



SUPERIOR
Hays,
Kansas

**DUAL INDUCTION
LOG**

Company MULL DRILLING COMPANY, INC.
Well #2-23 ALBIN
Field WILDCAT
County GOVE
State KANSAS

Company MULL DRILLING COMPANY, INC.
Well #2-23 ALBIN
Field WILDCAT
County GOVE State KANSAS

Location: API # : 15-063-21987-0000
1150' FSL & 2582' FEL
SEC 23 TWP 15S RGE 27W
Permanent Datum GROUND LEVEL Elevation 2467
Log Measured From KELLY BUSHING 5' A.G.L.
Drilling Measured From KELLY BUSHING
Elevation
K.B. 2472
D.F. 2470
G.L. 2467

Date	5/18/12
Run Number	ONE
Depth Driller	4450
Depth Logger	4456
Bottom Logged Interval	4454
Top Log Interval	00
Casing Driller	8 5/8"@222'
Casing Logger	224
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.5/53
pH / Fluid Loss	10.0/10.0
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.600@80F
Rmt @ Meas. Temp	.450@80F
Rmc @ Meas. Temp	.720@80F
Source of Rmf / Rmc	MEASUREMENT
Rm @ BHT	.400@120F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	12:00 A.M.
Maximum Recorded Temperature	120F
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
PENDENNIS, KS. & HWY 4, 6 1/2N. ON "RED CHIEF RD." TO "RD. C", 1E. TO CURVE. CONTINUE 1
MORE E. ON PASTURE TRAIL



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MAIN SECTION

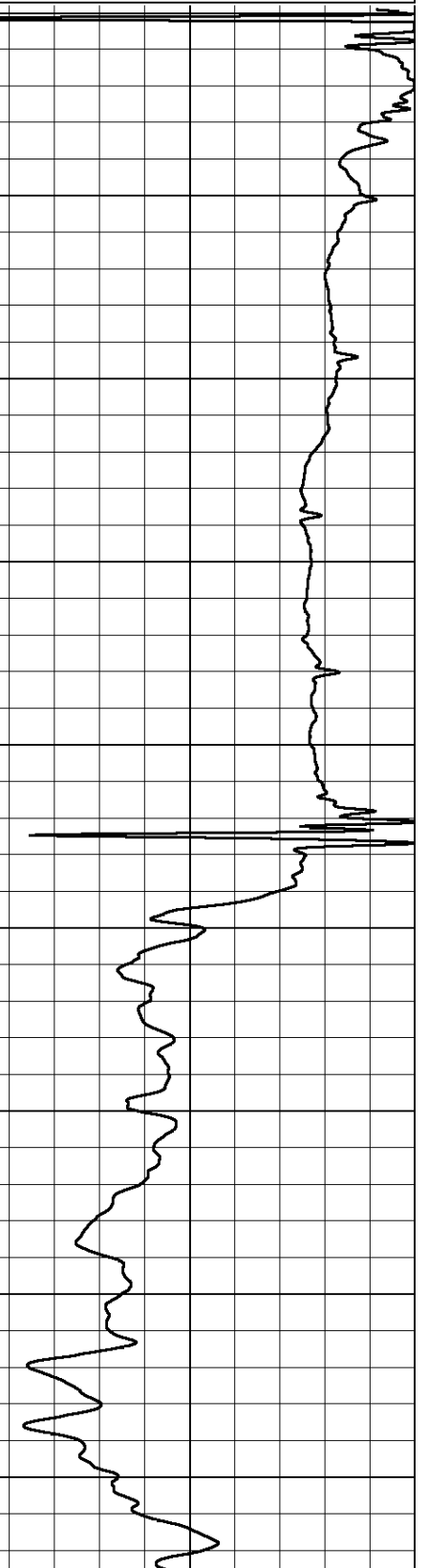
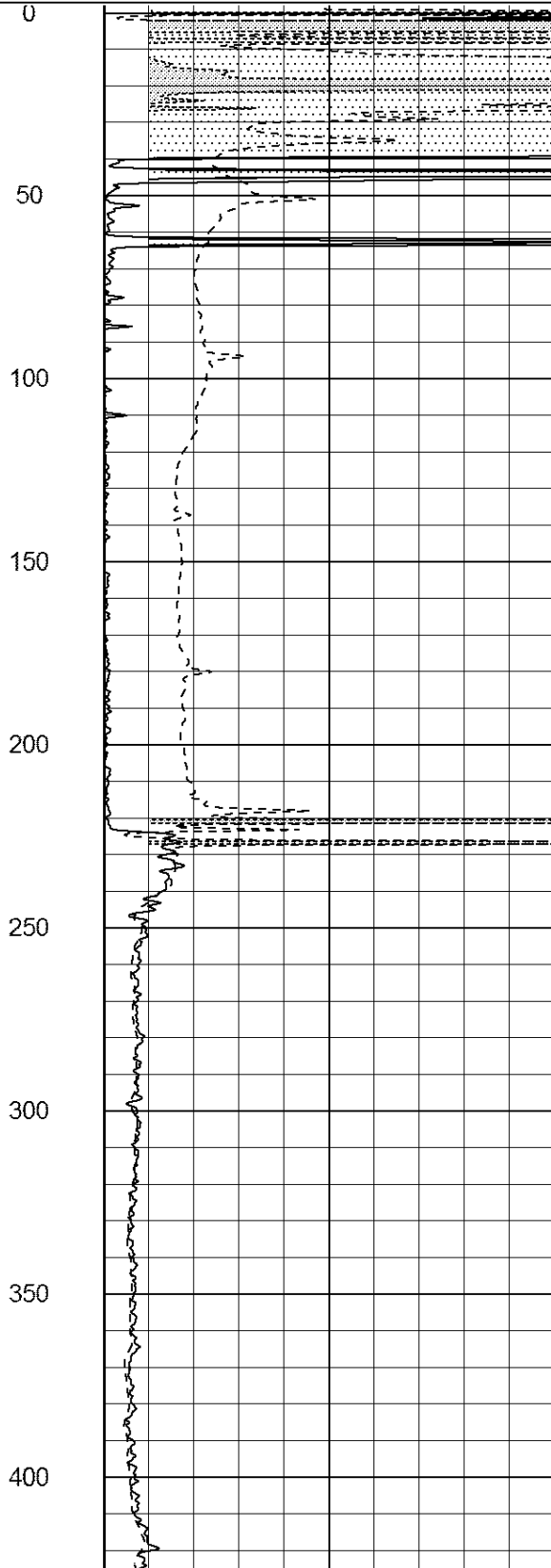
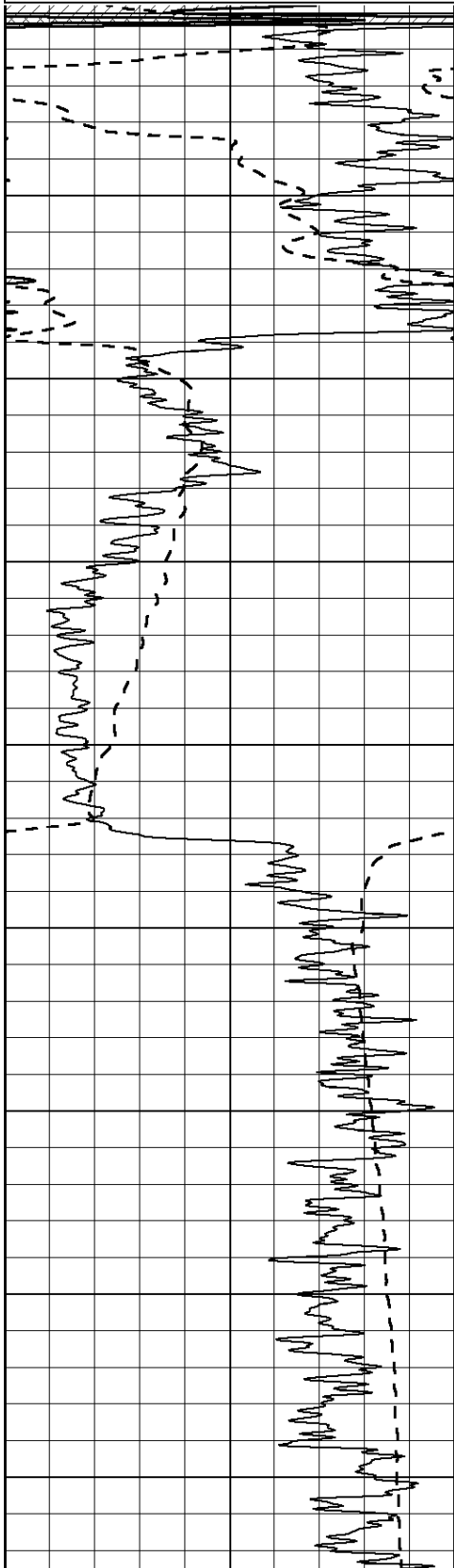
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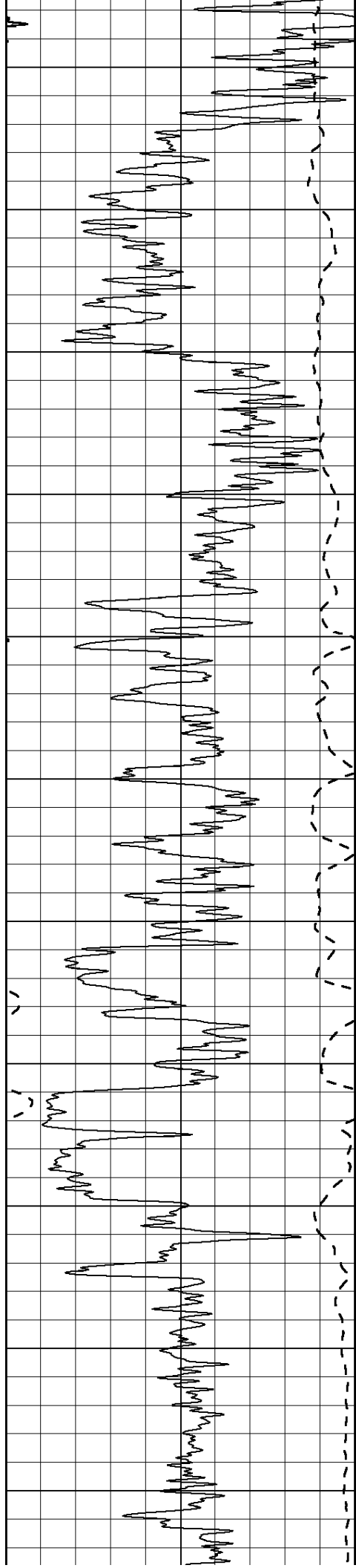
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-100	SP (mV)	100

