



SUPERIOR
Hays,
Kansas

DUAL INDUCTION LOG

Company	MULL DRILLING COMPANY, INC.	Company	MULL DRILLING COMPANY, INC.
Well	#2-16 DAVID	Well	#2-16 DAVID
Field	WILDCAT	Field	WILDCAT
County	NESS	County	NESS
State	KANSAS	State	KANSAS
Location:	AP1 # : 15-135-25376-0000 1113' FSL & 2136' FSL	Other Services CDL/CNL/PE MEL/SONIC	
Permanent Datum	GROUND LEVEL	Elevation	2456
Log Measured From	KELLY BUSHING 5' A.G.L.		
Drilling Measured From	KELLY BUSHING		
SEC 16 TWP 17S RGE 23W			
Date	4/17/12		
Run Number	ONE		
Depth Driller	4560		
Depth Logger	4562		
Bottom Logged Interval	4560		
Top Log Interval	00		
Casing Driller	8 5/8"@222'		
Casing Logger	208		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHORIDES 4,900 PPM	
Density / Viscosity	9.6/53		
pH / Fluid Loss	9.0/7.6		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.800@78F		
Rmt @ Meas. Temp	.600@78F		
Rmc @ Meas. Temp	.960@78F		
Source of Rmt / Rmc	MEASUREMENT		
Rm @ BHT	.516@78F		
Time Circulation Stopped	2.5 HOURS		
Time Logger on Bottom	8:15 A.M.		
Maximum Recorded Temperature	121F		
Equipment Number	4010		
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
RANSOM, KS. (HWY 283 & 4 JUNCTION) 5S. TO "RD. 210", 1 1/2E., N. INTO



SUPERIOR
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MAIN SECTION

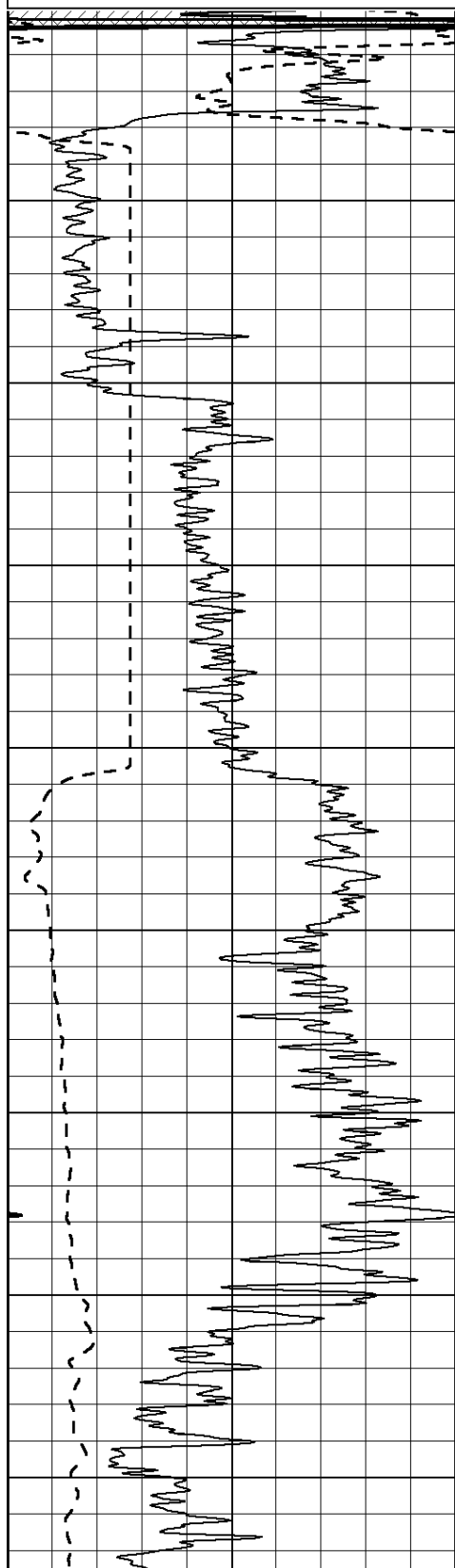
Database File: 408626pe.db
Dataset Pathname: pass3.6
Presentation Format: dil2
Dataset Creation: Tue Apr 17 09:51:53 2012 by Calc Open-Cased 110302
Charted by: Depth in Feet scaled 1:600

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

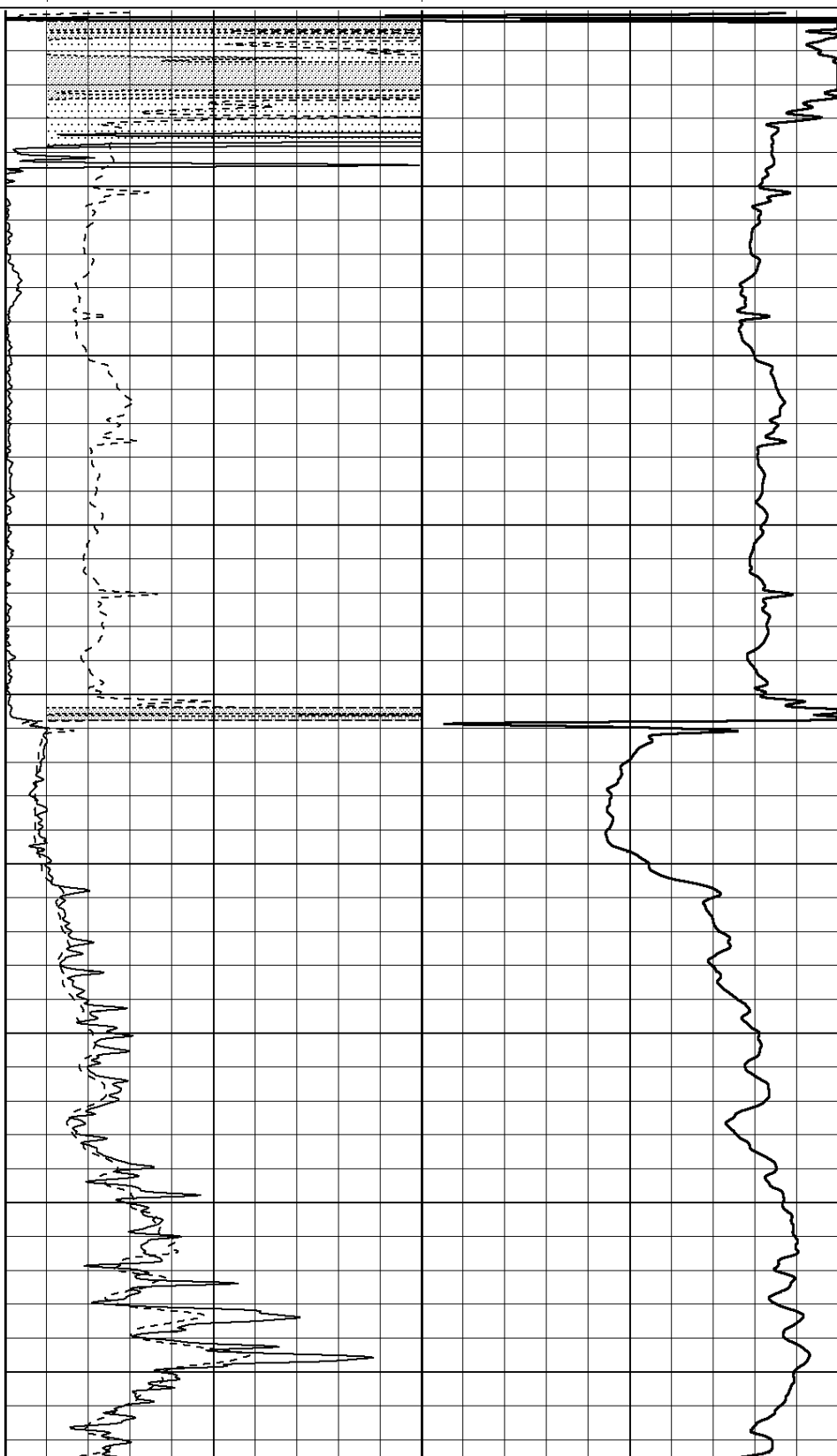
0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50

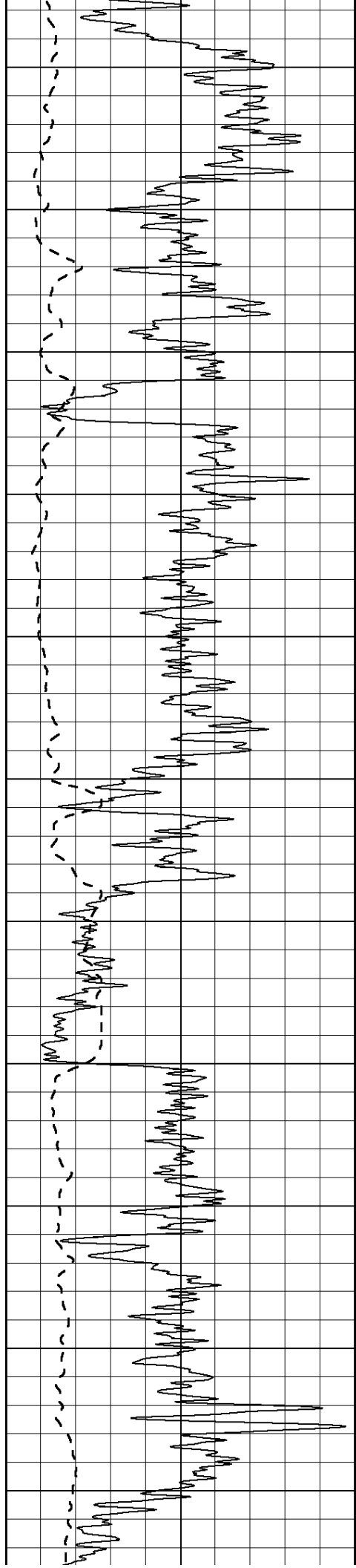
1000	CILD (mmho/m)	0
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50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500



