



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL
INDUCTION
LOG**

Company RAYMOND OIL COMPANY, INC.
Well DOWD #1
Field ALAMOTA
County LANE
State KANSAS

Company RAYMOND OIL COMPANY, INC.
Well DOWD #1
Field ALAMOTA
County LANE State KANSAS

Location: API # : 15-101-22515-00-00
1996' FSL & 1216' FWL
SEC 15 TWP 18S RGE 27W
Permanent Datum GROUND LEVEL Elevation 2685
Log Measured From KELLY BUSHING 5' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
CNL/CDL
MEL
Elevation
K.B. 2690
D.F. 2688
G.L. 2685

Date	6/15/14		
Run Number	ONE		
Depth Driller	4720		
Depth Logger	4720		
Bottom Logged Interval	4718		
Top Log Interval	00		
Casing Driller	8 5/8" @ 261		
Casing Logger	256		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 2,600 PPM	
Density / Viscosity	9.3/50		
pH / Fluid Loss	11.0/7.6		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.95 @ 86F		
Rmt @ Meas. Temp	0.71 @ 86F		
Rmc @ Meas. Temp	1.14 @ 86F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	0.67 @ 122F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	122F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	IAN MABB		
Witnessed By	KIM SHOEMAKER		

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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, KS. (785) 628-6395
DIRECTIONS:
DIGHTON, KS. - 8 MILES EAST TO TURKEY RED RD. - NORTH 1/2 MILE - EAST INTO

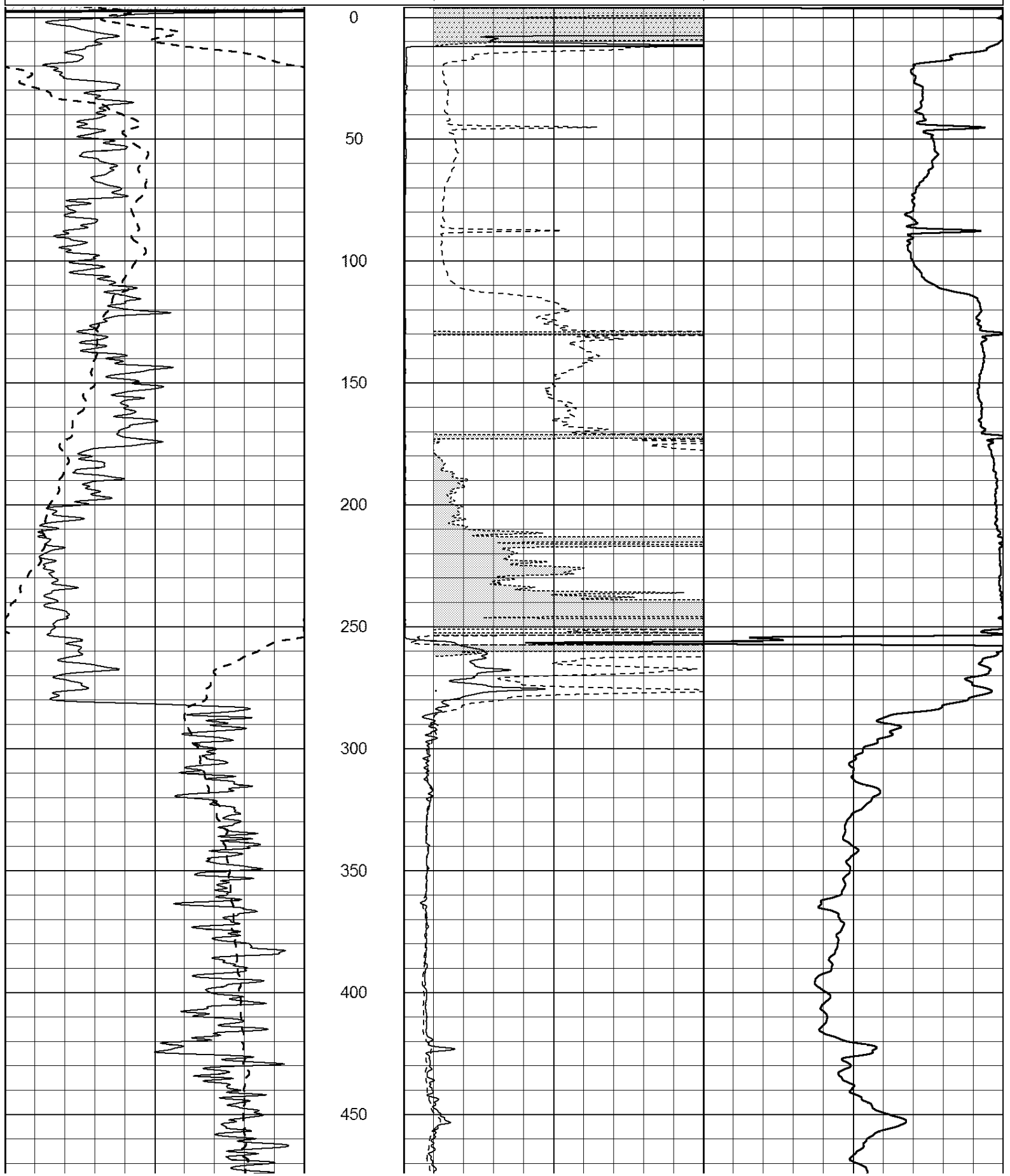
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Charted by: Depth in Feet scaled 1:600

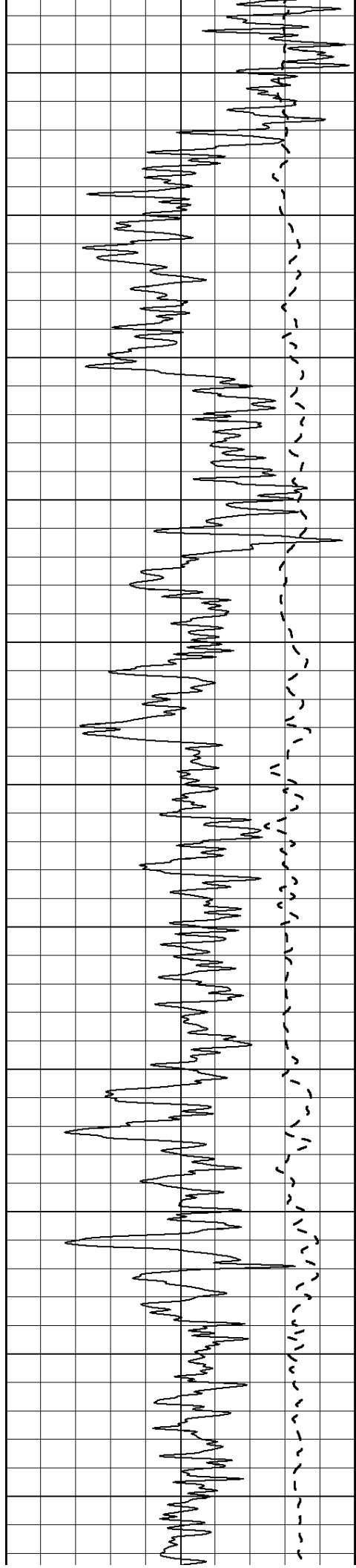
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-100	SP (mV)	100

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

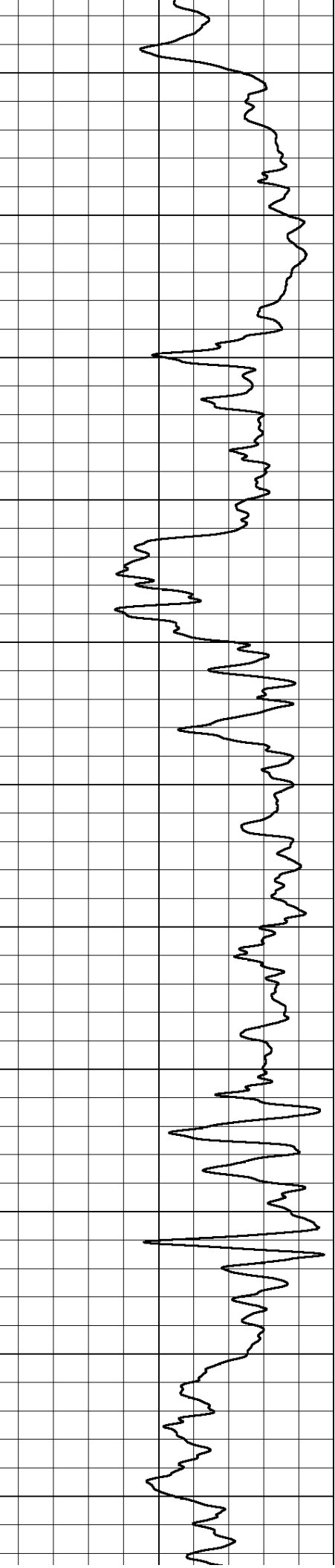
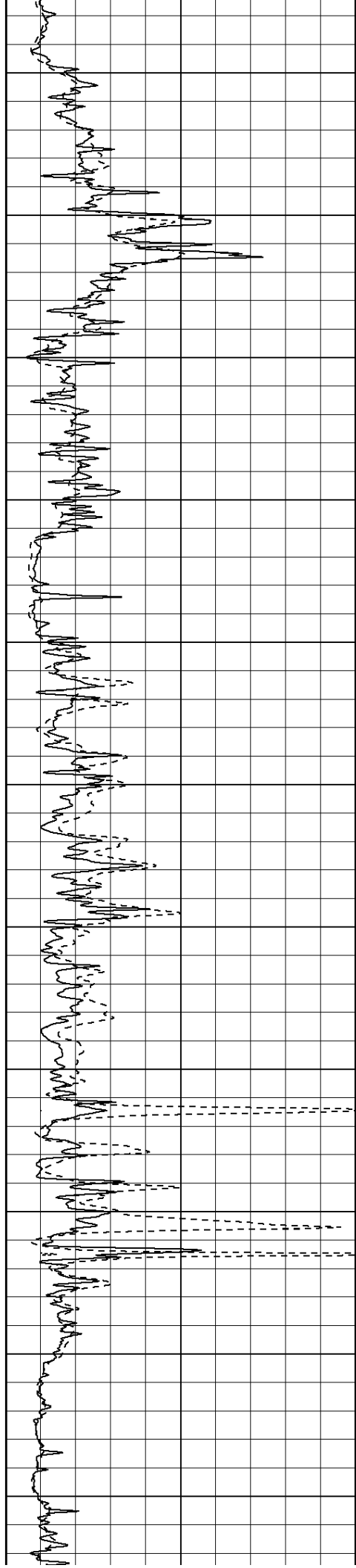
1000	CILD (mmho/m)	0
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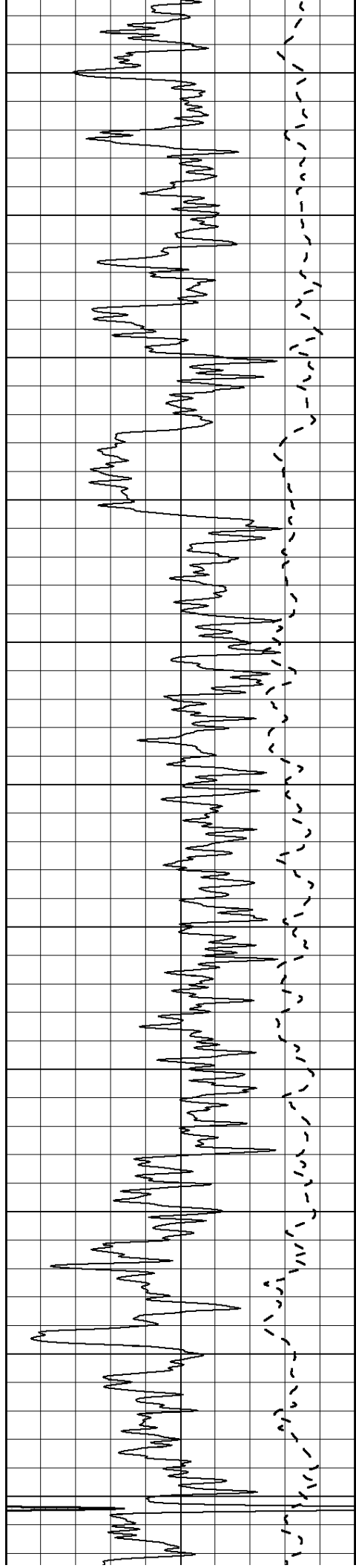
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500





