



**PIONEER**  
Pioneer Energy Services

**CEMENT  
BOND LOG  
WITH GAMMA RAY**

Company **BONANZA CREEK ENERGY**  
Well **STATE PRONGHORN W-32-31MRLNB**  
Field **WATTENBERG**  
County **WELD**  
State **COLORADO**

Company **BONANZA CREEK ENERGY**  
Well **STATE PRONGHORN W-32-31MRLNB**  
Field **WATTENBERG**  
County **WELD** State **COLORADO**

Location: API # : 05123423510000 Other Services  
SHL: 1306' FNL & 753' FEL NENE  
LAT: 40.36098  
LONG: -104.22622  
SEC 32 TWP 5N RGE 61W  
Permanent Datum GL Elevation 4565'  
Log Measured From KB  
Drilling Measured From KB ... 17' ABOVE GL  
Elevation 4582'  
D.F. 4582'  
G.L. 4565'

Date of Service	DECEMBER 8, 2015		
Run Number	ONE		
Depth Driller or PBTD	N/A		
Depth Logger	5700'		
Bottom Log Interval	5698'		
Top Log Interval	SURFACE		
Open Hole Size	8.75"		
Type Fluid	FSW		
Fluid Level	30'		
Fluid Density	8.33 PPG		
Max. Recorded Temperature	178 F		
Max. Wellhead Pressure	0 PSI		
Wellhead Connection	OPEN		
Estimated Cement Top	SEE LOG		
Unit Number	P1		
Wireline Size	9/32"		
Location	FT MORGAN, CO		
Recorded By	SCHUMAN		
Witnessed By	MR K. BUNKER		
	Size	Wt/Ft	Top
Tubing Record			Bottom
Surface Casing	9.625"	36#	SURFACE 1411'
Production Casing	7"	26#	SURFACE 6797'
Liner Record	4.5"	11.6#	5629' N/A

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not 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.

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.  
LOG CORRELATED TO KB

THANK YOU FOR USING PIONEER ENERGY SERVICES

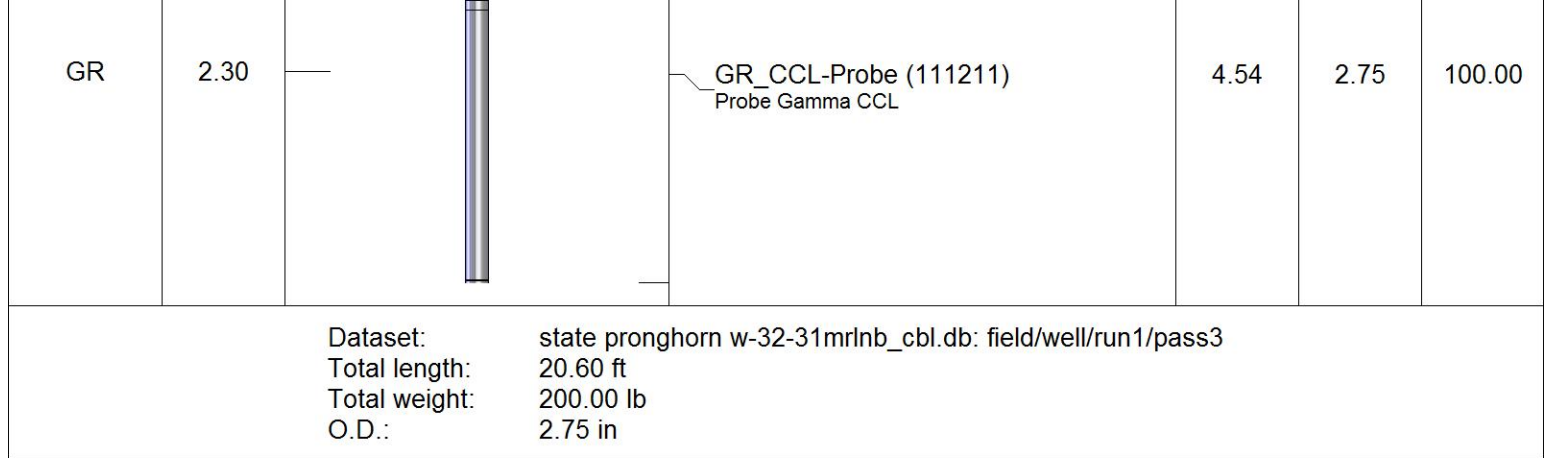
Your Pioneer Energy Services Crew	Tool Data - Services	Serial Number
Engineer: SCHUMAN	CBL	141166
Operator: GARCIA	GR	111211
Operator: STUMP		
Operator:		

DatabaseC:\ProgramData\Warrior\Data\state pronghorn w-32-31mrlnb\_cbl.db  
Dataset field/well/run1/pass3/\_vars\_

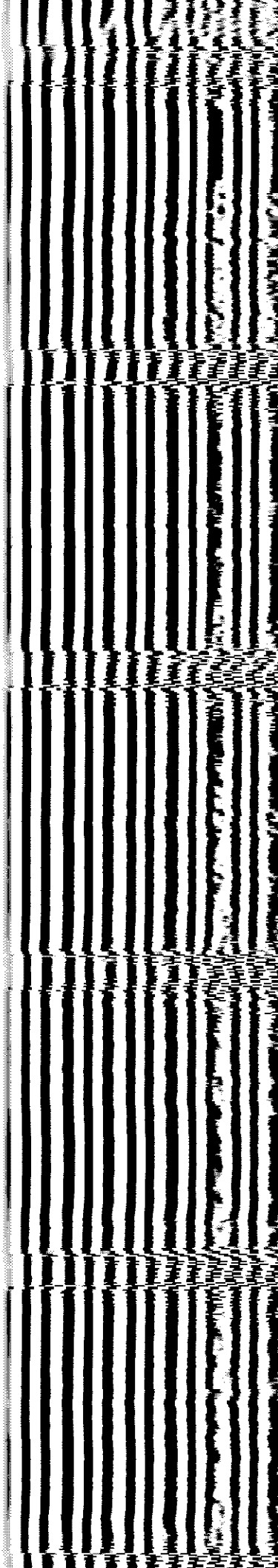
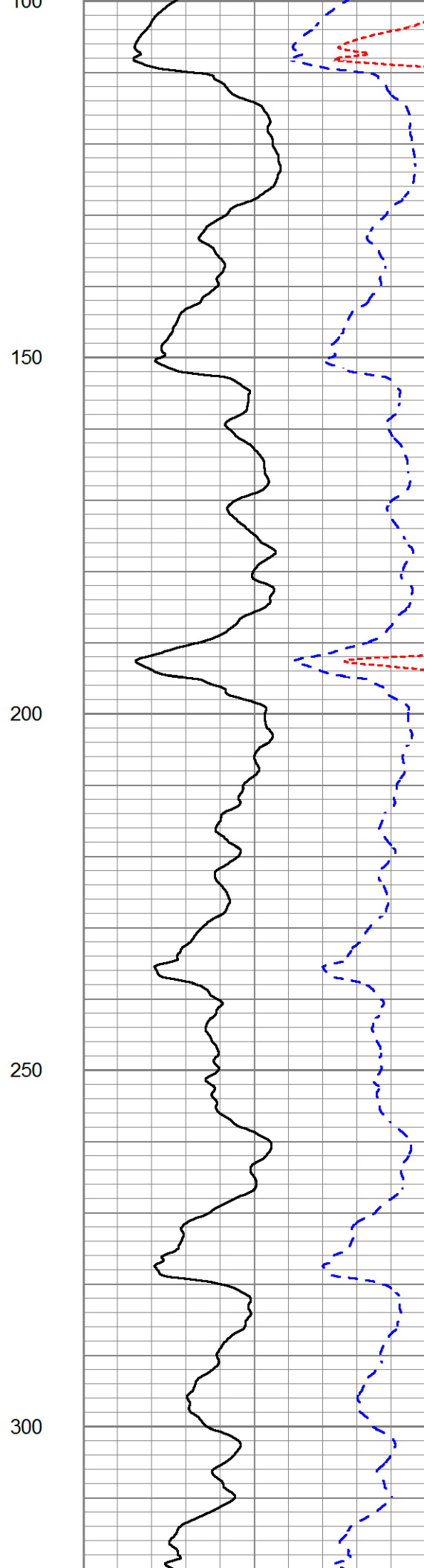
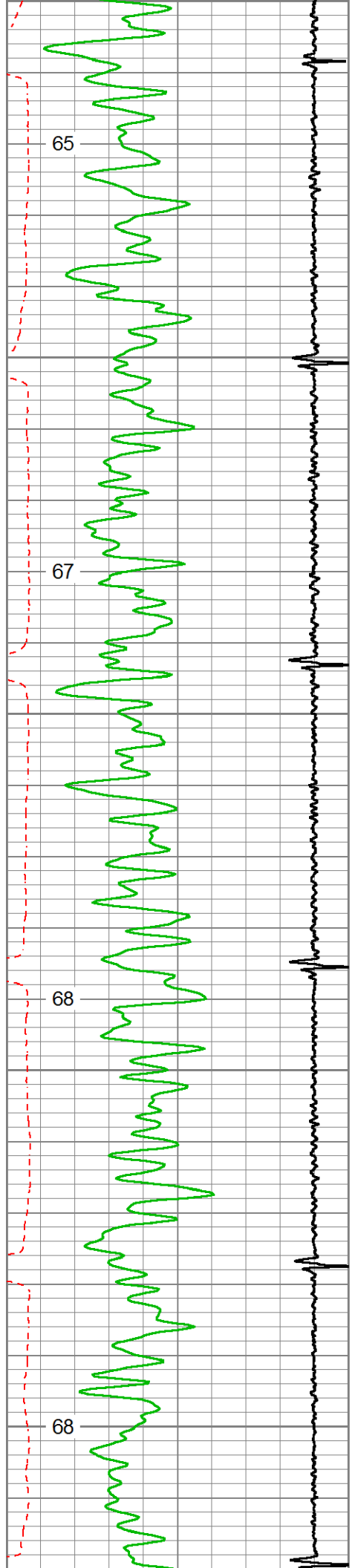
**Top - Bottom**

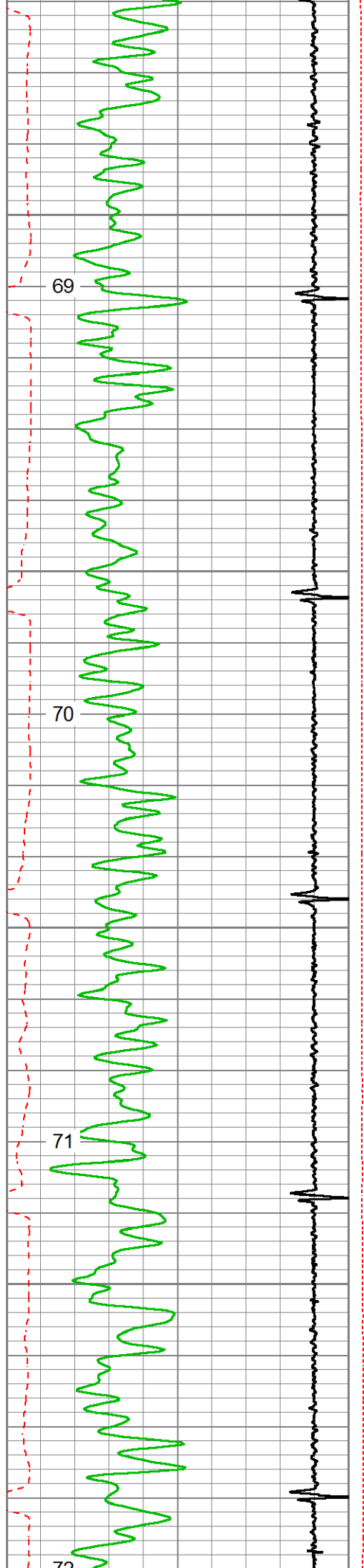
BHTEMP_Src	PPT usec	CASEWGHT lb/ft	MAXAMPL mV	MINAMPL mV	MINATTN db/ft	SRFTEMP degF	CASETHCK in
TEMP	0	26	0	1.5	0.08	0	0
CASEOD in 7	PERFS  0	TDEPTH ft 0	BOTTEMP degF 100	BOREID in 8.75			

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)	
			CHD-STNDRD Standard Cable Head	1.00	1.69	10.00	
			CENT-PTS275	2.83	2.75		
IntTemp	14.88						
TEMP	13.86						
				RBT-RBT-C3 (141166_7in) Probe Radii Bond Tool with Digital Telemetry	9.40	2.75	90.00
WVFS8	11.63						
WVFS7	11.63						
WVFS6	11.63						
WVFS5	11.63						
WVFS4	11.63						
WVFS3	11.63						
WVFS2	11.63						
WVFS1	11.63						
WVFCAL	11.63						
WVF3FT	11.63						
WVF5FT	10.63						
HEADVOLT	7.38						
			CENT-PTS275	2.83	2.75		
CCL	3.63						







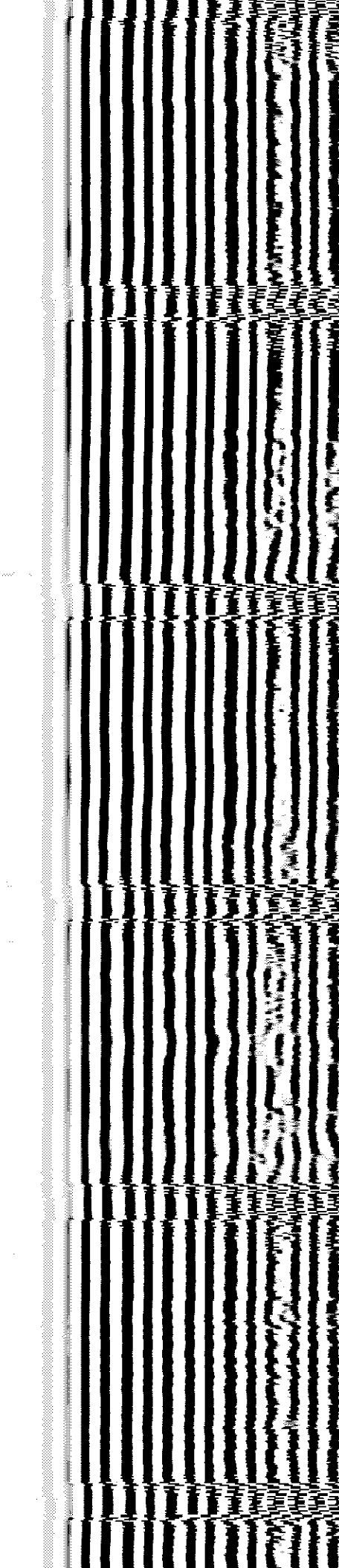
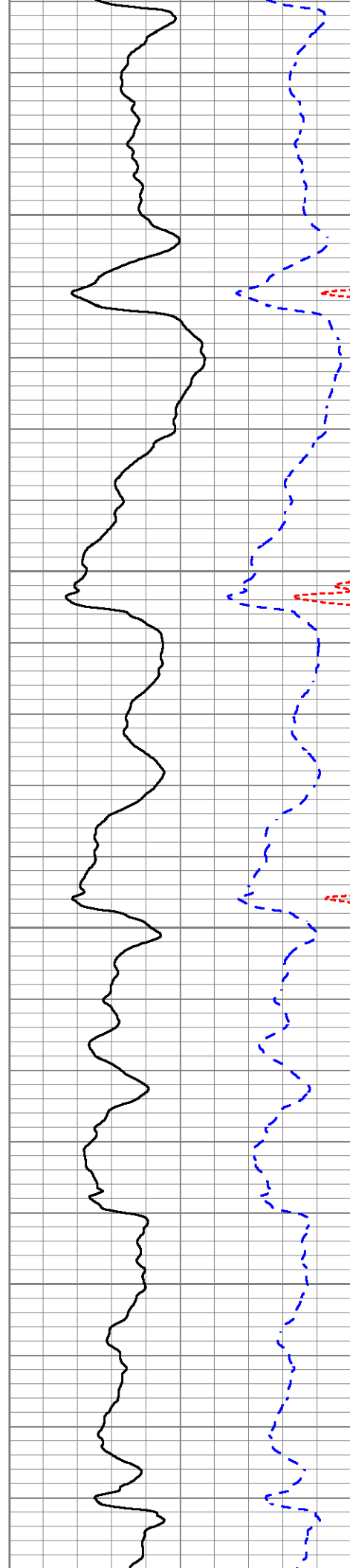


