



SUPERIOR
Hays,
Kansas

**DUAL
INDUCTION
LOG**

Company MULL DRILLING COMPANY, INC.
Well #1-32 MURPHY-SCHROEDER UNIT
Field
County THOMAS
State KANSAS

Company MULL DRILLING COMPANY, INC.
Well #1-32 MURPHY-SCHROEDER UNIT
Field
County THOMAS State KANSAS

Location: API #: 15-193-20767
2595' FWL & 335' FSL
SEC 32 TWP 8S RGE 31W
Permanent Datum GROUND LEVEL Elevation 3033
Log Measured From KELLY BUSHING 5' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
CDL/CNL
SONIC/MEL
Elevation
K.B. 3038
D.F.
G.L. 3033

Date	7-31-09
Run Number	ONE
Depth Driller	4700
Depth Logger	4698
Bottom Logged Interval	4696
Top Log Interval	00
Casing Driller	312
Casing Logger	312
Bit Size	7.875
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.3 / 54
pH / Fluid Loss	8.5 / 8.8
Source of Sample	FLOWLINE
Rim @ Meas. Temp	1.20 @ 90F
Rinf @ Meas. Temp	0.90 @ 90F
Rimc @ Meas. Temp	1.44 @ 90F
Source of Rinf / Rimc	MEASURED
Rim @ BHT	.890 @ 122F
Time Circulation Stopped	3 HOURS
Time Logger on Bottom	
Maximum Recorded Temperature	122F
Equipment Number	860
Location	HAYS, KS.
Recorded By	RUPP
Witnessed By	KEVIN KESSLER

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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: OAKLEY, TO WEST EXIT, 9N TO RD. "M", 3E, N INTO.

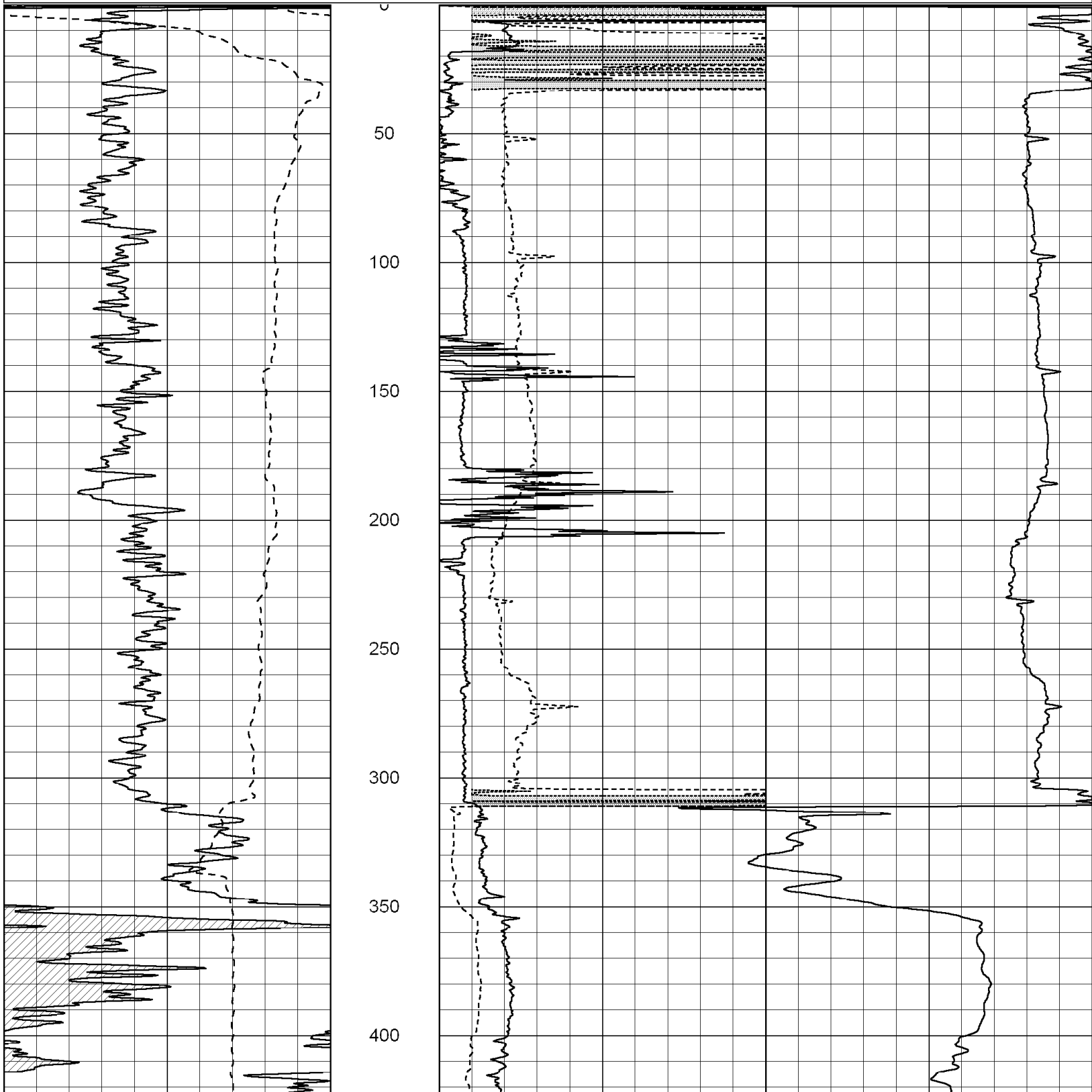


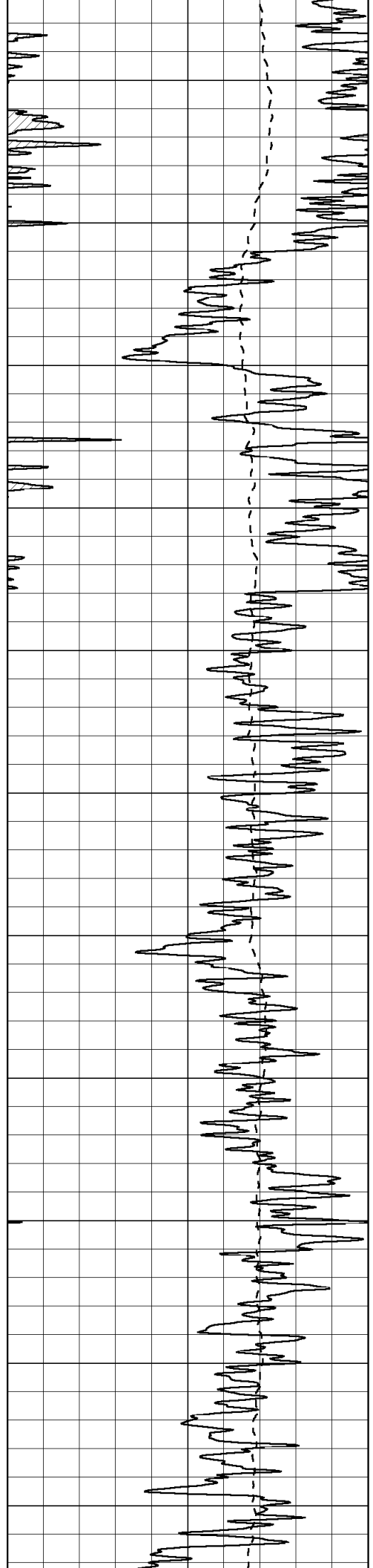
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MAIN SECTION

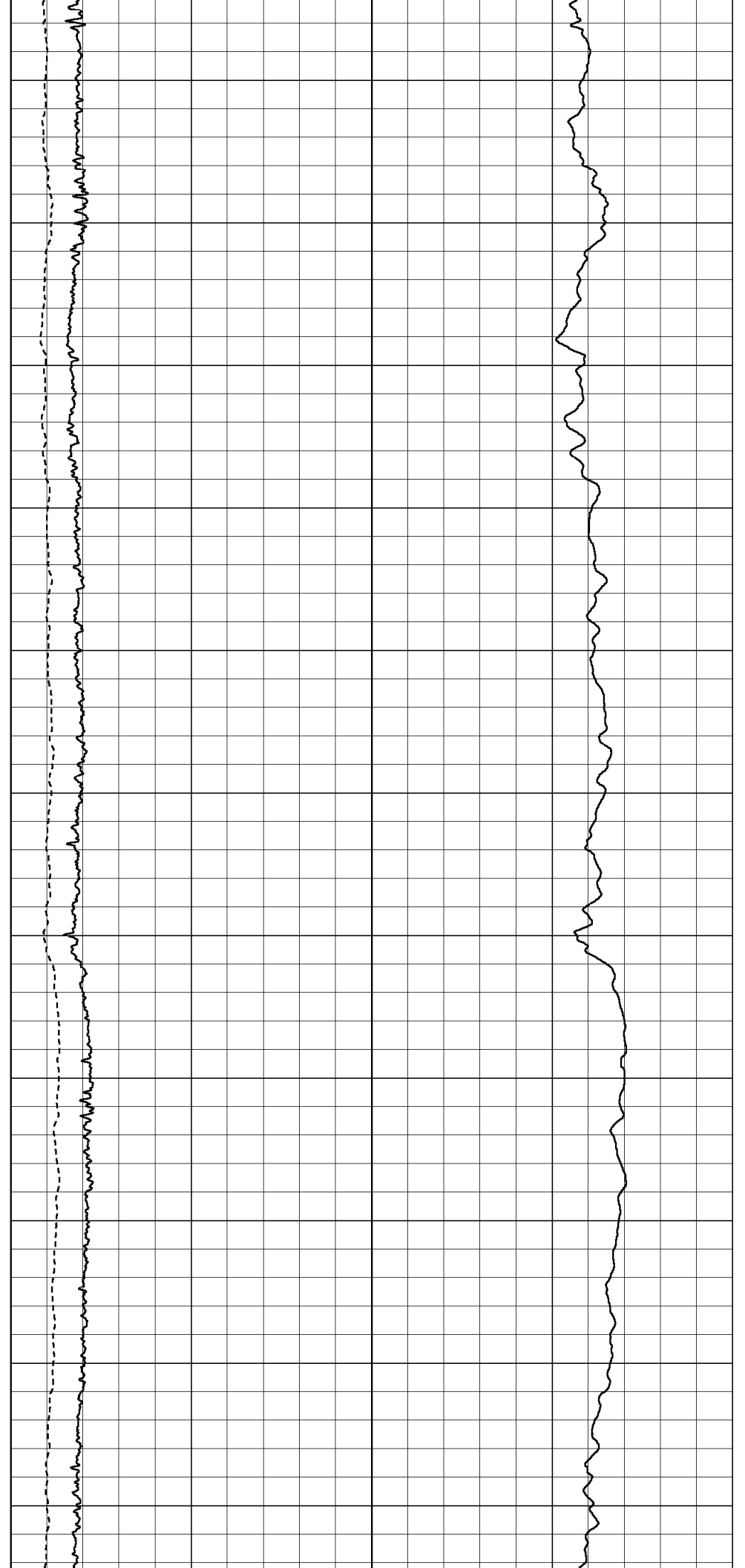
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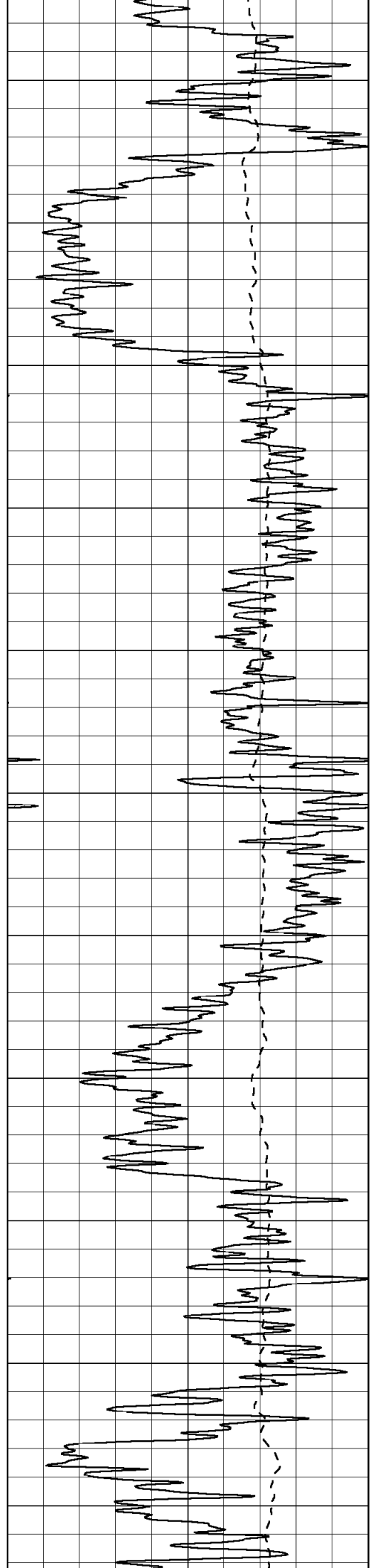
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-100	SP (mV)	100	0	Deep Induction (Ohm-m)	50
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			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500



