



DUAL INDUCTION LOG

Company KNIGHTON OIL COMPANY, INC.

Well HENERSON #1-3

Field MOORE WEST

County PRATT State KANSAS

Location: API #: 15-151-22566-0000
576' FNL & 360' FWL
NW - NW - NW

Other Services
CDL/CNL/PE
MEL/SONIC

SEC 13 TWP 26S RGE 14W

Permanent Datum GROUND LEVEL Elevation 1987
Log Measured From KELLY BUSHING 8' A.G.L.
Drilling Measured From KELLY BUSHING

Elevation
K.B. 1995
D.F. 1993
G.L. 1987

Date	4/21/23		
Run Number	ONE		
Depth Driller	4567		
Depth Logger	4565		
Bottom Logged Interval	4563		
Top Log Interval	00		
Casing Driller	8 5/8"@348'		
Casing Logger	348		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 14,500 PPM	
Density / Viscosity	8.9/52		
pH / Fluid Loss	9.5/12.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.300@68F		
Rmf @ Meas. Temp	.225@68F		
Rmc @ Meas. Temp	.360@68F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.169@121F		
Time Circulation Stopped	2.5 HOURS		
Time Logger on Bottom	9:15 A.M.		
Maximum Recorded Temperature	121F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	BLAKE MILLER		

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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.

15-151-22566-0000

Comments

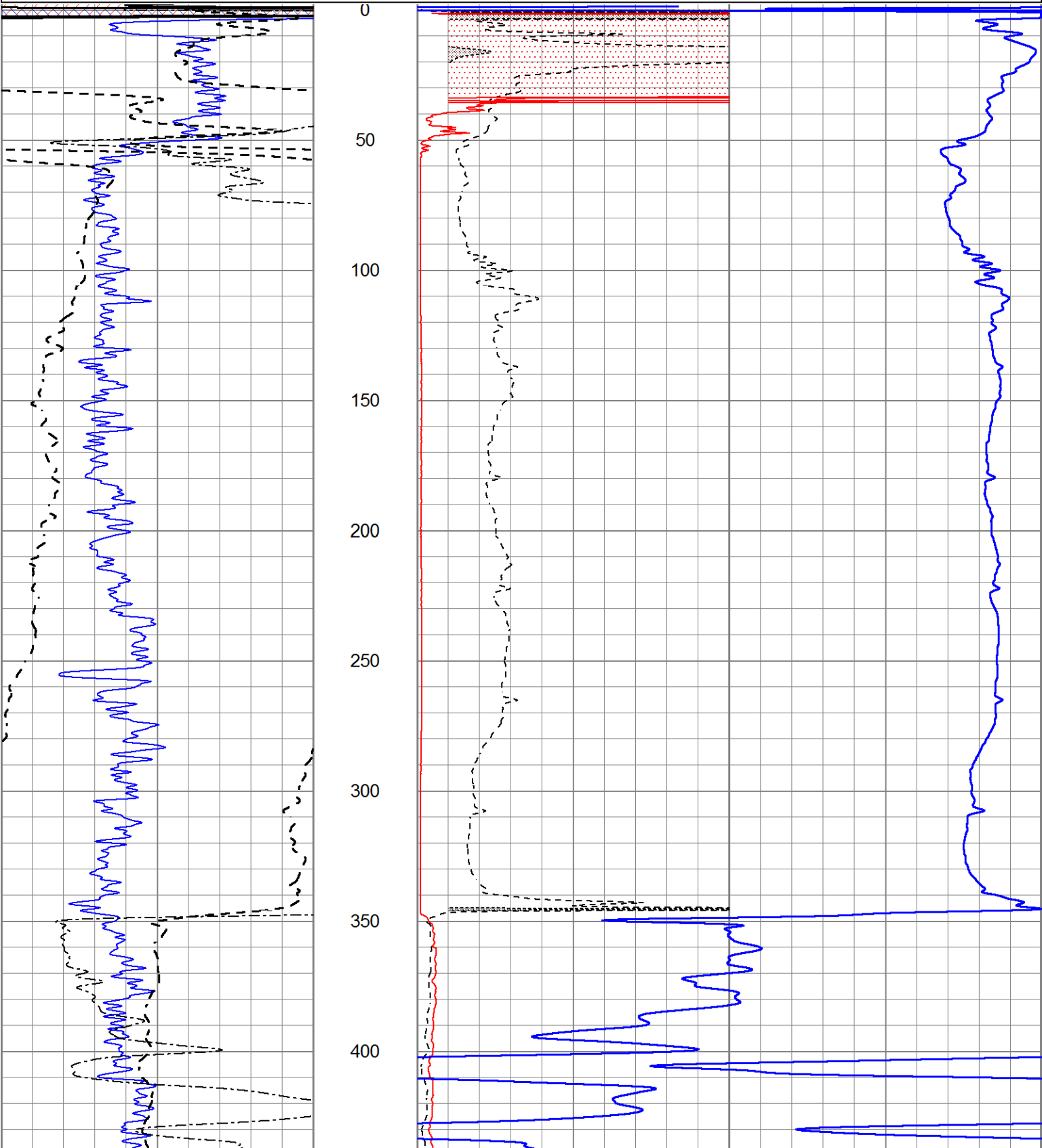
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS
BYERS, KS., 2N. ON BLKTOP, 1E., S. INTO @FORK

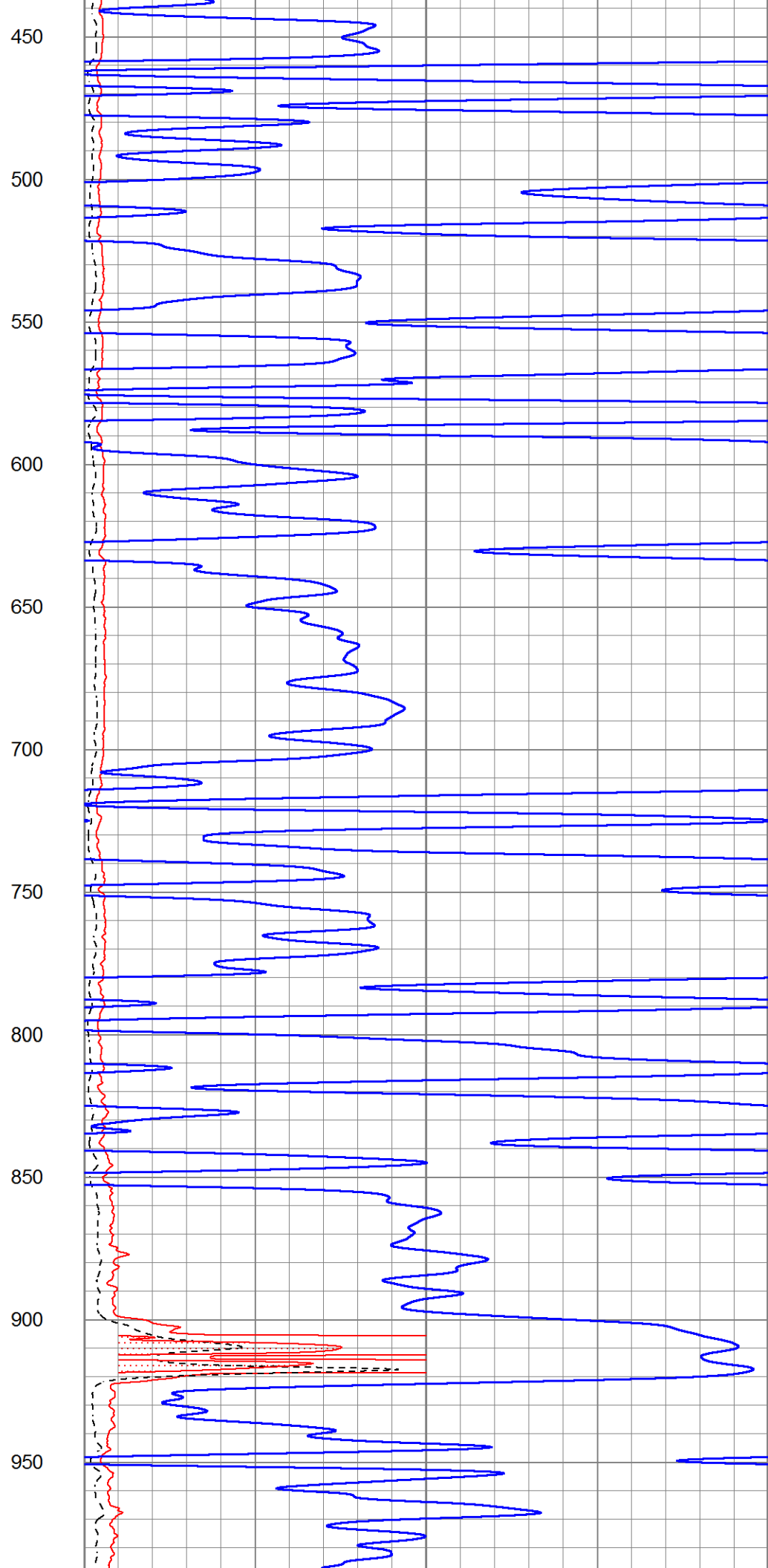
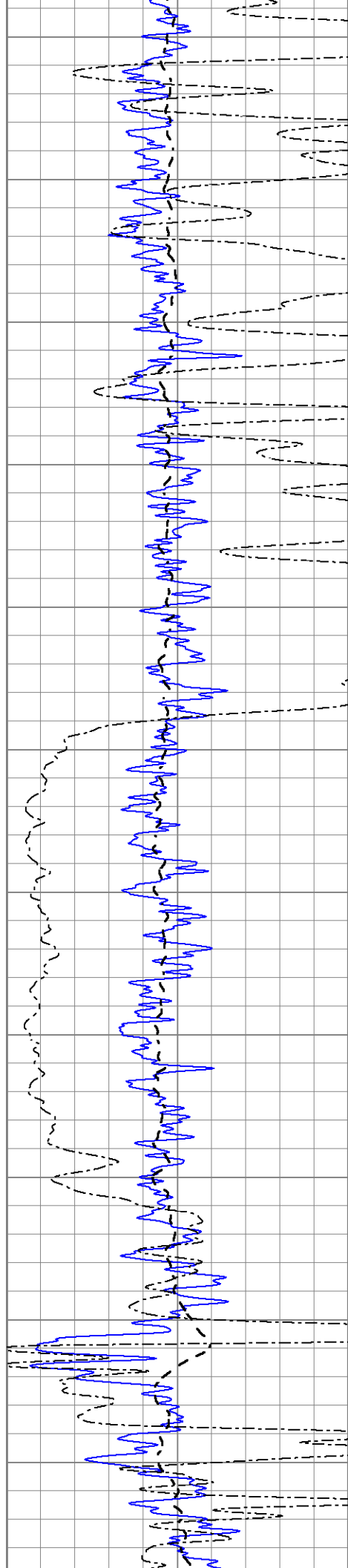