500
550
600
650
700
750
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850
900
950
1000





1050

1100

1150

1200

1250

1300

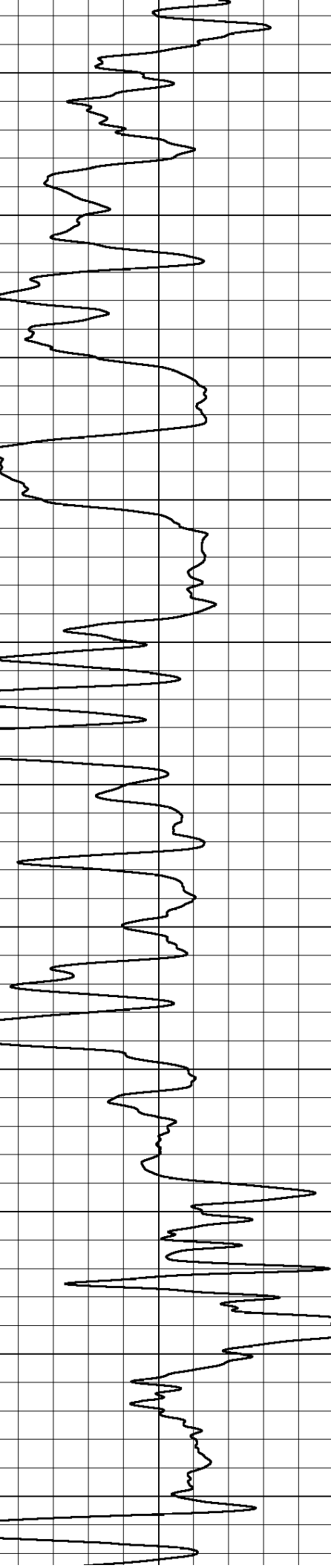
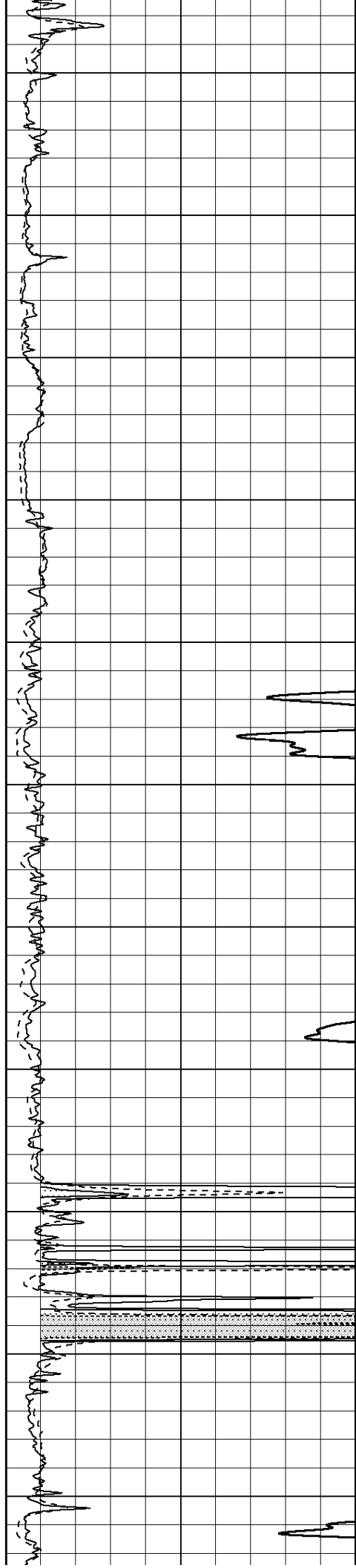
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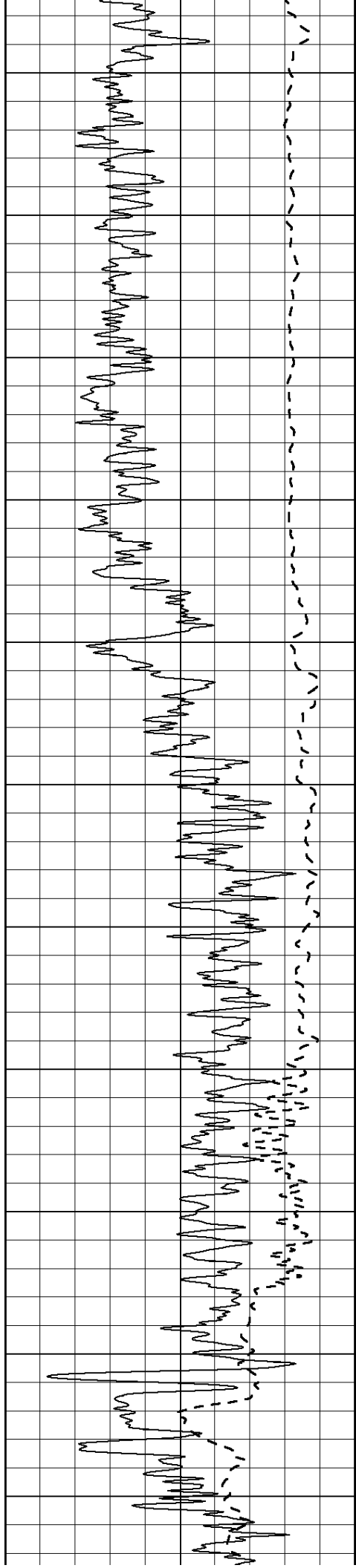
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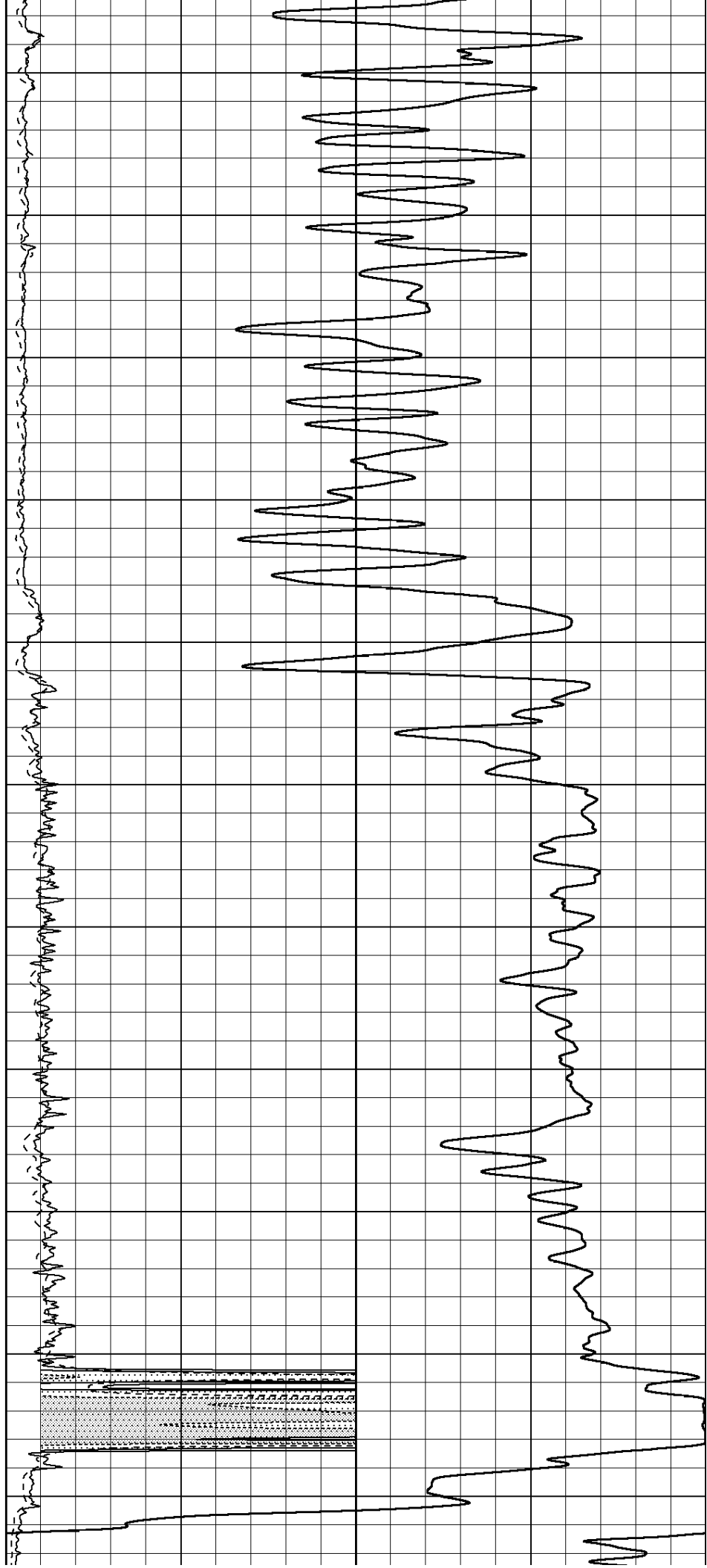
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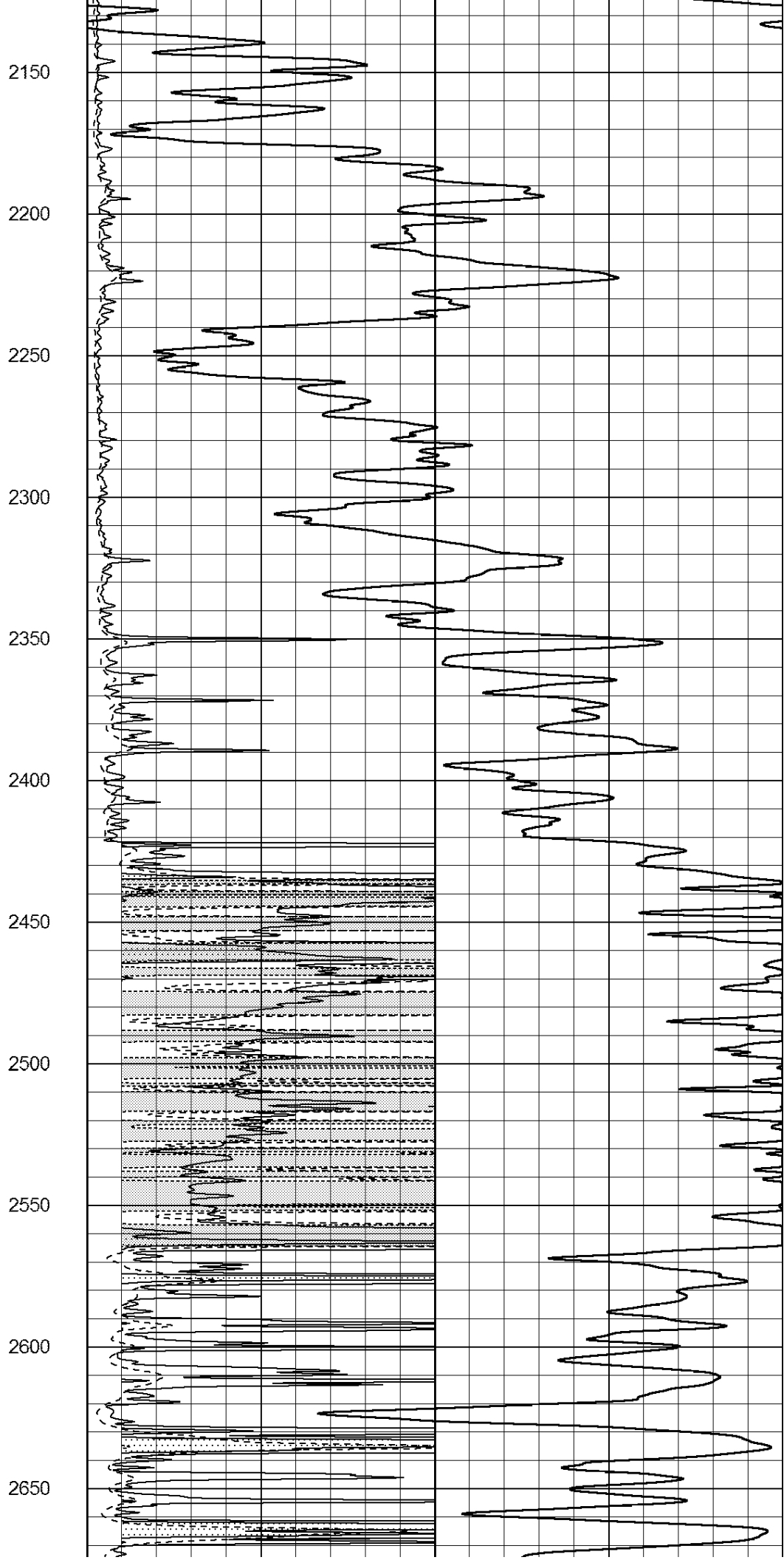
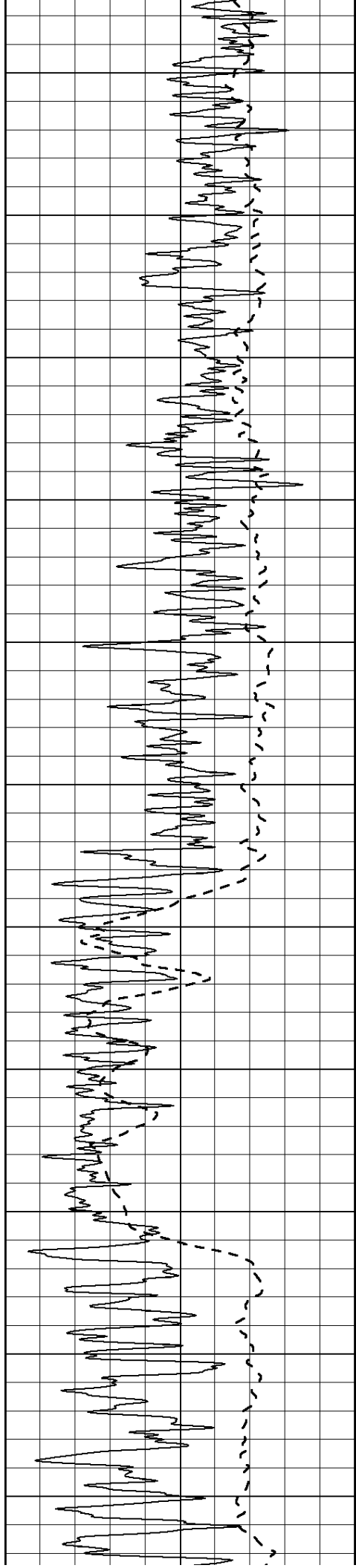
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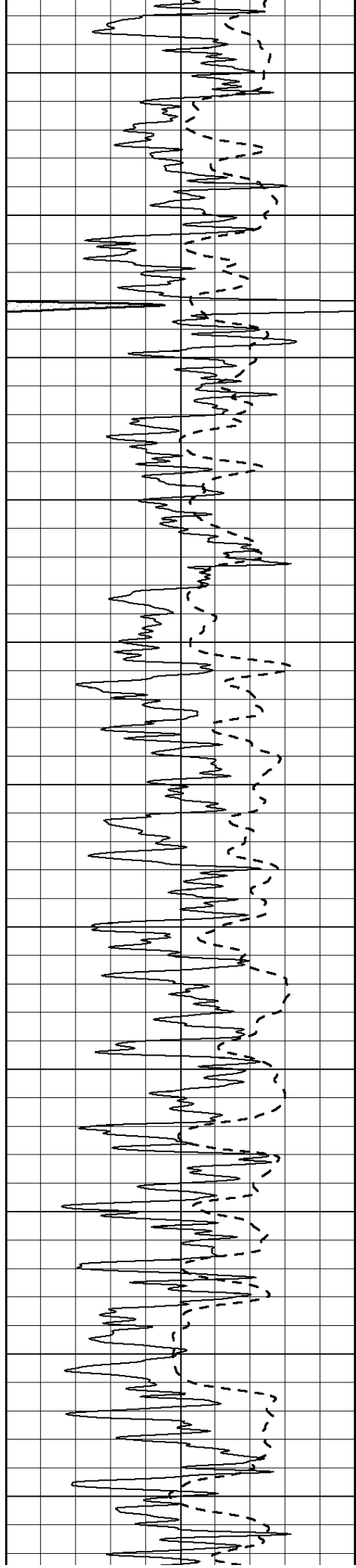




