



**SUPERIOR
Hays,
Kansas**

**DUAL
INDUCTION
LOG**

Company MAI OIL OPERATIONS
Well FROST #1
Field SMOLAN
County SALINE State KANSAS

Company MAI OIL OPERATIONS
Well FROST #1
Field SMOLAN
County SALINE
State KANSAS

Location: API #: 15-169-20331-0000
1500' FSL & 800' FWL
SW - SE - NW - SW
SEC 25 TWP 15S RGE 4W
GROUND LEVEL Elevation 1301
Log Measured From KELLY BUSHING 8' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
CDL/CNL
MEL/SON
Elevation
K.B. 1309
D.F. 1307
G.L. 1301

Date	12-2-11
Run Number	ONE
Depth Driller	3580
Depth Logger	3581
Bottom Logged Interval	3579
Top Log Interval	0
Casing Driller	403
Casing Logger	402
Bit Size	7.875
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.4 / 53
pH / Fluid Loss	10.5 / 7.8
Source of Sample	FLOWLINE
Rim @ Meas. Temp	1.10 @ 71F
Rmf @ Meas. Temp	0.83 @ 71F
Rmc @ Meas. Temp	1.32 @ 71F
Source of Rmf / Rmc	MEASURED
Rim @ BHT	70 @ 112F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	
Maximum Recorded Temperature	112F
Equipment Number	860
Location	HAYS, KS.
Recorded By	JEFF GRONEWEG
Witnessed By	JIM MUSGROVE

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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.

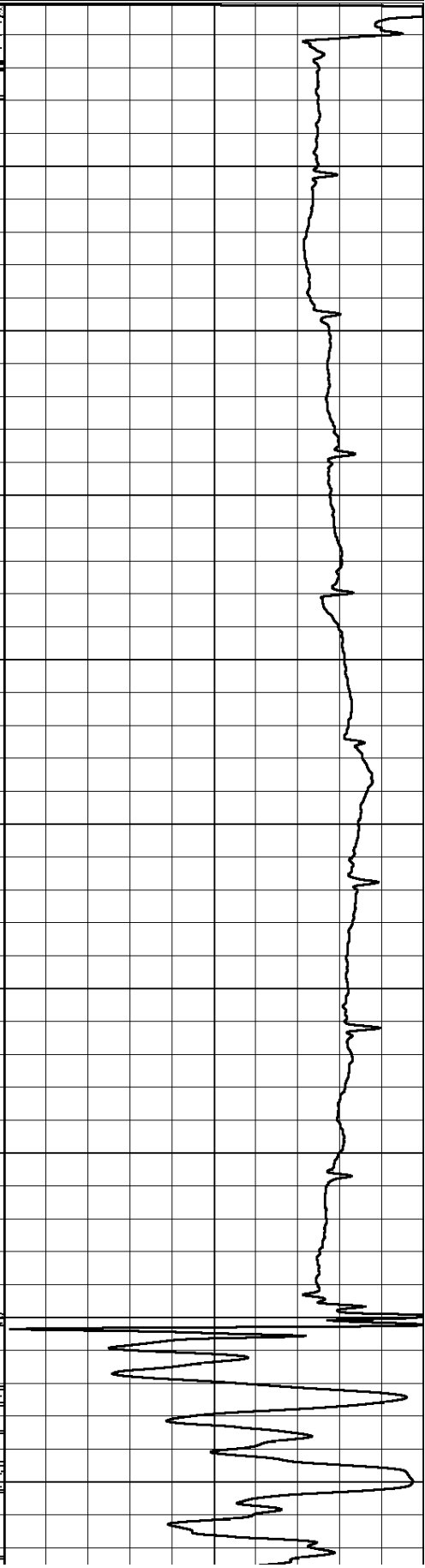
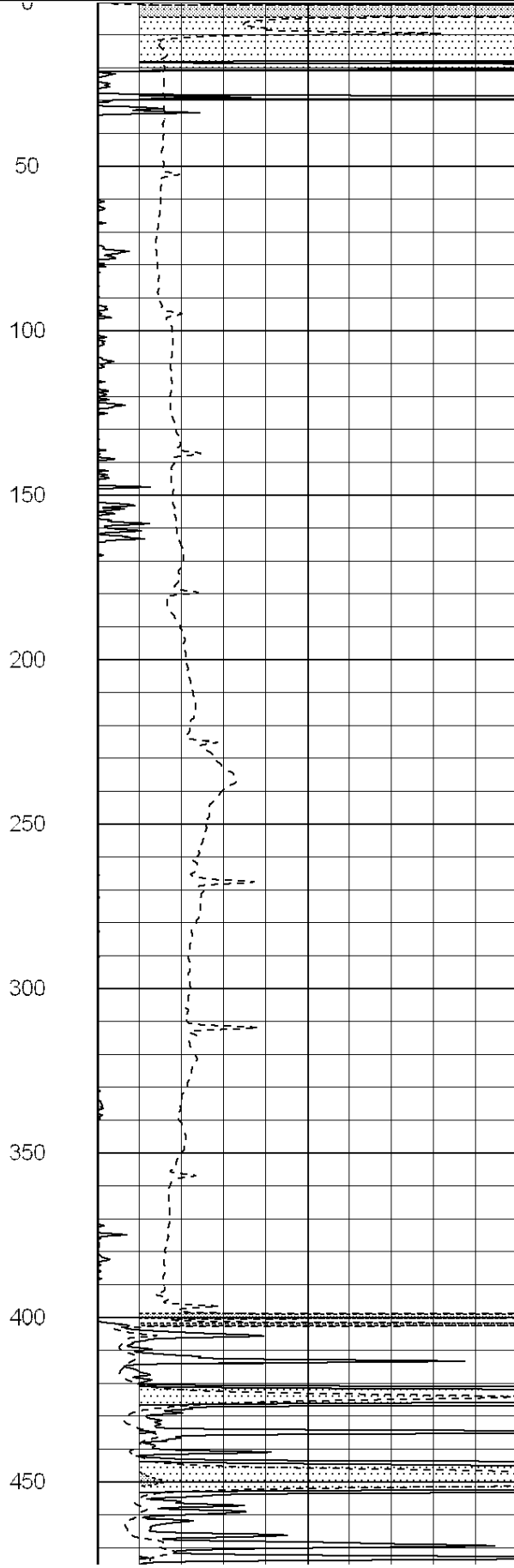
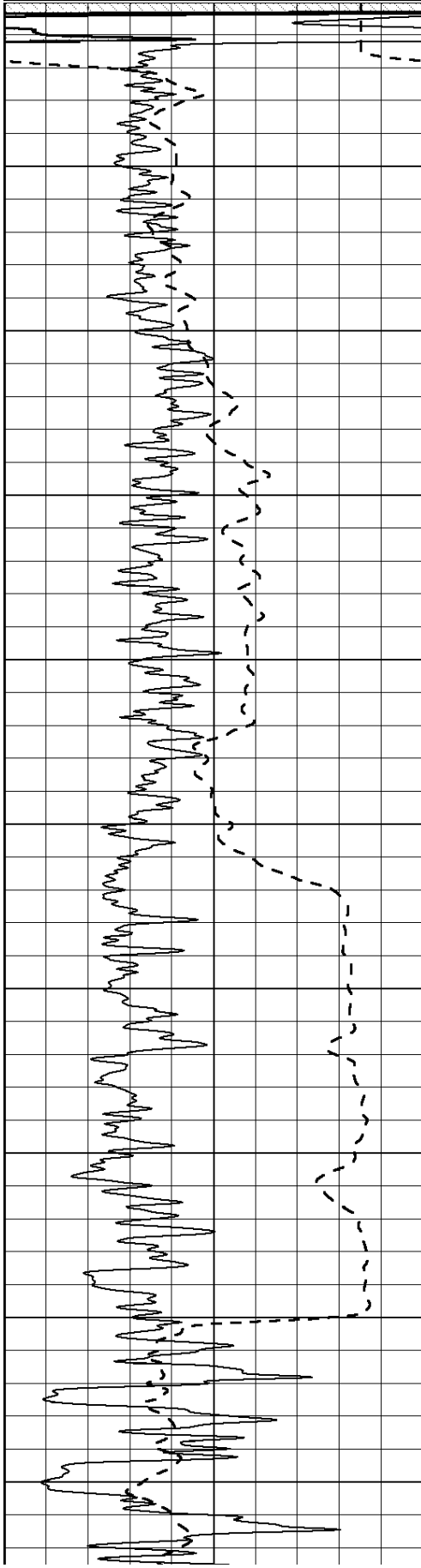
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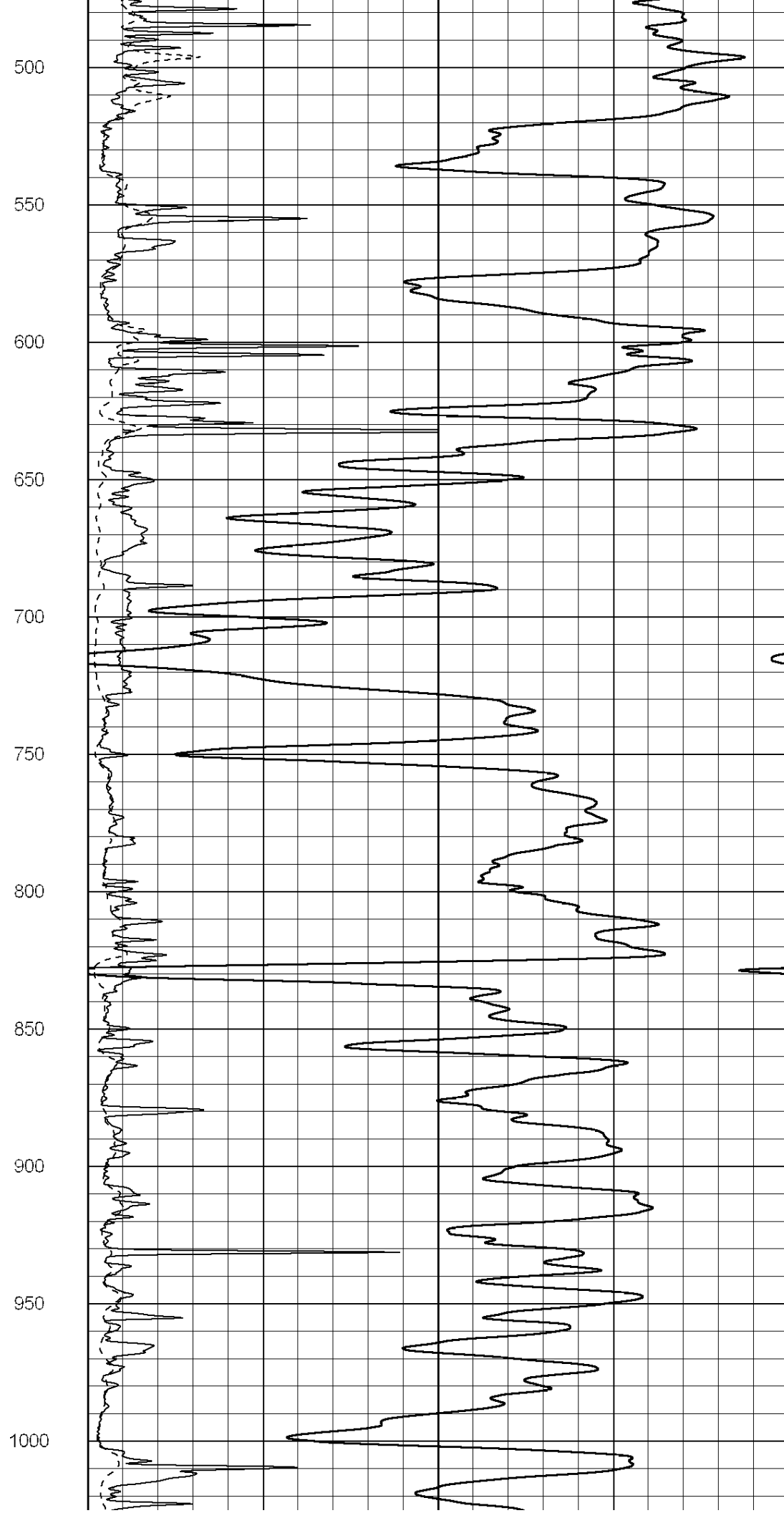
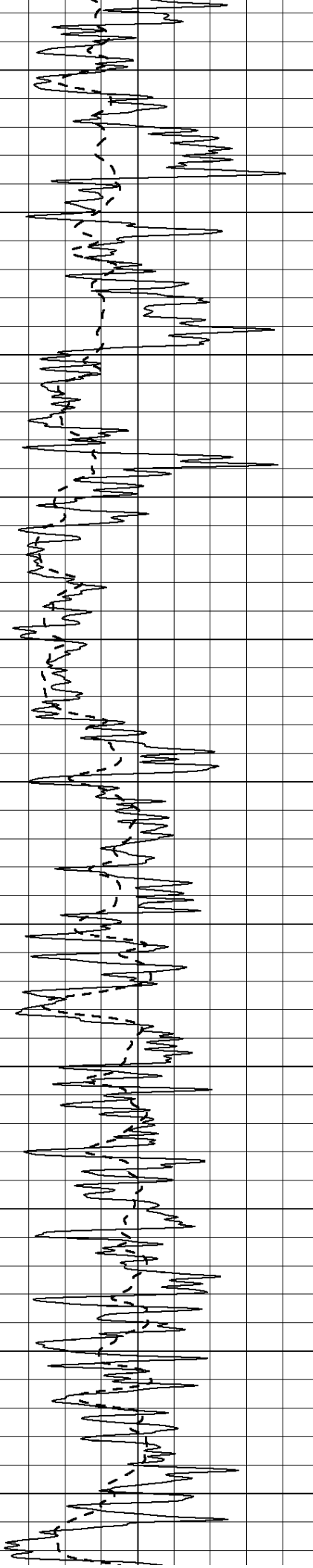
SUPERIOR WELL SERVICES
 785-628-6395
THANK YOU FOR YOUR BUSINESS
 DIRECTIONS: SALINA, KS - SOUTH TO SMOLAN RD (EXIT 86) - 4 MILE WEST TO BURMA RD
 1 MILE SOUTH TO MCREYNOLDS RD - 3/4 MILE SOUTH ON MUIR RD
 EAST INTO

