



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

Company ANTERO RESOURCES CORPORATION  
 Well FENDER 3H  
 Field MARCELLUS  
 County TYLER State WV

Company ANTERO RESOURCES CORPORATION  
 Well FENDER 3H  
 Field MARCELLUS  
 County TYLER  
 State WV

Location: API #: 47-095-02672-0000  
 SEC TWP RGE  
 Permanent Datum G.L. Elevation 1014.5'  
 Log Measured From K.B. K.B. 1040'  
 Drilling Measured From K.B. 0F 25.5' D.F. 1039'  
 G.L. 1014.5'

Date	7/3/20								
Run Number	ONE								
Depth Driller	16766'								
Depth Logger	6996'								
Bottom Logged Interval	6996'								
Top Log Interval	SURFACE								
Open Hole Size	6.75"								
Type Fluid	H2O								
Density / Viscosity	N/A								
Max. Recorded Temp.	142 DEG								
Estimated Cement Top	N/A								
Time Well Ready	N/A								
Time Logger on Bottom	N/A								
Equipment Number	340								
Location	BRIDGEPORT, WV								
Recorded By	J. BOGGS								
Witnessed By	BOB REED								
Borehole Record		Casing Record							
Run Number	Bit	From	To	Size	Weight	From	To		
				5.0"	18#	16766'	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

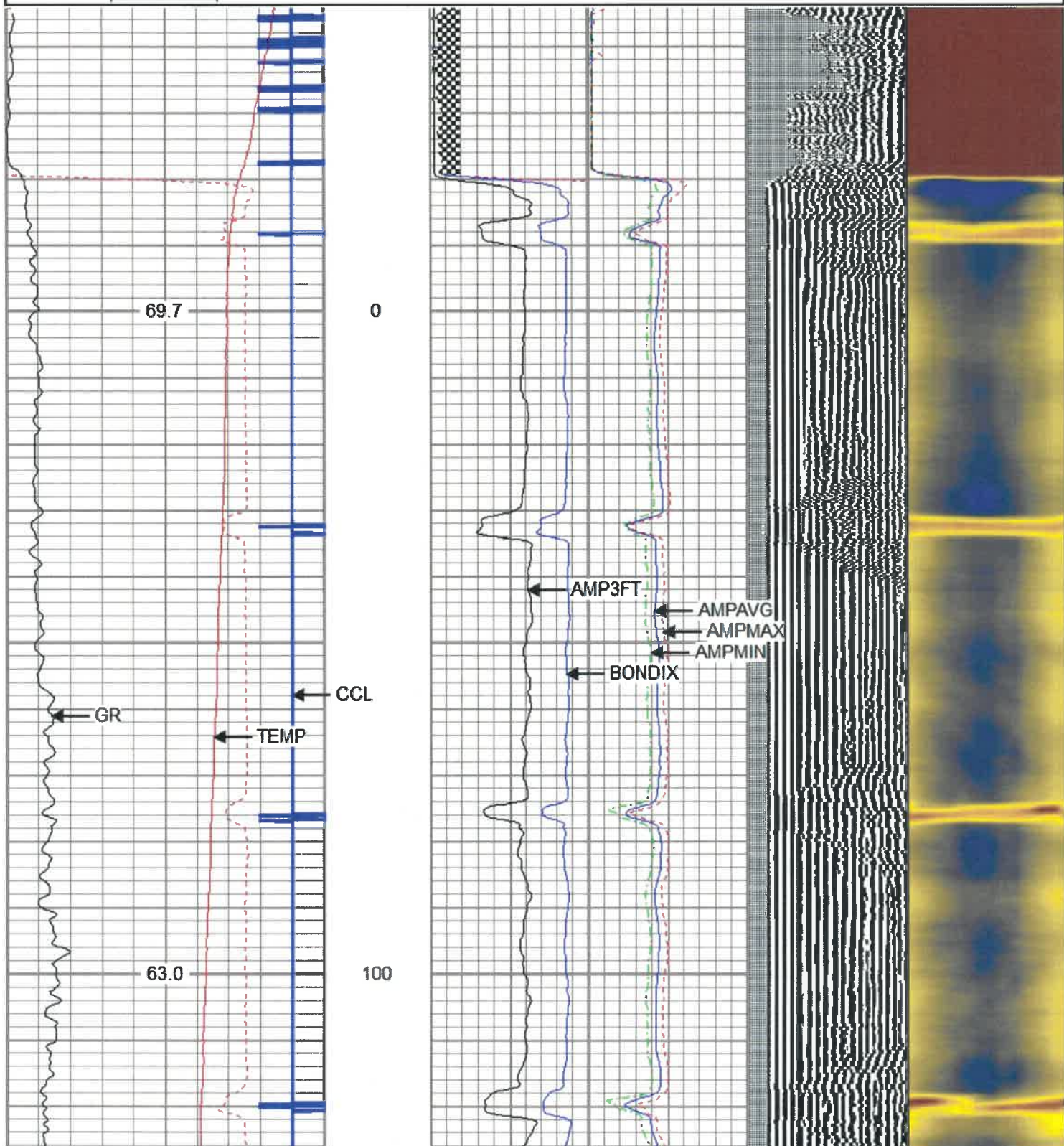
THANK YOU FOR USING KLX ENERGY SERVICES  
 TOP OF CEMENT @ N/A  
 MARKER JOINT @ 5980'-5991'  
 SHIFTED LOG UP HOLE 41' TO MATCH NINE ENERGY BOND LOG  
 BOTTOM HOLE TEMP- 142 DEG  
 WELL WAS LOGGED WITH 5000PSI HELD ON CASING

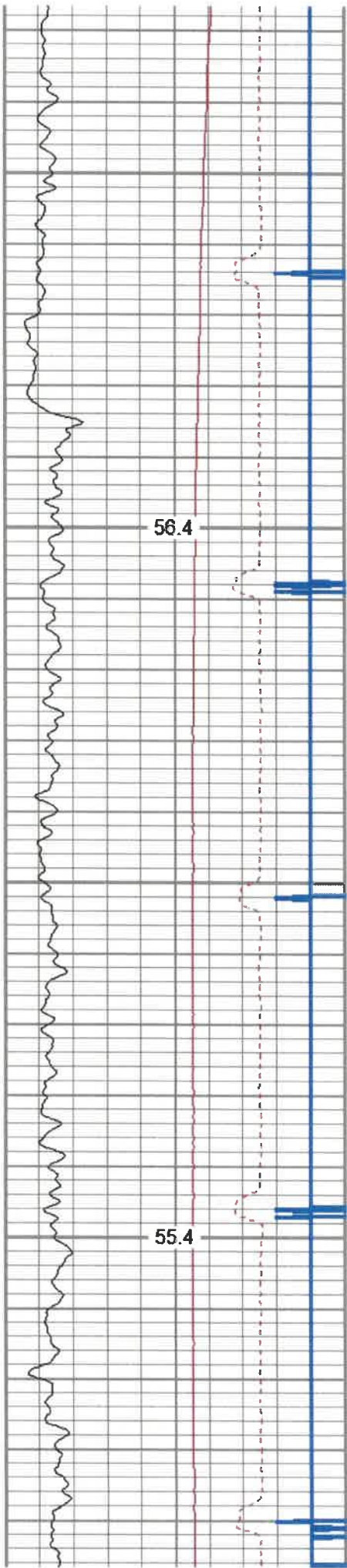


**5000 PSI MAIN PASS**

Database File: g:\antero-hogue pad\fender3h.db  
 Dataset Pathname: pass4.2  
 Presentation Format: antero  
 Dataset Creation: Mon Jul 06 15:57:05 2020 by Calc Std Casedhole 10081  
 Charted by: Depth in Feet scaled 1:240

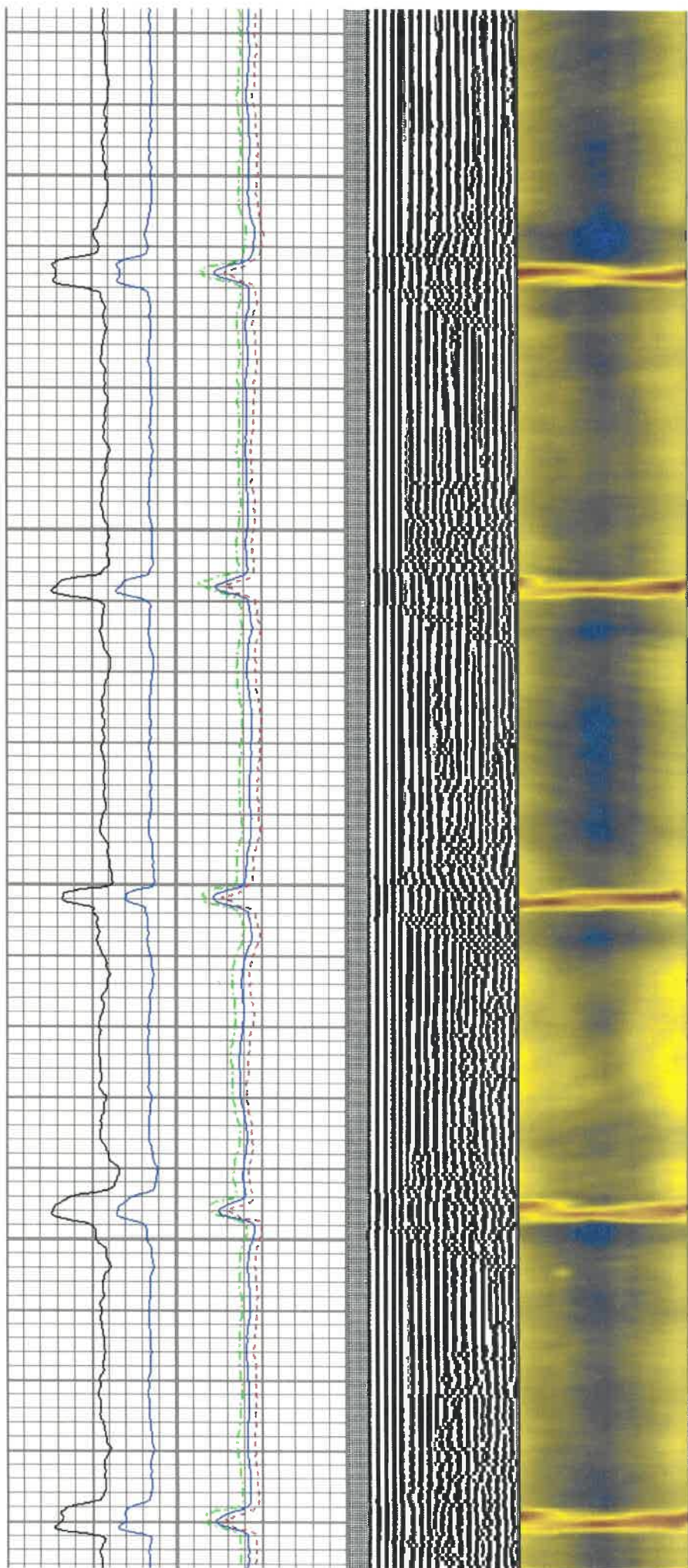
280	Travel Time (usec)	180	Amplitude	0	Amp Avg	150	200	VDL	1200	1	Sector Map	12
9	Casing Collars	-1	0	(mV)	100	0	Amp Max	150			20	80
0	Gamma Ray	180	0	AmpX5 (mV)	20	0	Amp Min	150				
0	TEMP (degF)	100	1	BONDIX	0							
	TEMP (degF)											

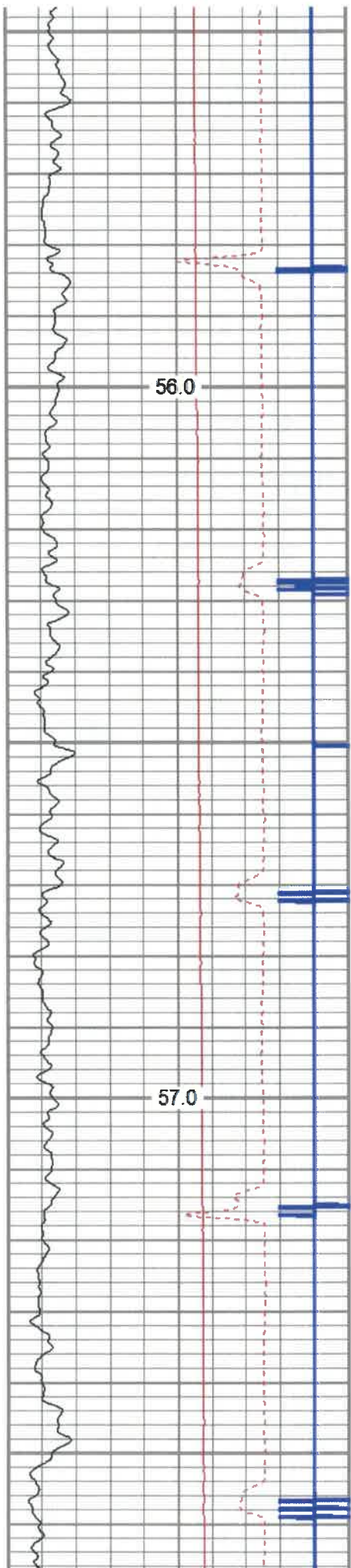




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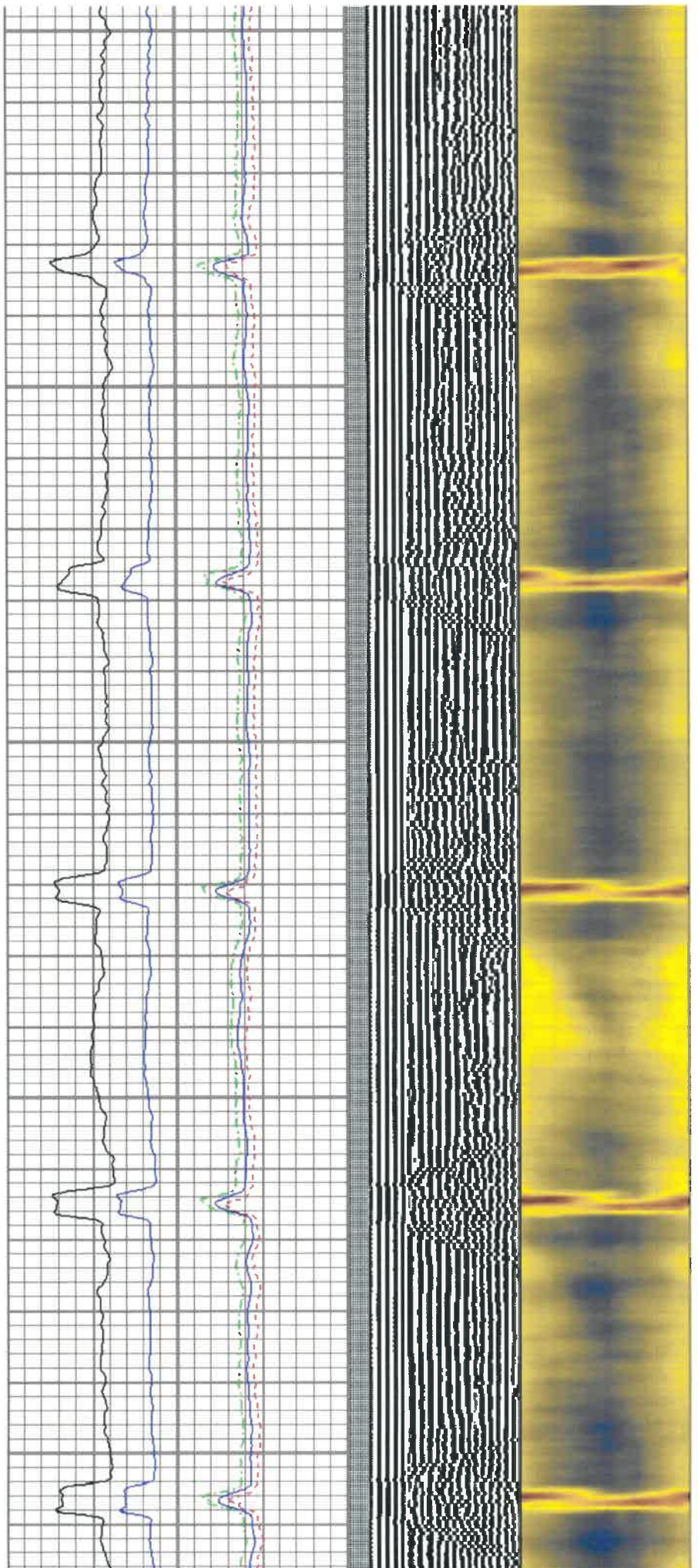
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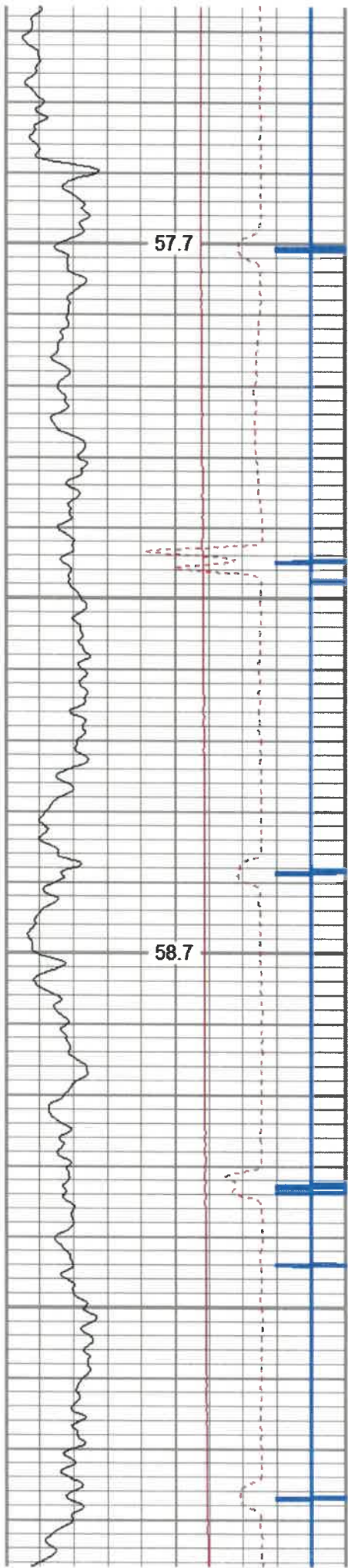




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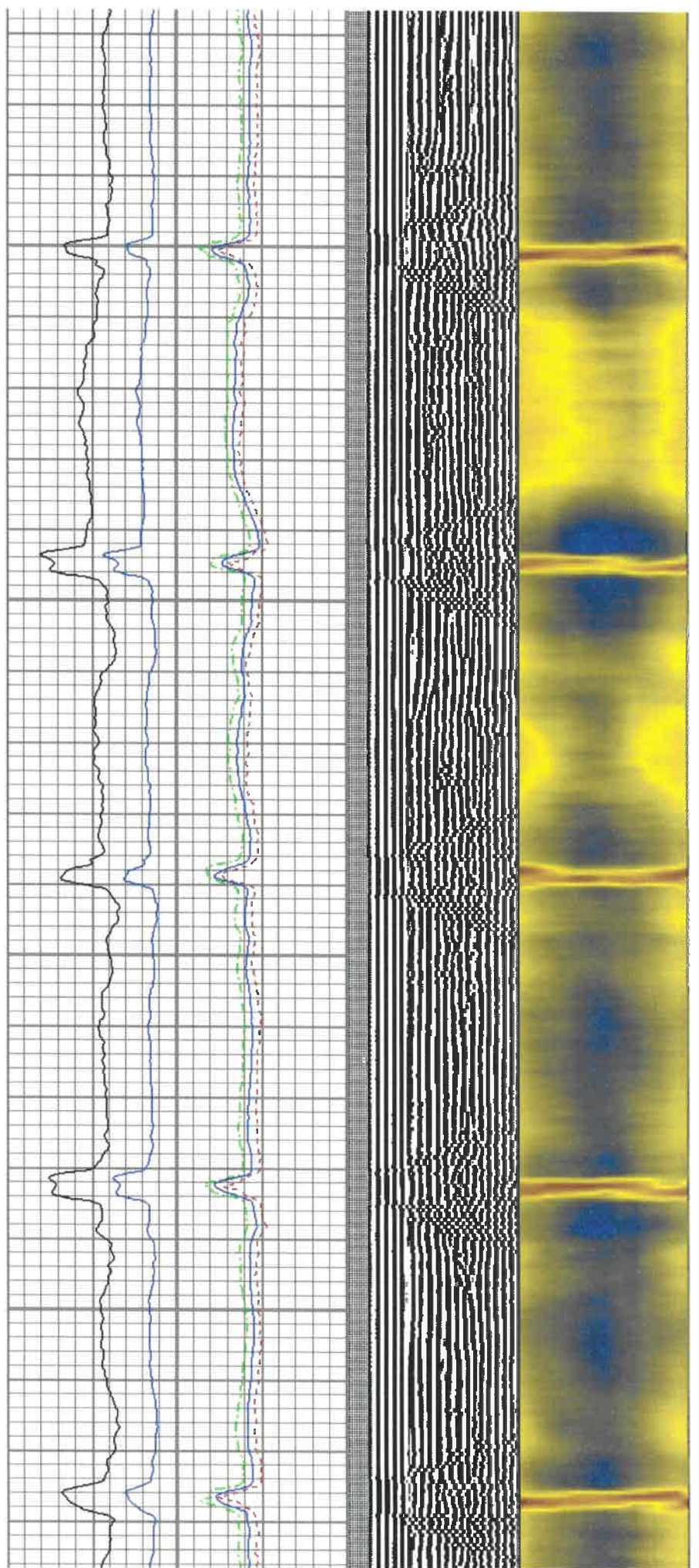
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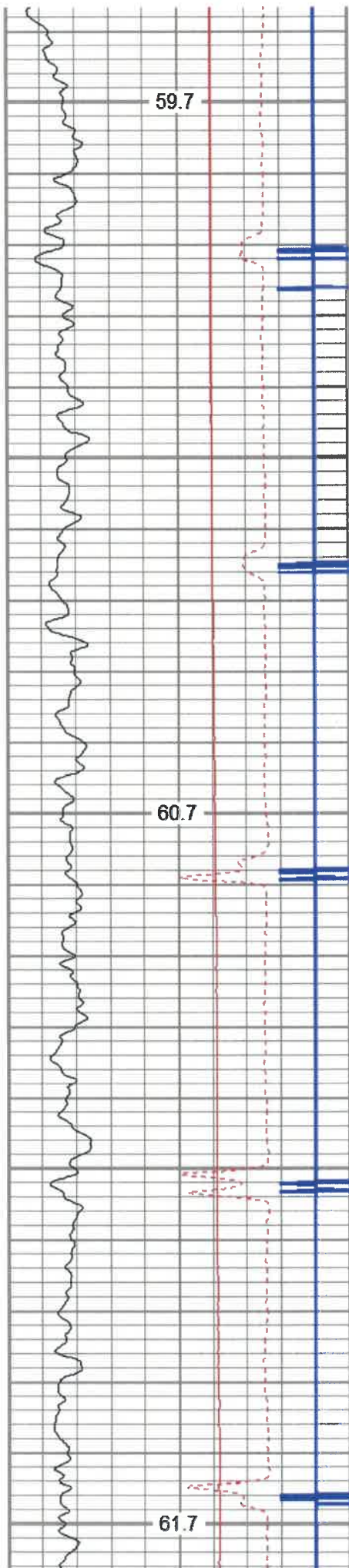




