

**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL
INDUCTION
LOG**

Company RITCHIE EXPLORATION, INC.
Well #1 KUHN 19A
Field WILDCAT
County GOVE State KANSAS

Company RITCHIE EXPLORATION, INC.
Well #1 KUHN 19A
Field WILDCAT
County GOVE
State KANSAS

Location: API #: 15-063-22065
1900' FNL & 1490' FEL
SEC 19 TWP 12S RGE 28W
Permanent Datum GROUND LEVEL Elevation 2747
Log Measured From KELLY BUSHING 8' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
CDL/CNL
Elevation
K.B. 2755
D.F.
G.L. 2747

Date	12-13-12
Run Number	ONE
Depth Driller	4616
Depth Logger	4616
Bottom Logged Interval	4614
Top Log Interval	00
Casing Driller	235
Casing Logger	235
Bit Size	7.875
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.3 / 55
pH / Fluid Loss	11.0 / 7.2
Source of Sample	FLOWLINE
Rm @ Meas. Temp	1.20 @ 70F
Rmf @ Meas. Temp	0.90 @ 70F
Rmc @ Meas. Temp	1.44 @ 70F
Source of Rmf / Rmc	MEASURED
Rm @ BHT	.690 @ 121F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	4:45 P.M.
Maximum Recorded Temperature	121F
Equipment Number	860
Location	HAYS, KS.
Recorded By	RUPP
Witnessed By	MIKE ENGELBRECHT

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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

NABORS COMPLETION & PRODUCTION CO.
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: GOVE, 3N, 1/2E, S INTO.

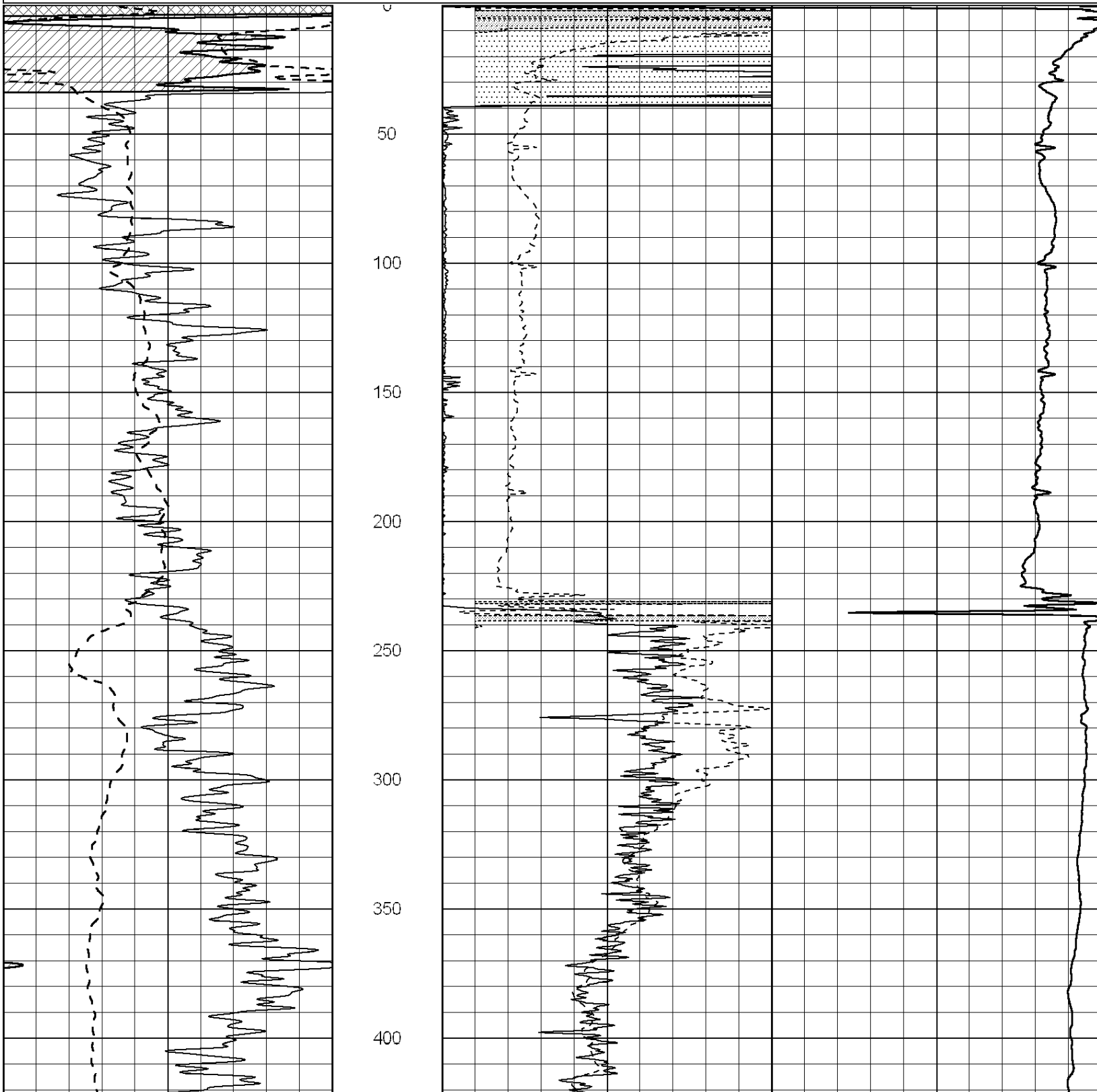


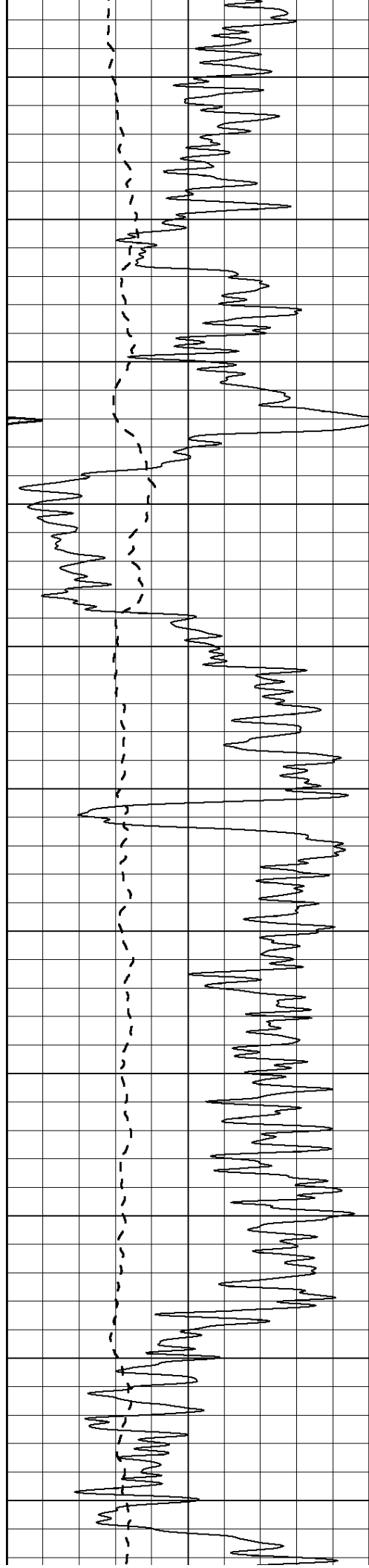
**COMPLETION
& PRODUCTION**

MAIN SECTION

Database File: 01063ddn.db
 Dataset Pathname: pass3.1
 Presentation Format: dil2
 Dataset Creation: Thu Dec 13 19:12:12 2012
 Charted by: Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150	0	RLL3 (Ohm-m)	50
			0	Deep Induction (Ohm-m)	50
			1000	CILD (mmho/m)	0
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500





450

500

550

600

650

700

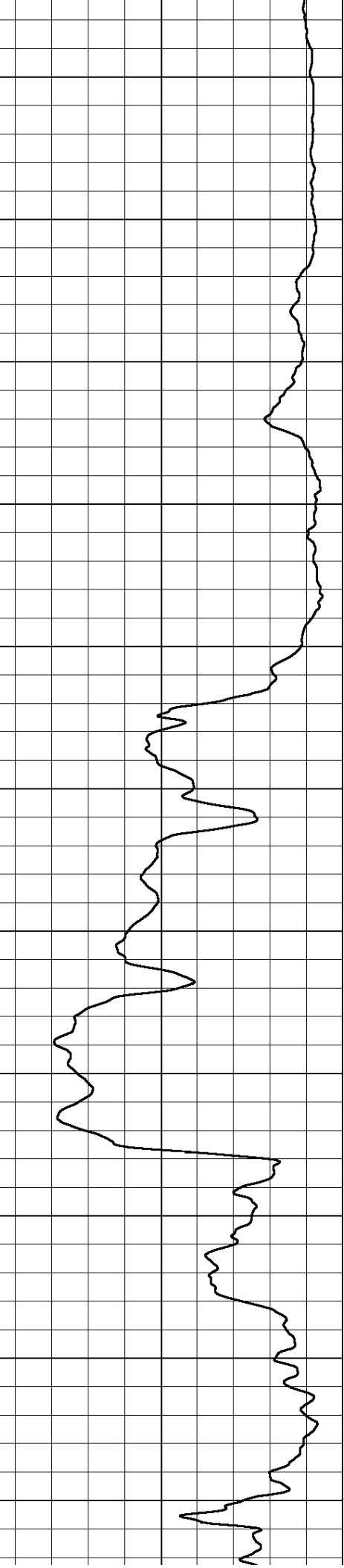
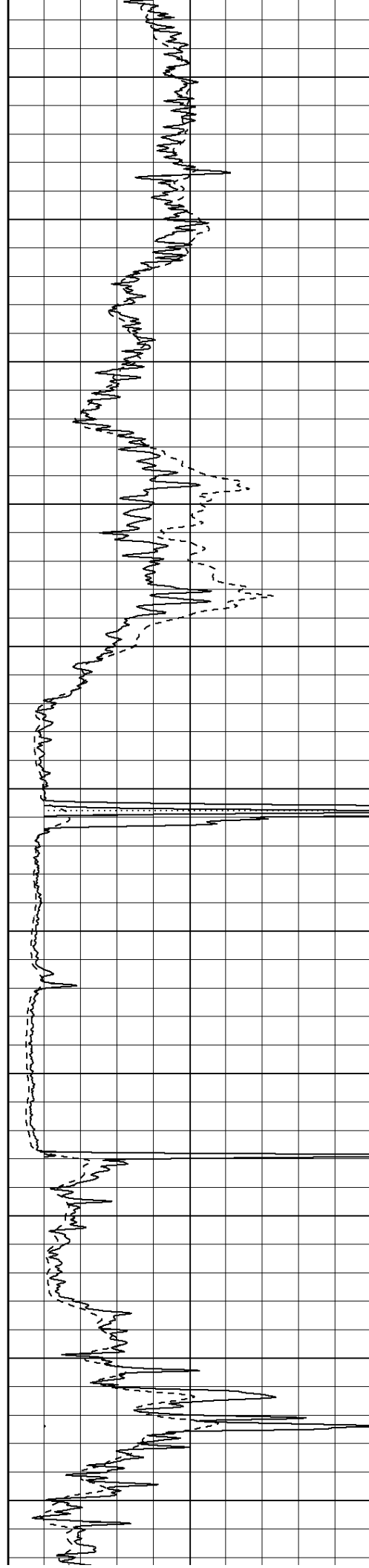
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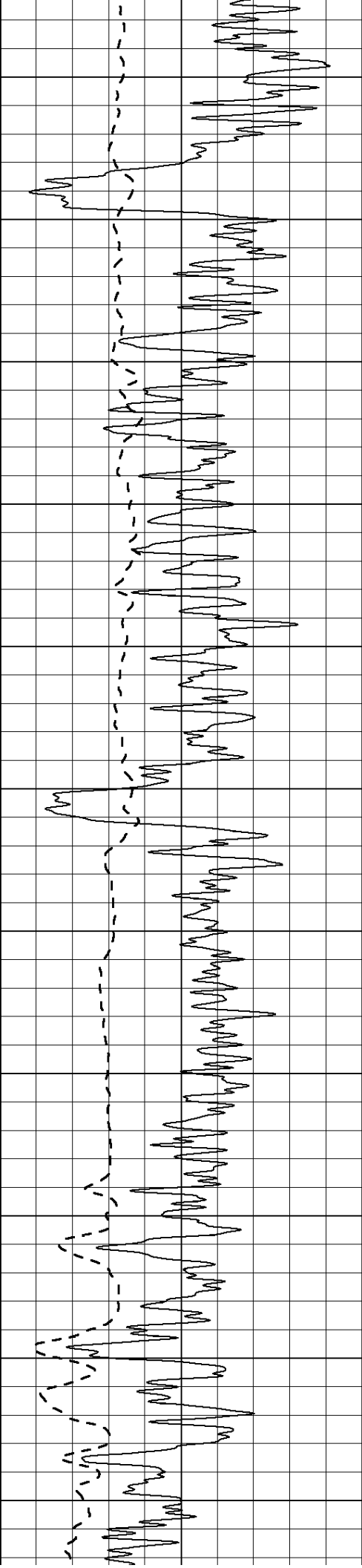
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850

