

DUAL INDUCTION LOG

Company	BEREXCO, LLC.	Company	BEREXCO, LLC.
Well	ARNOLD UNIT #13-12	Well	ARNOLD UNIT #13-12
Field	ARROYO NORTHEAST	Field	ARROYO NORTHEAST
County	STANTON	County	STANTON
State	KANSAS	State	KANSAS
Location:	API # : 15-187-21360-0000 475' FNL & 875' FEL SE - NW - NE - NE	Other Services CDL/CNL/PE MEL/SONIC	
Permanent Datum	GROUND LEVEL	Elevation	3334
Log Measured From	KELLY BUSHING 13' A.G.L.	K.B. 3347 D.F. 3345 G.L. 3334	
Drilling Measured From	KELLY BUSHING		
SEC 12 TWP 29S RGE 41W			
Date	6/14/23		
Run Number	ONE		
Depth Driller	5560		
Depth Logger	5560		
Bottom Logged Interval	5558		
Top Log Interval	00		
Casing Driller	8 5/8"@1741'		
Casing Logger	1742		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 500 PPM	
Density / Viscosity	9.4/65		
pH / Fluid Loss	10.0/6.4		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.60@79F		
Rmf @ Meas. Temp	1.20@79F		
Rmc @ Meas. Temp	1.92@79F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.972@130F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	3:30 A.M.		
Maximum Recorded Temperature	130F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	PETE VOLLMER		

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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.

15-187-21360-0000

Comments

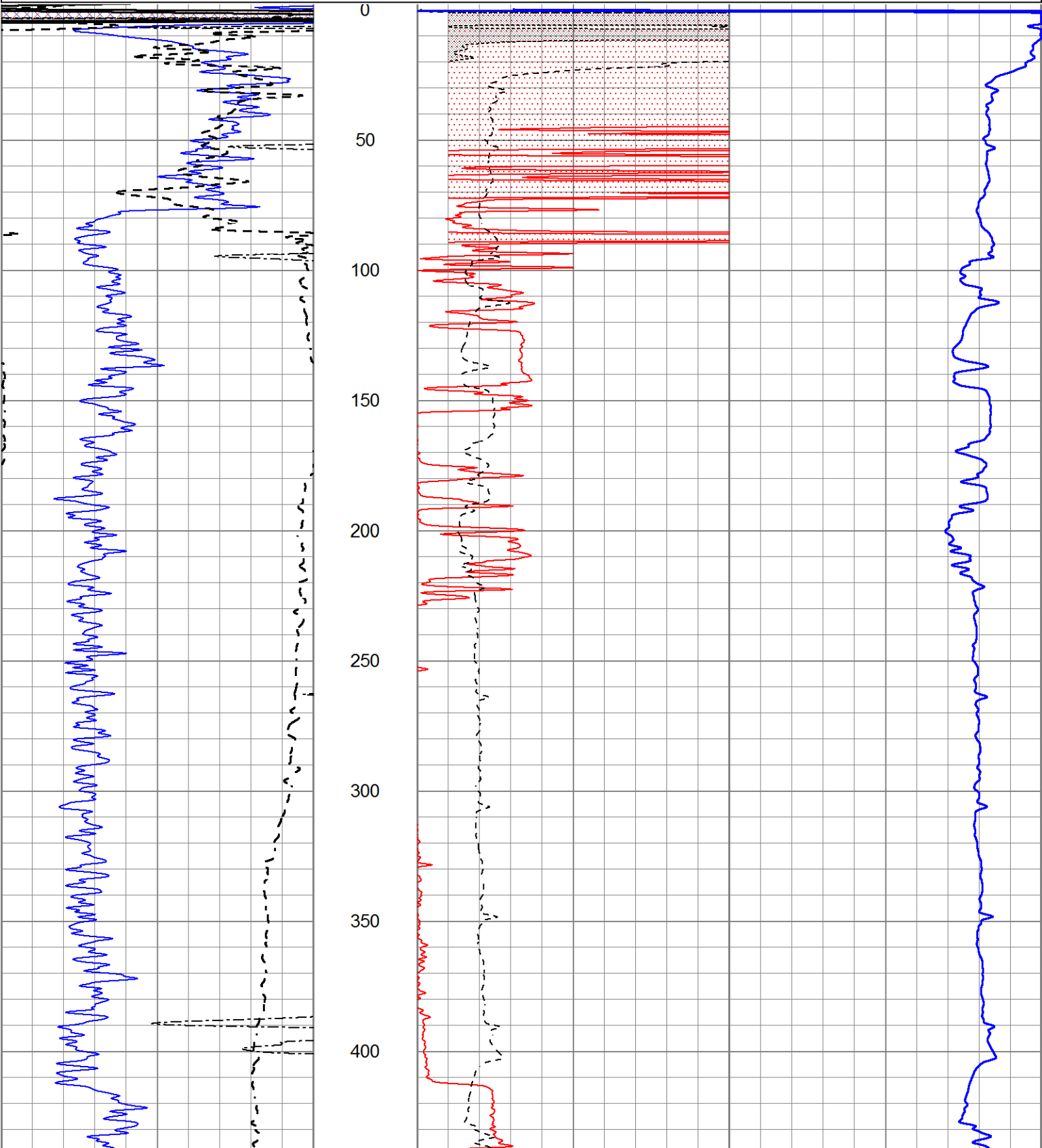
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS
JOHNSON CITY, KS., (HWY 160 & RD. L), 2S. TO "RD. 14", 1/4W., S. INTO

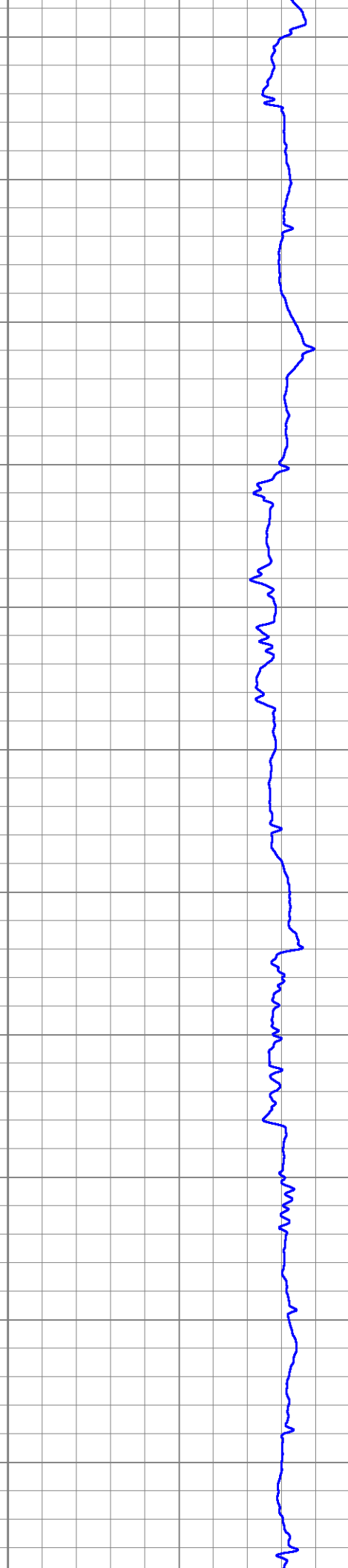
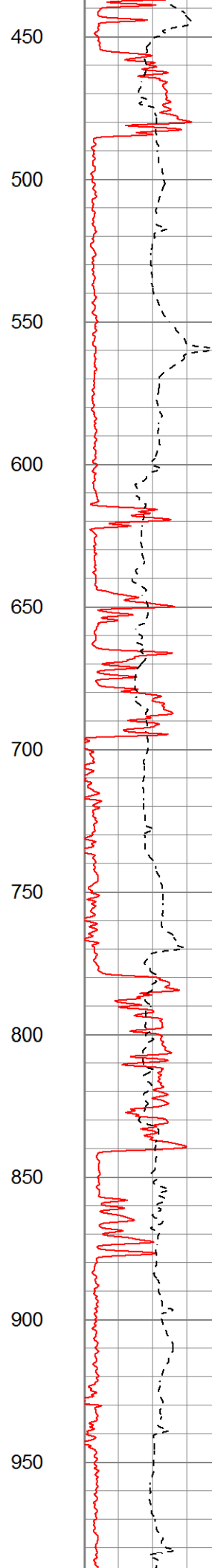
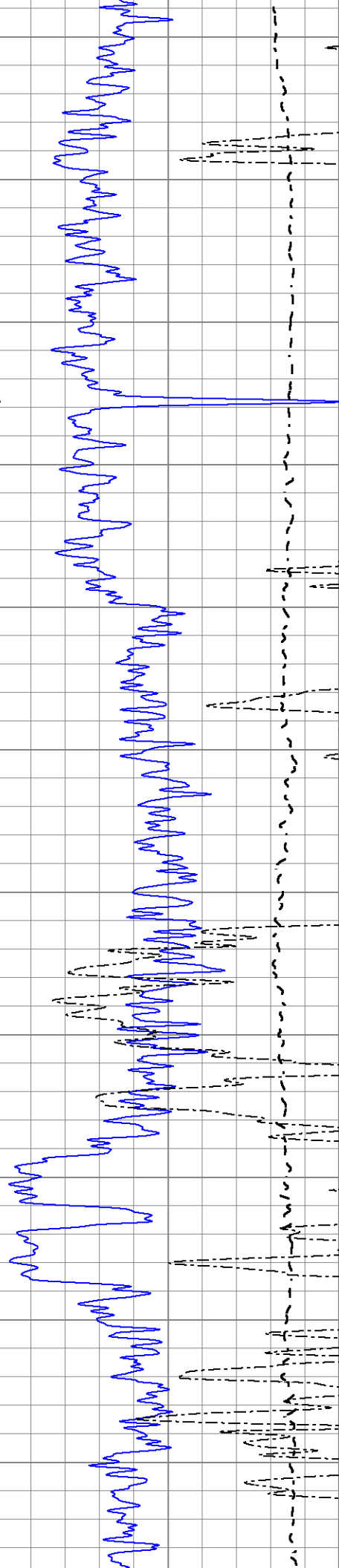


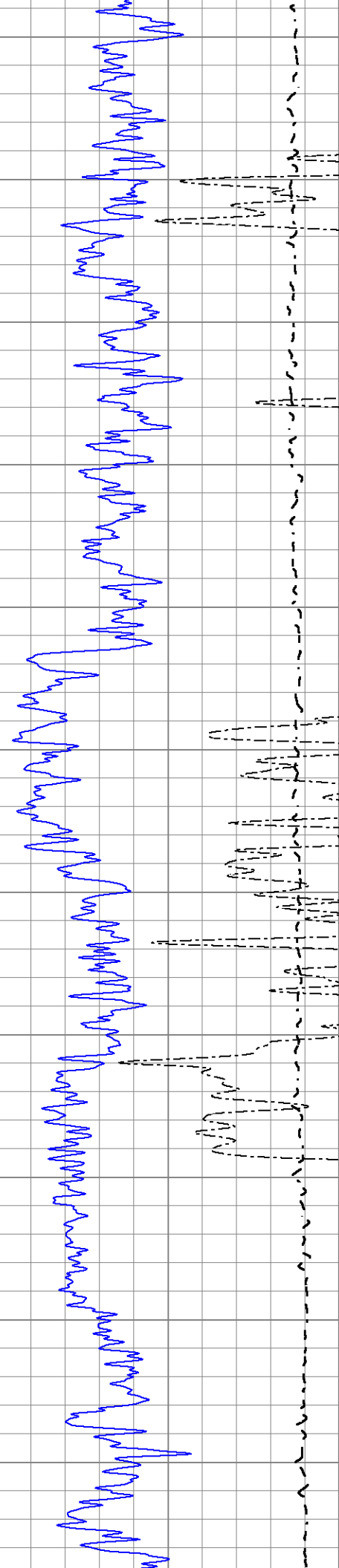
MAIN SECTION

Database File	7895pe.db
Dataset Pathname	pass3.2M
Presentation Format	_dil2
Dataset Creation	Wed Jun 14 05:45:23 2023
Charted by	Depth in Feet scaled 1:600

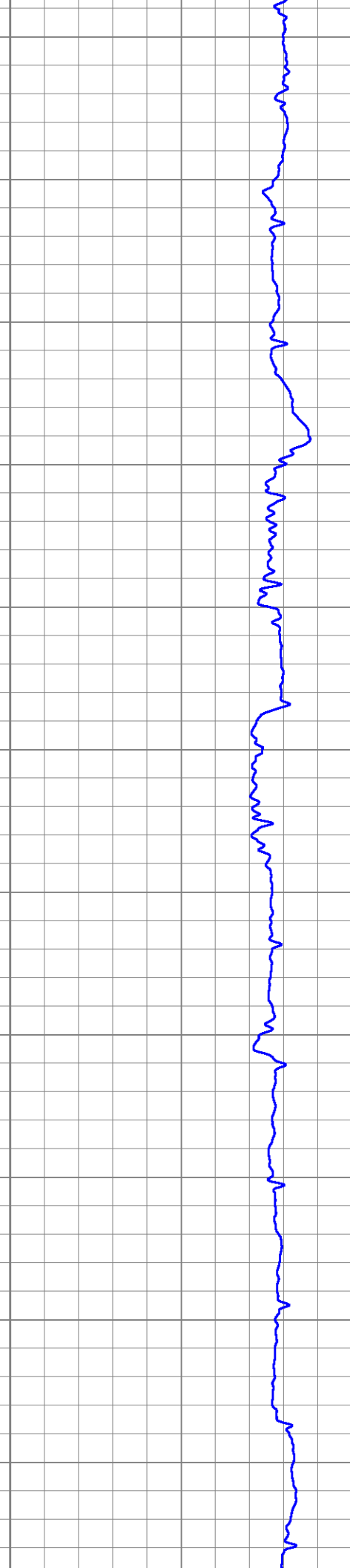
0	Gamma Ray (GAPI)	150	1000	CILD (mmho/m)	0
-100	SP (mV)	100	0	RLL3 (Ohm-m)	50
0	RWA (Ohm-m)	1	0	RILD (Ohm-m)	50
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500

