



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

DUAL INDUCTION LOG

Company		RED OAK ENERGY	
Well		ELISSA ANN #1-11	
Field		CAPSTONE SOUTH	
County		SCOTT	
State		KANSAS	
Location:		APL # : 15-171-21104-0000	
Permanent Datum		GROUND LEVEL Elevation 3094	
Log Measured From		KELLY BUSHING 16' A.G.L.	
Drilling Measured From		KELLY BUSHING	
SEC 11 TWP 17S RGE 34W		Other Services CDL/CNL	
Date	10/26/14		
Run Number	ONE		
Depth Driller	4950		
Depth Logger	4951		
Bottom Logged Interval	4949		
Top Log Interval	00		
Casing Driller	8 5/8" @ 269		
Casing Logger	266		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.4/55		
pH / Fluid Loss	9.5/8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.75 @ 74F		
Rmt @ Meas. Temp	.56 @ 74F		
Rmc @ Meas. Temp	.90 @ 74F		
Source of Rmt / Rmc	MEASUREMENT		
Rm @ BHT	.44 @ 125F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	125F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	PAT DEENIHAN		

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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:

SCOTT CITY, KS. - NORTH TO THE HWY 4 INTERSECTION - 6 WEST - WEST & SOUTH INTO

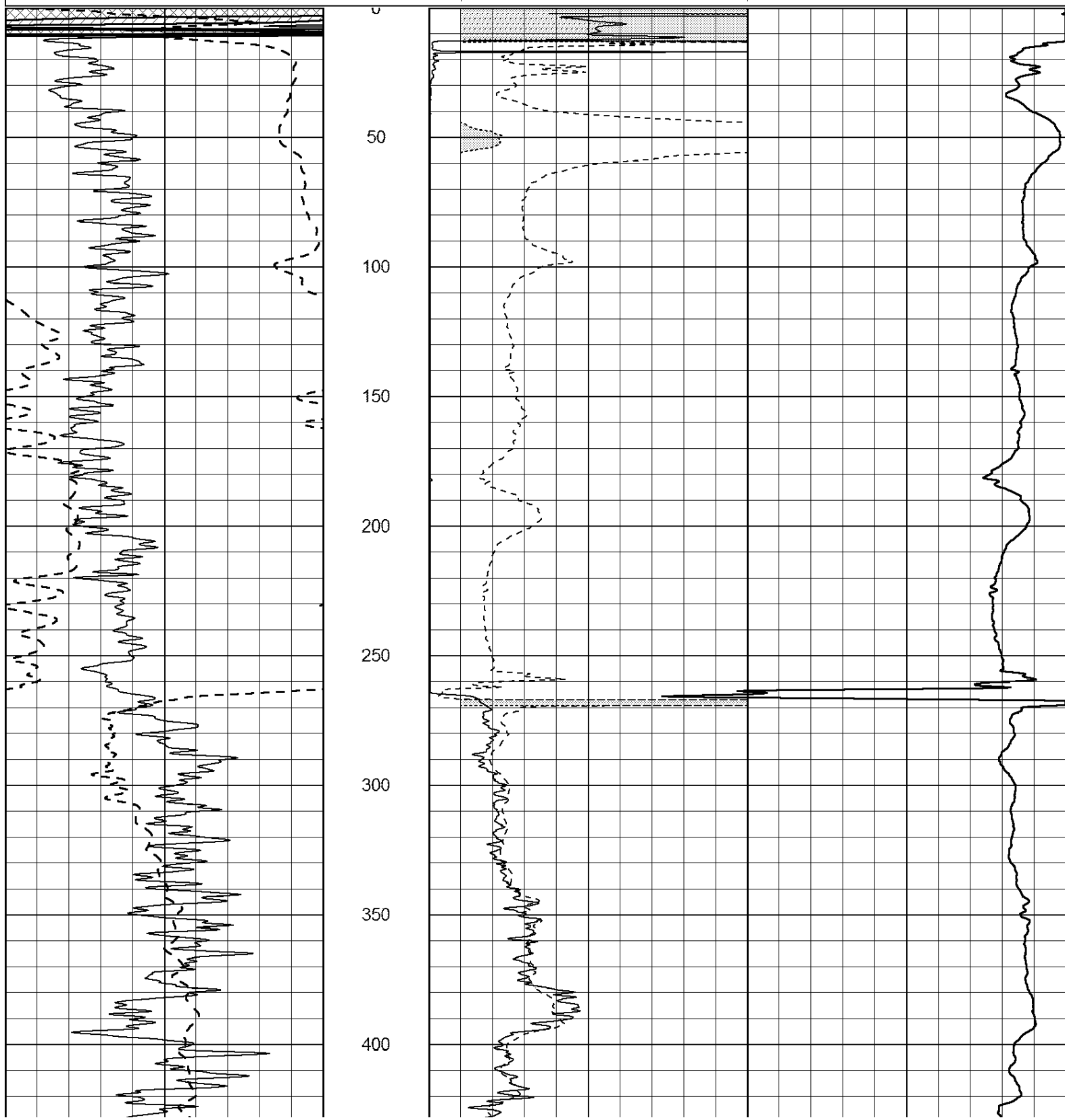
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 Charted by: Depth in Feet scaled 1:600

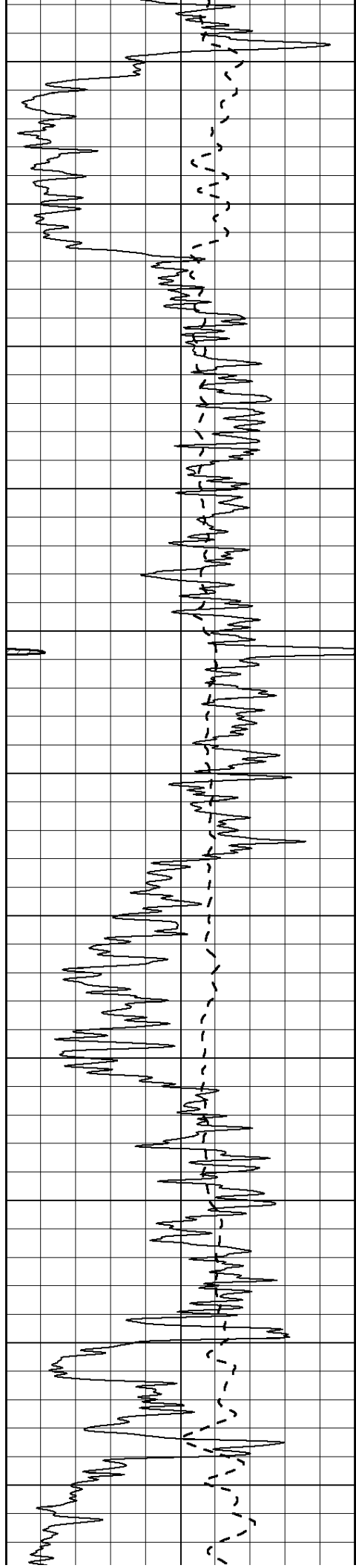
0 Gamma Ray (GAPI) 150
 -100 SP (mV) 100

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

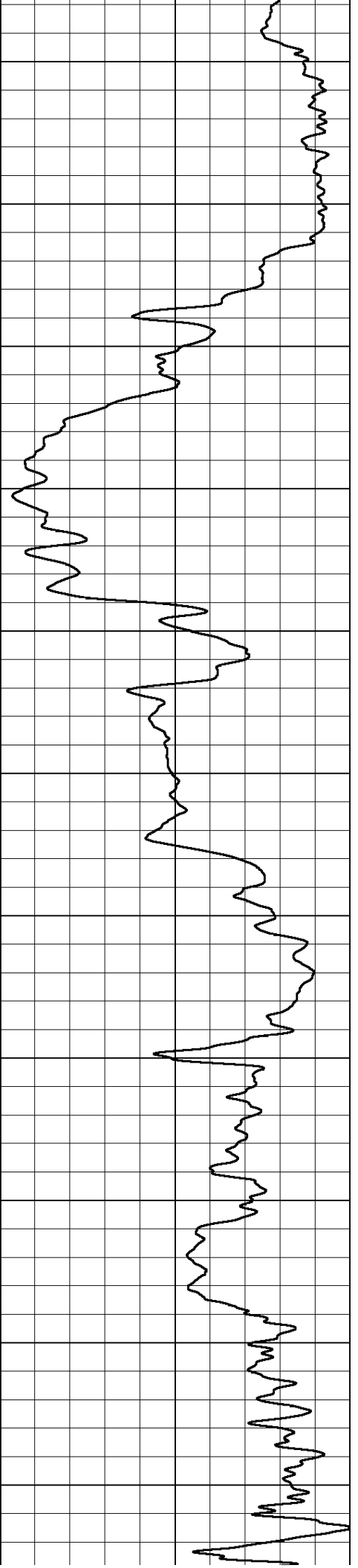
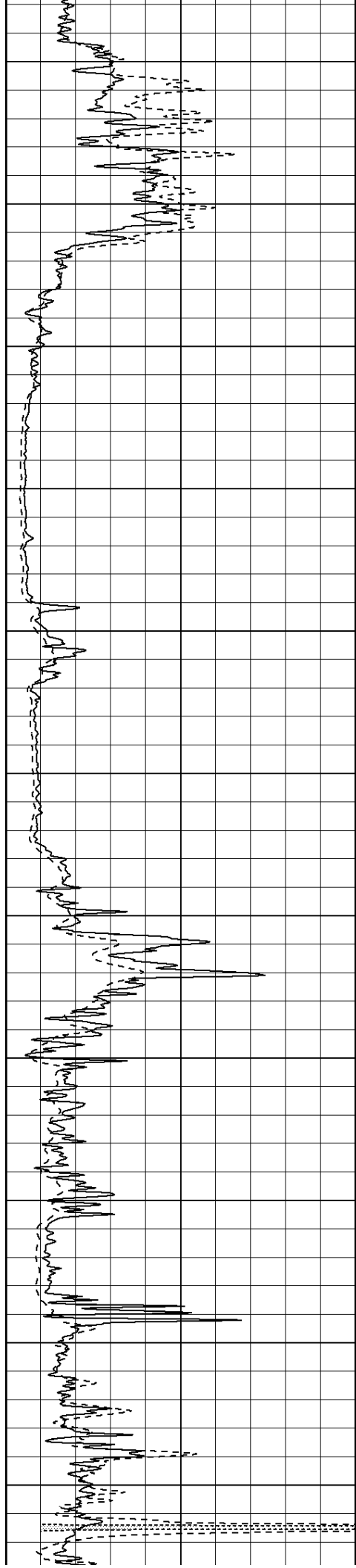
1000 CILD (mmho/m) 0

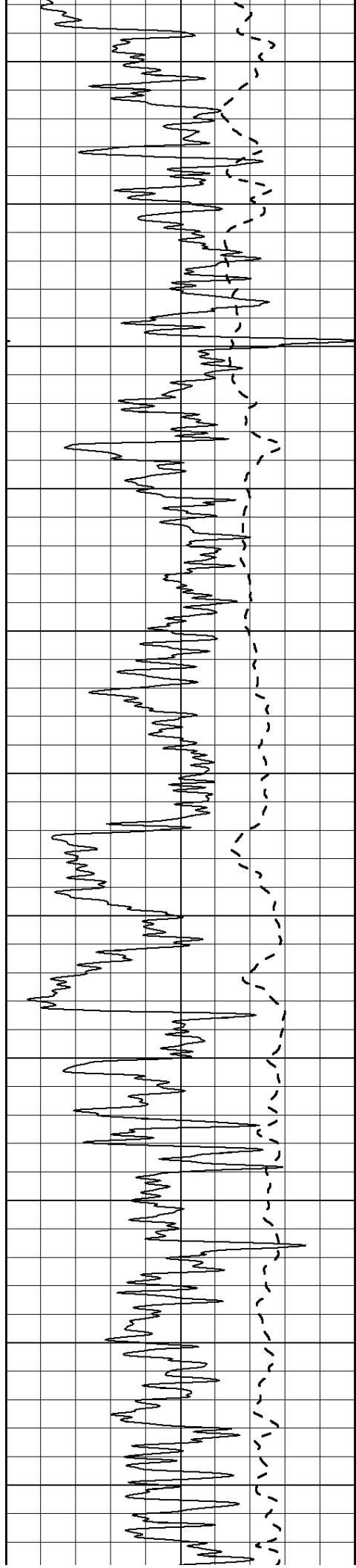
50 RILD X10 (Ohm-m) 500
 50 RLL3 X10 (Ohm-m) 500