1600
1650
1700
1750
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1850
1900
1950
2000
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2100







2700

2750

2800

2850

2900

2950

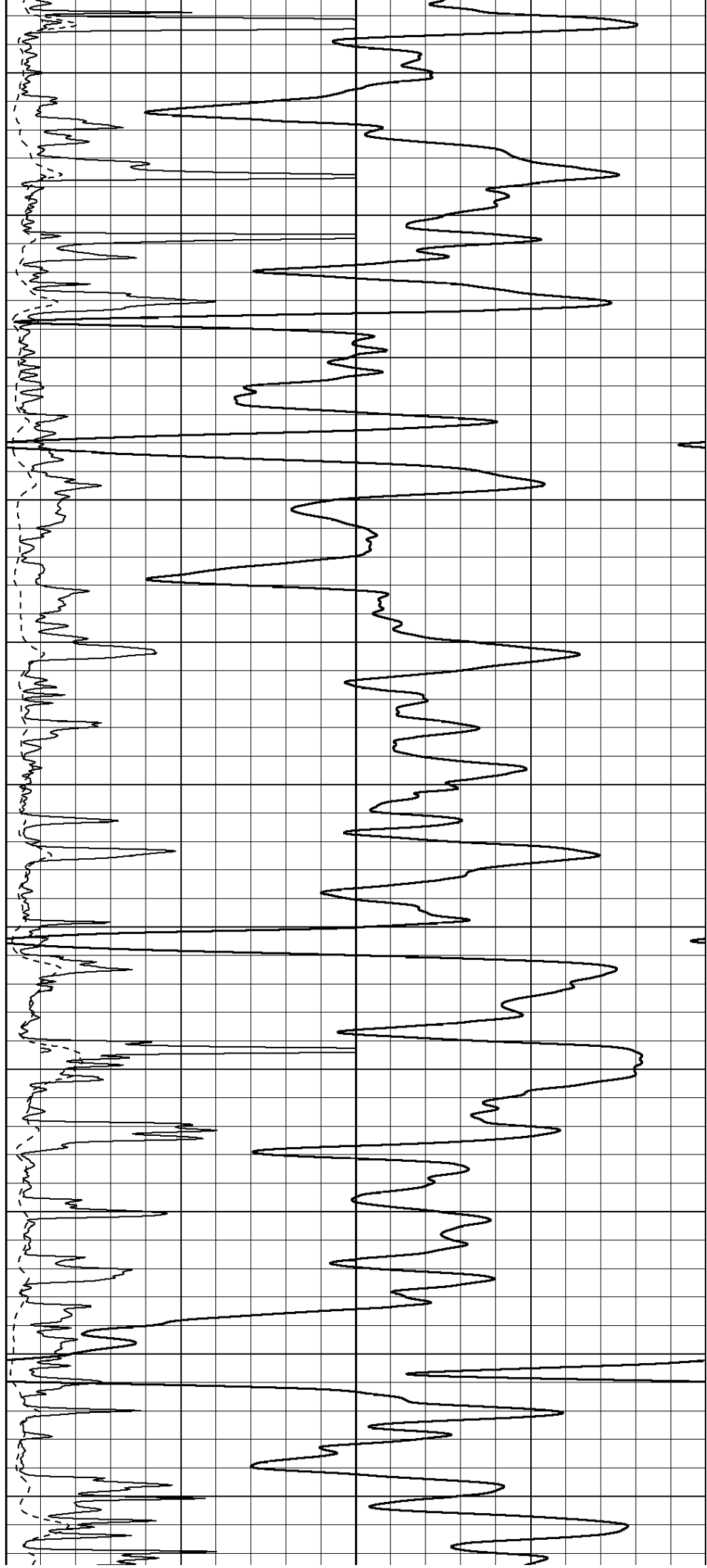
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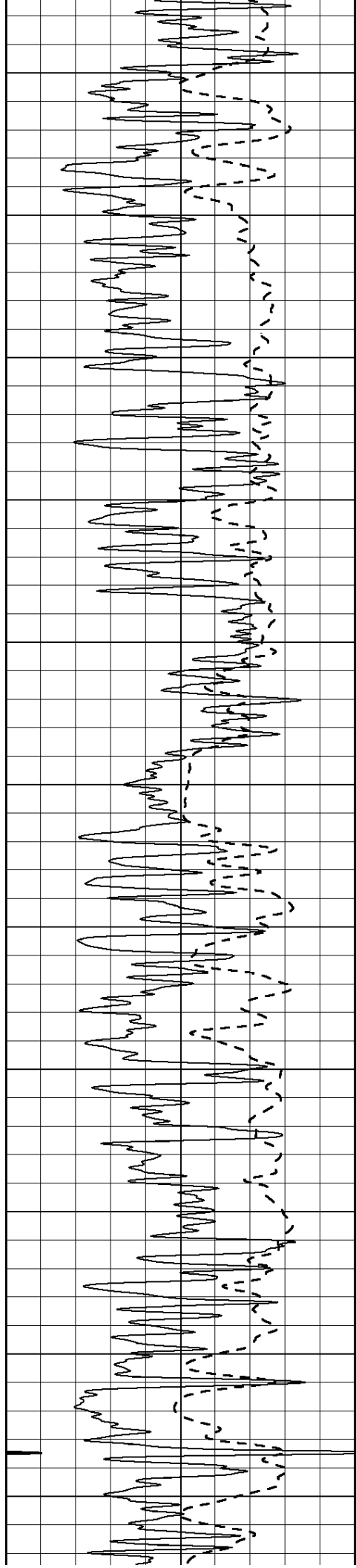
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3100