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

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





450

500

550

600

650

700

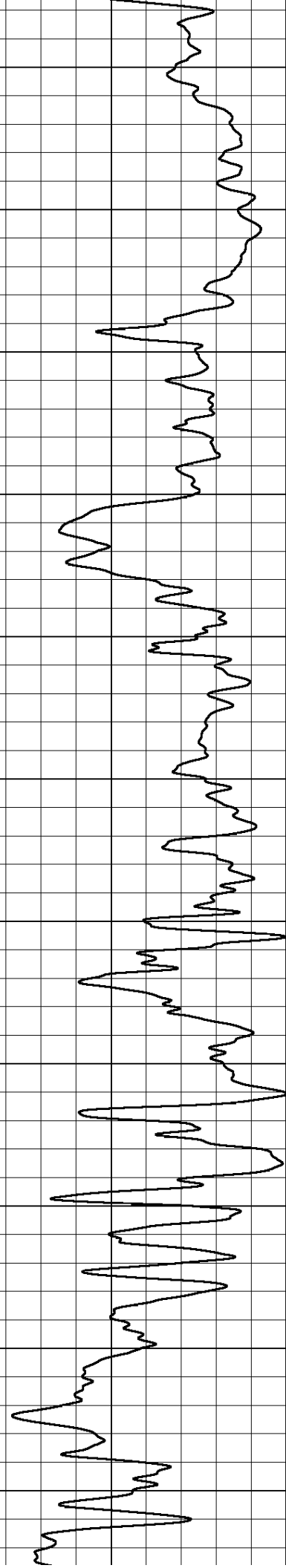
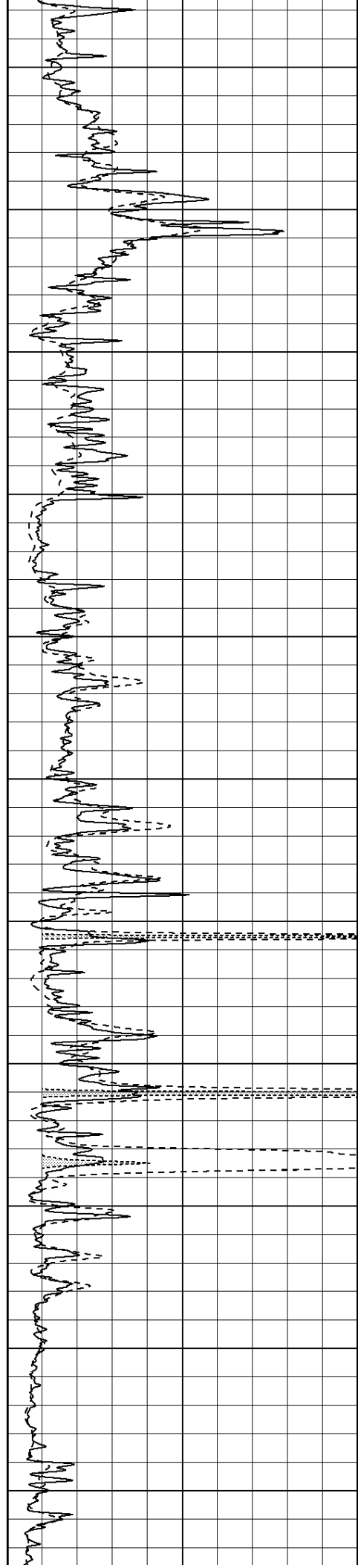
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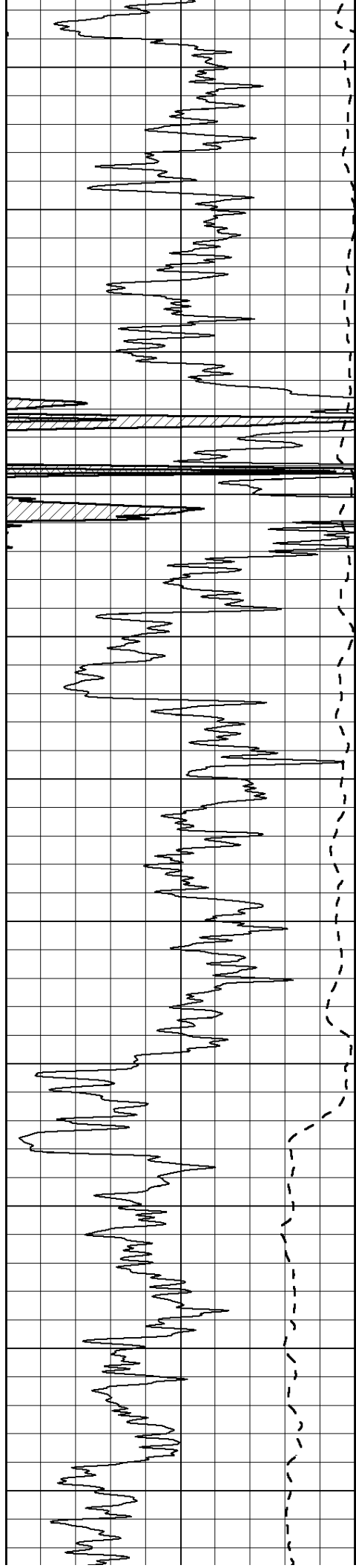
800

850

900

950





1000

1050

1100

1150

1200

1250

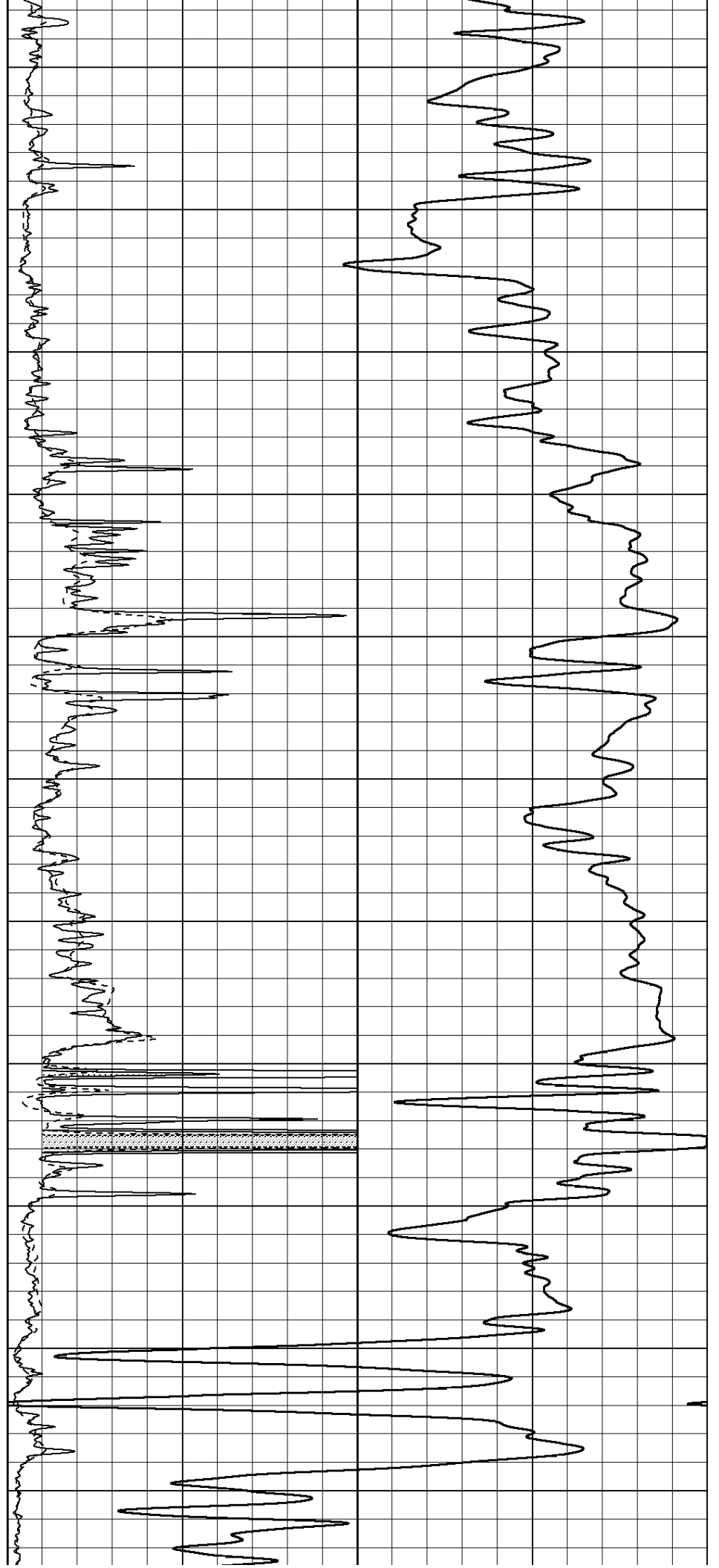
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1350

