



**CEMENT
BOND LOG
WITH GAMMA RAY**

PIONEER
Pioneer Energy Services

Company	BONANZA CREEK ENERGY				
Well	STATE PRONGHORN V-32-31MRLNB				
Field	WATTENBERG				
County	WELD				
State	COLORADO				
Location:	API # : 05123423530000				
SHL: 1266' FNL & 748' FEL NENE	Other Services				
LAT: 40.36109	NONE				
LONG: -104.2262					
SEC 32 TWP 5N RGE 61W					
Permanent Datum	GL	Elevation	4565'	Elevation	
Log Measured From	KB			K.B.	4582'
Drilling Measured From	KB ... 17' ABOVE GL			D.F.	4582'
				G.L.	4565'

Date of Service	DECEMBER 8, 2015				
Run Number	ONE				
Depth Driller or PBTD	N/A				
Depth Logger	5620'				
Bottom Log Interval	5618'				
Top Log Interval	SURFACE				
Open Hole Size	8.75"				
Type Fluid	FSW				
Fluid Level	30'				
Fluid Density	8.33 PPG				
Max. Recorded Temperature	182 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	Bottom	
Tubing Record					
Surface Casing	9.625"	36#	SURFACE	1415'	
Production Casing	7"	26#	SURFACE	6421'	
Liner Record	4.5"	11.6#	5573'	N/A	

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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.


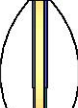
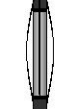
















Comments

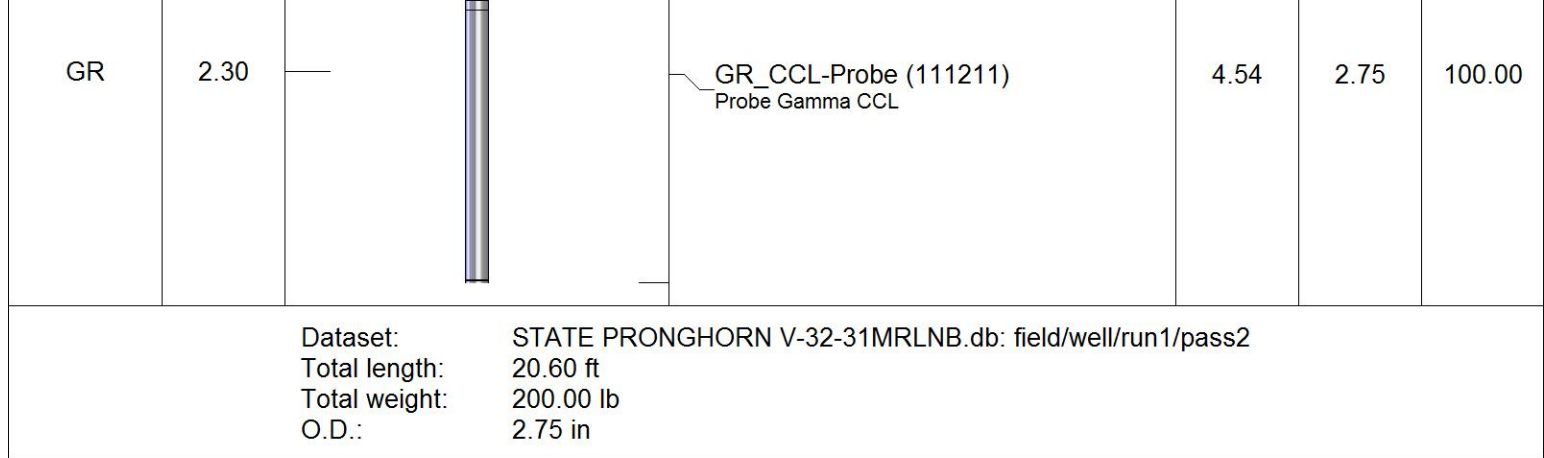
N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.
LOG CORRELATED TO KB

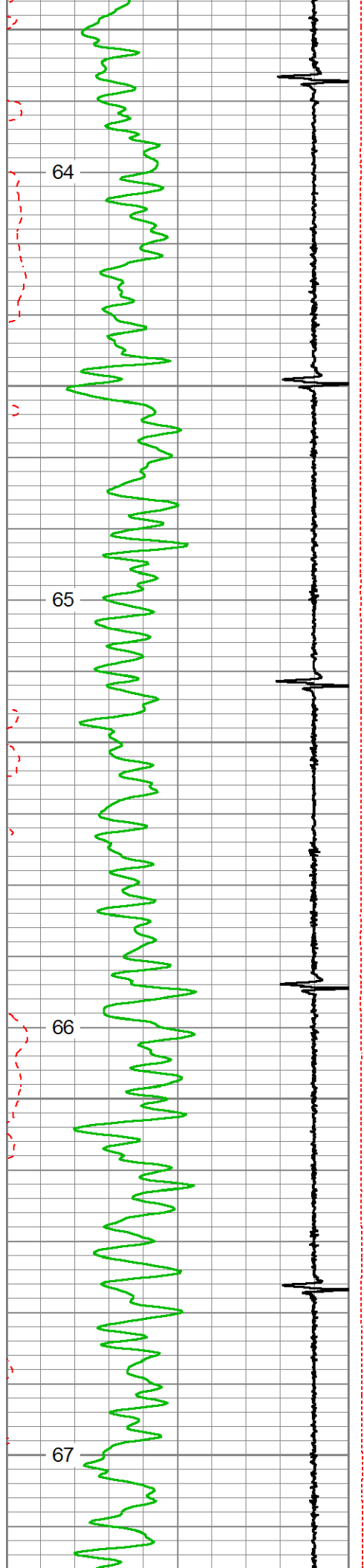
THANK YOU FOR USING PIONEER ENERGY SERVICES

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

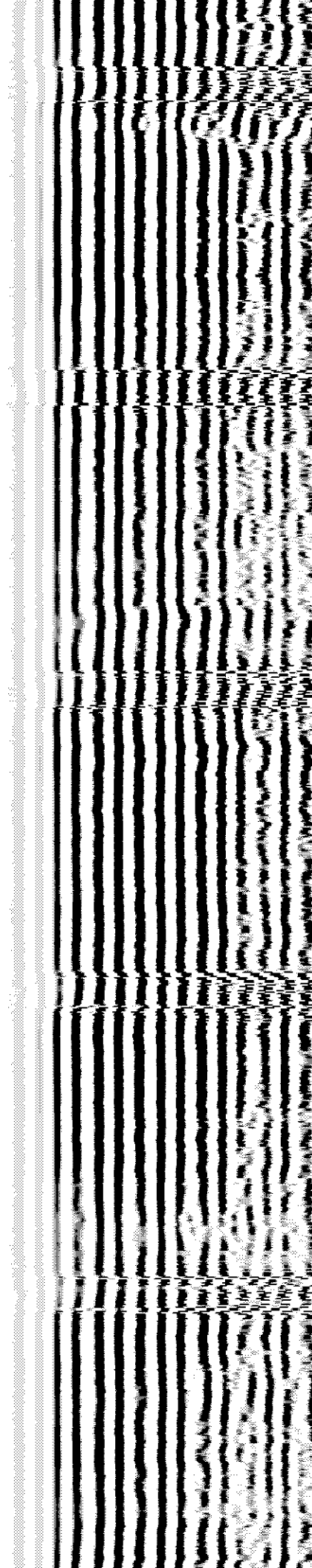
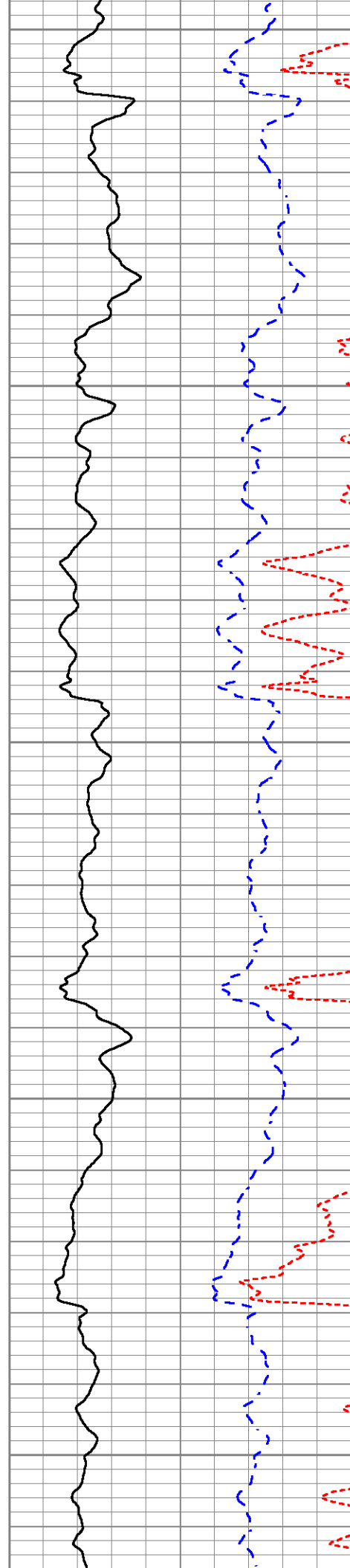
Top - Bottom							
BHTEMP_Src TEMP	PPT usec 0	CASEWGHT lb/ft 26	MAXAMPL mV 0	MINAMPL mV 1.5	MINATTN db/ft 0.08	SRFTEMP degF 0	CASETHCK in 0
CASEOD in 7	PERFS 0	TDEPTH ft 0	BOTTEMP degF 100	BOREID in 8.75			

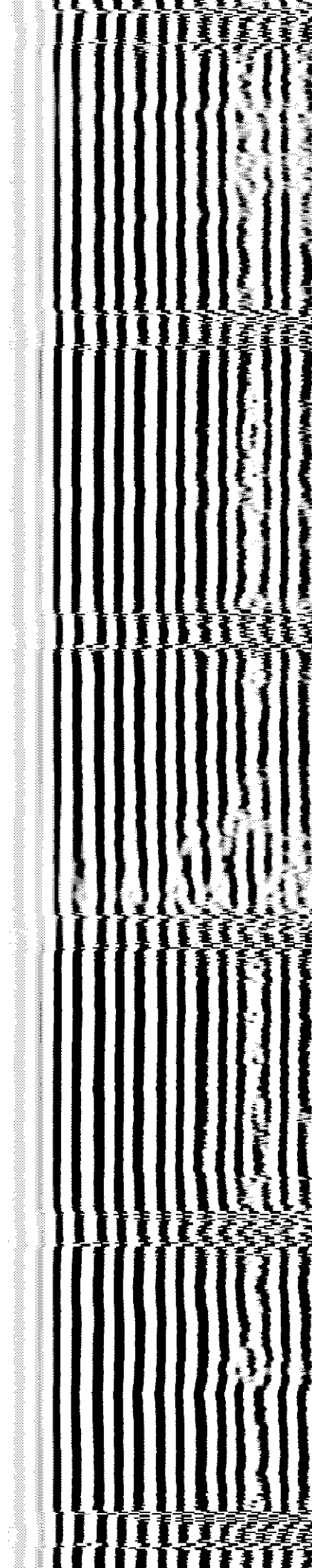
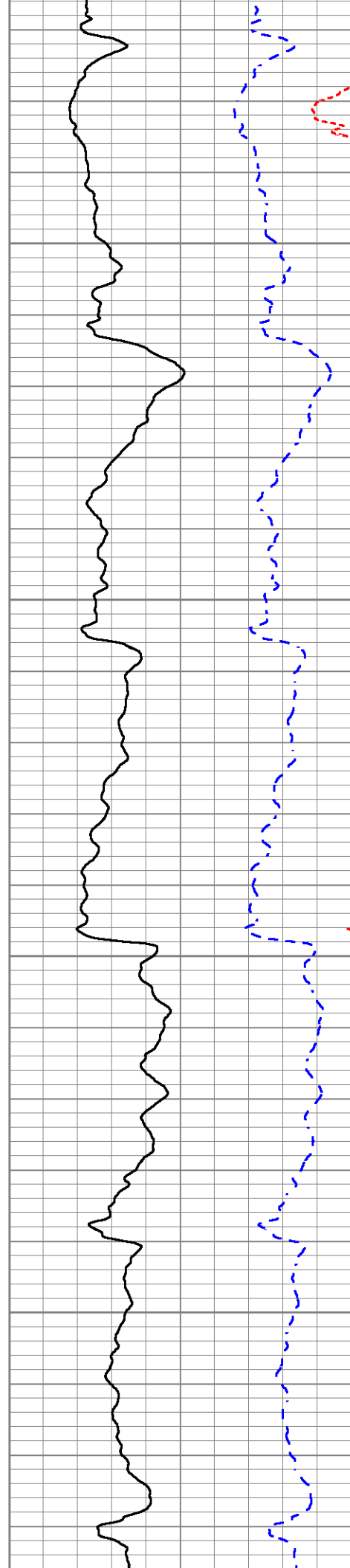
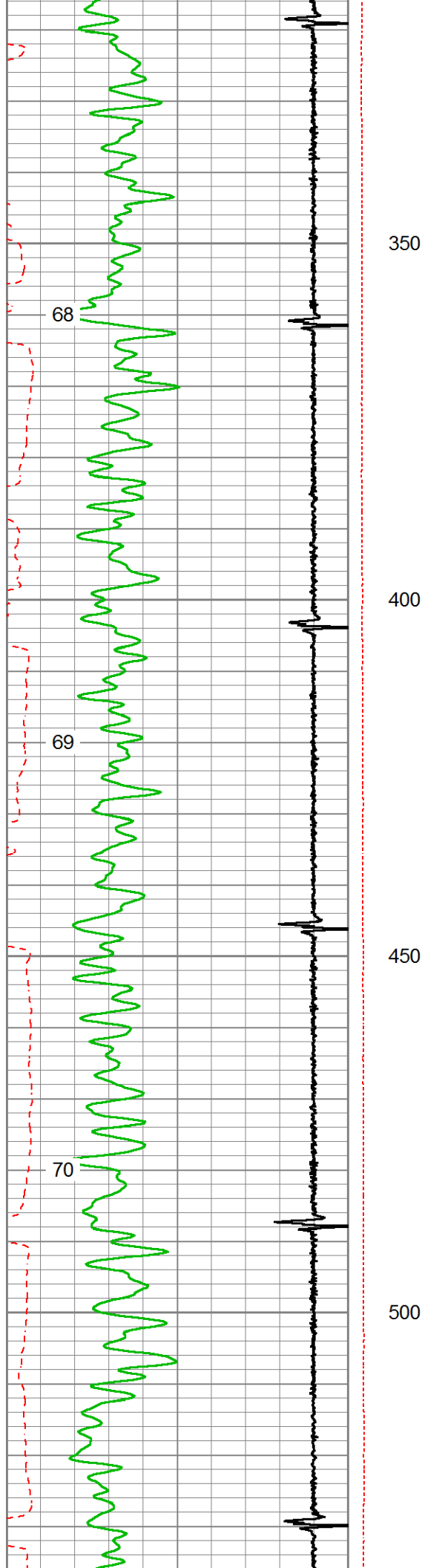
Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			CHD-STNDRD Standard Cable Head	1.00	1.69	10.00
			CENT-PTS275	2.83	2.75	
			RBT-RBT-C3 (141166_7in) Probe Radii Bond Tool with Digital Telemetry	9.40	2.75	90.00
IntTemp	14.88					
TEMP	13.86					
WVFS8	11.63					
WVFS7	11.63					
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					

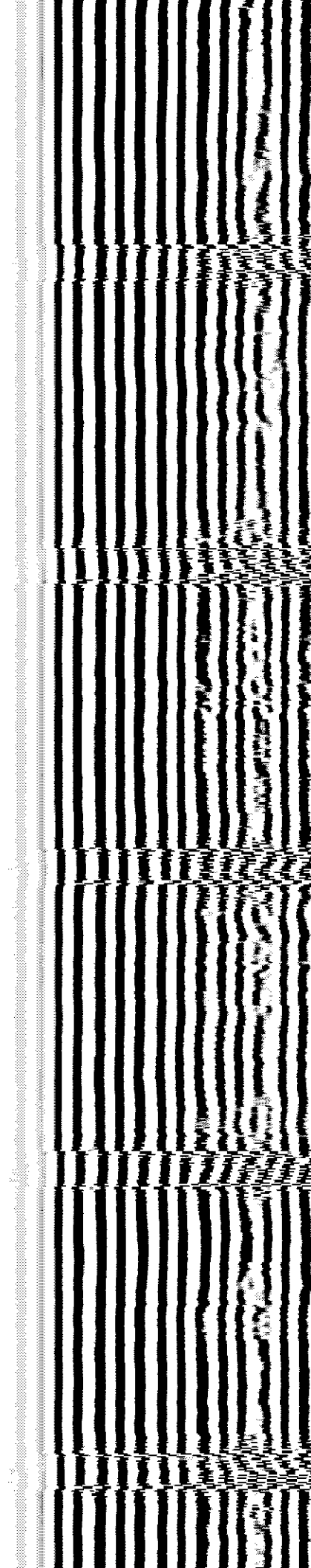
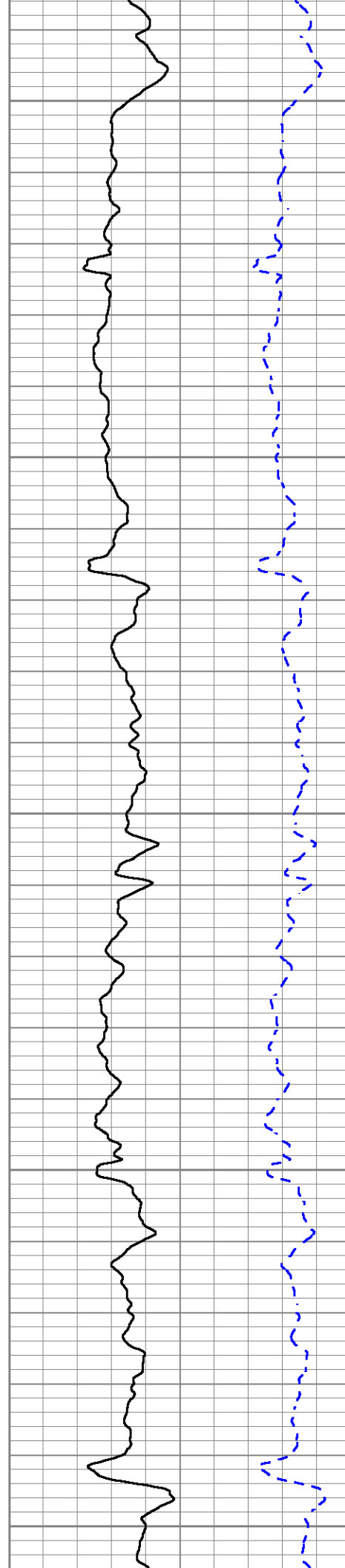
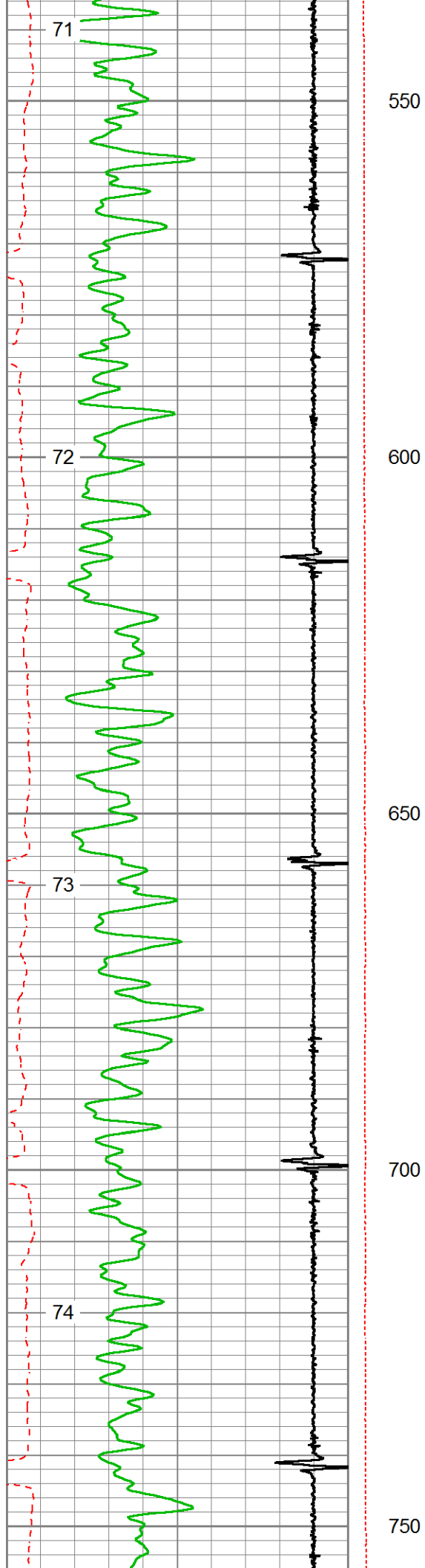


