

DUAL INDUCTION LOG

Company	PRATER OIL & GAS OPERATIONS	Company	PRATER OIL & GAS OPERATIONS
Well	HOWELL UNIT #1-2	Well	HOWELL UNIT #1-2
Field	UNNAMED	Field	UNNAMED
County	PRATT	County	PRATT
State	KANSAS	State	KANSAS
Location:	API # : 15-151-22595-0000	Other Services CDL/CNL/PE MEL/SONIC	
Permanent Datum	GROUND LEVEL	Elevation	2005
Log Measured From	KELLY BUSHING 11' A.G.L		
Drilling Measured From	KELLY BUSHING		
SEC 2	TWP 29S	RGE	14W
Run Number	ONE		
Depth Driller	4725		
Depth Logger	4726		
Bottom Logged Interval	4724		
Top Log Interval	00		
Casing Driller	8.675@433		
Casing Logger	433		
Bit Size	7.785		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES	5,700 PPM
Density / Viscosity	9.4/55		
pH / Fluid Loss	11.0/9.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.95@79F		
Rmf @ Meas. Temp	1.46@79F		
Rmc @ Meas. Temp	2.34@79F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	1.25@123F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	2:30 A.M.		
Maximum Recorded Temperature	123F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	SCOTT ALBERG		

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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.

15-151-22595-0000

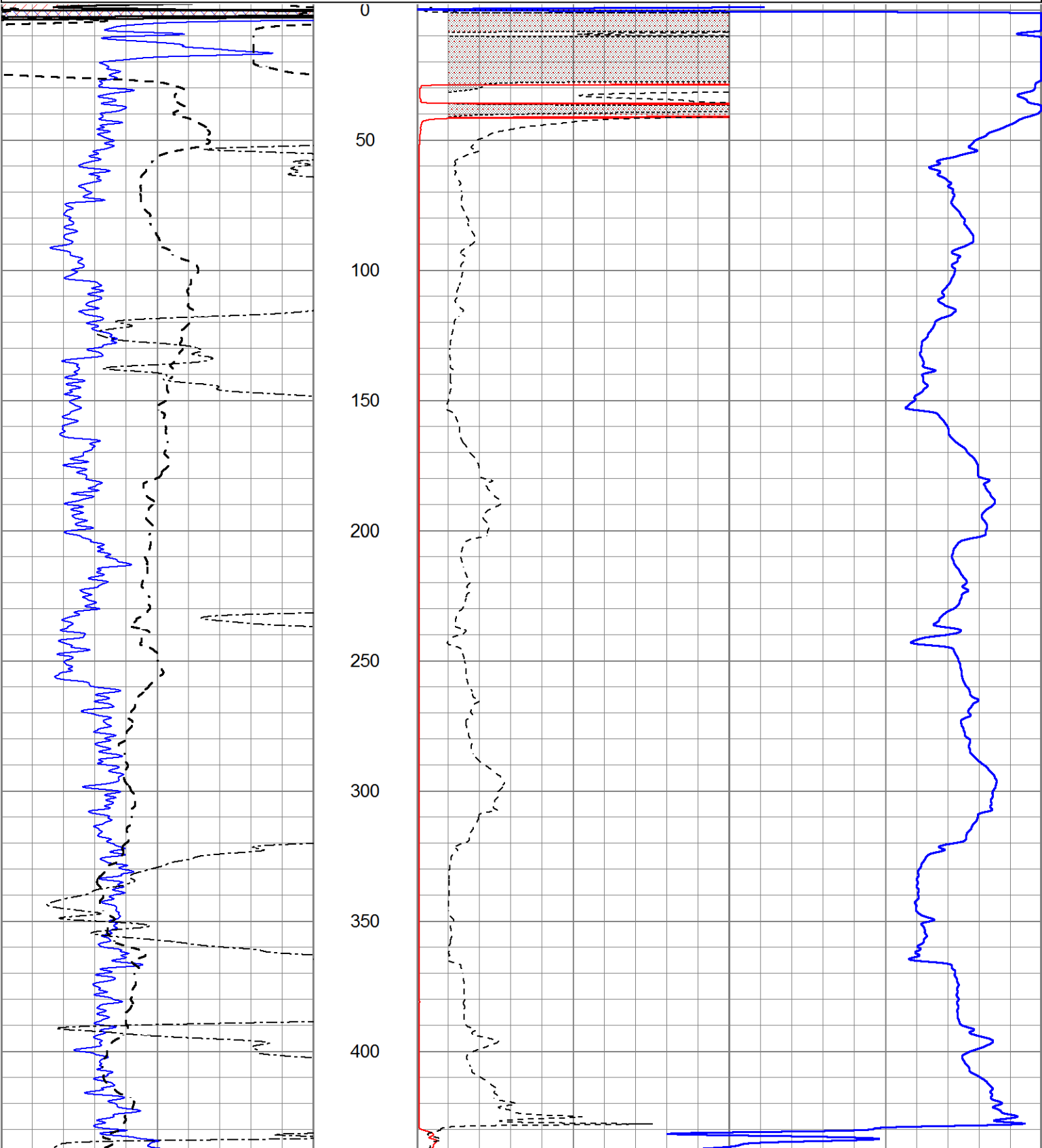
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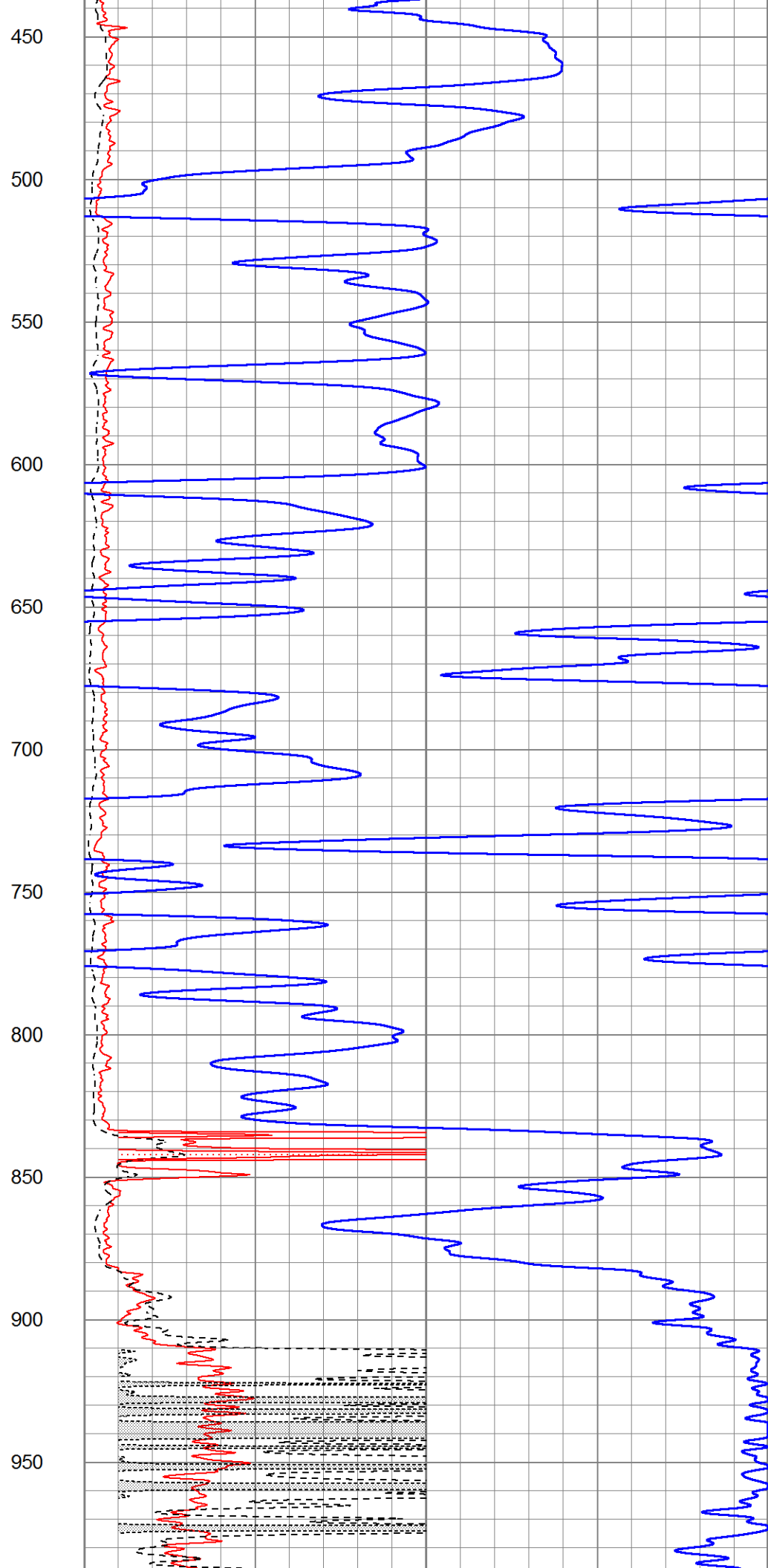
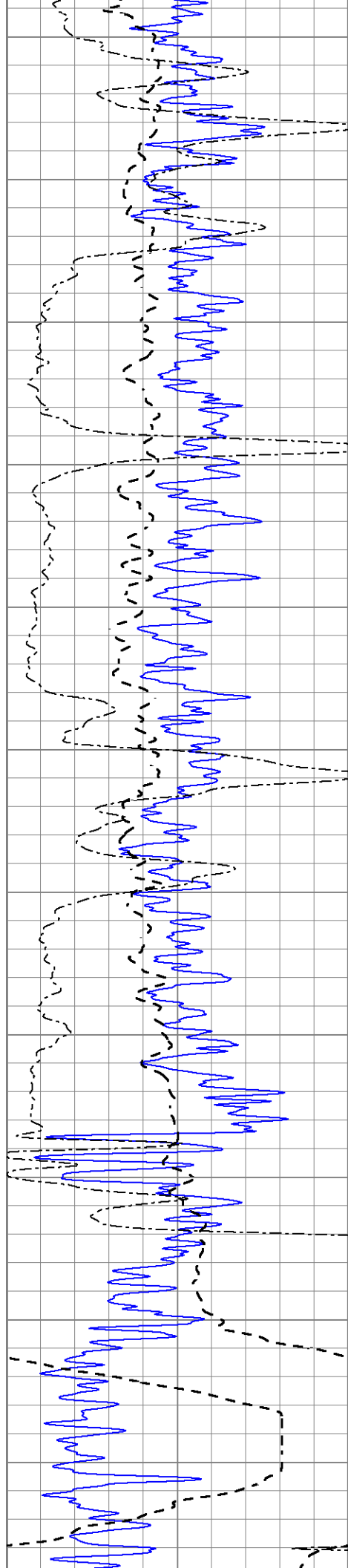
THANK YOU FOR USING ELI WIRELINE HAYS. KANSAS (785) 628-6395
DIRECTIONS
COATS, KS., 2N. ON "50TH AVE." TO "70TH ST.", 1/2E., N. INTO

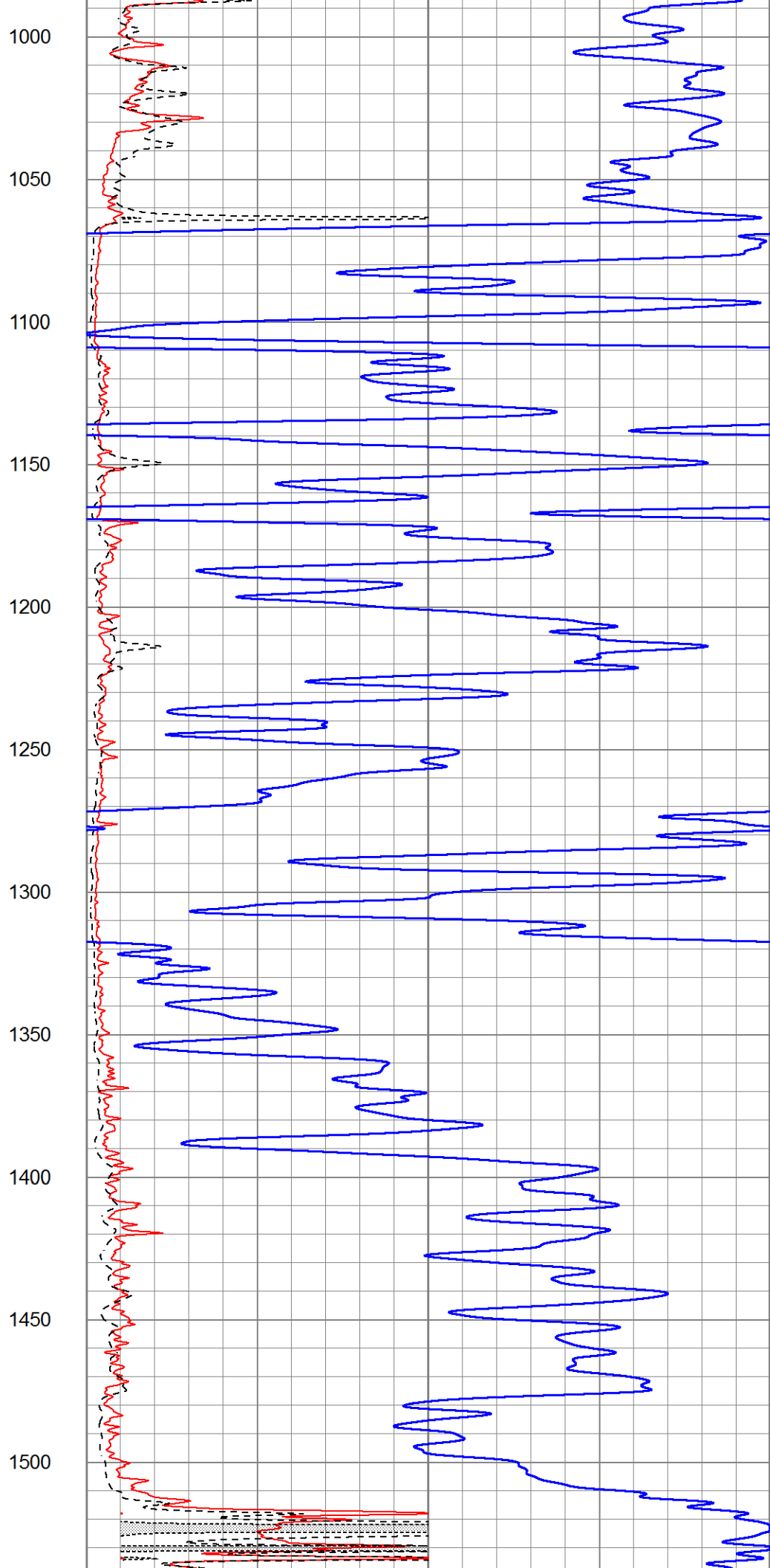
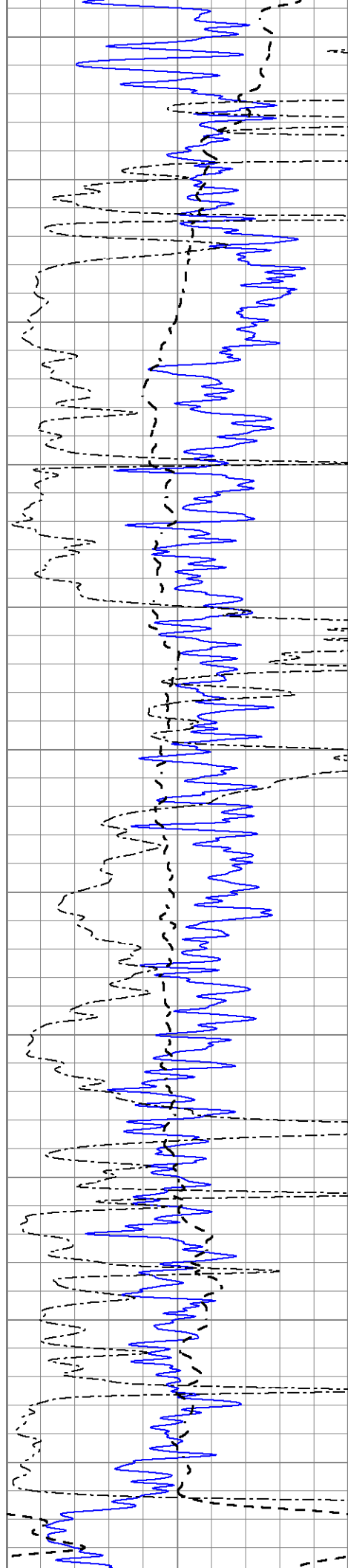


