



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

DUAL INDUCTION LOG

Company	RAYMOND OIL COMPANY	
Well	#3 MICHAELIS	
Field		
County	LOGAN	State
State	KANSAS	KANSAS
Company	RAYMOND OIL COMPANY	
Well	#3 MICHAELIS	
Field		
County	LOGAN	State
State	KANSAS	KANSAS
Location:	API # : 15-109-21322-0000	Other Services CDL/CNL MEL
2238' FNL & 835' FWL		
SEC 3 TWP 14S RGE 32W		
Permanent Datum	GROUND LEVEL	Elevation
Log Measured From	KELLY BUSHING	11.5' A.G.L.
Drilling Measured From	KELLY BUSHING	
2873.5		K.B. 2885
		D.F. 2883
		G.L. 2873.5
Date	8/12/14	
Run Number	ONE	
Depth Driller	4700	
Depth Logger	4700	
Bottom Logged Interval	4698	
Top Log Interval	00	
Casing Driller	8 5/8" @ 265	
Casing Logger	260	
Bit Size	7 7/8"	
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 6800 PPM
Density / Viscosity	9.4/67	
pH / Fluid Loss	10.5/10.6	
Source of Sample	FLOWLINE	
Rm @ Meas. Temp	.75 @ 98F	
Rmt @ Meas. Temp	.56 @ 98F	
Rmc @ Meas. Temp	.90 @ 98F	
Source of Rmt / Rmc	MEASUREMENT	
Rm @ BHT	.60 @ 122F	
Time Circulation Stopped	2 HOURS	
Time Logger on Bottom		
Maximum Recorded Temperature	122F	
Equipment Number	4010	
Location	HAYS, KANSAS	
Recorded By	JASON CAPELLUCCI	
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 NABORS, HAYS, KS. (785) 628-6395
DIRECTIONS:
OAKLEY, KS. - 16 SOUTH - 1 WEST - SOUTH & EAST INTO

Database File:

25850ddn.db

Dataset Pathname:

pass3.1

Presentation Format:

_dil2

Dataset Creation:

Tue Aug 12 17:44:58 2014

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

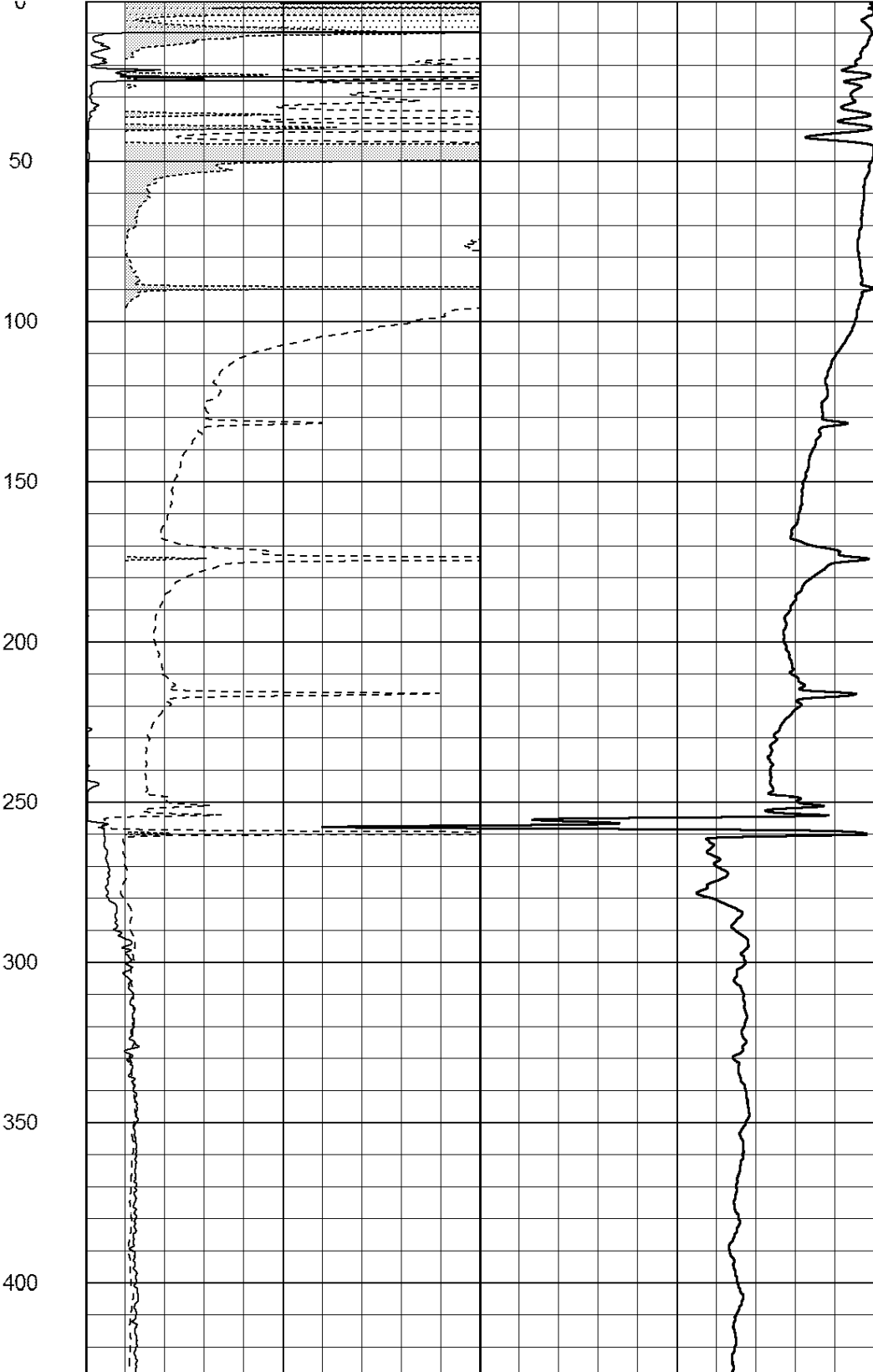
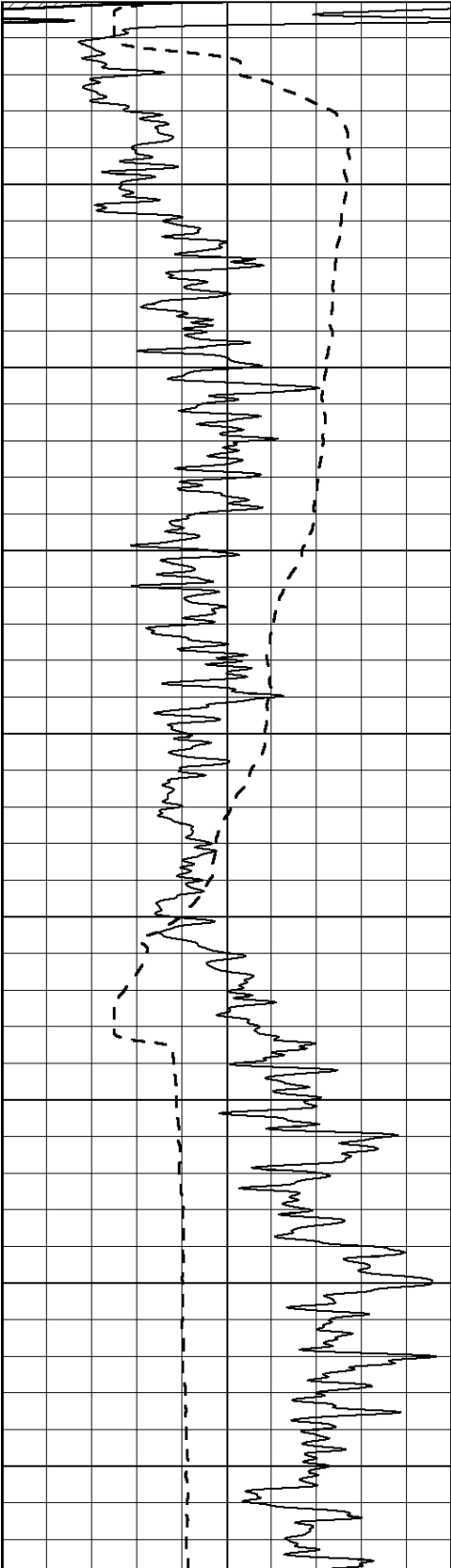
RILD X10 (Ohm-m)

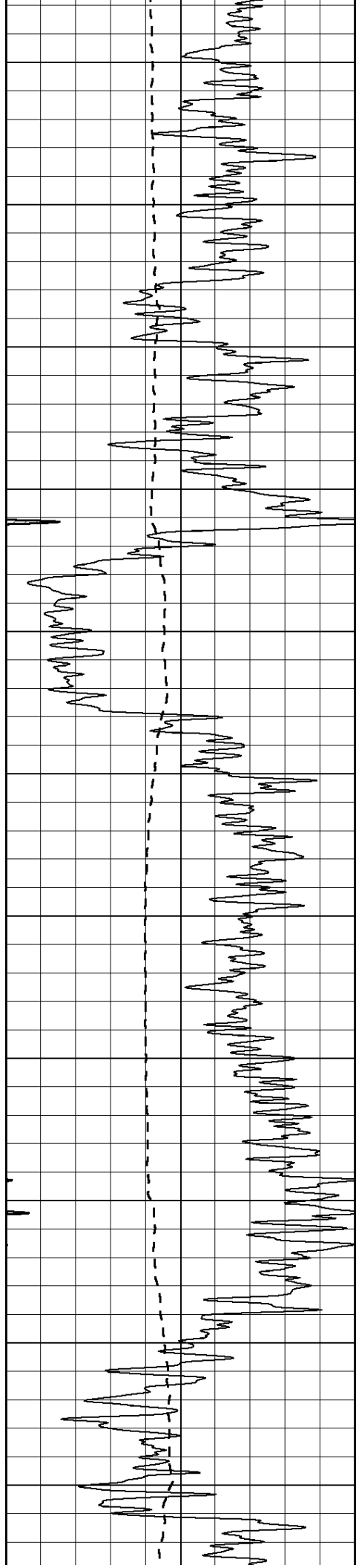
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50

RLL3 X10 (Ohm-m)