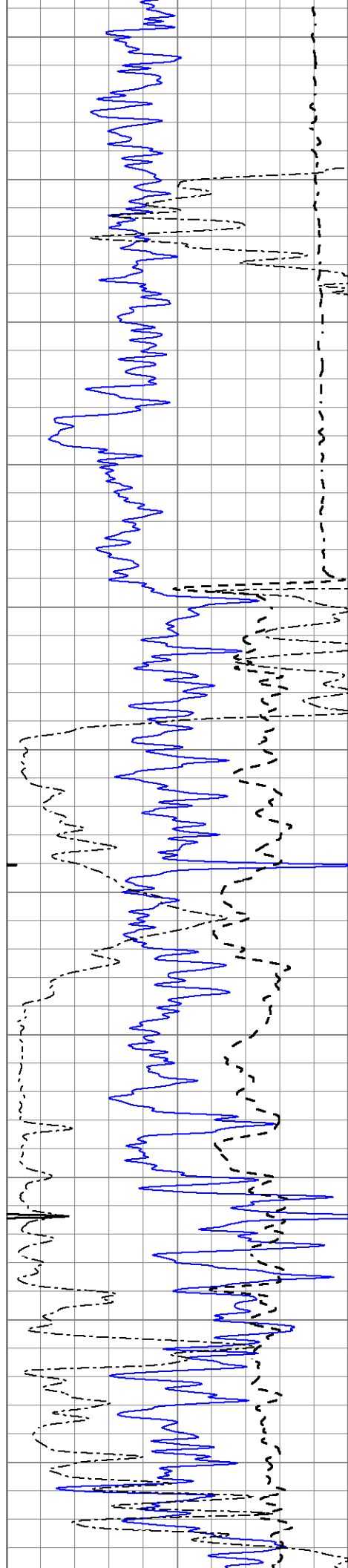






1000
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1100
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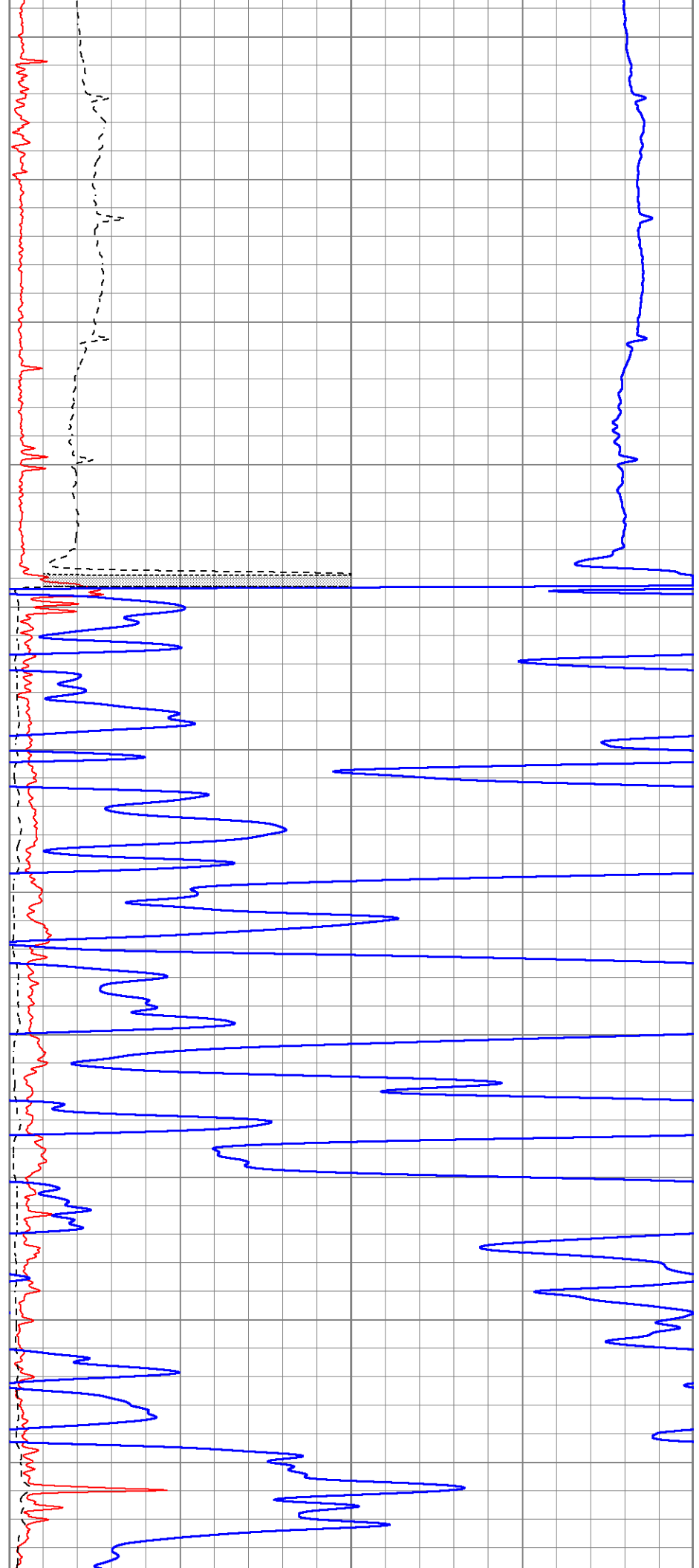
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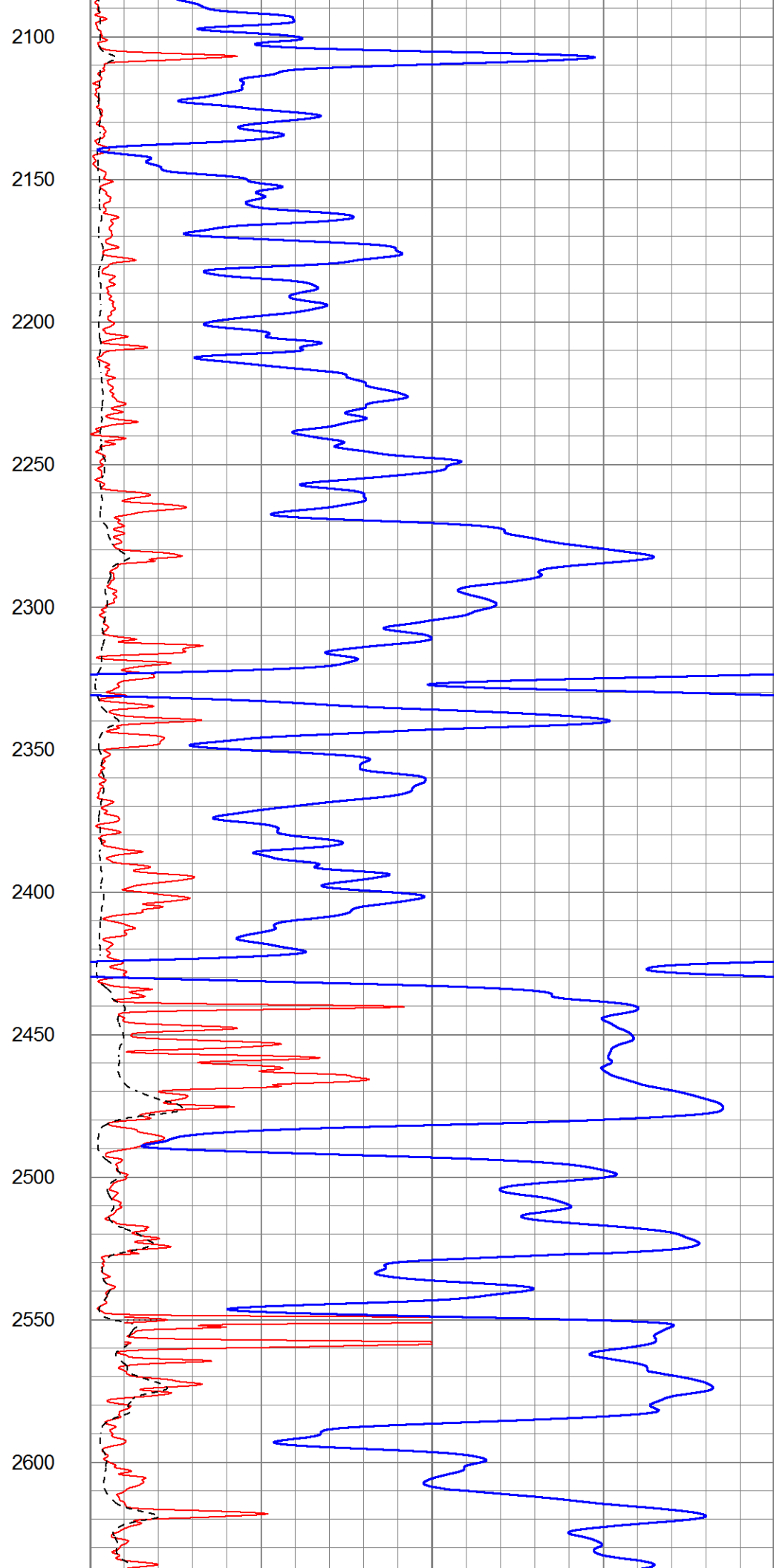
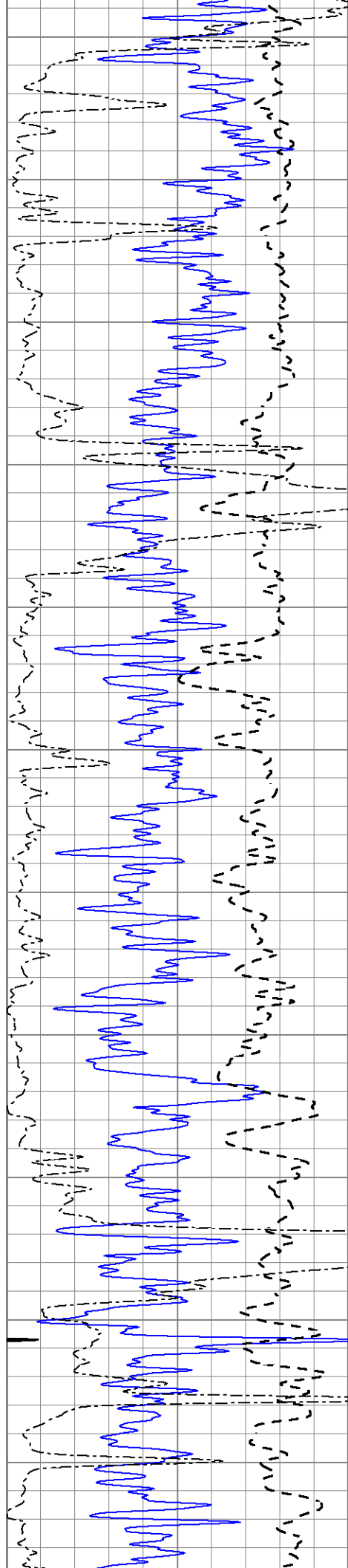
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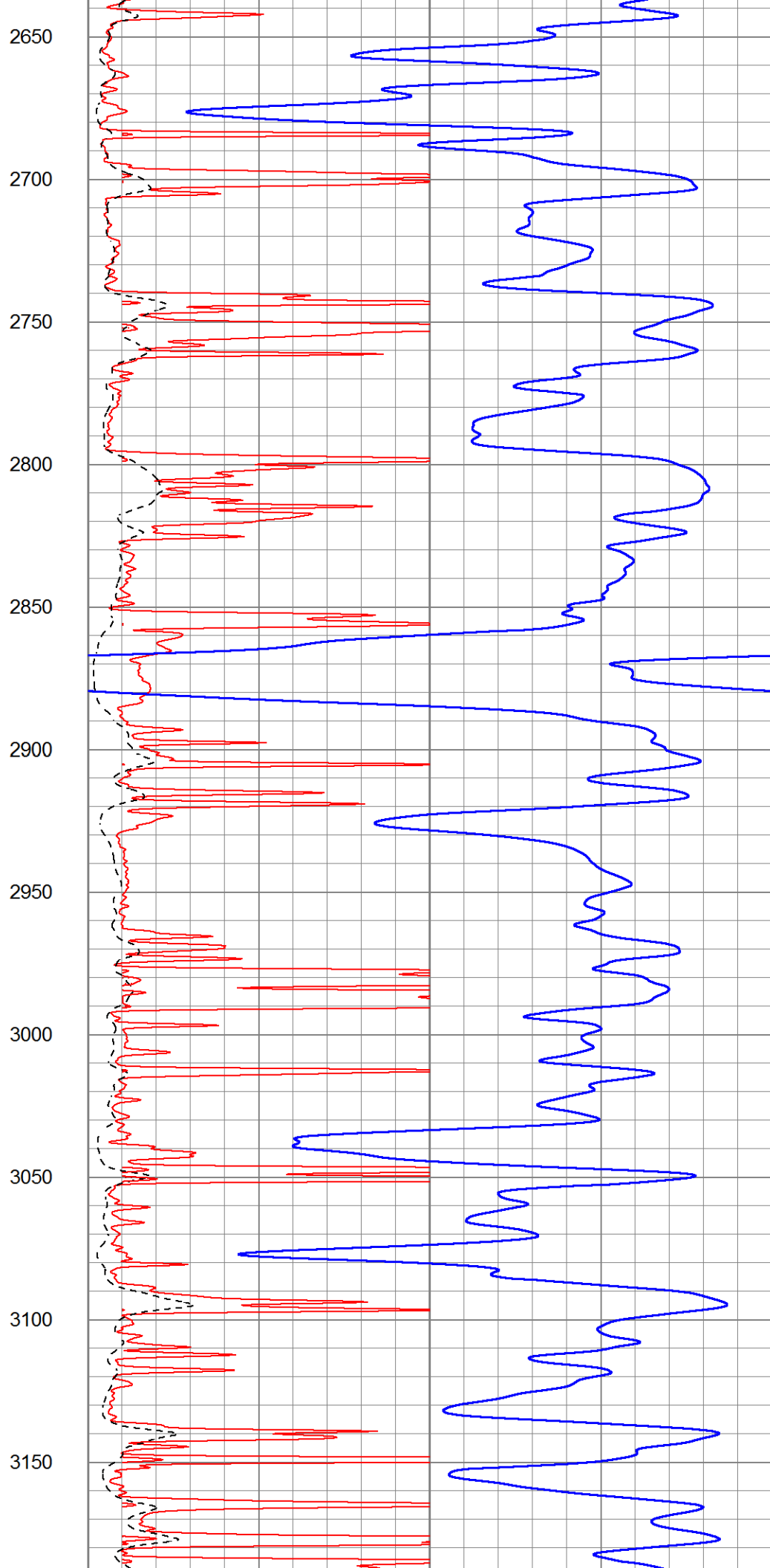
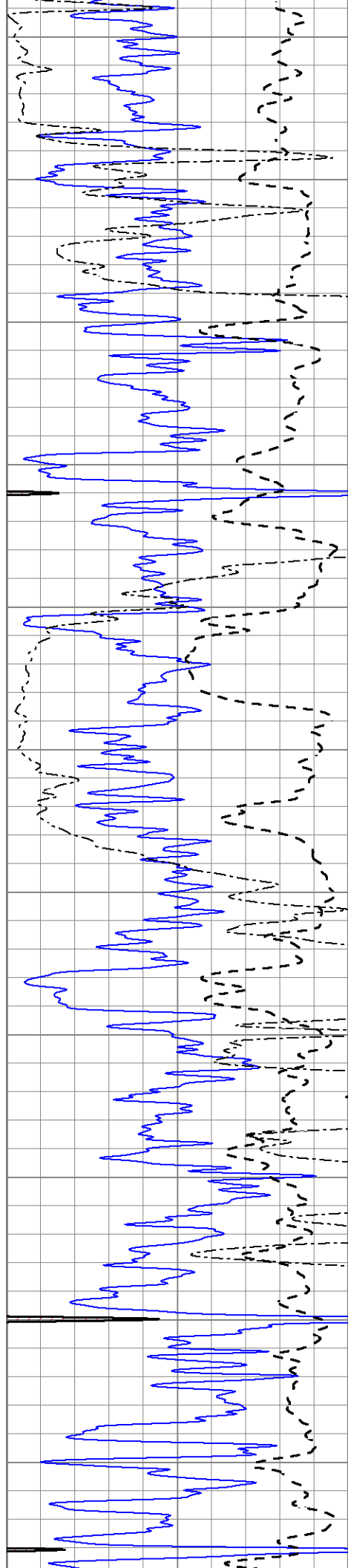
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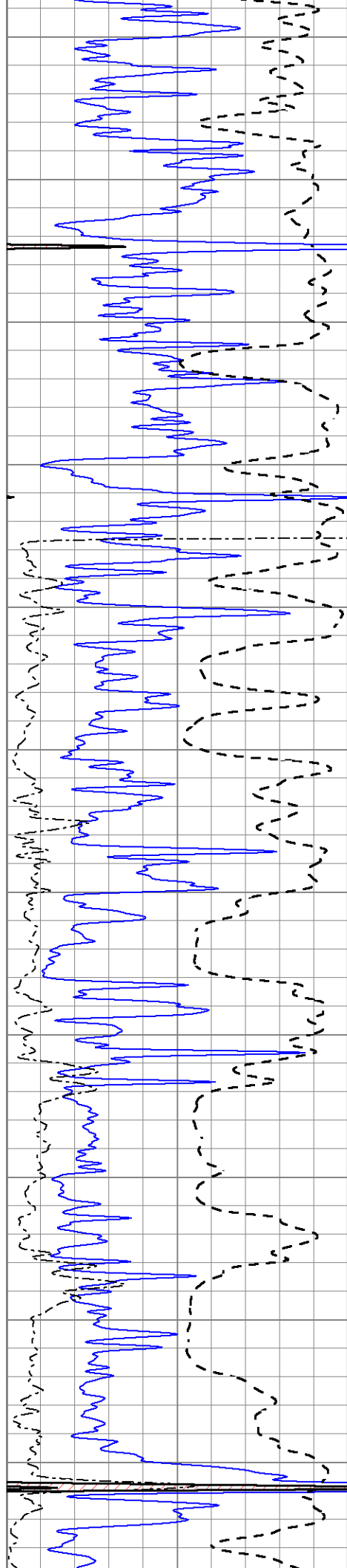
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3250

