



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

Company ANTERO RESOURCES CORPORATION
 Well REMINGTON UNIT 1H
 Field MARCELLUS
 County TYLER
 State W.V.

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Location: API #: 47095025330000

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	16967'
Depth Logger	6239'
Bottom Logged Interval	6239'
Top Log Interval	SURFACE
Open Hole Size	N/A
Type Fluid	H2O
Density / Viscosity	N/A
Max. Recorded Temp.	140DEG
Estimated Cement Top	180'
Time Well Ready	N/A
Time Logger on Bottom	12:15PM
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	113'
				13 3/8"	54.5LB	SURFACE	369'
				9 5/8"	36LB	SURFACE	2607'
				5 1/2"	23LB	SURFACE	16967'

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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- 180'
 BOTTOM HOLE TEMP- 140DEG
 MARKER JOINT ON LOG @ 5698'-5708'
 CORRECTED UP HOLE 21' TO PUT MARKER ON DEPTH WITH PIPE TALLY



Main Log @ 1500 PSI

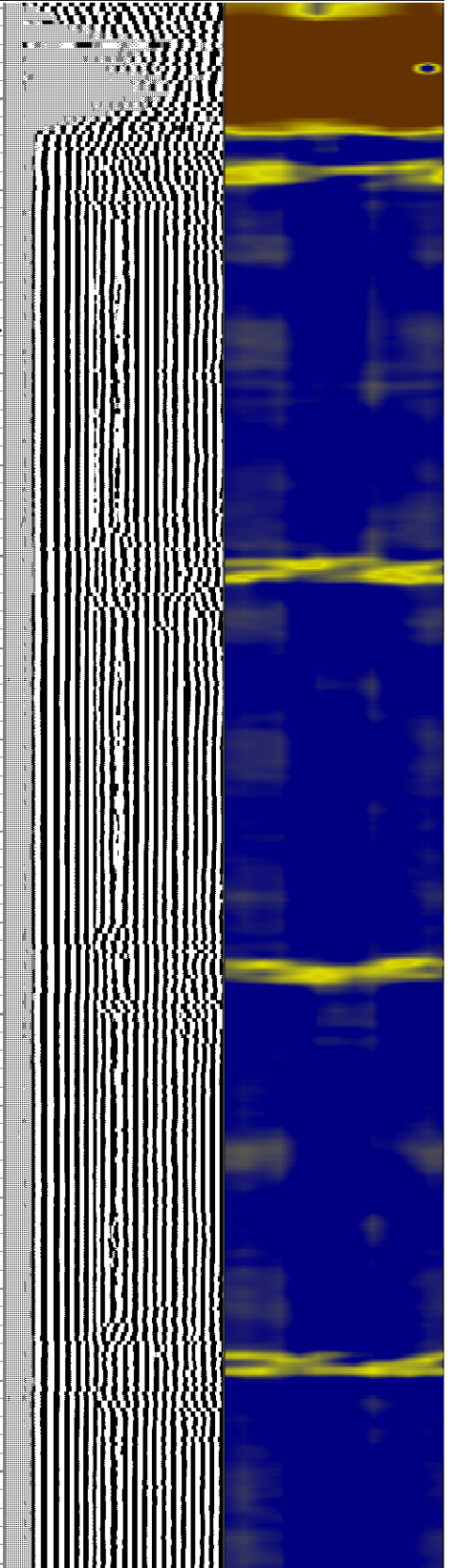
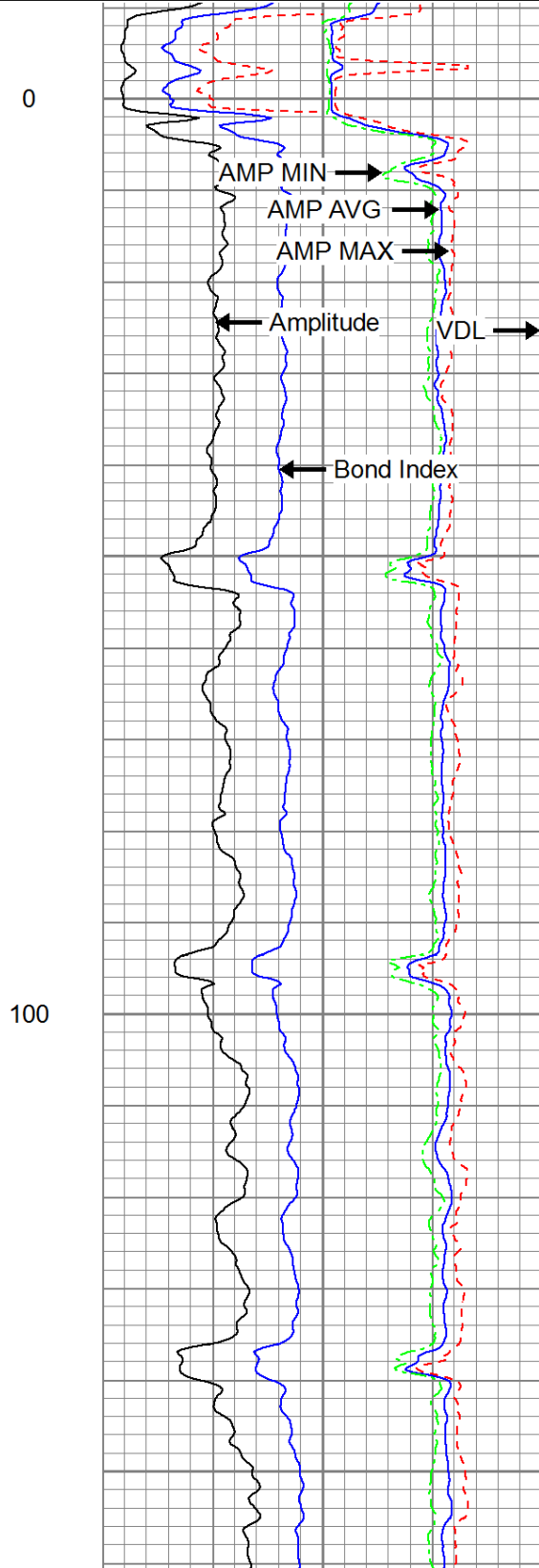
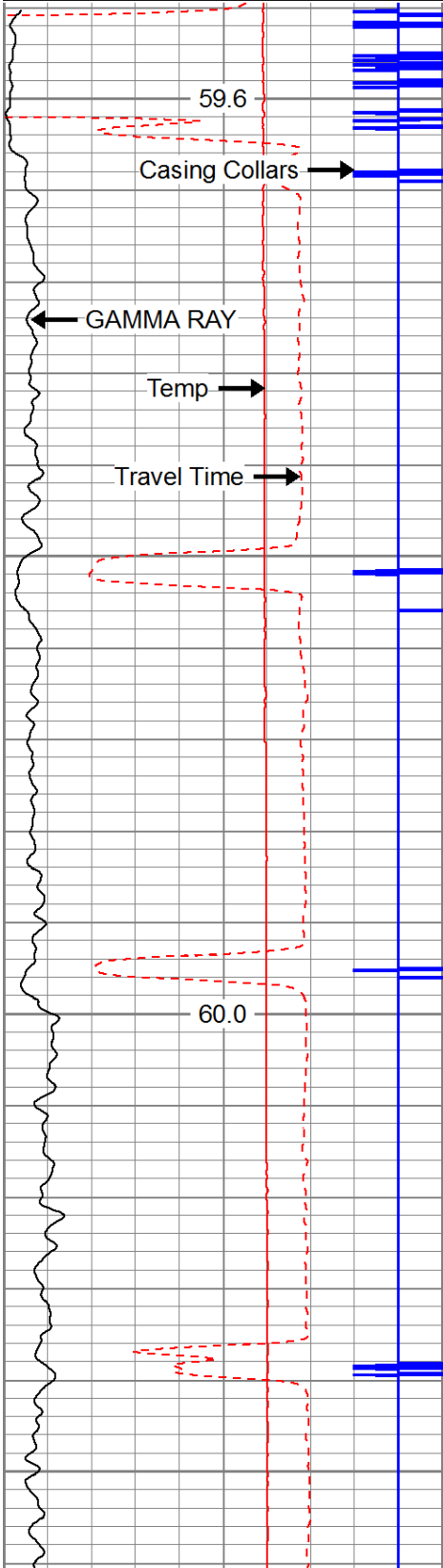
Database File: c:\warrior\data\2019 antero\antero-remington unit 1h.db
 Dataset Pathname: pass4.3
 Presentation Format: antero f
 Dataset Creation: Mon Apr 01 08:14:12 2019 by Calc Std Casedhole 10081
 Charted by: Depth in Feet scaled 1:240

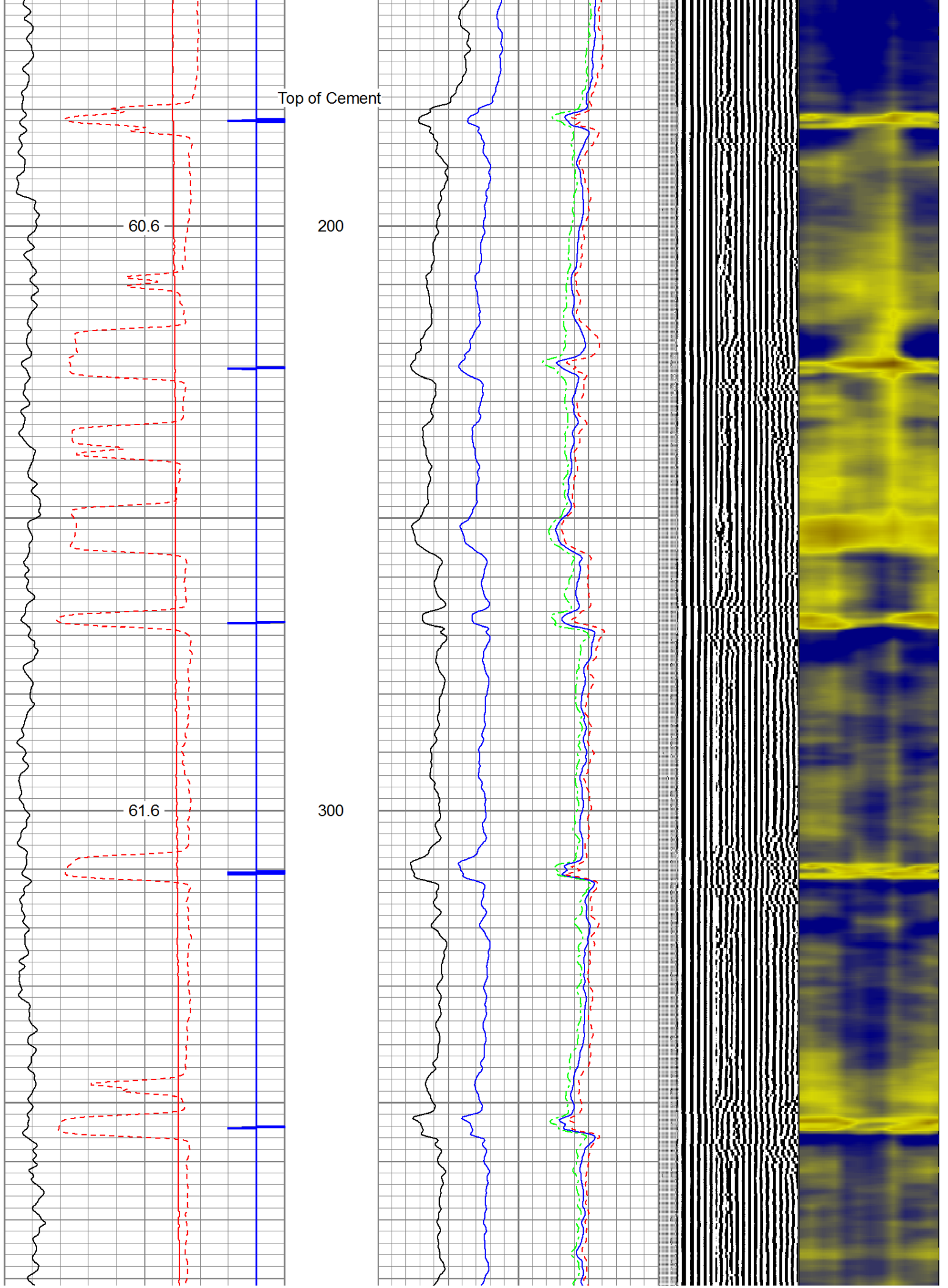
280	Travel Time (usec)	180
9	Casing Collars	-1
0	Gamma Ray	180
0	TEMP (degF)	100

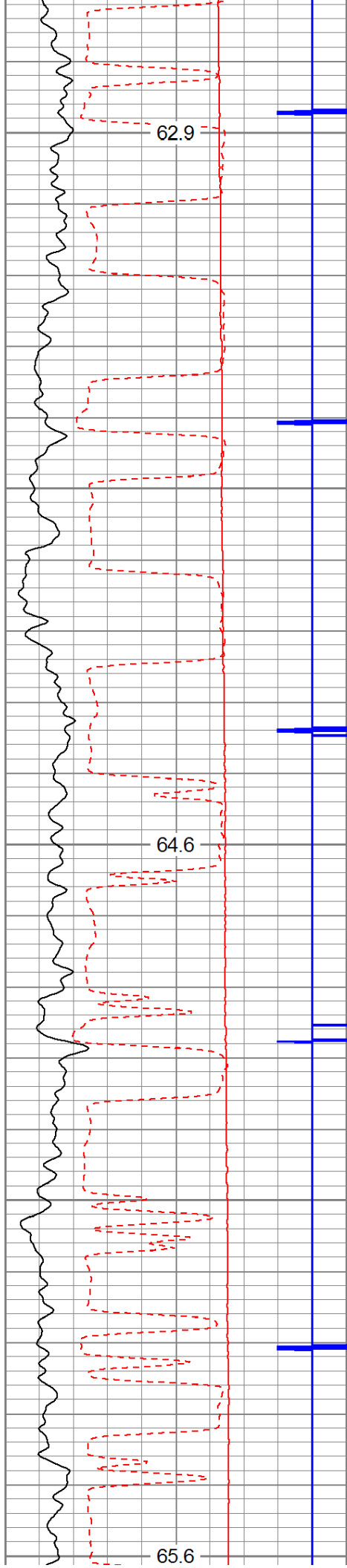
Amplitude	0	Amp Avg	150
(mV)	100	Amp Max	150
AmpX5 (mV)	20	Amp Min	150
BONDIX	0		

200	VDL	1200	1	Sector Map	12
			20		80

TEMP (degF)



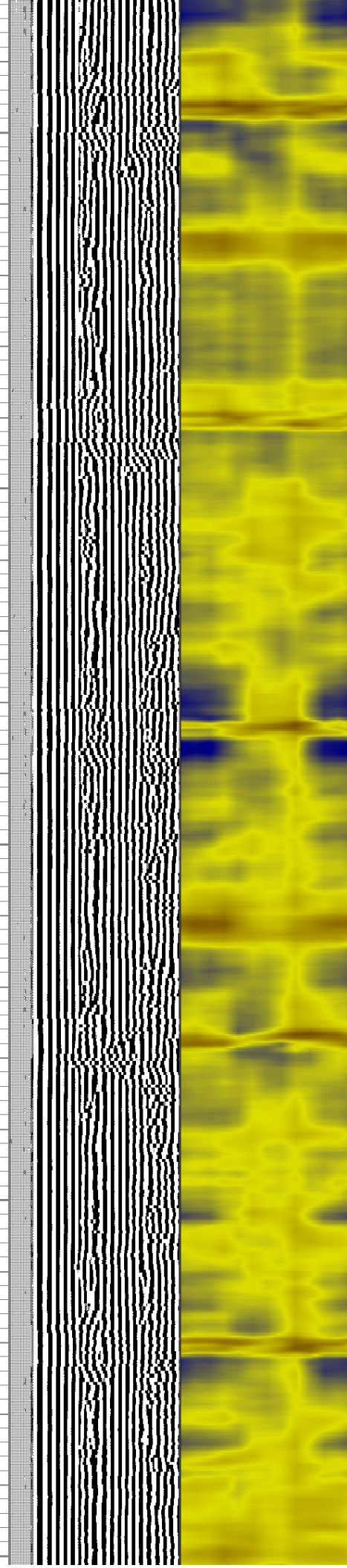
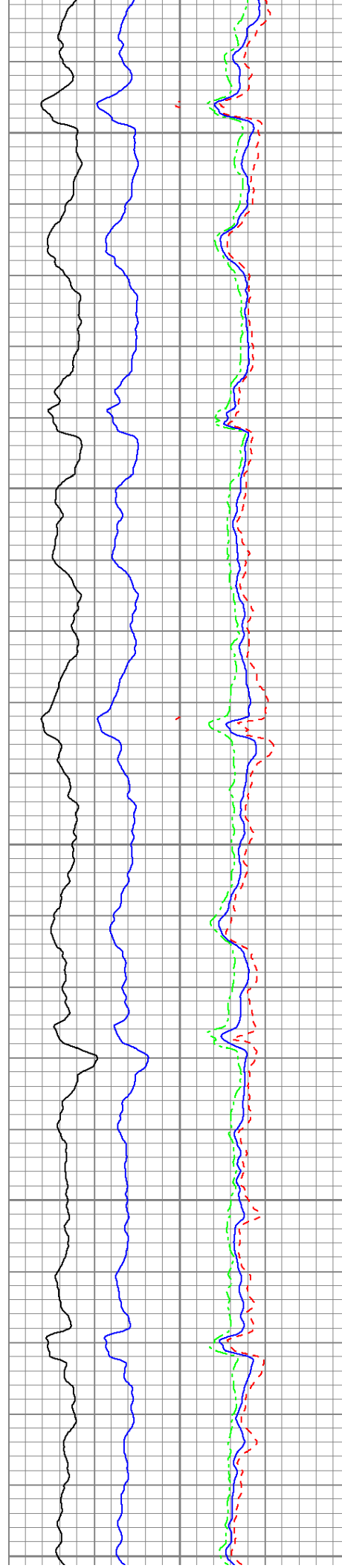


