



**SUPERIOR
Hays,
Kansas**

**DUAL
INDUCTION
LOG**

Company CAERUS KANSAS, LLC.
Well HOFFMAN RANCH #23-23
Field HOISINGTON EAST
County BARTON
State KANSAS

Company CAERUS KANSAS, LLC.
Well HOFFMAN RANCH #23-23
Field HOISINGTON EAST
County BARTON State KANSAS

Location: API # : 15-009-25639
1795' FSL & 1814' FWL
SEC 123 TWP 17S RGE 13W
Permanent Datum GROUND LEVEL Elevation 1856
Log Measured From KELLY BUSHING 9' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
CDL/CNL
SONIC/MEL
Elevation
K.B. 1865
D.F.
G.L. 1856

Date	12-13-11		
Run Number	ONE		
Depth Driller	3450		
Depth Logger	3449		
Bottom Logged Interval	3447		
Top Log Interval	00		
Casing Driller	820		
Casing Logger	820		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.3 / 45		
pH / Fluid Loss	9.5 / 8.8		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	0.65 @ 70F		
Rinf @ Meas. Temp	0.49 @ 70F		
Rinc @ Meas. Temp	0.78 @ 70F		
Source of Rinf / Rinc	MEASURED		
Rim @ BHT	.420 @ 109F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	2:30 P.M.		
Maximum Recorded Temperature	109F		
Equipment Number	860		
Location	HAYS, KS.		
Recorded By	RUPP		
Witnessed By	JEFF LAWLER	BRIAN KARLIN	

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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

SUPERIOR WELL SERVICES
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: HOISINGTON DAIRY QUEEN, 2E, 2 1/2N, E INTO.



**SUPERIOR
Hays,
Kansas**

MAIN SECTION

Database File: 001214ddn.db
 Dataset Pathname: pass3.1
 Presentation Format: dil2
 Dataset Creation: Tue Dec 13 16:26:17 2011 by Calc Open-Case 090629
 Charted by: Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150
-100	SP (mV)	100

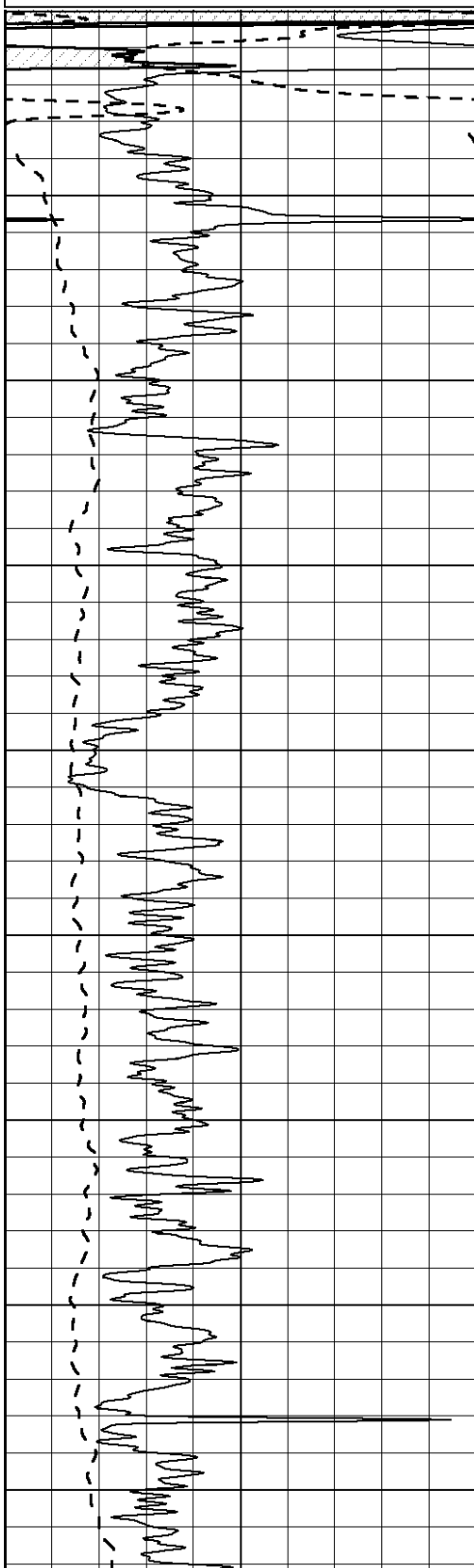
0	RLL3 (Ohm-m)	50
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0	Deep Induction (Ohm-m)	50
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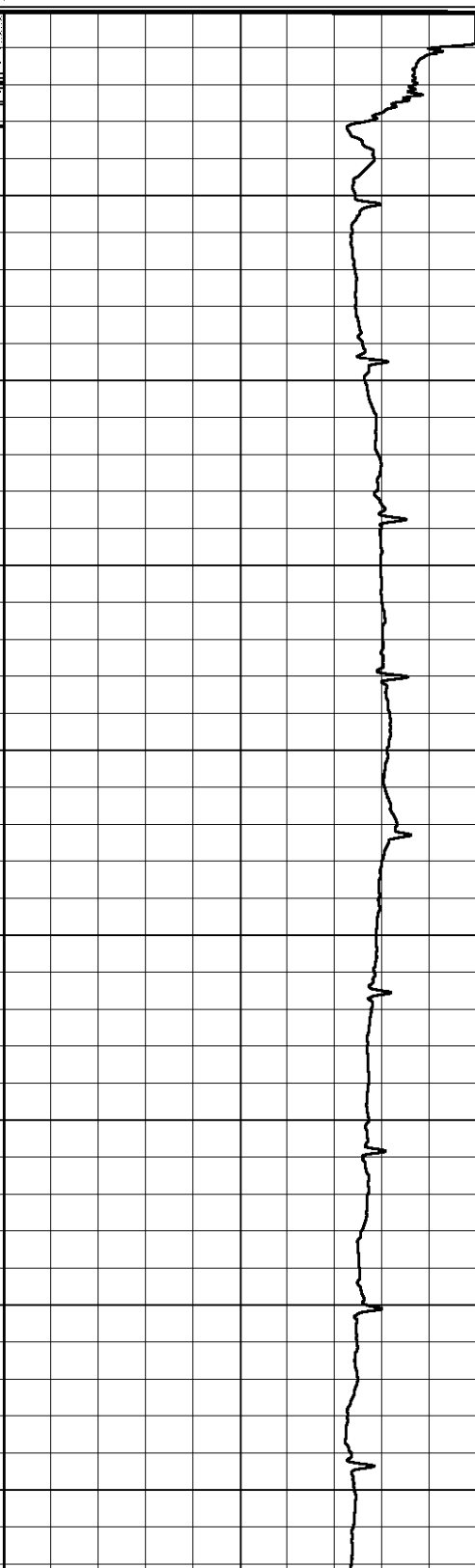
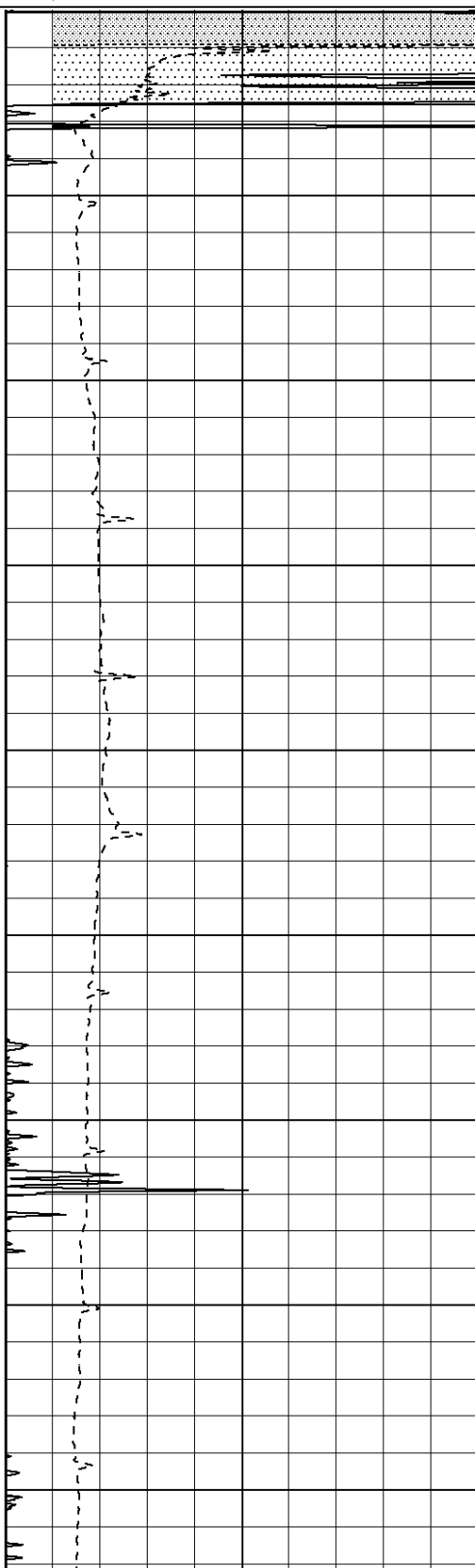
1000	CILD (mmho/m)	0
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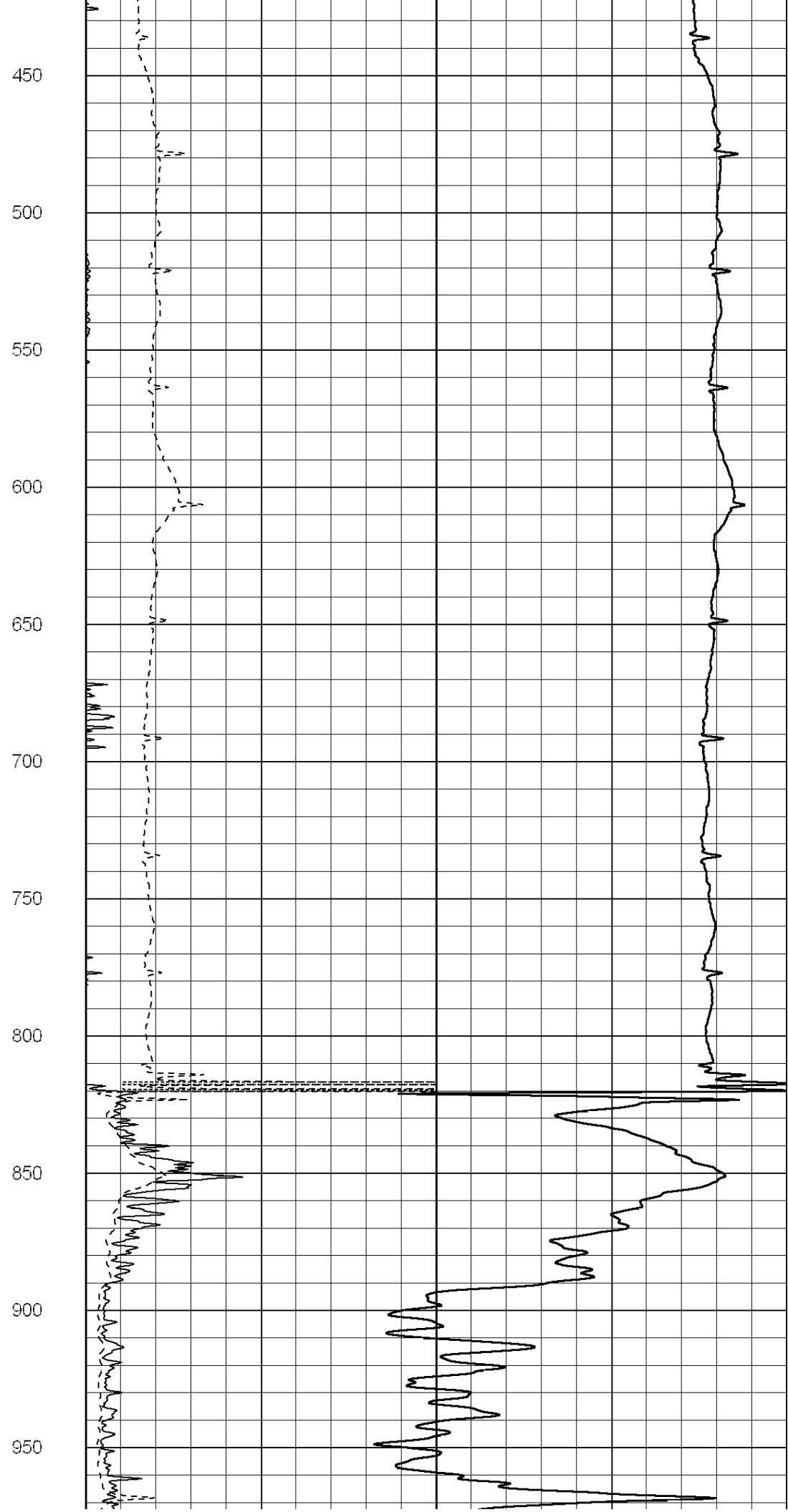
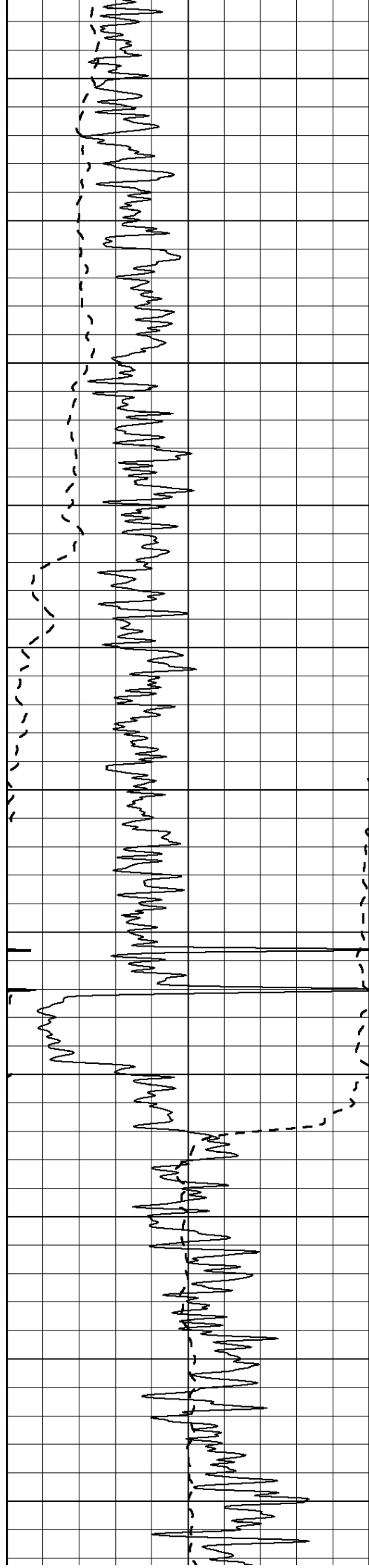
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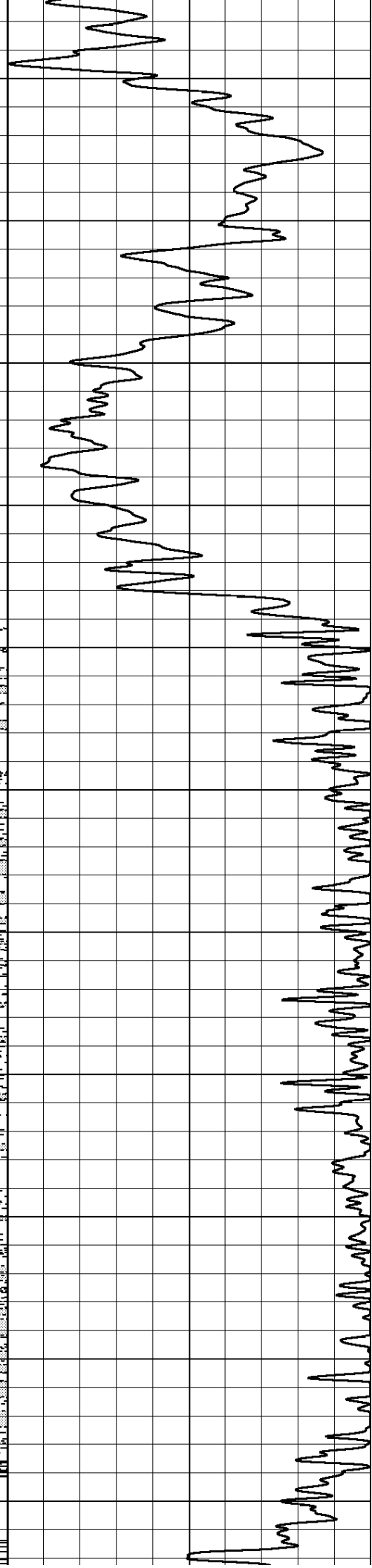
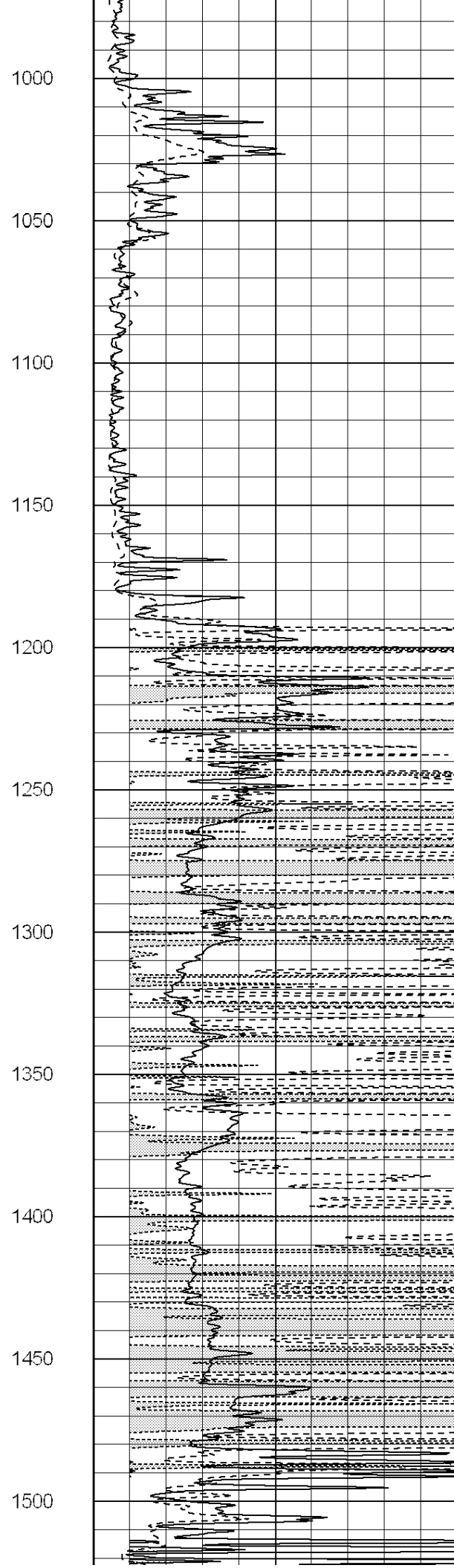
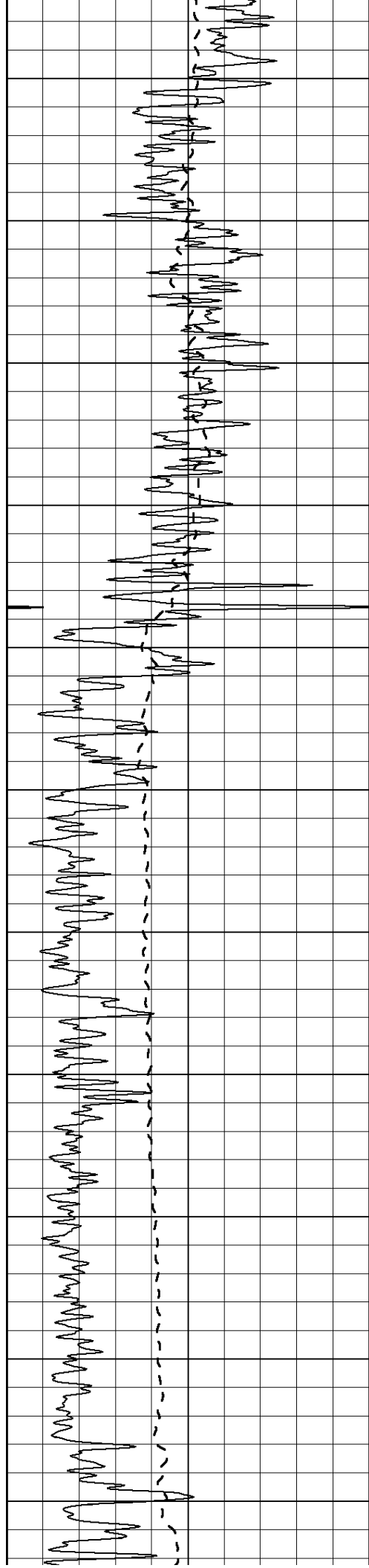
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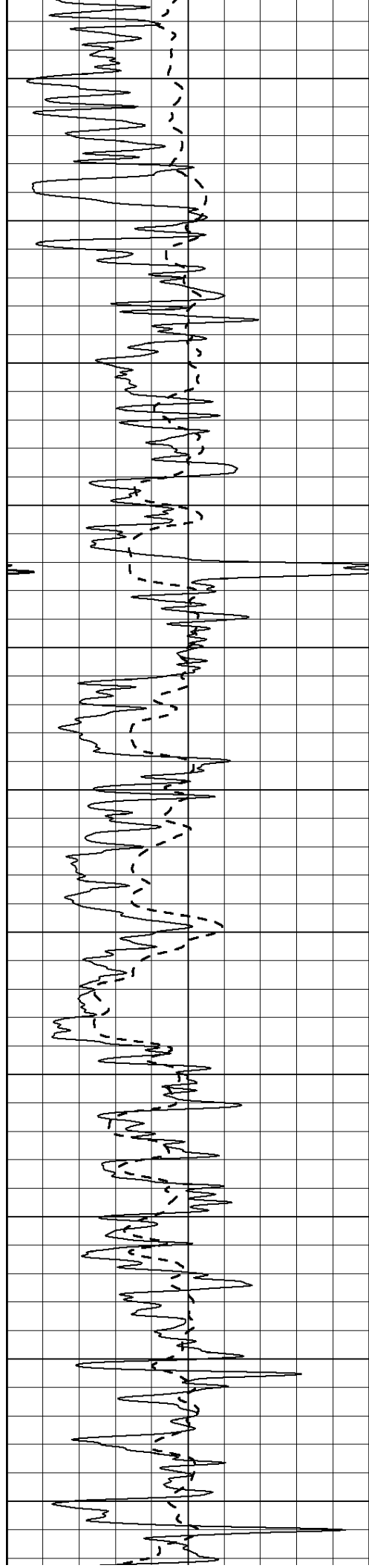


