



**SUPERIOR  
Hays,  
Kansas**

**DUAL  
INDUCTION  
LOG**

**Company MUSTANG ENERGY CORPORATION**  
**Well WERTH #1**  
**Field**  
**County ELLIS State KANSAS**

**Location:** API #: 15-165-21971-0000  
 NE - NW - SE - NW  
 1340' FNL & 1845' FWL  
 SEC 6 TWP 16S RGE 18W  
 Permanent Datum: GROUND LEVEL Elevation: 2004  
 Log Measured From: KELLY BUSHING 8' A.G.L.  
 Drilling Measured From: KELLY BUSHING  
 Other Services: CNL/CDL MEL/SON  
 Elevation: K.B. 2012 D.F. G.L. 2004

Date	5-12-12
Run Number	ONE
Depth Driller	3660
Depth Logger	3659
Bottom Logged Interval	3657
Top Log Interval	00
Casing Driller	1185
Casing Logger	1185
Bit Size	7.875
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.3 / 50
pH / Fluid Loss	10.5 / 9.6
Source of Sample	FLOWLINE
Rim @ Meas. Temp	0.50 @ 70F
Rmf @ Meas. Temp	0.38 @ 70F
Rmc @ Meas. Temp	0.60 @ 70F
Source of Rmf / Rmc	MEASURED
Rim @ BHT	0.31 @ 113F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	
Maximum Recorded Temperature	113F
Equipment Number	860
Location	HAYS, KS.
Recorded By	DAN GOTTSCHALK
Witnessed By	HERB DEINES
	RODNEY BRIN

<<< Fold Here >>>

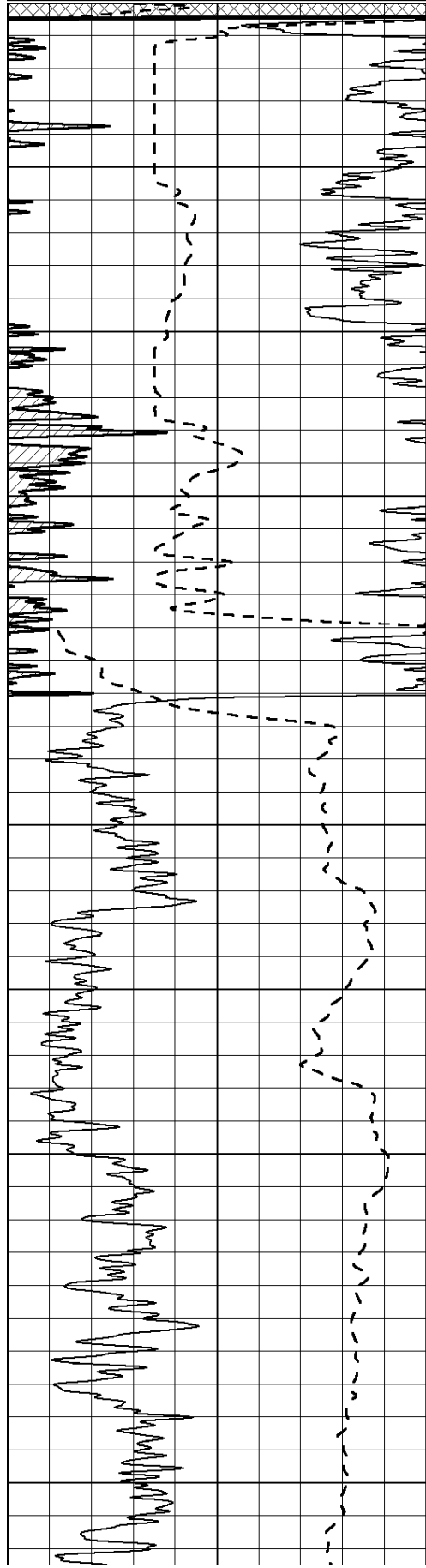
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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**

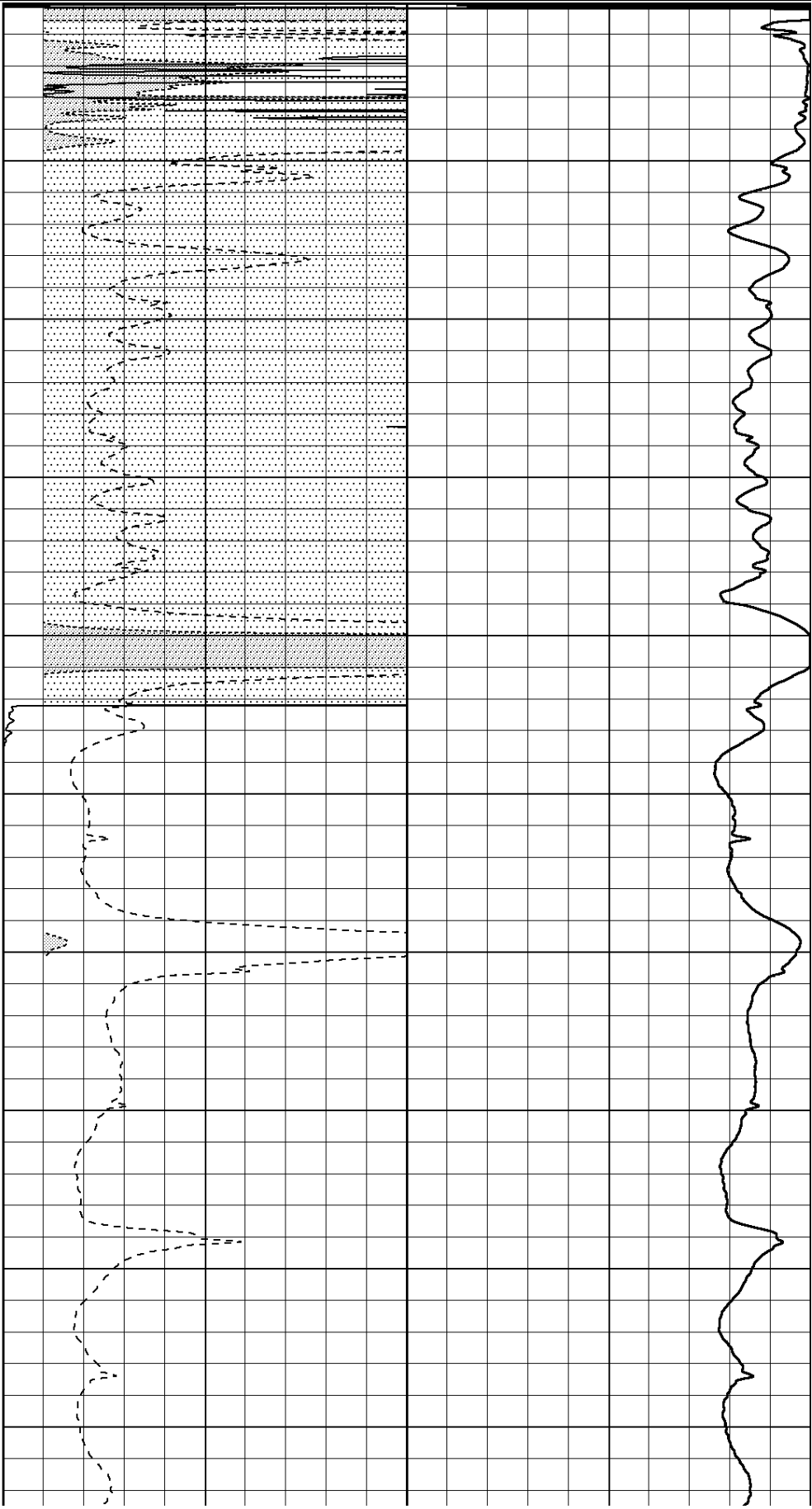
**THANK YOU FOR USING SUPERIOR WELL SERVICES, INC.**  
**HAYS, KS. 785-628-6395**  
**DIRECTIONS: HWY 183 & THE RUSH / ELLIS COUNTY LINE - 2 WEST - SOUTH INTO**

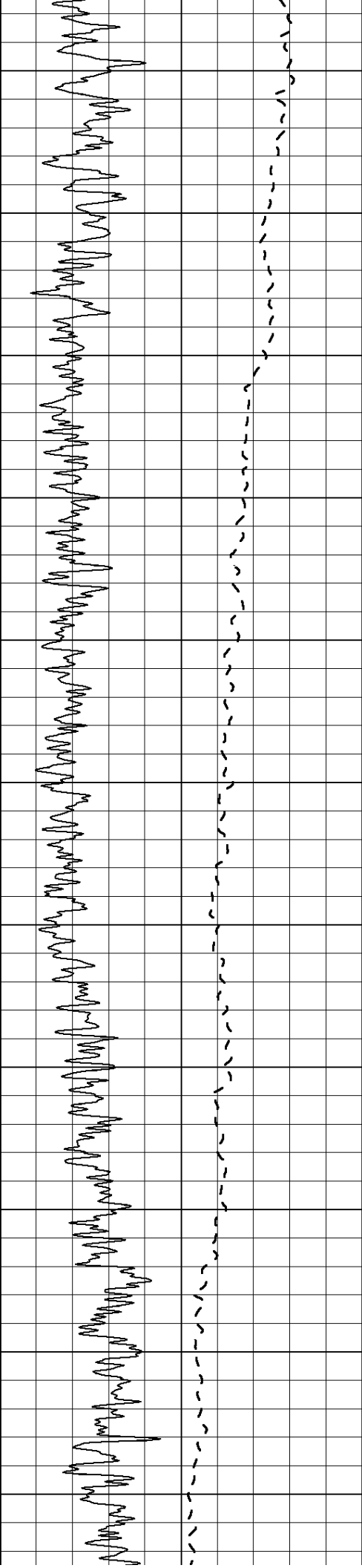
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0	RLL3 (Ohm-m)	50
0	Deep Induction (Ohm-m)	50
1000	CILD (mmho/m)	0
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500

