



COMPENSATED NEUTRON  
GAMMA RAY

Pioneer Energy Services

CompanyPDC ENERGY INC.

Well SPAUR 10Y-241  
Field WATTENBERG  
County WELD State CO

Company PDC ENERGY INC.  
Well SPAUR 10Y-241  
Field WATTENBERG  
County WELD State CO

Location: API # : 05123423250000 Other Services  
SHL: 254' FSL & 2393' FWL  
SESW  
SEC 10 TWP 4N RGE 67W  
Permanent Datum GL Elevation 4831'  
Log Measured From GL  
Drilling Measured From KB  
NONE  
K.B. N/A  
D.F. N/A  
G.L. 4831'

Date of Service	25 MAY 2016		
Run Number	1		
Depth Driller or PBTD	11976'		
Depth Logger	7282'		
Bottom Log Interval	7282'		
Top Log Interval	SURFACE		
Open Hole Size	8.75"		
Type Fluid	WBM		
Fluid Level	SURFACE		
Fluid Density	N/A		
Max. Recorded Temperature	N/A		
Max. Wellhead Pressure	N/A		
Wellhead Connection	N/A		
Estimated Cement Top	N/A		
Unit Number	P-129		
Wireline Size	9/32"		
Location	FT. MORGAN		
Recorded By	SHAUN STUMP		
Witnessed By	MR. SMITH		
	Size	Wt/Ft	Top
Tubing Record			Bottom
Surface Casing	9.625"	36#	SURFACE 1300'
Production Casing	5.5"	20#	SURFACE 11976'
Liner Record			

<<< 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.

0 PSI ON WELL WHILE LOGGING

S.O.# 2-290182

THANK YOU FOR USING PIONEER ENERGY SERVICES

Your Pioneer Energy Services Crew	Tool Data - Services	Serial Number
Engineer: S.STUMP Operator: S. SCHUMAN Operator: M. GARCIA Operator:	GR/CCL CNT	1404-109 120508


Top - Bottom


BOREID in 8.75	BOTTEMP degF 208	CASED?  Yes	CASEOD in 5.5	CASETHCK in 0	CMNTTHCK in 0	CMTTKCOR  On
CSTKCOR  On	NPORSEL  Sandstone	PERFS  0	SRFTEMP degF 0	SZCOR  On	TDEPTH ft 0	


Variable Description

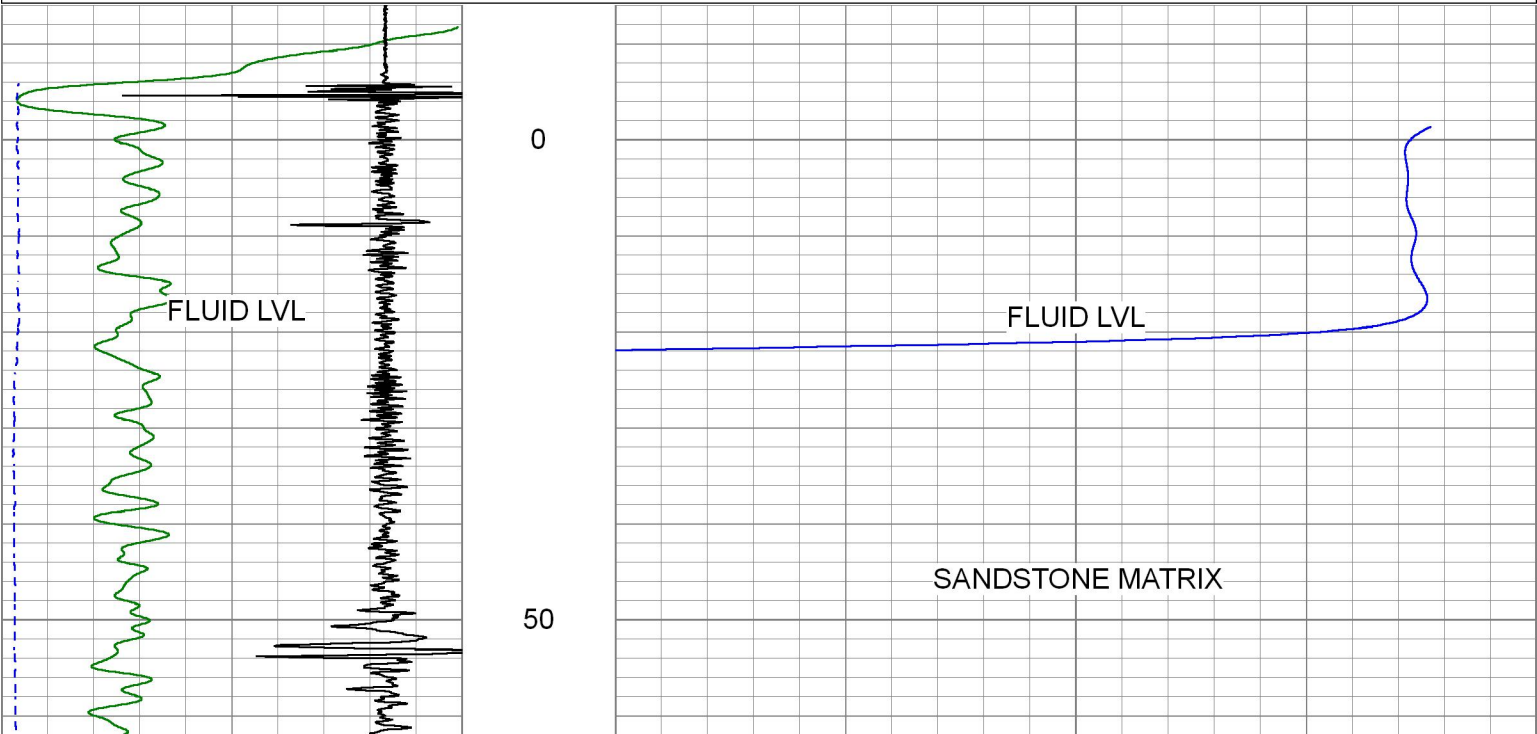
BOREID : Borehole I.D.  
BOTTEMP : Bottom Hole Temperature  
CASED? : Cased hole ?  
CASEOD : Casing O.D.  
CASETHCK : Casing Thickness  
CMNTTHCK : Cement Thickness  
CMTTKCOR : CN CemThk. Cor. ?

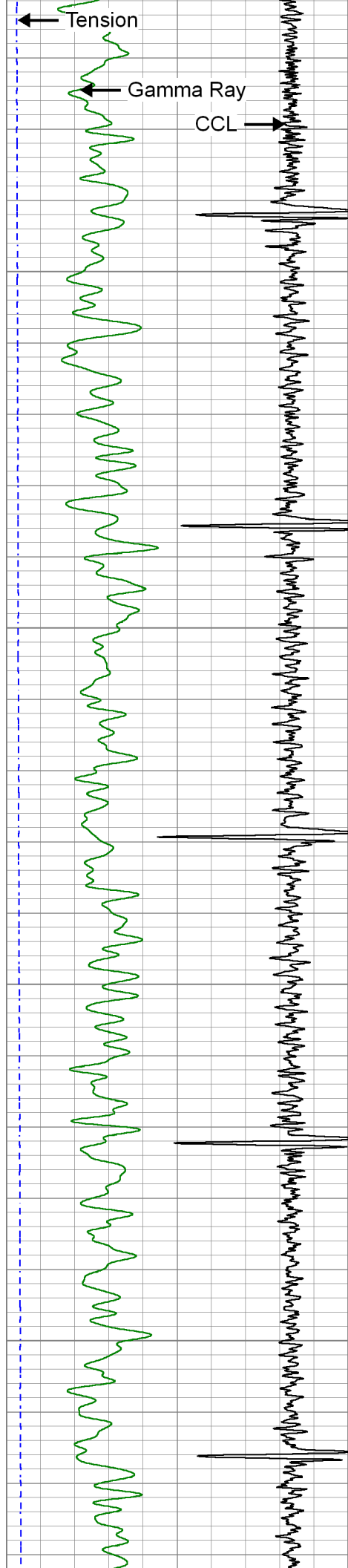
CSTKCOR : CN CasThk. Cor. ?  
NPORSEL : Neutron Porosity Curve Select  
PERFS : Perforation Flag  
SRFTEMP : Surface Temperature  
SZCOR : CN Size Cor. ?  
TDEPTH : Total Depth

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
CCL\$2 CCL\$1	9.19 9.19		Cable Head-Titan 143 1 7/16" Titan Cable Head	1.03	1.43	2.00
GR	7.85		GR-GC_6PIN (FW1404-109) Probe 6 Pin GR275-0001 rev.1	4.82	2.75	

CNLSC	2.05		CNT-275BL (120508) Probe 2.75 Digital CNT	5.00	2.75	76.00
	CNSSC	1.64				
			Bullnose-Titan GO Pin Pressure Cap	0.27	1.38	1.00
Dataset: 2-290182.db: field/well/run1/pass3 Total length: 11.12 ft Total weight: 79.00 lb O.D.: 2.75 in						

		<h1>MAIN PASS</h1>	
		0 PSI ON WELL WHILE LOGGING	
Database File	2-290182.db		
Dataset Pathname	pass3		
Presentation Format	pinr_cnl-ft morgan		
Dataset Creation	Wed May 25 14:10:19 2016		
Charted by	Depth in Feet scaled 1:240		
0	Gamma Ray (GAPI)	200	40
0	Tension (lb)	3000	Compensated Neutron Porosity (pu)
5	CCL	-1	0





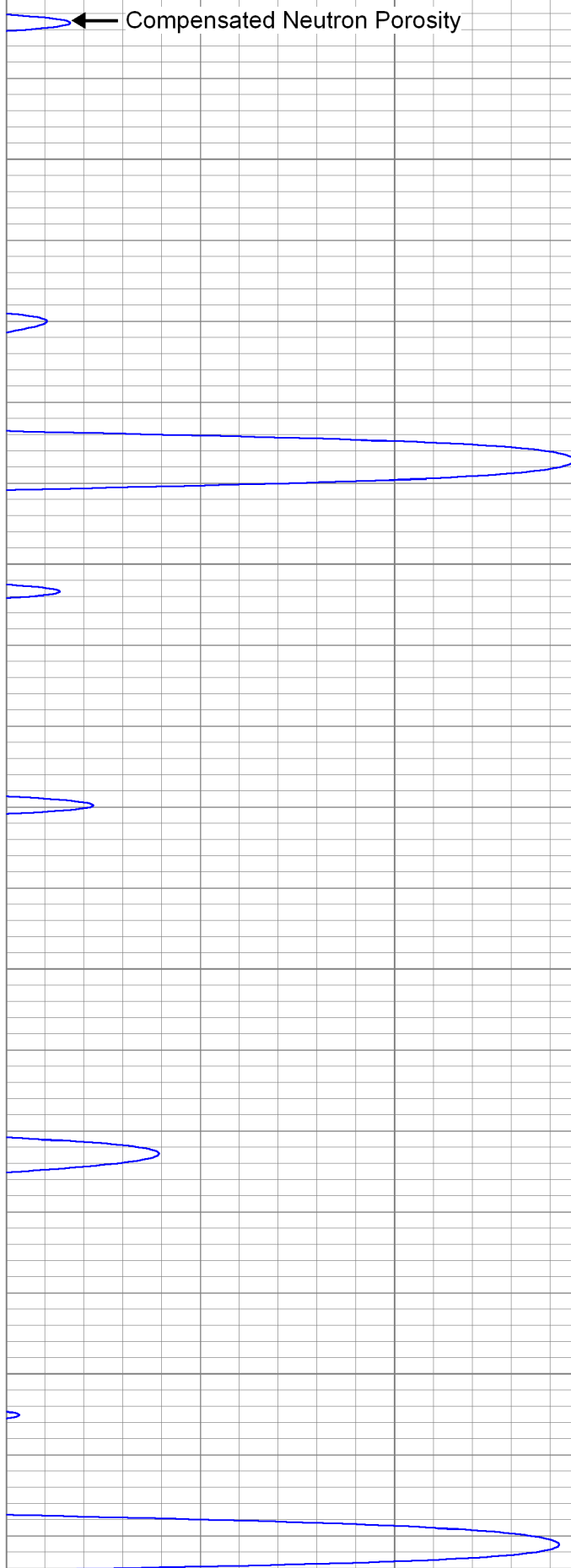
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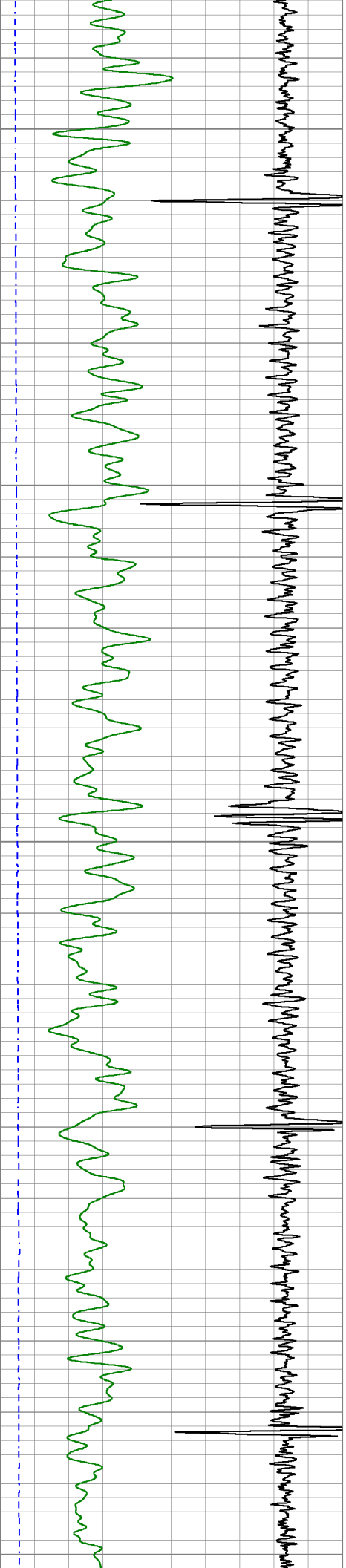
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200

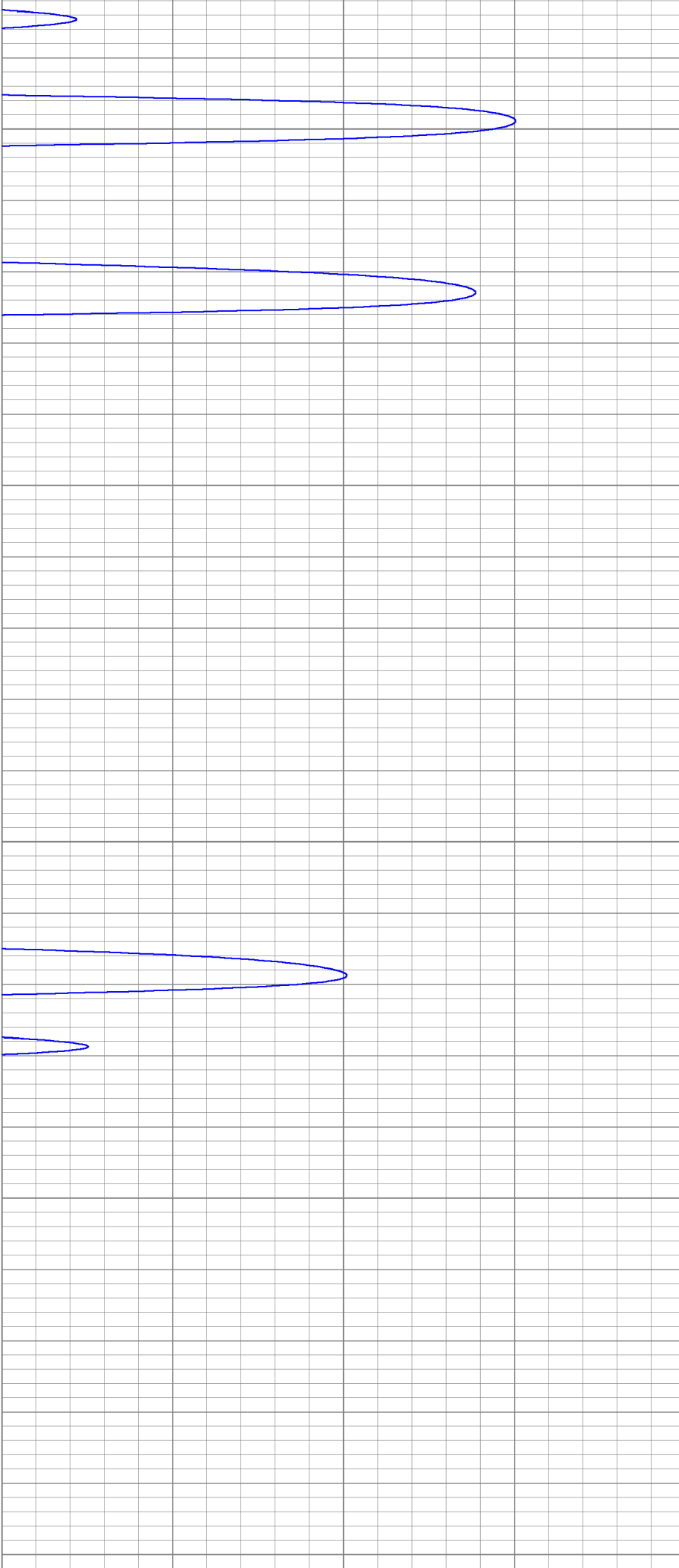
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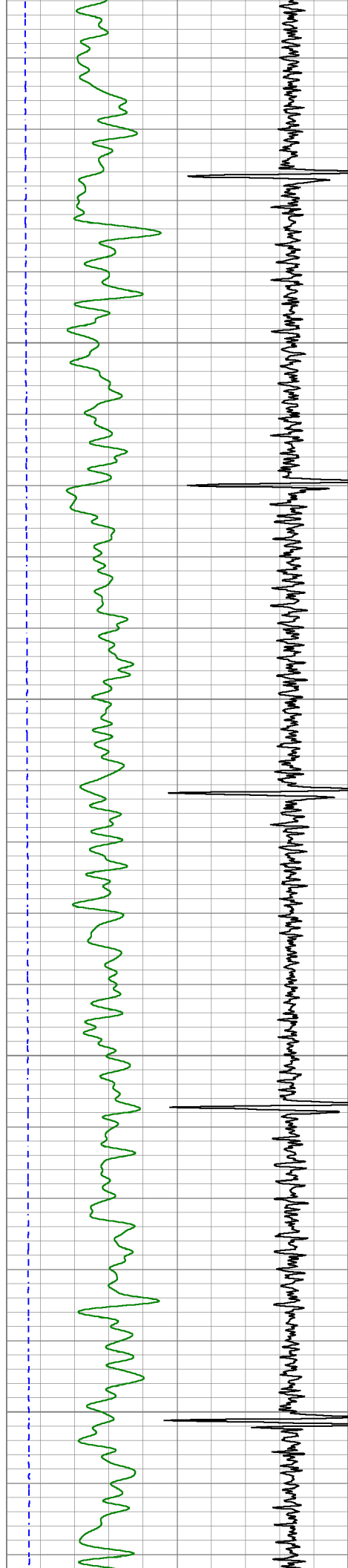
Compensated Neutron Porosity