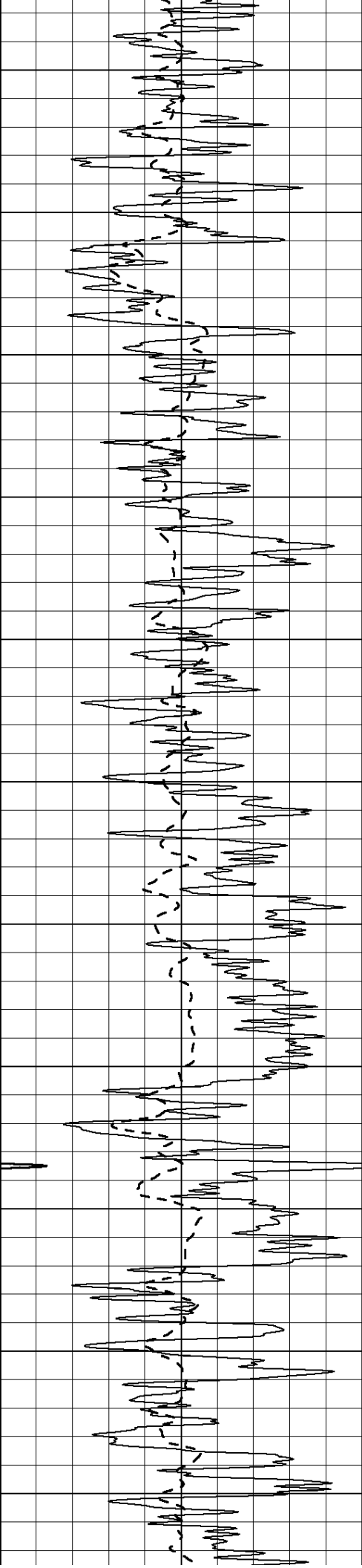
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-100	SP (mV)	100

0	RLL3 (Ohm-m)	50
0	Deep Induction (Ohm-m)	50

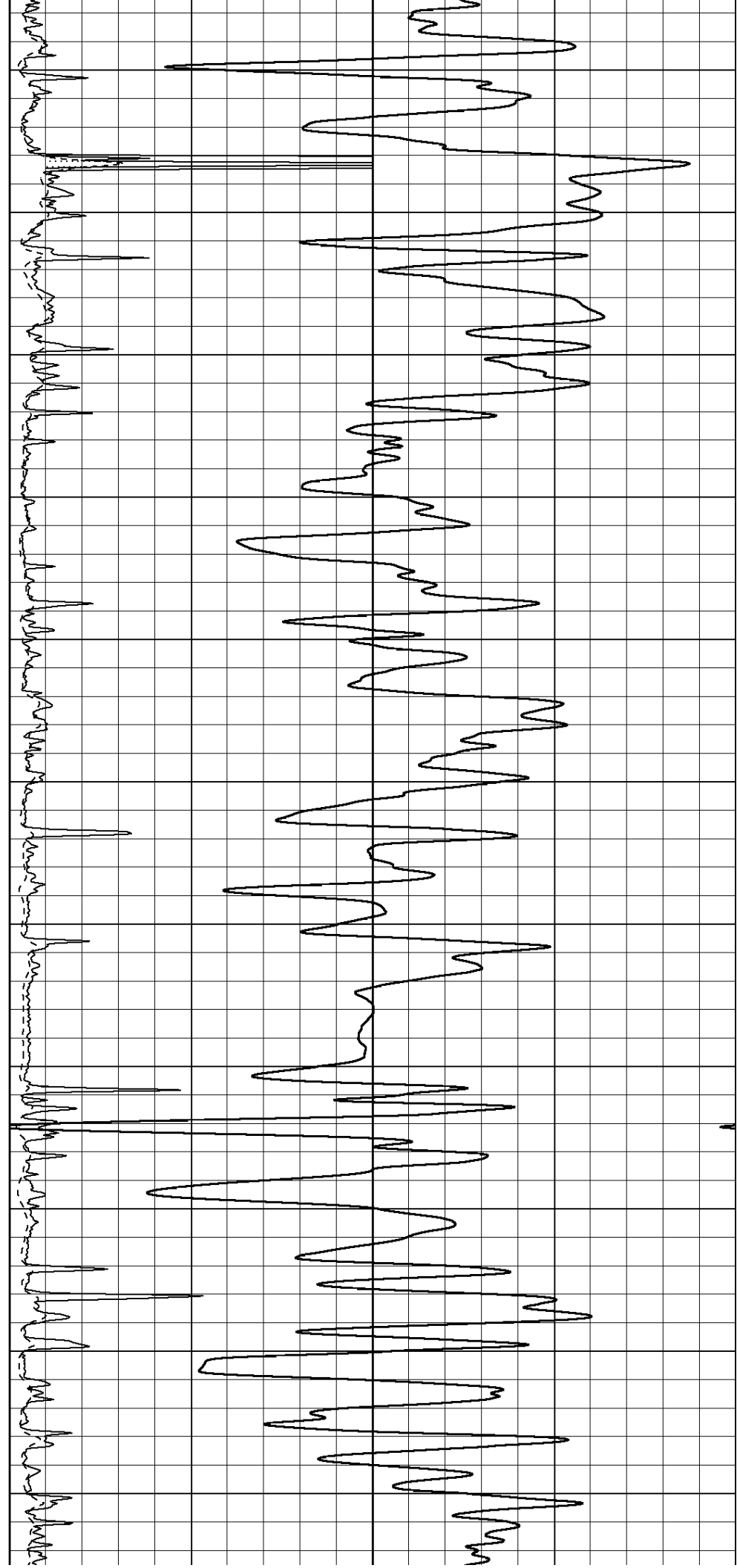
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50	RLL3 X10 (Ohm-m)	500