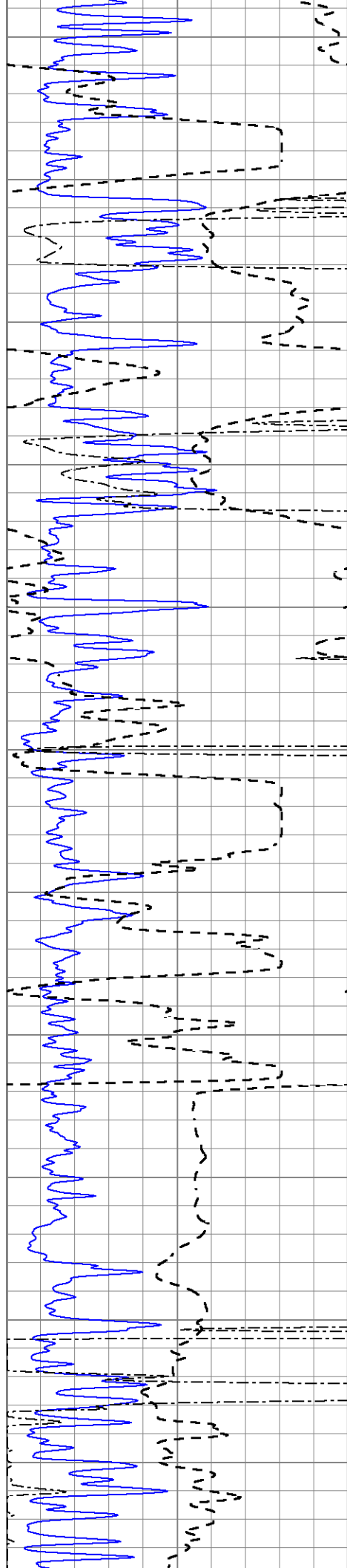
MAIN SECTION

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









1550

1600

1650

1700

1750

1800

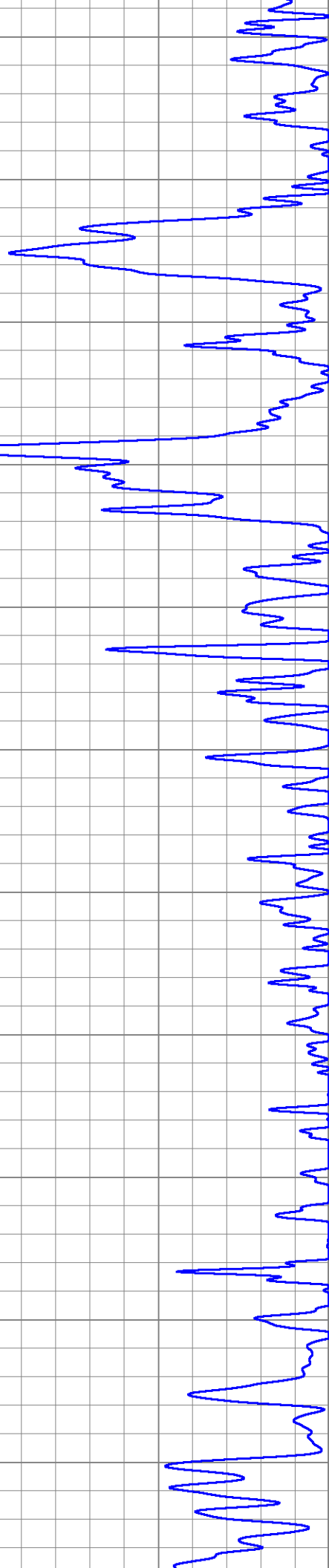
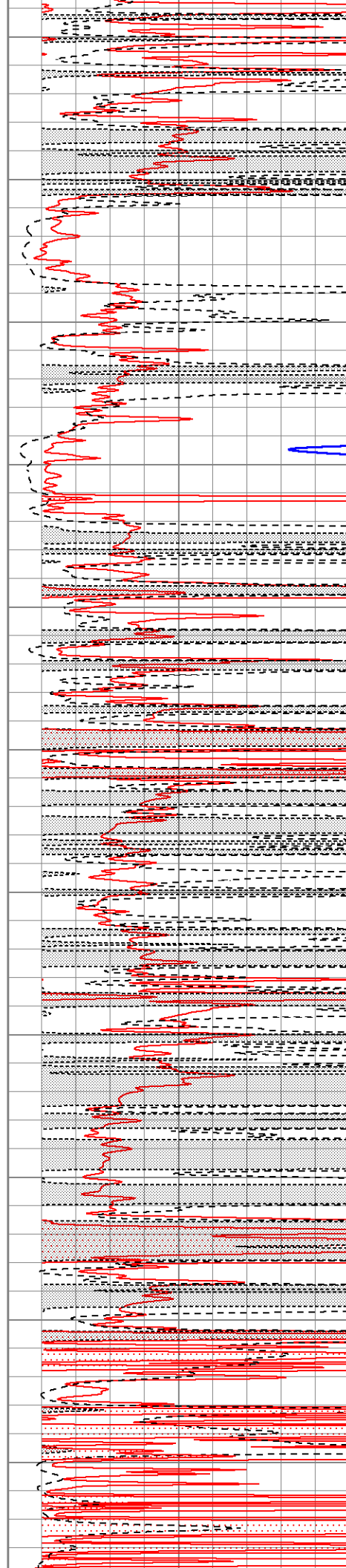
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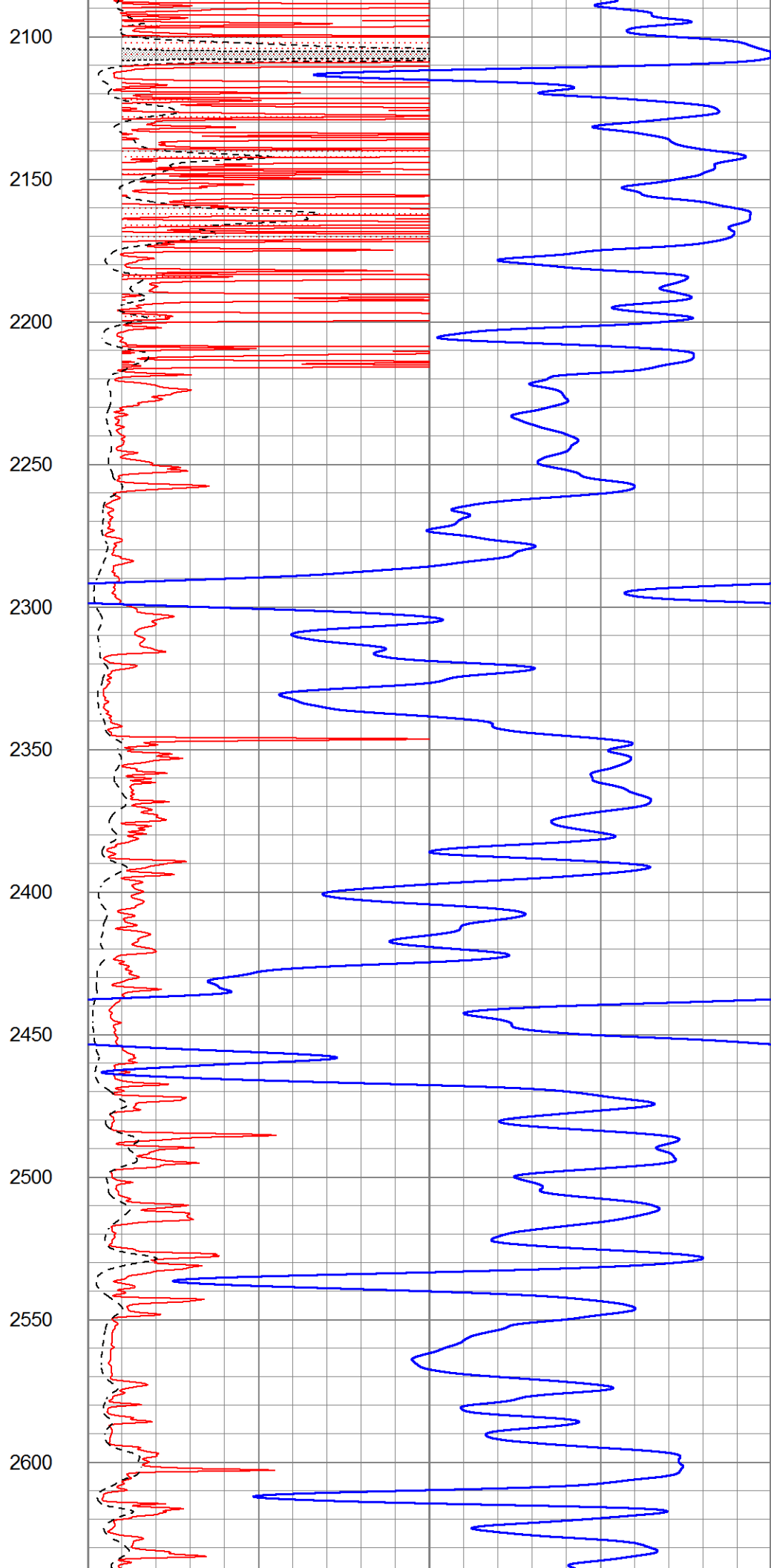
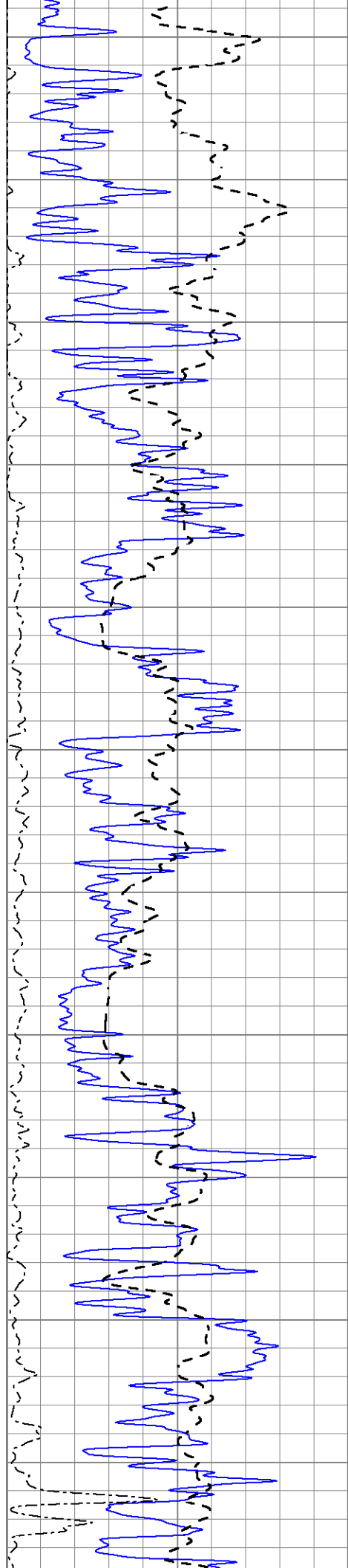
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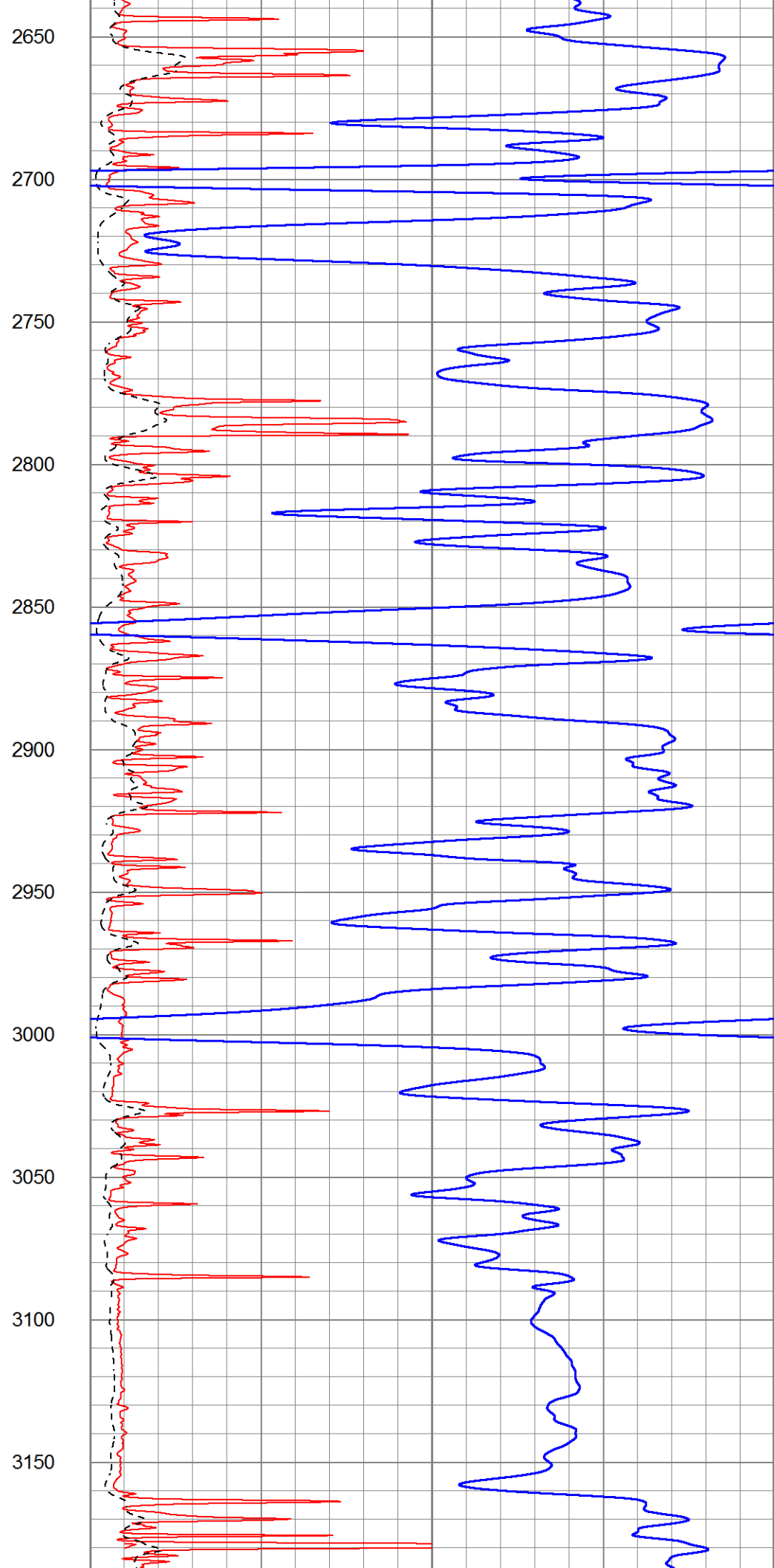
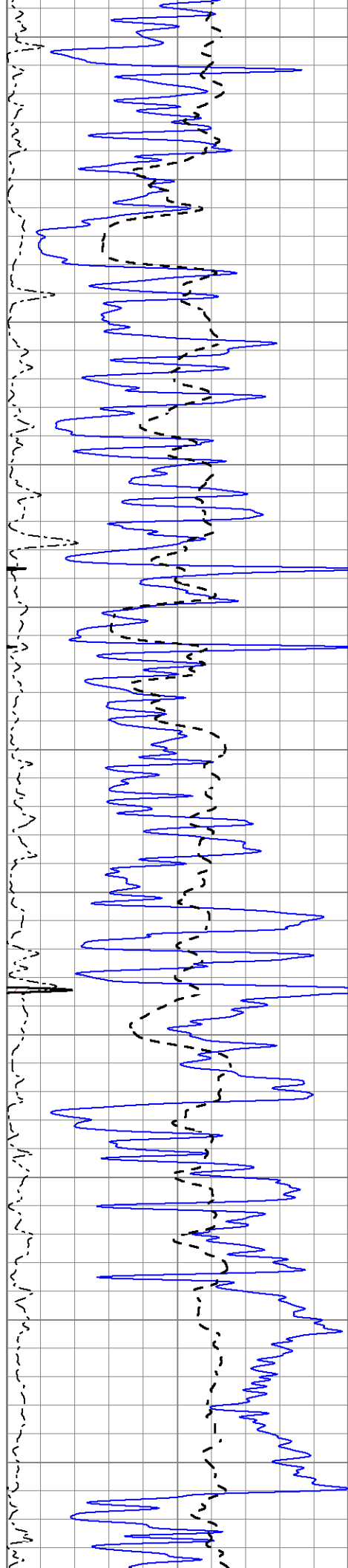
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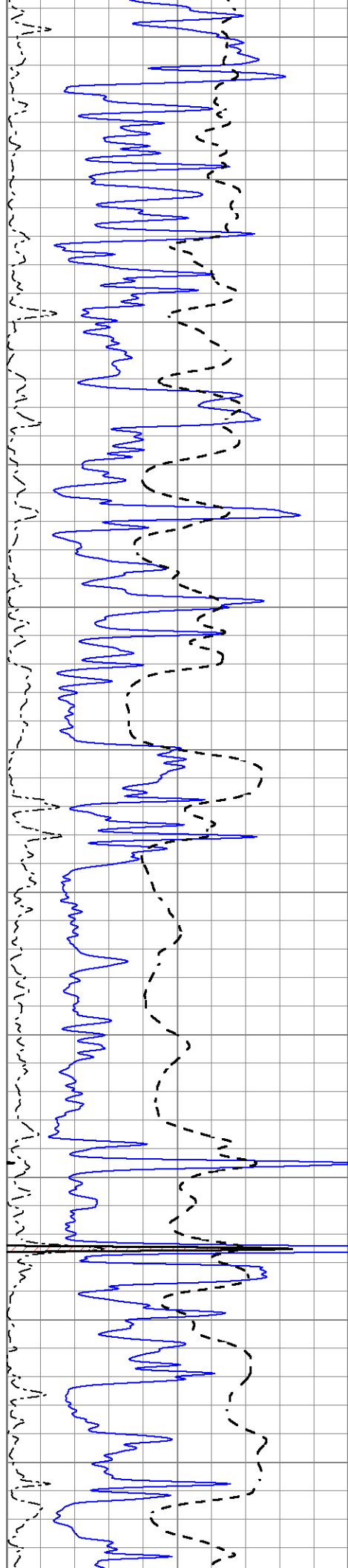
2000