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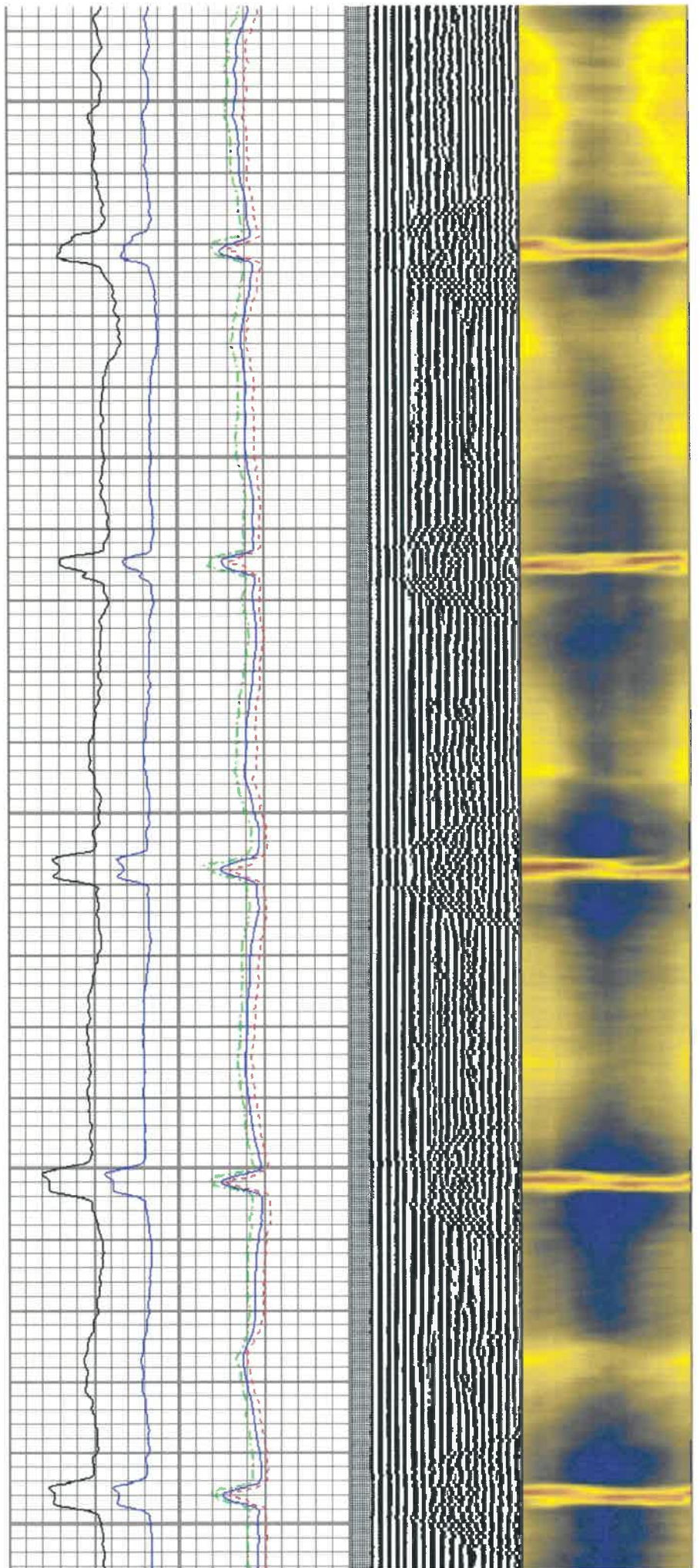


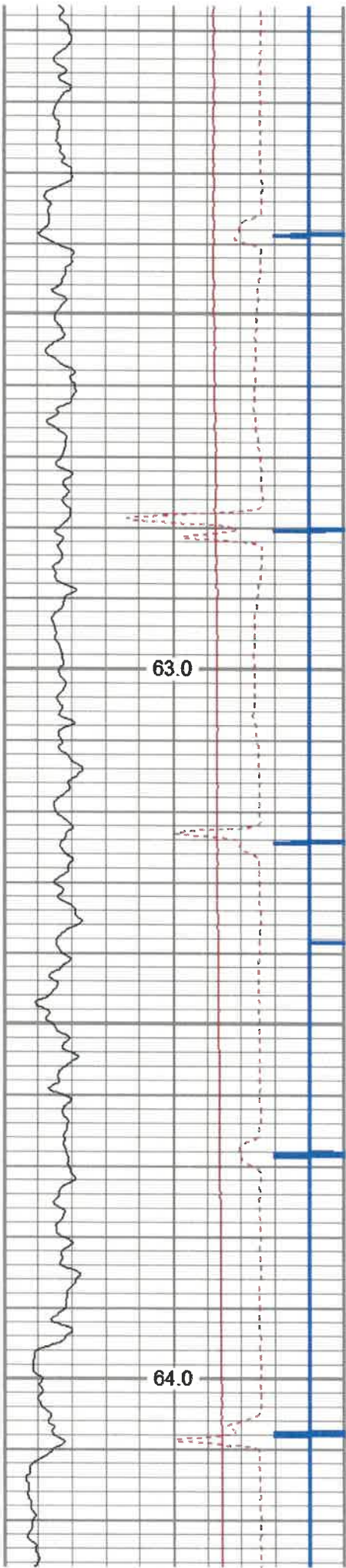


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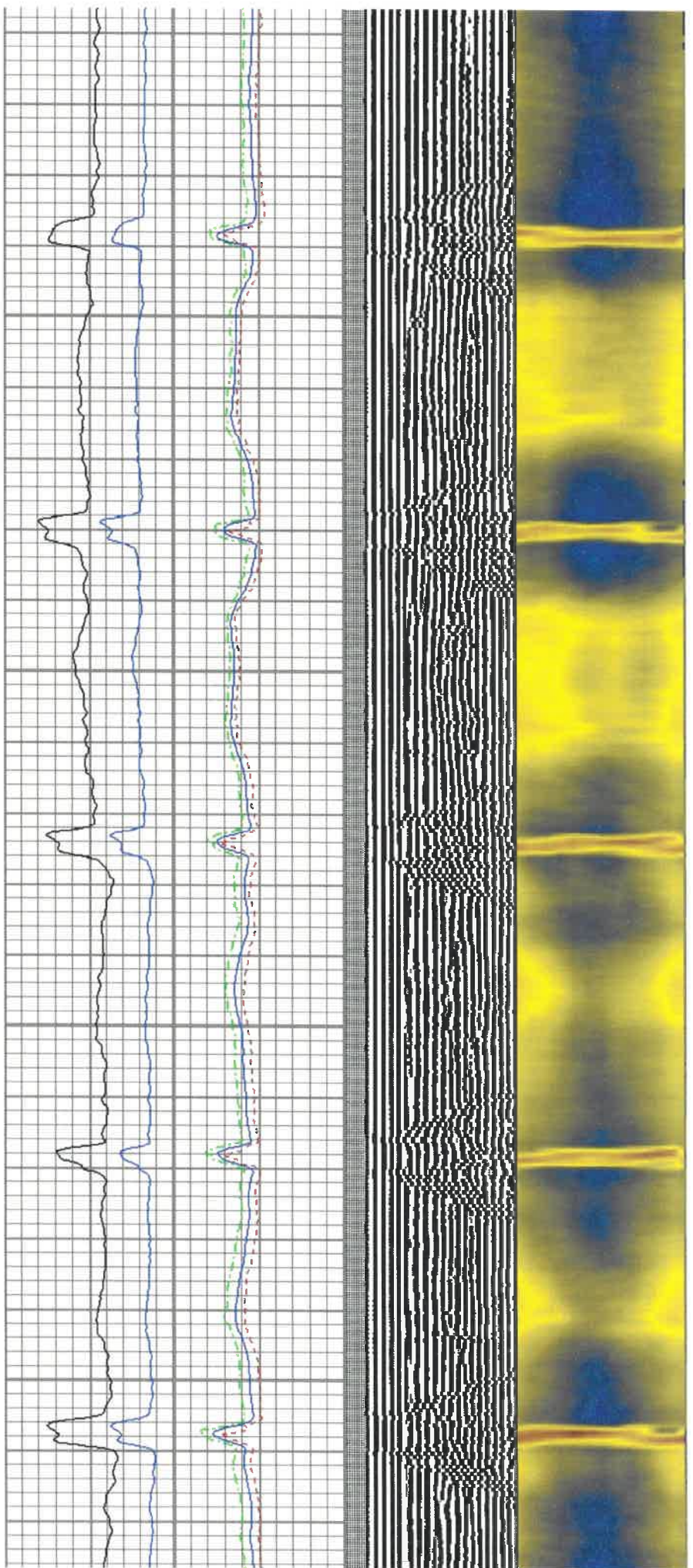
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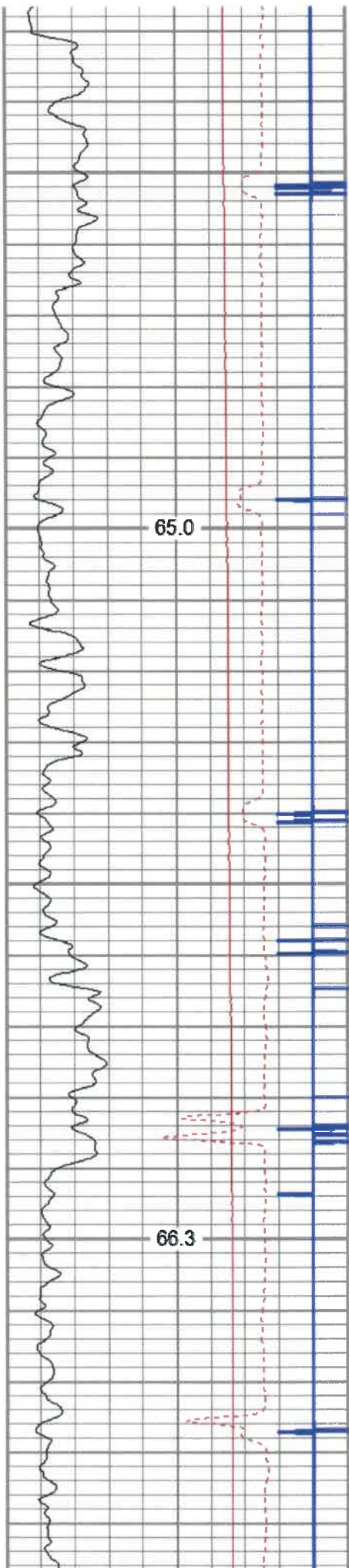




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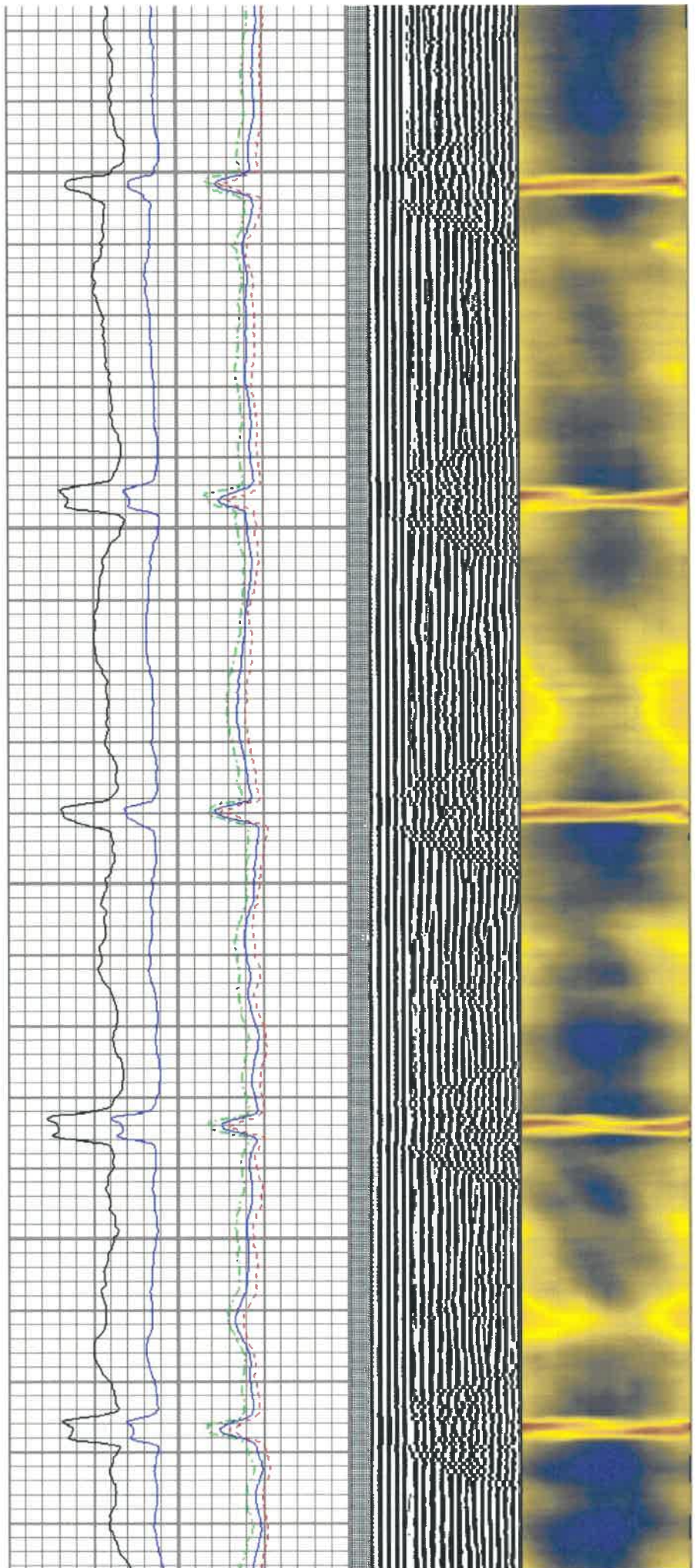
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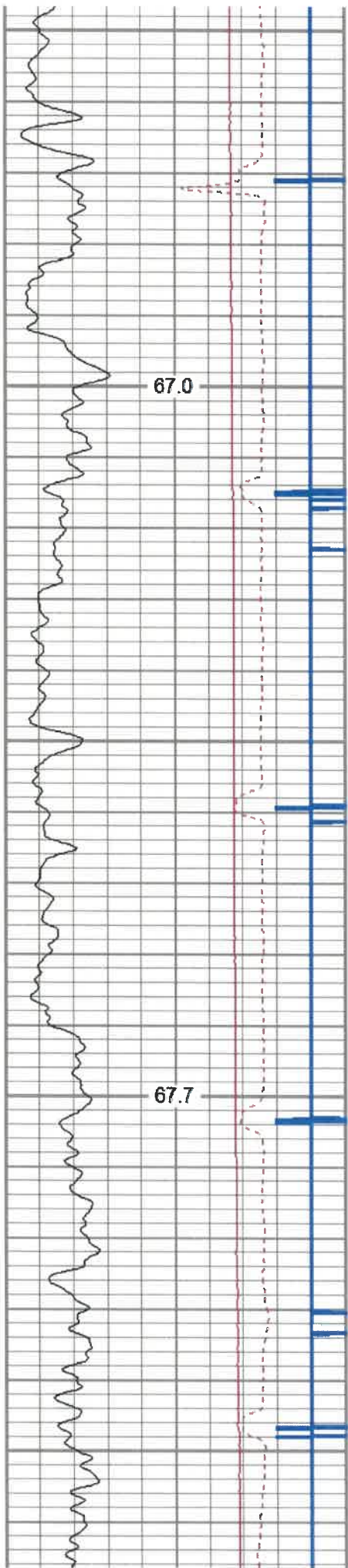


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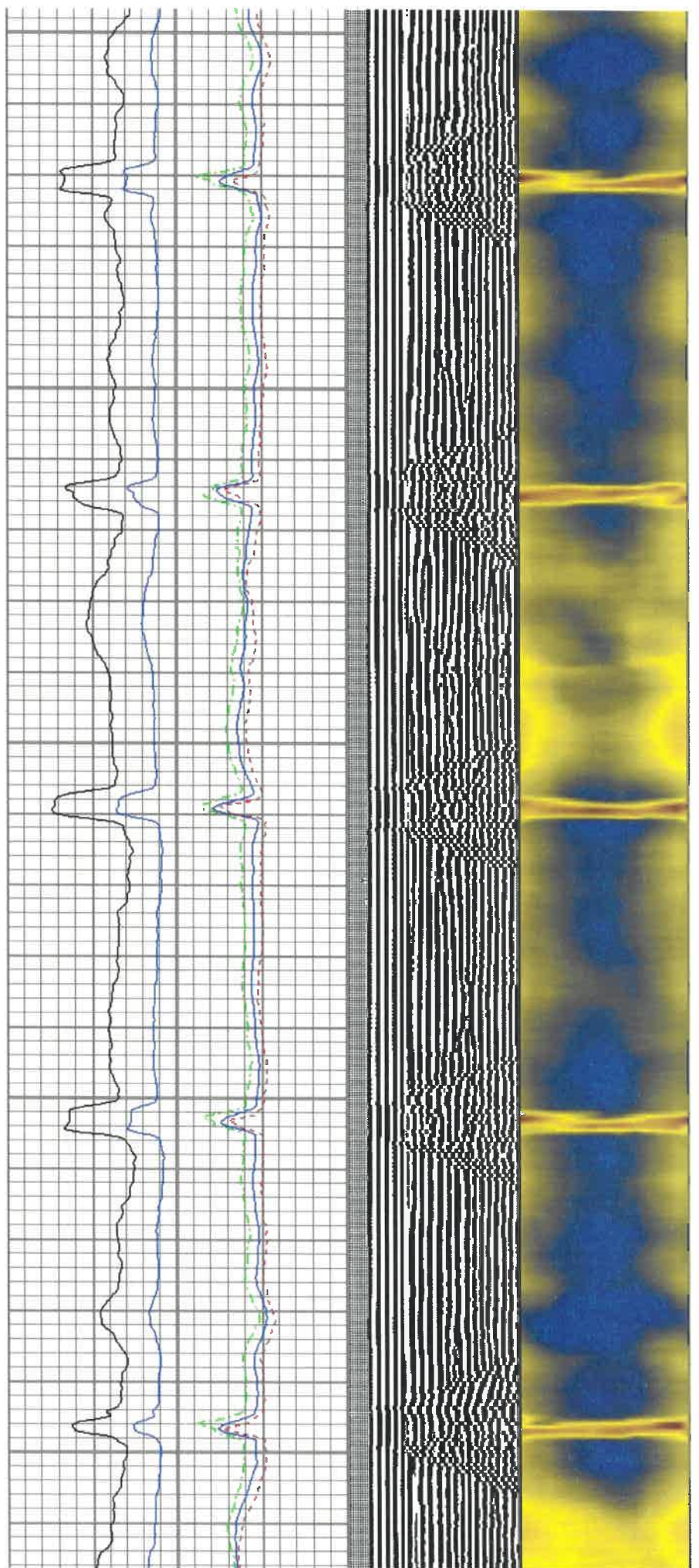