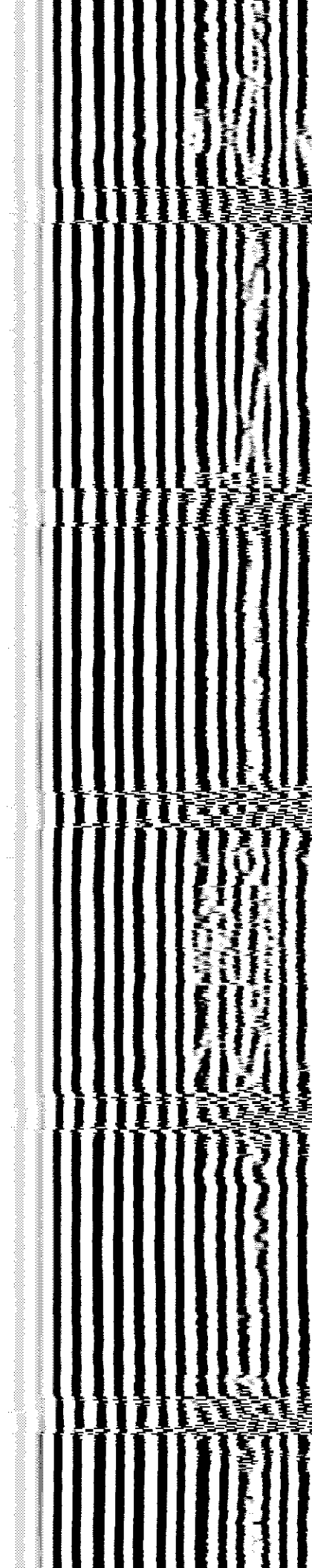
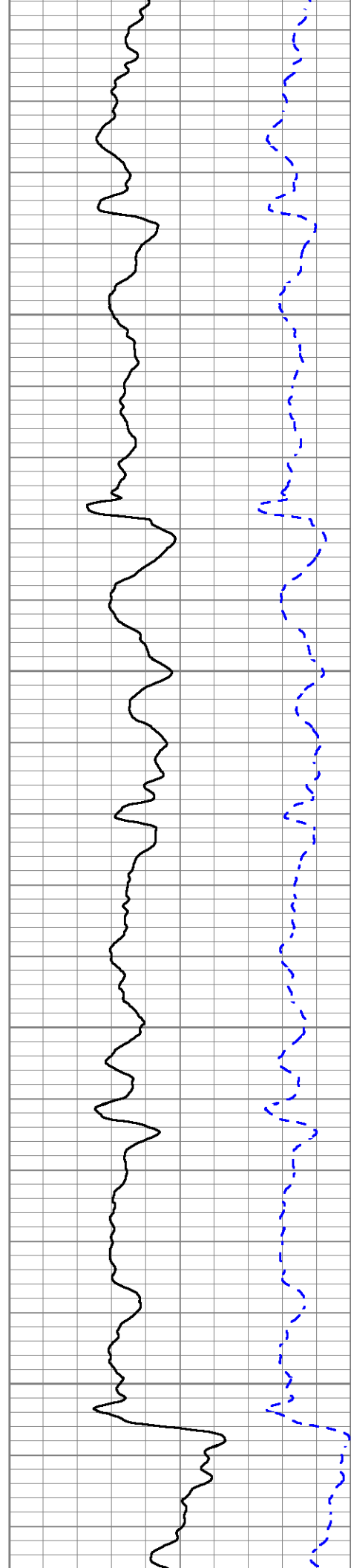
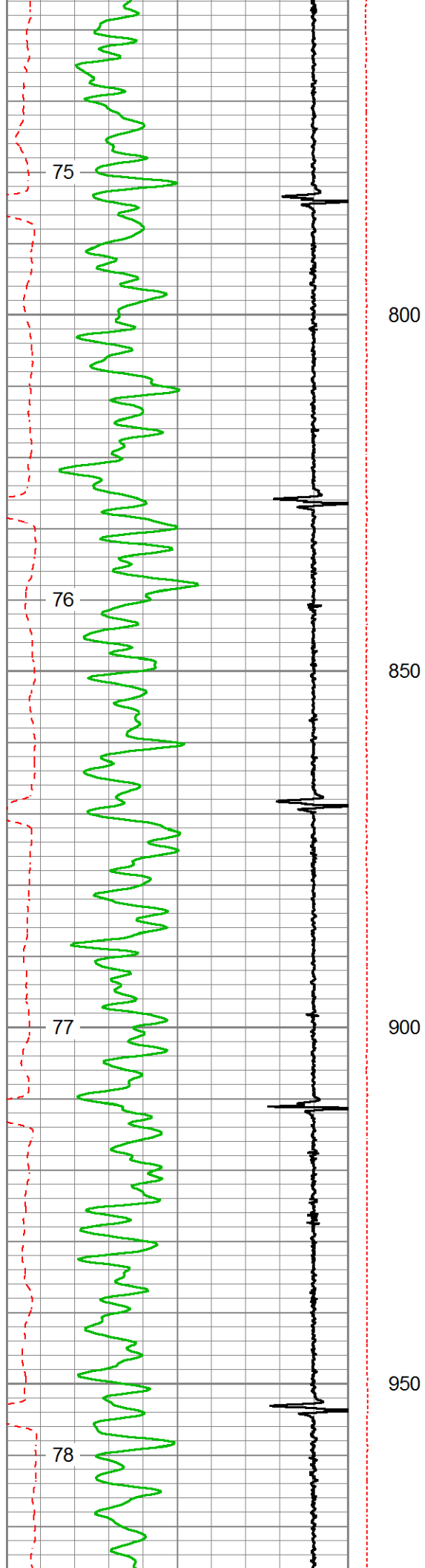


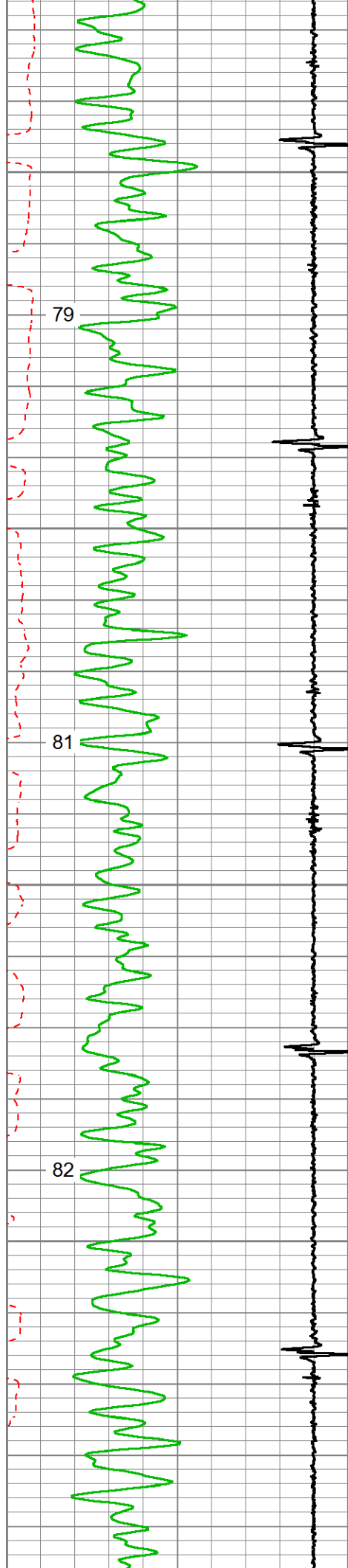
100
150
200
250
300











79

81

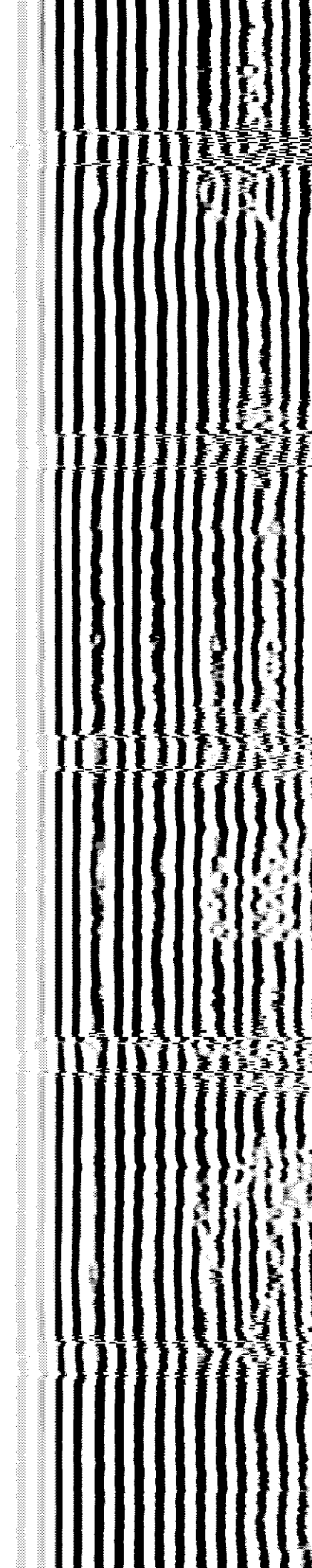
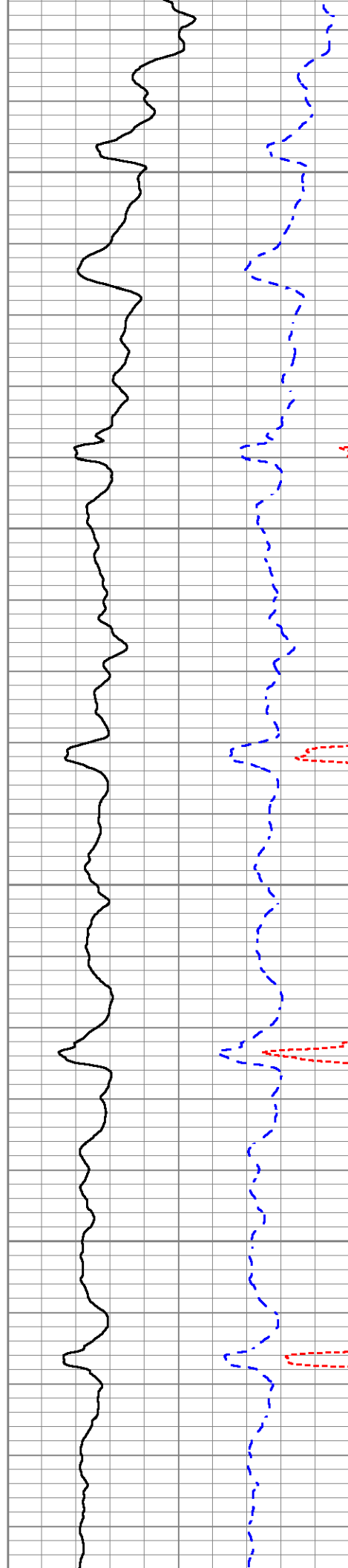
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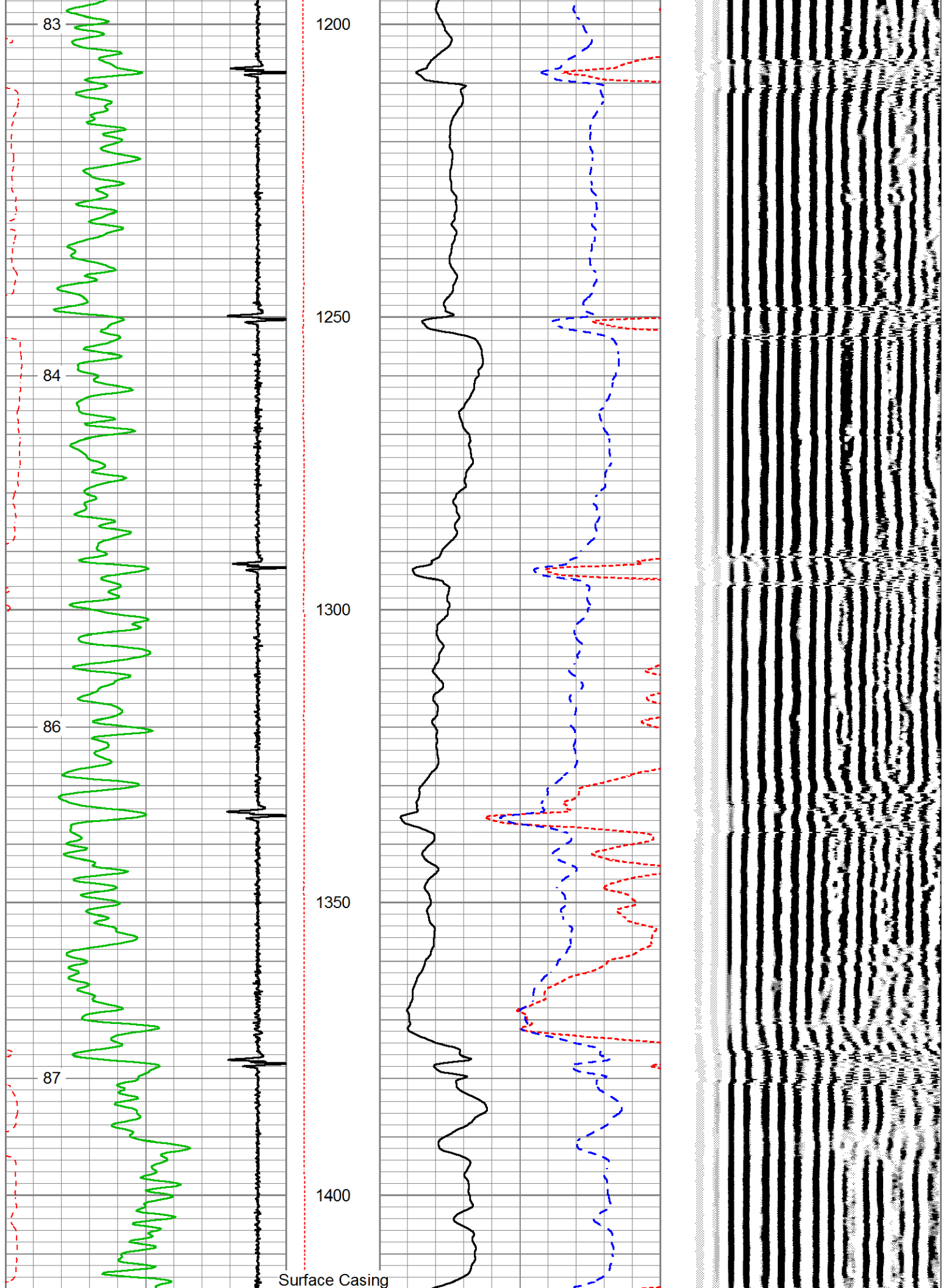
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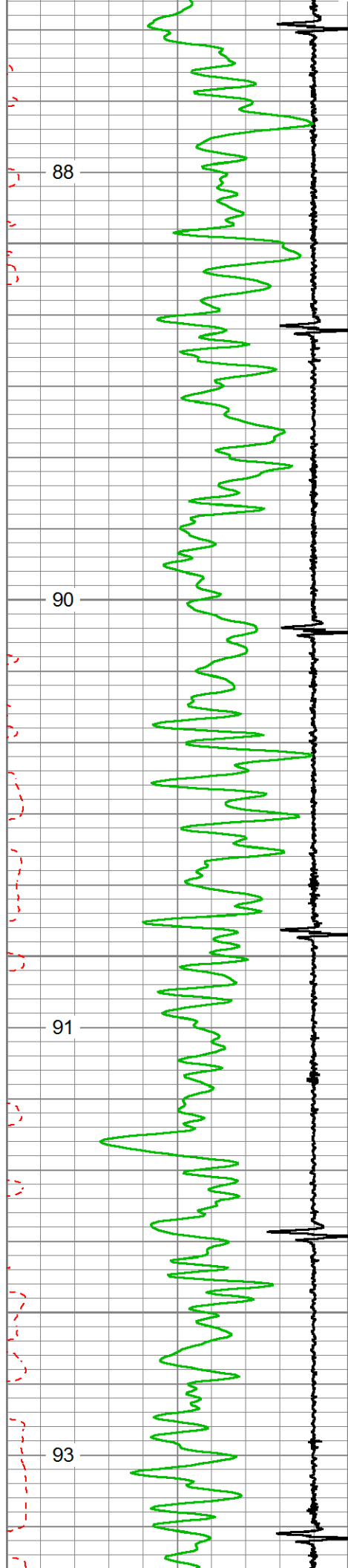
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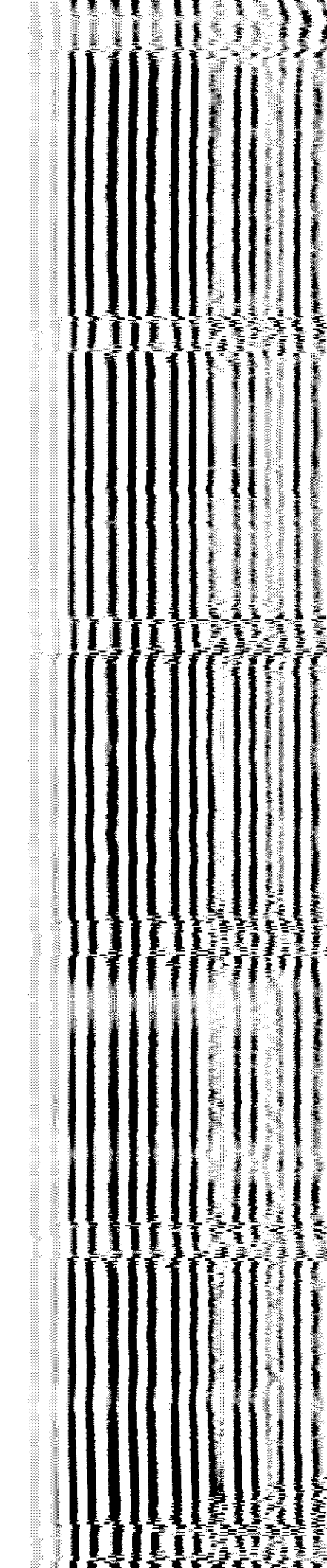
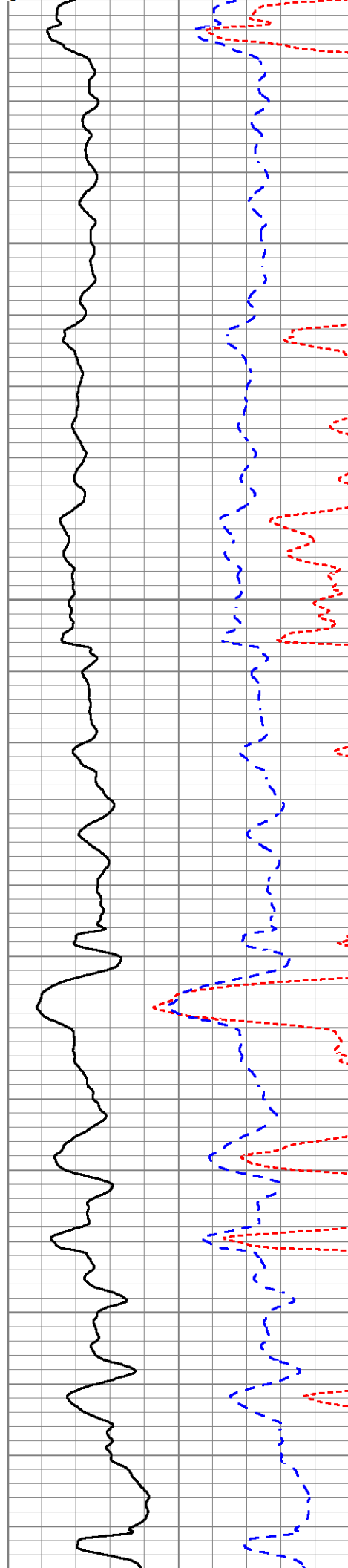