2050









3200

3250

3300

3350

3400

3450

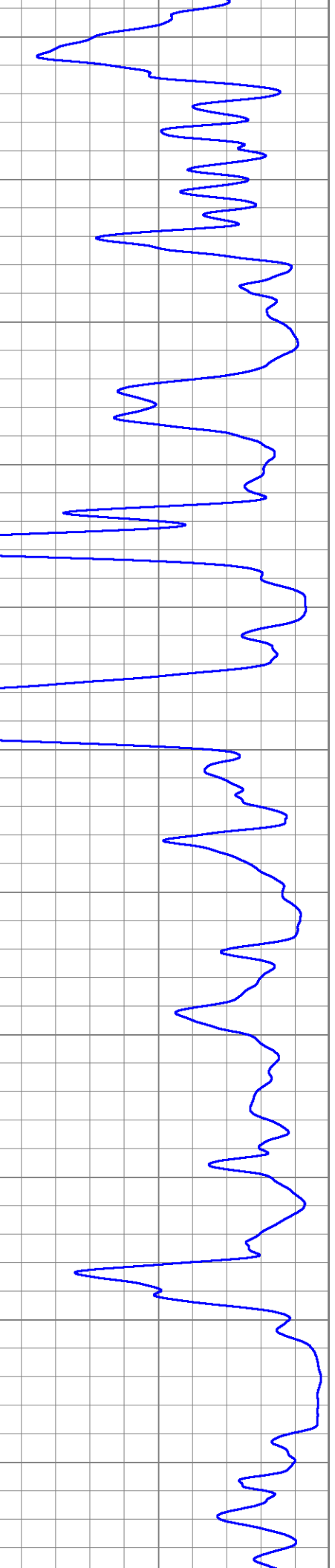
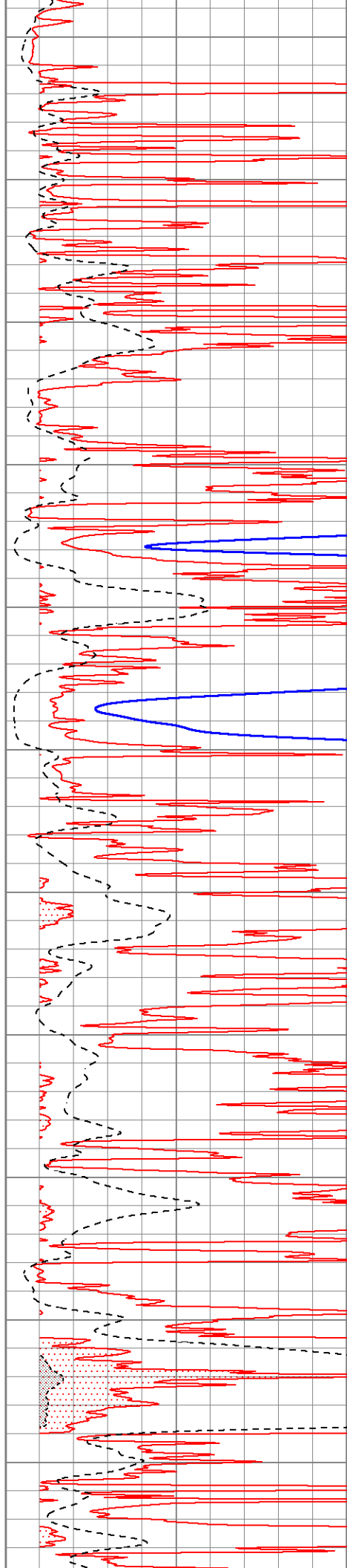
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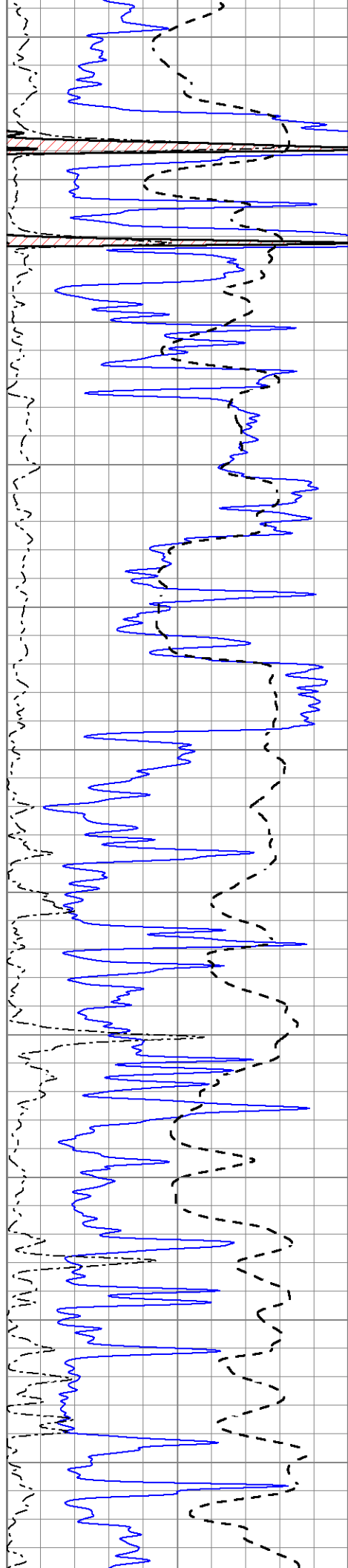
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3600

3650

3700





3750

3800

3850

3900

3950

4000

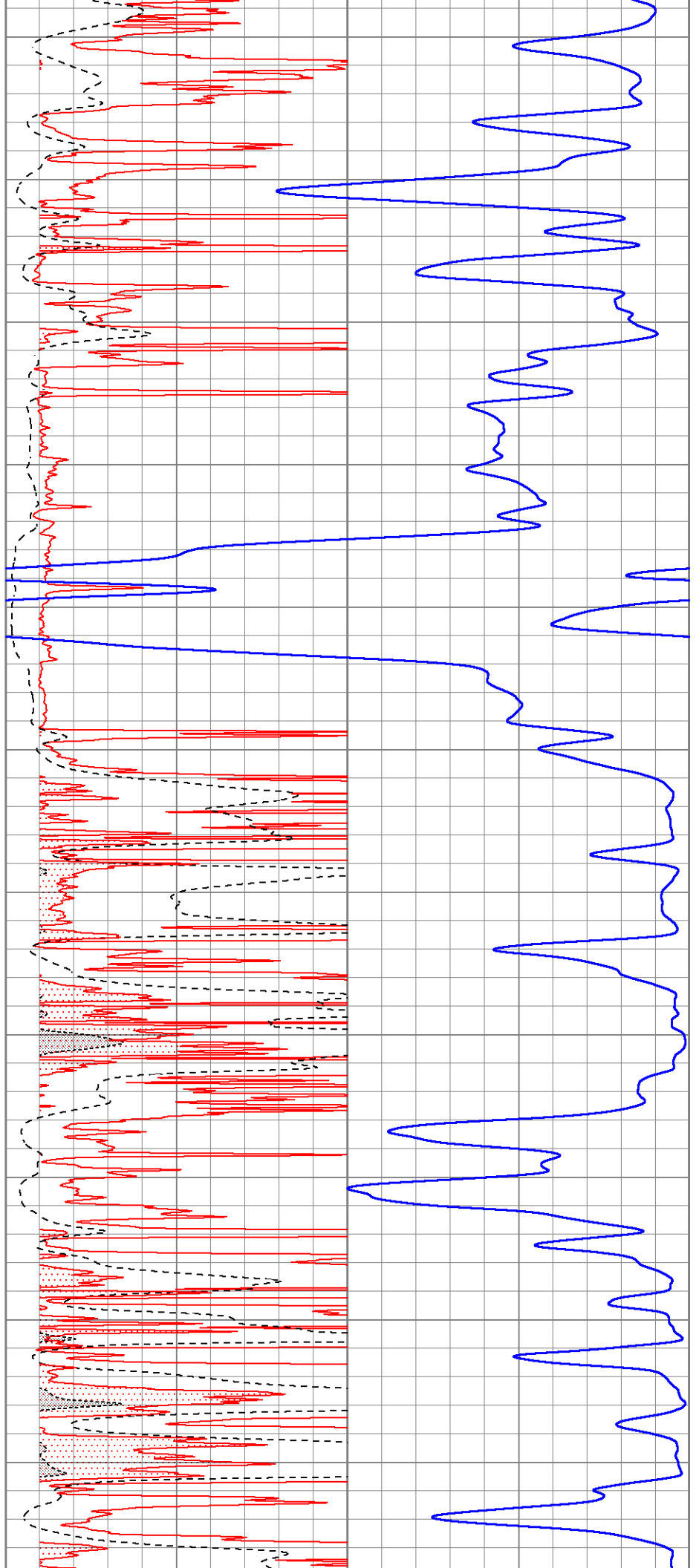
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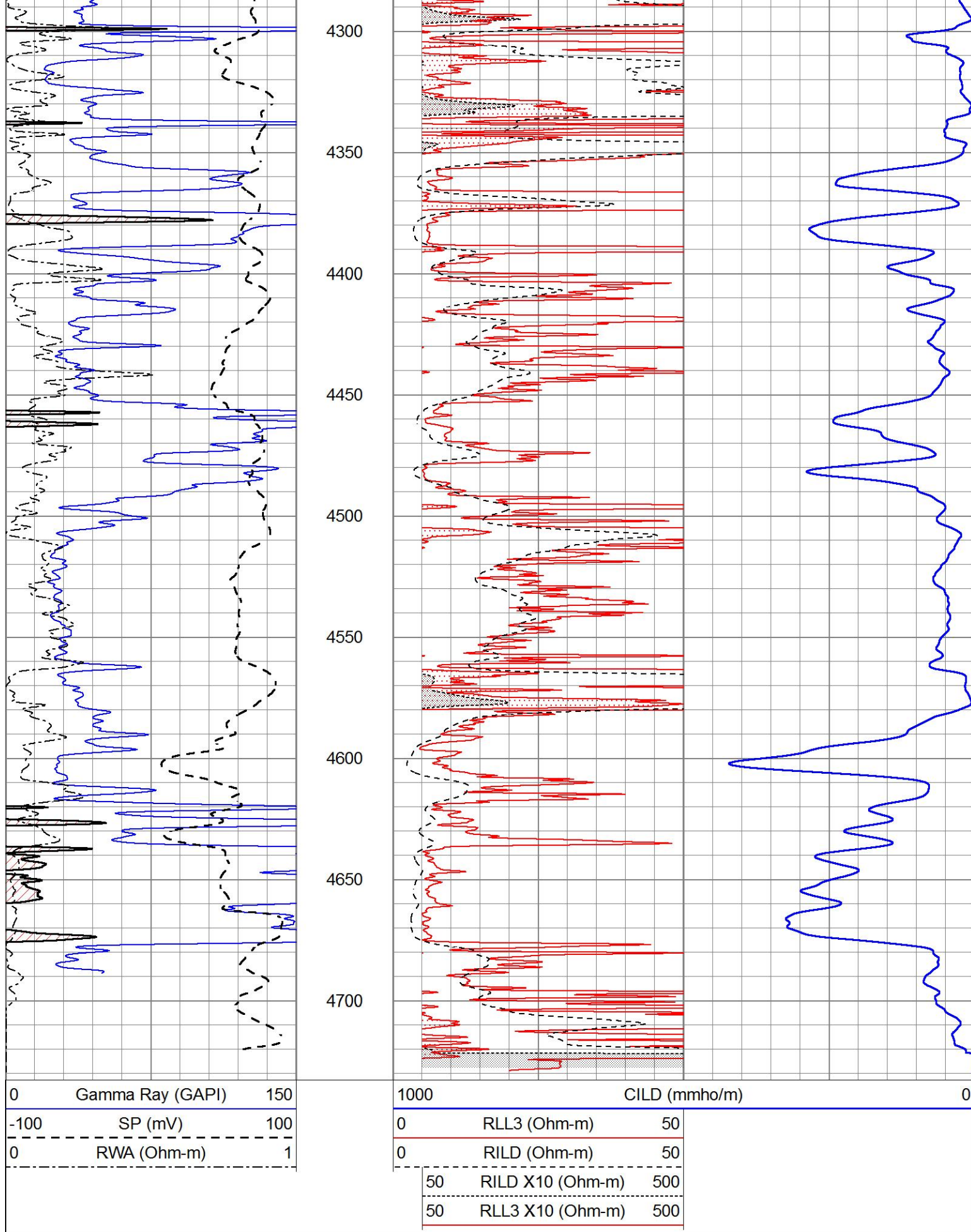
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4150

