



**SUPERIOR
Hays,
Kansas**

**DUAL
INDUCTION
LOG**

Company	CAERUS KANSAS, LLC	Location:	API # : 15-185-23679	Other Services CDL/CNL SONIC/MEL
Well	WATERS #30-42	1651' FNL & 441' FEL		
Field	SATTERLEE			
County	STAFFORD	State KANSAS		
SEC 30 TWP 24S RGE 14W				
Permanent Datum	GROUND LEVEL	Elevation	1987	Elevation
Log Measured From	KELLY BUSHING 9' A.G.L.			K.B. 1996
Drilling Measured From	KELLY BUSHING			D.F. 1987
Date	6-23-11			
Run Number	ONE			
Depth Driller	4450			
Depth Logger	4449			
Bottom Logged Interval	4447			
Top Log Interval	00			
Casing Driller	266			
Casing Logger	264			
Bit Size	7.875			
Type Fluid in Hole	CHEMICAL MUD			
Density / Viscosity	9.4 / 58			
pH / Fluid Loss	9.5 / 9.2			
Source of Sample	FLOWLINE			
Rim @ Meas. Temp	0.80 @ 95F			
Rmf @ Meas. Temp	0.60 @ 95F			
Rmc @ Meas. Temp	0.96 @ 95F			
Source of Rmf / Rmc	MEASAURED			
Rim @ BHT	.640 @ 119F			
Time Circulation Stopped	2 HOURS			
Time Logger on Bottom	1:15 A.M.			
Maximum Recorded Temperature	119F			
Equipment Number	860			
Location	HAYS, KS.			
Recorded By	RUPP			
Witnessed By	HERB DIENES			

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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: MACKSVILLE, 4E, 1 1/2S, W INTO.



**SUPERIOR
Hays,
Kansas**

MAIN SECTION

Database File: 006941ddn.db
 Dataset Pathname: pass3.4A
 Presentation Format: dil2
 Dataset Creation: Thu Jun 23 06:54:41 2011
 Charted by: Depth in Feet scaled 1:600

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

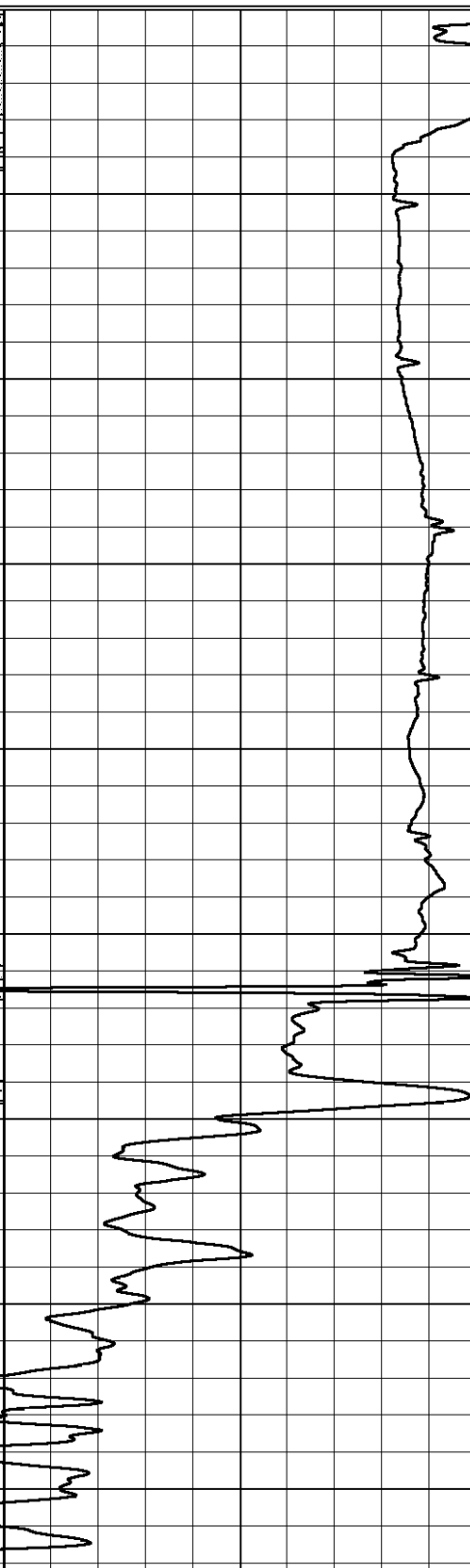
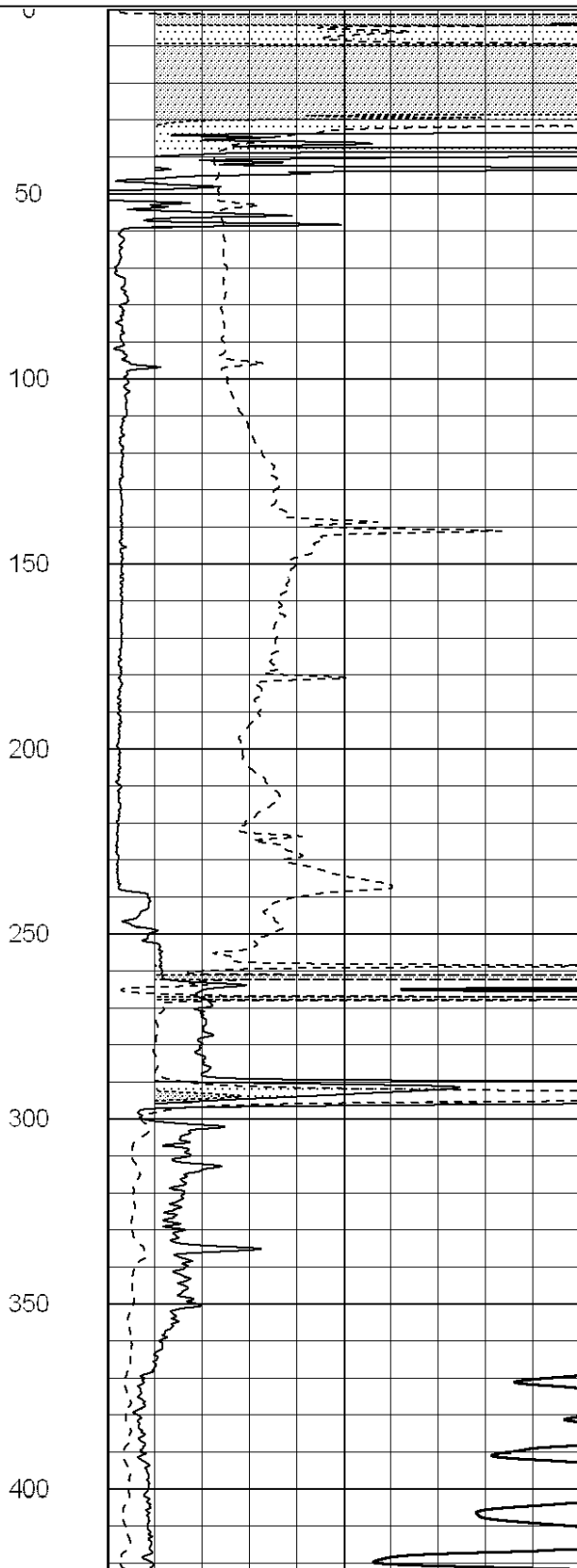
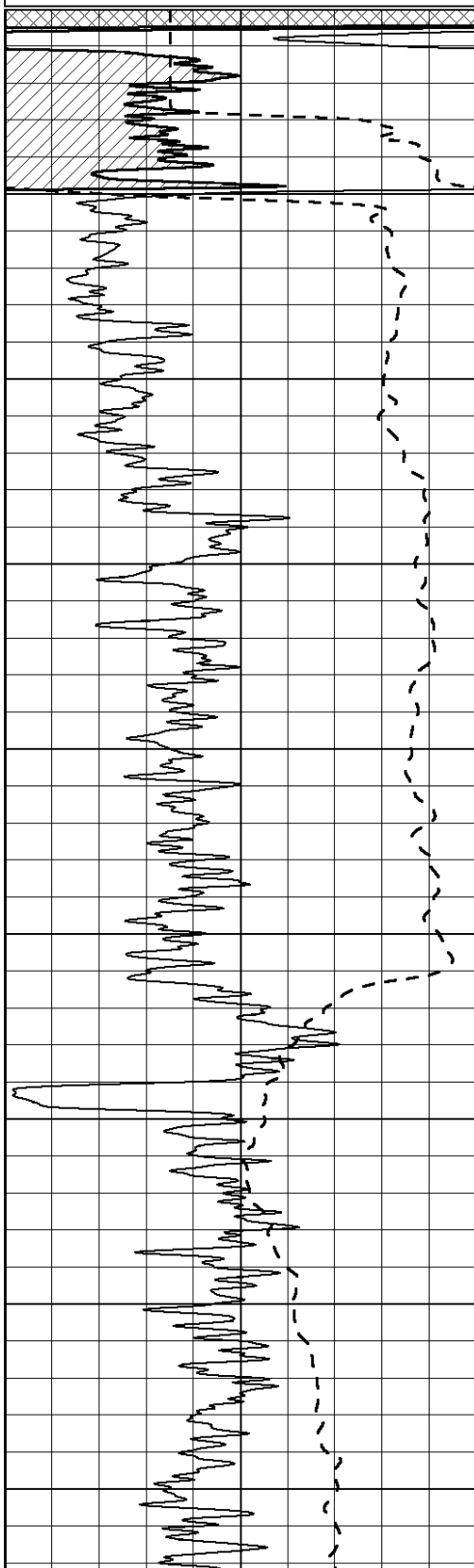
0	RLL3 (Ohm-m)	50
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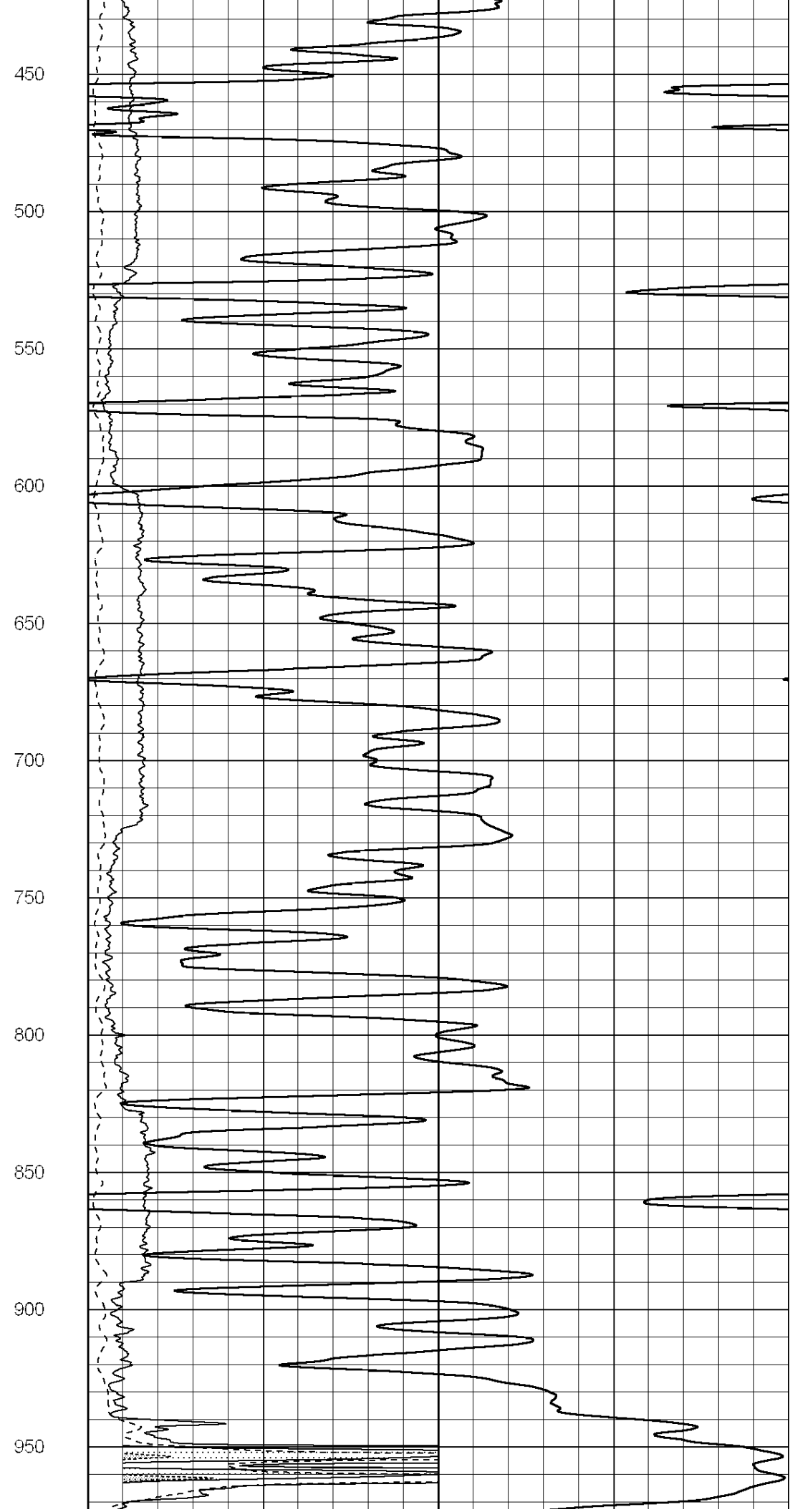
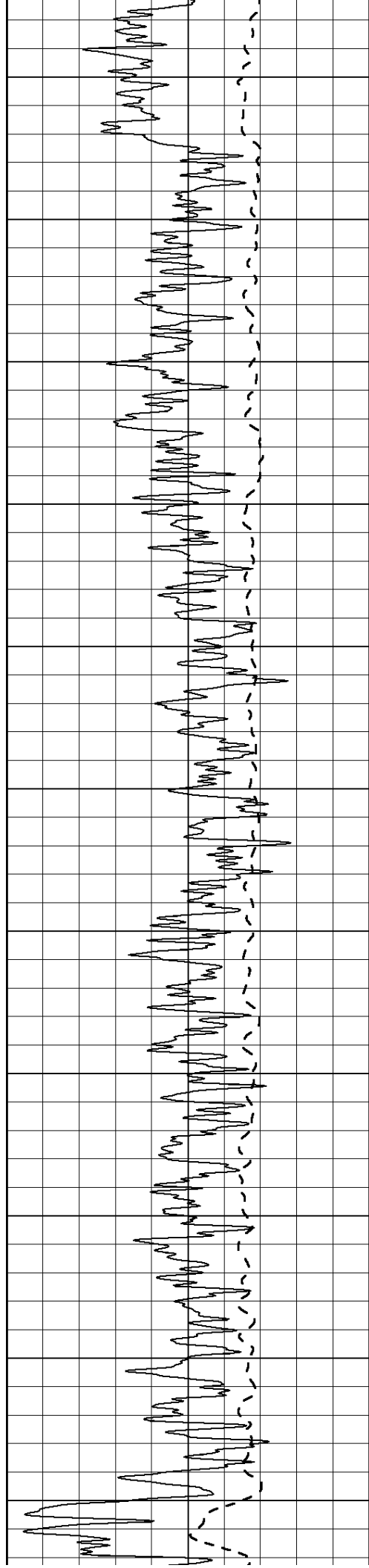
0	Deep Induction (Ohm-m)	50
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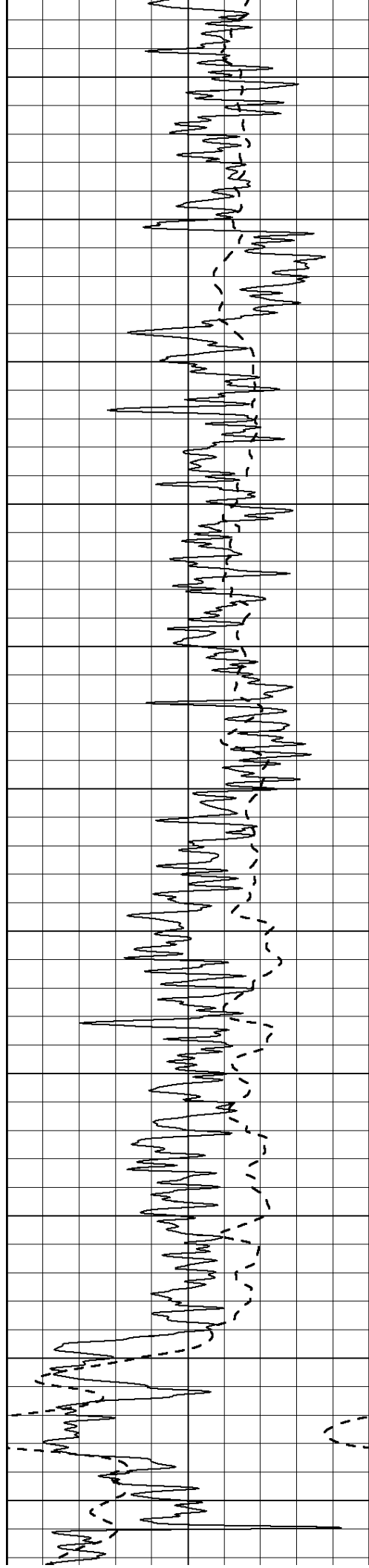
1000	CILD (mmho/m)	0
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50	RILD X10 (Ohm-m)	500
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50	RLL3 X10 (Ohm-m)	500
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1000

