



SUPERIOR
Hays,
Kansas

DUAL INDUCTION LOG

Company	MID - CONTINENT ENERGY	Company	MID - CONTINENT ENERGY OPERATING CO.
Well	#1-16 HUTCHINS	Well	#1-16 HUTCHINS
Field	WILDCAT	Field	WILDCAT
County	LANE	County	LANE
State	KANSAS	State	KANSAS
Location:	API # : 15-101-22186-0000	Other Services	CDL/CNL MEL
	1400' FSL & 2145' FEL		
	SEC 16 TWP 19S RGE 29W		
Permanent Datum	GROUND LEVEL	Elevation	2837
Log Measured From	KELLY BUSHING 5' A.G.L.	K.B. 2842 D.F. 2840 G.L. 2837	
Drilling Measured From	KELLY BUSHING		
Date	8/31/09		
Run Number	CNE		
Depth Driller	4710		
Depth Logger	4712		
Bottom Logged Interval	4710		
Top Log Interval	00		
Casing Driller	8 5/8"@306'		
Casing Logger	306		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 2,400 PPM	
Density / Viscosity	9.2/54		
pH / Fluid Loss	9.0/9.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.40@83F		
Rmf @ Meas. Temp	1.05@83F		
Rmc @ Meas. Temp	1.68@83F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.952@122F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	1:30 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
DIGHTON, KS. (4 WAY STOP) 6 S. ON HWY 23 TO RD. "90", 3 1/2 W., N. INTO



SUPERIOR
Hays,
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MAIN SECTION

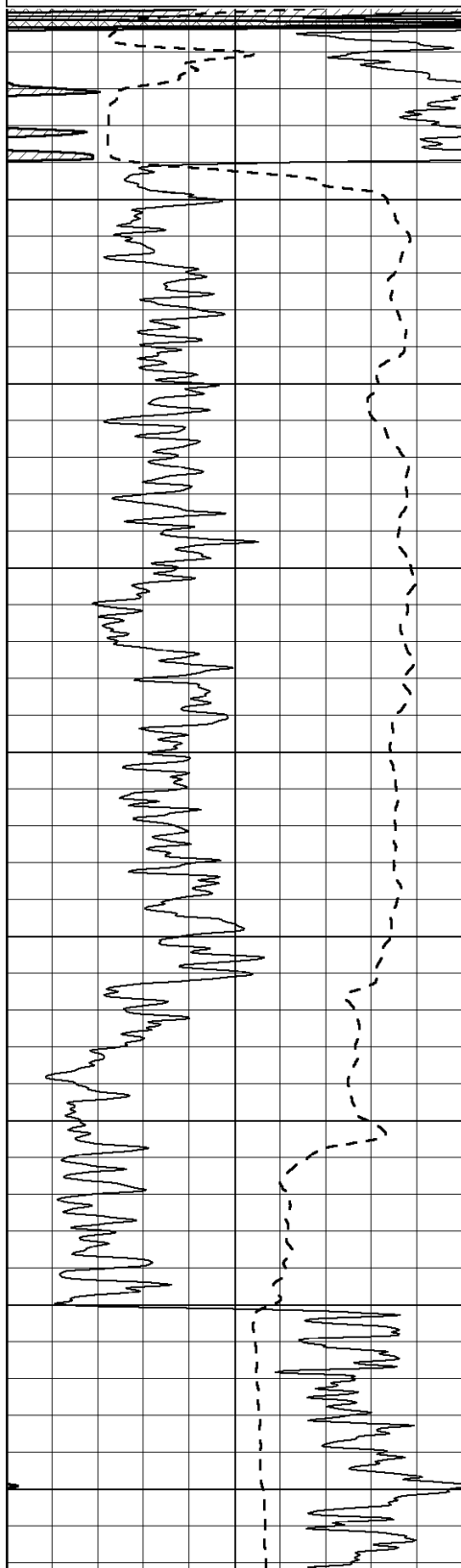
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Dataset Pathname: pass3.8
Presentation Format: dil2
Dataset Creation: Mon Aug 31 03:13:59 2009
Charted by: Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150
-100	SP (mV)	100

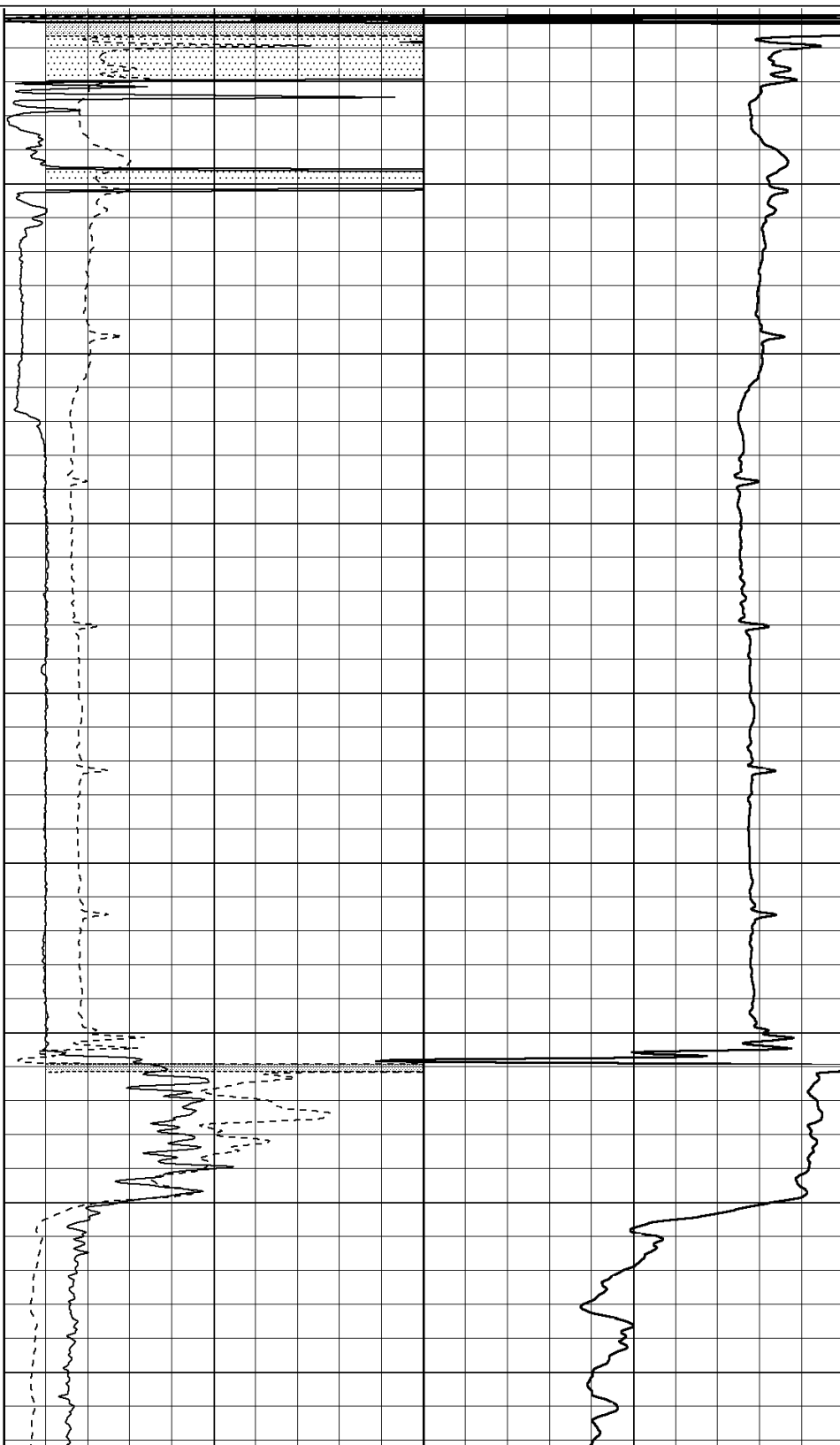
0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50

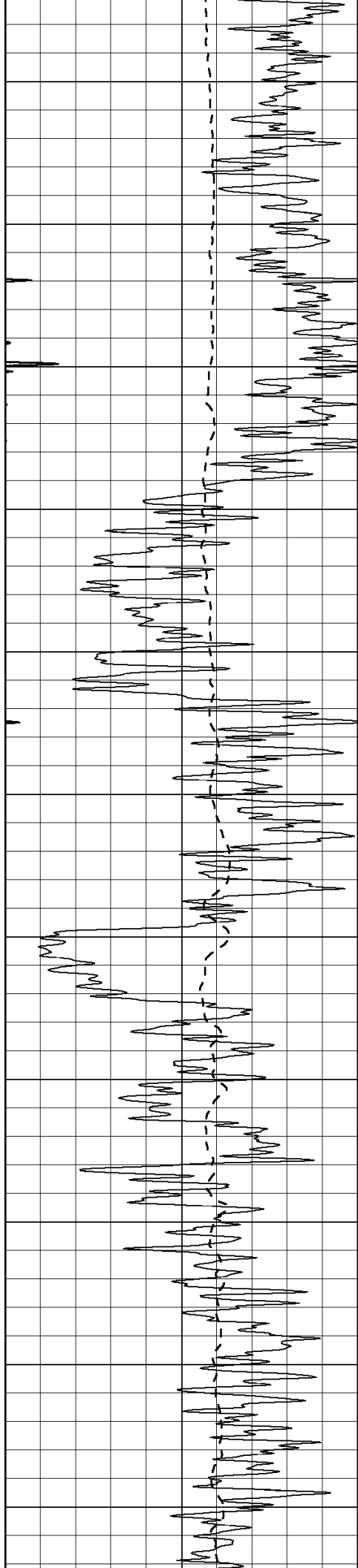
1000	CILD (mmho-m)	0
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50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500



