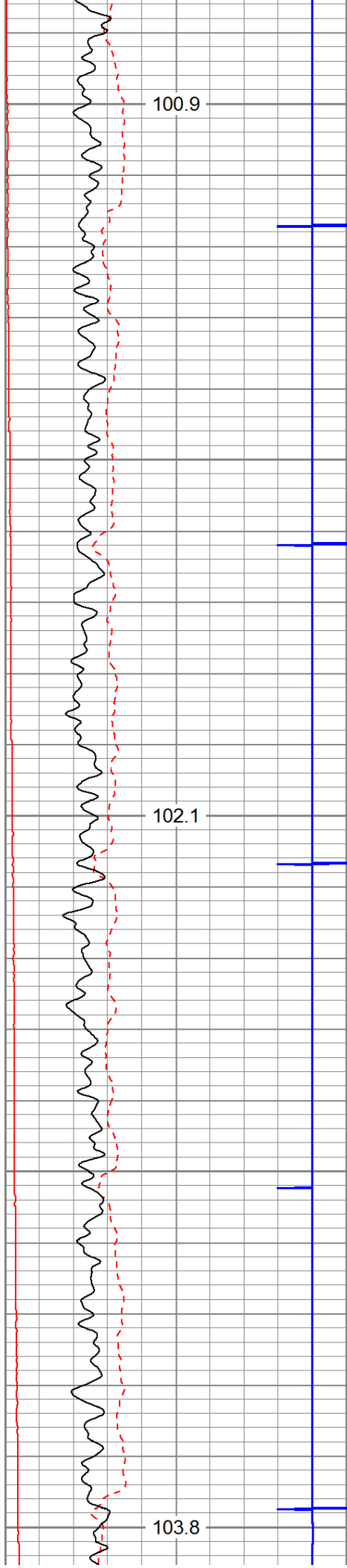


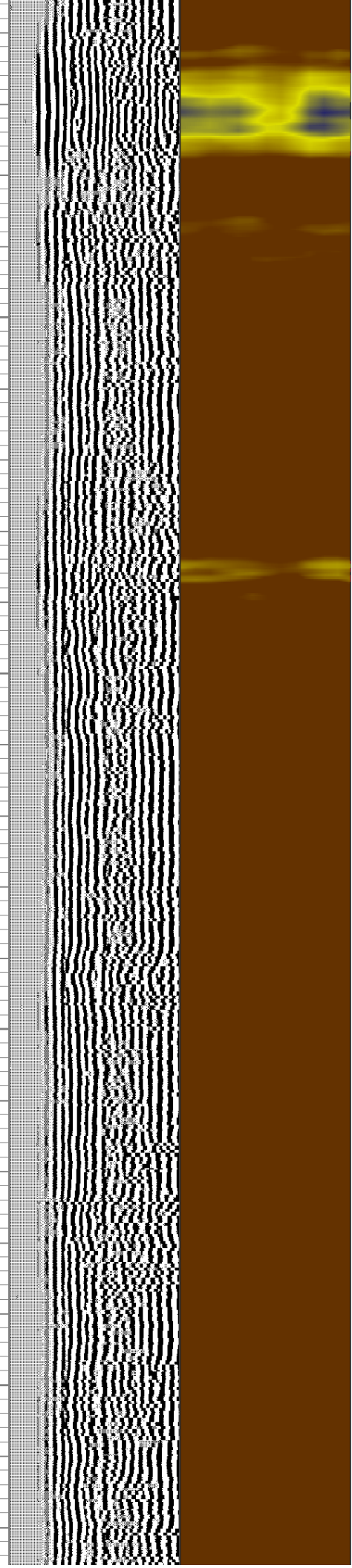
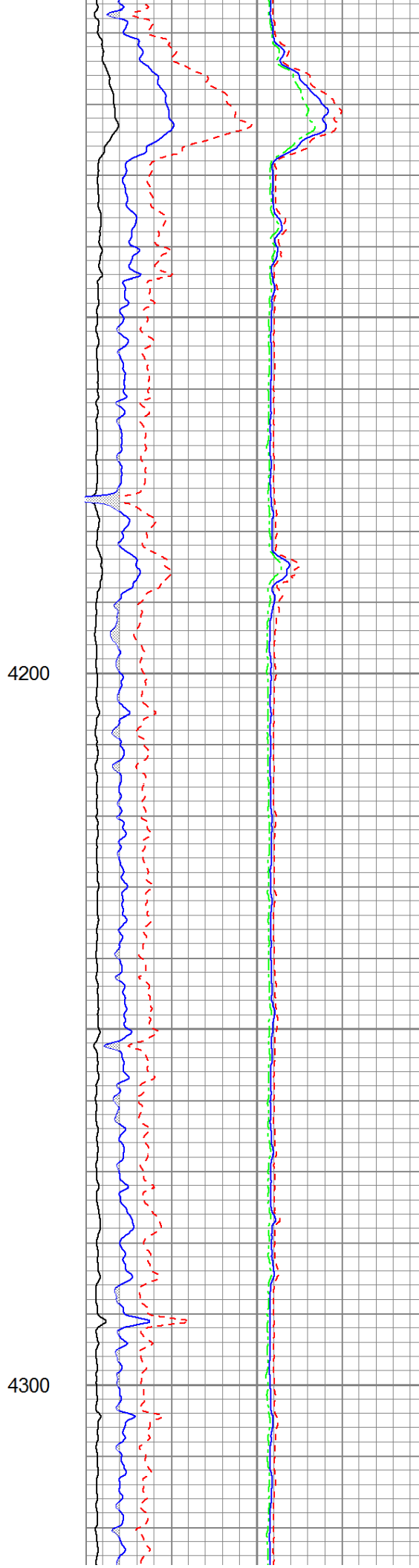
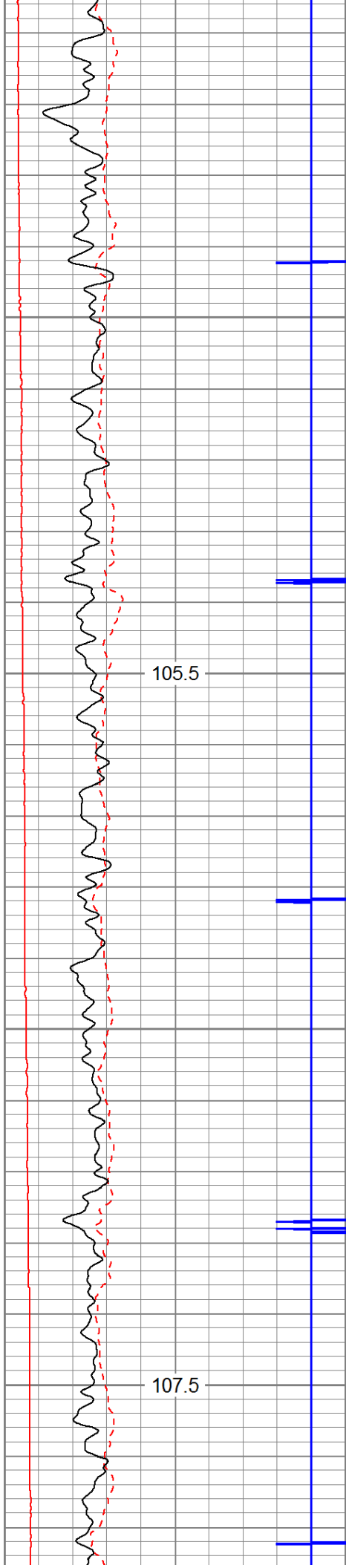


