



SUPERIOR
Hays,
Kansas

**DUAL INDUCTION
LOG**

Company RITCHIE EXPLORATION, INC.
Well HESS 20D #1
Field WILDCAT
County GOVE
State KANSAS

Company RITCHIE EXPLORATION, INC.
Well HESS 20D #1
Field WILDCAT
County GOVE State KANSAS

Location: 1700' FSL & 2305' FWL
API #: 15-063-21783-0000
SEC 20 TWP 13S RGE 31W
Permanent Datum GROUND LEVEL Elevation 2878
Log Measured From KELLY BUSHING 10' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
CDL/CNL
Elevation
K.B. 2888
D.F. 2886
G.L. 2878

Date	7/3/09
Run Number	ONE
Depth Driller	4600
Depth Logger	4602
Bottom Logged Interval	4600
Top Log Interval	00
Casing Driller	8 5/8"@216'
Casing Logger	214
Bit Size	7 7/8
Type Fluid In Hole	CHEMICAL MUD
Density / Viscosity	9.0/65
pH / Fluid Loss	9.0/6.4
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.750@93F
Rmf @ Meas. Temp	.563@93F
Rmc @ Meas. Temp	.900@93F
Source of Rmf / Rmc	MEASUREMENT
Rm @ BHT	.576@121F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	8:30 P.M.
Maximum Recorded Temperature	121F
Equipment Number	0836
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	STEVE CARL

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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
OAKLEY, KS. 11S. ON HWY 83 TO GOVE RD., 3E., 4S., 1/2E., N. INTO



SUPERIOR
Hays,
Kansas

MAIN SECTION

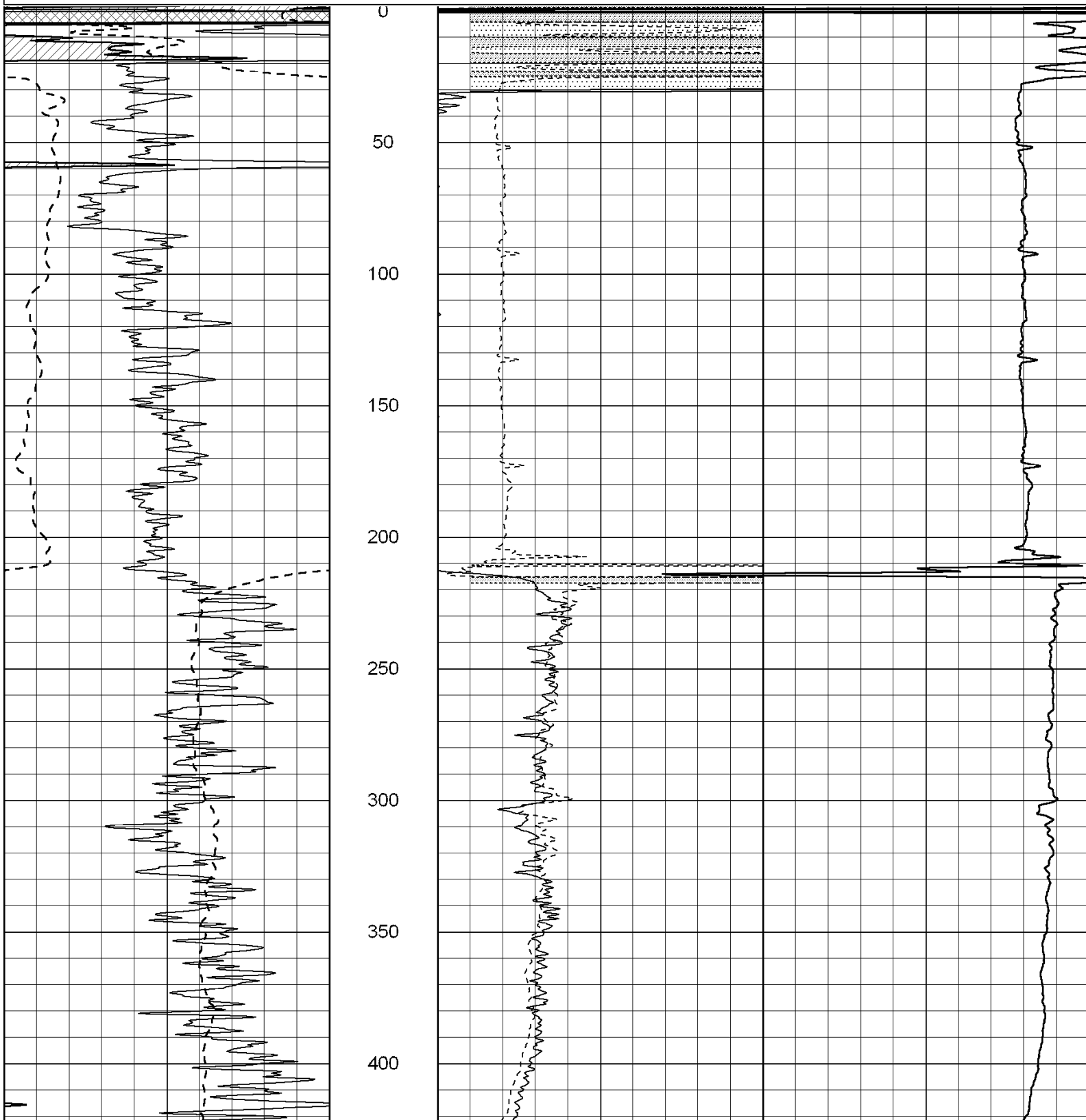
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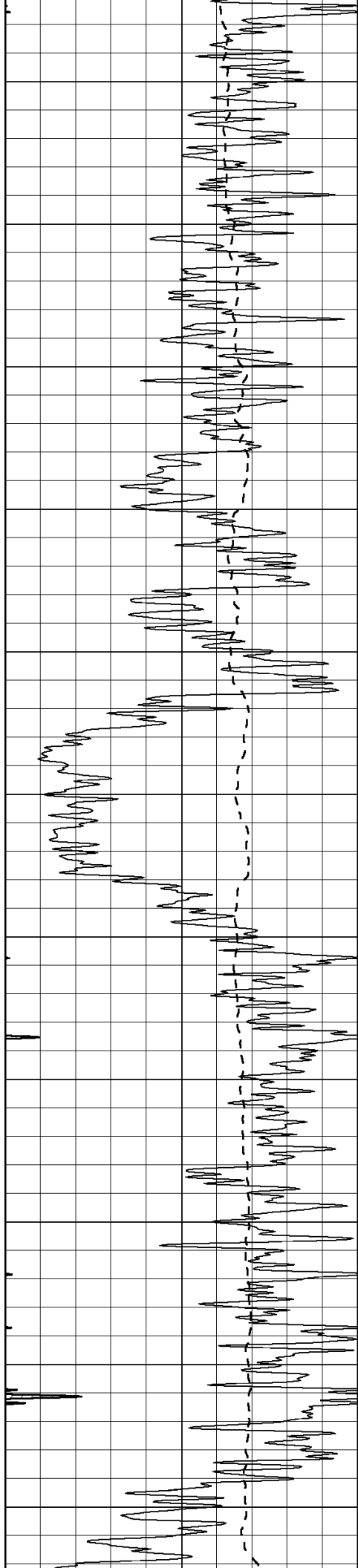
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0 RLL3 (Ohm-m) 50
 0 RILD (Ohm-m) 50

1000 CILD (mmho-m) 0

50 RILD X10 (Ohm-m) 500
 50 RLL3 X10 (Ohm-m) 500





450

500

550

600

650

700

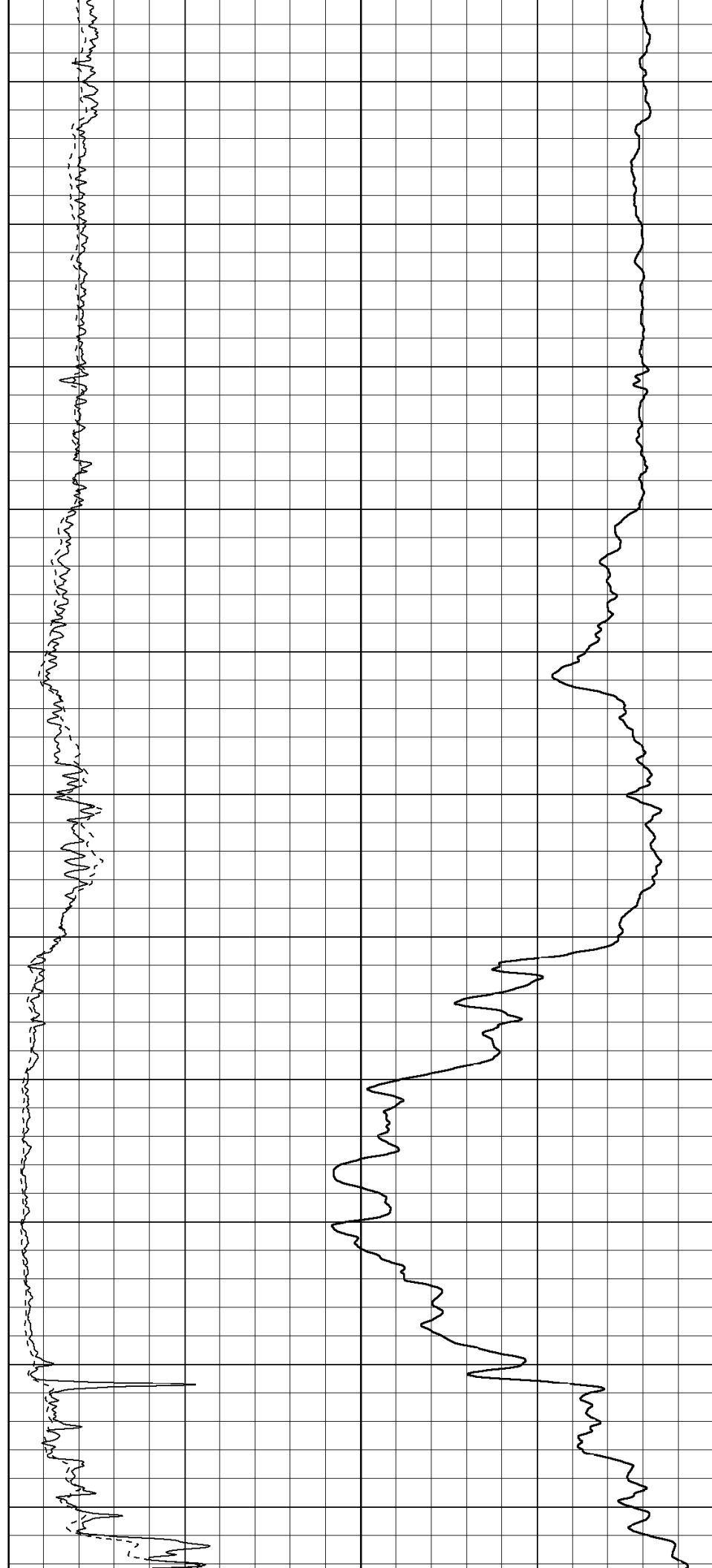
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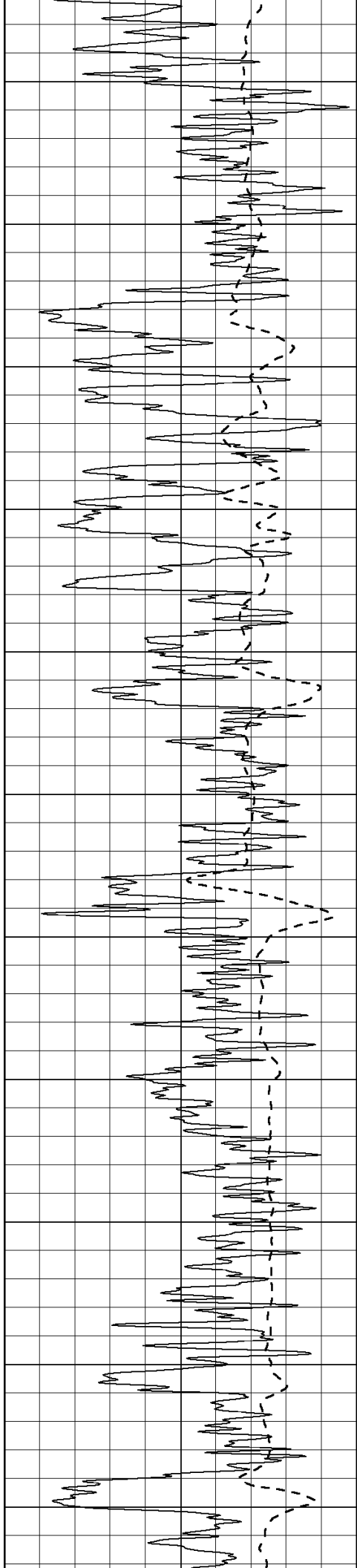
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850