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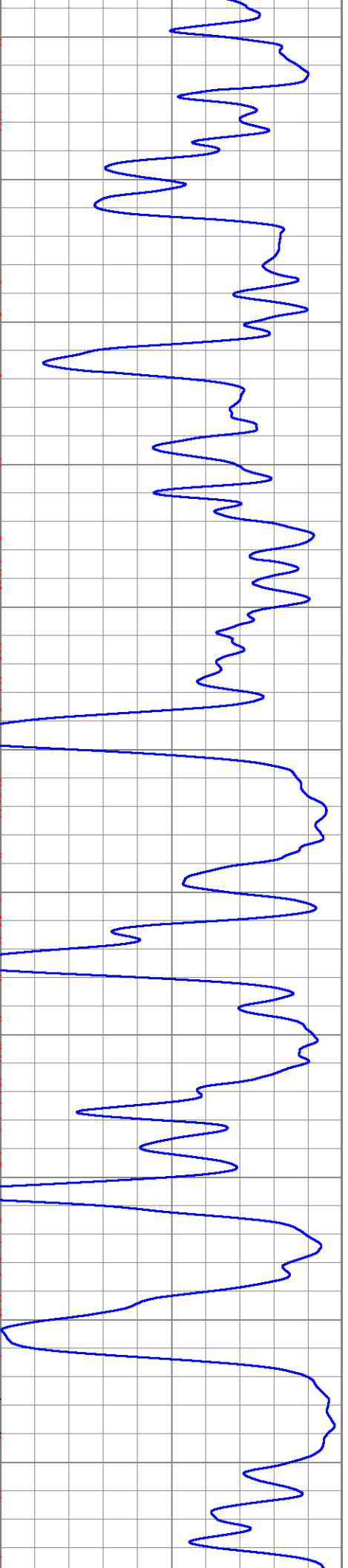
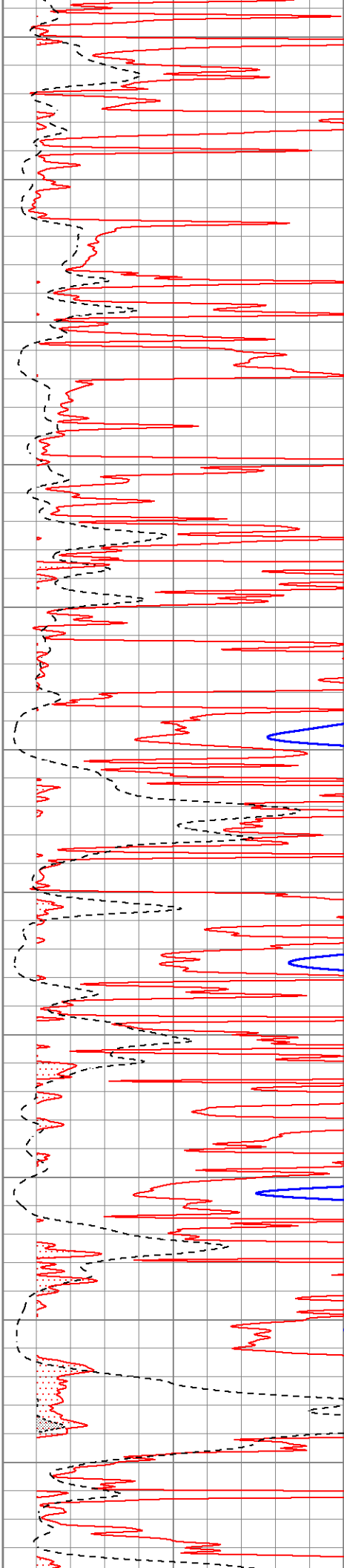
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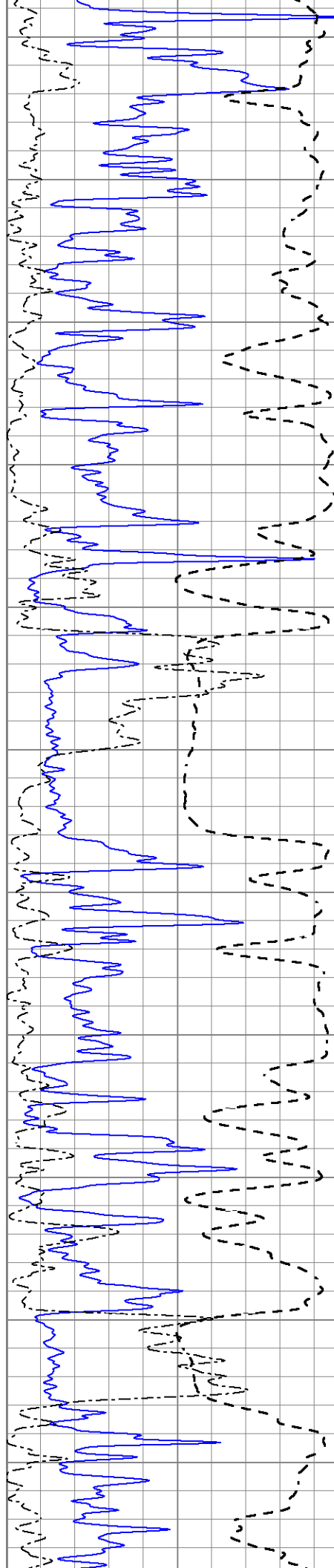
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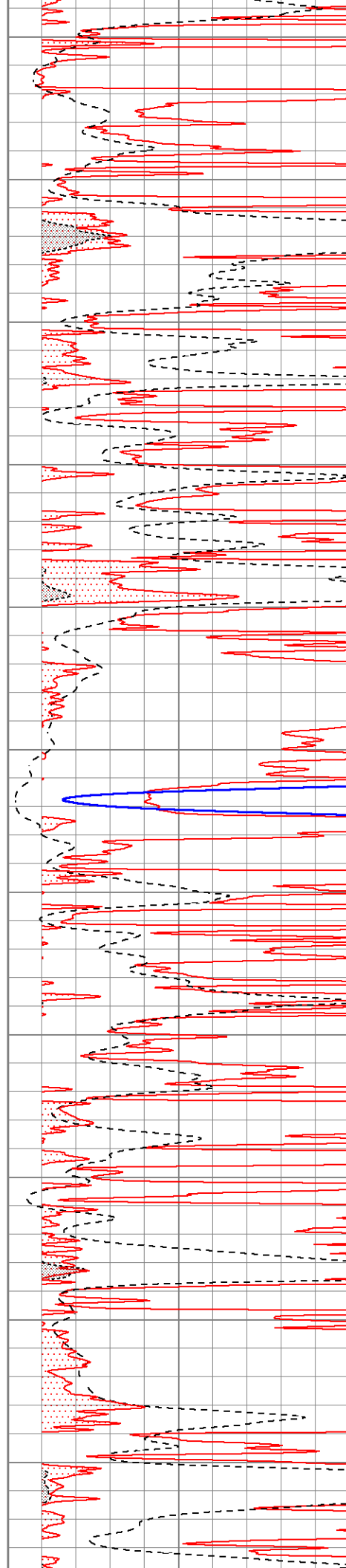
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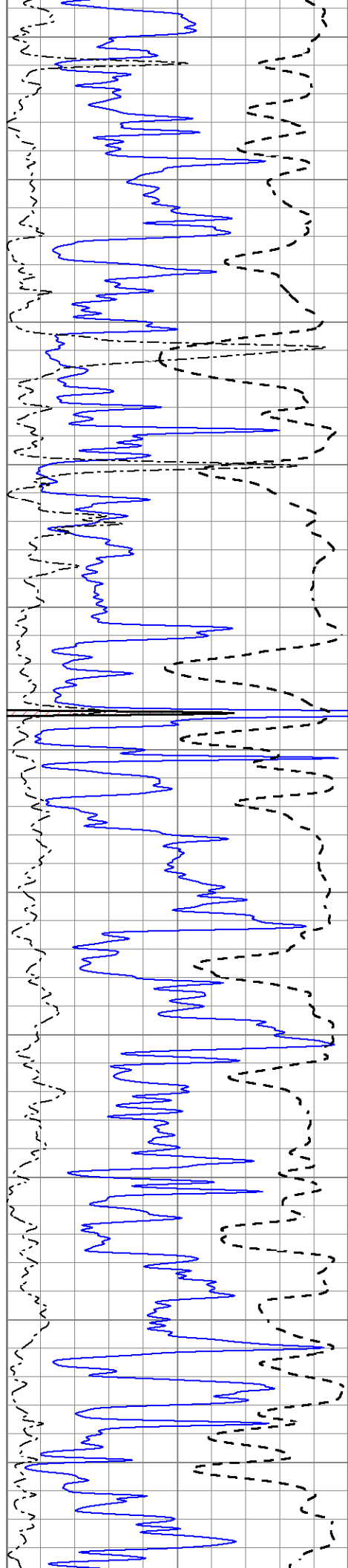
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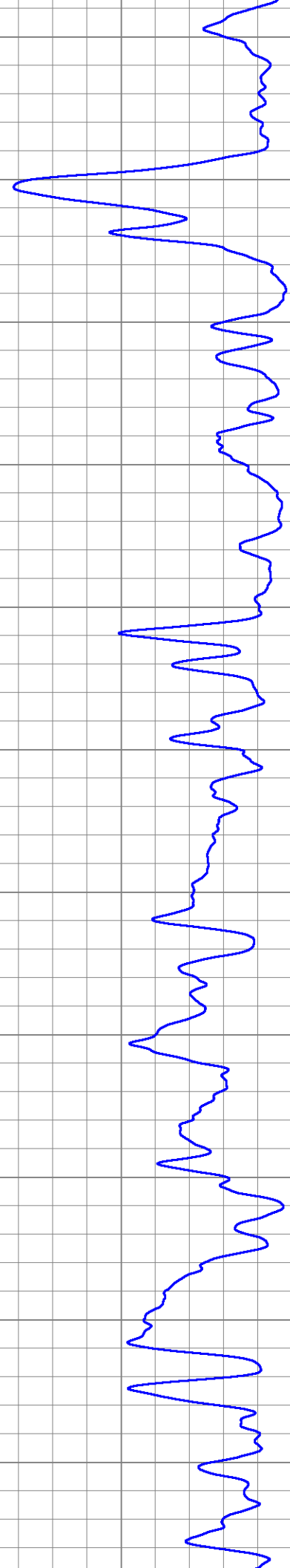
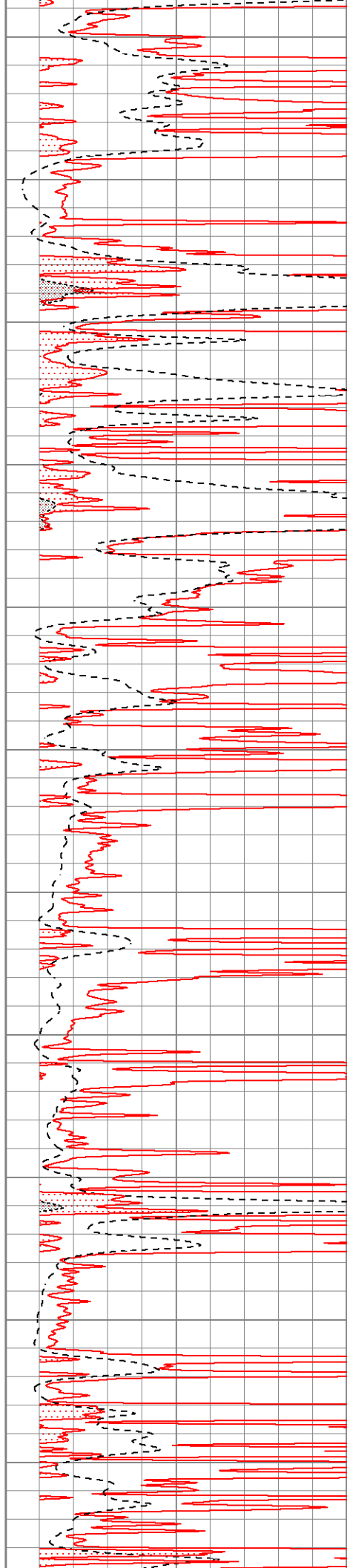
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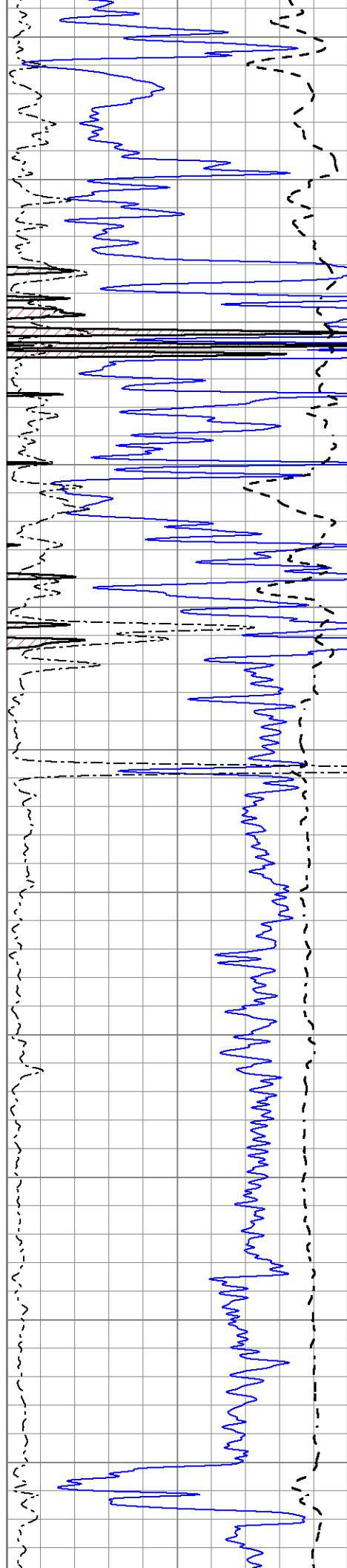
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5100