0
50
100
150
200
250
300
350
400





450

500

550

600

650

700

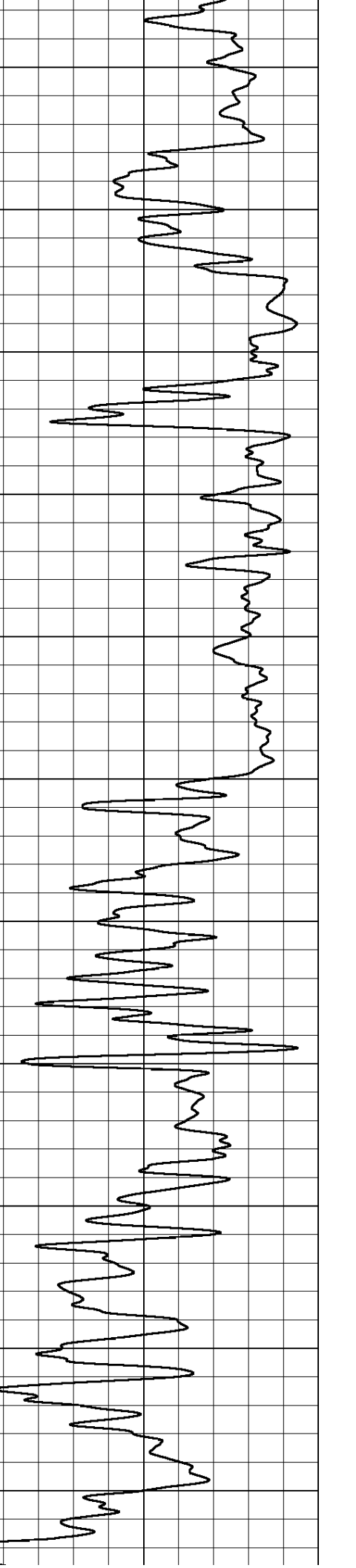
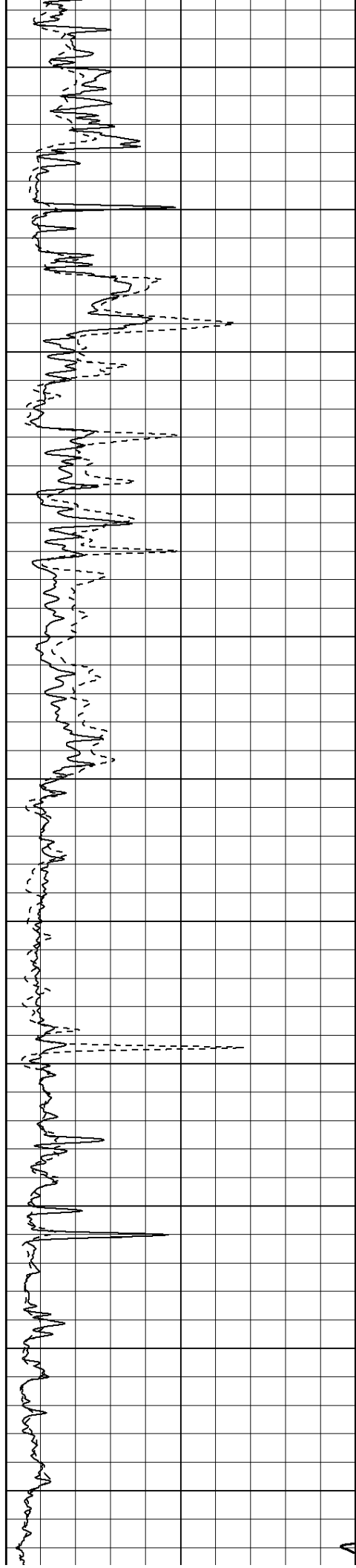
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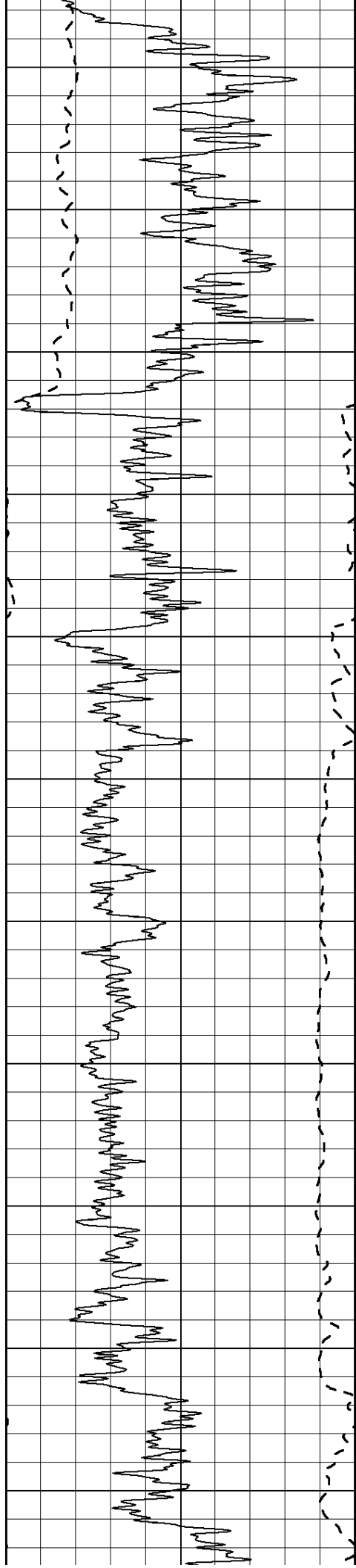
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850

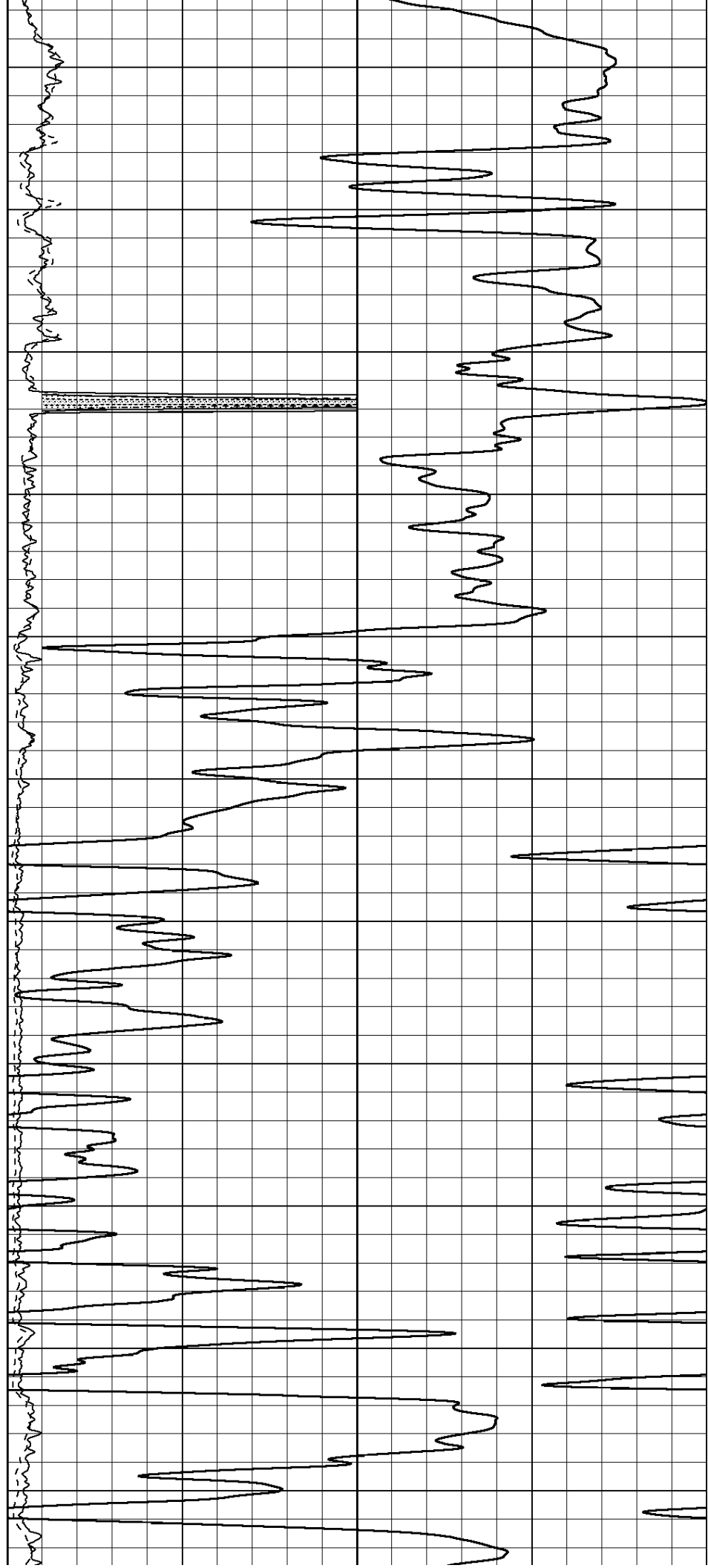
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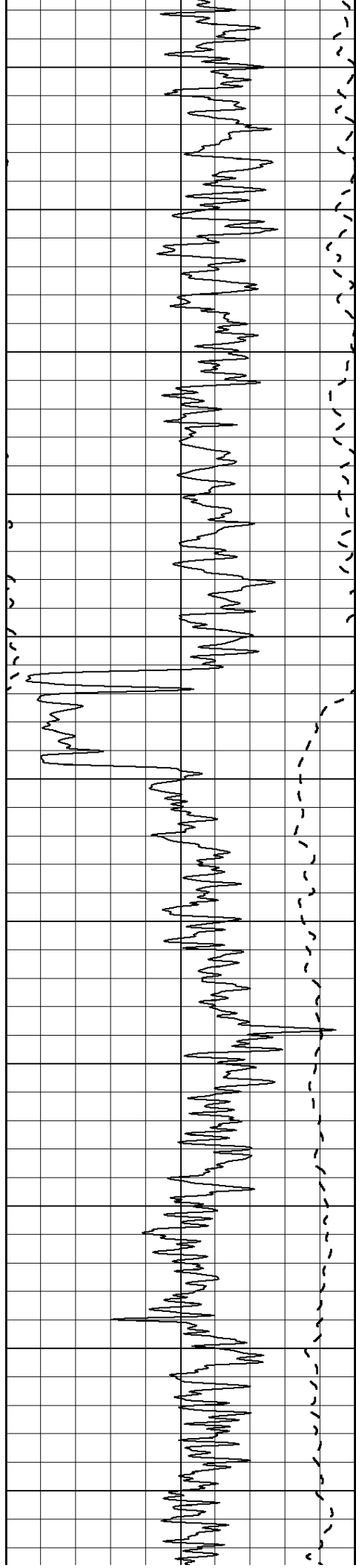
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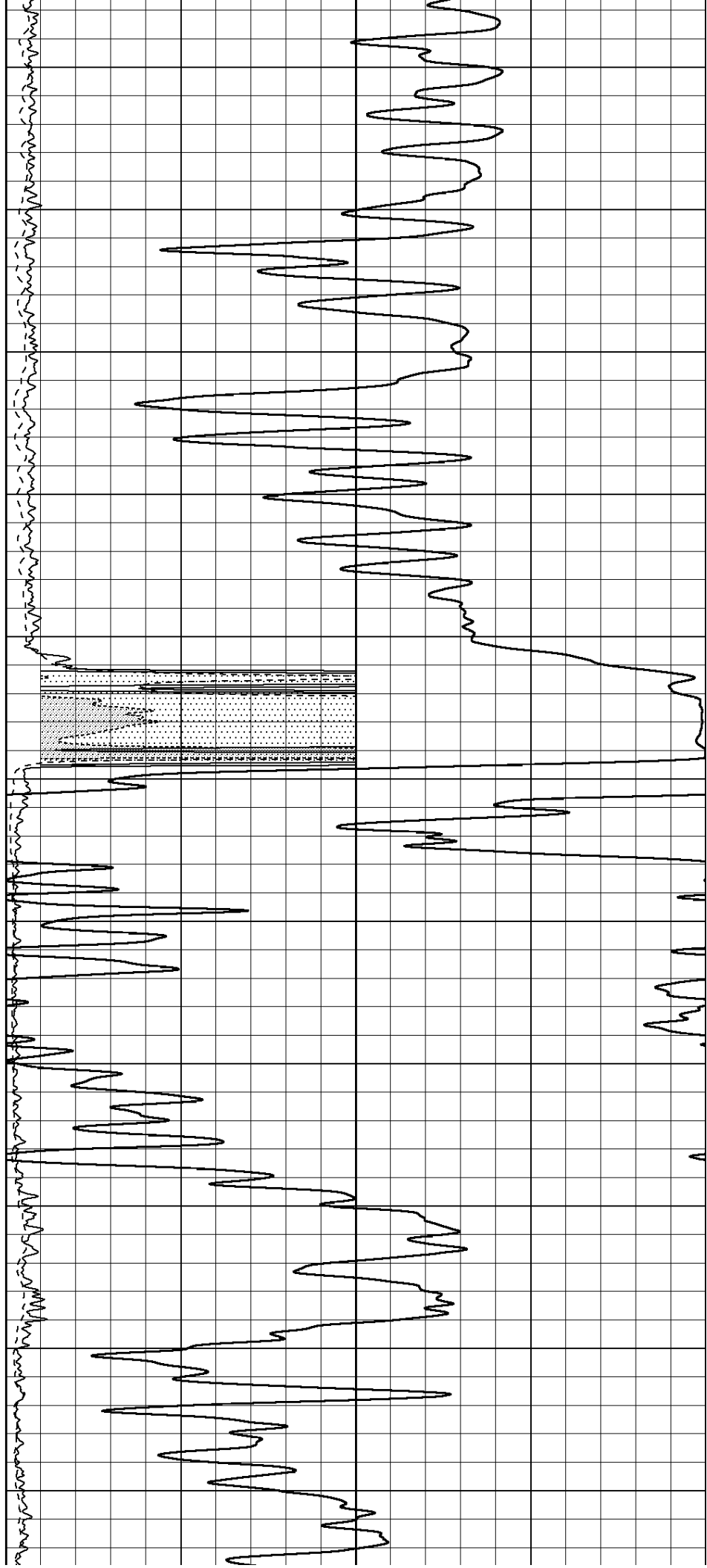


