



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL
INDUCTION
LOG**

Company DOWNING-NELSON OIL COMPANY, INC.
Well WALT "C" #1-4
Field HOLLEY
County GRAHAM
State KANSAS

Company DOWNING-NELSON OIL COMPANY, INC.
Well WALT "C" #1-4
Field HOLLEY
County GRAHAM State KANSAS

Location: API #: 15-065-24030-00-00
330' FSL & 2550' FEL
W2 - SW - SW - SE
SEC 4 TWP 9S RGE 24W
Permanent Datum GROUND LEVEL Elevation 2442
Log Measured From KELLY BUSHING 8' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
CNL/CDL
MEL
Elevation
K.B. 2450
D.F. 2448
G.L. 2442

Date	4-13-14		
Run Number	ONE		
Depth Driller	4055		
Depth Logger	4055		
Bottom Logged Interval	4053		
Top Log Interval	00		
Casing Driller	8 5/8 " @ 220'		
Casing Logger	218'		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 2.000	
Density / Viscosity	9.2 / 54		
pH / Fluid Loss	10.0 / 8.8		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	1.0 @ 60F		
Rmf @ Meas. Temp	0.75 @ 60F		
Rmc @ Meas. Temp	1.20 @ 60F		
Source of Rmf / Rmc	MEASURED		
Rim @ BHT	0.40 @ 113F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	114F		
Equipment Number	860		
Location	HAYS, KS.		
Recorded By	IAN MABB		
Witnessed By	MARC DOWNING		

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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 SERVICES
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: WAKEENEY, KS. - NORTH TO RED LINE RD. - WEST TO RD 180 - NORTH 4 MILES TO RD L - EAST 1/4 MILE - SOUTH INTO

0 Gamma Ray (GAPI) 150

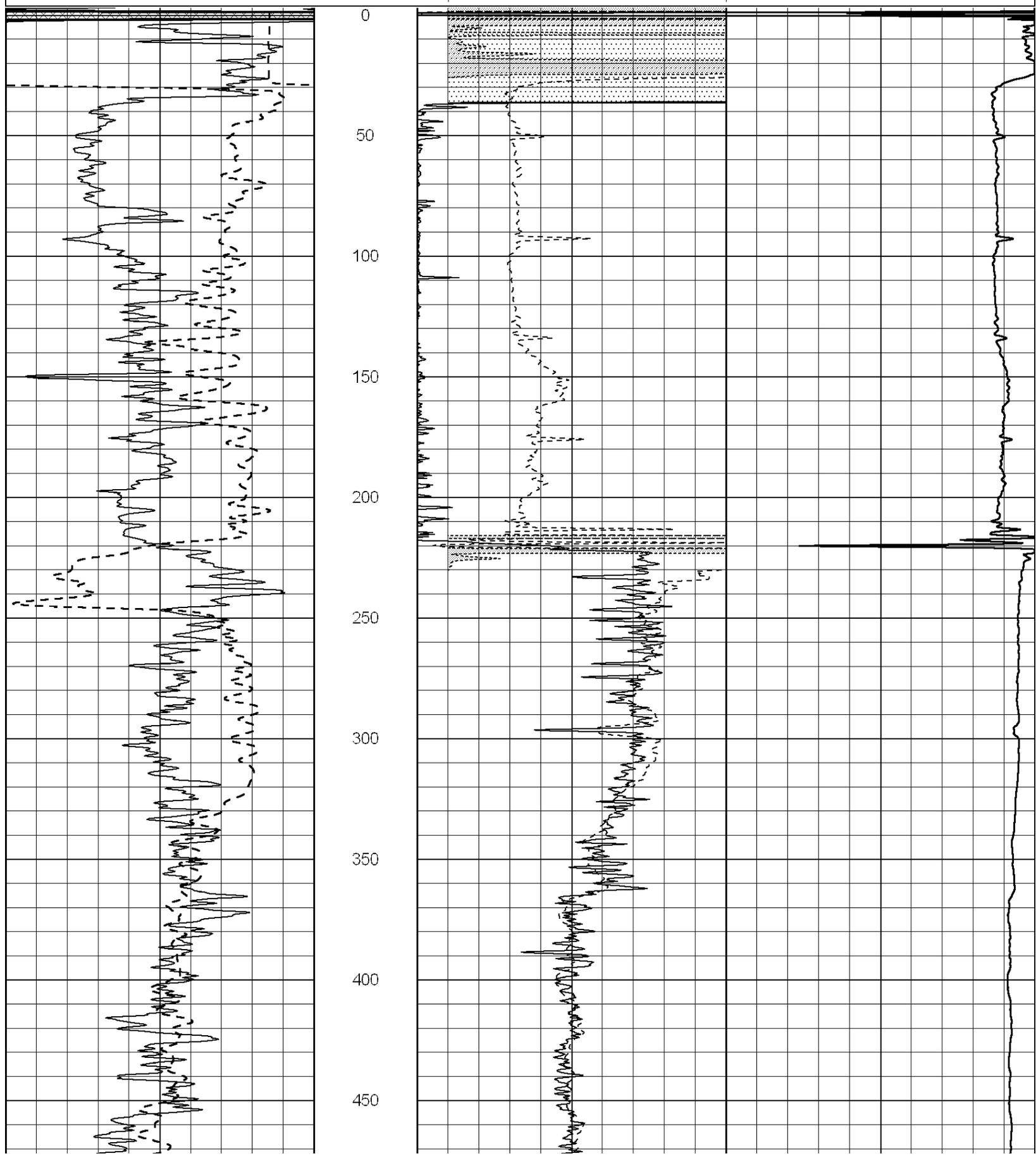
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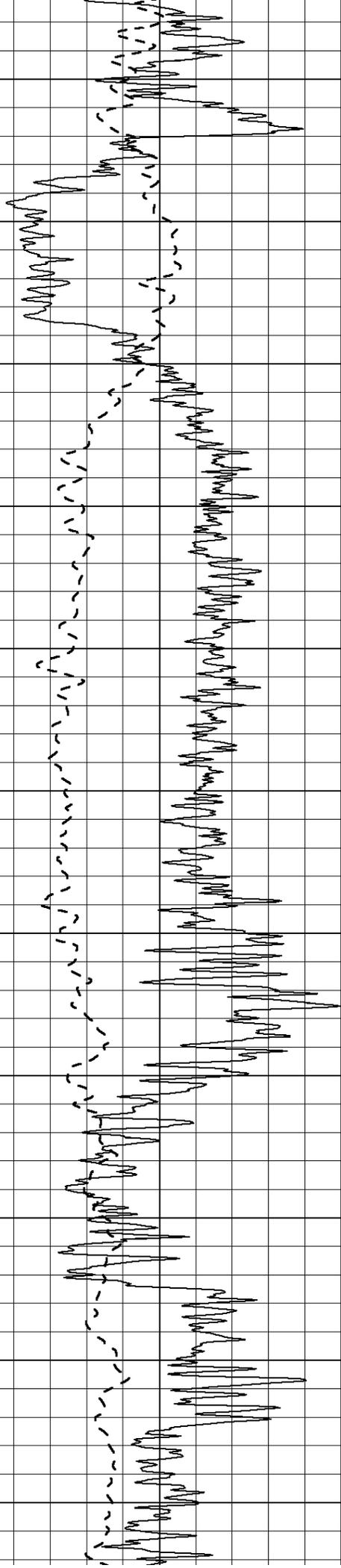
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1000 CILD (mmho/m) 0