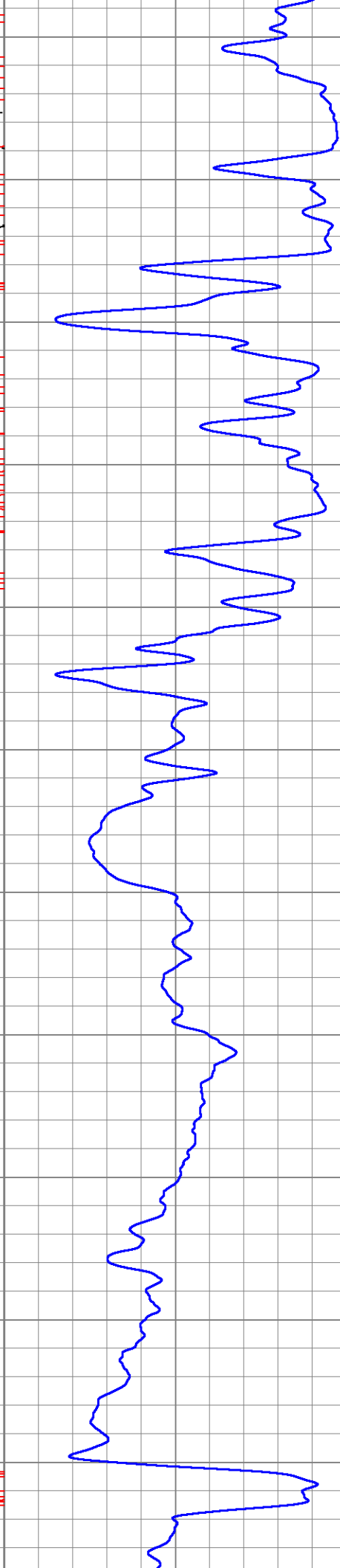
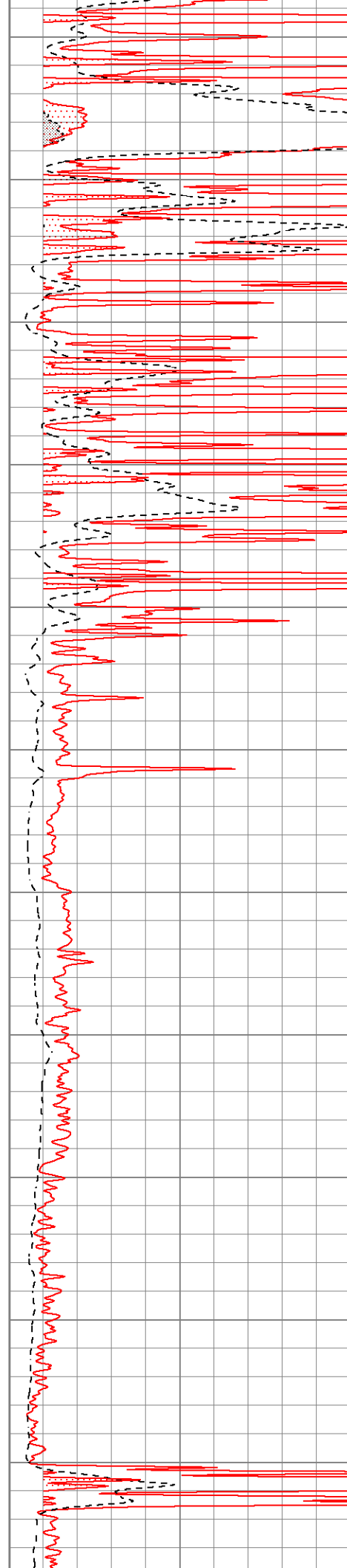
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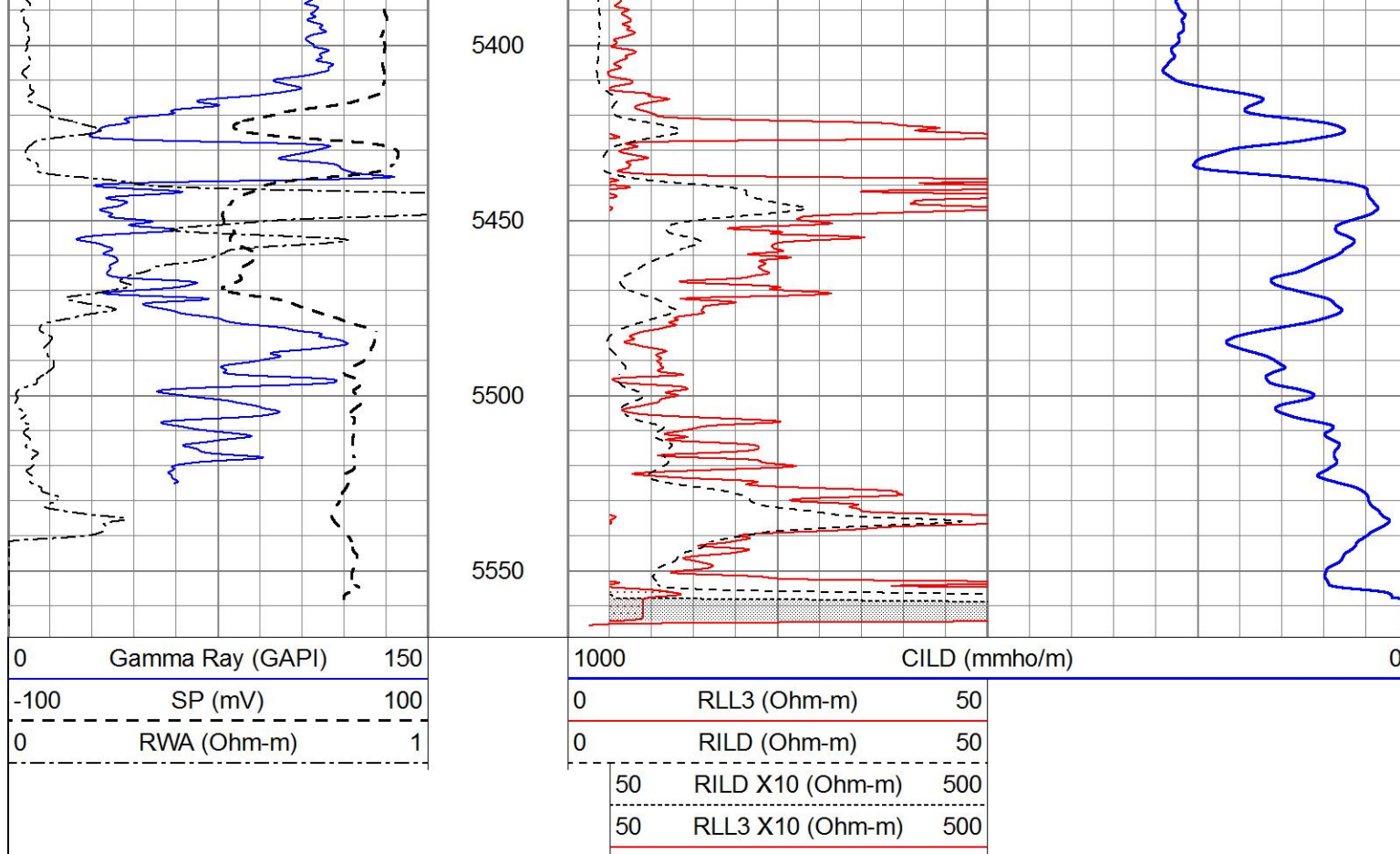
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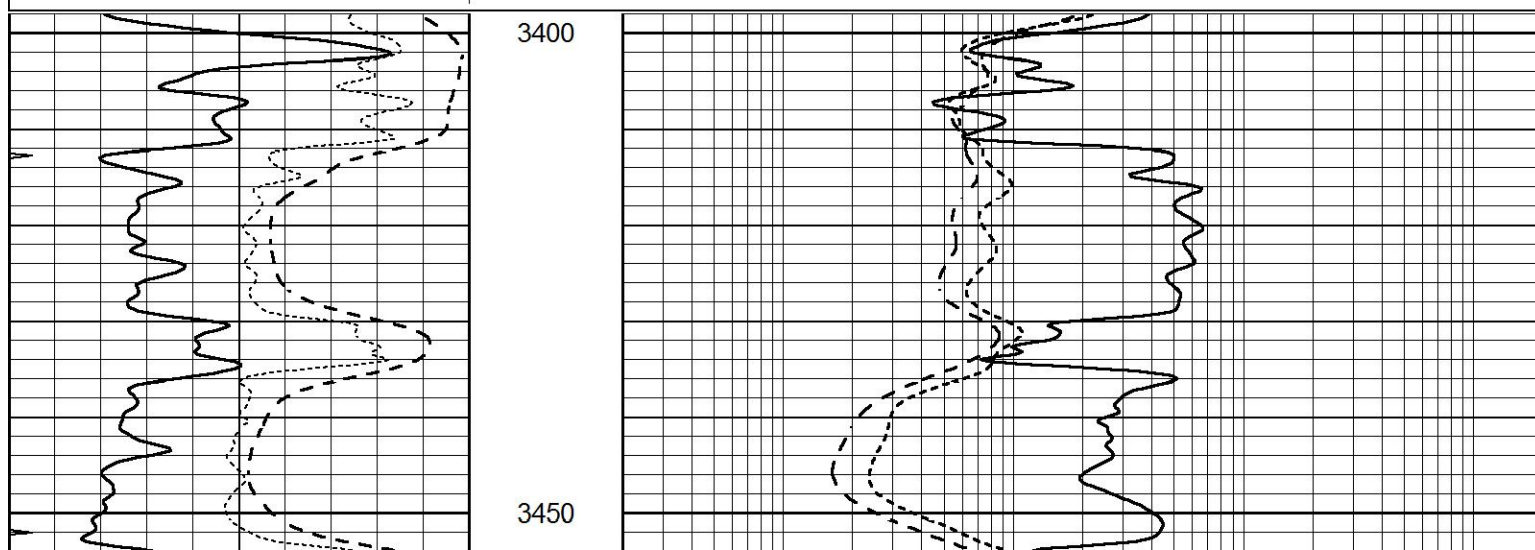


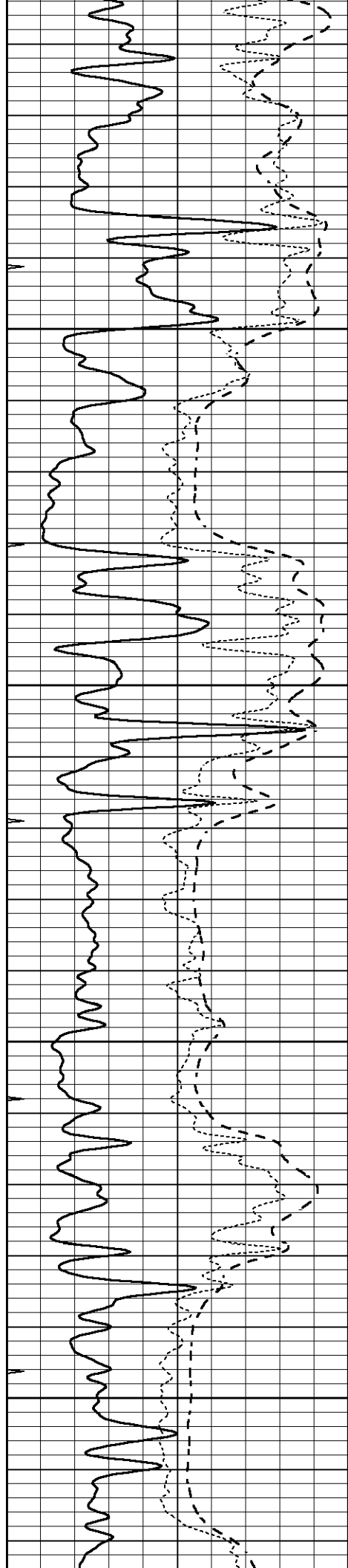


MAIN SECTION

Database File 7895pe.db
 Dataset Pathname pass3.2M
 Presentation Format _dil
 Dataset Creation Wed Jun 14 05:45:23 2023
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			