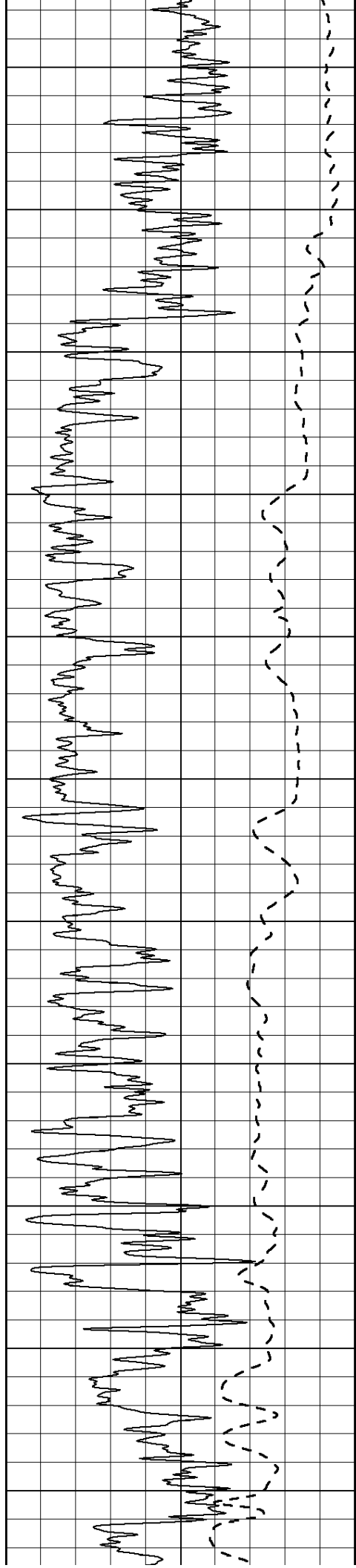
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1050
1100
1150
1200
1250
1300
1350
1400
1450
1500





1550
1600
1650
1700
1750
1800
1850
1900
1950
2000
2050





2100

2150

2200

2250

2300

2350

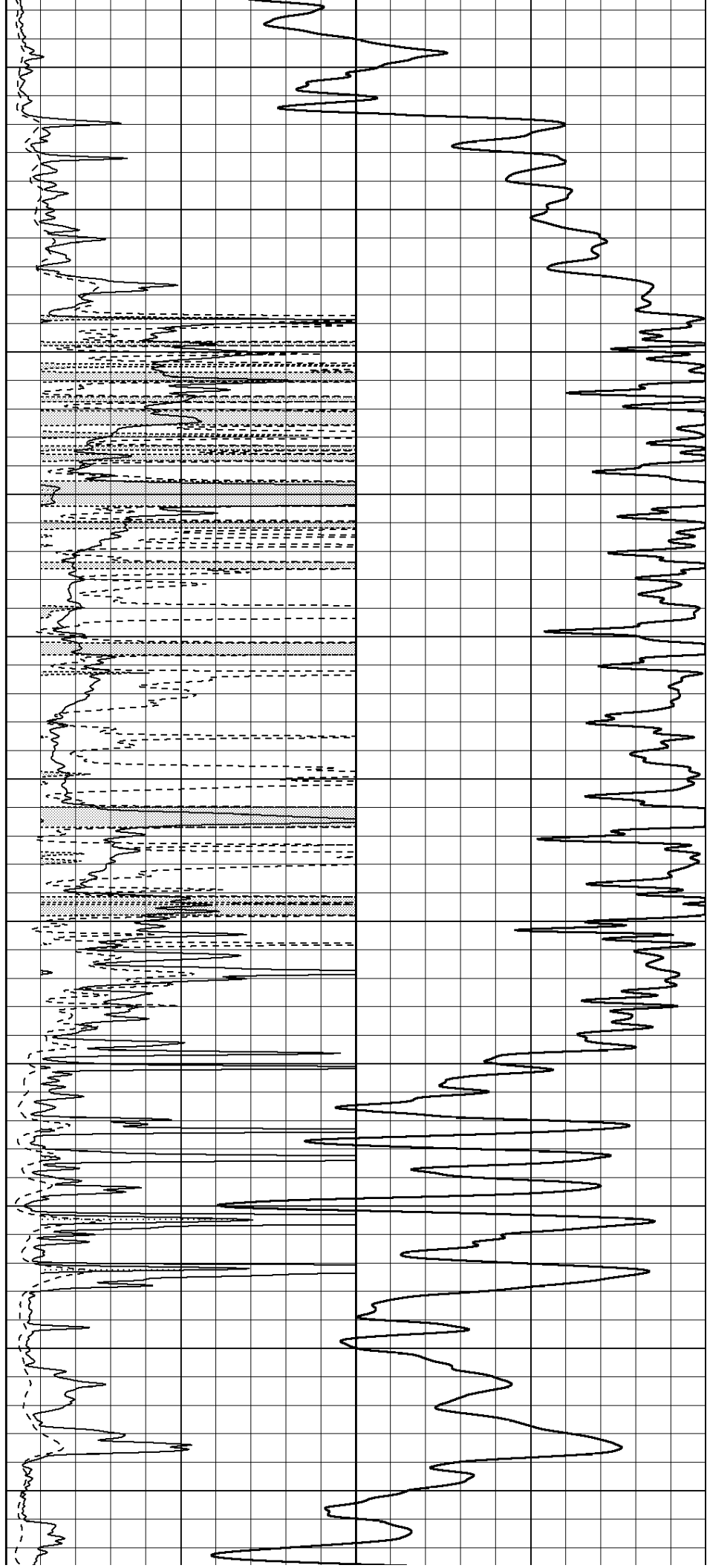
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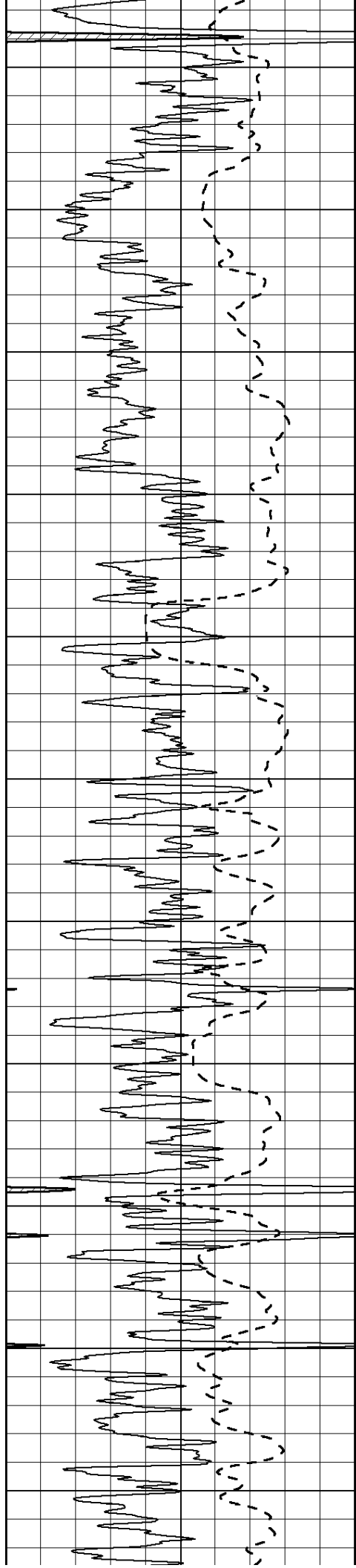
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2500

