



DUAL INDUCTION LOG

Company	EDISON OPERATING CO., LLC.		
Well	WATERS #1-16		
Field	DILLWYN		
County	STAFFORD	State	KANSAS
Location:	API # : 15-185-24106-0000 1980' FNL & 2023' FWL W/2 - E/2 - SE - NW		Other Services CDL/CNL/PE MEL/SONIC
Permanent Datum	GROUND LEVEL	Elevation	1980
Log Measured From	KELLY BUSHING 10' A.G.L.	Elevation	K.B. 1990 D.F. 1988 G.L. 1980
Drilling Measured From	KELLY BUSHING		
Date	4/3/22		
Run Number	ONE		
Depth Driller	4380		
Depth Logger	4382		
Bottom Logged Interval	4380		
Top Log Interval	00		
Casing Driller	8 5/8"@363'		
Casing Logger	363		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 8,000 PPM	
Density / Viscosity	9.1/53		
pH / Fluid Loss	10.5/8.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.460@78F		
Rmf @ Meas. Temp	.345@78F		
Rmc @ Meas. Temp	.552@78F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.299@120F		
Time Circulation Stopped	2.5 HOURS		
Time Logger on Bottom	4:00 A.M.		
Maximum Recorded Temperature	120F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS	COLE ROBBEN	
Witnessed By	ADAM KENNEDY		

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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.

15-185-24106-0000

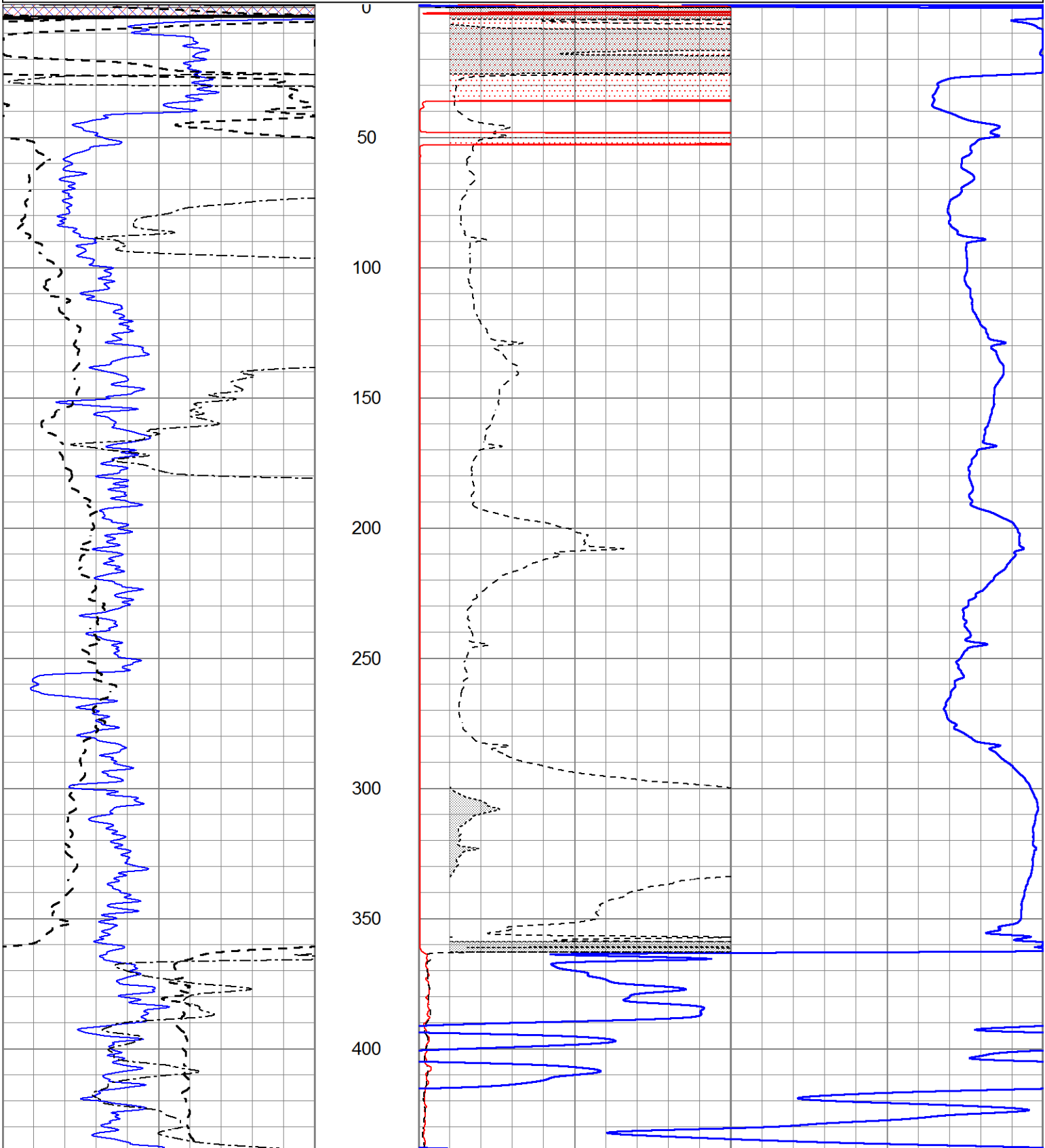
Comments

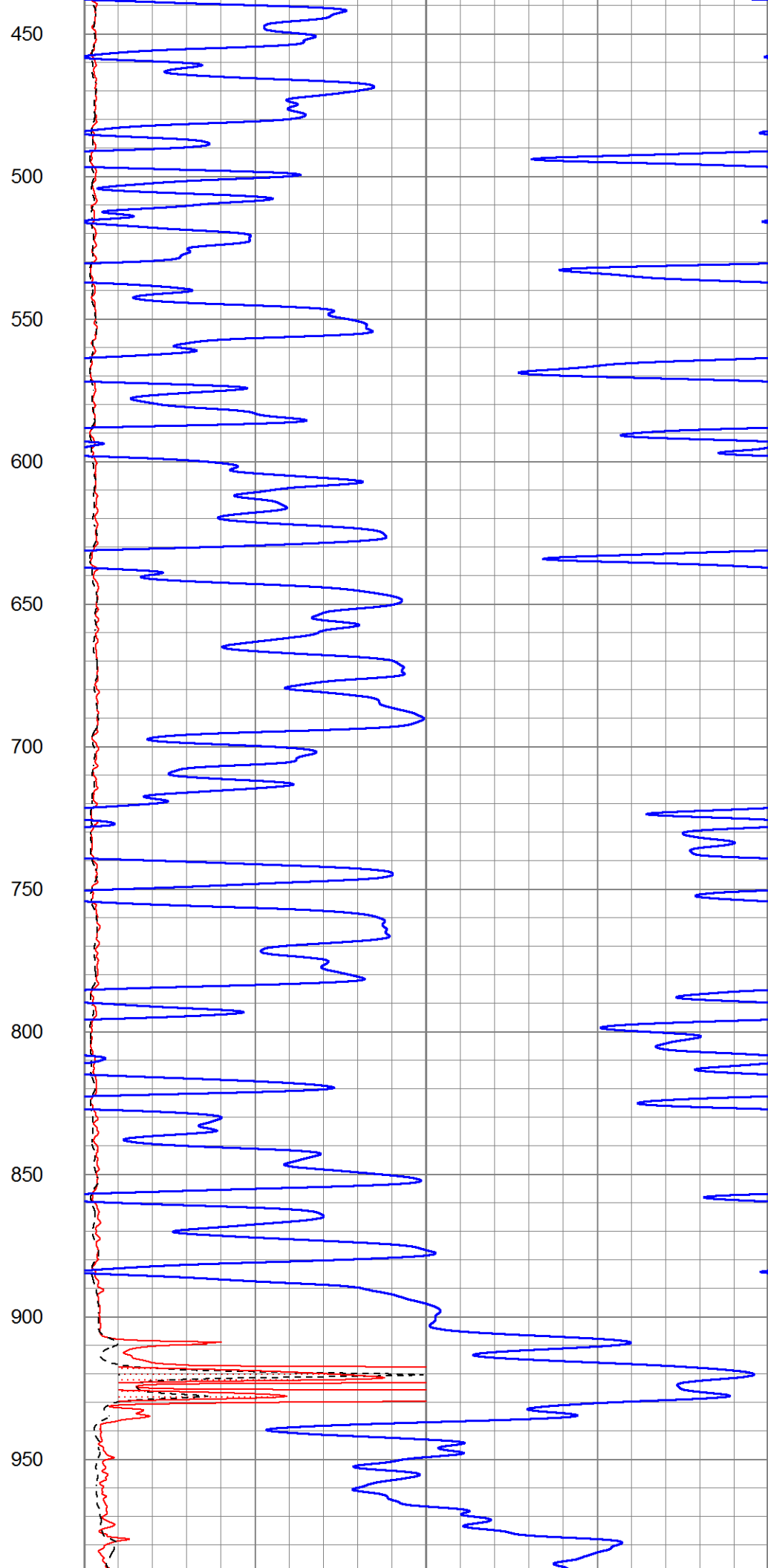
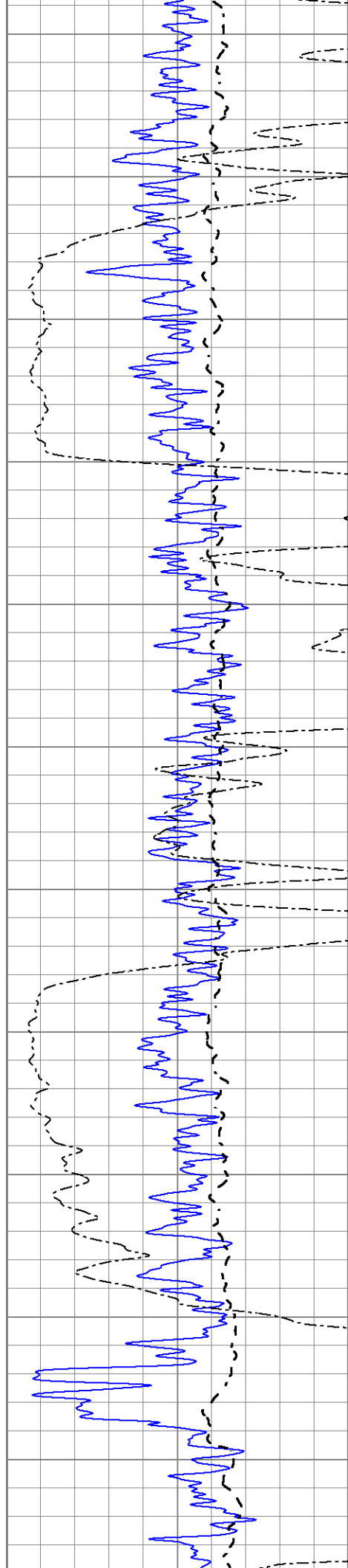
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS
ST. JOHN, KS. S. TO (HWY 50 & 281 JUNCTION) 7W. ON HWY 50, 1/2N., E. INTO



