



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL INDUCTION
LOG**

Company ABERCROMBIE ENERGY, LLC.
Well MOORE #1-9
Field WILDCAT
County SCOTT
State KANSAS

Company ABERCROMBIE ENERGY, LLC.
Well MOORE #1-9
Field WILDCAT
County SCOTT State KANSAS

Location: API # : 15-171-20918-0000
1800' FSL & 1390' FEL
SEC 9 TWP 20S RGE 34W
Permanent Datum GROUND LEVEL Elevation 3059
Log Measured From KELLY BUSHING 10' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
CDL/CNL/PE
MEL/SONIC
Elevation
K.B. 3069
D.F. 3067
G.L. 3059

Date	11/14/12
Run Number	ONE
Depth Driller	4982
Depth Logger	4982
Bottom Logged Interval	4980
Top Log Interval	00
Casing Driller	8 5/8"@30'
Casing Logger	303
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.3/48
pH / Fluid Loss	9.0/10.4
Source of Sample	FLOWLINE
Rin @ Meas. Temp	.500@90F
Rmf @ Meas. Temp	.375@90F
Rmc @ Meas. Temp	.600@90F
Source of Rmf / Rmc	MEASUREMENT
Rin @ BHT	.360@125F
Time Circulation Stopped	2.5 HOURS
Time Logger on Bottom	7:00 A.M.
Maximum Recorded Temperature	125F
Equipment Number	4854
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	WES HANSEN

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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

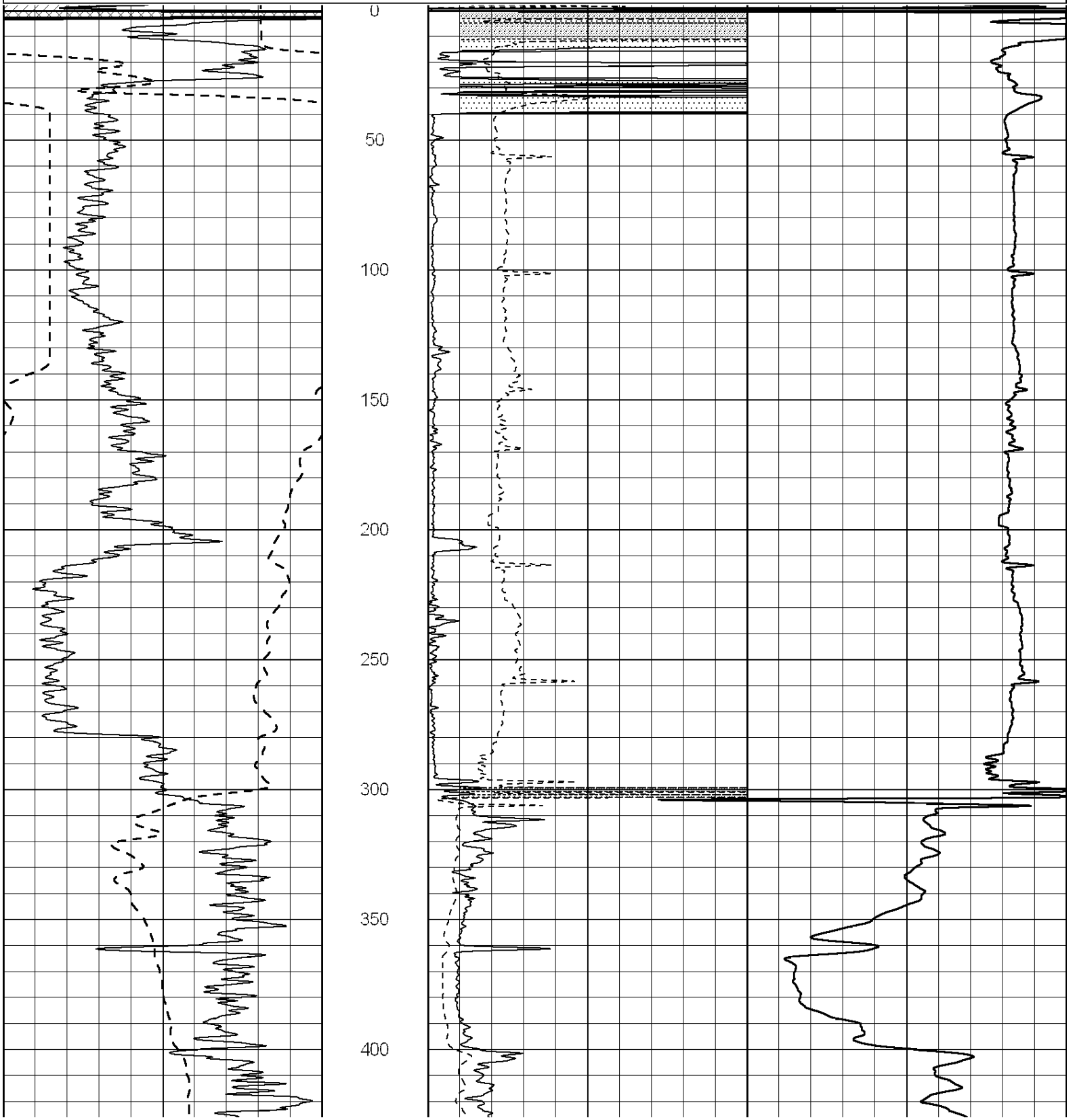
THANK YOU FOR USING "NABORS" HAYS, KANSAS (785) 628-6395
DIRECTIONS
MODOC, KS. & HWY 96, 11S.ON "CHEROKEE RD.", 1/2W., 1/2 N. @ORANGE POST, E. INTO

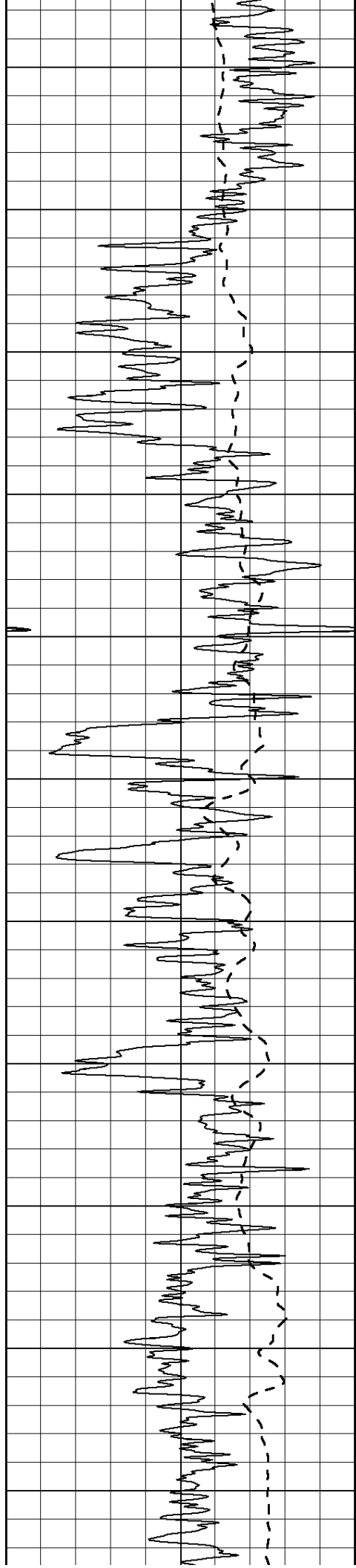


MAIN SECTION

Database File: 010012pe.db
 Dataset Pathname: pass3.8
 Presentation Format: dil2
 Dataset Creation: Wed Nov 14 09:03:16 2012 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150	0	RLL3 (Ohm-m)	50
-100	SP (mV)	100	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