300  
350  
400  
450  
500



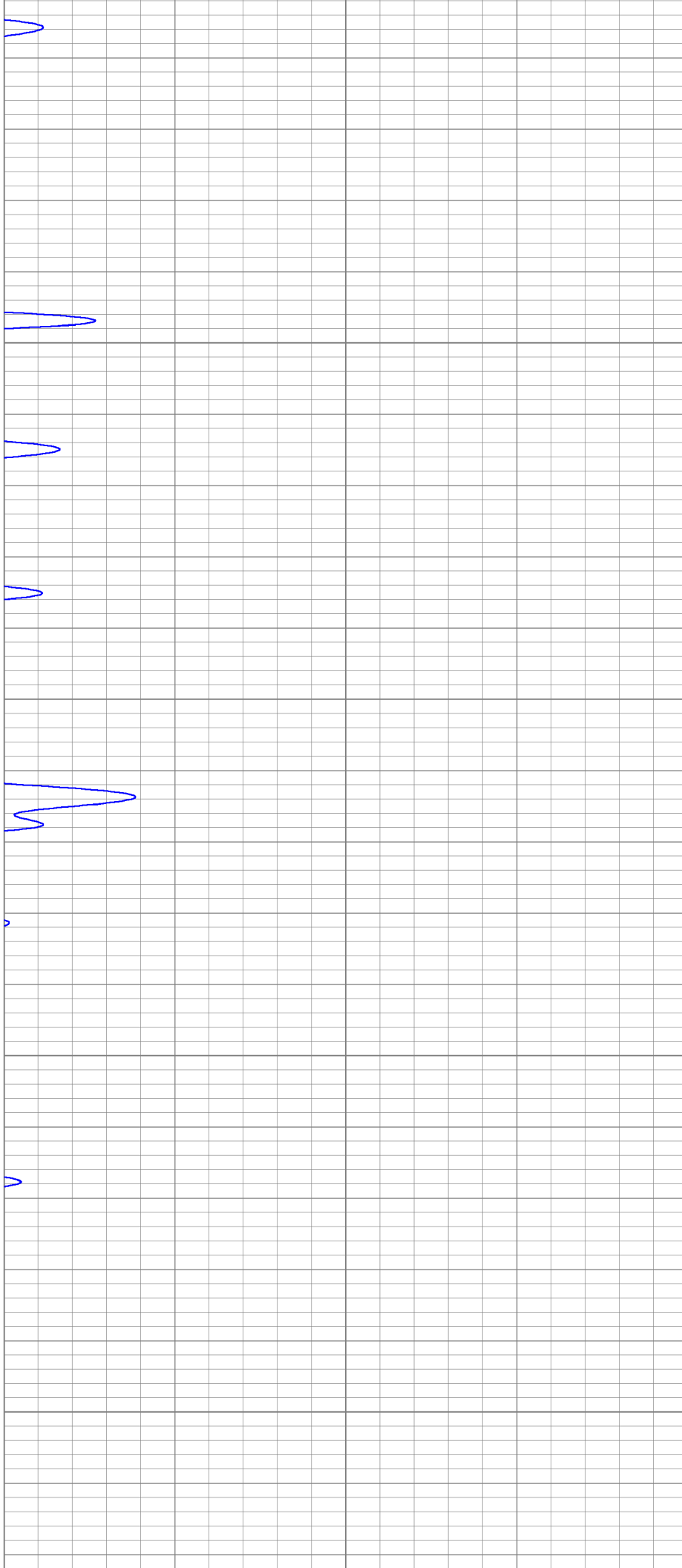


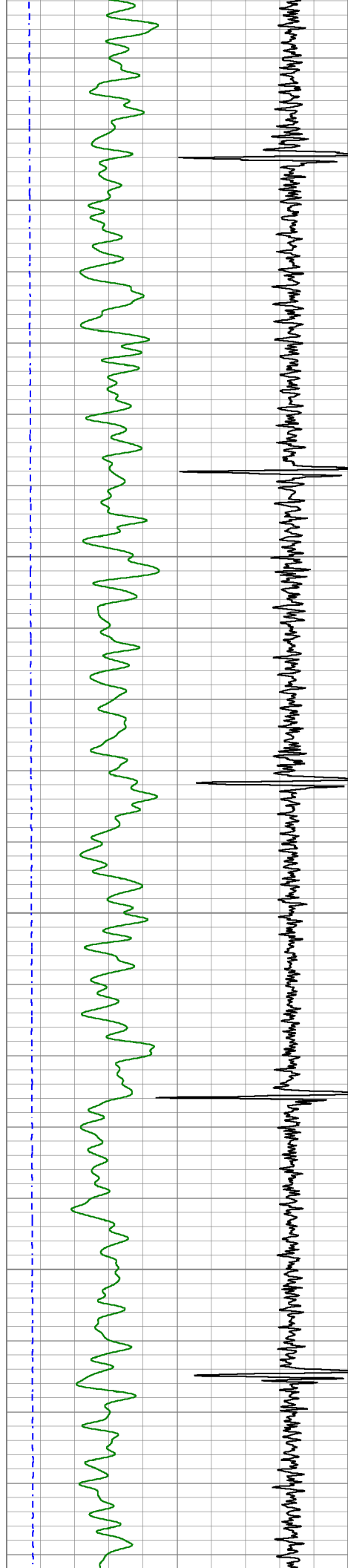
550

600

650

700



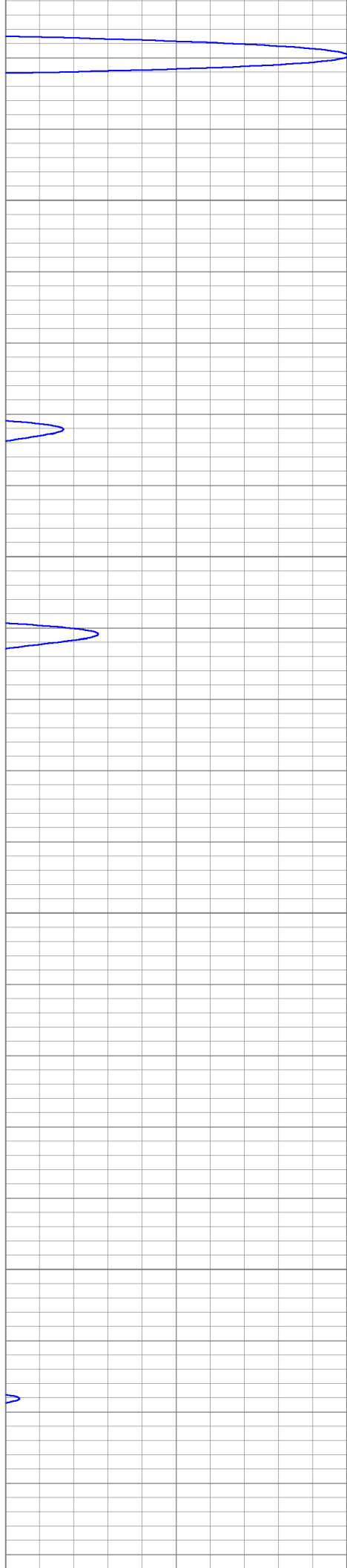


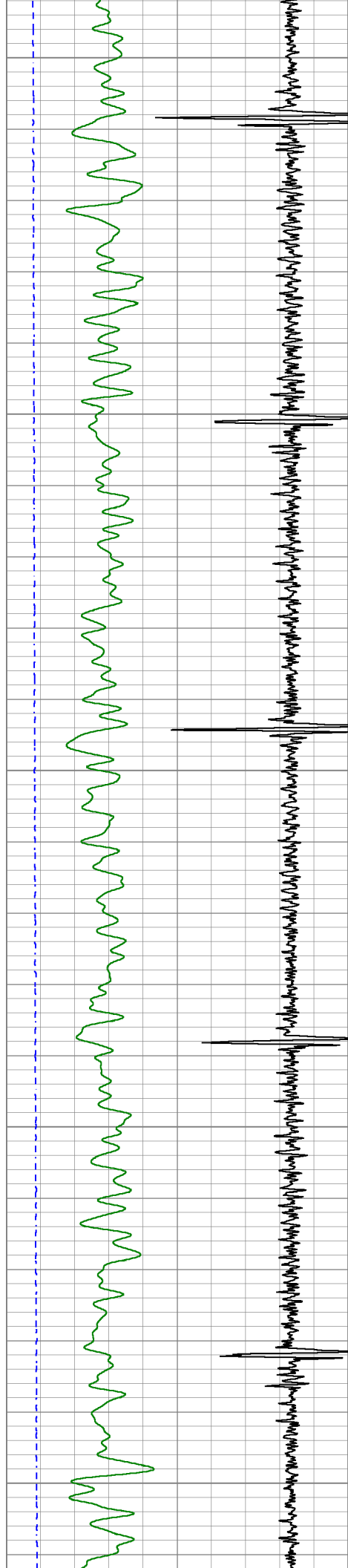
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800

850

900





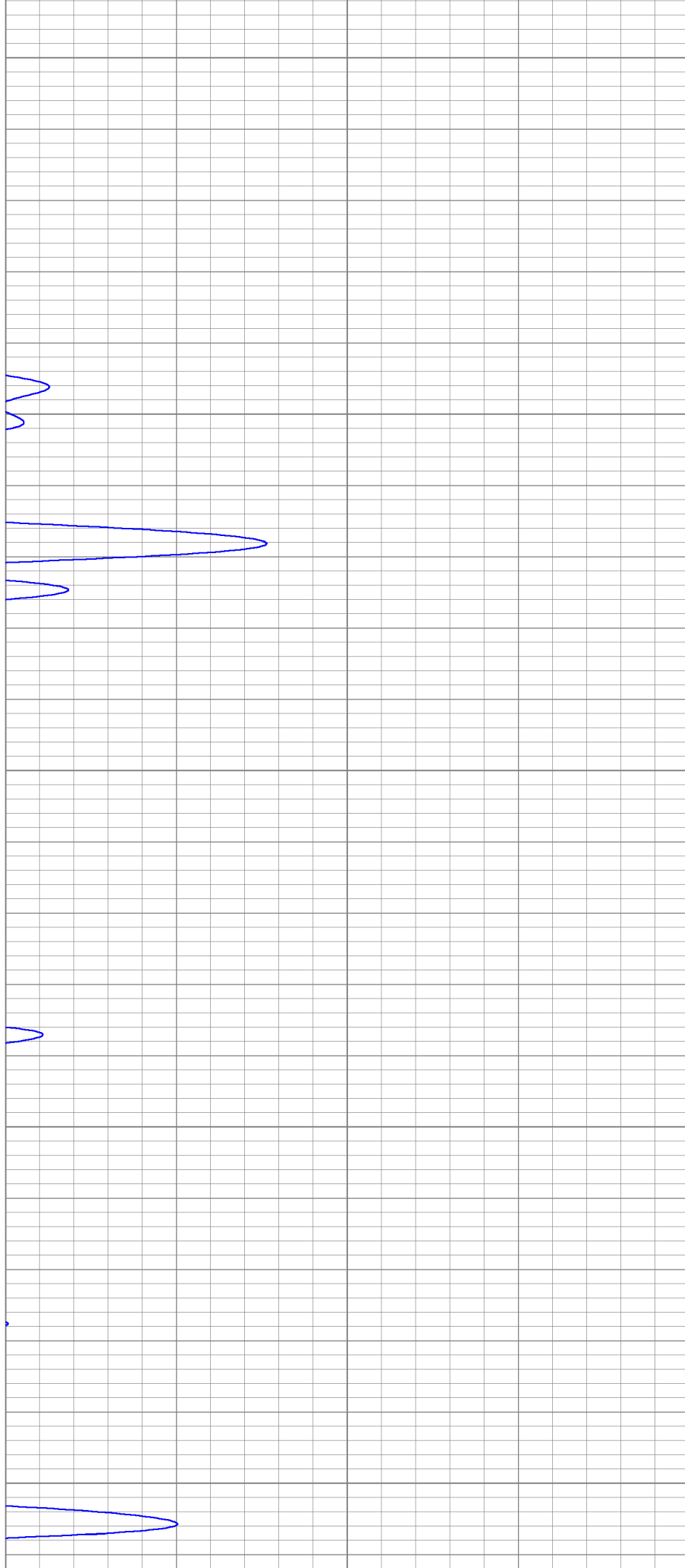
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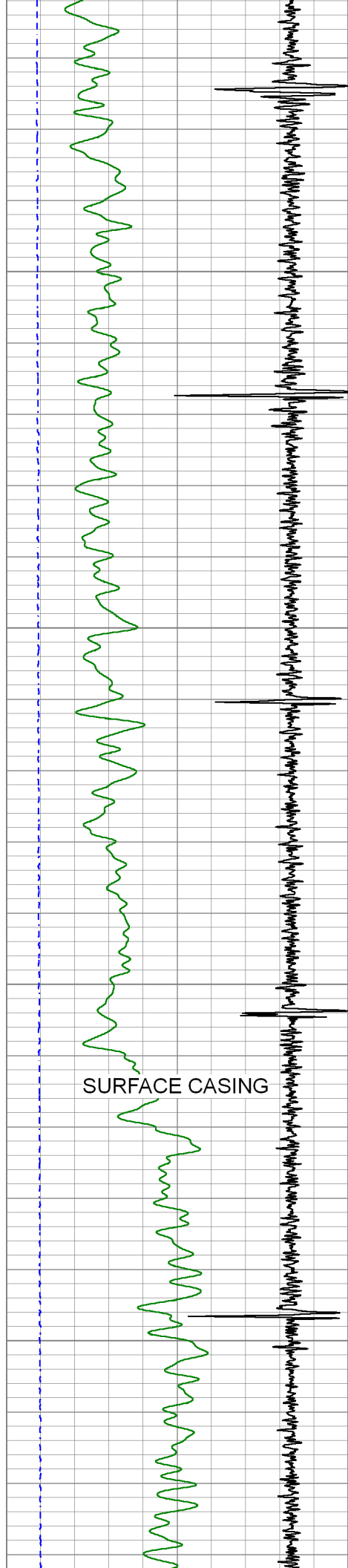
1000

1050

1100

1150





1200

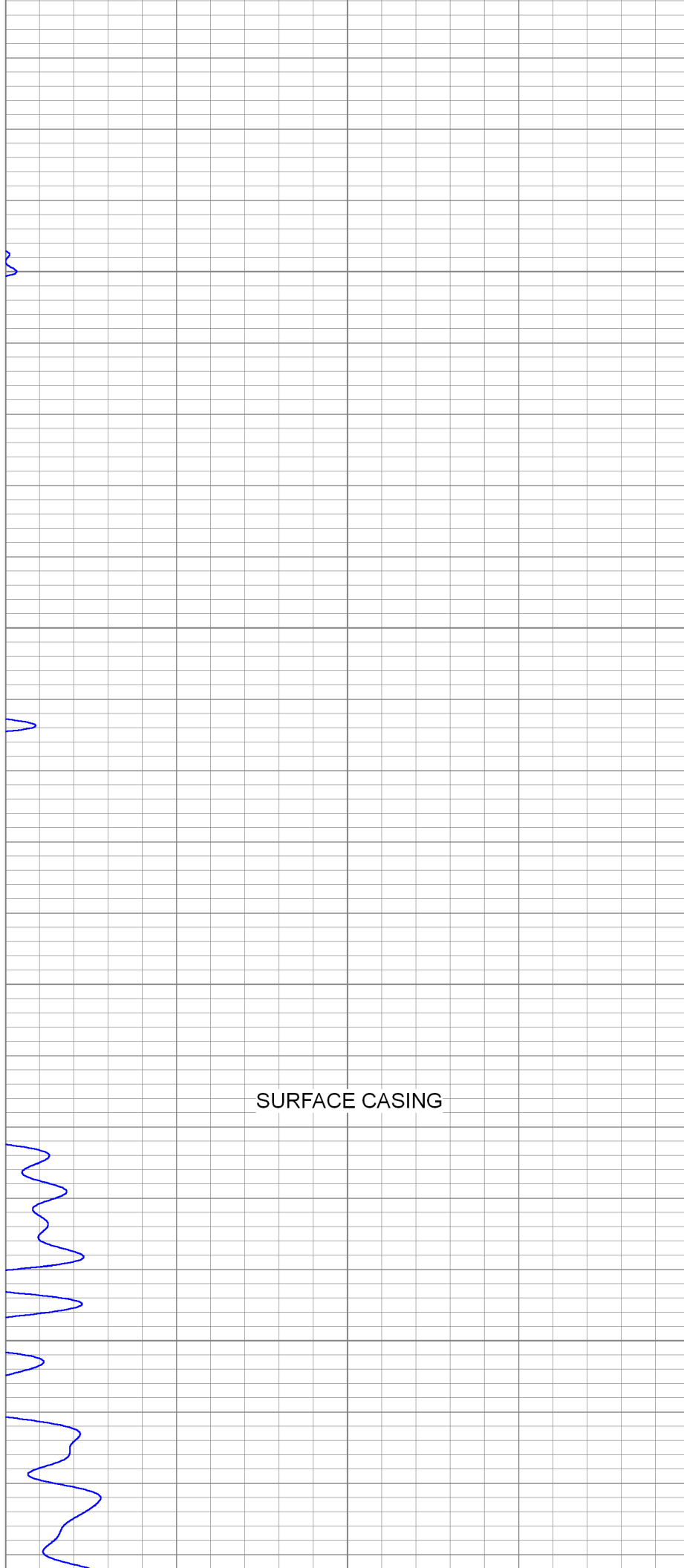
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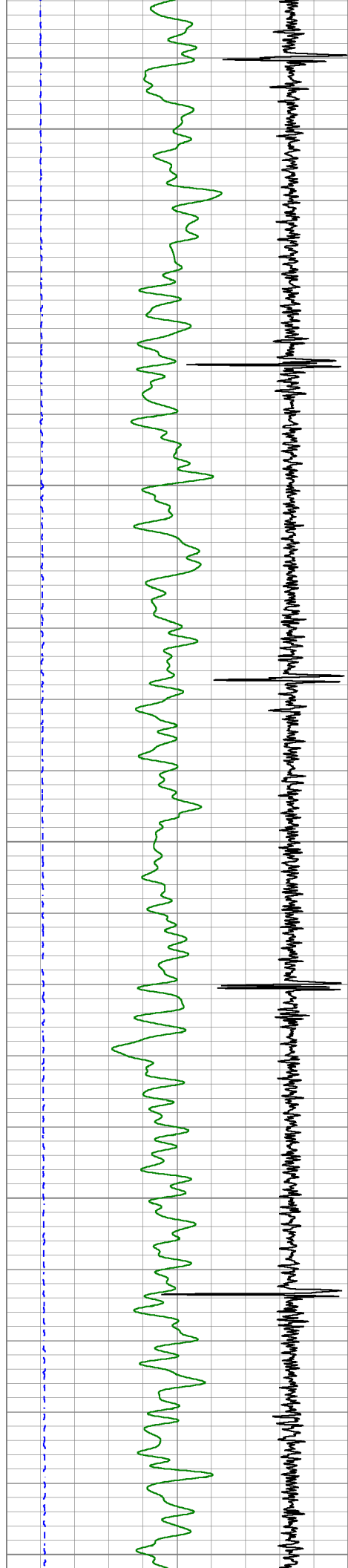
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SURFACE CASING