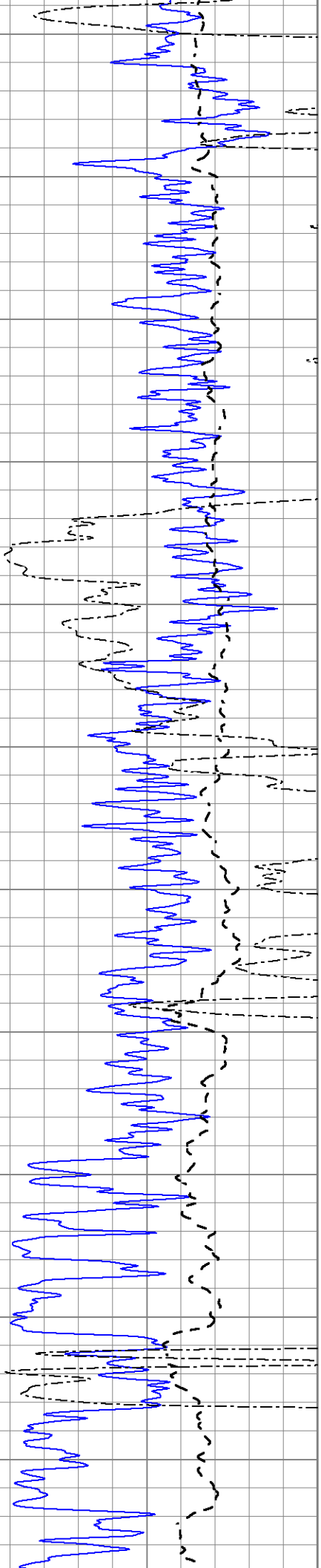
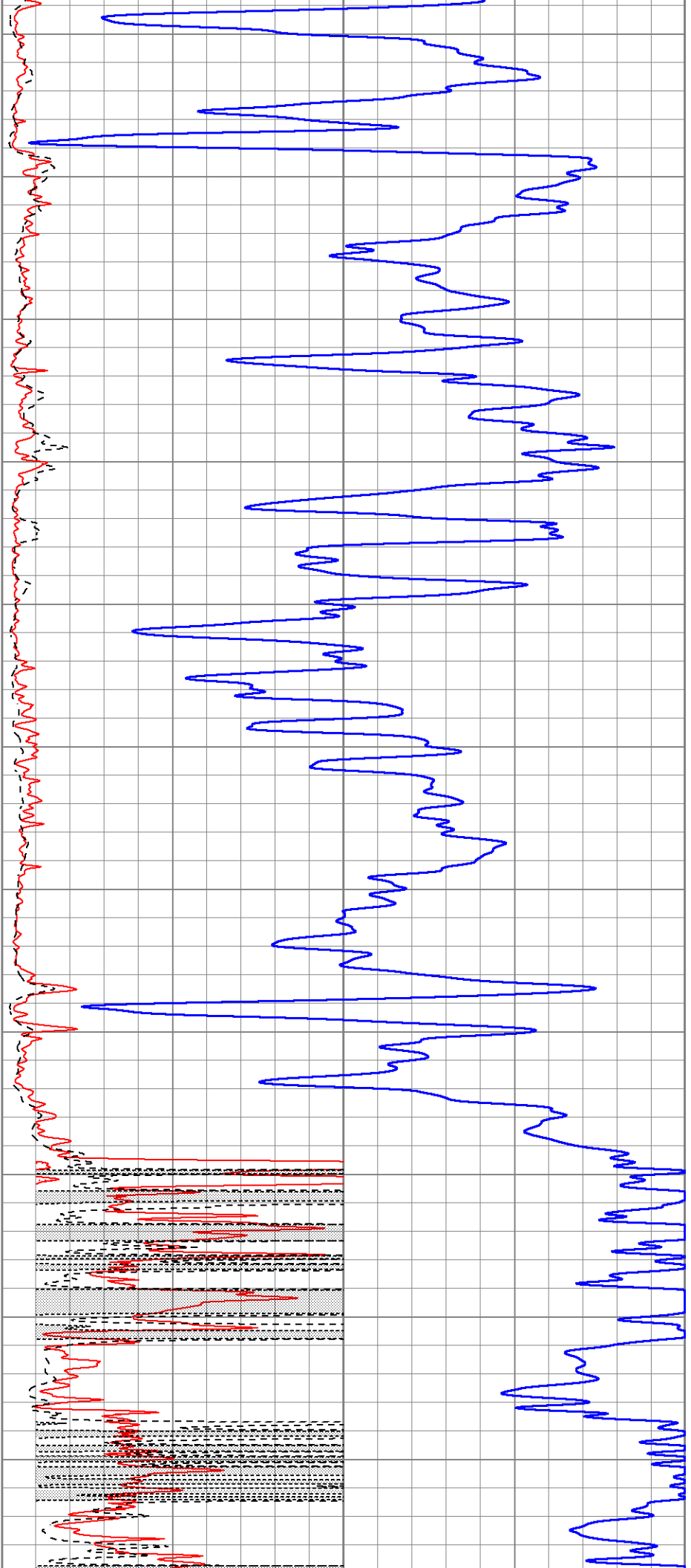
MAIN SECTION

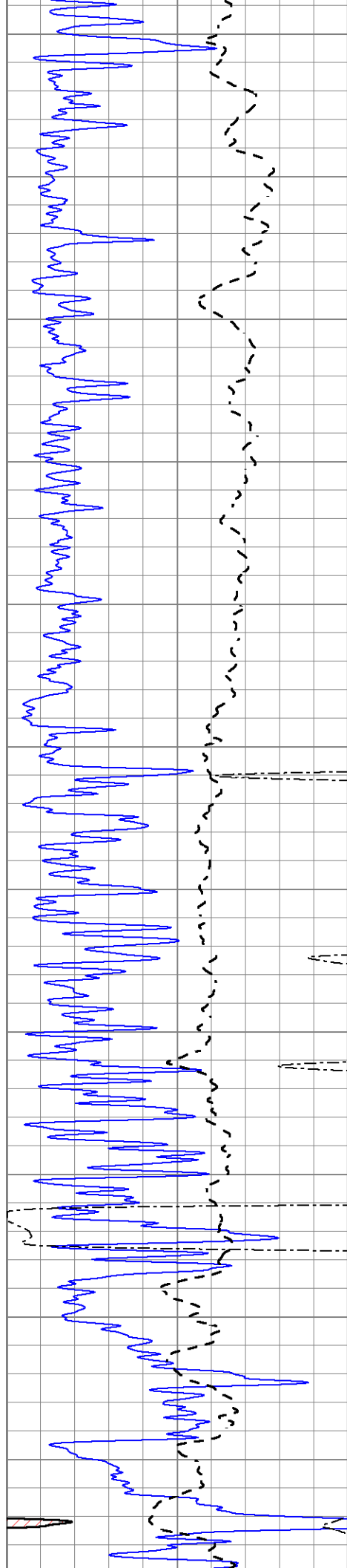
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-100	SP (mV)	100	0	RLL3 (Ohm-m)	50
0	RWA (Ohm-m)	1	0	RILD (Ohm-m)	50
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500





1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500





1550

1600

1650

1700

1750

1800

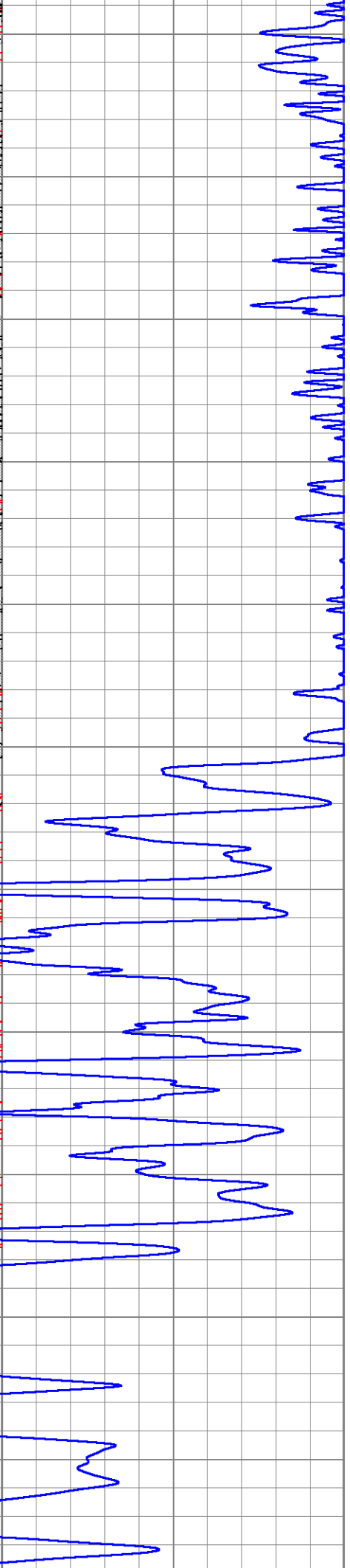
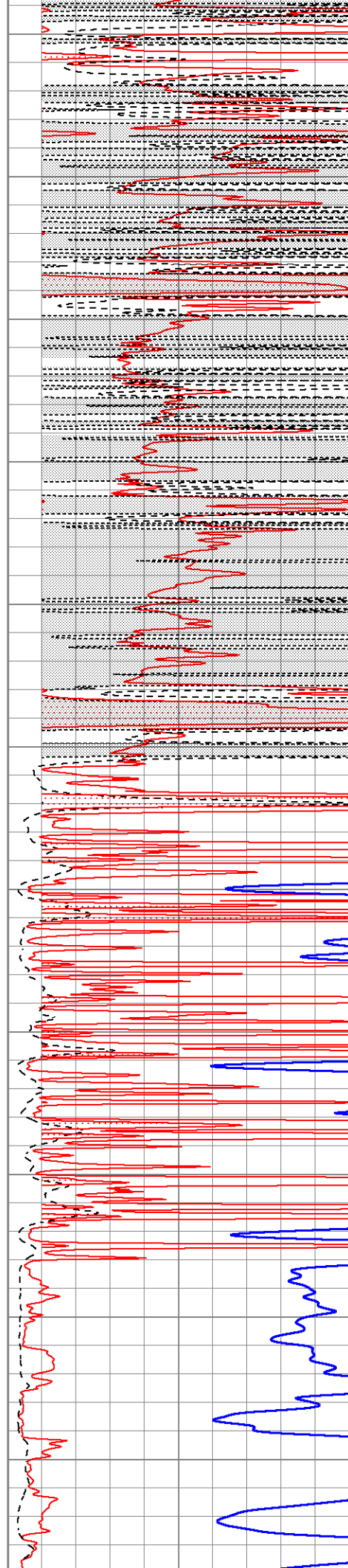
1850