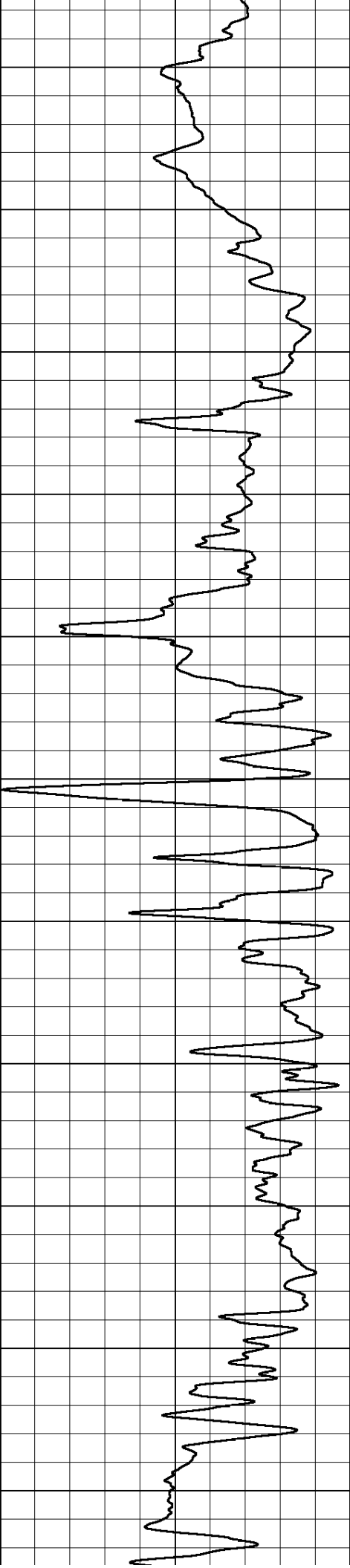
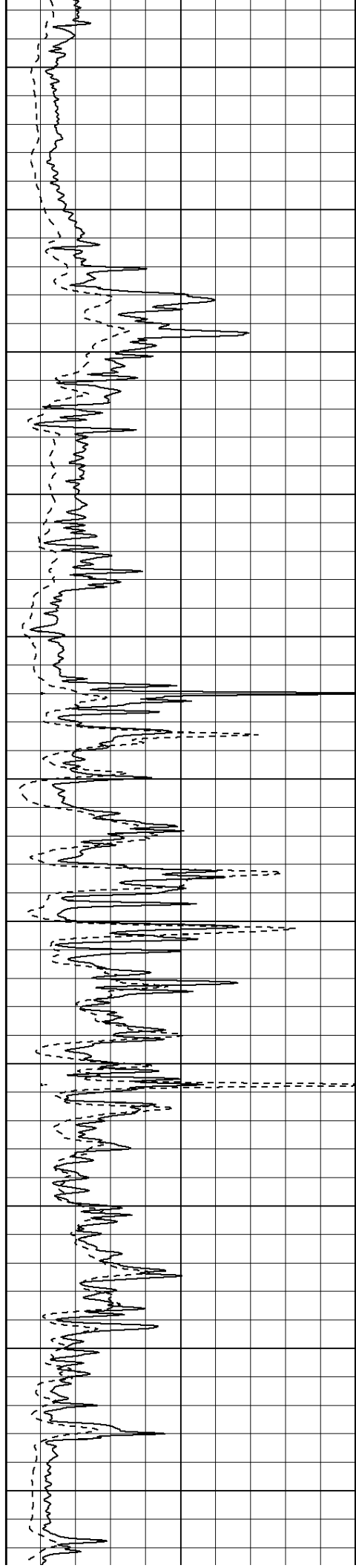
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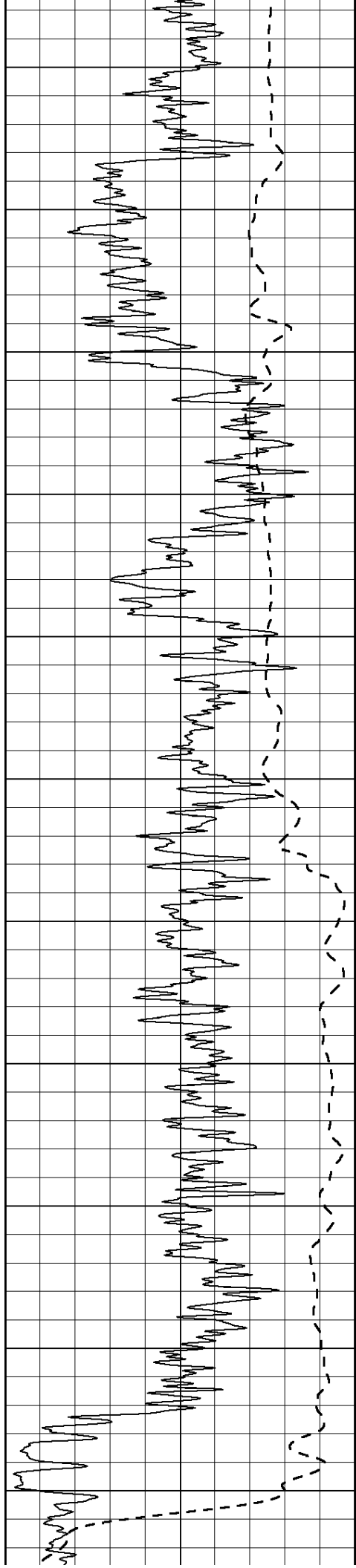
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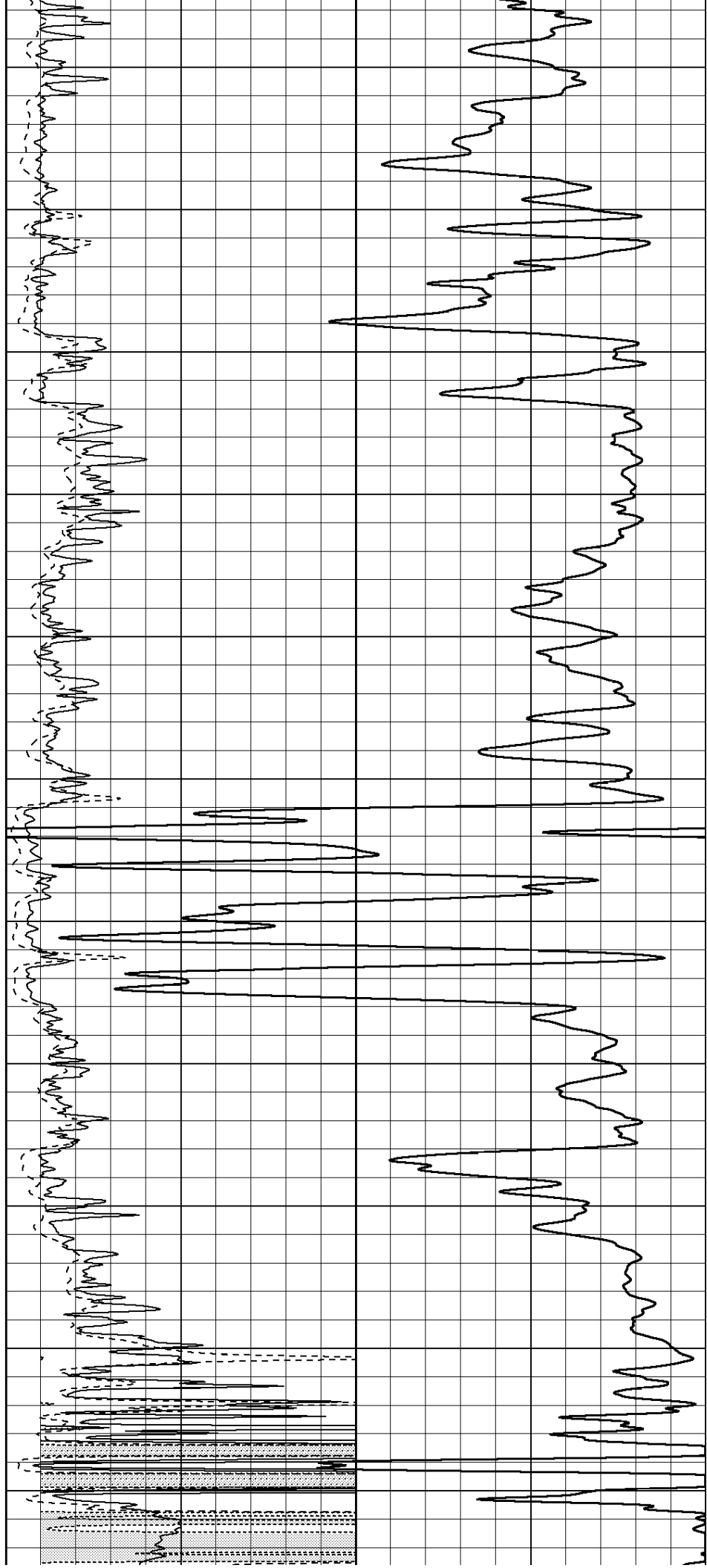
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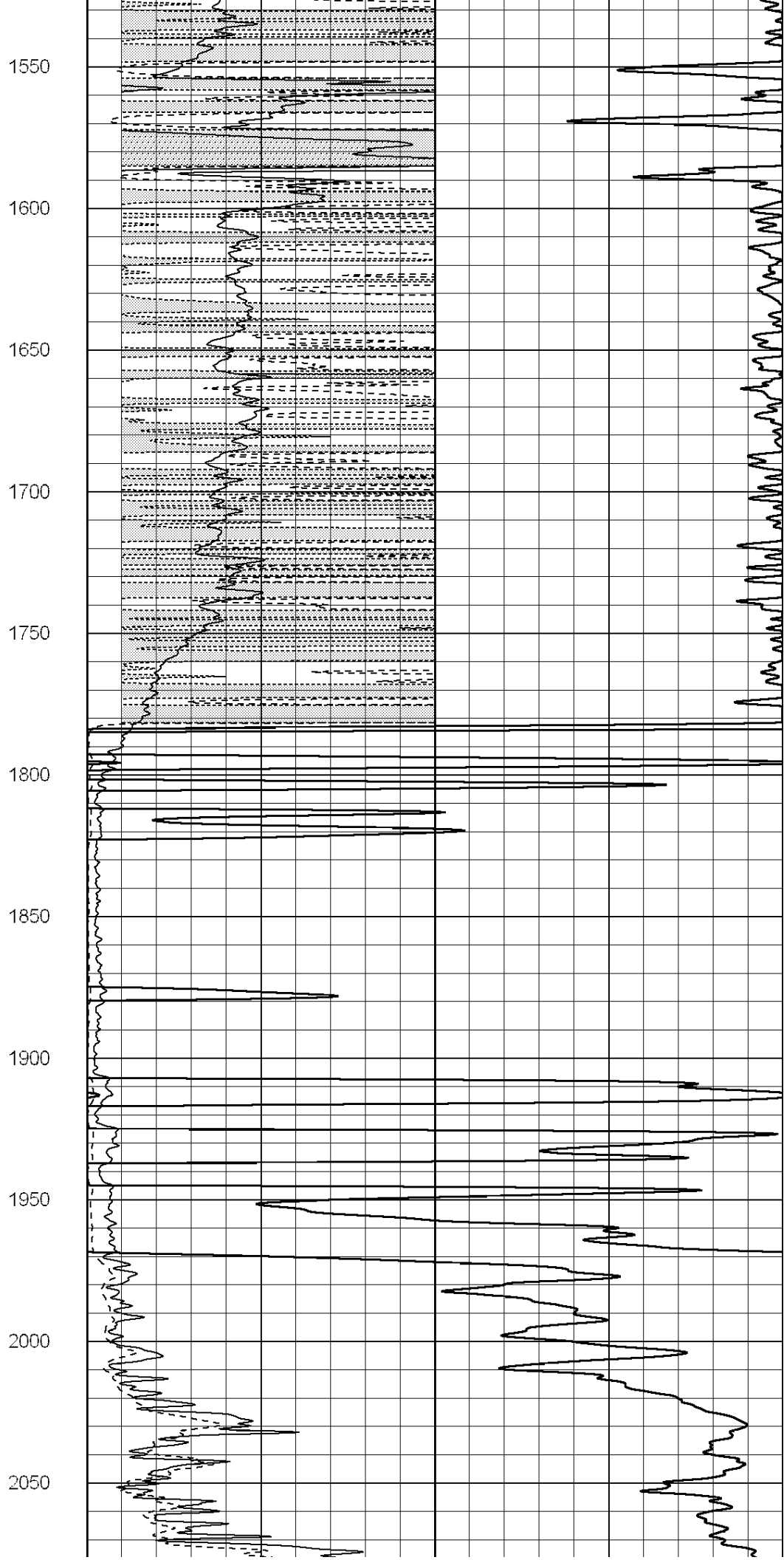
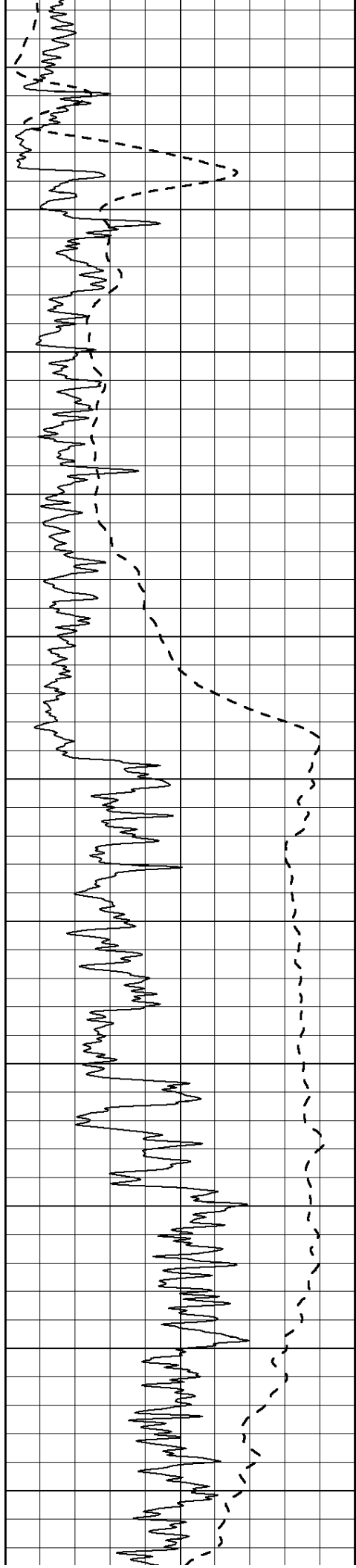
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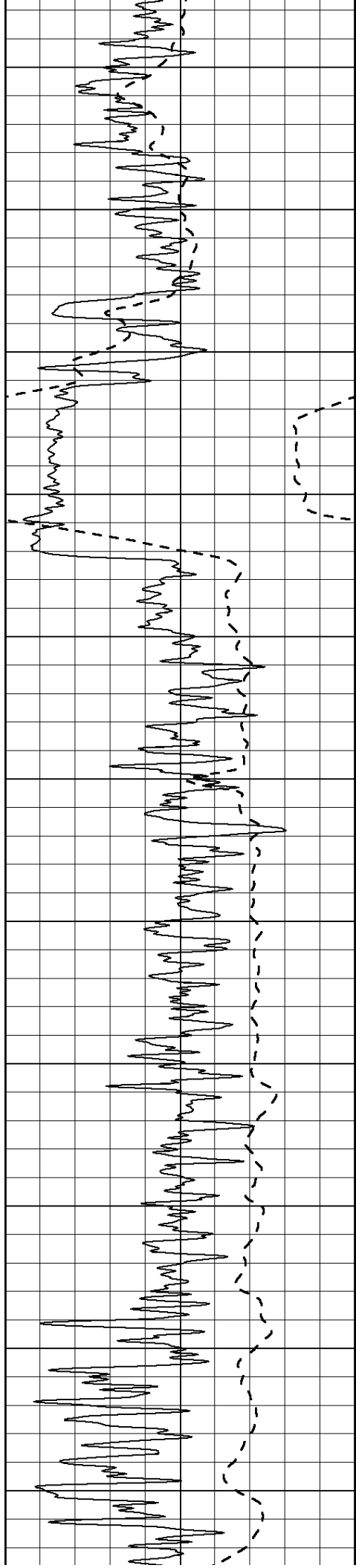




1000
1050
1100
1150
1200
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1300
1350
1400
1450
1500







