



SUPERIOR
Hays,
Kansas

DUAL INDUCTION LOG

Company	CAPTIVA II, LLC.		
Well	EAKIN #5-7		
Field	LARNED WEST		
County	PAWNEE	State	KANSAS
Location:	AP1 #: 15-145-21655-0000		Other Services CDL/CNL/PE MEL/SONIC
Permanent Datum Log Measured From Drilling Measured From		GROUND LEVEL KELLY BUSHING 11' A.G.L. KELLY BUSHING	
SEC 7 TWP 22S RGE 16W		Elevation K.B. 2021 D.F. 2019 G.L. 2010	
Date	10/28/11		
Run Number	ONE		
Depth Driller	4050		
Depth Logger	4050		
Bottom Logged Interval	4048		
Top Log Interval	00		
Casing Driller	8 5/8"@1026'		
Casing Logger	1024		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 7,800 PPM	
Density / Viscosity	9.3/53		
pH / Fluid Loss	10.0/6.4		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.600@80F		
Rmt @ Meas. Temp	.450@80F		
Rmc @ Meas. Temp	.720@80F		
Source of Rmt / Rmc	MEASUREMENT		
Rm @ BHT	.410@117F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	9:00 A.M.		
Maximum Recorded Temperature	117F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	CHARLIE STURDAVANT		

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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

LARNED, KS. (DOWN TOWN) 3/4W. ON HWY 56 JUST PAST SECOND BRIDGE, 1/2S., W. INTO@TANK
BATTERY THEN S. ALONG RIVER



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MAIN SECTION

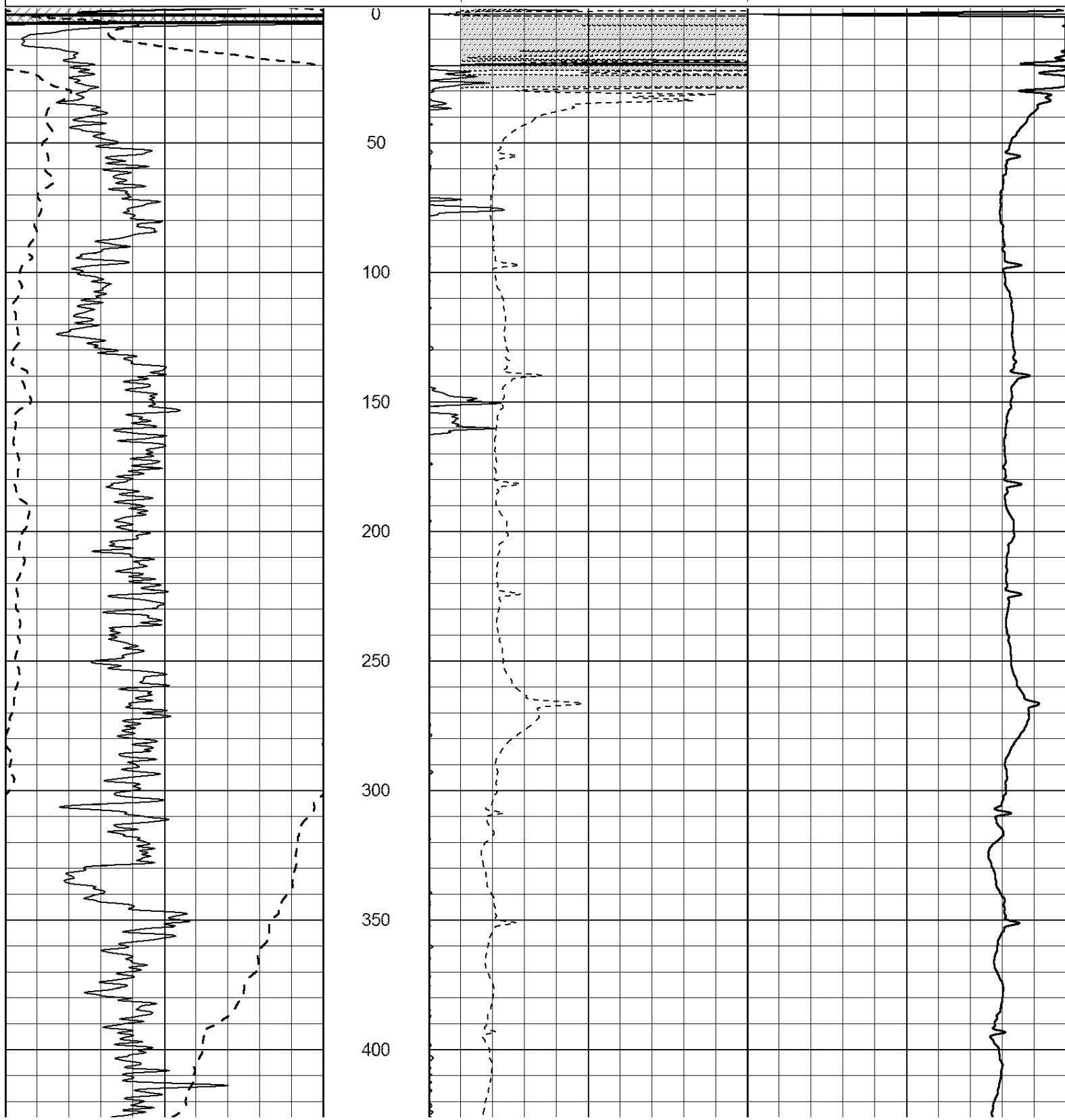
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Dataset Pathname: pass3.4
Presentation Format: dil2
Dataset Creation: Fri Oct 28 10:42:36 2011 by Calc Open-Cased 110302
Charted by: Depth in Feet scaled 1:600