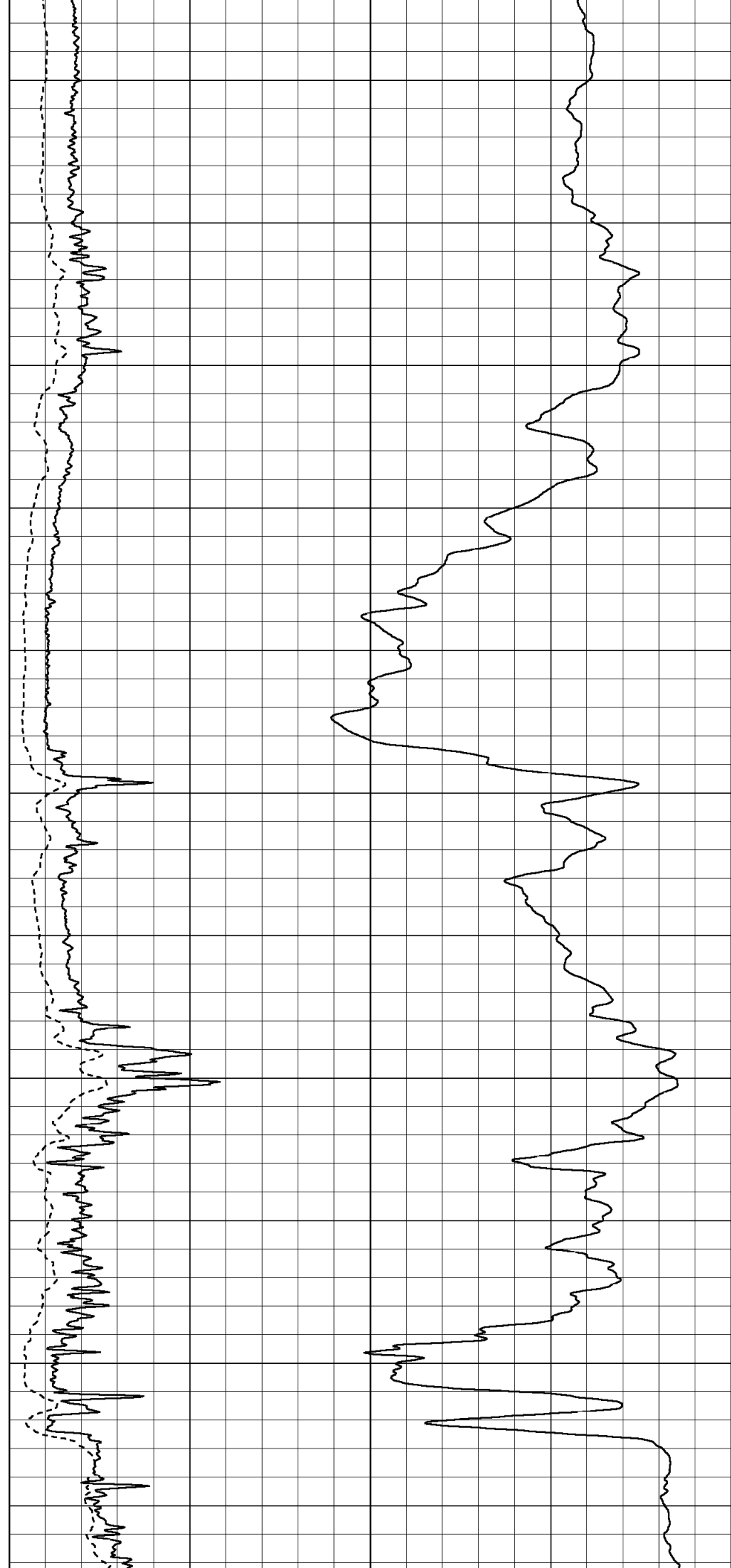


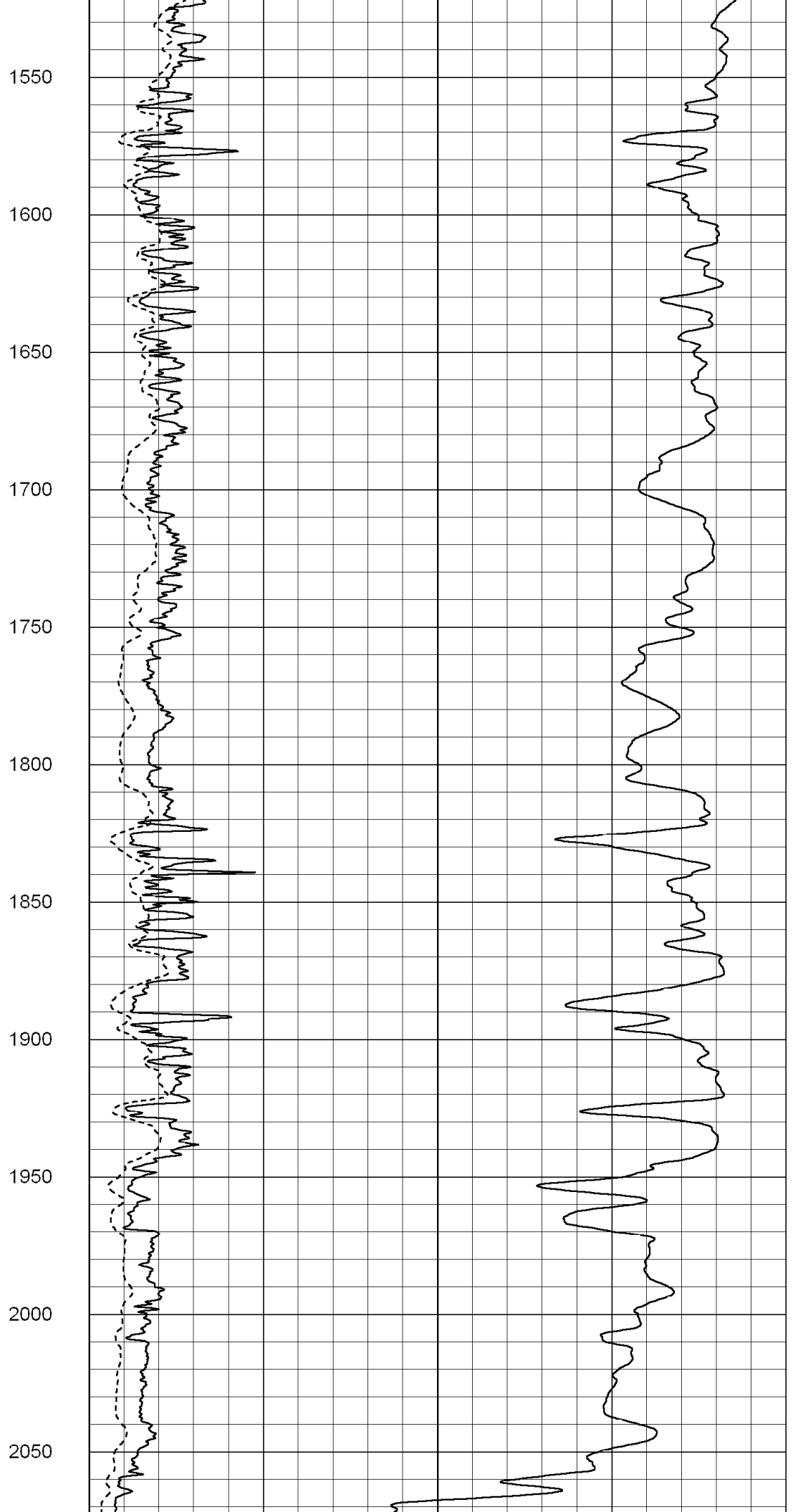
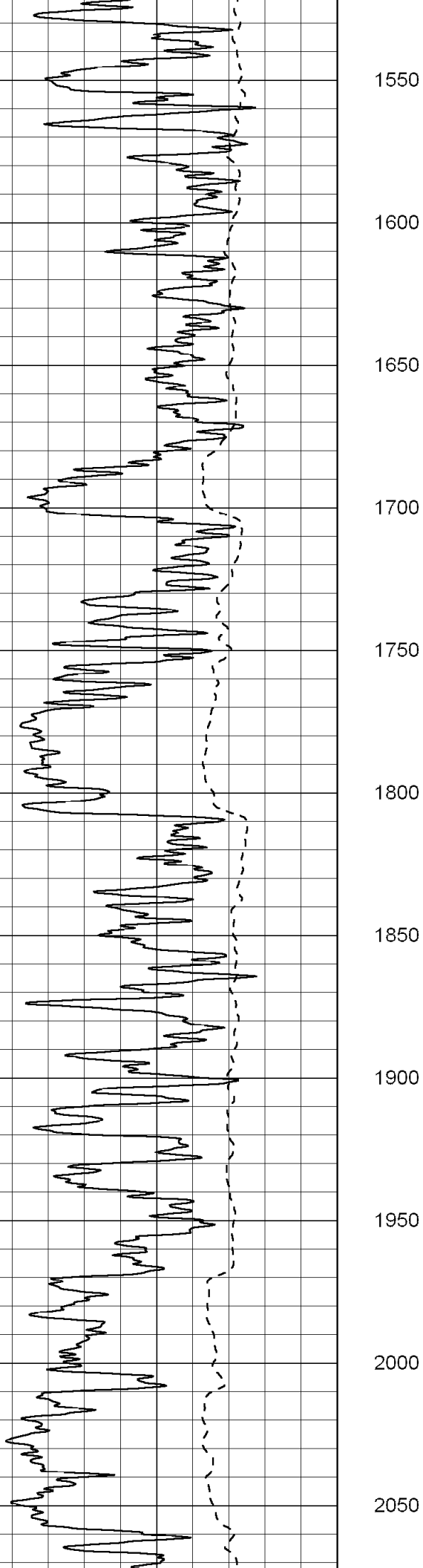
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550
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650
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750
800
850
900
950

