



Pioneer Energy Services

Dual Induction Log

15-153-20,912-00-00

API No.

Company **Murfin Drilling Company, Inc.**

Well **Frisbie No.1-23**

Field

County **Rawlins**

State

Kansas

Location

2310' FNL & 2310' FWL

Other Services
CNL/CDL
MEL/BHCS

Sec: **23**

Twp: **2S**

Rge: **36W**

Elevation

K.B. 3305
D.F. 3295
G.L. 3295

Permanent Datum **Ground Level**

3295

Log Measured From **Kelly Bushing**

10 Ft. Above Perm. Datum

Drilling Measured From **Kelly Bushing**

Date

11/30/2012

Run Number

One

Depth Driller

4990

Depth Logger

4986

Bottom Logged Interval

4985

Top Log Interval

0

Casing Driller

8.625 @ 391

Casing Logger

389

Bit Size

7.875

Type Fluid in Hole

Chemical

Salinity,ppm CL

1,400

Density / Viscosity

9.3 67

pH / Fluid Loss

11.5 5.6

Source of Sample

Flowline

Rm @ Meas. Temp

1.55 @ 62

Rmf @ Meas. Temp

1.16 @ 62

Rmc @ Meas. Temp

2.09 @ 62

Source of Rmf / Rmc

Charts

Rm @ BHT

.76 @ 126

Operating Rig Time

5 Hours

Max Rec. Temp. F

126

Equipment Number

17

Location

Hays

Recorded By

C. Desaire

Witnessed By

Rocky Milford

<<< 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 Pioneer Energy Services
www.pioneerenergy.com
785 625 3858

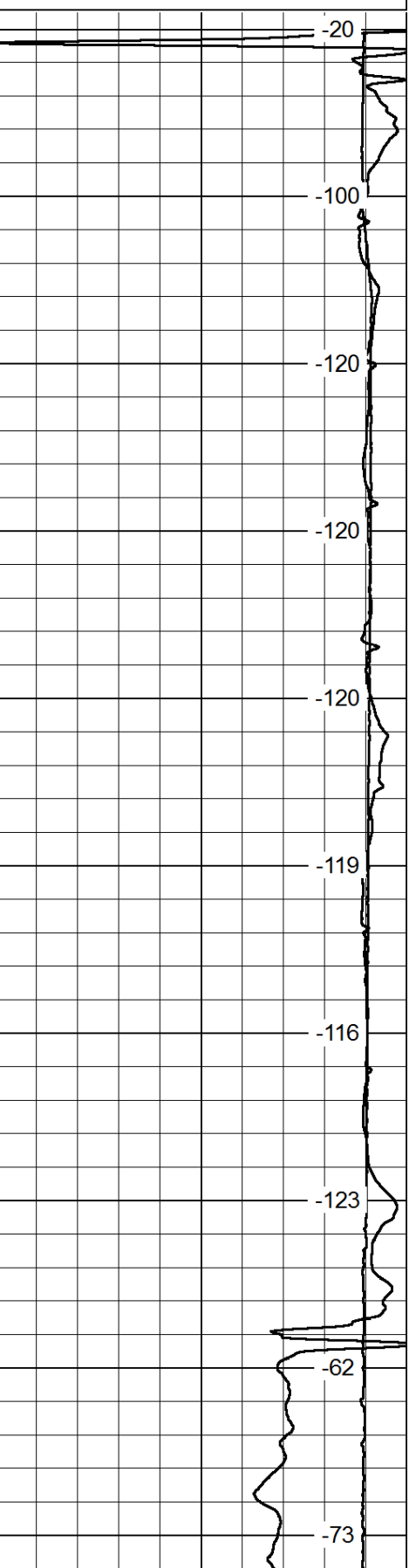
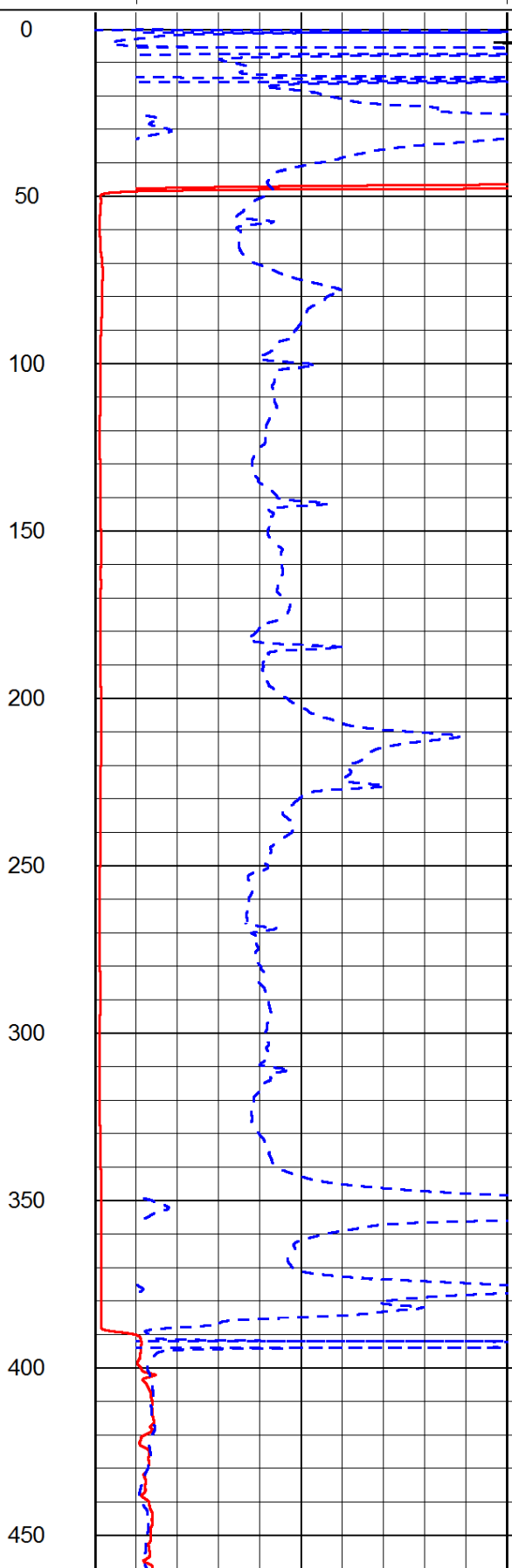
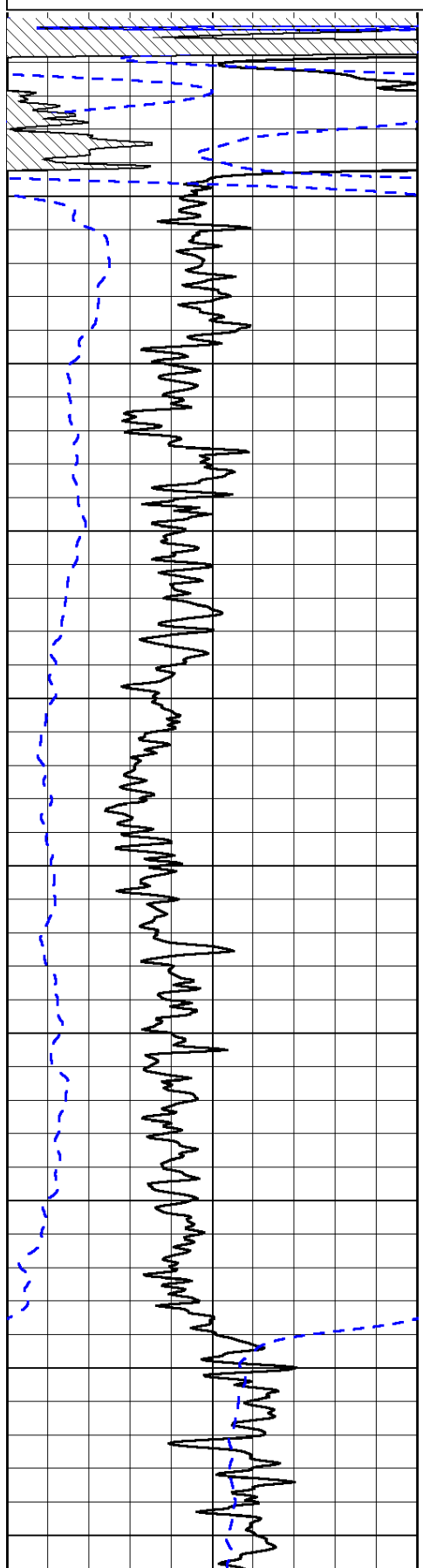
Atwood KS, 16 W to 5 Rd,
6 N to V Rd, 1/2 E, S Into

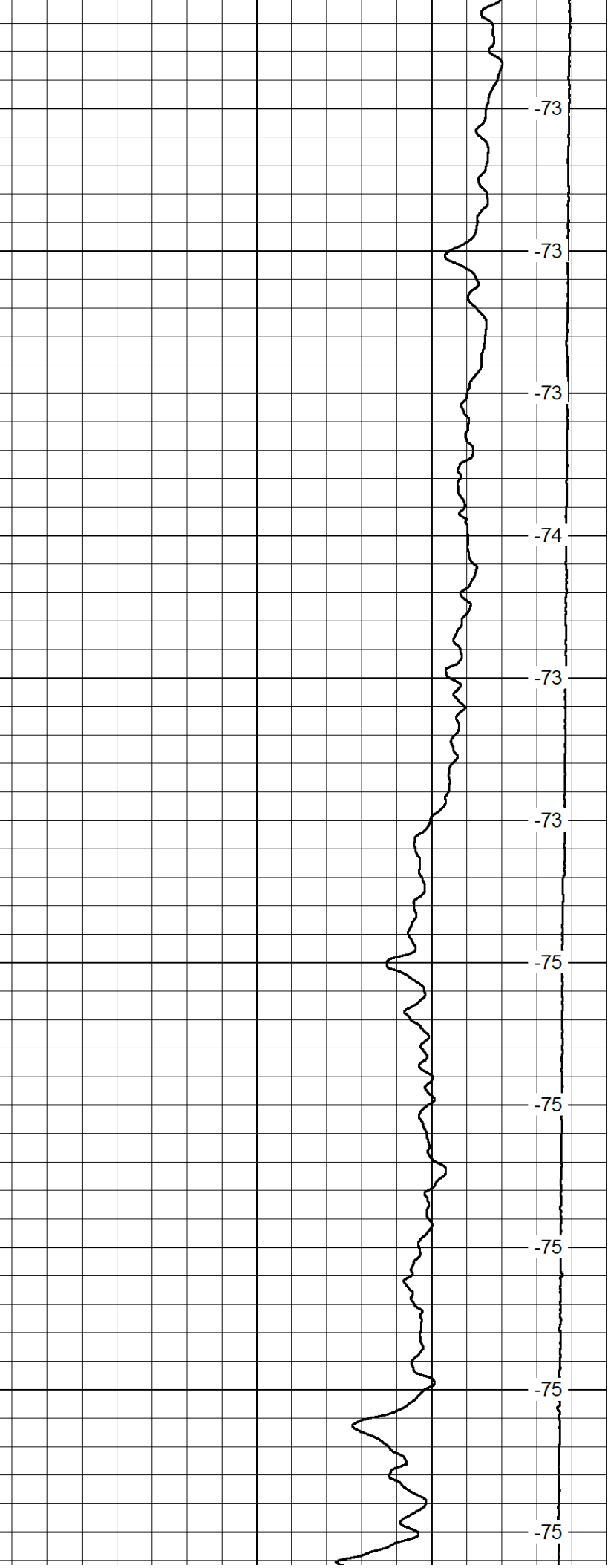
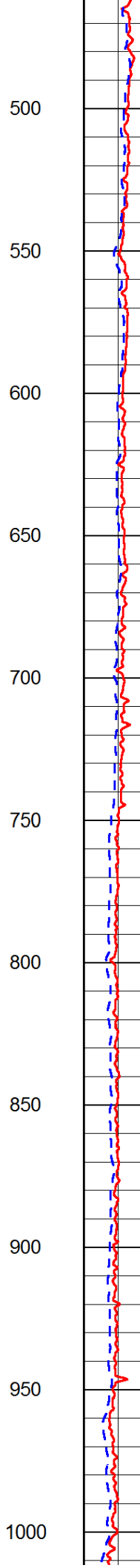
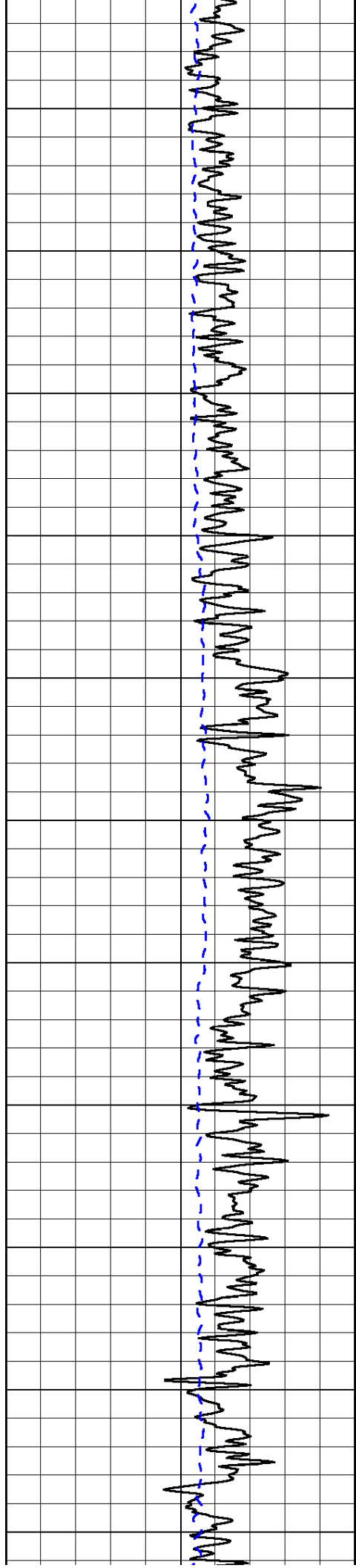
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Presentation Format: dil2in
Dataset Creation: Fri Nov 30 17:56:53 2012
Charted by: Depth in Feet scaled 1:600

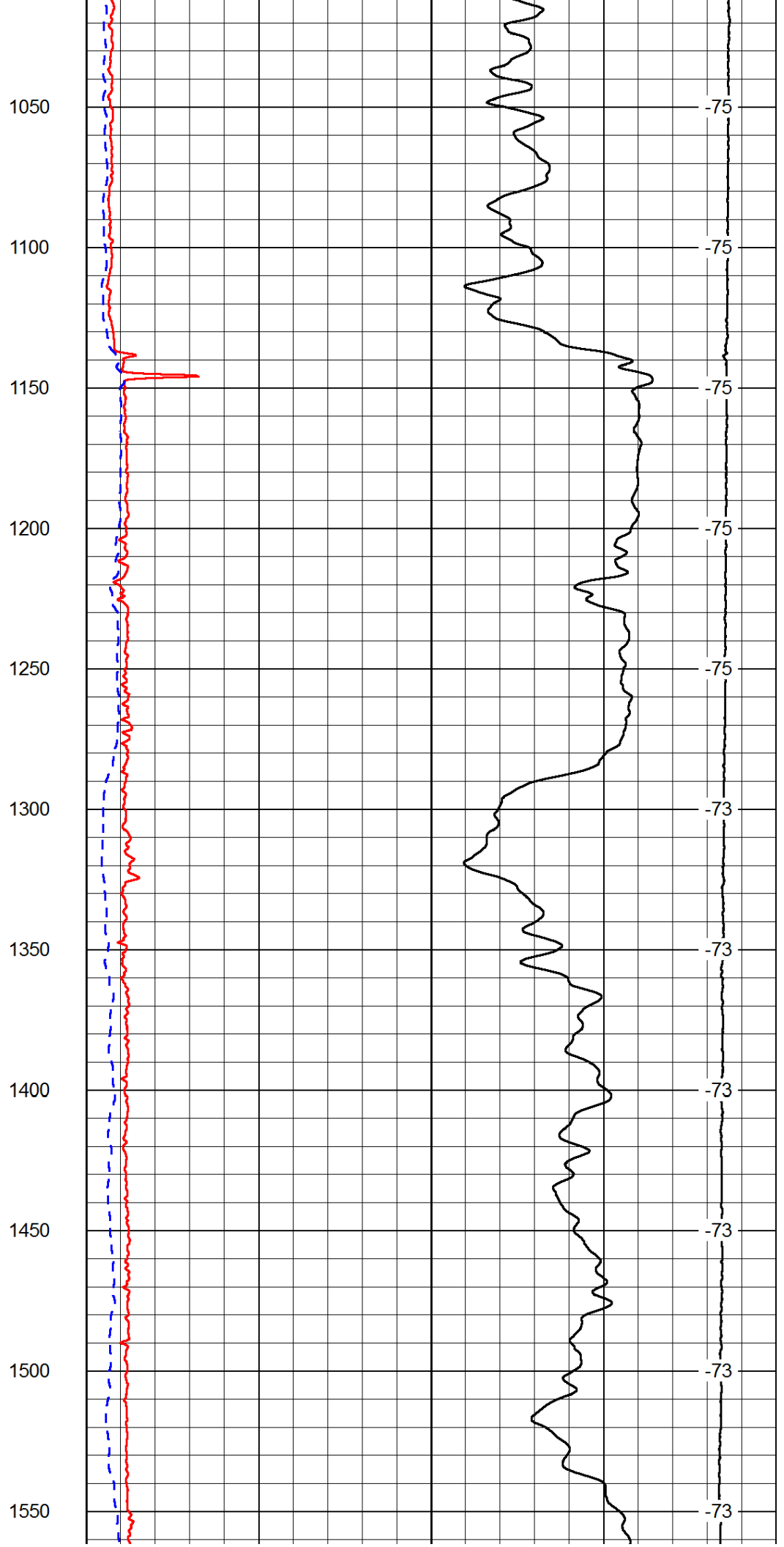
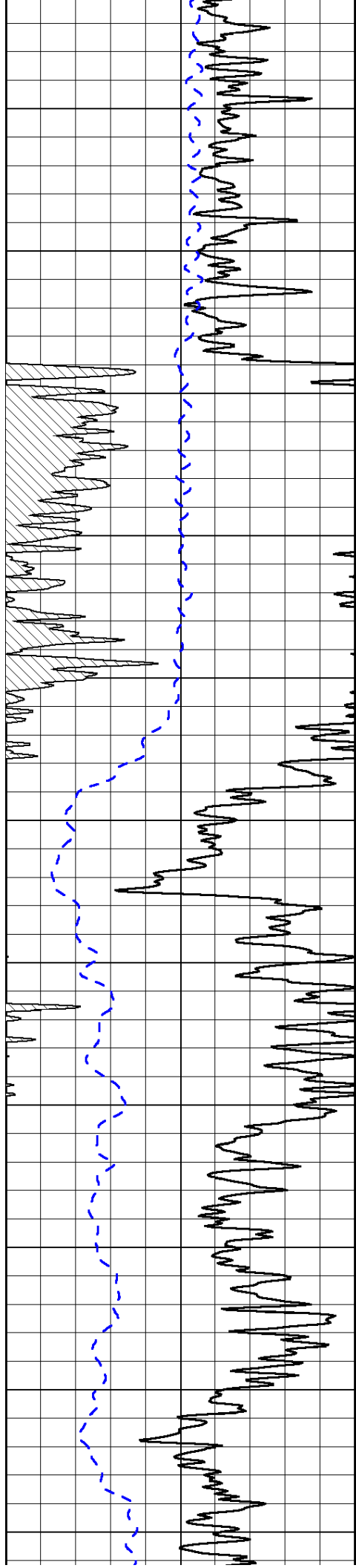
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-200	SP (mV)	0