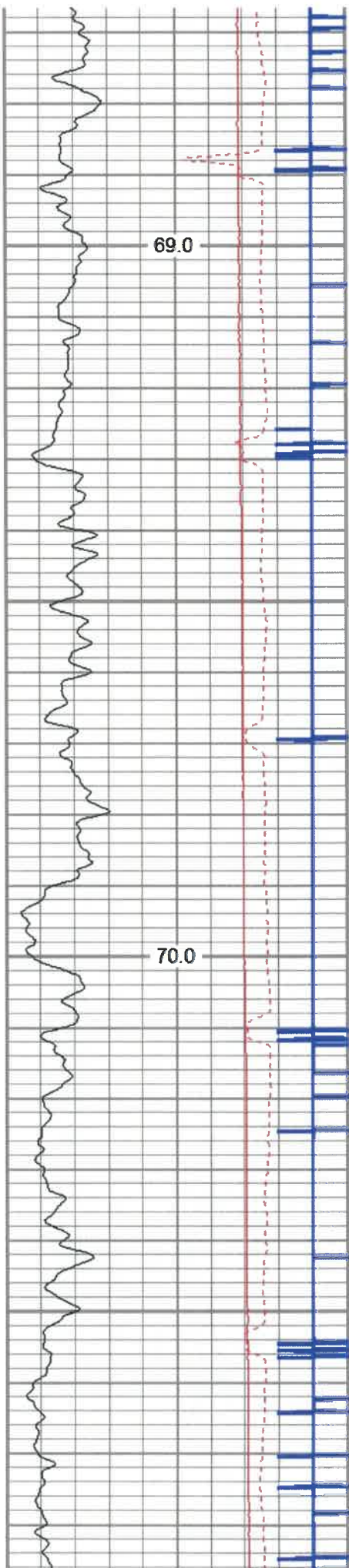




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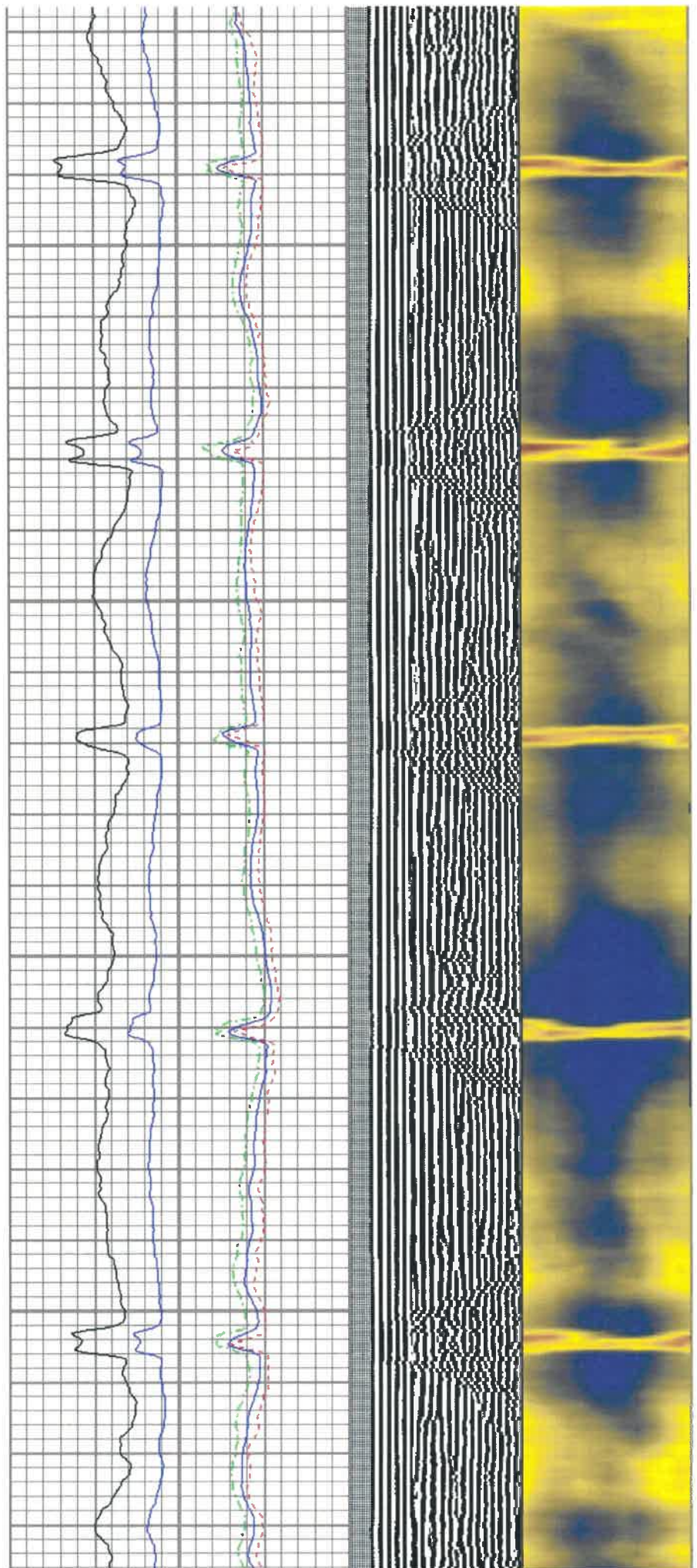
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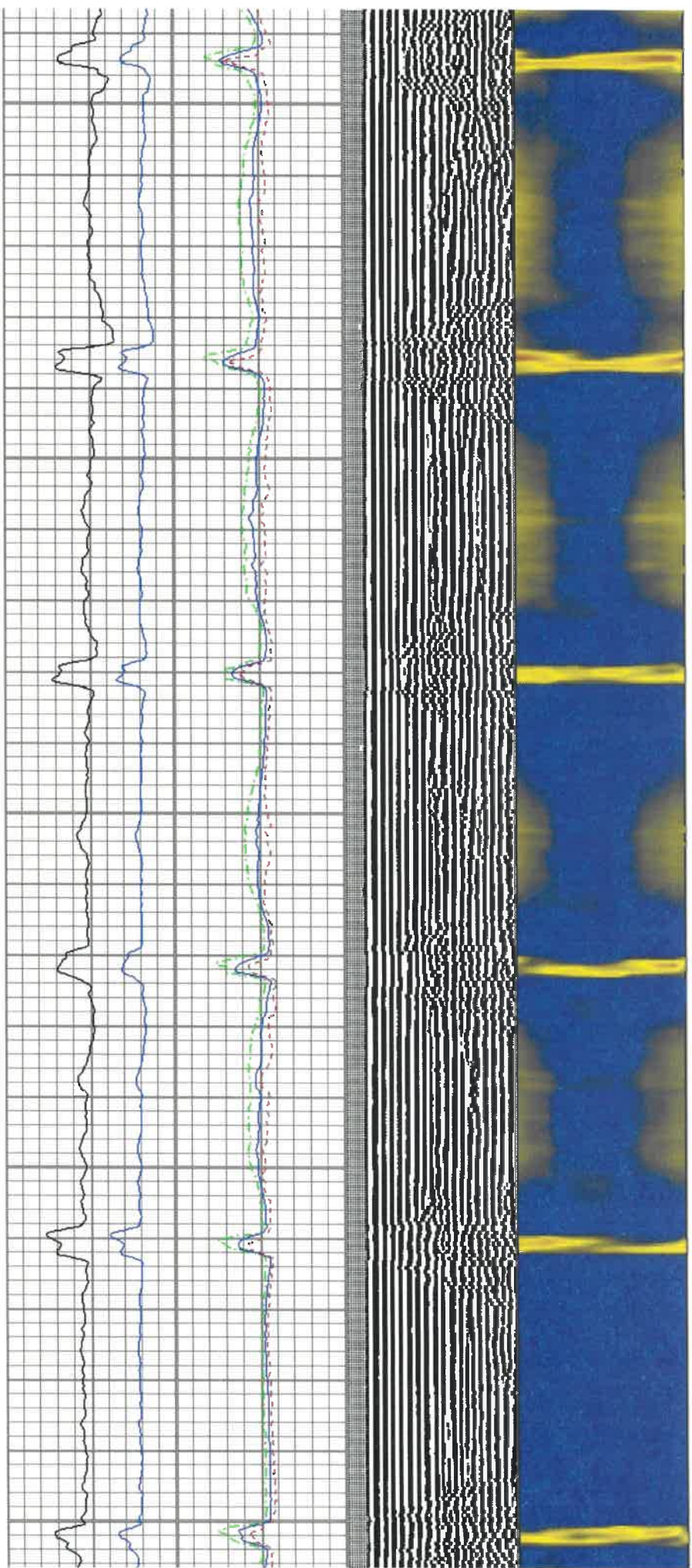
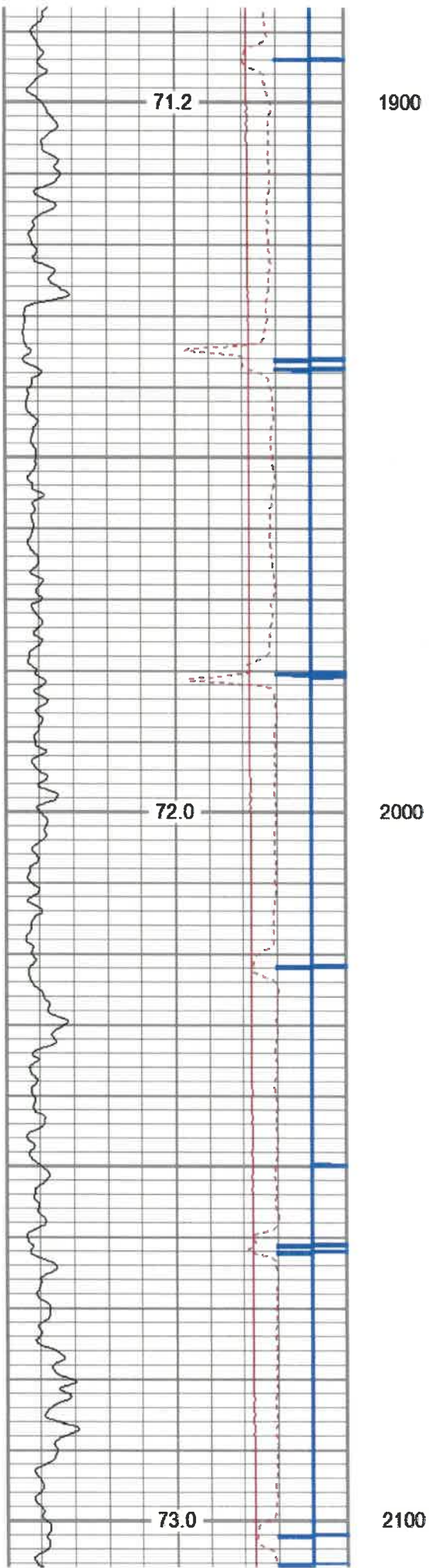


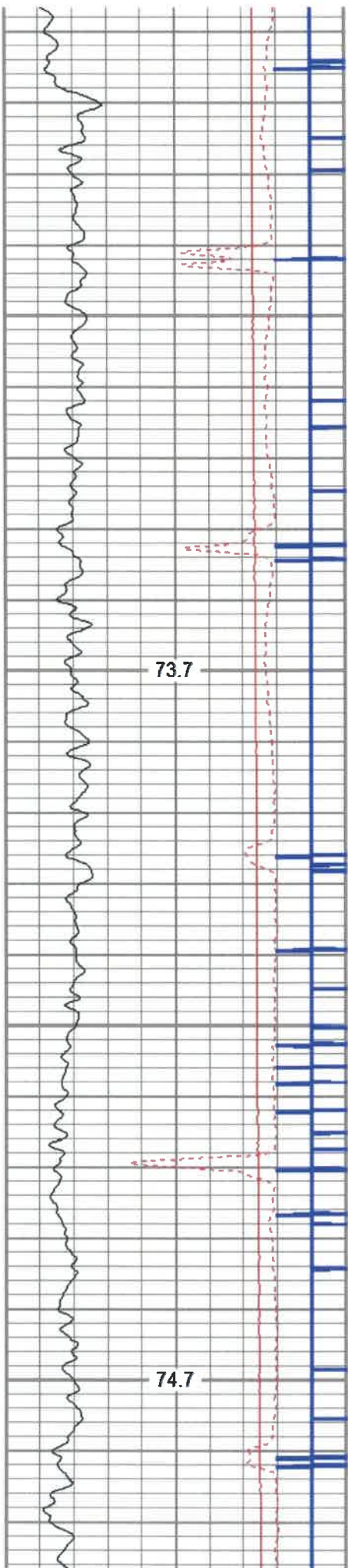


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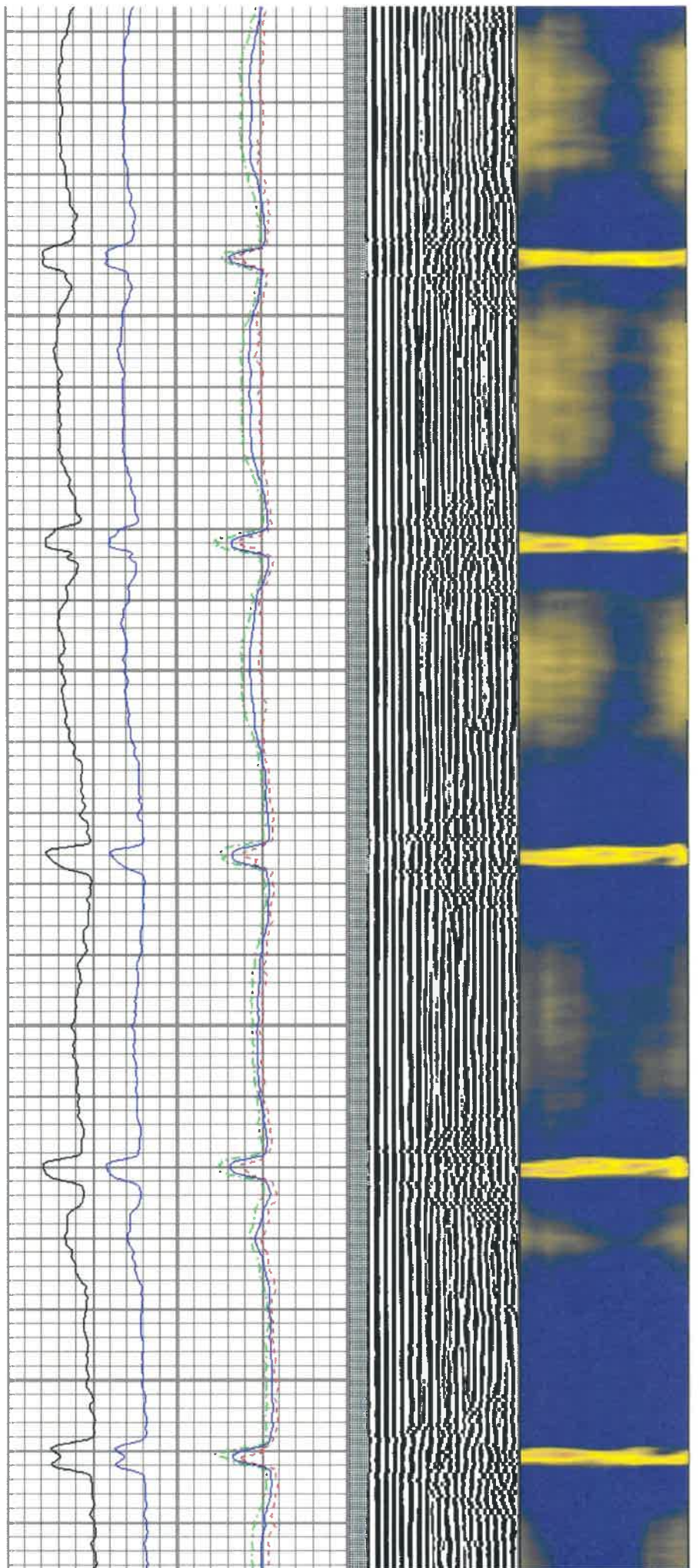


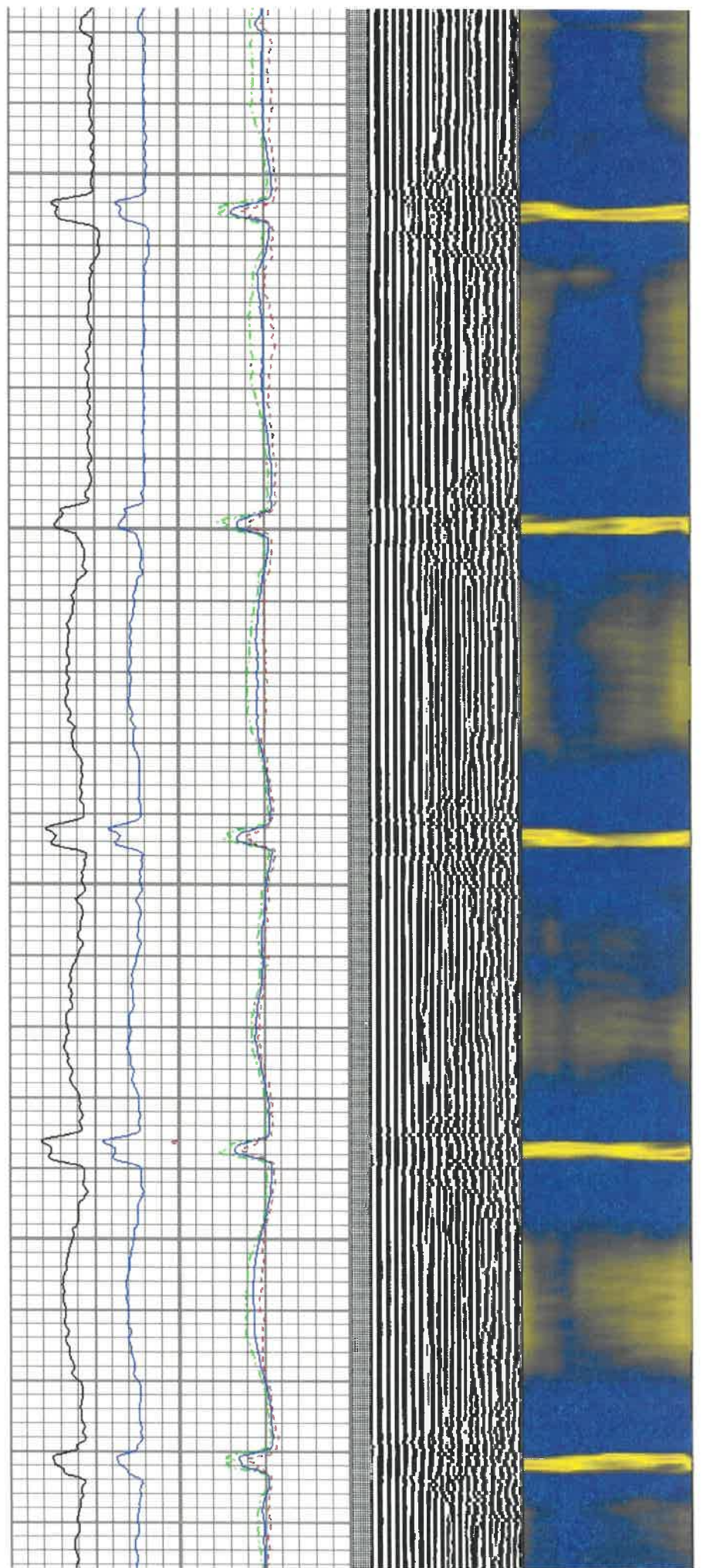
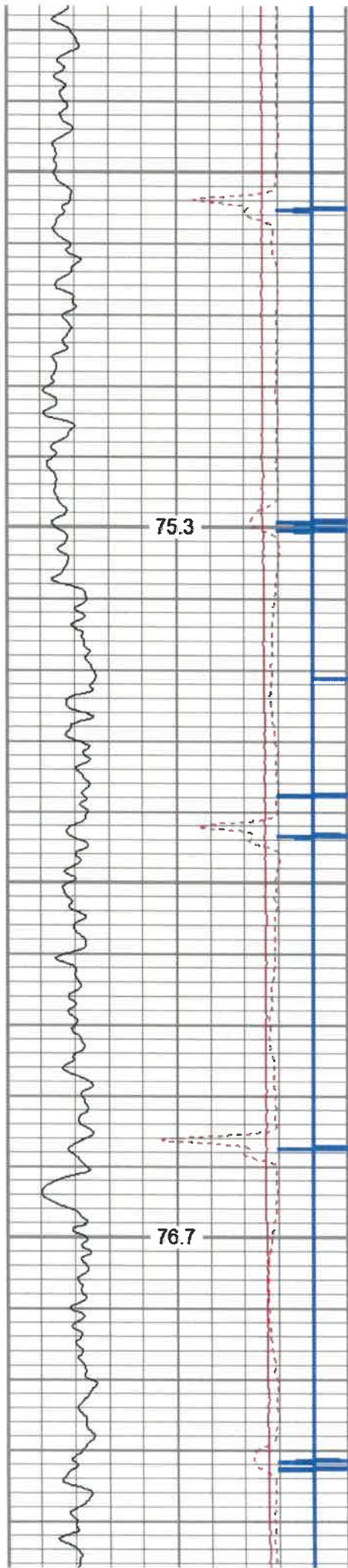


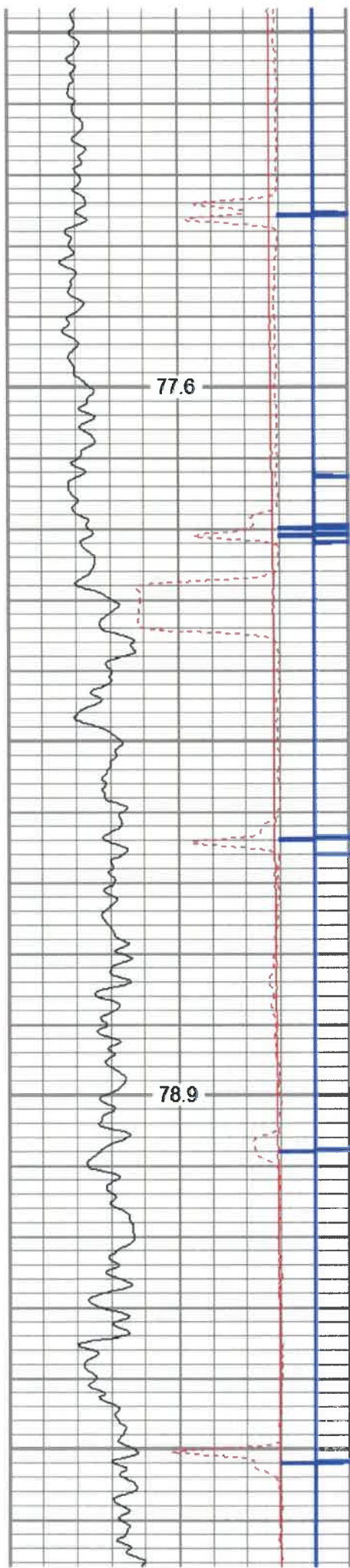


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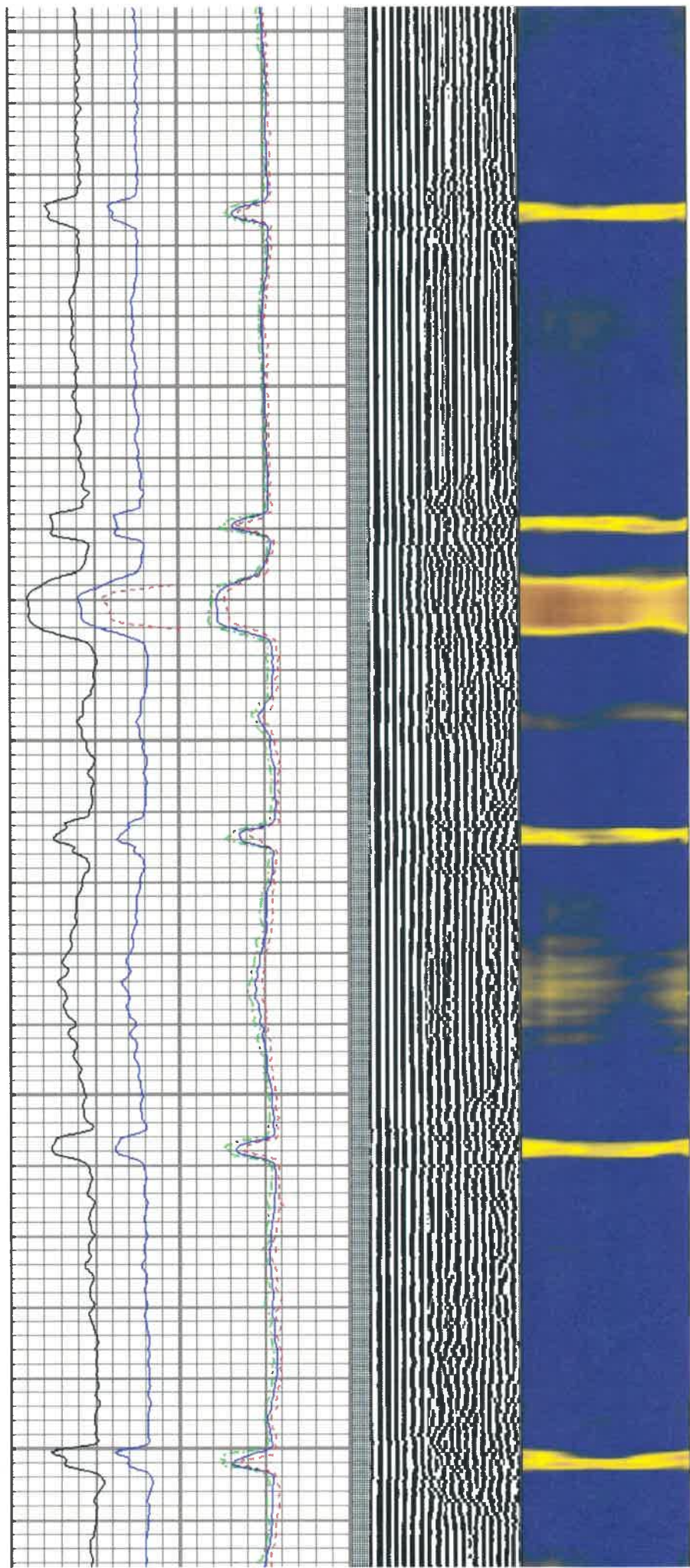