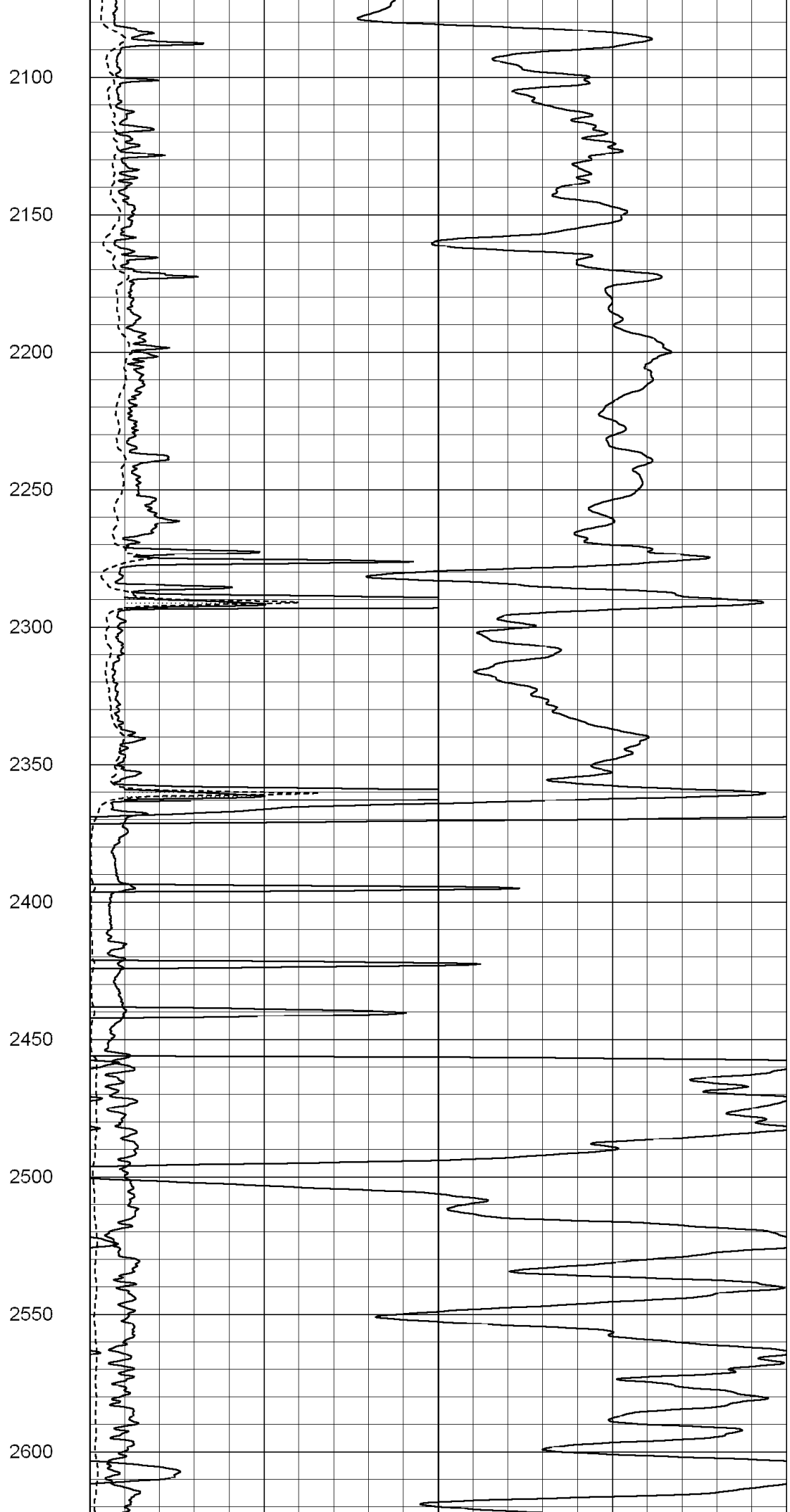
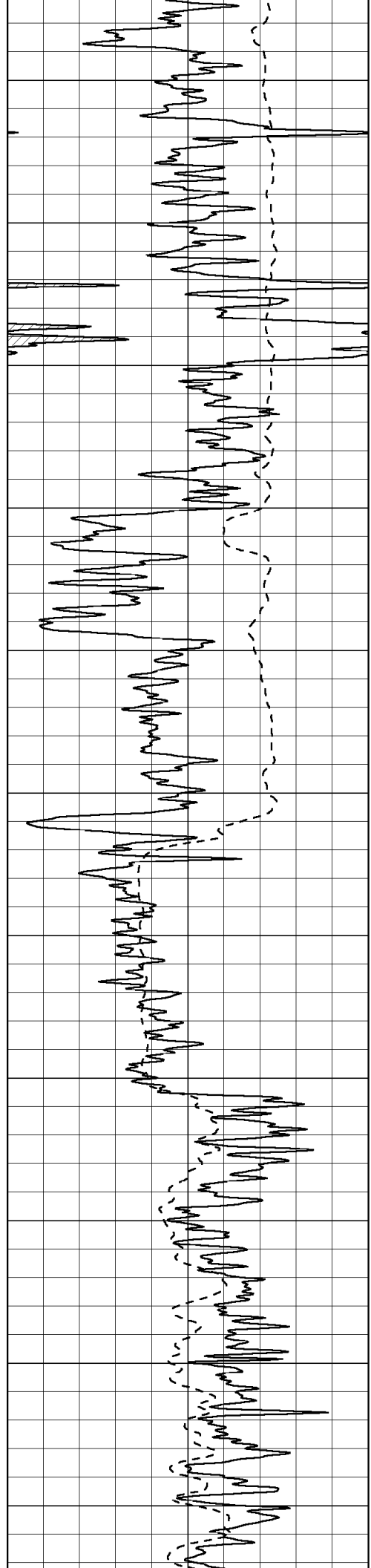


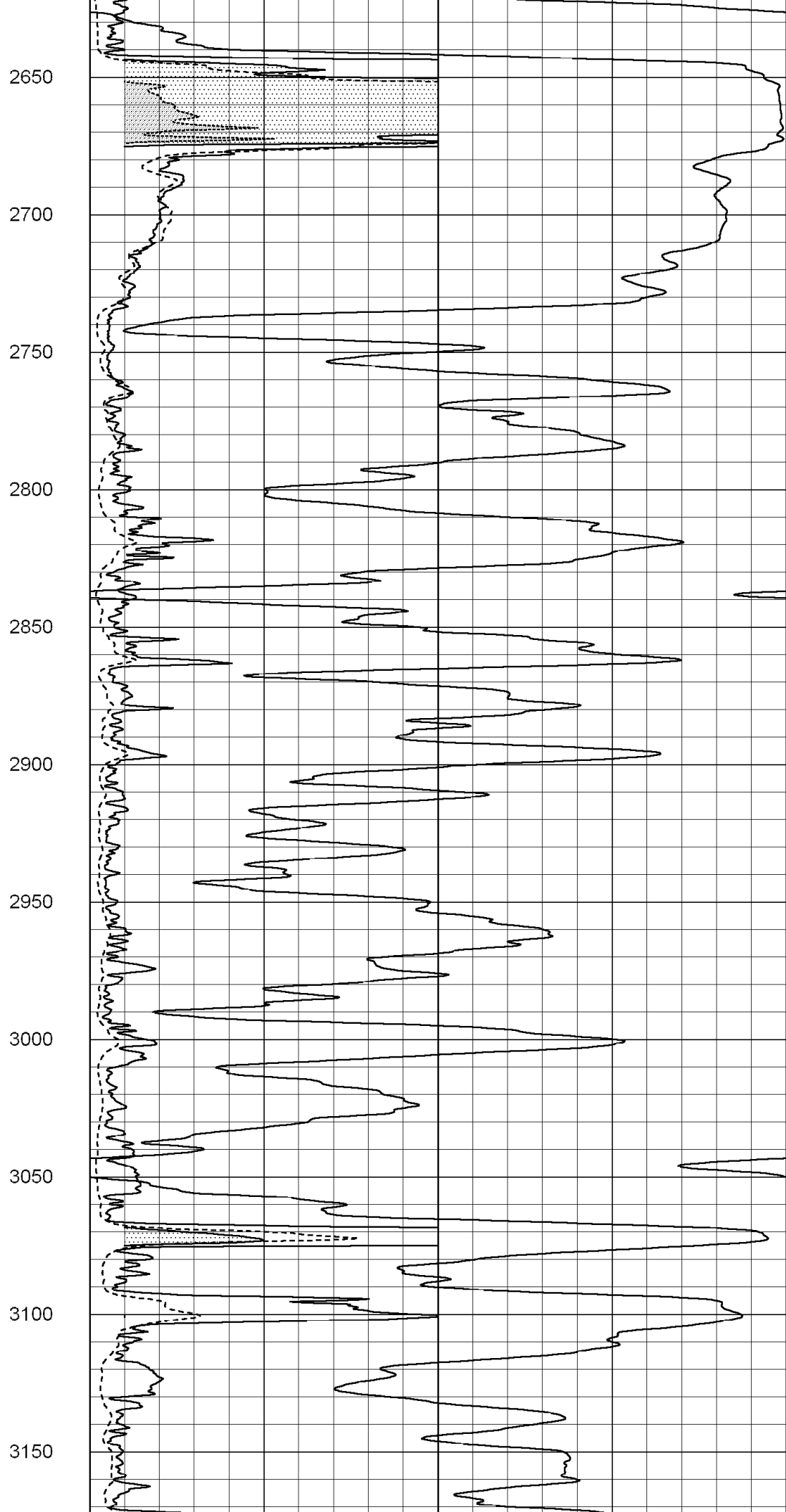
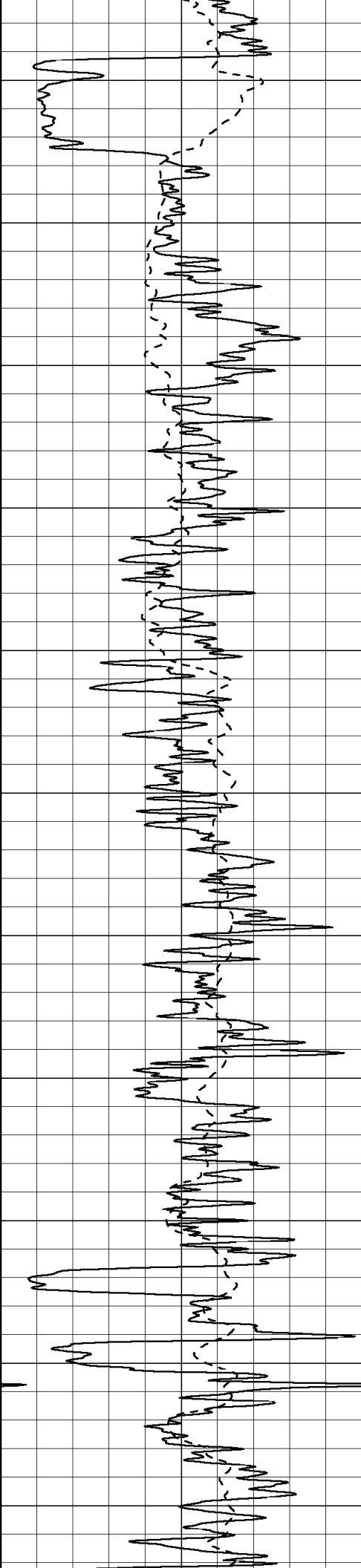