1350

SURFACE CASING





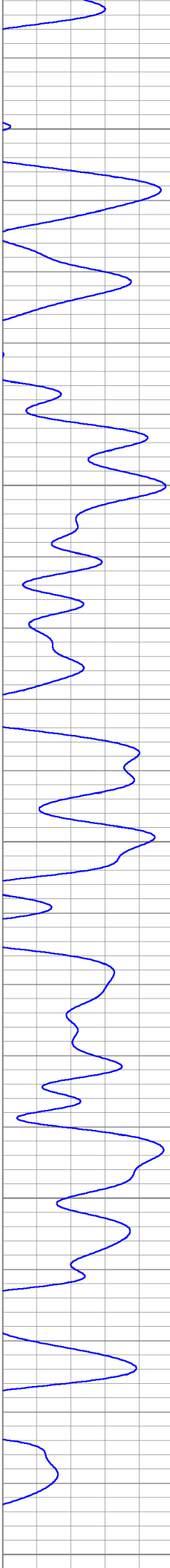
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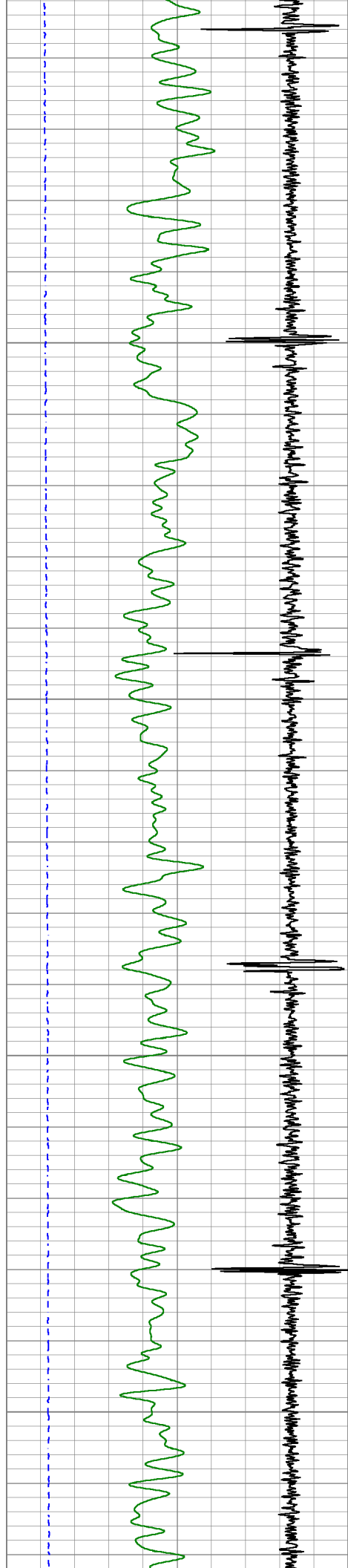
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1500

1550

1600





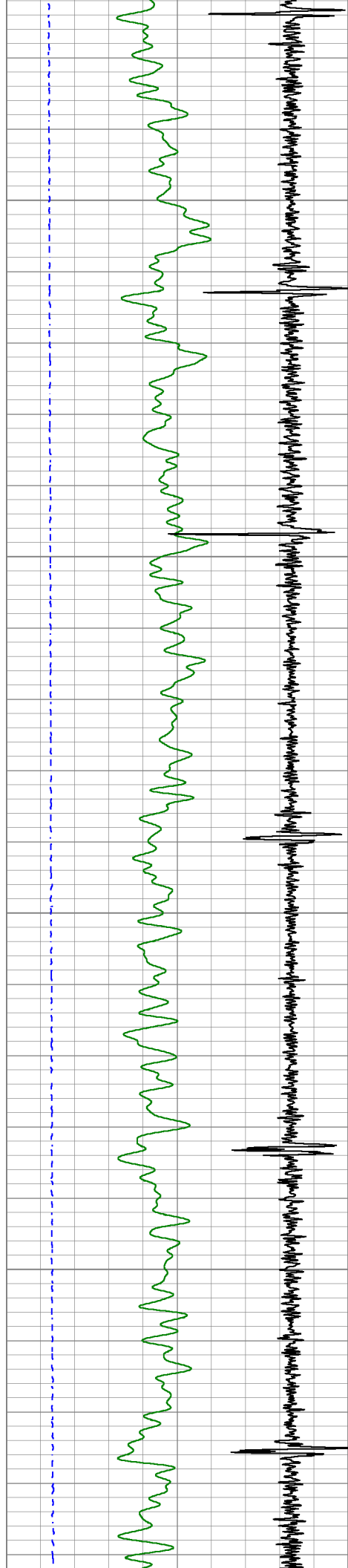
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1700

1750

1800



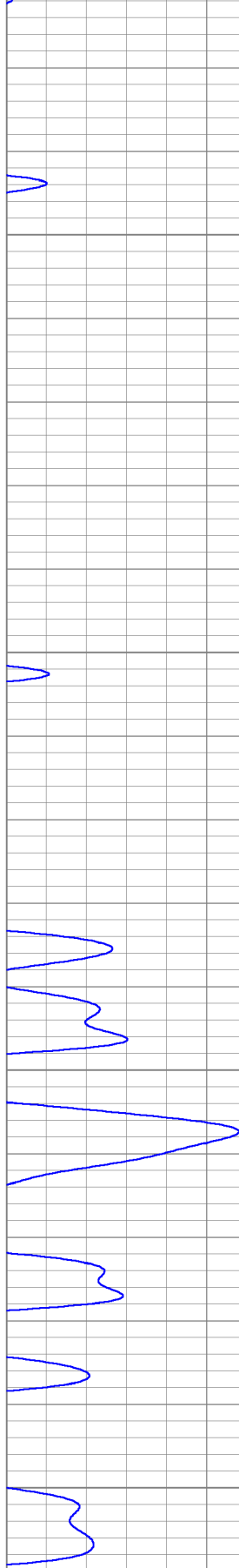


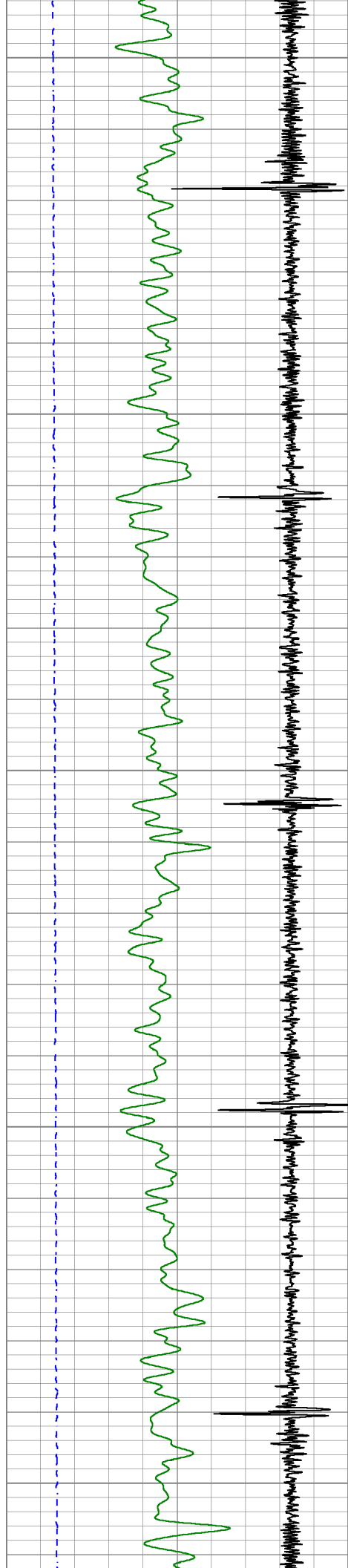
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1900

1950

2000





2050

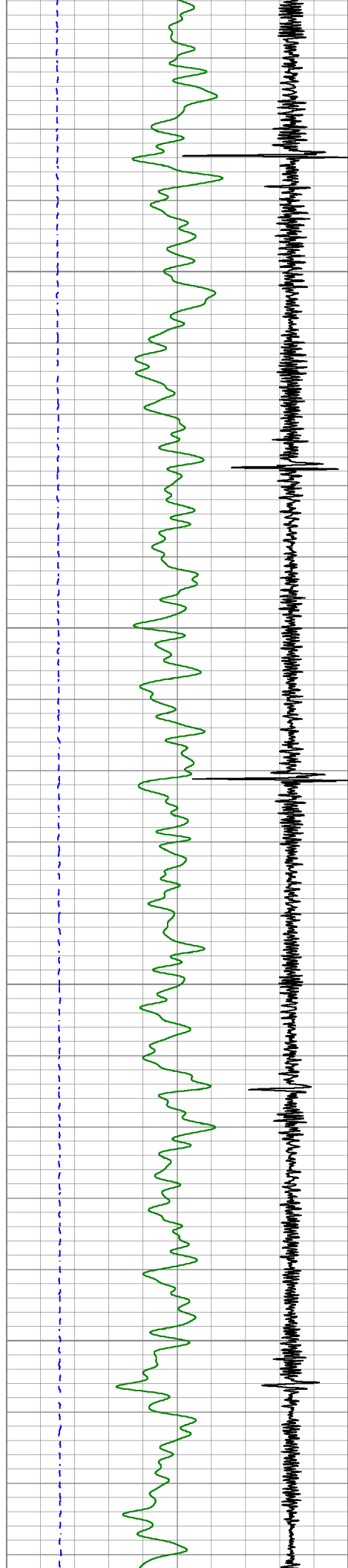
2100

2150

2200

2250



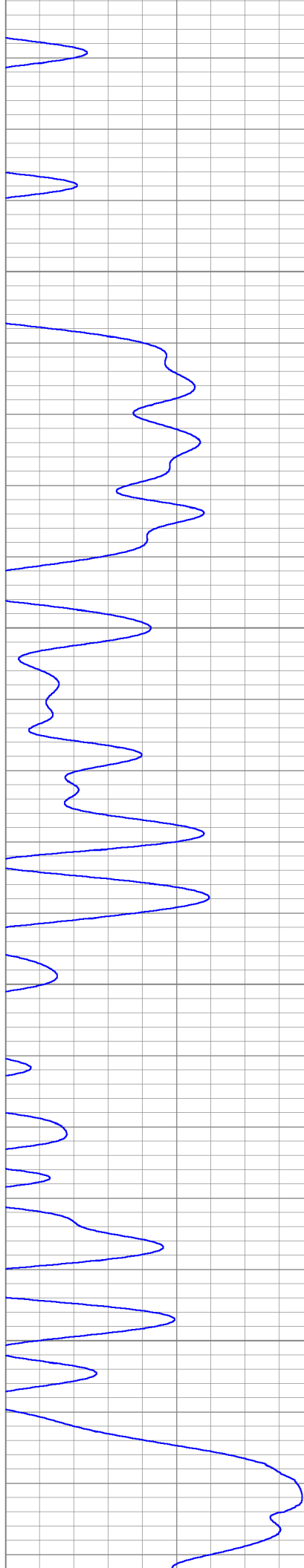


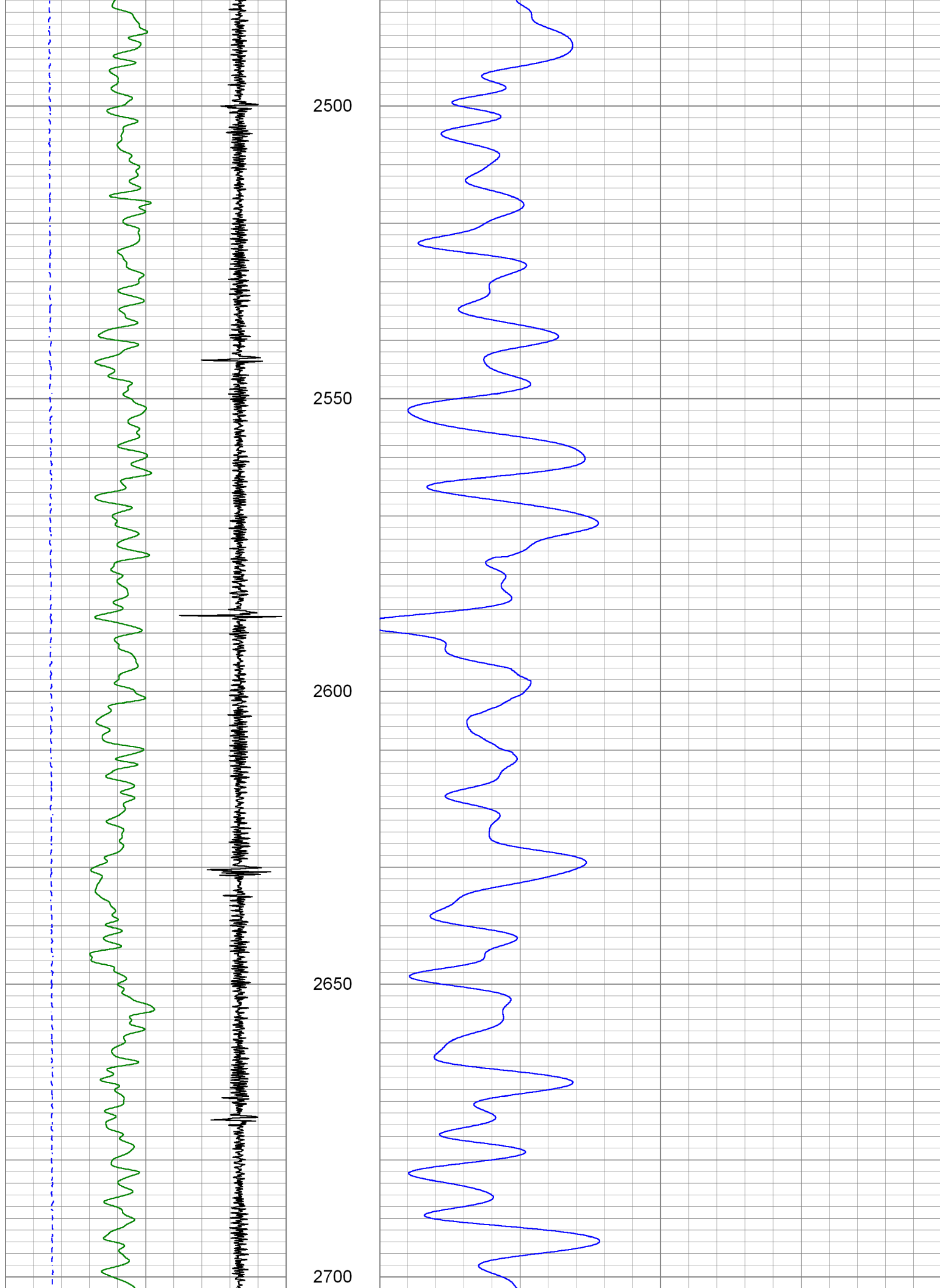
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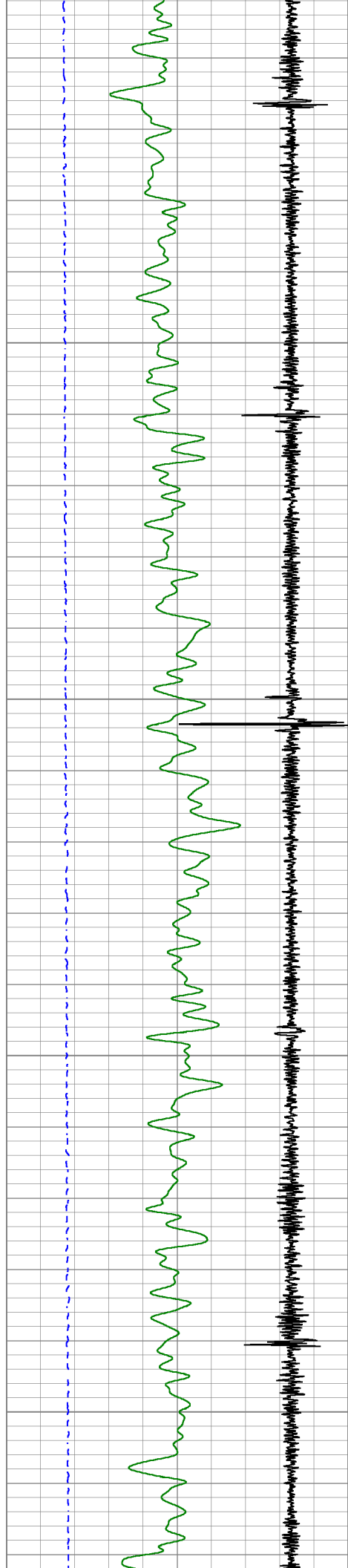
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2400