900

950





1000

1050

1100

1150

1200

1250

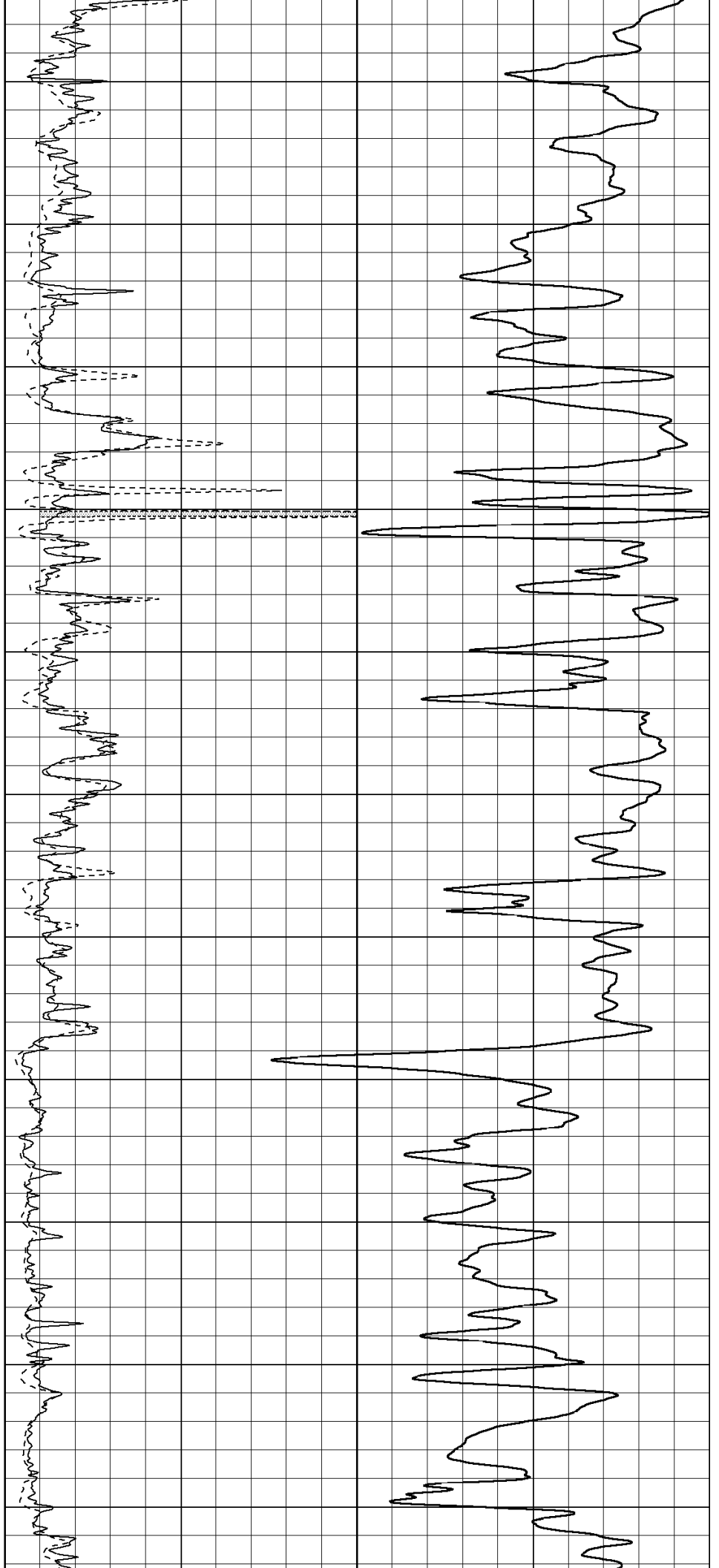
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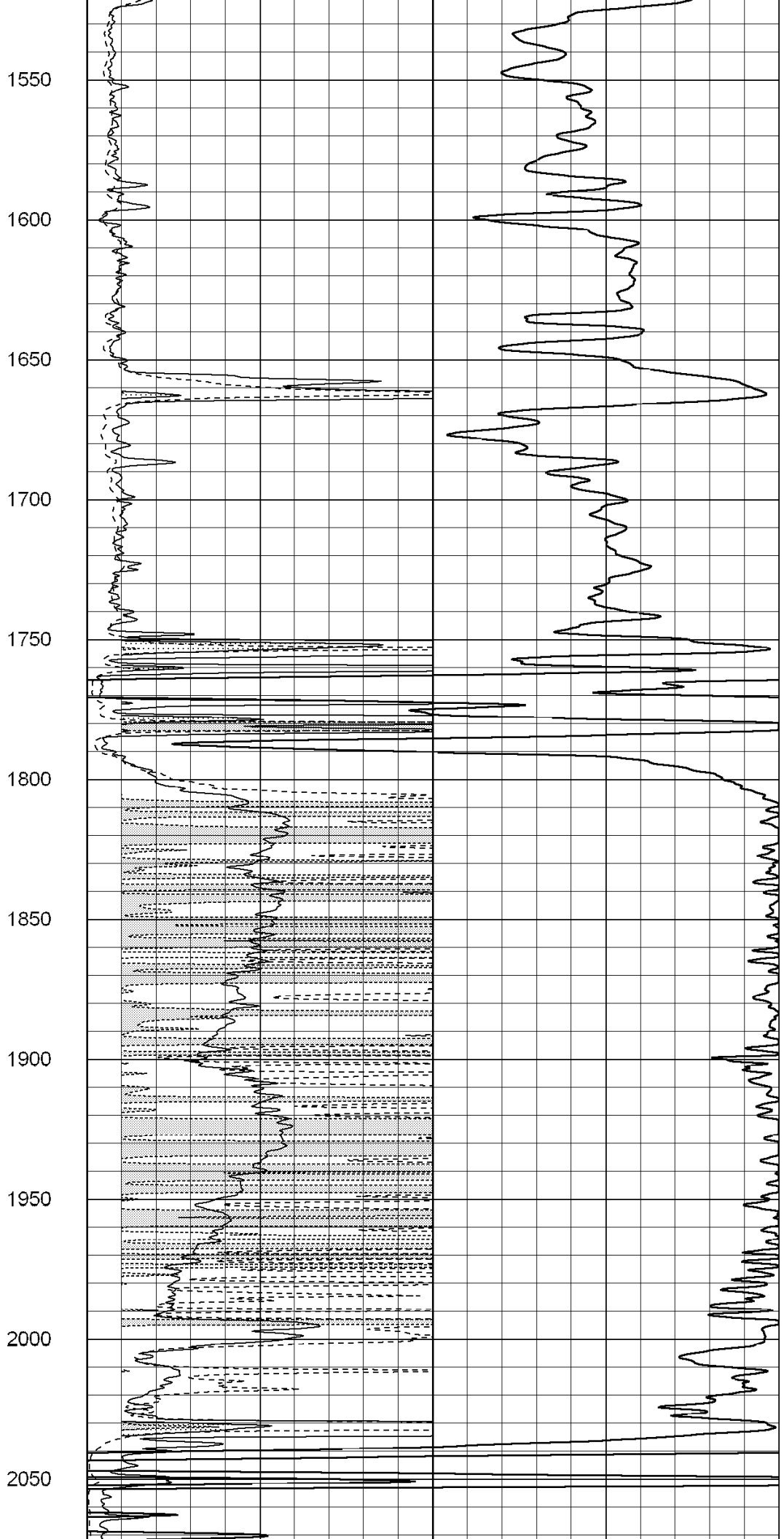
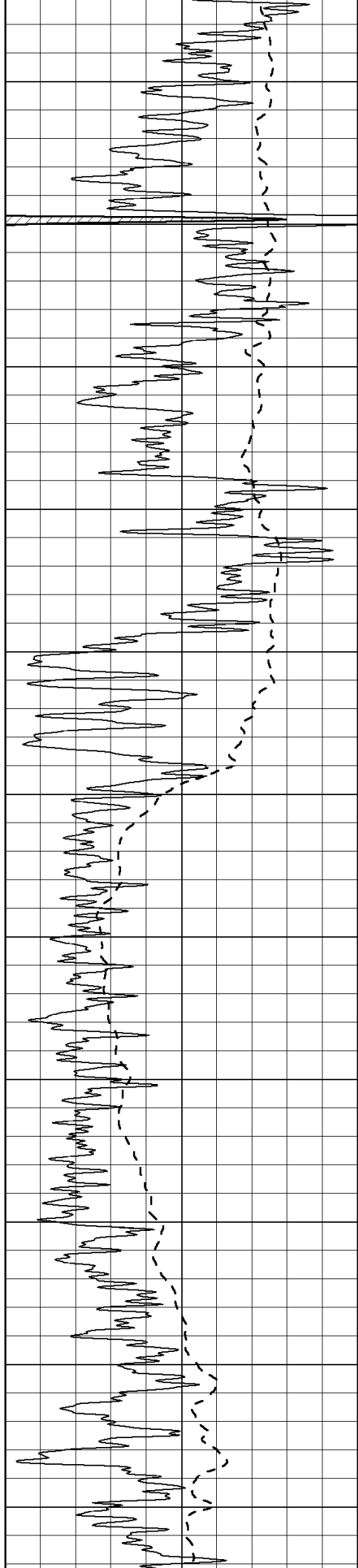
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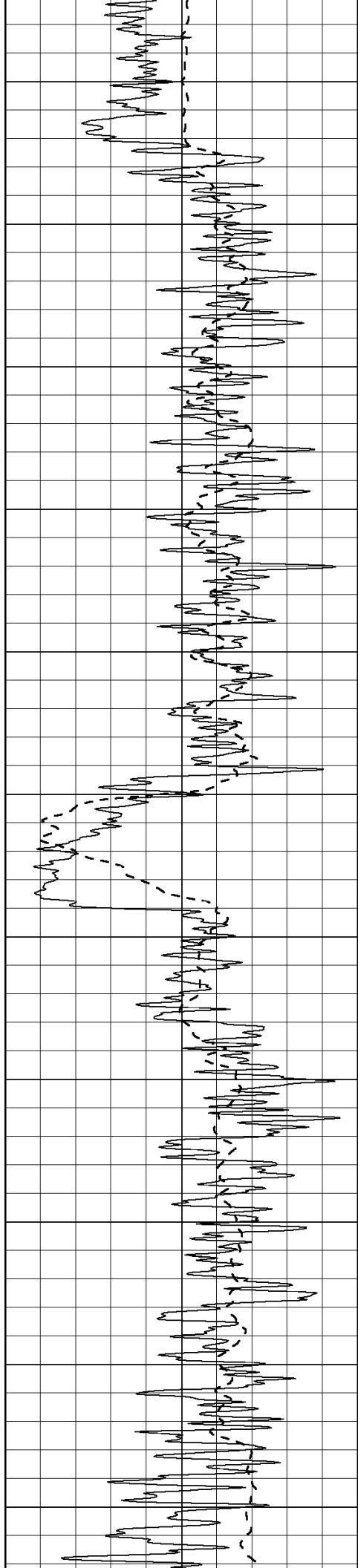
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2100

