

DUAL INDUCTION LOG

Company	L. D. DRILLING, INC.		
Well	#1-22 BANNISTER		
Field	BANNISTER		
County	RUSH	State	KANSAS
Location:	API # : 15-165-22176-0000 1155' FNL & 2289' FWL SW - SE - NE - NW		Other Services CDL/CNL MEL
Permanent Datum	GROUND LEVEL	Elevation	2239
Log Measured From	KELLY BUSHING 5' A.G.L.		
Drilling Measured From	KELLY BUSHING		
Date	11/23/21		
Run Number	ONE		
Depth Driller	4450		
Depth Logger	4452		
Bottom Logged Interval	4450		
Top Log Interval	00		
Casing Driller	8 5/8"@264'		
Casing Logger	264		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 8,000 PPM	
Density / Viscosity	9.2/58		
pH / Fluid Loss	10.0/7.6		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.420@80F		
Rmf @ Meas. Temp	.315@80F		
Rmc @ Meas. Temp	.504@80F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.275@122F		
Time Circulation Stopped	2.5 HOURS		
Time Logger on Bottom	1:00 A.M.		
Maximum Recorded Temperature	120F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	KIM SHOEMAKER	TED McHENRY	

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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.

15-165-22176-0000

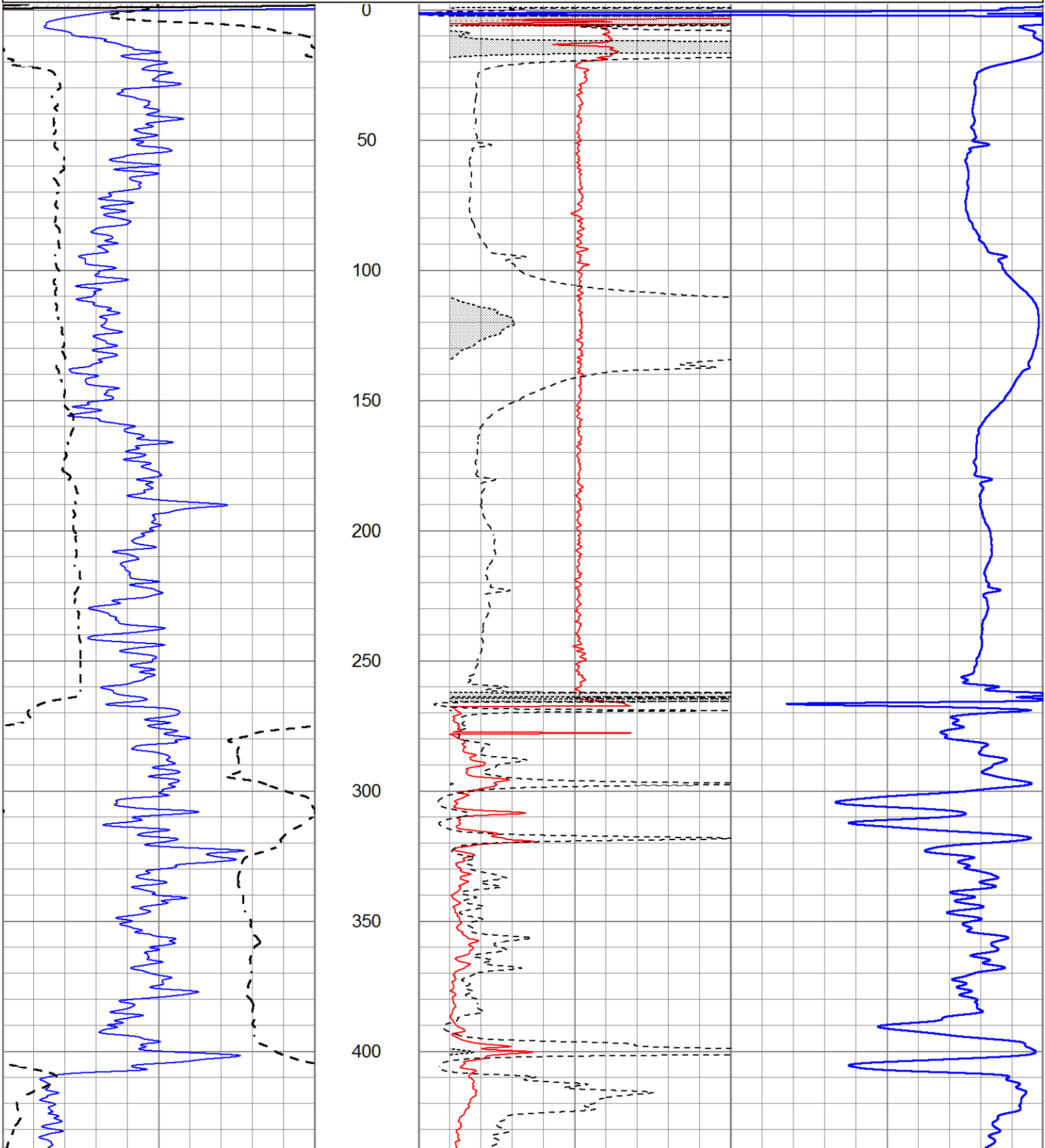
Comments

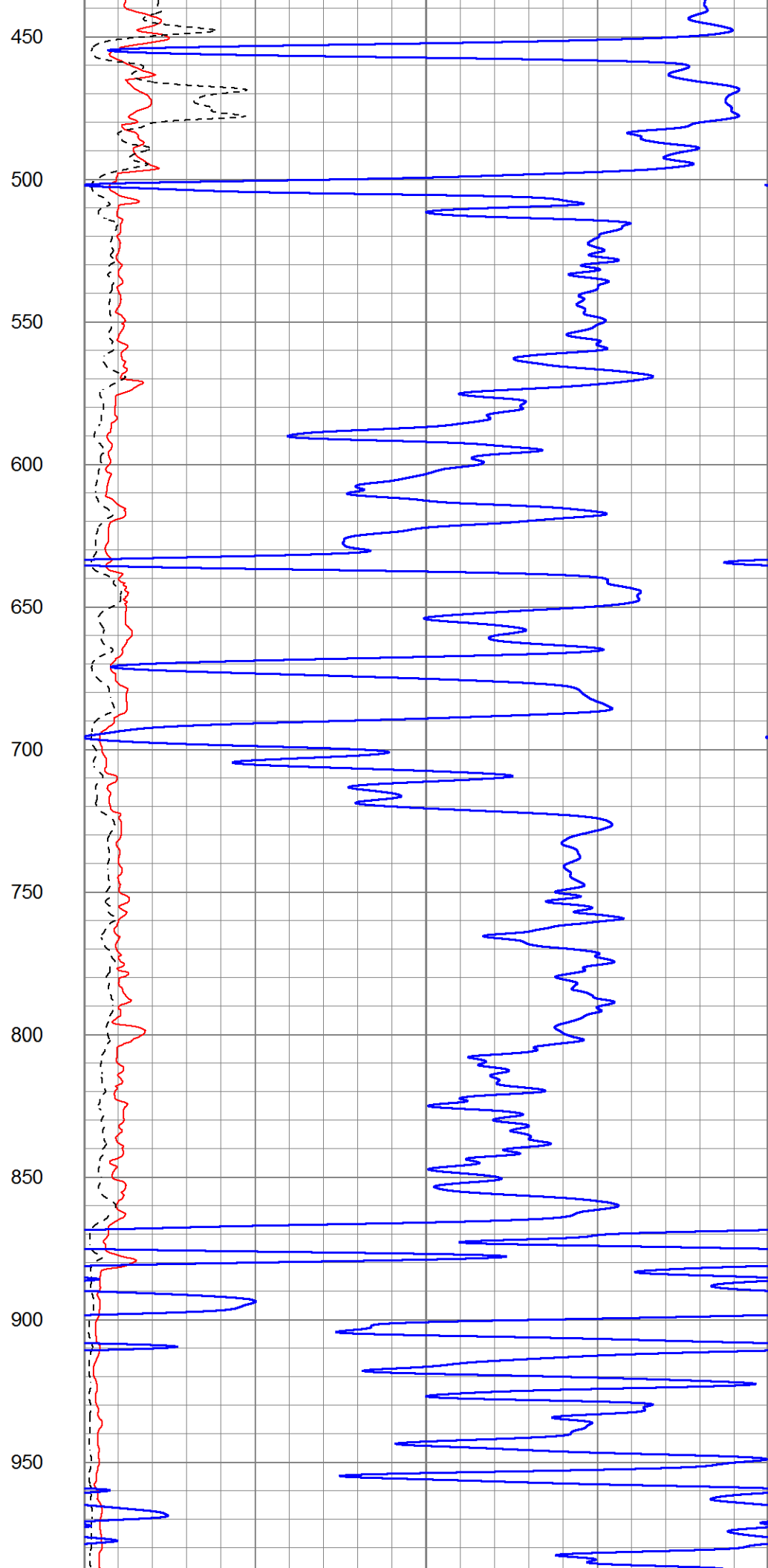
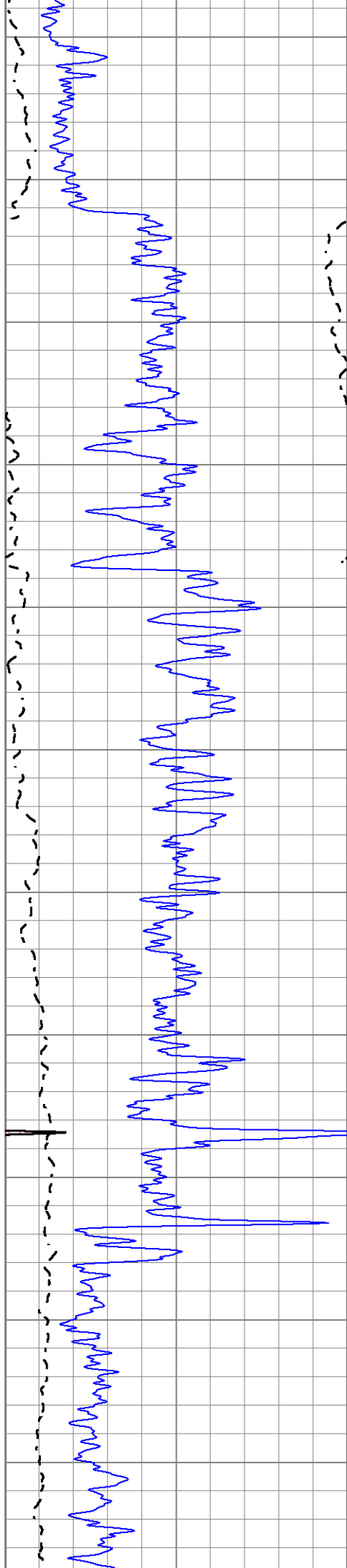
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS
ALEXANDER, KS., 2E. ON HWY 96 TO "RD. 140", 5S. TO "RD. V", 1/2W., S. INTO