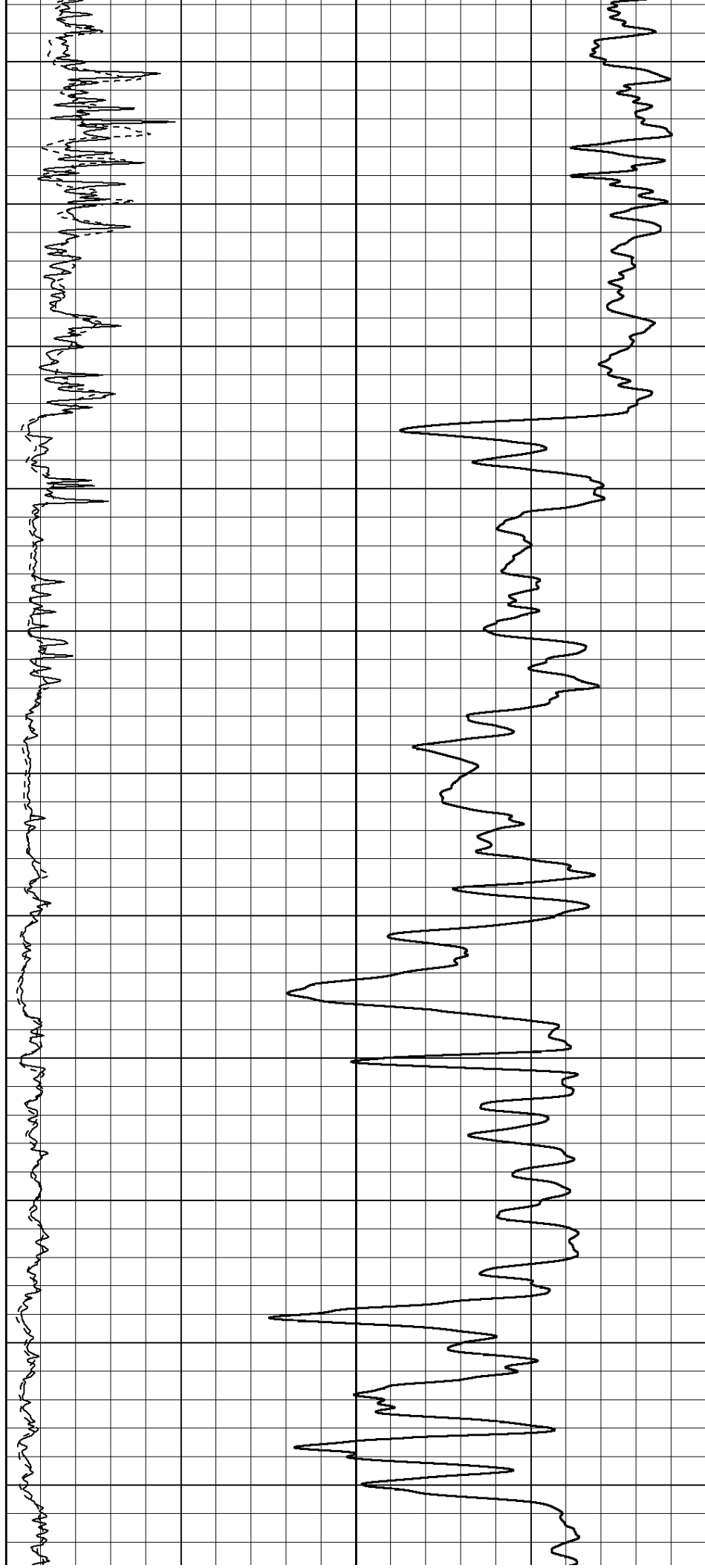


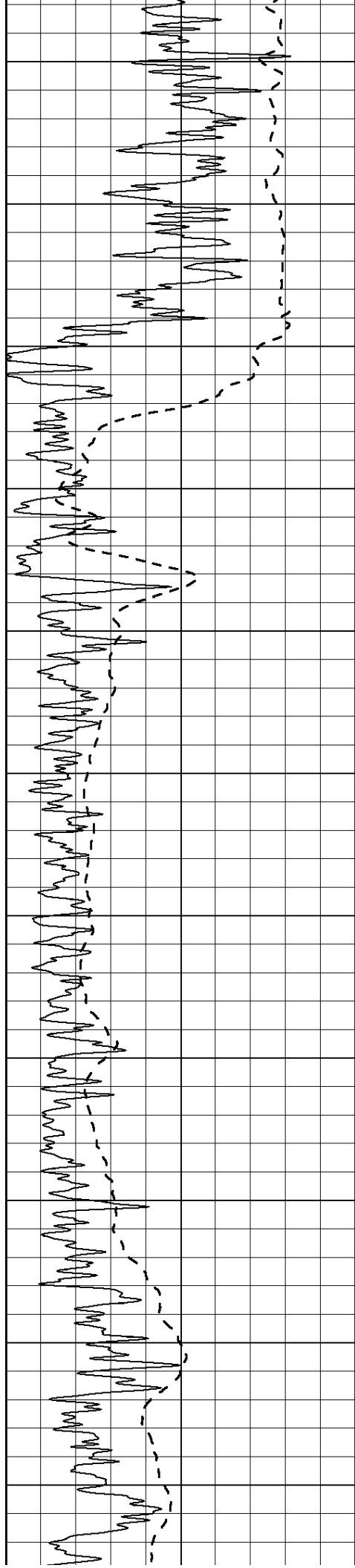
450
500
550
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650
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750
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850
900
950