2150

2200

2250

2300

2350

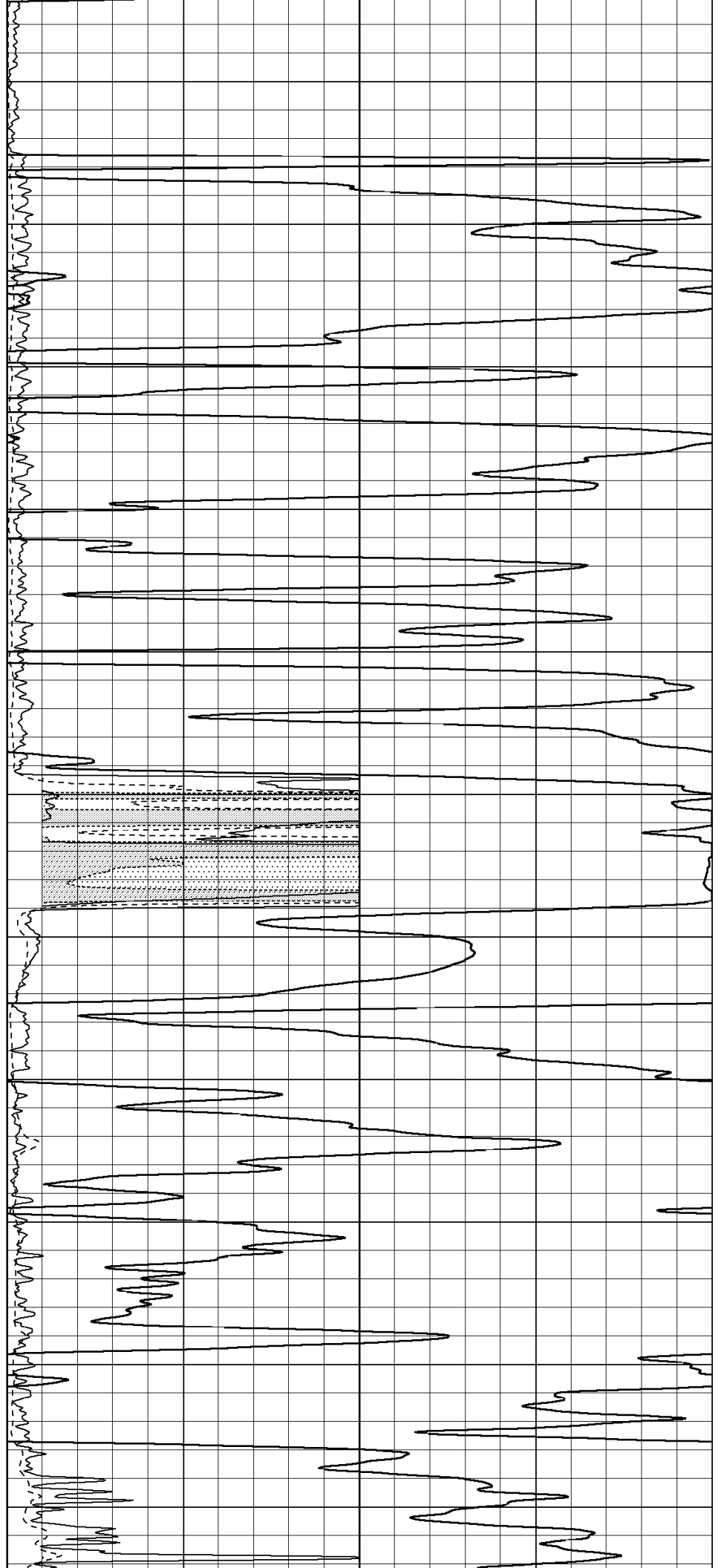
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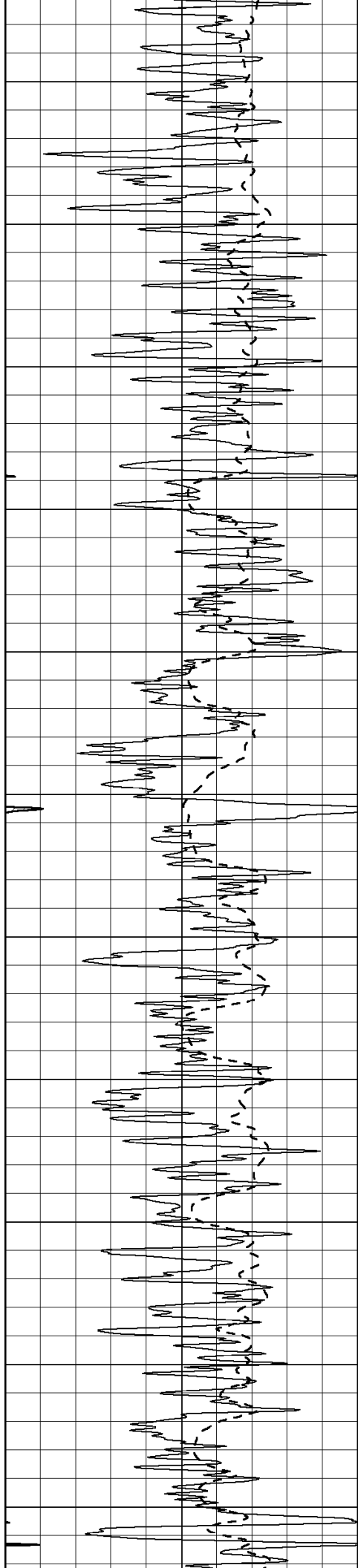
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2550