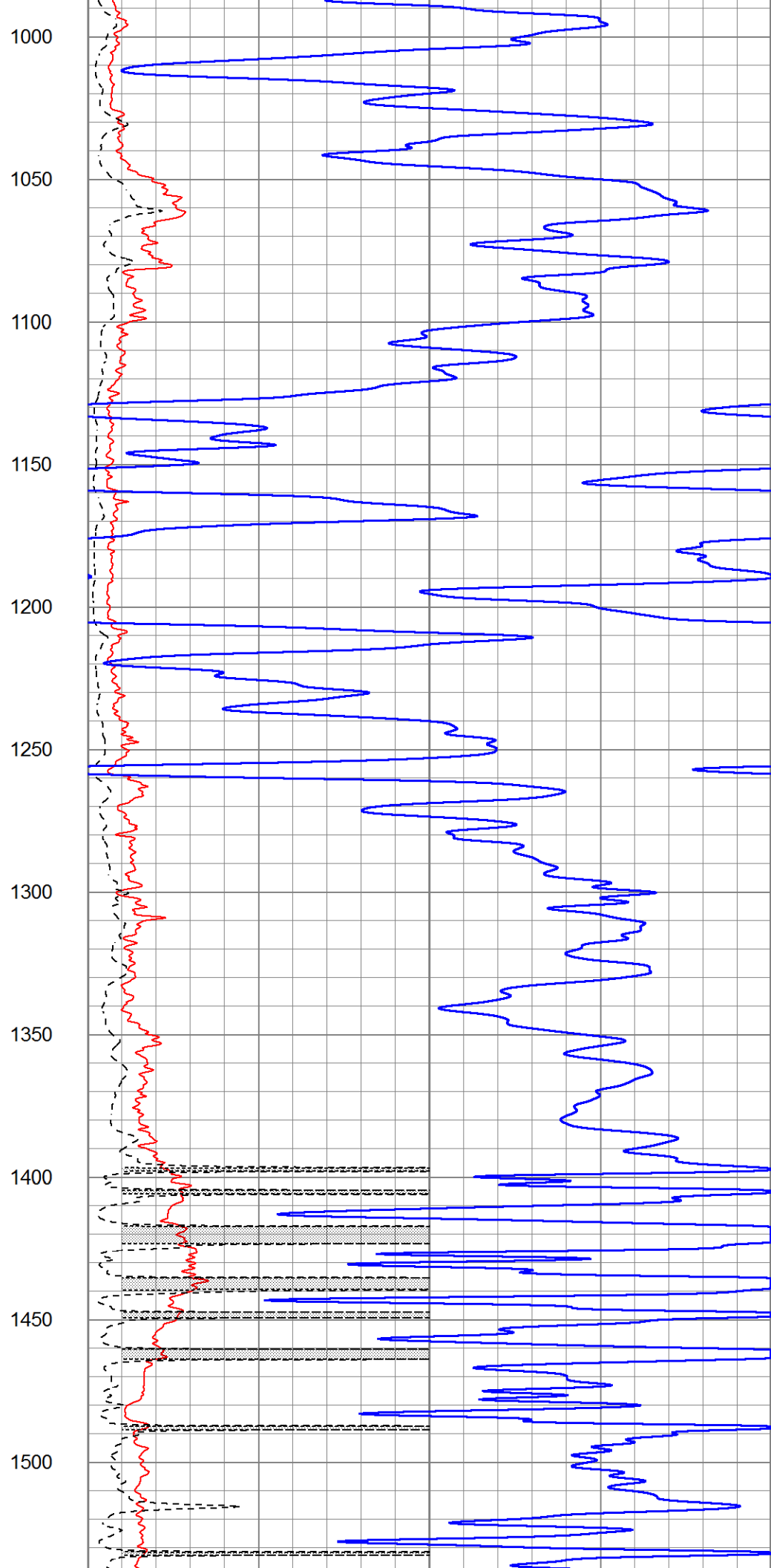
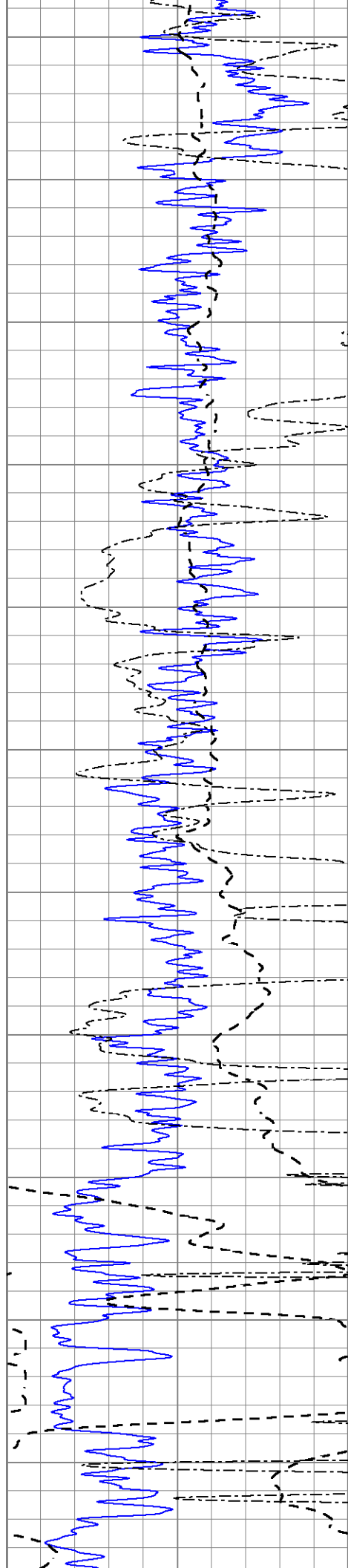
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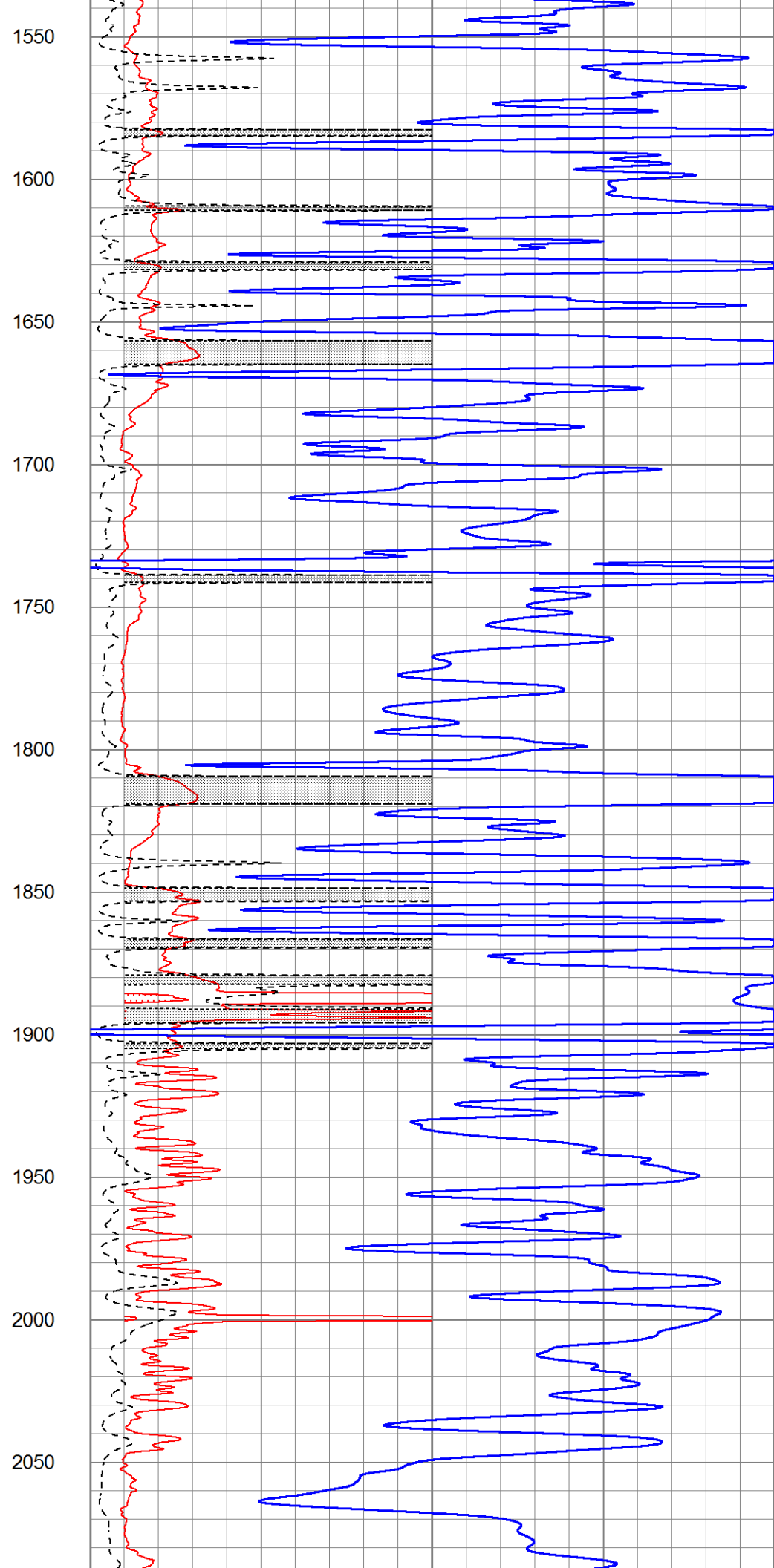
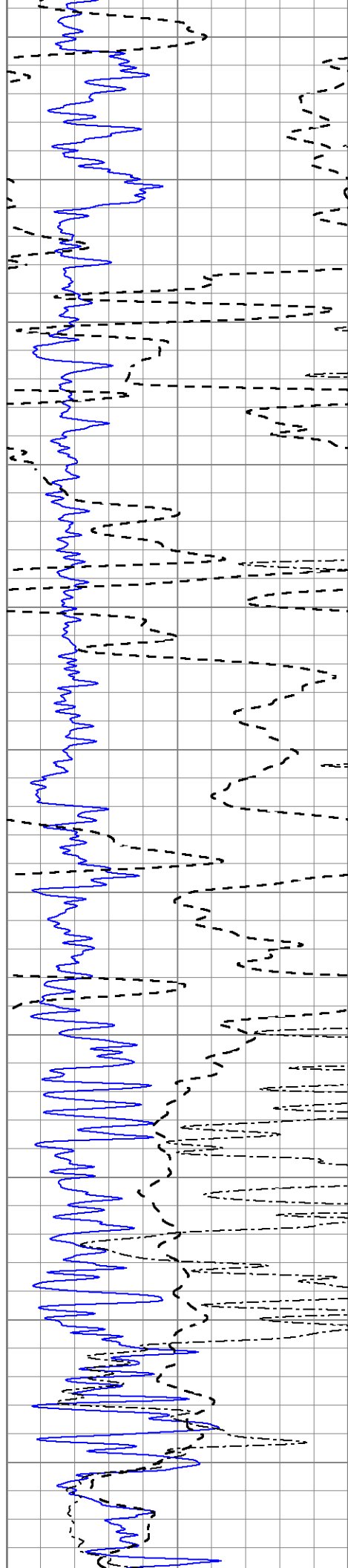
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Dataset Pathname	pass3.4M
Presentation Format	_dil2
Dataset Creation	Fri Apr 21 11:57:52 2023
Charted by	Depth in Feet scaled 1:600