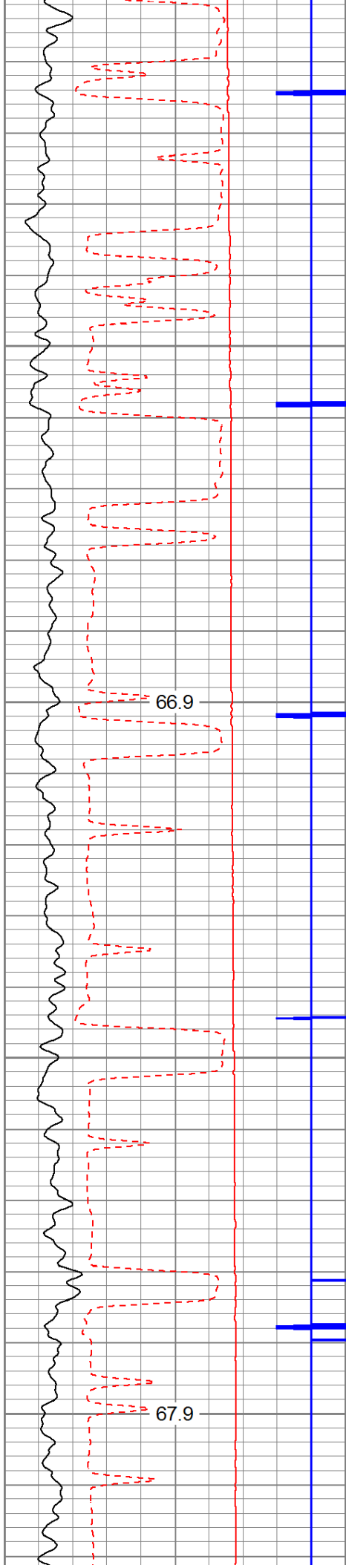


400

500

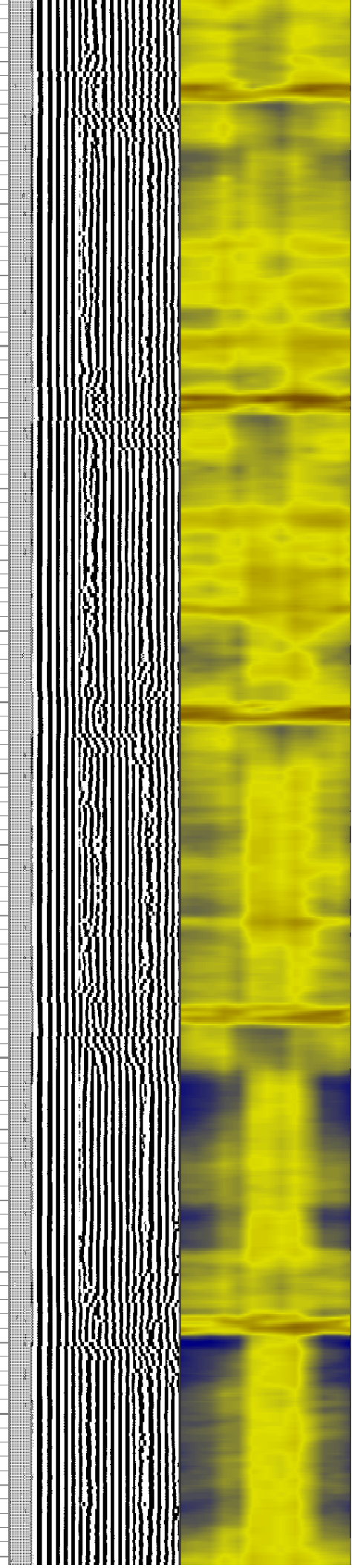
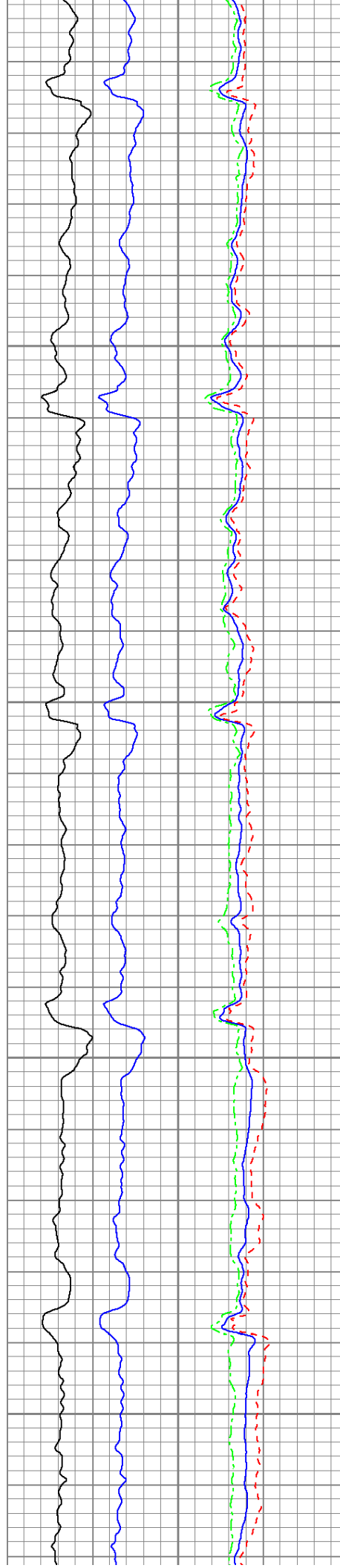
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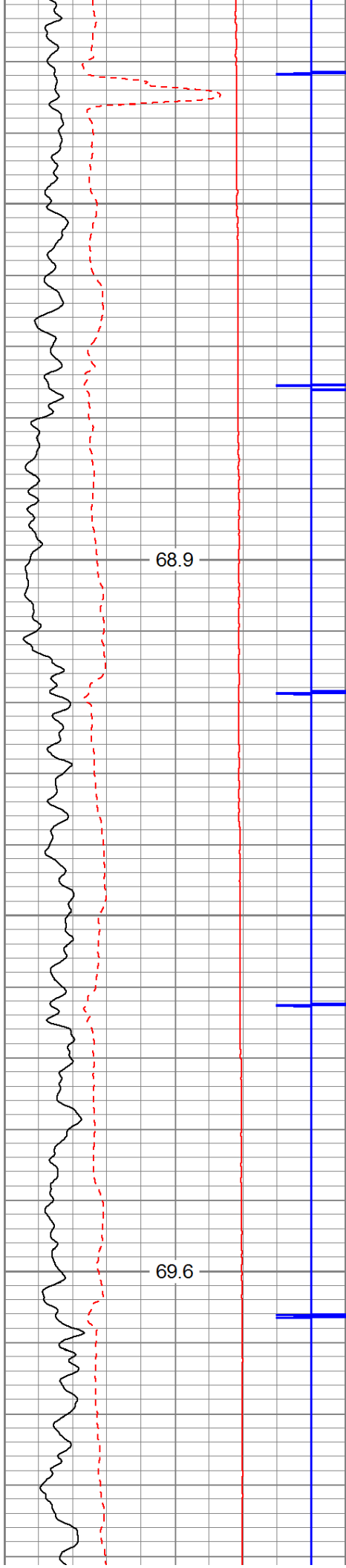




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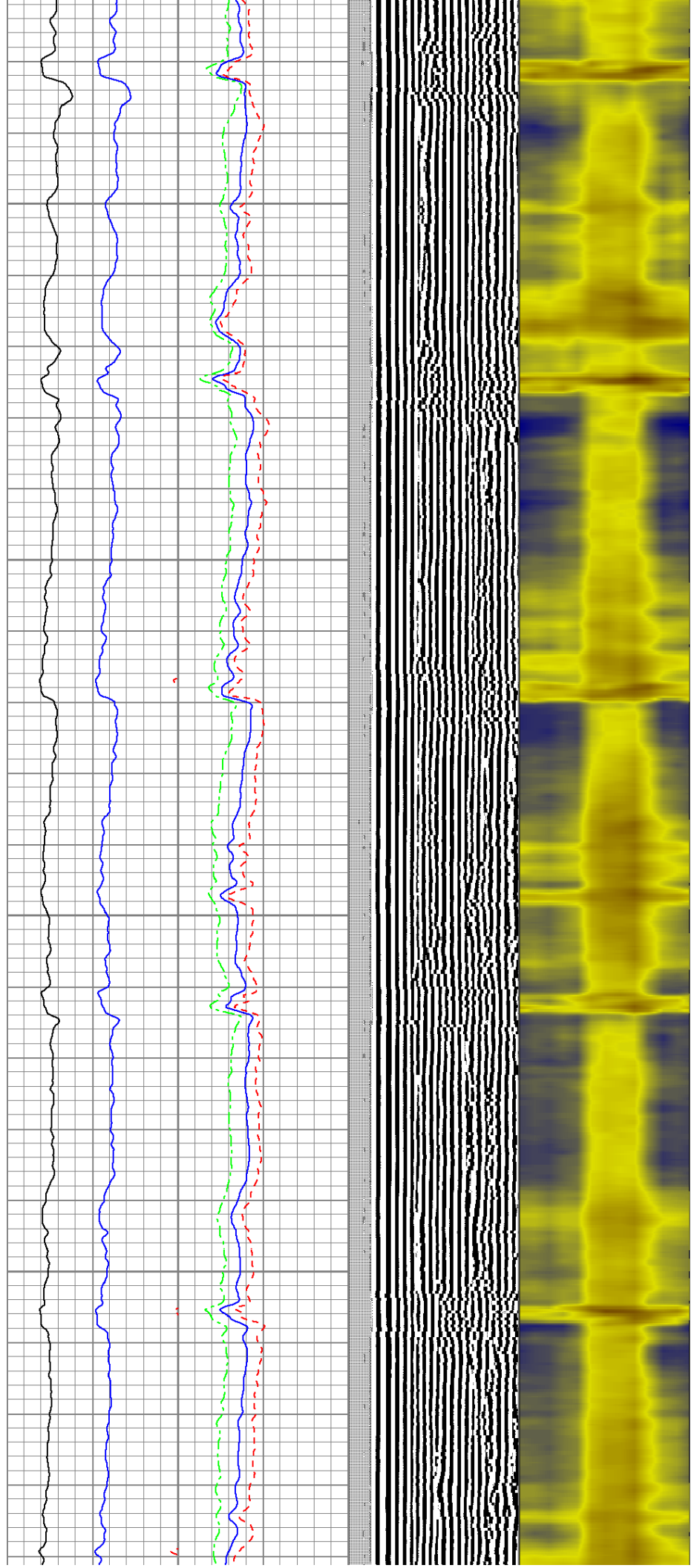
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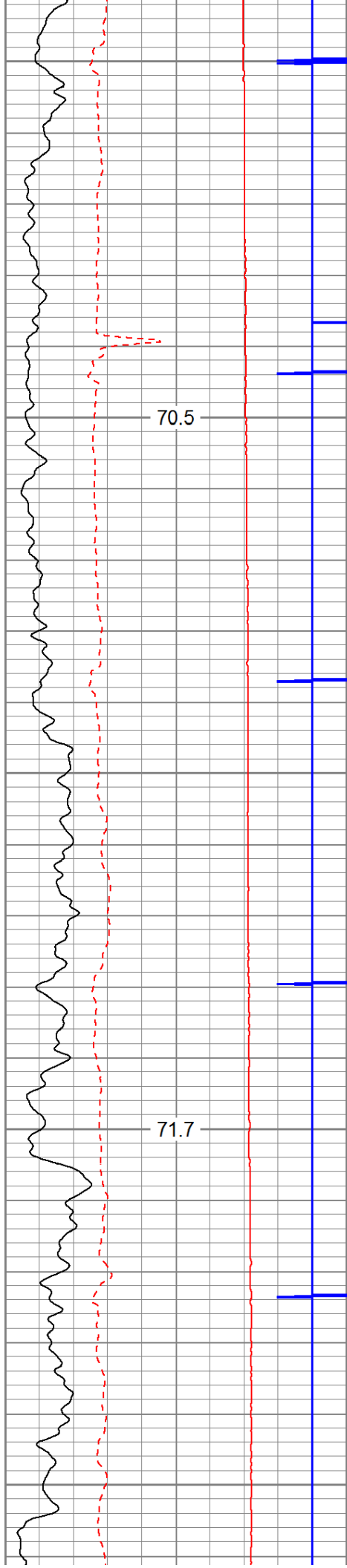




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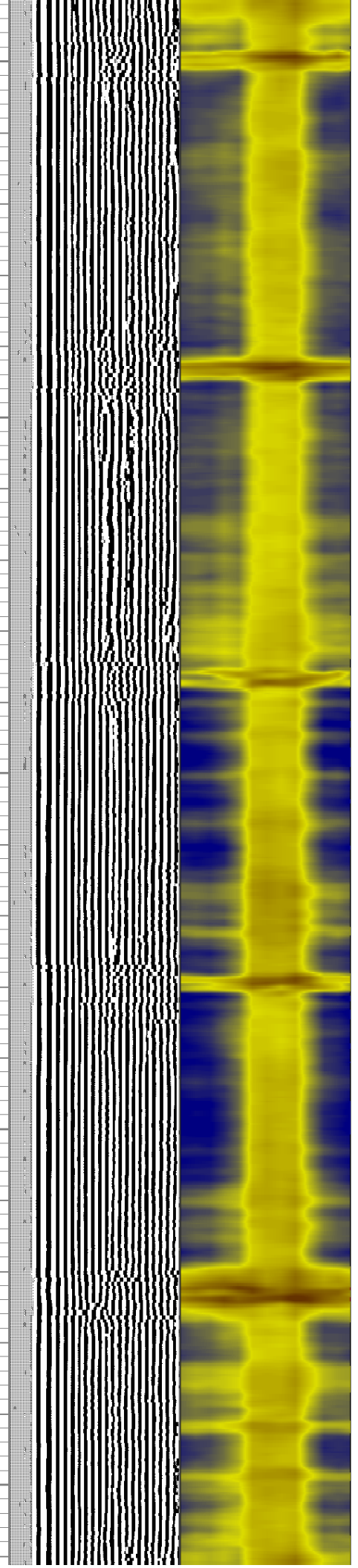
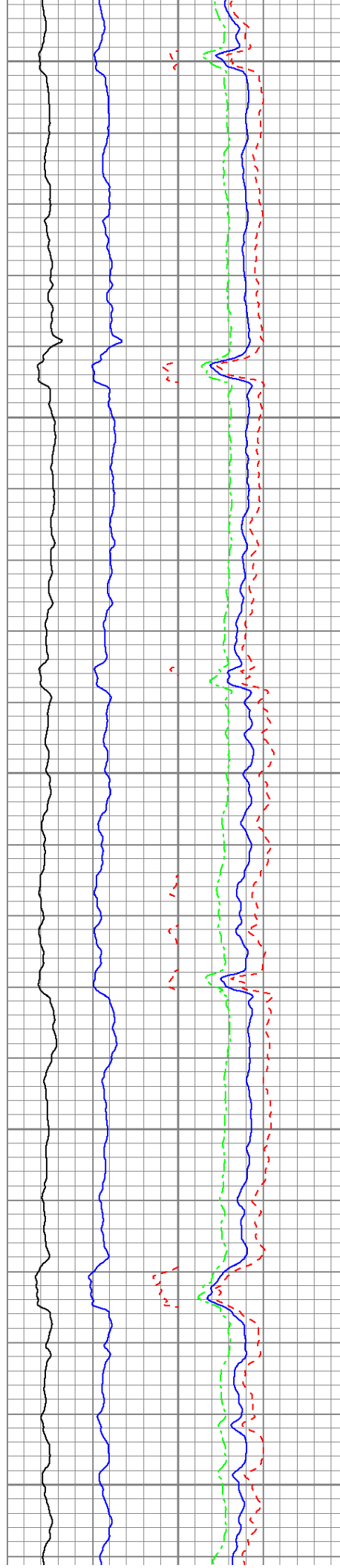
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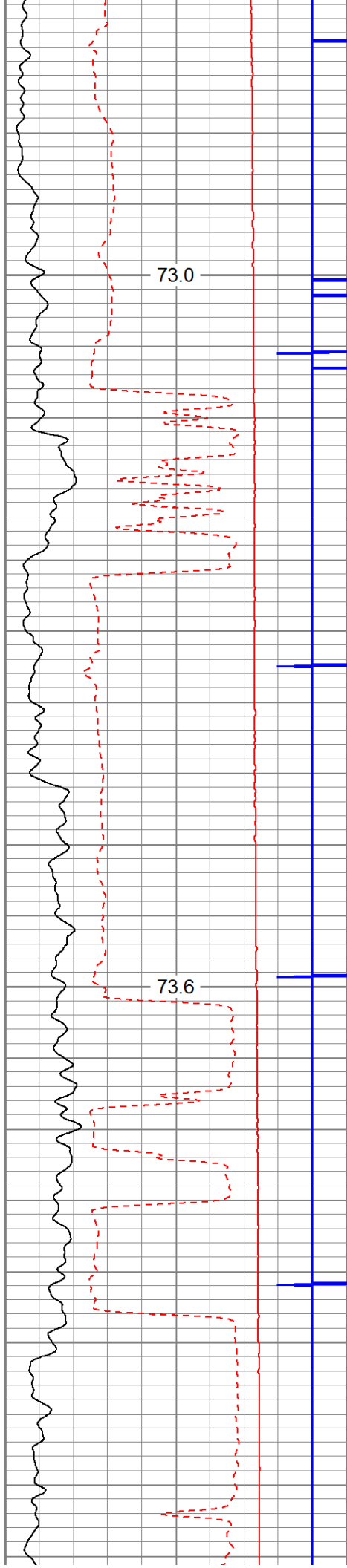




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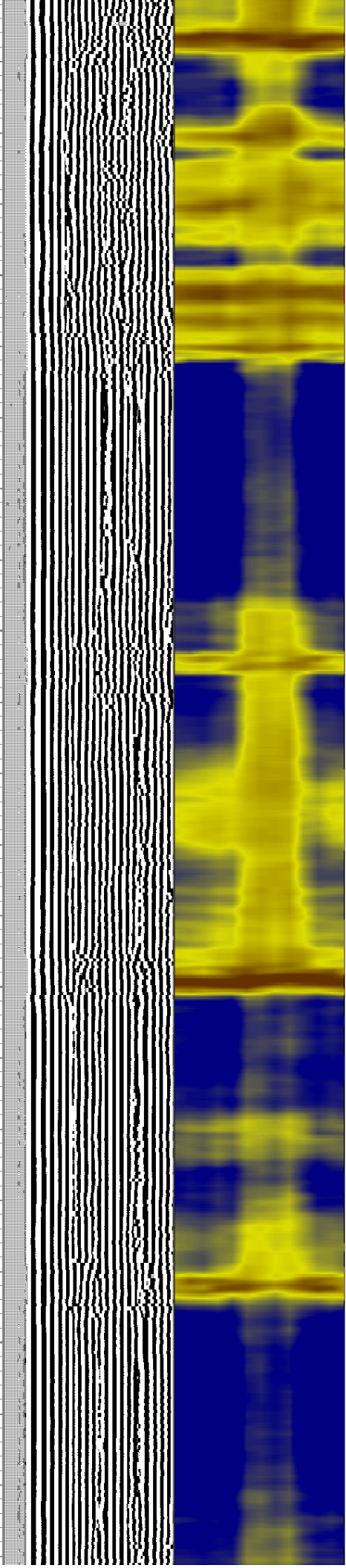
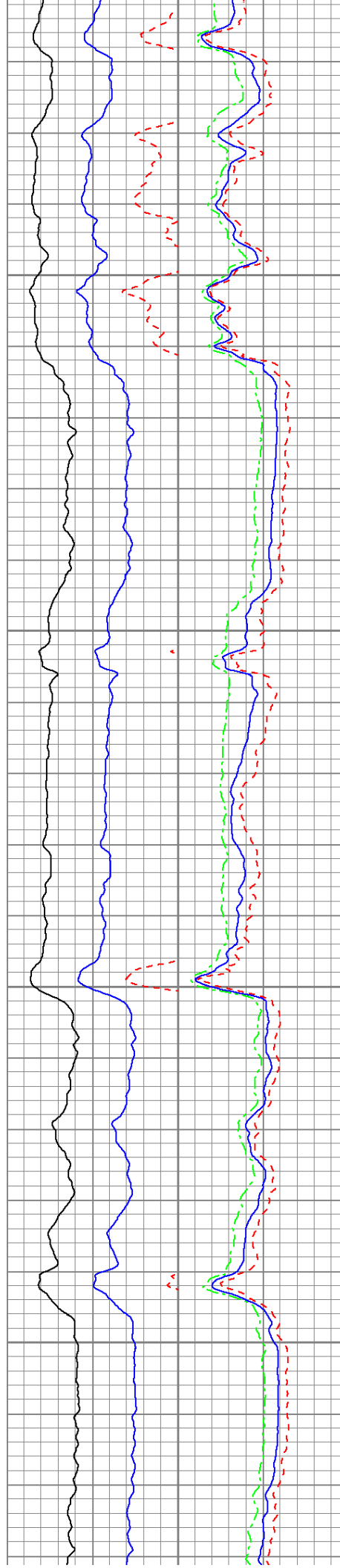
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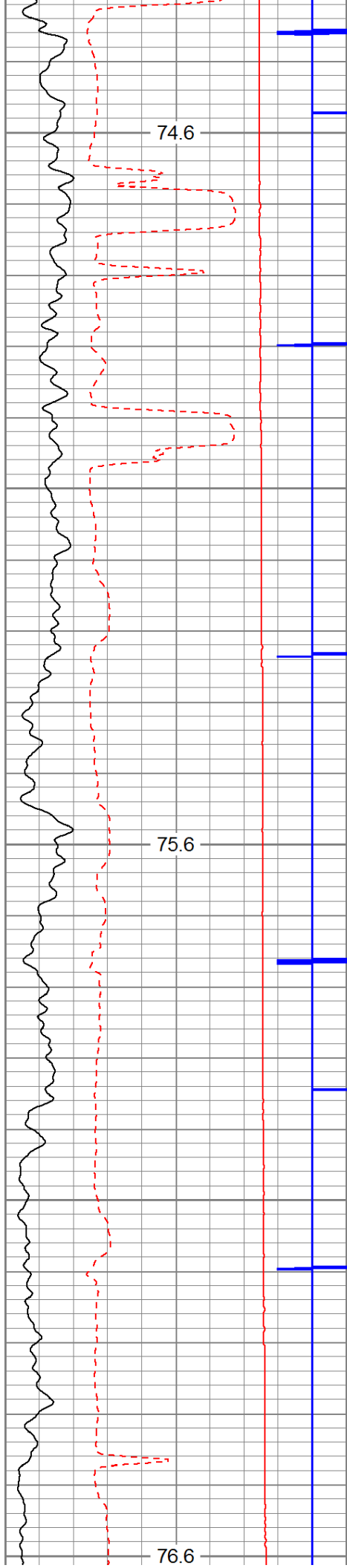