2100

2150

2200

2250

2300

2350

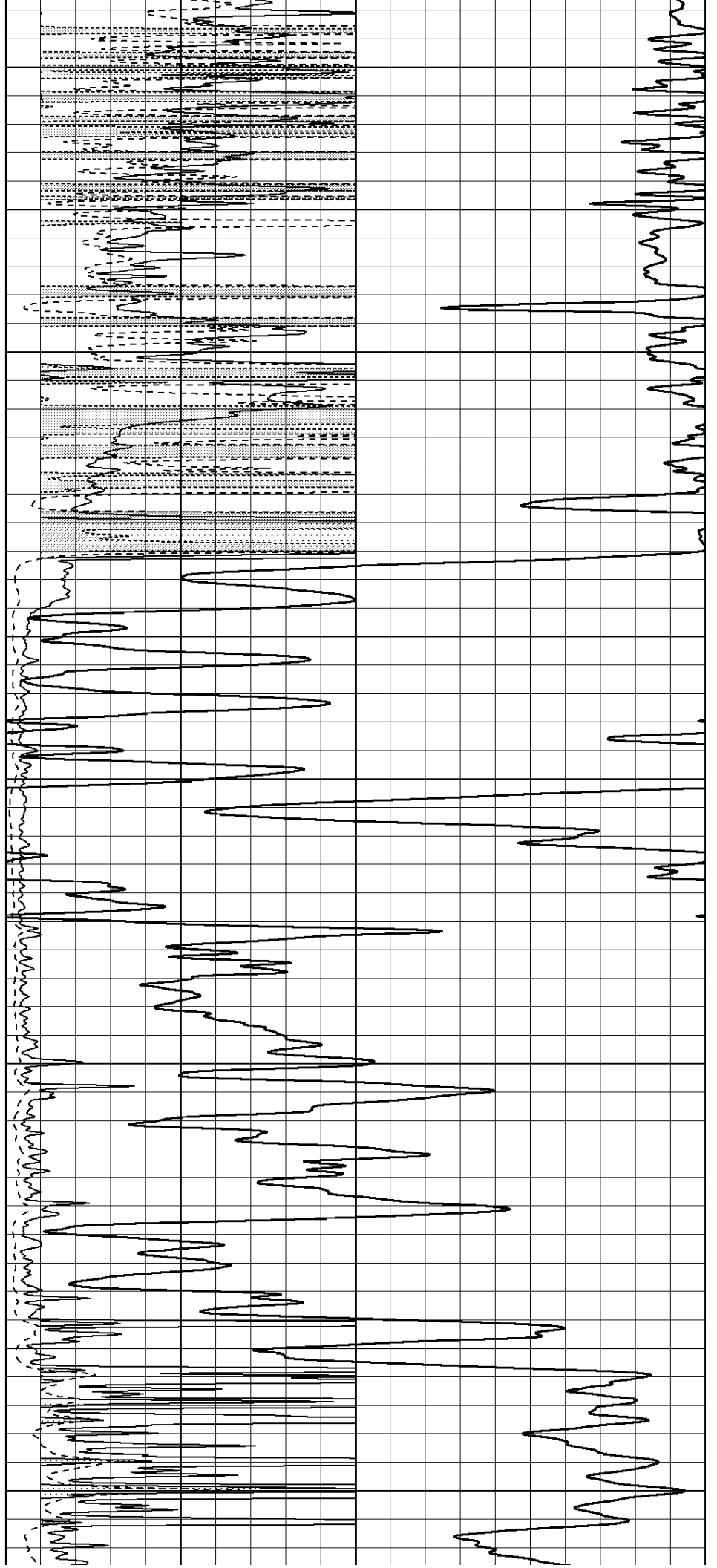
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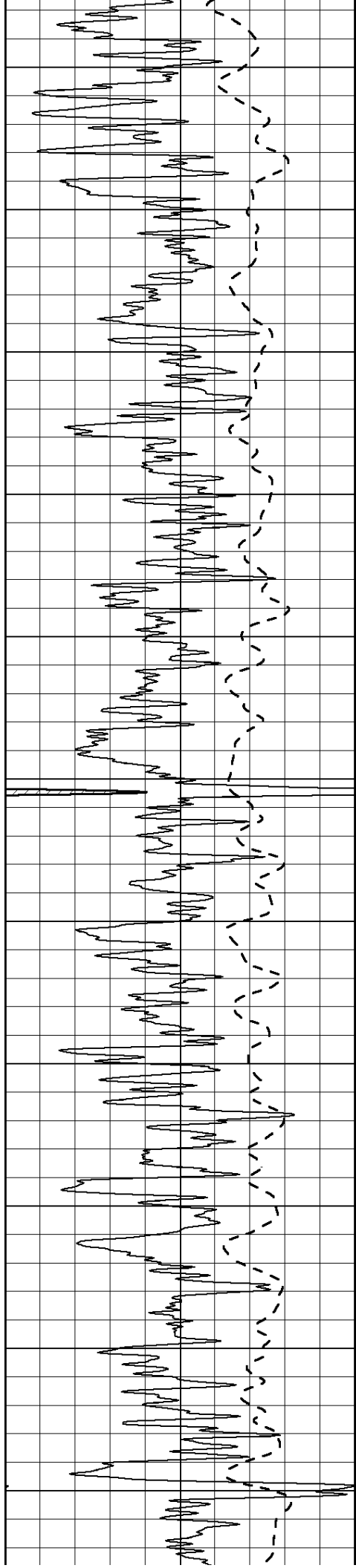
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2550

2600





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2900

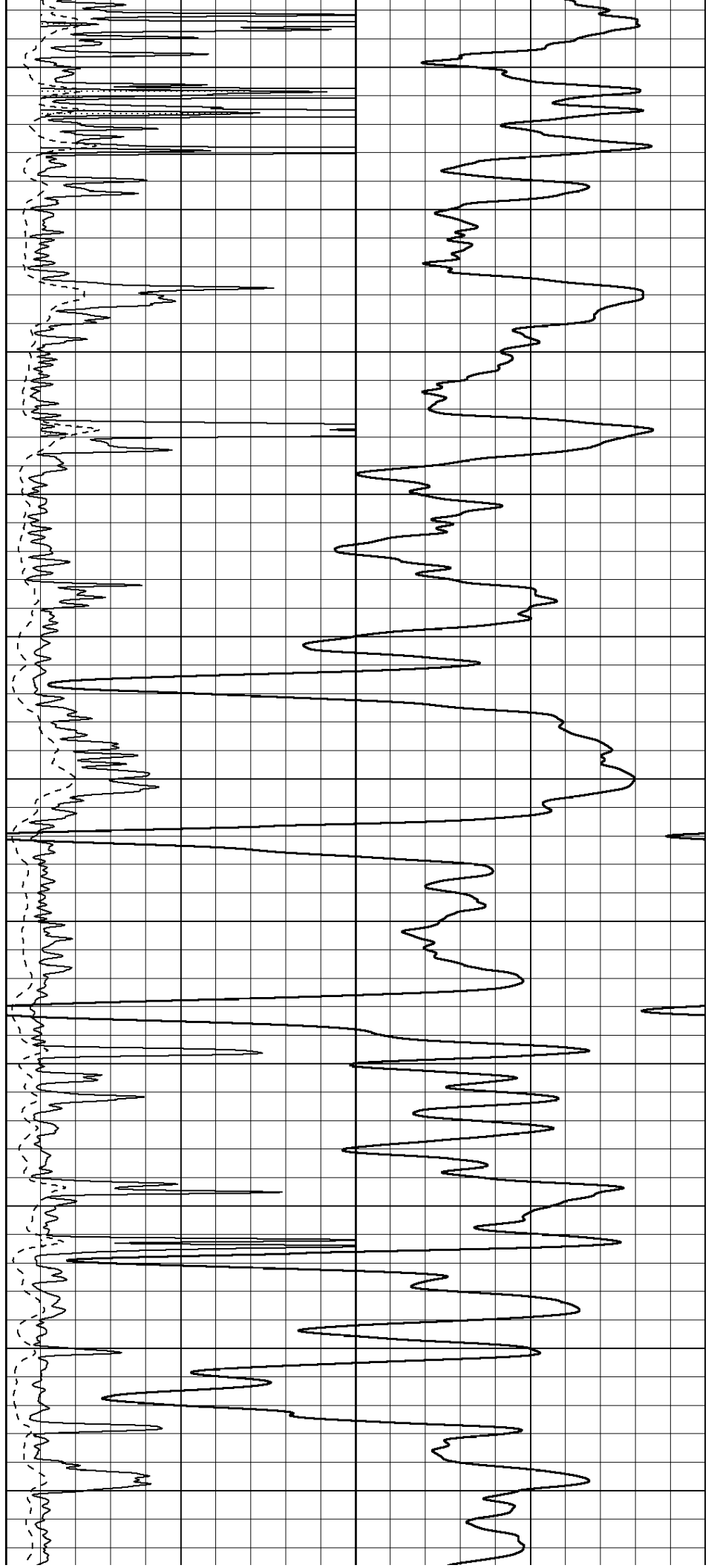
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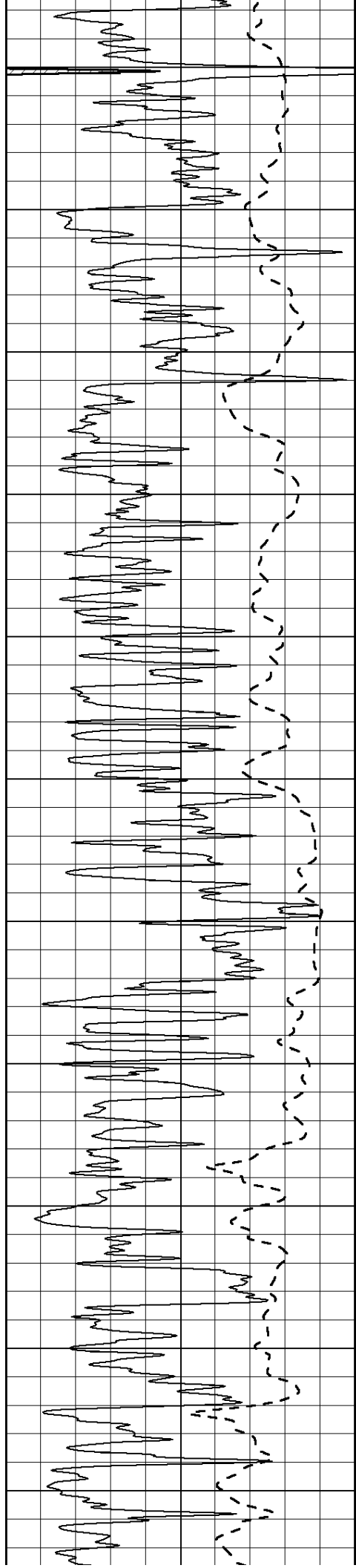
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3050