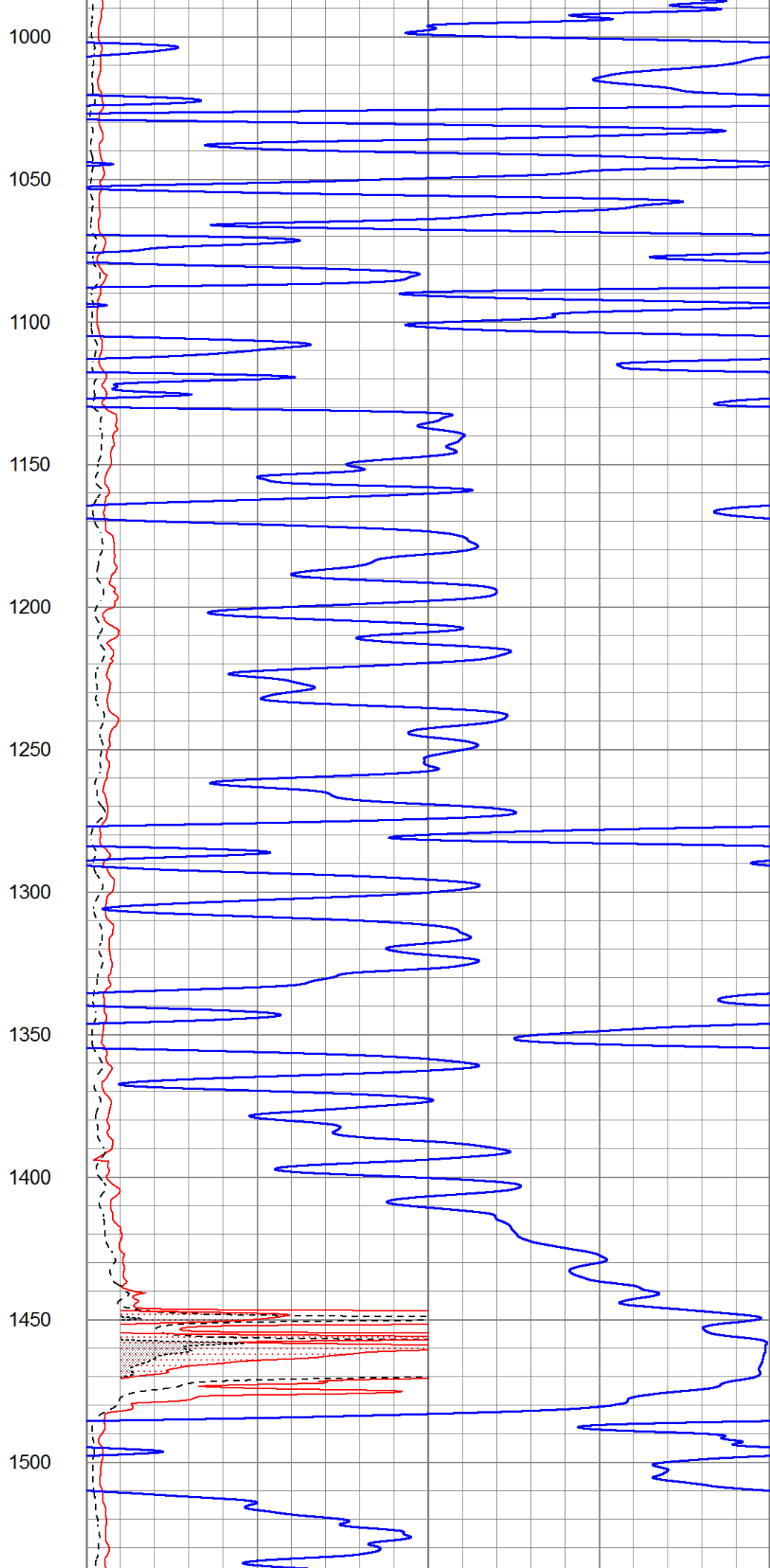
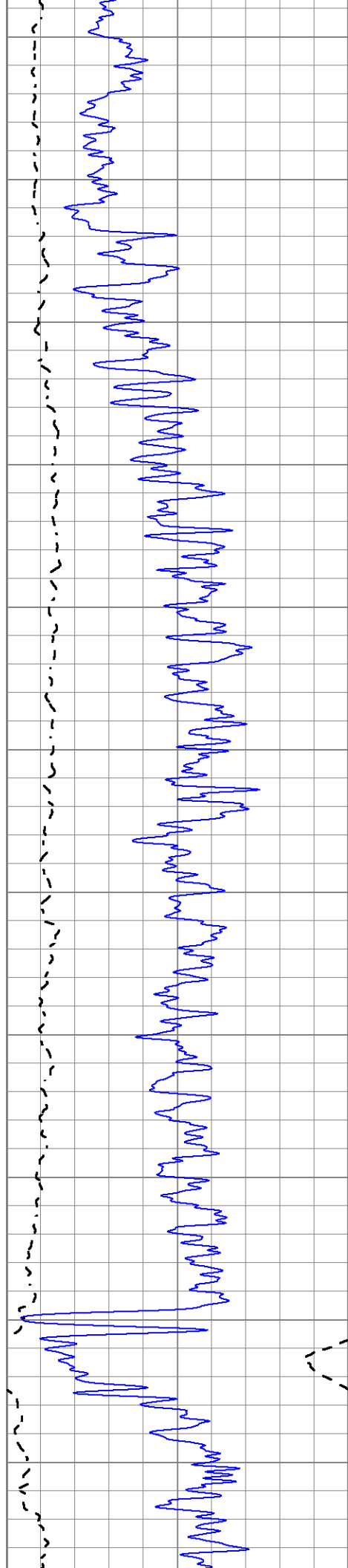


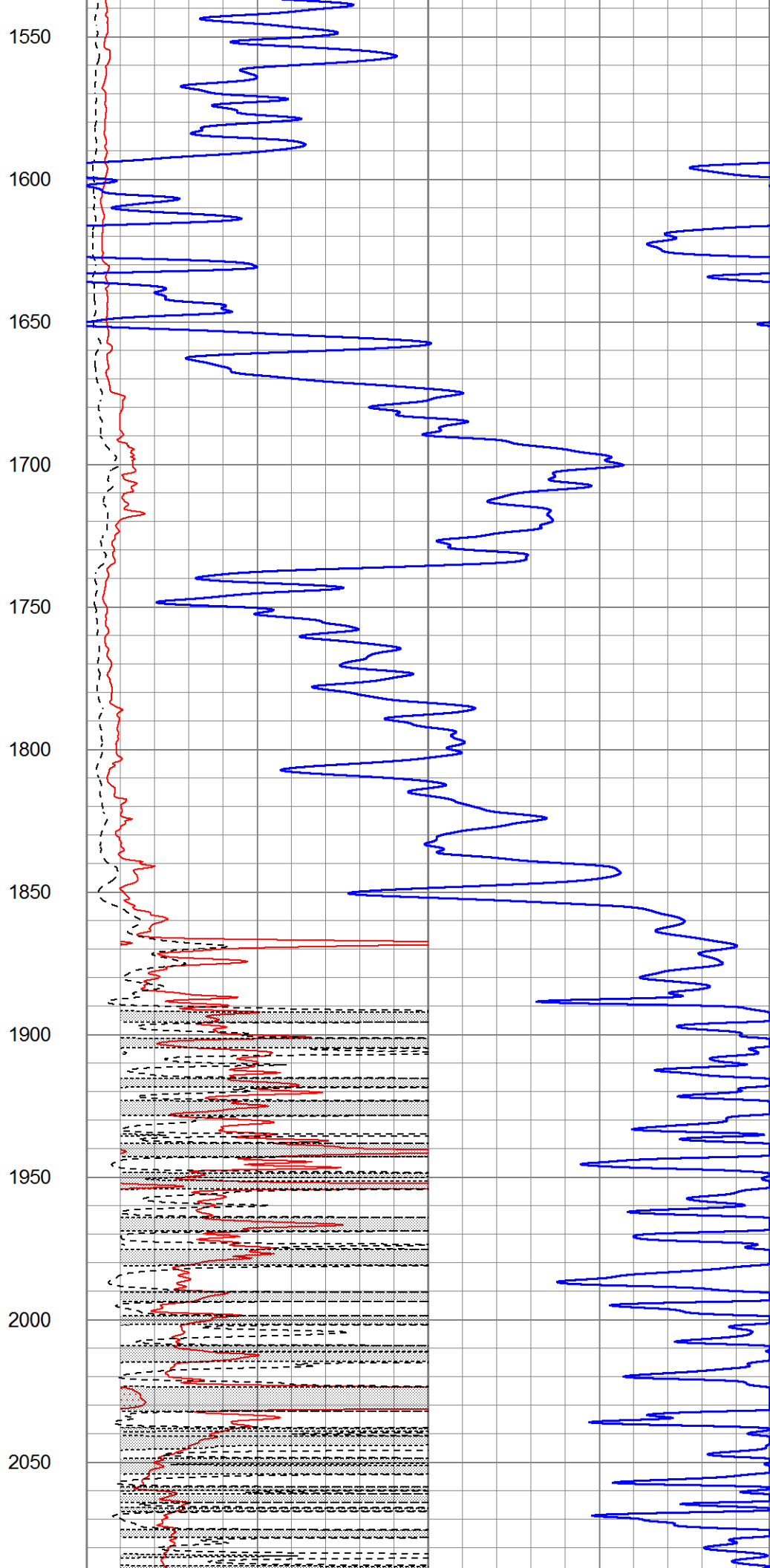
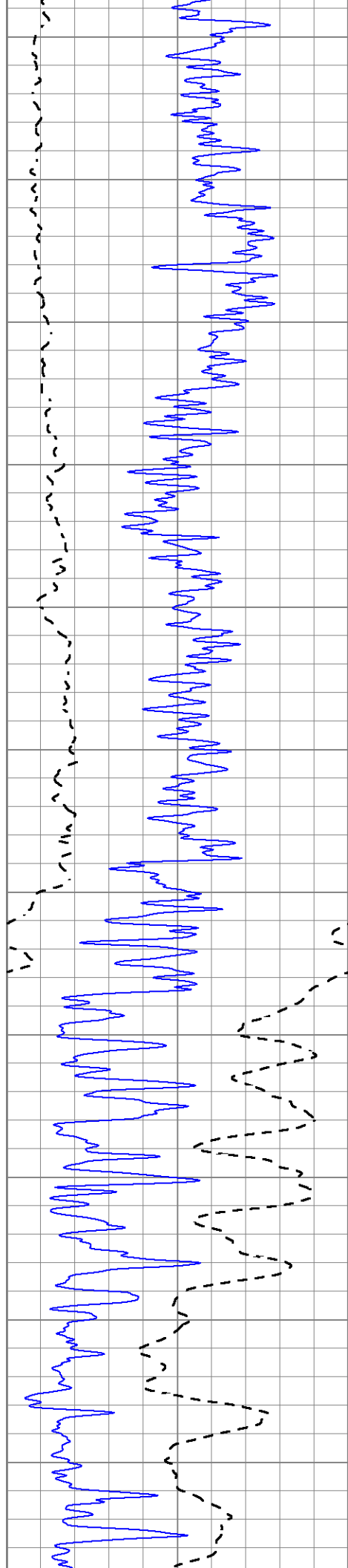
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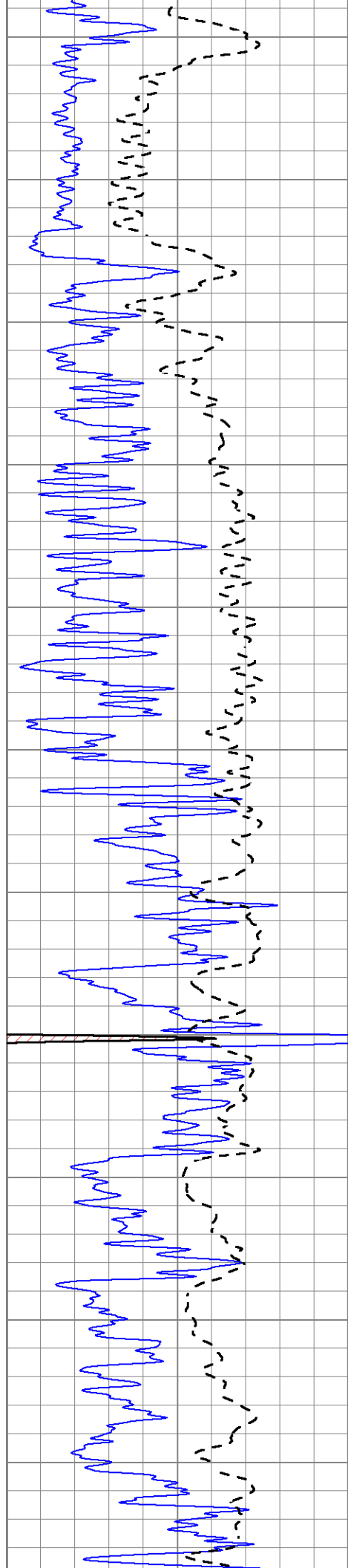
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-100	SP (mV)	100	0	RLL3 (Ohm-m)	50
0	RWA (Ohm-m)	1	0	RILD (Ohm-m)	50
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500