1050

1100

1150

1200

1250

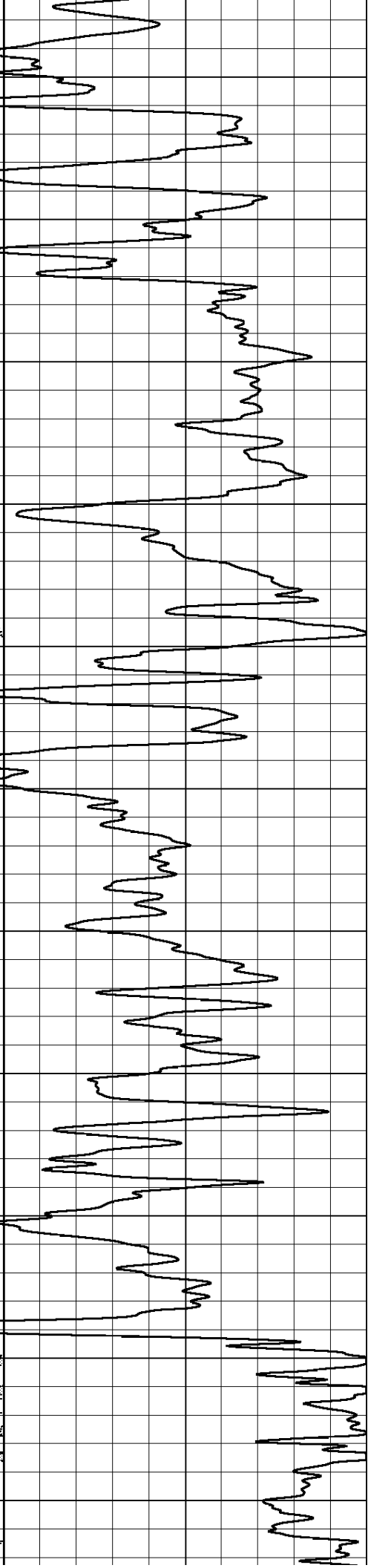
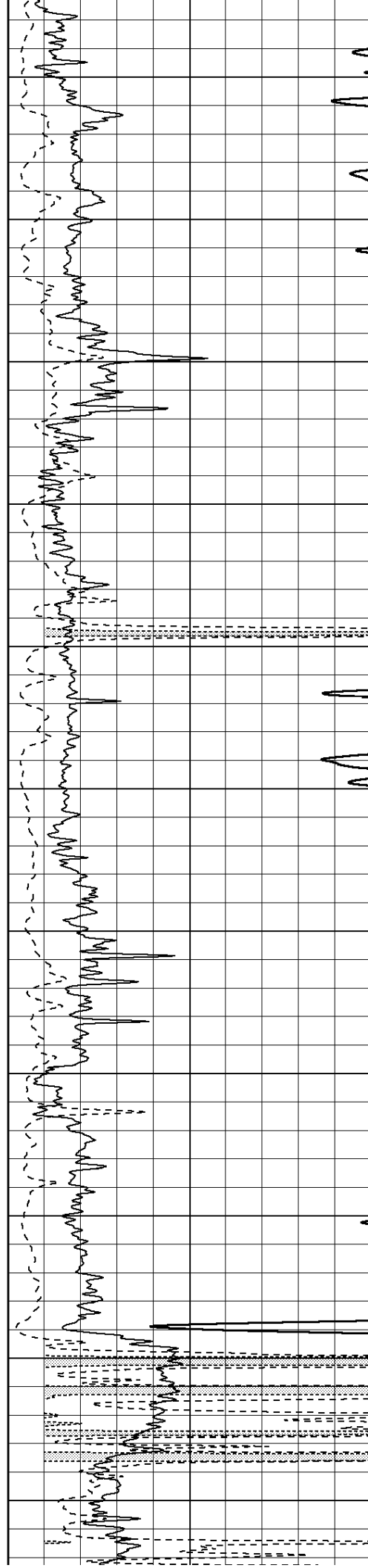
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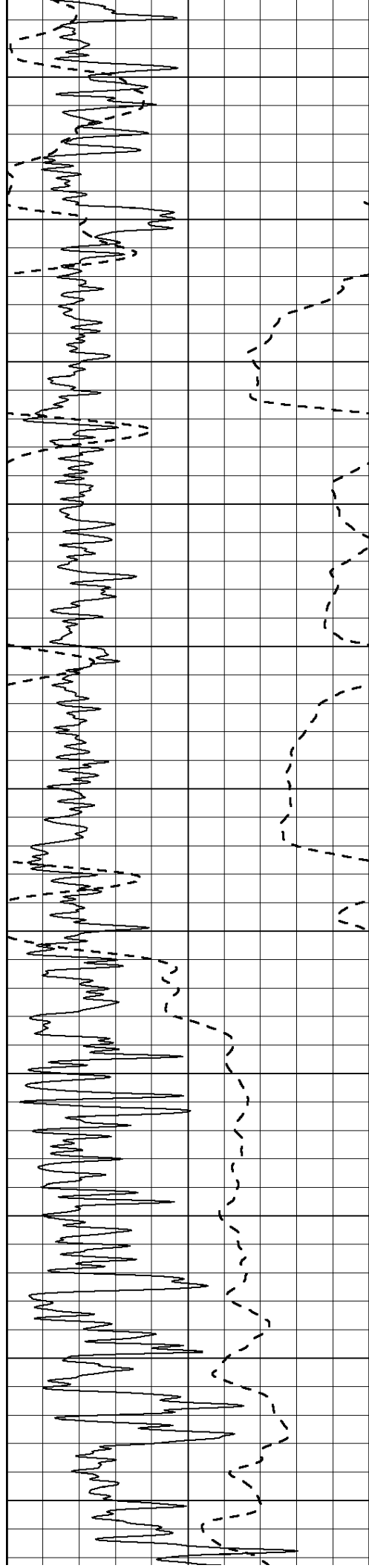
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1400

1450

1500





1550

1600

1650

1700

1750

1800

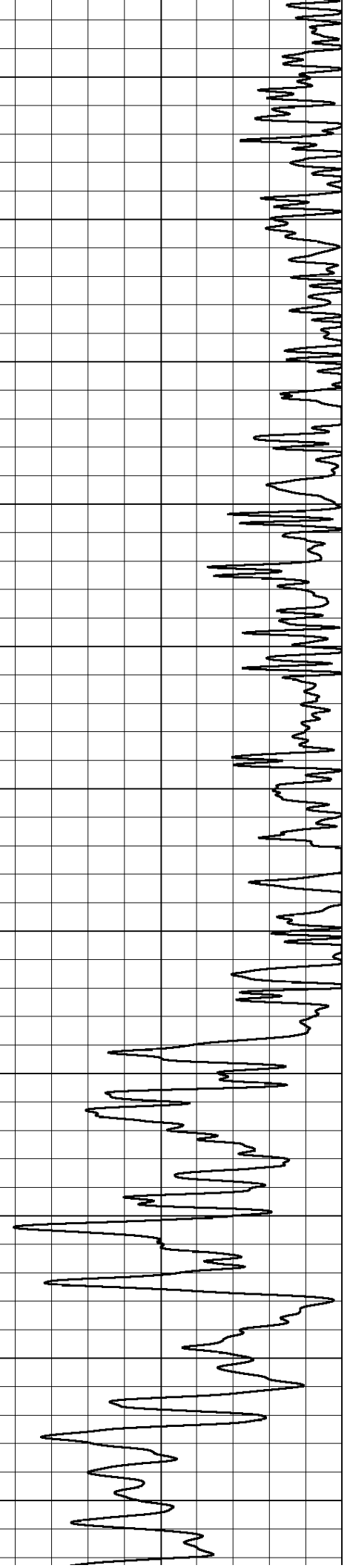
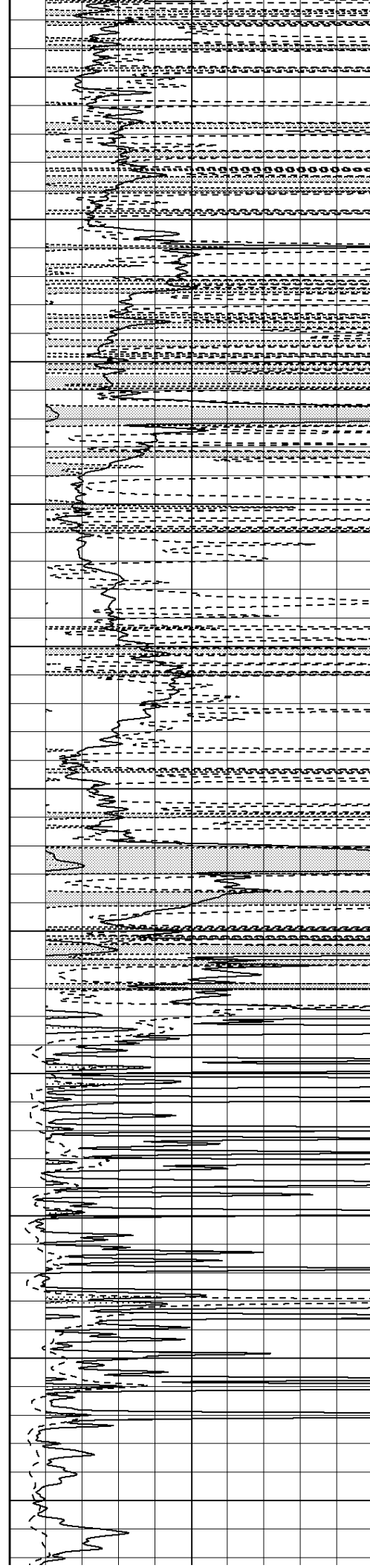
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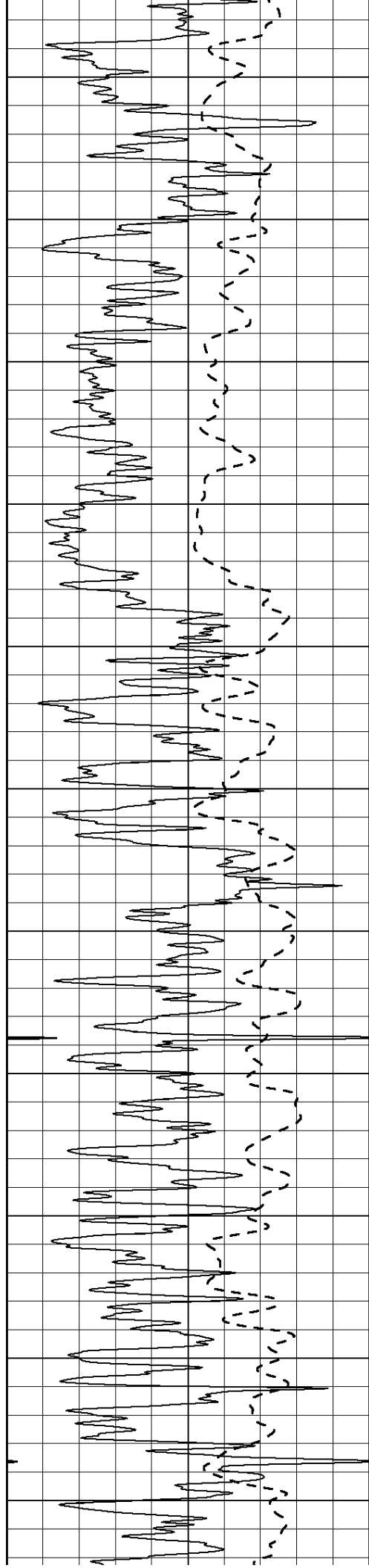
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1950

