



DUAL INDUCTION LOG

Company	DARRAH OIL COMPANY, LLC.	Company	DARRAH OIL COMPANY, LLC.
Well	YOUNKIN #1-11	Well	YOUNKIN #1-11
Field	WILDCAT	Field	WILDCAT
County	LOGAN	County	LOGAN
State	KANSAS	State	KANSAS
Location:	API # : 15-109-21603-0000	Other Services	CDL/CNL MEL/SON
Permanent Datum	GROUND LEVEL	Elevation	2885
Log Measured From	KELLY BUSHING 11" A.G.L.	K.B. 2896 D.F. 2894 G.L. 2885	
Drilling Measured From	KELLY BUSHING		
SEC 11 TWP 14S RGE 34W			
Date	6/28/20		
Run Number	ONE		
Depth Driller	4650		
Depth Logger	4650		
Bottom Logged Interval	4648		
Top Log Interval	00		
Casing Driller	8 5/8"@267'		
Casing Logger	267		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 7.000 PPM	
Density / Viscosity	9.3/58		
pH / Fluid Loss	9.0/9.6		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.420@90F		
Rmf @ Meas. Temp	.315@90F		
Rmc @ Meas. Temp	.504@90F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.310@122F		
Time Circulation Stopped	2.5 HOURS		
Time Logger on Bottom	9.30 P.M.		
Maximum Recorded Temperature	122F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	SETH EVENSON		

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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

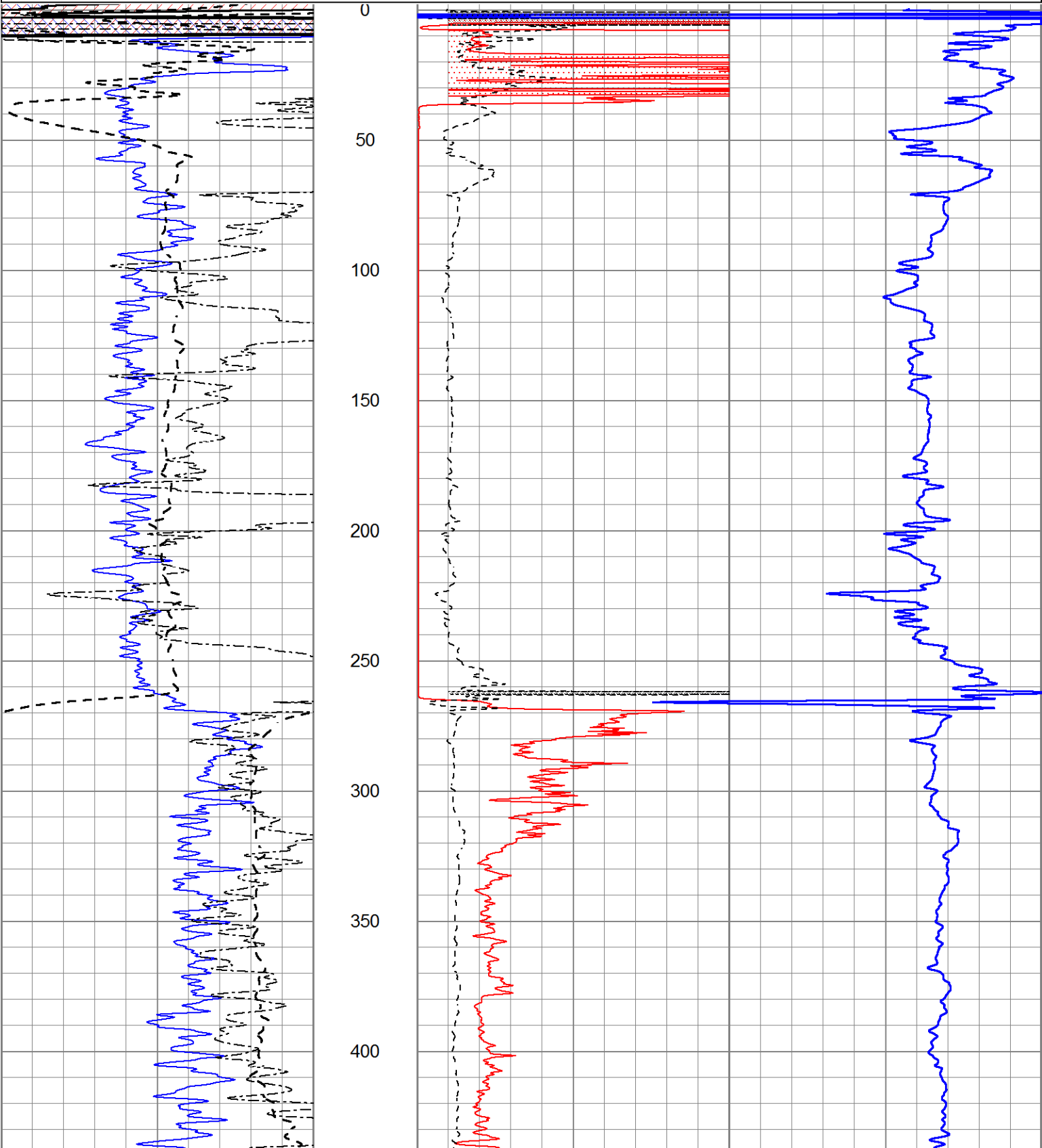
THANK YOU FOR USING E.L.I. WIRELINE SERVICES HAYS, KANSAS (785)628-6395
DIRECTIONS
OAKLEY, KS., 13S. ON HWY 83 TO "QUAIL RD.", 7W. TO "RD. 370" 1S. TO "PLAINS RD.", 2W. TO "RD. 350", 4S. TO "LARIAT RD.", 1W. TO CATTLE GUARD, THEN 1/2 W. IN PASTURE

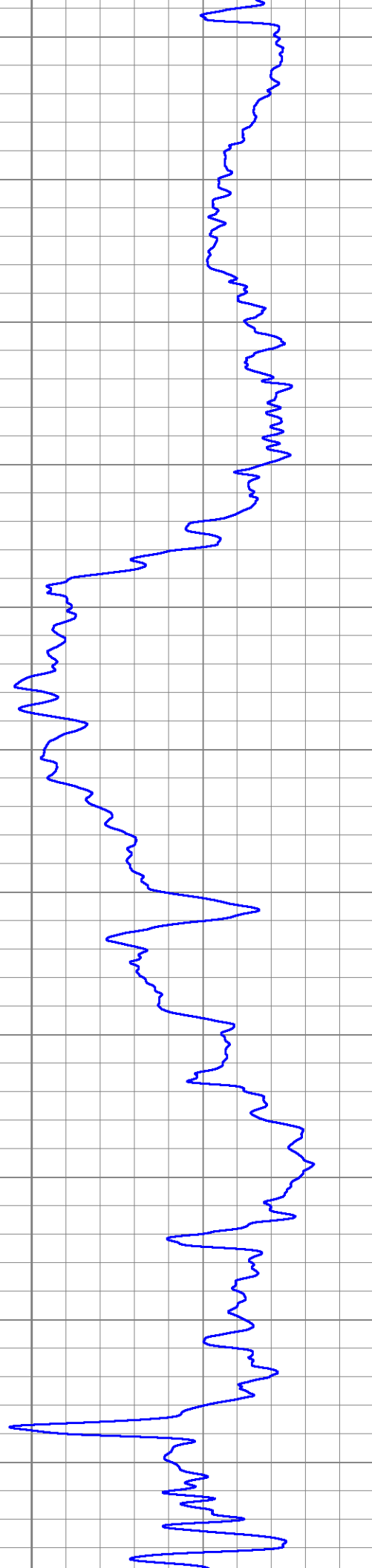
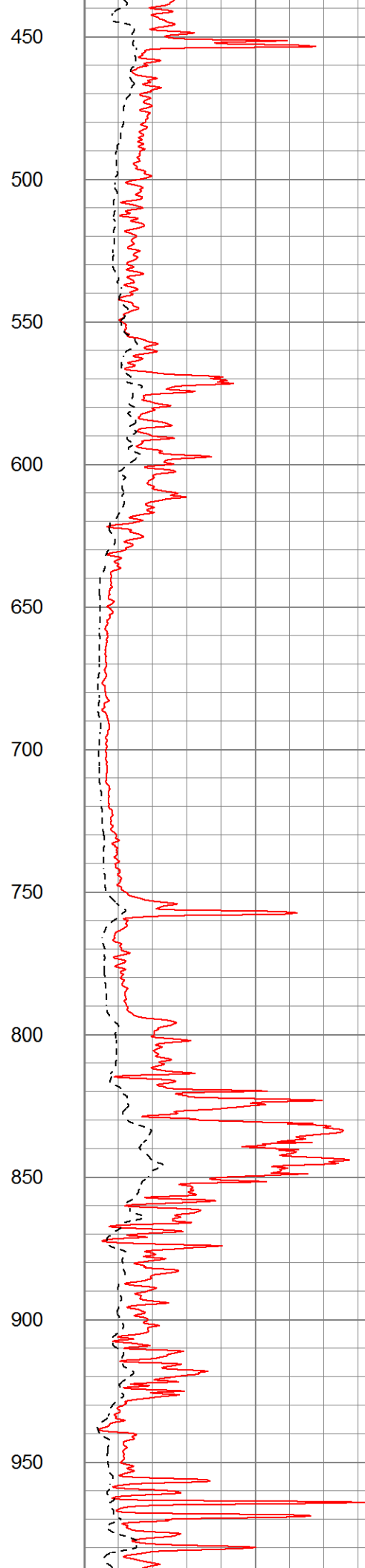
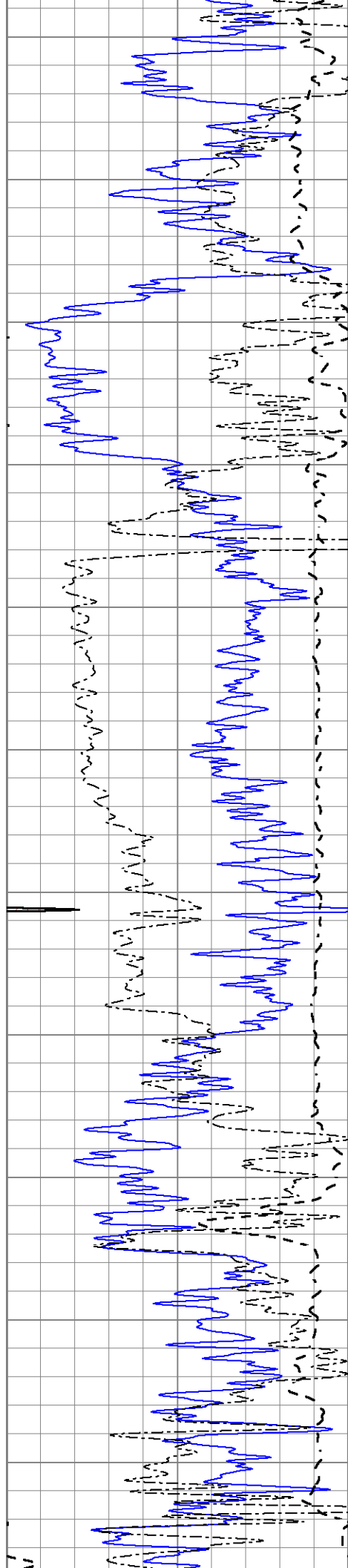


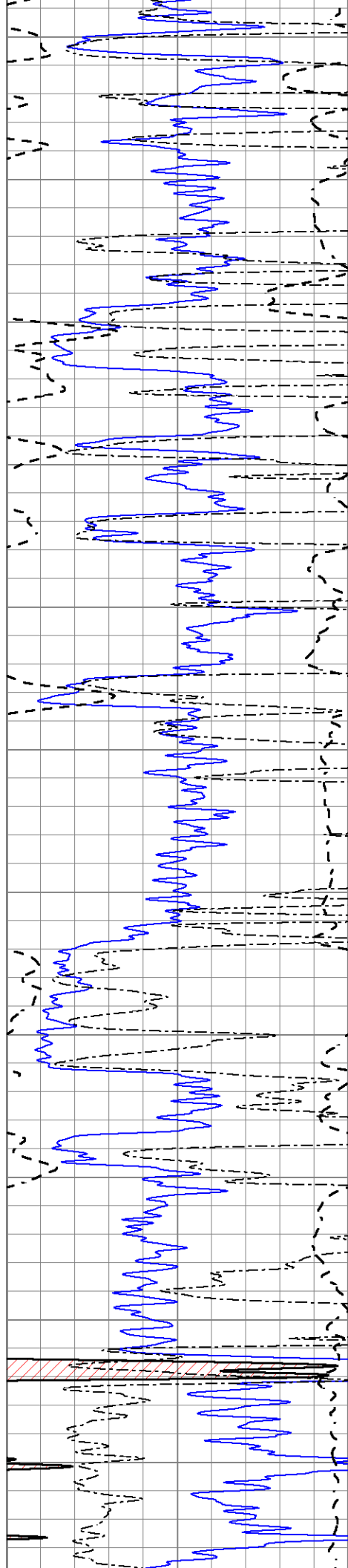
MAIN SECTION

Database File	4548ddn.db
Dataset Pathname	pass3.6
Presentation Format	_dil2
Dataset Creation	Sun Jun 28 23:14:24 2020
Charted by	Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150	1000	CILD (mmho/m)	0
-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