2100

2150

2200

2250

2300

2350

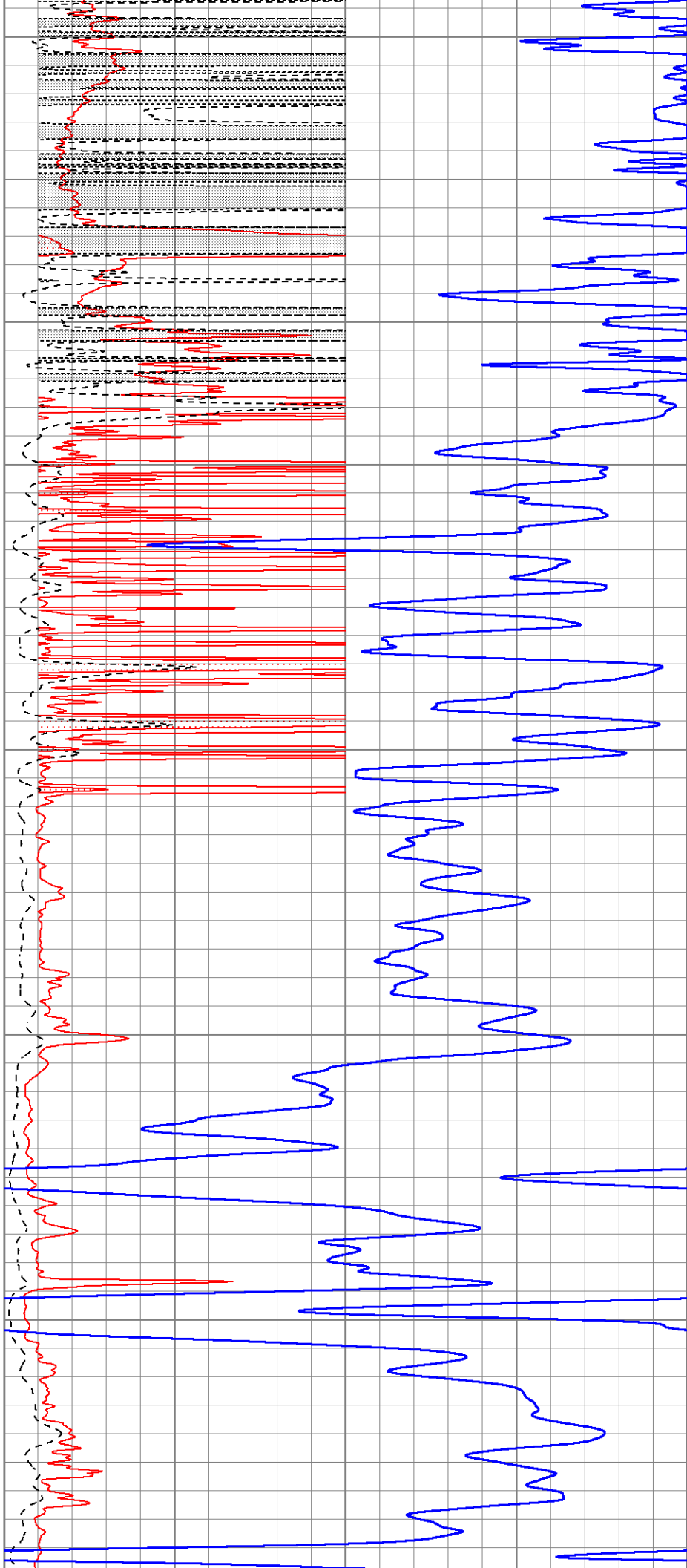
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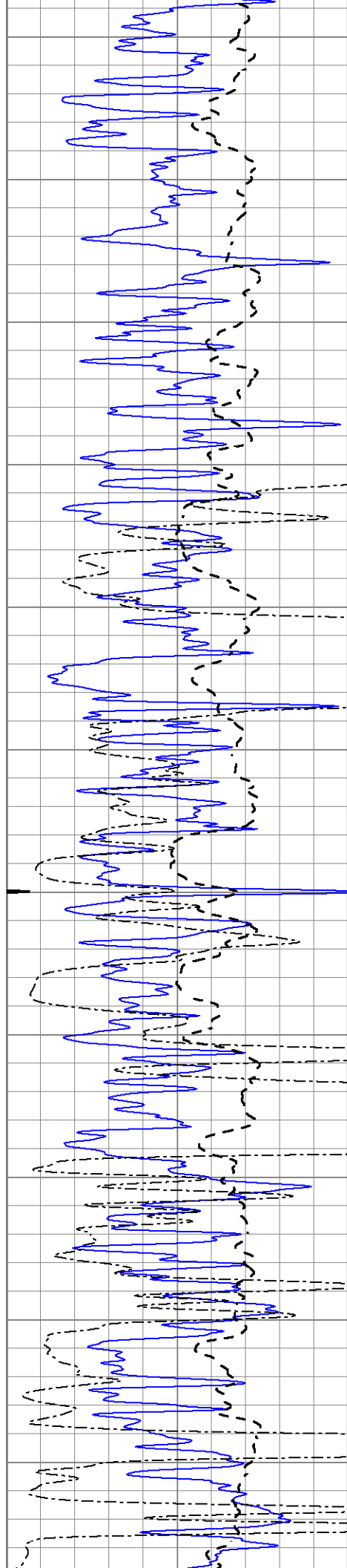
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2500

2550

2600





2650

2700

2750

2800

2850

2900

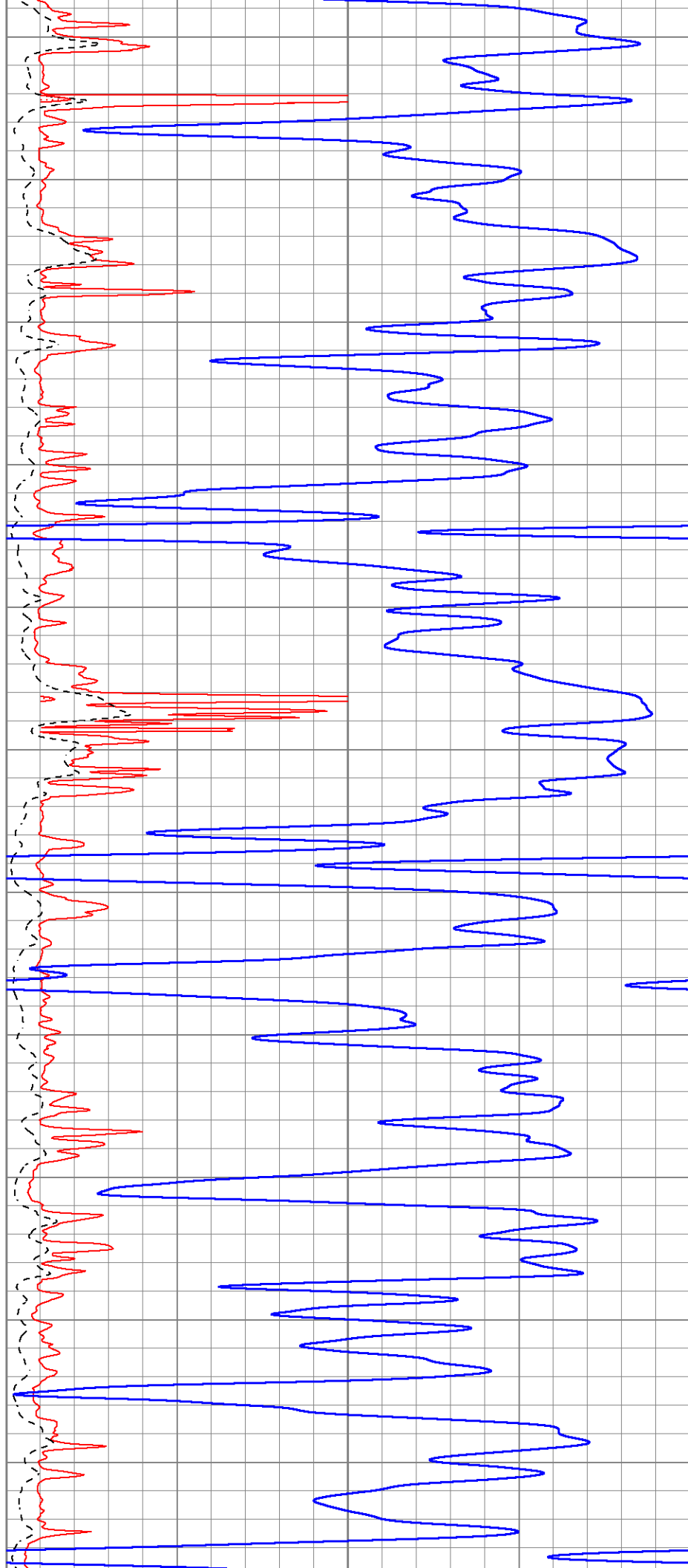
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3000

3050

3100

3150



3200

3250

3300

3350

3400

3450

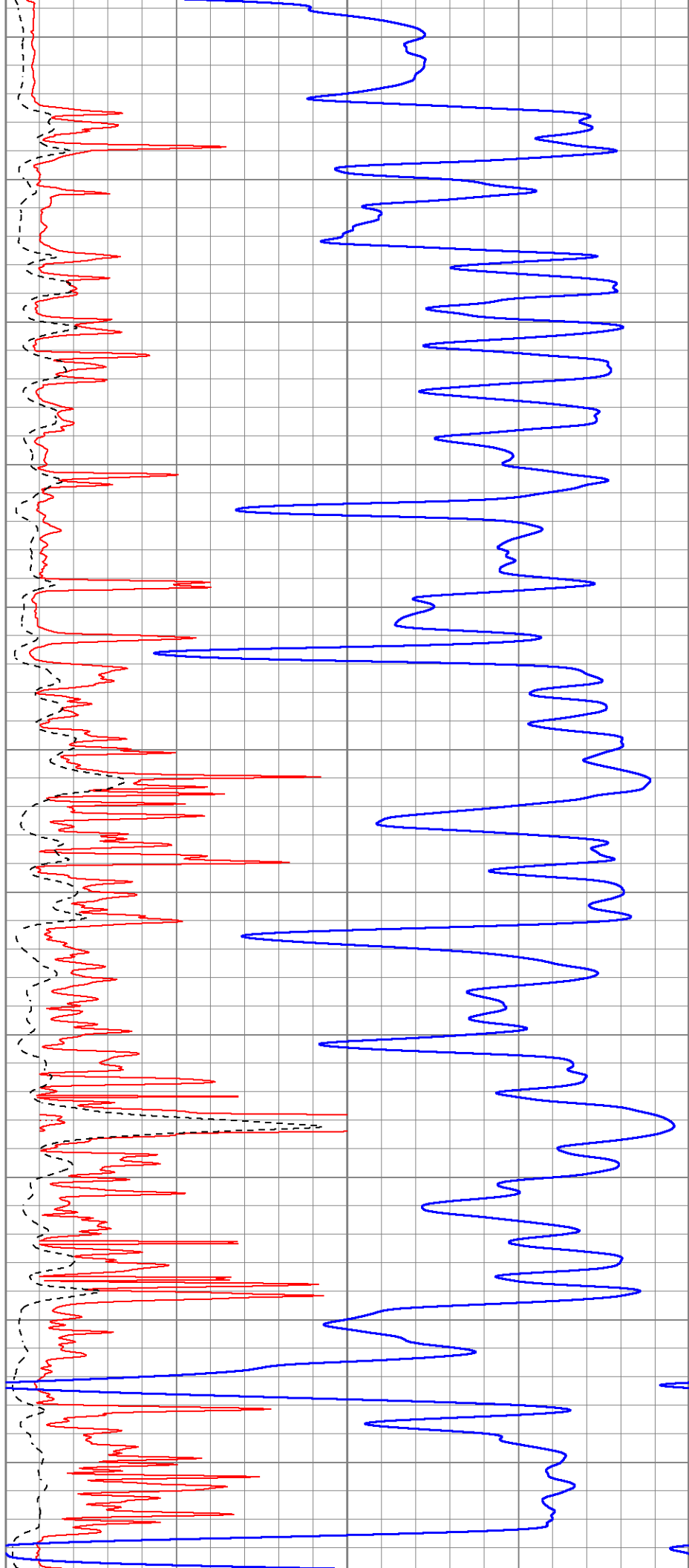
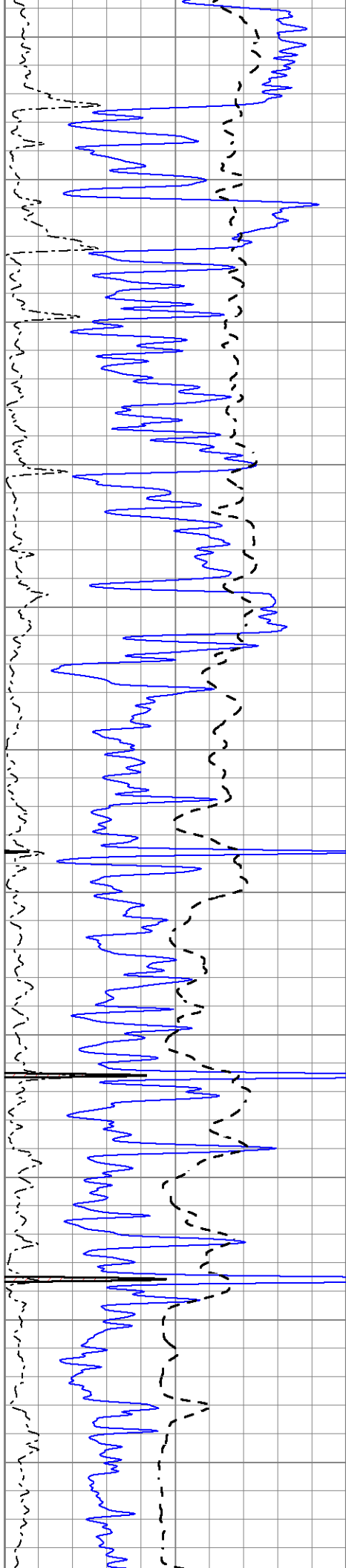
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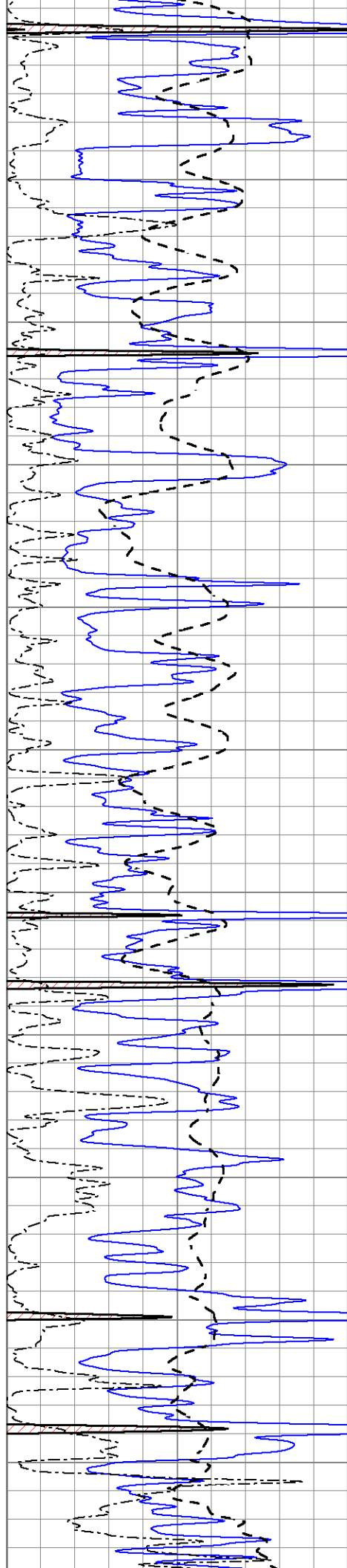
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3600