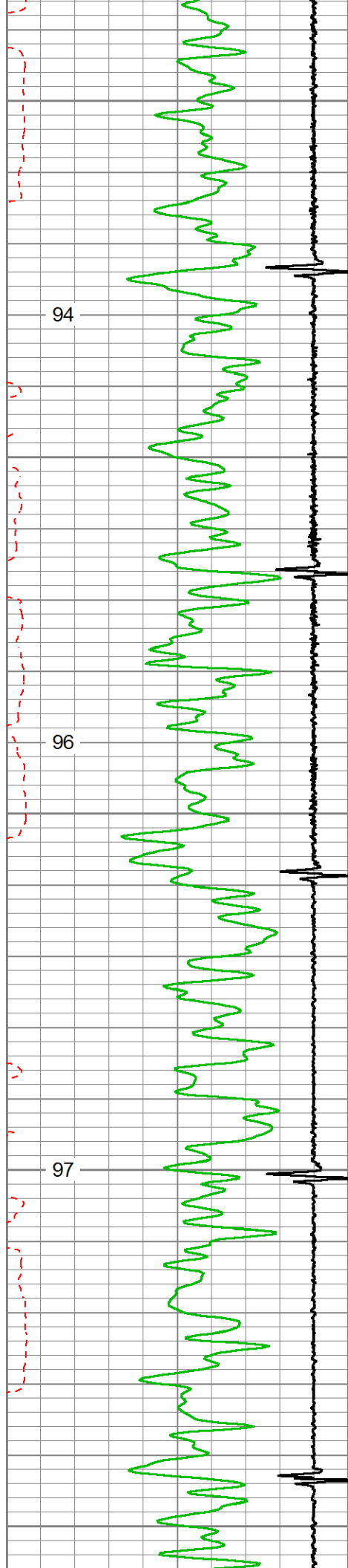
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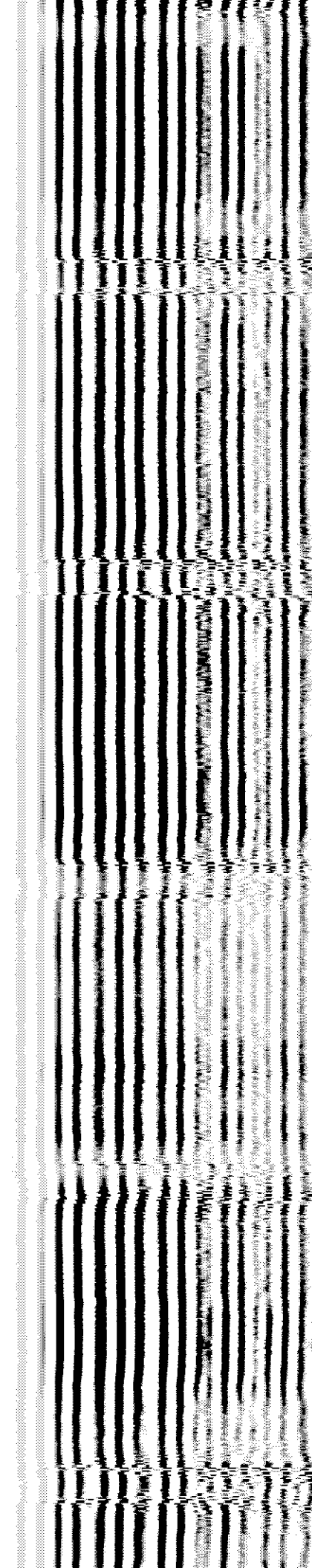
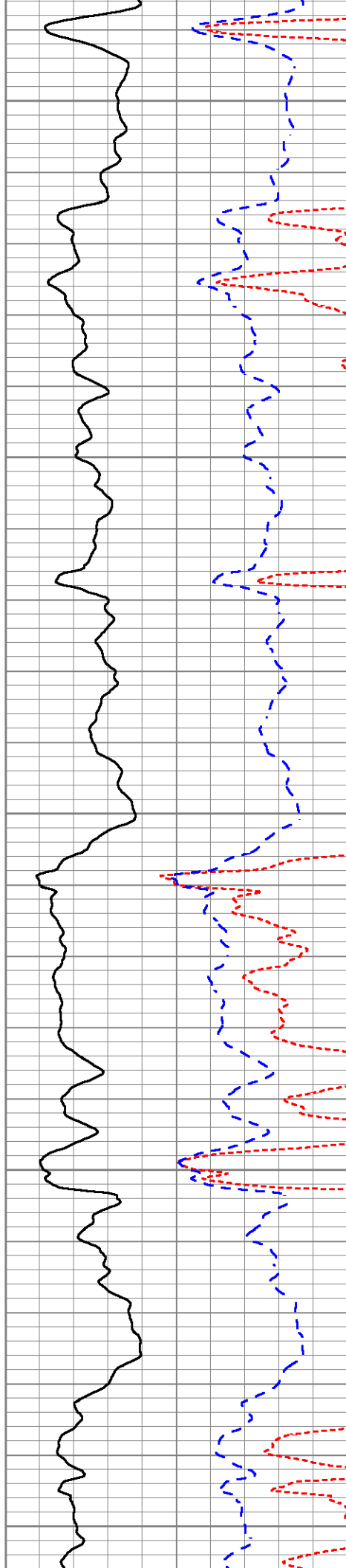
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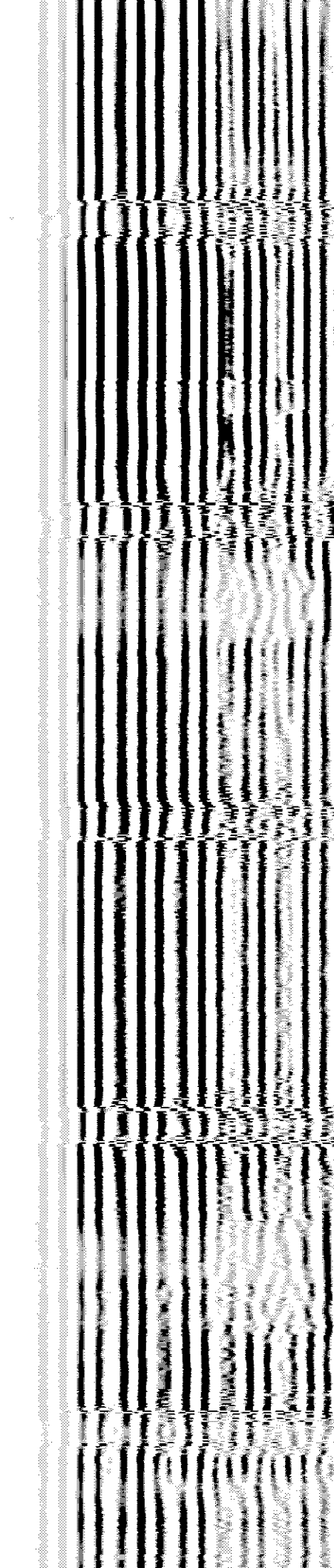
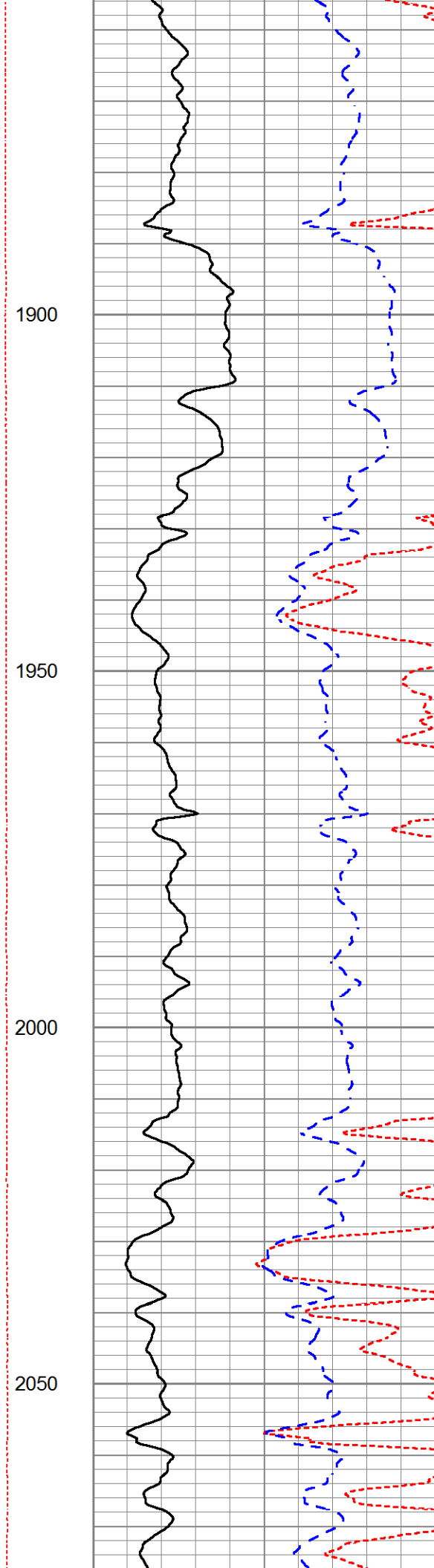
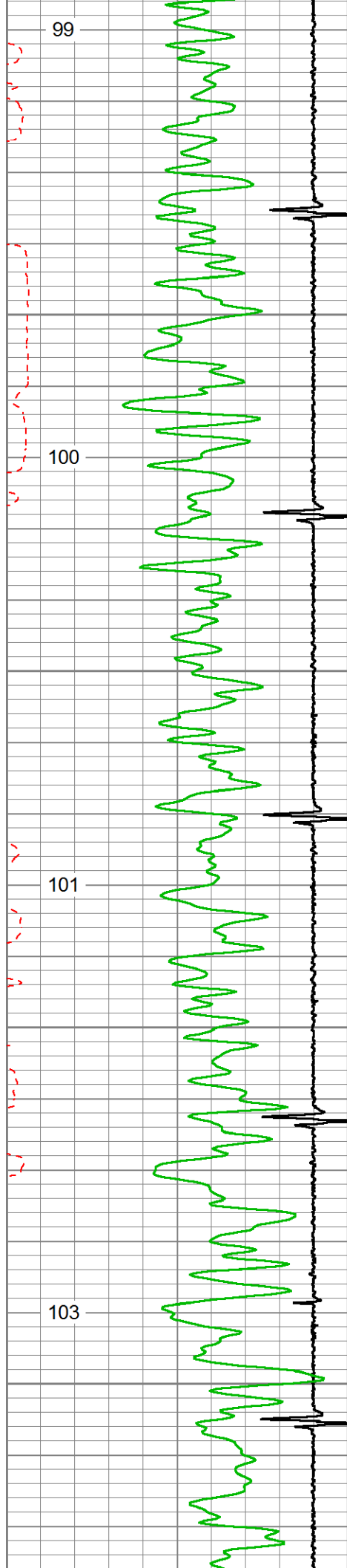
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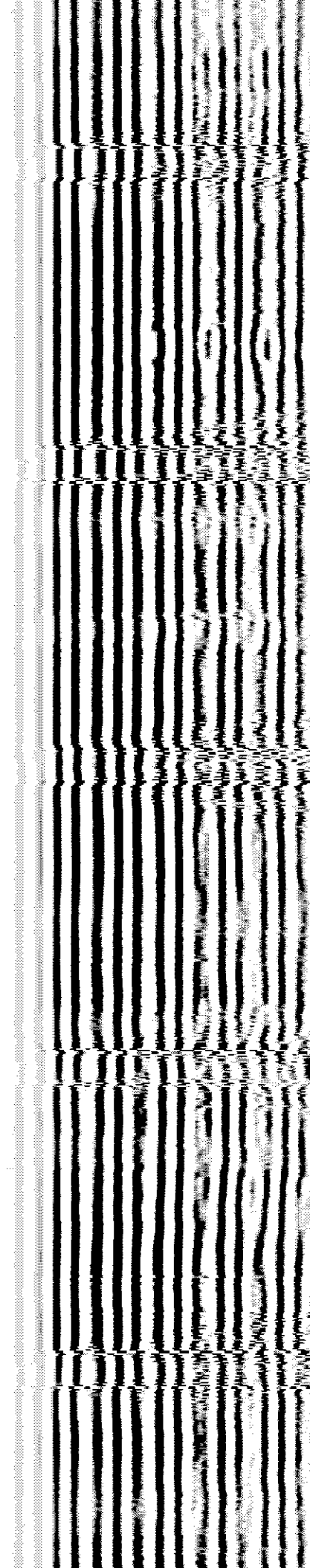
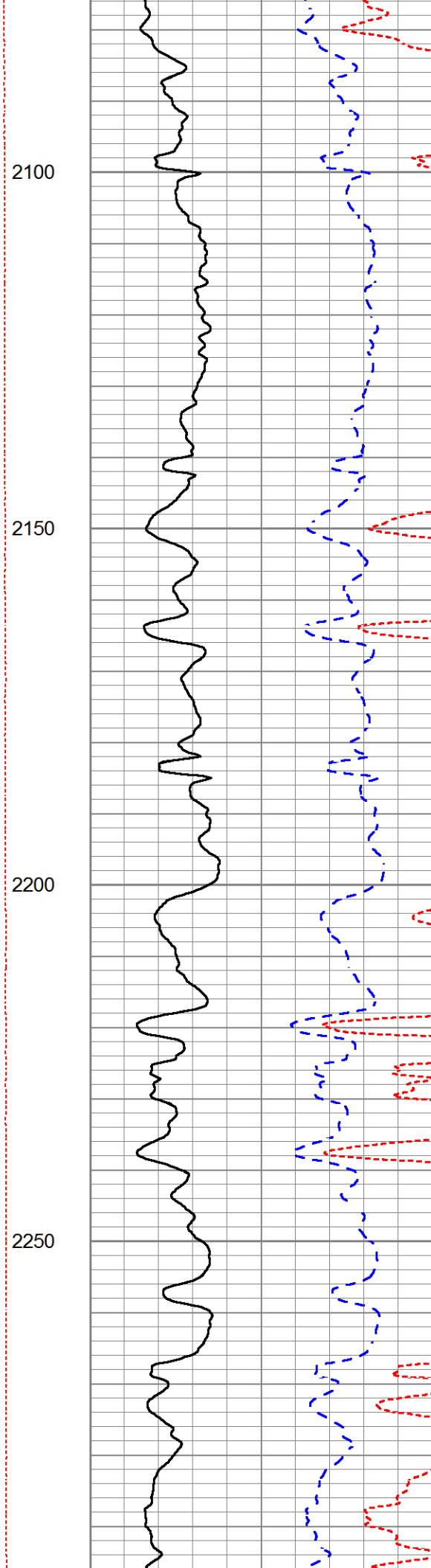
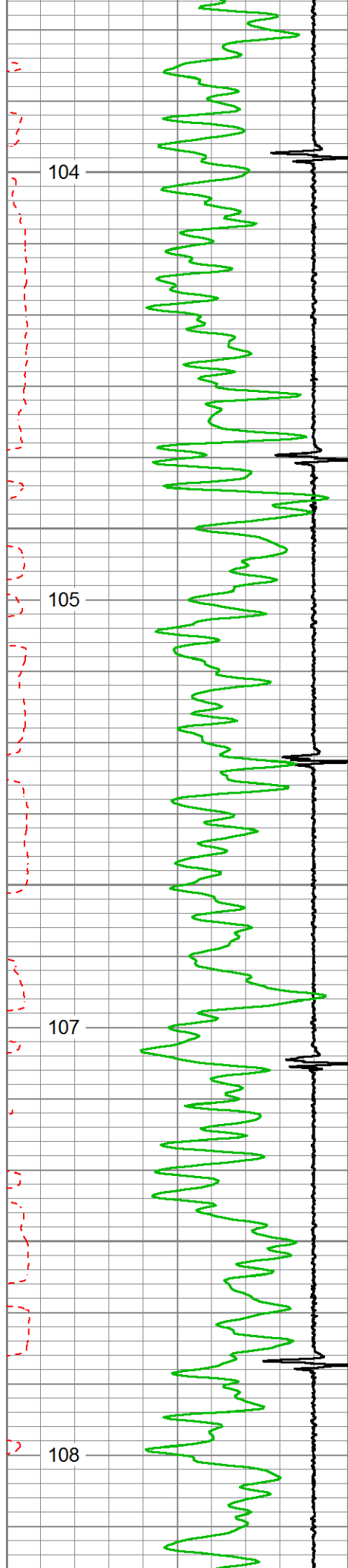
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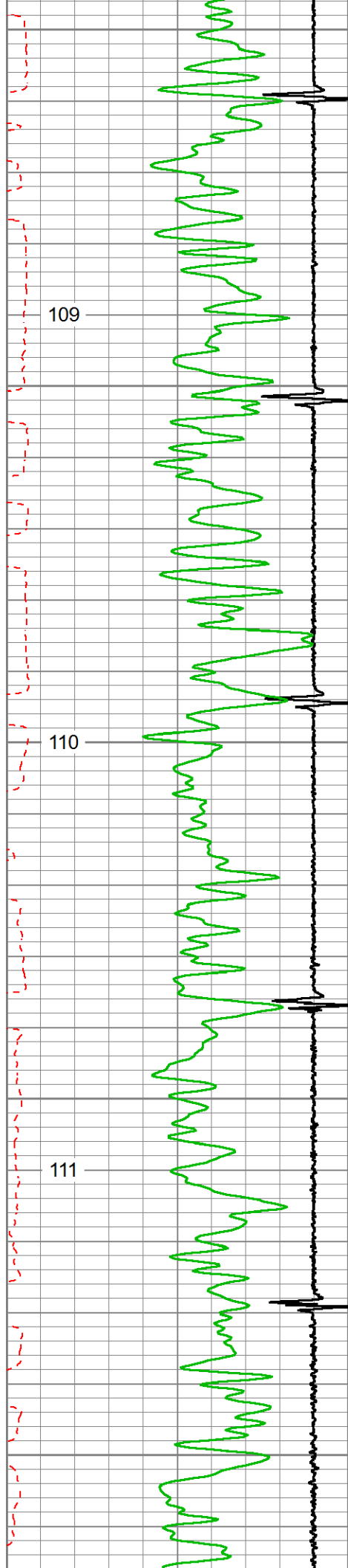
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1850