0
50
100
150
200
250
300
350
400









1550

1600

1650

1700

1750

1800

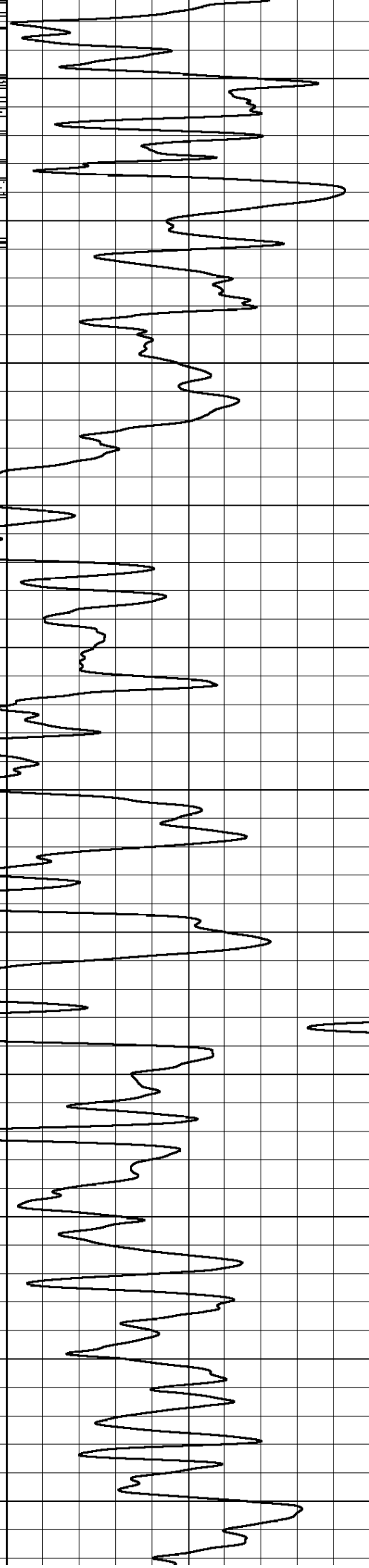
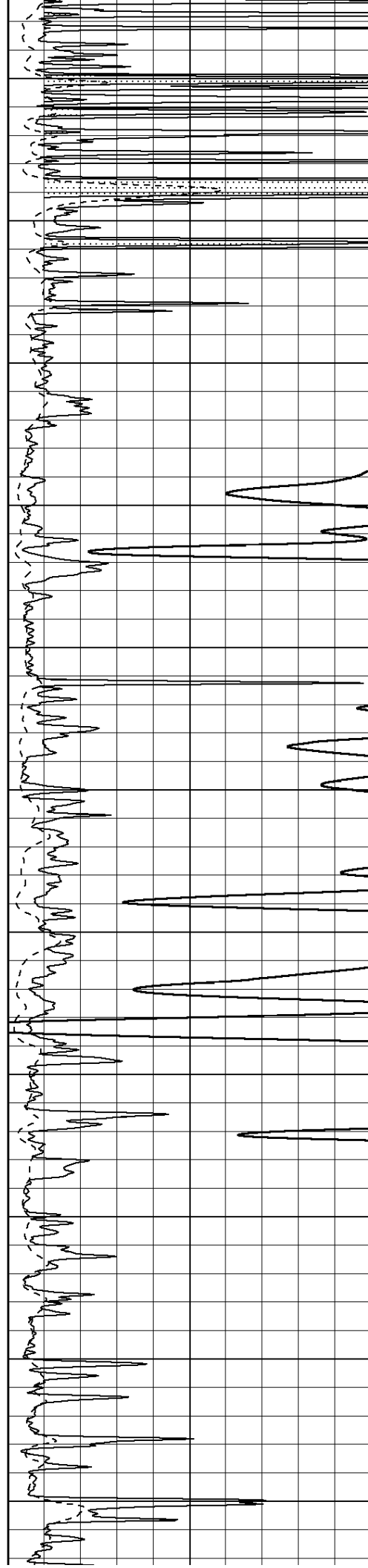
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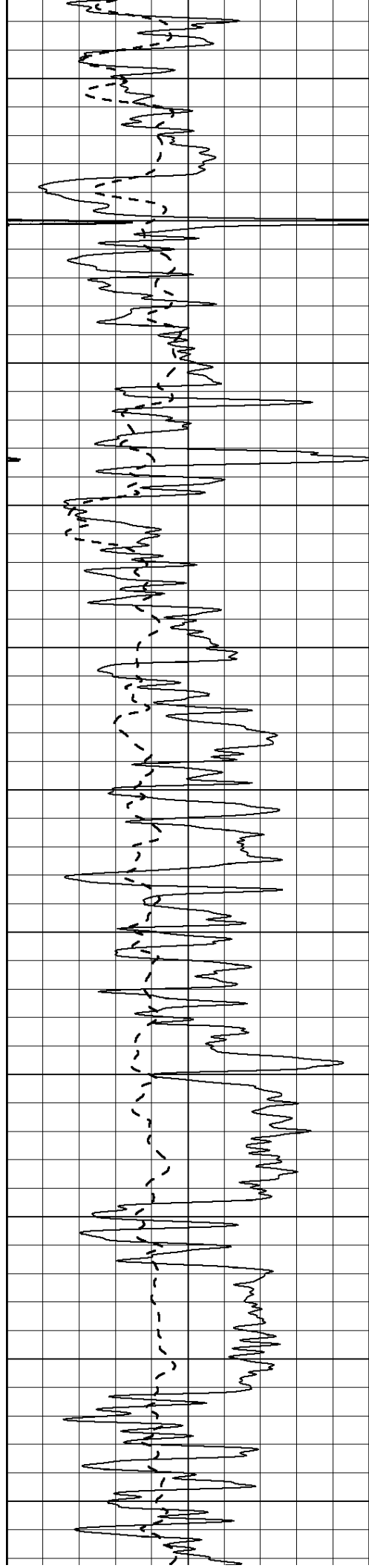
1900