2450







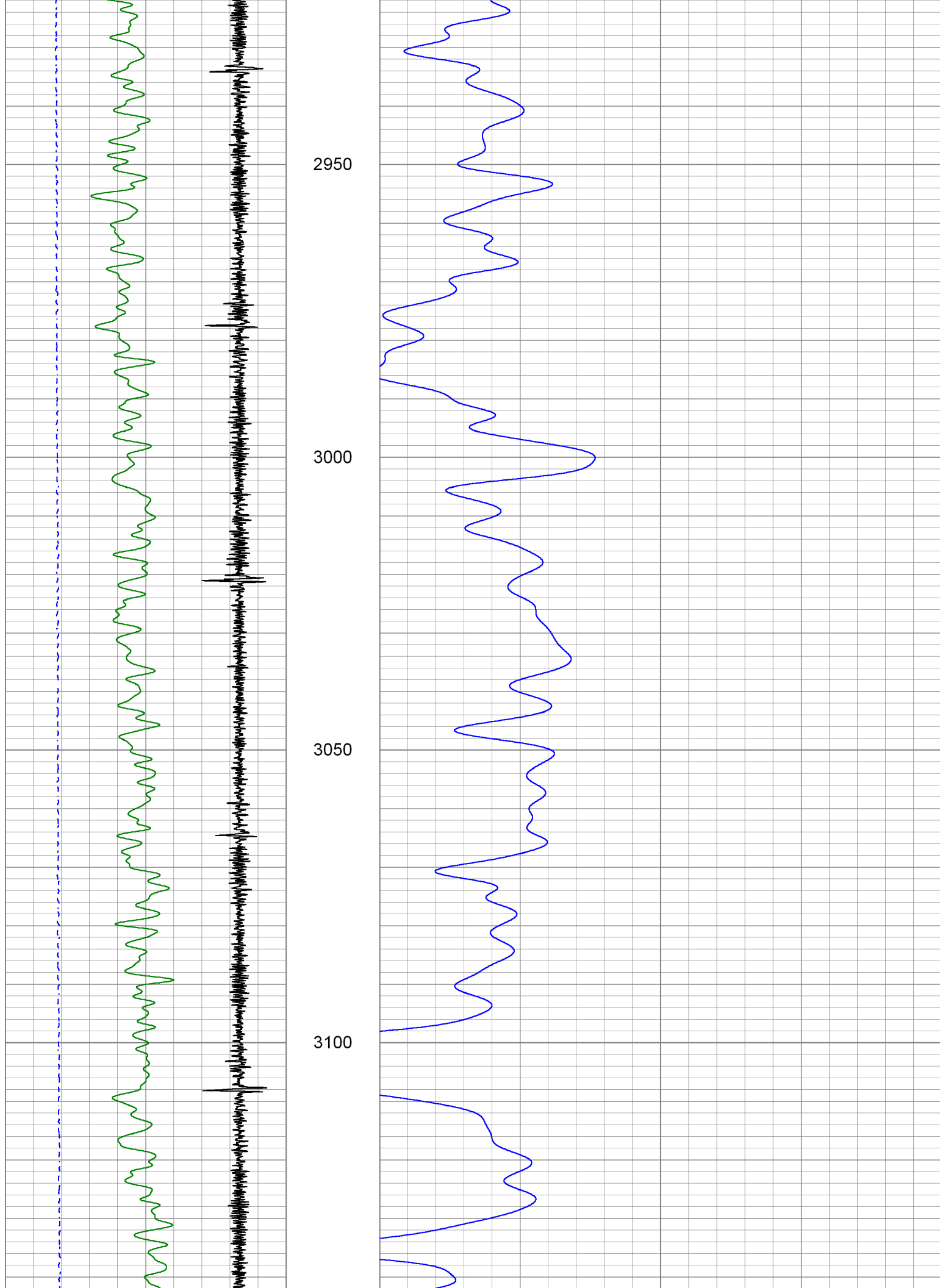
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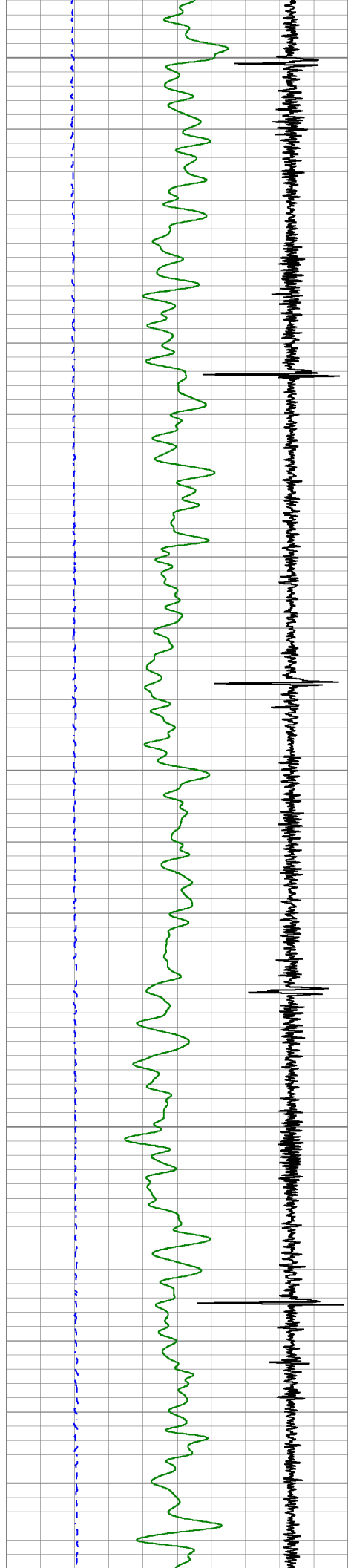
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2850

2900







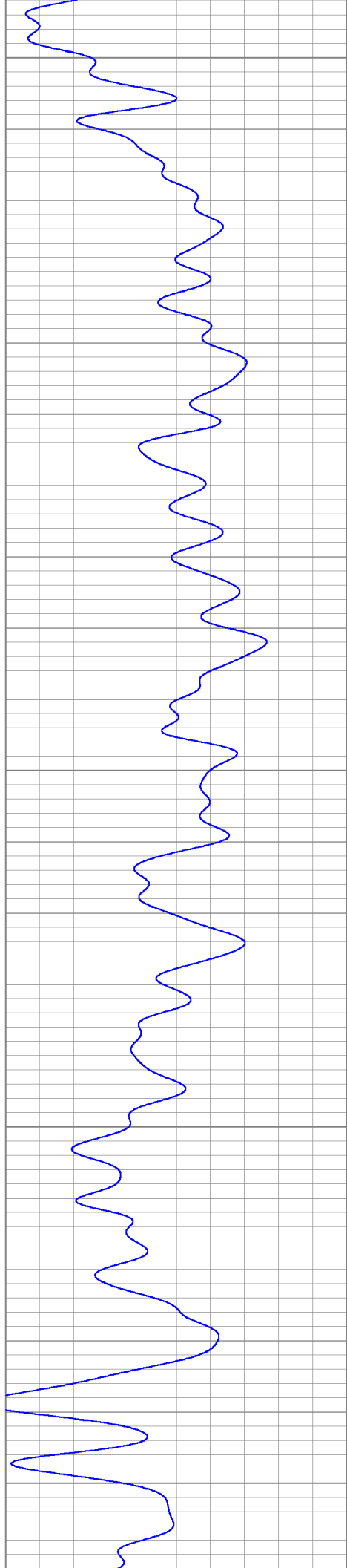
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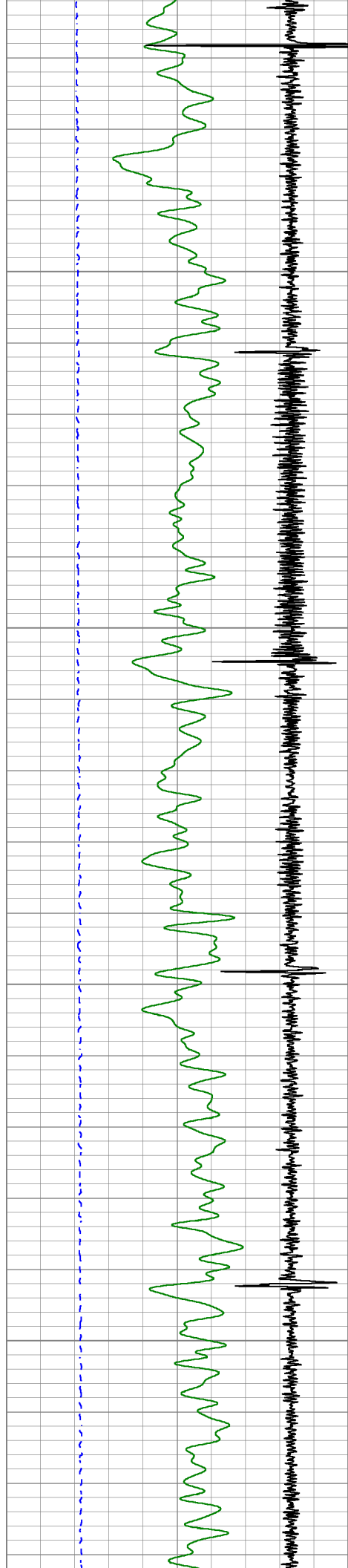
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3250

3300

3350



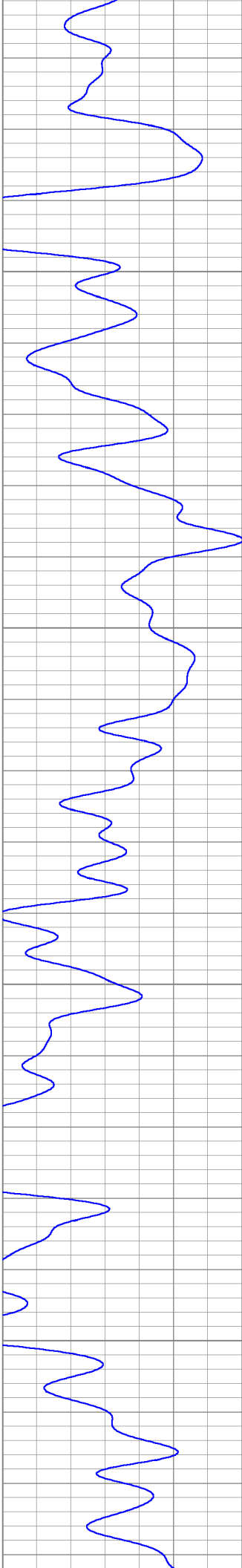


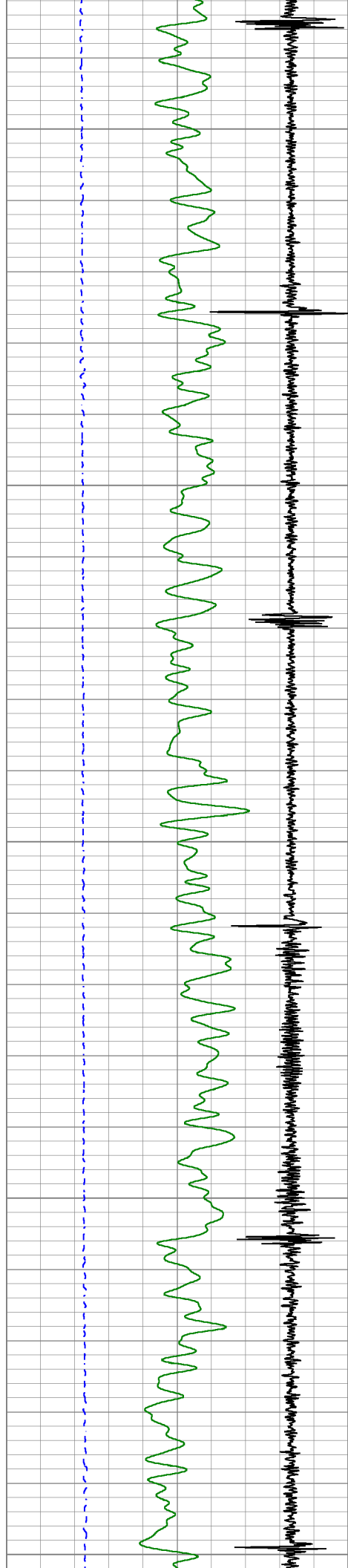
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3450

3500

3550





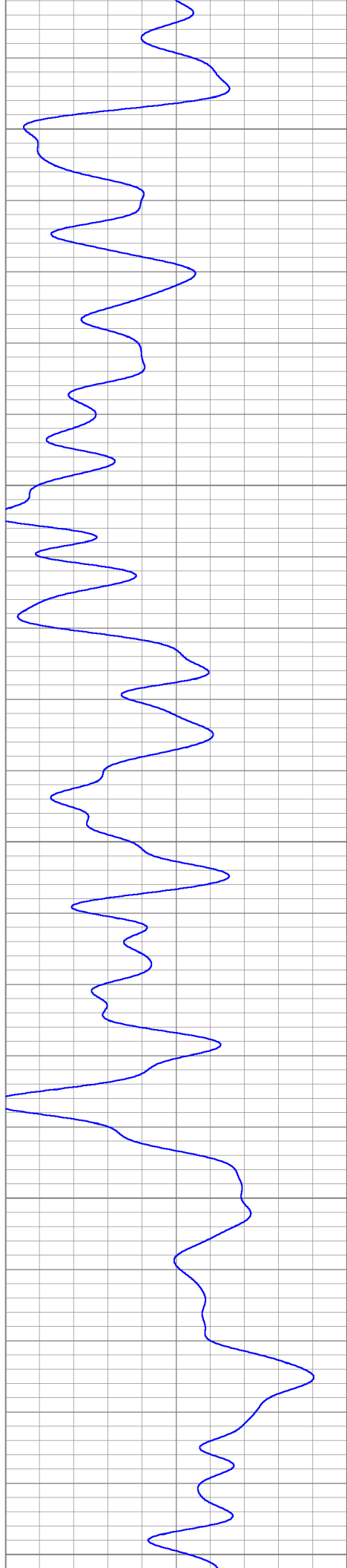
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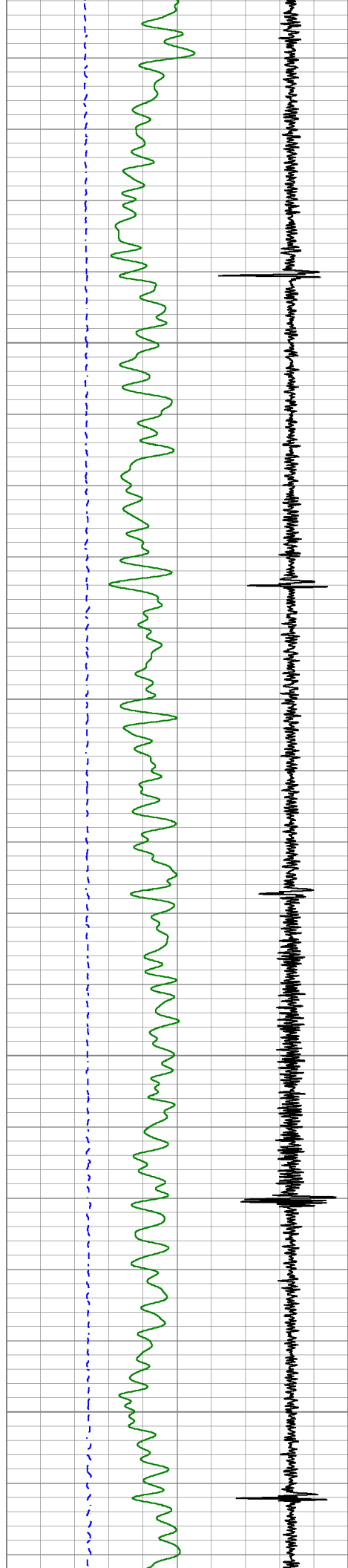
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3700