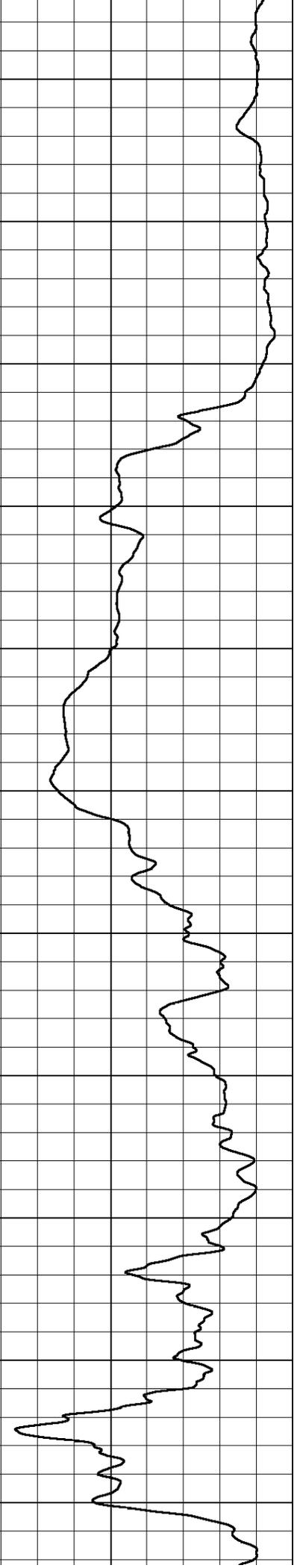
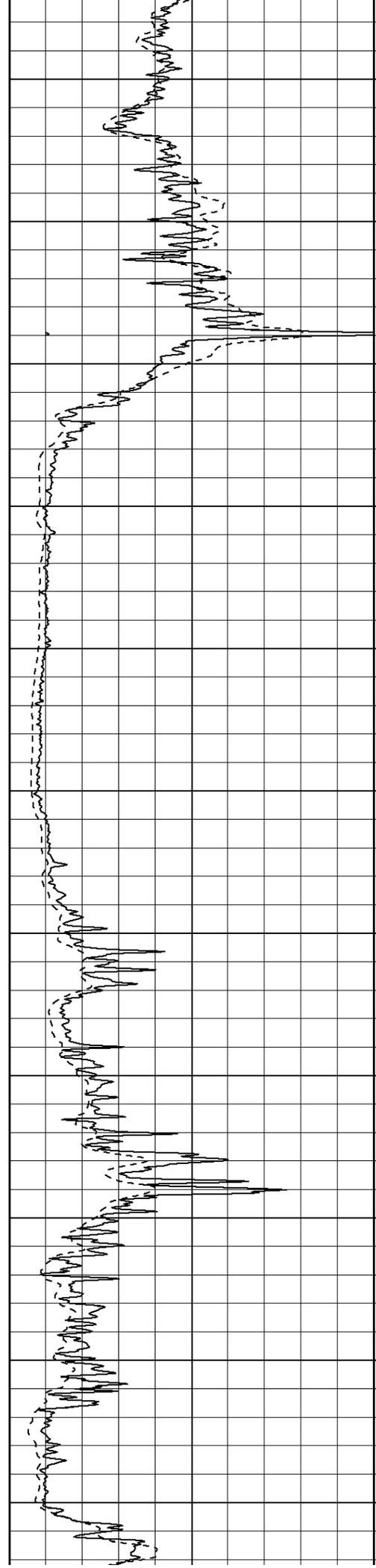
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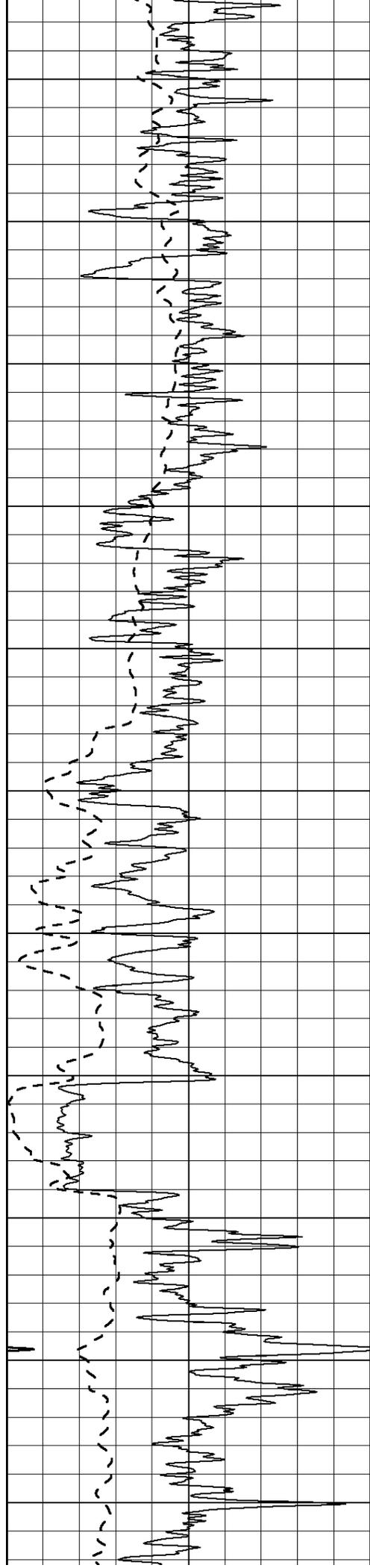
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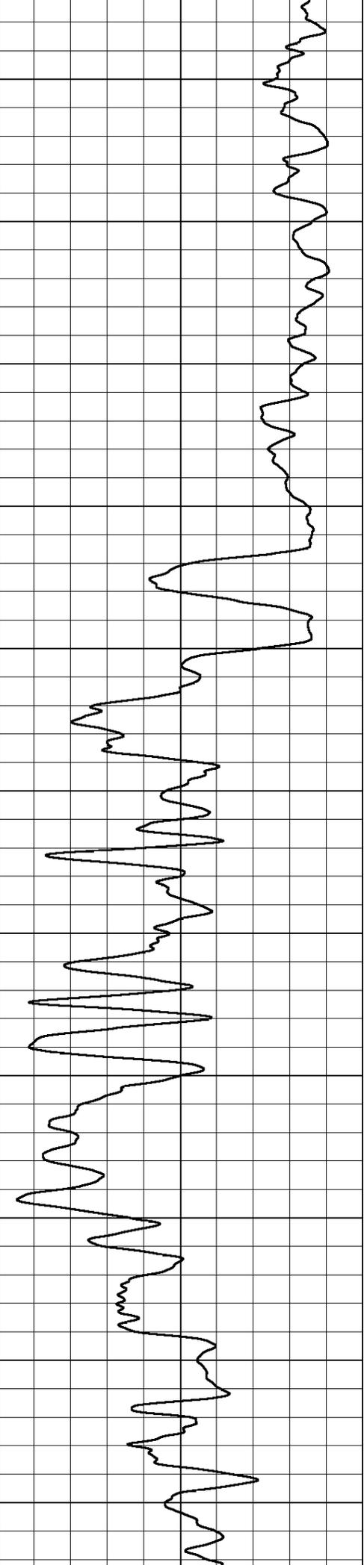
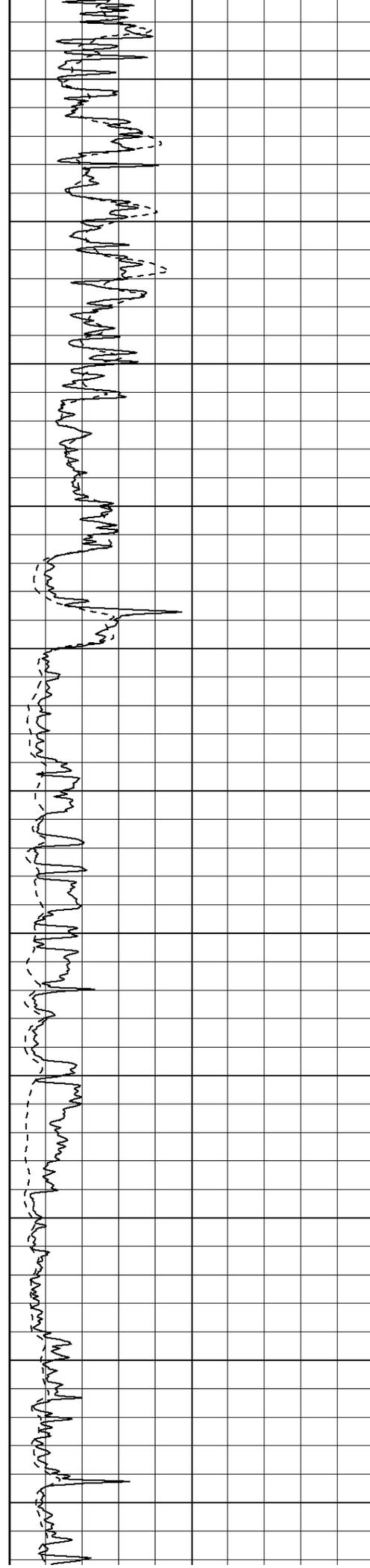


