



SUPERIOR
Hays,
Kansas

**DUAL INDUCTION
LOG**

Company	MID-CONTINENT ENERGY	Company	MID - CONTINENT ENERGY OPERATING CO.
Well	#1-21 SCHAUF	Well	#1-21 SCHAUF
Field	WILDCAT	Field	WILDCAT
County	LANE	County	LANE
State	KANSAS	State	KANSAS
Location:	API # : 15-101-22185-0000	Other Services	CDL/CNL MEL
	625' FSL & 1940' FWL		
	SEC 21 TWP 19S RGE 27W	Elevation	
Permanent Datum	GROUND LEVEL	Elevation	2715
Log Measured From	KELLY BUSHING 5' A.G.L.	K.B.	2720
Drilling Measured From	KELLY BUSHING	D.F.	2718
		G.L.	2715

Date	8/16/09
Run Number	ONE
Depth Driller	4700
Depth Logger	4700
Bottom Logged Interval	4698
Top Log Interval	00
Casing Driller	8 5/8"@302'
Casing Logger	304
Bit Size	7 7/8
Type Fluid In Hole	CHEMICAL MUD
Density / Viscosity	9.2/53
pH / Fluid Loss	10.5/8.4
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.750@84F
Rmf @ Meas. Temp	.563@84F
Rmc @ Meas. Temp	.900@84F
Source of Rmf / Rmc	MEASUREMENT
Rm @ BHT	.516@122F
Time Circulation Stopped	3 HOURS
Time Logger on Bottom	11:30 A.M.
Maximum Recorded Temperature	122F
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
NESS CITY, KS. 22W. ON HWY 96 TO "TURKEY RED" RD., 7S. TO RD. "80", 1/2W., N. INTO



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MAIN SECTION

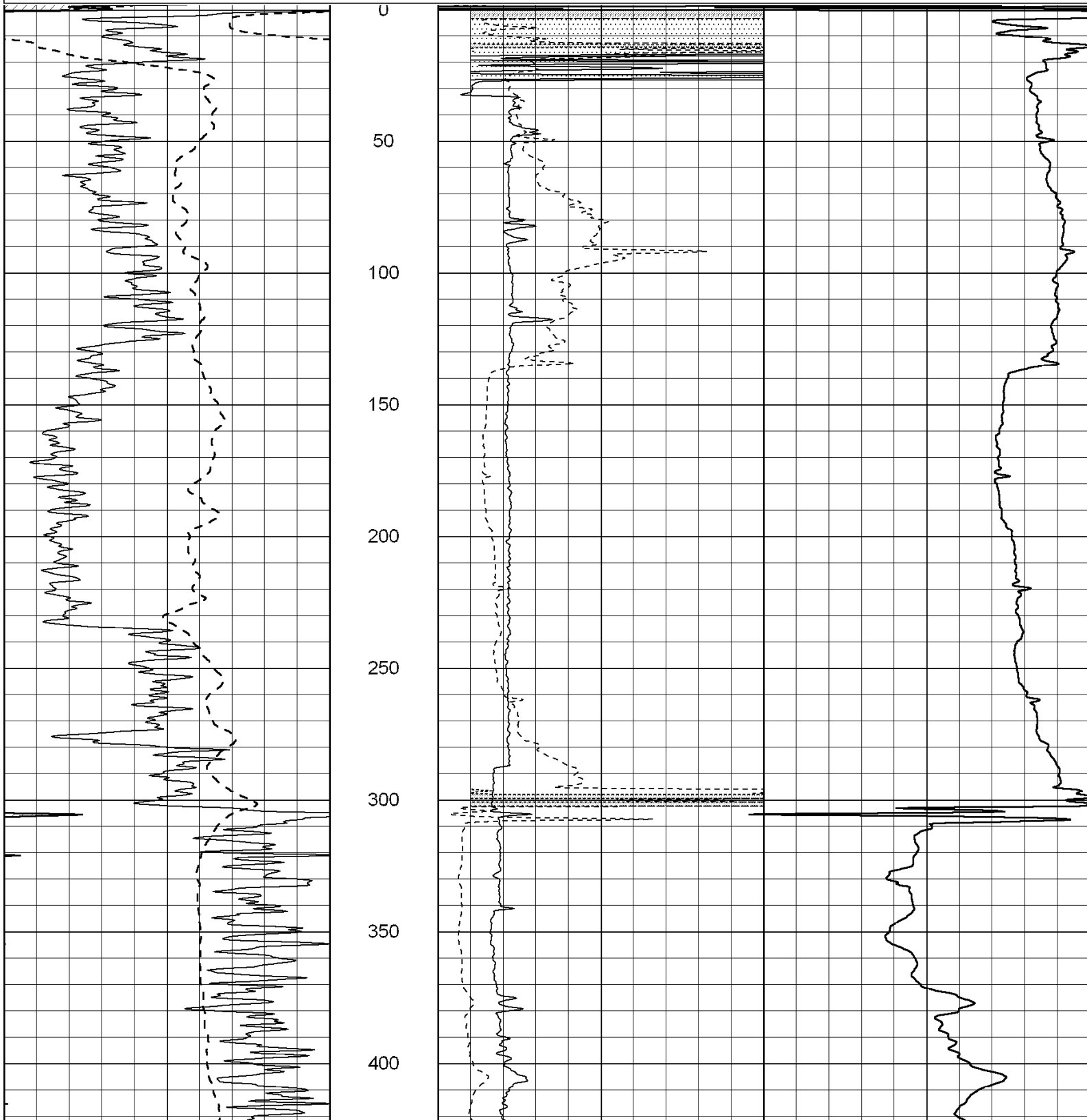
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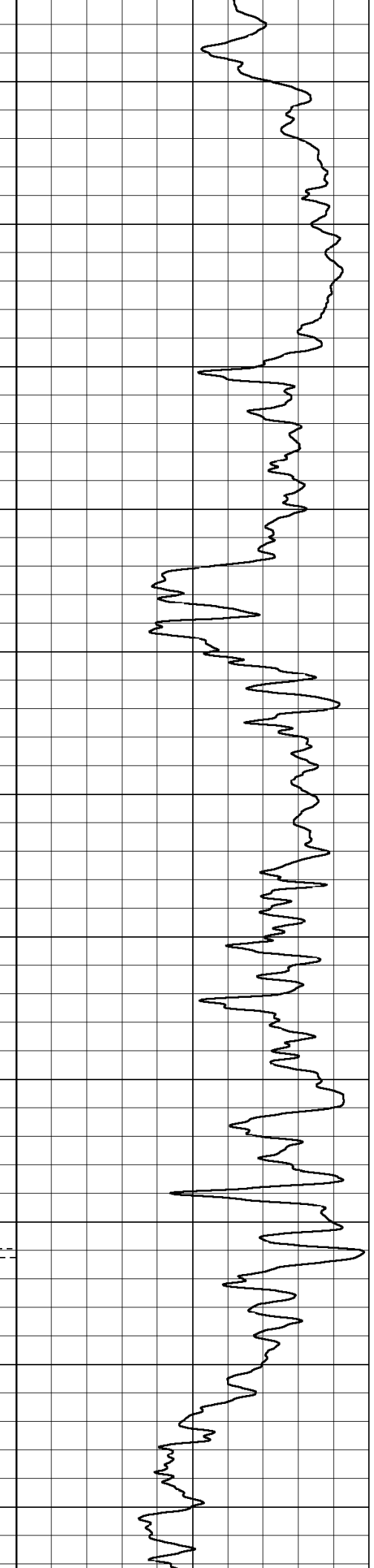
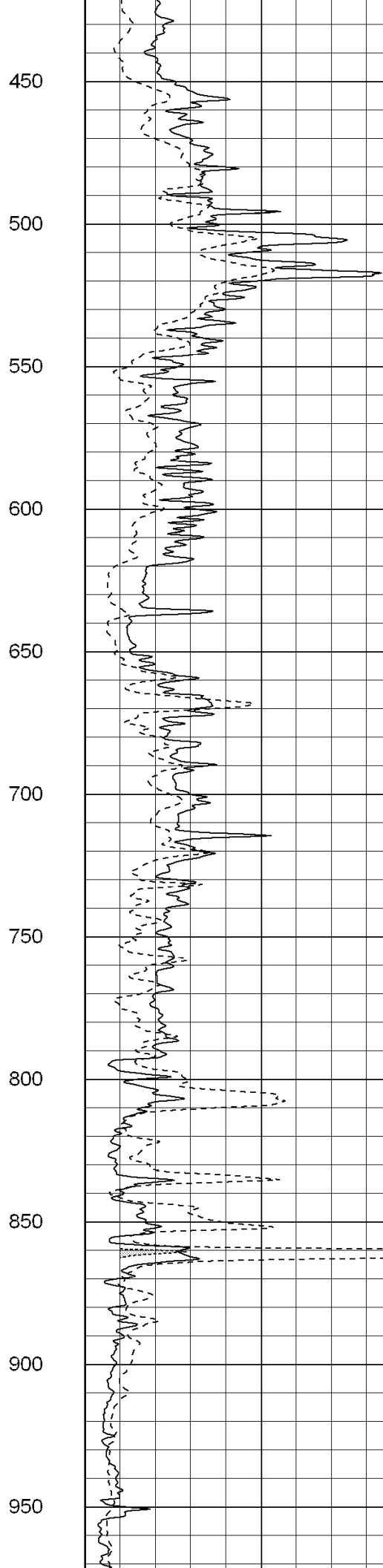
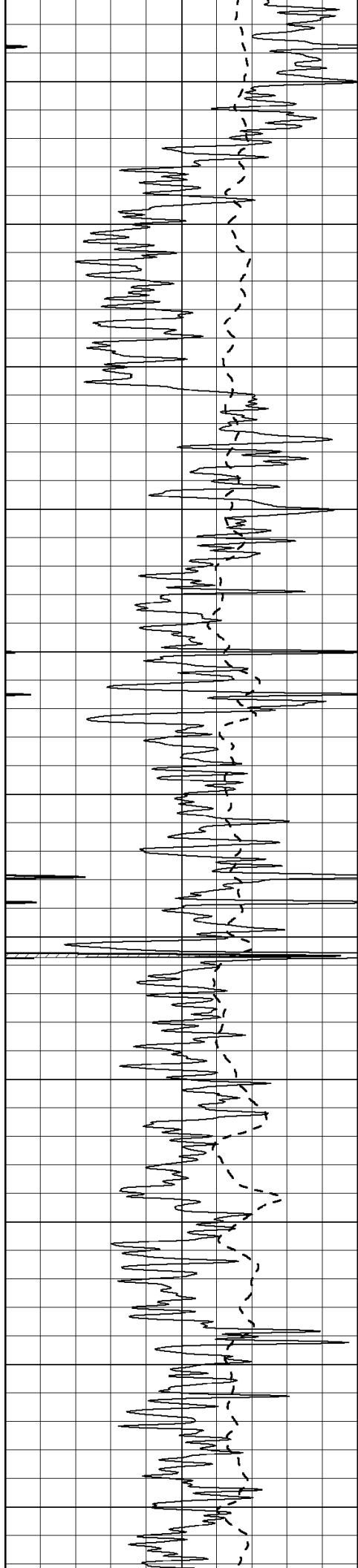
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 -100 SP (mV) 100