0
50
100
150
200
250
300
350
400





450

500

550

600

650

700

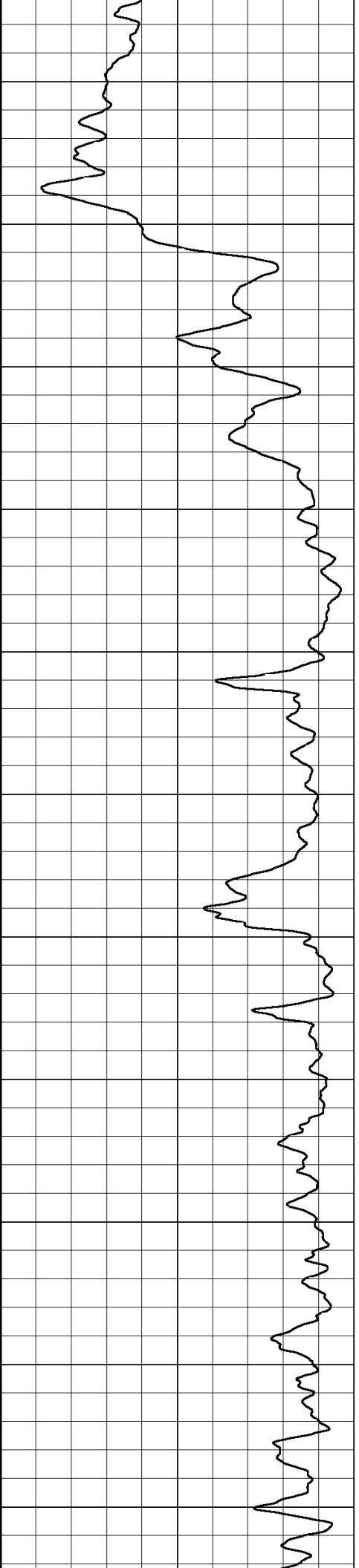
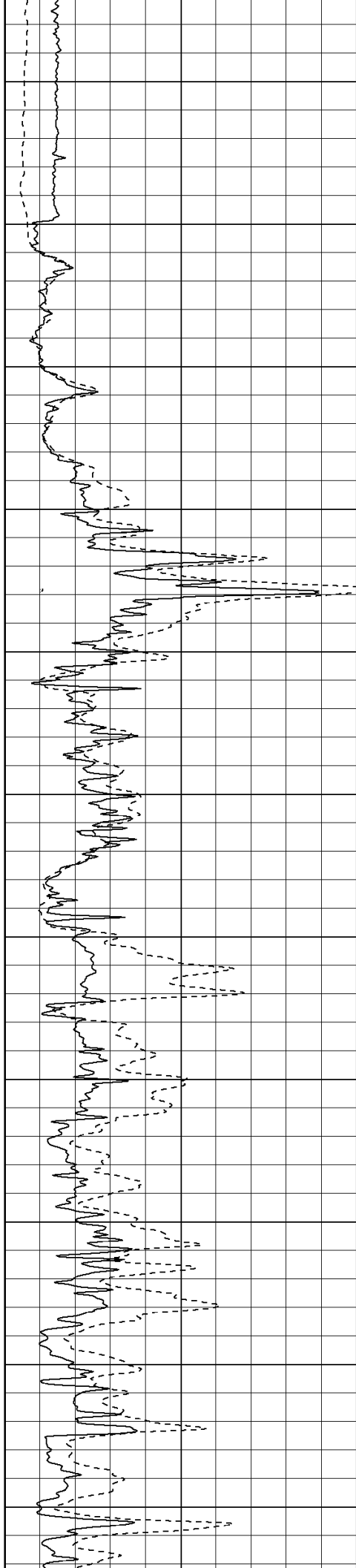
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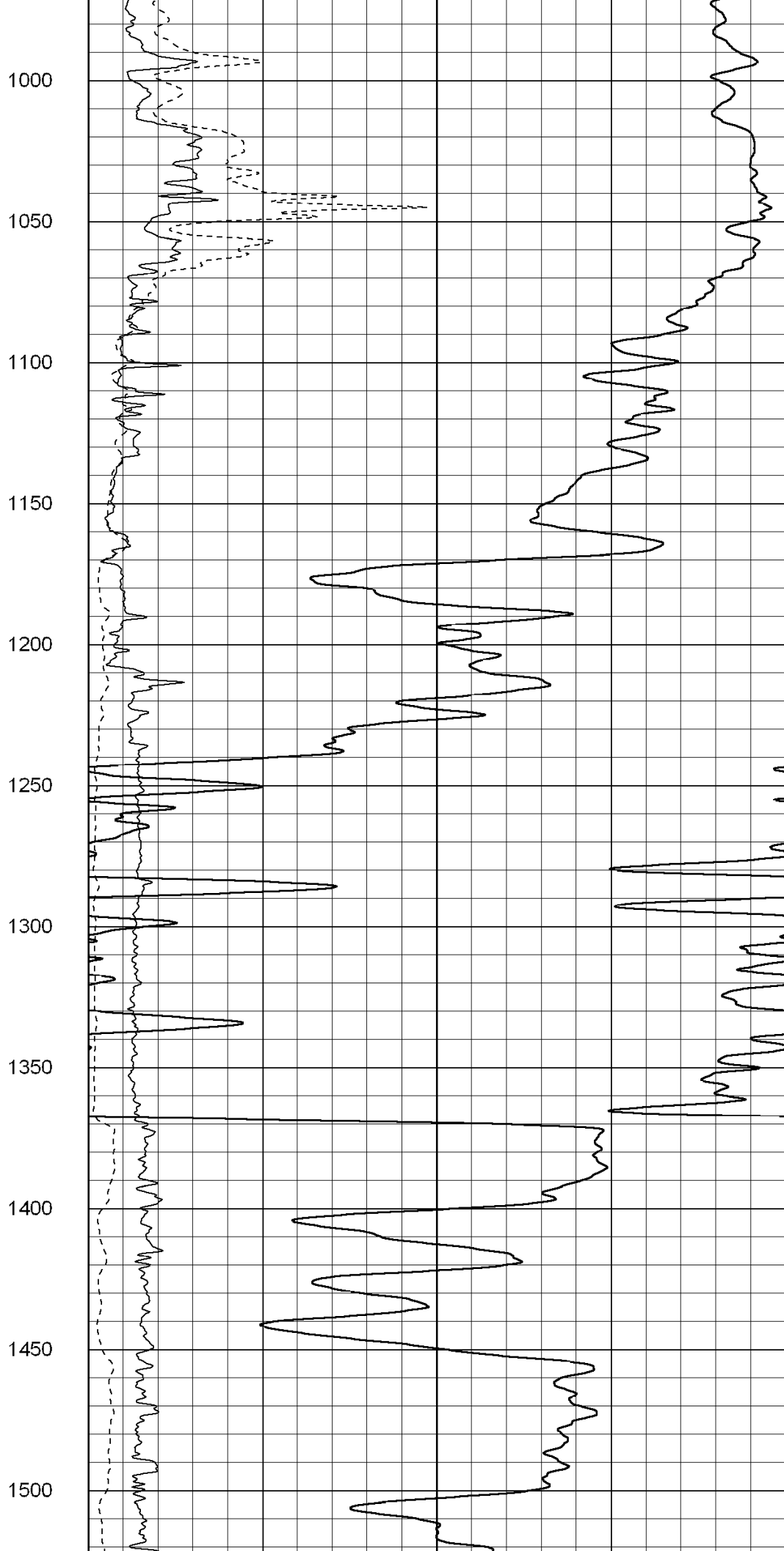
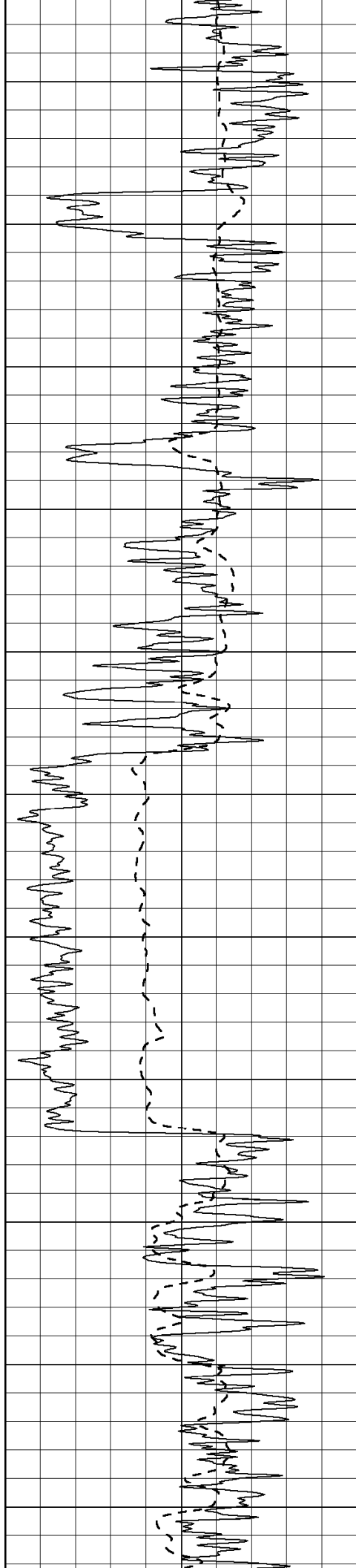
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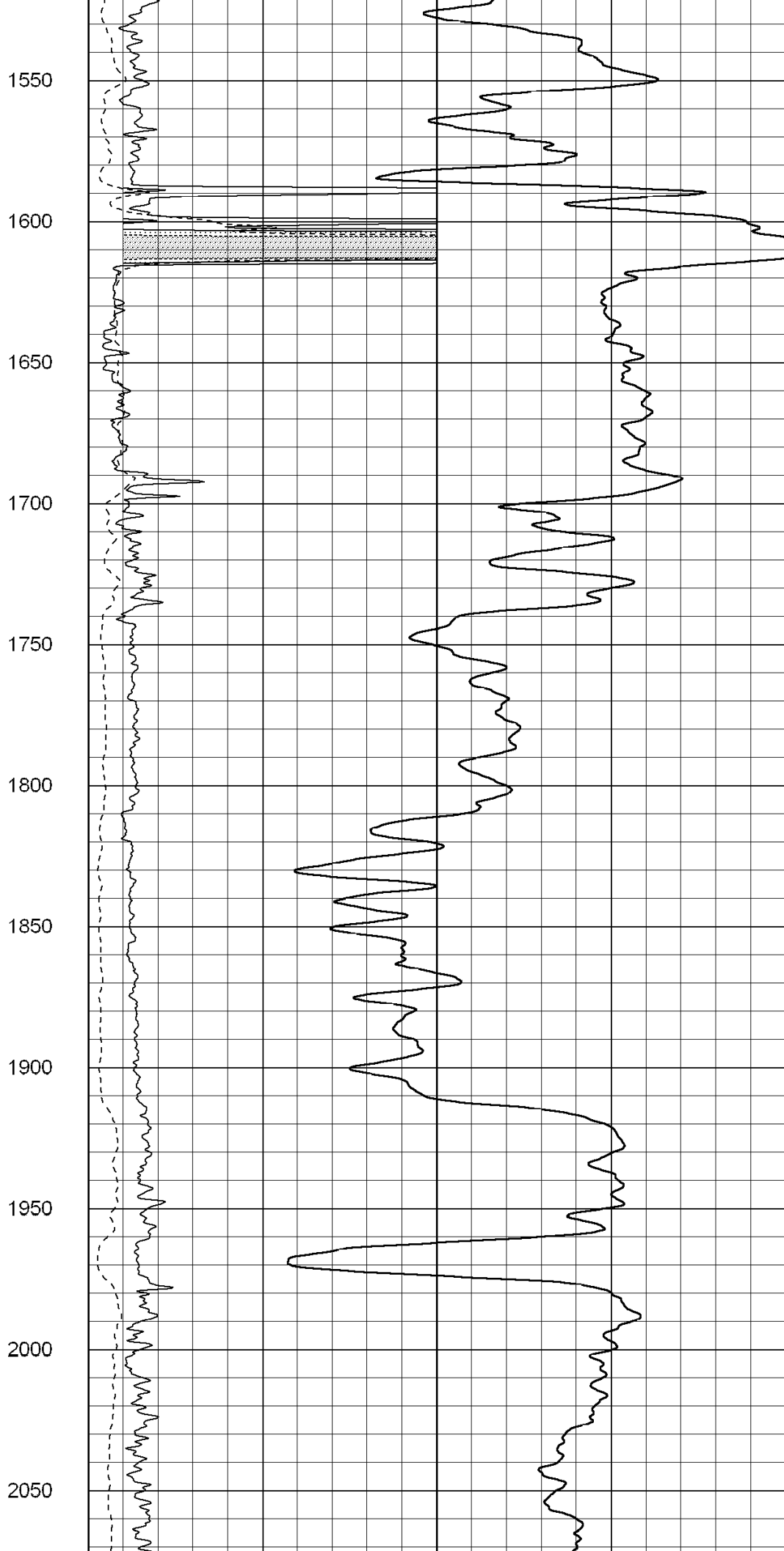