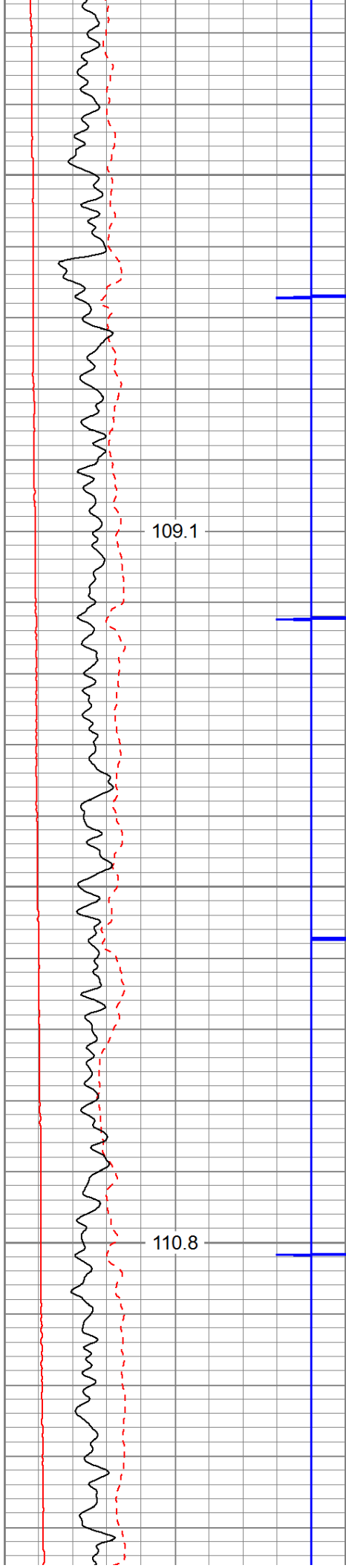
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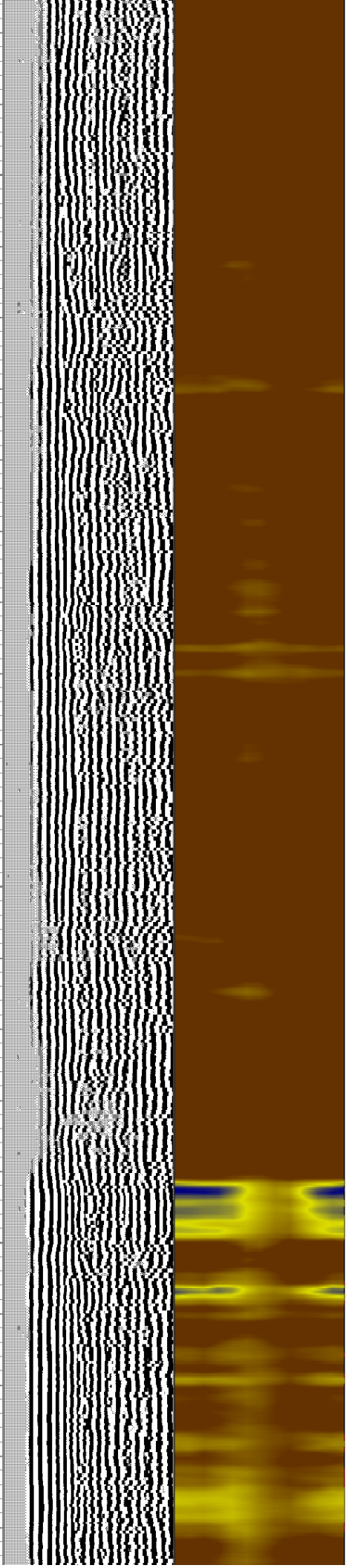
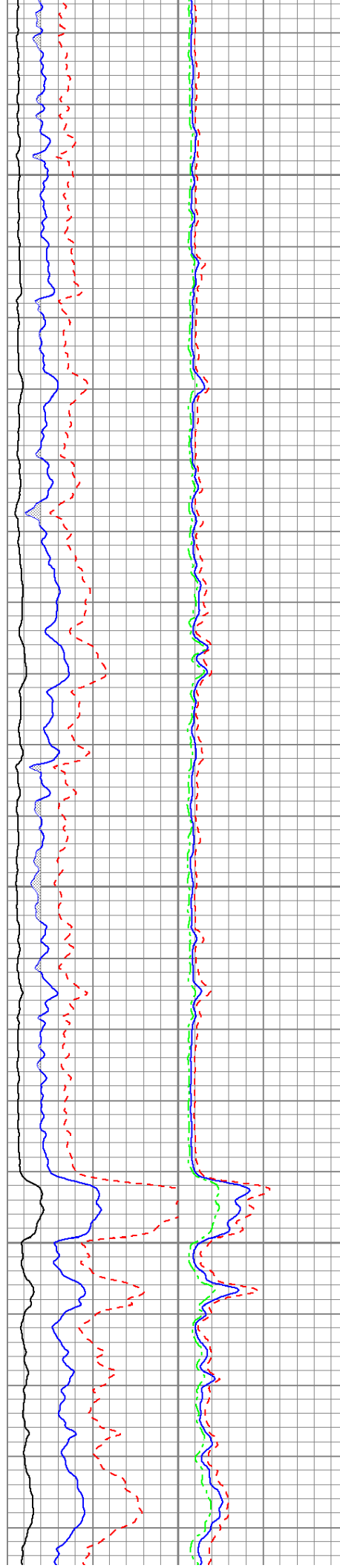


