



# DUAL INDUCTION LOG

Company INDIAN OIL COMPANY, INC.

Well WARREN #6

Field MEAIRS

County BARBER State KANSAS

Location: 1700' FNL & 1650' FEL  
S/2 - NE - SW - NE

AP1 #: 15-007-24475-0000  
SEC 35 TWP 30S RGE 12W

Permanent Datum GROUND LEVEL Elevation 1623

Log Measured From KELLY BUSHING 12' A.G.L.

Drilling Measured From KELLY BUSHING

Other Services  
CDL/CNL/PE  
MEL/SON/FF  
Elevation  
K.B. 1635  
D.F. 1633  
G.L. 1624

Date	6/27/23
Run Number	ONE
Depth Driller	4733
Depth Logger	4734
Bottom Logged Interval	4732
Top Log Interval	00
Casing Driller	8 5/8"@225'
Casing Logger	225
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.4/54
pH / Fluid Loss	9.0/11.2
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.580@98F
Rmf @ Meas. Temp	.435@98F
Rmc @ Meas. Temp	.696@98F
Source of Rmf / Rmc	MEASUREMENT
Rm @ BHT	.462@123F
Time Circulation Stopped	3 HOURS
Time Logger on Bottom	6:00 A.M.
Maximum Recorded Temperature	123F
Equipment Number	922339
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	AARON YOUNG

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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.

15-007-24475-0000

Comments

THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395  
DIRECTIONS  
MEDICINE LODGE, KS., N. ON HWY 281 TO "AMBER RD., E. TO "RESORT RD.", BACK SOUTH TO  
(ARROWHEAD LAKE ENTRANCE) AFTER 200' TAKE LEFT FORK AND FOLLOW TRAIL

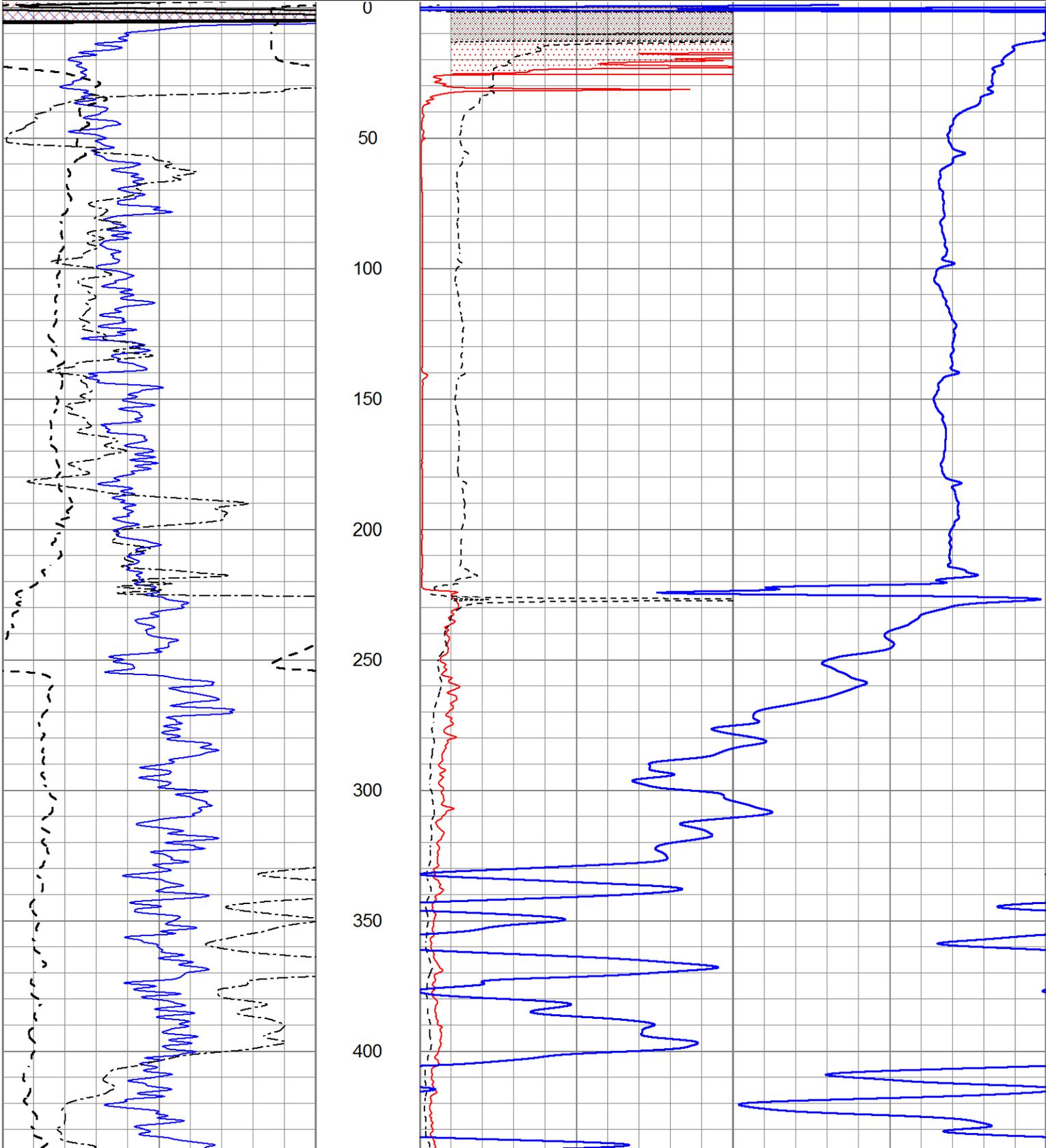


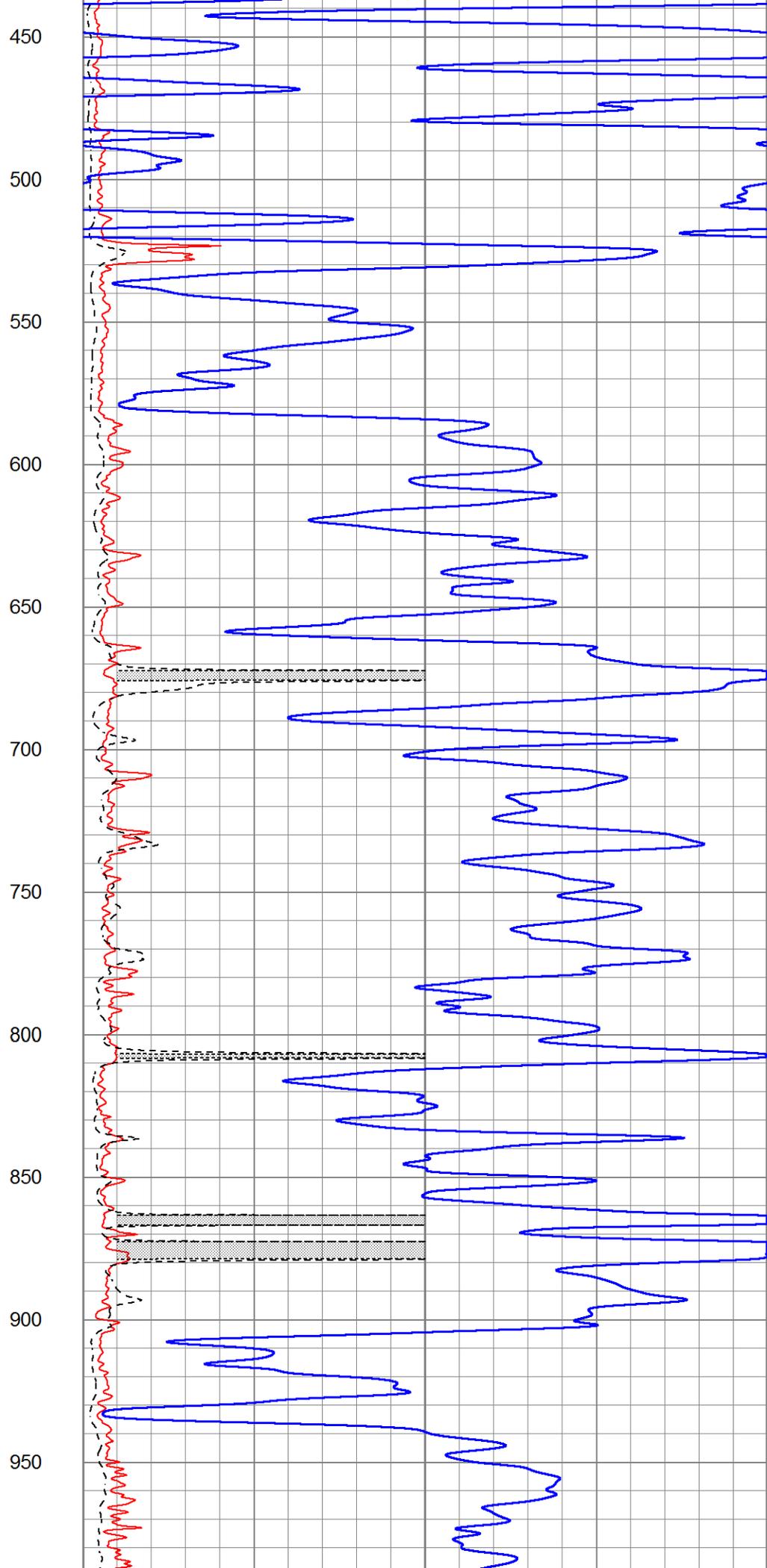
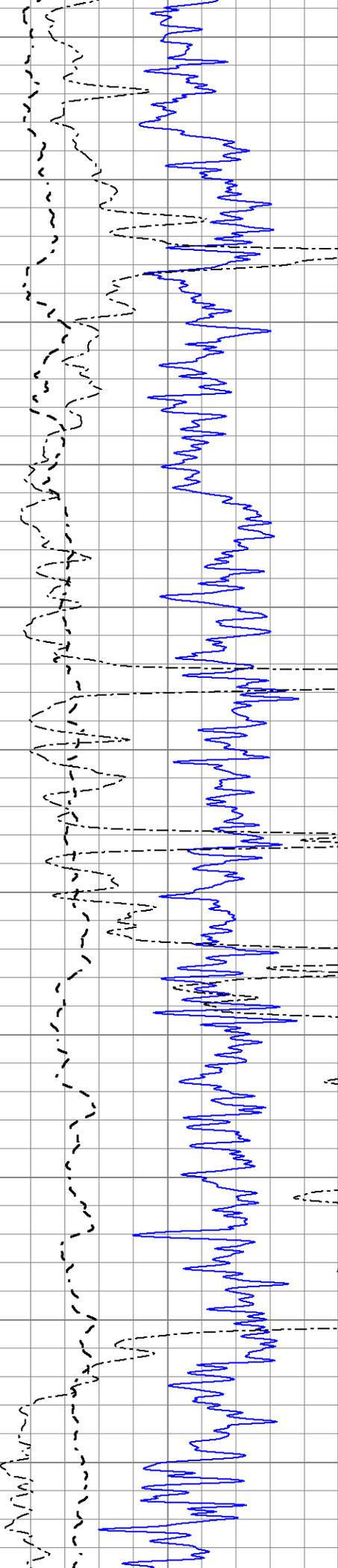
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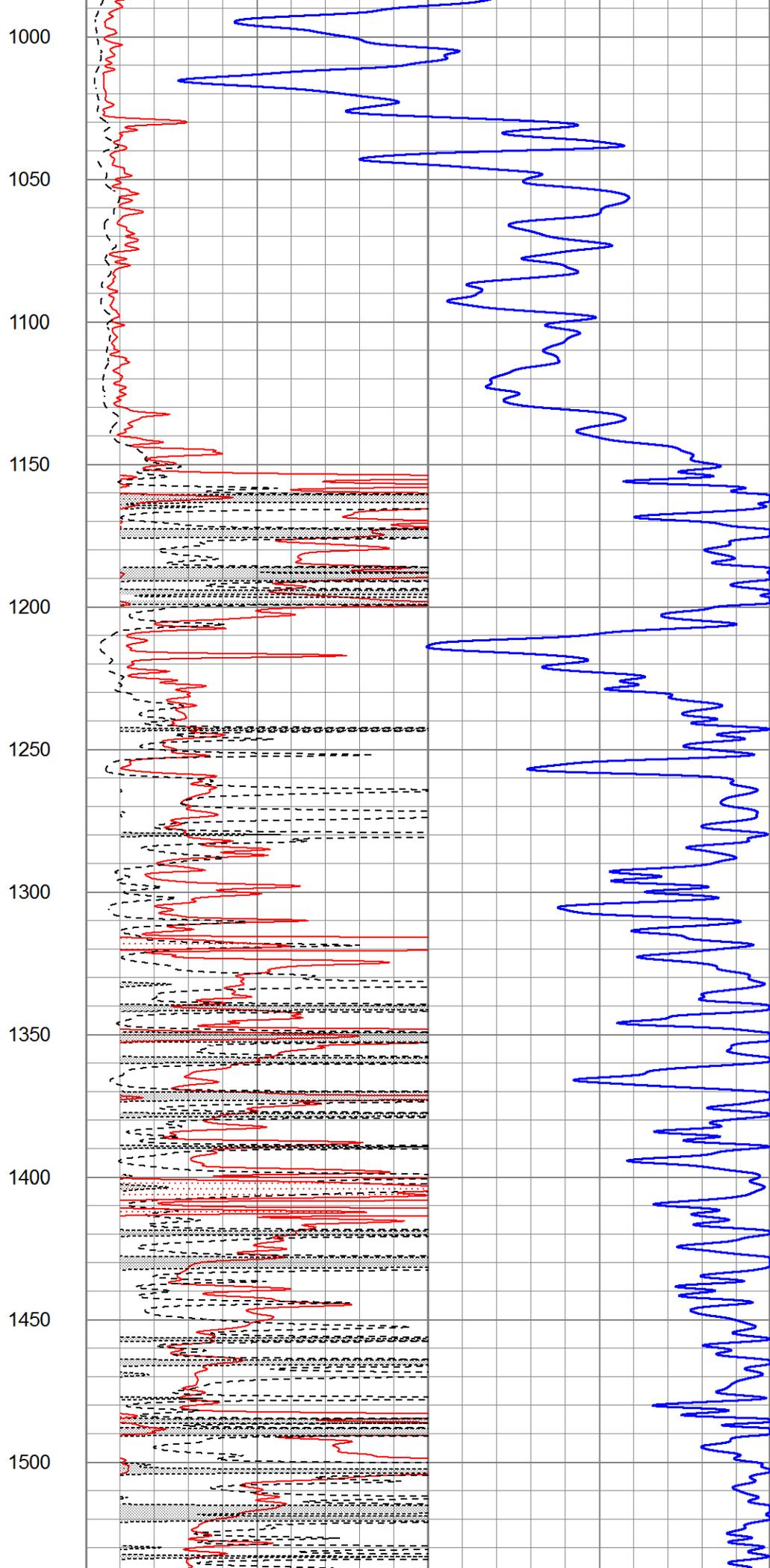
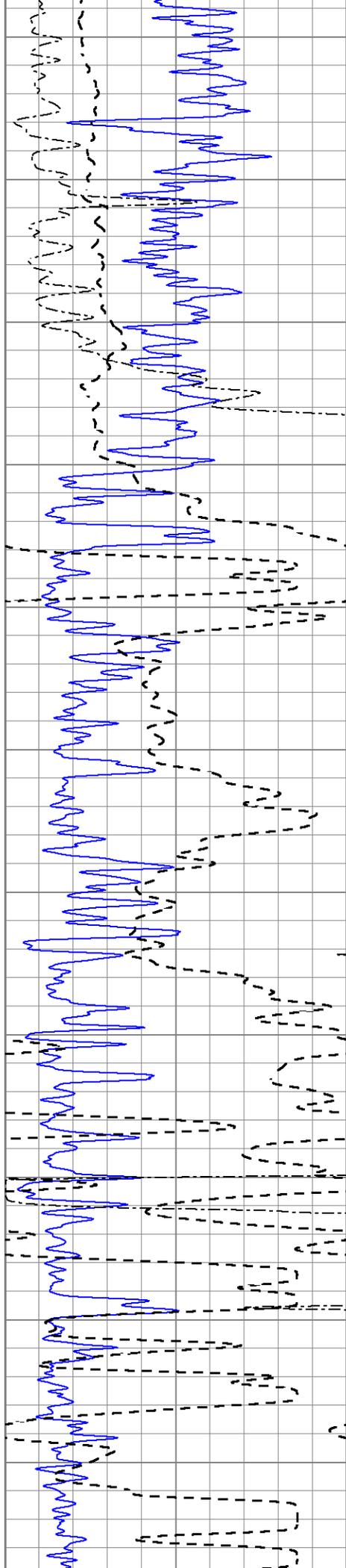
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 Presentation Format \_dil2  
 Dataset Creation Tue Jun 27 08:23:29 2023  
 Charted by Depth in Feet scaled 1:600