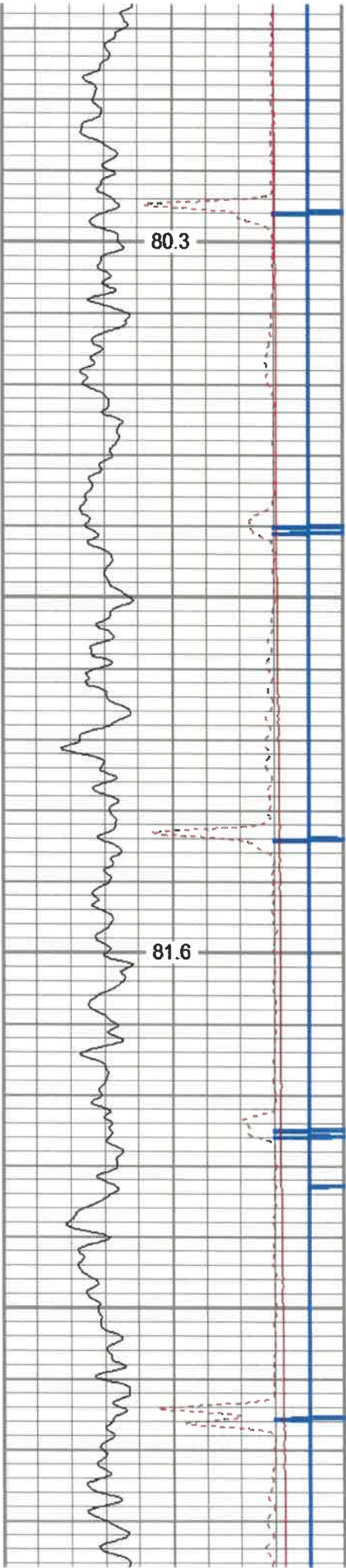




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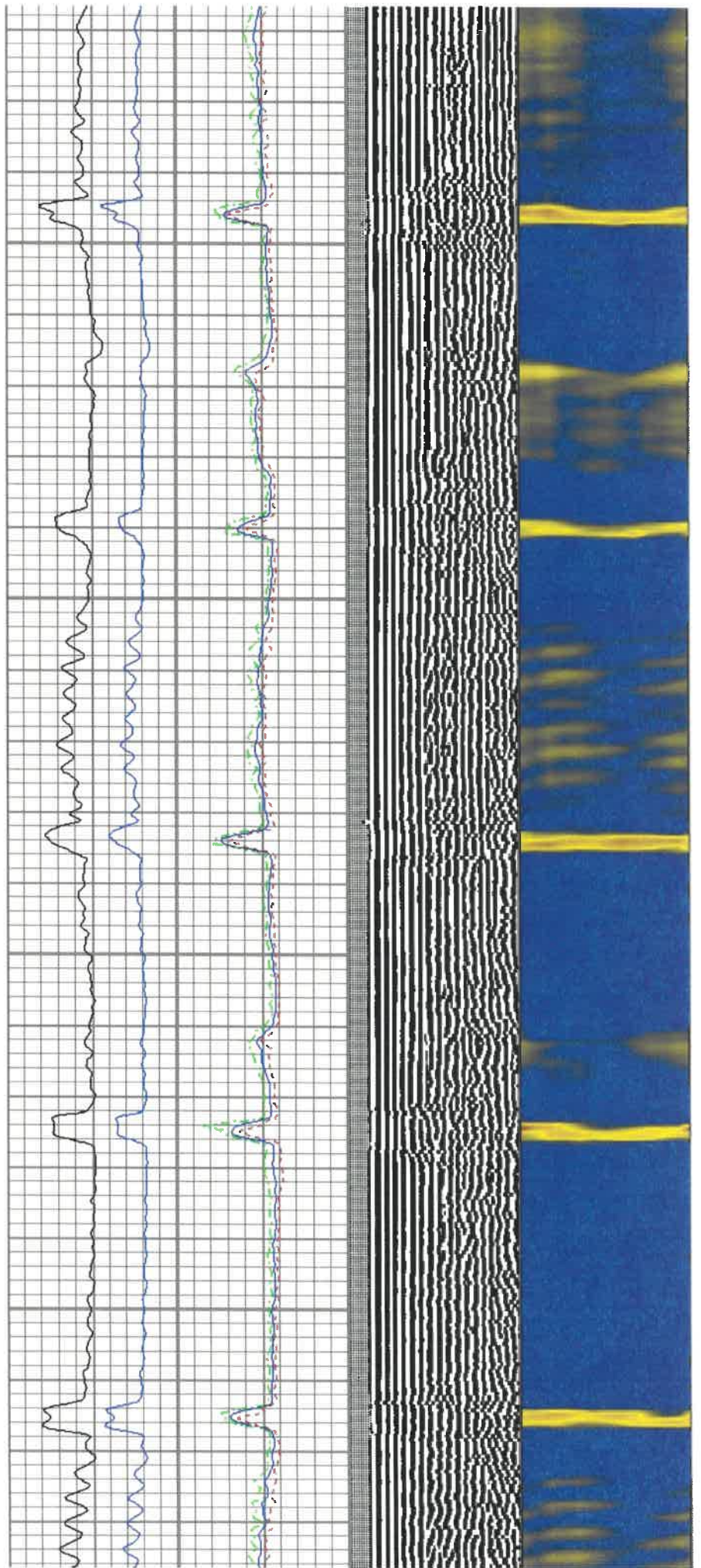
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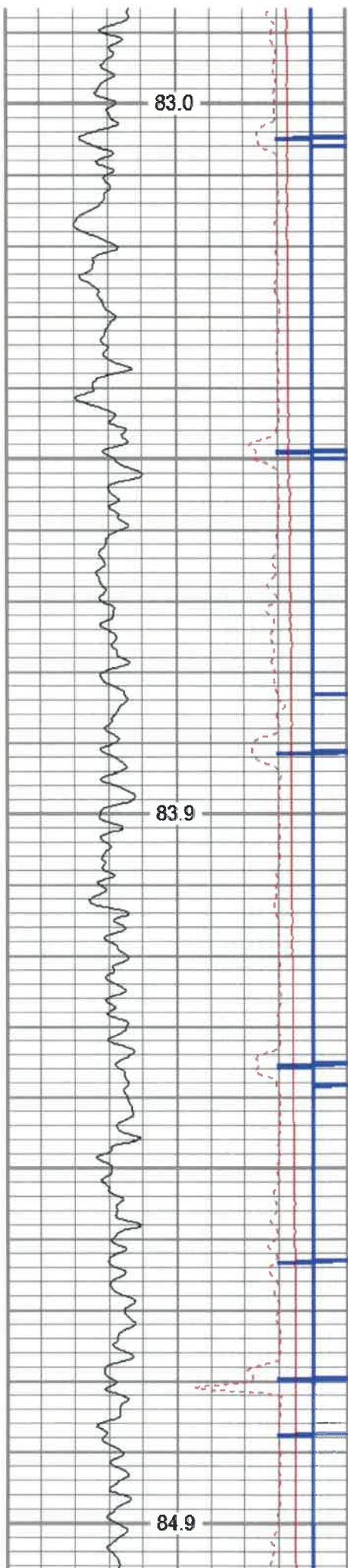




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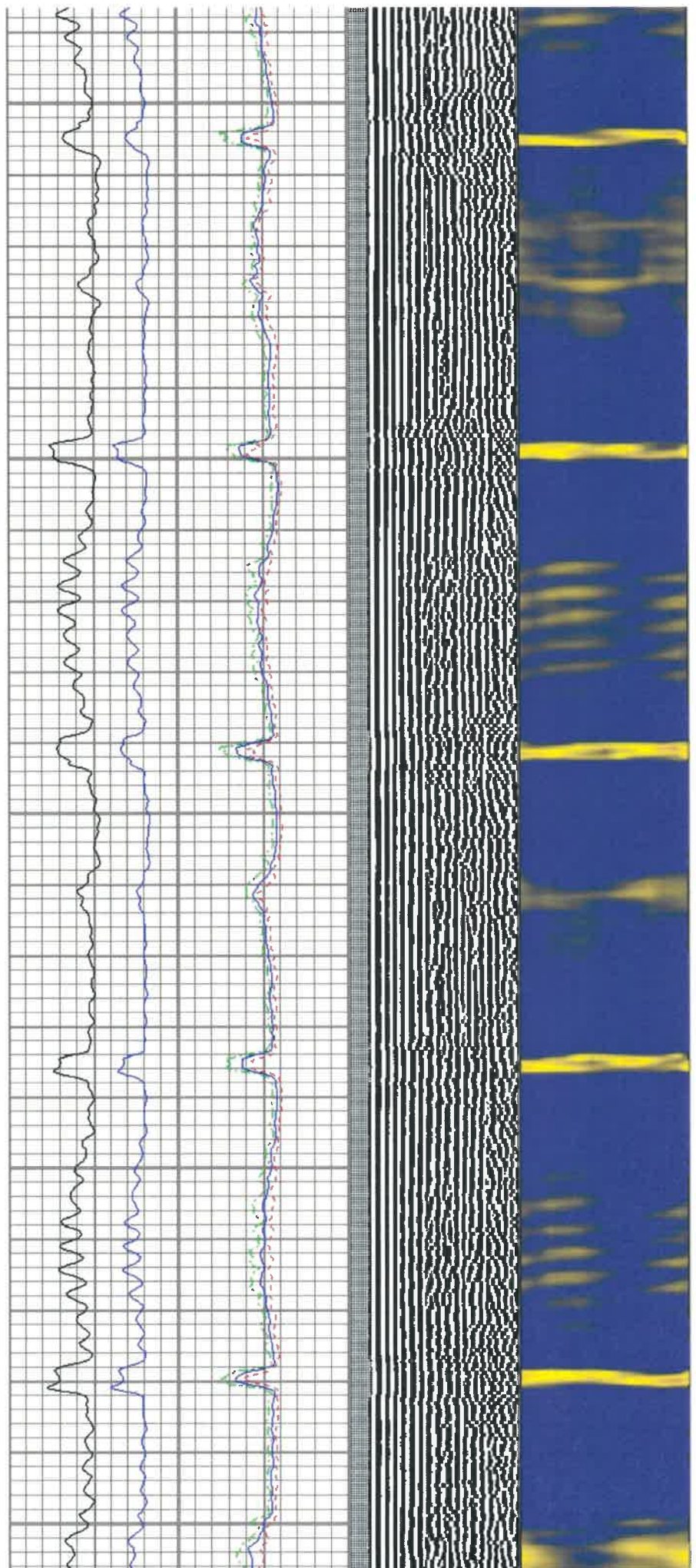




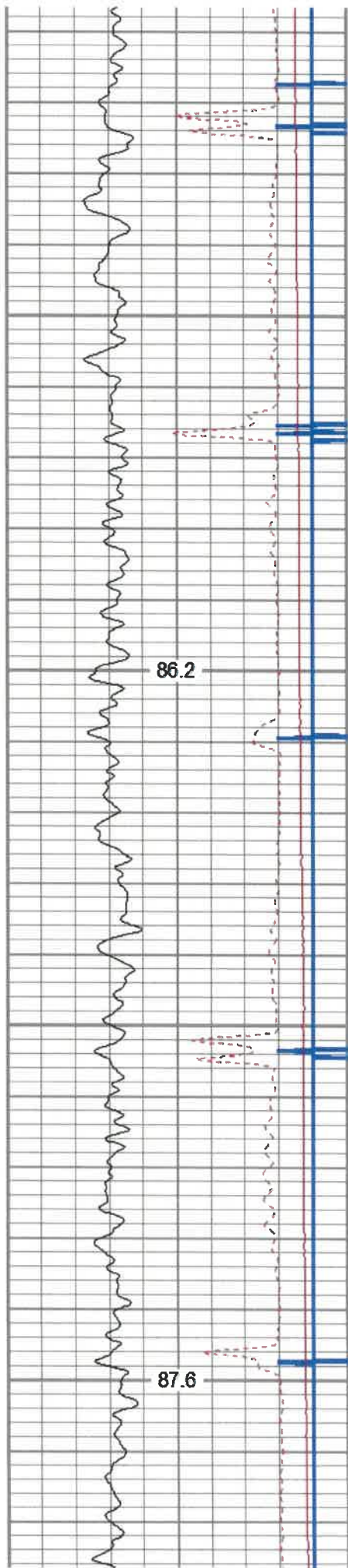
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3100

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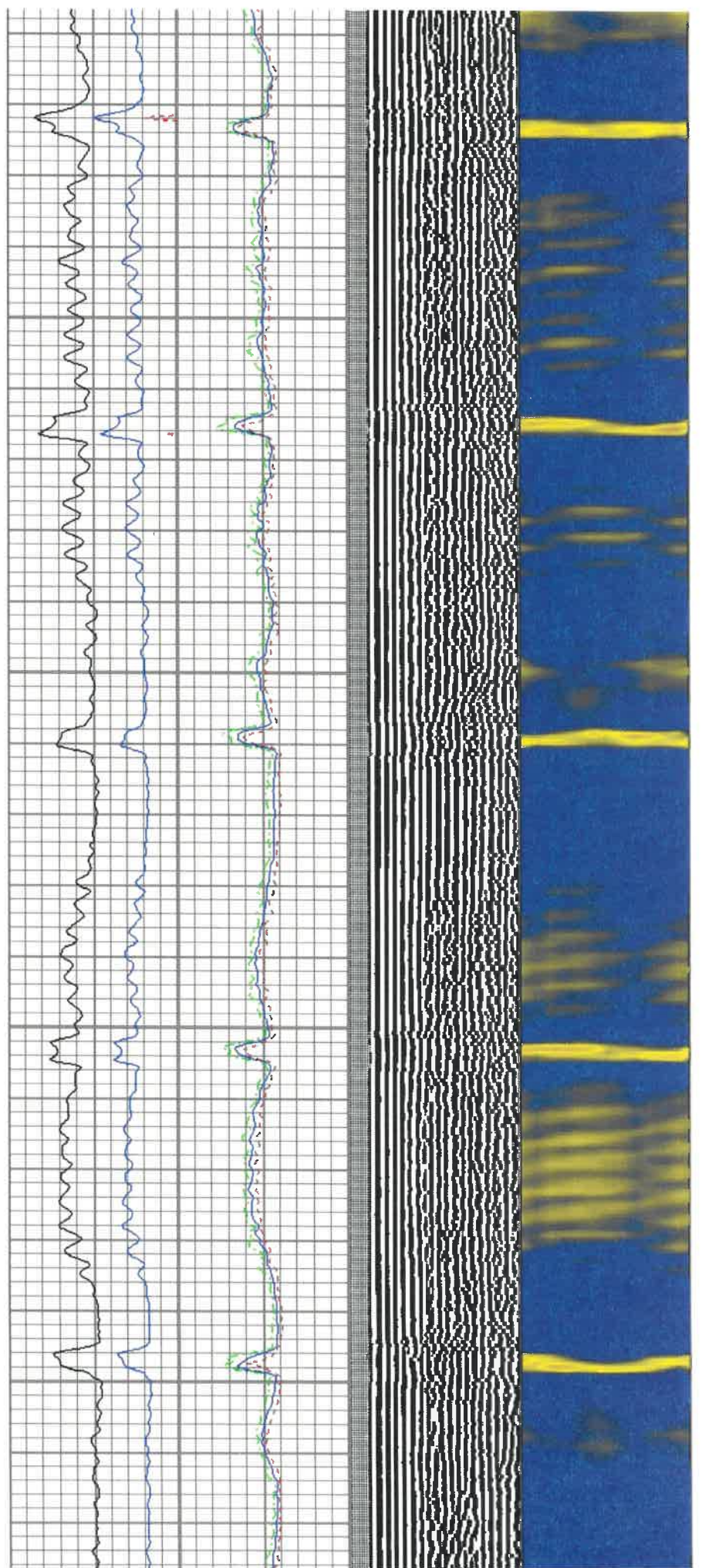


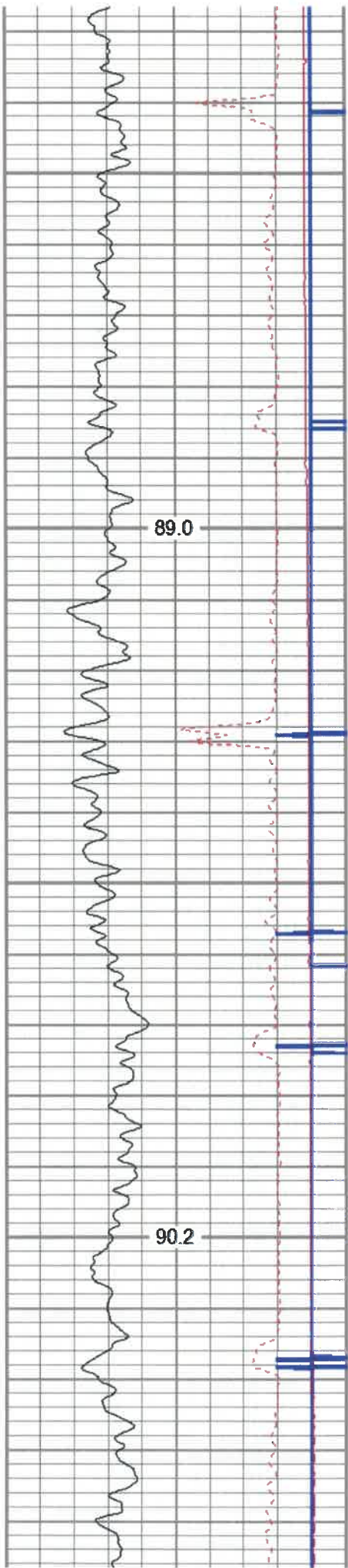




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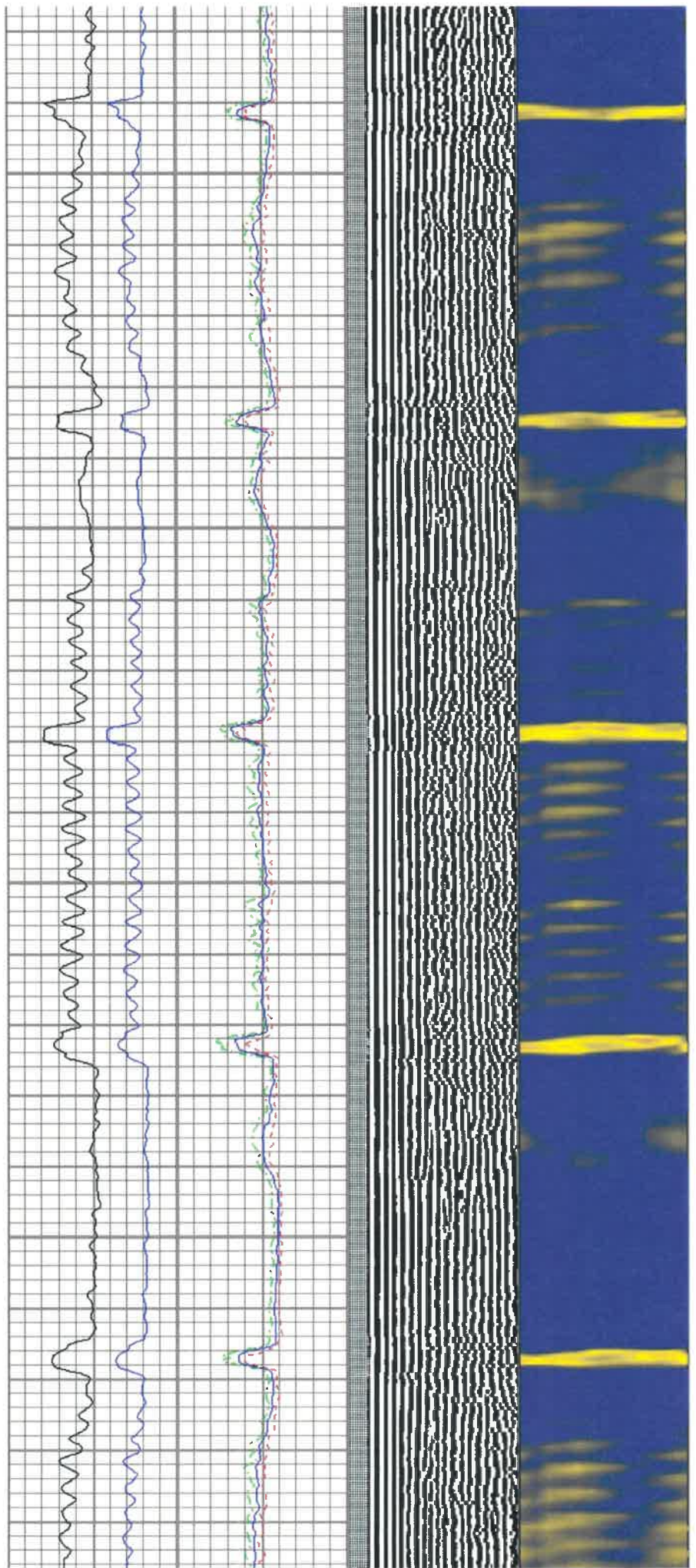
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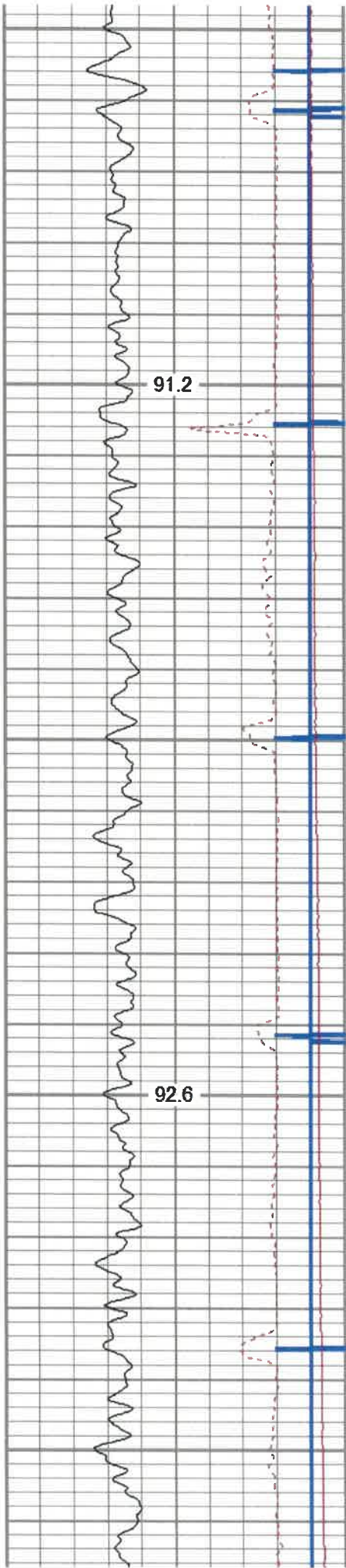