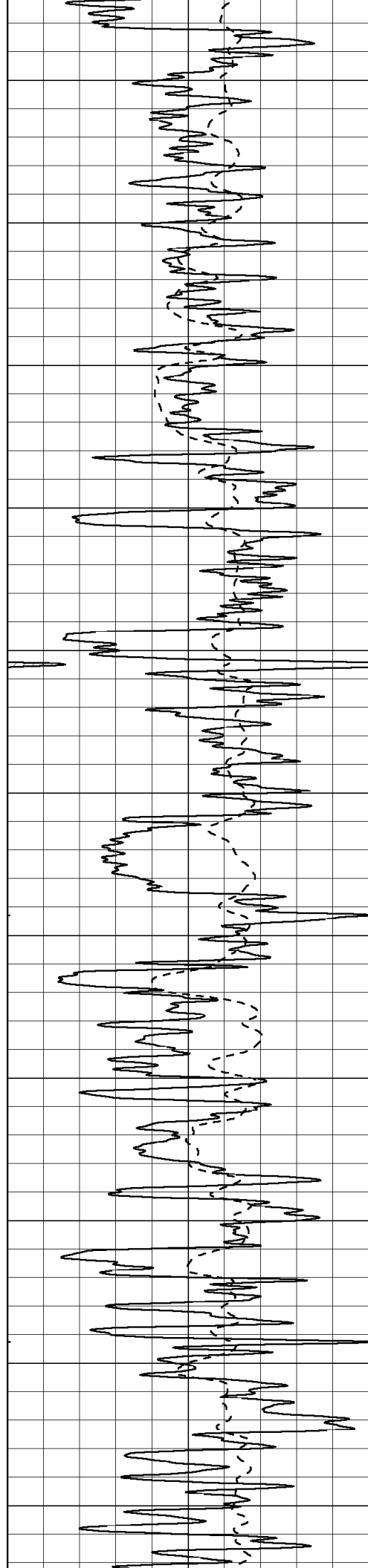
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1050
1100
1150
1200
1250
1300
1350
1400
1450
1500











3200

3250

3300

3350

3400

3450

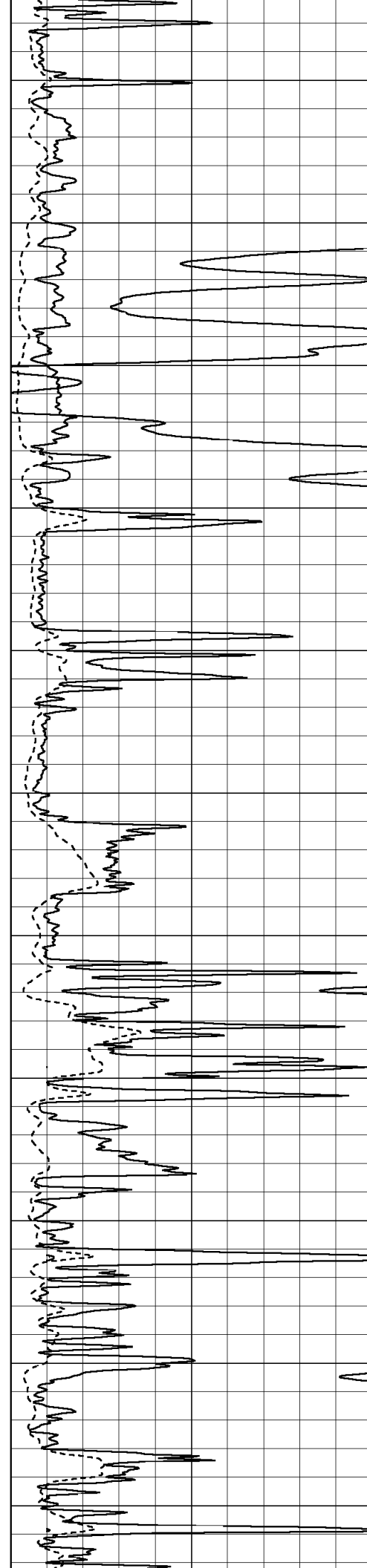
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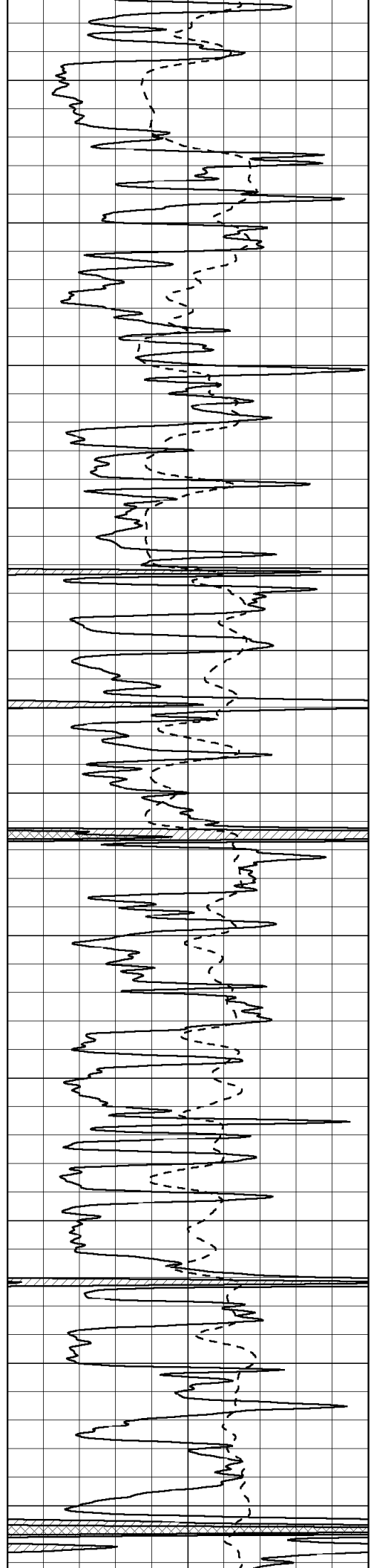
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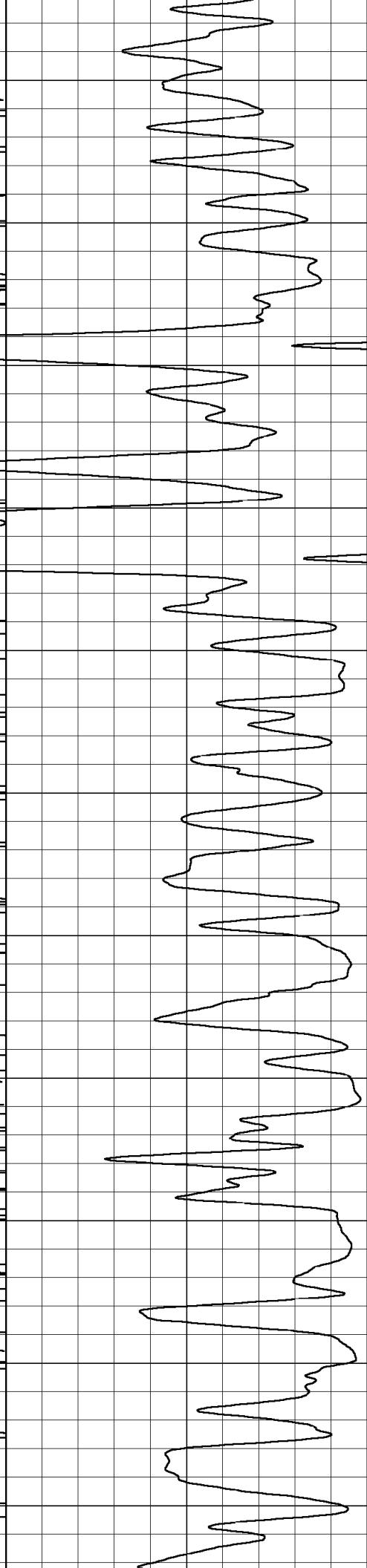
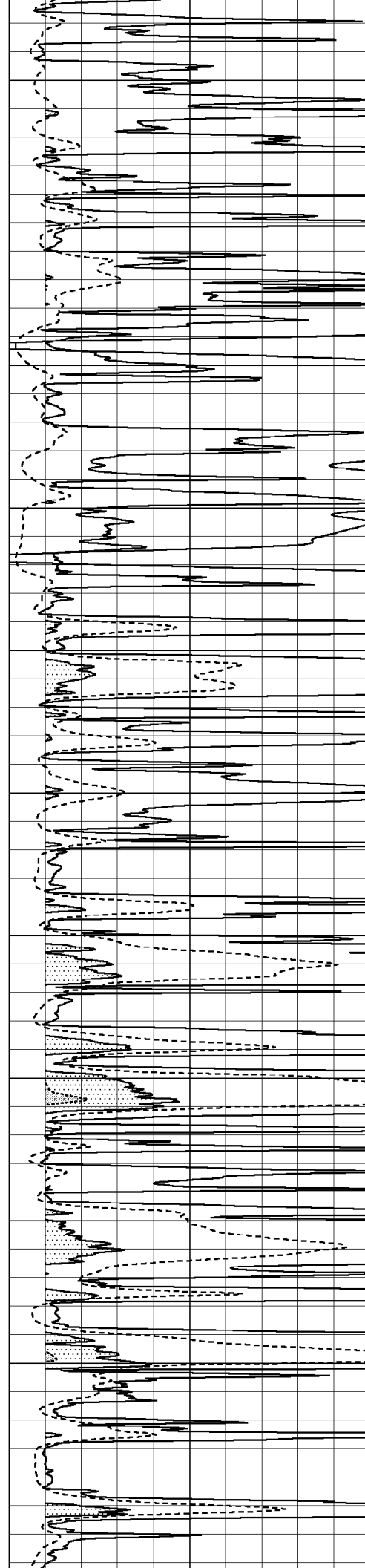
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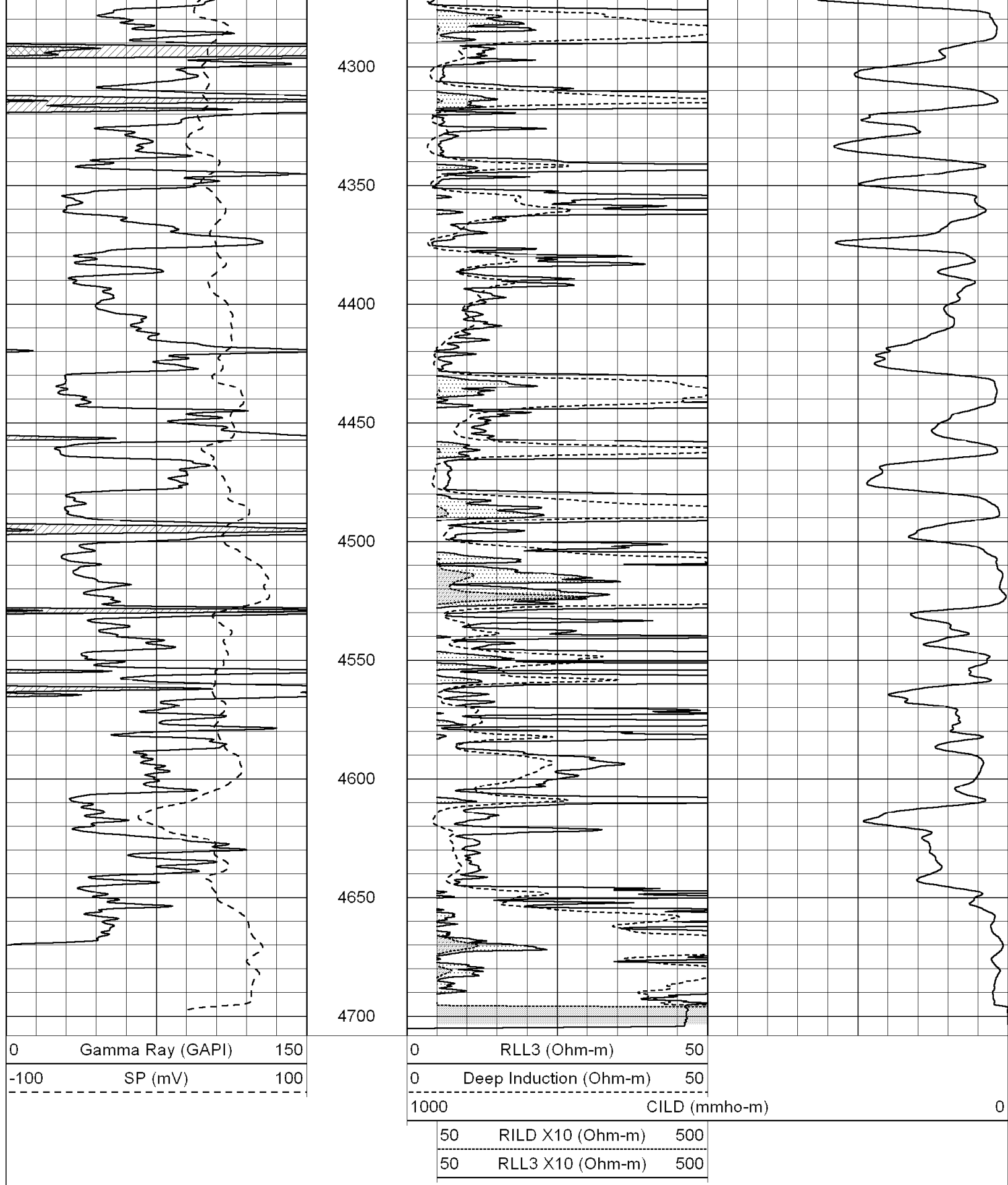
3700