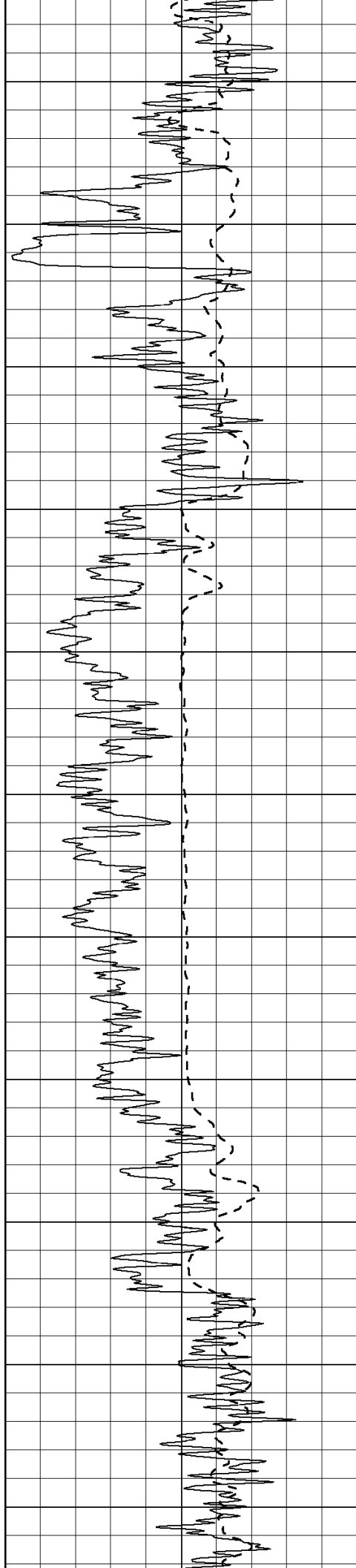
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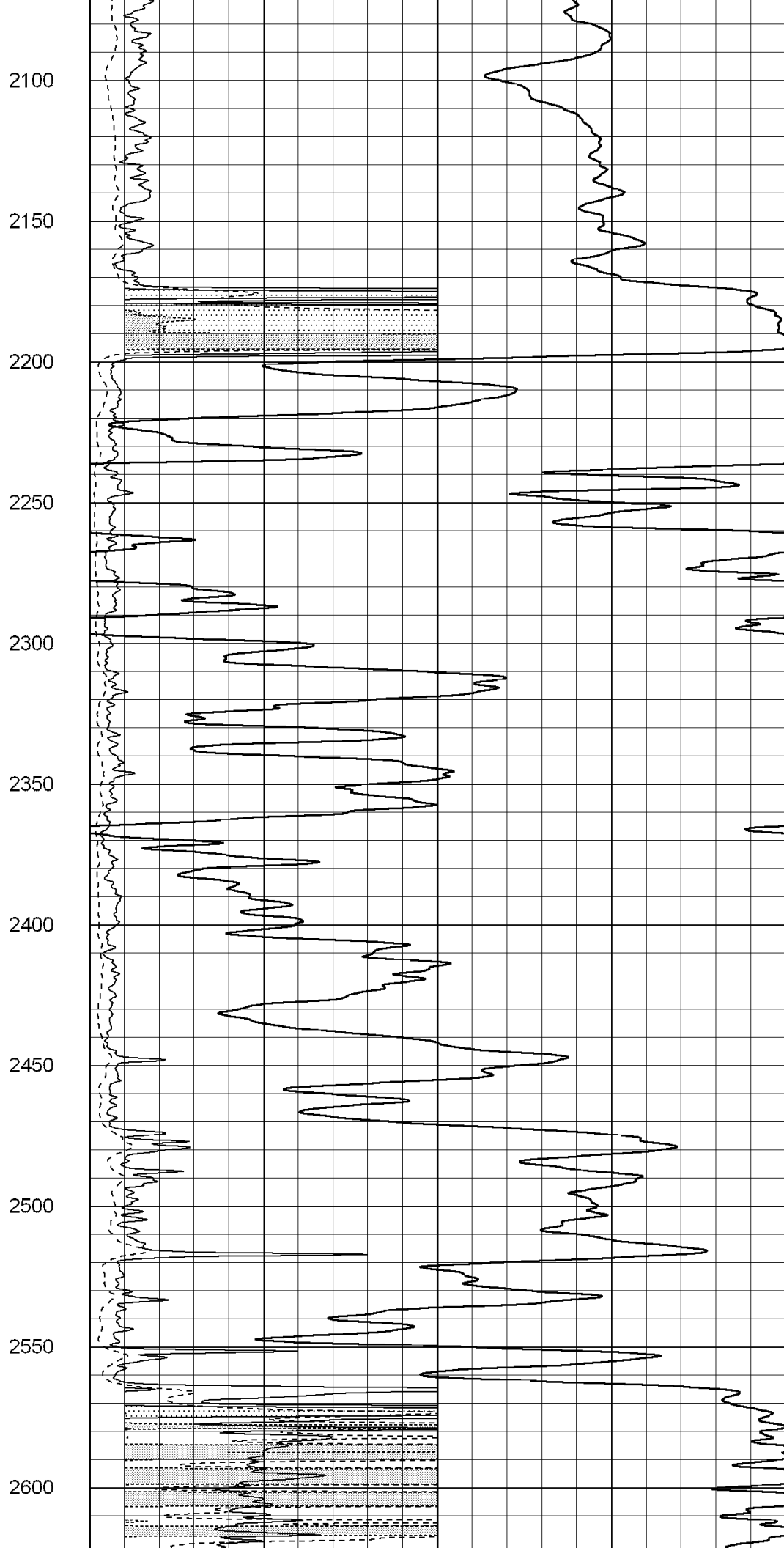
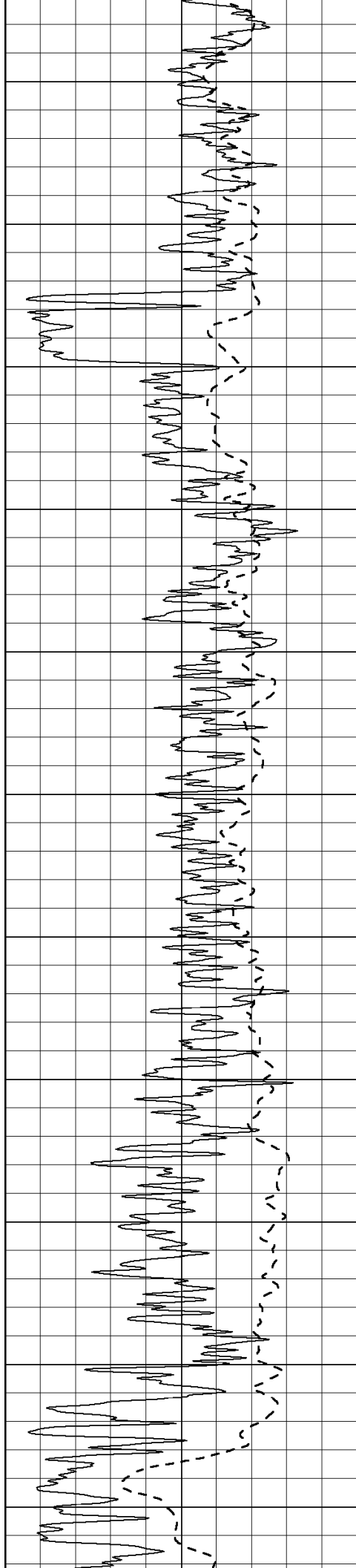
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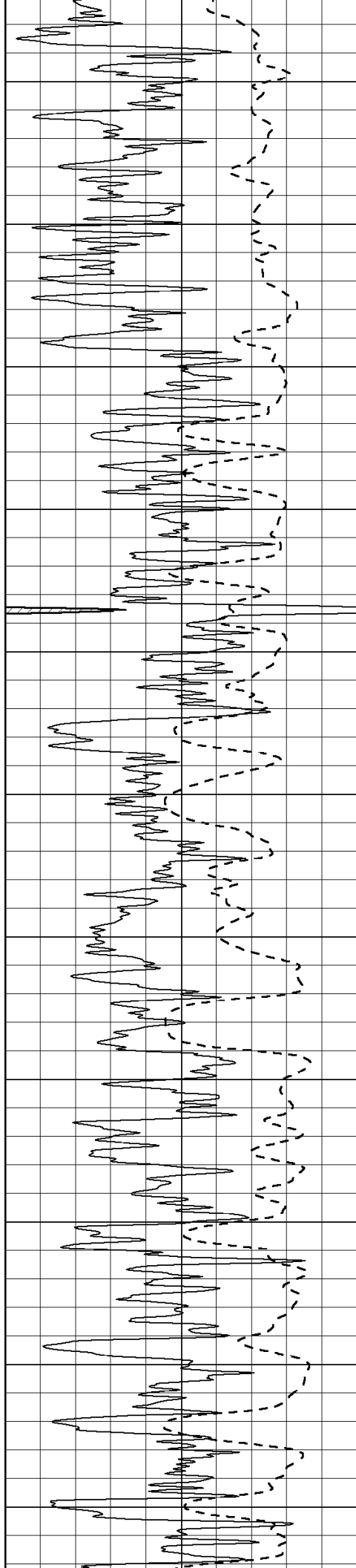
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2650