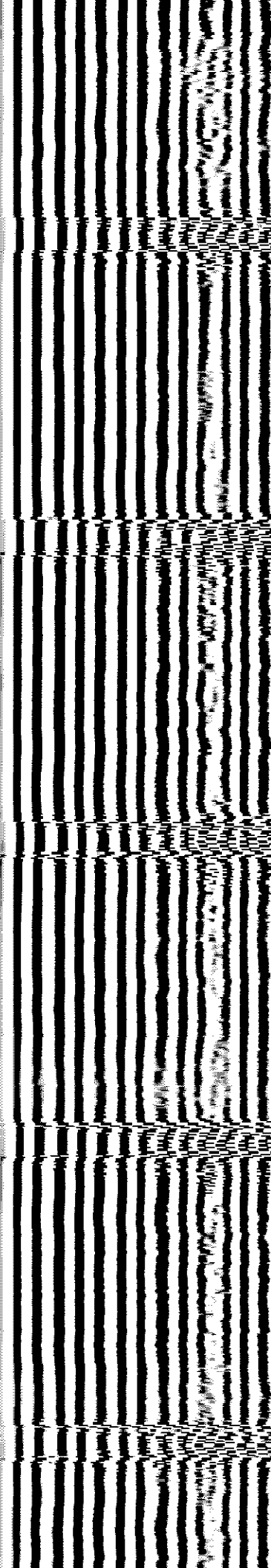
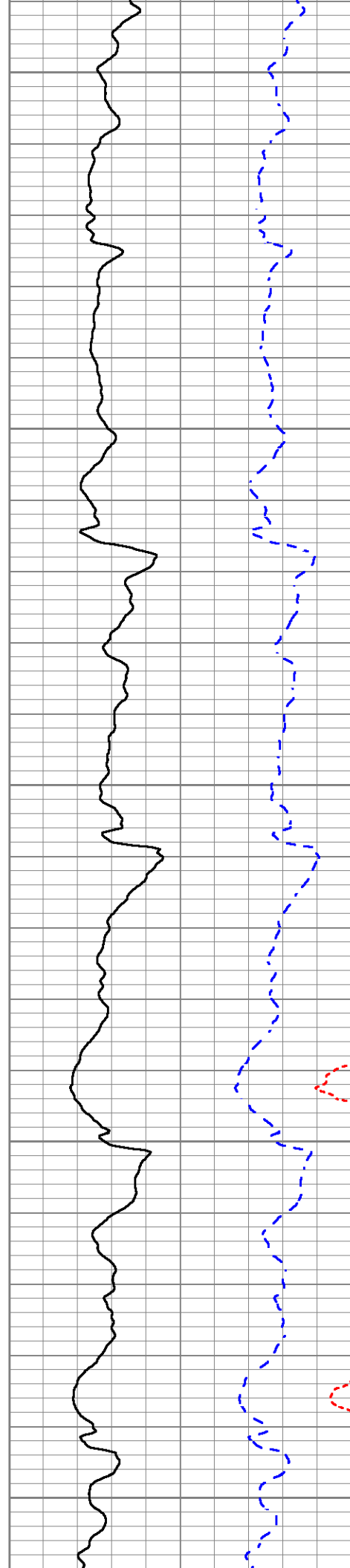
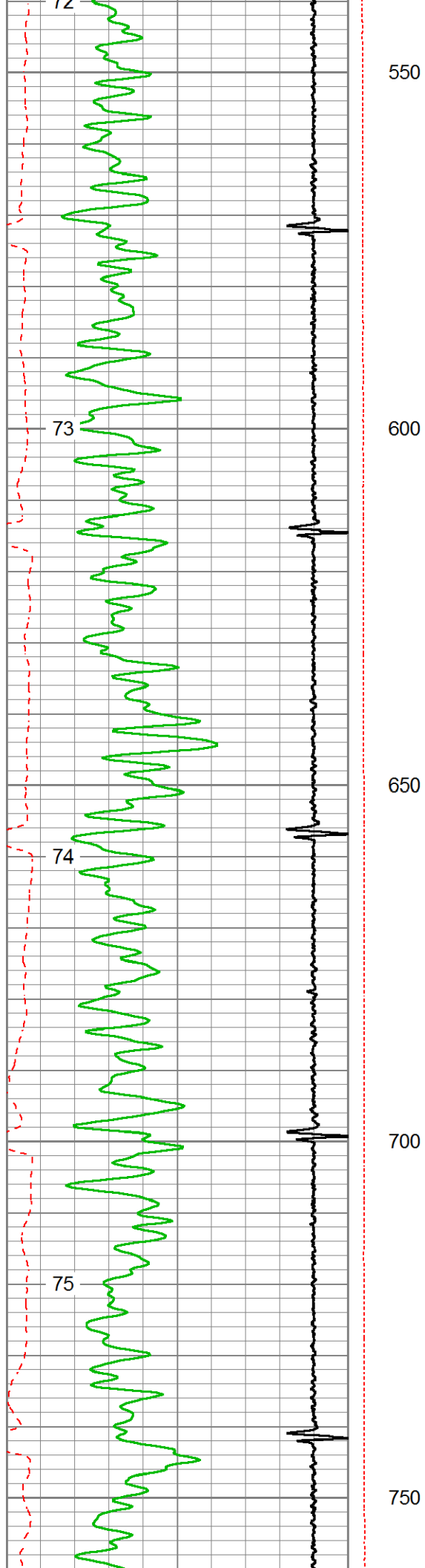
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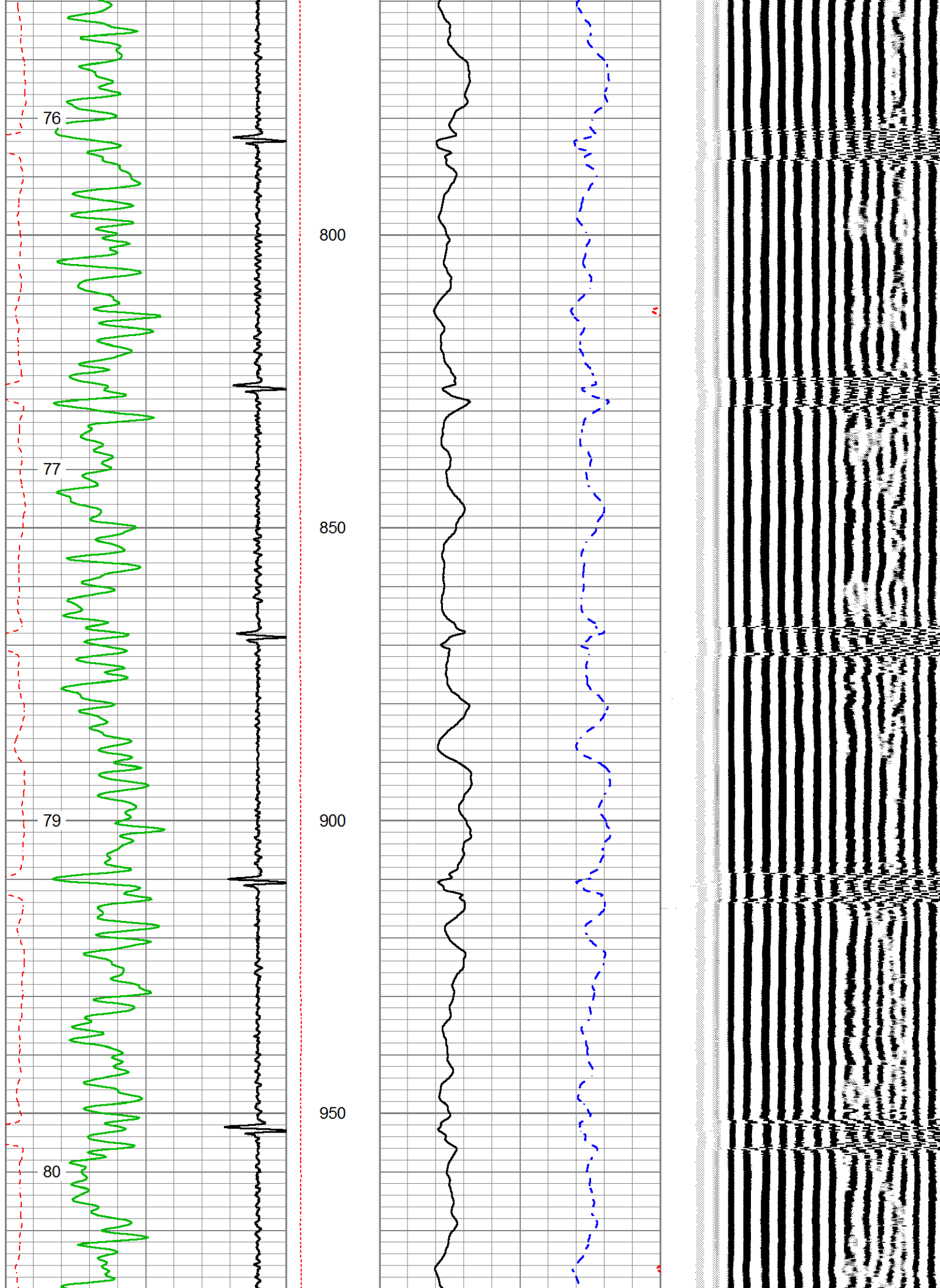
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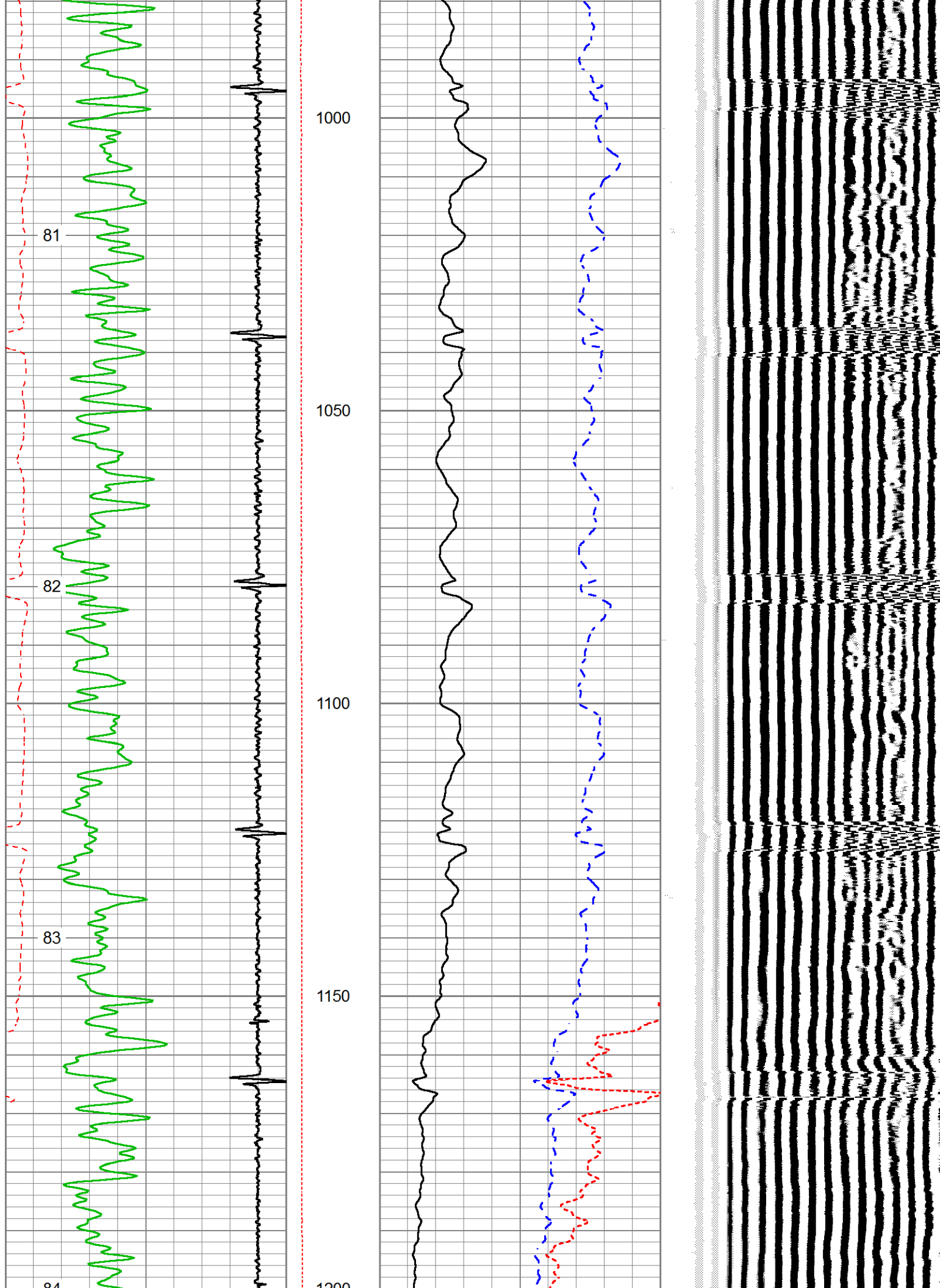
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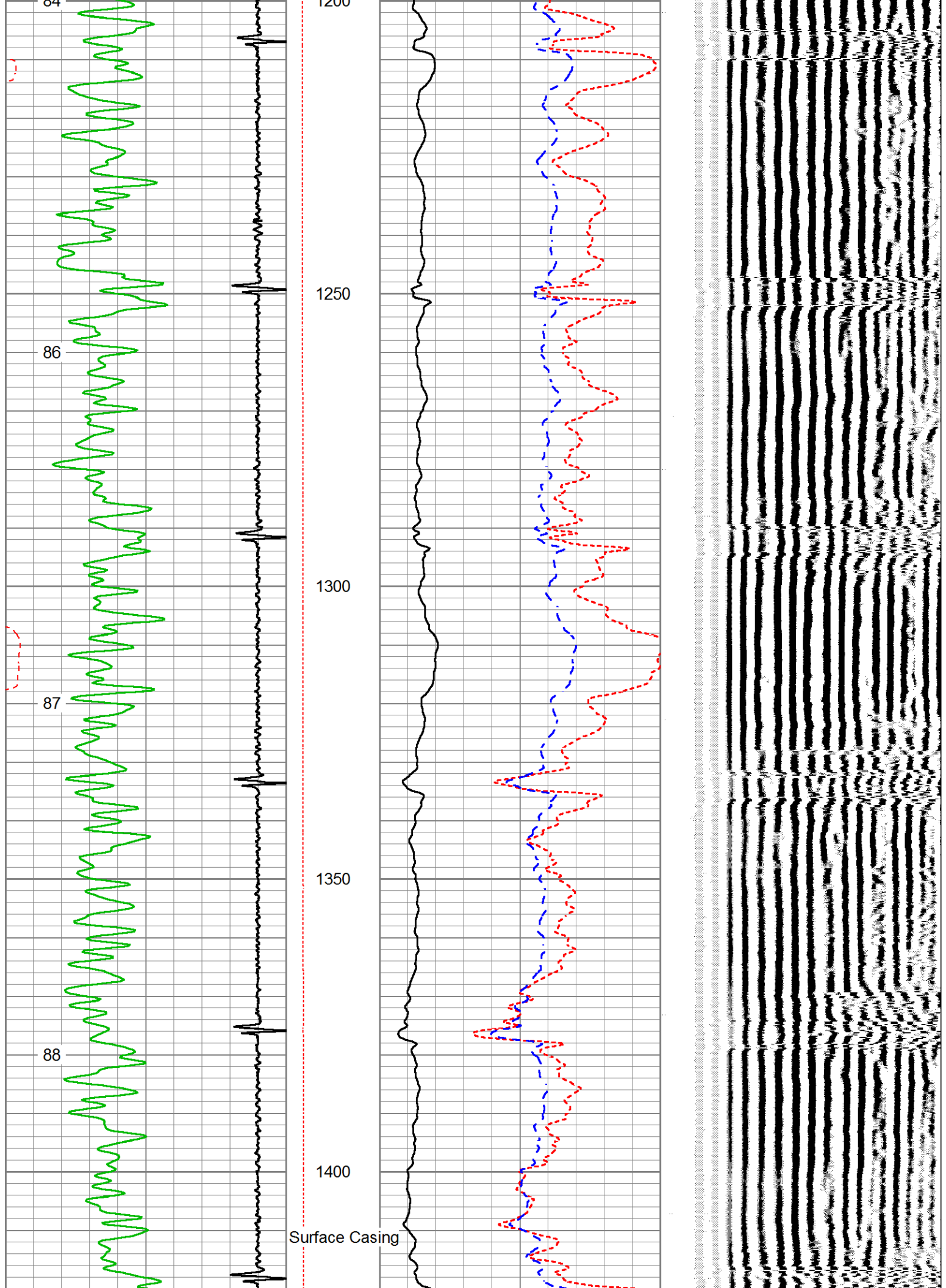