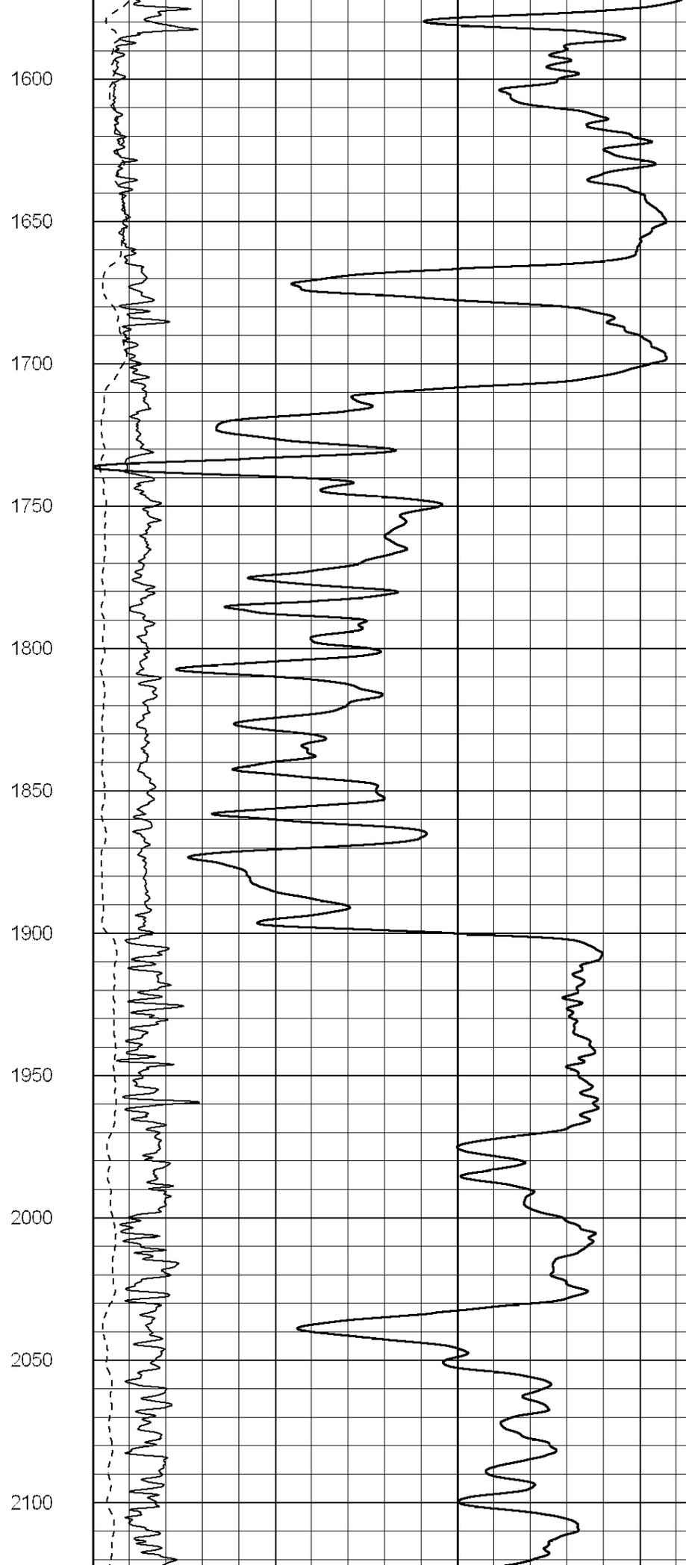
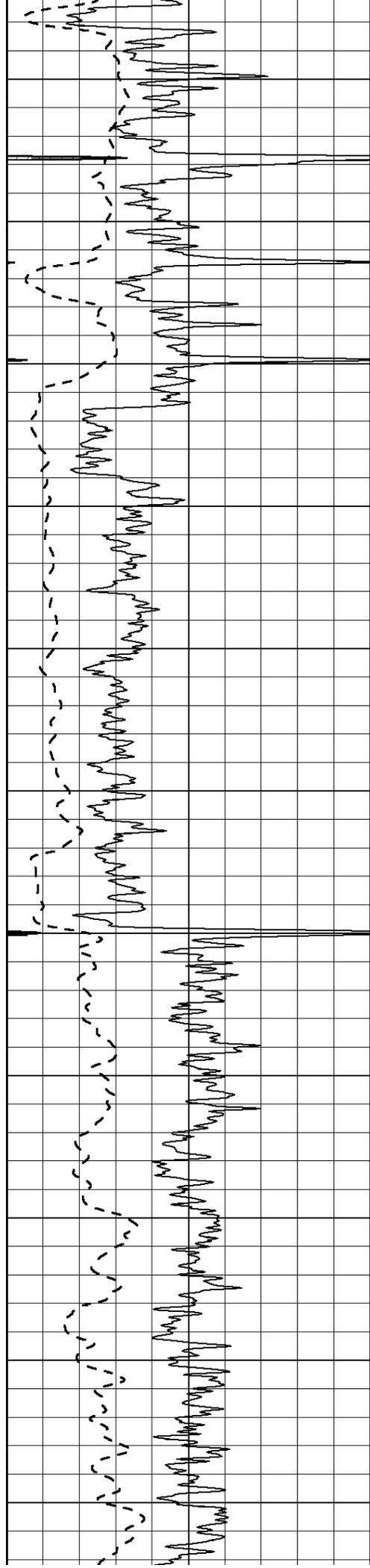
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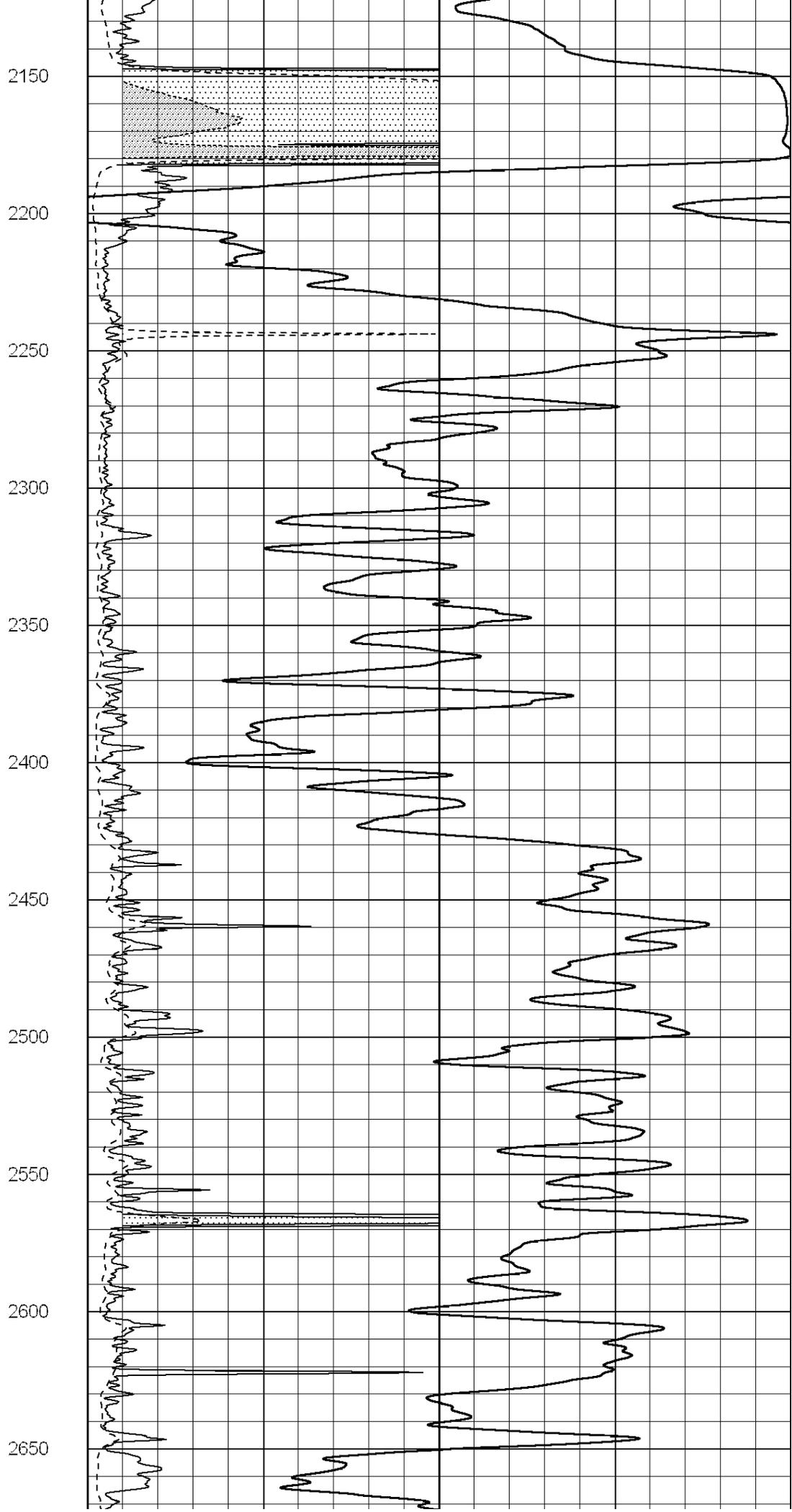
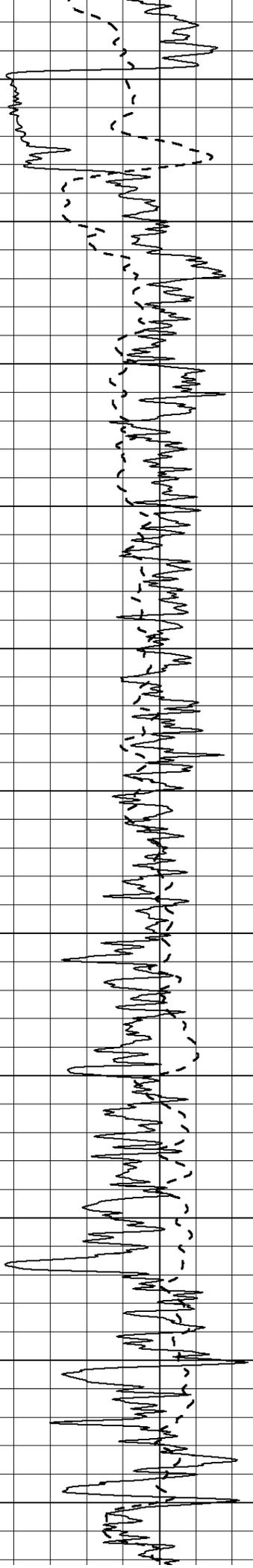