2550

2600





2650

2700

2750

2800

2850

2900

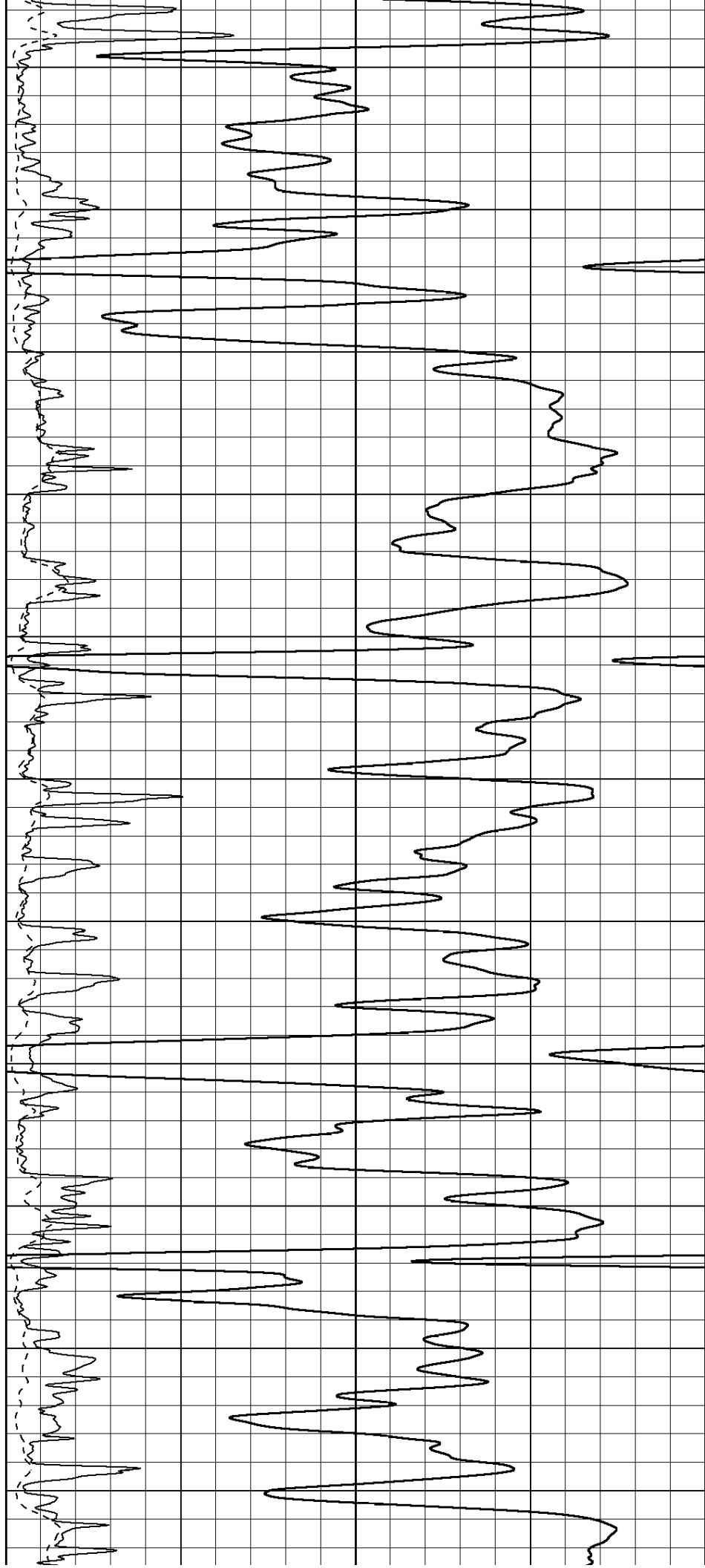
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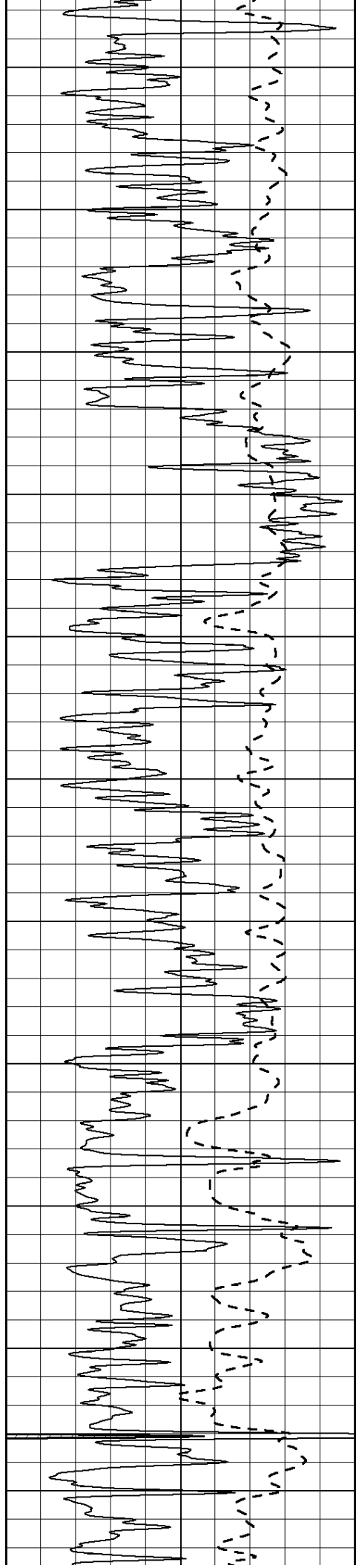
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3050

3100

3150





3200

3250

3300

3350

3400

3450

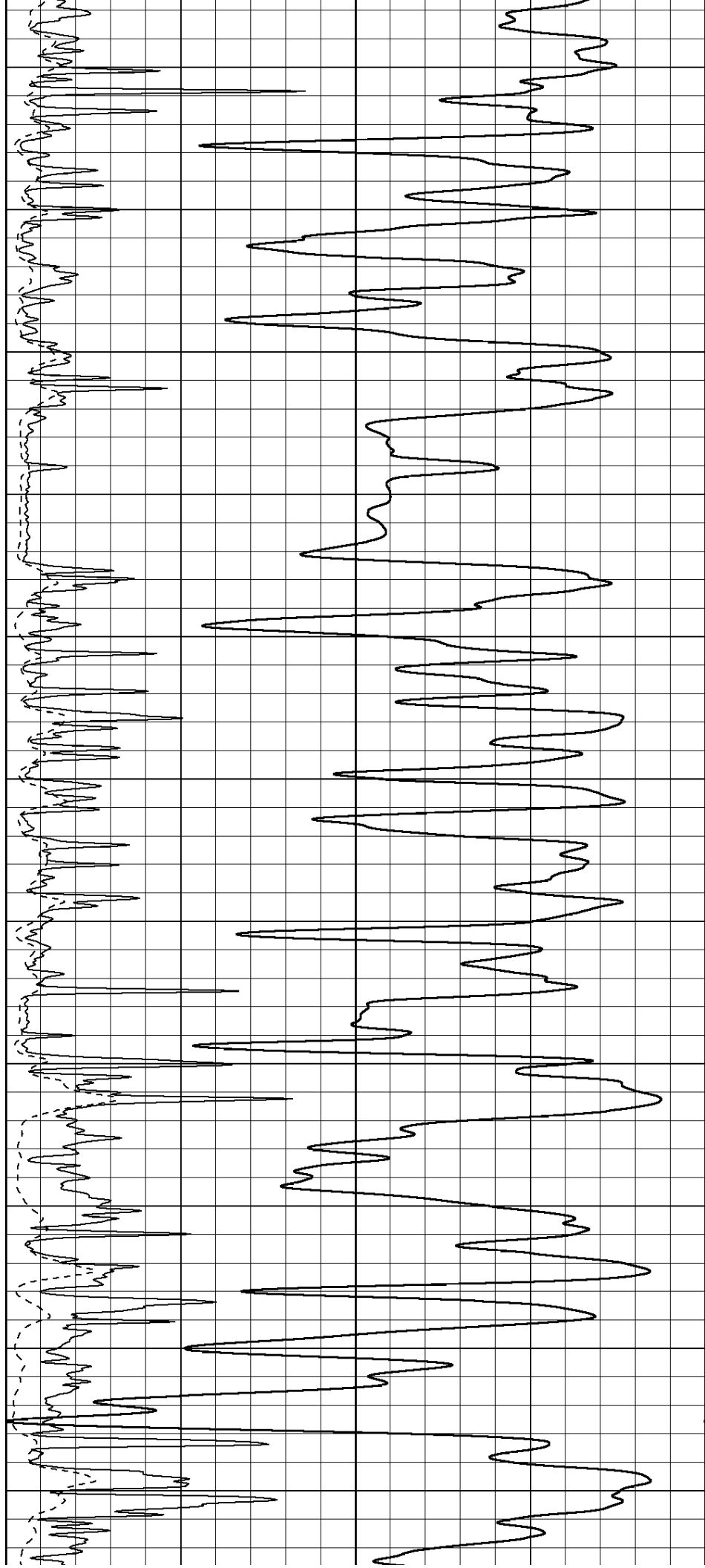
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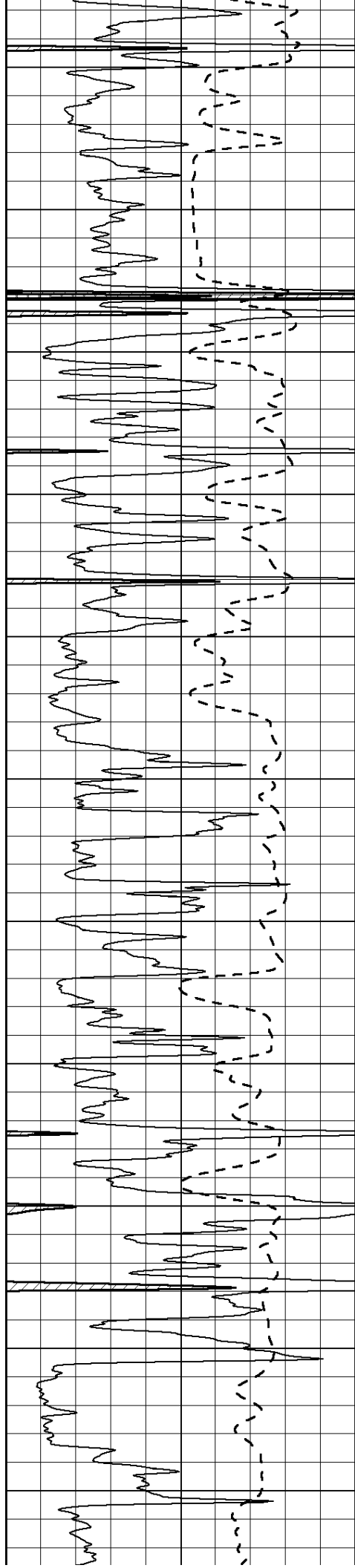
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3600