1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500





1550

1600

1650

1700

1750

1800

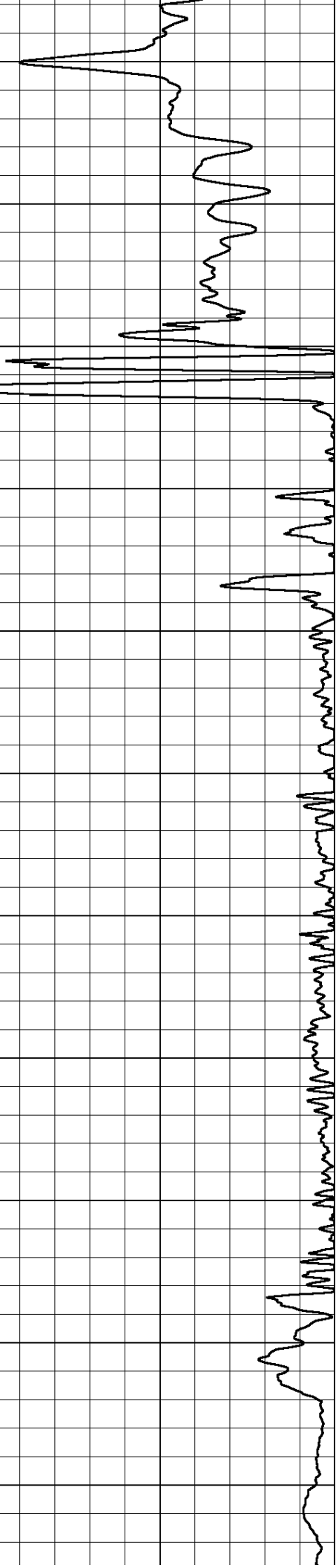
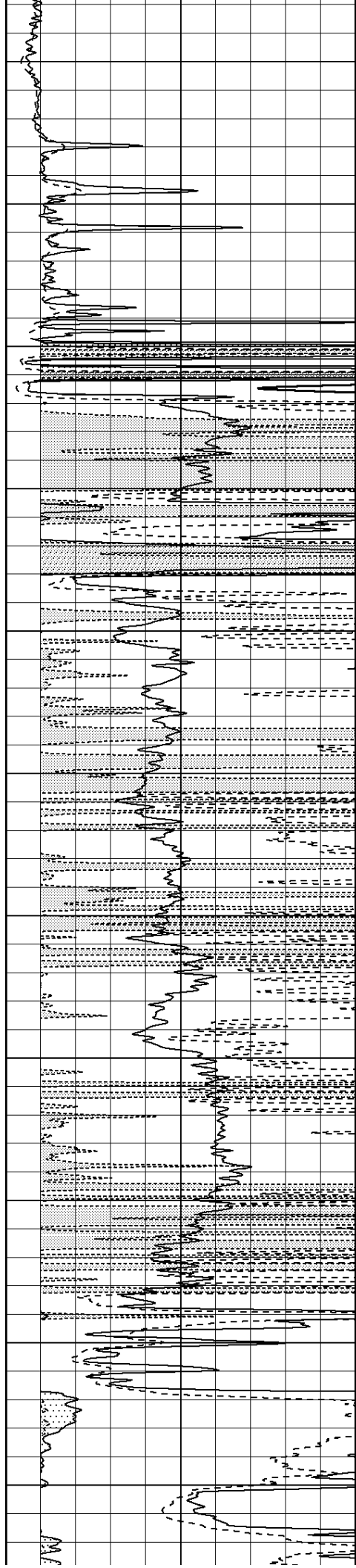
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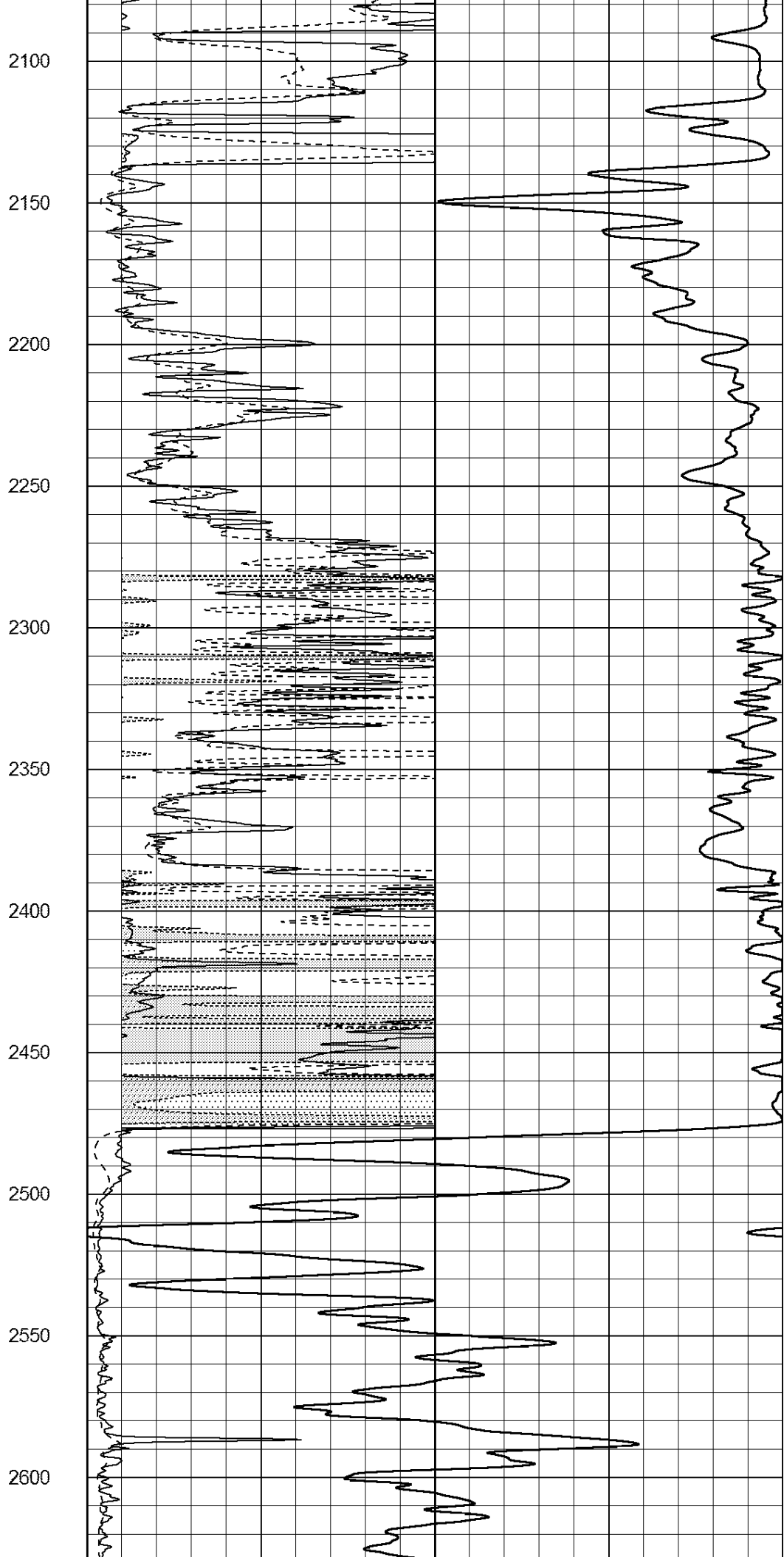
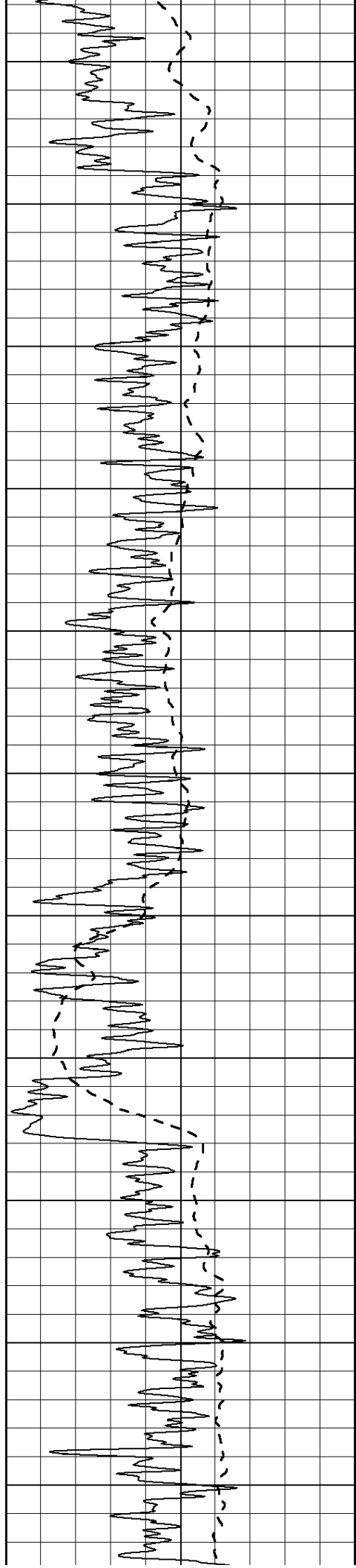
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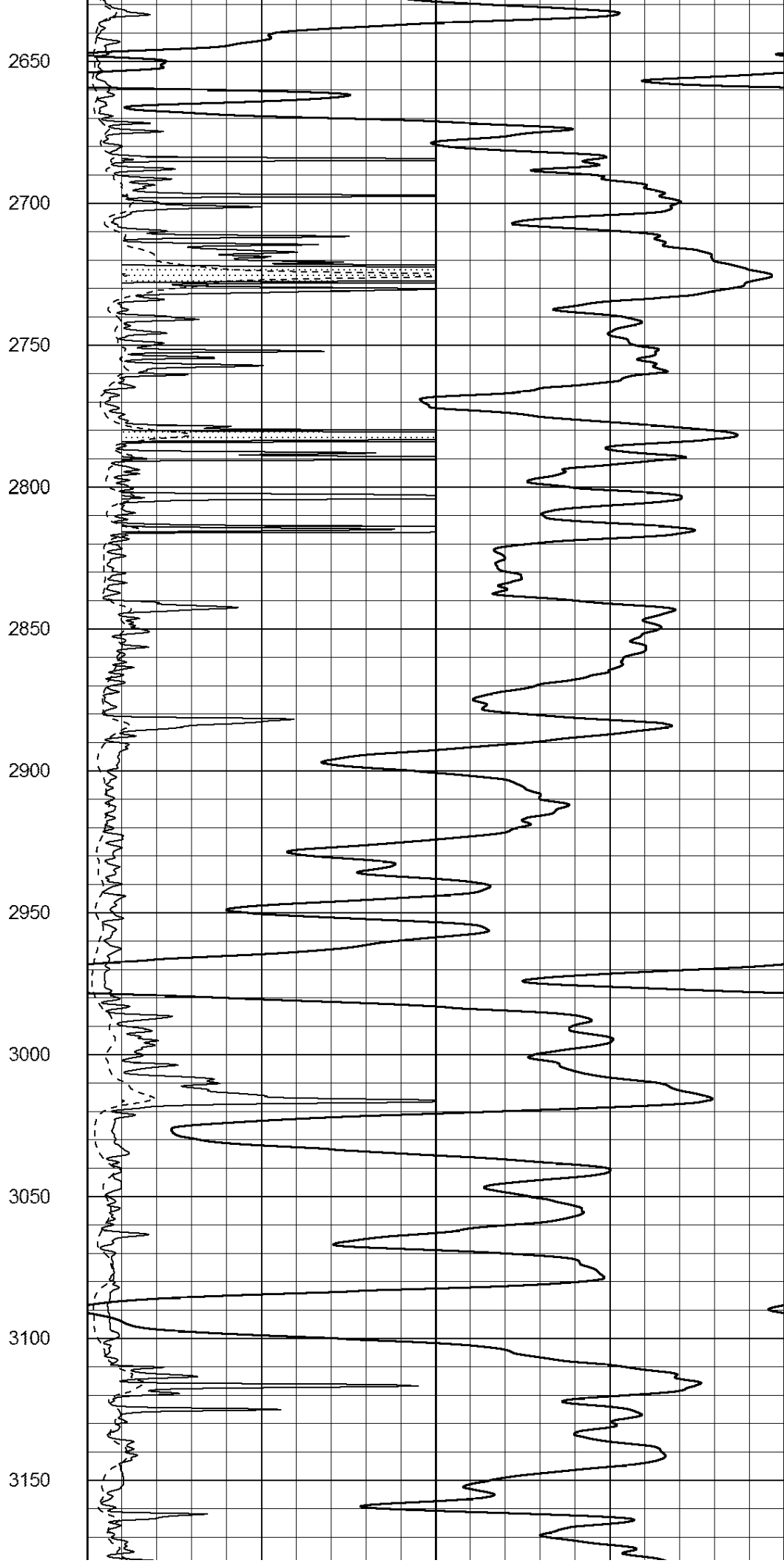
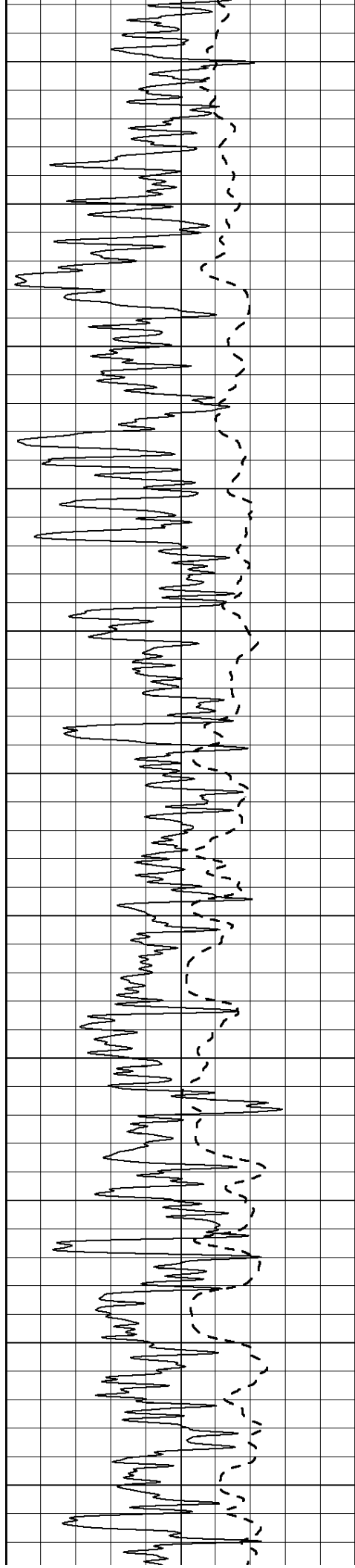
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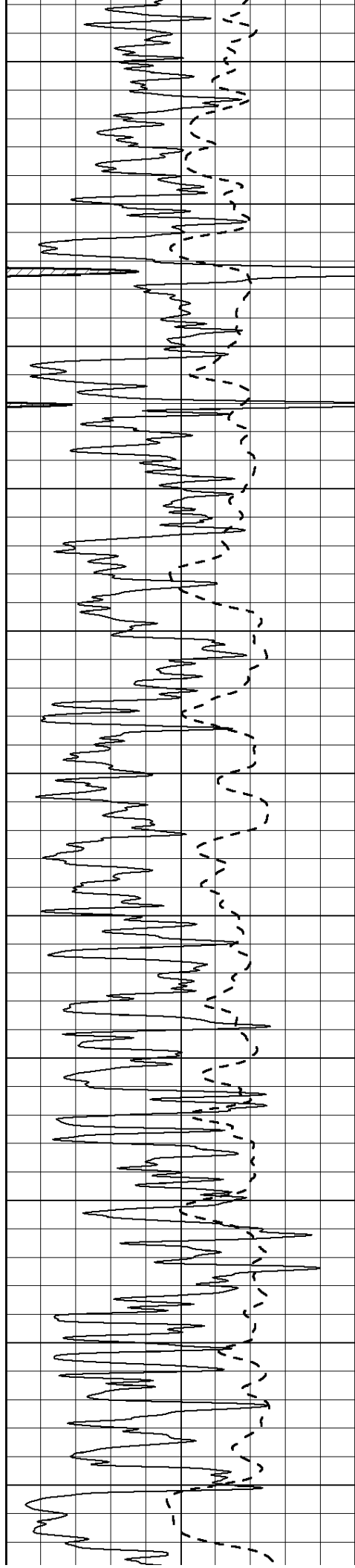
2000