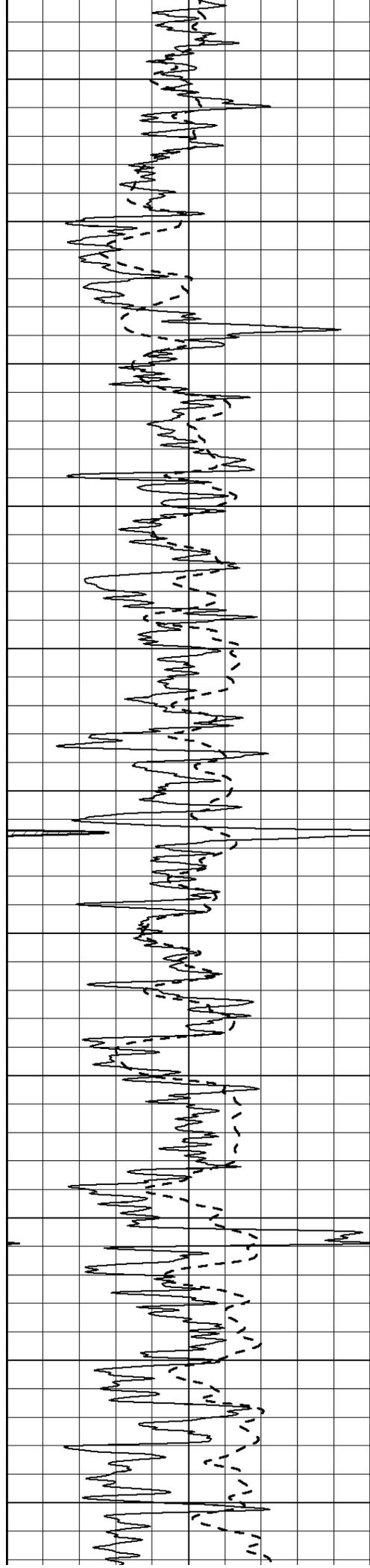


1050
1100
1150
1200
1250
1300
1350
1400
1450
1500
1550









2700

2750

2800

2850

2900

2950

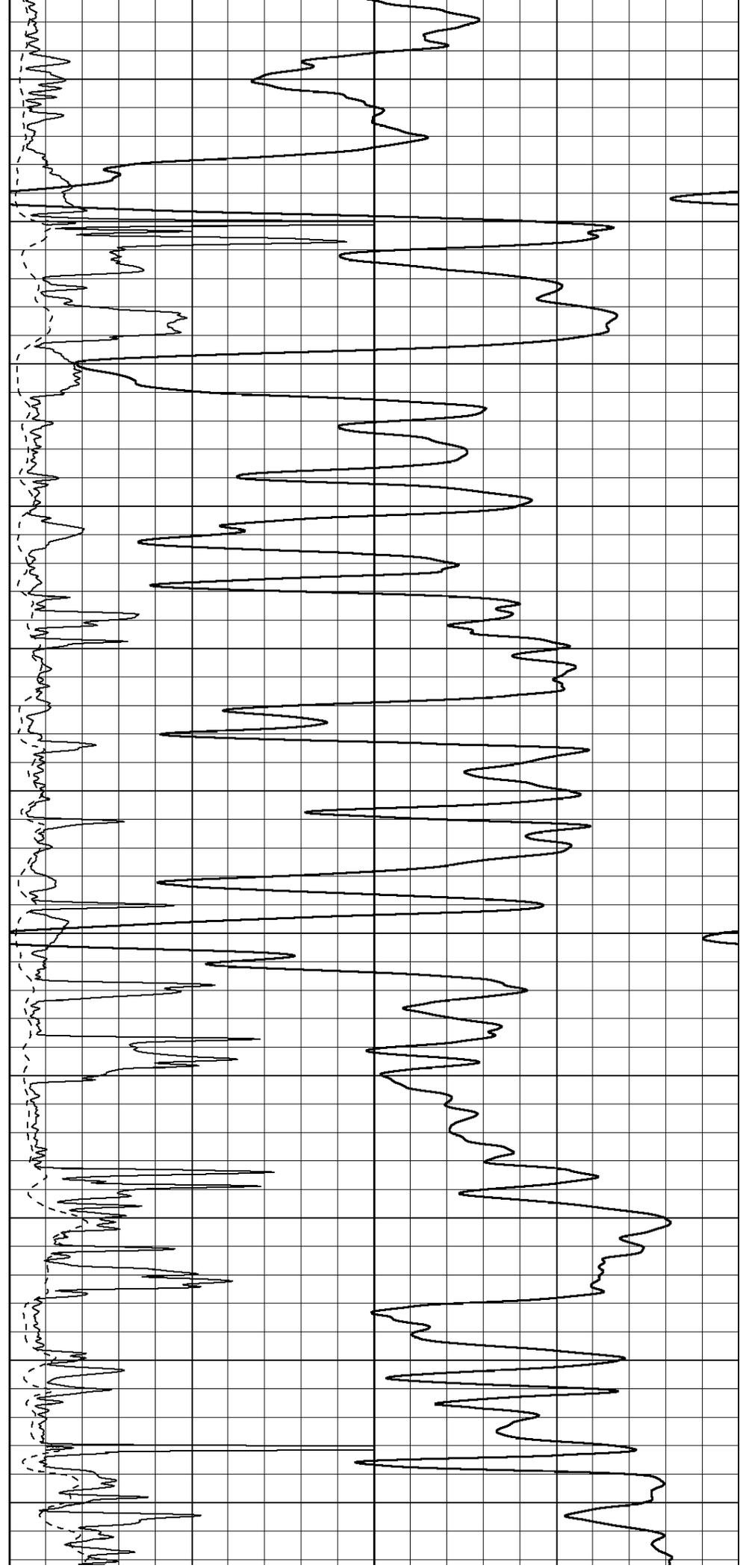
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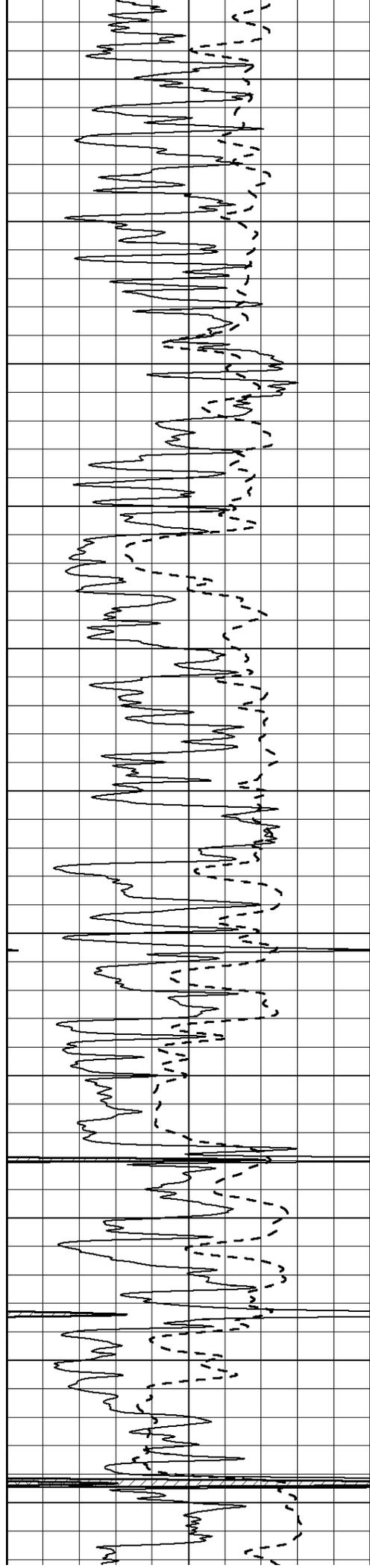
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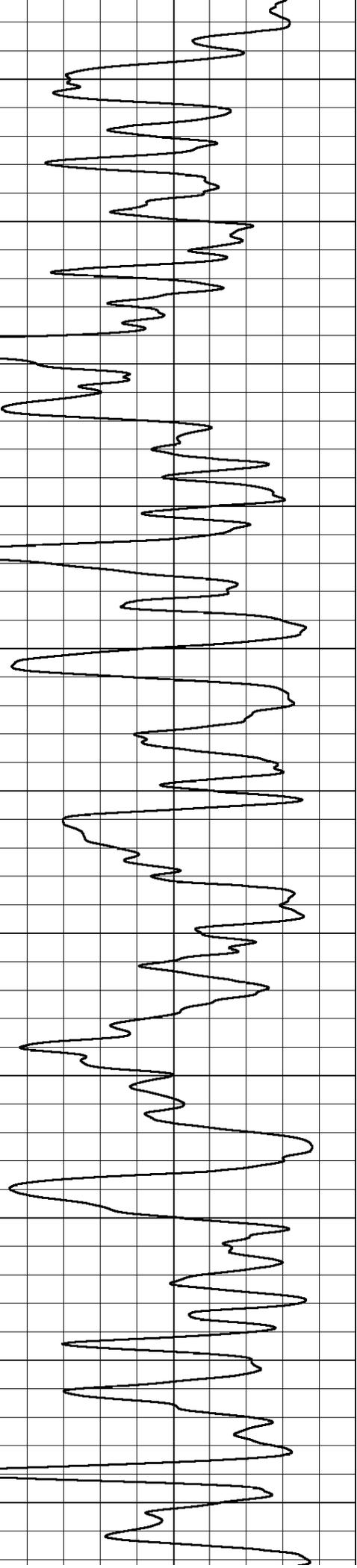
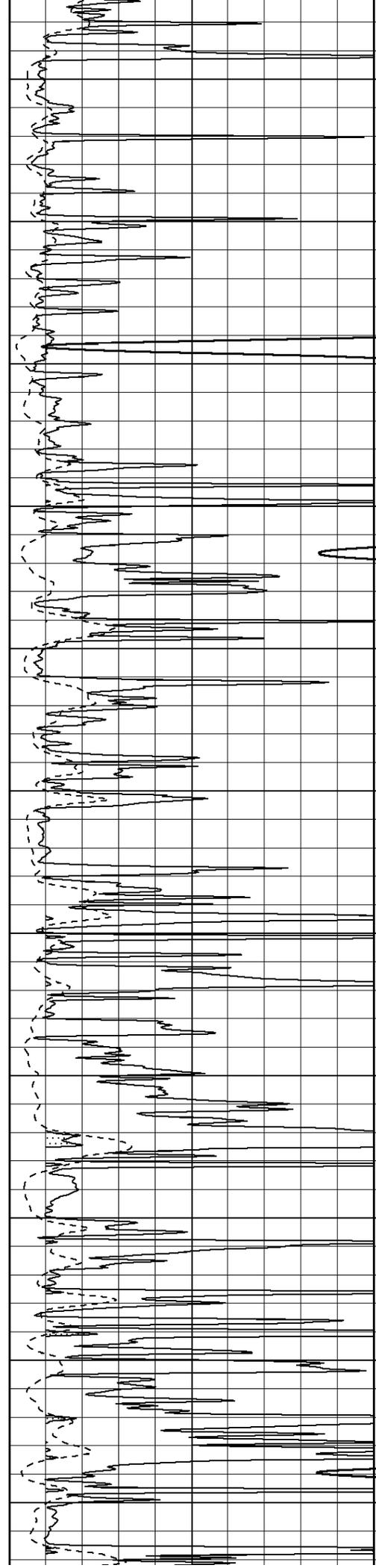
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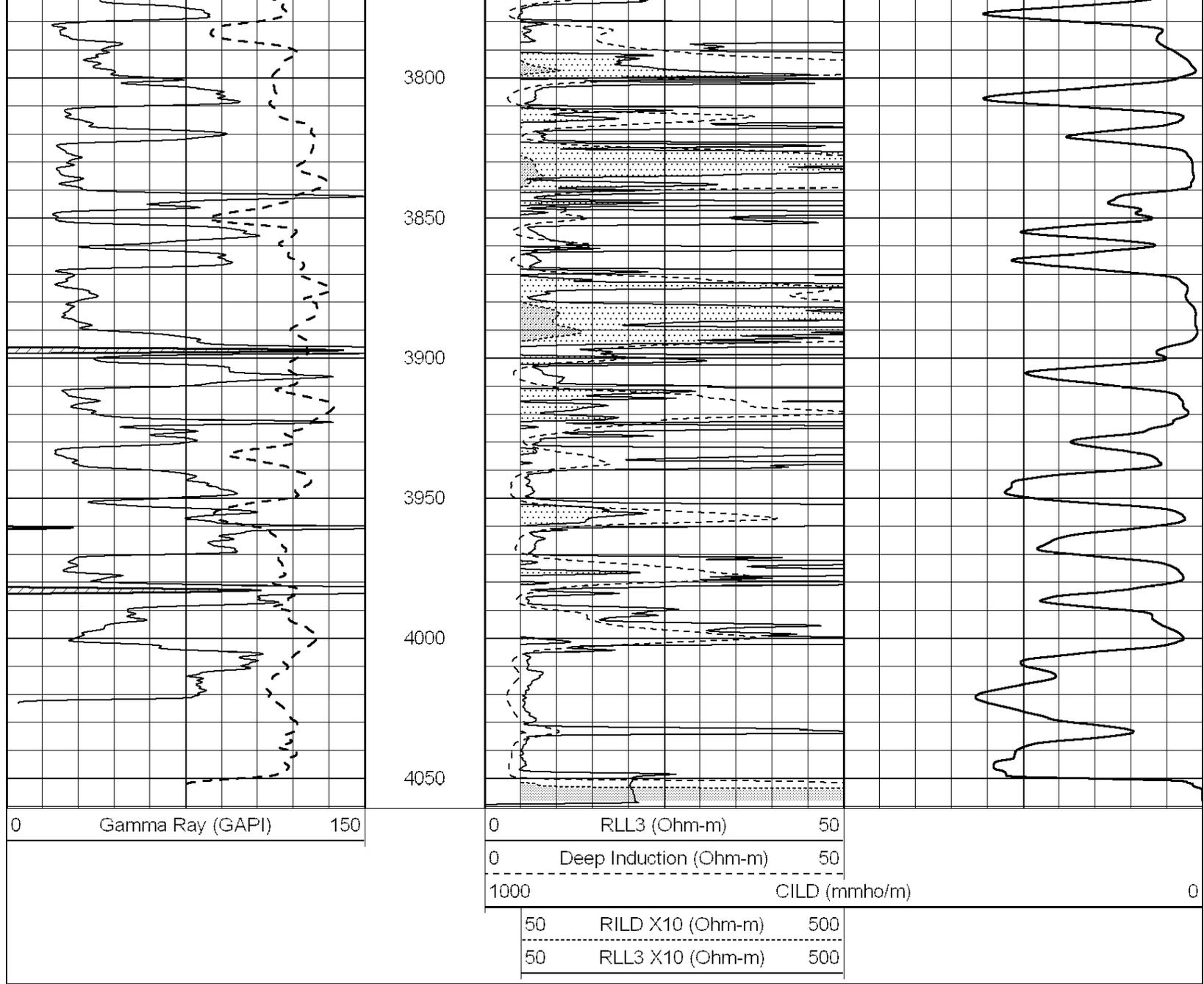
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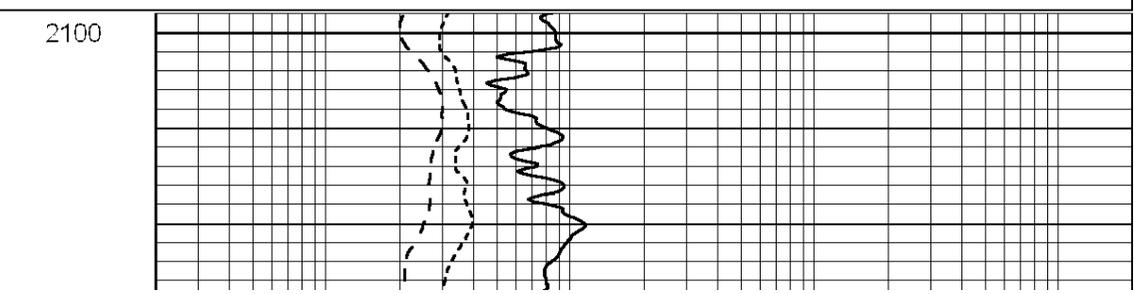
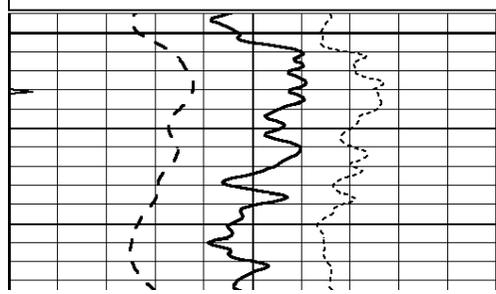
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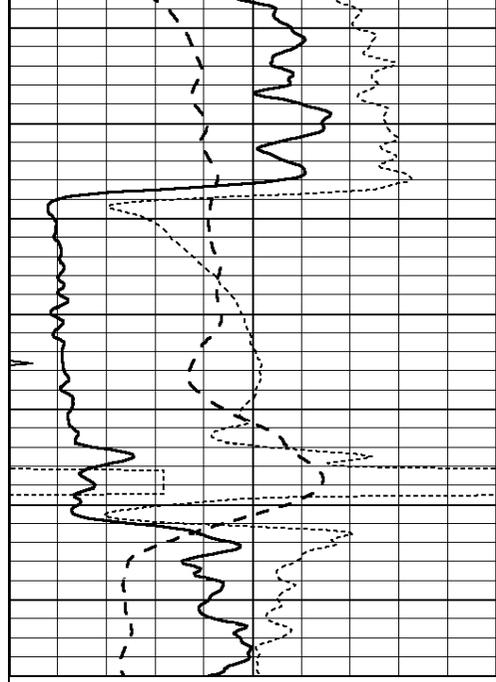