3650

3700





3750

3800

3850

3900

3950

4000

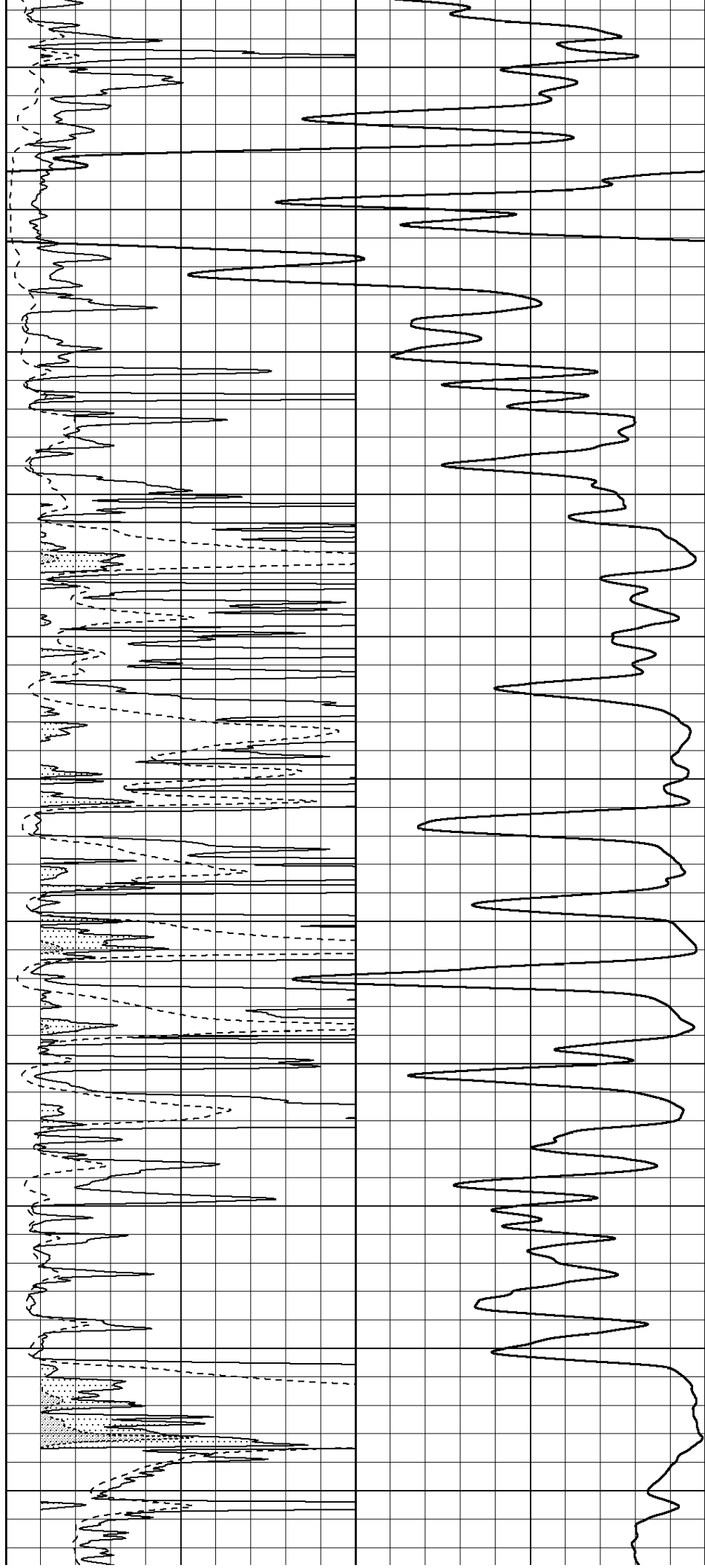
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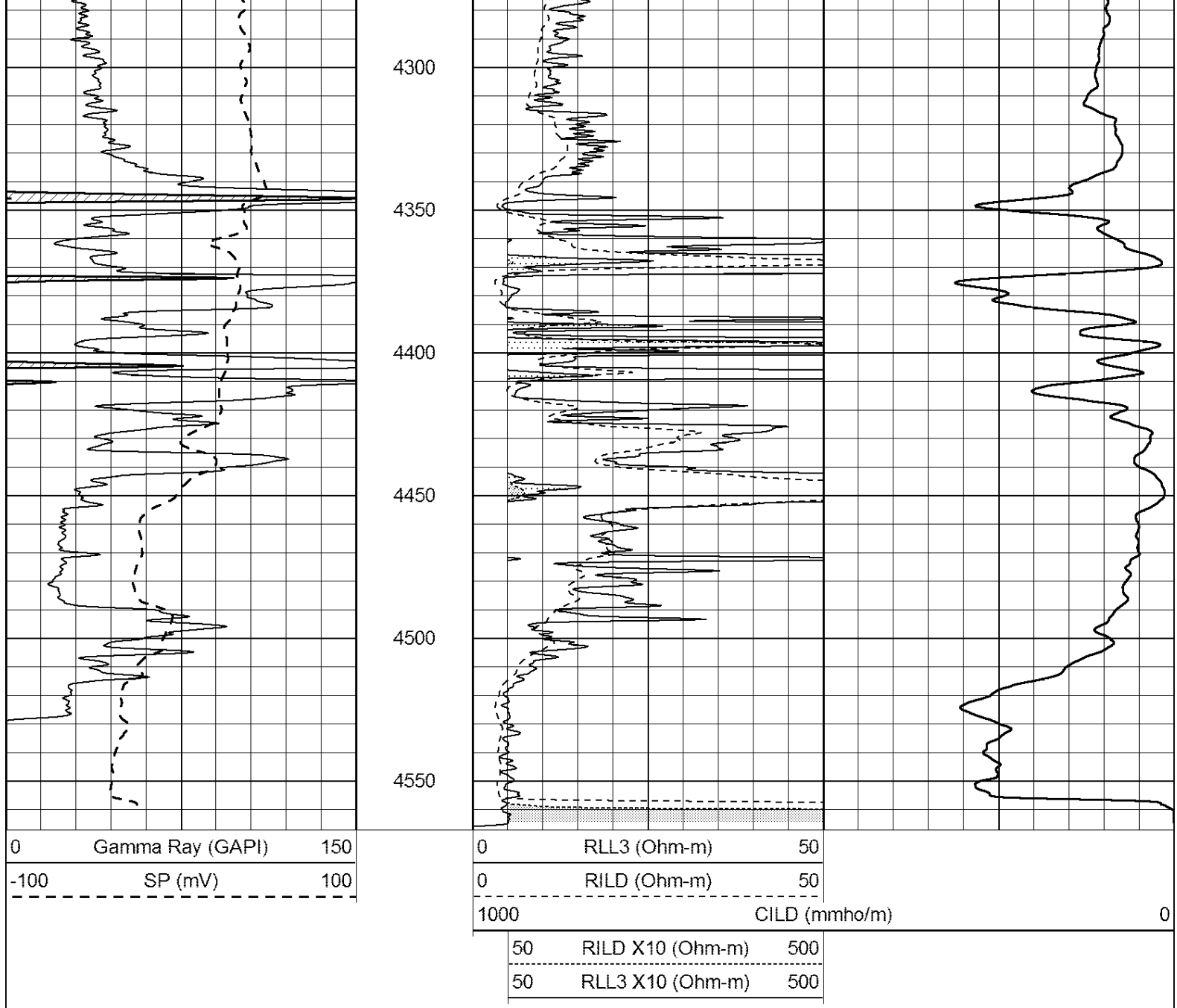
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4150

4200

4250





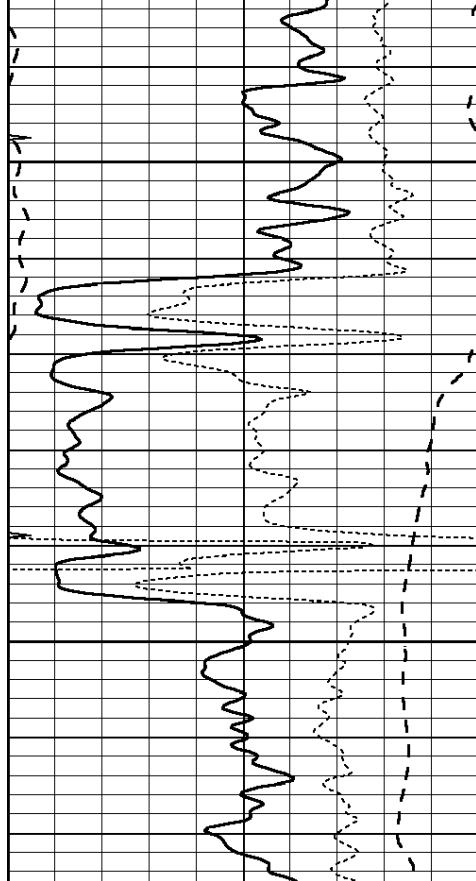
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ANHYDRITE

Database File: 408626pe.db
Dataset Pathname: pass3.7
Presentation Format: dil
Dataset Creation: Tue Apr 17 09:52:52 2012 by Calc Open-Cased 110302
Charted by: Depth in Feet scaled 1:240

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

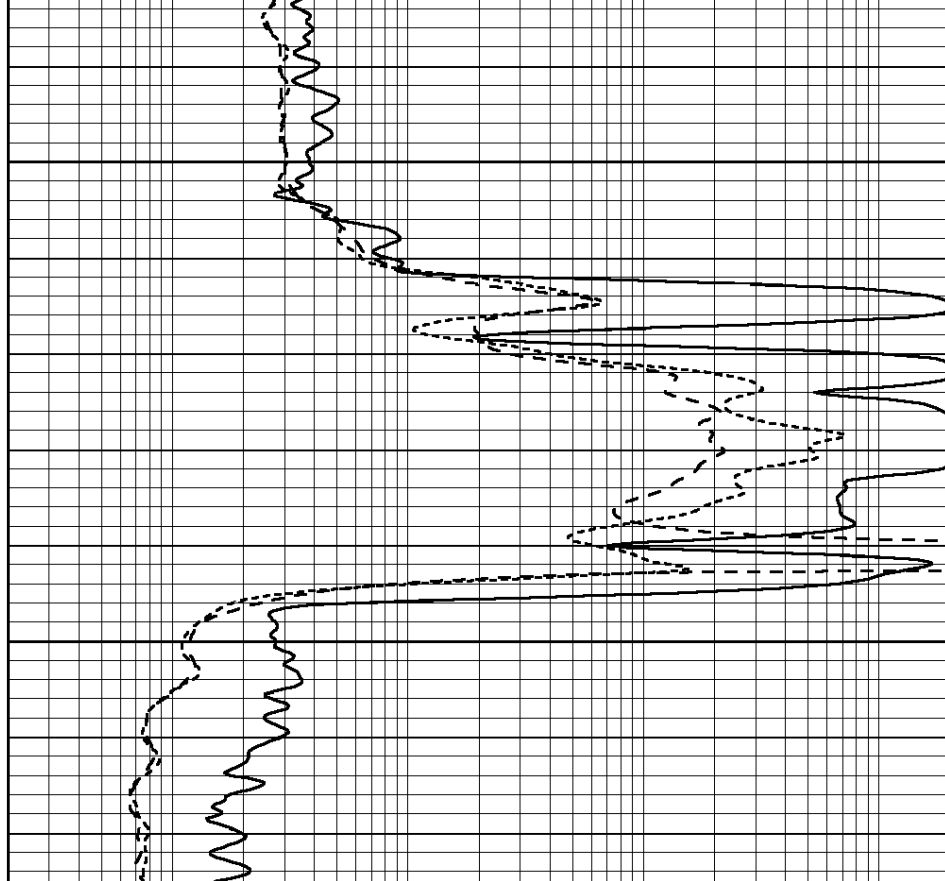
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



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

1750

1800



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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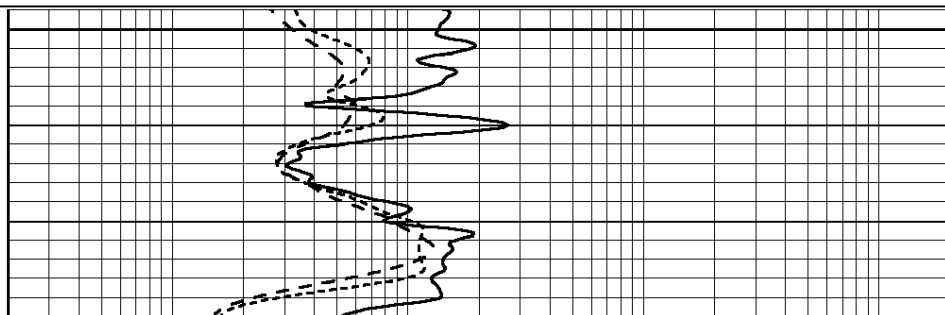
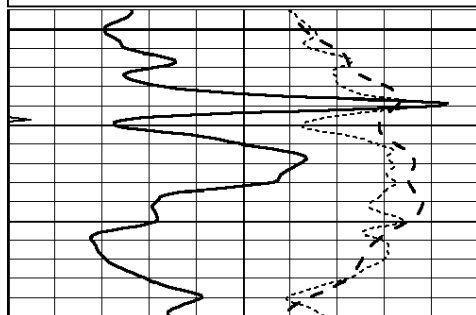
MAIN SECTION

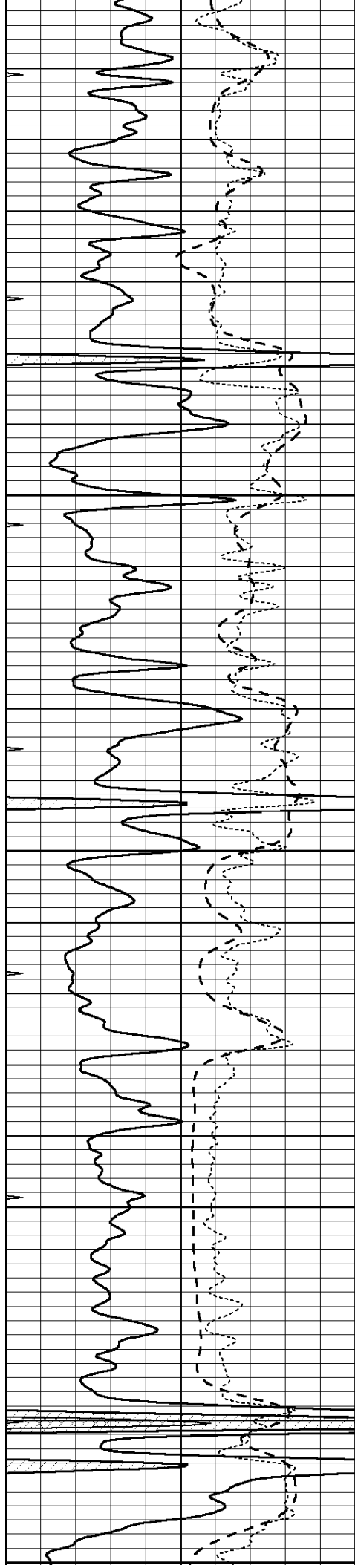
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 Dataset Creation: Tue Apr 17 09:51:53 2012 by Calc Open-Cased 110302
 Charted by: Depth in Feet scaled 1:240