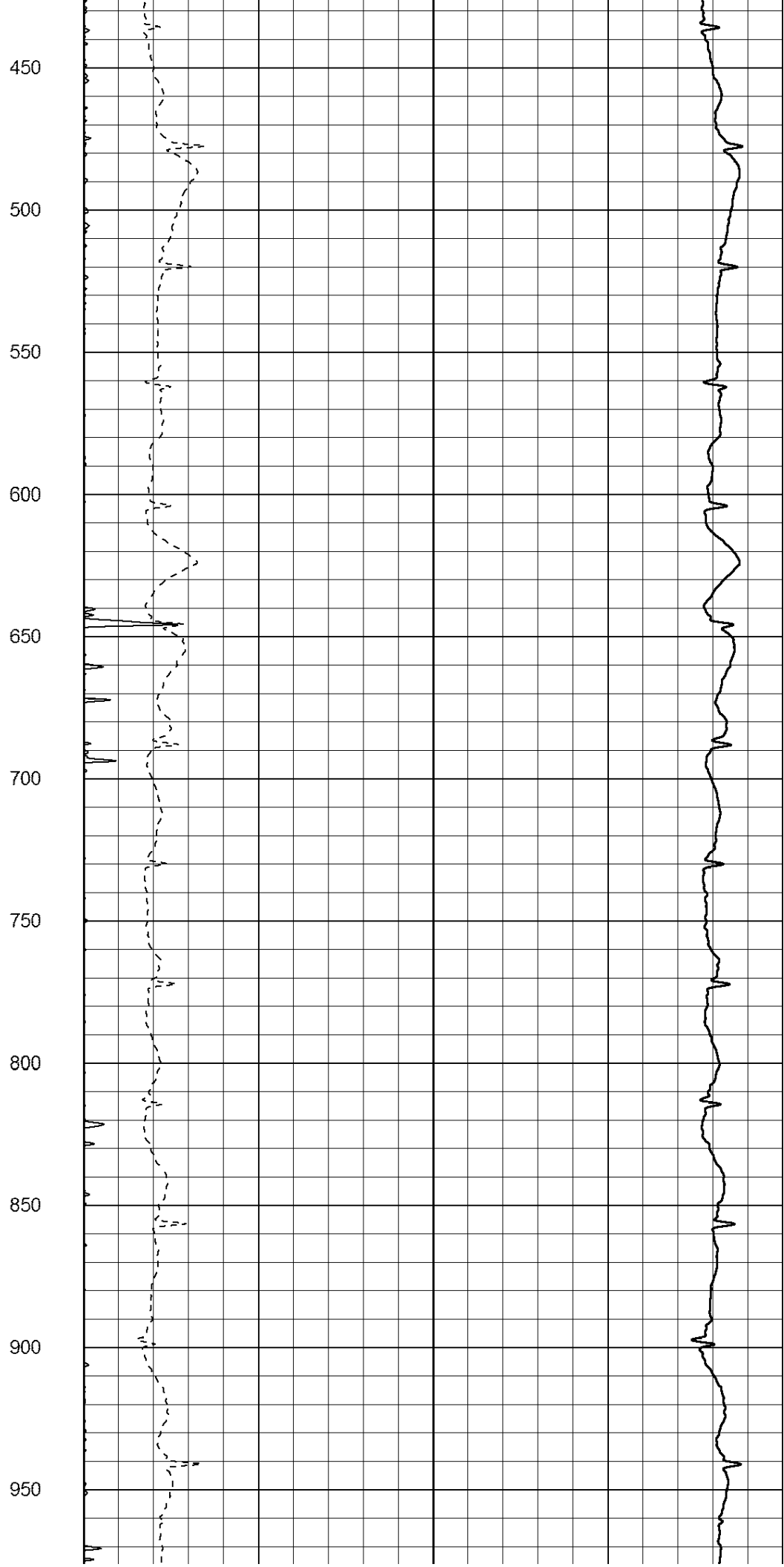
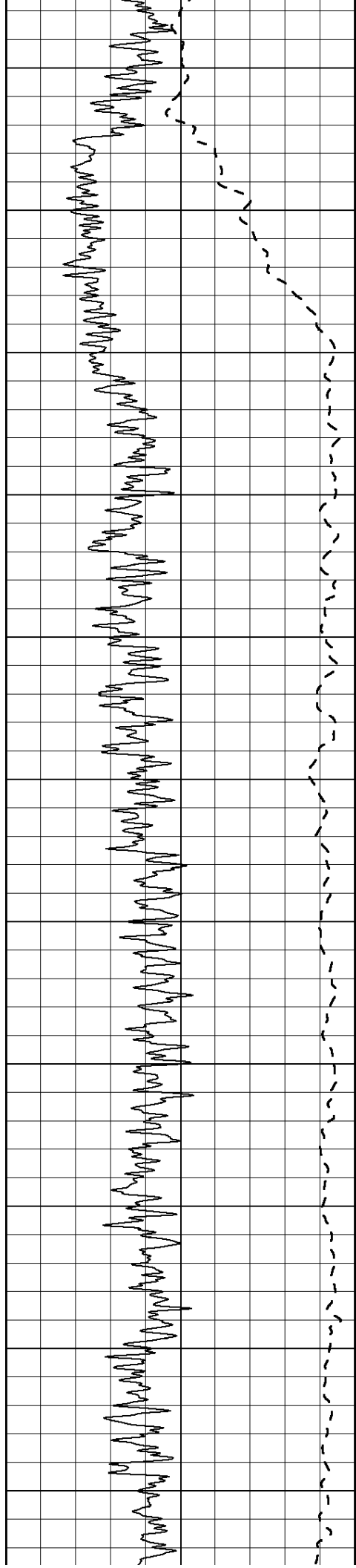
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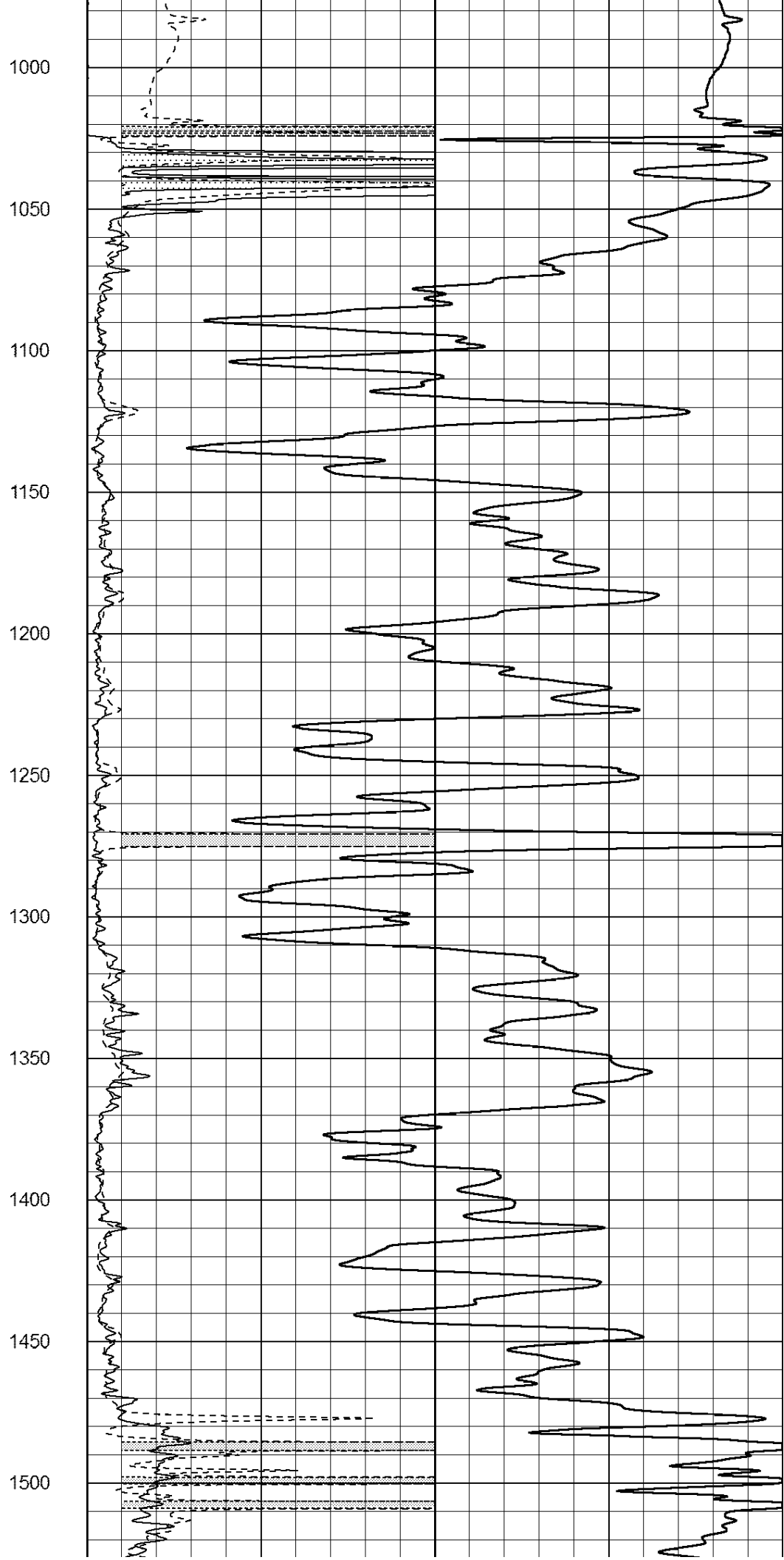
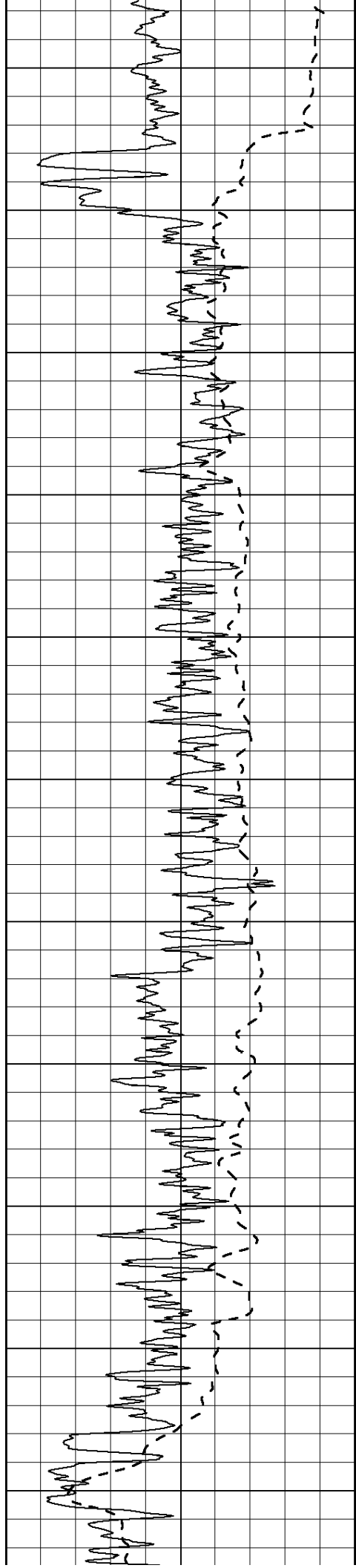
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0	RILD (Ohm-m)	50

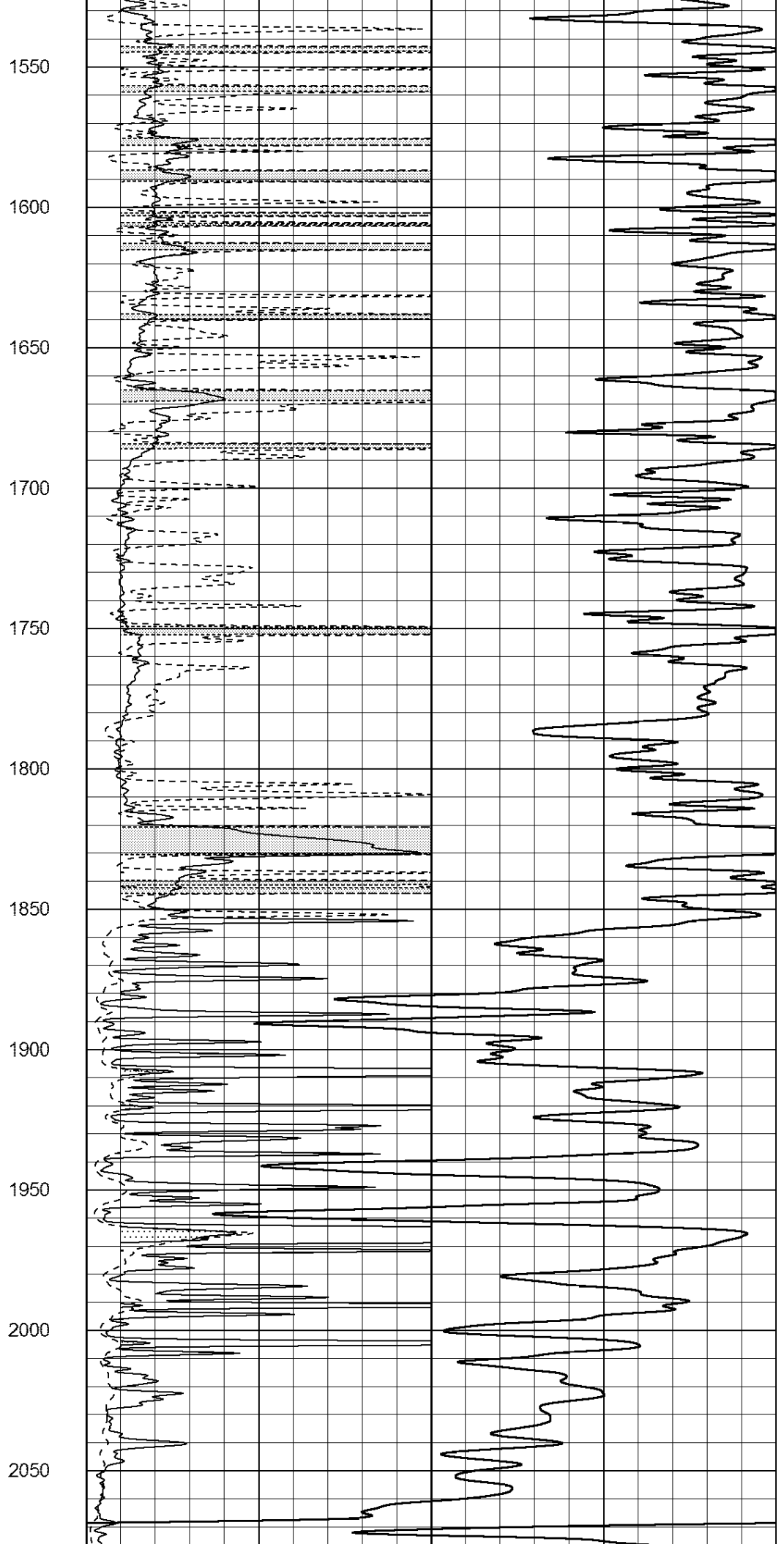
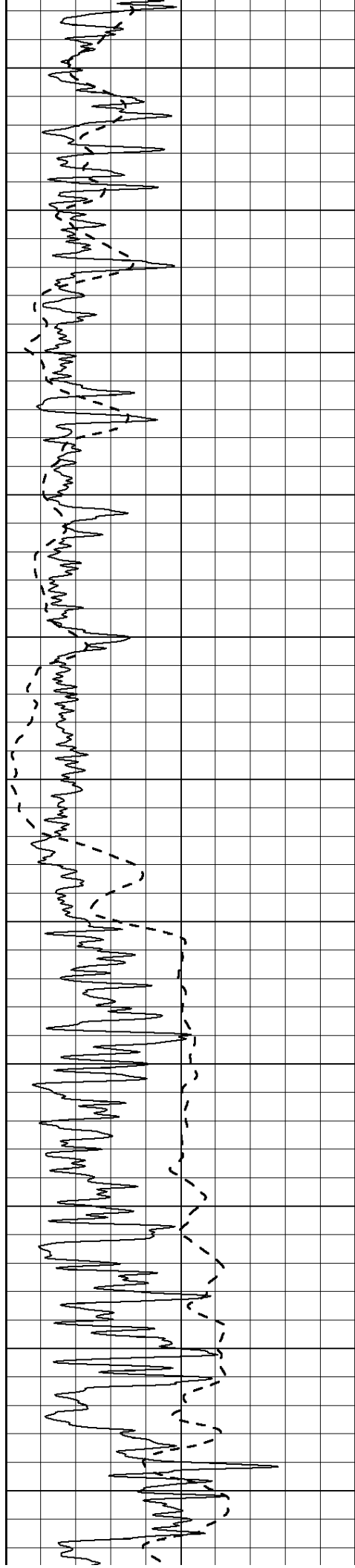
1000	CILD (mmho/m)	0
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50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500