2050









3200

3250

3300

3350

3400

3450

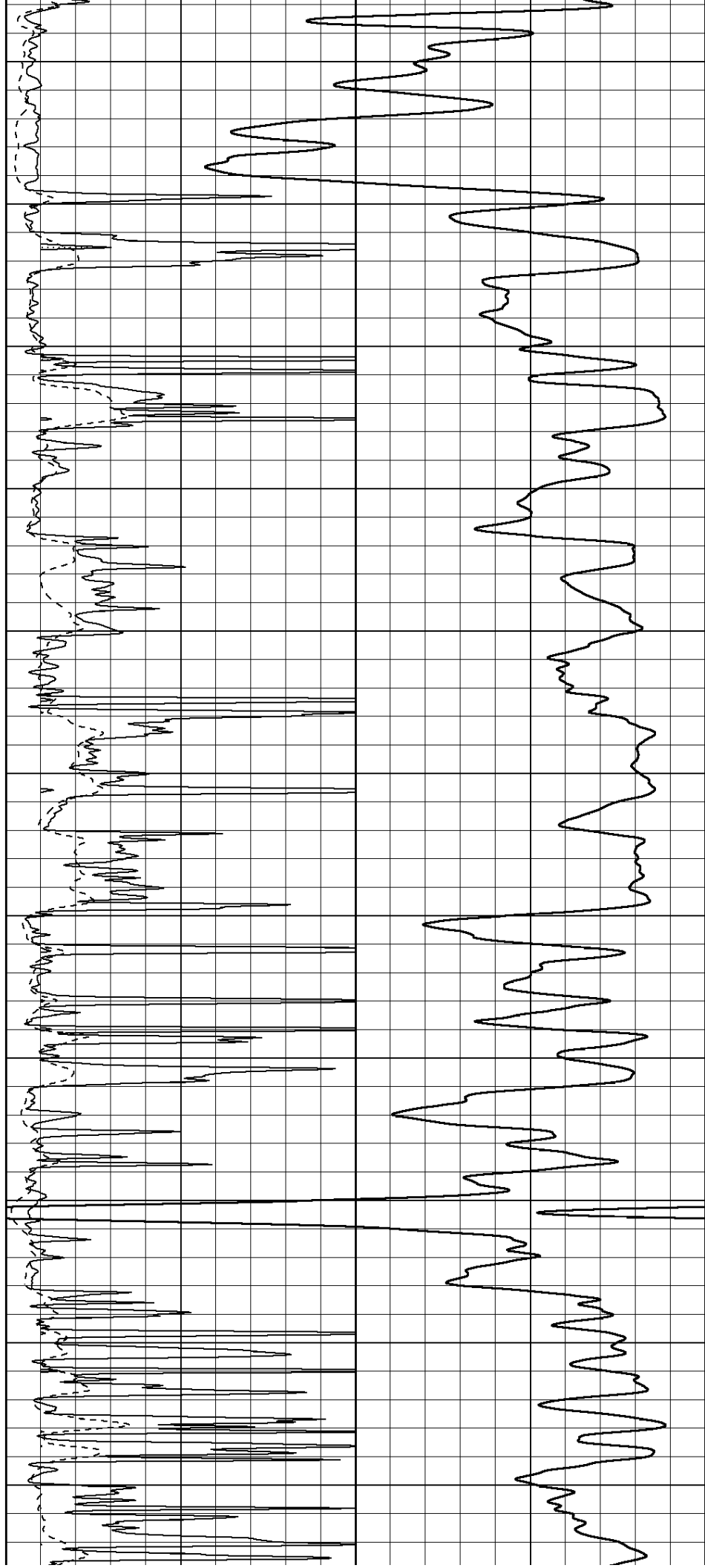
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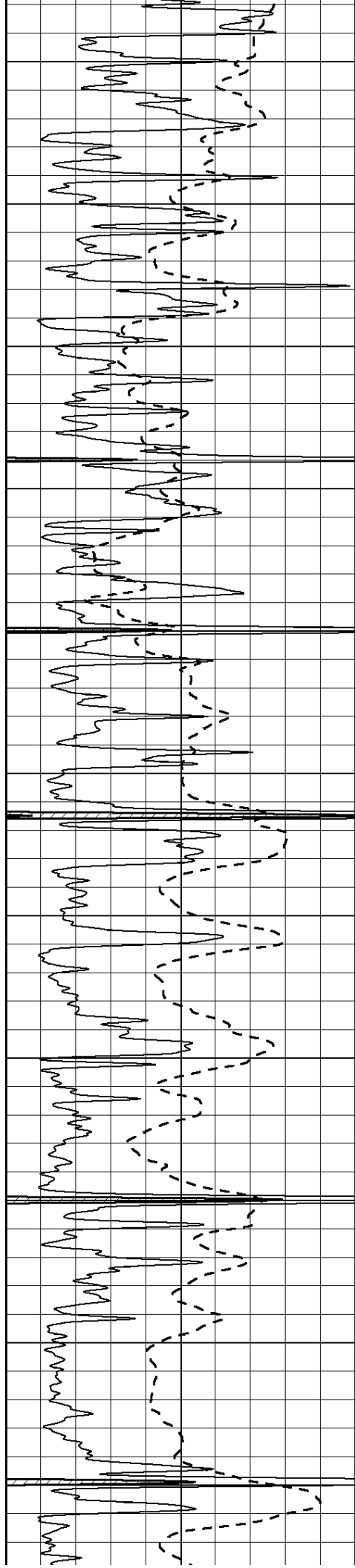
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3600

3650

3700





3750

3800

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3900

3950

4000

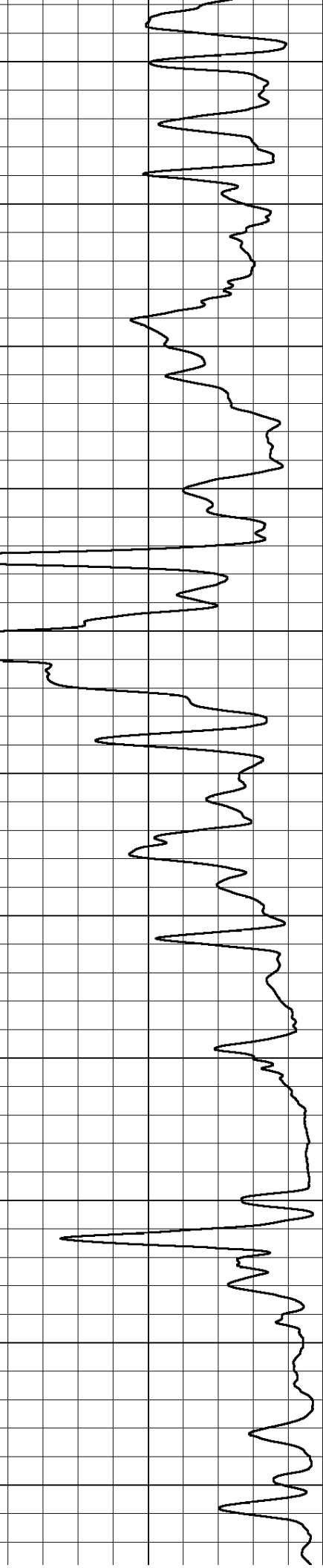
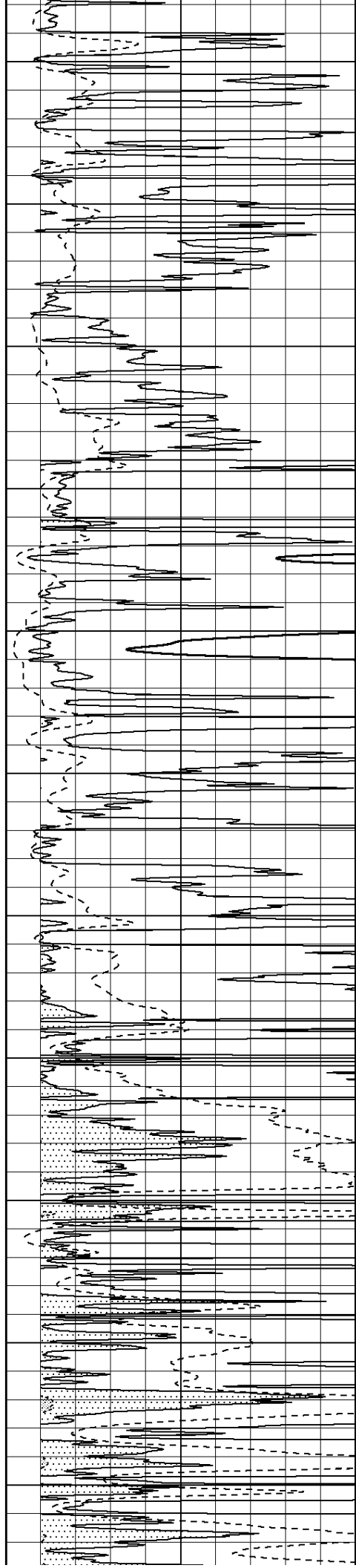
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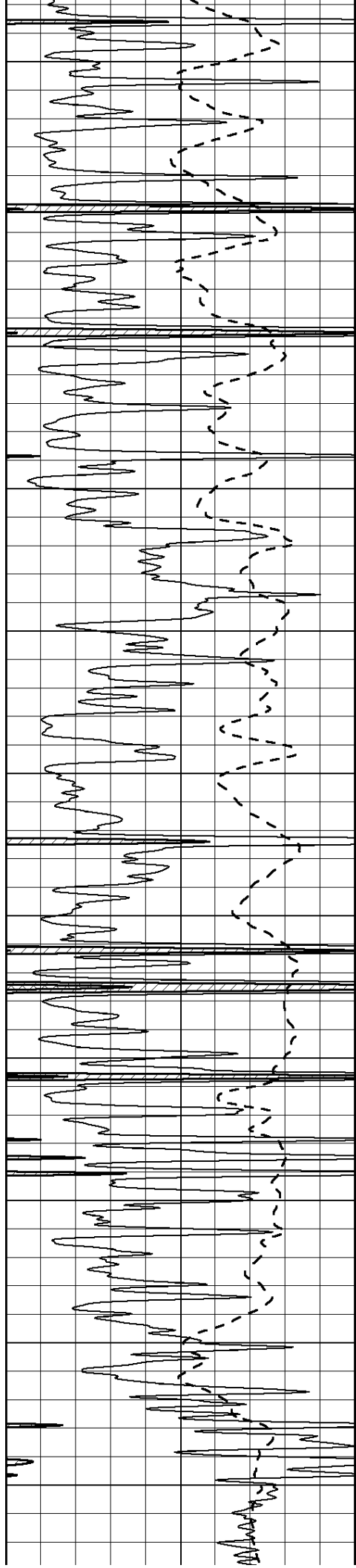
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4150

4200

4250





4300

4350

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4450

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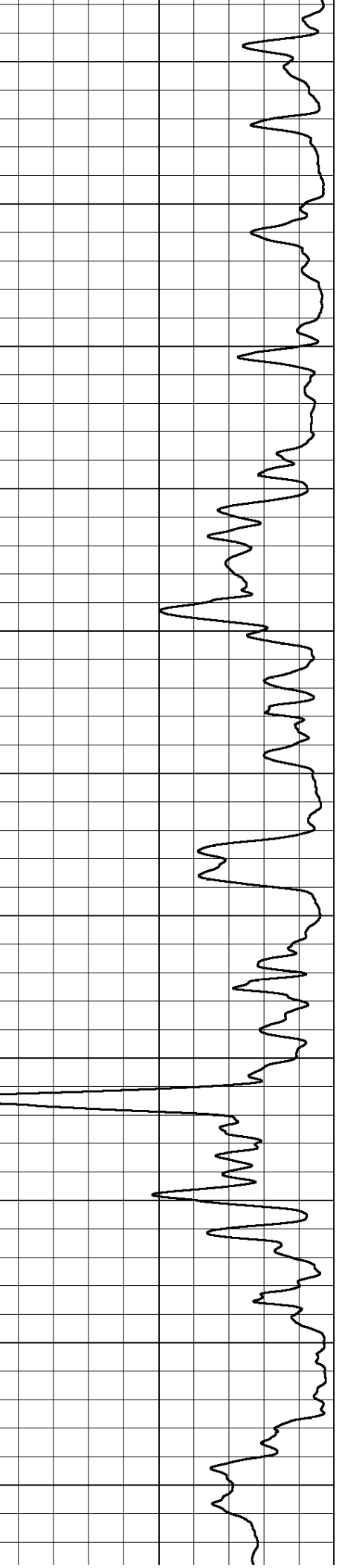
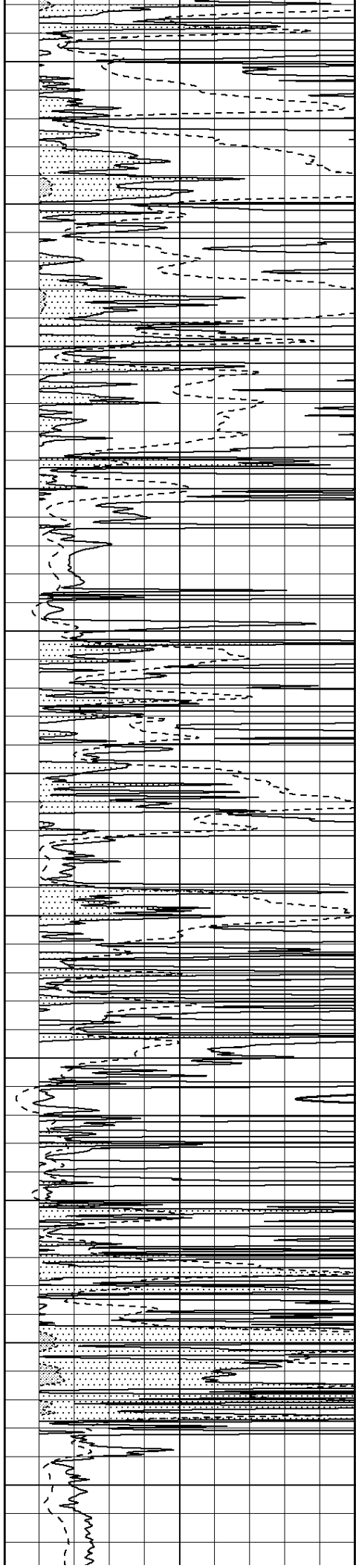
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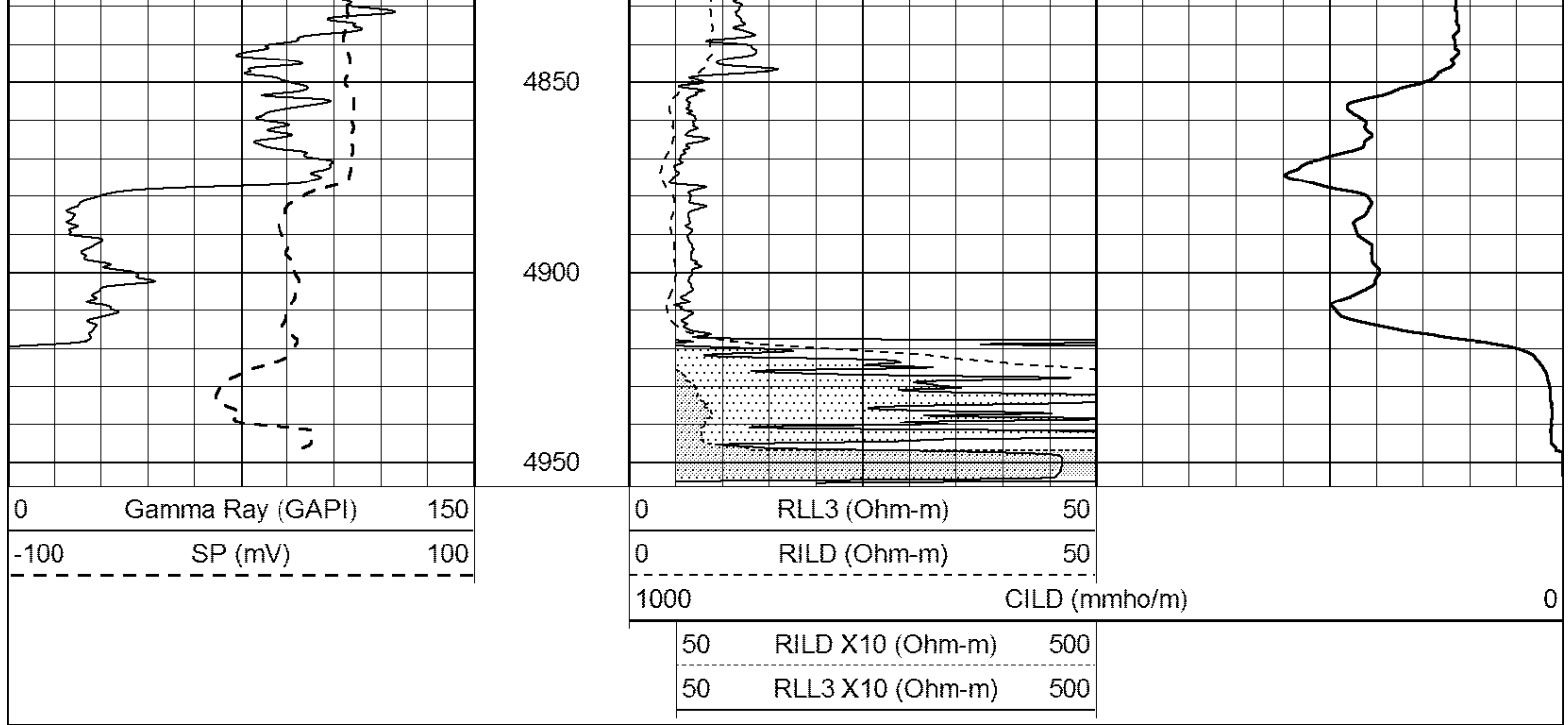
4650