1950

2000

2050





2100

2150

2200

2250

2300

2350

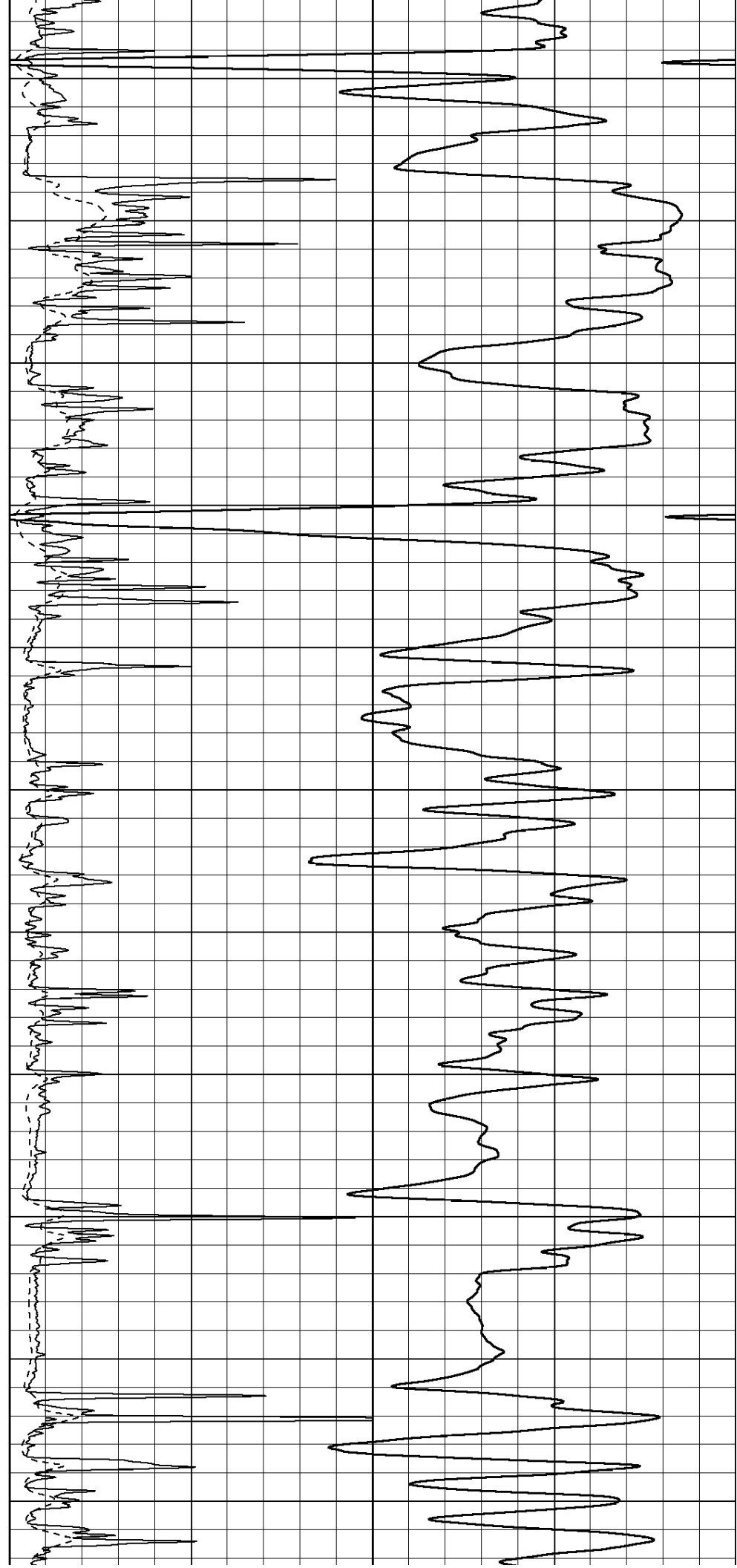
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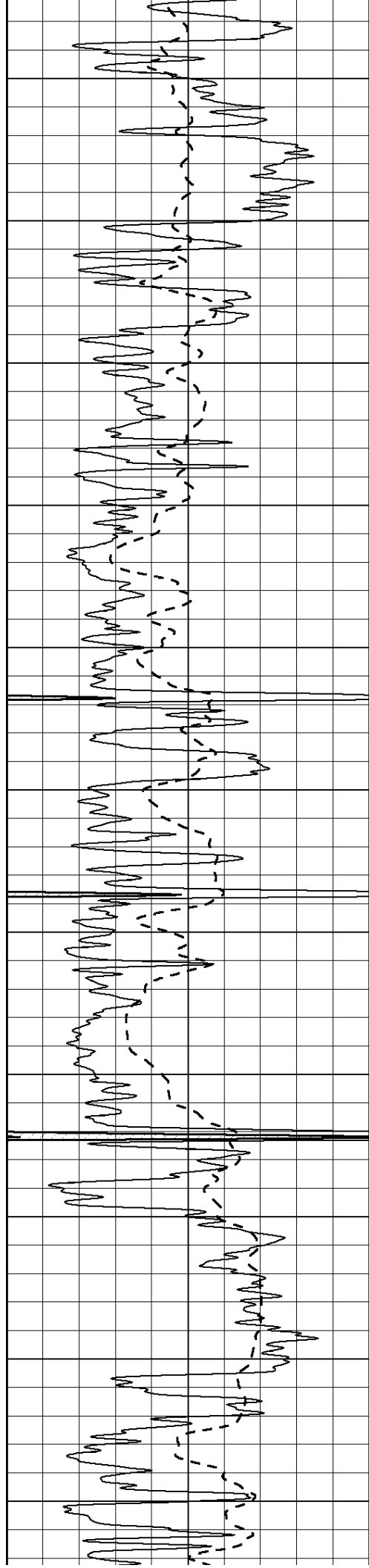
2450

2500

2550

2600





2650

2700

2750

2800

2850

2900

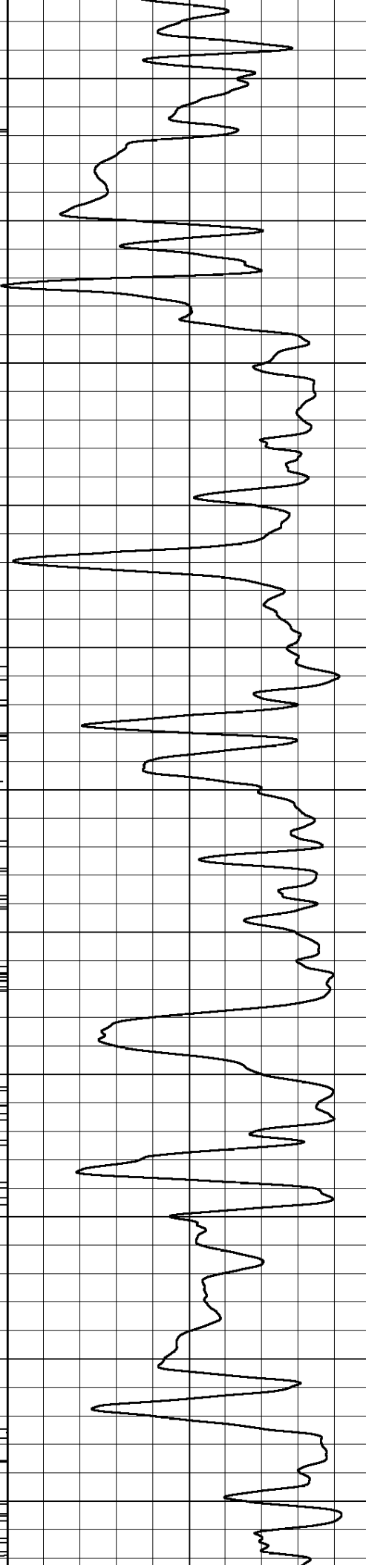
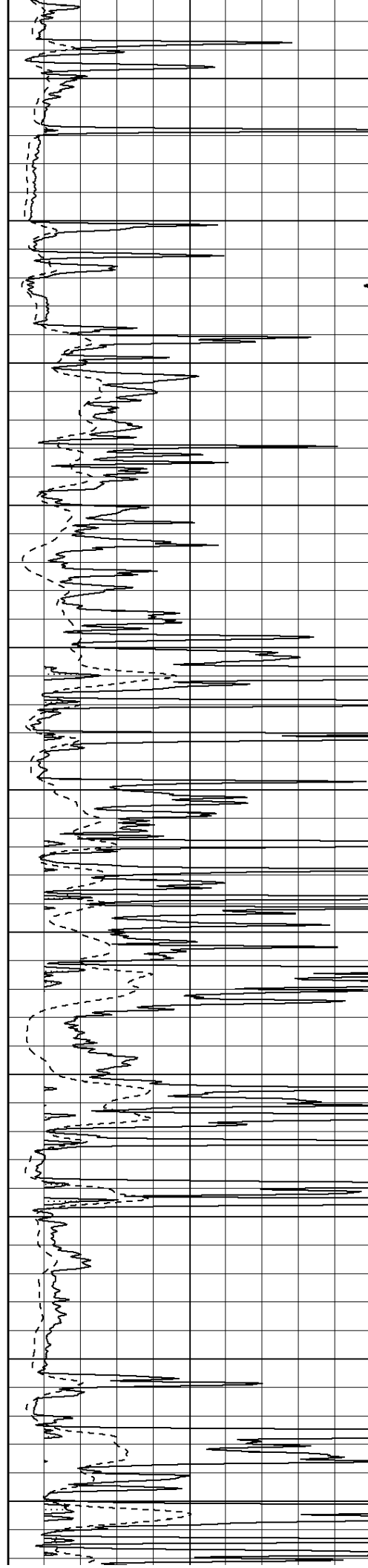
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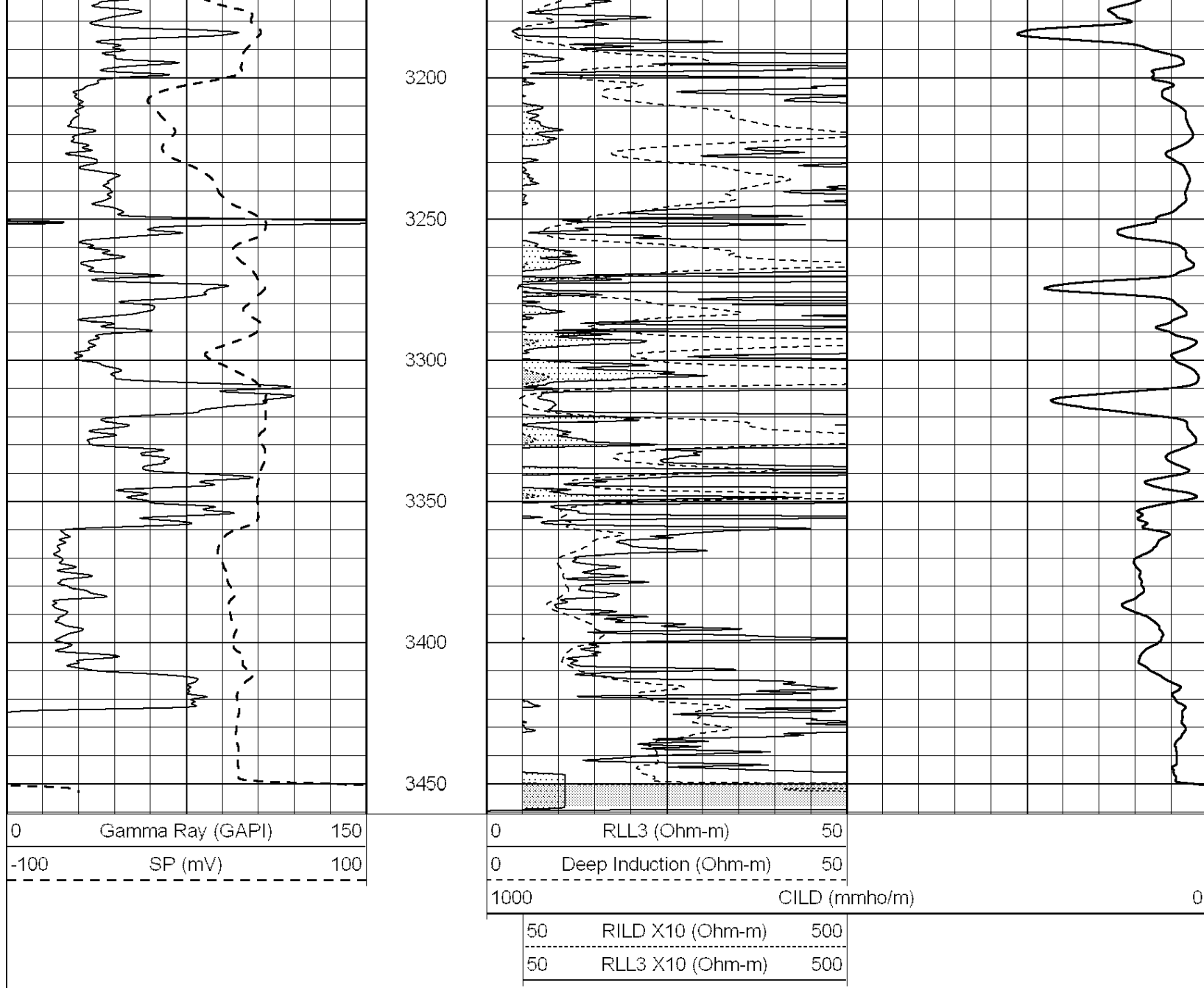
3000