2700

2750

2800

2850

2900

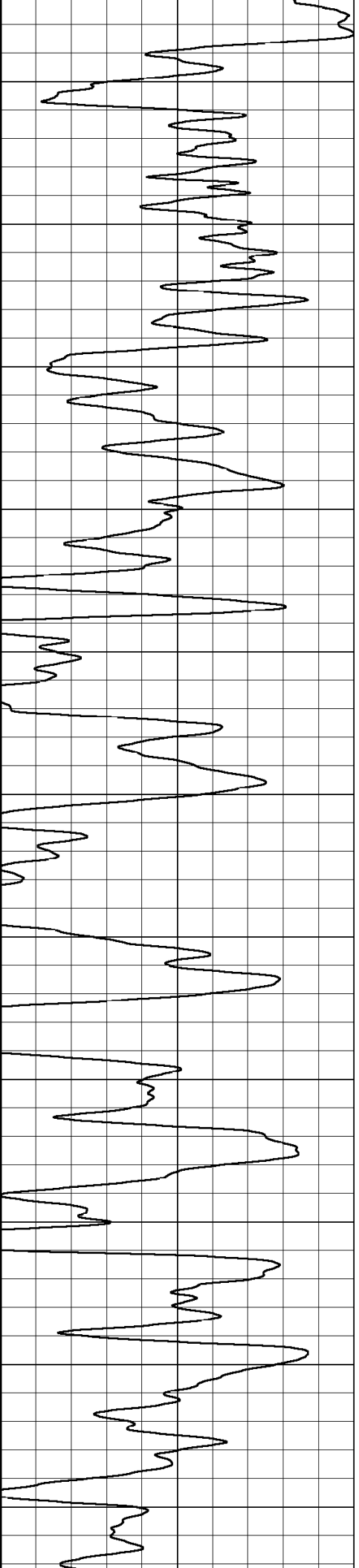
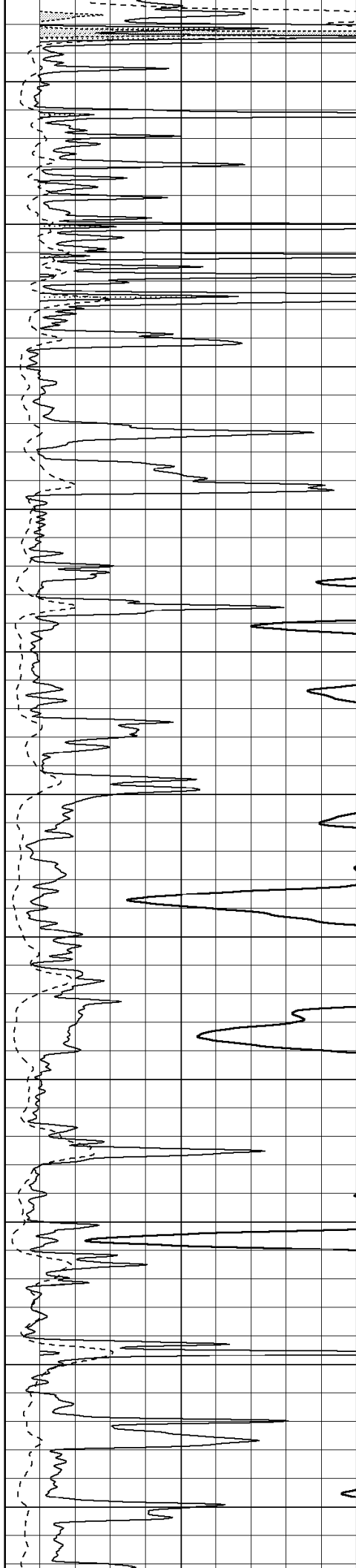
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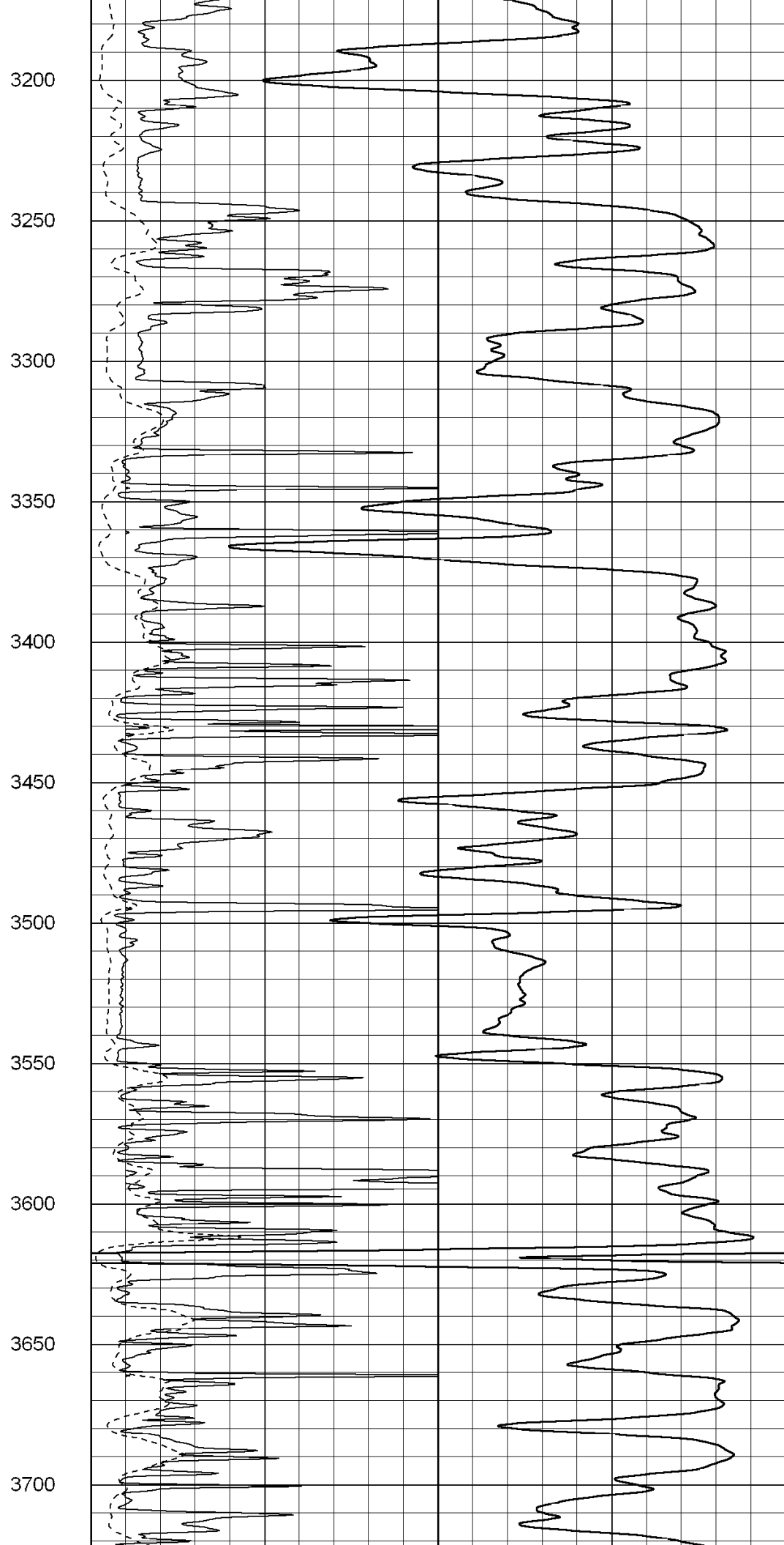
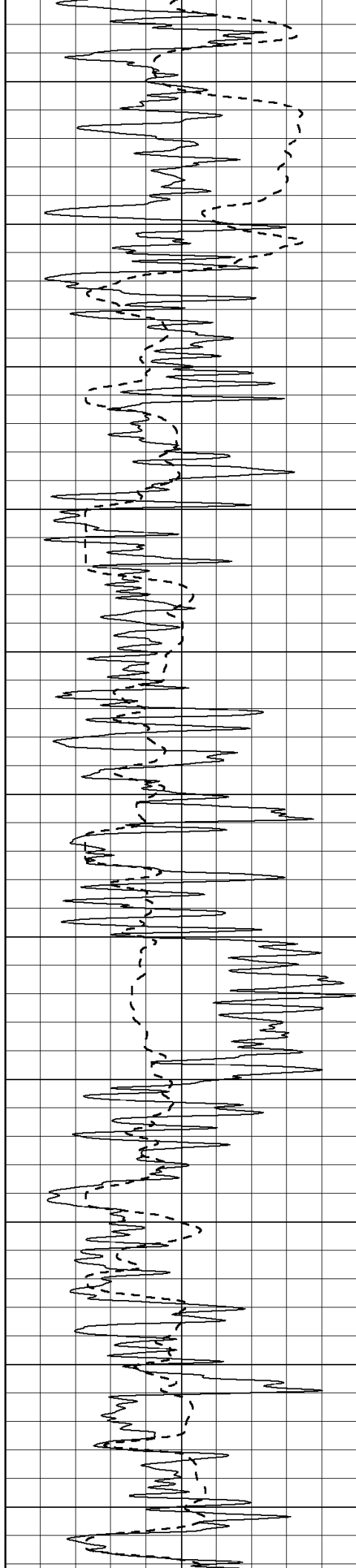
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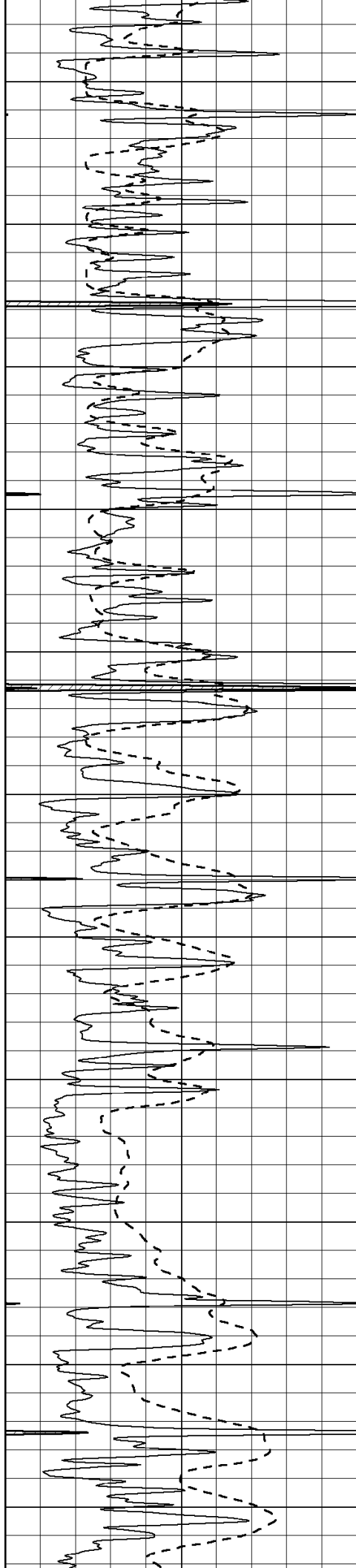
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3100