3650

3700





3750

3800

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3900

3950

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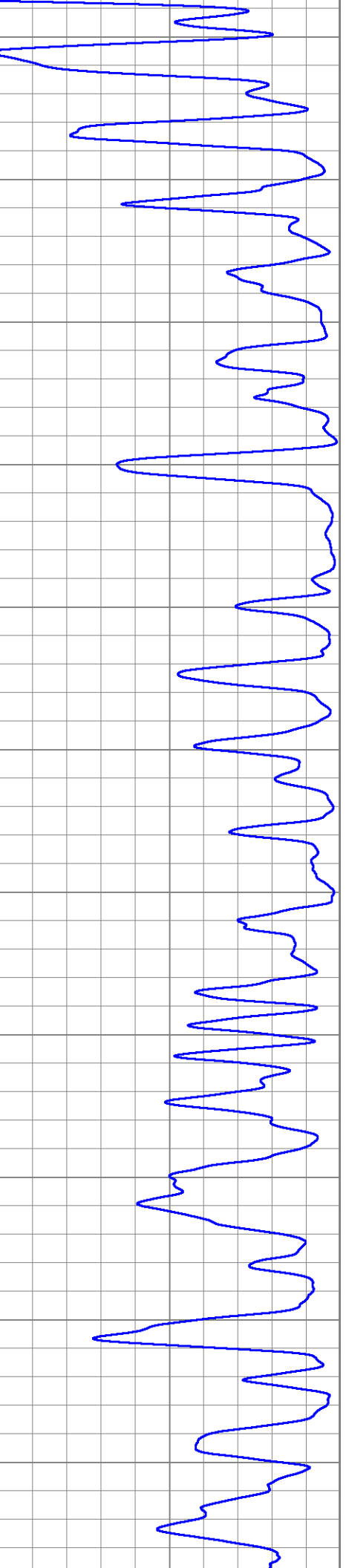
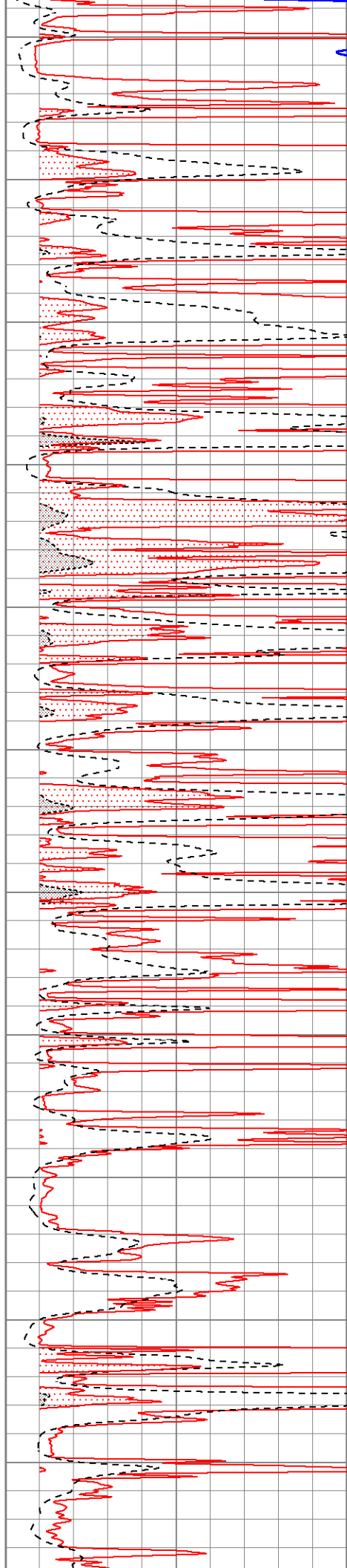
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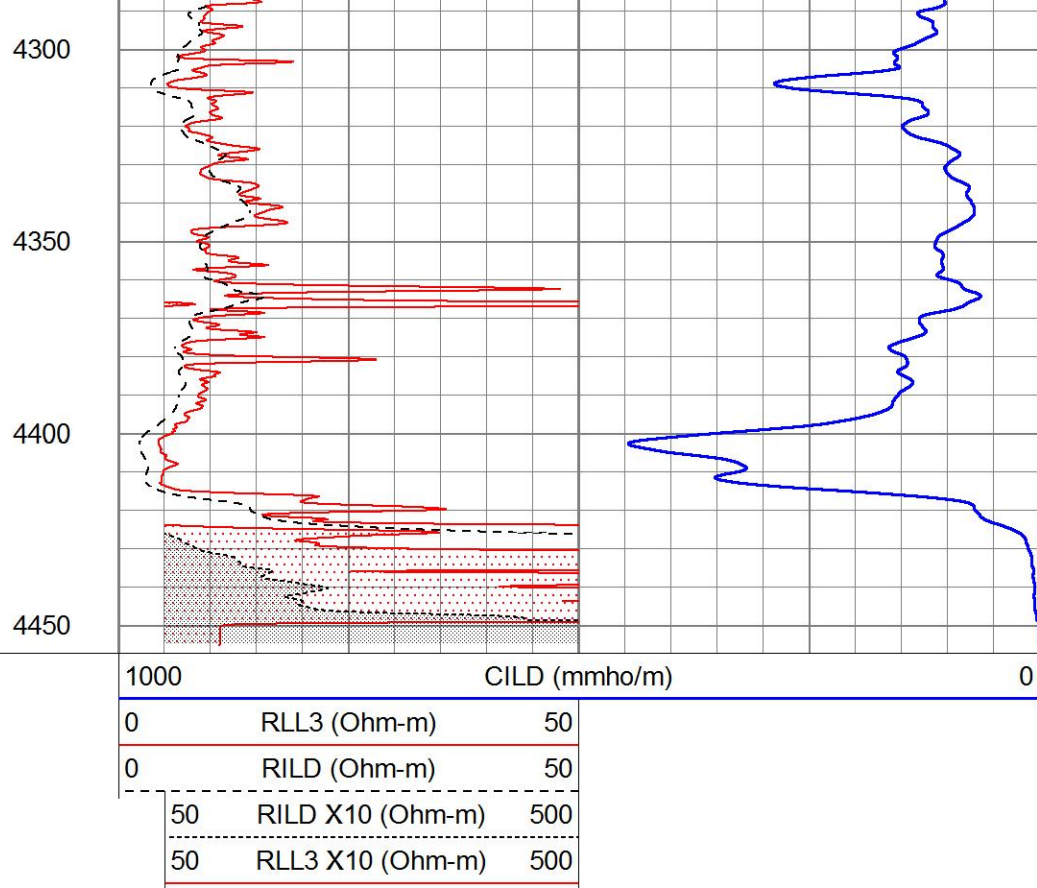
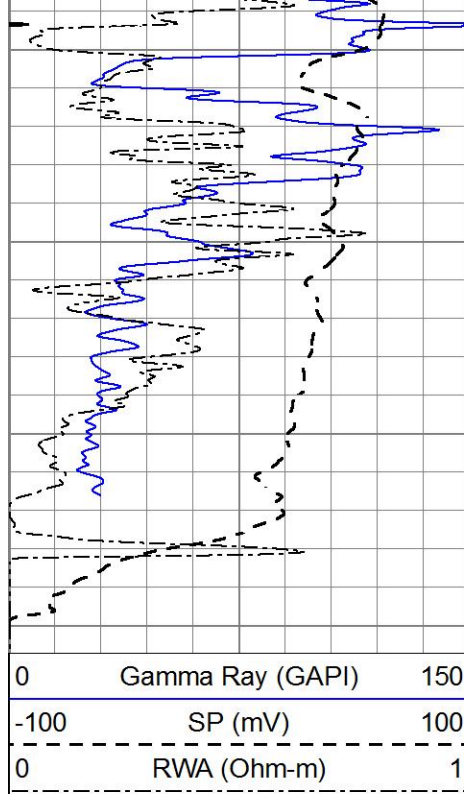
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4150