1900

1950

2000

2050





2100

2150

2200

2250

2300

2350

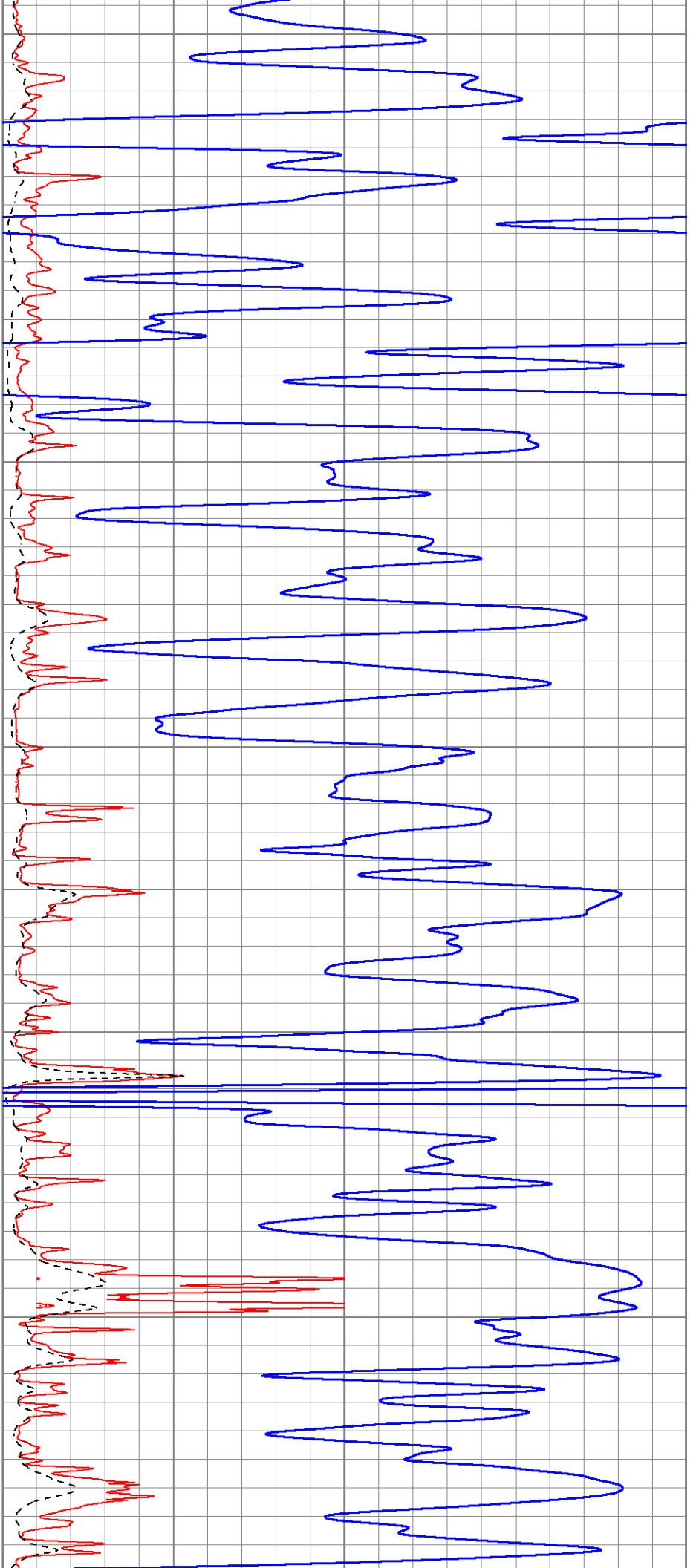
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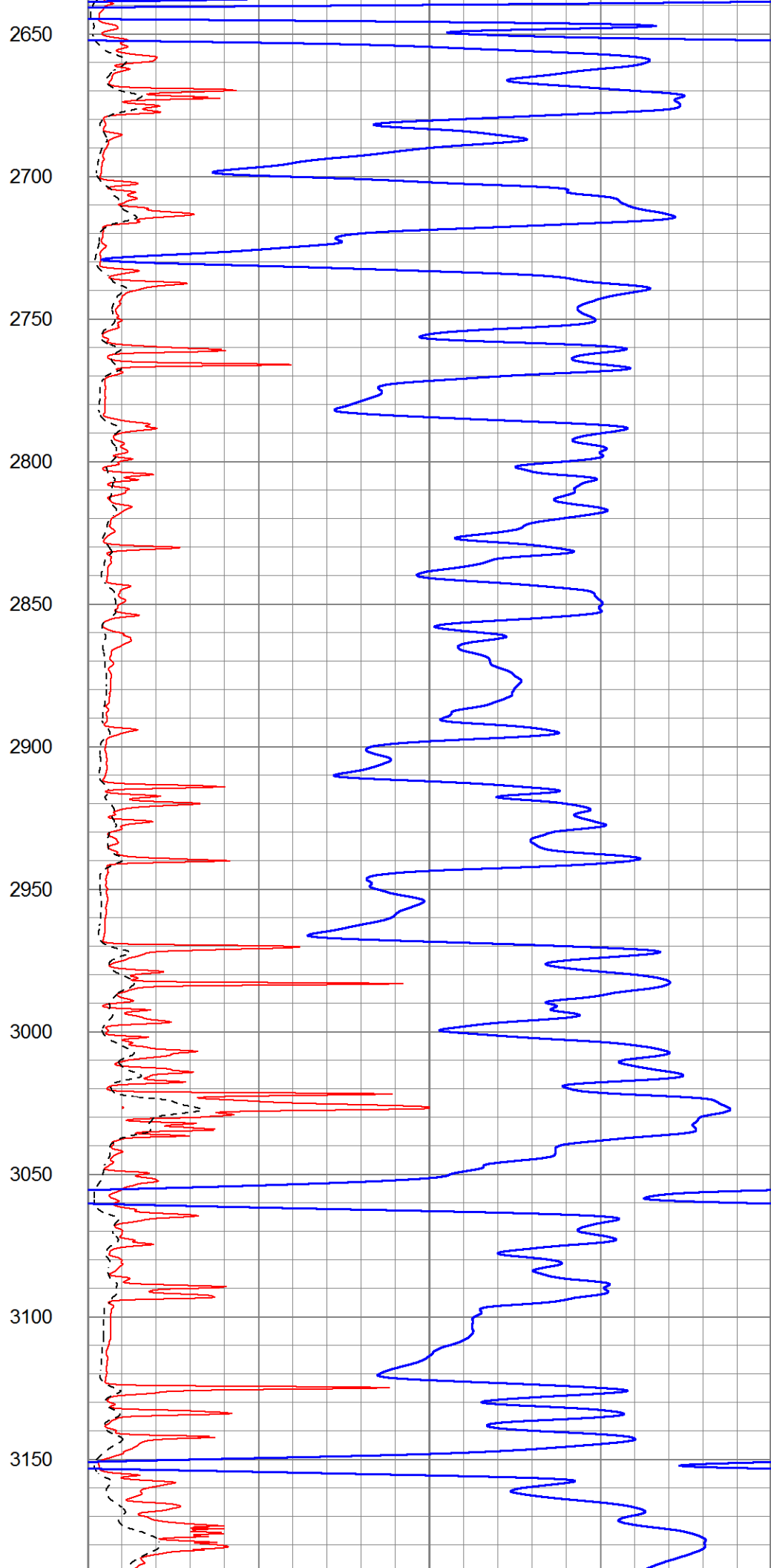
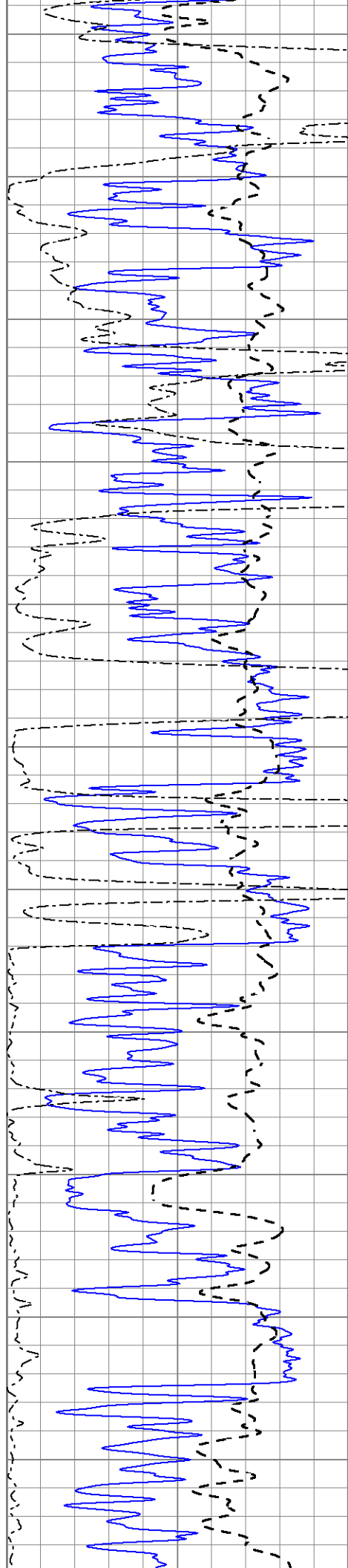
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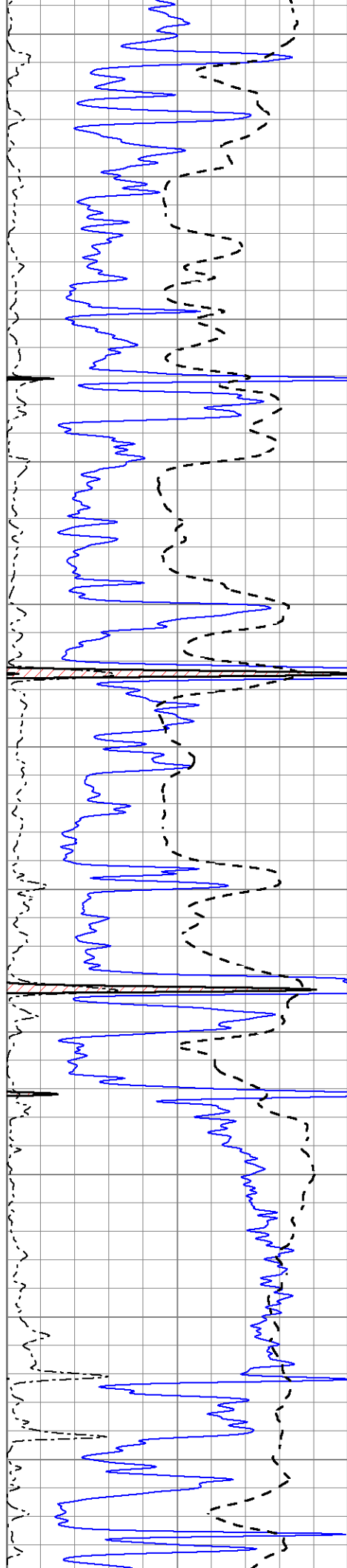
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2550

2600







3200

3250

3300

3350

3400

3450

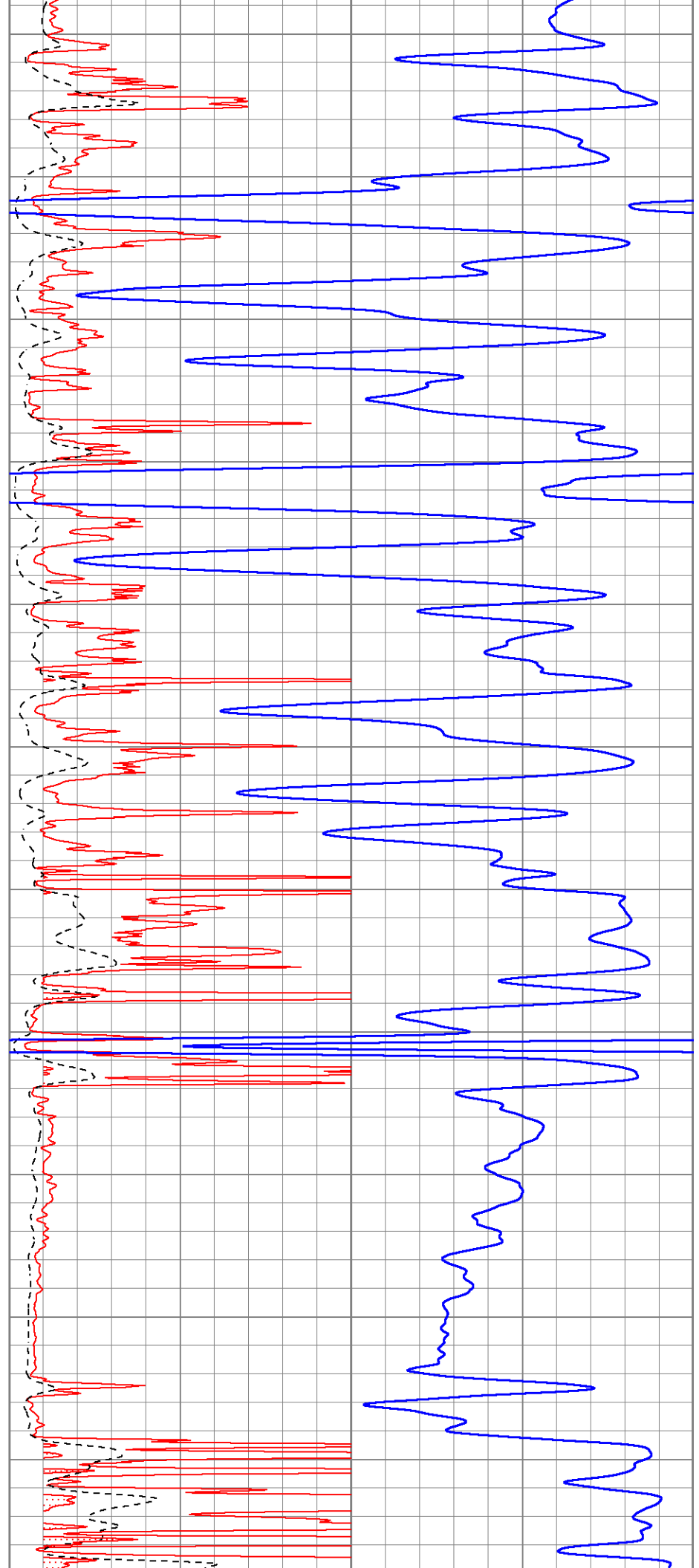
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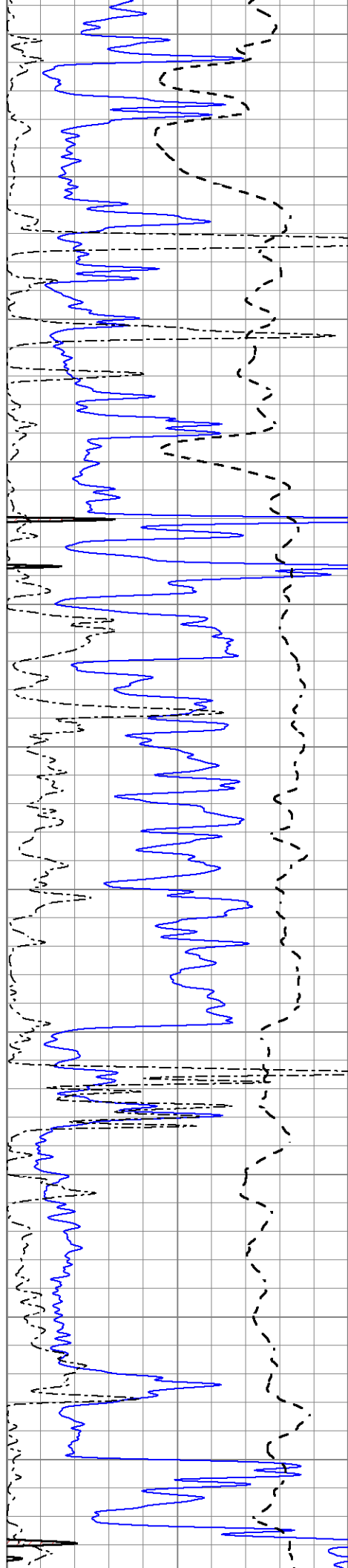
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3600