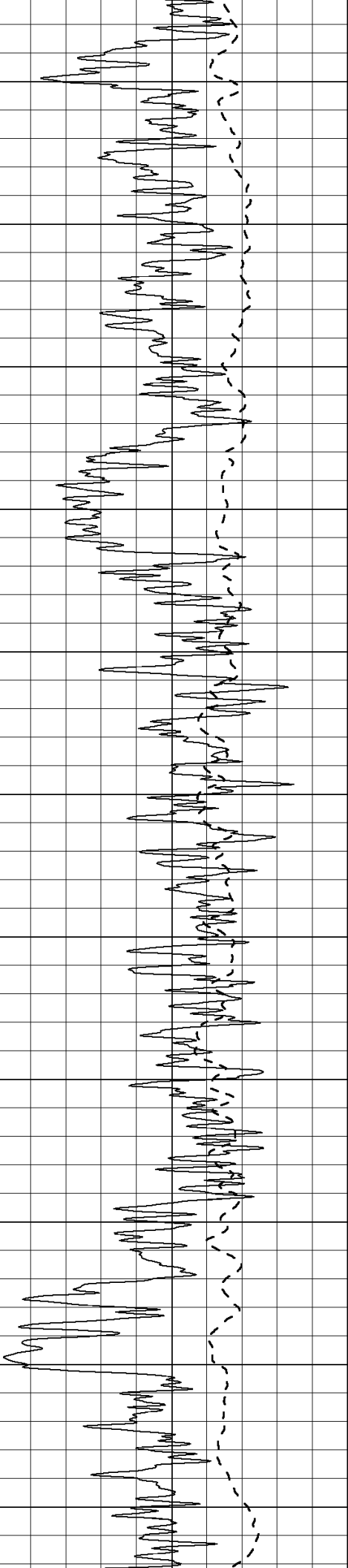
0 RLL3 (Ohm-m) 50
 0 RILD (Ohm-m) 50

1000 CILD (mmho-m) 0

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







1000

1050

1100

1150

1200

1250

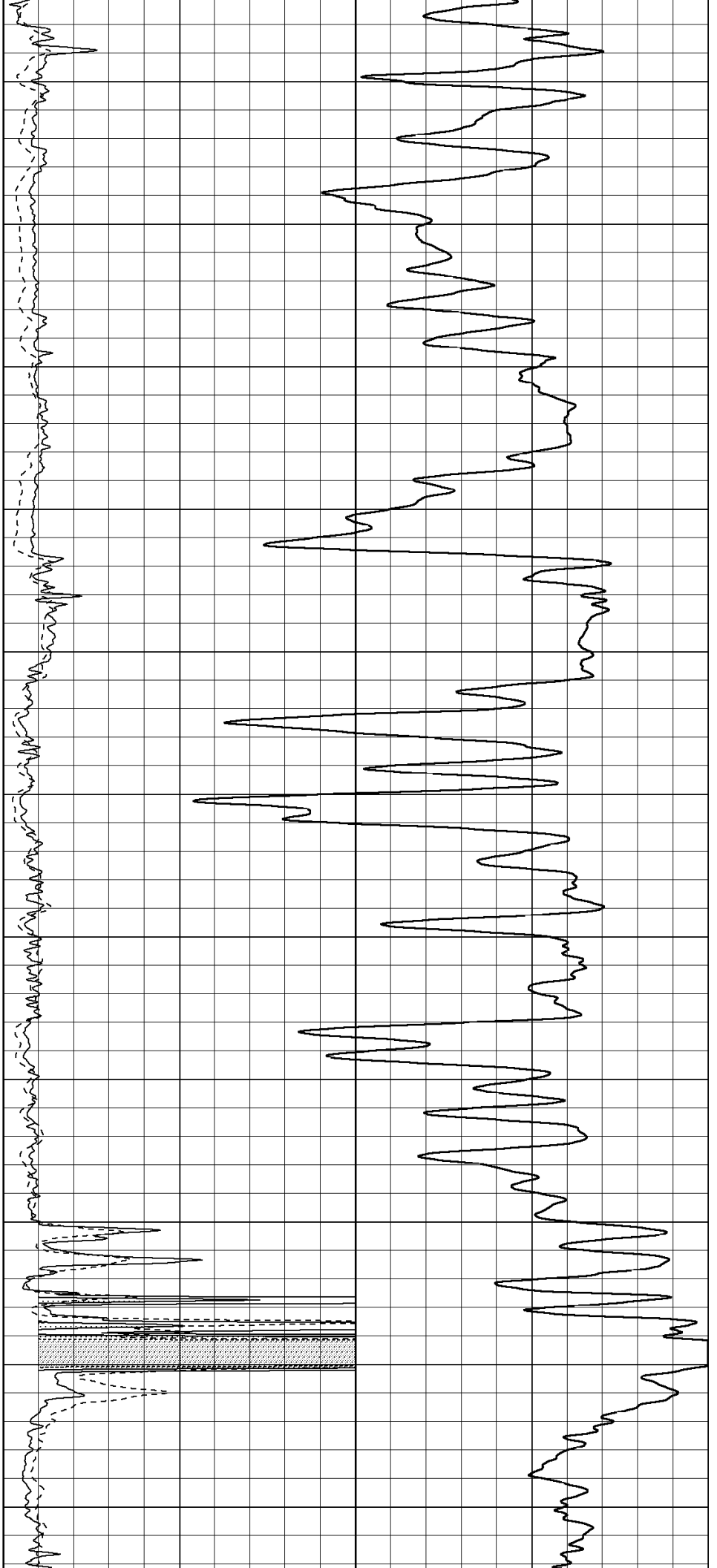
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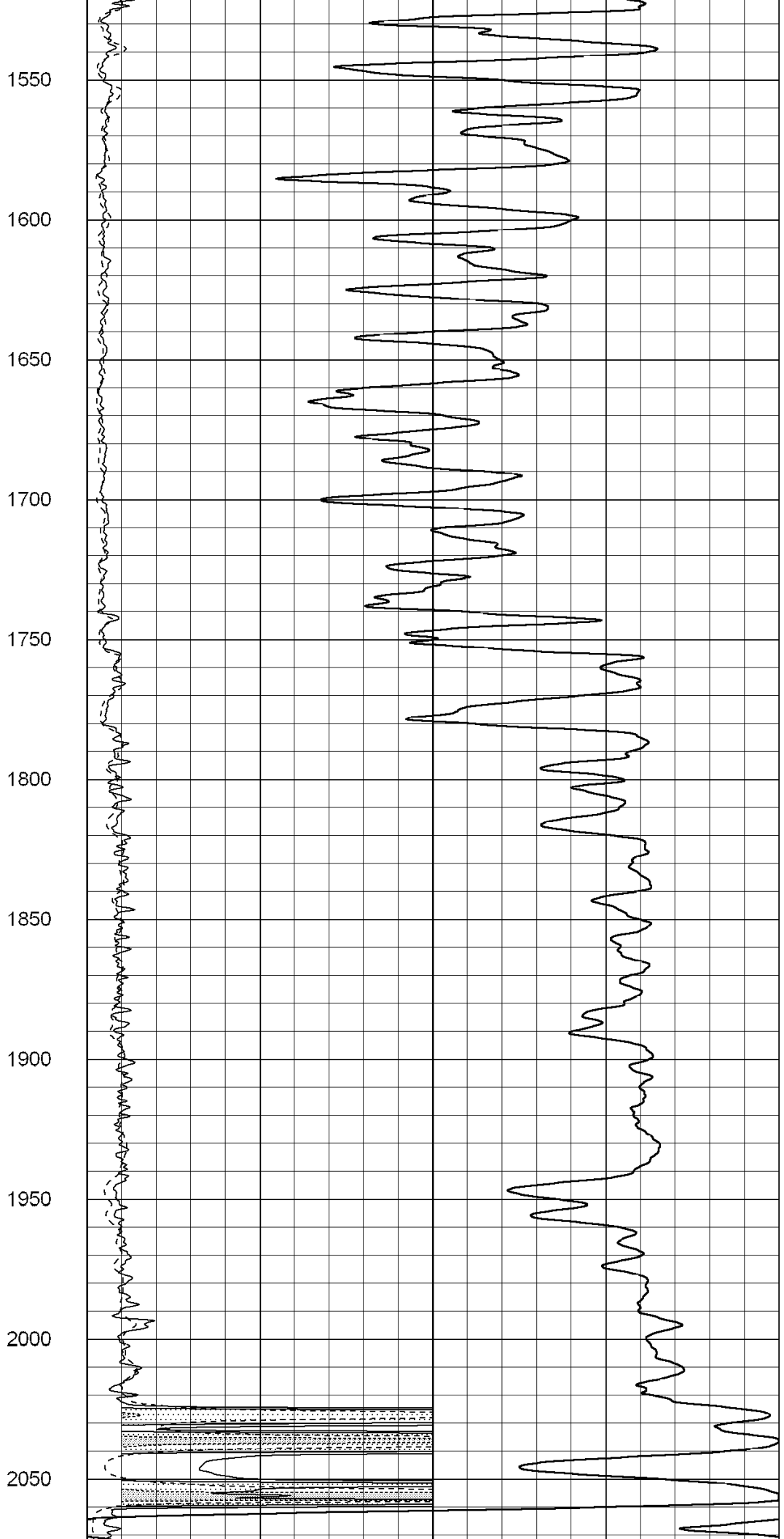
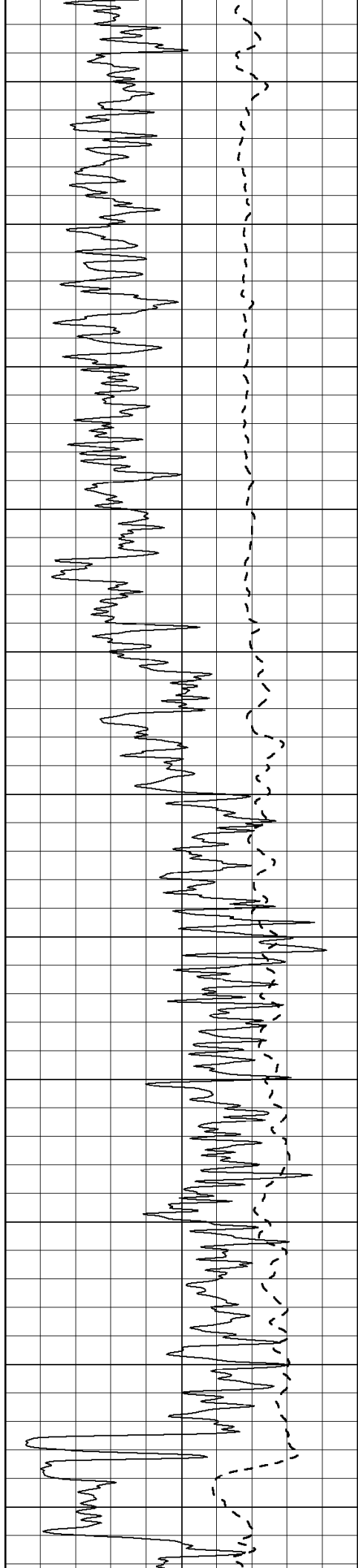
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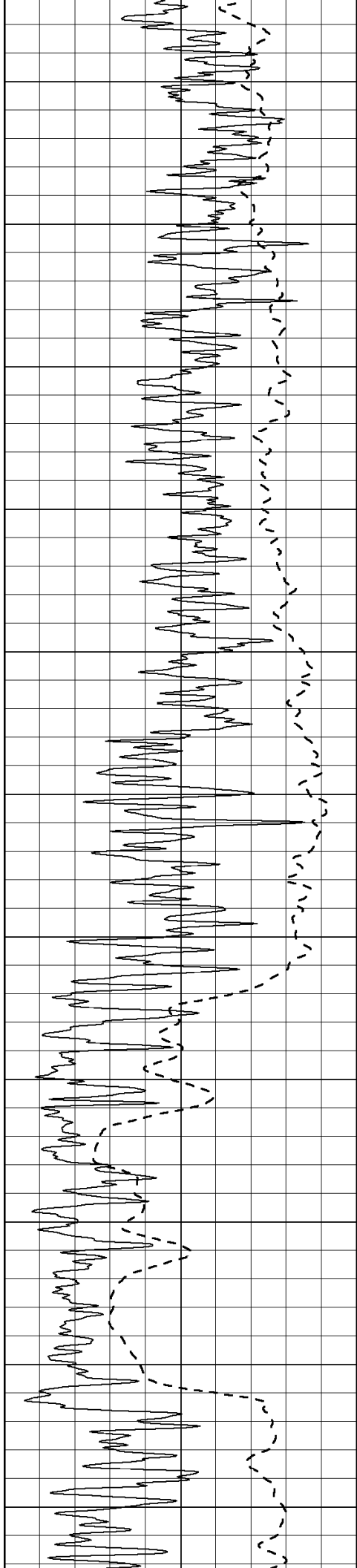
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1450