2600





2650

2700

2750

2800

2850

2900

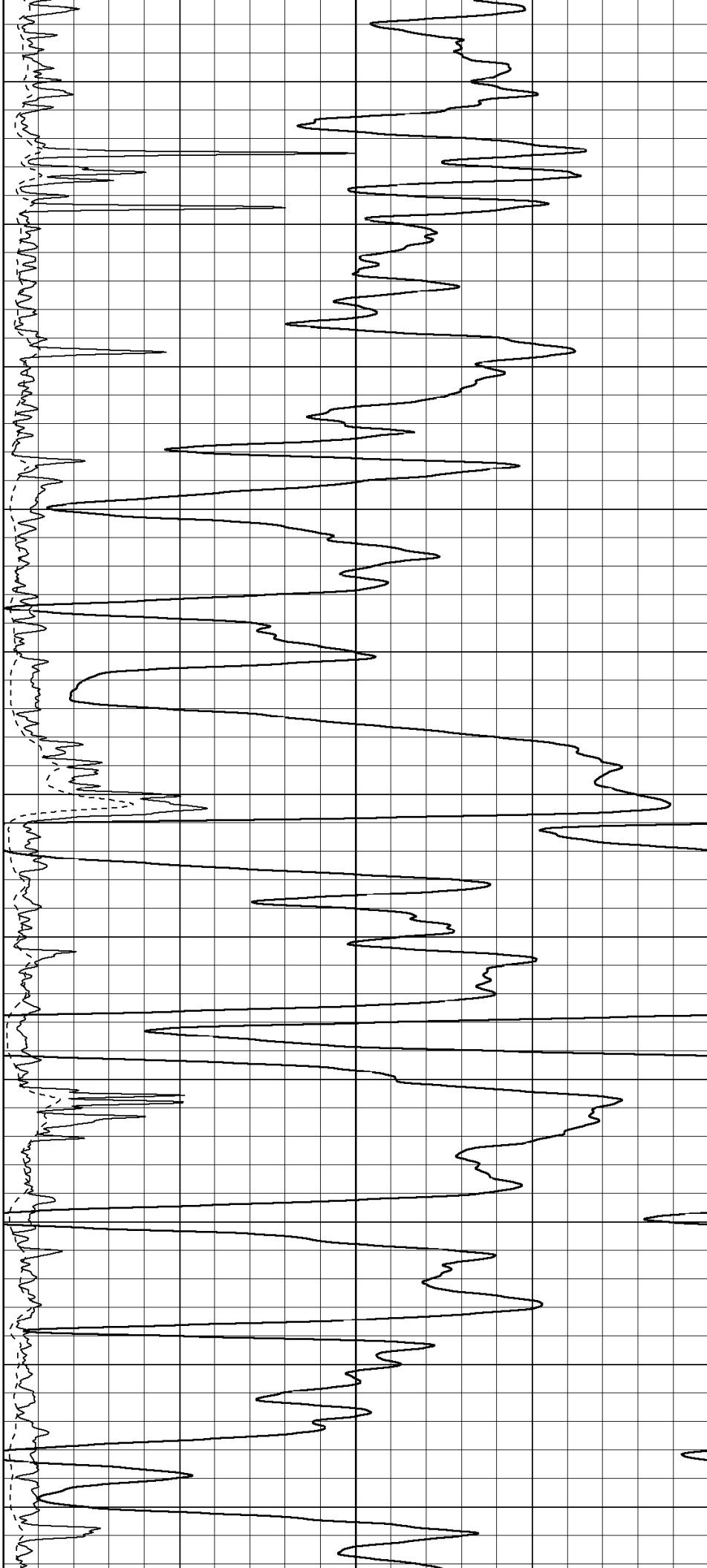
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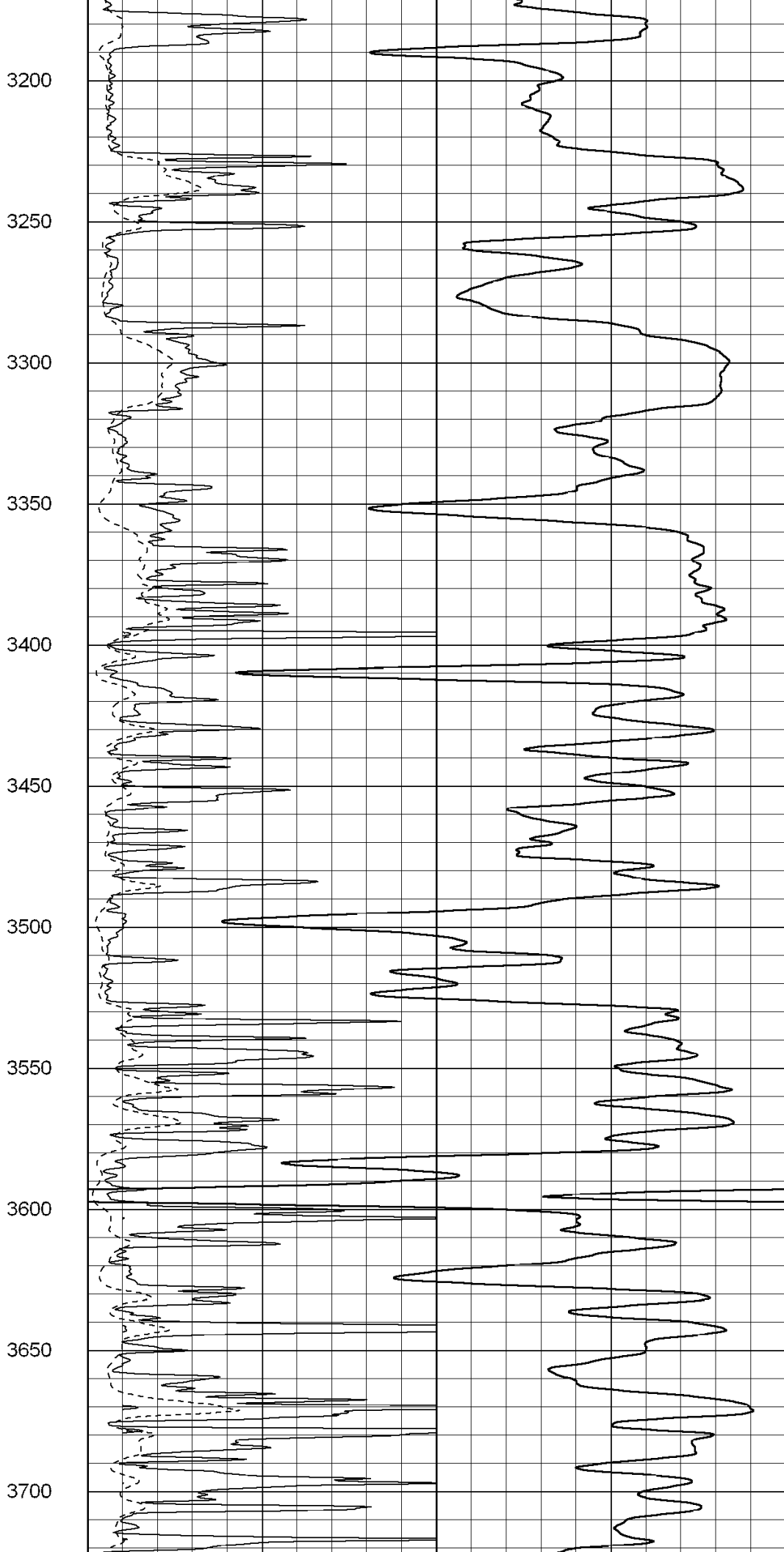
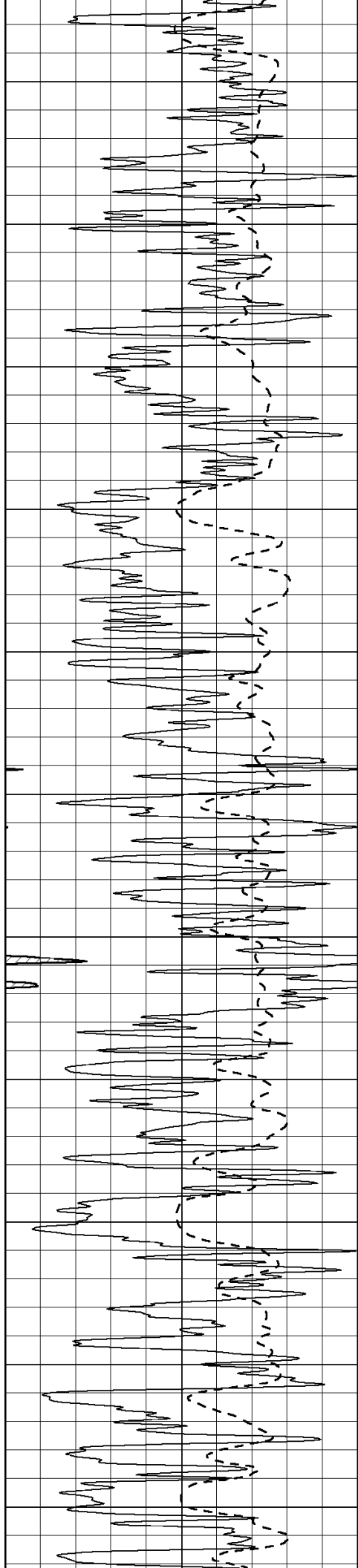
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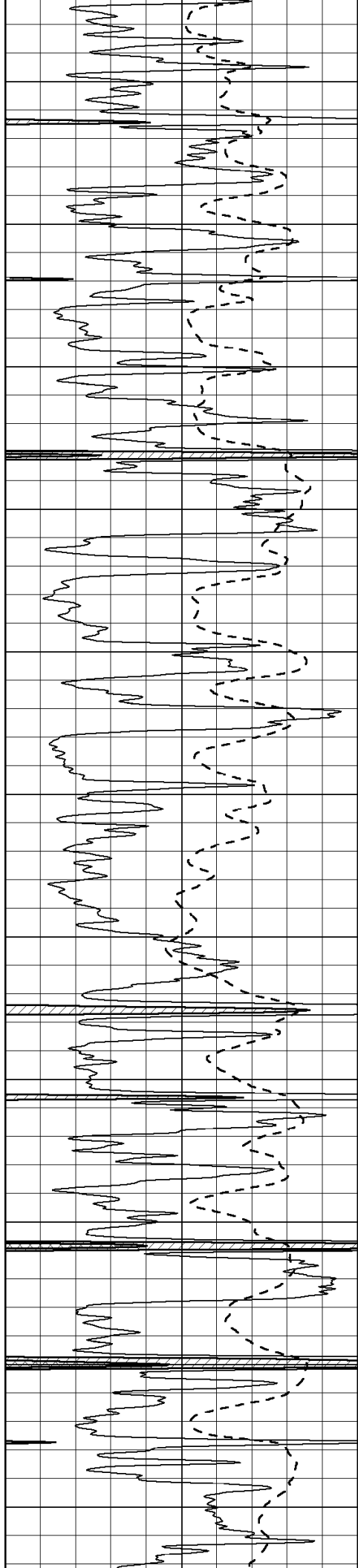
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3150