2100

2150

2200

2250

2300

2350

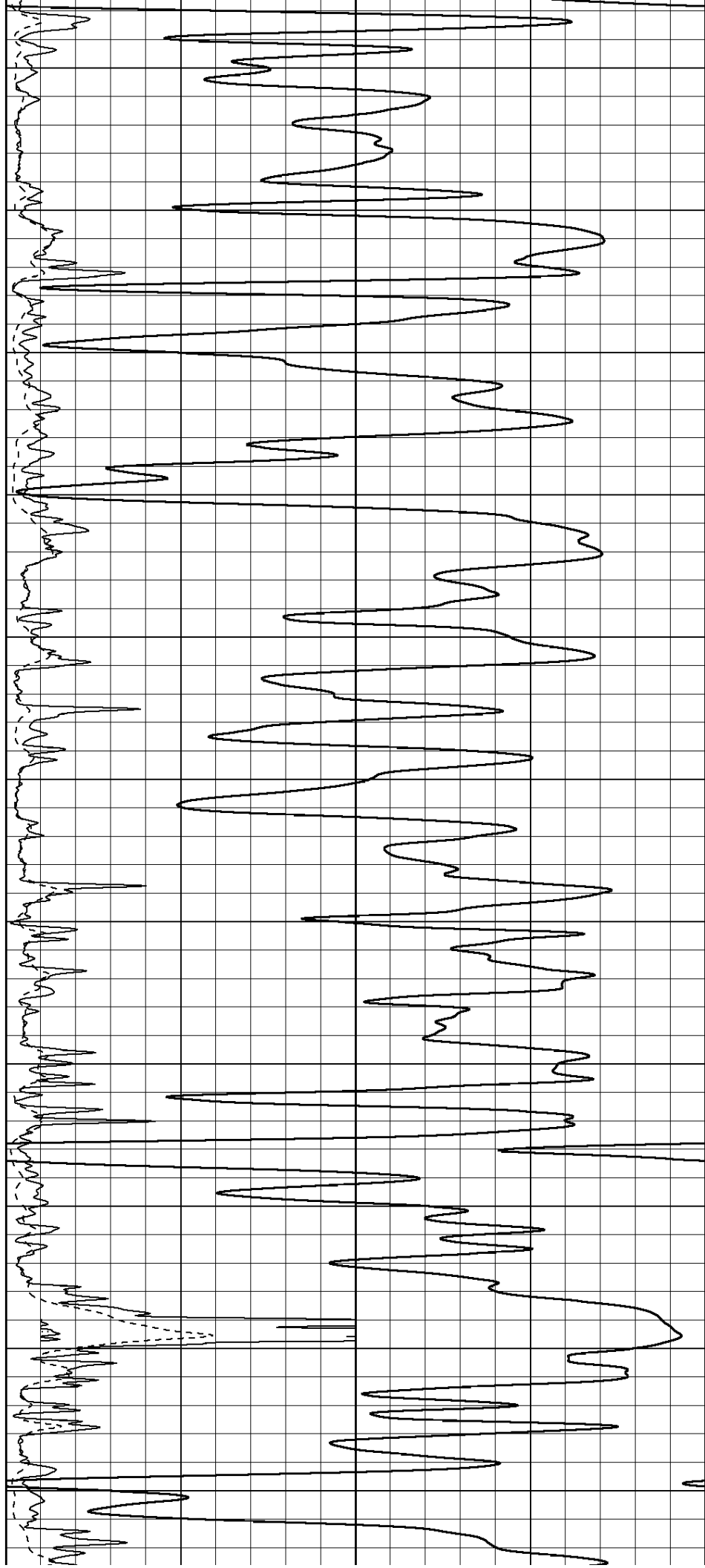
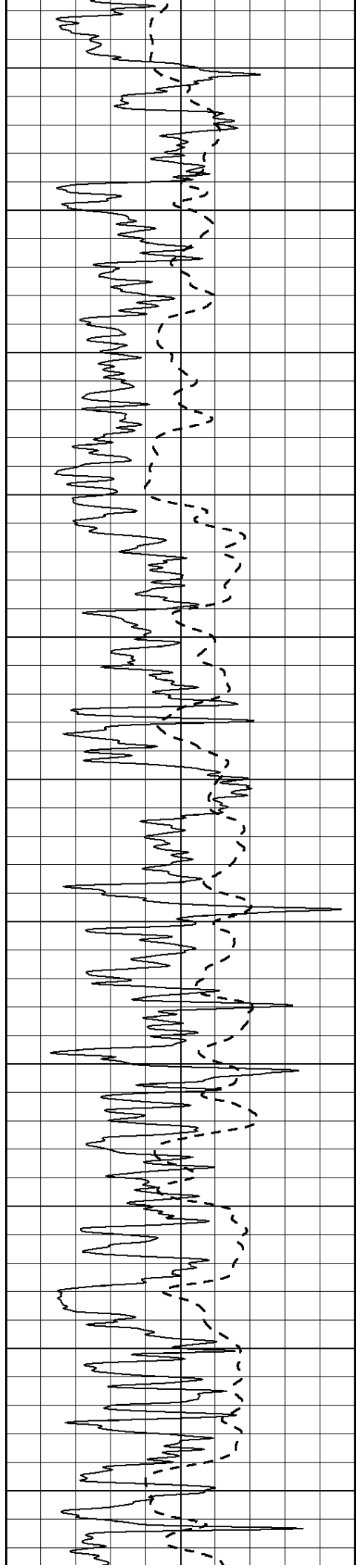
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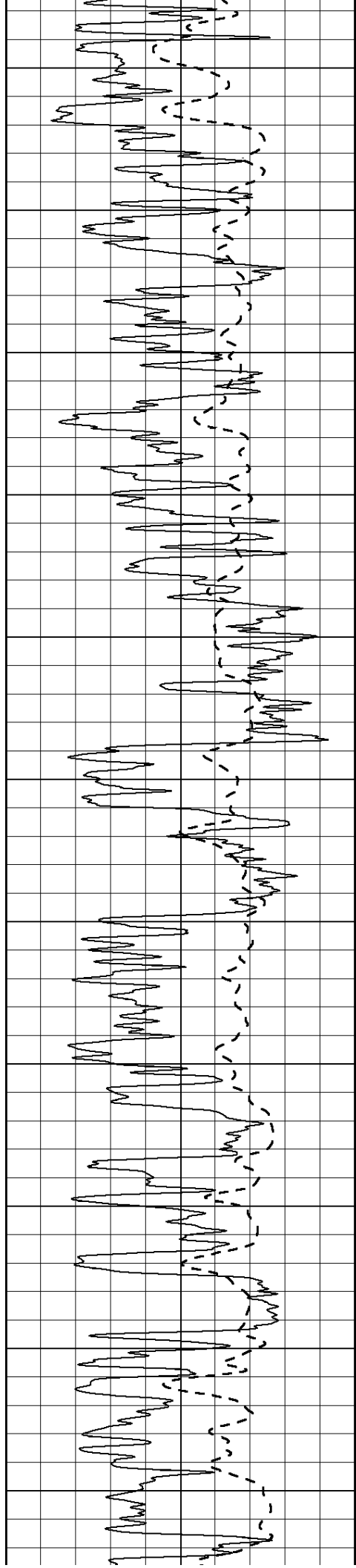
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2500

2550

2600





2650

2700

2750

2800

2850

2900

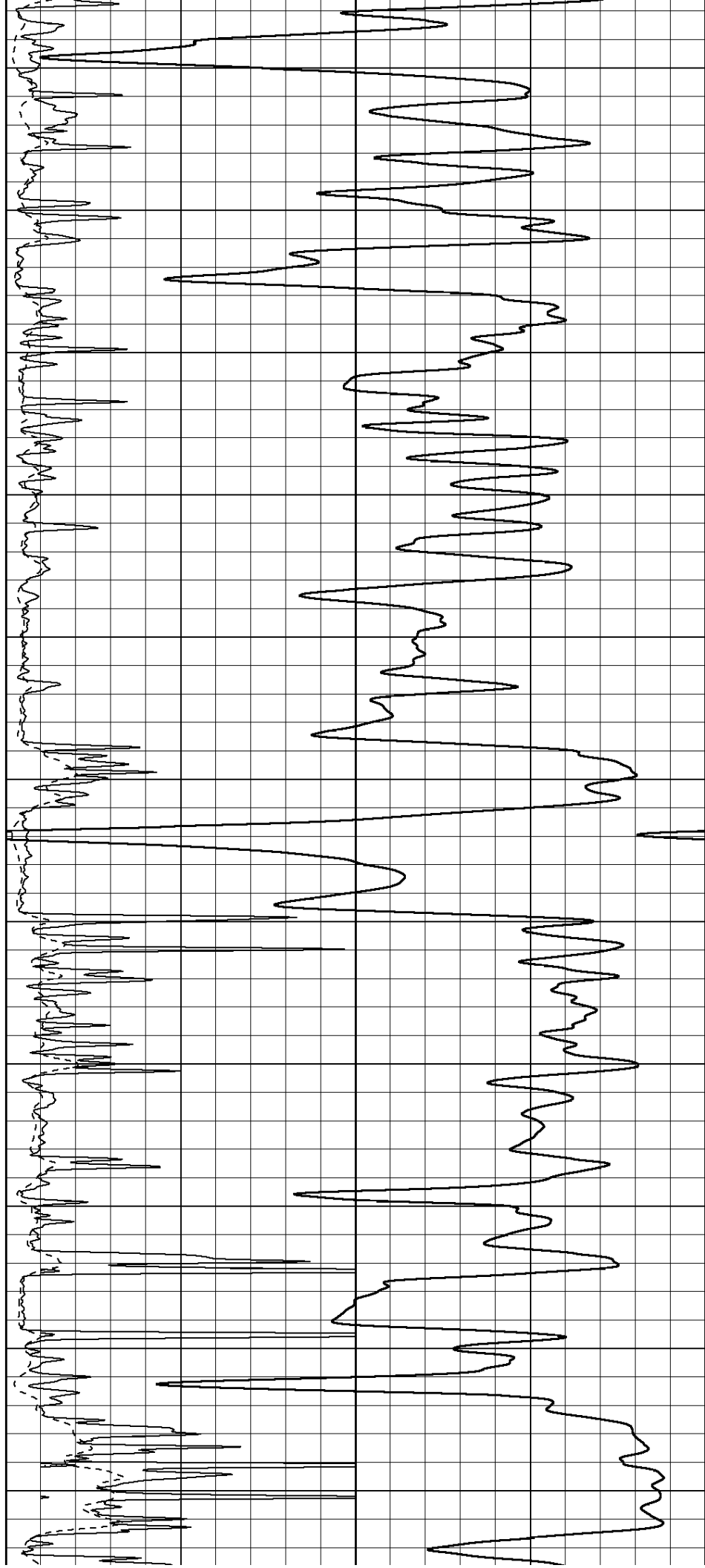
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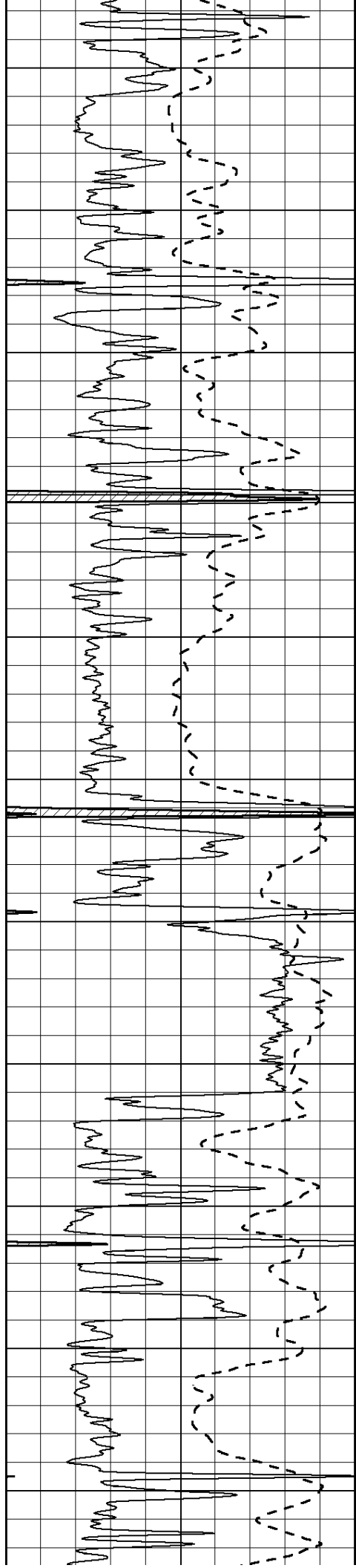
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3050