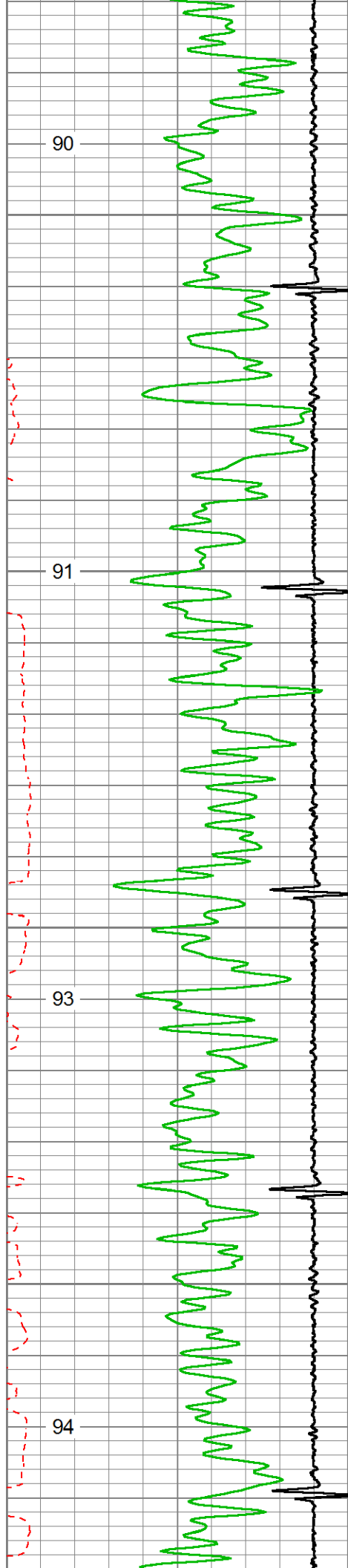










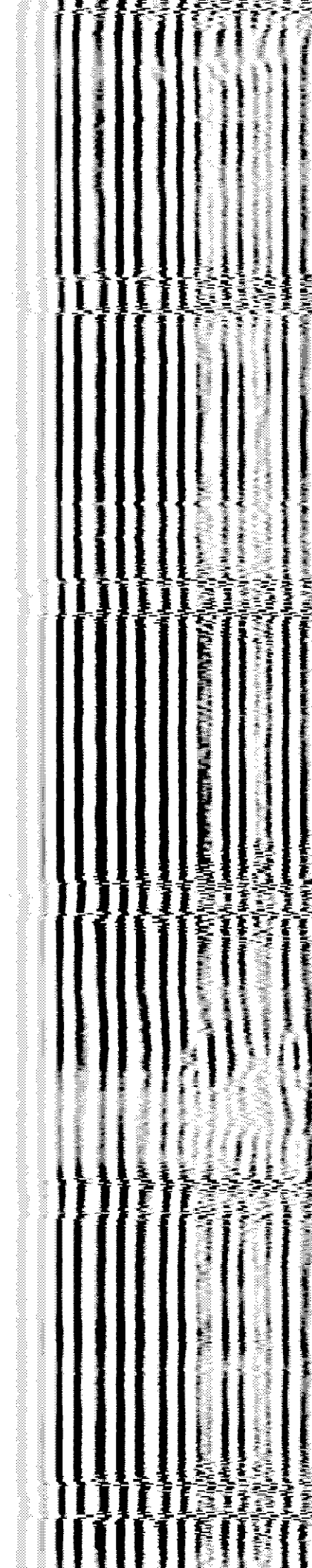
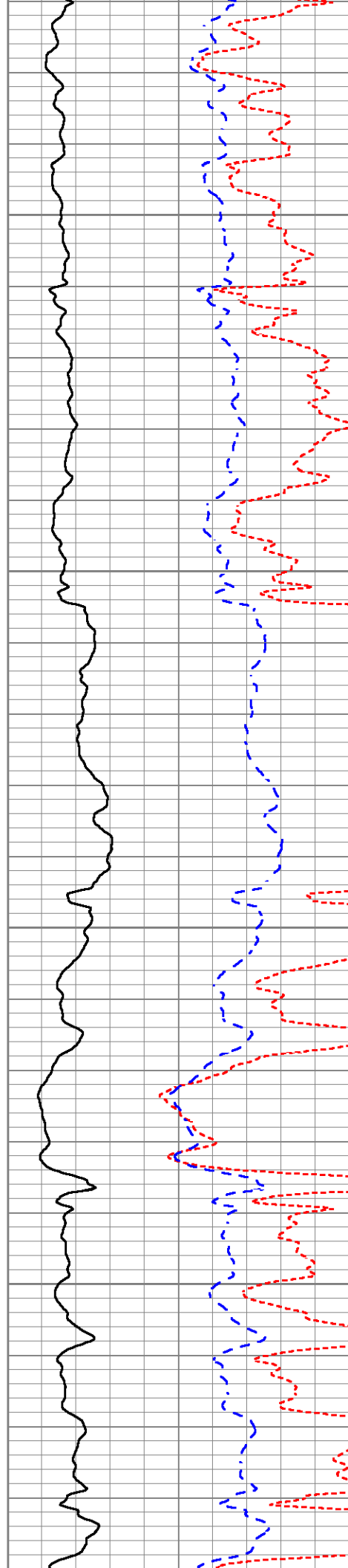


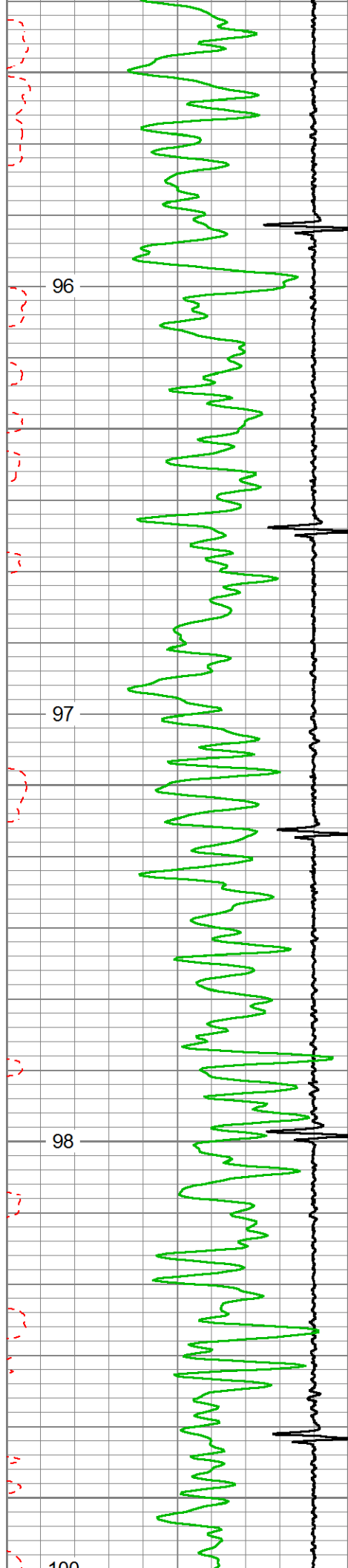
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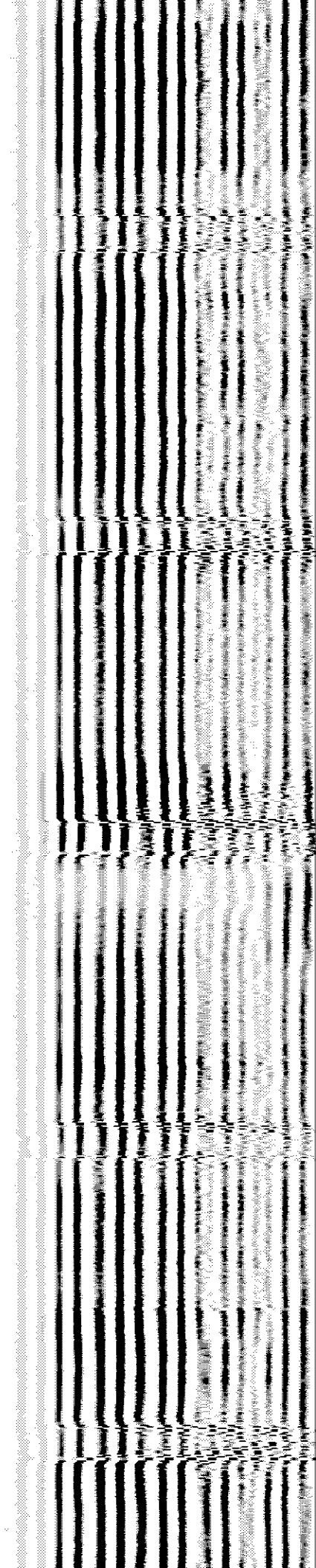
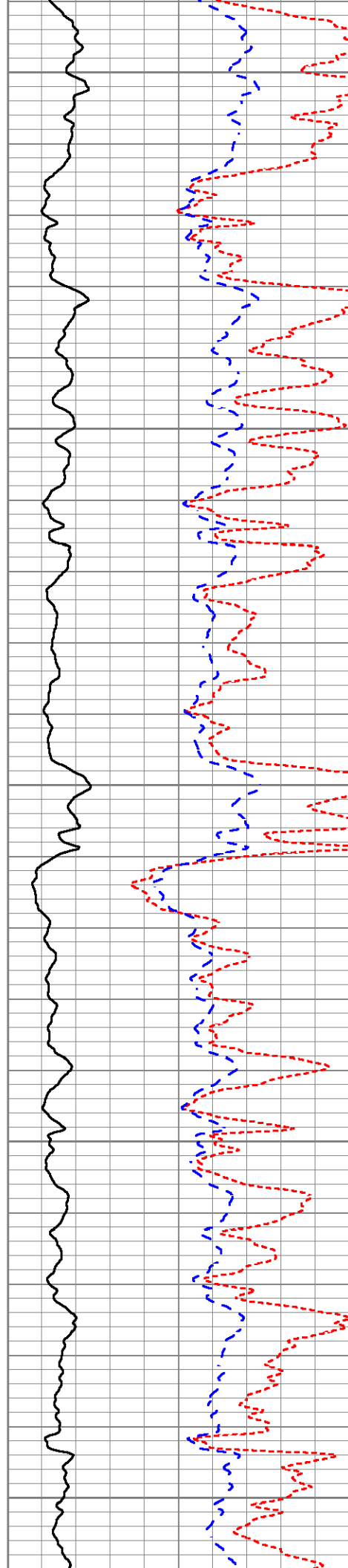
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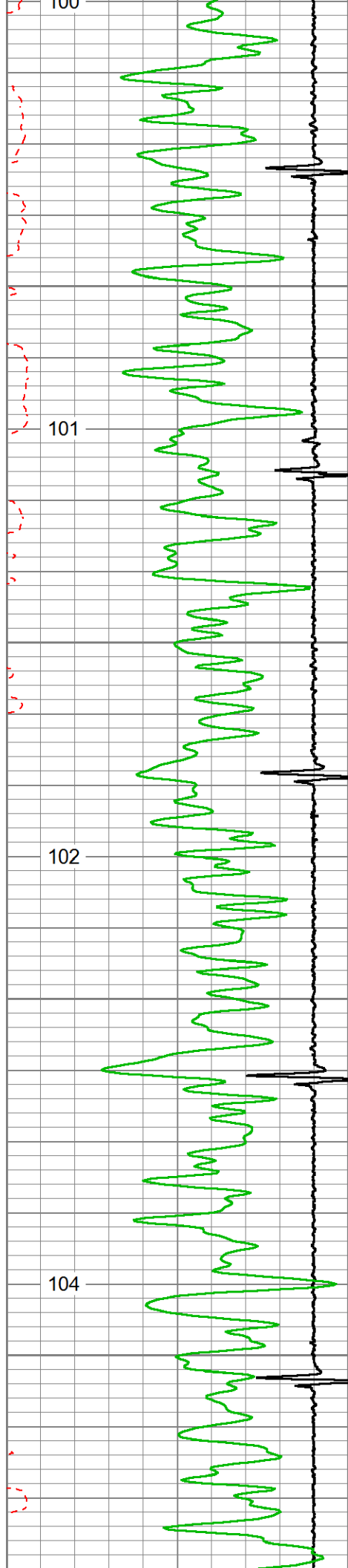
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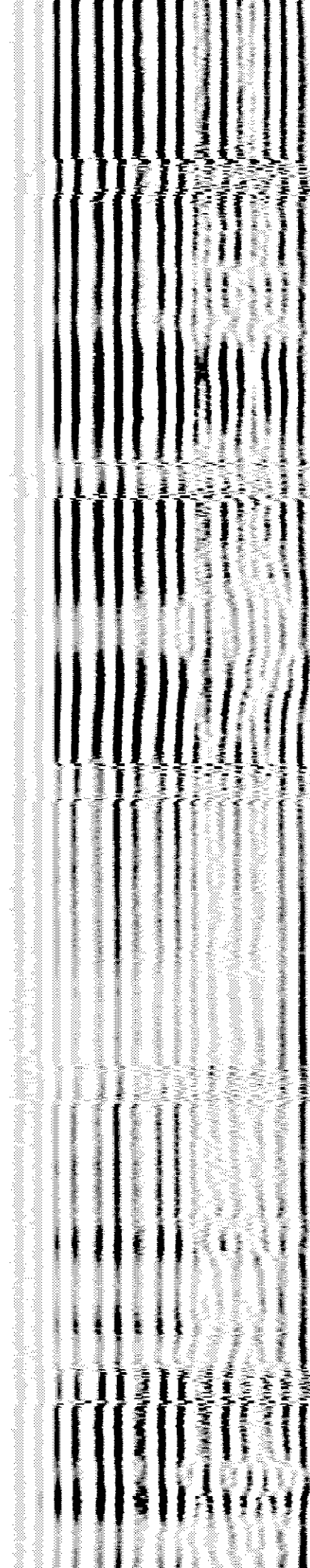
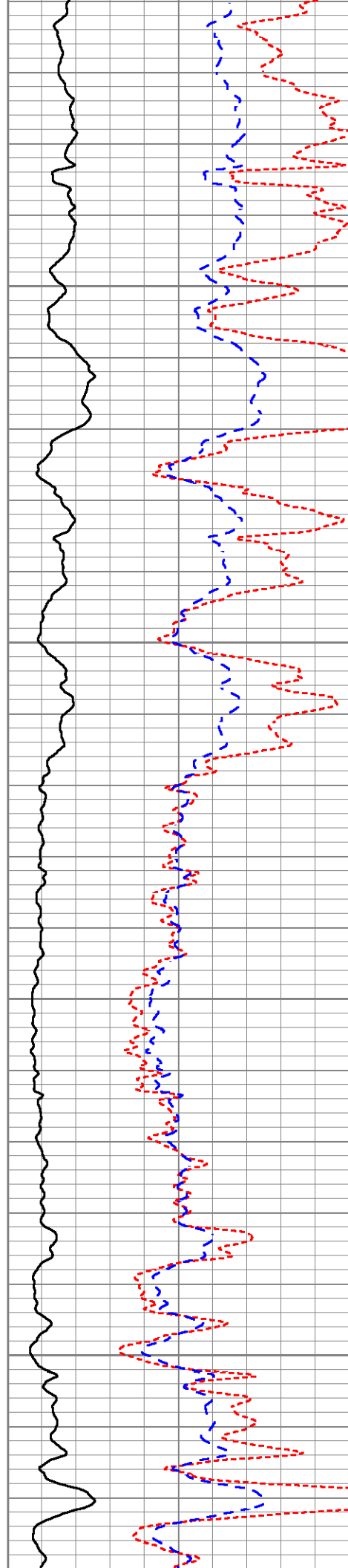