500





450

500

550

600

650

700

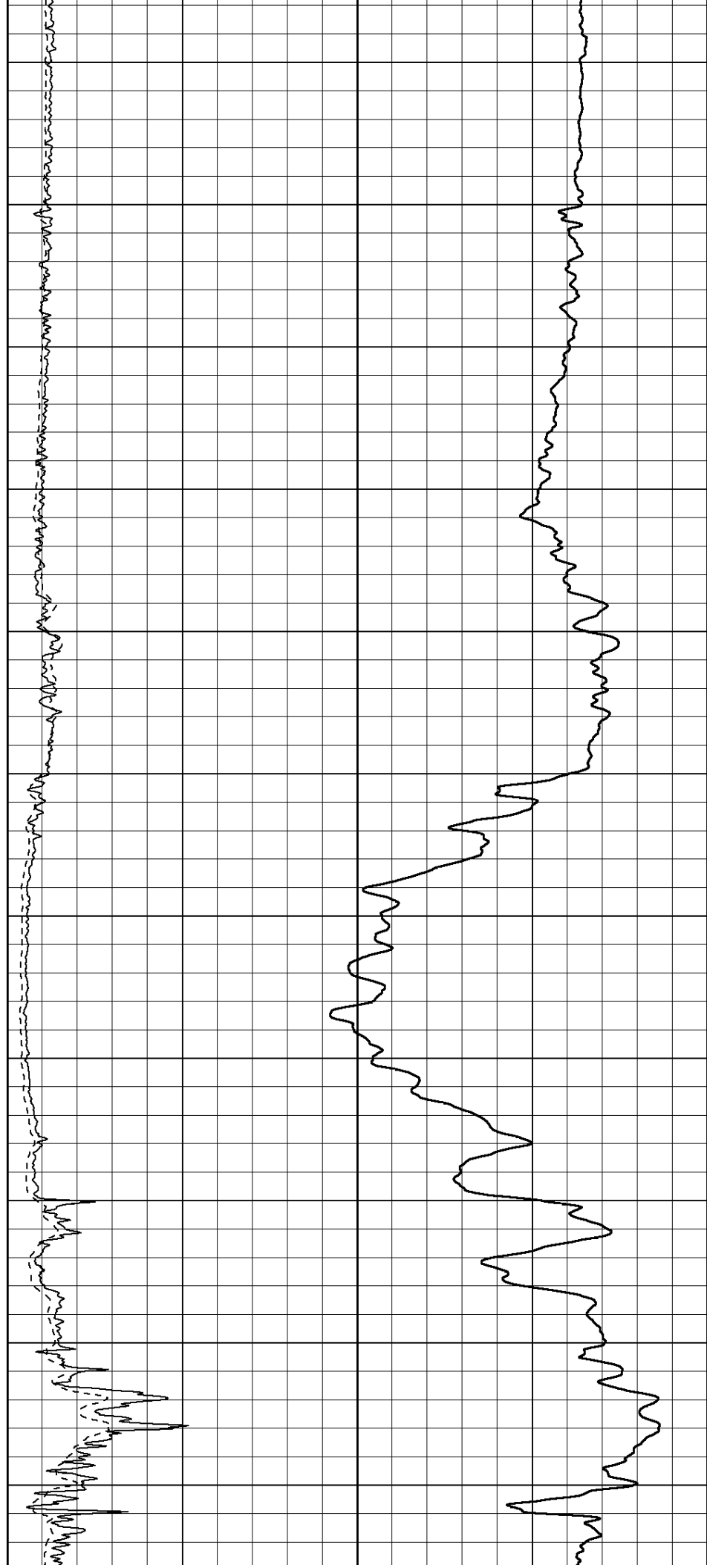
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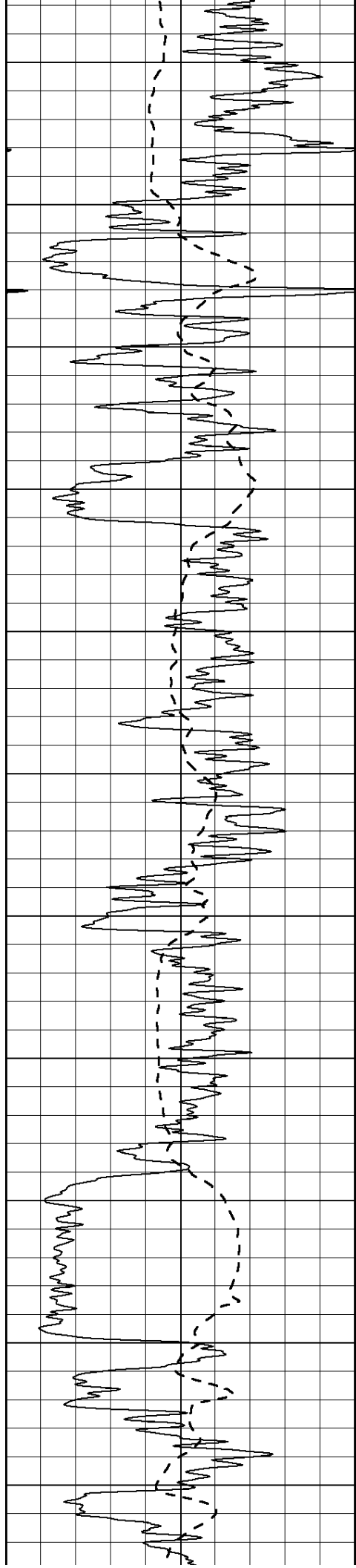
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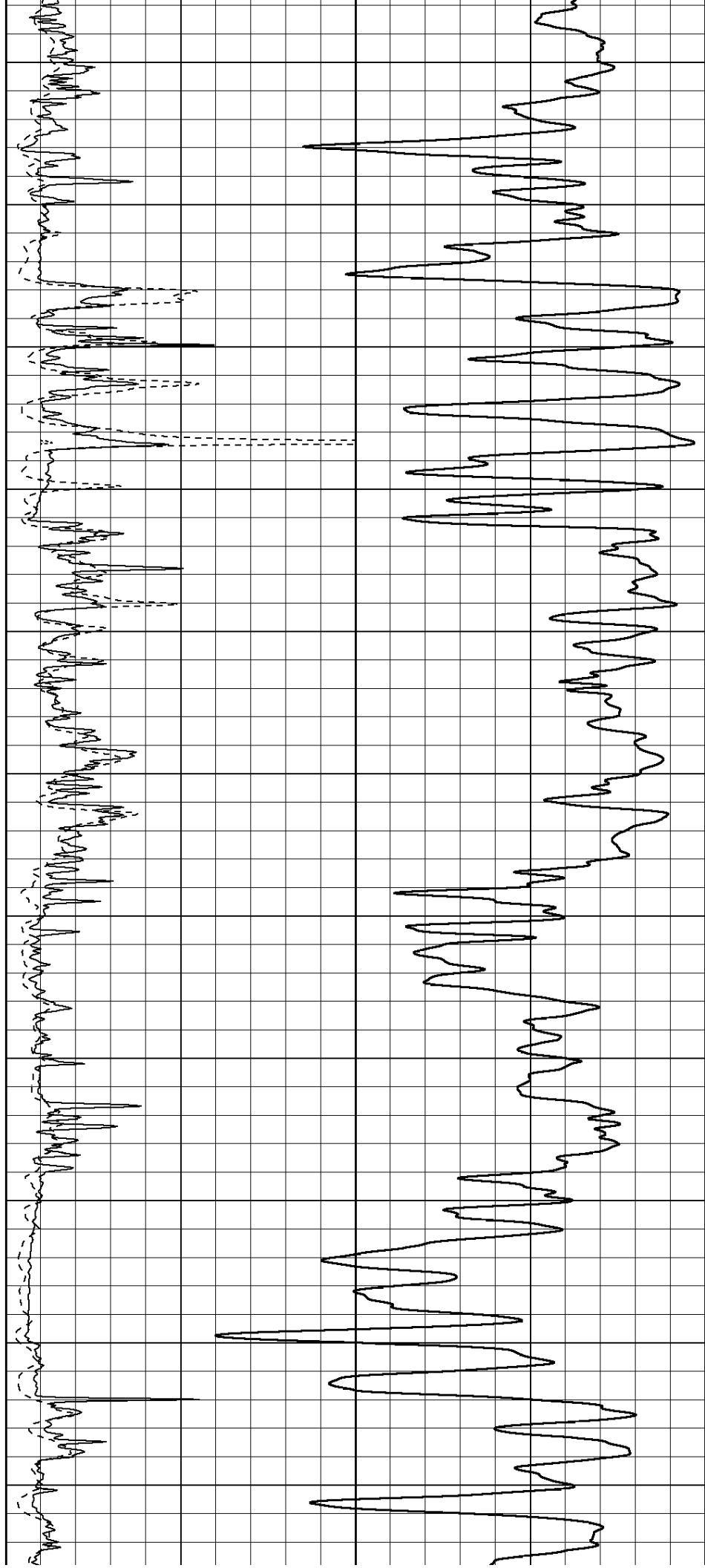
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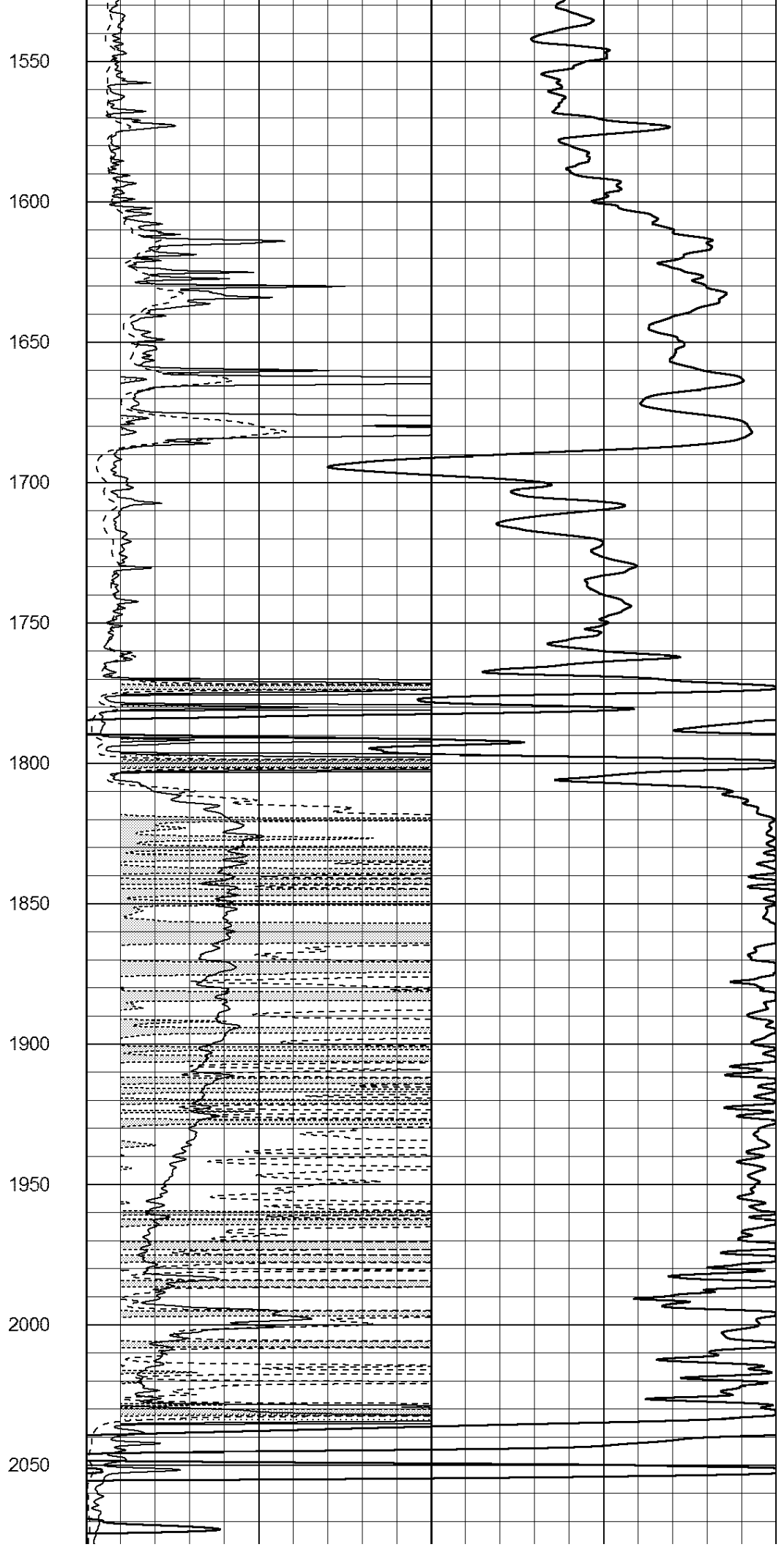
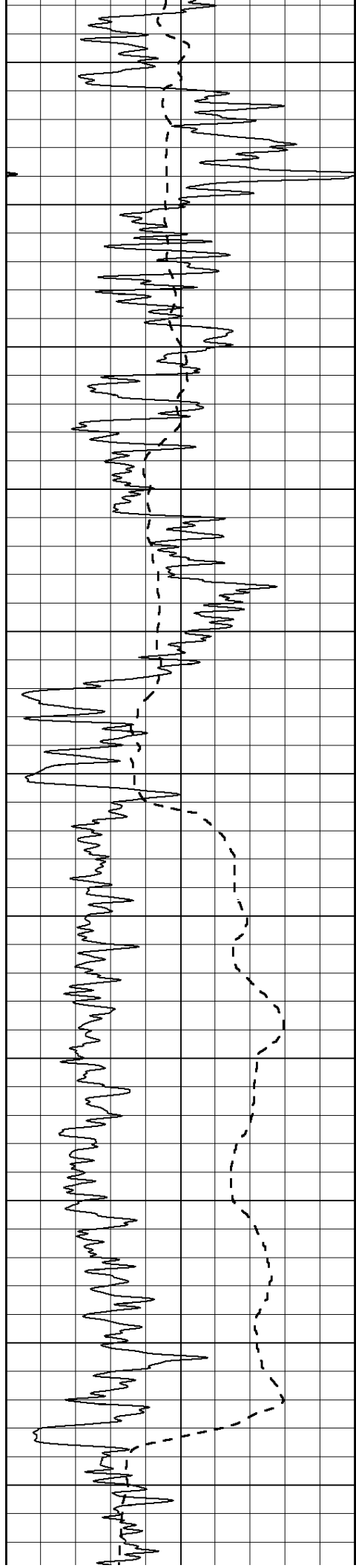
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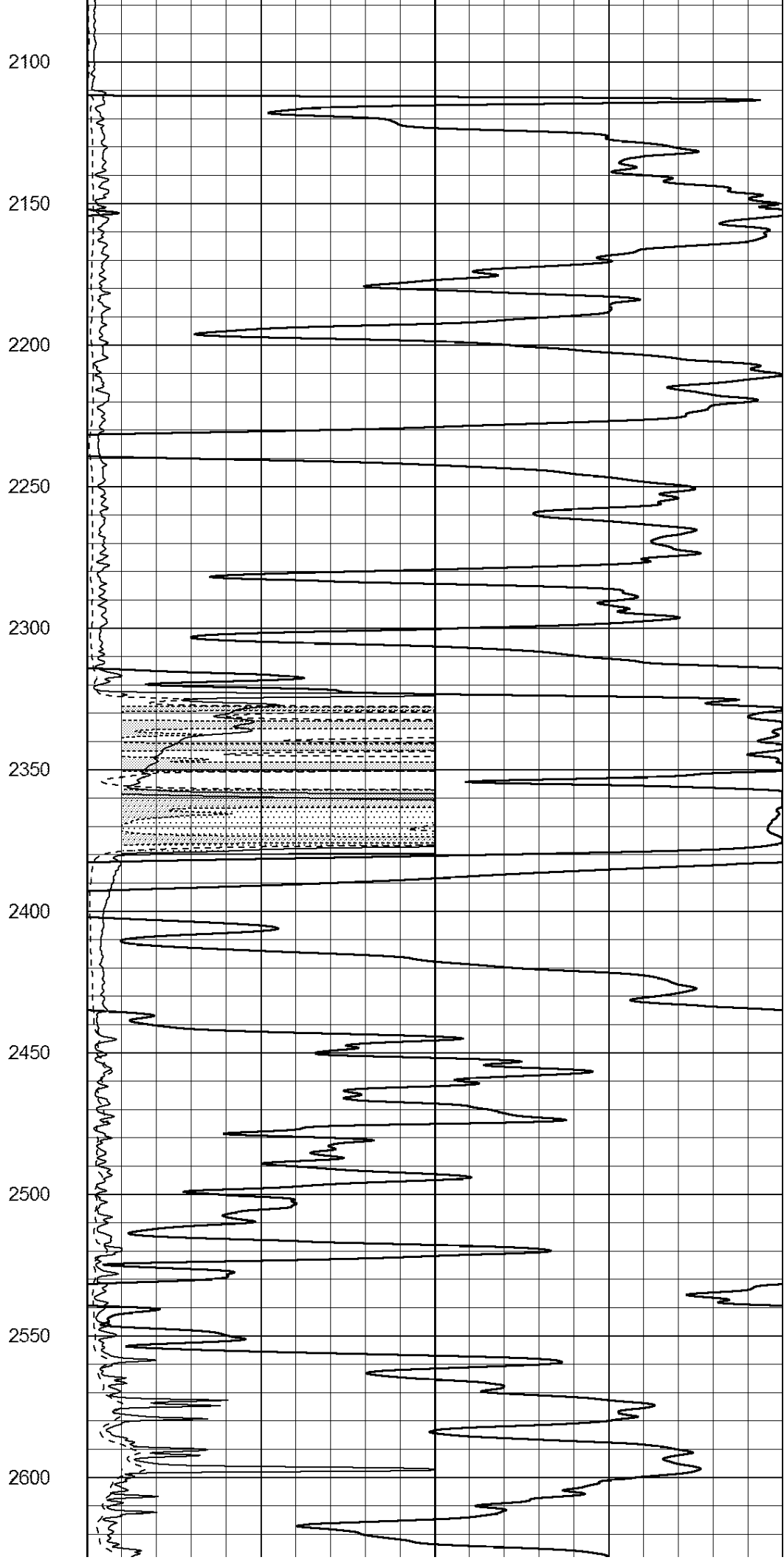
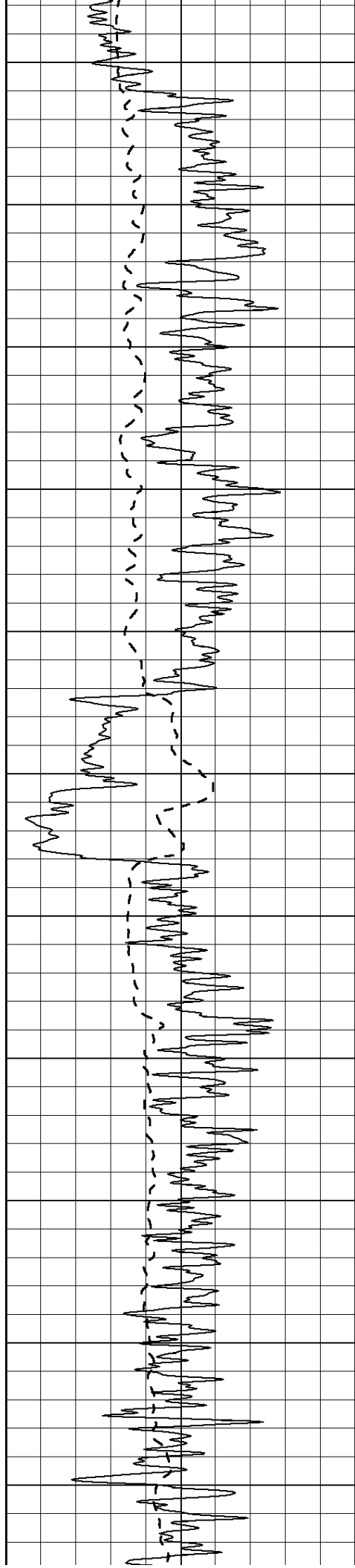