3100

3150





3200

3250

3300

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3400

3450

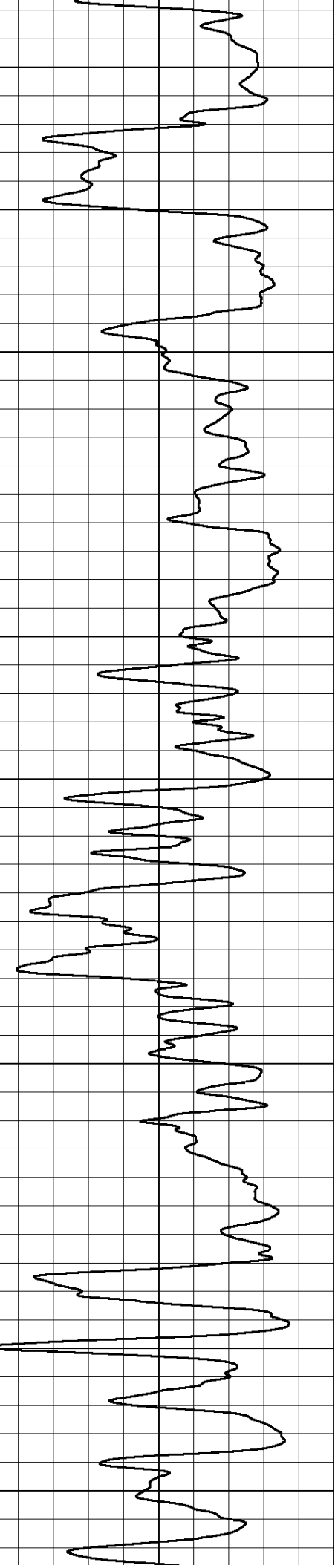
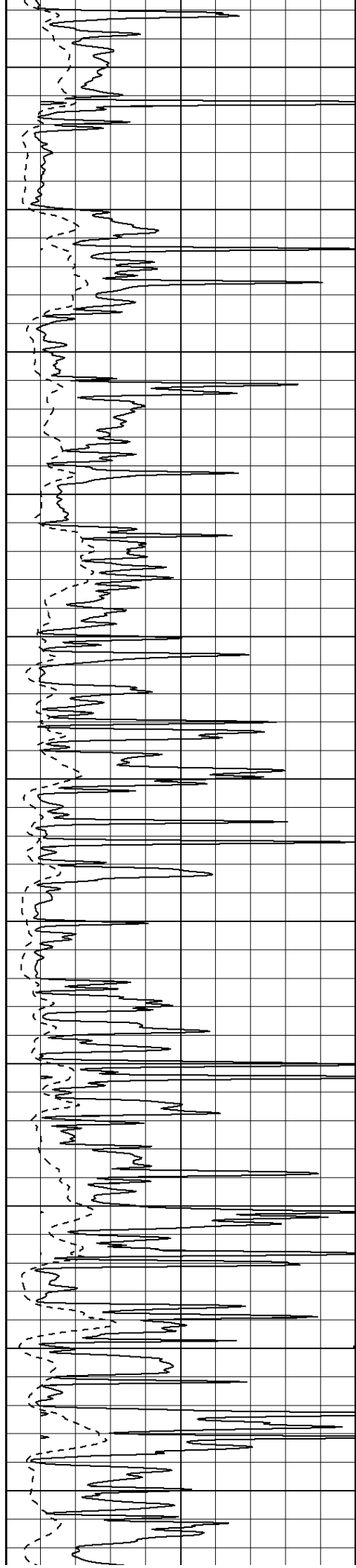
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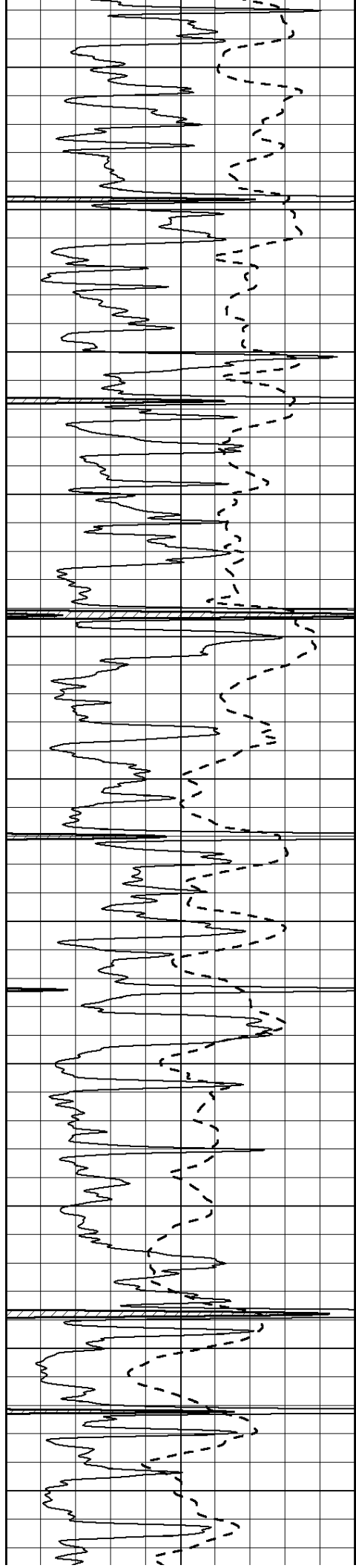
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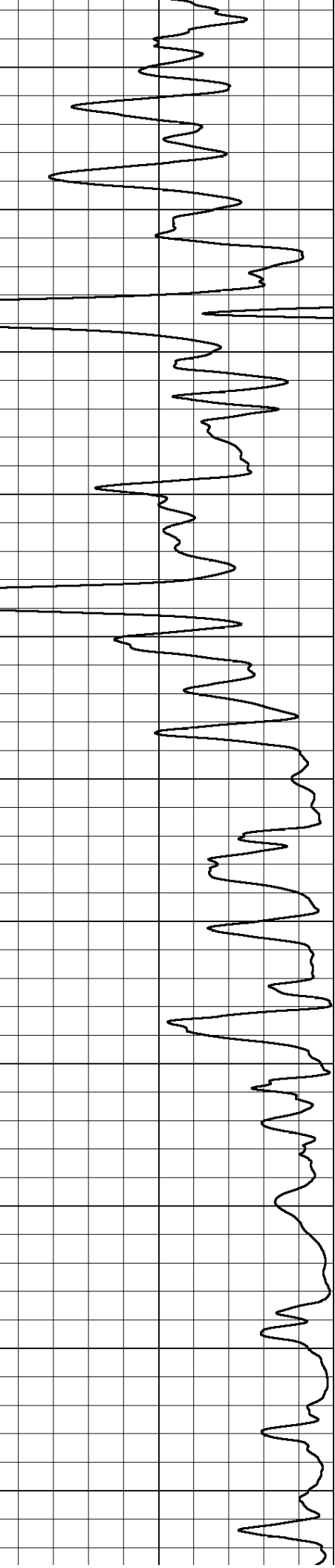
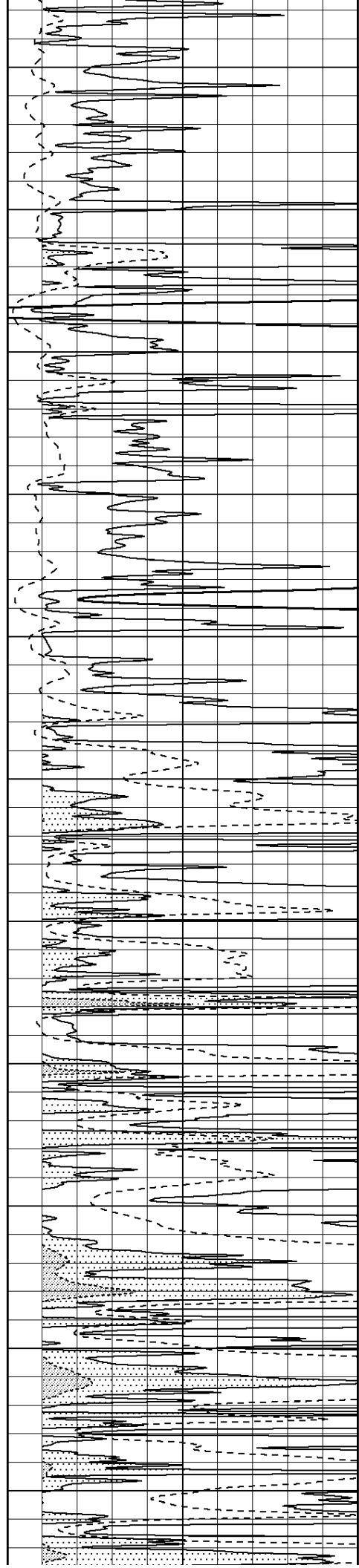
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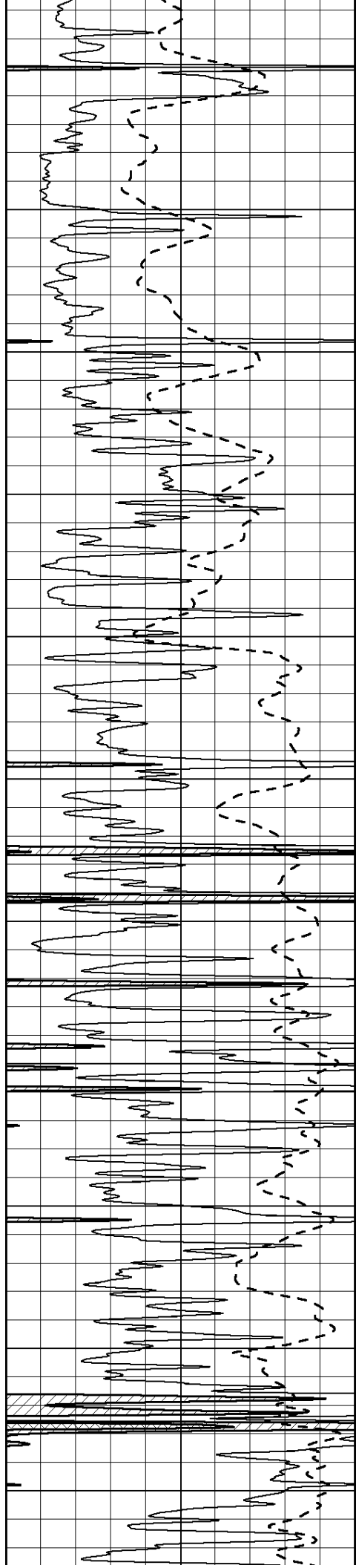
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4150

4200

4250





4300

4350

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4500

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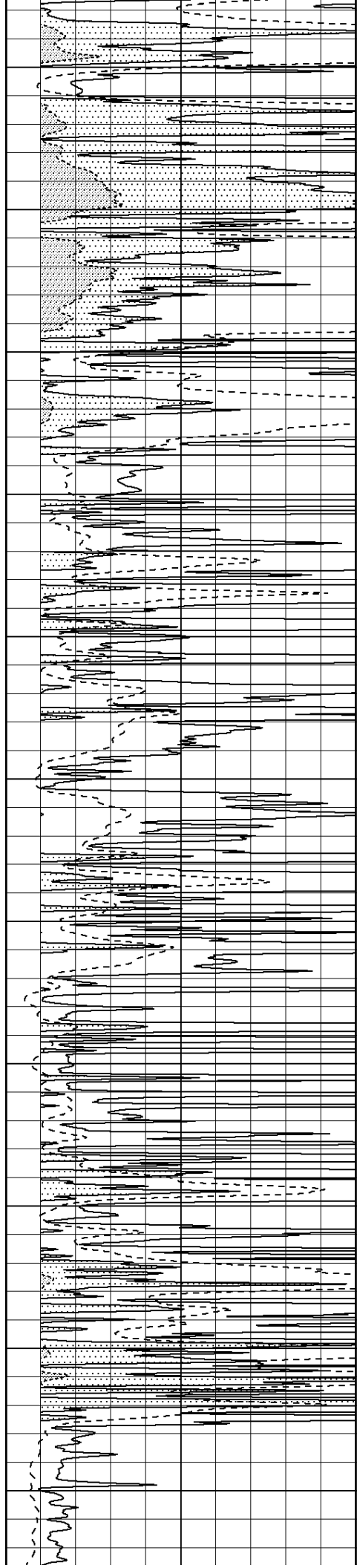
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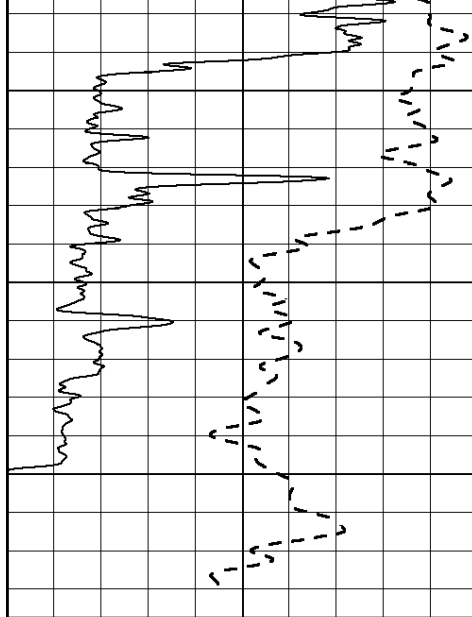
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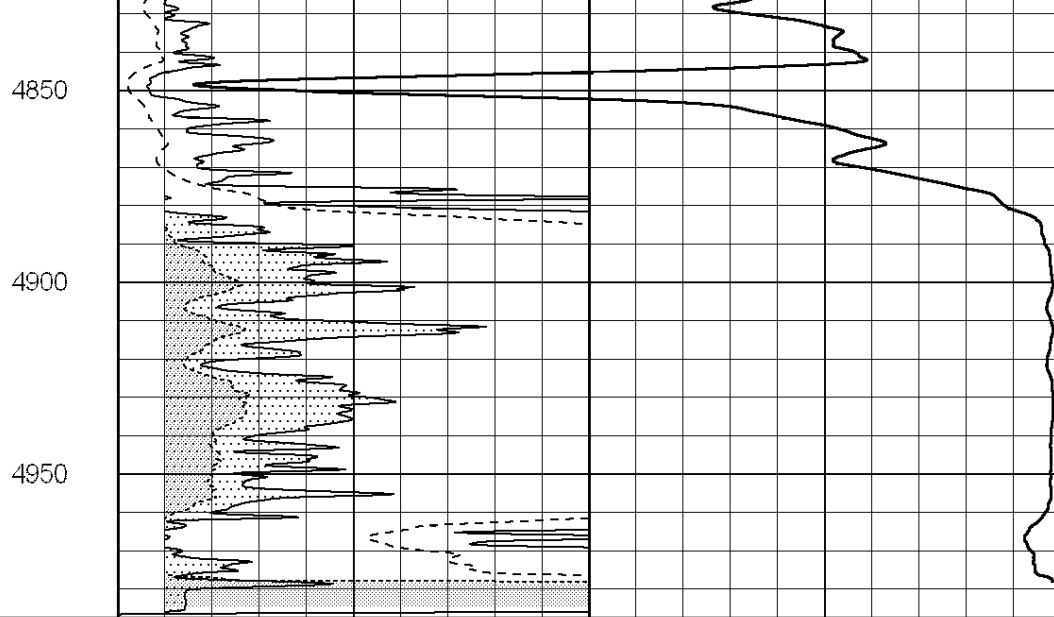
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4800