3750
3800
3850
3900
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4000
4050
4100
4150
4200
4250



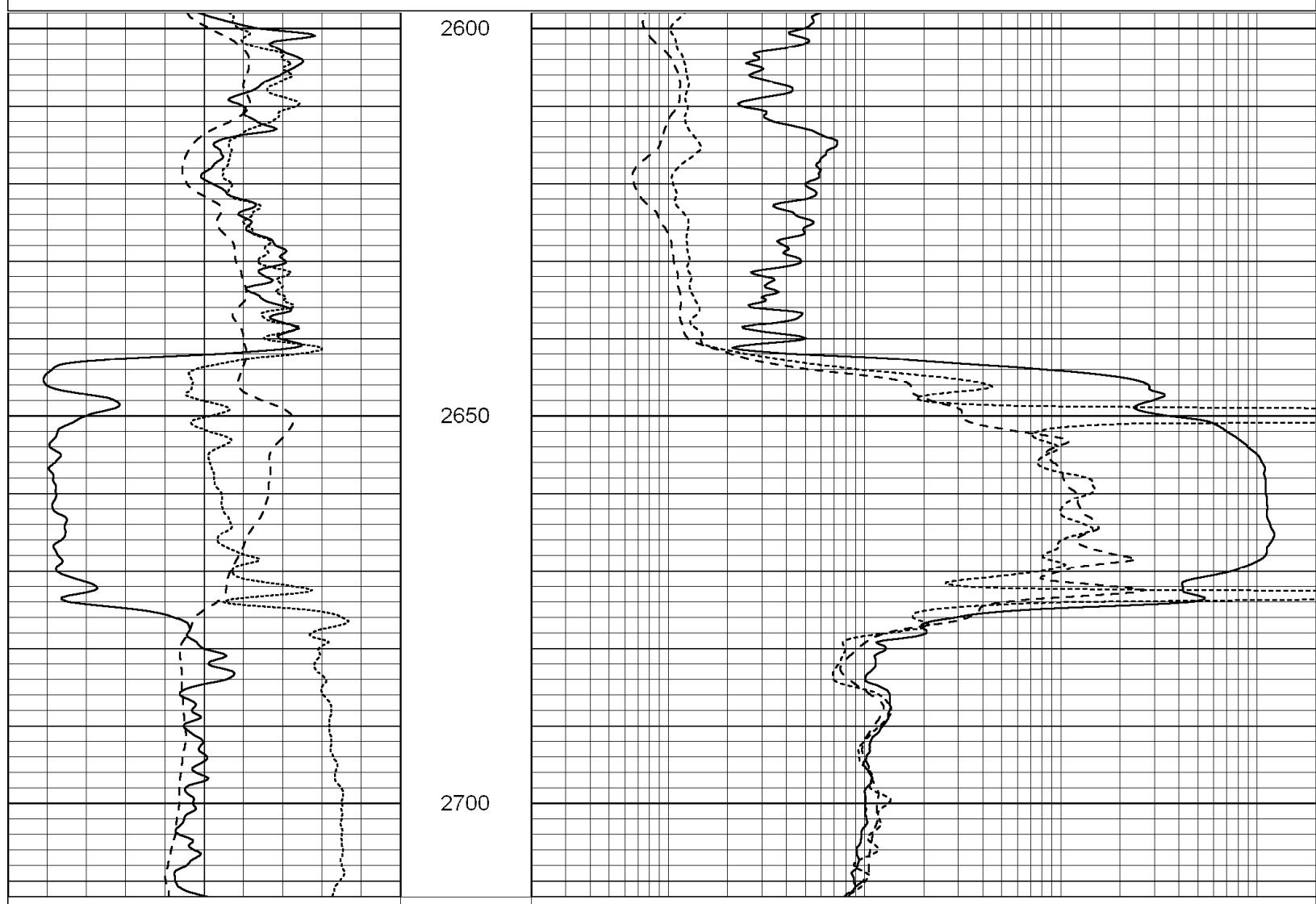


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MAIN SECTION

Database File: 000712ddn.db
 Dataset Pathname: pass6.1A
 Presentation Format: dil
 Dataset Creation: Fri Jul 31 08:54:01 2009
 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	MEDIUM INDUCTION (Ohm-m)	2000
-250	RxoRt	50	0.2	DEEP INDUCTION (Ohm-m)	2000