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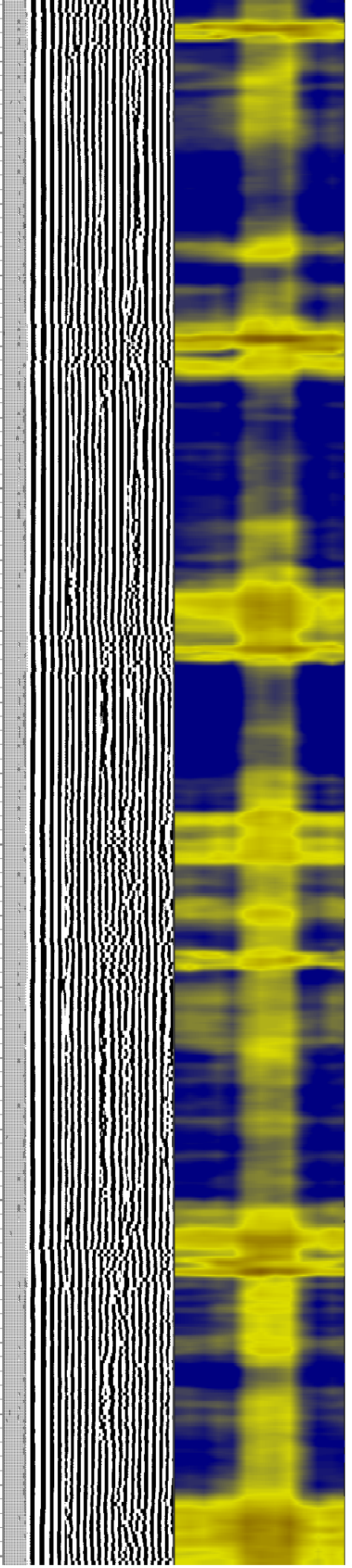
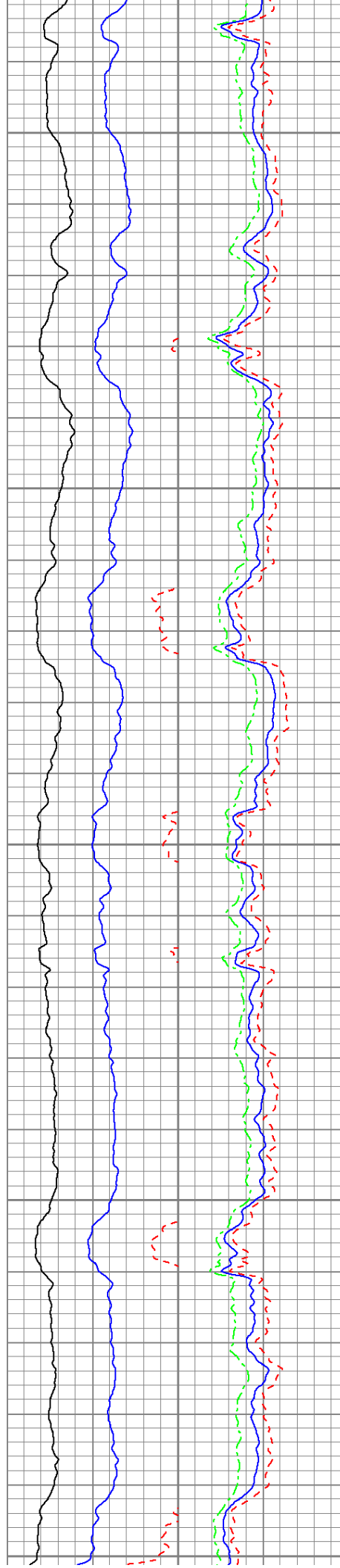


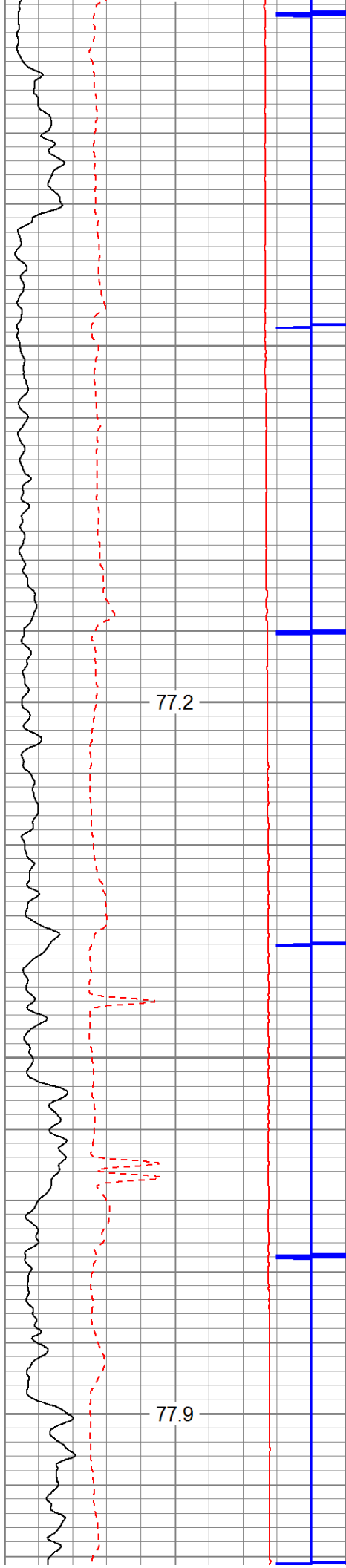


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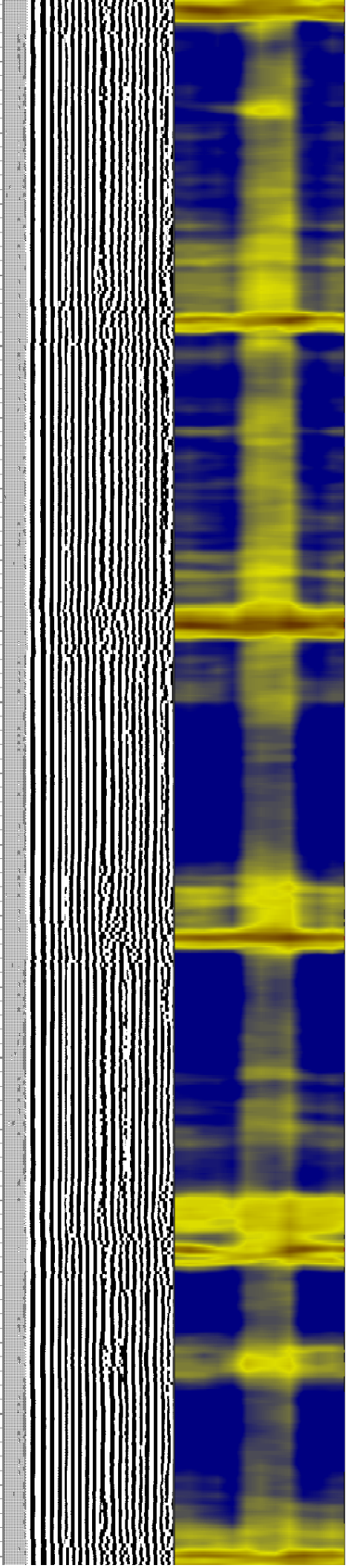
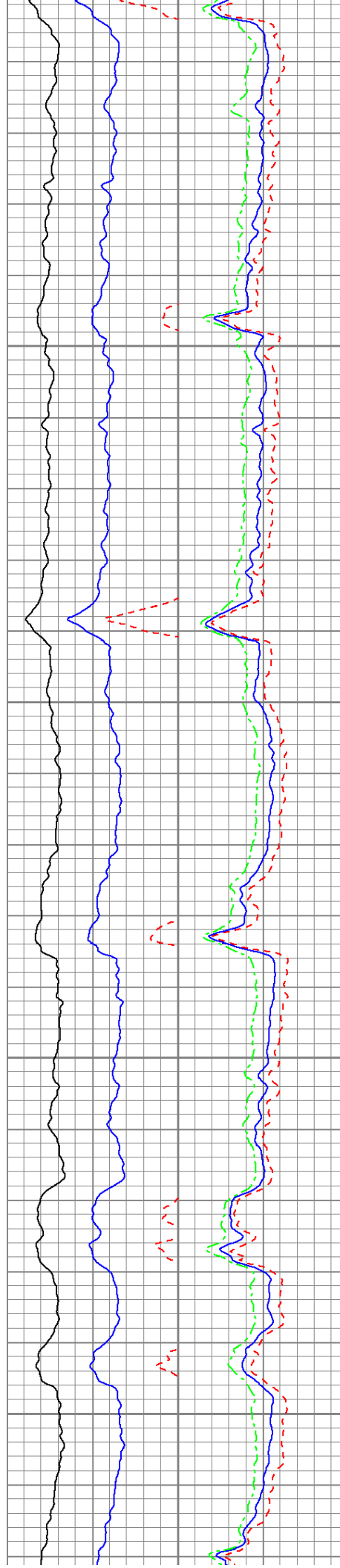
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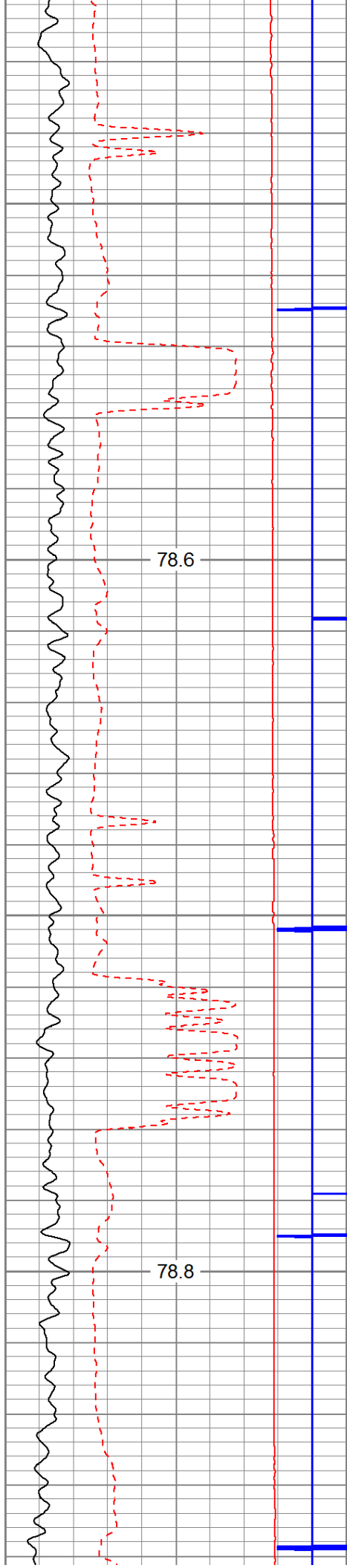




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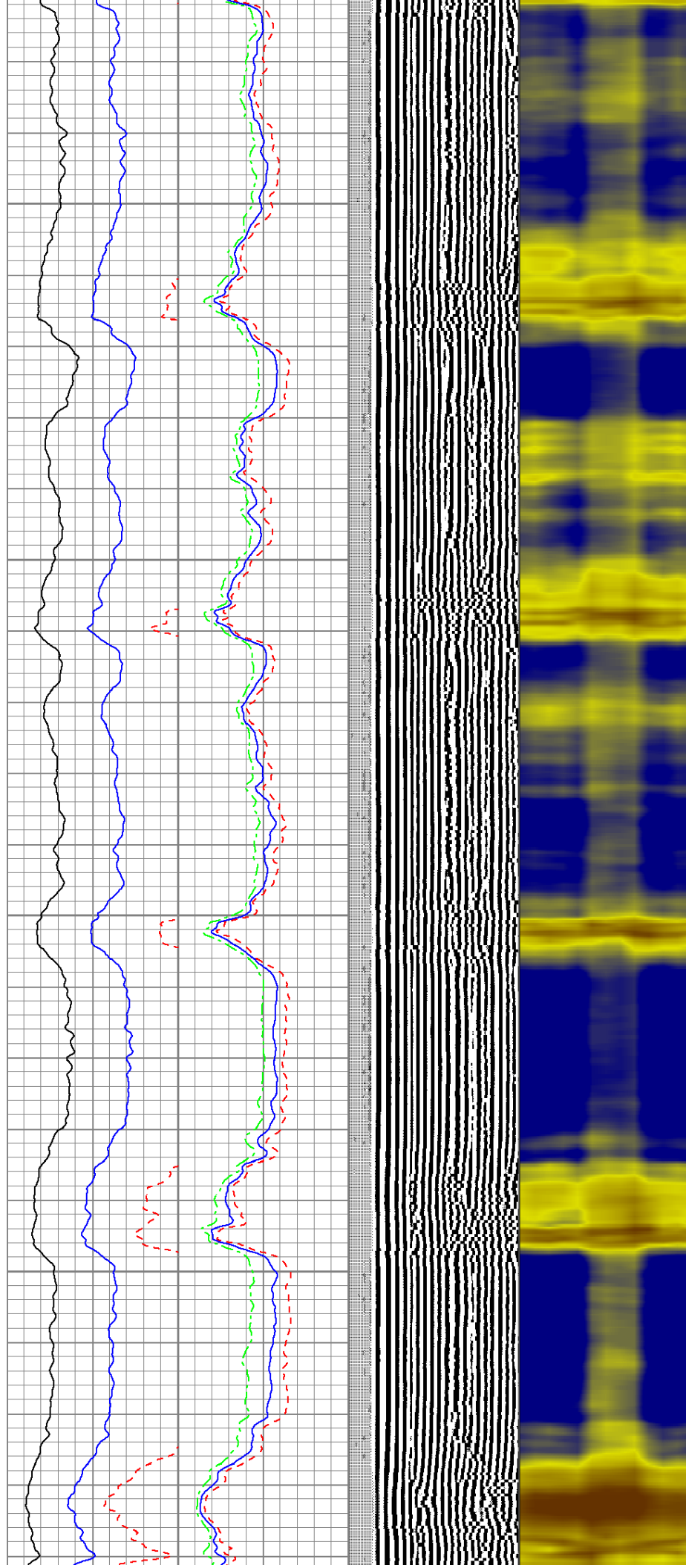
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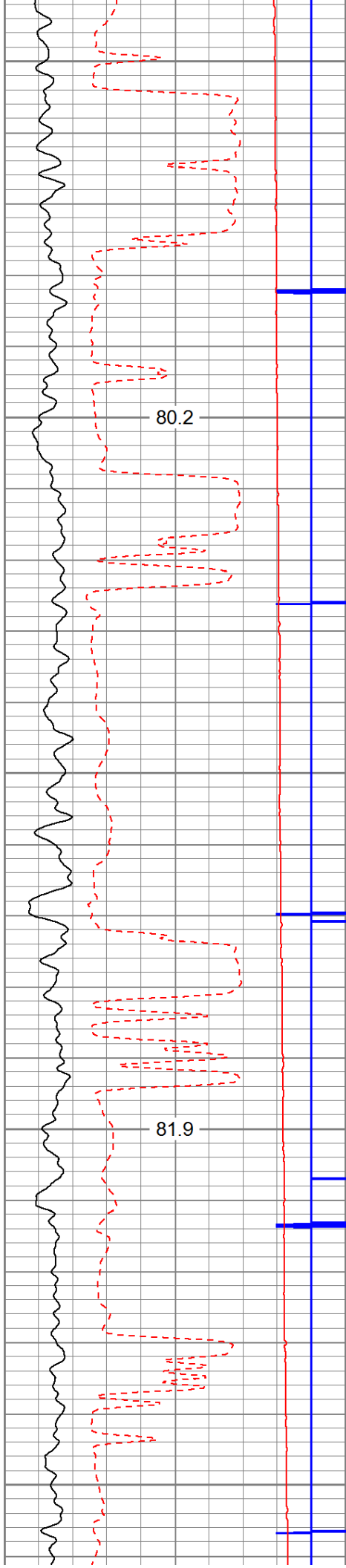




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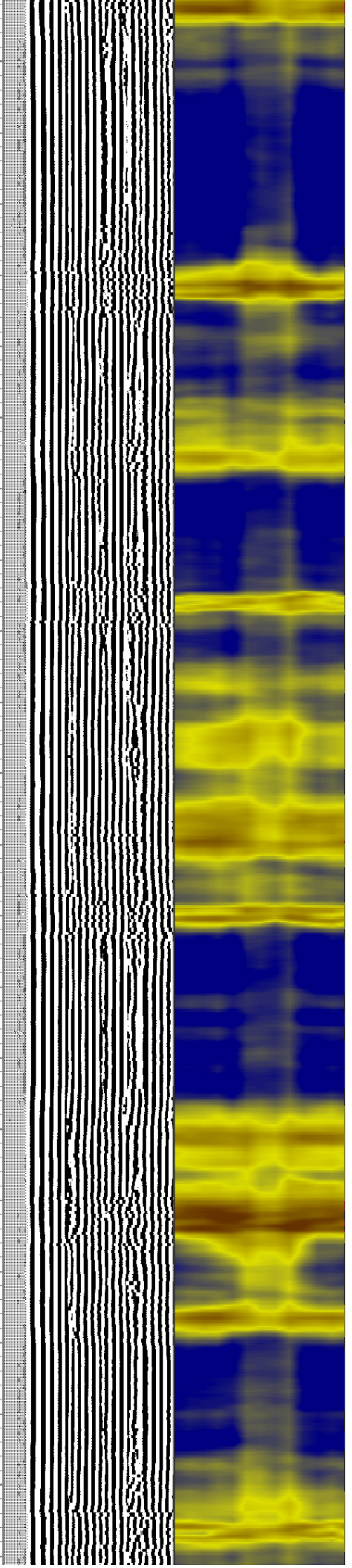
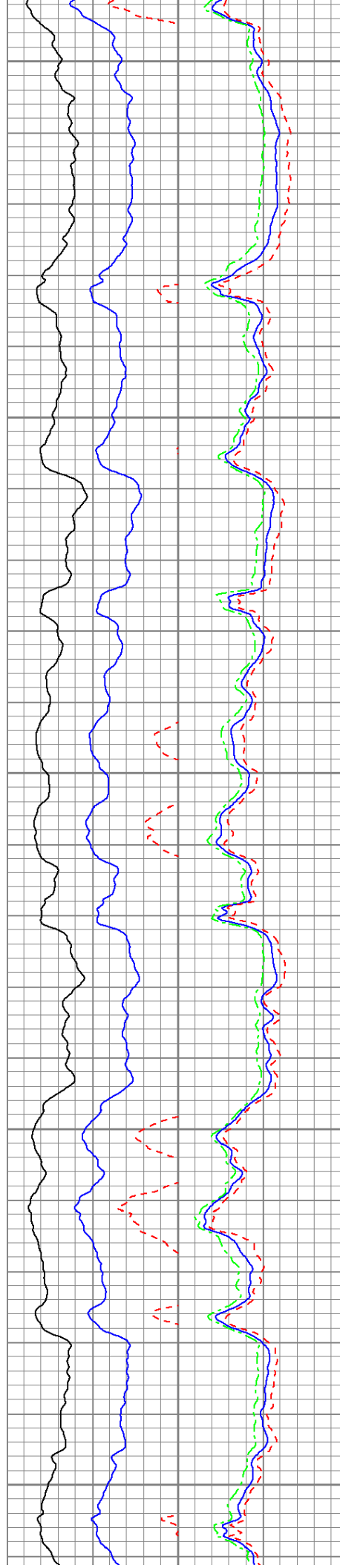
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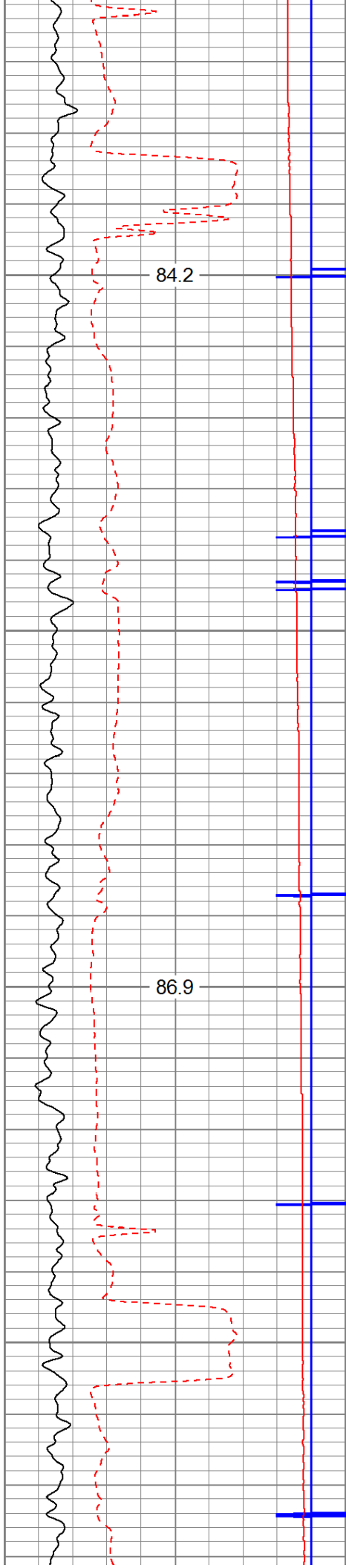