4700

4750

4800



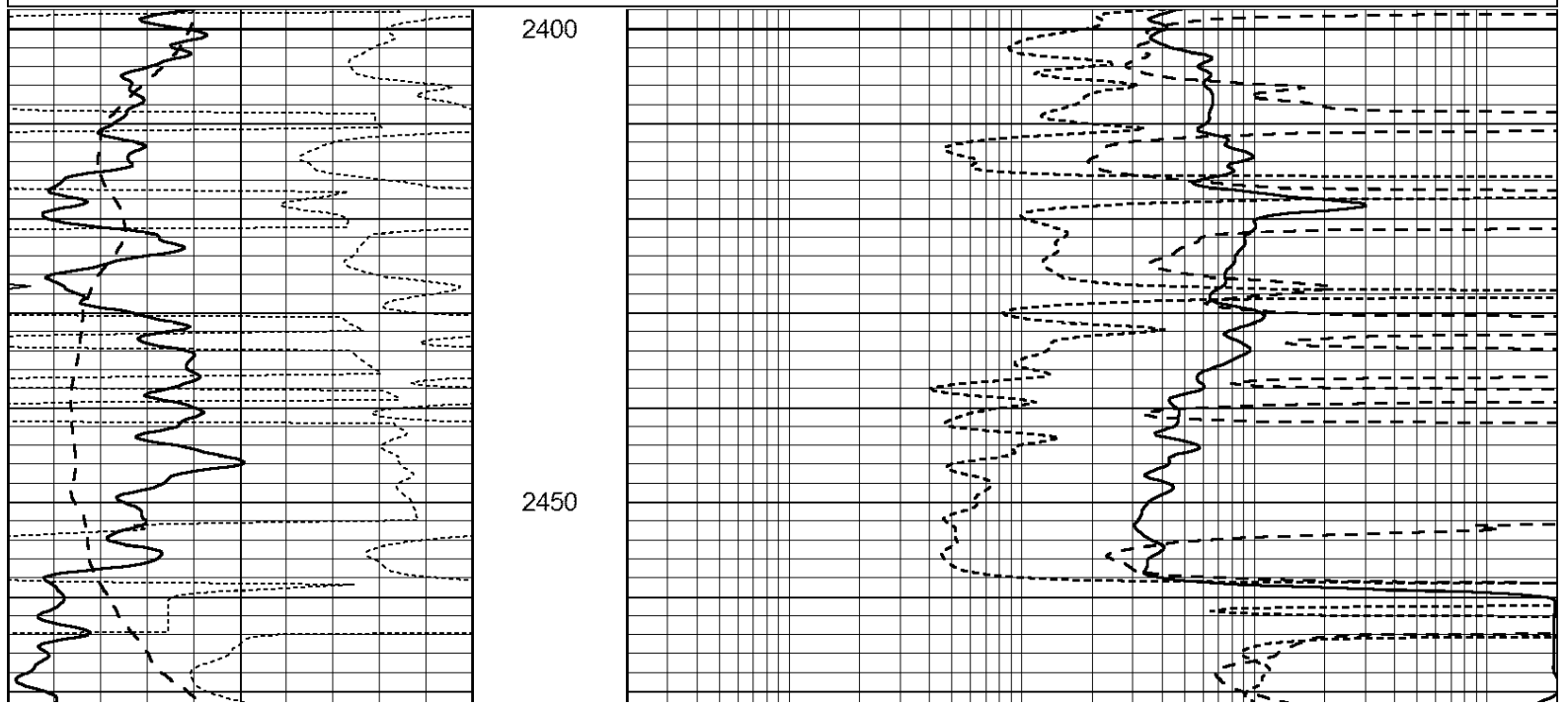


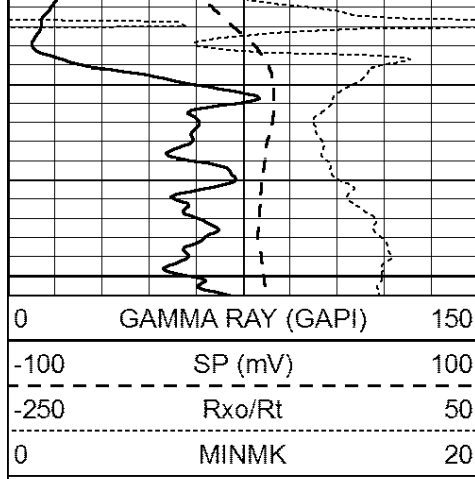
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ANHYDRITE

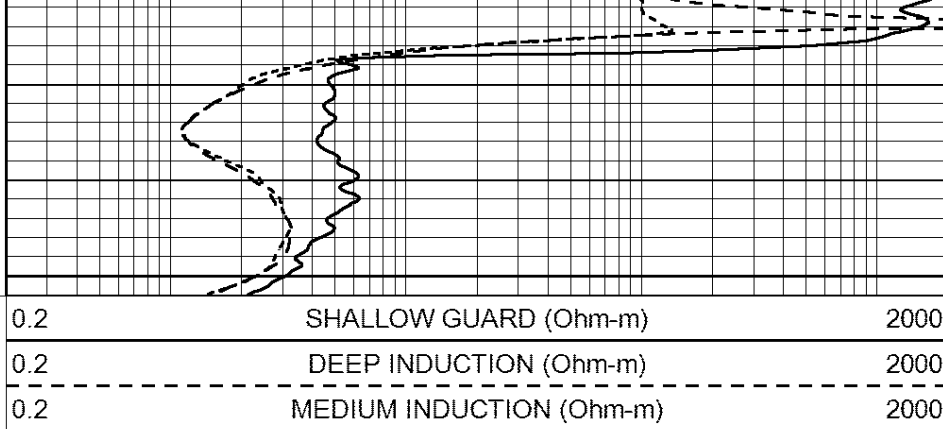
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 Charted by: Depth in Feet scaled 1:240

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			



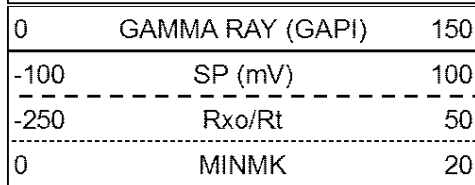


2500



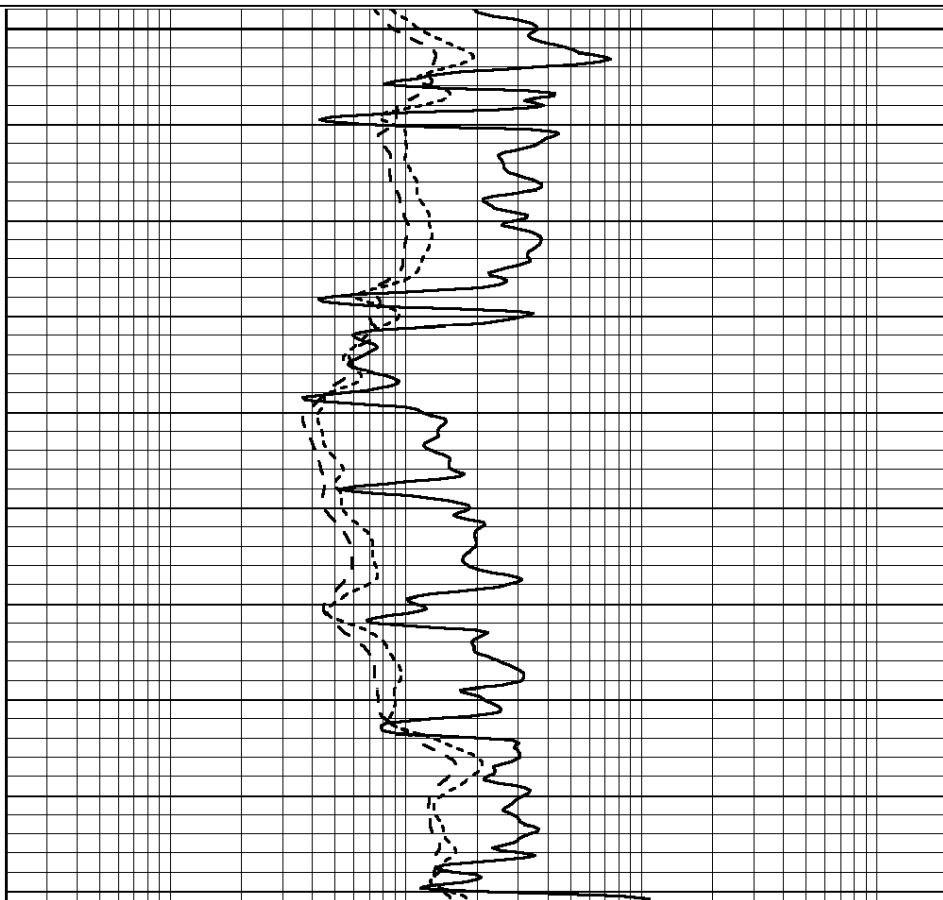
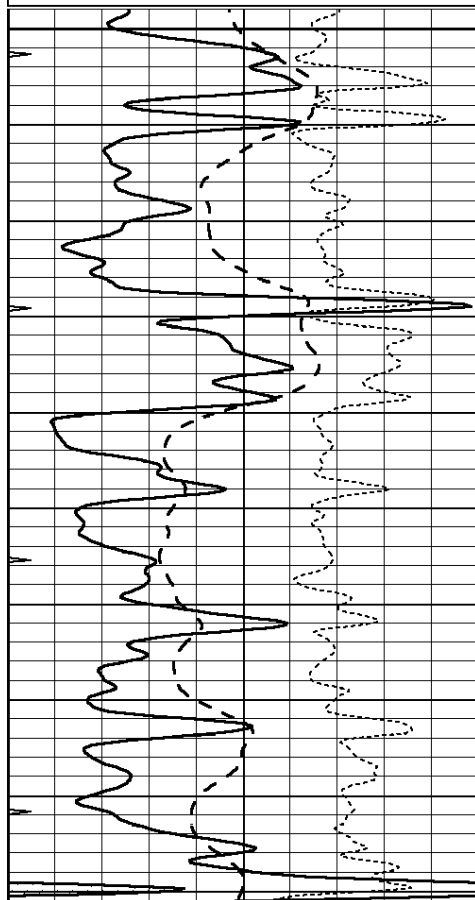
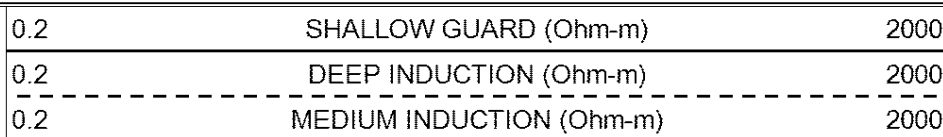
MAIN SECTION