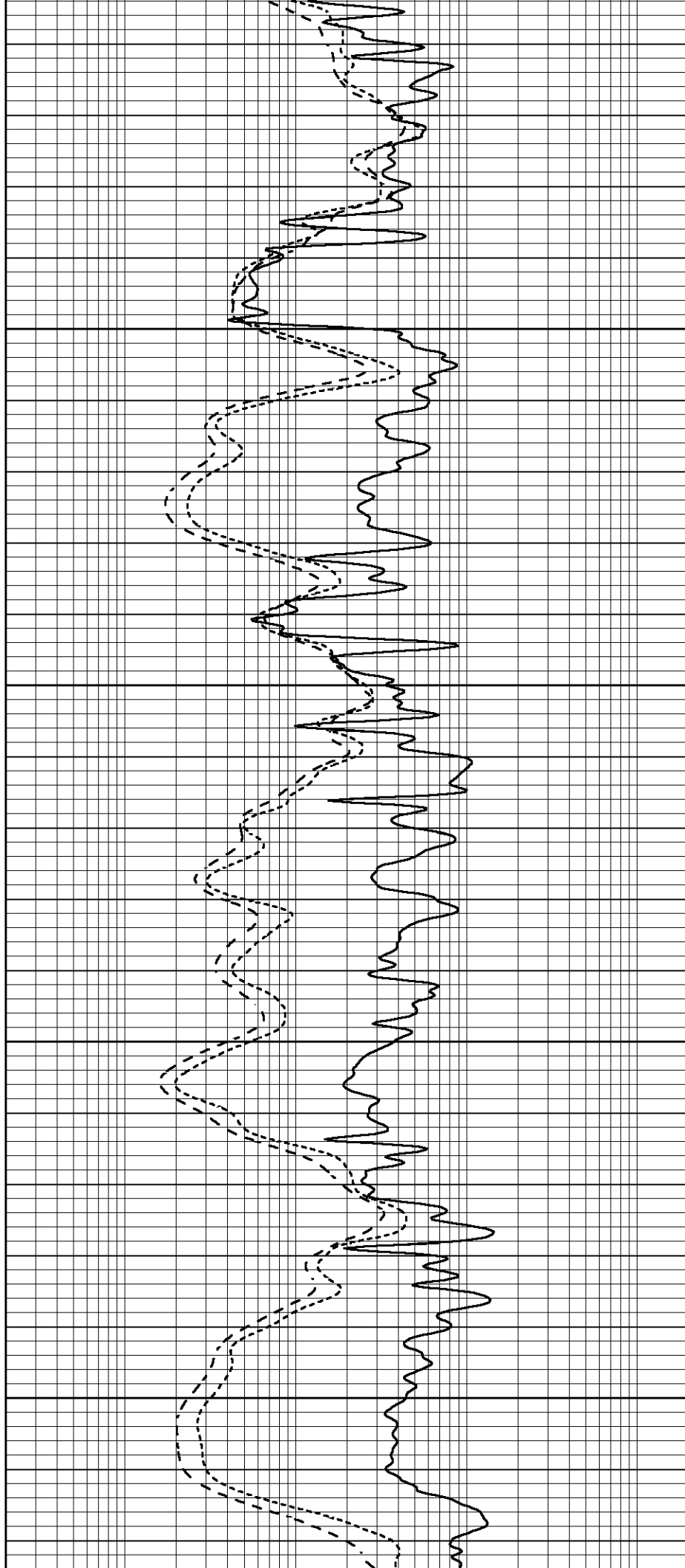


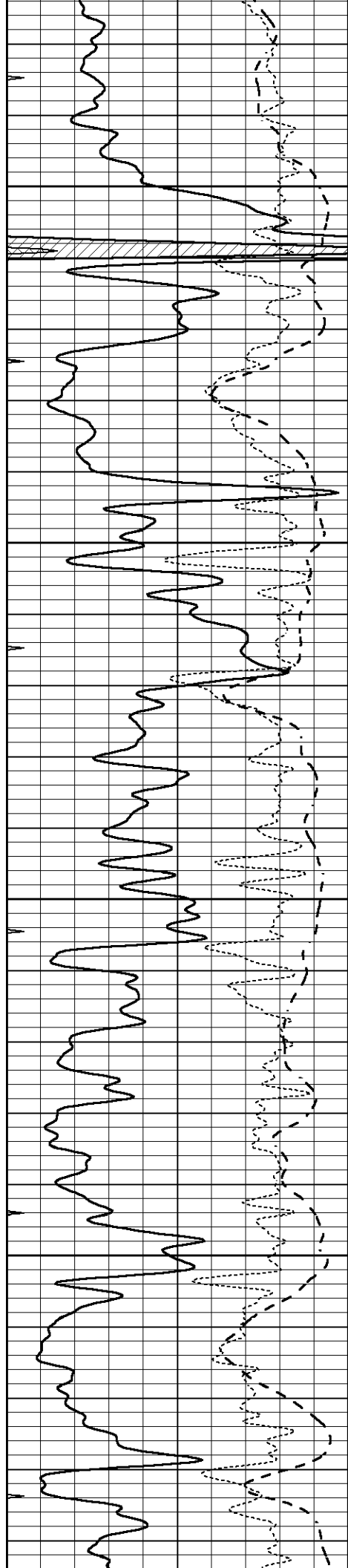
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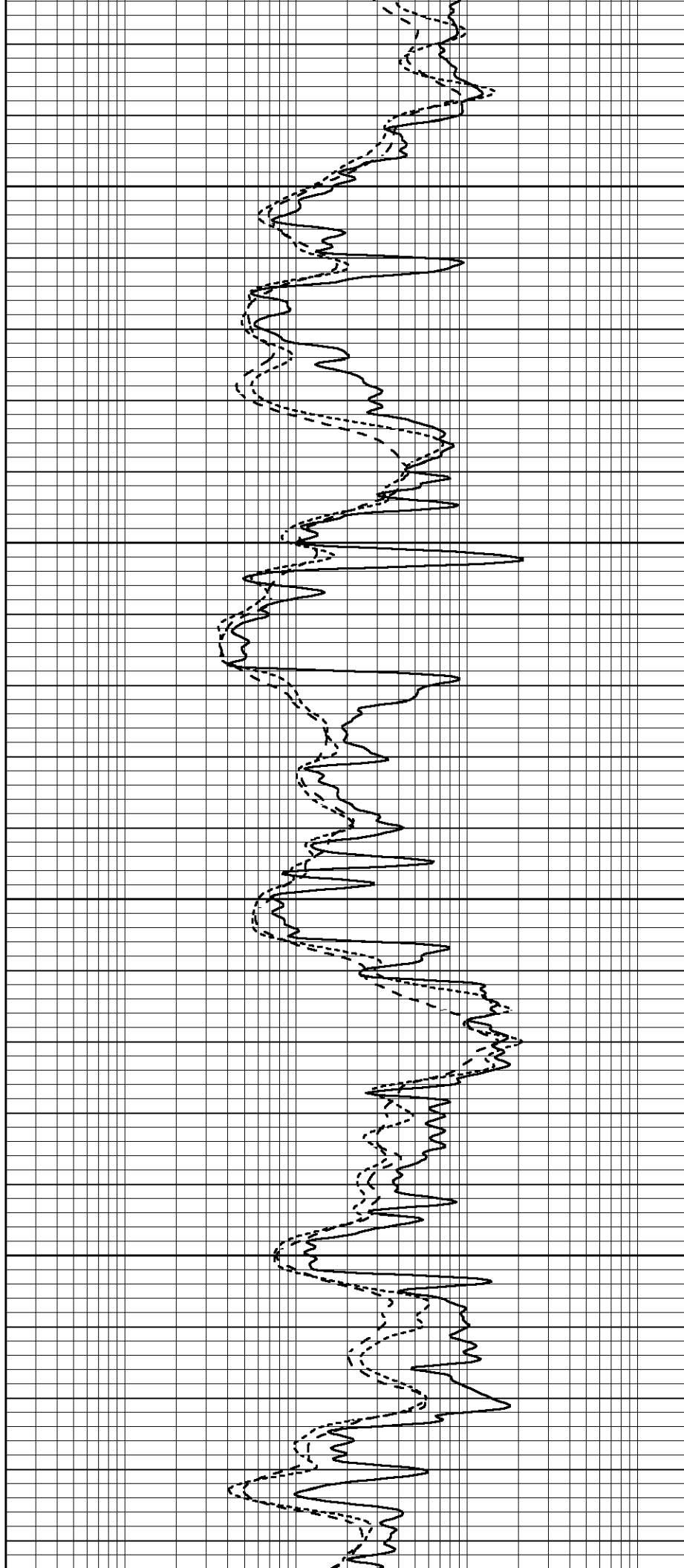


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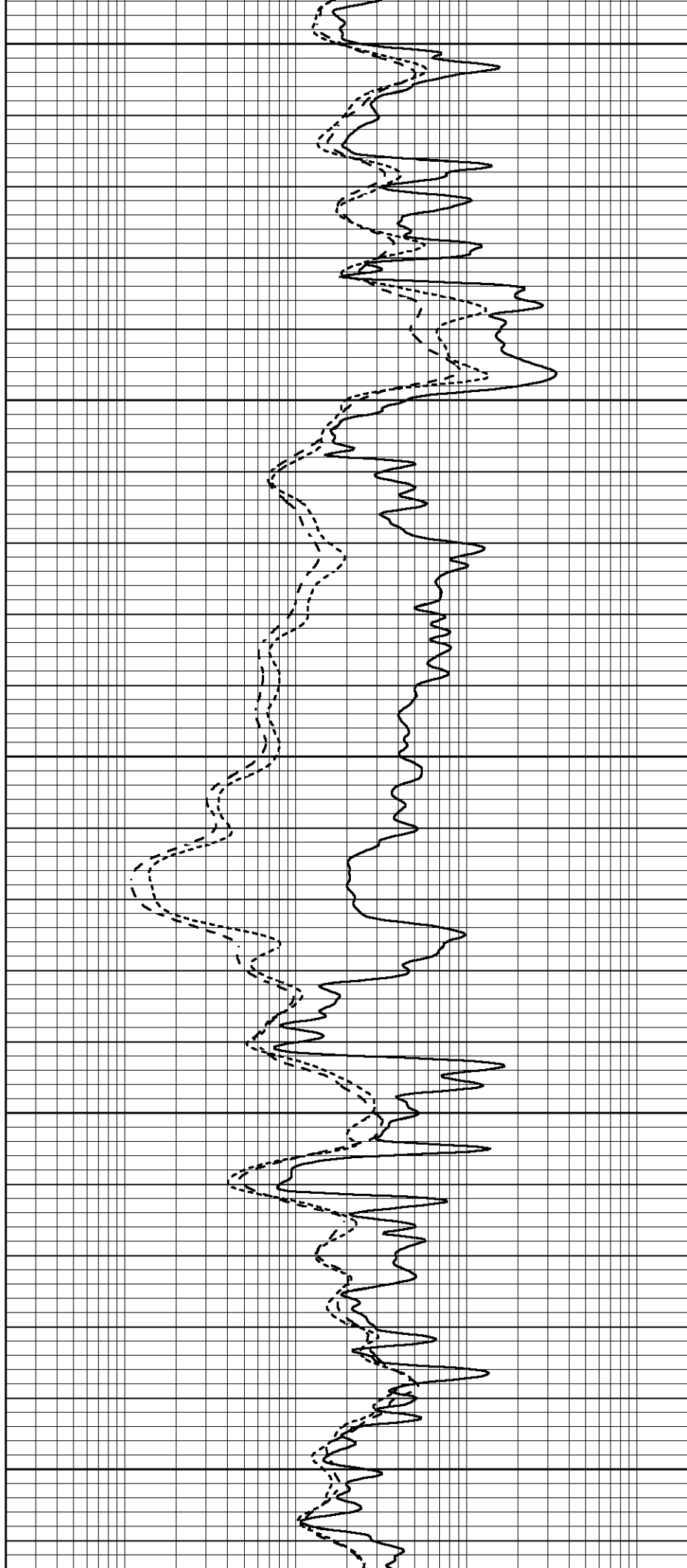
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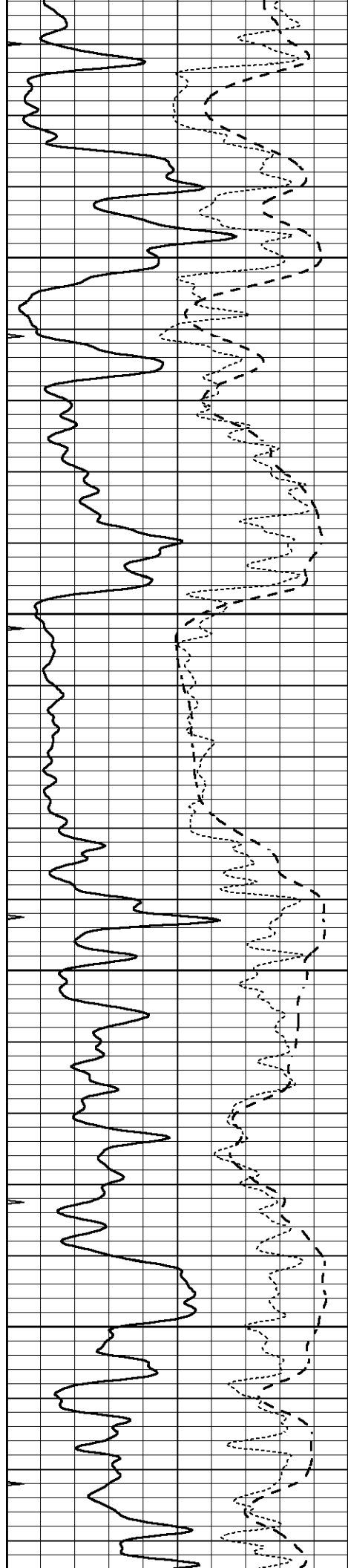
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4000