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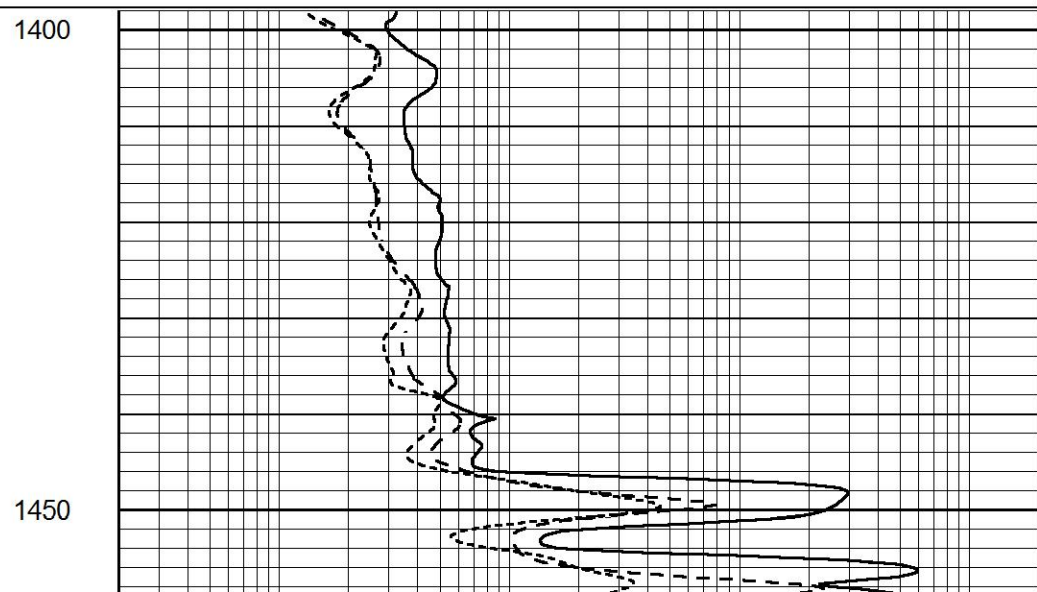
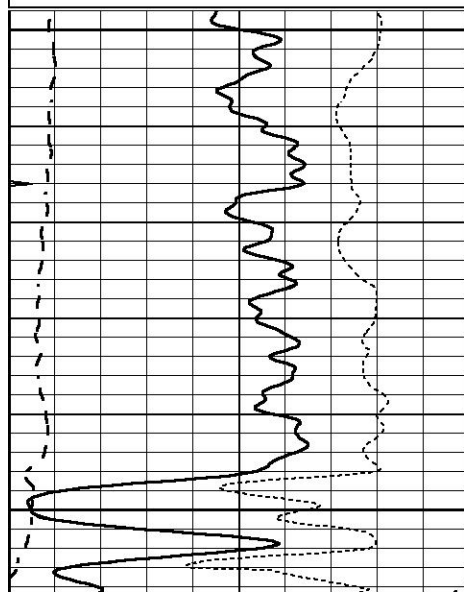
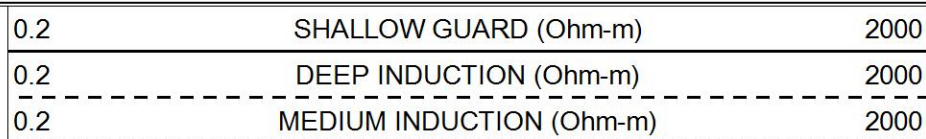
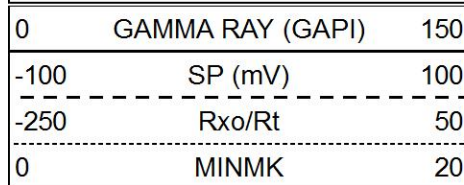
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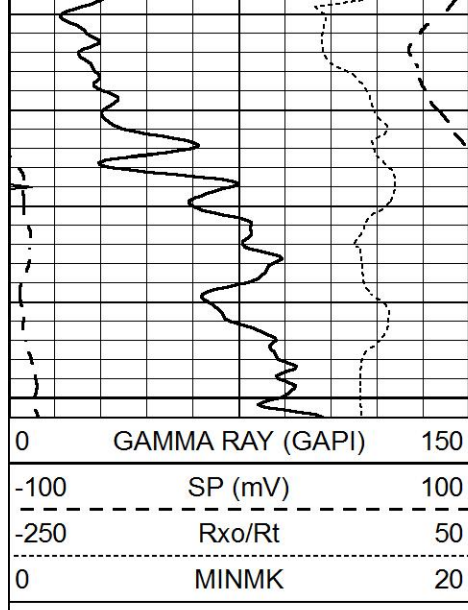




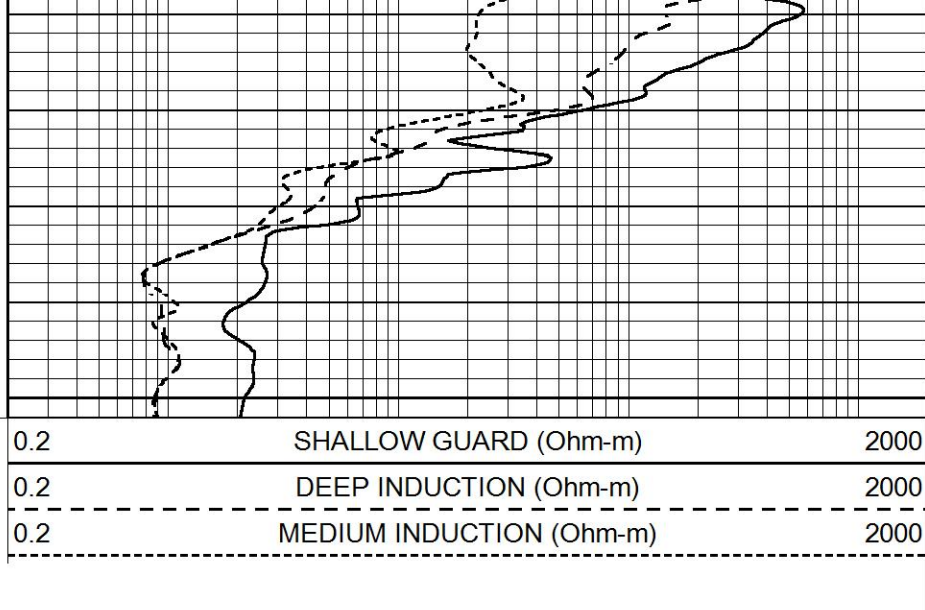
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 Presentation Format _dil
 Dataset Creation Tue Nov 23 03:34:45 2021
 Charted by Depth in Feet scaled 1:240



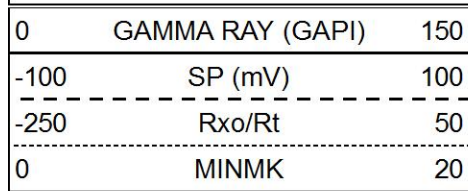


1500



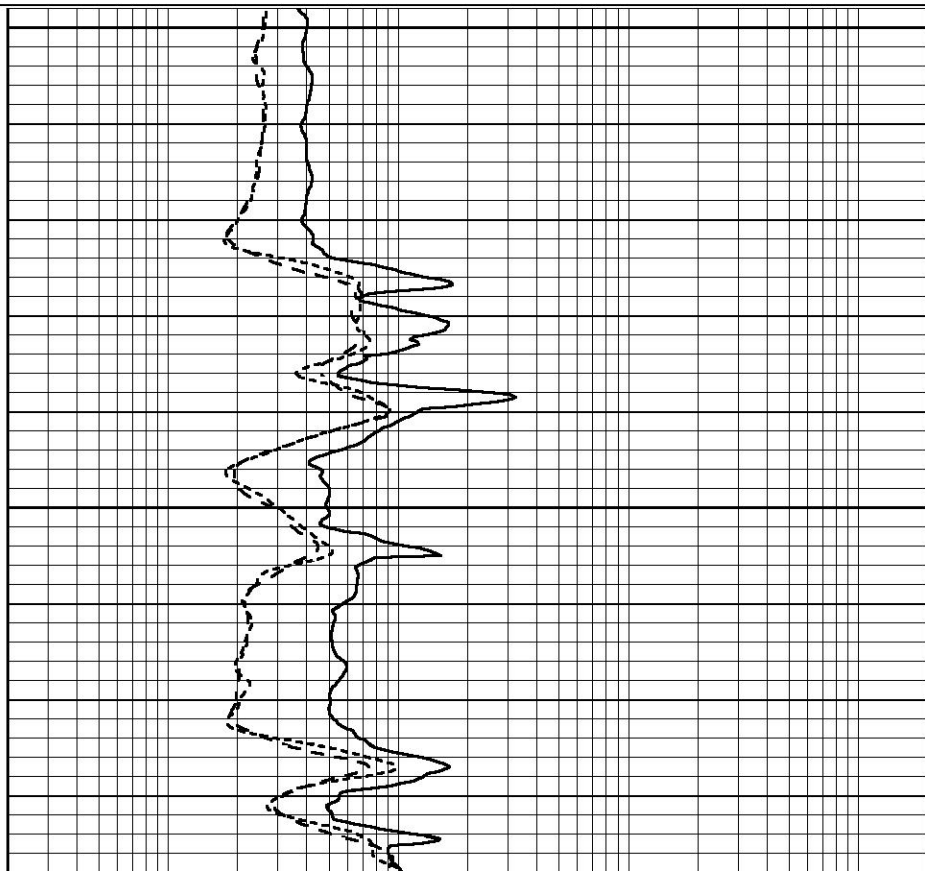
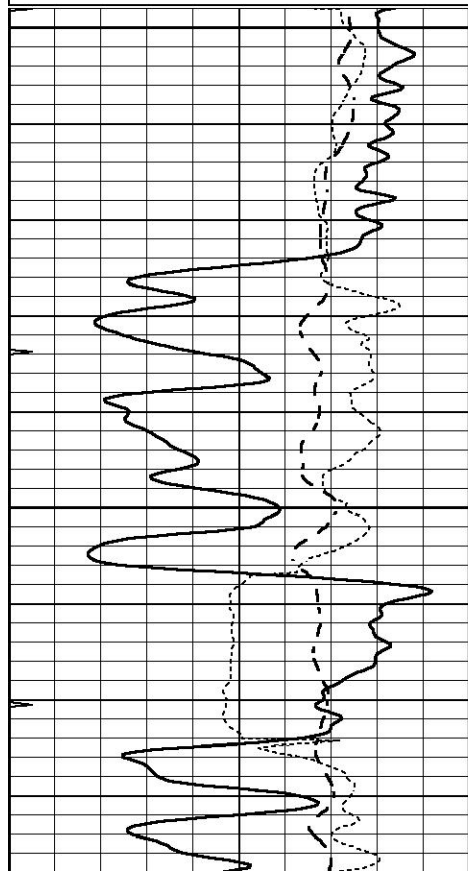
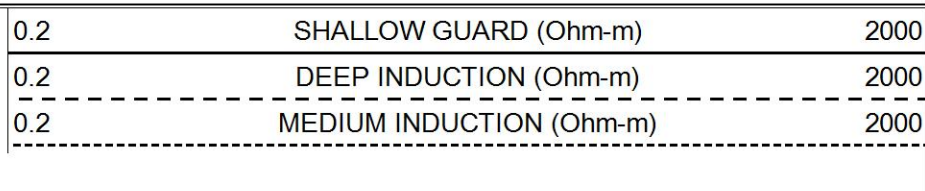
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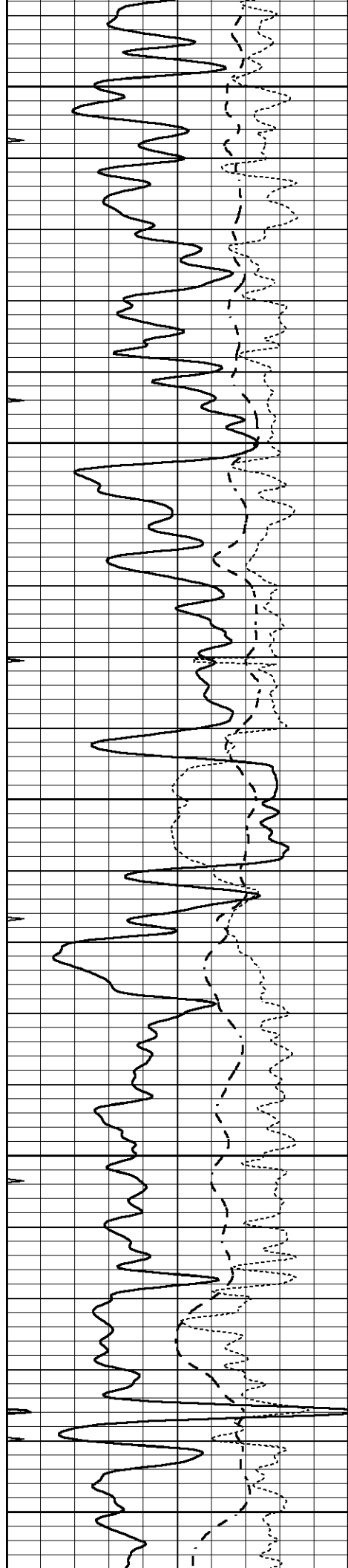
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 Charted by Depth in Feet scaled 1:240