2300

109

2350

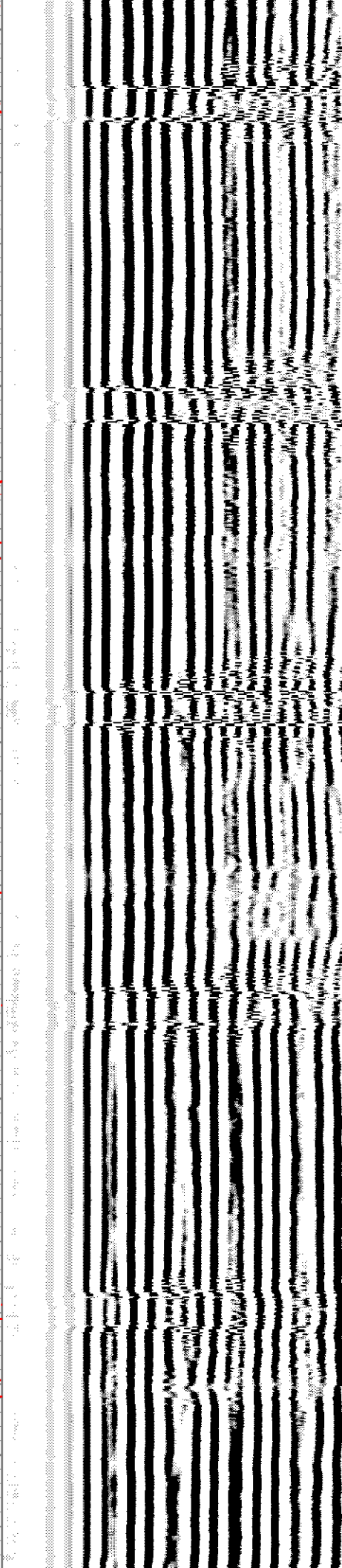
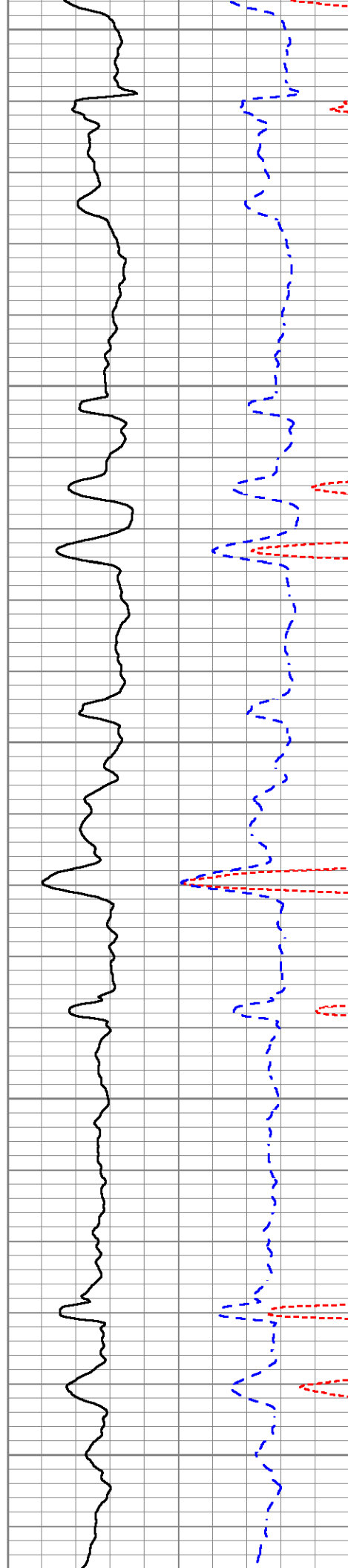
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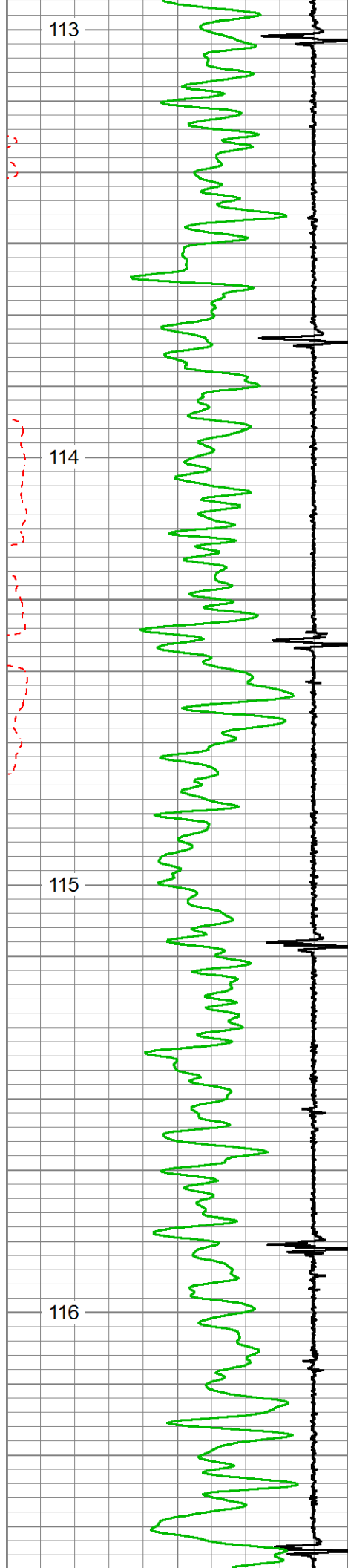
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2450

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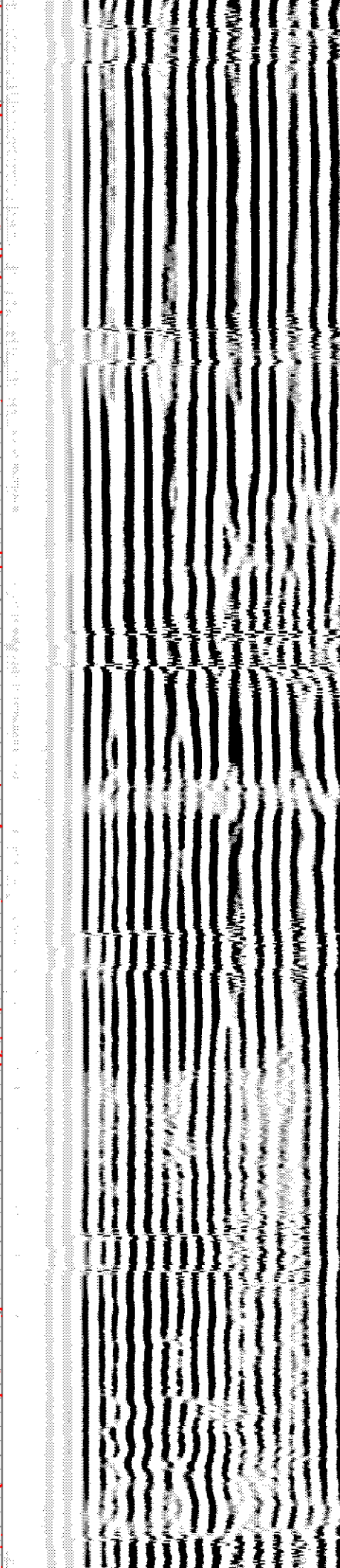
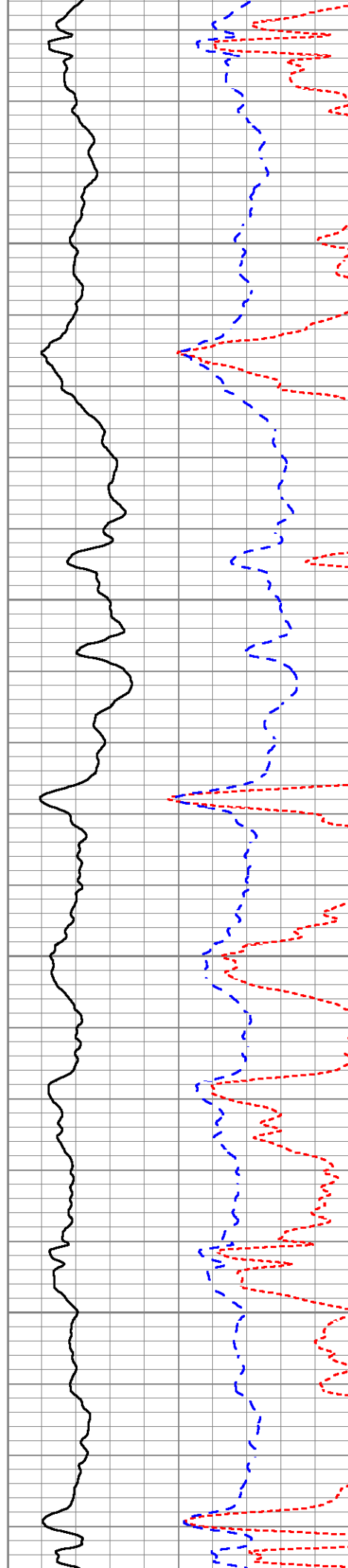


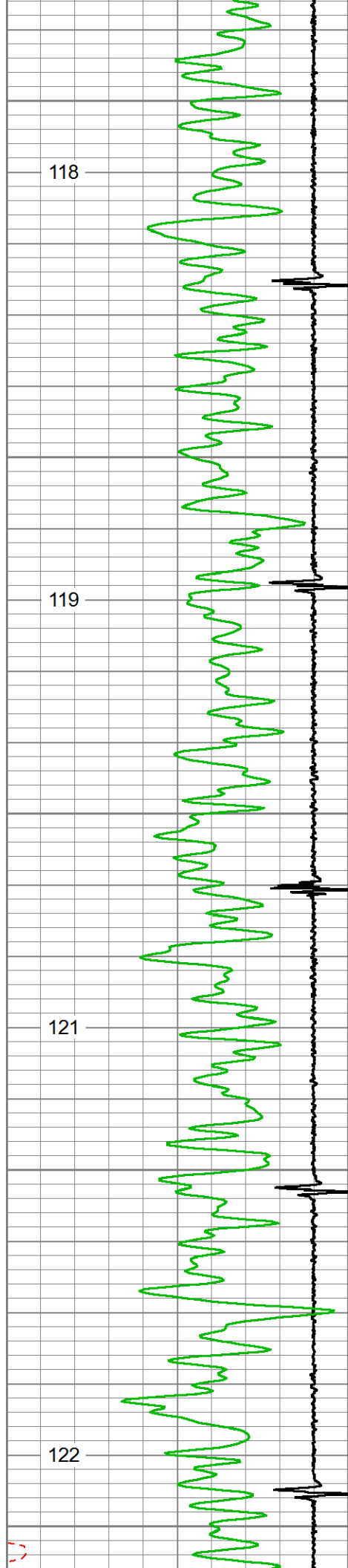
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2700