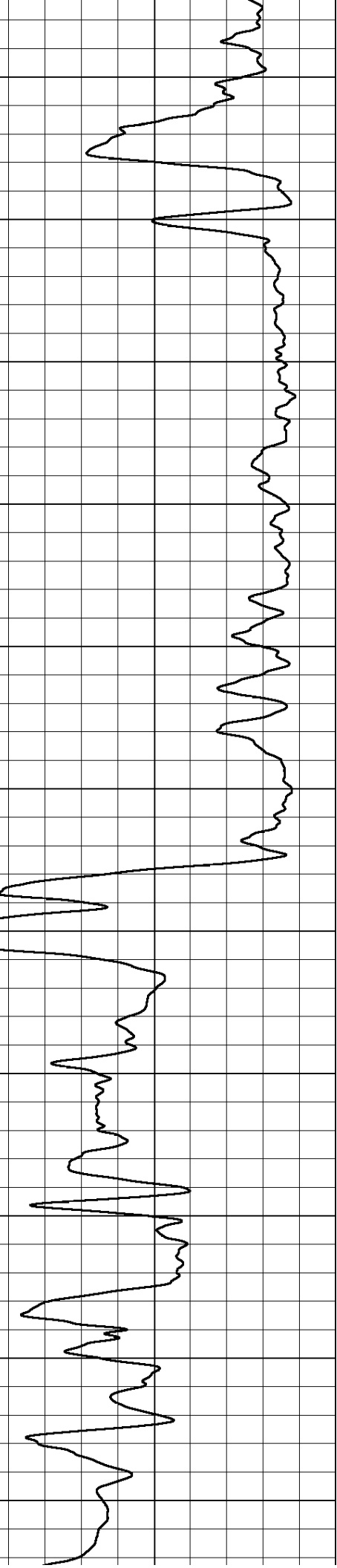
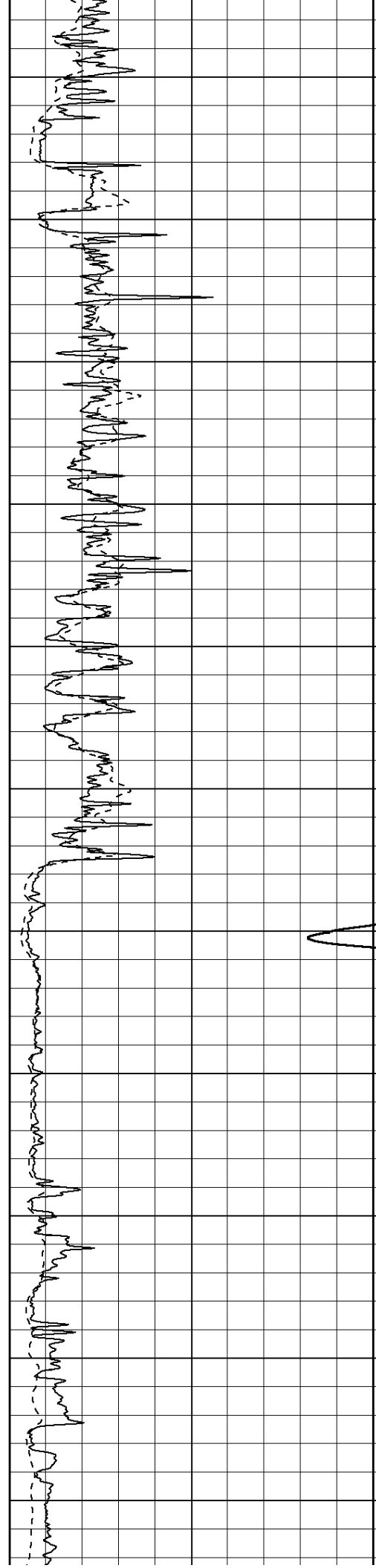
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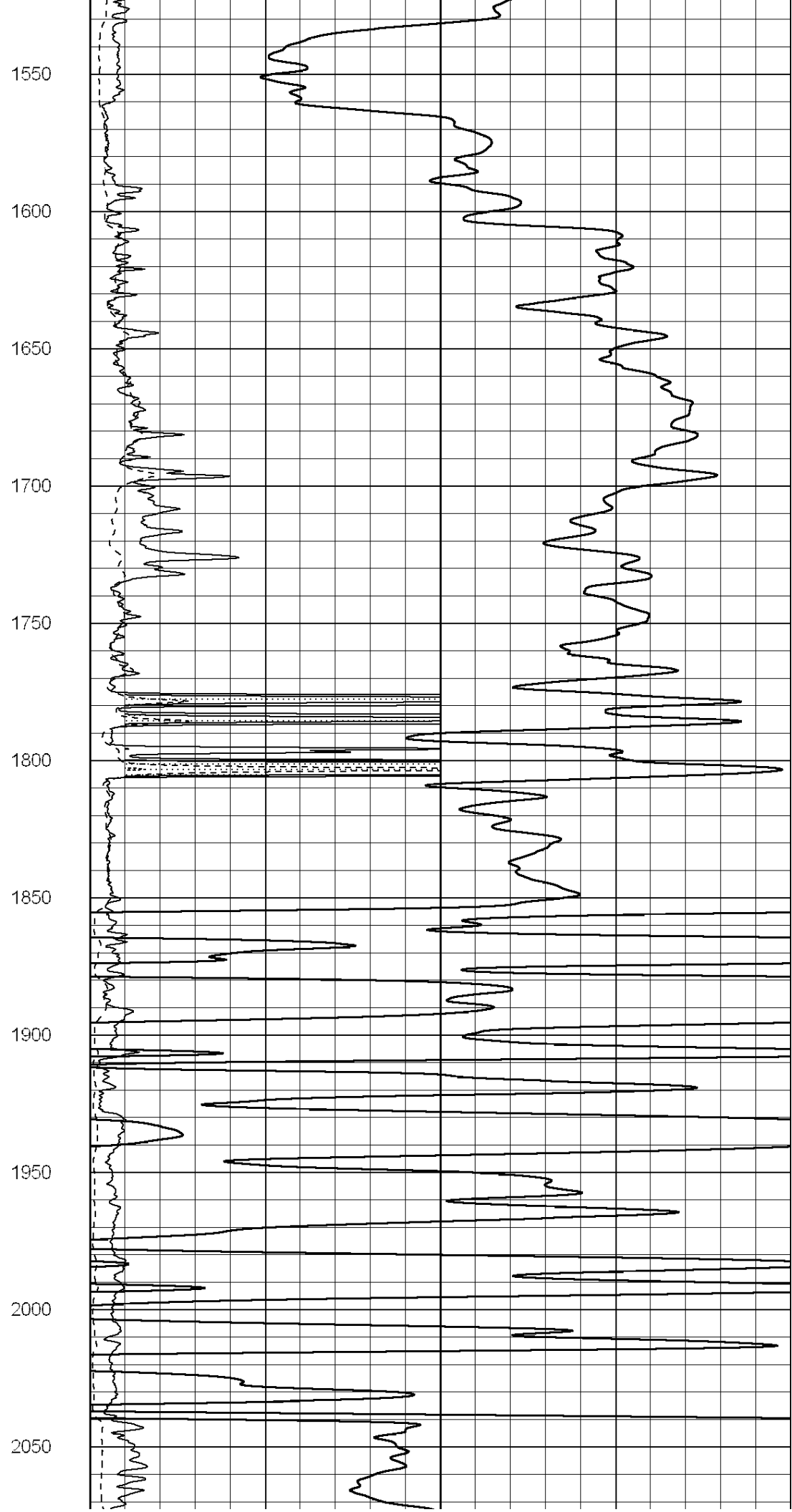
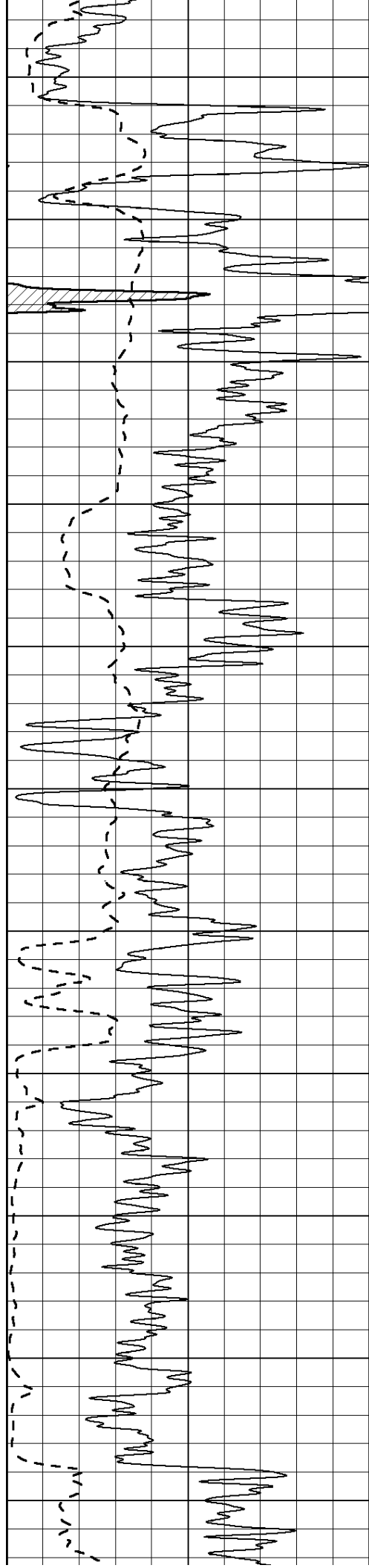
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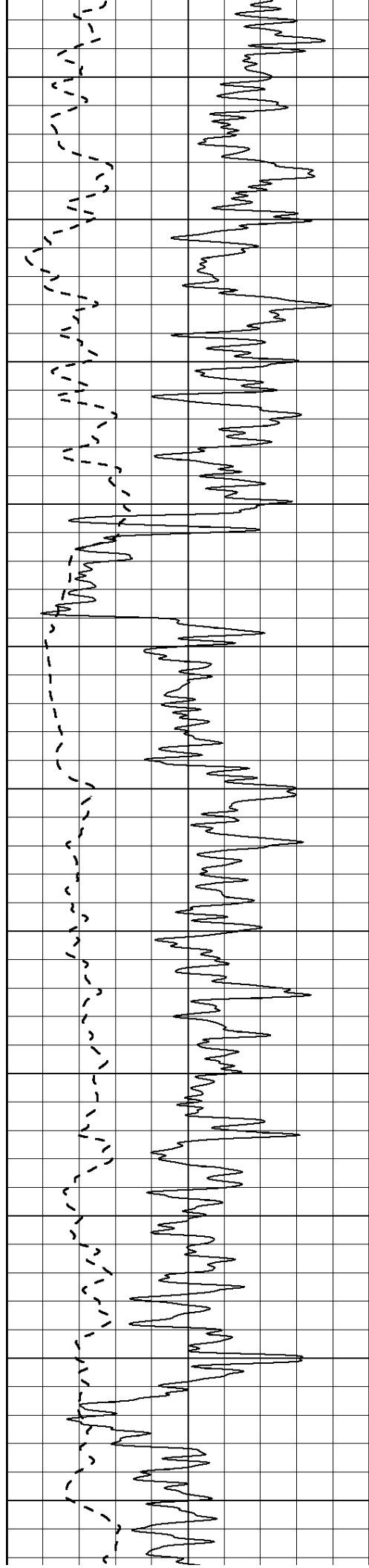