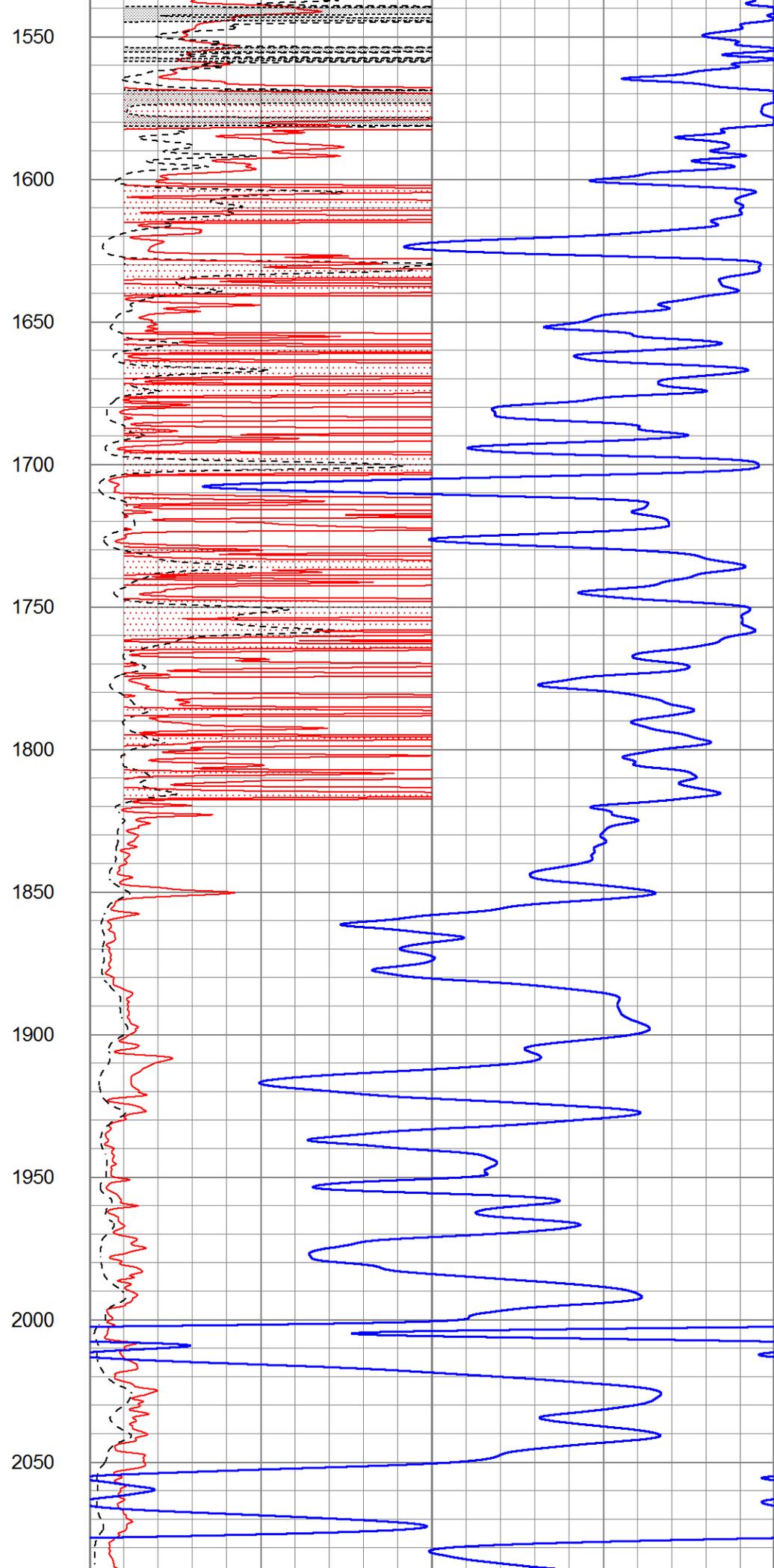
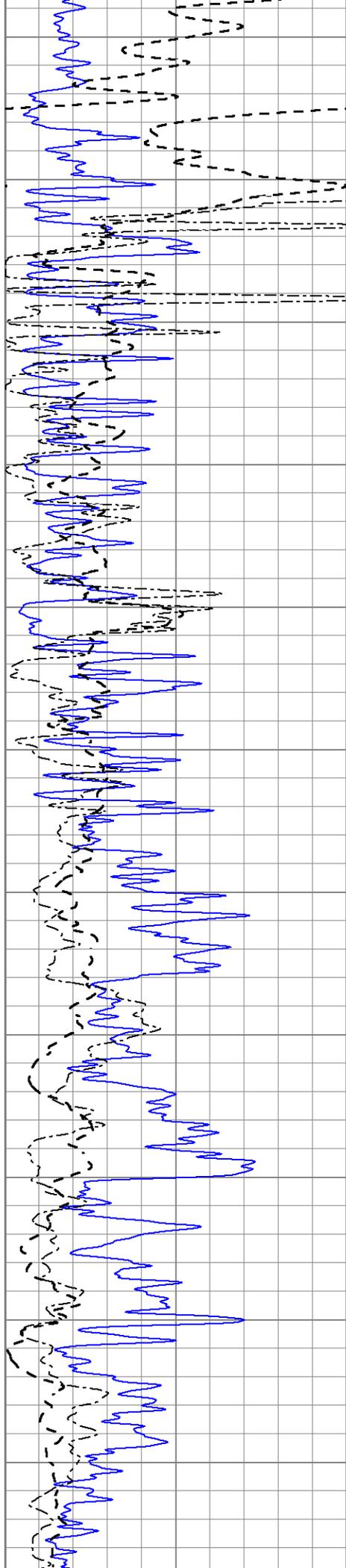
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-100	SP (mV)	100
0	RWA (Ohm-m)	1

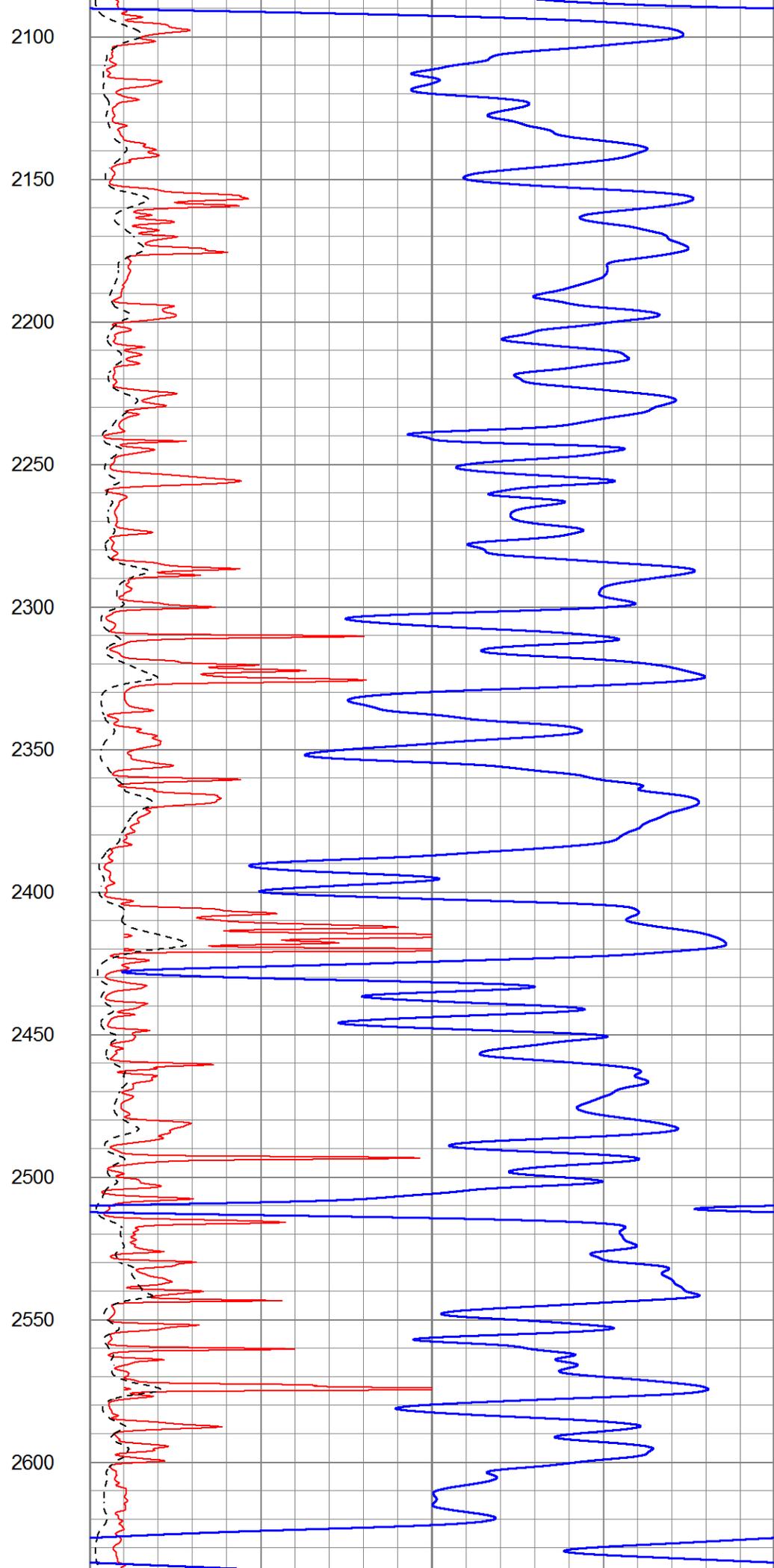
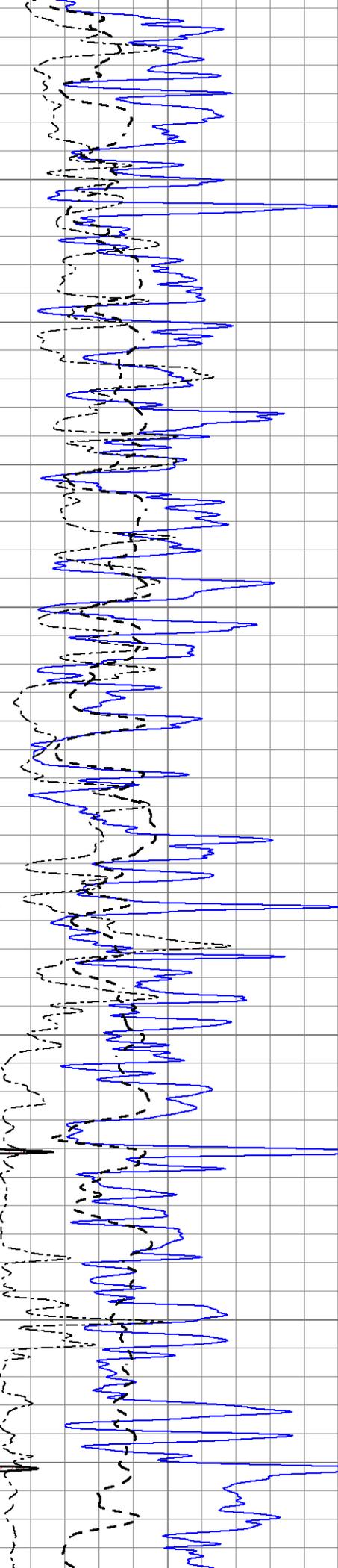
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0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500