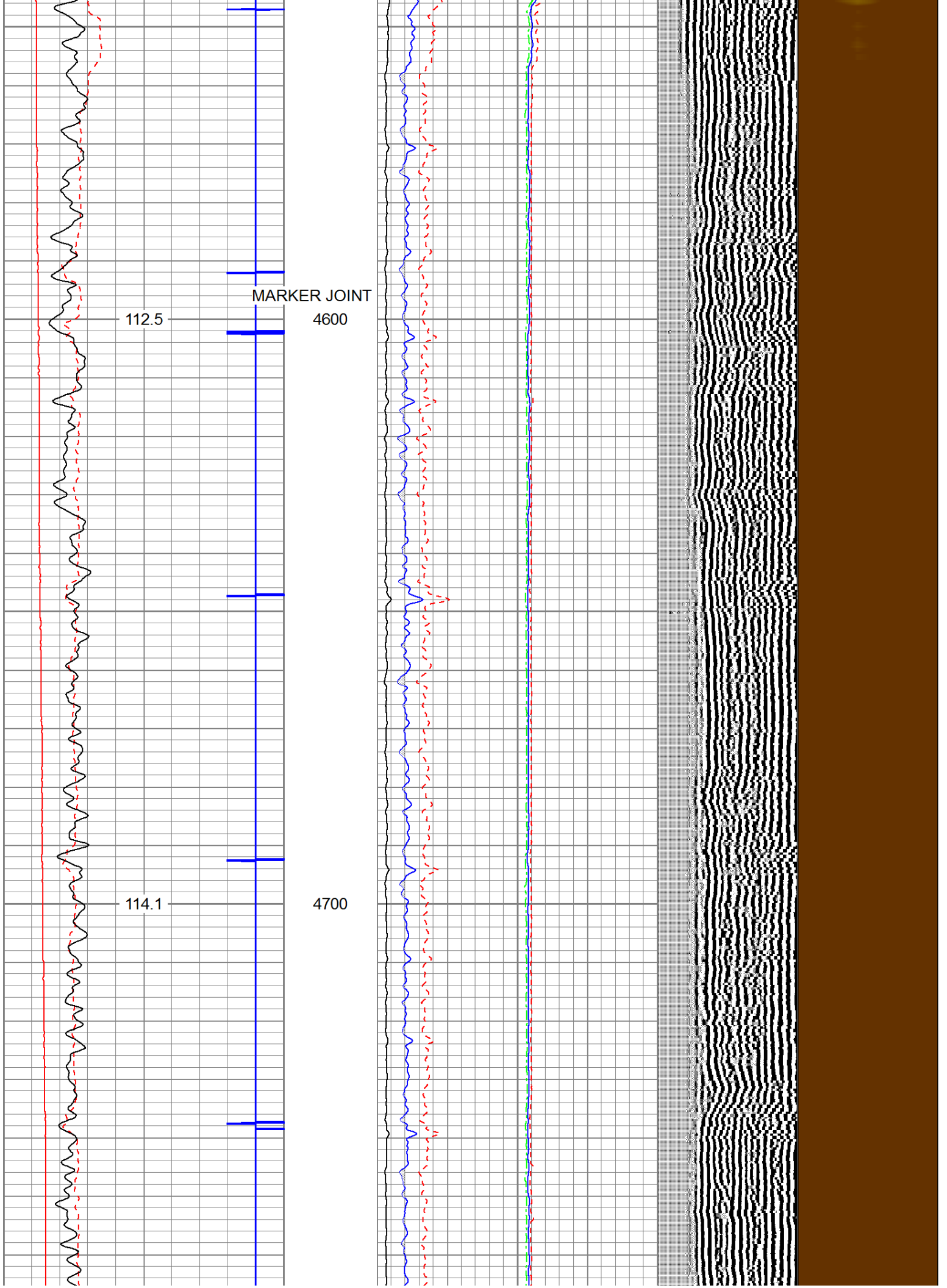


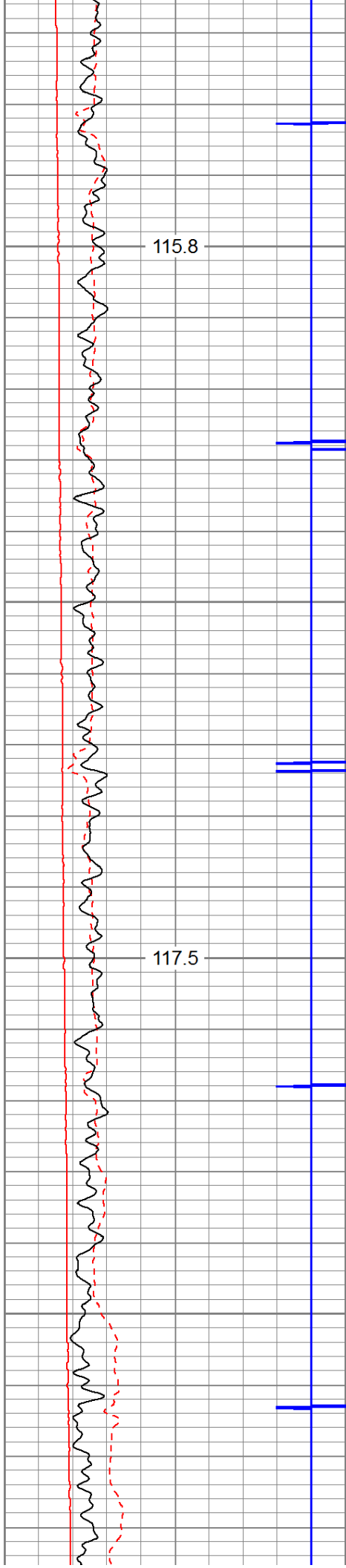


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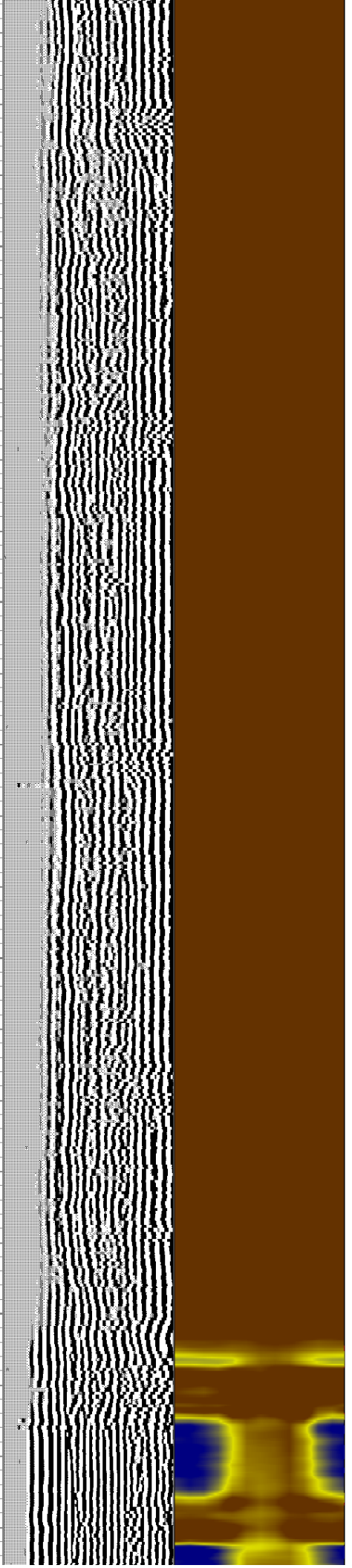
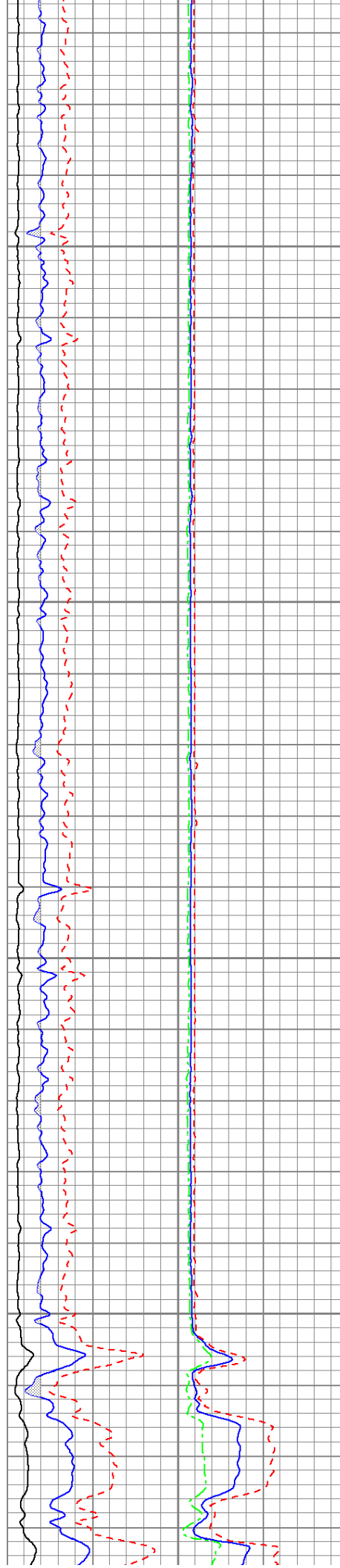