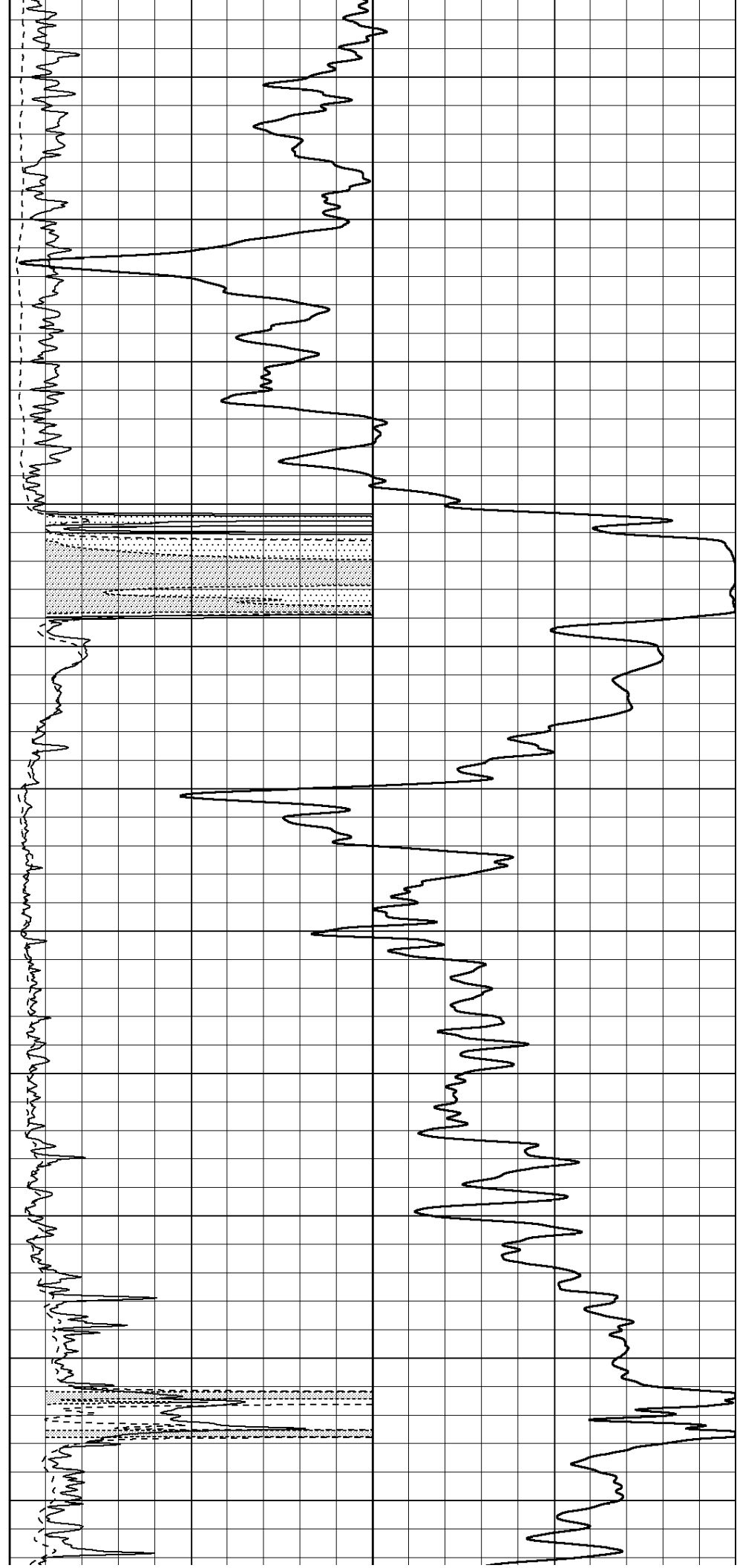
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1050
1100
1150
1200
1250
1300
1350
1400
1450
1500

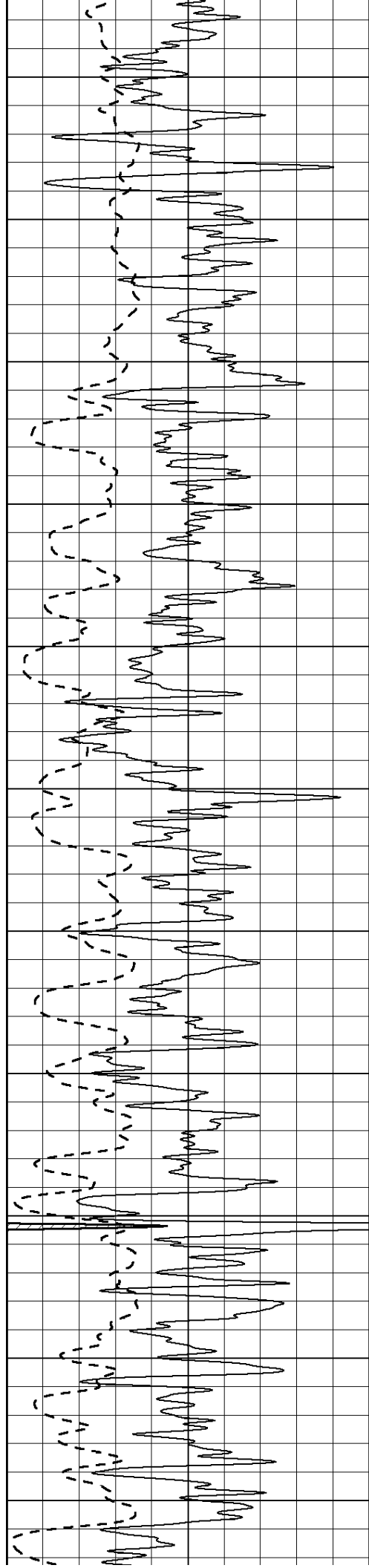




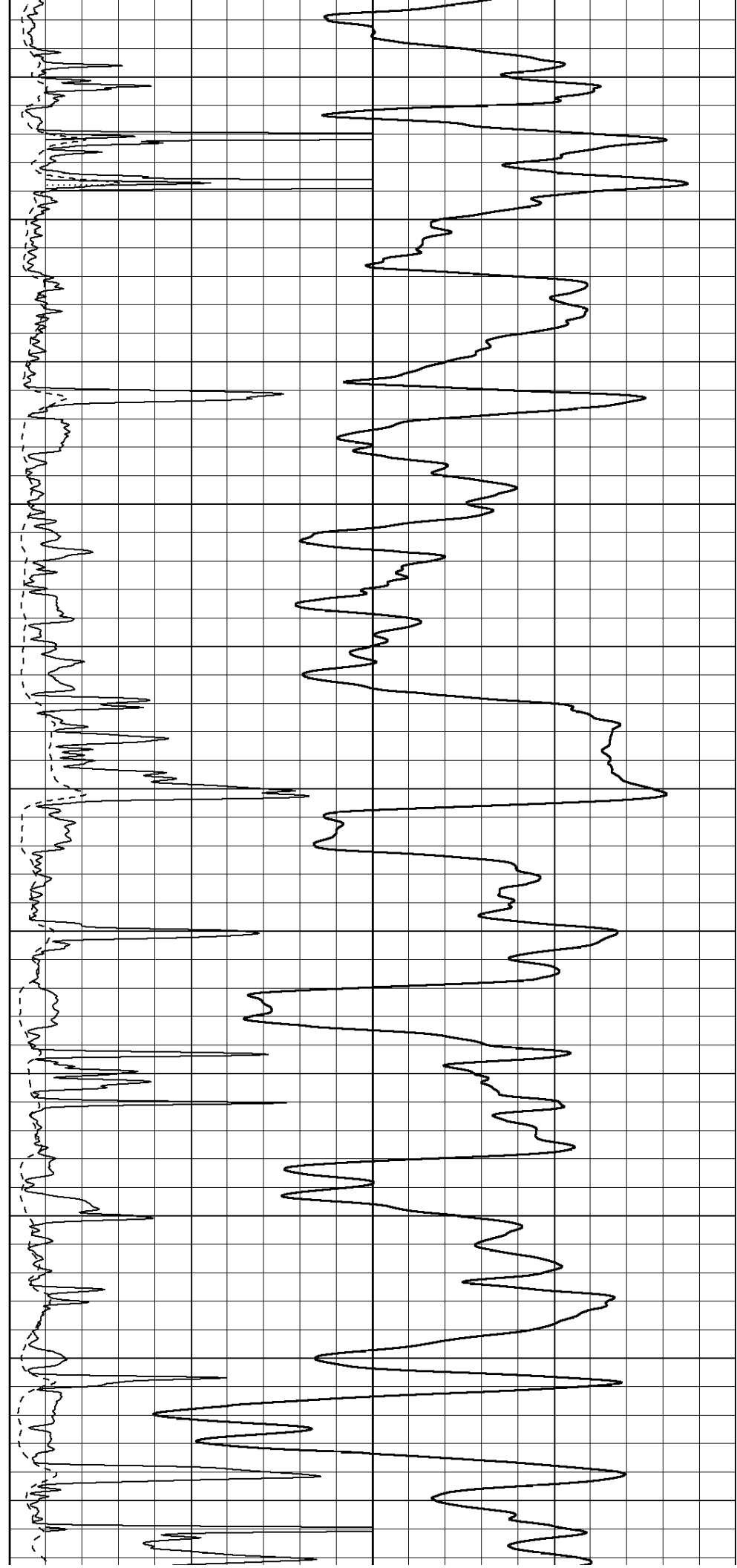


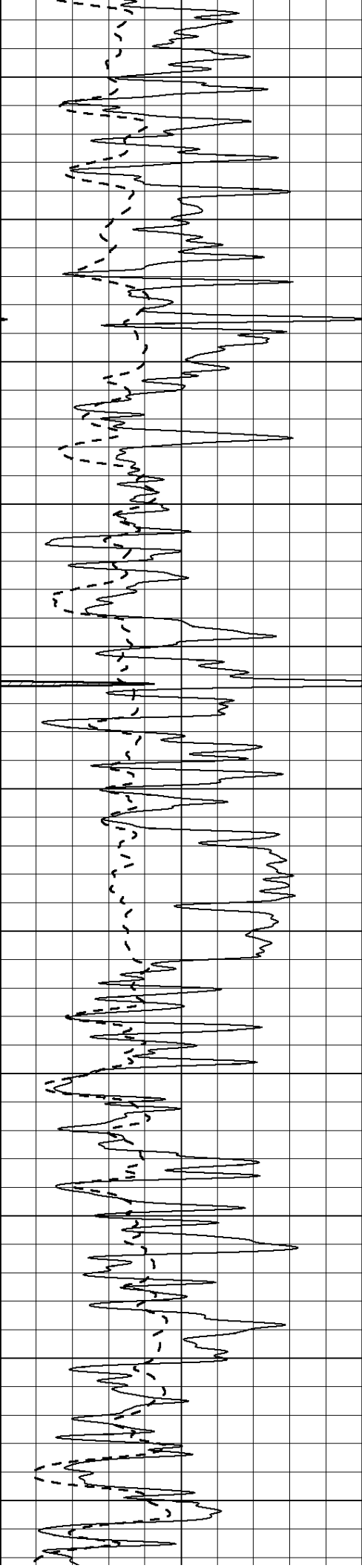
2100
2150
2200
2250
2300
2350
2400
2450
2500
2550
2600