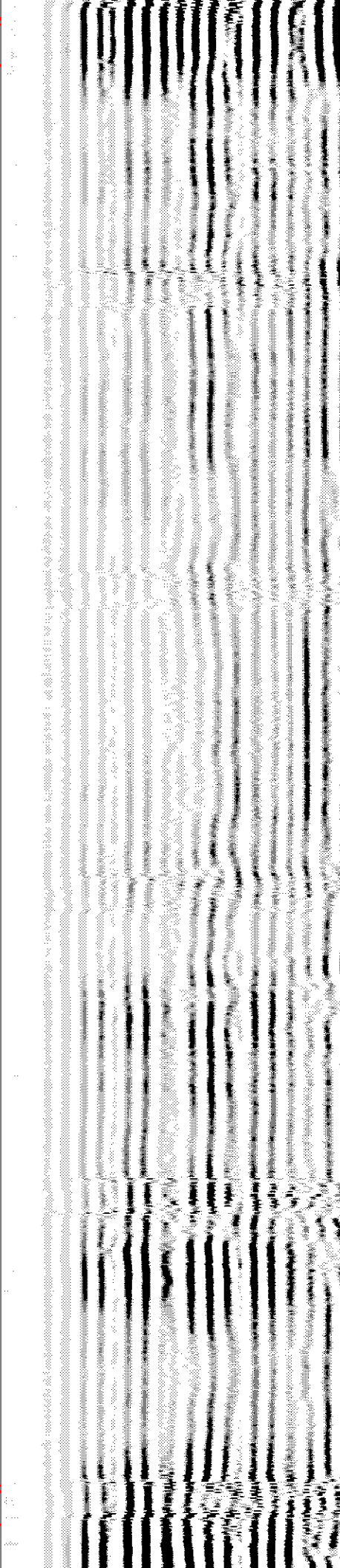
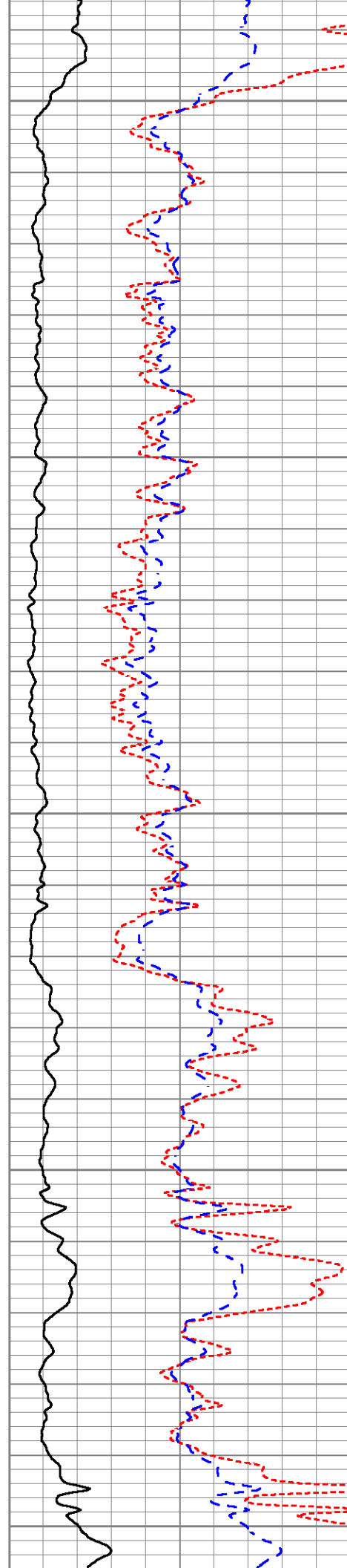
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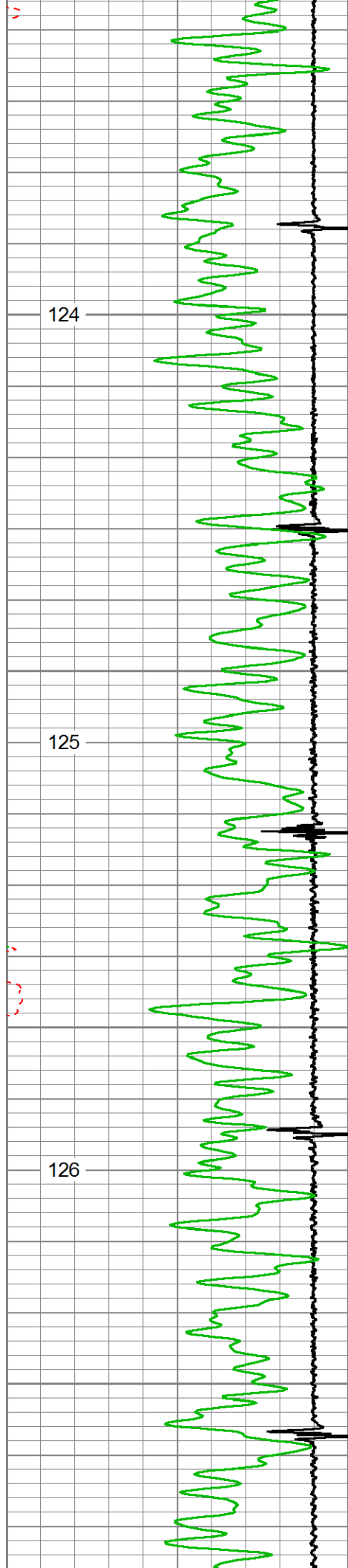
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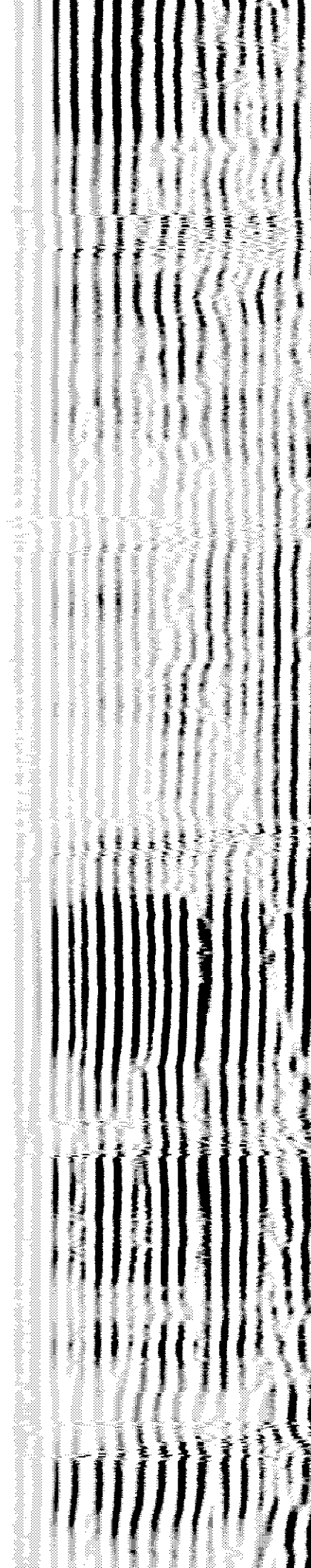
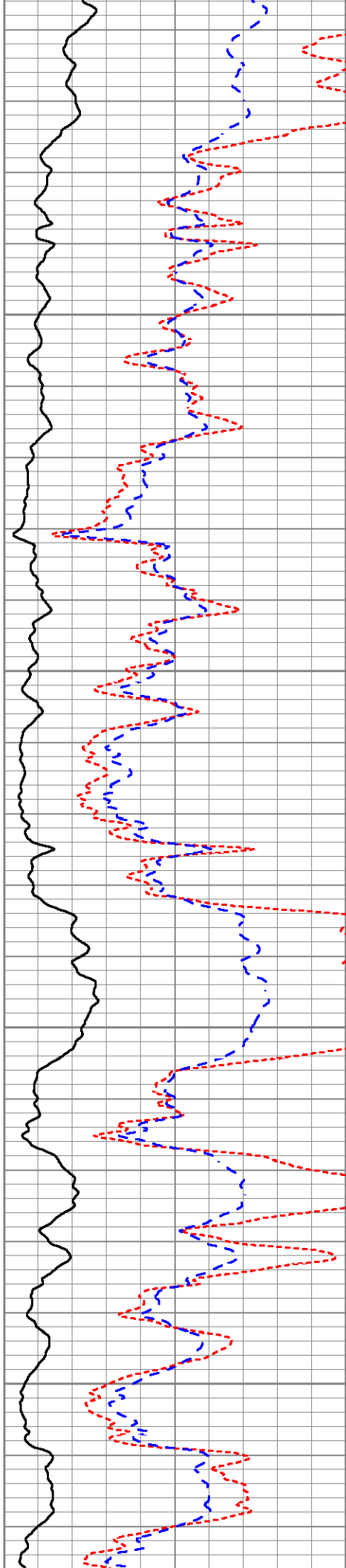


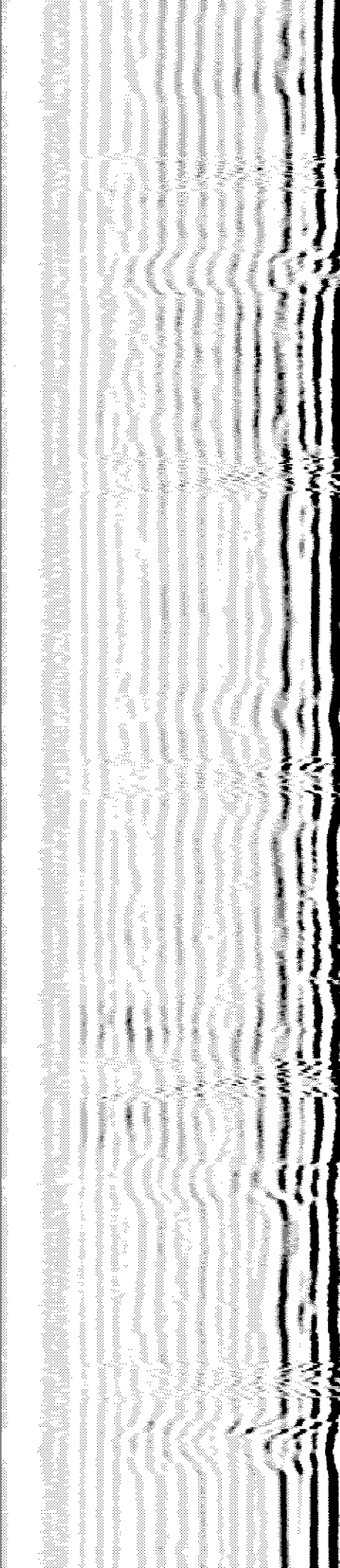
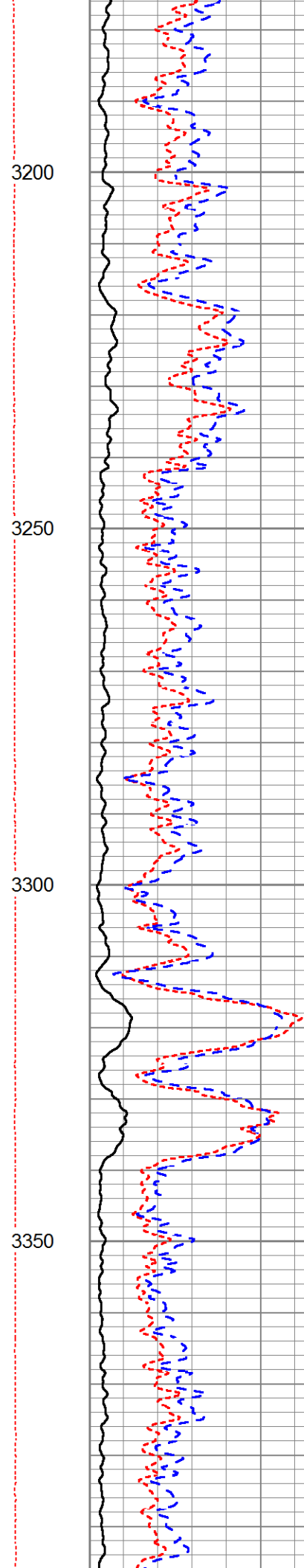
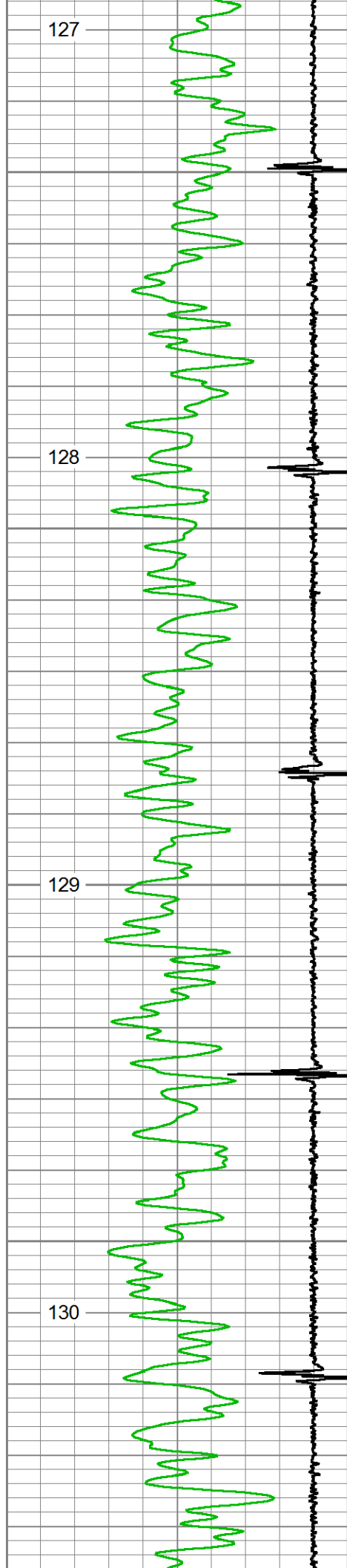
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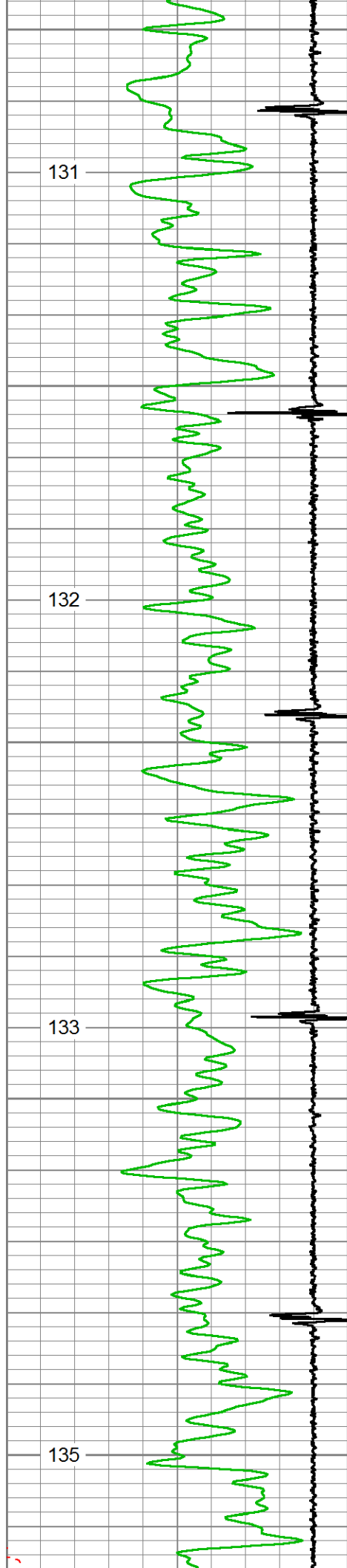
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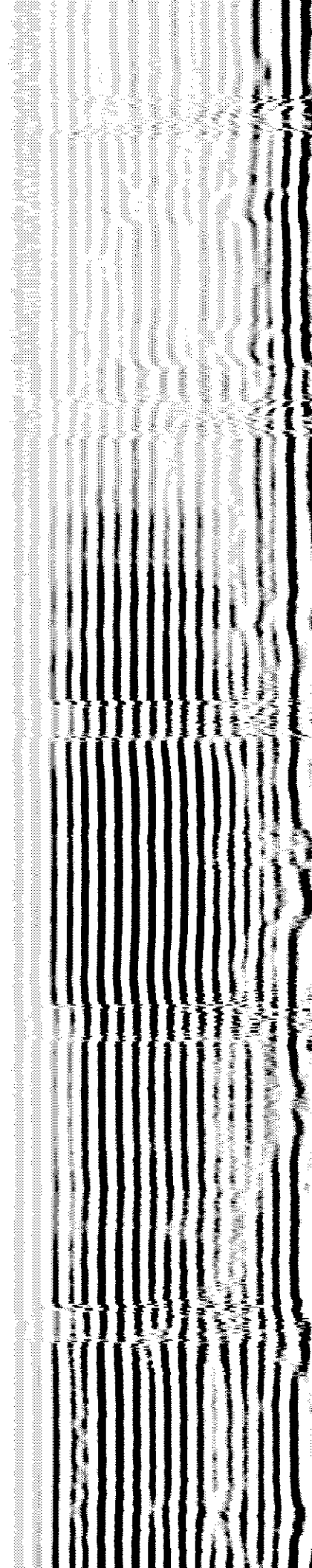
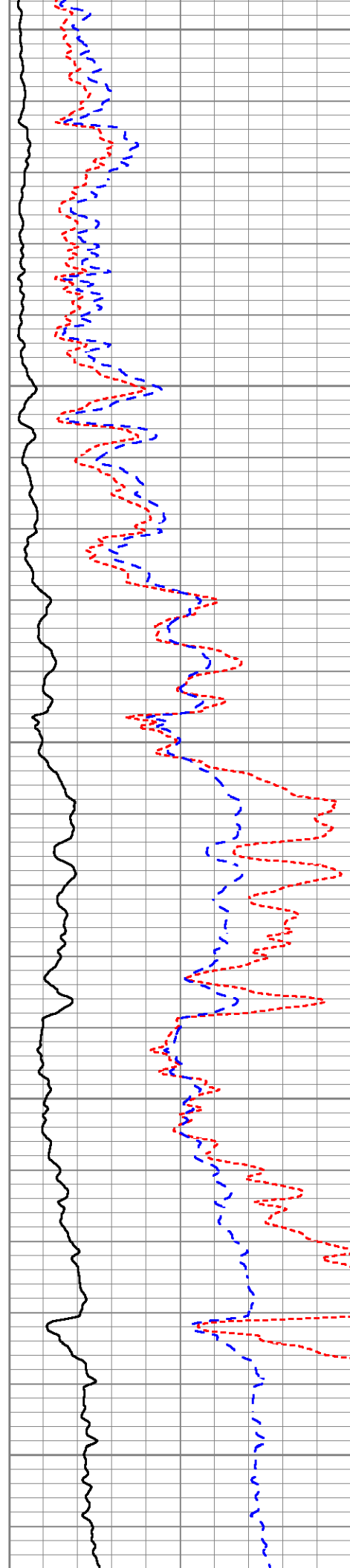
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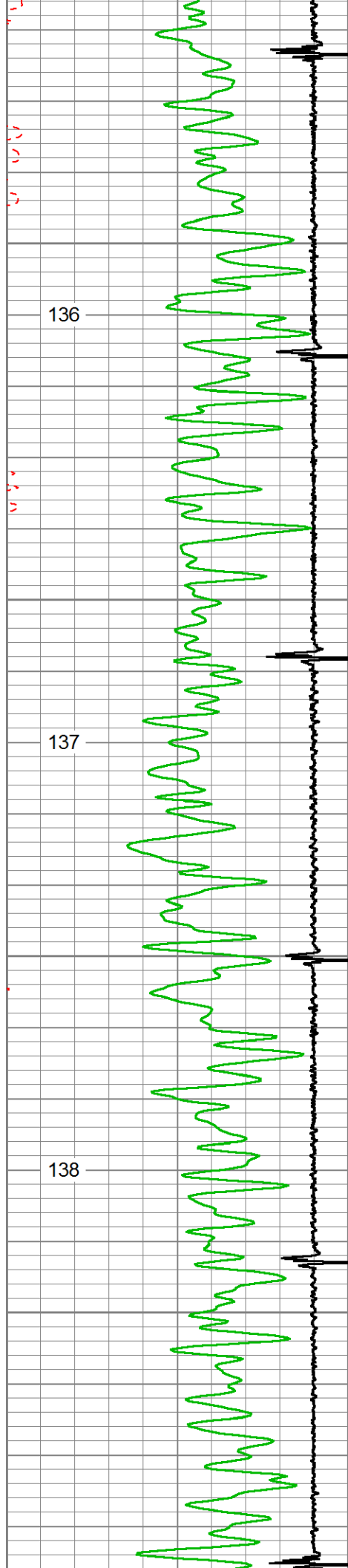