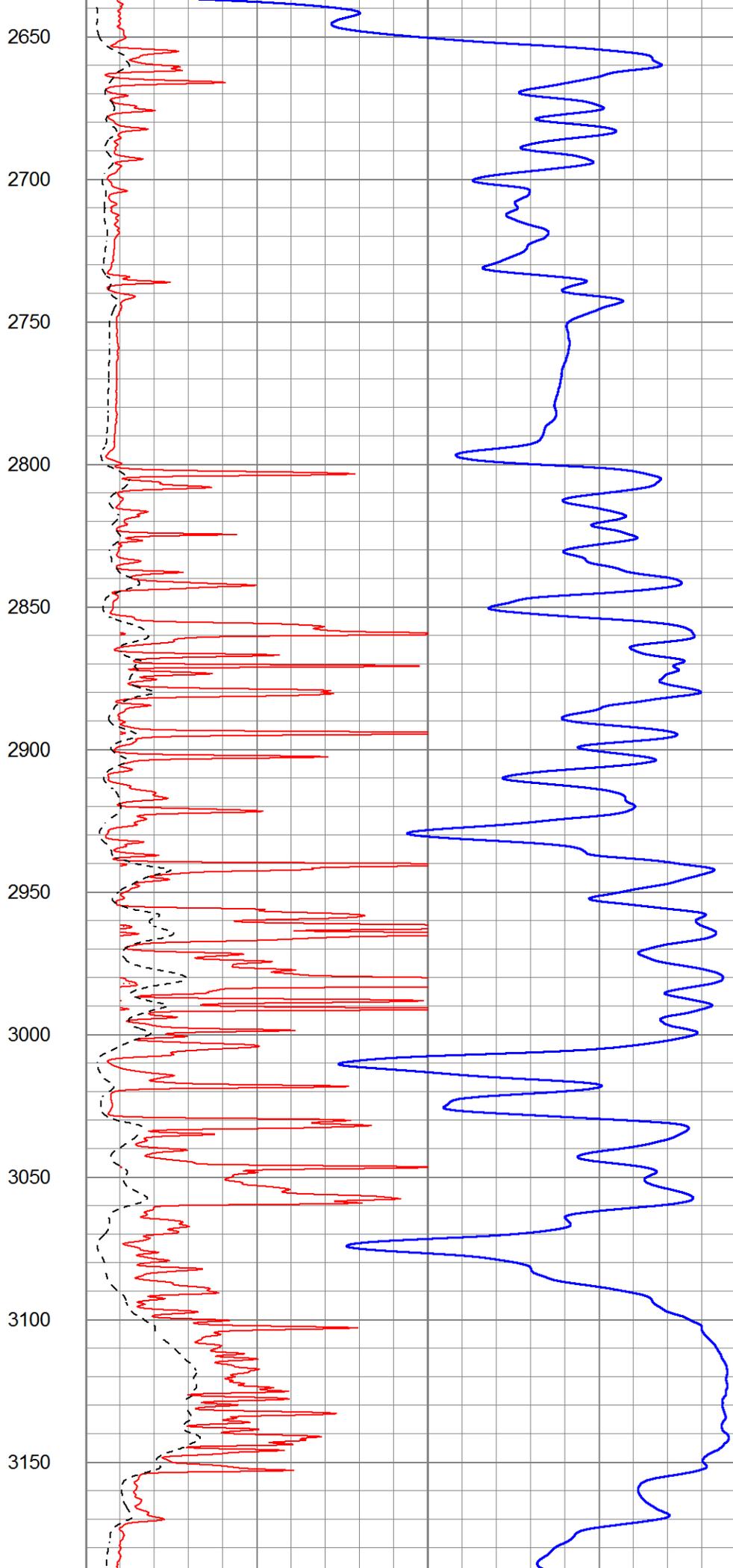
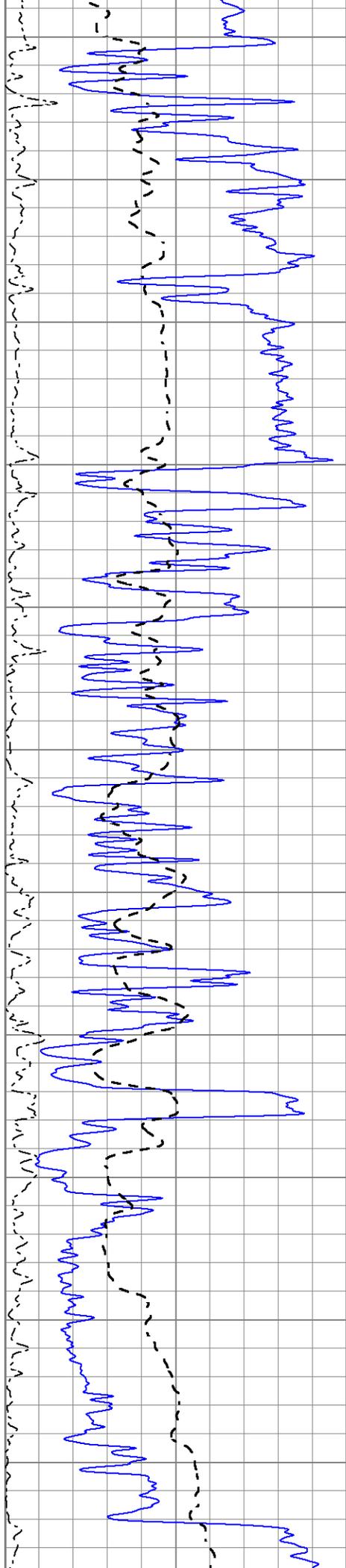


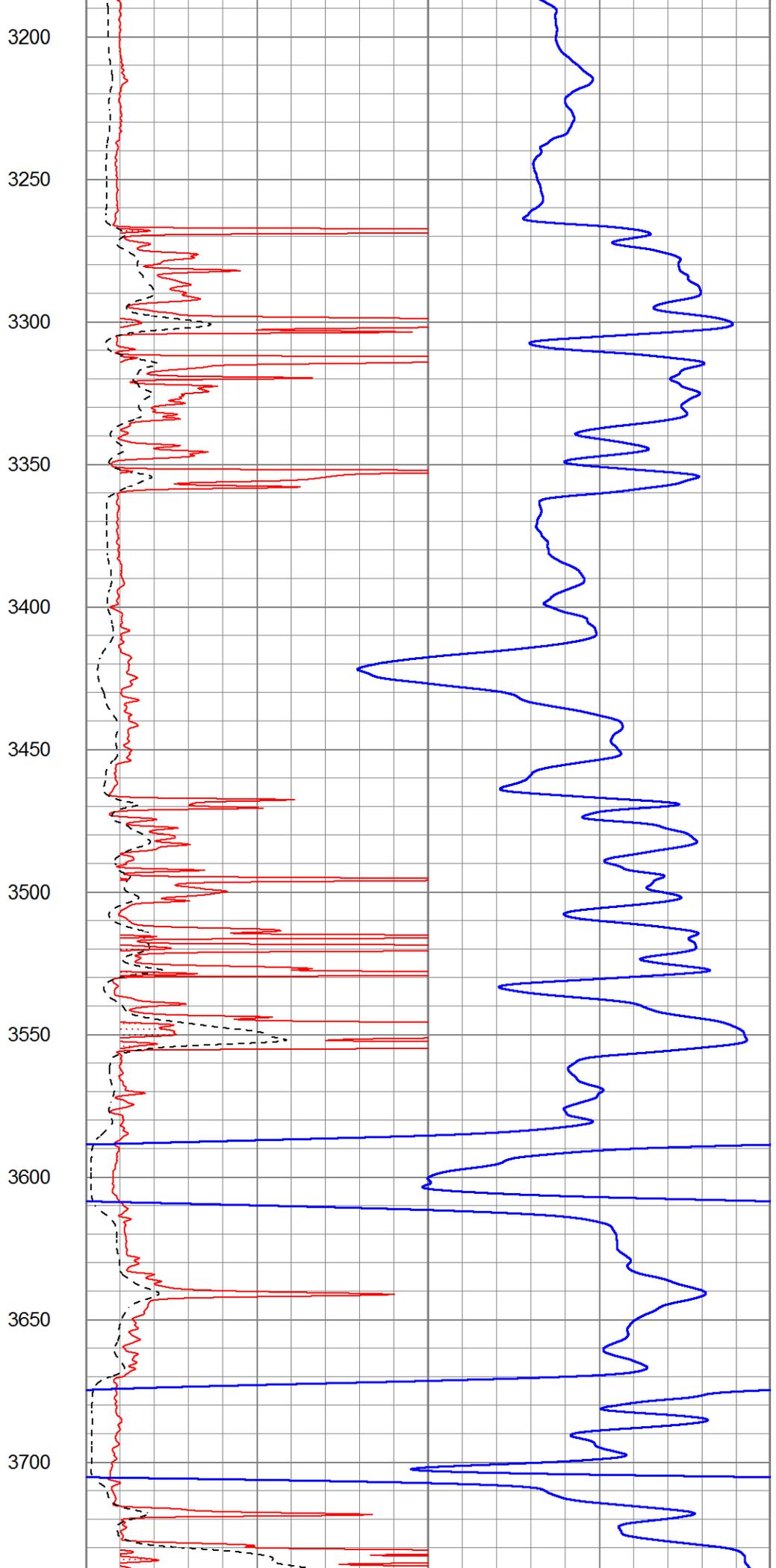
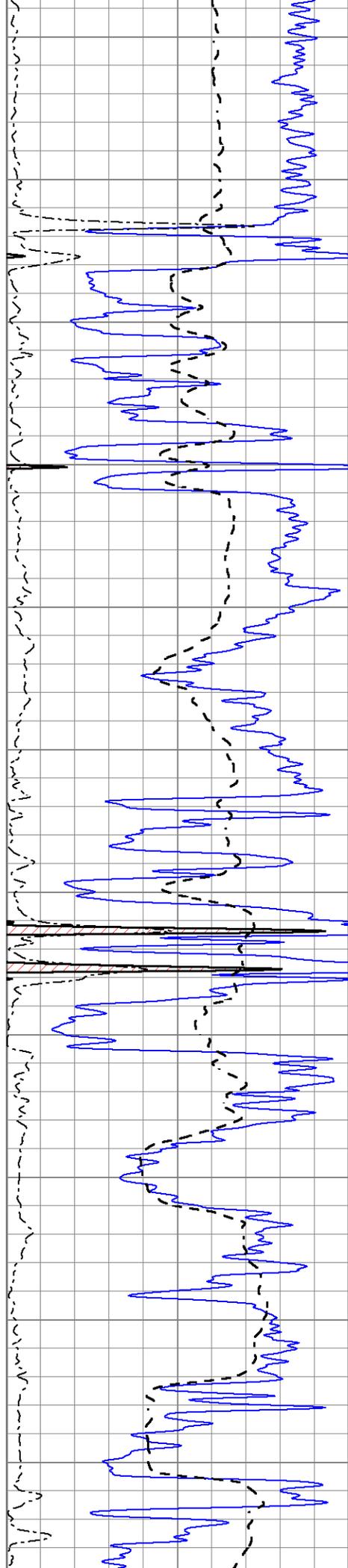