3050

3100

3150

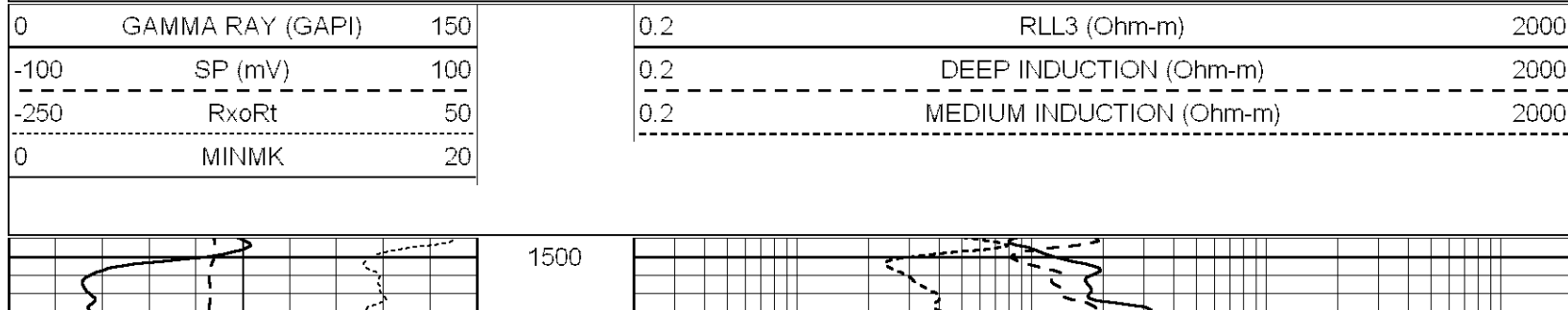


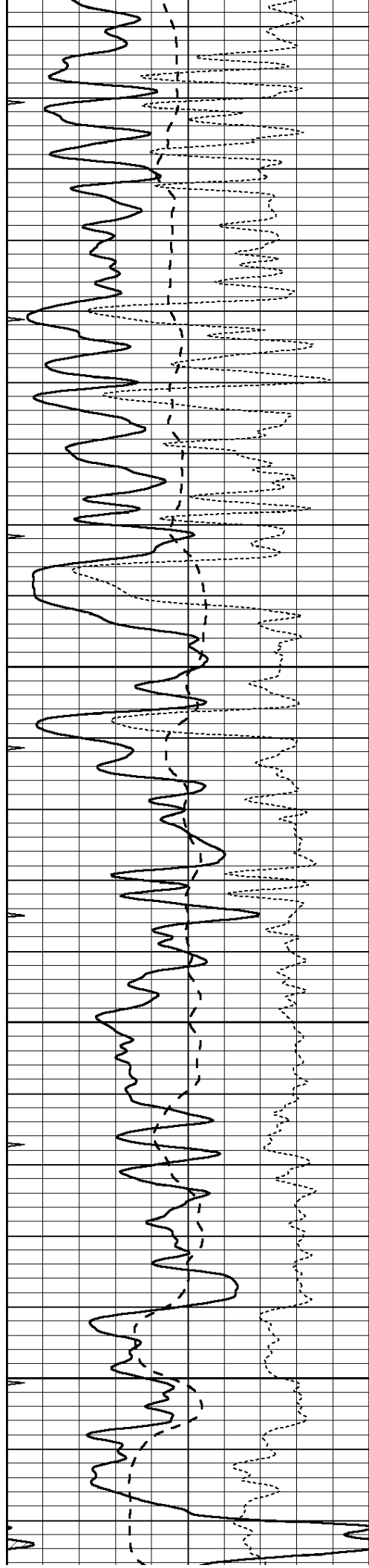


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MAIN SECTION

Database File: 001214ddn.db
 Dataset Pathname: pass3.1
 Presentation Format: dil
 Dataset Creation: Tue Dec 13 16:26:17 2011 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240



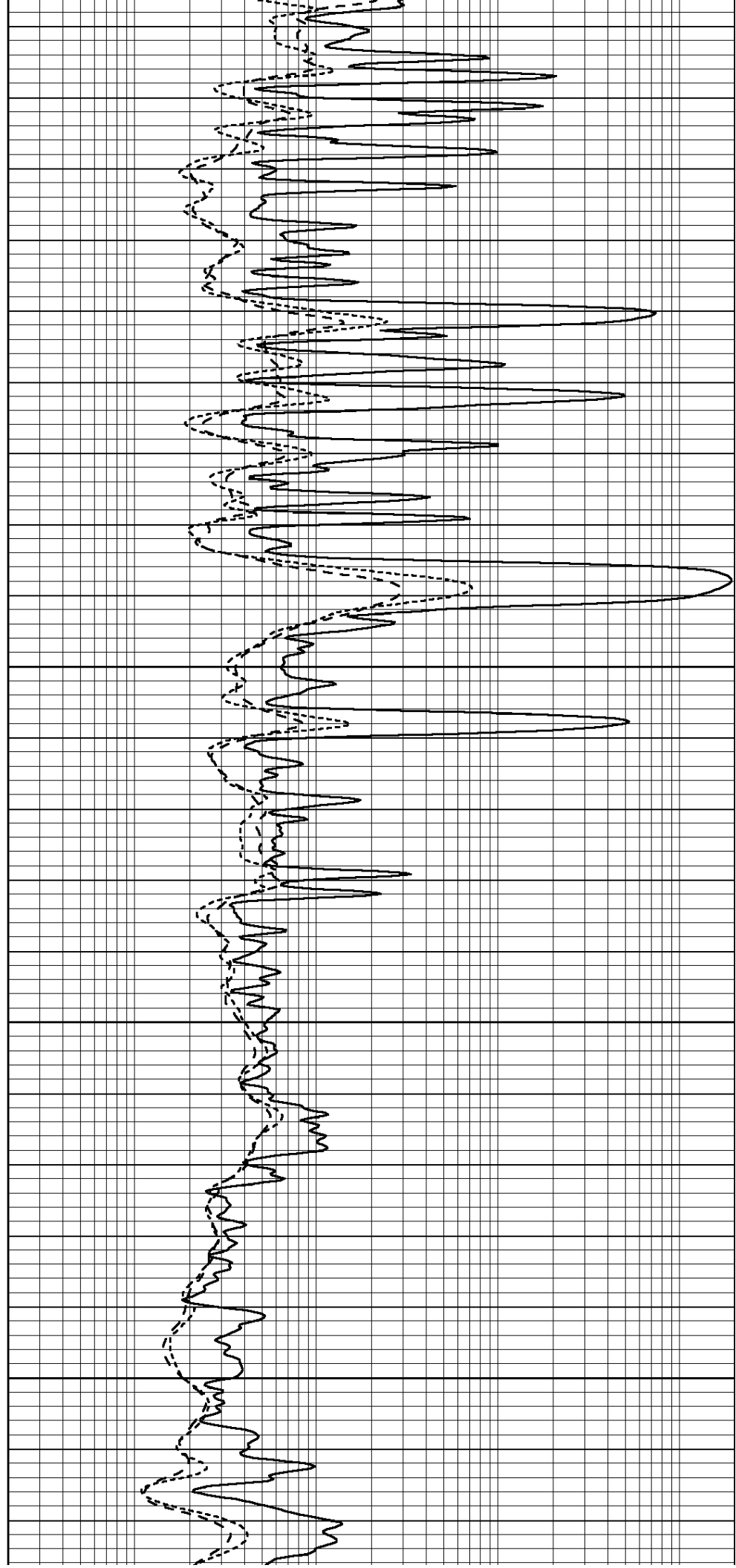


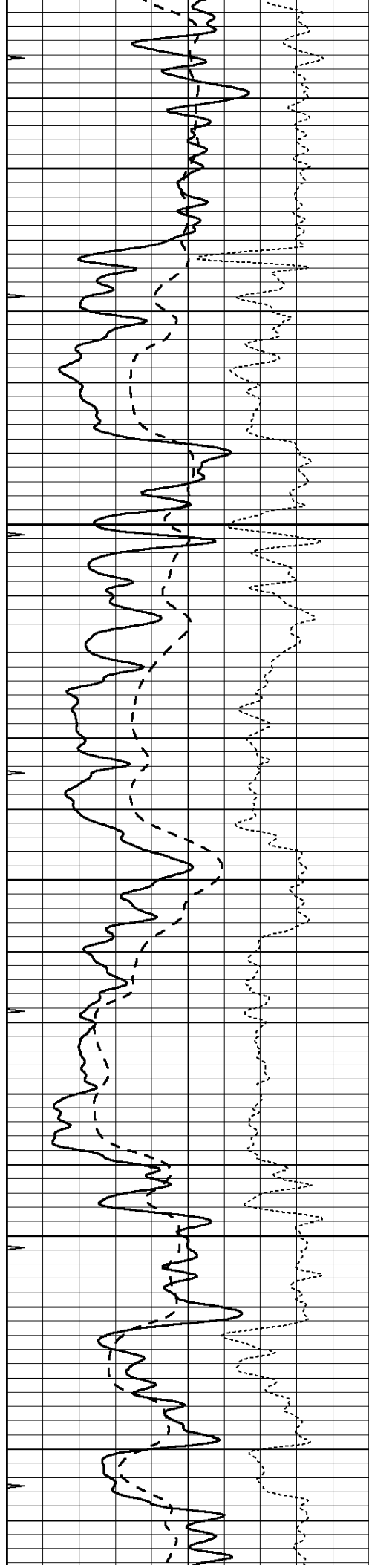
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1600