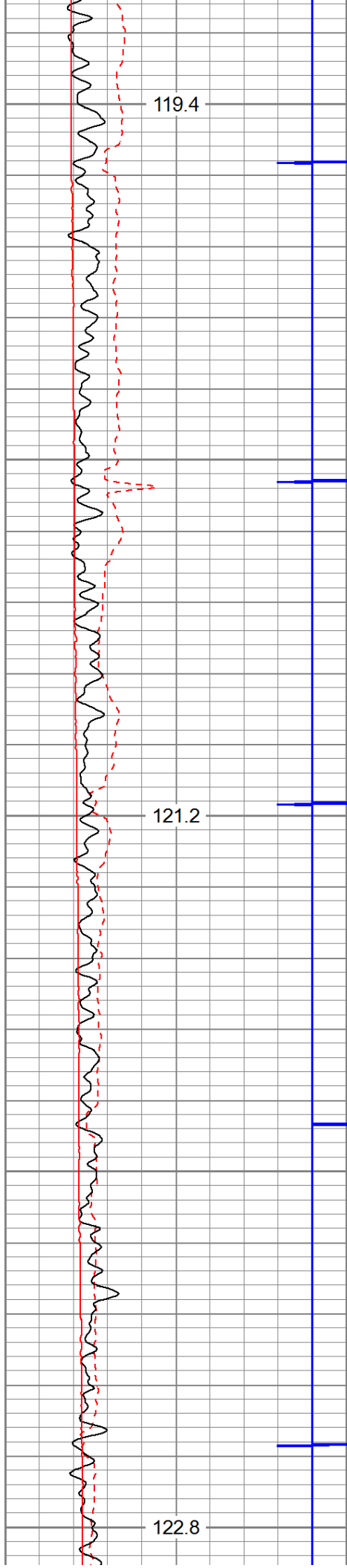


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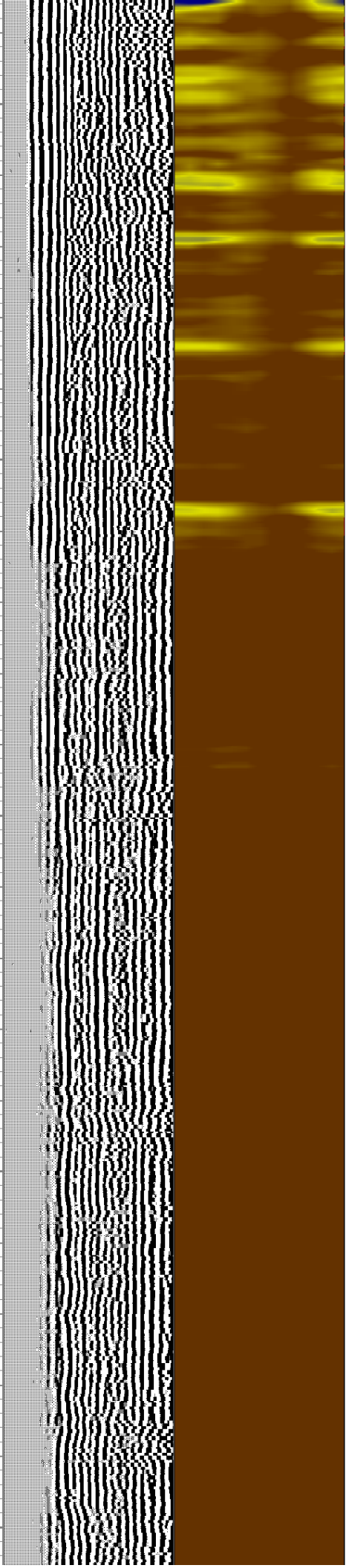
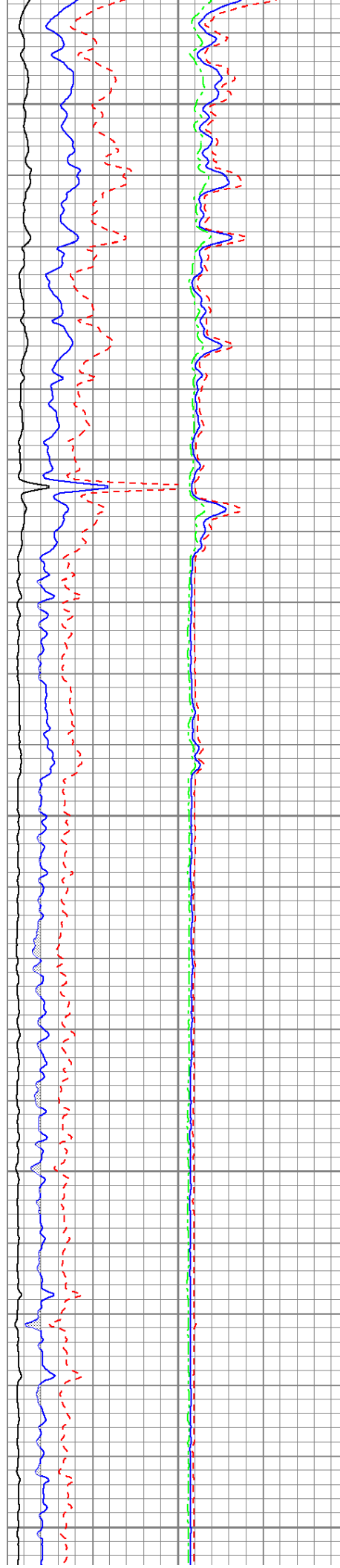


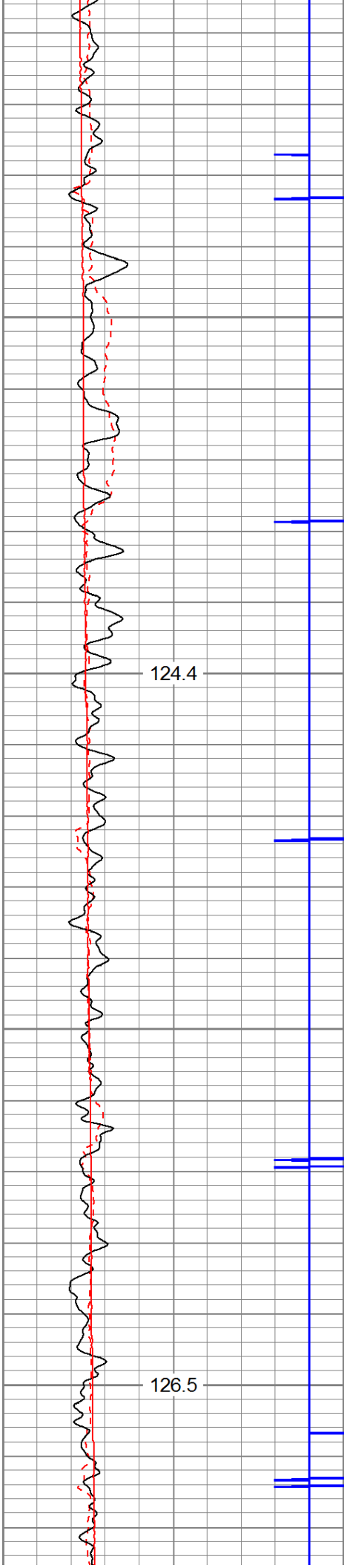


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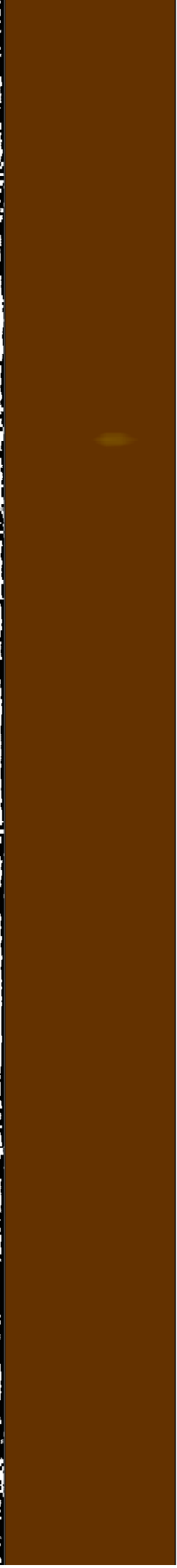
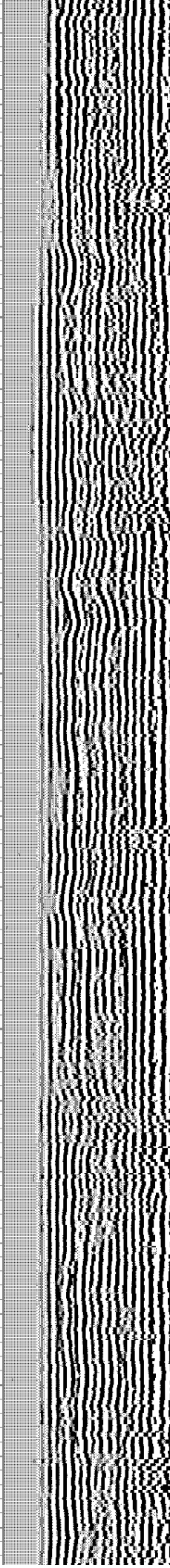
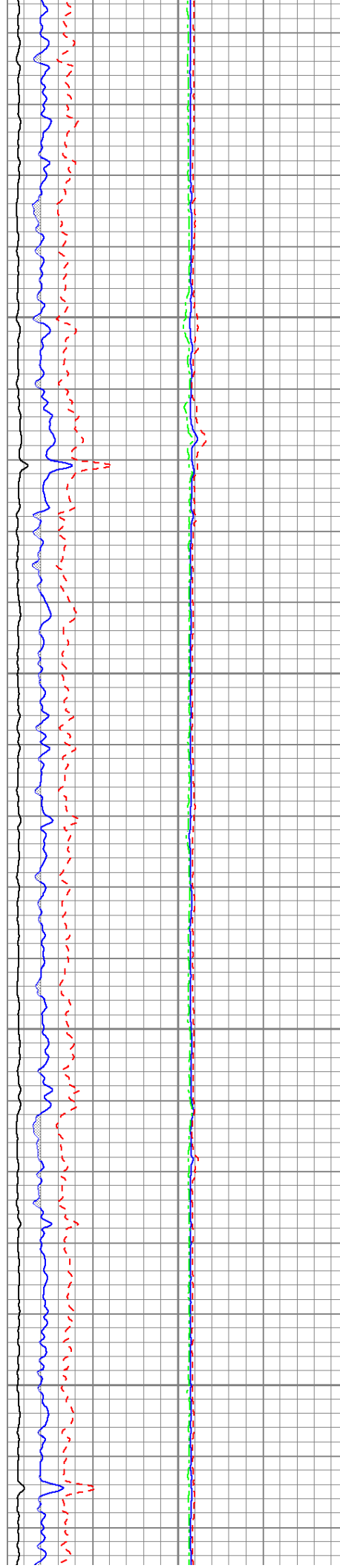
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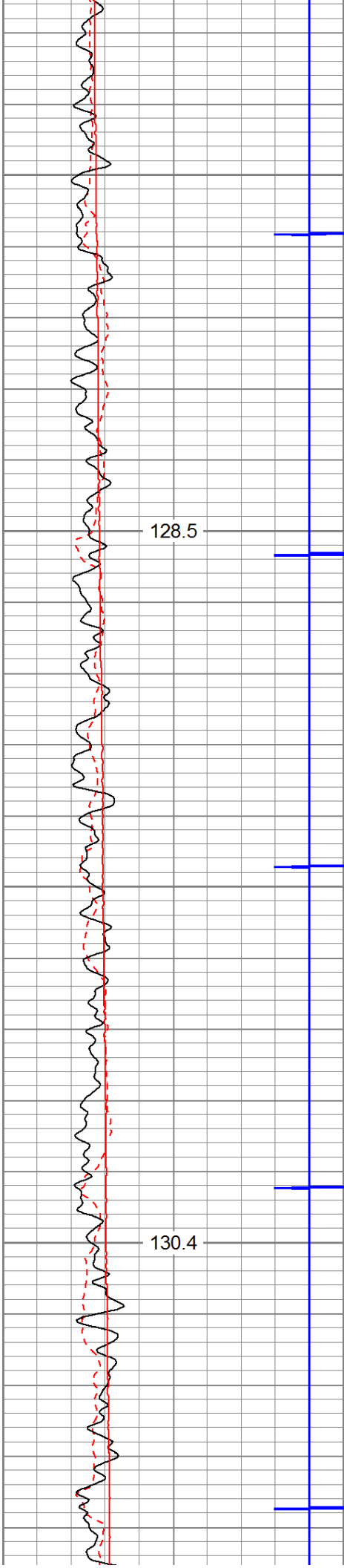