3100

3150





3200

3250

3300

3350

3400

3450

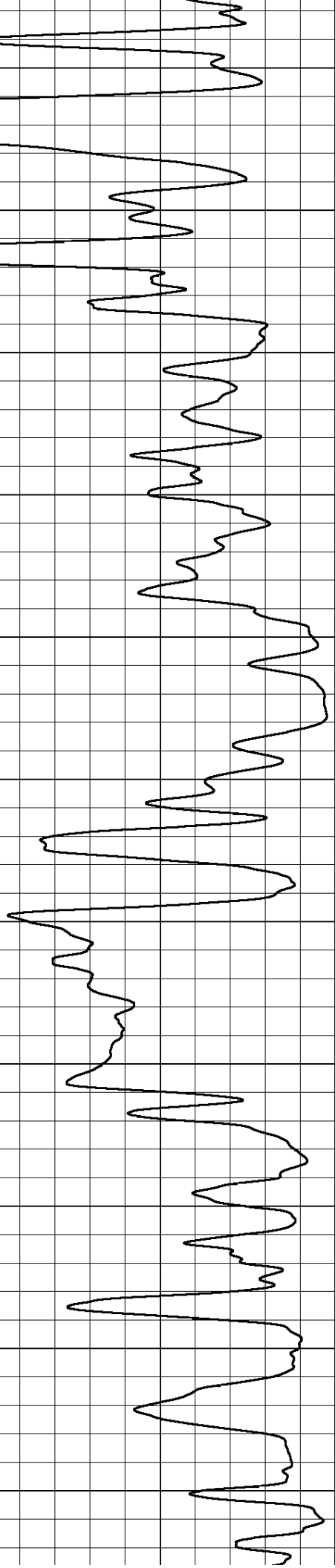
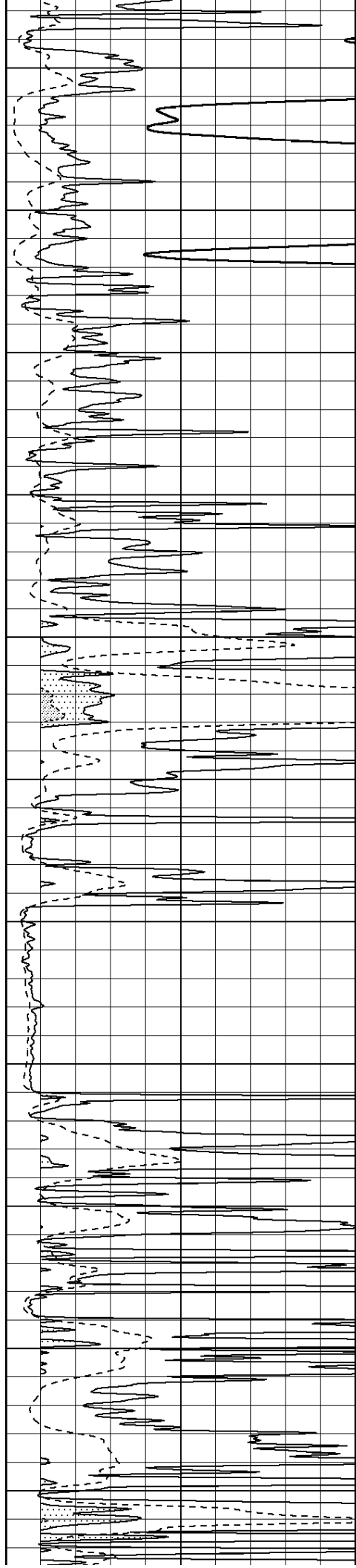
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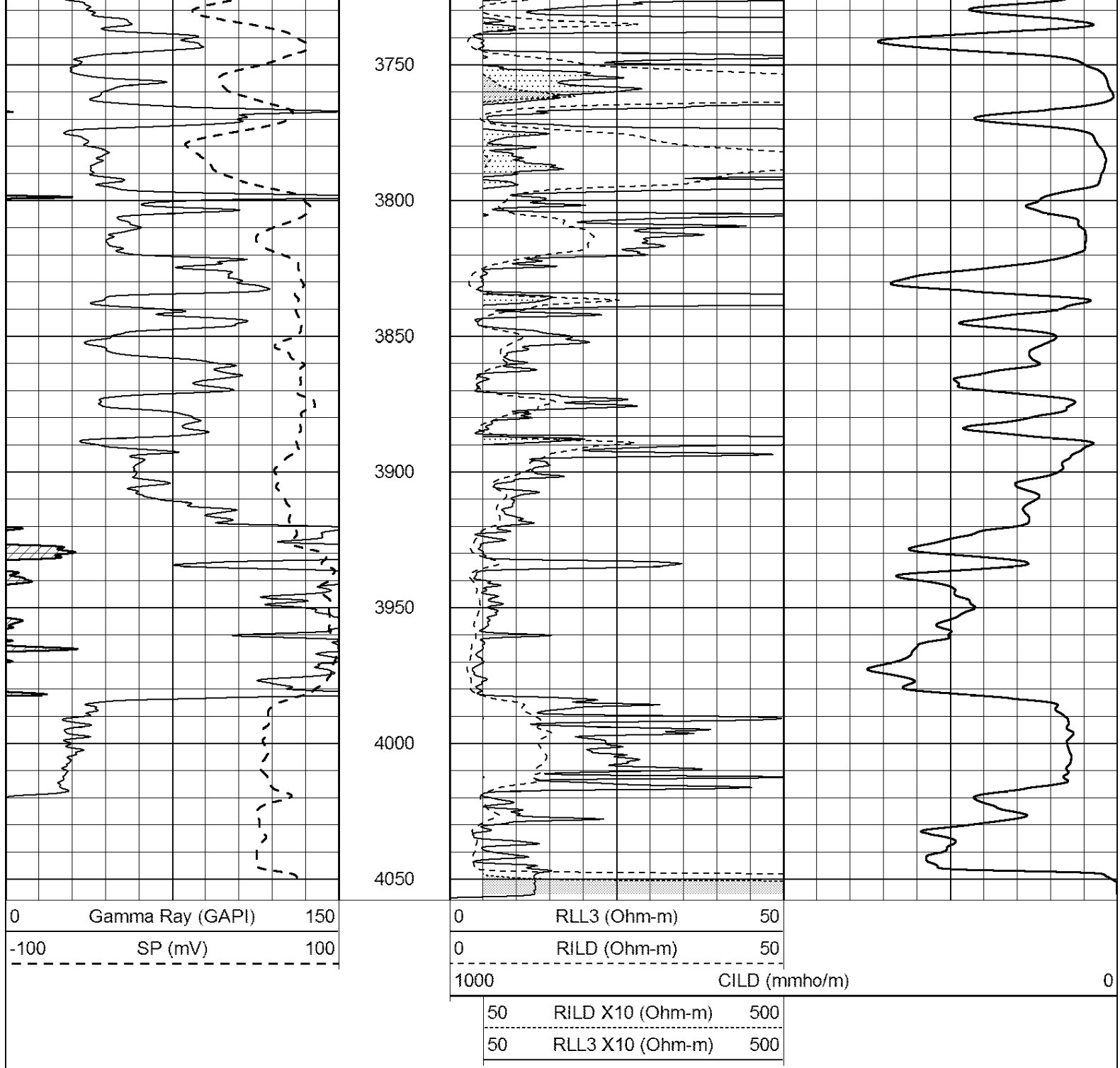
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3600