0	Gamma Ray (GAPI)	150
-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

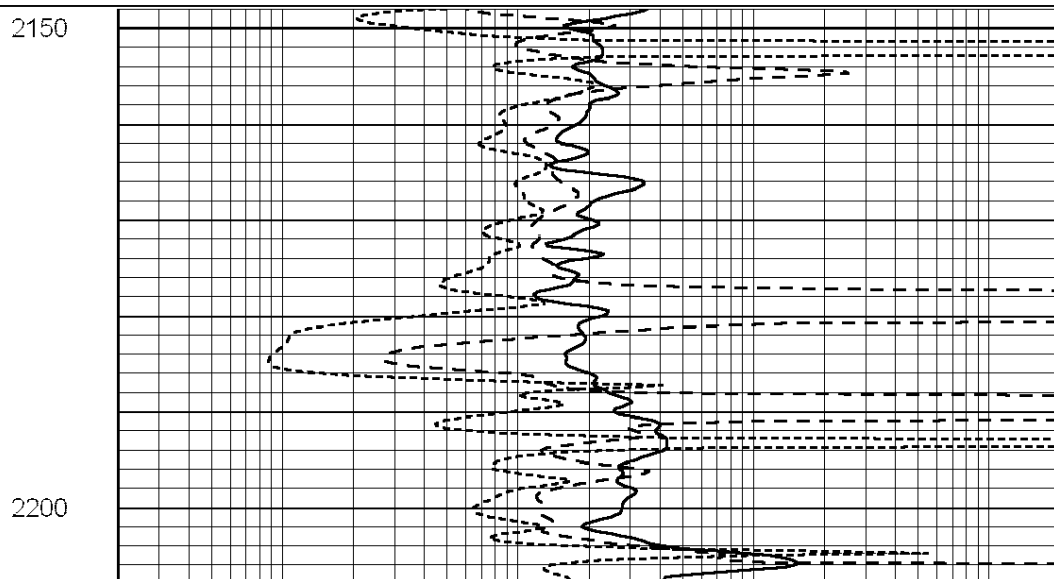
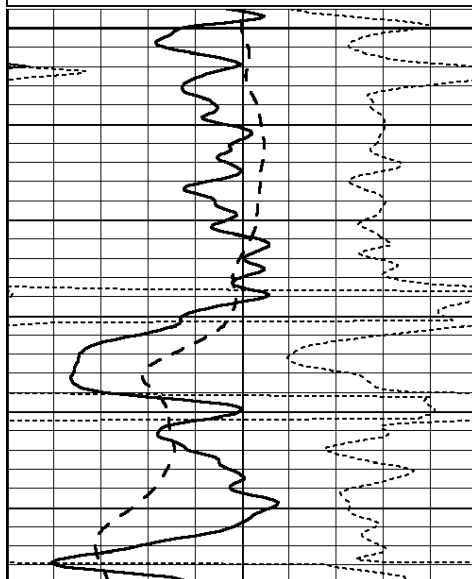
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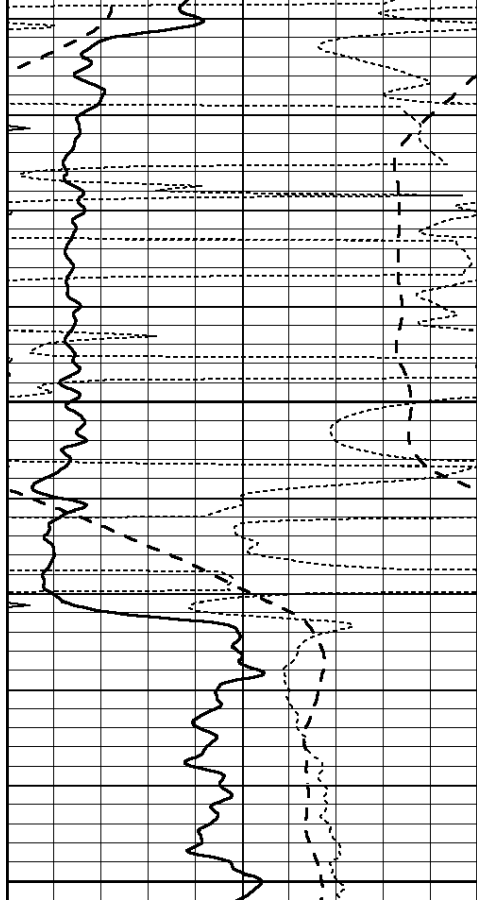
ANHYDRITE

Database File: 010012pe.db
 Dataset Pathname: pass3.9
 Presentation Format: dil
 Dataset Creation: Wed Nov 14 09:04:56 2012 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

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

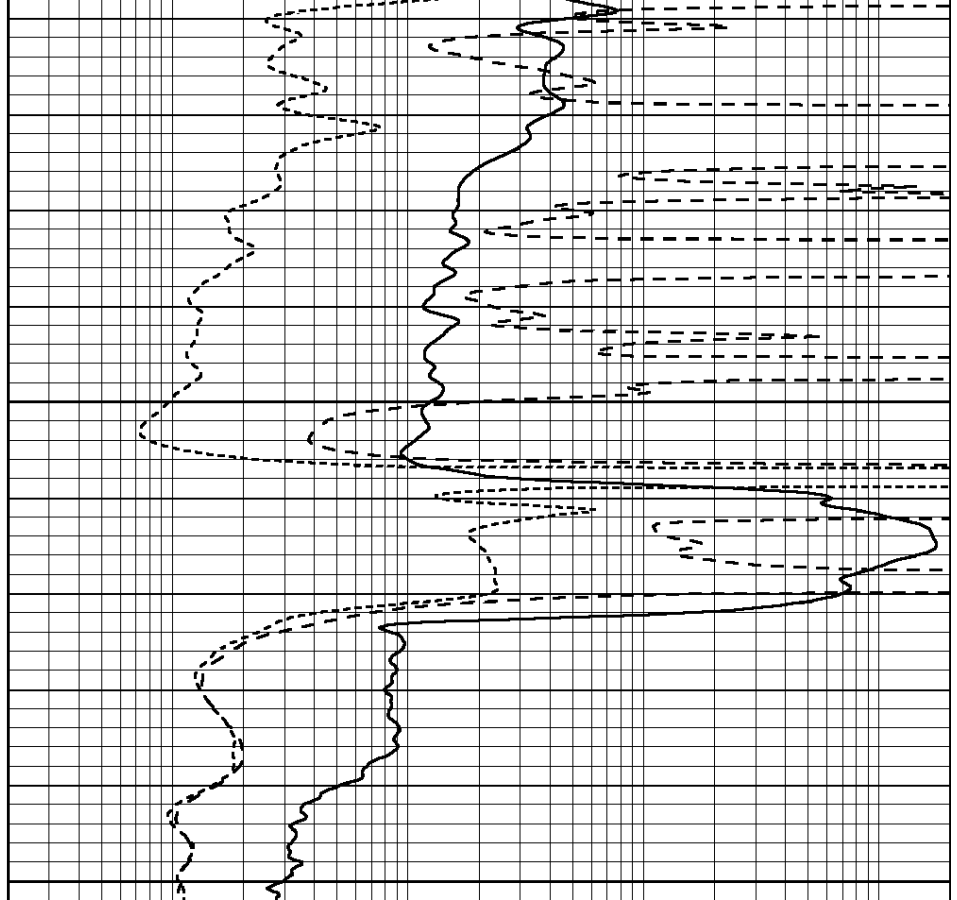
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000





2250

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

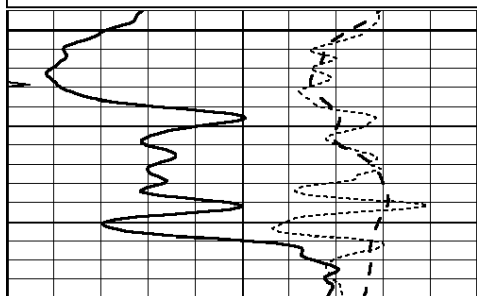


MAIN SECTION

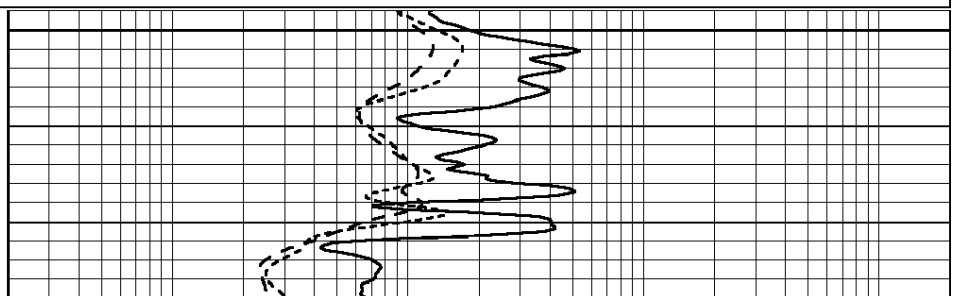
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 Dataset Pathname: pass3.8
 Presentation Format: dil
 Dataset Creation: Wed Nov 14 09:03:16 2012 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

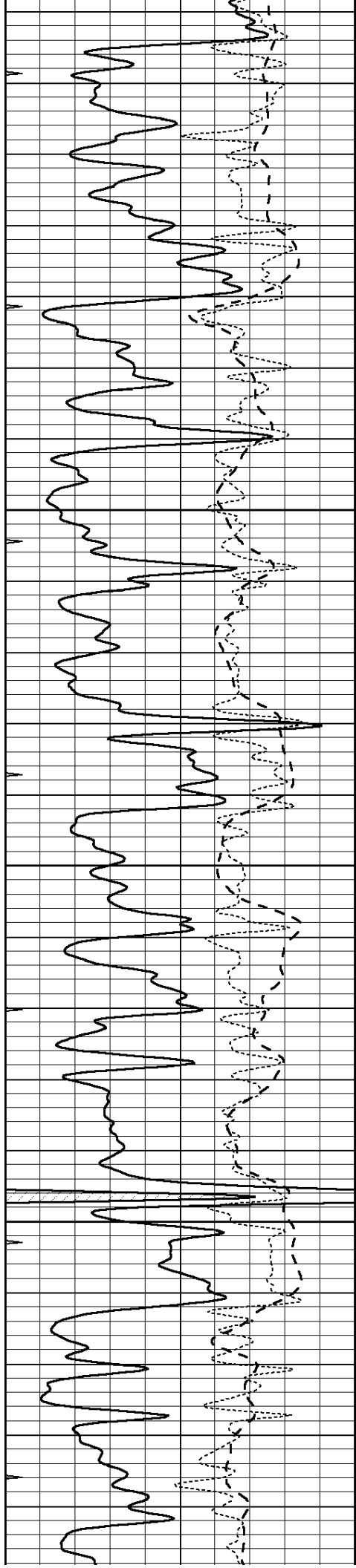
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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



3600



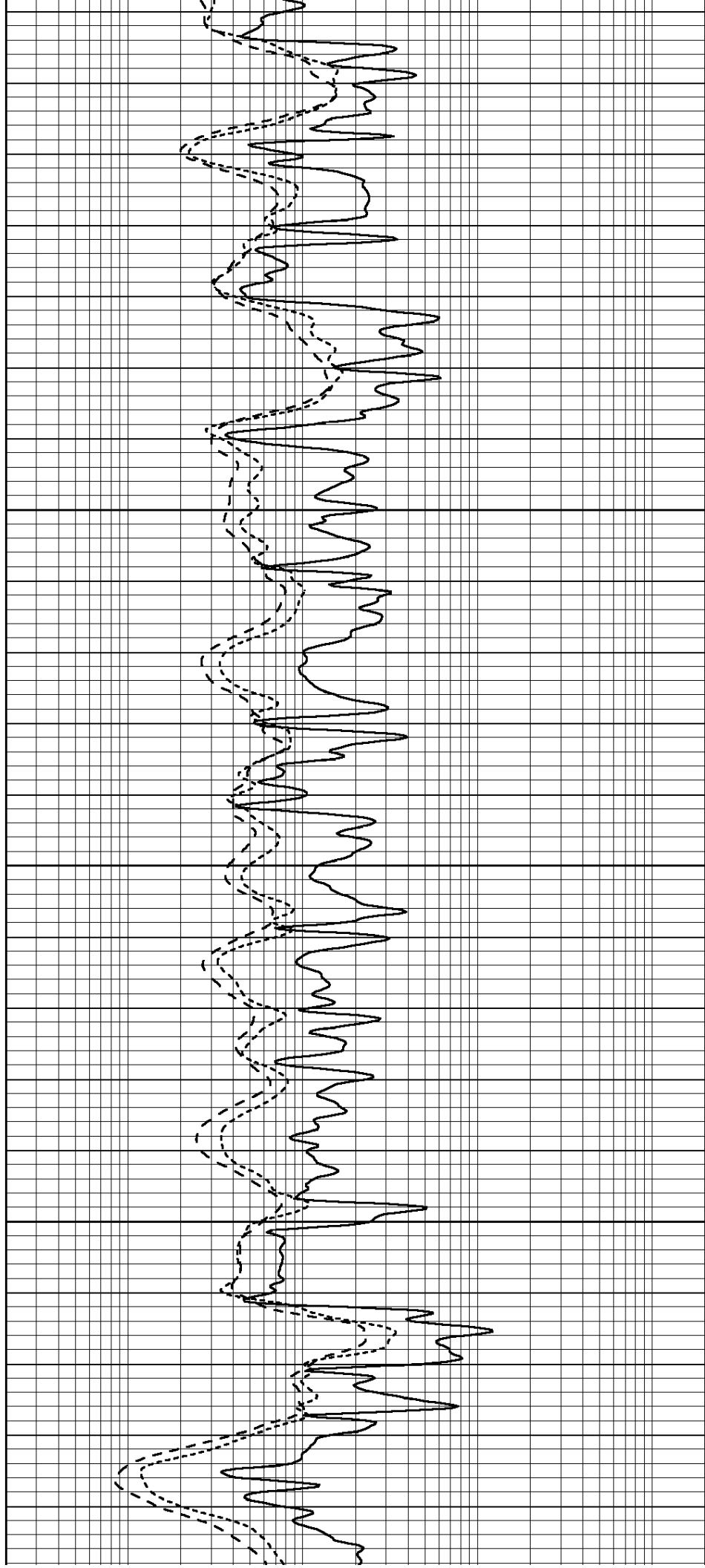


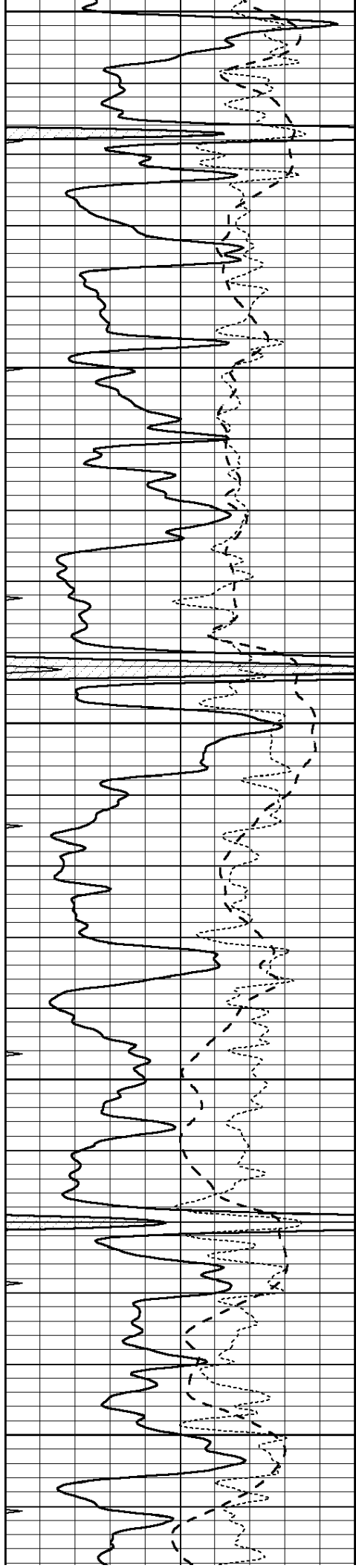
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3800