3750

3800



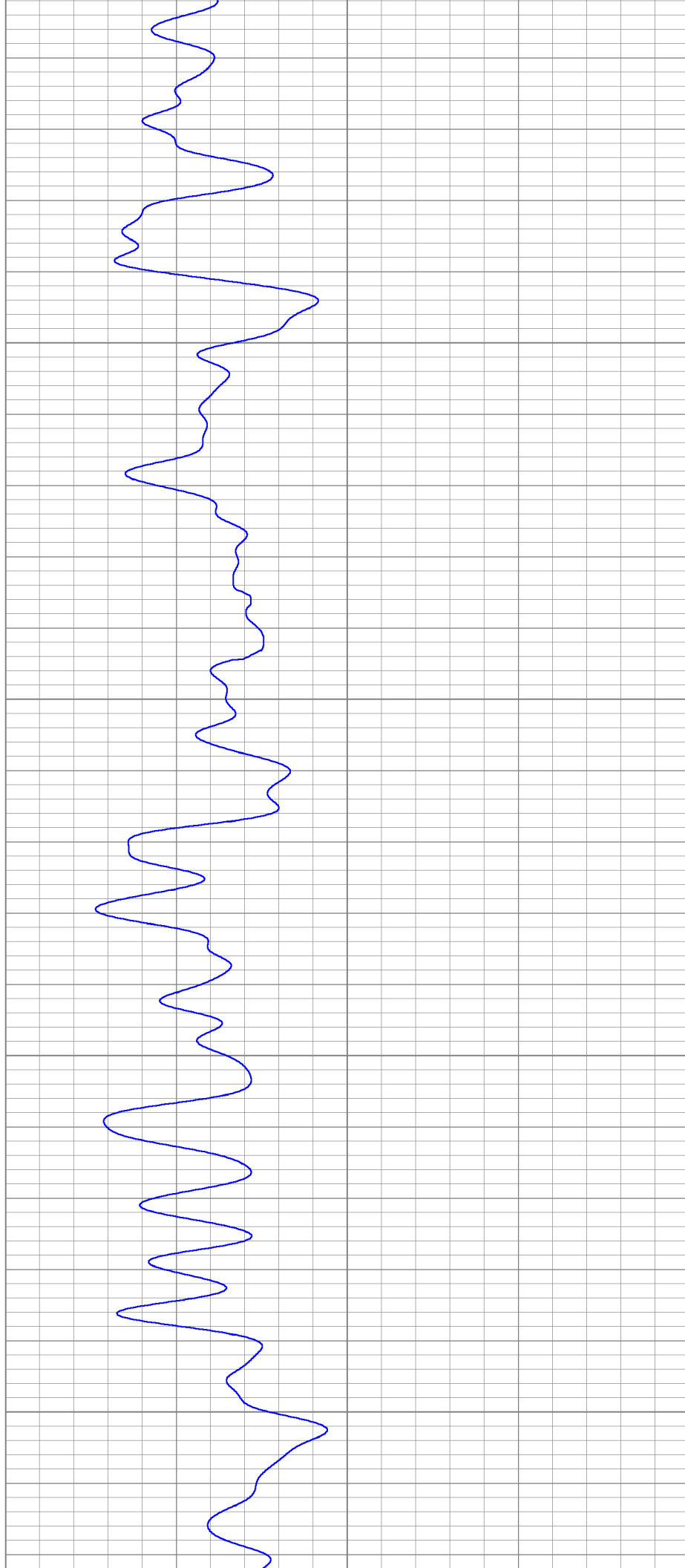


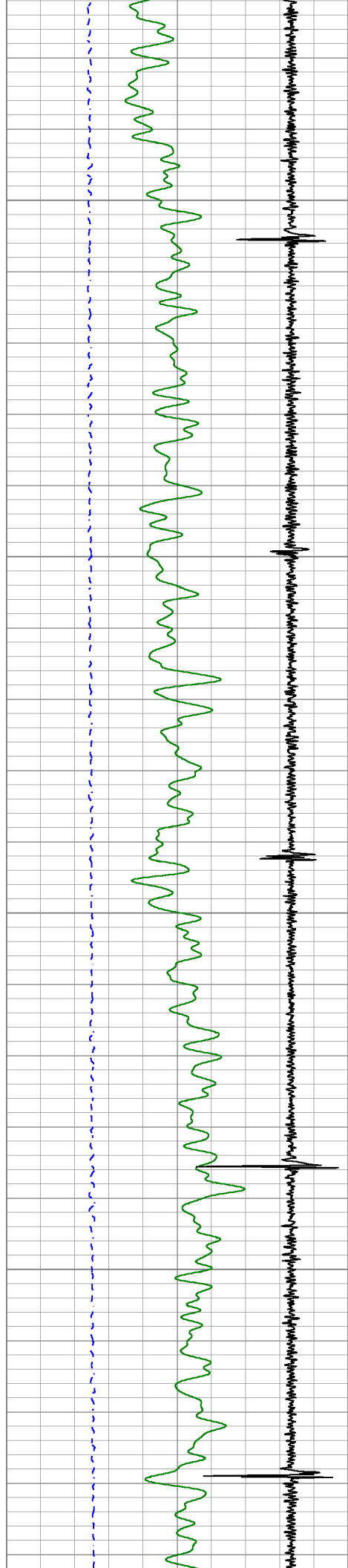
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3900

3950

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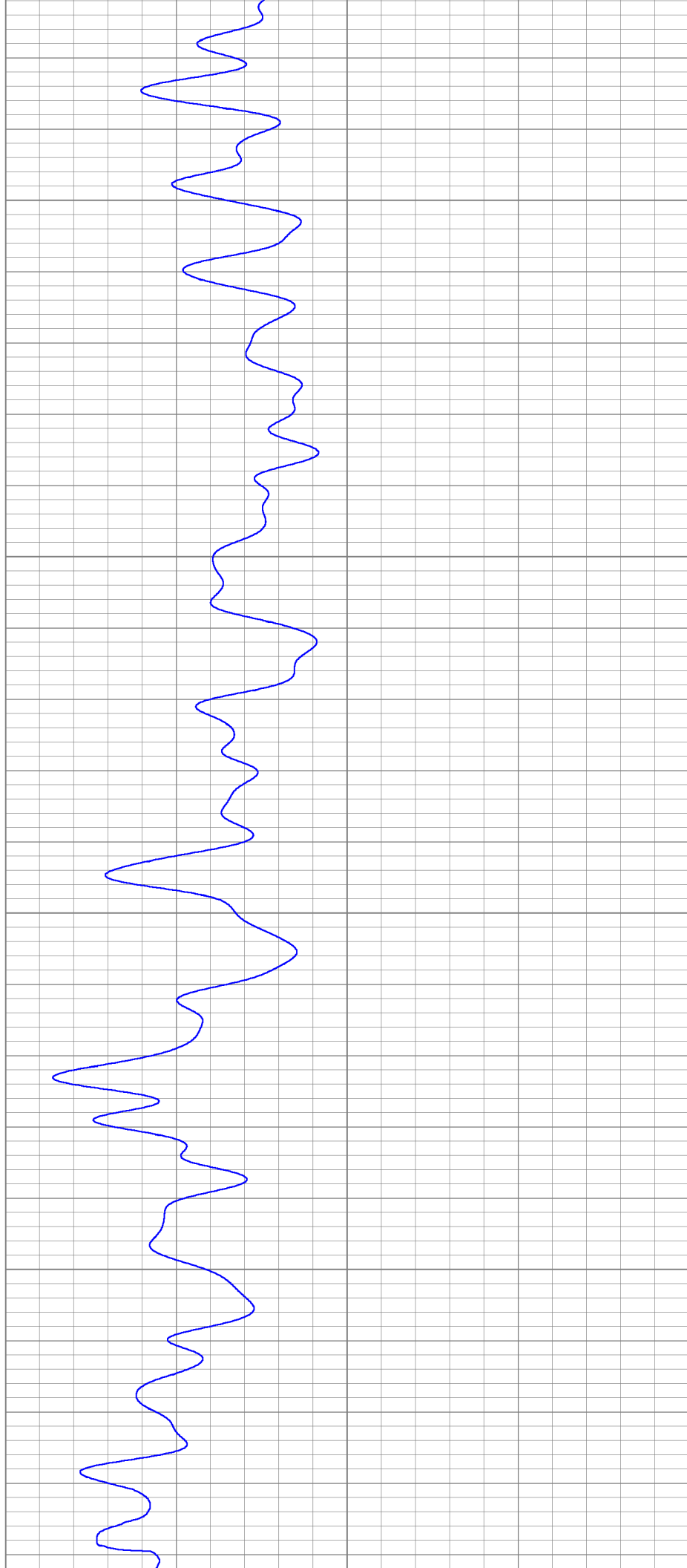


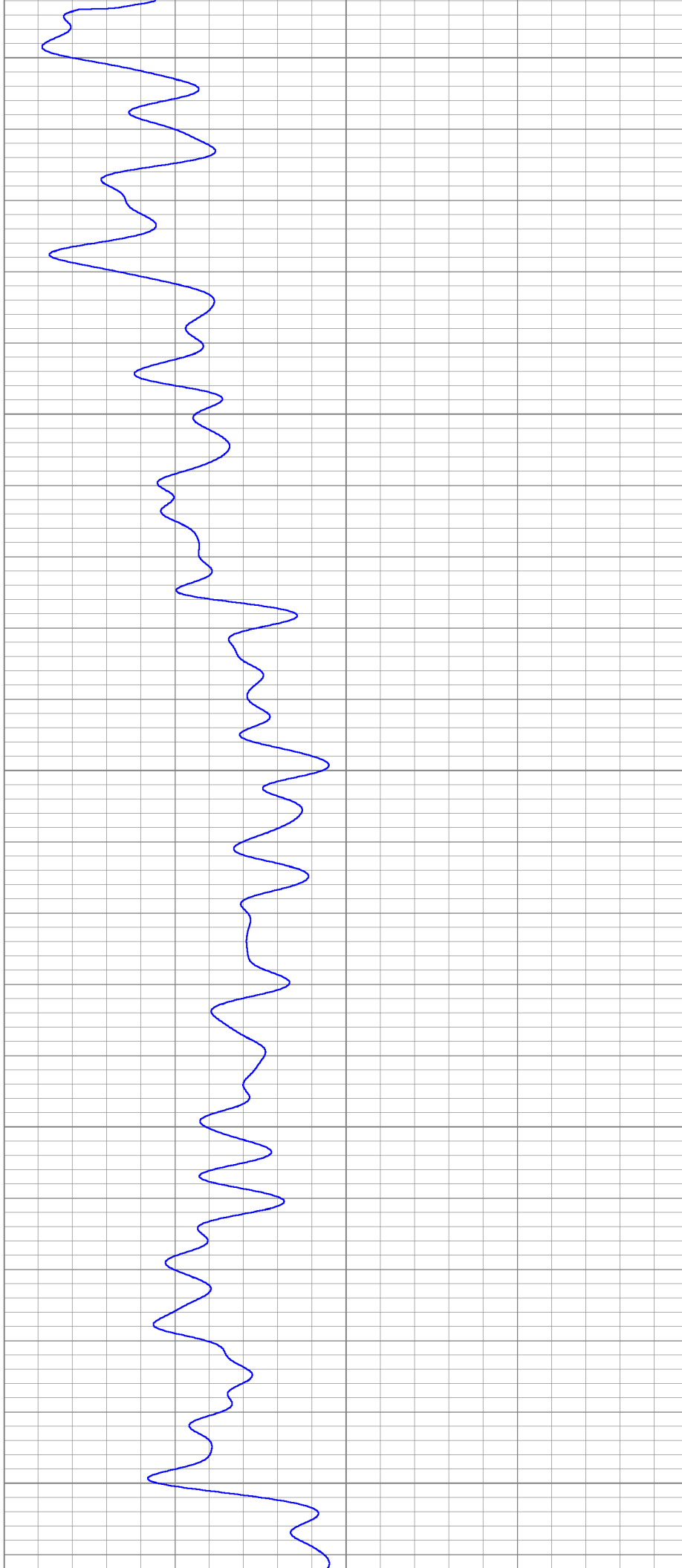
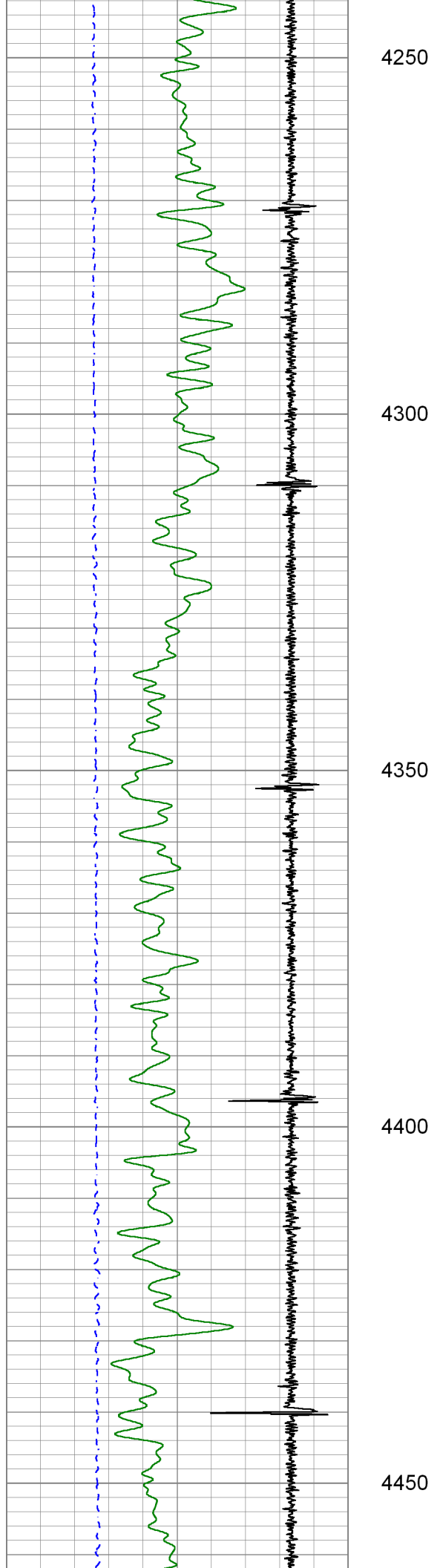
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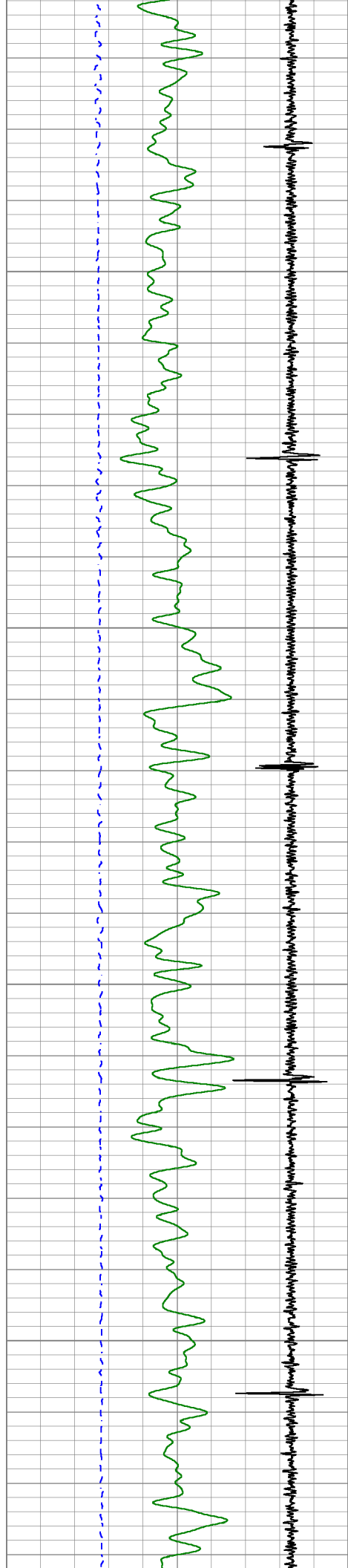
4100