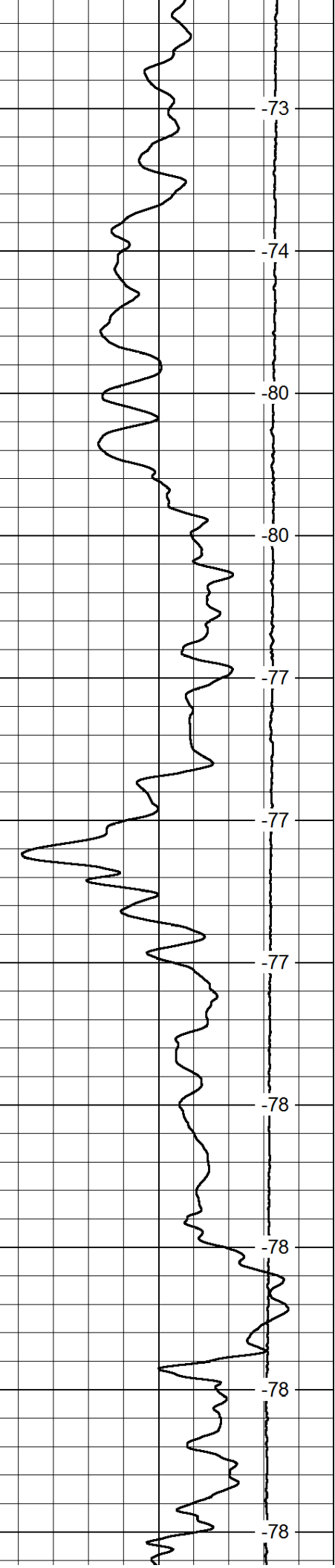
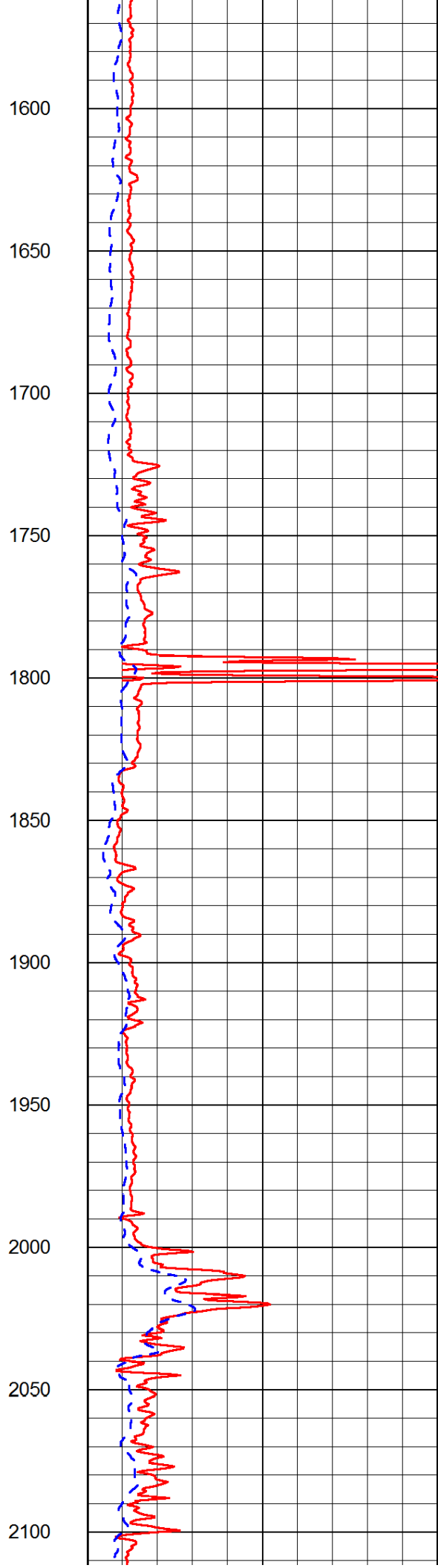
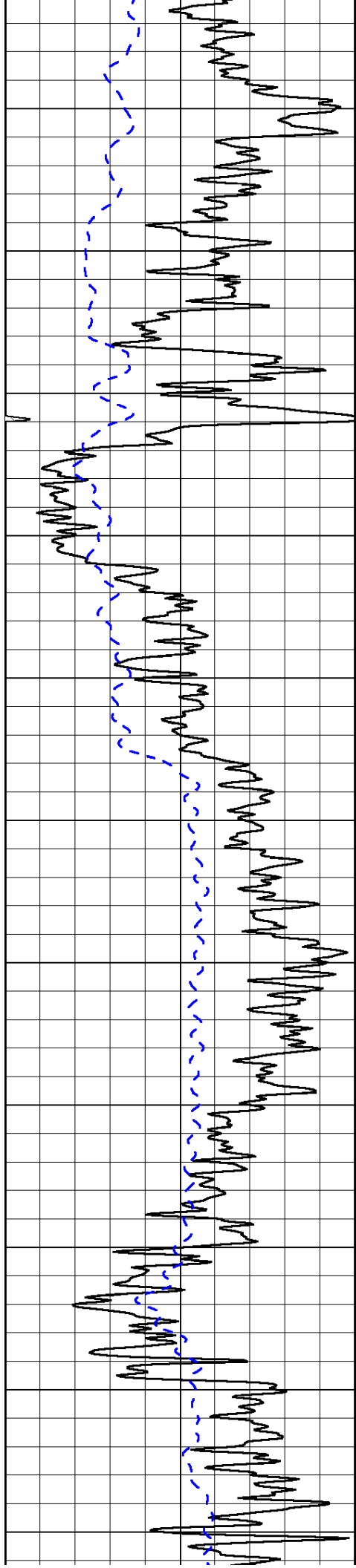
0	Shallow Resistivity	50
0	Deep Resistivity	50
1000	Conductivity	0
15000	Line Tension	0
50	Shallow Resistivity	500
50	Deep Resistivity	500

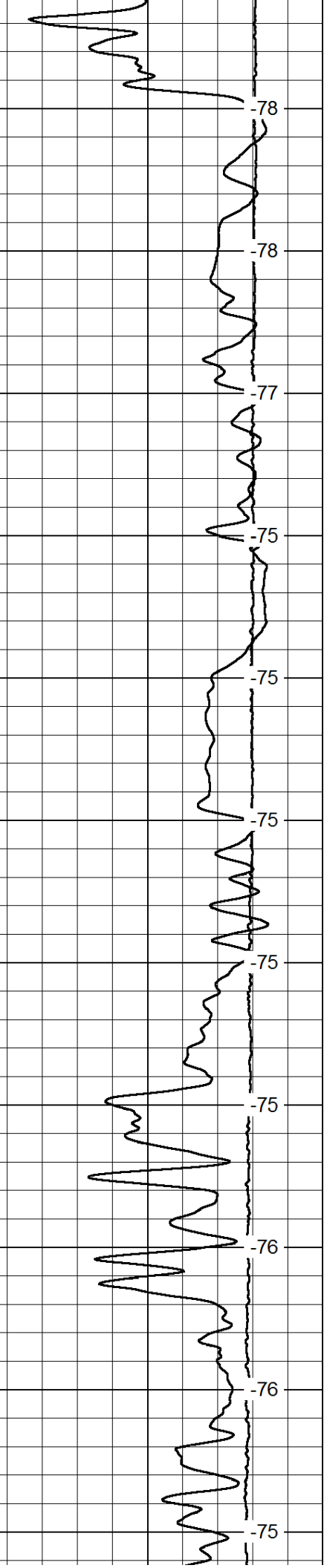
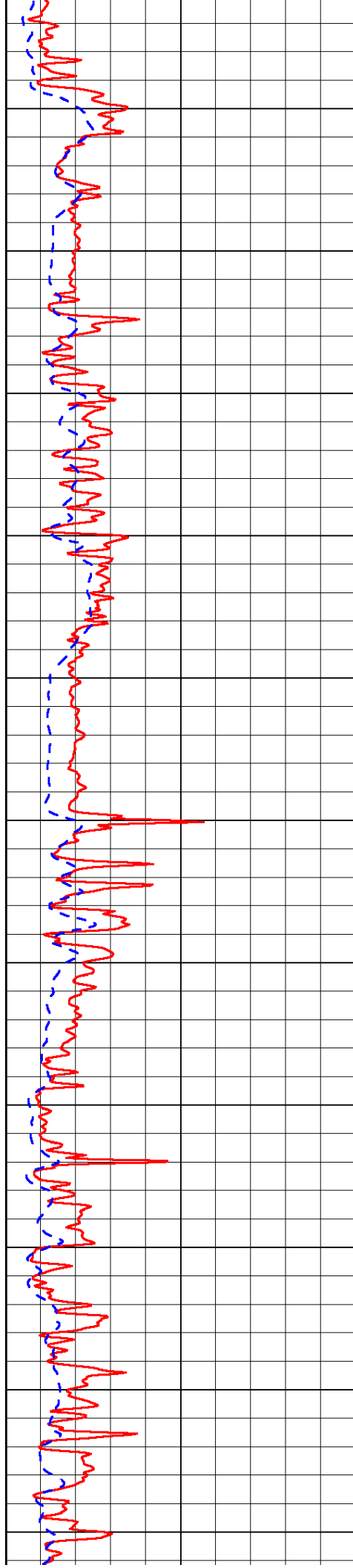
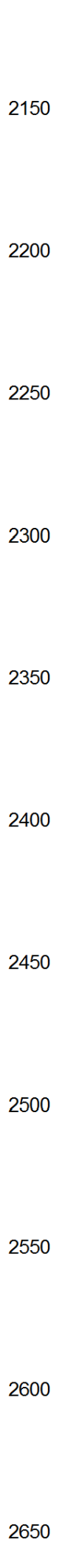
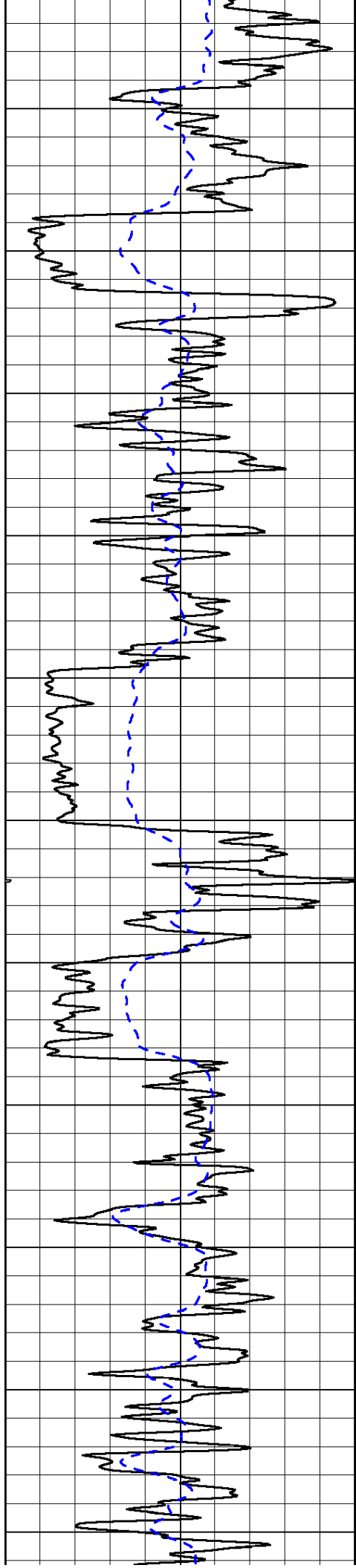
LSPD

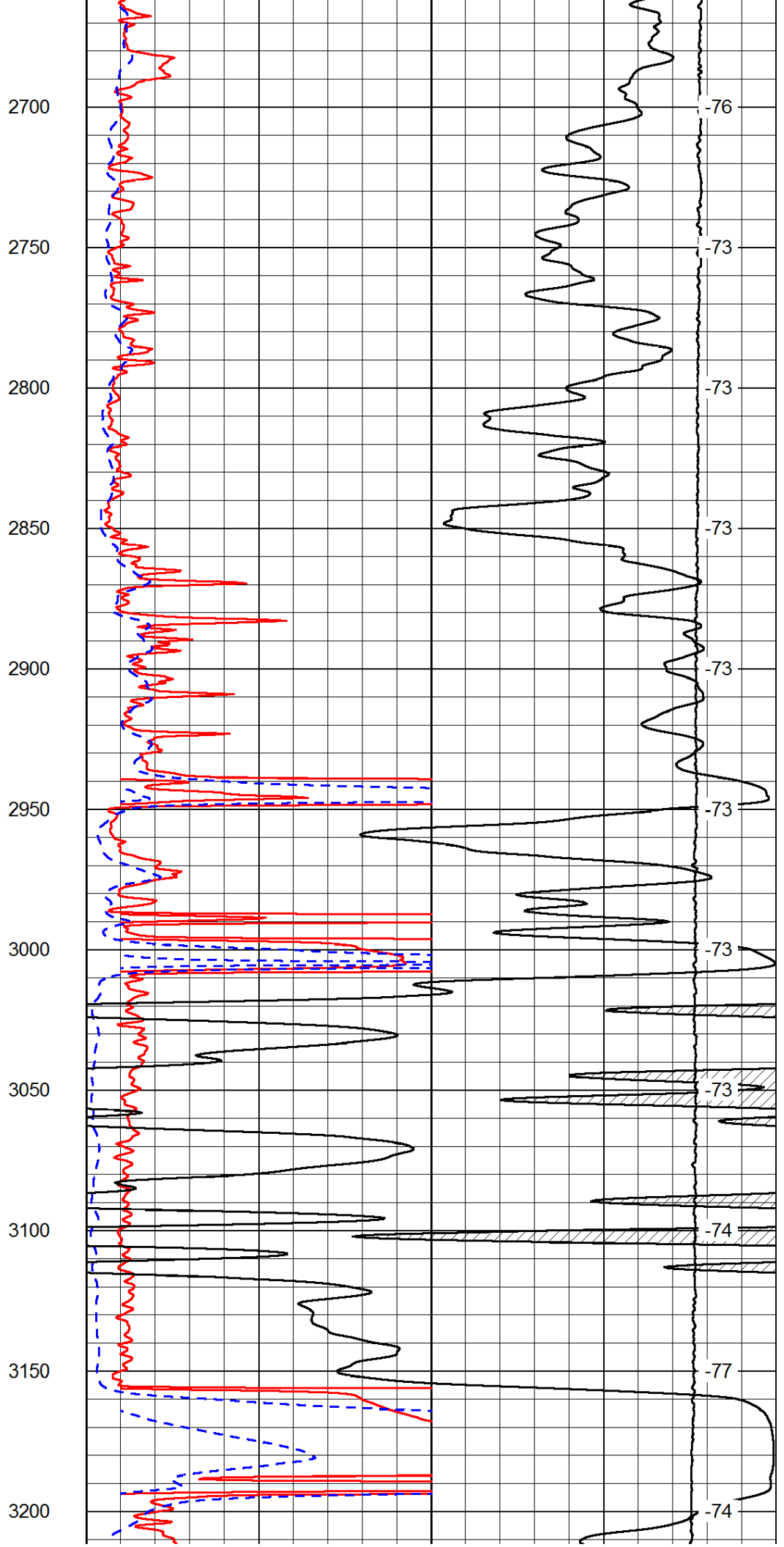
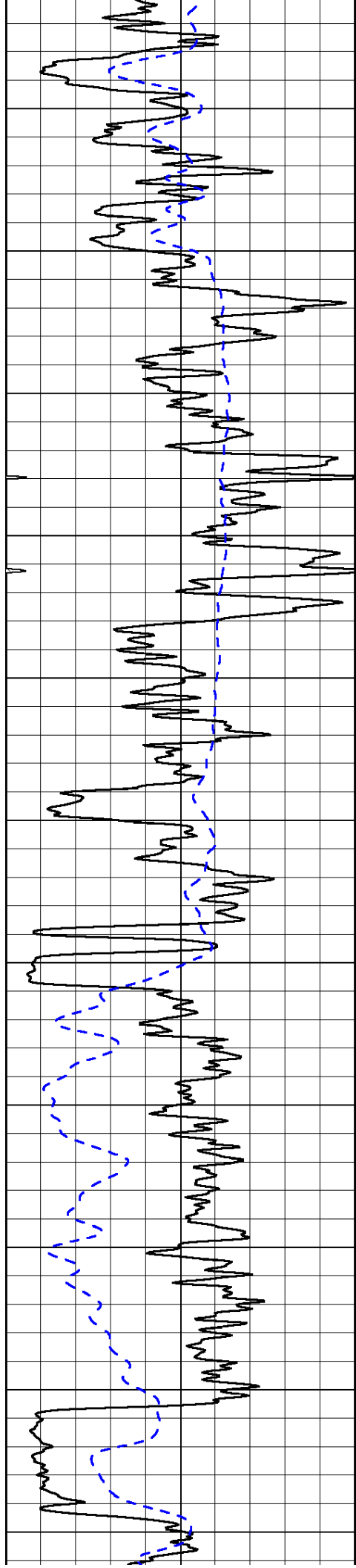


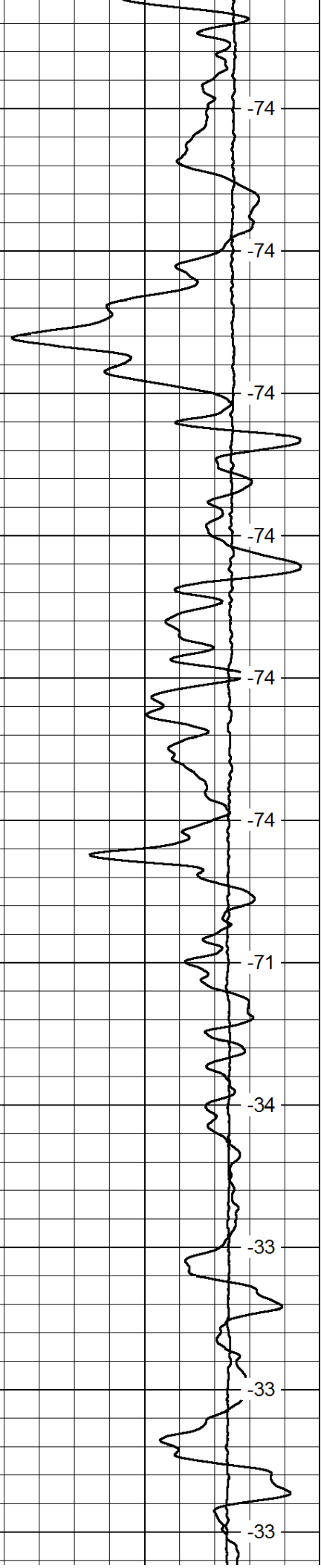
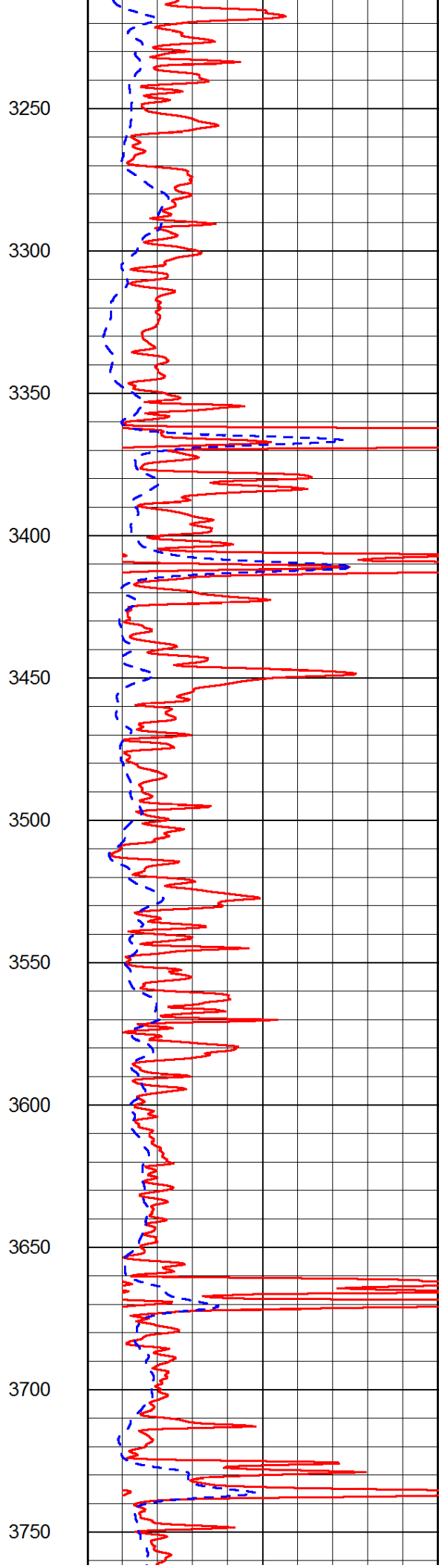
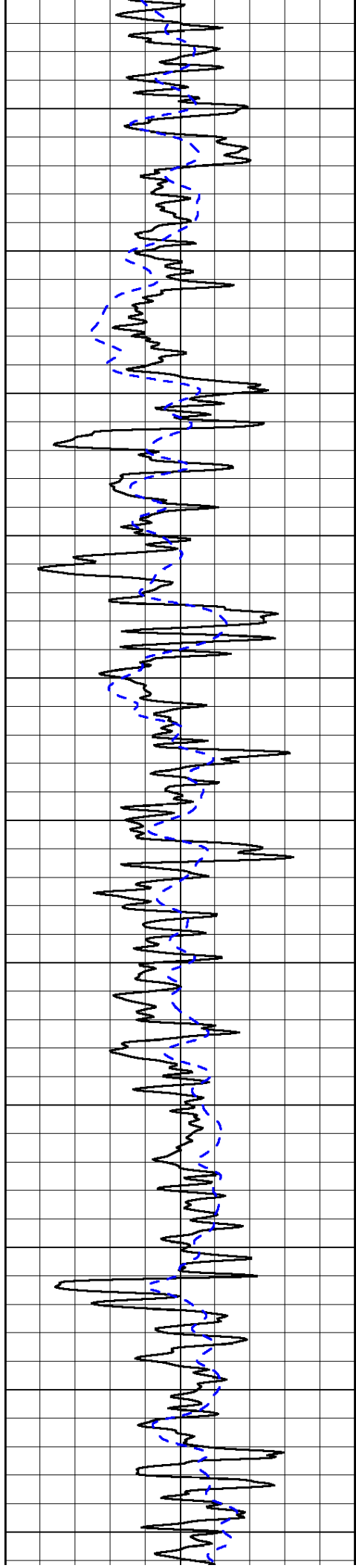