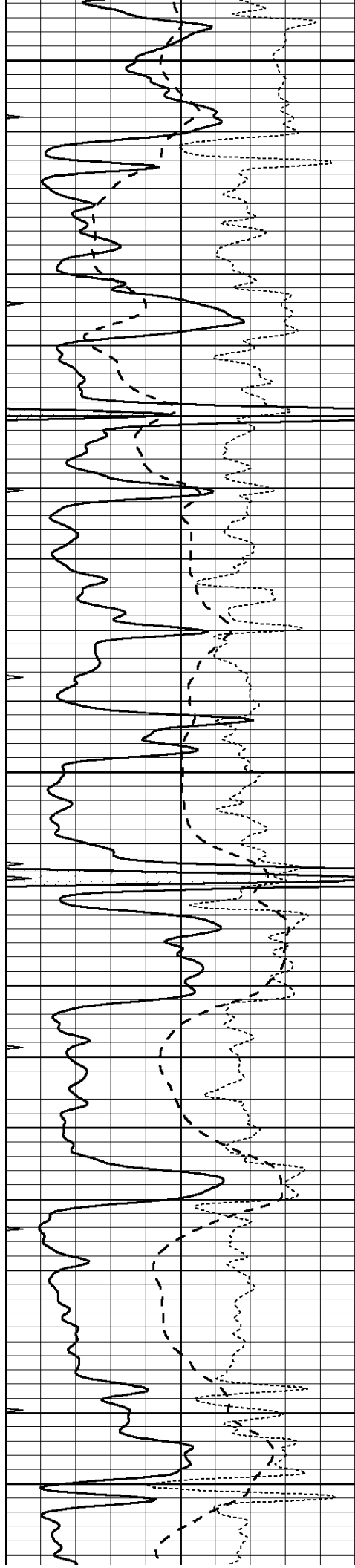
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3800

3850





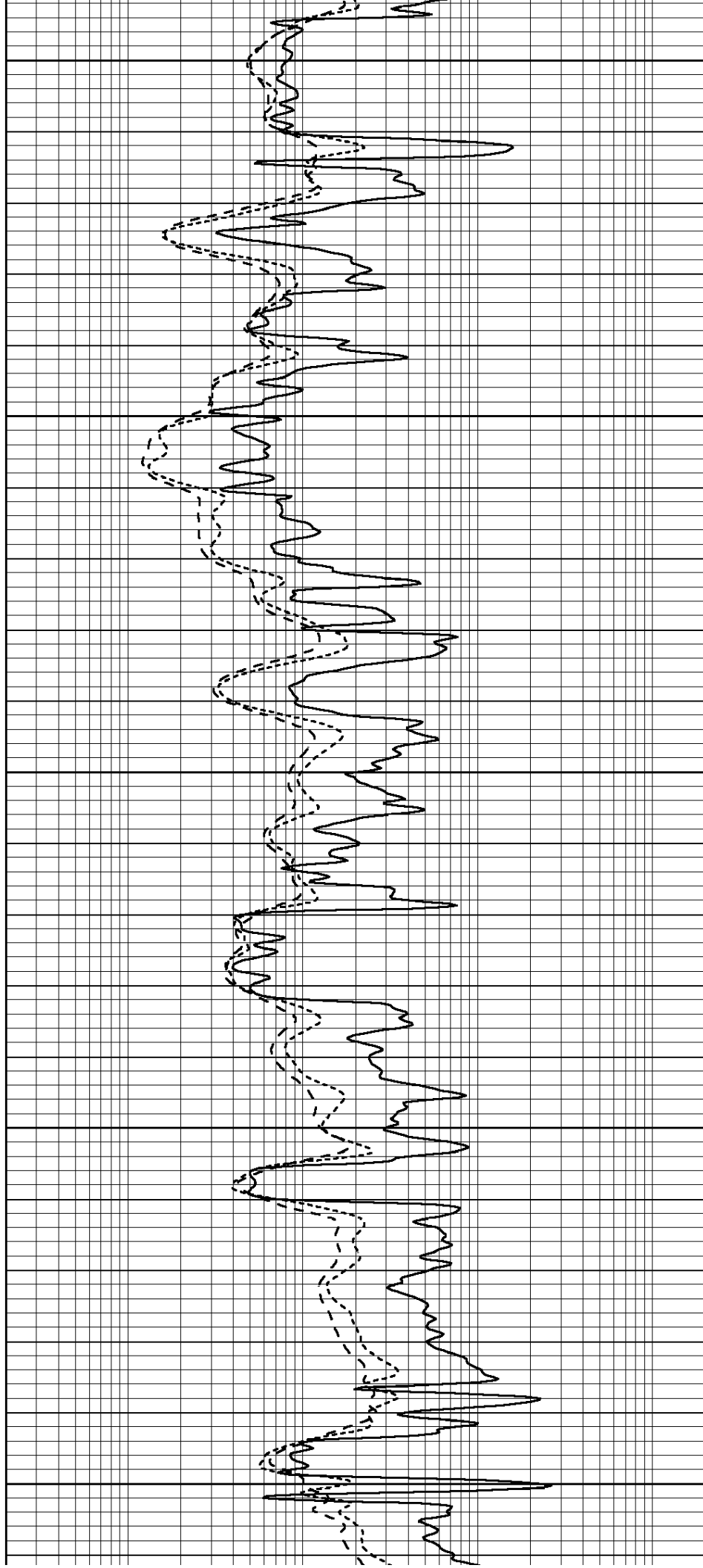
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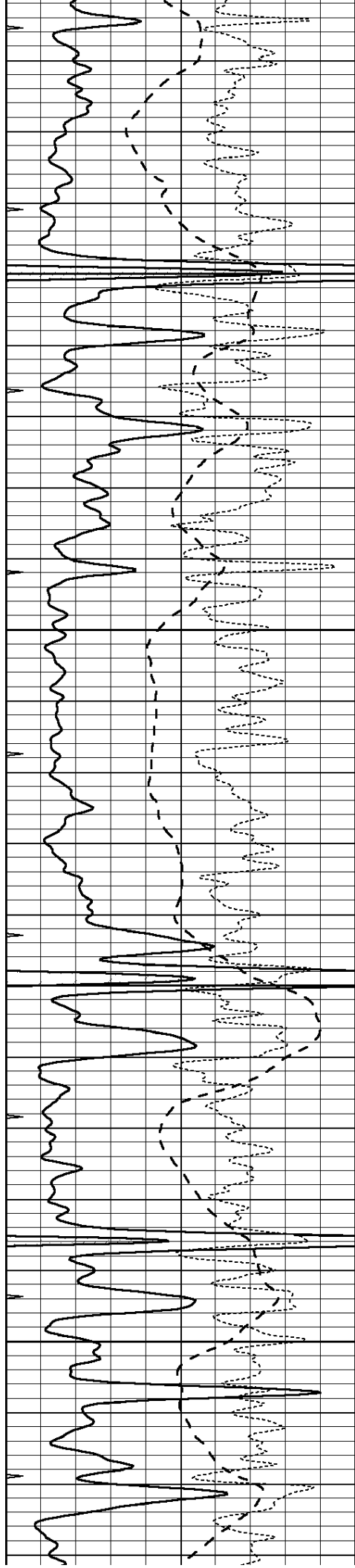
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4000