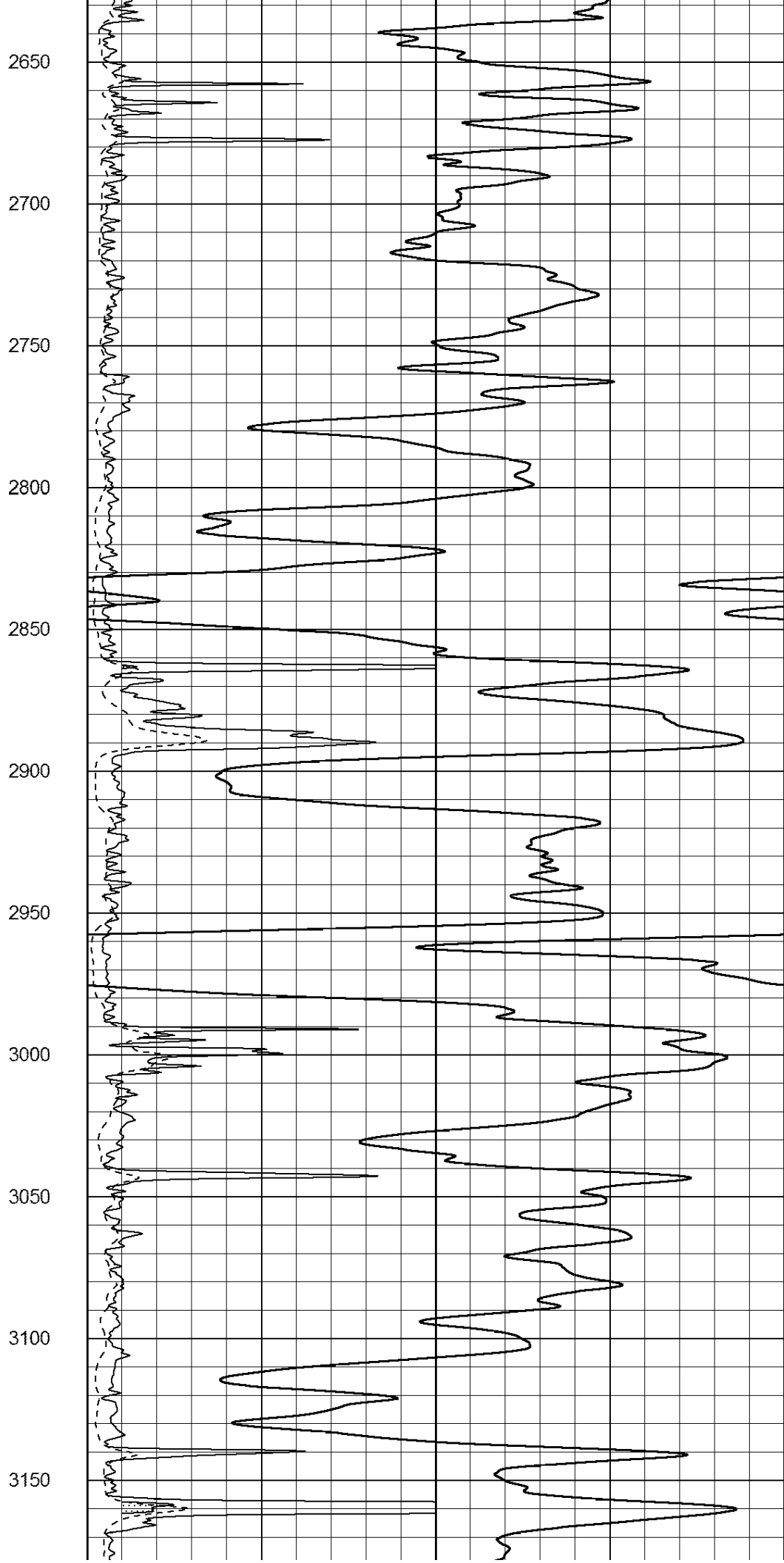
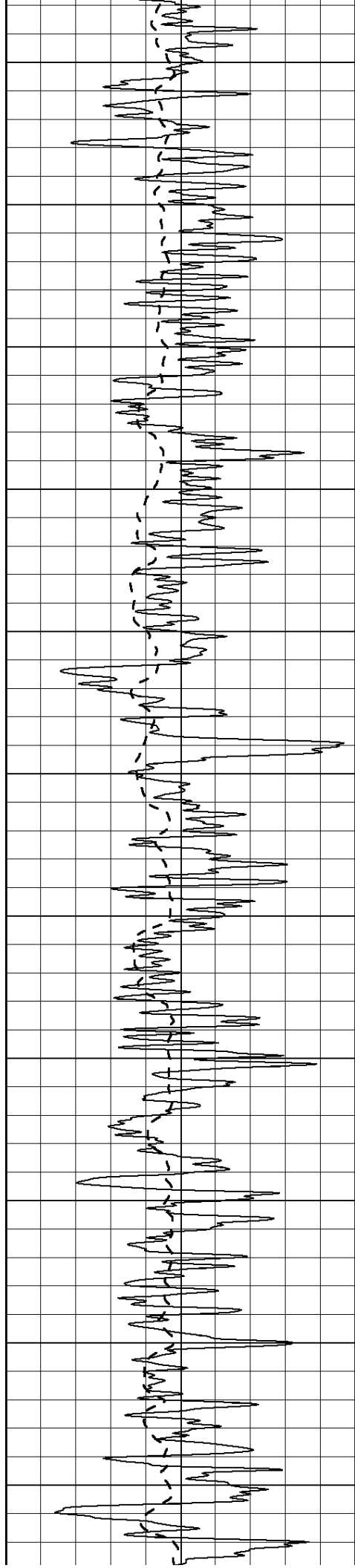


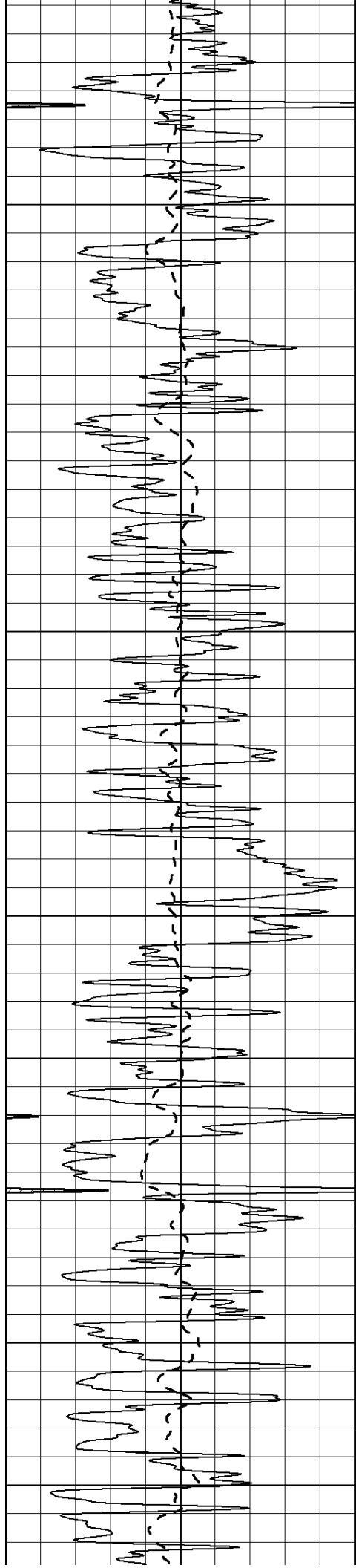
1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500