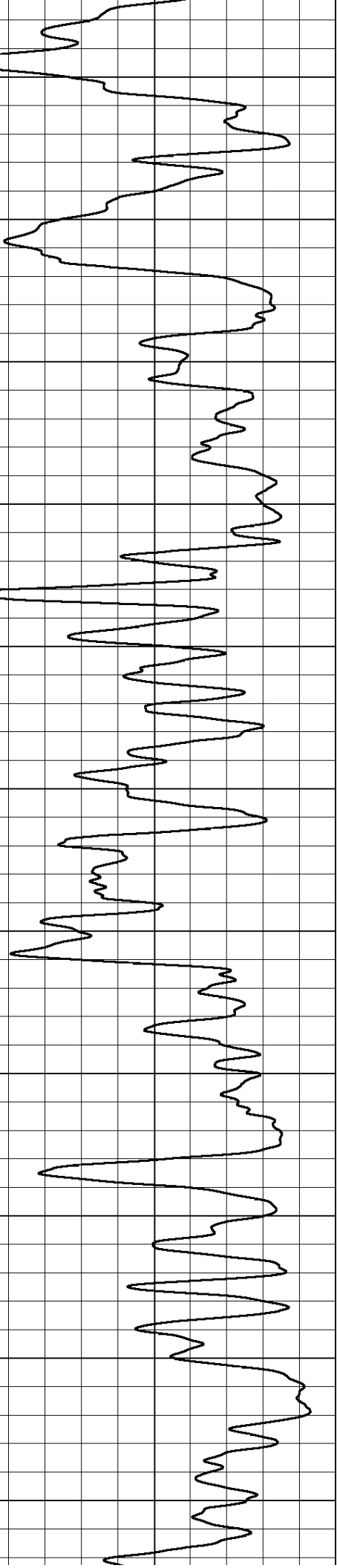
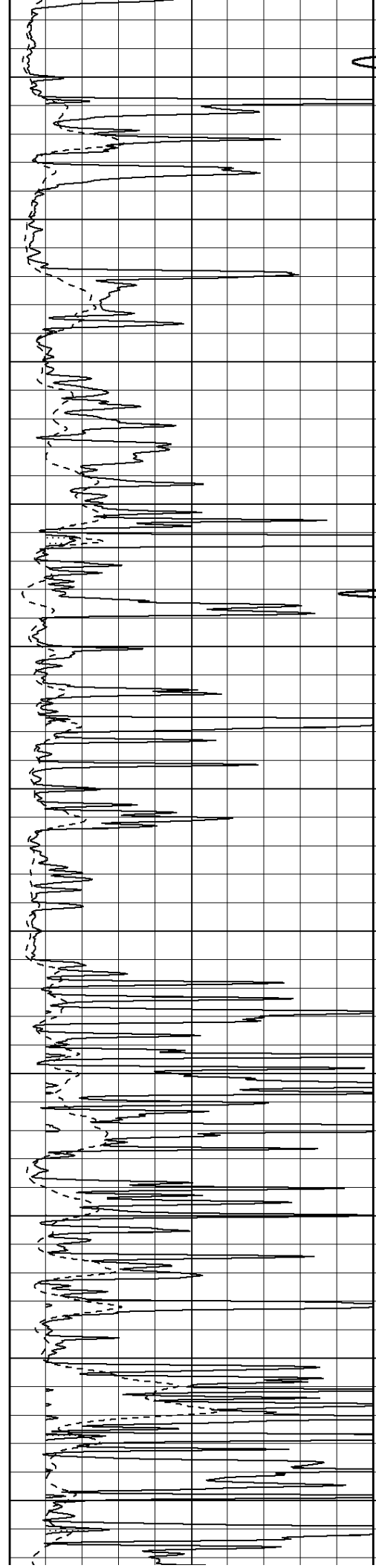


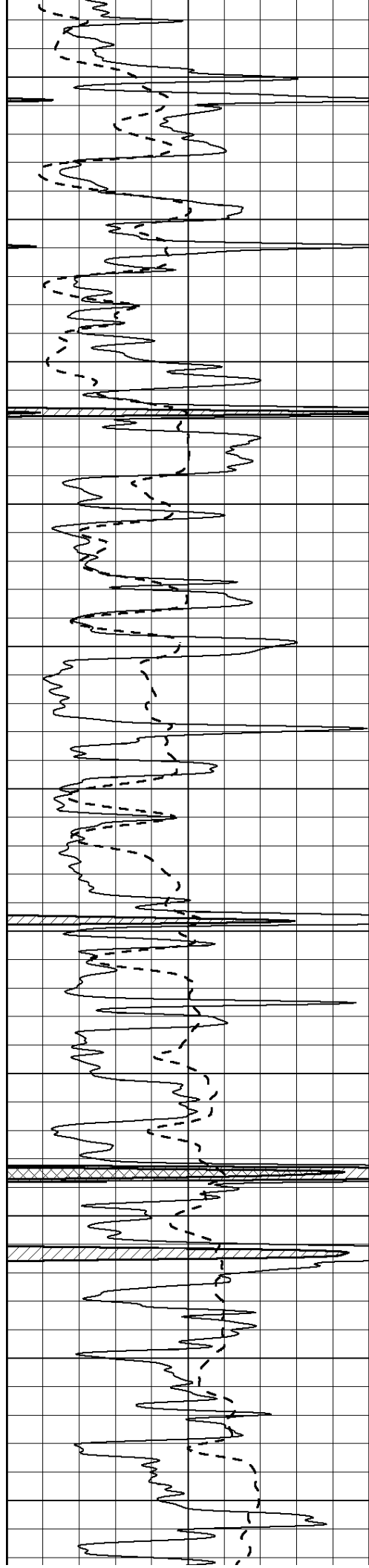
2650
2700
2750
2800
2850
2900
2950
3000
3050
3100
3150



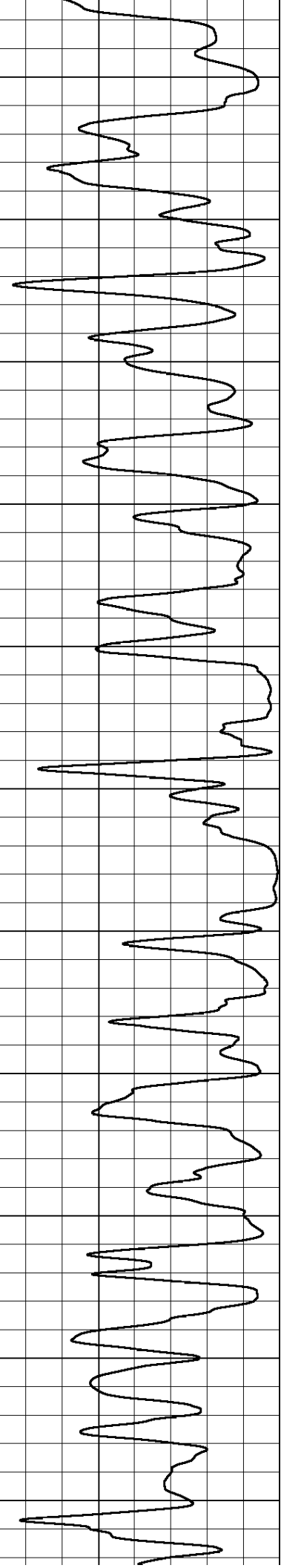
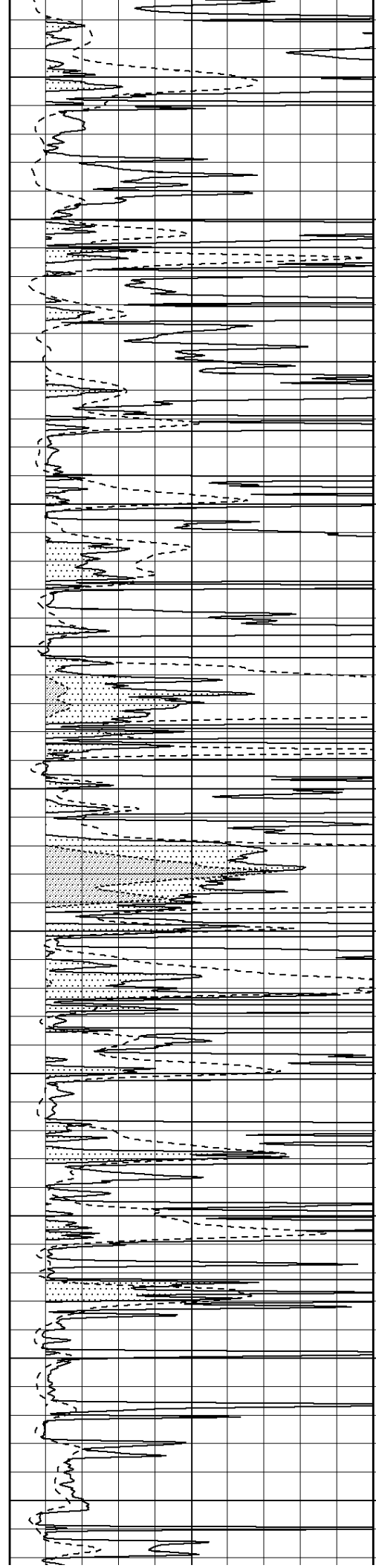


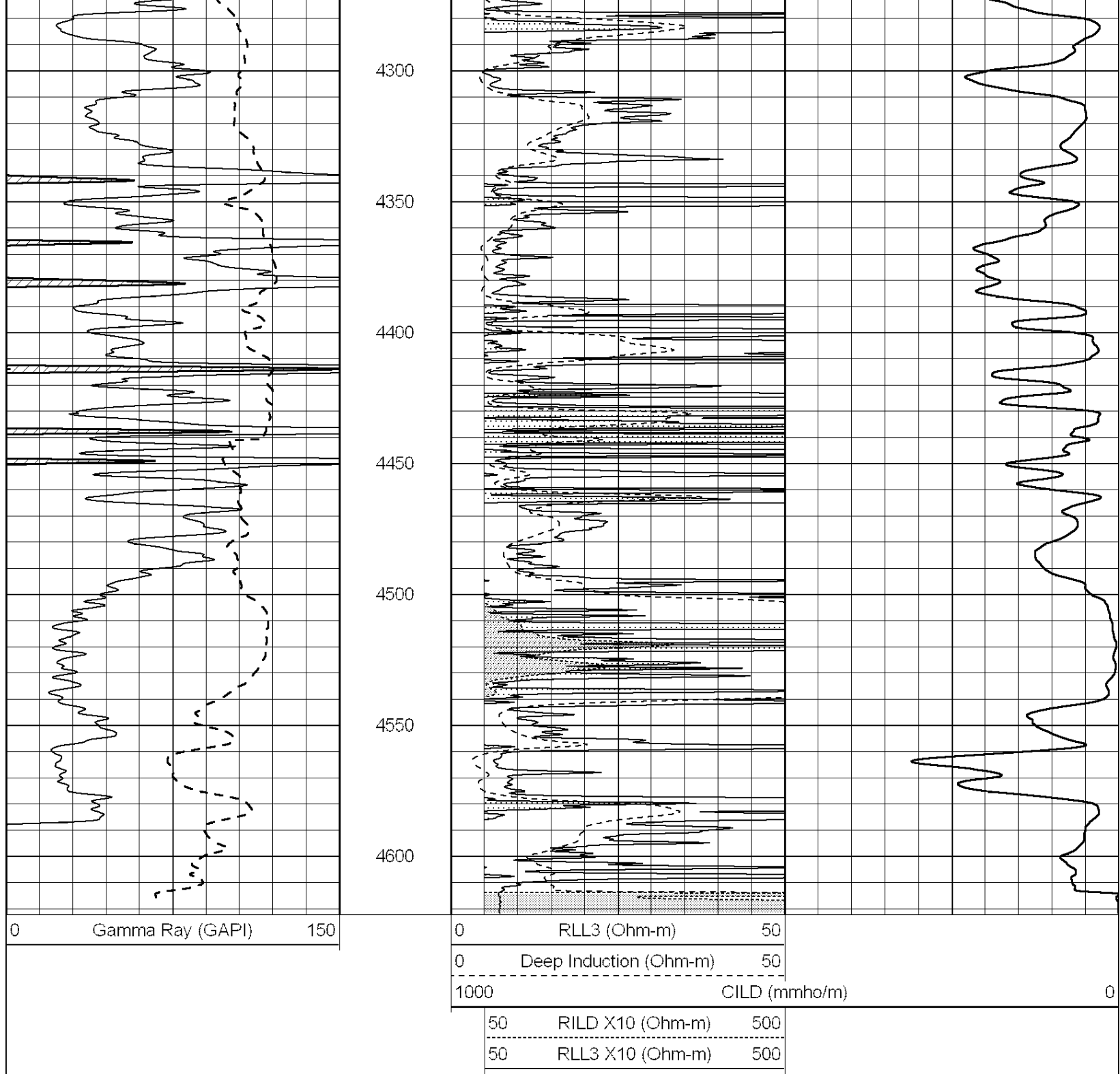
3200
3250
3300
3350
3400
3450
3500
3550
3600
3650
3700