1400

1450

1500



1000

1050

1100

1150

1200

1250

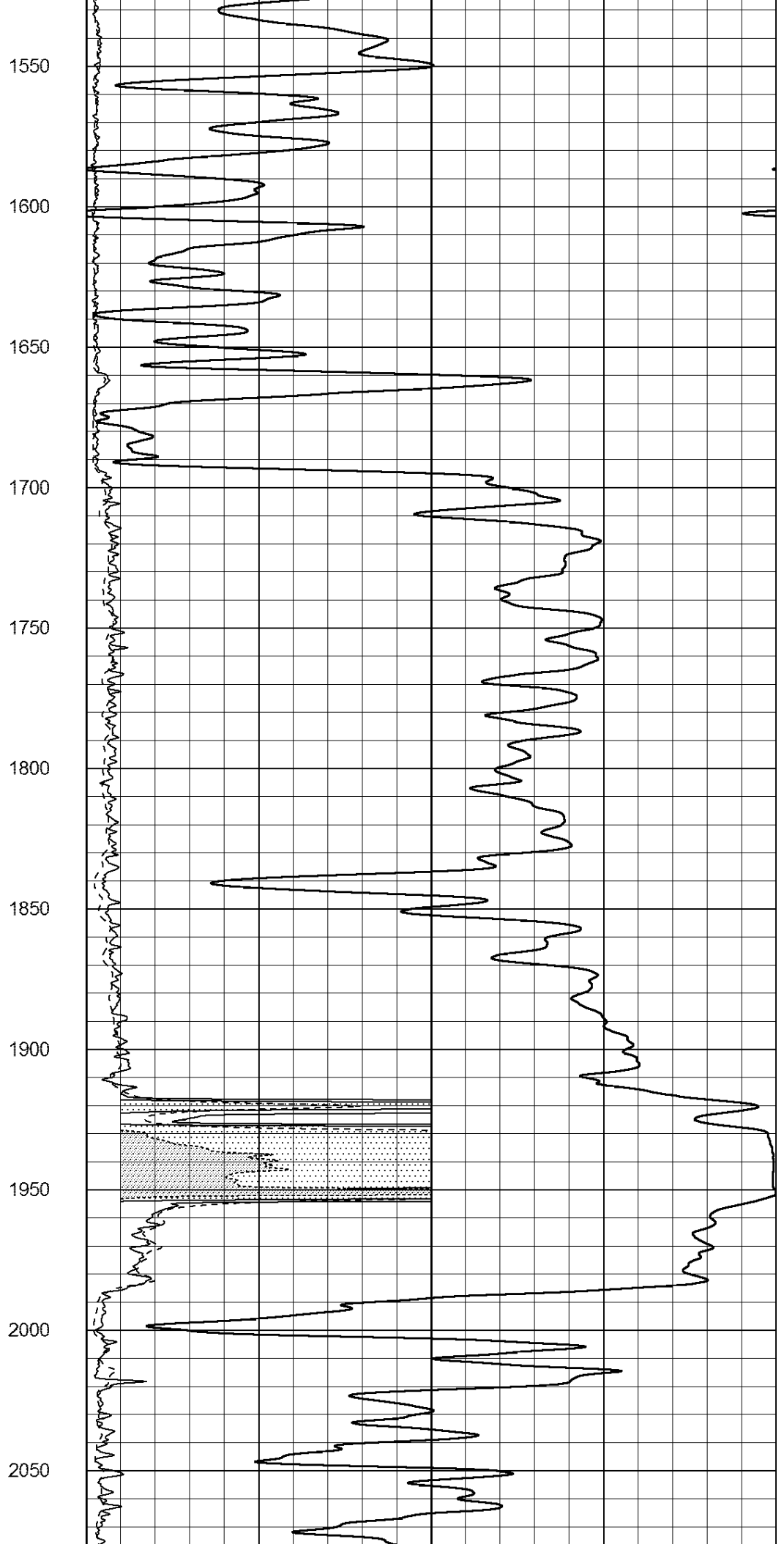
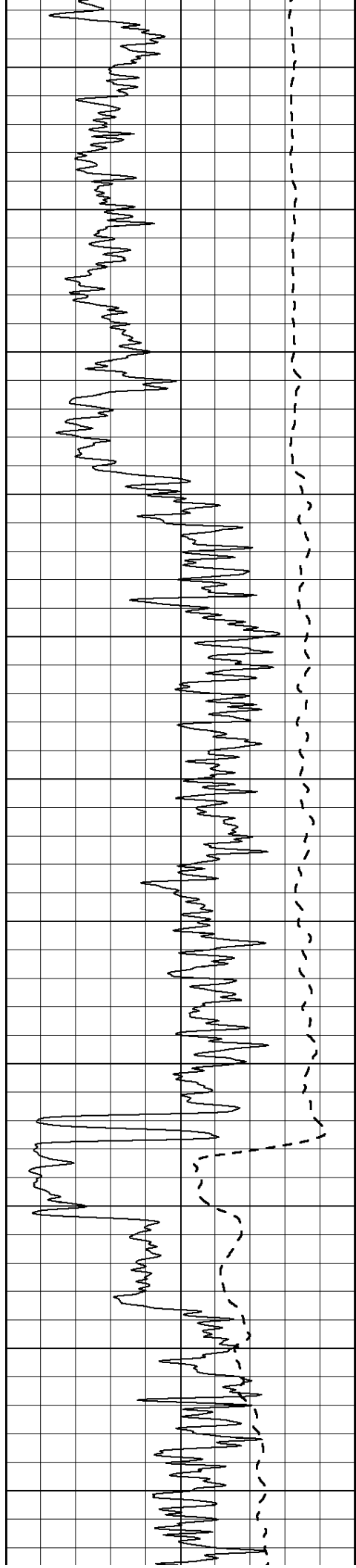
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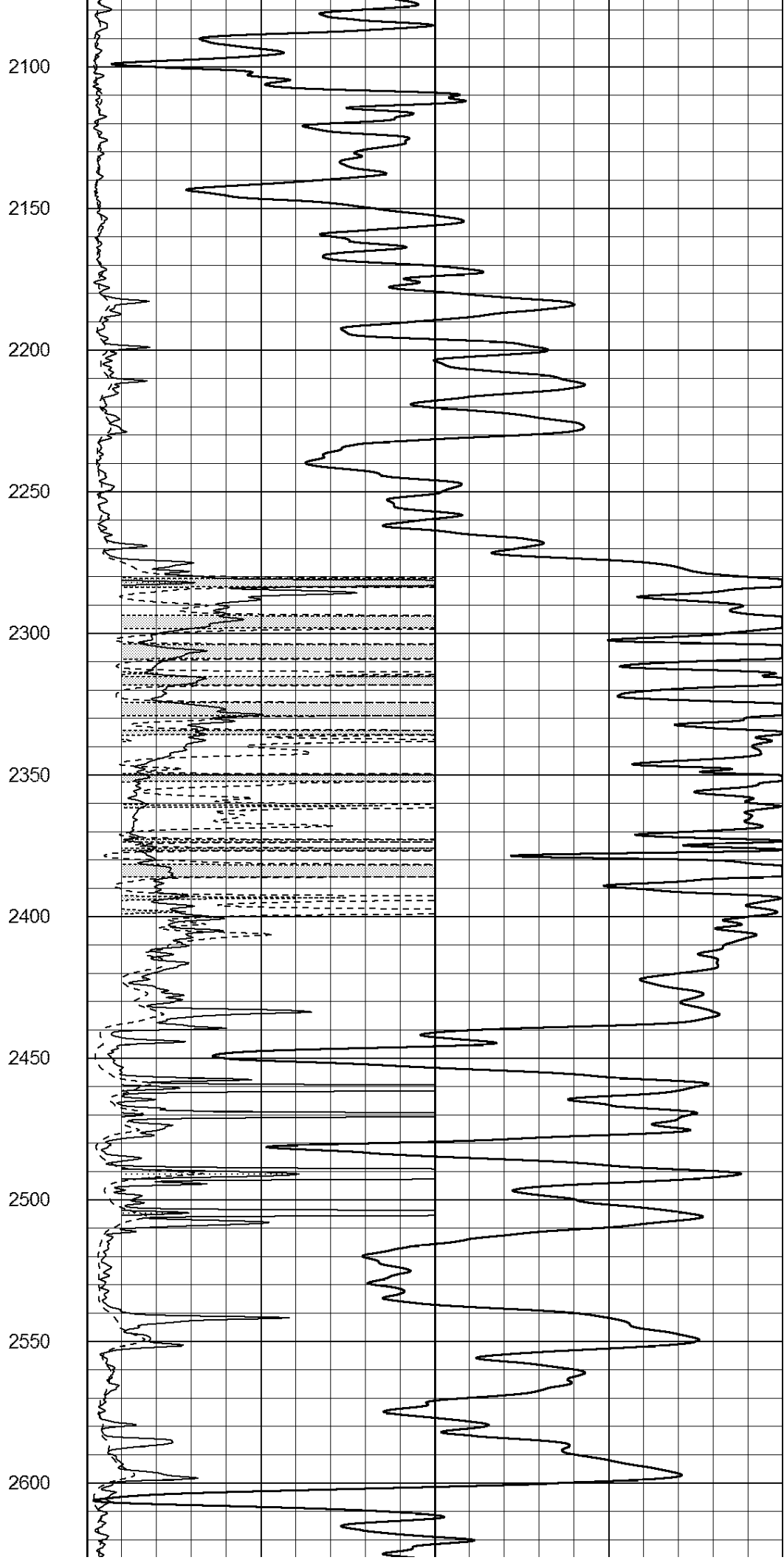
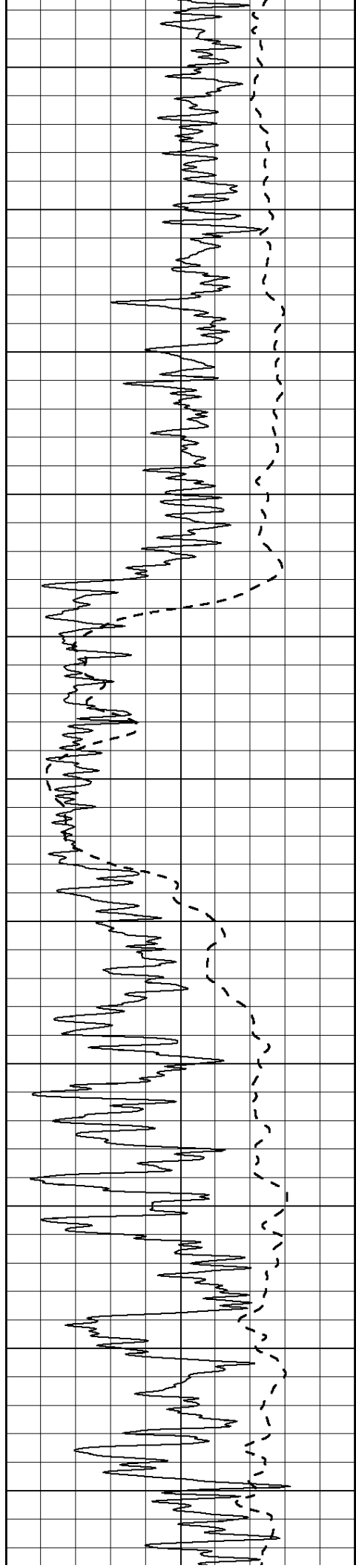
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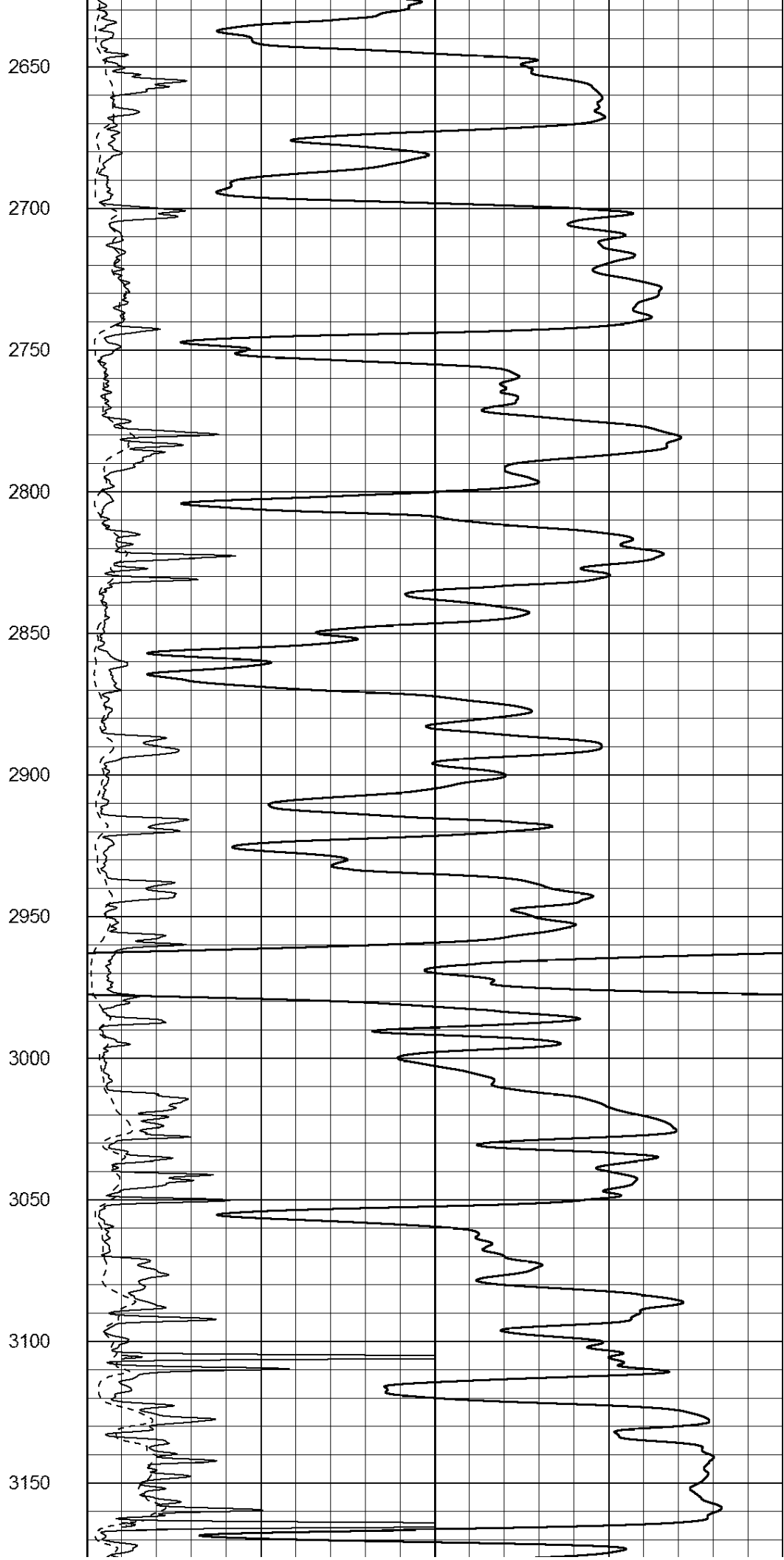