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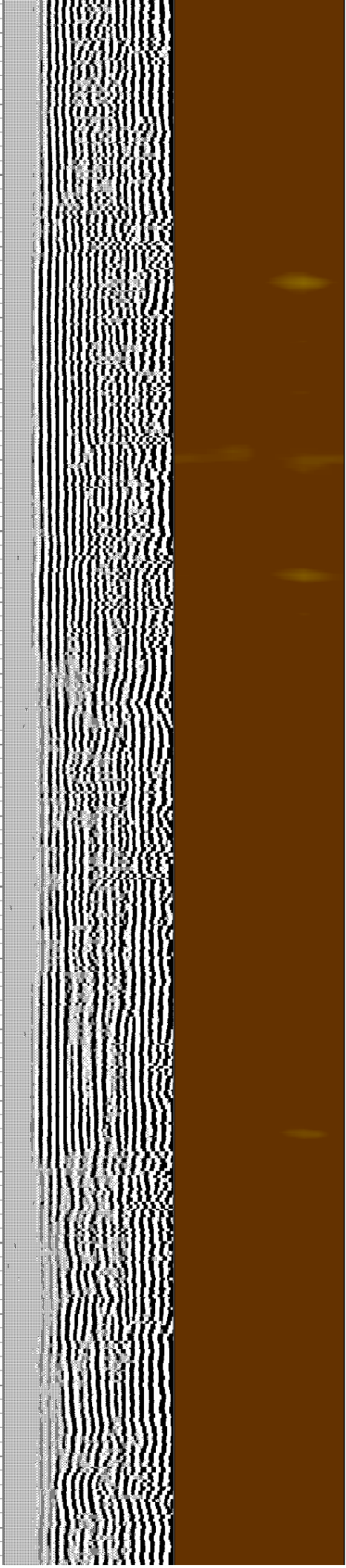
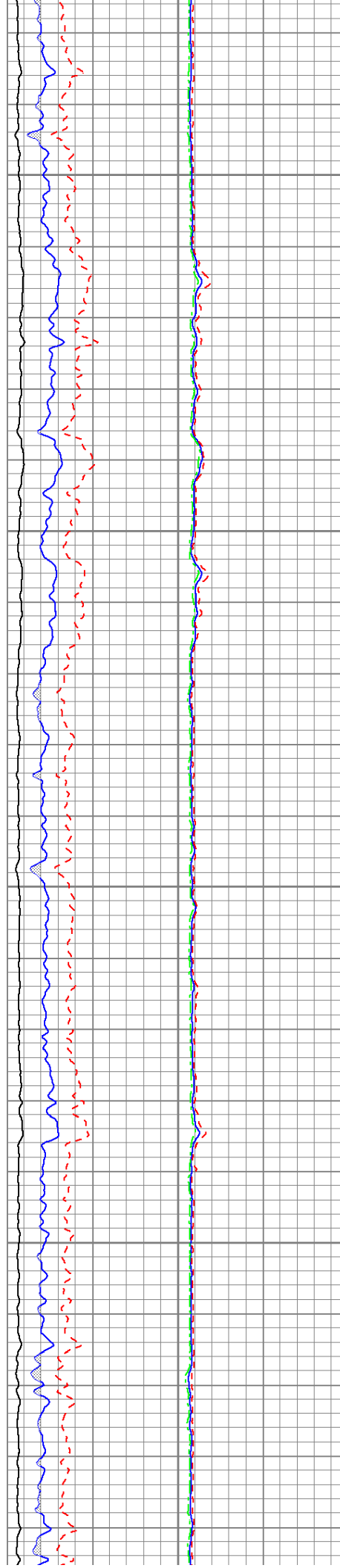
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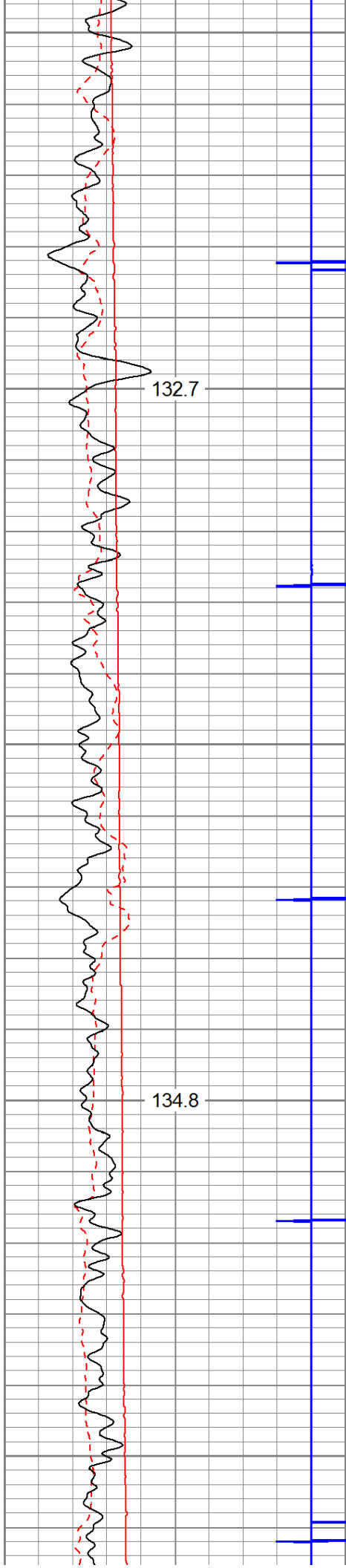