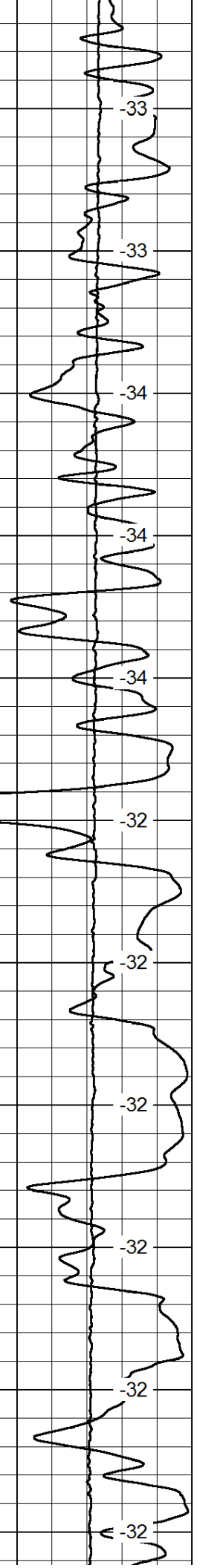
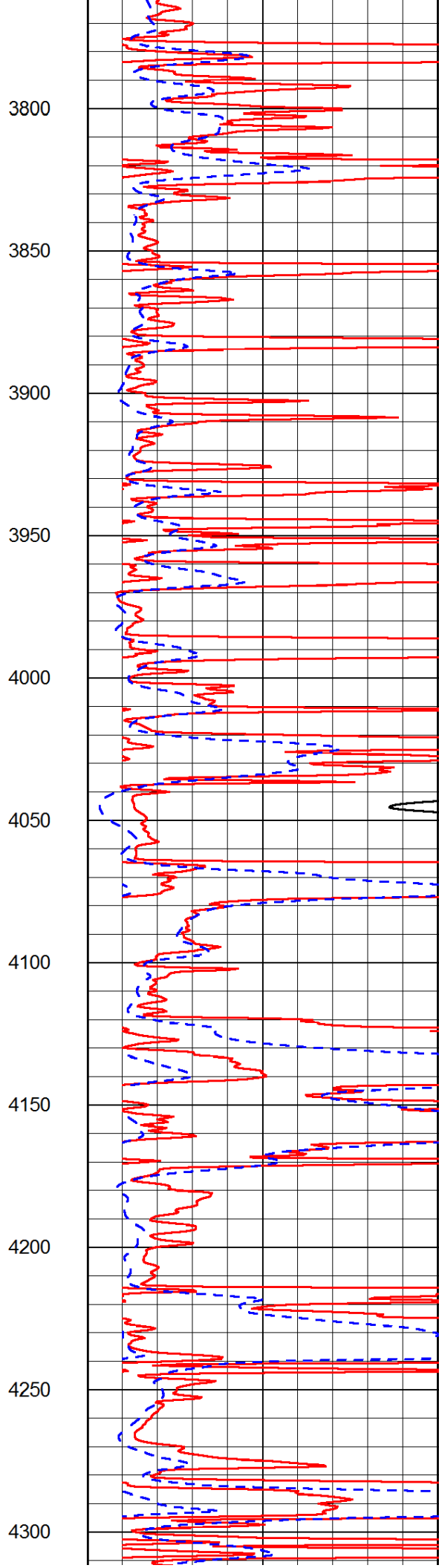
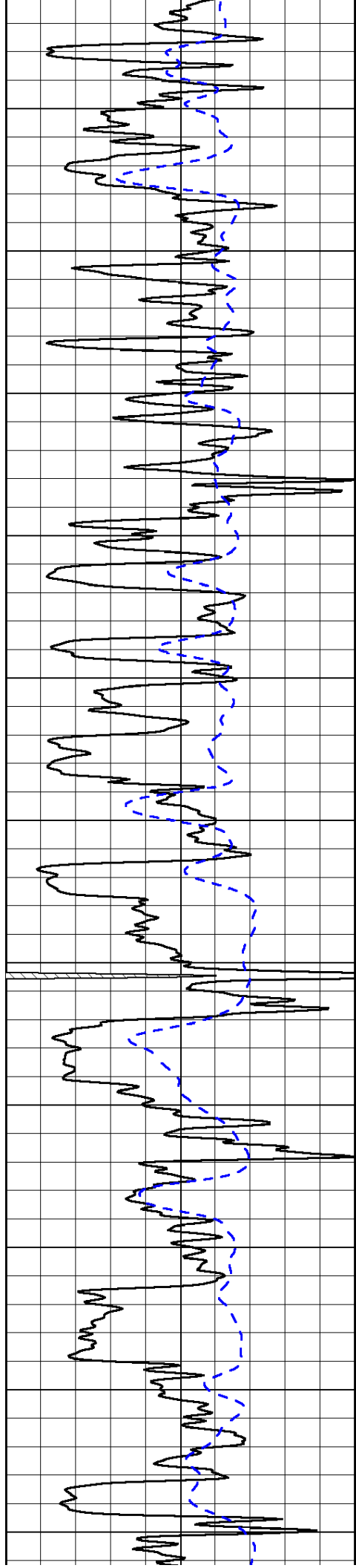


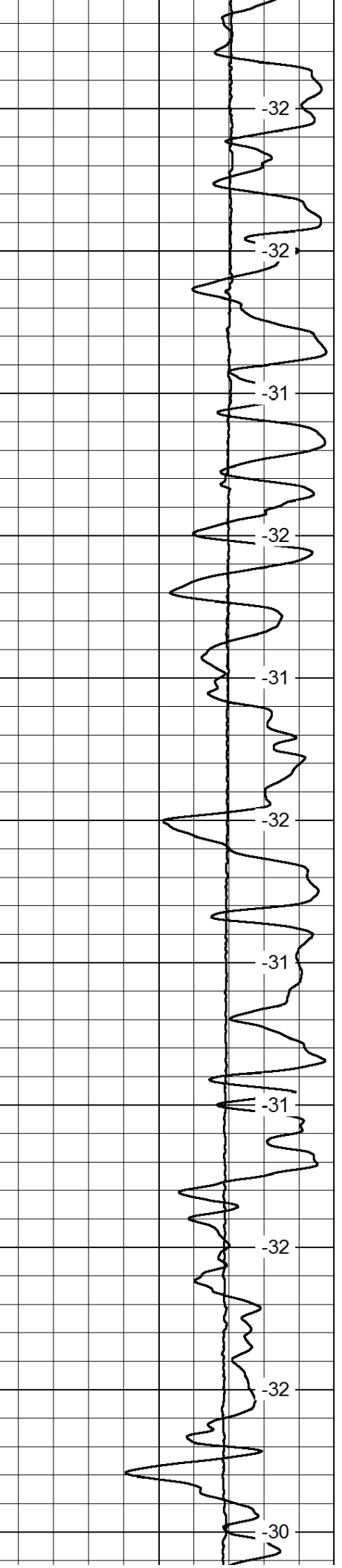
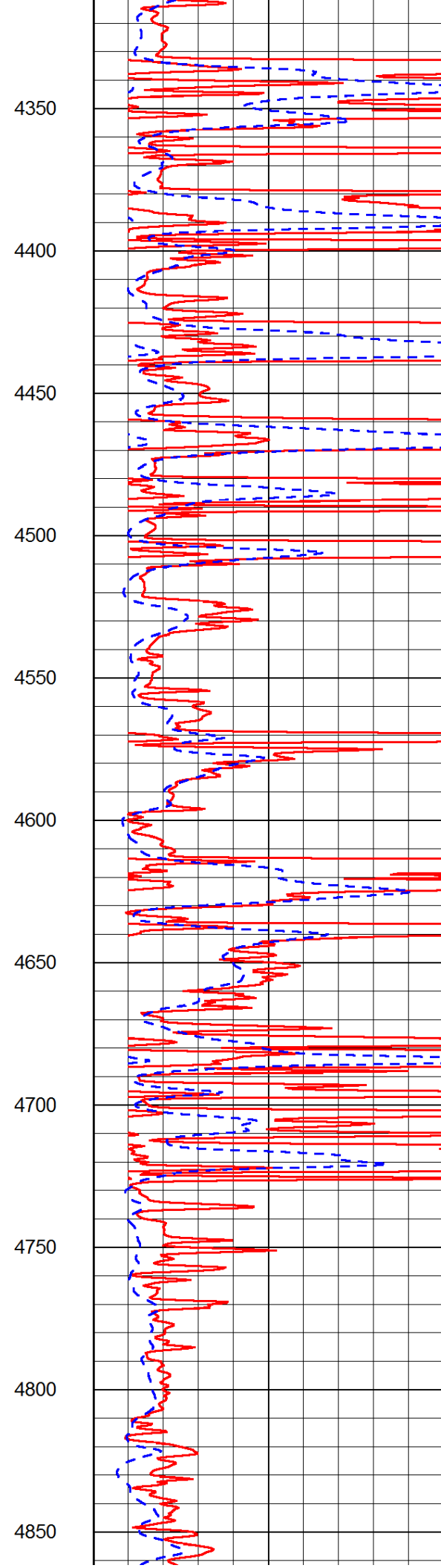
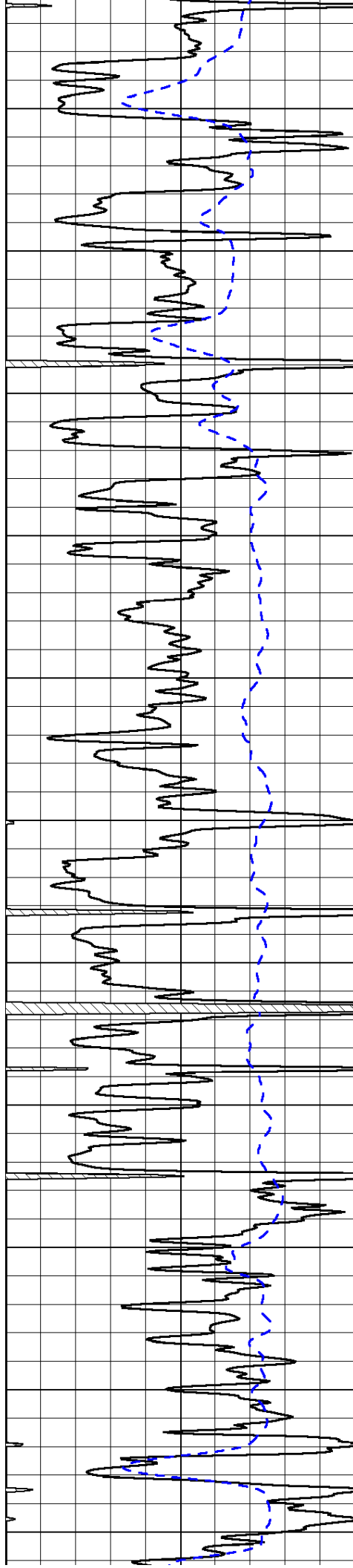


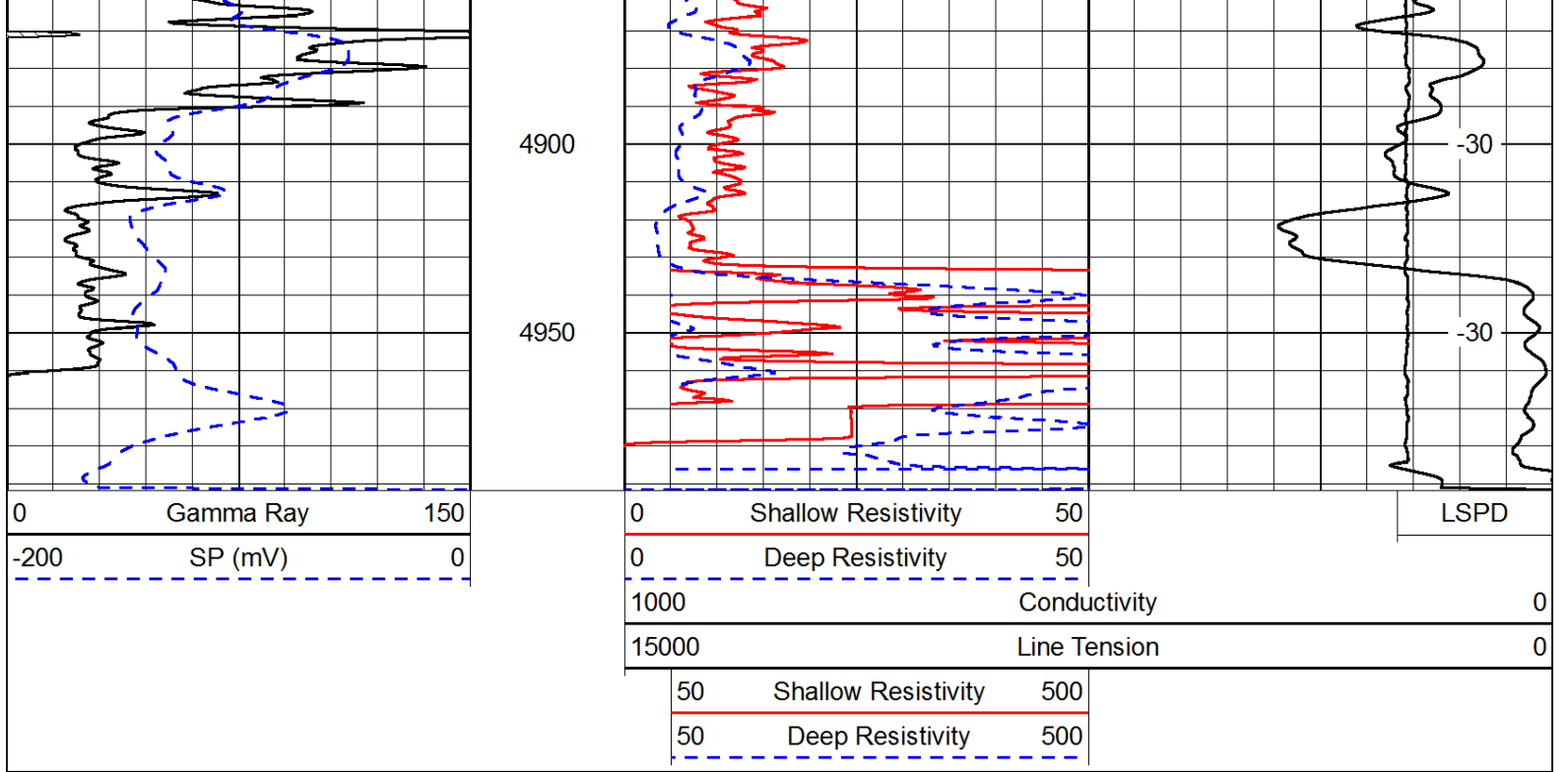




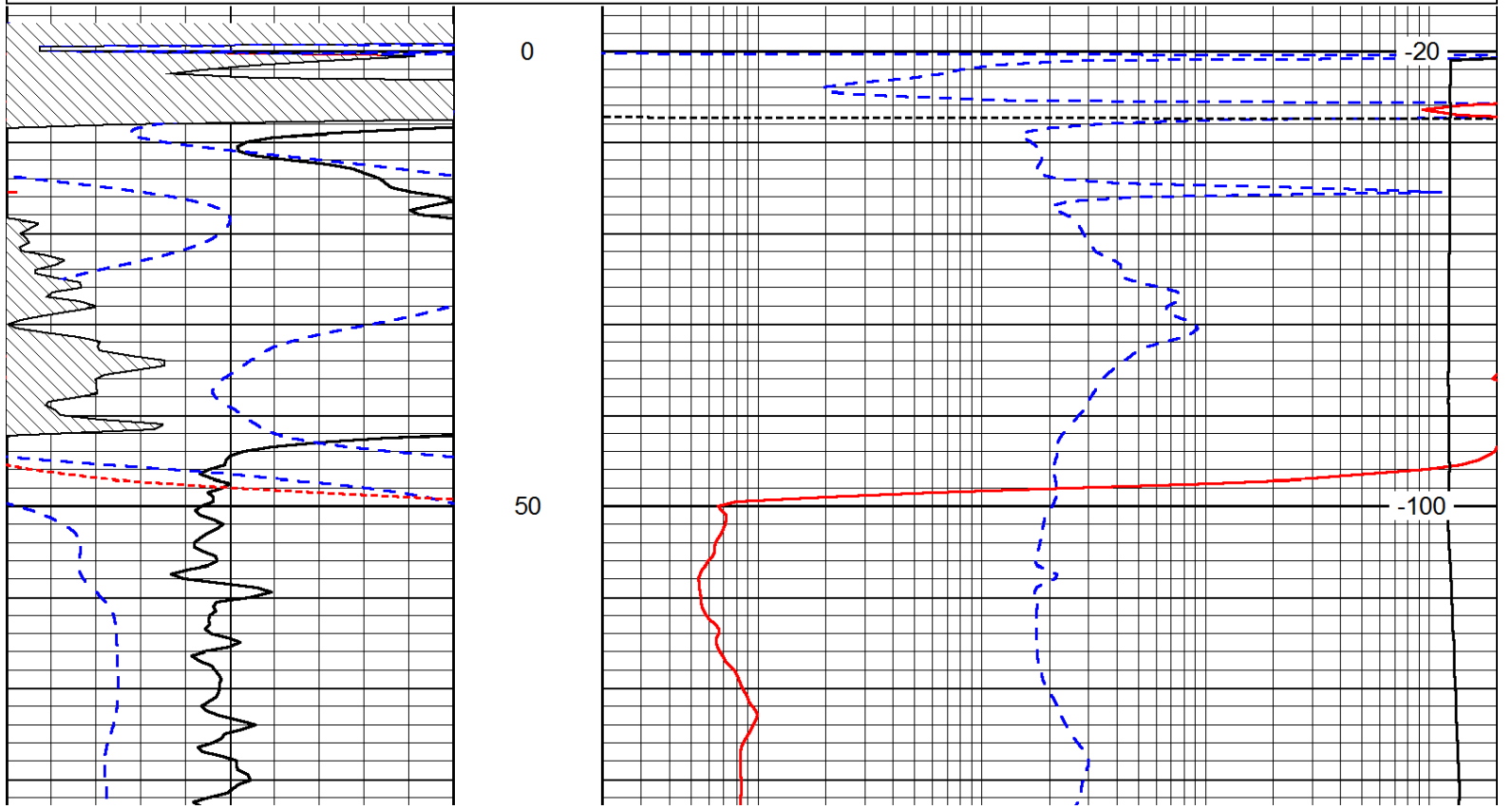
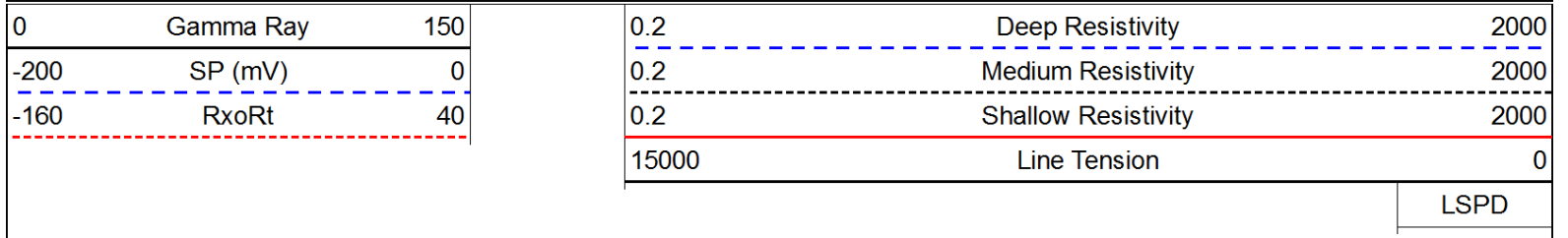