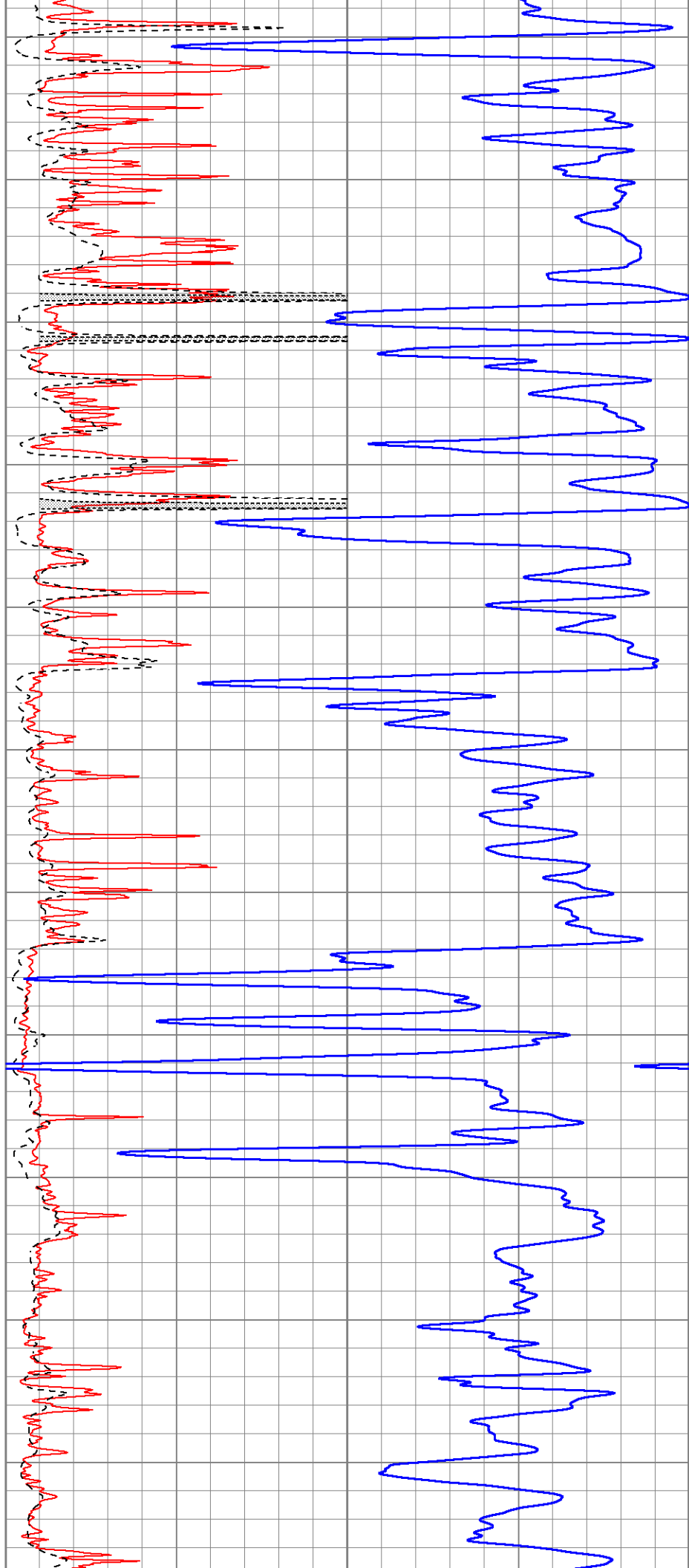
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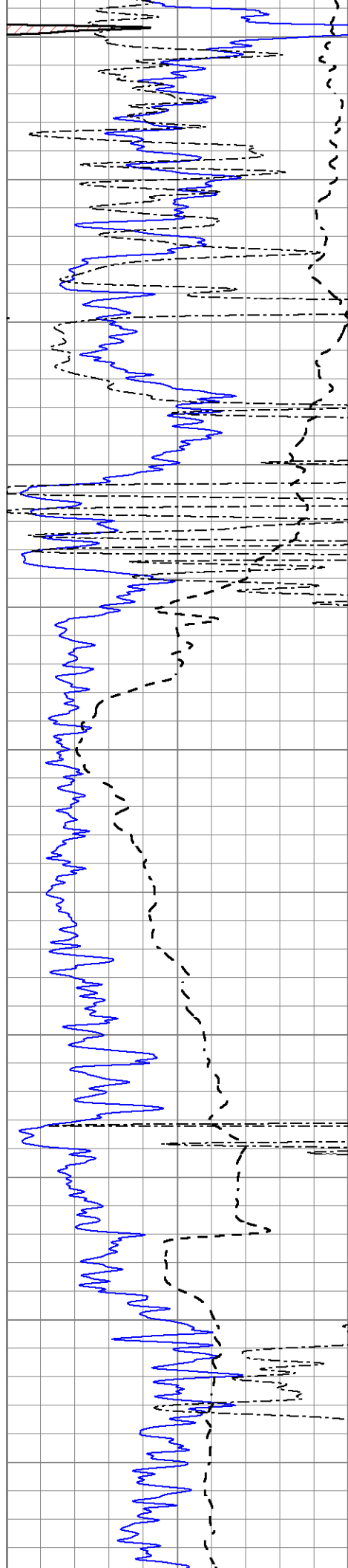
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1400

1450

1500





1550

1600

1650

1700

1750

1800

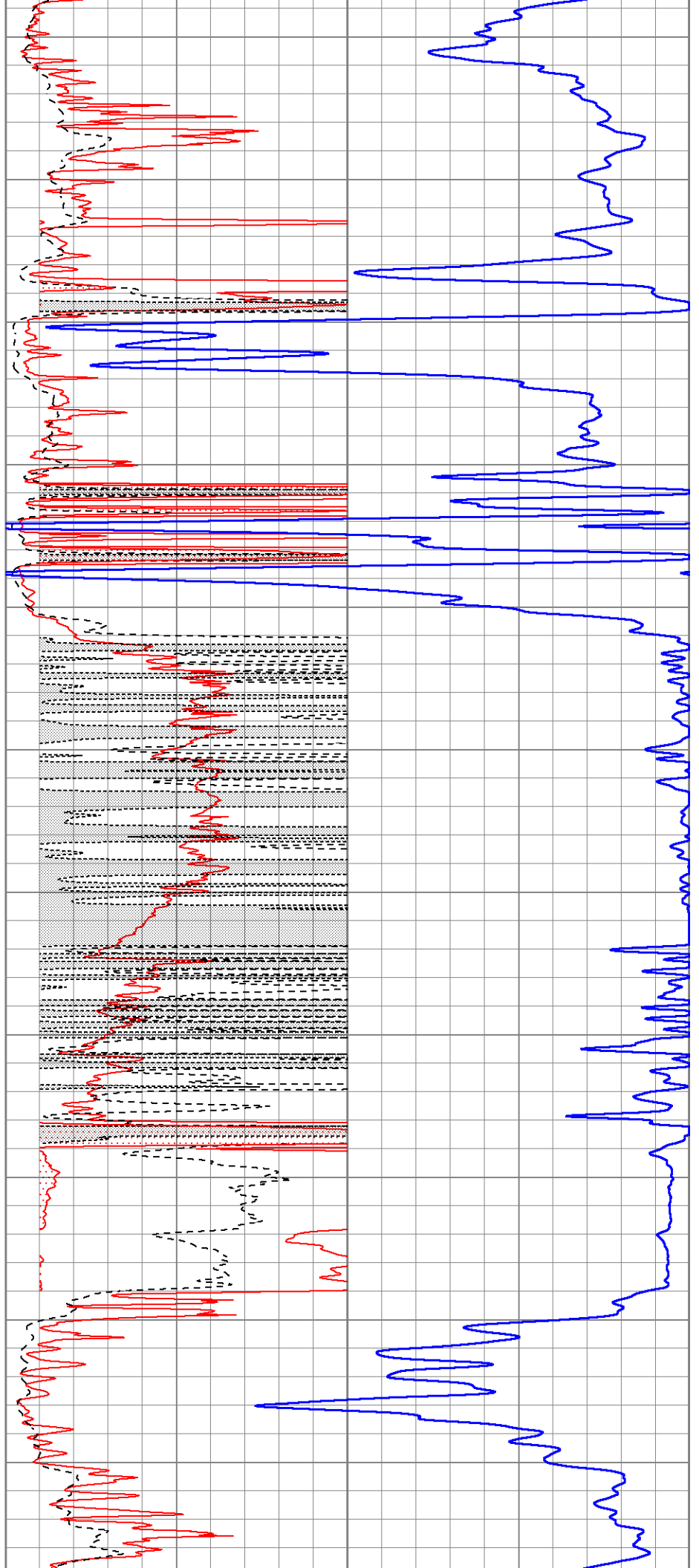
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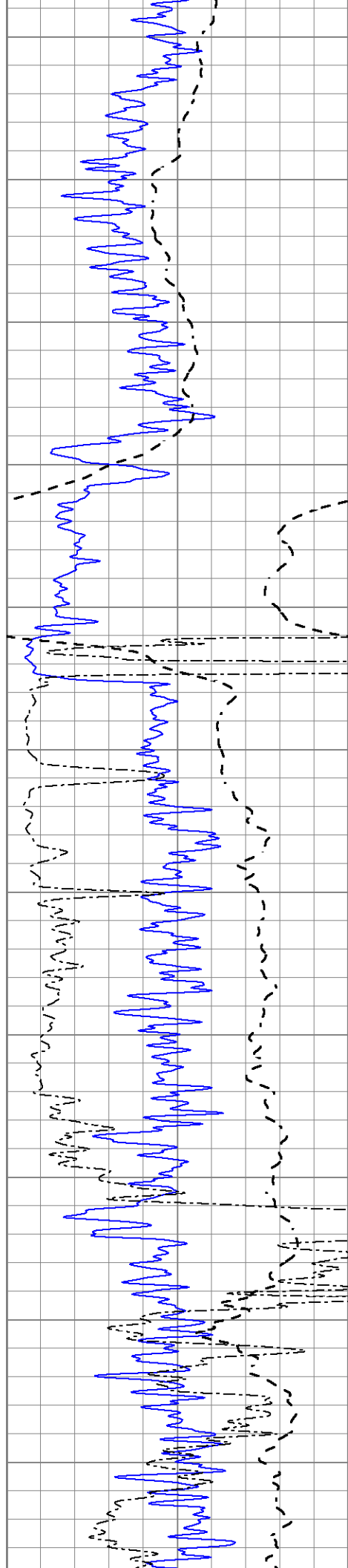
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1950