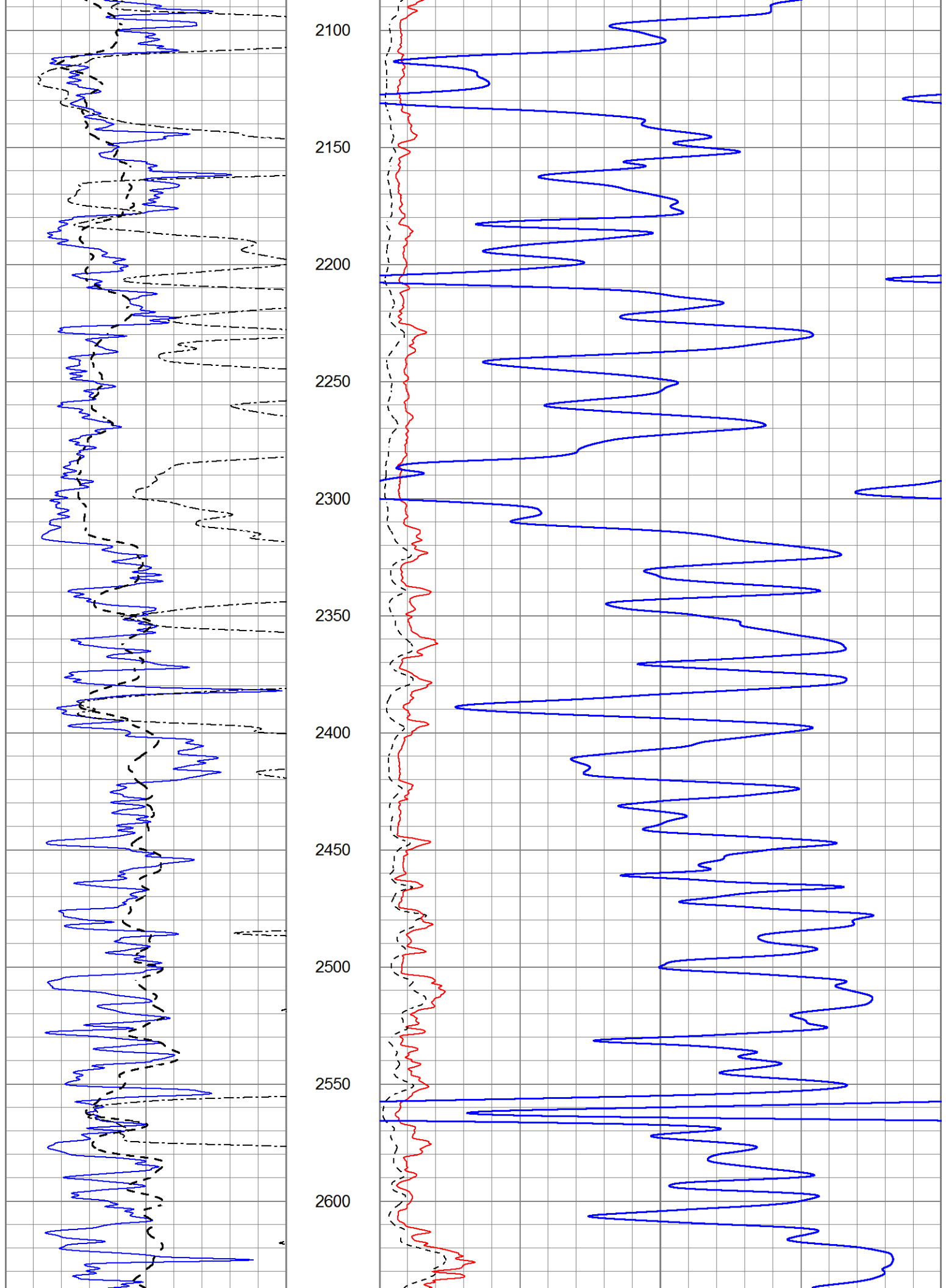
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-100	SP (mV)	100	0	RLL3 (Ohm-m)	50
0	RWA (Ohm-m)	1	0	RILD (Ohm-m)	50
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500

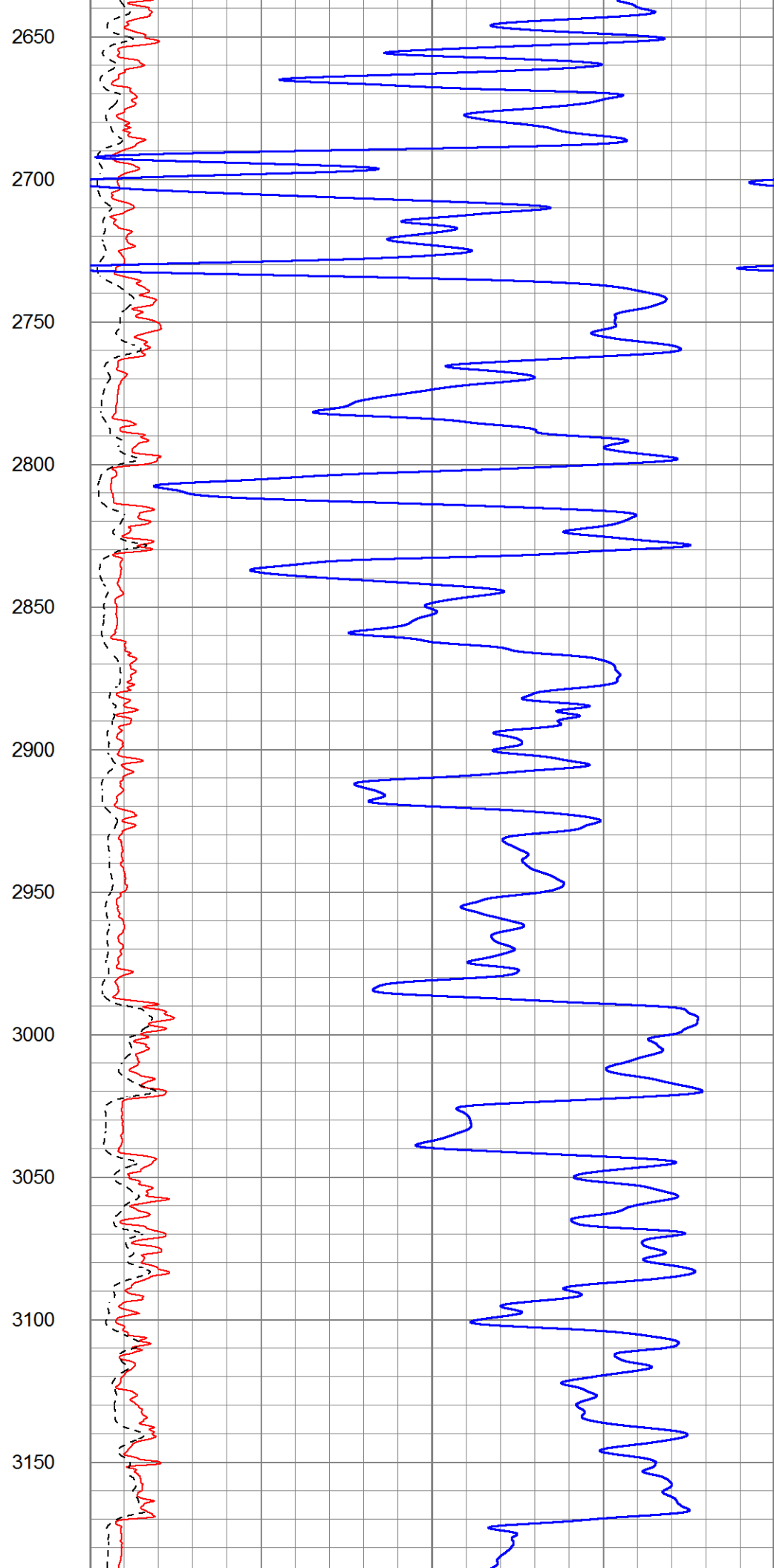
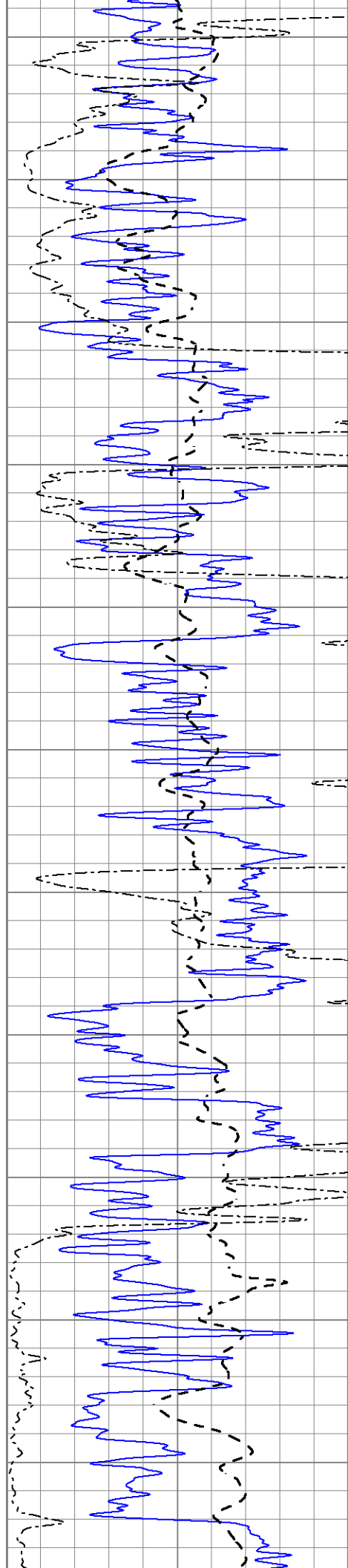