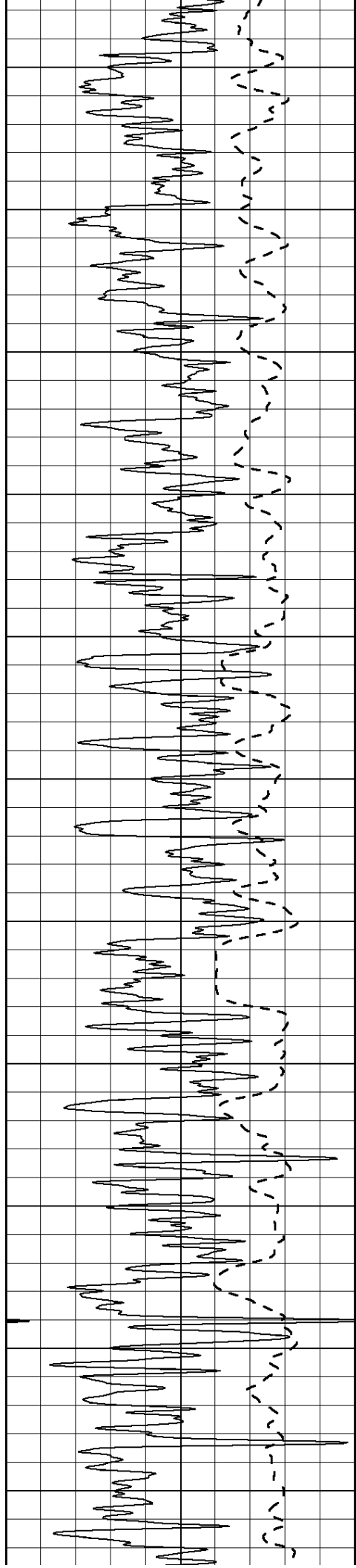
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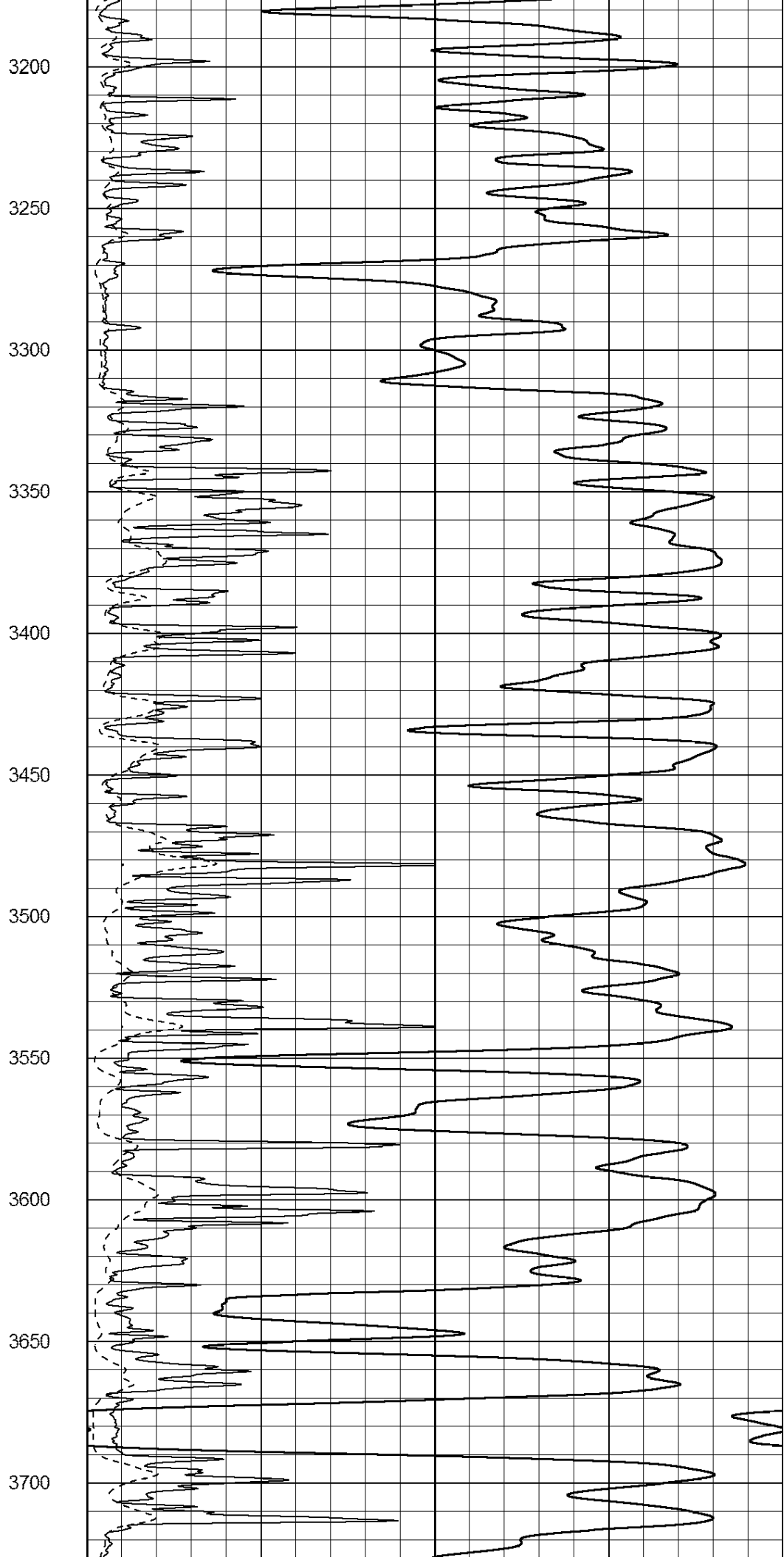
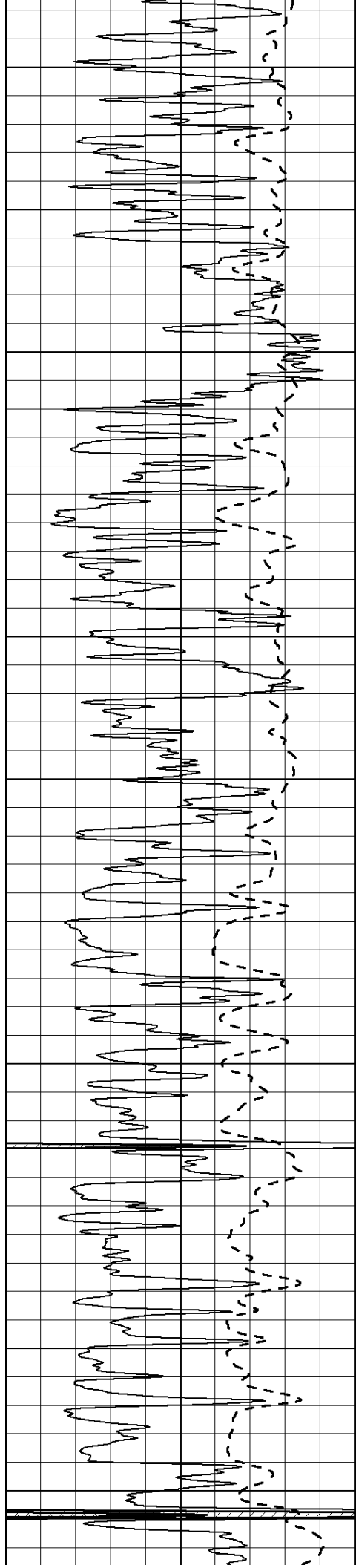
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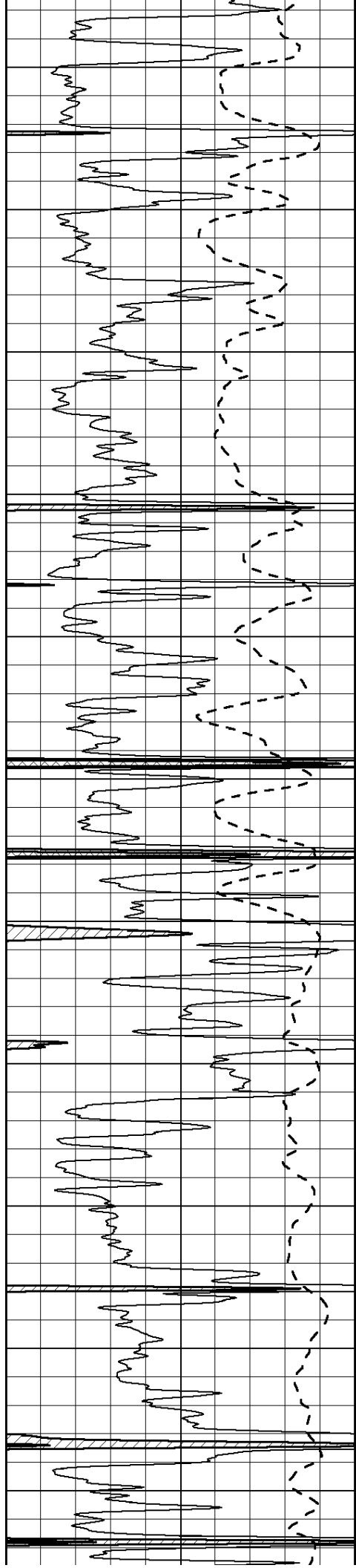
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3750