3200

3250

3300

3350

3400

3450

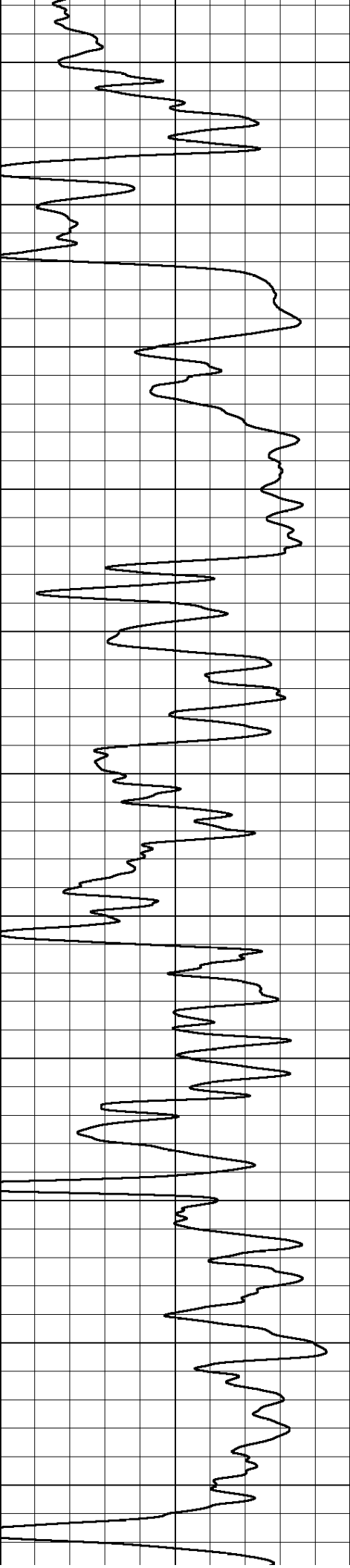
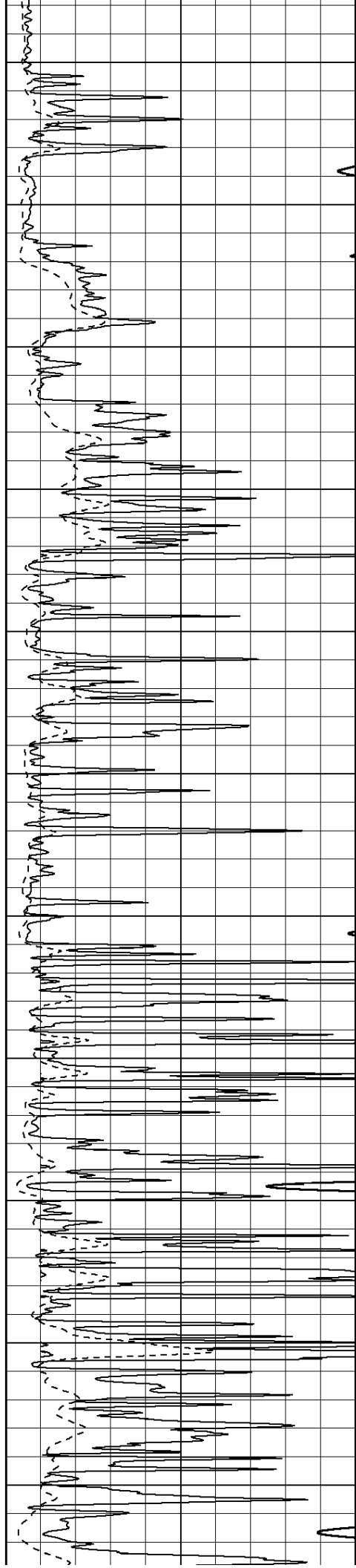
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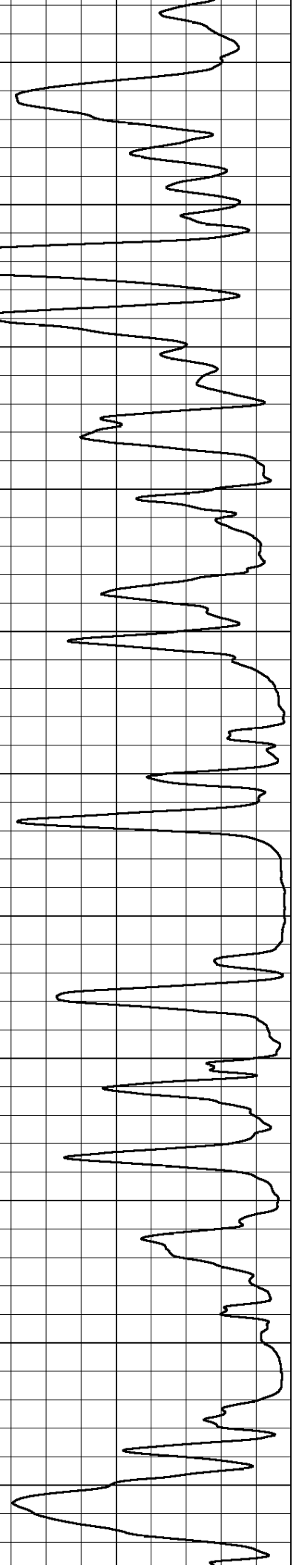
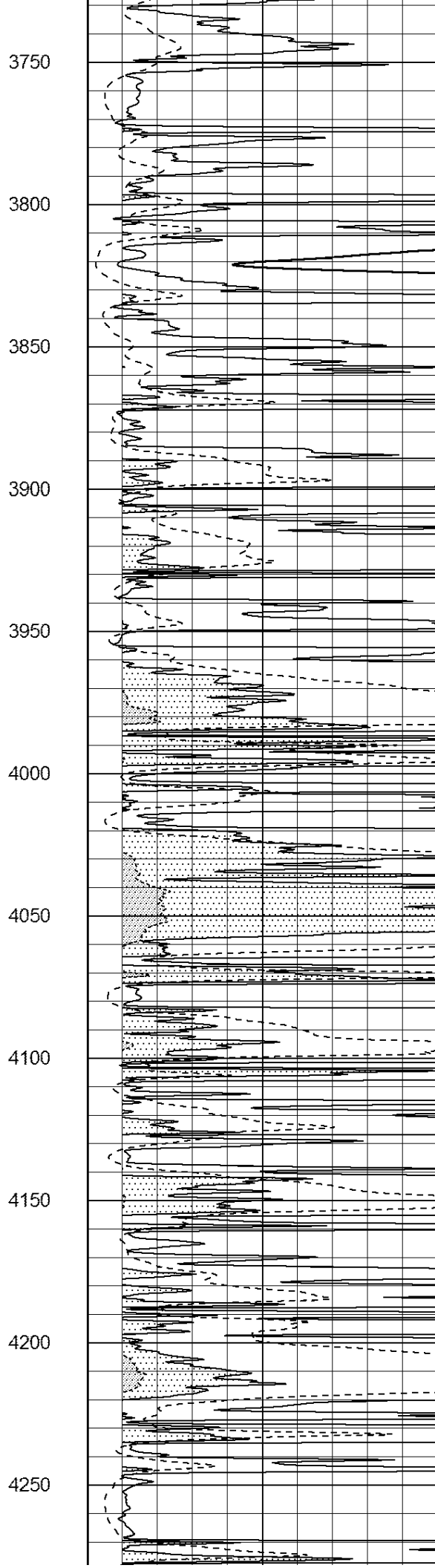
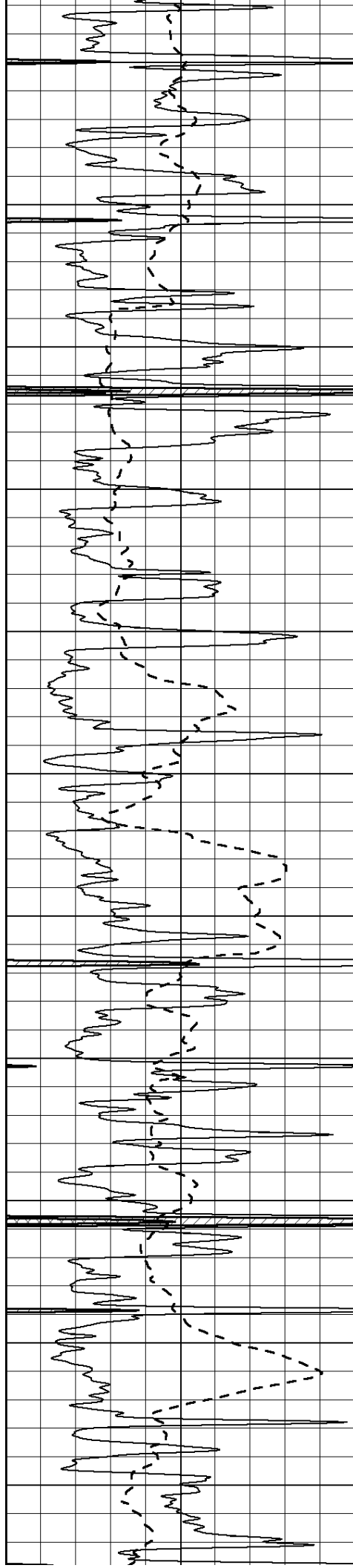
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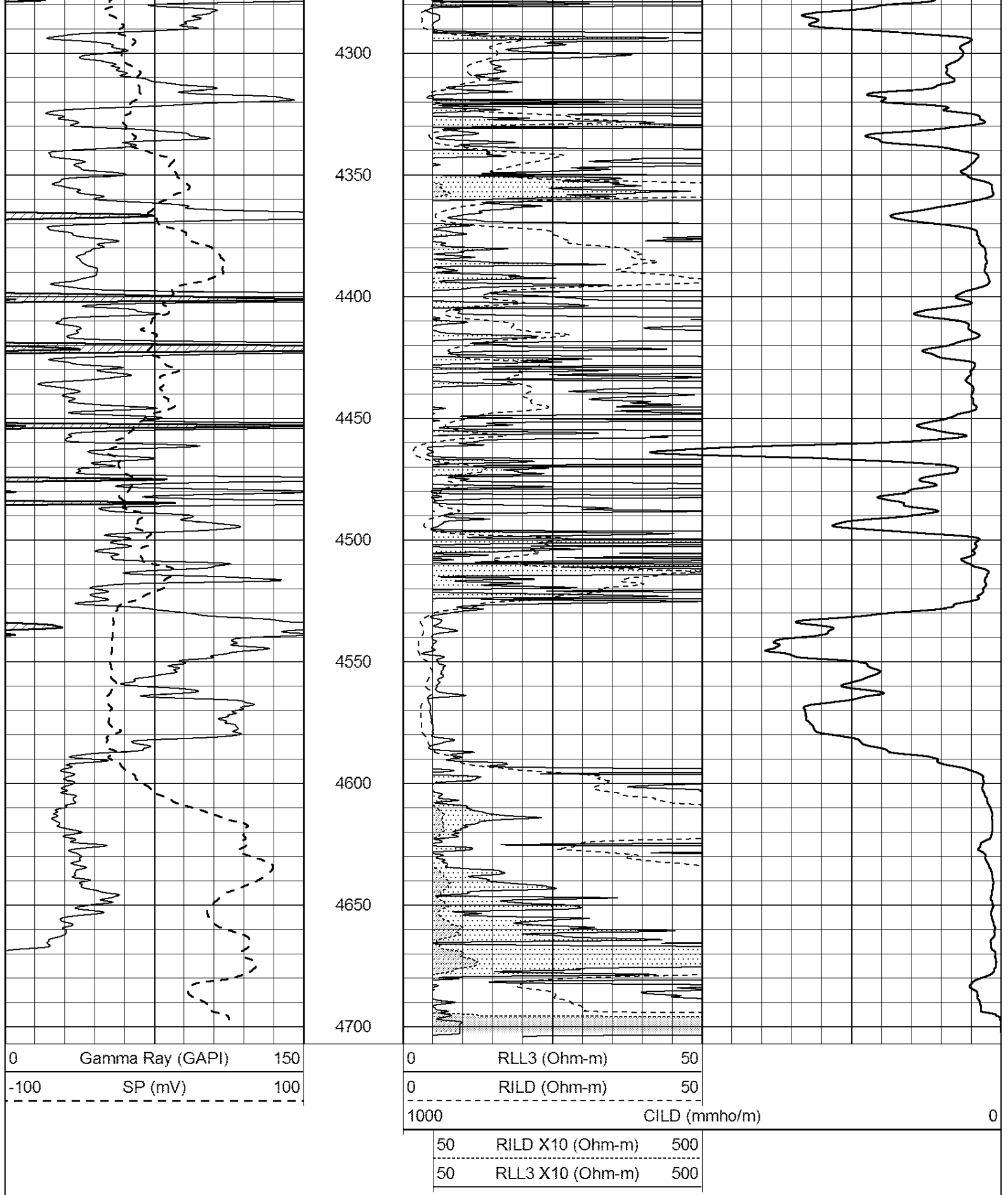
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3700