2000

2050





2100

2150

2200

2250

2300

2350

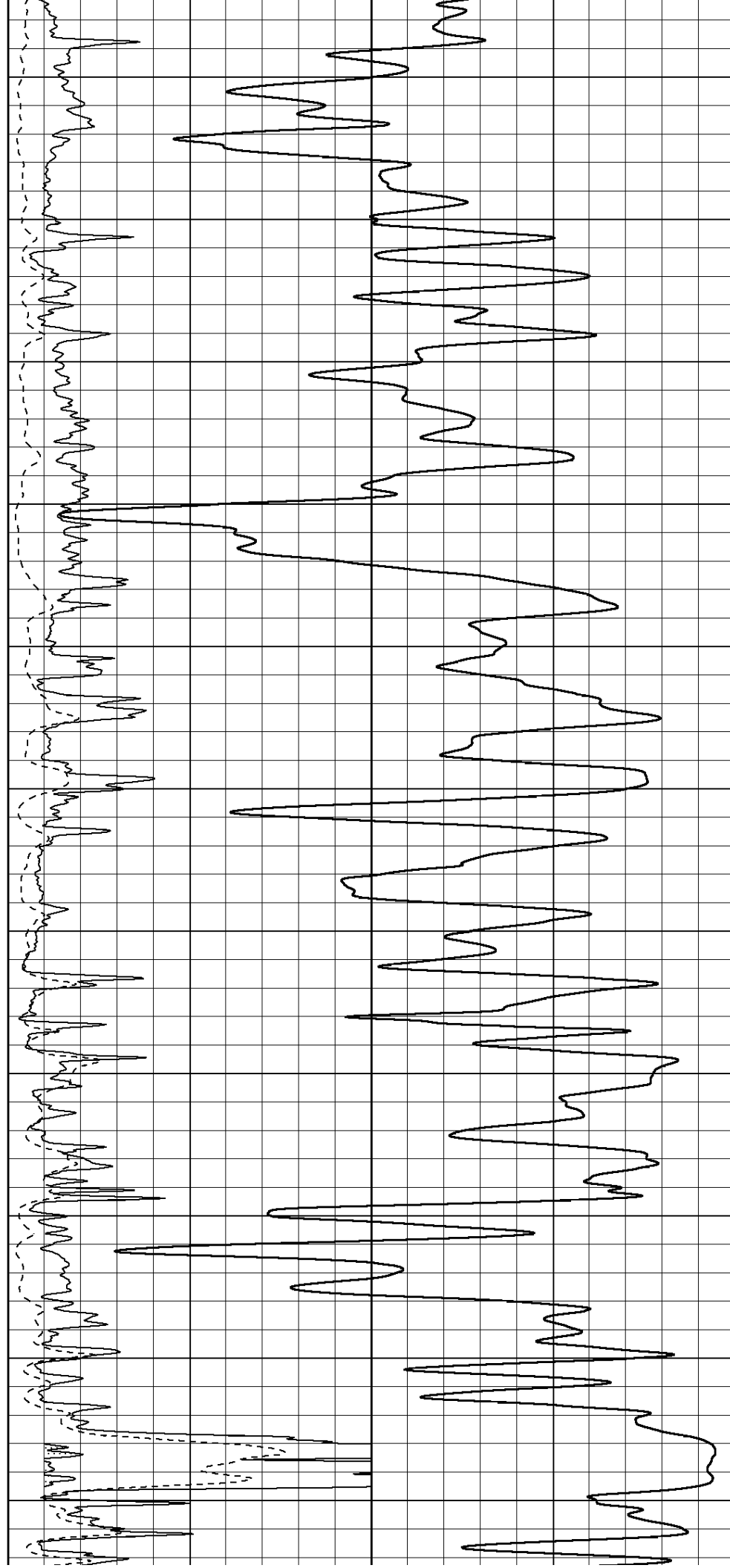
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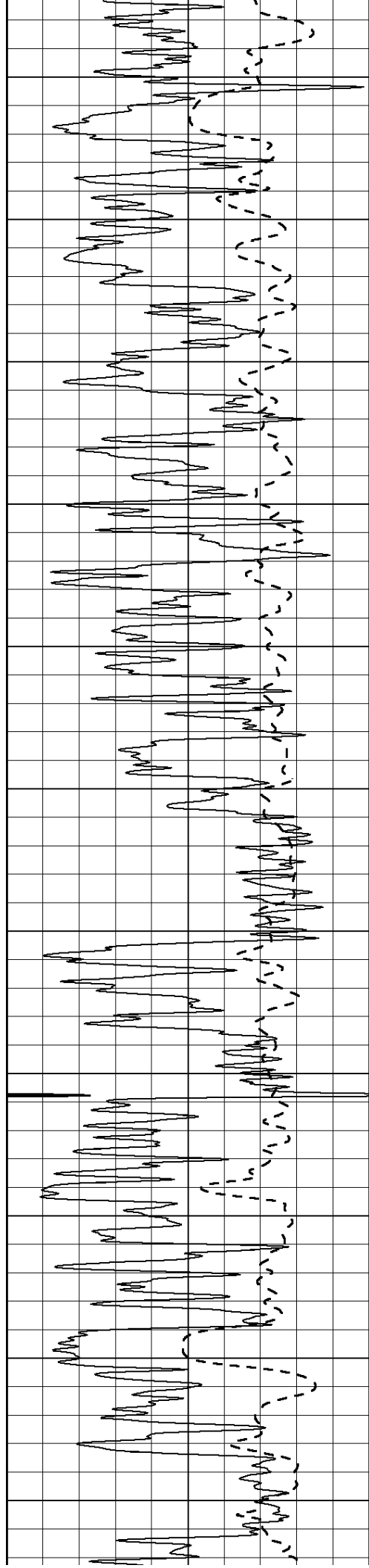
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2500