4150

4200





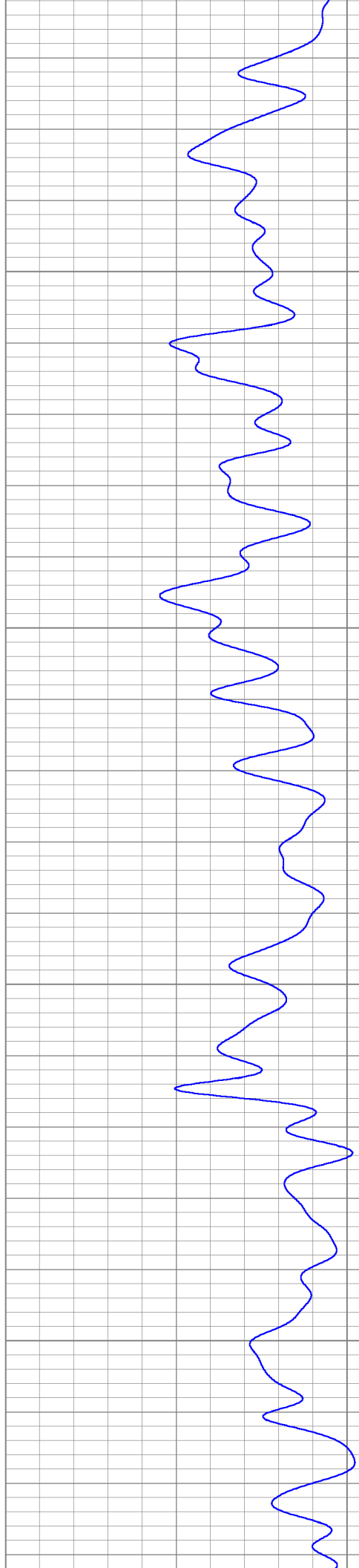


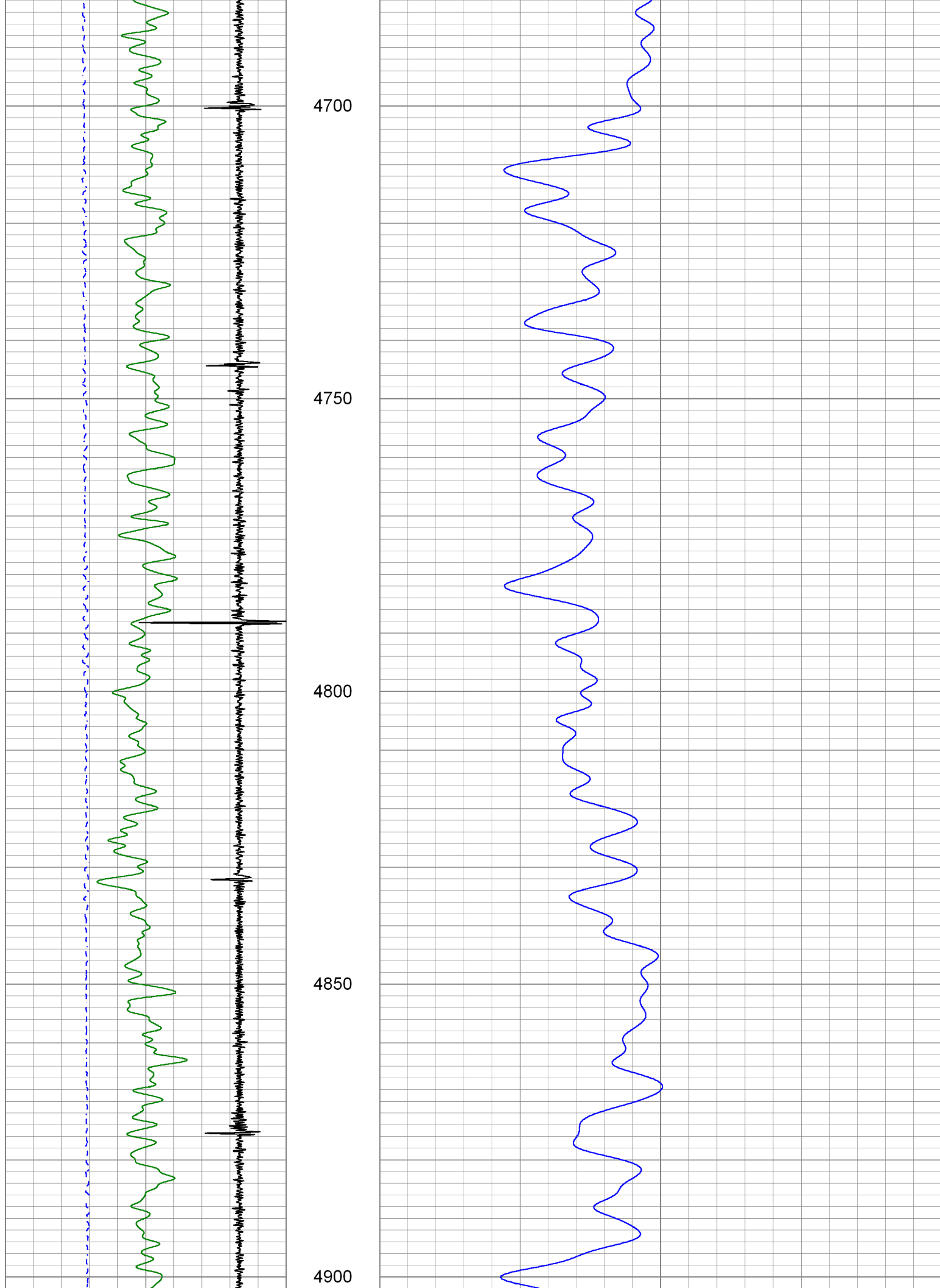
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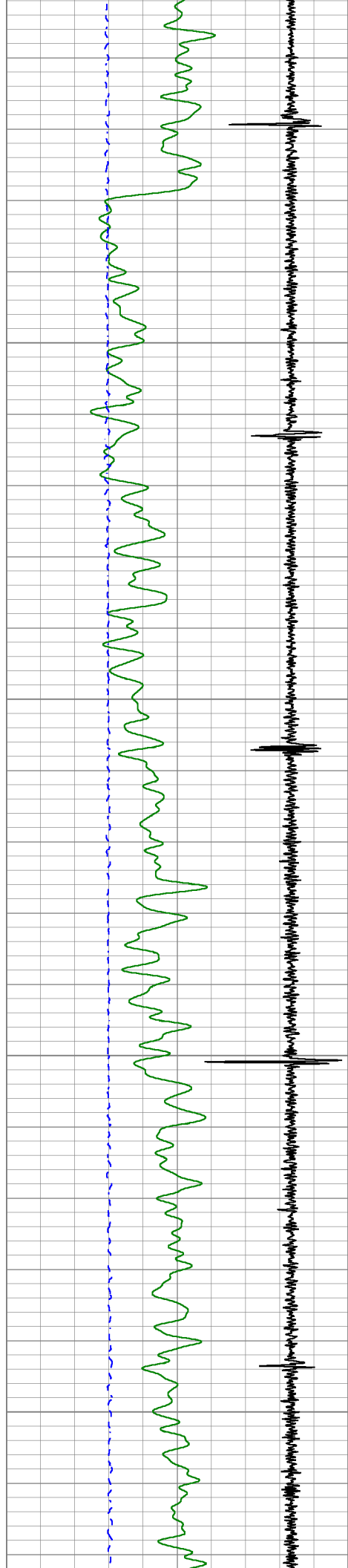
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4600

4650





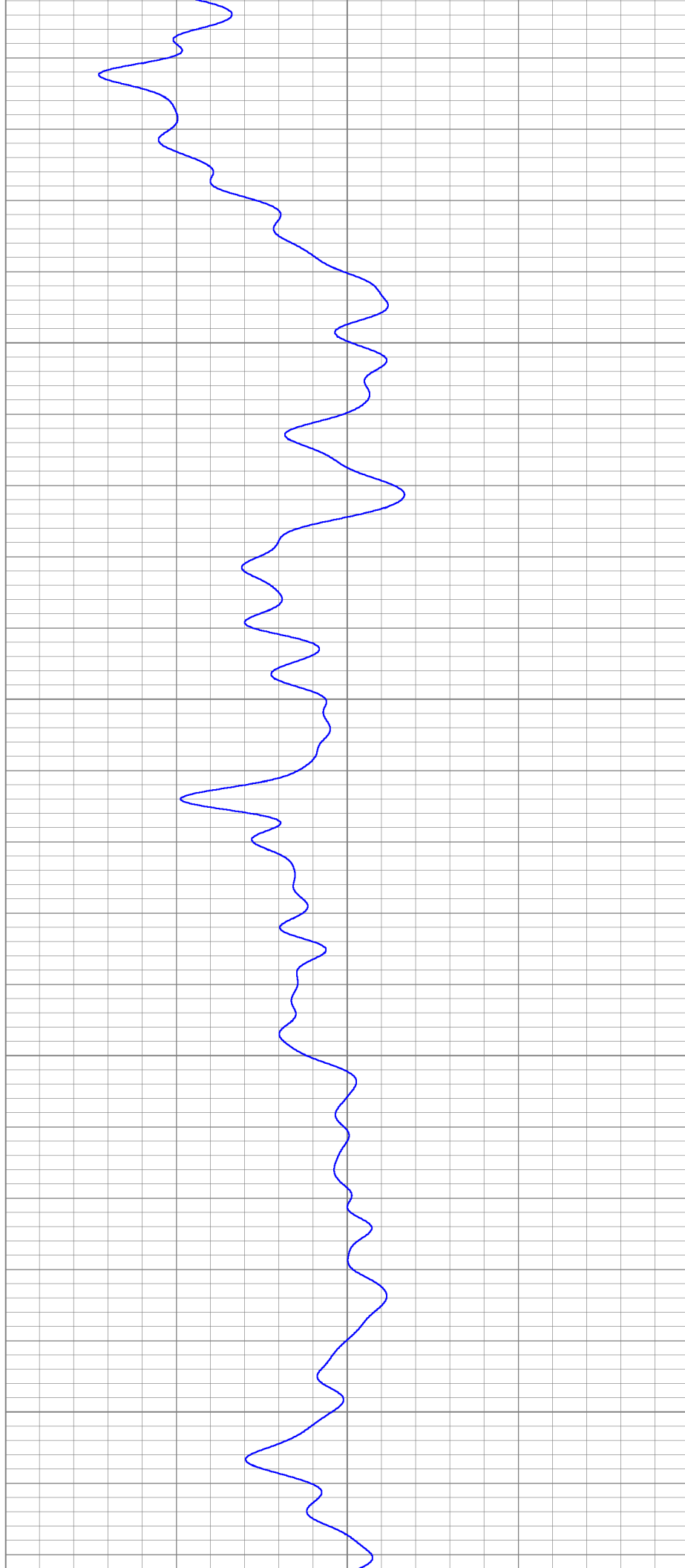


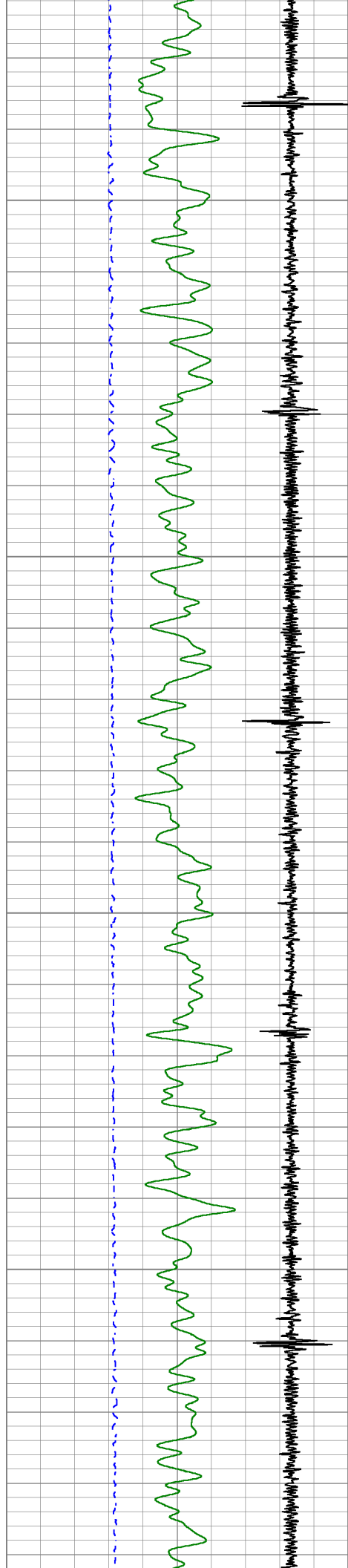
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5000

5050

5100



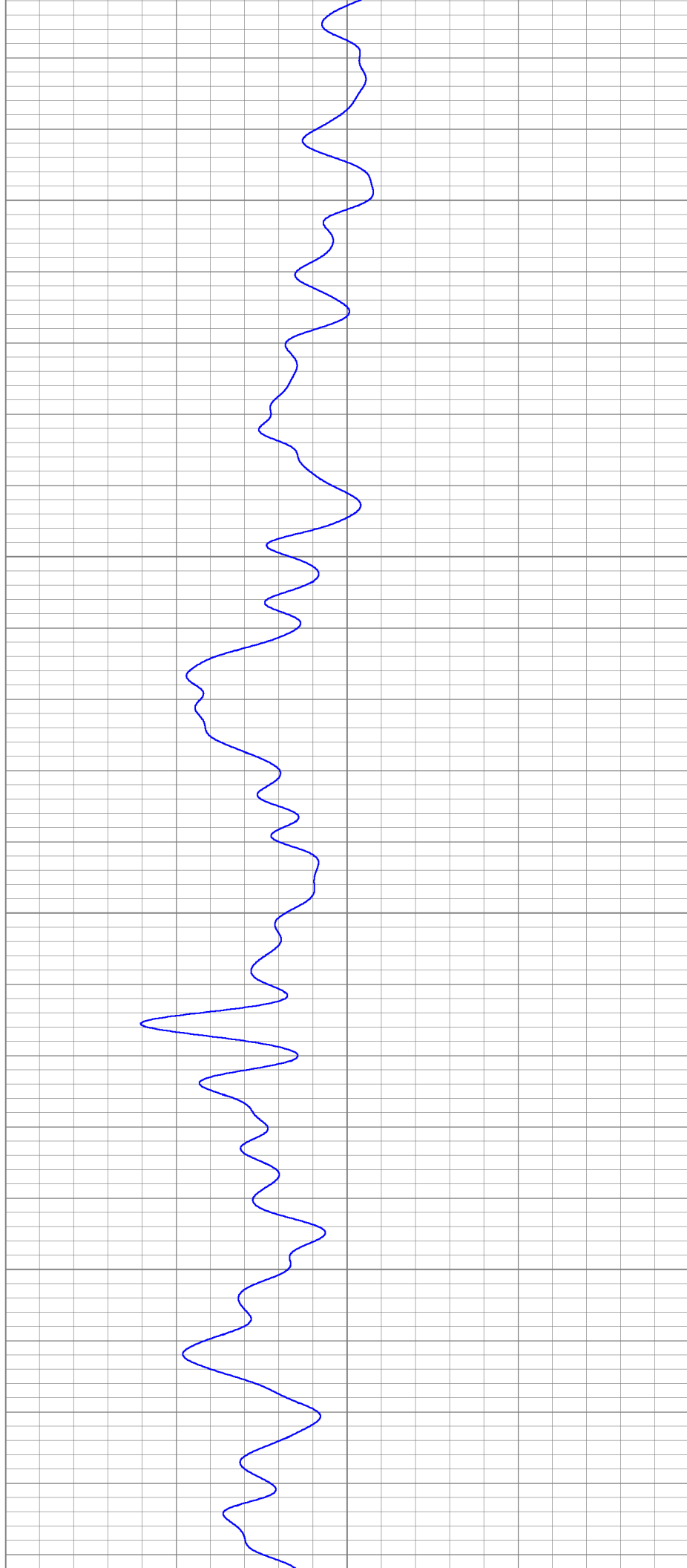


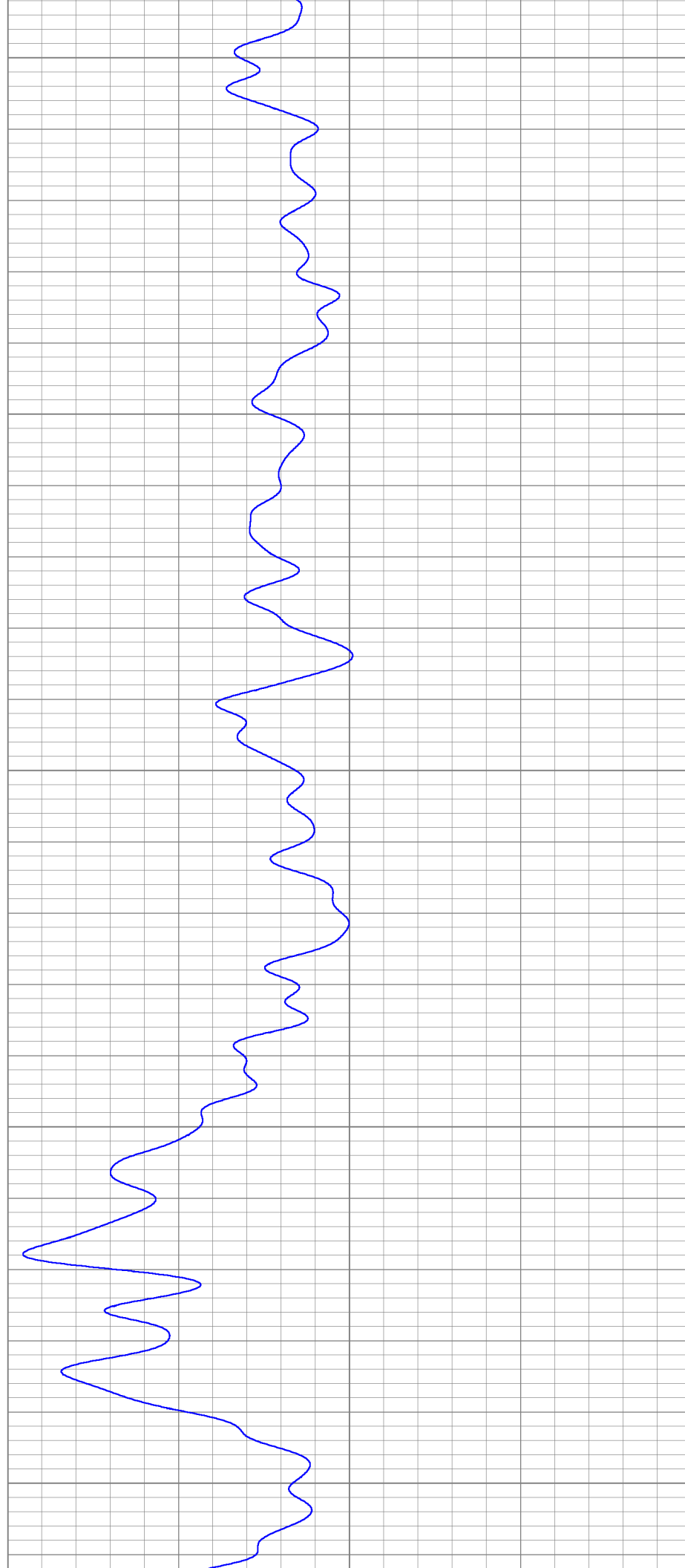
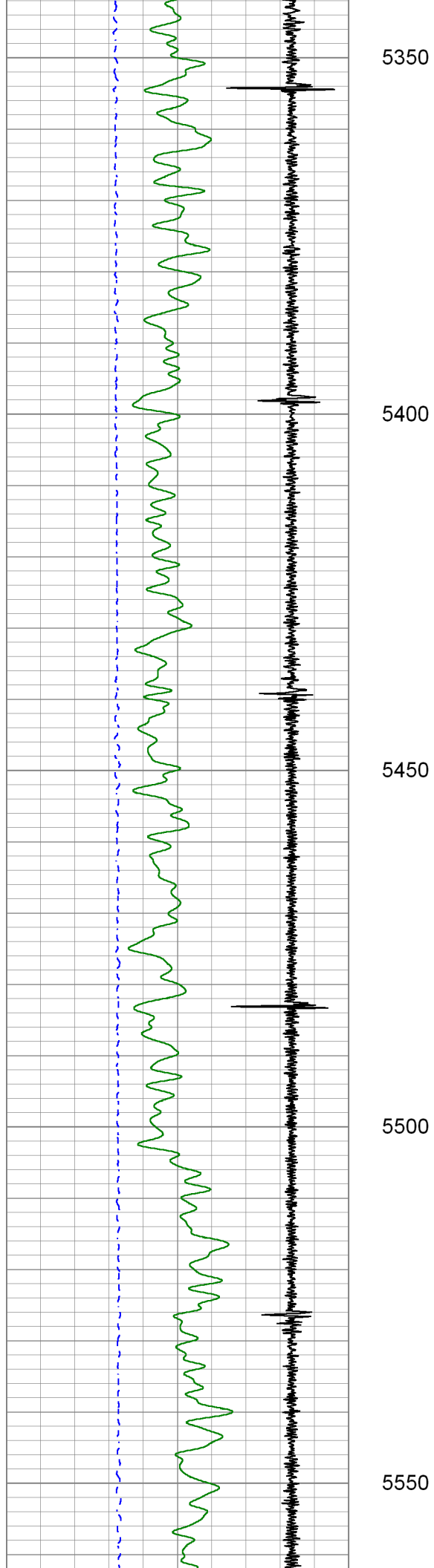
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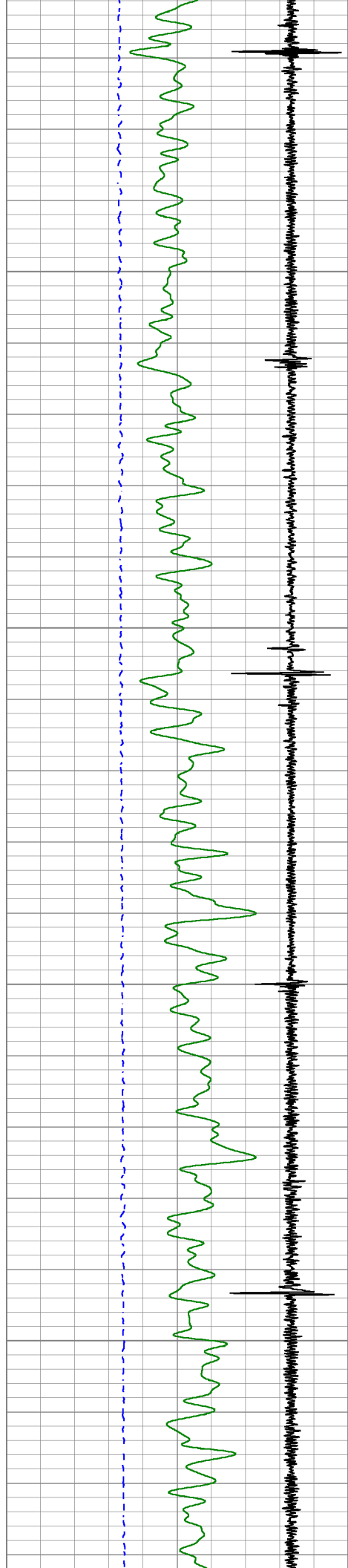
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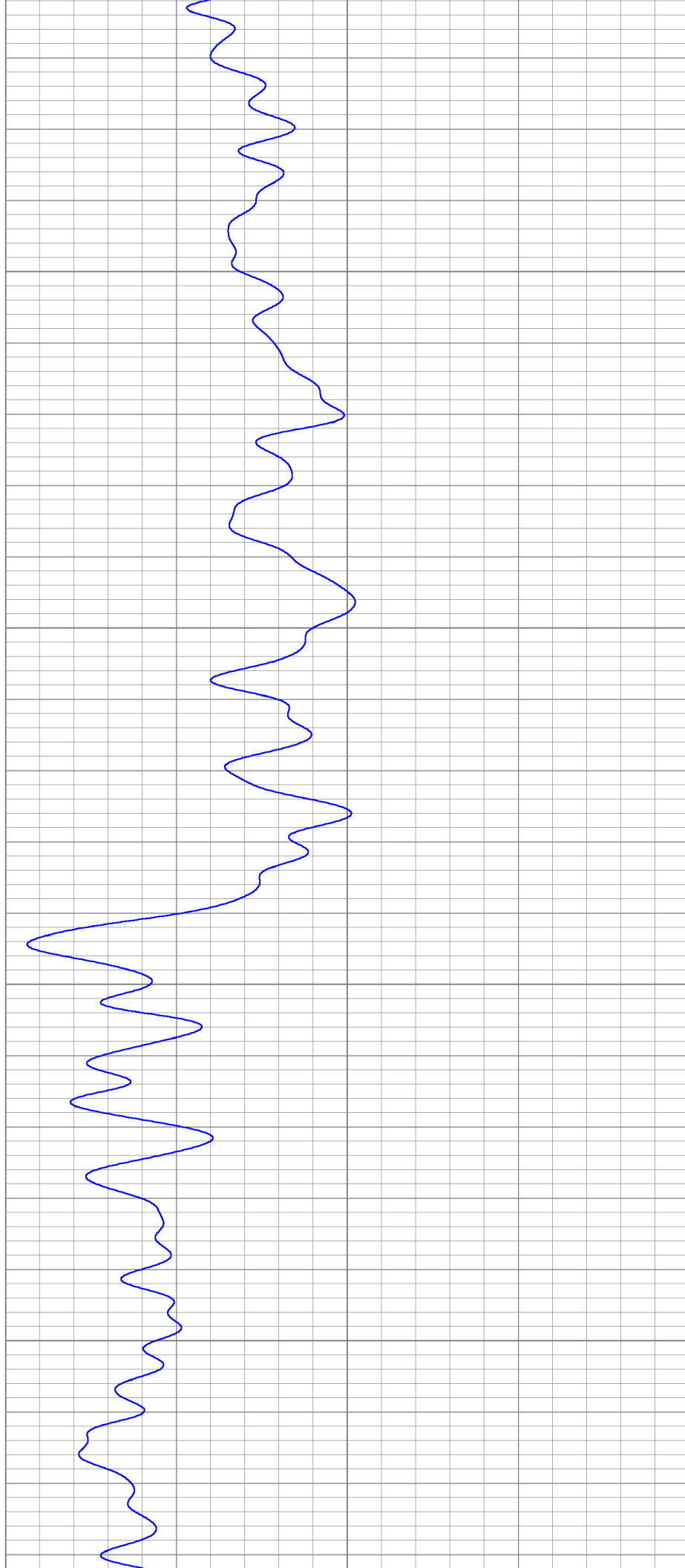