2000

2050





2100

2150

2200

2250

2300

2350

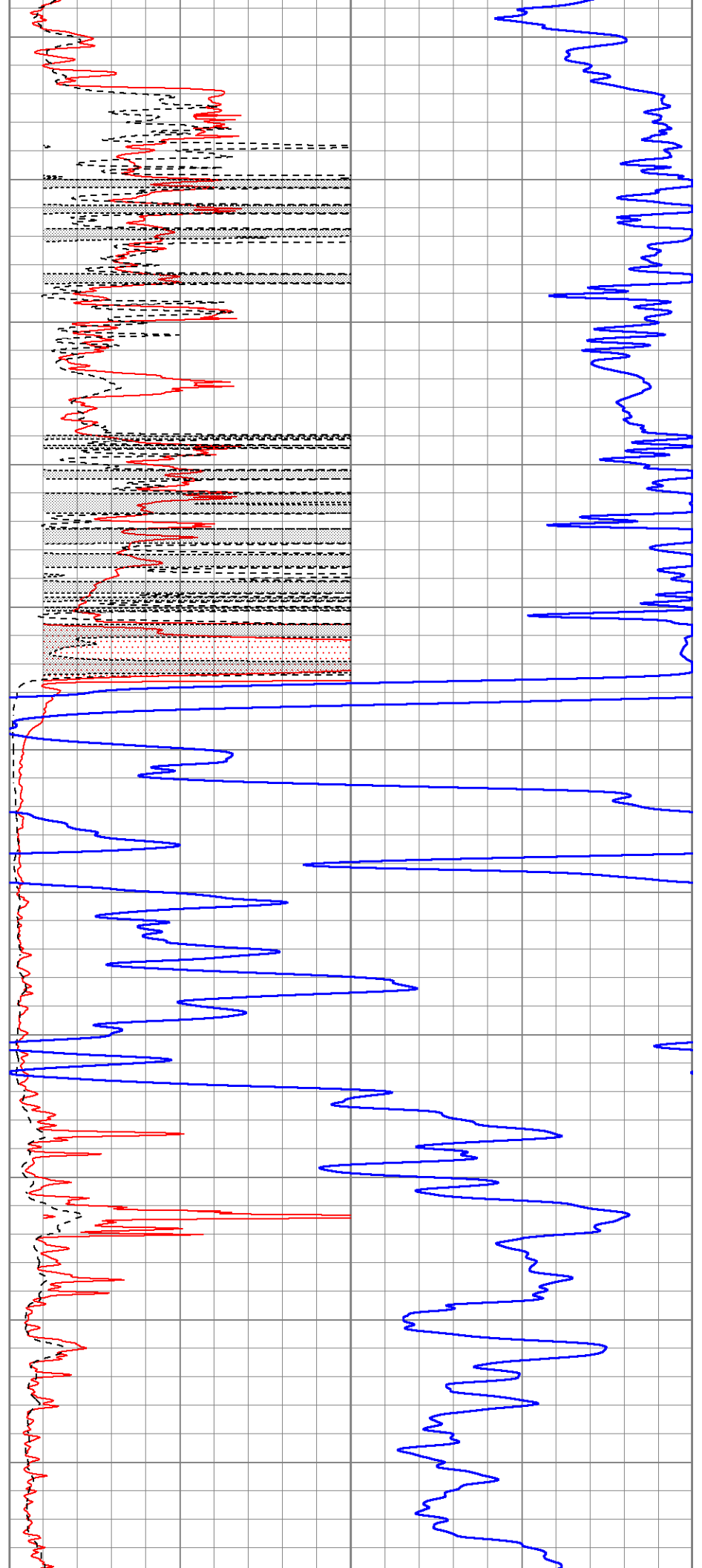
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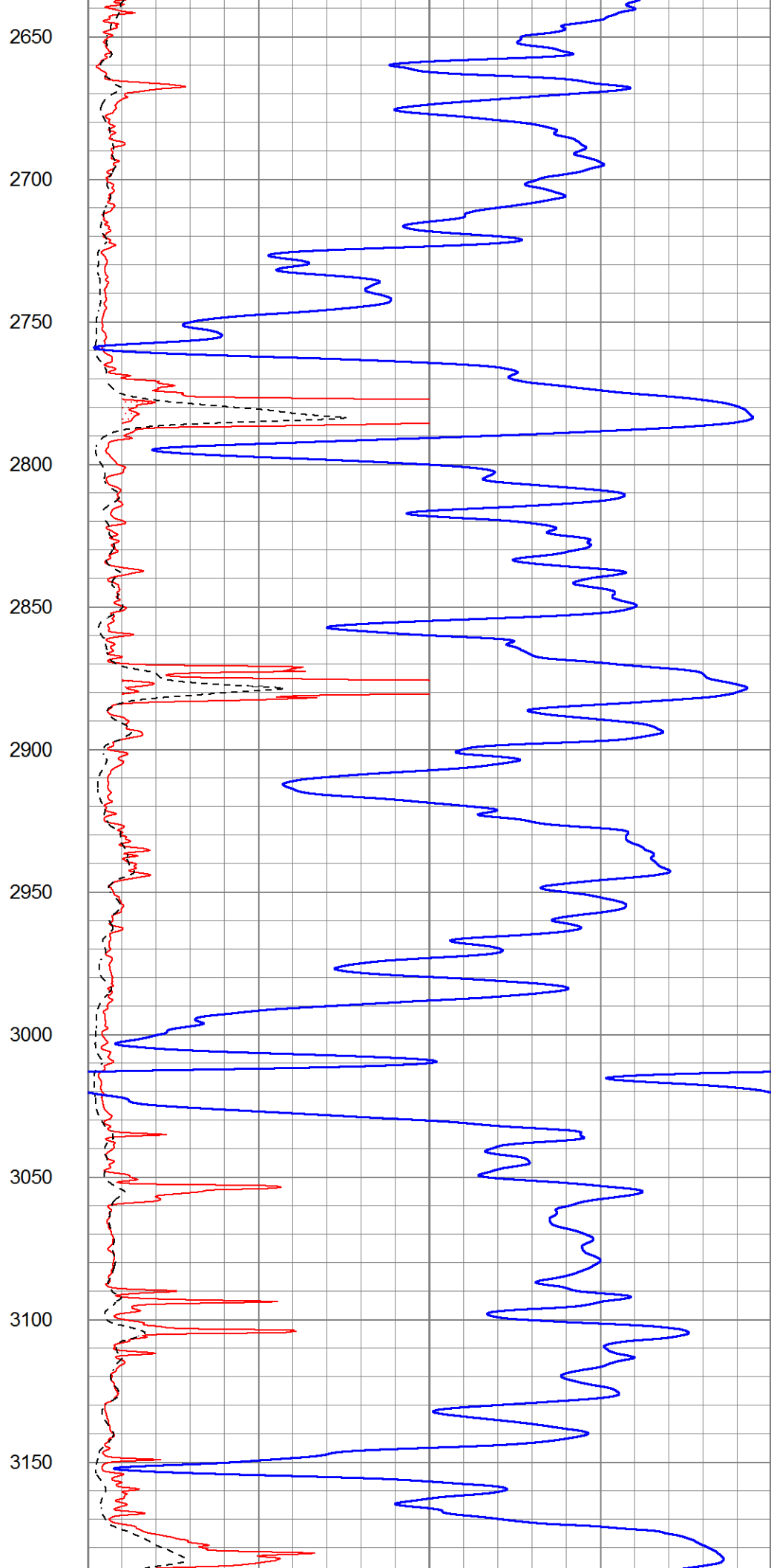
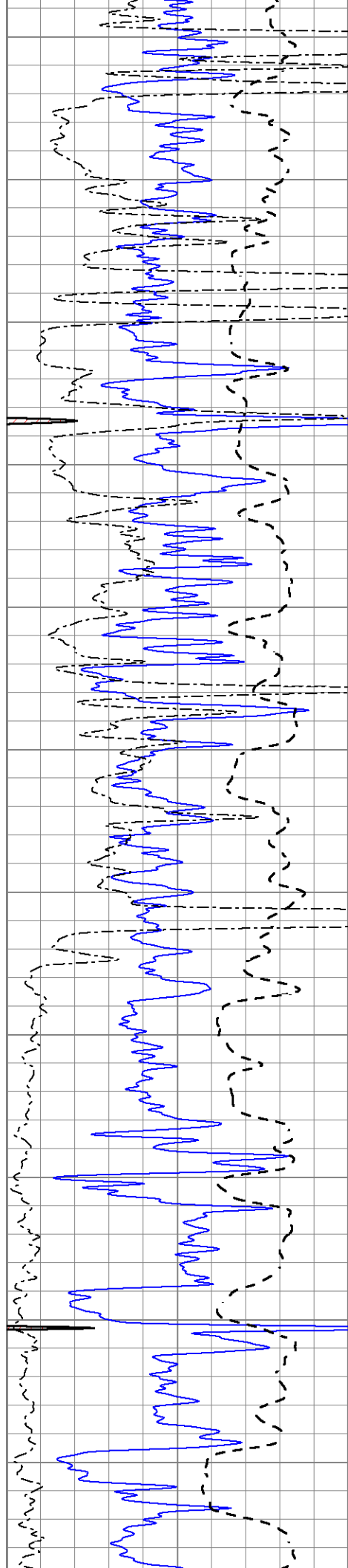
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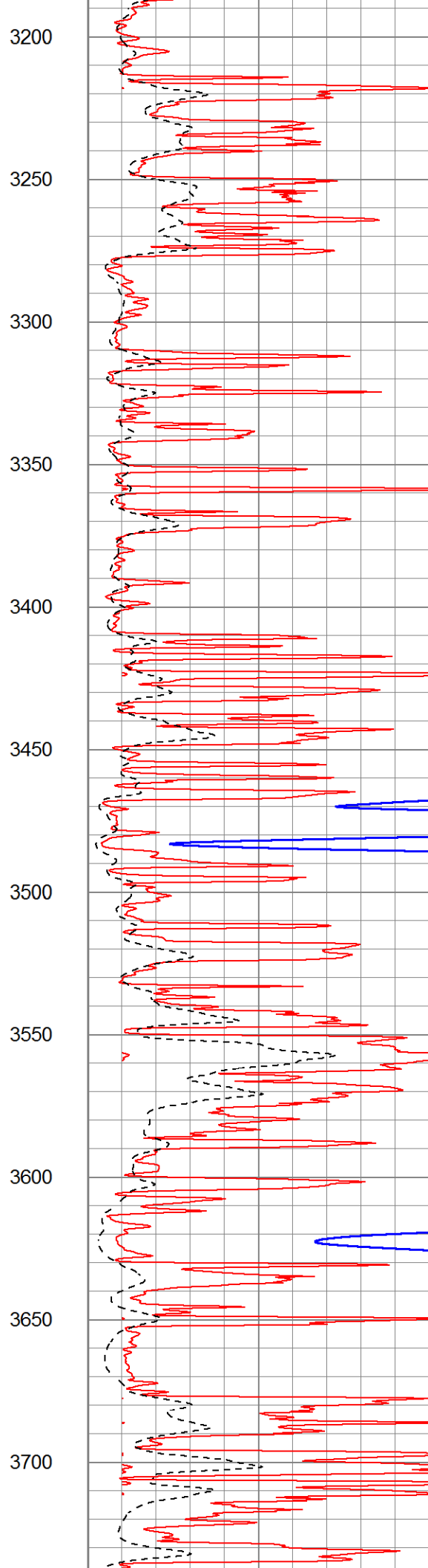
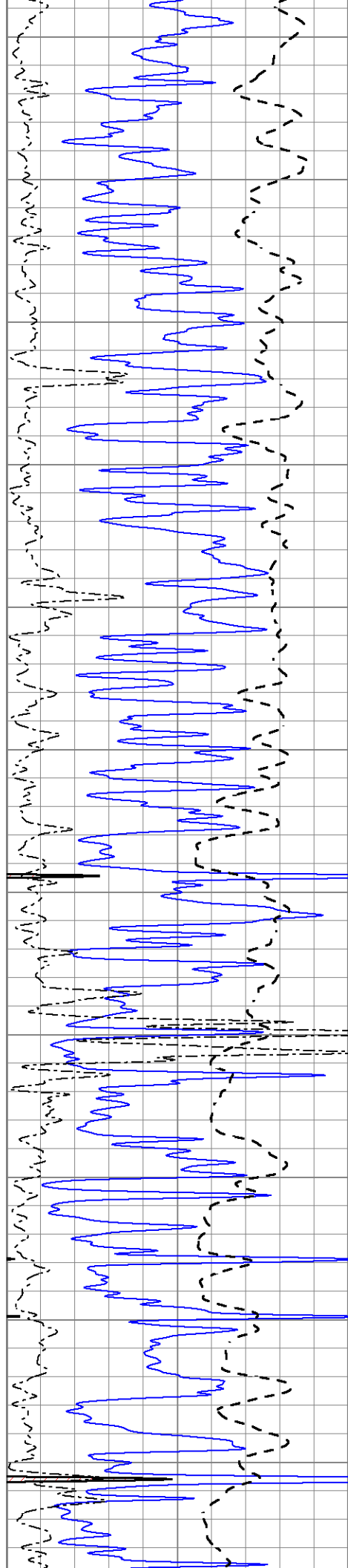
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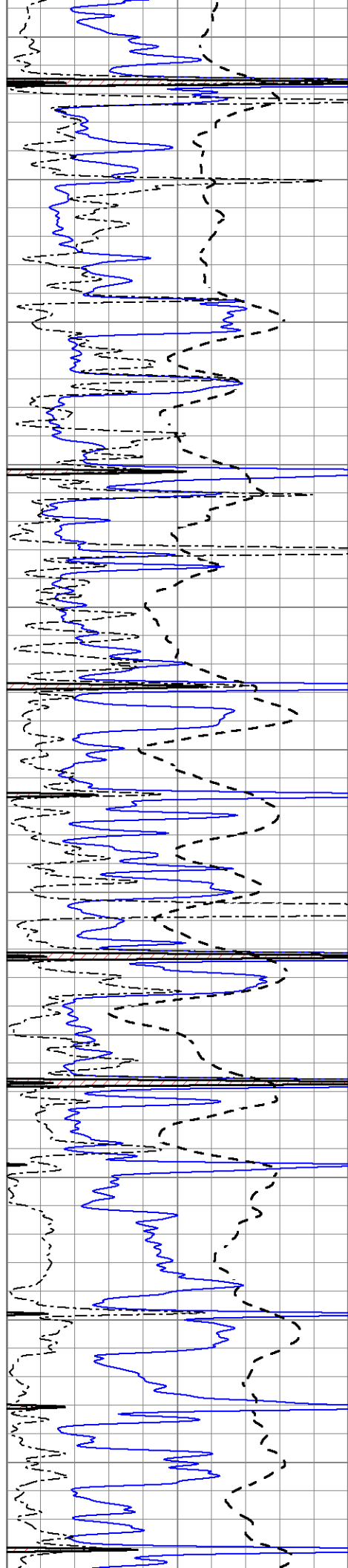
2550