2550

2600





2650

2700

2750

2800

2850

2900

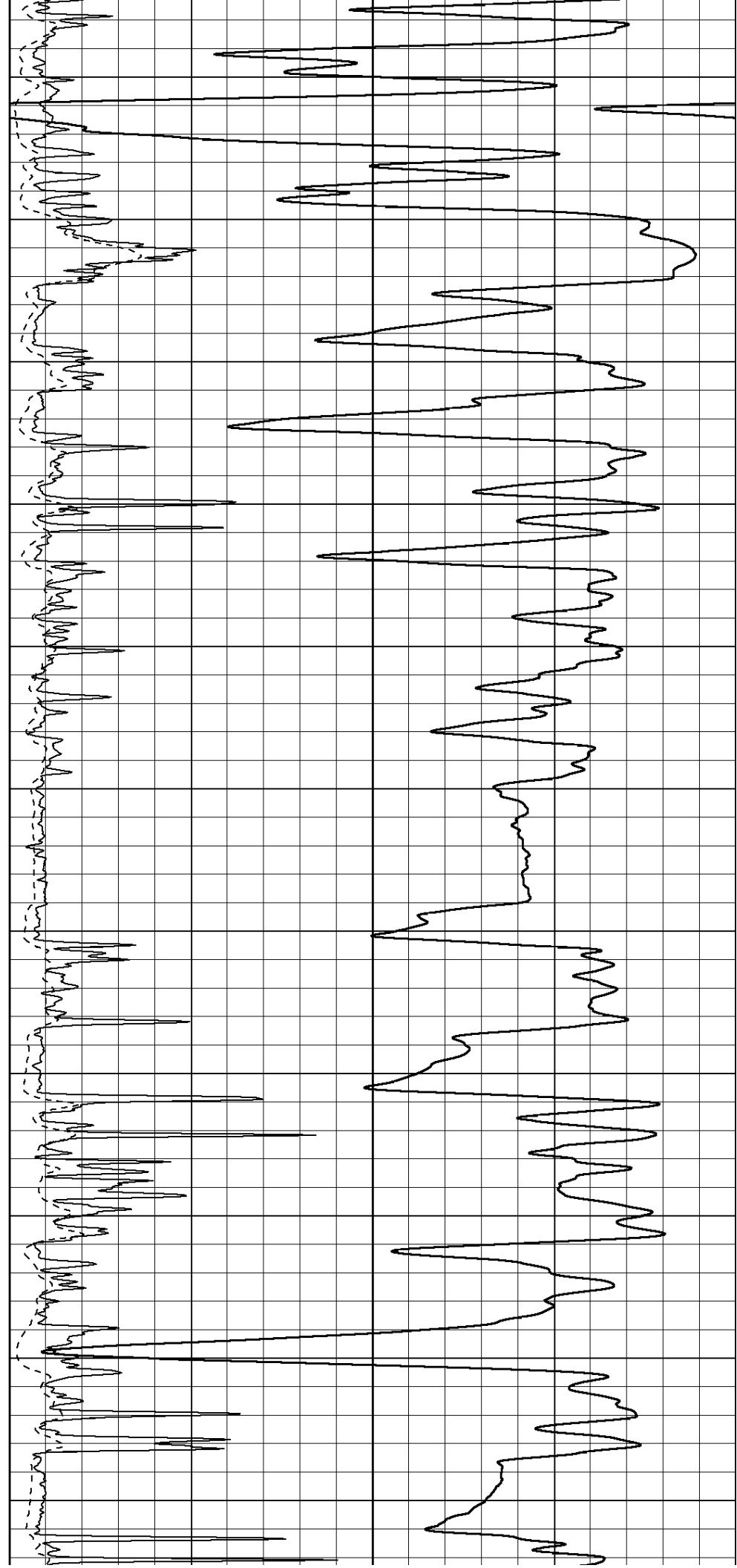
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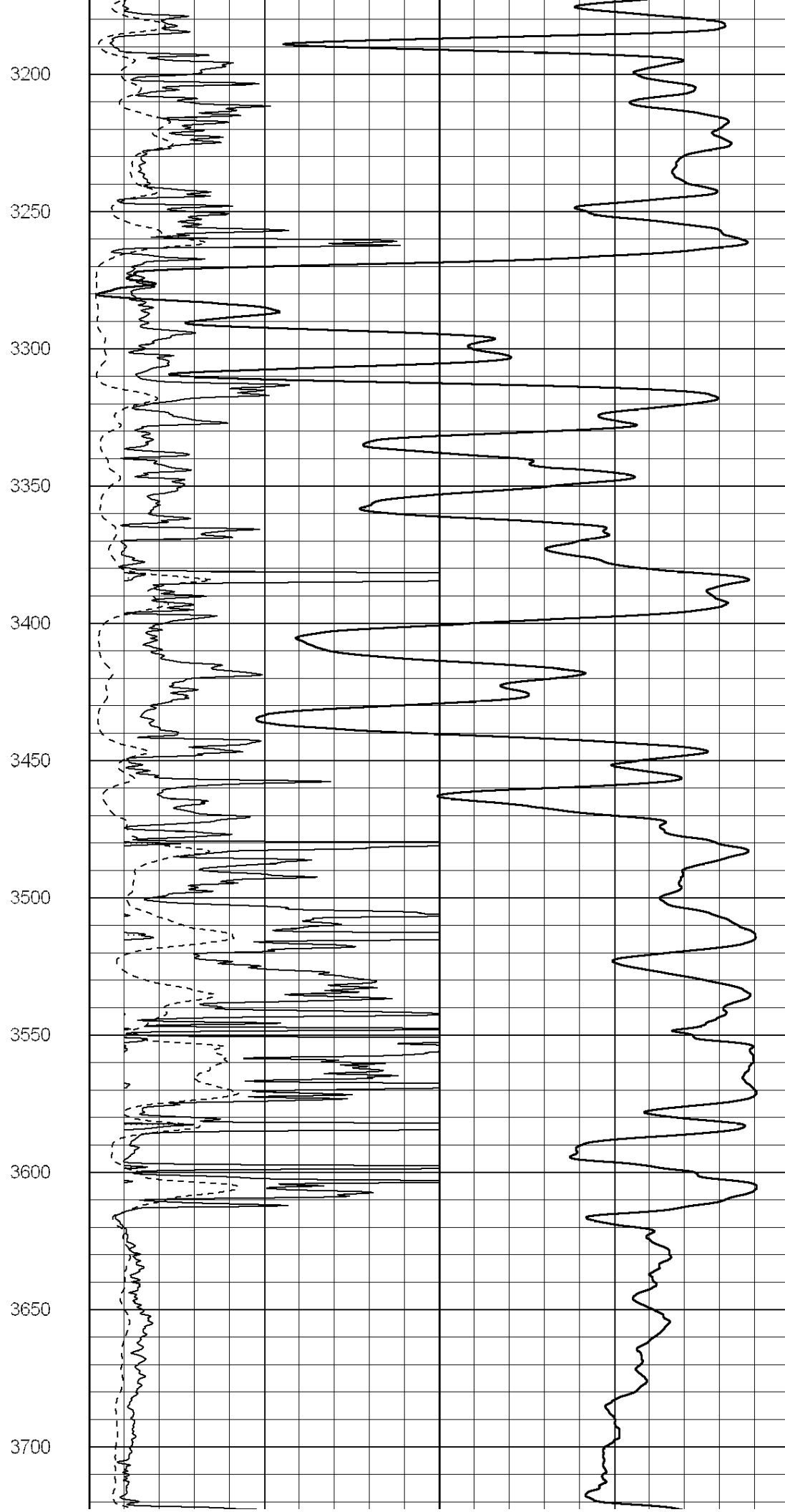
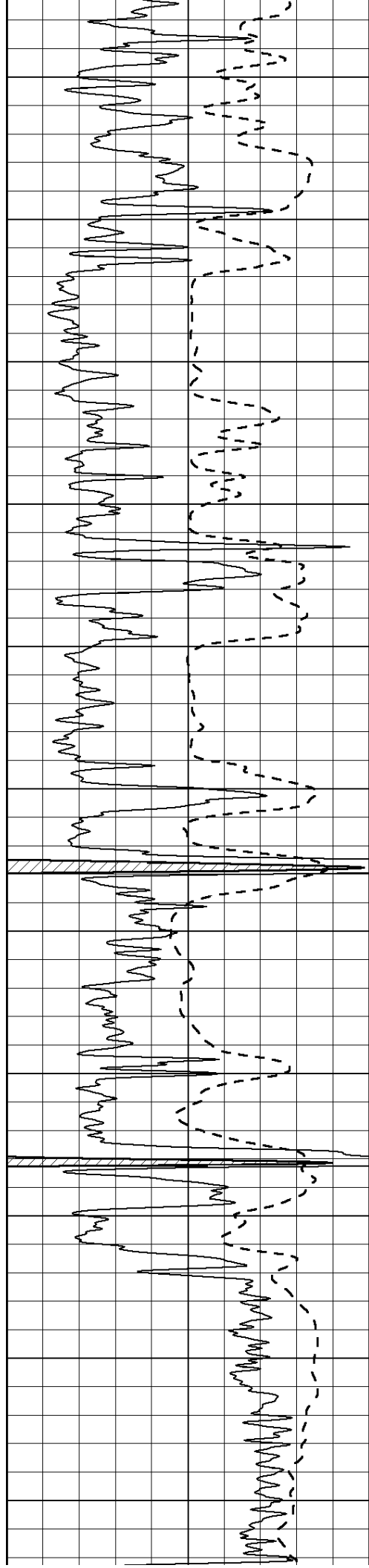
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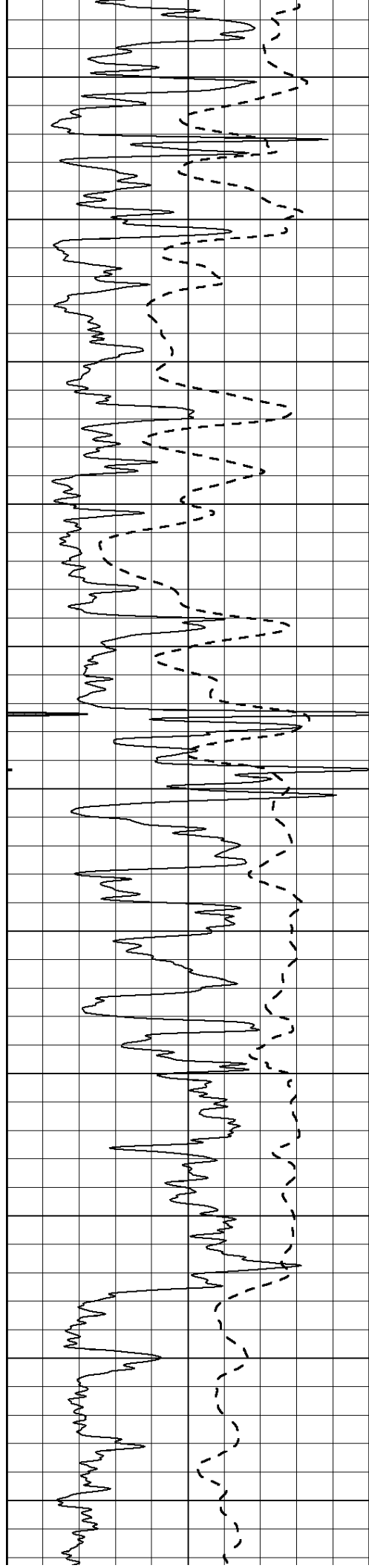
3050

3100

3150







3750

3800

3850

3900

3950

4000

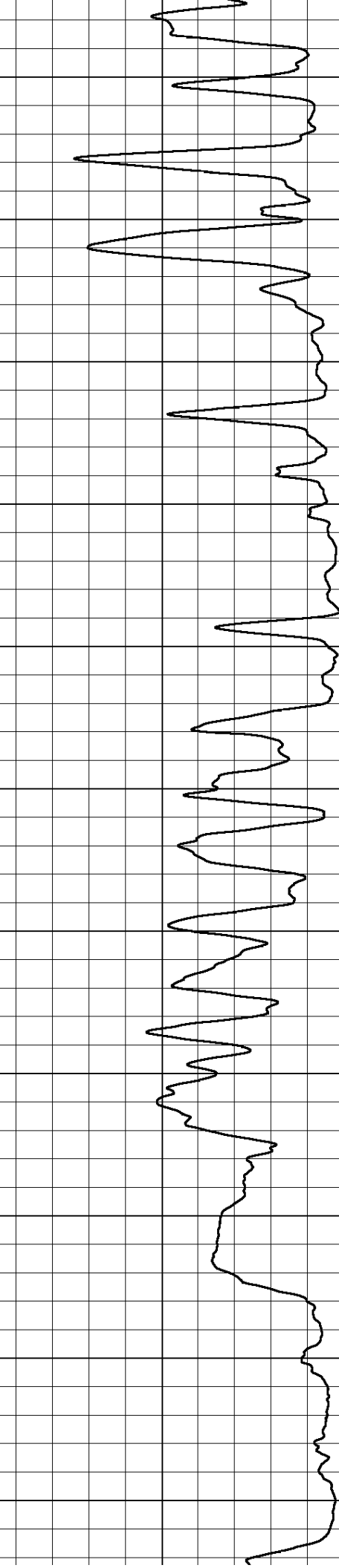
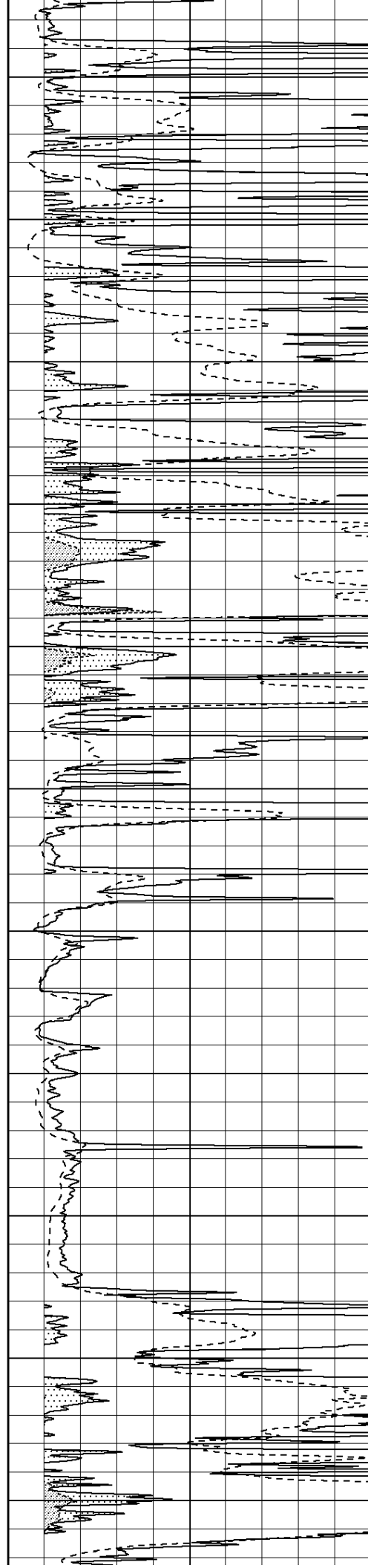
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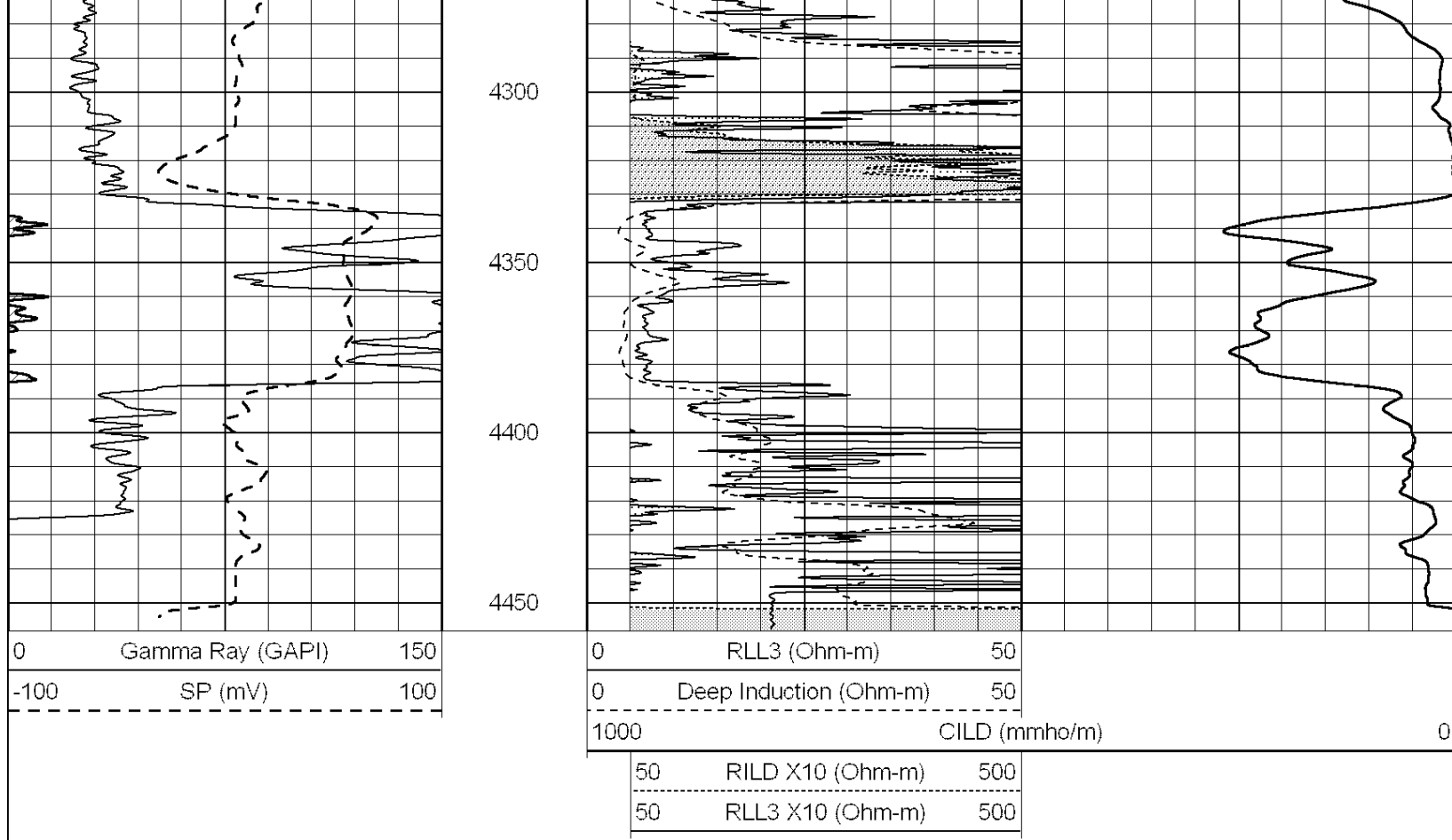
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4150