4050

4100



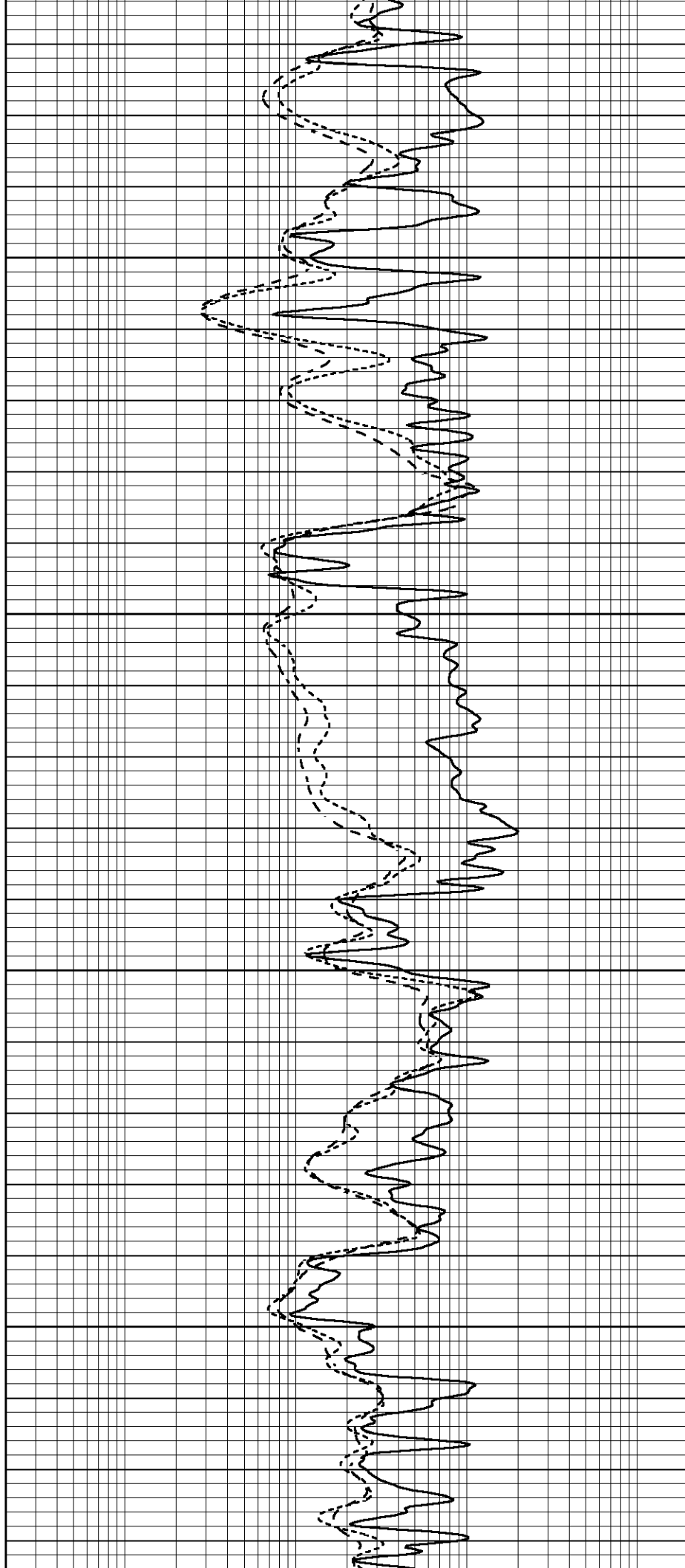


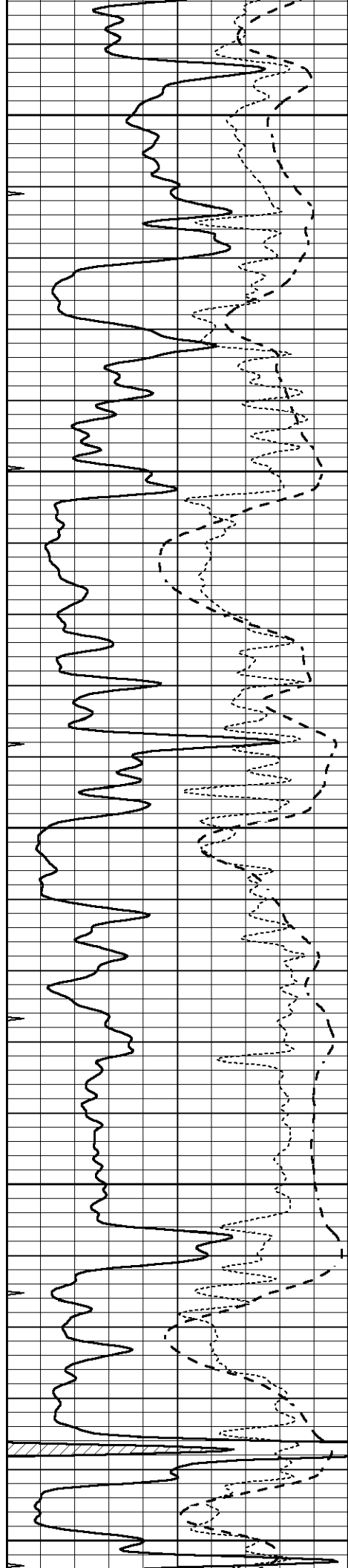
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4250

4300





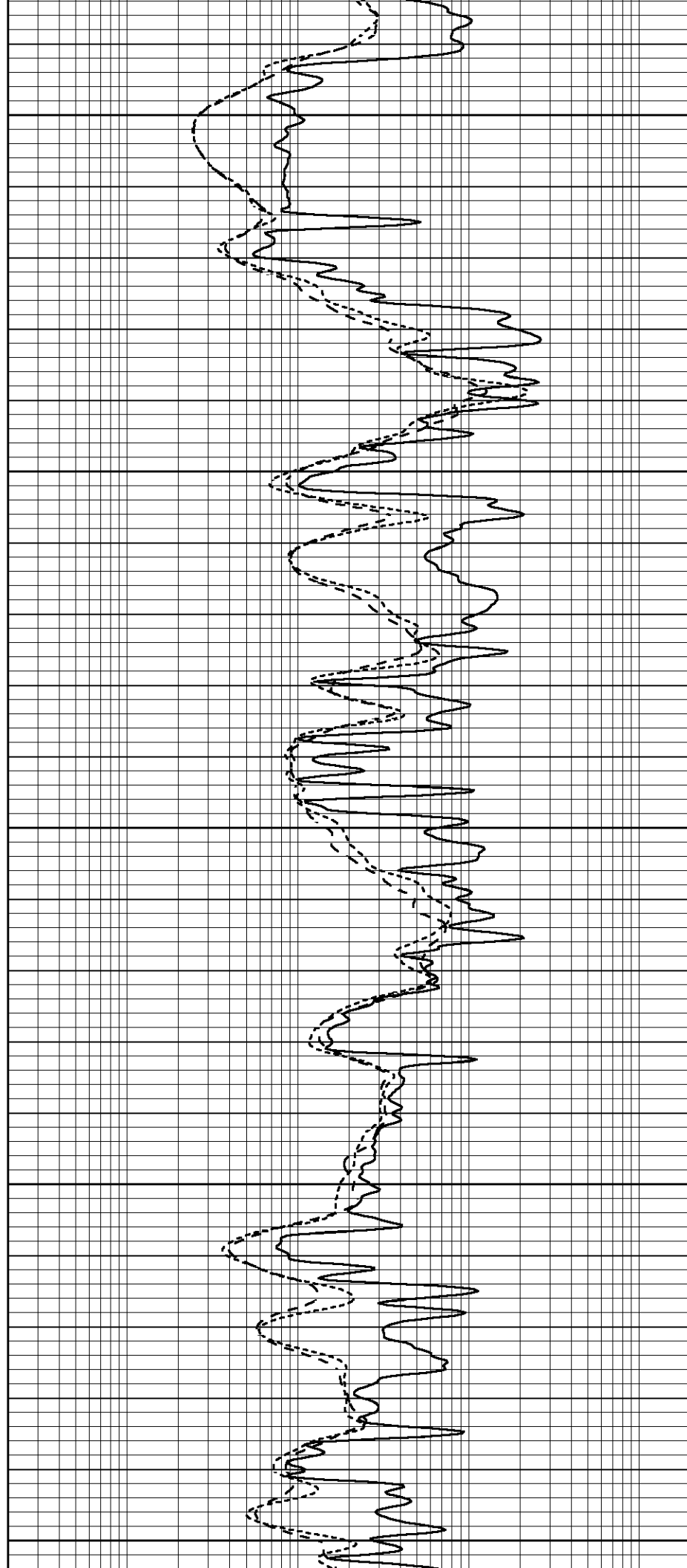
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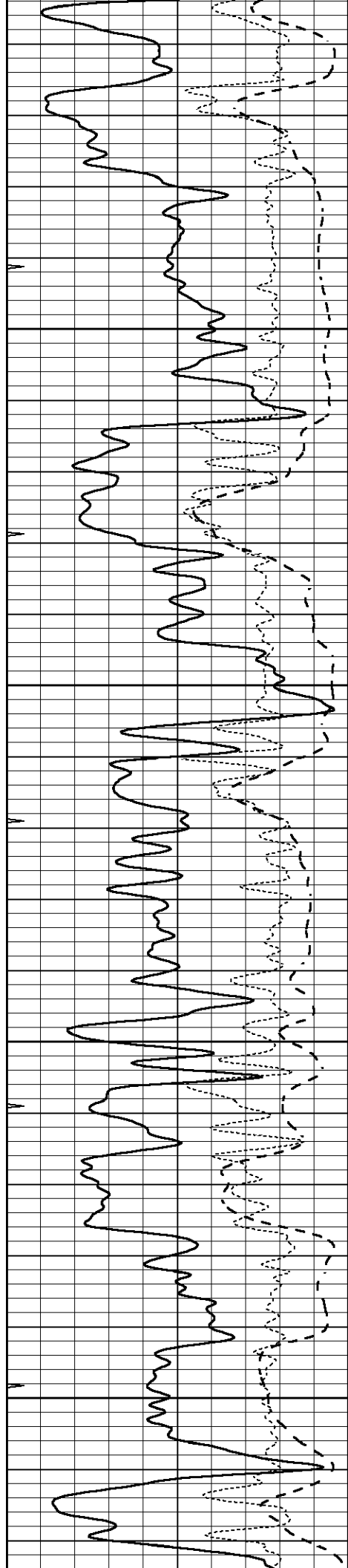
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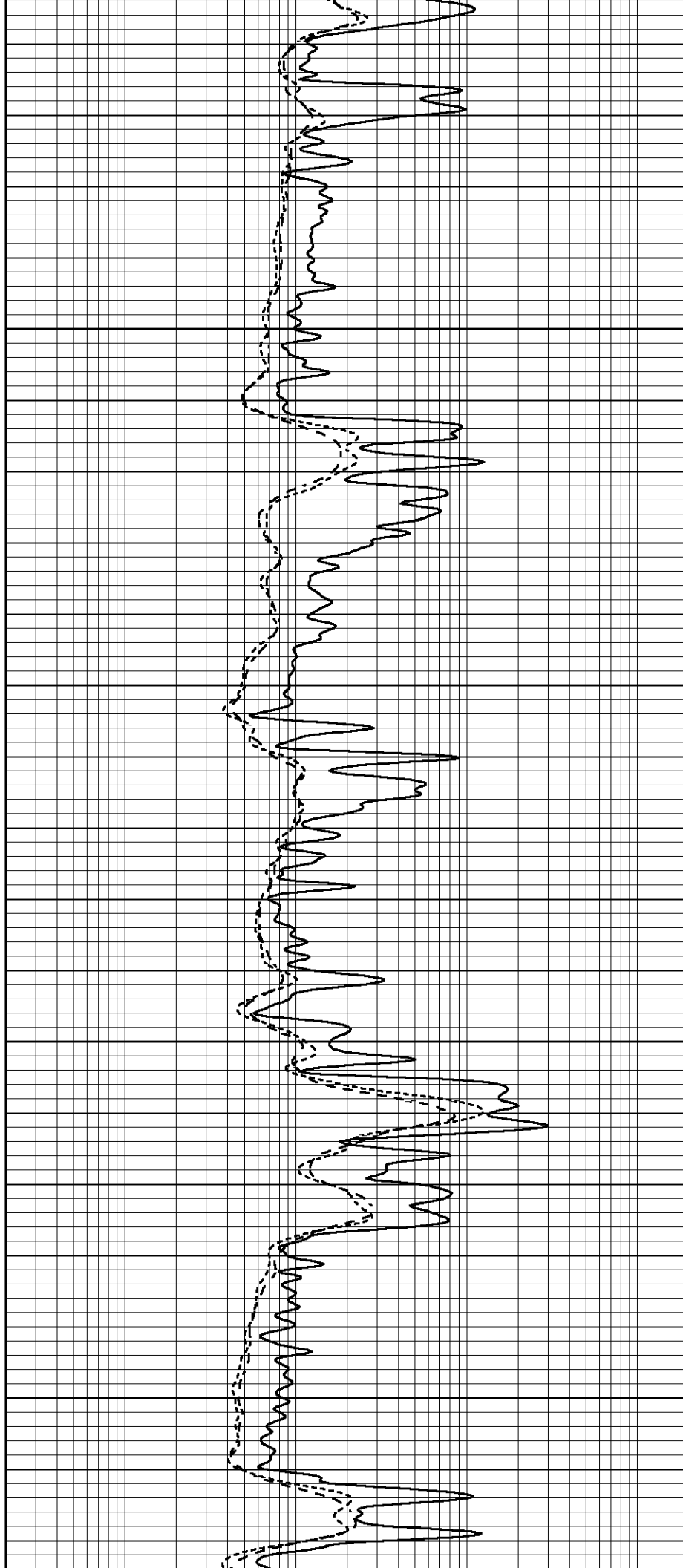