3750
3800
3850
3900
3950
4000
4050
4100
4150
4200
4250





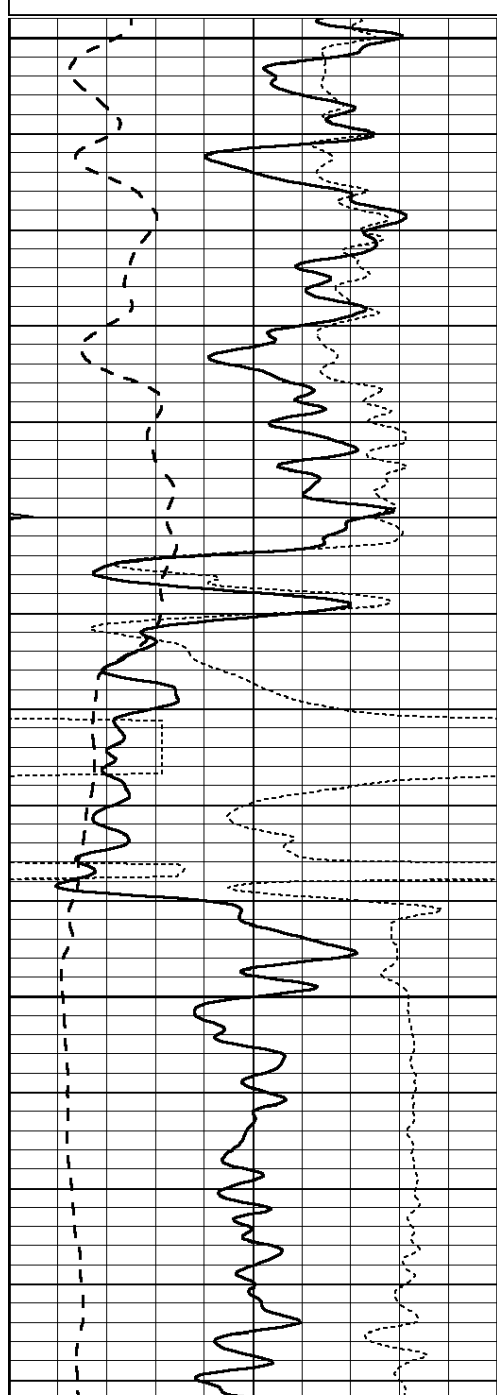
MAIN SECTION

Database File: 01063ddn.db
 Dataset Pathname: pass3.1
 Presentation Format: dil
 Dataset Creation: Thu Dec 13 19:12:12 2012
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	0.2	RLL3 (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000

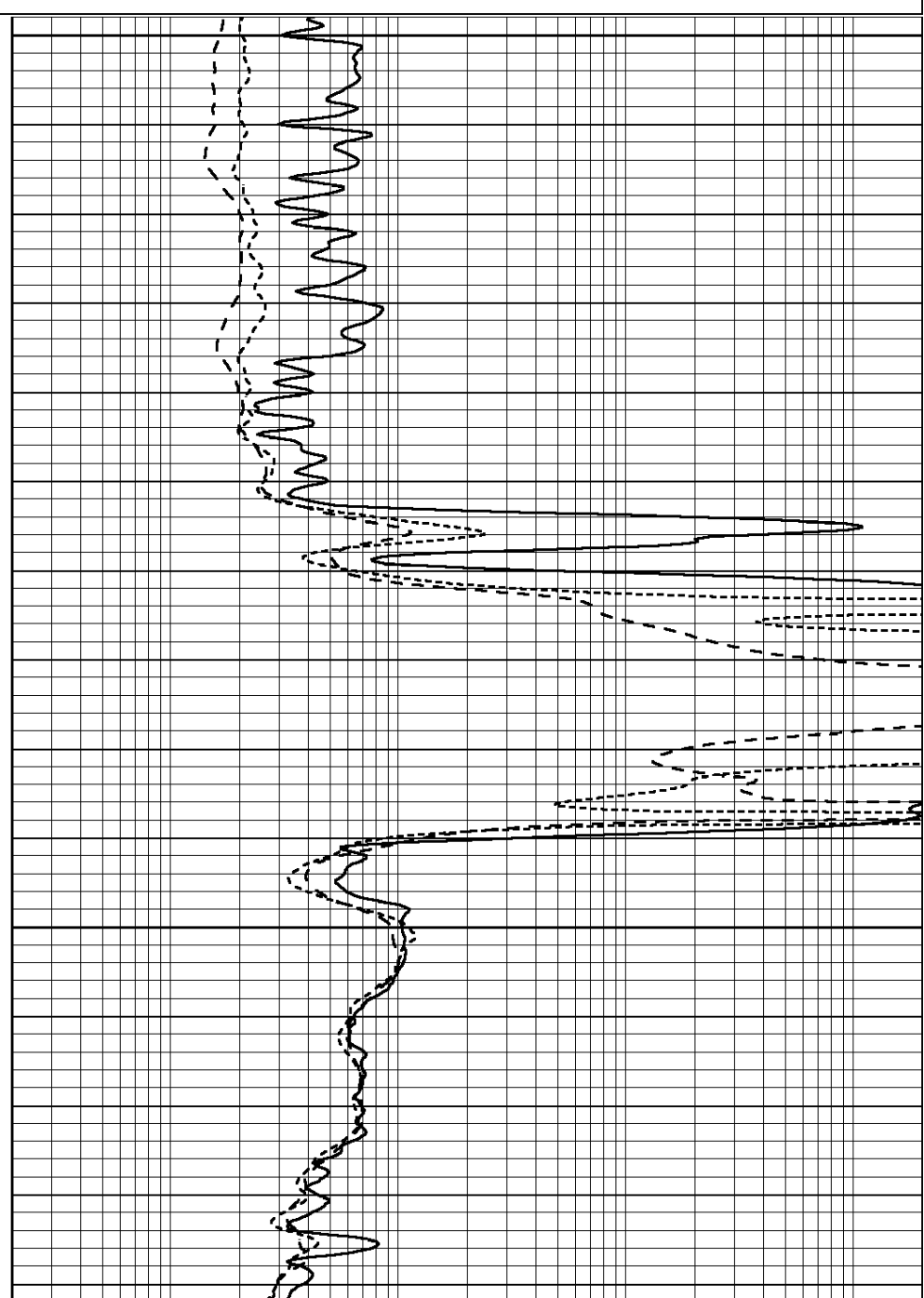
-250	RxoRt	50
0	MINMK	20

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

2200
2250
2300



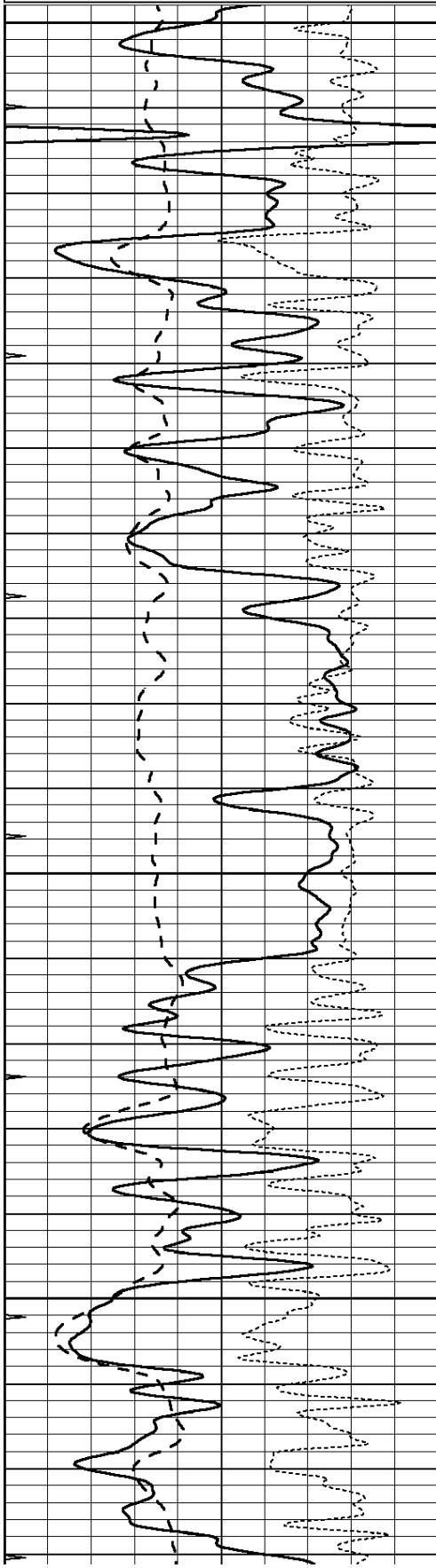
0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



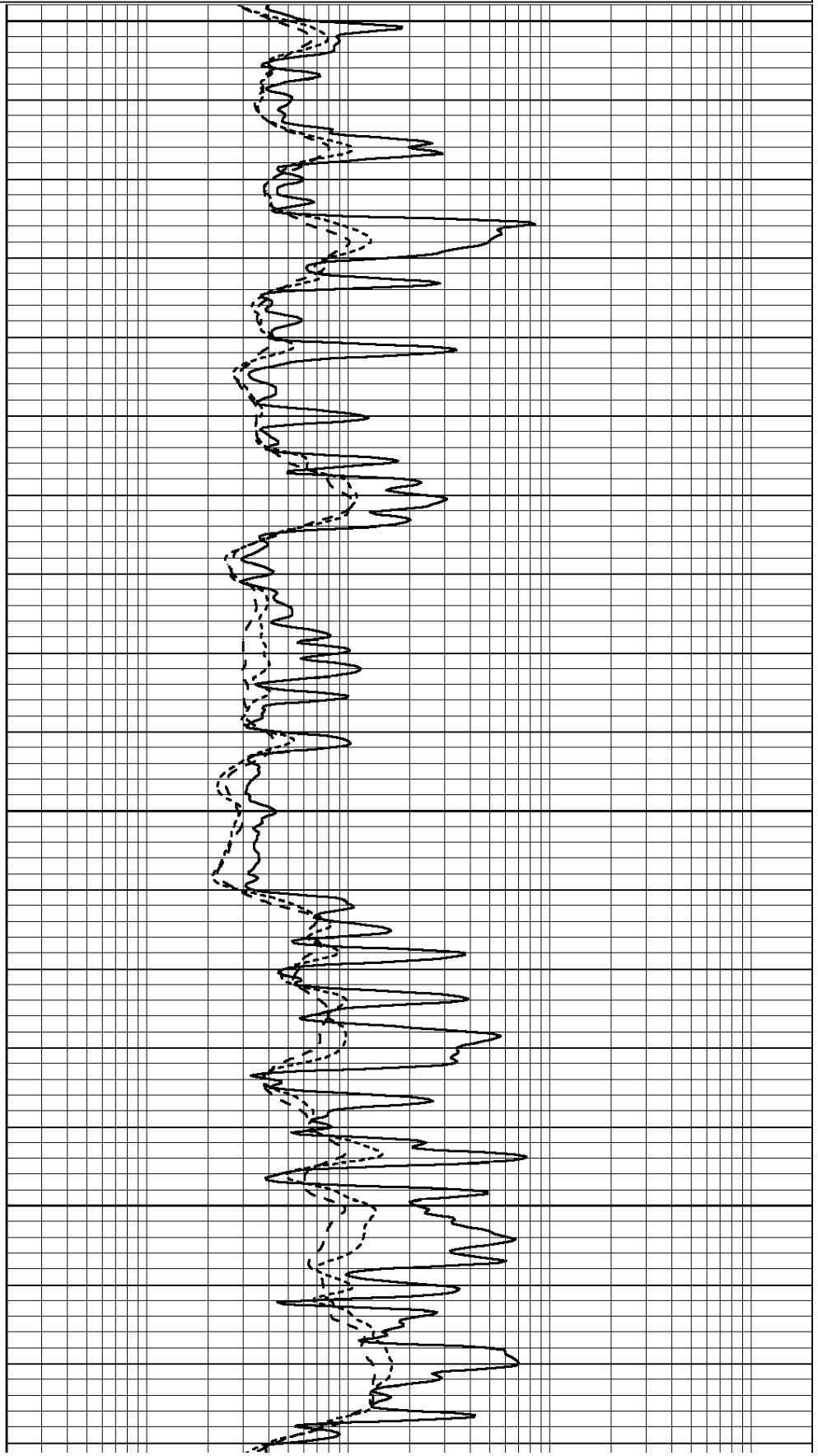
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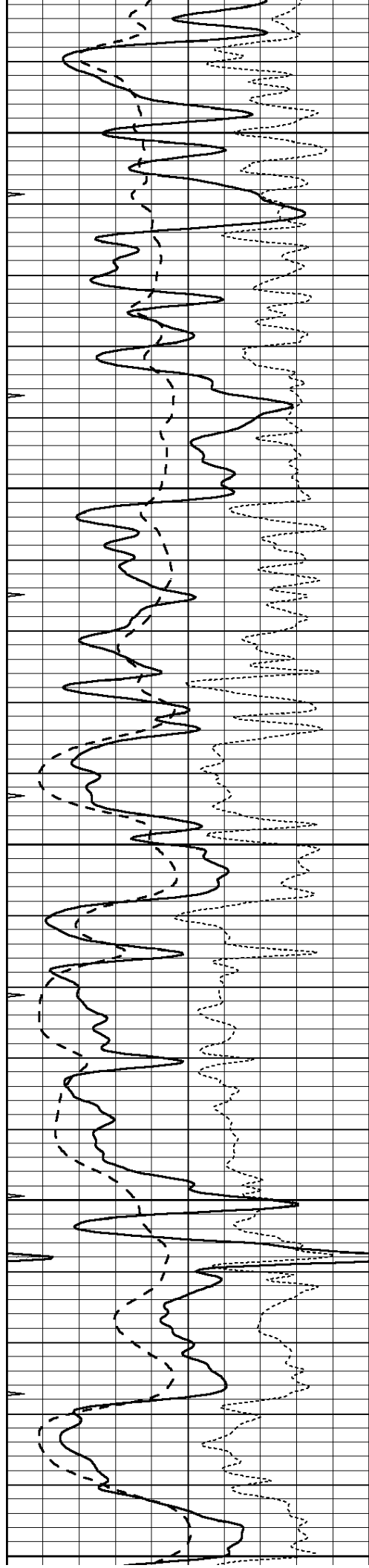
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