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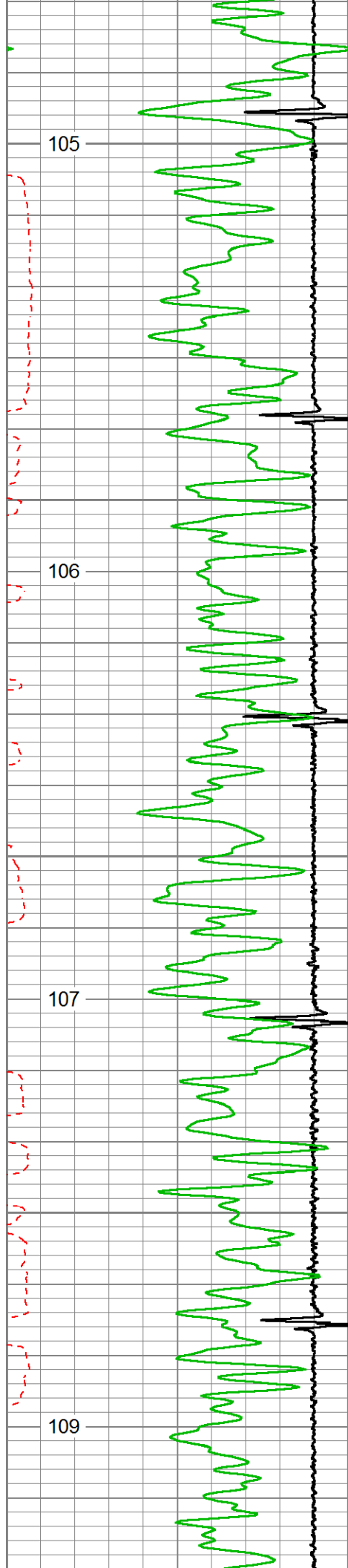
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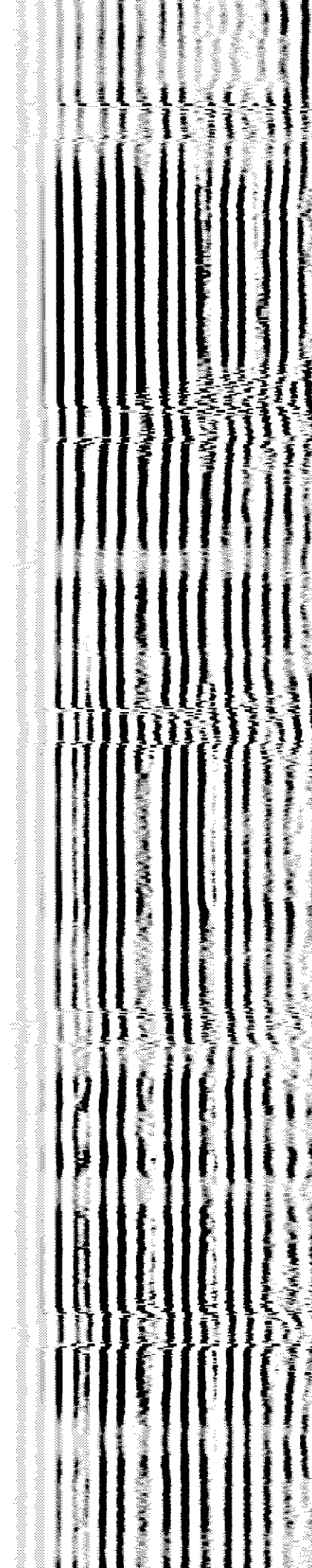
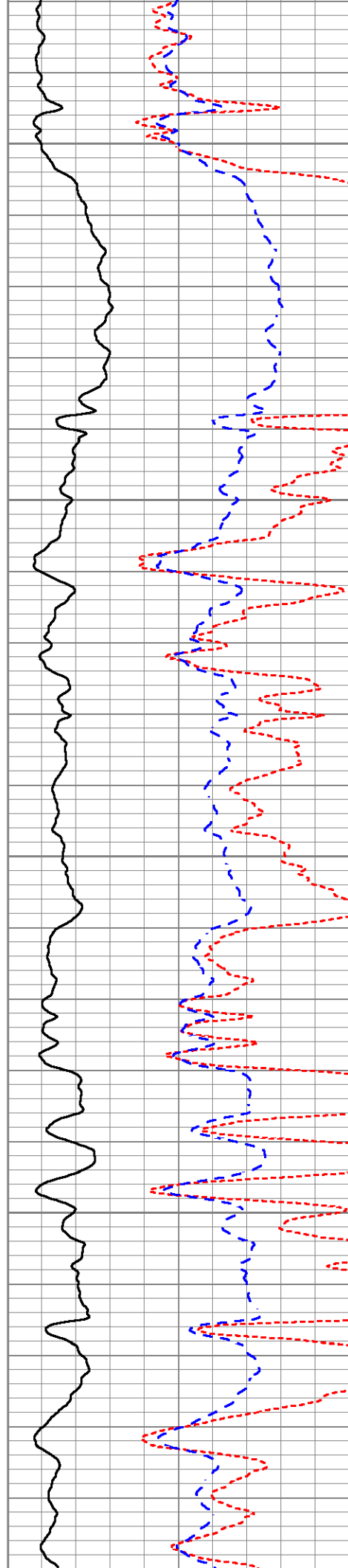
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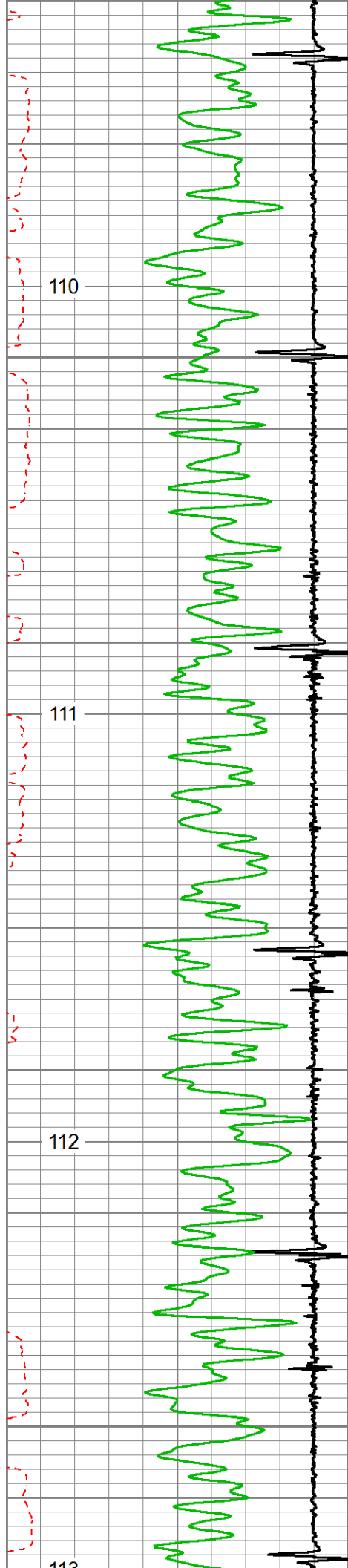
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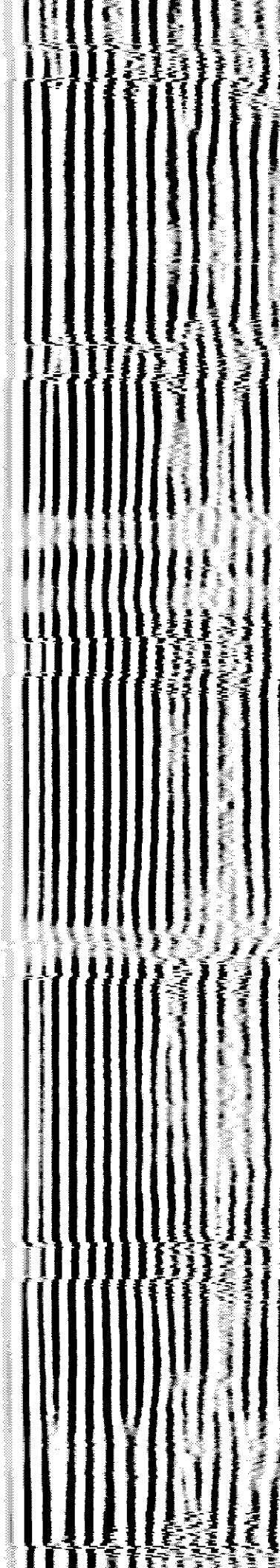
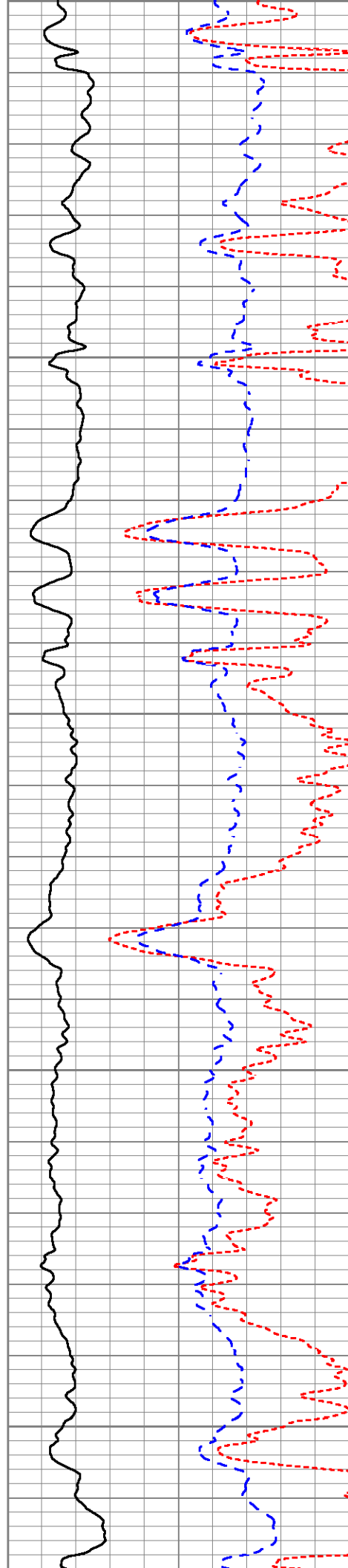
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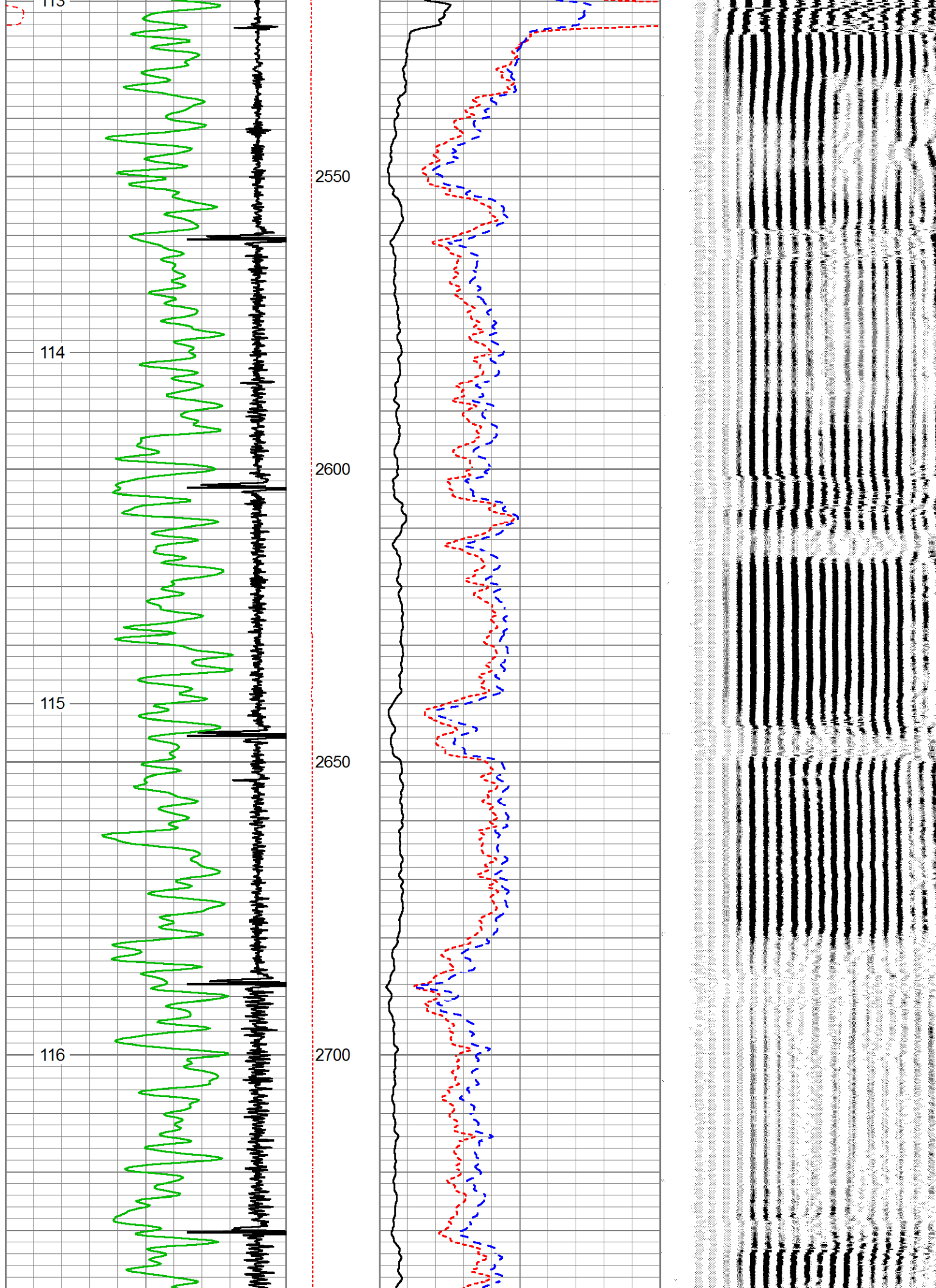
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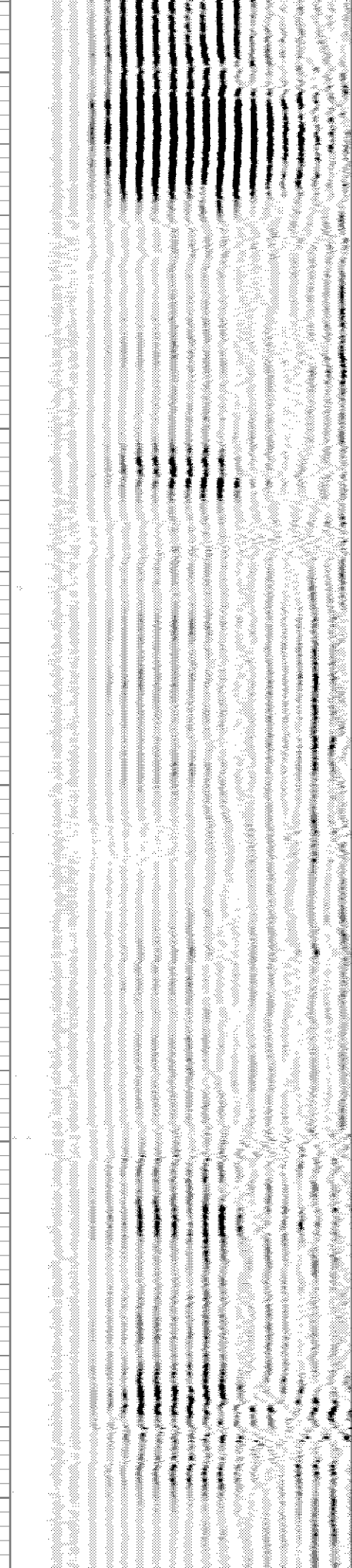
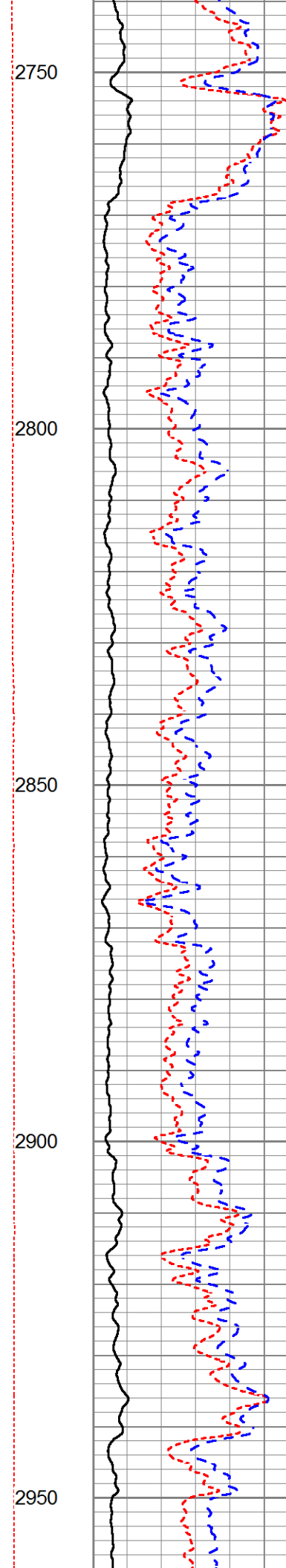
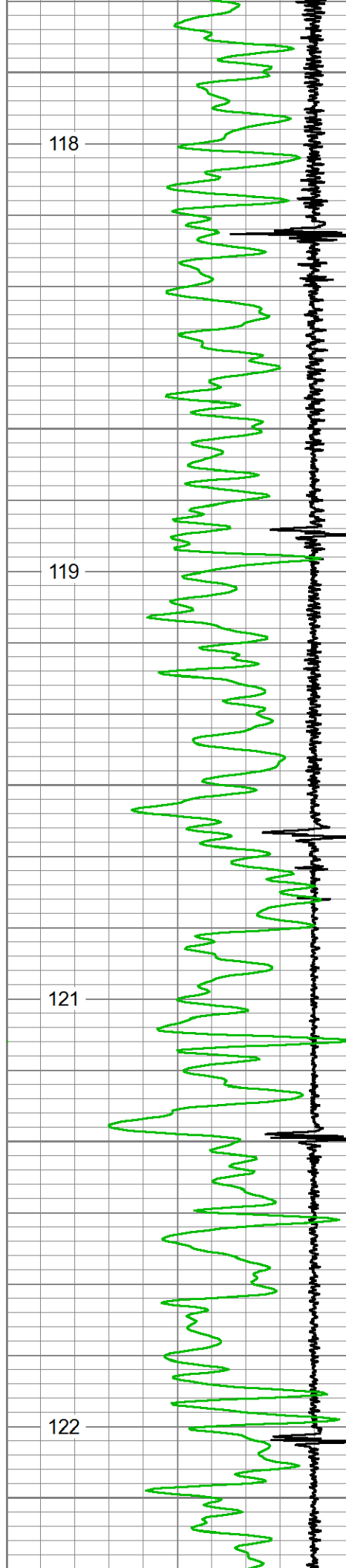