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



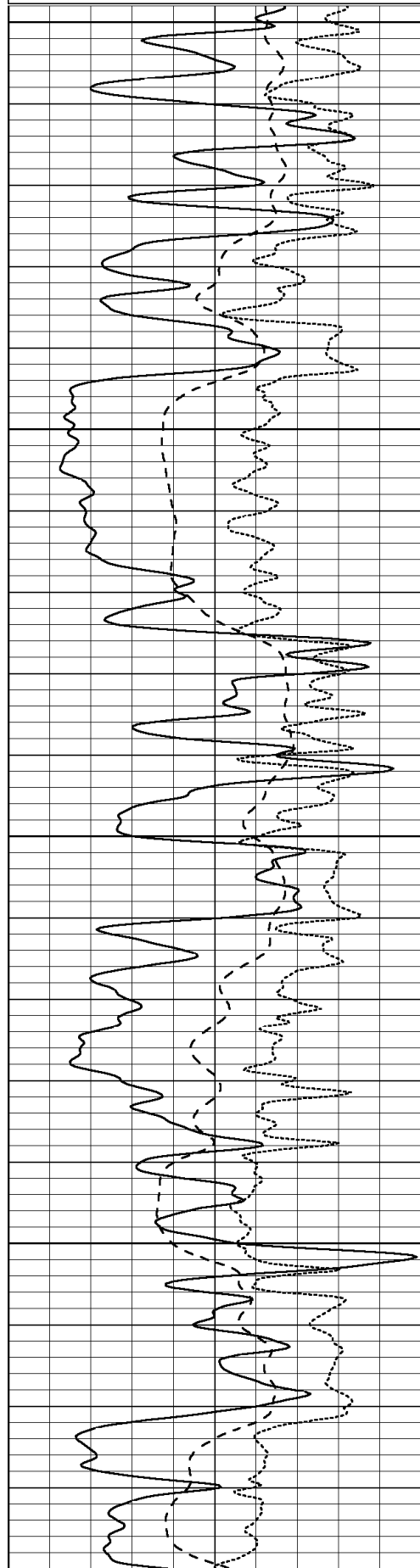
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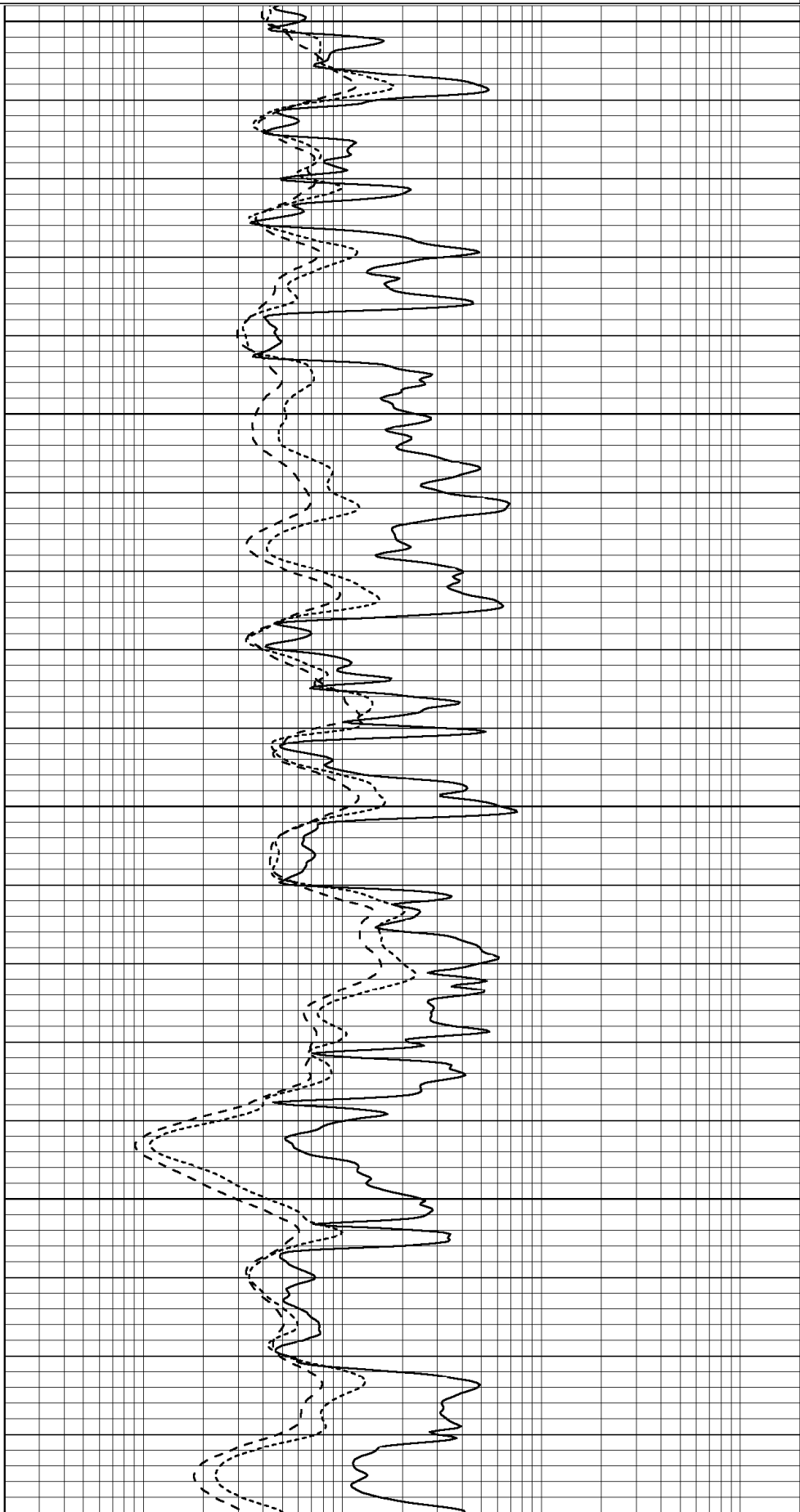
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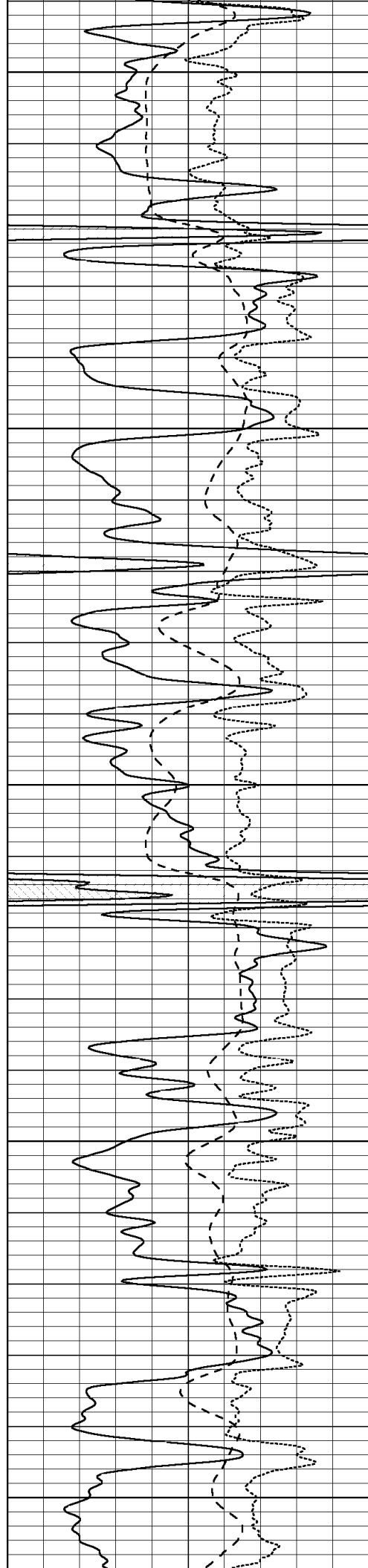
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50

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



3700
 3750
 3800
 3850





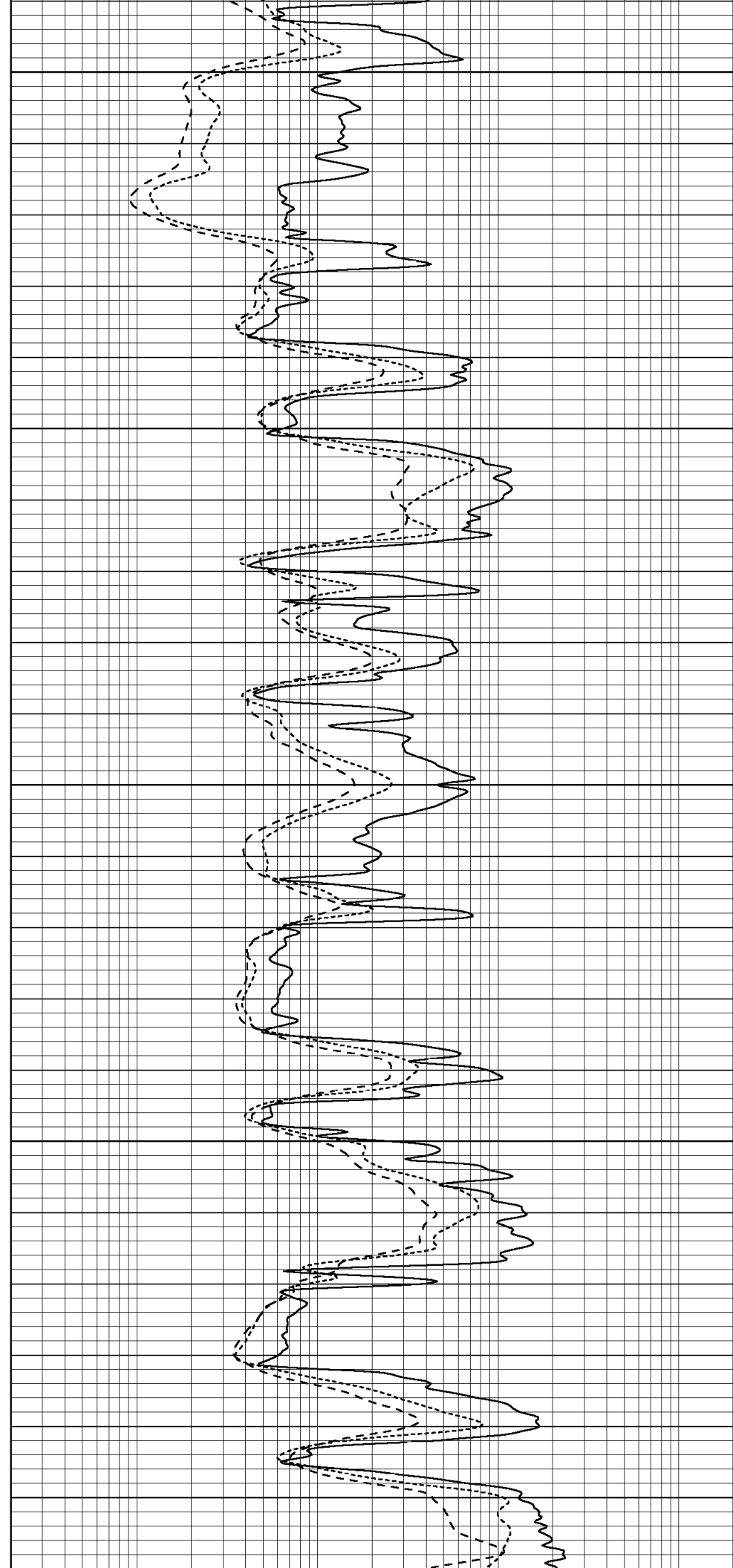
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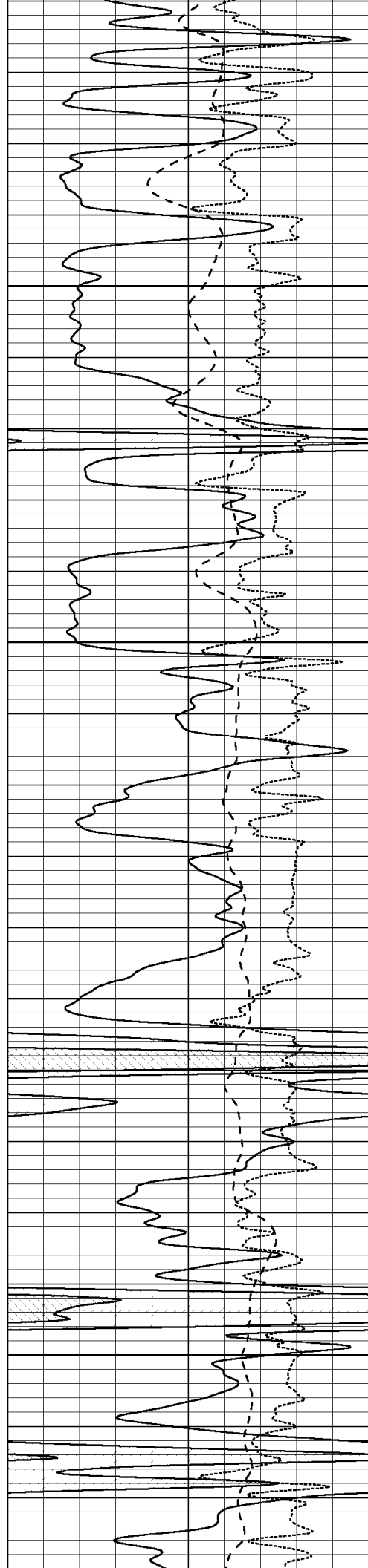
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4050