3750

3800

3850

3900

3950

4000

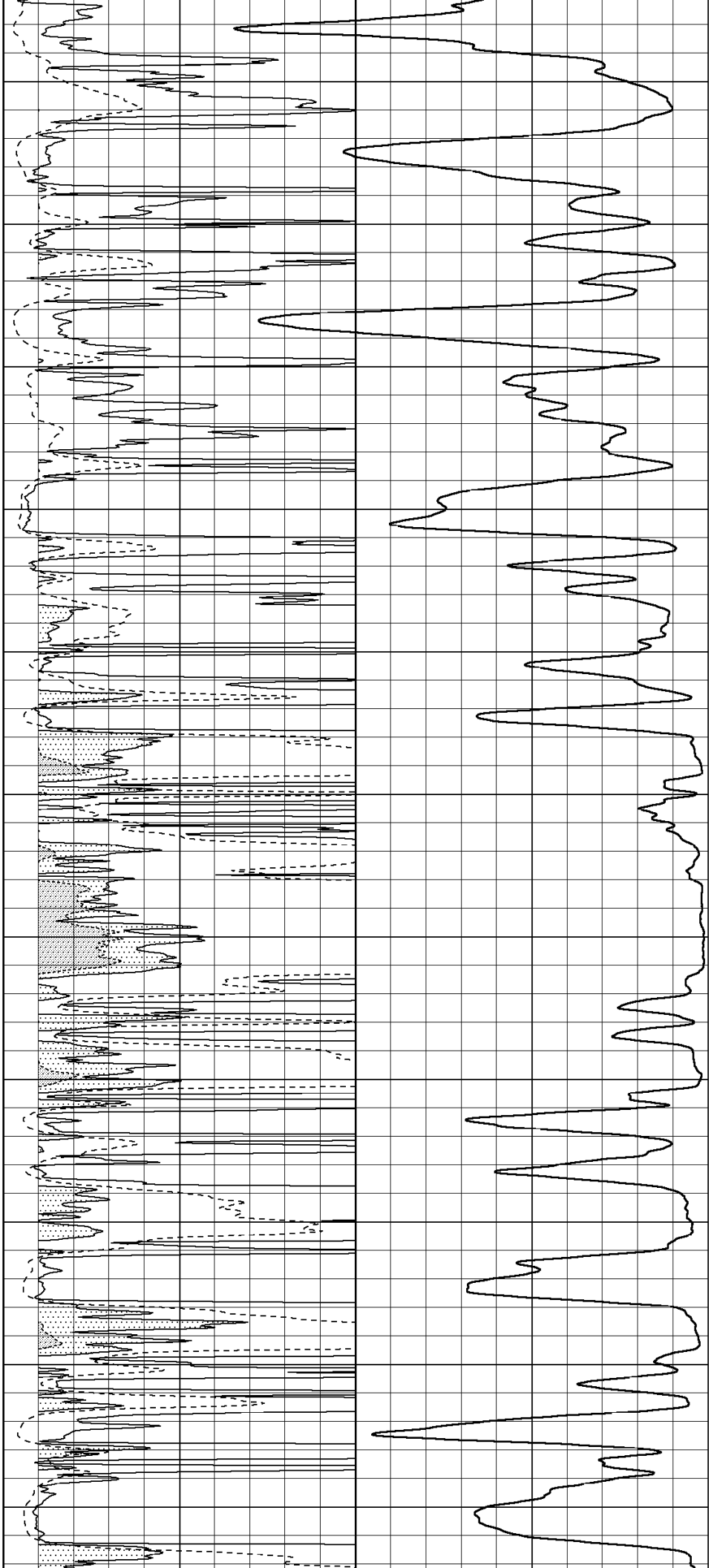
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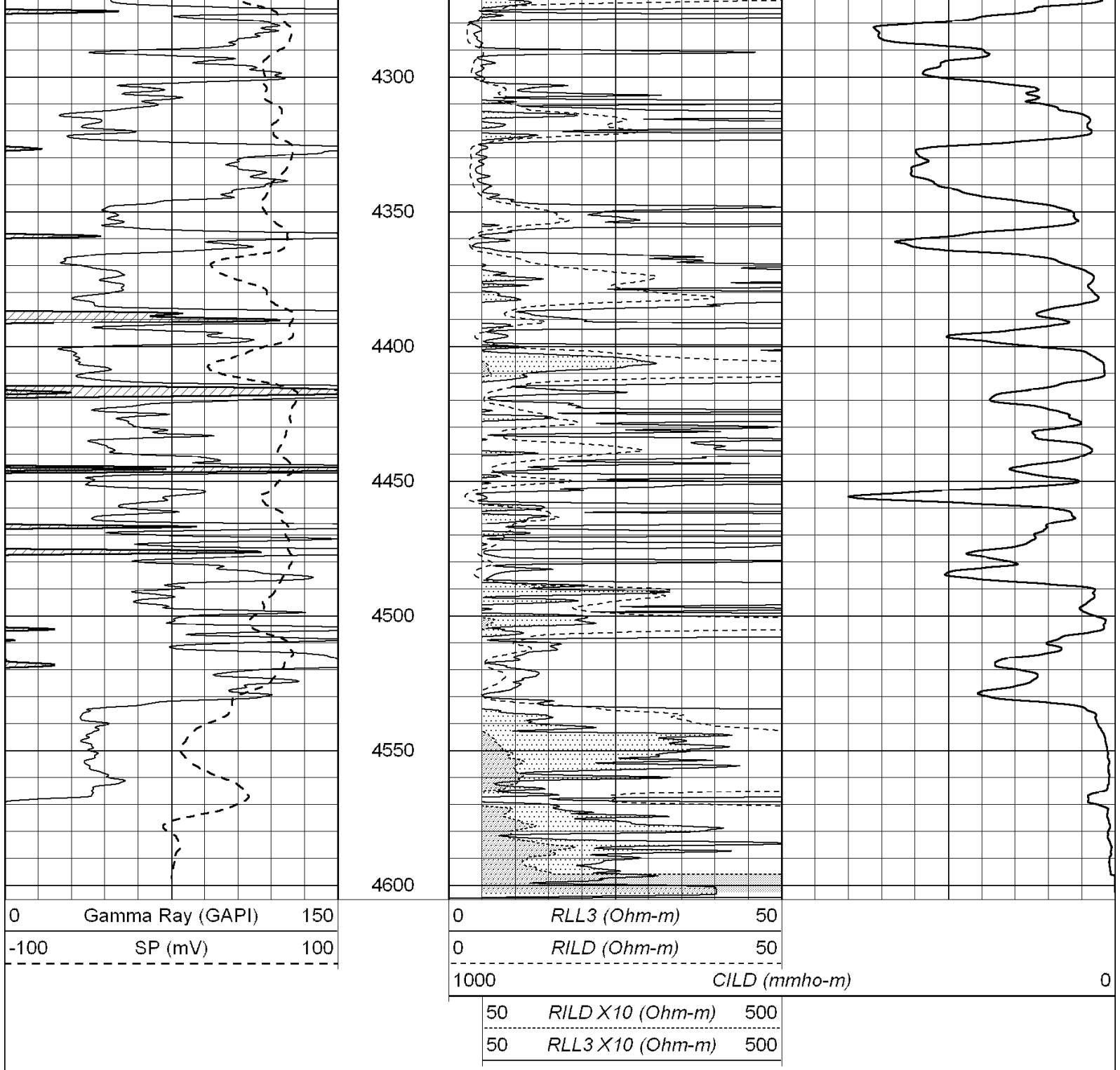
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4150

4200

4250



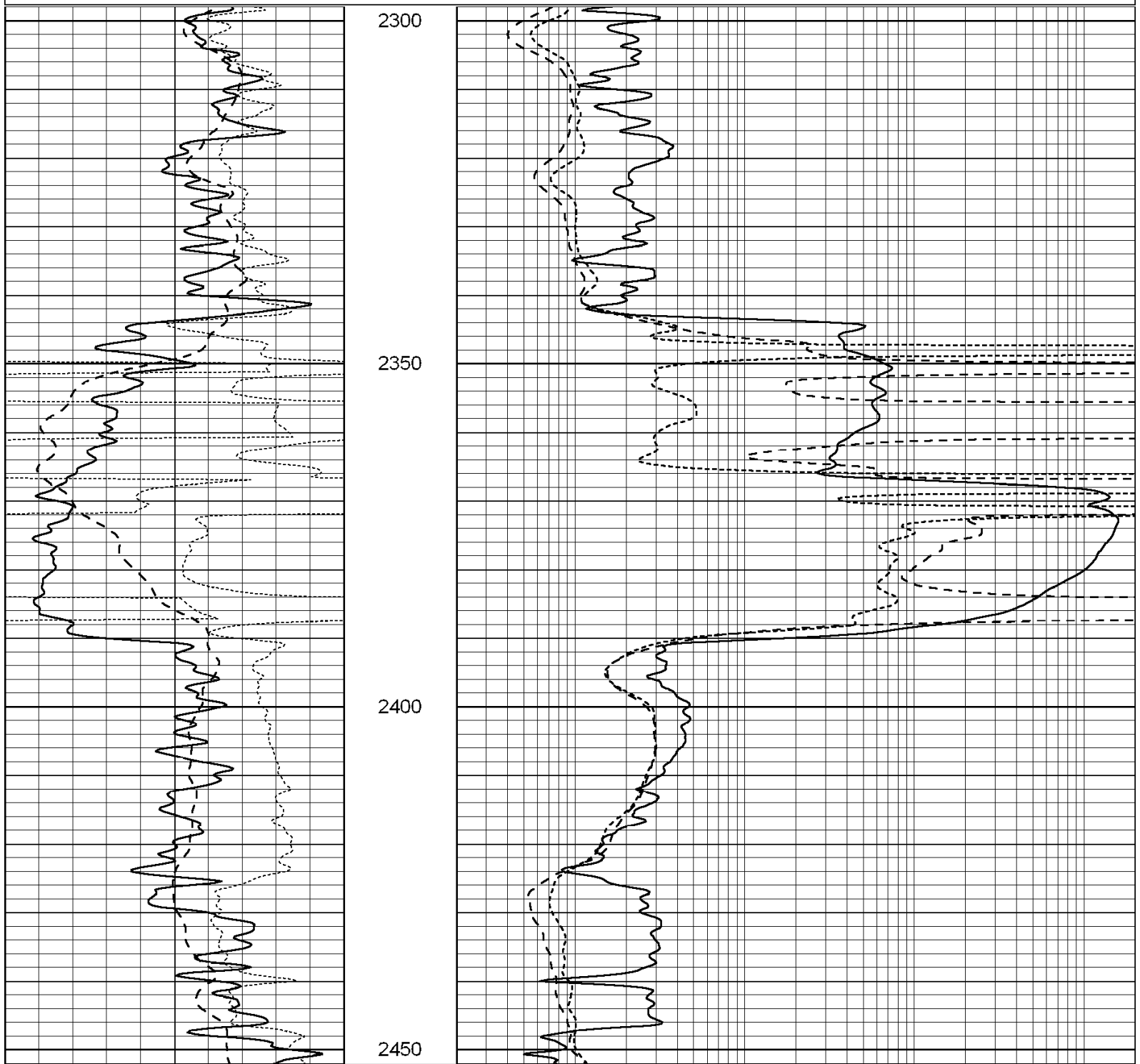


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ANHYDRITE

Database File: 003533ddn.db
 Dataset Pathname: pass3.5
 Presentation Format: dil
 Dataset Creation: Fri Jul 03 21:50:35 2009 by Calc Open-Cased 060407
 Charted by: Depth in Feet scaled 1:240

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0	GAMMA RAY (GAPI)	150																		
-100	SP (mV)	100																		
-250	Rxo/Rt	50																		
0.2	SHALLOW GUARD (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	Rxo/Rt	50

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



MAIN SECTION

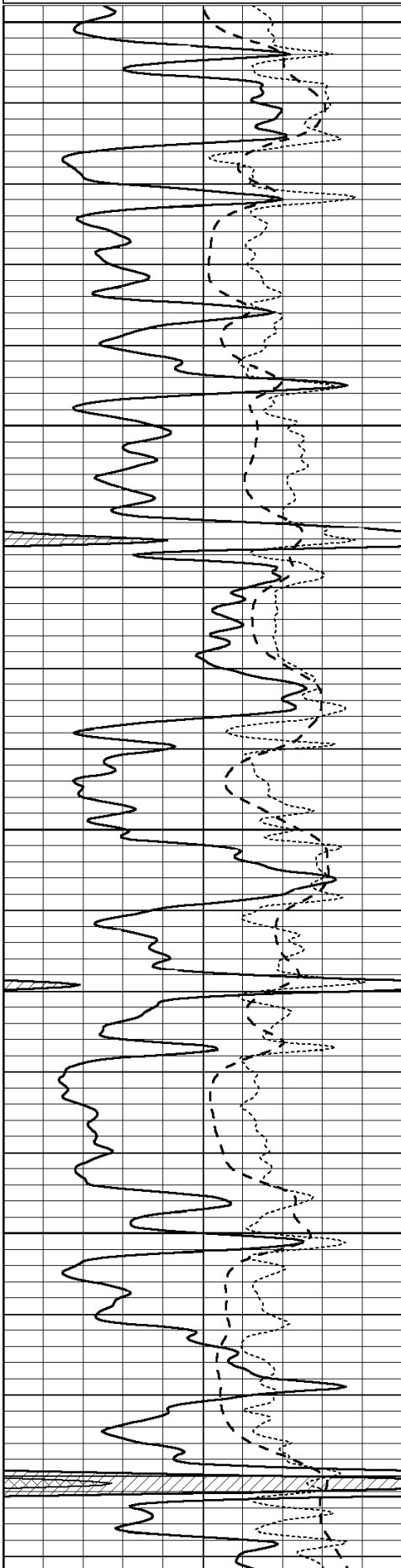
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Charted by:

Depth in Feet scaled 1:240

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-100	SP (mV)	100
-250	Rxo/Rt	50