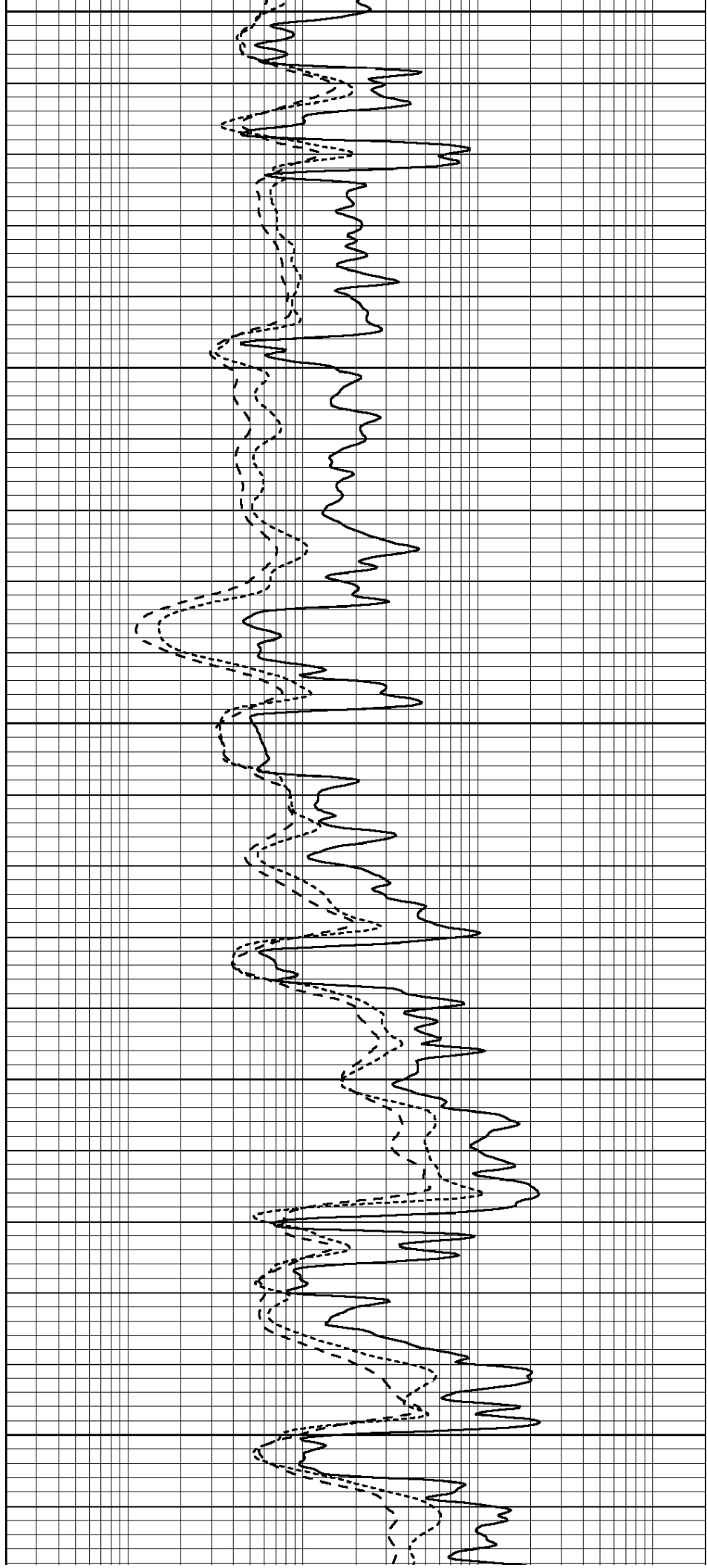
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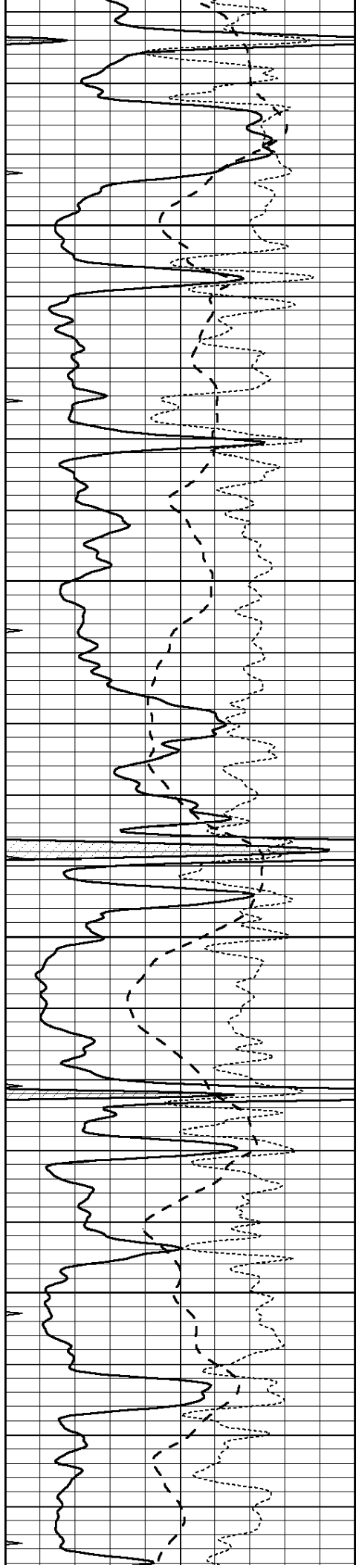
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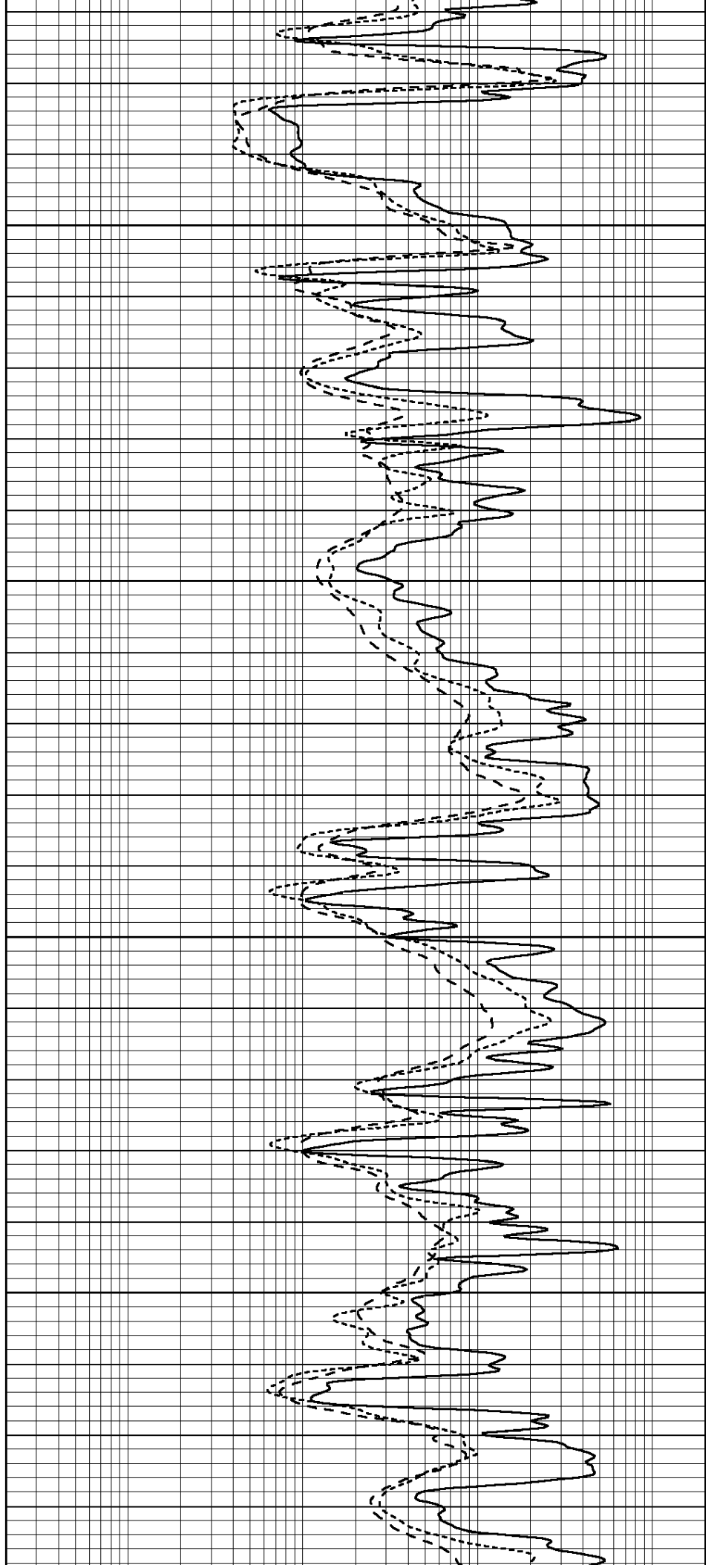


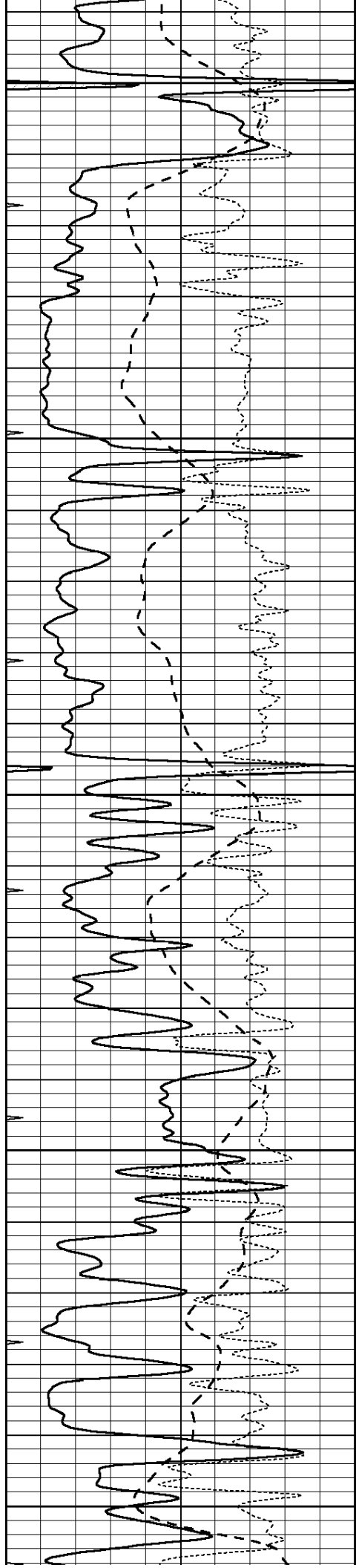
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4150