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3450
3500
3550
3600



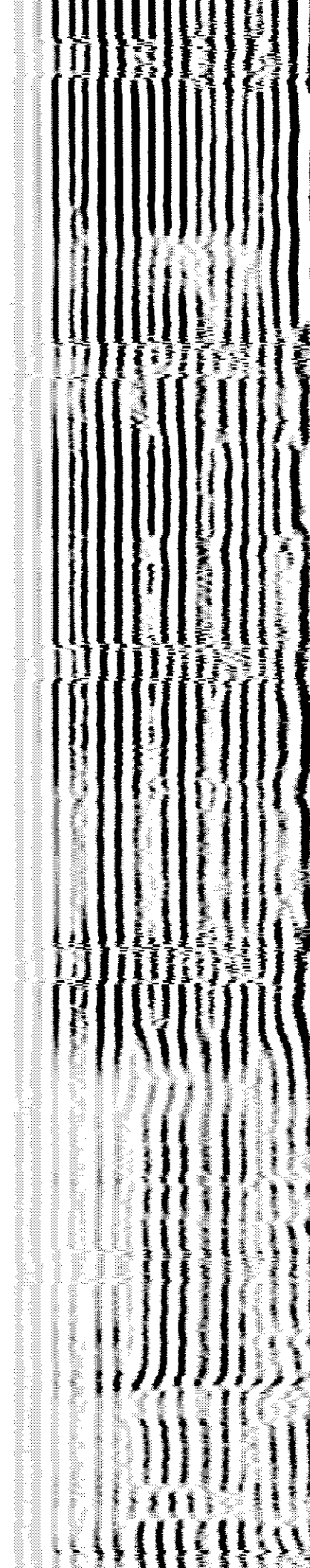
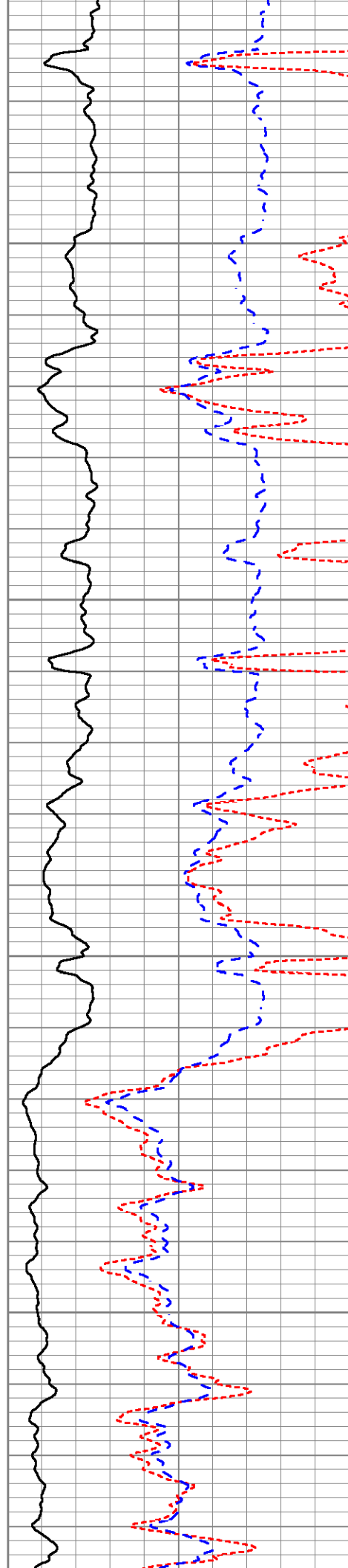


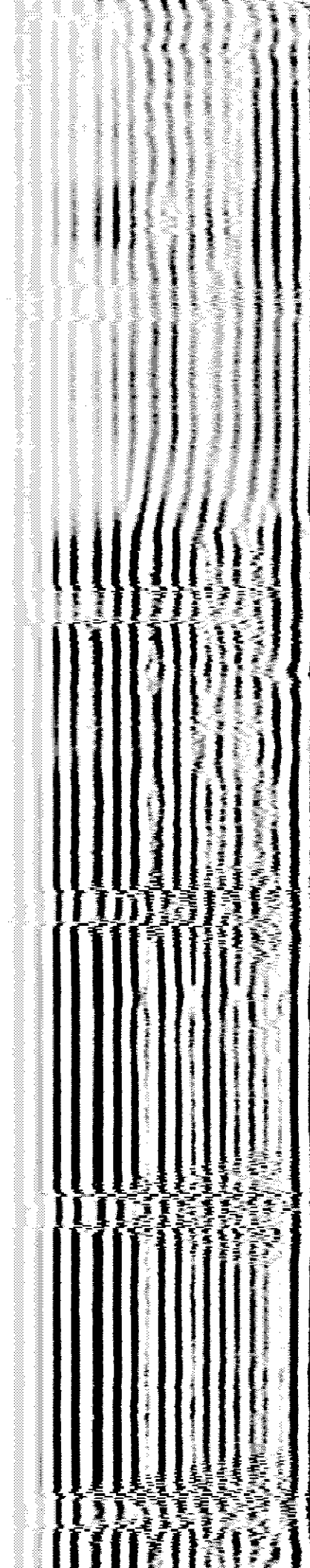
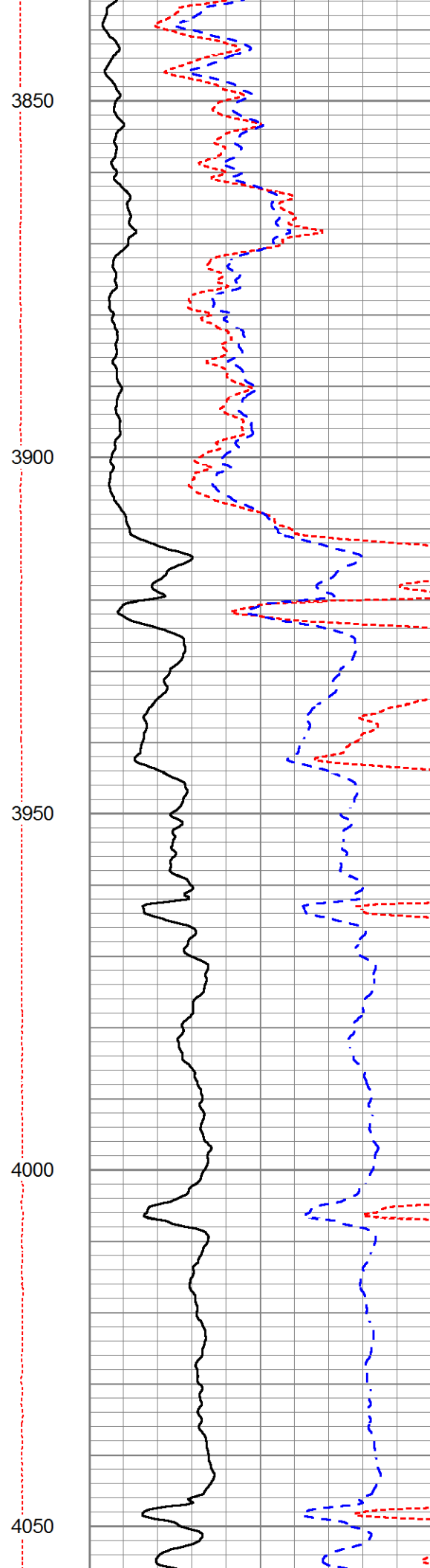
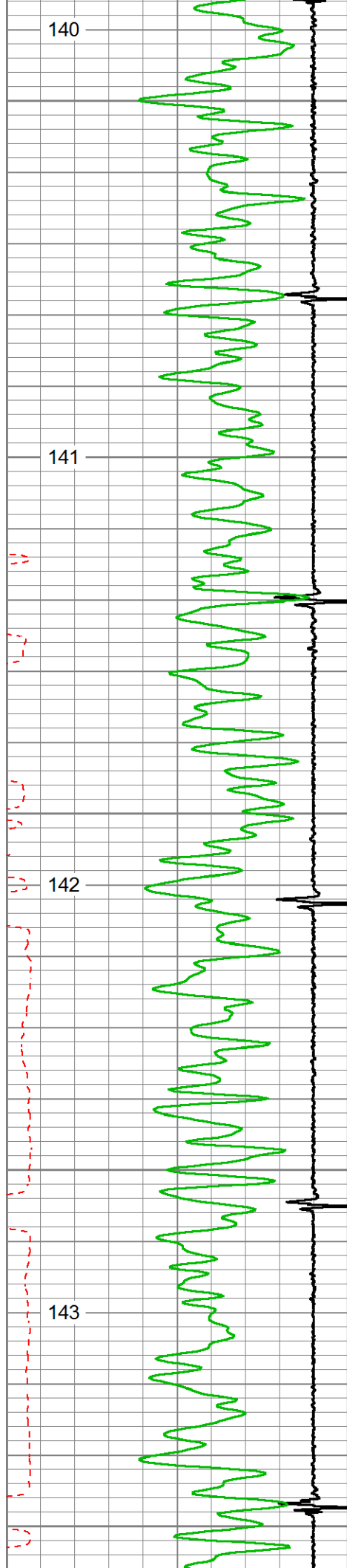
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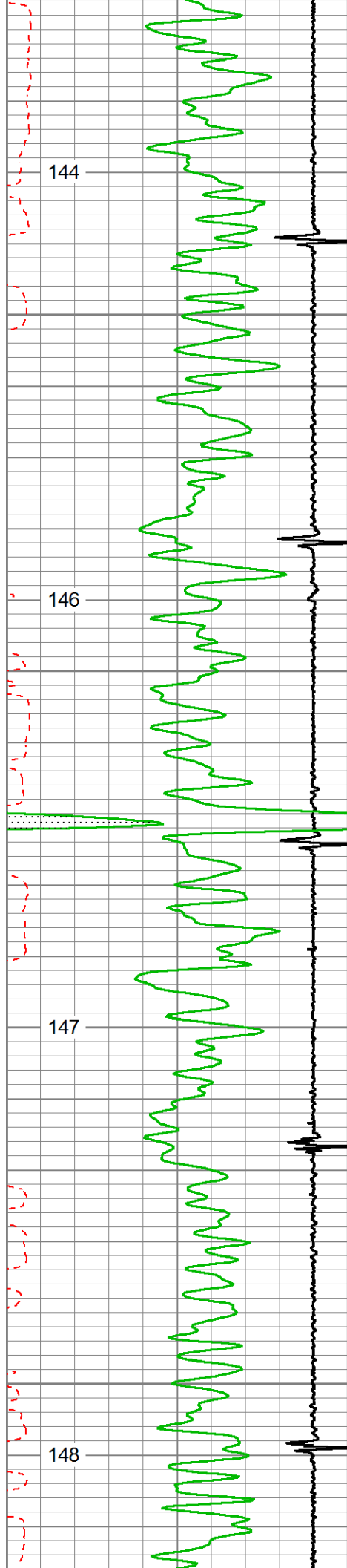
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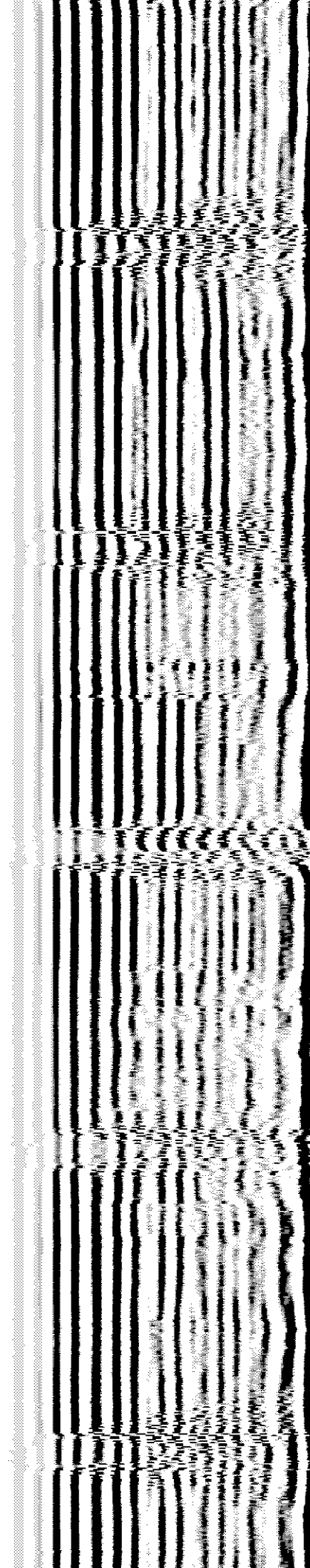
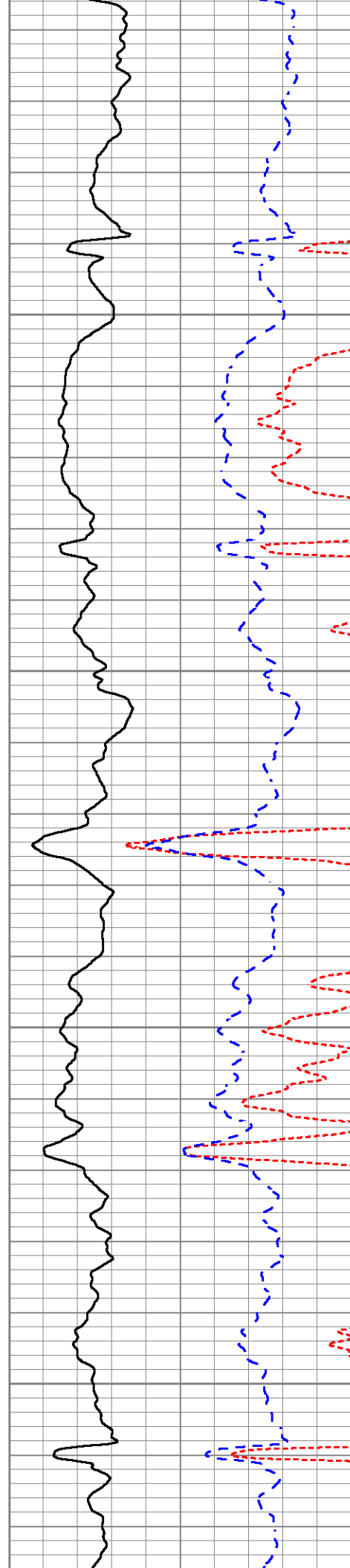


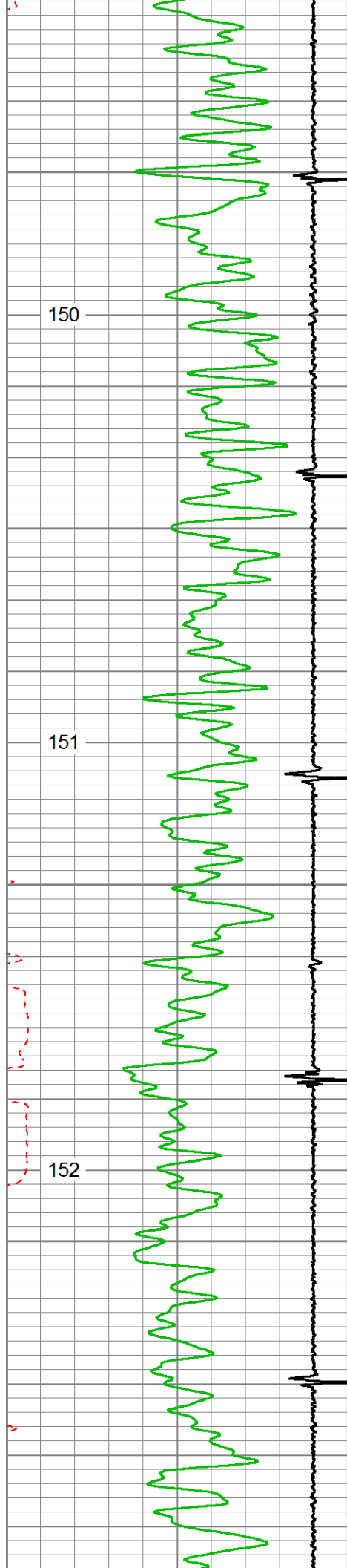
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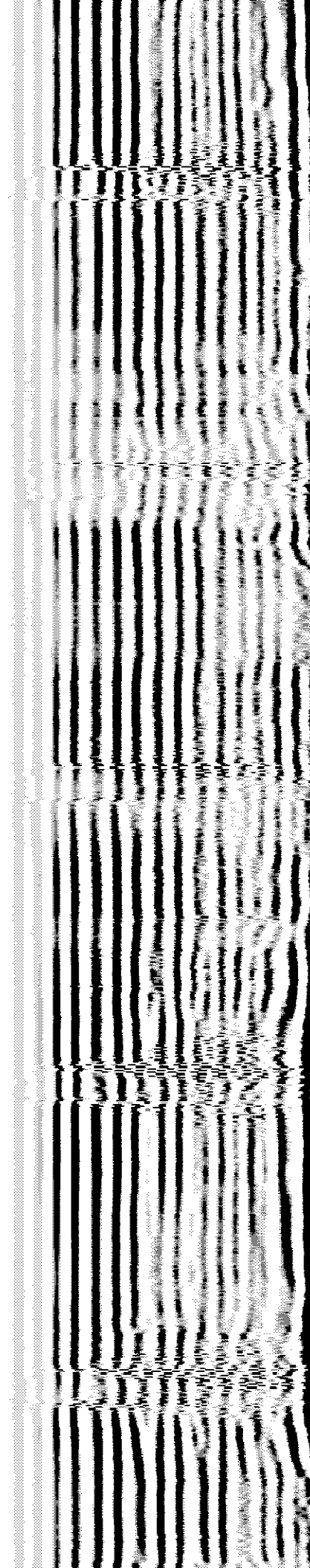
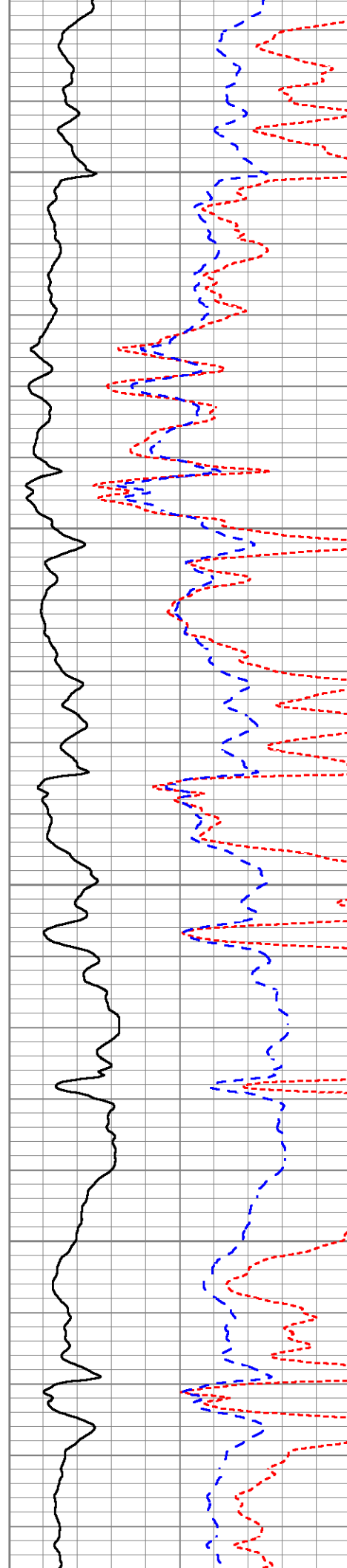