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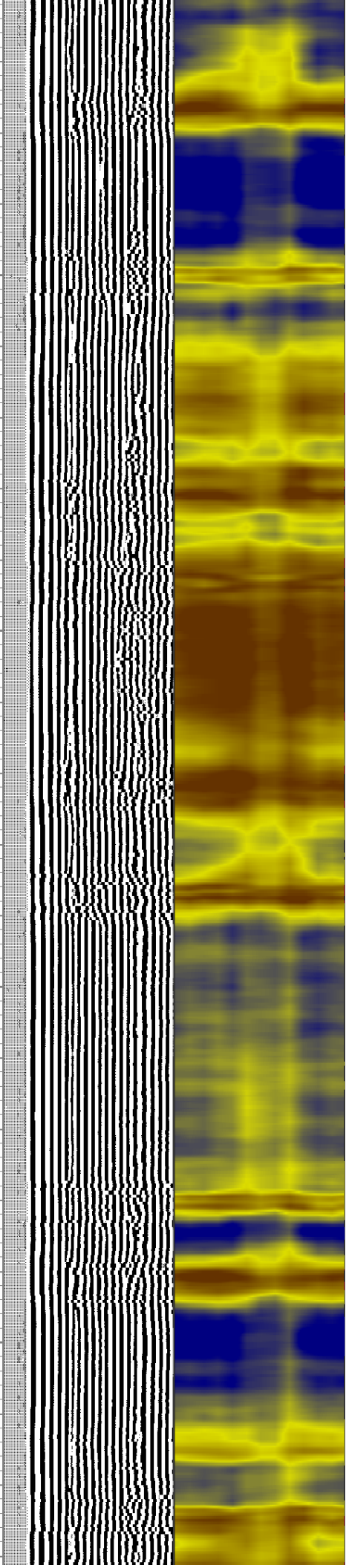
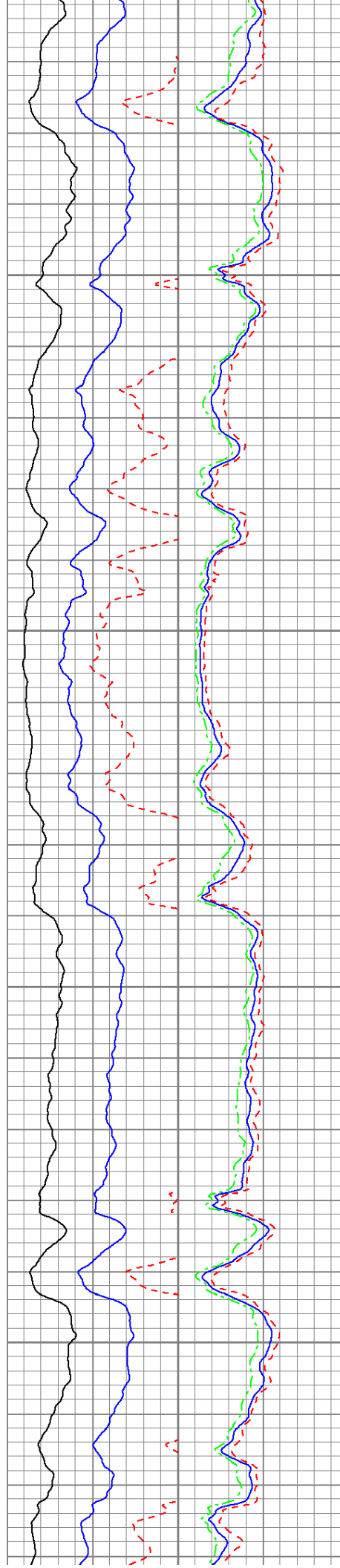
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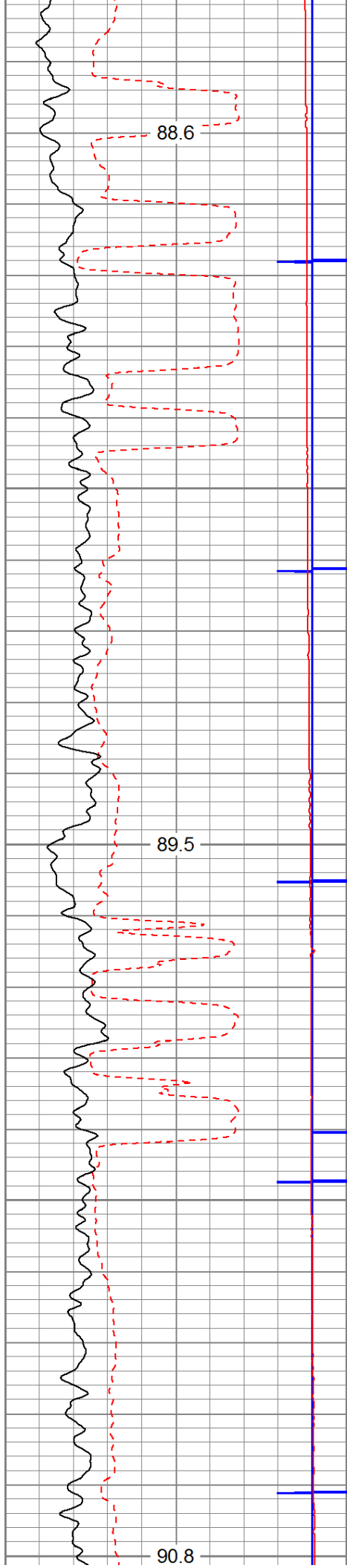




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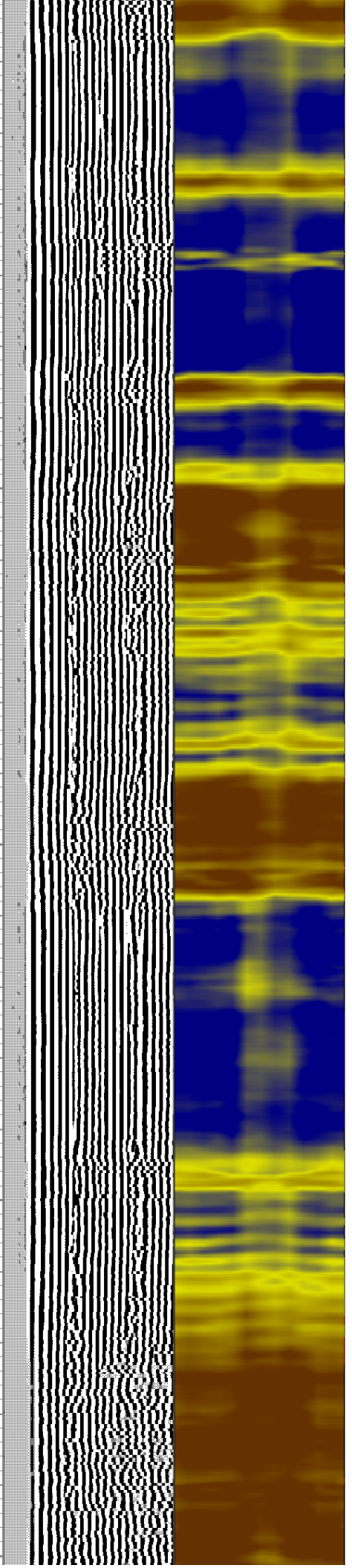
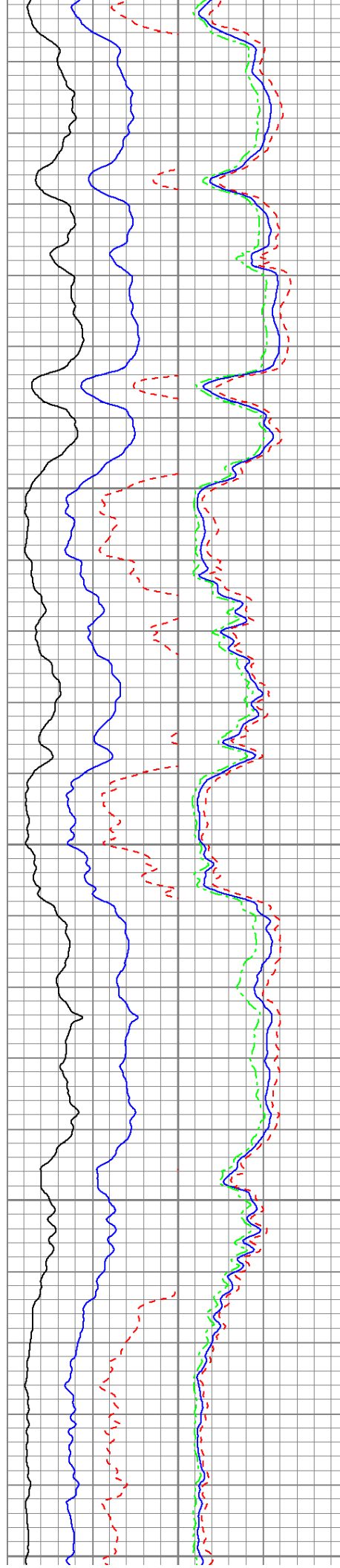


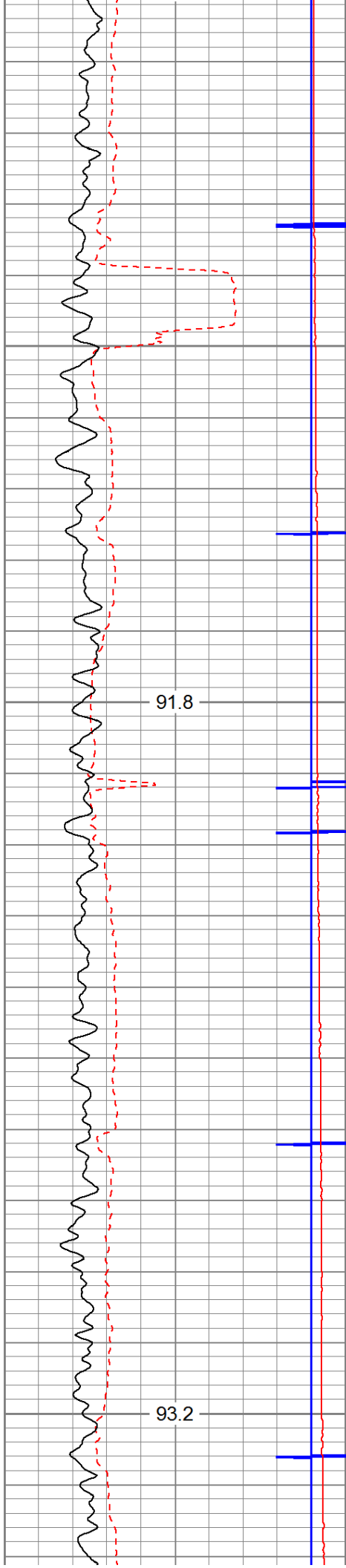


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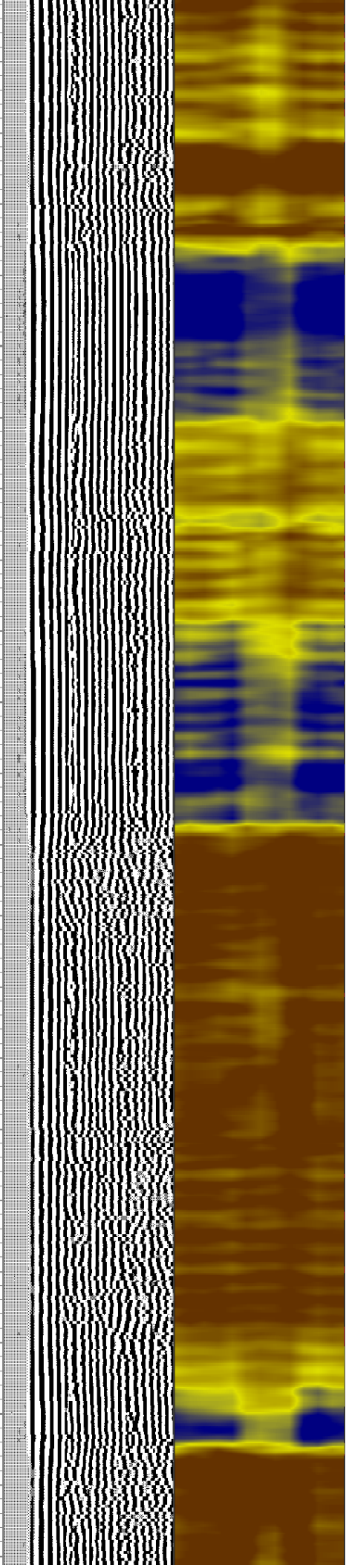
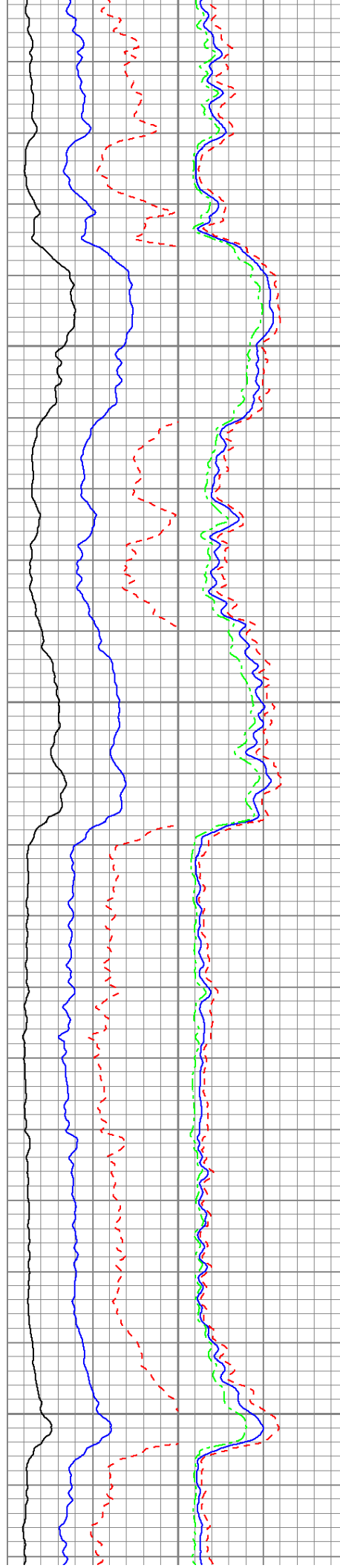
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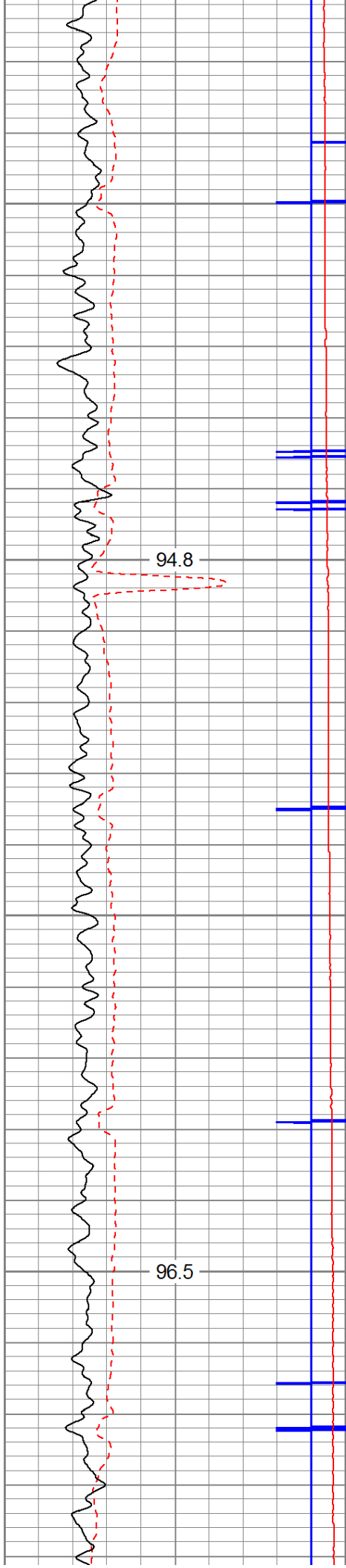




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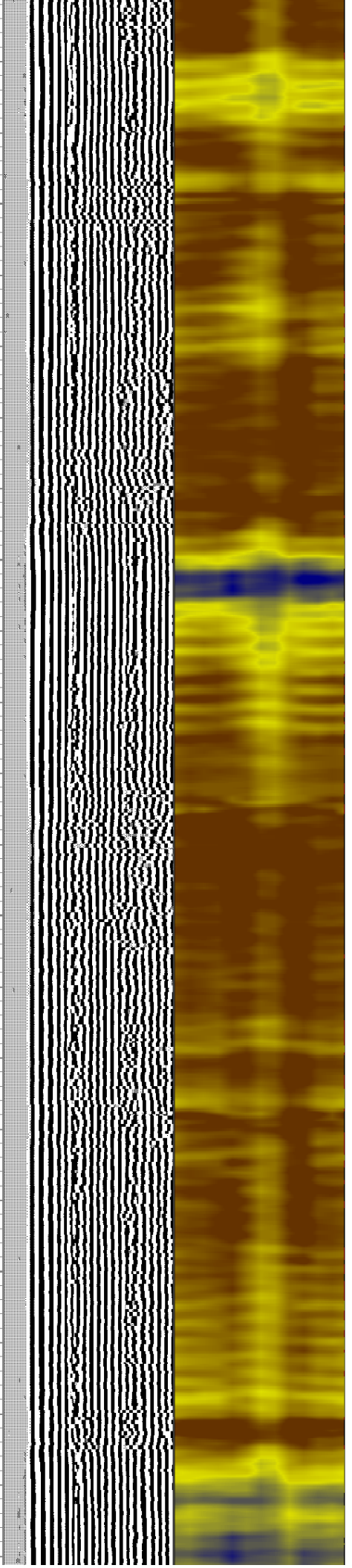
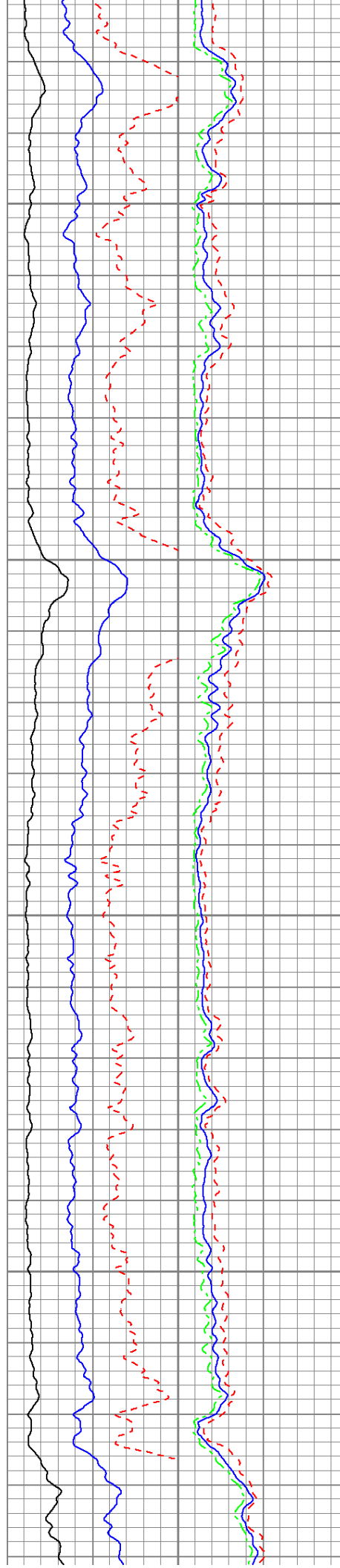
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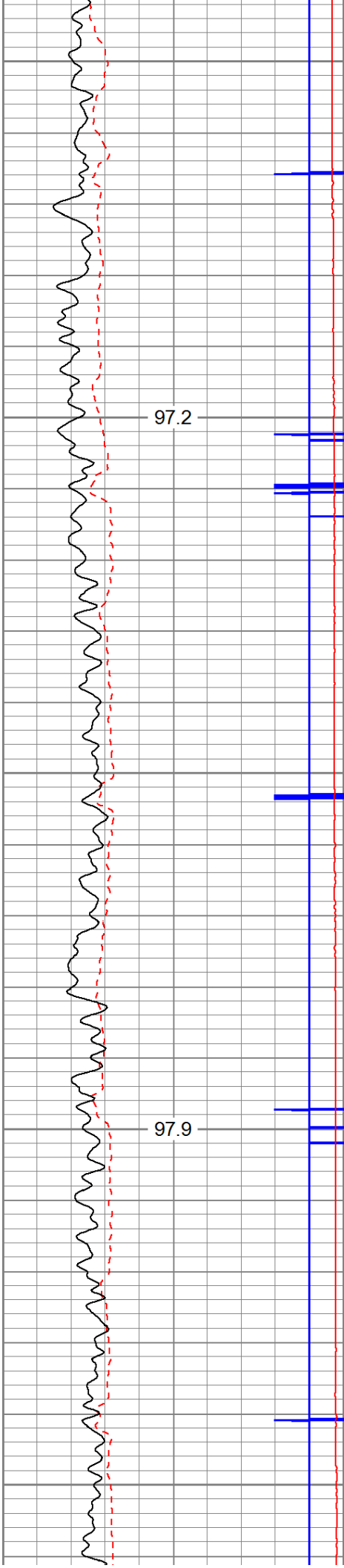