1650

1700



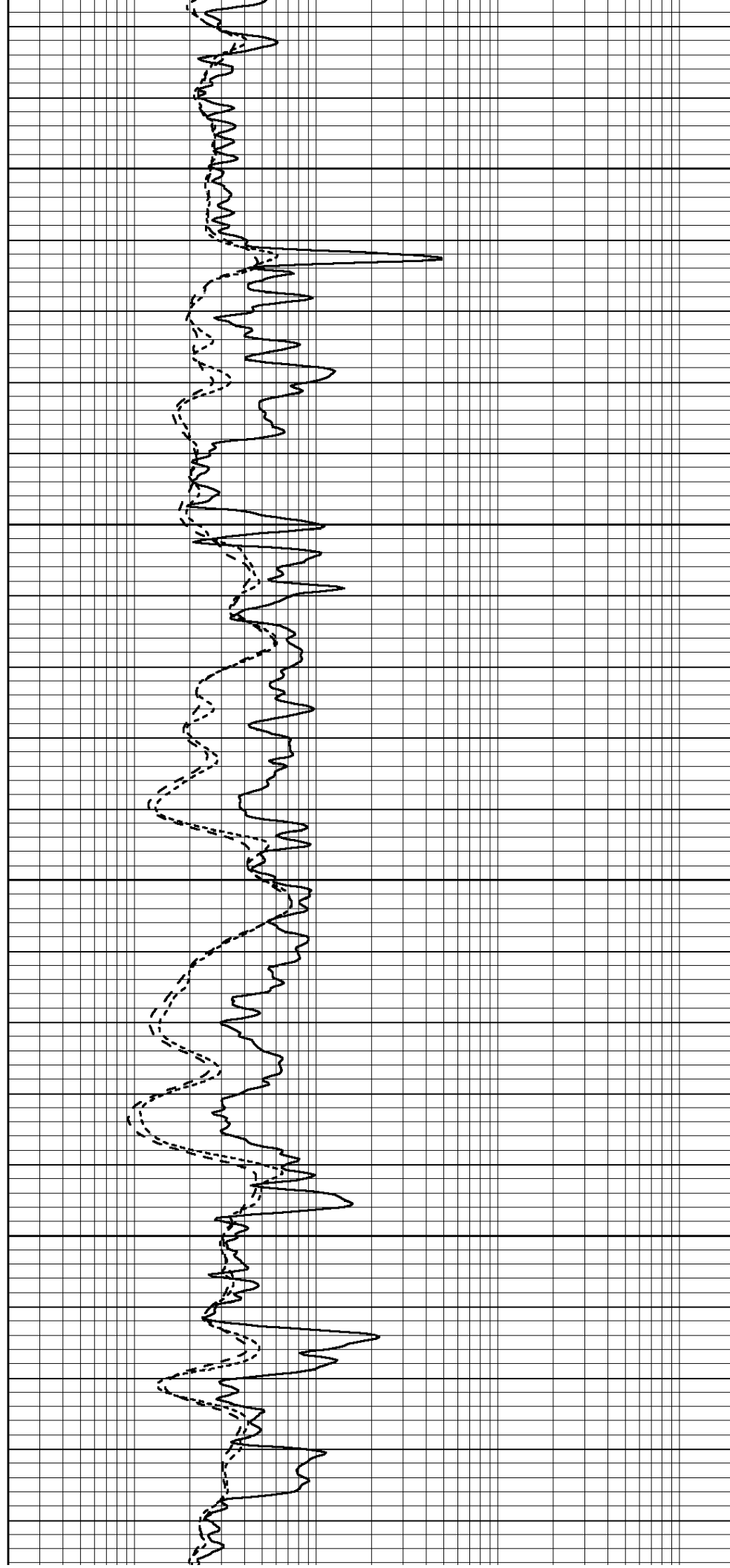


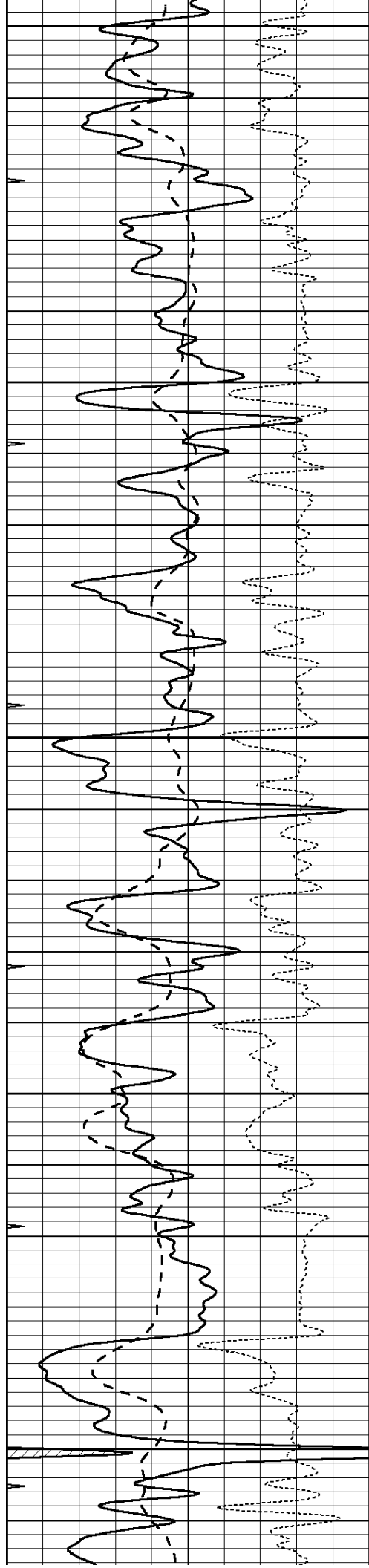
1750

1800

1850

1900





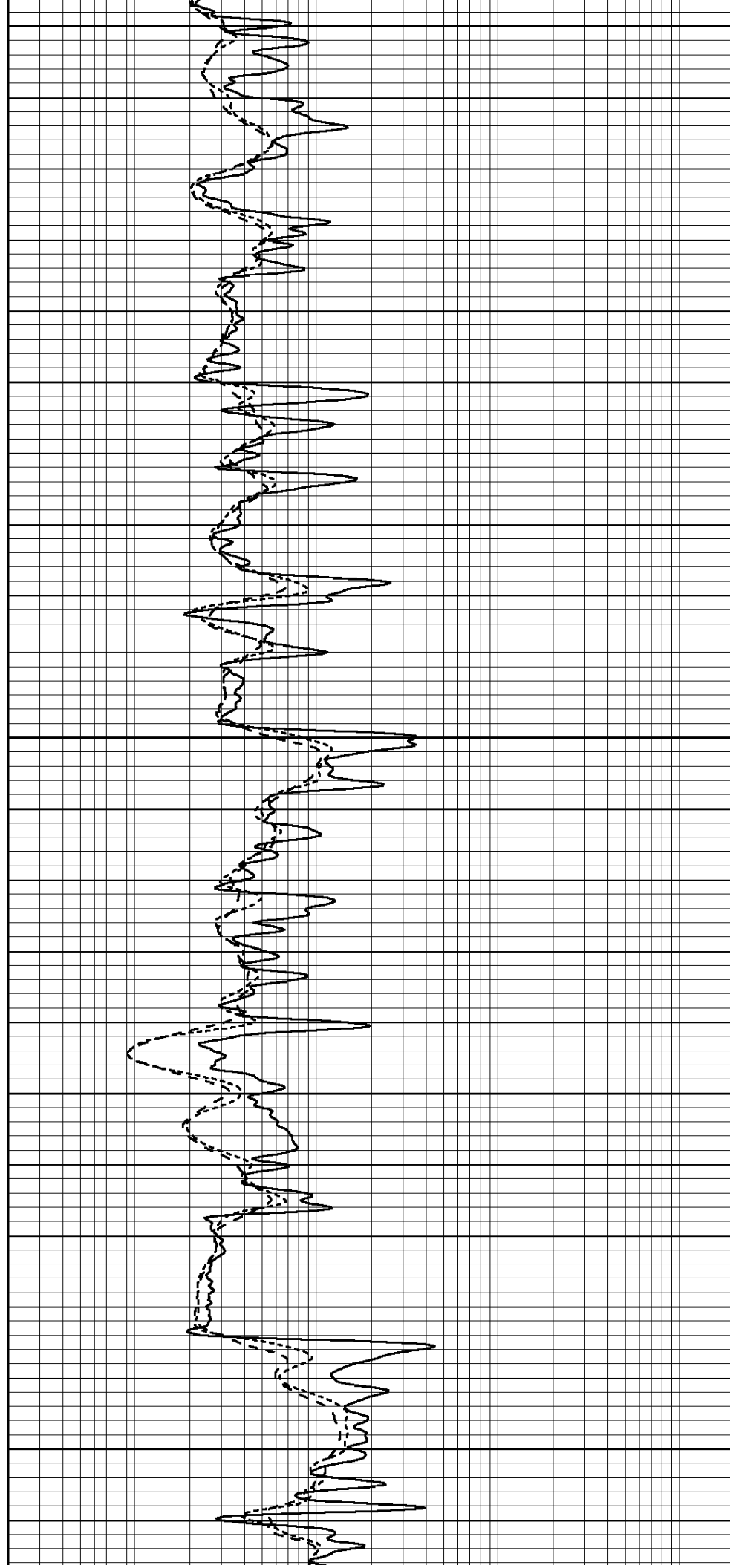
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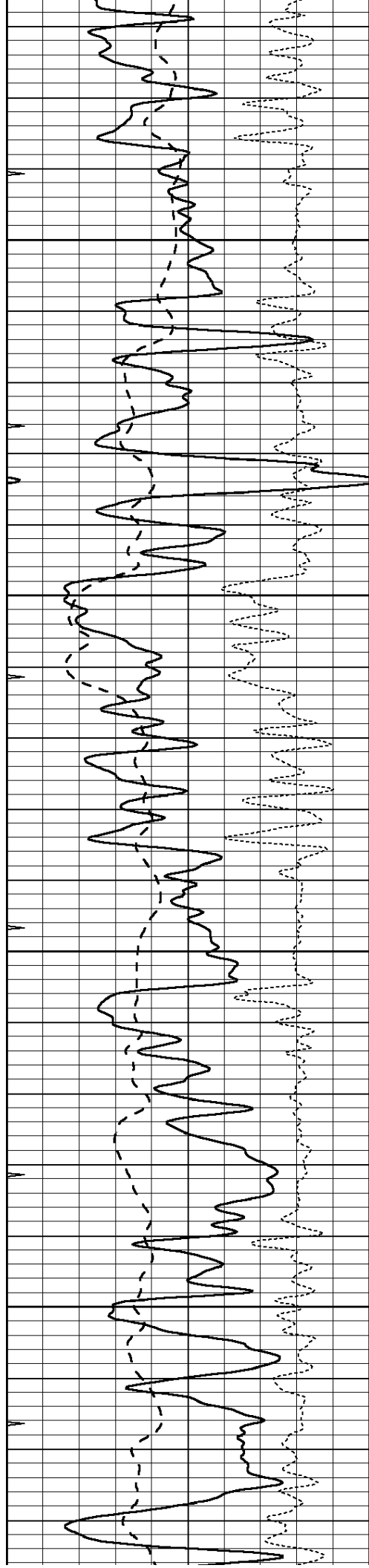
2000

2050

2100

2150



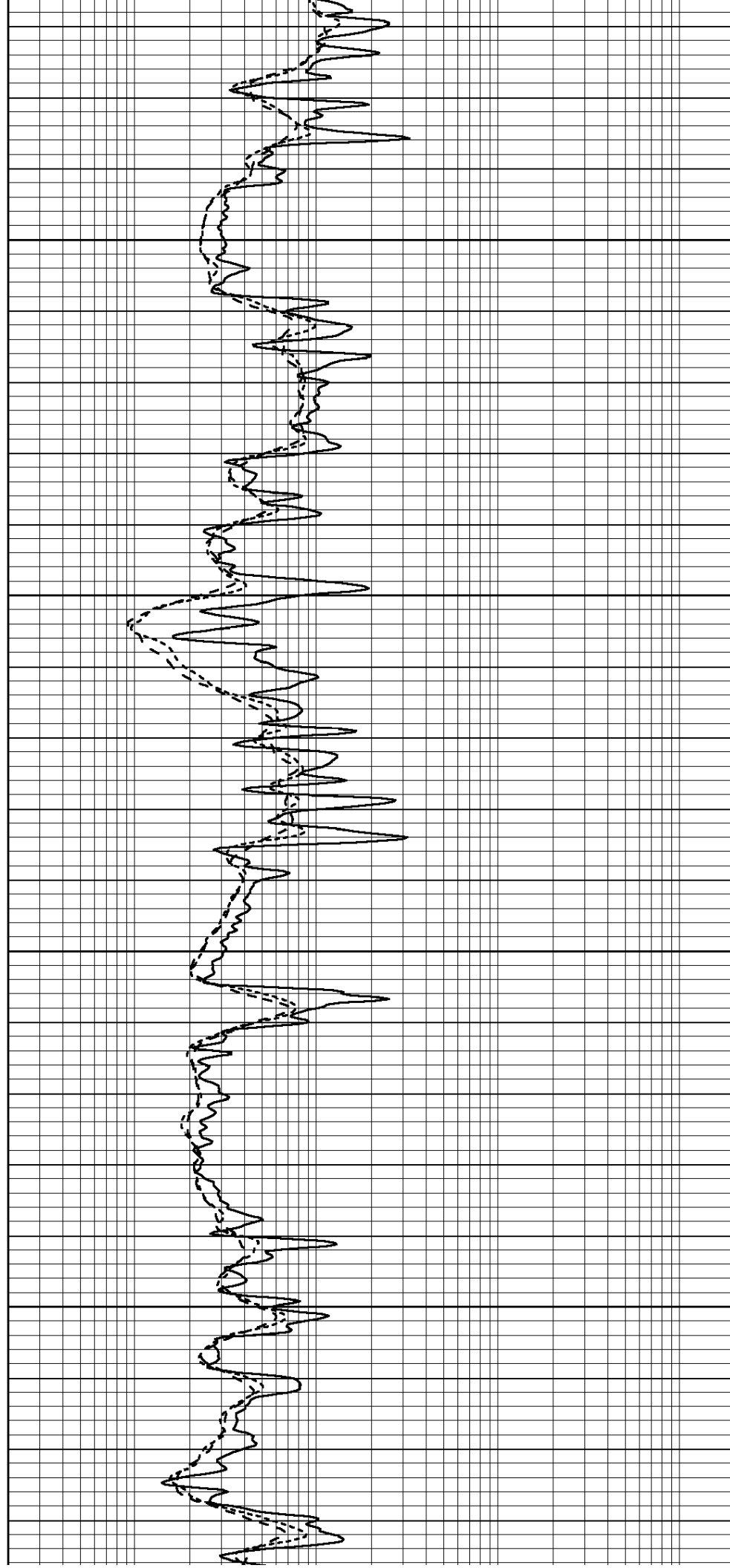


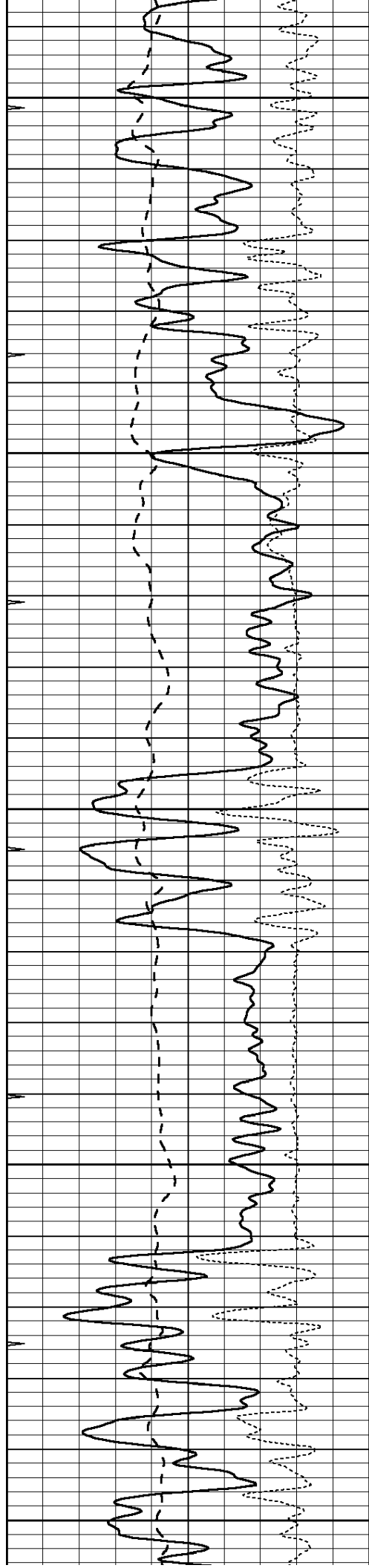
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2250

2300

2350





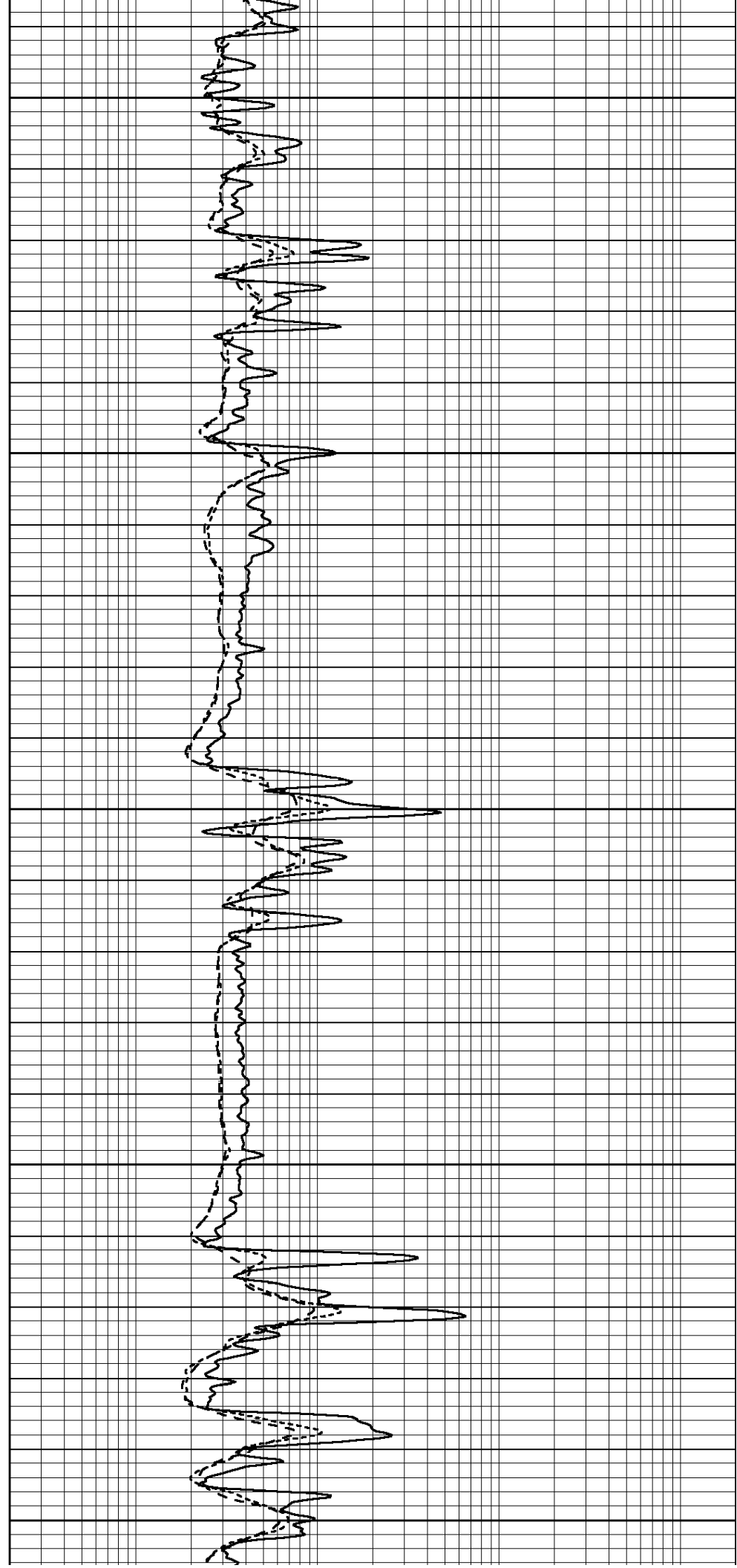
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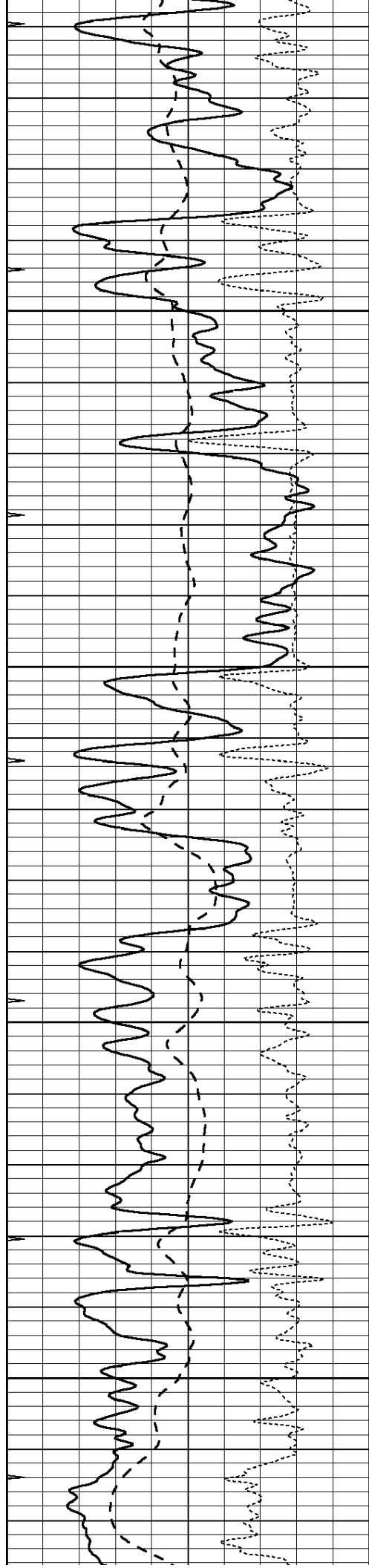
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2500