2600









3750

3800

3850

3900

3950

4000

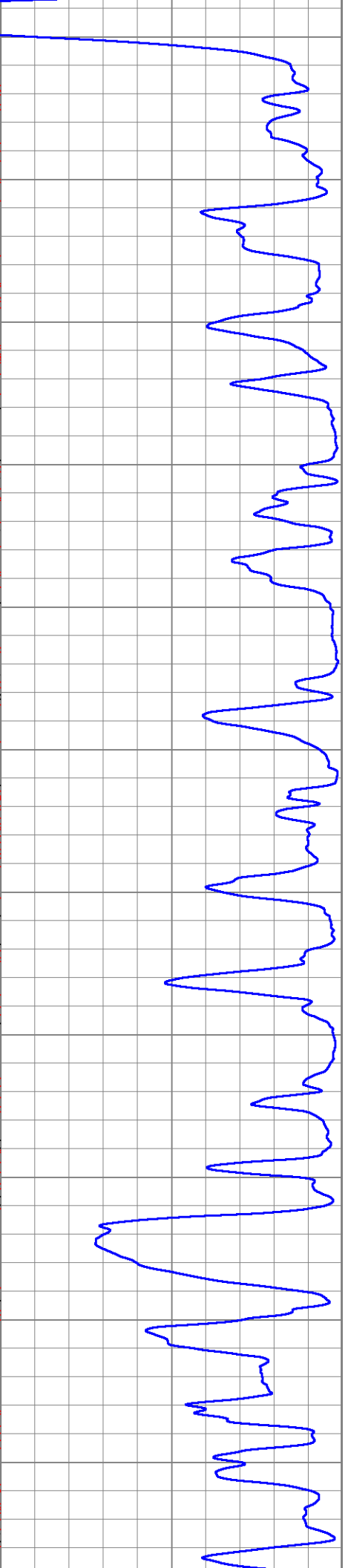
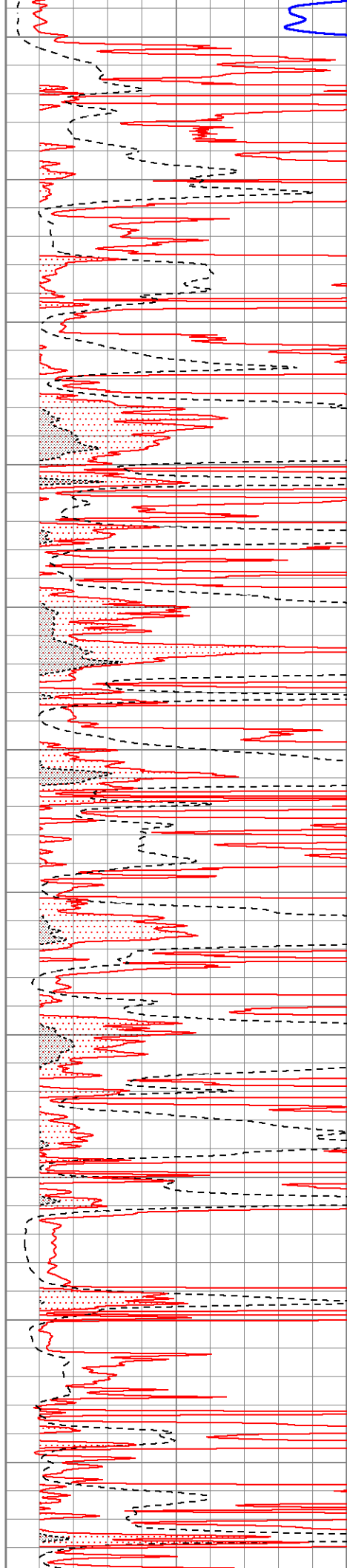
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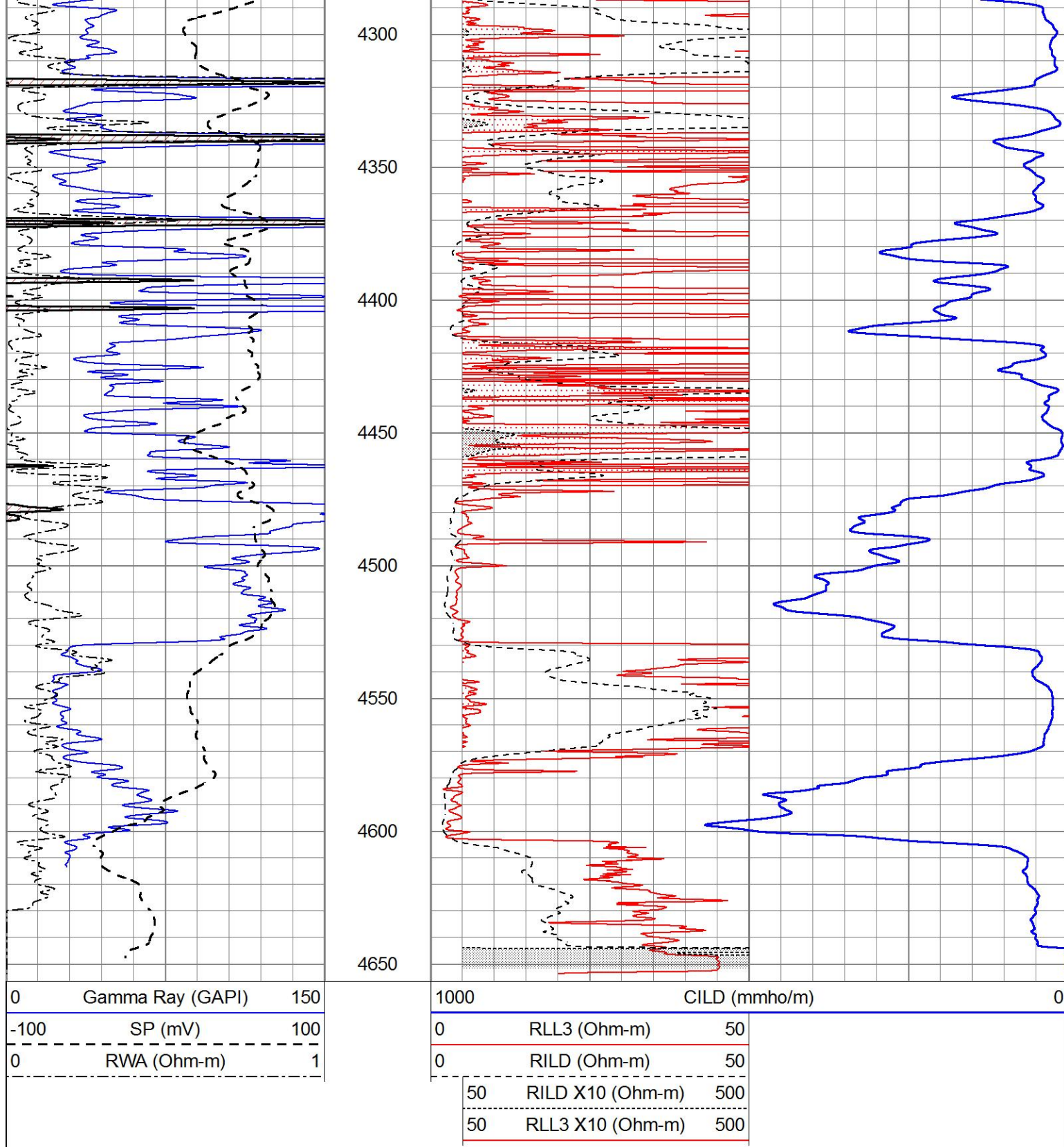
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4150