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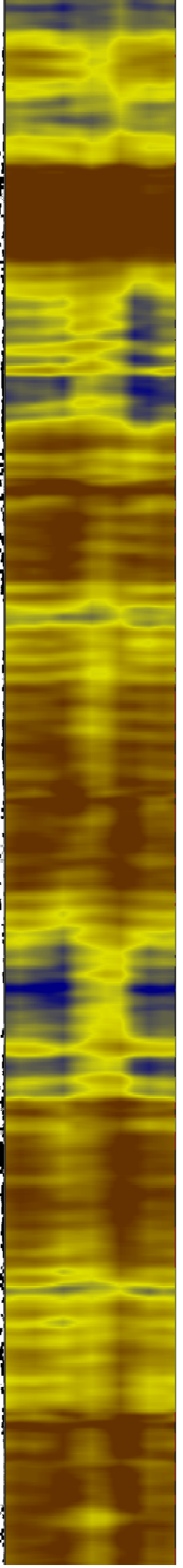
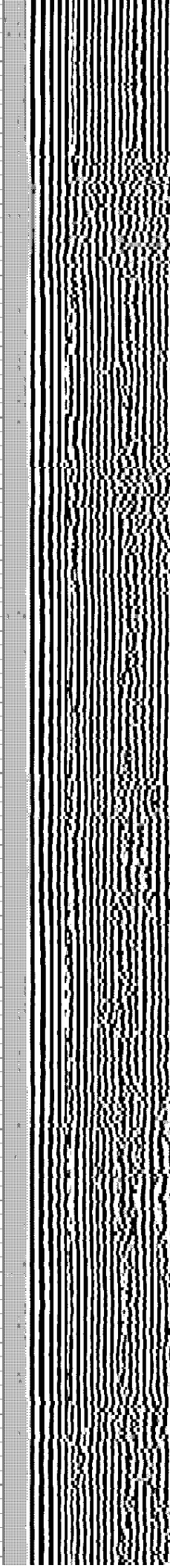
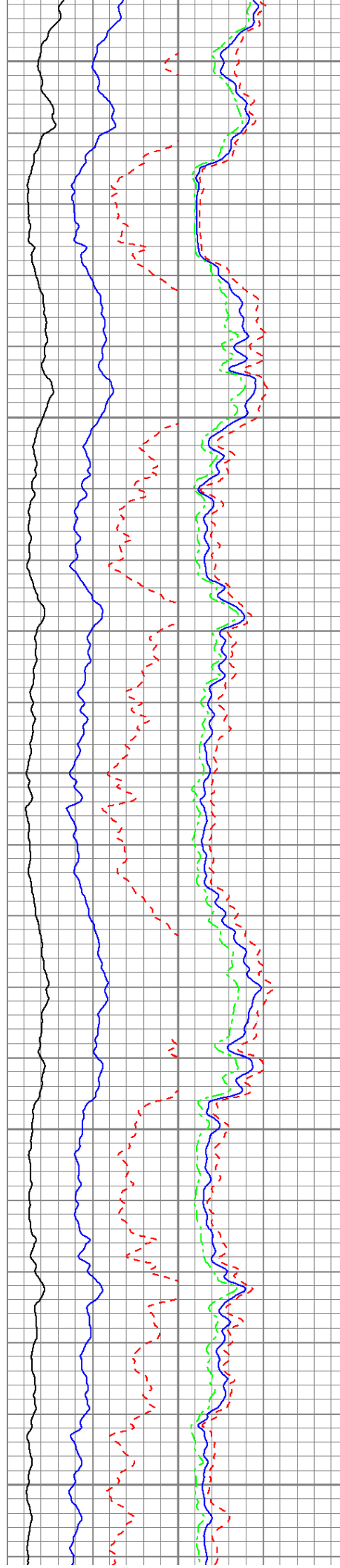
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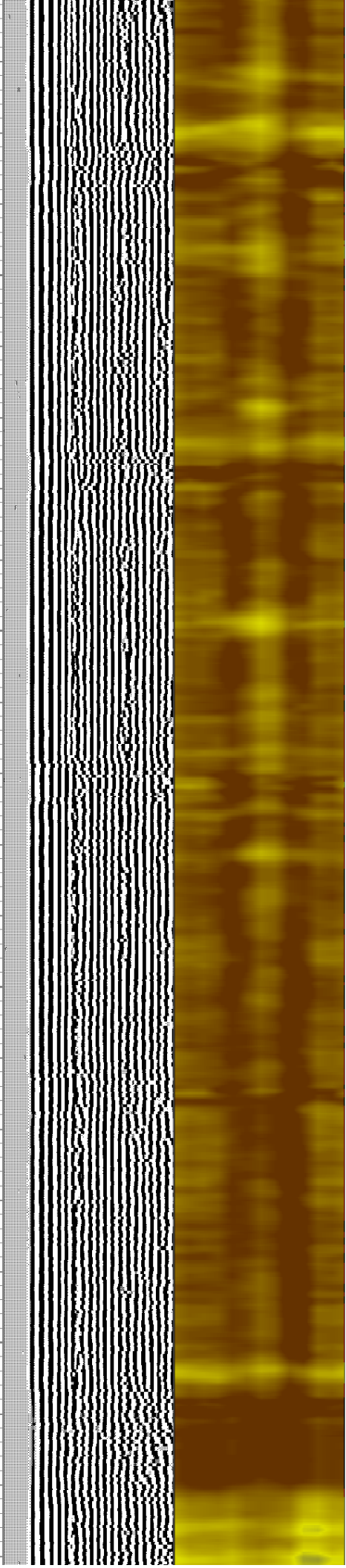
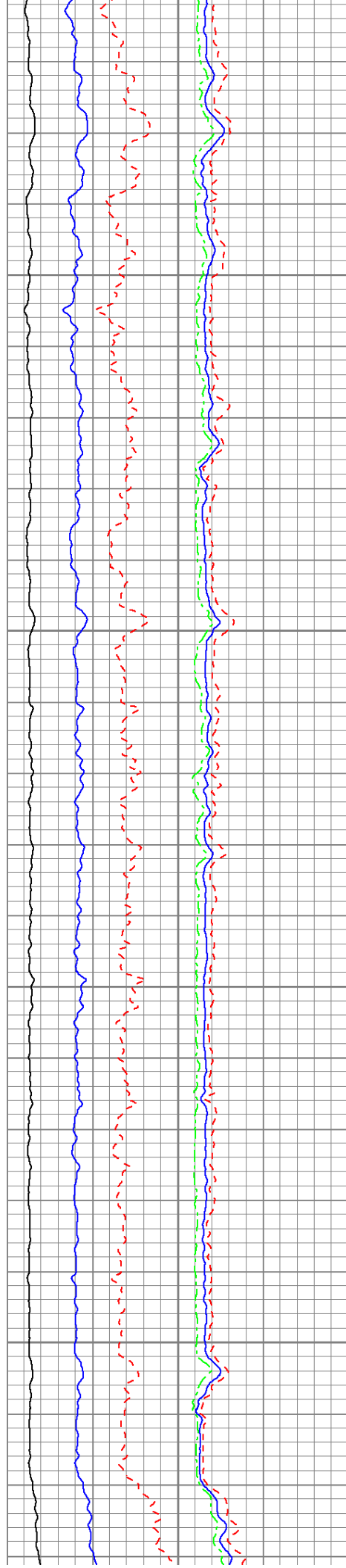
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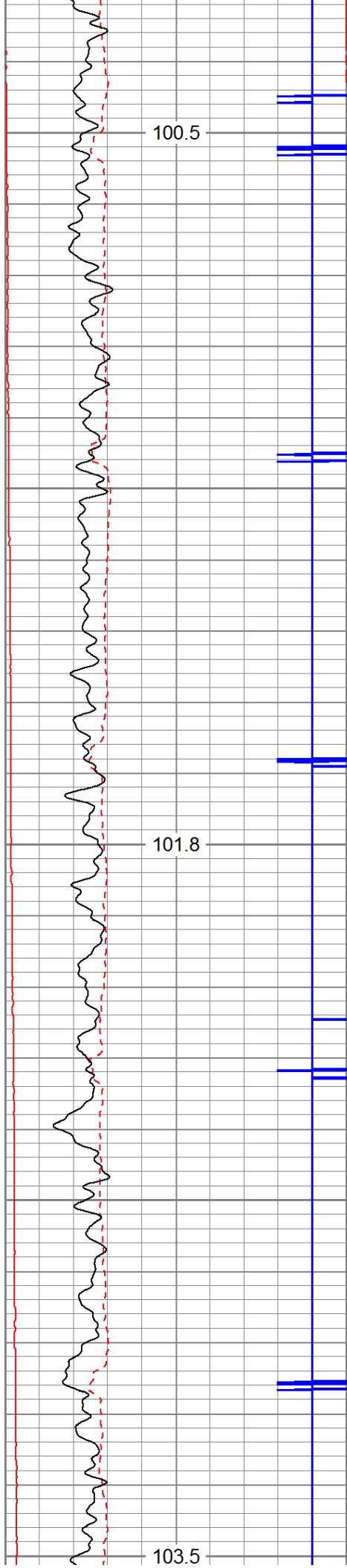




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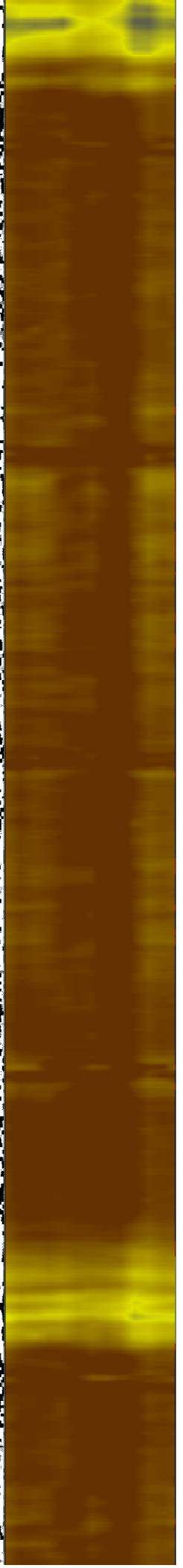
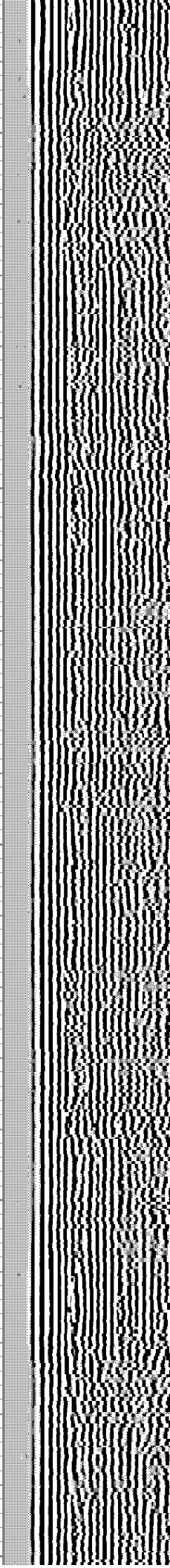
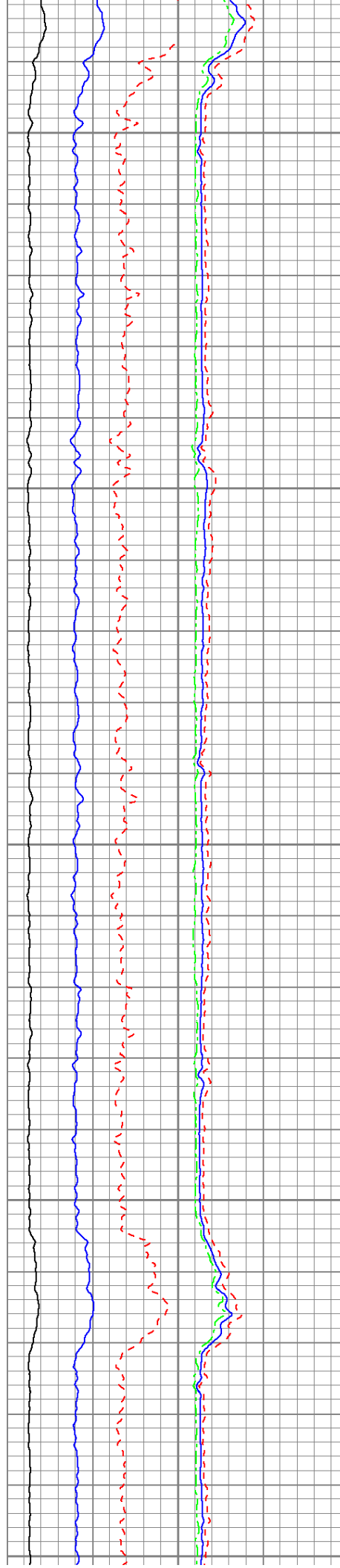


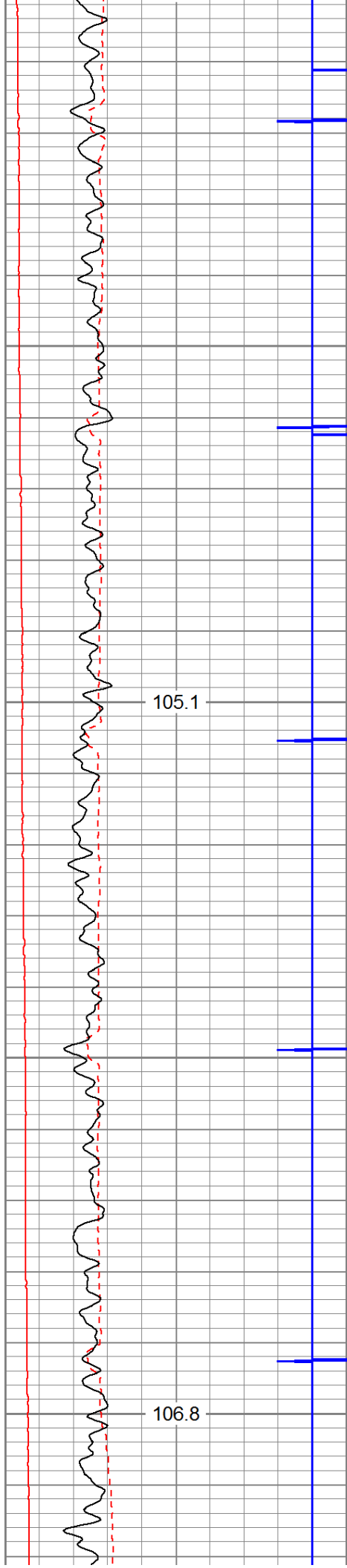


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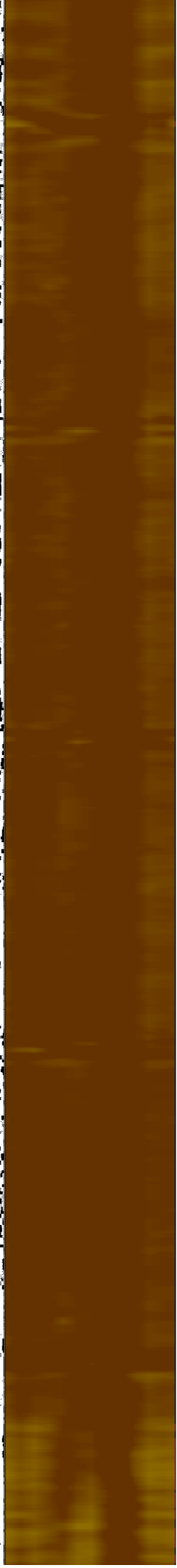
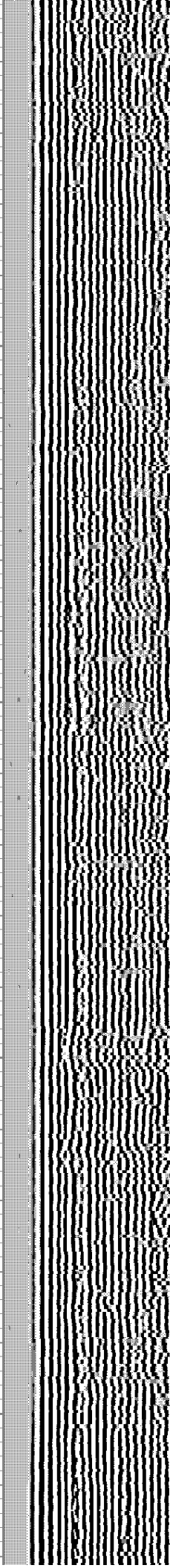
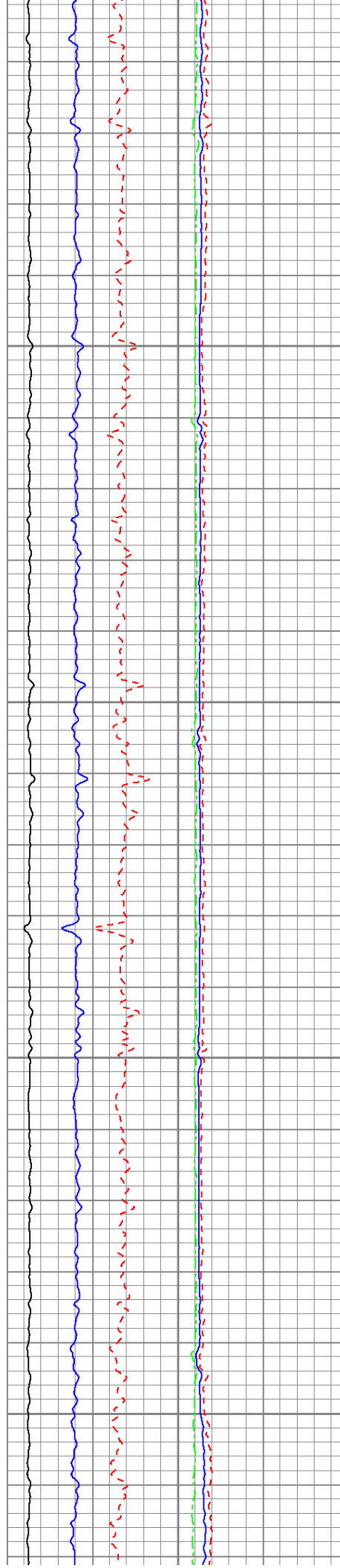
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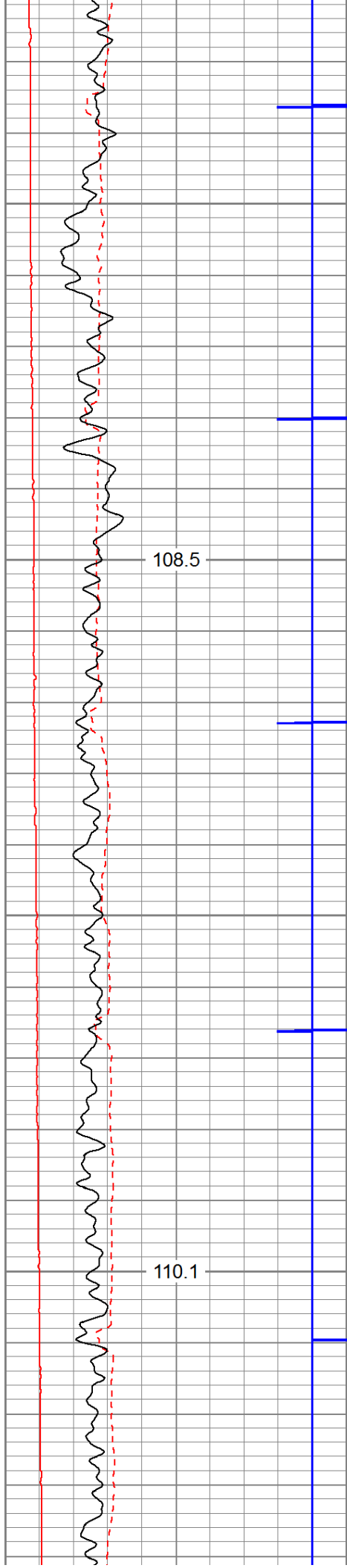