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



3400
 3450
 3500
 3550





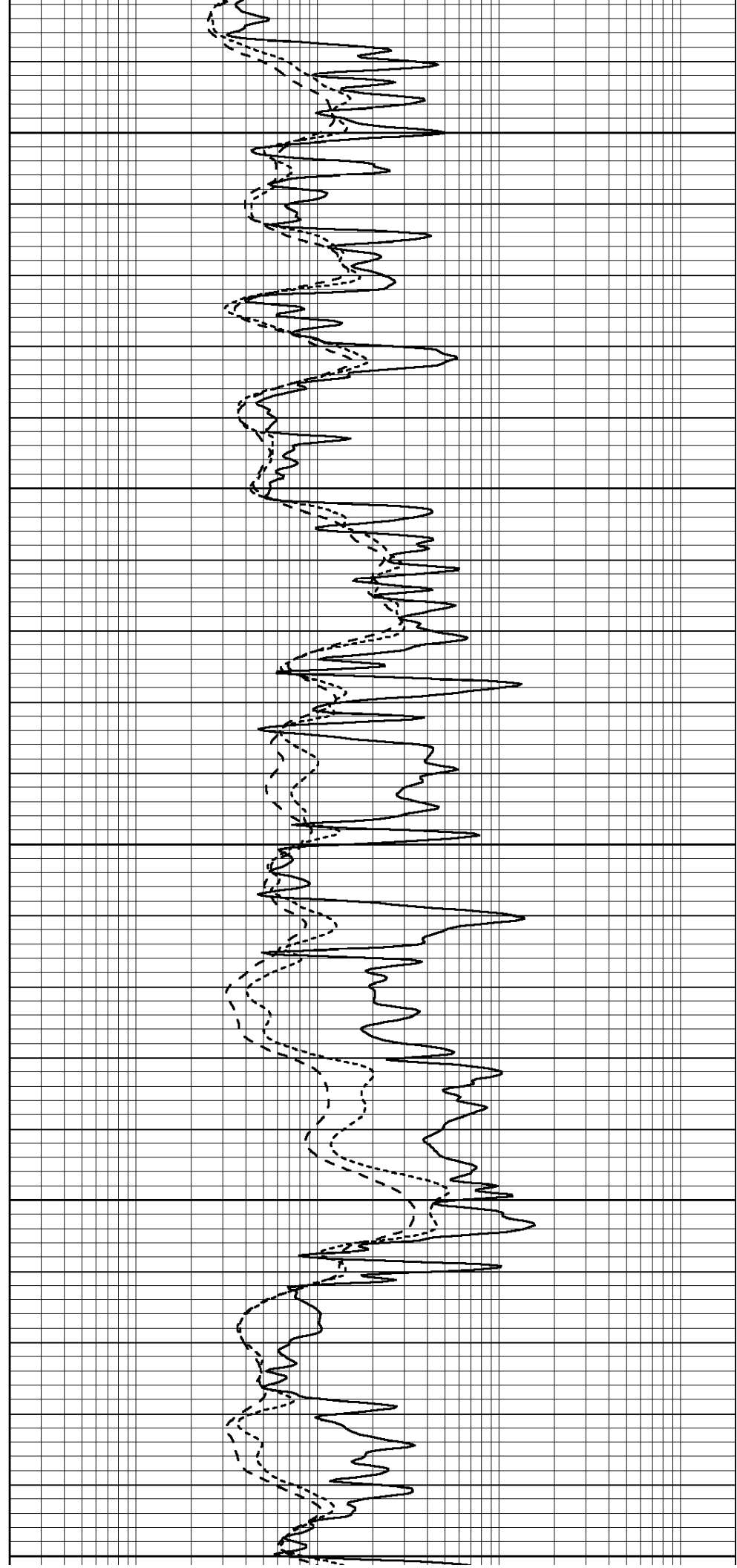
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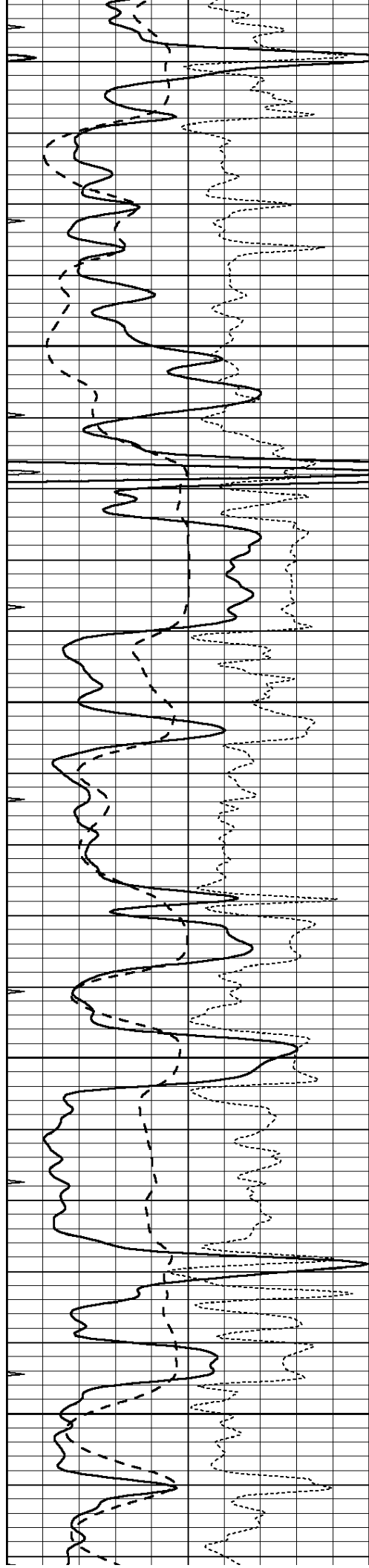
3650