4200

4250

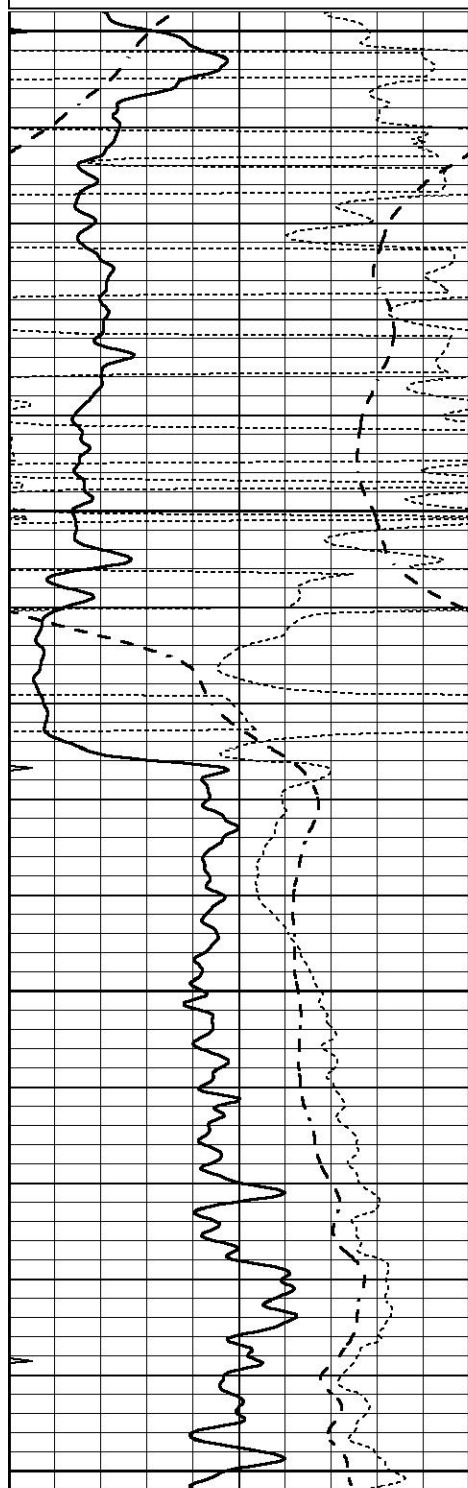




ANHYDRITE

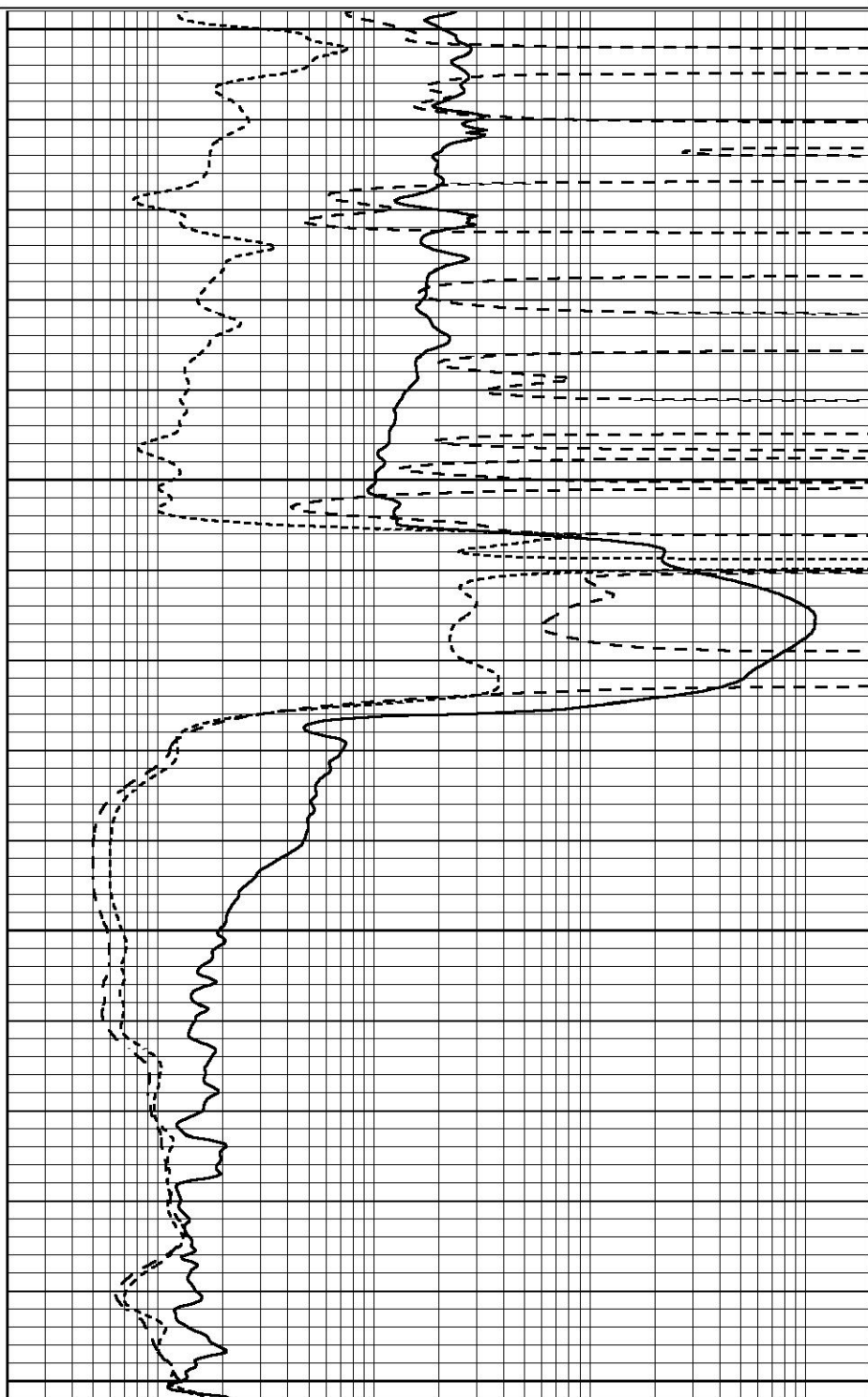
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 Dataset Pathname pass3.6A
 Presentation Format _dil
 Dataset Creation Sun Jun 28 23:14:37 2020
 Charted by Depth in Feet scaled 1:240

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



0	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



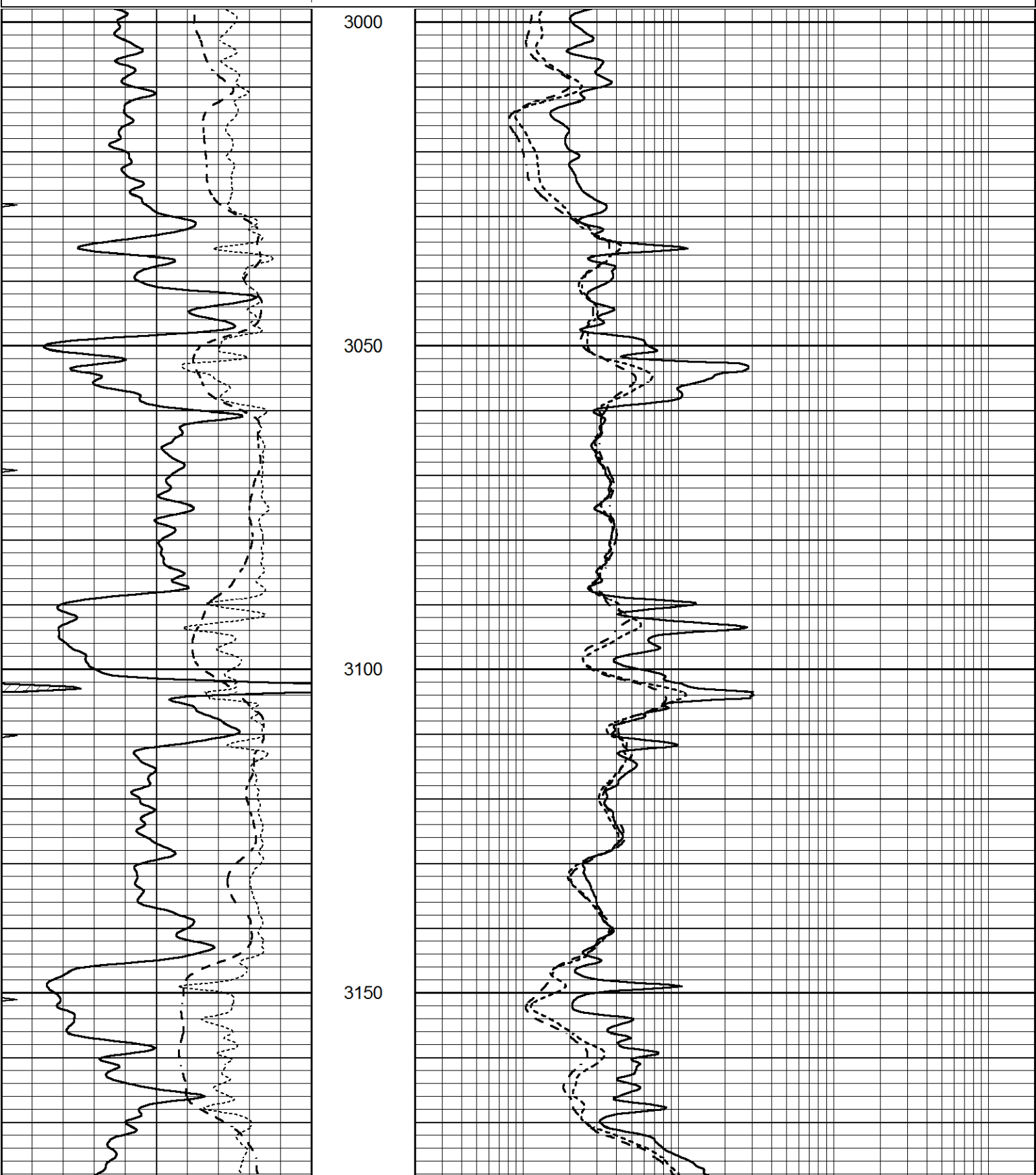
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

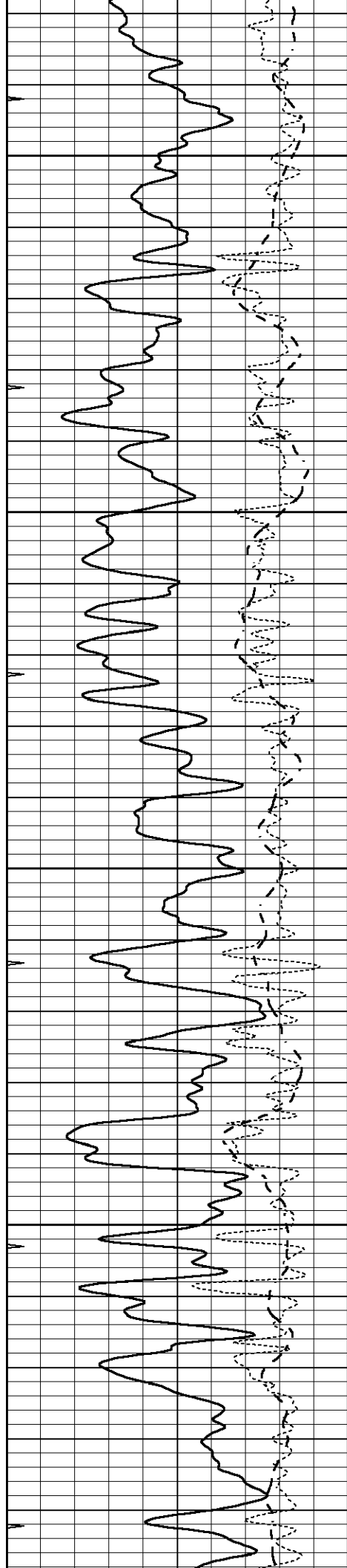


MAIN SECTION

Database File	4548ddn.db
Dataset Pathname	pass3.6
Presentation Format	_dil
Dataset Creation	Sun Jun 28 23:14:24 2020
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			



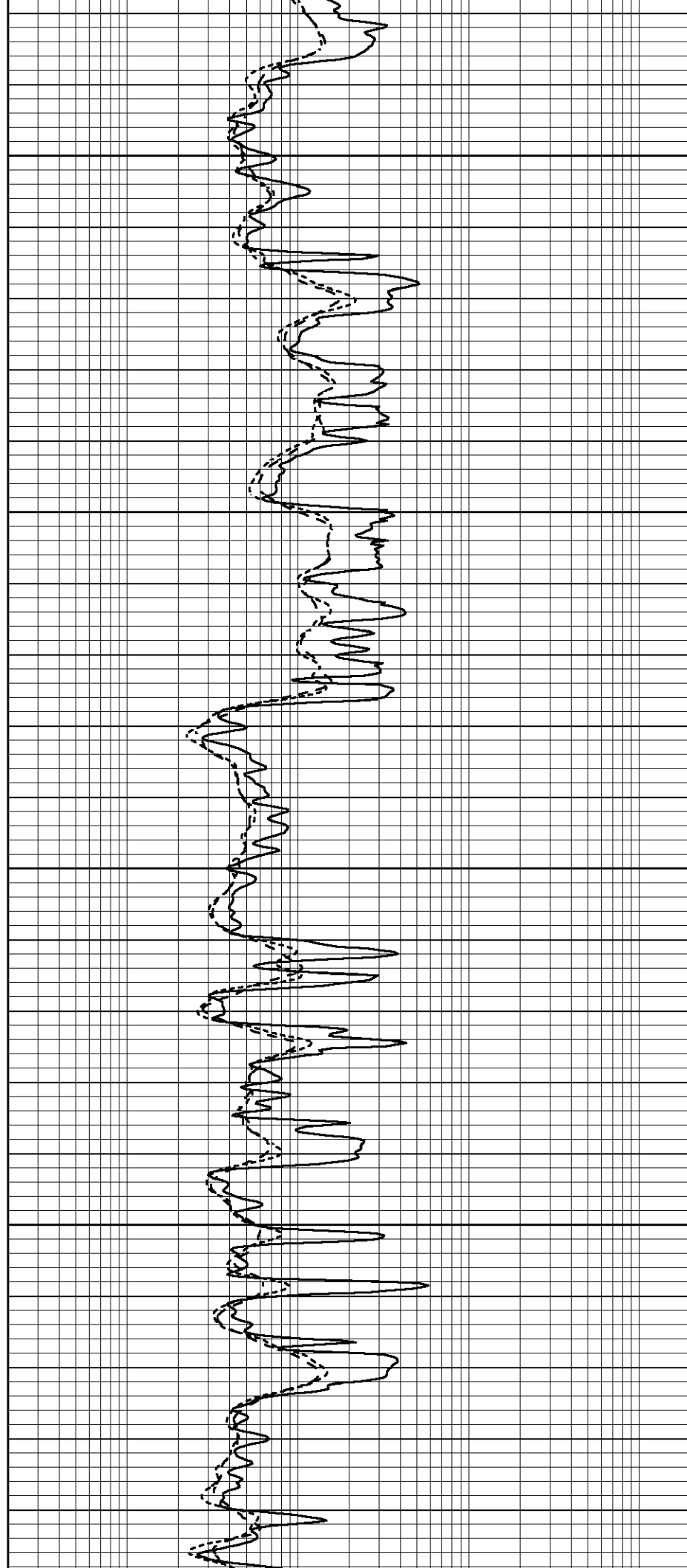


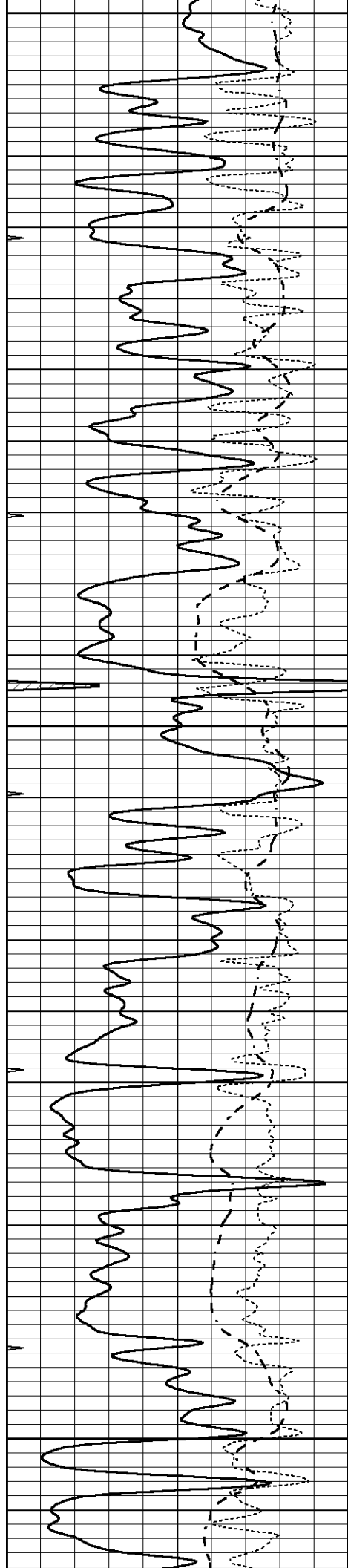
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3250