3650

3700





3750

3800

3850

3900

3950

4000

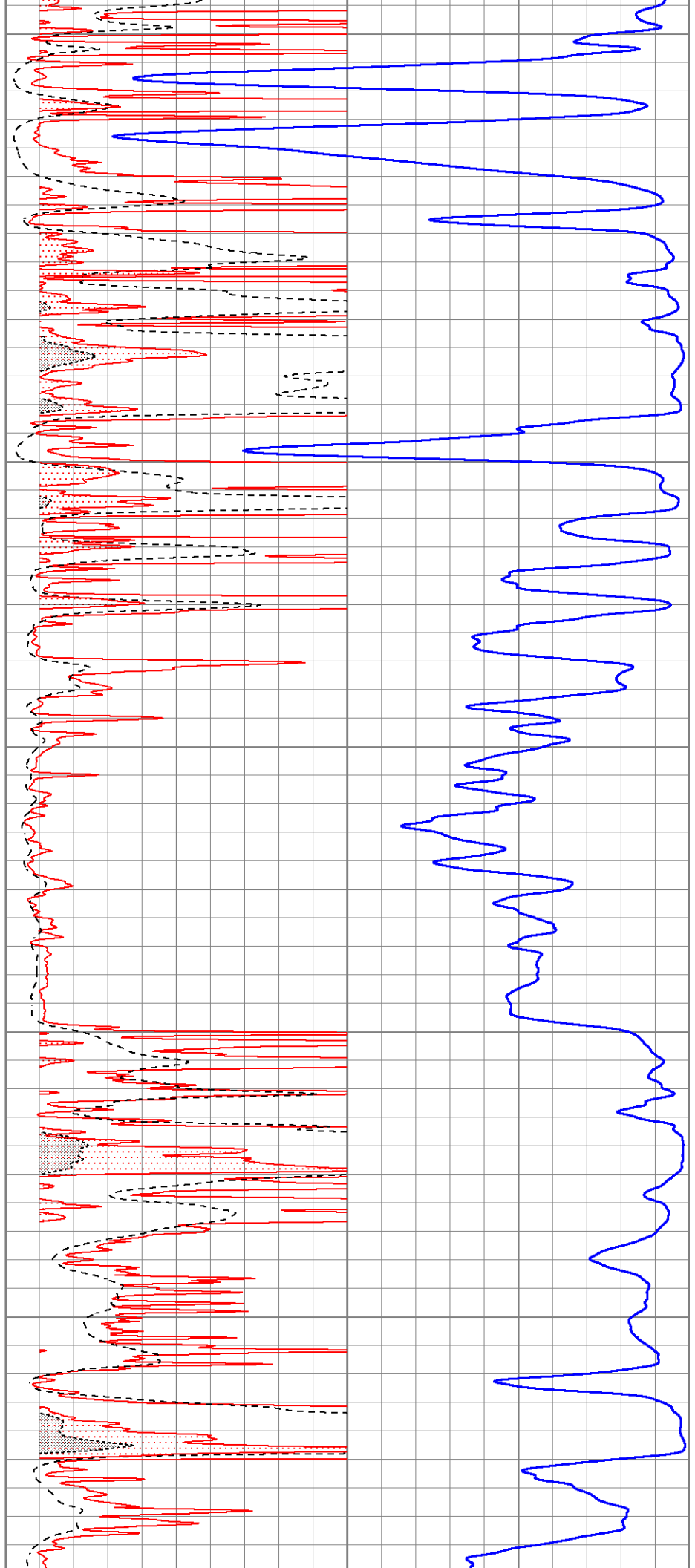
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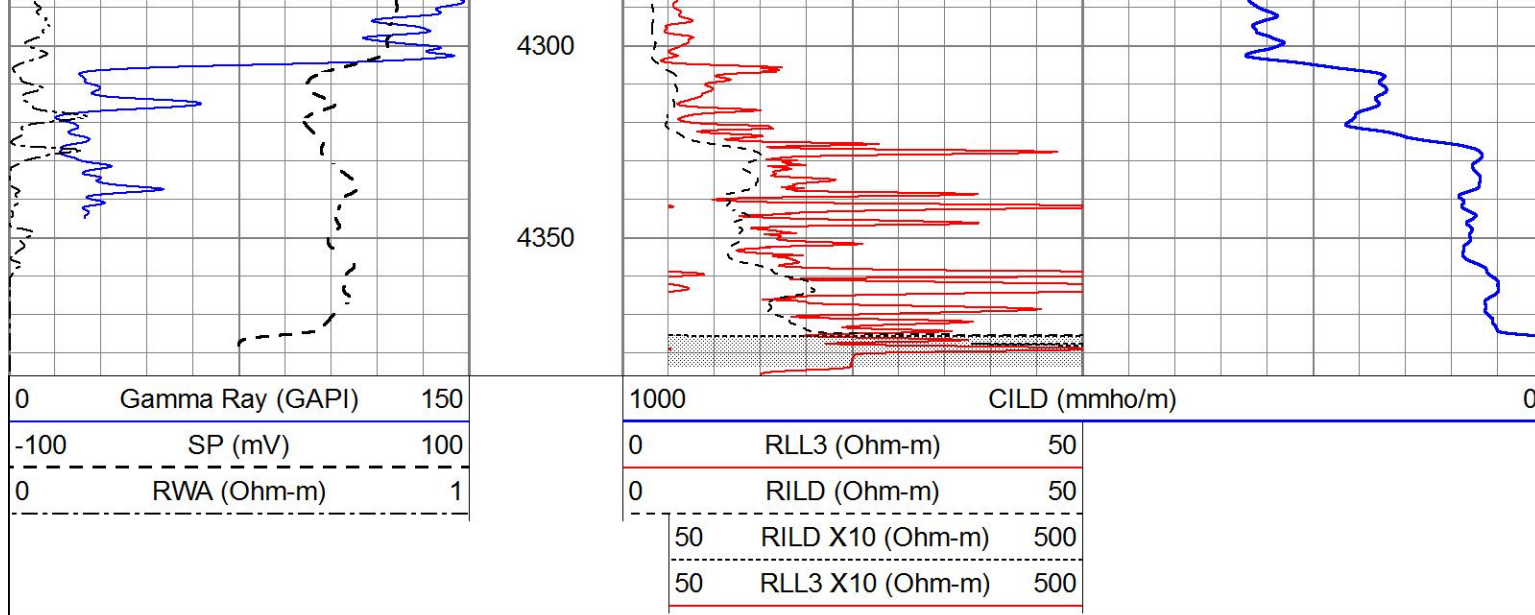
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4150

4200

4250

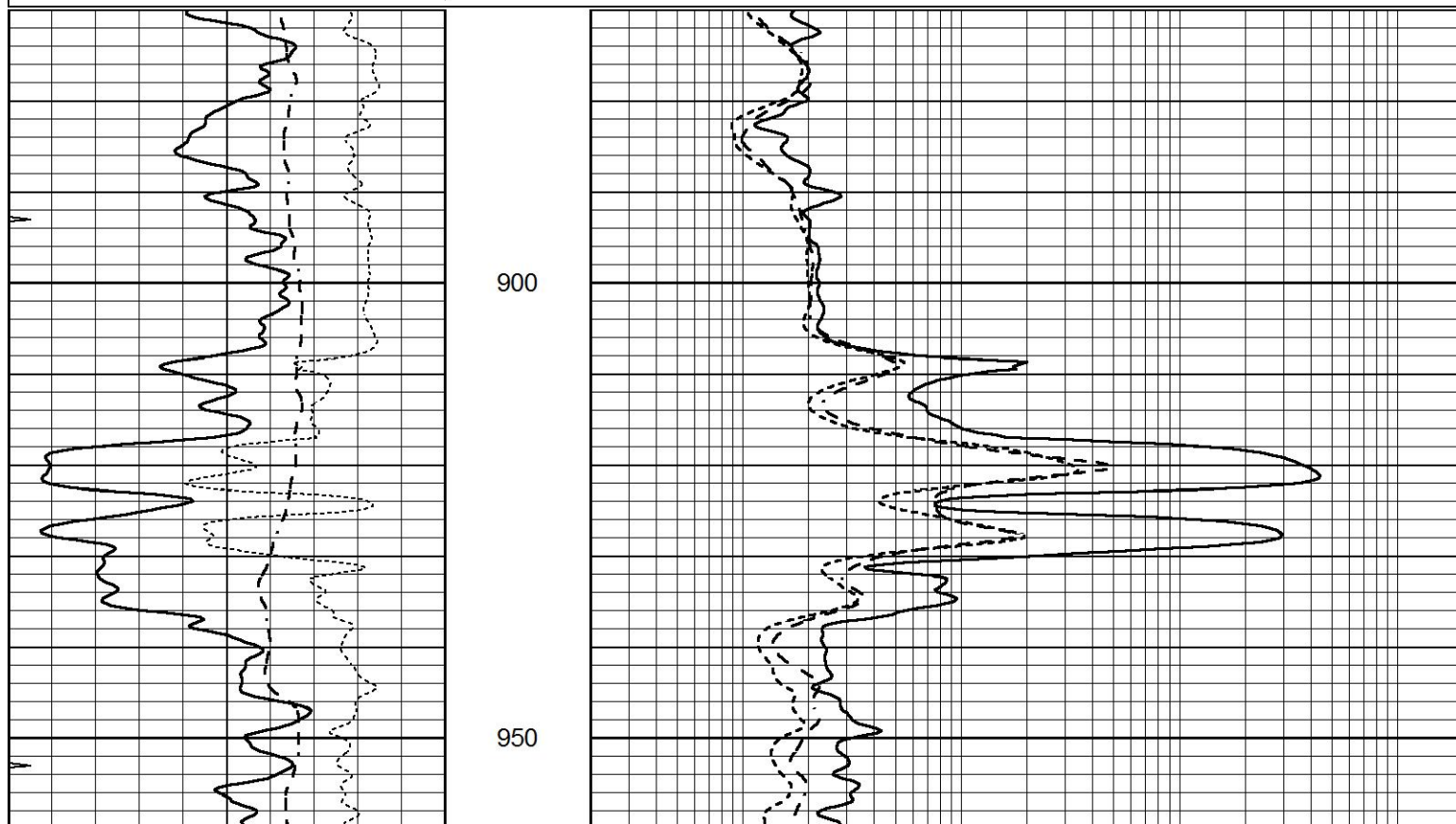


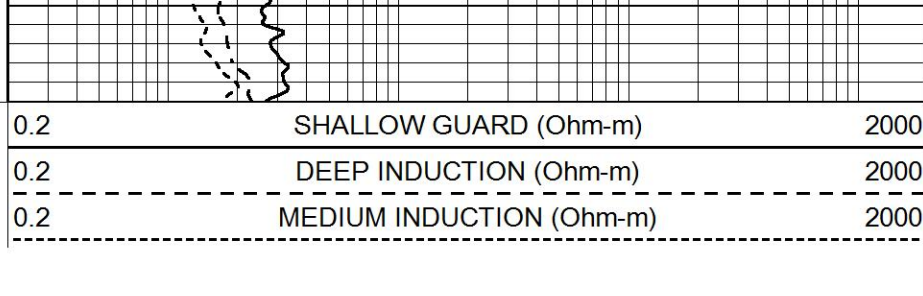
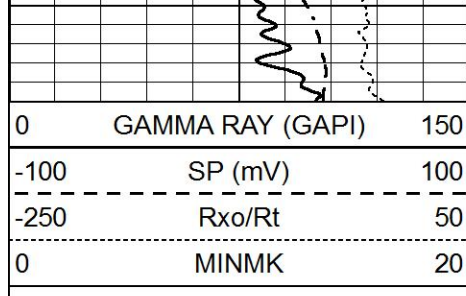