1500







2100

2150

2200

2250

2300

2350

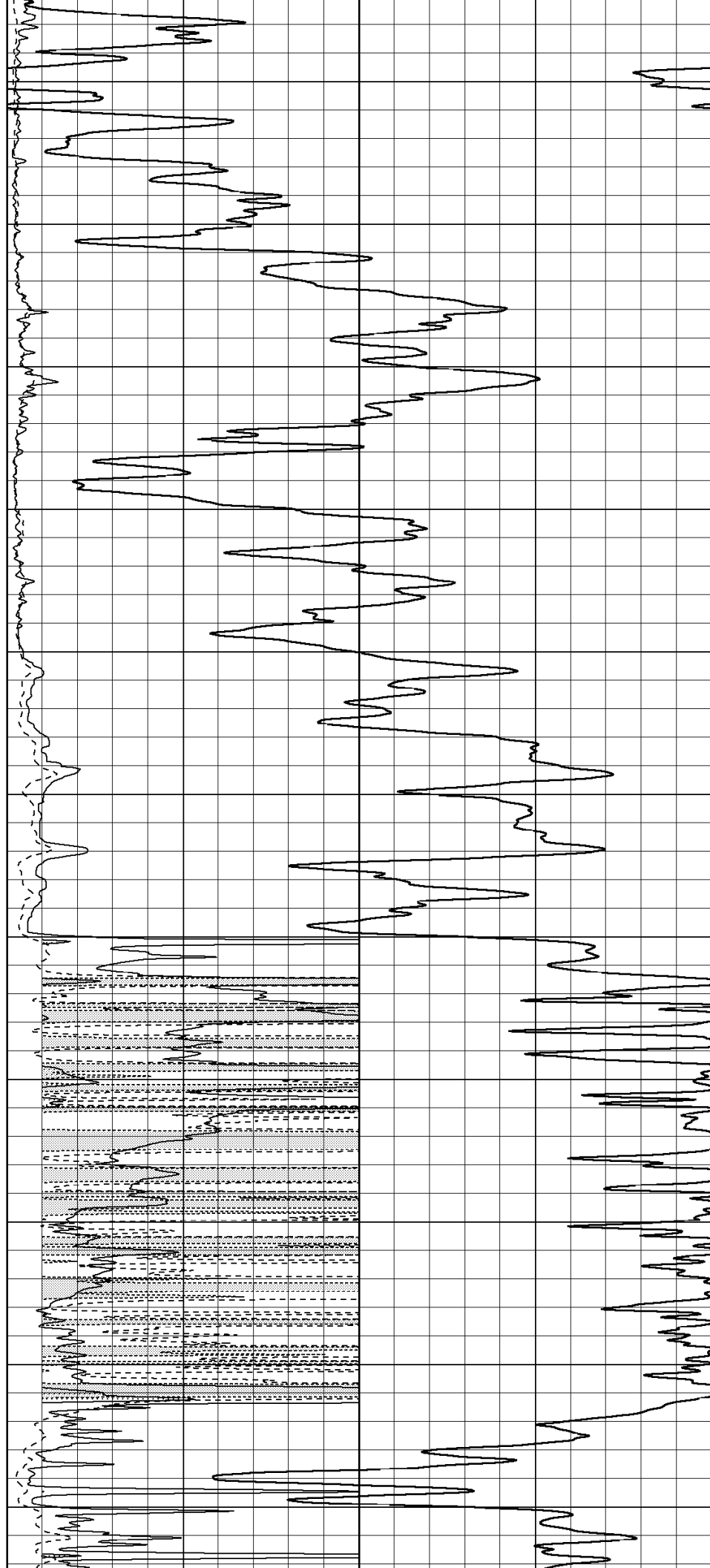
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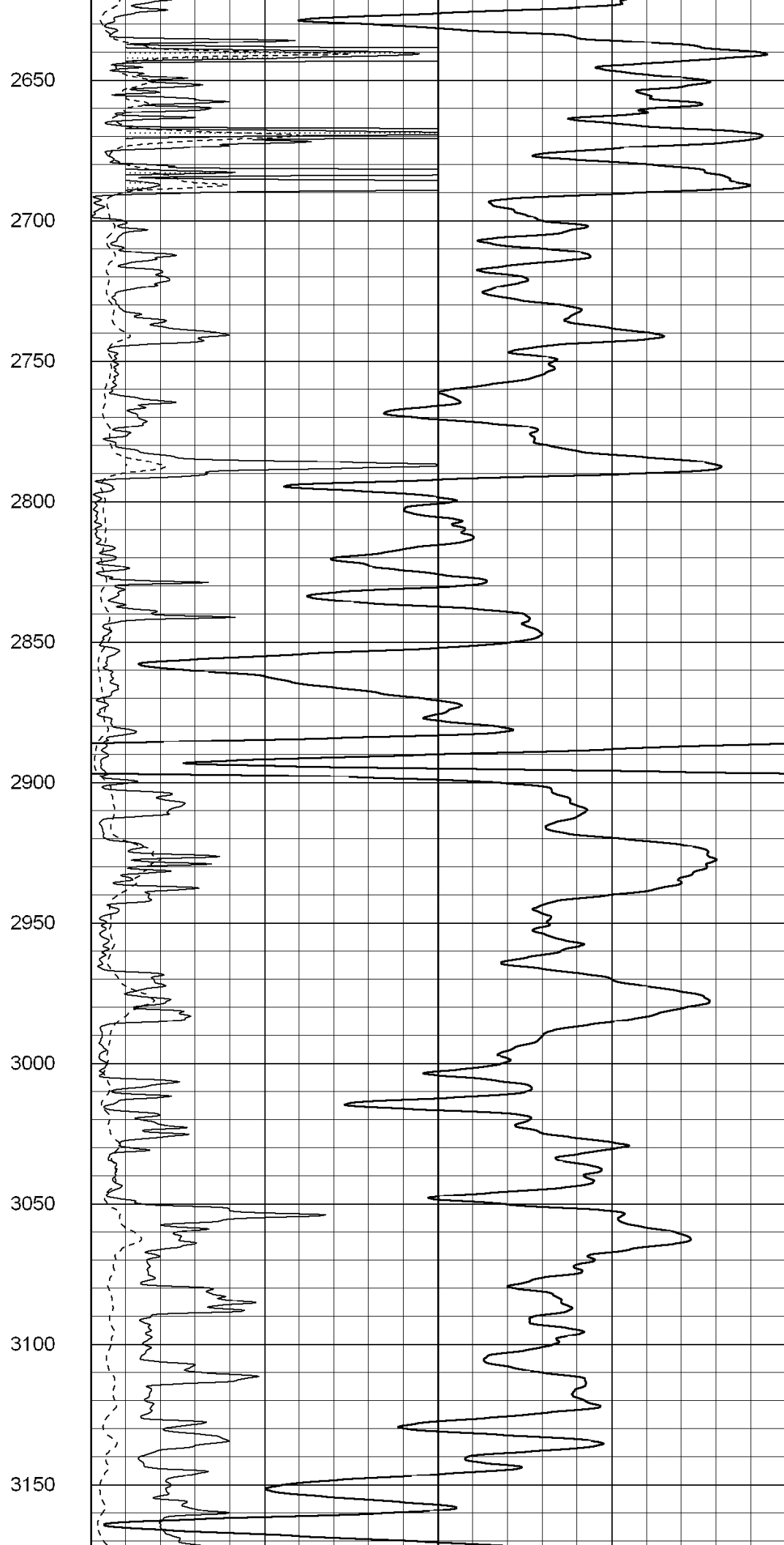
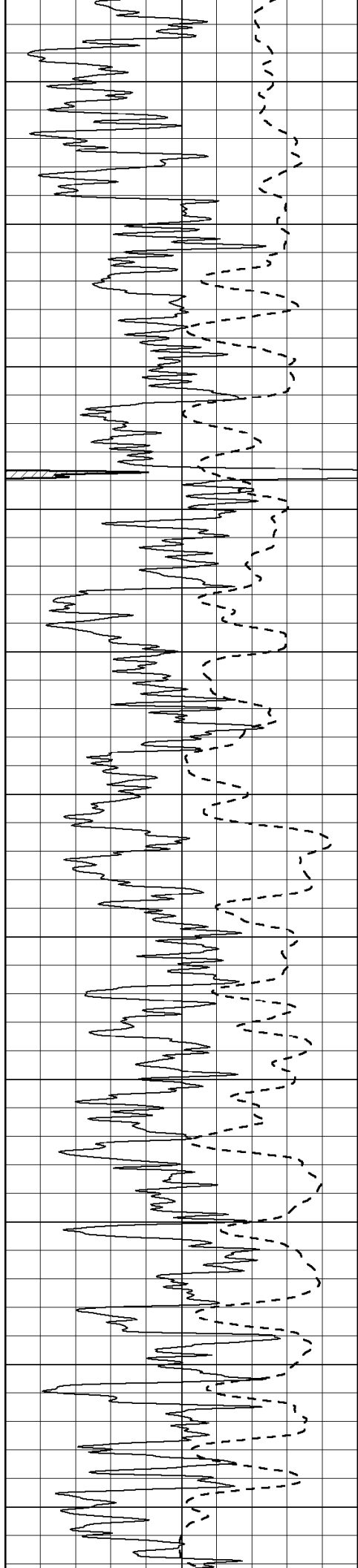
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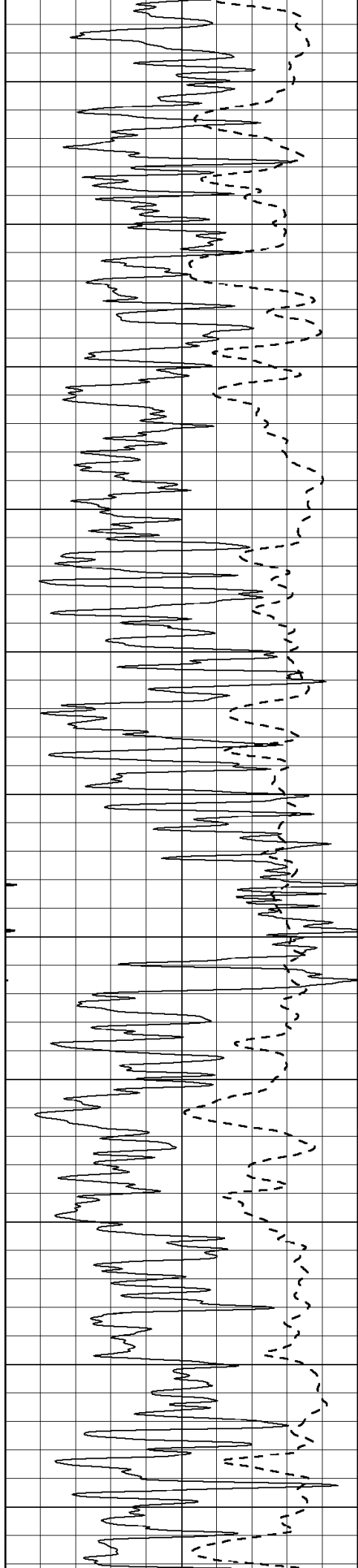
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2600