3300

3350





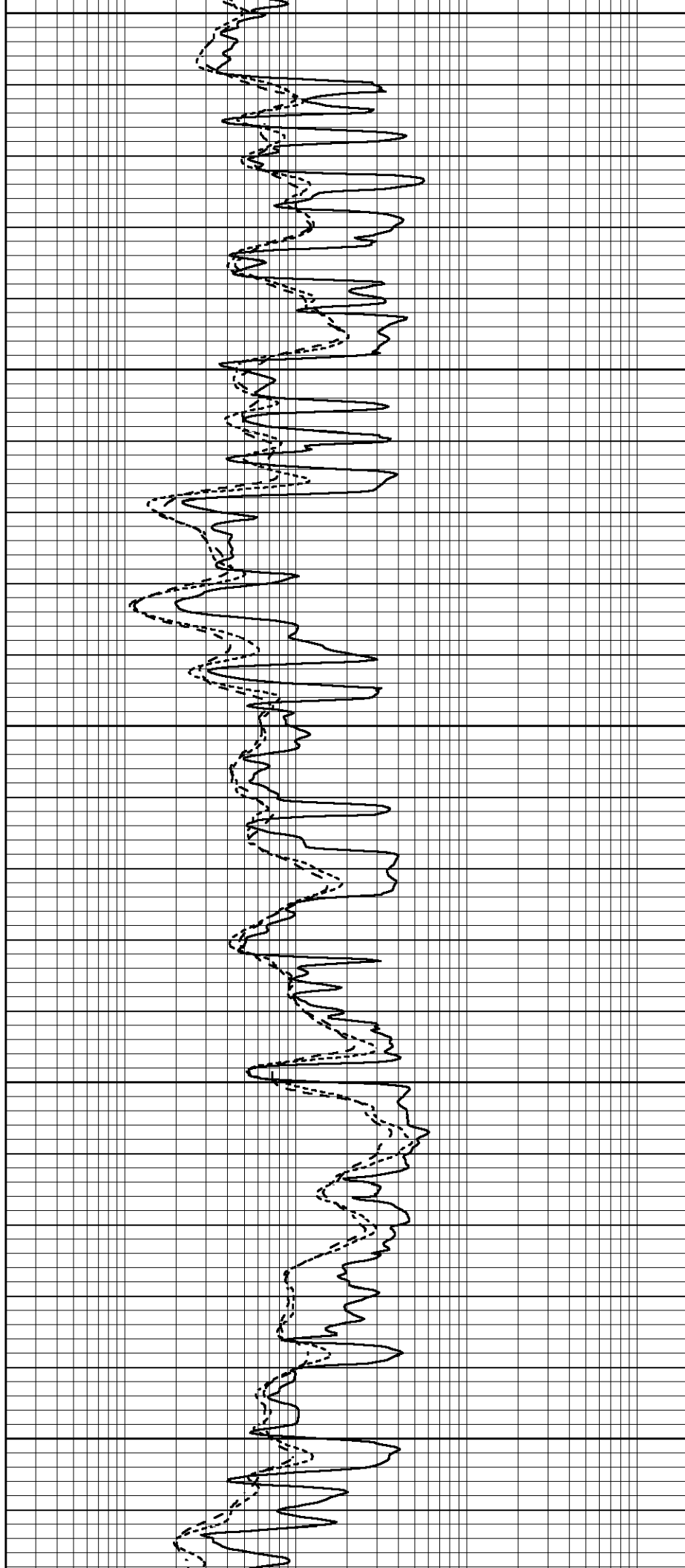
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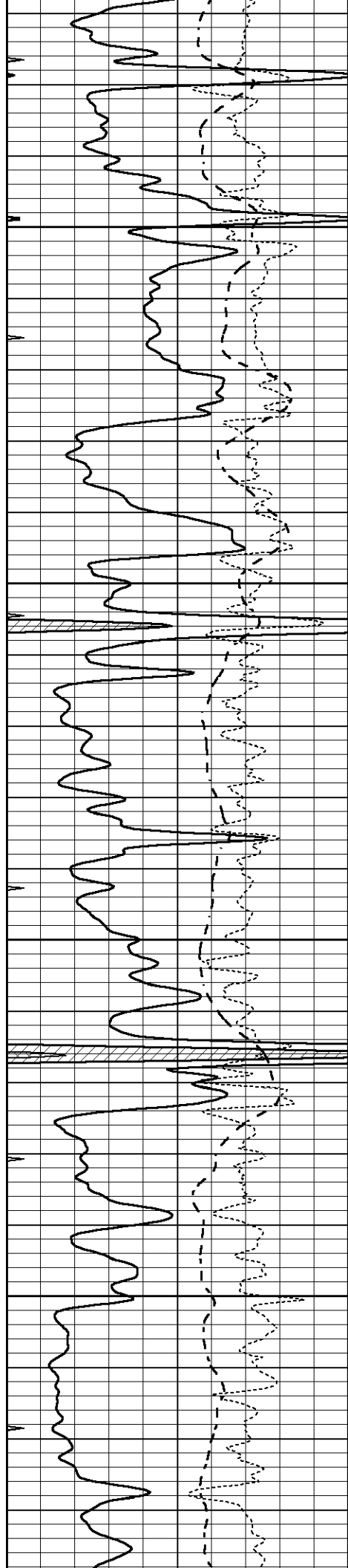
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3500

3550

3600



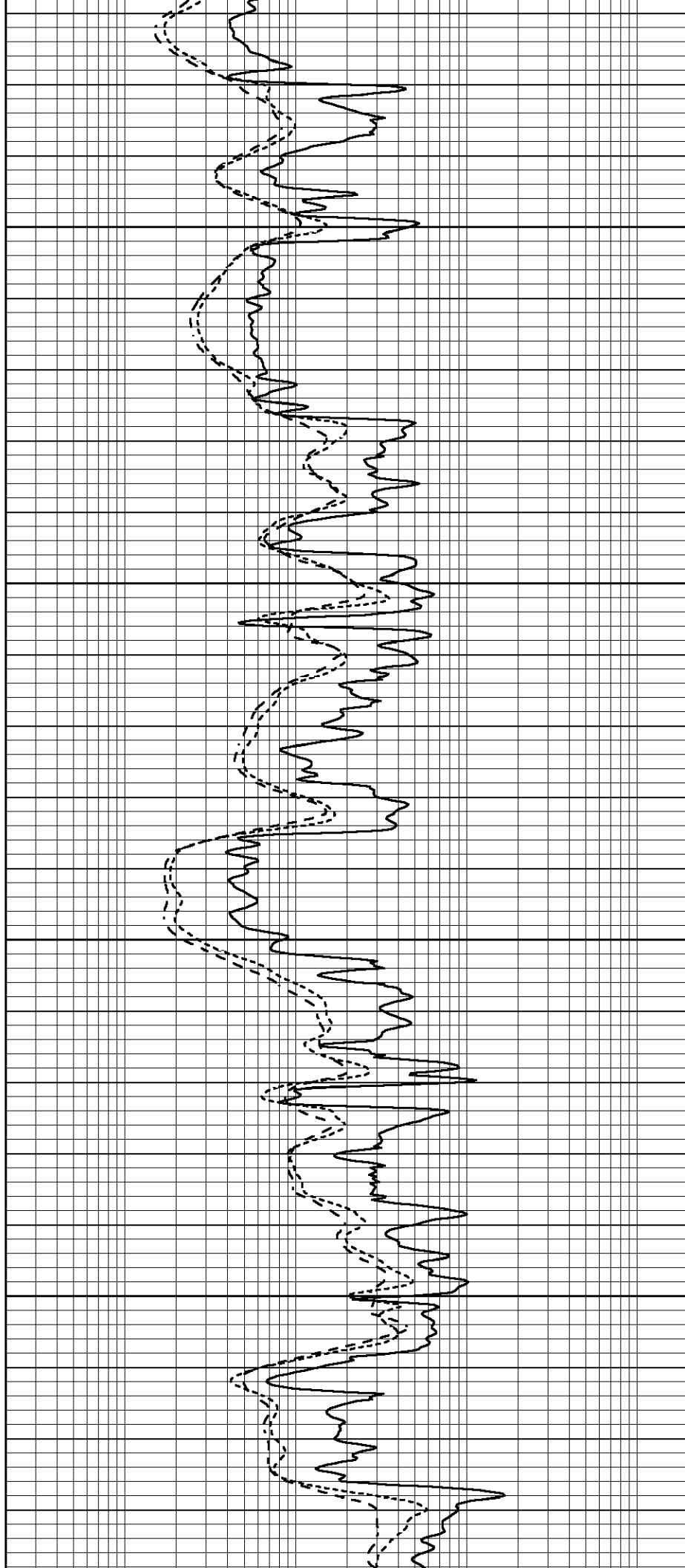


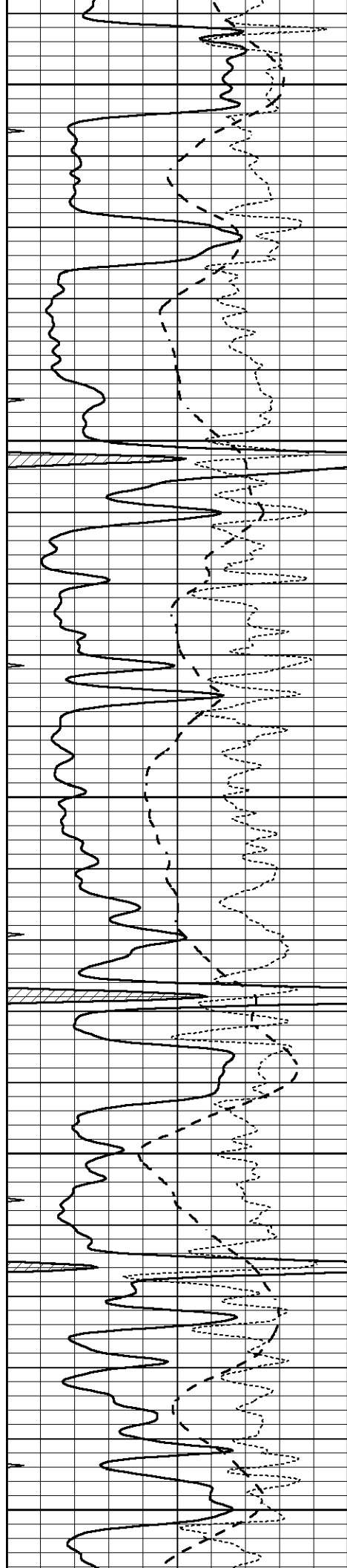
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3700