3800

3850

3900

3950

4000

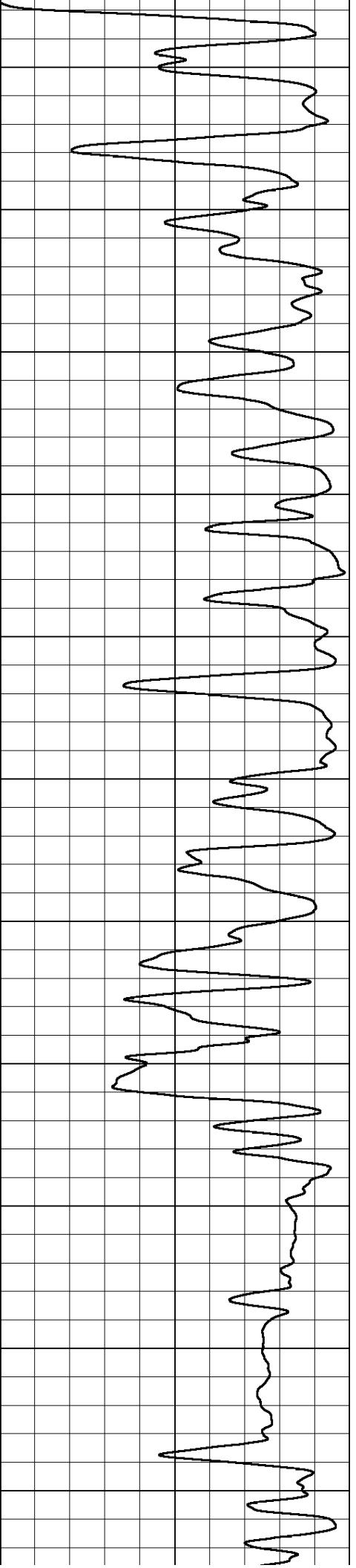
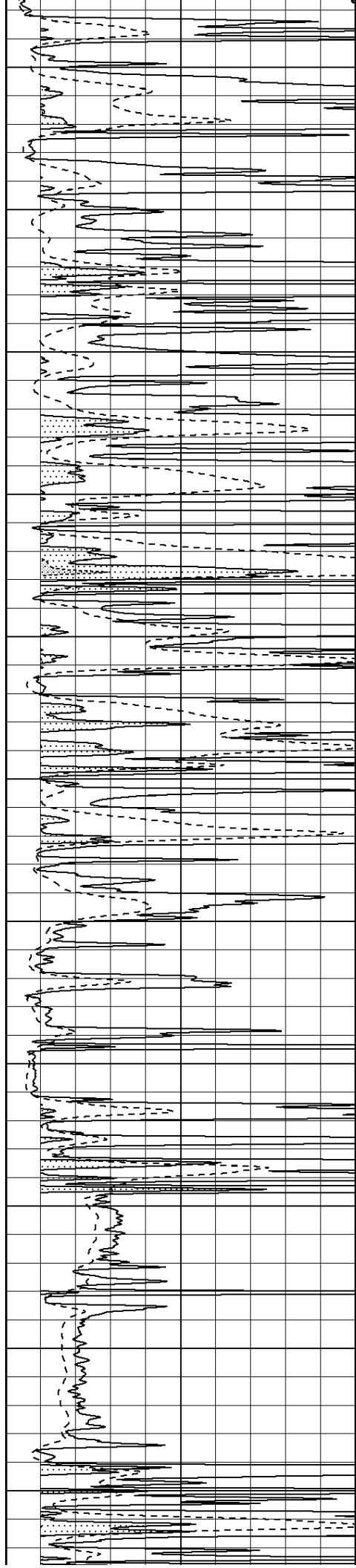
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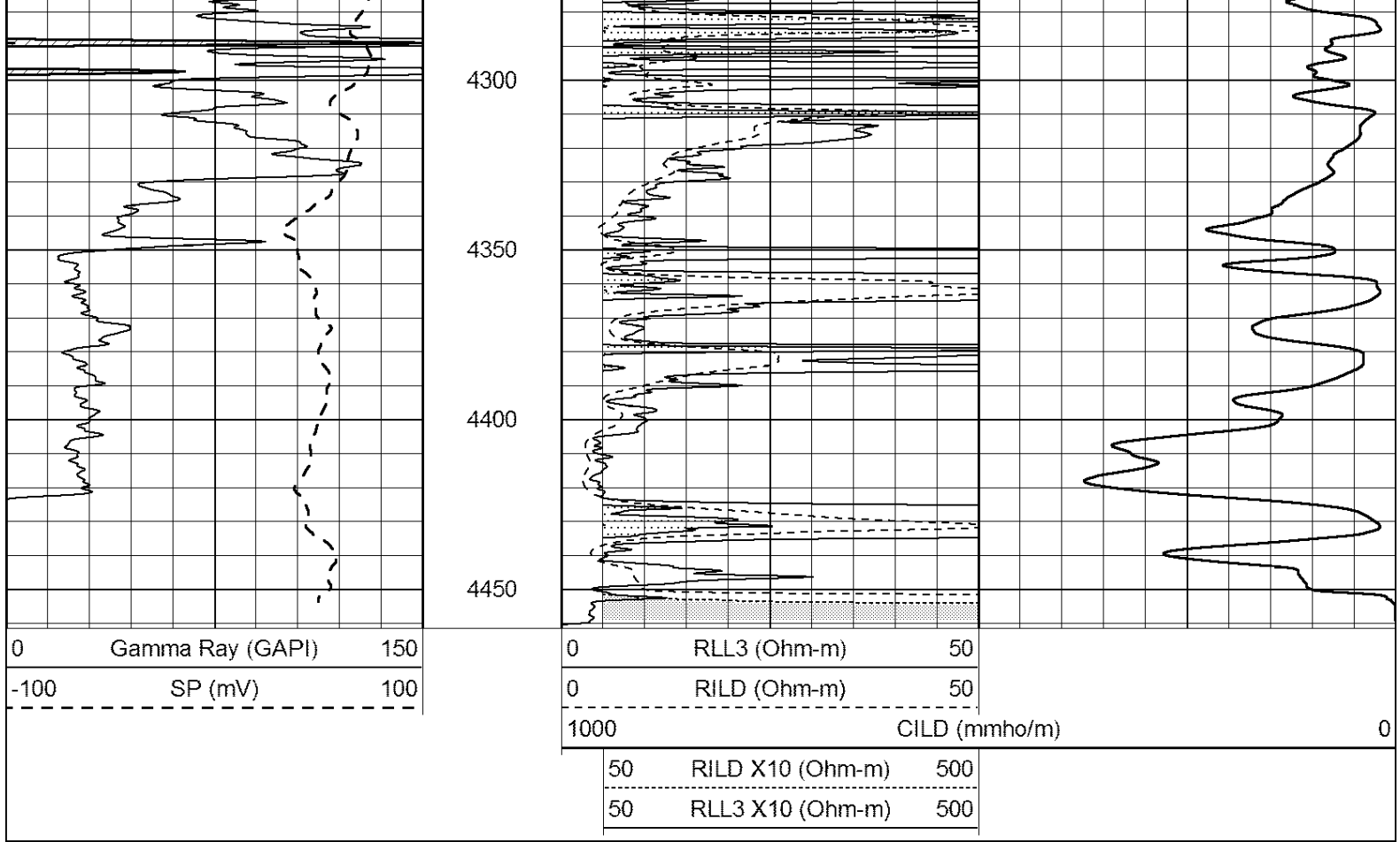
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4150

4200

4250



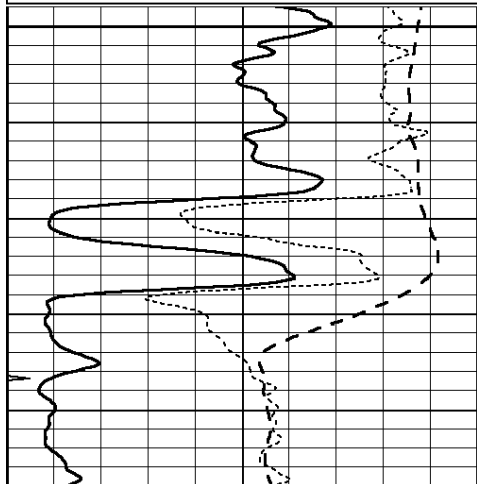


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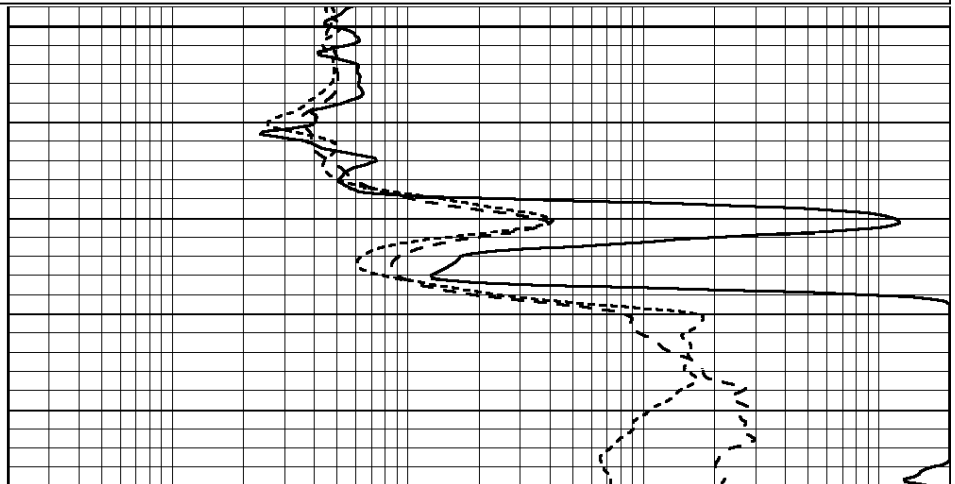
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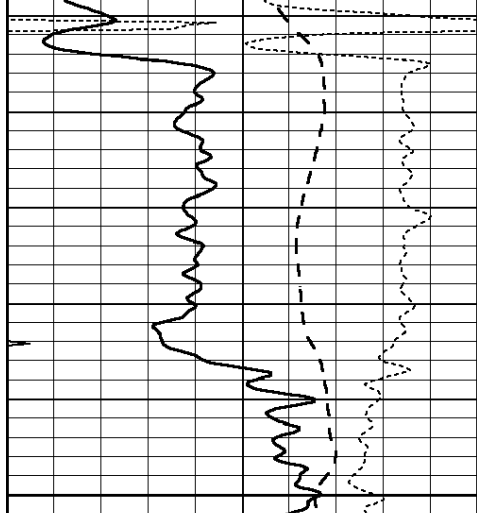
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 Dataset Pathname: pass3.5
 Presentation Format: dil
 Dataset Creation: Fri May 18 01:33:29 2012 by Calc Open-Cased 110302
 Charted by: Depth in Feet scaled 1:240

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			



1900

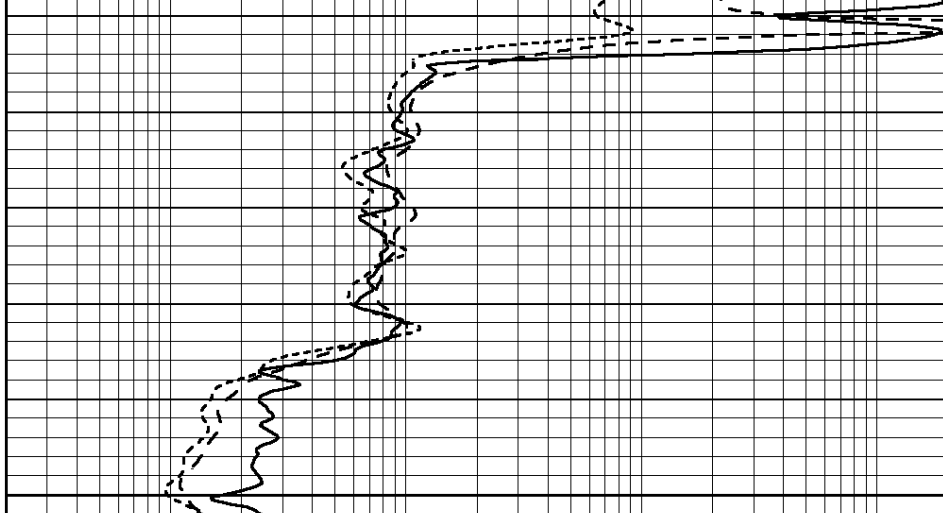




0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

1950

2000



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



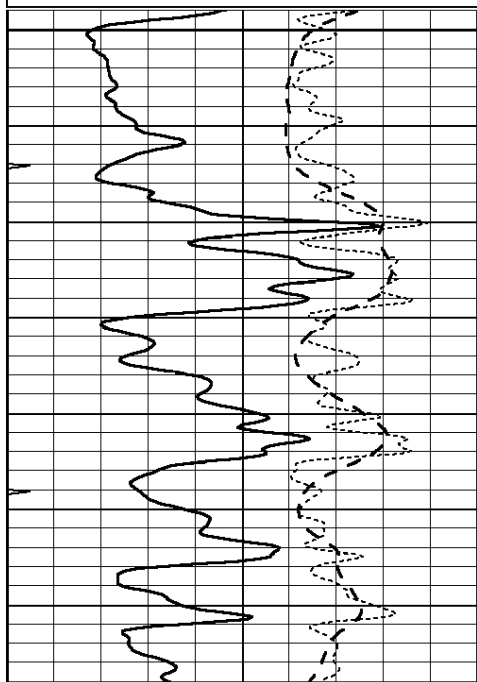
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MAIN SECTION