4200

4250



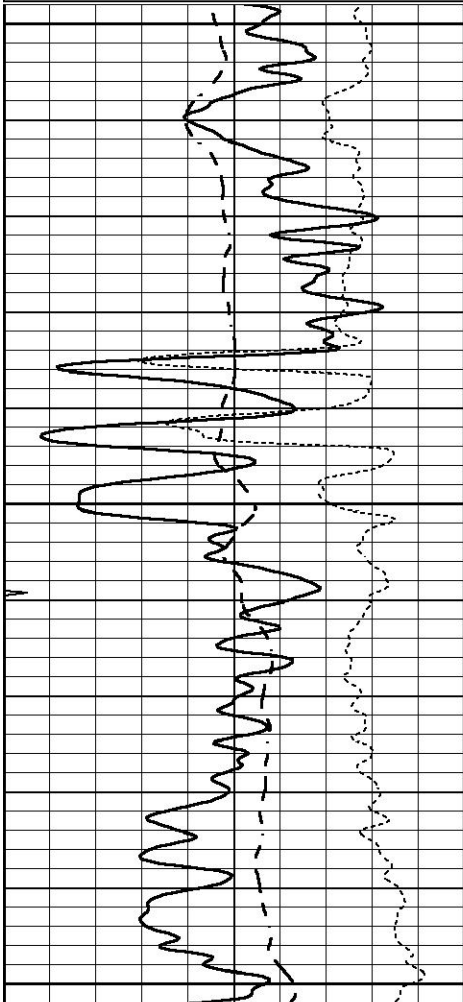


ANHYDRITE

Database File 8641pe.db
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 Presentation Format _dil
 Dataset Creation Sat Jul 06 05:24:36 2024
 Charted by Depth in Feet scaled 1:240

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

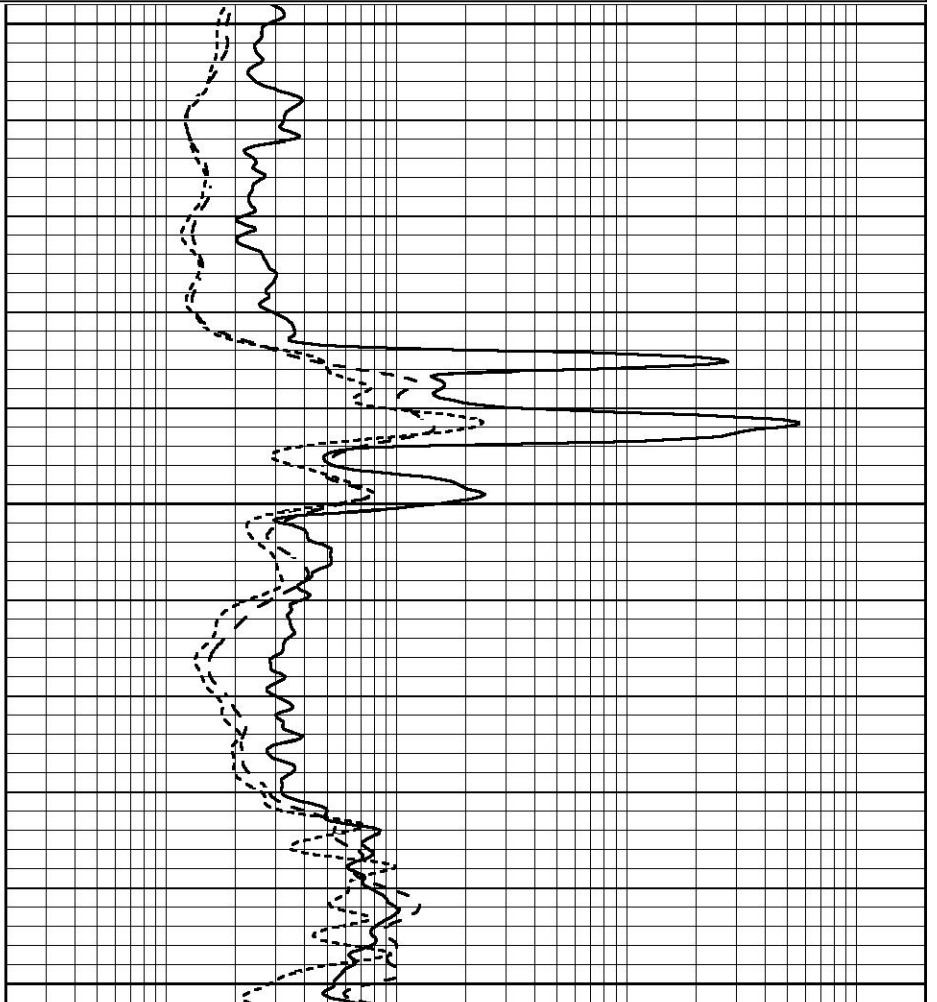
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



800

850

900



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

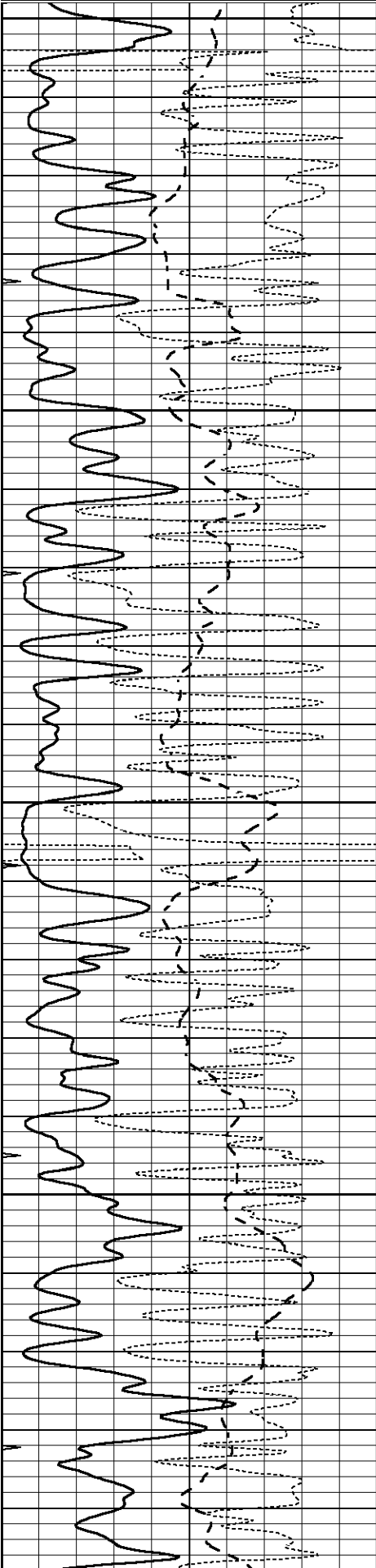
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



MAIN SECTION

Database File 8641pe.db
 Dataset Pathname pass3.2M
 Presentation Format _dil
 Dataset Creation Sat Jul 06 05:23:12 2024
 Charted by Depth in Feet scaled 1:240