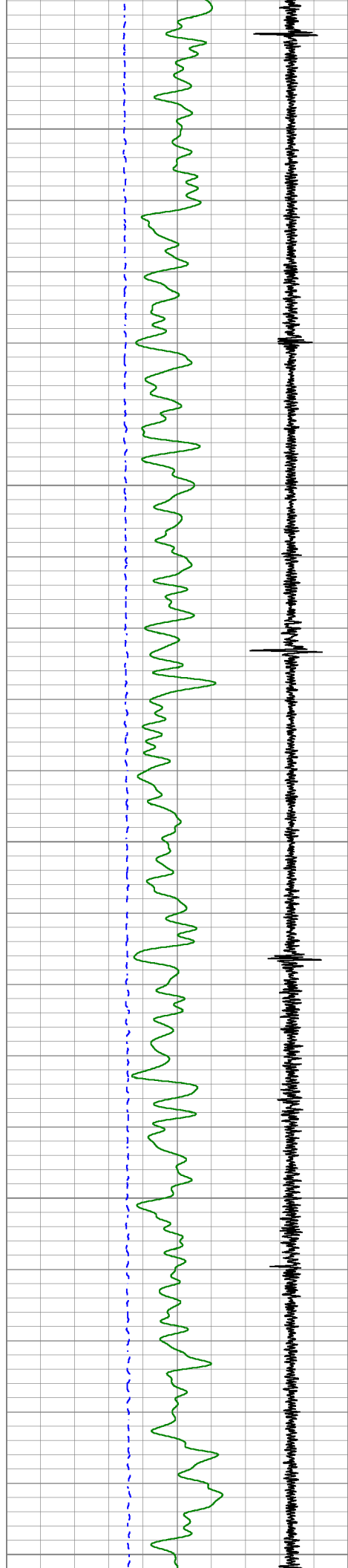
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5650

5700

5750





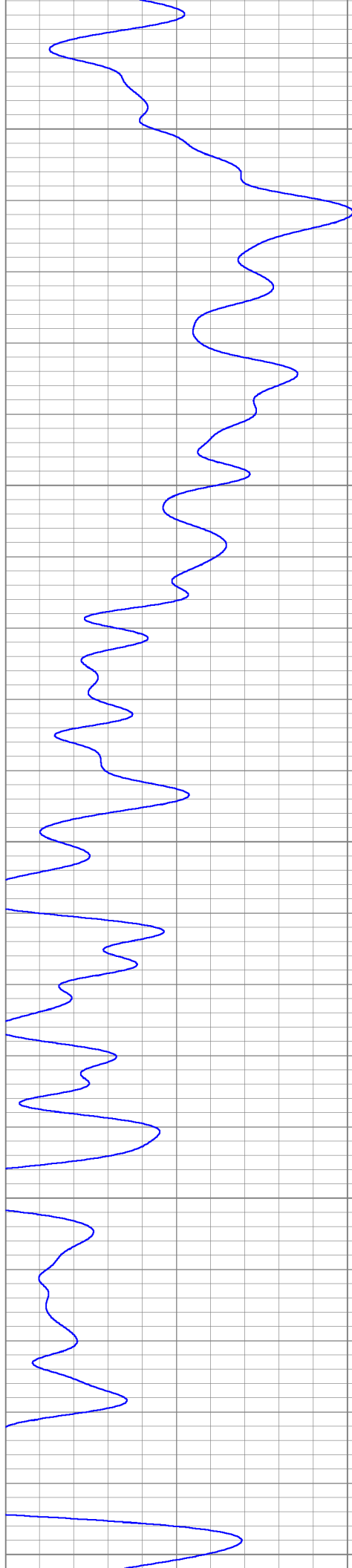
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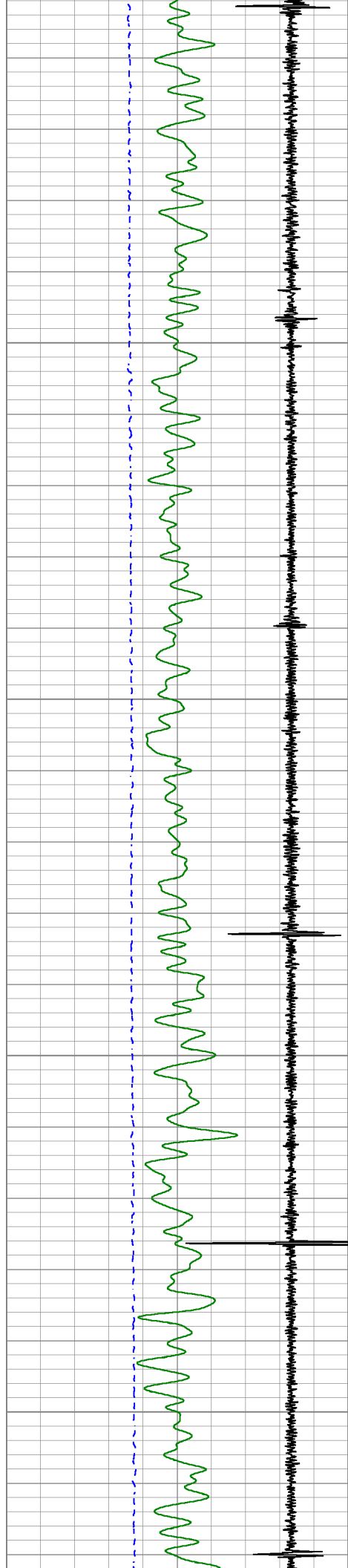
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5900

5950

6000



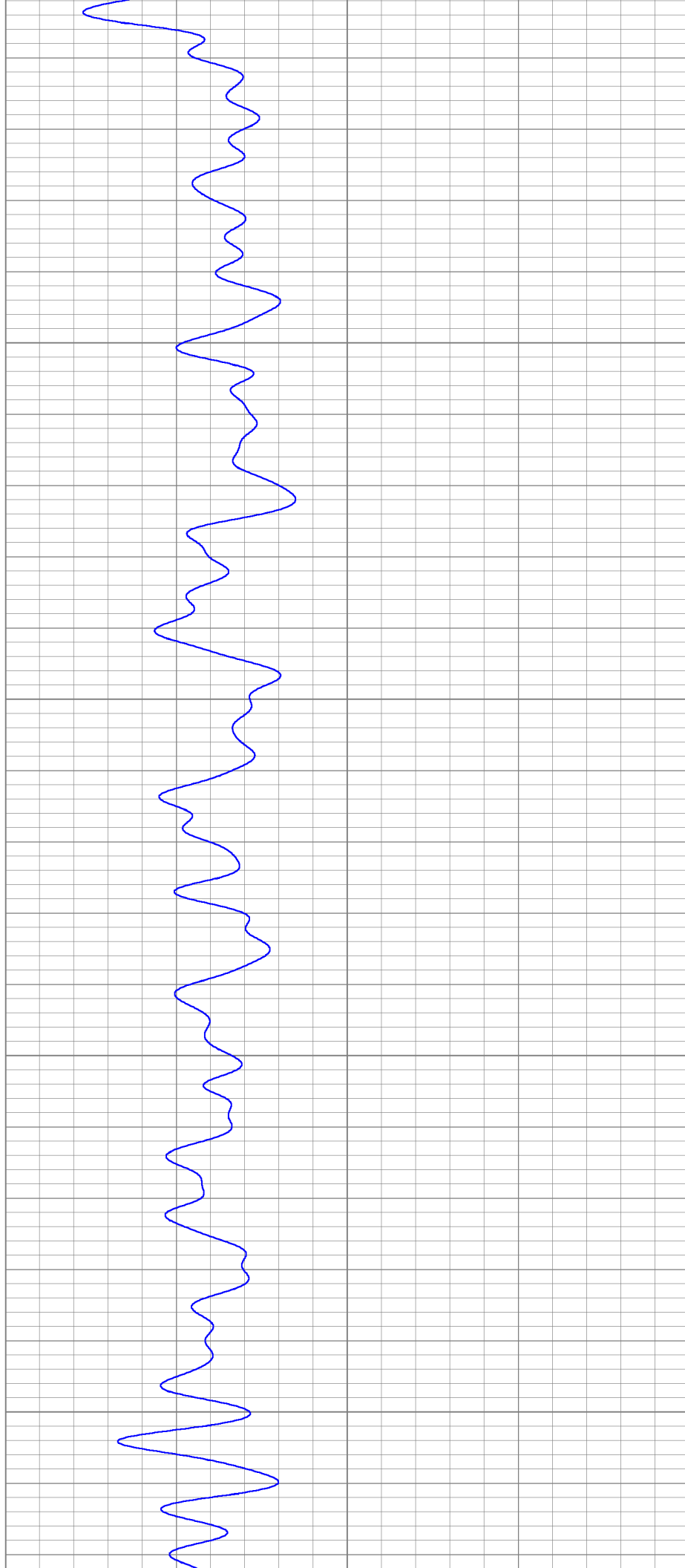


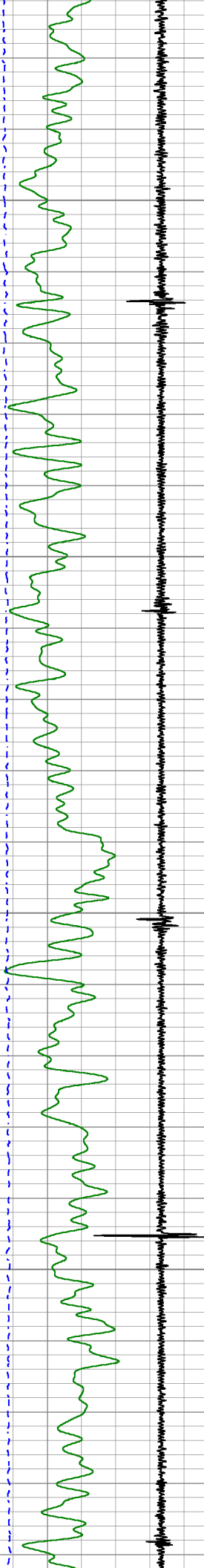
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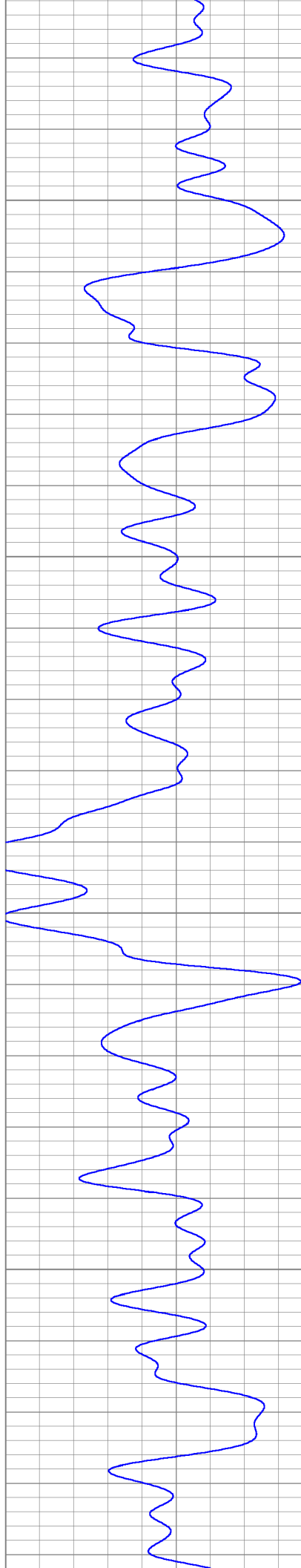