4200

4250

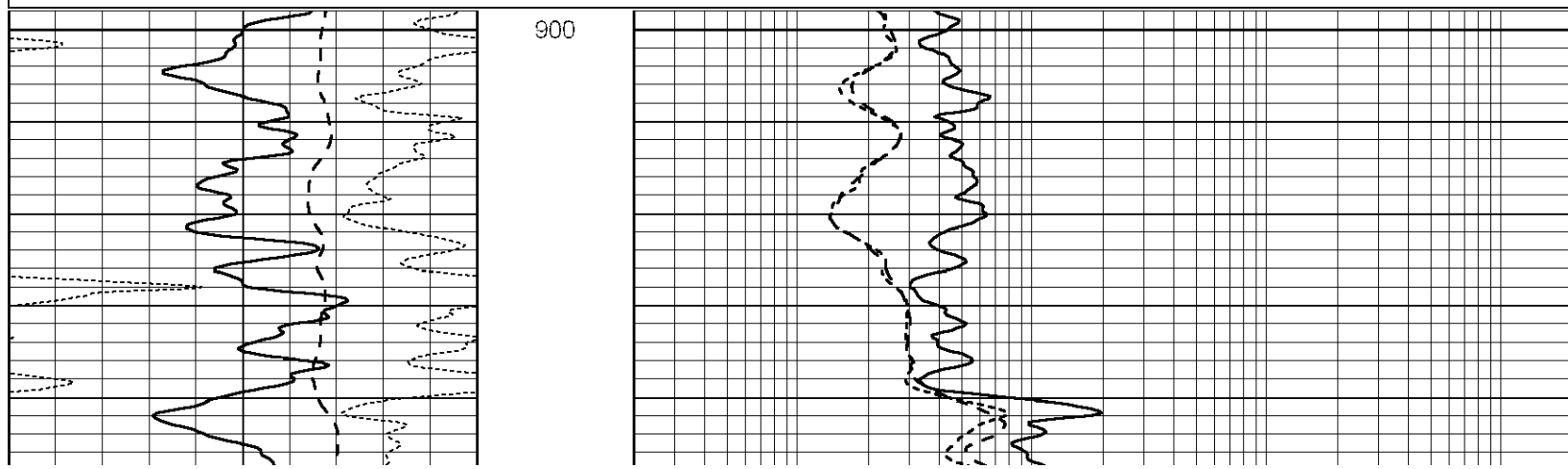
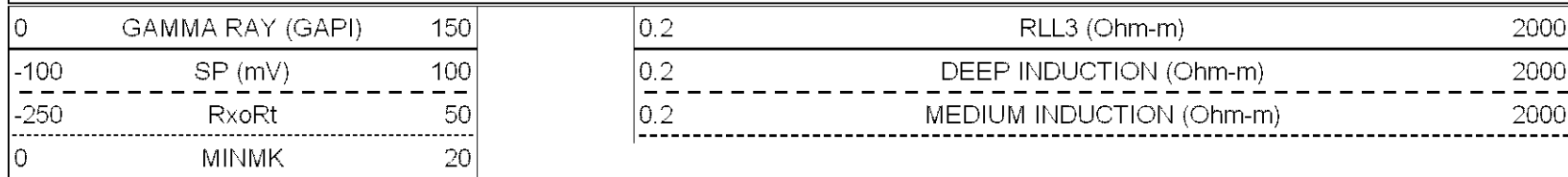


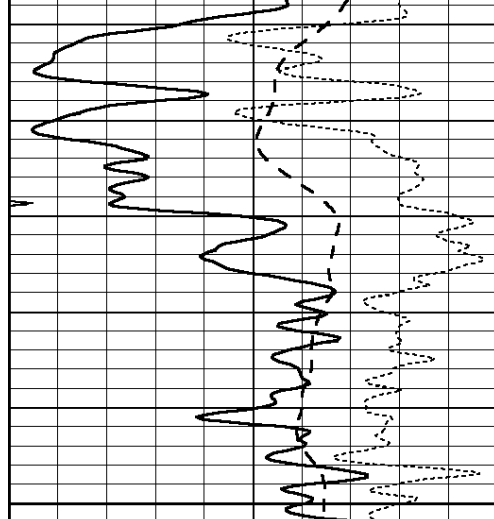


SUPERIOR
Hays,
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MAIN SECTION

Database File: 006941ddn.db
Dataset Pathname: pass3.2A
Presentation Format: dil
Dataset Creation: Thu Jun 23 04:45:12 2011
Charted by: Depth in Feet scaled 1:240

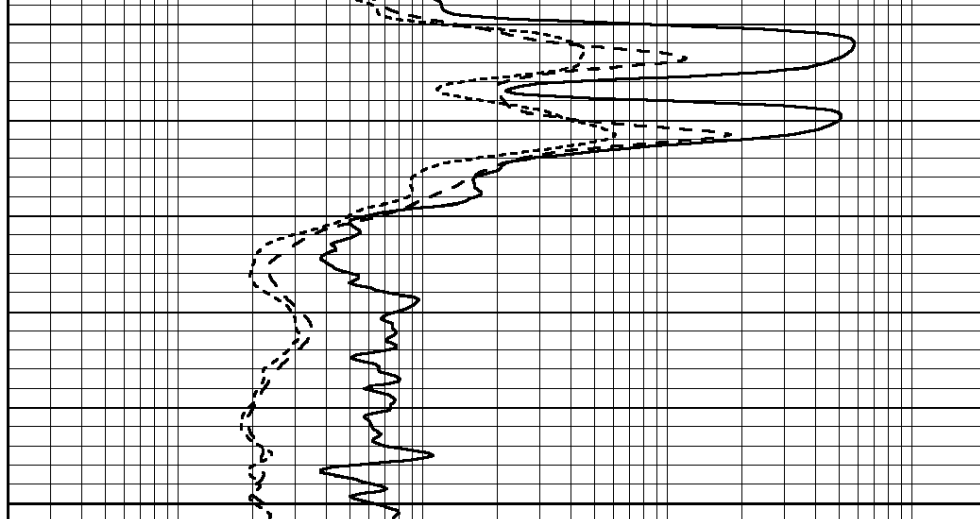




0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

950

1000



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



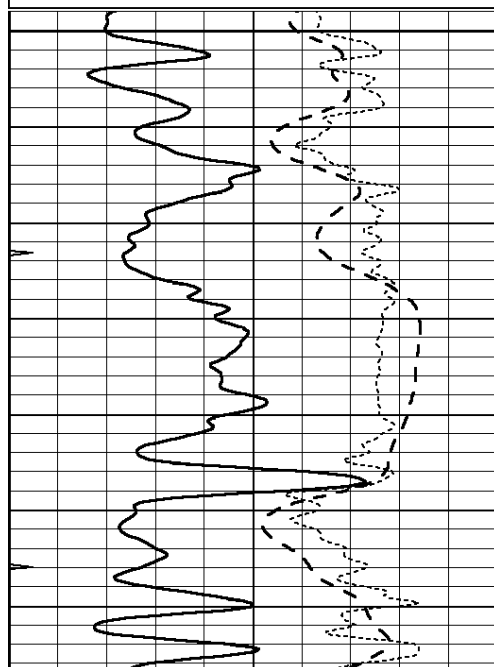
SUPERIOR
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MAIN SECTION

Database File: 006941ddn.db
Dataset Pathname: pass3.2A
Presentation Format: dil
Dataset Creation: Thu Jun 23 04:45:12 2011
Charted by: Depth in Feet scaled 1:240

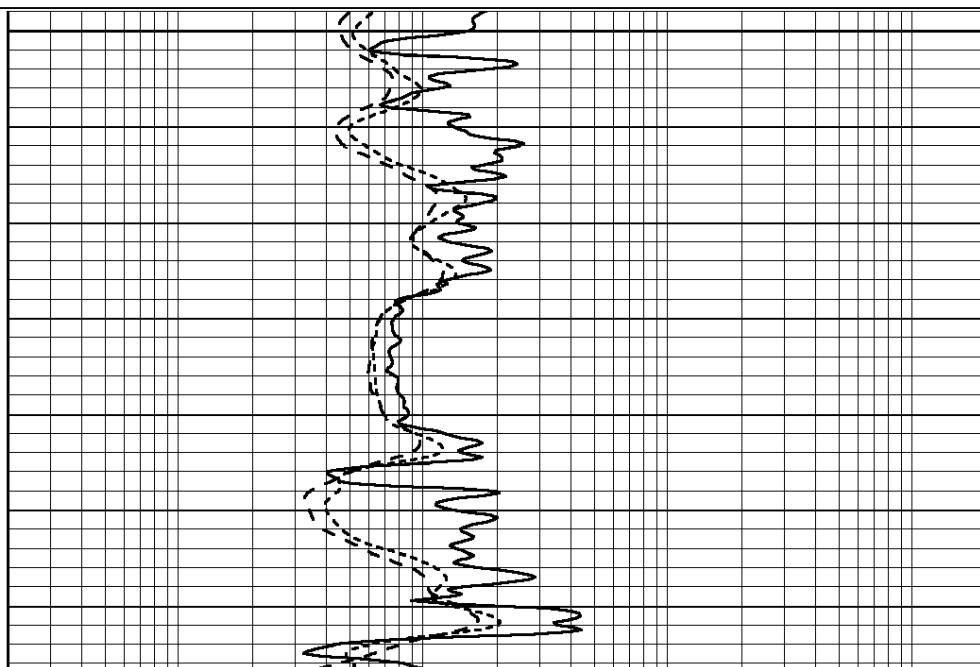
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

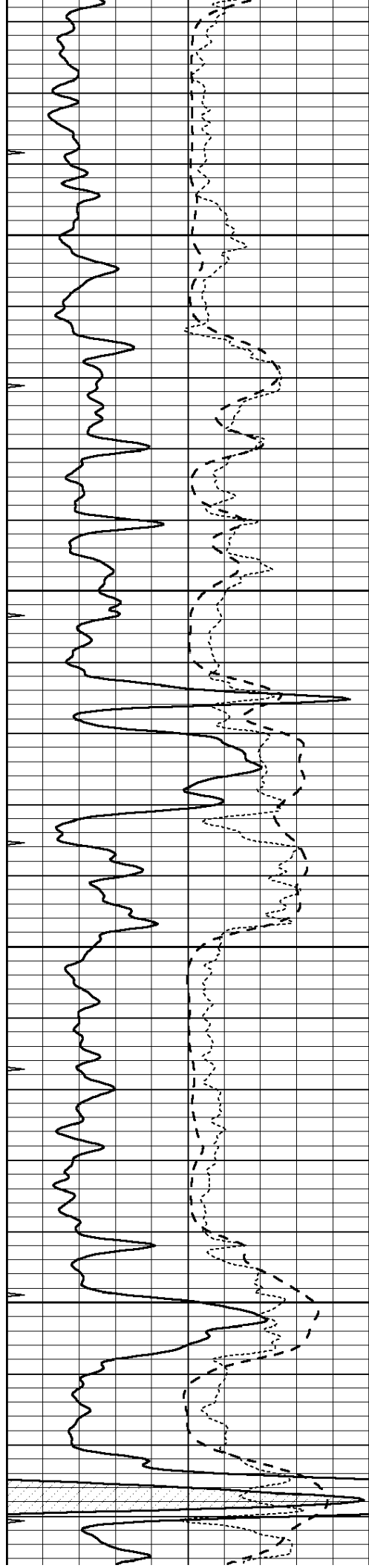
0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