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



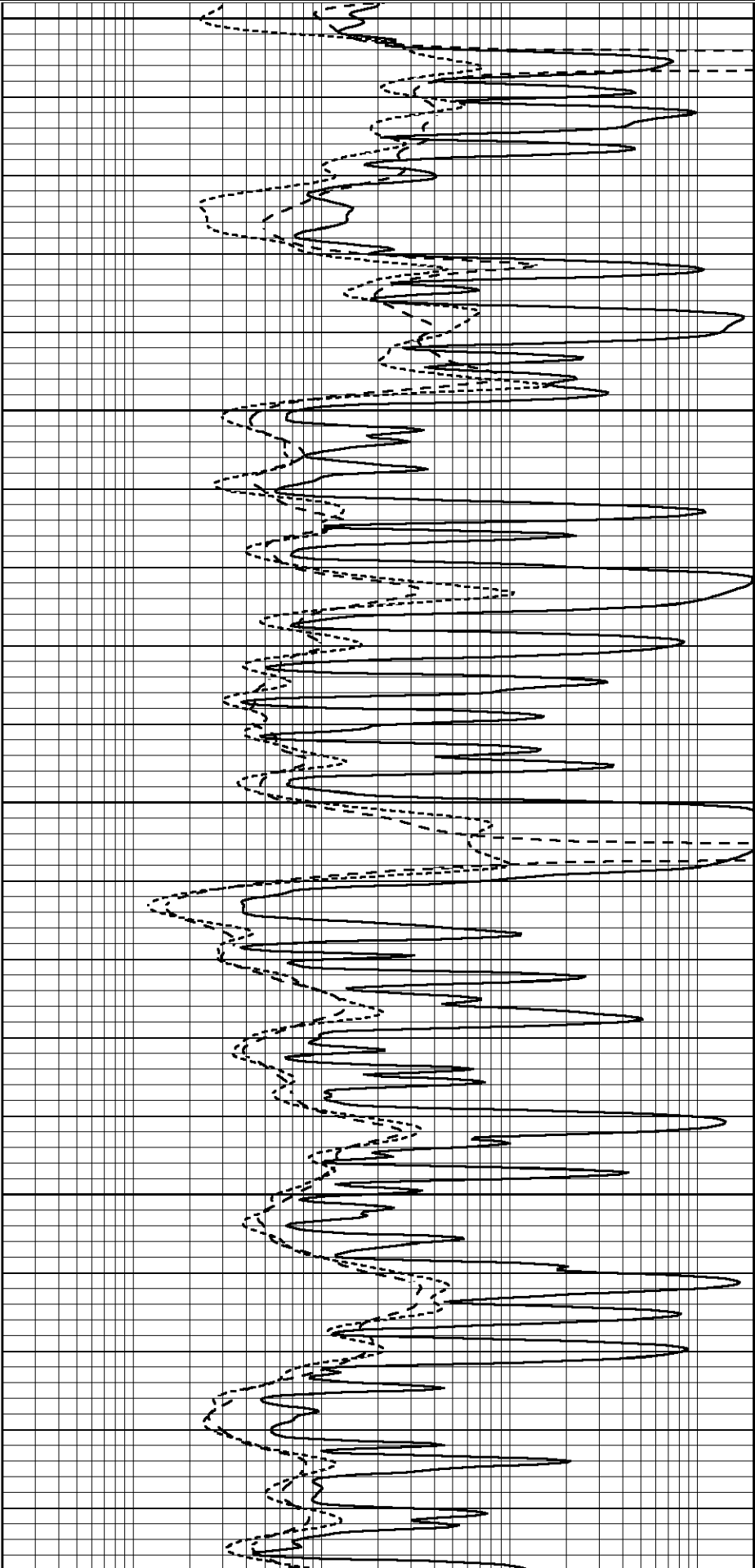
2000

2050

2100

2150

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



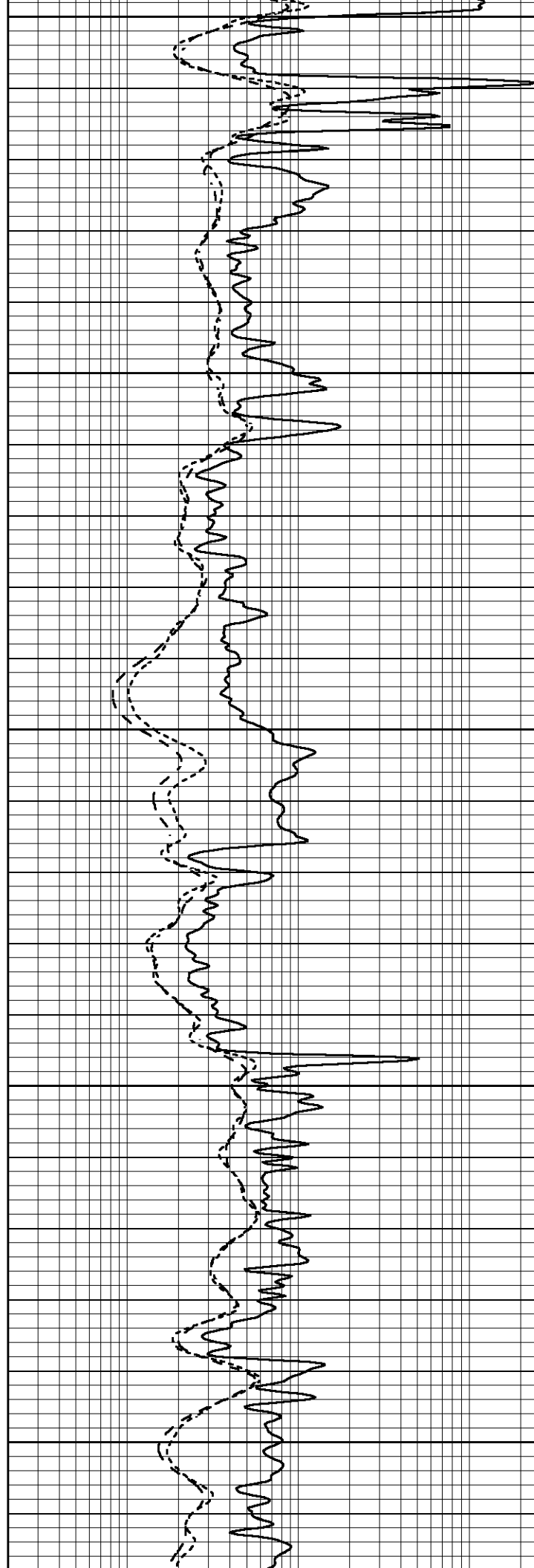
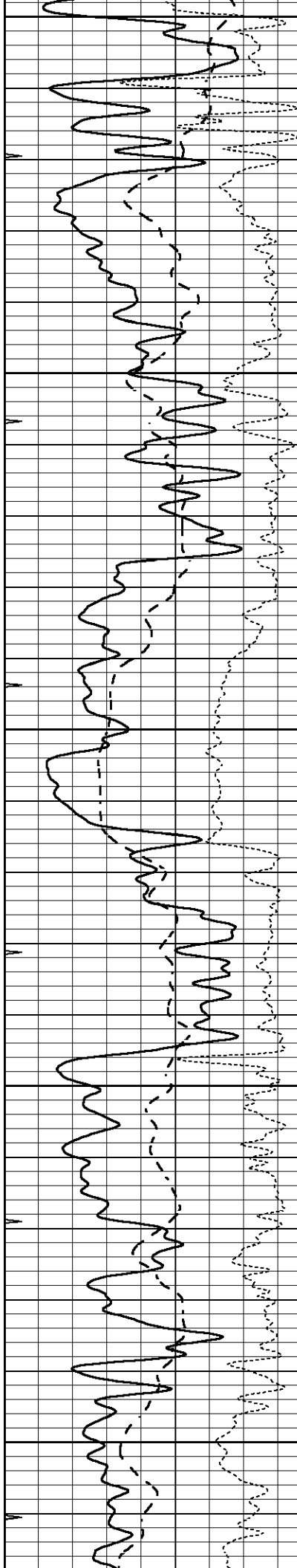
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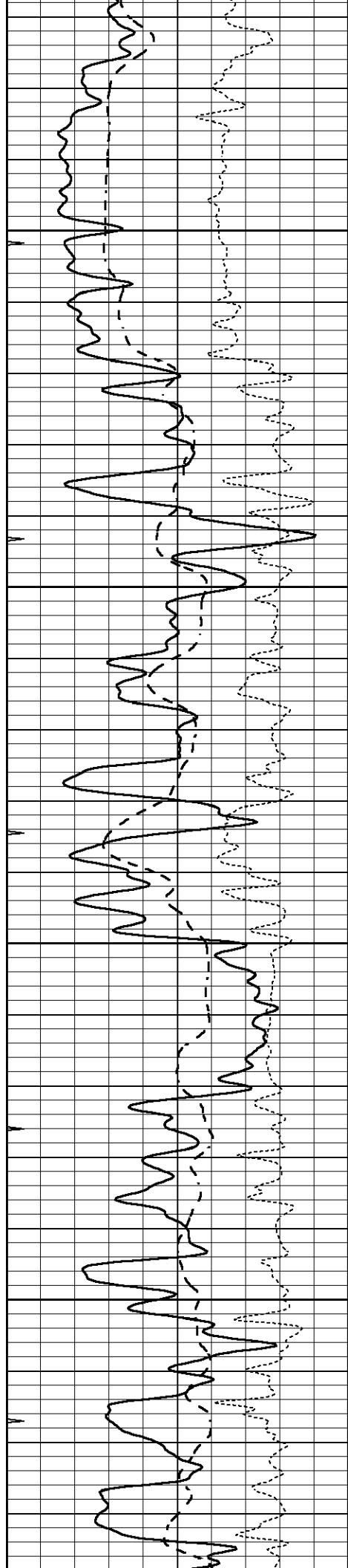
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2300

2350

2400



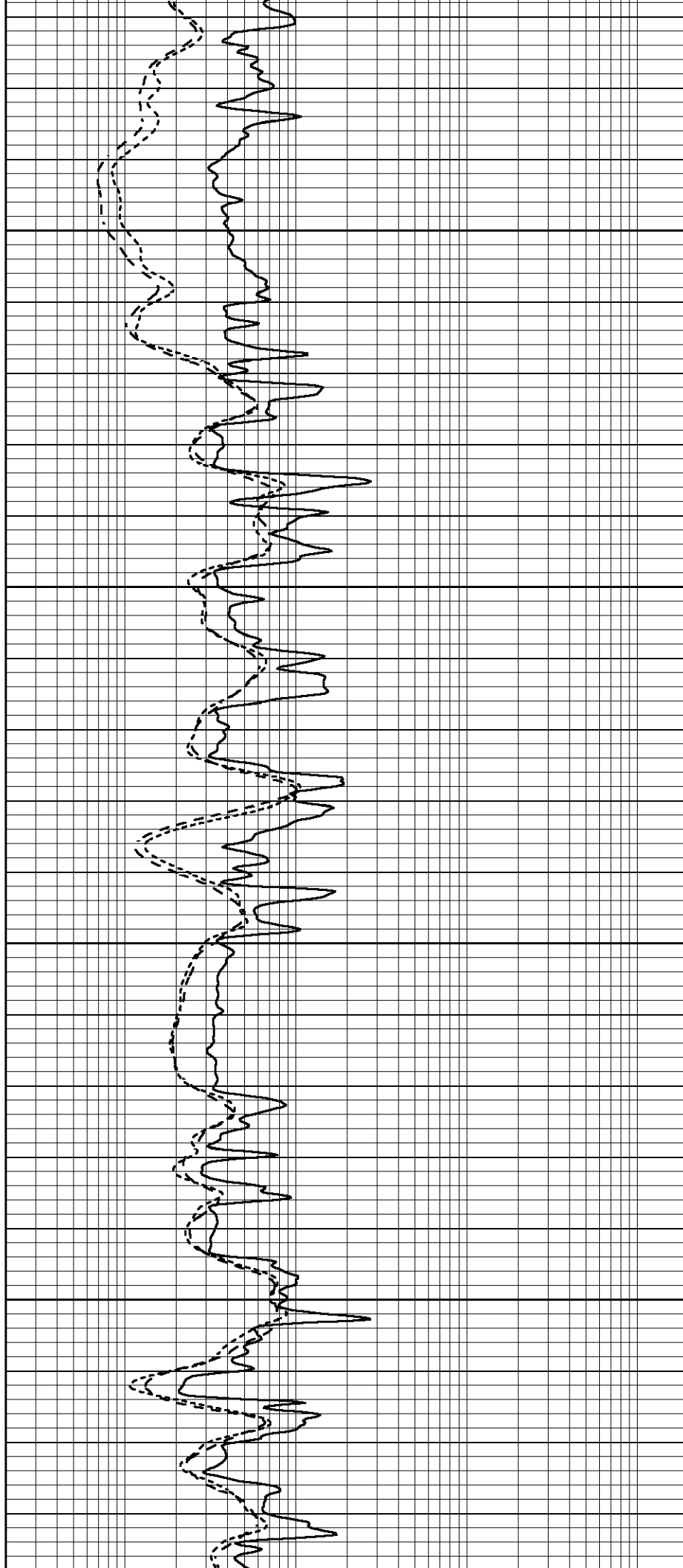


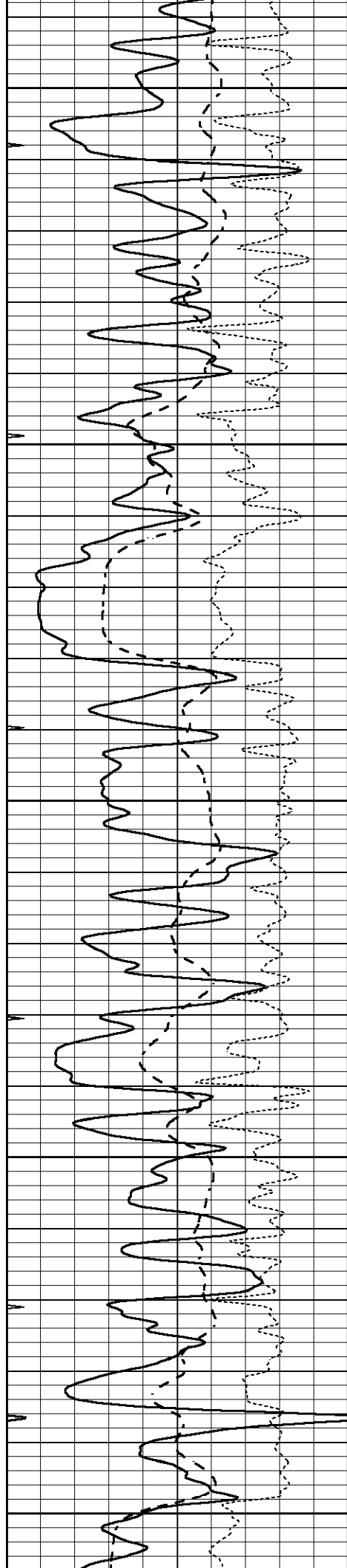
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2500

2550

2600





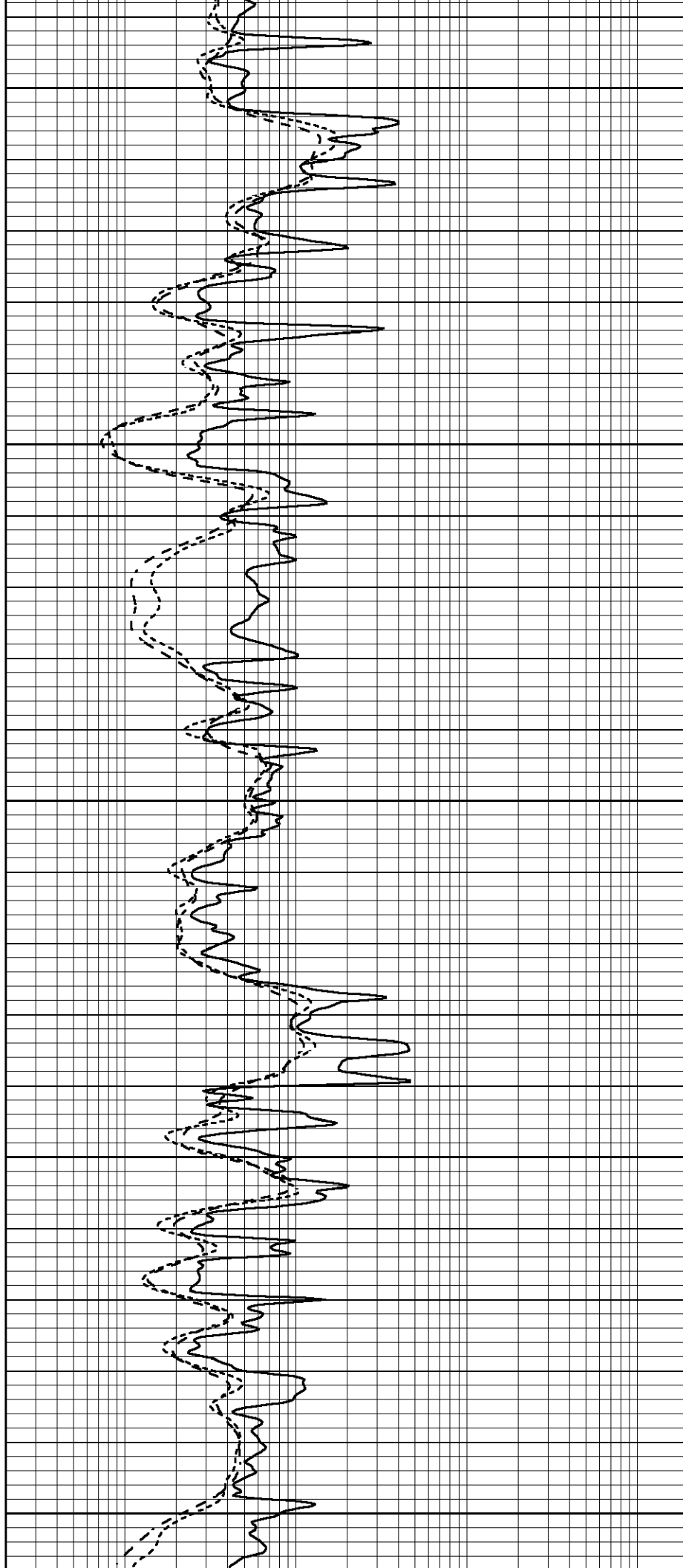
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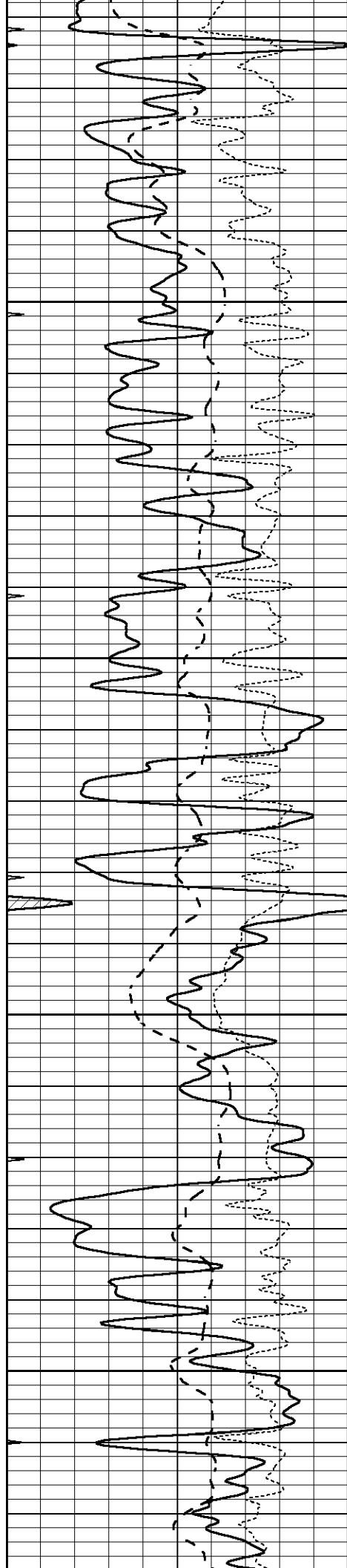
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2750