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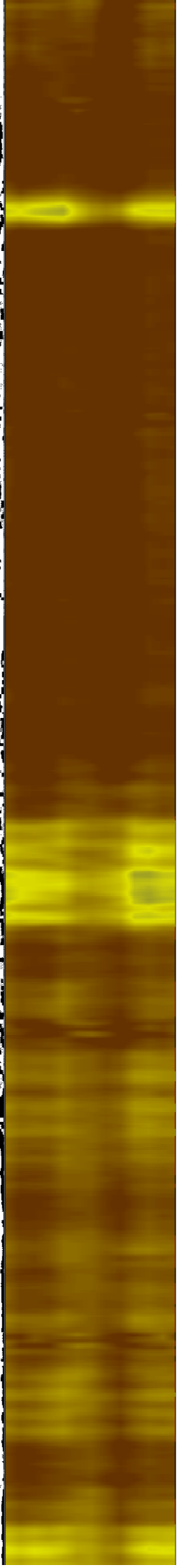
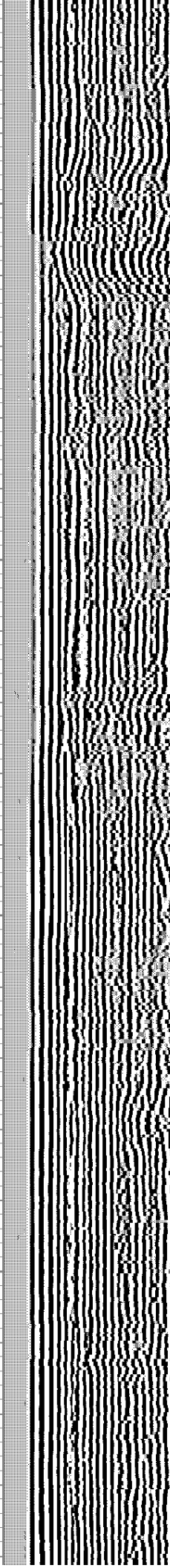
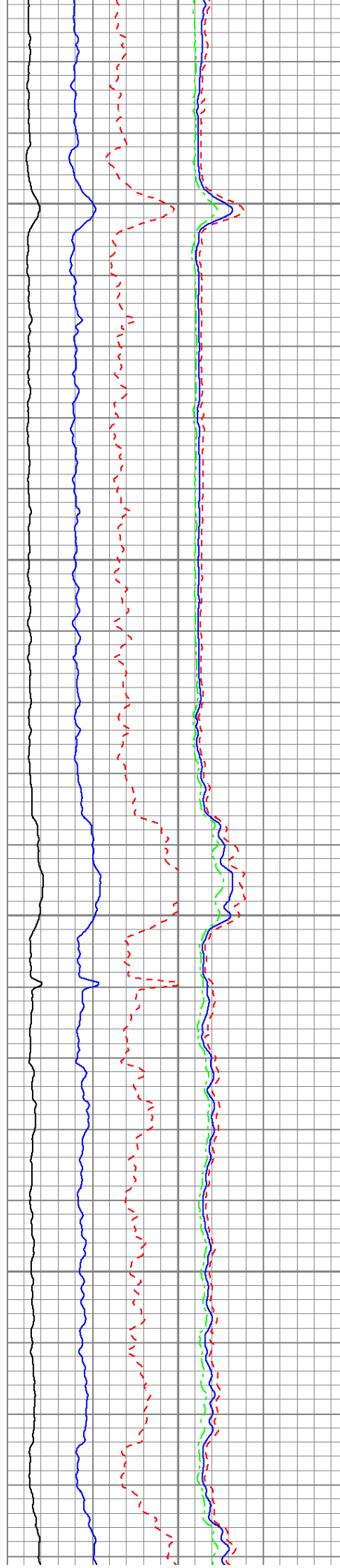
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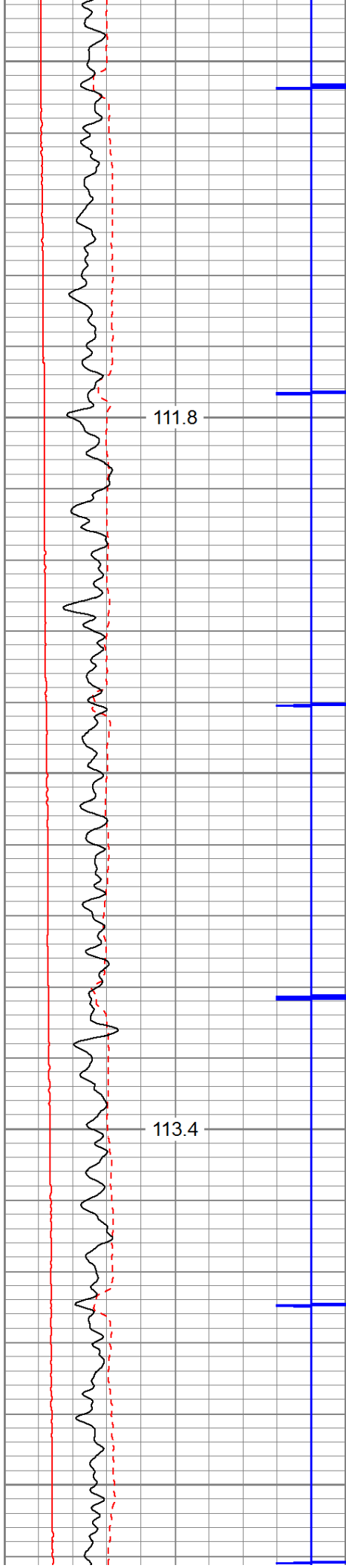




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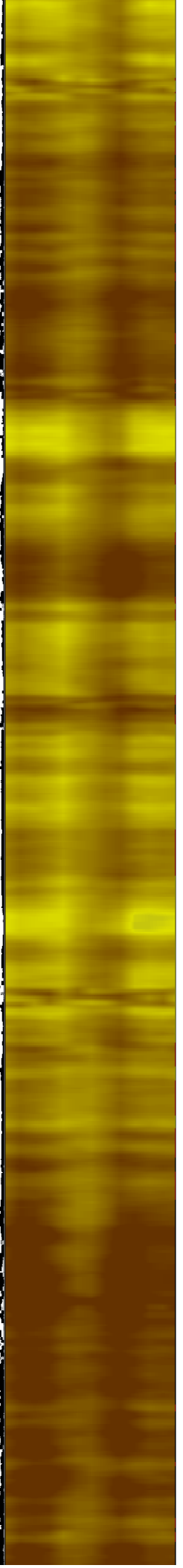
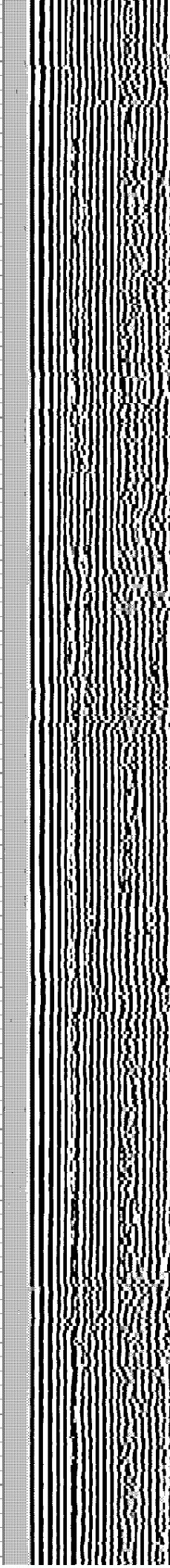
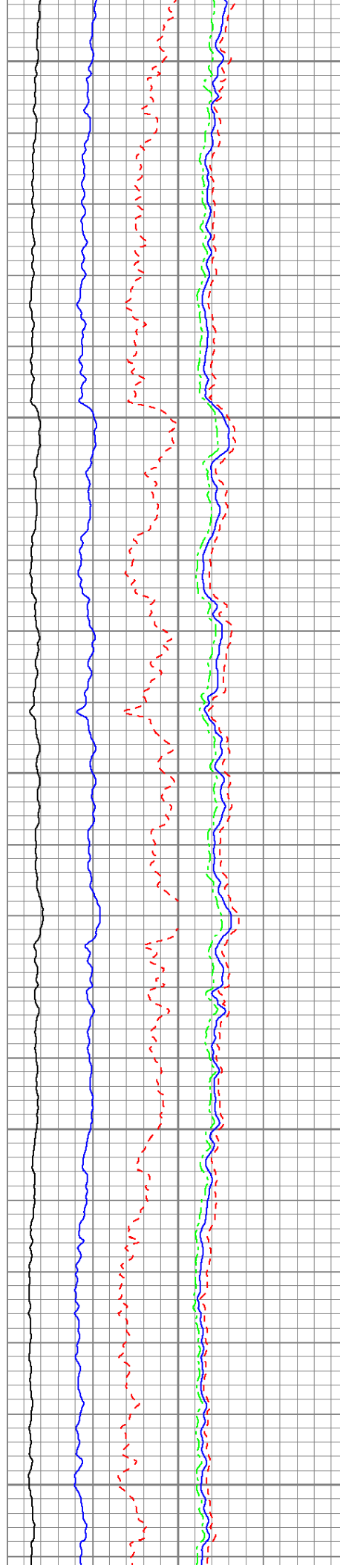
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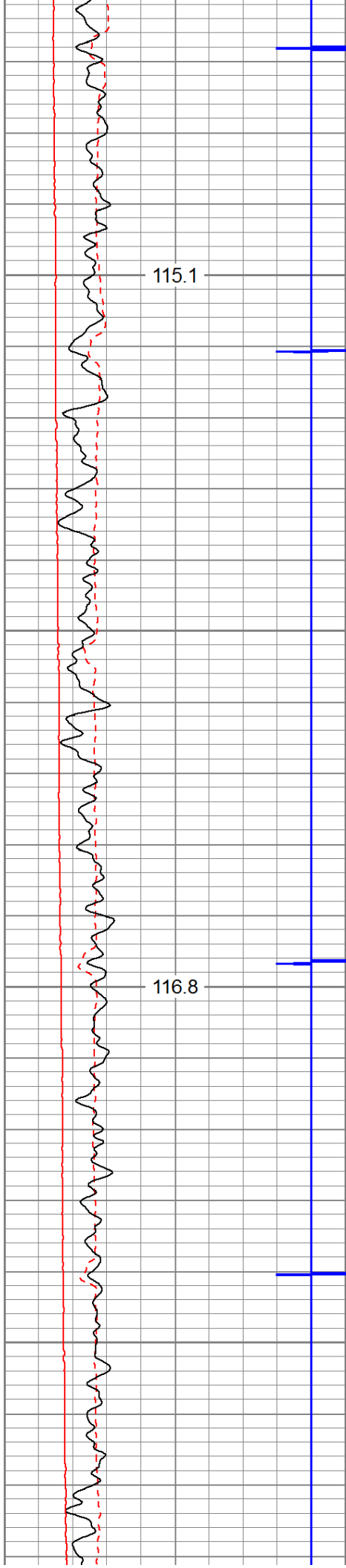




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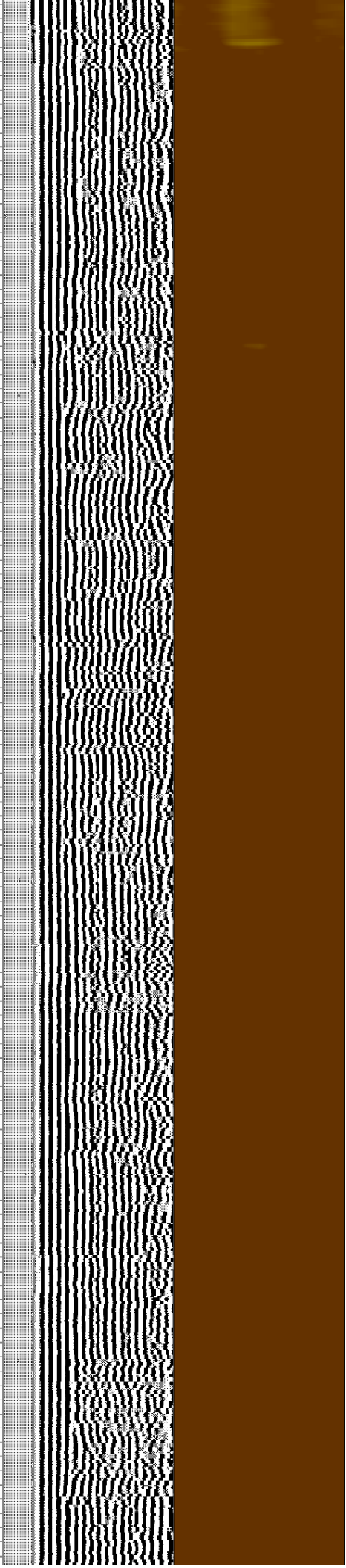
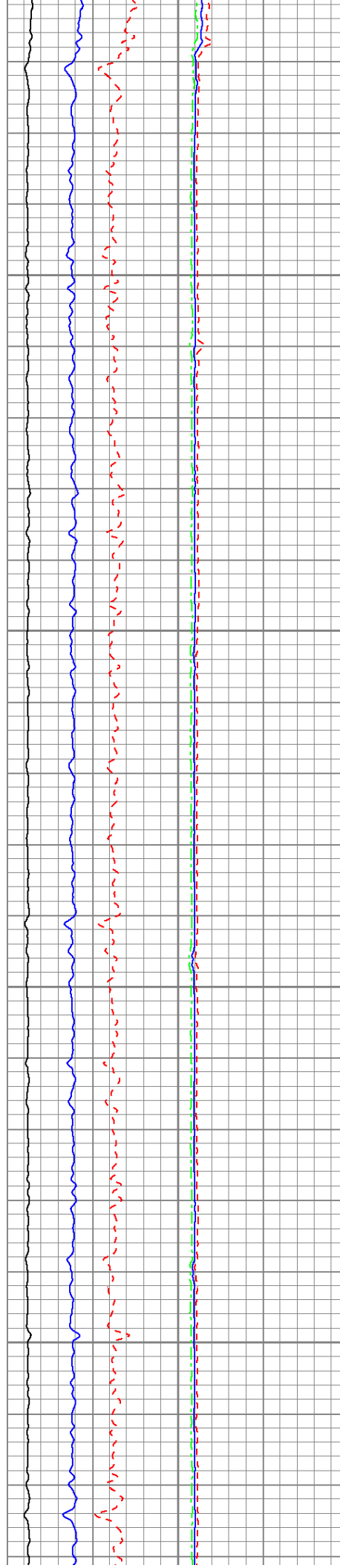
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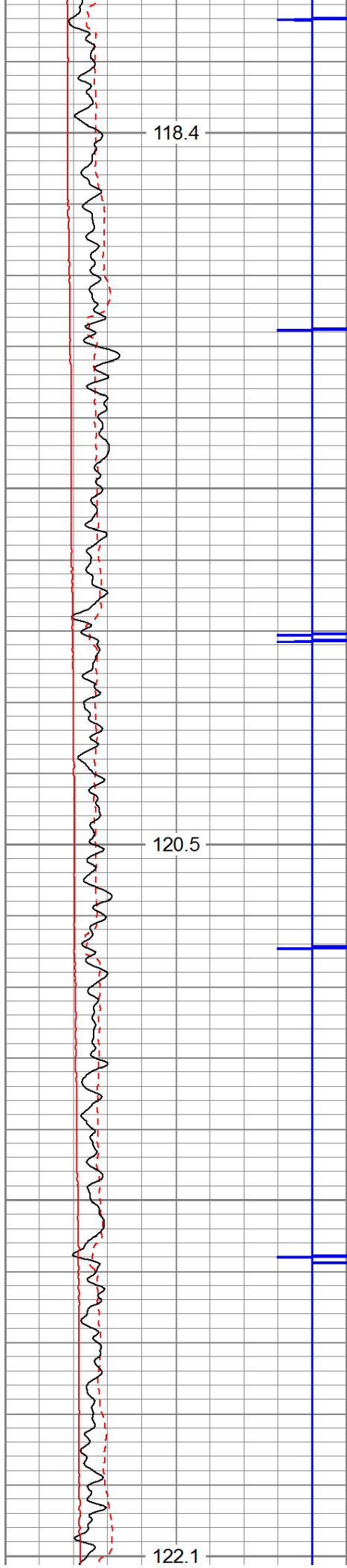




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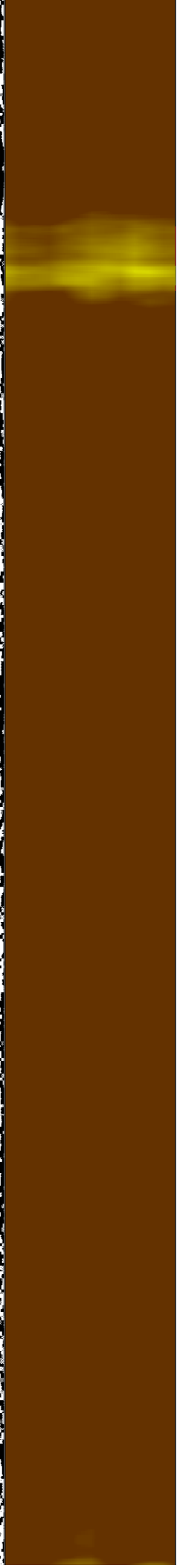
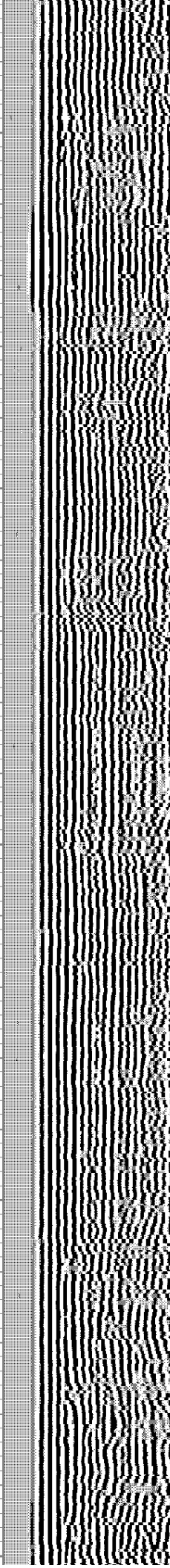
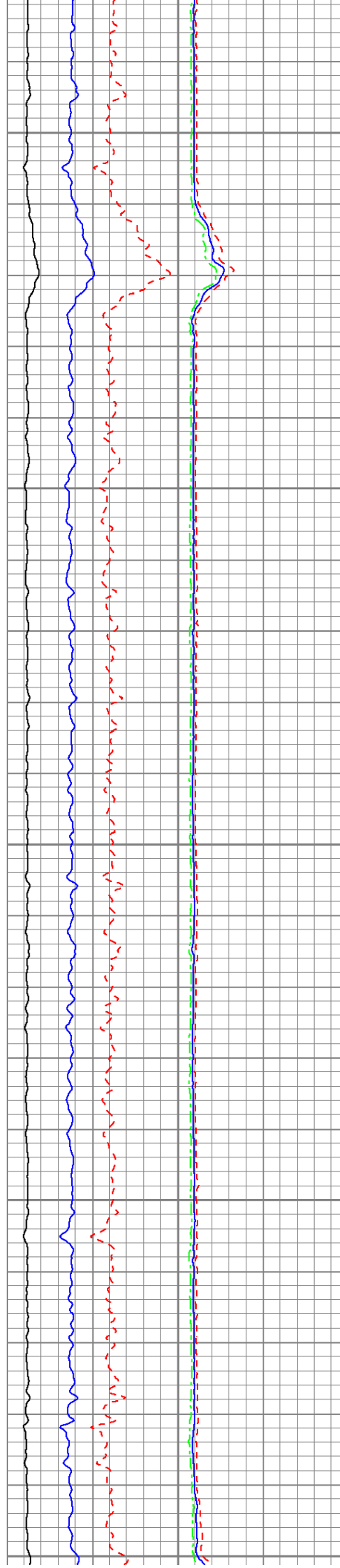