ANHYDRITE

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 Presentation Format _dil
 Dataset Creation Sun Apr 03 05:47:34 2022
 Charted by Depth in Feet scaled 1:240

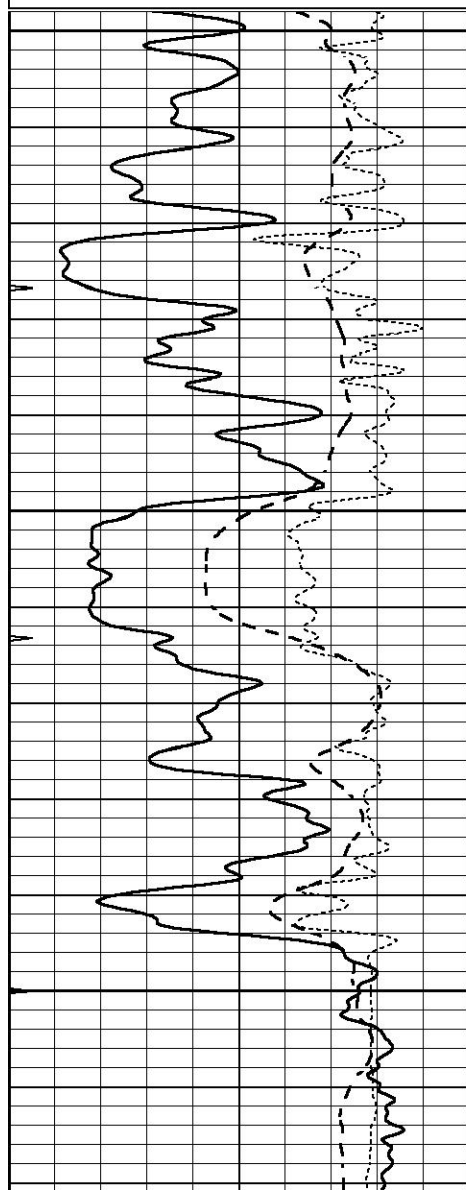
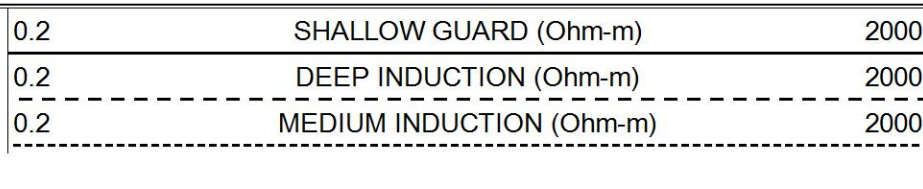
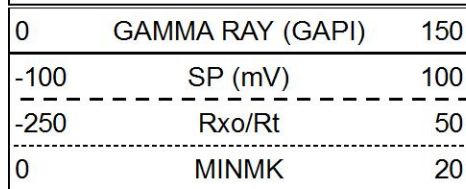
0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			





MAIN SECTION

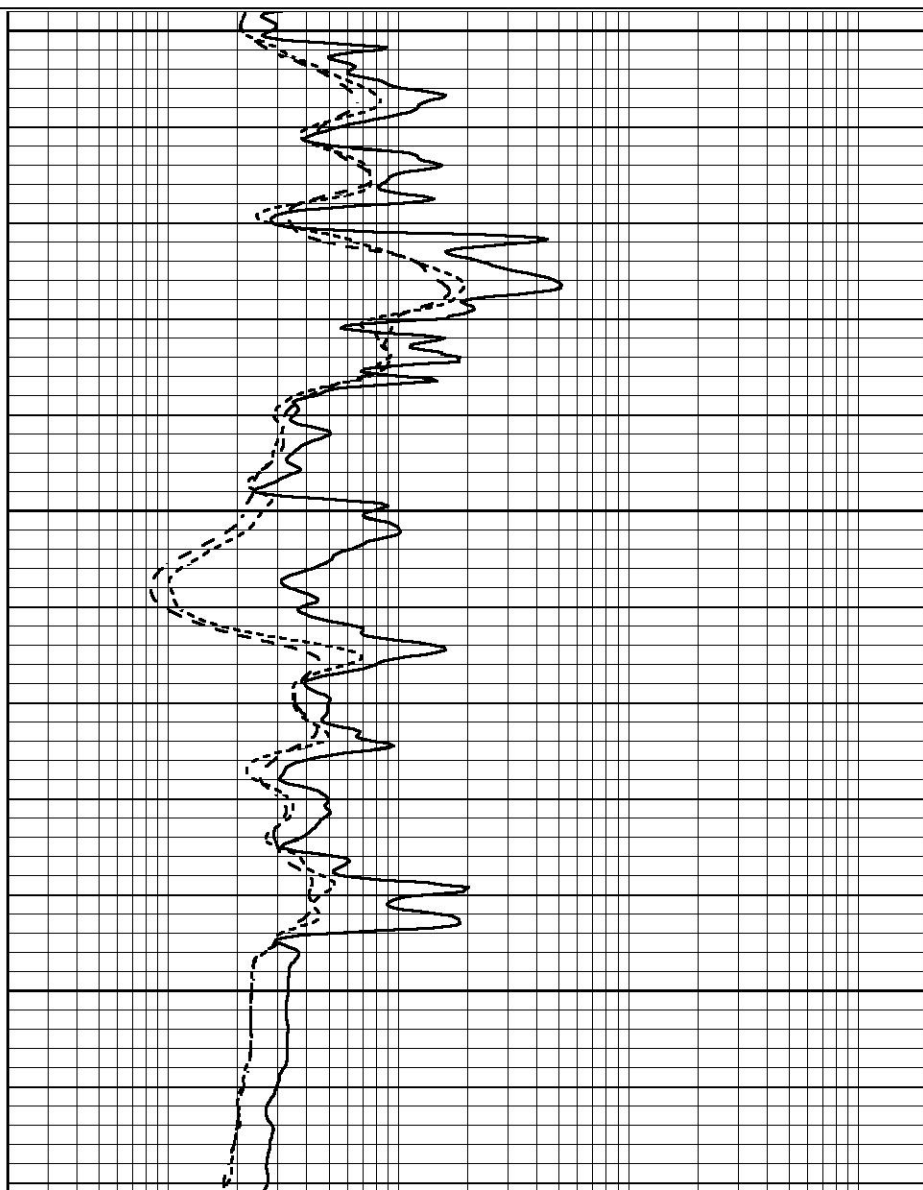
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 Dataset Pathname pass3.1M
 Presentation Format _dil
 Dataset Creation Sun Apr 03 05:47:08 2022
 Charted by Depth in Feet scaled 1:240