3750

3800





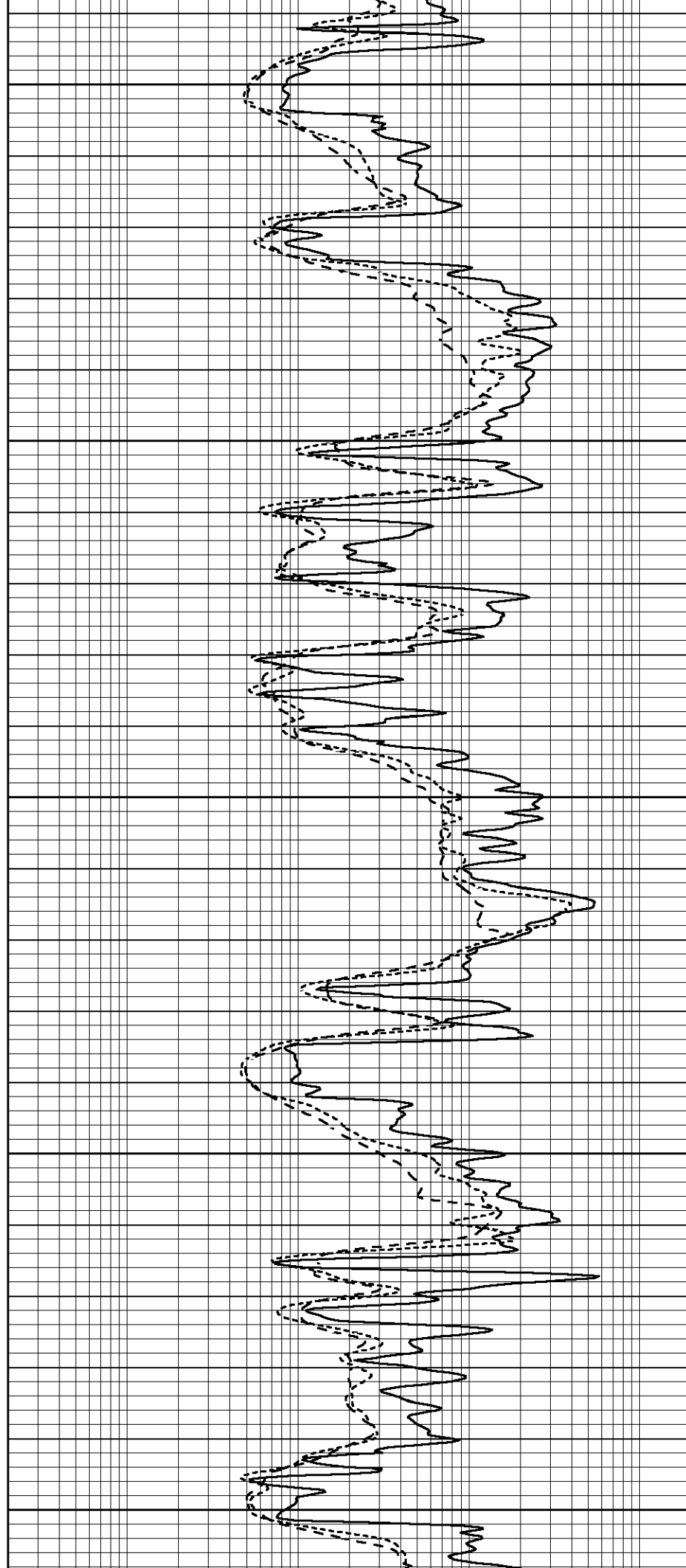
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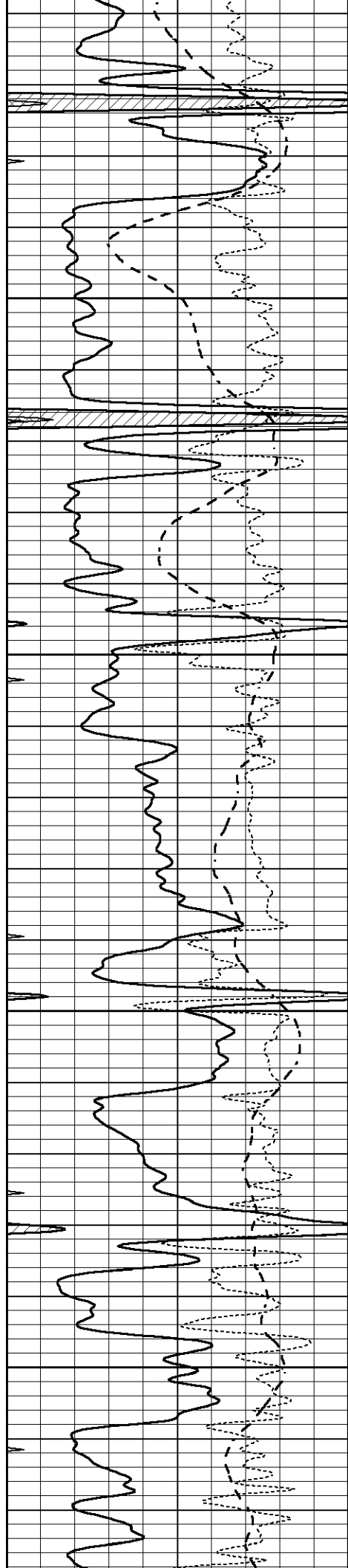
3900