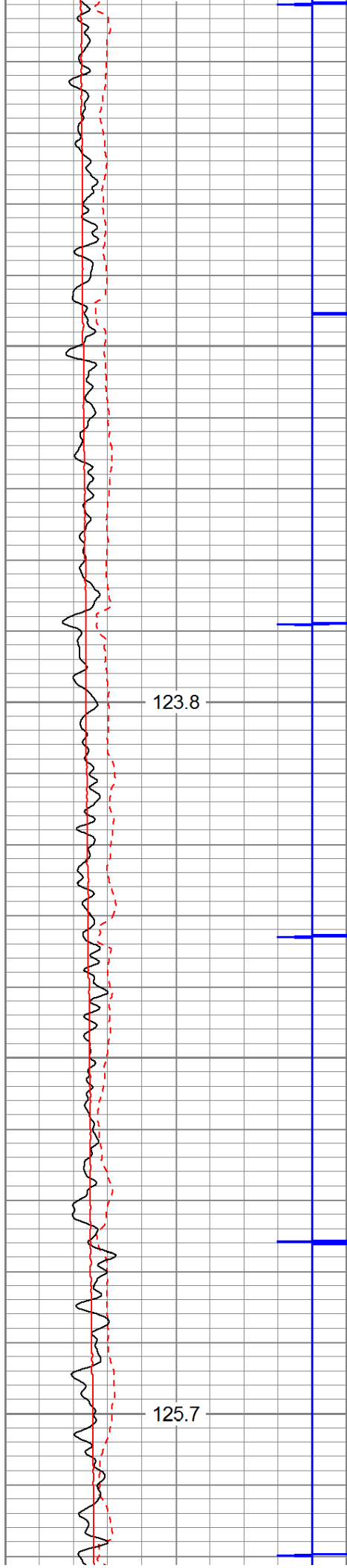


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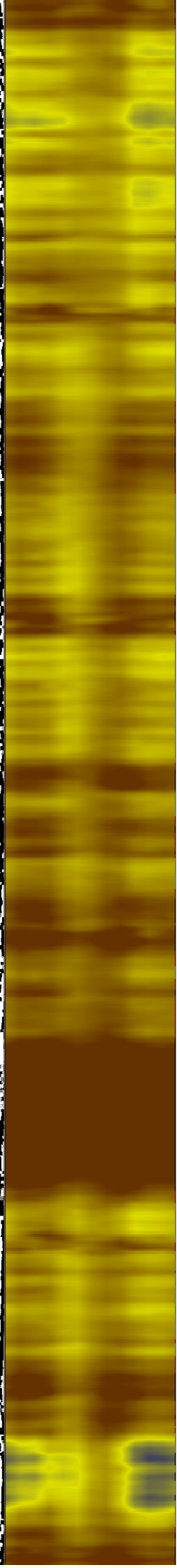
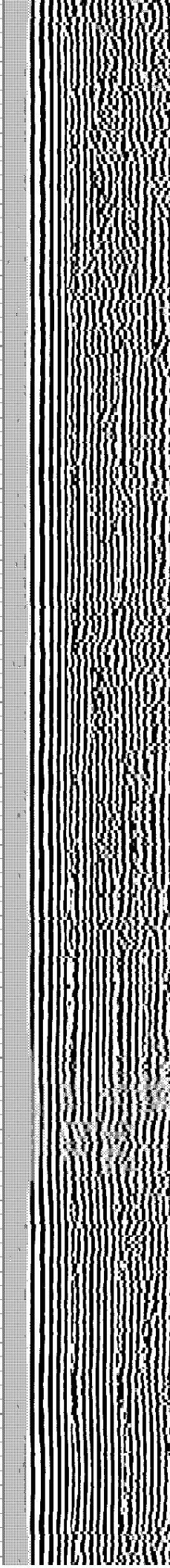
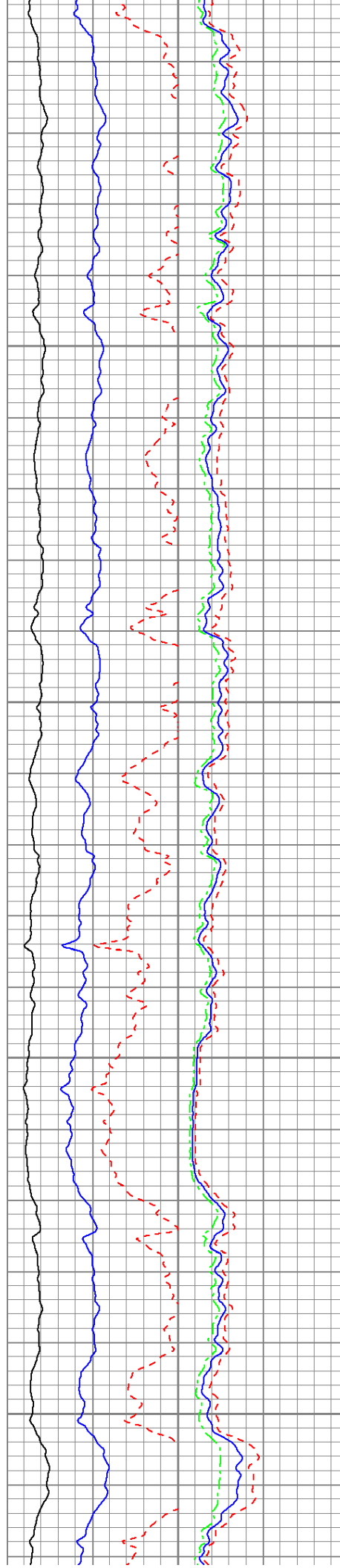
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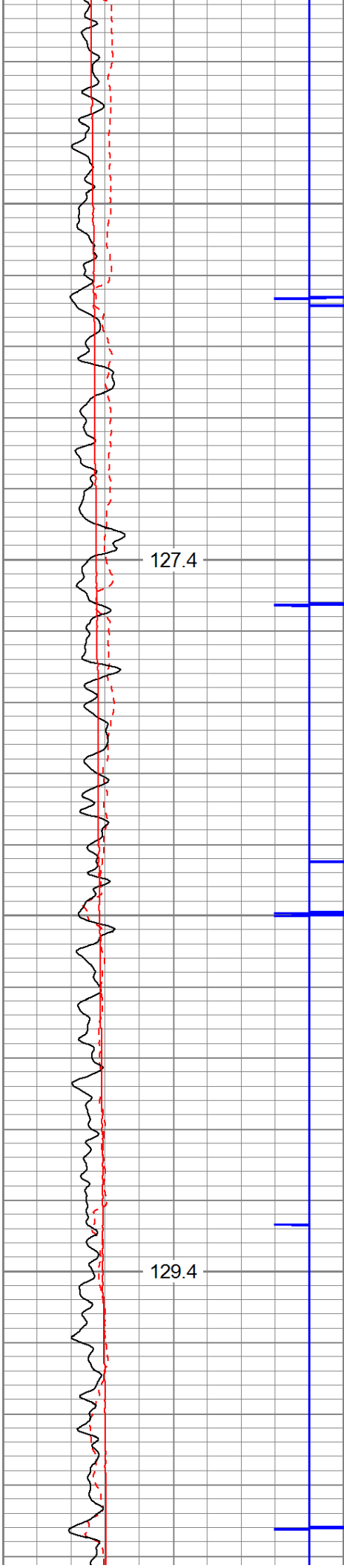




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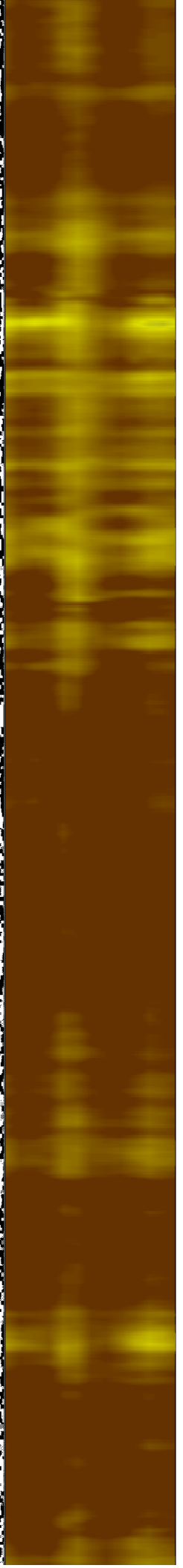
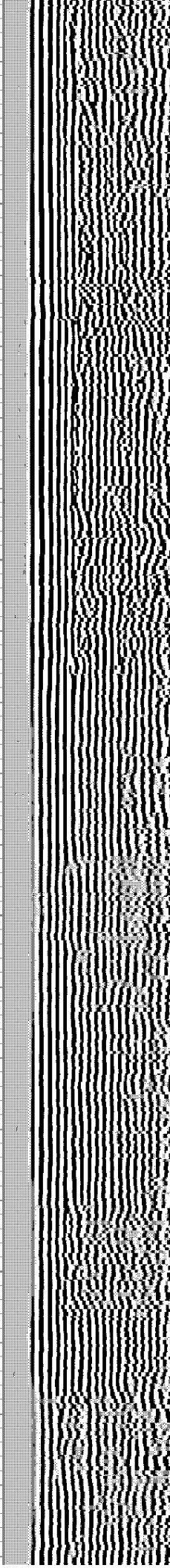
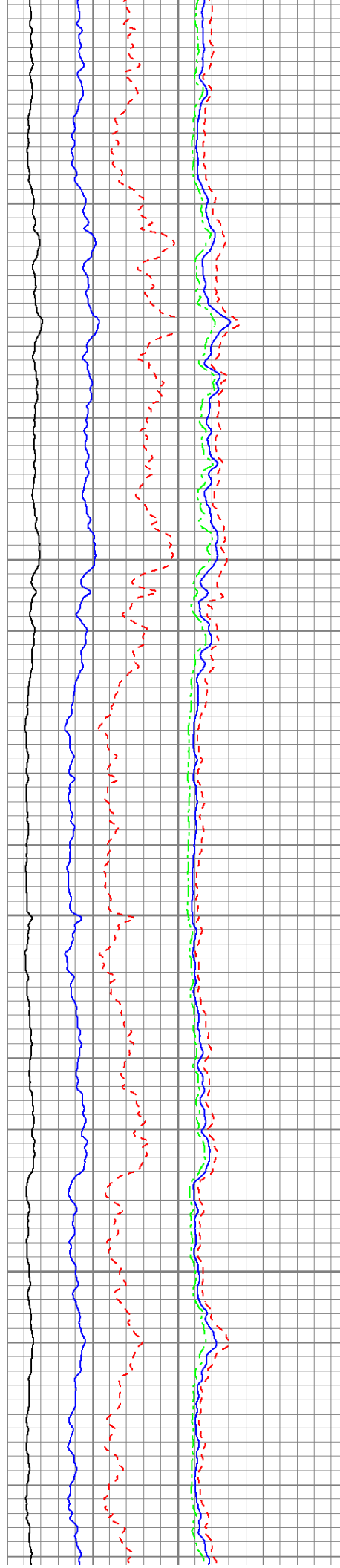
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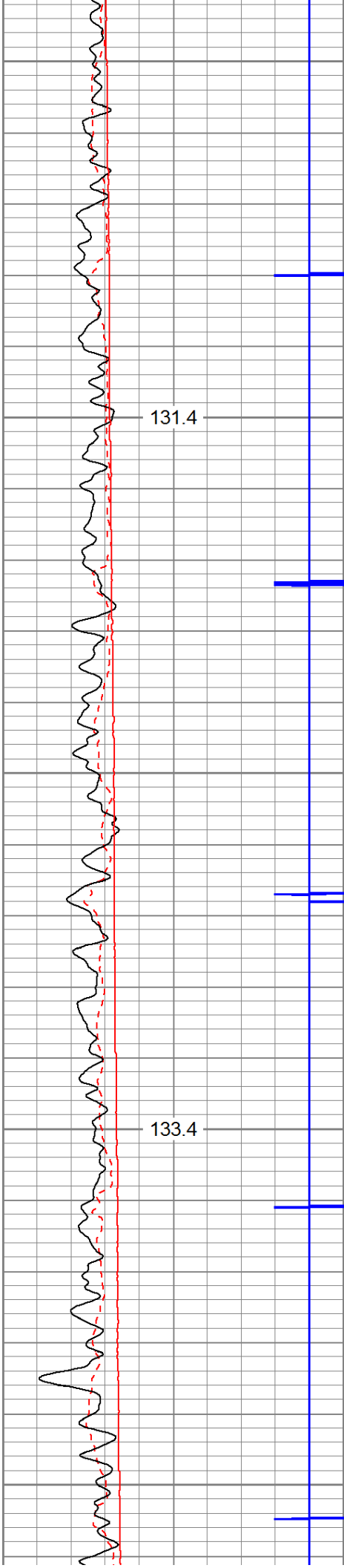




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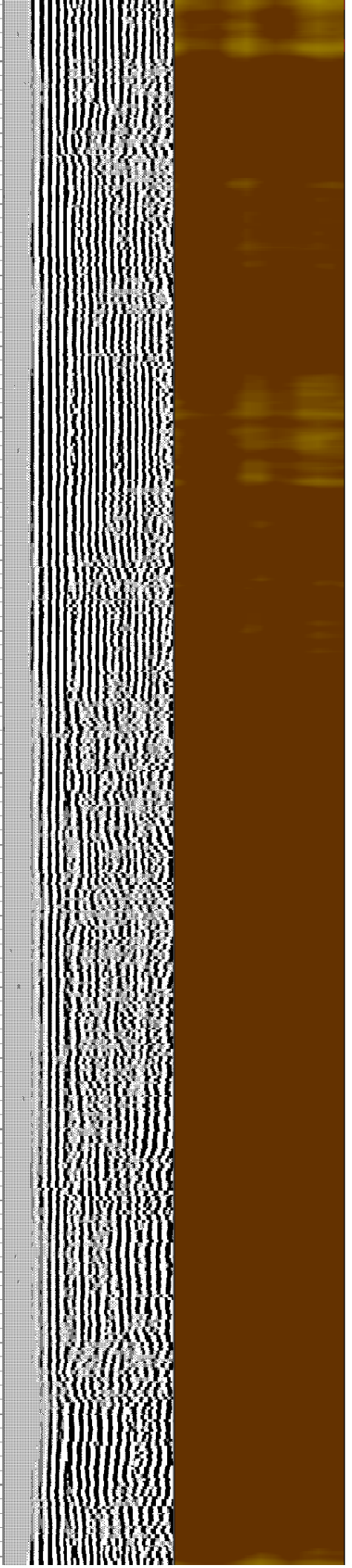
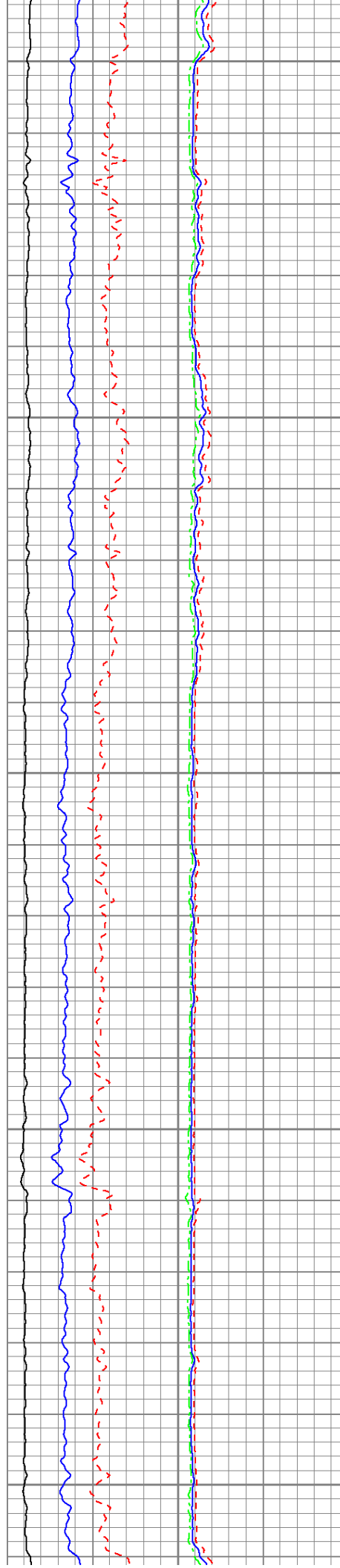
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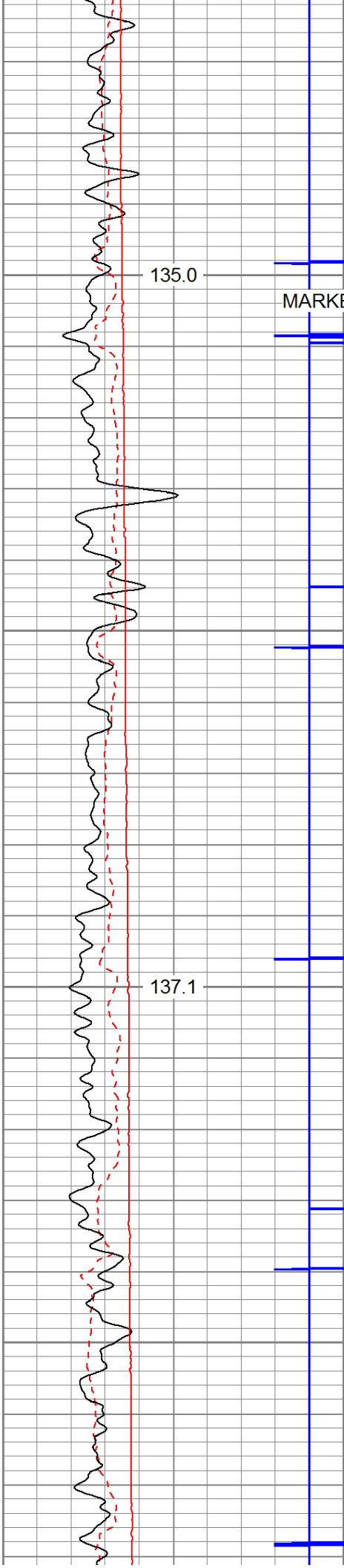




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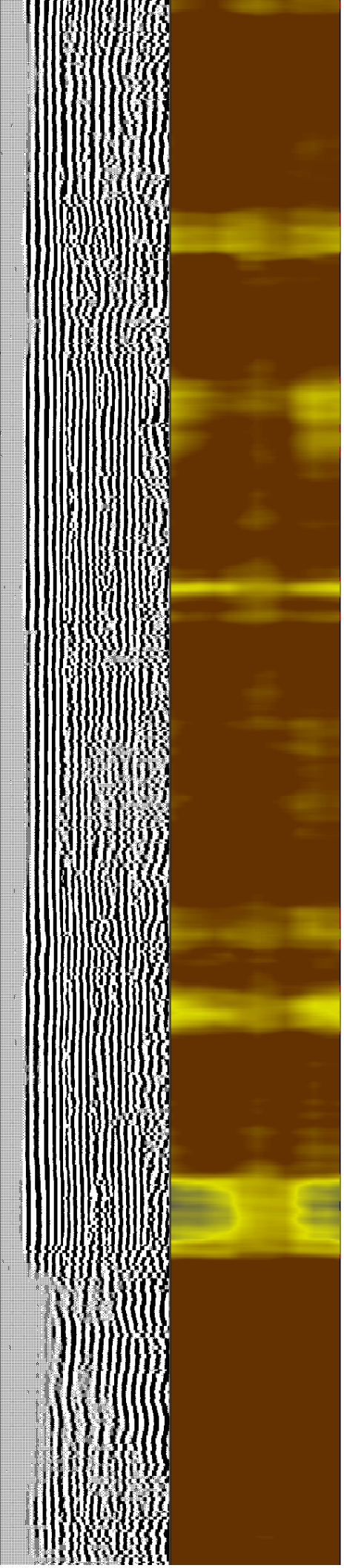
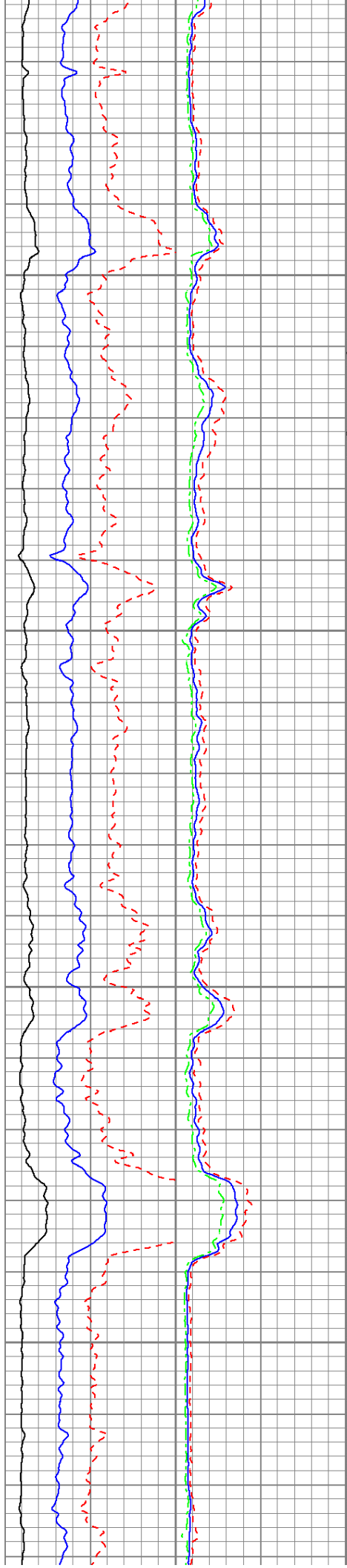
5600