3150







3750

3800

3850

3900

3950

4000

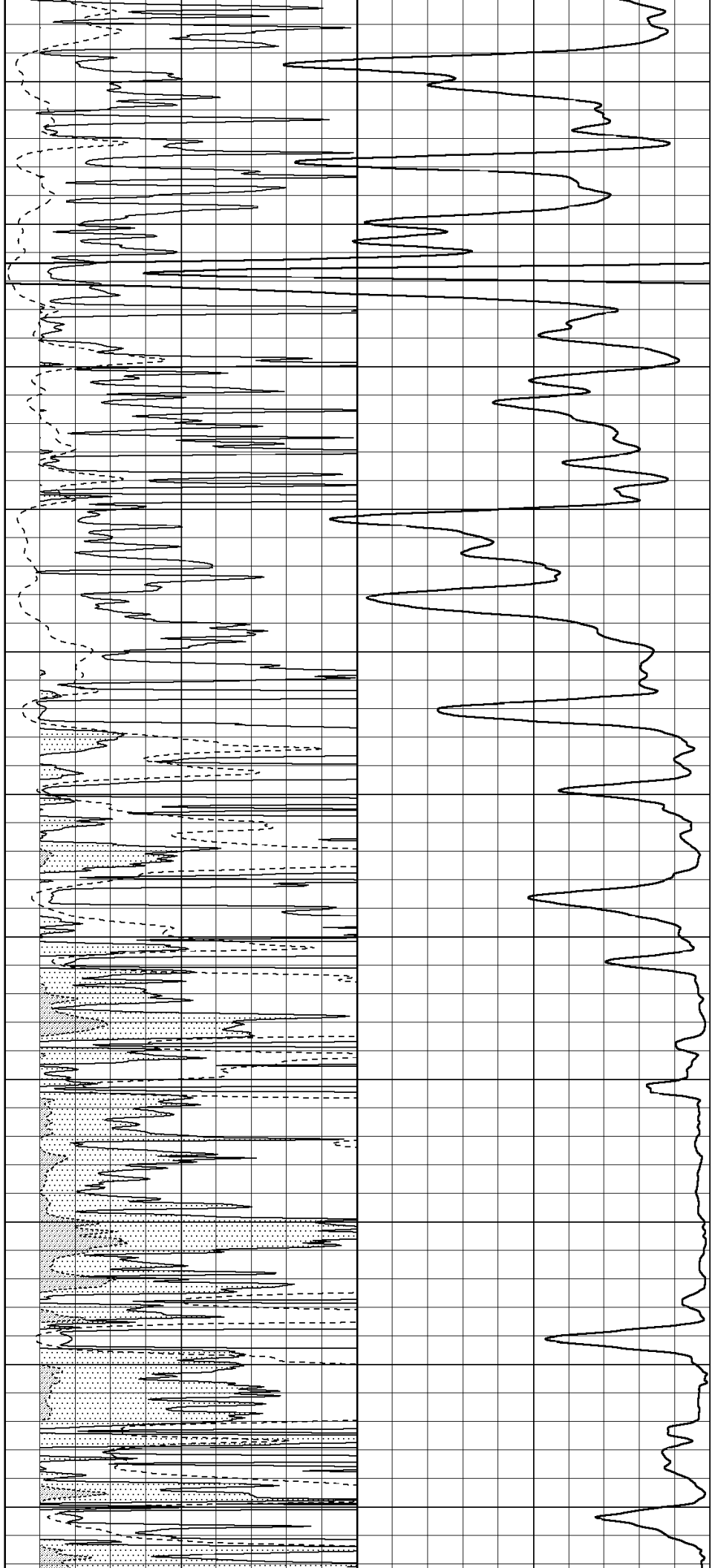
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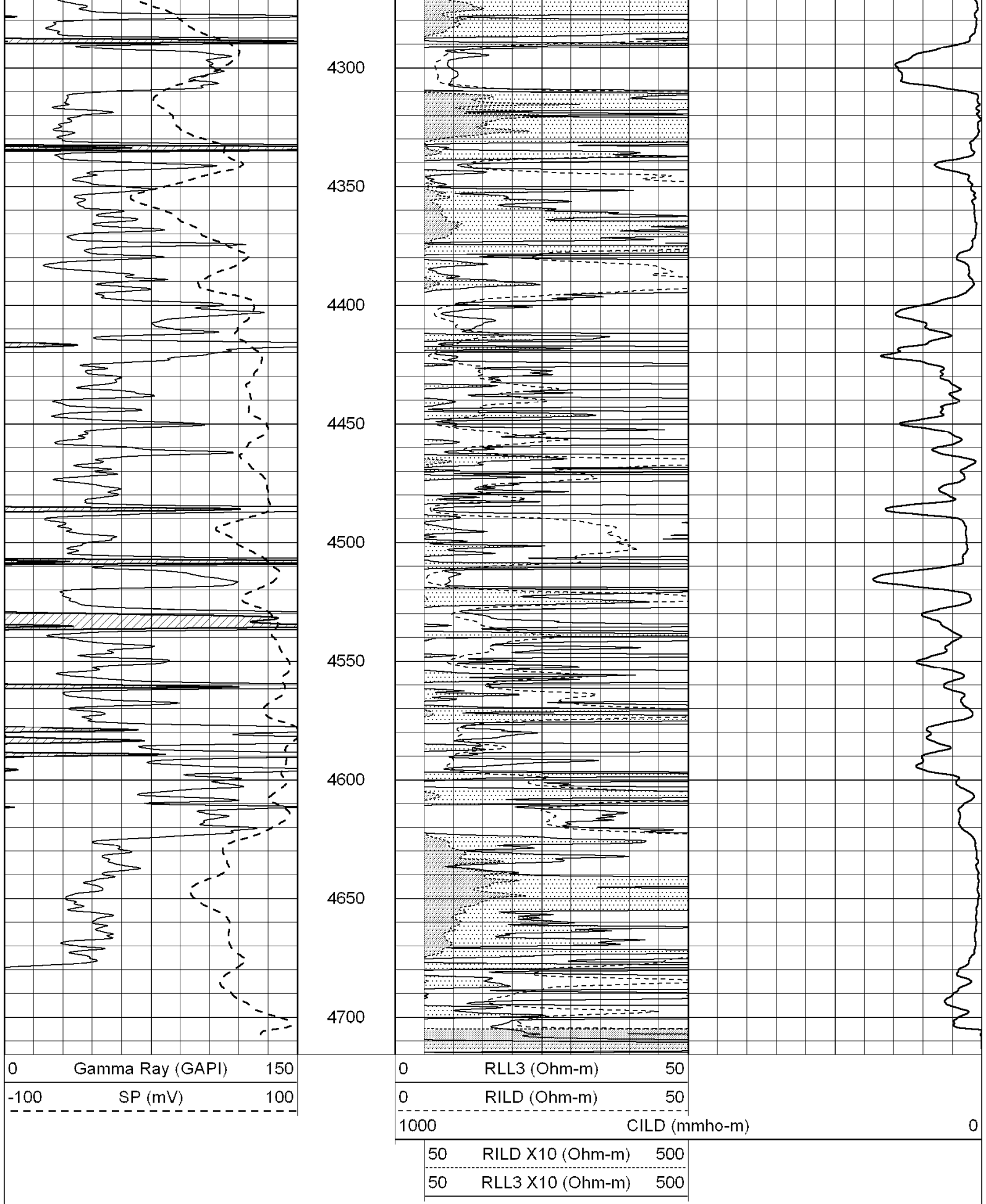
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4150

4200

4250







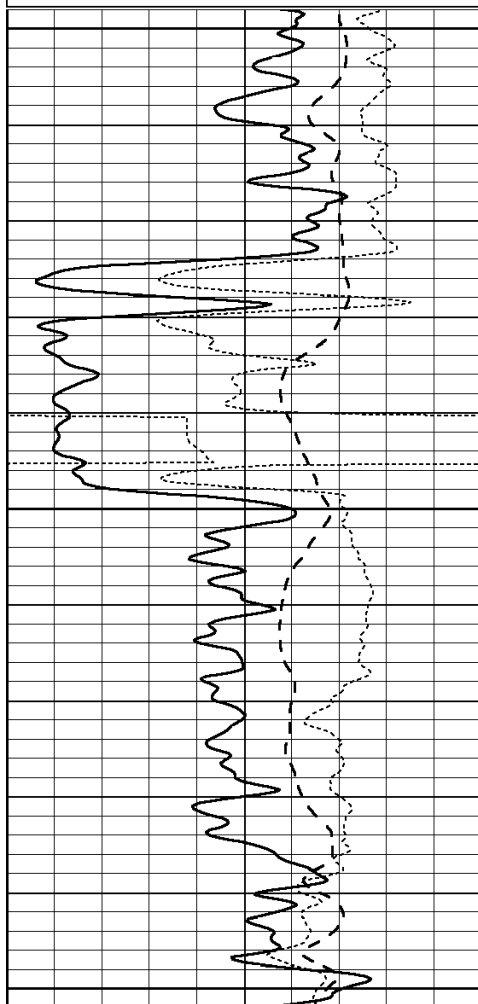
Hays,
Kansas

ANIT DRILL

Database File: 004061ddn.db
Dataset Pathname: pass3.7
Presentation Format: dil
Dataset Creation: Mon Aug 31 03:11:39 2009 by Calc Open-Cased 060407
Charted by: Depth in Feet scaled 1:240

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

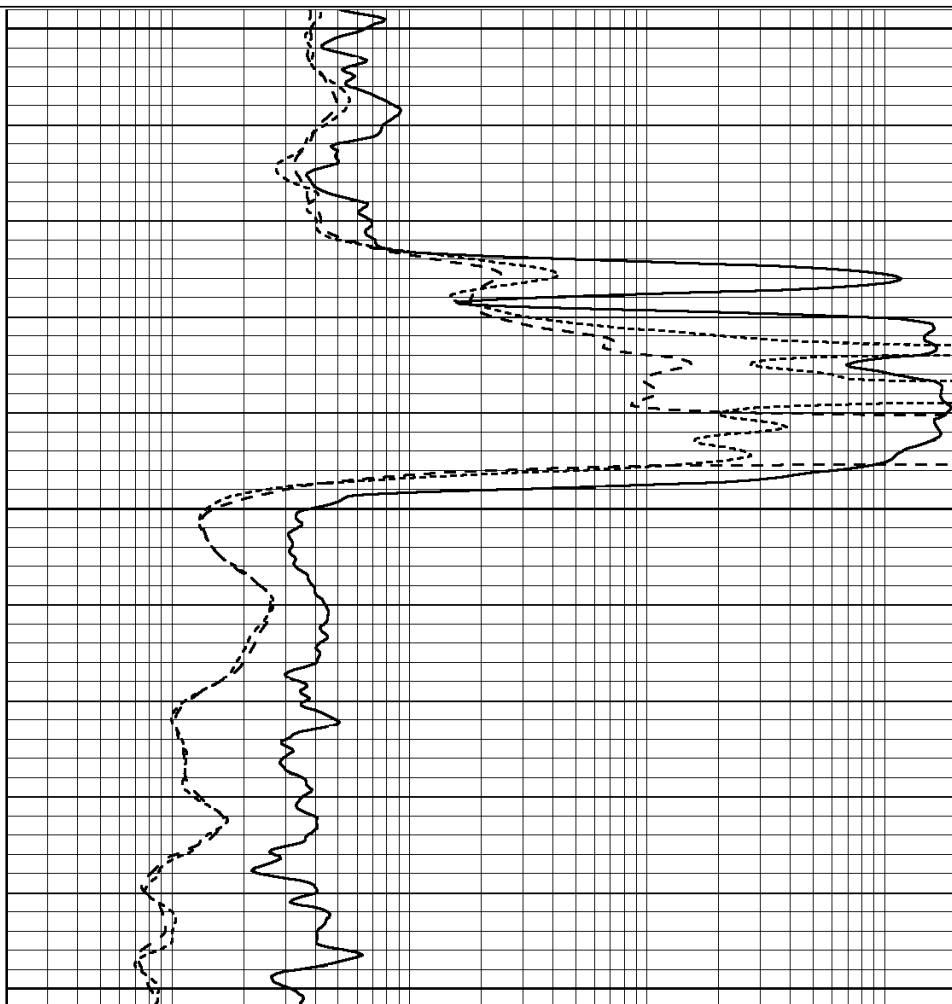
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



2150

2200

2250



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



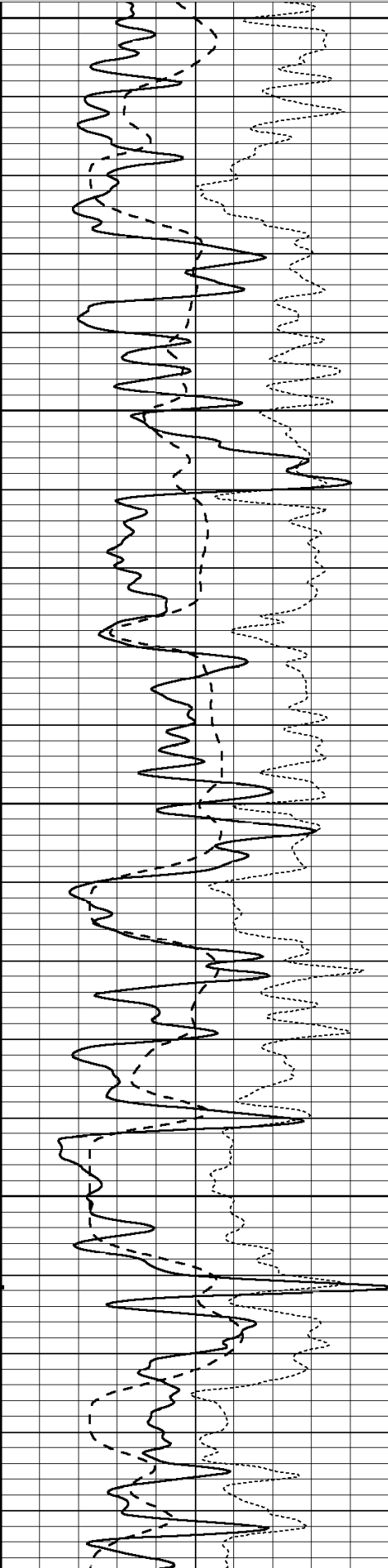
SUPERIOR
Hays,
Kansas

MAIN SECTION

Database File: 004061ddn.db
Dataset Pathname: pass3.8
Presentation Format: dil
Dataset Creation: Mon Aug 31 03:13:59 2009
Charted by: Depth in Feet scaled 1:240