Database File: 408770pe.db
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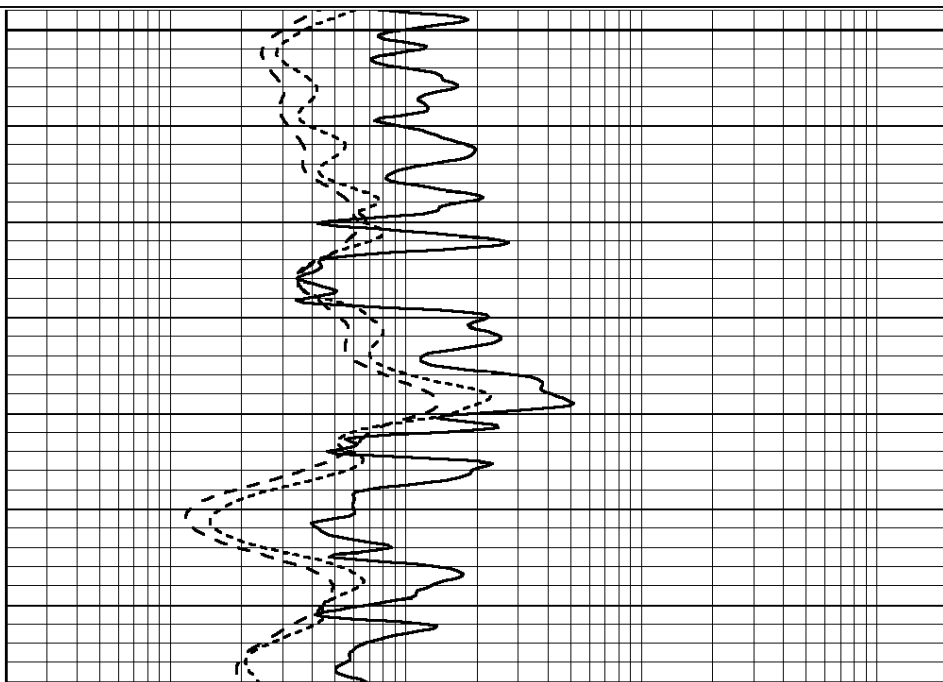
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

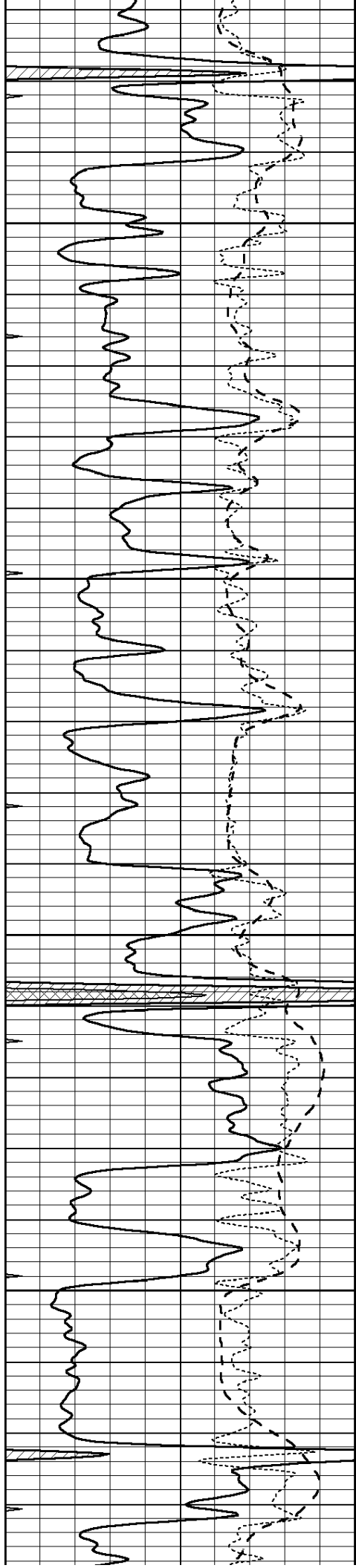
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



3500

3550



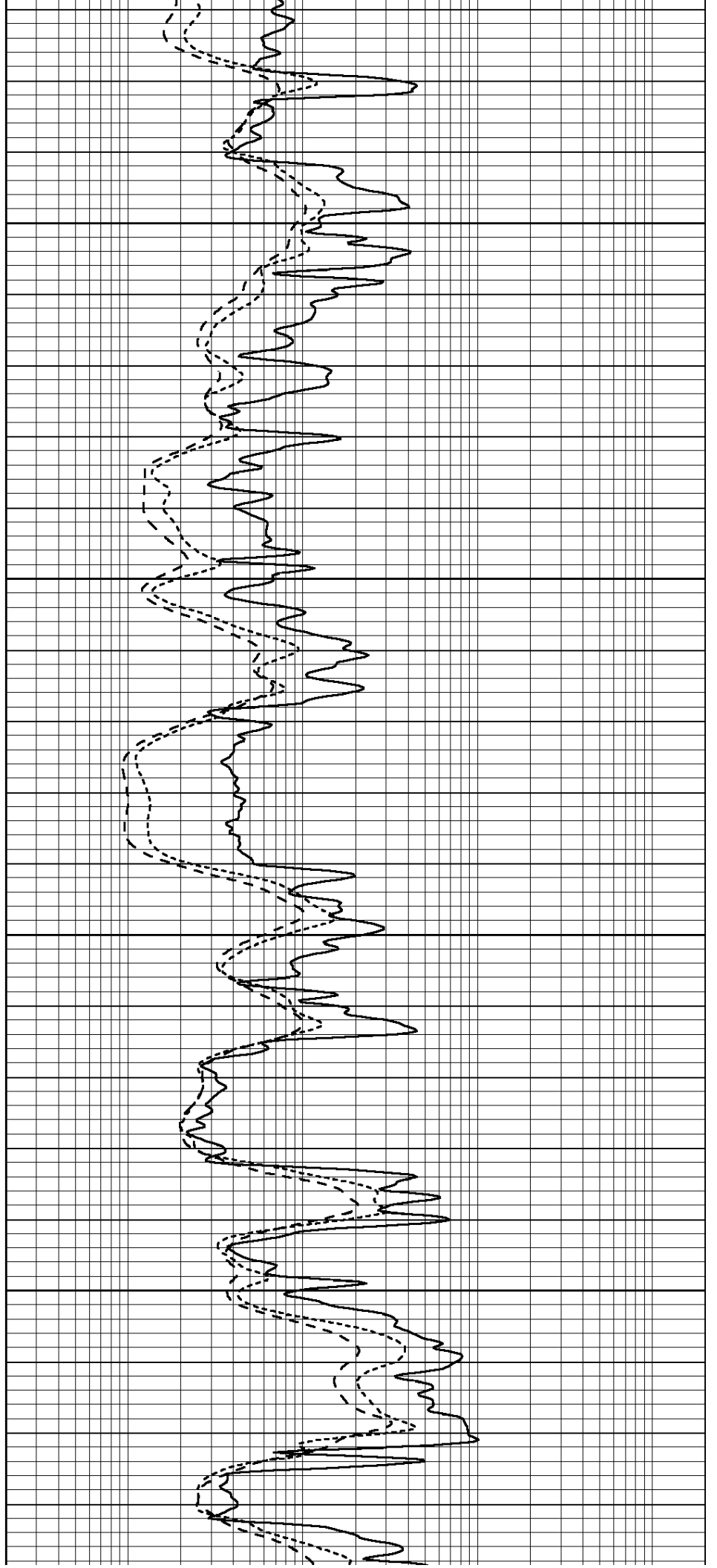


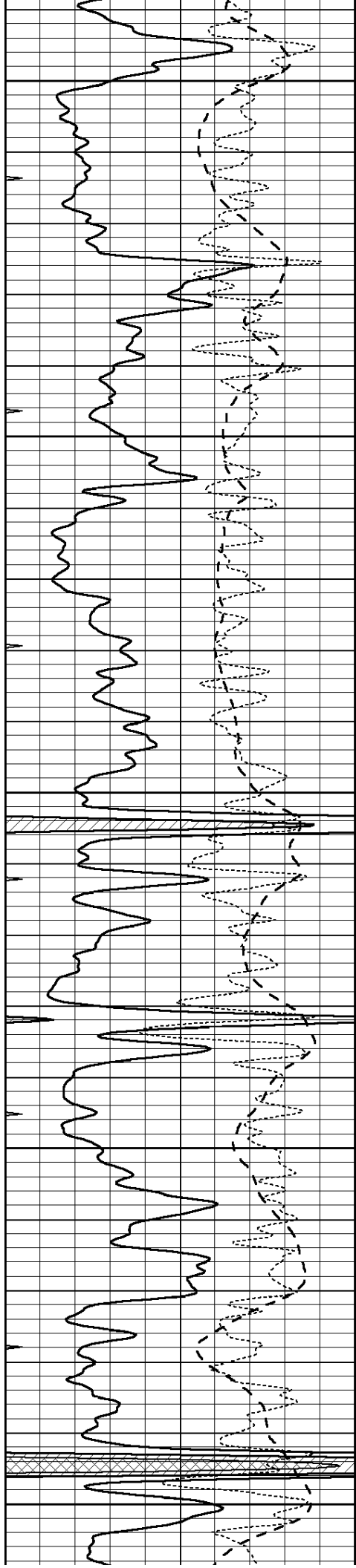
3600

3650

3700

3750





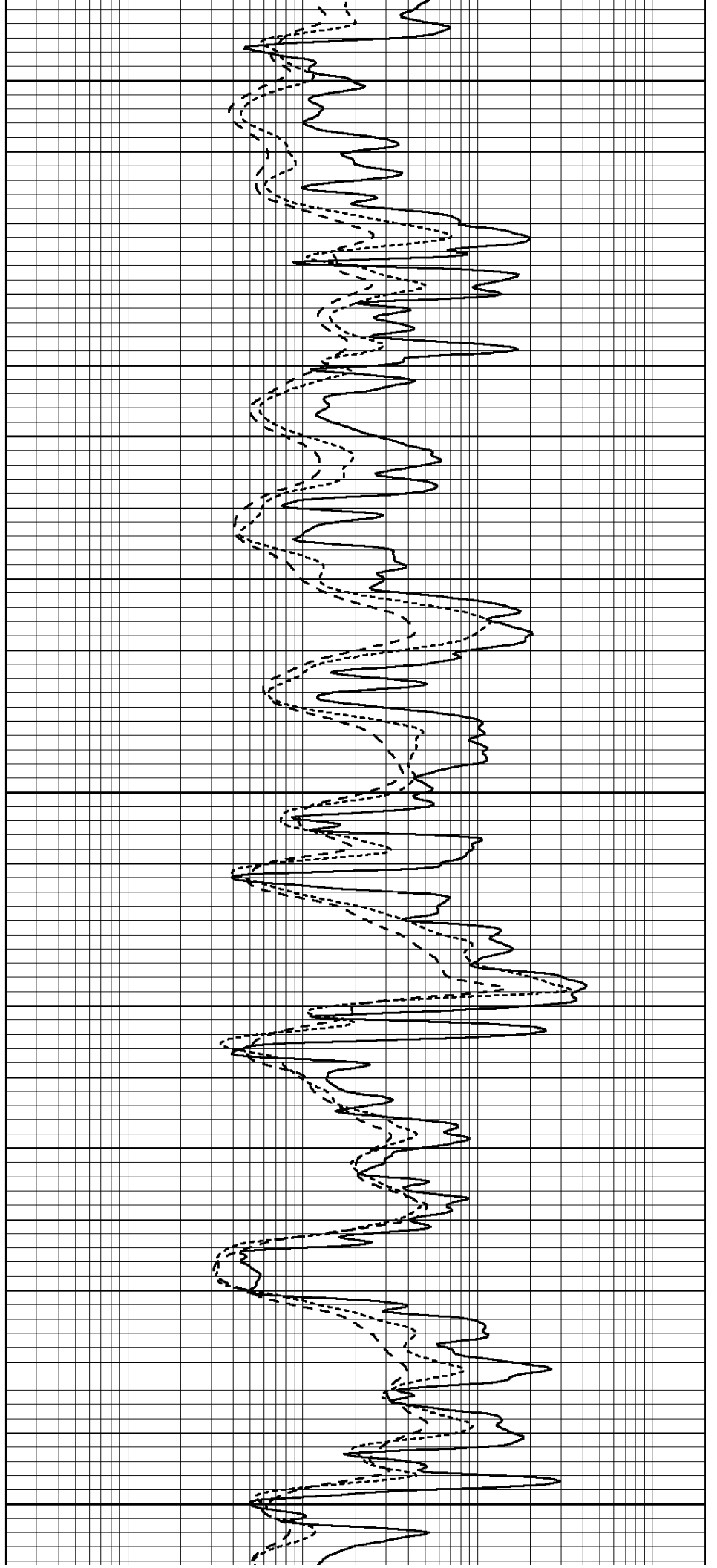
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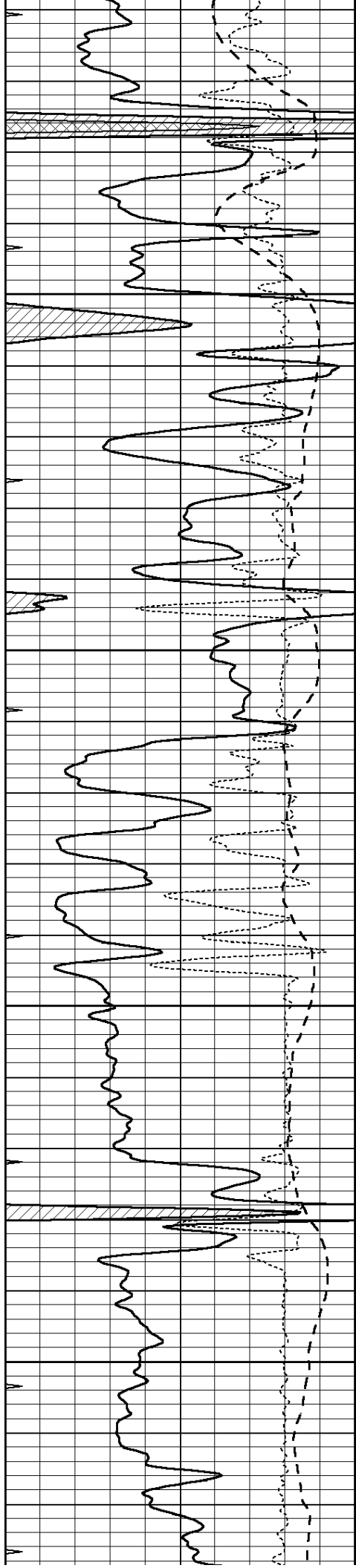
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3900