3200

3250

3300

3350

3400

3450

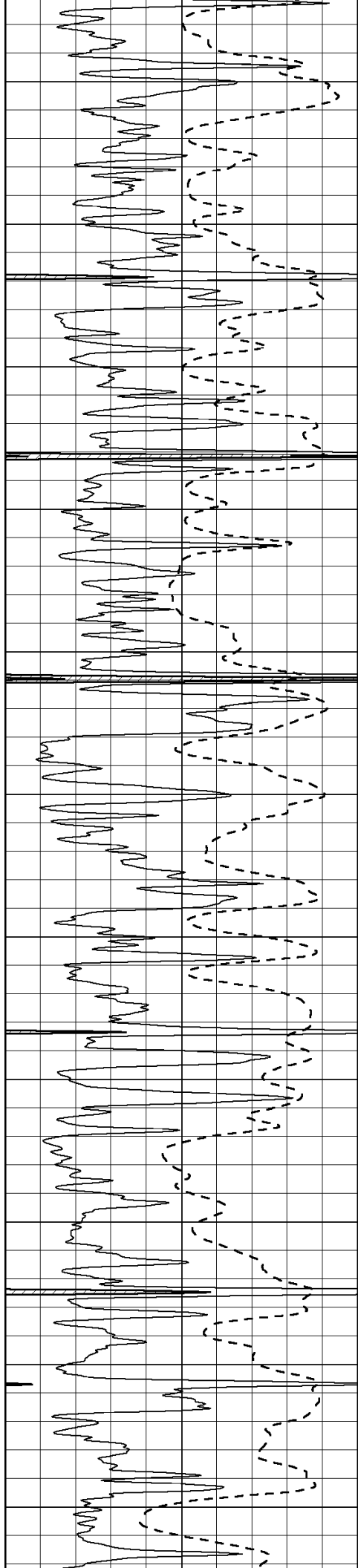
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3550

3600

3650

3700



3750

3800

3850

3900

3950

4000

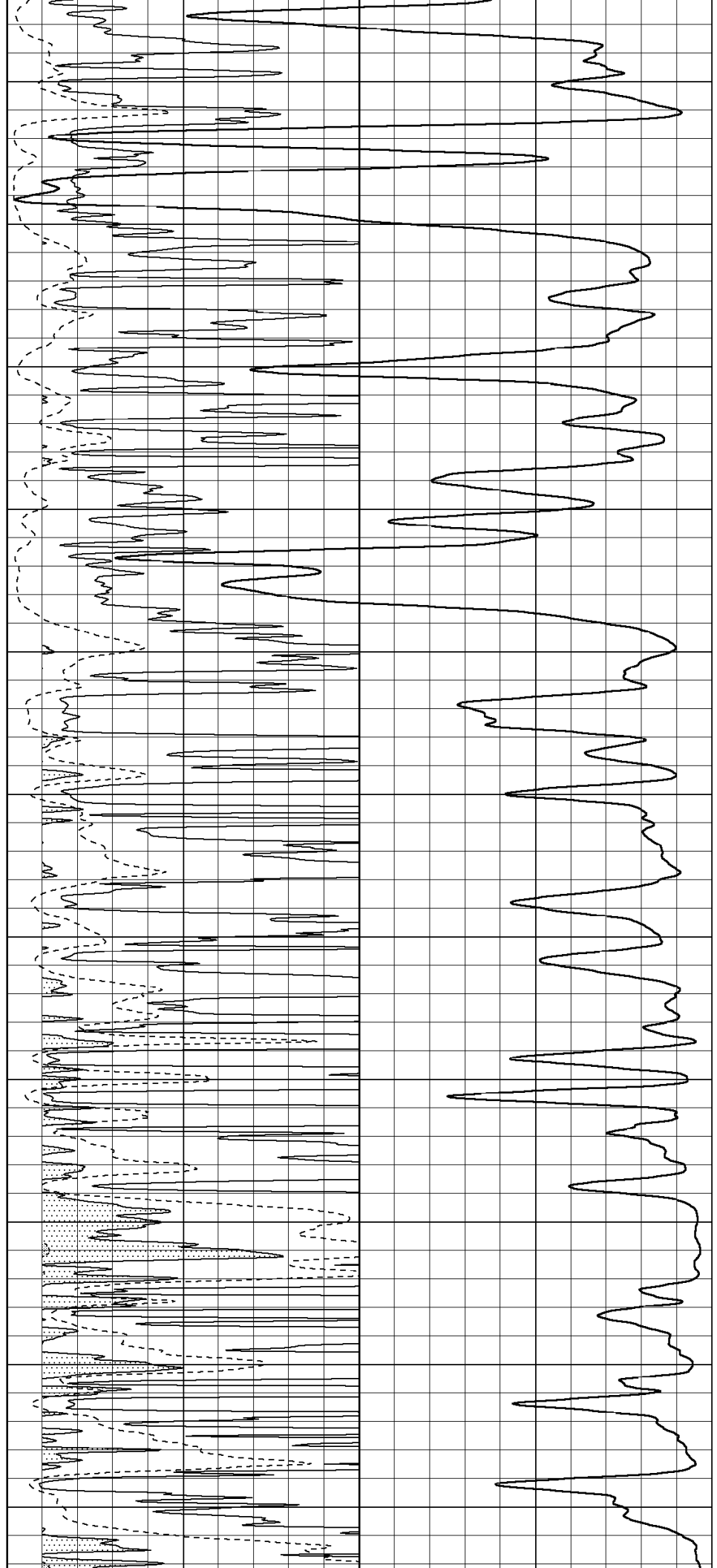
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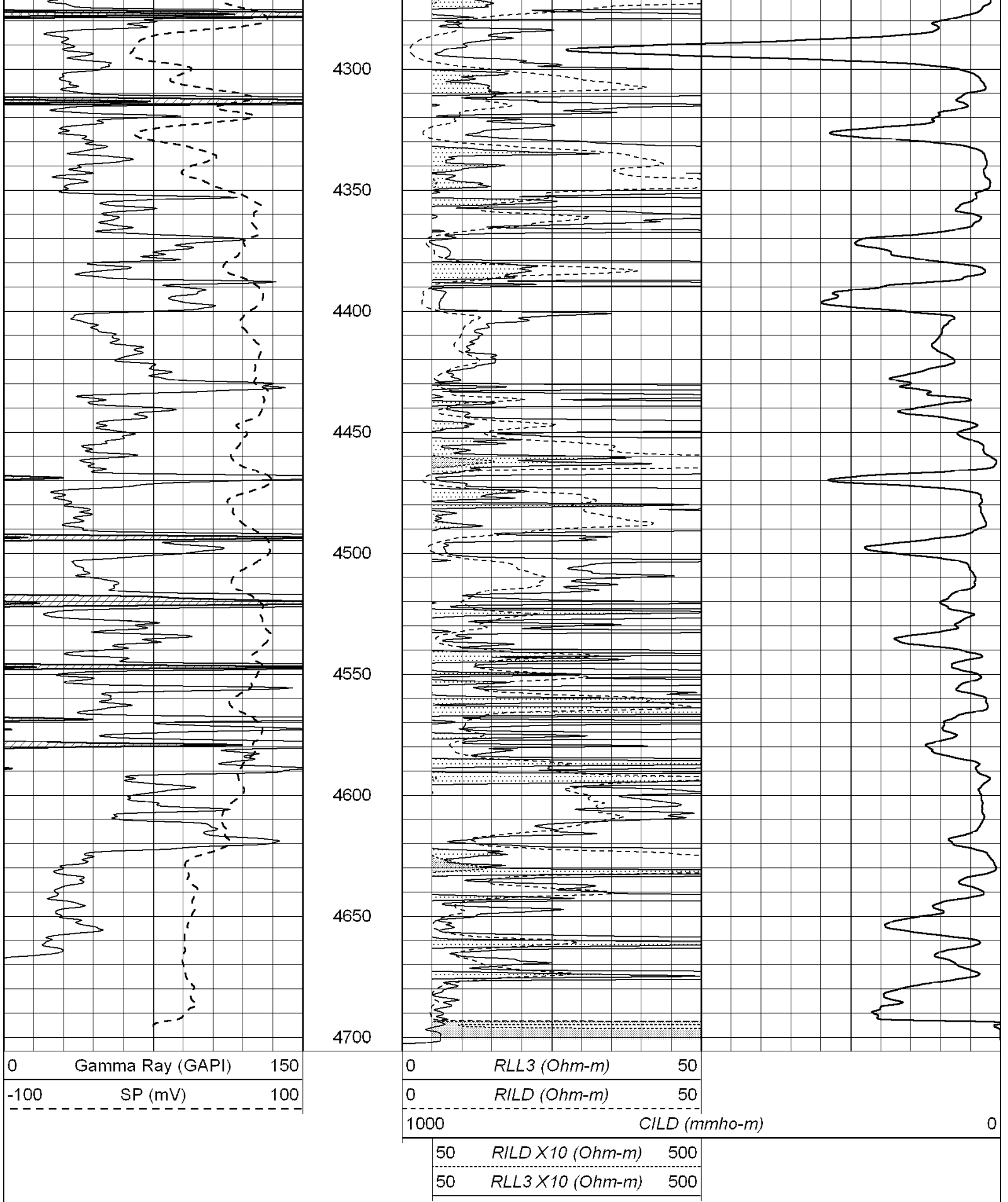
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4150