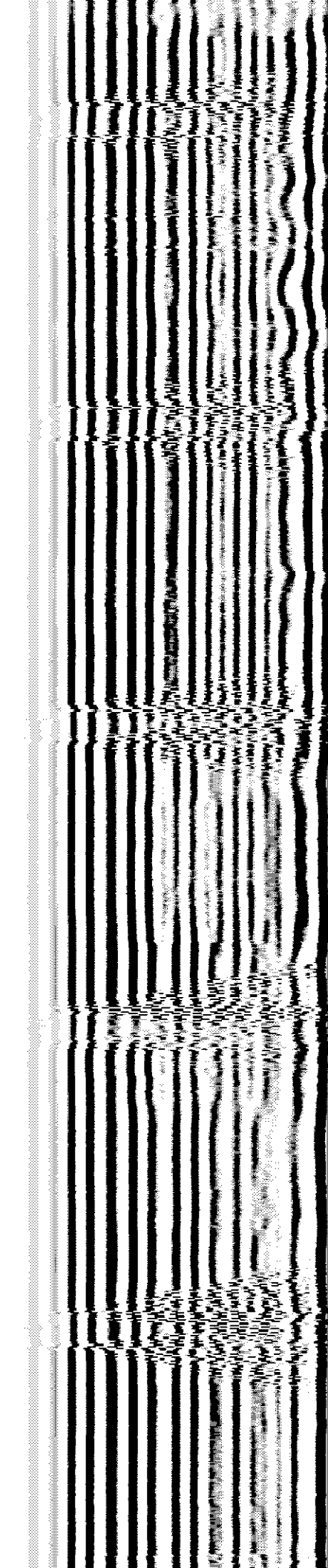
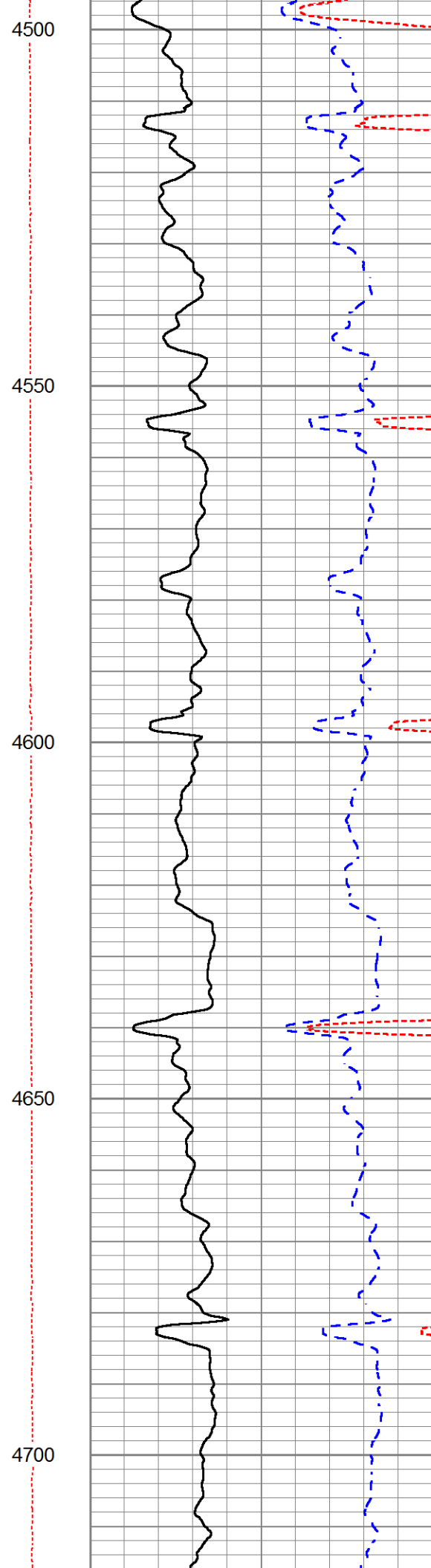
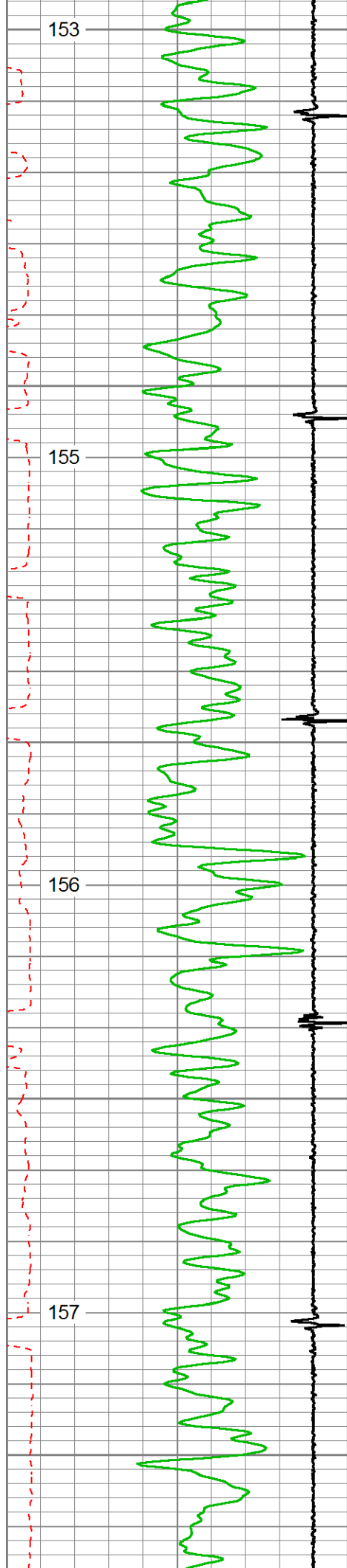
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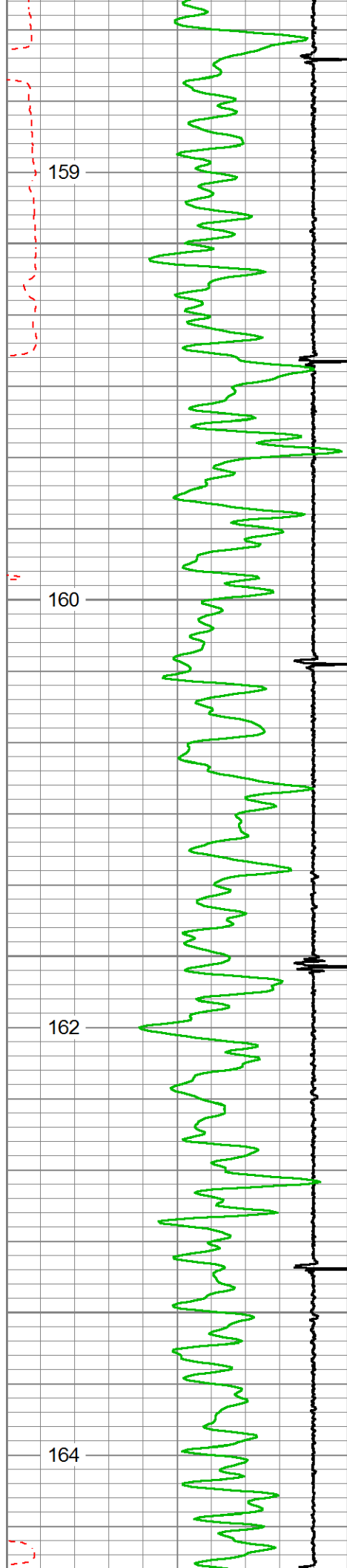
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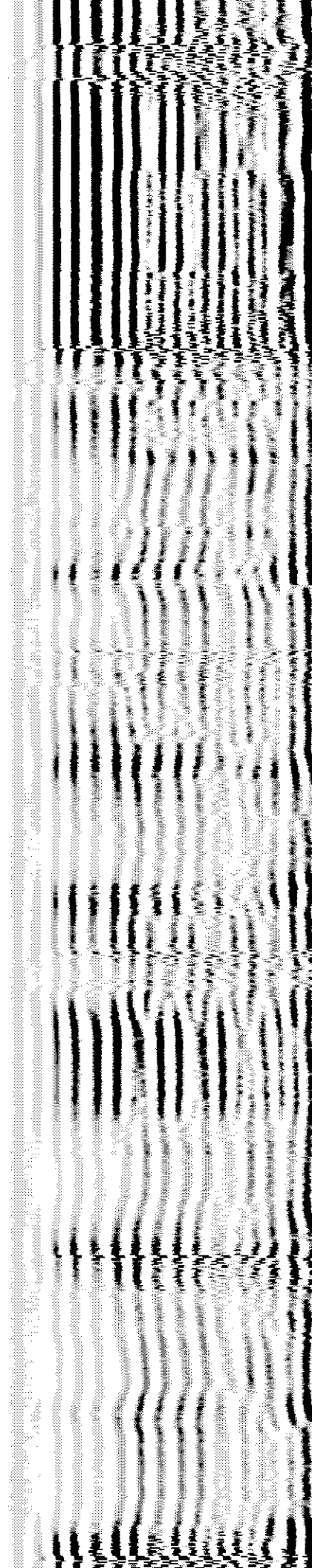
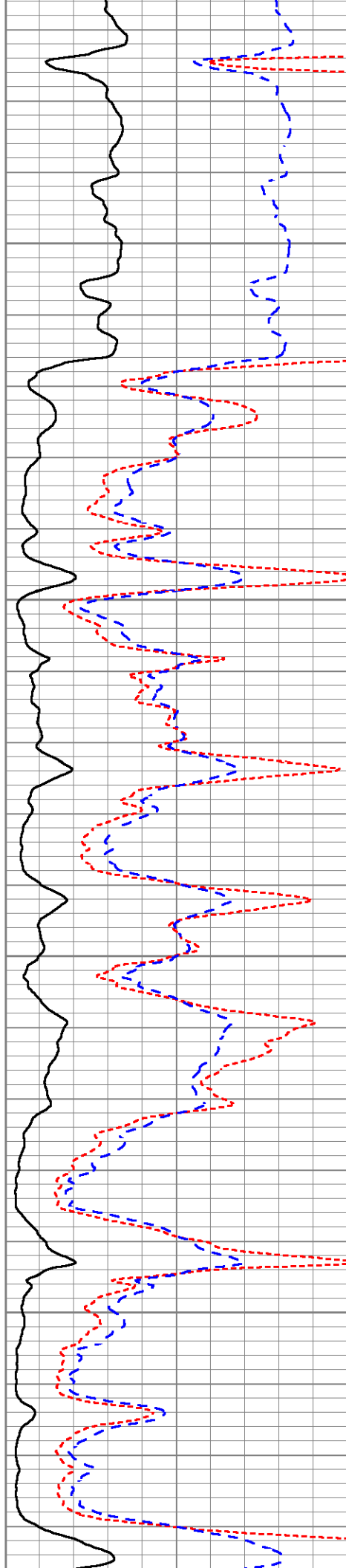