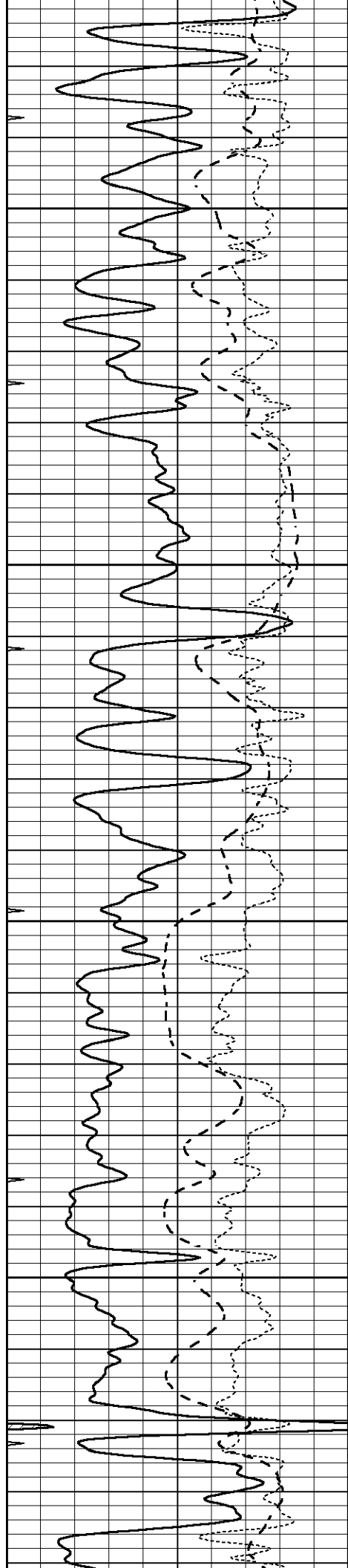


3000

3050

3100



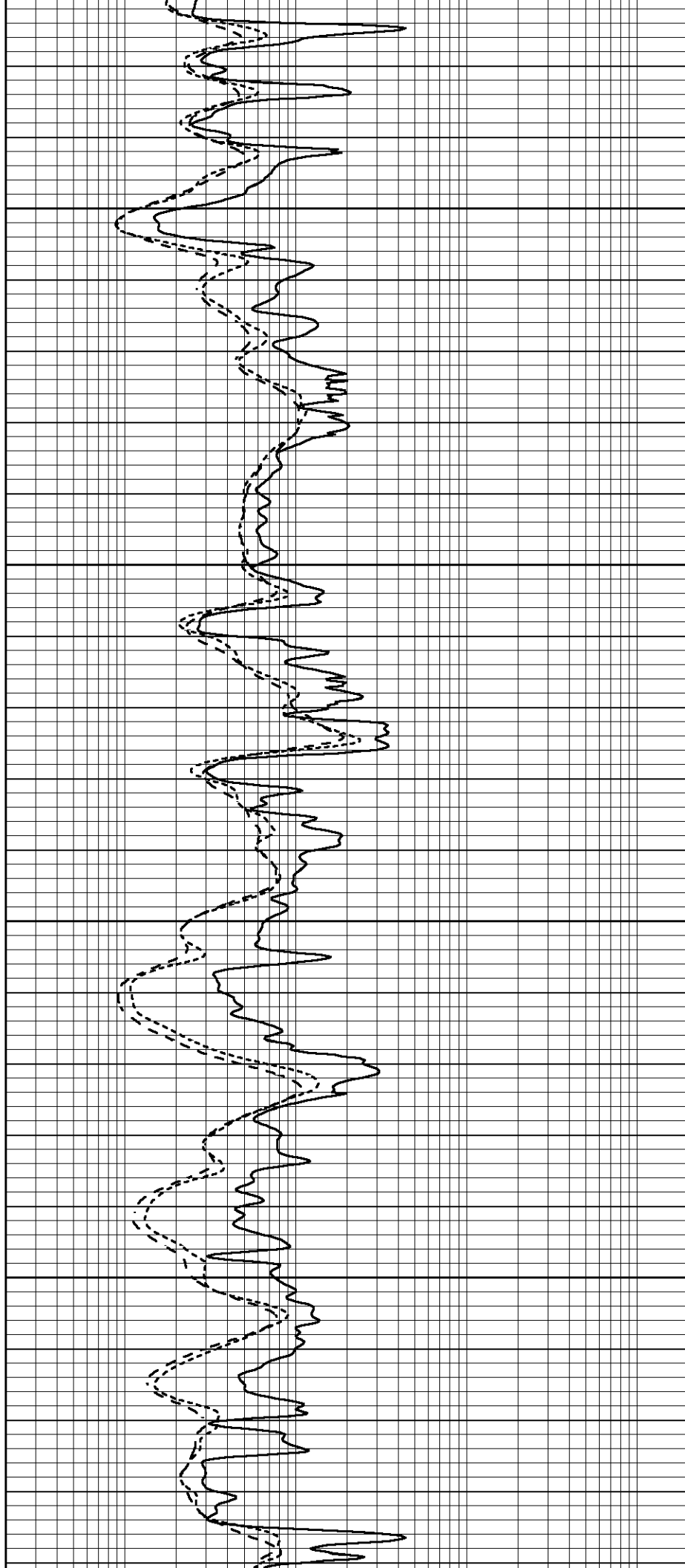


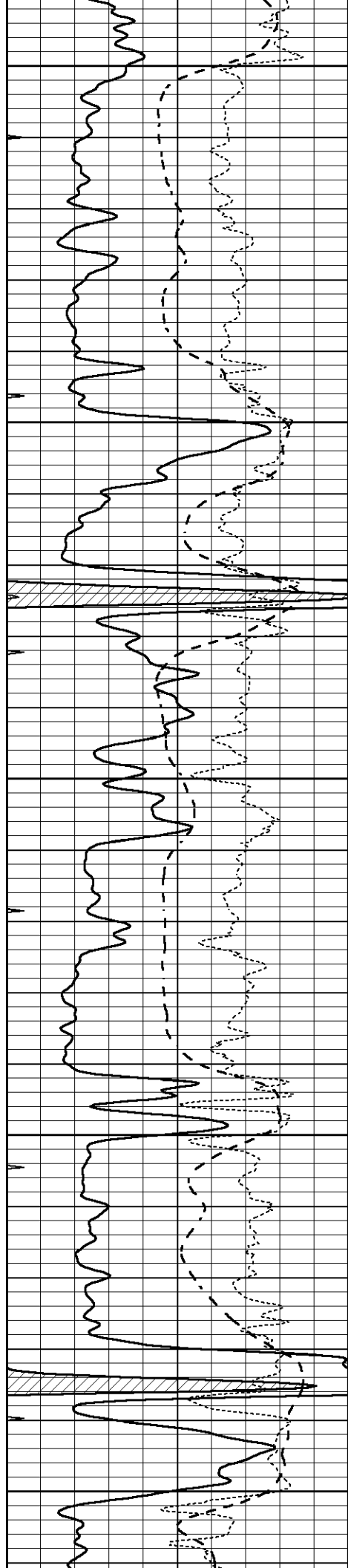
3150

3200

3250

3300





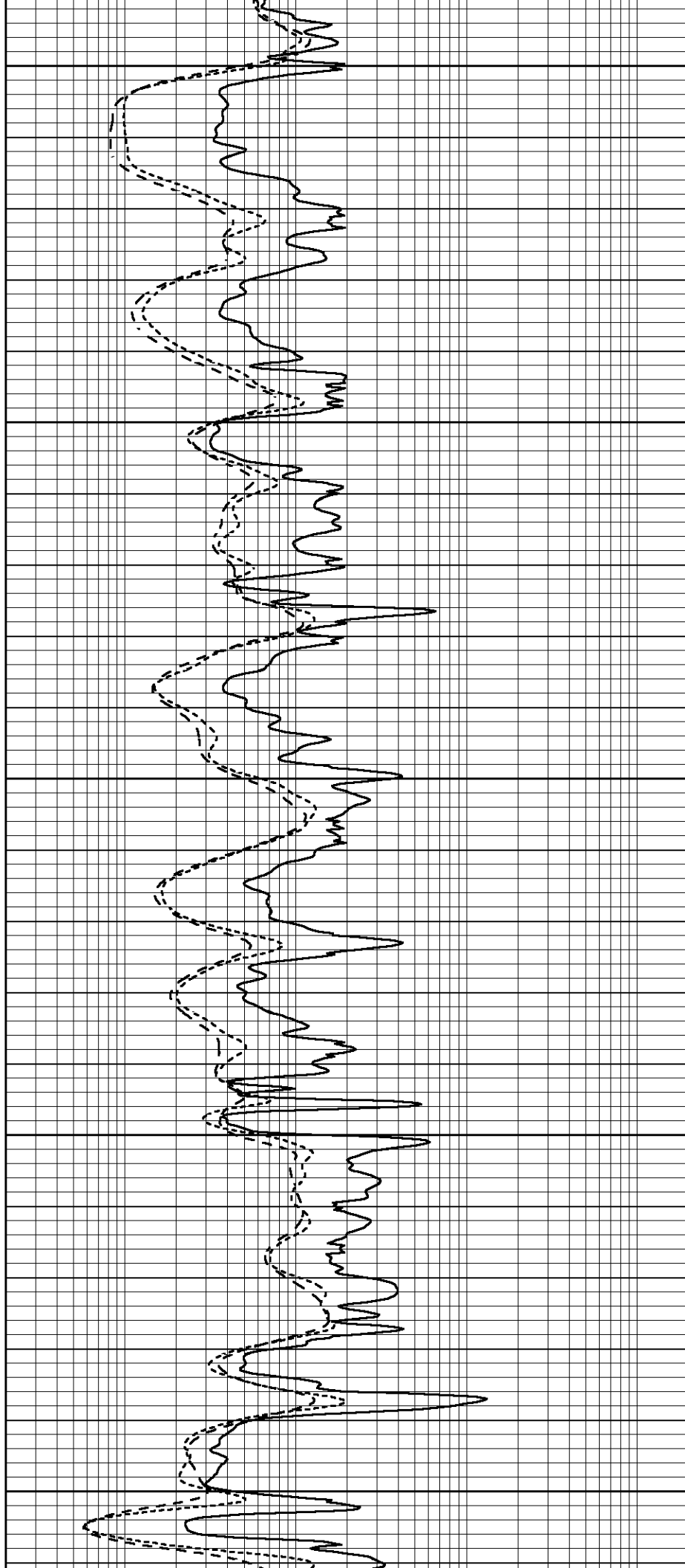
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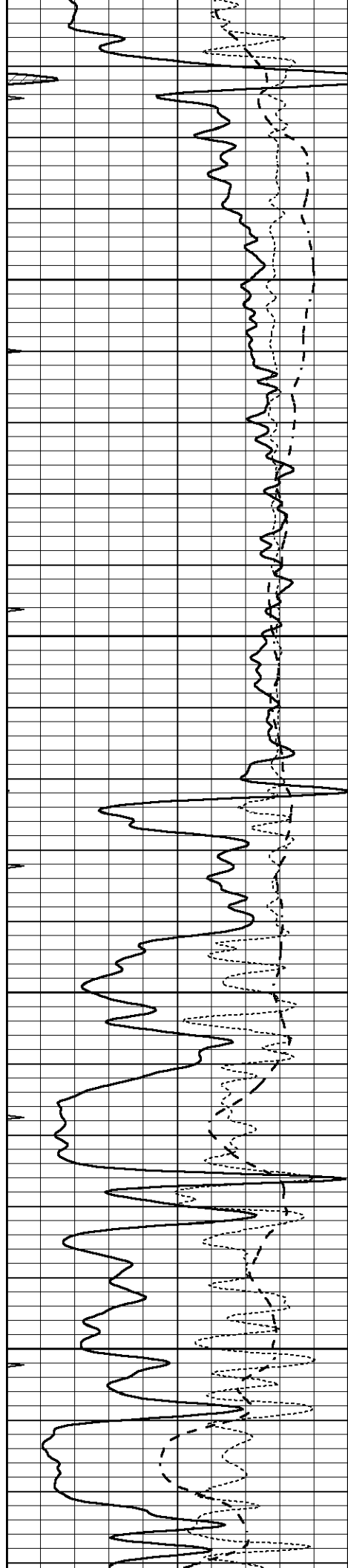
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3450

3500

3550



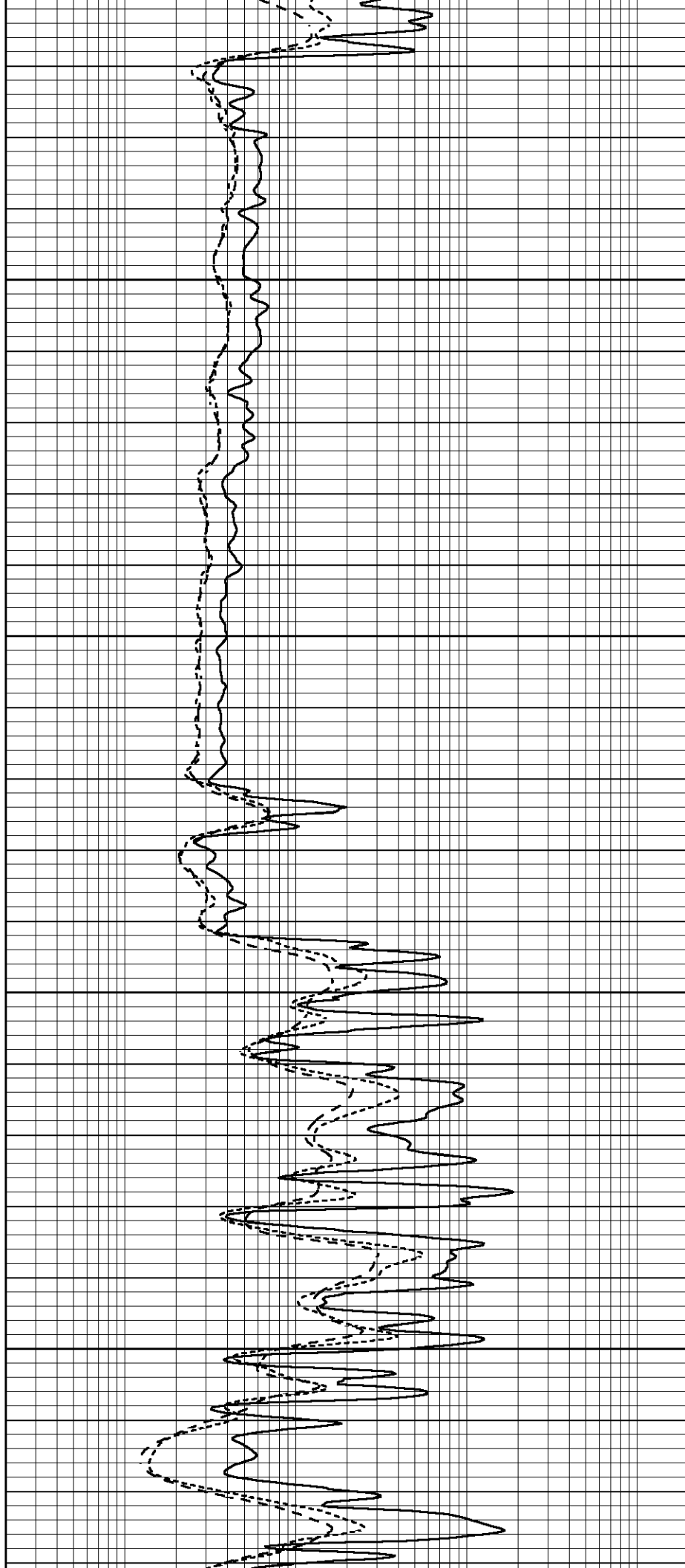


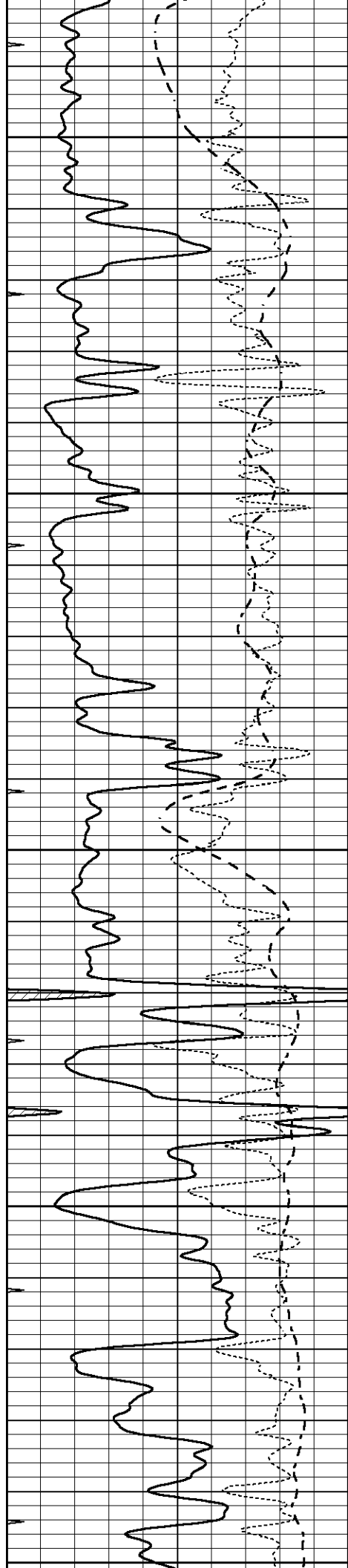
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3650

