



DUAL INDUCTION LOG

Company INDIAN OIL COMPANY, INC.
 Well WARREN #5-35
 Field MEAIRS
 County BARBER State KANSAS

Location: API #: 15-007-24431-0000
 330' FNL & 2890' FWL
 W2 - NW - NW - NE
 SEC 35 TWP 30S RGE 12W
 Permanent Datum GROUND LEVEL Elevation 1629
 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. 1641
 D.F. 1639
 G.L. 1629

Date	7/21/22
Run Number	ONE
Depth Driller	4757
Depth Logger	4755
Bottom Logged Interval	4753
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	9.5/10.8
pH / Fluid Loss	9.5/10.8
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.600@94F
Rmf @ Meas. Temp	.450@94F
Rmc @ Meas. Temp	.720@94F
Source of Rmf / Rmc	MEASURED
Rm @ BHT	.459@123F
Time Circulation Stopped	3 HOURS
Time Logger on Bottom	11:45 P.M.
Maximum Recorded Temperature	123F
Equipment Number	8916
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	AARON YOUNG
	ANTHONY FARRAR

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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.

Comments

THANK YOU FOR USING ELI WIRELINE, HAYS, KS. (785) 628-6395
 DIRECTIONS:
 MEDICINE LODGE, KS., N. ON HWY 281 TO "AMBER RD.", 1E., N. ON TRAIL