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

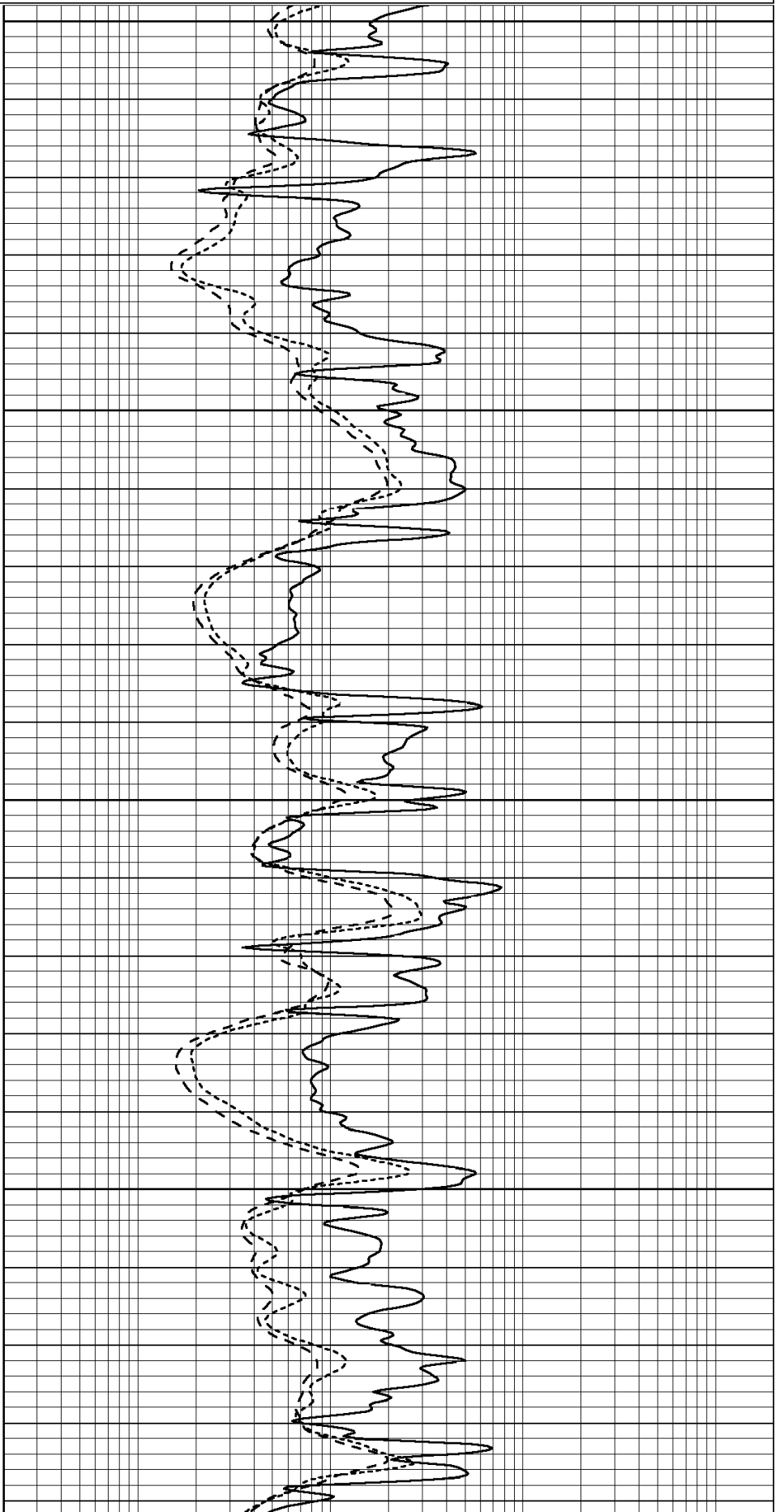


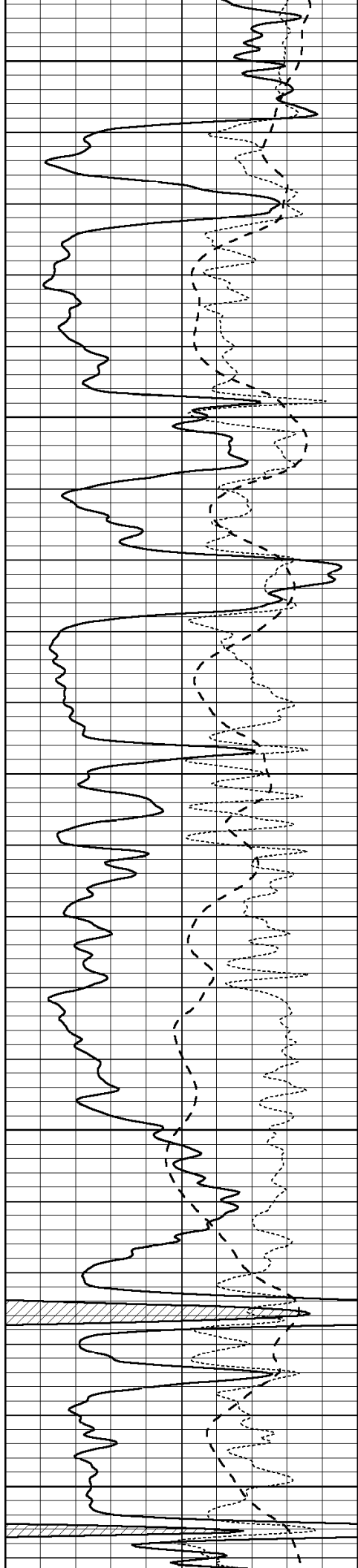
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3750

3800

3850





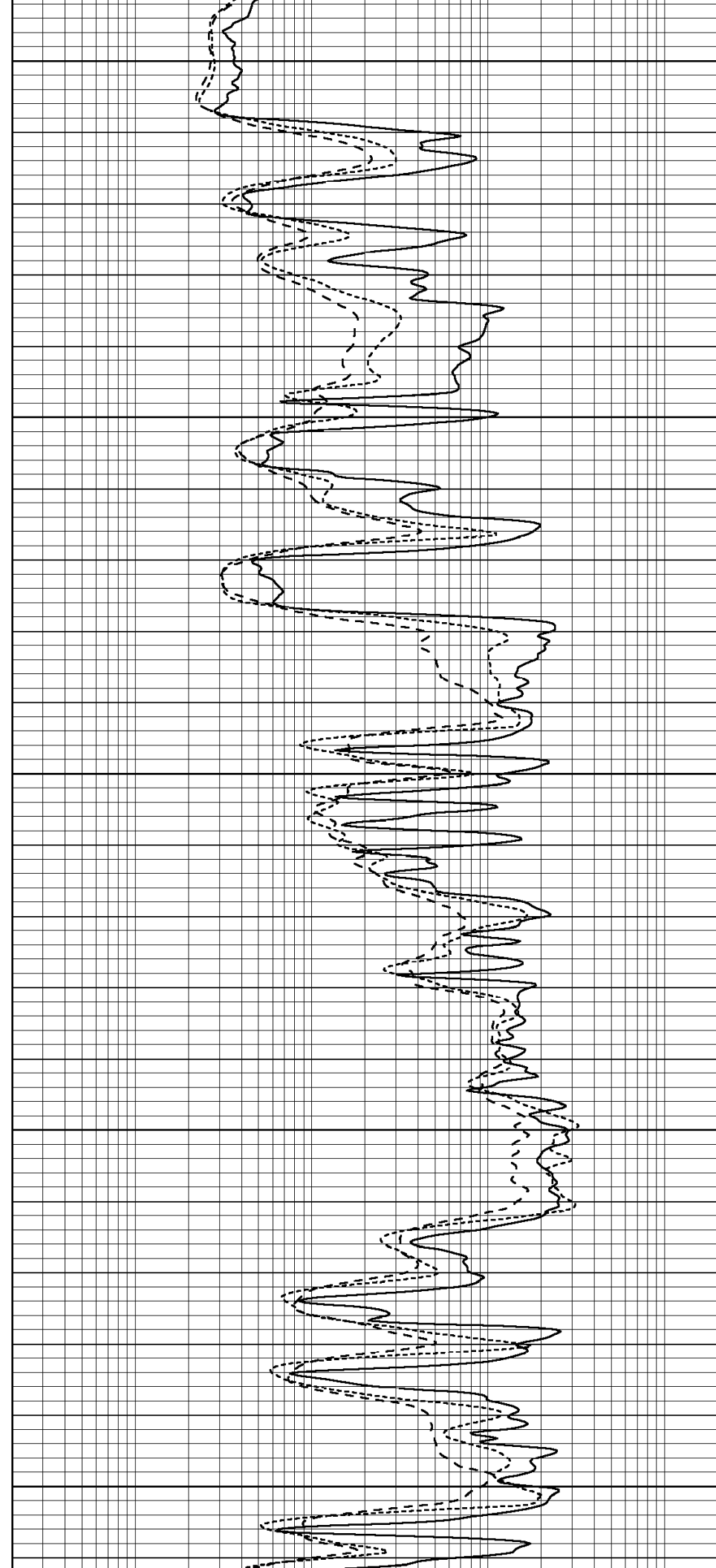
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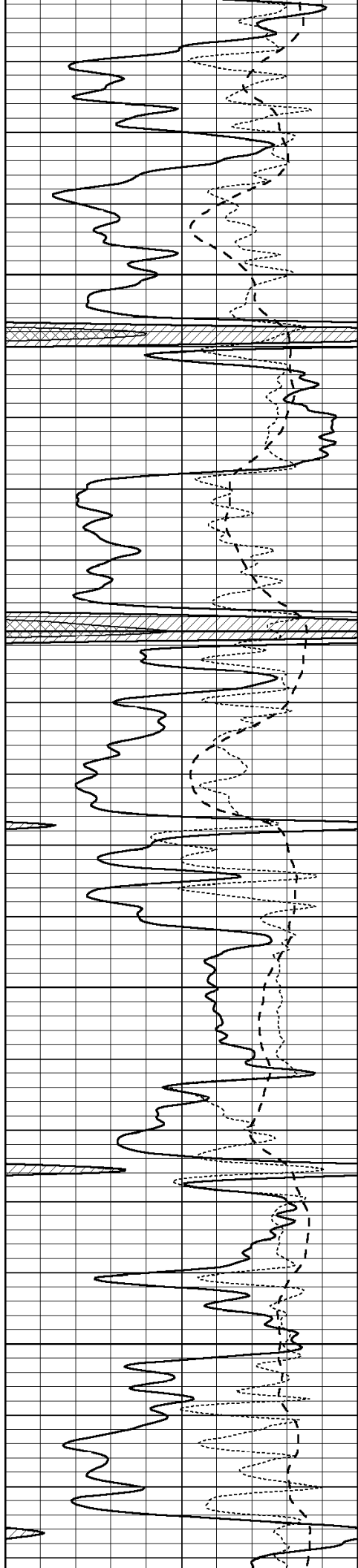
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4050