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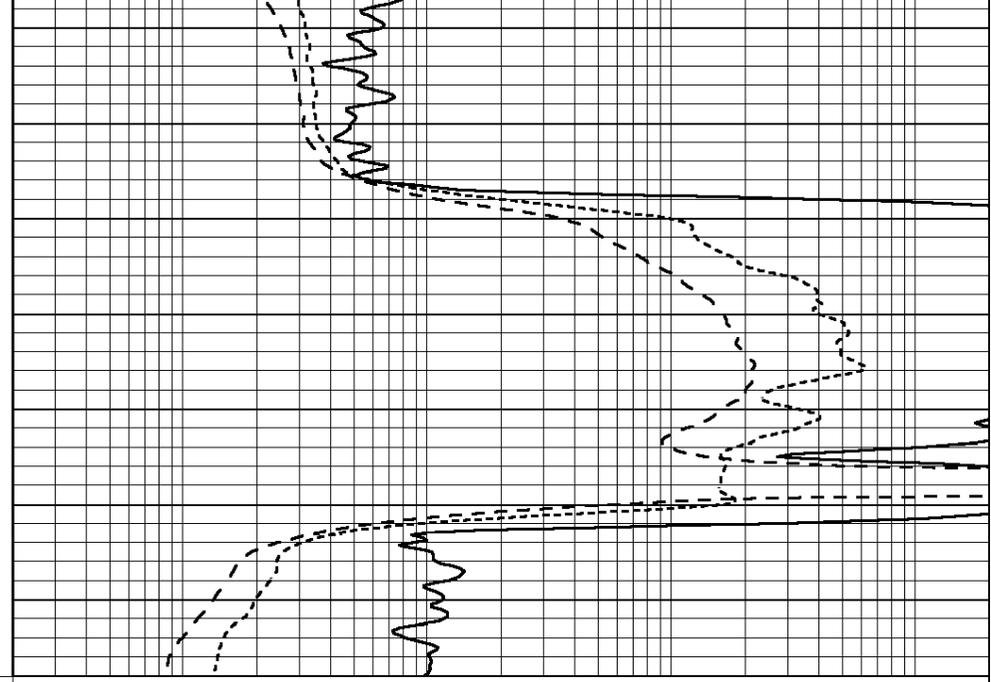
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-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	RxoRt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			