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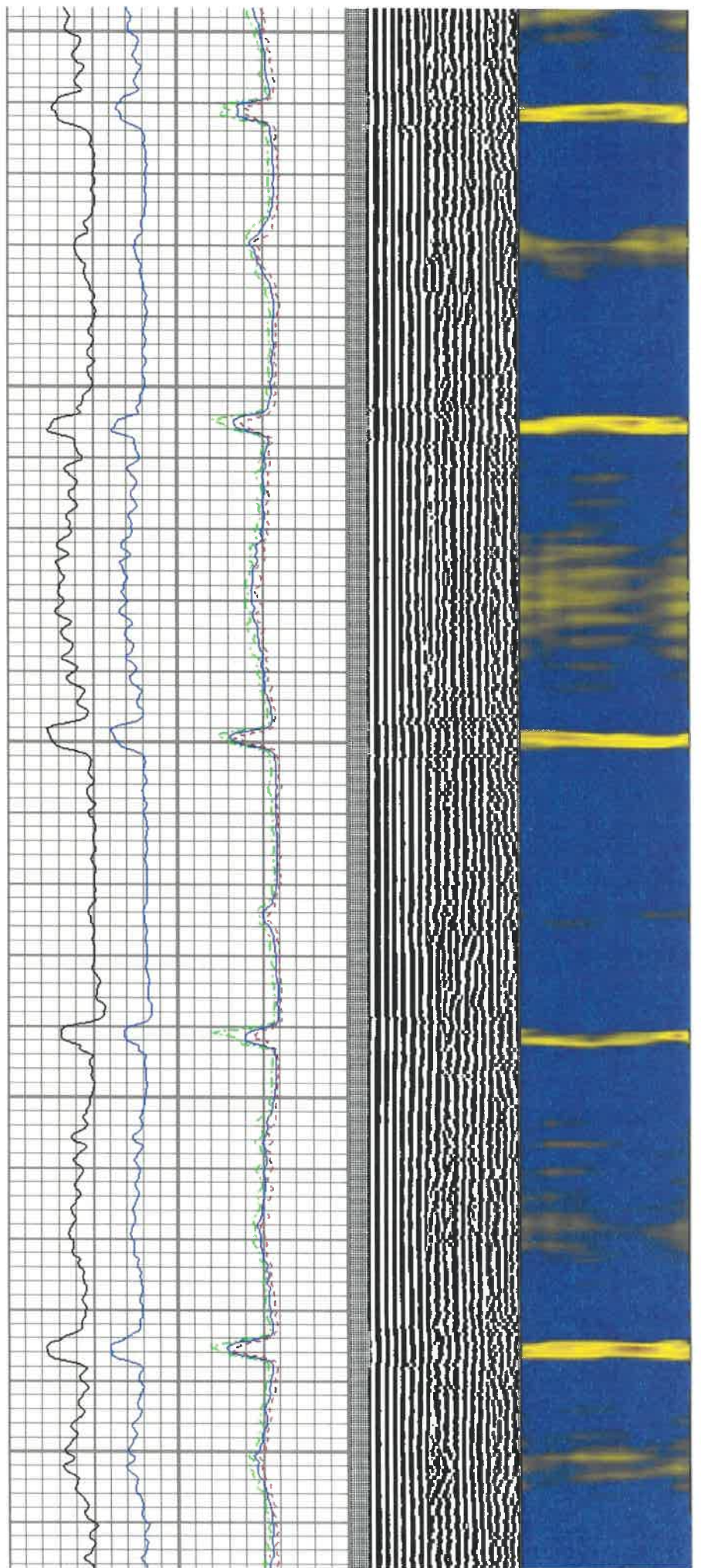
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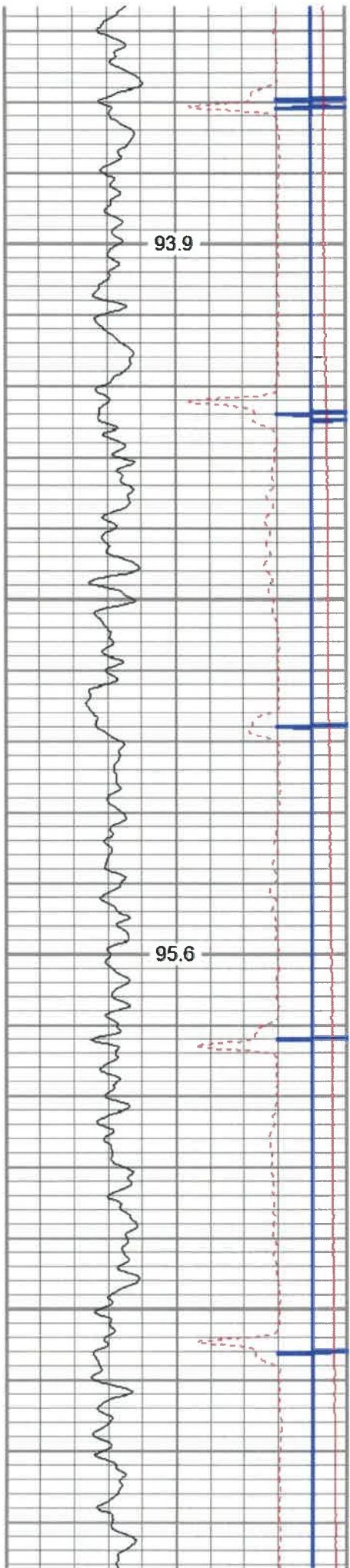




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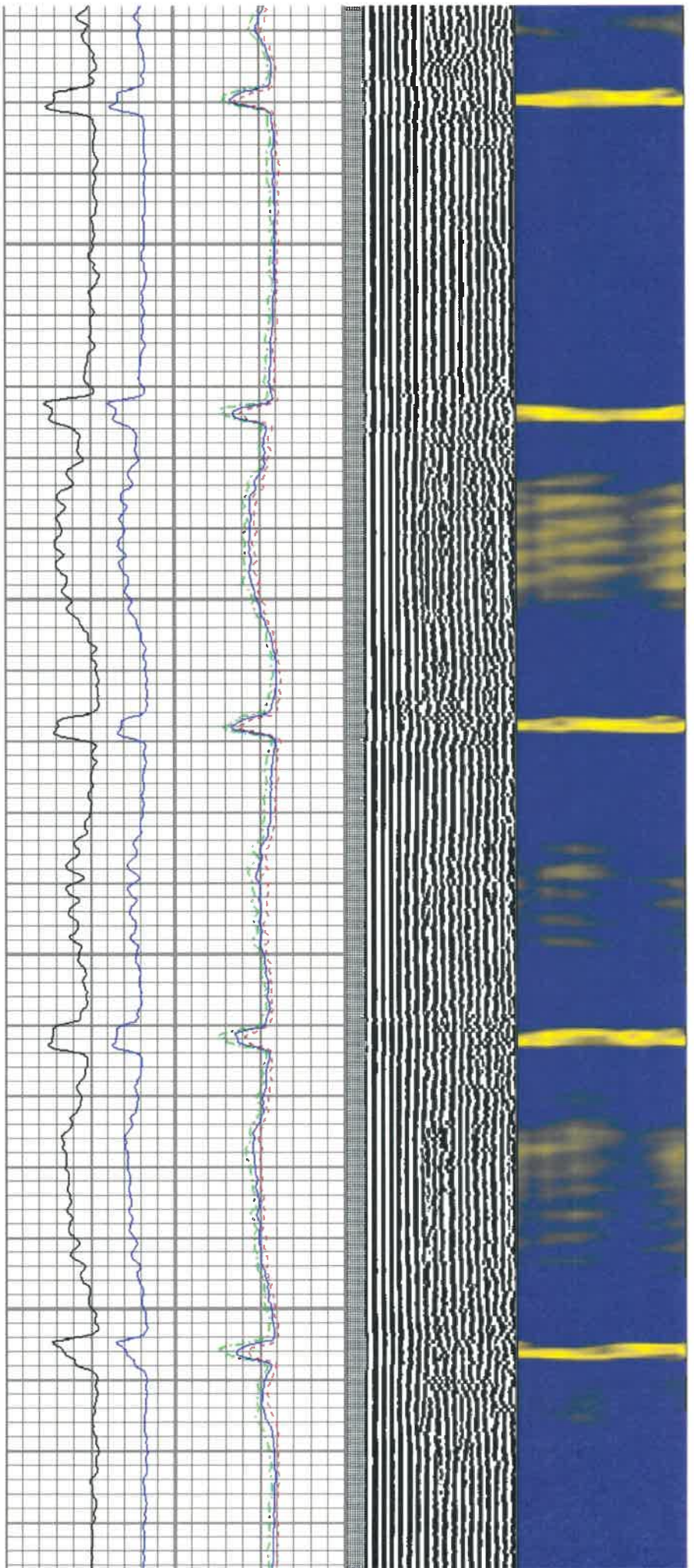
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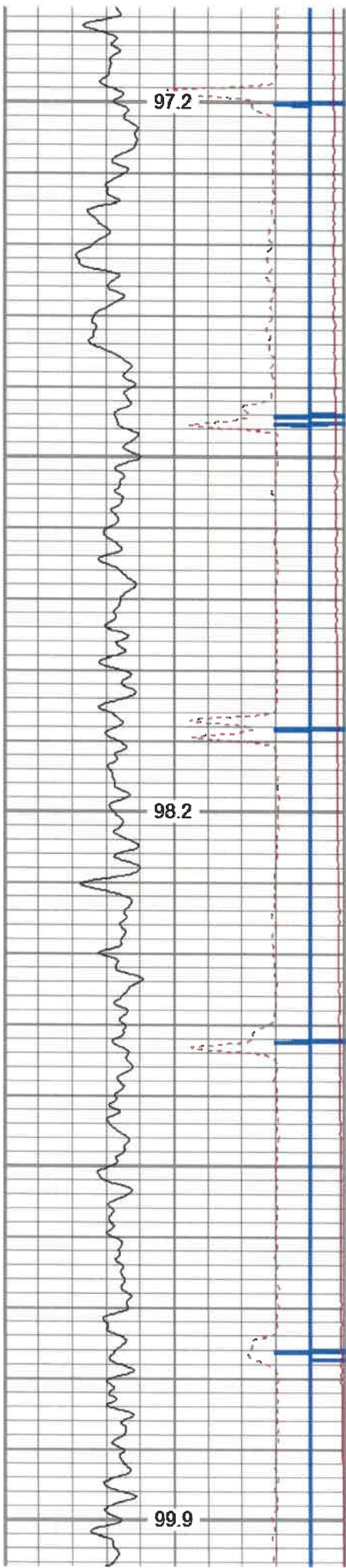




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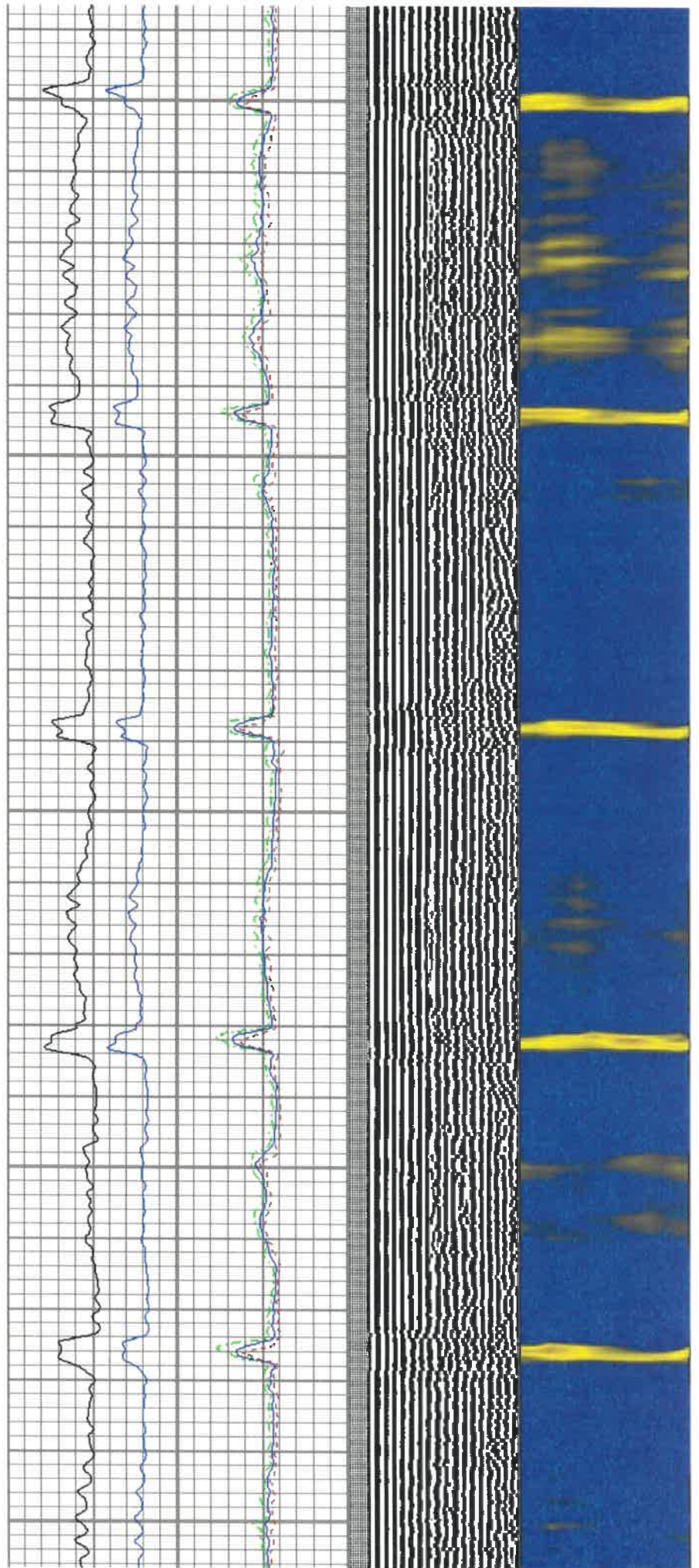


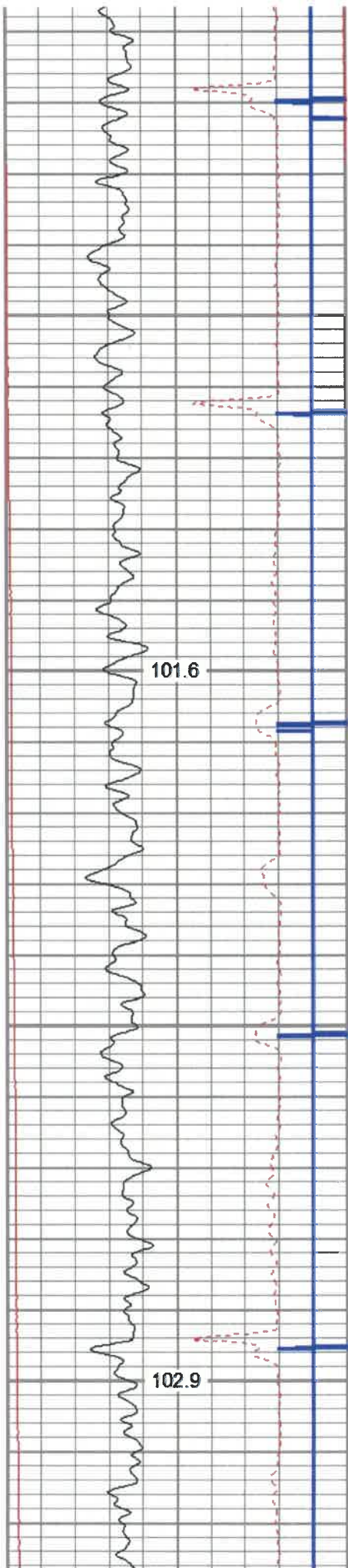


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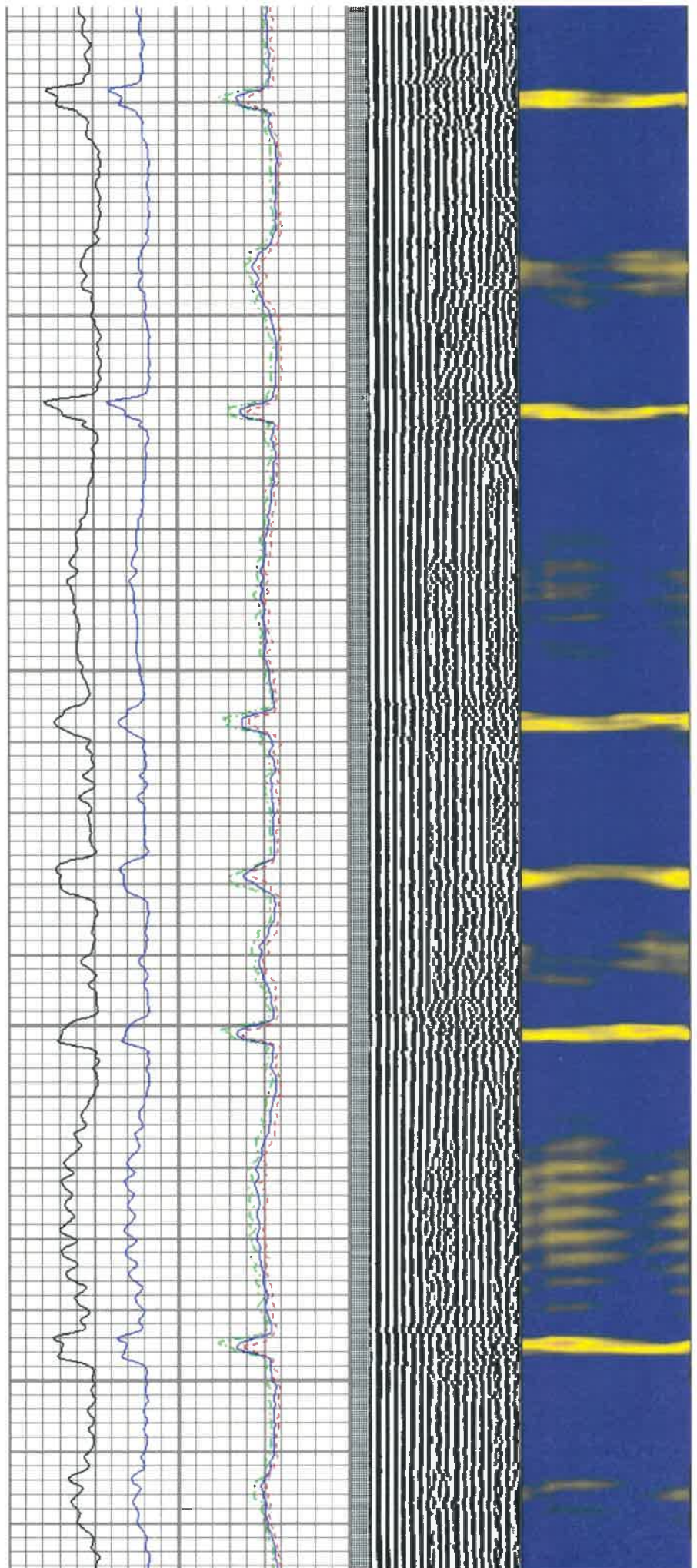
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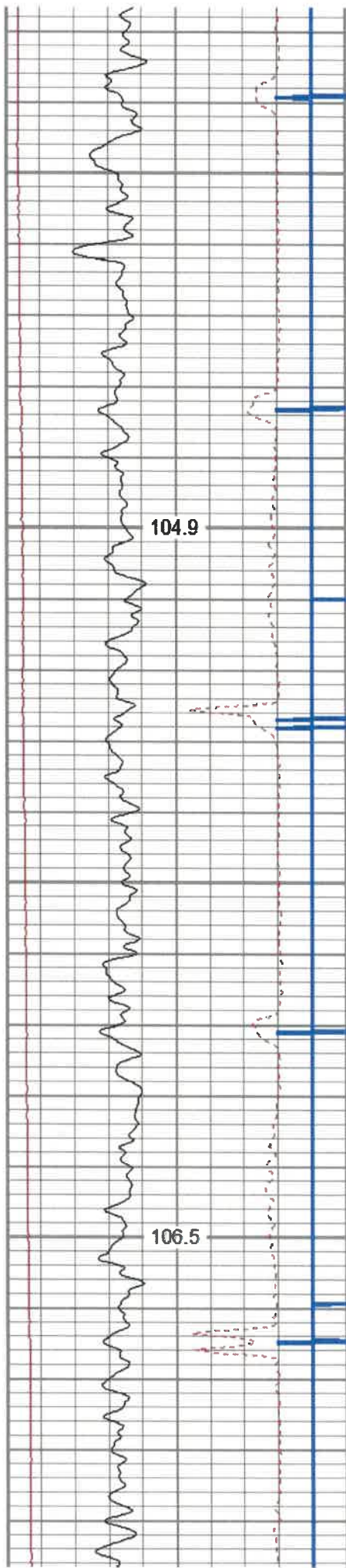




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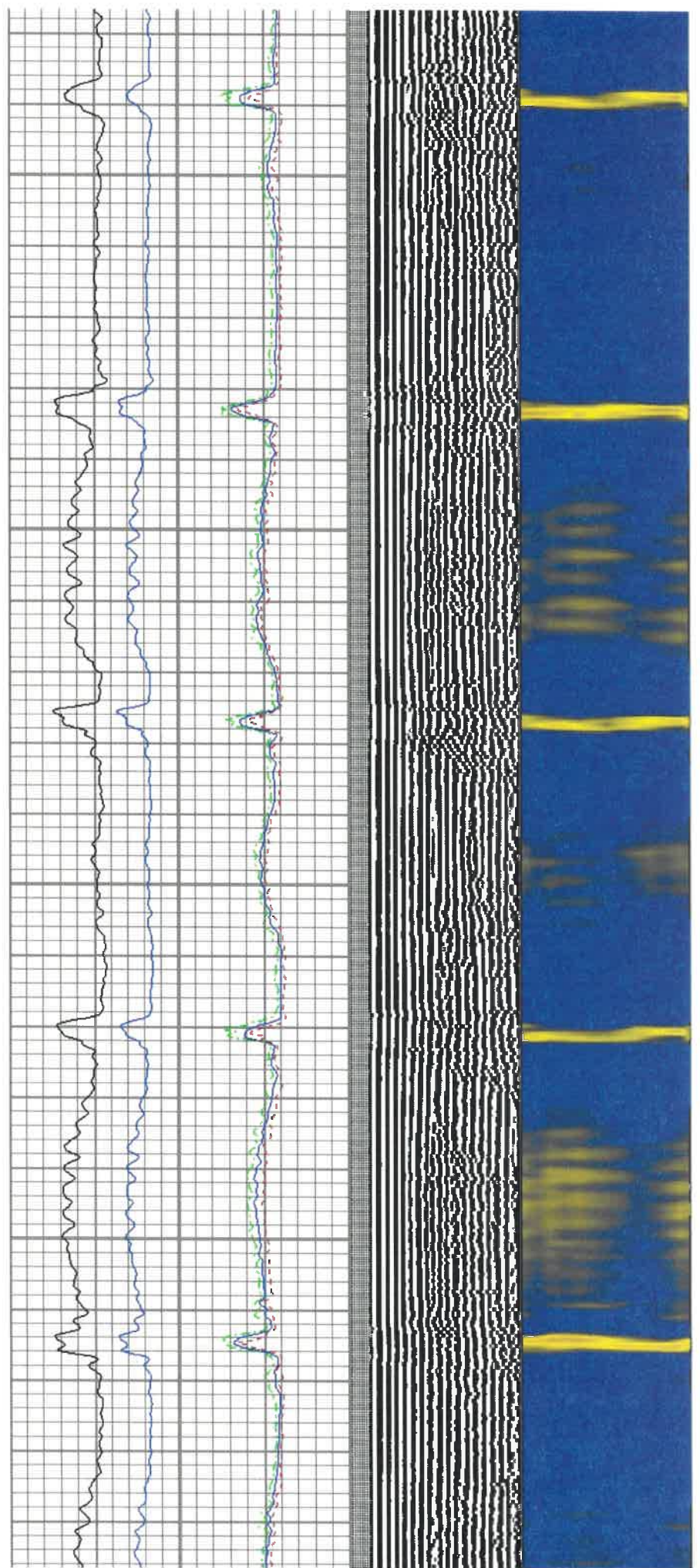
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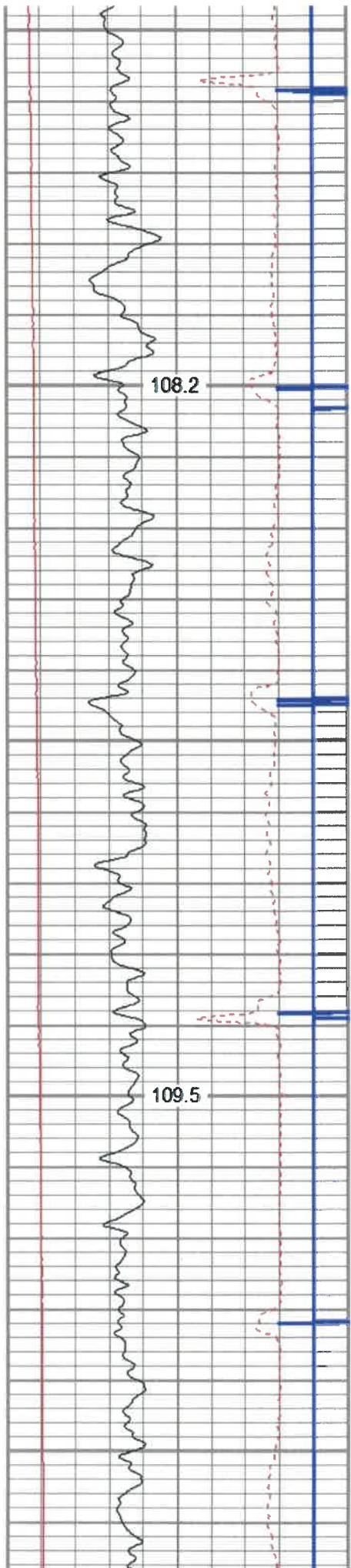