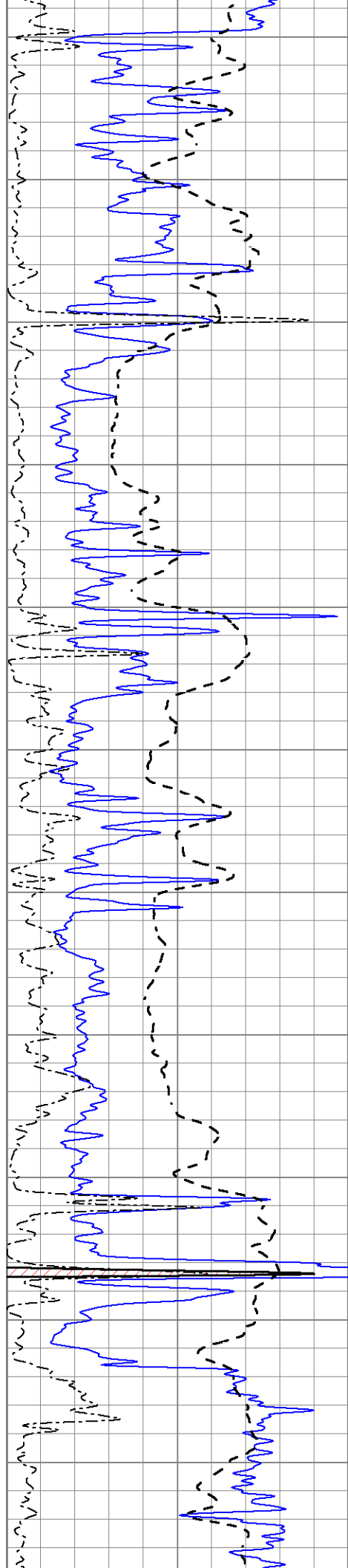












3200

3250

3300

3350

3400

3450

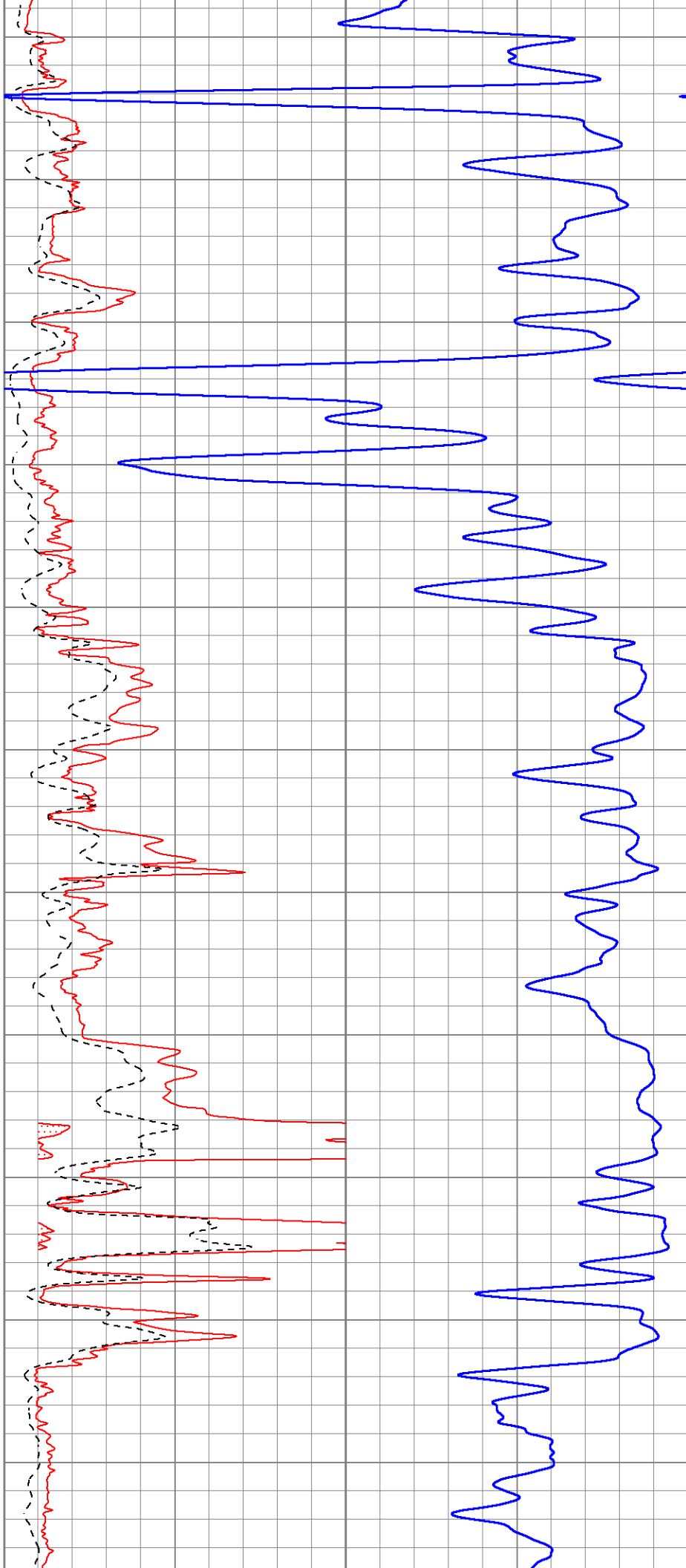
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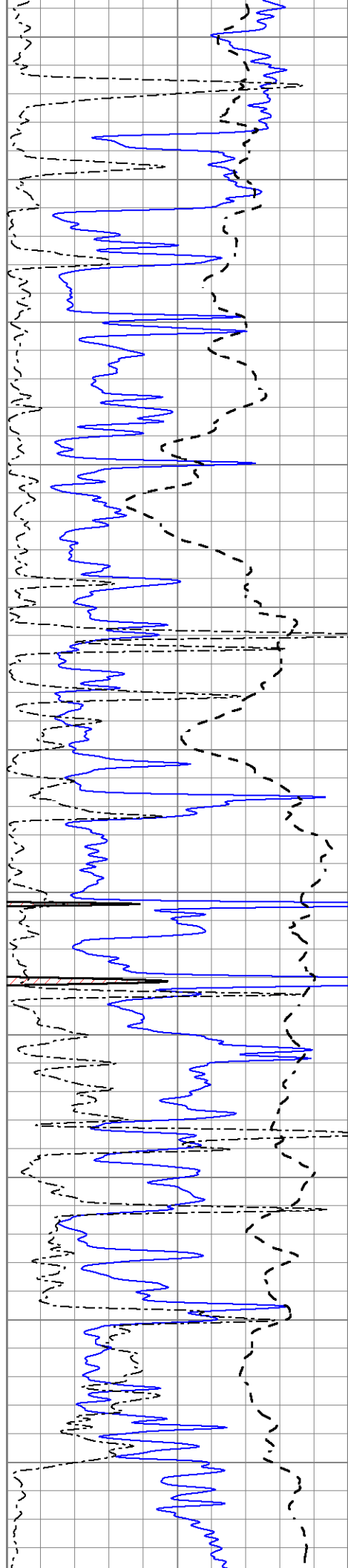
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3600

3650

3700





3750

3800

3850

3900

3950

4000

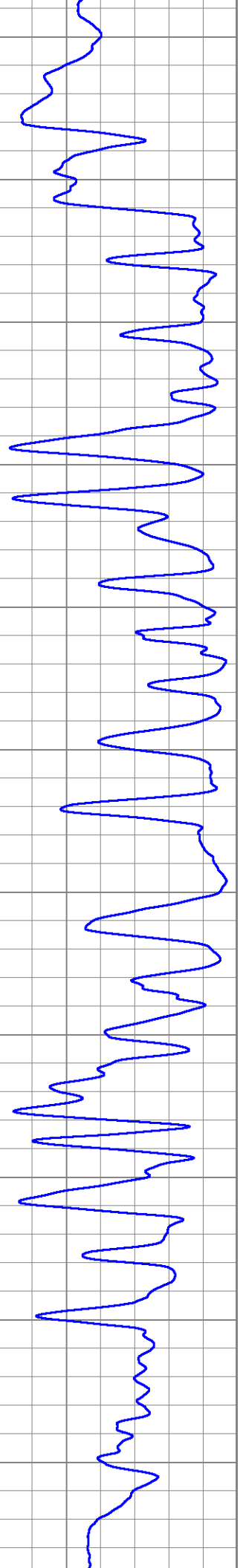
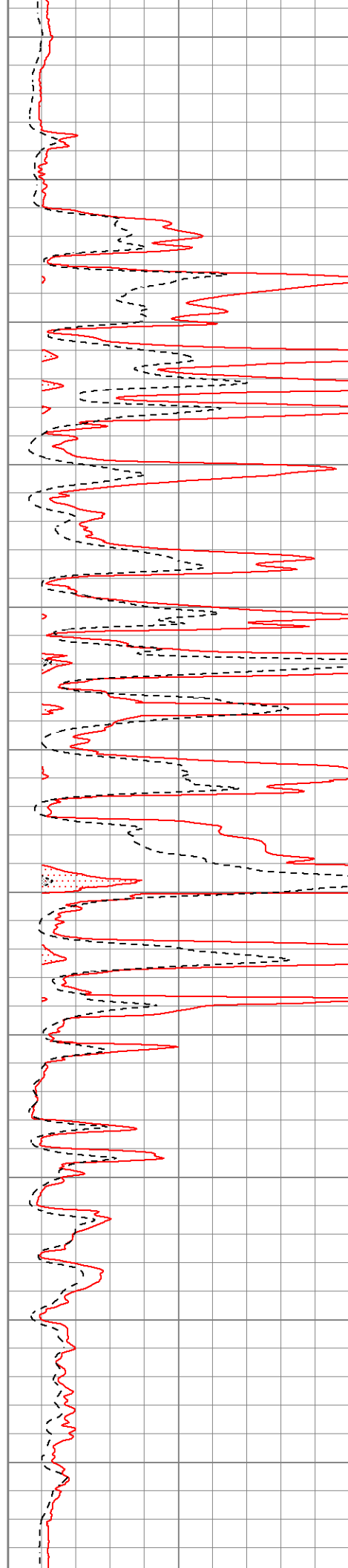
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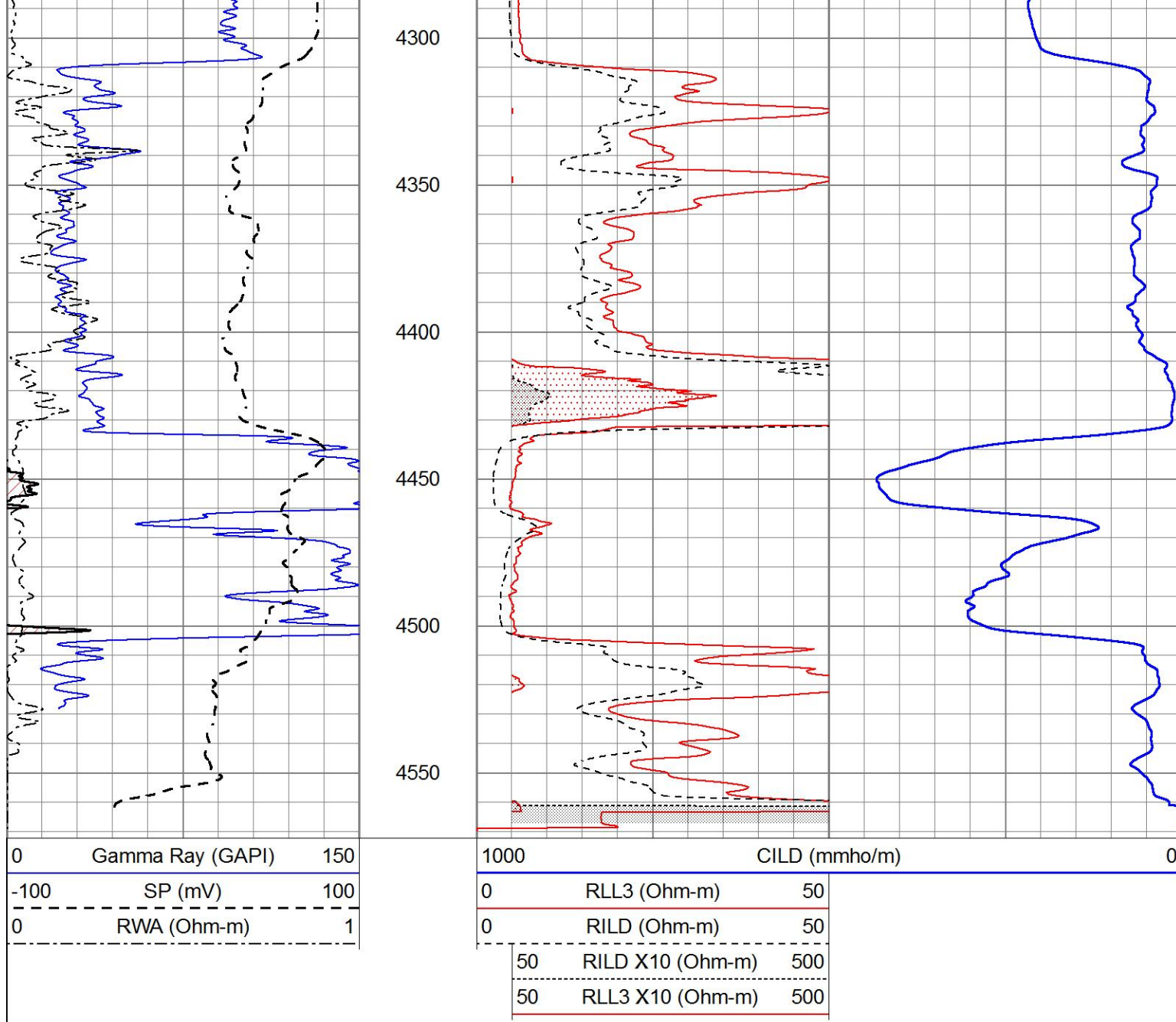
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4150

4200

4250

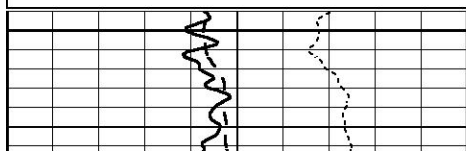




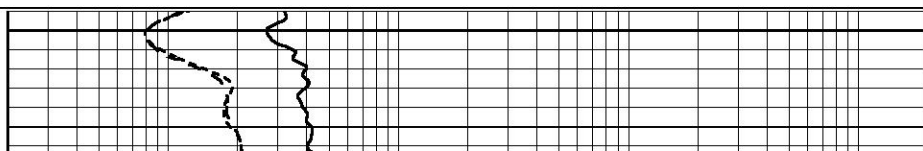
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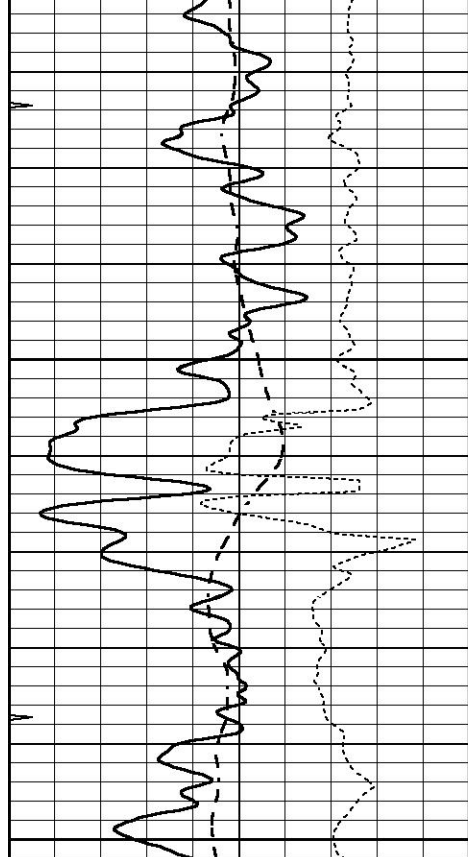
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 Presentation Format _dil
 Dataset Creation Fri Apr 21 11:56:38 2023
 Charted by Depth in Feet scaled 1:240