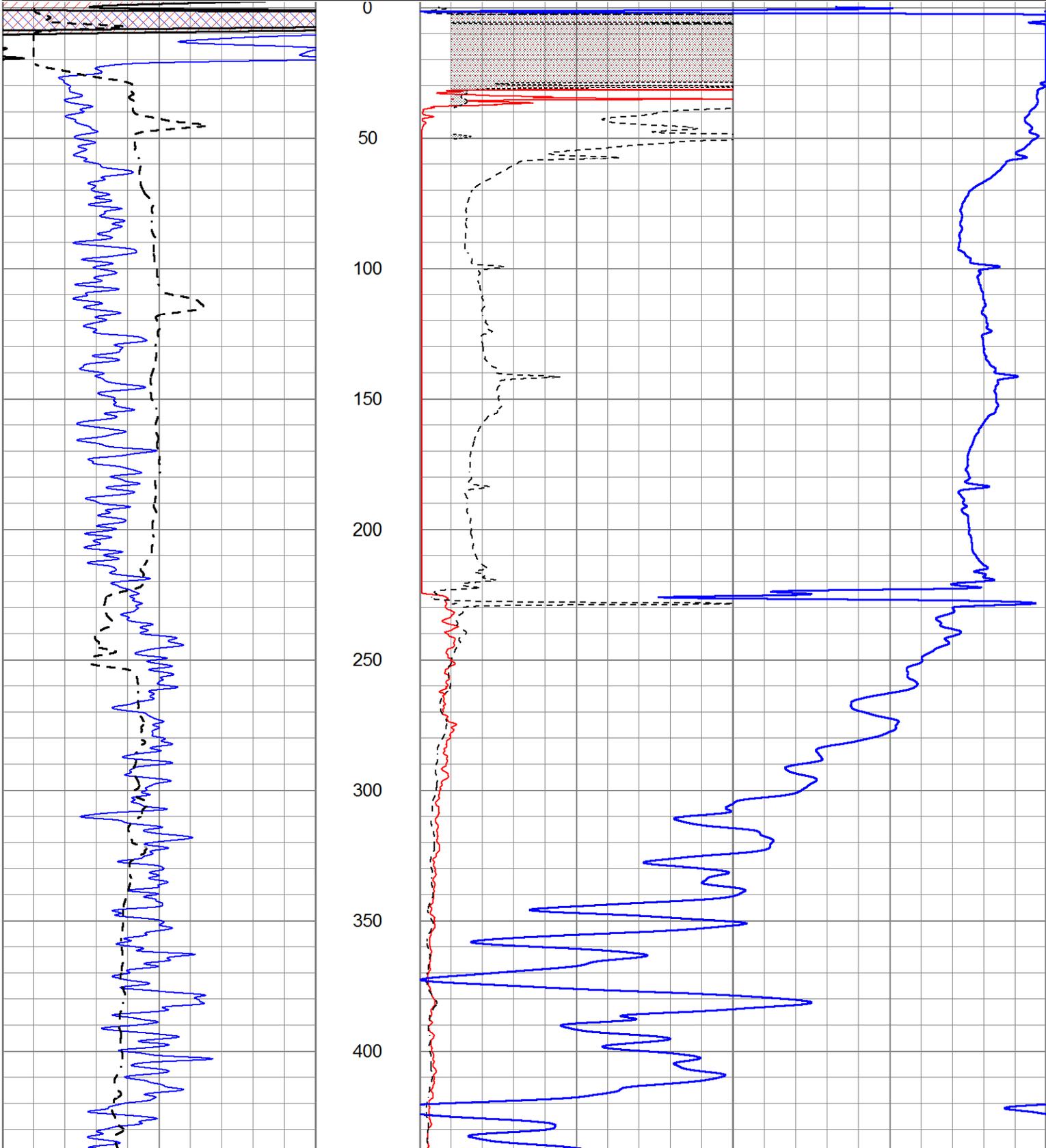


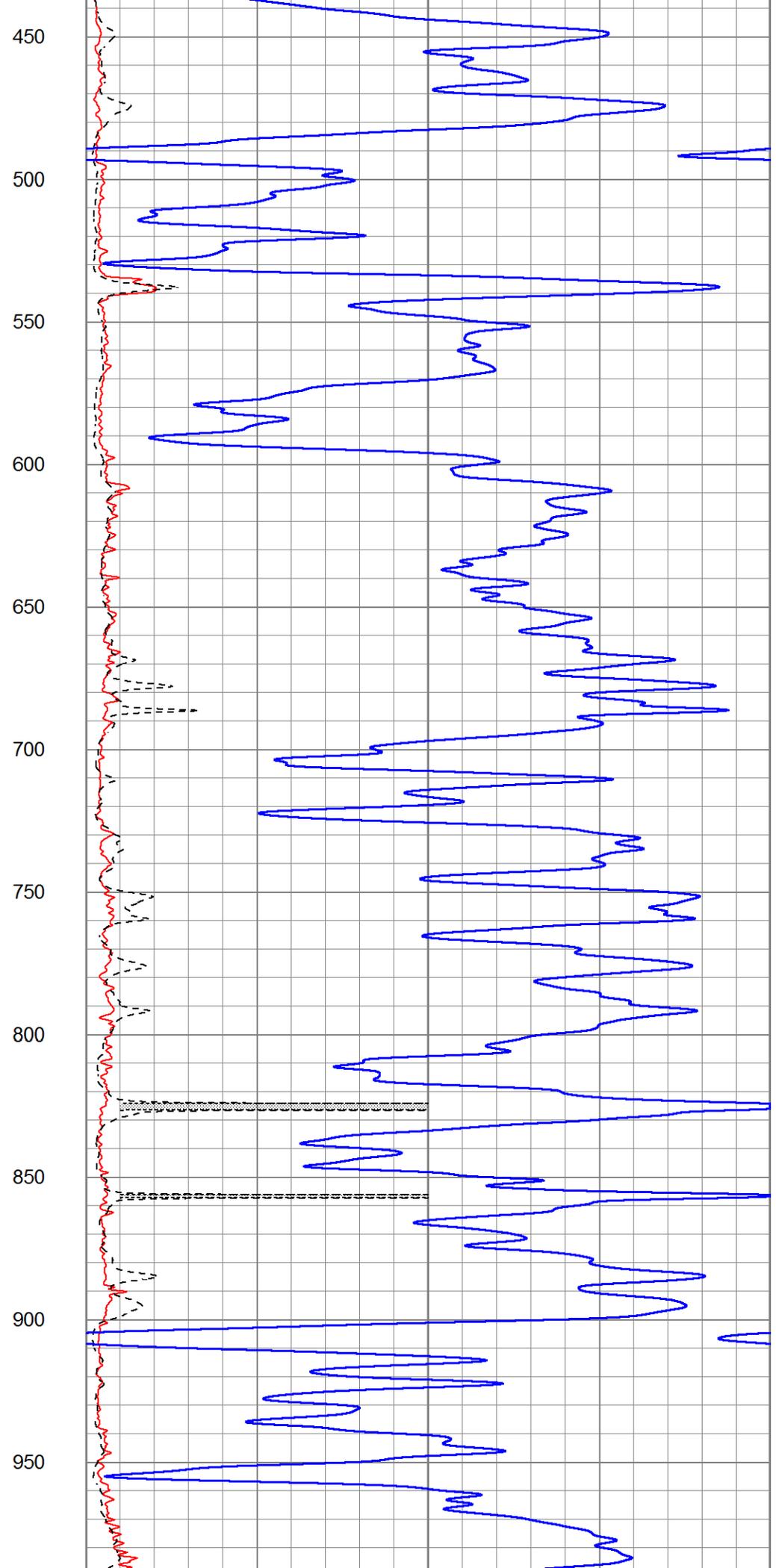
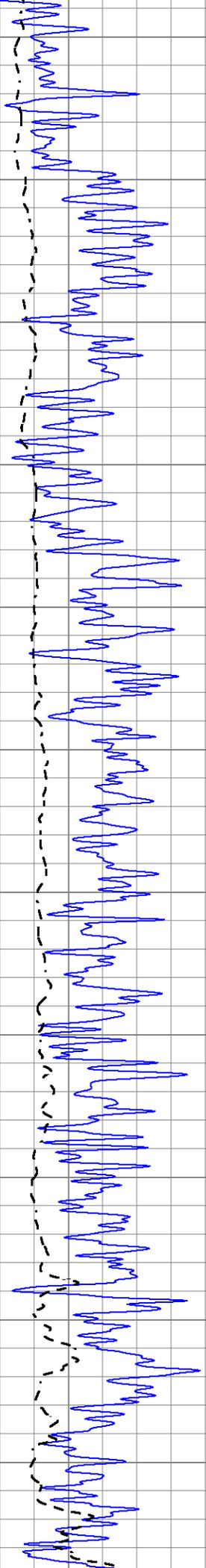
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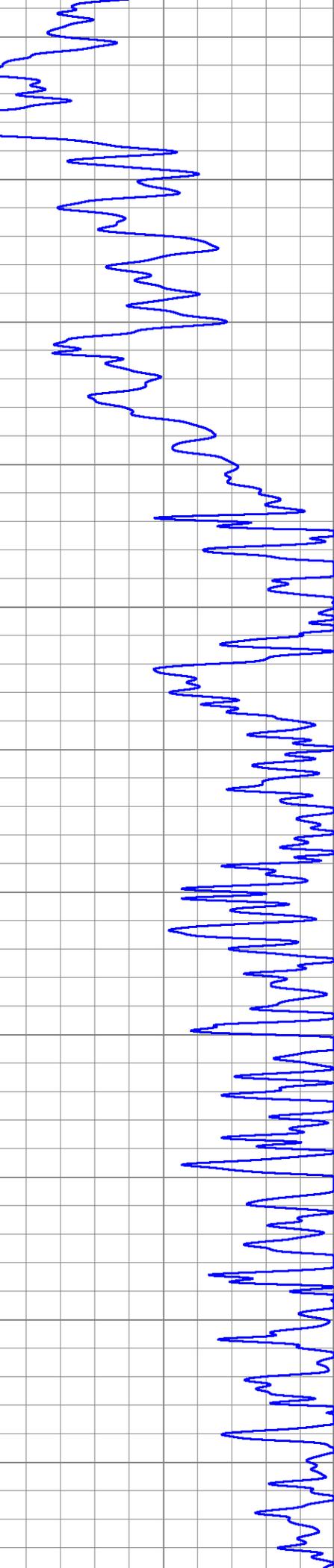
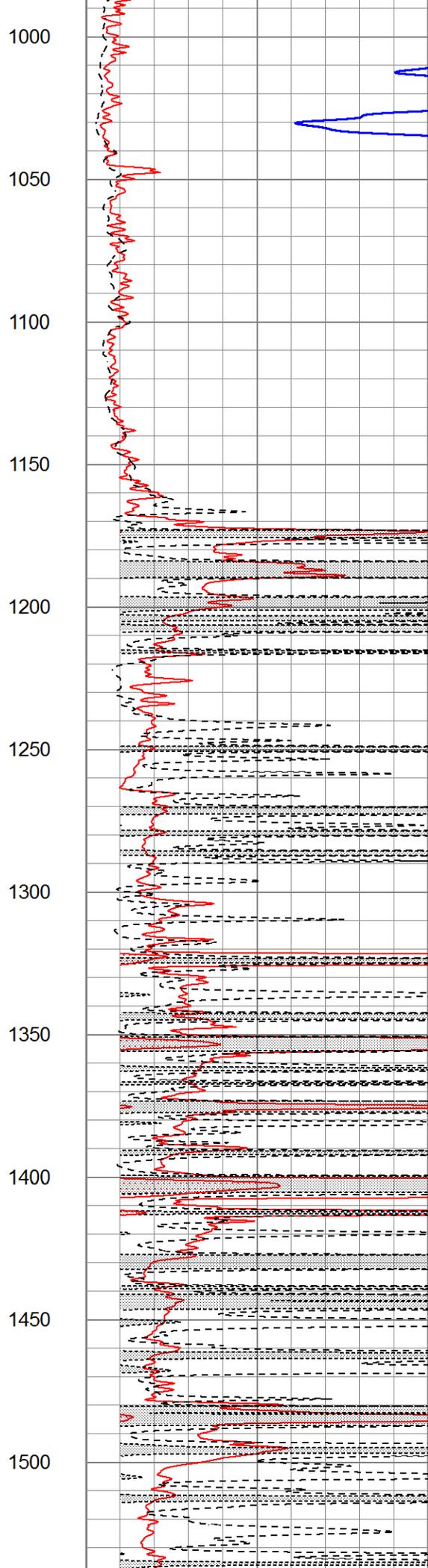
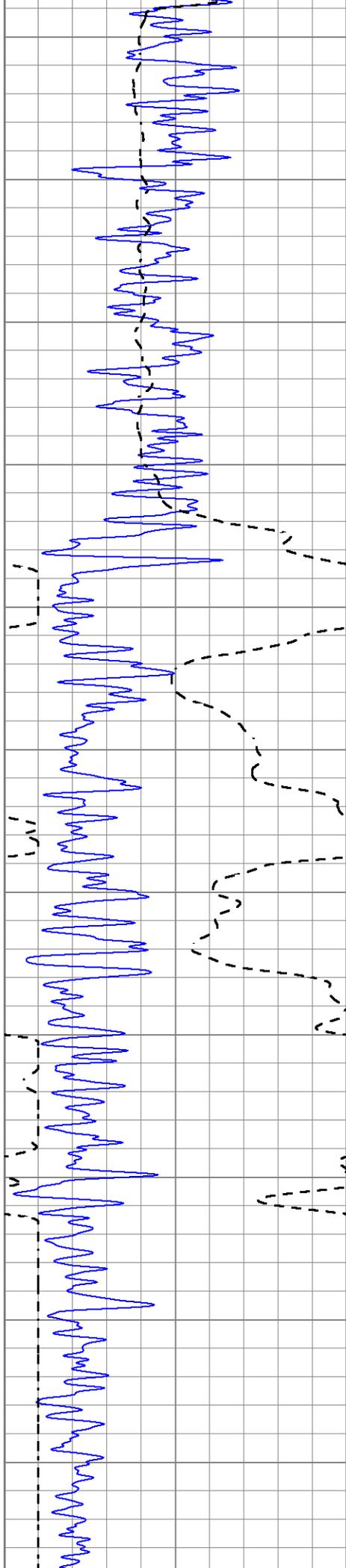
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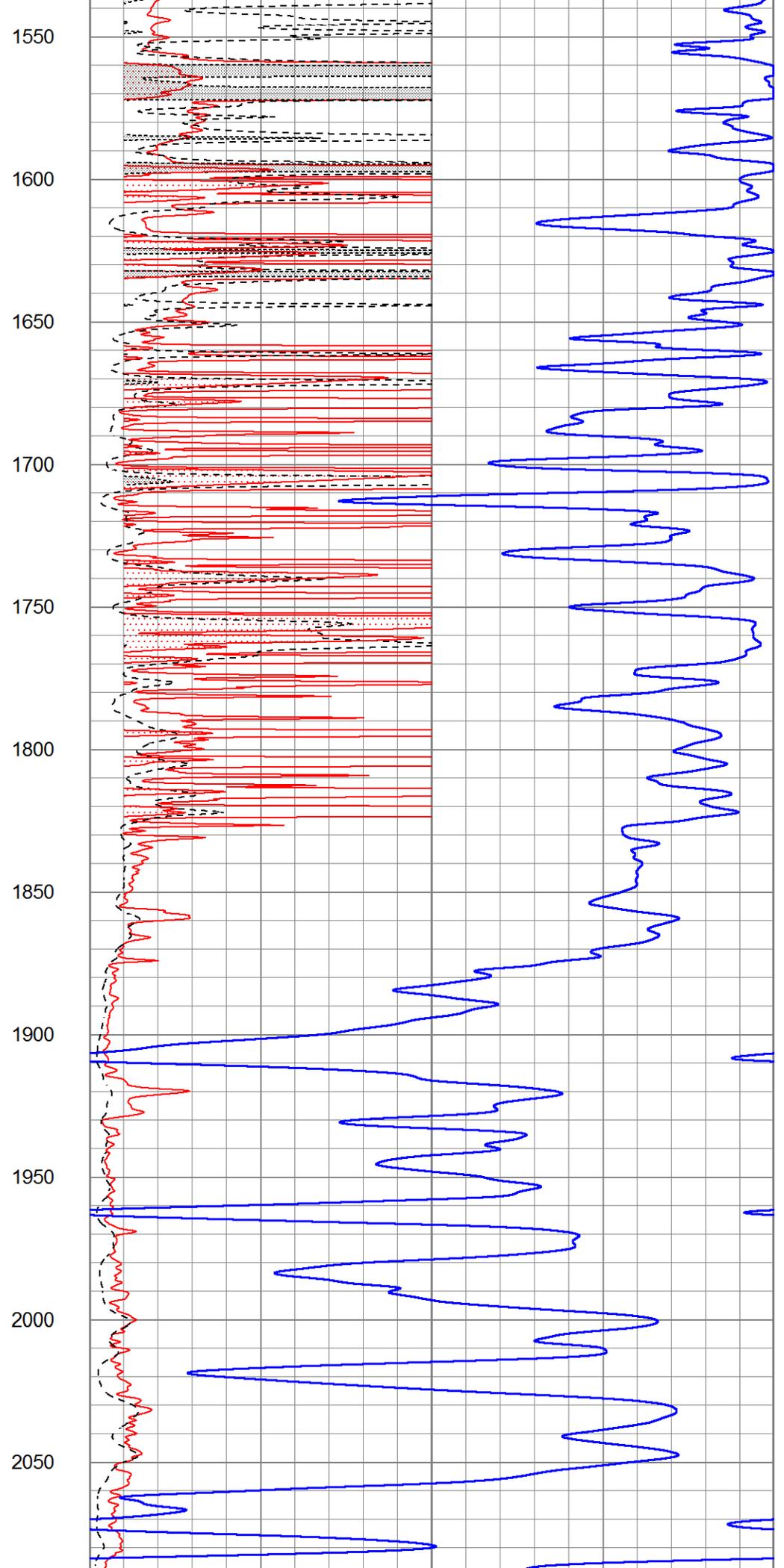
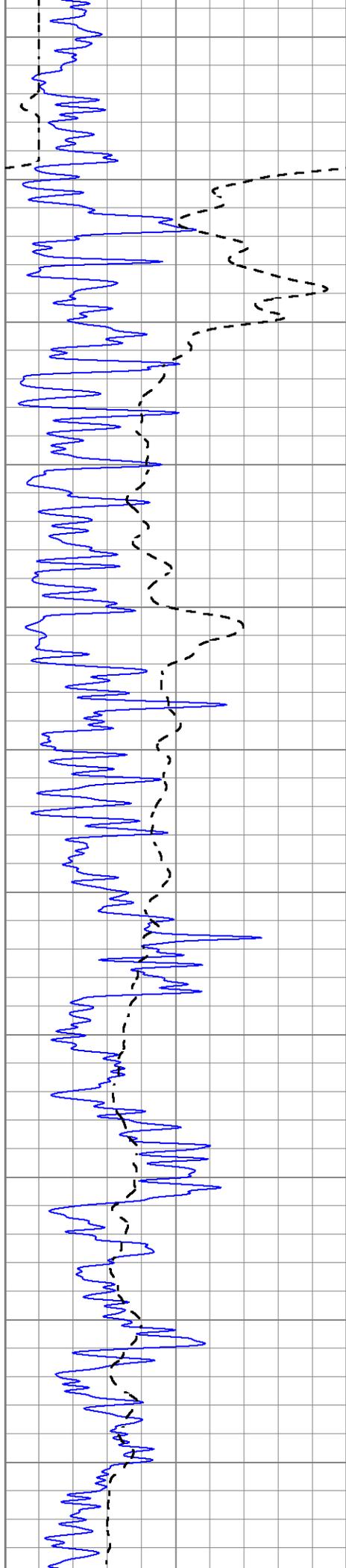
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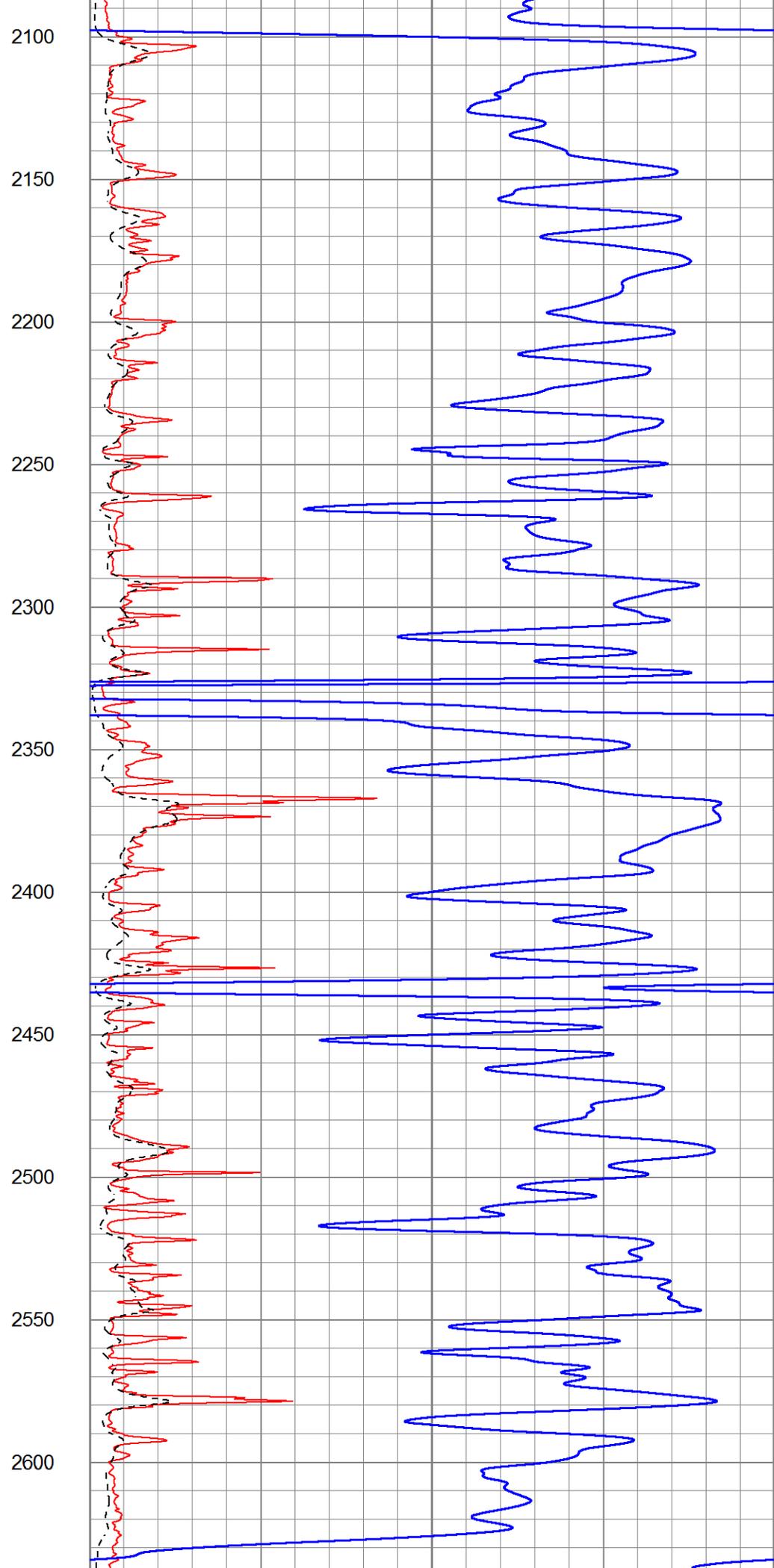
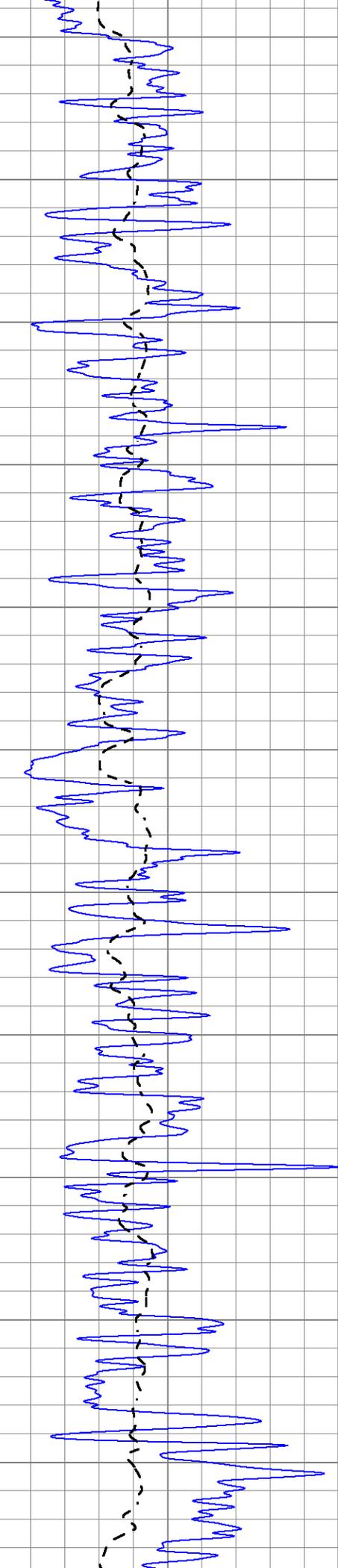
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0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500