3200

3250





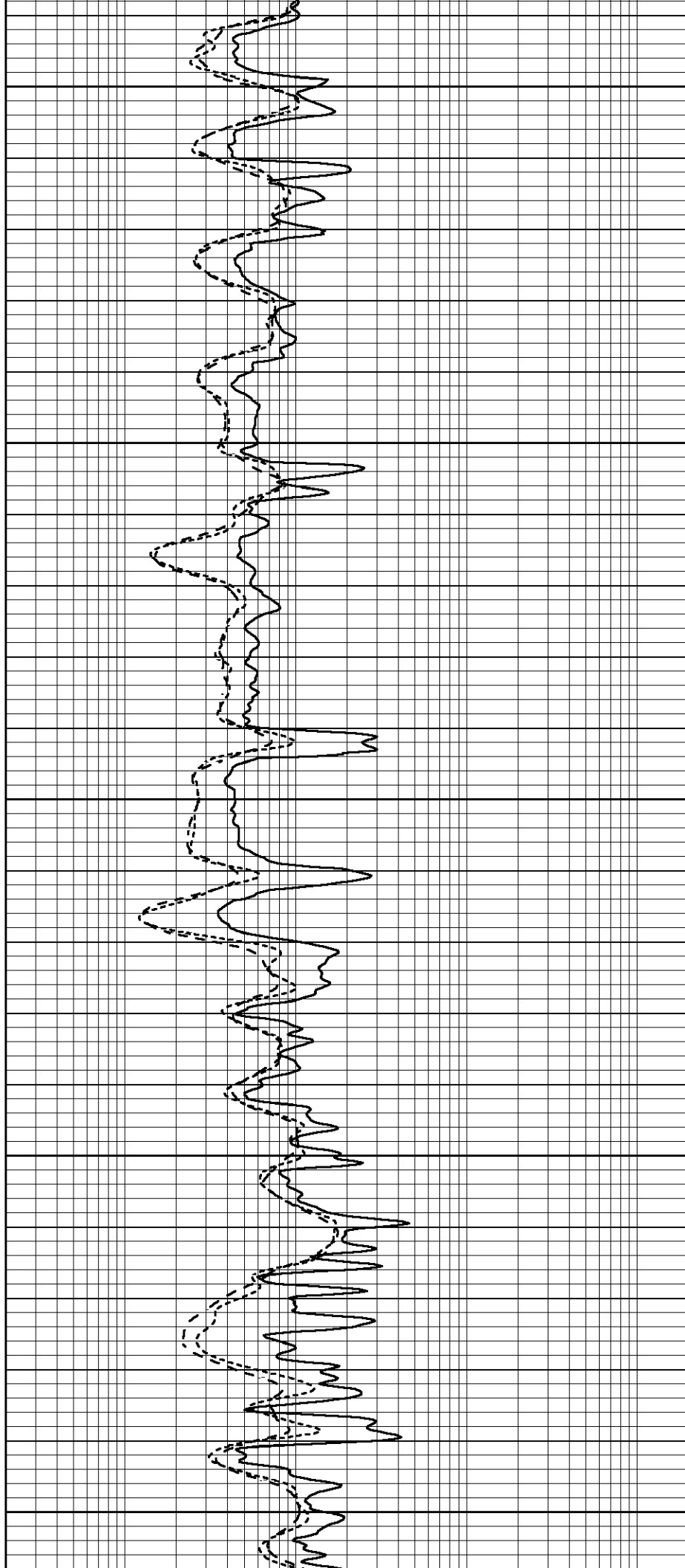
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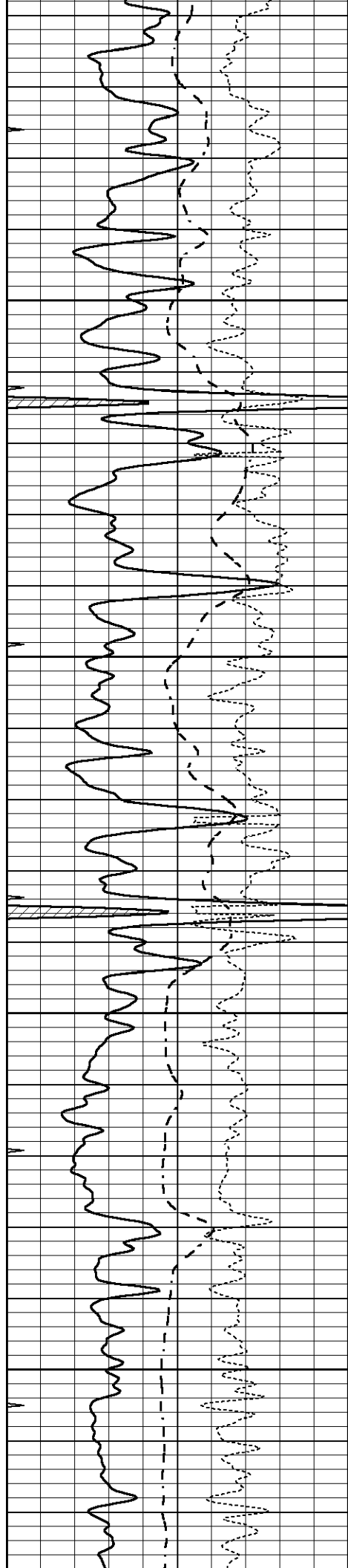
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3400

3450

3500



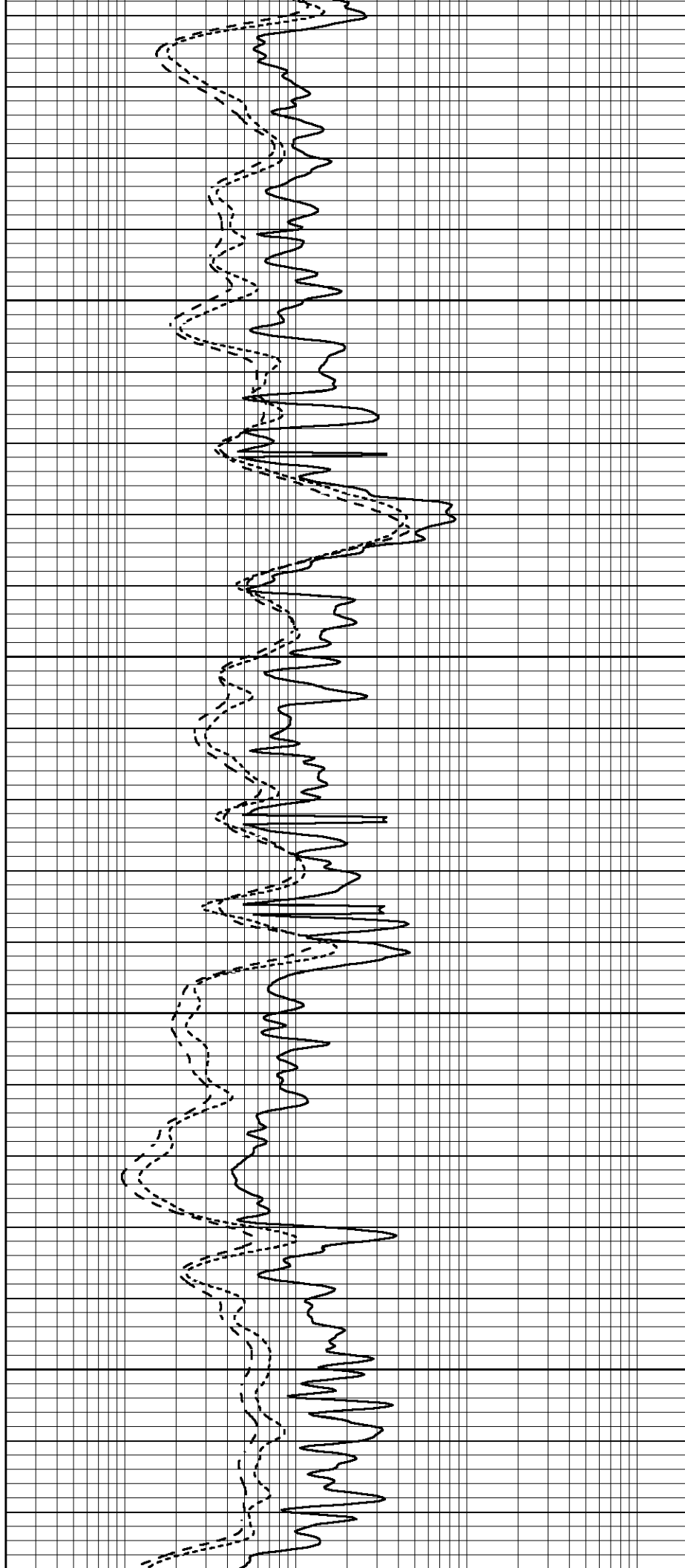


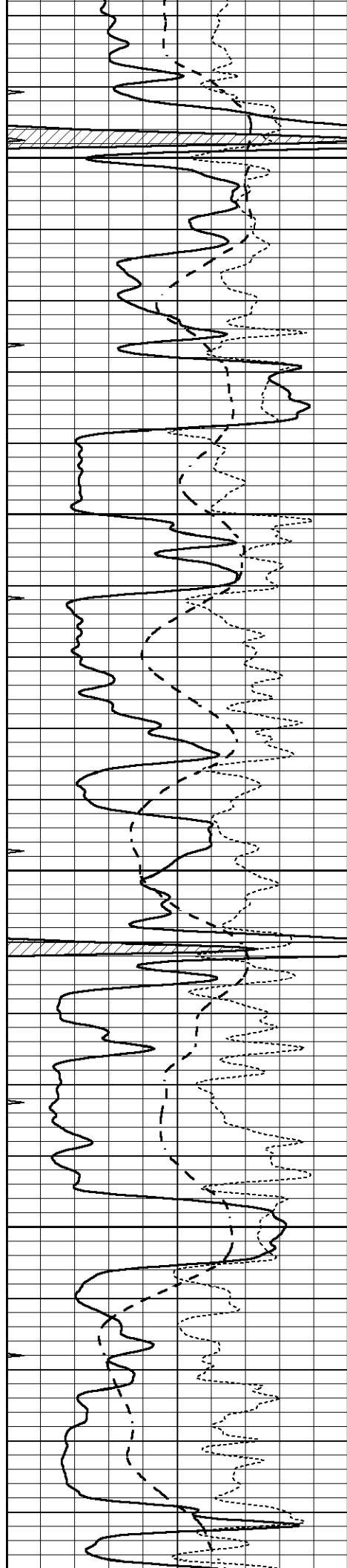
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3650