4200

4250





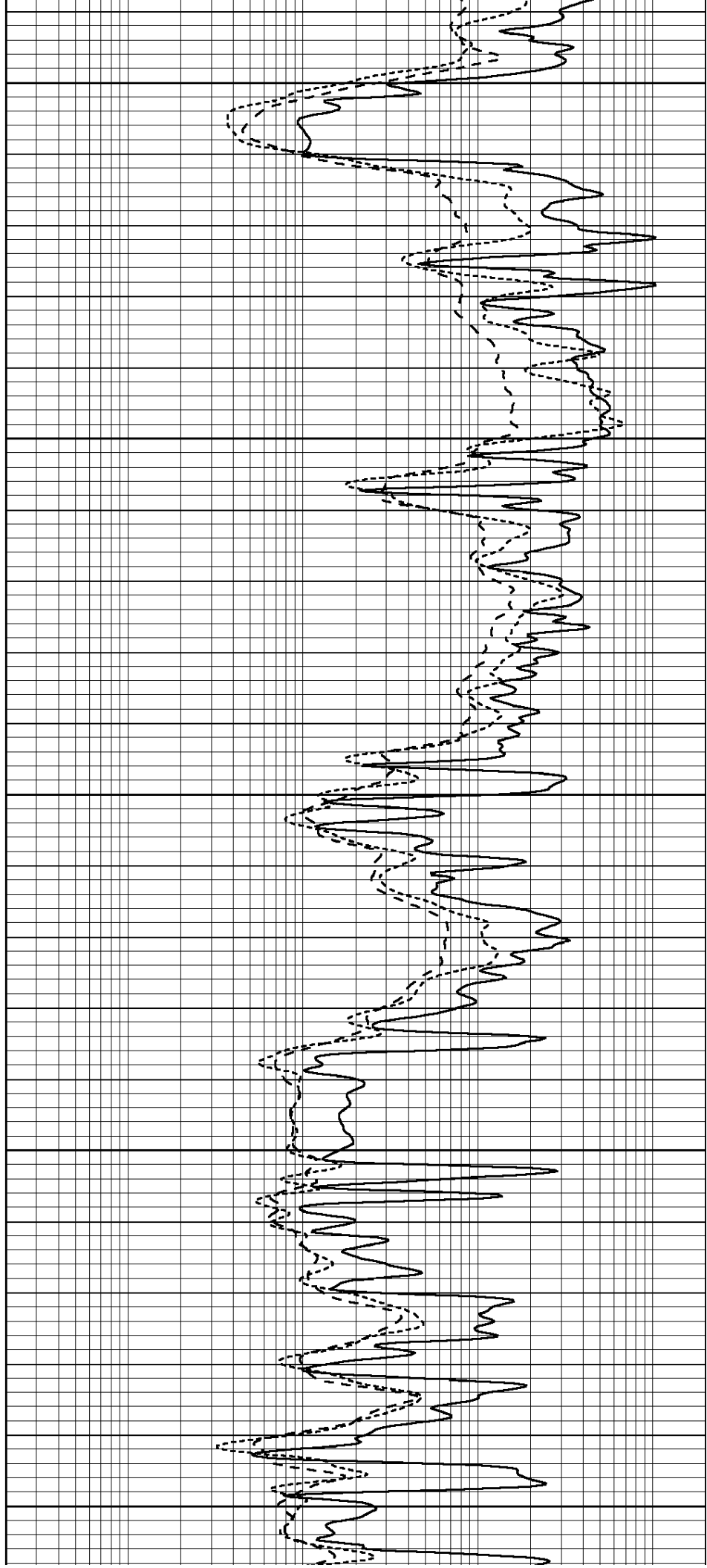
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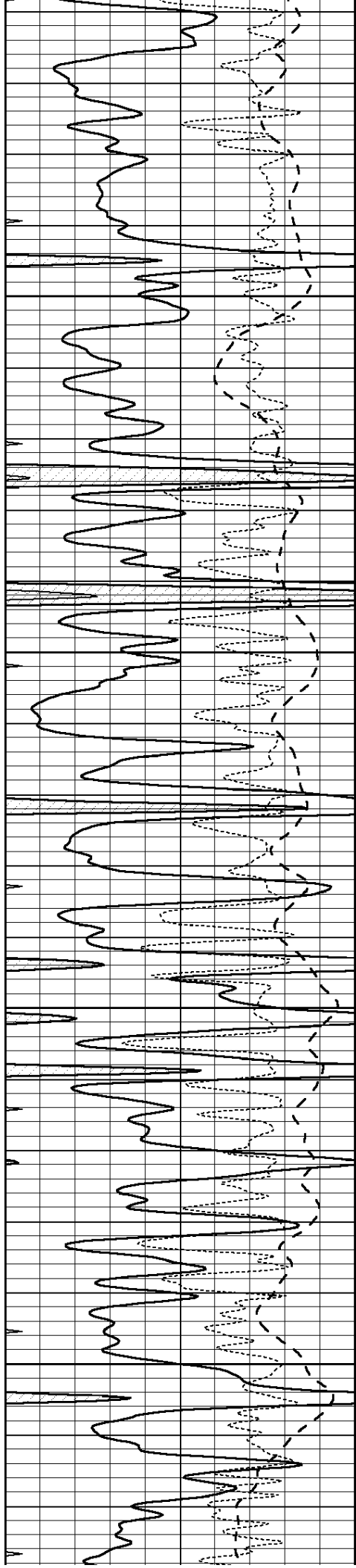
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4500



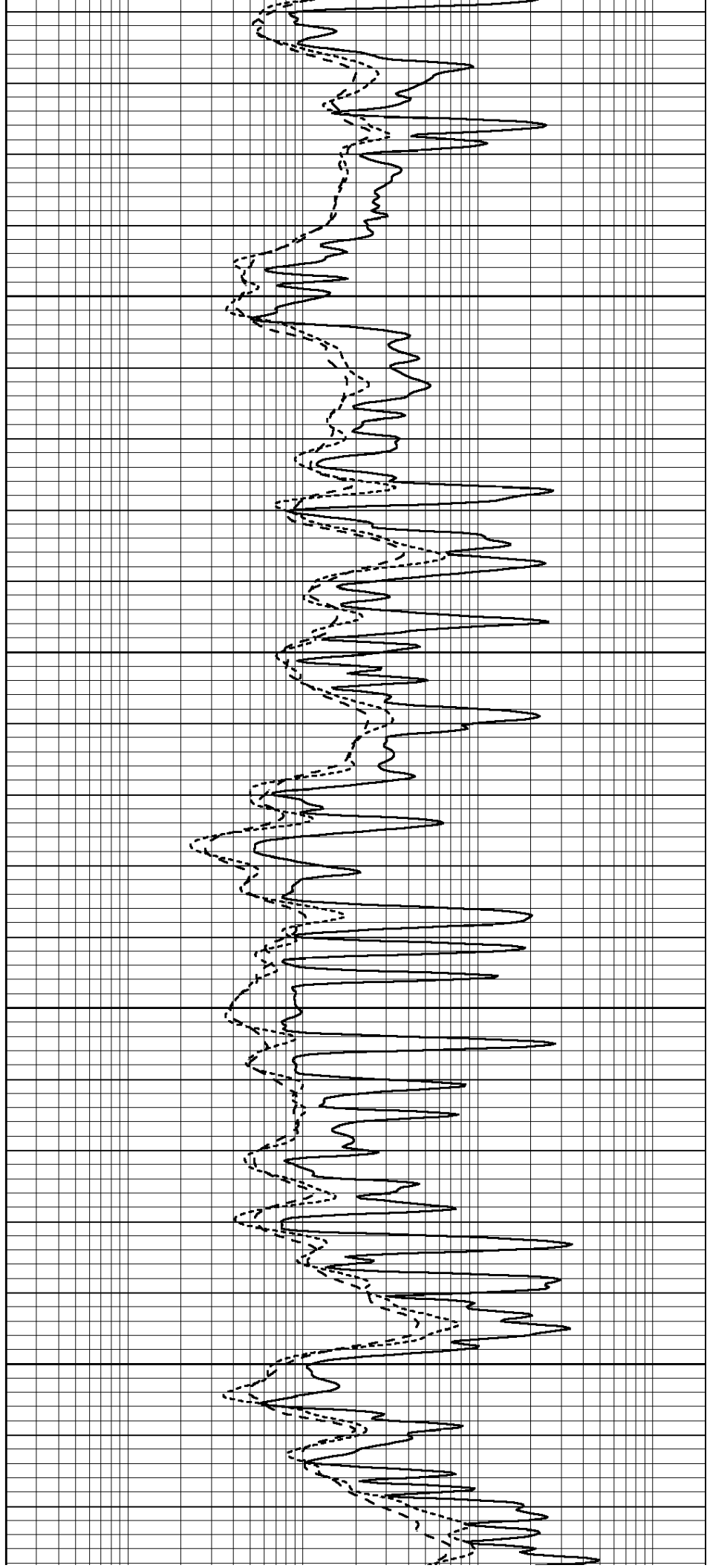


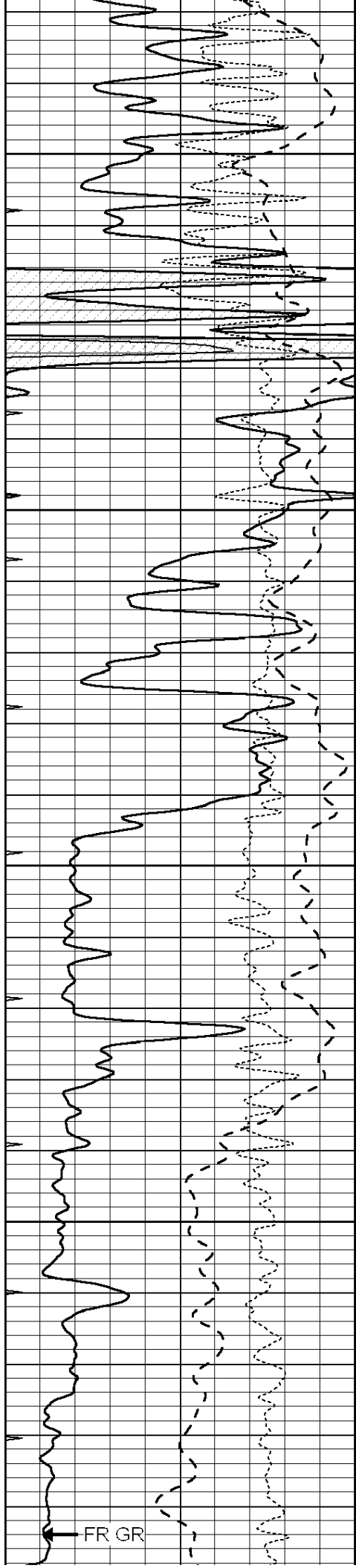
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4700



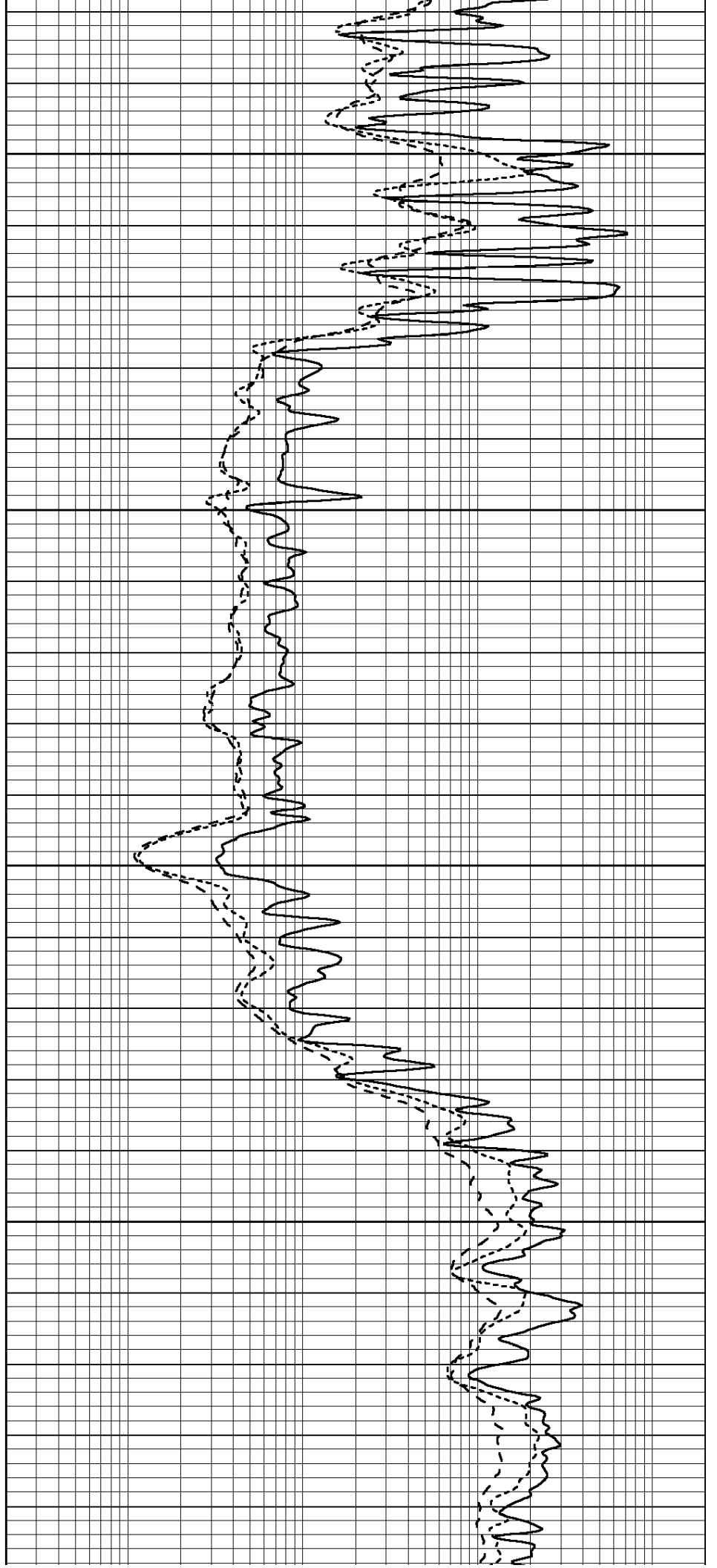


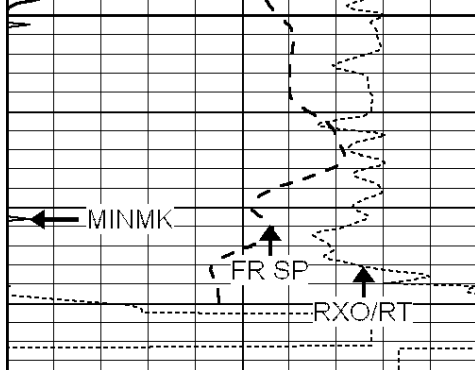
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4800