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			



850

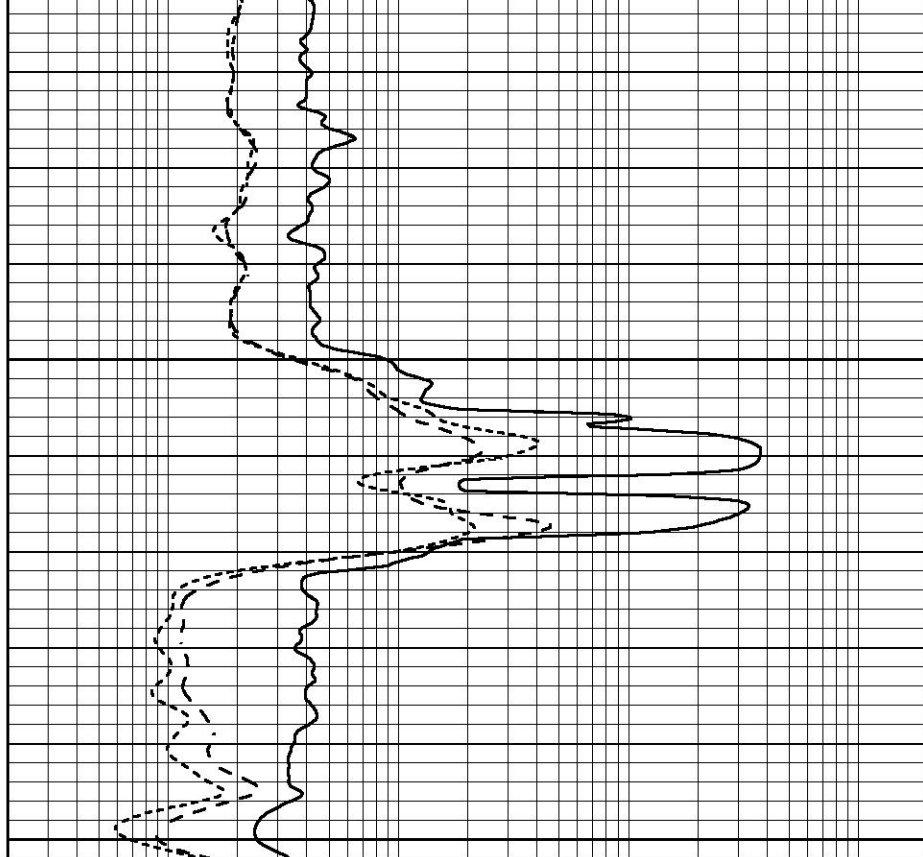




0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

900

950



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



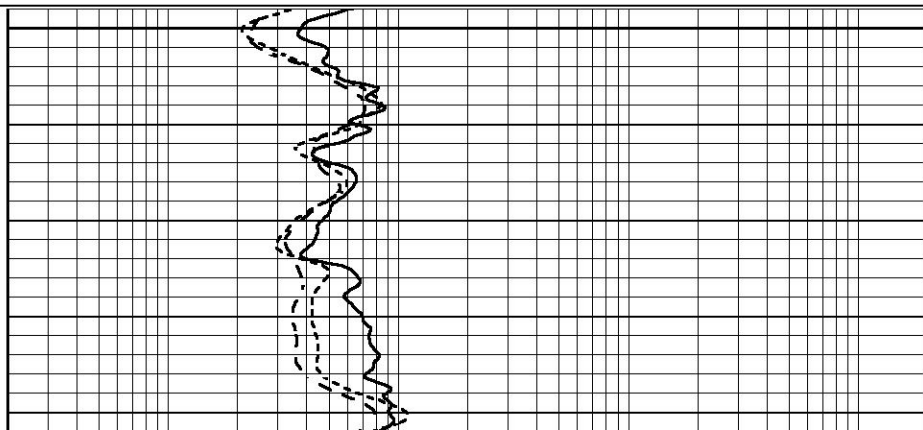
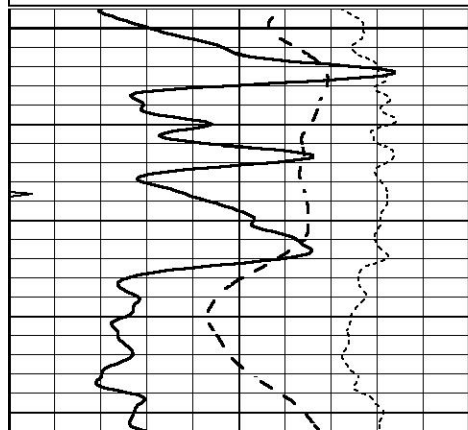
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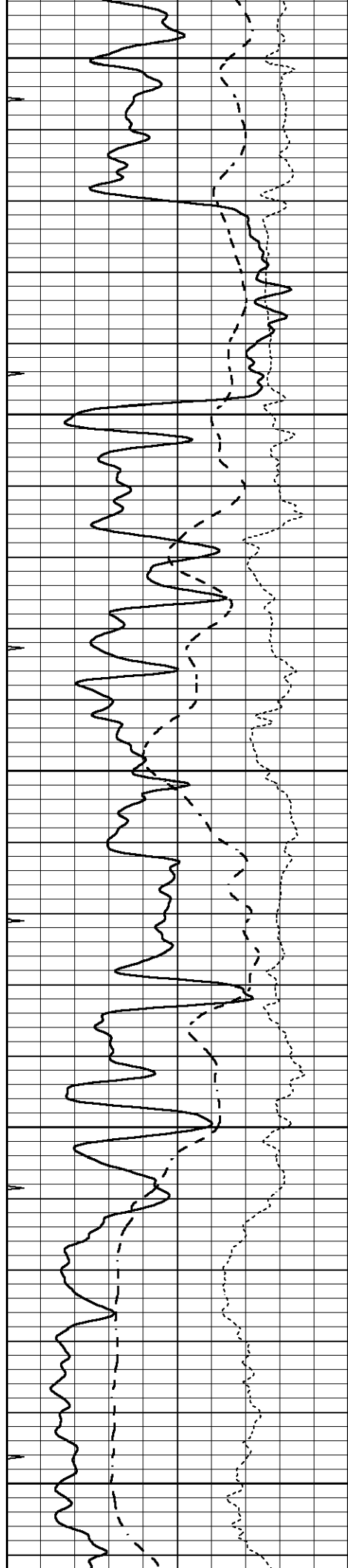
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 Dataset Pathname pass3.4M
 Presentation Format _dil
 Dataset Creation Fri Apr 21 11:57:52 2023
 Charted by Depth in Feet scaled 1:240

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

3100





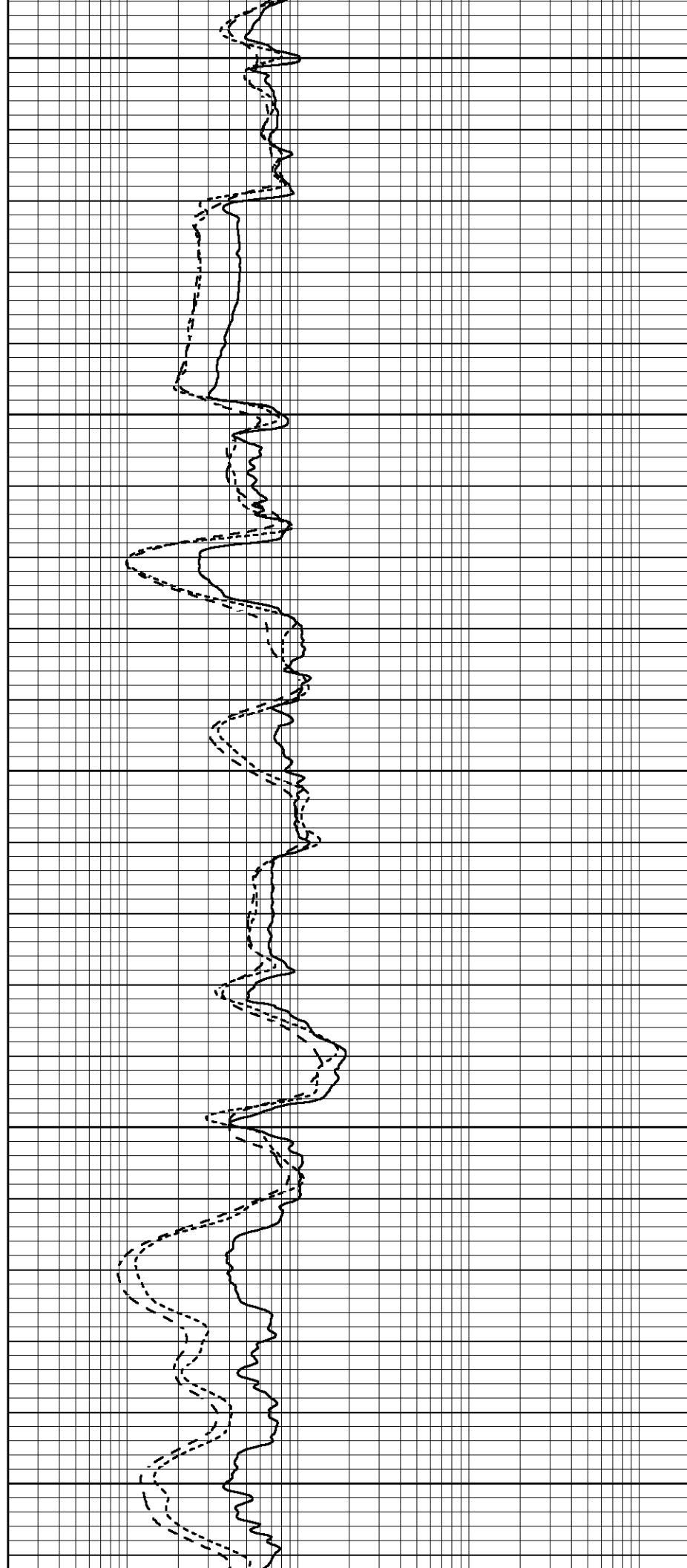
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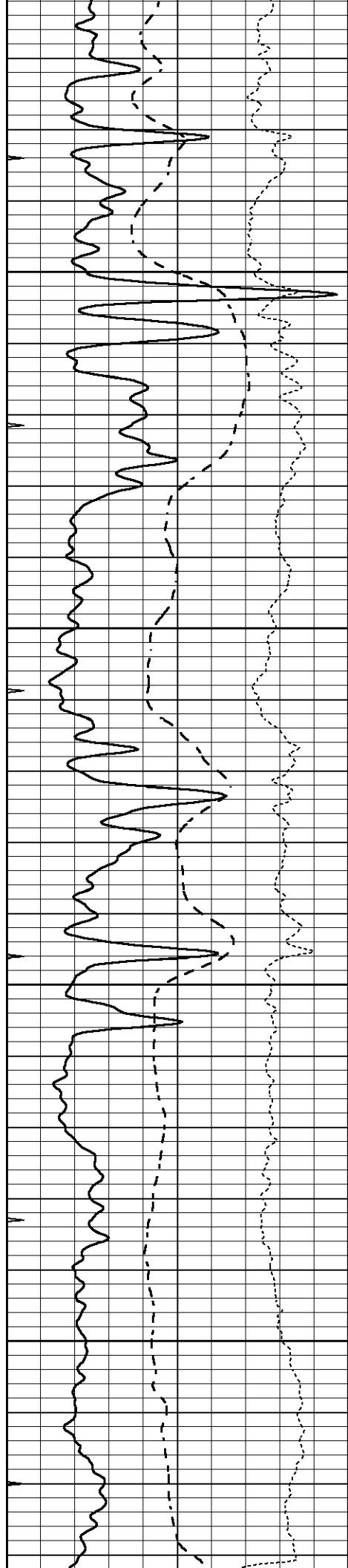
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3250