4100



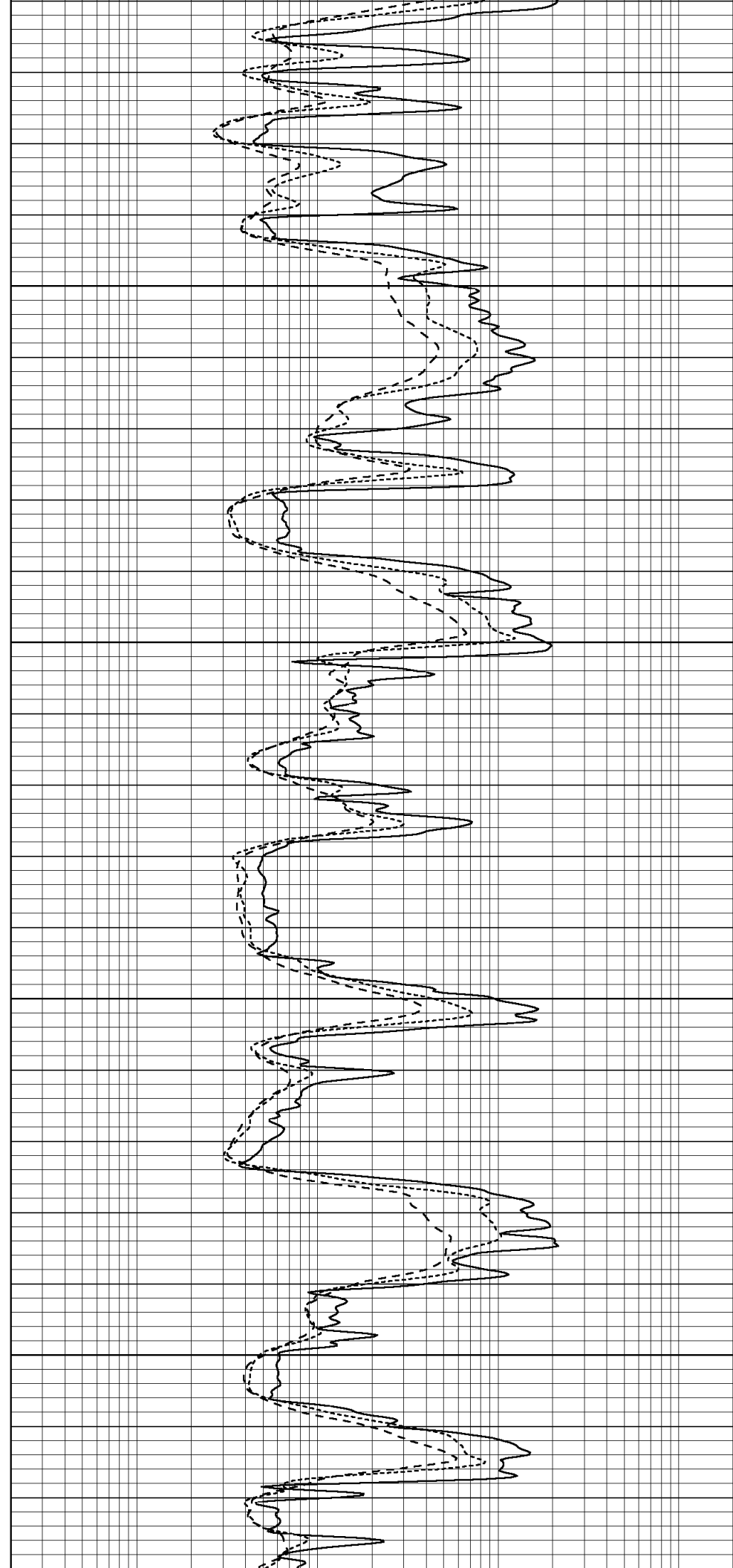


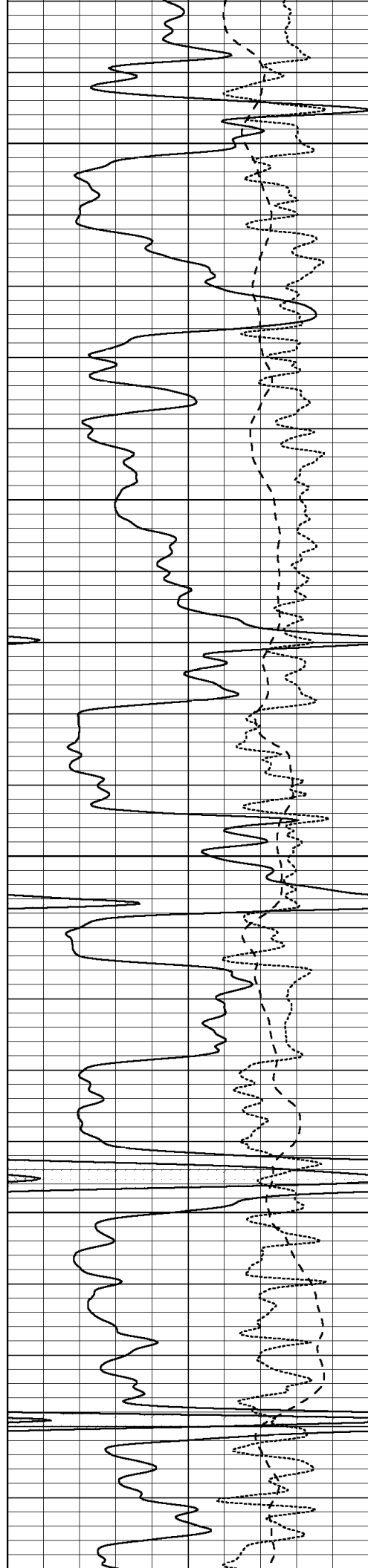
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4200

4250

4300





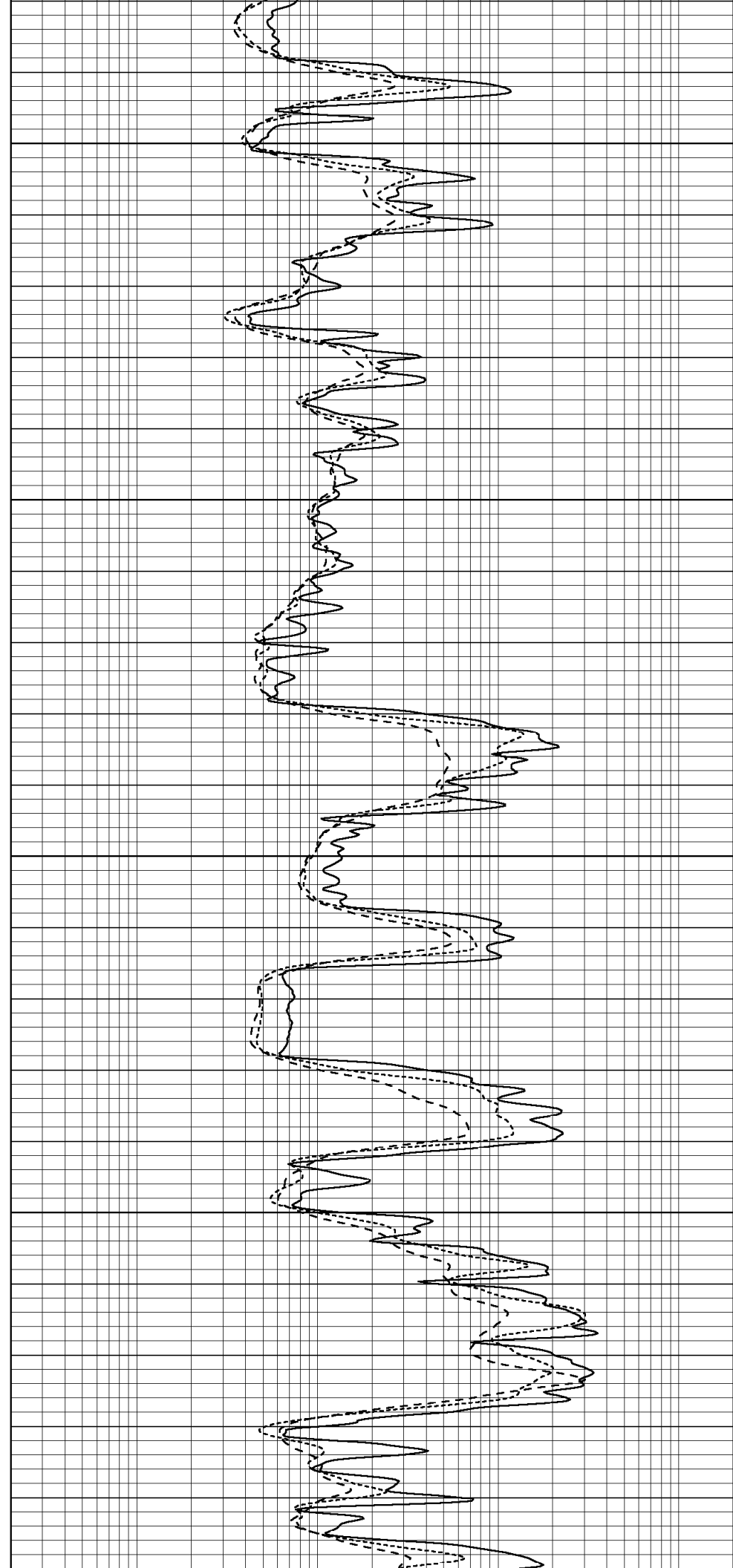
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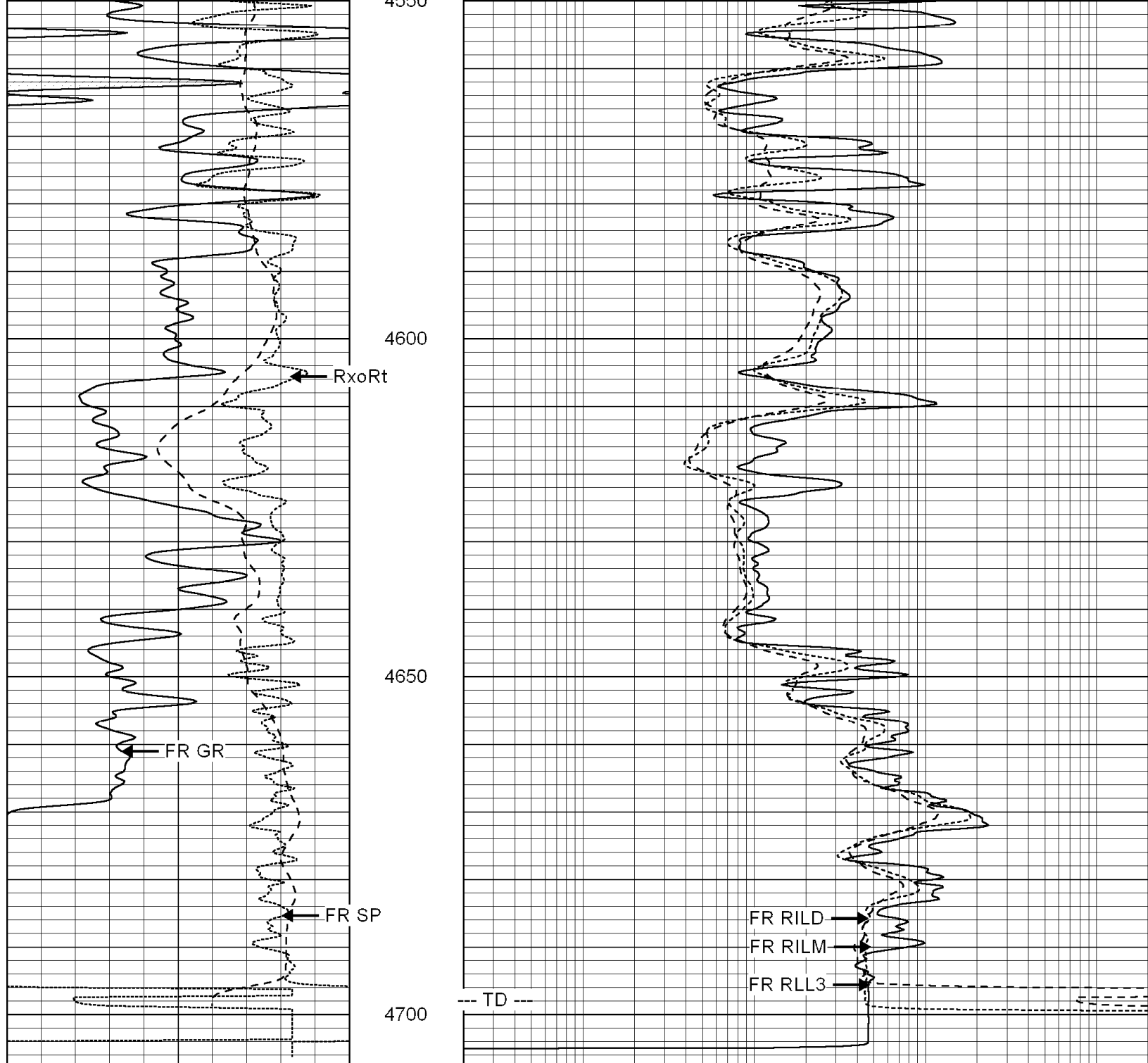
4400