4200

4250





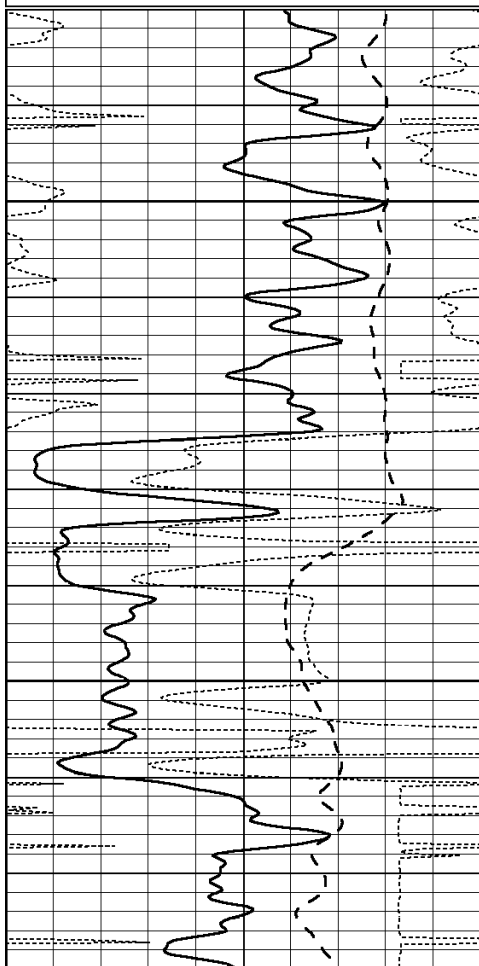
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ANHYDRITE

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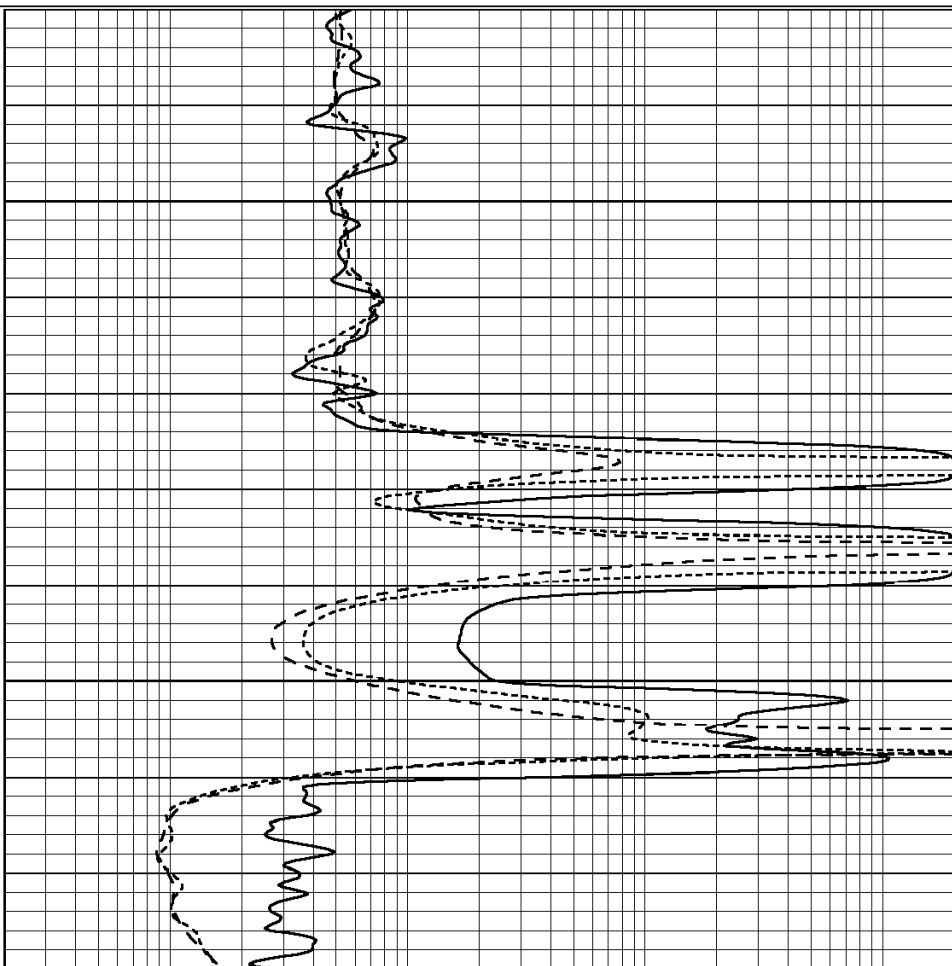
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-100	SP (mV)	100
-250	Rxo/Rt	50

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



2000

2050



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



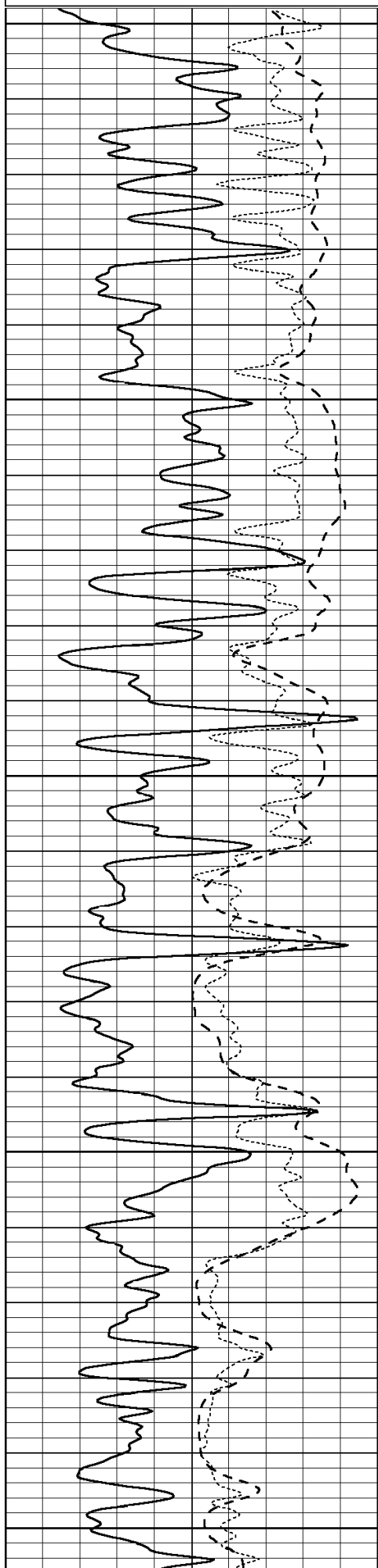
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MAIN SECTION

Database File: 004055ddn.db
 Dataset Pathname: pass4.13
 Presentation Format: dil
 Dataset Creation: Sun Aug 16 12:56:55 2009
 Charted by: Depth in Feet scaled 1:240

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

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



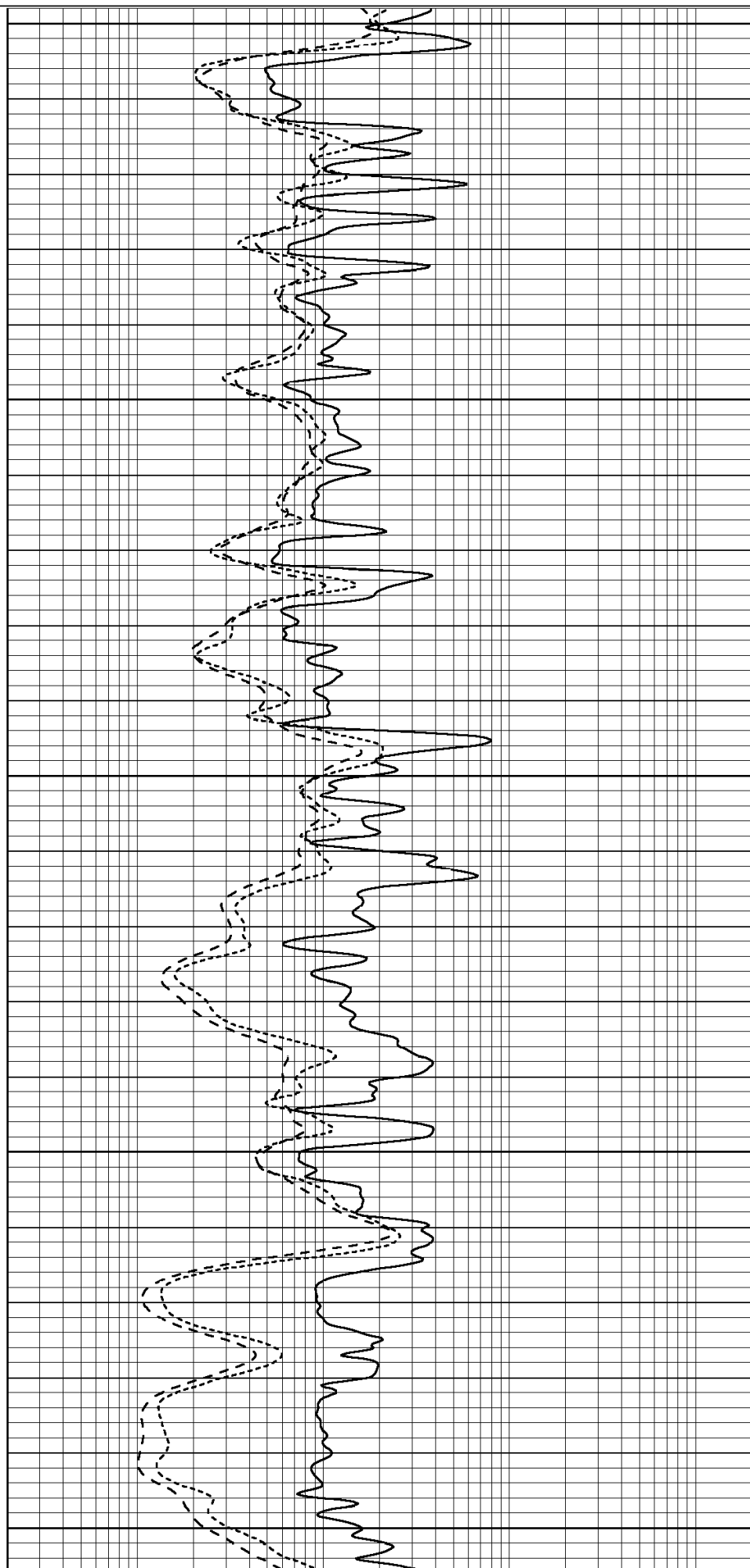
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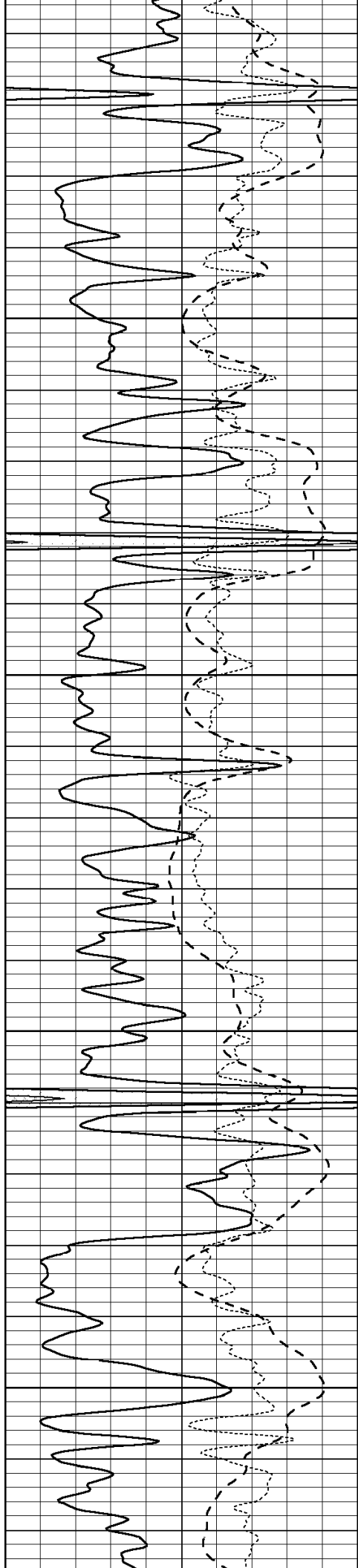
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3700