3700

3750

3800



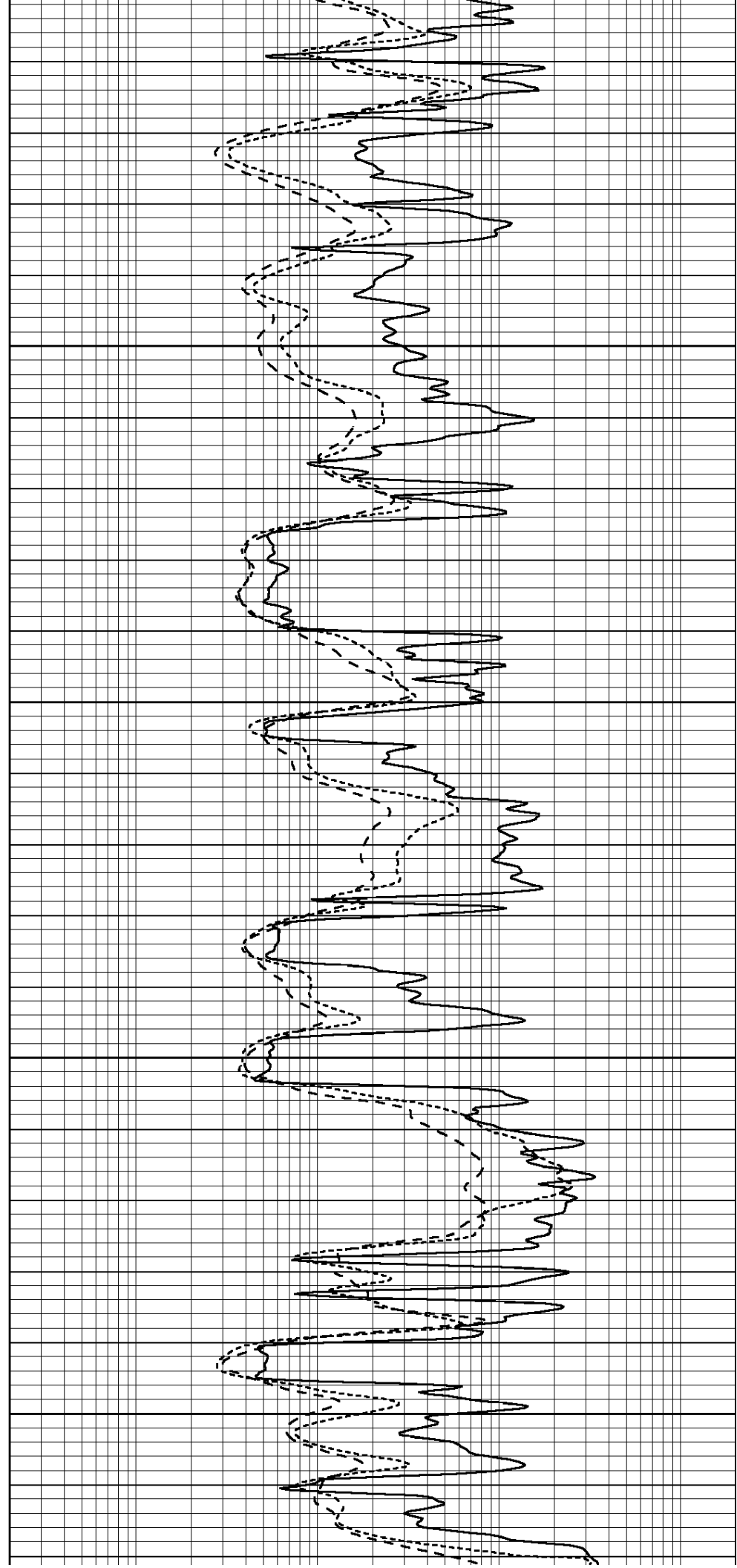


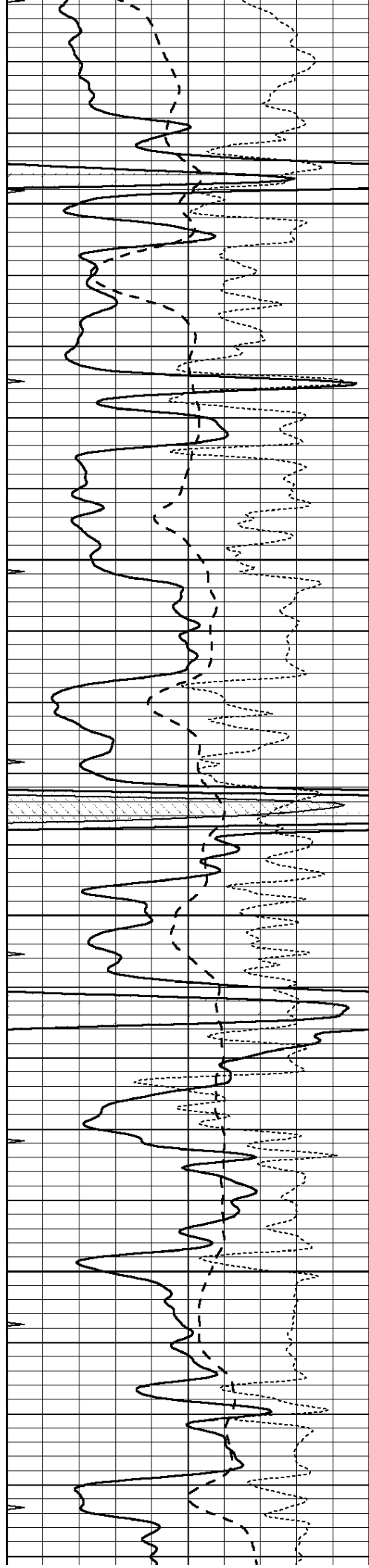
3850

3900

3950

4000



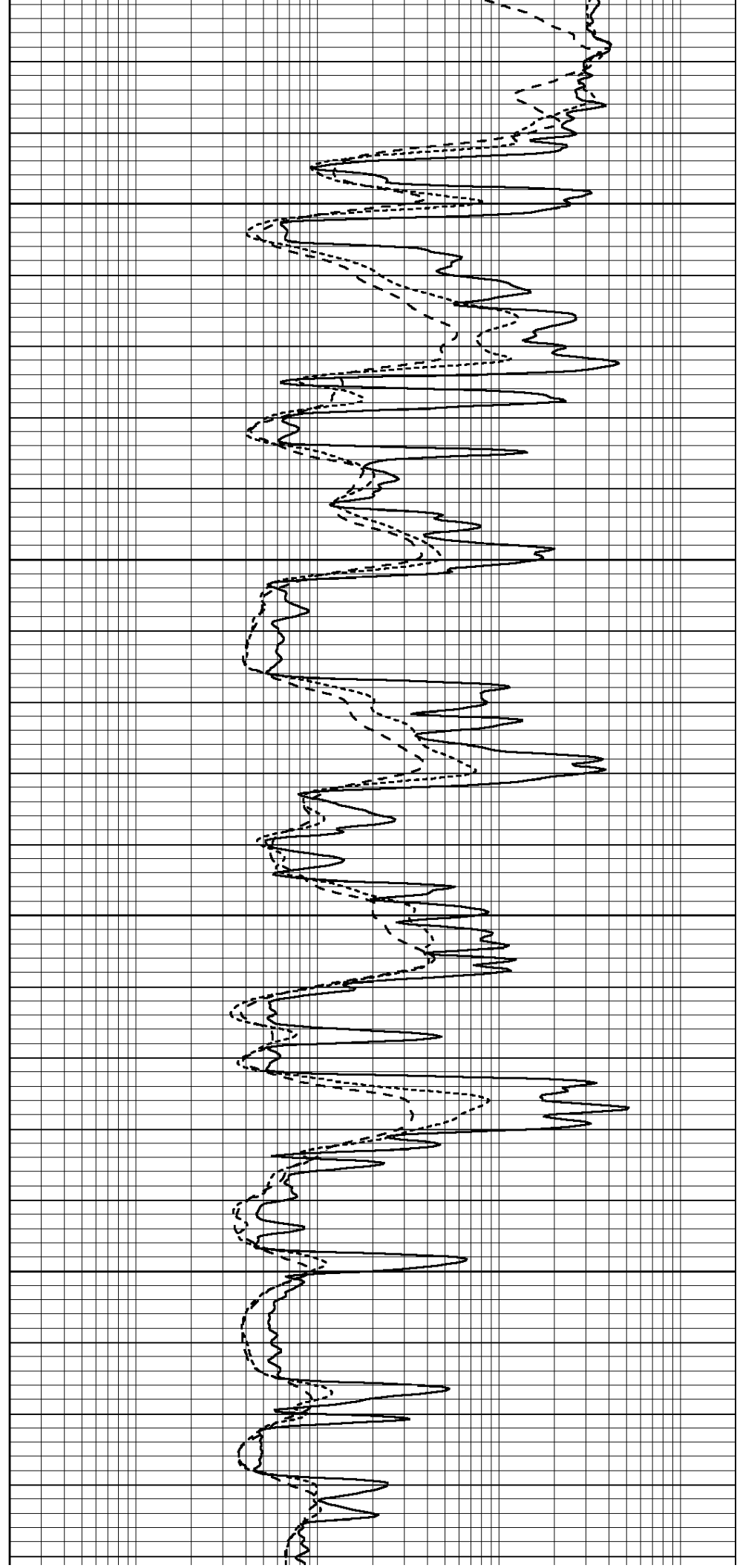


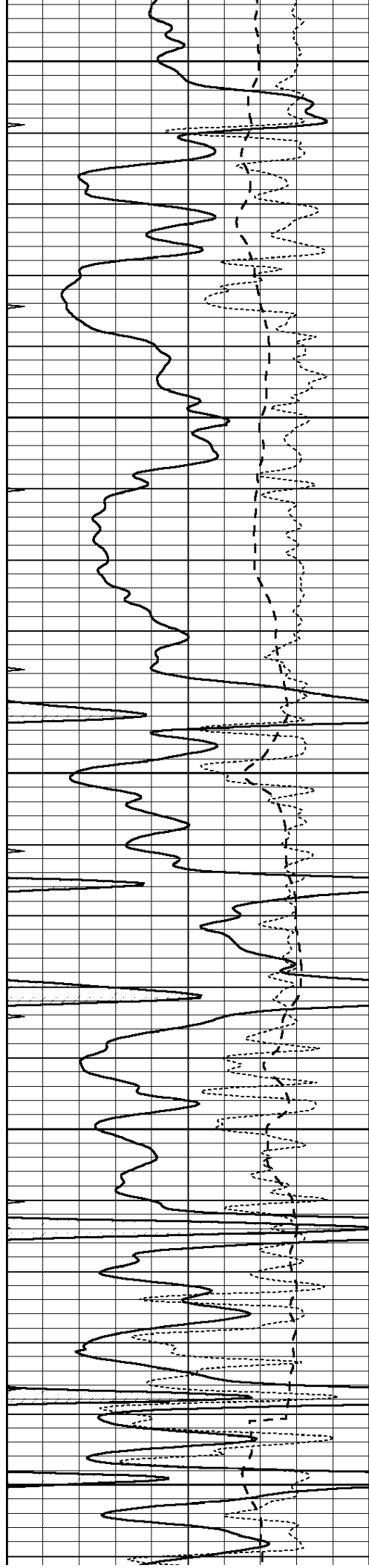
4050

4100

4150

4200





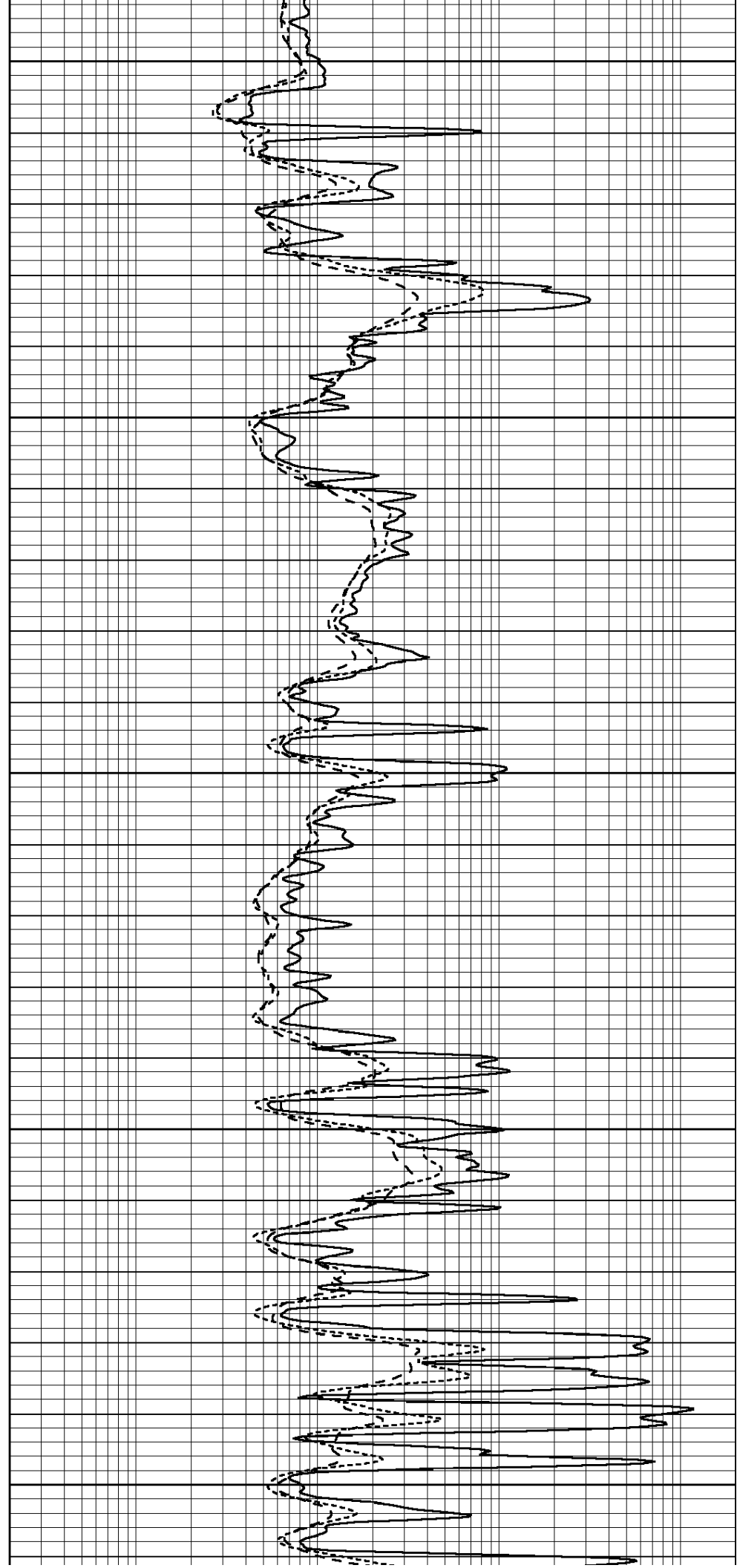
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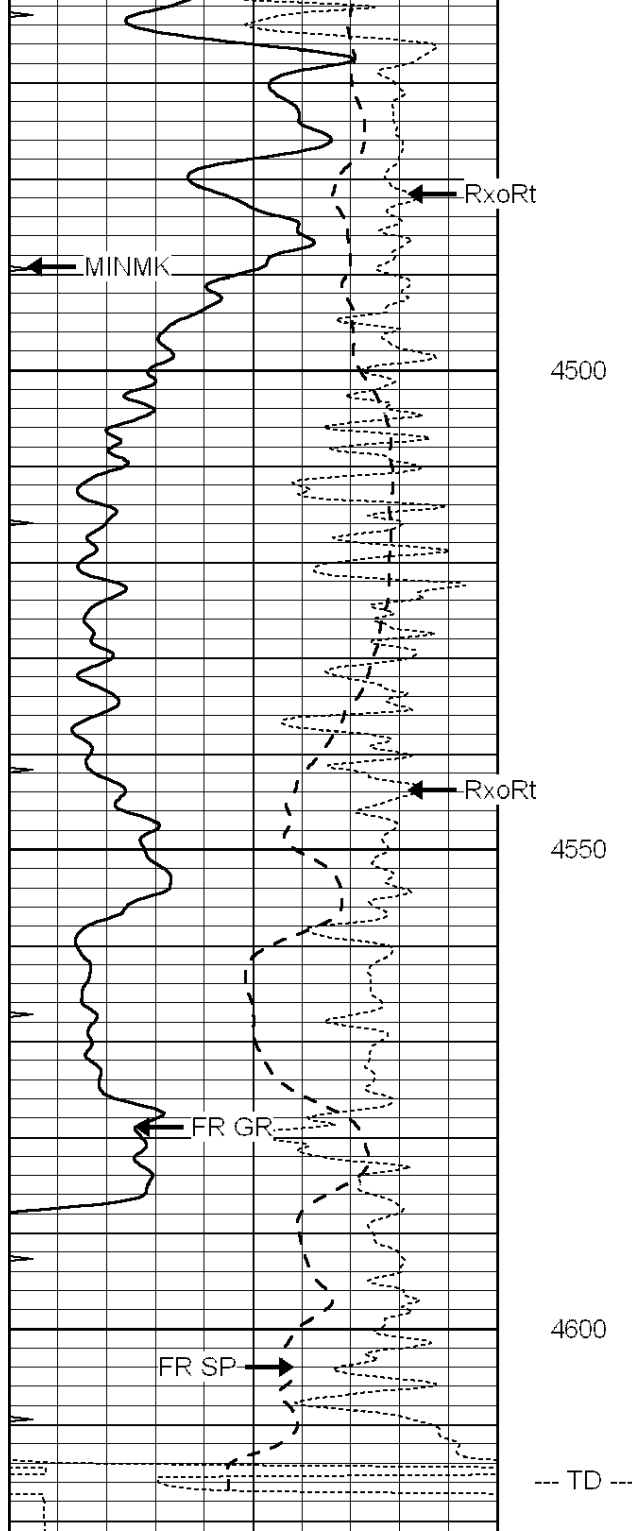
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4350