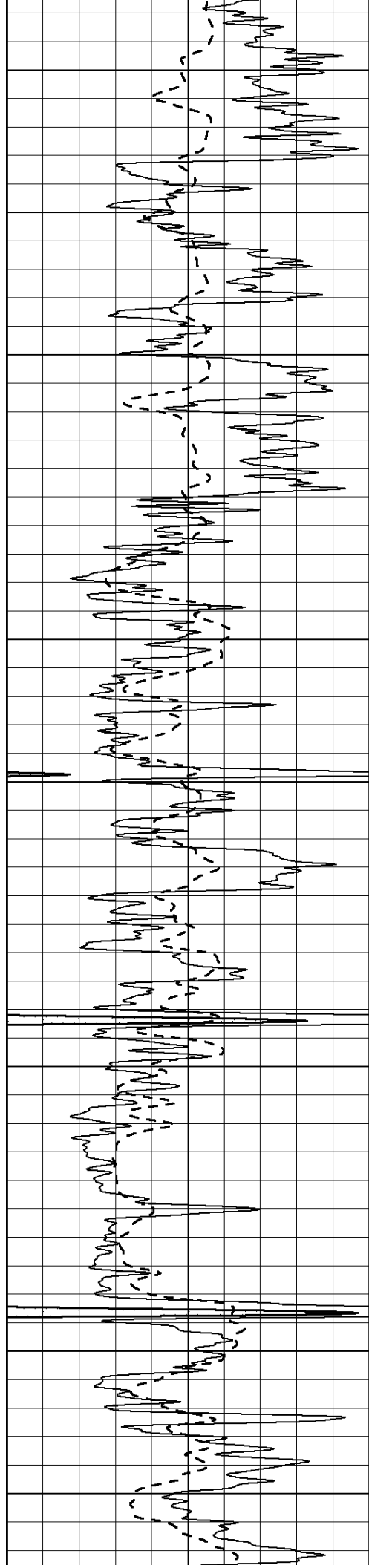




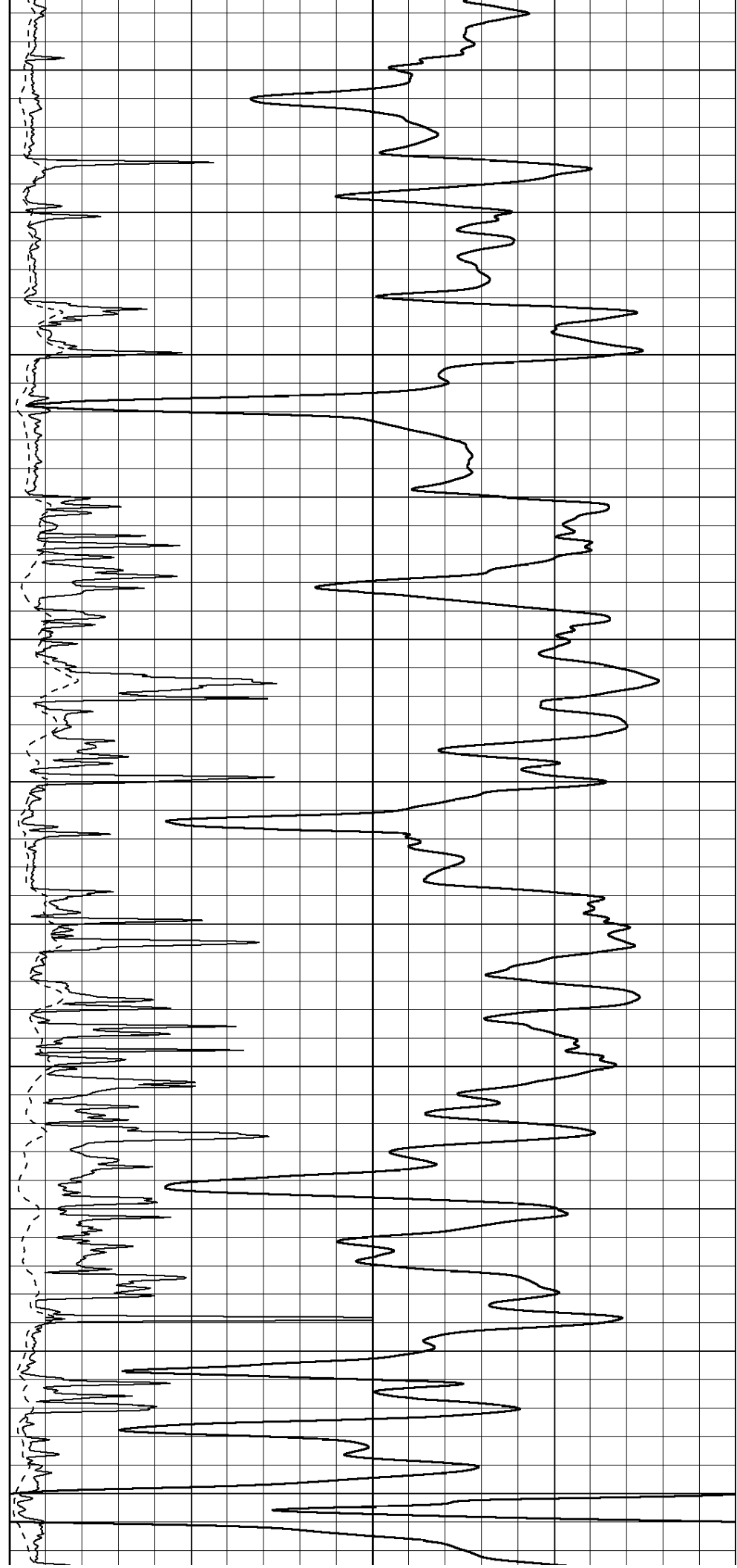


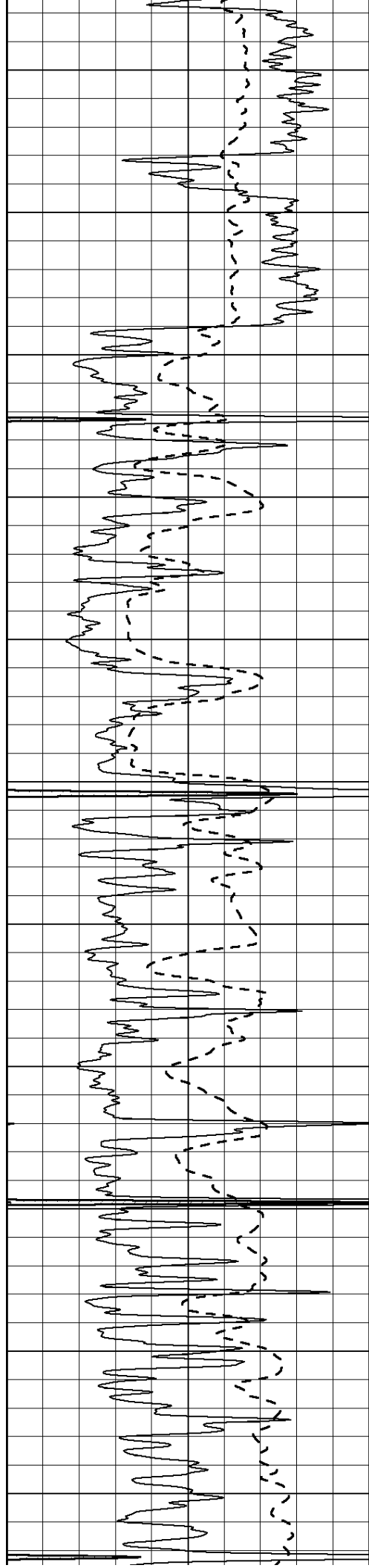
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1100
1150
1200
1250
1300
1350
1400
1450
1500
1550