3750

3800



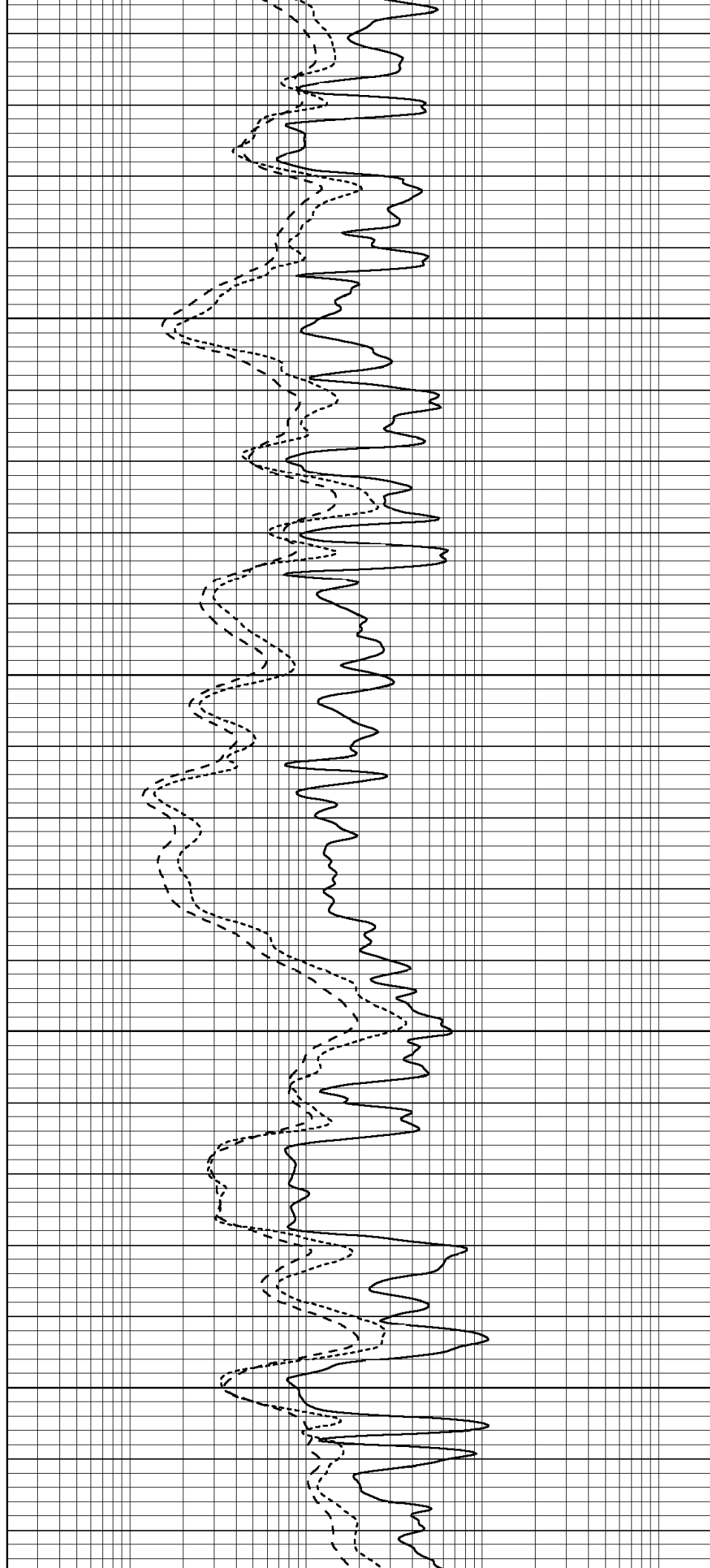


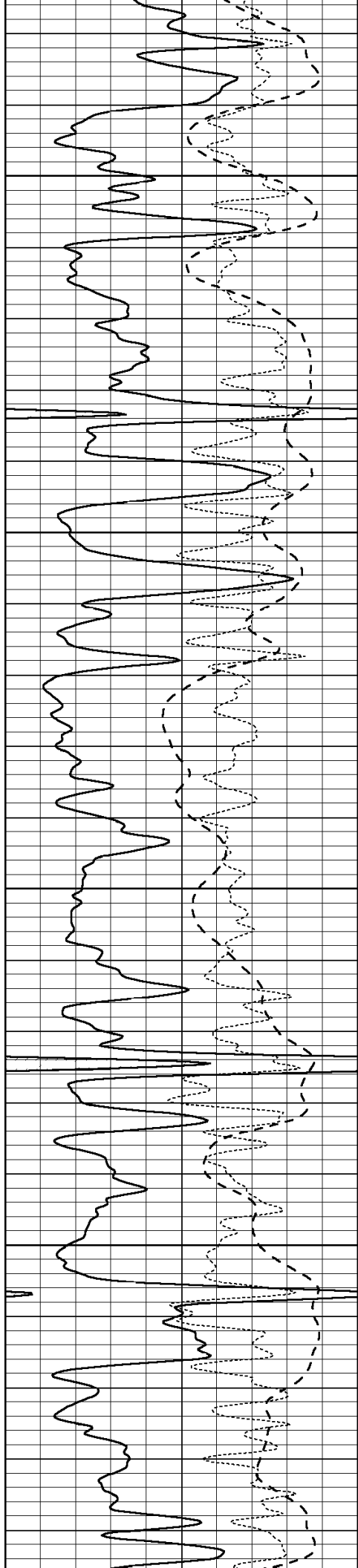
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3900

3950

4000



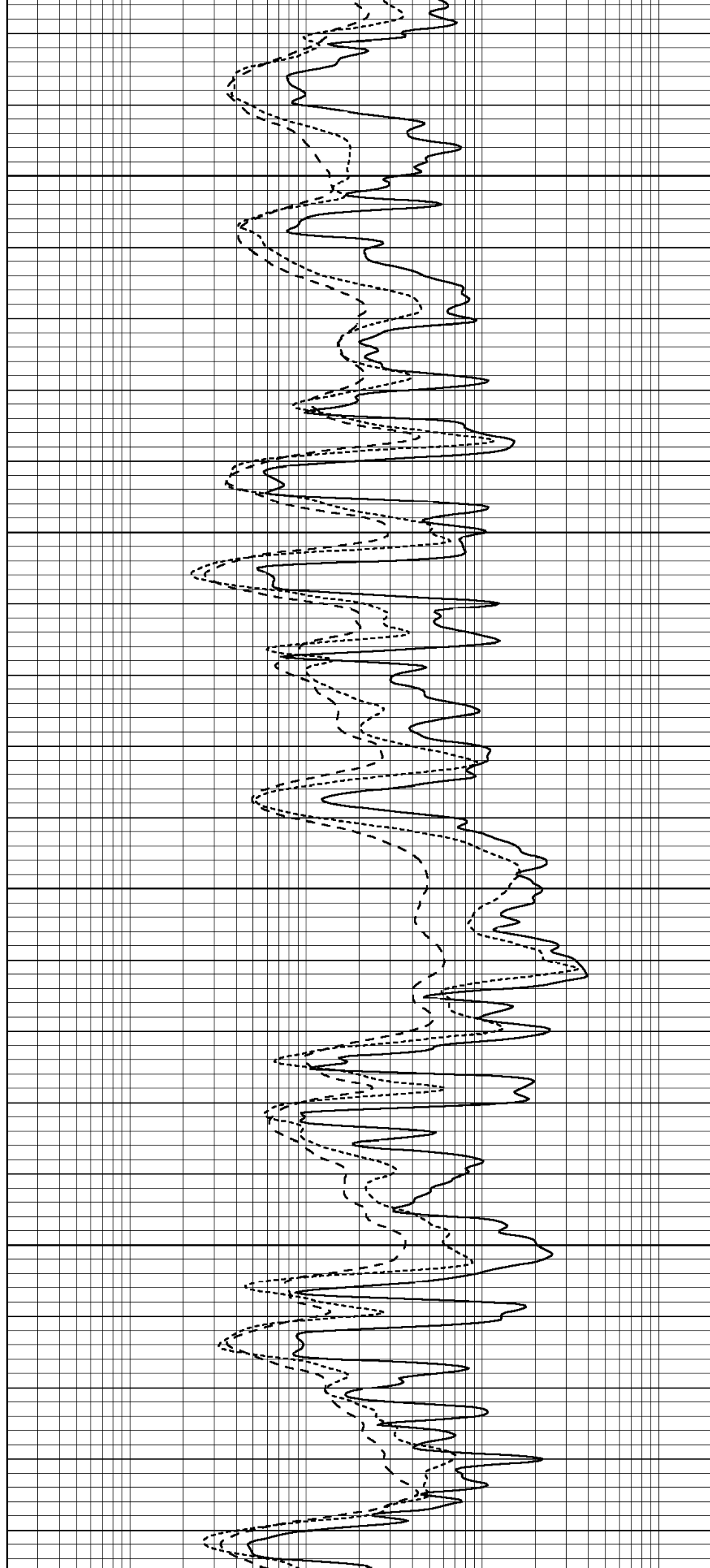


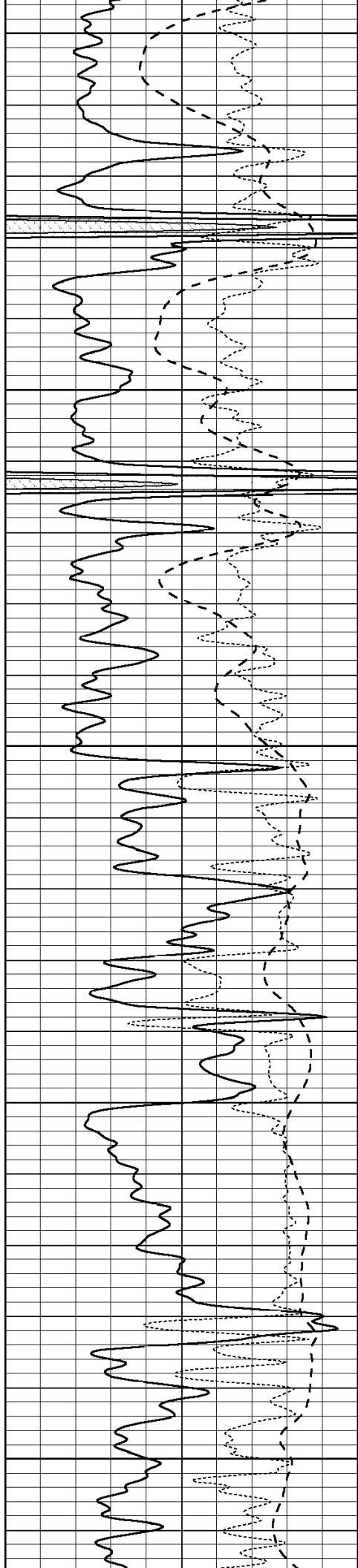
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4100

