



SUPERIOR
Hays,
Kansas

**DUAL INDUCTION
LOG**

Company MULL DRILLING COMPANY, INC.
Well #1-32 BABCOCK "B"
Field WILDCAT
County GOVE
State KANSAS

Company MULL DRILLING COMPANY, INC.
Well #1-32 BABCOCK "B"
Field WILDCAT
County GOVE State KANSAS

Location: API # : 15-063-21891-0000
2502' FNL & 1209' FEL
SEC 32 TWP 15S RGE 26W
Permanent Datum GROUND LEVEL Elevation 2542
Log Measured From KELLY BUSHING 9' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
CDL/CNL/PE
MEL/SONIC
Elevation
K.B. 2551
D.F. 2549
G.L. 2542

Date	3/17/11
Run Number	ONE
Depth Driller	4540
Depth Logger	4542
Bottom Logged Interval	4540
Top Log Interval	00
Casing Driller	8 5/8"@238'
Casing Logger	238
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.2/55
pH / Fluid Loss	10.0/8.8
Source of Sample	FLOWLINE
Rin @ Meas. Temp	1.30@80F
Rmf @ Meas. Temp	.975@80F
Rmc @ Meas. Temp	1.56@80F
Source of Rmf / Rmc	MEASUREMENT
Rin @ BHT	.860@121F
Time Circulation Stopped	2.5 HOURS
Time Logger on Bottom	9:30 P.M.
Maximum Recorded Temperature	121F
Equipment Number	0836
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
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

THANK YOU FOR USING SUPERIOR WELL SERVICE HAYS, KANSAS (785) 628-6395
DIRECTIONS
UTICA, KS. 3W. ON HWY 4 TO "CASTLE ROCK RD.", 4N., E. INTO@CURVE IN THE RD.



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MAIN SECTION

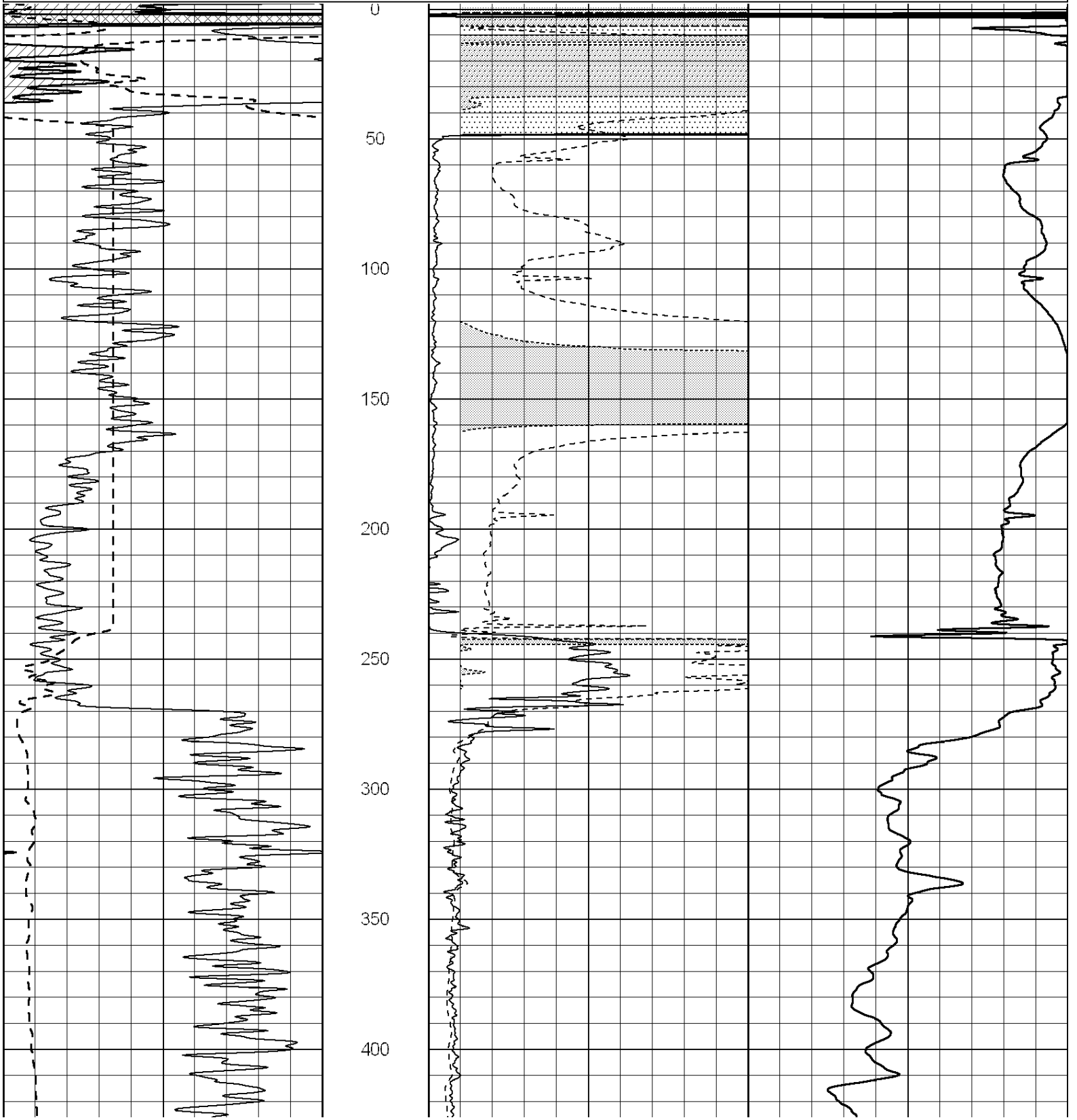
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 Charted by: Depth in Feet scaled 1:600

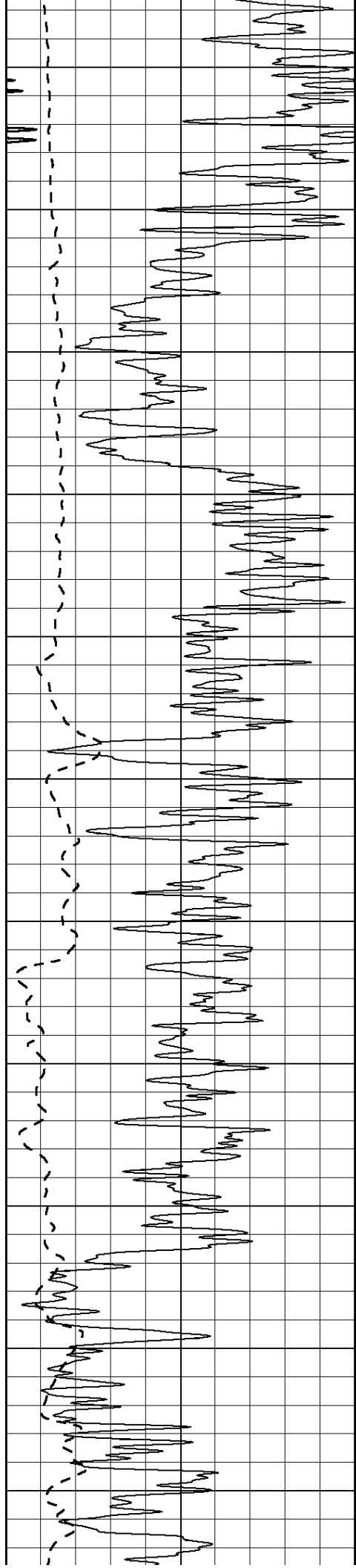
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 -100 SP (mV) 100