2550

2600



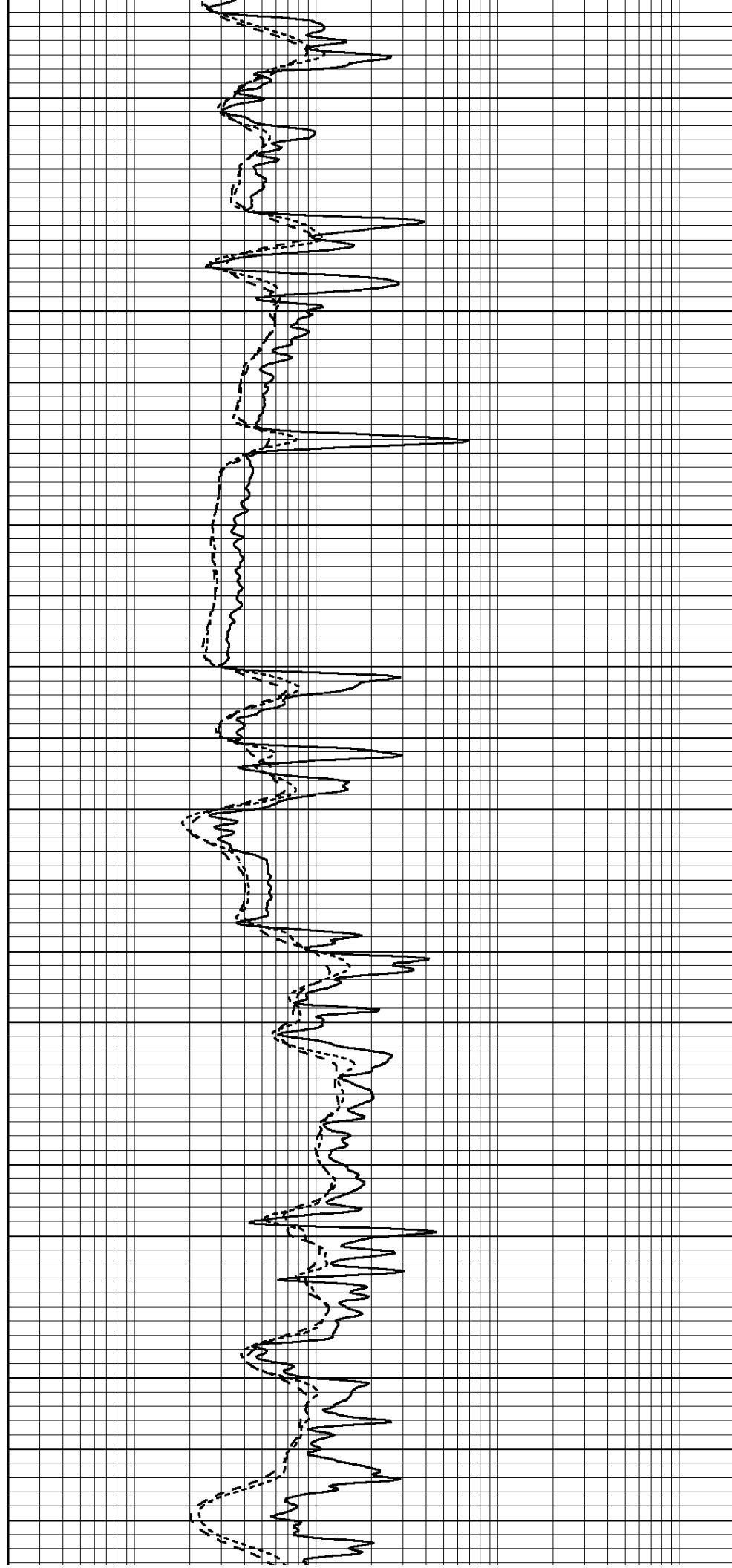


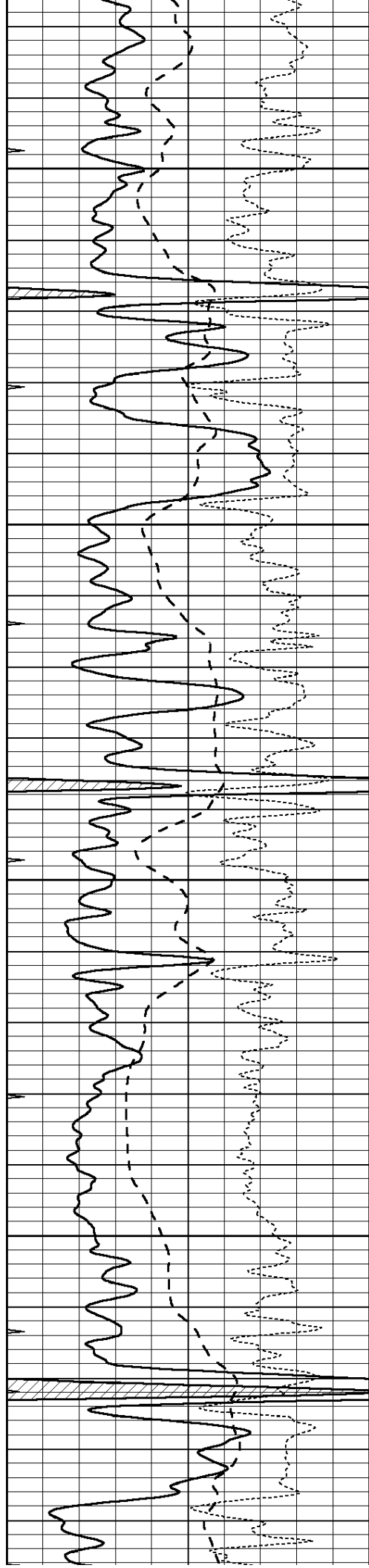
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2700