4150

4200





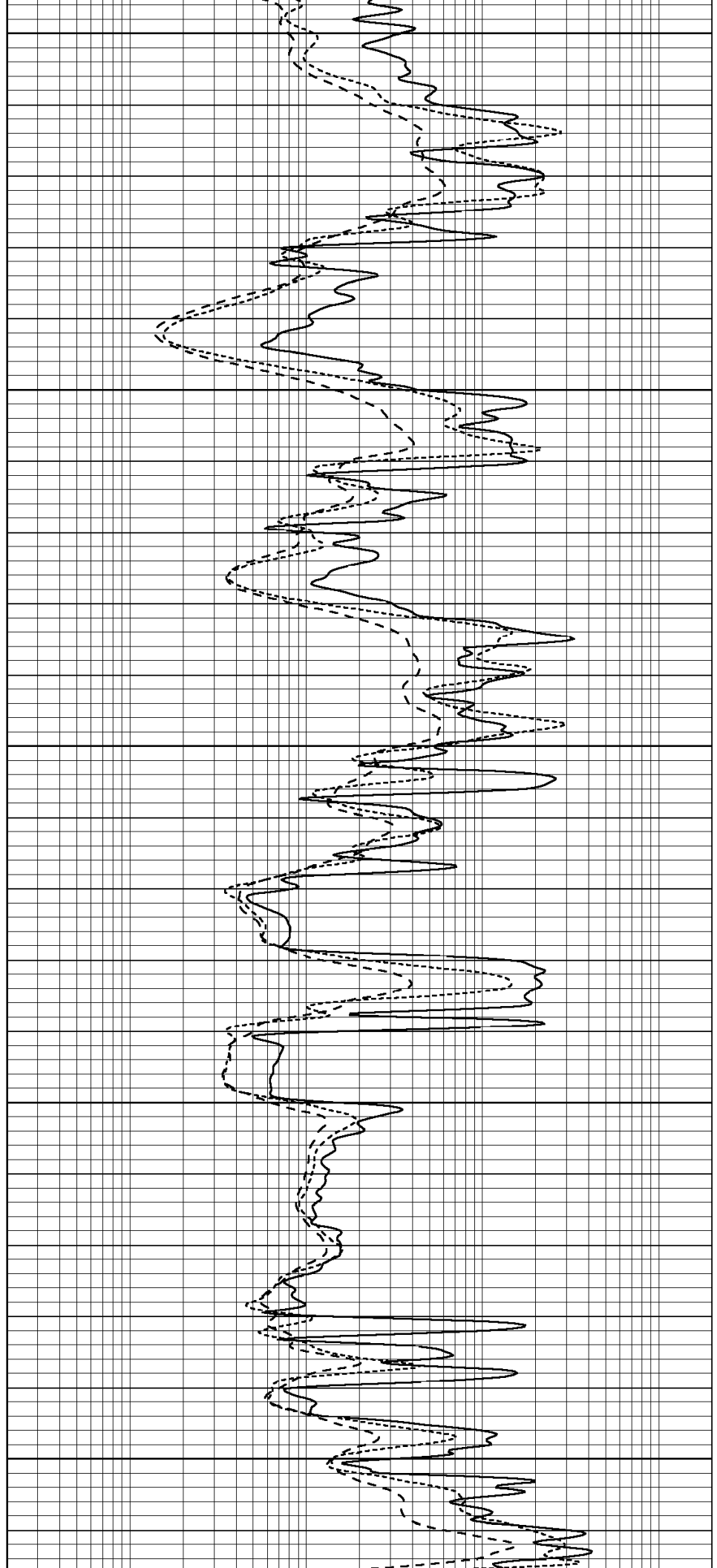
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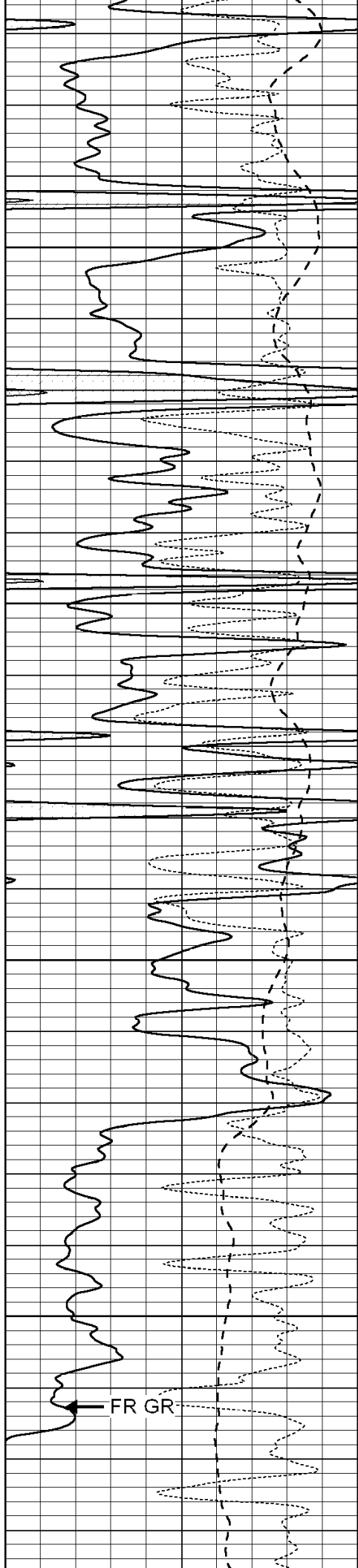
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4350

4400

4450





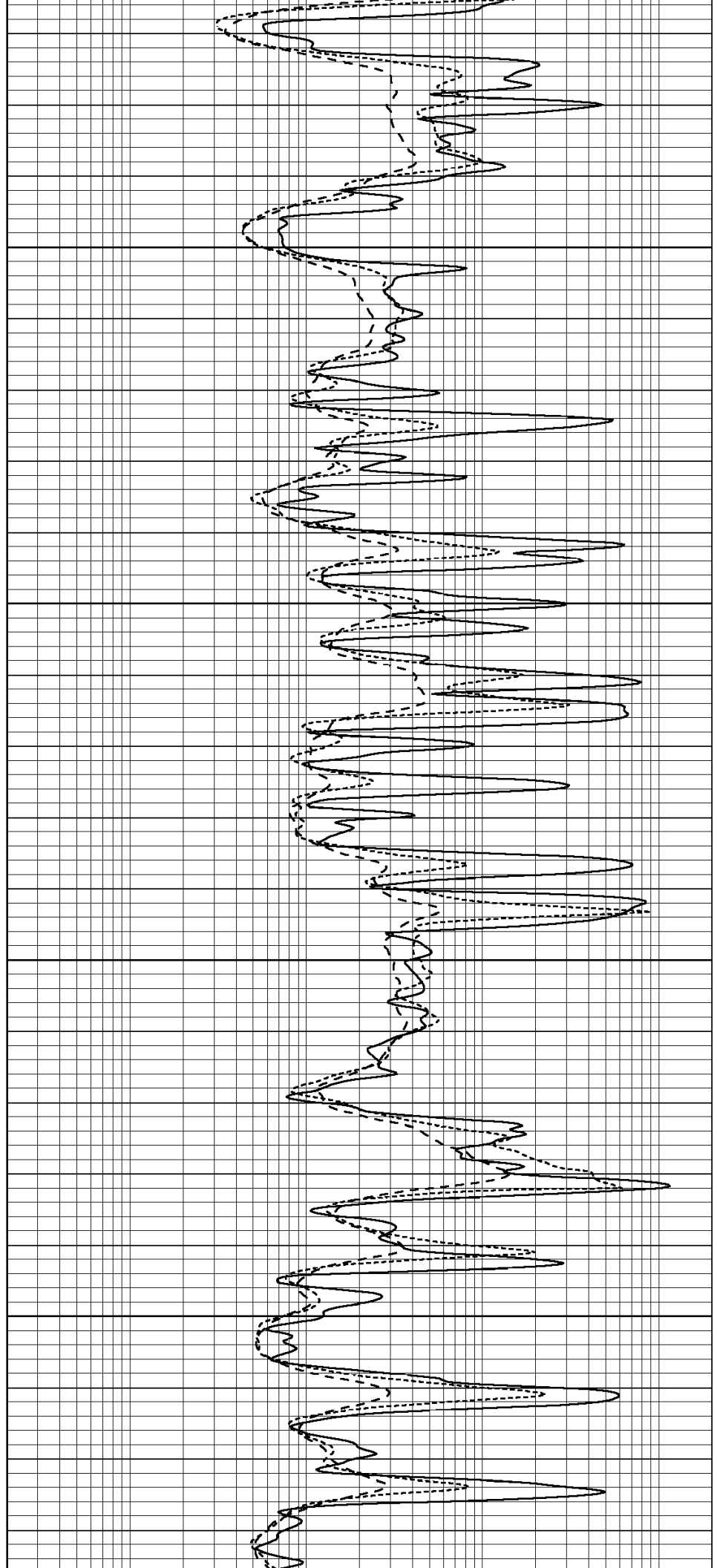
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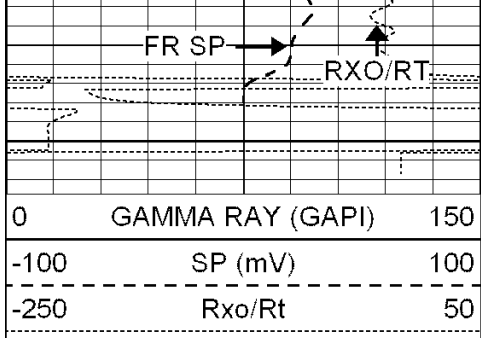
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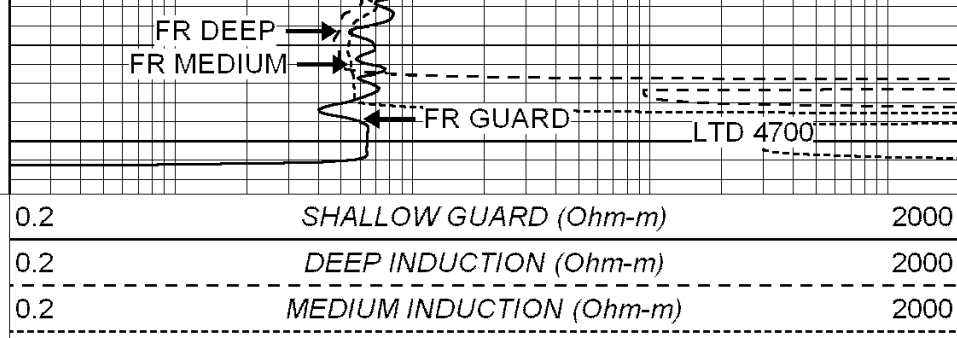
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FR GR