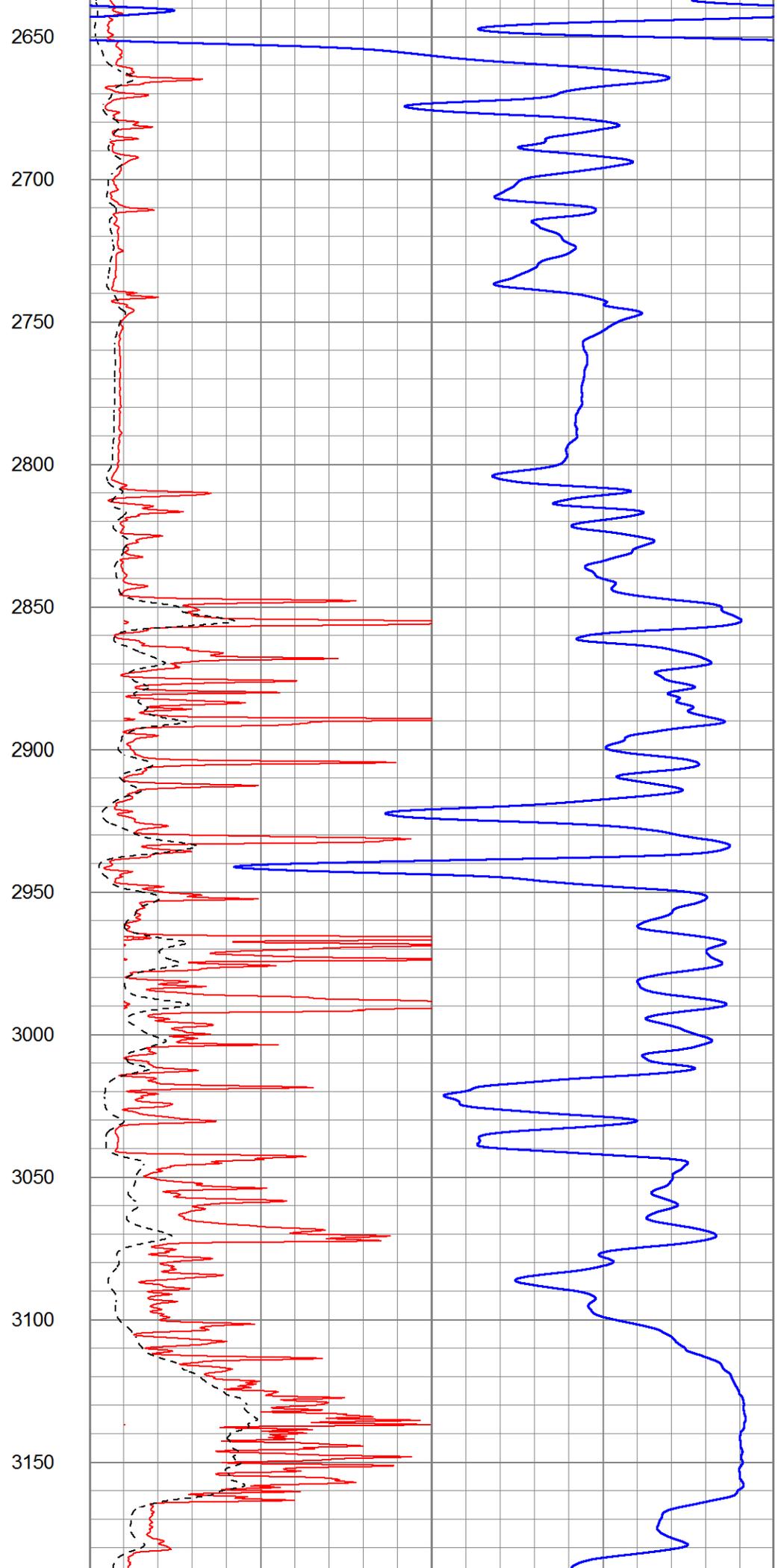
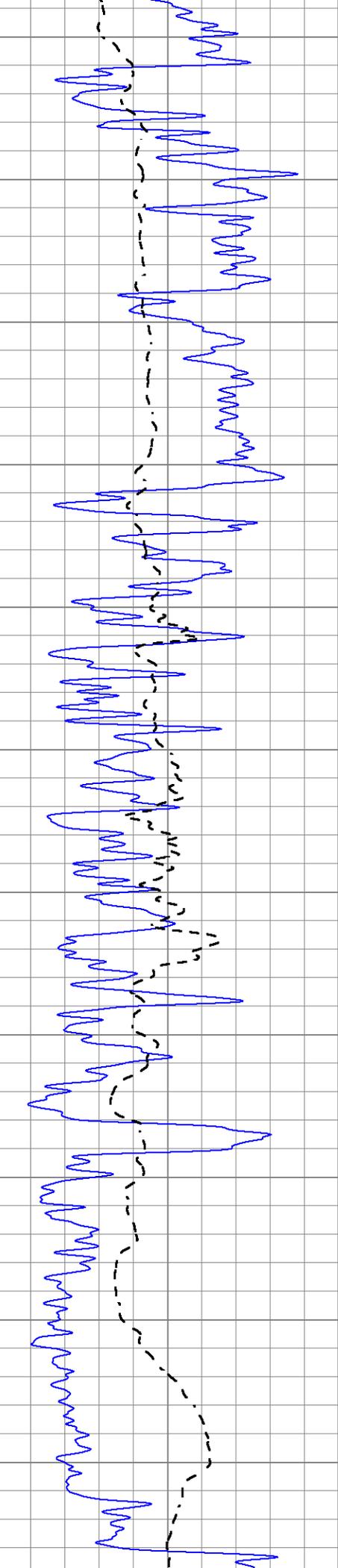


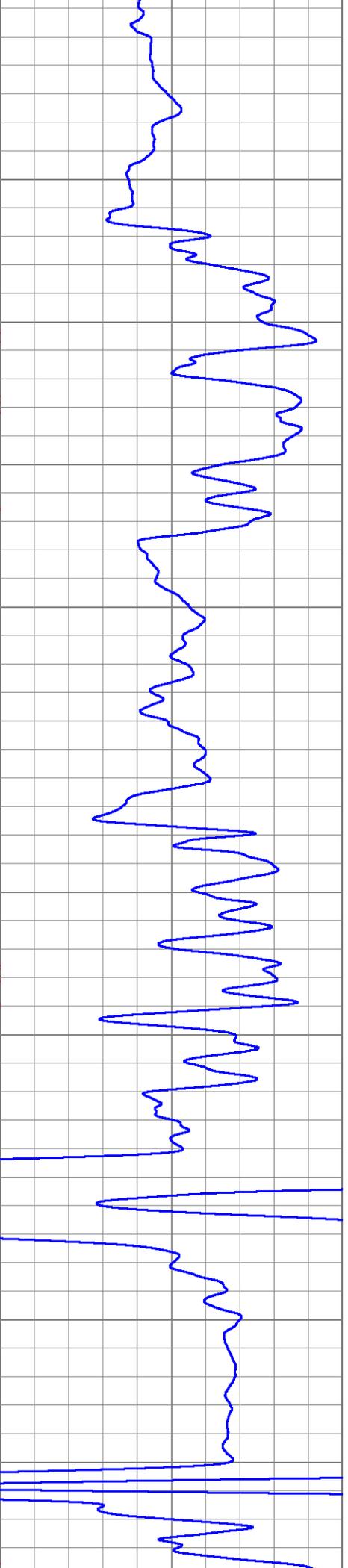
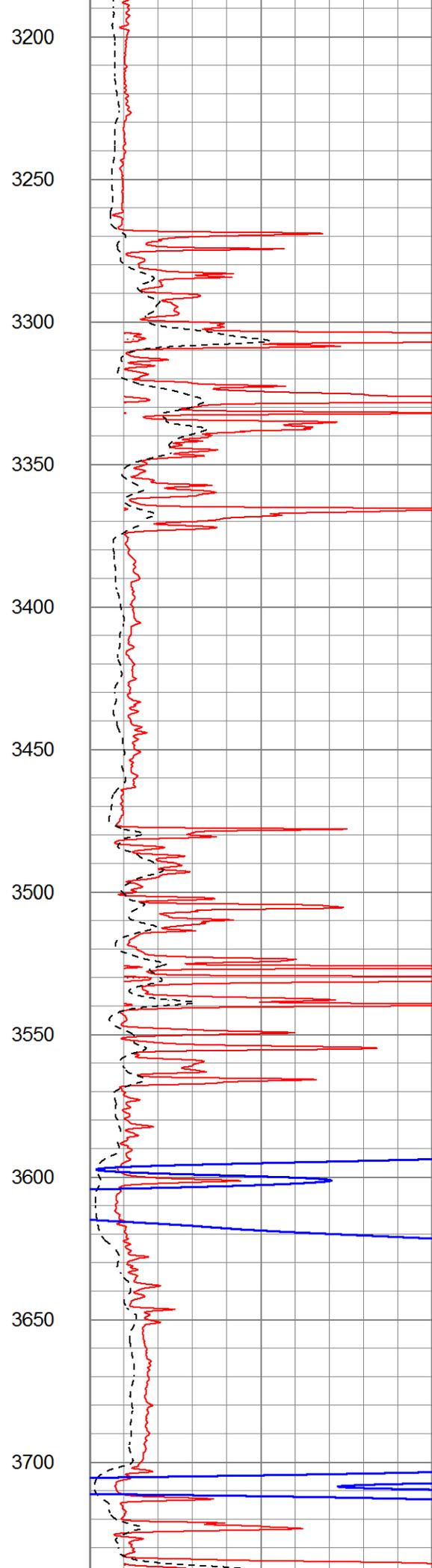
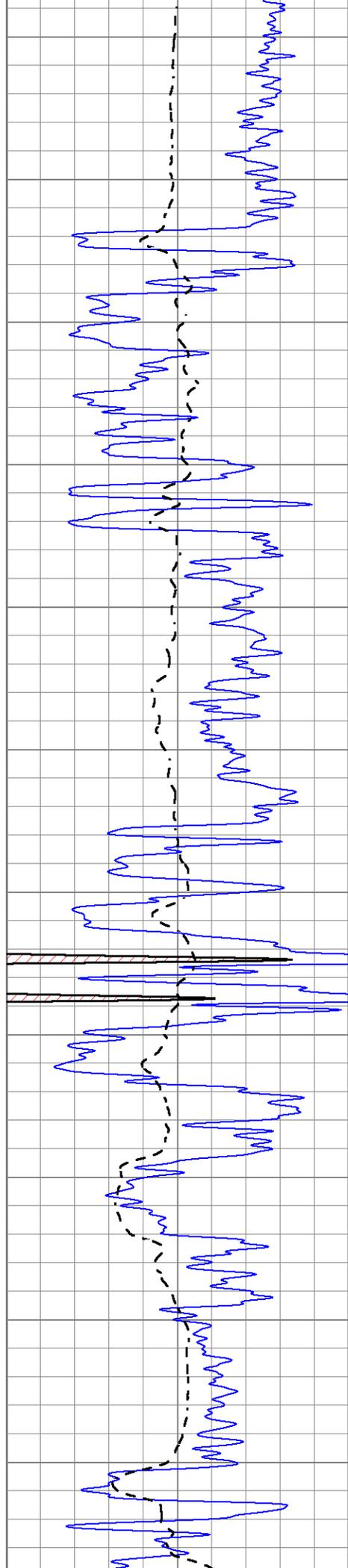


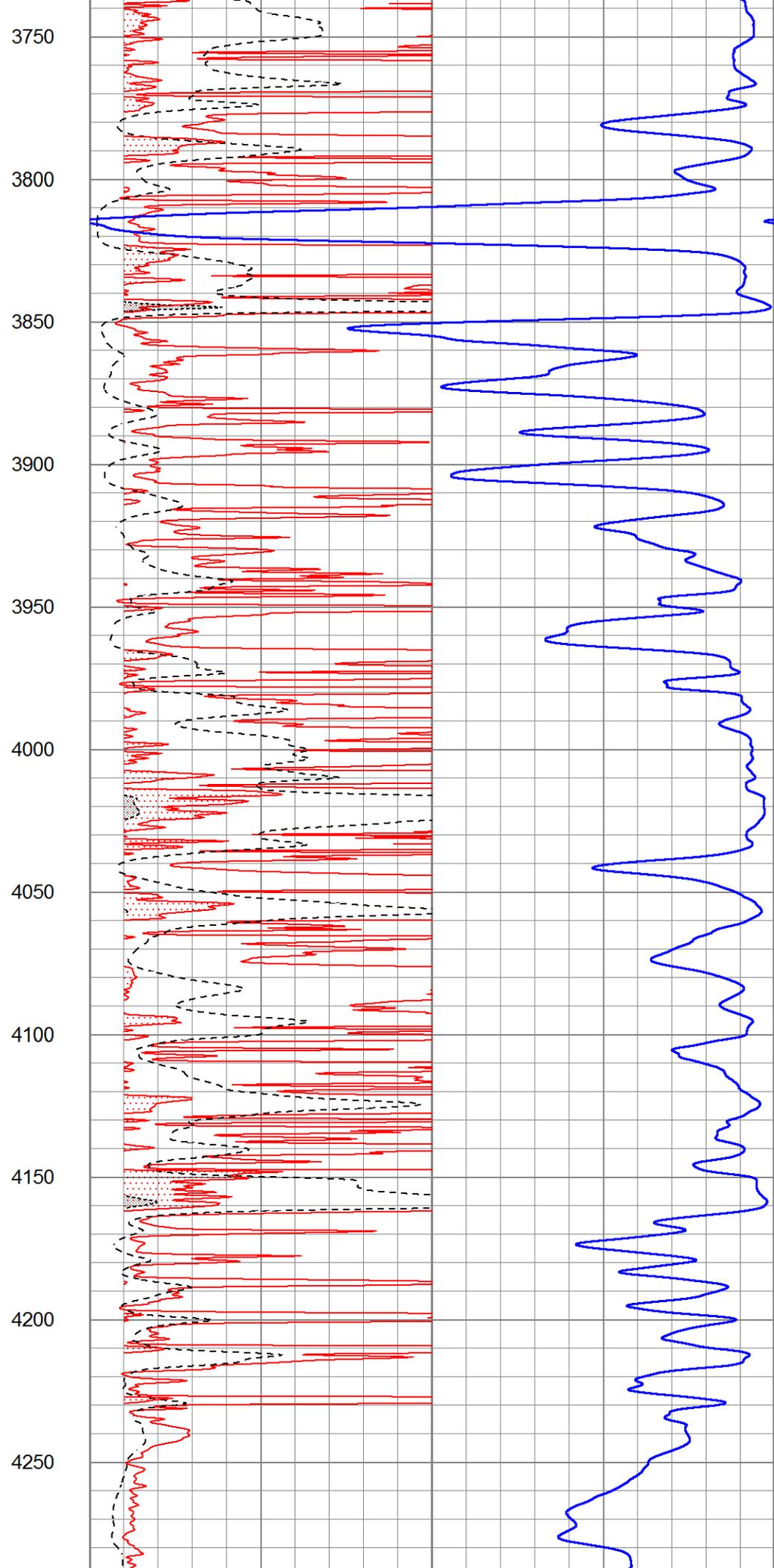
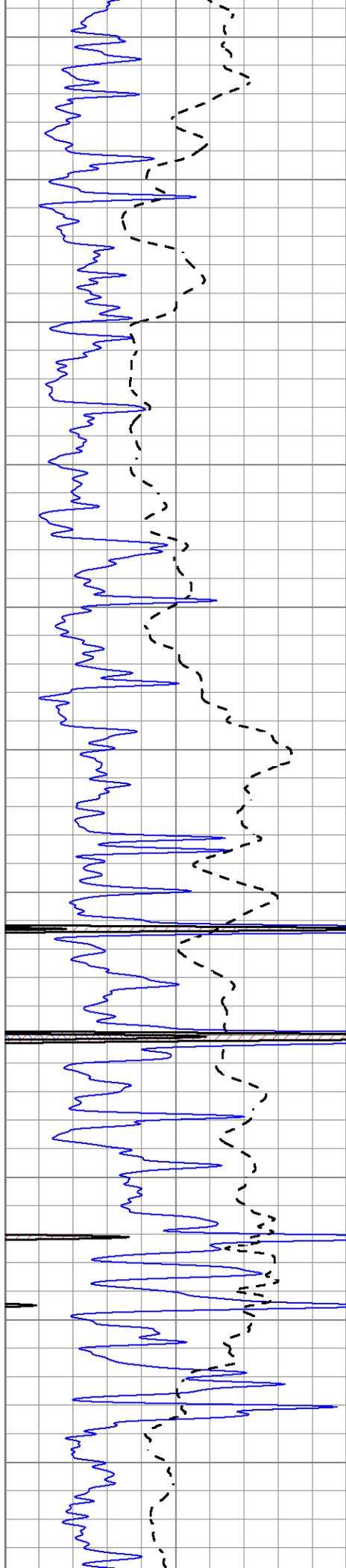