1600
1650
1700
1750
1800
1850
1900
1950
2000
2050
2100





2150

2200

2250

2300

2350

2400

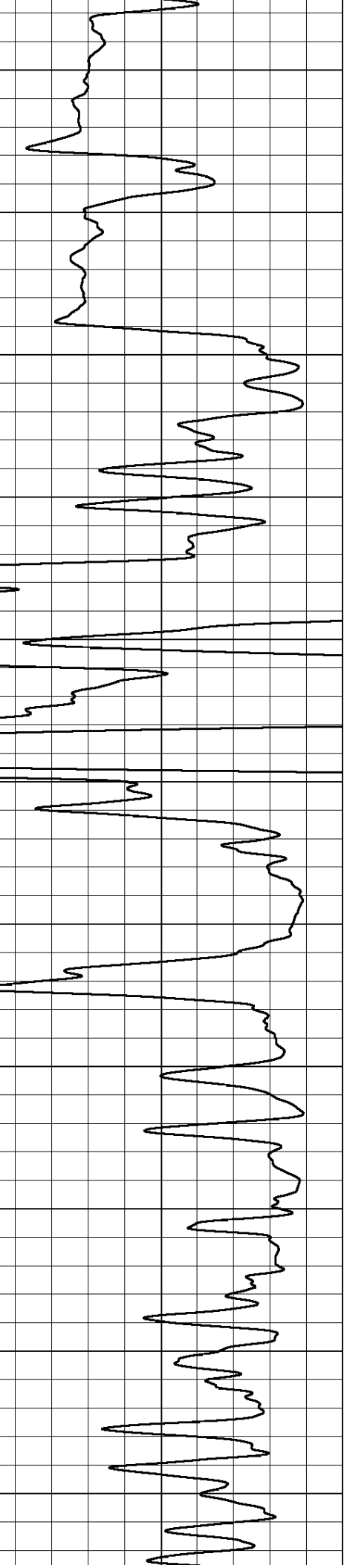
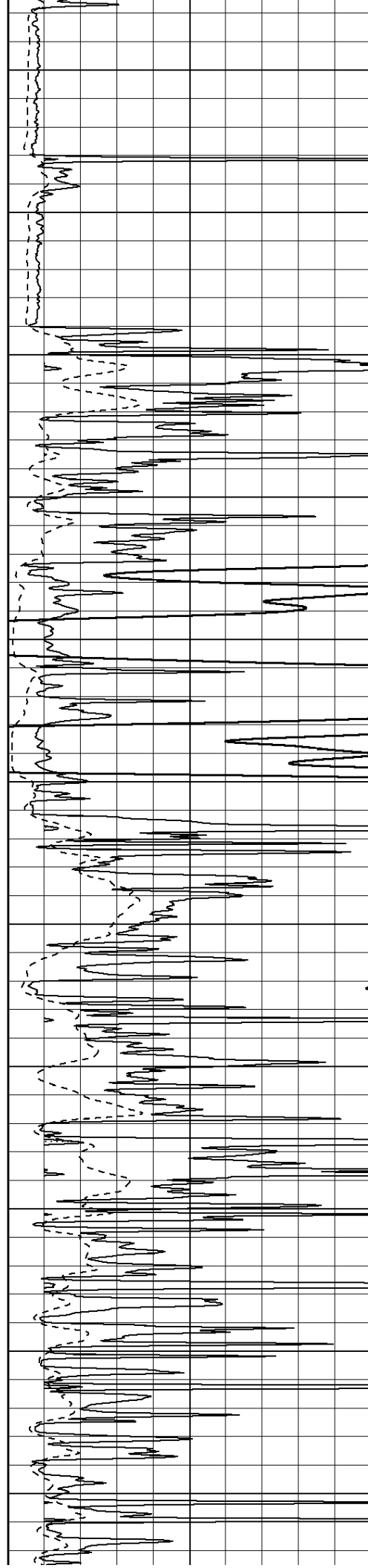
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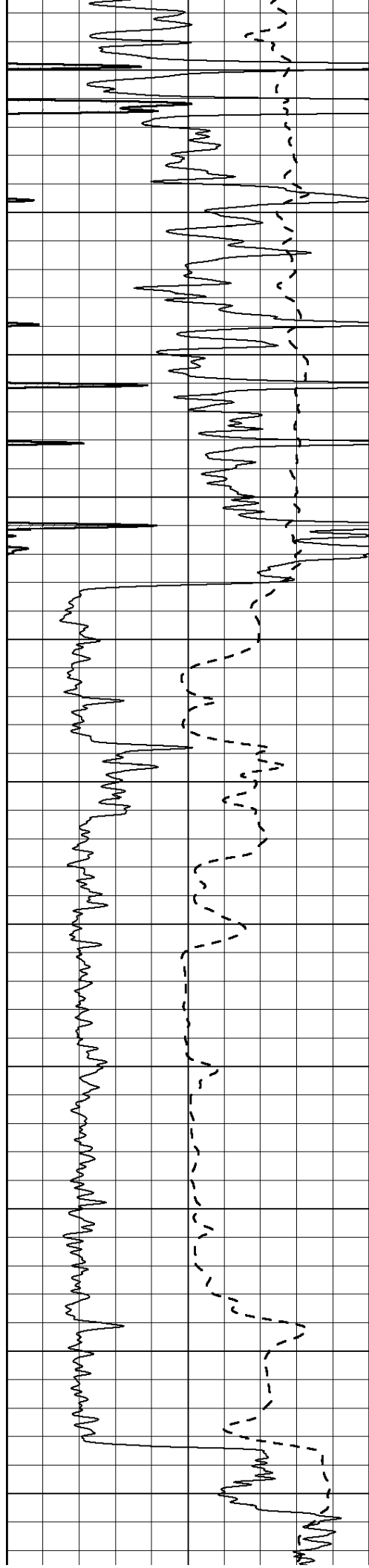
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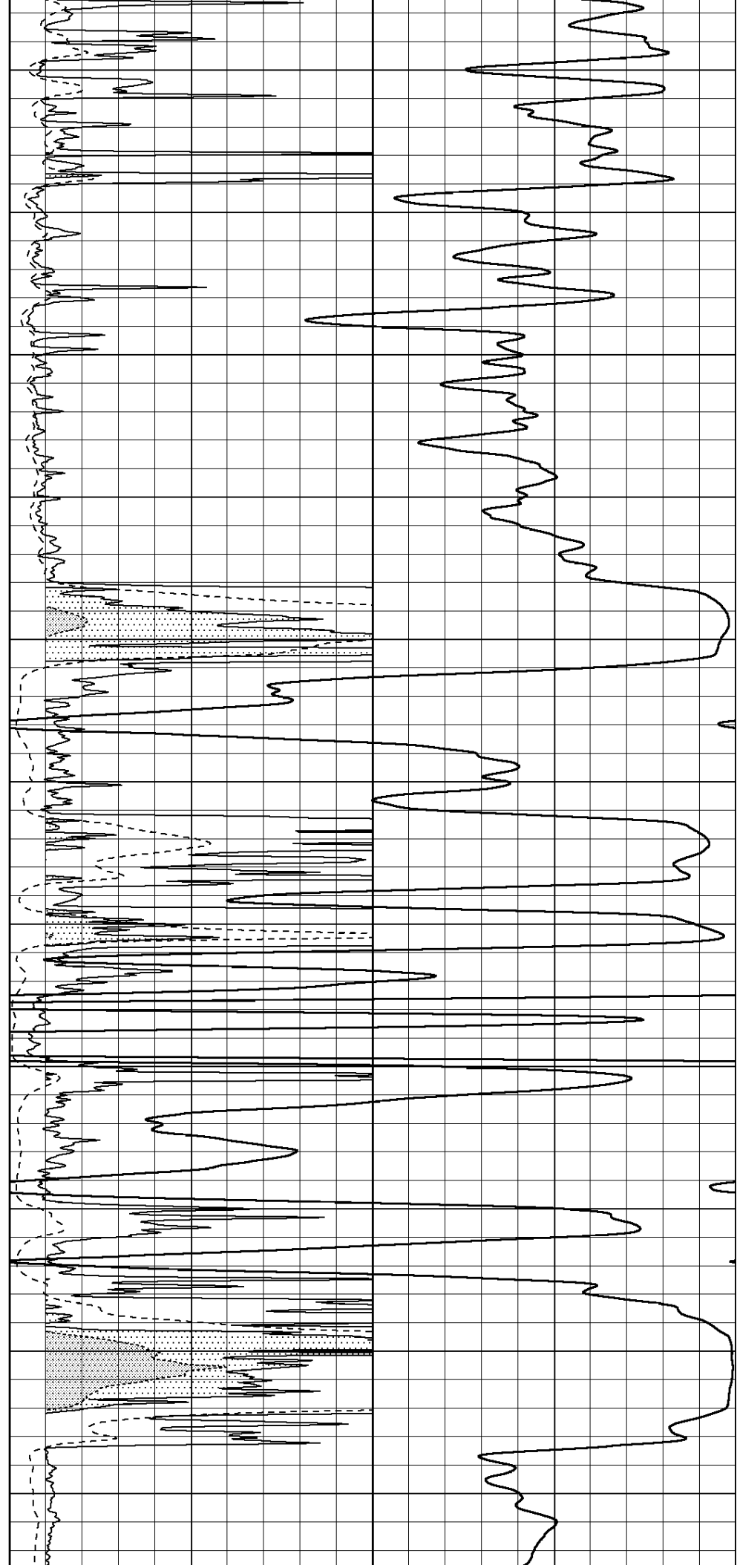
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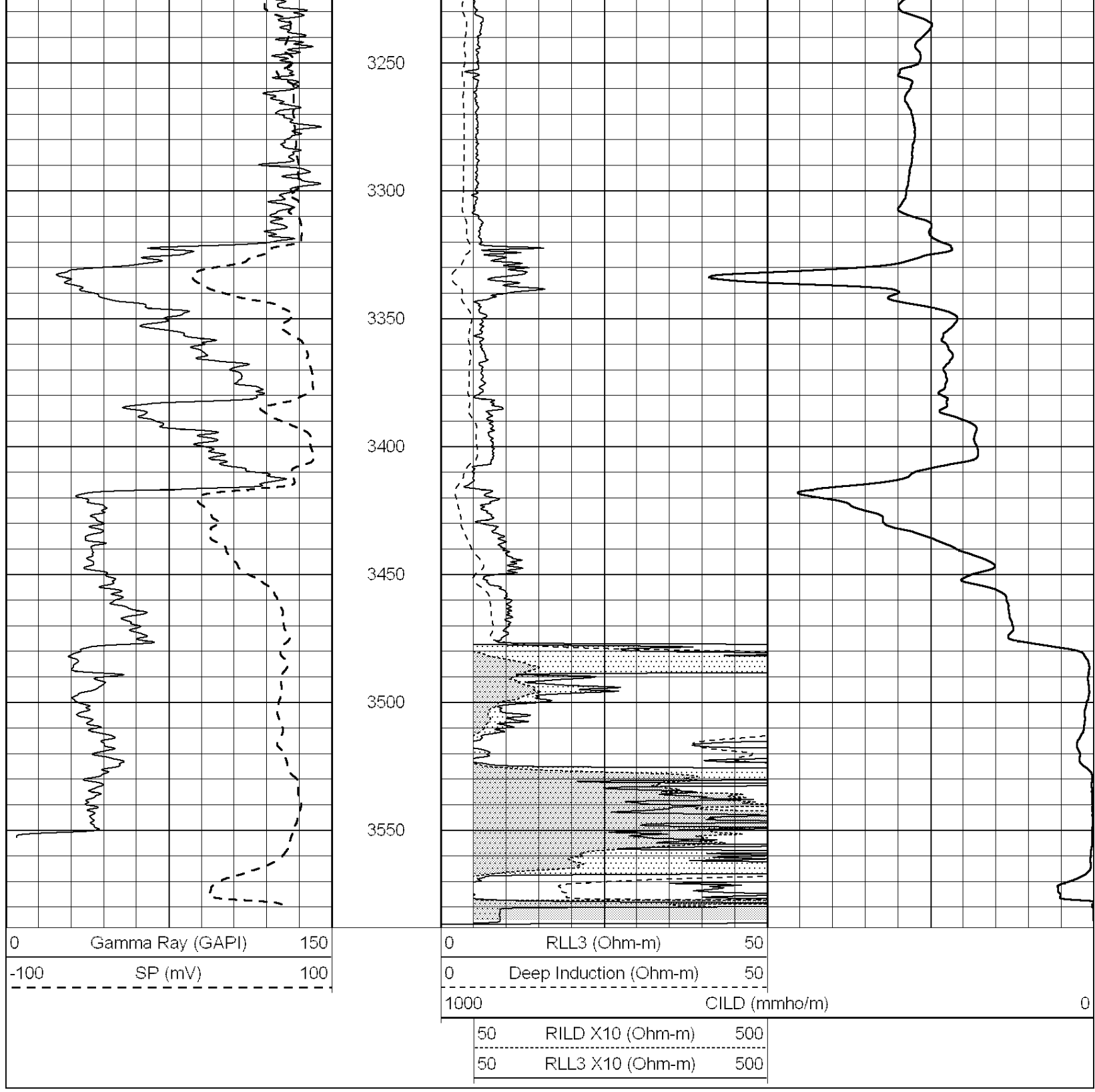
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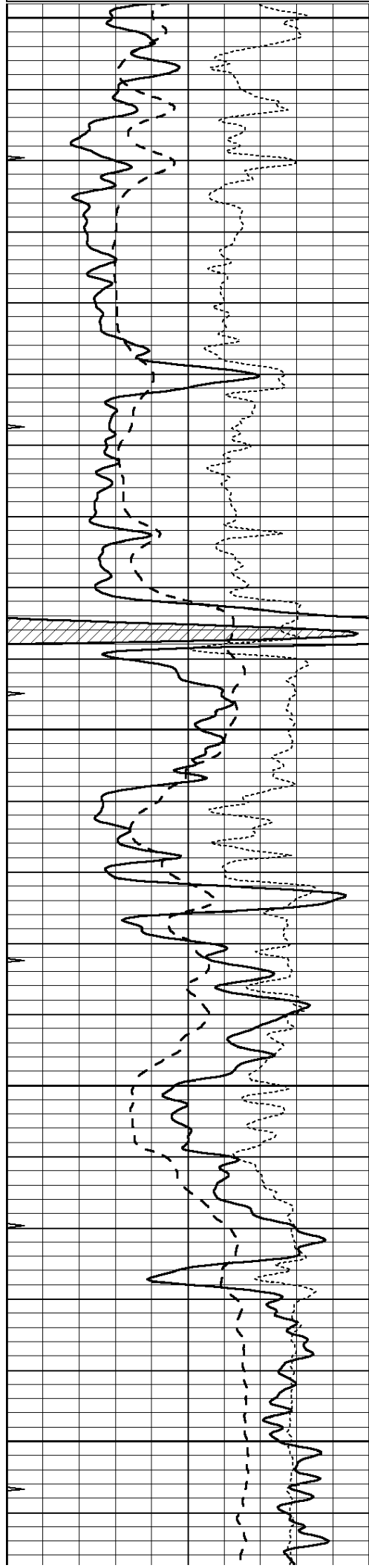
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2750
2800
2850
2900
2950
3000
3050
3100
3150
3200





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 Presentation Format: dil
 Dataset Creation: Fri Dec 02 15:45:42 2011 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20
0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



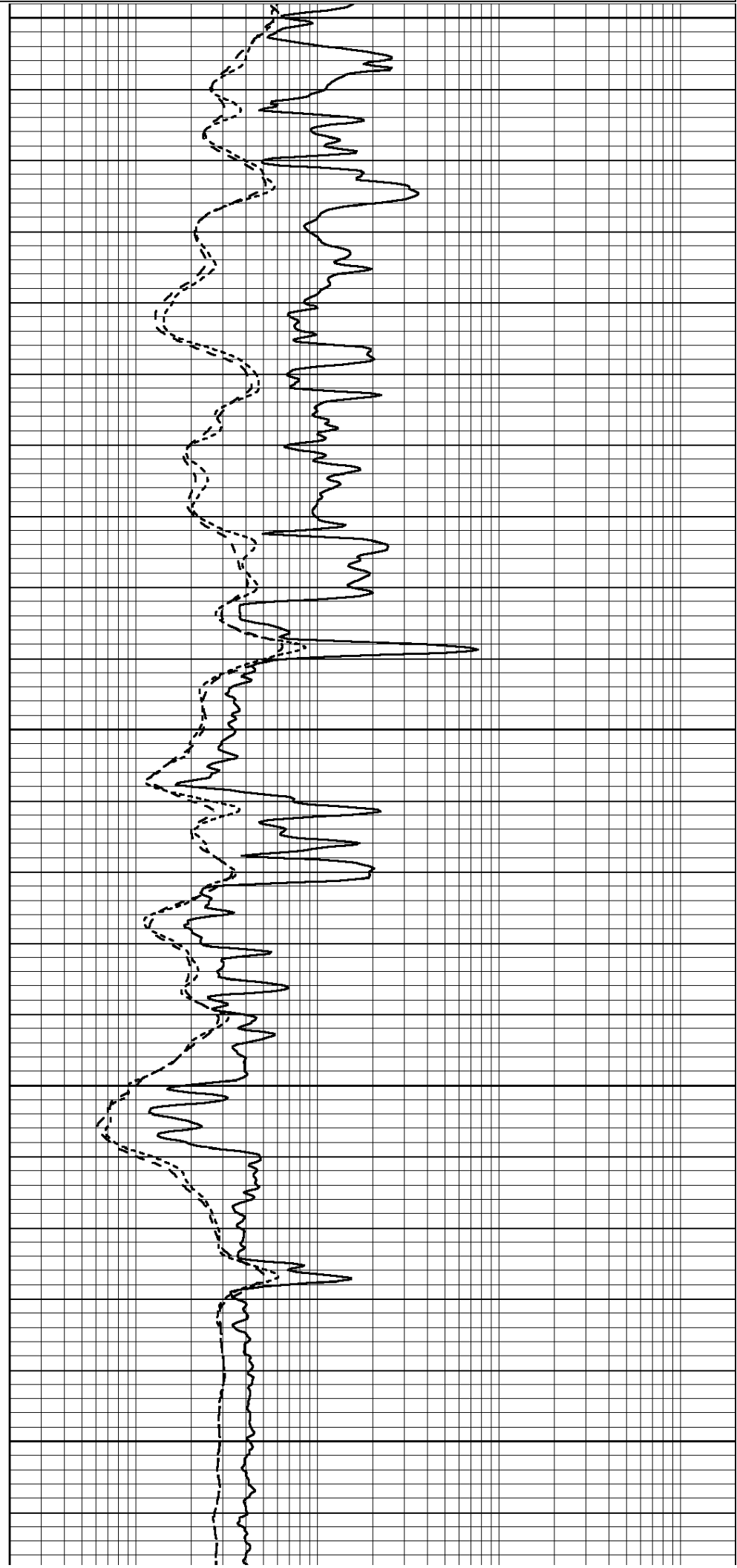
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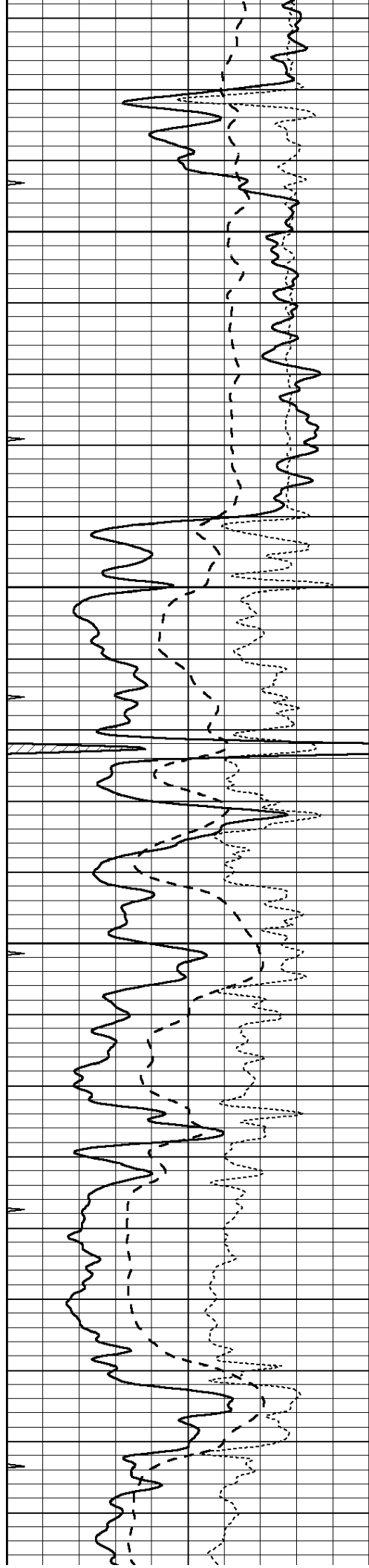
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2050