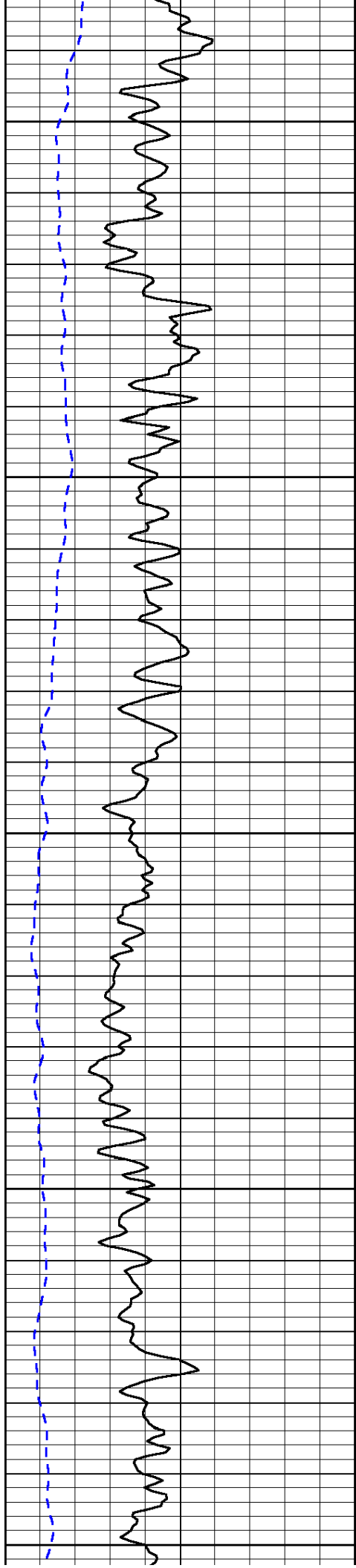






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 Presentation Format: dil
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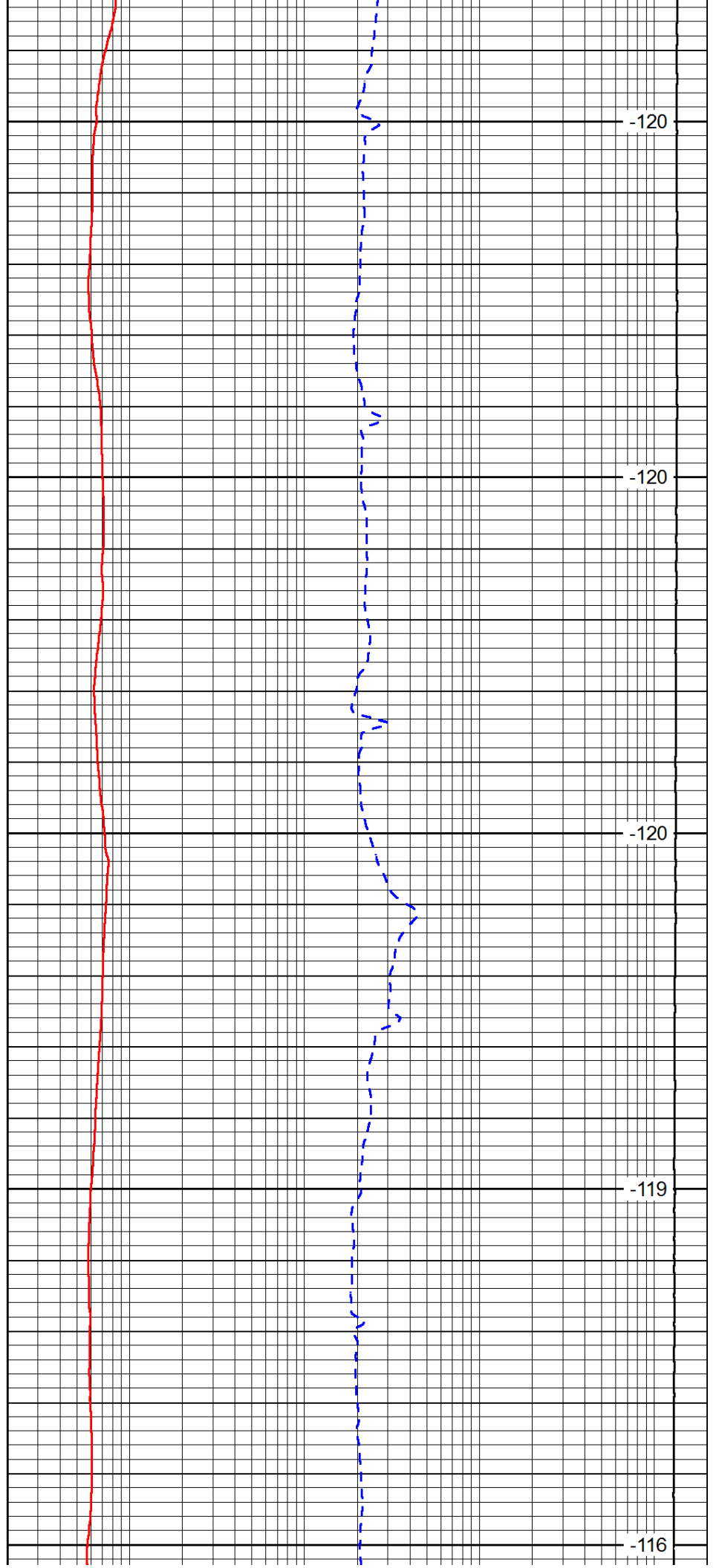
100

150

200

250

300



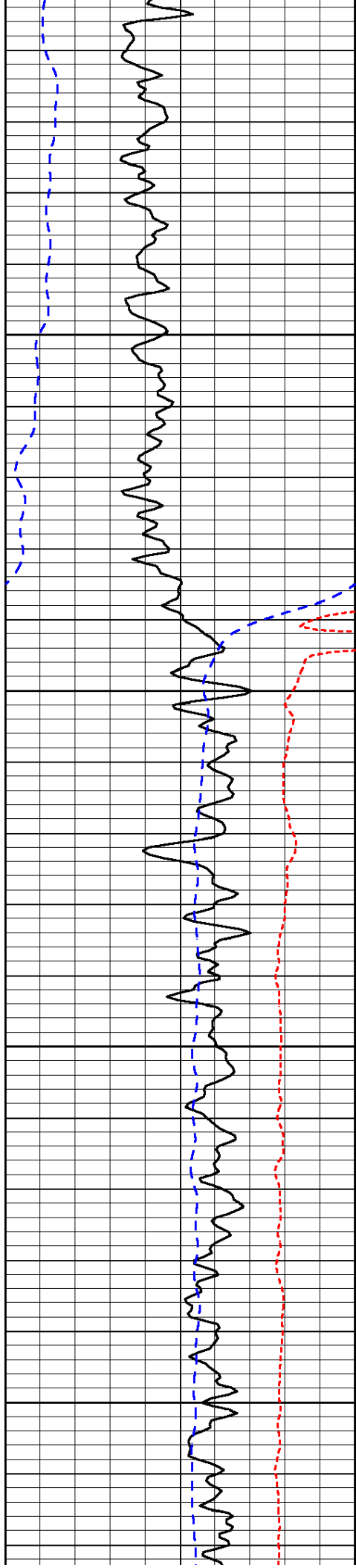
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-120

-120

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-116

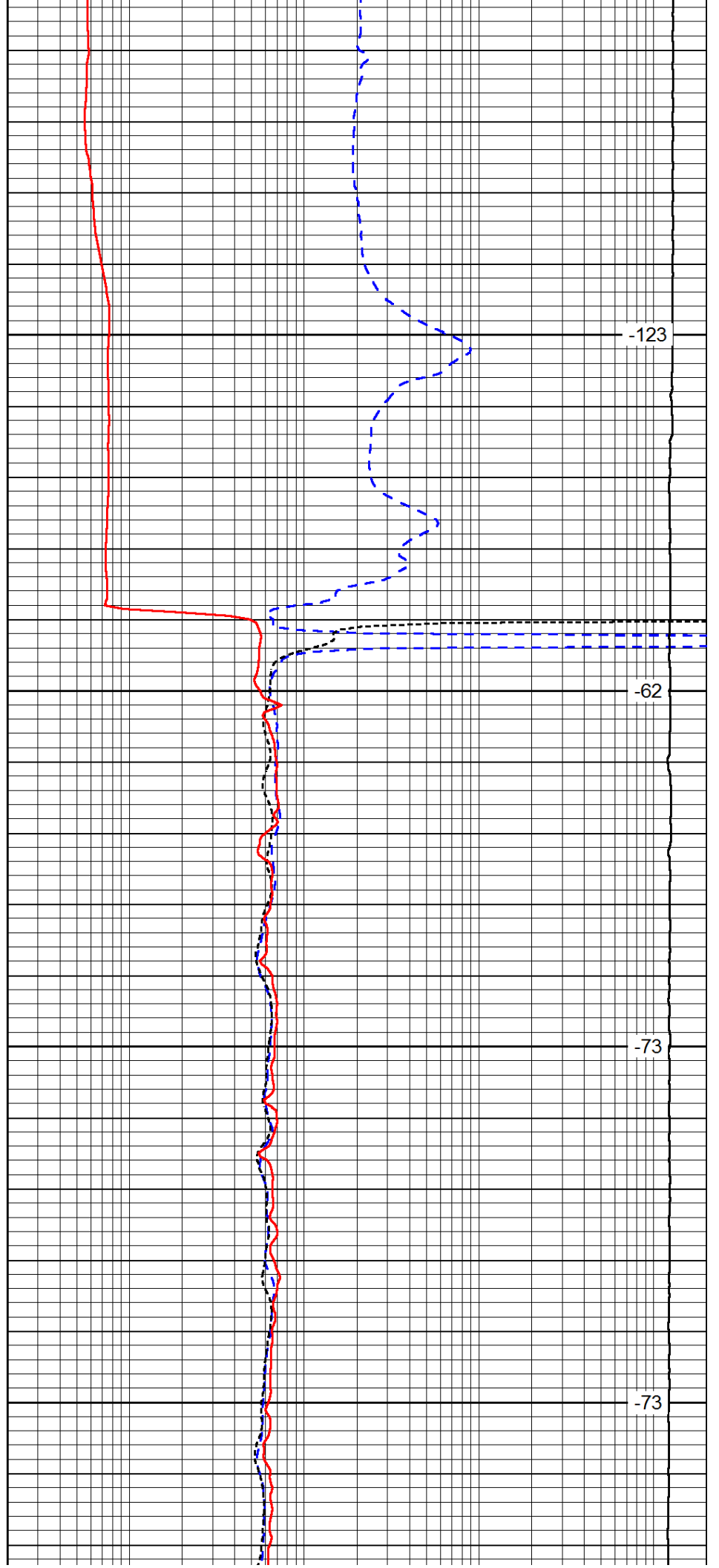


350

400

450

500

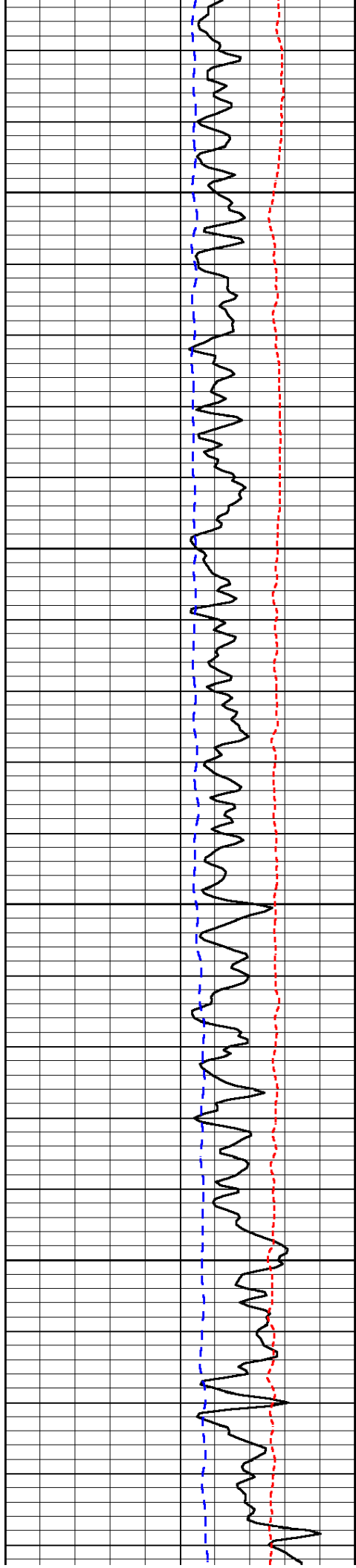


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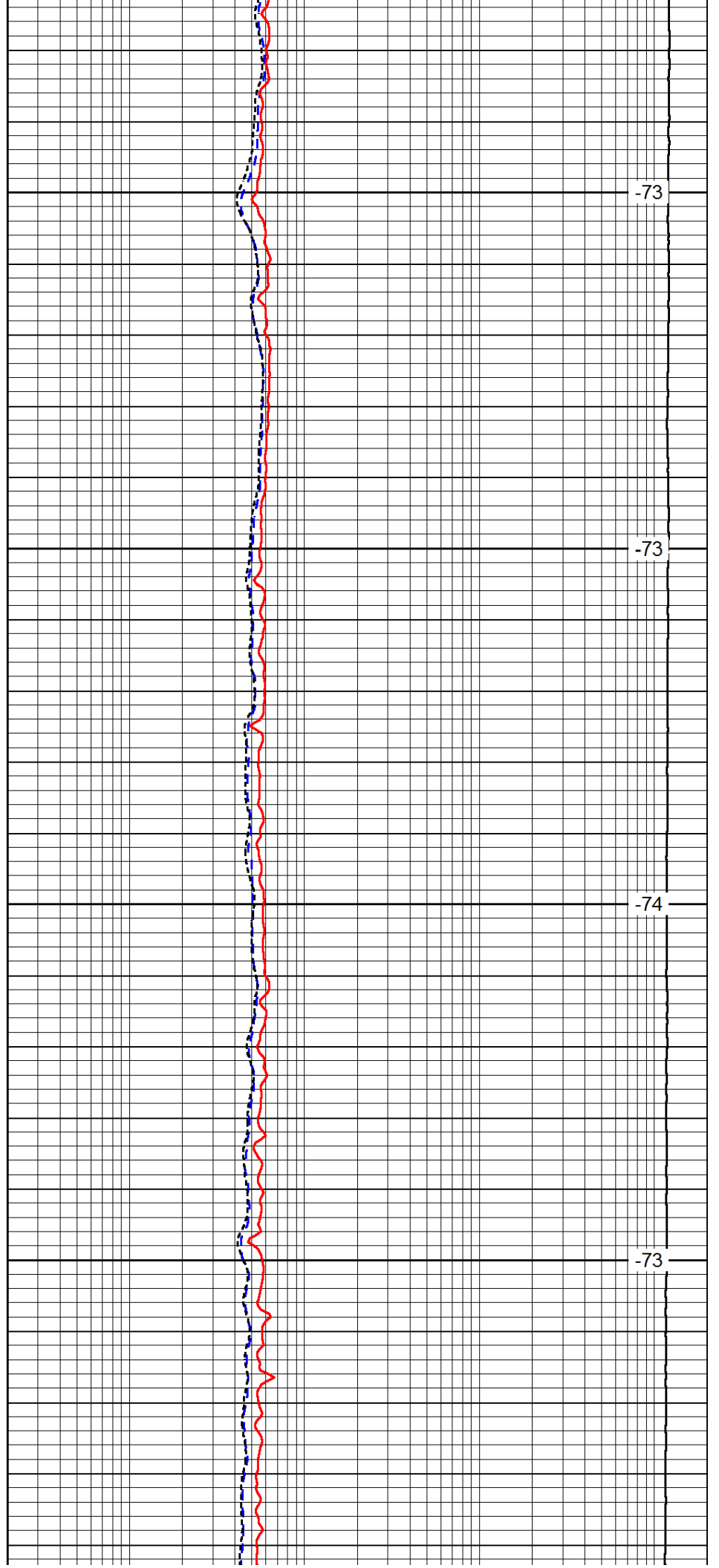


550

600

650

700

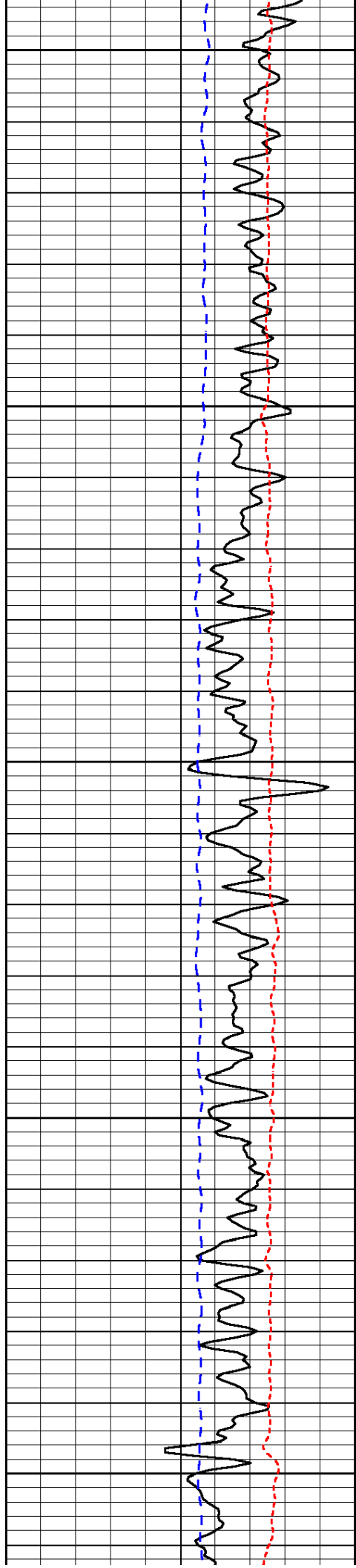


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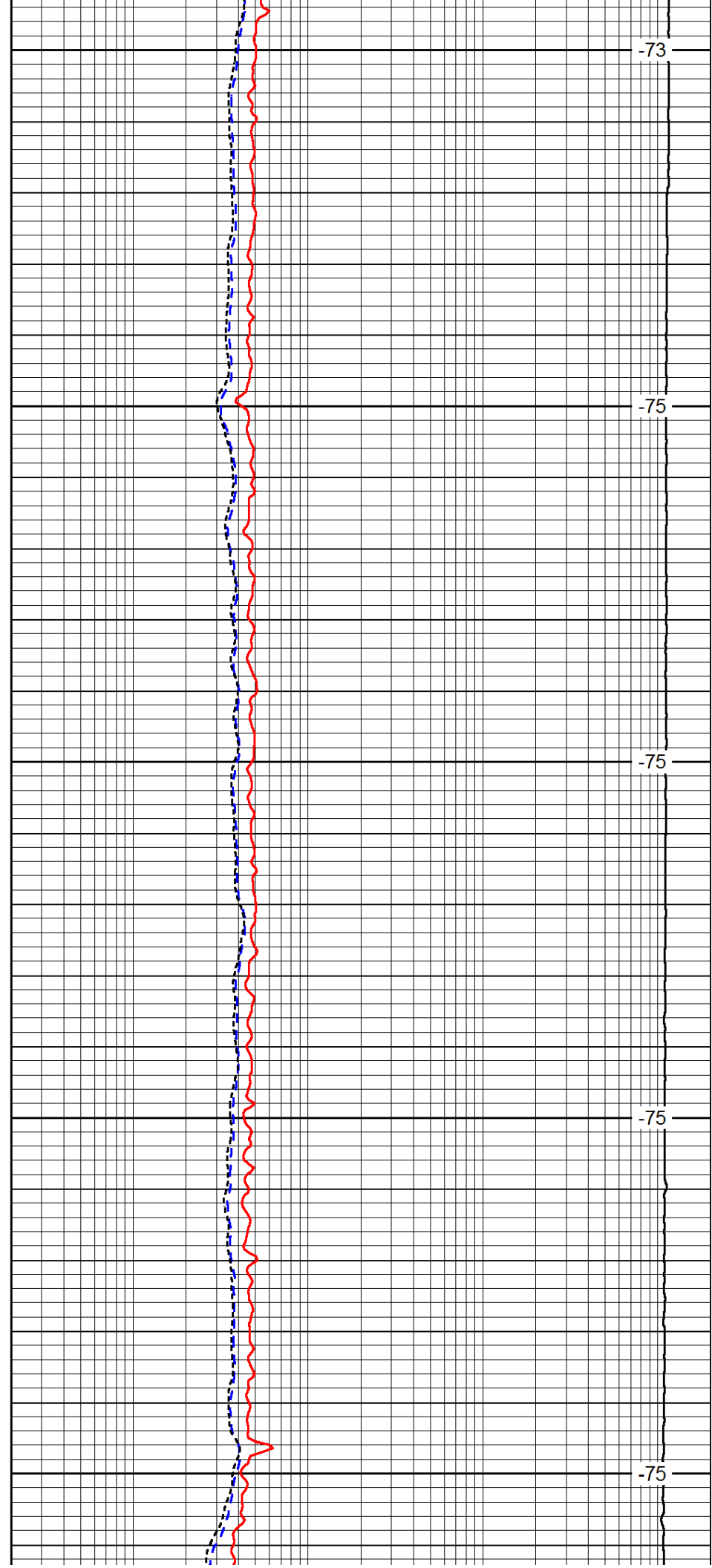
750