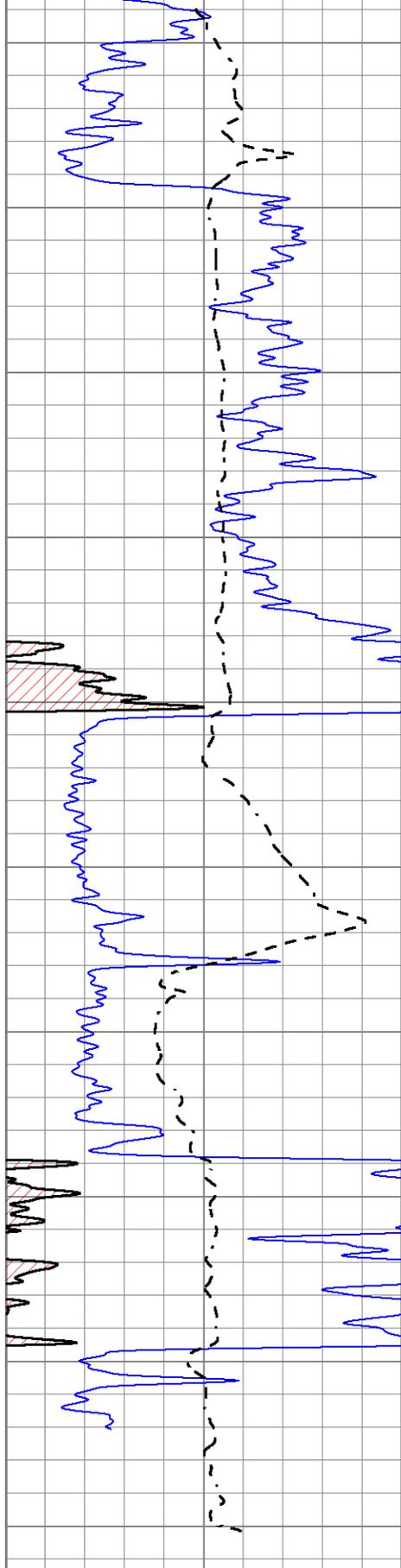




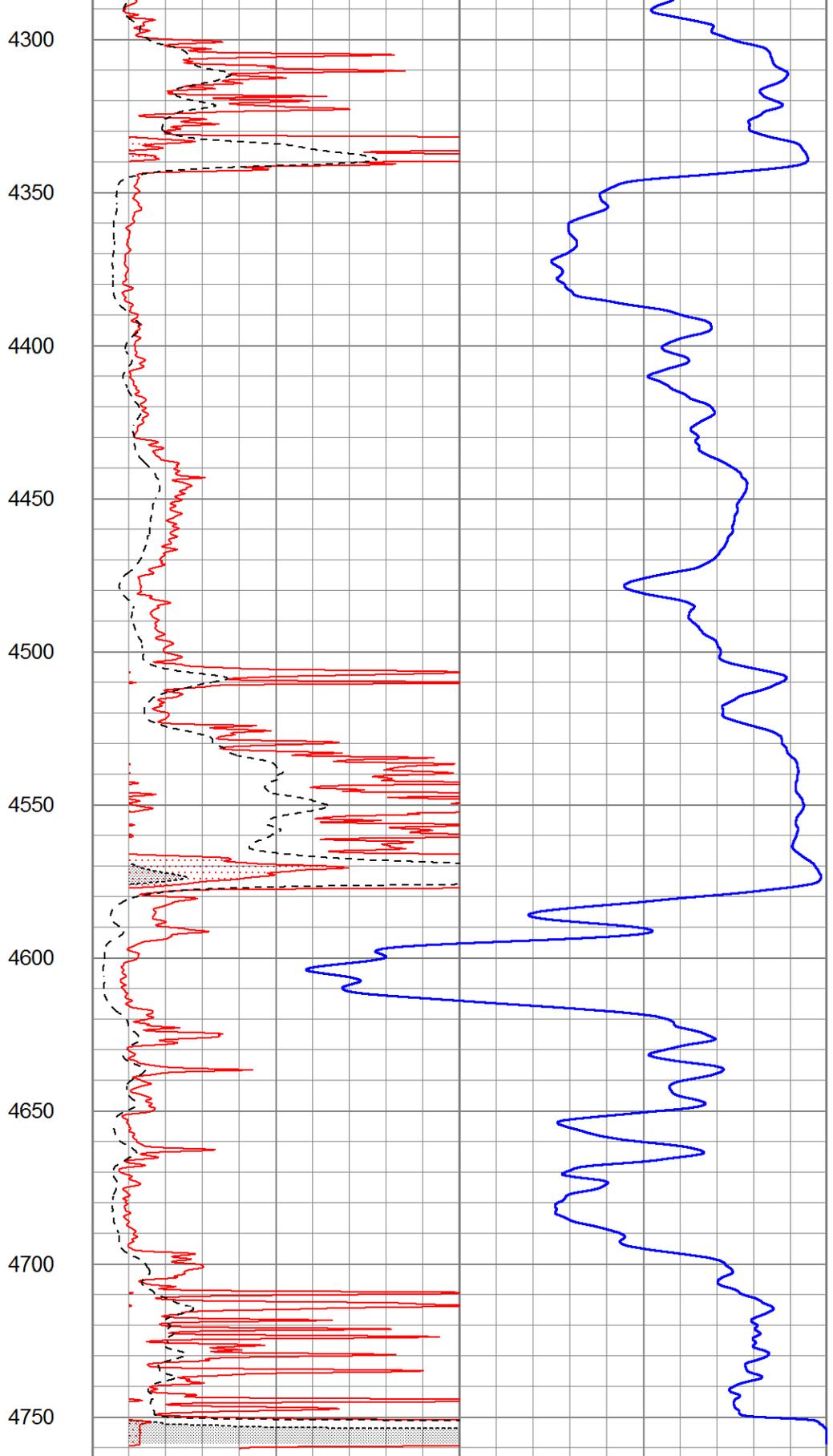








0	Gamma Ray (GAPI)	150
-100	SP (mV)	100



1000	CILD (mmho/m)	0
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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

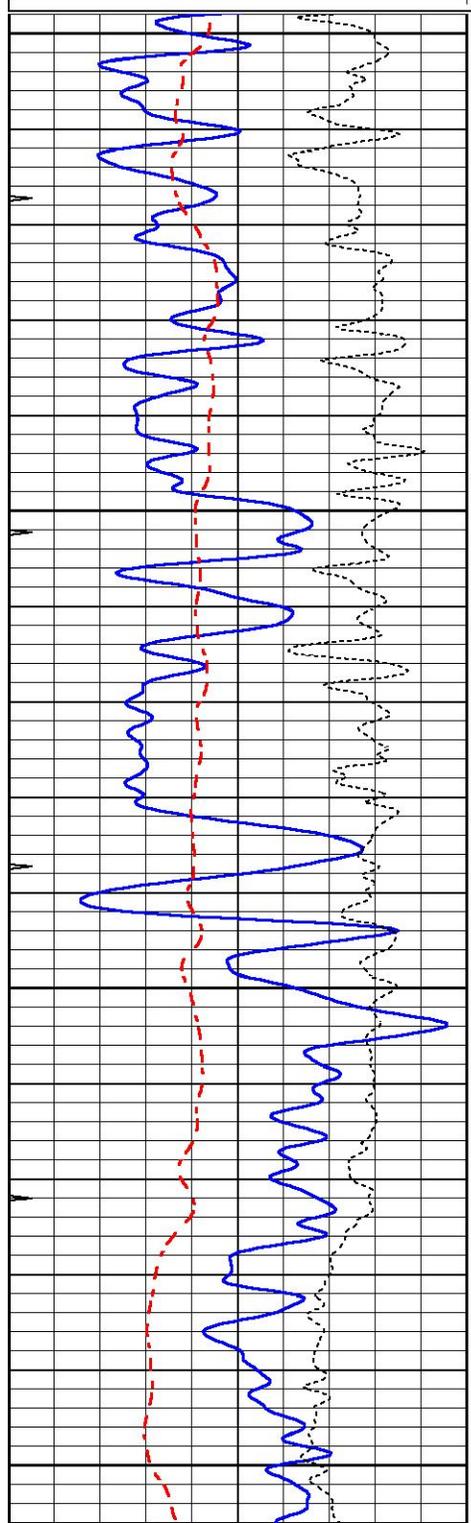


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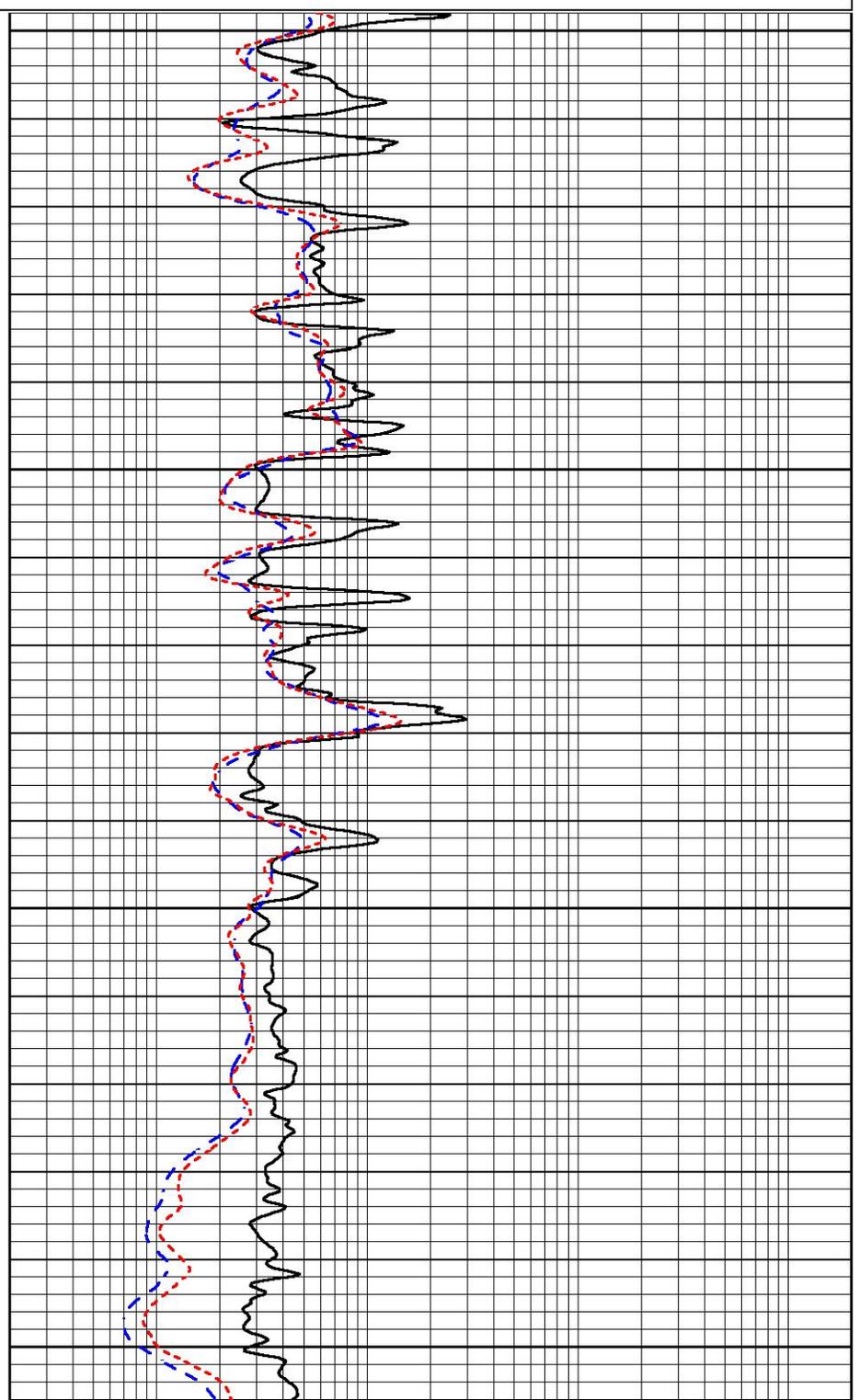
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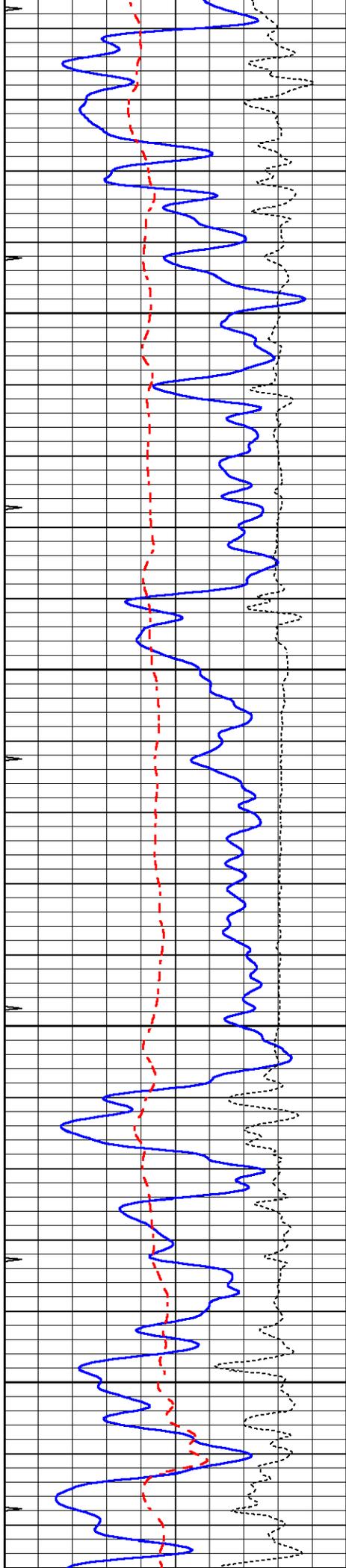
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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