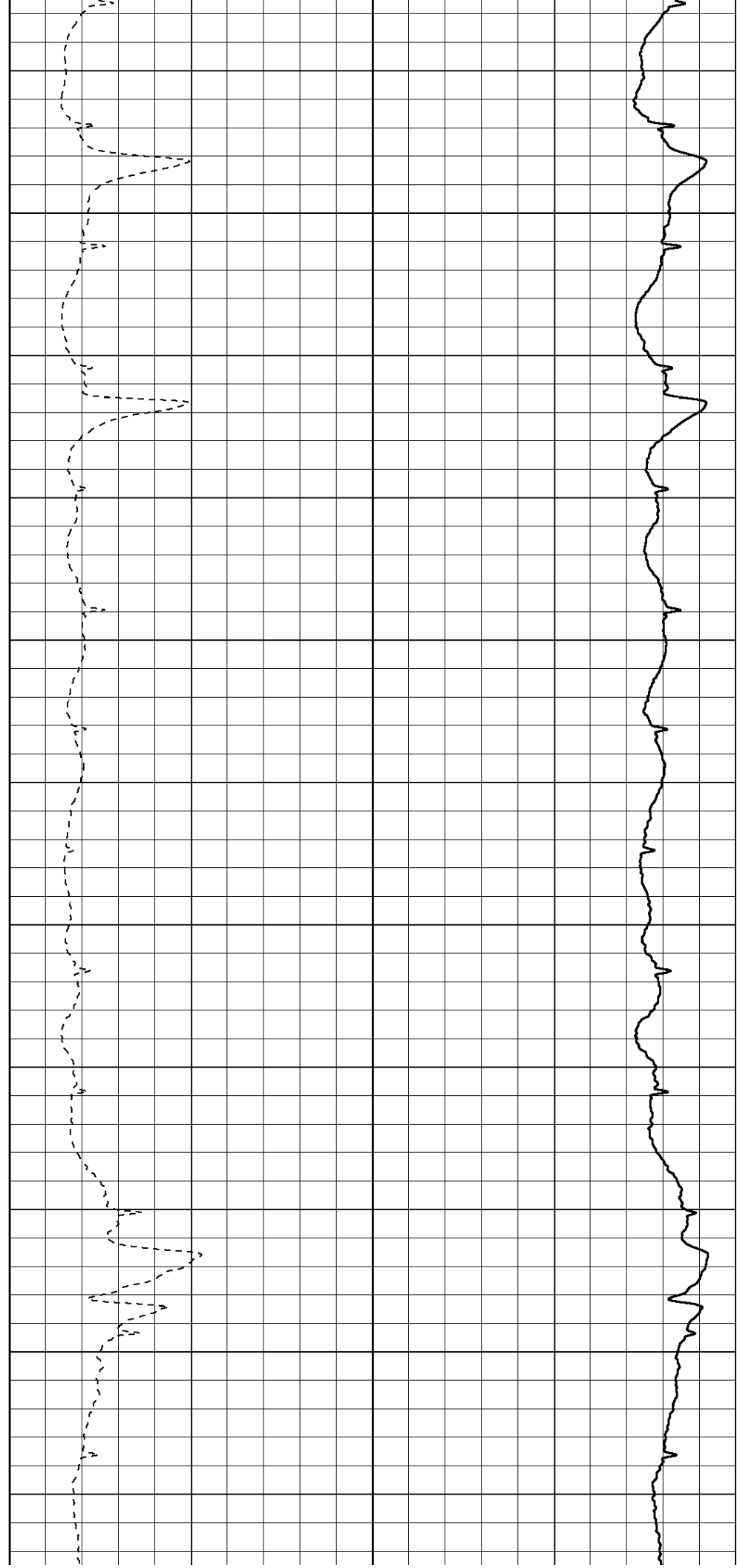


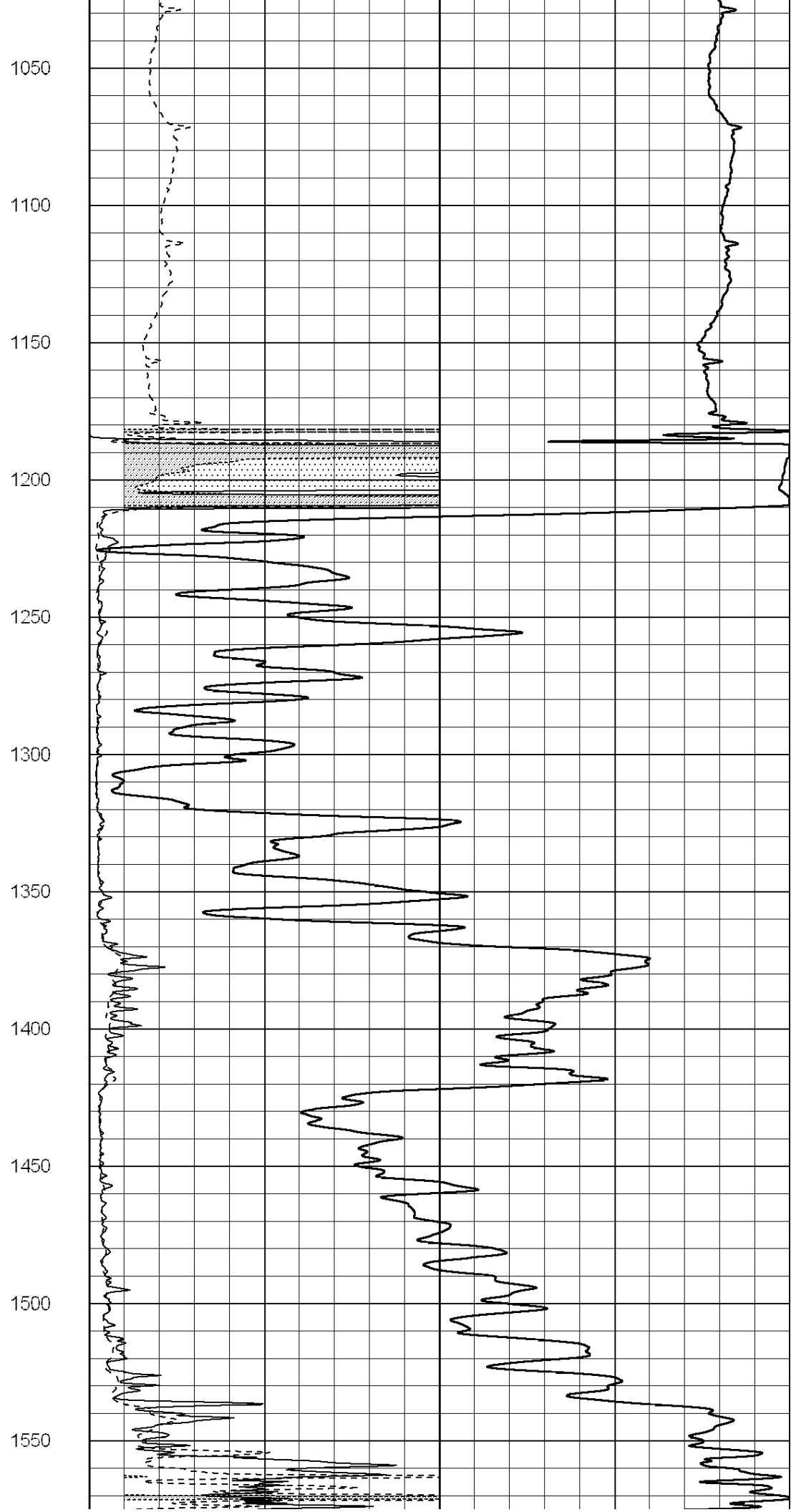
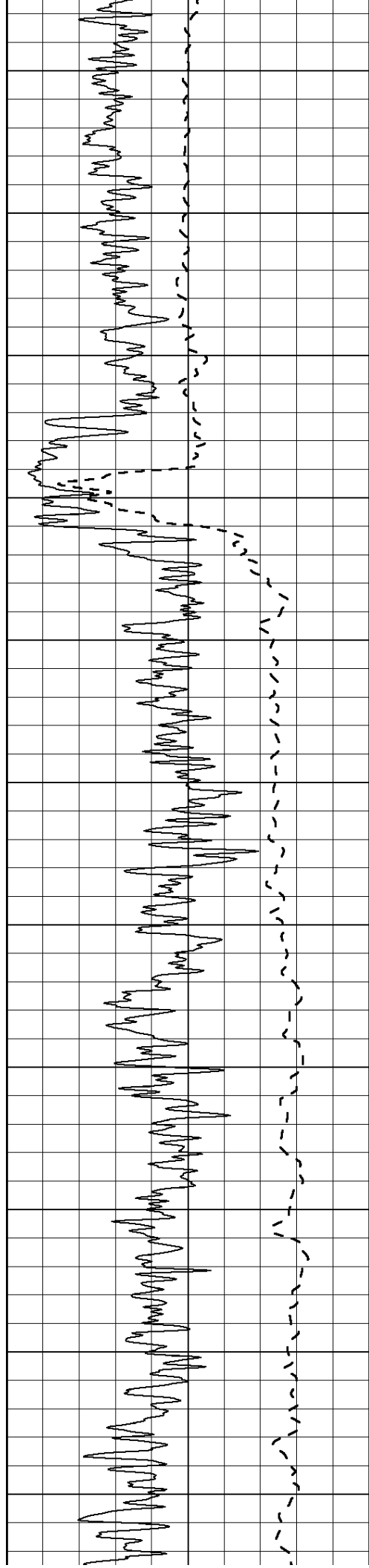
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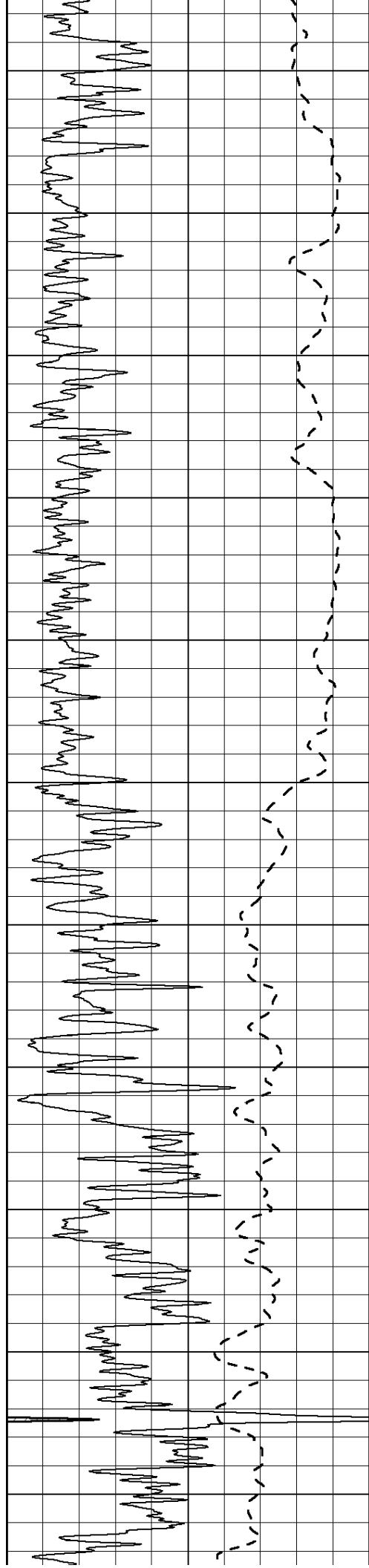