4050

4100



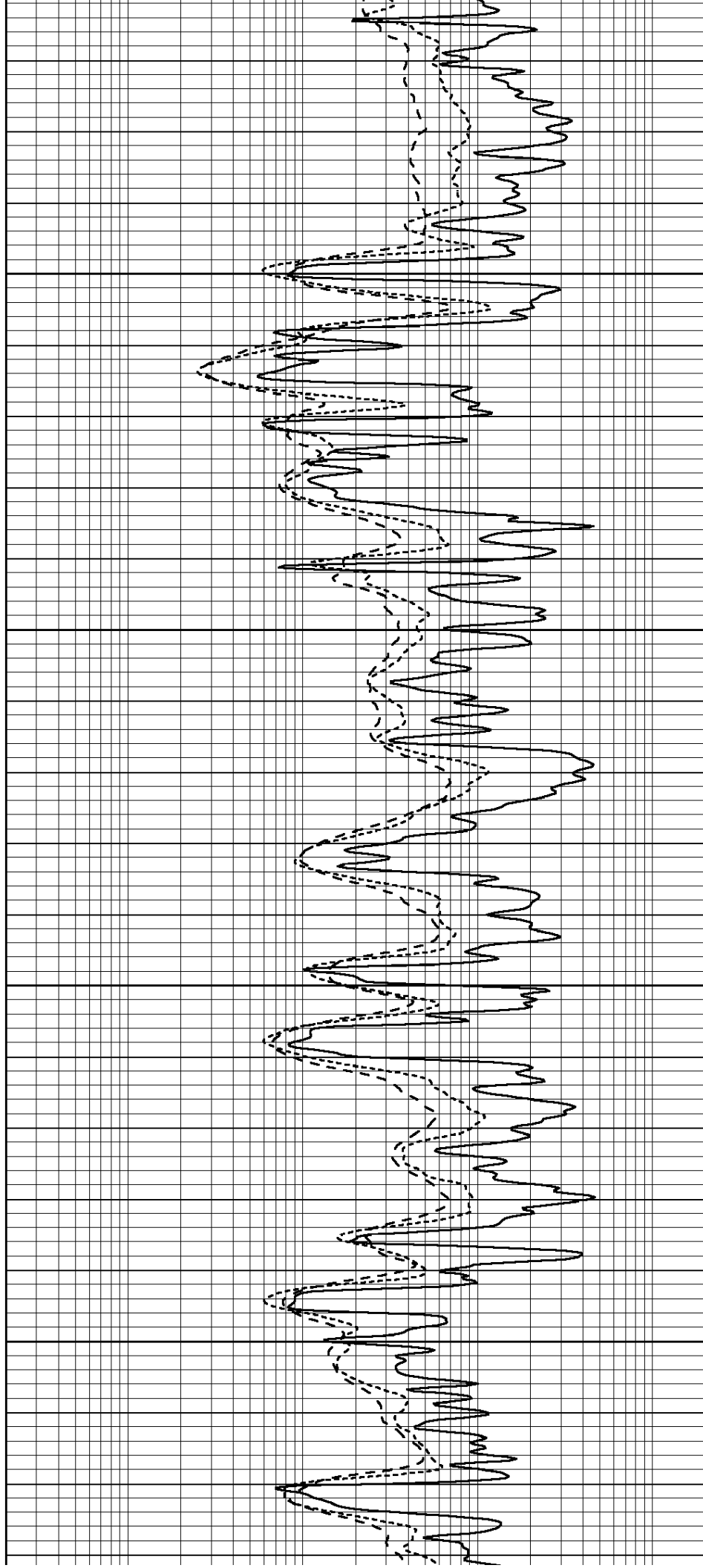


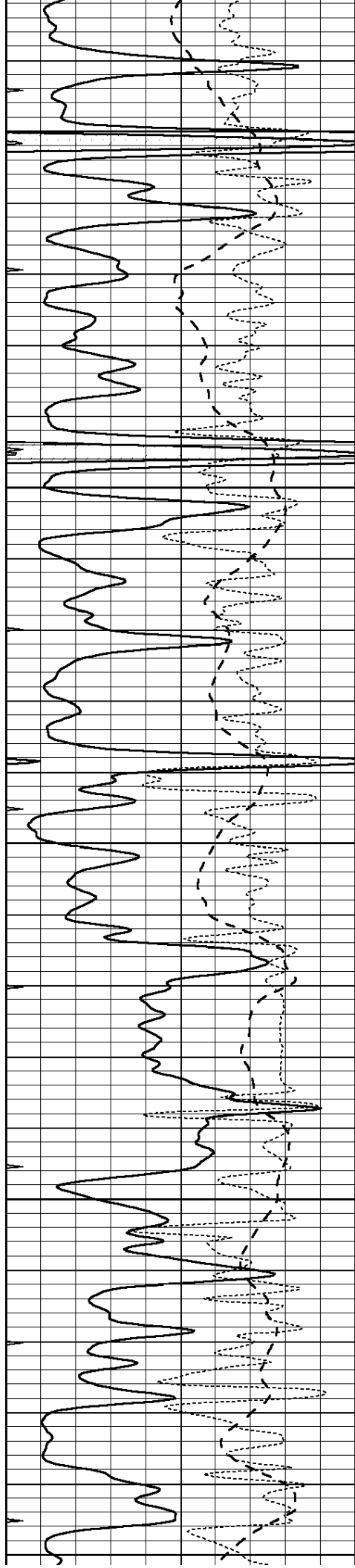
4150

4200

4250

4300





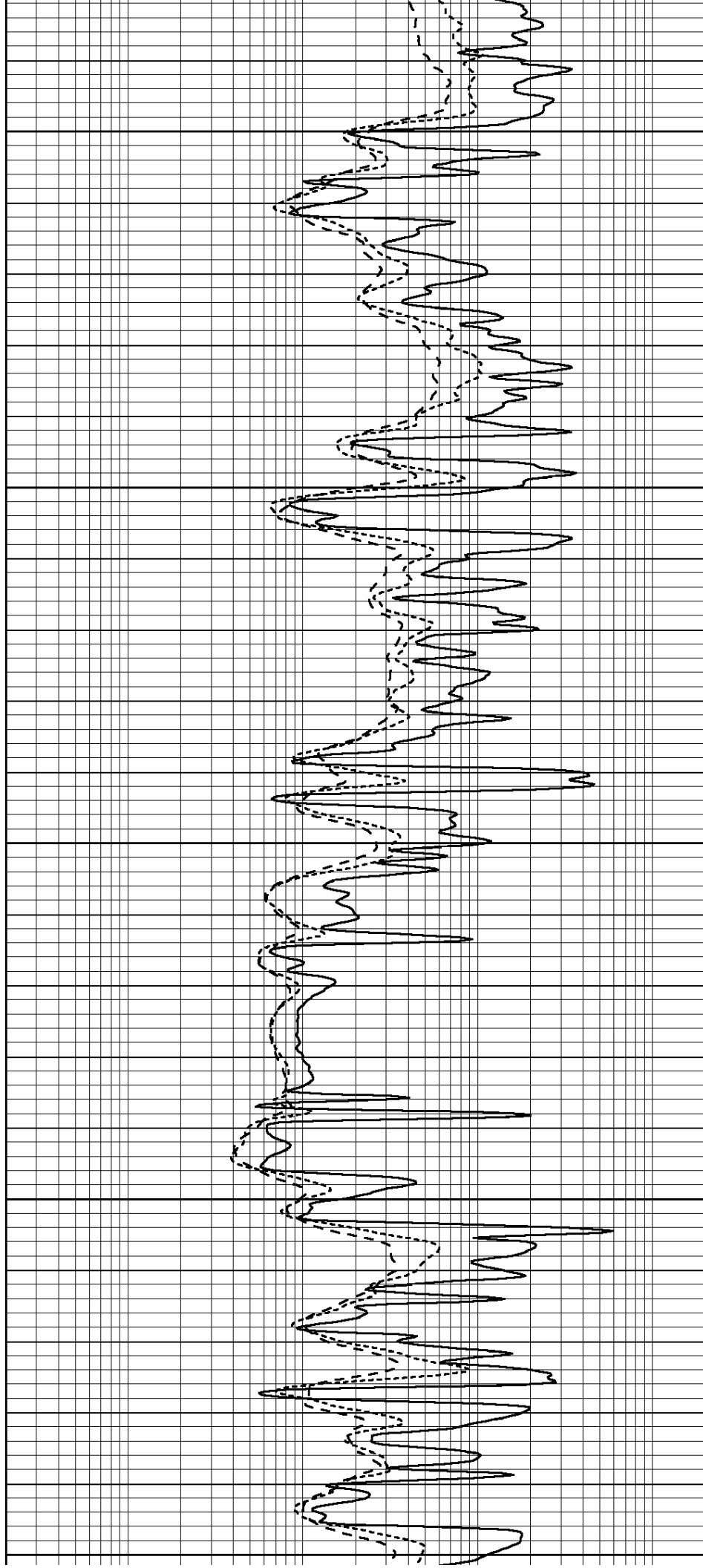
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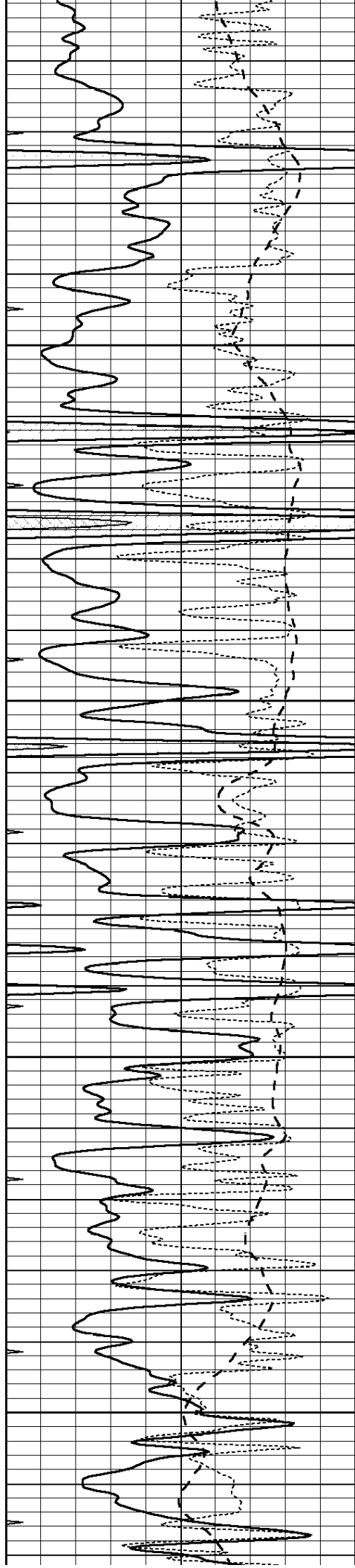
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4450

4500

4550



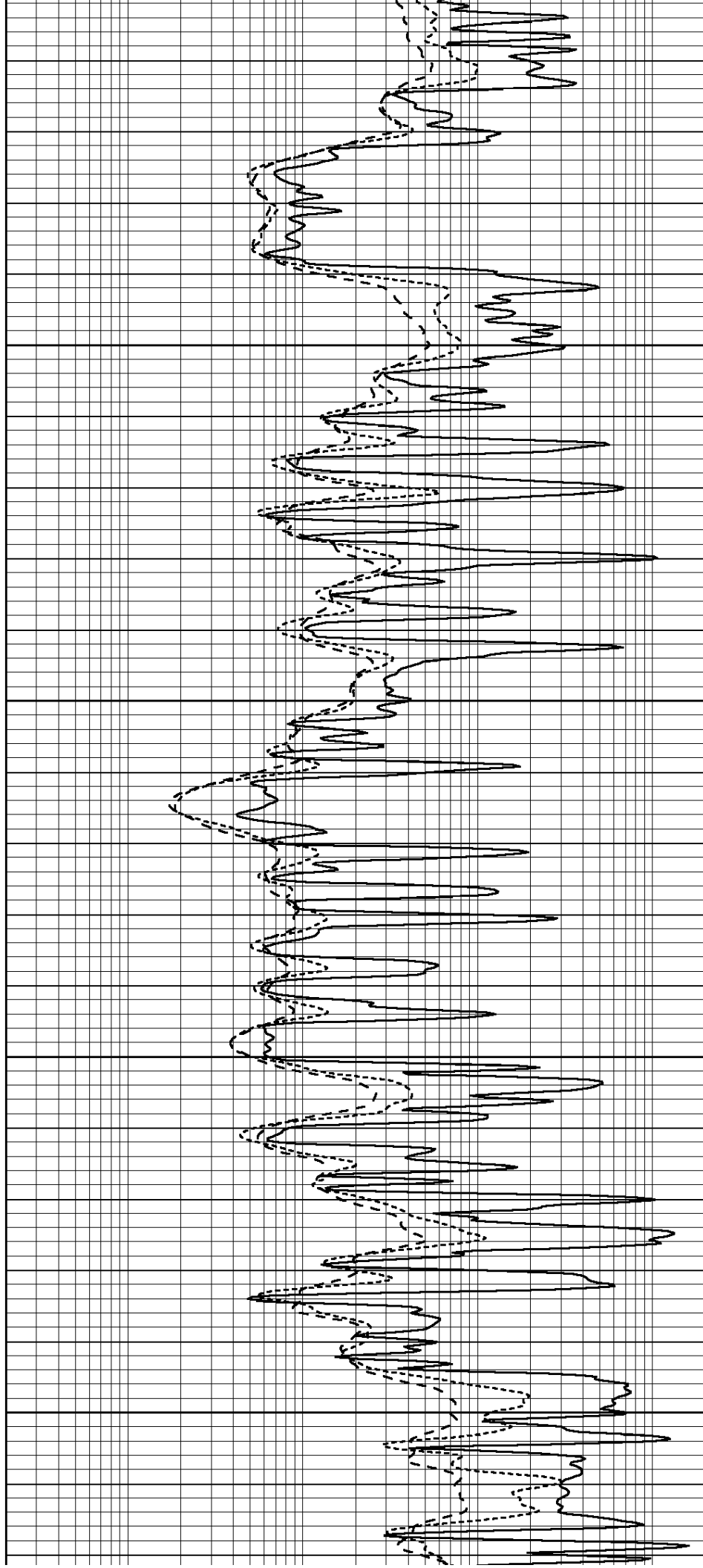


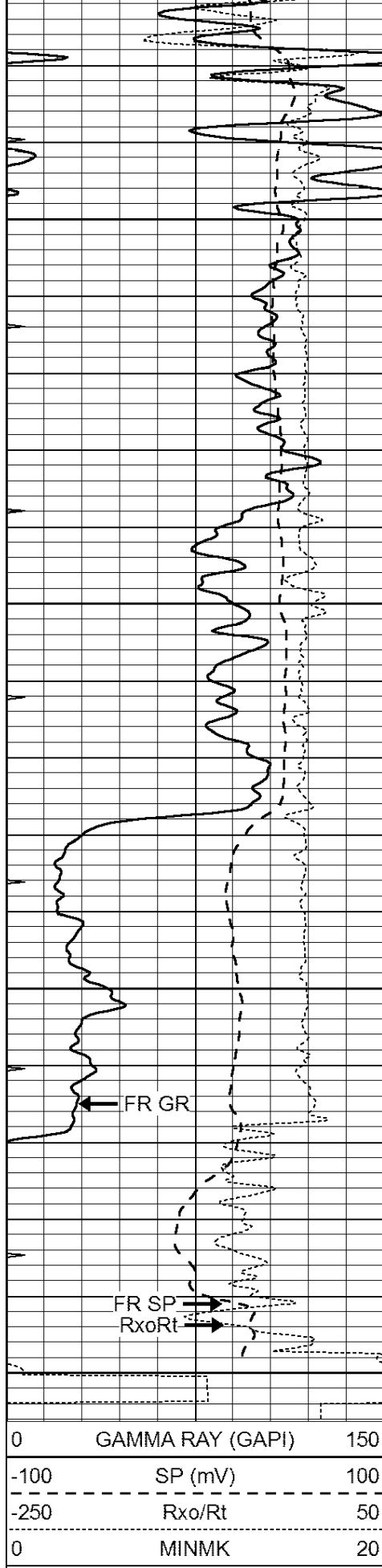
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4650