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

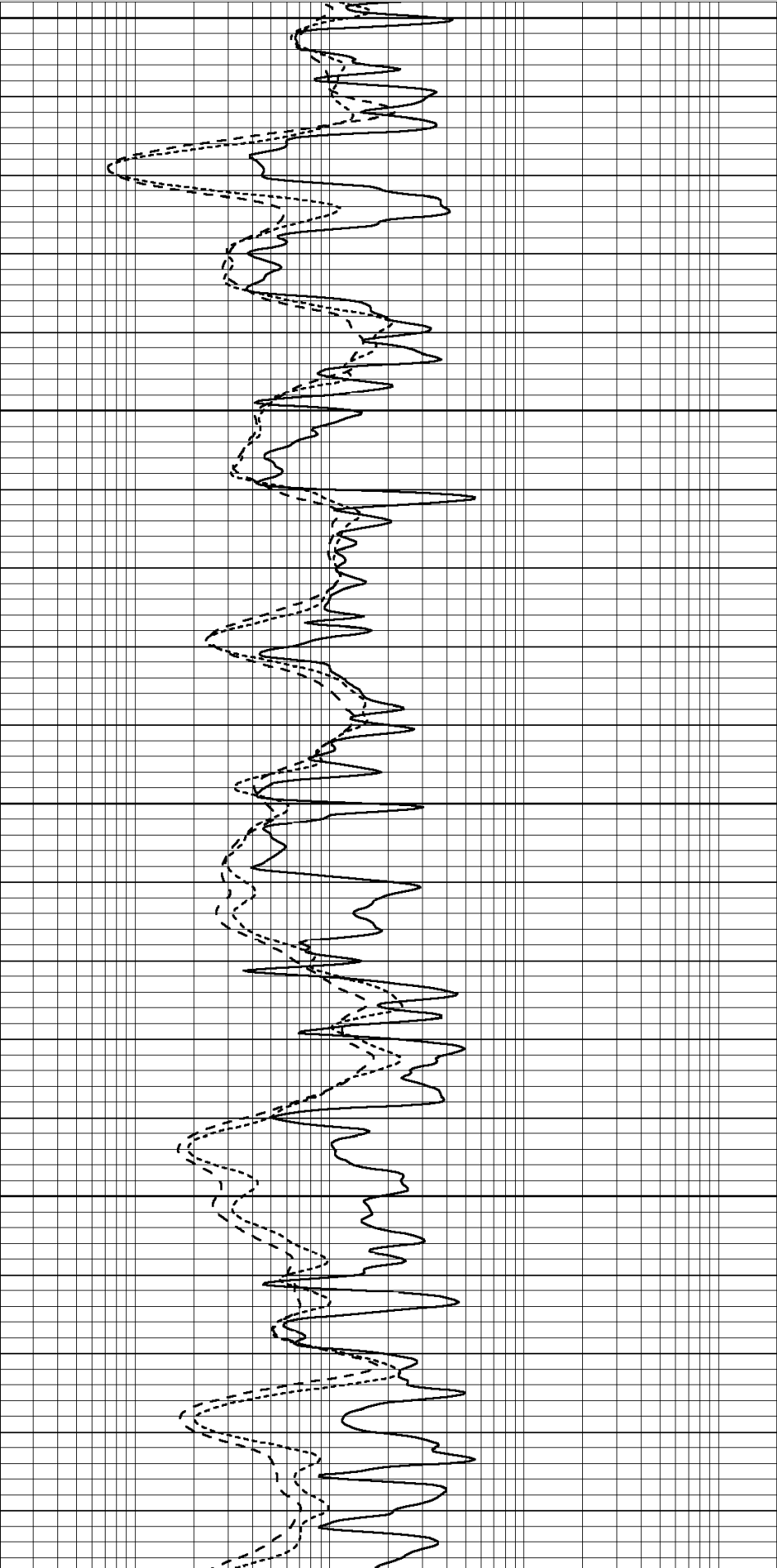


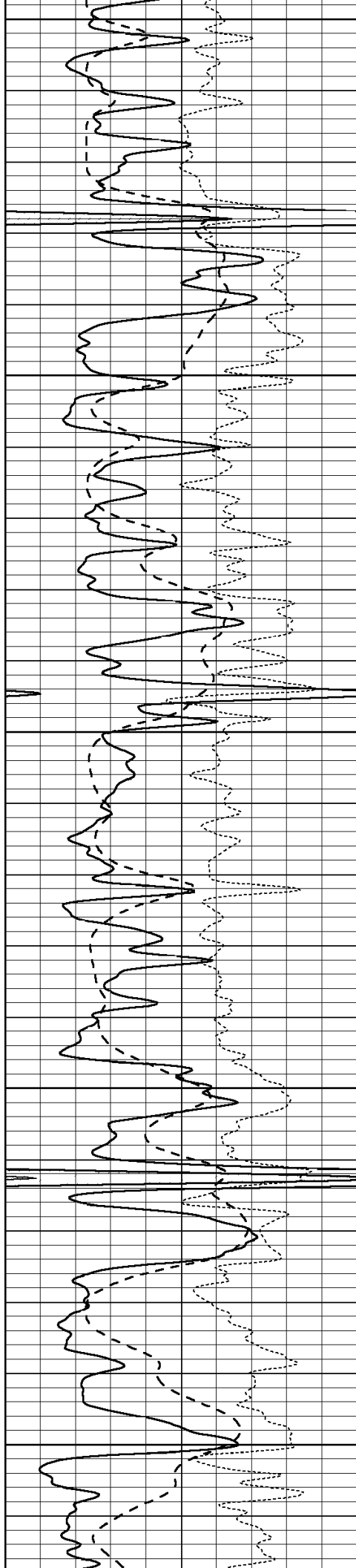
3600

3650

3700

3750





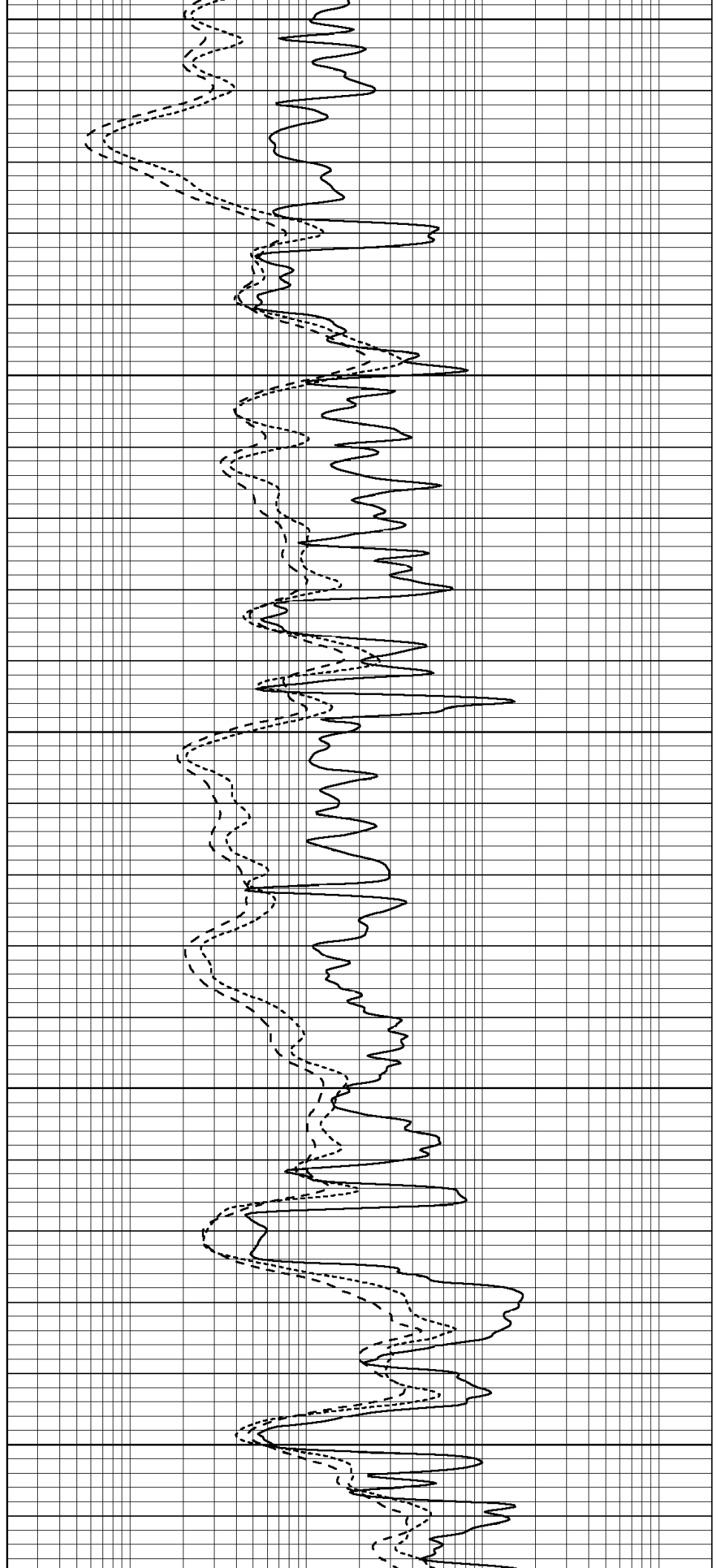
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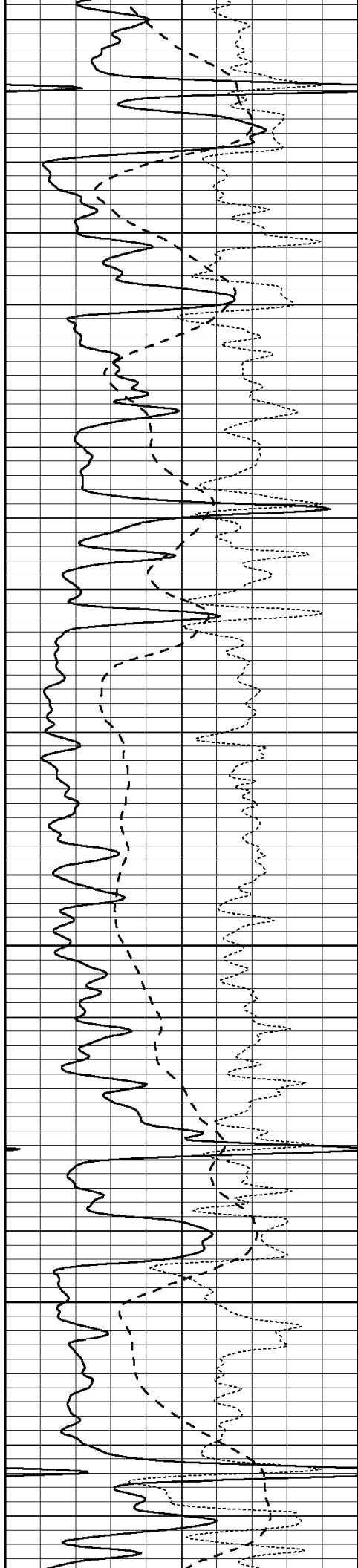
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3900