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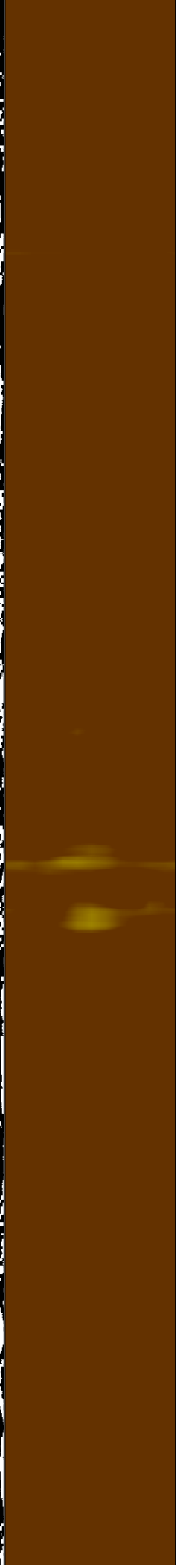
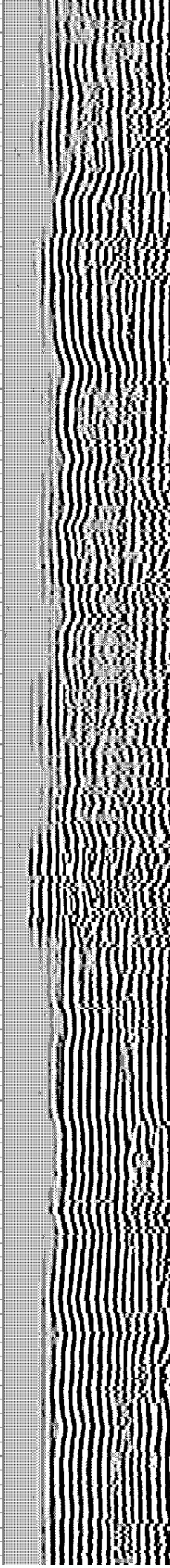
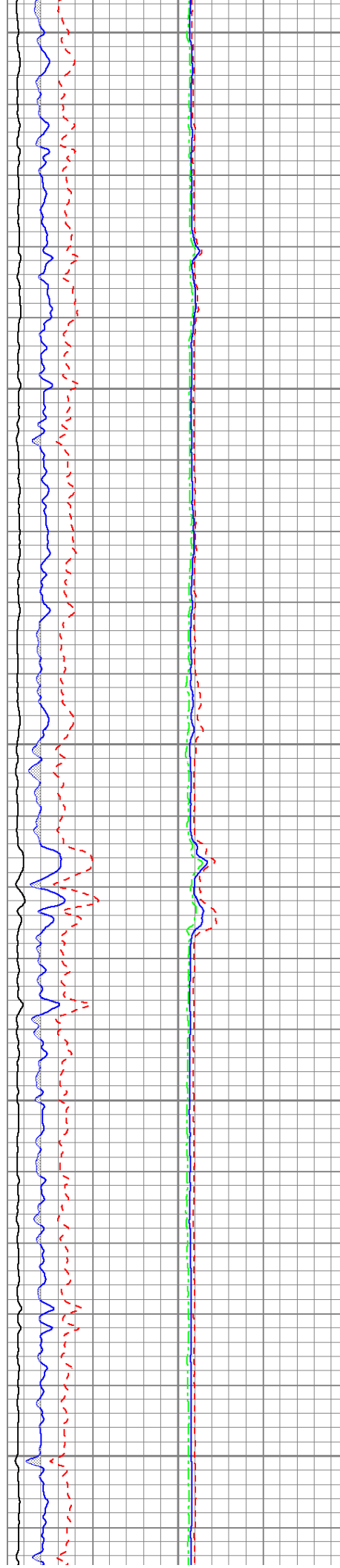
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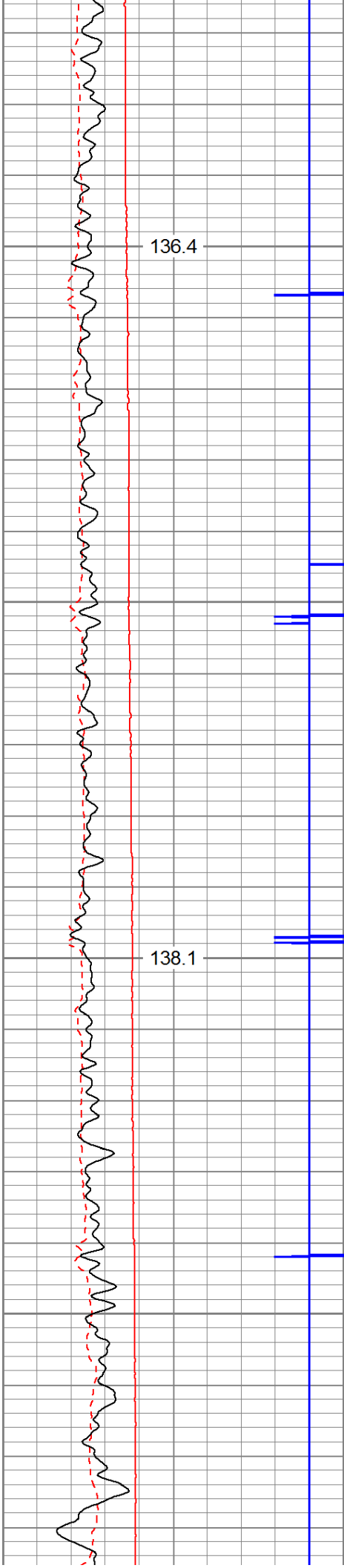




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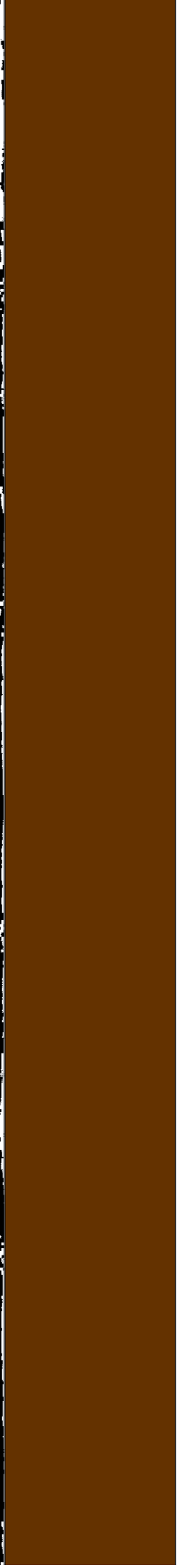
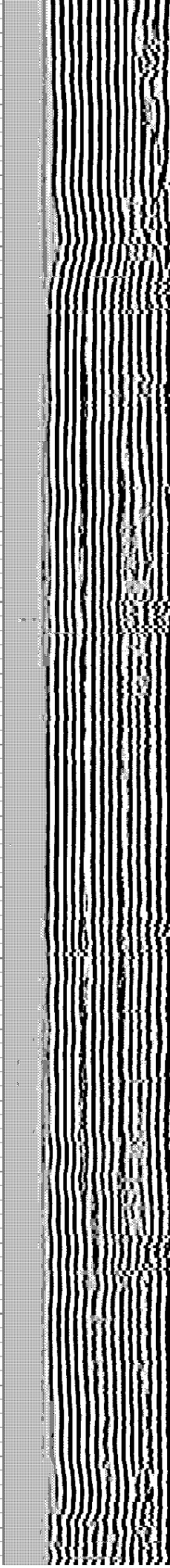
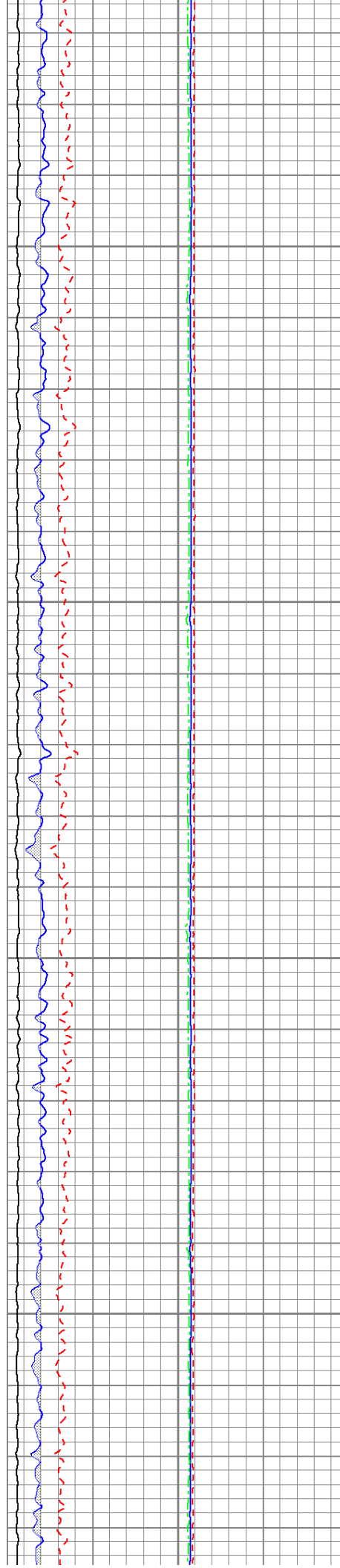
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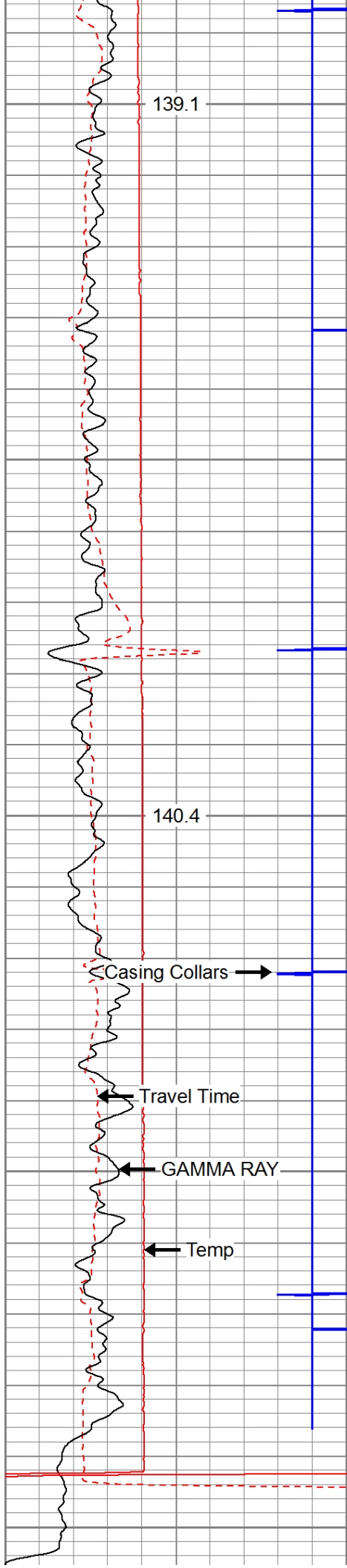