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

2150

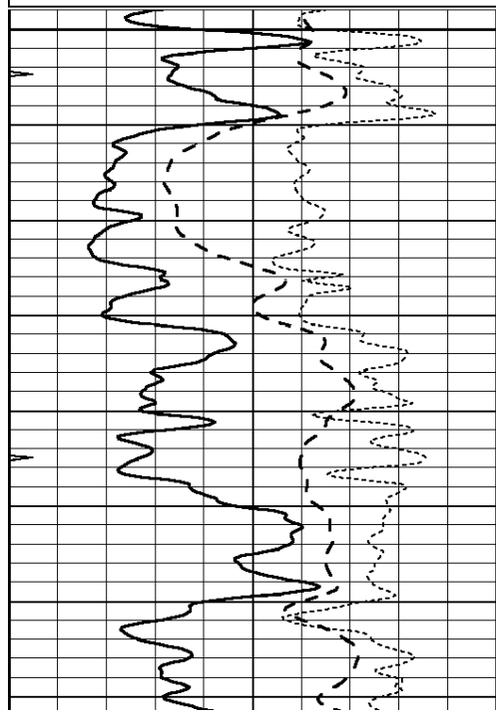


0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

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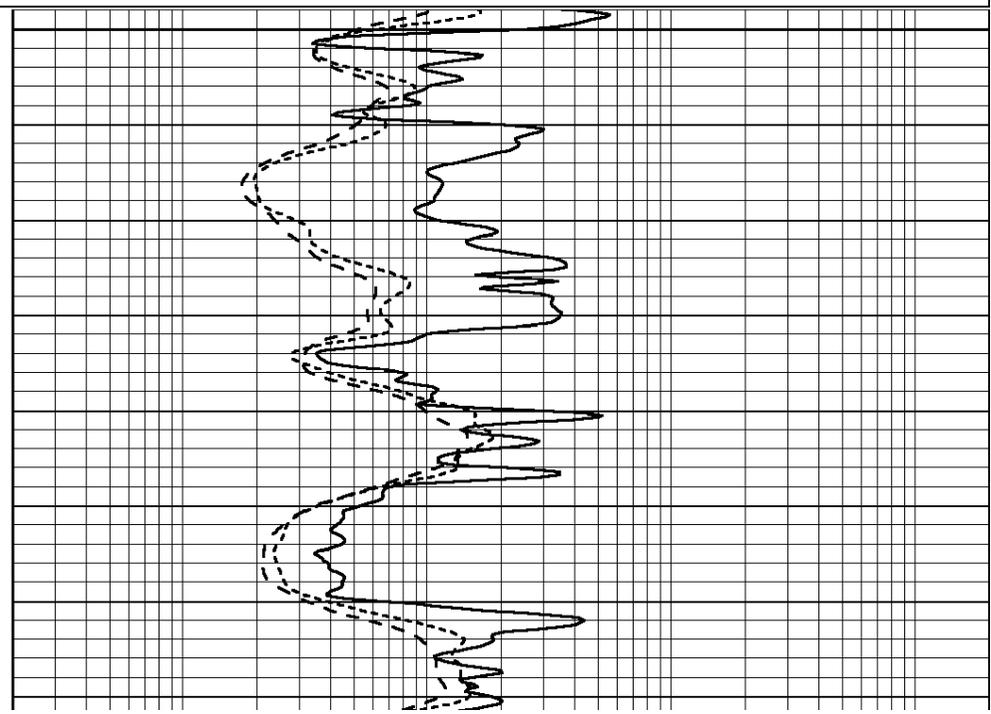
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-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

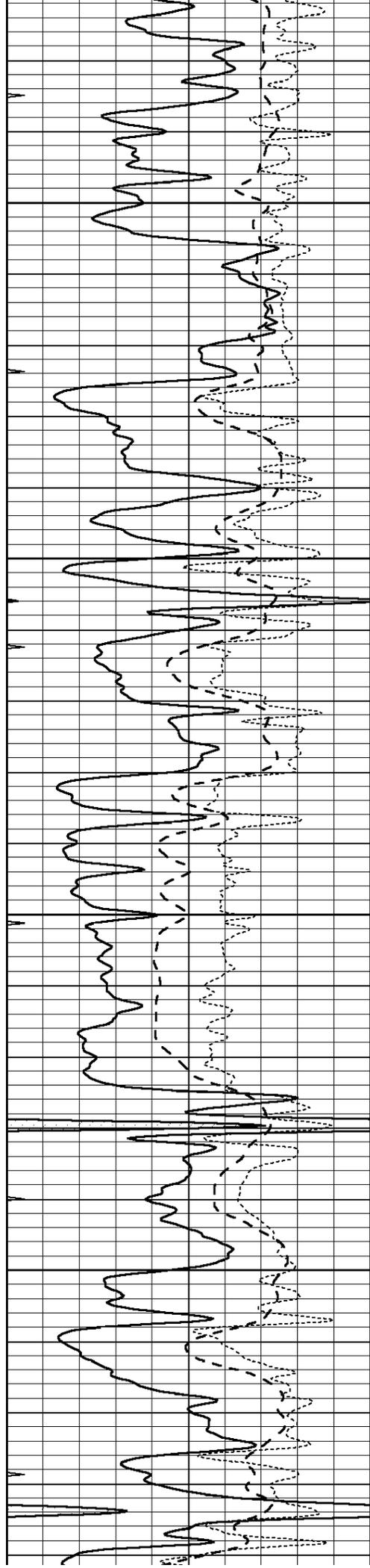
0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