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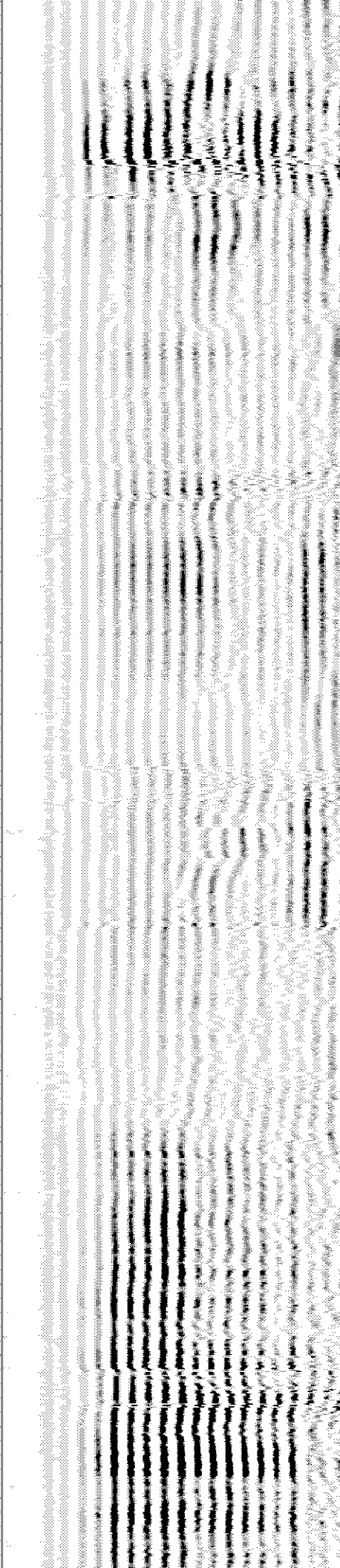
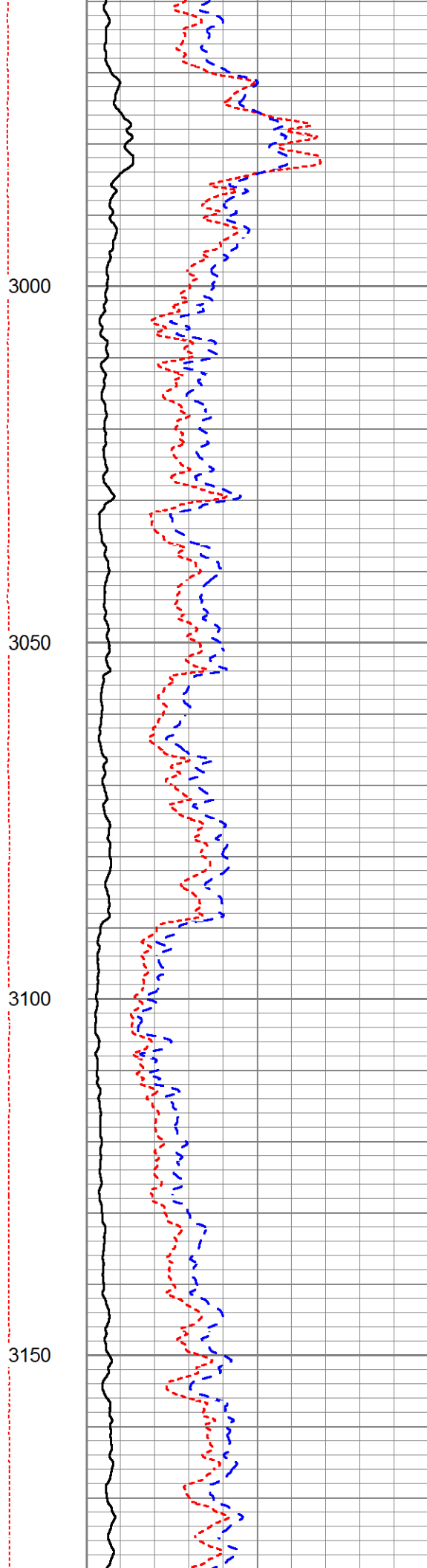
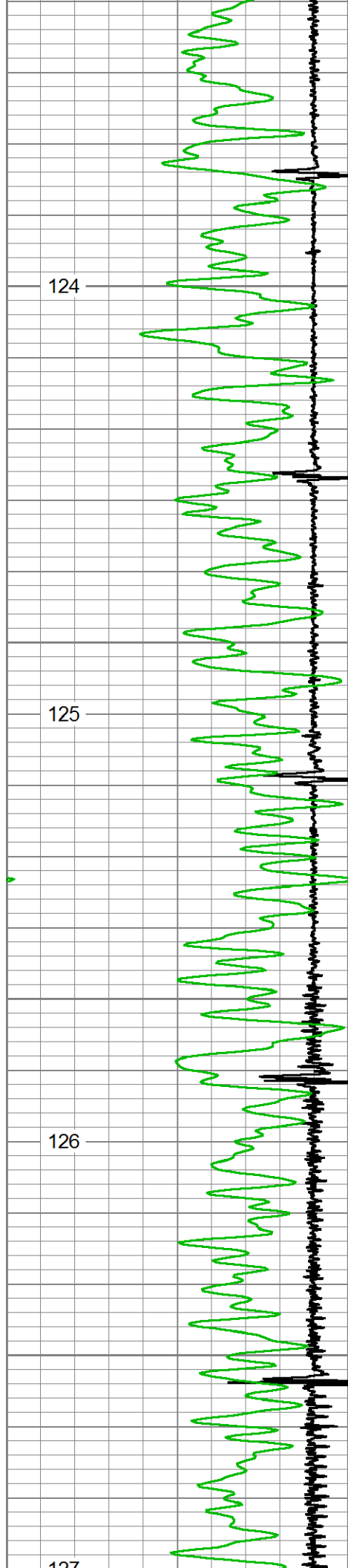


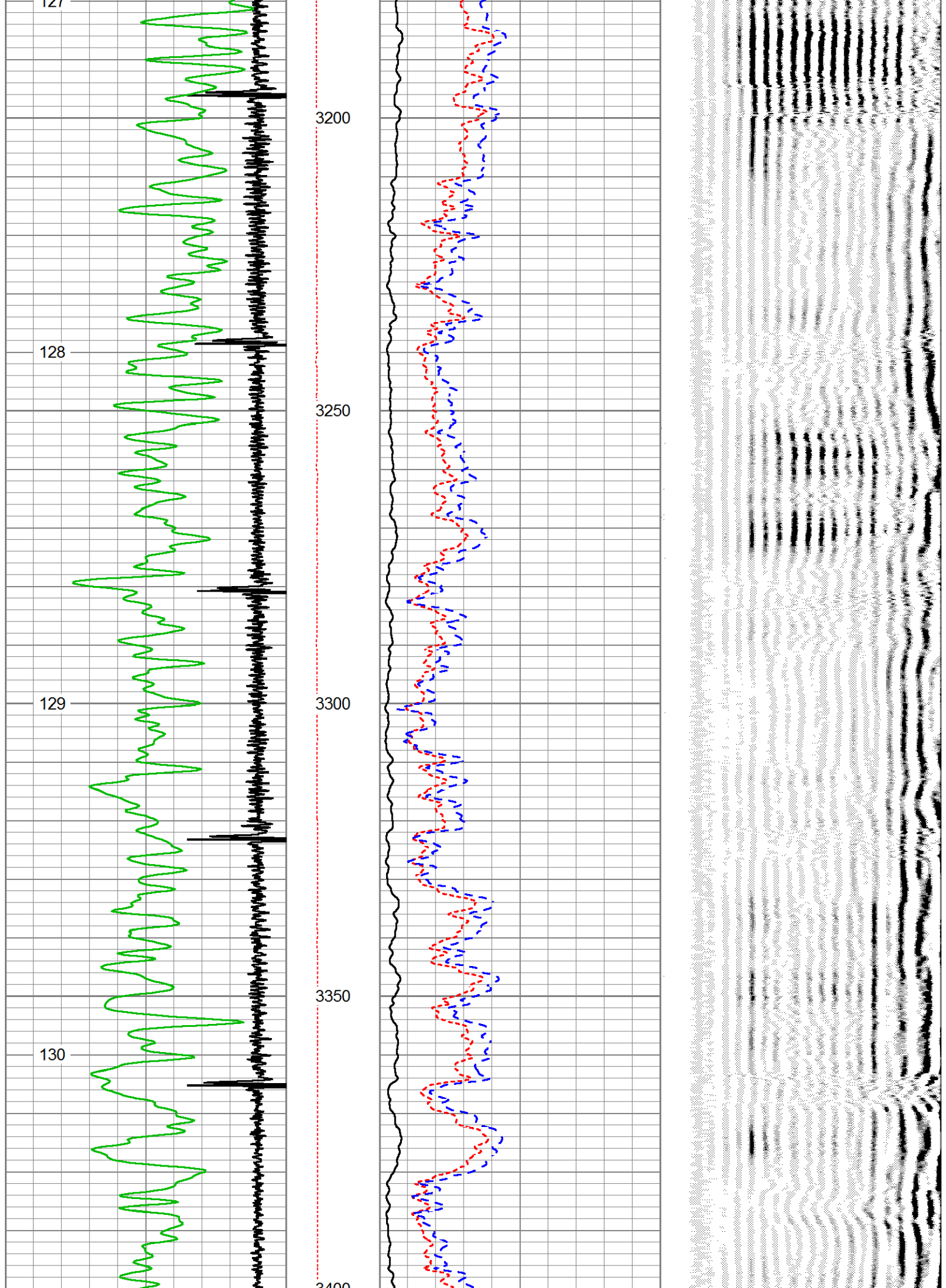


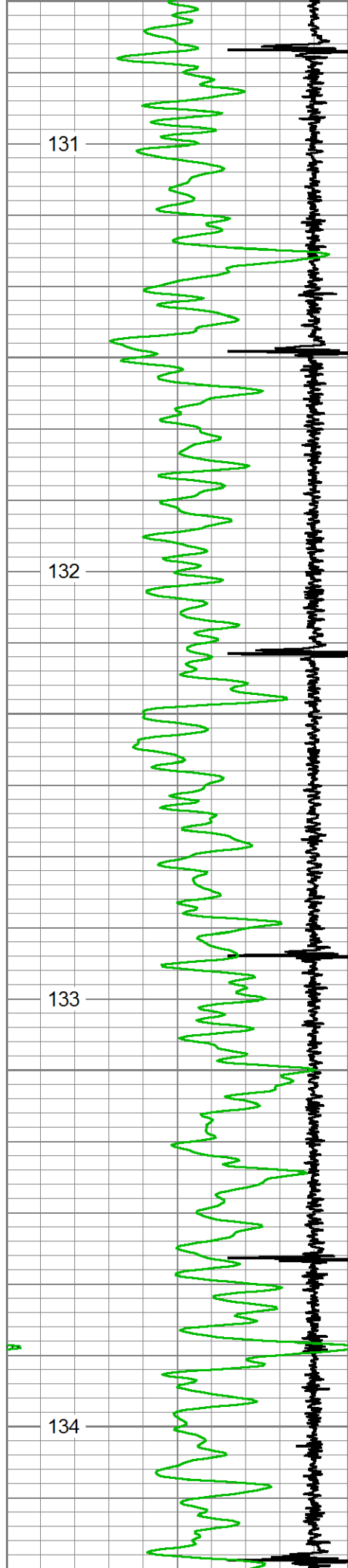




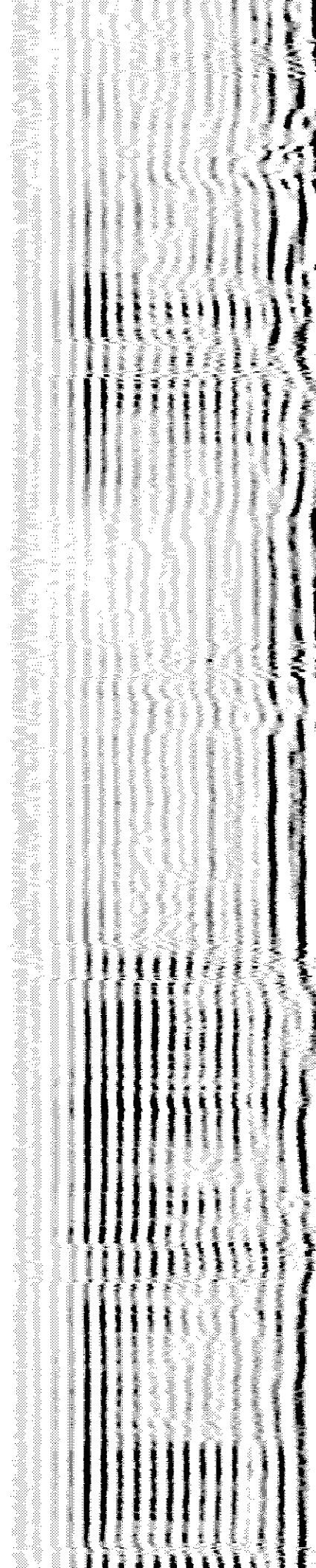
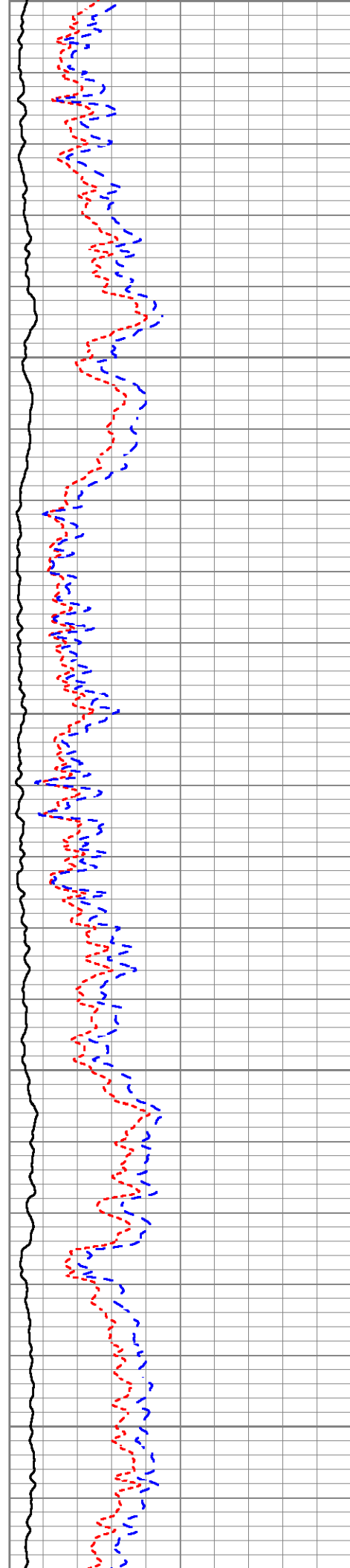