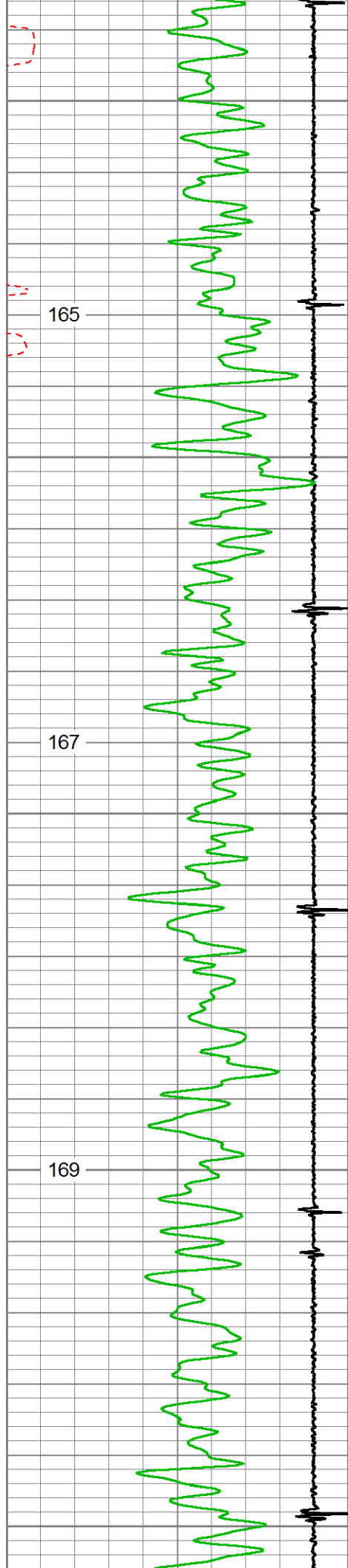
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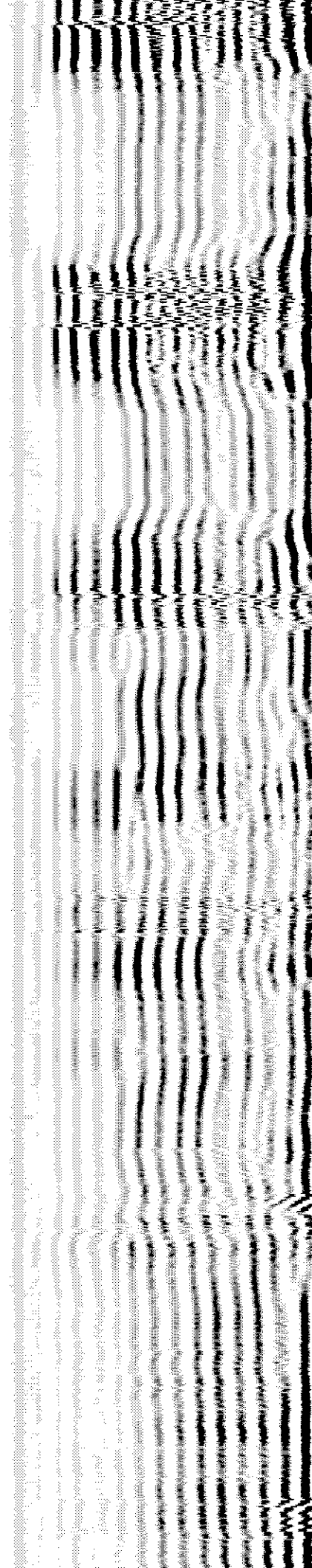
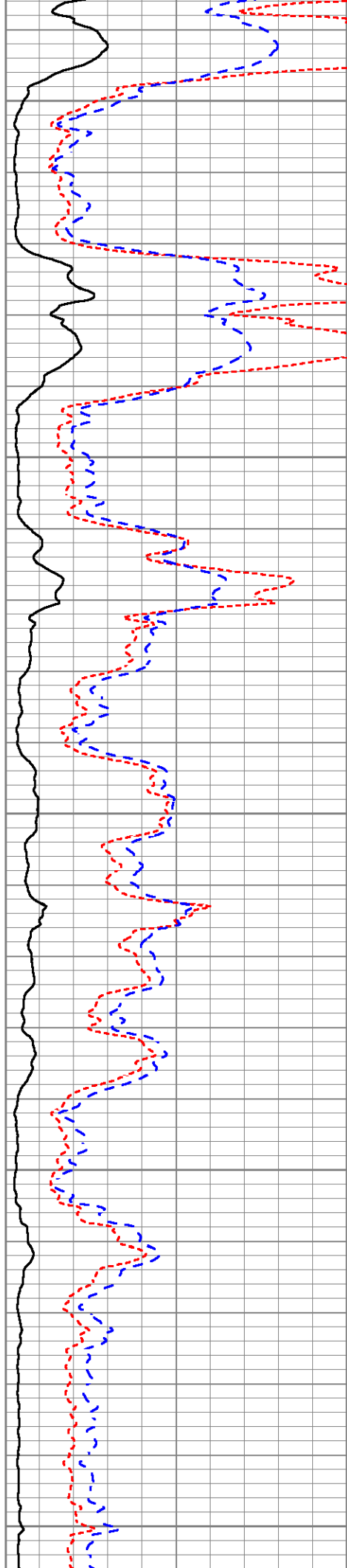
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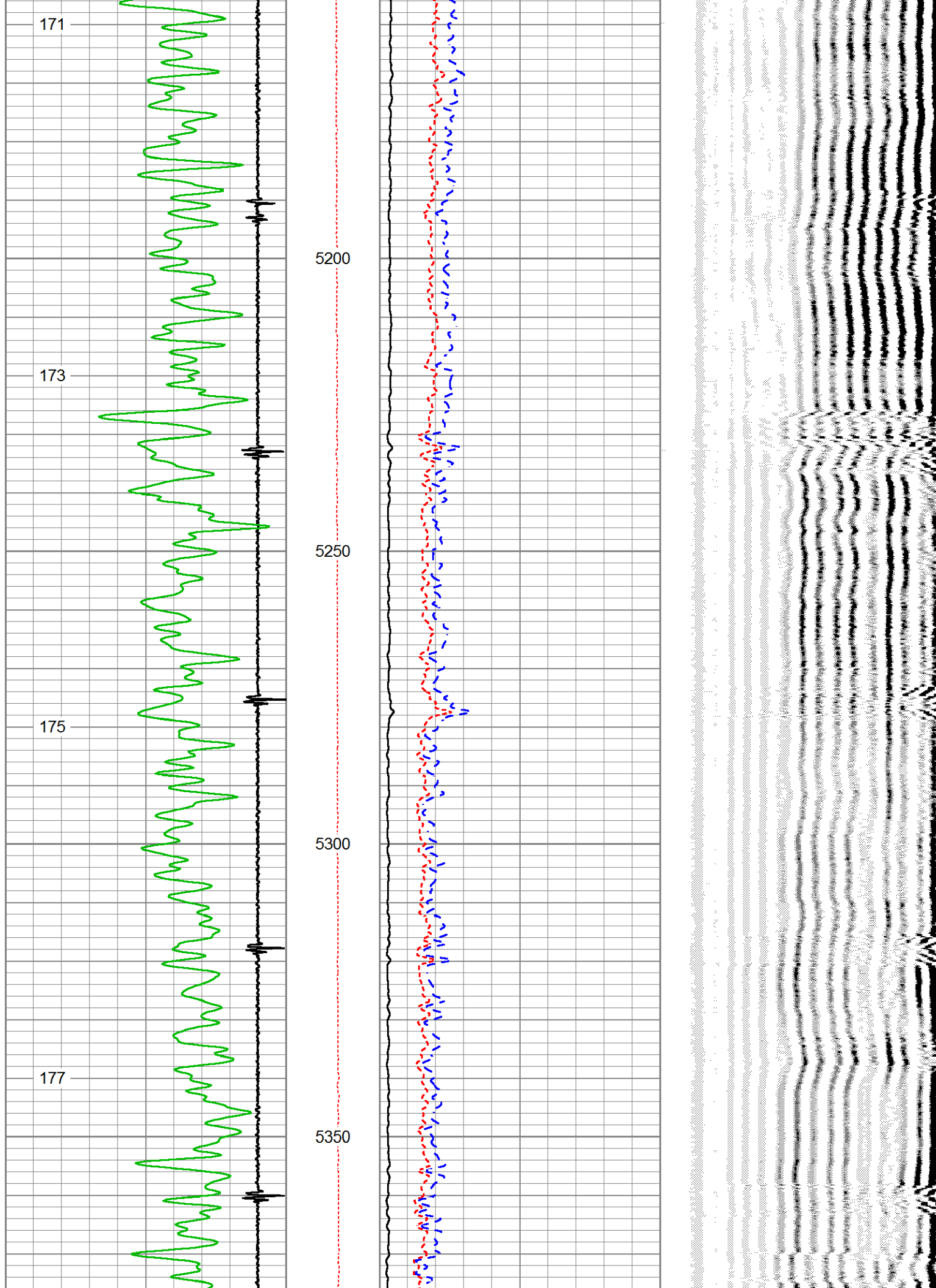
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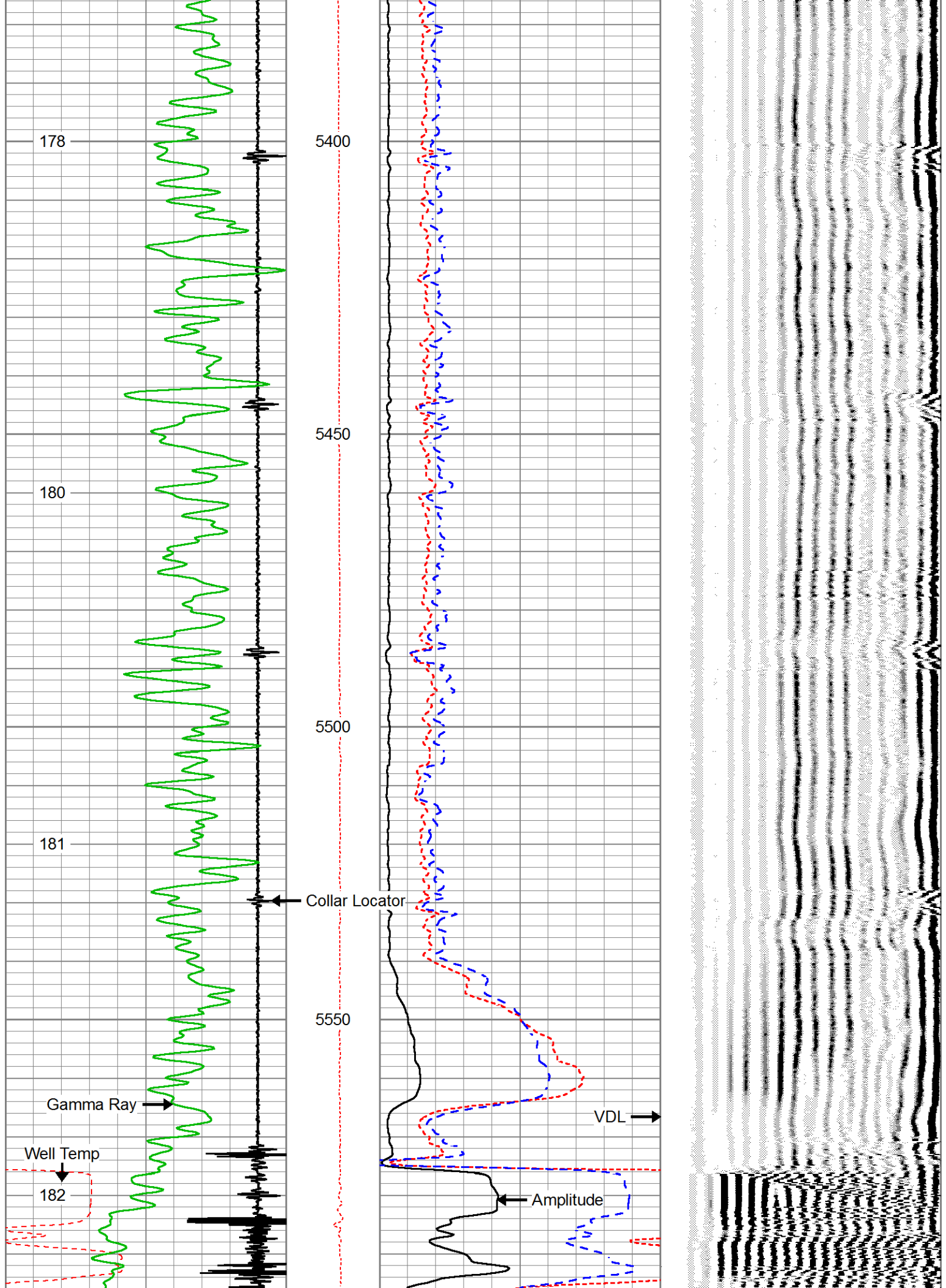
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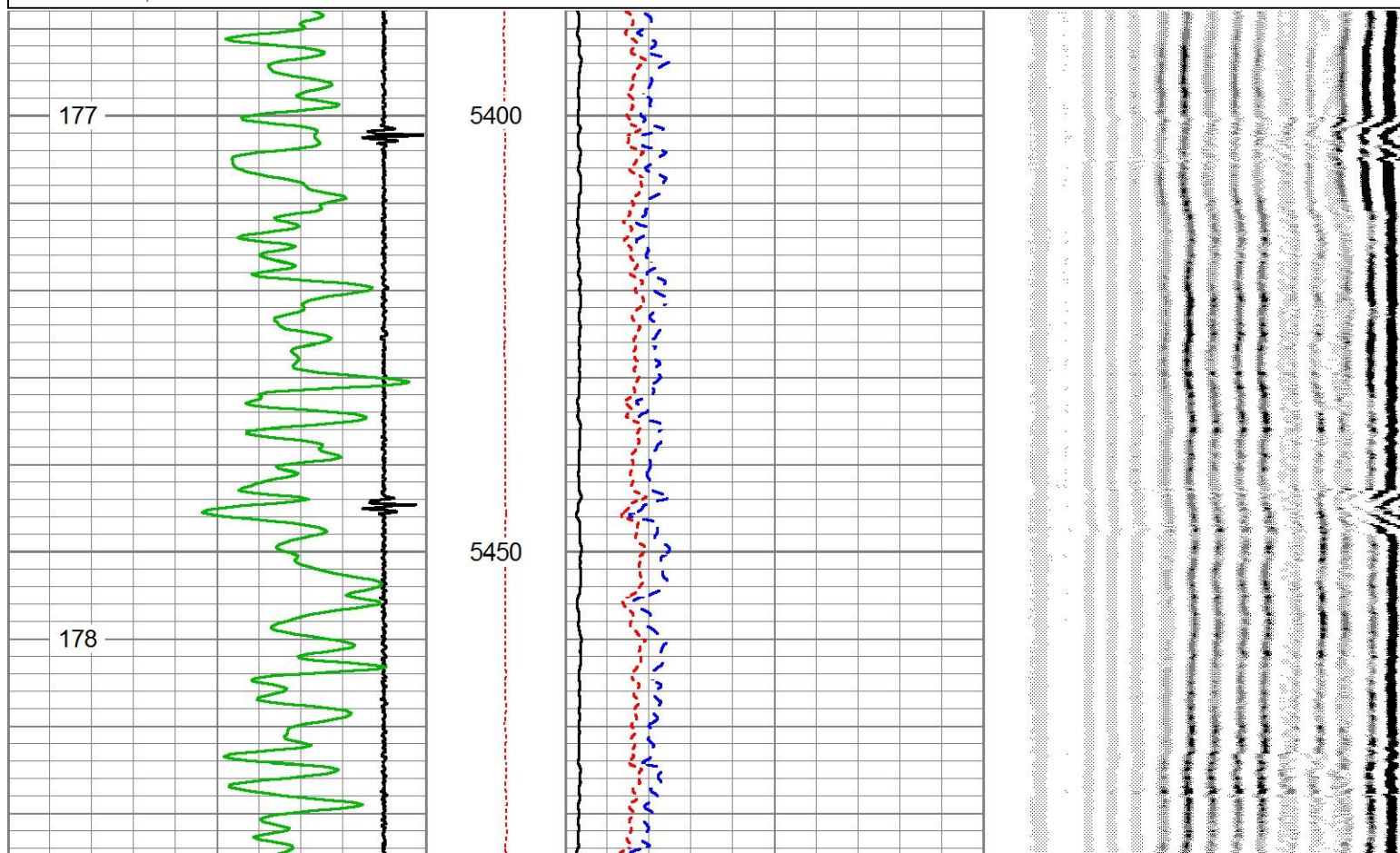
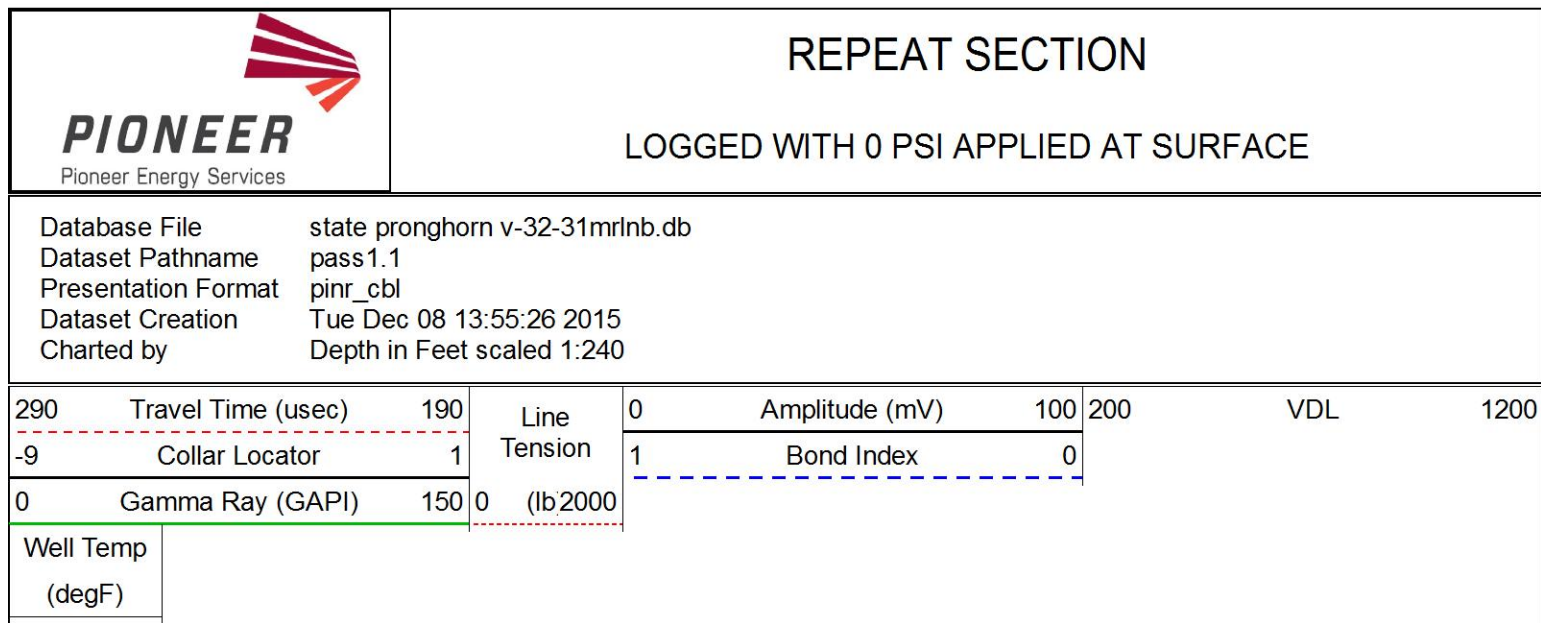
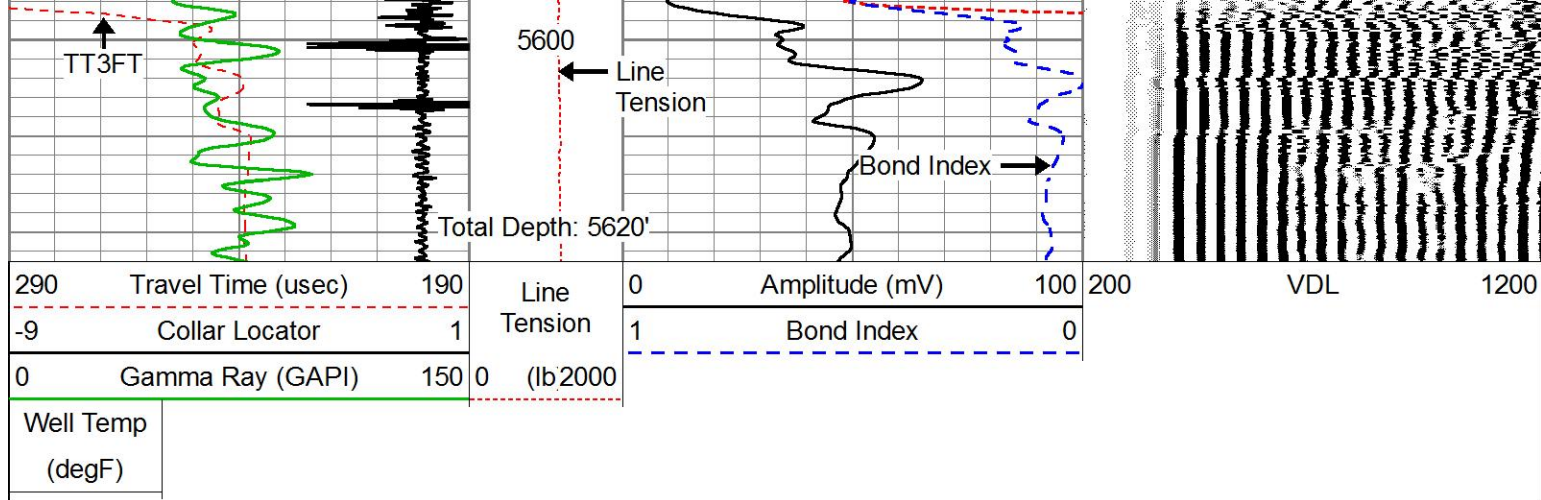
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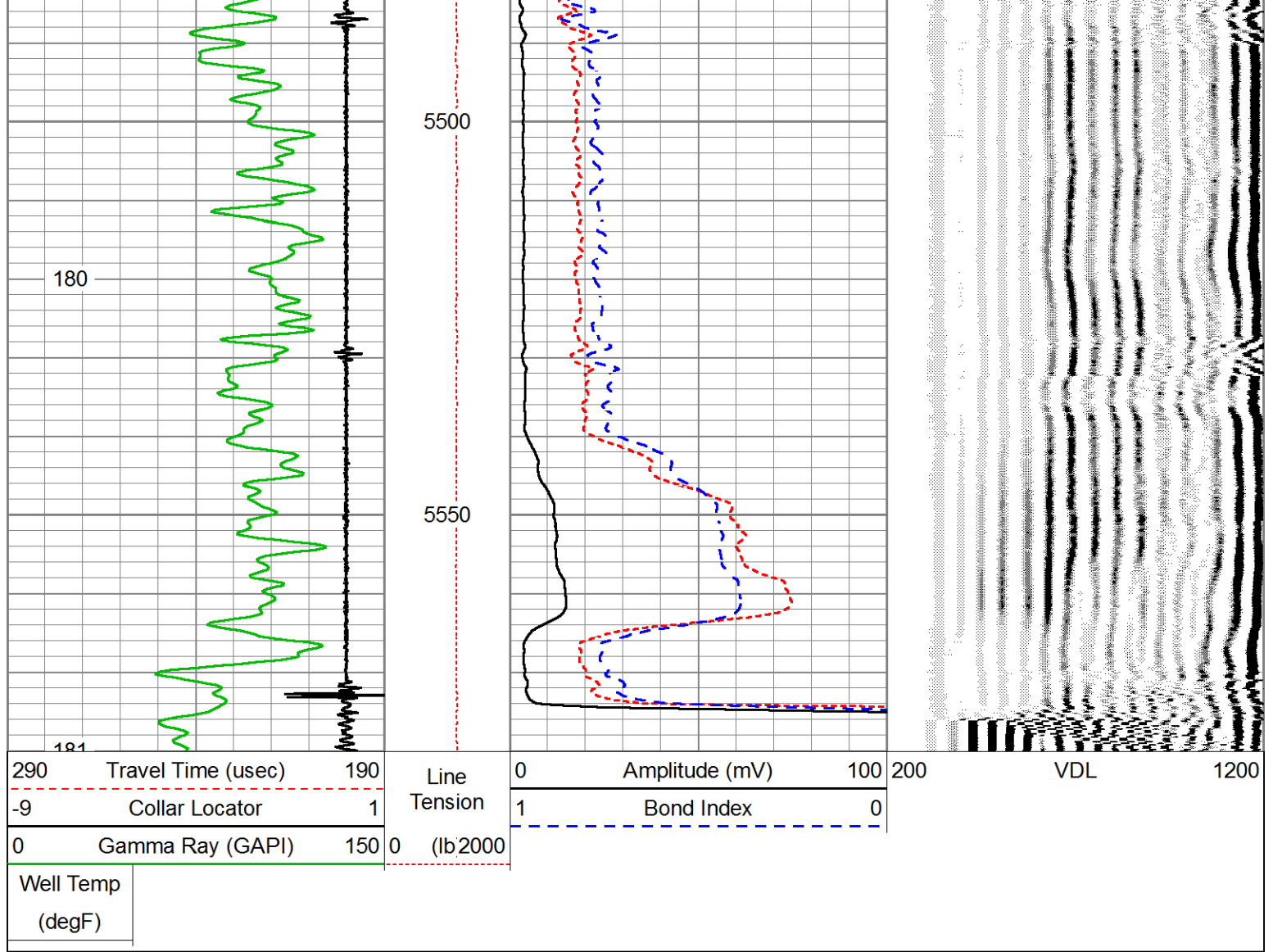
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Calibration Report			
Database File	STATE PRONGHORN V-32-31MRLNB.db		
Dataset Pathname	pass1		
Dataset Creation	Tue Dec 08 13:13:01 2015		
Gamma Ray Calibration Report			
Serial Number:	111211		
Tool Model:	Probe		
Performed:	Tue Dec 01 07:35:29 2015		
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		

	Company	BONANZA CREEK ENERGY		
	Well	STATE PRONGHORN V-32-31MRLNB		
	Field	WATTENBERG		
	County	WELD		
	State	COLORADO		Country USA