4450

4500

4550





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

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



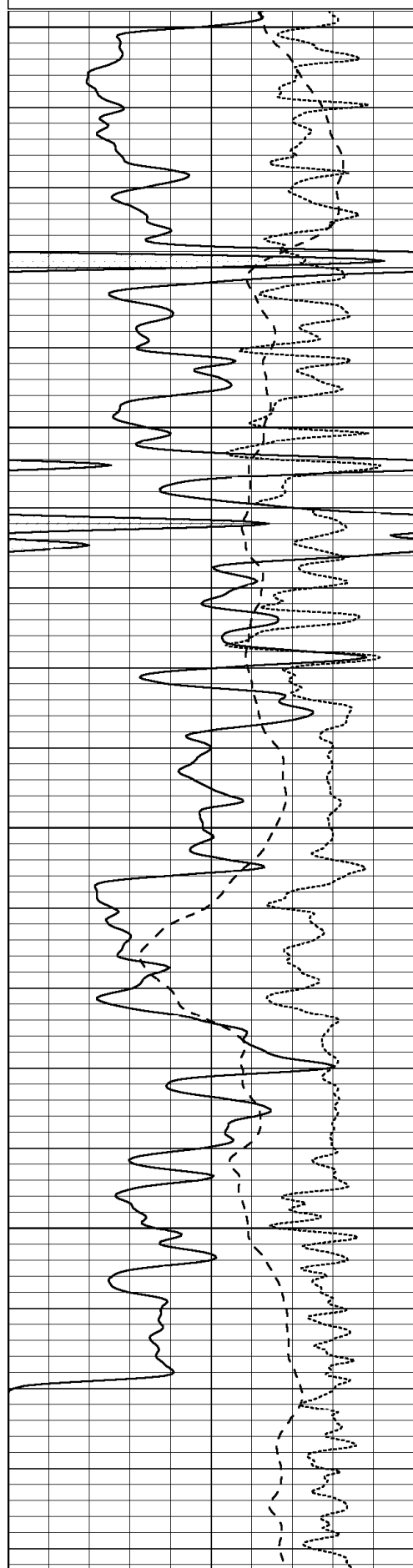
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REPEAT SECTION

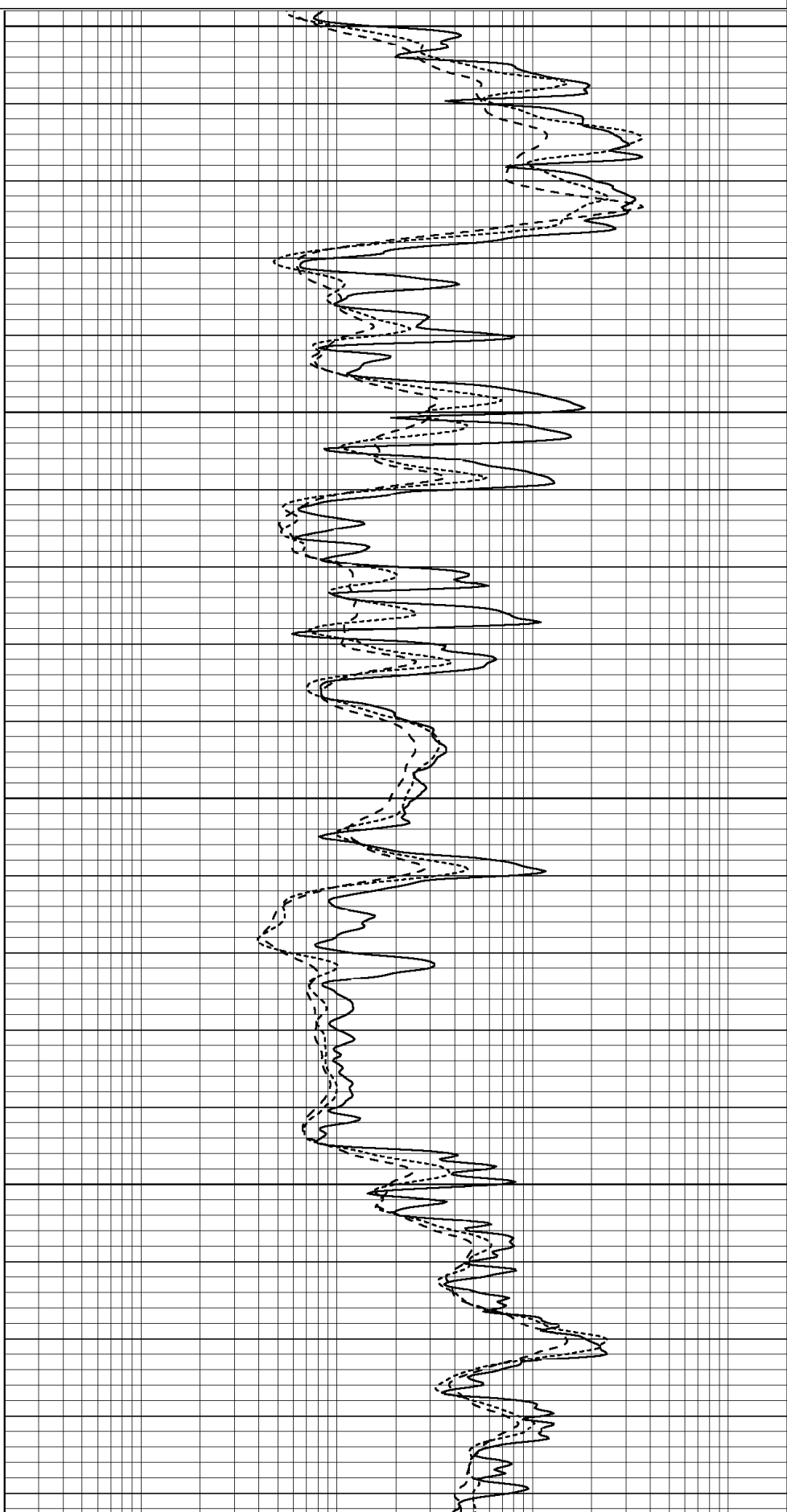
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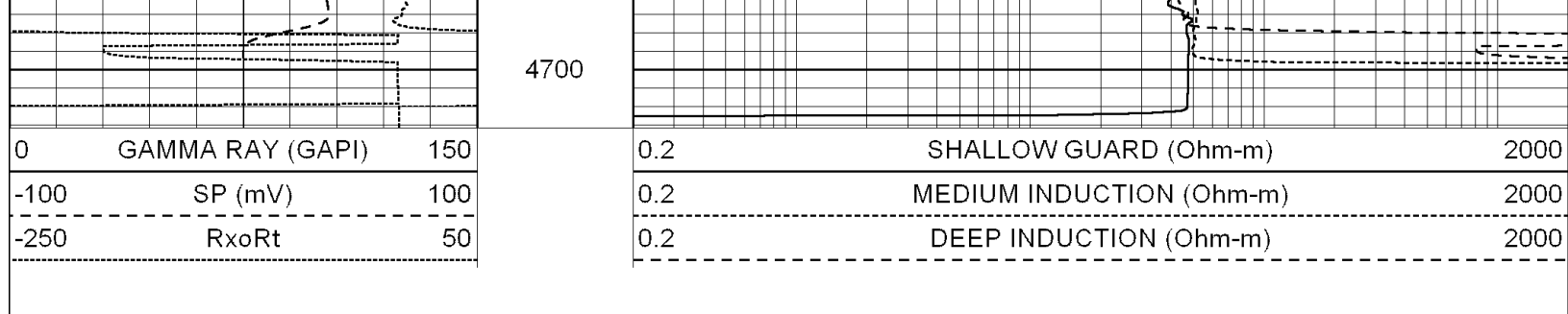
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50

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



4500
4550
4600
4650





Calibration Report

Database File: 000712ddn.db
 Dataset Pathname: pass6
 Dataset Creation: Fri Jul 31 07:20:50 2009 by Log Open-Cased 051020

Dual Induction Calibration Report

Serial-Model: DIL4-GEAR
 Performed: Fri Jul 31 07:48:50 2009

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.006	0.665	V	0.000	400.000	mmho-m	600.000	-11.000
Medium	-0.005	0.748	V	0.000	462.500	mmho-m	600.000	-12.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.007	0.650	V	0.000	400.000	mmho-m	621.890	-4.289
Medium	0.012	0.750	V	0.000	462.500	mmho-m	626.134	-7.000

Compensated Density Calibration Report

Serial-Model: GEAR1-GEARHART
 Source / Verifier: 147 / 147
 Master Calibration Performed: Fri Jul 31 07:17:17 2009

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1006.91	528.07	cps
Aluminum	2.610	g/cc	233.49	355.80	cps
Spine Angle = 74.88			Density/Spine Ratio = 0.594		
	Size		Reading		
Small Ring	8.30	in	3.68	V	
Large Ring	14.00	in	6.06	V	

Compensated Neutron Calibration Report

Serial Number: NEU_11
 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: Fri Jul 31 06:50:30 2009

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.5300 GAPI/cps