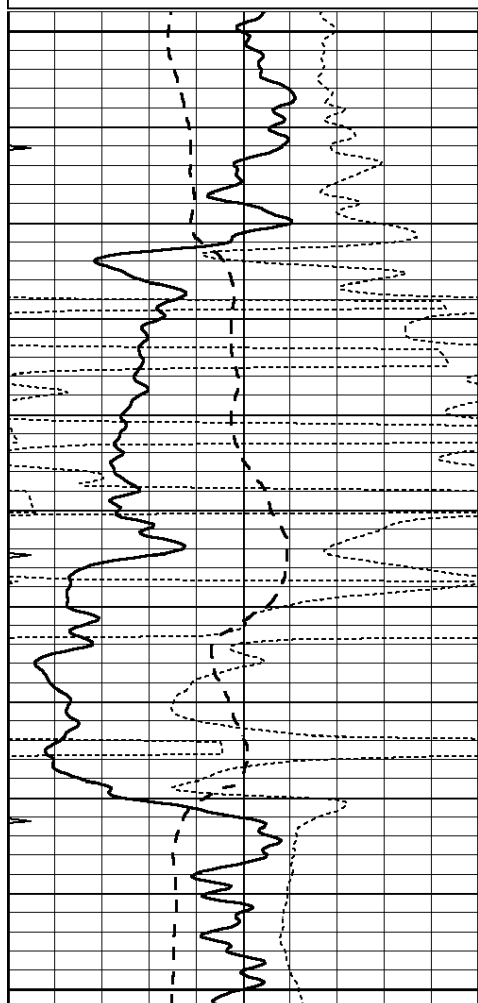




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 Presentation Format: _dil
 Dataset Creation: Tue Aug 12 17:44:58 2014
 Charted by: Depth in Feet scaled 1:240

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

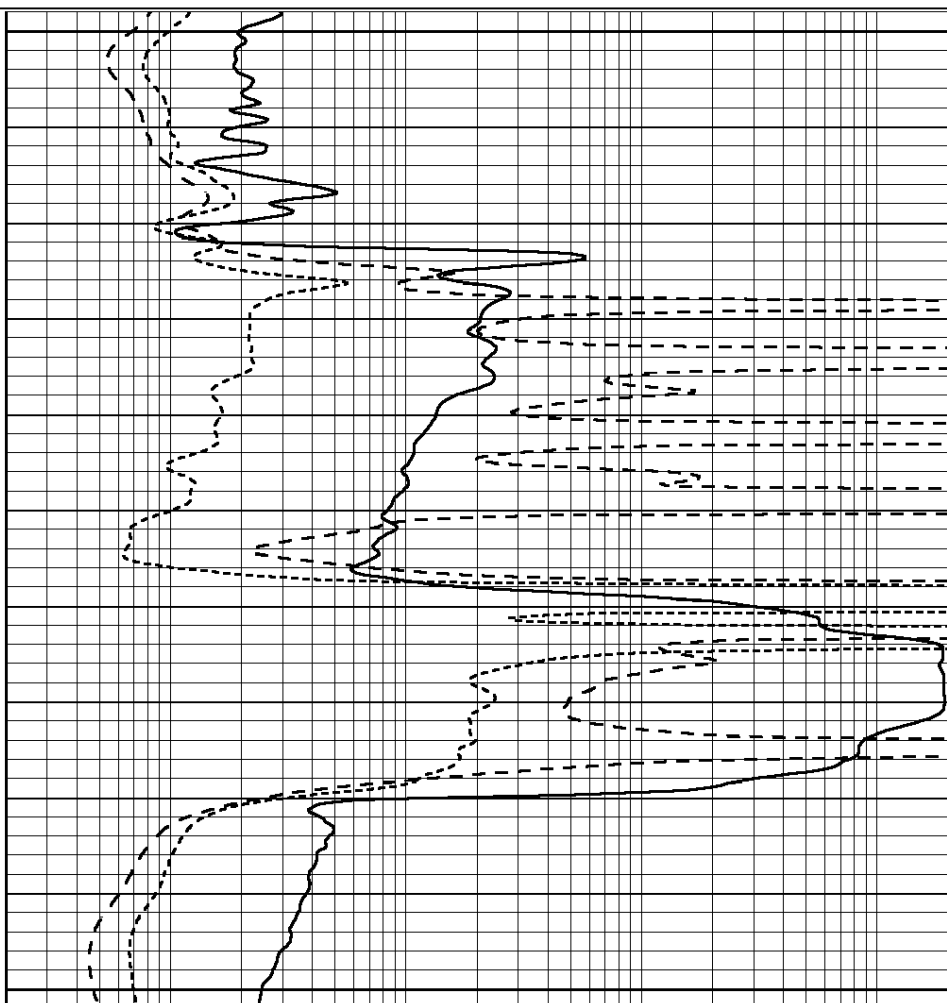
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0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



2300

2350

2400



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

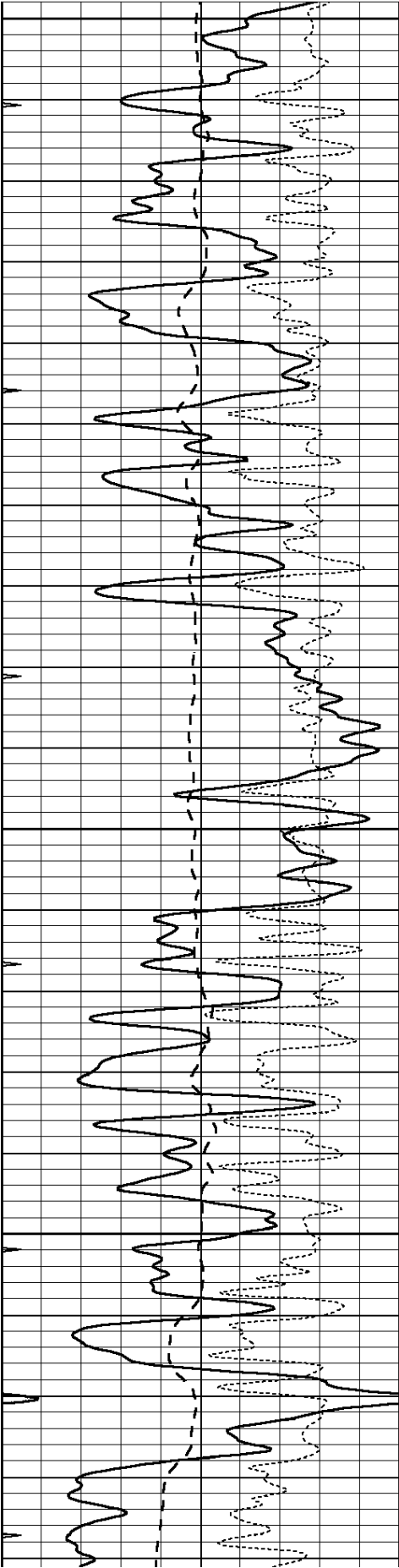
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0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



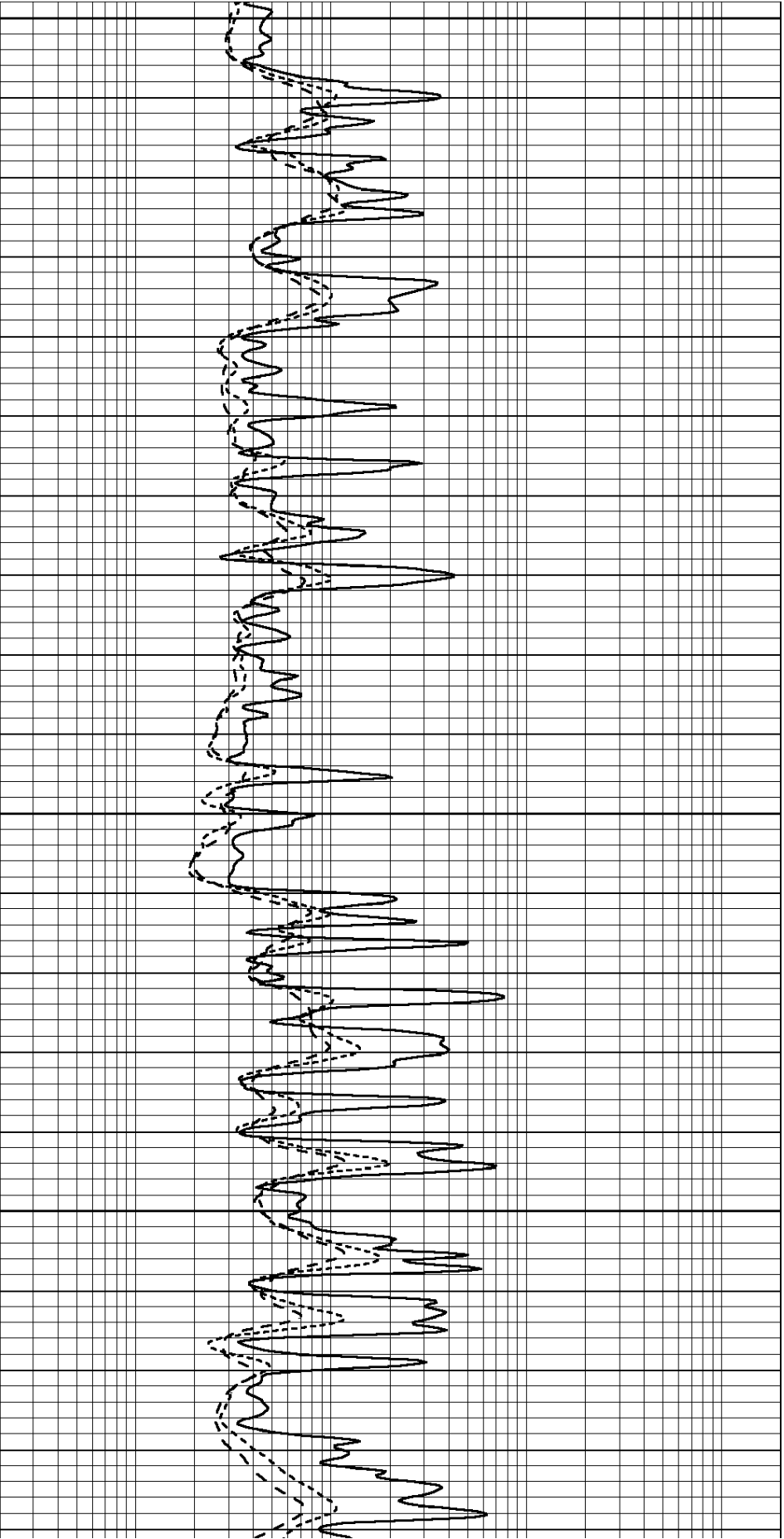
MAIN SECTION

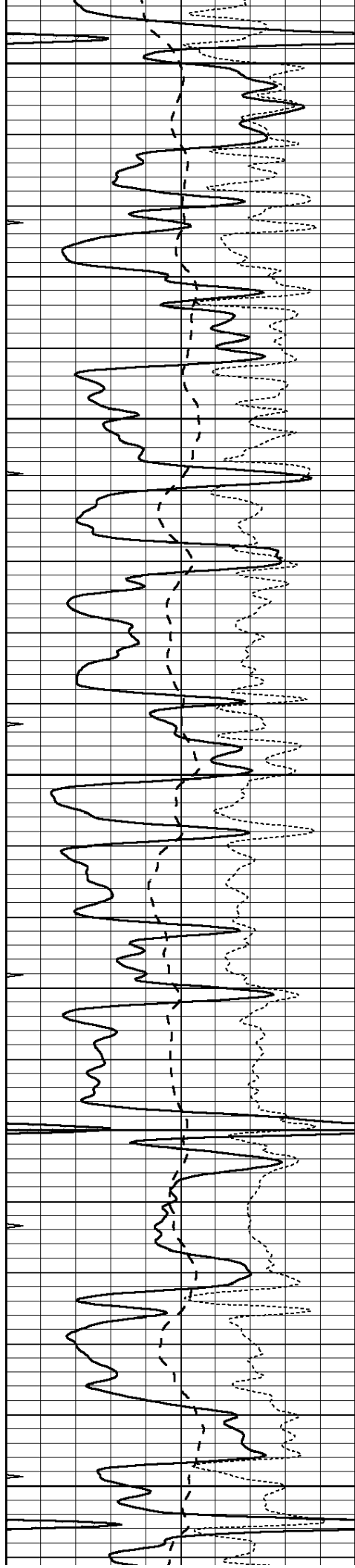
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0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20