3150

3200





3250

3300

3350

3400

3450

3500

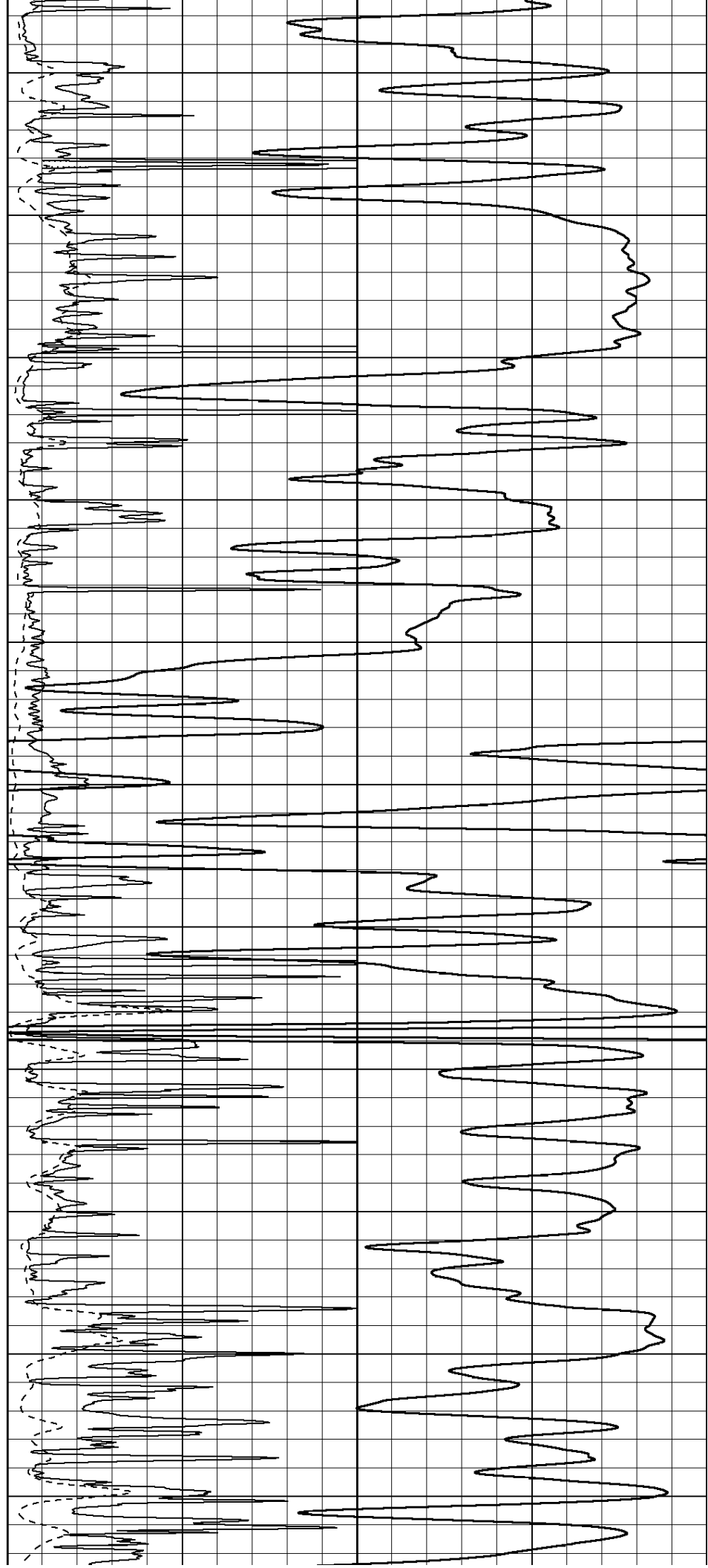
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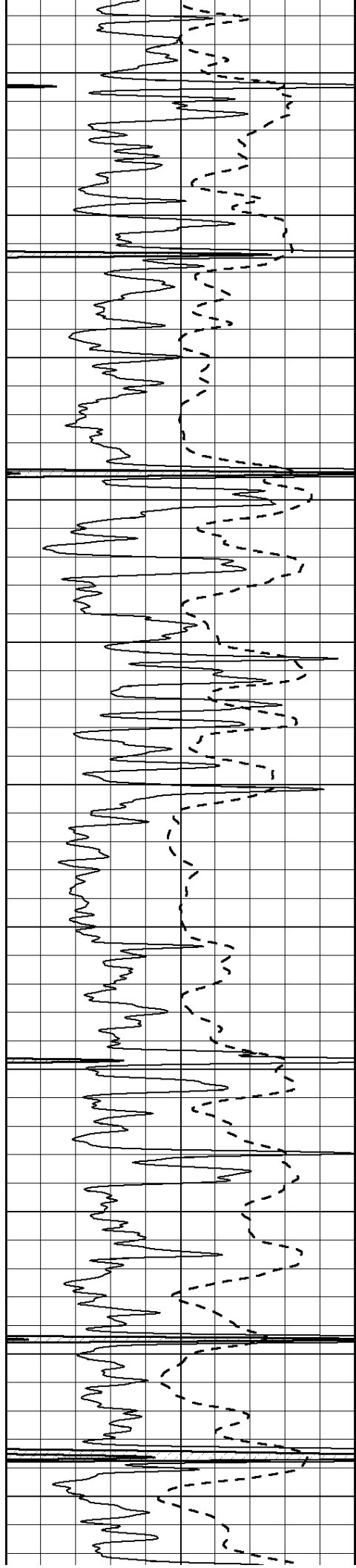
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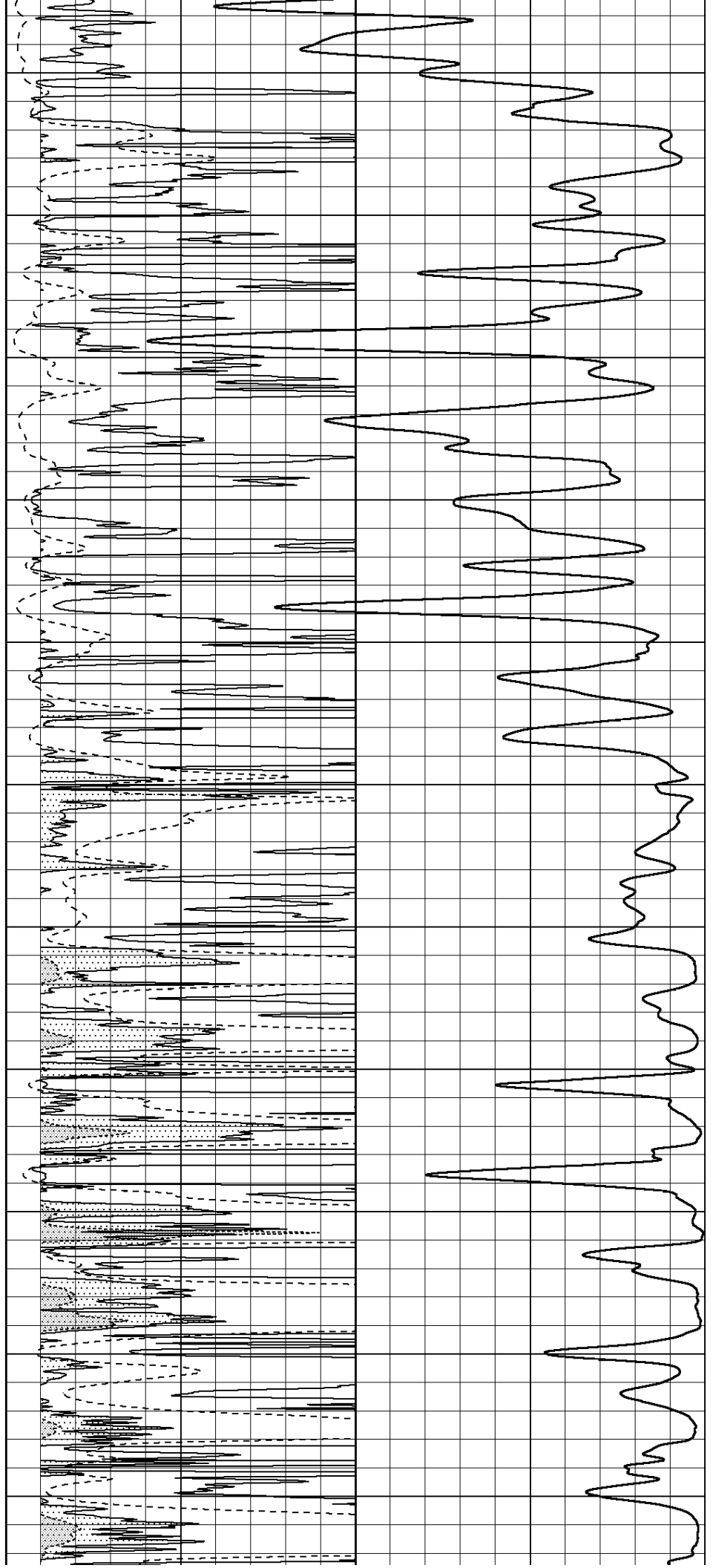
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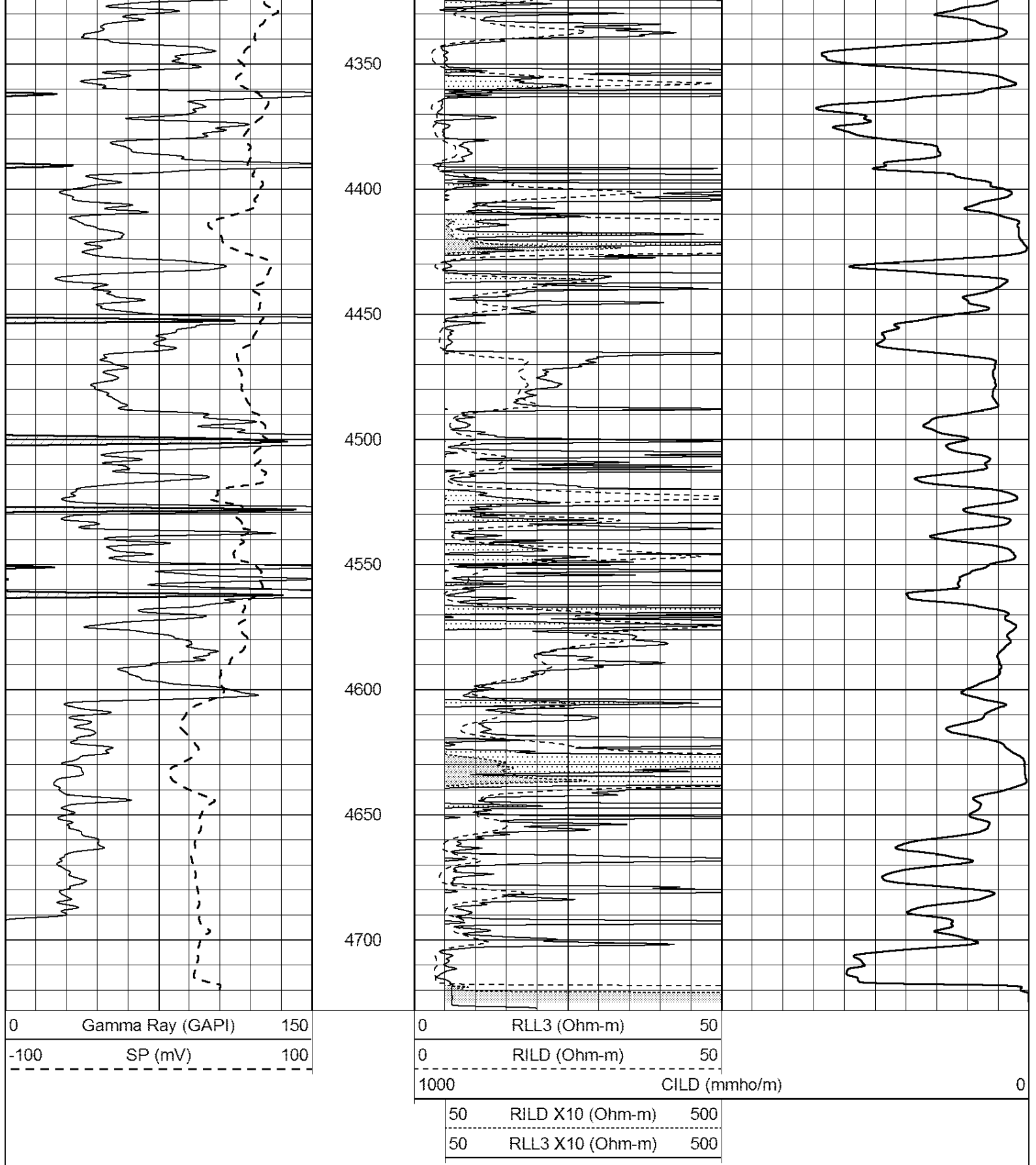
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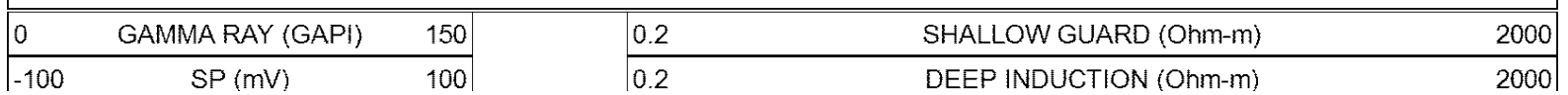