2750

2800



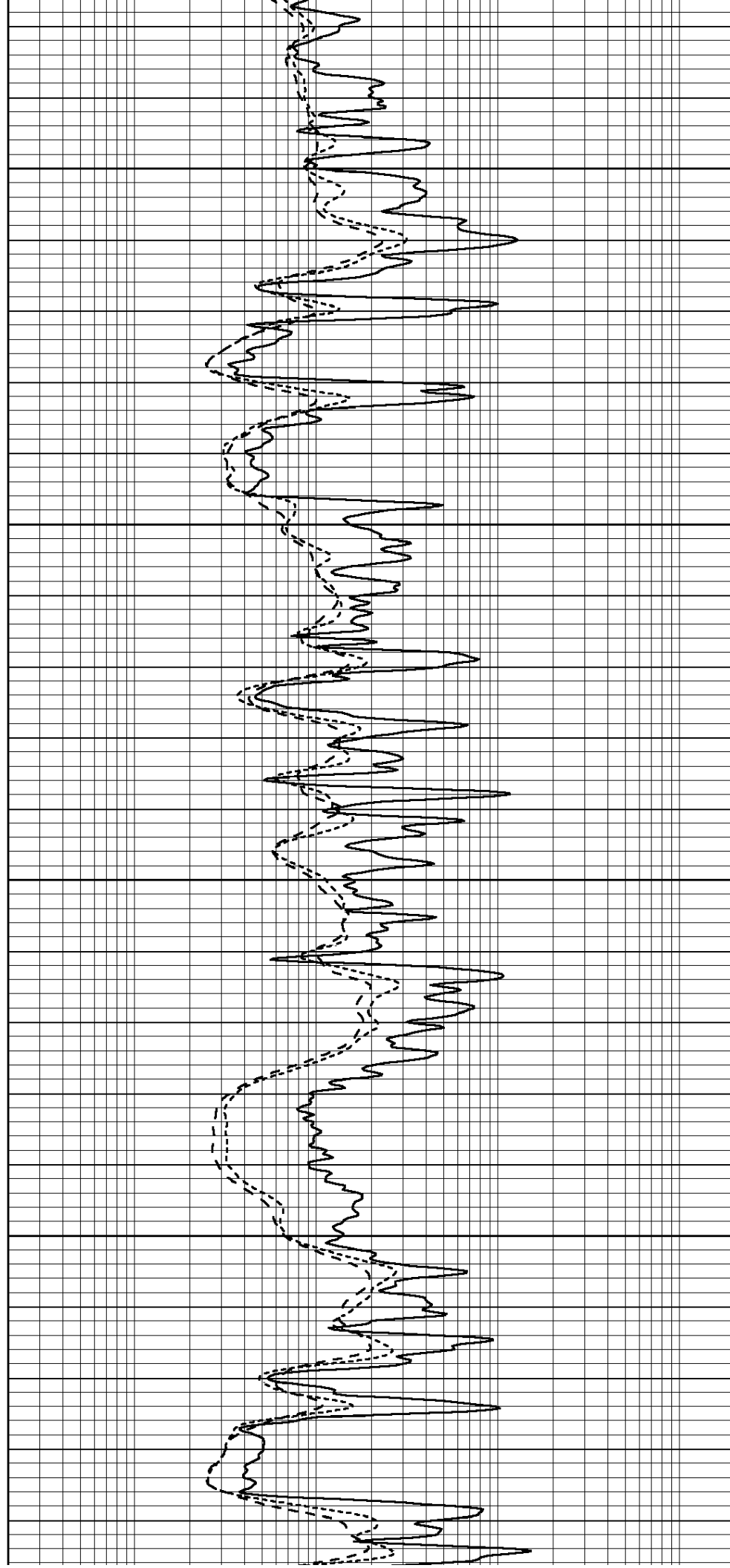


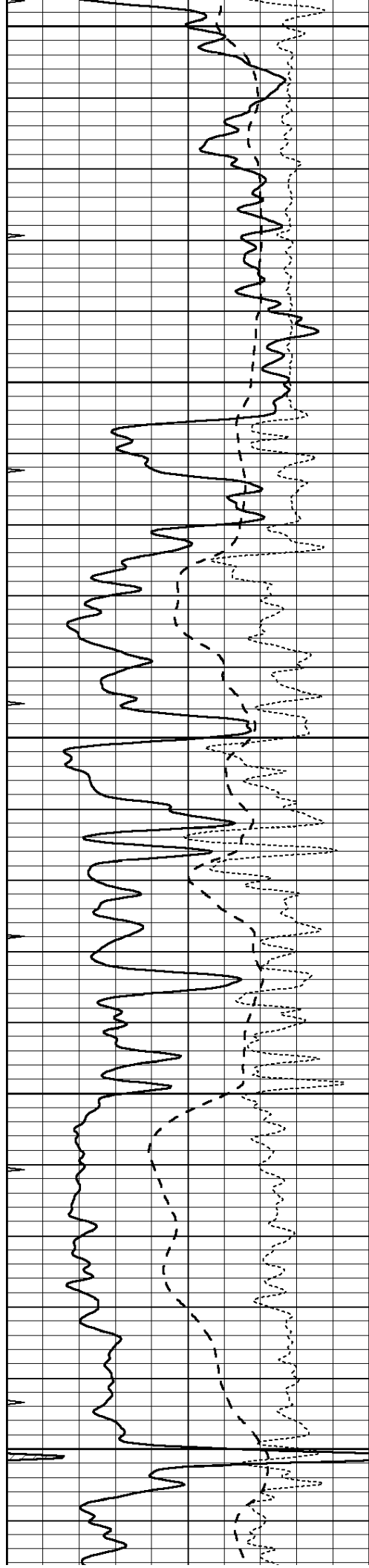
2850

2900

2950

3000





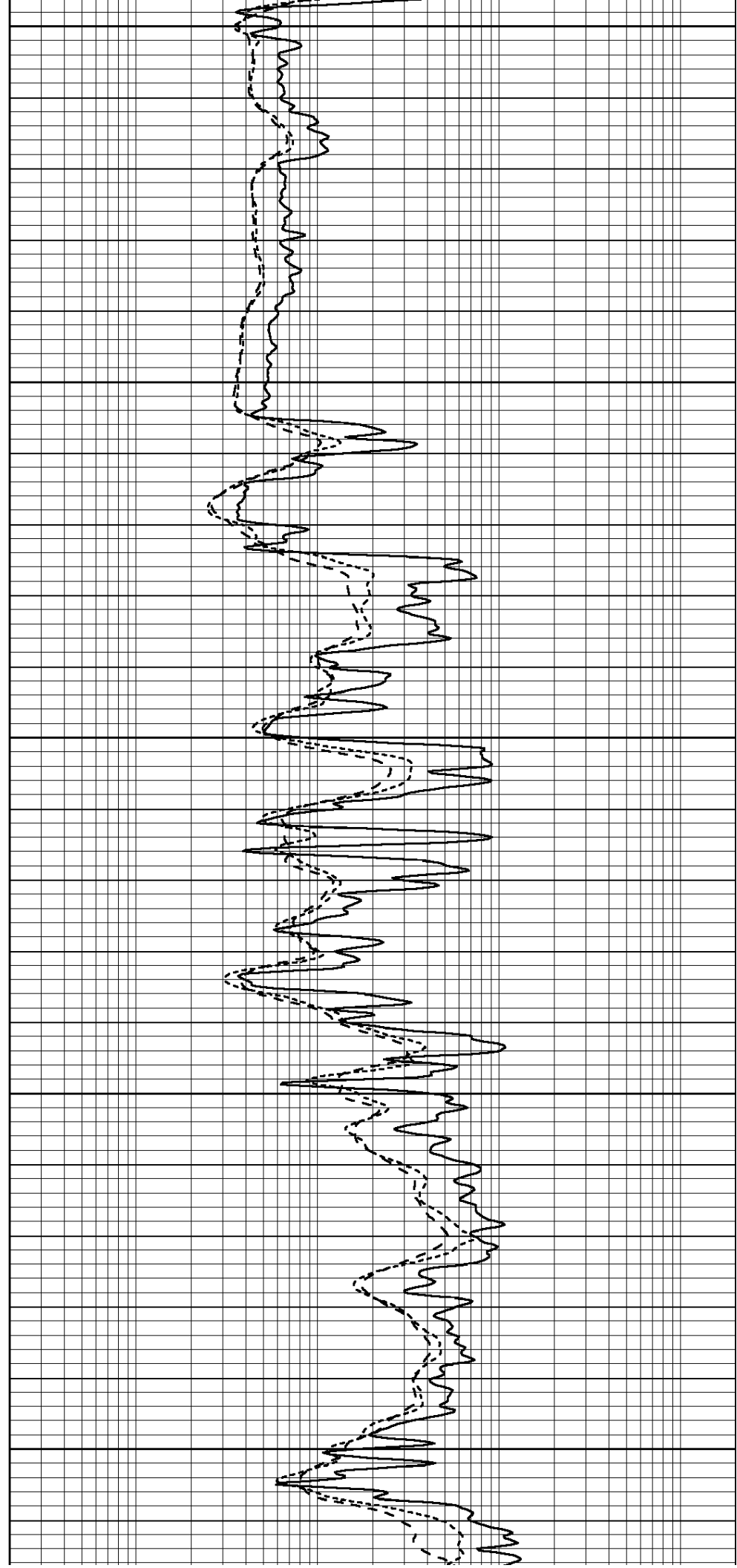
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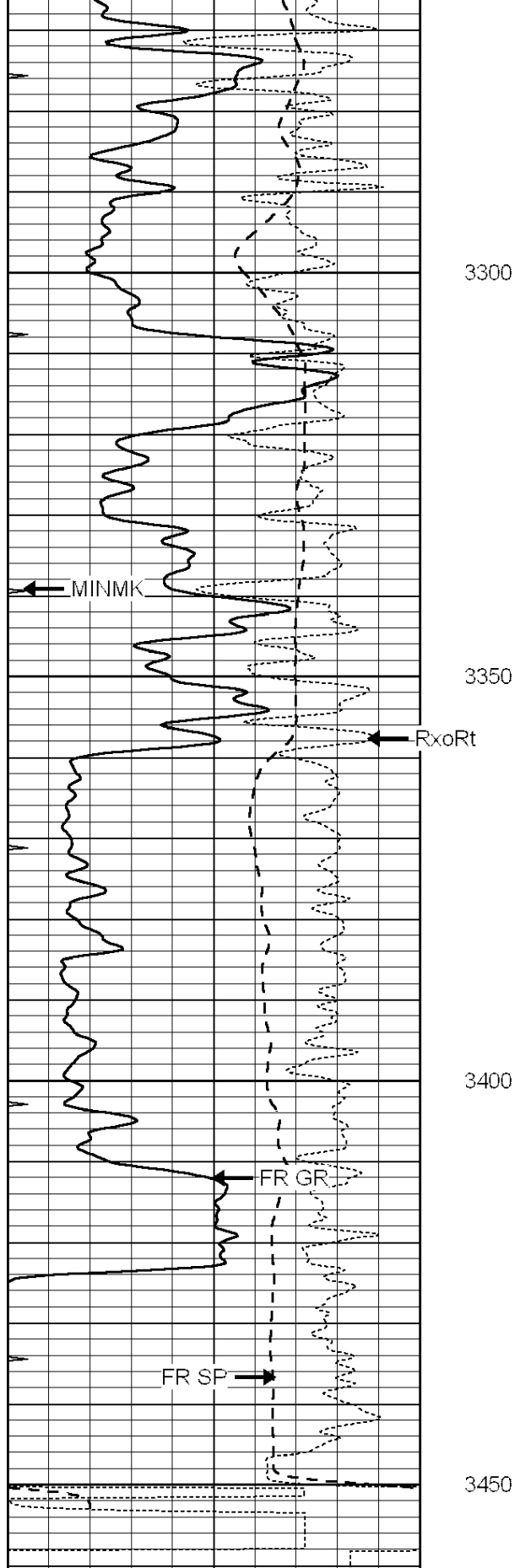
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3150

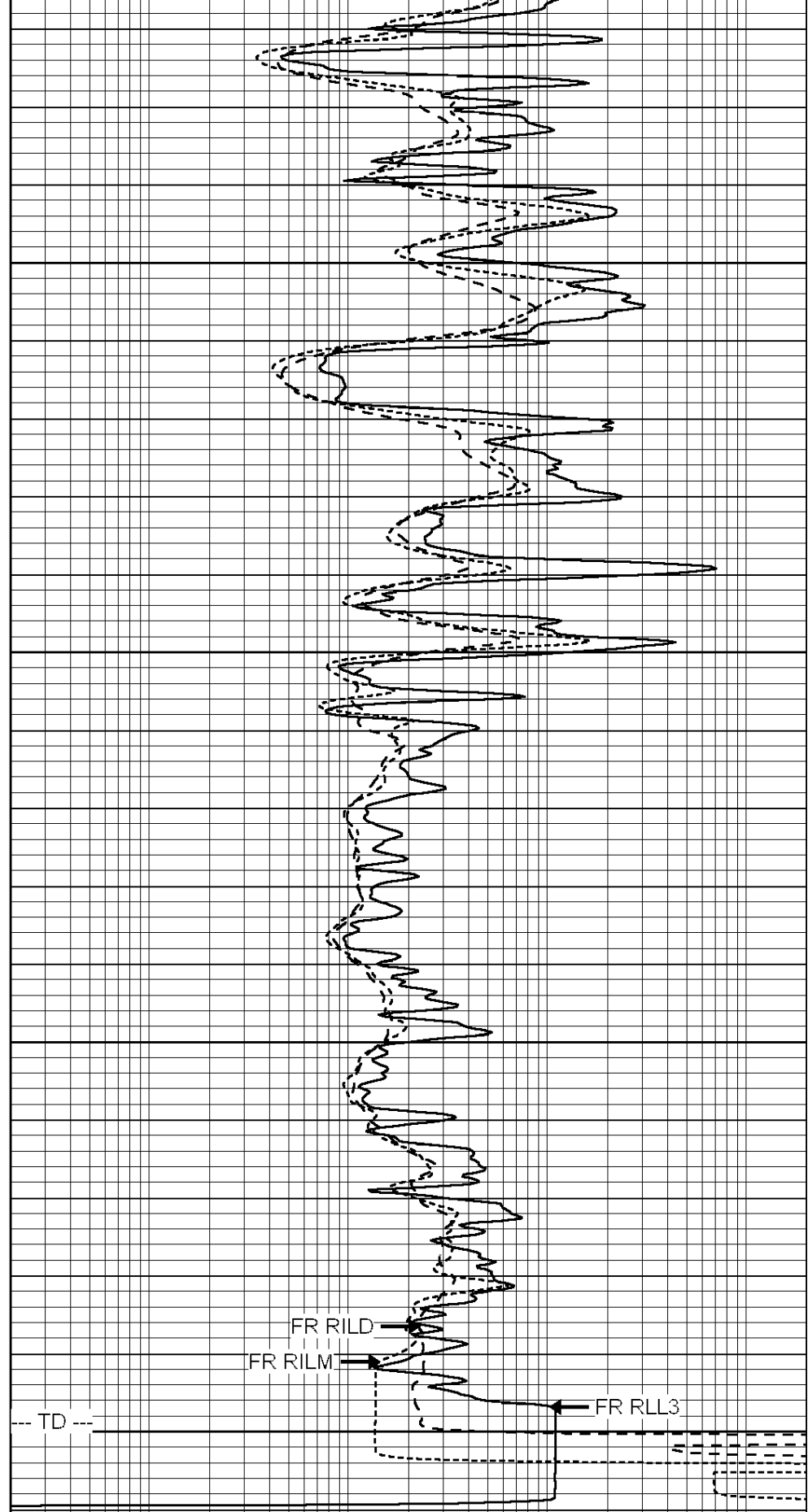
3200

3250





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: 001214ddn.db
Dataset Pathname: pass2.1A
Presentation Format: dil
Dataset Creation: Tue Dec 13 16:19:30 2011 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

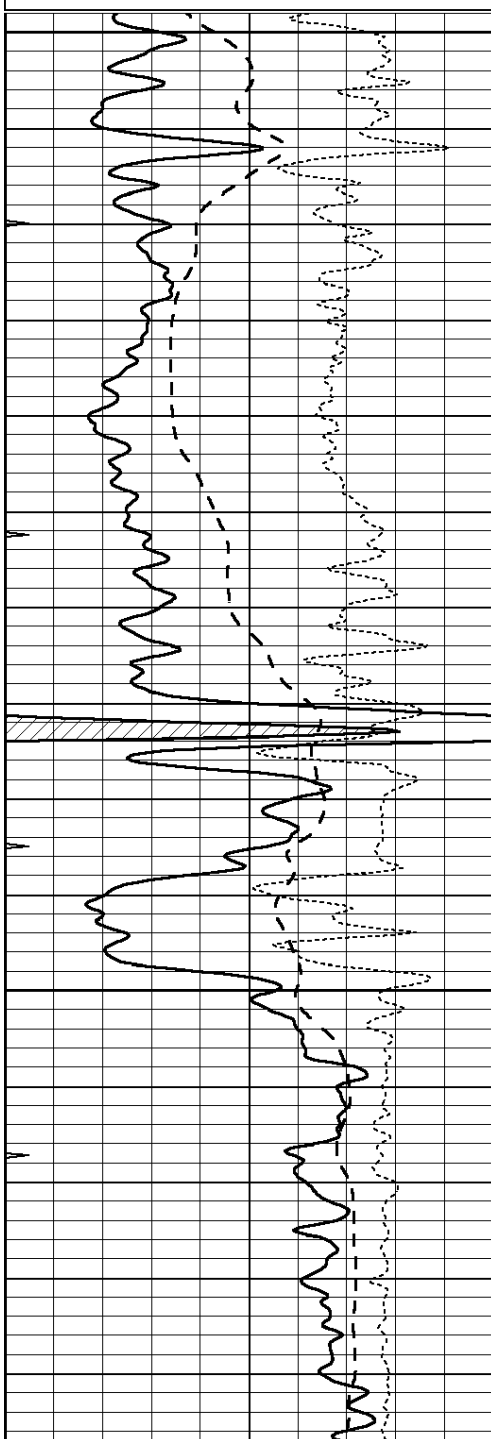
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100