3700

3750





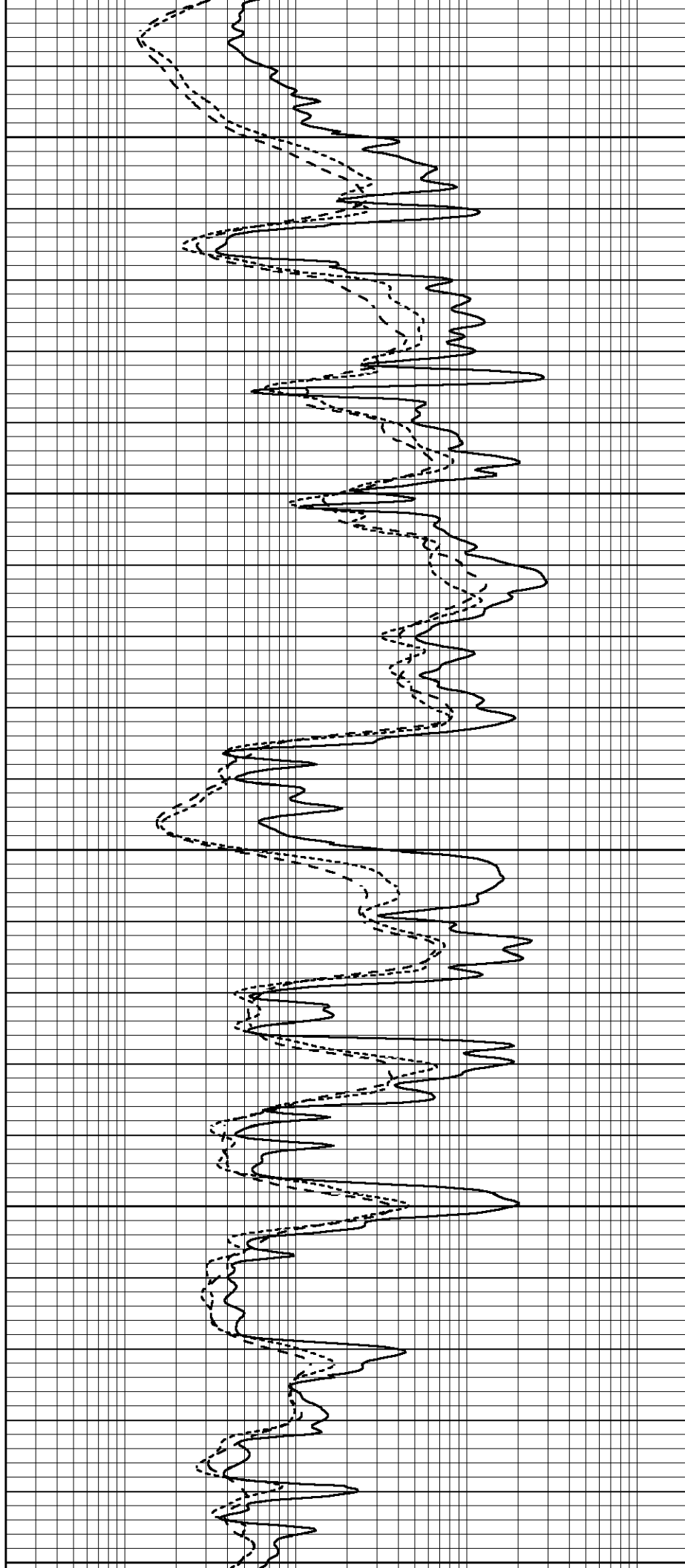
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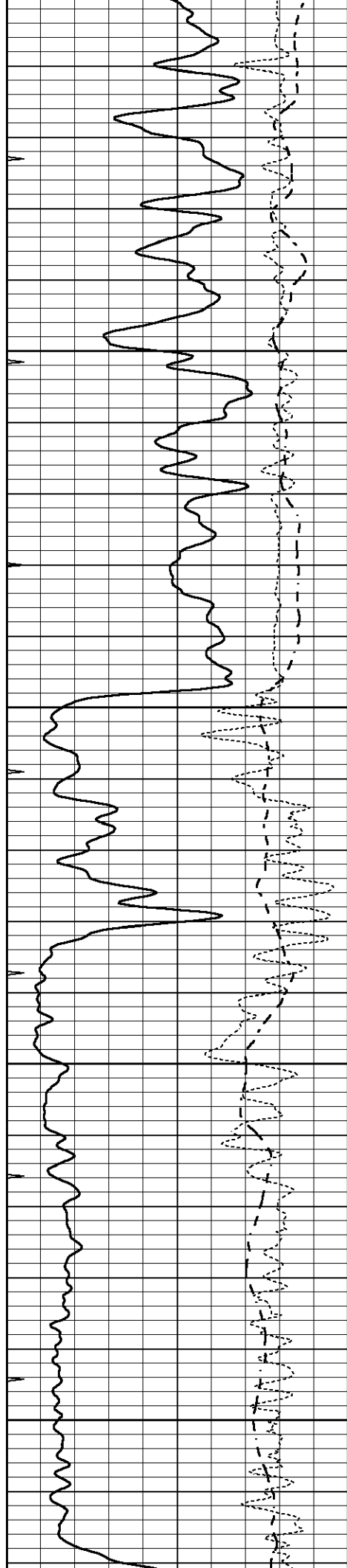
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3900

3950

4000



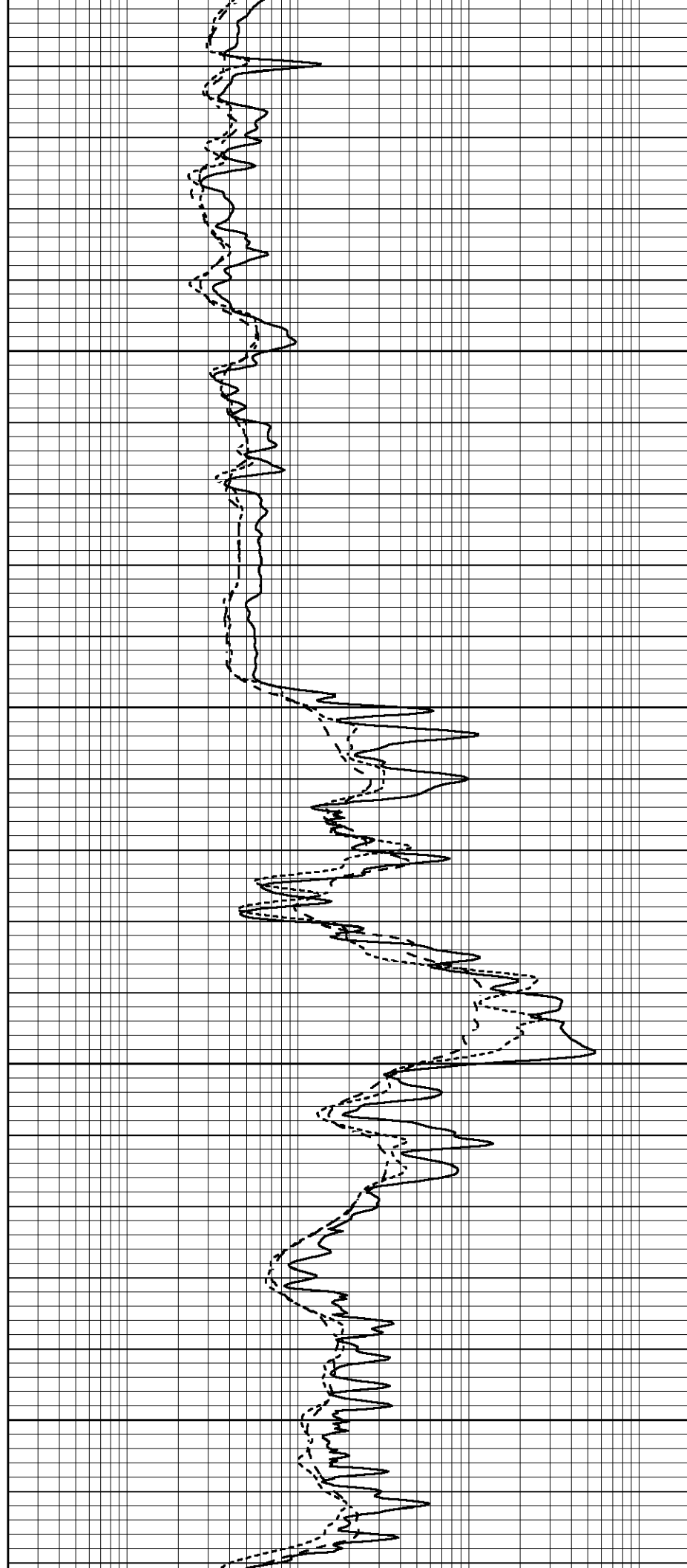


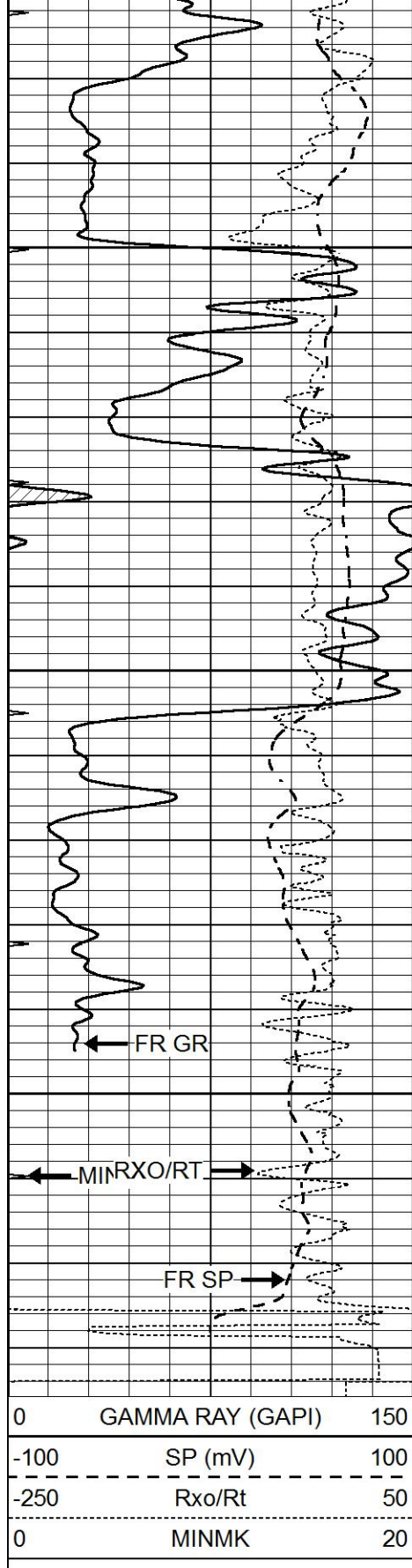
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4100