4100



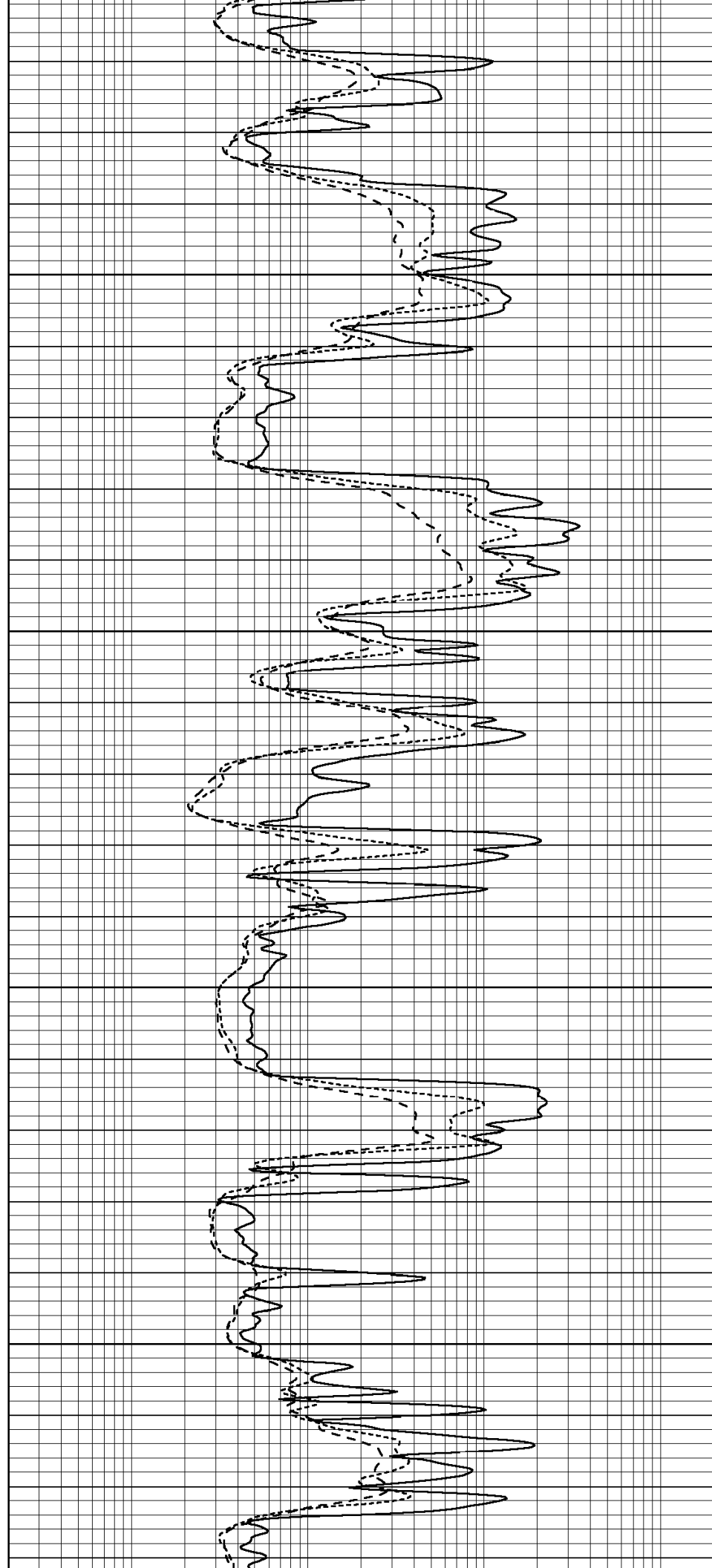


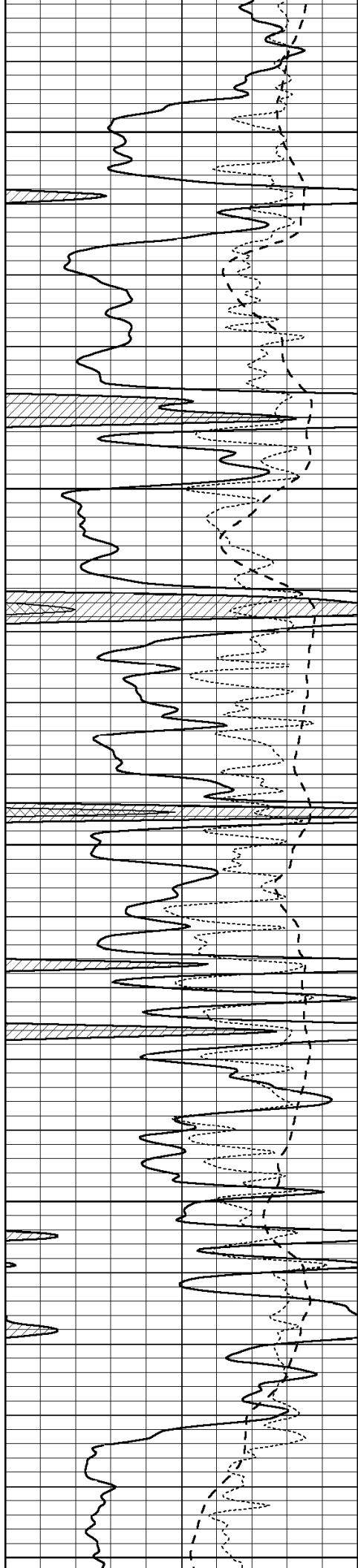
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4250

4300





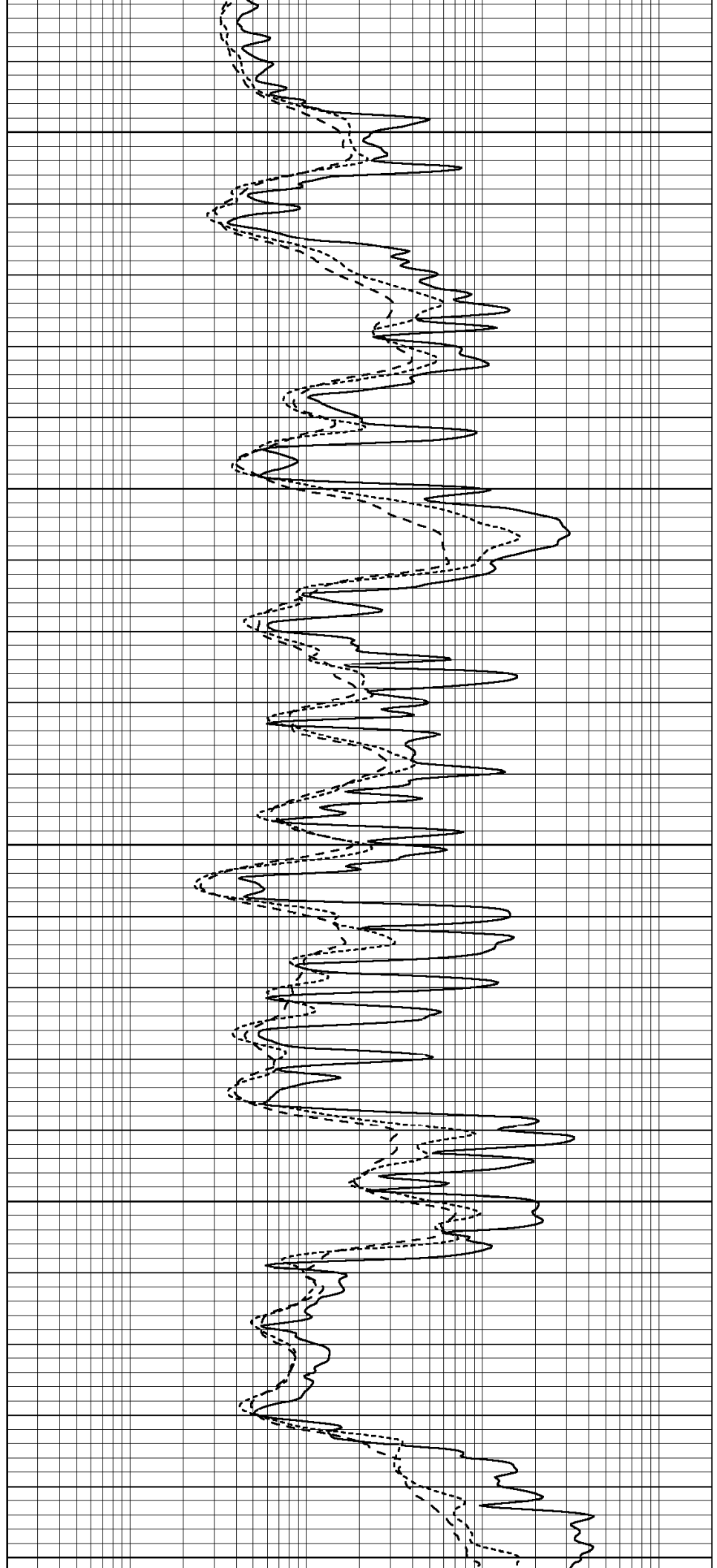
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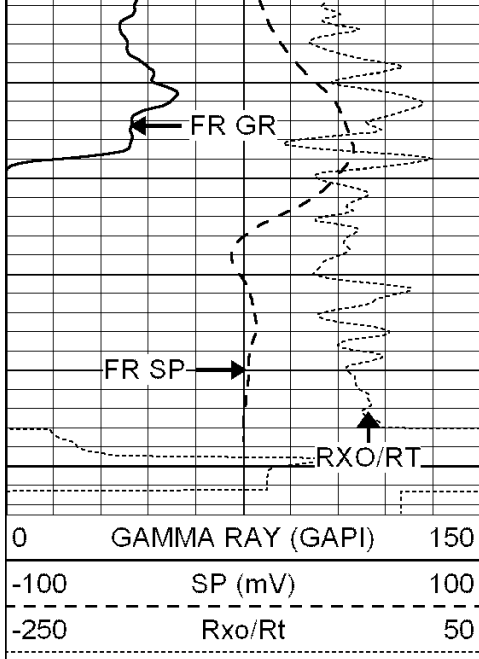
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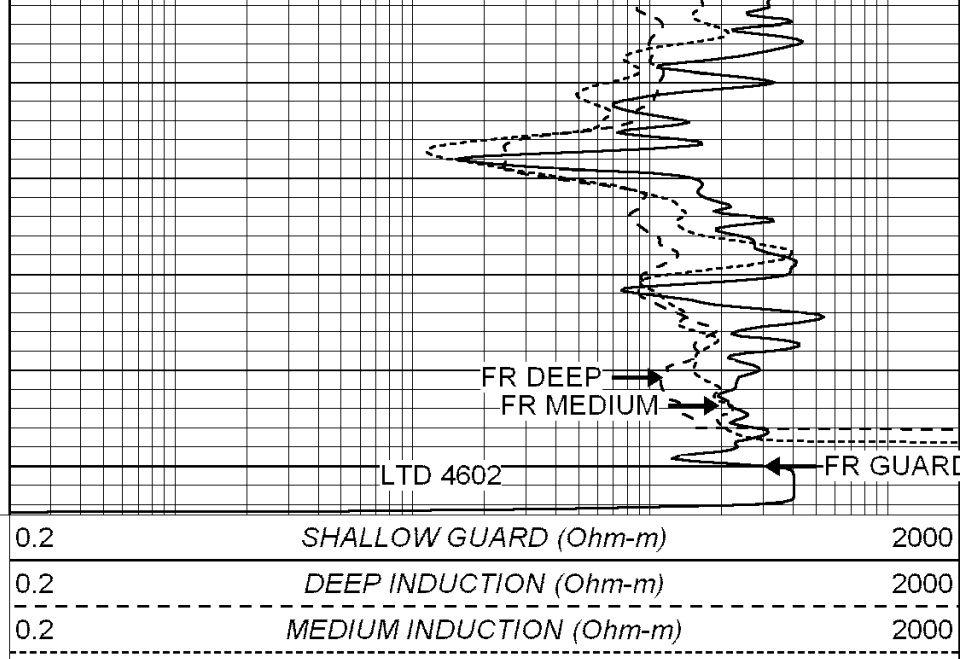
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4600