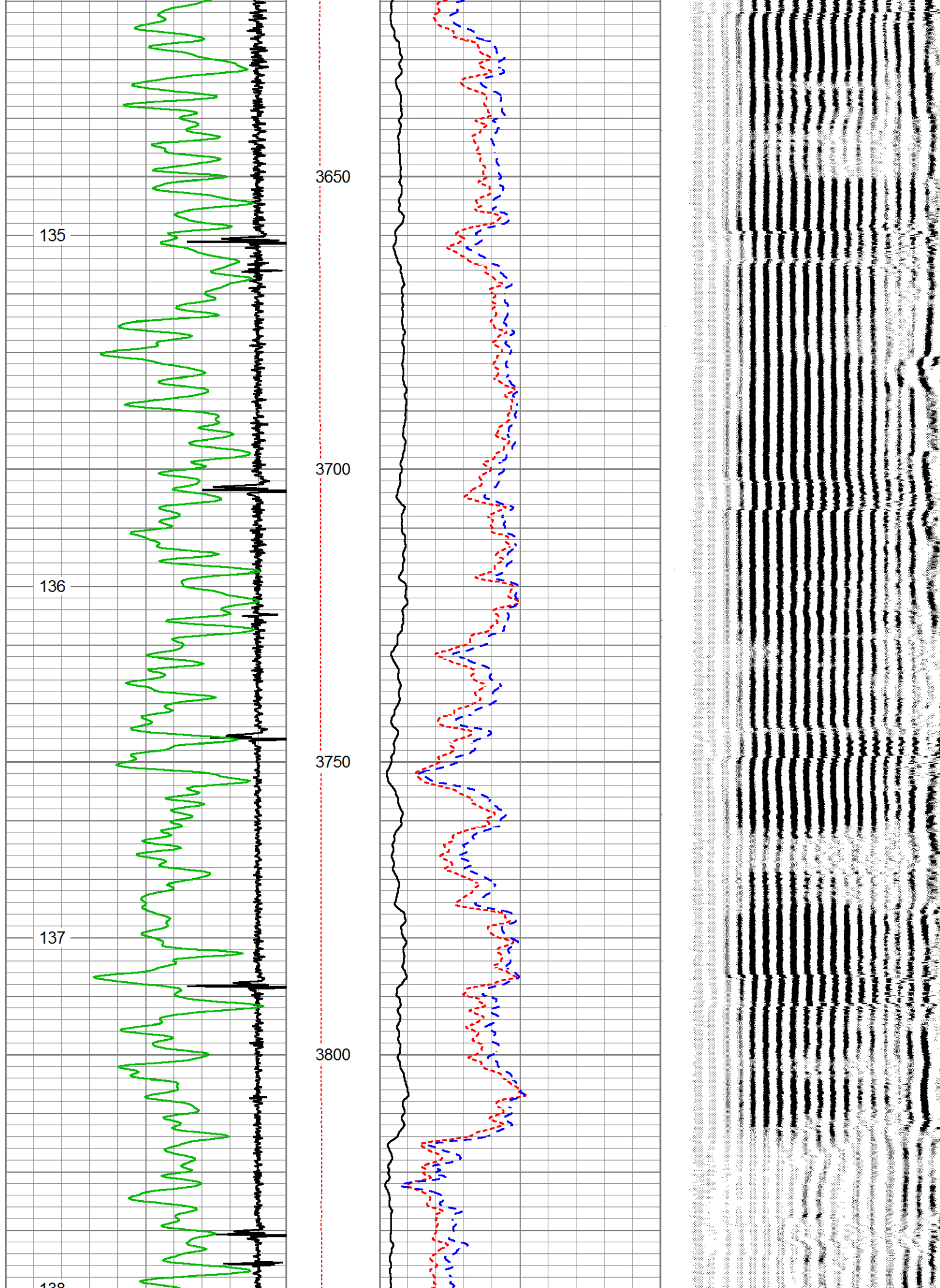




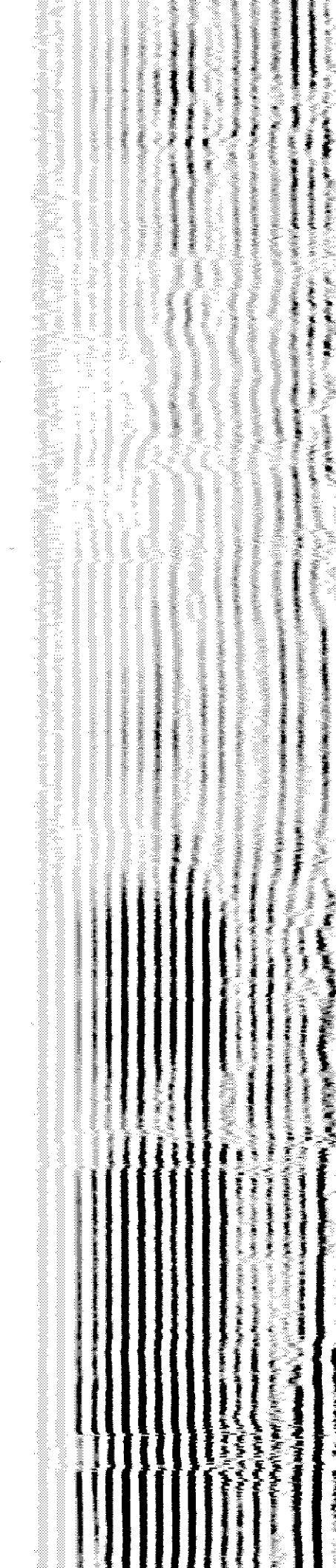
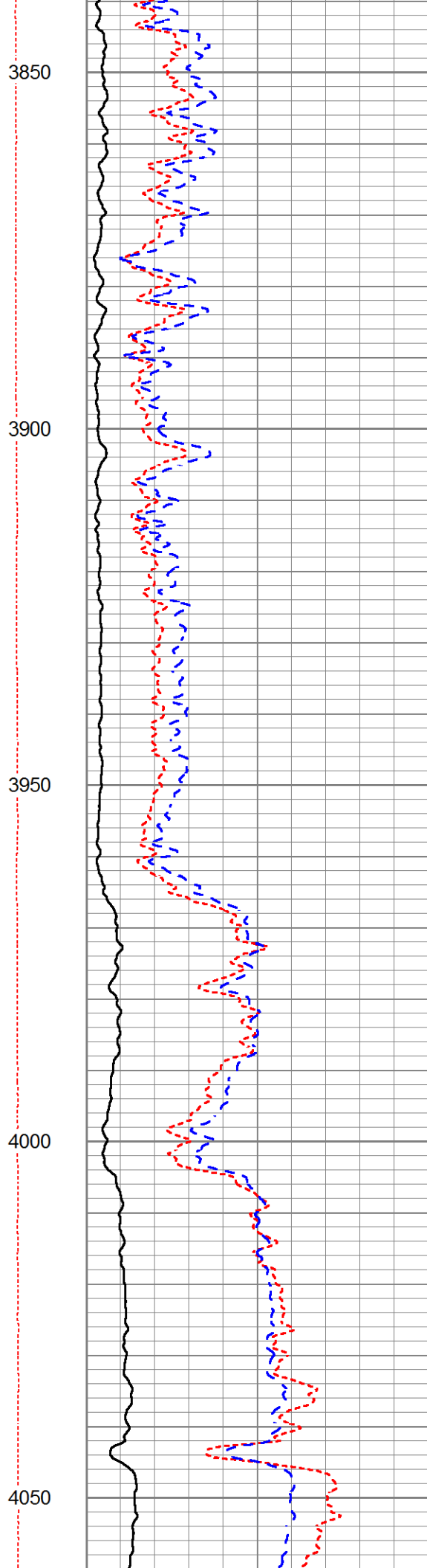
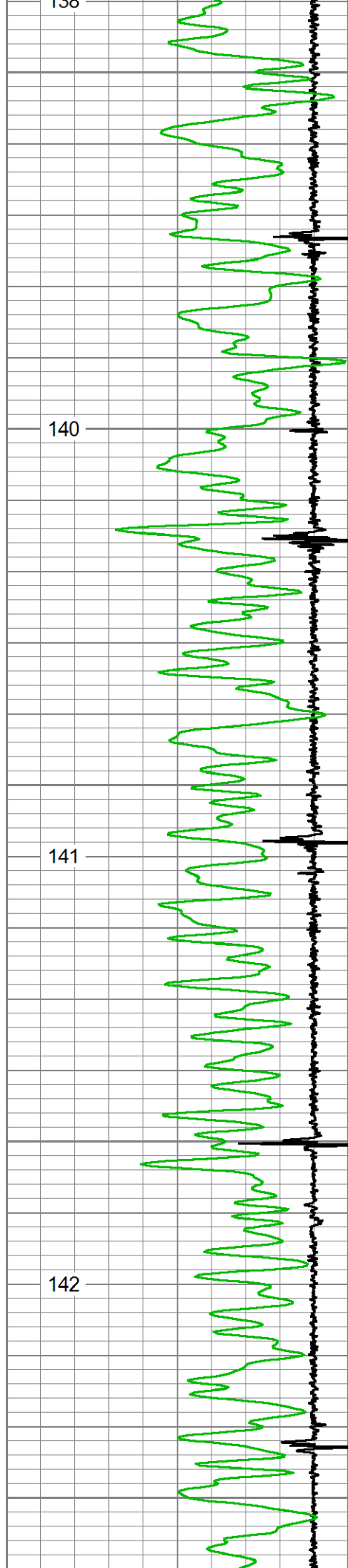
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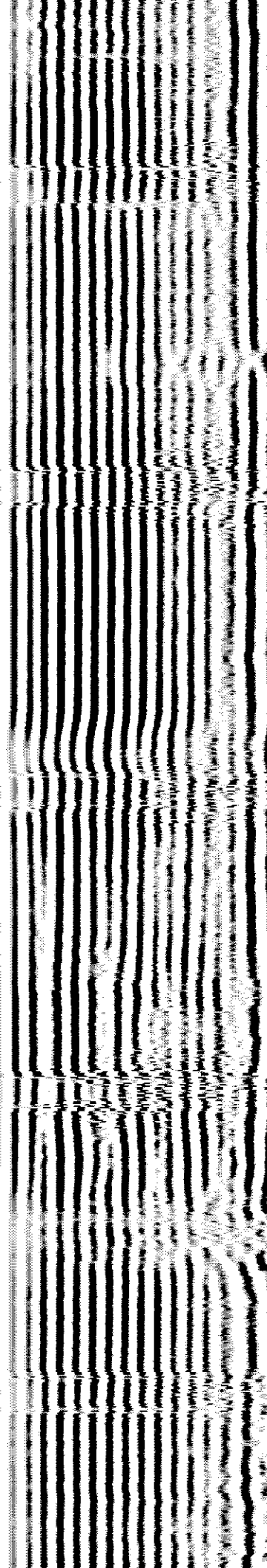
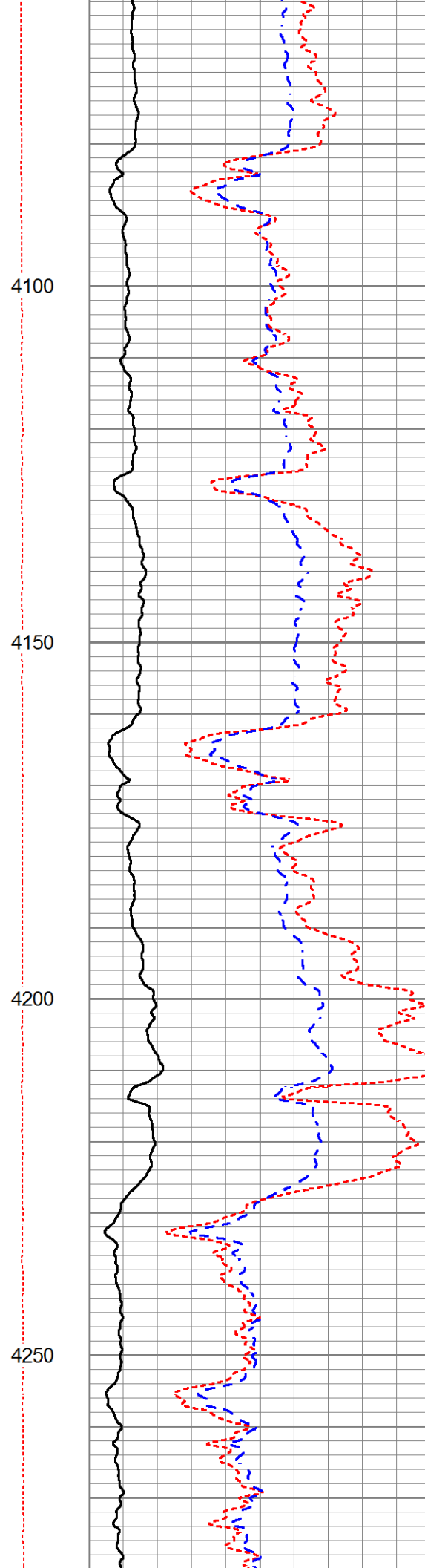
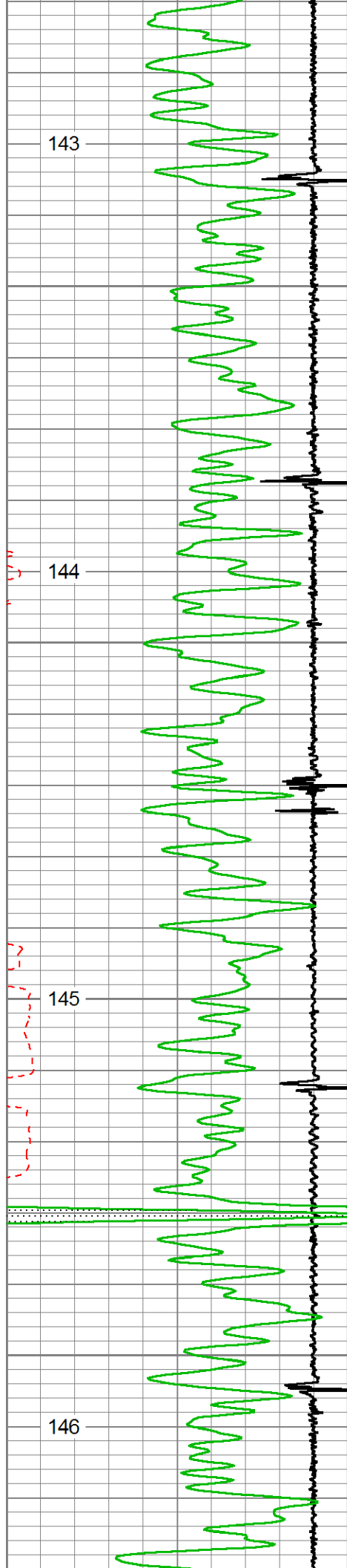


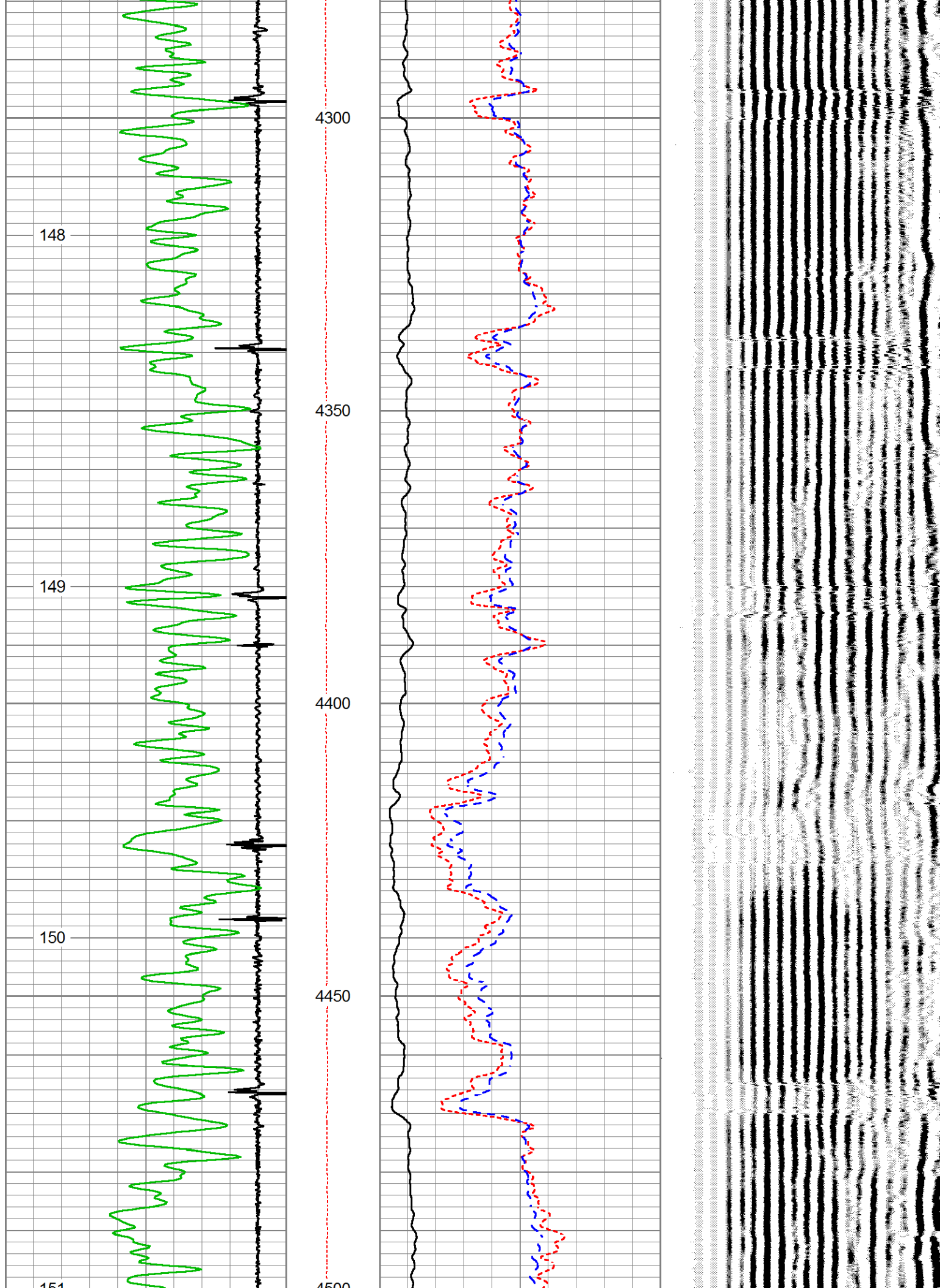




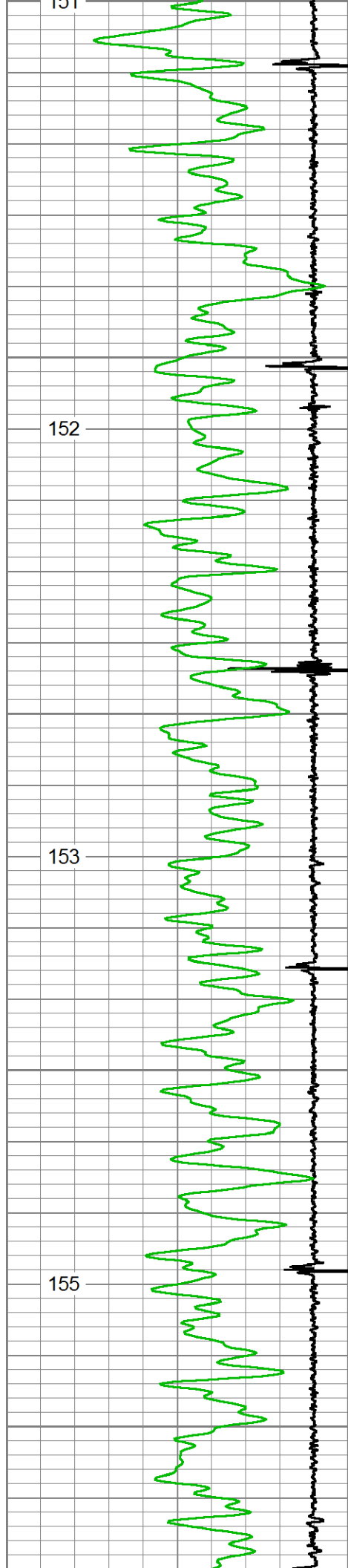




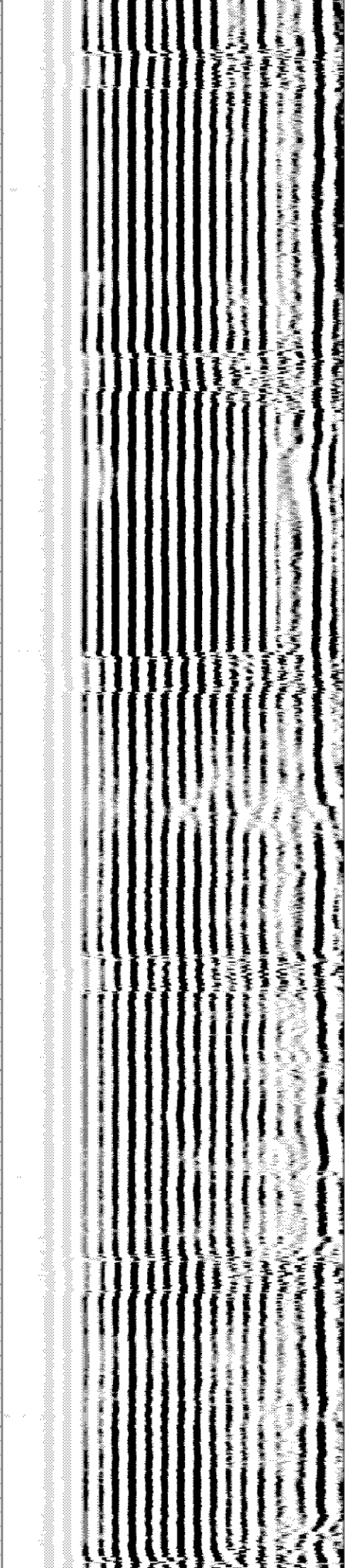
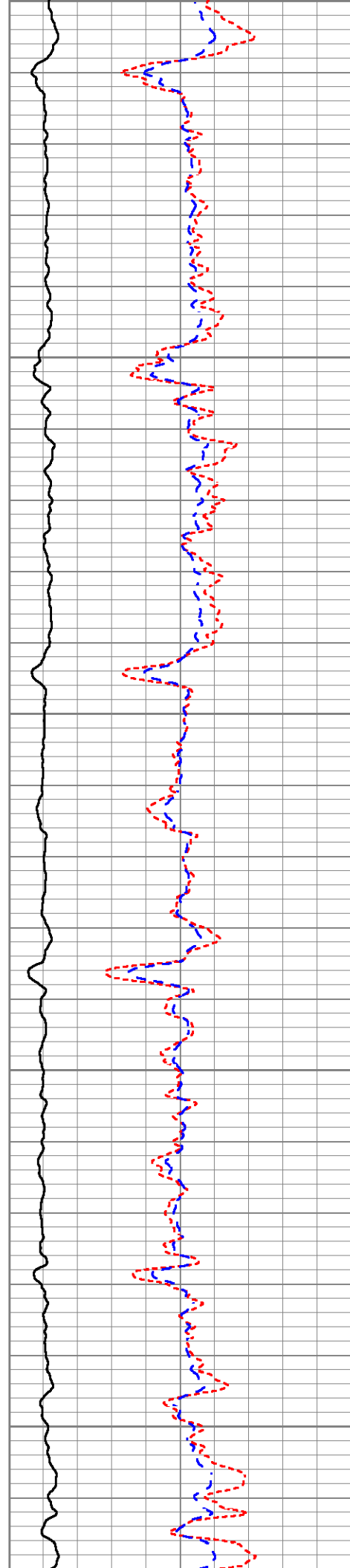