2500
2550
2600
2650



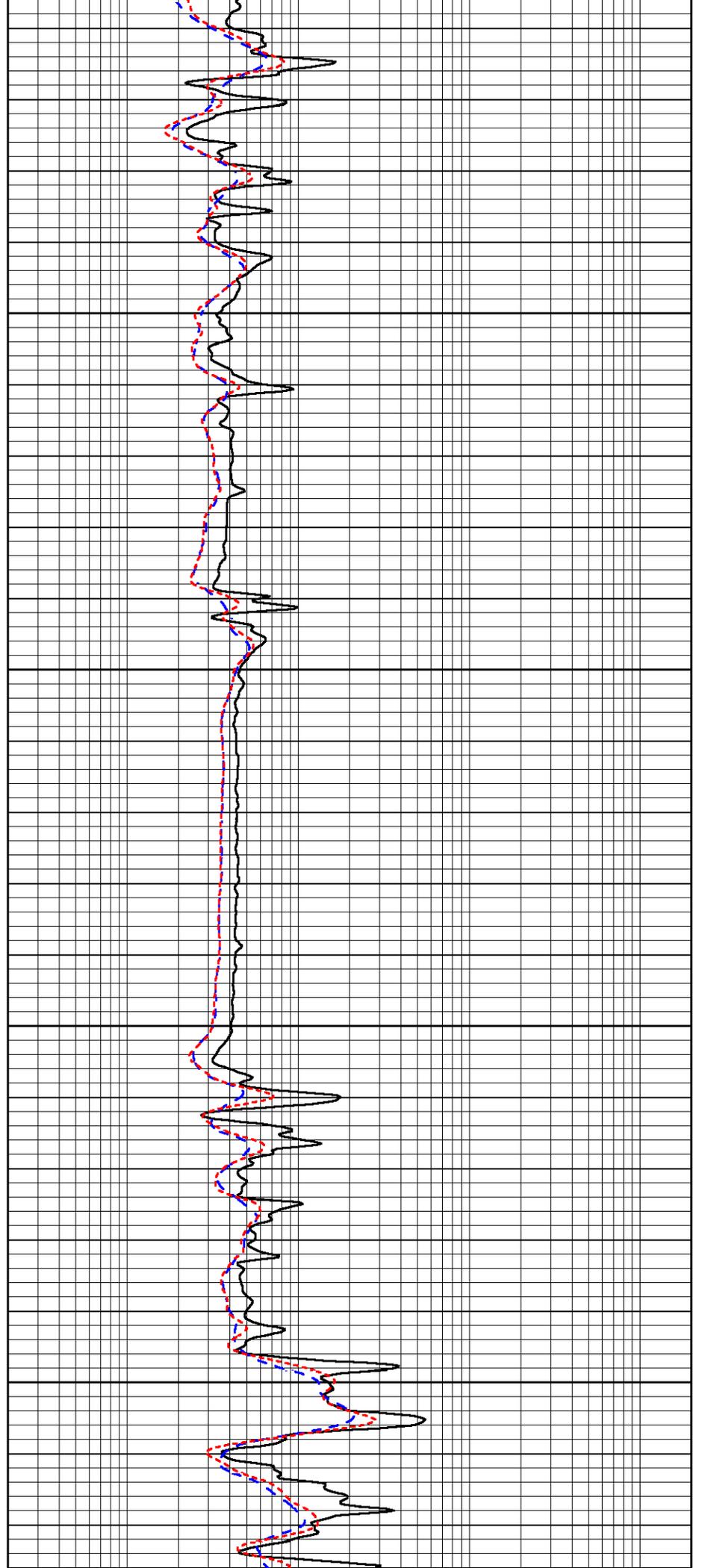


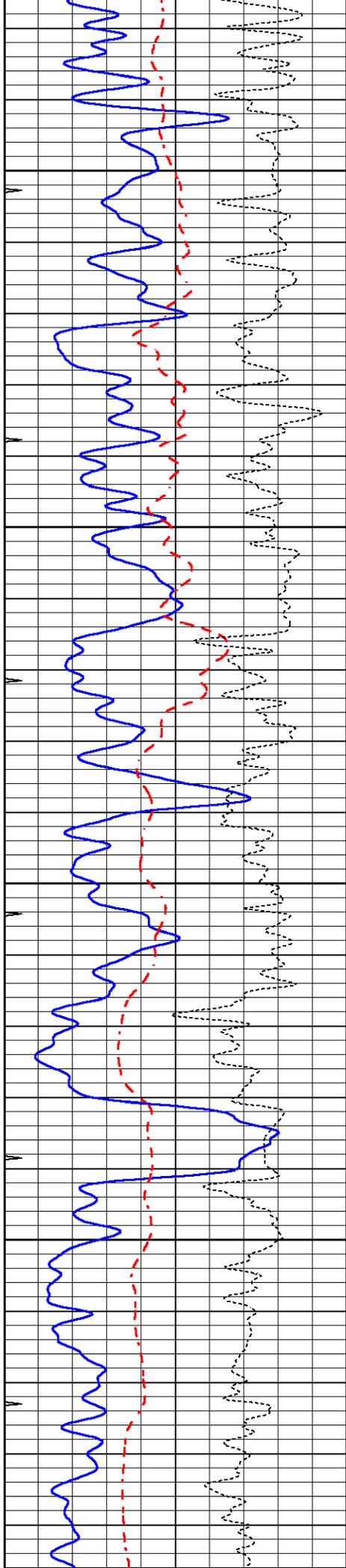
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2750

2800

2850



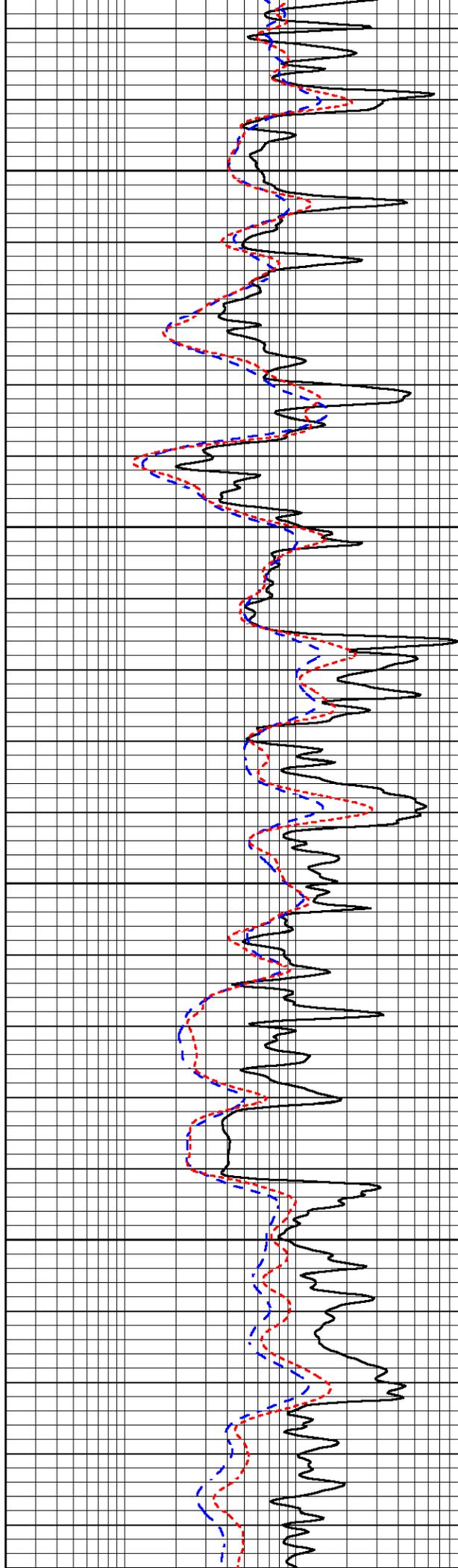


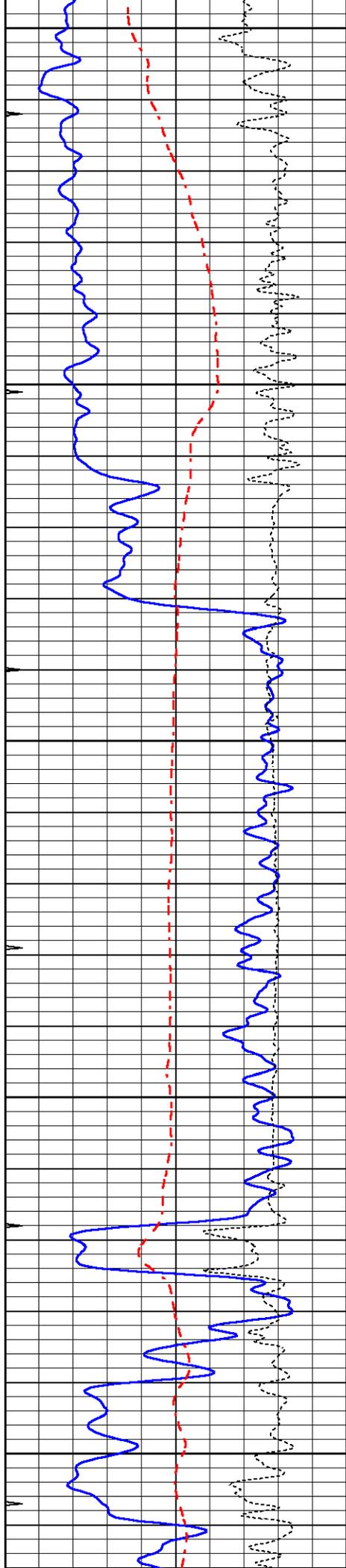
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3000