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





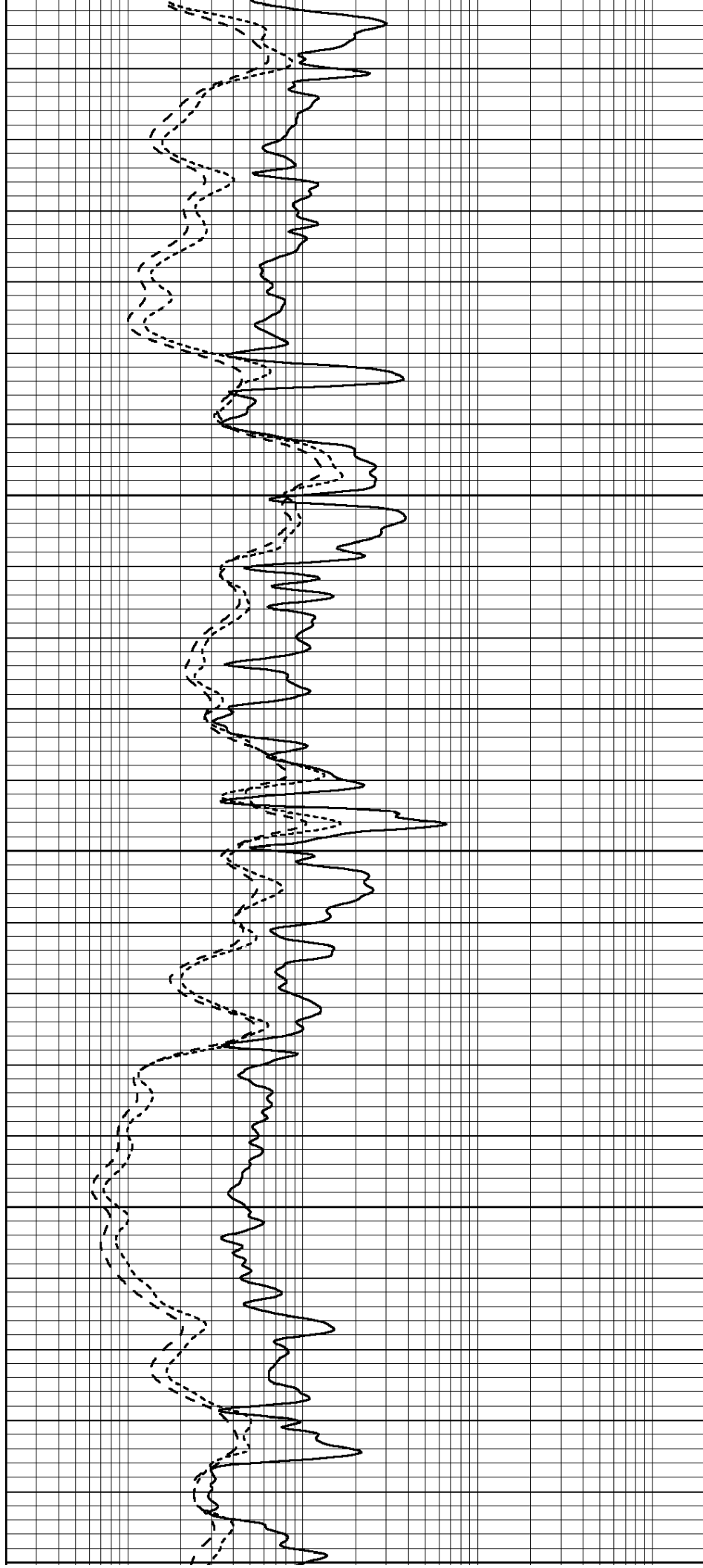
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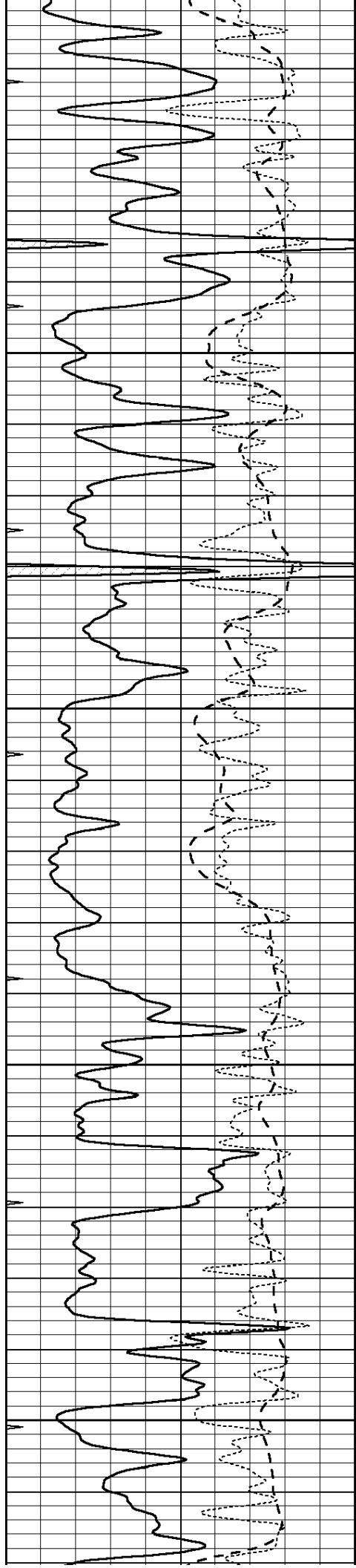
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3750

3800

3850



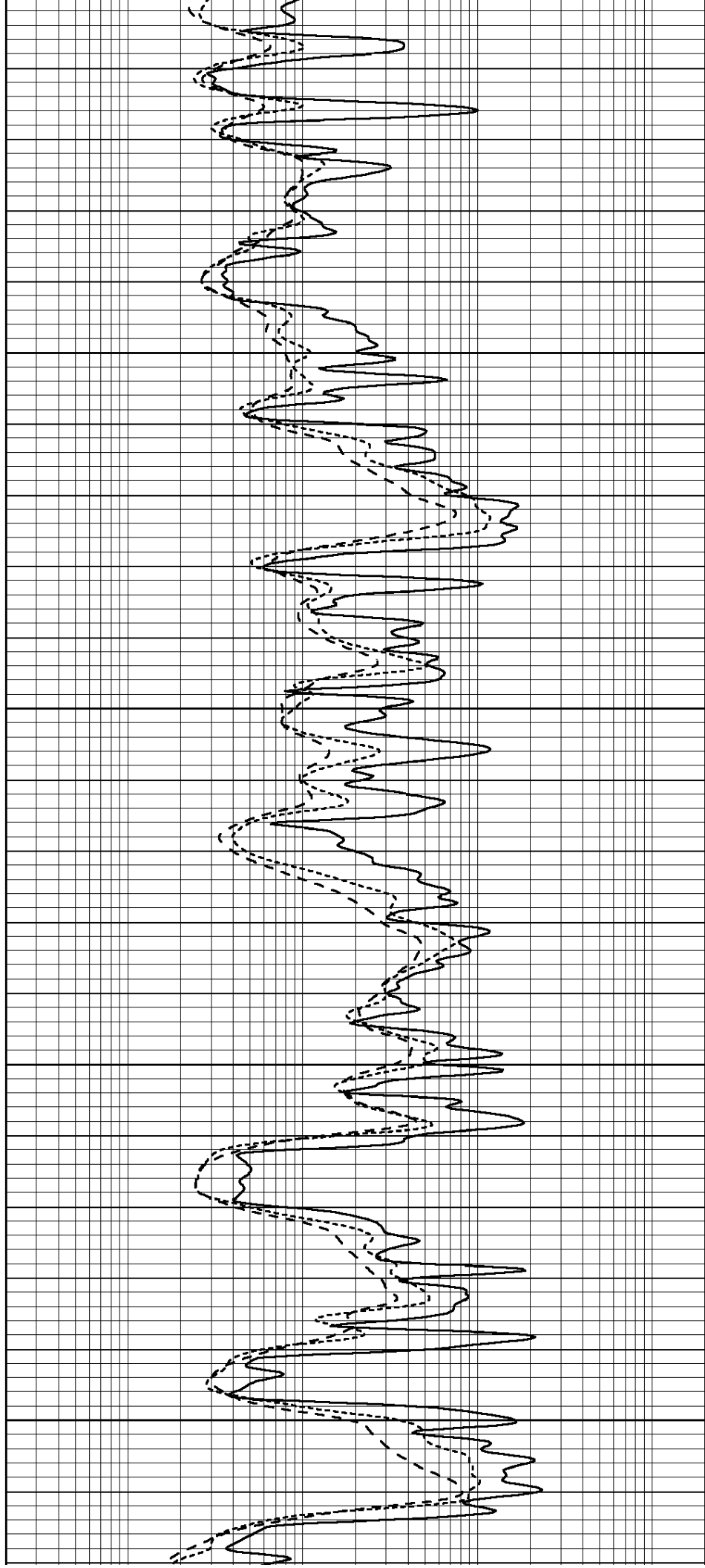


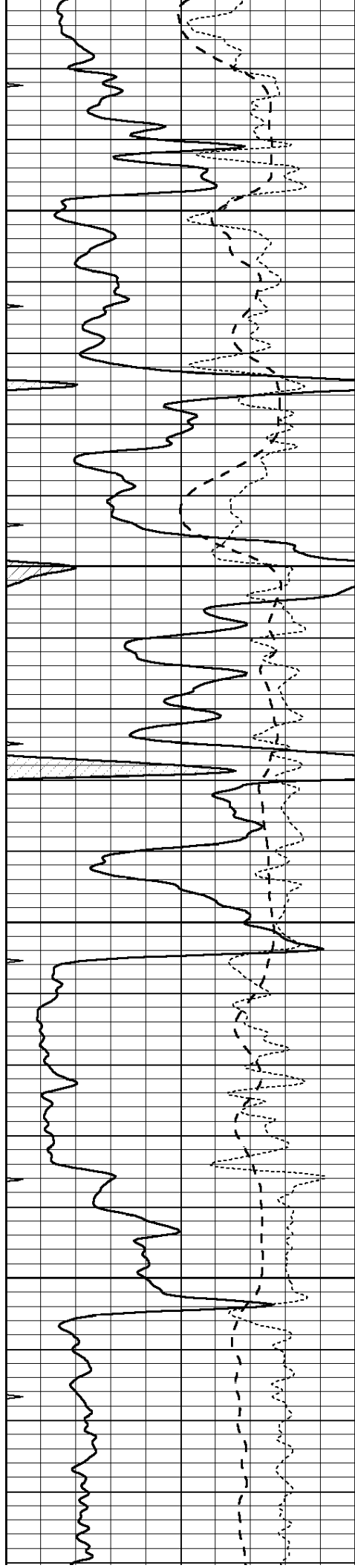
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3950