4150

4200



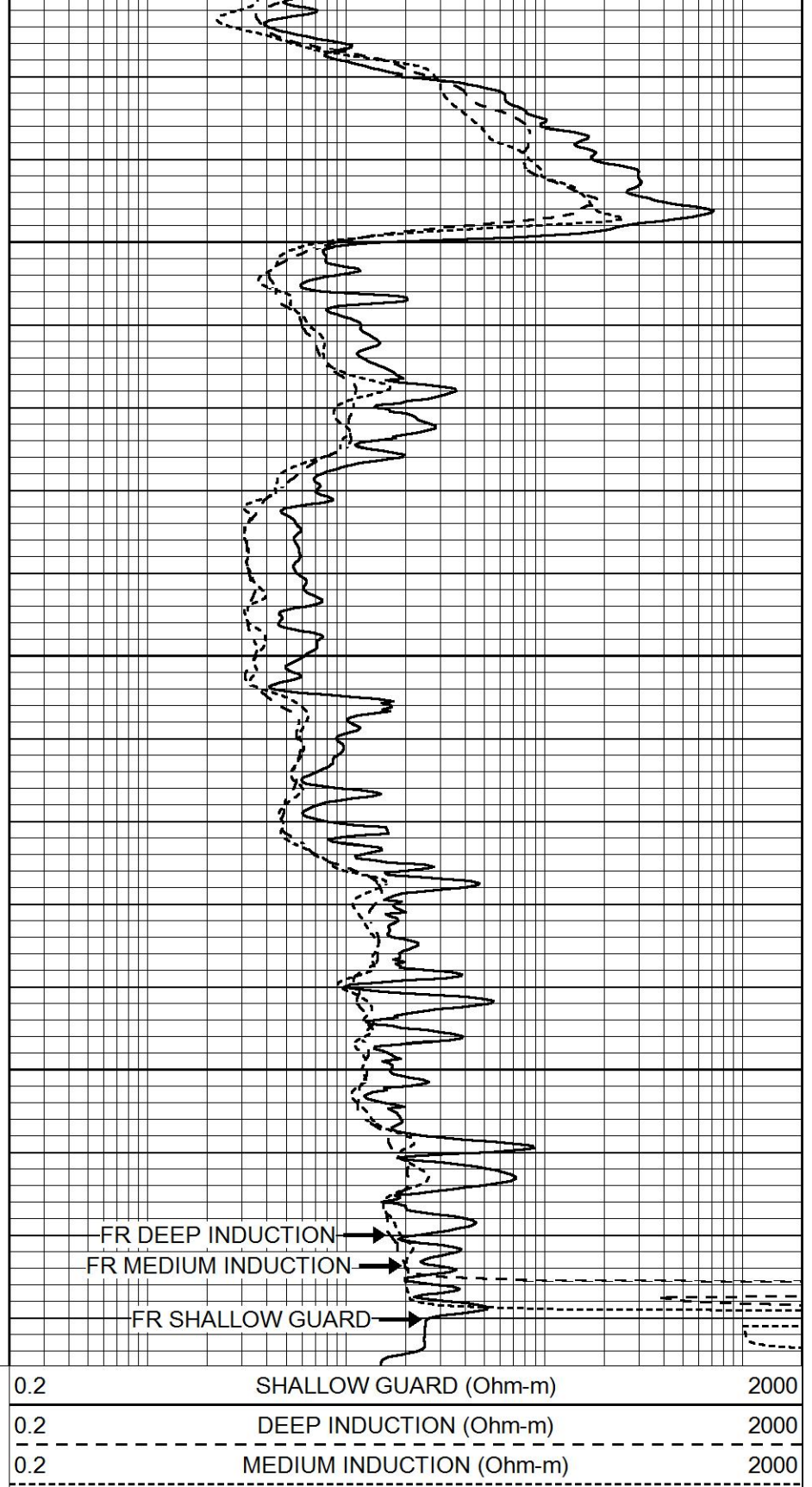


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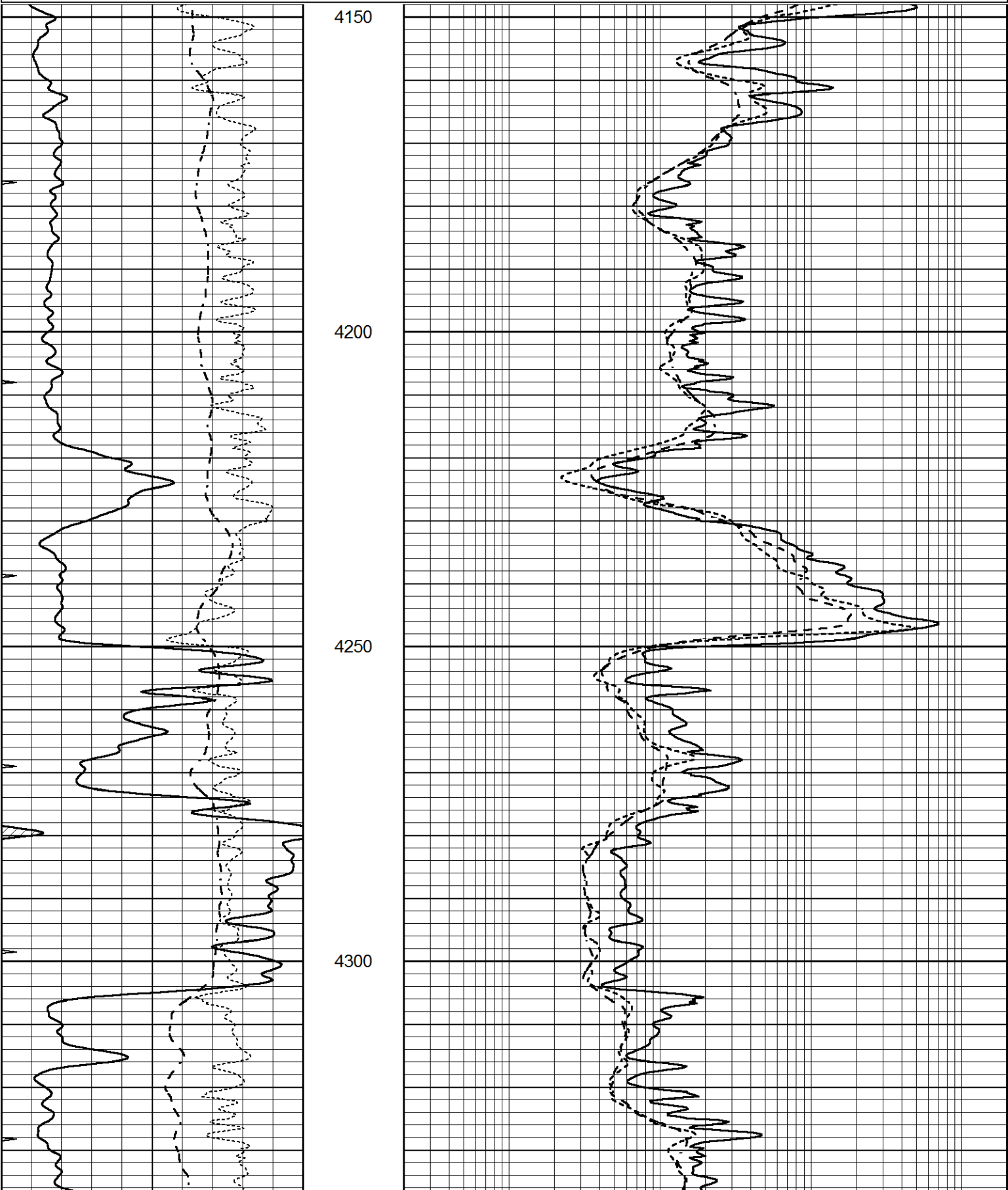
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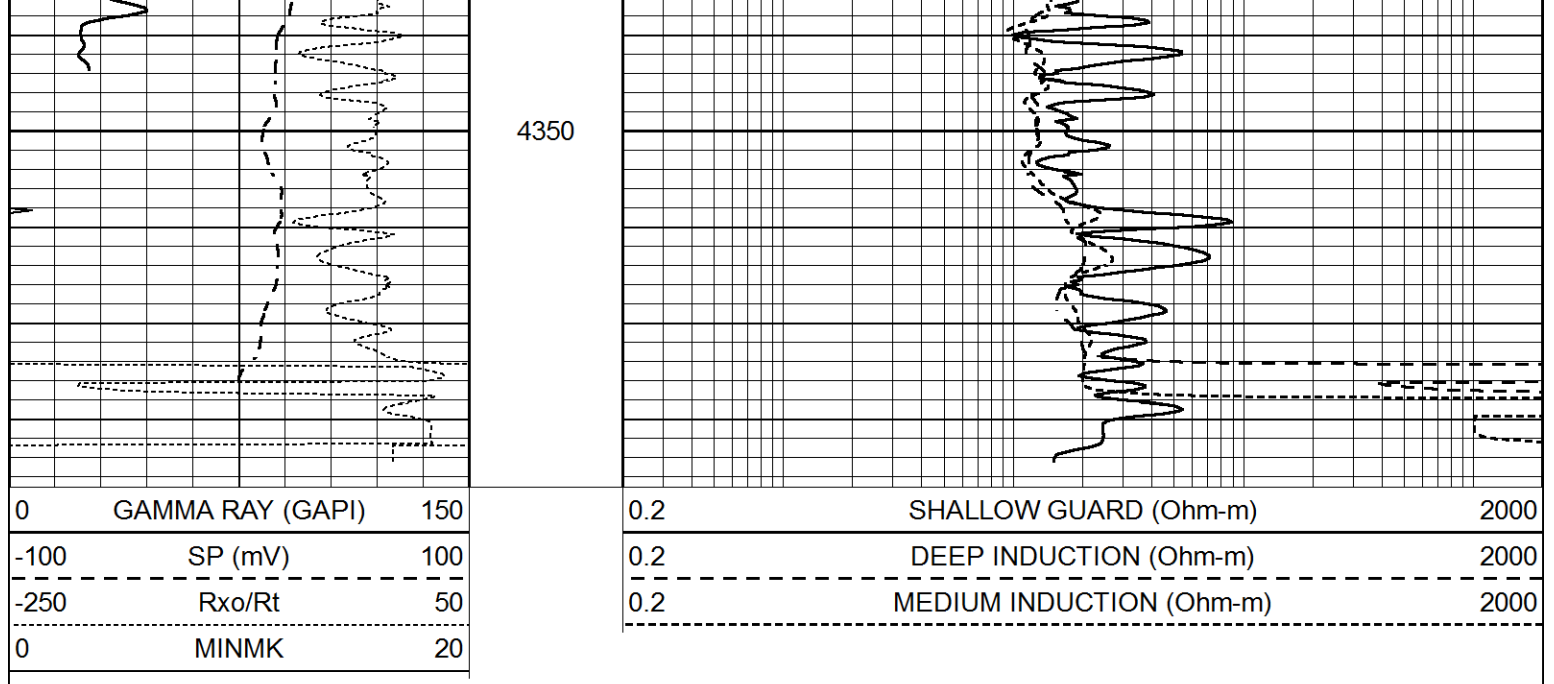
LTD 4382



REPEAT SECTION

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	6273pe.db								
Dataset Pathname	pass3.1M								
Dataset Creation	Sun Apr 03 05:47:08 2022								
Dual Induction Calibration Report									
Serial-Model:					PROBE9-DILG				
Surface Cal Performed:					Wed Mar 23 10:31:45 2022				
Downhole Cal Performed:					Wed Mar 11 11:31:19 2020				
After Survey Verification Performed:					Wed Mar 11 11:31:22 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	720.000	-18.000	
Medium	0.039	0.728	V	0.000	464.000	mmho/m	720.000	-20.000	
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			

Litho Density Calibration Report
Serial: 001 Model: PRB

Master Calibration		Performed Mon May 11 11:33:29 2020			
	Background	Magnesium	Aluminum	Aluminum+Fe	
Window 1	1593.8	10211.9	3449.0	3132.1	cps
Window 2	1486.7	8824.2	3065.6	2829.4	cps
Window 3	1206.8	4705.7	1944.6	1871.7	cps
Window 4	361.0	367.9	364.8	363.1	cps
Long Space	0.0	7337.5	1578.9	1342.7	cps
Short Space	2.7	2543.4	1657.9	1382.7	cps
Rho		1.7100	2.5900	0.0000	g/cc
Pe		2.0000	2.7500	5.7900	
Rib Angle	: 44.4	Rib Slope	: 0.980	Density/Spine Ratio	: 0.552
Spine Angle	: 74.4	Spine Slope	: 3.590	Spine Intercept	: -19.2

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

Detectors:	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu
Gamma Ray Calibration Report			
Serial Number:	070558		
Tool Model:	OPEN_GR		
Performed:	Tue Mar 22 20:25:25 2022		
Calibrator Value:	1.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	1.0	cps	
Sensitivity:	0.3000	GAPI/cps	