3700



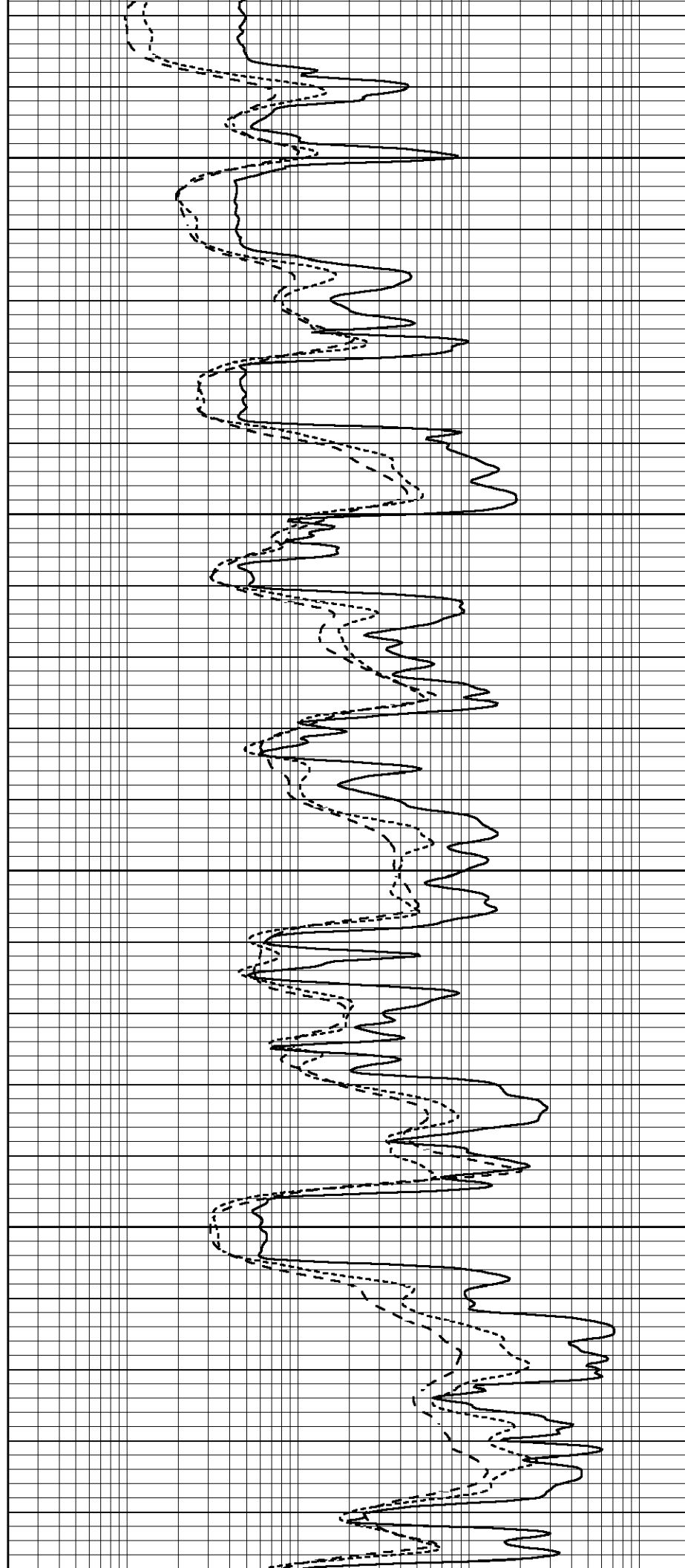


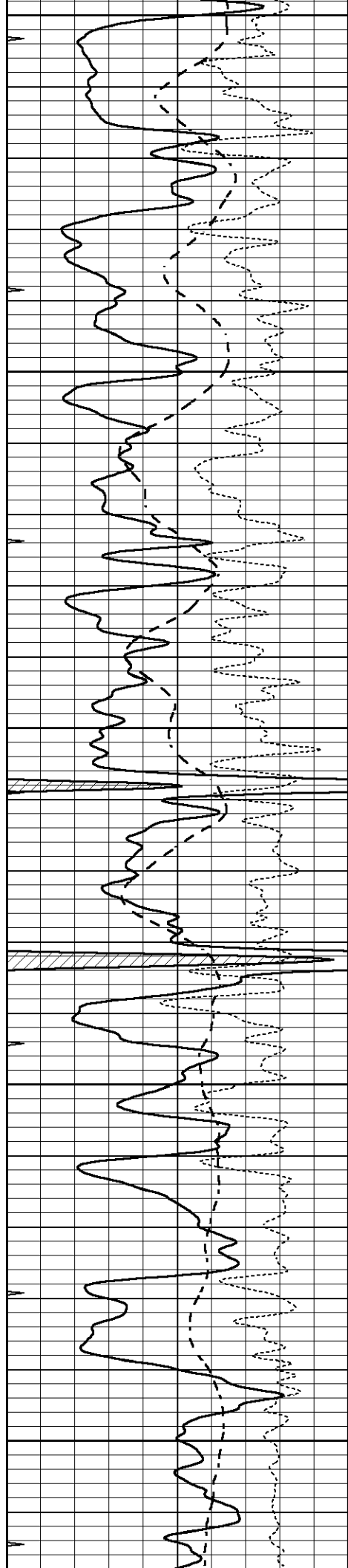
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3800

3850

3900





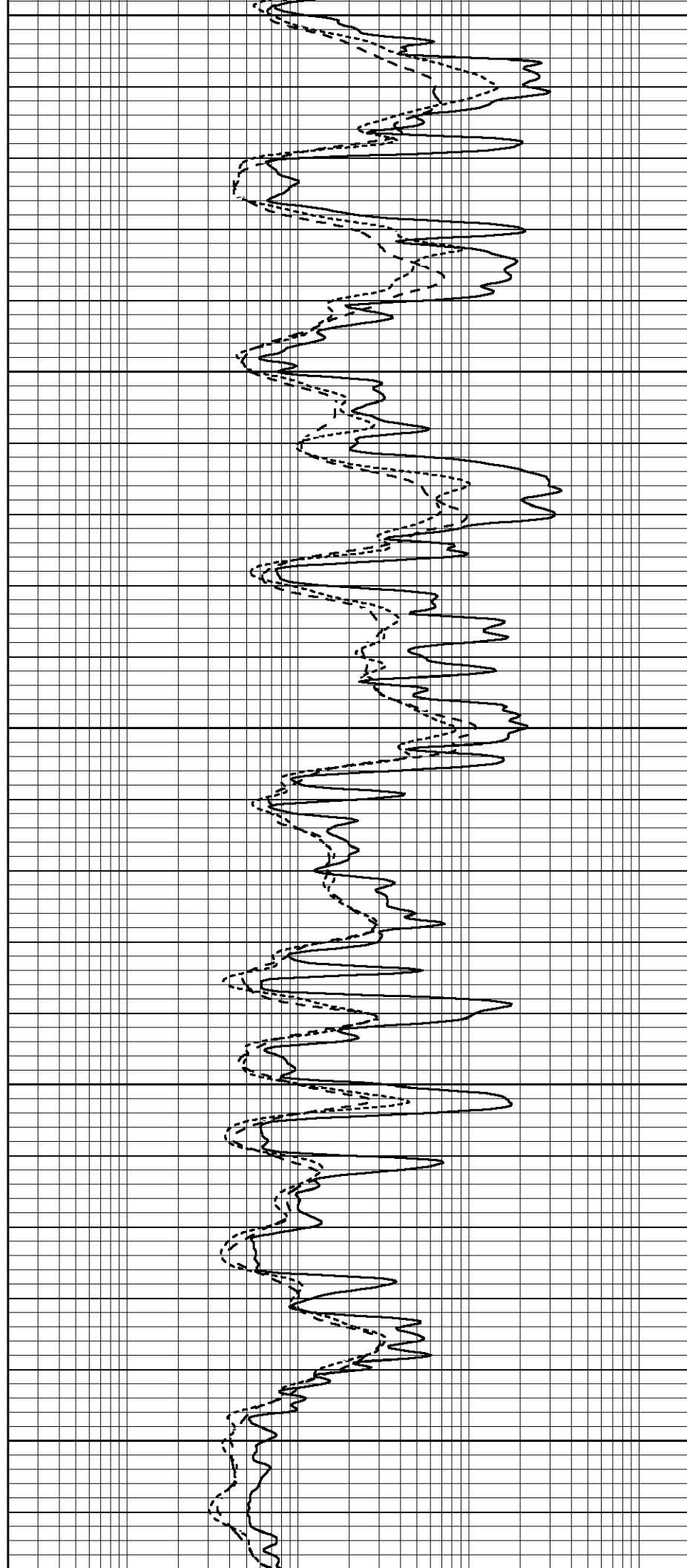
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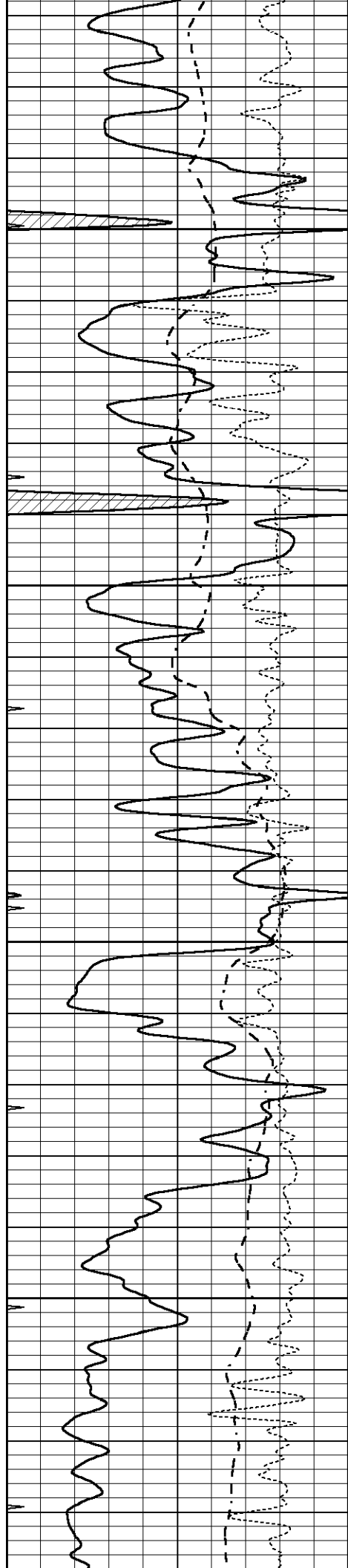
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4050