-250	RxoRt	50

0	MINMK	20

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

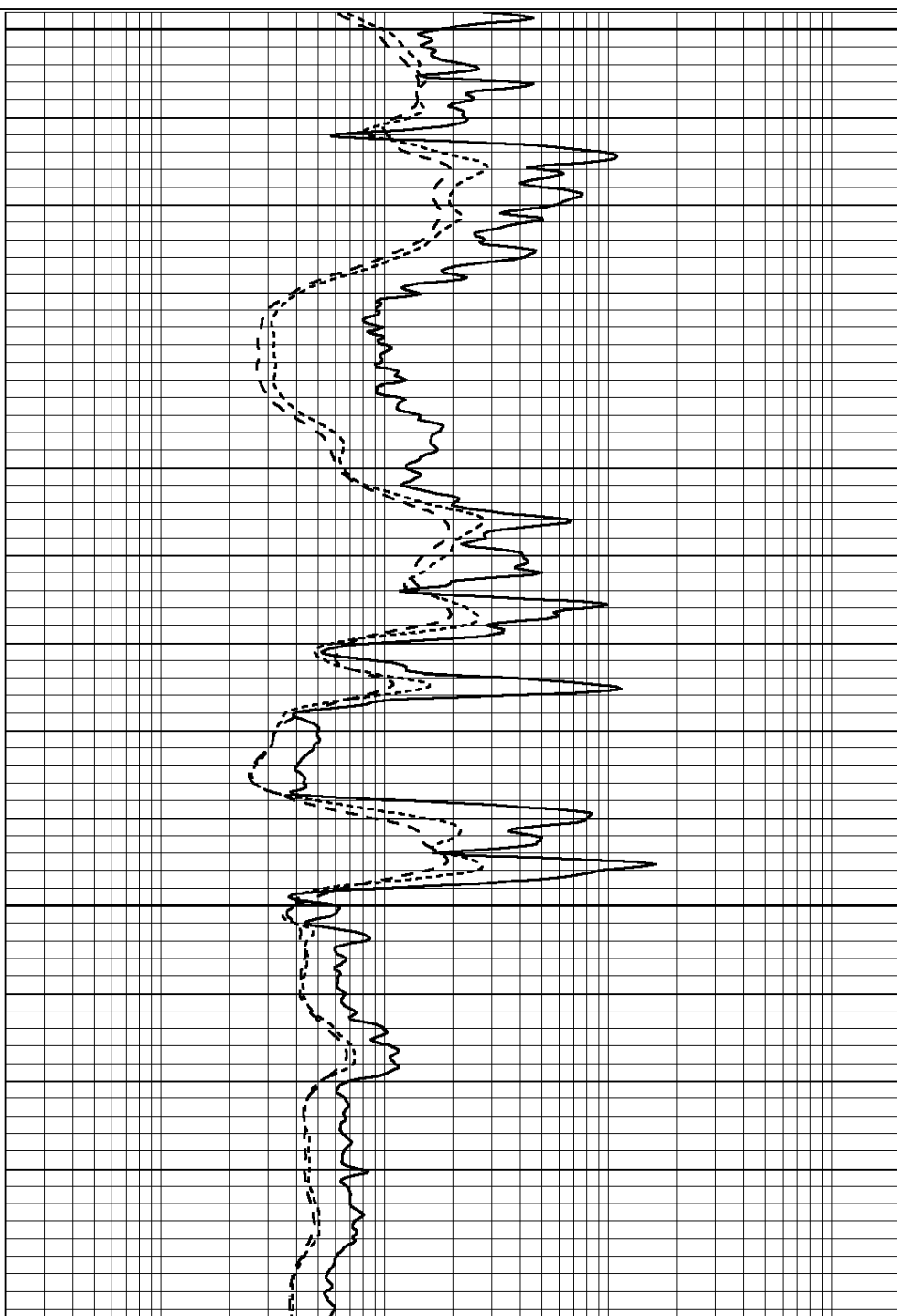
0.2	MEDIUM INDUCTION (Ohm-m)	2000

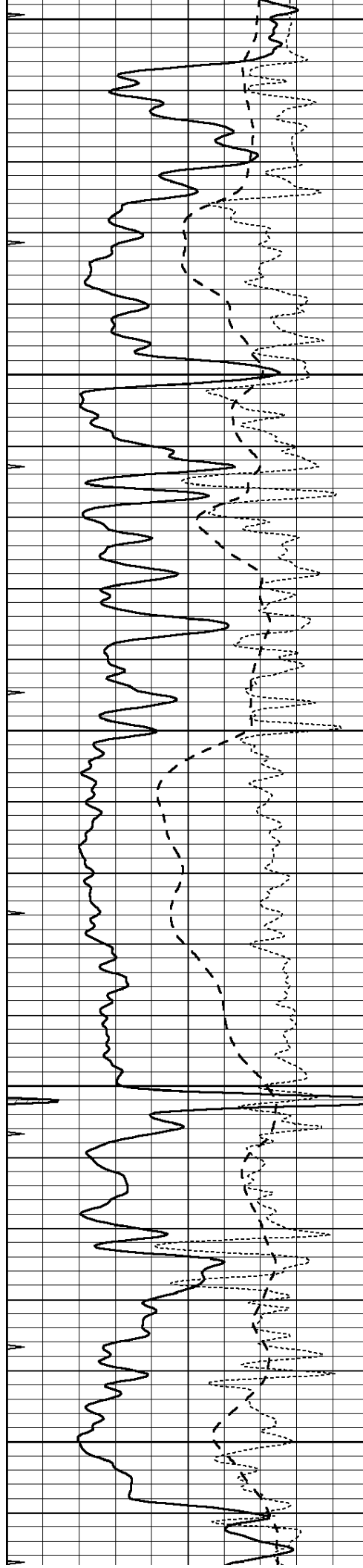


2950

3000

3050





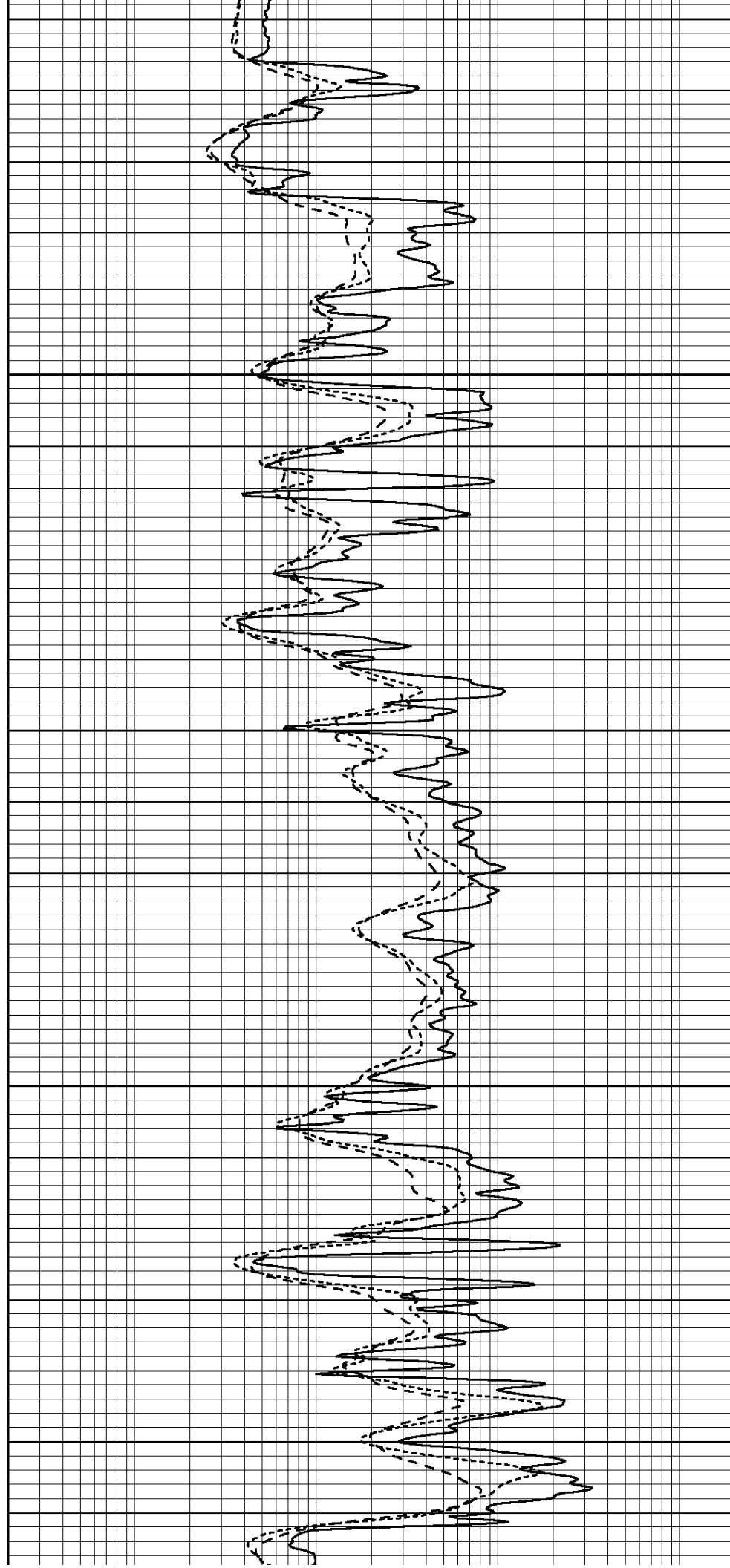
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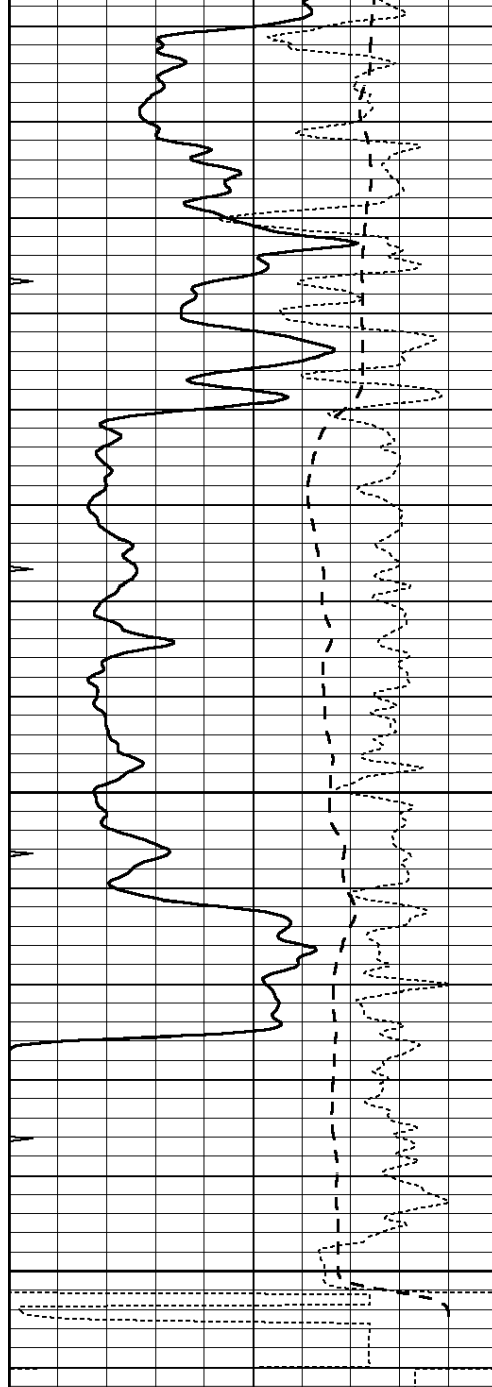
3150

3200

3250

3300



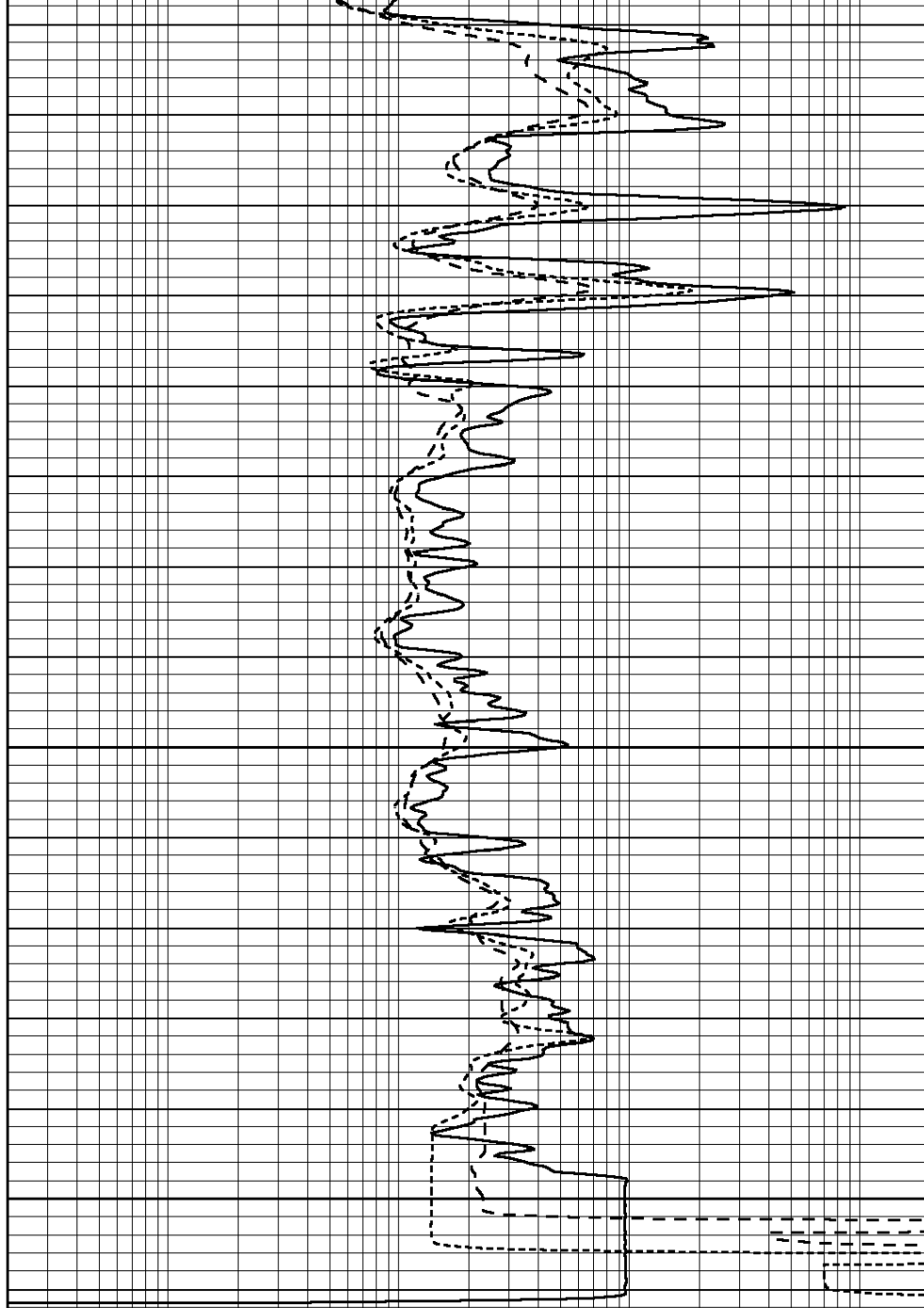


3350

3400

3450

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: 001214ddn.db
 Dataset Pathname: pass2.1A
 Dataset Creation: Tue Dec 13 16:19:30 2011 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: DIL5-GEAR
 Performed: Tue Dec 13 14:50:27 2011

Readings		References		Results	
Loop:	Air	Loop	Air	m	b

Deep	0.004	0.654	V	0.000	400.000	mmho/m	520.000	-16.000
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: Tue Dec 13 14:50:14 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	8.50	in	3.47	V		
Large Ring	14.00	in	5.80	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: Tue Dec 13 14:49:50 2011

 Calibrator Value: 1.0 GAPI

 Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

 Sensitivity: 0.6500 GAPI/cps