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





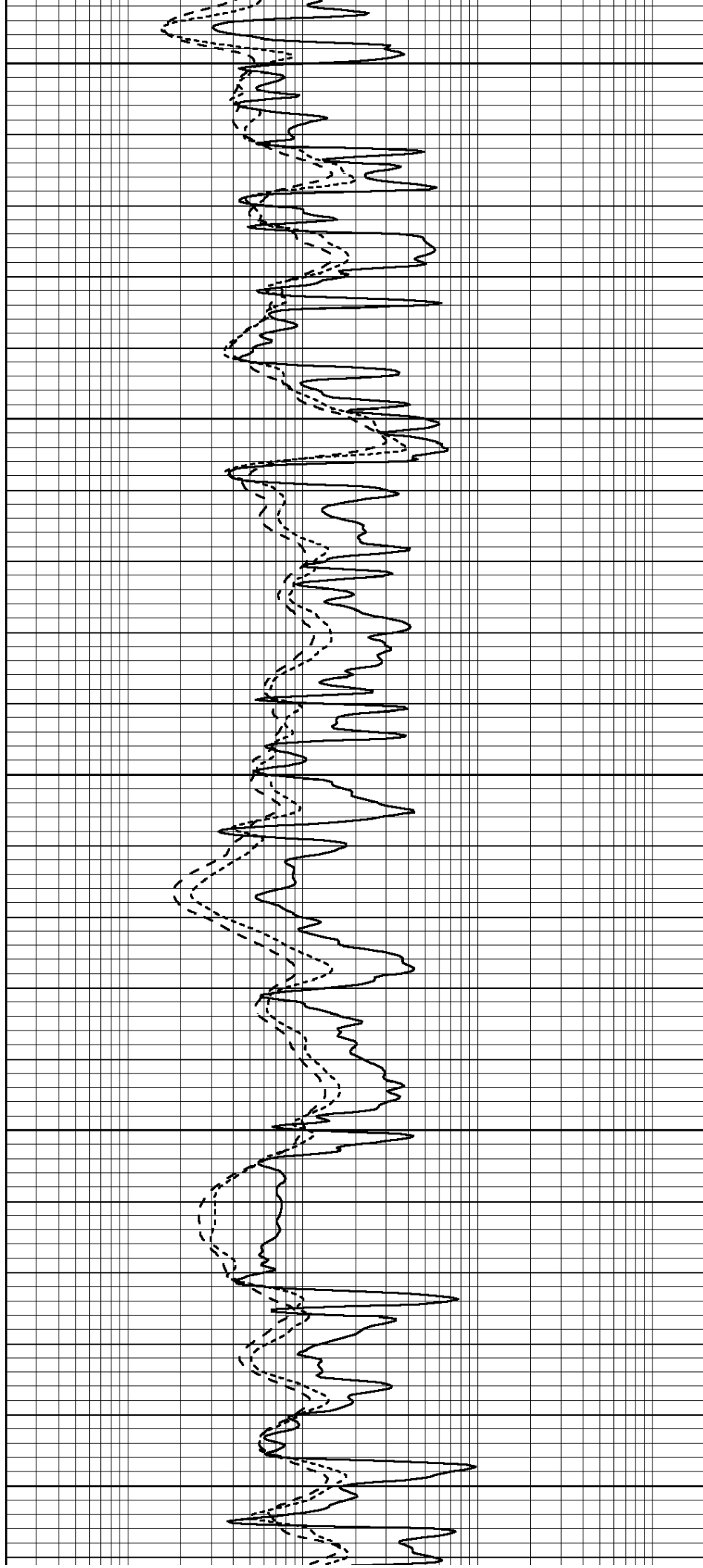
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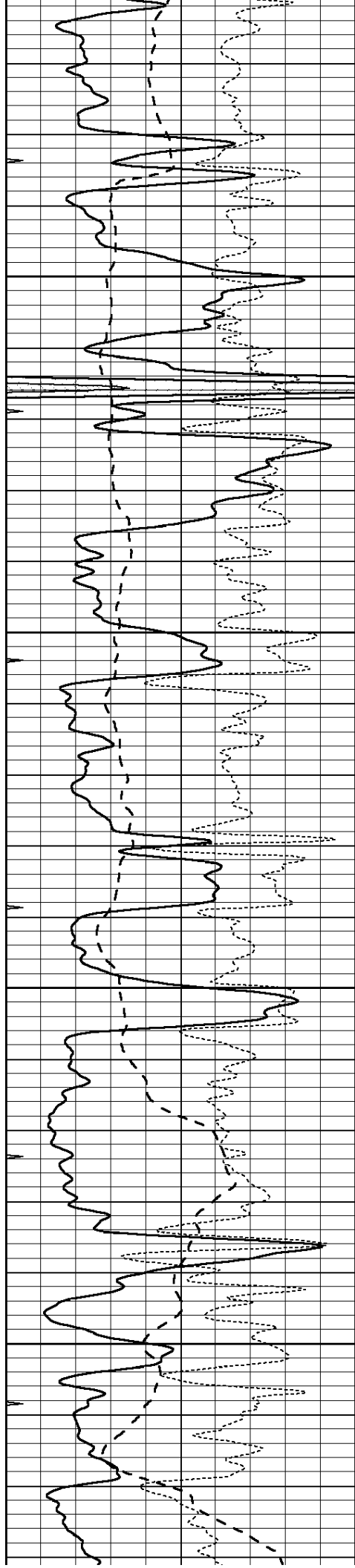
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3800



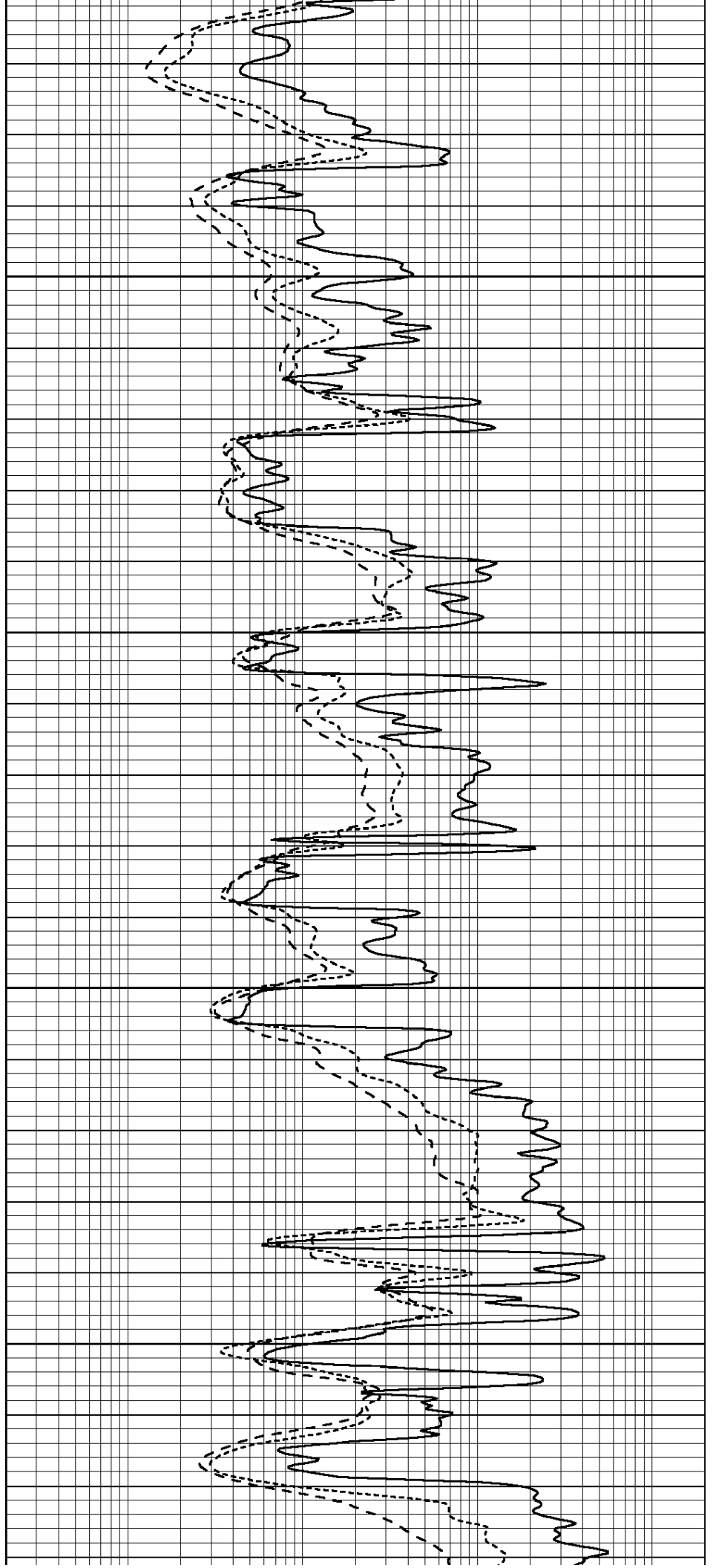


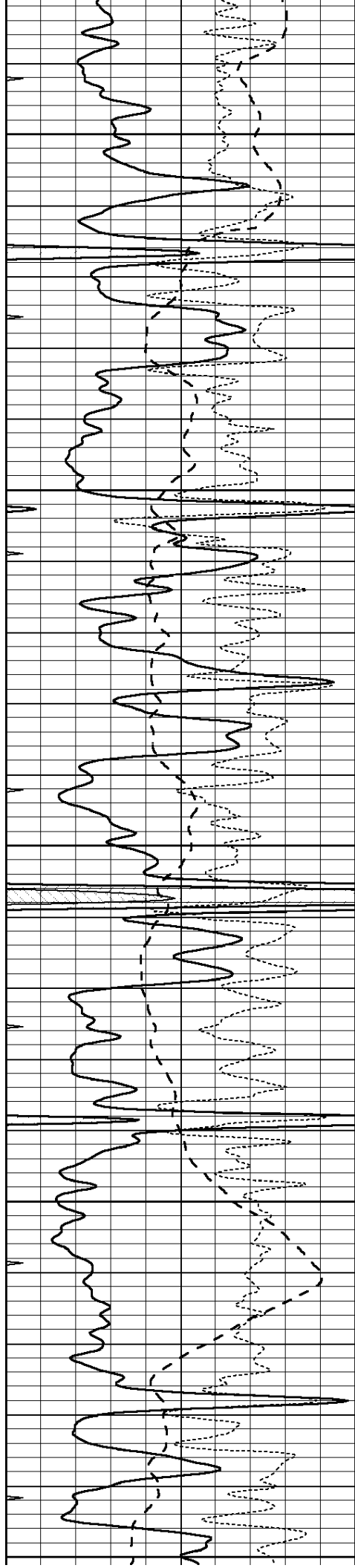
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3900