3800
3850
3900
3950
4000
4050
4100
4150
4200
4250
4300



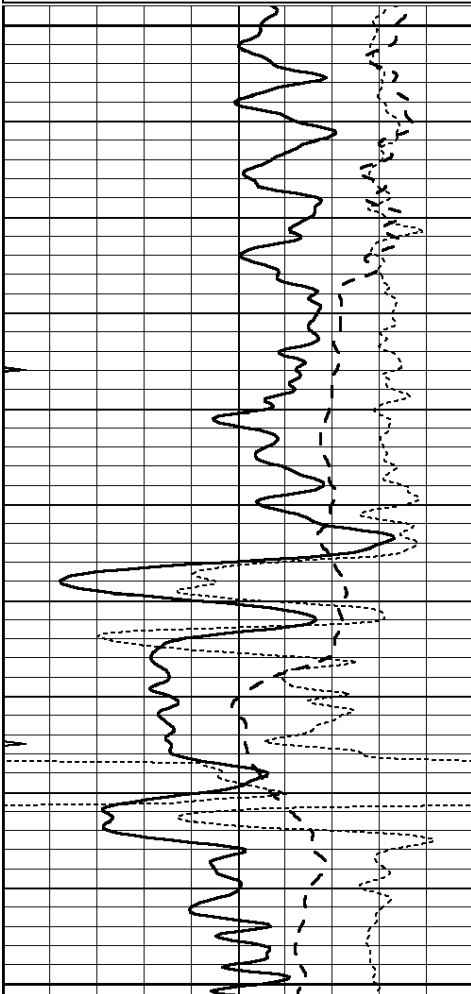


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 Charted by: Depth in Feet scaled 1:240



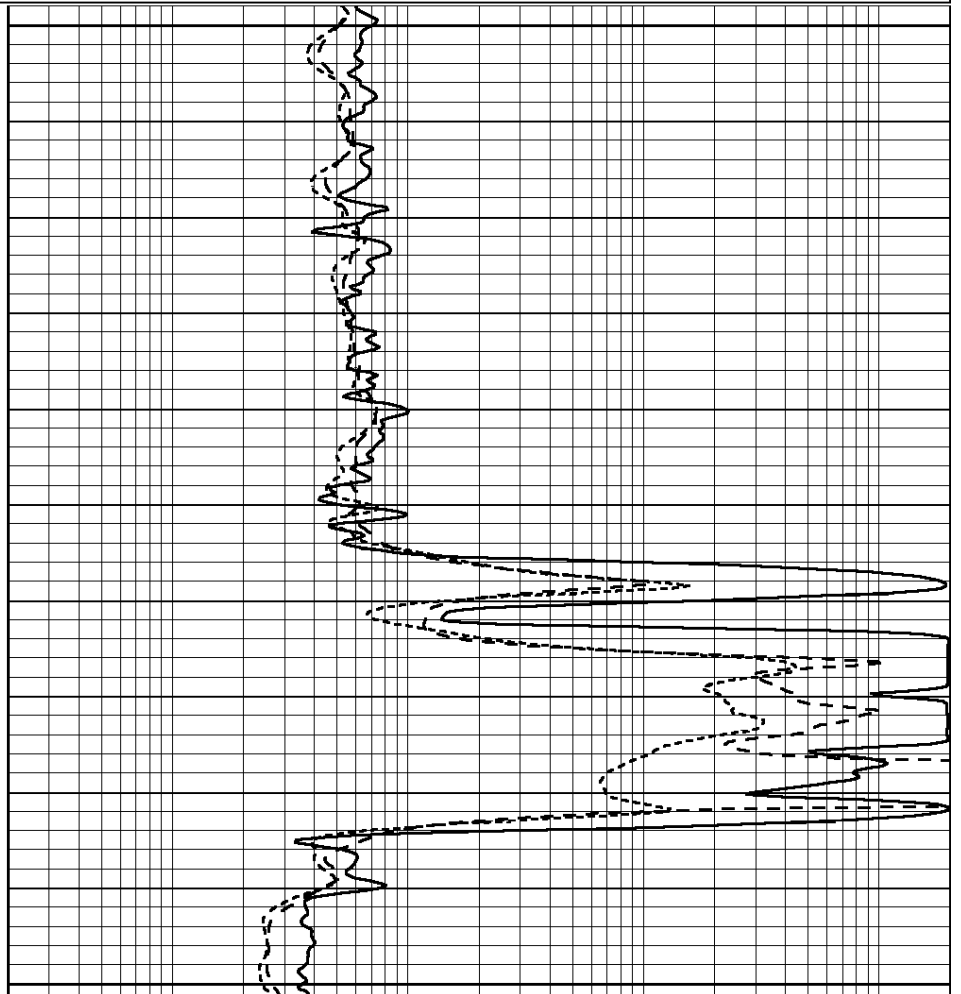
-250	Rxo/Rt	50
0	MINMK	20

0.2	MEDIUM INDUCTION (Ohm-m)	2000
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2000
2050
2100

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

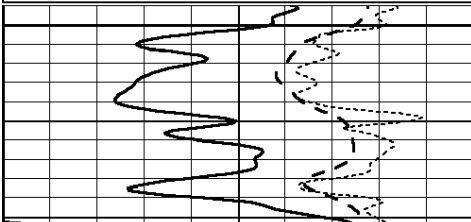


0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

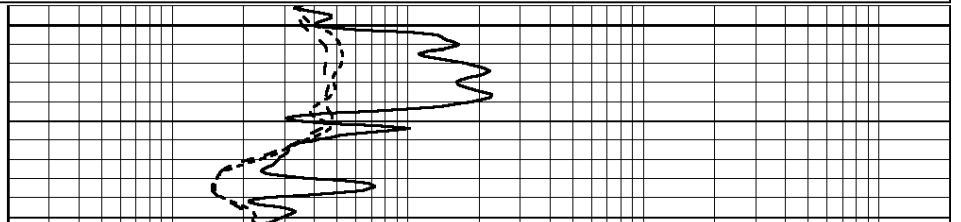
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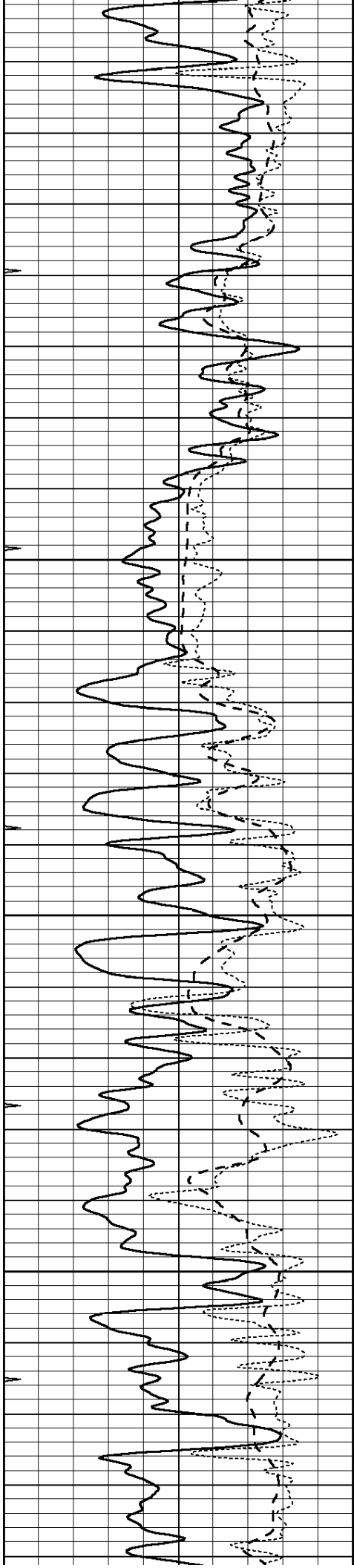
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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