0 RLL3 (Ohm-m) 50
 0 RILD (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

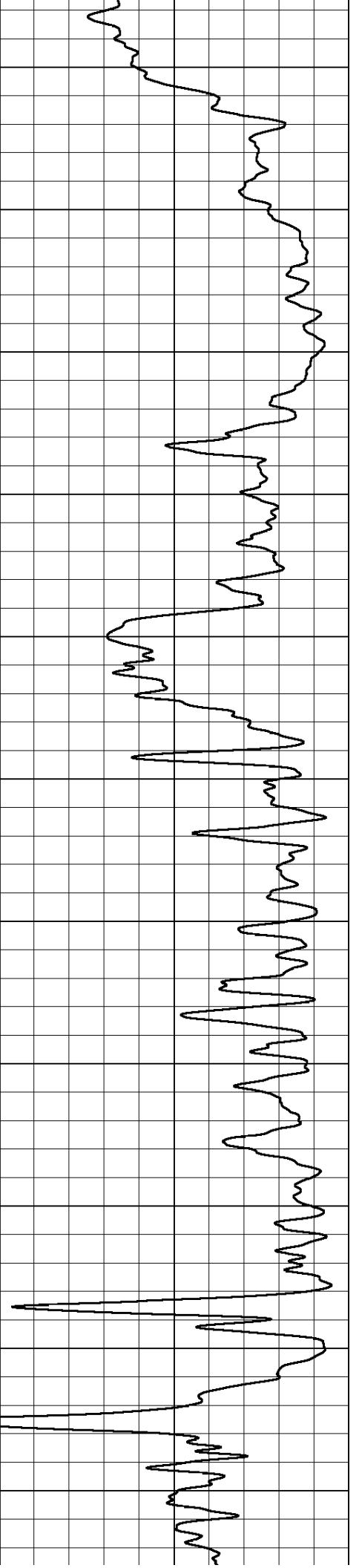
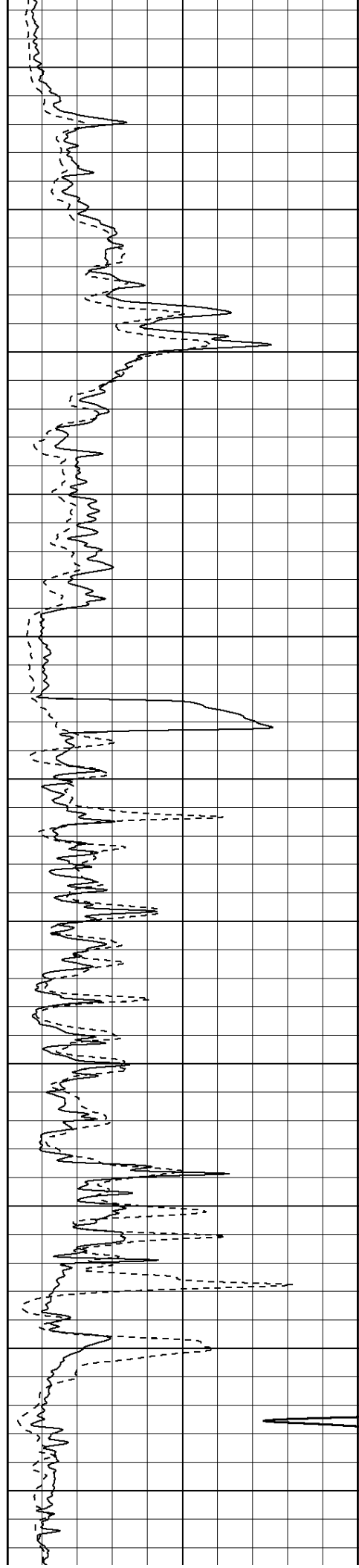
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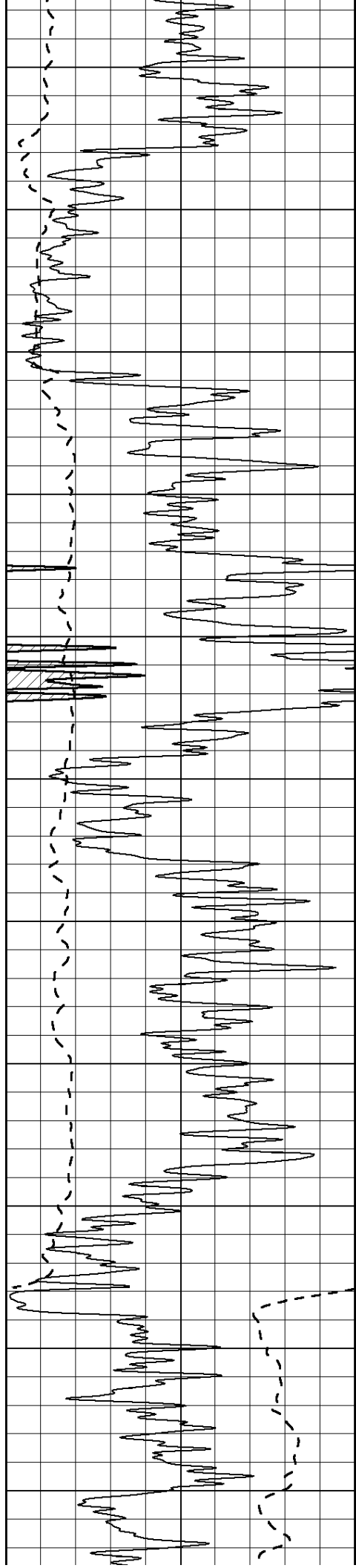
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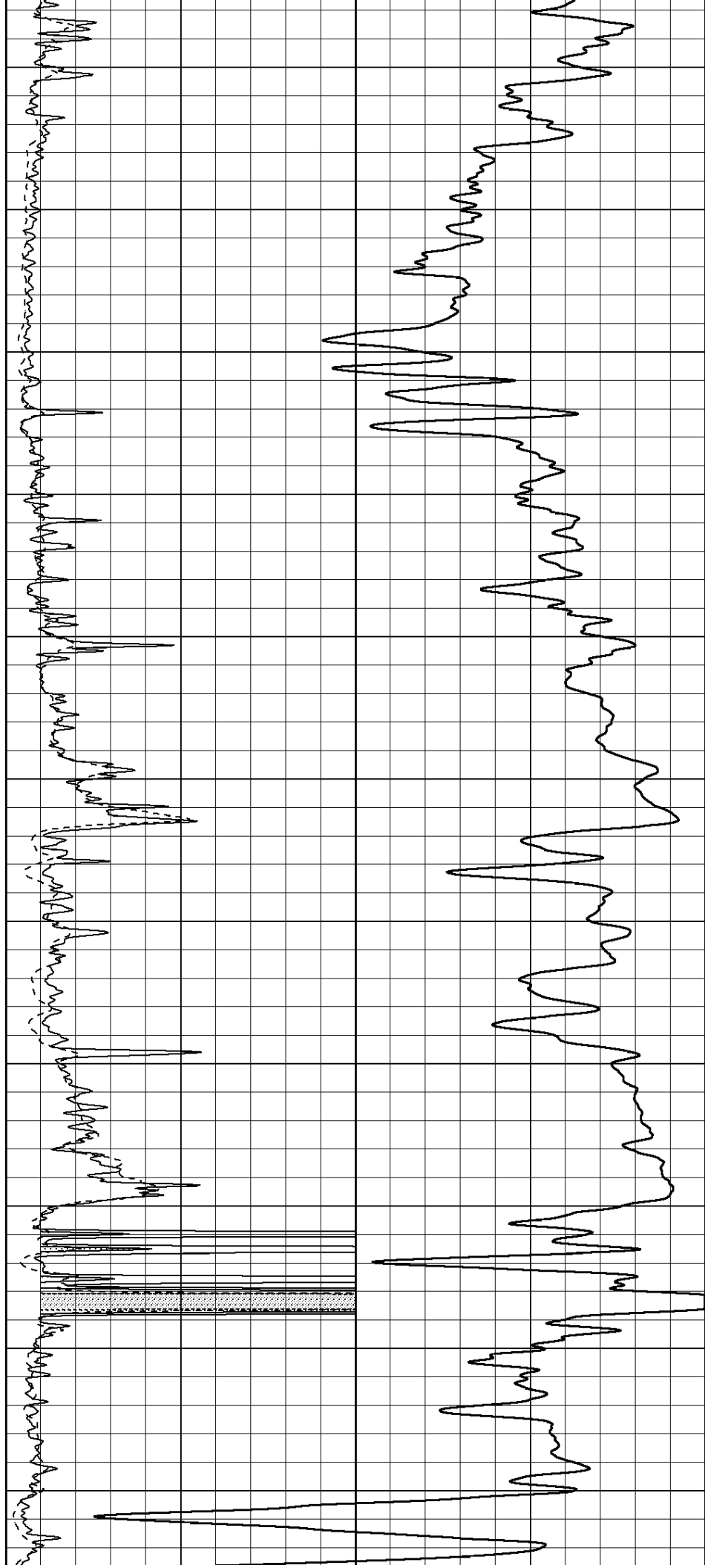
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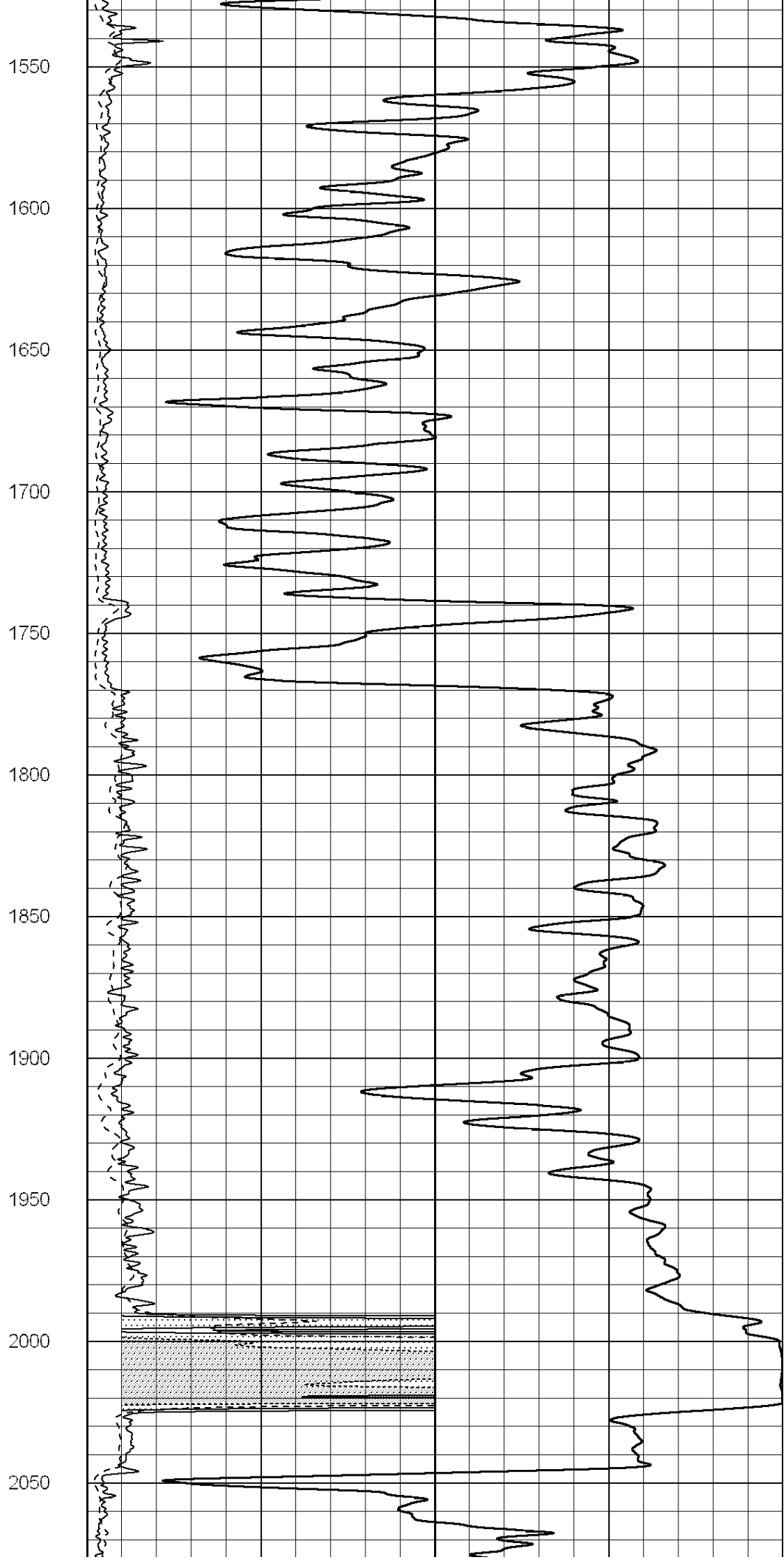
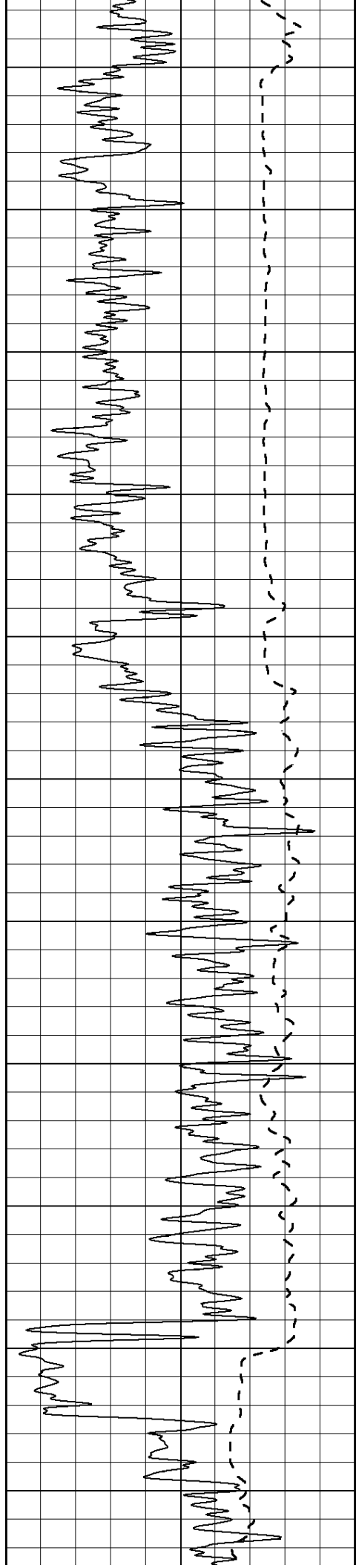
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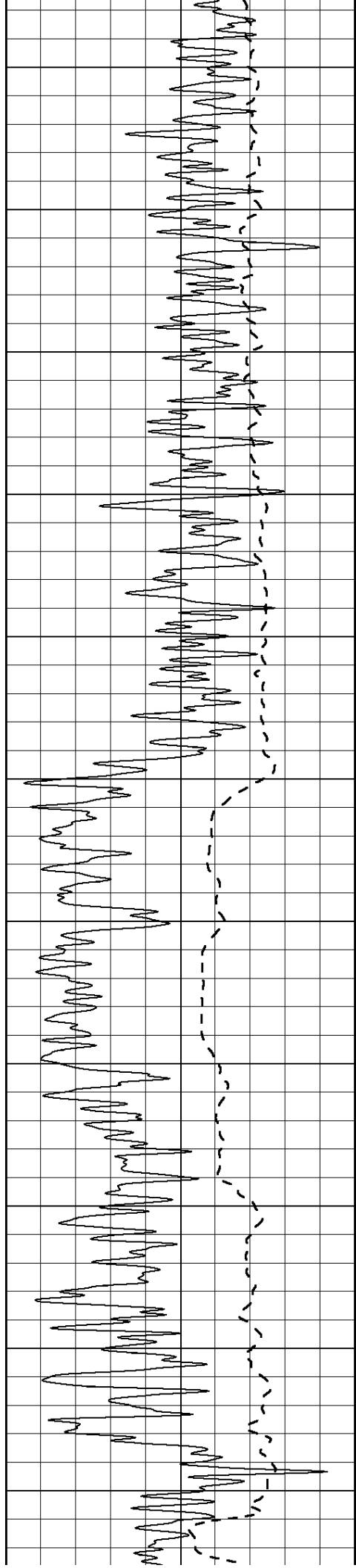