800

850

900

950



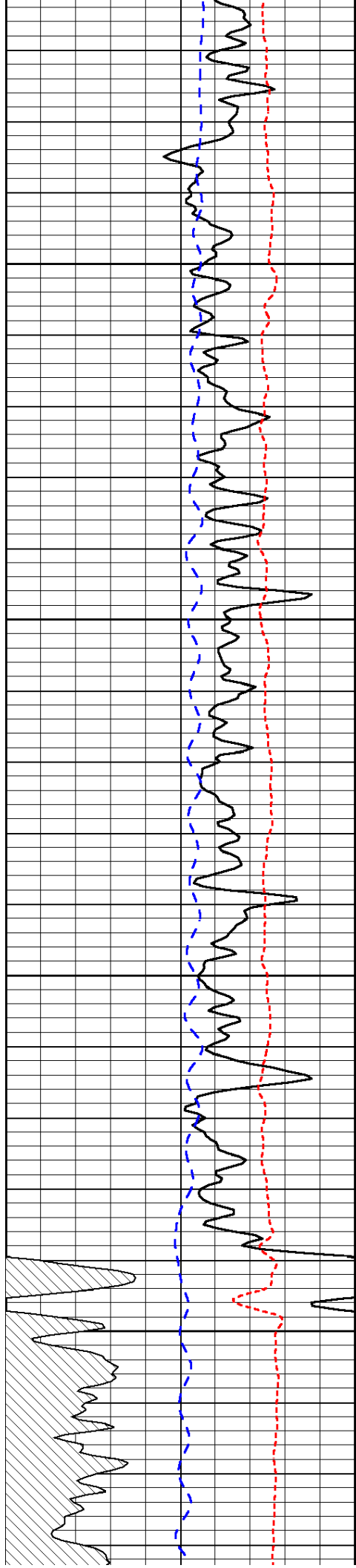
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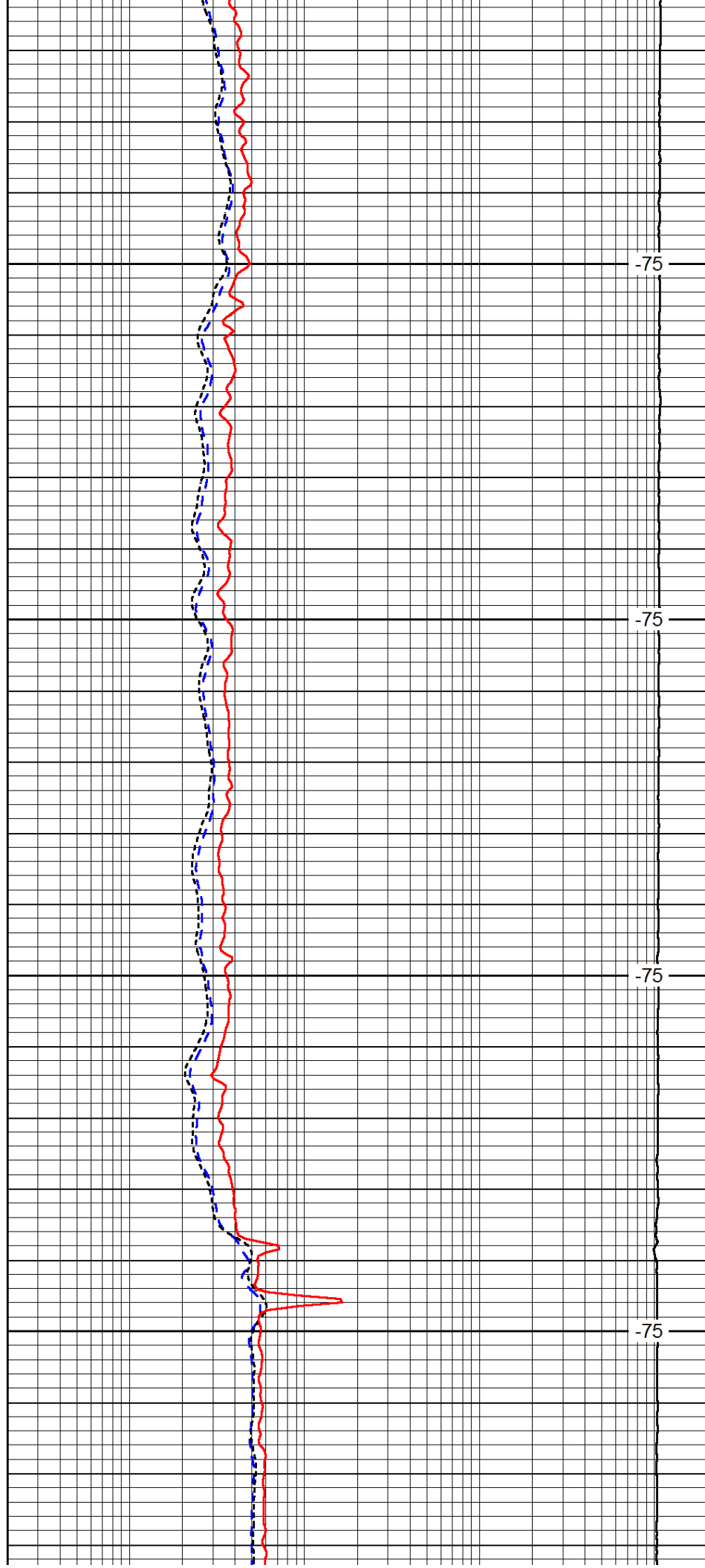


1000

1050

1100

1150

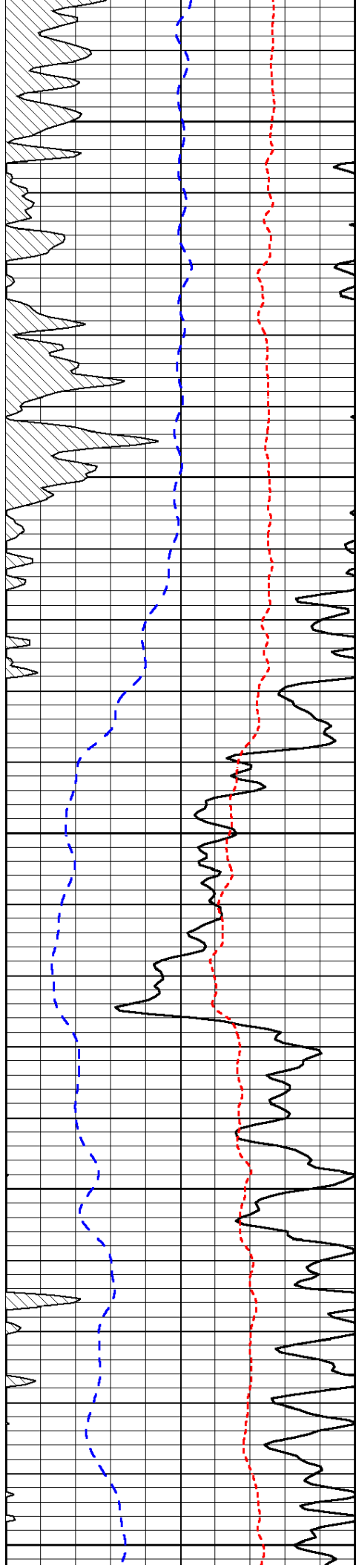


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-75



1200

1250

1300

1350

1400

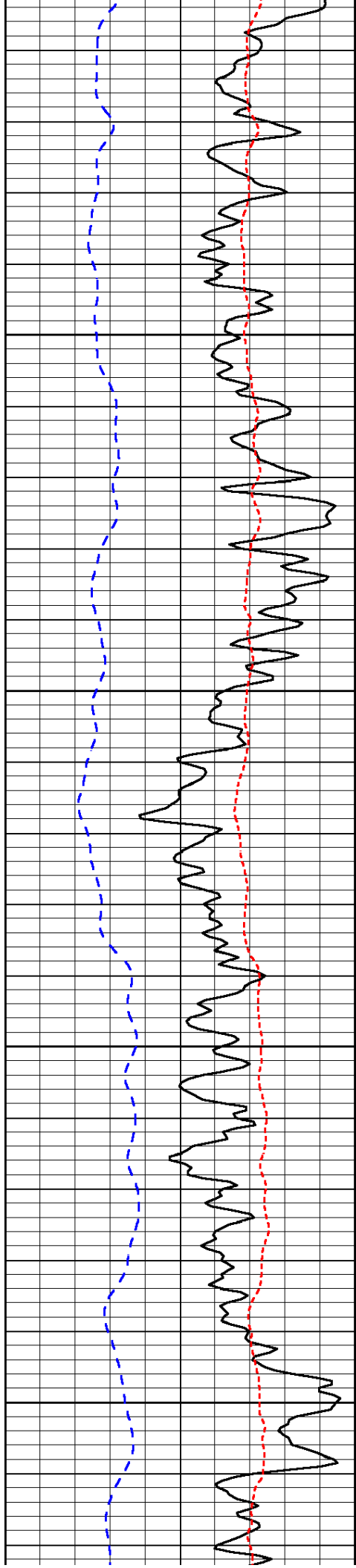
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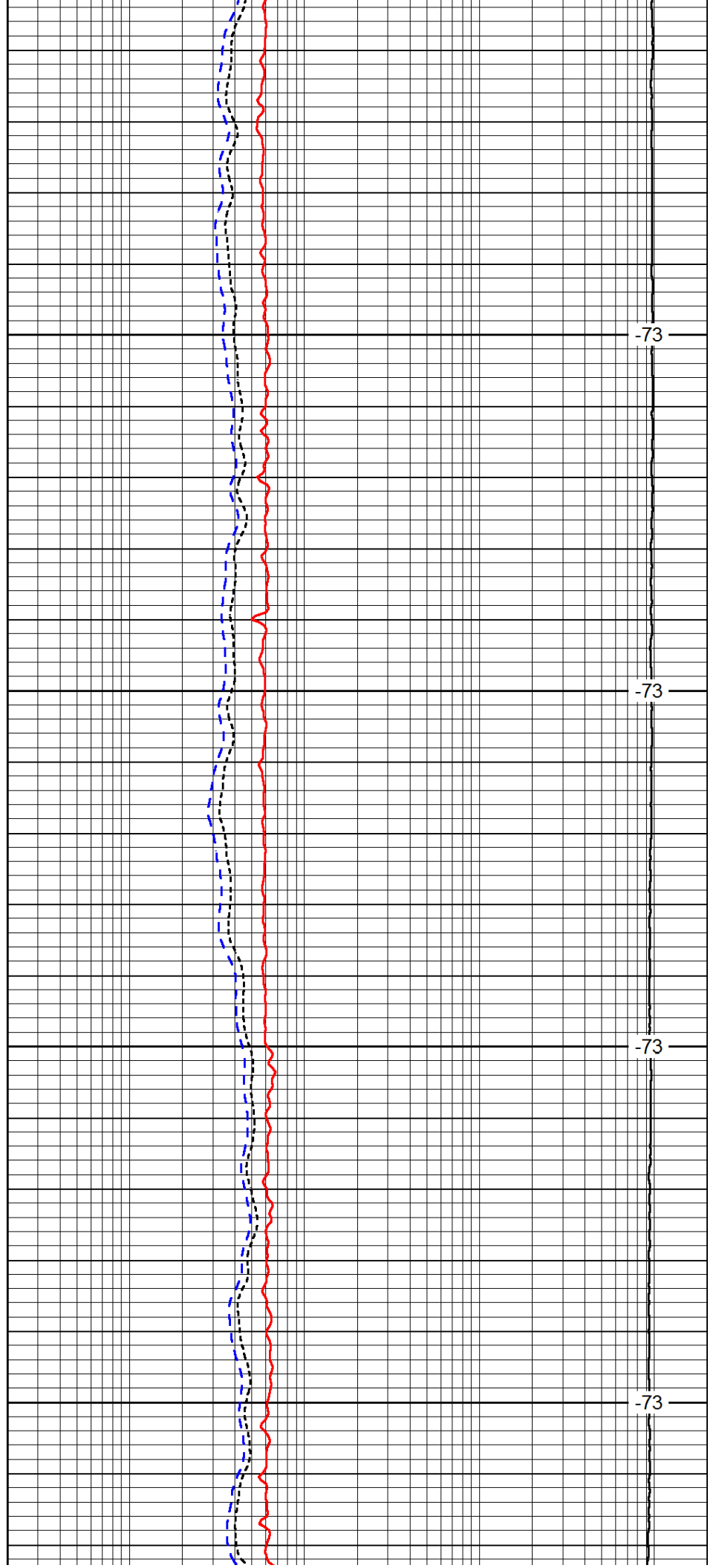


1450

1500

1550

1600

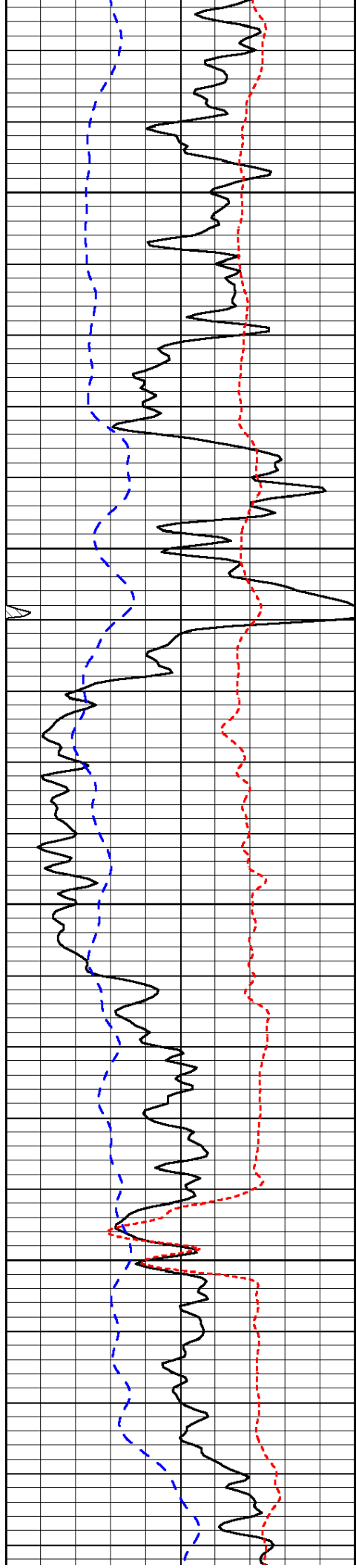


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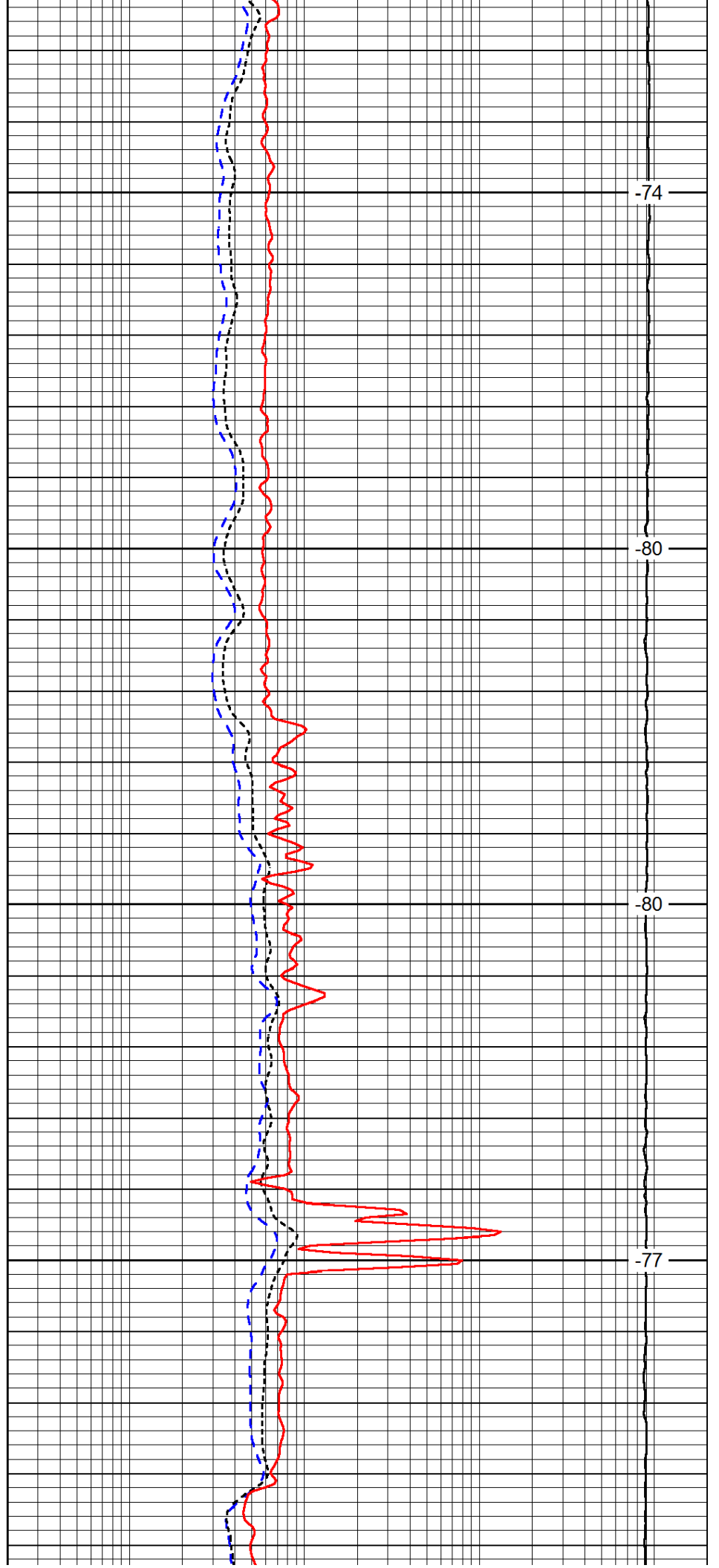


1650

1700

1750

1800

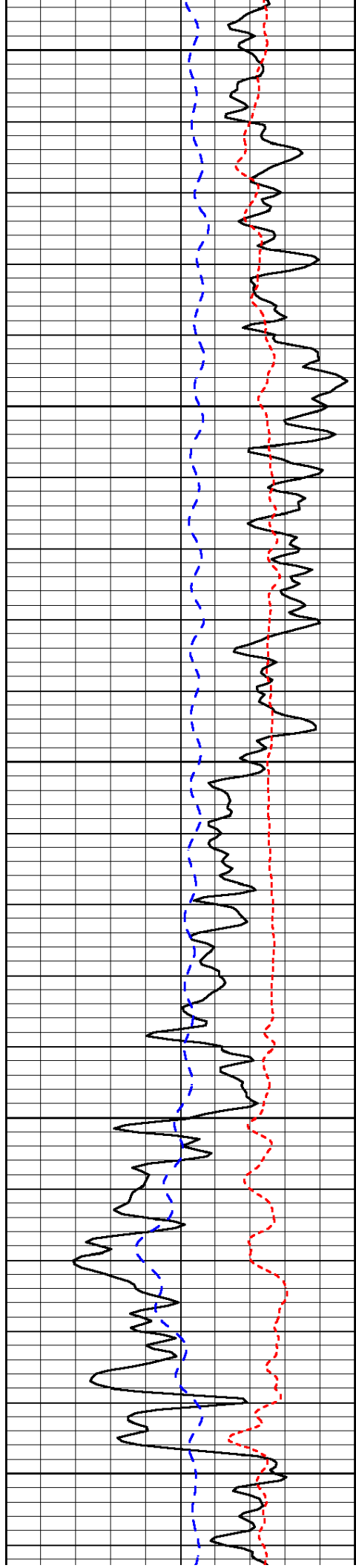


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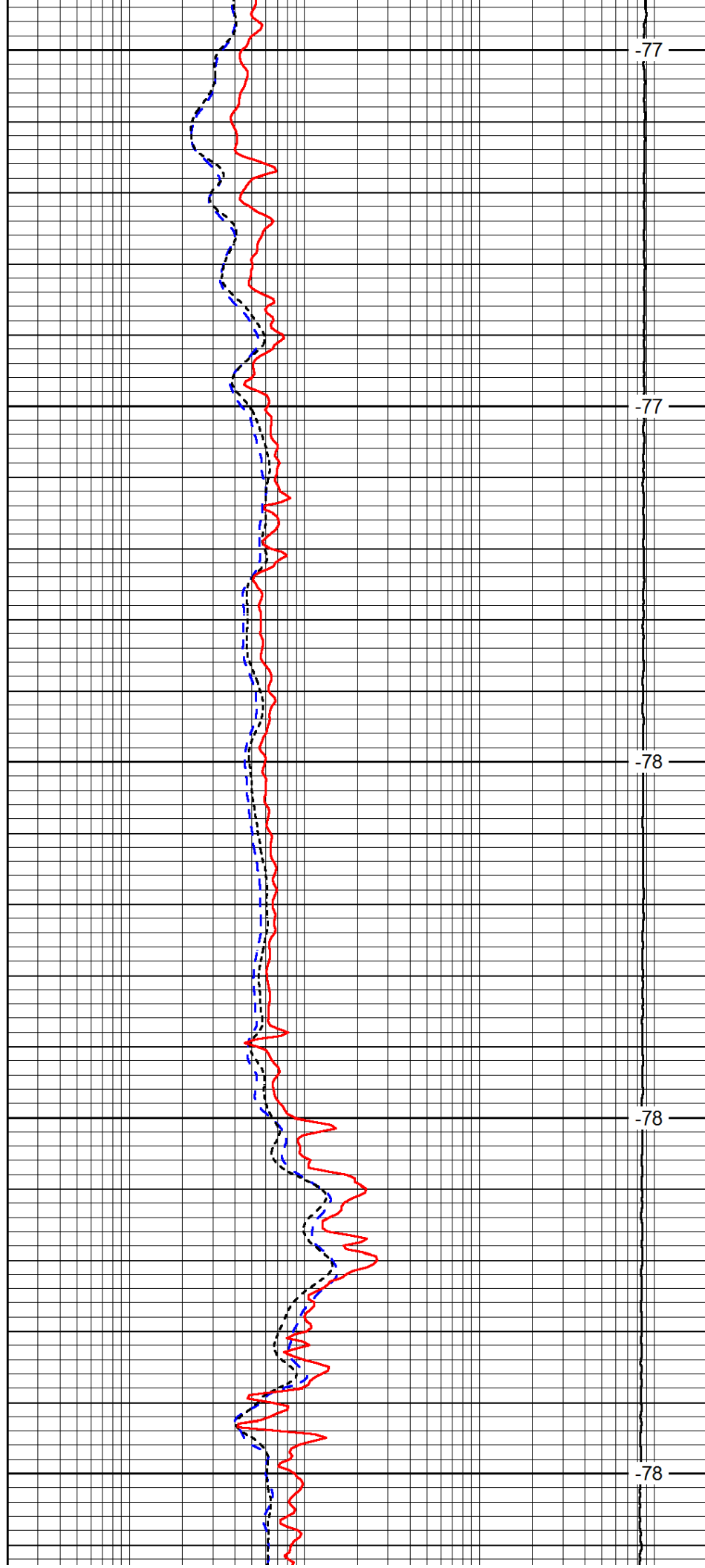
1850