4000

4050



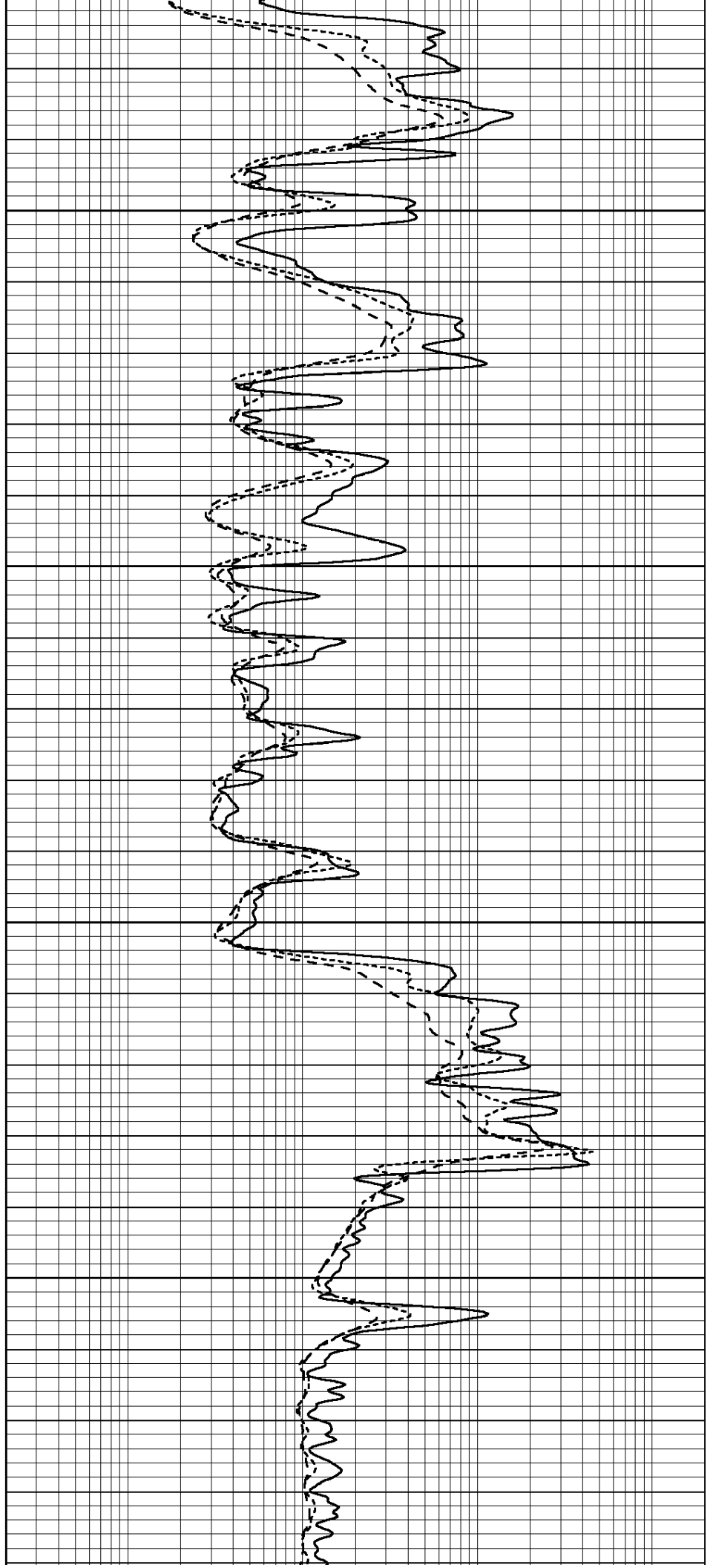


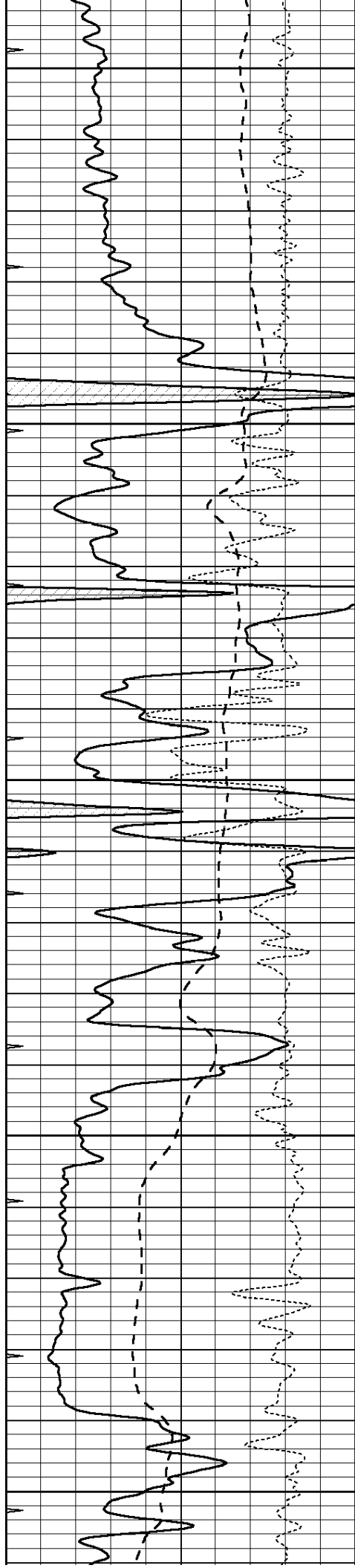
4100

4150

4200

4250





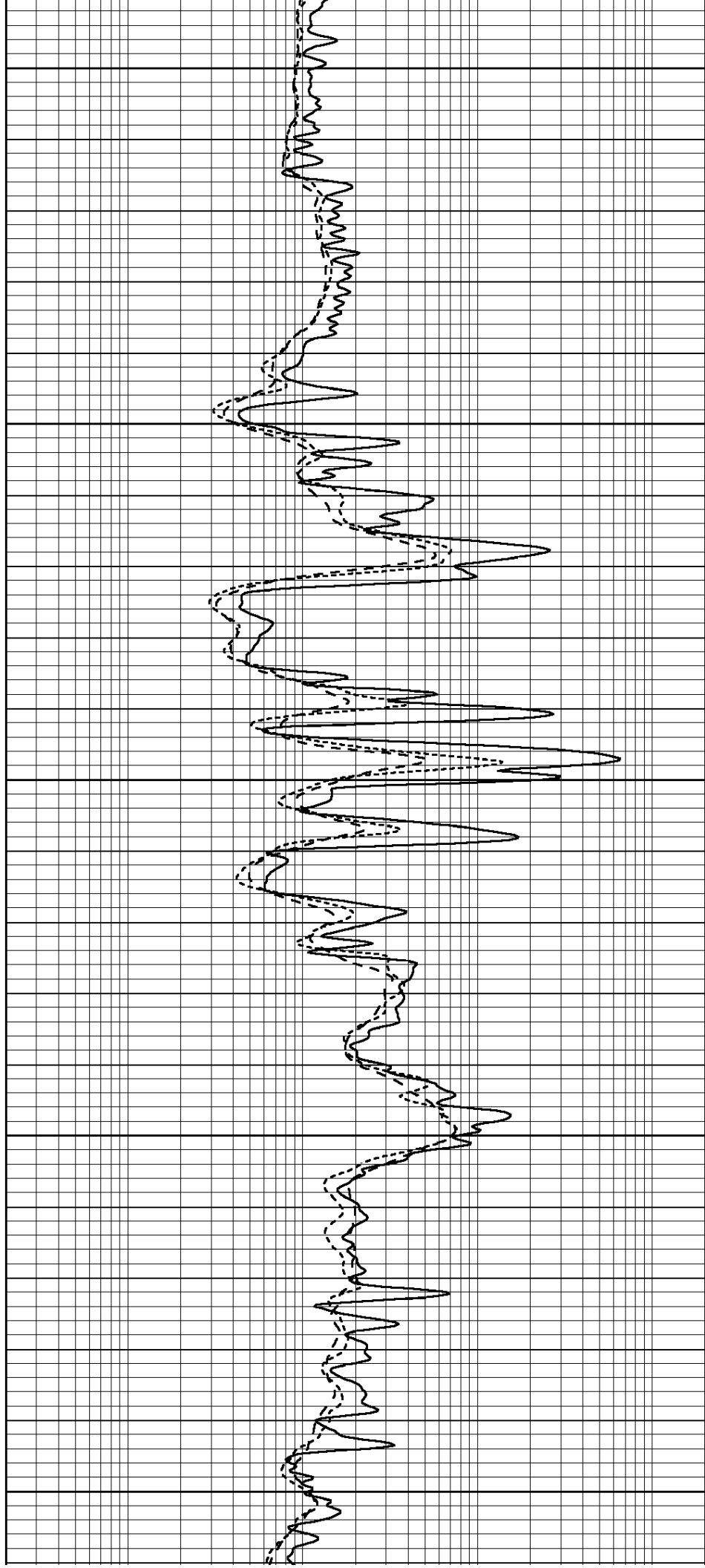
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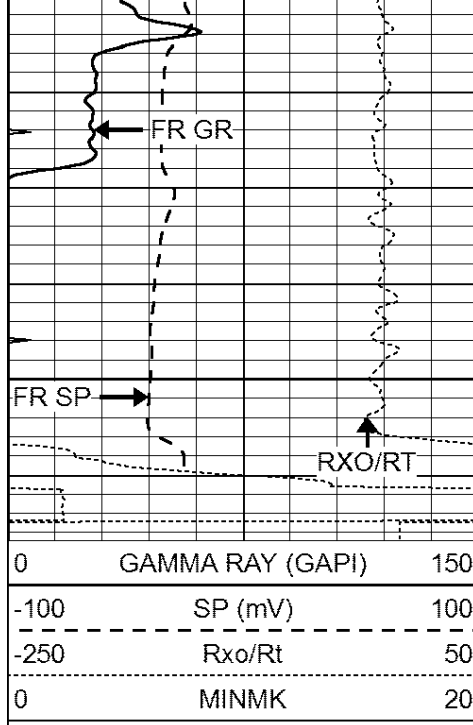
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4400

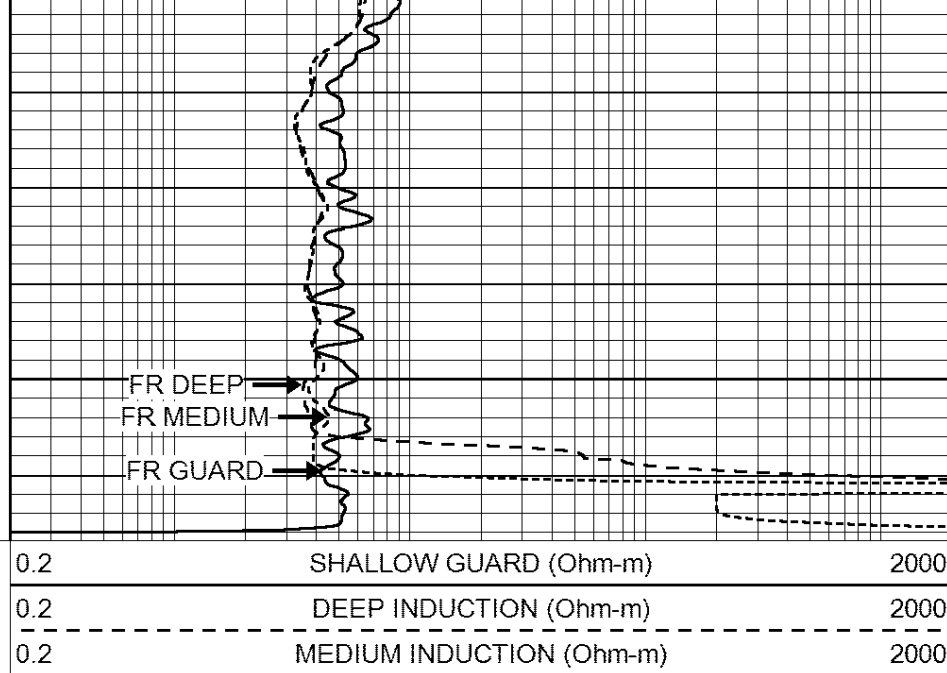
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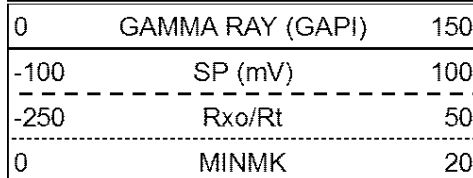
4550
LTD 4562