3950

4000



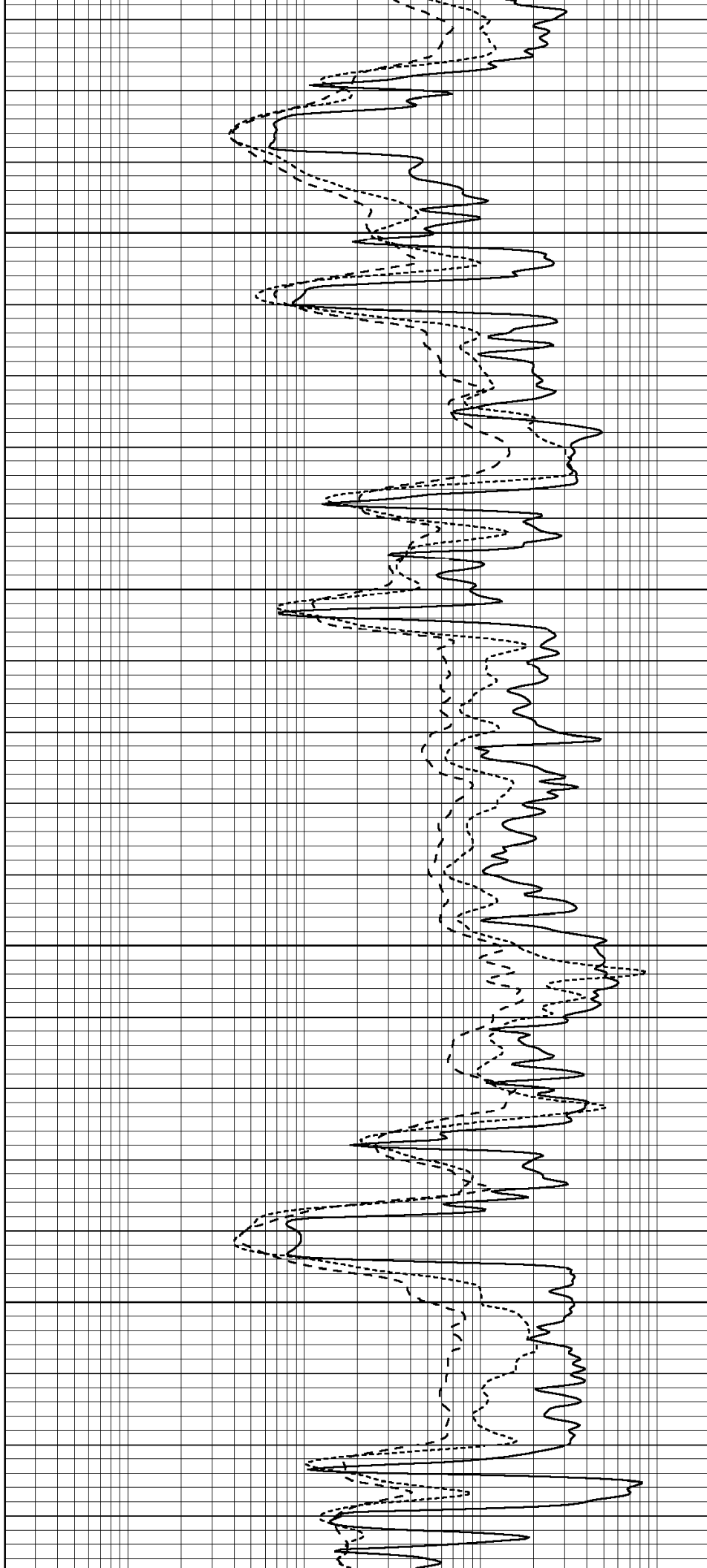


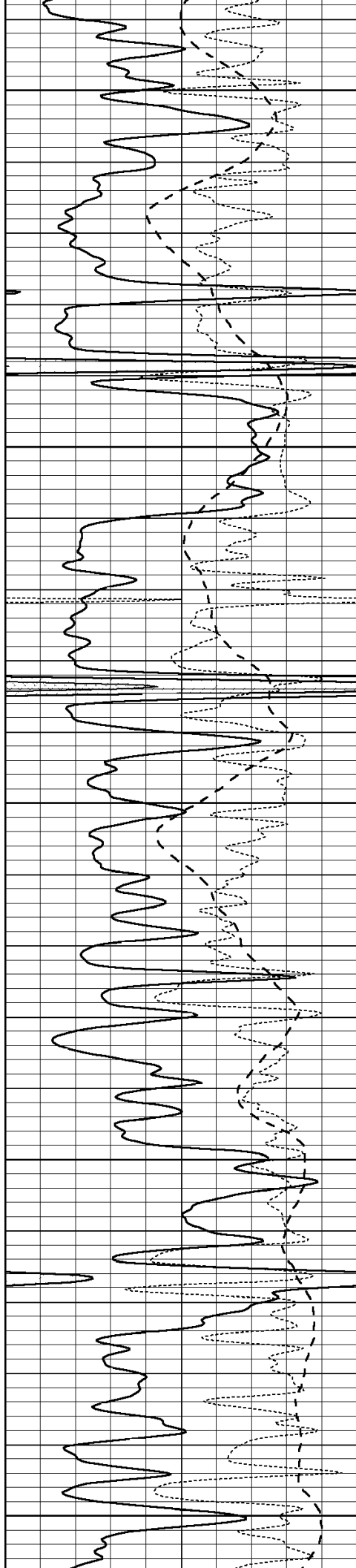
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4100

4150

4200





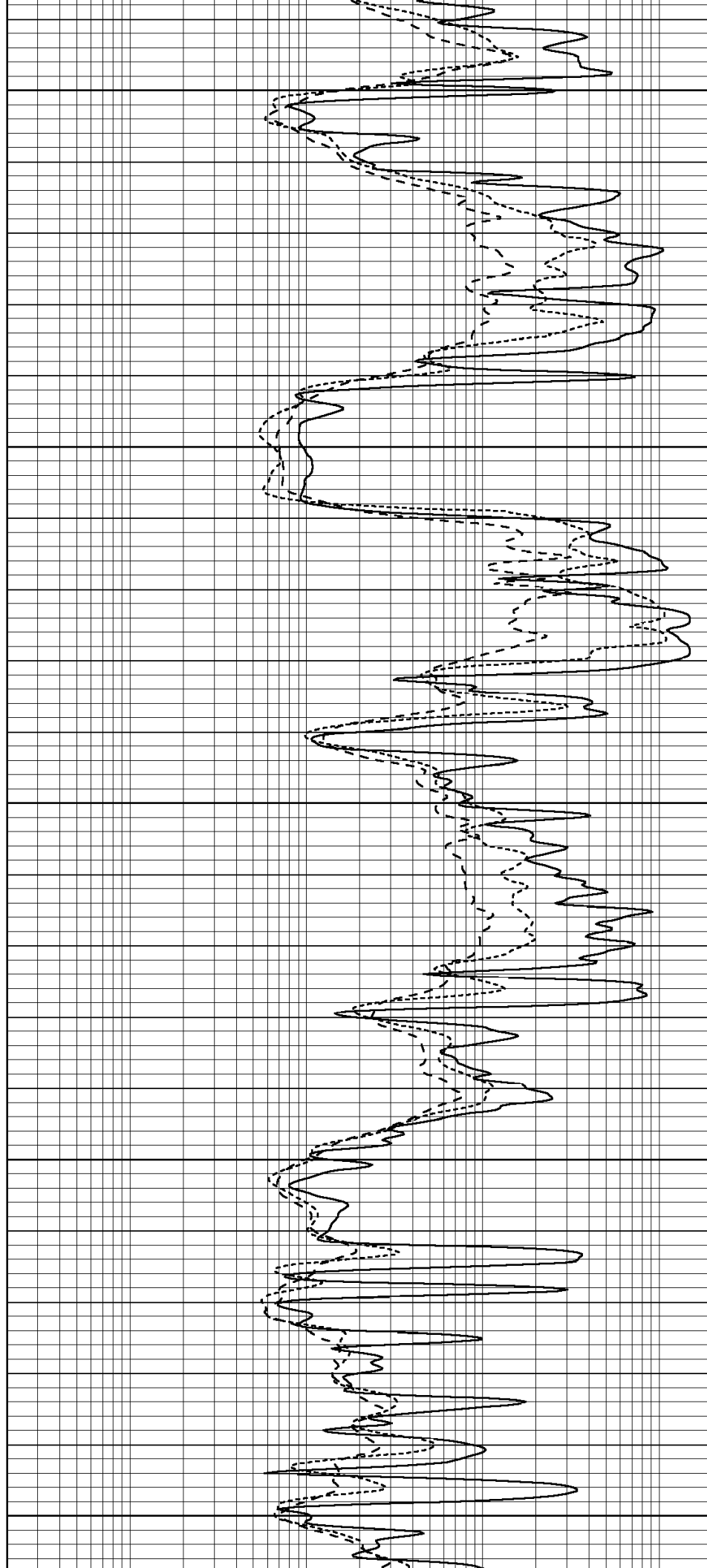
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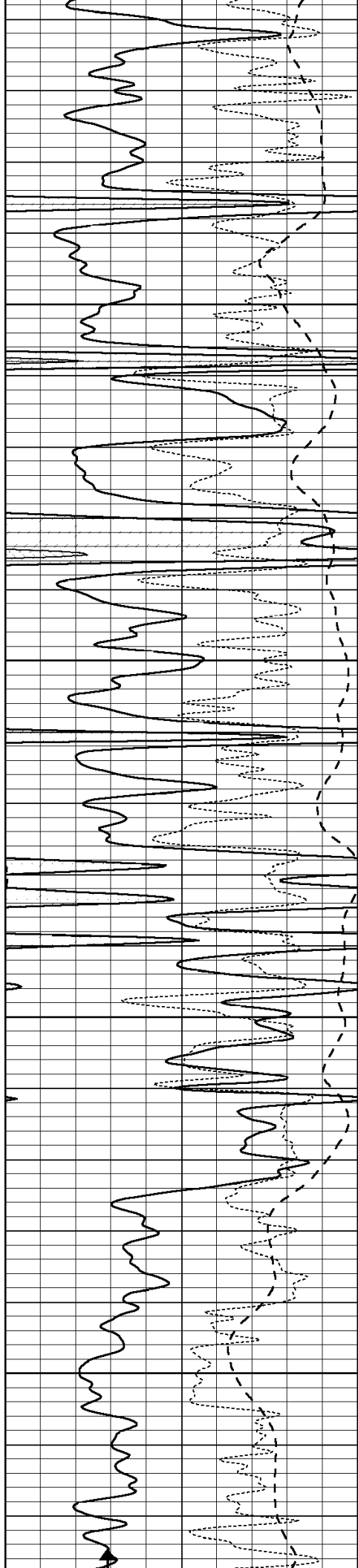
4300