3400



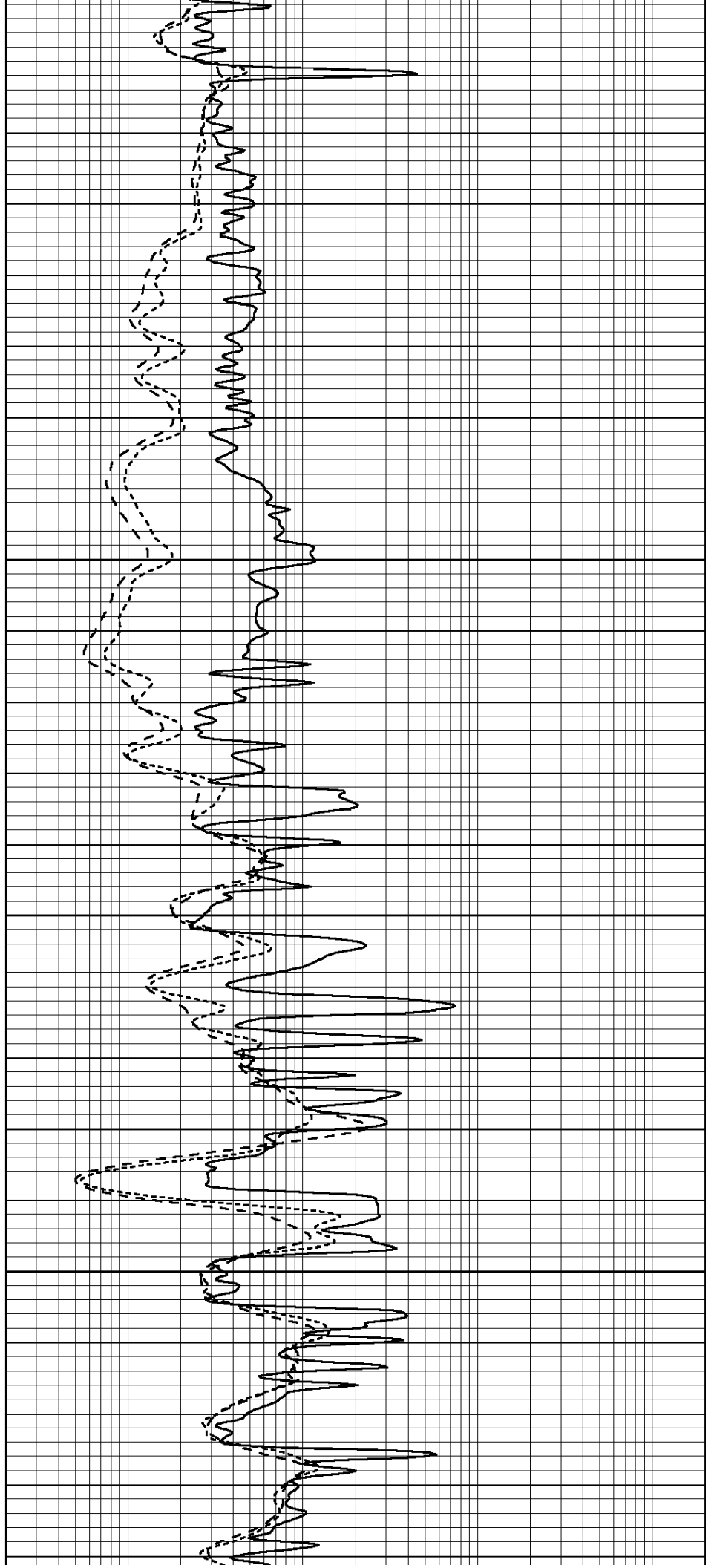


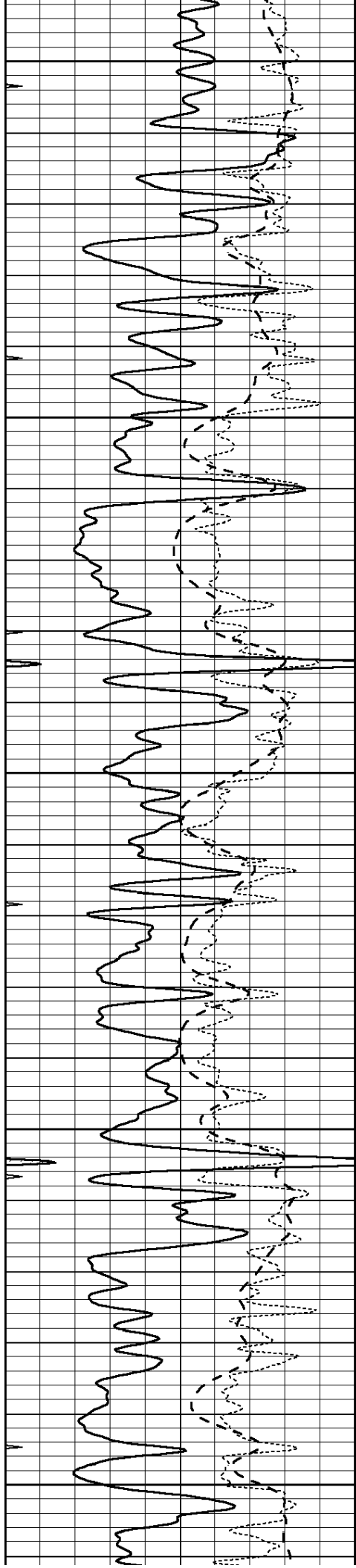
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3500

3550

3600





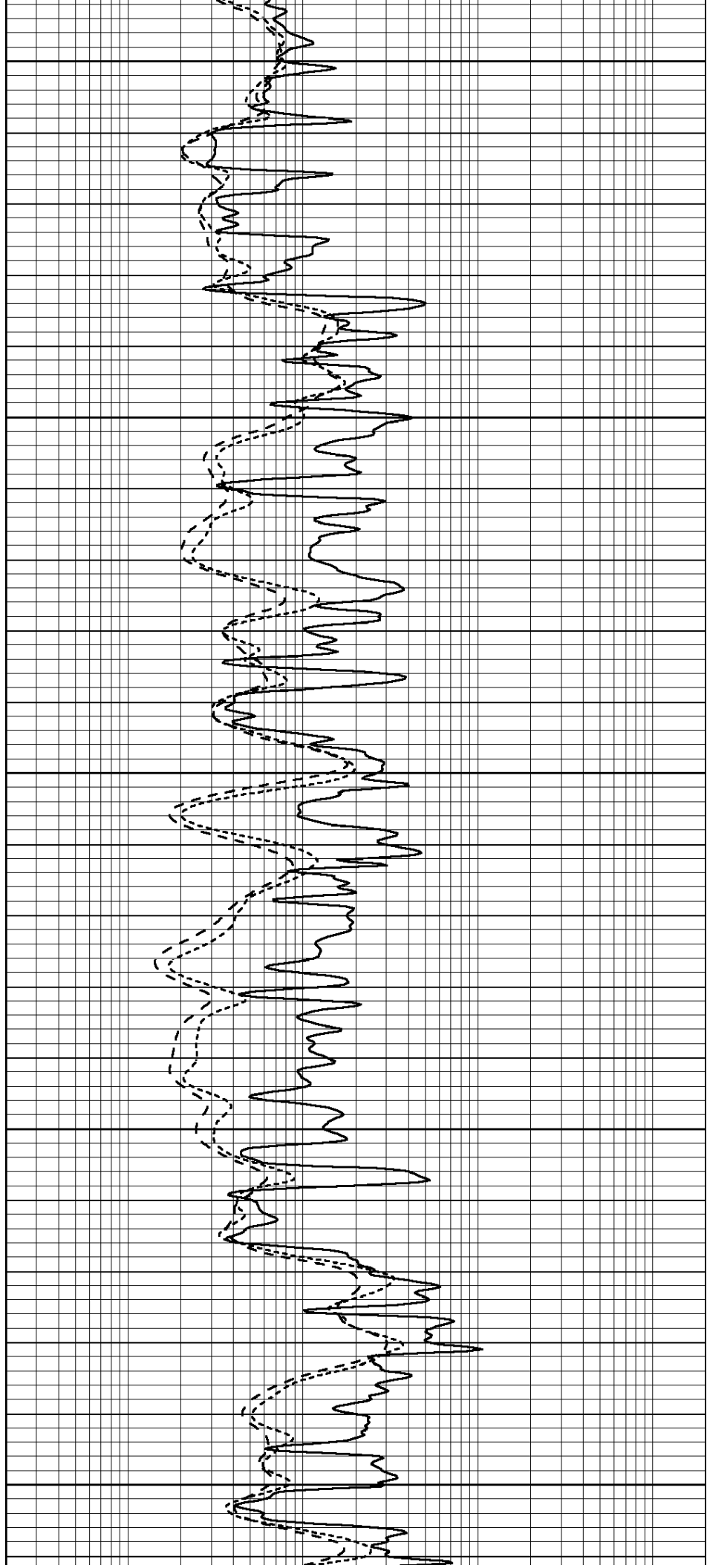
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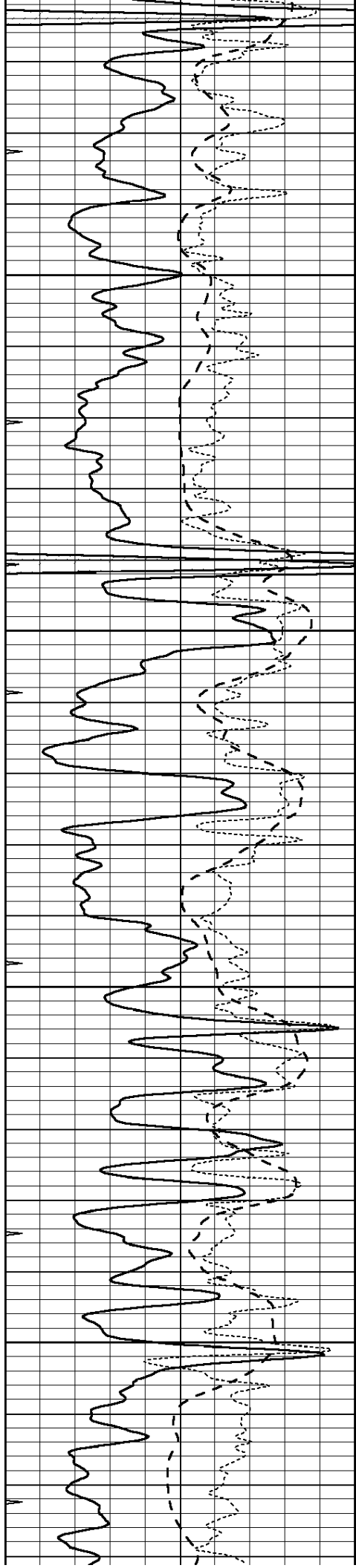
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3750

3800

3850



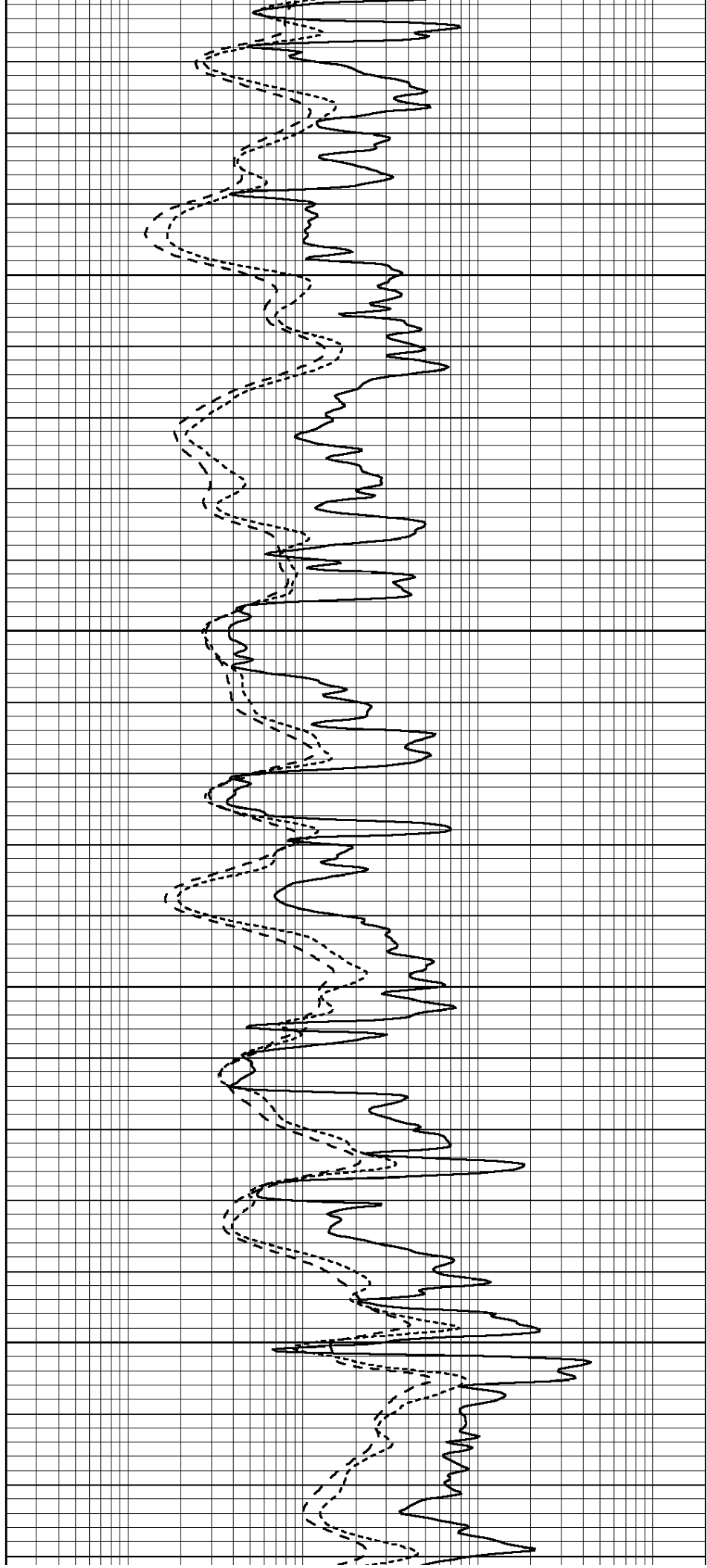


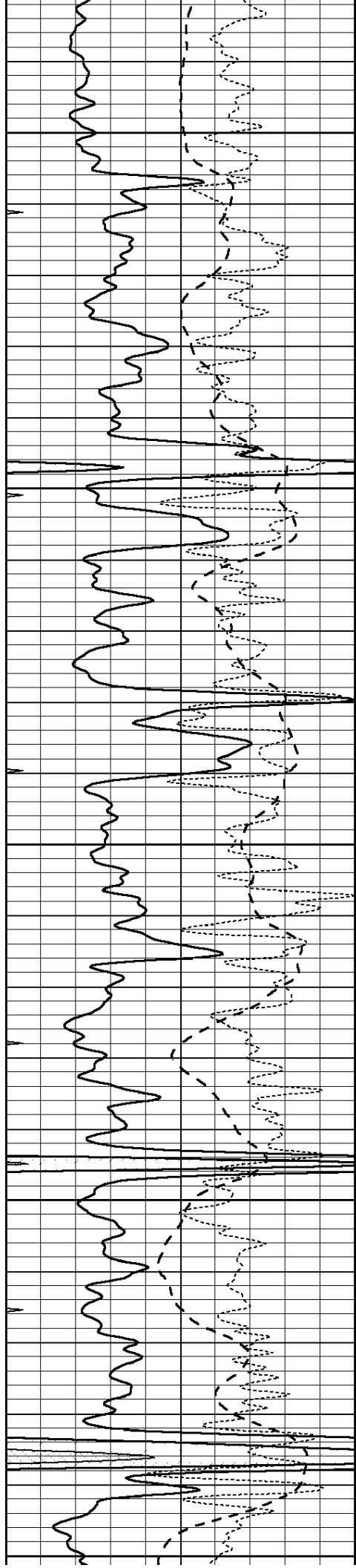
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3950