1900

1950

2000

2050



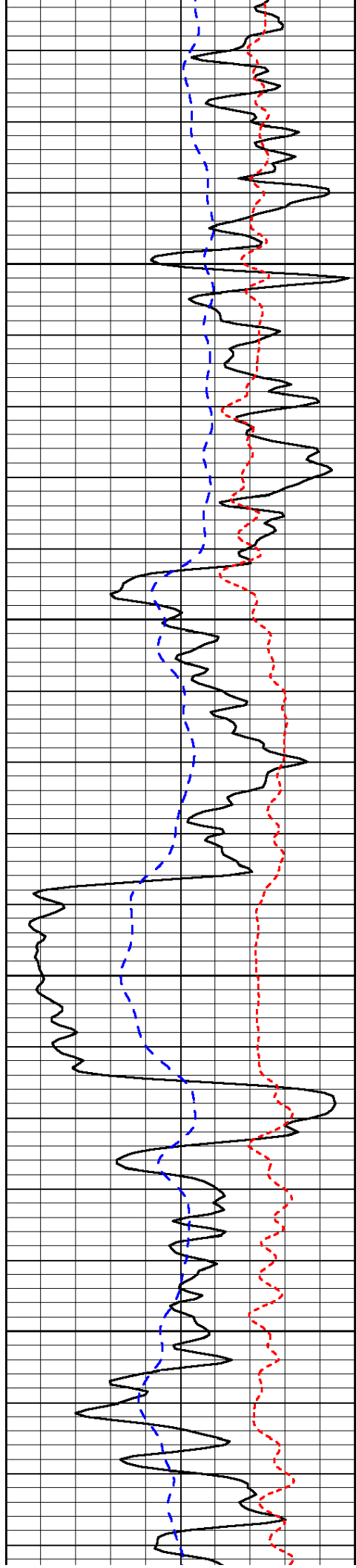
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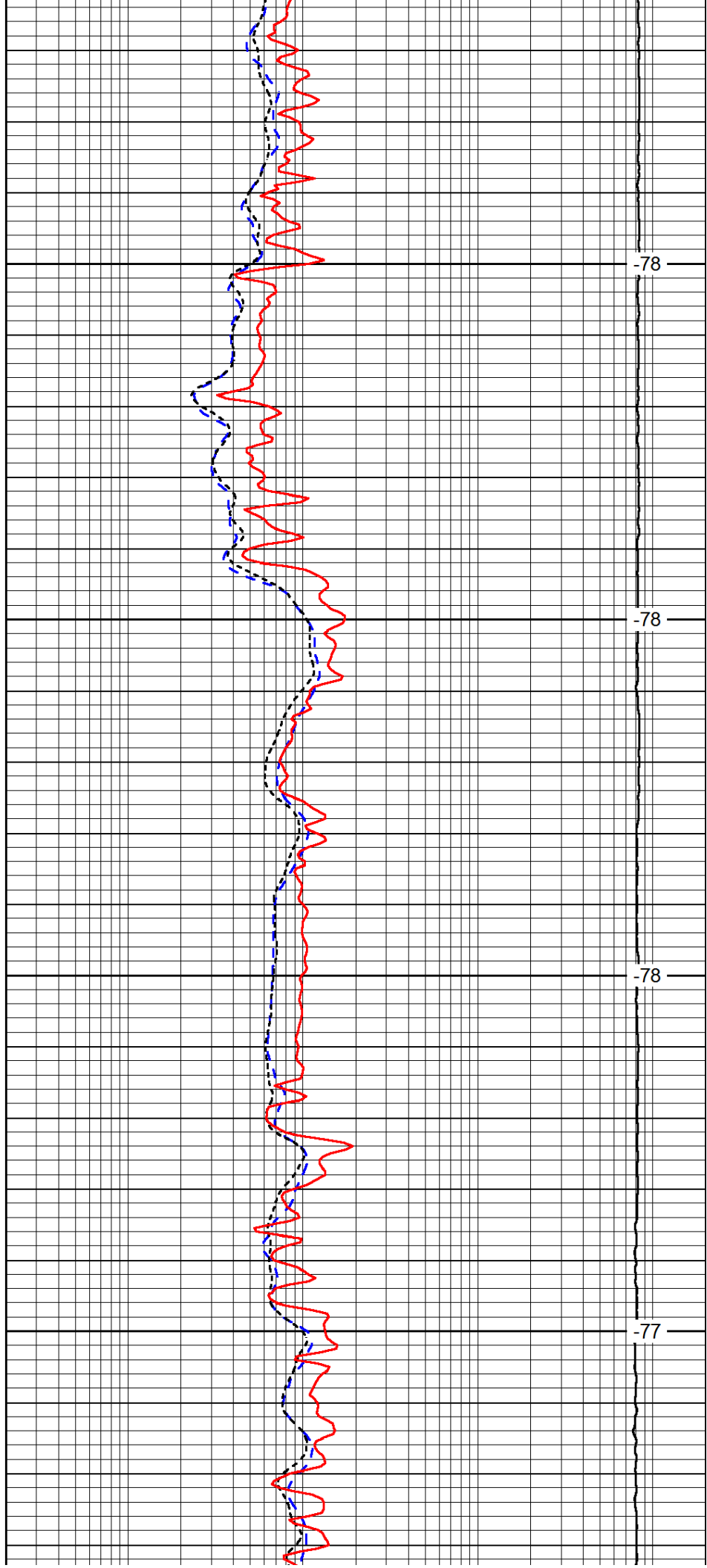


2100

2150

2200

2250

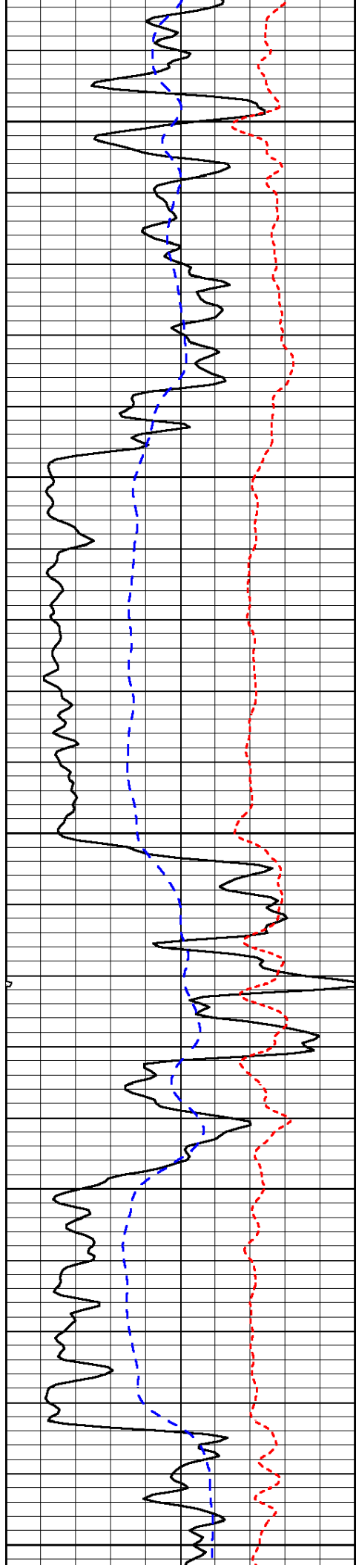


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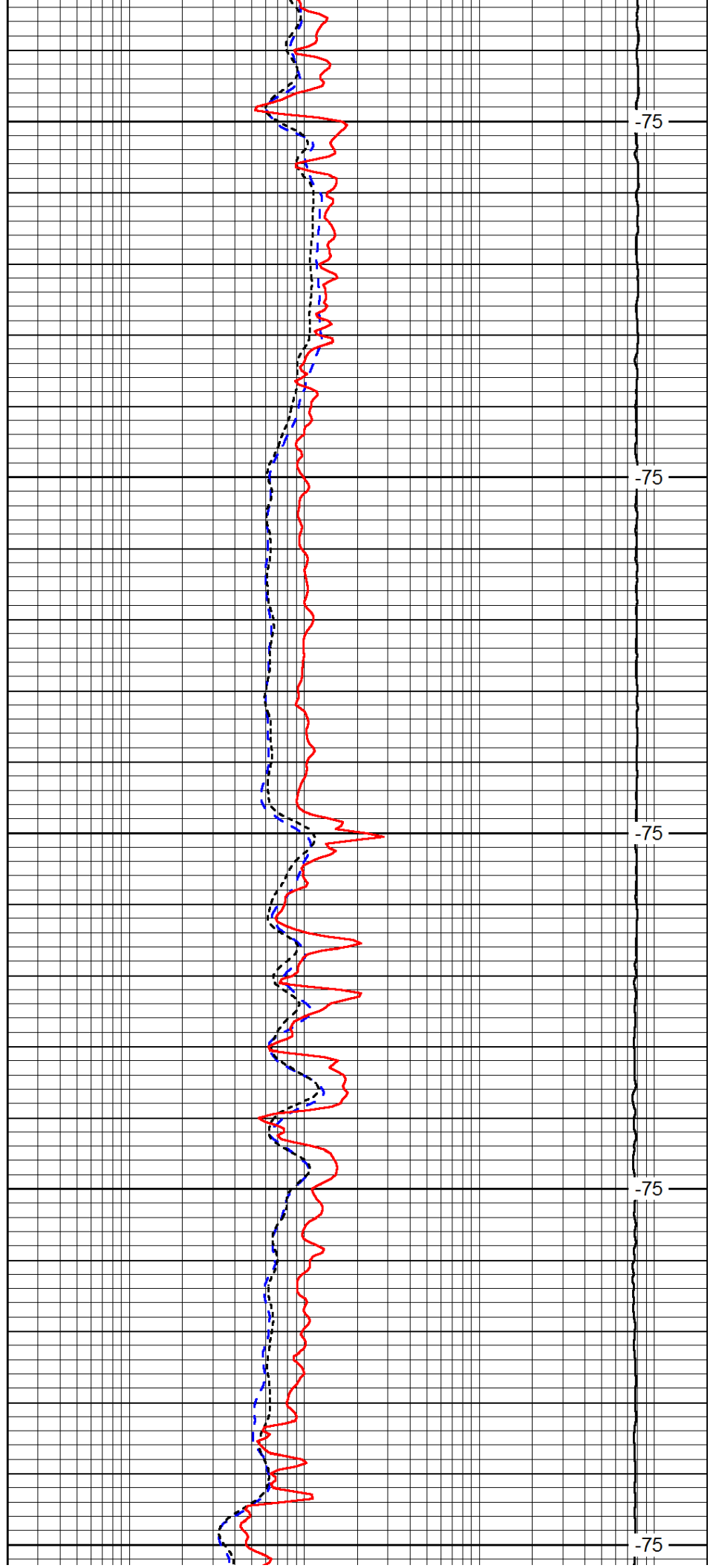
2300

2350

2400

2450

2500



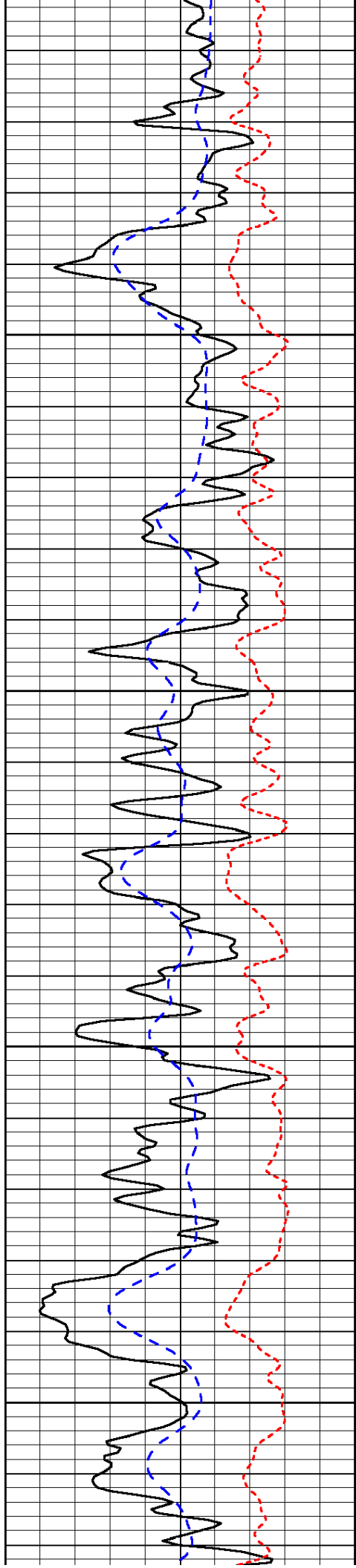
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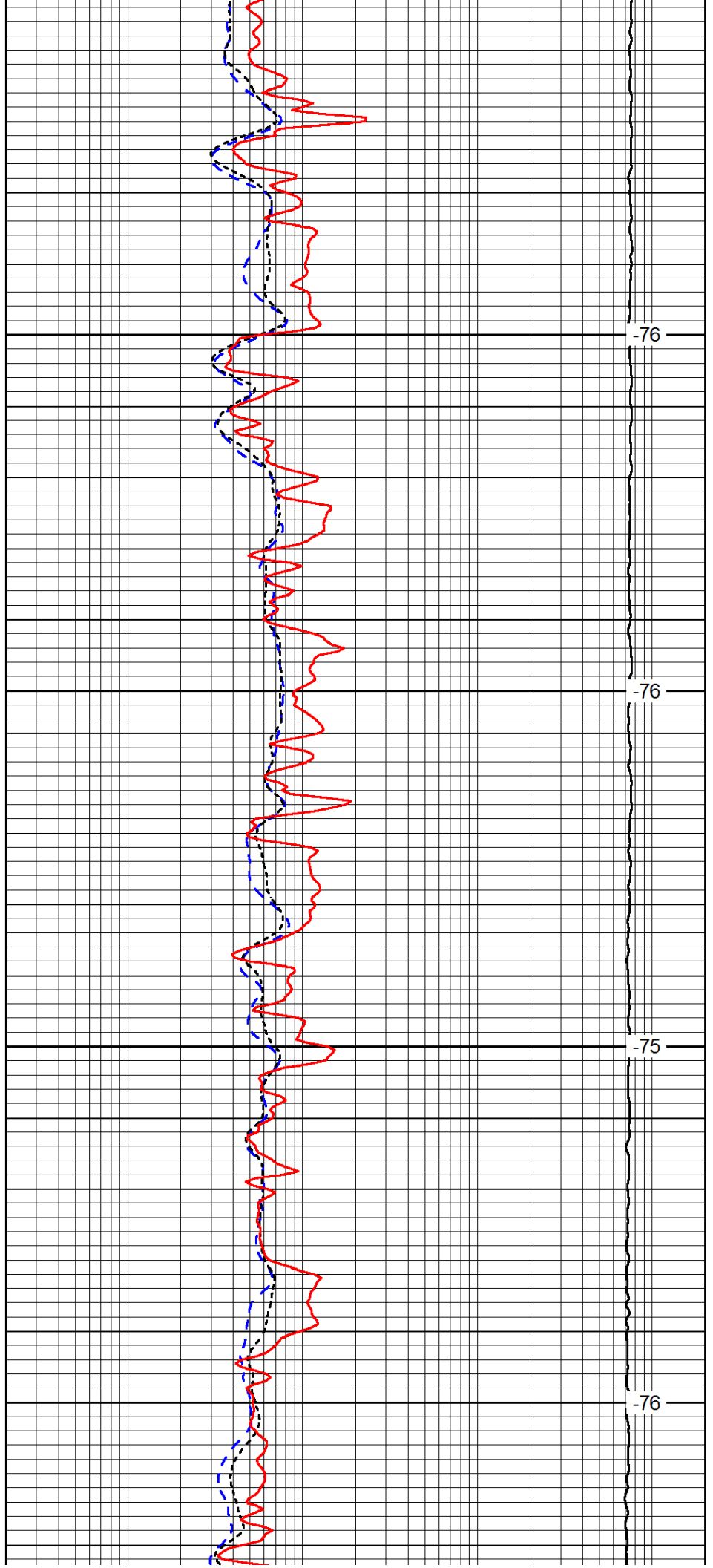


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2600

2650

2700

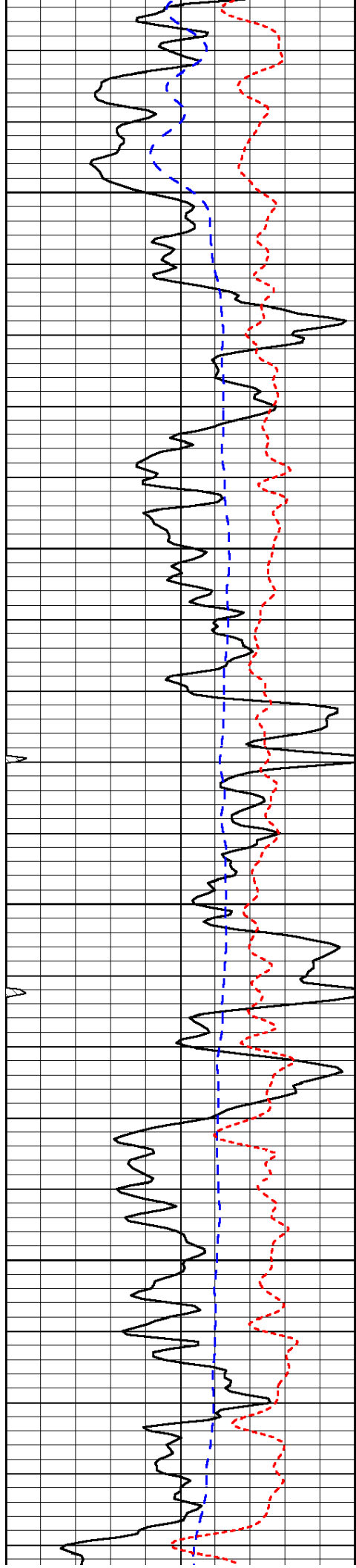


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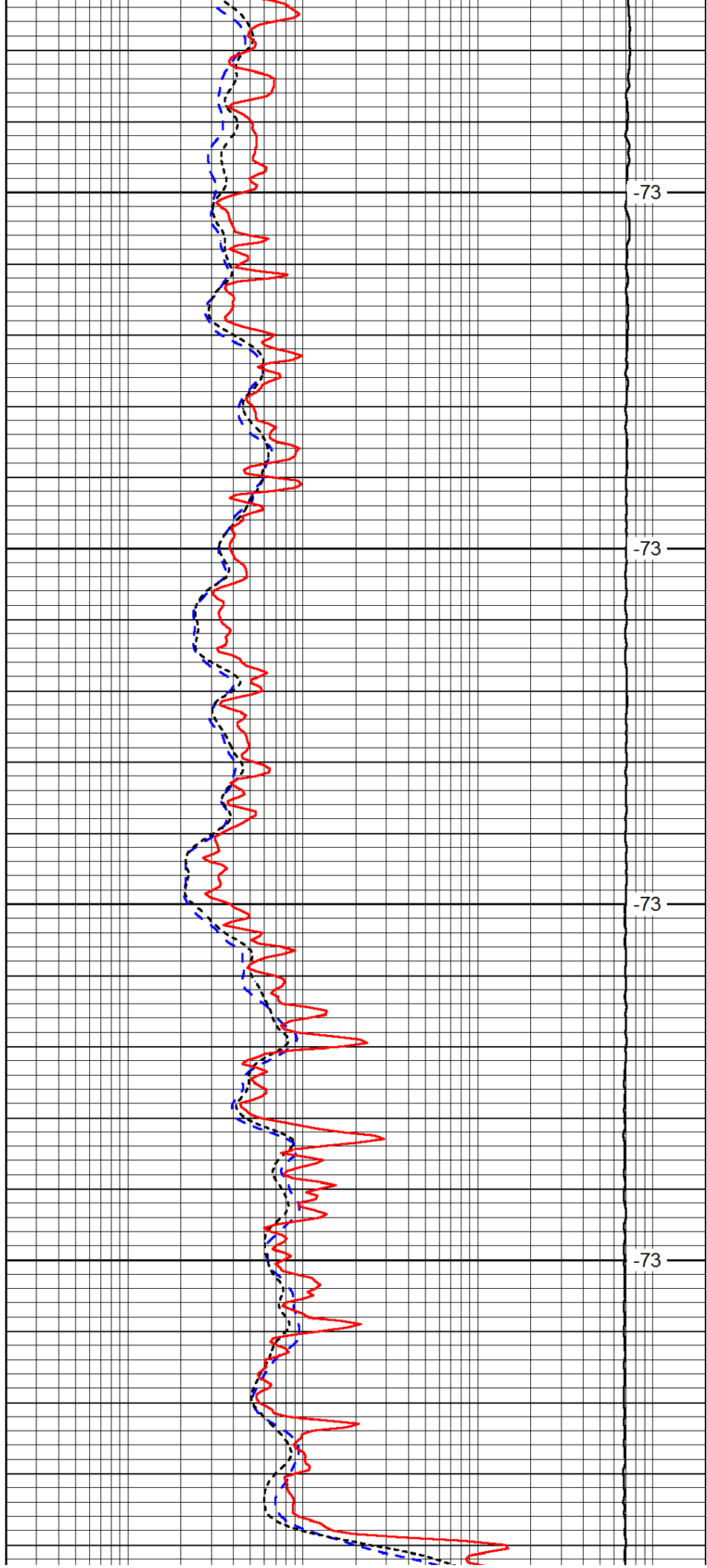