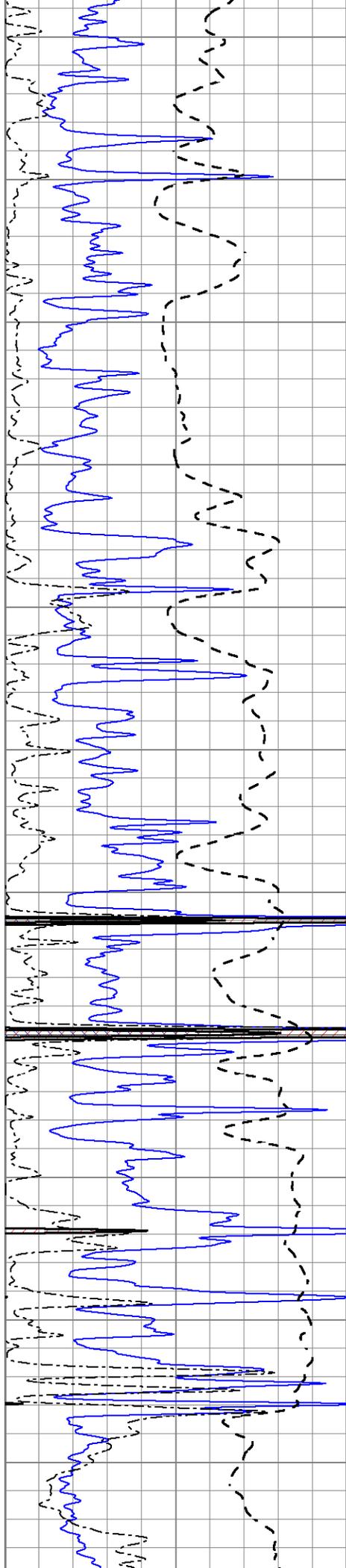












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3800

3850

3900

3950

4000

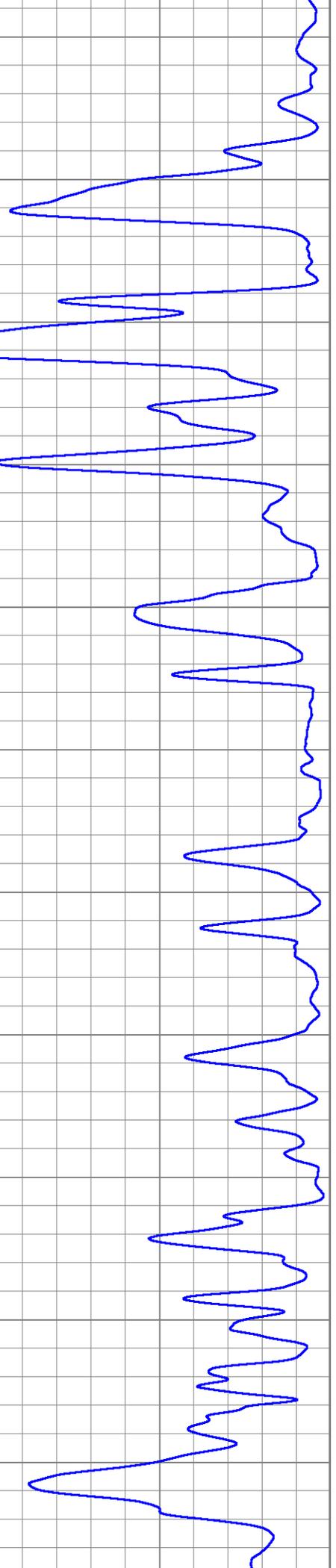
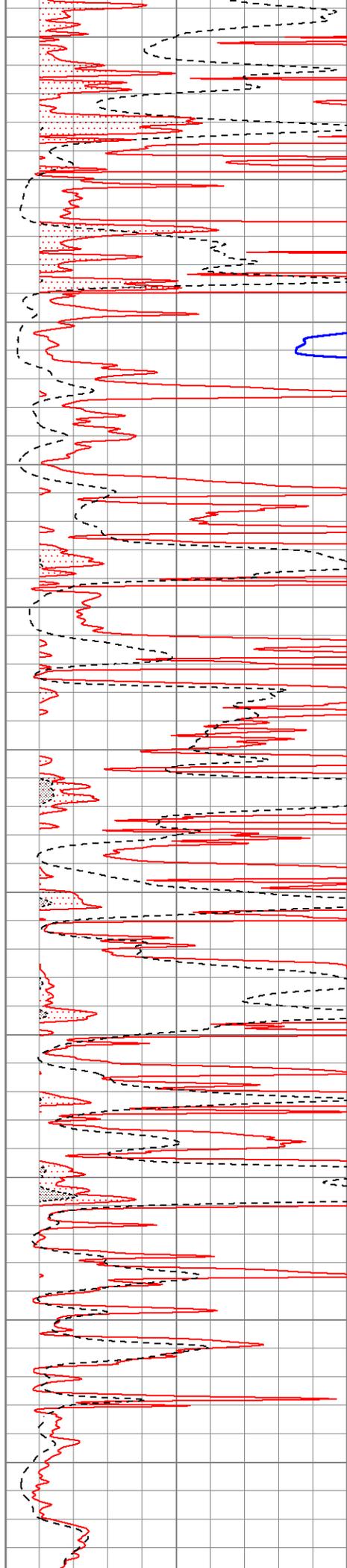
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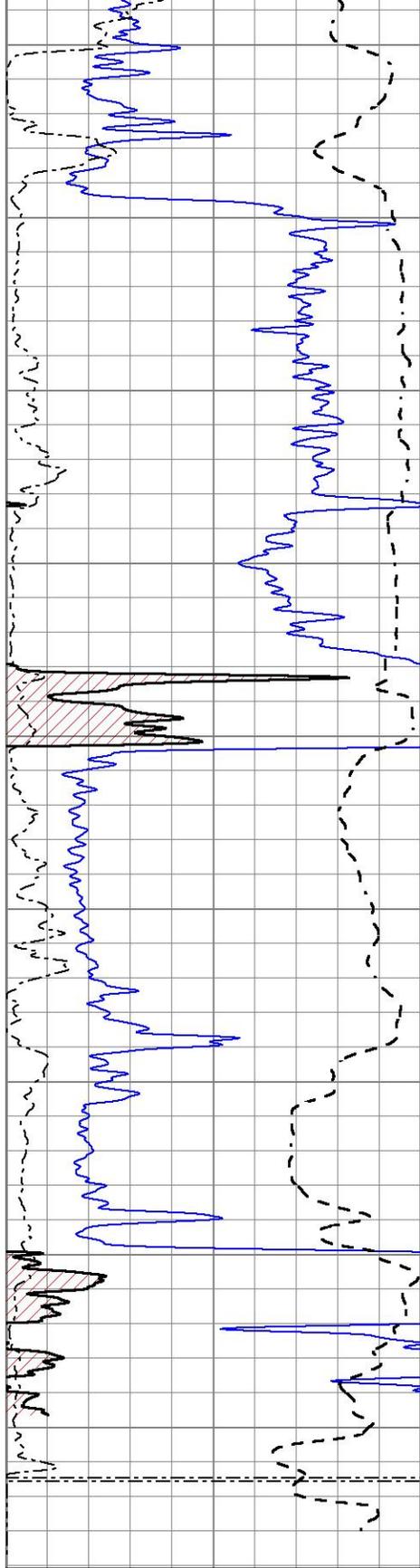
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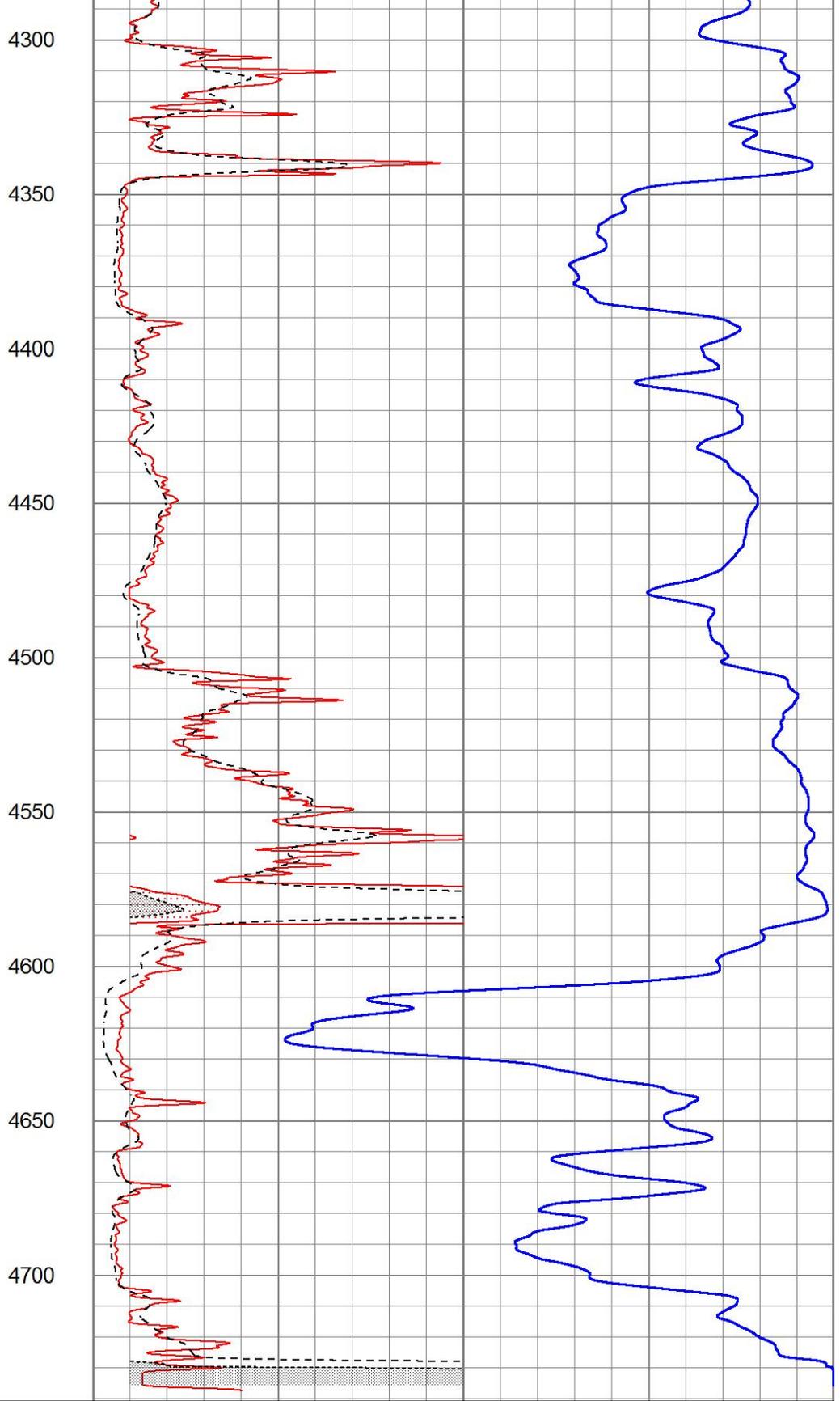
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0	Gamma Ray (GAPI)	150
-100	SP (mV)	100
0	RWA (Ohm-m)	1



1000	CILD (mmho/m)	0
0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500



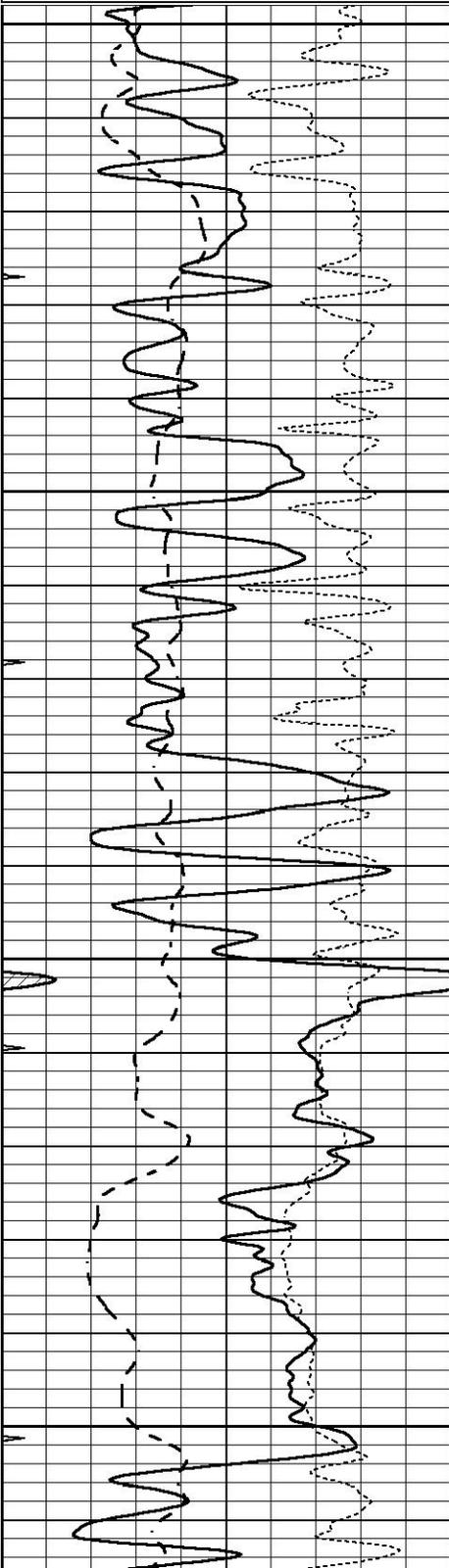
# MAIN SECTION

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 Presentation Format \_dil  
 Dataset Creation Tue Jun 27 08:23:29 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

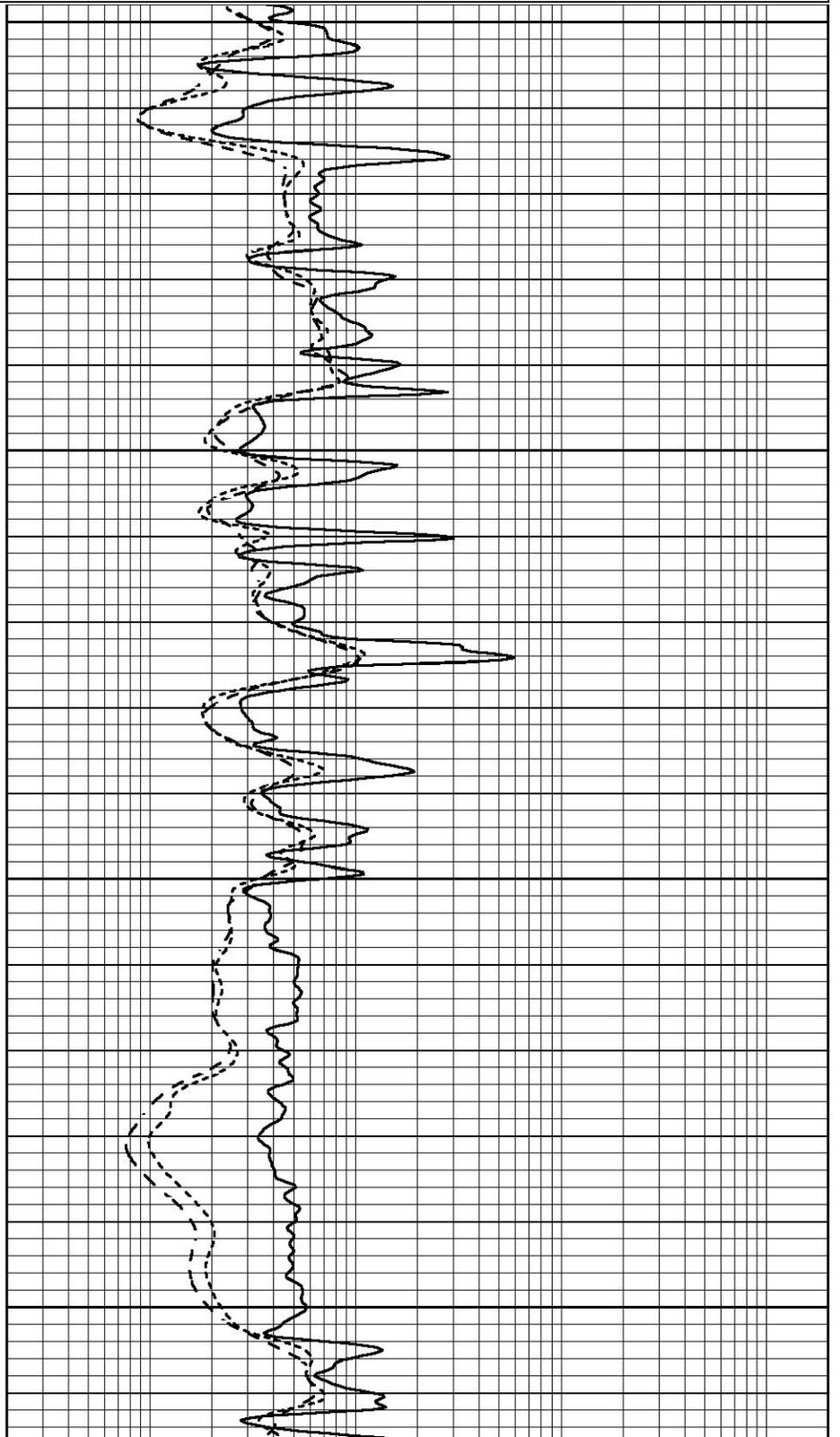


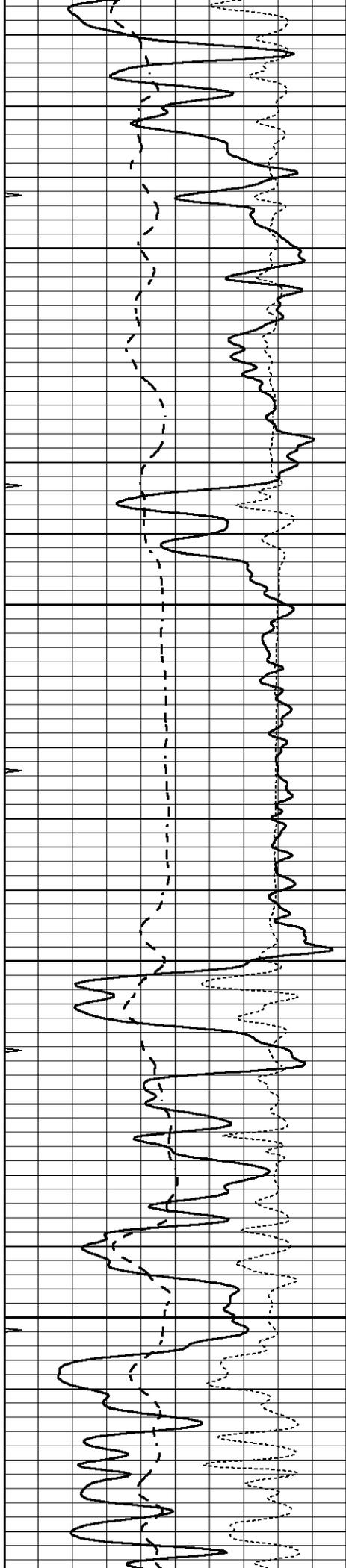
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2650