3650

3700



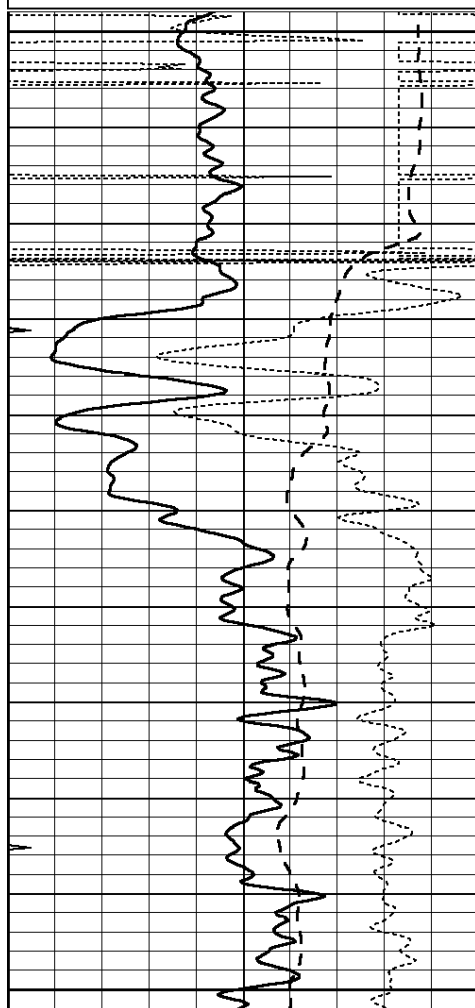


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ANHYDRITE

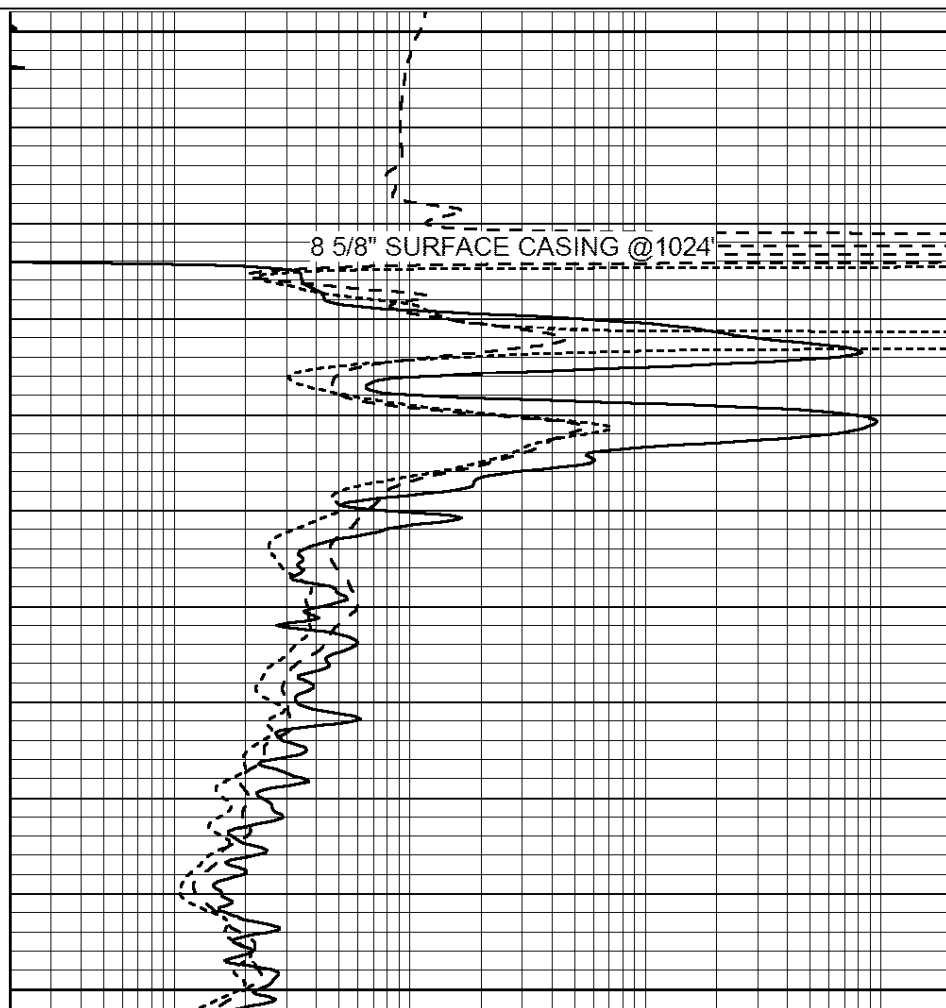
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 Charted by: Depth in Feet scaled 1:240

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	20			



0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

1000
1050
1100



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



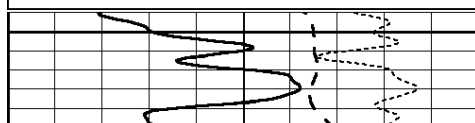
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MAIN SECTION

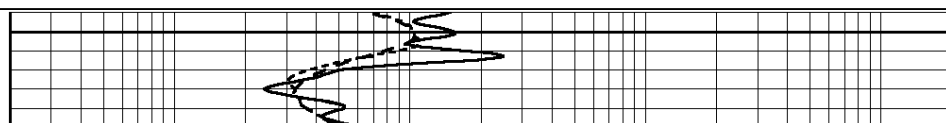
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Charted by: Depth in Feet scaled 1:240

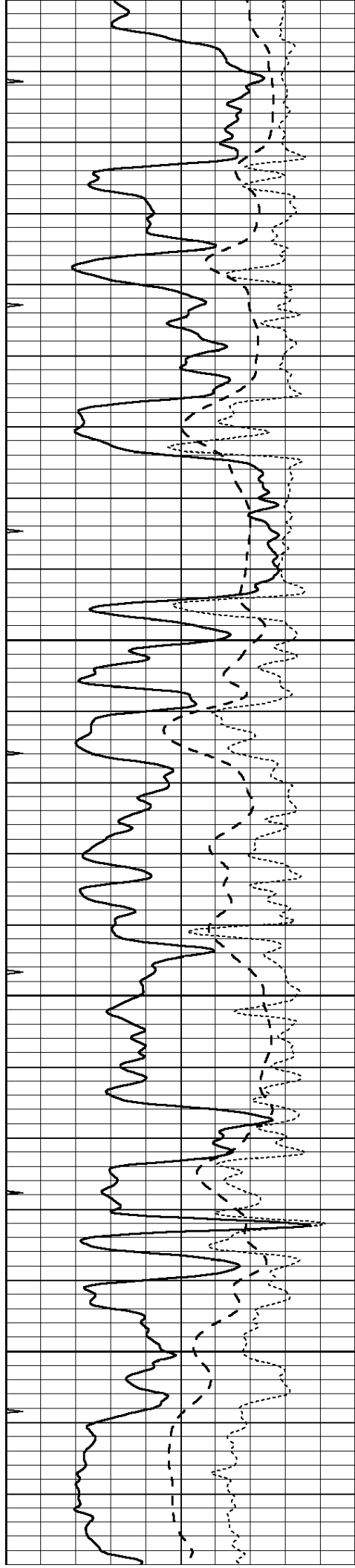
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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



3000



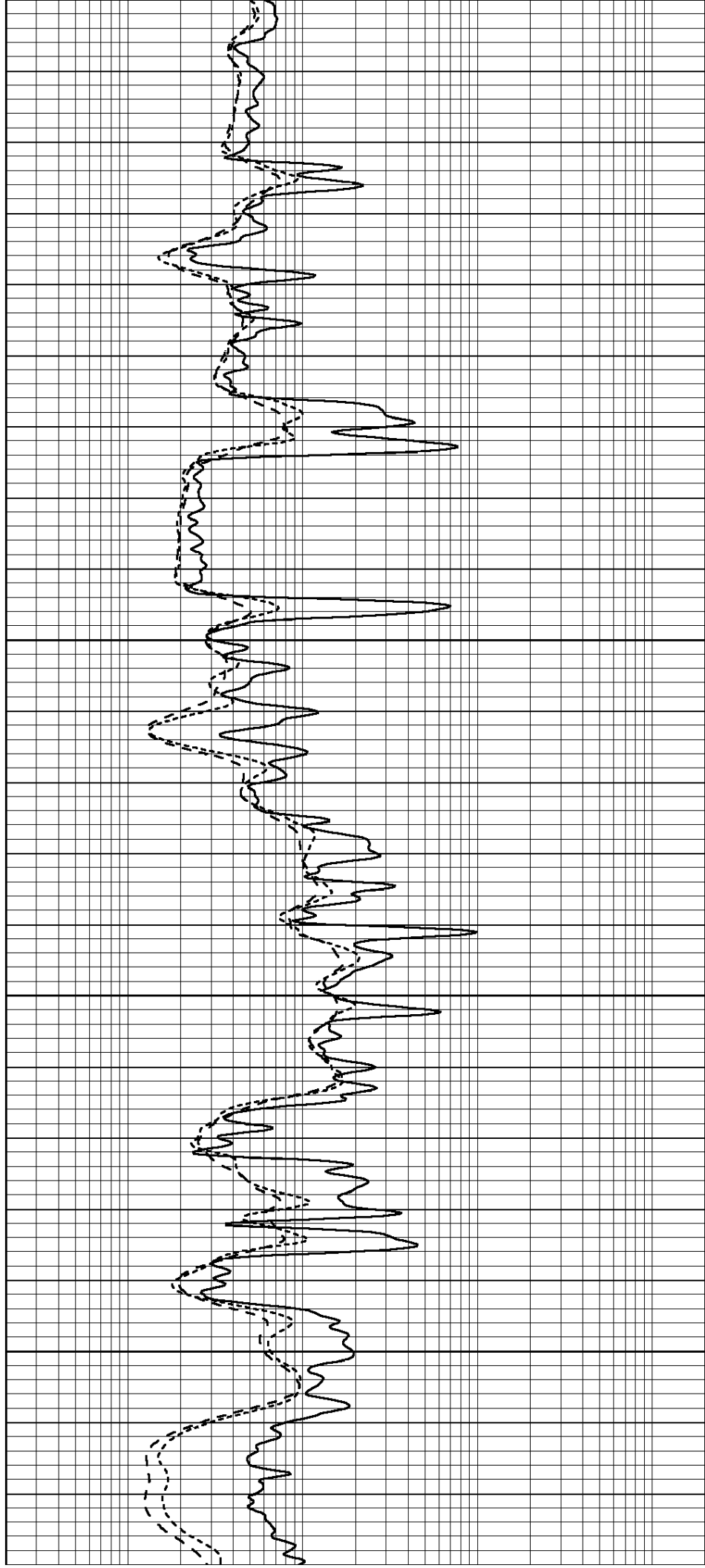


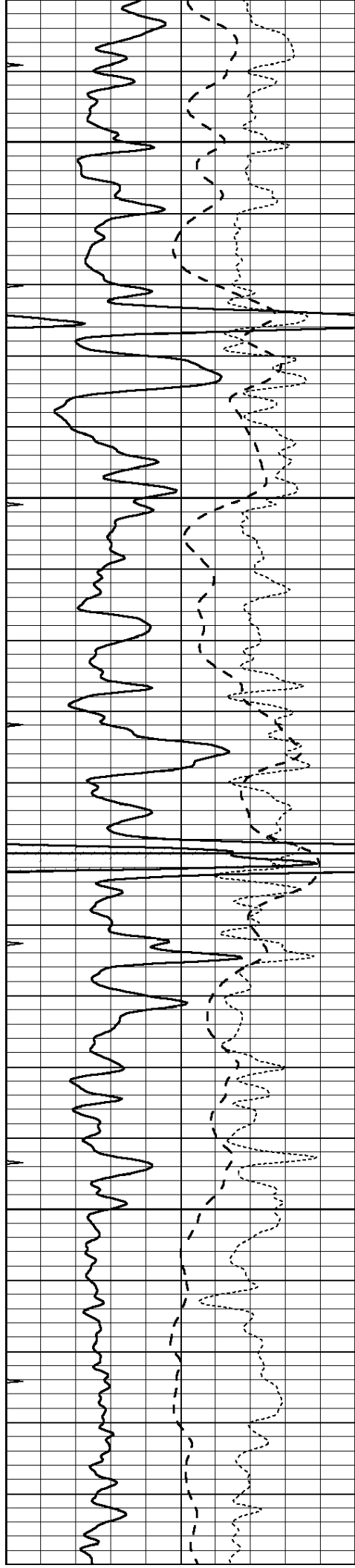
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3100