1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500







2100

2150

2200

2250

2300

2350

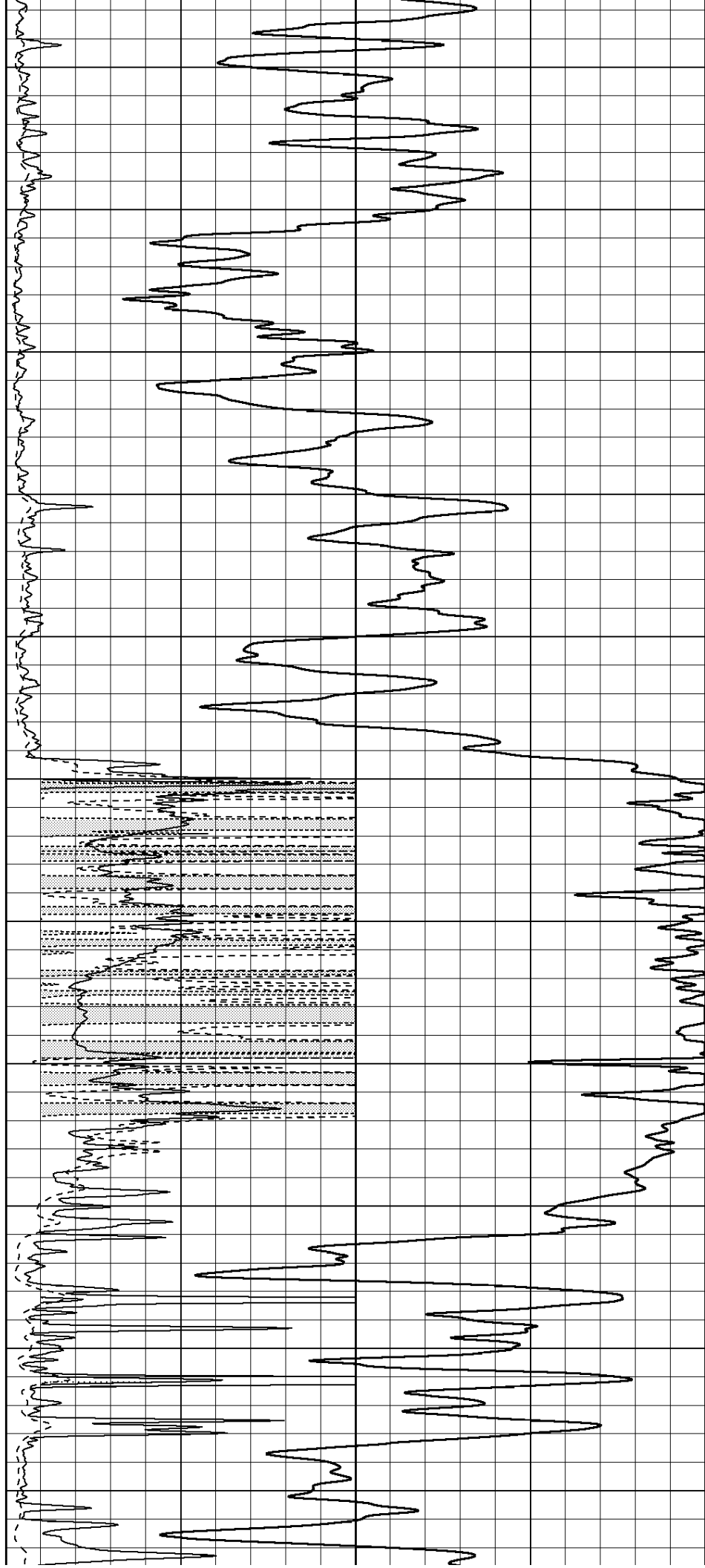
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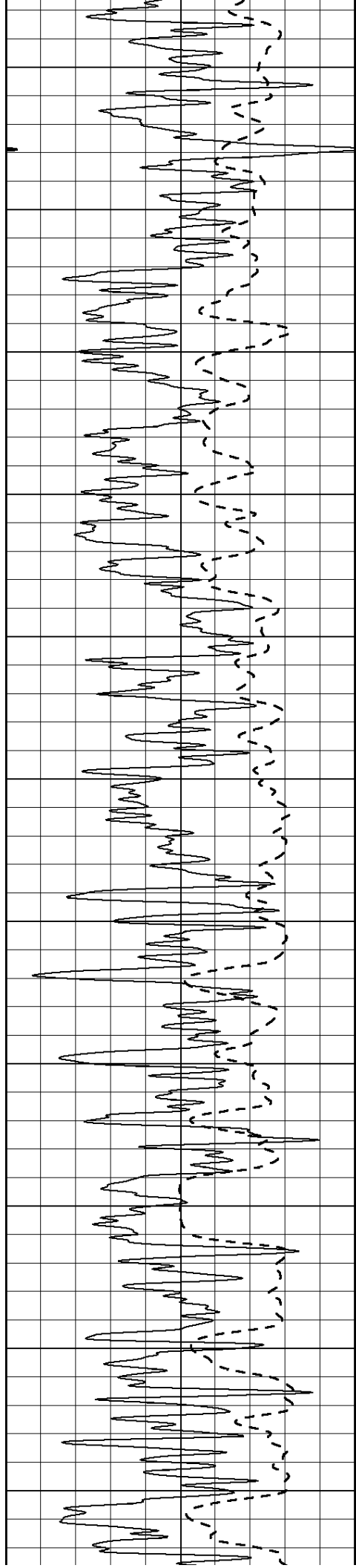
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2500