2100

2150



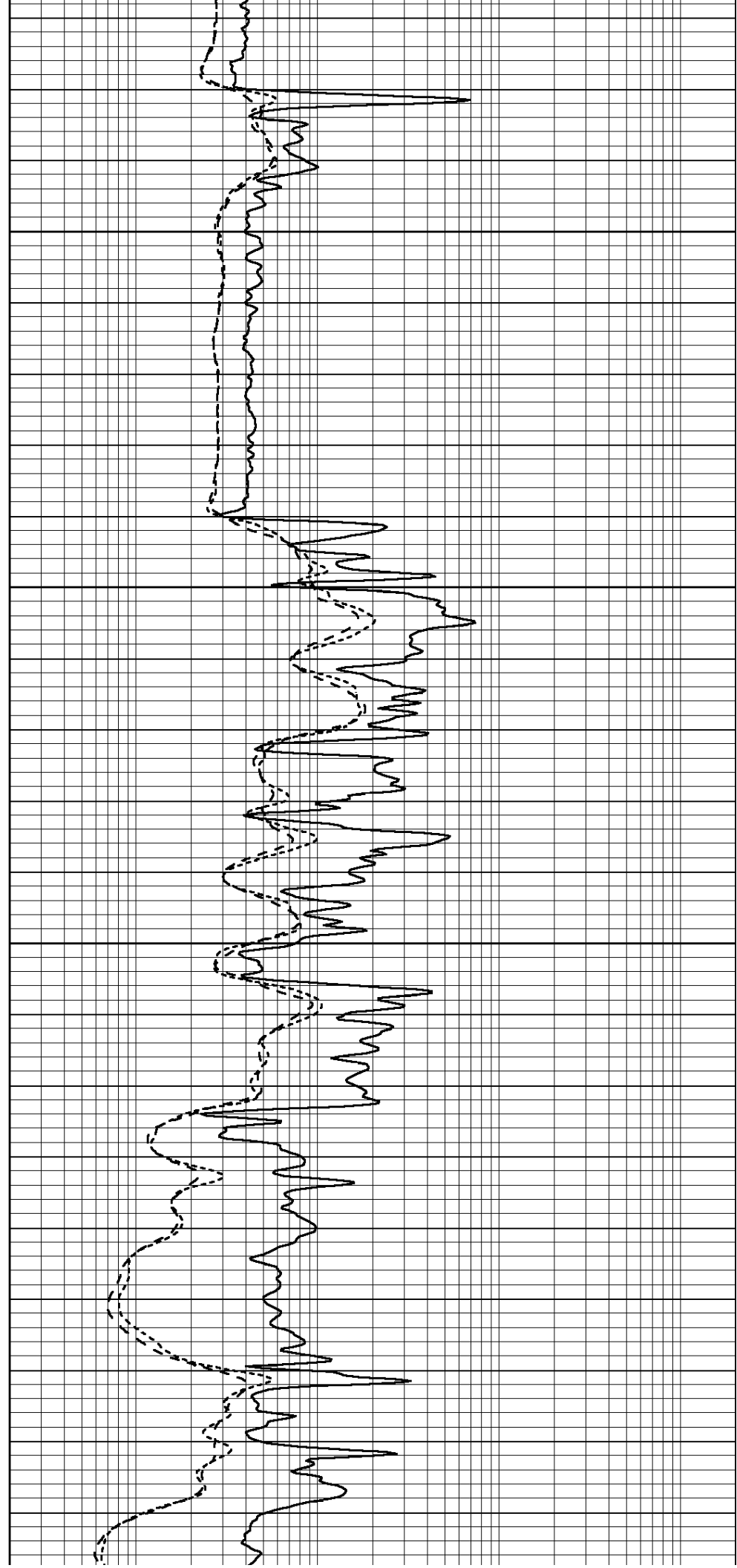


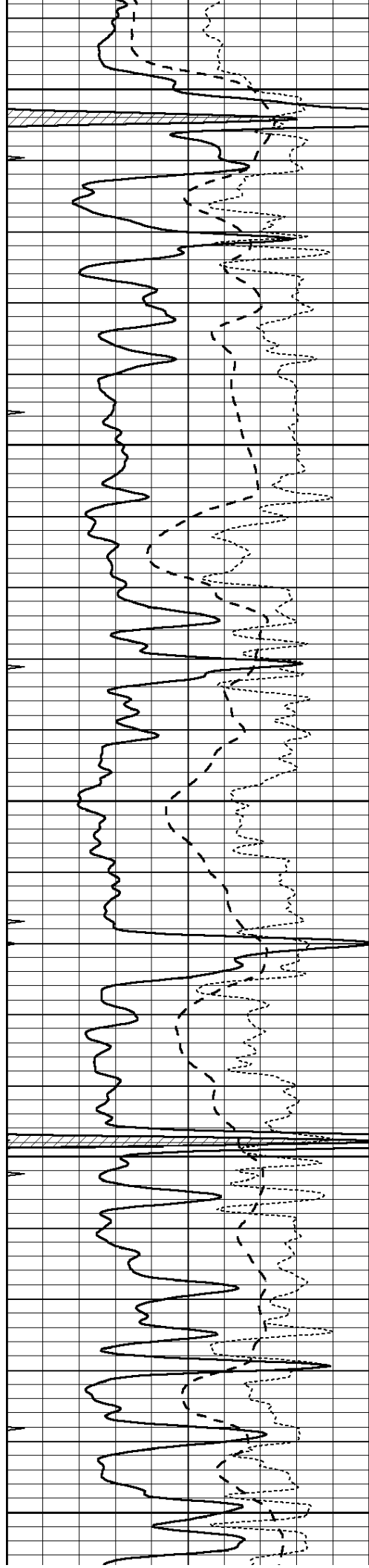
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2250

2300

2350





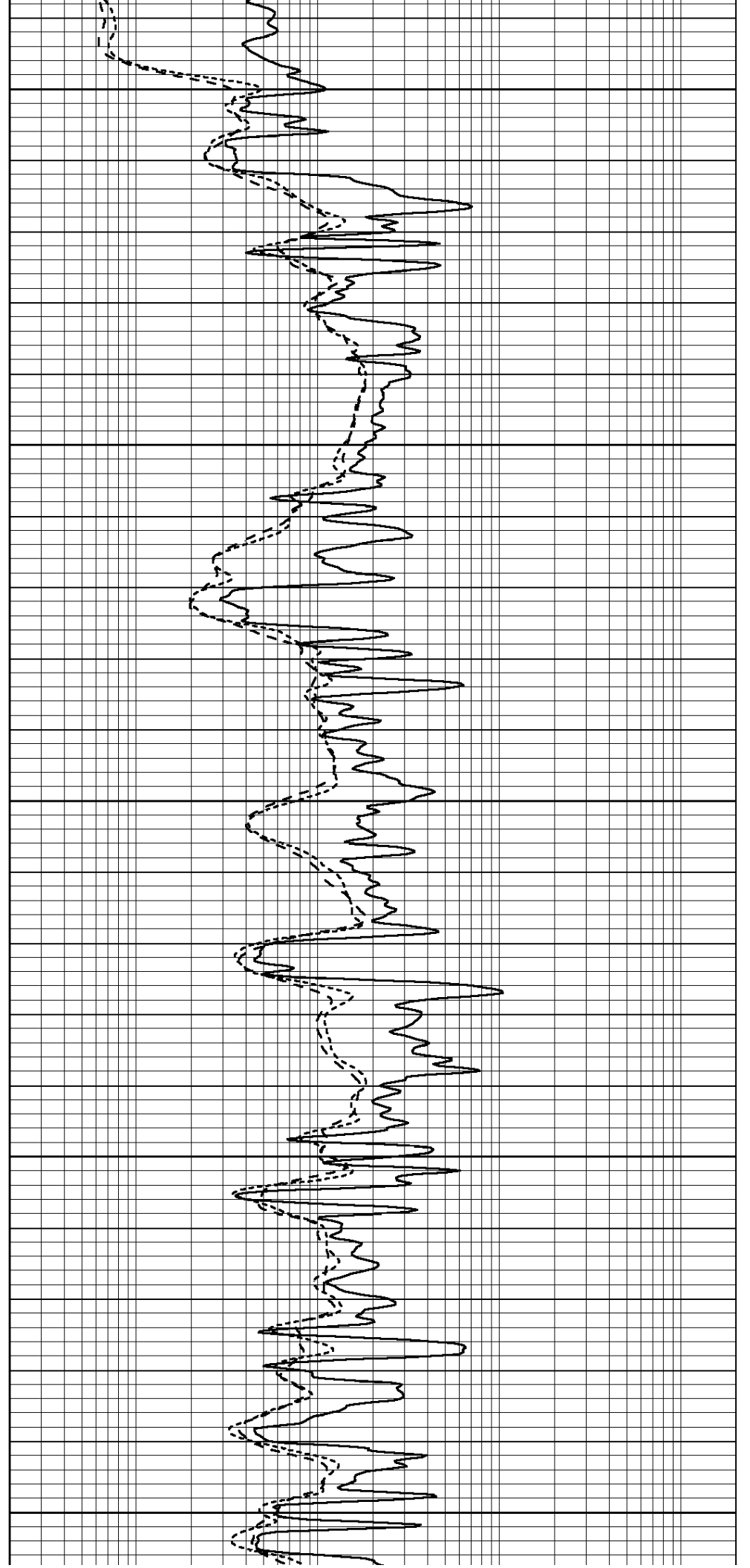
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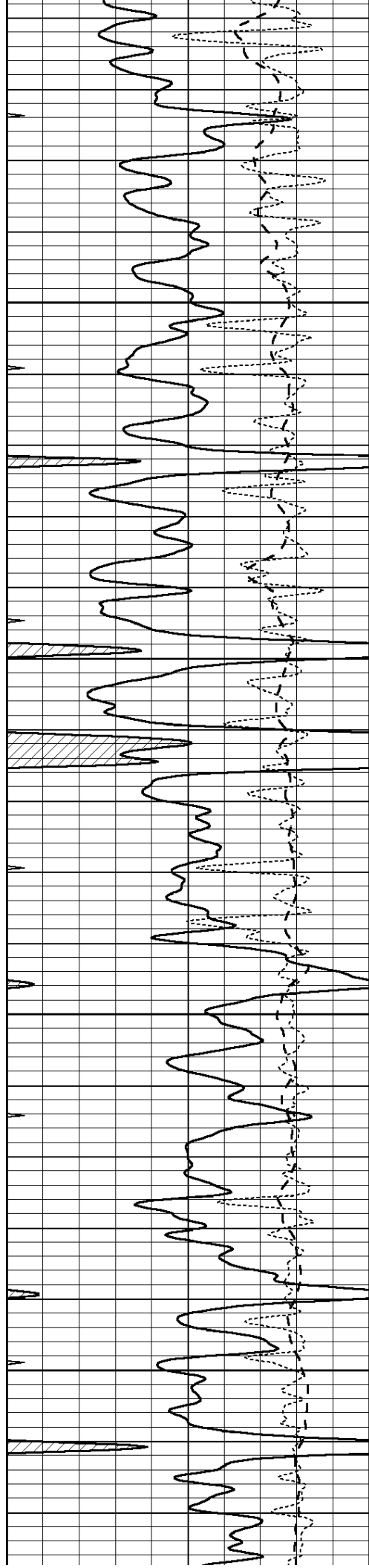
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2500