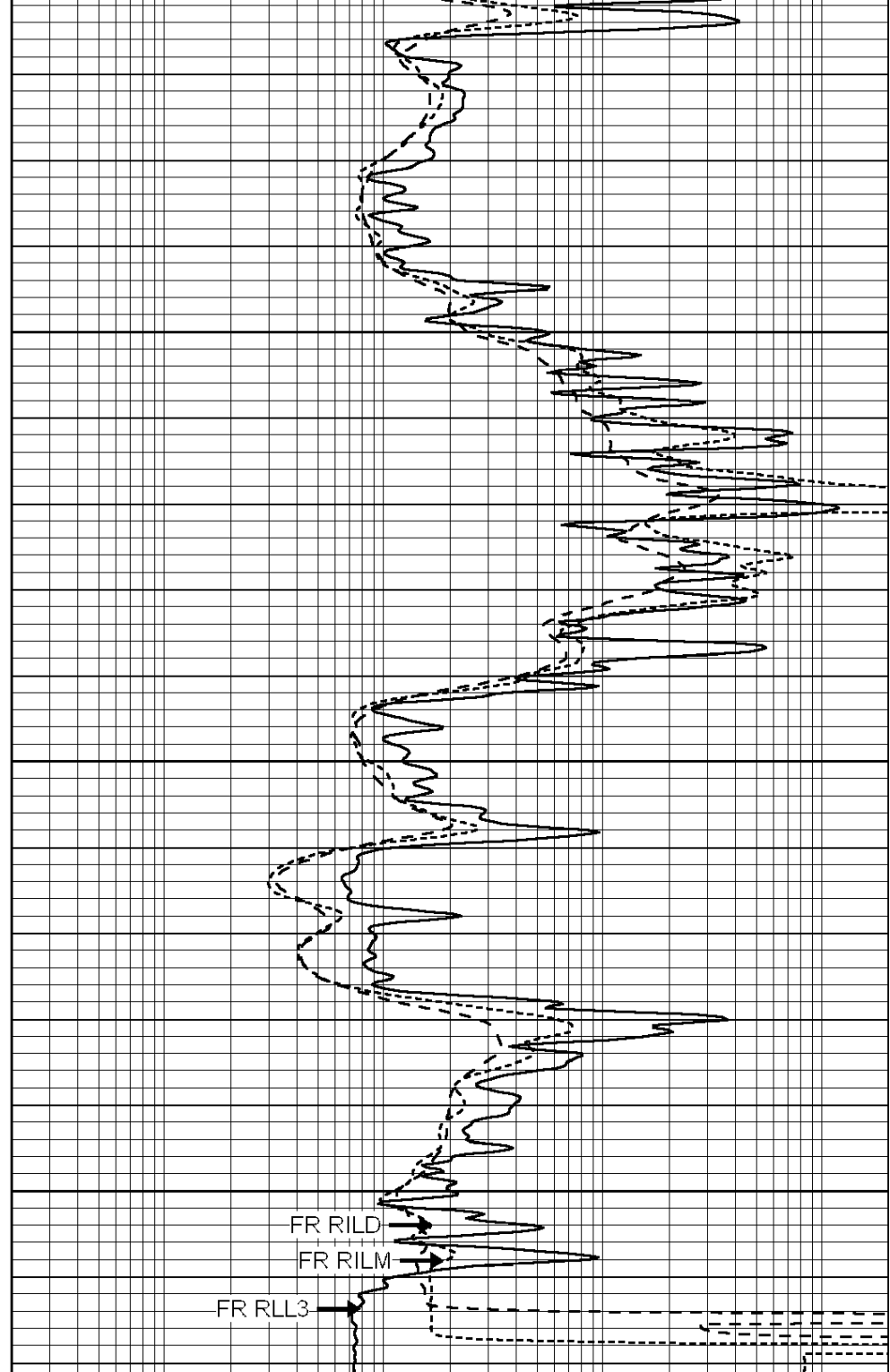
4400

4450





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

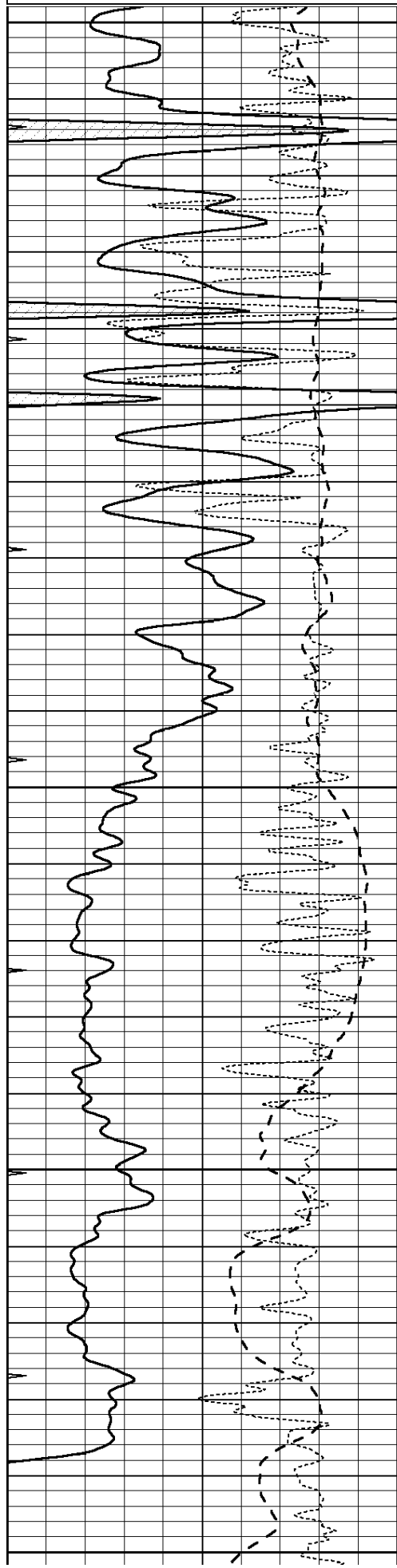
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 Presentation Format: dil
 Dataset Creation: Thu Dec 13 19:25:46 2012
 Charted by: Depth in Feet scaled 1:240

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

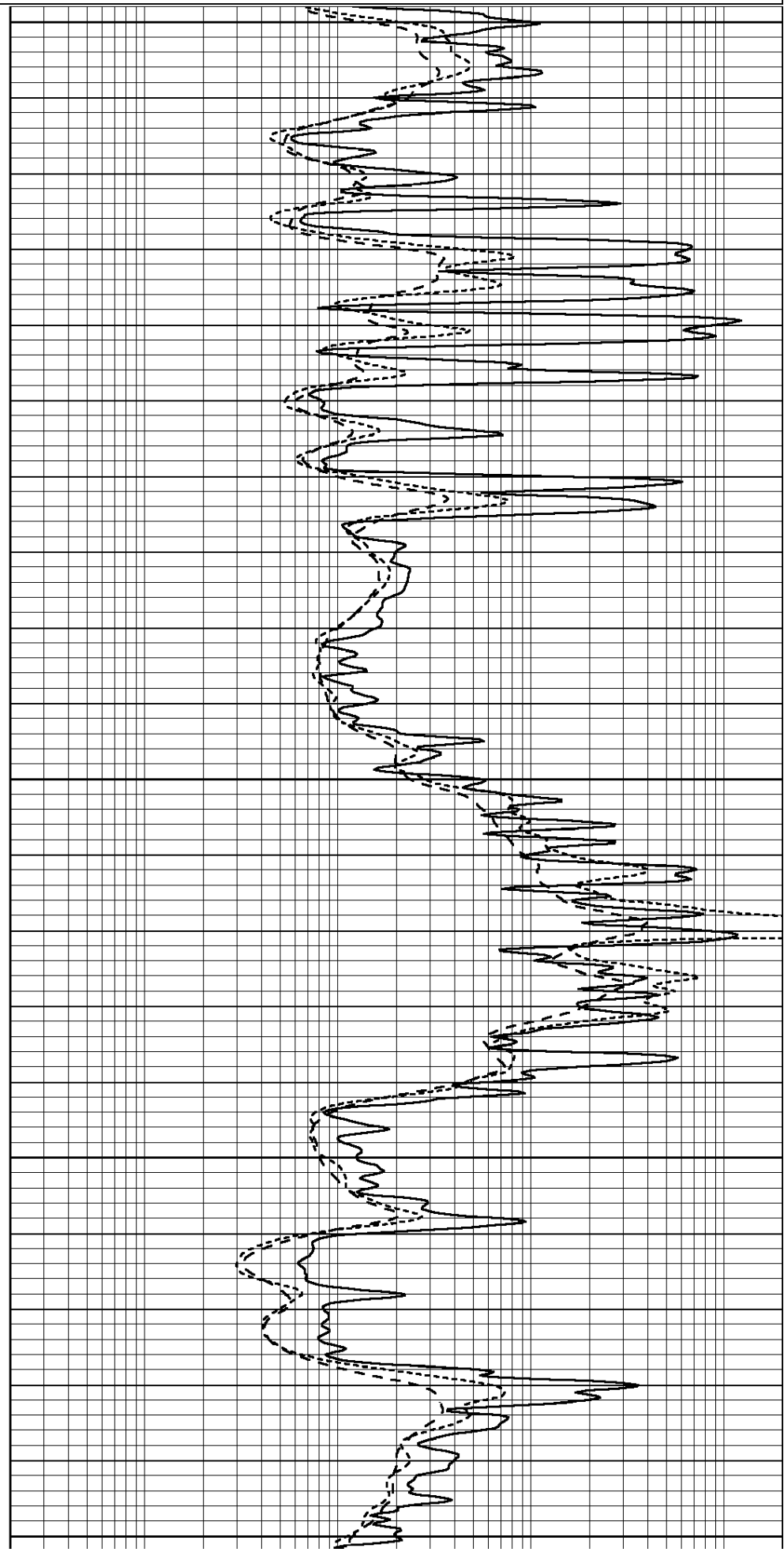
0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000

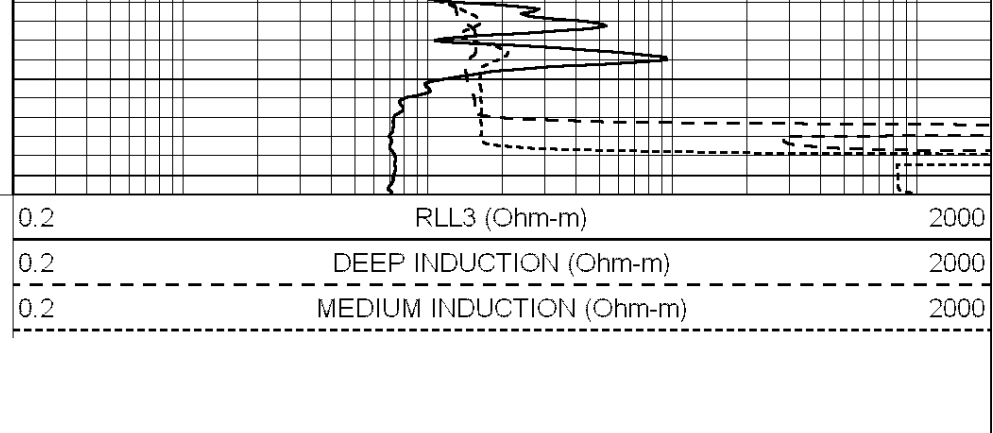
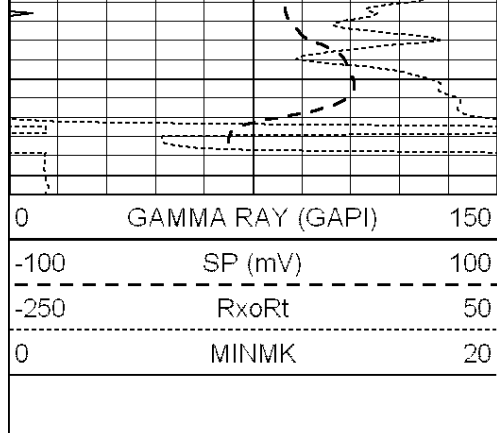
-250 RxoRt 50
0 MINMK 20

0.2 MEDIUM INDUCTION (Ohm-m) 2000



4400
4450
4500
4550
4600





Calibration Report

Database File: 01063ddn.db
 Dataset Pathname: pass3.1
 Dataset Creation: Thu Dec 13 19:12:12 2012

Dual Induction Calibration Report

Serial-Model: DIL5-GEAR
 Performed: Thu Dec 13 16:41:19 2012

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.004	0.654	V	0.000	400.000	mmho/m	470.000	-13.000
Medium	-0.005	0.737	V	0.000	462.500	mmho/m	490.000	-8.000
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: Thu Dec 13 16:41:05 2012

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1205.67	613.10	cps
Aluminum	2.590	g/cc	277.64	430.46	cps
Spine Angle = 76.46			Density/Spine Ratio = 0.583		
	Size		Reading		
Small Ring	7.70	in	4.69	V	
Large Ring	14.00	in	6.52	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:	Thu Dec 13 17:42:20 2012	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.7500	GAPI/cps