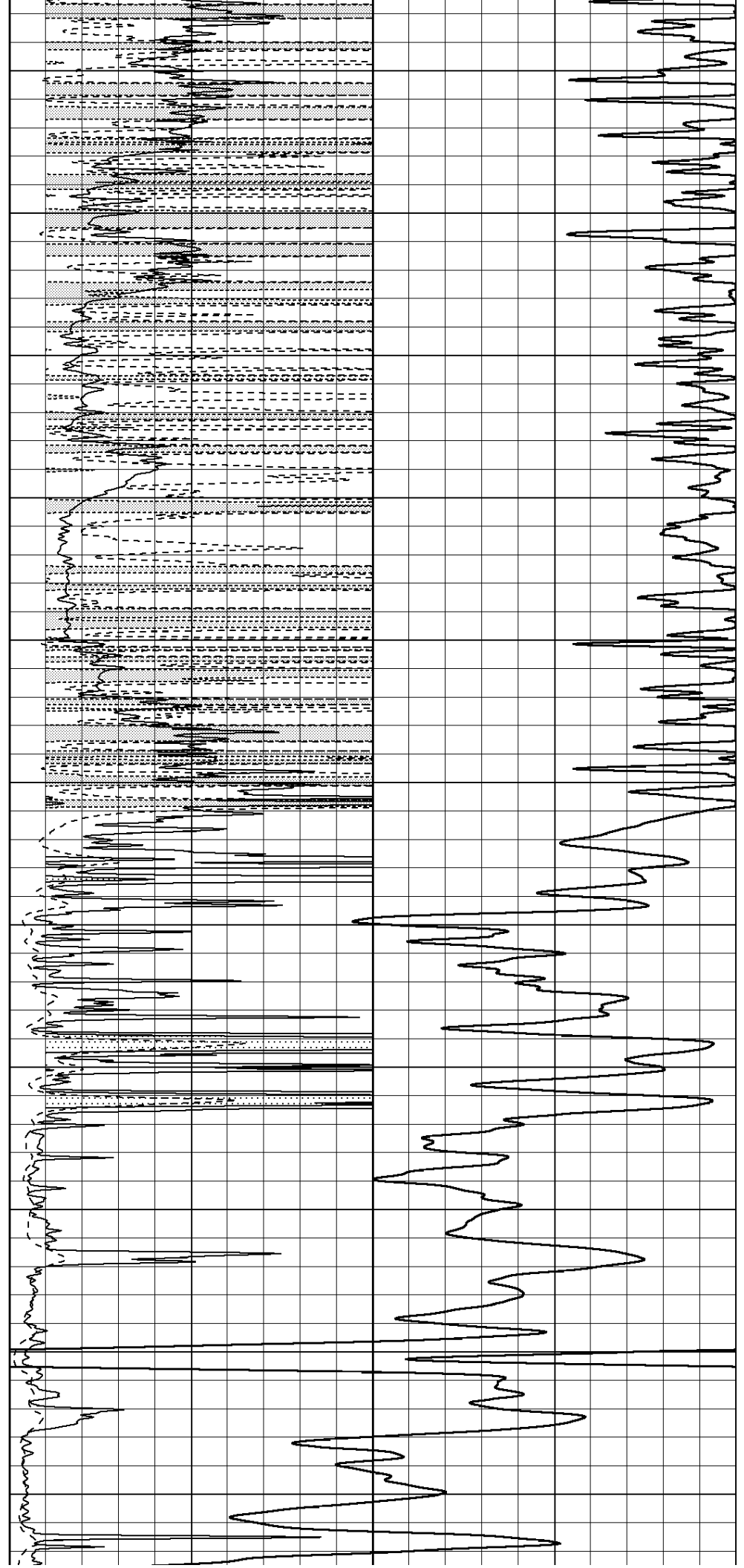
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950  
1000

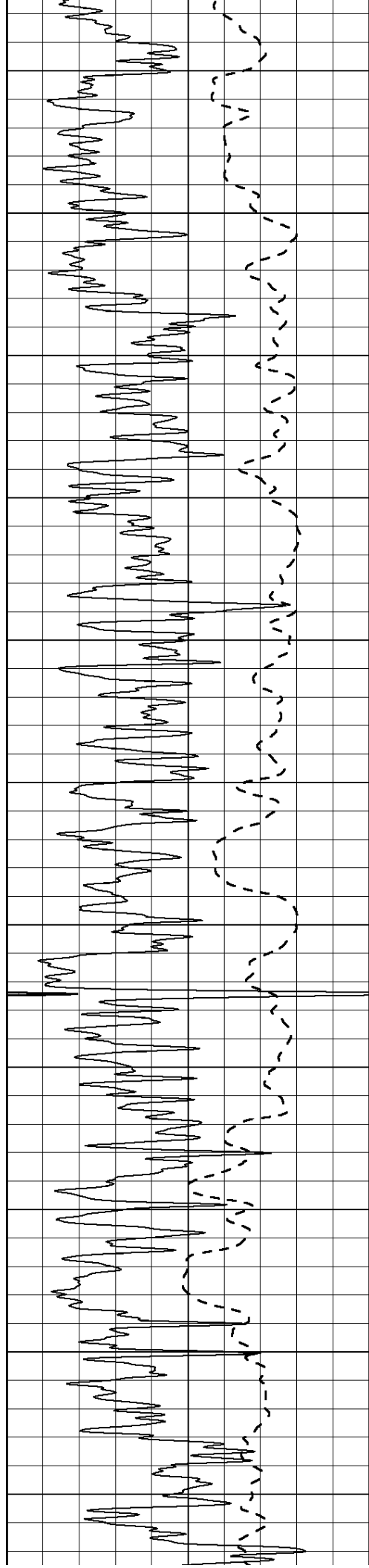






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1650  
1700  
1750  
1800  
1850  
1900  
1950  
2000  
2050  
2100