2550

2600



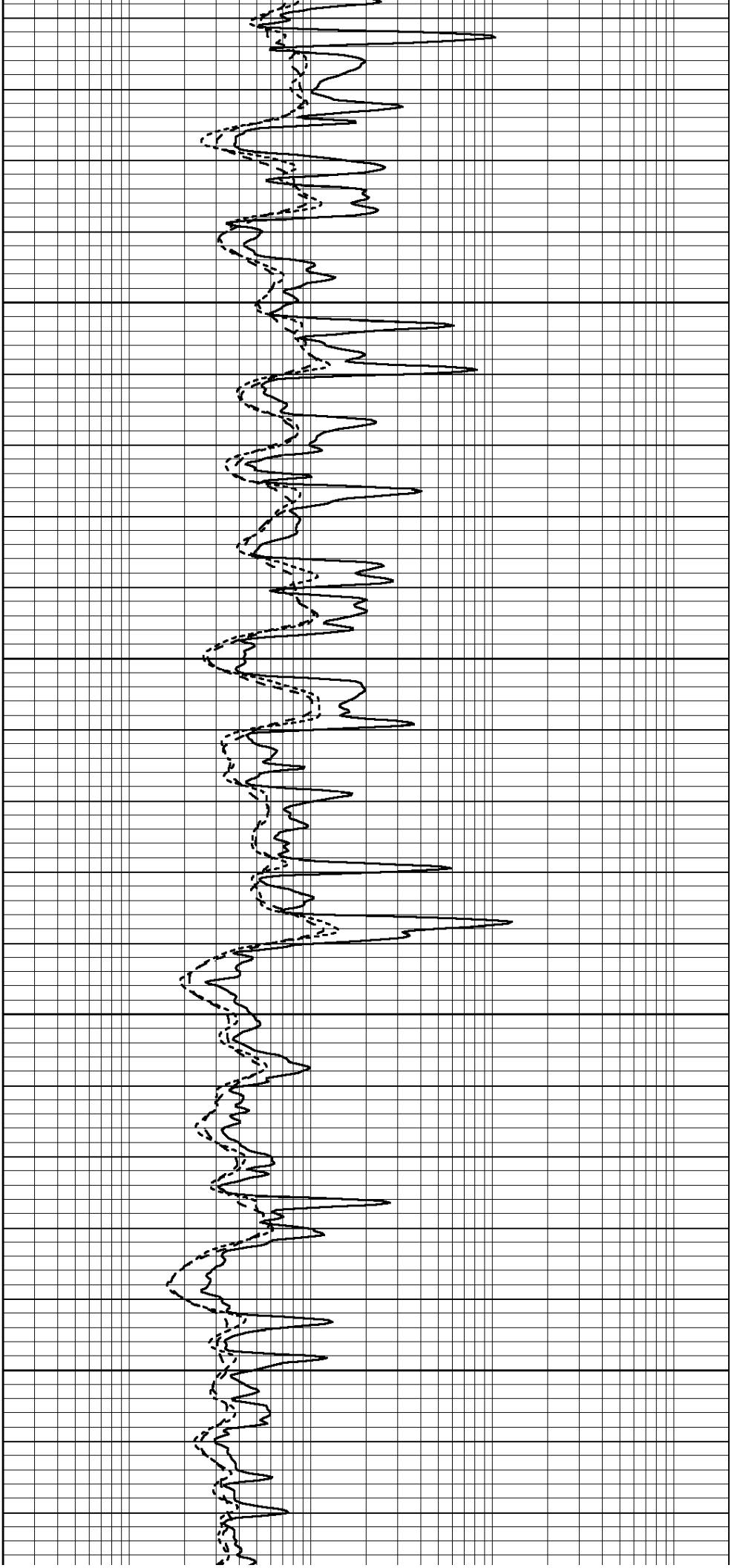


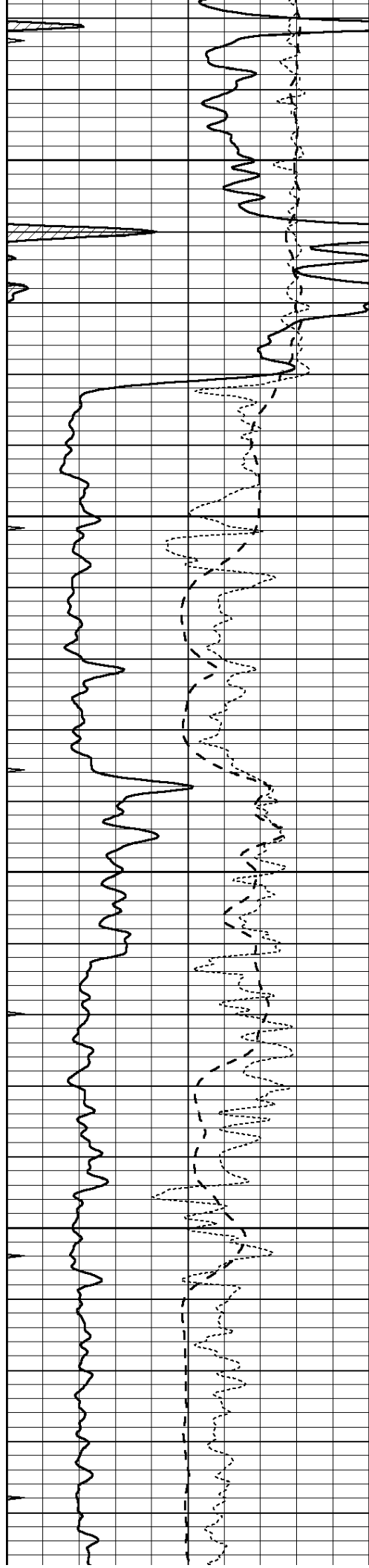
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2700