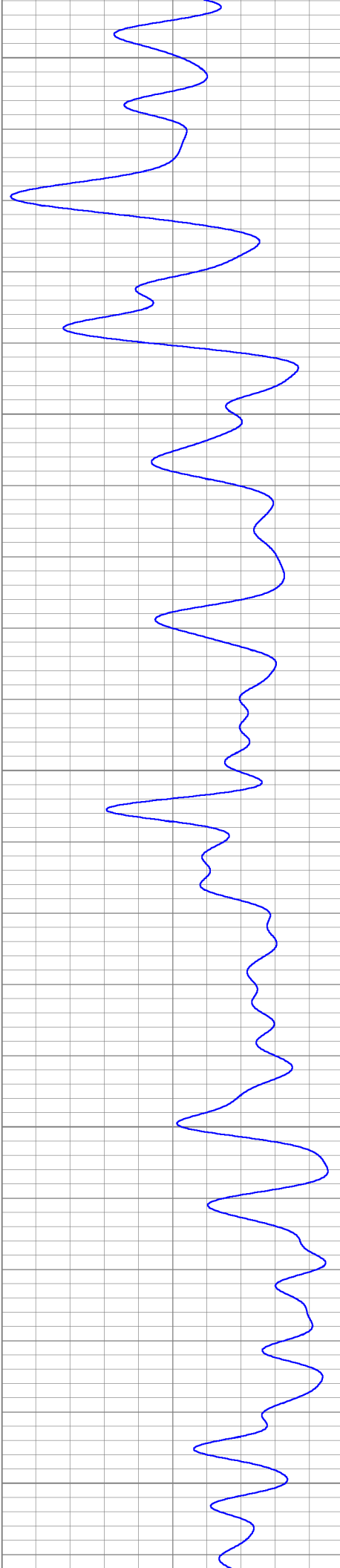
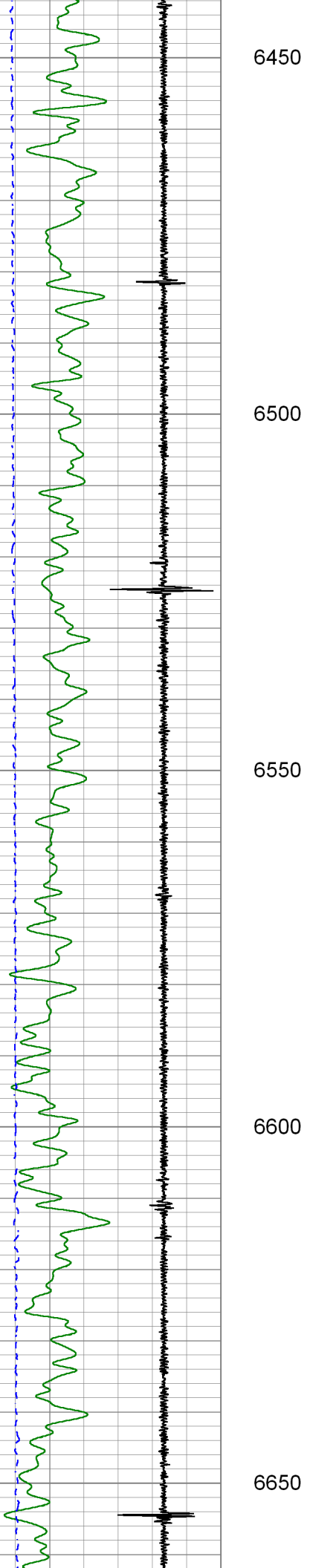
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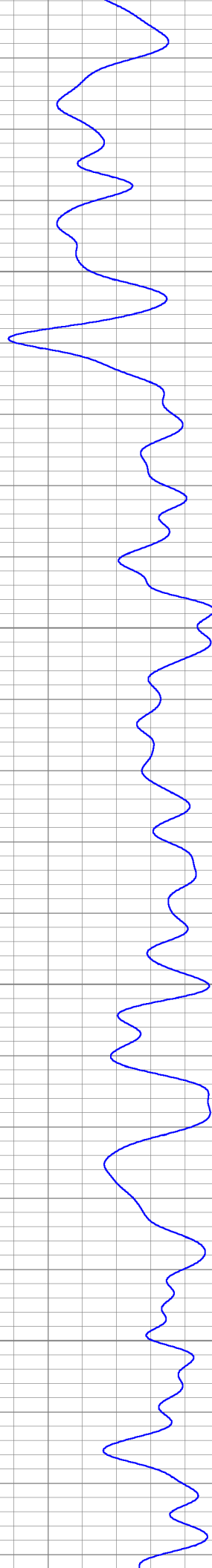
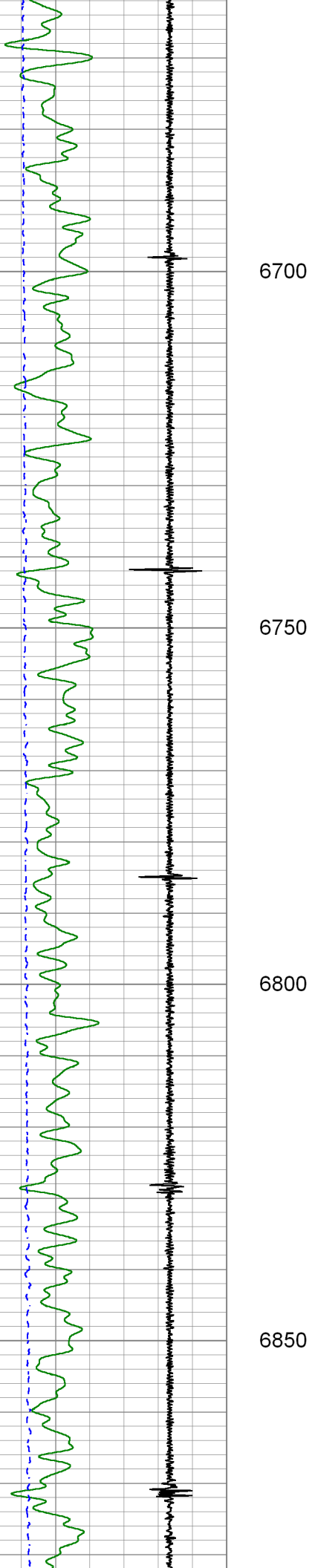
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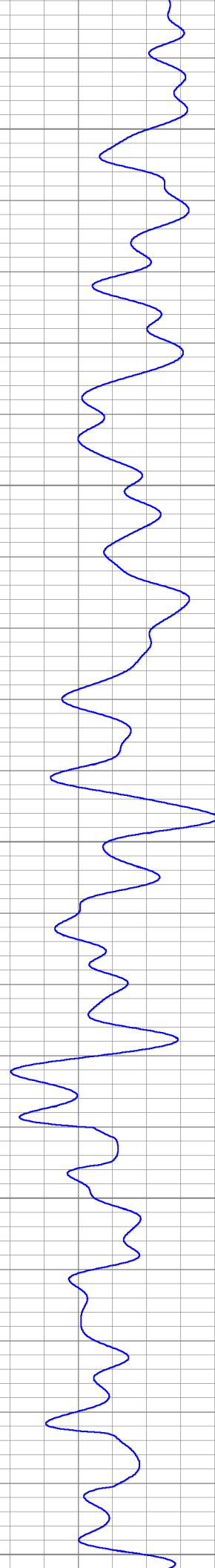
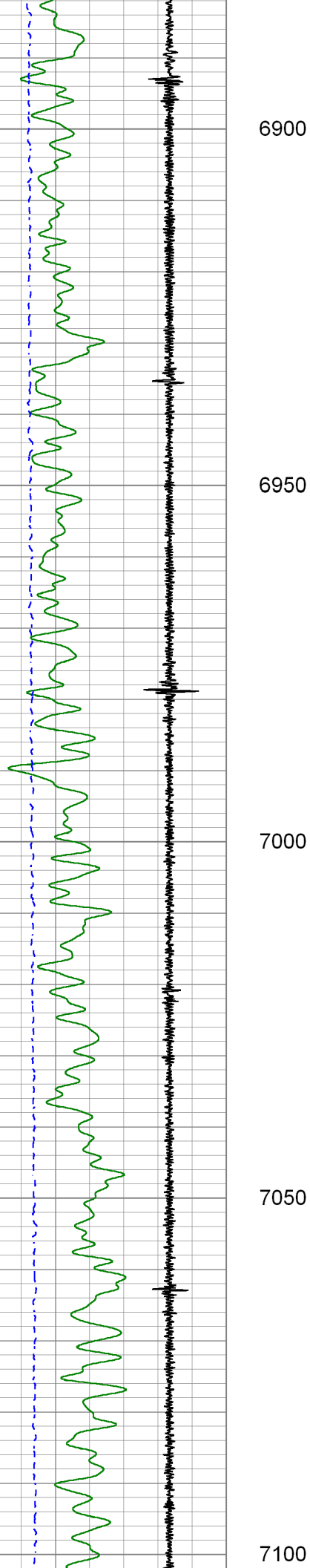
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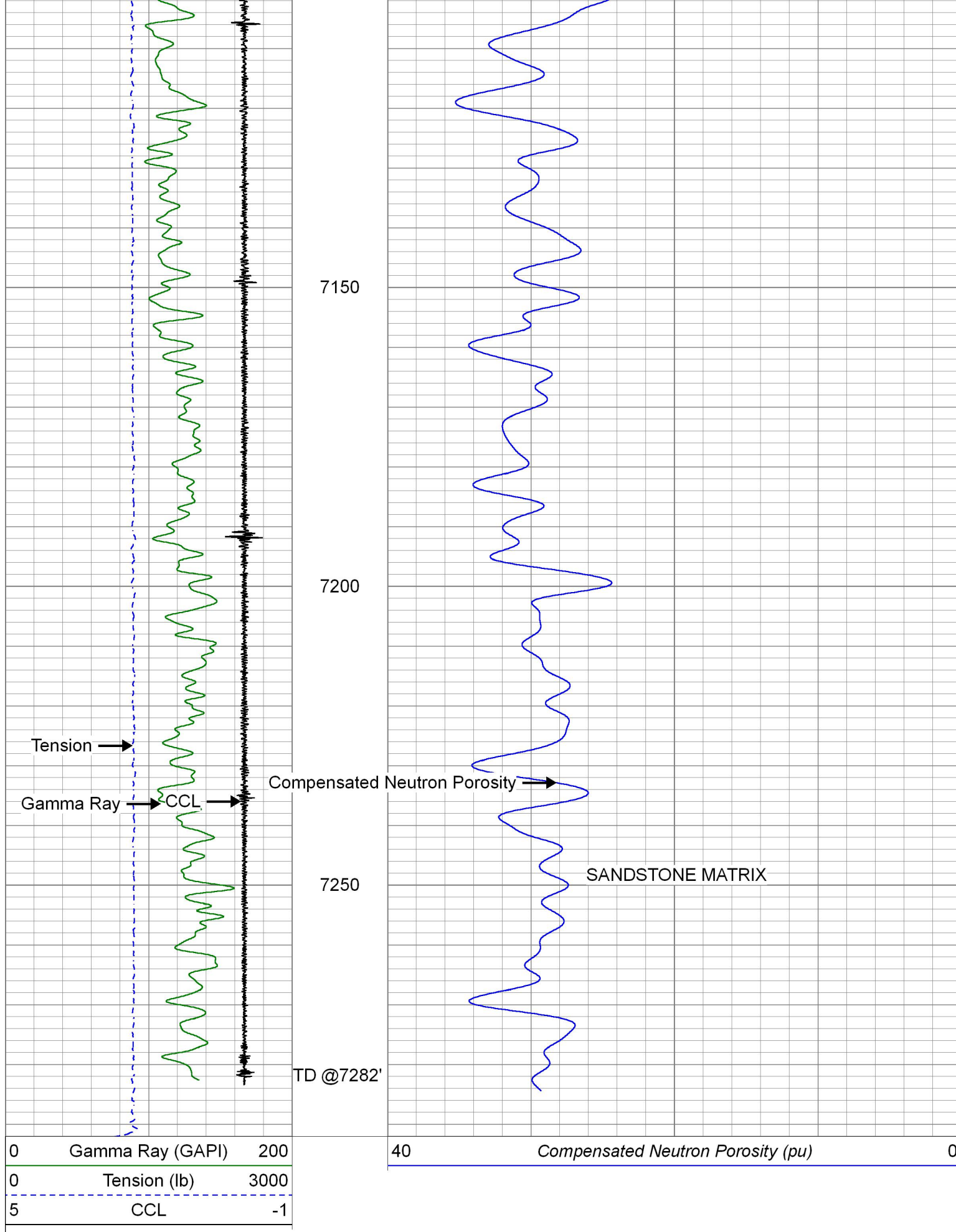
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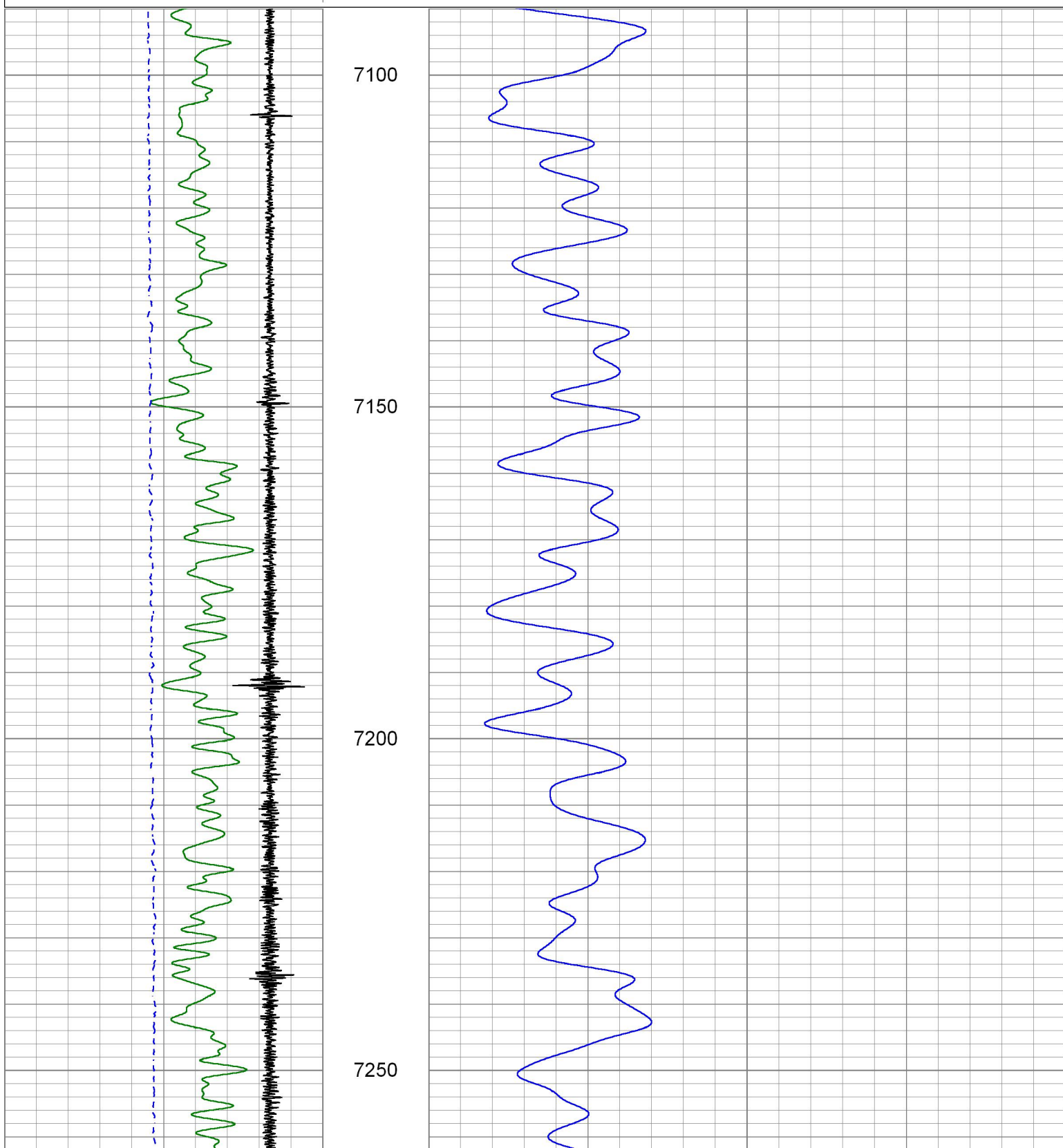


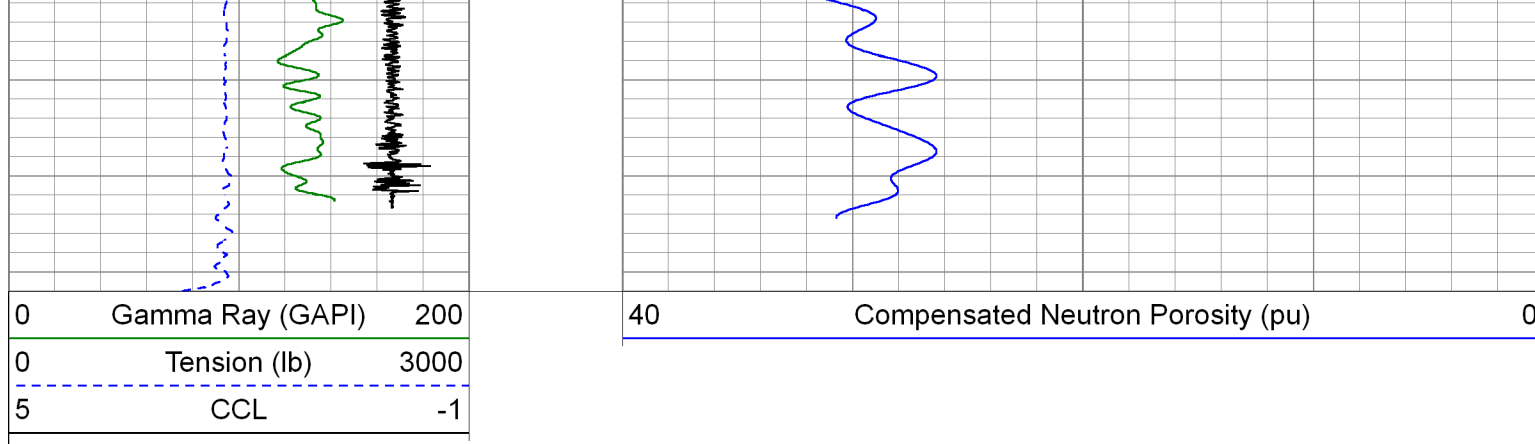
REPEAT SECTION

Database File 2-290182.db  
 Dataset Pathname pass2  
 Presentation Format pinr\_cnl-ft morgan  
 Dataset Creation Wed May 25 14:01:28 2016  
 Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	200
0	Tension (lb)	3000
5	CCL	-1

40	Compensated Neutron Porosity (pu)	0
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Database File		2-290182.db		Calibration Report	
Dataset Pathname		pass3			
Dataset Creation		Wed May 25 14:10:19 2016			
Compensated Neutron Calibration Report					
		Serial Number:		120508	
		Tool Model:		275BL	
CALIBRATION		Tue May 03 15:03:35 2016			
	Detector	Readings		Target	
	Short Space	4420.07	cps	0.00	cps
	Long Space	780.48	cps	0.00	cps
Normalization					
				1.0000	
				1.0000	
PRE-SURVEY VERIFICATION					
	Detector	Readings		Measured	
				Target	
1)	Short Space	cps			
	Long Space	cps		pu	pu
2)	Short Space	cps			
	Long Space	cps		pu	
3)	Short Space	cps			
	Long Space	cps		pu	
POST-SURVEY VERIFICATION					
	Detector	Readings		Measured	
				Target	
1)	Short Space	cps			
	Long Space	cps		pu	pu
2)	Short Space	cps			
	Long Space	cps		pu	pu
3)	Short Space	cps			
	Long Space	cps		pu	pu
Gamma Ray Calibration Report					
Serial Number:		FW1404-109			
Tool Model:		GC_6PIN			
Performed:		Tue May 03 11:43:57 2016			
Calibrator Value:		1.0	GAPI		

Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.8500	GAPI/cps



Company	PDC ENERGY INC.	
Well	SPAUR 10Y-241	
Field	WATTENBERG	
County	WELD	
State	CO	Country USA