2800

2850



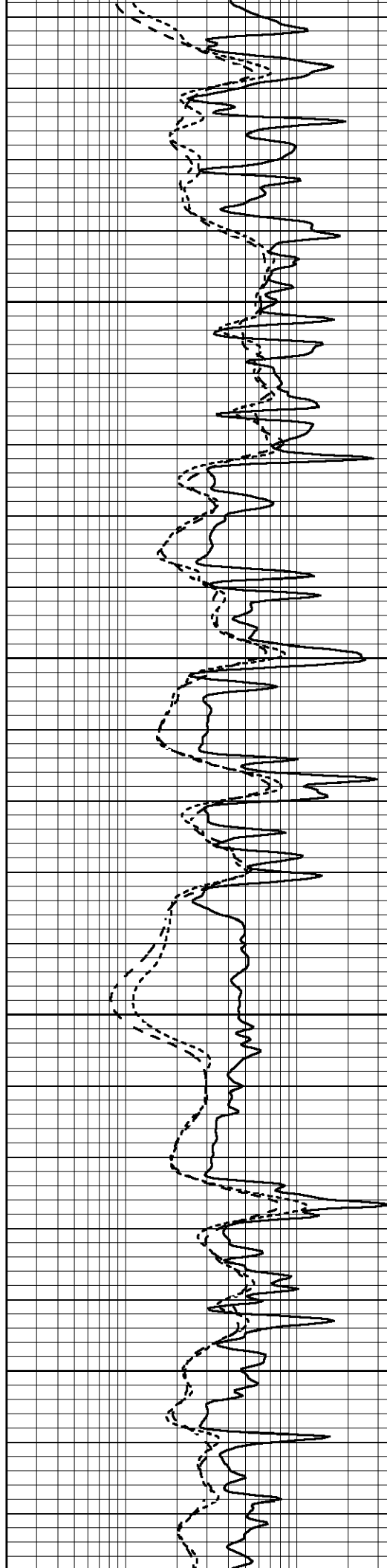


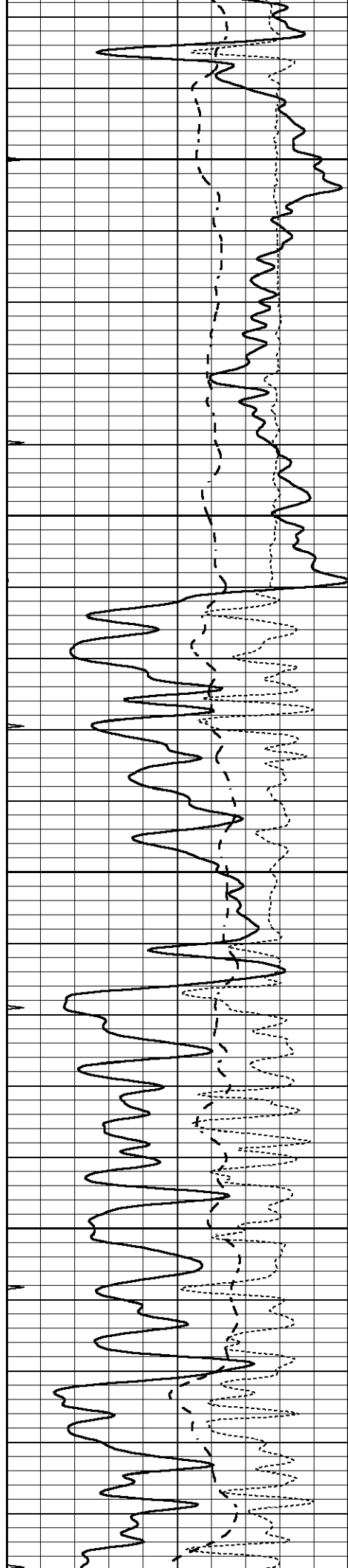
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2950

3000

3050



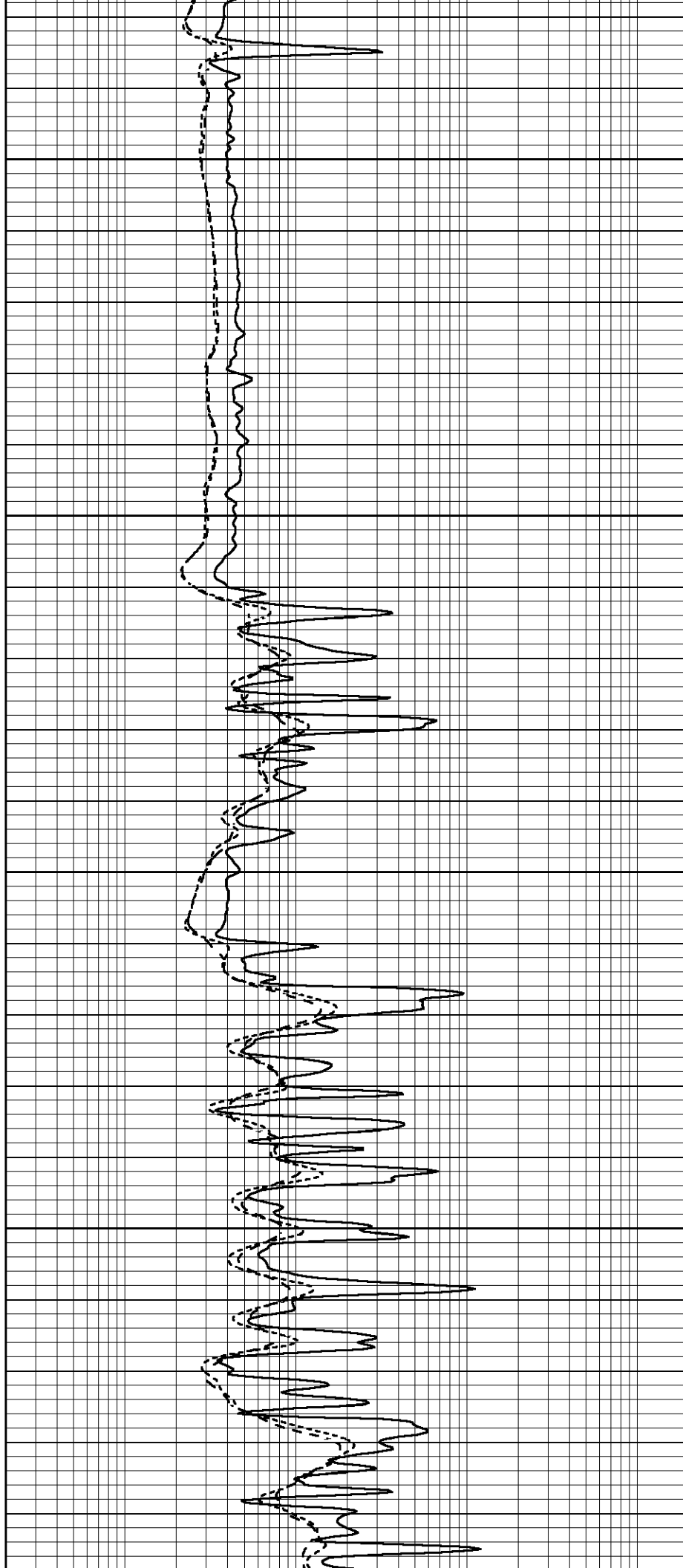


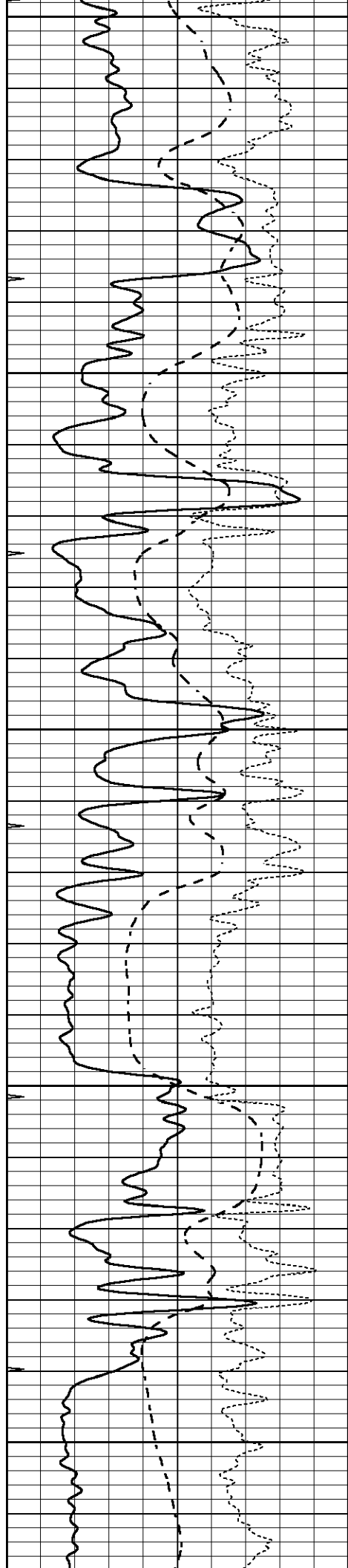
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3150

3200

3250





3300

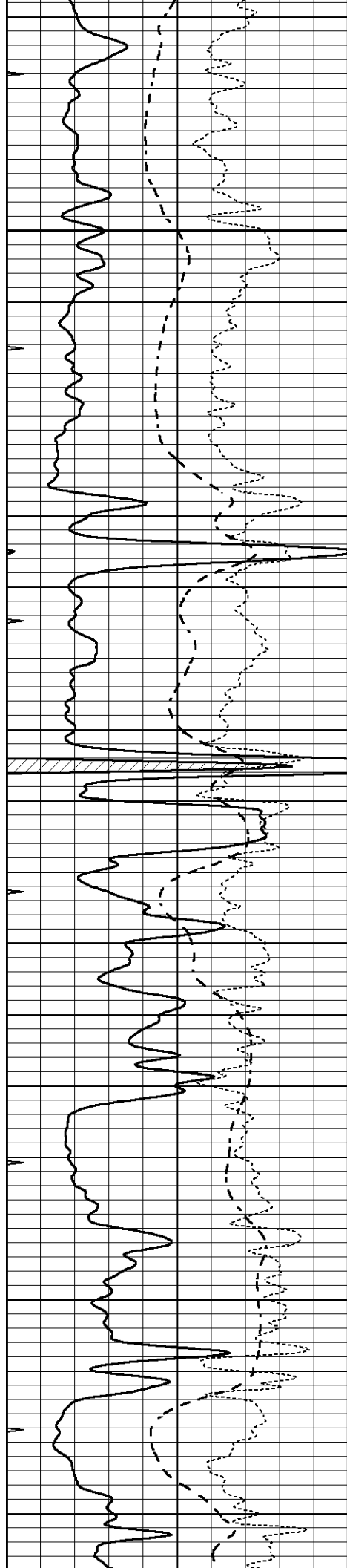
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3400

3450

3500



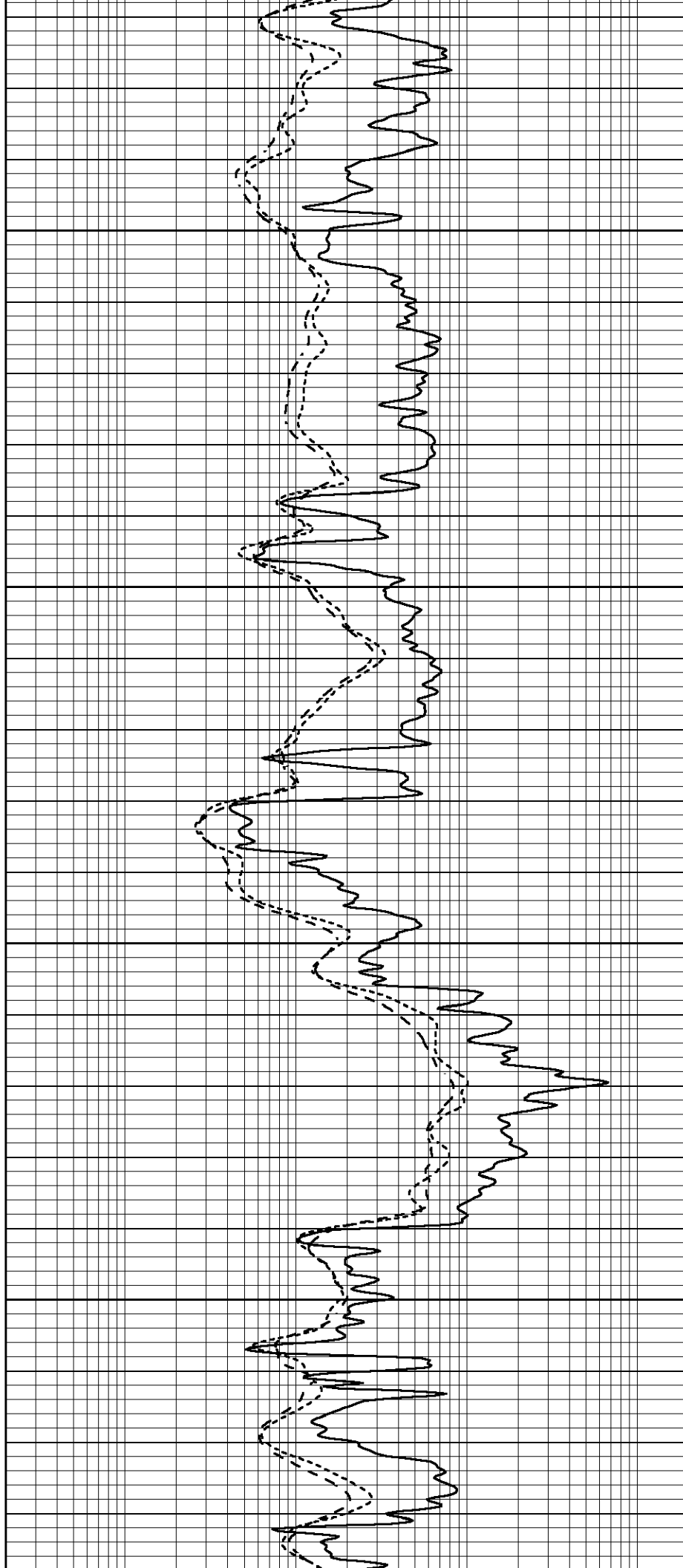


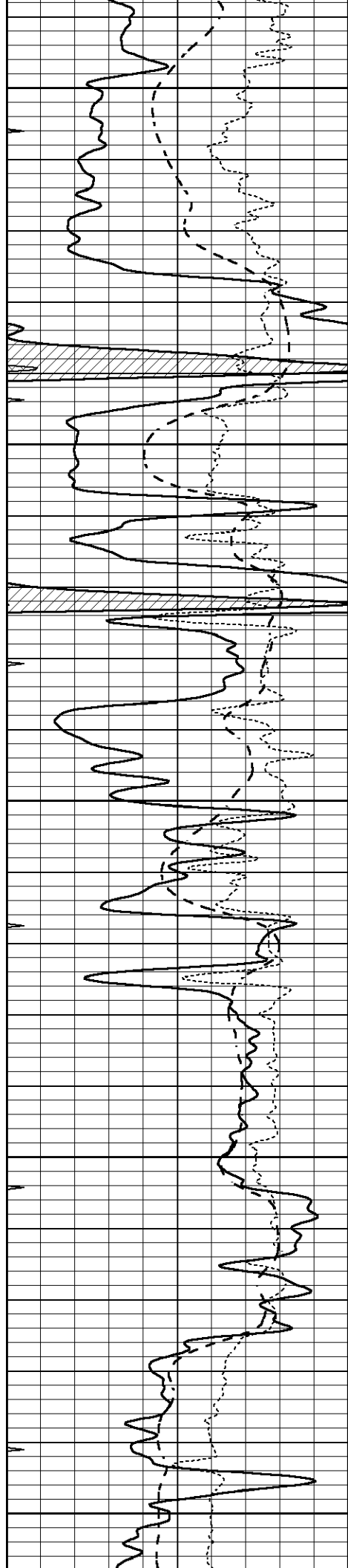
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3600