2750

2800

2850

2900

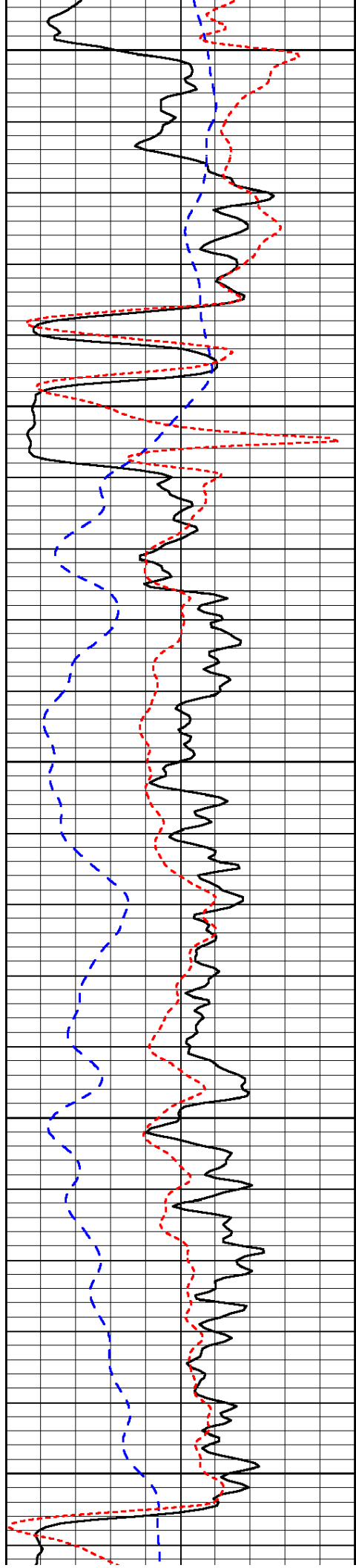


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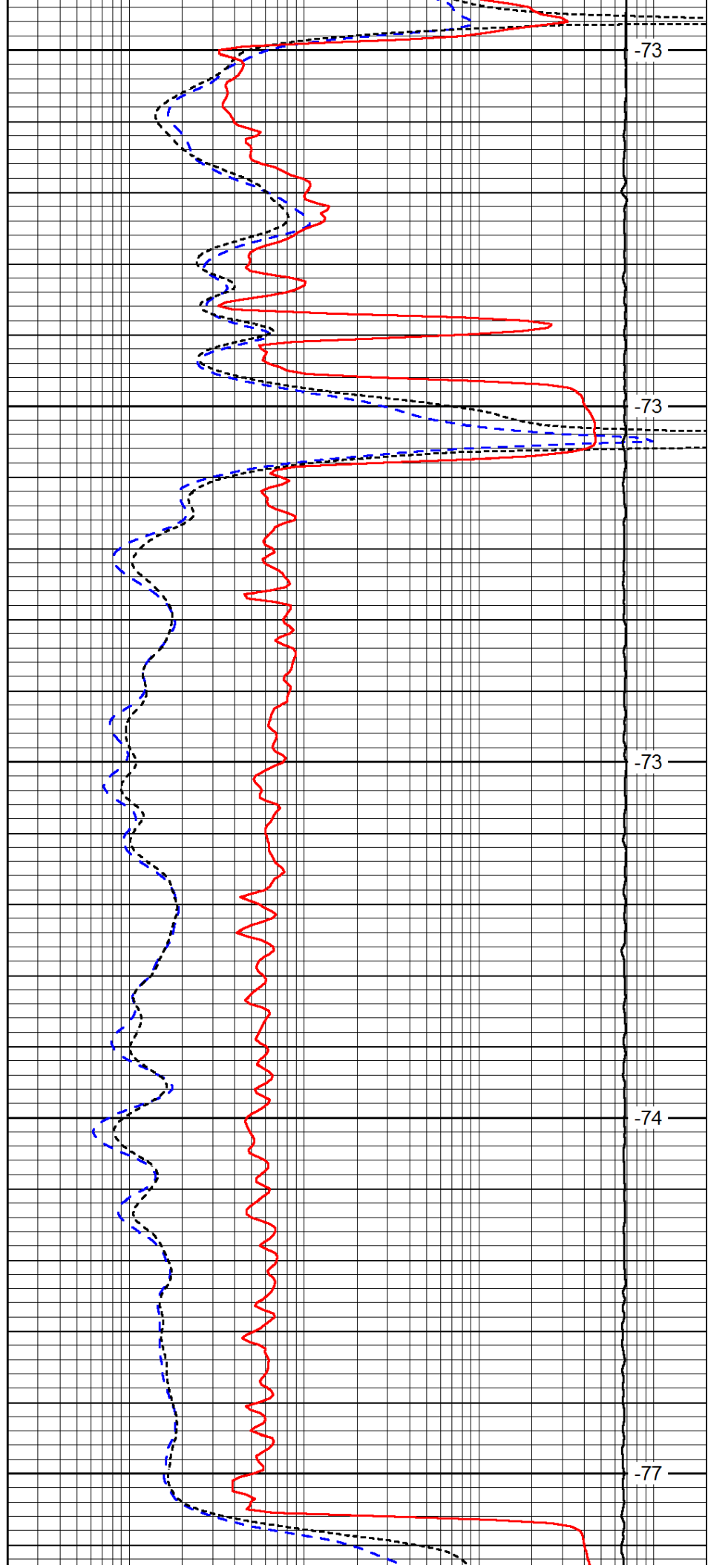
2950

3000

3050

3100

3150



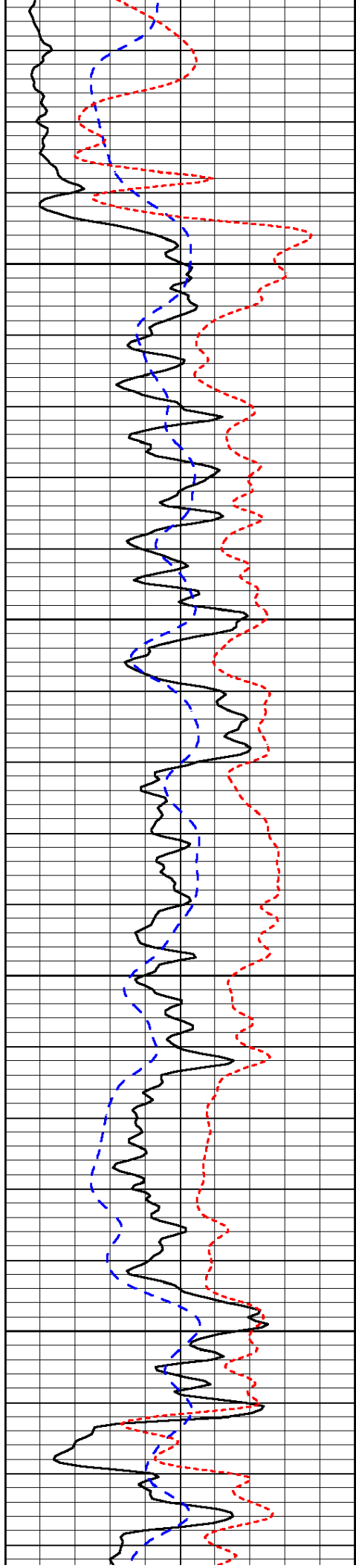
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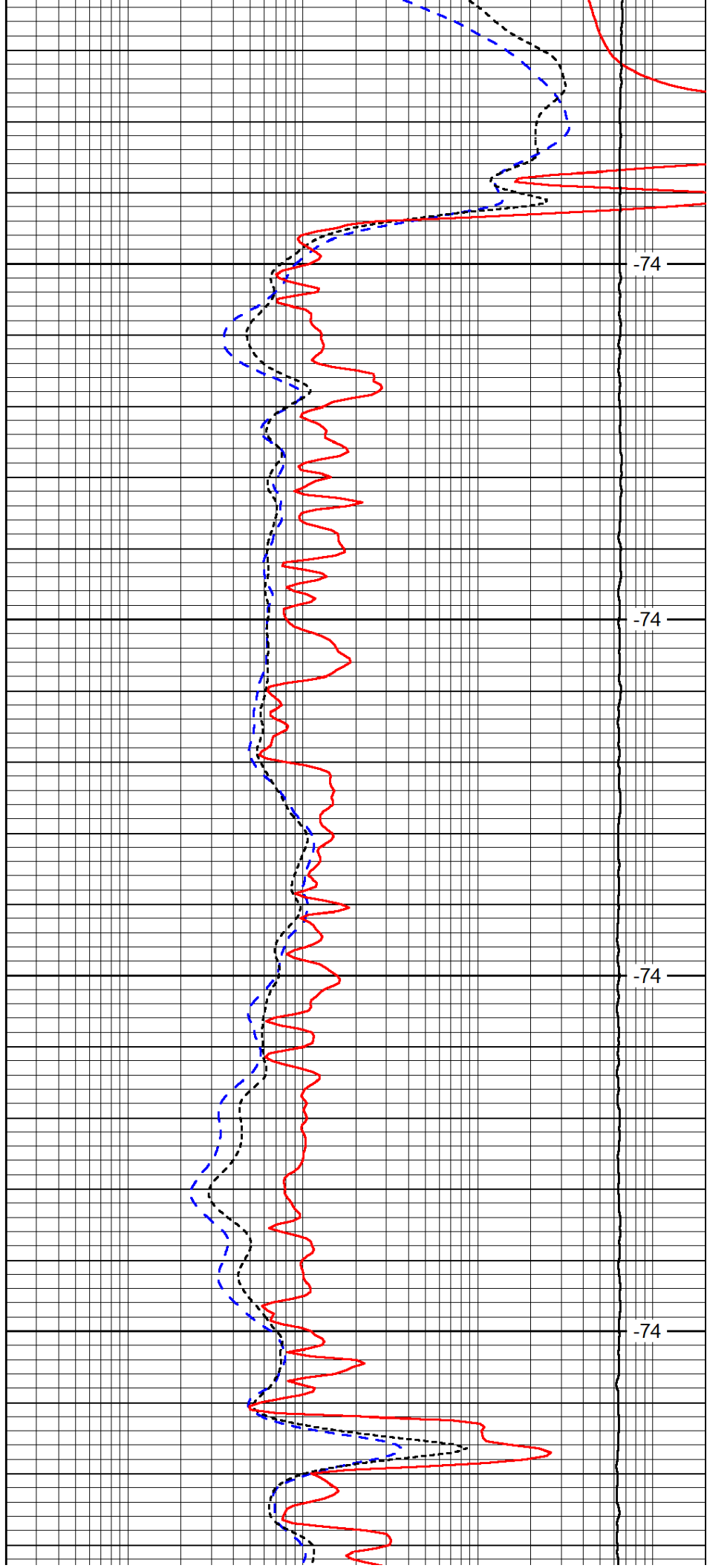


3200

3250

3300

3350

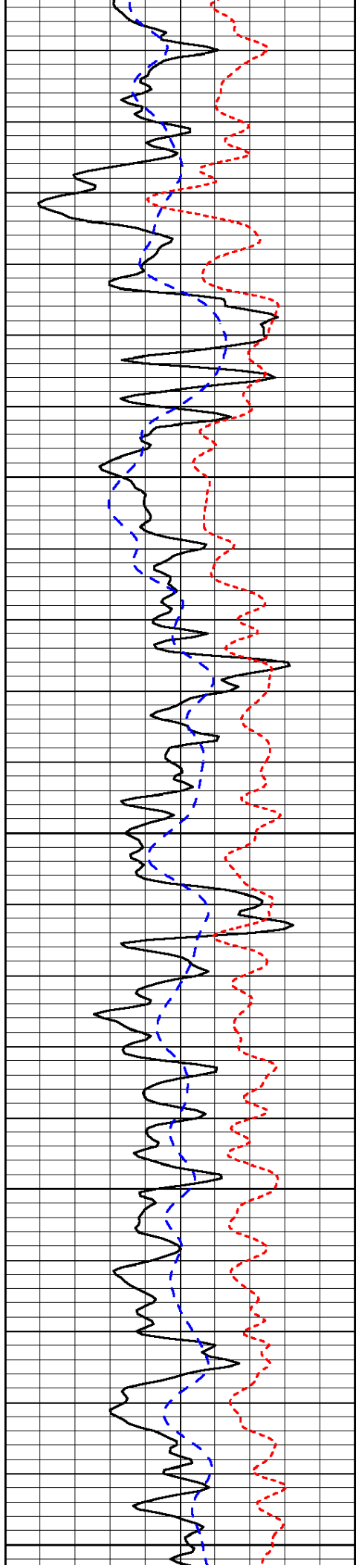


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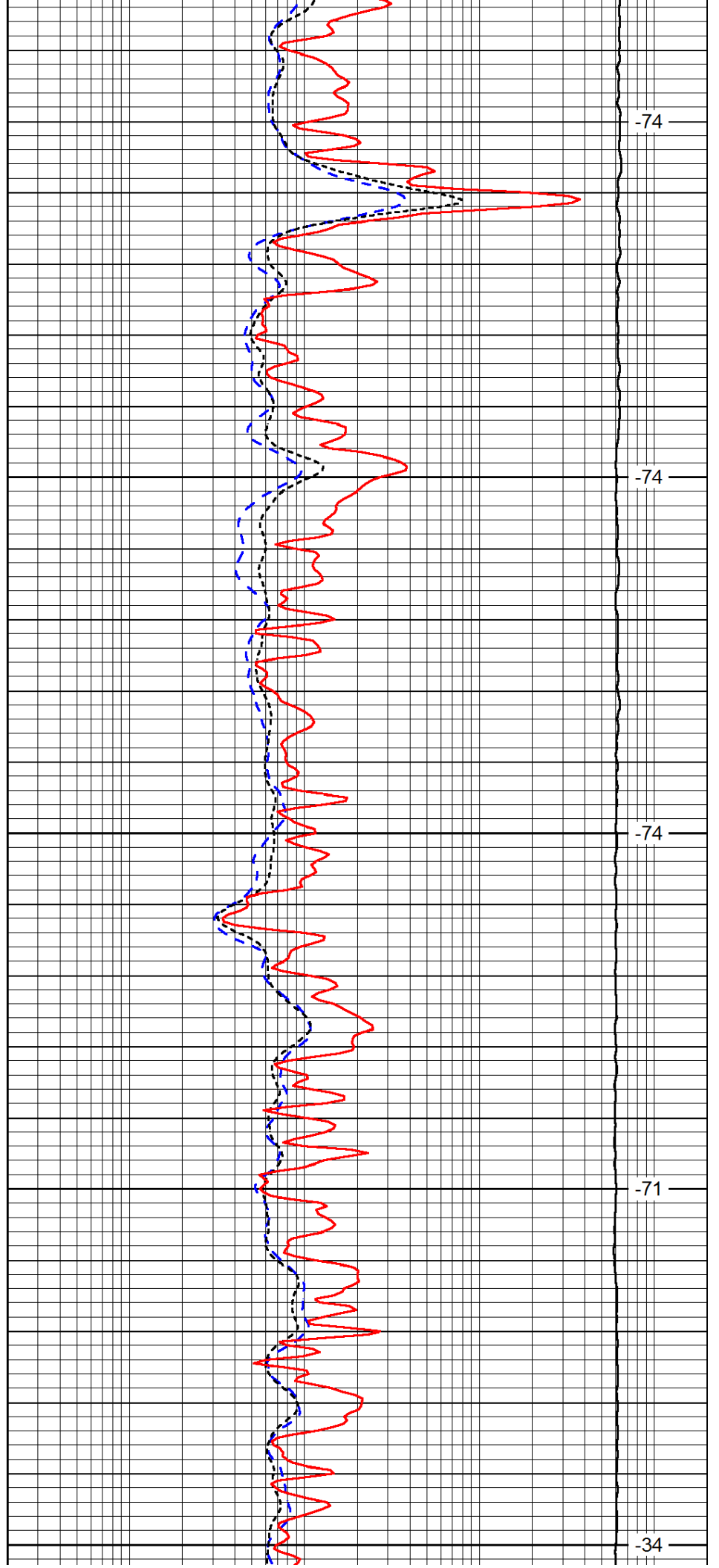
3400

3450

3500

3550

3600



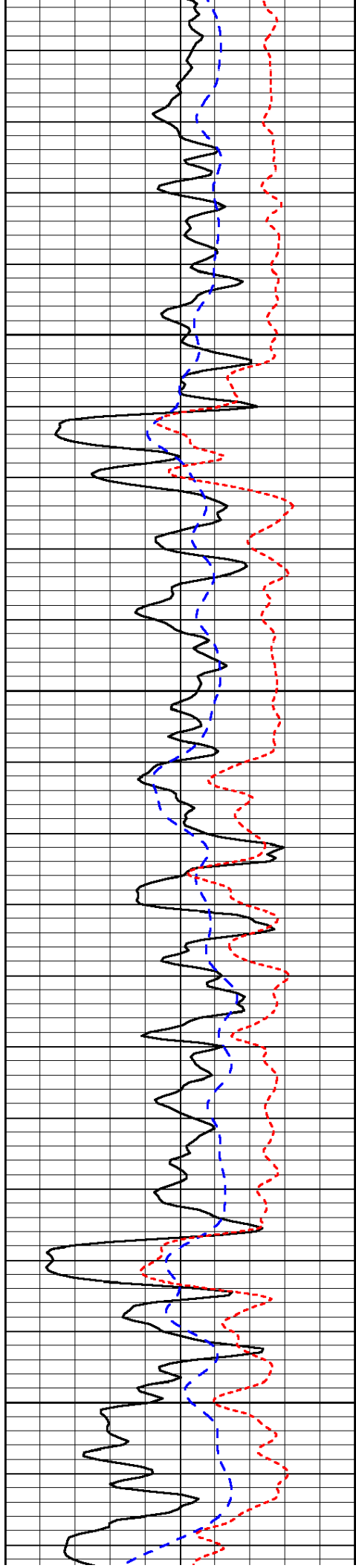
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-34