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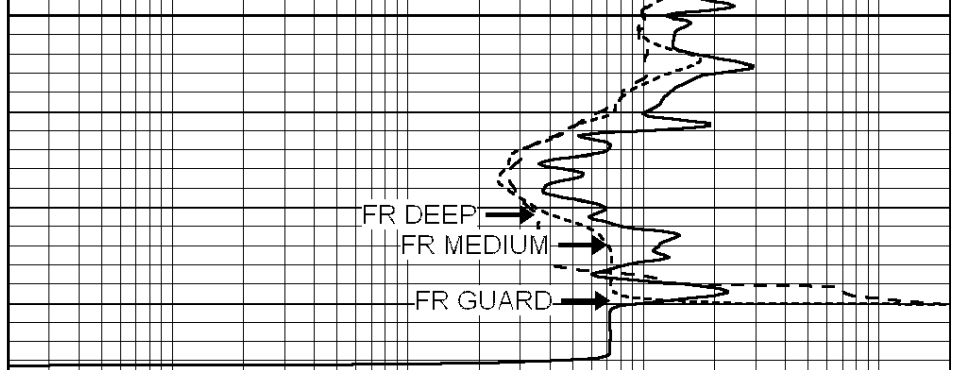
4900





4950
LTD 4982

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

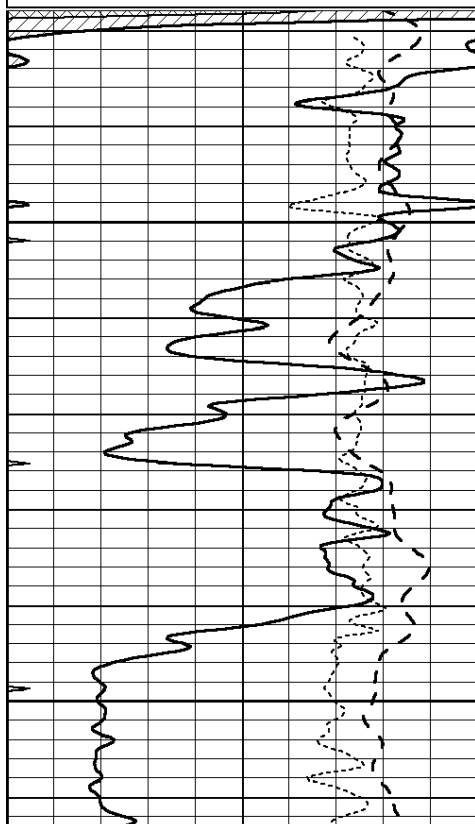


REPEAT SECTION

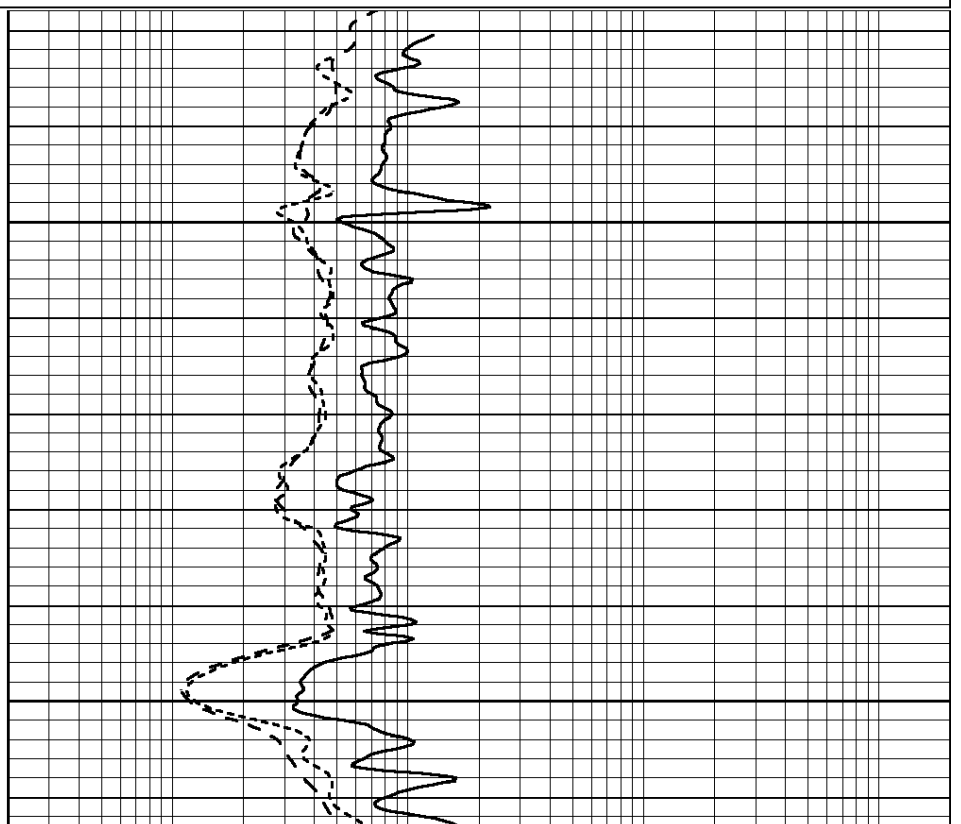
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 Presentation Format: dil
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 Charted by: Depth in Feet scaled 1:240

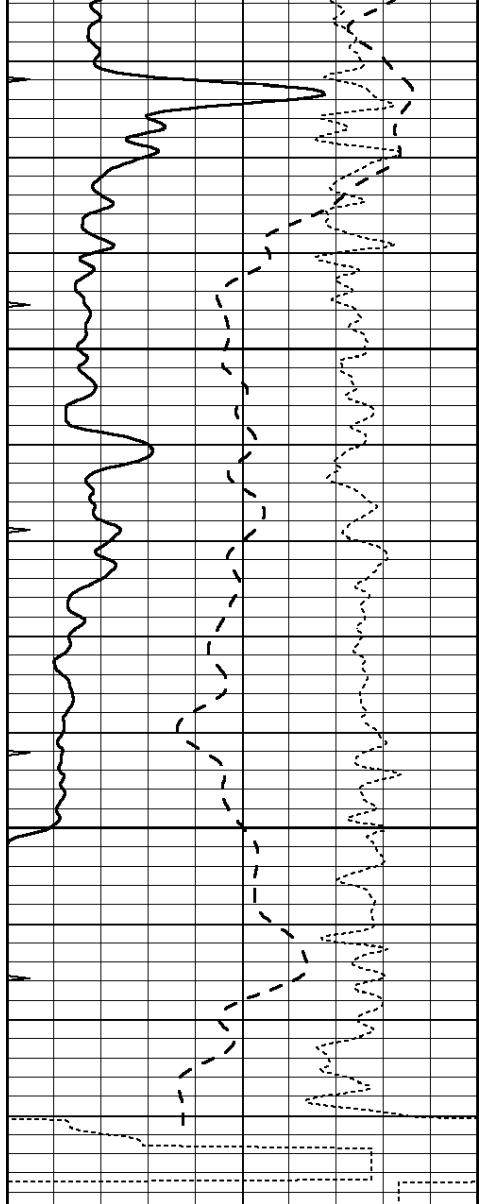
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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



4800
4850

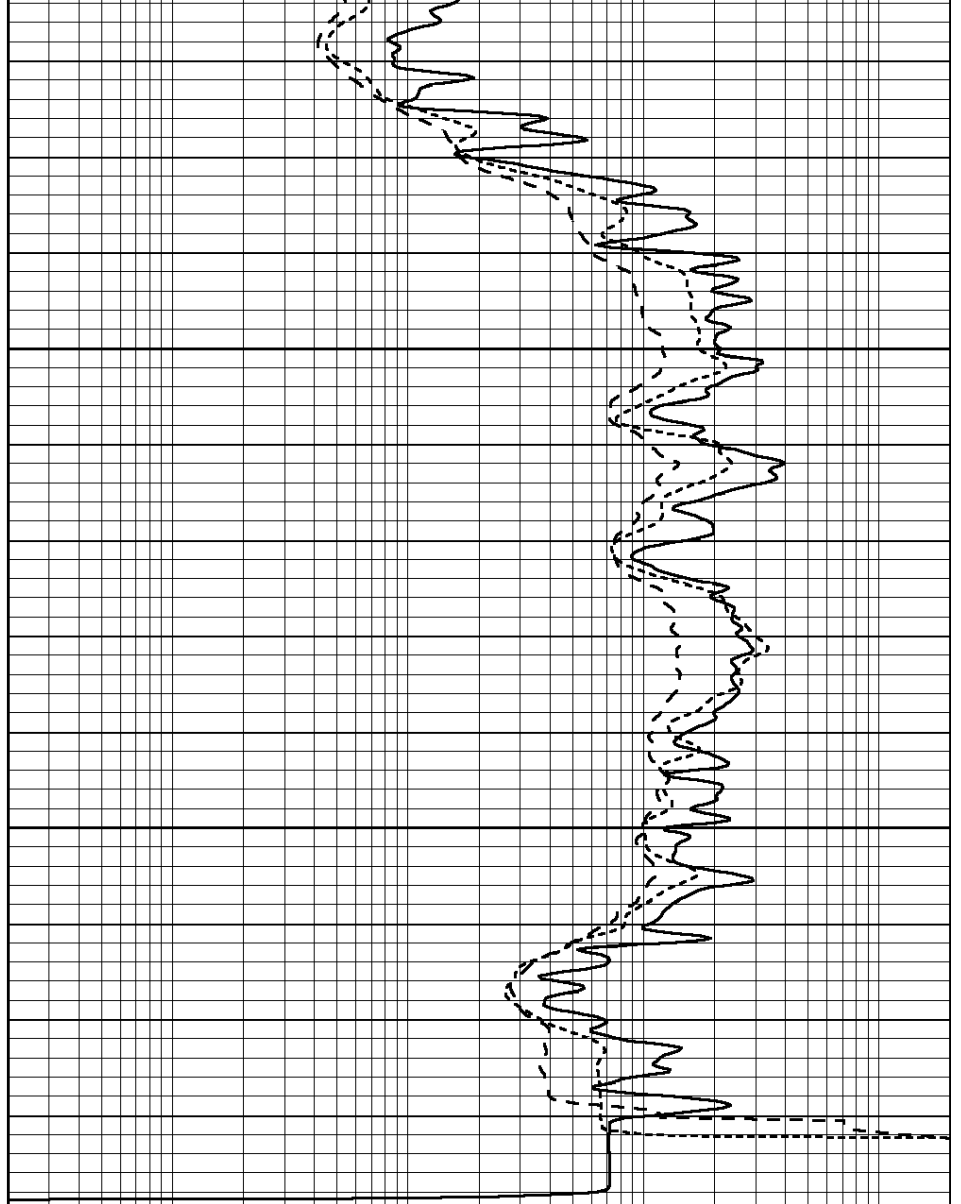




4900

4950

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

Calibration Report

Database File: 010012pe.db
 Dataset Pathname: pass3.8
 Dataset Creation: Wed Nov 14 09:03:16 2012 by Calc SOC 120430

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
 Performed: Sun Nov 11 00:57:13 2012

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	640.000	7.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	700.000	-11.000
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	3.5	6.5	
High Ref	5.5	15.0	
	Gain: 4.4		Offset: -9.1

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:	Wed Sep 19 15:58:00 2012
Calibrator Value:	1.0 GAPI
Background Reading:	0.0 cps
Calibrator Reading:	1.0 cps
Sensitivity:	0.3000 GAPI/cps