3950

4000

4050



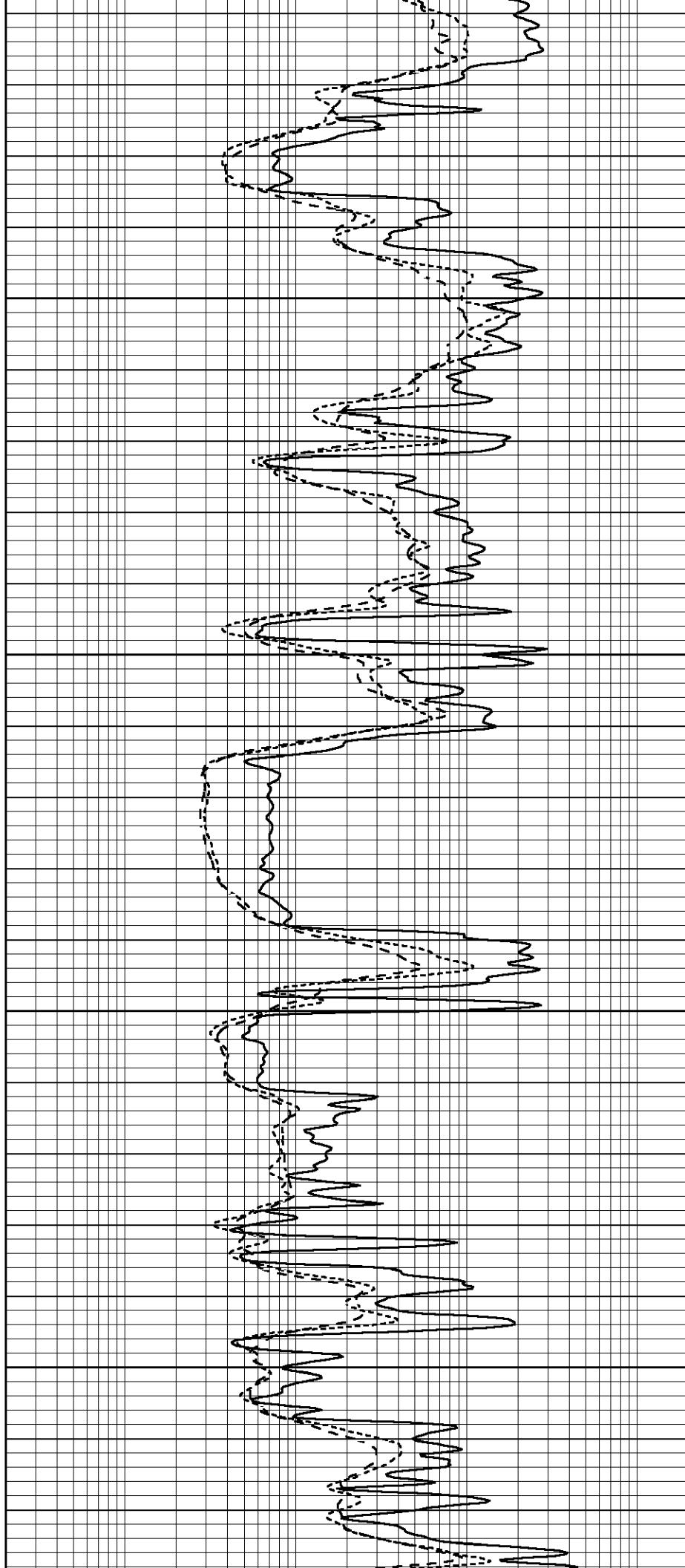


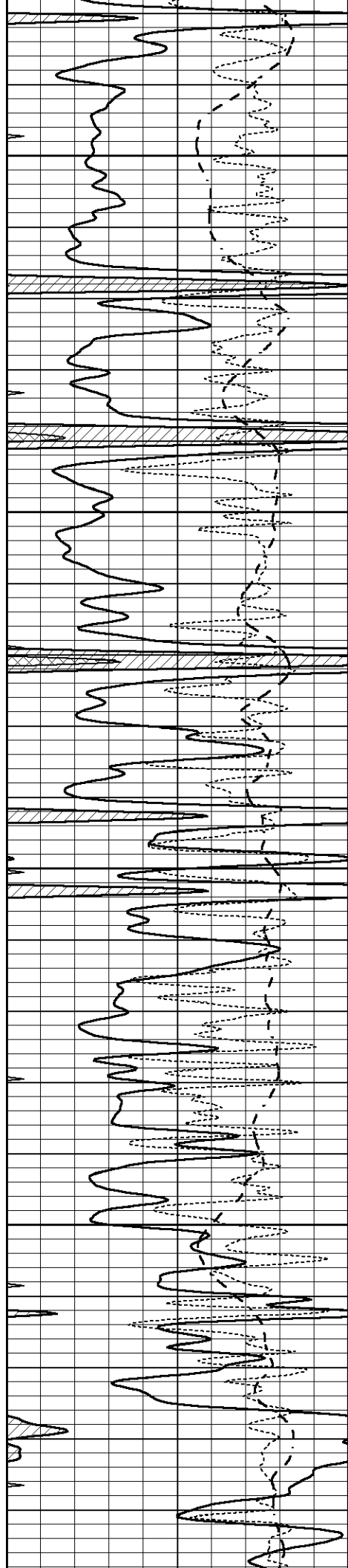
4100

4150

4200

4250



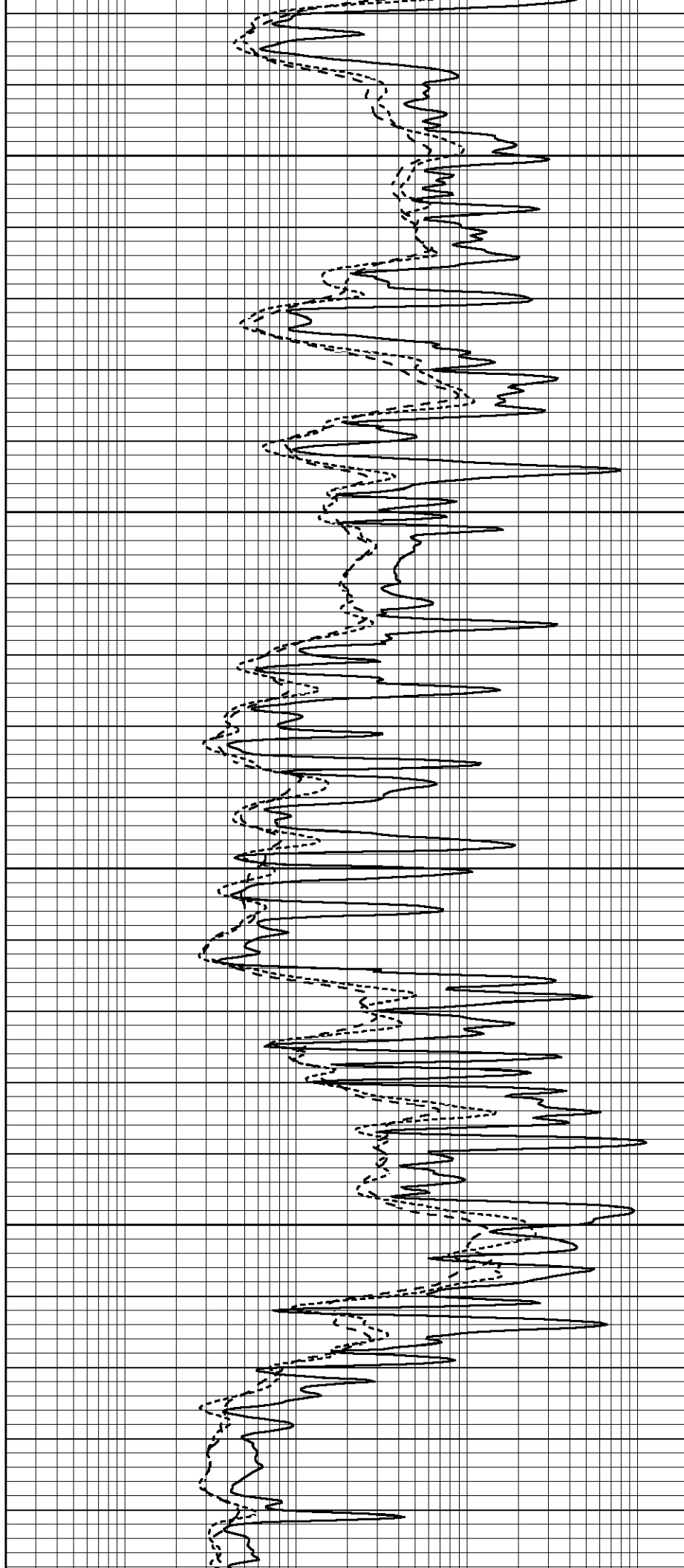


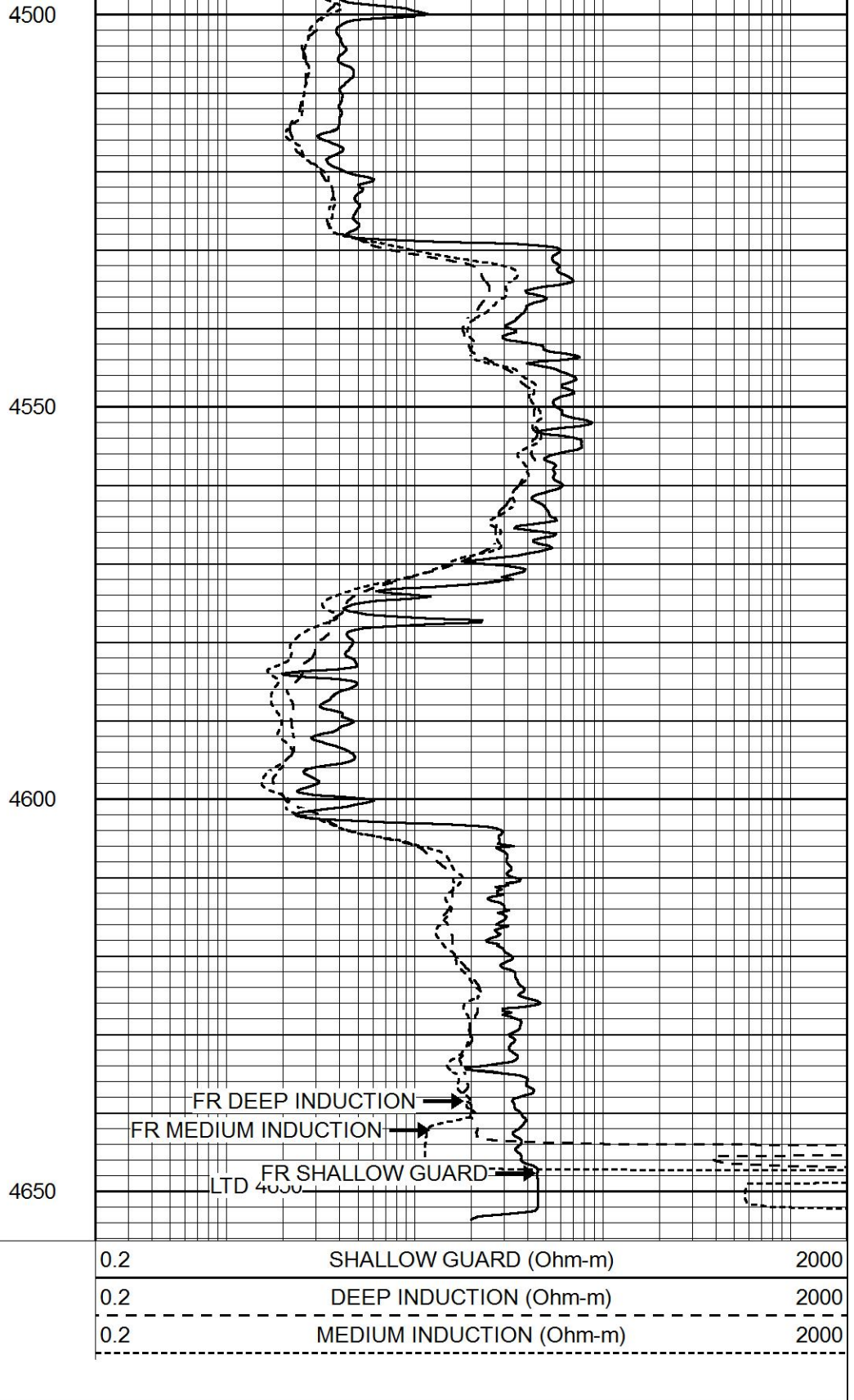
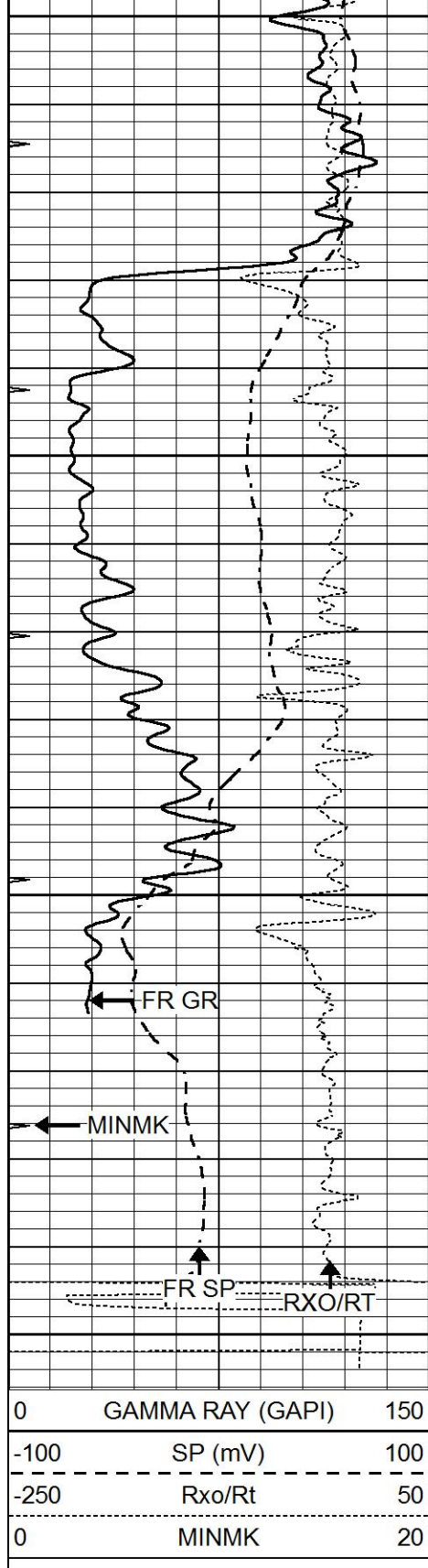
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4350

4400

4450



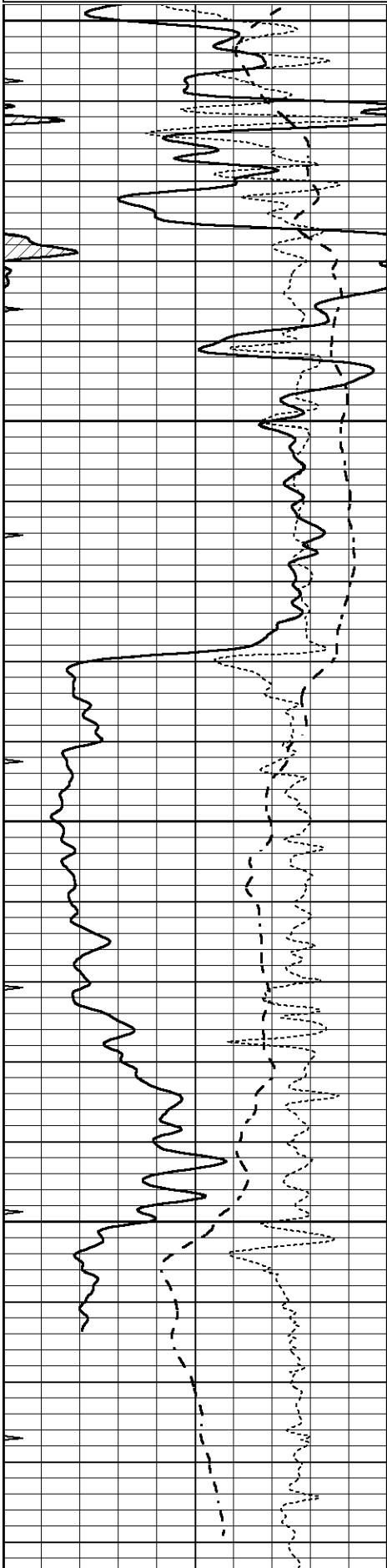


REPEAT SECTION

Database File 4548ddn.db
 Dataset Pathname pass2.2
 Presentation Format _dil
 Dataset Creation Sun Jun 28 22:03:46 2020
 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

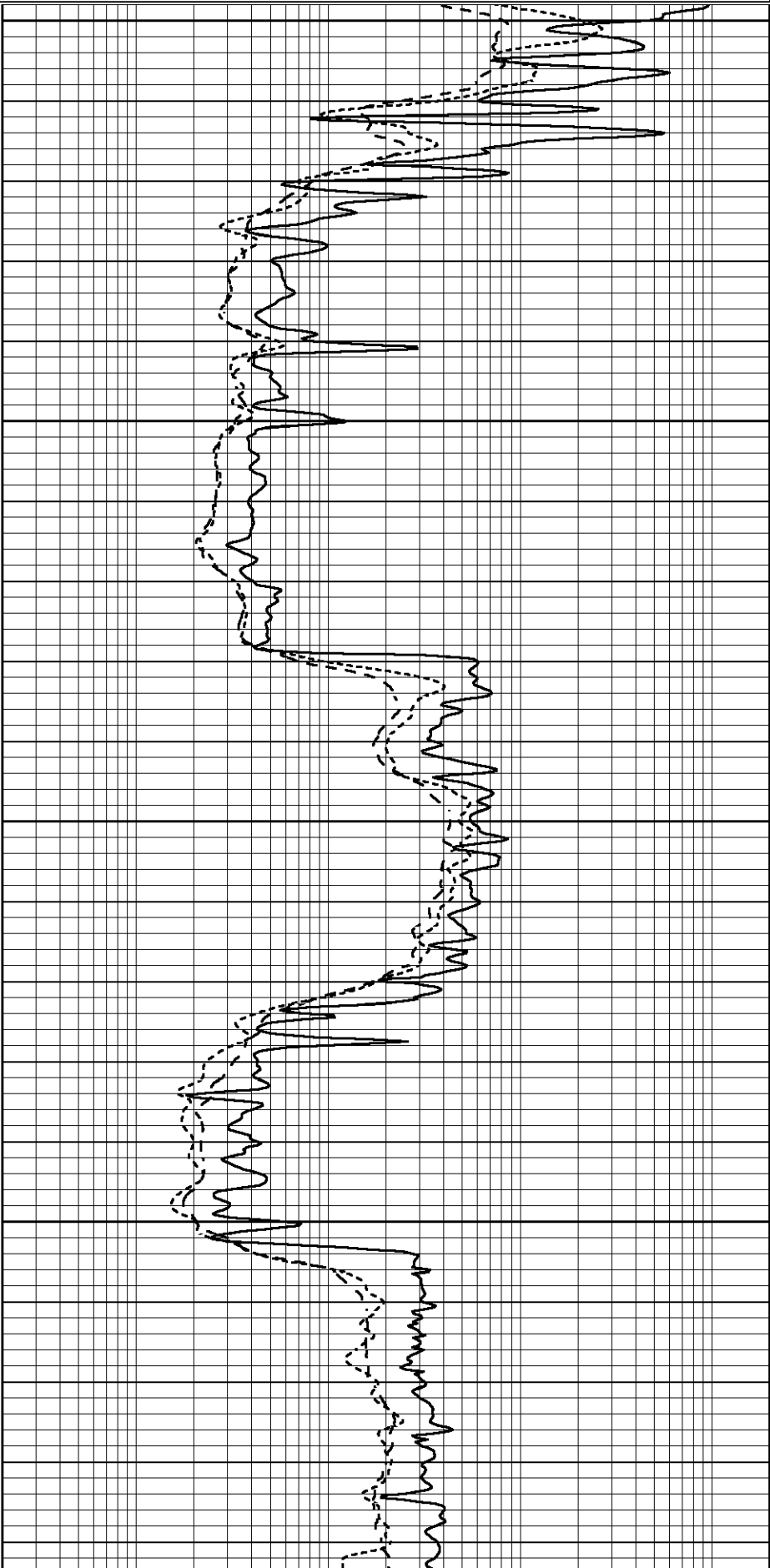


4450

4500

4550

4600



Master Calibration		Performed Mon May 11 10:45:58 2020			
	Background	Magnesium	Aluminum	Aluminum+Fe	
Window 1	1199.7	10039.4	3208.4	2838.9	cps
Window 2	1096.3	8590.5	2806.1	2527.9	cps

Window 3	934.1	5176.2	1855.7	1739.5	cps
Window 4	267.0	271.6	264.8	264.9	cps
Long Space	0.0	7494.2	1709.8	1431.6	cps
Short Space	1.1	1784.3	1183.7	971.1	cps
Rho		1.7100	2.5900	0.0000	g/cc
Pe		2.0000	2.7500	5.7900	
Rib Angle	: 44.5	Rib Slope	: 0.982	Density/Spine Ratio	: 0.574
Spine Angle	: 74.5	Spine Slope	: 3.601	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	

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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:	Wed Jul 03 10:25:53 2019
Calibrator Value:	1.0 GAPI

Background Reading:

0.0

cps

Calibrator Reading:

1.0

cps

Sensitivity:

0.3000

GAPI/cps