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4750



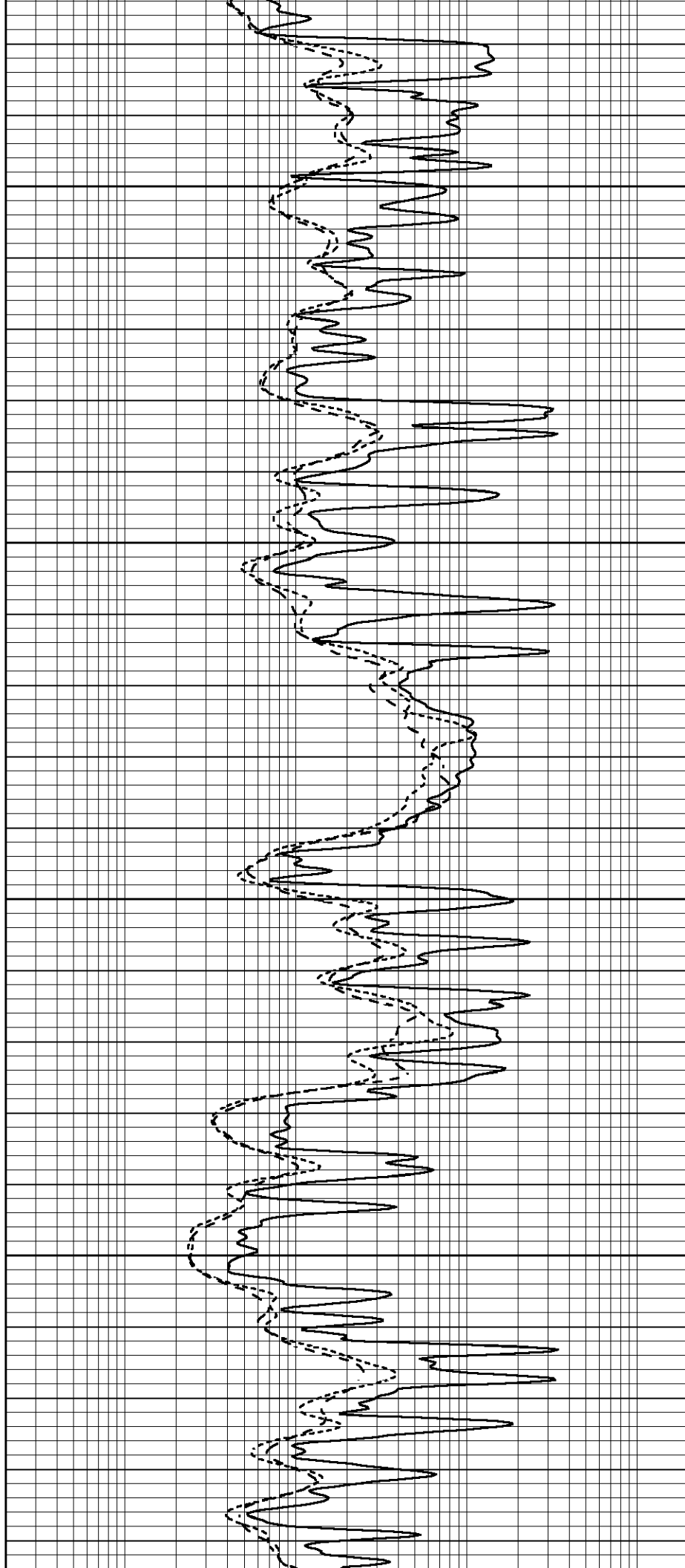


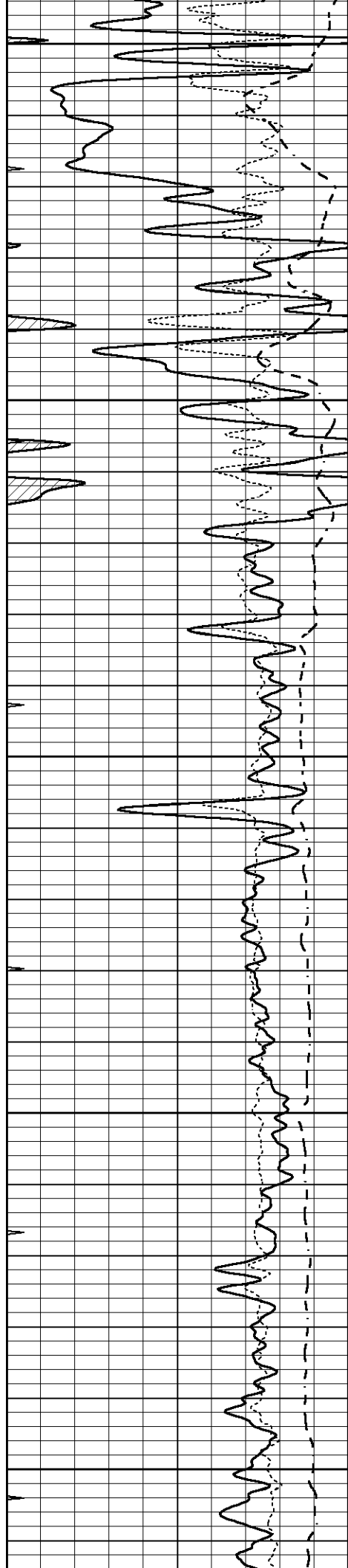
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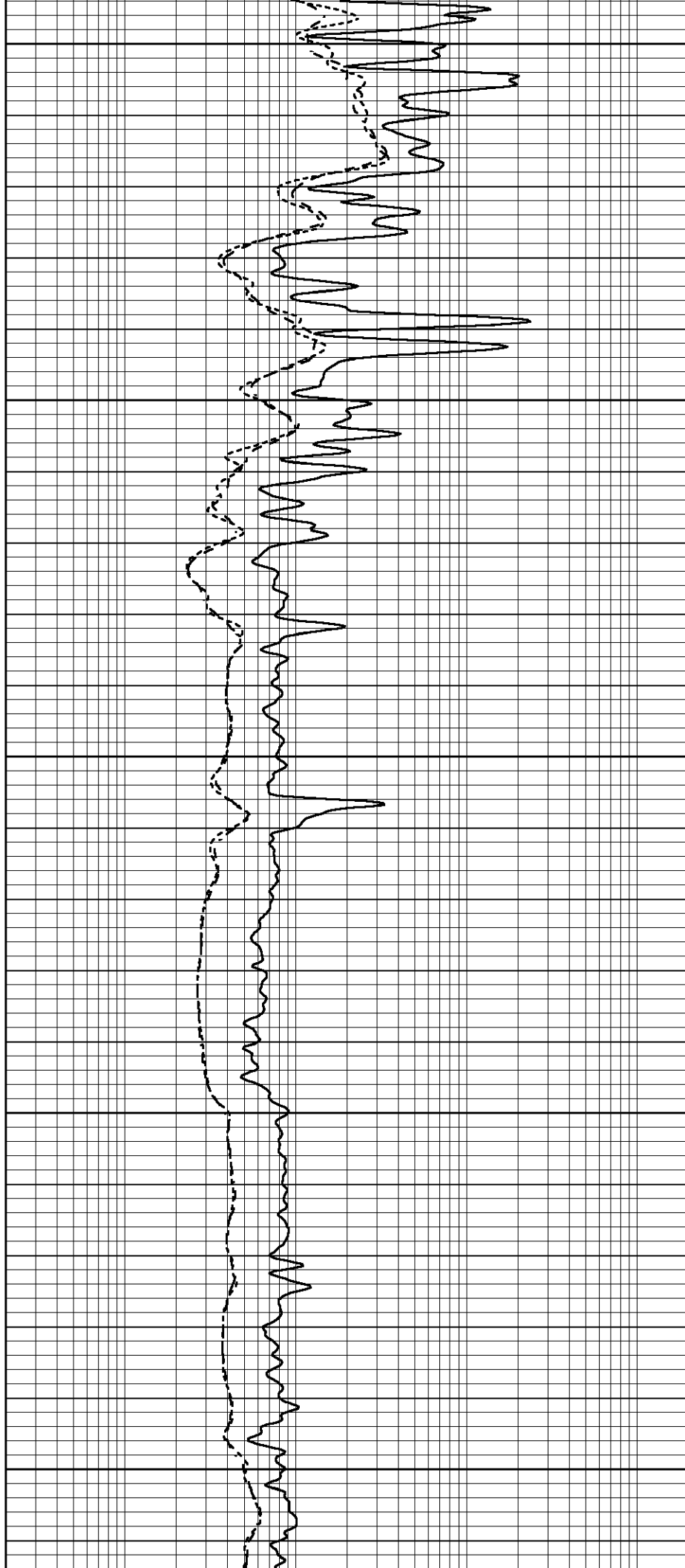
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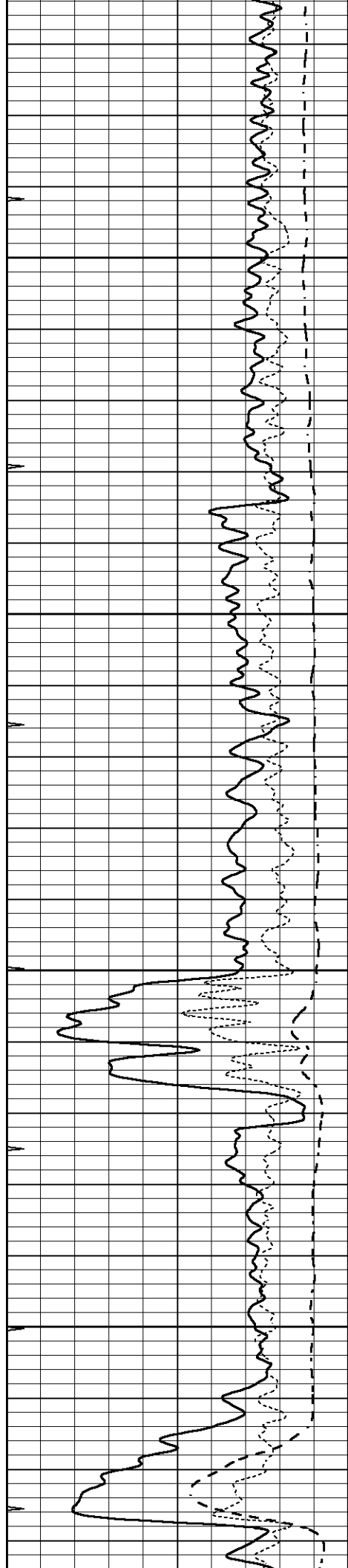
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5150