3400

3450



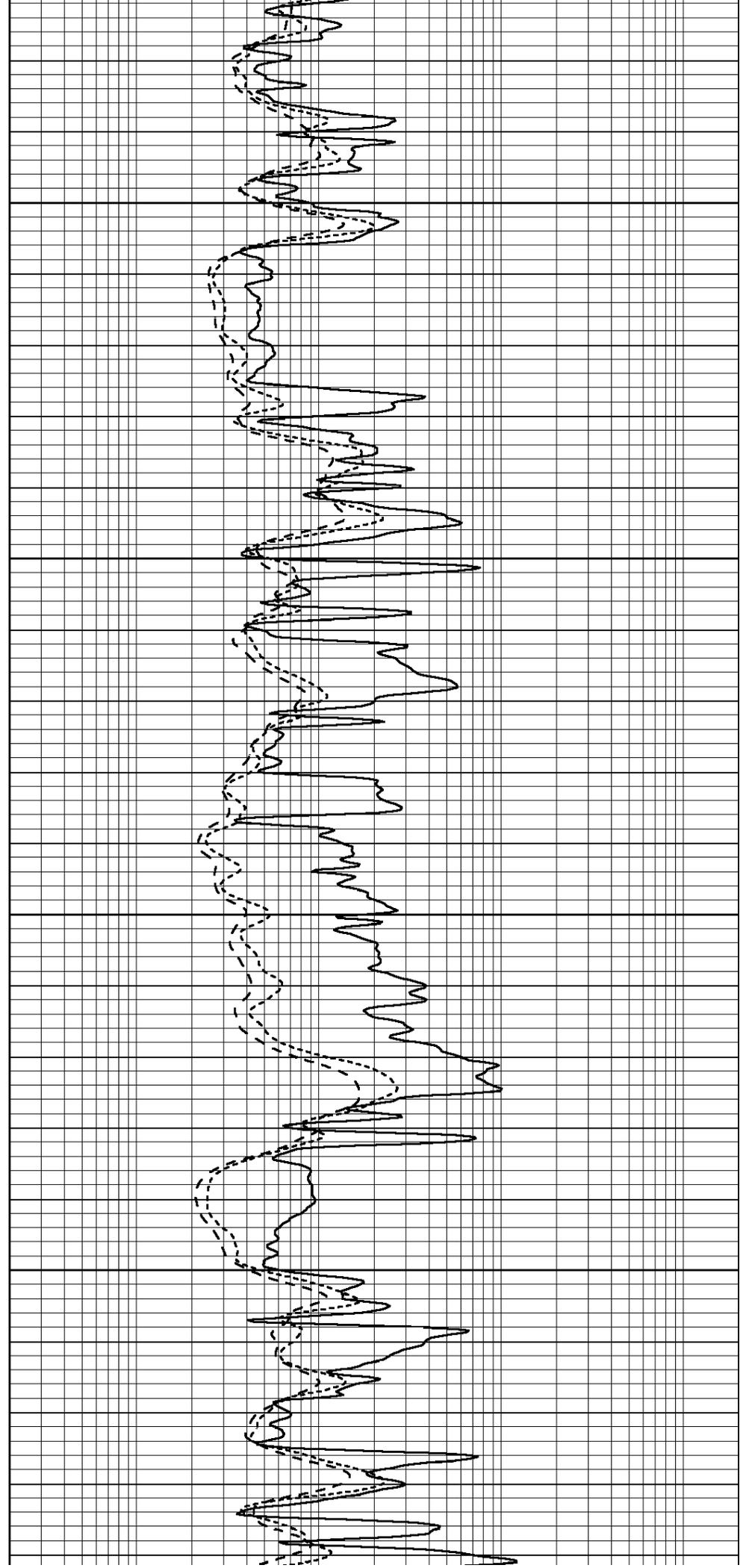


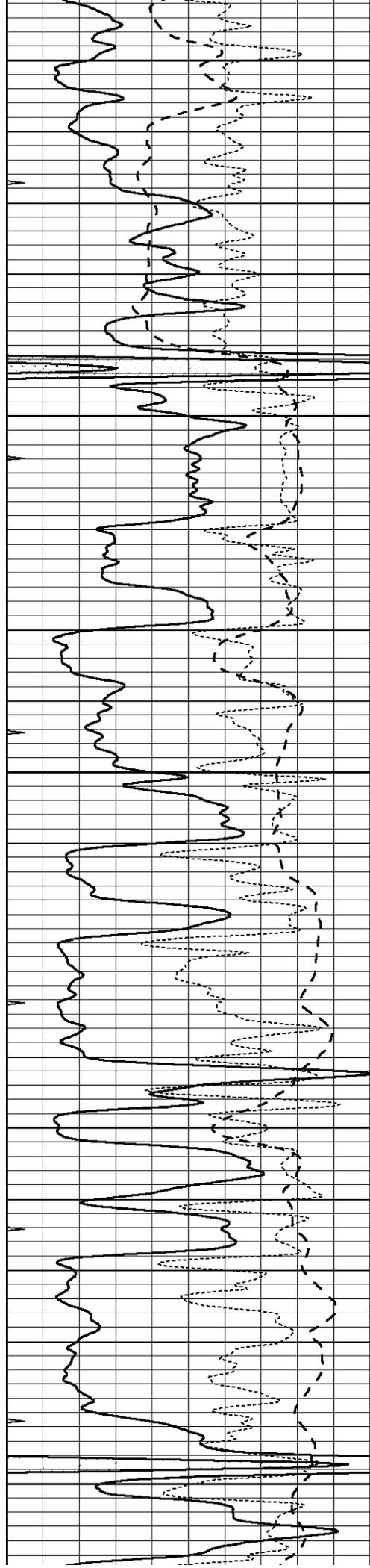
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3600

3650





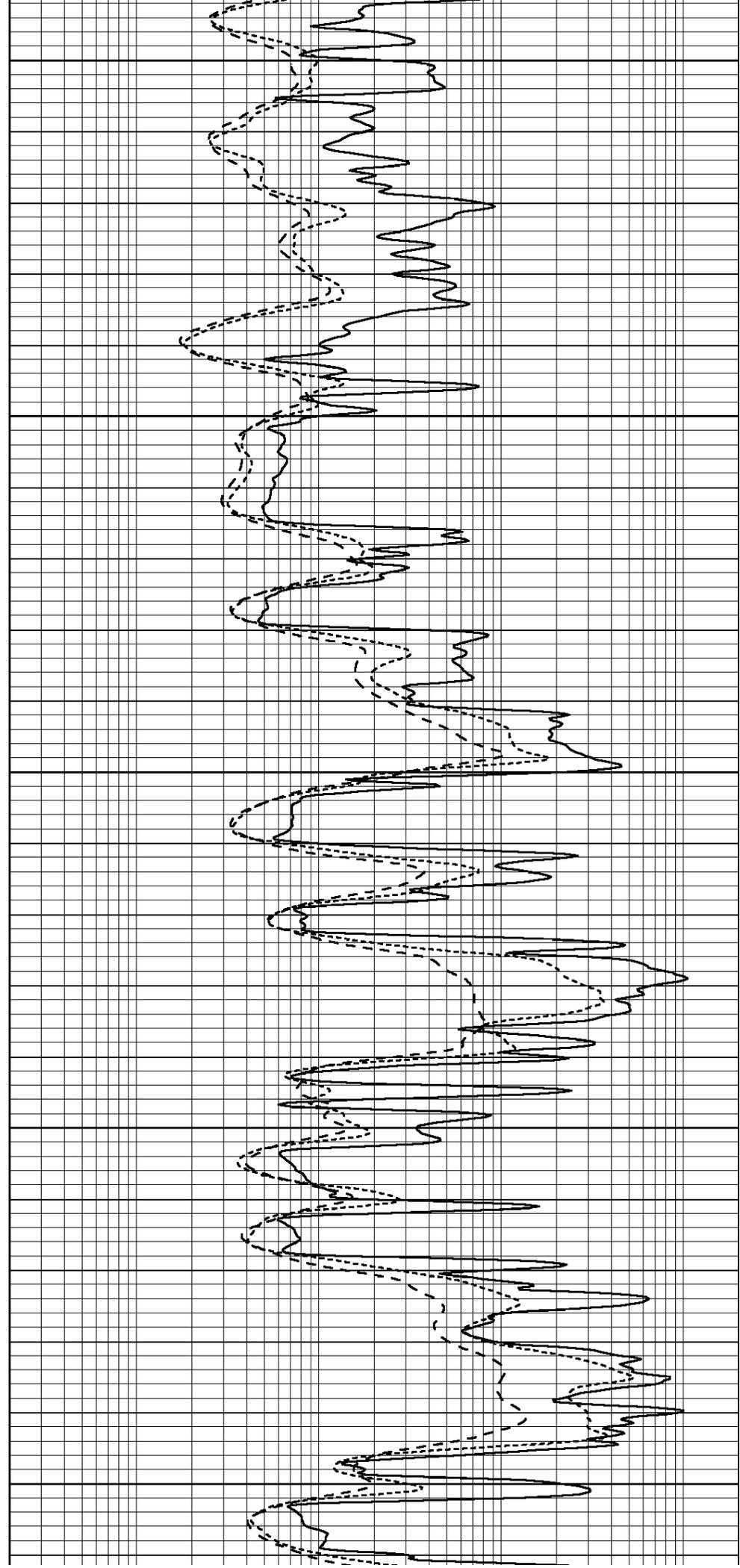
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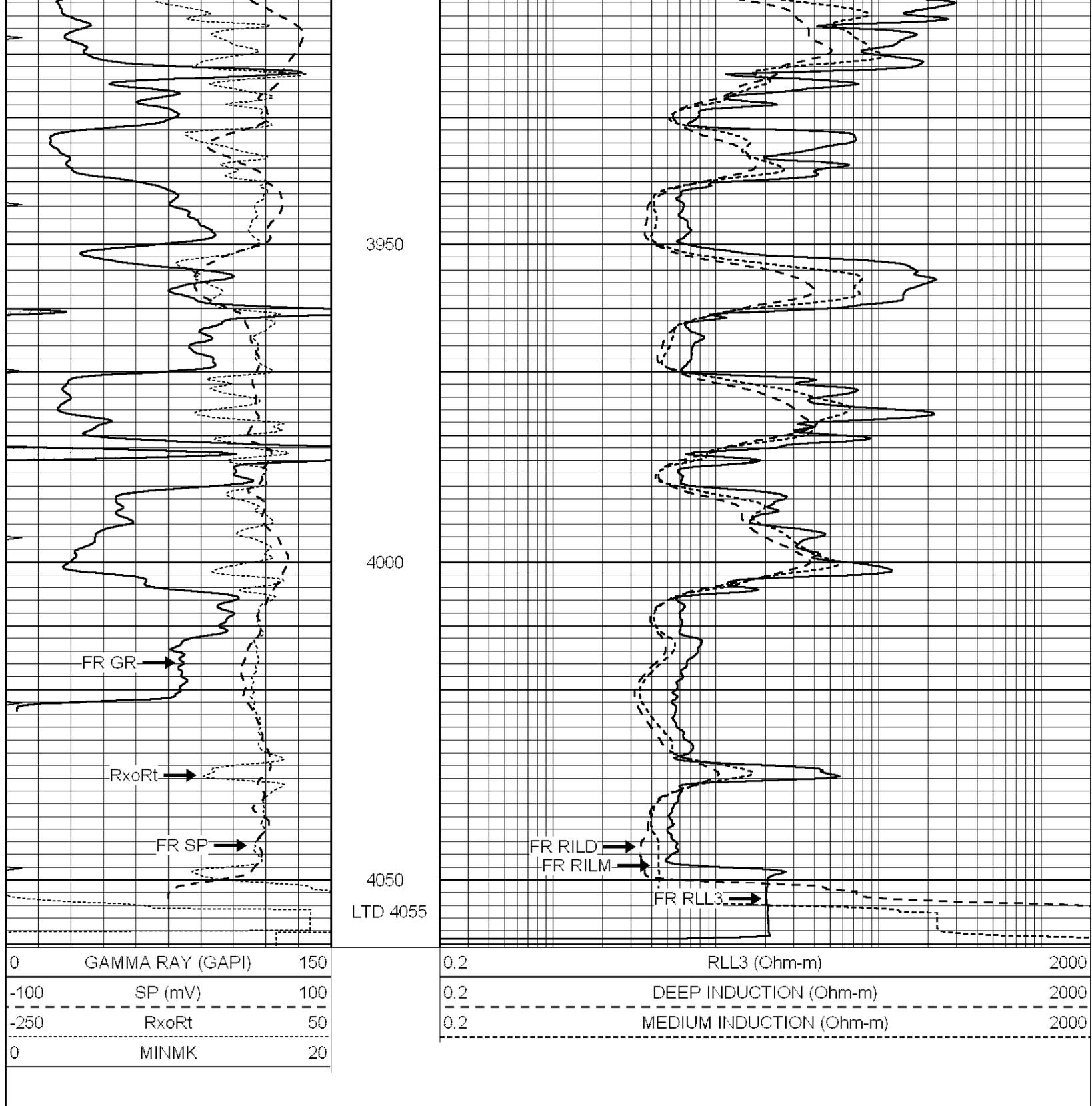
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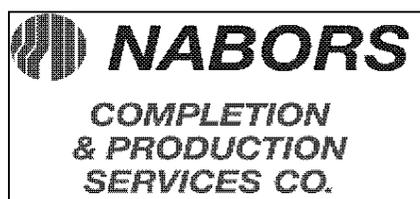
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0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