3300

3350



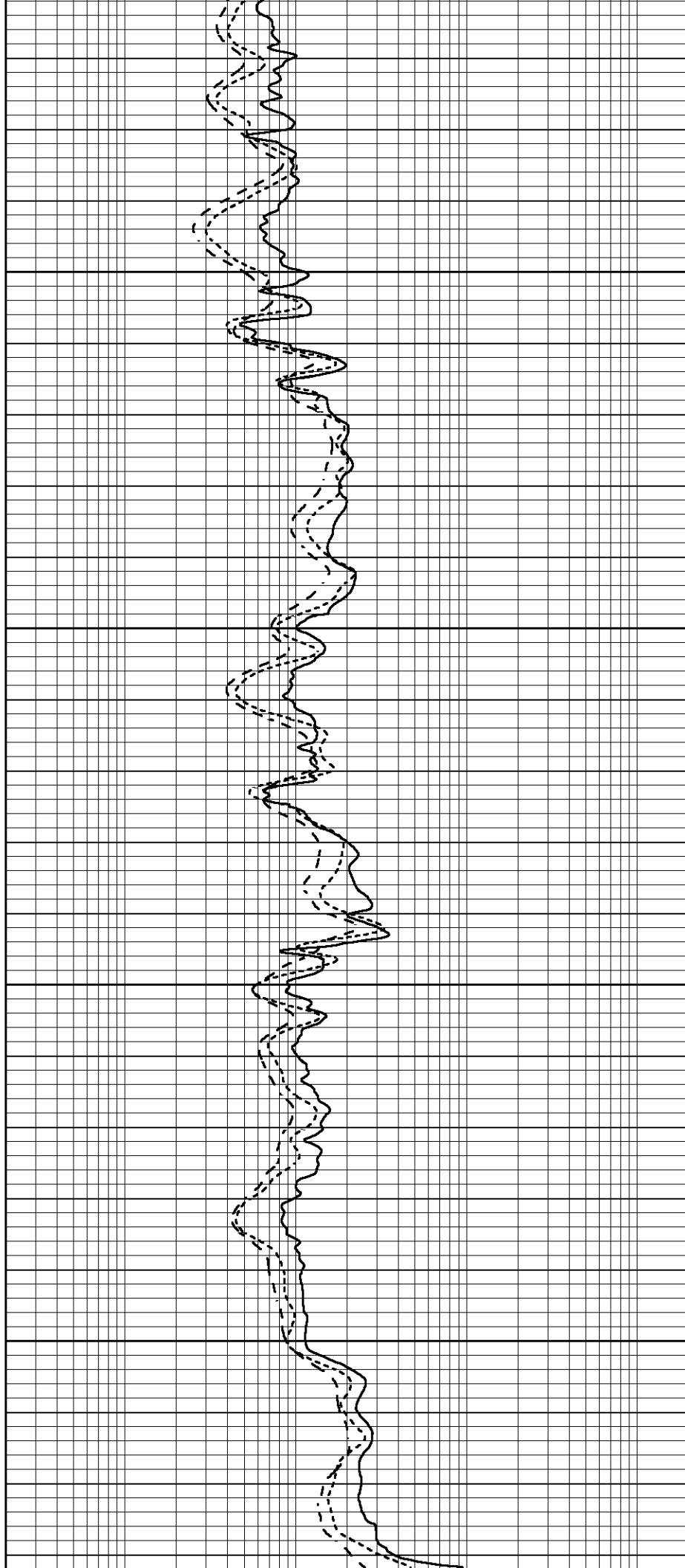


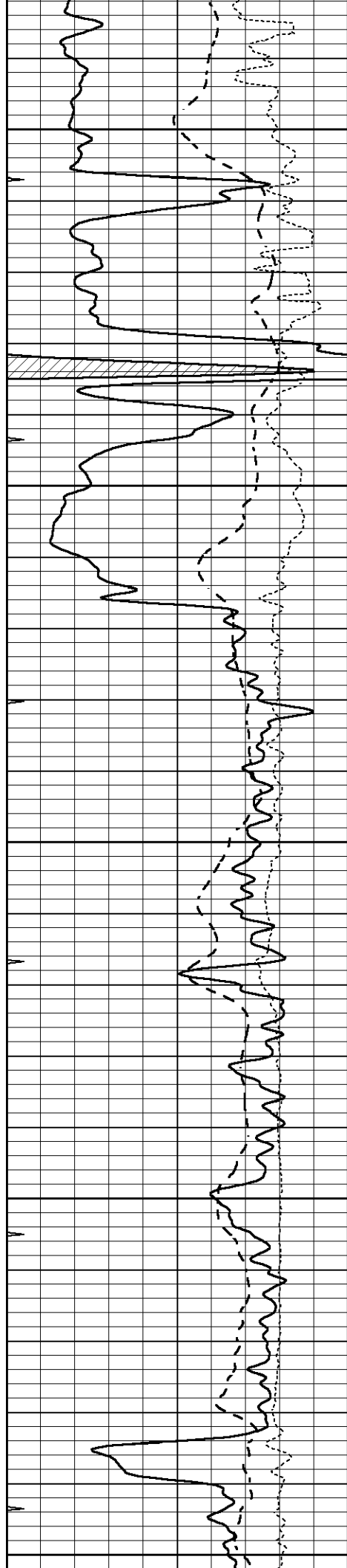
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3450

3500

3550





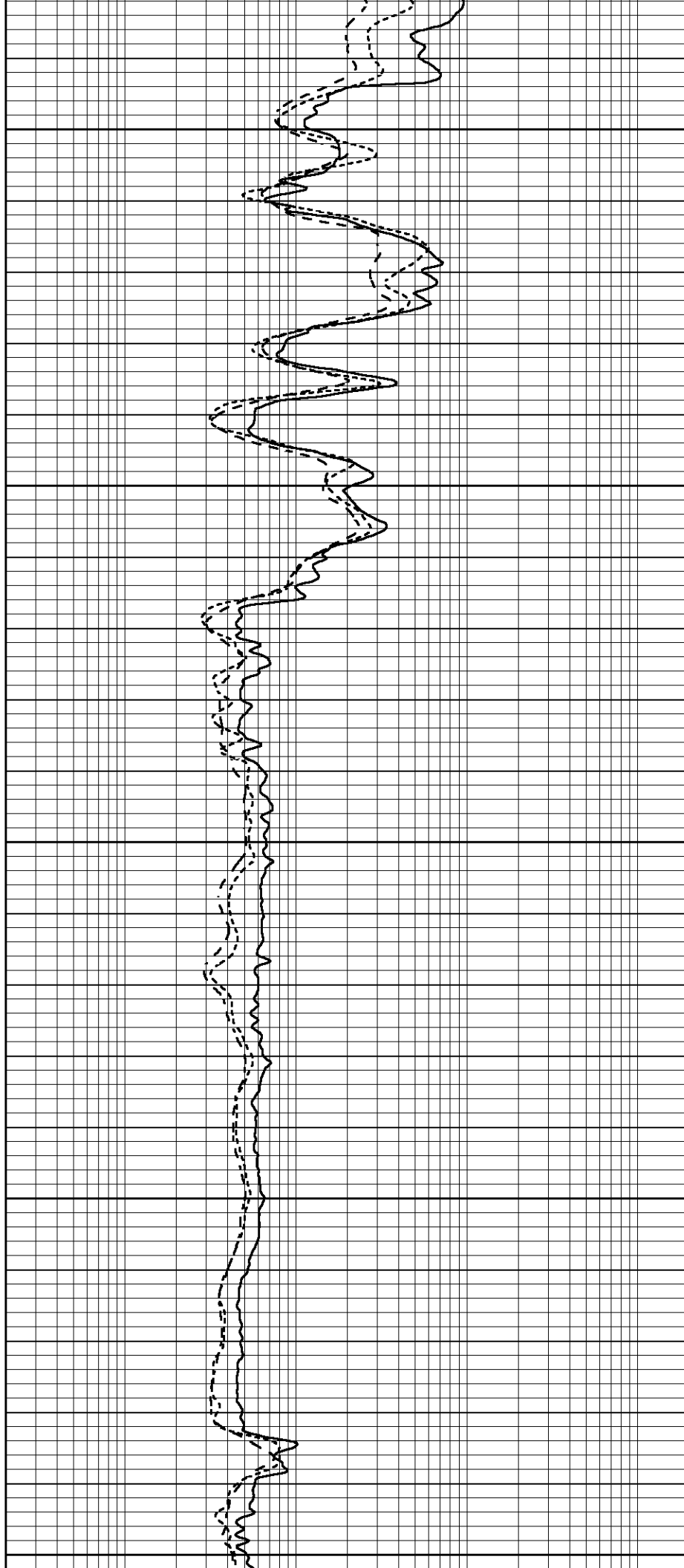
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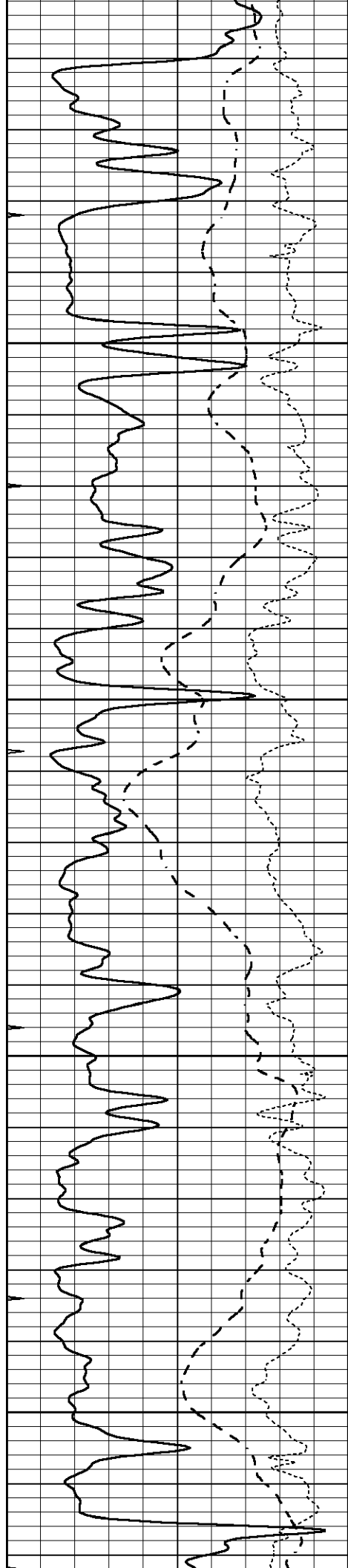
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3750