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



LTD 4602

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



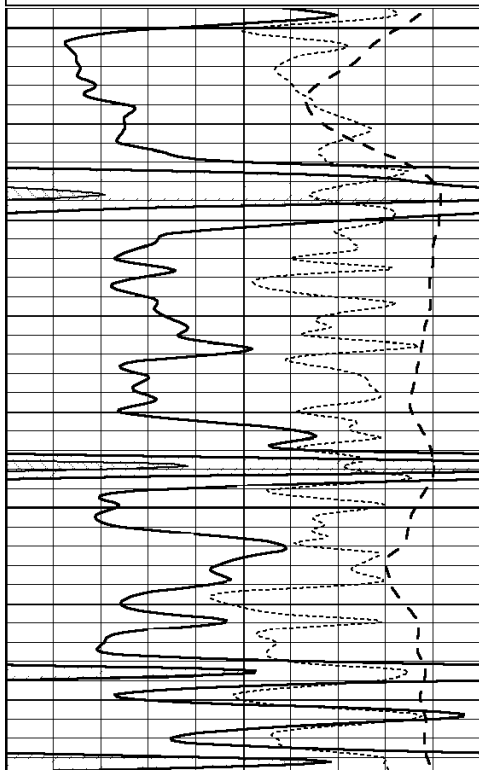
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REPEAT SECTION

Database File: 003533ddn.db
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 Charted by: Depth in Feet scaled 1:240

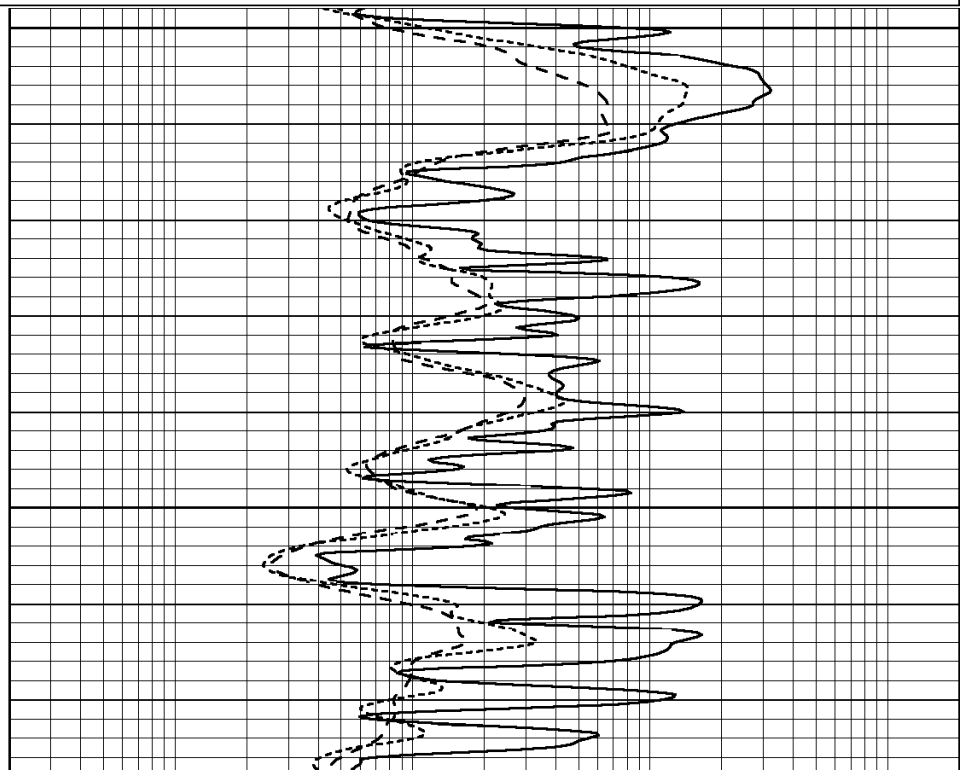
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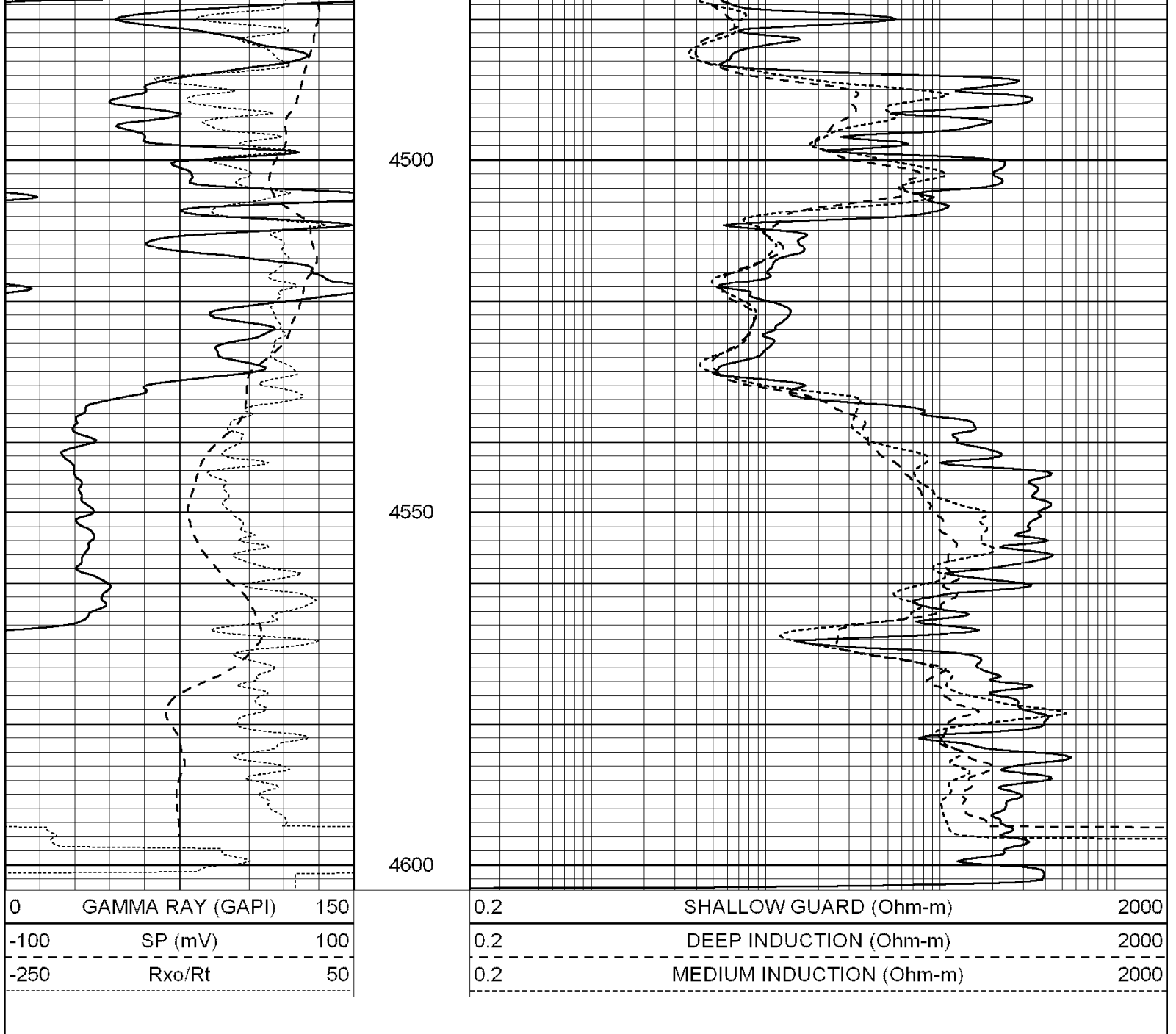
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0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



4400

4450





Calibration Report

Database File: 003533ddn.db
 Dataset Pathname: pass3.4
 Dataset Creation: Fri Jul 03 21:50:25 2009 by Calc Open-Cased 060407

Dual Induction Calibration Report

Serial-Model: DIL2-GEAR
 Performed: Fri Jul 03 20:57:36 2009

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.002	0.667	V	0.000	400.000	mmho-m	650.000	6.000
Medium	-0.003	0.739	V	0.000	462.500	mmho-m	720.000	-15.000
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

Litho Density Calibration Report
 Serial: 004N Model: PRB
 Performed Wed Feb 18 14:22:08 2009

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1561.2	10815.1	3655.8	12418.8	cps
Window 2	1425.2	9176.3	3183.9	10387.8	cps
Window 3	1092.2	4291.0	1759.2	4746.8	cps
Window 4	339.5	347.6	341.8	348.3	cps
Long Space	0.0	7751.0	1758.7	8962.6	cps
Short Space	1.3	1175.2	770.9	1319.8	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	

Rib Angle	: 44.1	Rib Slope	: 0.970	Density/Spine Ratio	: 0.571
Spine Angle	: 74.1	Spine Slope	: 3.518	Spine Intercept	: -15.9

Caliper

	Readings	Reference	
Low Ref	2.0	6.6	
High Ref	4.7	16.0	
	Gain: 3.5		Offset: -0.3

Compensated Neutron Calibration Report

Serial Number: NEU_4I
 Tool Model: G

CALIBRATION

Detector	Readings	Target	Normalization
Short Space	996.00 cps	1000.00 cps	1.0000
Long Space	977.00 cps	1000.00 cps	1.0000

Gamma Ray Calibration Report

Serial Number:	GR4
Tool Model:	OPEN
Performed:	Fri Jul 03 19:06:26 2009
Calibrator Value:	200.0 GAPI
Background Reading:	0.0 cps
Calibrator Reading:	189.0 cps
Sensitivity:	1.0500 GAPI/cps