2550

2600





2650

2700

2750

2800

2850

2900

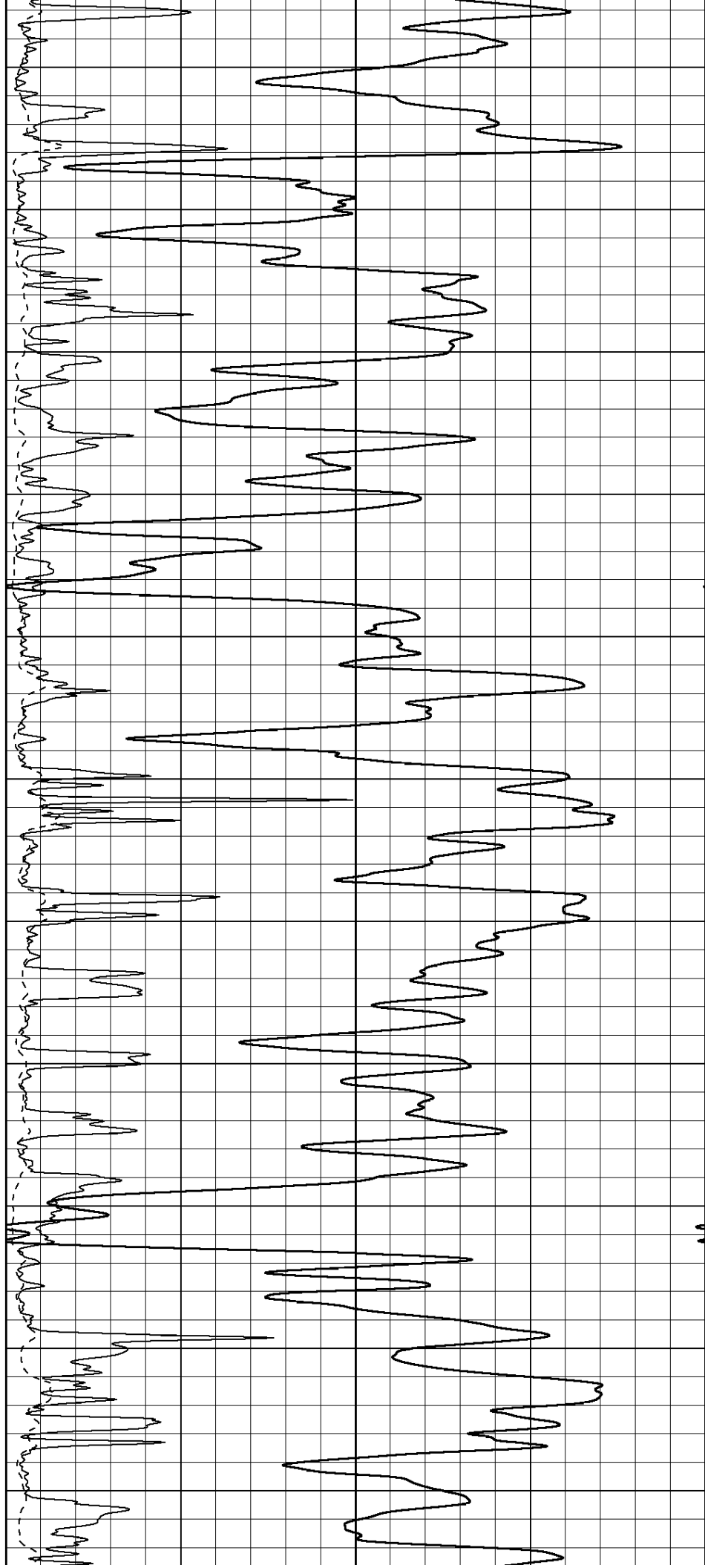
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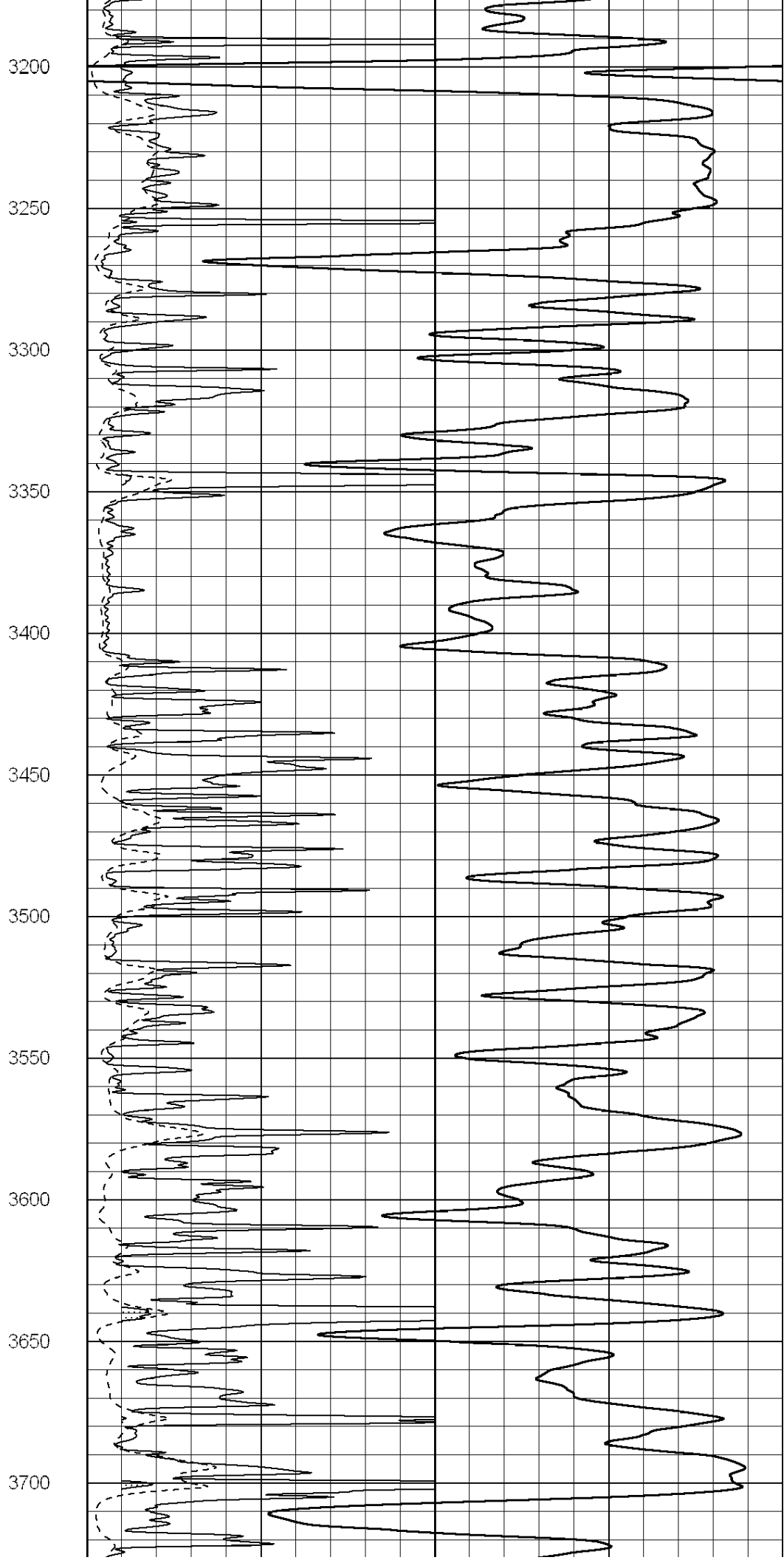
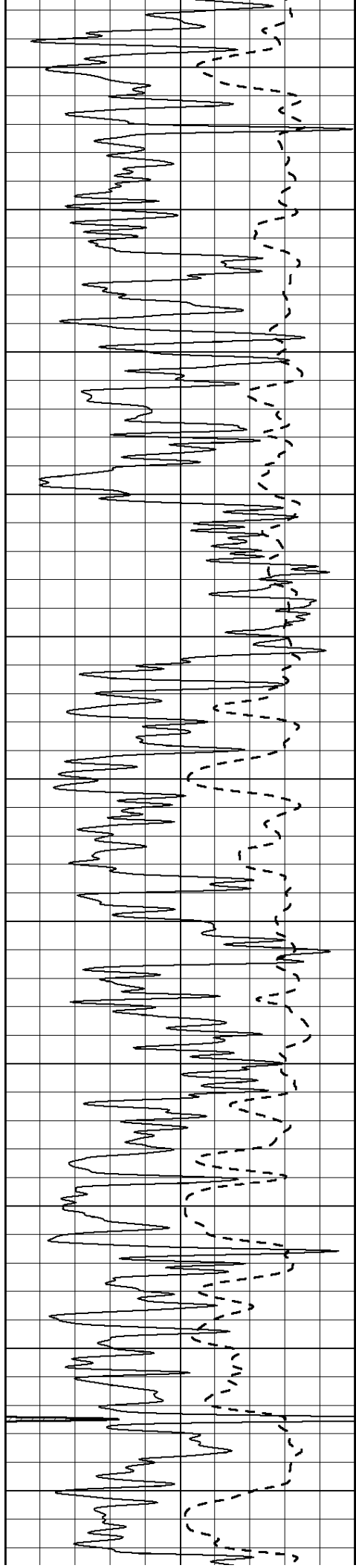
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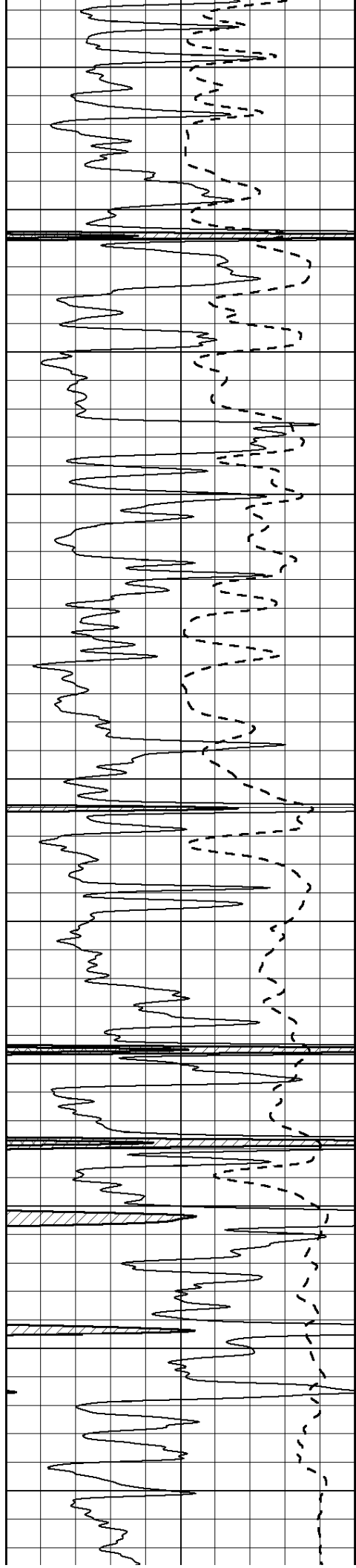
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3100