4700

4750



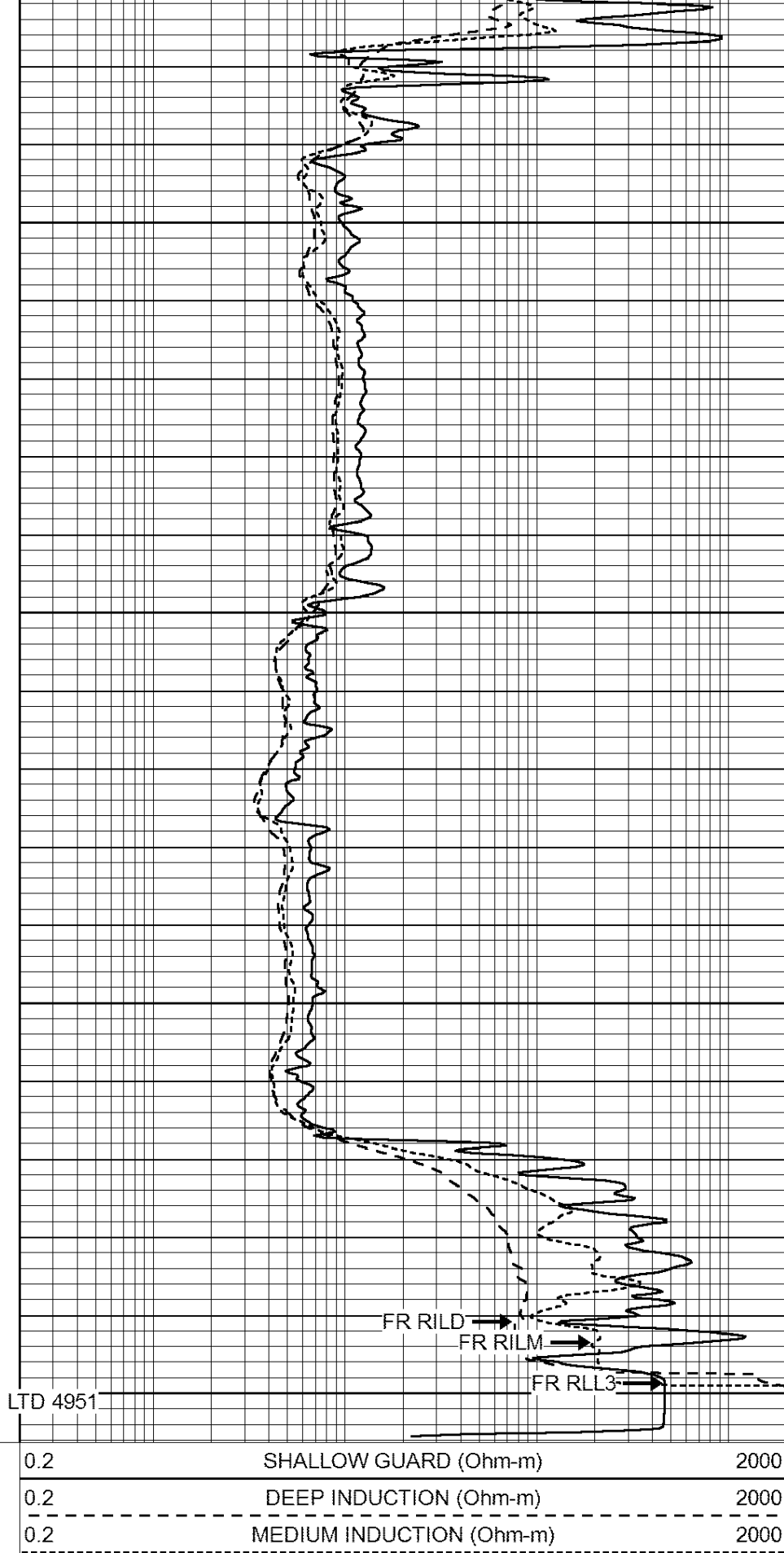


4800

4850

4900

4950

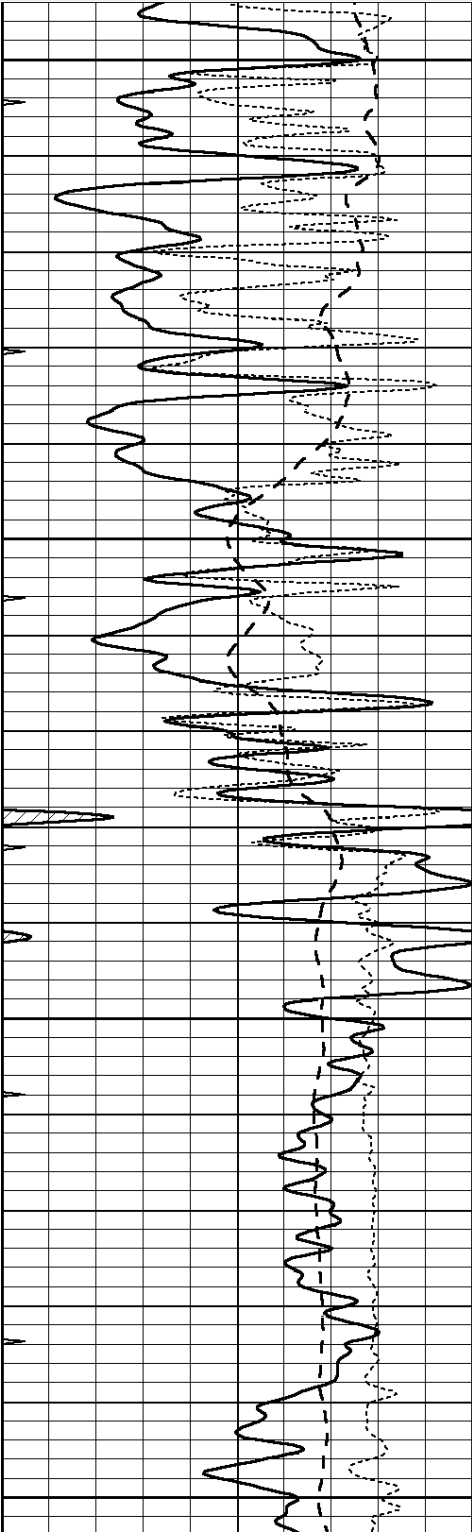


LTD 4951

Database File: 26217ddn.db
Dataset Pathname: pass2.1
Presentation Format: _dil
Dataset Creation: Sun Oct 26 12:50:05 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

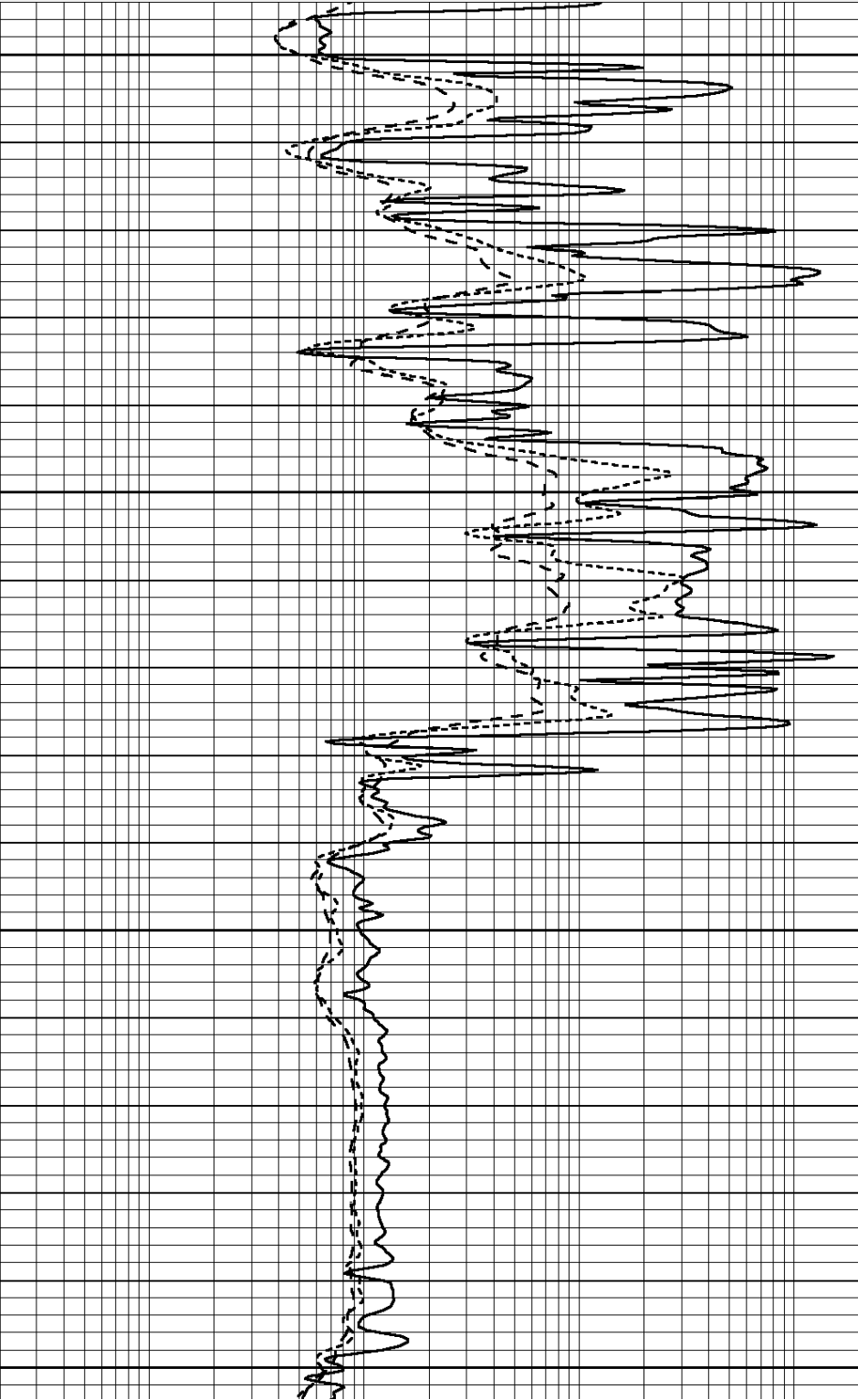


4700

4750

4800

4850





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

-9.739

Downhole Calibration

Readings				References			Results	
	Zero	Cal		Zero	Cal		m'	b'
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:				Sun Aug 17 08:09:42 2014				
Before Survey Verification Performed:								
After Survey Verification Performed:								

Master Calibration								
	Density			Far Detector		Near Detector		
Magnesium	1.710	g/cc		935.36		501.55	cps	
Aluminum	2.620	g/cc		209.32		357.01	cps	
Spine Angle = 77.21				Density/Spine Ratio = 0.593				
	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
1)	Short Space	cps	
	Long Space	cps	pu
2)	Short Space	cps	
	Long Space	cps	pu
3)	Short Space	cps	
	Long Space	cps	pu
POST-SURVEY VERIFICATION			
	Detector	Readings	Measured Target
1)	Short Space	cps	
	Long Space	cps	pu
2)	Short Space	cps	
	Long Space	cps	pu
3)	Short Space	cps	
	Long Space	cps	pu
Gamma Ray Calibration Report			
Serial Number:		GR6	
Tool Model:		OPEN	
Performed:		Sun Aug 17 15:23:09 2014	
Calibrator Value:		150.0	GAPI
Background Reading:		0.0	cps
Calibrator Reading:		276.0	cps
Sensitivity:		0.7000	GAPI/cps