3200

3250



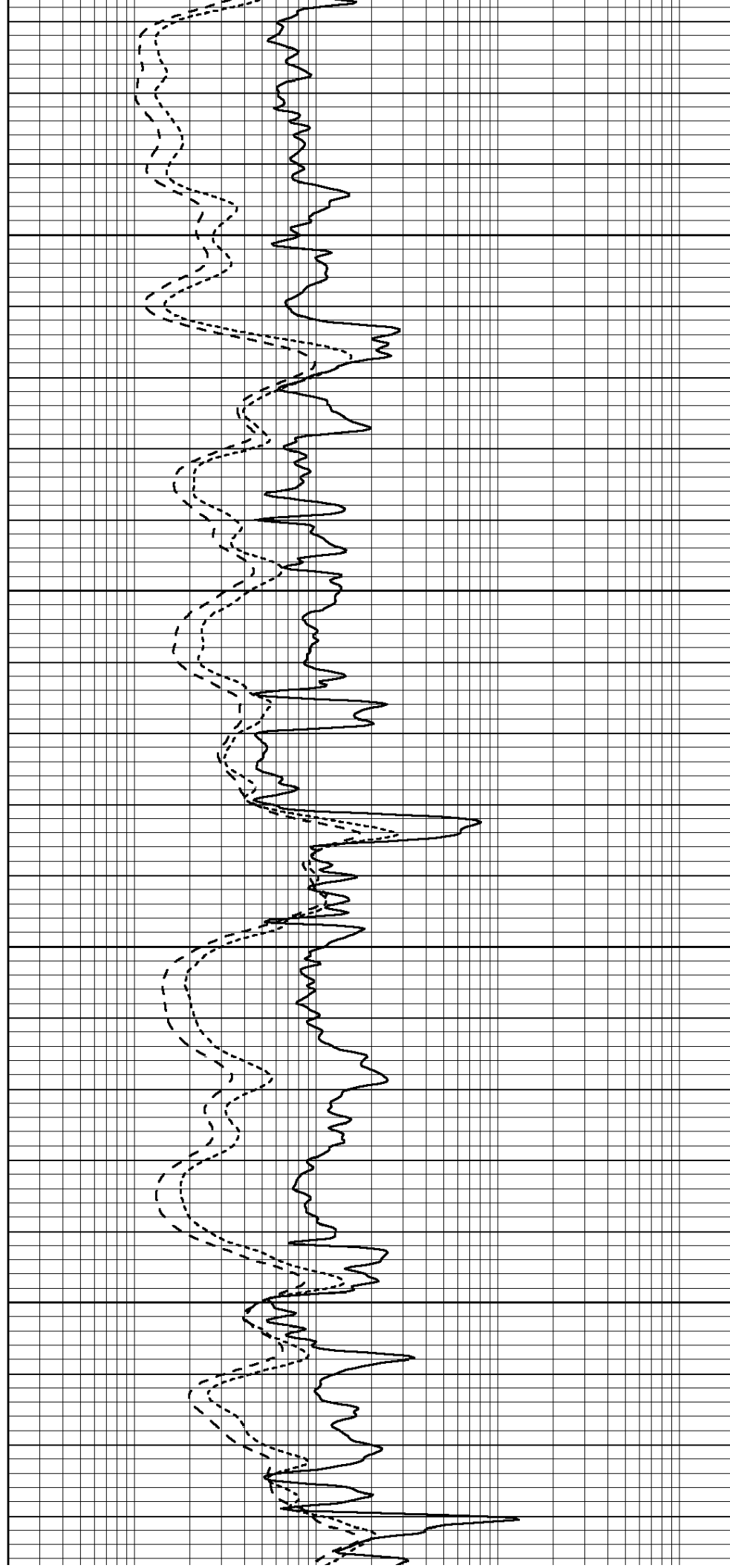


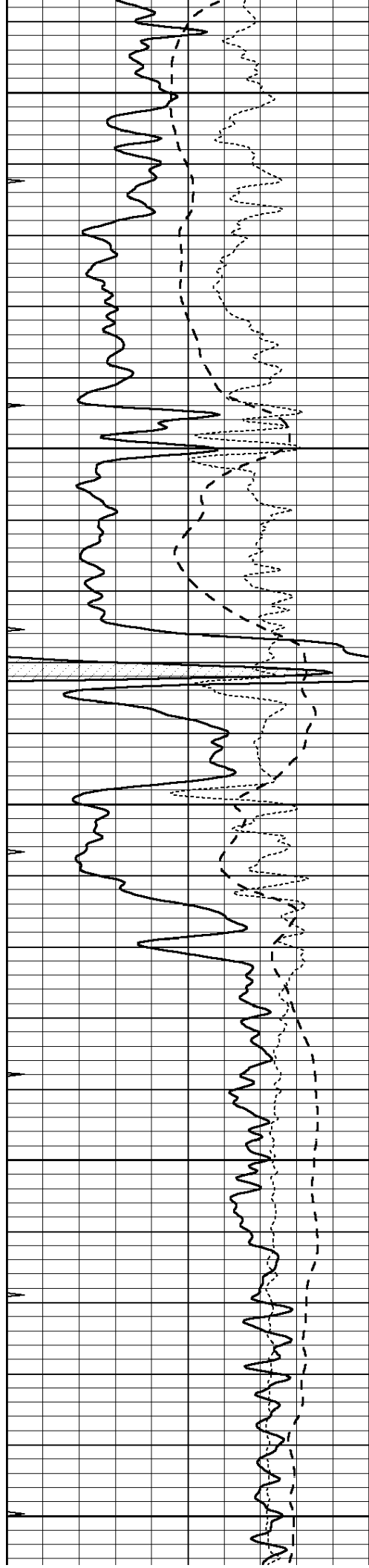
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3350

3400

3450





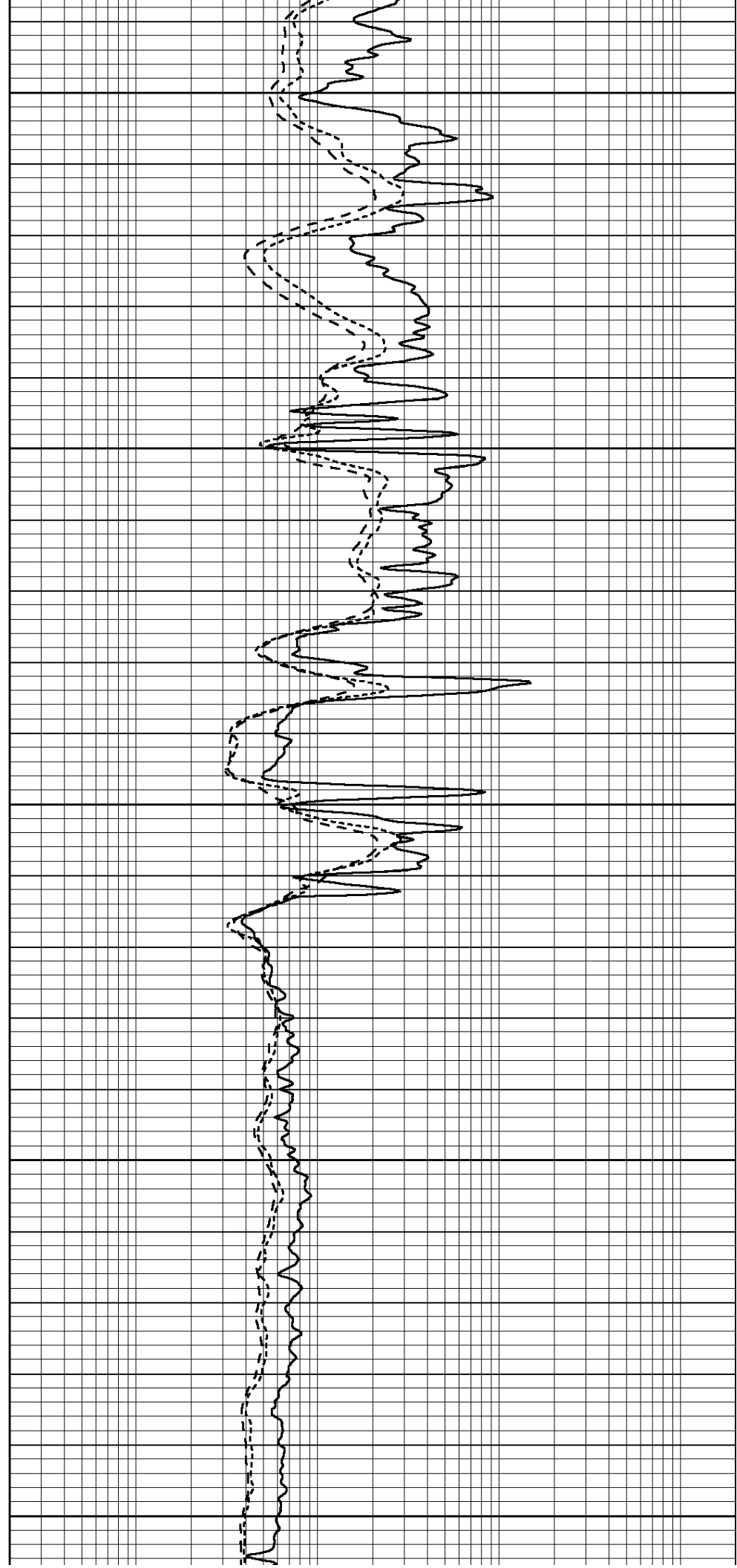
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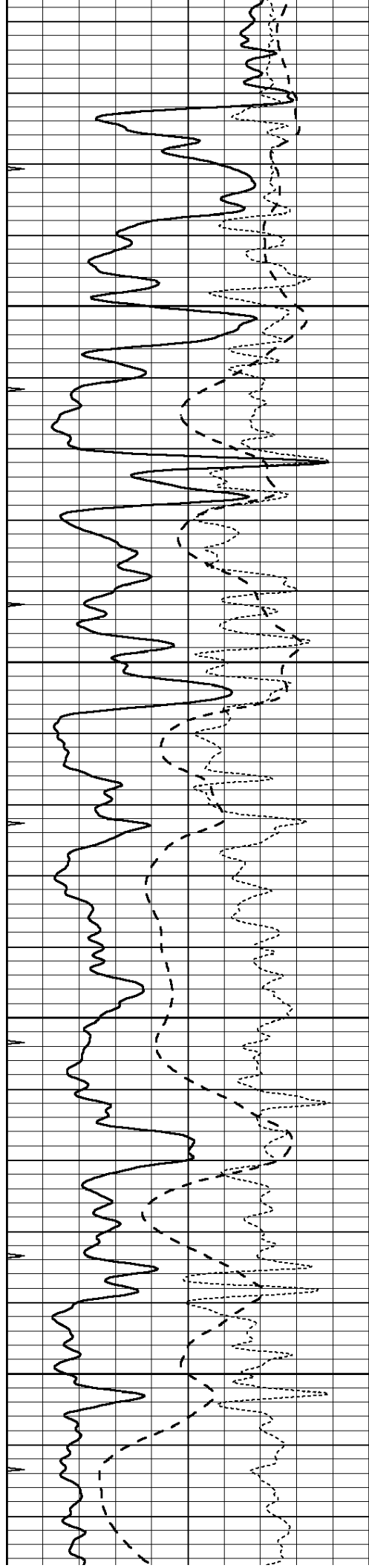
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3600