3150

3200





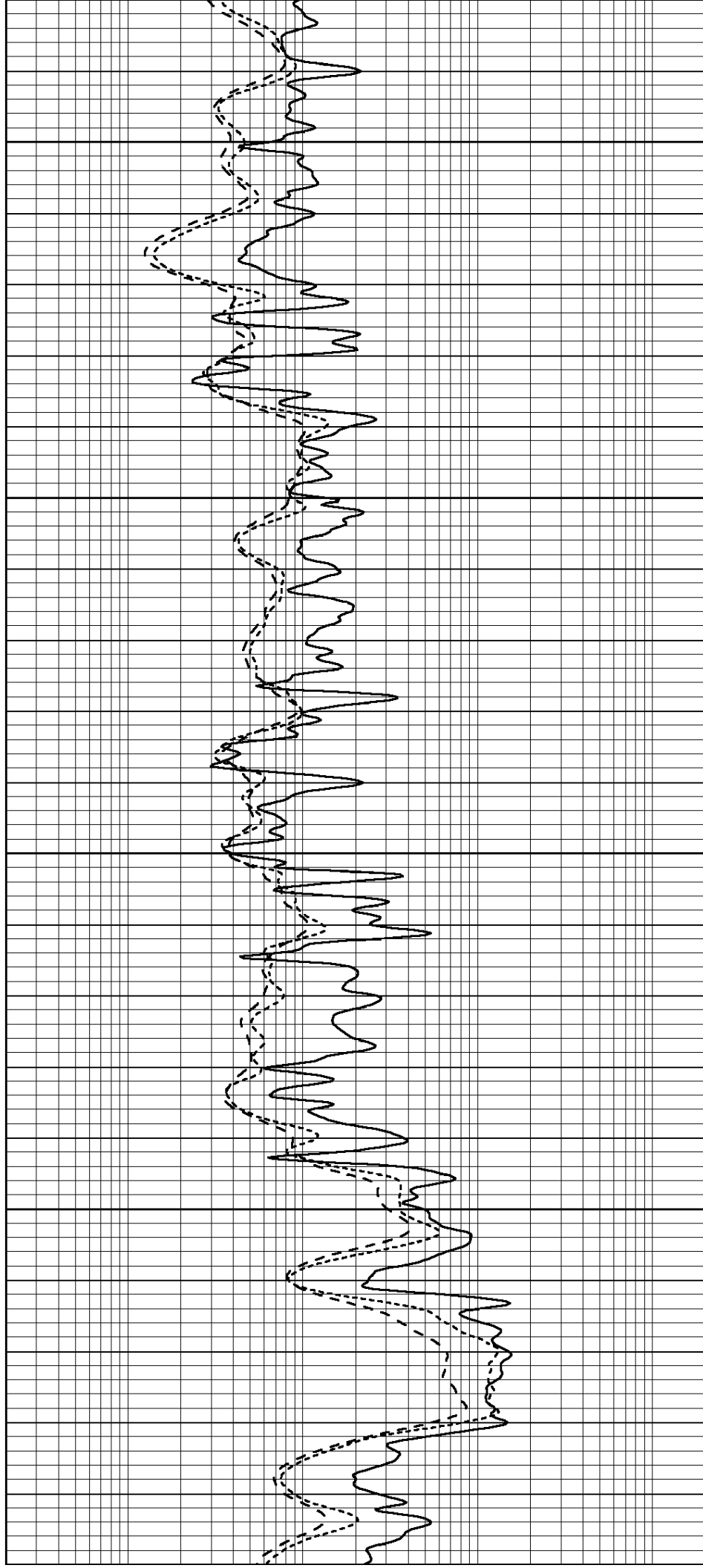
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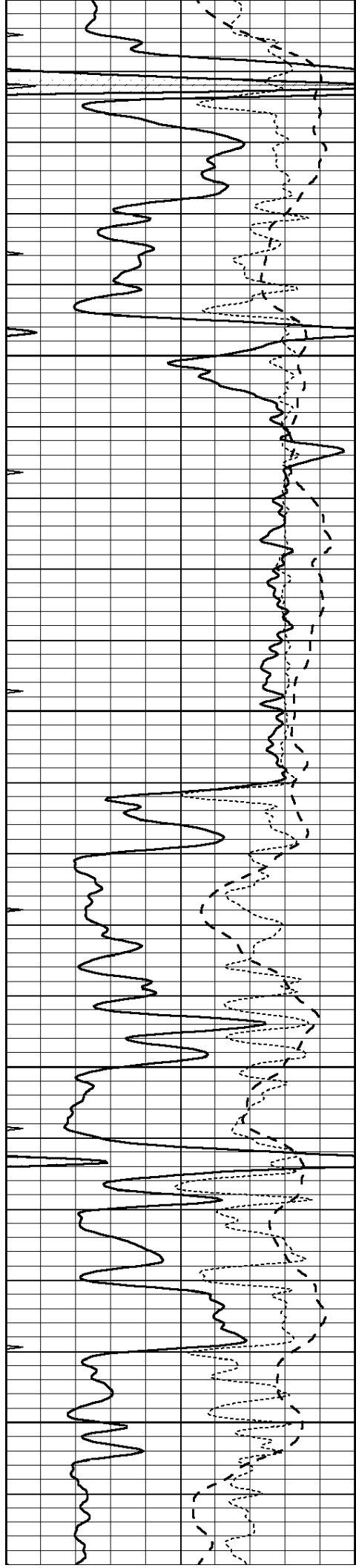
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3350

3400

3450





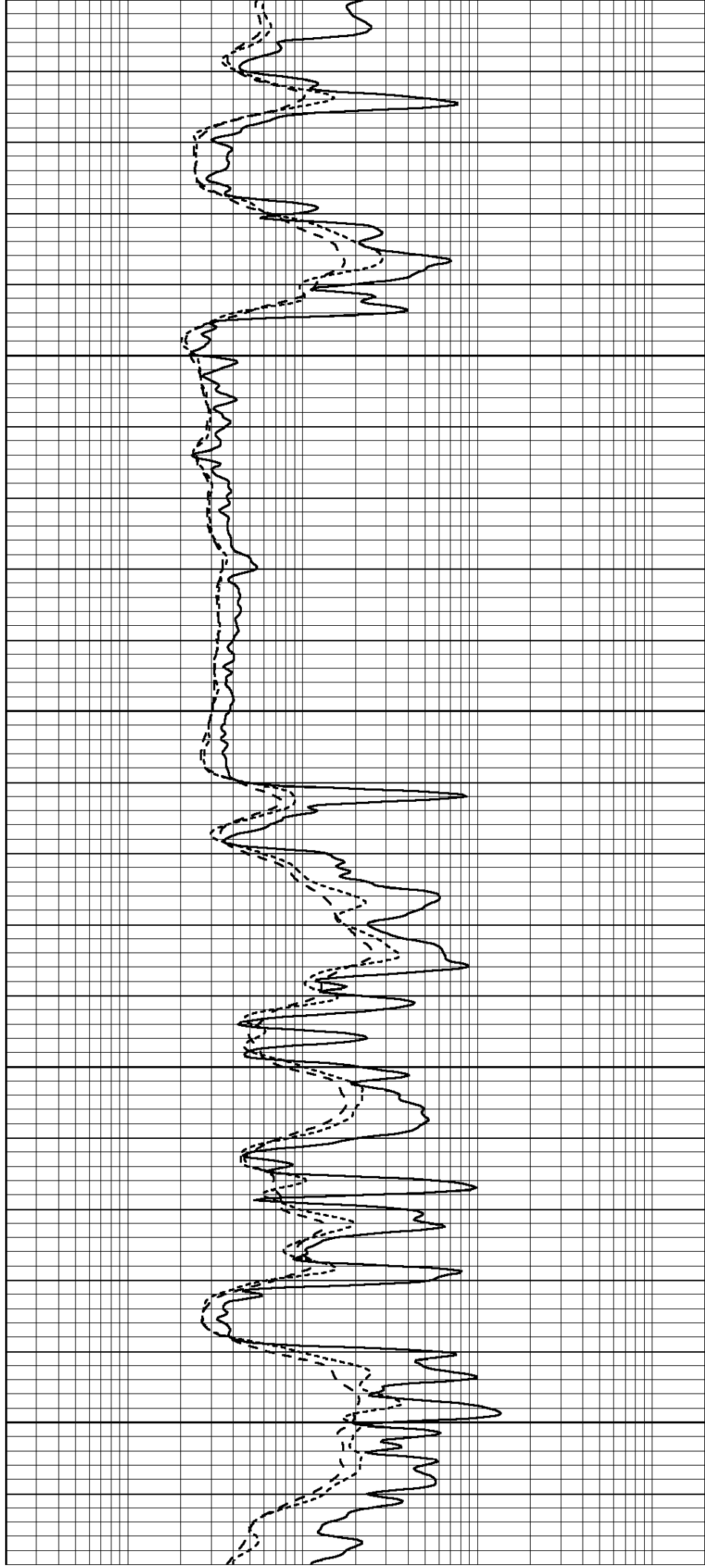
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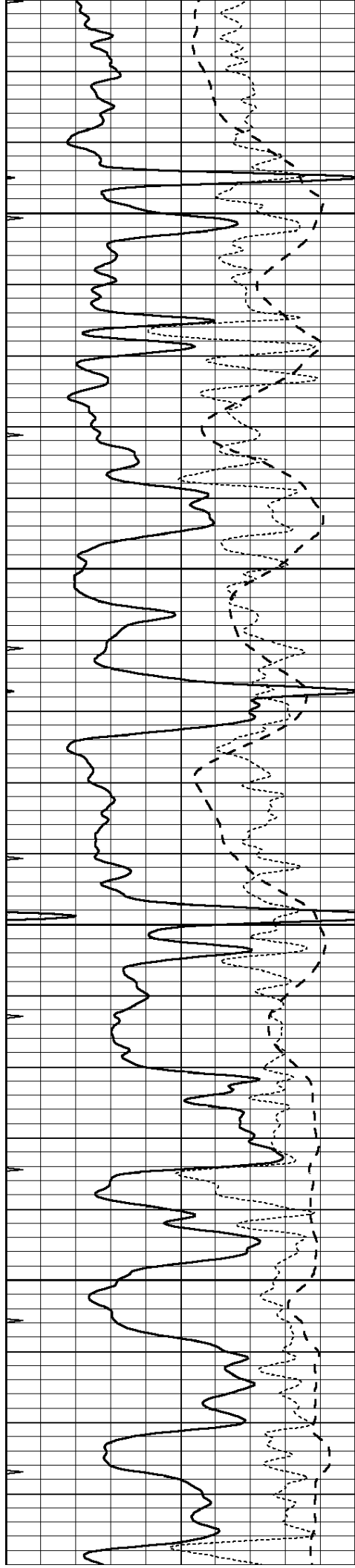
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3600