4000

4050





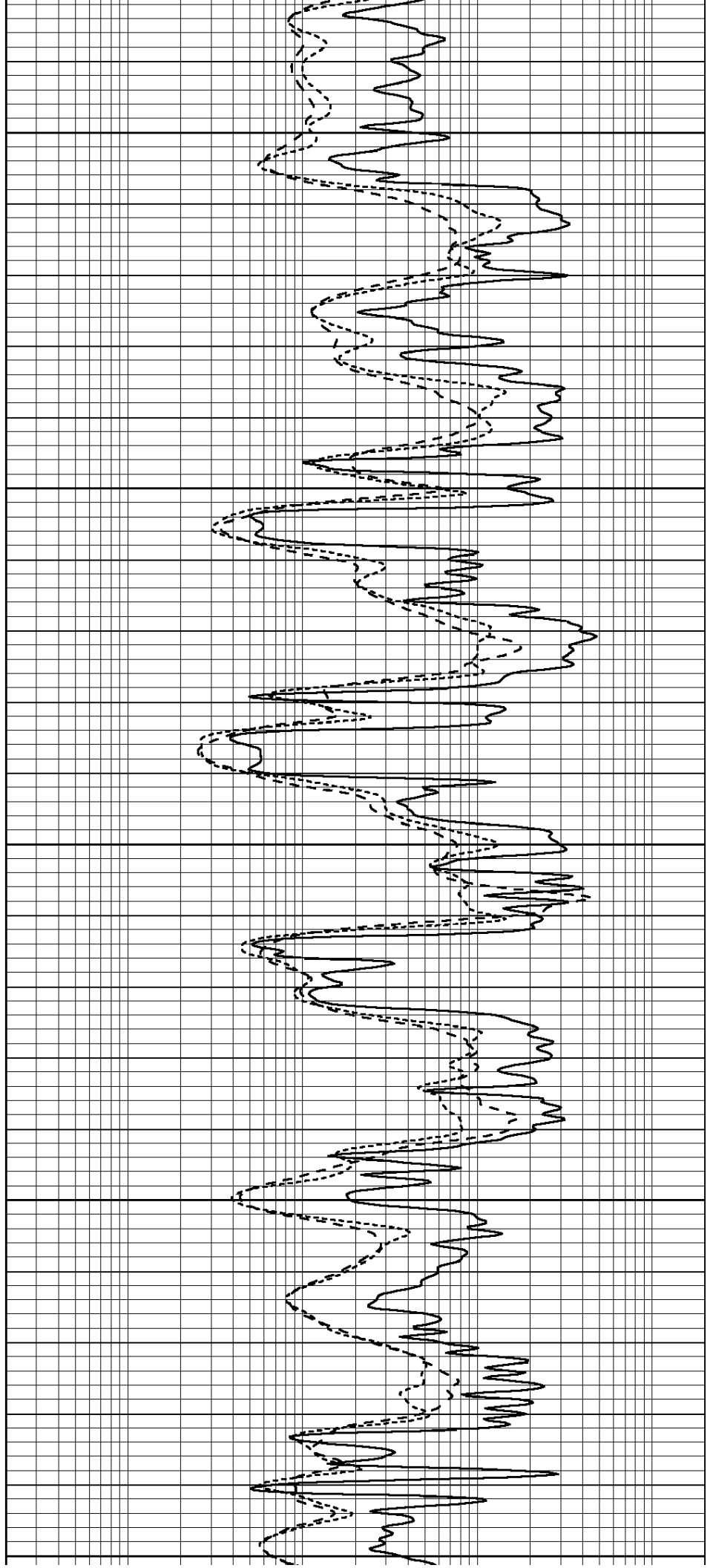
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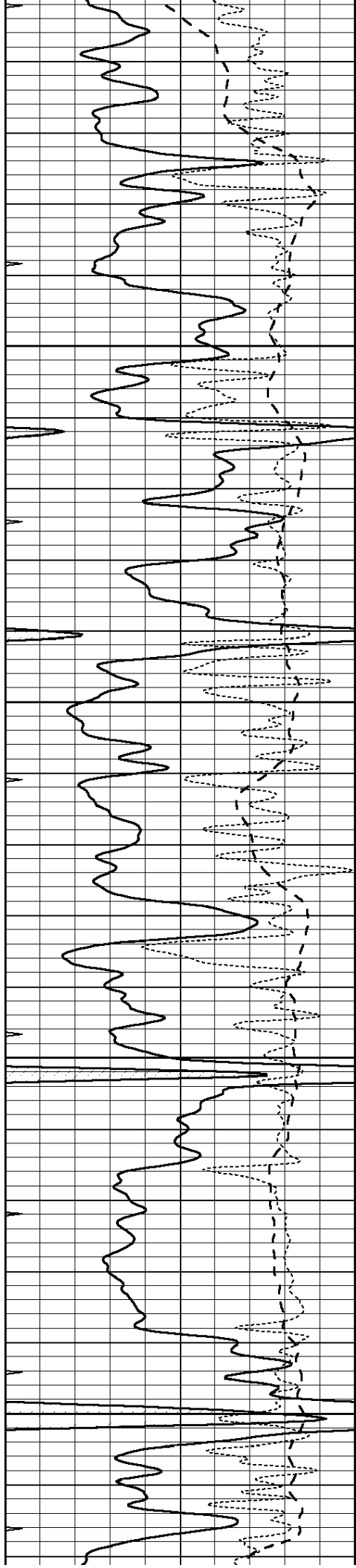
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4200

4250

4300



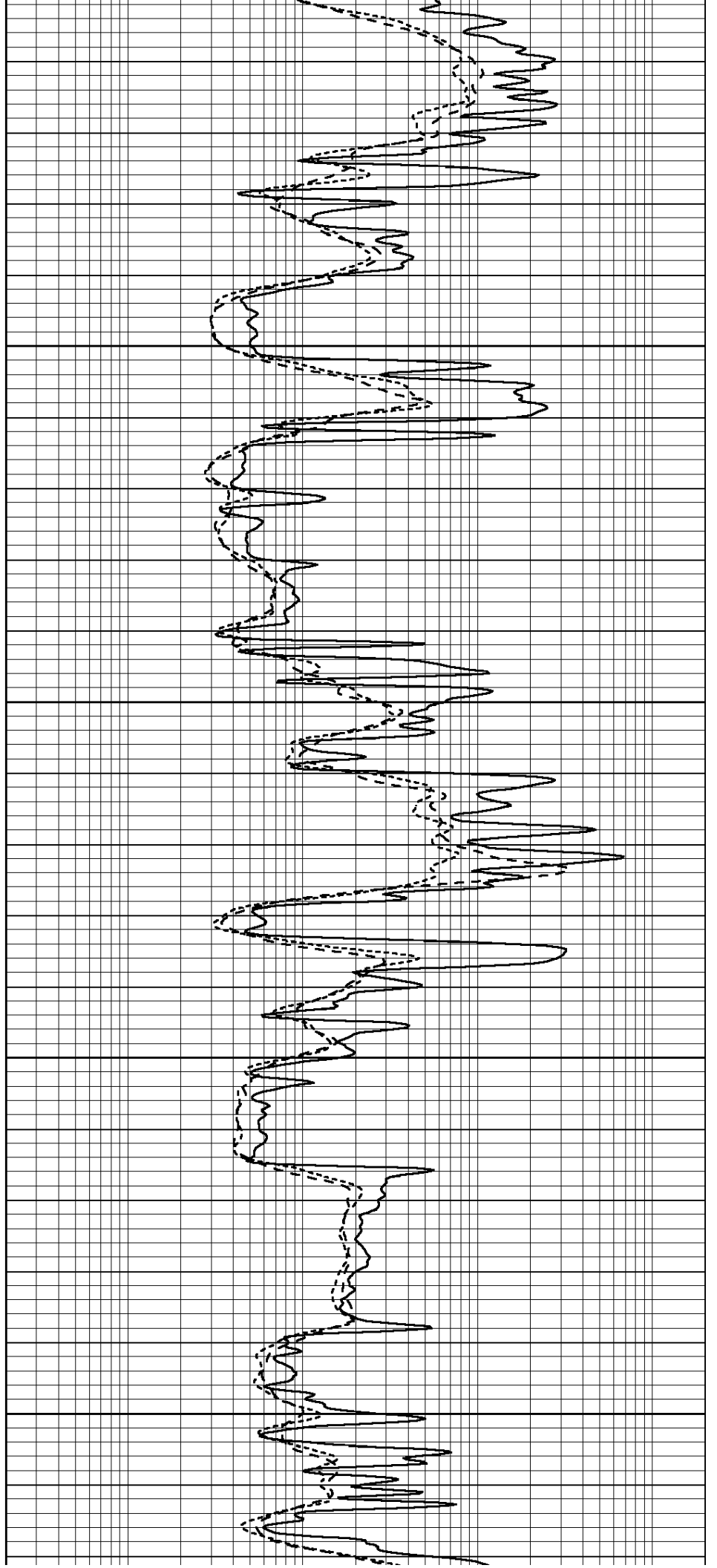


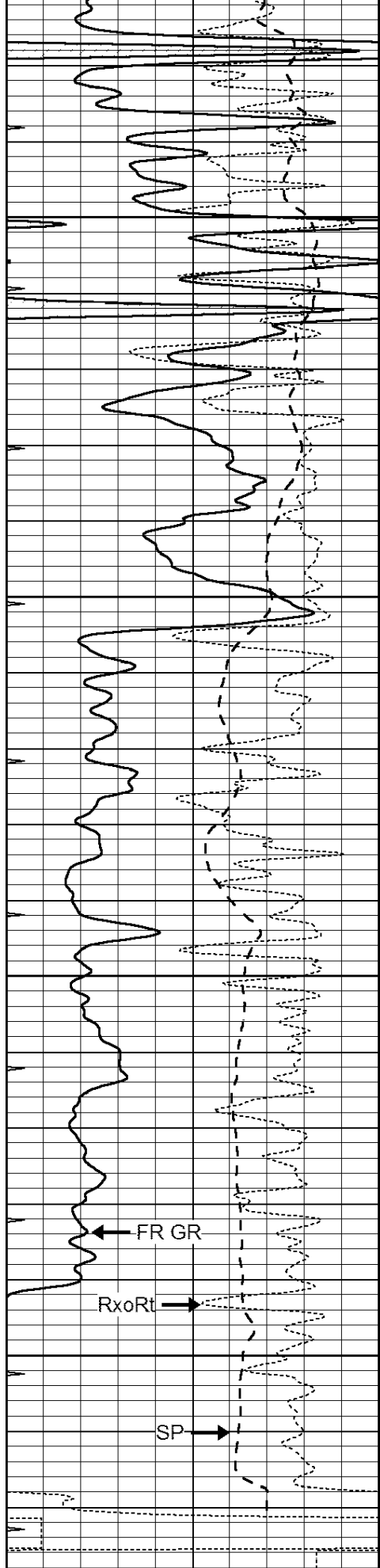
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4450