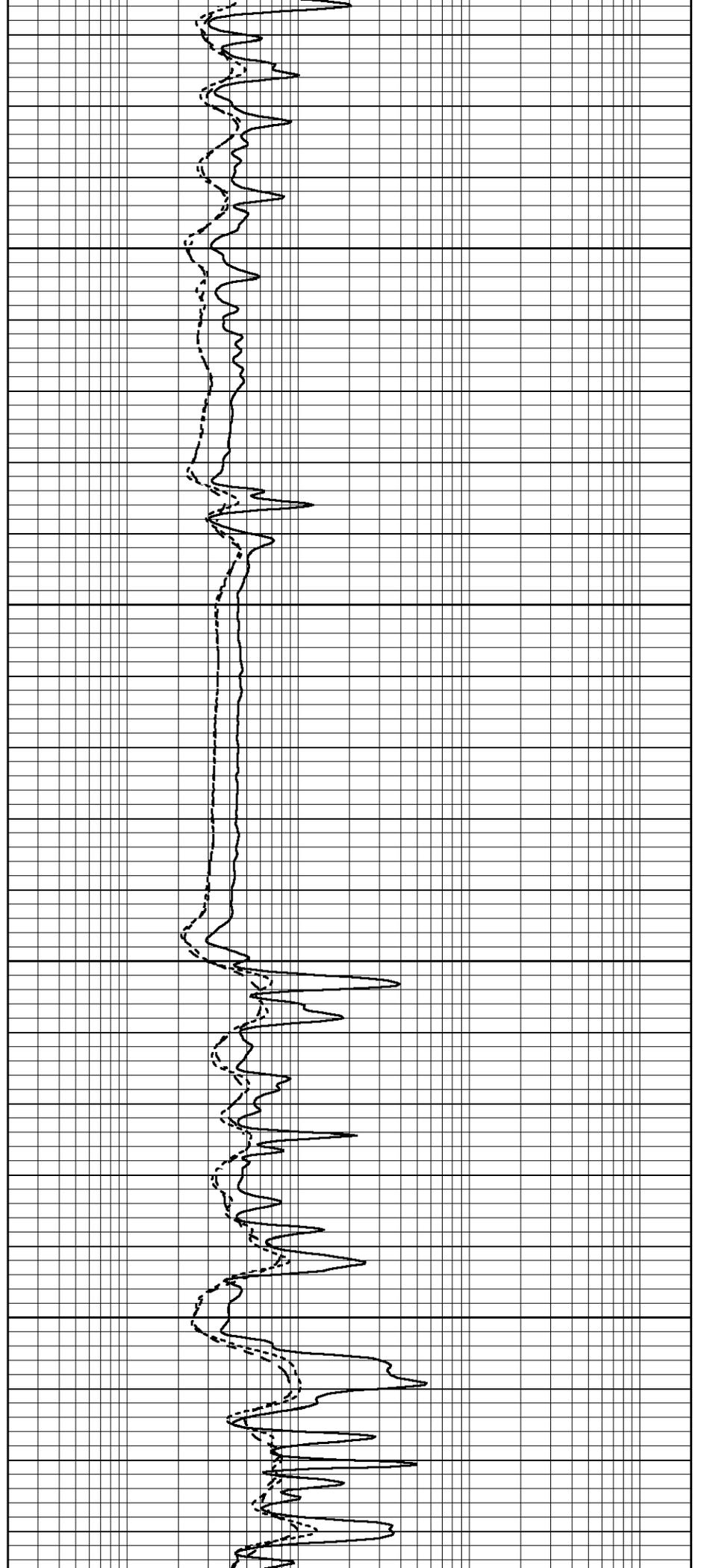


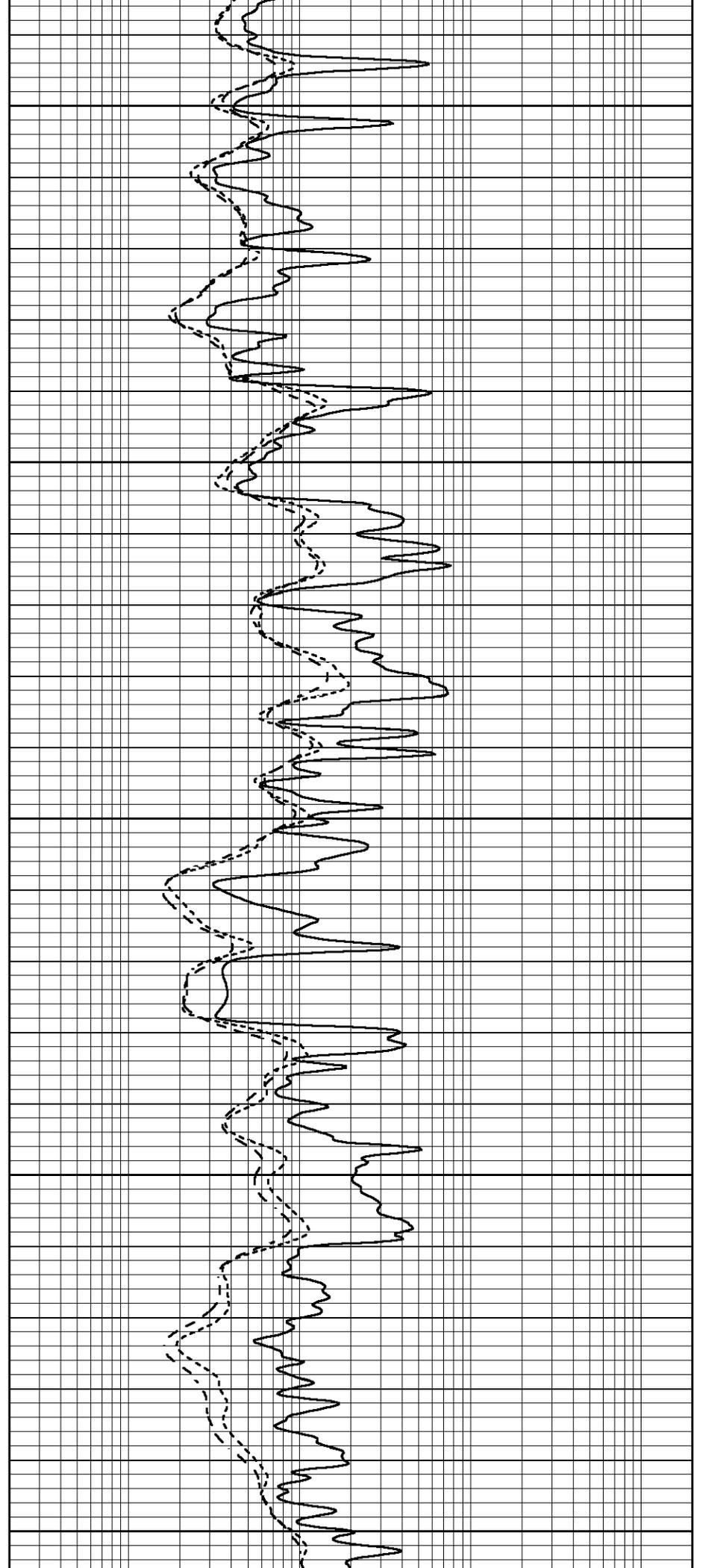
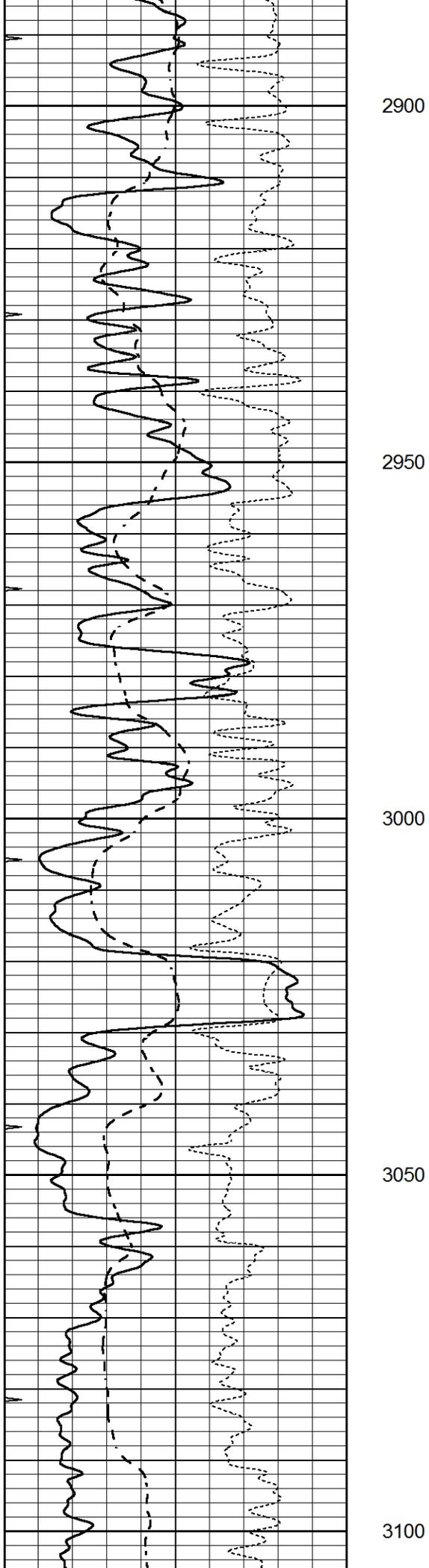
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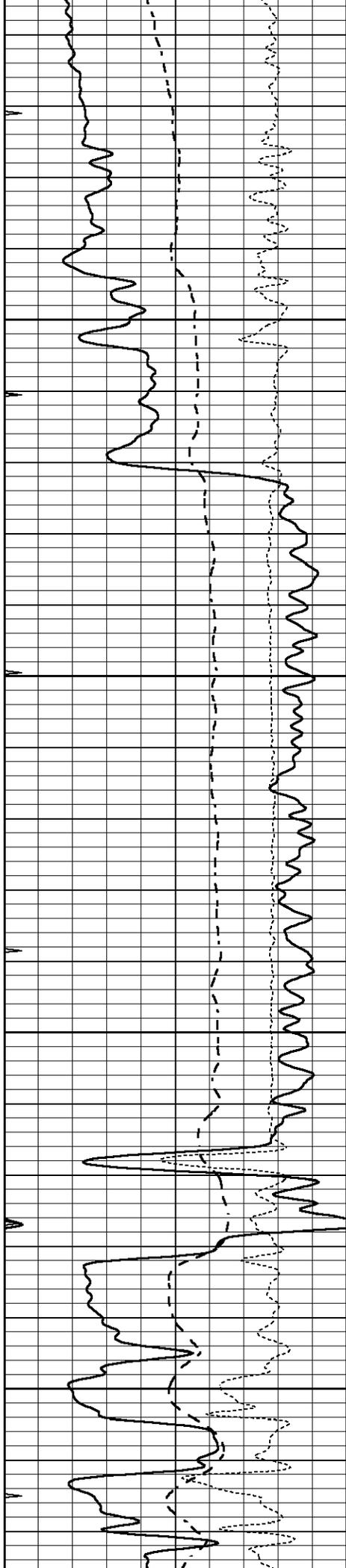
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2850