3650

3700



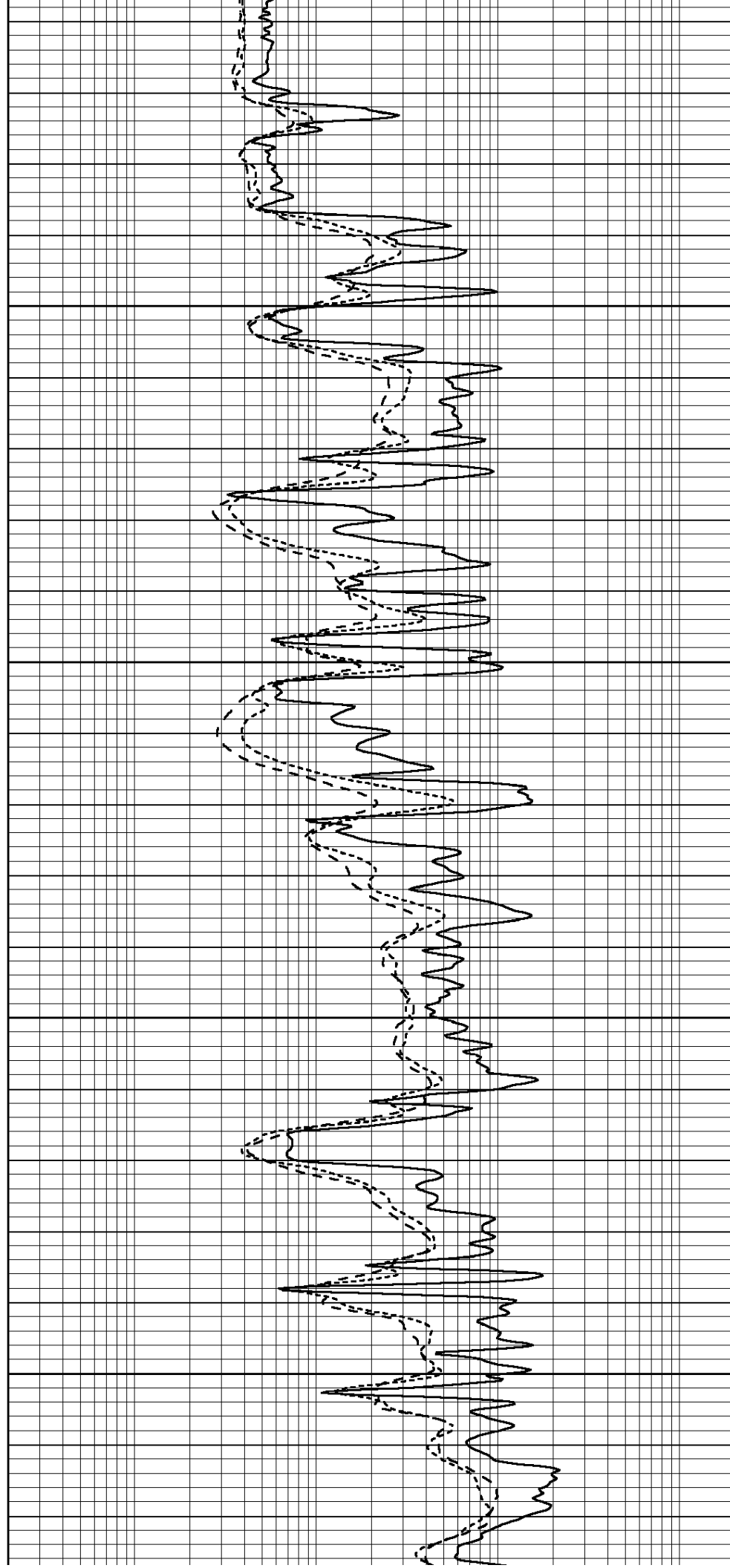


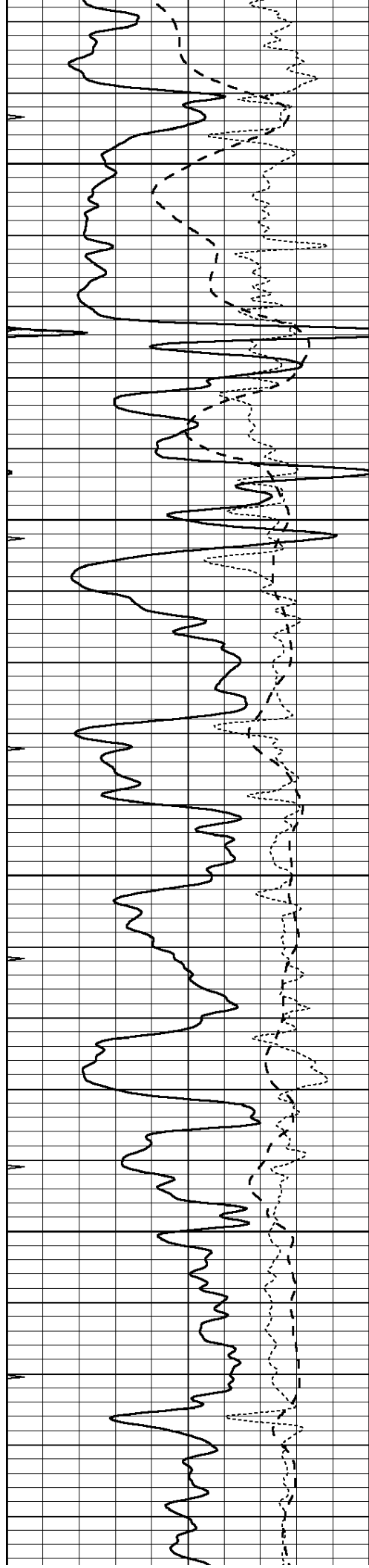
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3800

3850

3900



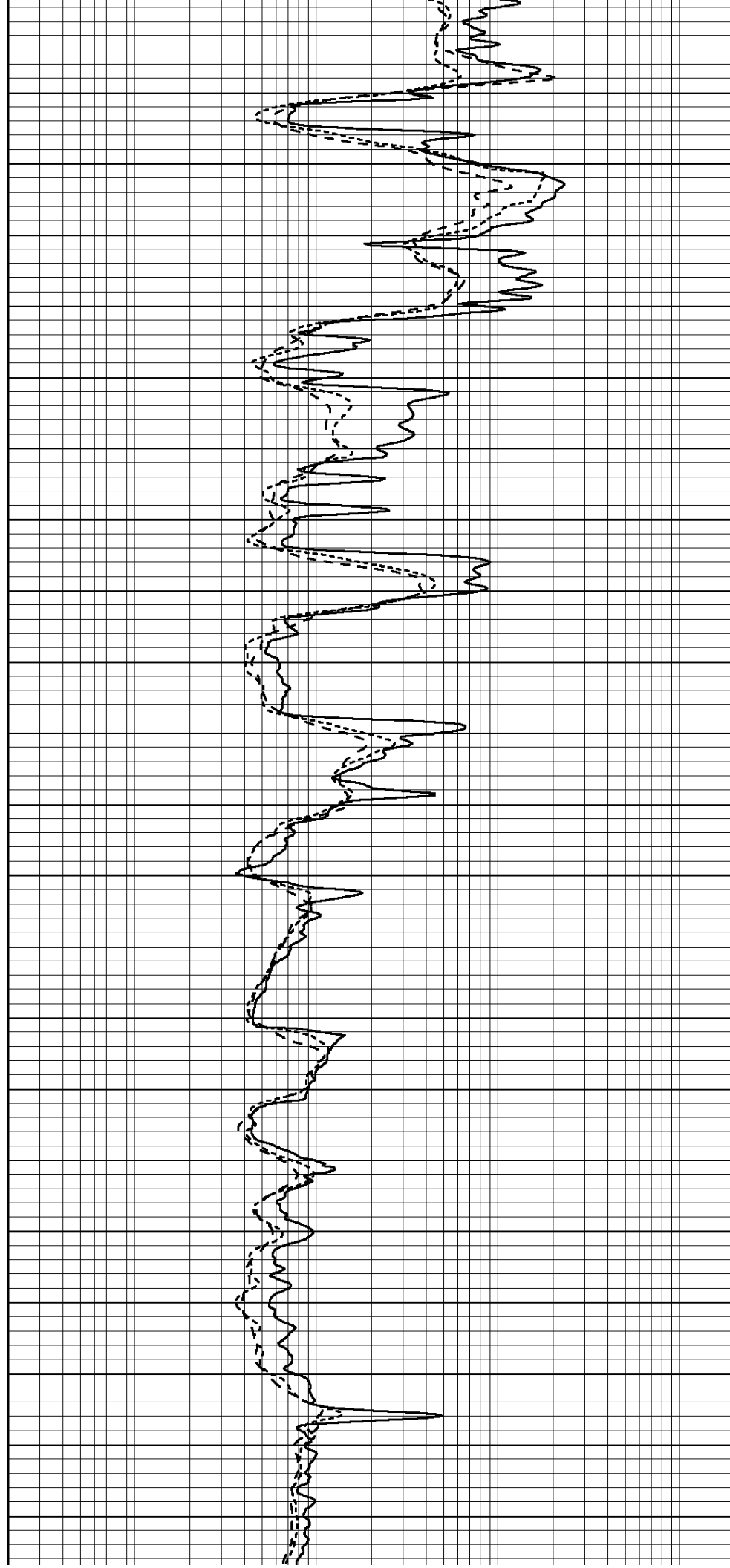


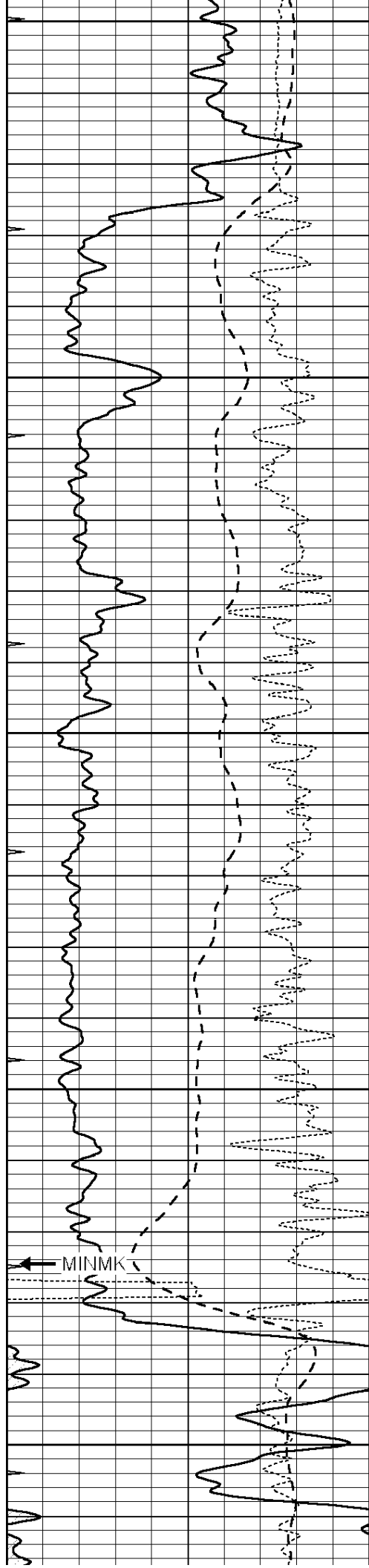
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4000

4050

4100





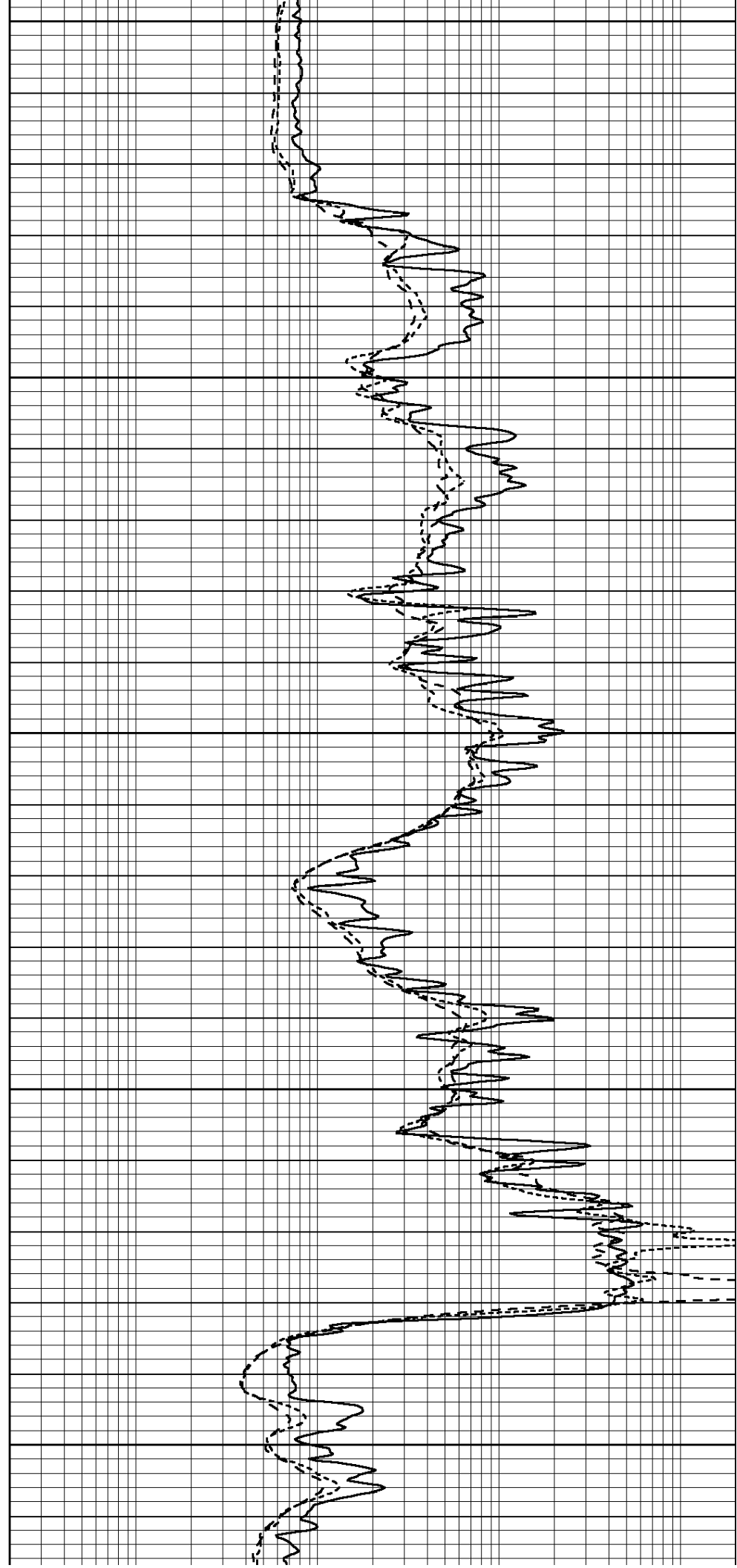
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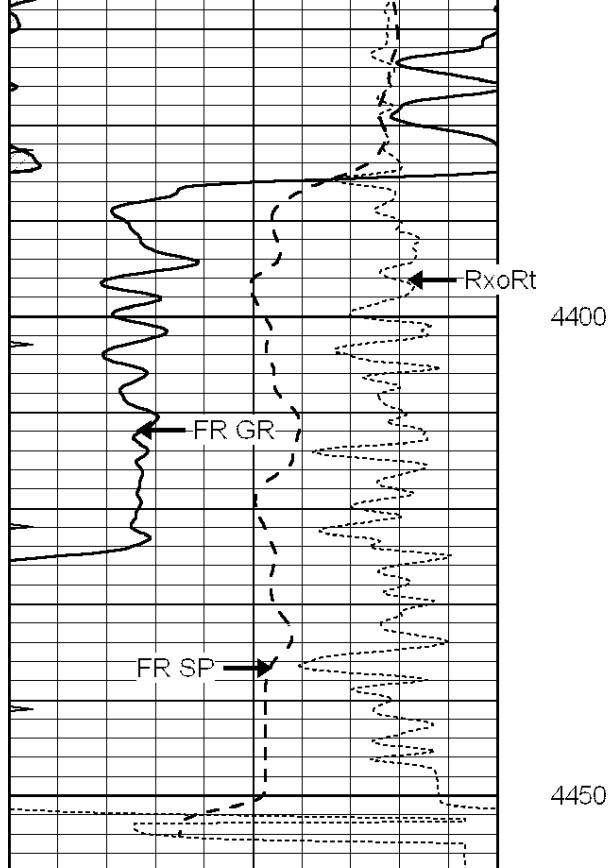
4200