3950

4000



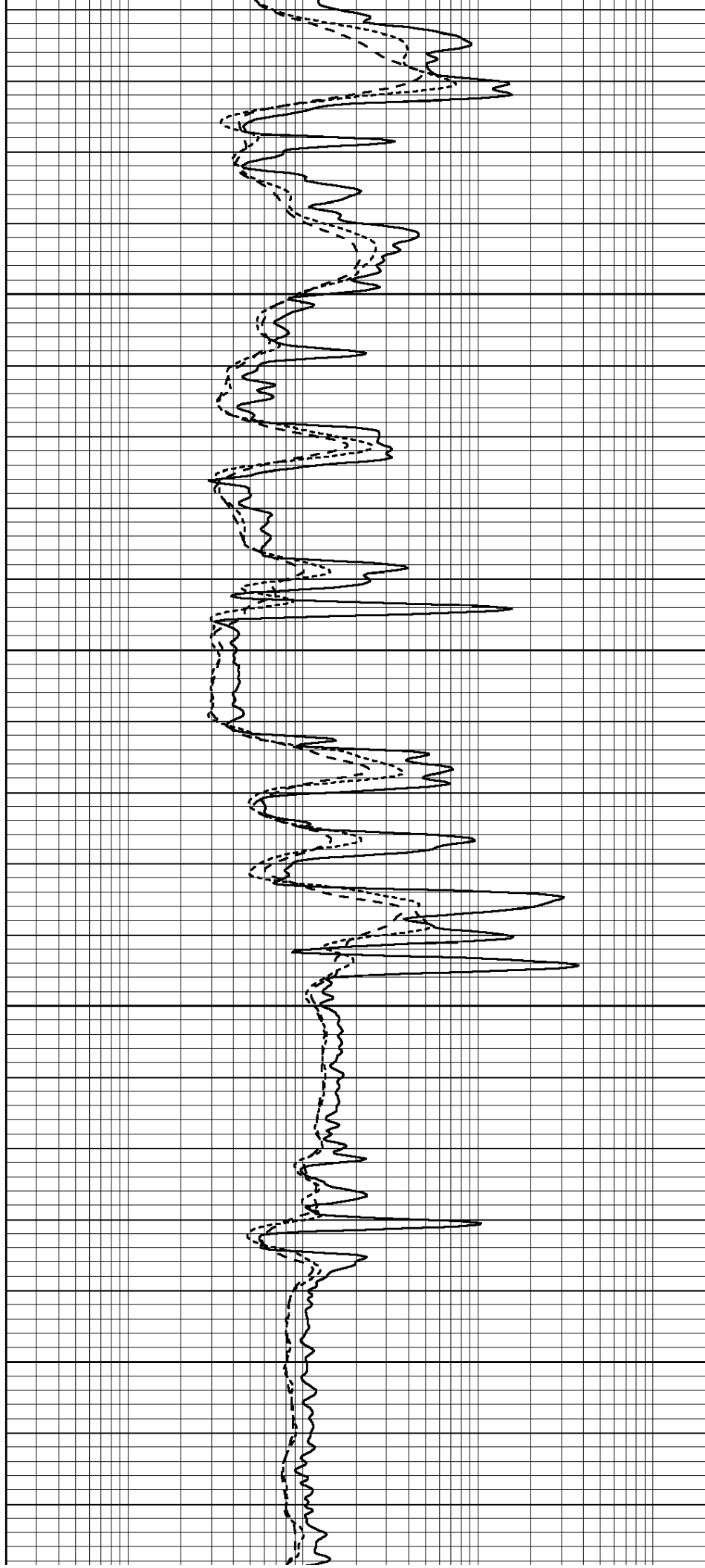


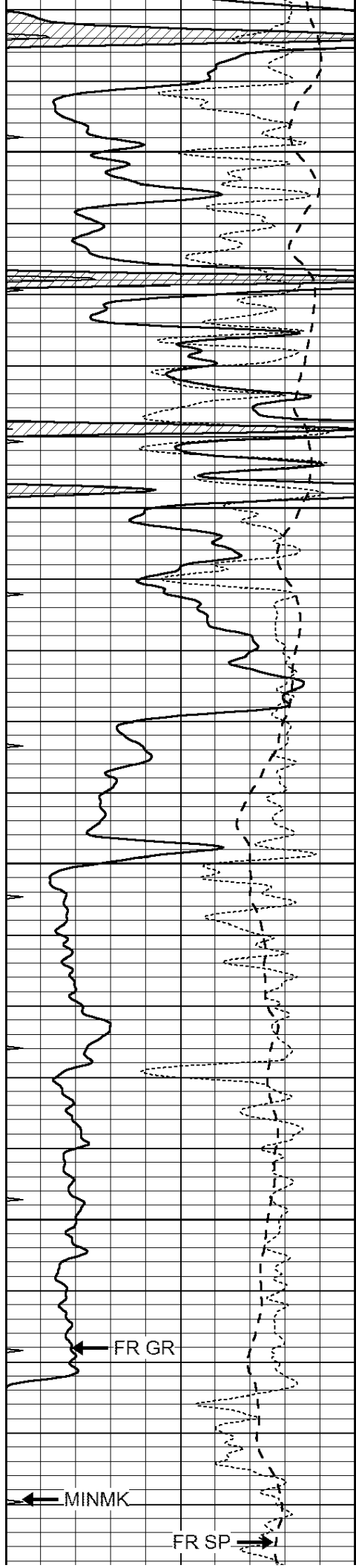
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4100

4150

4200



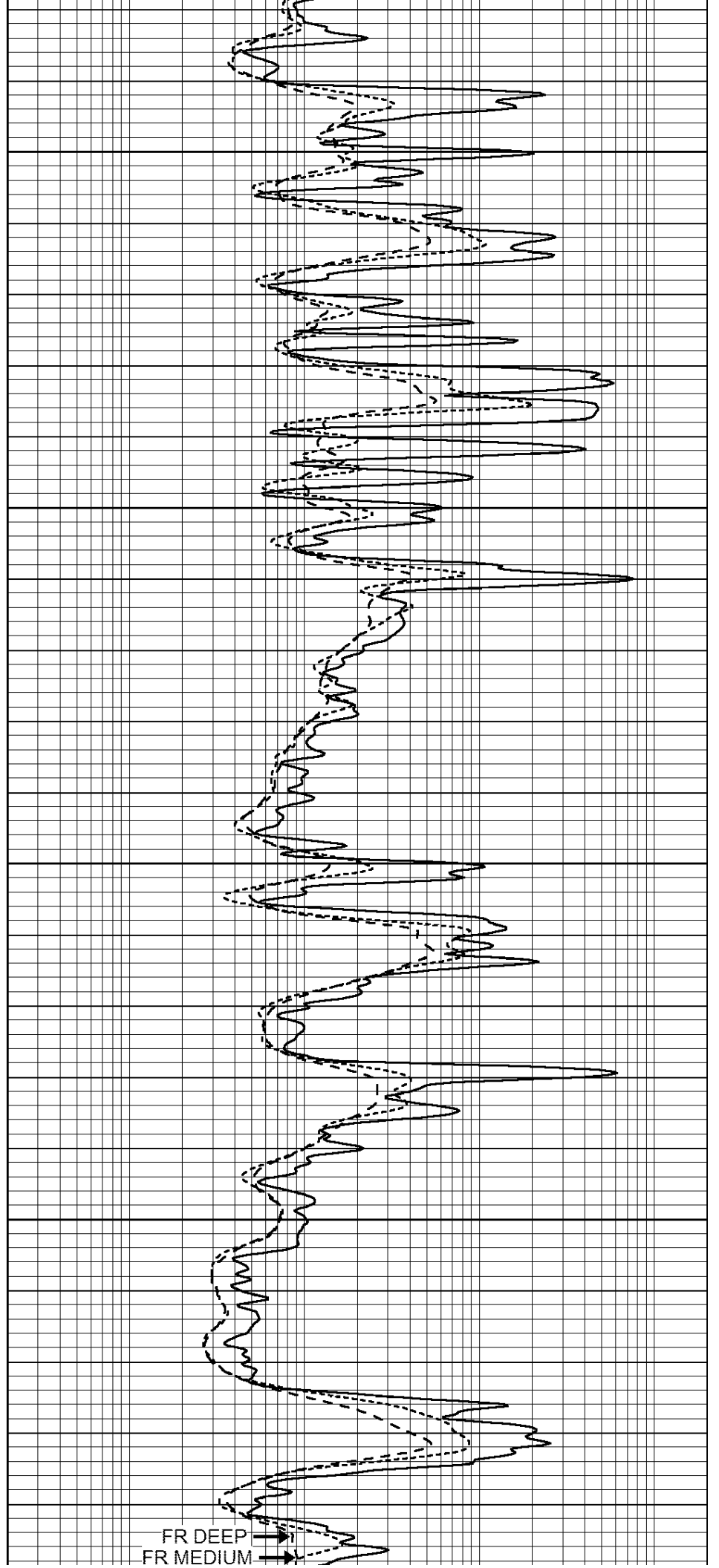


4250

4300

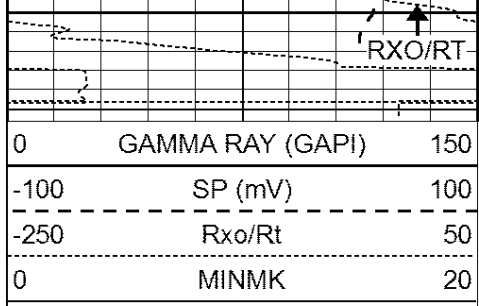
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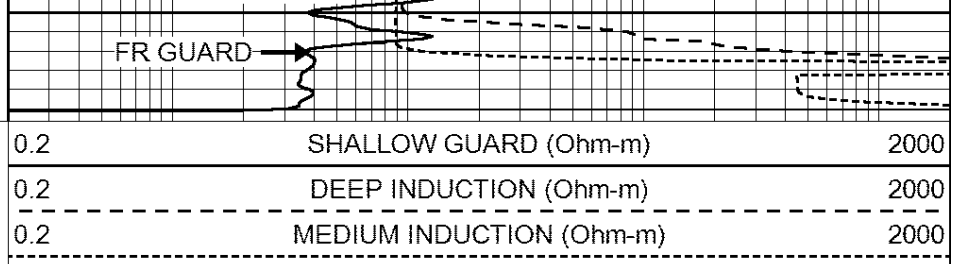