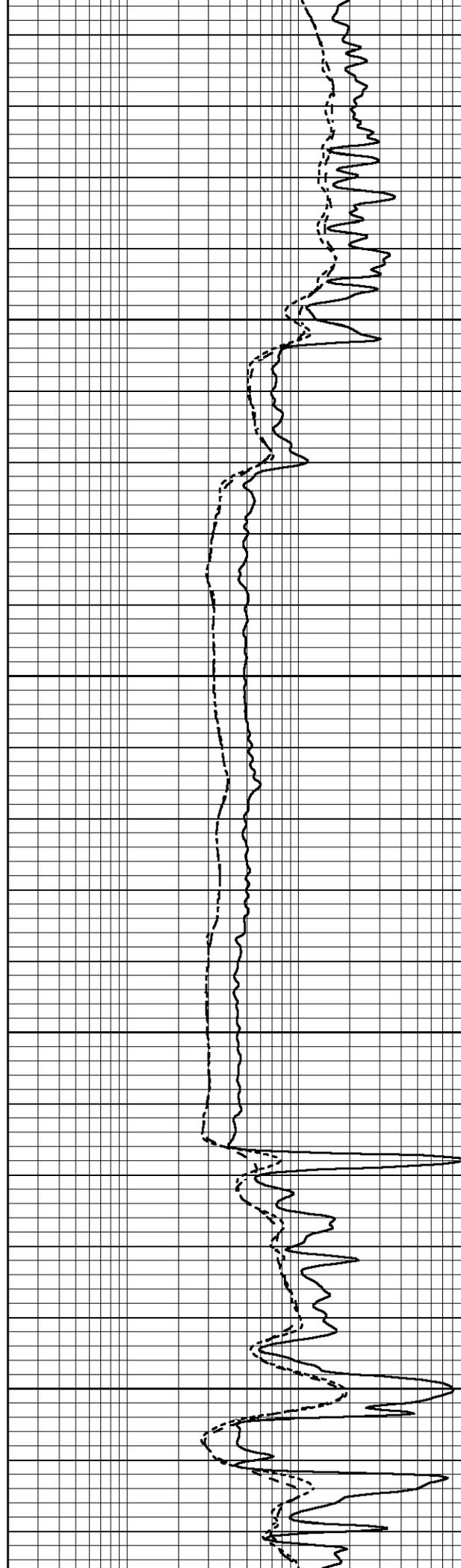


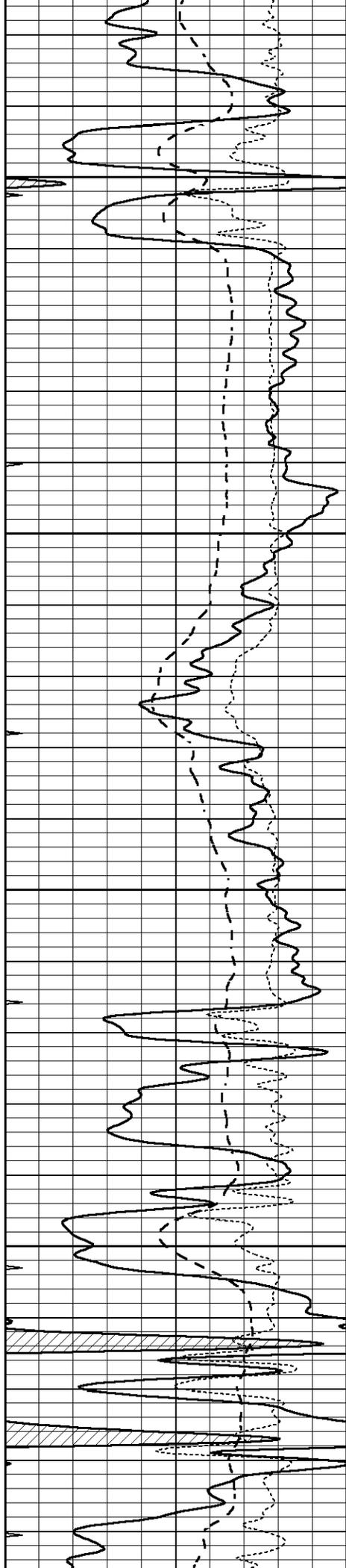
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3200

3250

3300



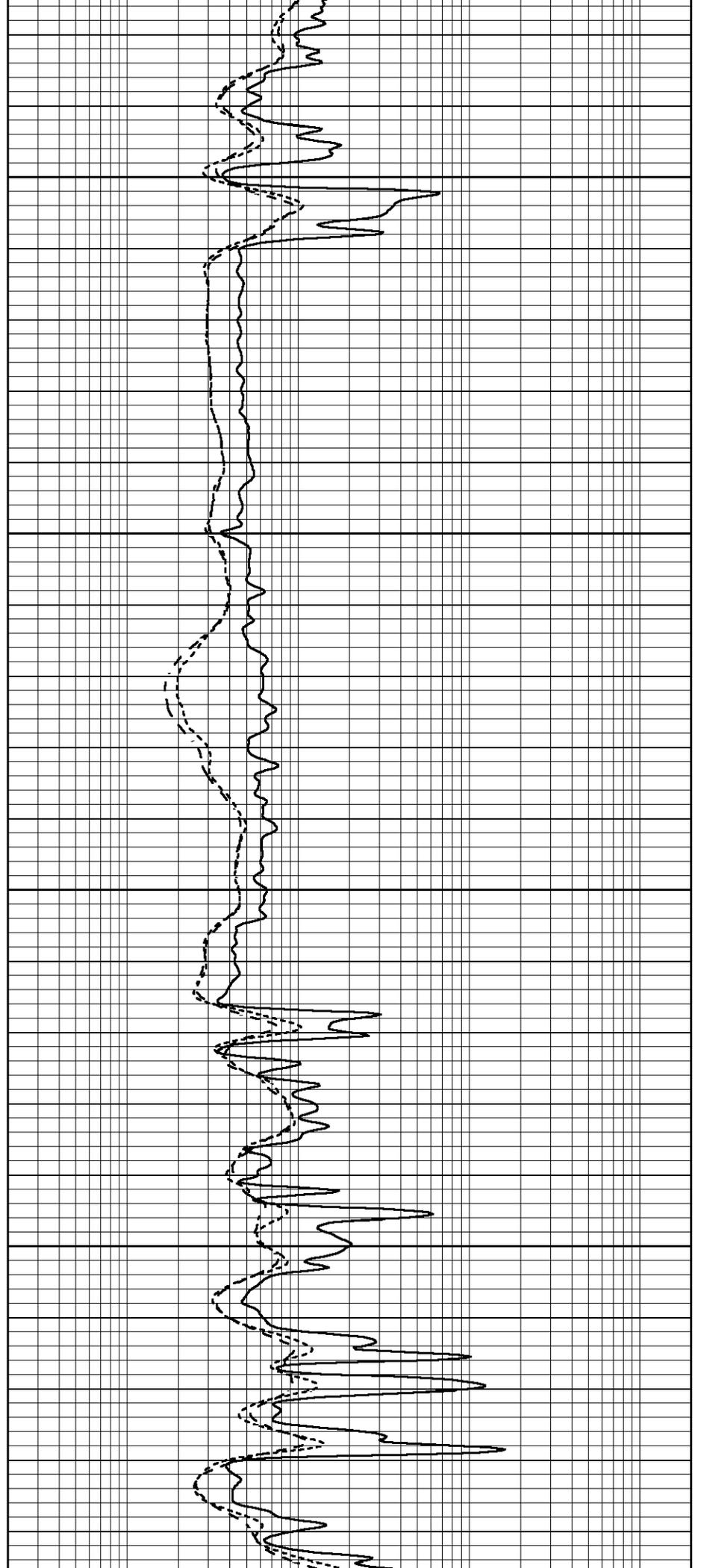


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3400

3450

3500



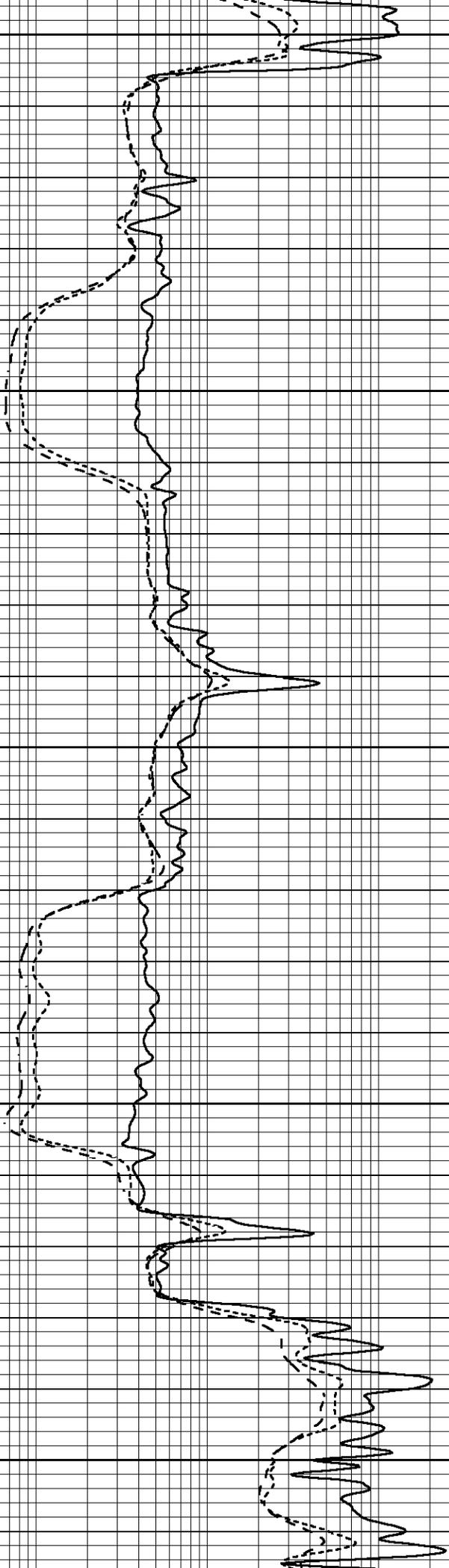
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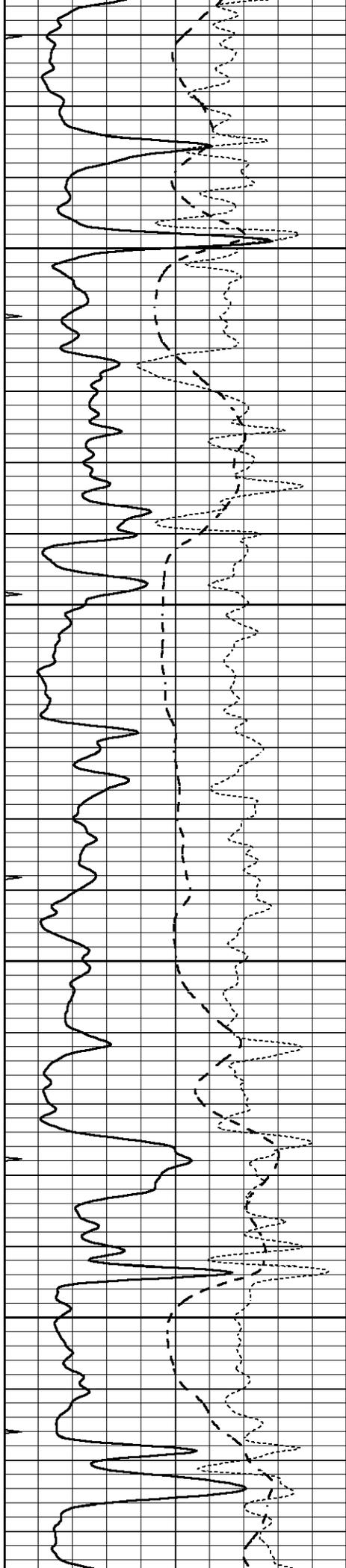
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3650