4250

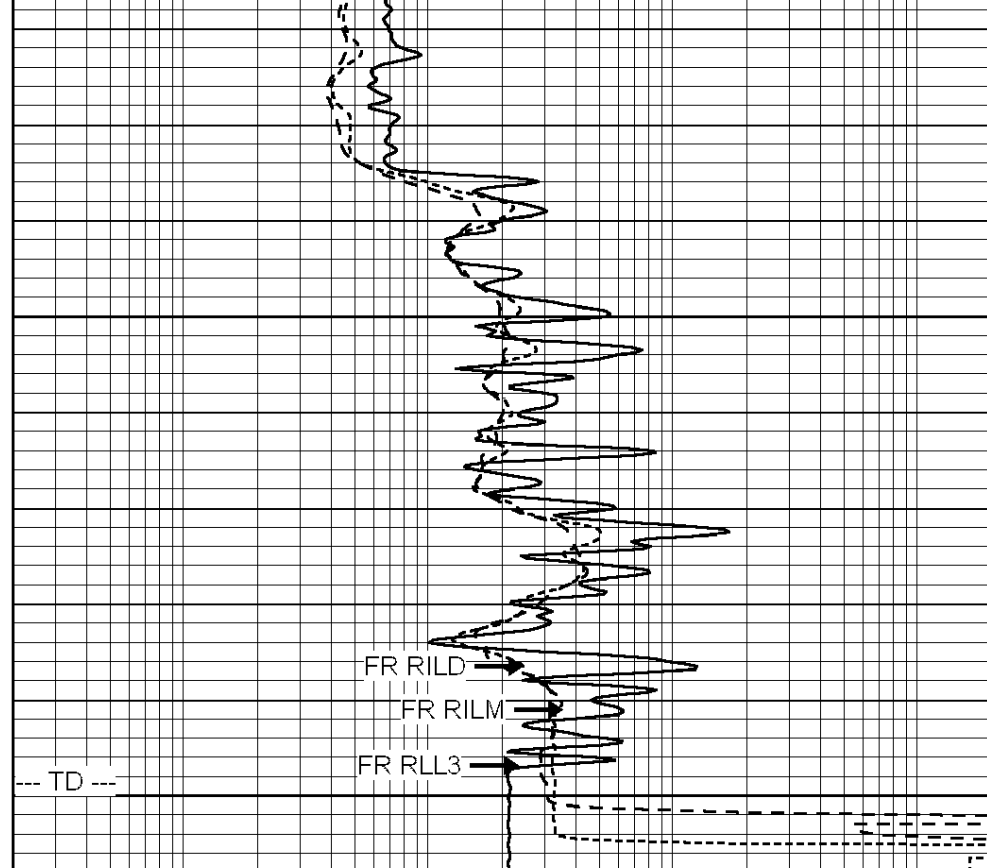
4300

4350





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



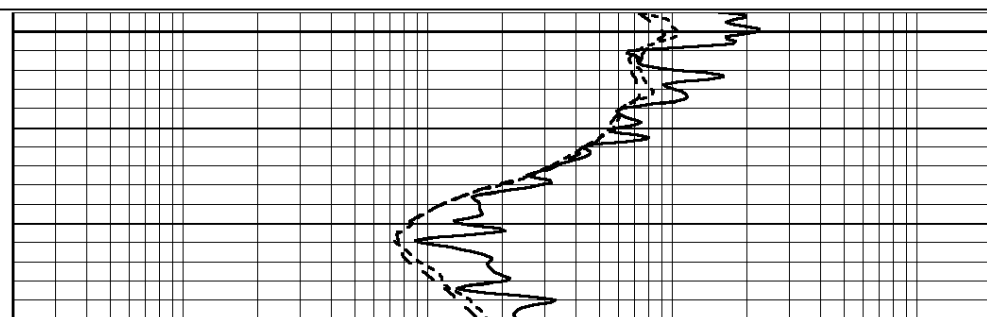
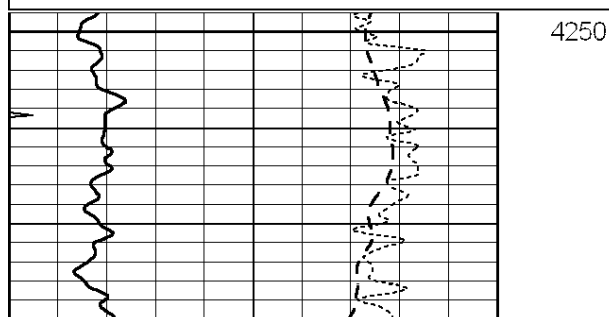
SUPERIOR
Hays,
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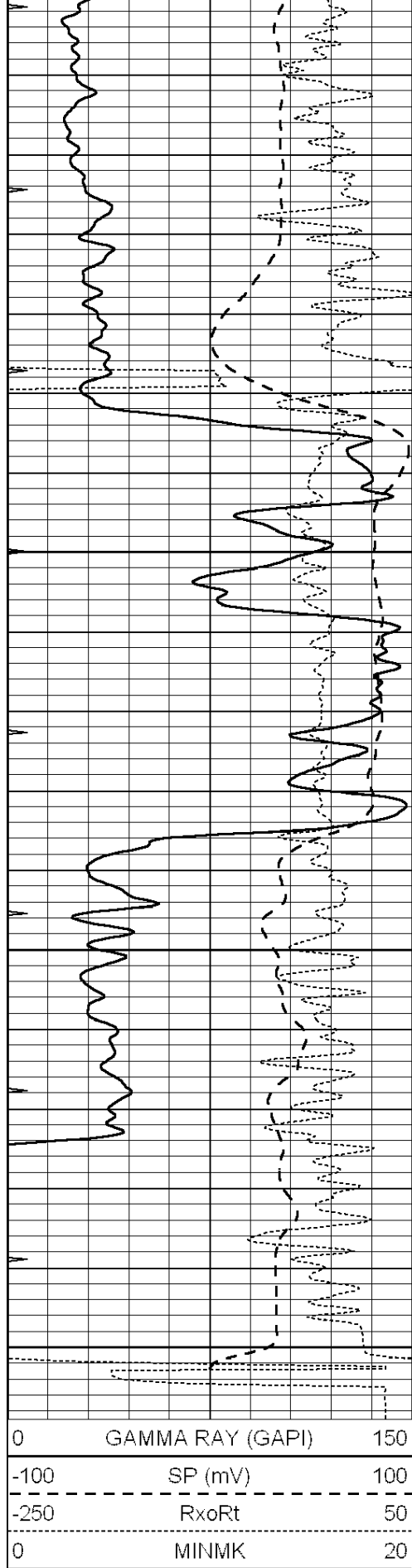
REPEAT SECTION

Database File: 006941ddn.db
Dataset Pathname: pass2.1
Presentation Format: dil
Dataset Creation: Thu Jun 23 04:29:54 2011
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



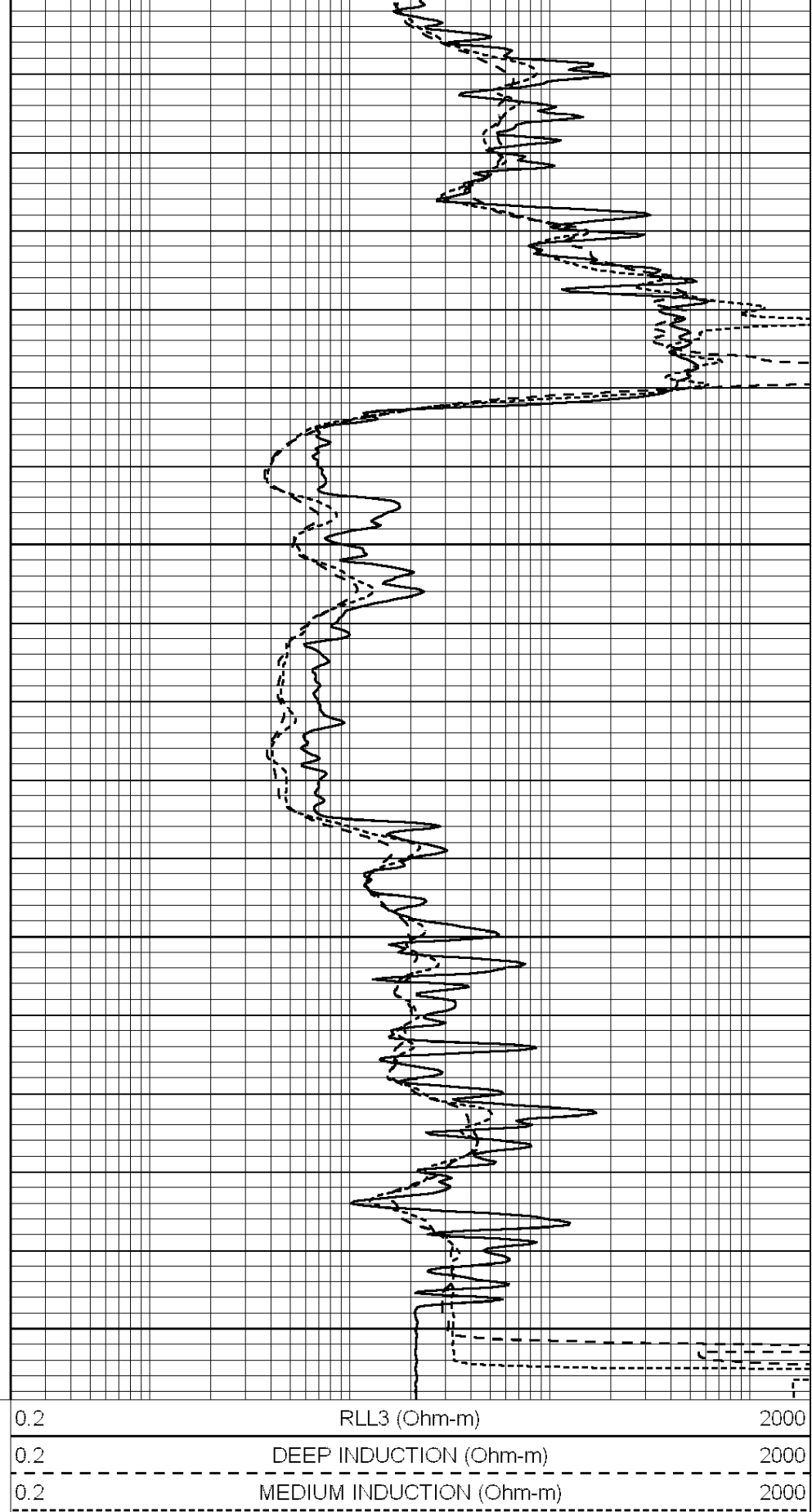


4300

4350

4400

4450



Calibration Report

Database File: 006941ddn.db

Dataset Pathname: pass3.2A

Dual Induction Calibration Report

Serial-Model:
Performed:DIL2-GEAR
Thu Jun 23 01:06:37 2011

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.002	0.667	V	0.000	400.000	mmho/m	530.000	-2.000
Medium	-0.003	0.739	V	0.000	462.500	mmho/m	550.000	-10.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.001	0.658	V	0.000	400.000	mmho/m	609.010	-0.700
Medium	0.015	0.761	V	0.000	462.500	mmho/m	620.392	-9.326

Compensated Density Calibration Report

Serial-Model:
Source / Verifier:
Master Calibration Performed:GEAR1-GEARHART
147 / 147
Sat Jun 18 15:23:57 2011

Master Calibration

	Density			Far Detector		Near Detector	
Magnesium	1.710	g/cc		1243.76		629.14	cps
Aluminum	2.580	g/cc		282.16		435.01	cps
Spine Angle = 76.03				Density/Spine Ratio = 0.569			
	Size			Reading			
Small Ring	9.20	in		3.82	V		
Large Ring	14.20	in		6.37	V		

Compensated Neutron Calibration Report

Serial Number:
Tool Model:NUE_2I
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: Thu Jun 23 01:57:15 2011

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.6500 GAPI/cps