5900

6000

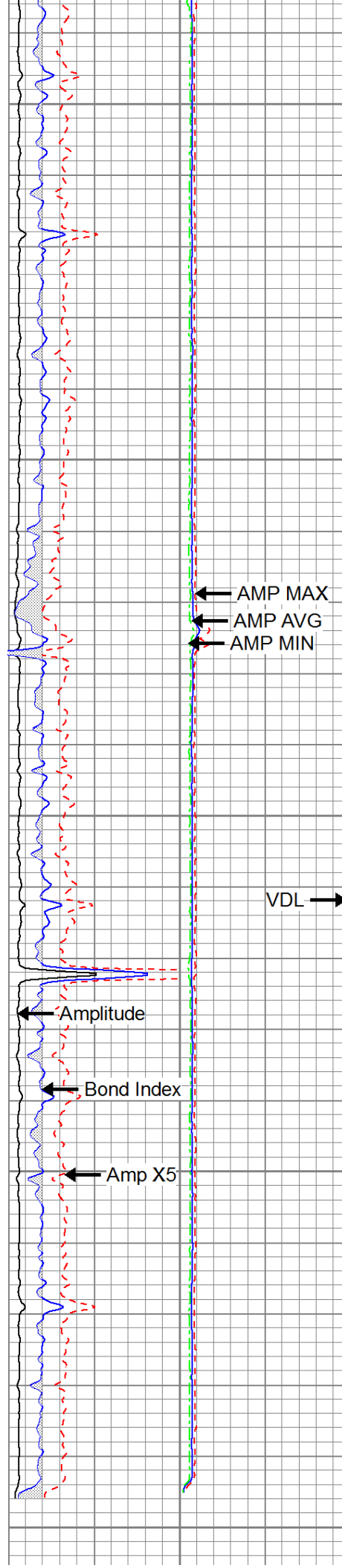




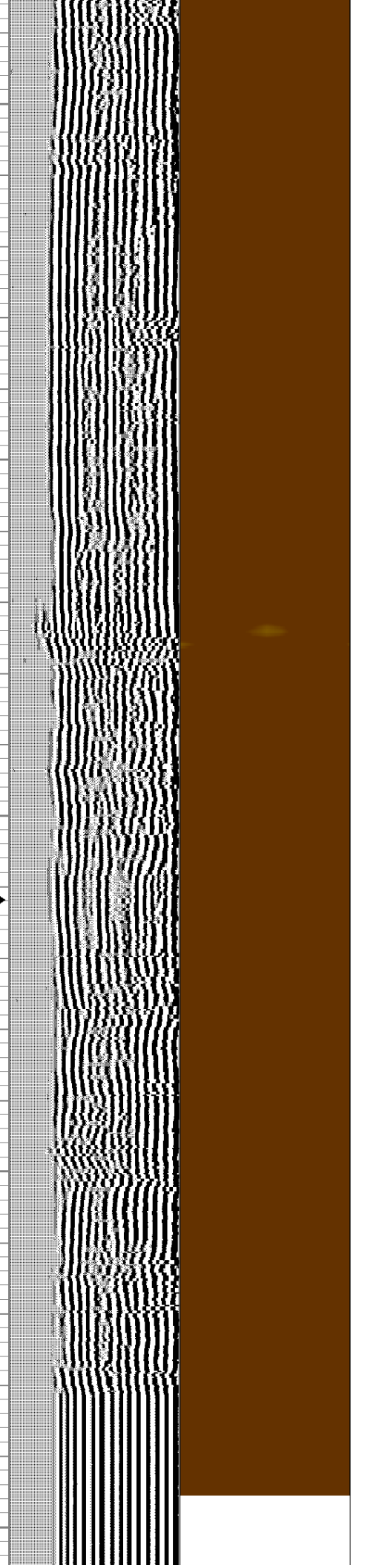
6100

6200

6300



VDL →



280	Travel Time (usec)	180
9	Casing Collars	-1
0	Gamma Ray	180
0	TEMP (degF)	100

TEMP  
(degF)