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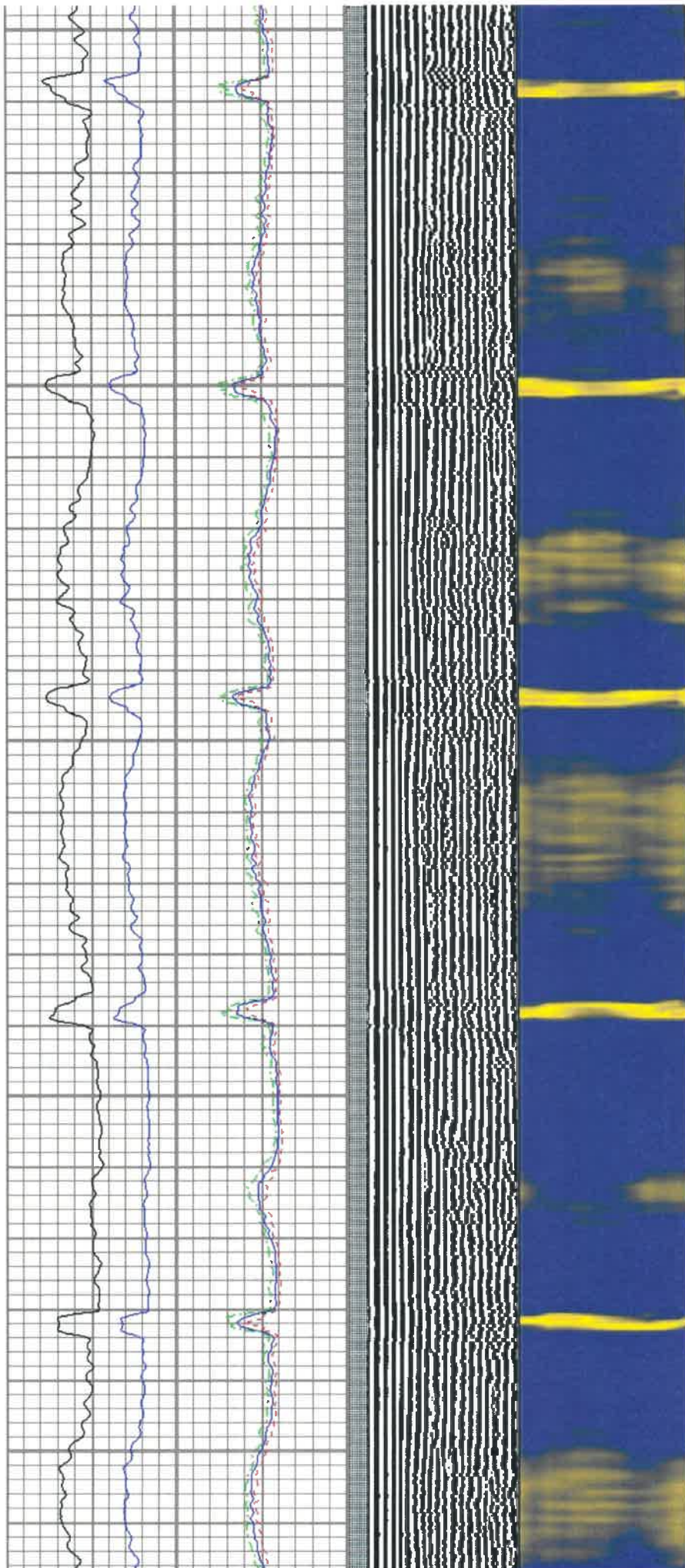
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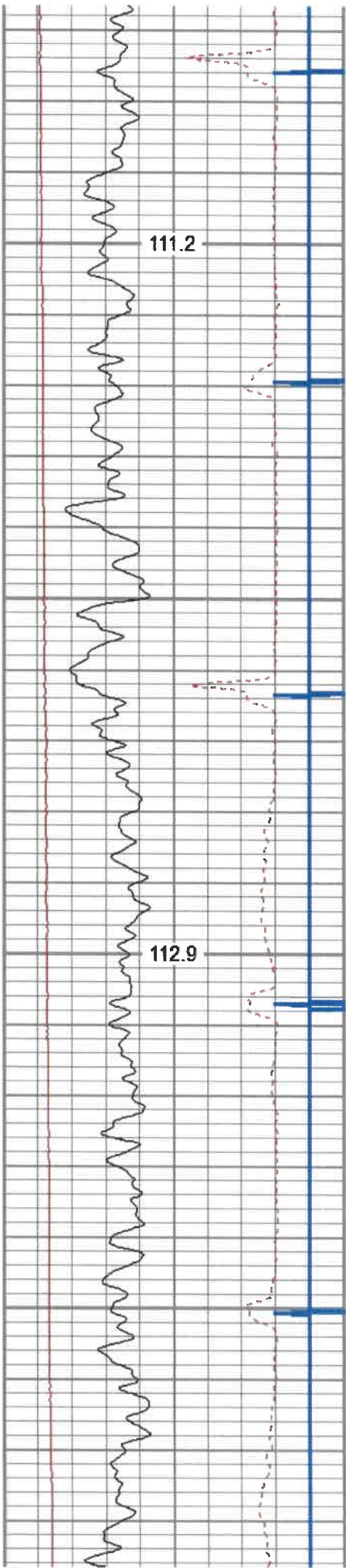


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4900

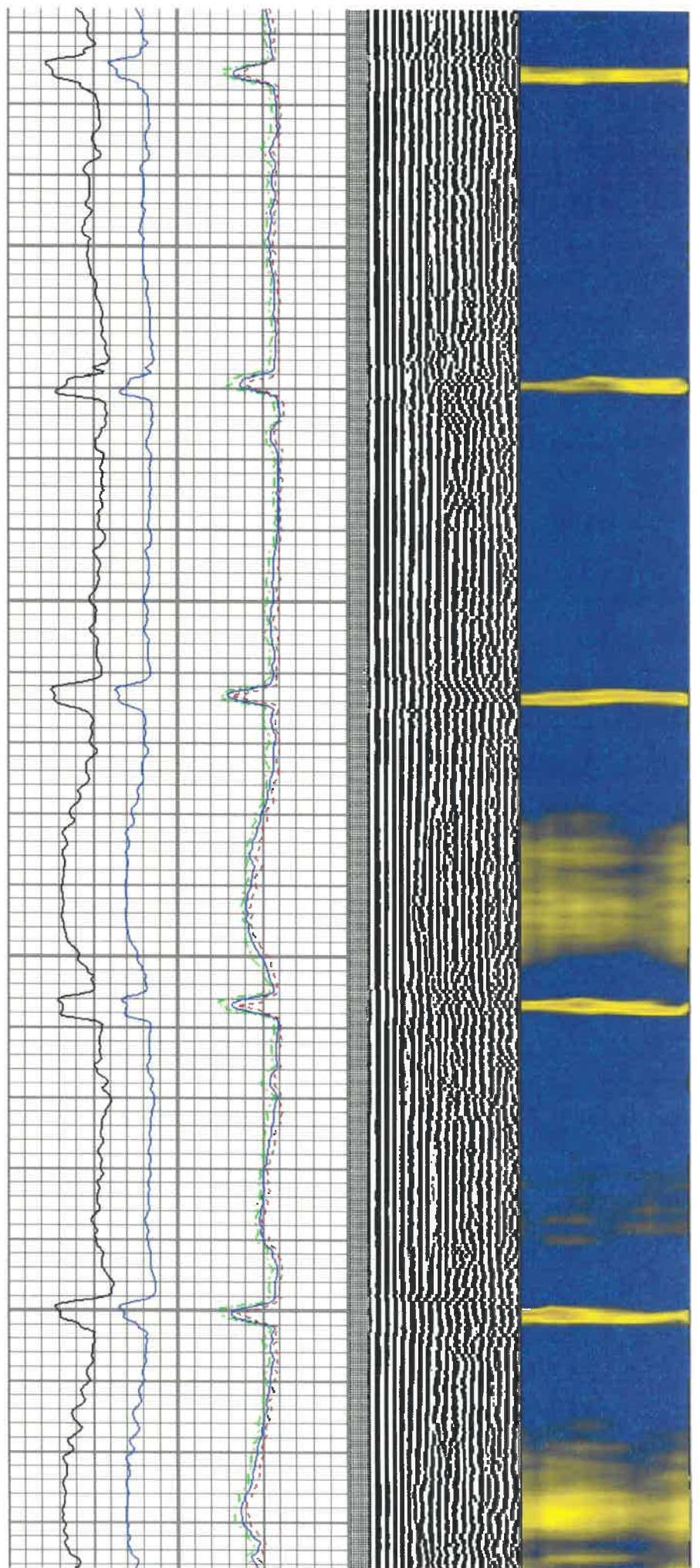


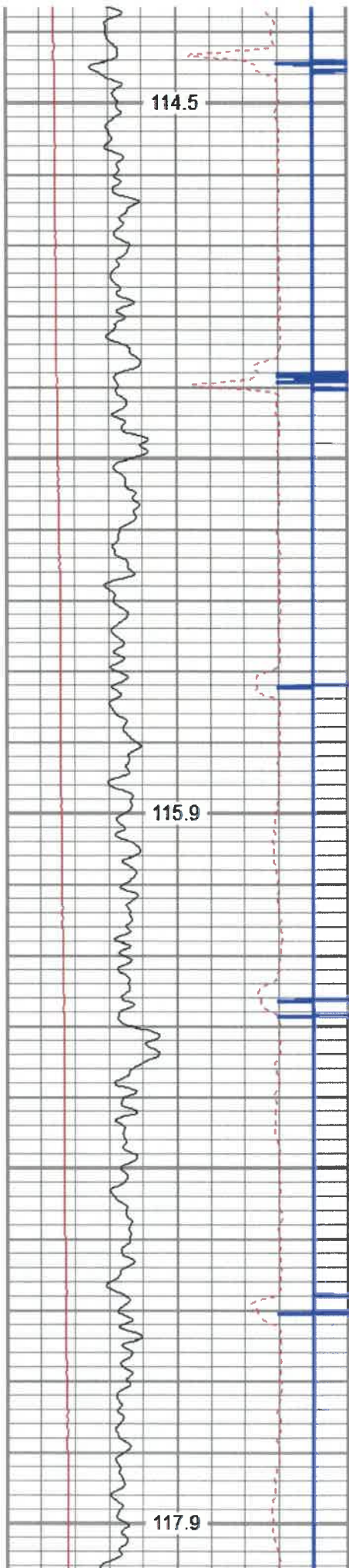




5000

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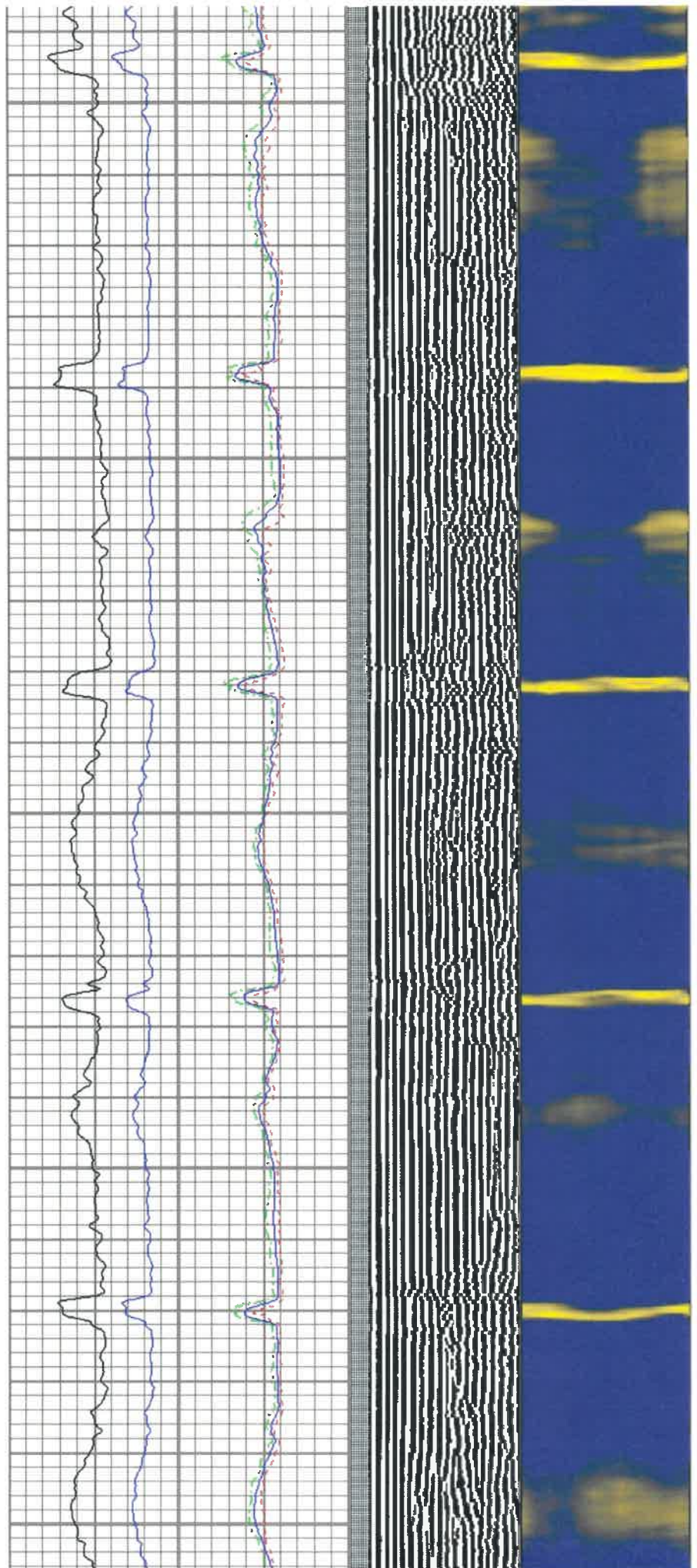


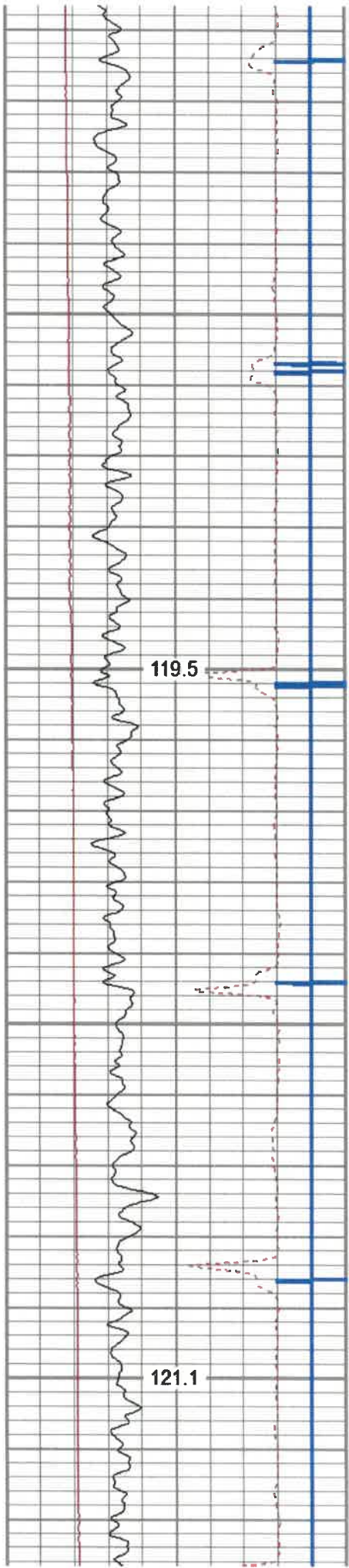


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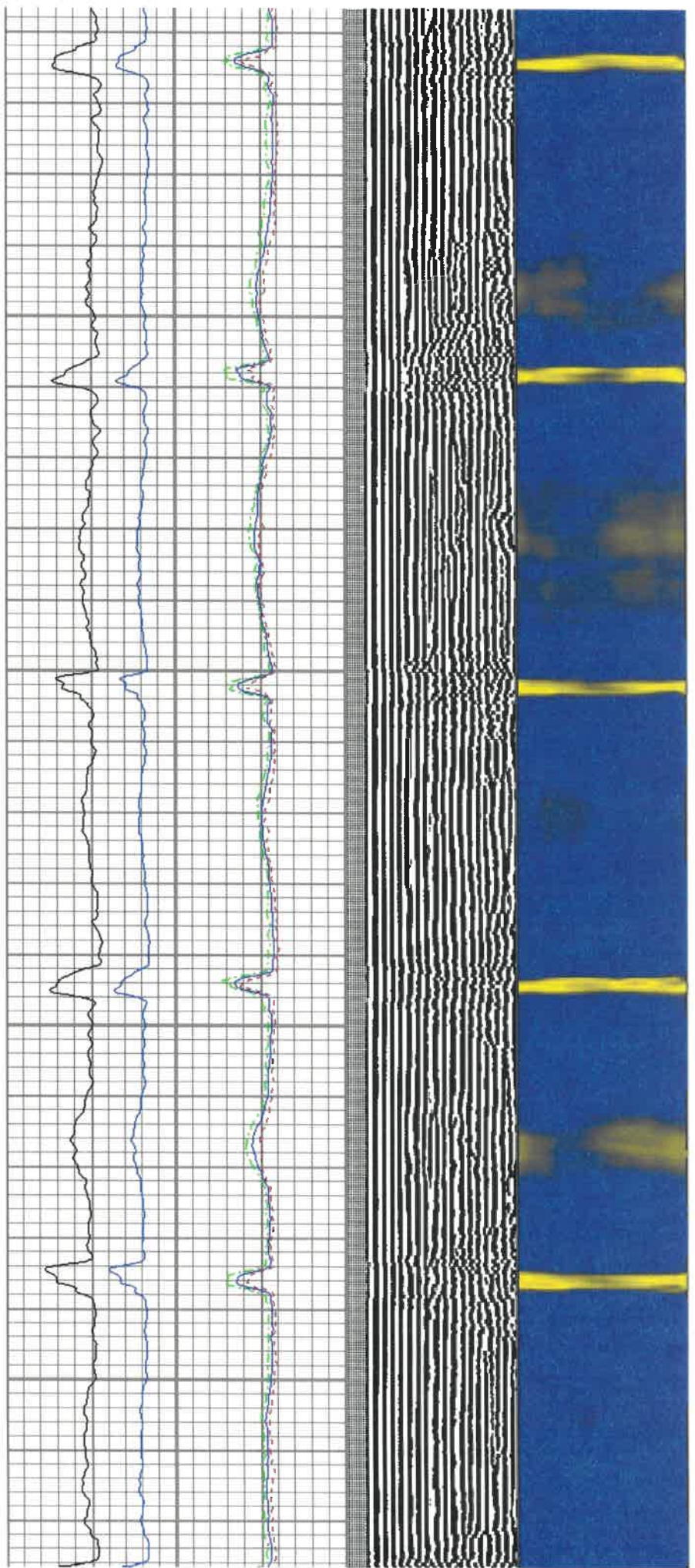
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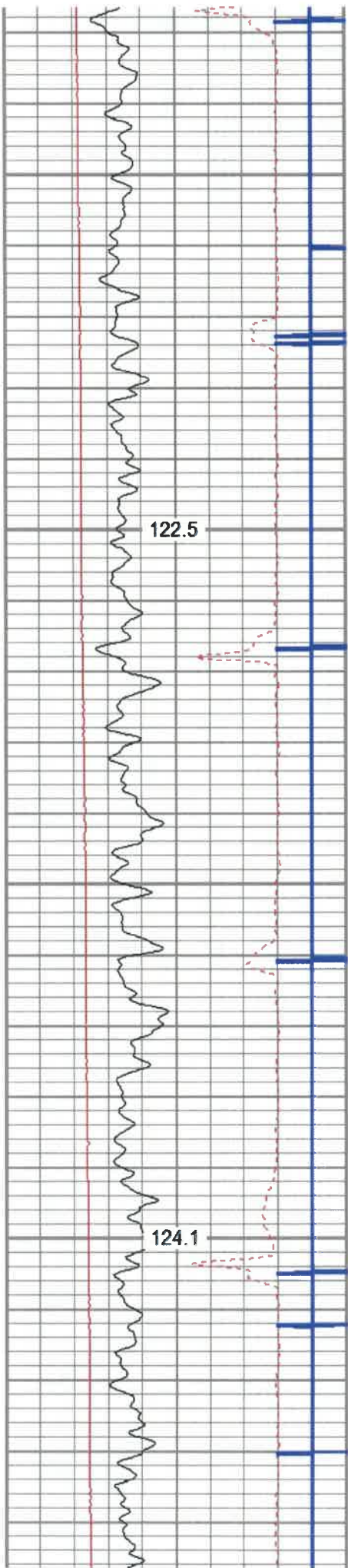