2150

2200

2250

2300

2350

2400

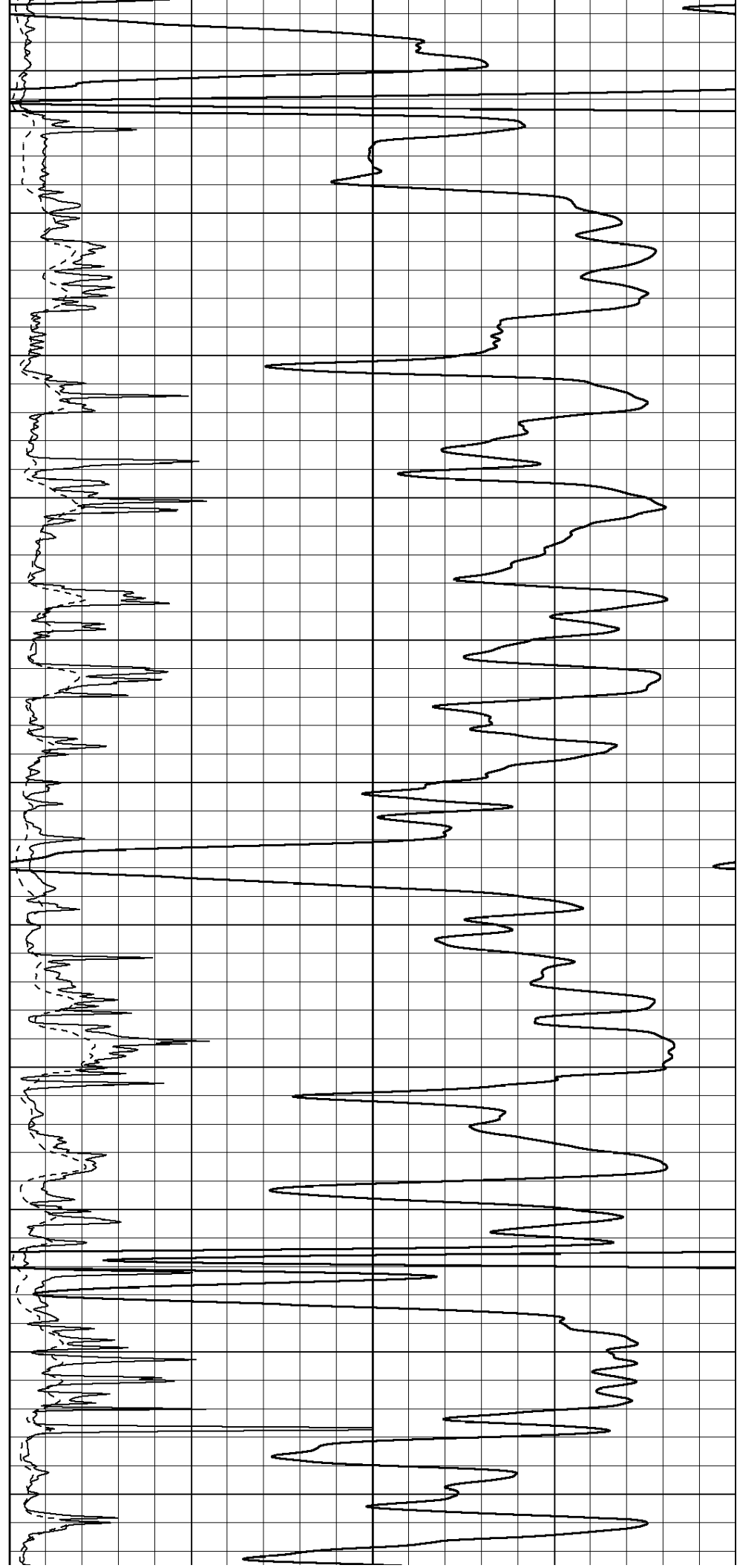
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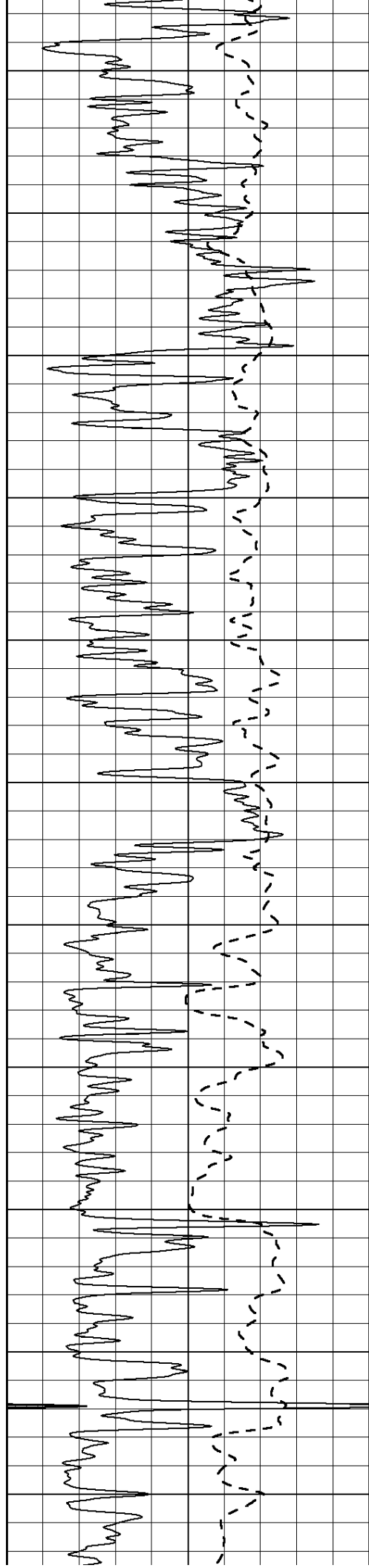
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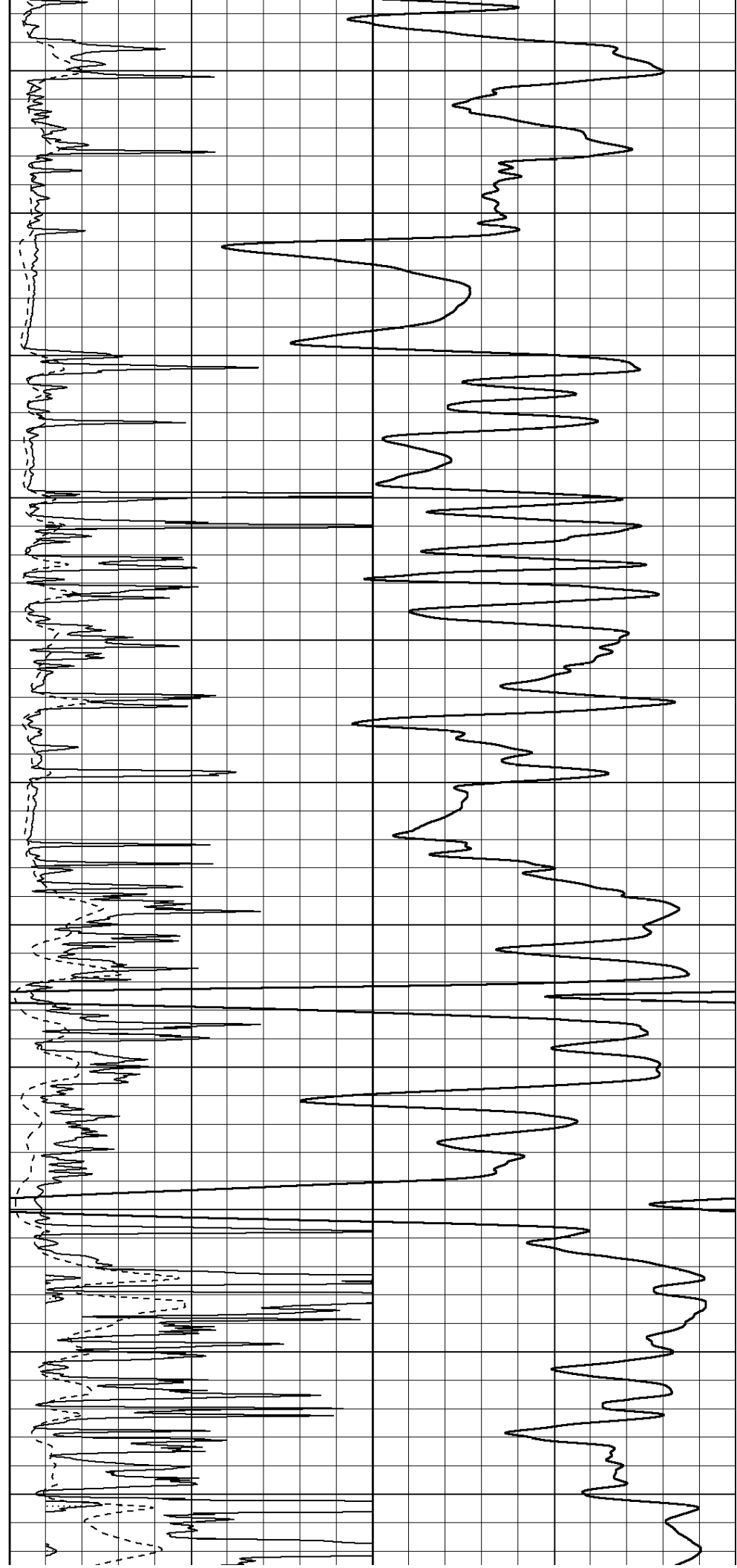
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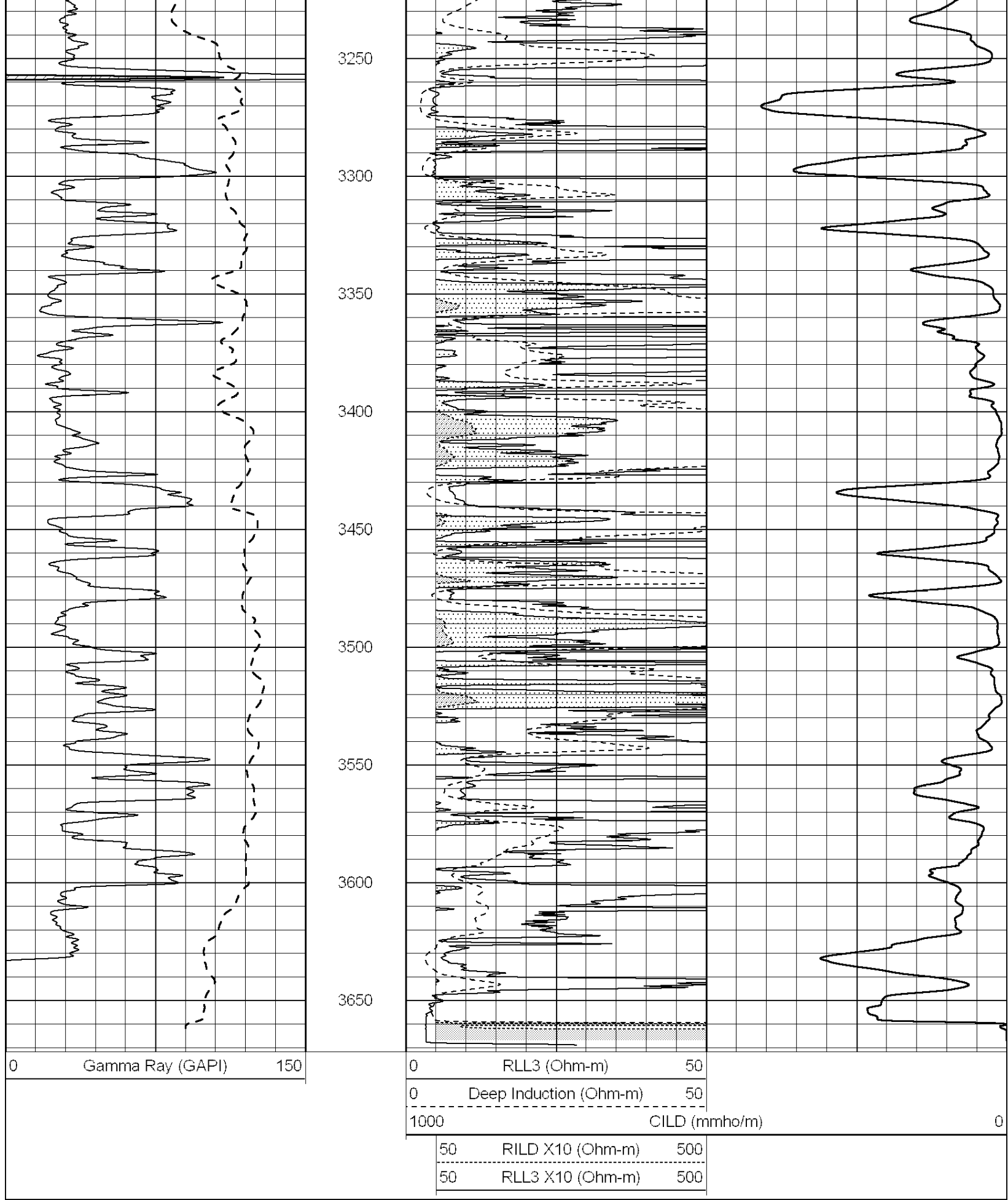
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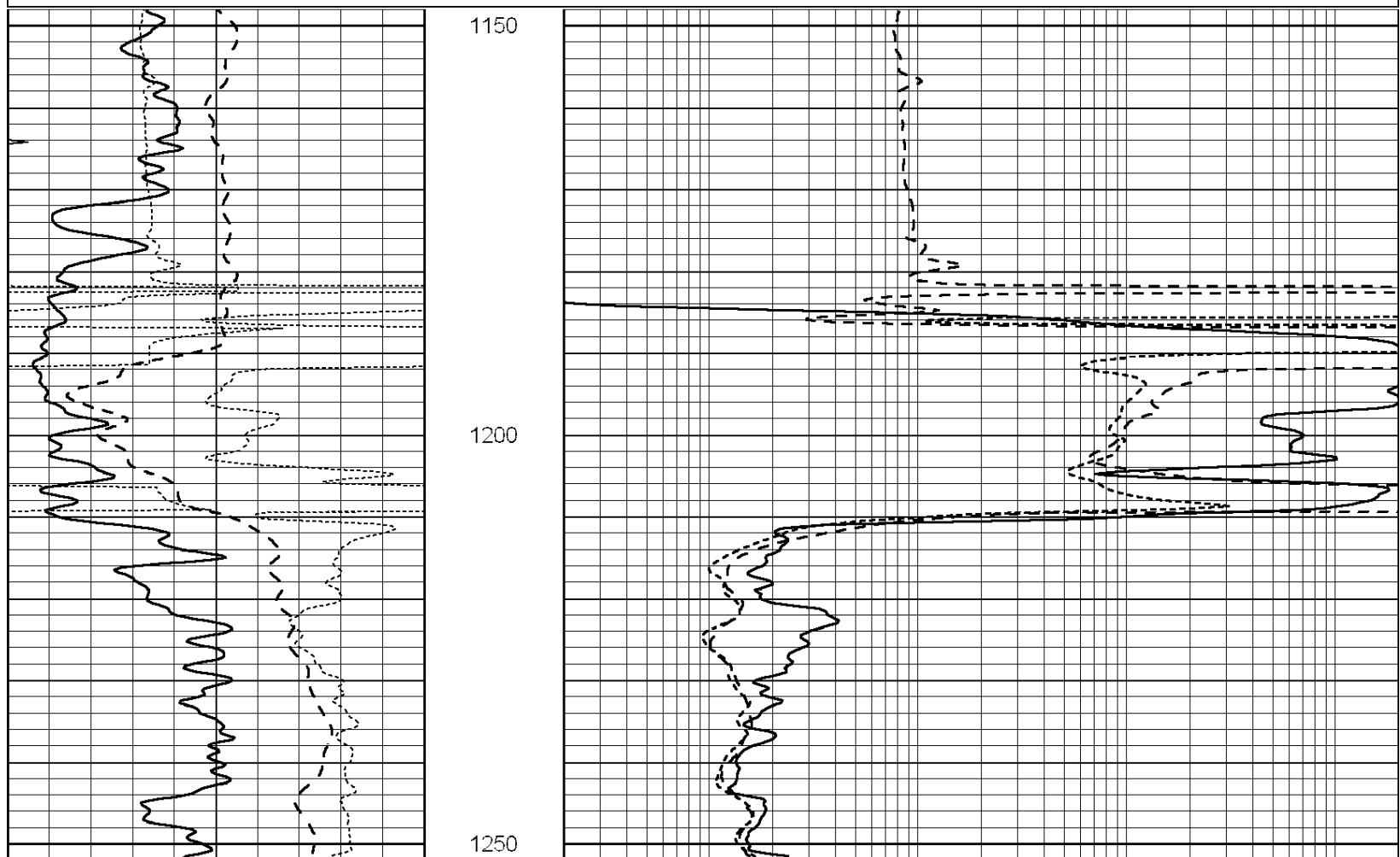
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3100  
3150  
3200