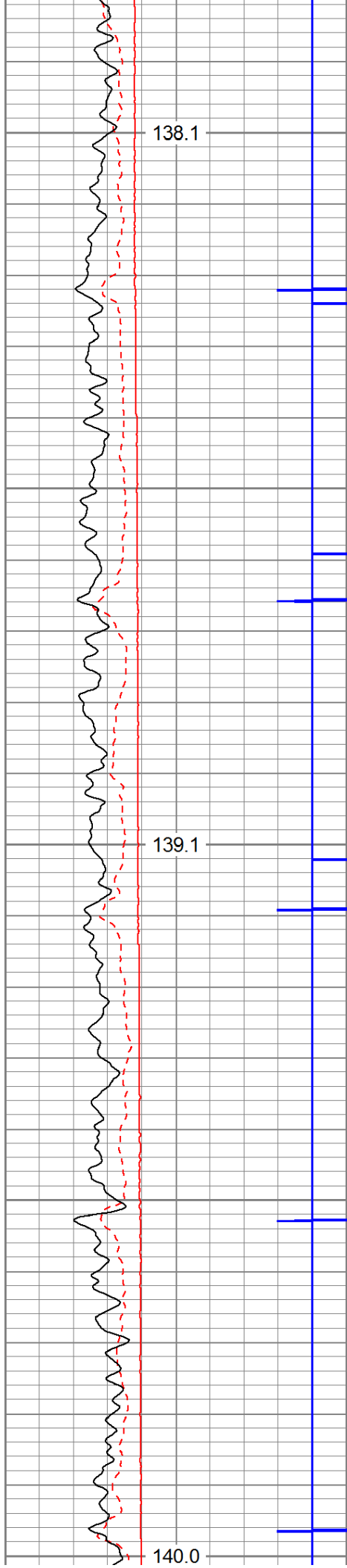




5700
MARKER JOINT

5800

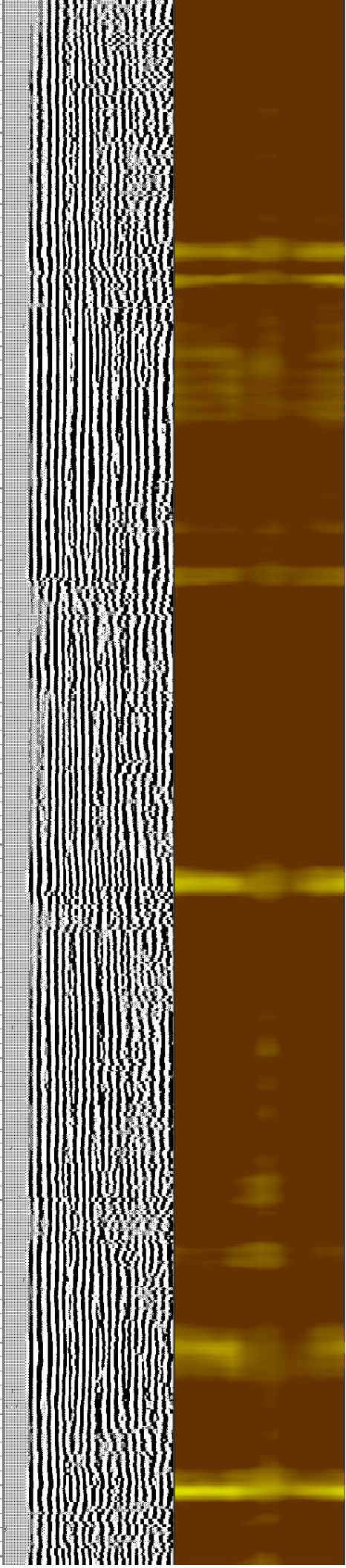
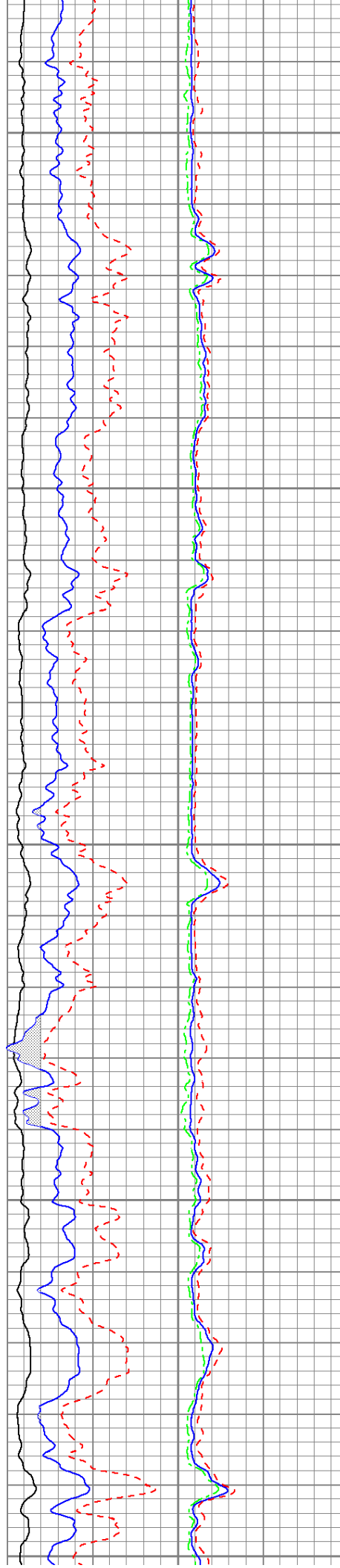


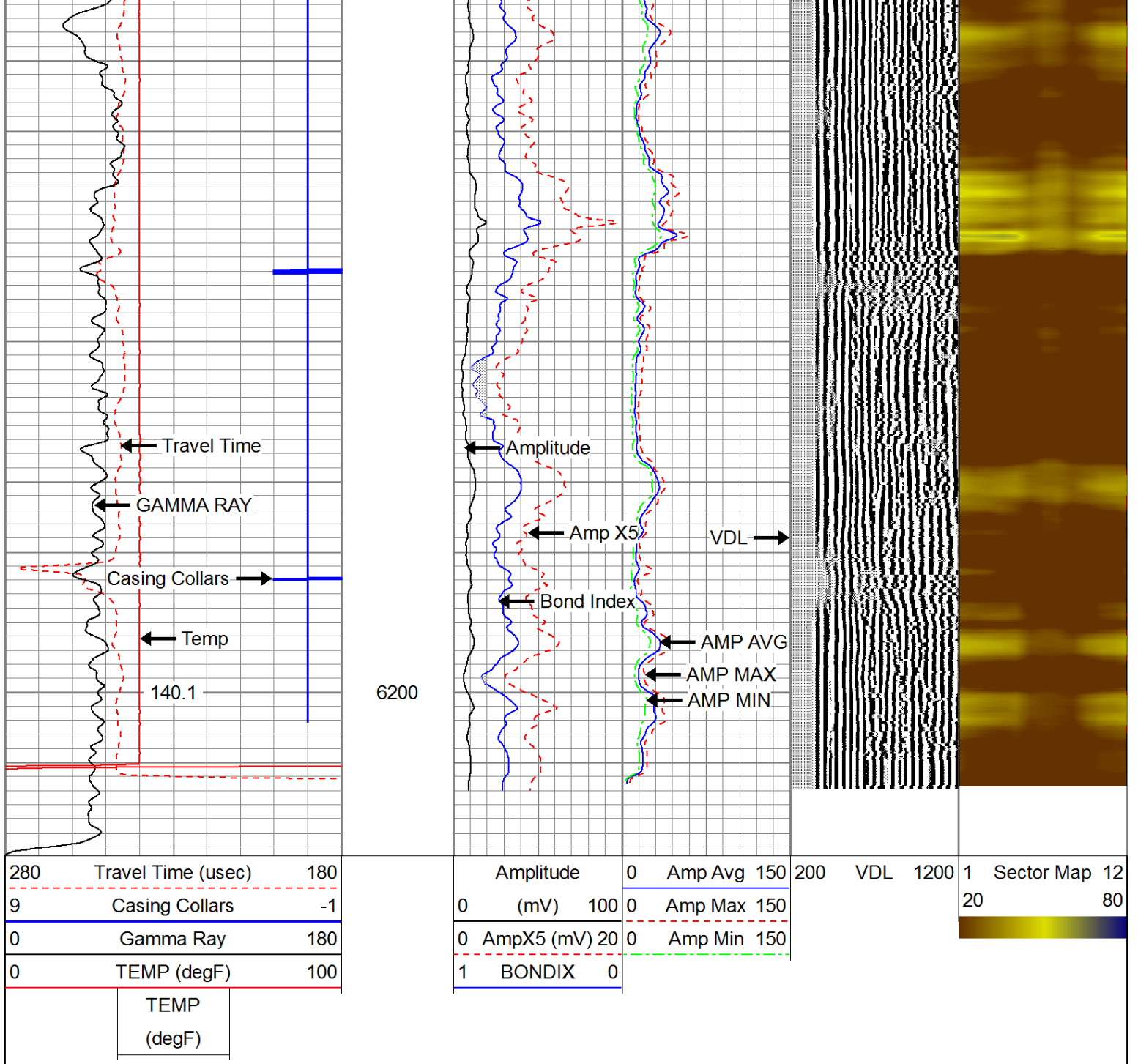


5900

6000

6100



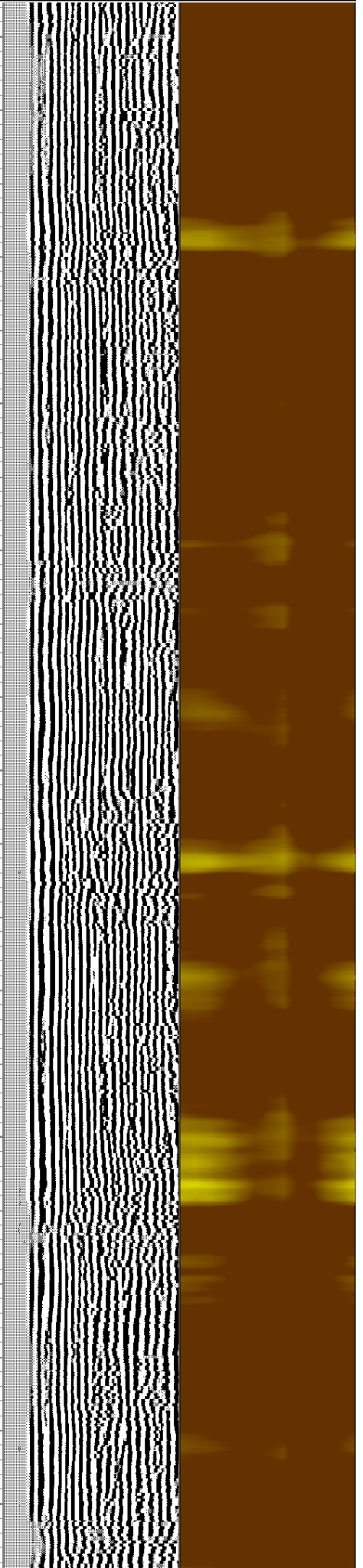
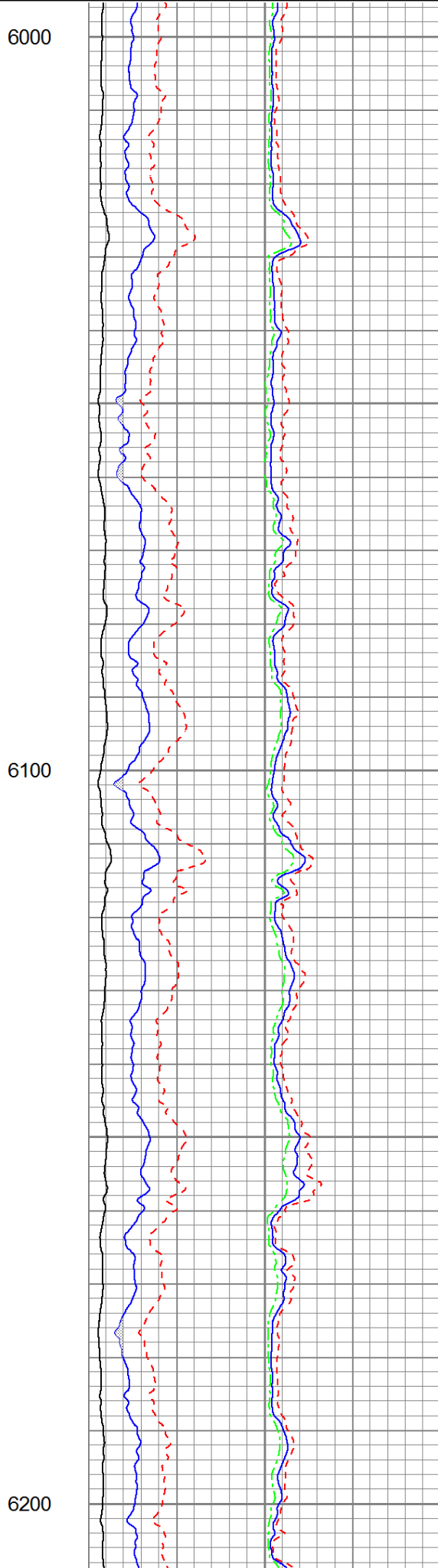
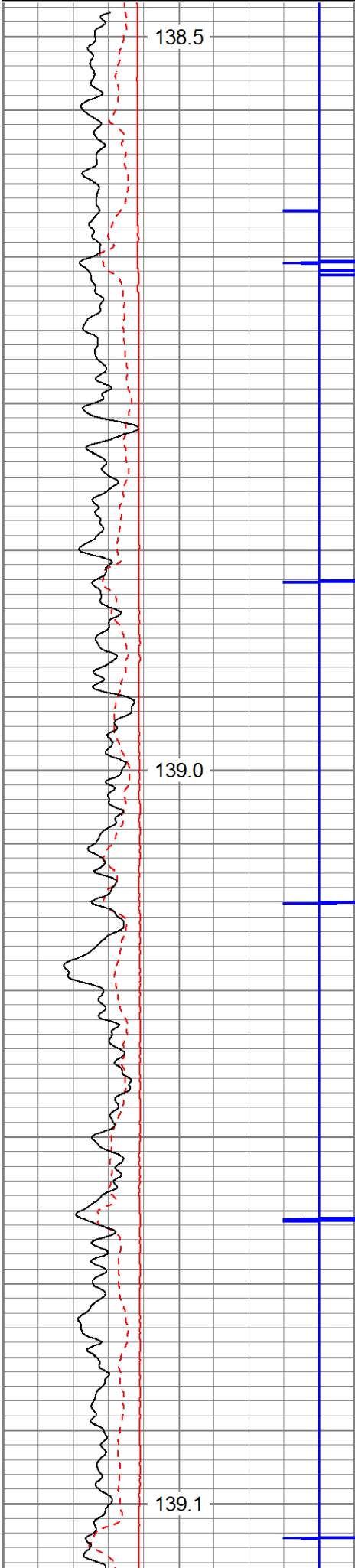


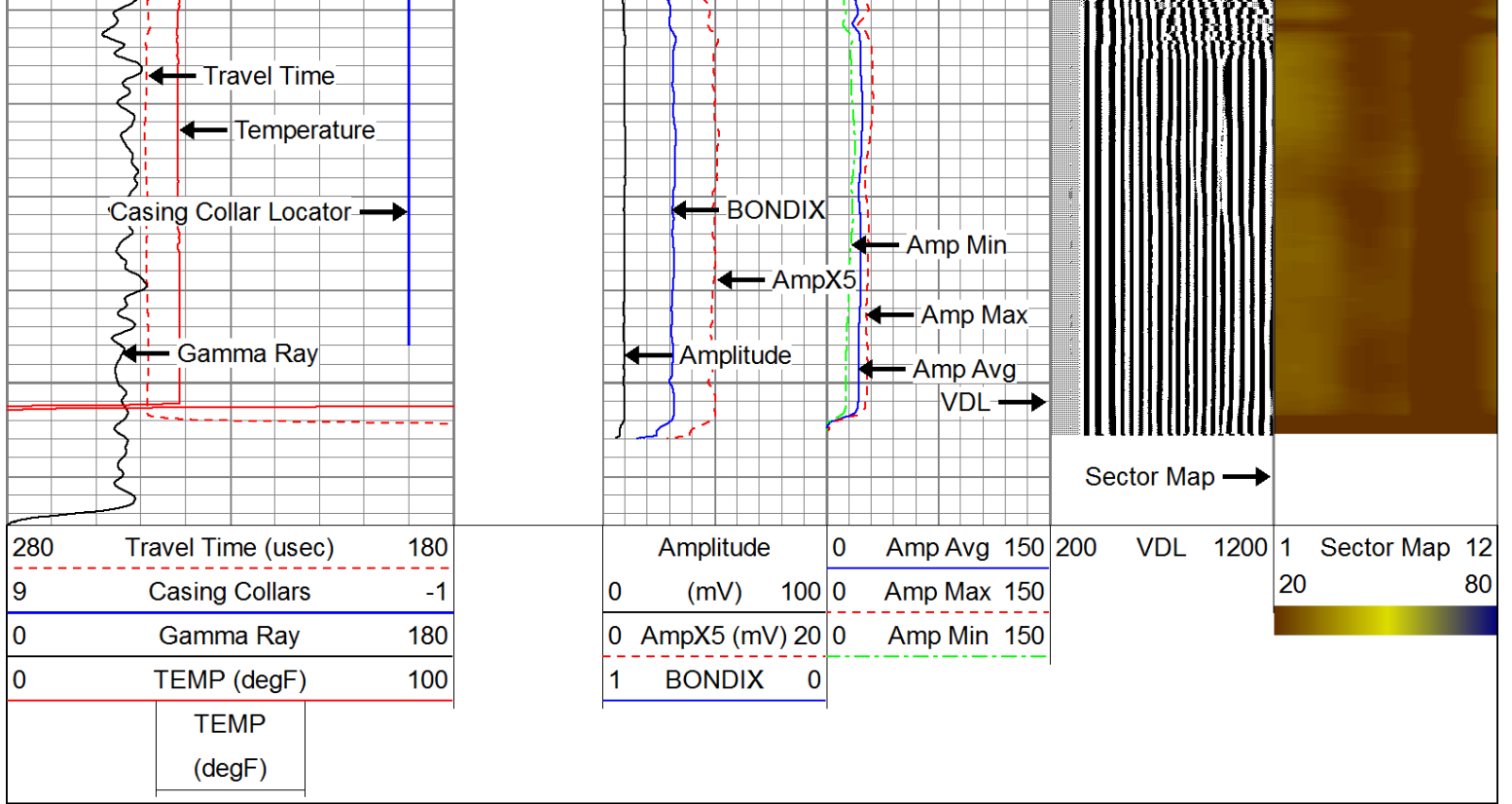
REPEAT SECTION

Database File: c:\warrior\data\2019 antero\antero-remington unit 1h.db
 Dataset Pathname: pass3
 Presentation Format: antero f
 Dataset Creation: Sat Mar 30 11:39:12 2019 by Log 7.0 B1
 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	0						
0	TEMP (degF)	100	1	BONDIX	0							

(degF)





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
TEMP	12.77					
WVFS1	11.48		SCBL-Tek12 (IOL40-05) Tekco 400 Deg F 12 Sector RIB with Temp	9.13	3.25	135.00
WVFS2	11.48					
WVFS3	11.48					
WVFS4	11.48					
WVFS5	11.48					
WVFS6	11.48					
WVFS7	11.48					
WVFS8	11.48					
WVFS9	11.48					
WVFS10	11.48					
WVFS11	11.48					

WVFS11	11.48				
WVFS12	11.48				
WVF3FT	10.73				
WVFCAL	10.73				
WVF5FT	9.73				
WVFTEMP	6.40				
WVFSYNC	6.40		2.75 2 3/4" Tekco Adjustable Centralizer	2.73	2.75
GR	1.04	GR-Tek-Co 2 3/4 (IPSNO-03) Tekco 2 3/4" 400 Deg. F Logging Gamma Ray	3.67	2.75	40.00

Dataset: antero-remington unit 1h.db: field/well/run1/pass4.2
 Total Length: 20.07 ft
 Total Weight: 250.00 lb
 O.D.: 3.25 in

Calibration Report

Database File: C:\Warrior\Data\2019 antero\antero-remington unit 1h.db
 Dataset Pathname: pass4.2
 Dataset Creation: Sat Mar 30 14:08:42 2019 by Calc 7.0 B1

Gamma Ray Calibration Report

Serial Number: IPSNO-03
 Tool Model: Tek-Co 2 3/4
 Performed: Mon Nov 07 10:23:17 2016

 Calibrator Value: 1.0

 Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

 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 1H



Well	REMININGTON UNIT 111
Field	MARCELLUS
County	TYLER
State	W.V.

Country