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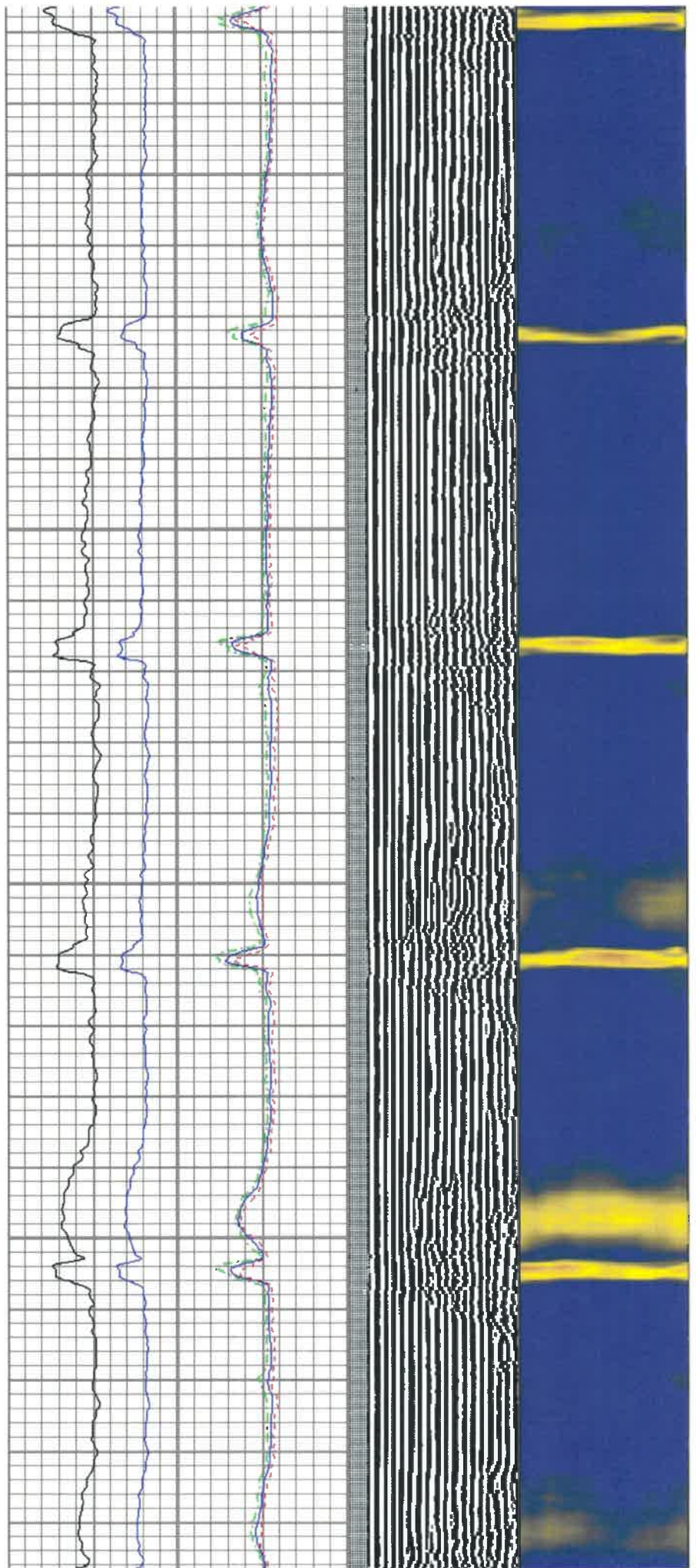
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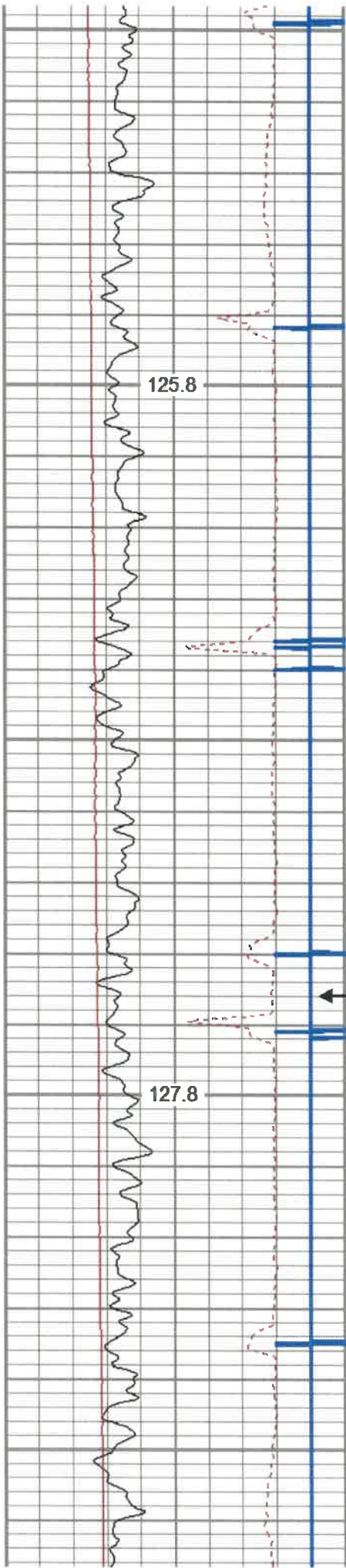




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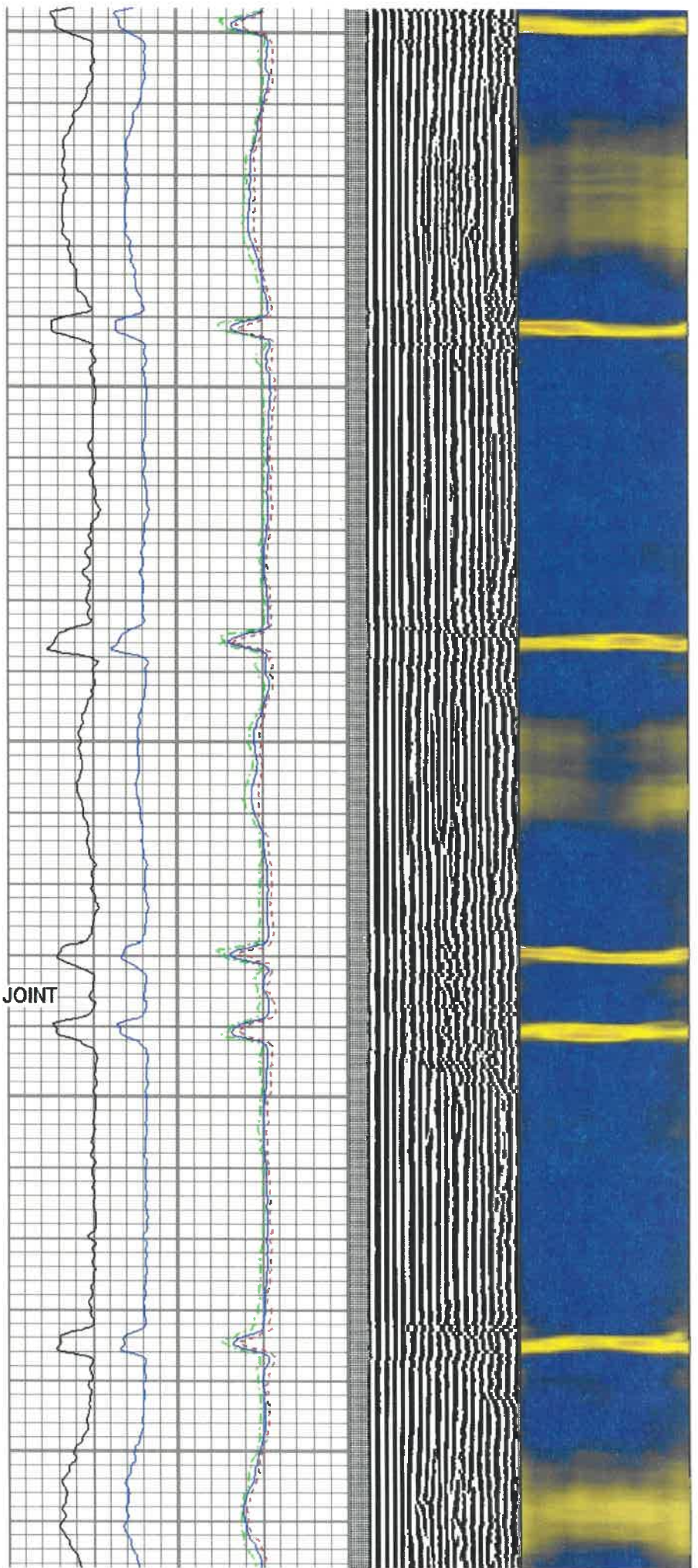


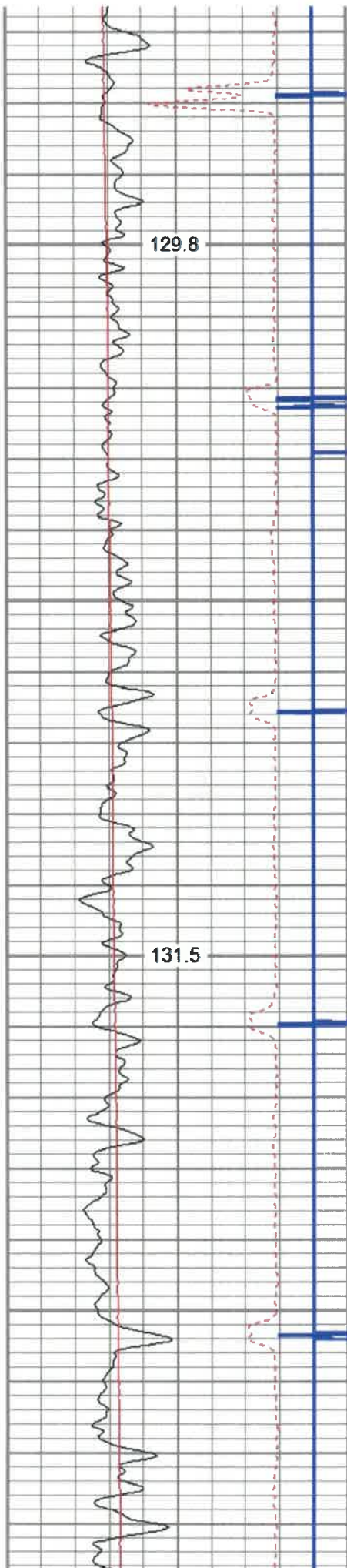


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← MARKER JOINT

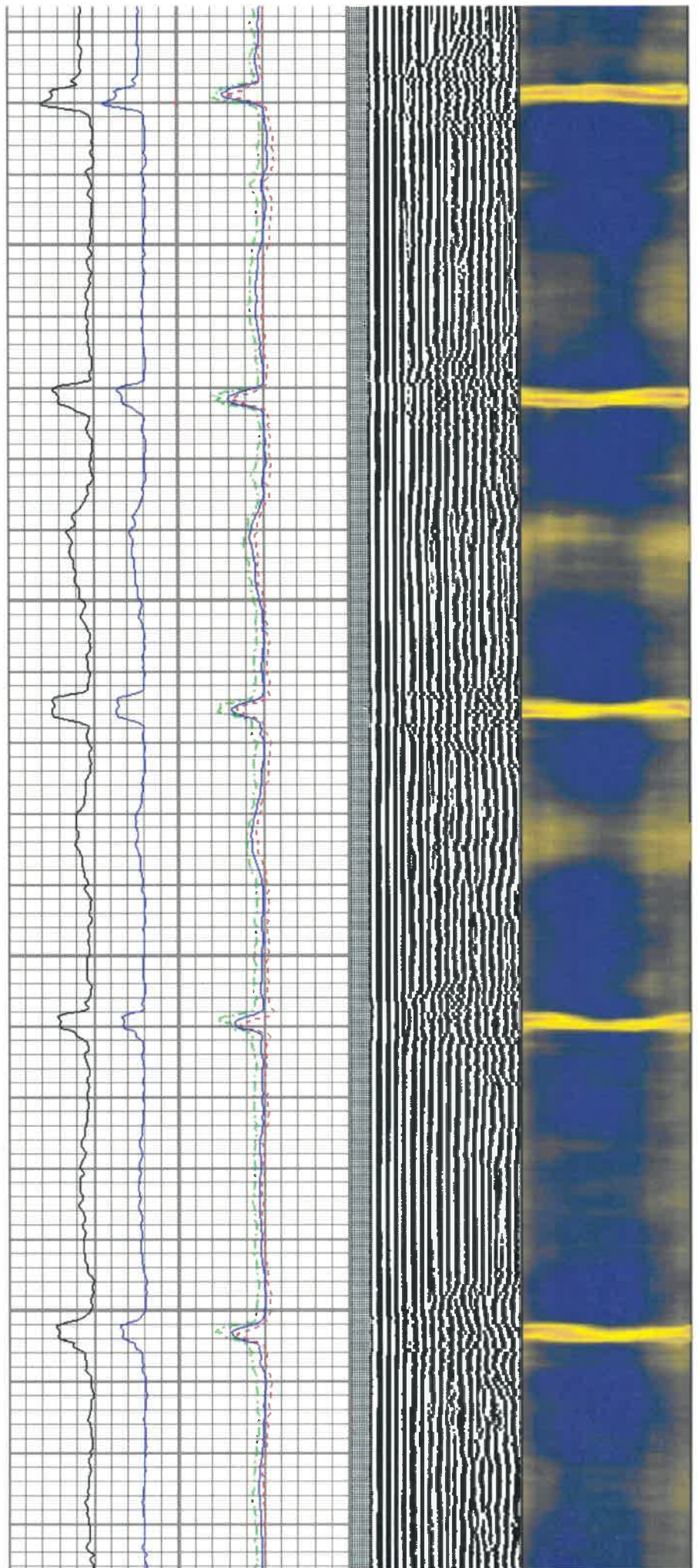
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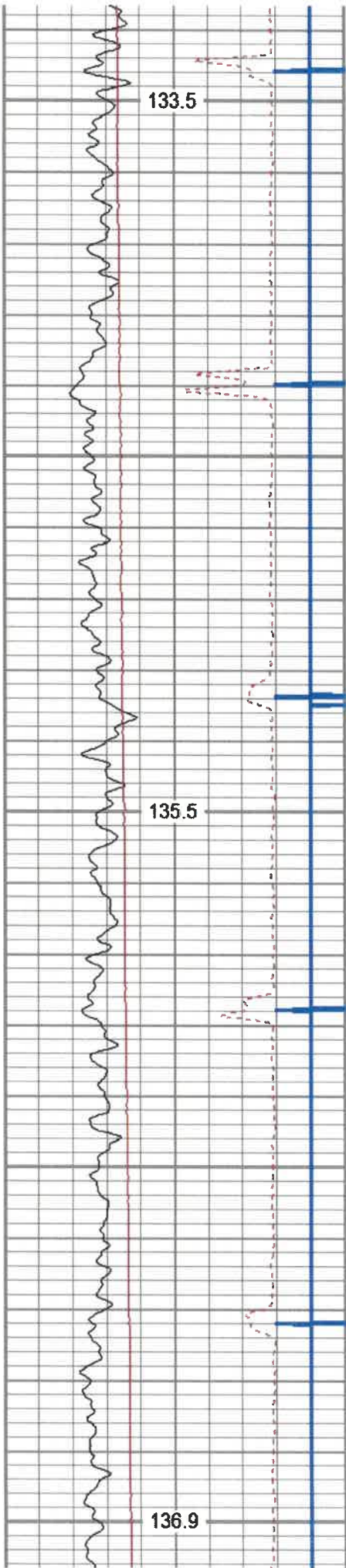




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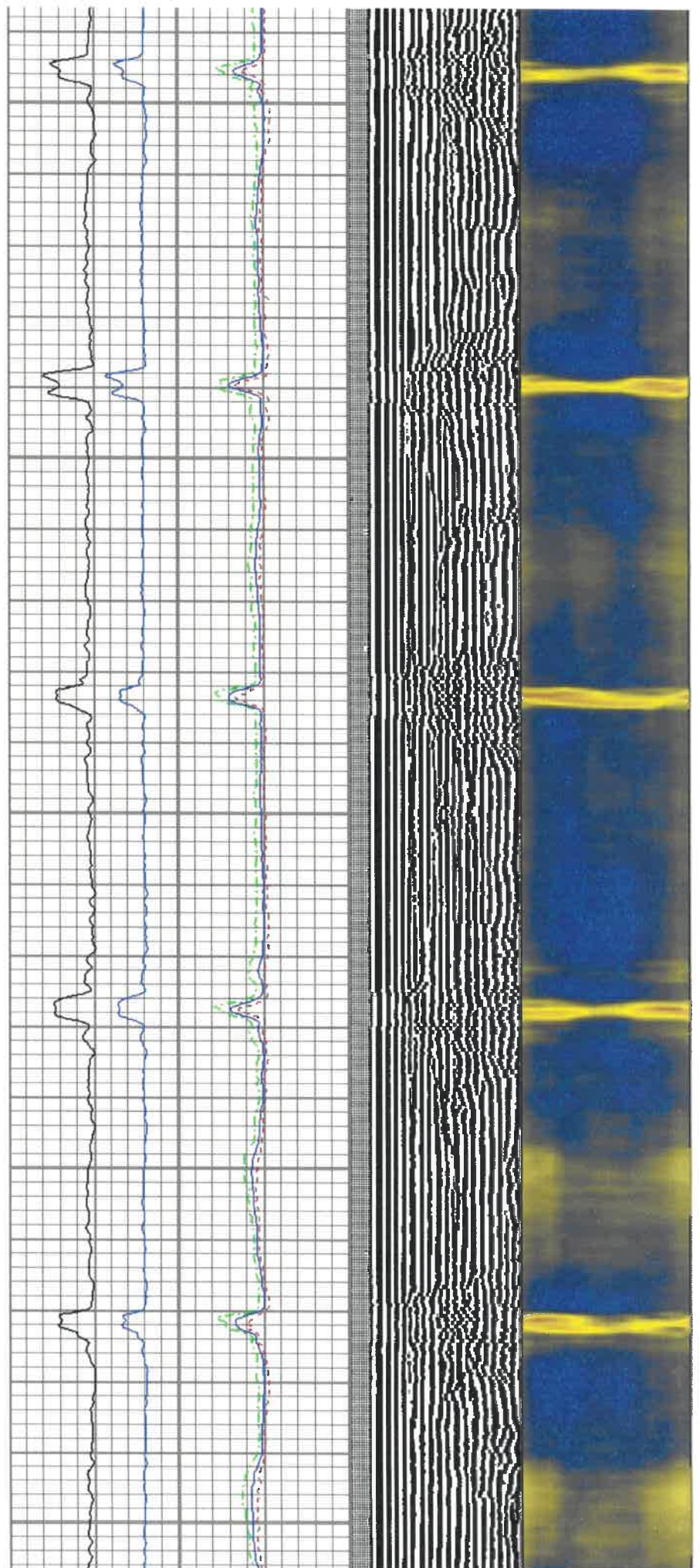


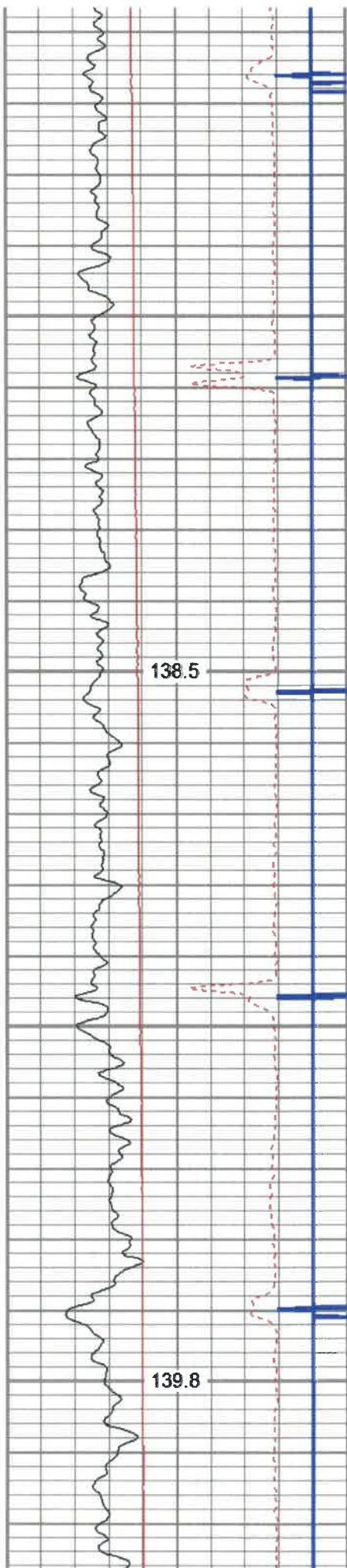


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6400

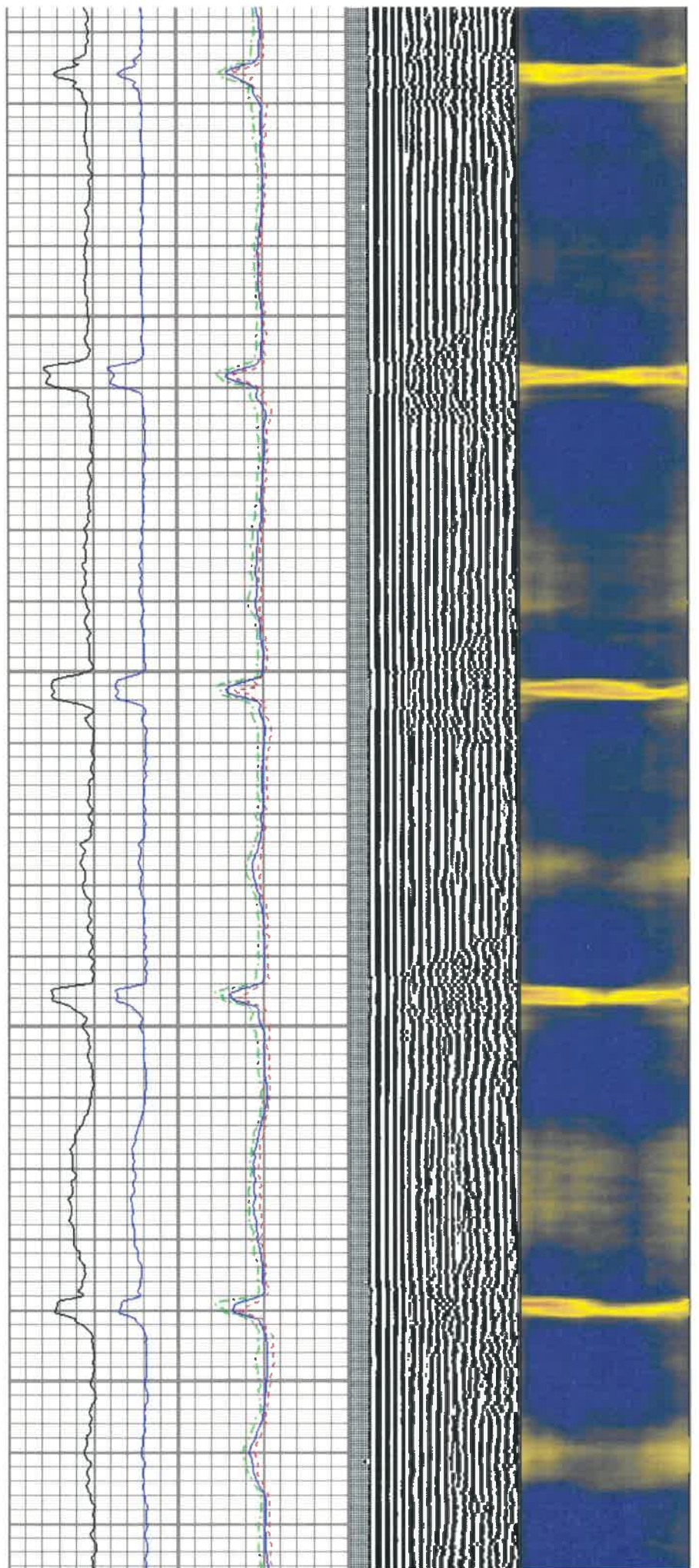
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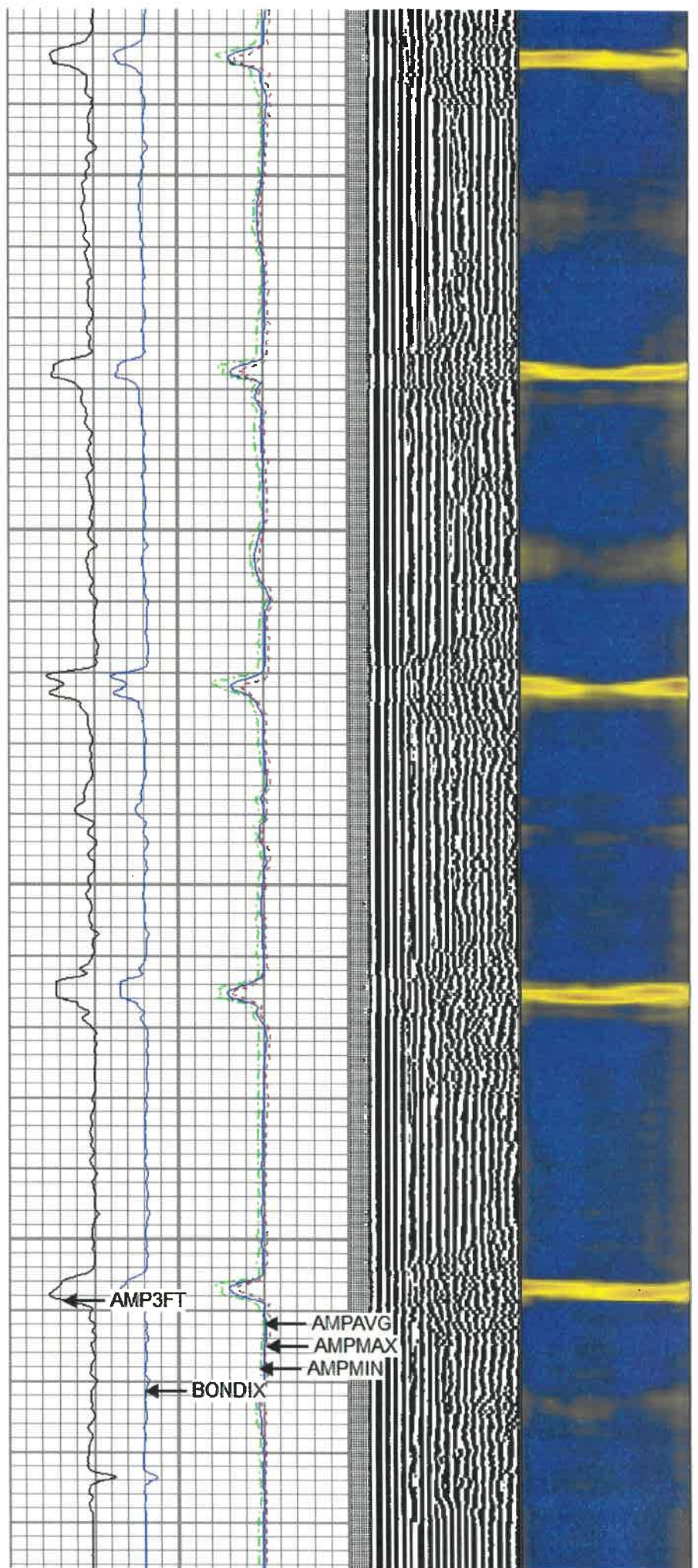
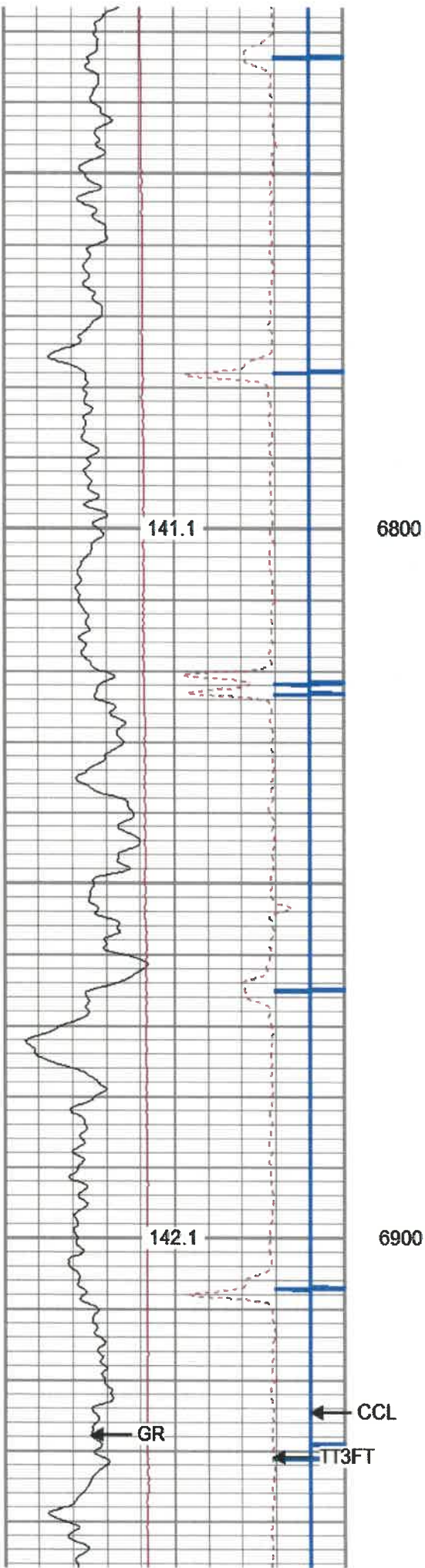