2750

2800



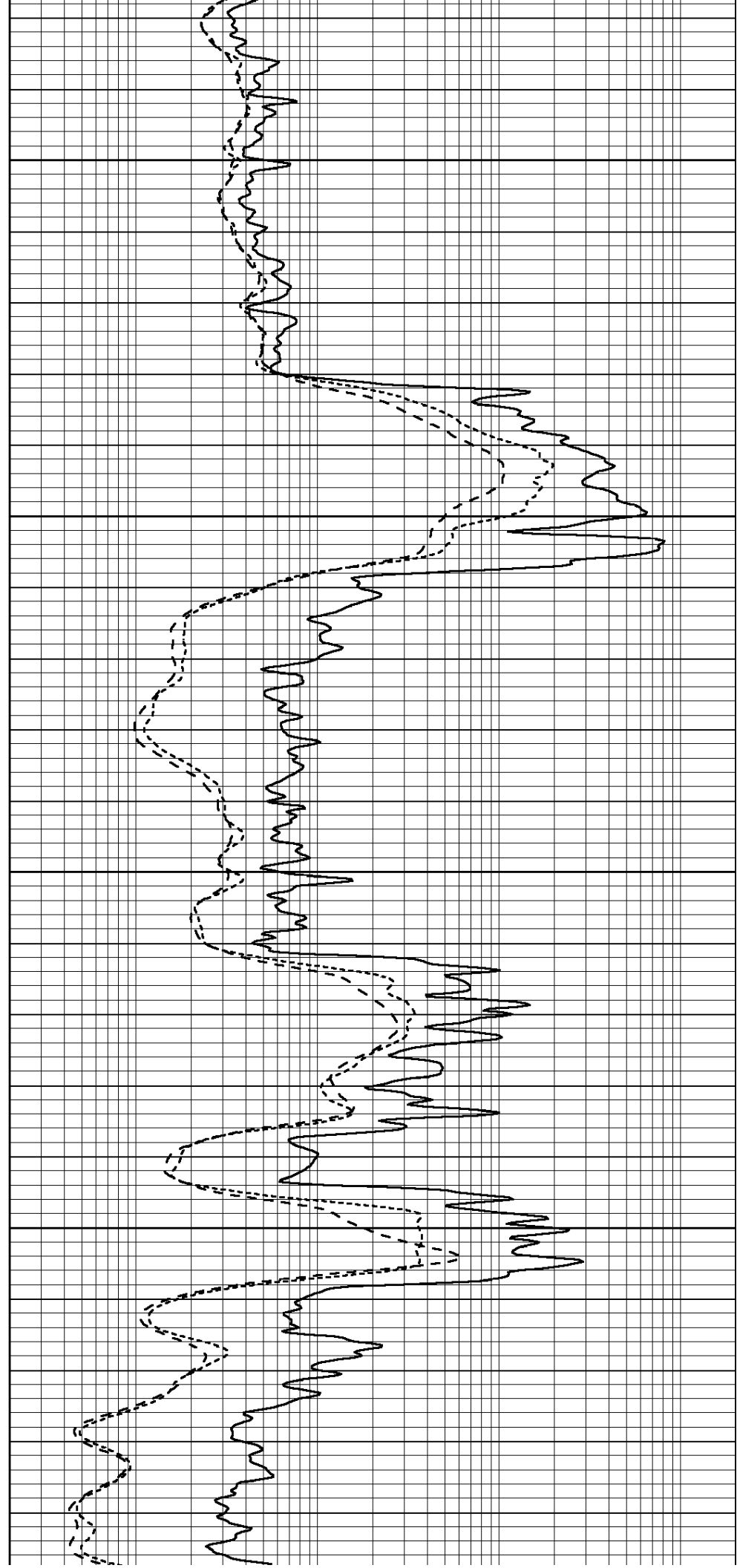


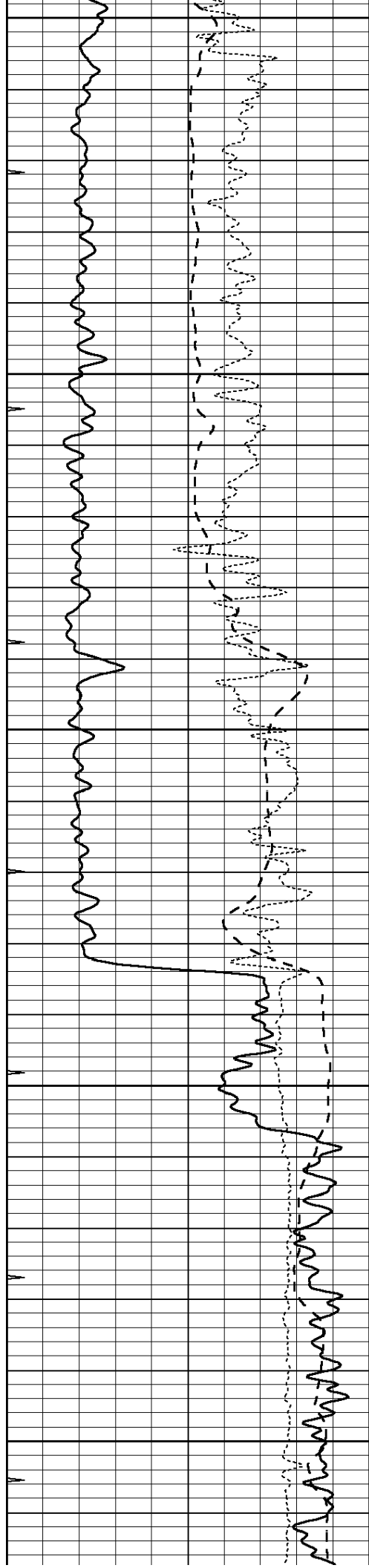
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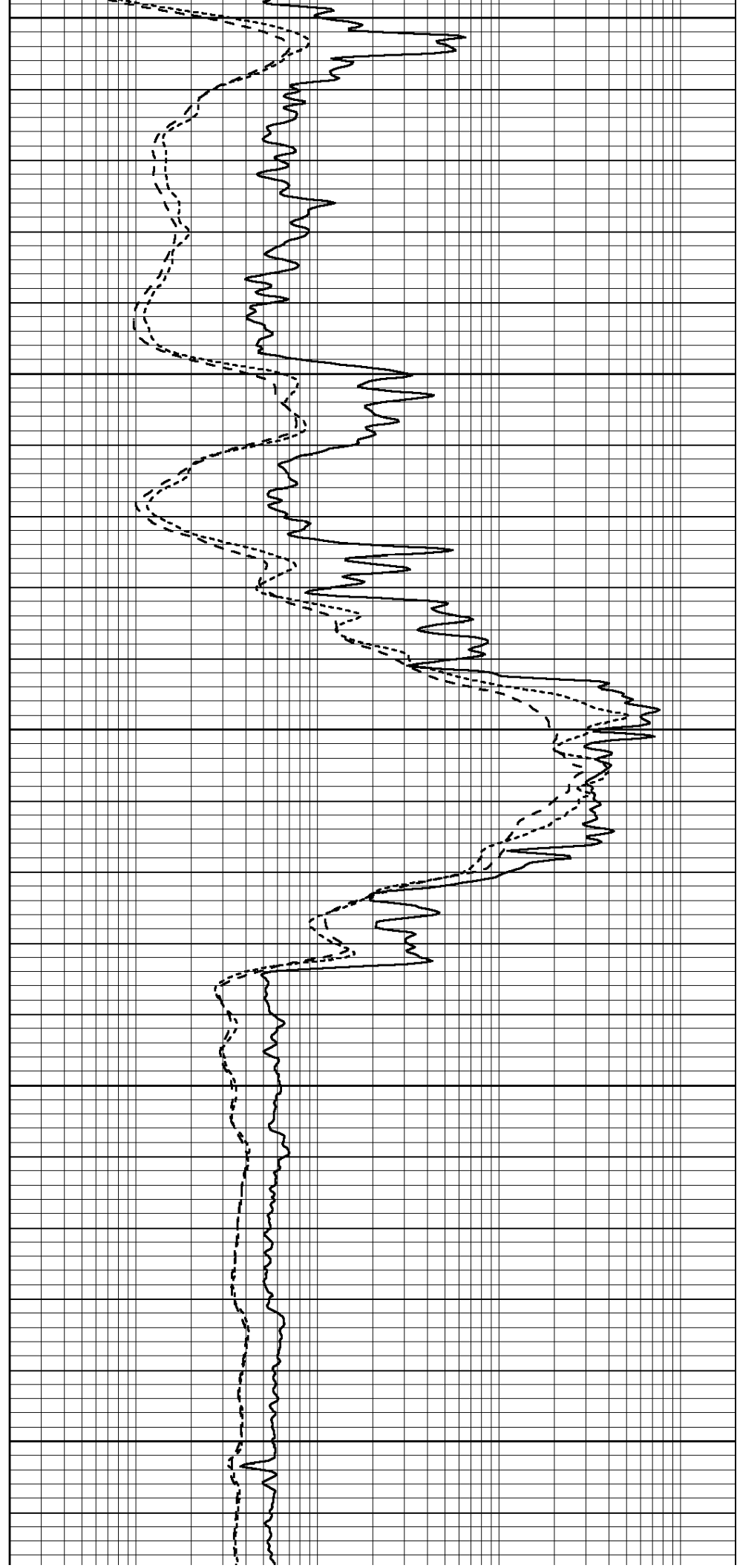
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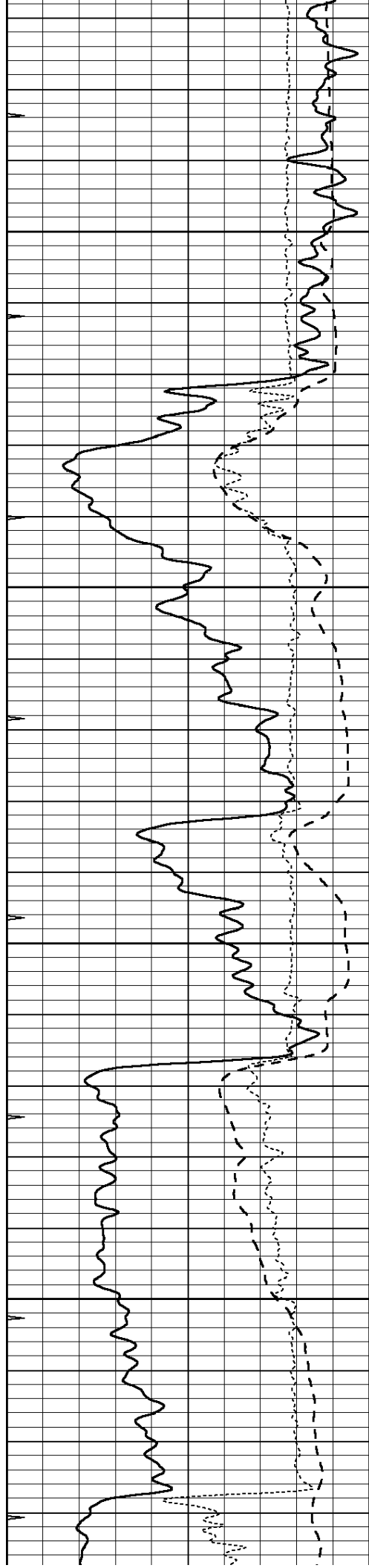
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3150

3200

3250



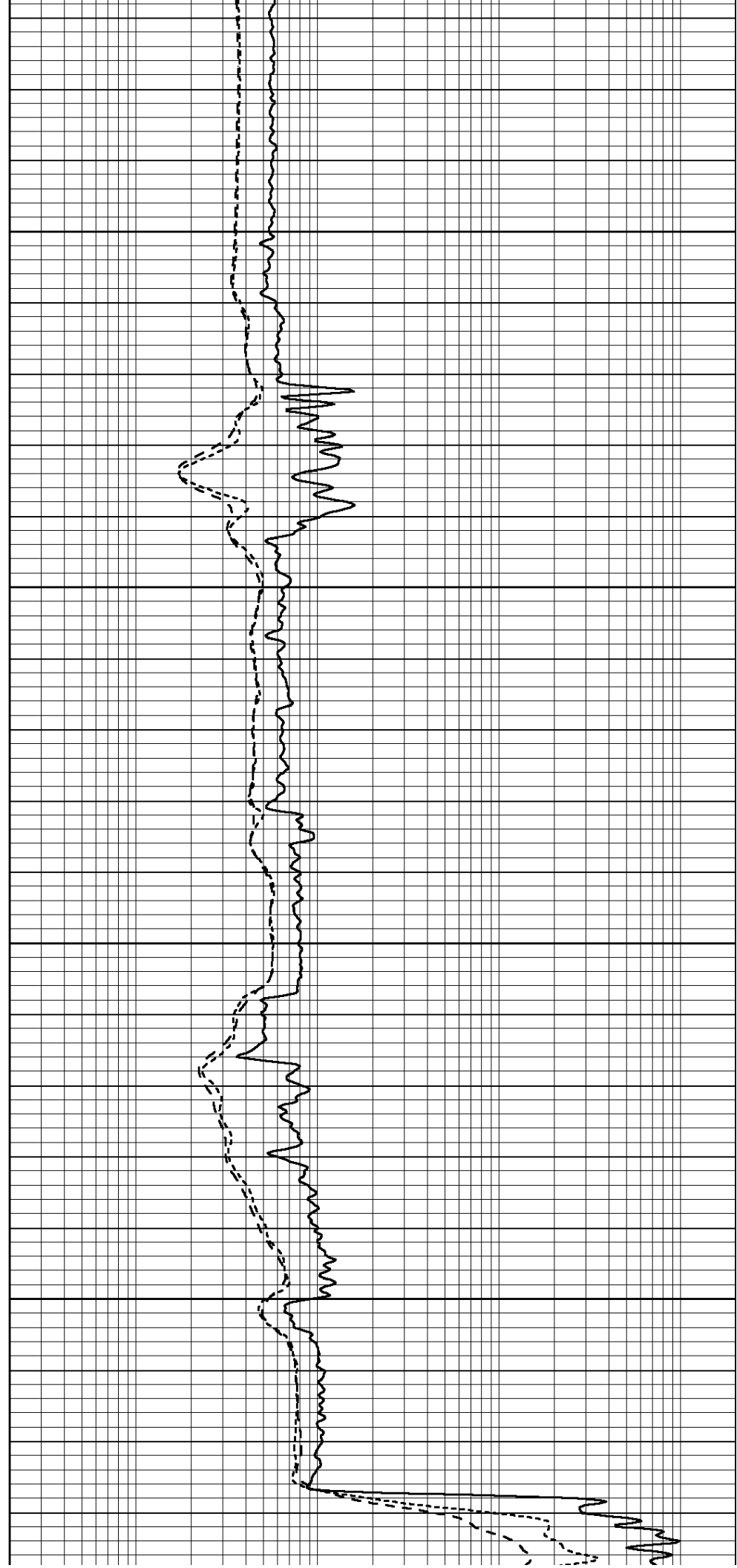


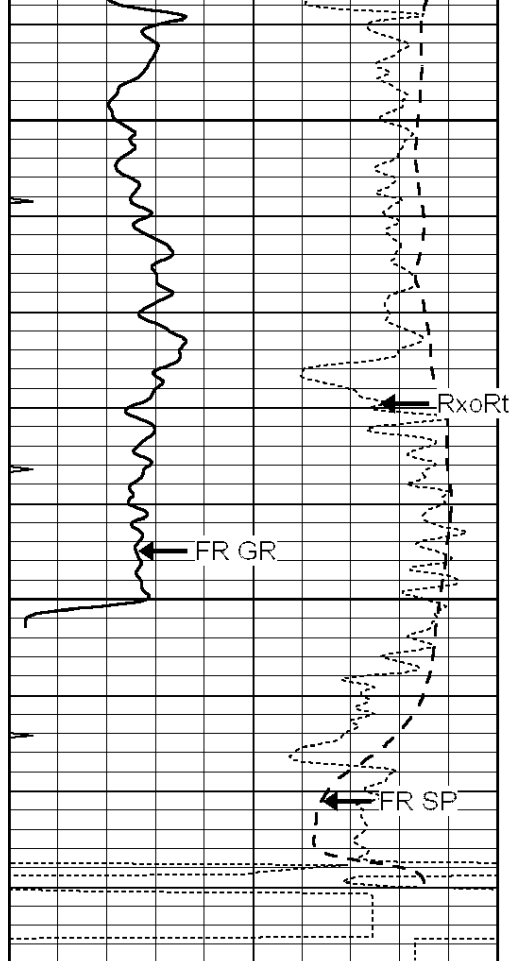
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3350