3650



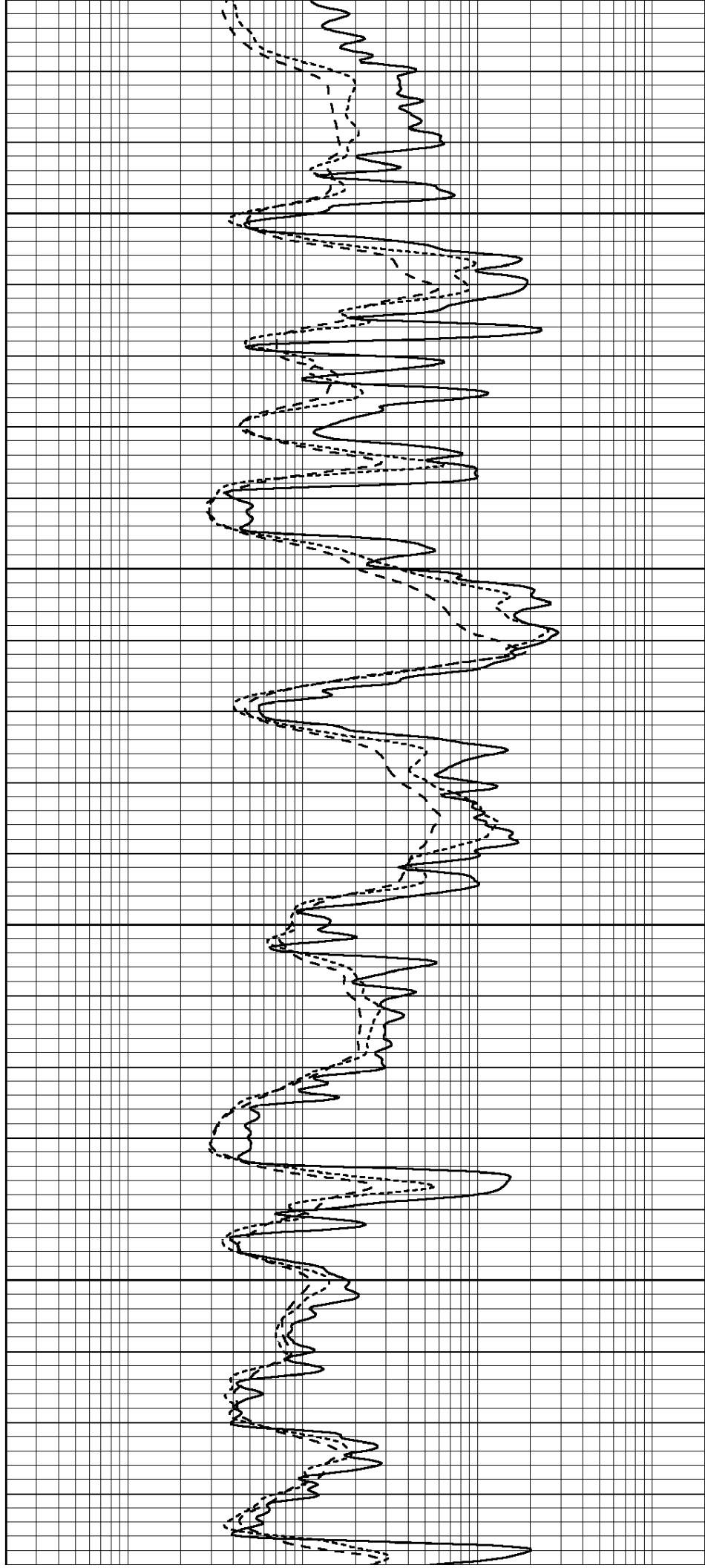


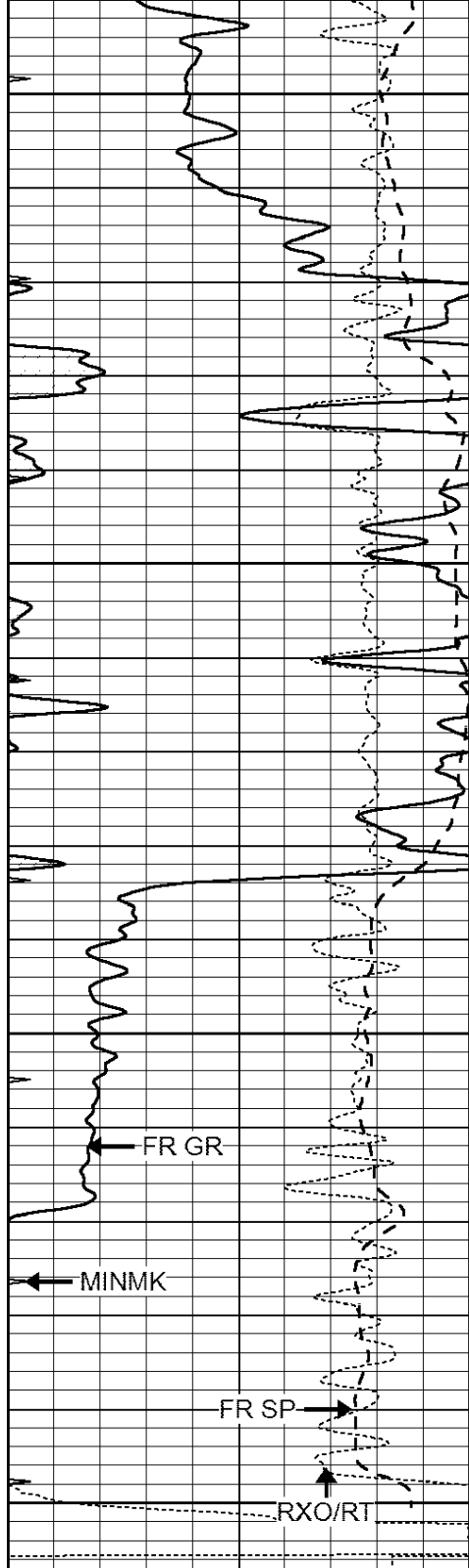
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3750

3800

3850





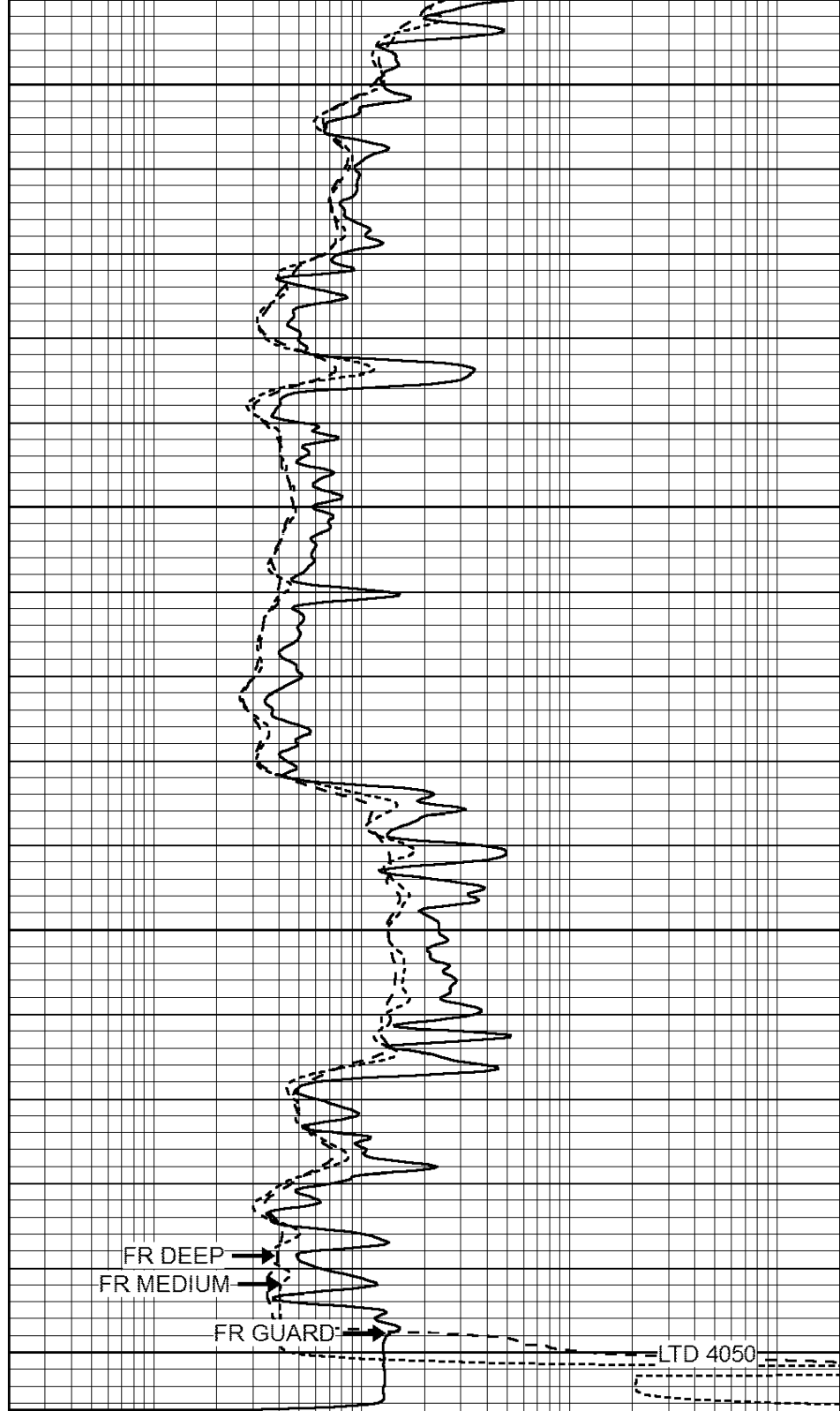
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