FR DEEP

FR MEDIUM



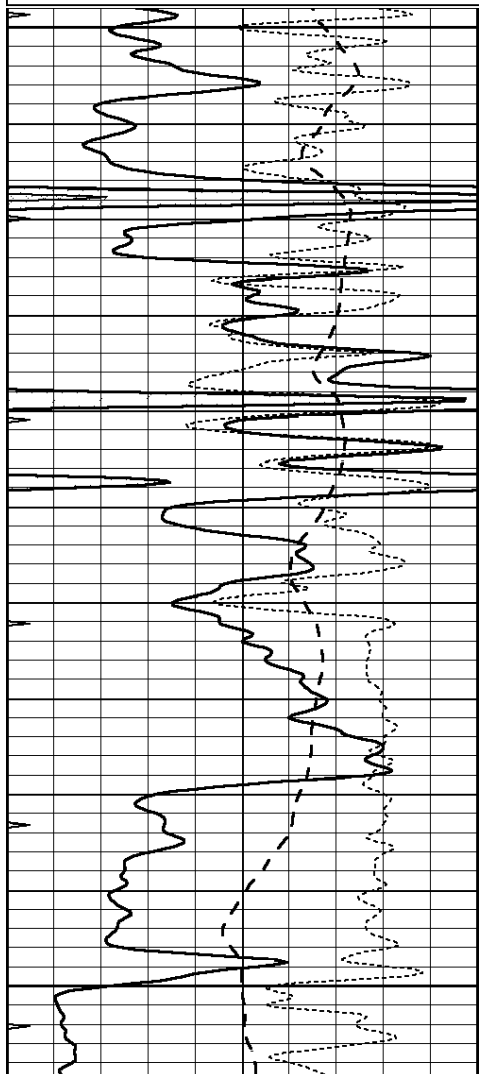
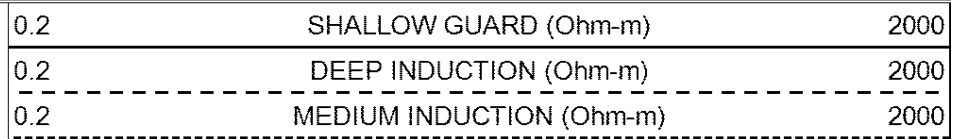
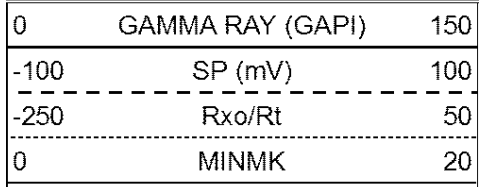
4450
LTD 4456



SUPERIOR
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REPEAT SECTION

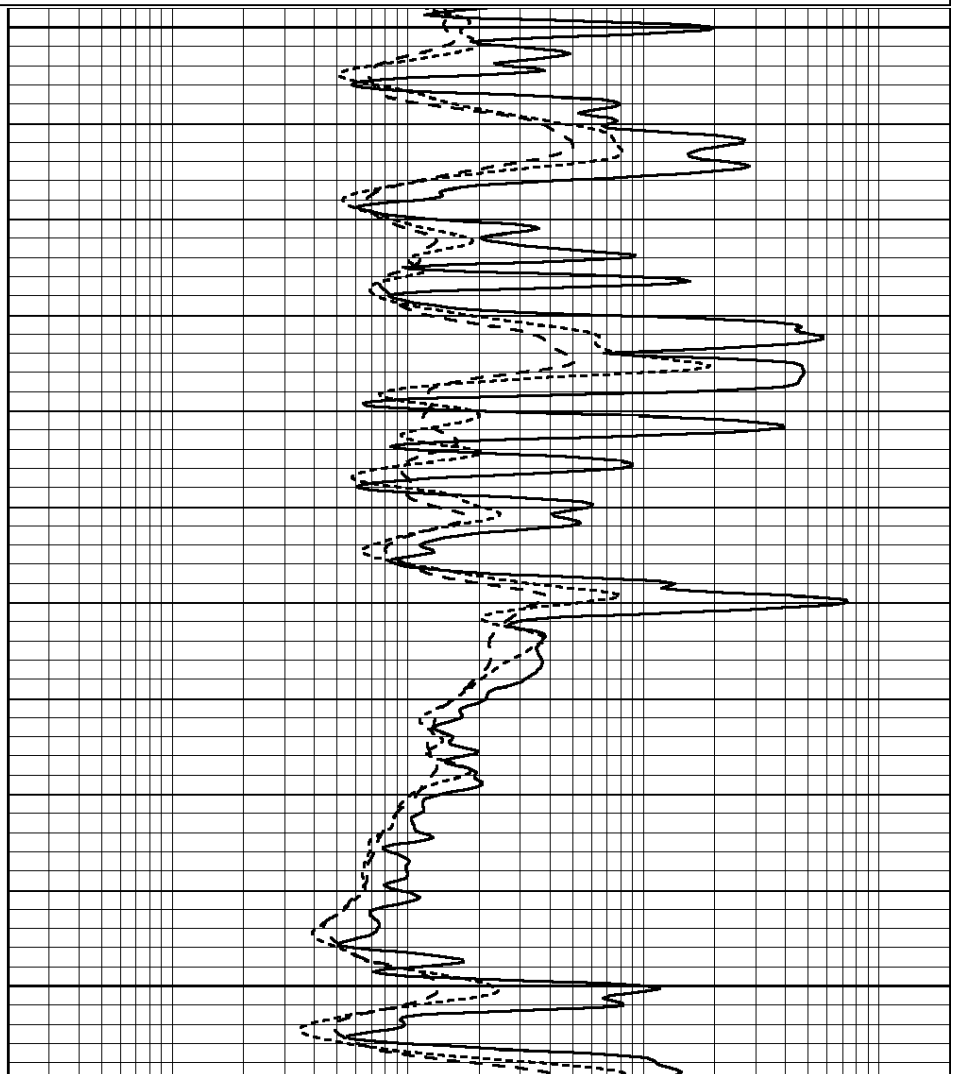
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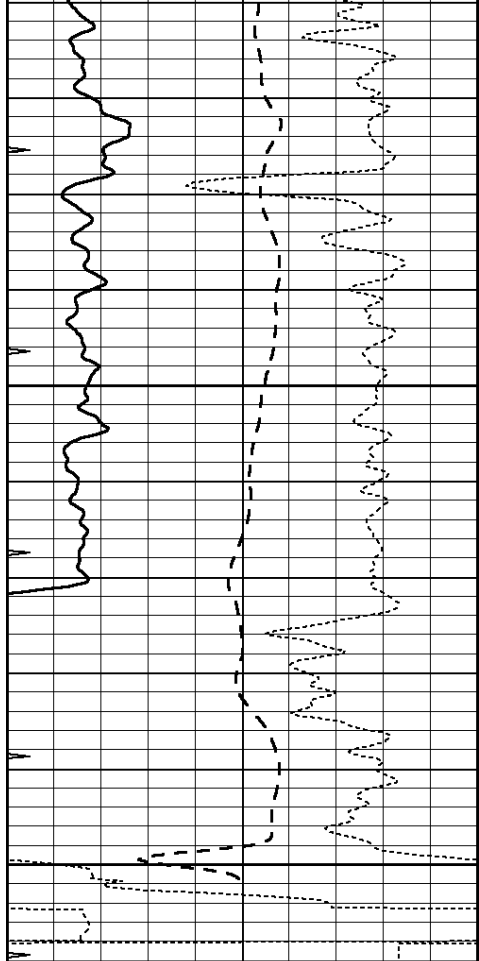


4250

4300

4350

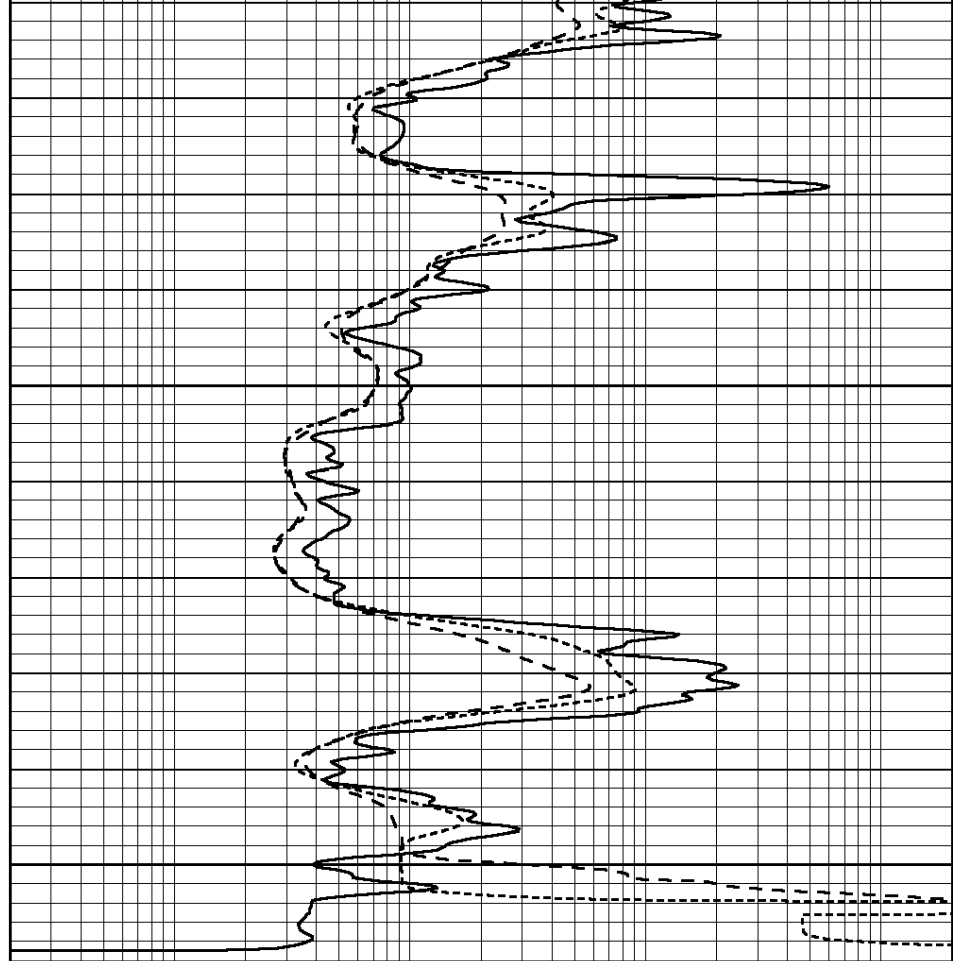




4400

4450

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: 408770pe.db
 Dataset Pathname: pass3.4
 Dataset Creation: Fri May 18 01:31:43 2012 by Calc Open-Cased 110302

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
 Performed: Thu May 17 06:19:21 2012

Loop:	Readings				References		Results	
	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	-8.000
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

	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	8.4	
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:	Fri May 18 00:15:00 2012	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.3000	GAPI/cps