3050





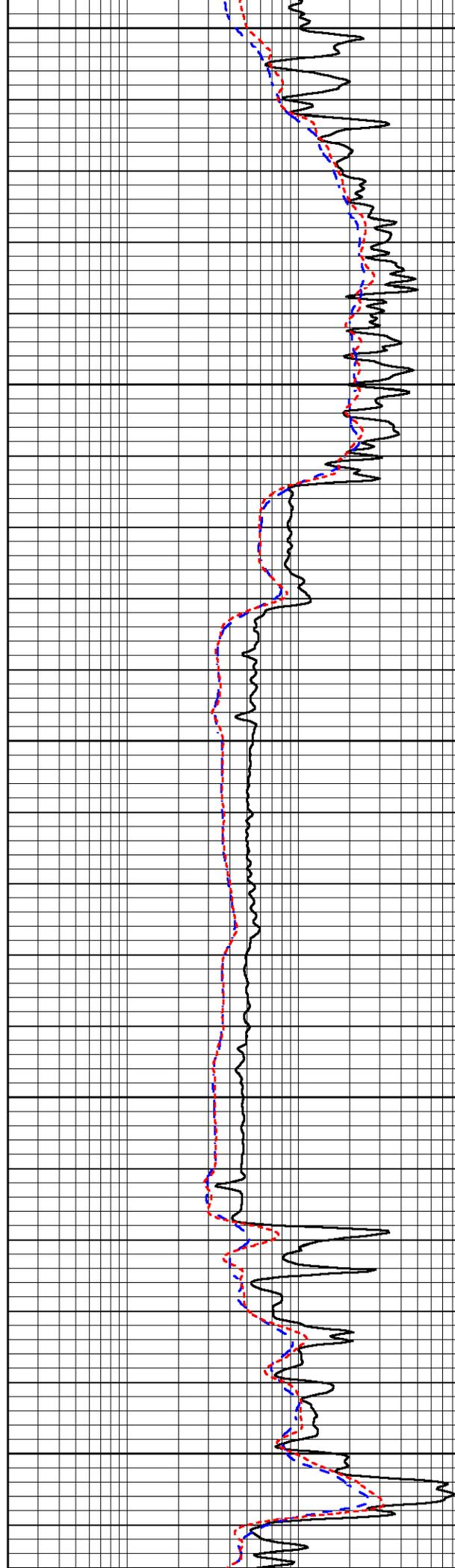
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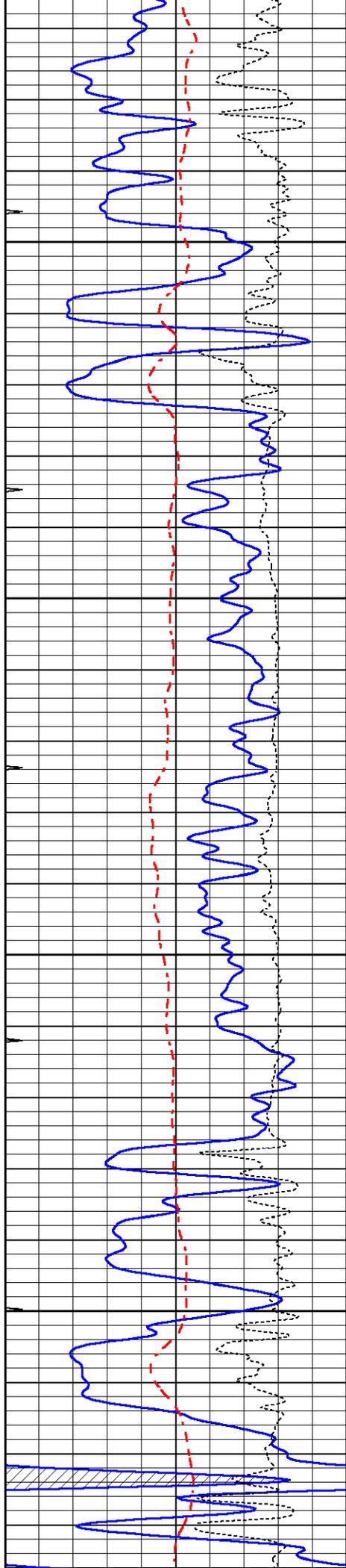
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3200

3250

3300



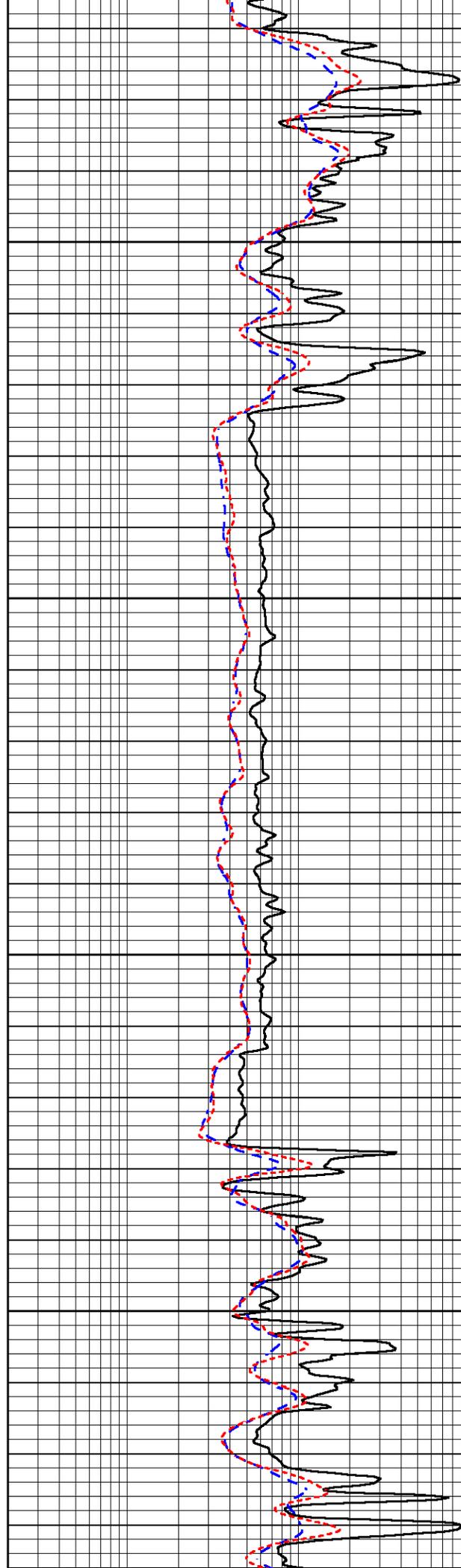


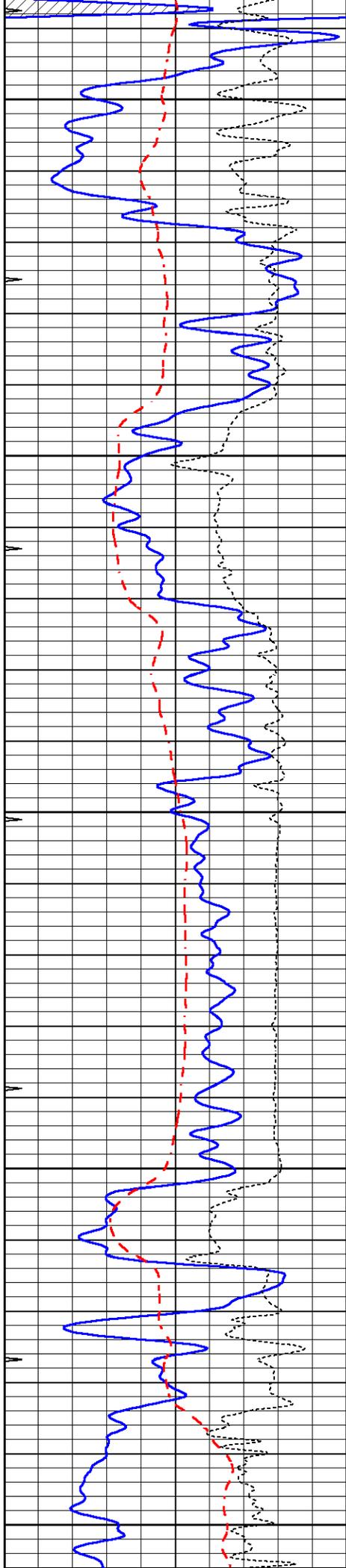
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3400

3450

3500





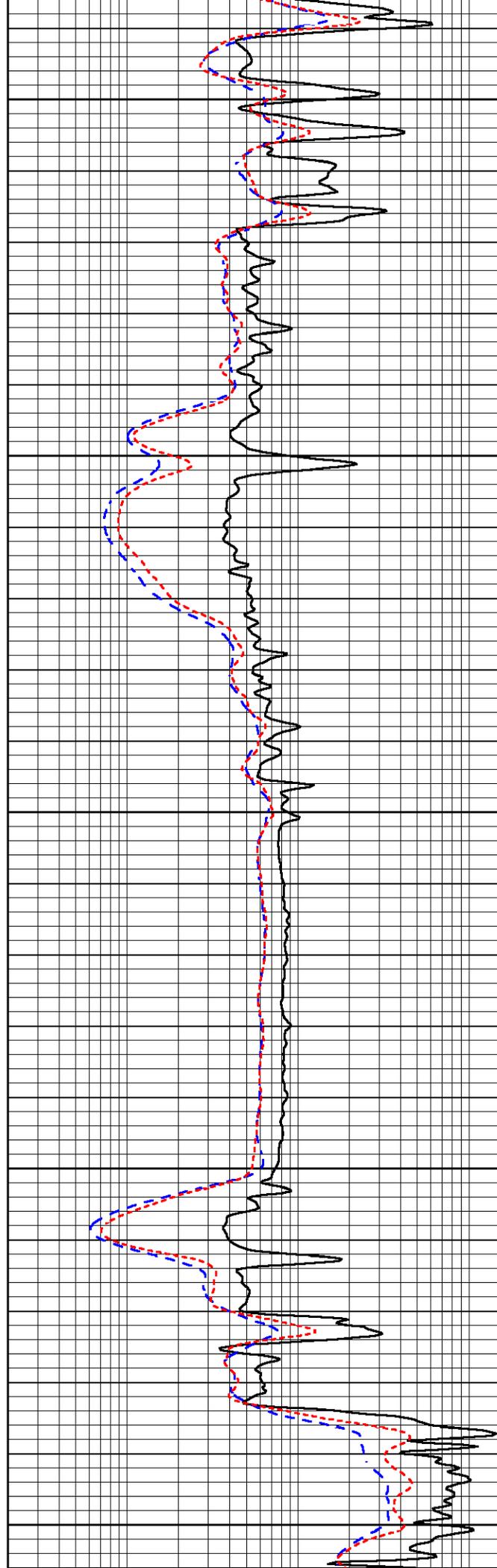
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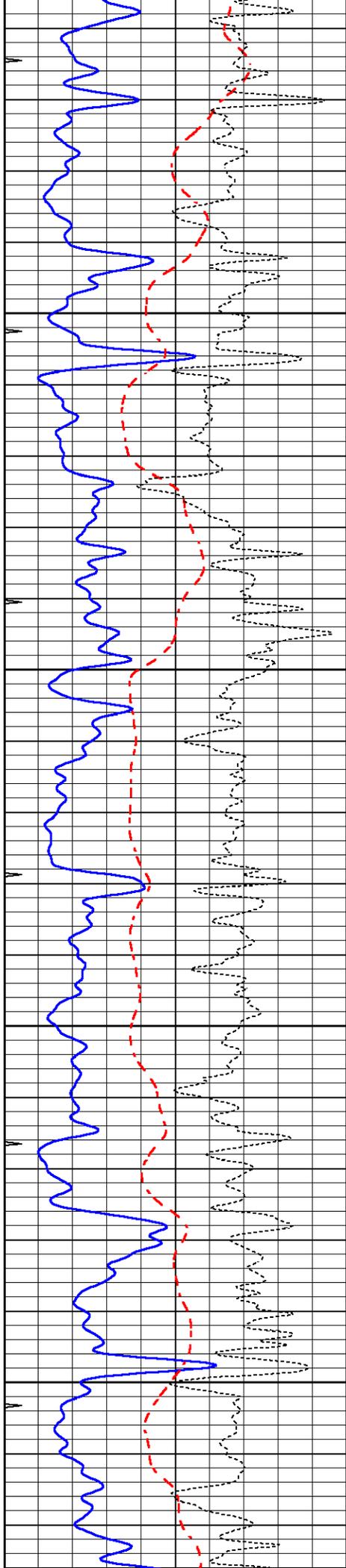
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3650

3700

3750



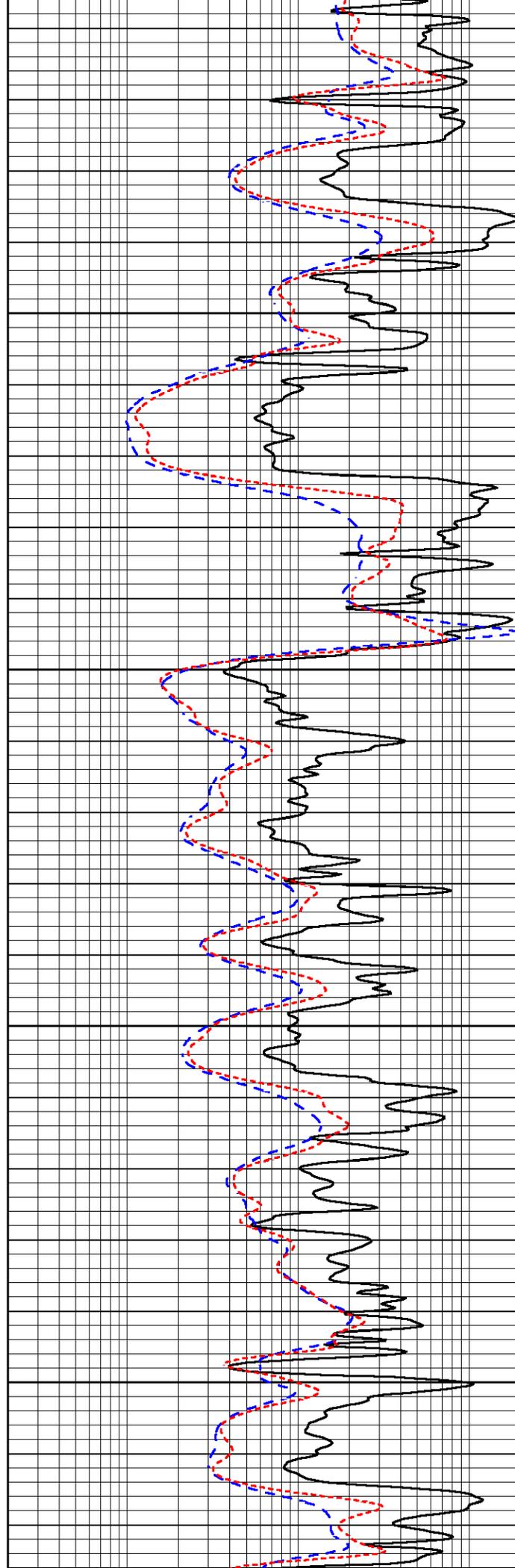


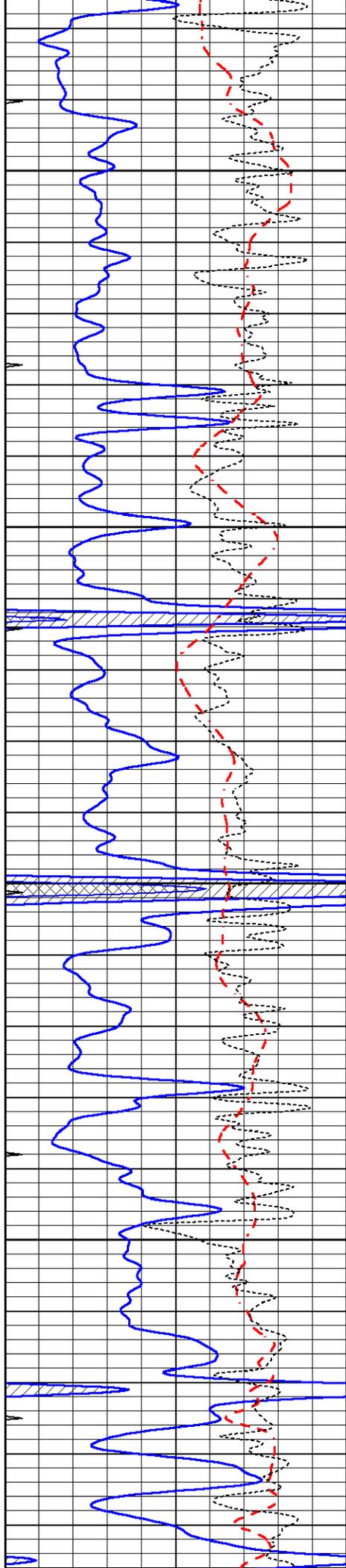
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3850