3150







3750

3800

3850

3900

3950

4000

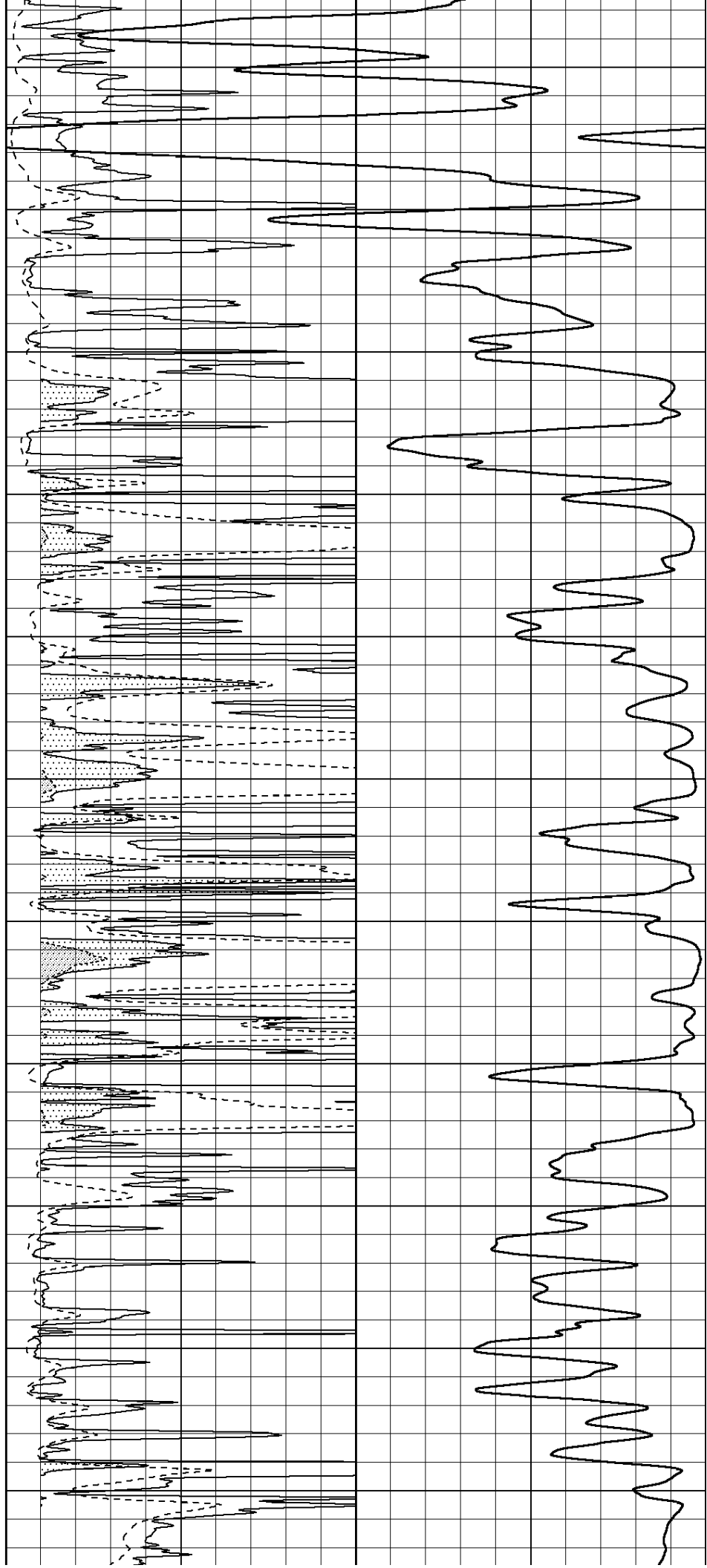
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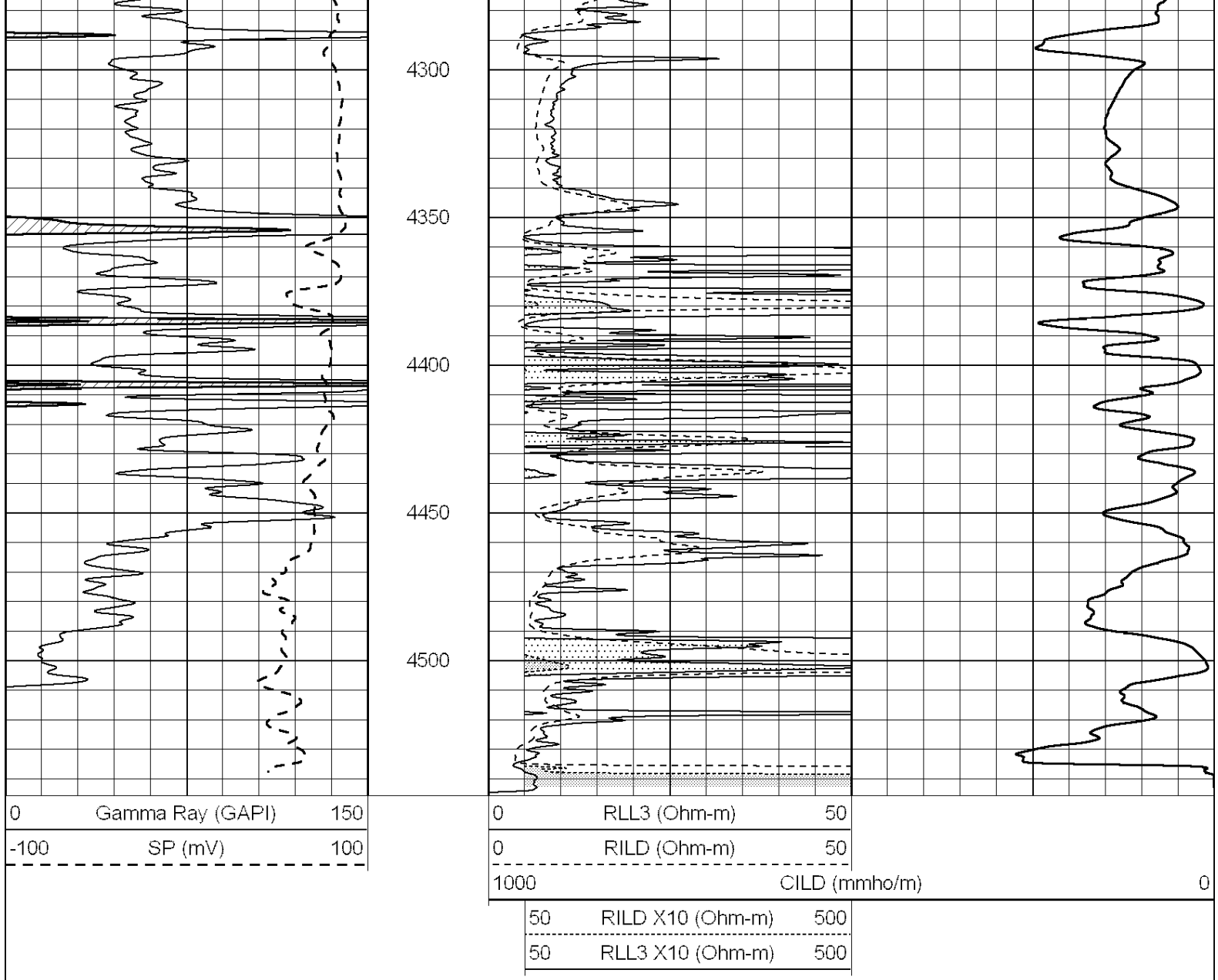
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4150

4200

4250





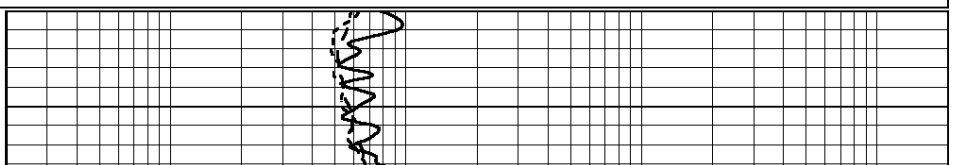
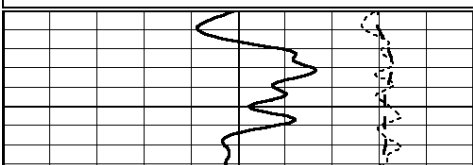
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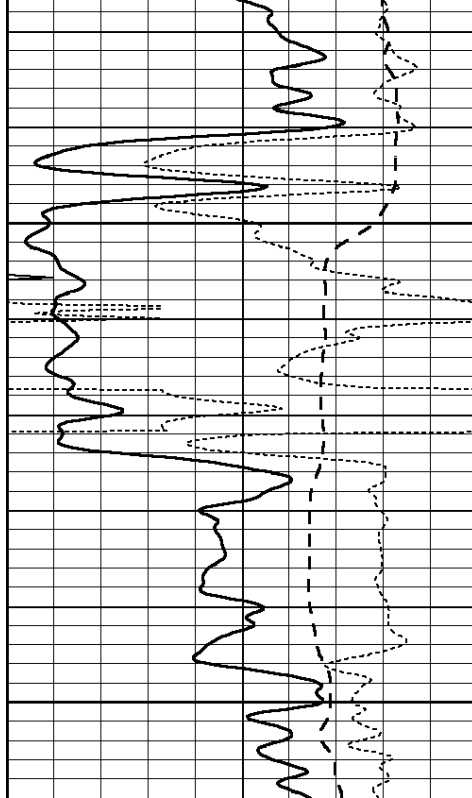
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 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	10

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

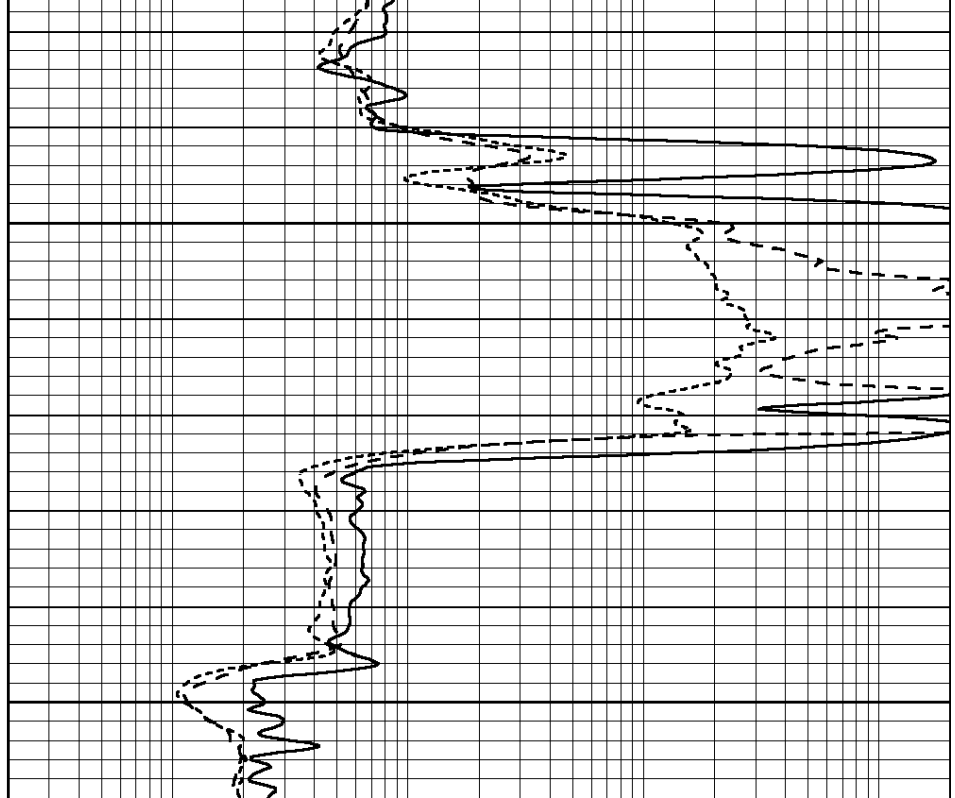




2000

2050

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	10



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



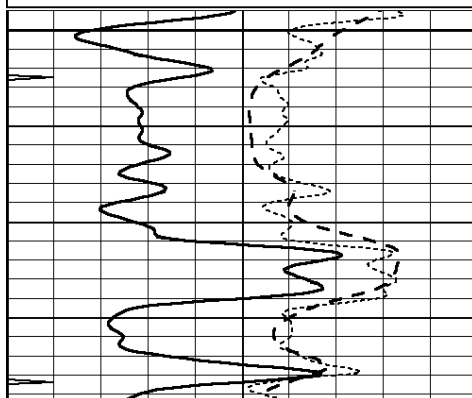
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MAIN SECTION