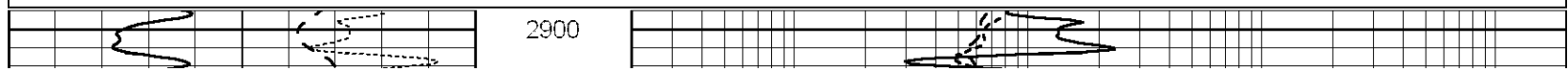
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 Presentation Format: dil

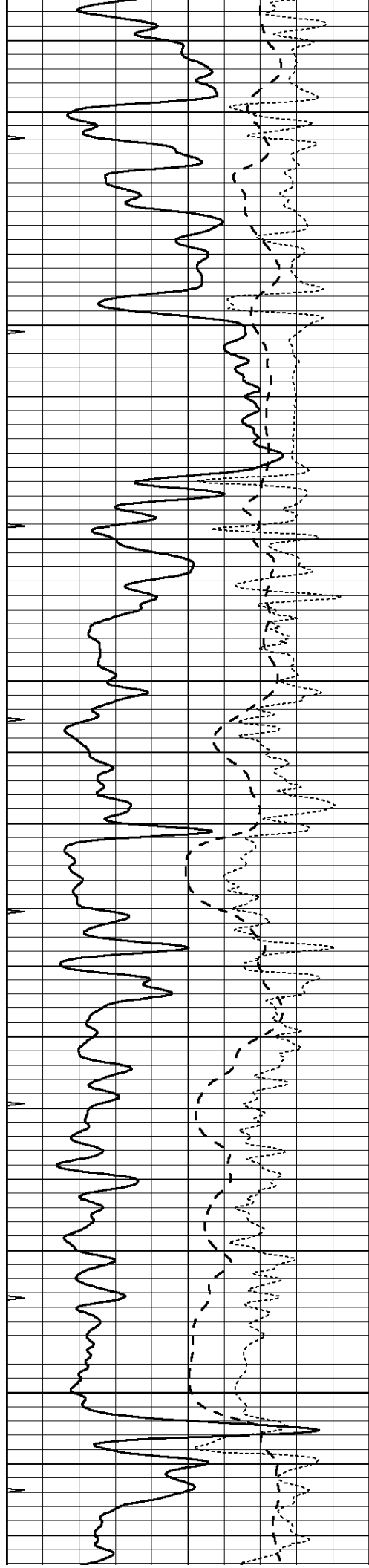
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-250	RxoRt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			



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-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	RxoRt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			

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-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	RxoRt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			