3900

3950



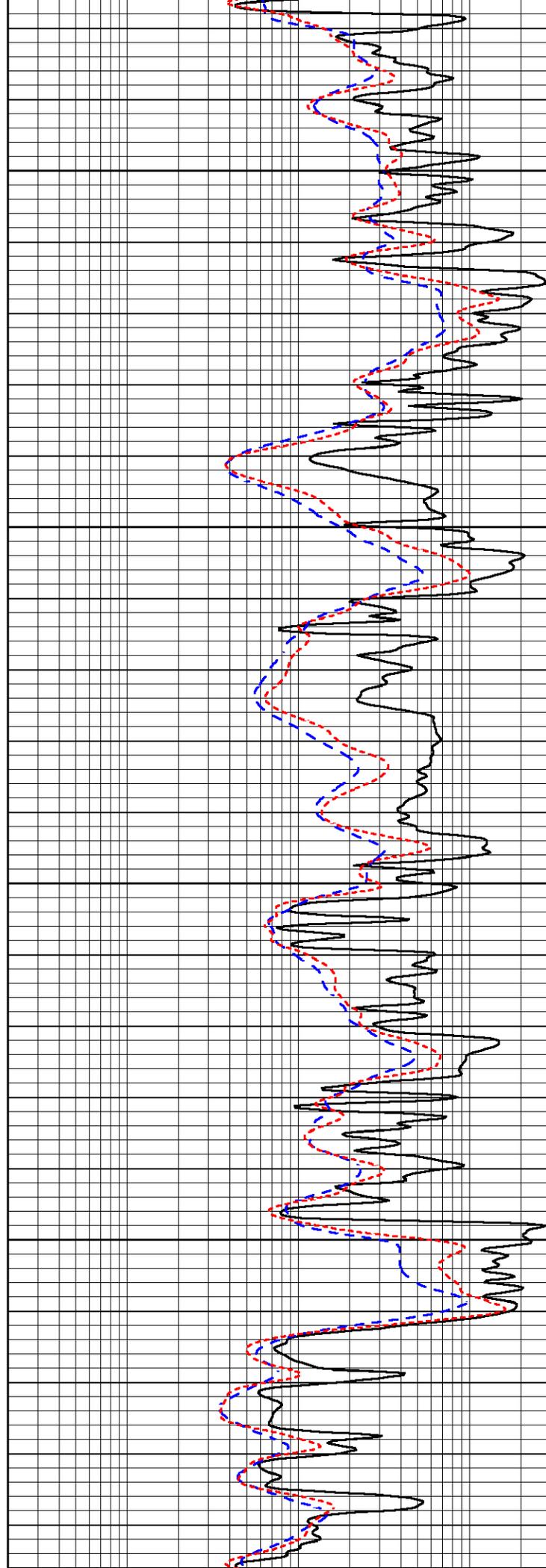


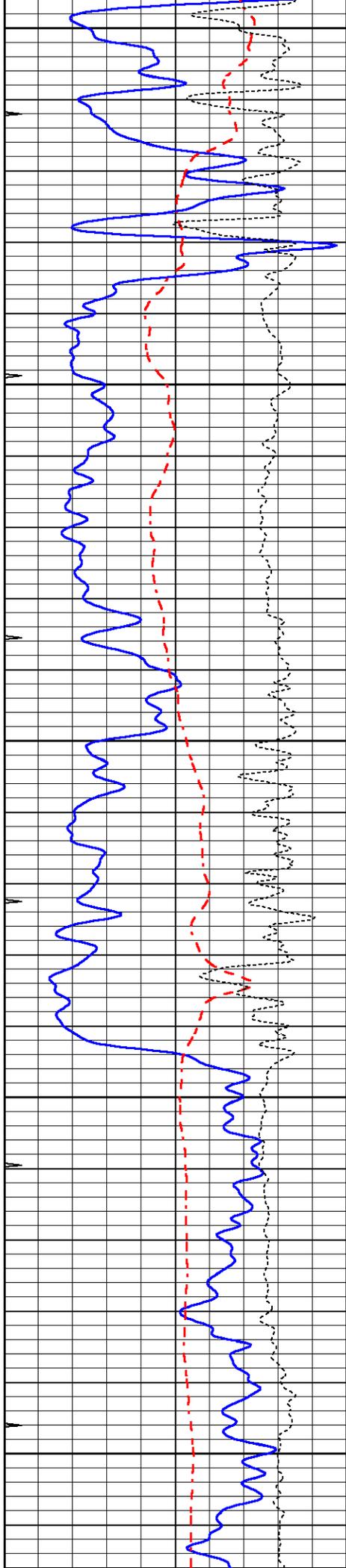
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4050

4100

4150





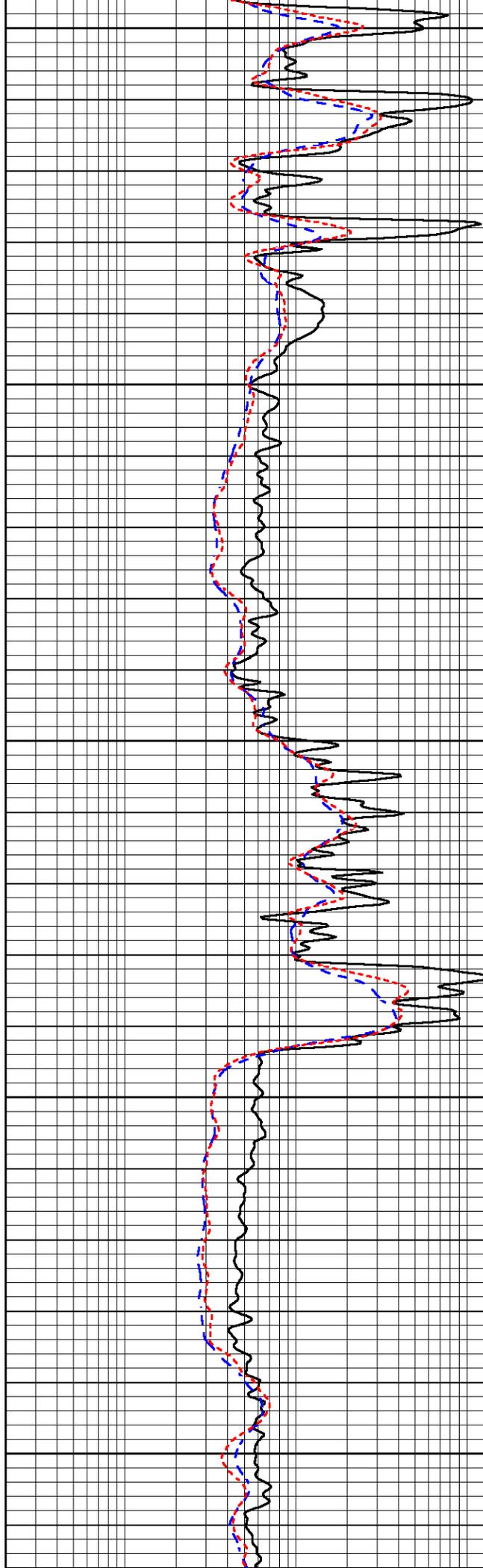
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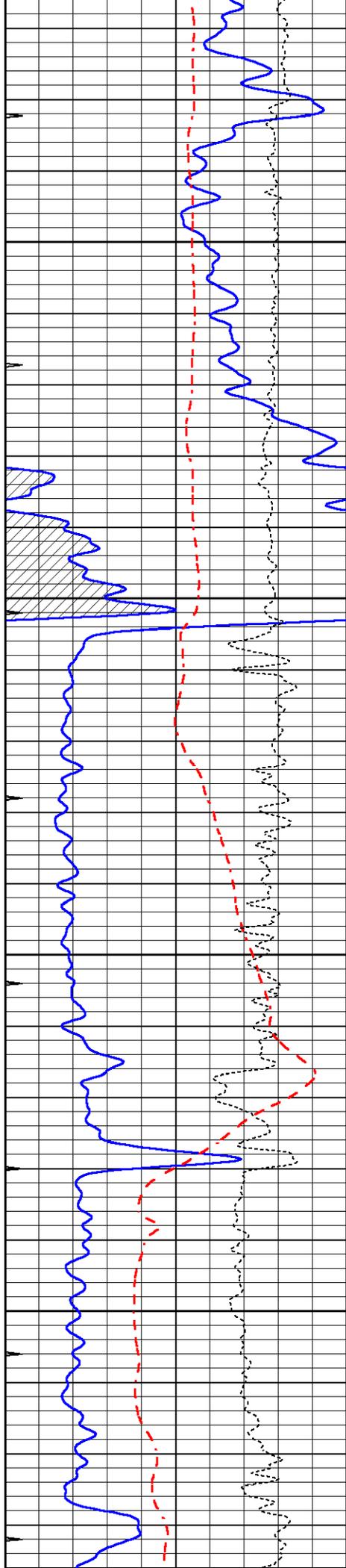
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4300