3800



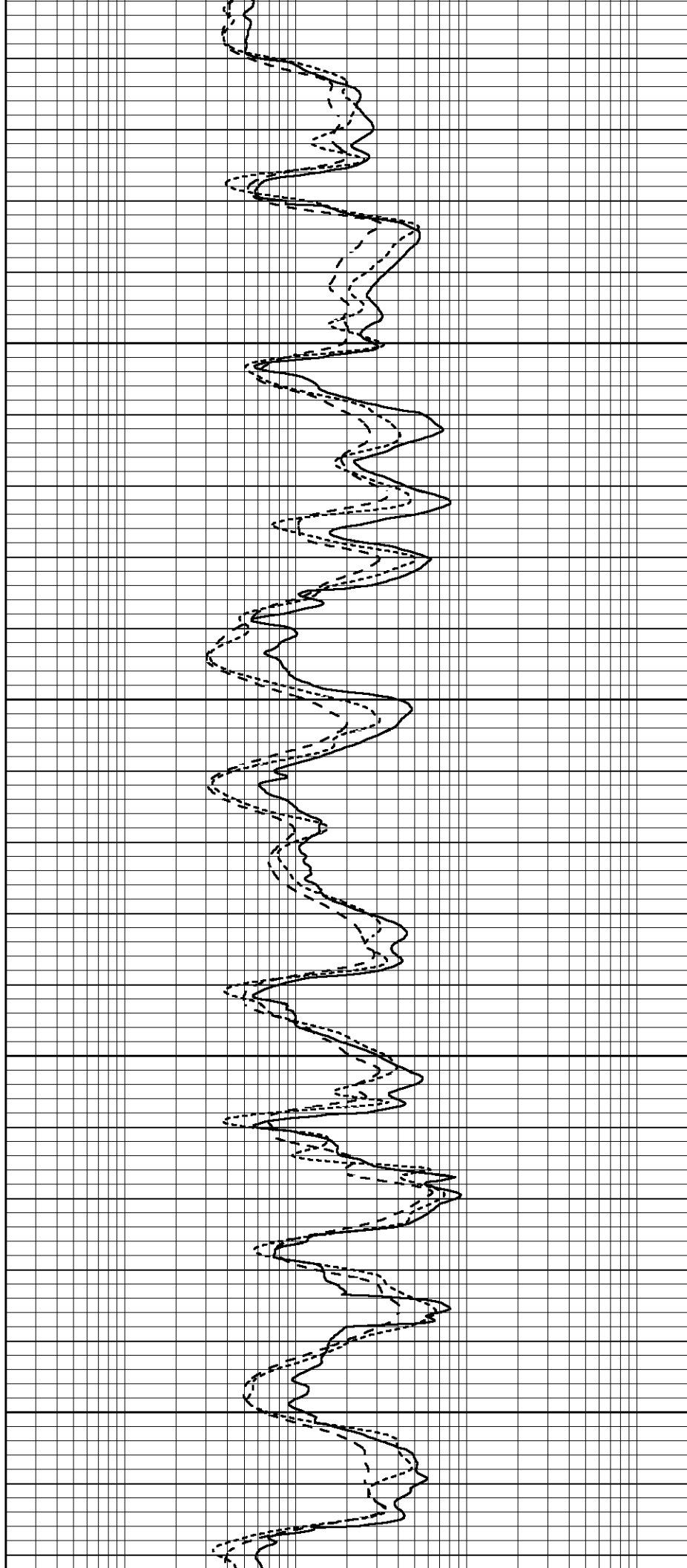


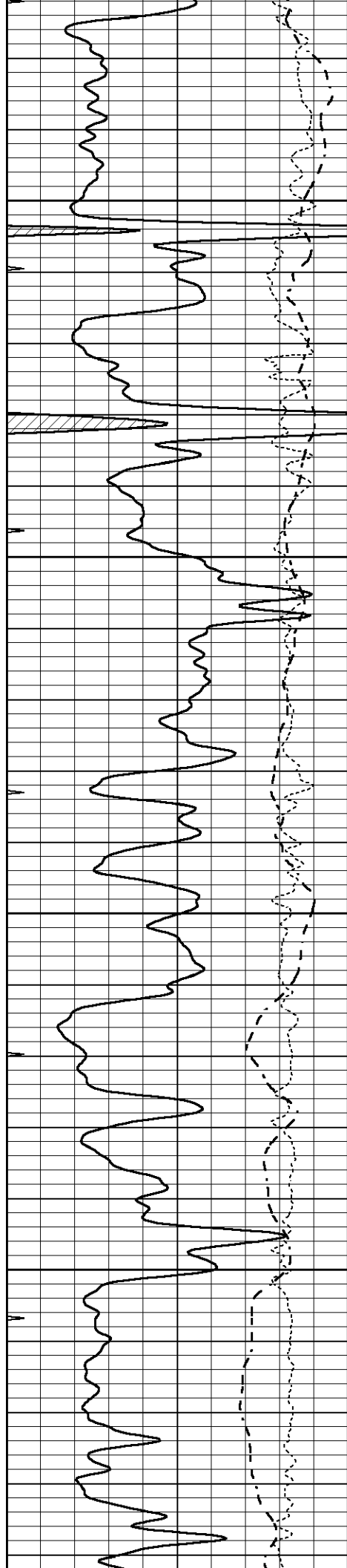
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3900

3950

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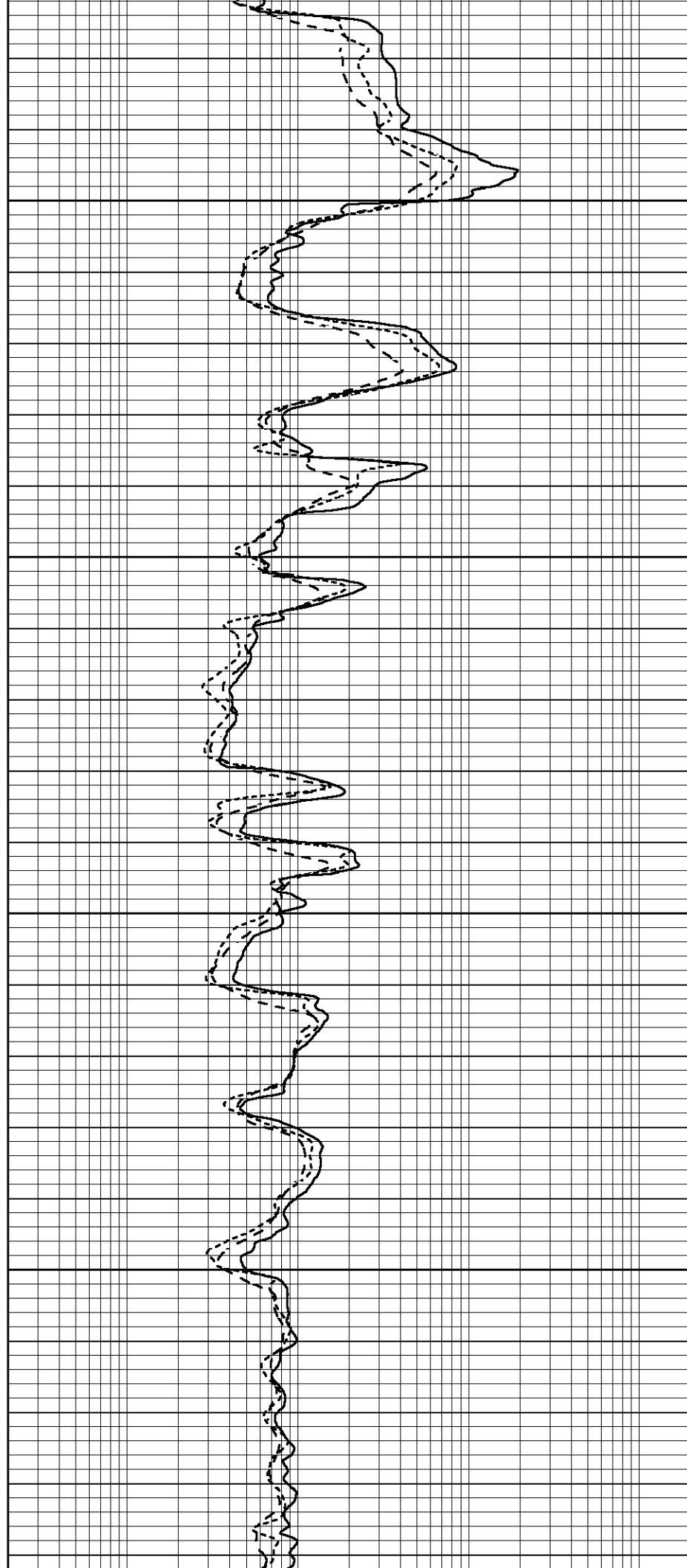


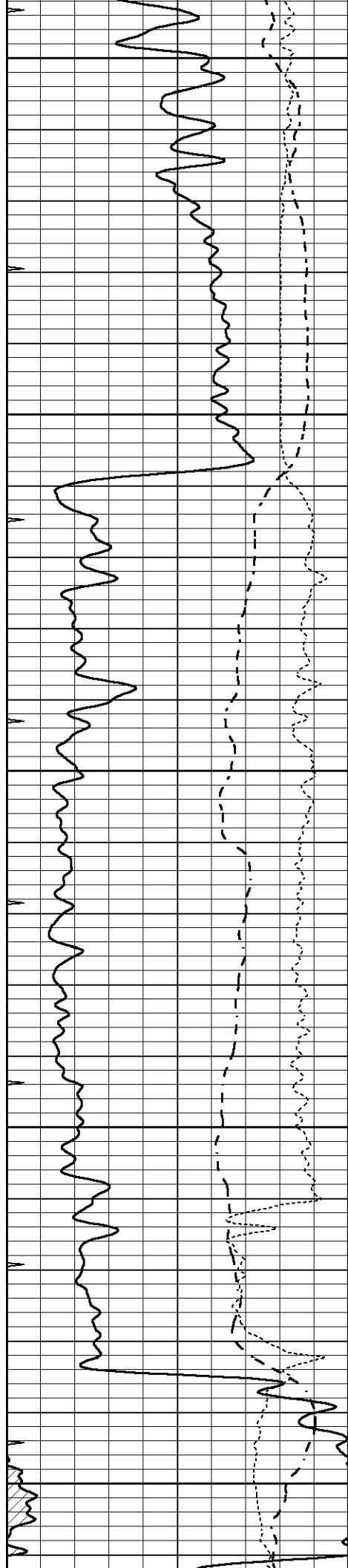
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4100

4150

4200





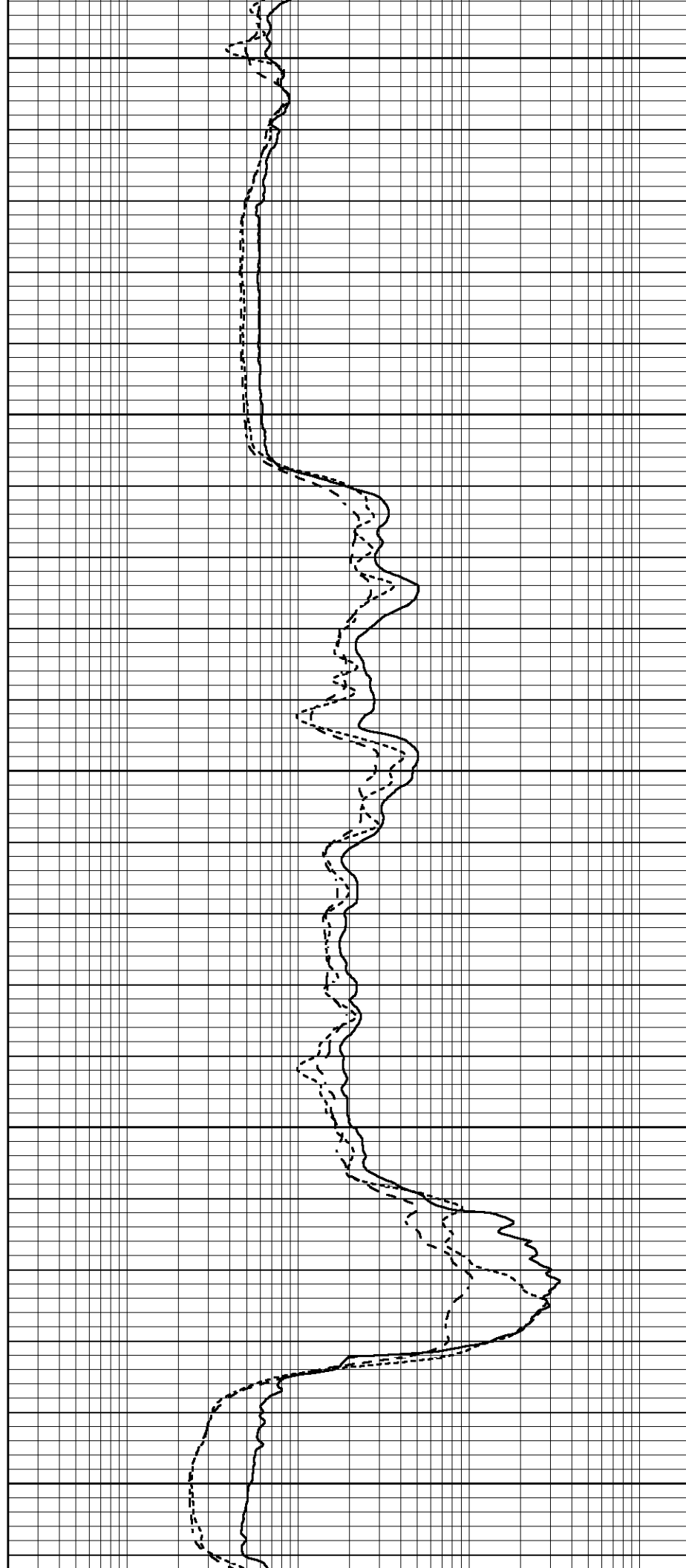
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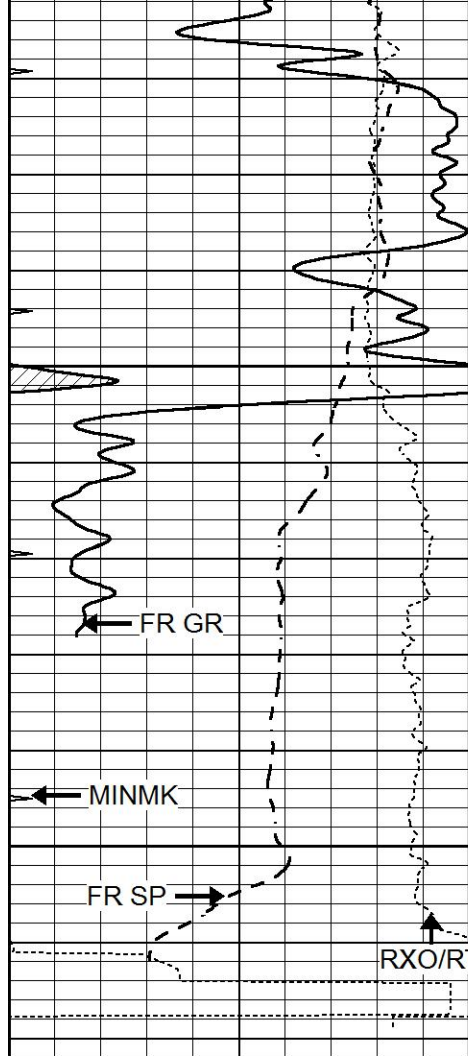
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4350