4500





4550

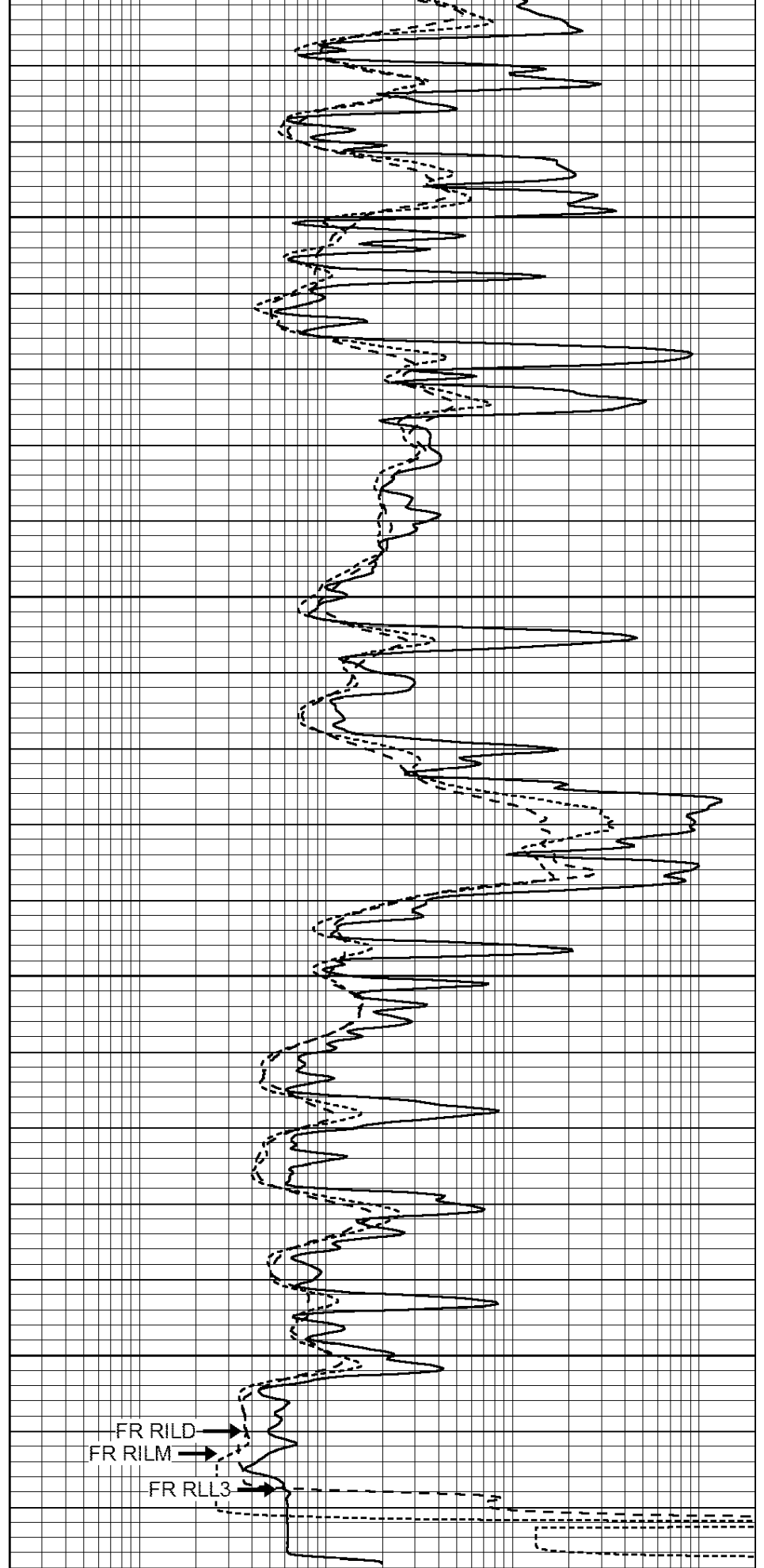
4600

4650

4700

LTD 4720

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



FR RILD

FR RILM

FR RLL3

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

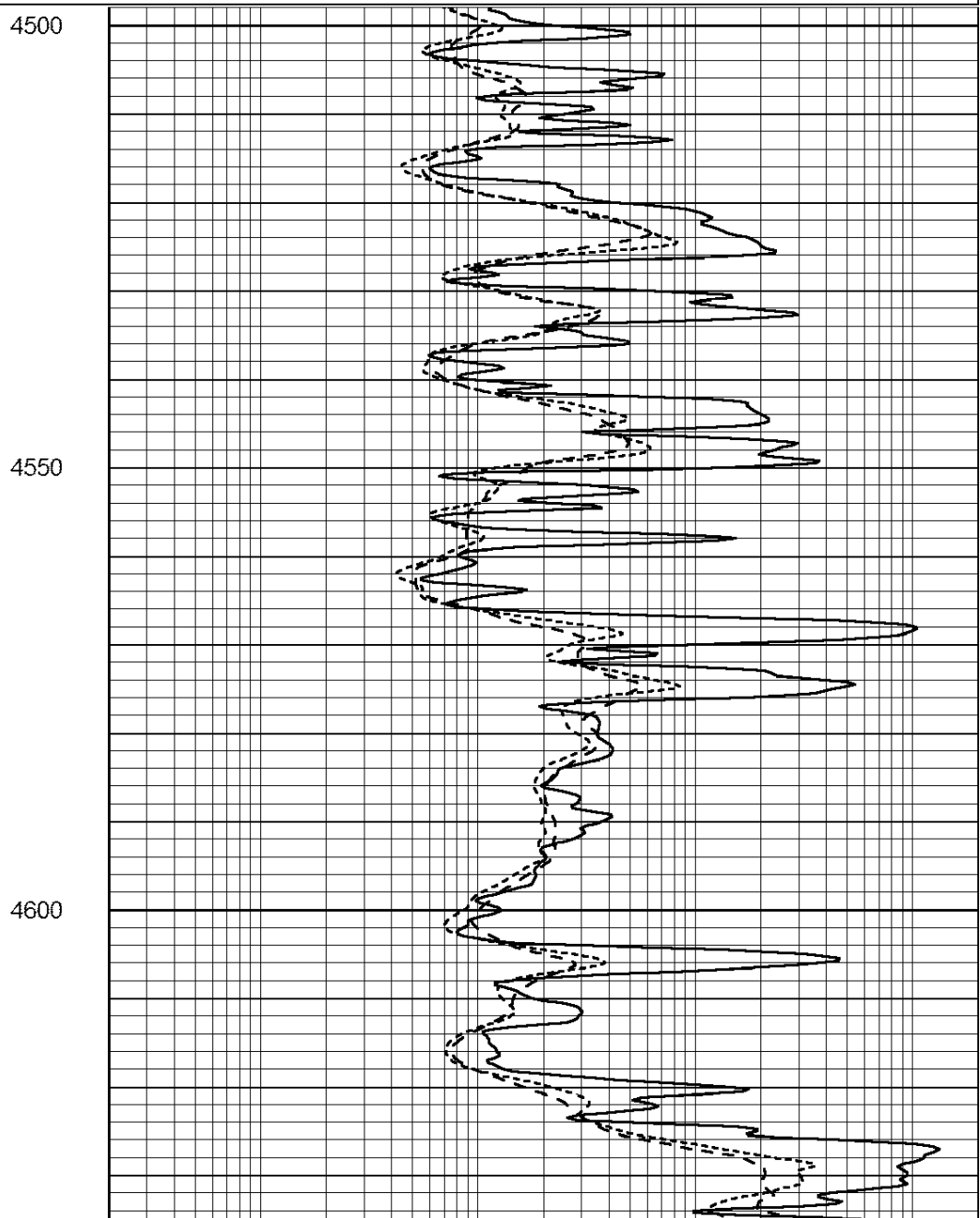
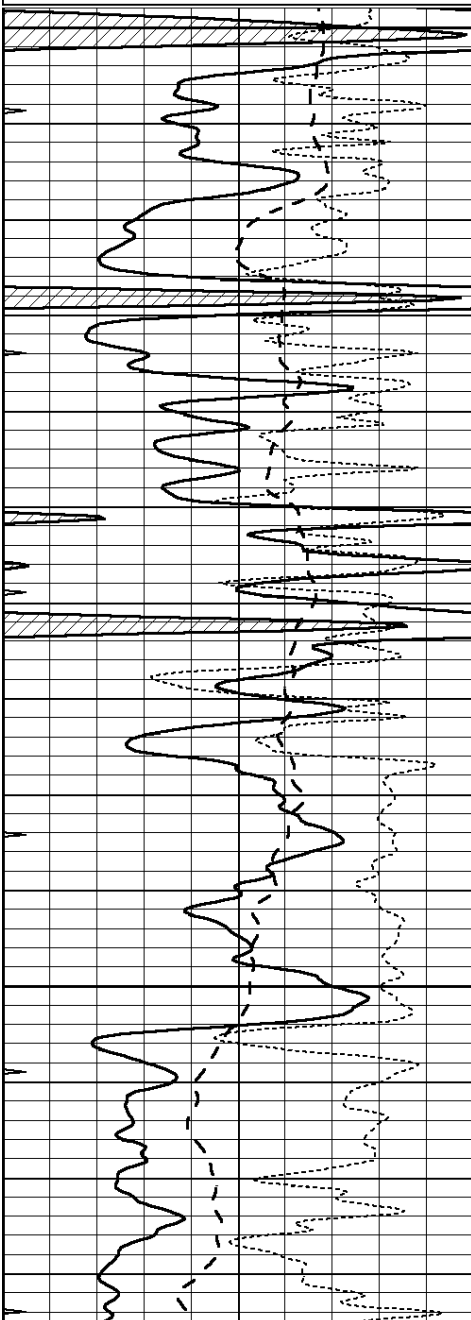


REPEAT SECTION

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 Dataset Pathname: pass3.1
 Presentation Format: _dil
 Dataset Creation: Sun Jun 15 11:42:05 2014 by Calc Open-Cased 090629
 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



Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000
LL3		7.500	V		1500.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		3800.000	mmho-m		

After Survey Verification								
	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		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:	GEAR3-GEARHART
Source / Verifier:	143 / 143
Master Calibration Performed:	Fri Jan 04 15:48:16 2013
Before Survey Verification Performed:	
After Survey Verification Performed:	

Master Calibration					
	Density		Far Detector	Near Detector	
	Magnesium	1.710	g/cc	935.36	501.55
Aluminum	2.580	g/cc	209.32	357.01	cps
Spine Angle = 77.21			Density/Spine Ratio = 0.567		
	Size		Reading		
Small Ring	8.00	in	4.29	V	
Large Ring	14.00	in	6.24	V	

Before Survey Verification					
	Target		Measured		
			g/cc		g/cc
		g/cc		g/cc	
		g/cc		g/cc	

After Survey Verification					
	Target		Measured		
			g/cc		g/cc
		g/cc		g/cc	
		g/cc		g/cc	

Compensated Neutron Calibration Report

Serial Number:	6I
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	

PRE-SURVEY VERIFICATION				
Detector	Readings		Measured	Target

	Detector	Readings	Measured	Target
1)	Short Space Long Space	cps cps	pu	pu
2)	Short Space Long Space	cps cps	pu	
3)	Short Space Long Space	cps cps	pu	

POST-SURVEY VERIFICATION

	Detector	Readings	Measured	Target
1)	Short Space Long Space	cps cps	pu	pu
2)	Short Space Long Space	cps cps	pu	pu
3)	Short Space Long Space	cps cps	pu	pu

Gamma Ray Calibration Report

Serial Number:	GR6	
Tool Model:	OPEN	
Performed:	Sat May 31 01:22:06 2014	
Calibrator Value:	150.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	276.0	cps
Sensitivity:	0.7535	GAPI/cps