3700

3750



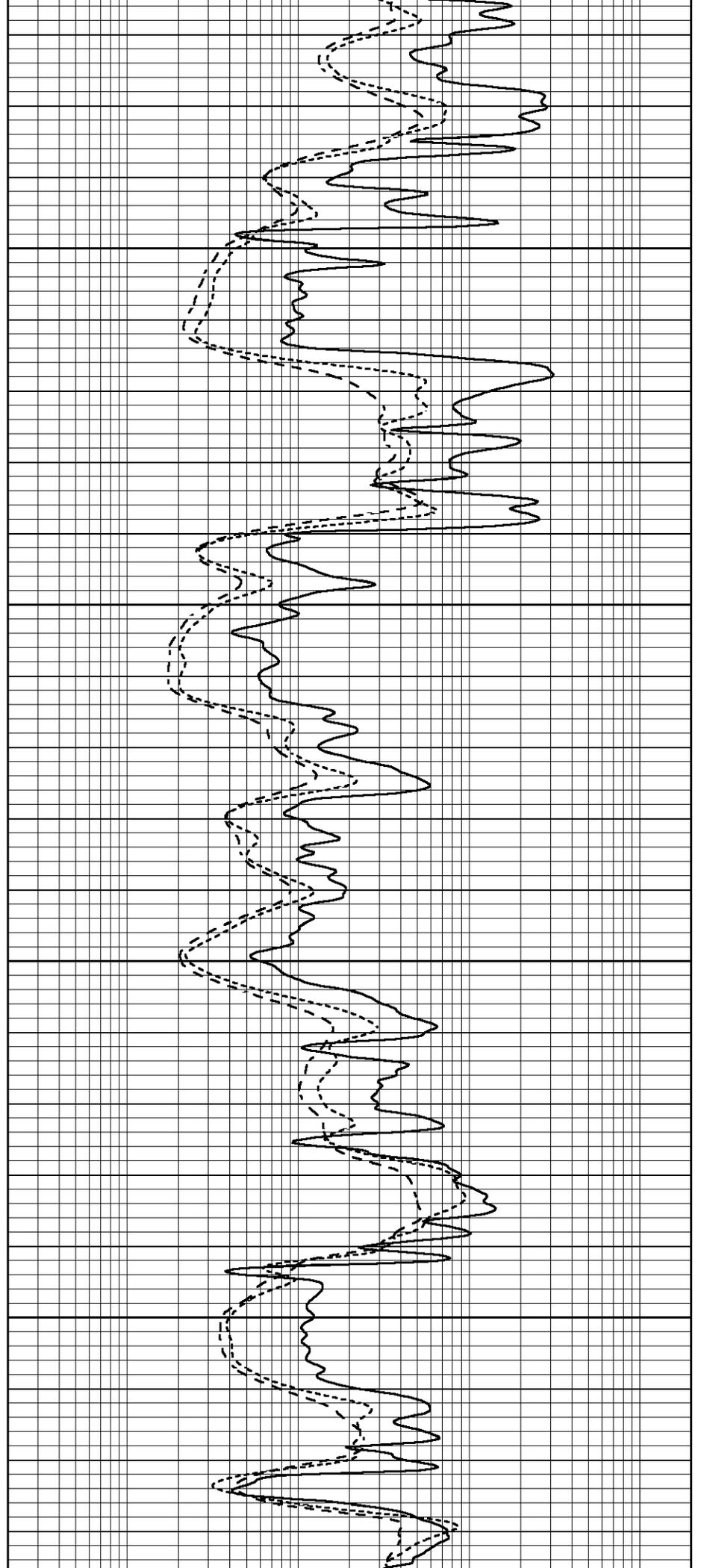


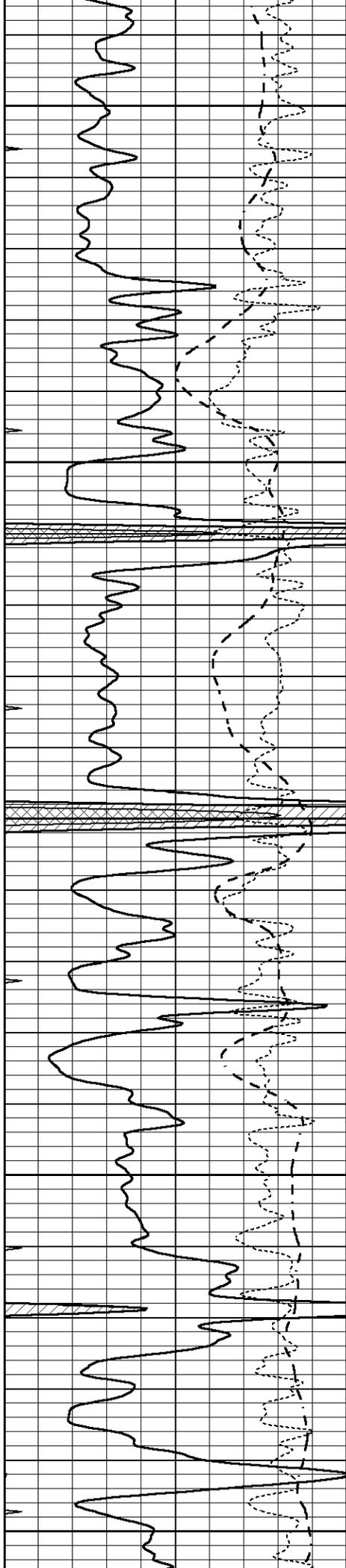
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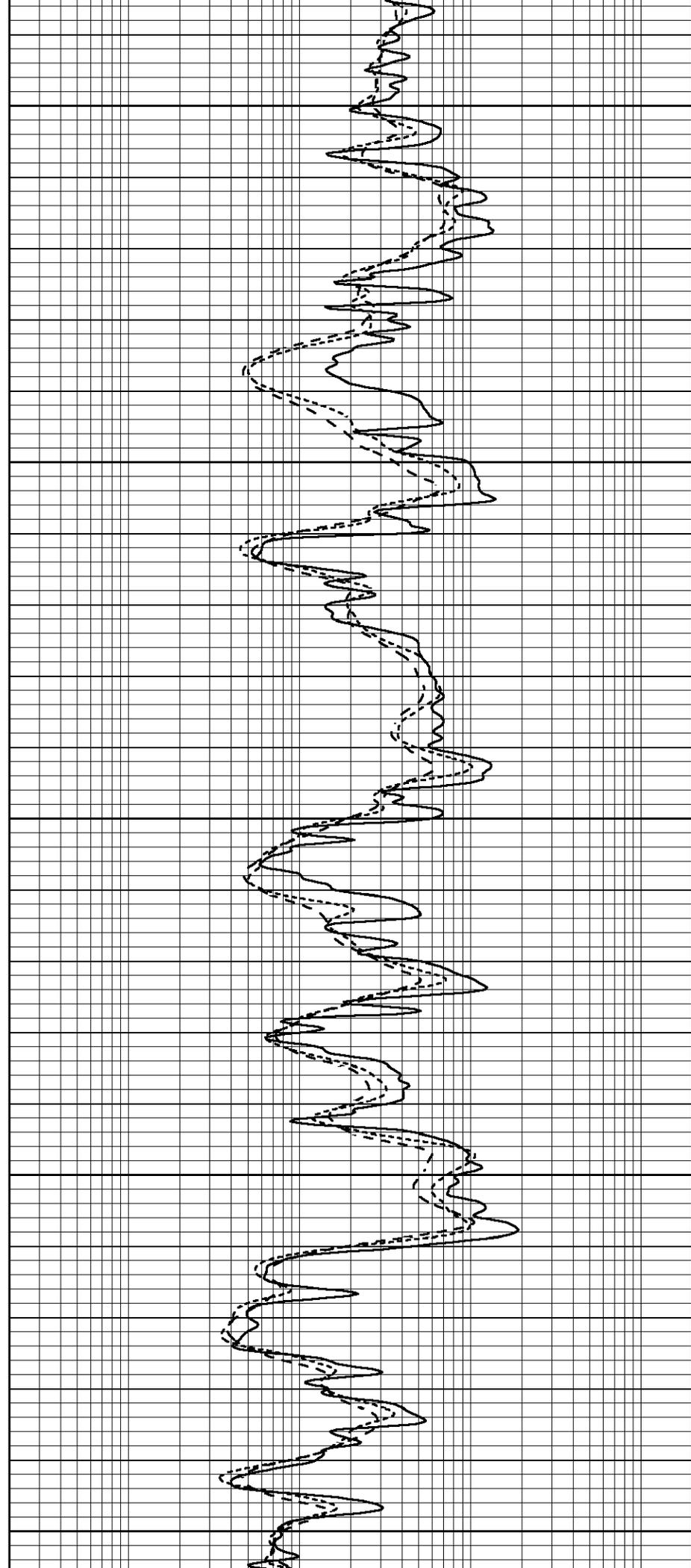
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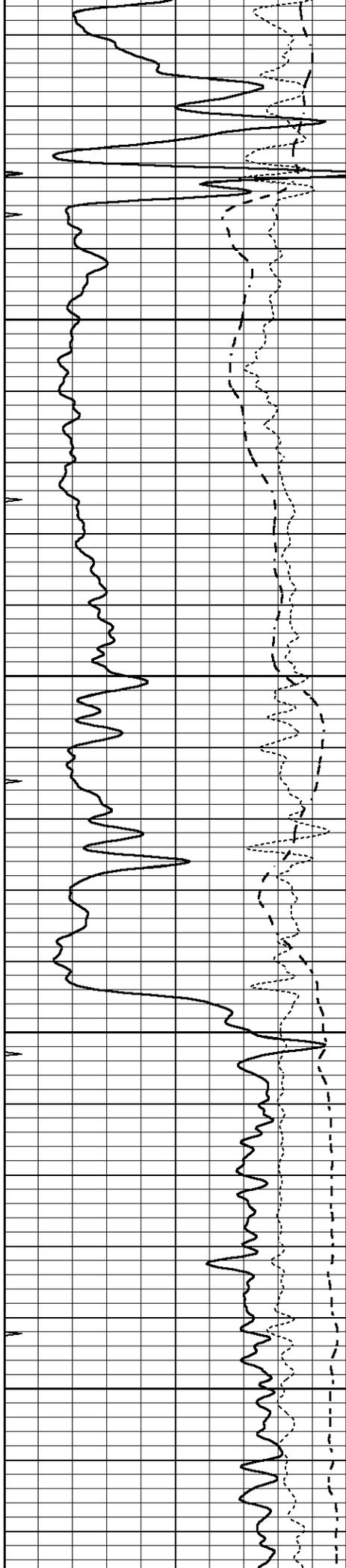
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4200



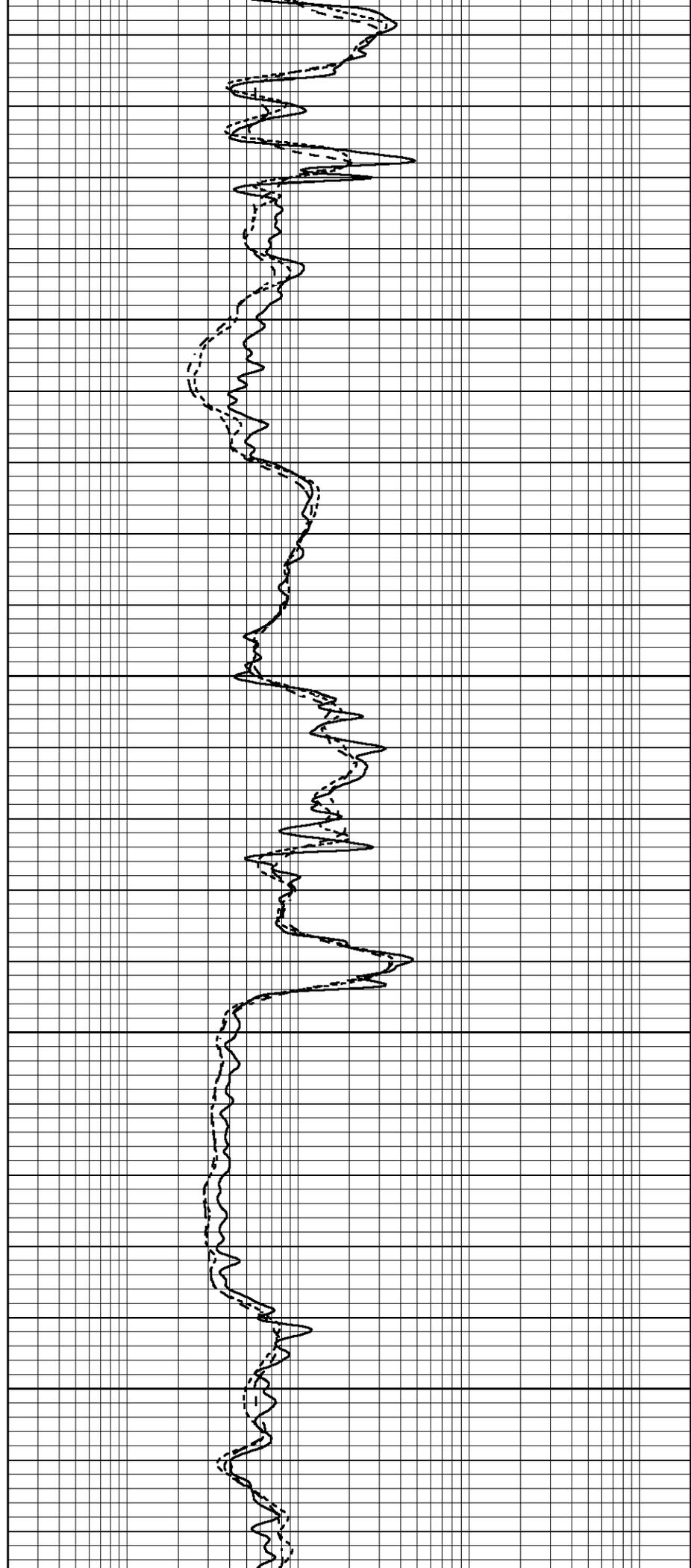


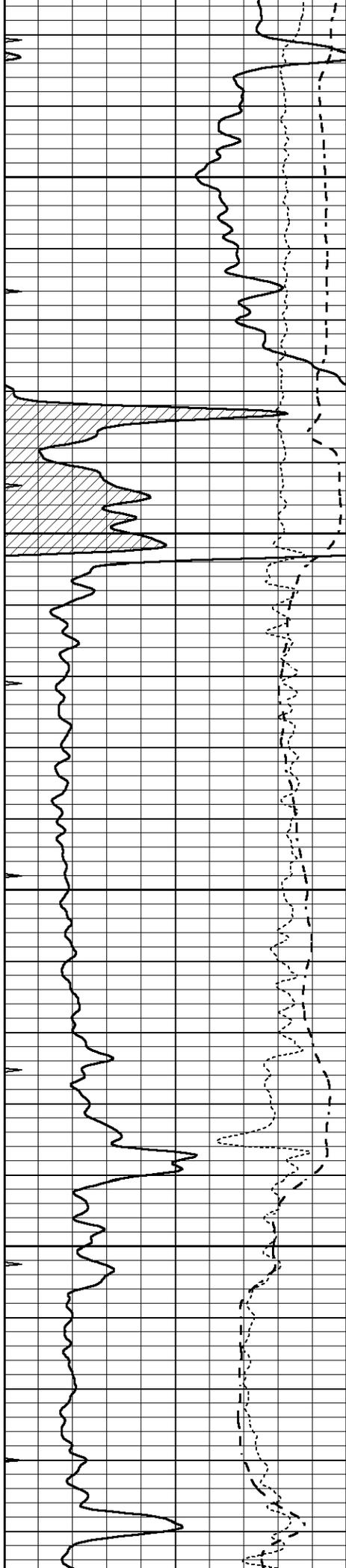
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4350