4100

4150



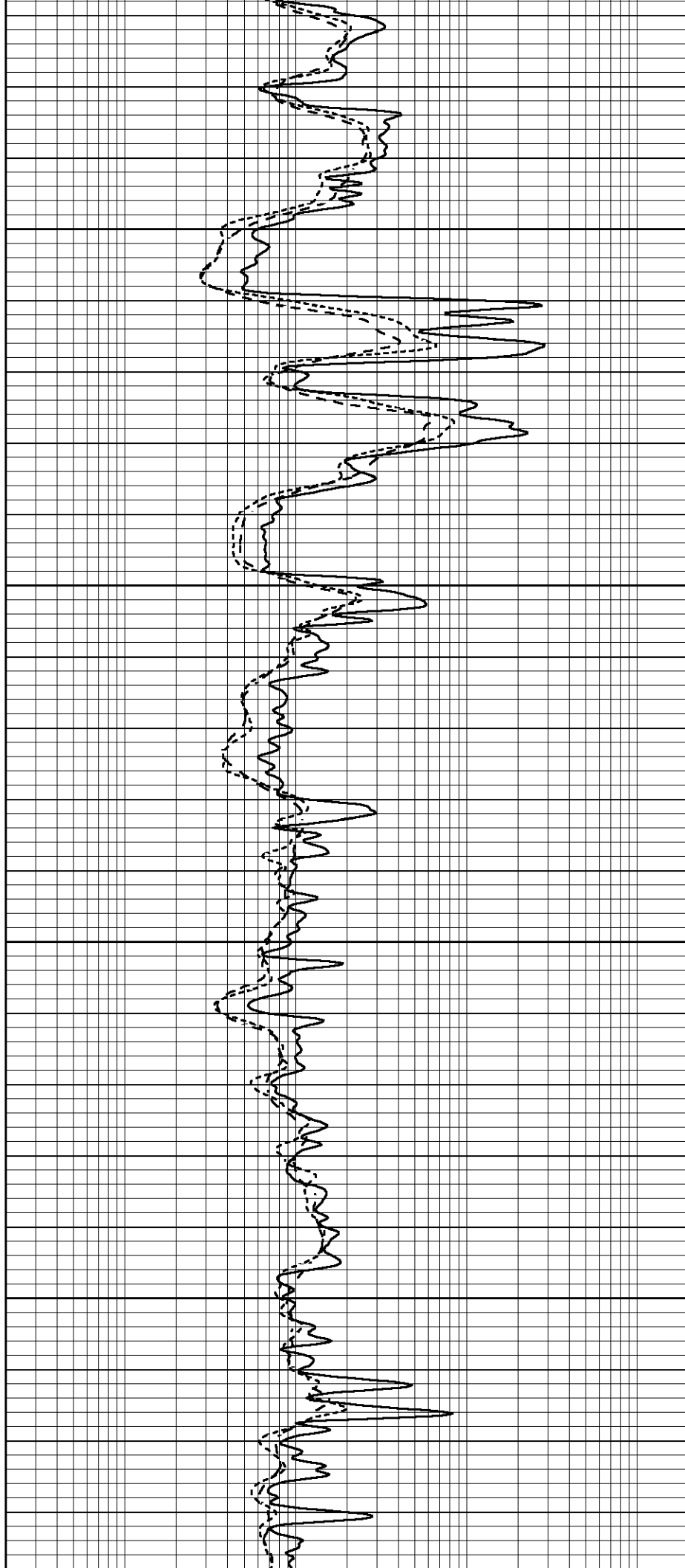


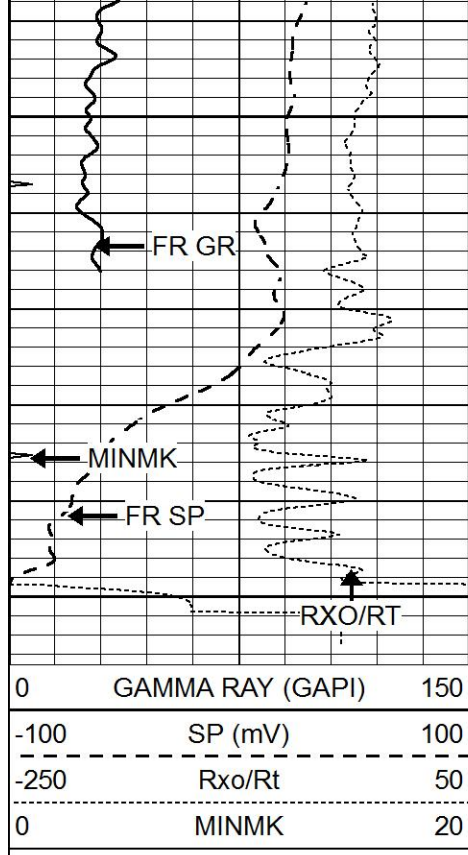
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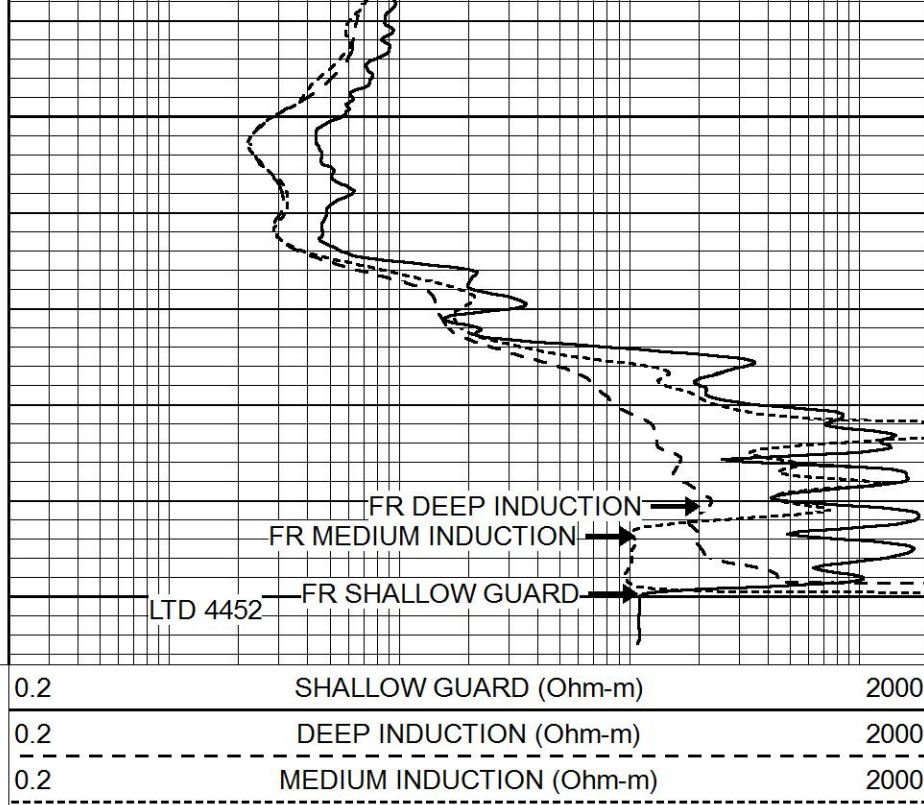
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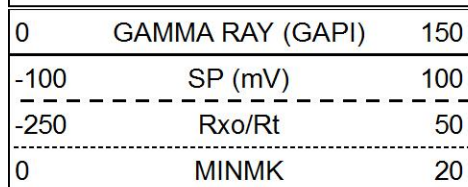
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4450



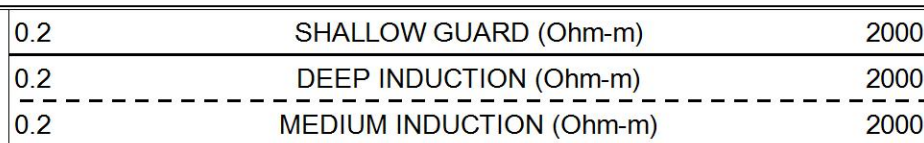
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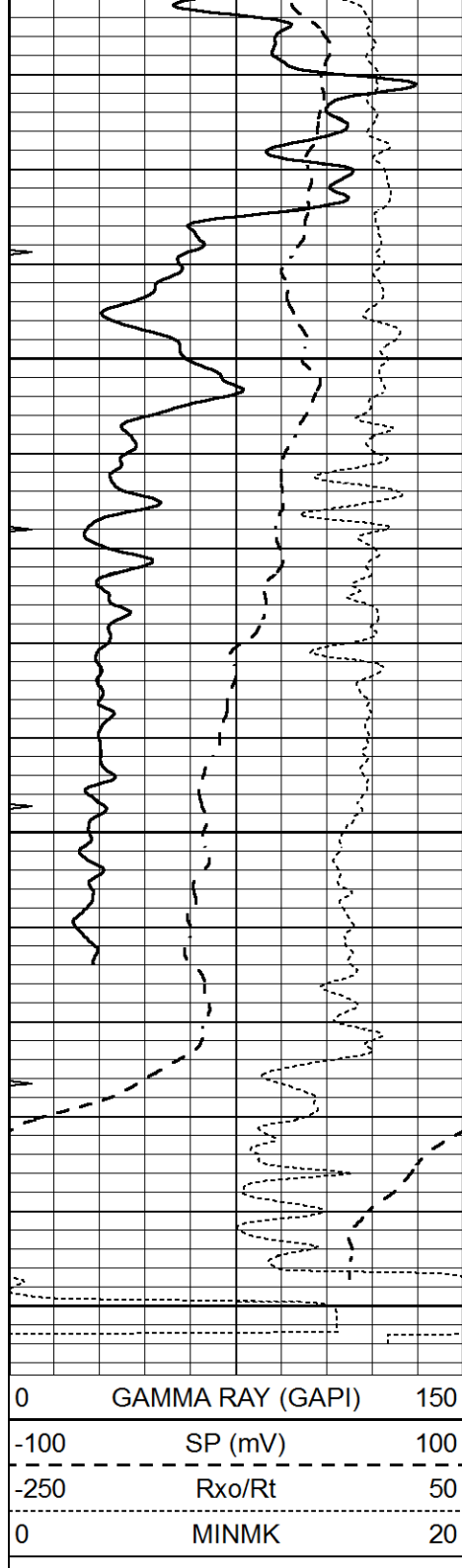
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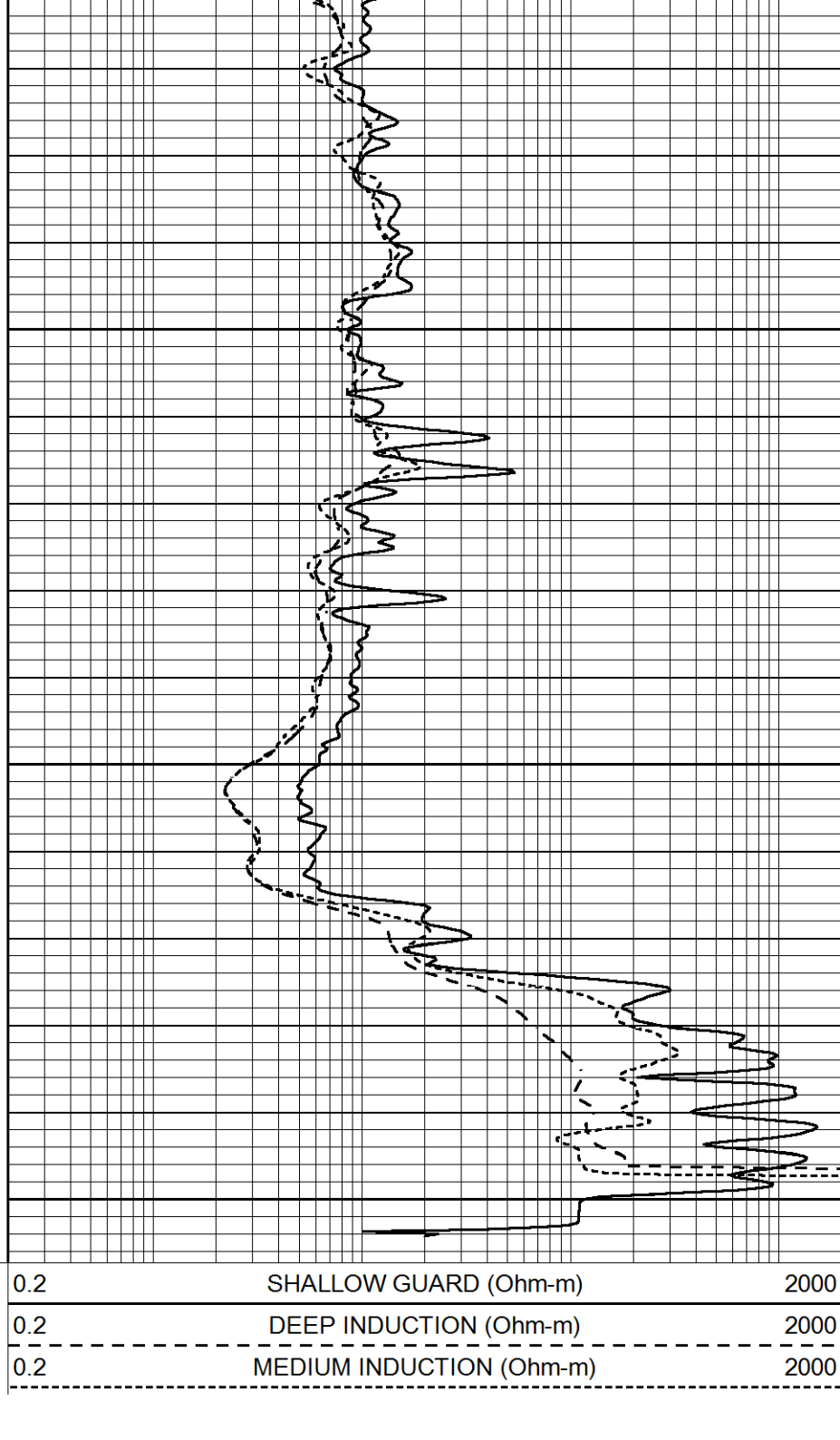




4350

4400

4450



Calibration Report

Database File 5836ddn.db
 Dataset Pathname pass3.1M
 Dataset Creation Tue Nov 23 03:31:39 2021

Dual Induction Calibration Report

Serial-Model: PROBE7-DILG
 Surface Cal Performed: Wed Nov 03 23:37:20 2021
 Downhole Cal Performed: Thu Mar 12 11:45:10 2020
 After Survey Verification Performed: Thu Mar 12 11:45:00 2020

Surface Calibration

Readings

References

Results

Loop:	Air	Loop		Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	650.000	2.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	680.000	-42.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256
Medium	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102

Downhole Calibration								
Readings			References			Results		
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	1.000	0.000
LL3		7.500	V		1400.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		4000.000	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		
		0.000	mmho-m		4000.000	mmho-m		

Litho Density Calibration Report								
Serial: 003			Model: PRB					

Master Calibration			Performed Fri Mar 05 10:51:07 2021					
	Background	Magnesium	Aluminum	Aluminum+Fe				
Window 1	1570.6	10682.1	3457.0	3096.9				cps
Window 2	1451.7	9432.7	3101.4	2816.5				cps
Window 3	1334.0	7160.6	2532.0	2369.3				cps
Window 4	370.4	373.1	366.4	370.9				cps
Long Space	0.0	7981.0	1649.7	1364.8				cps
Short Space	2.8	3522.0	2211.0	1823.6				cps
Rho		1.7100	2.5900	0.0000				g/cc
Pe		2.0000	2.7500	5.7900				
Rib Angle	: 43.5	Rib Slope	: 0.951	Density/Spine Ratio			: 0.535	
Spine Angle	: 73.5	Spine Slope	: 3.386	Spine Intercept			: -18.7	

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					
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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 Sep 03 05:25:49 2021

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.2800 GAPI/cps