3900

3950

4000

4050



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



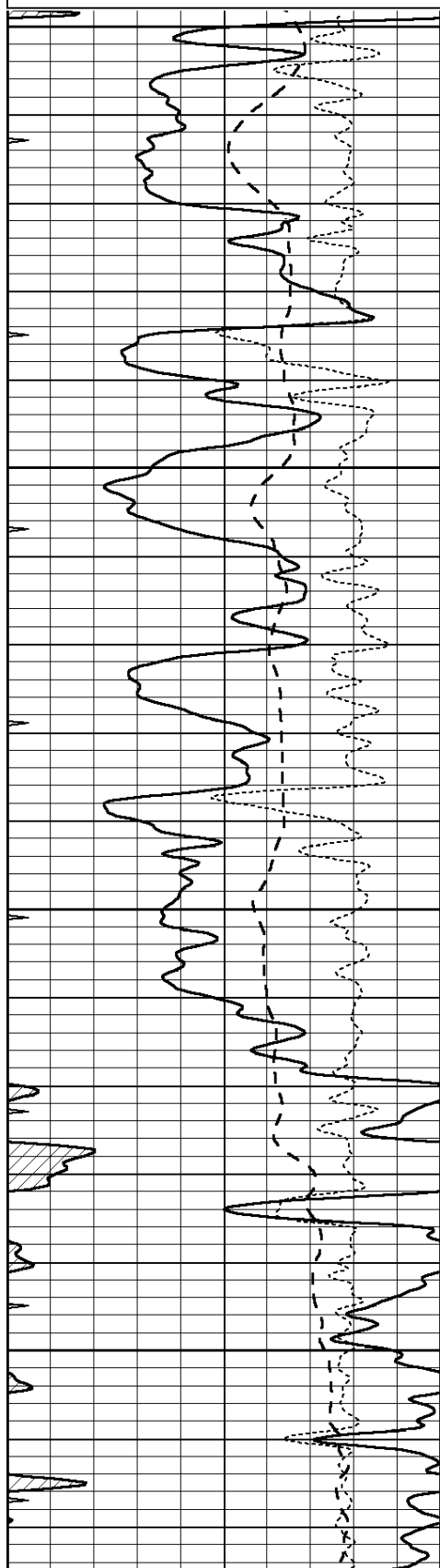
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REPEAT SECTION

Database File: 007474pe.db
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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	20

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

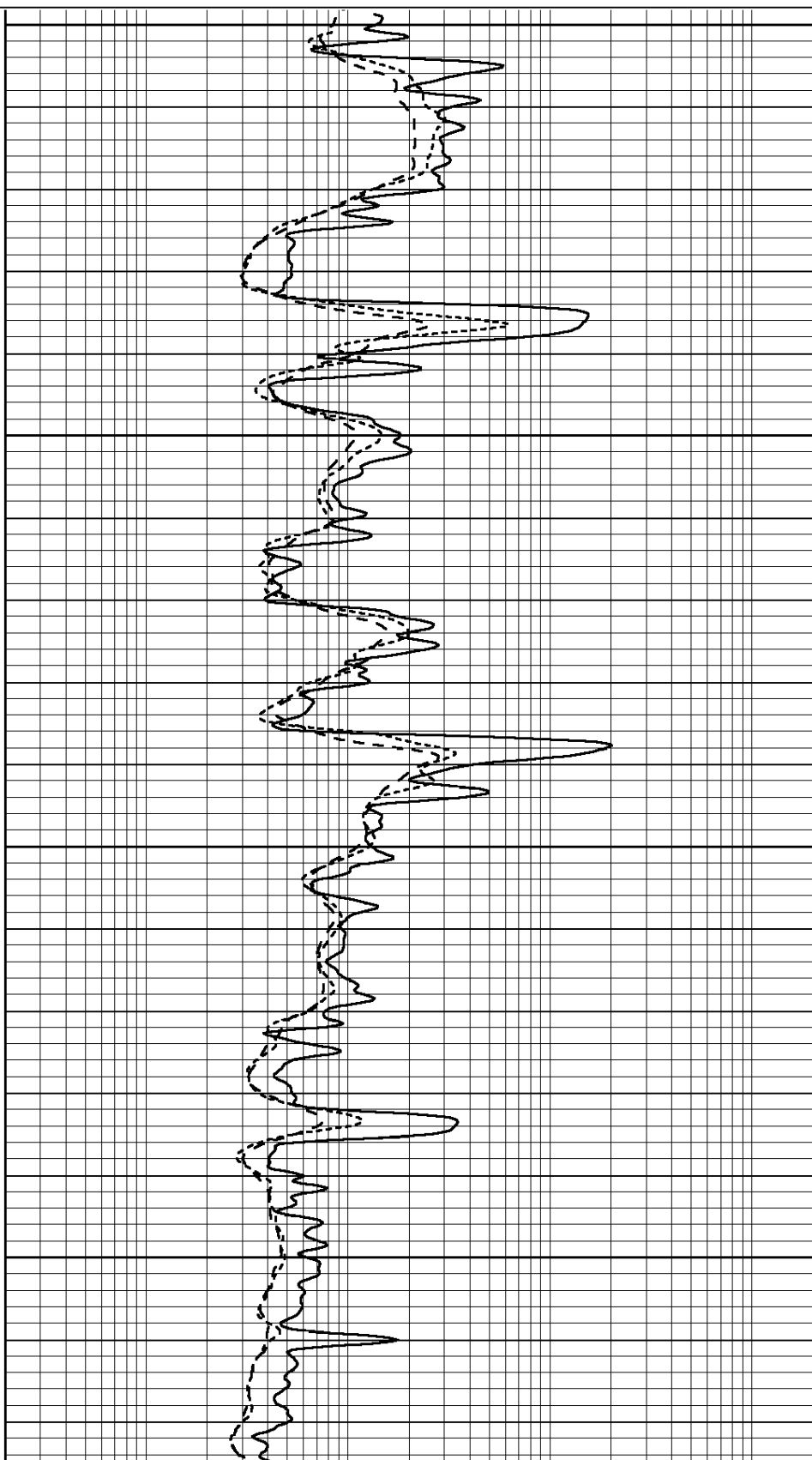


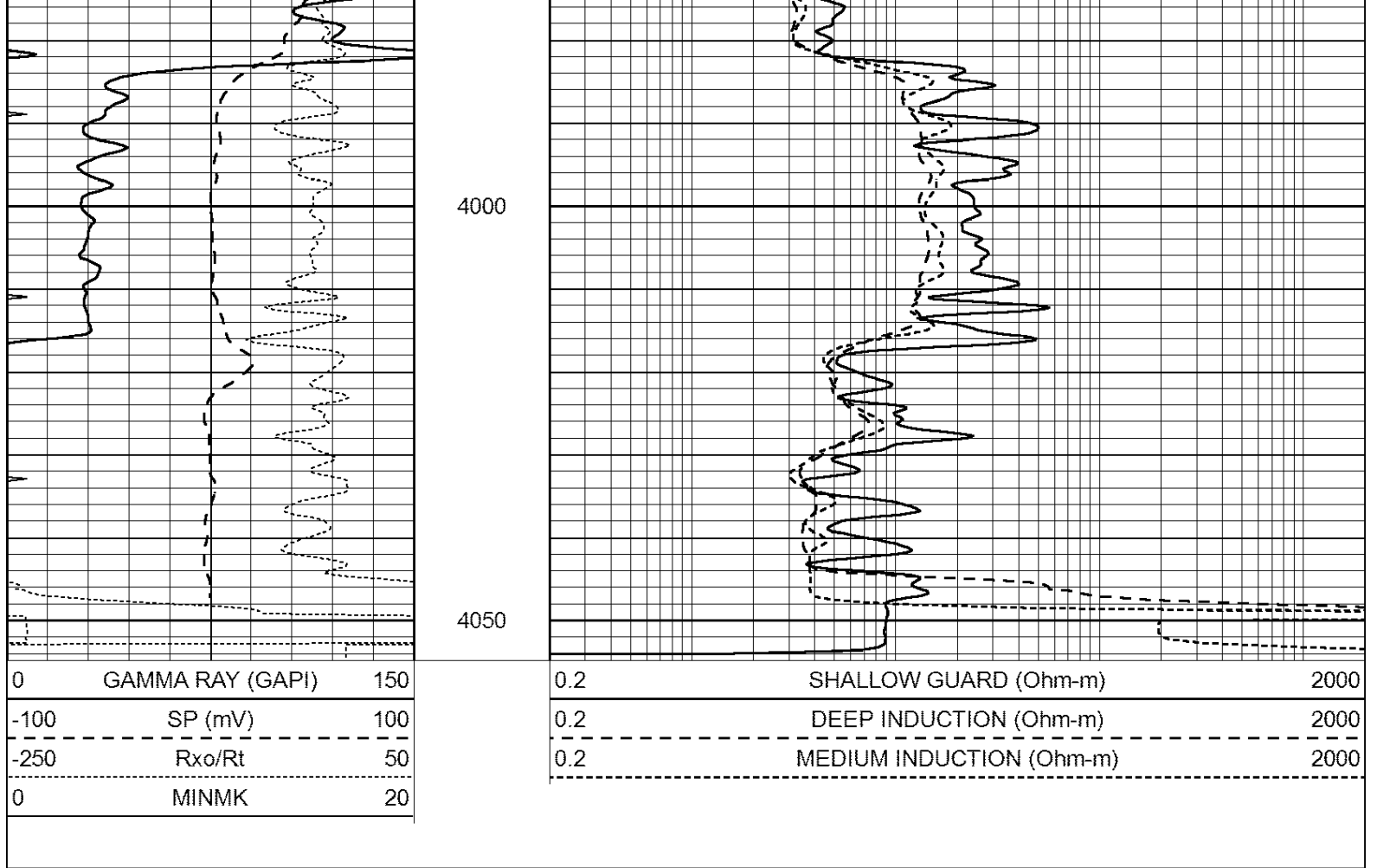
3800

3850

3900

3950





Calibration Report

Database File: 007474pe.db
 Dataset Pathname: pass3.4
 Dataset Creation: Fri Oct 28 10:42:36 2011 by Calc Open-Cased 110302

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
 Performed: Fri Oct 28 10:07:10 2011

Readings				References			Results	
Loop:	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	-9.000
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: 006 Model: PRB
 Performed Sun Aug 15 09:48:41 2010

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1686.6	11612.8	3932.0	12718.8	cps
Window 2	1531.4	9204.7	3267.8	9851.9	cps
Window 3	1198.3	4733.6	1952.5	4920.6	cps
Window 4	317.3	321.2	325.9	303.6	cps

Long Space	0.0	7673.3	1736.4	8320.4	cps
Short Space	1.7	2548.5	1657.2	2628.8	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	
Rib Angle	: 43.8	Rib Slope	: 0.961	Density/Spine Ratio	: 0.569
Spine Angle	: 73.8	Spine Slope	: 3.453	Spine Intercept	: -18.1
Caliper	Readings	Reference			
Low Ref	4.0	8.3			
High Ref	5.9	15.0			
	Gain: 3.5		Offset: -5.5		
Compensated Neutron Calibration Report					
		Serial Number:	070808		
		Tool Model:	Probe		
PRE-SURVEY VERIFICATION					
Detector	Readings	Measured	Target		
Short Space	cps				
Long Space	cps	pu	pu		
POST-SURVEY VERIFICATION					
Detector	Readings	Measured	Target		
Short Space	cps				
Long Space	cps	pu	pu		
Gamma Ray Calibration Report					
Serial Number:	070559				
Tool Model:	OPEN_GR				
Performed:	Fri Oct 28 05:51:52 2011				
Calibrator Value:	1.0	GAPI			
Background Reading:	0.0	cps			
Calibrator Reading:	1.0	cps			
Sensitivity:	0.2500	GAPI/cps			