4350

4400

4450



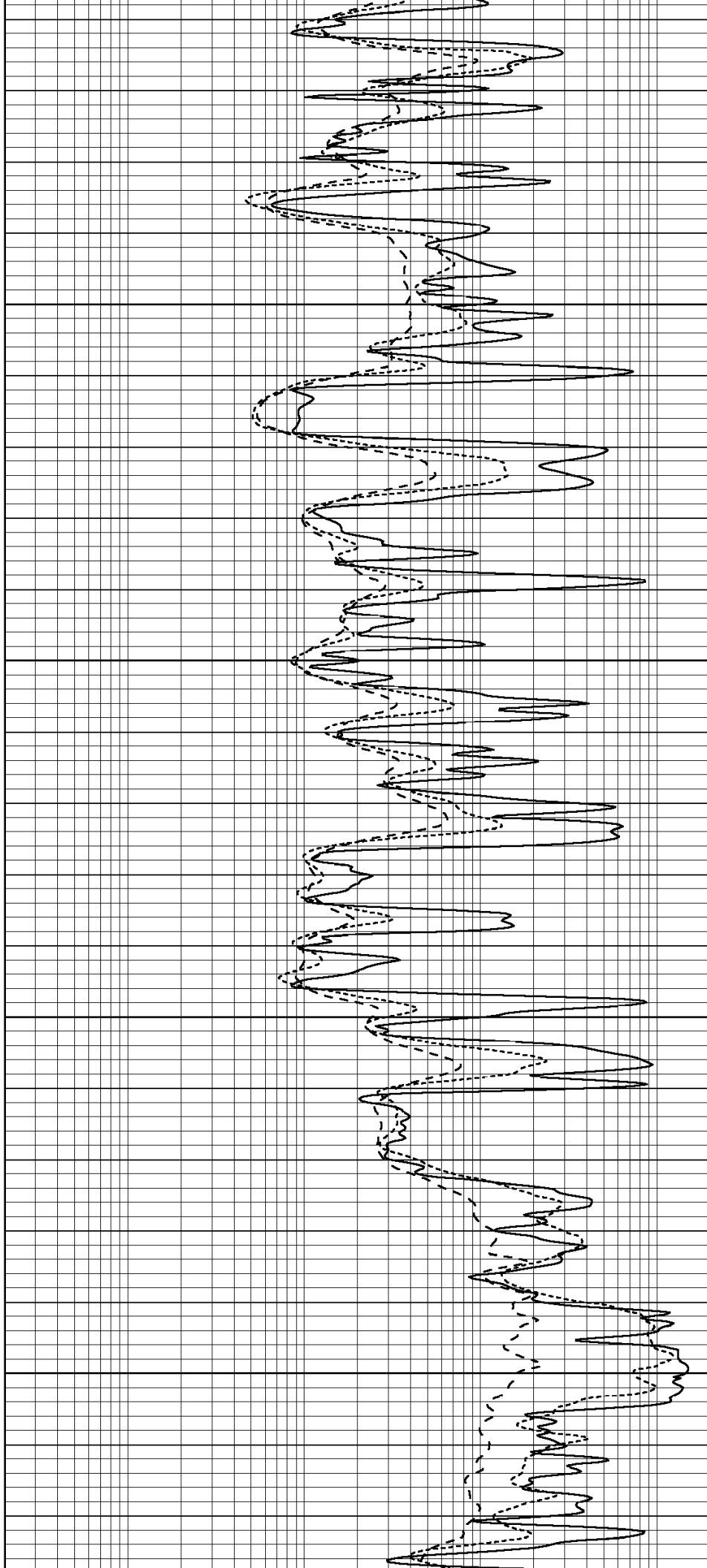


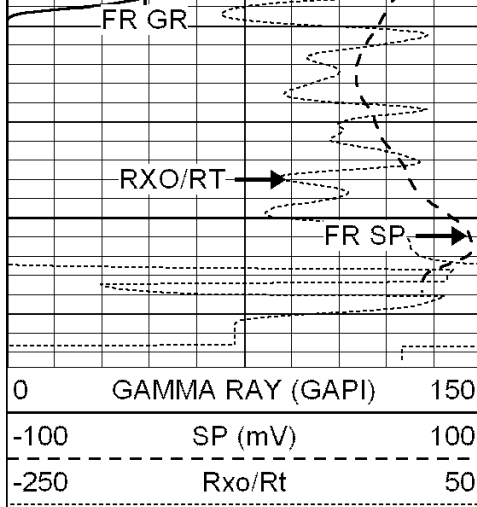
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4550

4600

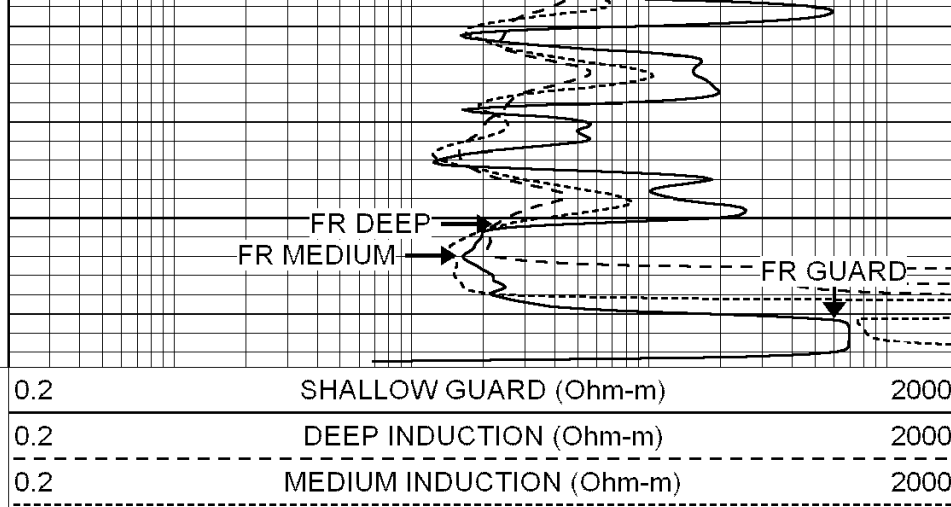
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4700

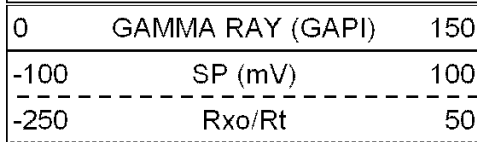
LTD 4712



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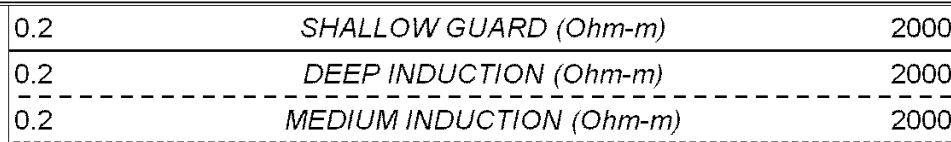
REPEAT SECTION

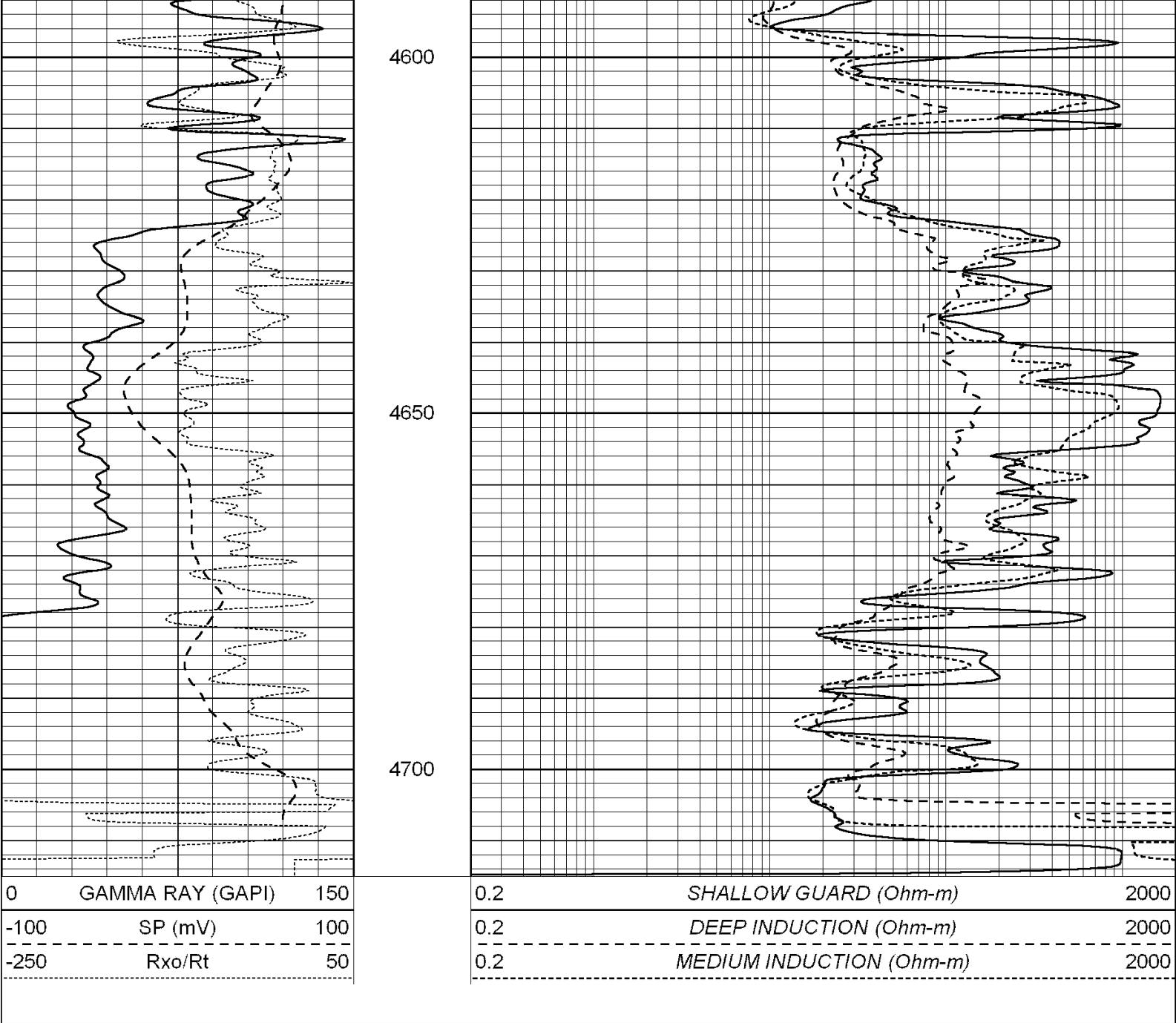
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 Presentation Format: dil
 Dataset Creation: Mon Aug 31 01:42:10 2009 by Calc Open-Cased 060407
 Charted by: Depth in Feet scaled 1:240



4500

4550





Calibration Report									
Database File:		004061ddn.db							
Dataset Pathname:		pass3.8							
Dataset Creation:		Mon Aug 31 03:13:59 2009							
Dual Induction Calibration Report									
Serial-Model: Performed:				DIL2-GEAR Mon Aug 31 01:55:58 2009					
Readings					References			Results	
Loop:	Air	Loop		Air	Loop		m	b	
Deep	0.002	0.667	V	0.000	400.000	mmho-m	650.000	-15.000	
Medium	-0.003	0.739	V	0.000	462.500	mmho-m	720.000	-35.000	
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: 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	Readings	Reference	
Low Ref	2.6	6.3	
High Ref	5.0	14.0	
	Gain: 3.2		Offset: -2.2

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:	Mon Aug 31 01:58:03 2009
Calibrator Value:	200.0 GAPI
Background Reading:	0.0 cps
Calibrator Reading:	189.0 cps
Sensitivity:	0.8500 GAPI/cps