5200



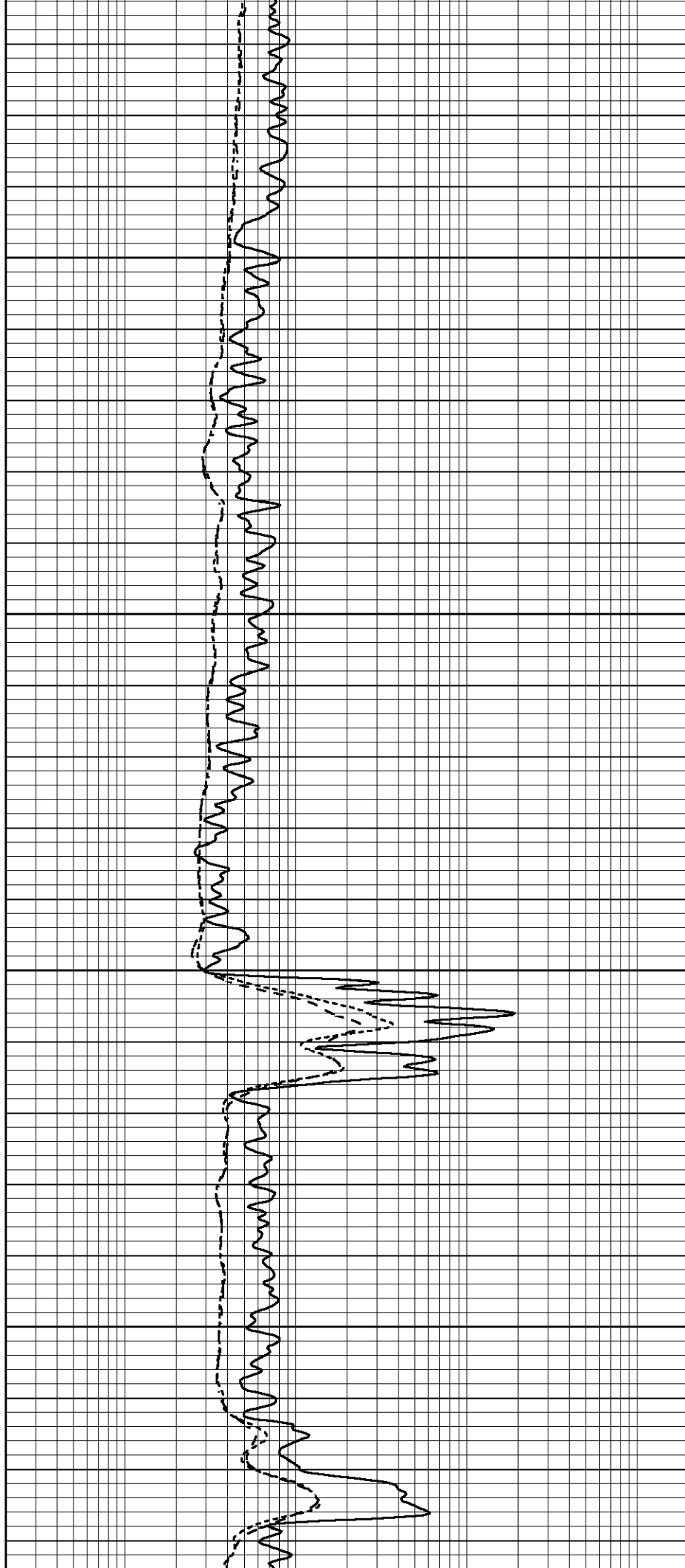


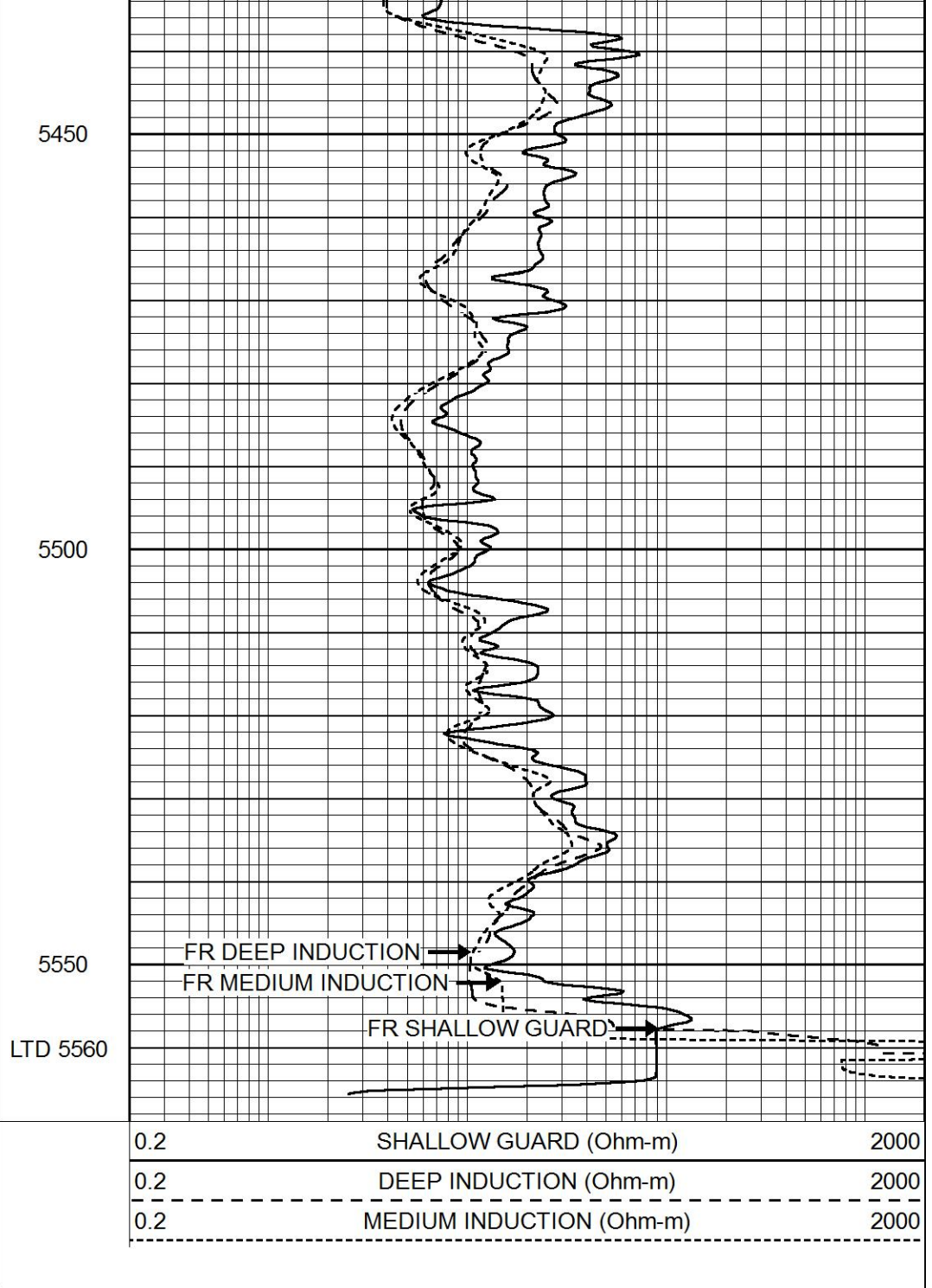
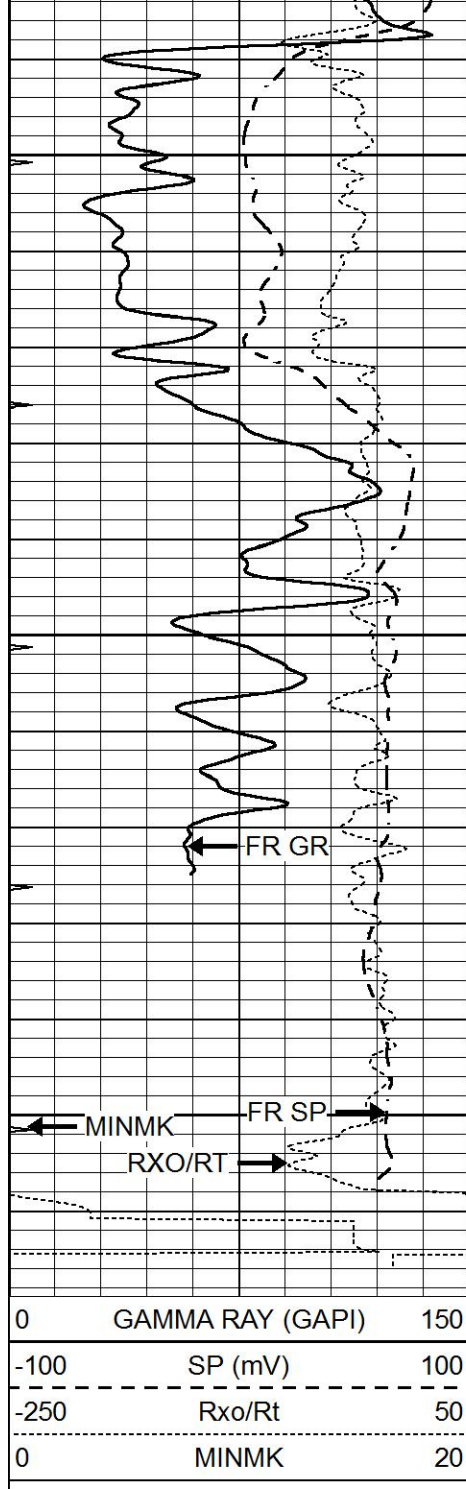
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5400



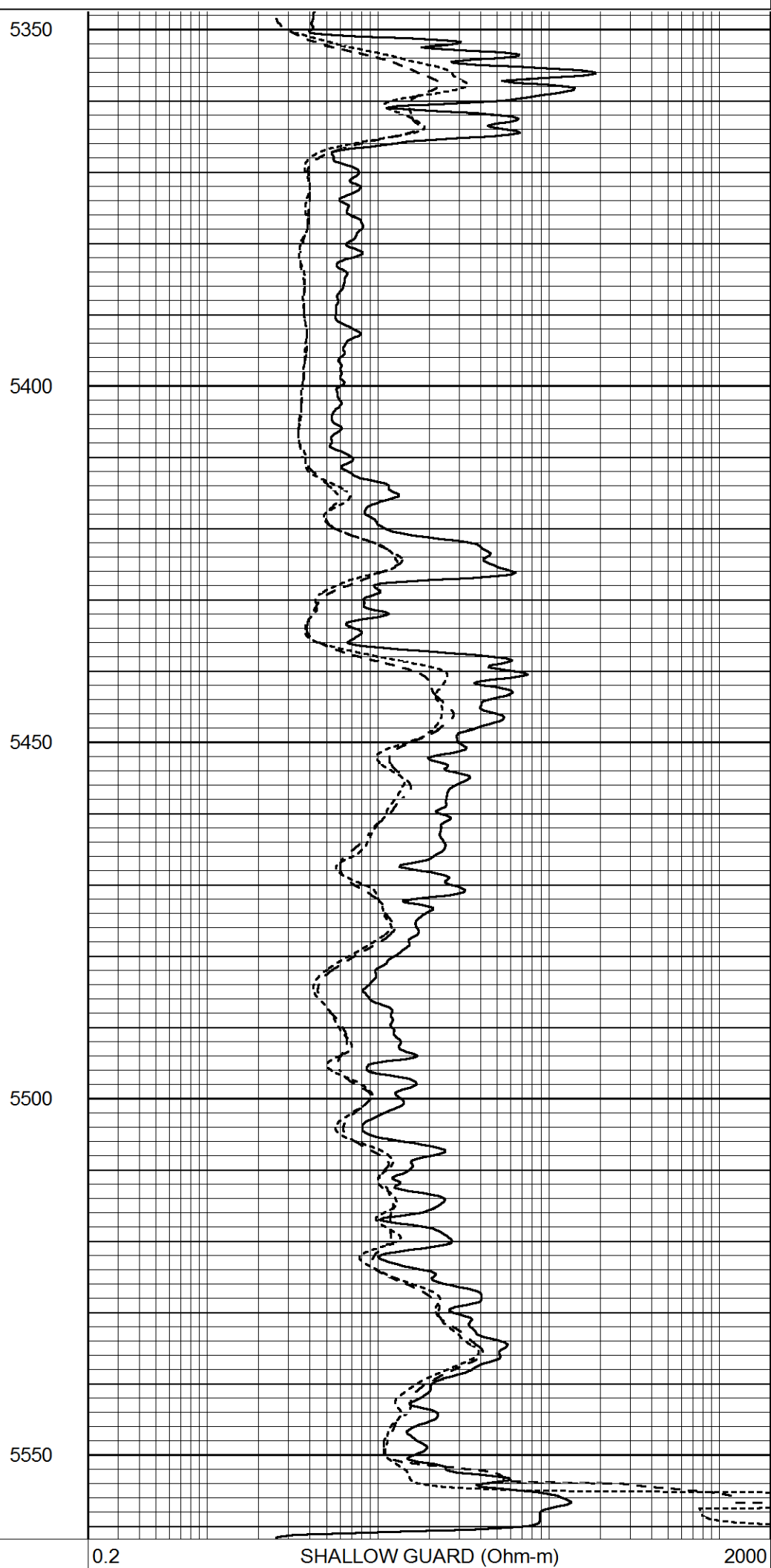
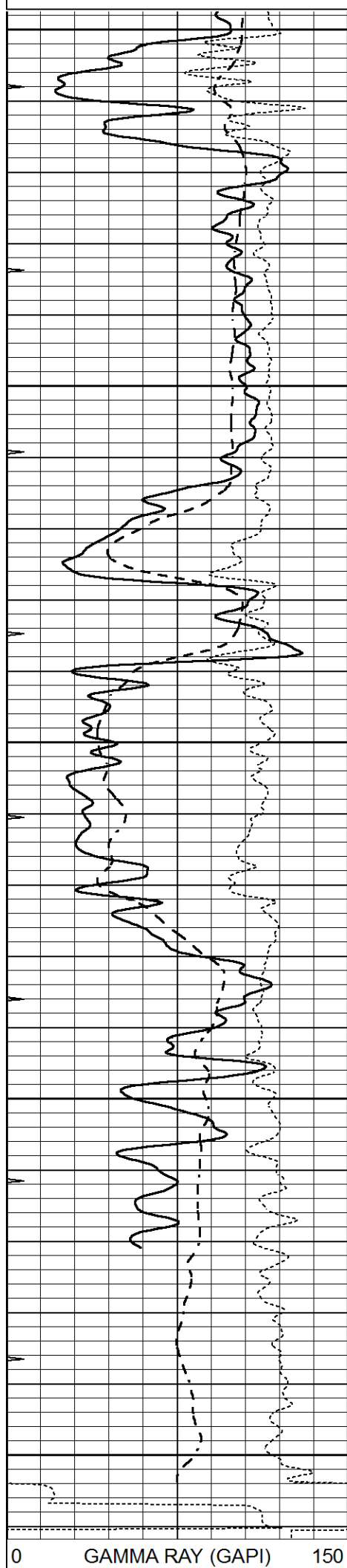


REPEAT SECTION

Database File 7895pe.db
 Dataset Pathname pass2.1R
 Presentation Format _dil
 Dataset Creation Wed Jun 14 05:52:02 2023
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

Calibration Report									
Database File	7895pe.db								
Dataset Pathname	pass3.2M								
Dataset Creation	Wed Jun 14 05:45:23 2023								
Dual Induction Calibration Report									
Serial-Model:				DIL7-GEAR					
Surface Cal Performed:				Sun Apr 30 05:42:20 2023					
Downhole Cal Performed:				Tue Apr 17 15:38:44 2007					
After Survey Verification Performed:				Tue Apr 17 15:38:40 2007					
Surface Calibration									
Readings				References			Results		
Loop:	Air	Loop		Air	Loop		m	b	
Deep	0.019	0.660	V	0.000	400.000	mmho/m	660.000	16.000	
Medium	-0.006	0.655	V	0.000	462.500	mmho/m	720.000	-20.000	
Internal:	Zero	Cal		Zero	Cal		m	b	
Deep	0.010	0.665	V	0.000	400.000	mmho/m	610.018	-5.925	
Medium	0.009	0.655	V	0.000	400.000	mmho/m	618.983	-5.564	
Downhole Calibration									
Readings				References			Results		
Internal:	Zero	Cal		Zero	Cal		m	b	
Deep	3.372	400.834	mmho/m	0.556	401.206	mmho/m	1.008	-2.843	
Medium	13.557	467.446	mmho/m	9.465	462.114	mmho/m	0.997	-4.055	
Shallow	2.521	0.019	V	500.000	2.000	Ohm-m	250.000	2.500	
After Survey Verification									
Readings				Targets			Results		
Internal:	Zero	Cal		Zero	Cal		m'	b'	
Deep	0.000	0.000	mmho/m	3.372	400.834	mmho/m	1.008	-2.843	
Medium	0.000	0.000	mmho/m	13.557	467.446	mmho/m	0.997	-4.055	
Shallow	2.500	0.000	Ohm-m	500.000	2.000	Ohm-m	225.000	1.000	

Litho Density Calibration Report									
Serial: 004				Model: PRB					

Master Calibration					Performed Tue Aug 02 11:29:35 2022				
	Background	Magnesium	Aluminum	Aluminum+Fe					
Window 1	1154.2	10019.5	3137.9	2795.6				cps	
Window 2	1054.4	8597.6	2733.4	2469.5				cps	
Window 3	902.3	5241.4	1832.1	1719.3				cps	
Window 4	251.9	261.1	255.8	252.9				cps	
Long Space	0.0	7543.2	1679.0	1415.0				cps	
Short Space	4.4	2049.3	1321.7	1116.8				cps	
Rho		1.7100	2.5900	0.0000				g/cc	
Pe		2.0000	2.7500	5.7900					

Rib Angle	: 43.7	Rib Slope	: 0.957	Density/Spine Ratio	: 0.562
Spine Angle	: 73.7	Spine Slope	: 3.426	Spine Intercept	: -17.2
Before Survey Verification					
Performed Wed Dec 31 18:00:00 1969					
Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	
After Survey Verification					
Performed Wed Dec 31 18:00:00 1969					
Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	
Compensated Neutron Calibration Report					
Serial Number:		070808PMC			
Tool Model:		NABORS			
PRE-SURVEY VERIFICATION					
Detector	Readings	Measured	Target		
Short Space	cps				
Long Space	cps	pu	pu		
POST-SURVEY VERIFICATION					
Detector	Readings	Measured	Target		
Short Space	cps				
Long Space	cps	pu	pu		
Gamma Ray Calibration Report					
Serial Number:	070558				
Tool Model:	OPEN_GR				
Performed:	Wed Jun 14 03:45:13 2023				
Calibrator Value:	1.0	GAPI			
Background Reading:	0.0	cps			
Calibrator Reading:	1.0	cps			
Sensitivity:	0.3000	GAPI/cps			