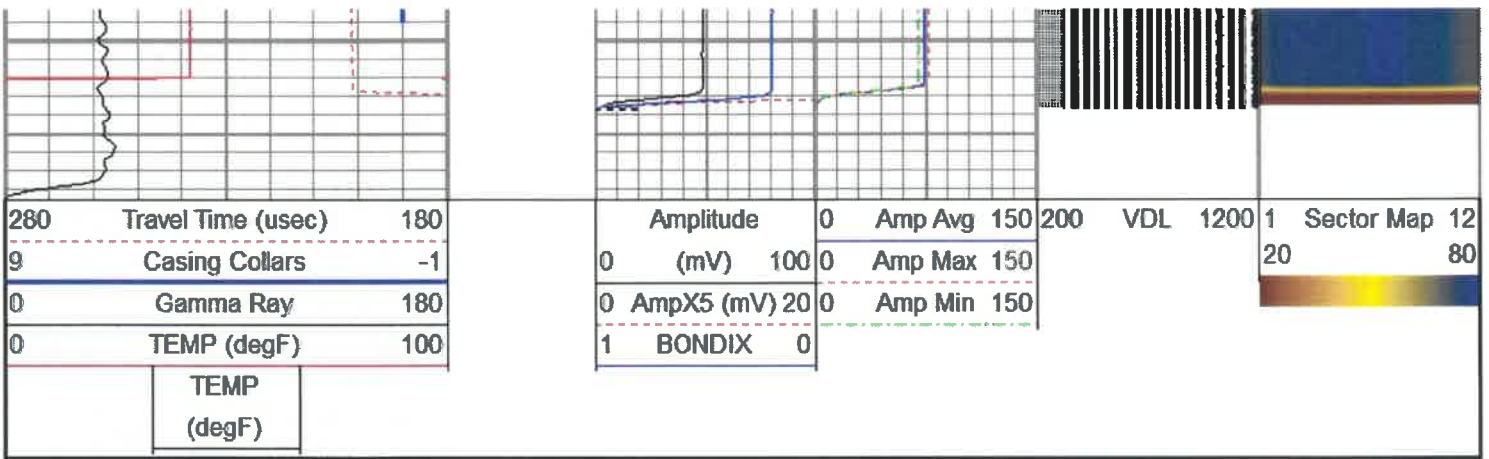
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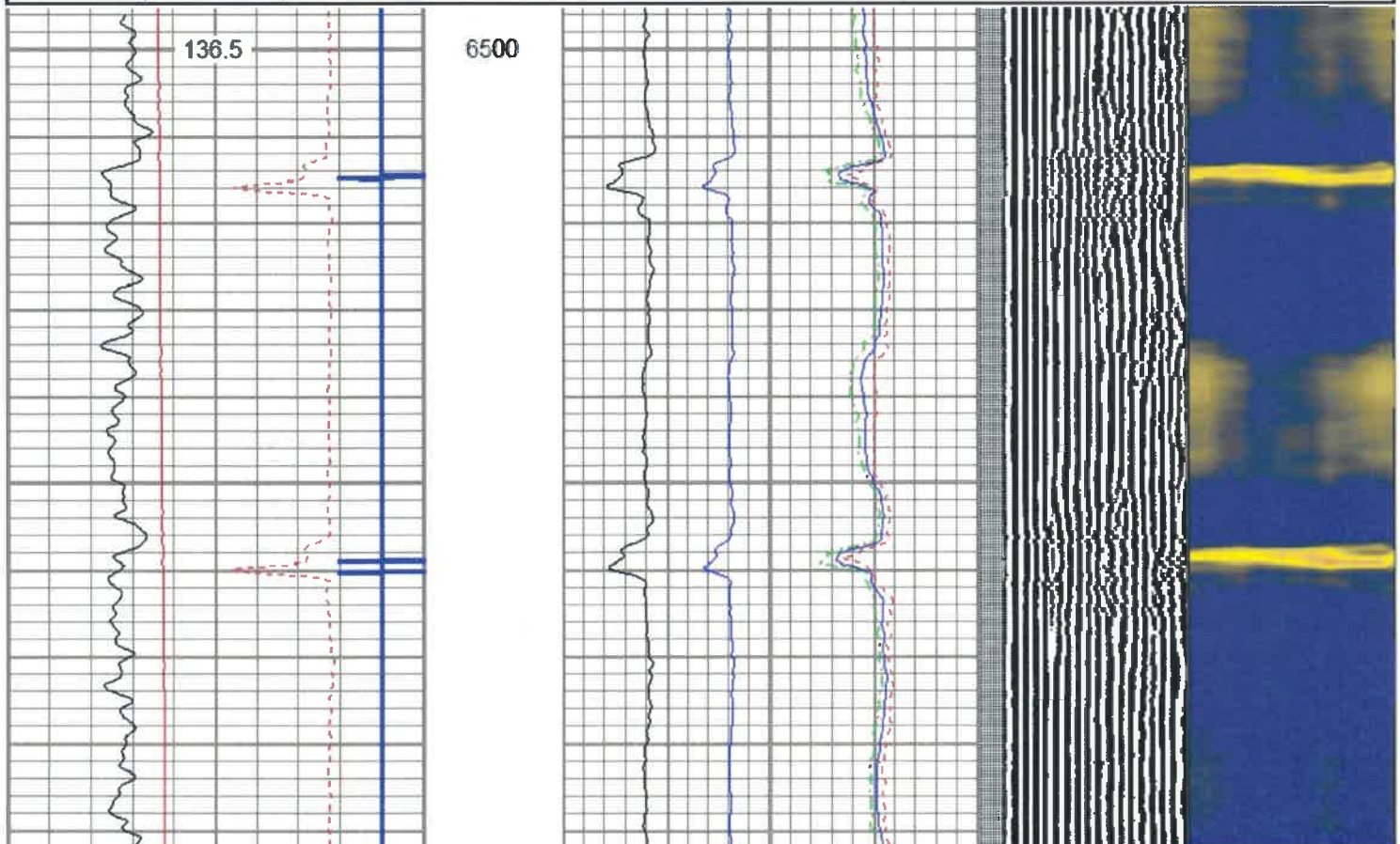
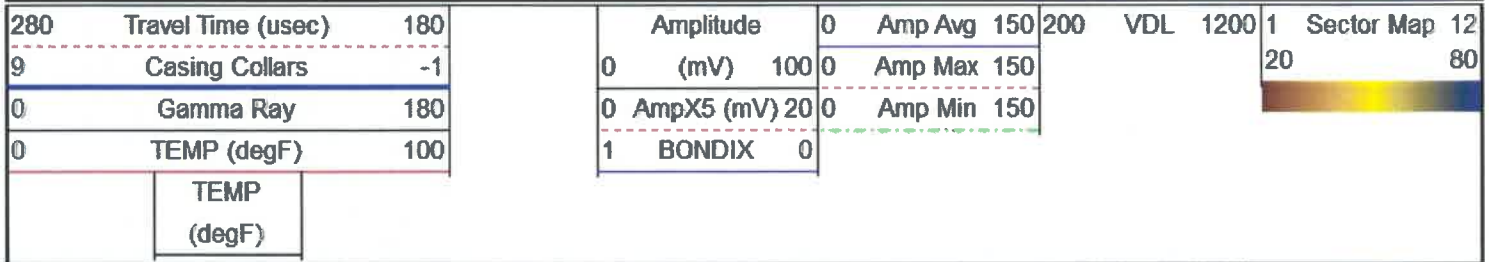


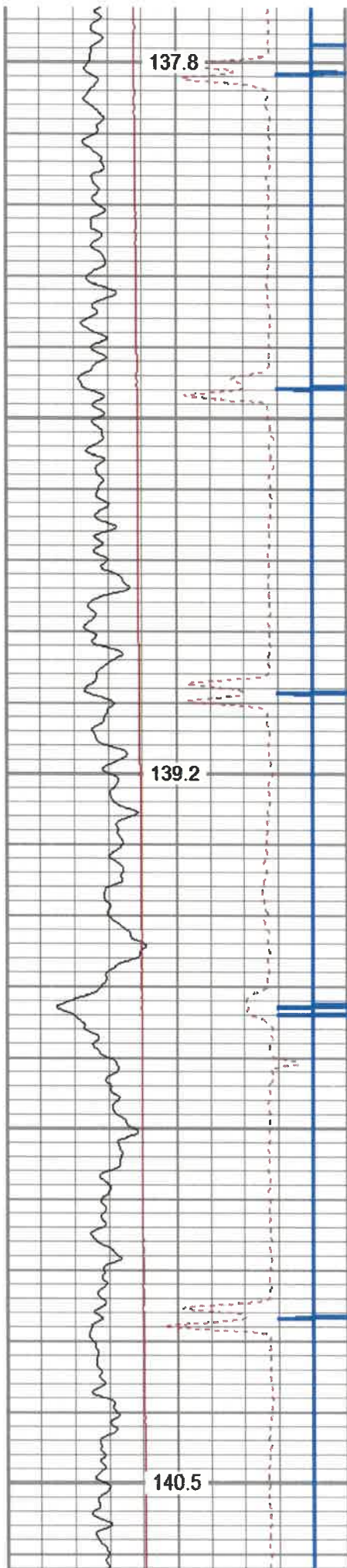




# 1500PSI REPEAT PASS

Database File: g:\antero-hogue pad\fender3h.db  
 Dataset Pathname: pass2  
 Presentation Format: antero  
 Dataset Creation: Fri Jul 03 08:59:09 2020 by Log 7.0 B1  
 Charted by: Depth in Feet scaled 1:240

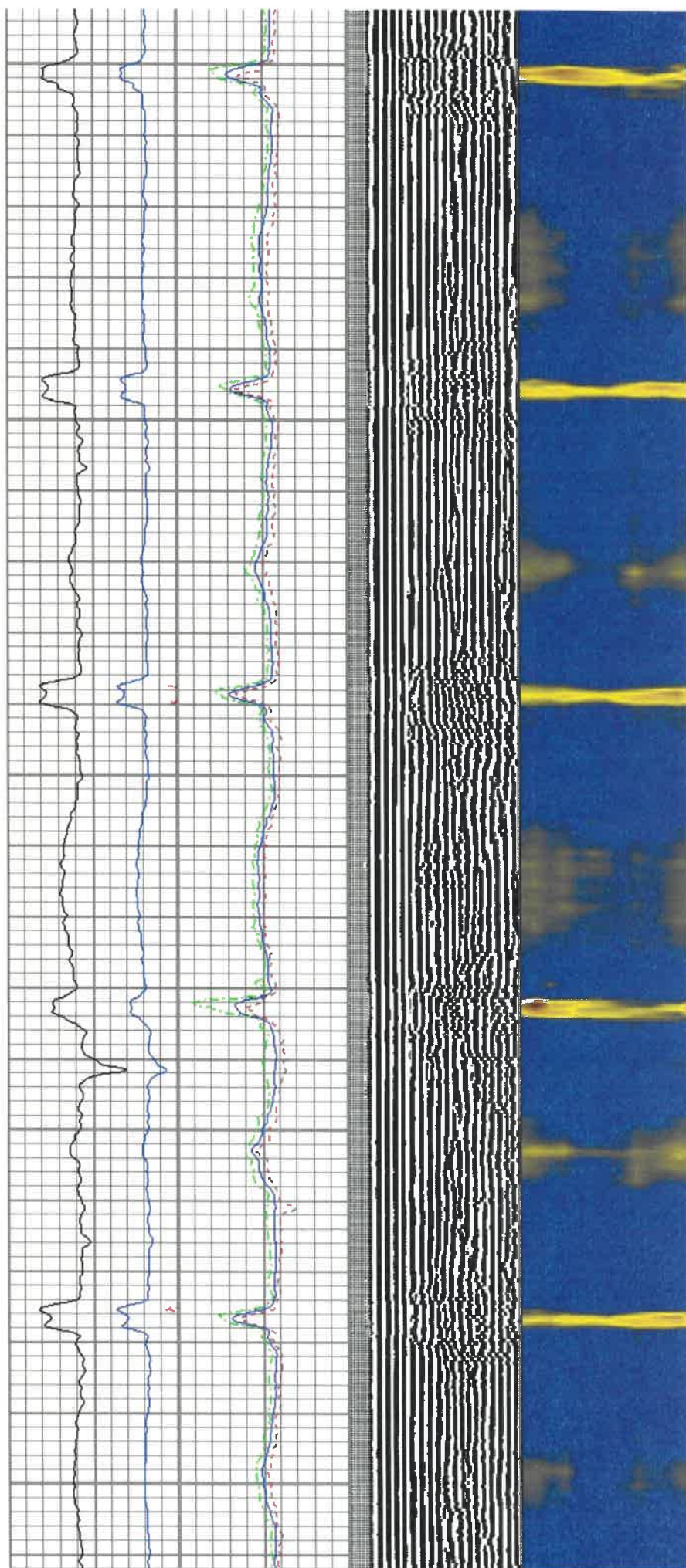


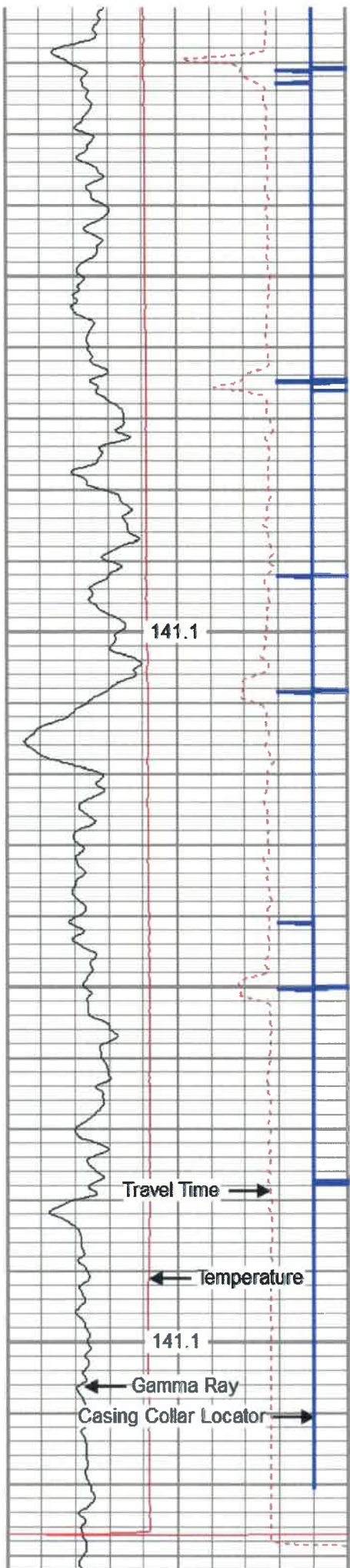


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6700

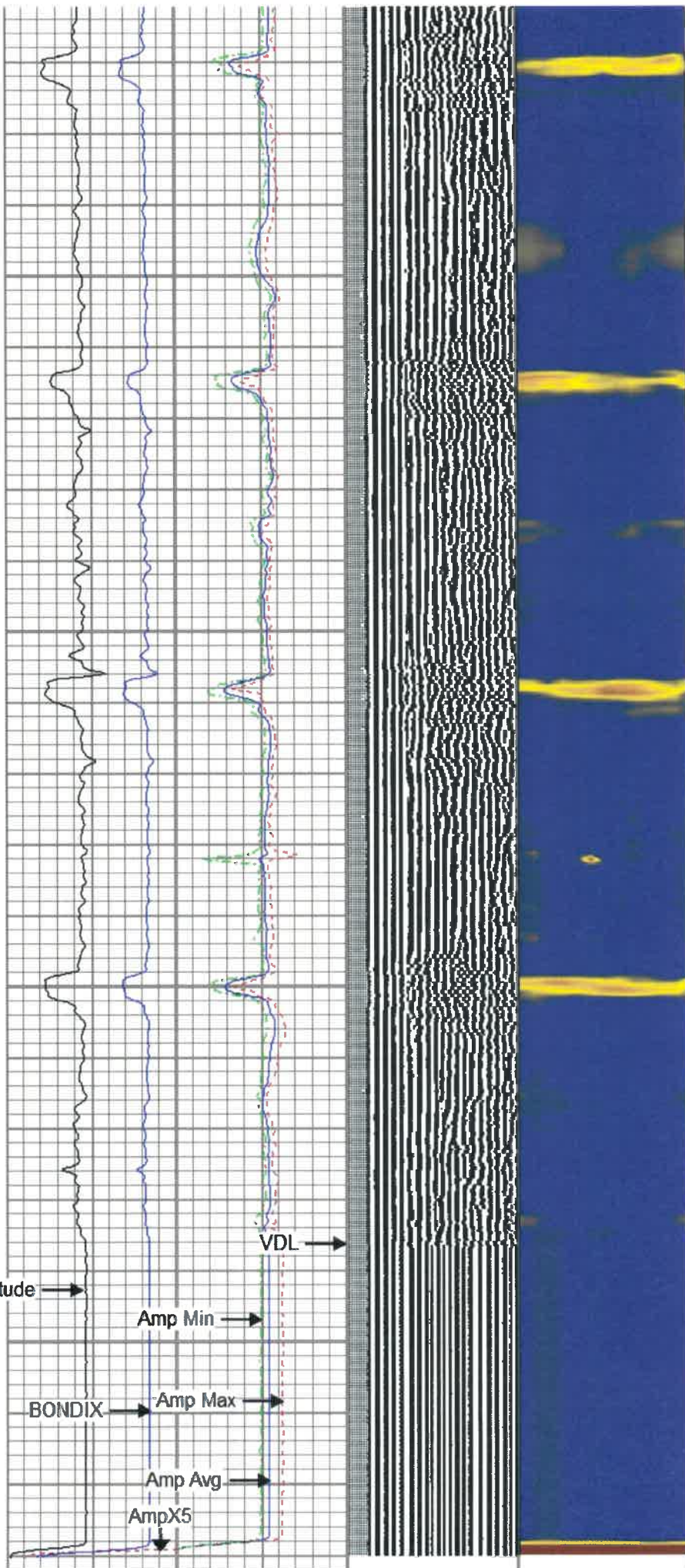
6800





6900

7000




280	Travel Time (usec)	180	Amplitude	0	Amp Avg	150	200	VDL	1200	1	Sector Map	12
9	Casing Collars	-1	0 (mV)	100	0	Amp Max	150			20		80
0	Gamma Ray	180	0	AmpX5 (mV)	20	0	Amp Min	150				
0	TEMP (degF)	100	1	BONDIX	0							
	TEMP (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						
WVFS2	11.48						
WVFS3	11.48			SCBL-Tek12 (IOL40-05) Tekco 400 Deg F 12 Sector RIB with Temp	9.13	3.25	135.00
WVFS4	11.48						
WVFS5	11.48						
WVFS6	11.48						
WVFS7	11.48						
WVFS8	11.48						
WVFS9	11.48						
WVFS10	11.48						
WVFS11	11.48						
WVFS12	11.48						
WV3FT	10.73						
WVFCAL	10.73						
WV5FT	9.73						
WVTEMP	6.40						
WVFSYNC	6.40		2.75 2 3/4" Tekco Adjustable Centralizer	2.73	2.75	25.00	

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: fender3h.db: field/well/run1/pass4			
			Total Length: 20.07 ft			
			Total Weight: 250.00 lb			
			O.D.: 3.25 in			

Calibration Report		
Database File:	g:\antero-hogue pad\fender3h.db	
Dataset Pathname:	pass3.1	
Dataset Creation:	Tue Jul 07 12:38:43 2020 by Calc Std Casedhole 10081	
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	FENDER 3H
	Field	MARCELLUS
	County	TYLER
	State	WV
	Country	