3950

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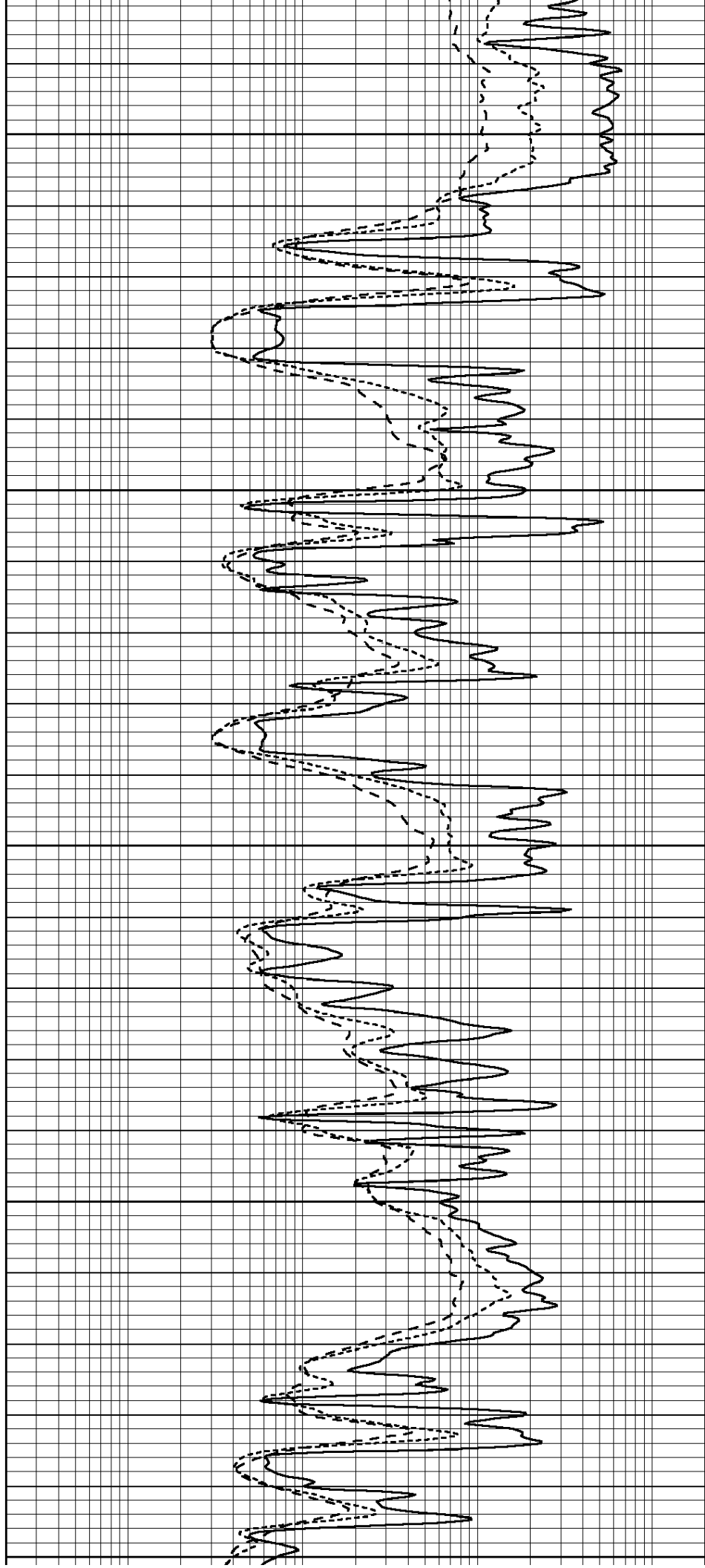
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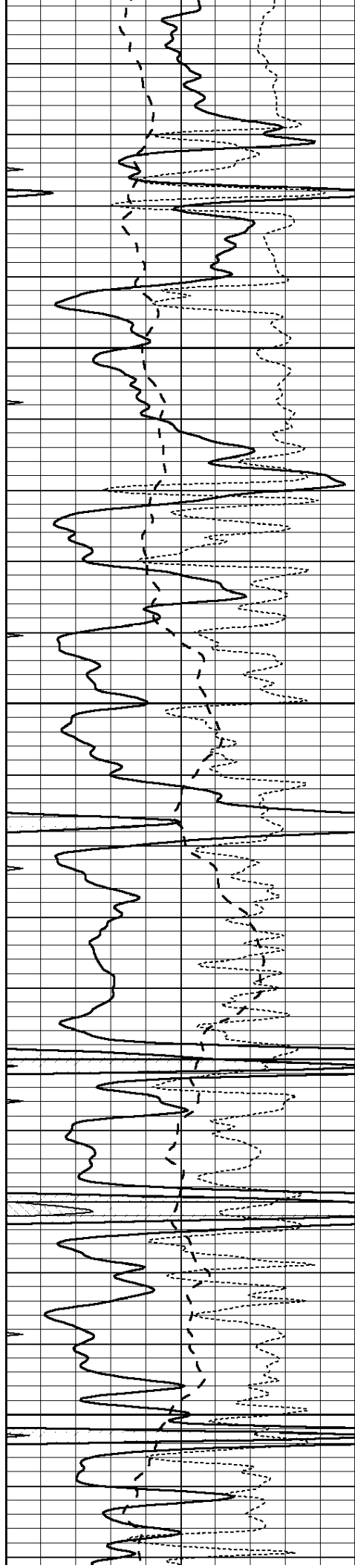
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4150

4200

4250



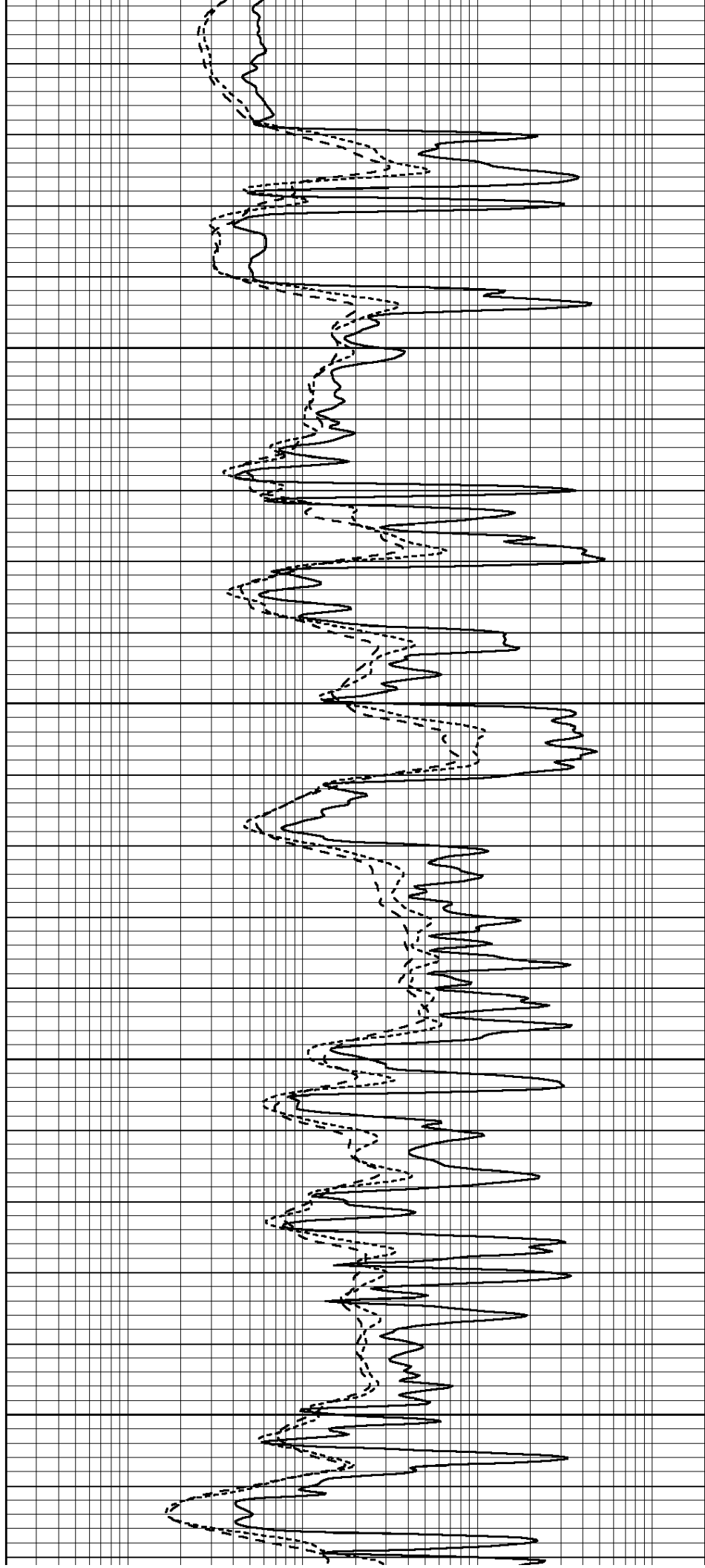


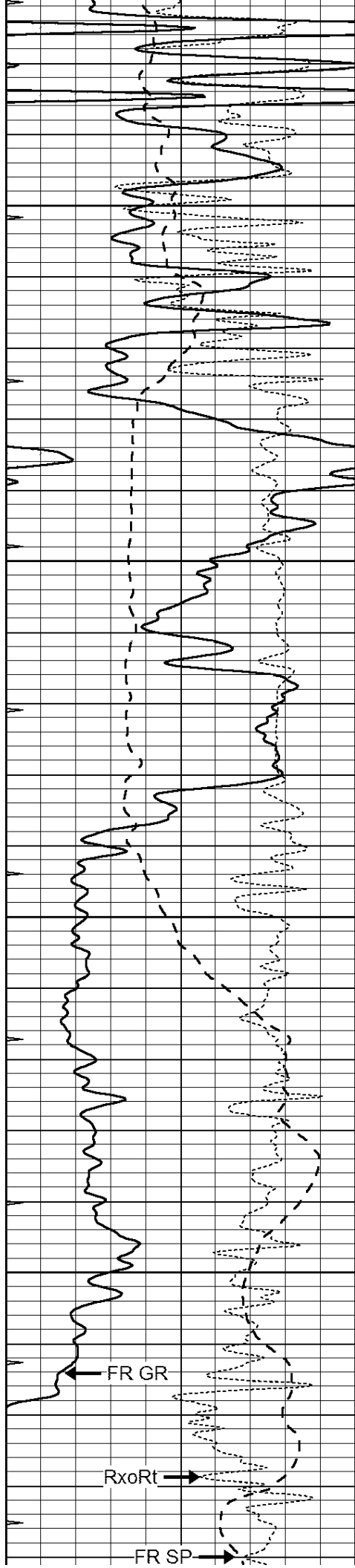
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4350