3650

3700





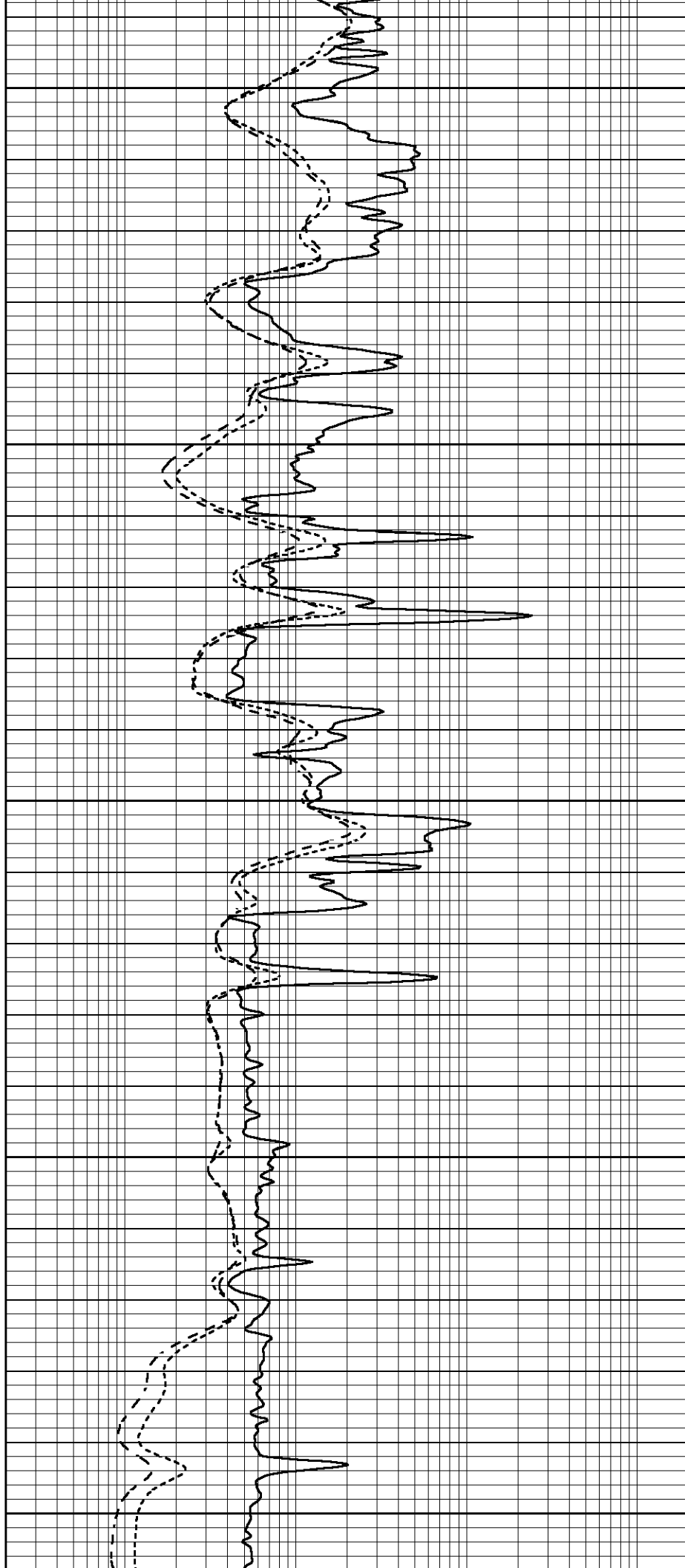
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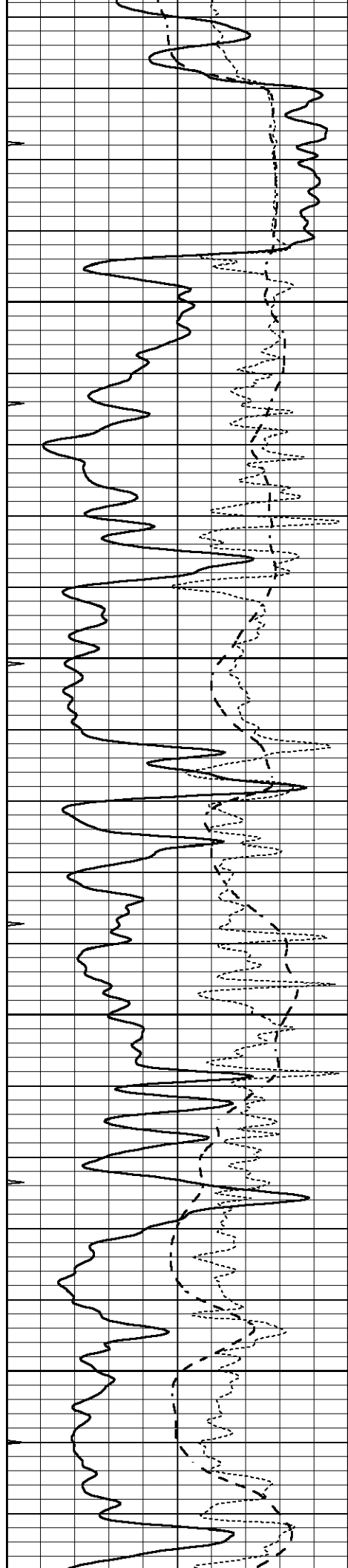
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3850

3900

3950



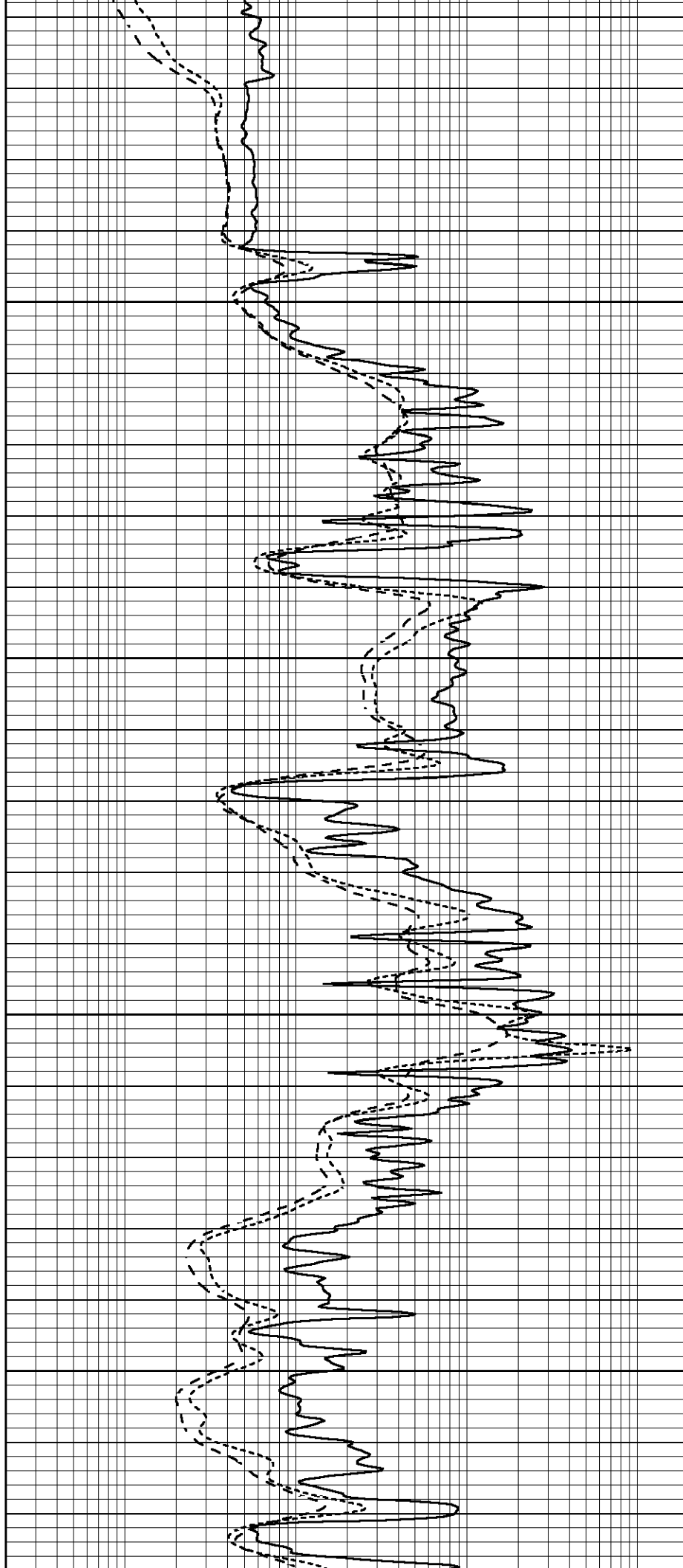


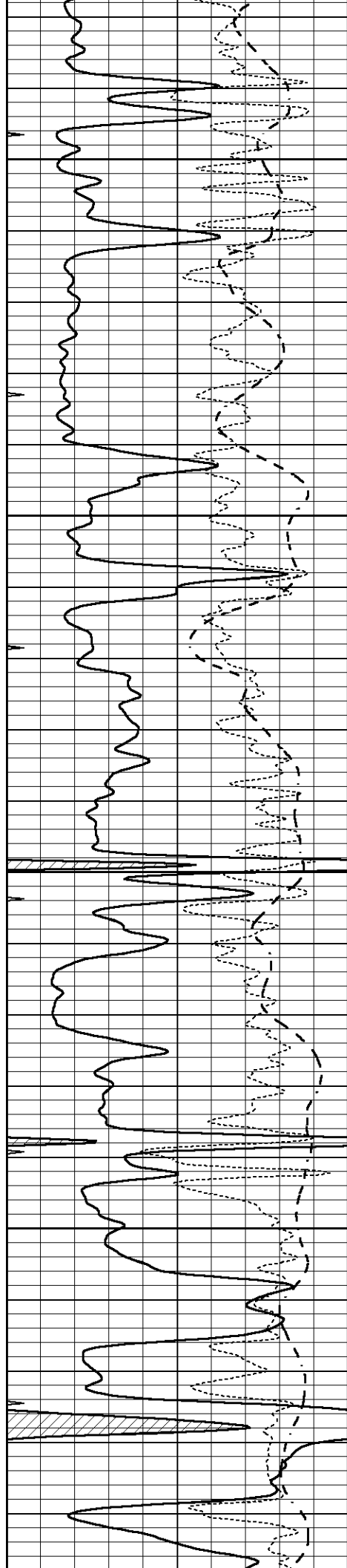
4000

4050

4100

4150



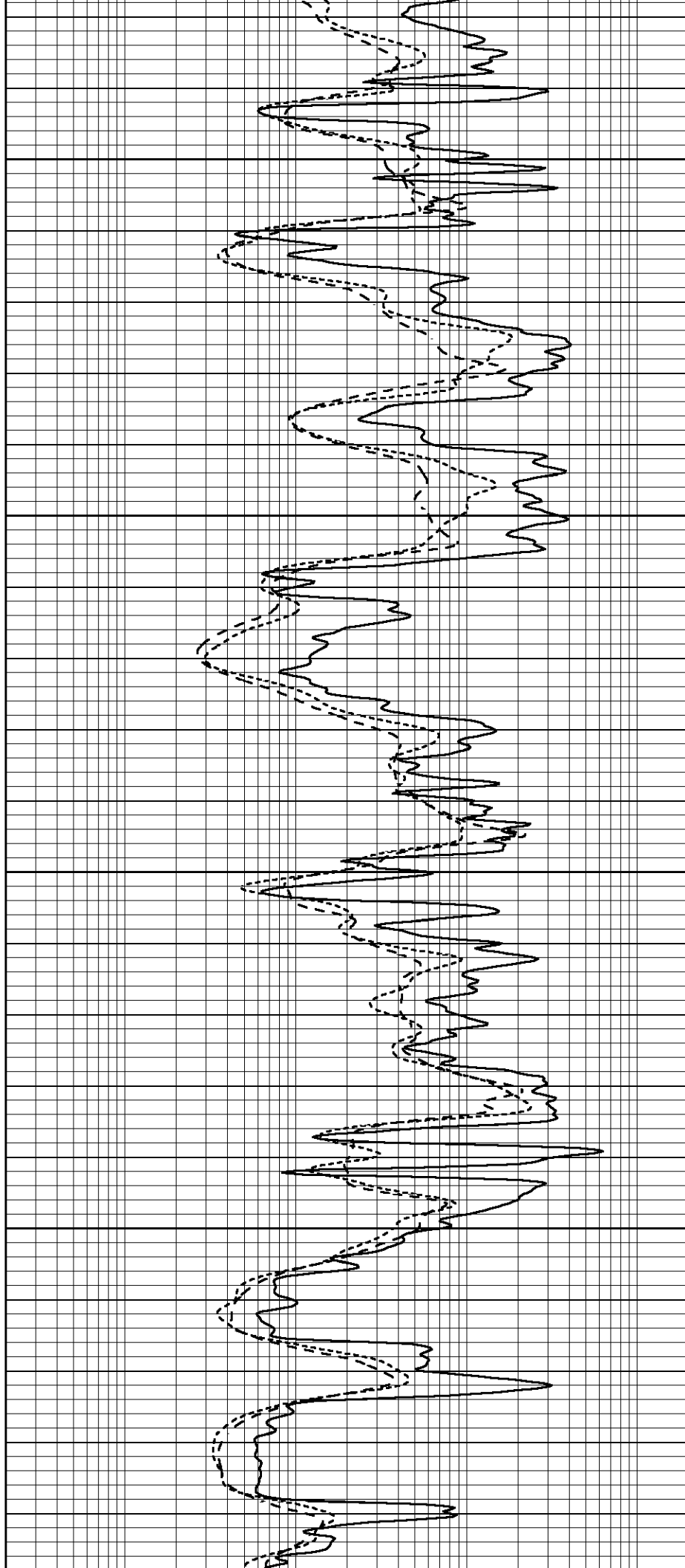


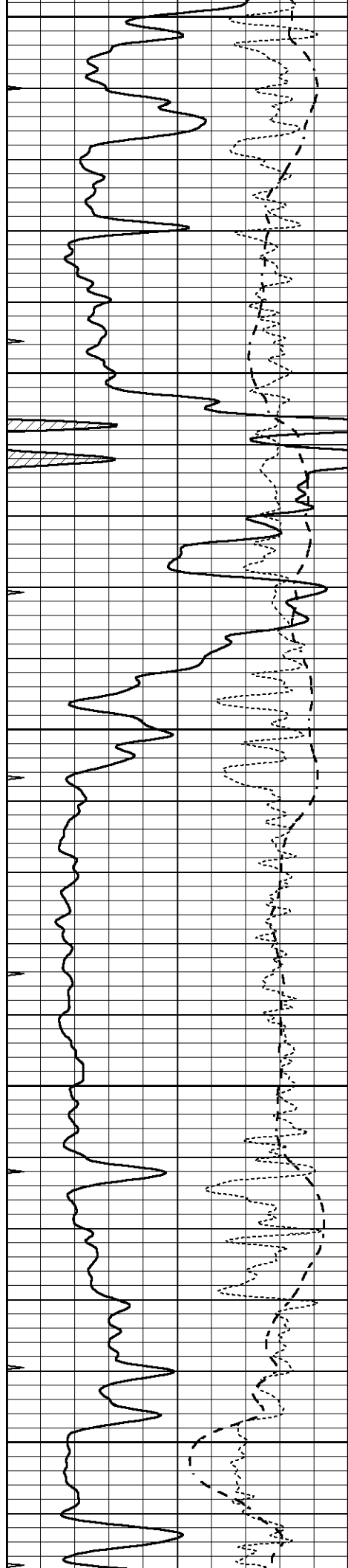
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4250