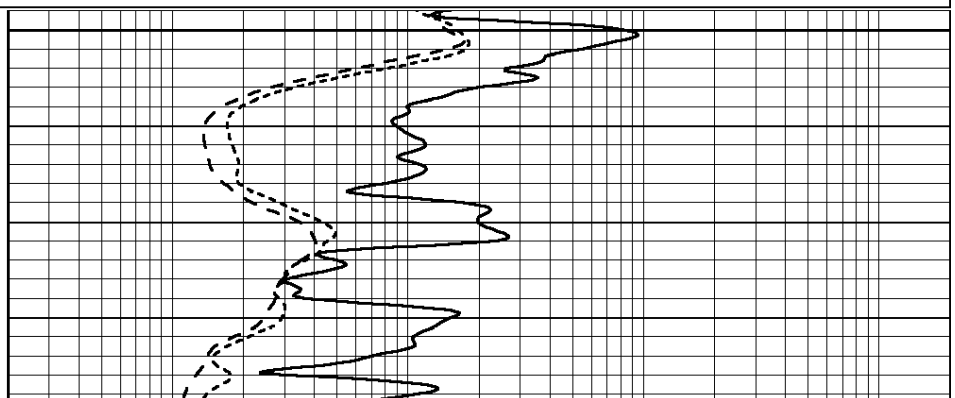
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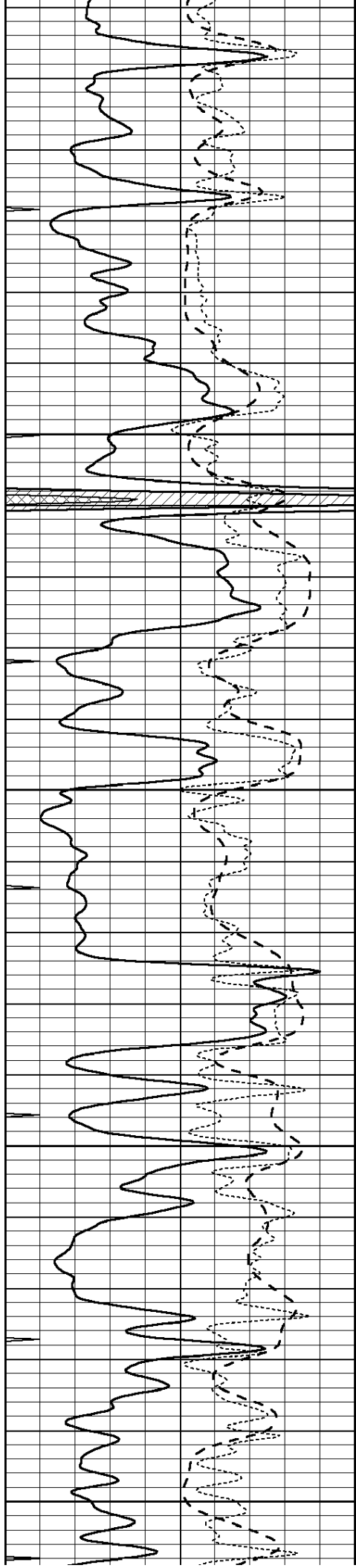
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-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	10

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



3700





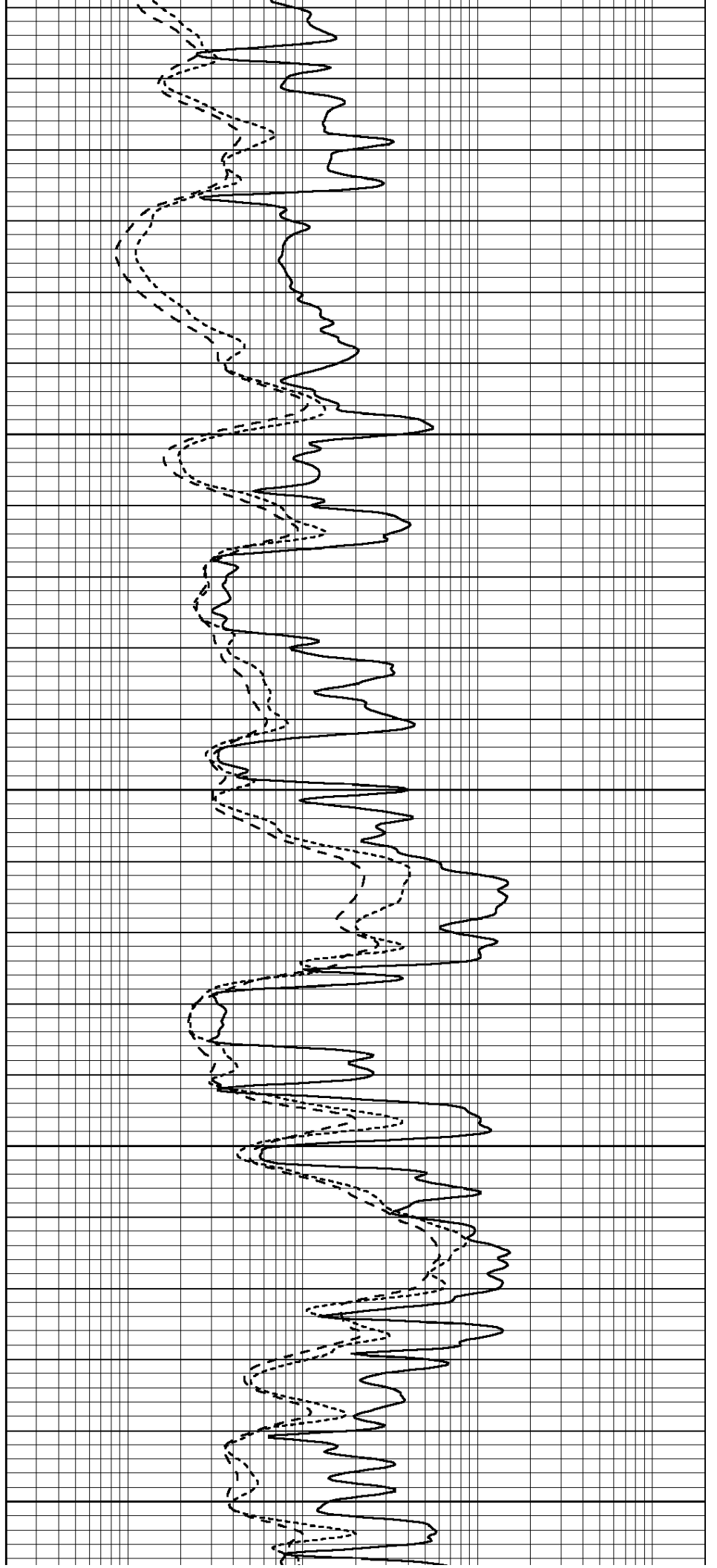
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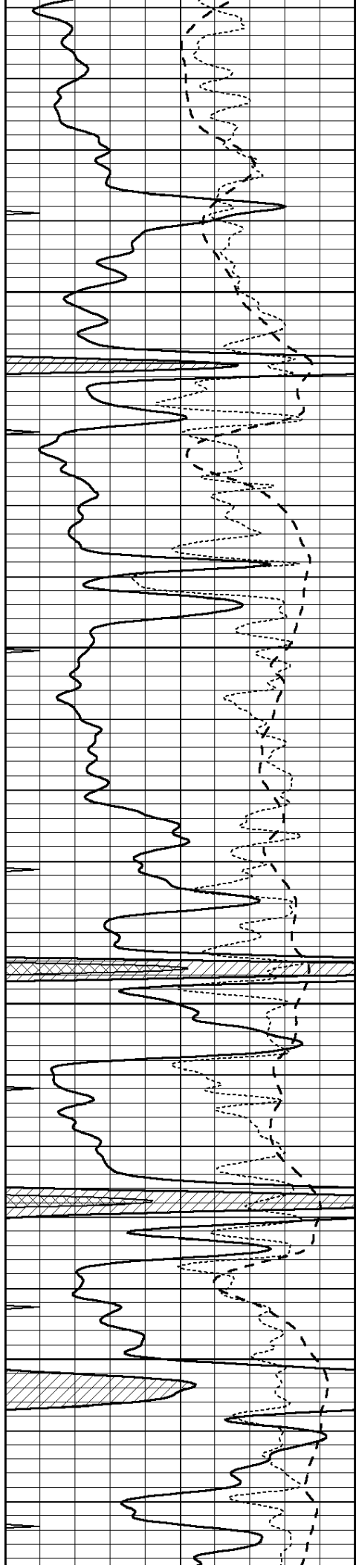
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3850