4400

4450



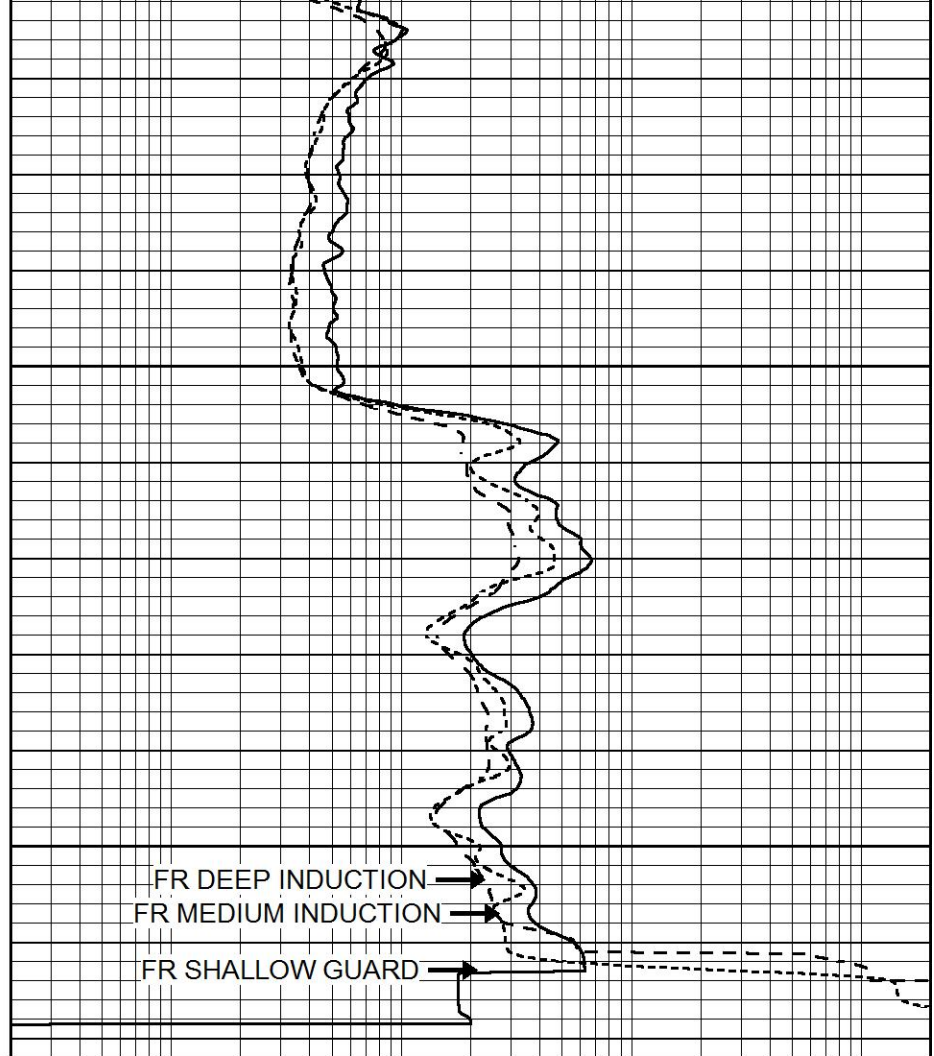


4500

4550

LTD 4565

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



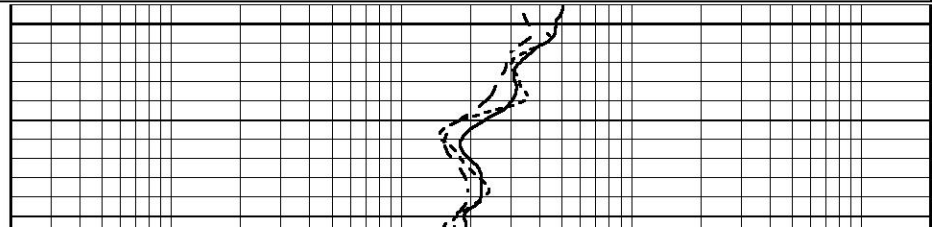
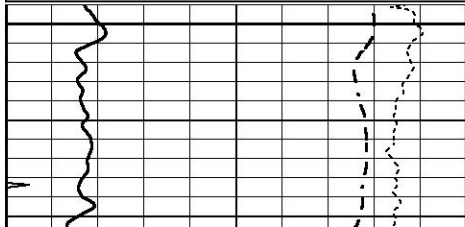
REPEAT SECTION

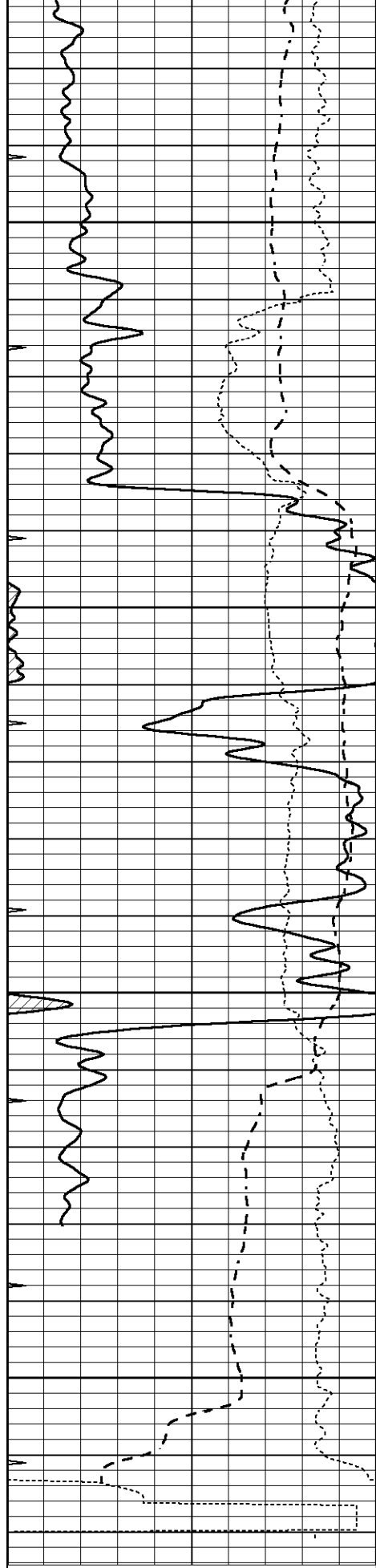
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 Presentation Format _dil
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 Charted by Depth in Feet scaled 1:240

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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

4350





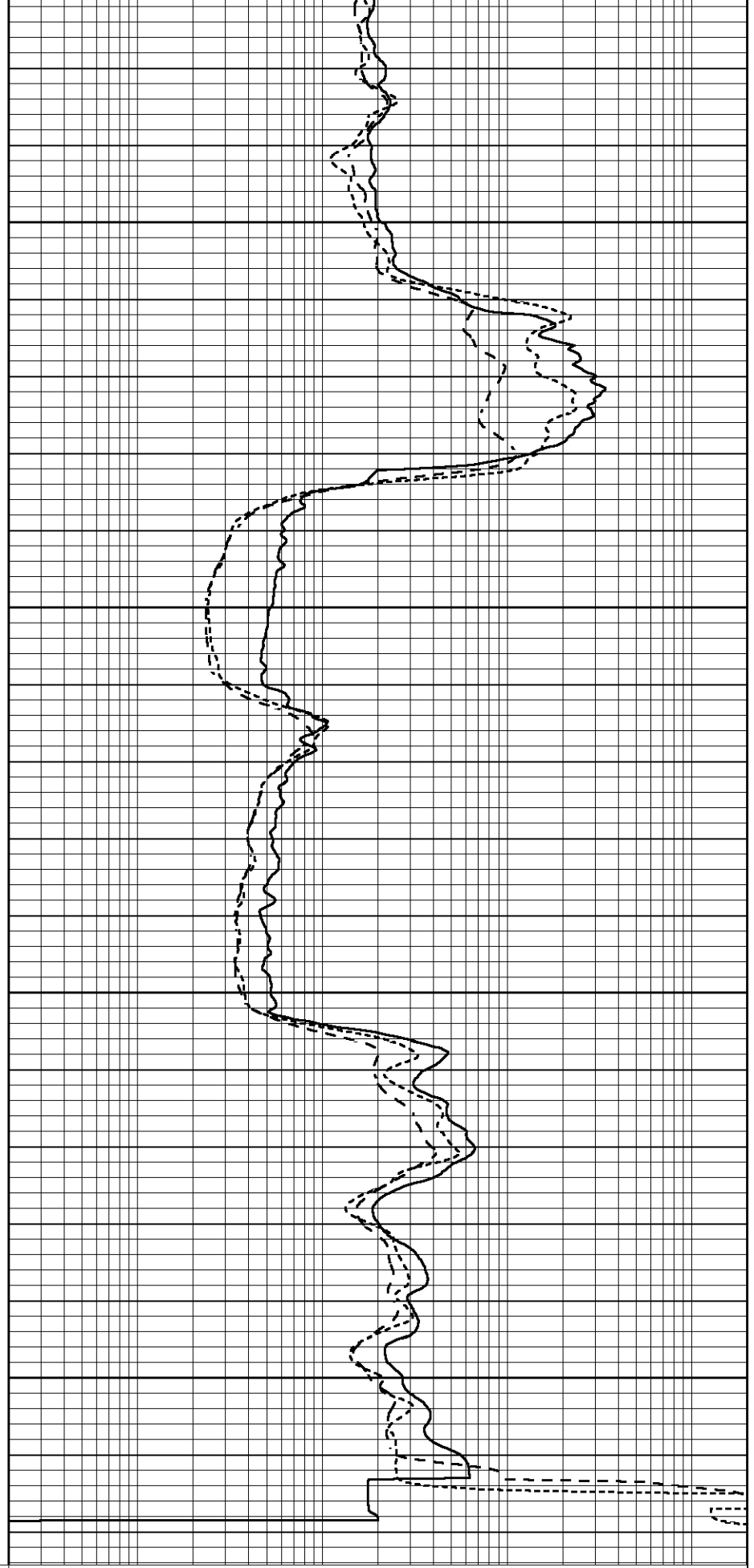
4400

4450

4500

4550

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



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 7274pe.db
Dataset Pathname pass3.4M
Dataset Creation Fri Apr 21 11:57:52 2023

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
Surface Cal Performed: Tue Apr 18 18:49:38 2023
Downhole Cal Performed: Mon Jul 28 11:08:27 2008
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	640.000	15.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	625.000	0.000
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	

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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:	Tue Apr 11 09:45:09 2023	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.2800	GAPI/cps