4300

4350





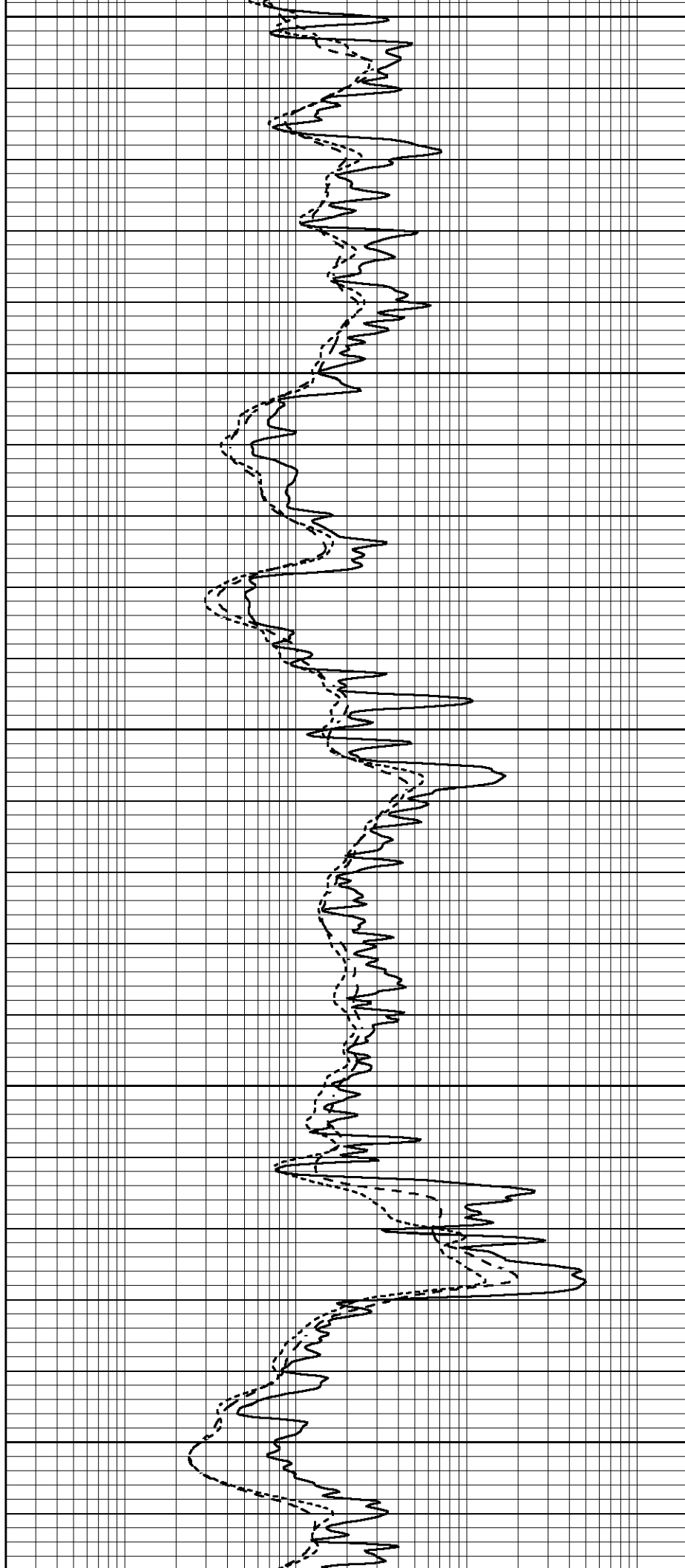
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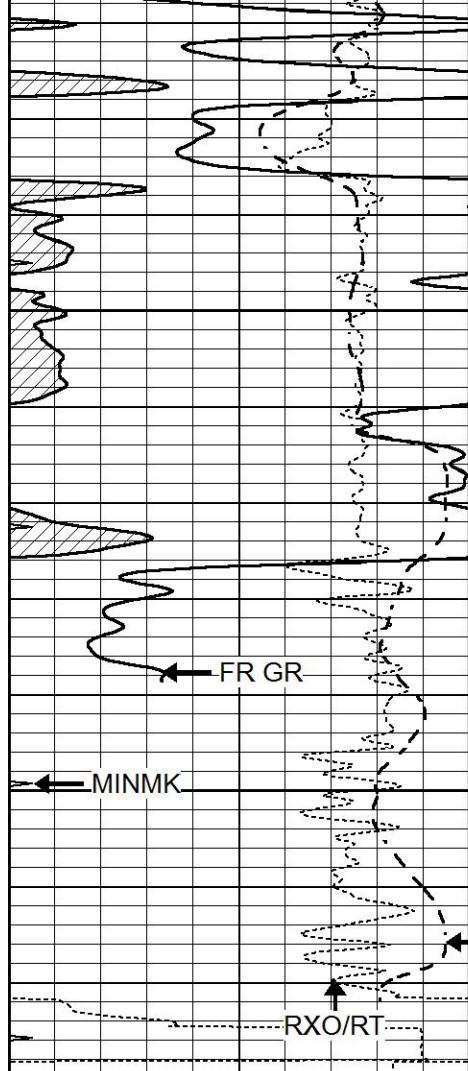
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4500

4550

4600





4650

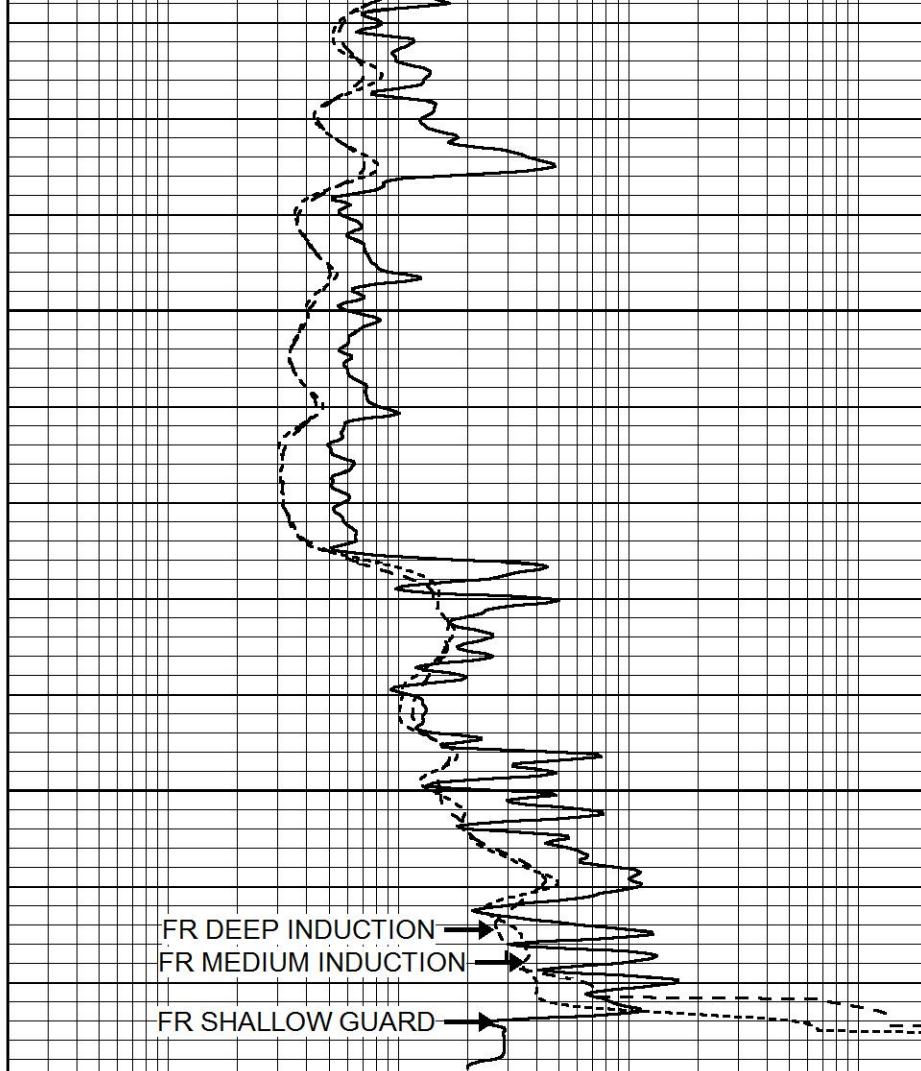
4700

FR SP

RXO/RT

LTD 4726

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



FR DEEP INDUCTION

FR MEDIUM INDUCTION

FR SHALLOW GUARD

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

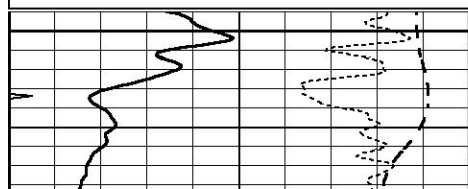


REPEAT SECTION

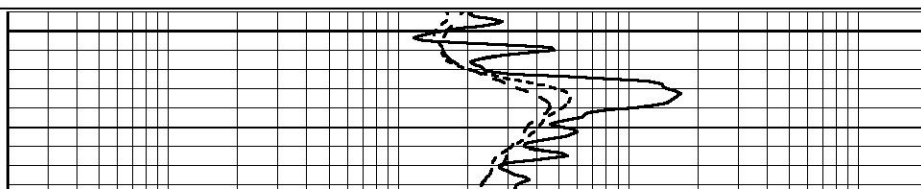
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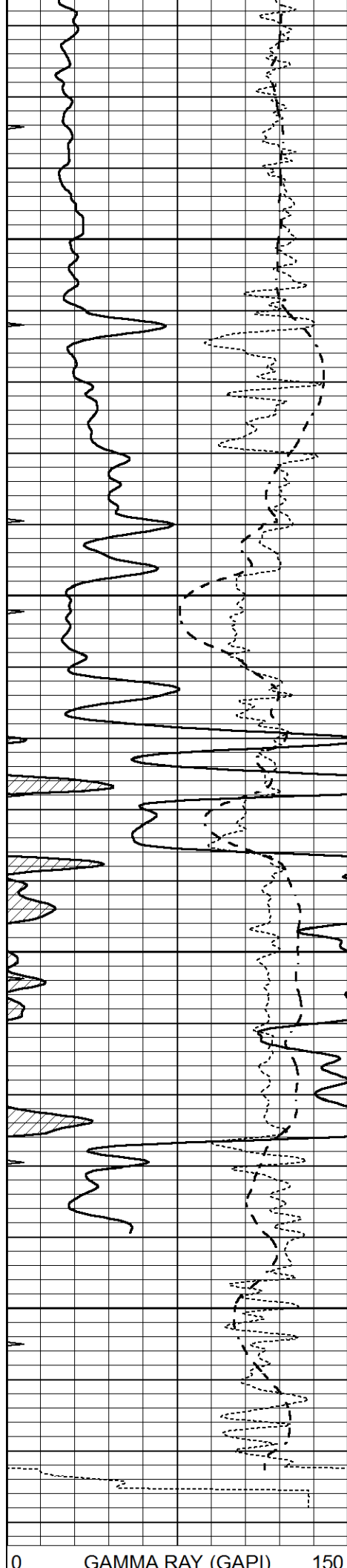
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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



4500





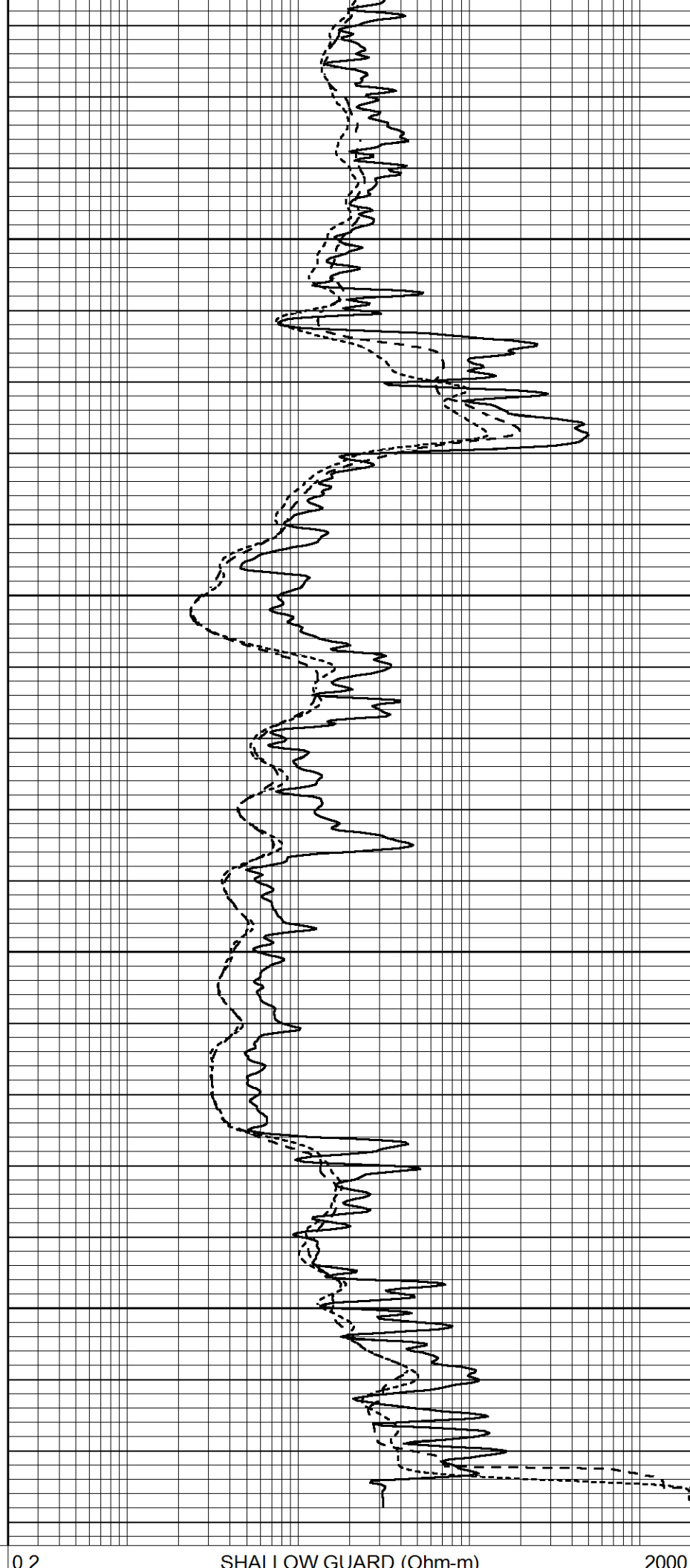
4550

4600

4650

4700

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			

Calibration Report	
Database File	8641pe.db
Dataset Pathname	pass3.2M
Dataset Creation	Sat Jul 06 05:23:12 2024

Dual Induction Calibration Report	
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Serial-Model:	PROBE8-DILG
Surface Cal Performed:	Sat Jul 06 03:46:43 2024
Downhole Cal Performed:	Mon Aug 14 00:39:25 2023
After Survey Verification Performed:	Mon Jul 28 11:08:27 2008

Surface Calibration		Readings		References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	660.000	12.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	650.000	1.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739

Downhole Calibration		Readings		References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000
LL3		7.500	V		1500.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		3800.000	mmho-m		

After Survey Verification		Readings		Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
LL3		1.000	Ohm-m		1.000	Ohm-m		
		0.000	Ohm-m		0.000	Ohm-m		
		1.000	mmho-m		1.000	mmho-m		

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:	Thu Jun 13 23:56:25 2024			
Calibrator Value:	1.0	GAPI		
Background Reading:	0.0	cps		
Calibrator Reading:	1.0	cps		
Sensitivity:	0.3000	GAPI/cps		