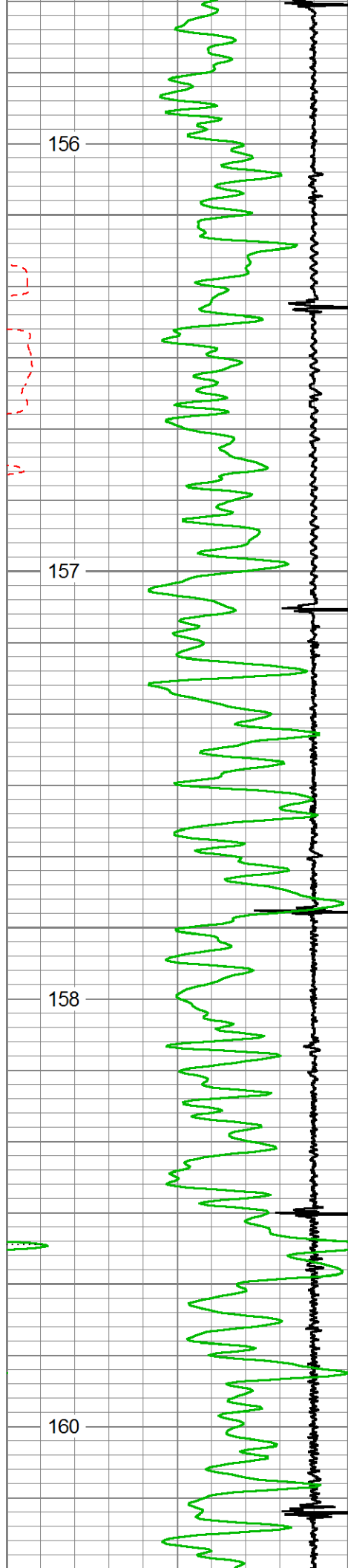




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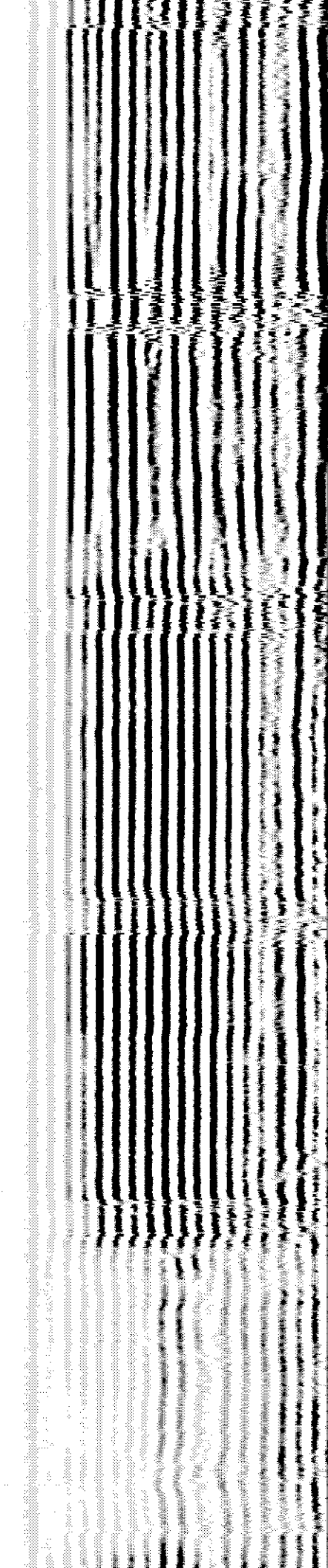
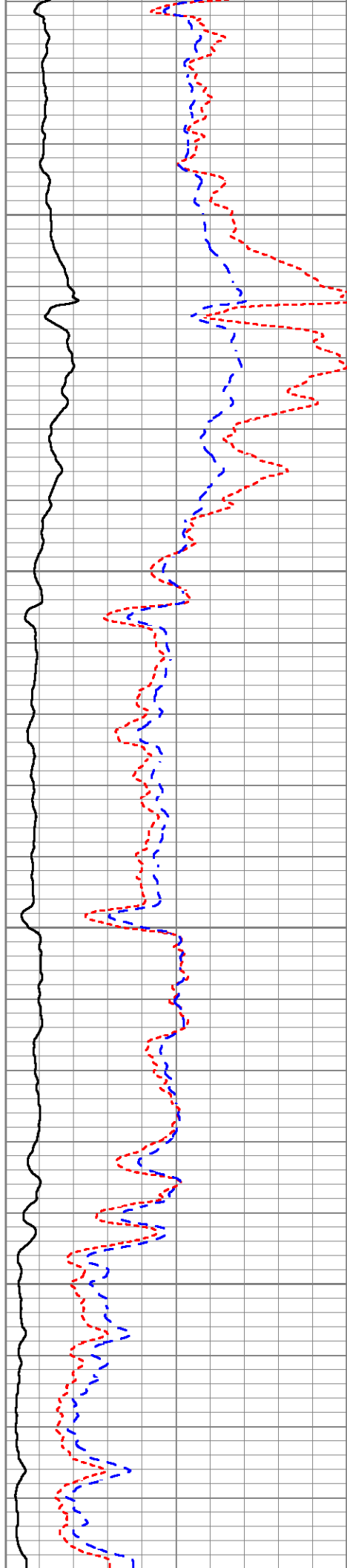
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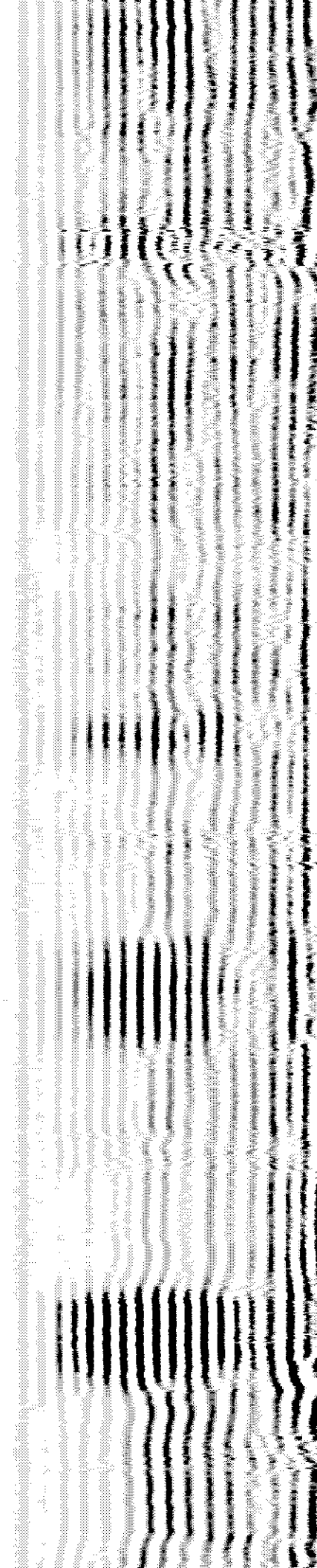
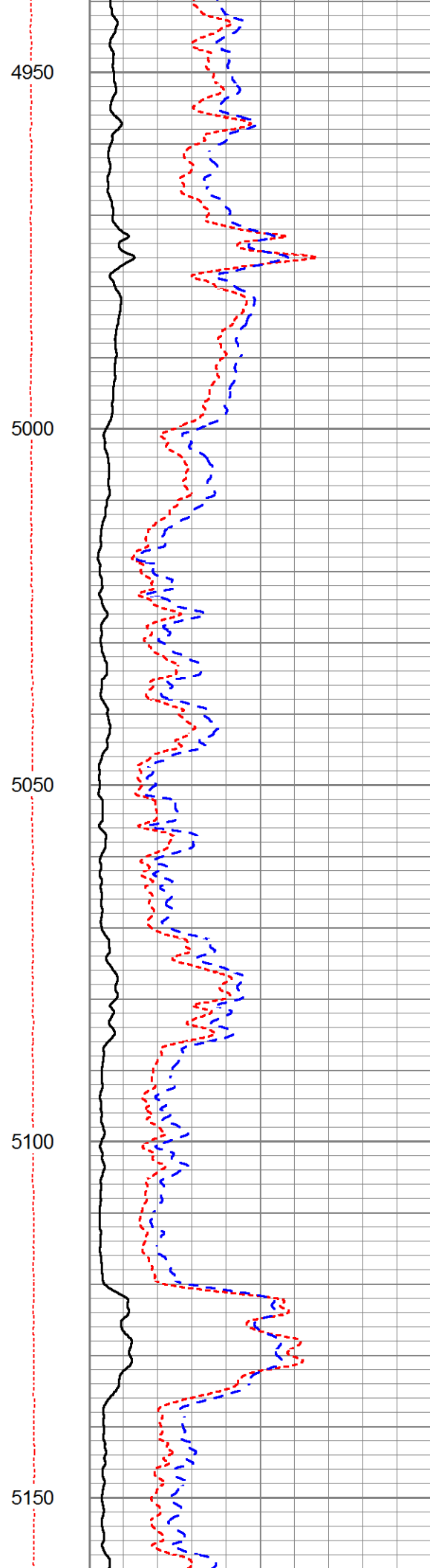
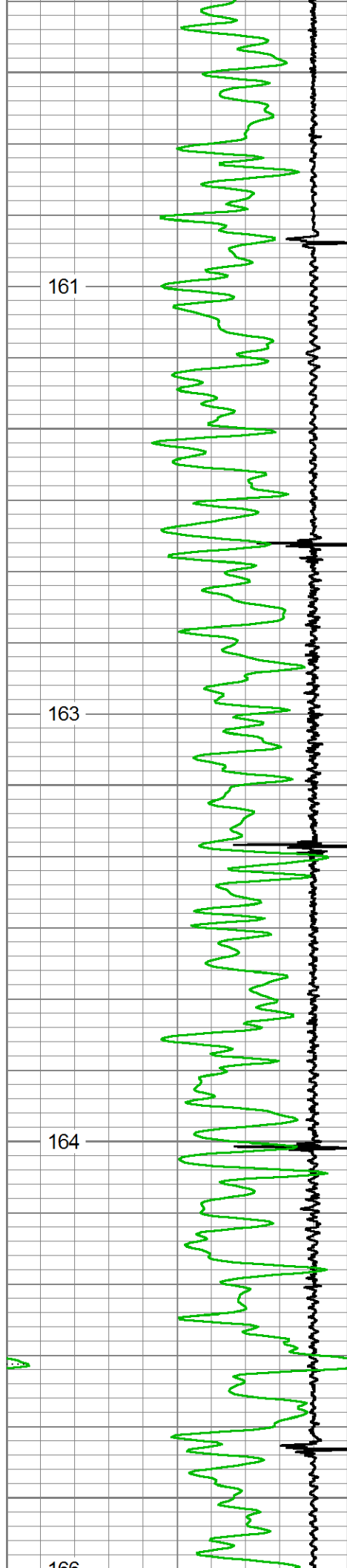
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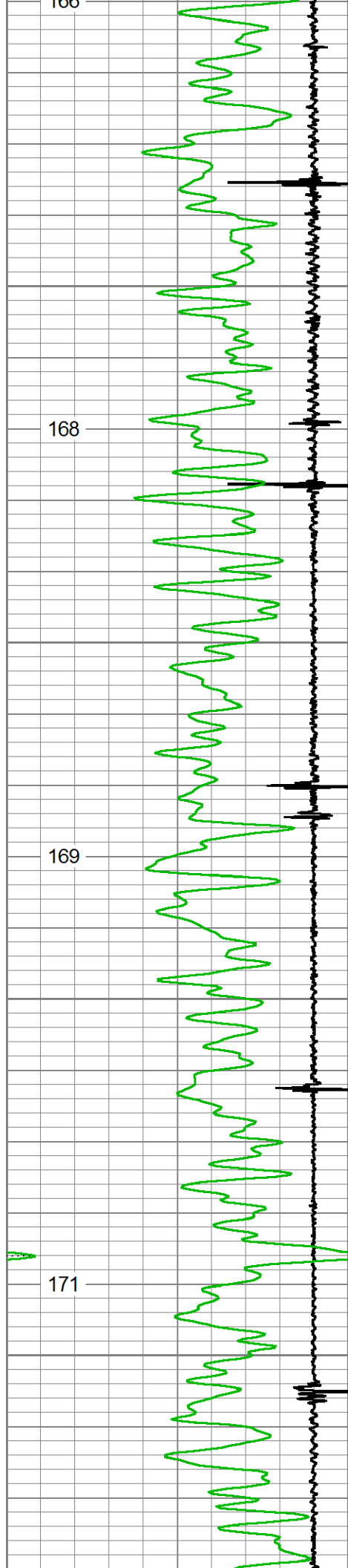
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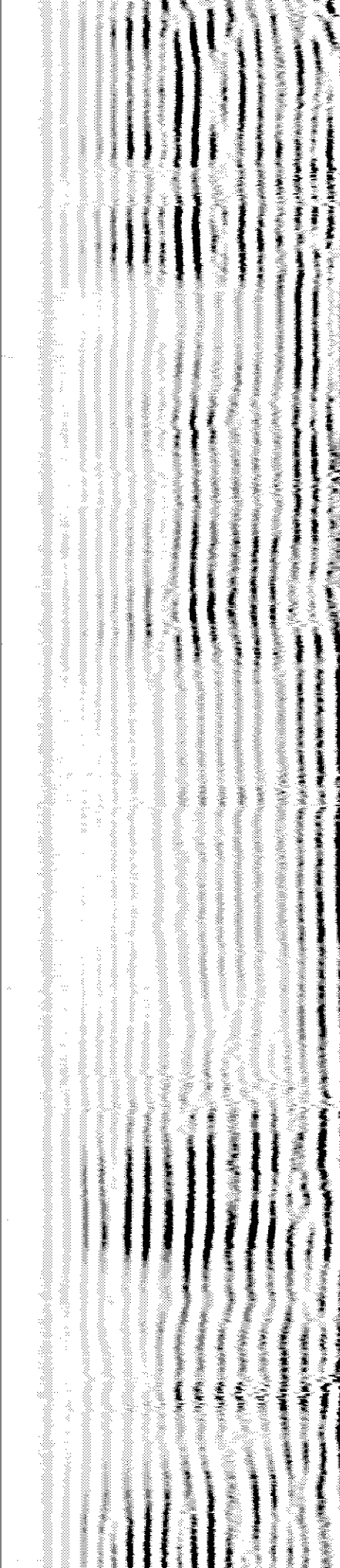
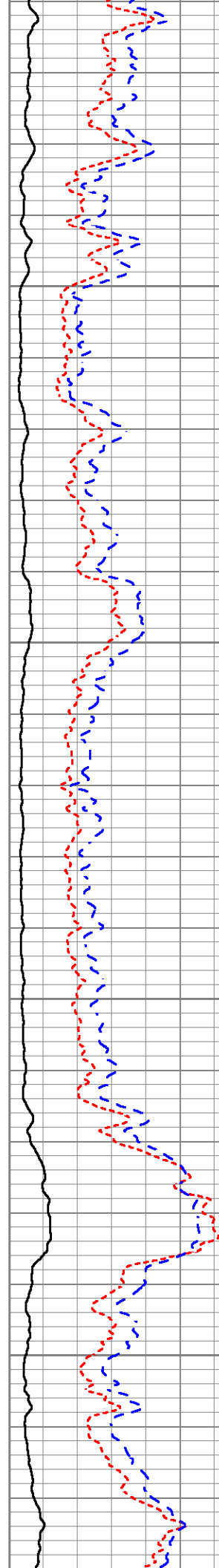