3400

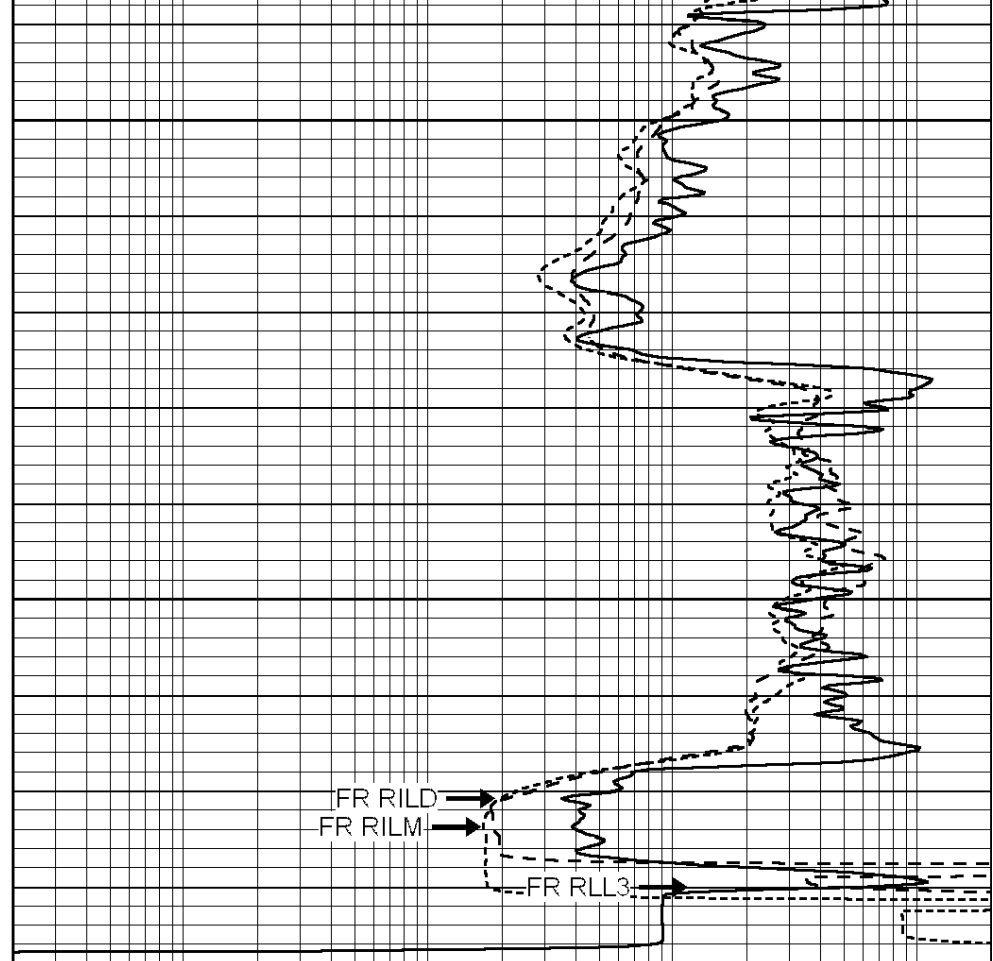
3450





3500
3550
LTD 3581

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20



0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



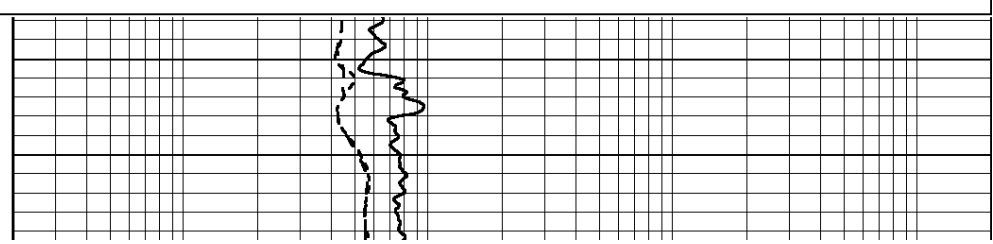
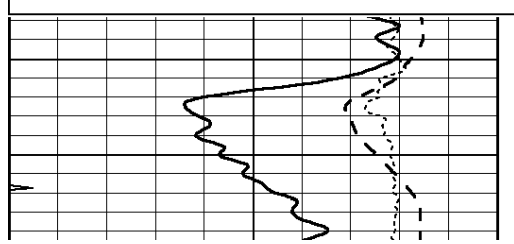
SUPERIOR
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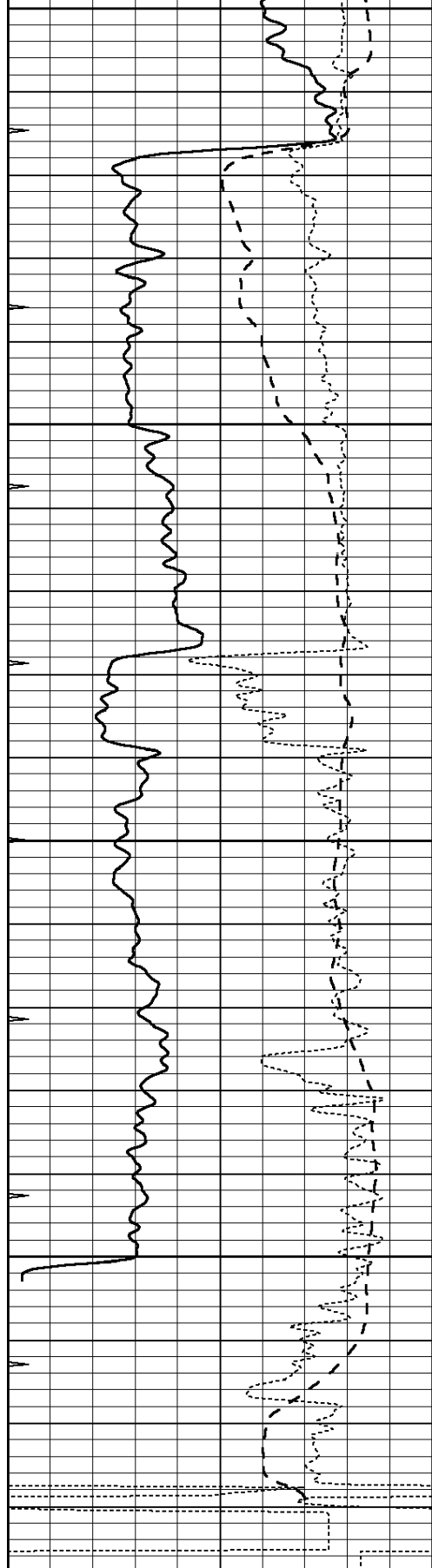
REPEAT SECTION

Database File: 008021ddn.db
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 Charted by: Depth in Feet scaled 1:240

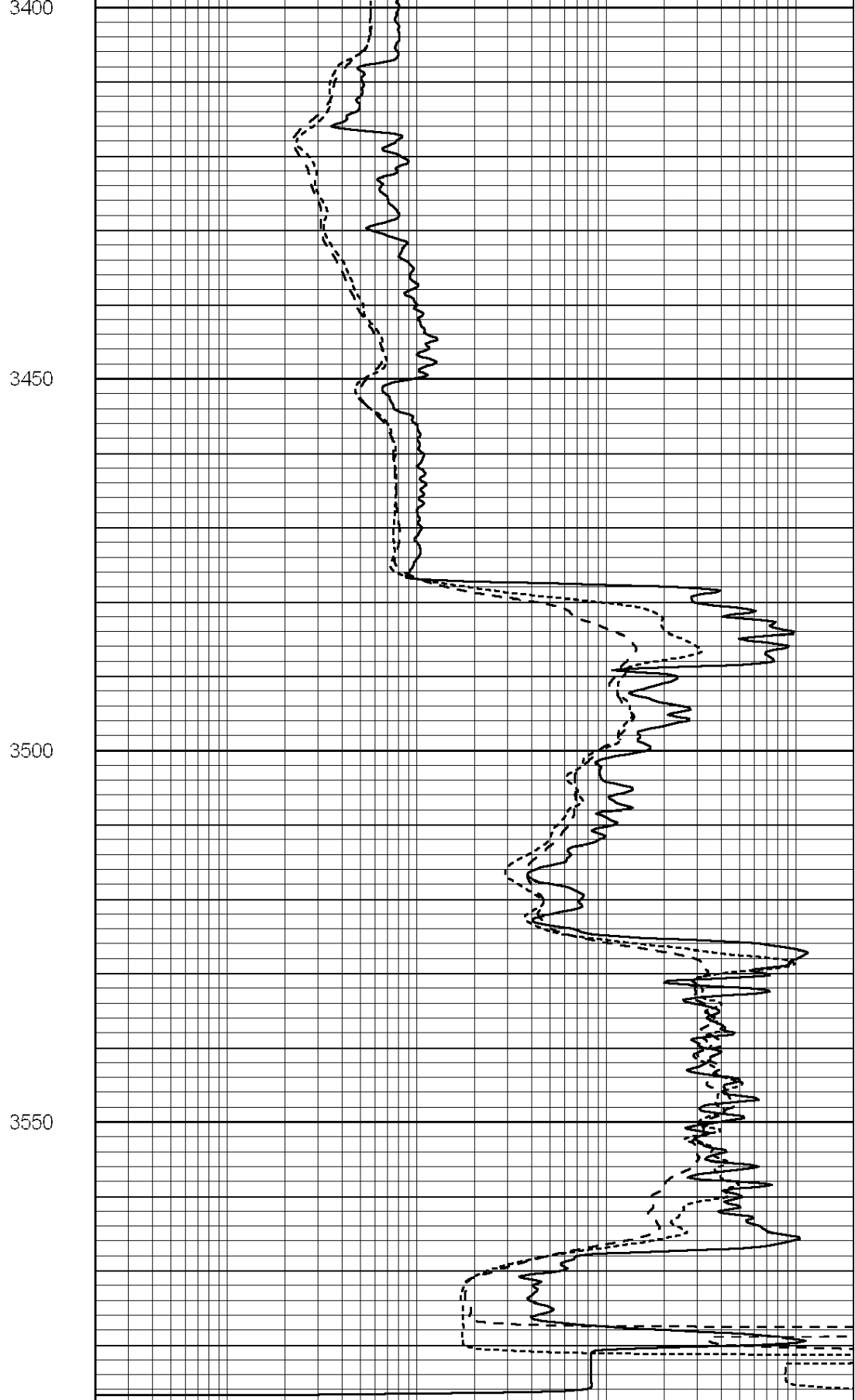
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000





0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20



0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

Calibration Report

Database File: 008021ddn.db
 Dataset Pathname: pass3.3
 Dataset Creation: Fri Dec 02 17:14:27 2011 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: DIL5-GEAR
 Performed: Sat Nov 26 00:40:50 2011

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.004	0.654	V	0.000	400.000	mmho/m	520.000	-20.000
Medium	-0.005	0.737	V	0.000	462.500	mmho/m	550.000	-12.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.006	0.655	V	0.000	400.000	mmho/m	615.668	-3.483
Medium	0.010	0.747	V	0.000	462.500	mmho/m	627.607	-6.064

Compensated Density Calibration Report

Serial-Model: GEAR1-GEARHART
 Source / Verifier: 147 / 147
 Master Calibration Performed: Sat Nov 19 06:29:56 2011

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1243.76	629.14	cps
Aluminum	2.590	g/cc	282.16	435.01	cps
Spine Angle = 76.03			Density/Spine Ratio = 0.576		
	Size		Reading		
Small Ring	8.40	in	3.15	V	
Large Ring	13.00	in	4.72	V	

Compensated Neutron Calibration Report

Serial Number: NUE_2I
 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

Gamma Ray Calibration Report

Serial Number: GR5
 Tool Model: OPEN
 Performed: Mon Nov 28 02:44:15 2011

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 0.6500 GAPI/cps