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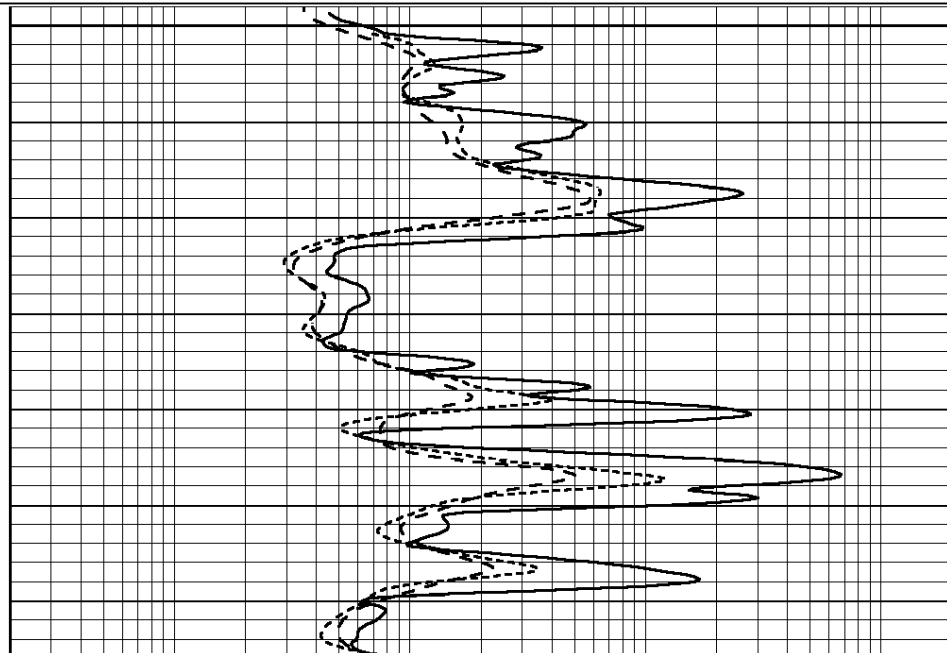
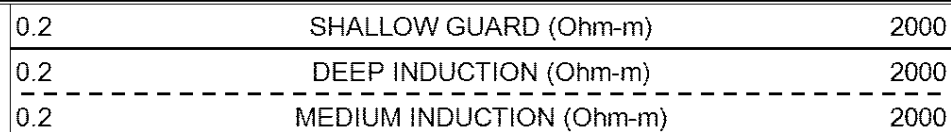
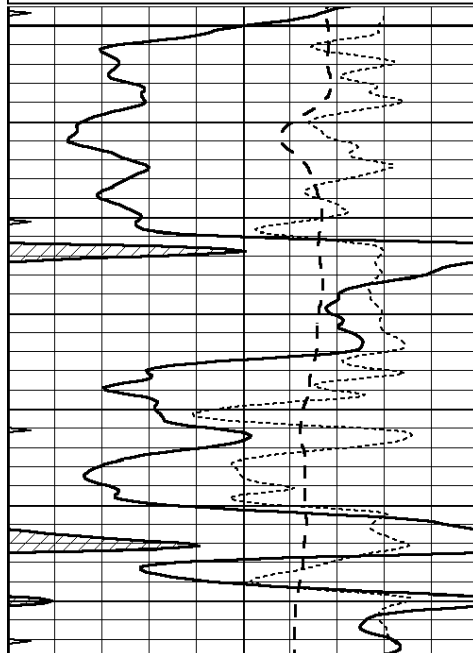
REPEAT SECTION

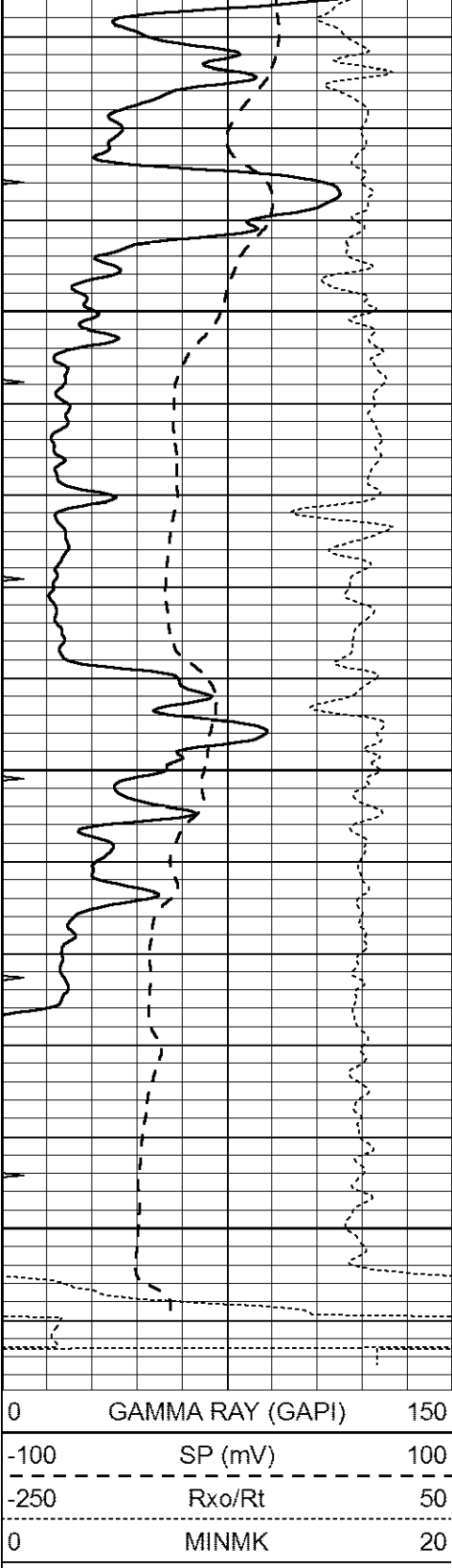
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Dataset Pathname: pass2.3
Presentation Format: dil
Dataset Creation: Tue Apr 17 10:06:28 2012
Charted by: Depth in Feet scaled 1:240



4350

4400

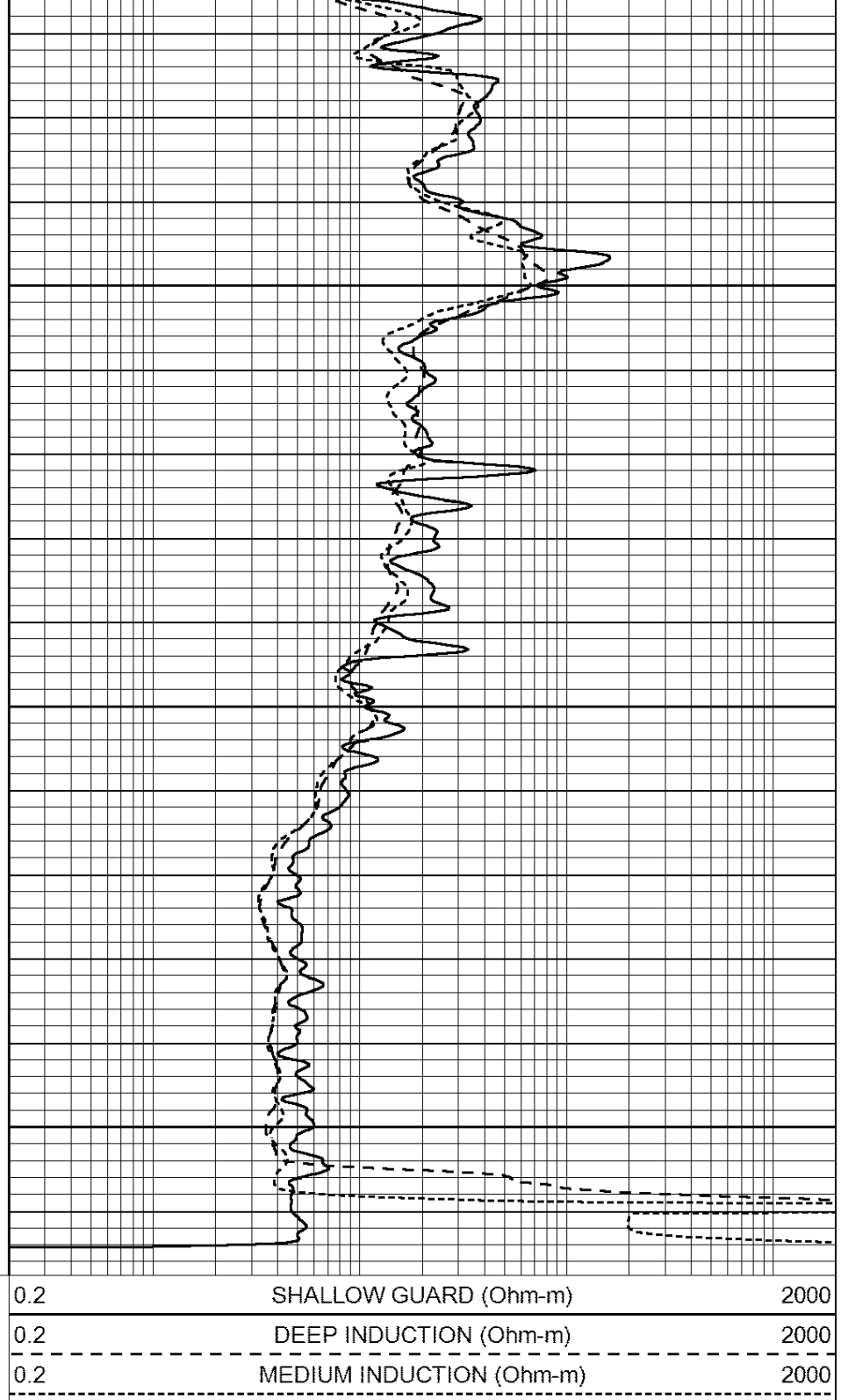




4450

4500

4550



Calibration Report

Database File: 408626pe.db
Dataset Pathname: pass3.6
Dataset Creation: Tue Apr 17 09:51:53 2012 by Calc Open-Cased 110302

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
Performed: Tue Apr 17 08:21:26 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	5.000
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		
Low Ref	Readings 4.0	Reference 8.4
High Ref	5.9	15.0
	Gain: 3.4	Offset: -5.2

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:	Mon Apr 16 22:08:41 2012	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.3000	GAPI/cps