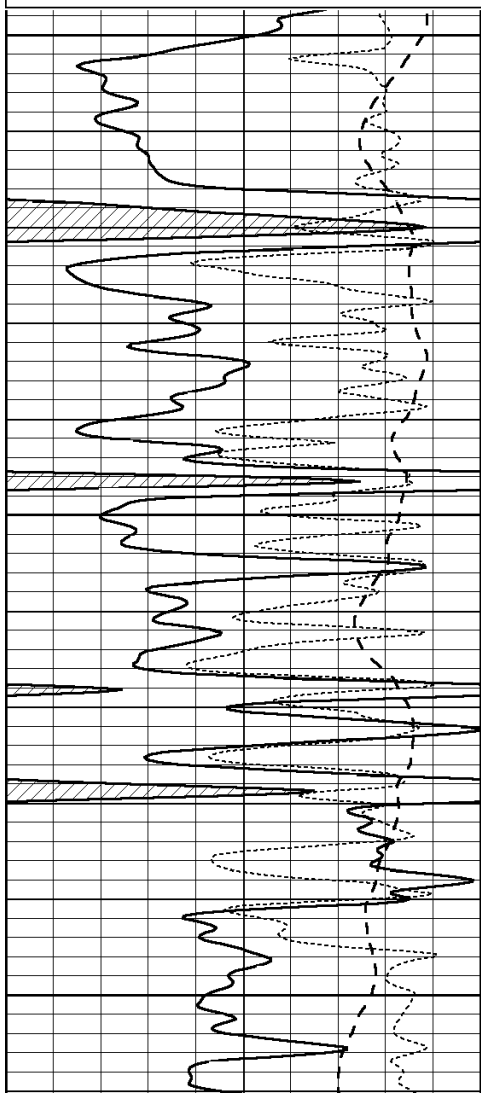
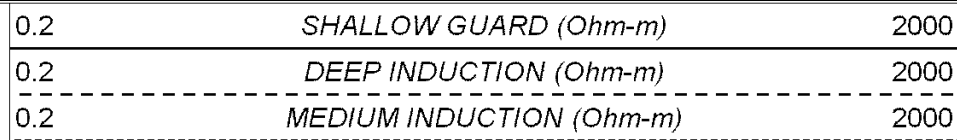
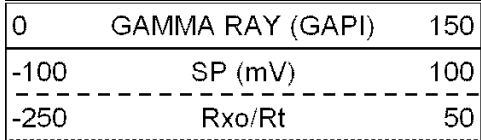
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REPEAT SECTION

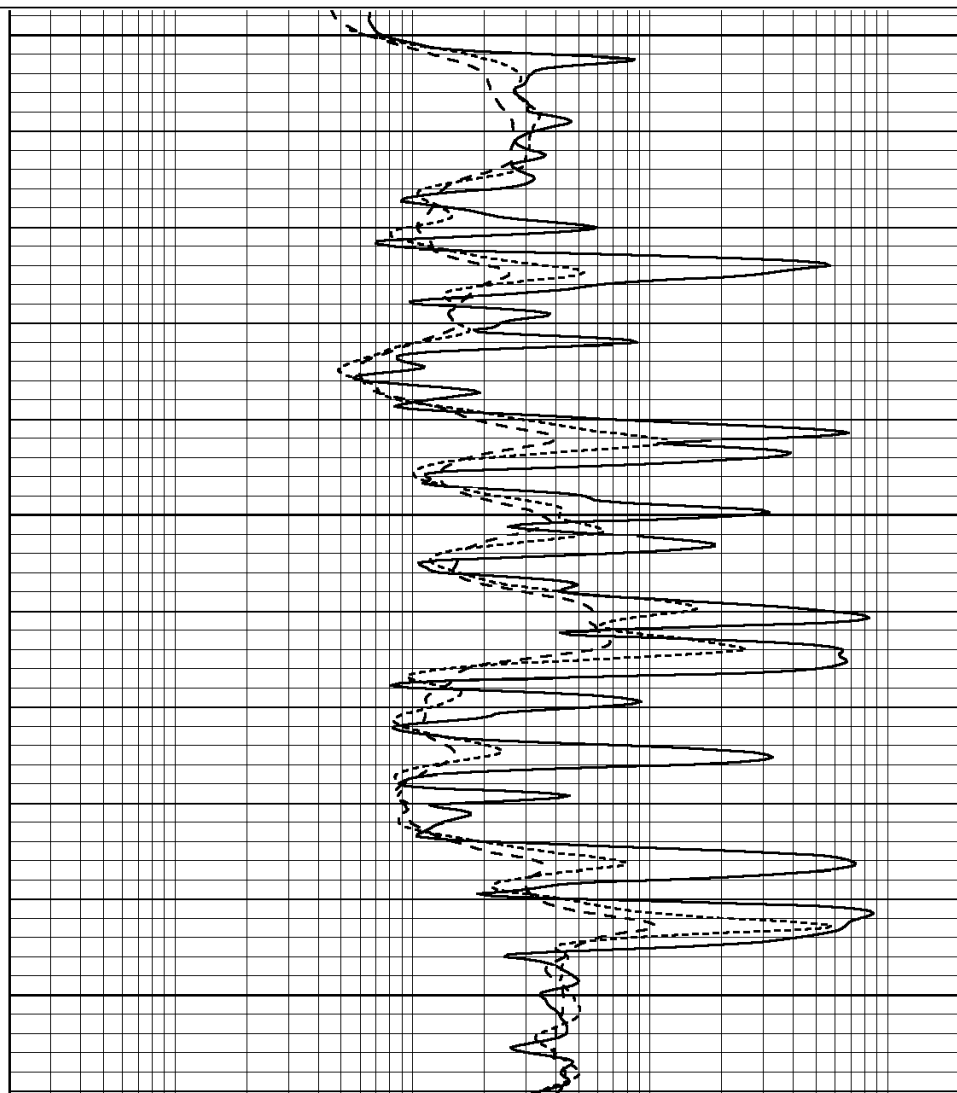
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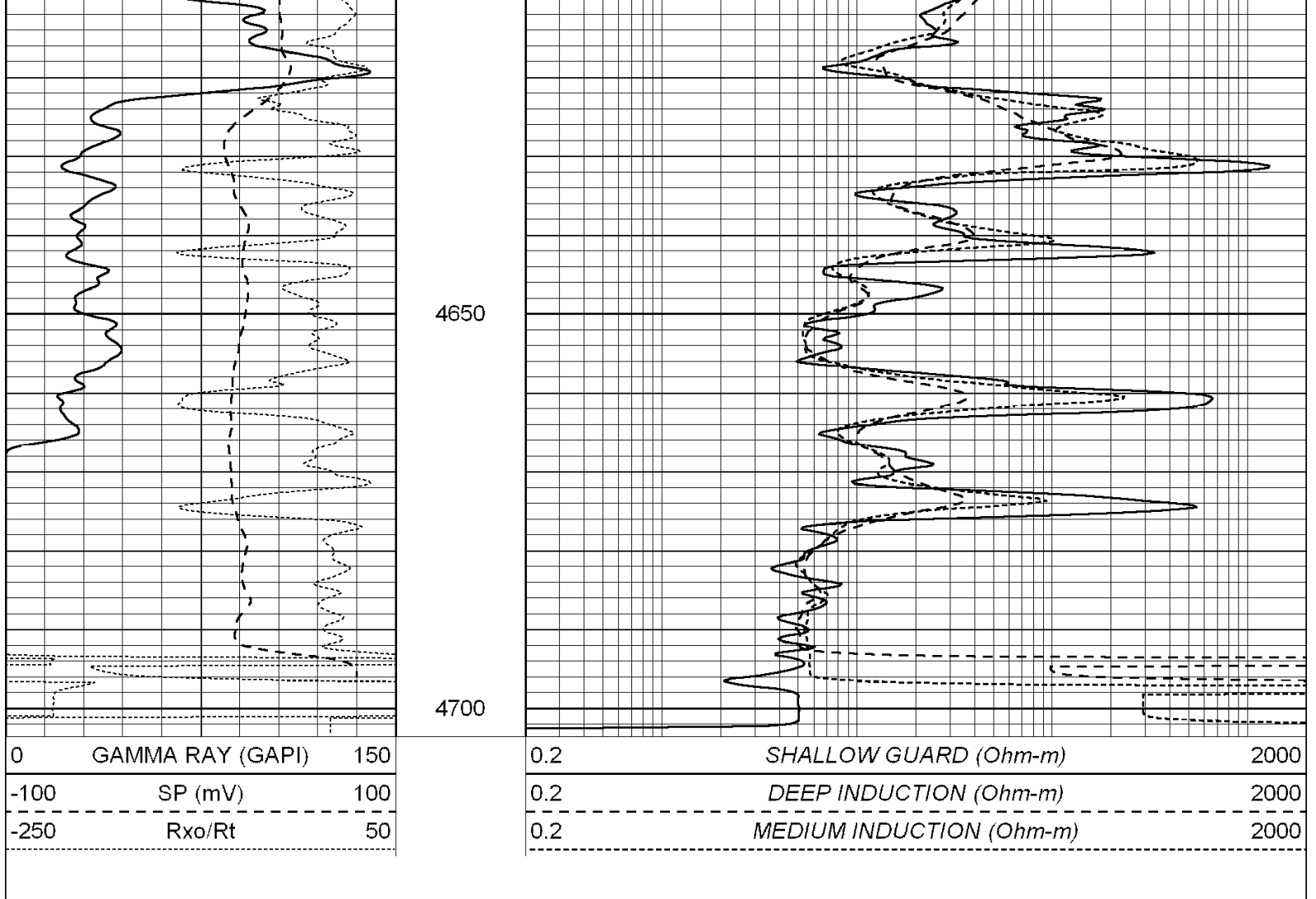


4500

4550

4600





Calibration Report

Database File: 004055ddn.db
 Dataset Pathname: pass4.13
 Dataset Creation: Sun Aug 16 12:56:55 2009

Dual Induction Calibration Report

Serial-Model: DIL4-GEAR
 Performed: Sun Aug 16 10:42:15 2009

Loop:	Readings				References			Results	
	Air	Loop			Air	Loop		m	b
Deep	0.008	0.666	V	0.000	400.000	mmho-m	570.000	-20.000	
Medium	-0.003	0.769	V	0.000	462.500	mmho-m	560.000	-25.000	
Internal:	Zero	Cal		Zero	Cal		m	b	
Deep	0.013	0.651	V	0.000	400.000	mmho-m	627.541	-8.365	
Medium	0.020	0.754	V	0.000	462.500	mmho-m	630.311	-12.549	

Litho Density Calibration Report
 Serial: 002 Model: PRB
 Performed Wed Jul 15 08:50:33 2009

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1004.5	12487.9	3487.9	13943.3	cps

Window 2	923.9	10508.8	3008.8	11524.2	cps
Window 3	651.3	3820.8	1326.3	4060.8	cps
Window 4	219.9	225.2	221.2	224.8	cps
Long Space	0.0	9584.9	2084.9	10600.3	cps
Short Space	0.9	1892.4	1272.6	2038.6	cps
Rho		1.7100	2.5960	1.3800	g/cc
Pe			2.5700	1.5500	

Rib Angle	: 45.4	Rib Slope	: 1.015	Density/Spine Ratio	: 0.562
Spine Angle	: 75.4	Spine Slope	: 3.845	Spine Intercept	: -19.8

Caliper

Low Ref	Readings	Reference	
High Ref	2.6	6.6	
	5.0	14.0	
	Gain: 3.1		Offset: -1.5

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:	Sun Aug 16 11:56:53 2009
Calibrator Value:	200.0 GAPI
Background Reading:	0.0 cps
Calibrator Reading:	189.0 cps
Sensitivity:	0.8500 GAPI/cps