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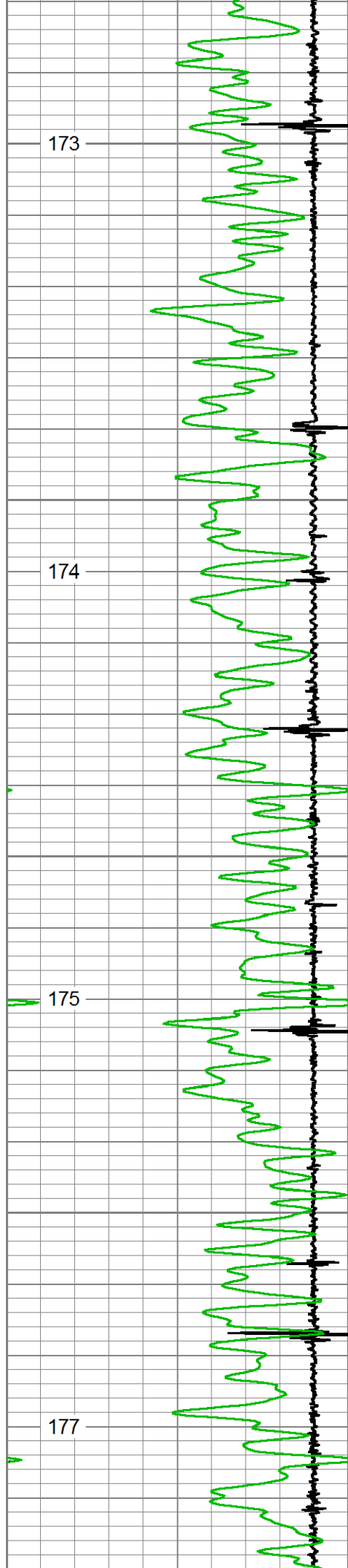
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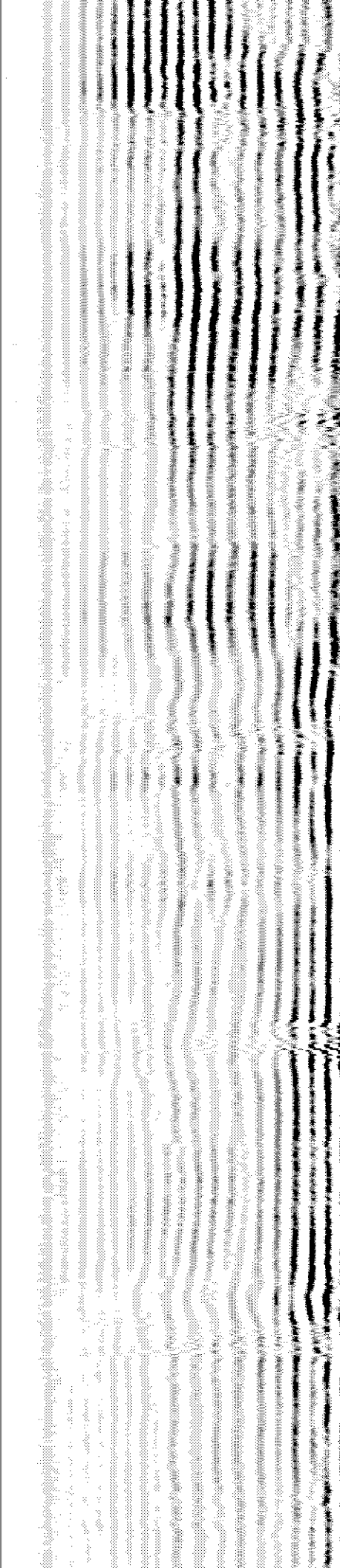
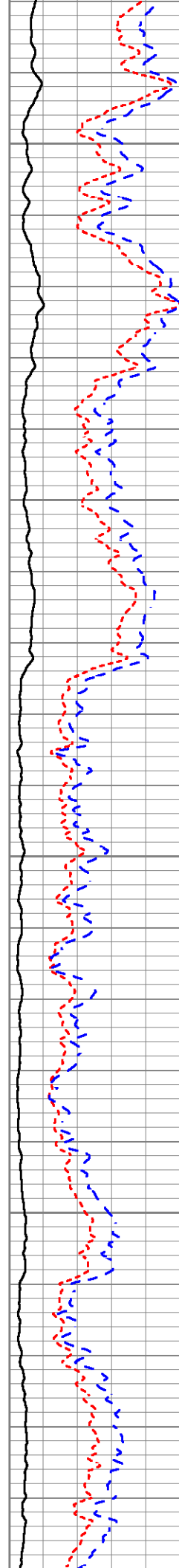
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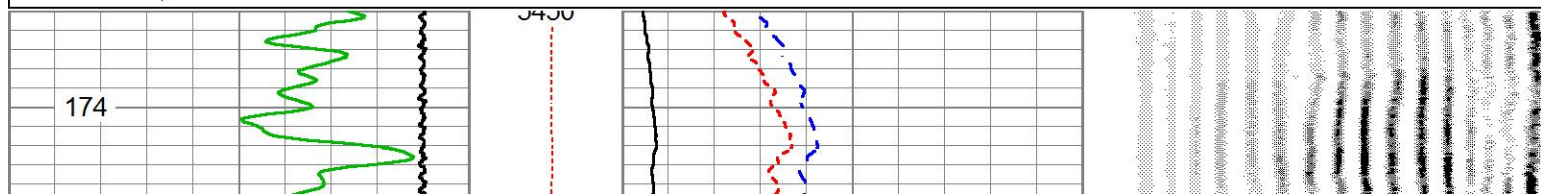
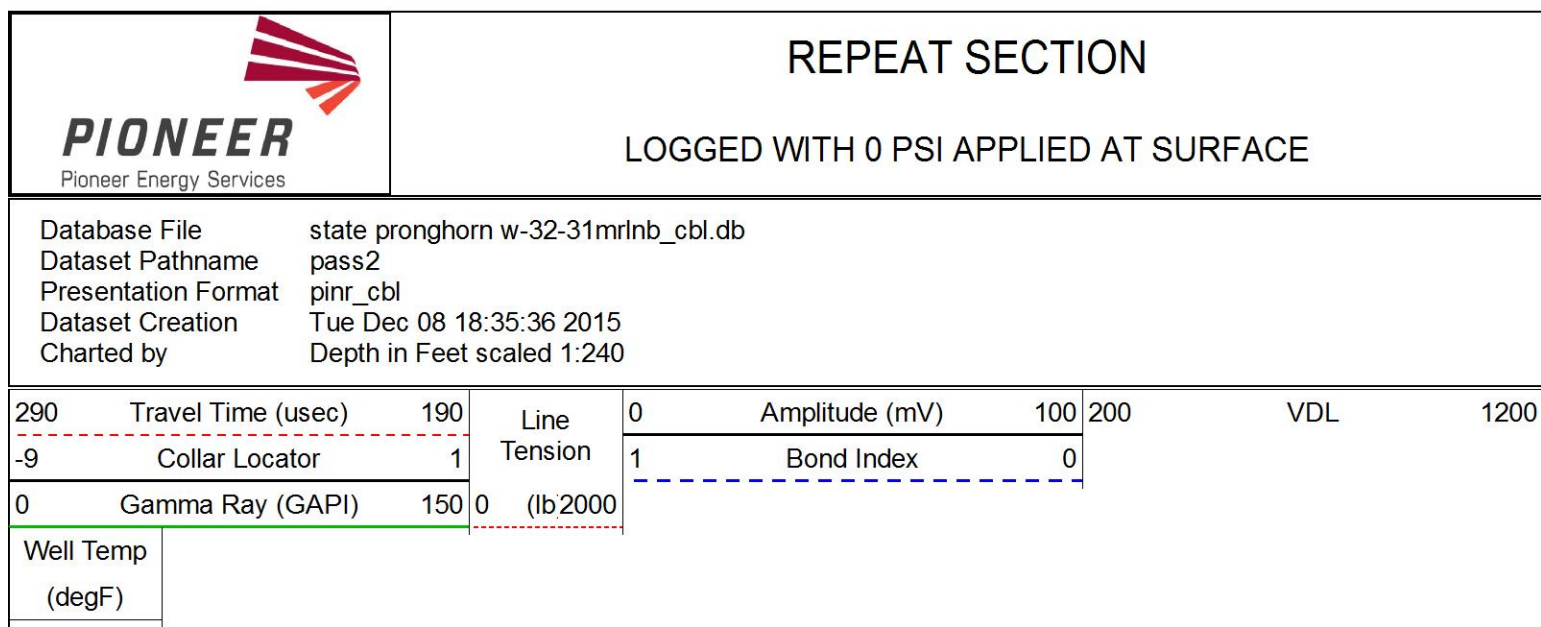
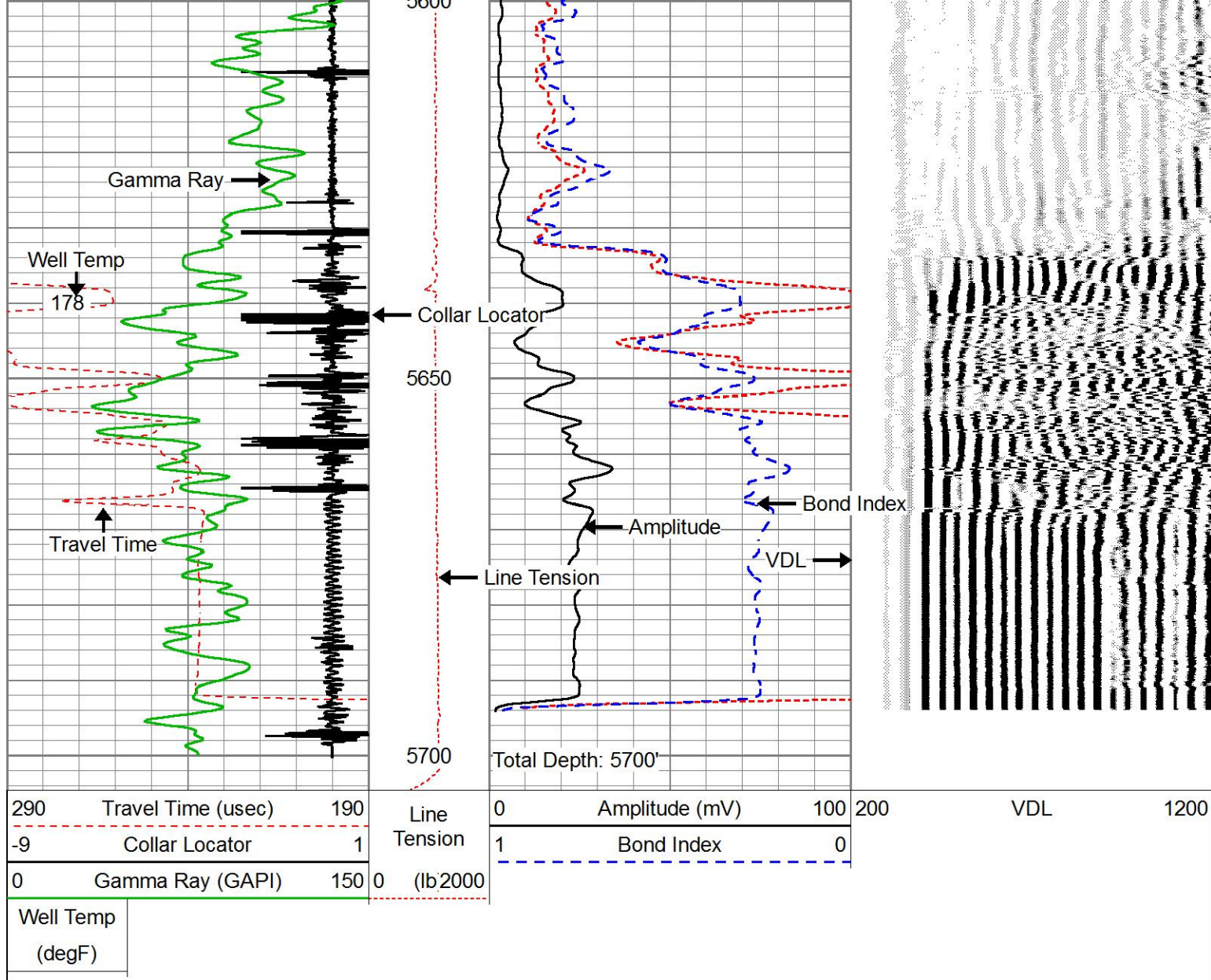
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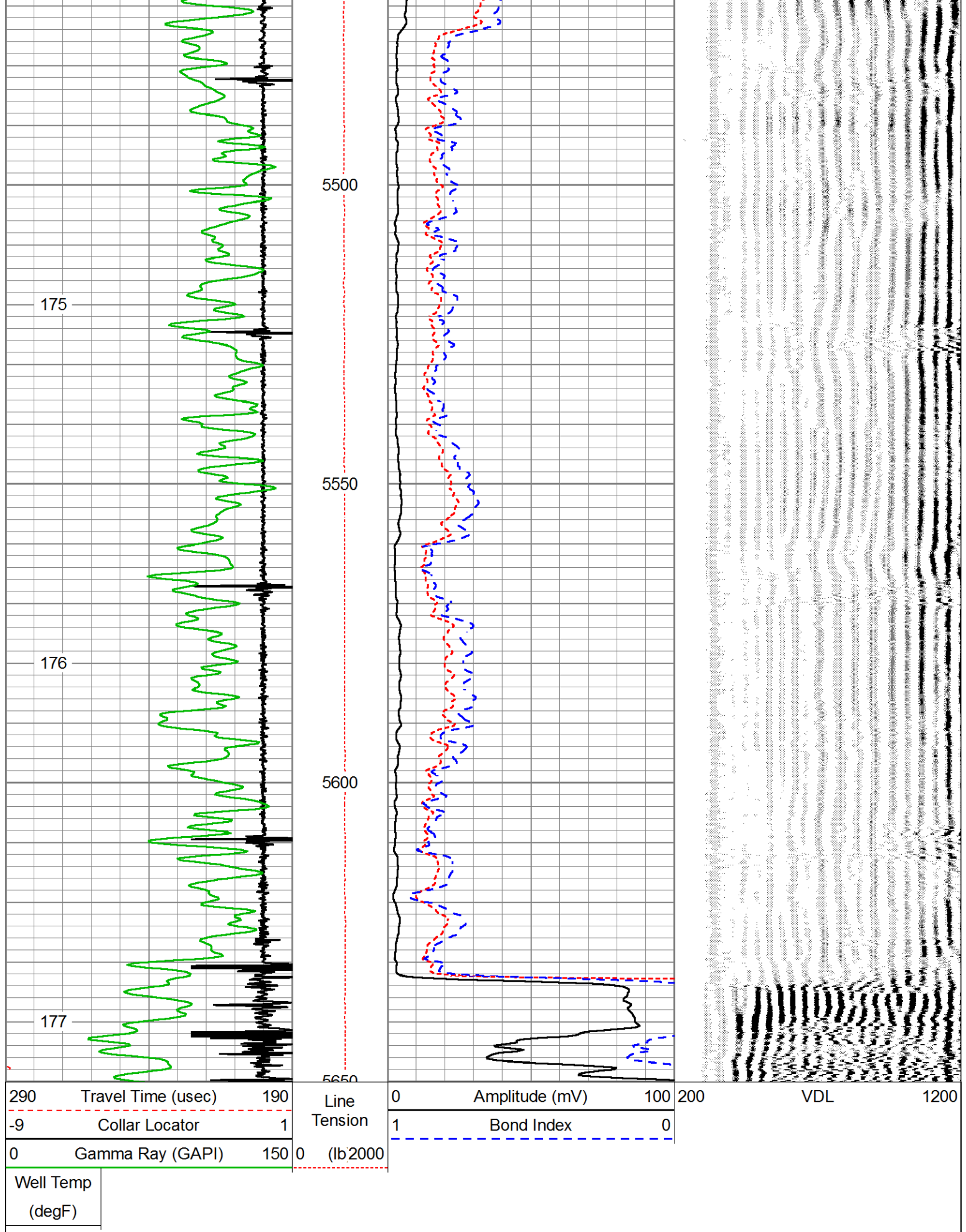
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### Calibration Report

Database File

state pronghorn v-32-31mrlnb.db



### Gamma Ray Calibration Report

Serial Number: 111211  
Tool Model: Probe  
Performed: Tue Dec 01 07:35:29 2015

Calibrator Value: 693.0 GAPI

Background Reading: 338.5 cps  
Calibrator Reading: 1057.0 cps

Sensitivity: 0.9000 GAPI/cps

### Segmented Cement Bond Log Calibration Report

Serial Number: 141166\_7in  
Tool Model: RBT-C3

Calibration Casing Diameter: 7.000 in  
Calibration Depth: 1108.300 ft

Master Calibration, performed Tue Dec 01 07:01:05 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.018	1.551	1.000	62.000	63.000	-0.500
CAL	0.014	1.749				
5'	0.012	1.520	1.000	62.000	47.035	0.427
SUM						
S1	0.019	1.508	0.000	100.000	67.153	-1.255
S2	0.019	1.538	0.000	100.000	65.814	-1.236
S3	0.019	1.532	0.000	100.000	66.111	-1.289
S4	0.019	1.529	0.000	100.000	66.199	-1.241
S5	0.019	1.522	0.000	100.000	66.509	-1.237
S6	0.017	1.532	0.000	100.000	65.992	-1.102
S7	0.018	1.515	0.000	100.000	66.774	-1.188
S8	0.019	1.542	0.000	100.000	65.640	-1.238

### Temperature Calibration Report

Serial Number: 141166\_7in  
Tool Model: RBT-C3  
Performed: Wed Dec 02 09:38:42 2015

	Reference		Reading	
Low Reference:	35.00	degF	29.90	degF
High Reference:	91.00	degF	102.60	degF
Gain:	0.77			
Offset:	11.97			
Delta Spacing	1			



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Well STATE PRONGHORN W-32-31MRLNB  
Field WATTENBERG  
County WELD