3900

3950



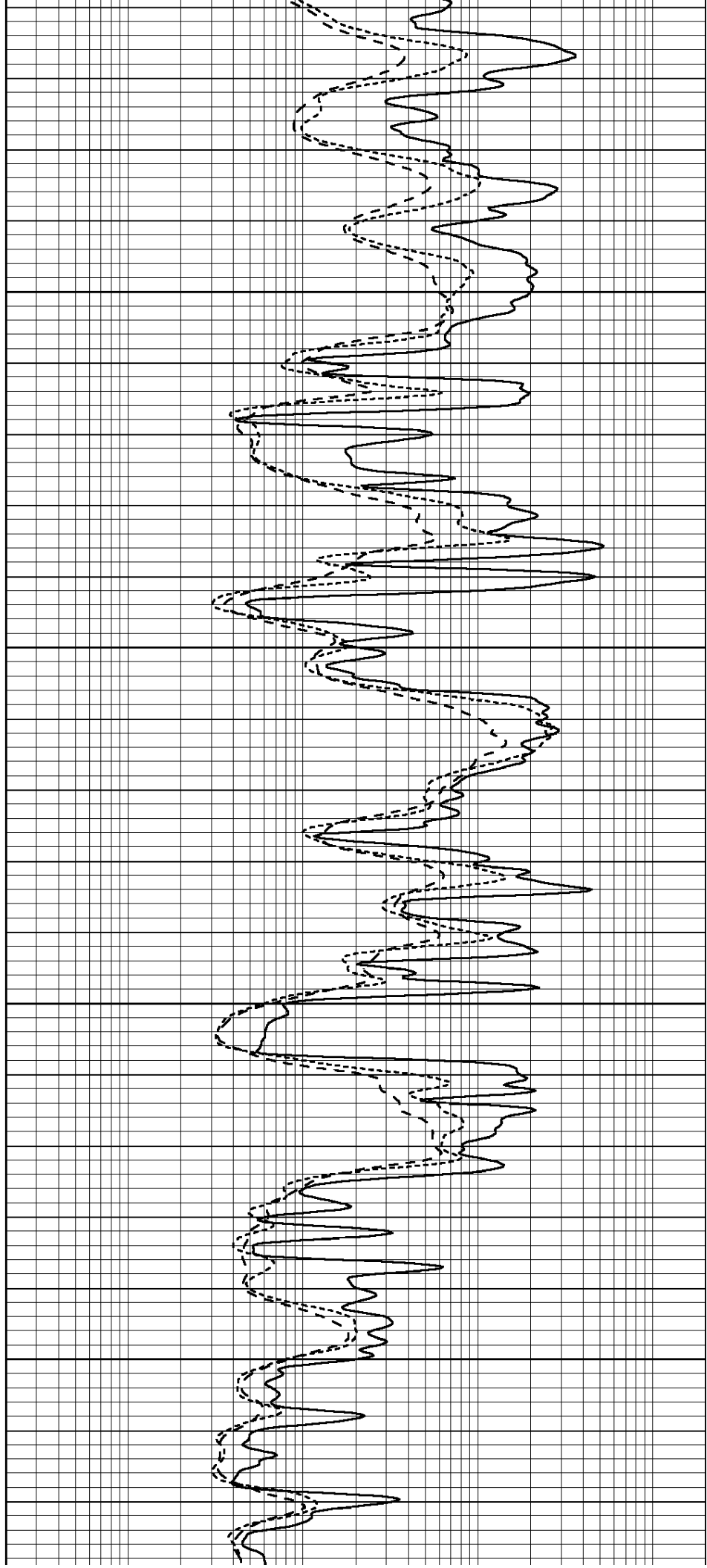


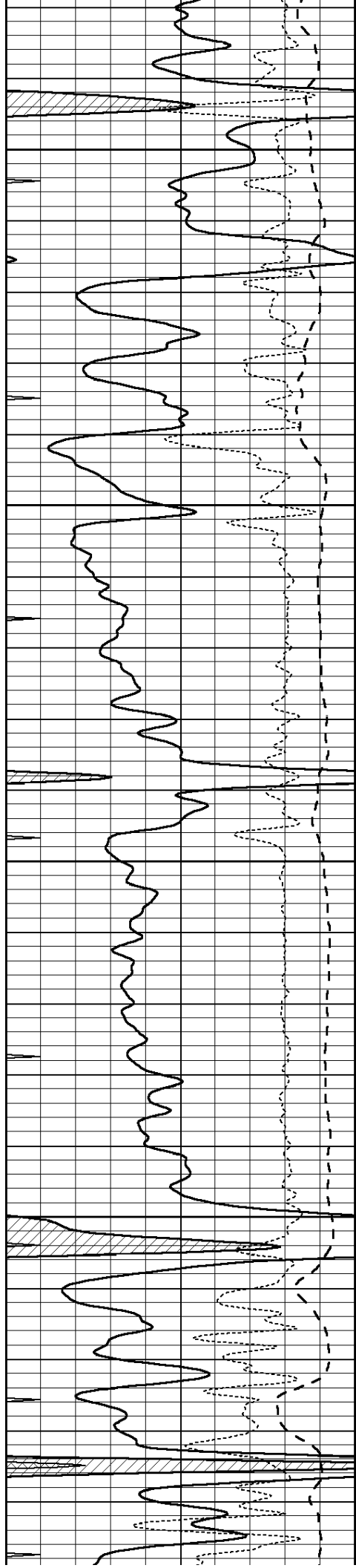
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4050

4100

4150



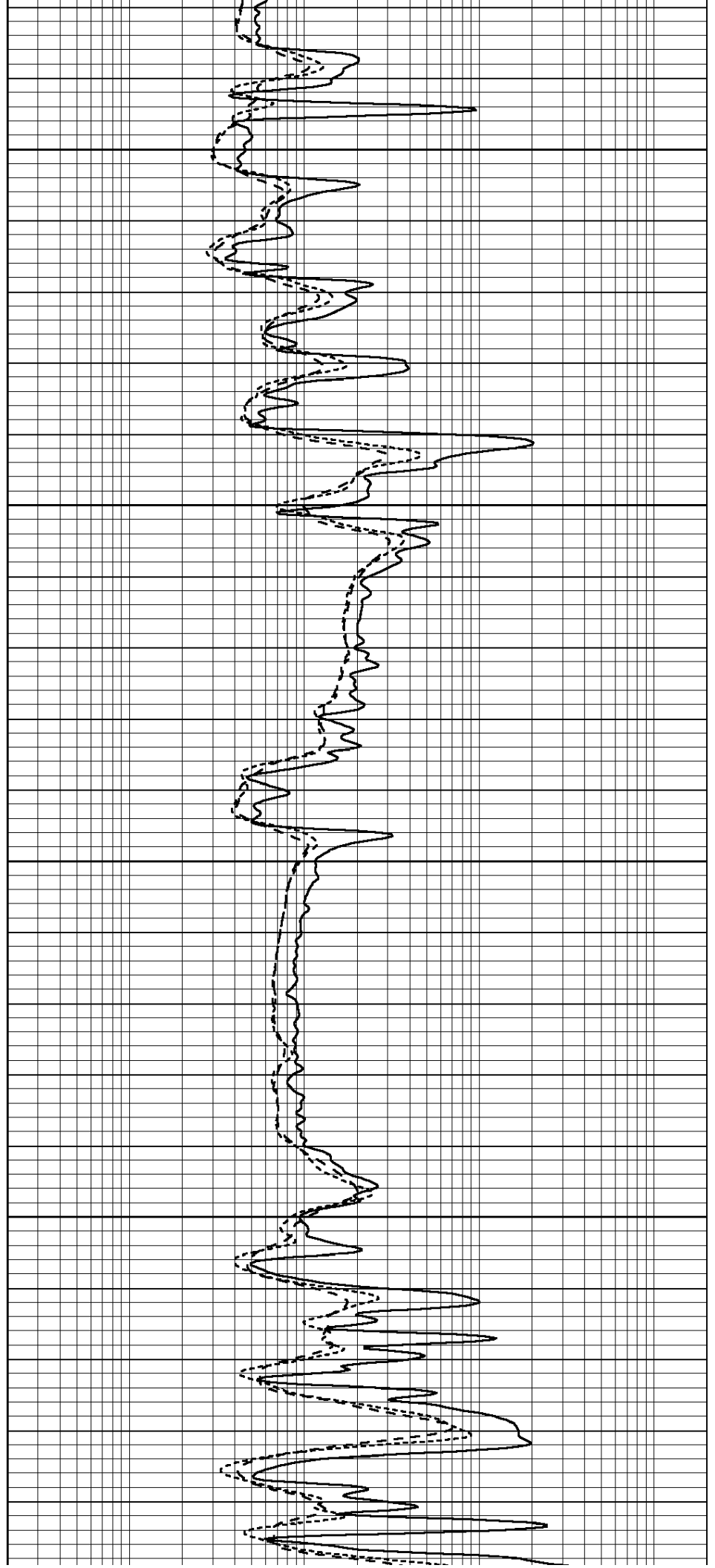


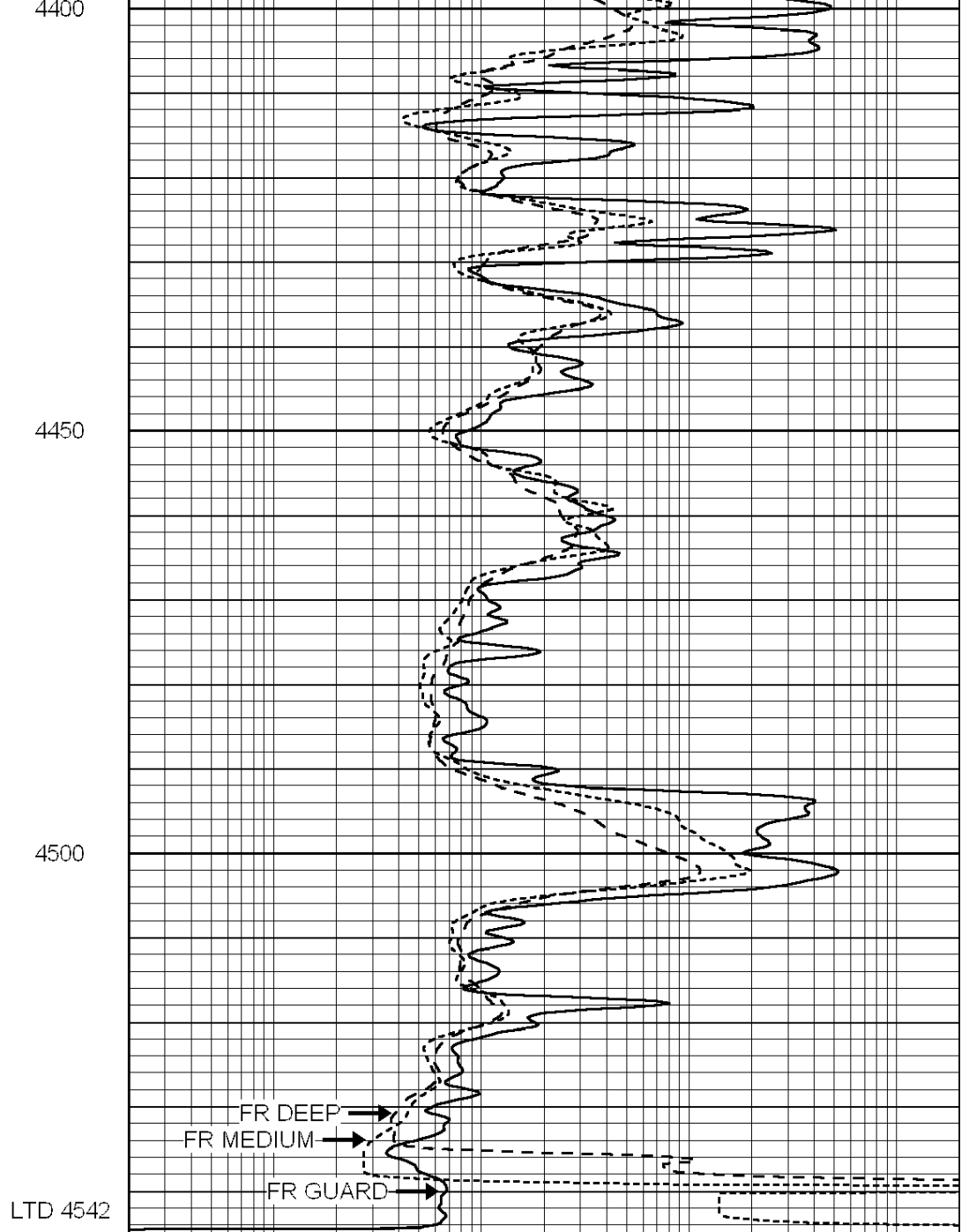
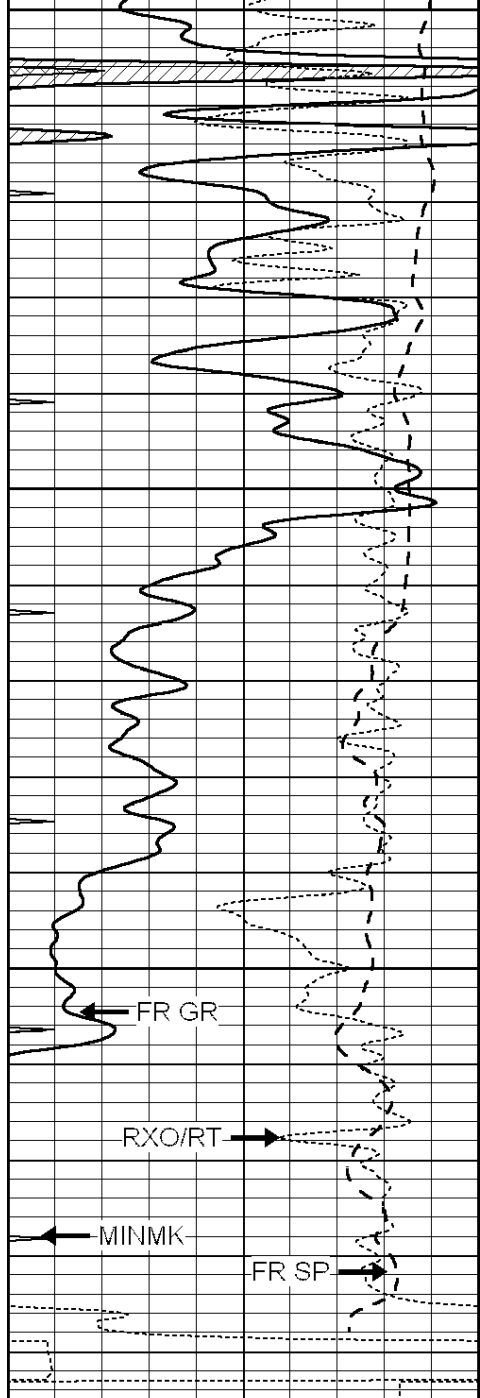
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4250