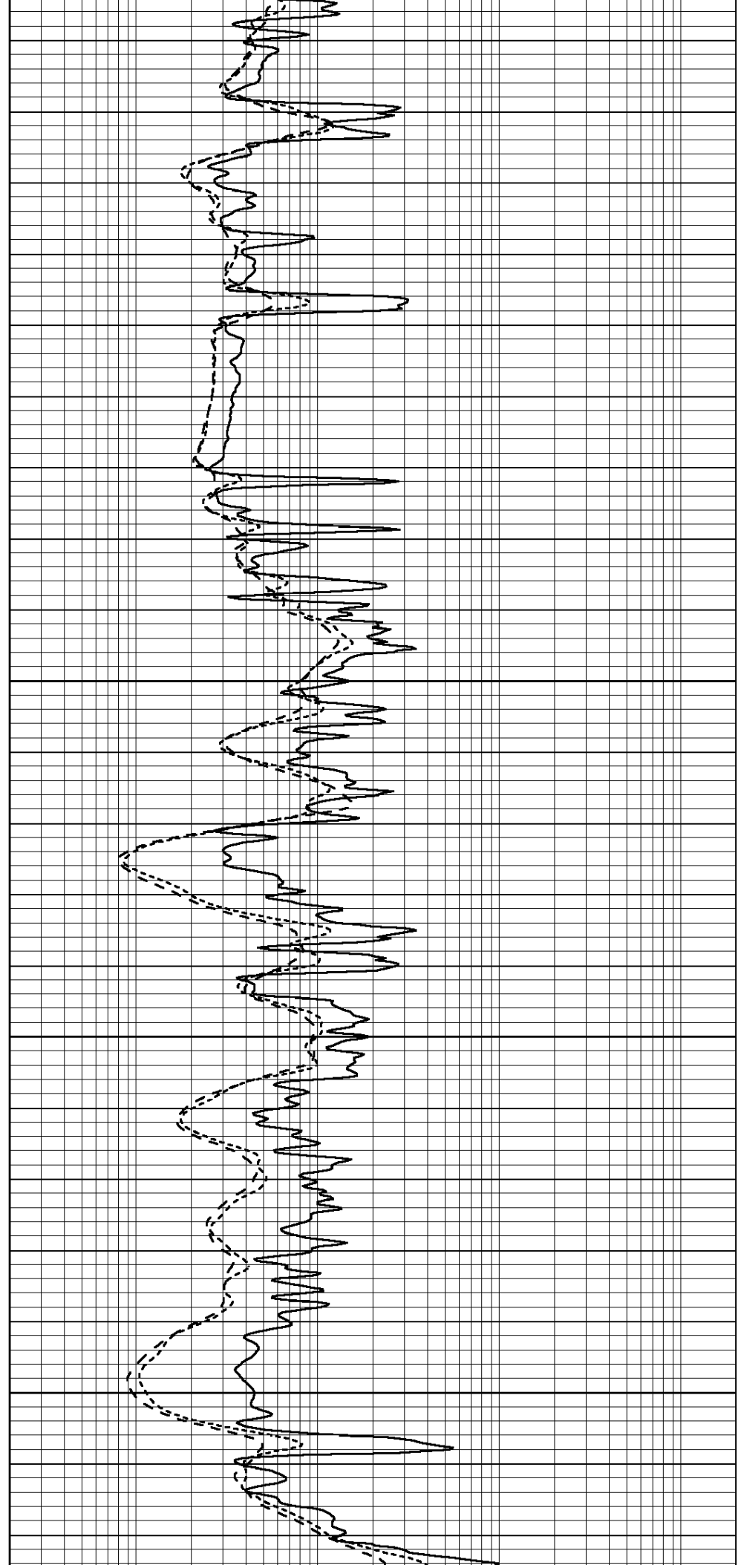


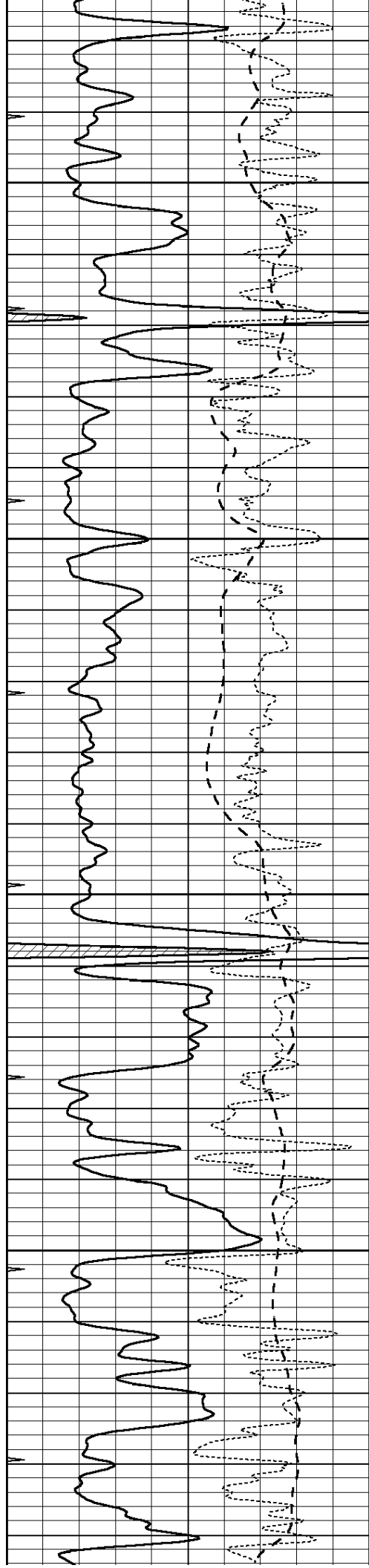
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3050

3100



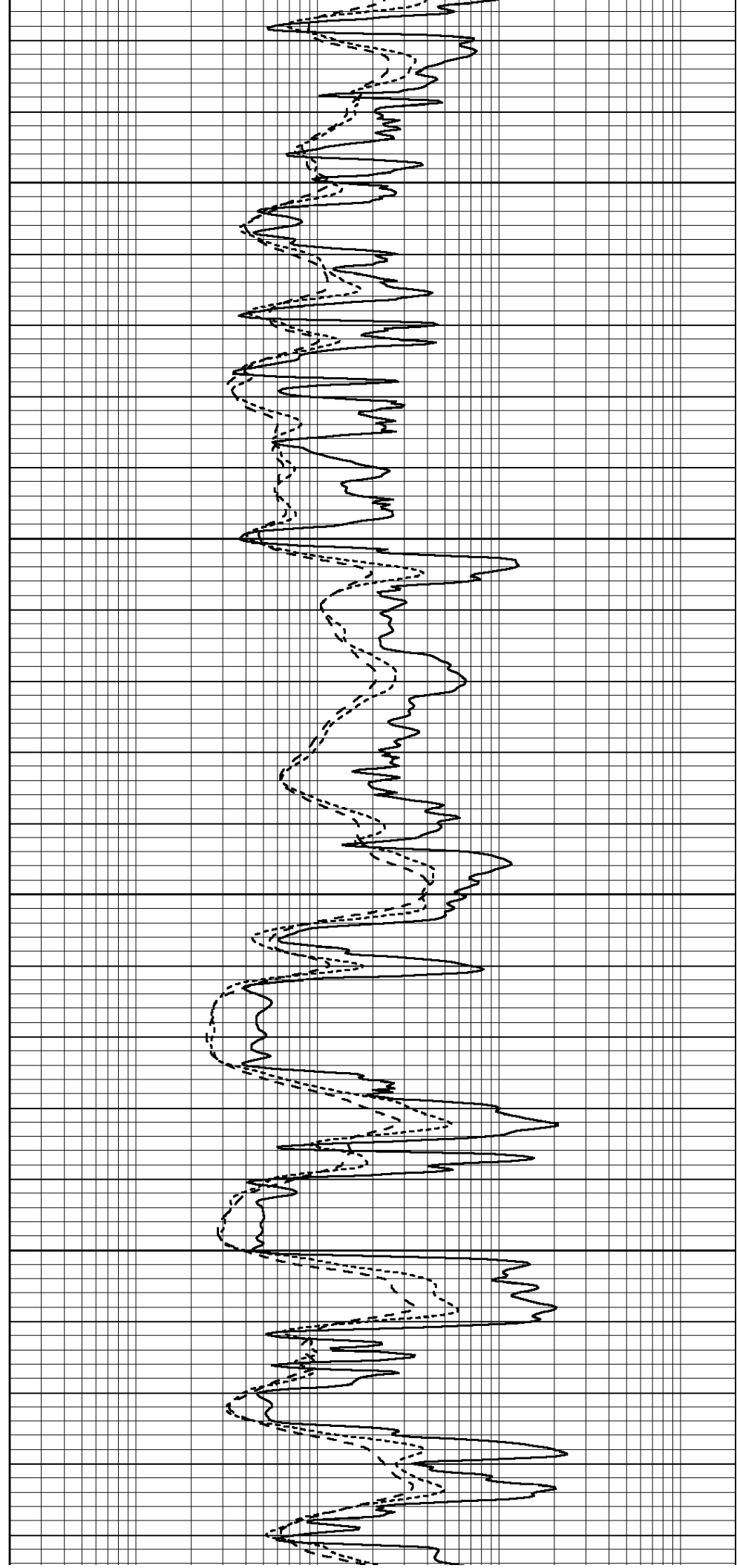


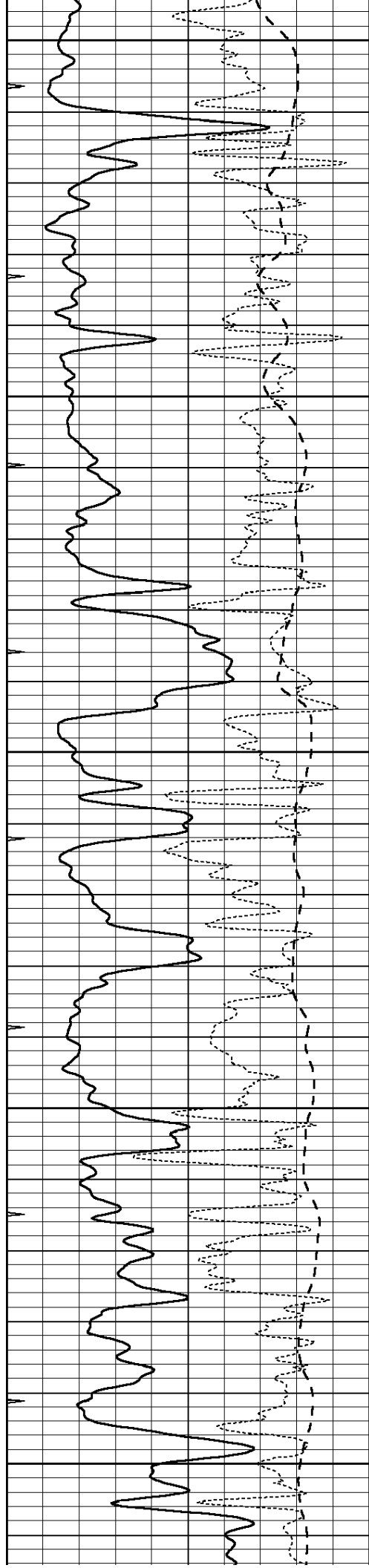
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3300