Amplitude	0	Amp Avg	150
(mV)	100	Amp Max	150
AmpX5 (mV)	20	Amp Min	150
BONDIX	0		

200	VDL	1200	1	Sector Map	12
20					80



# REPEAT SECTION

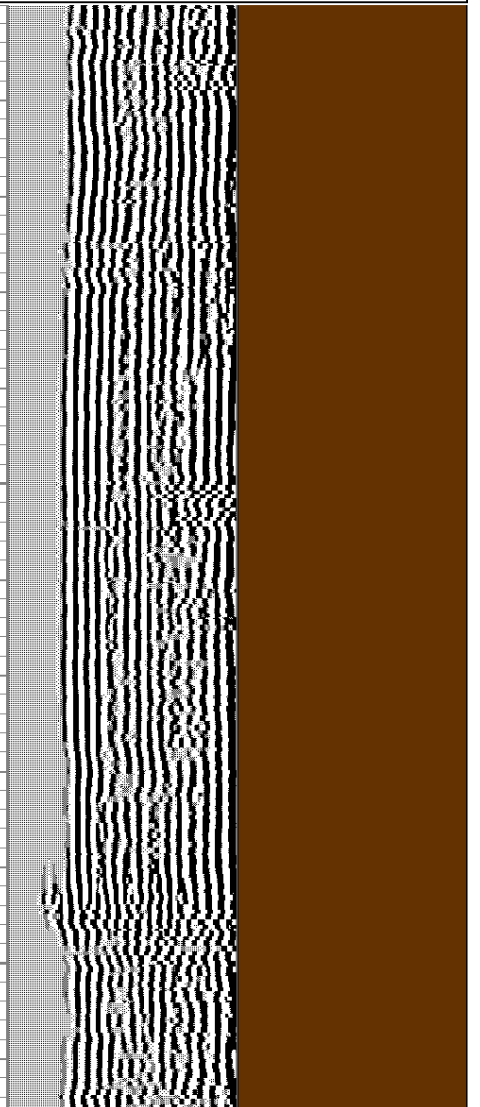
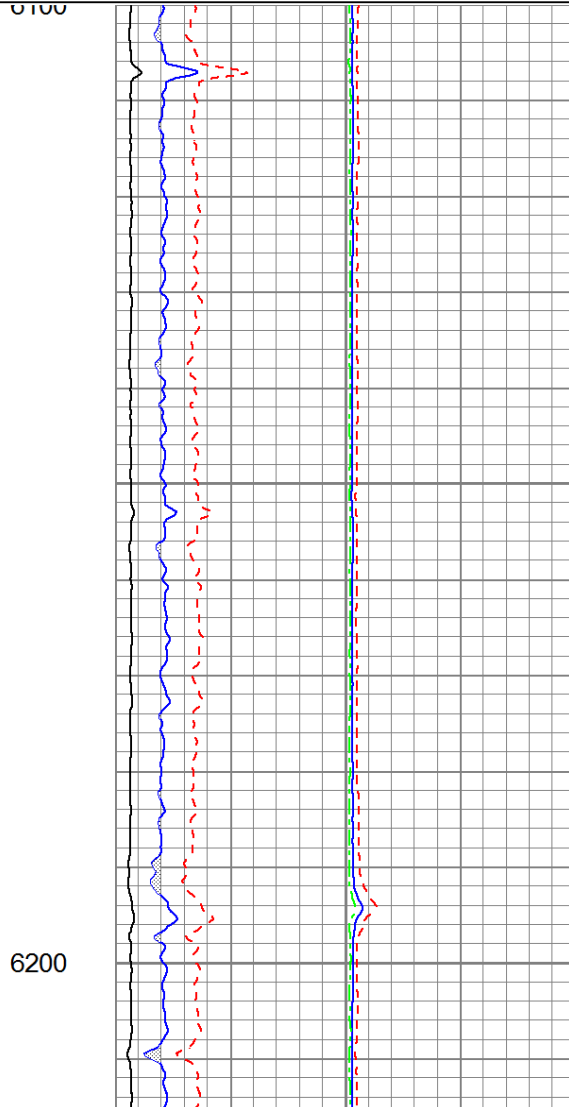
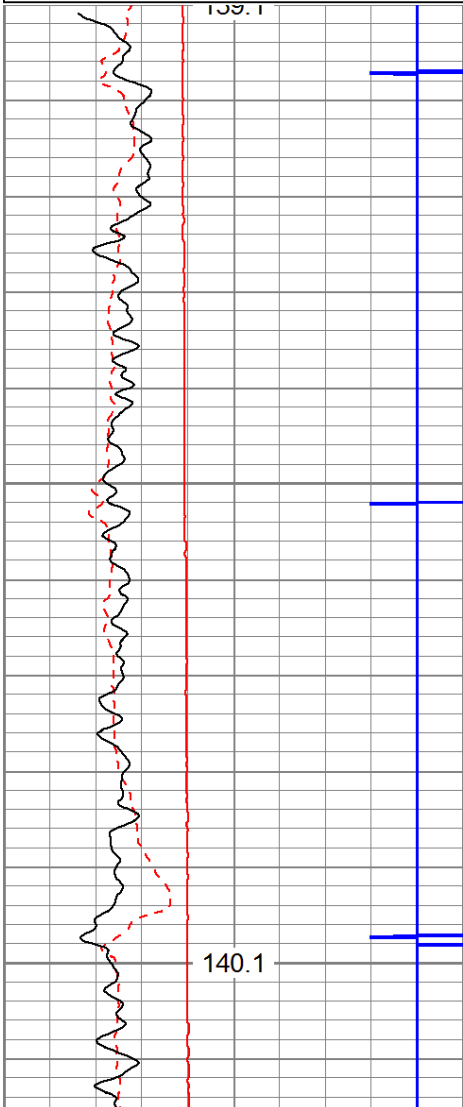
Database File: c:\warrior\data\2019 antero\antero-remington unit 2h.db  
 Dataset Pathname: pass2  
 Presentation Format: antero f  
 Dataset Creation: Sat Mar 30 15:09:42 2019 by Log 7.0 B1  
 Charted by: Depth in Feet scaled 1:240

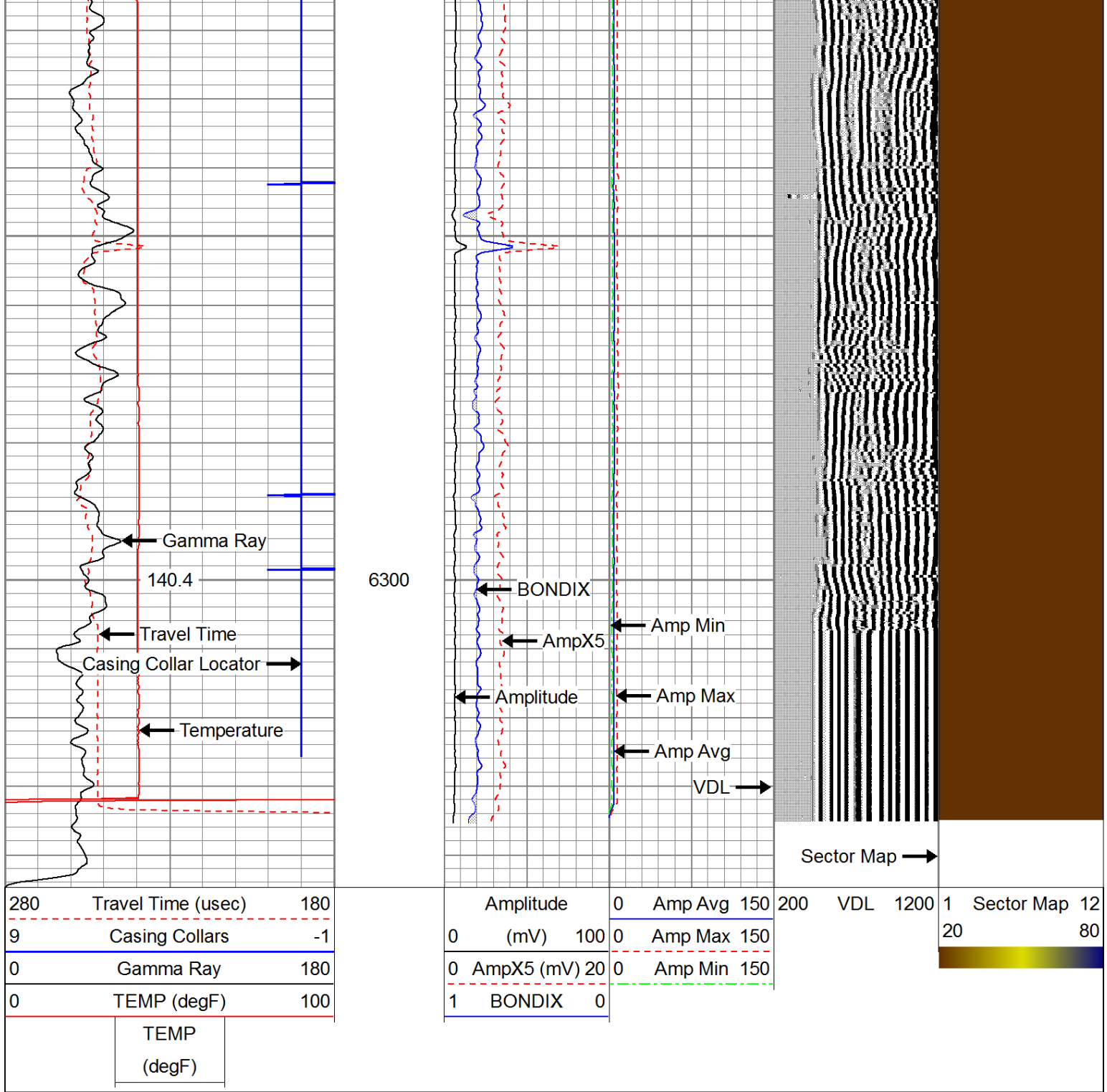
280	Travel Time (usec)	180
9	Casing Collars	-1
0	Gamma Ray	180
0	TEMP (degF)	100

TEMP  
(degF)

Amplitude	0	Amp Avg	150
(mV)	100	Amp Max	150
AmpX5 (mV)	20	Amp Min	150
BONDIX	0		

200	VDL	1200	1	Sector Map	12
20					80





Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
CCL	18.93		CCL-312tekco (3.12TEKCO) Tekco 3 1/8" 450 Deg. "F" SmCo Logging CCL	1.82	3.12	25.00
			2.75 2 3/4" Tekco Adjustable Centralizer	2.73	2.75	25.00





Sensitivity:

0.3000

/cps

Temperature Calibration Report

Serial Number: IOL40-05  
Tool Model: Tek12  
Performed: Wed Jul 31 10:53:14 2013

	Reference		Reading	
Low Reference:	0.00	degF	0.00	usec
High Reference:	1.00	degF	1.00	usec
Gain:	0.33			
Offset:	0.00			
Delta Spacing	2			



Company	ANTERO RESOURCES CORPORATION	
Well	REMINGTON UNIT 2H	
Field	MARCELLUS	
County	TYLER	
State	W.V.	Country