4300

4350





0	GAMMA RAY (GAPI)	150
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-250	Rxo/Rt	50
0	MINMK	10

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



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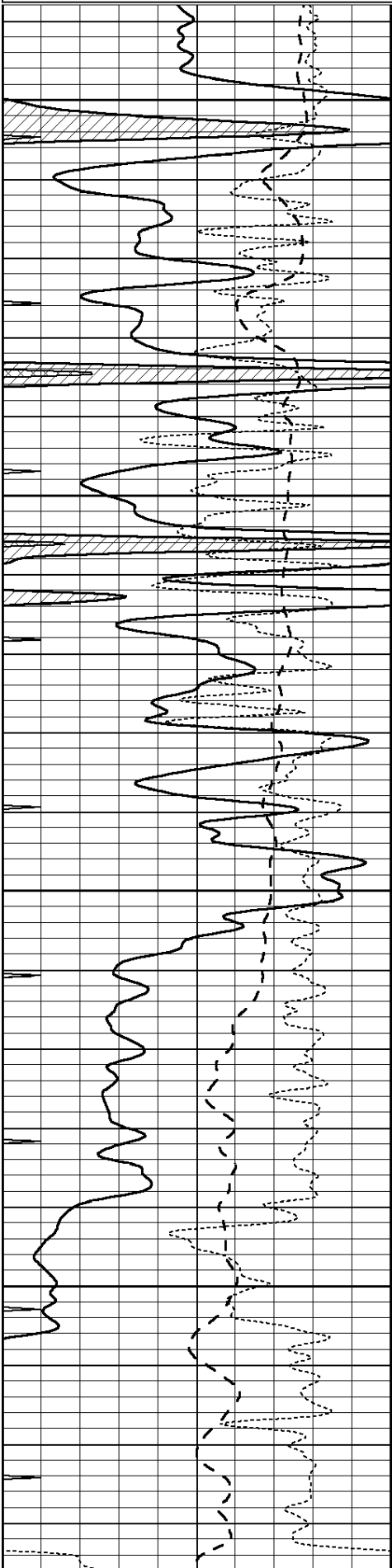
REPEAT SECTION

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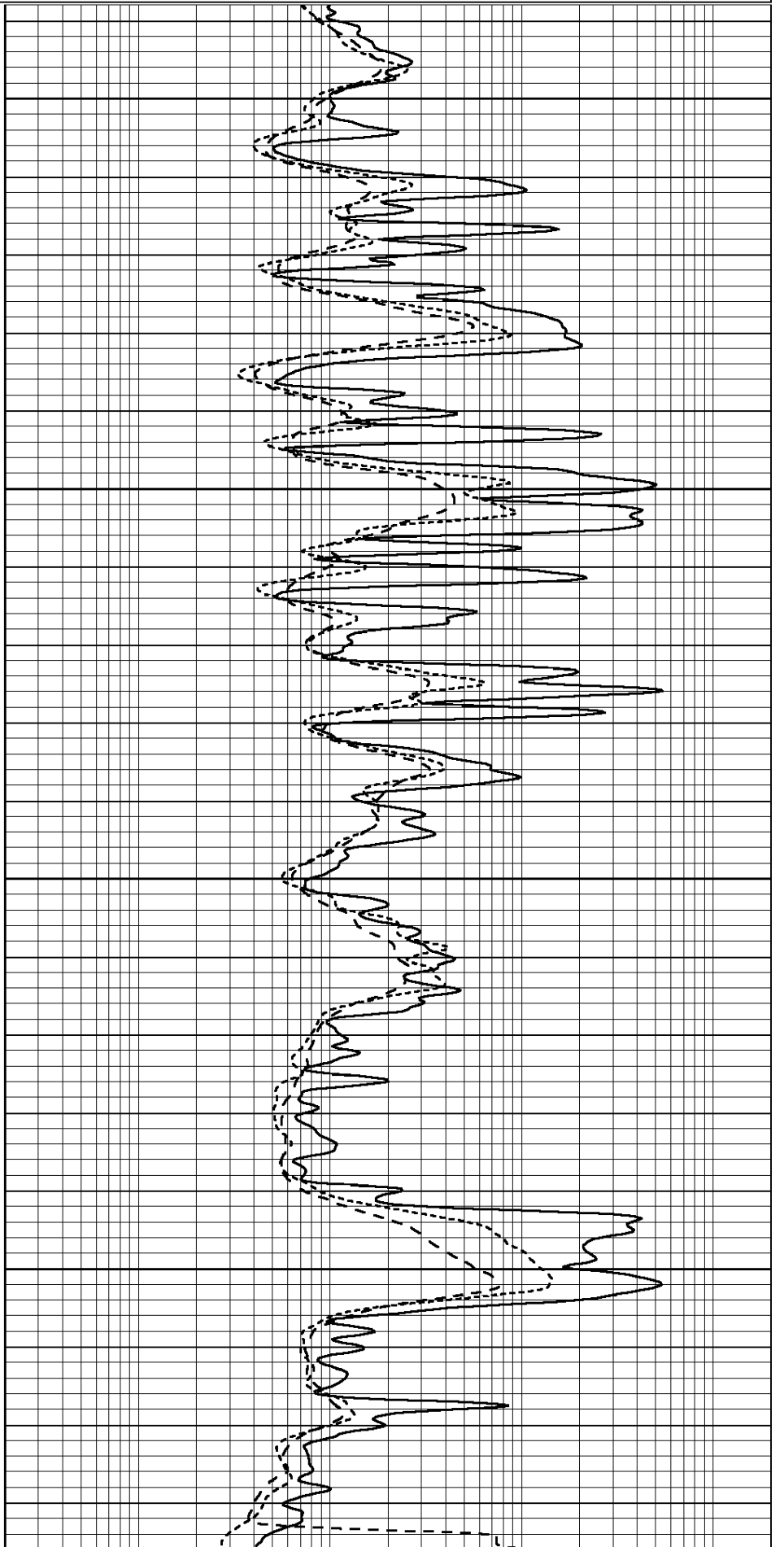
0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
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-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	10

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



4350
4400
4450
4500



0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	10			

Calibration Report

Database File: 006611pe.db
Dataset Pathname: pass3.6
Dataset Creation: Fri Mar 11 22:49:58 2011 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
Performed: Fri Mar 11 20:56:55 2011

Loop:	Readings				References		Results	
	Air	Loop			Air	Loop	m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	640.000	-4.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	700.000	-14.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.645	V	0.000	400.000	mmho/m	622.059	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	631.393	-4.555

Litho Density Calibration Report

Serial: 003N Model: PRB
Performed Tue Sep 08 14:14:44 2009

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	2042.6	12312.8	4225.8	13758.4	cps
Window 2	1855.8	10134.7	3624.2	11113.1	cps
Window 3	1639.4	6760.2	2716.3	7260.3	cps
Window 4	466.4	469.2	466.1	476.5	cps
Long Space	0.0	8278.9	1768.4	9257.4	cps
Short Space	2.2	2377.3	1544.1	2574.2	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	

Rib Angle : 44.4 Rib Slope : 0.979 Density/Spine Ratio : 0.549
Spine Angle : 74.4 Spine Slope : 3.577 Spine Intercept : -18.8

Caliper

	Readings	Reference	
Low Ref	1.8	5.6	
High Ref	4.6	14.0	
	Gain: 3.0		Offset: 0.4

Compensated Neutron Calibration Report

Serial Number: NEU_3I
Tool Model: G

CALIBRATION

Detector Readings Target Normalization

Short Space	997.00	cps	1000.00	cps	1.0000
Long Space	986.00	cps	1000.00	cps	1.0000

Gamma Ray Calibration Report

Serial Number:	GR3	
Tool Model:	OPEN	
Performed:	Fri Mar 11 20:56:40 2011	
Calibrator Value:	200.0	GAPI
Background Reading:	3.0	cps
Calibrator Reading:	186.0	cps
Sensitivity:	0.6000	GAPI/cps