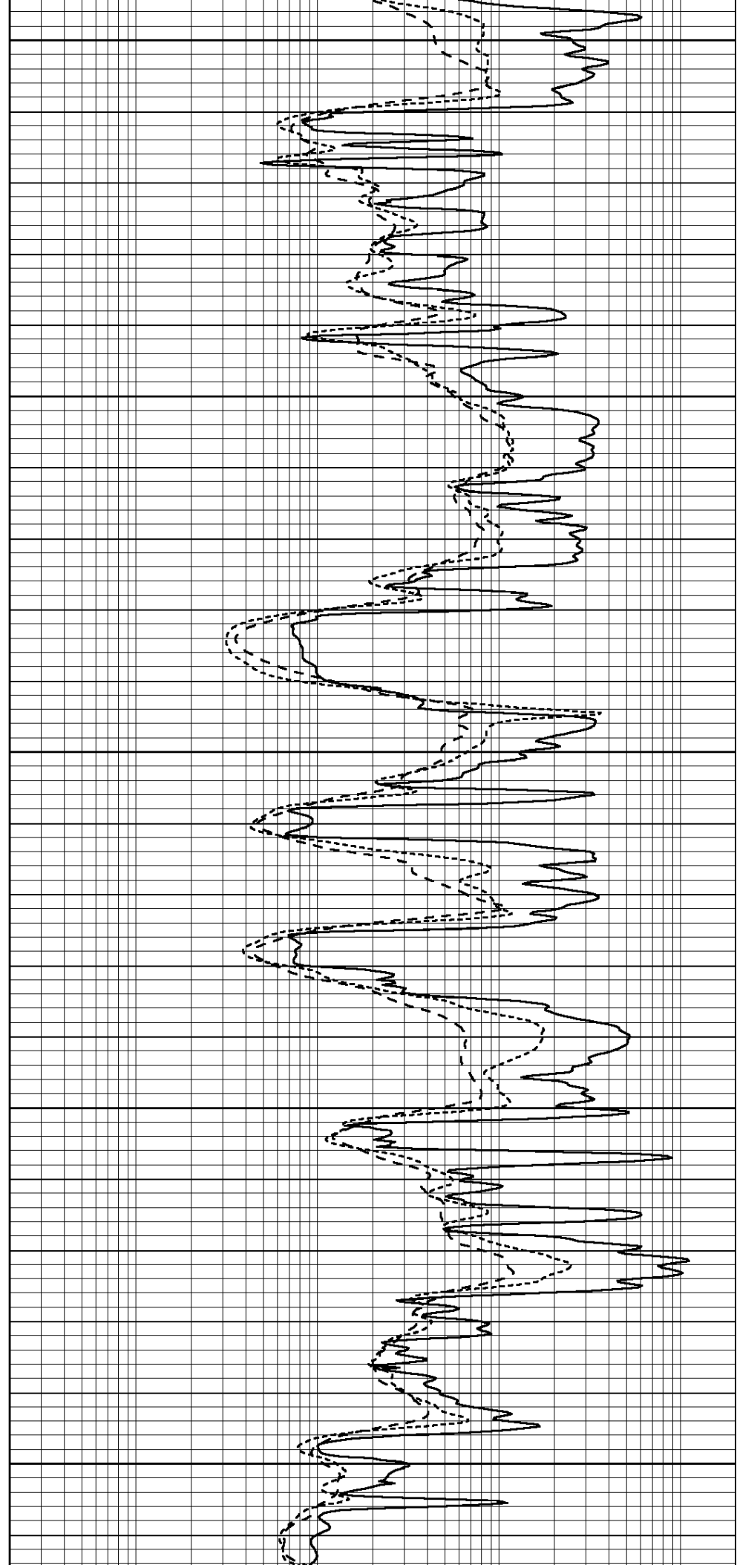
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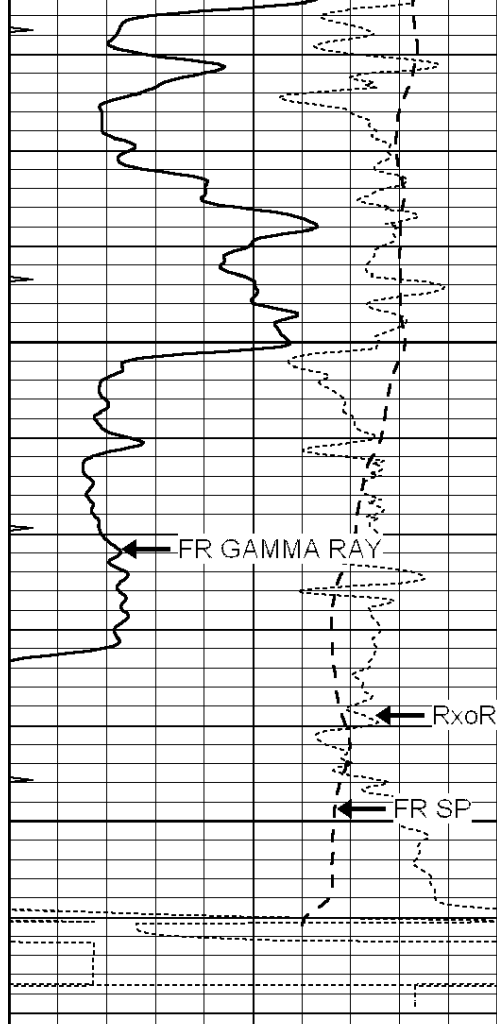
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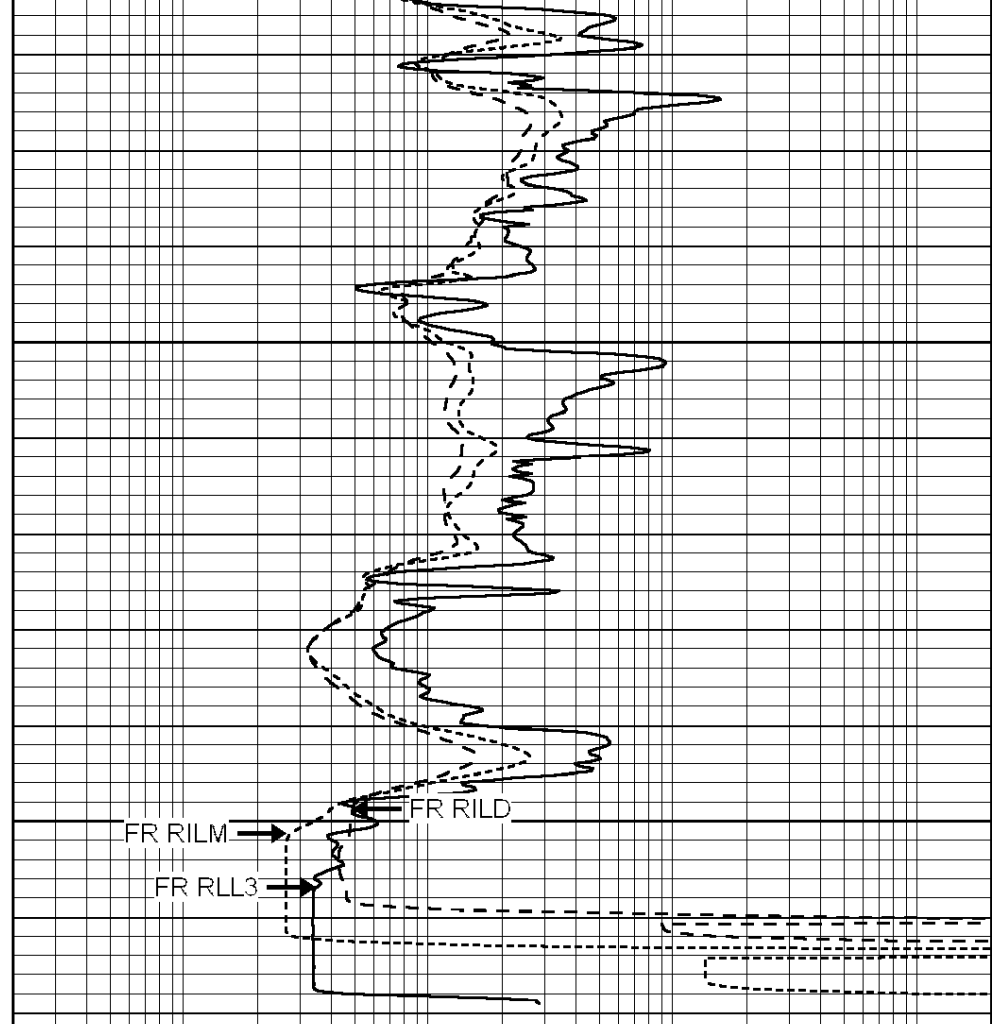
3550