4400



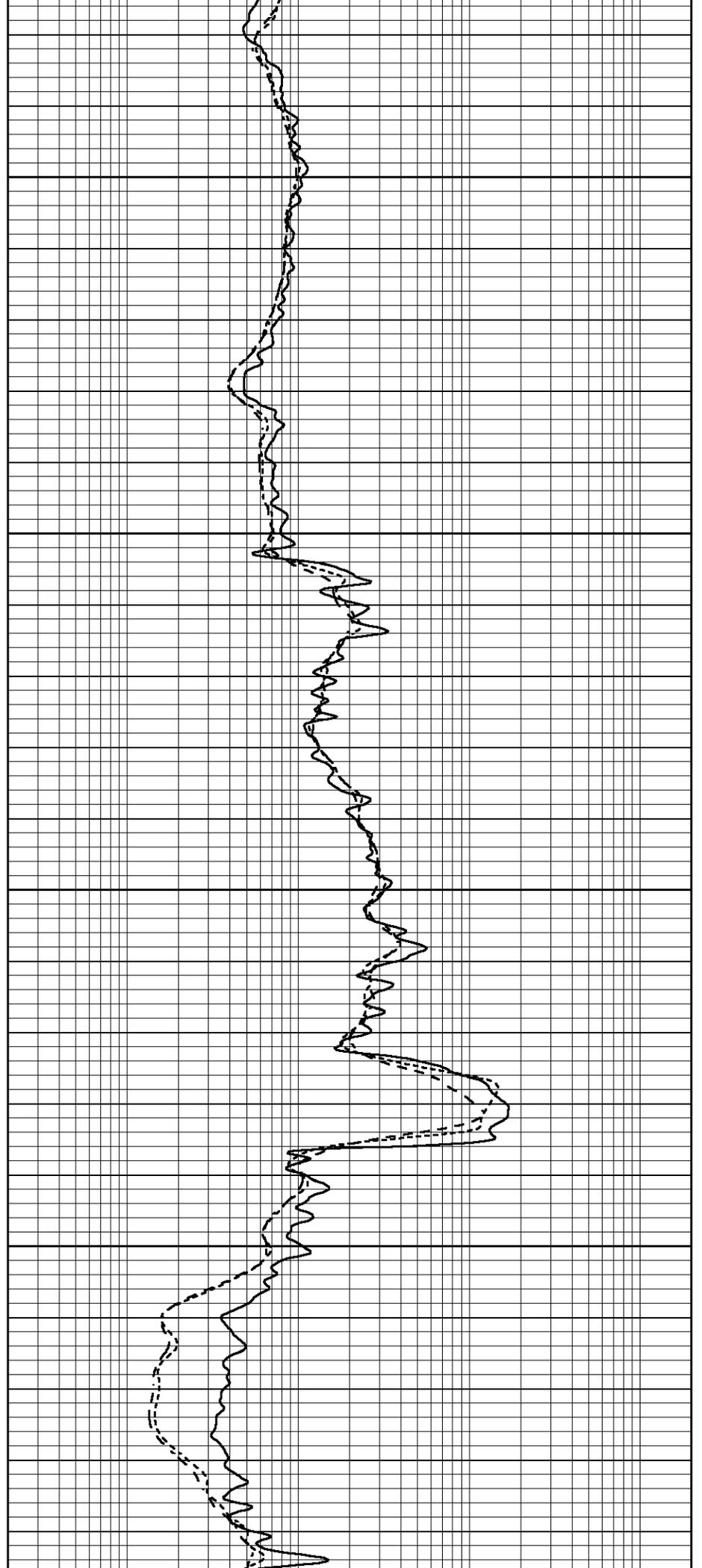


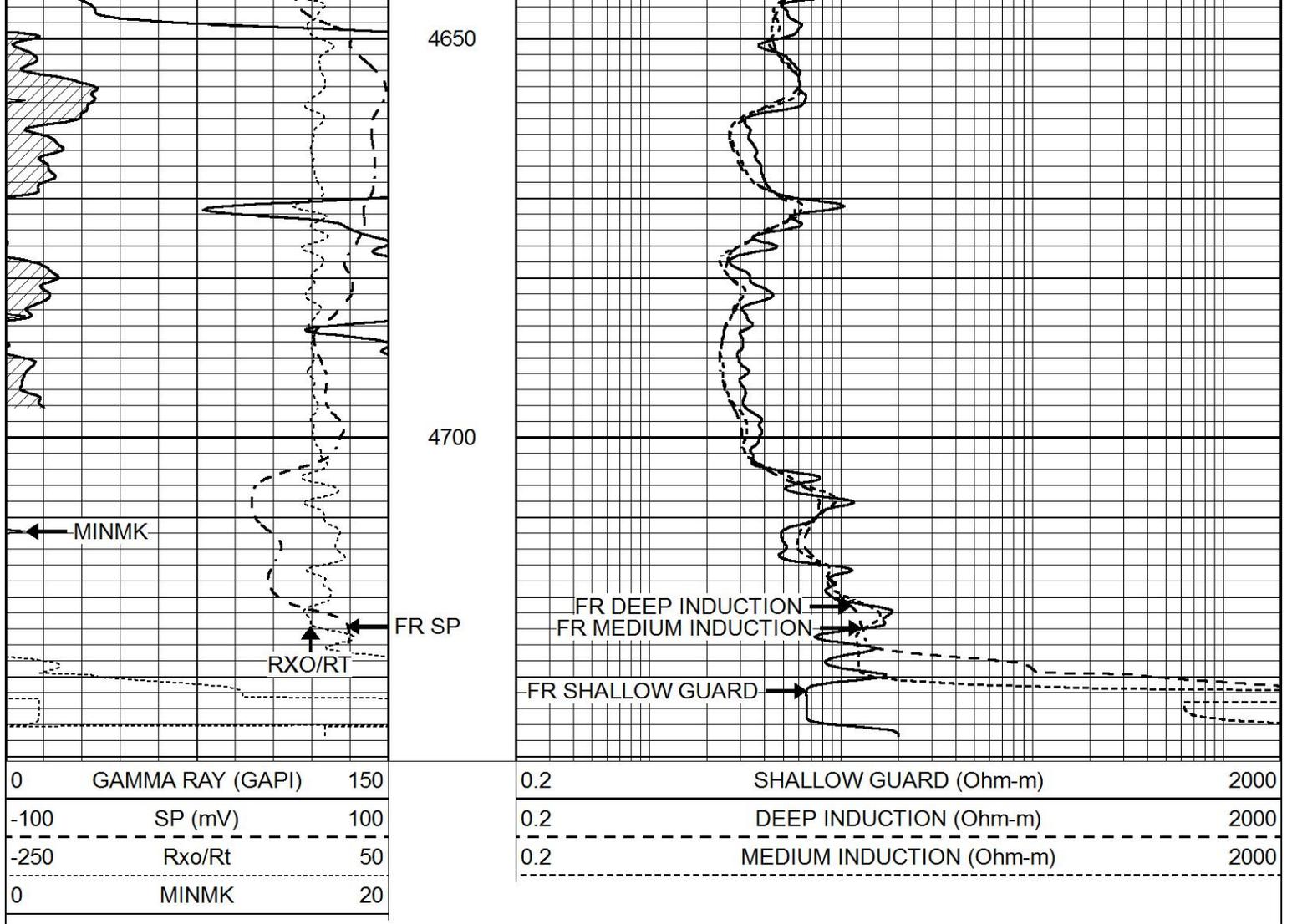
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4600

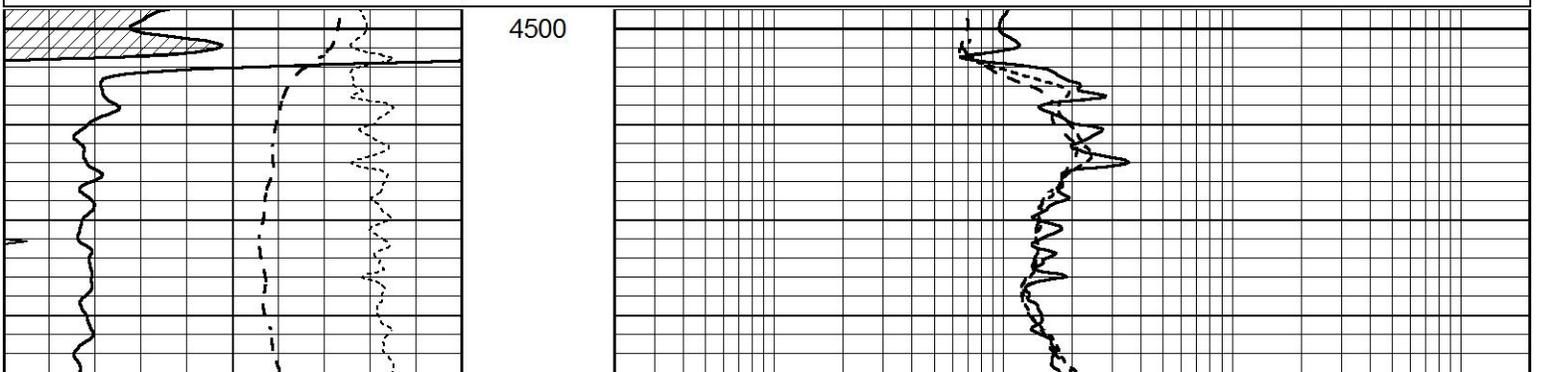


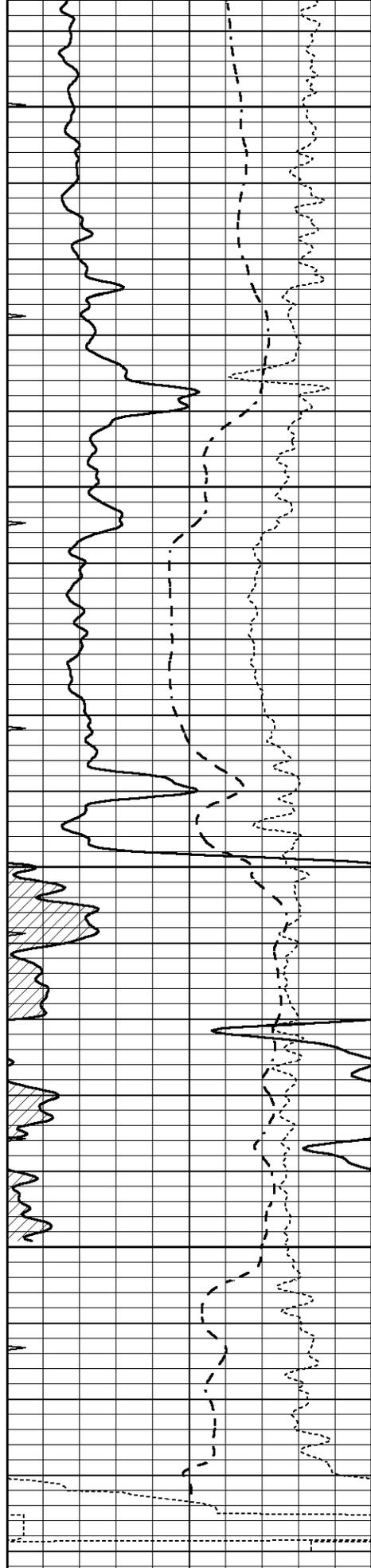


# REPEAT SECTION

Database File 7899pe.db  
 Dataset Pathname pass2.1R  
 Presentation Format \_dil  
 Dataset Creation Tue Jun 27 08:28:04 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			





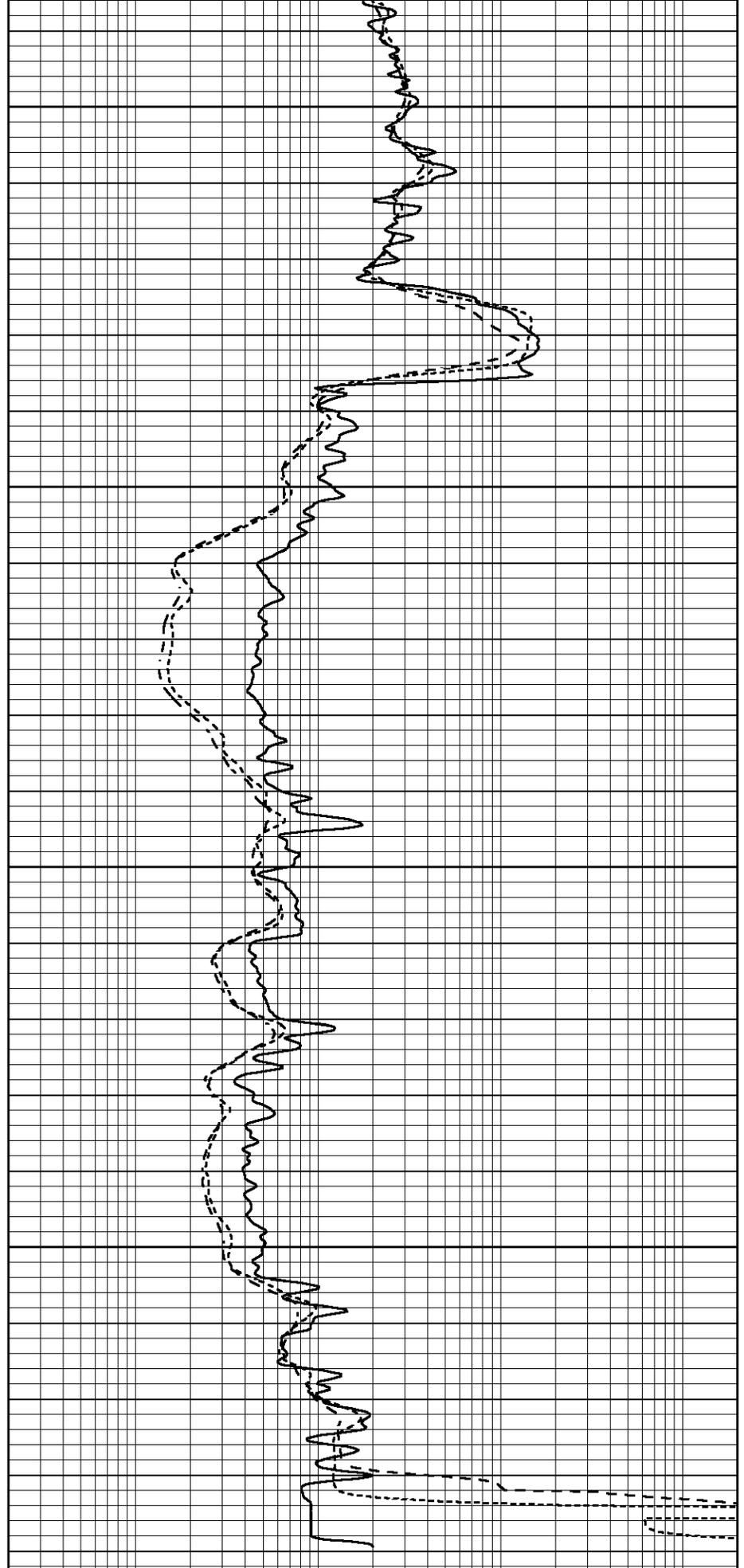
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4600

4650

4700

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



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

Calibration Report

Database File 7899pe.db  
 Dataset Pathname pass3.1M  
 Dataset Creation Tue Jun 27 08:23:29 2023

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG  
 Surface Cal Performed: Tue Jun 27 07:55:42 2023  
 Downhole Cal Performed: Mon Jul 28 11:08:27 2008  
 After Survey Verification Performed: Mon Jul 28 11:08:27 2008

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	640.000	6.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	620.000	-4.000
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: 001 Model: PRB

Master Calibration

Performed Tue Aug 02 14:54:49 2022

	Background	Magnesium	Aluminum	Aluminum+Fe	
Window 1	1540.1	9840.1	3279.8	3001.8	cps
Window 2	1435.6	8495.4	2920.3	2720.3	cps
Window 3	1167.4	4527.9	1868.6	1810.1	cps
Window 4	344.6	343.5	346.7	342.3	cps
Long Space	0.0	7059.8	1484.8	1284.7	cps
Short Space	3.3	2502.7	1618.3	1368.5	cps
Rho		1.7100	2.5900	0.0000	g/cc
Pe		2.0000	2.7500	5.7900	

Rib Angle : 44.4 Rib Slope : 0.979 Density/Spine Ratio : 0.544

Spine Angle : 74.4

Spine Slope : 3.576

Spine Intercept : -19.1

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: Fri Jun 16 10:29:28 2023

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
Calibrator Reading: 1.0 cps

Sensitivity: 0.3000 GAPI/cps