4350

4400



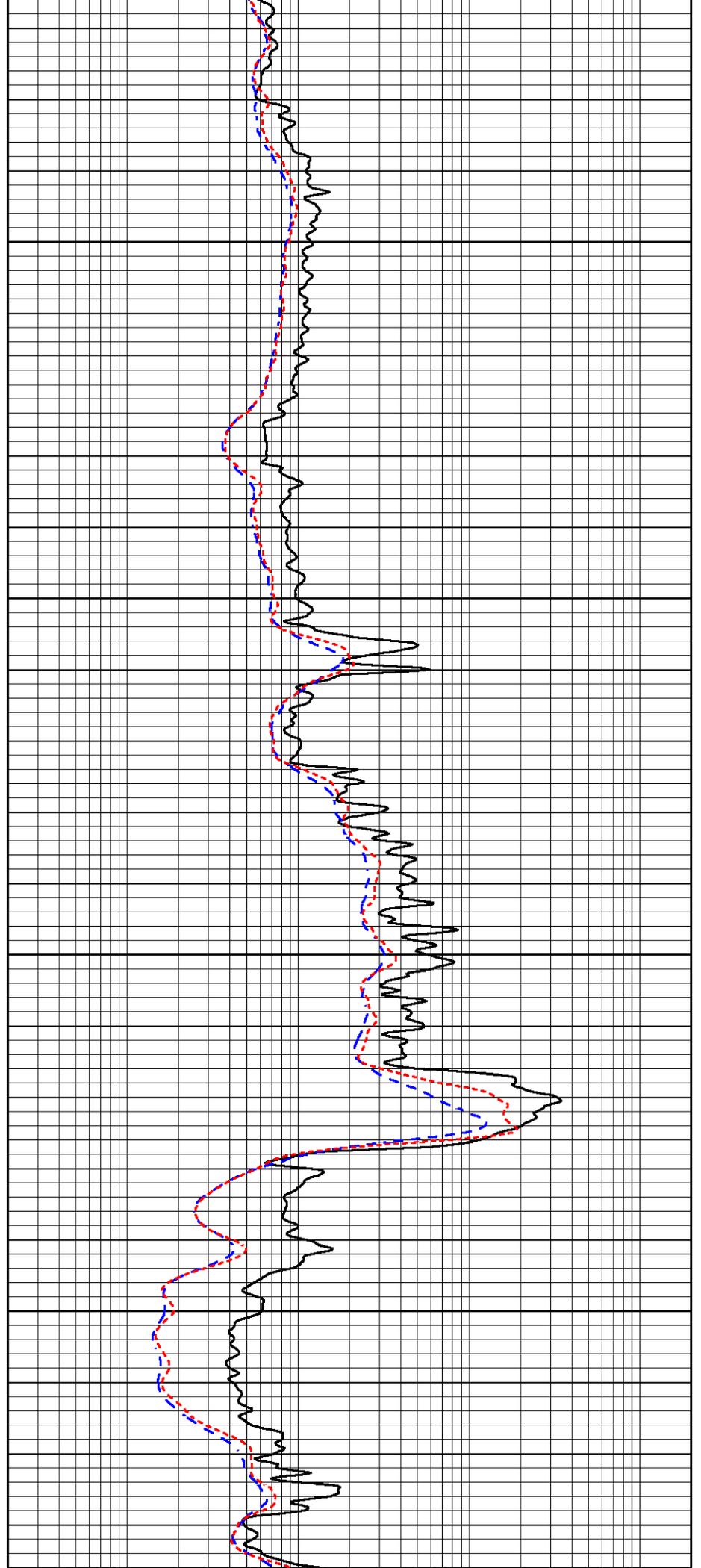


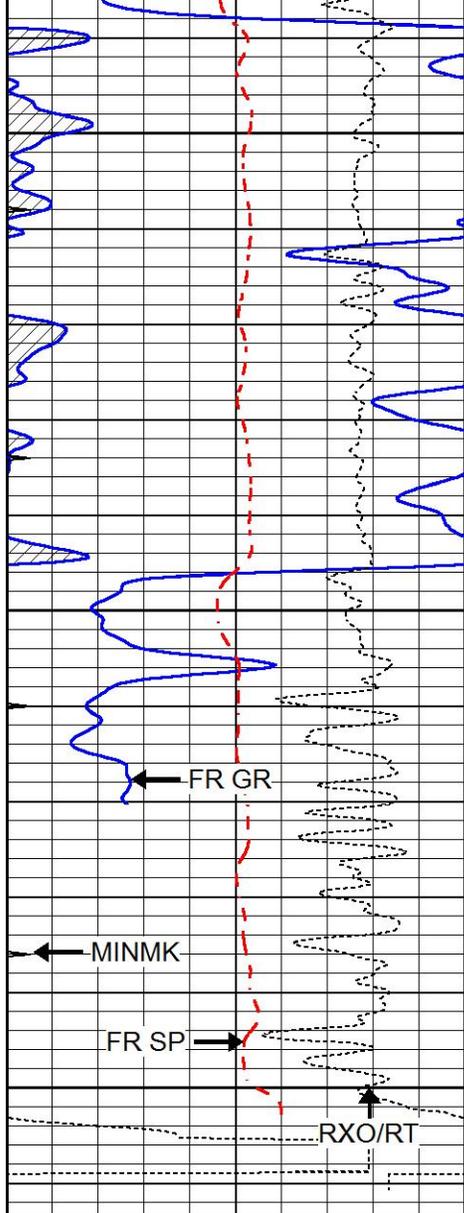
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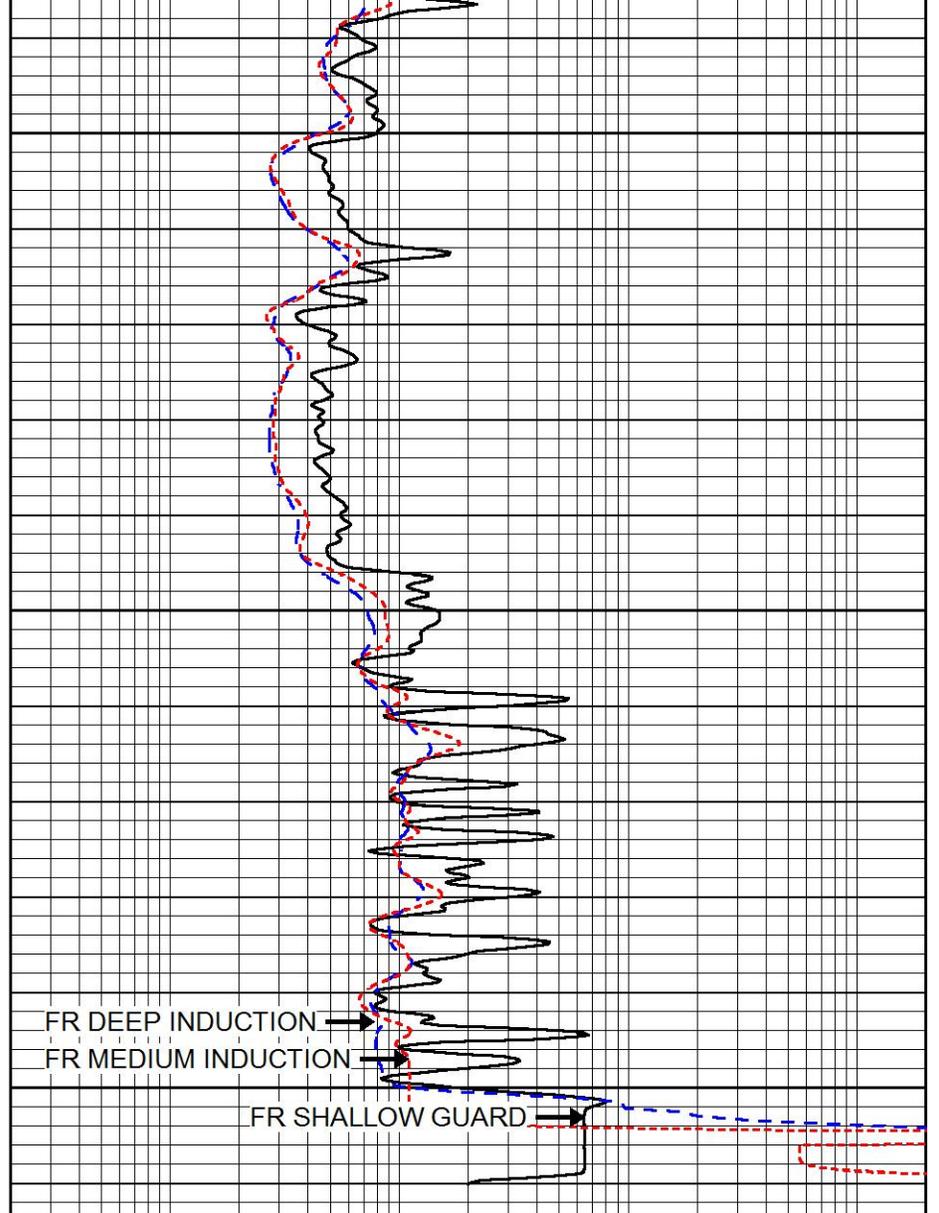
4600





4650
4700
4750
LTD 4755

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

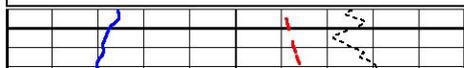


REPEAT SECTION

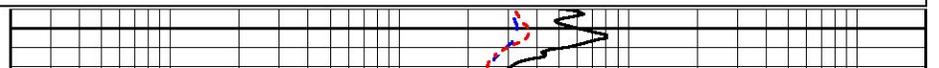
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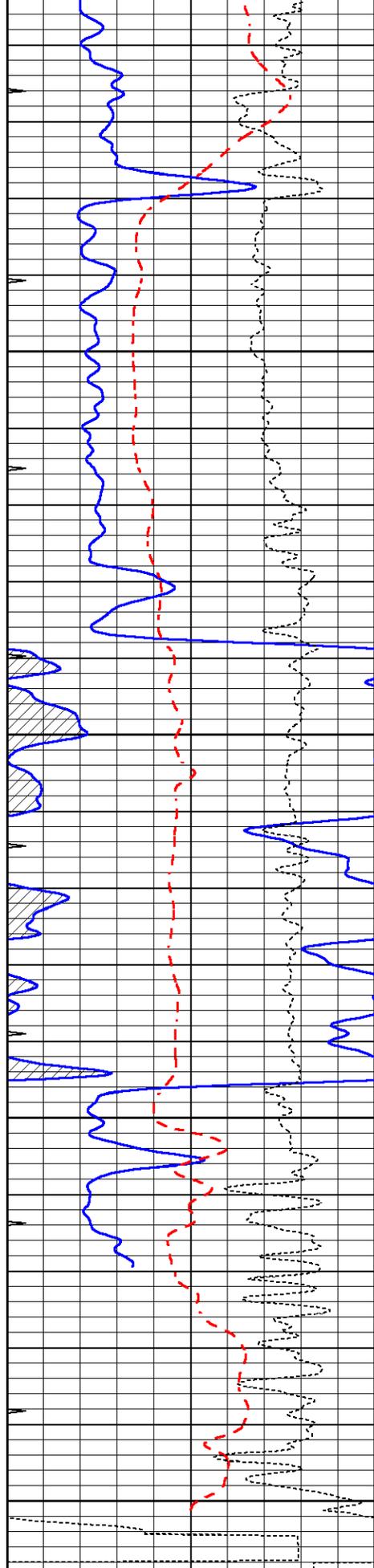
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-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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



4550





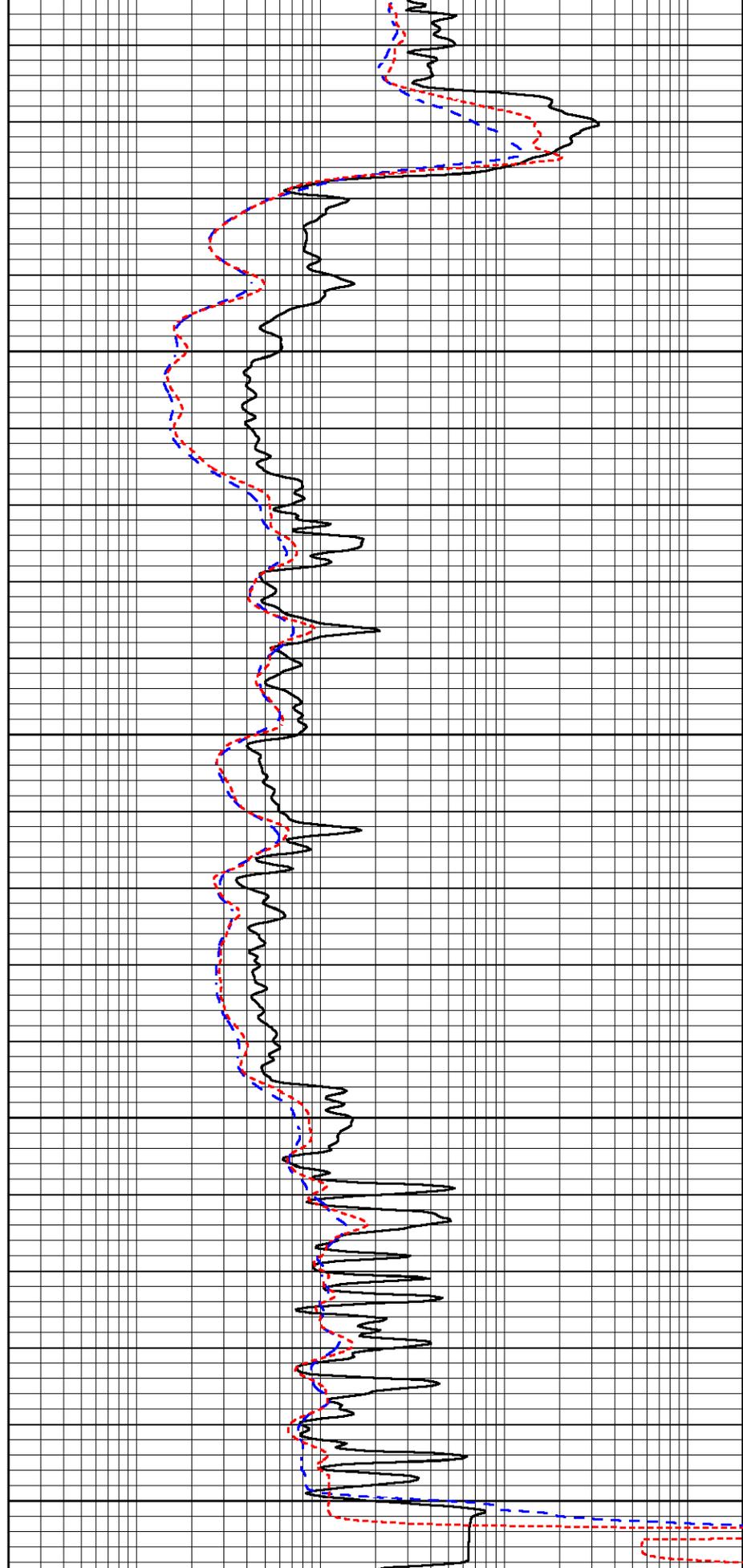
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

4600

4650

4700

4750



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 6716pe.db
 Dataset Pathname pass3.1M
 Dataset Creation Fri Jul 22 02:00:40 2022

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
 Surface Cal Performed: Fri Jul 22 00:17:24 2022
 Downhole Cal Performed: Mon Sep 10 14:28:38 2018
 After Survey Verification Performed: Mon Sep 10 14:28:40 2018

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	620.000	4.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	600.000	-10.000
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: 002N Model: PRB

Master Calibration

Performed Tue Mar 10 15:08:00 2020

	Background	Magnesium	Aluminum	Aluminum+Fe	
Window 1	780.1	6981.9	2088.6	1871.2	cps
Window 2	718.6	5898.2	1813.8	1664.1	cps
Window 3	580.0	2989.5	1088.0	1039.1	cps
Window 4	172.8	175.7	175.3	173.5	cps
Long Space	0.0	5179.6	1095.2	945.5	cps
Short Space	1.1	1228.6	821.2	690.4	cps
Rho		1.7100	2.5900	0.0000	g/cc
Pe		2.0000	2.7500	5.7900	

Rib Angle : 45.5 Rib Slope : 1.016 Density/Spine Ratio : 0.548
 Spine Angle : 75.5 Spine Slope : 2.857 Spine Intercept : 18.0

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: 6I
Tool Model: G

CALIBRATION

Detector	Readings	Target	Normalization
Short Space	1.00 cps	1.00 cps	1.0000
Long Space	1.00 cps	1.00 cps	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
Long Space

cps
cps

pu

pu

Gamma Ray Calibration Report

Serial Number:	GR6	
Tool Model:	OPEN	
Performed:	Mon Jun 20 01:31:16 2022	
Calibrator Value:	150.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	276.0	cps
Sensitivity:	0.8500	GAPI/cps