3600  
3650  
LTD 3659

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20



0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



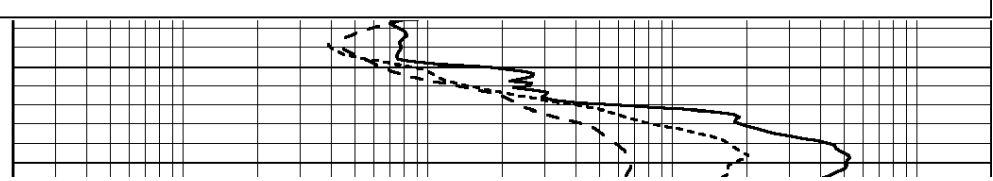
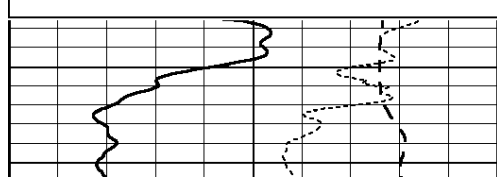
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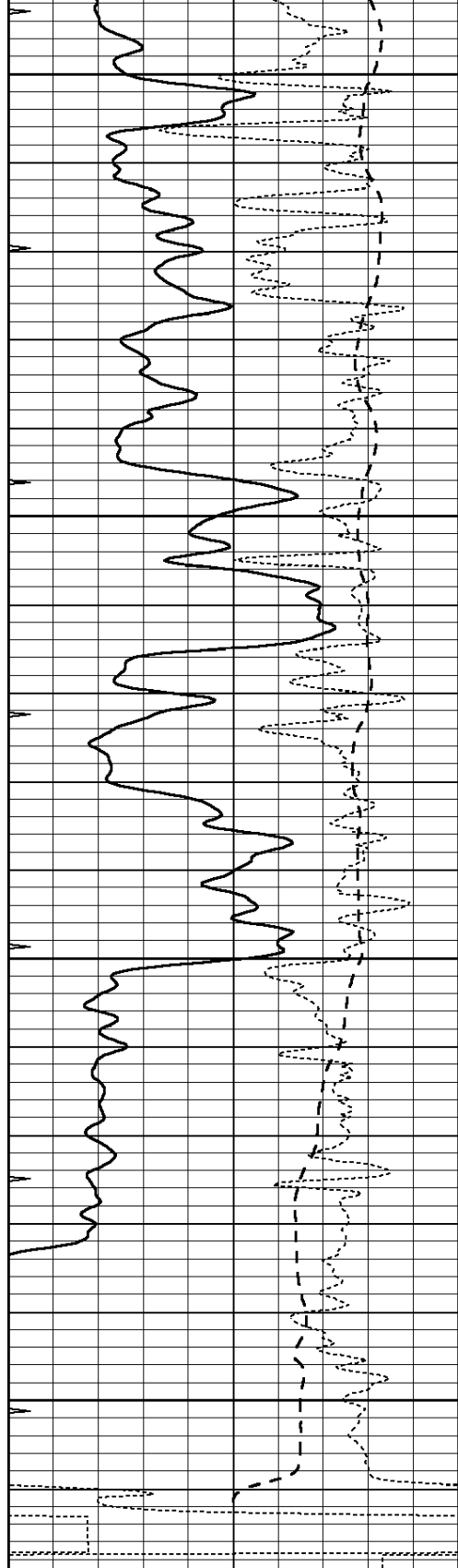
# REPEAT SECTION

Database File: 9177ddn.db  
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 Presentation Format: dil  
 Dataset Creation: Sat May 12 08:04:28 2012 by Calc Open-Cased 090629  
 Charted by: Depth in Feet scaled 1:240

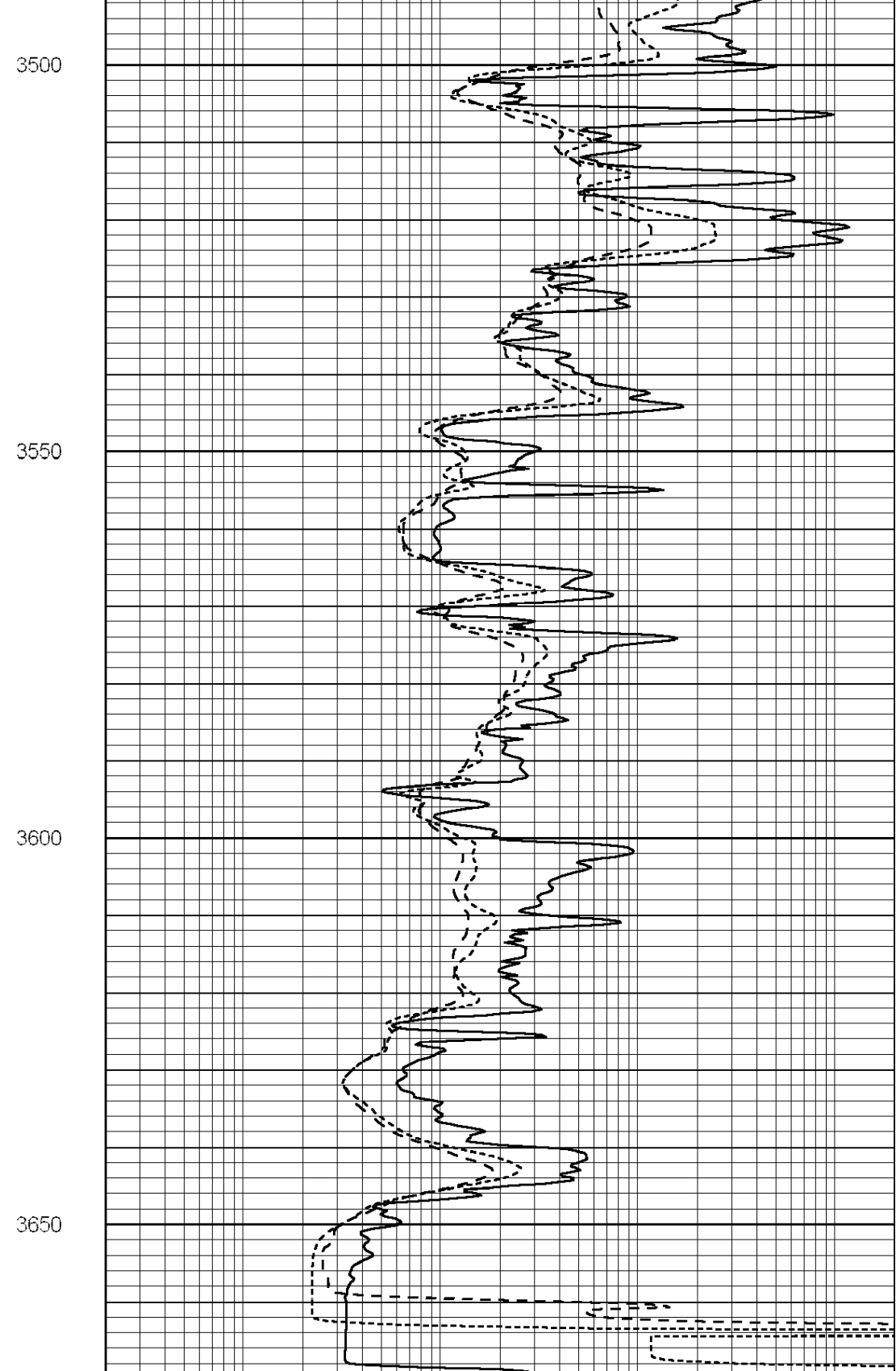
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-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

0.2	RLL3 (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	RxoRt	50
0	MINMK	20



0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

Calibration Report

Database File: 9177ddn.db  
 Dataset Pathname: pass1

Dual Induction Calibration Report

Serial-Model: PROBE9-DILG  
 Surface Cal Performed: Thu May 10 04:20:47 2012  
 Downhole Cal Performed: Mon Jul 28 12:02:56 2008  
 After Survey Verification Performed: Mon Jul 28 12:02:56 2008

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop	V	Air	Loop	mmho/m	m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	550.000	-8.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	540.000	-10.000
Internal:	Zero	Cal	V	Zero	Cal	mmho/m	m	b
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256
Medium	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102

Downhole Calibration

	Readings			References			Results	
	Zero	Cal	V	Zero	Cal	mmho/m	m'	b'
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	1.000	0.000
LL3		7.500	V		1400.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		3970.000	mmho-m		

After Survey Verification

	Readings			Targets			Results	
	Zero	Cal	V	Zero	Cal	mmho/m	m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
LL3		1.000	Ohm-m		1.000	Ohm-m		
		0.000	Ohm-m		0.000	Ohm-m		
		1.000	mmho-m		1.000	mmho-m		

Compensated Density Calibration Report

Serial-Model: GEAR1-GEARHART  
 Source / Verifier: 147 / 147  
 Master Calibration Performed: Thu May 10 04:14:54 2012

Master Calibration

	Density		Far Detector	Near Detector	
	g/cc	g/cc		cps	cps
Magnesium	1.710	g/cc	1243.76	629.14	cps
Aluminum	2.590	g/cc	282.16	435.01	cps
Spine Angle = 76.03			Density/Spine Ratio = 0.576		
	Size		Reading		
Small Ring	9.00	in	4.01	V	
Large Ring	14.00	in	5.67	V	

Compensated Neutron Calibration Report

Serial Number: NUE\_2I  
 Tool Model: G

CALIBRATION

Detector	Readings		Target		Normalization
Short Space	1.00	cps	1.00	cps	1.0000
Long Space	1.00	cps	1.00	cps	1.0000

Gamma Ray Calibration Report

Serial Number:	GR5	
Tool Model:	OPEN	
Performed:	Thu May 10 07:14:18 2012	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.6600	GAPI/cps