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

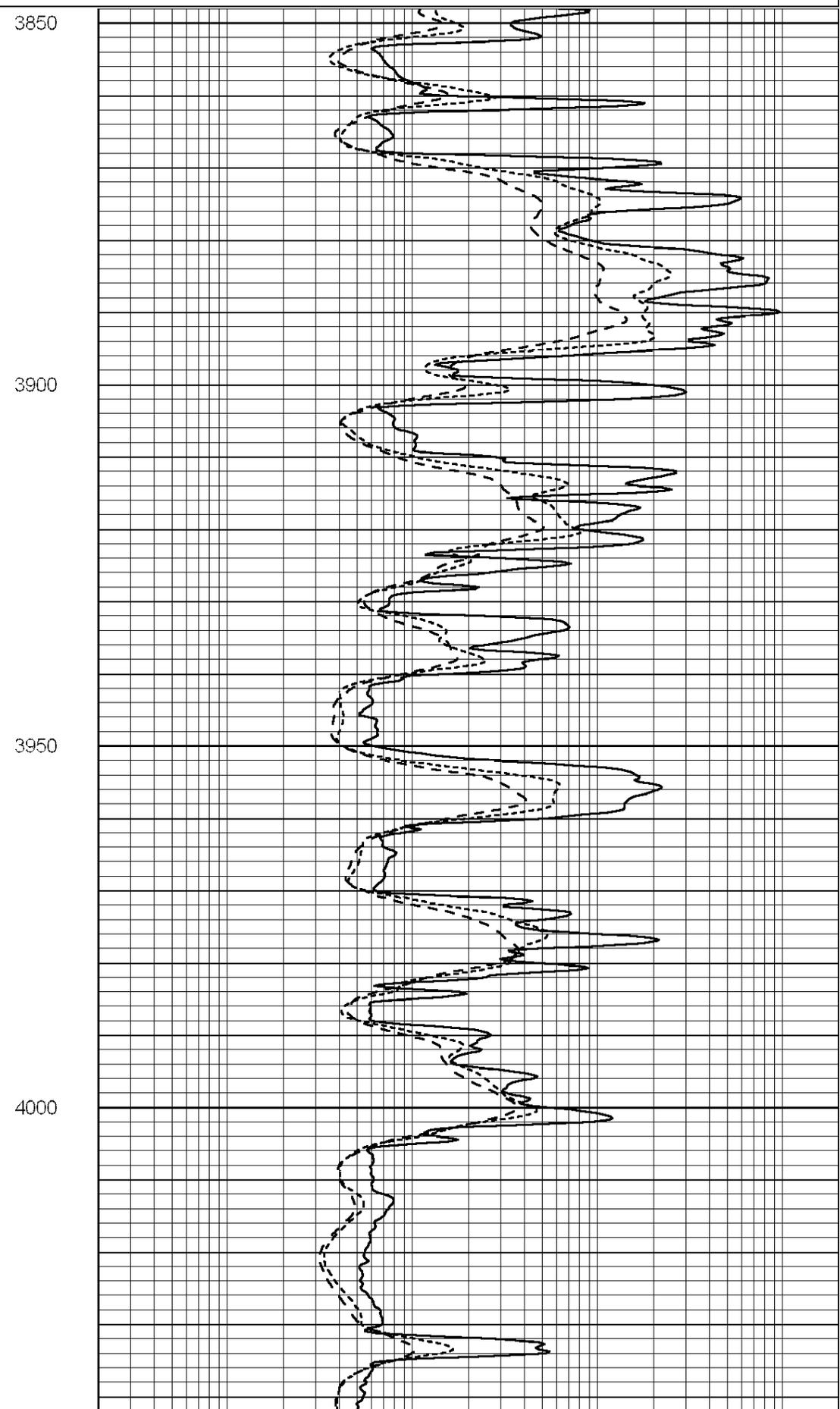
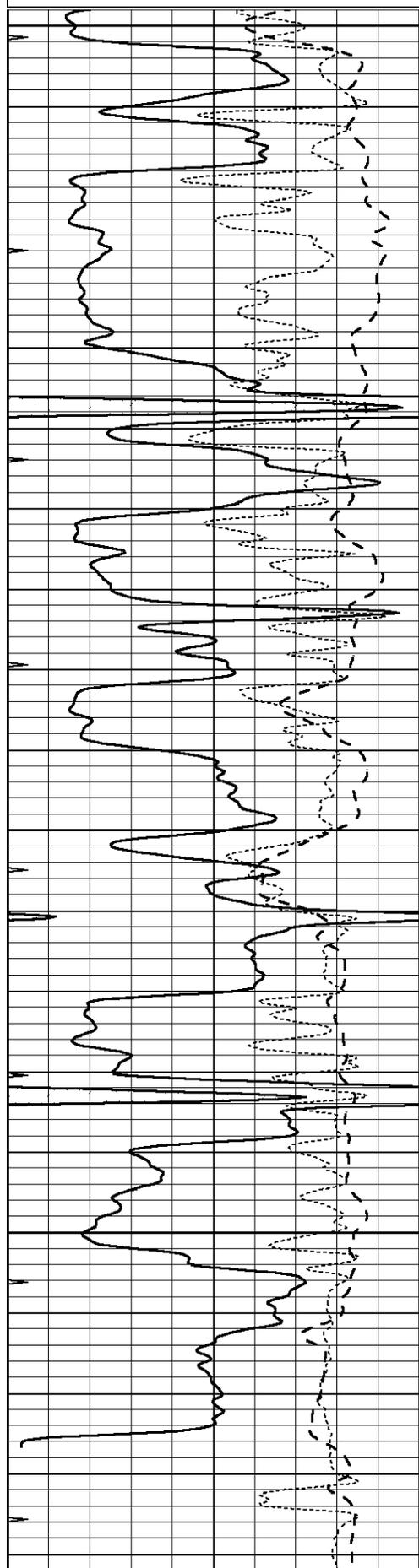


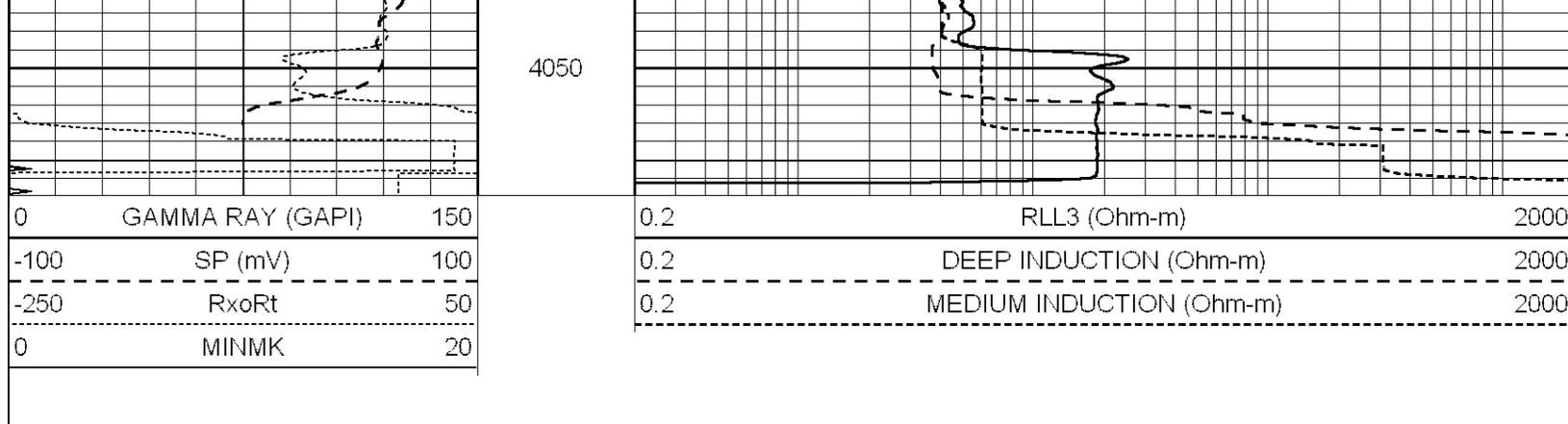
REPEAT SECTION

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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: 24136ddn.db
 Dataset Pathname: pass4.2
 Dataset Creation: Sun Apr 13 13:06:14 2014 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
 Performed: Tue Apr 01 19:32:51 2014

Loop:	Readings			References			Results	
	Air	Loop	V	Air	Loop	mmho/m	m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	500.000	5.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	540.000	-2.000
Internal:	Zero	Cal	V	Zero	Cal	mmho/m	m	b
Deep	0.002	0.645	V	0.000	400.000	mmho/m	560.000	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	540.000	-4.000

Compensated Density Calibration Report

Serial-Model: GEAR1-GEARHART
 Source / Verifier: 147 / 147
 Master Calibration Performed: Tue Apr 01 19:31:33 2014

Master Calibration

	Density		Far Detector	Near Detector
Magnesium	1.710	g/cc	1211.27	625.92 cps
Aluminum	2.590	g/cc	267.11	413.26 cps
Spine Angle = 74.64		Density/Spine Ratio = 0.561		
	Size		Reading	
Small Ring	8.20	in	5.18	V
Large Ring	14.00	in	8.18	V

Compensated Neutron Calibration Report

Serial Number: 080620
 Tool Model: Probe

PRE-SURVEY VERIFICATION

Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps		

Long Space

cps

pu

pu

POST-SURVEY VERIFICATION

Detector

Readings

Measured

Target

Short Space
Long Space

cps
cps

pu

pu

Gamma Ray Calibration Report

Serial Number:	7	
Tool Model:	Probe1	
Performed:	Tue Apr 01 19:11:08 2014	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.4500	GAPI/cps