4400

4450



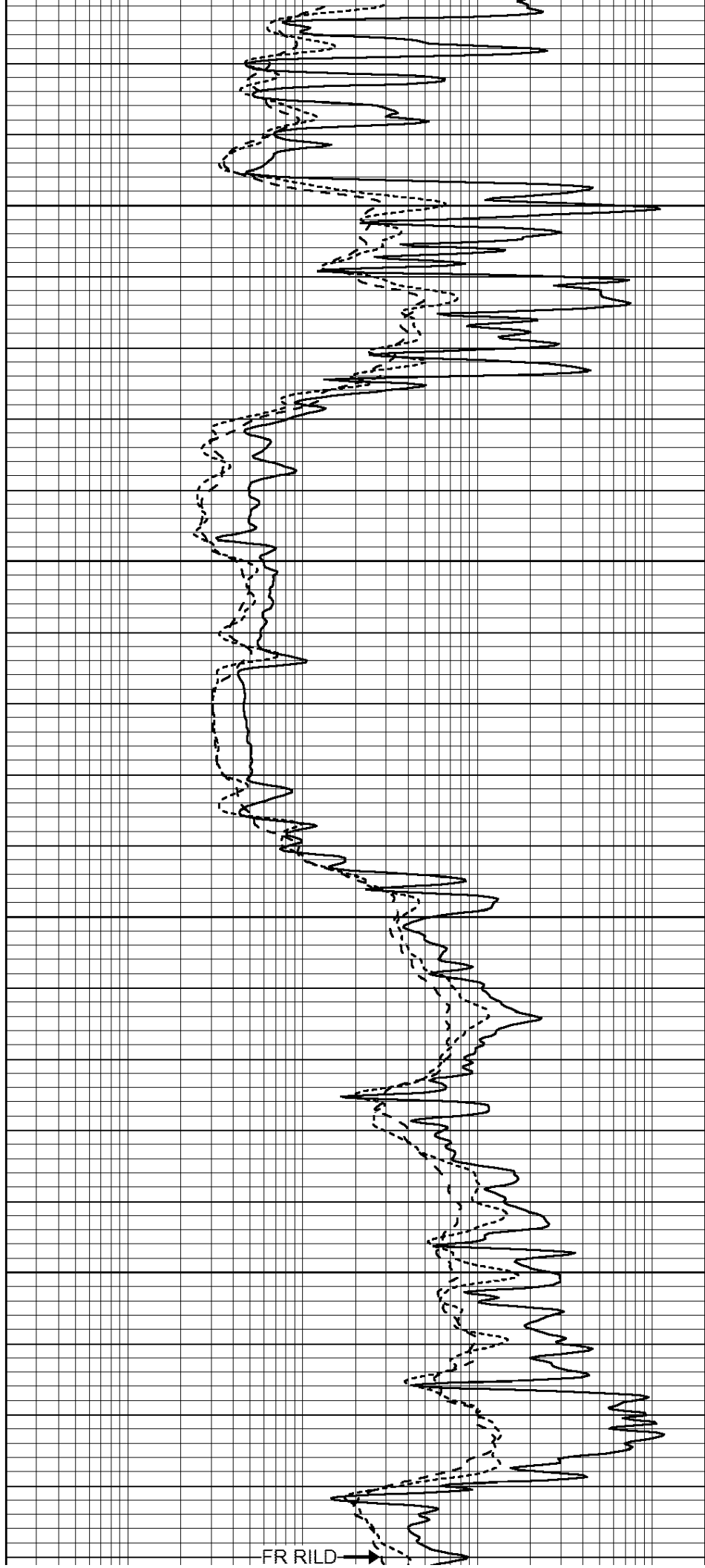


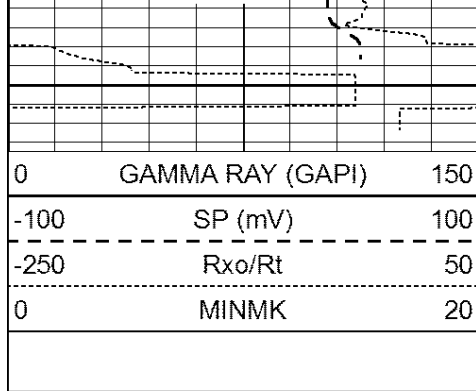
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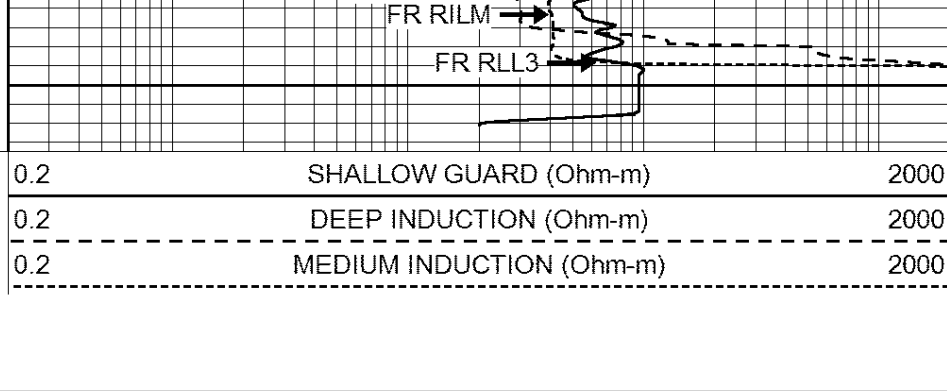
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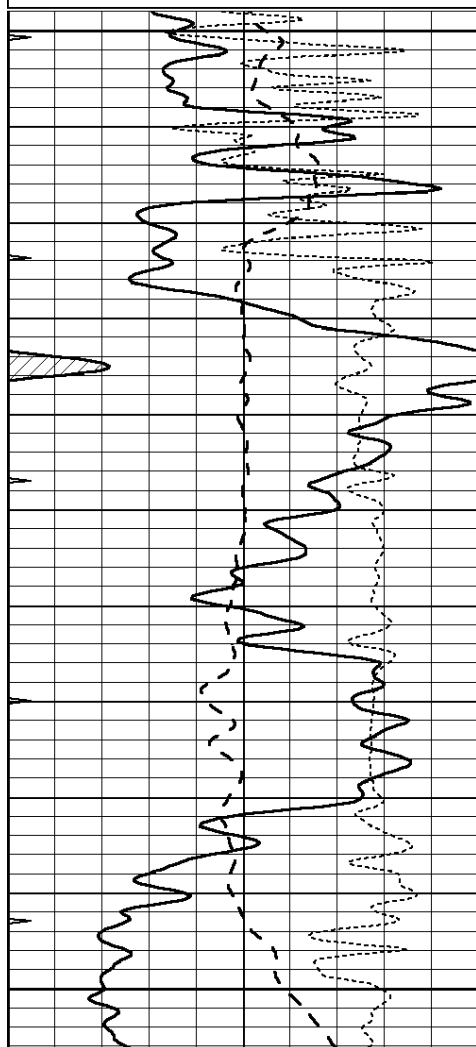
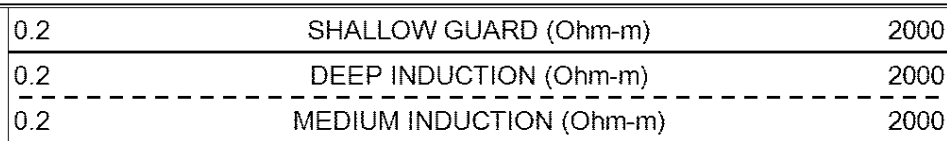
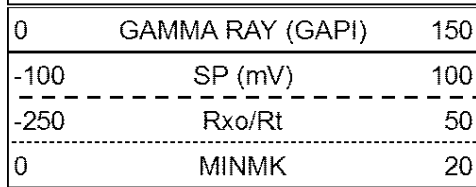


LTD 4700



REPEAT SECTION

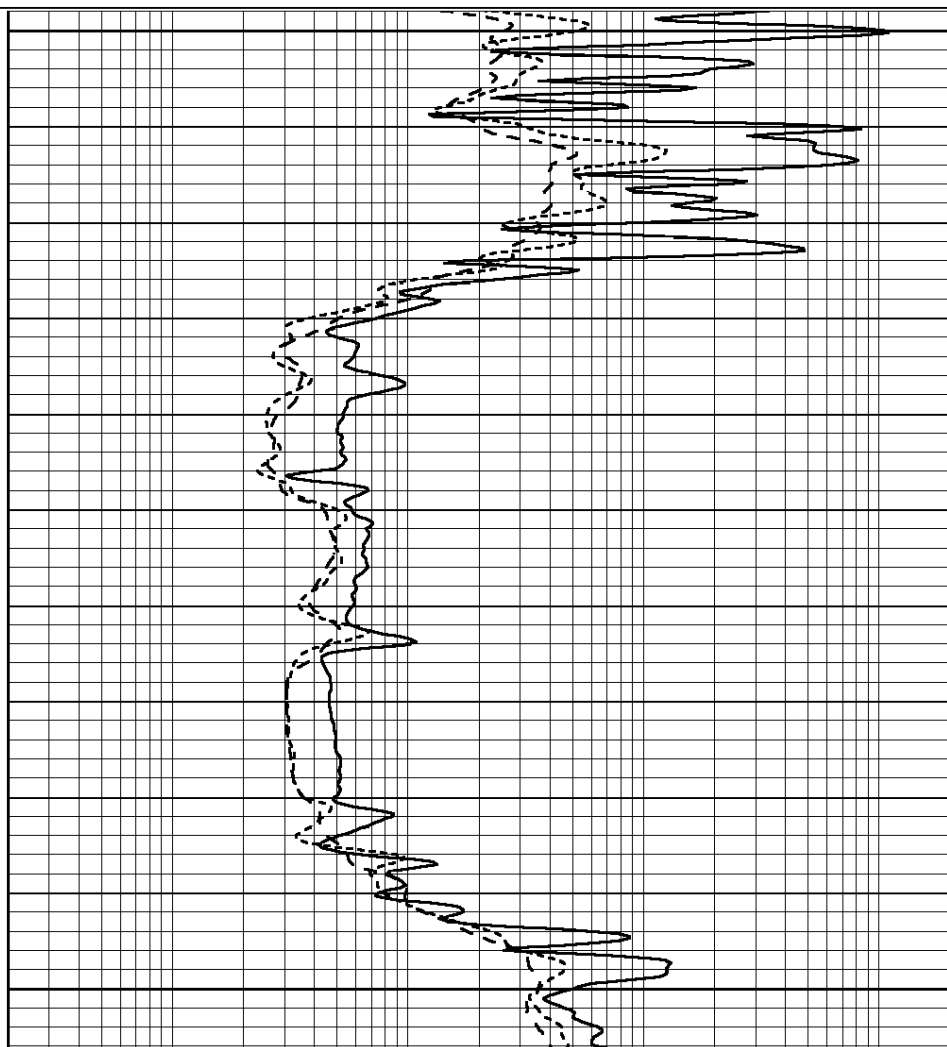
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 Charted by: Depth in Feet scaled 1:240

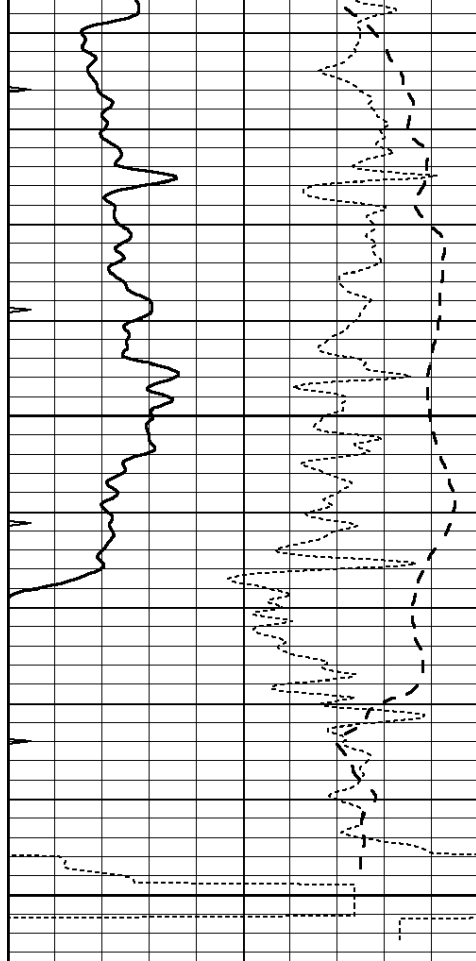


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4550

4600

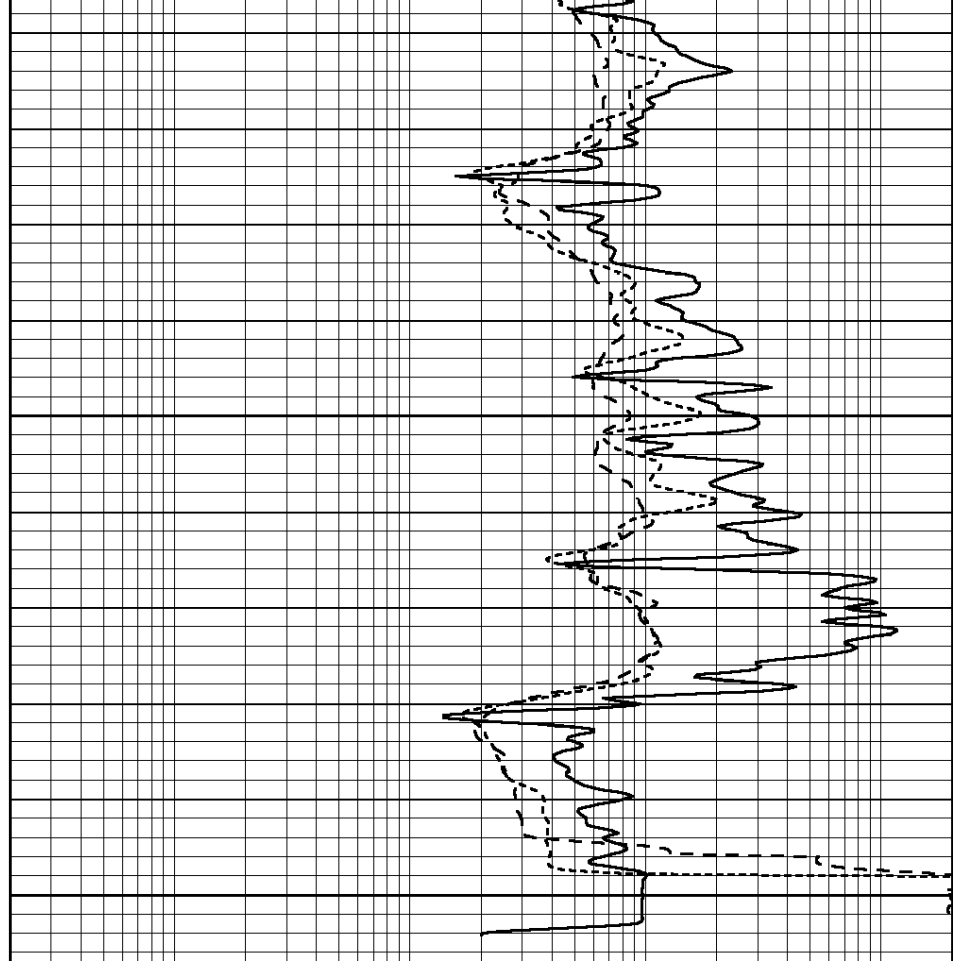




4650

4700

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: 25850ddn.db
 Dataset Pathname: pass3.1
 Dataset Creation: Tue Aug 12 17:44:58 2014

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
 Surface Cal Performed: Sun Jul 27 18:19:21 2014
 Downhole Cal Performed: Mon Jul 28 11:08:27 2008
 After Survey Verification Performed: Mon Jul 28 11:08:27 2008

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	630.000	-6.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	590.000	-16.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739

Downhole Calibration

Readings References Results

PRE-SURVEY VERIFICATION

	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:	Sun Jul 27 22:13:15 2014	
Calibrator Value:	150.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	276.0	cps
Sensitivity:	0.7500	GAPI/cps