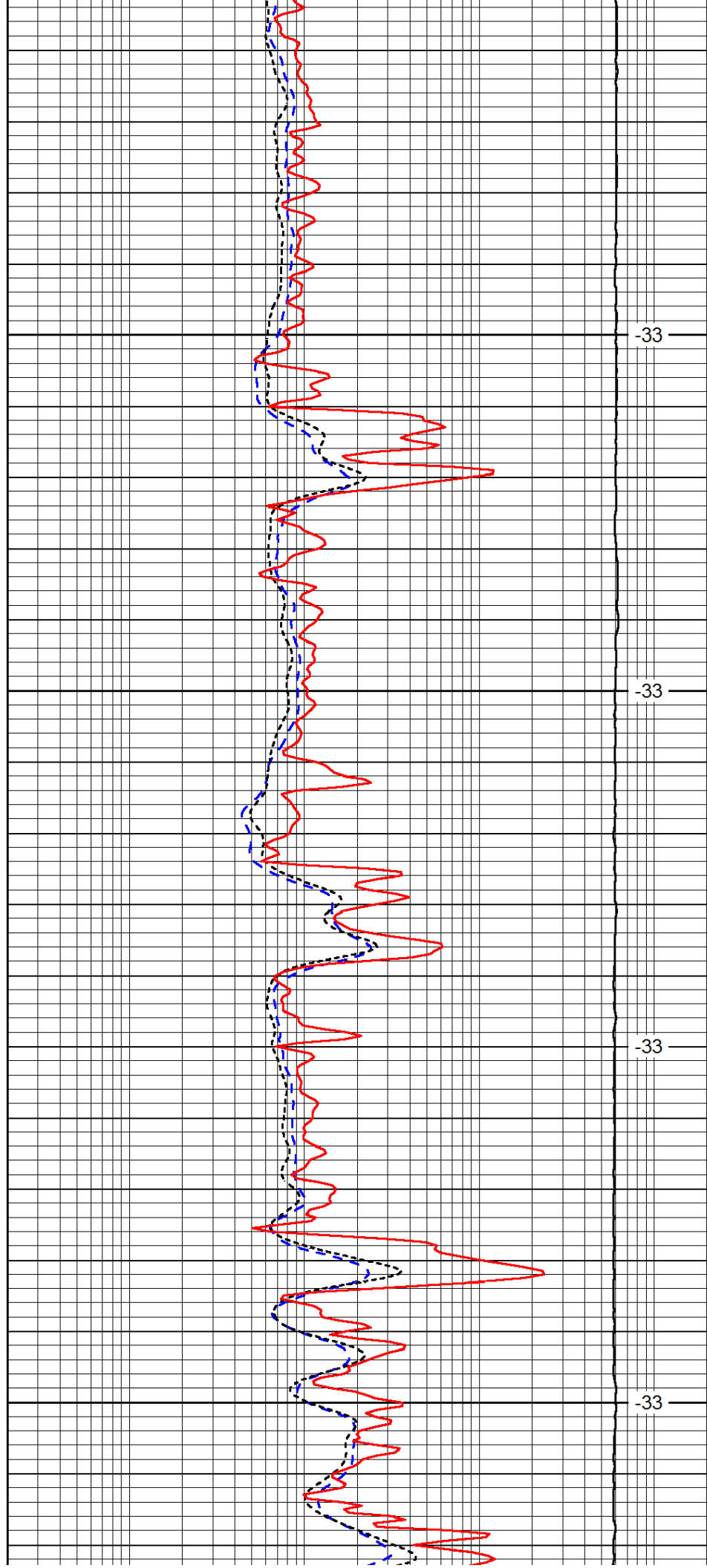


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3700

3750

3800

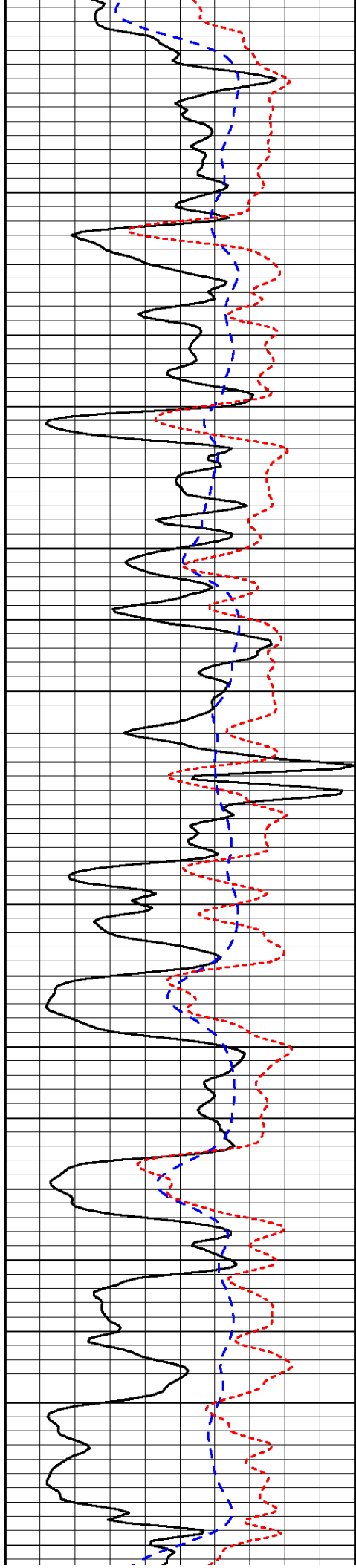


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-33

-33

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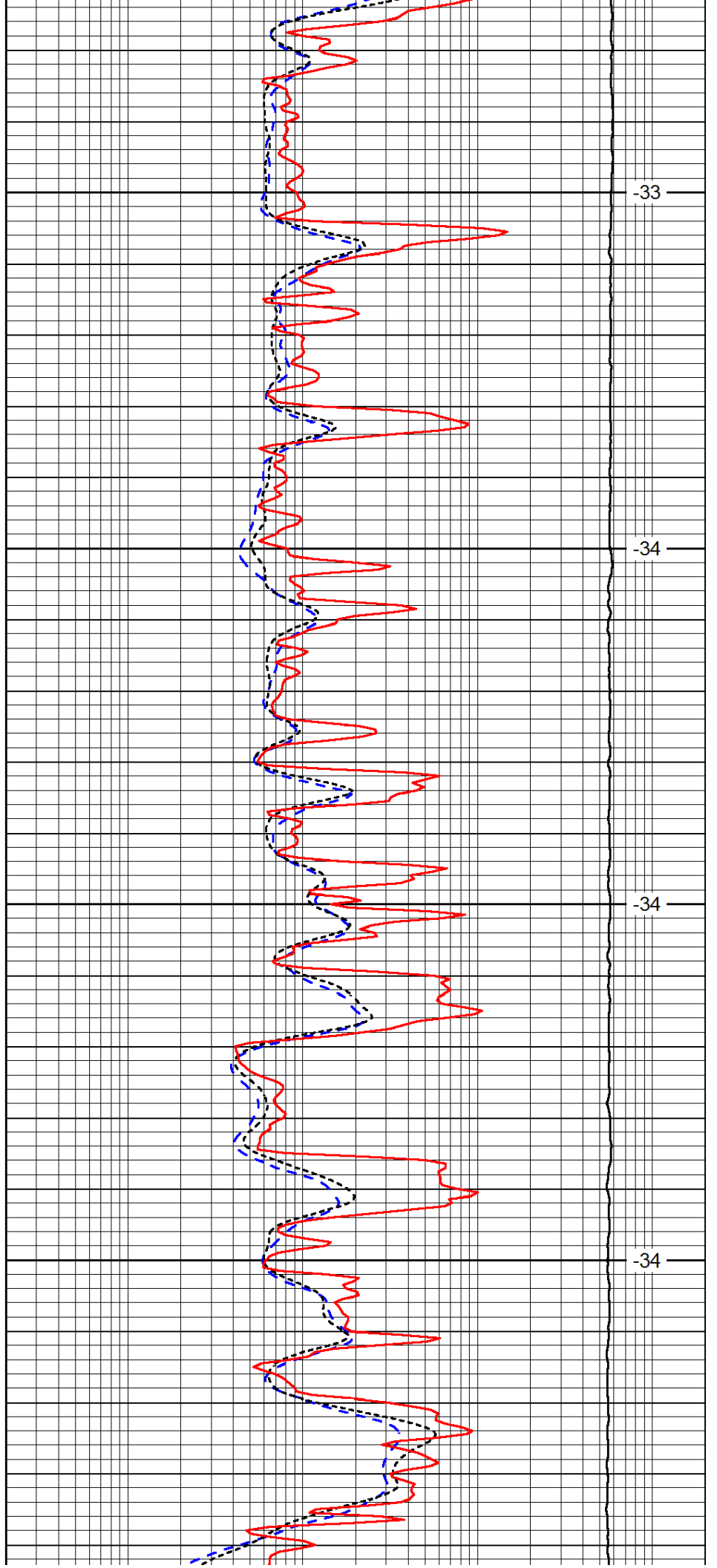


3850

3900

3950

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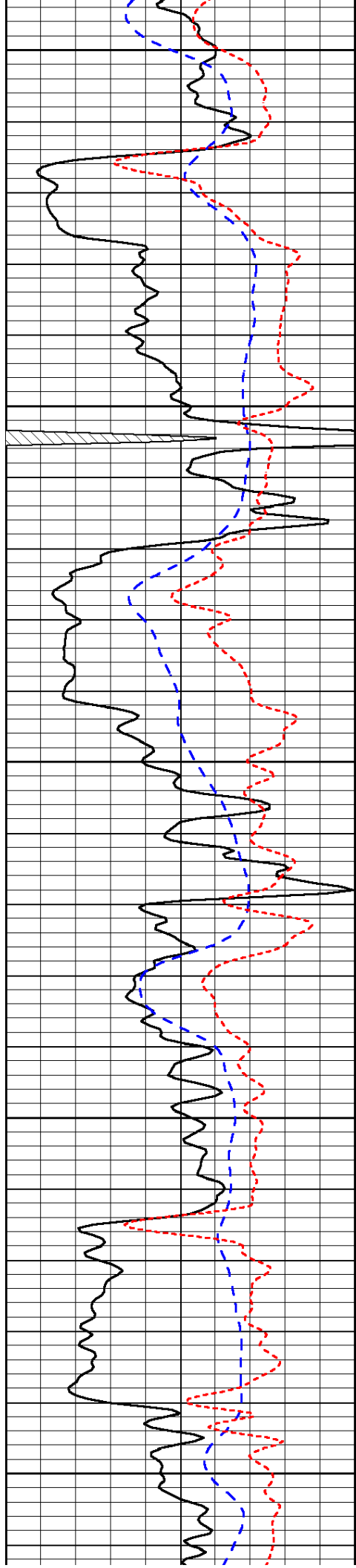


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-34

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-34



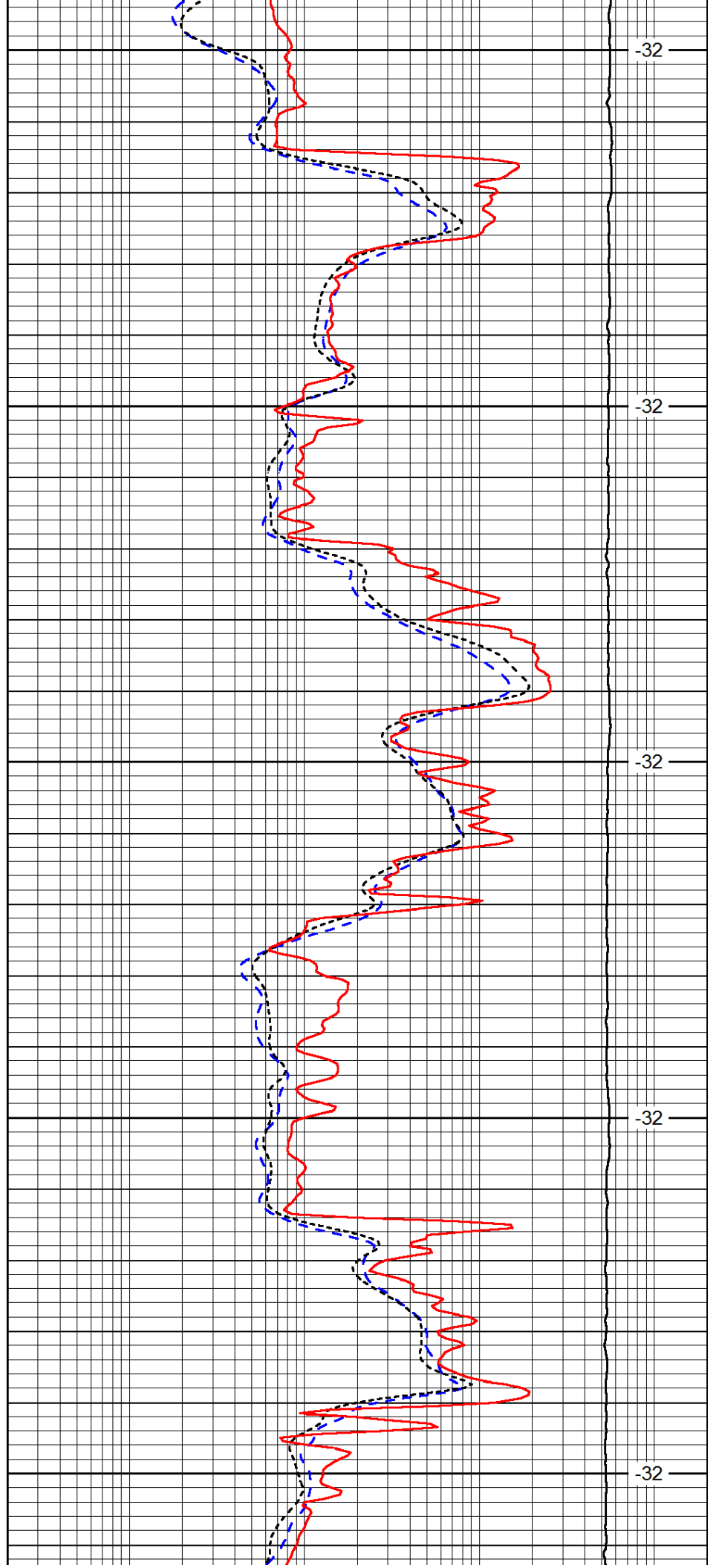
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4100

4150

4200

4250



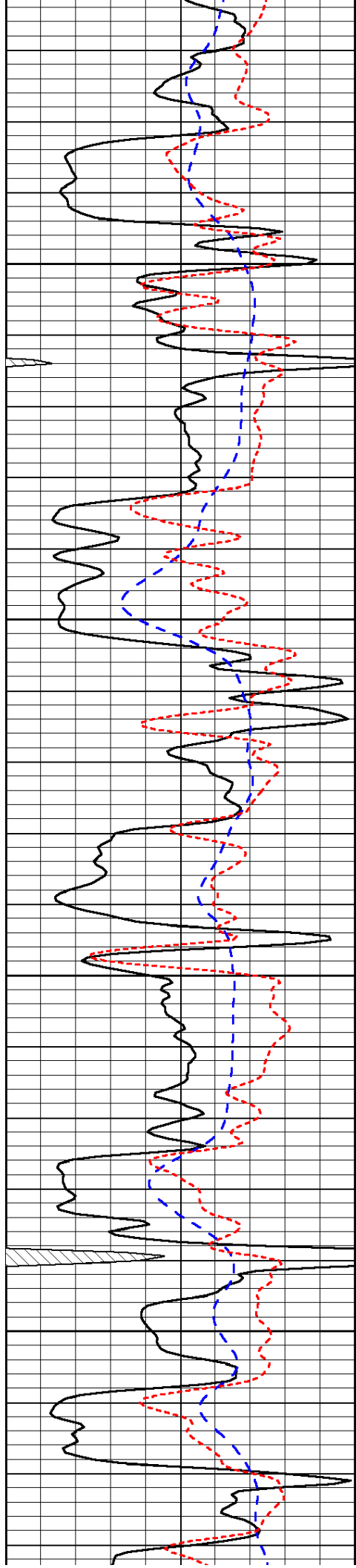
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-32

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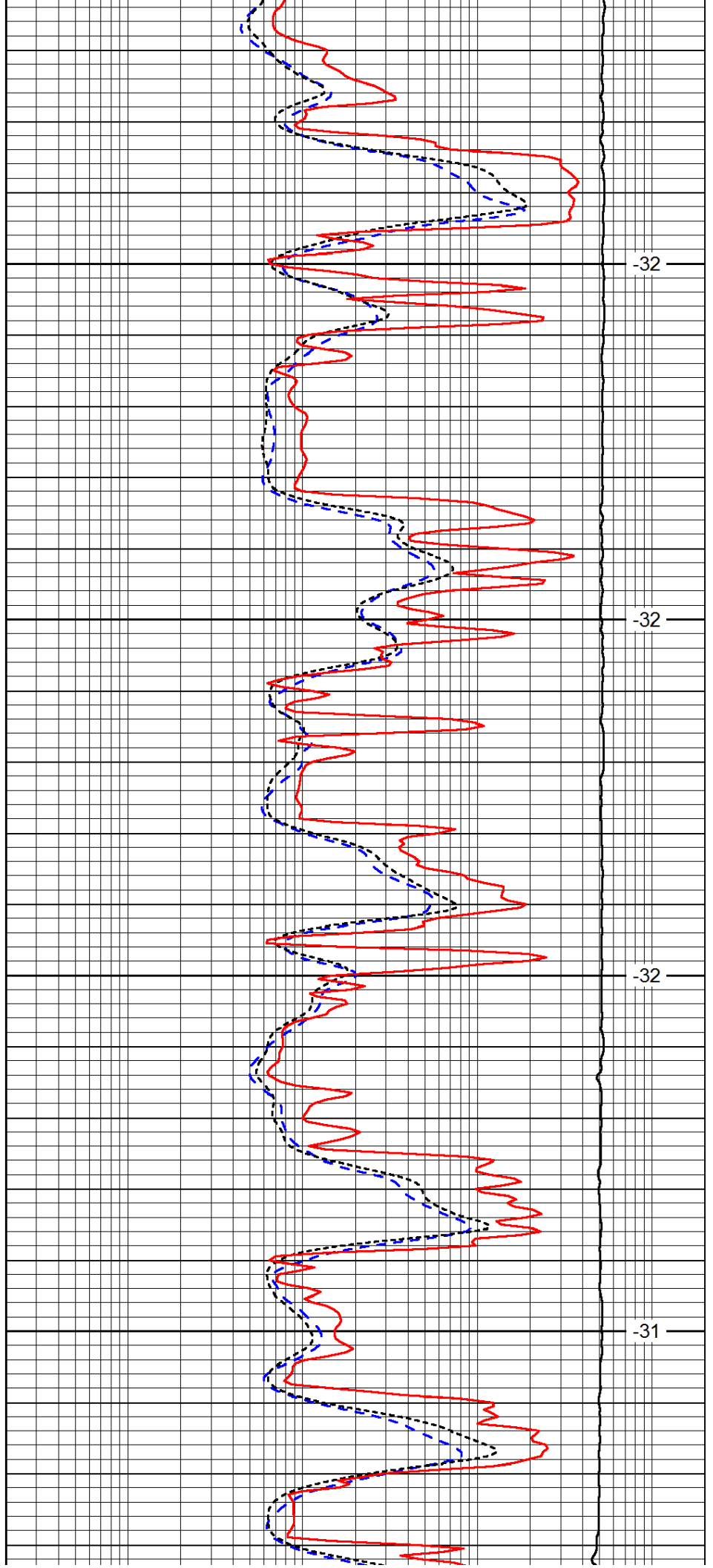


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4350

4400

4450

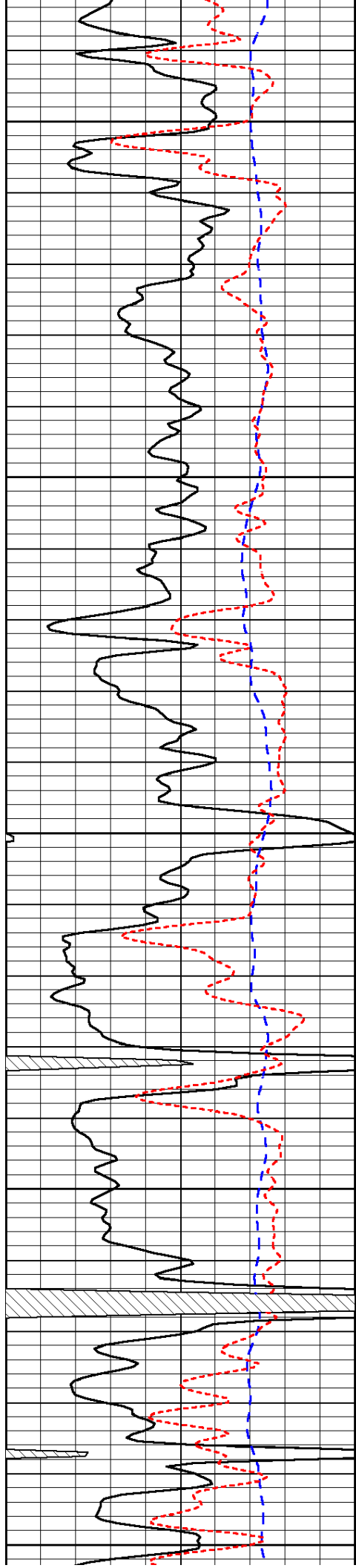


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-32

-32

-31



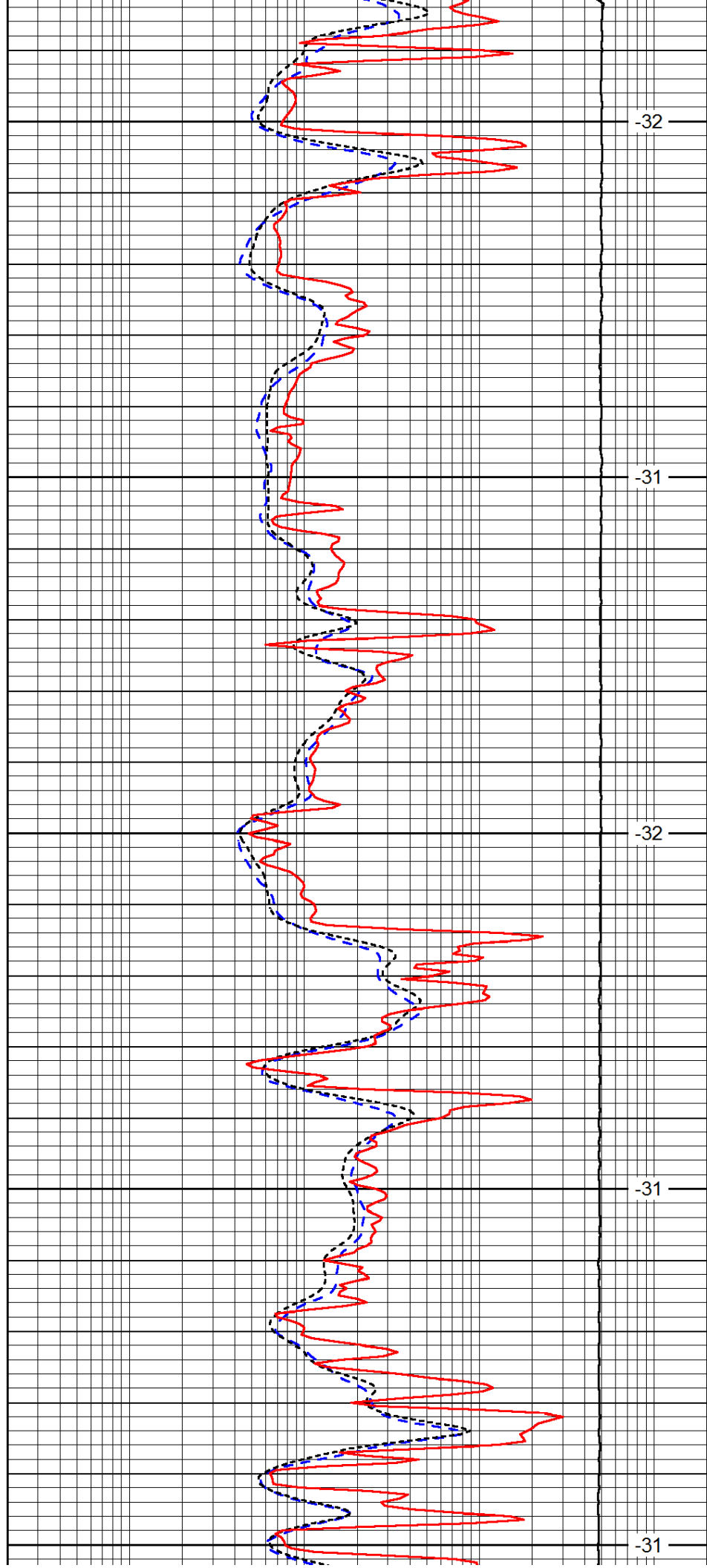
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4550

4600

4650

4700



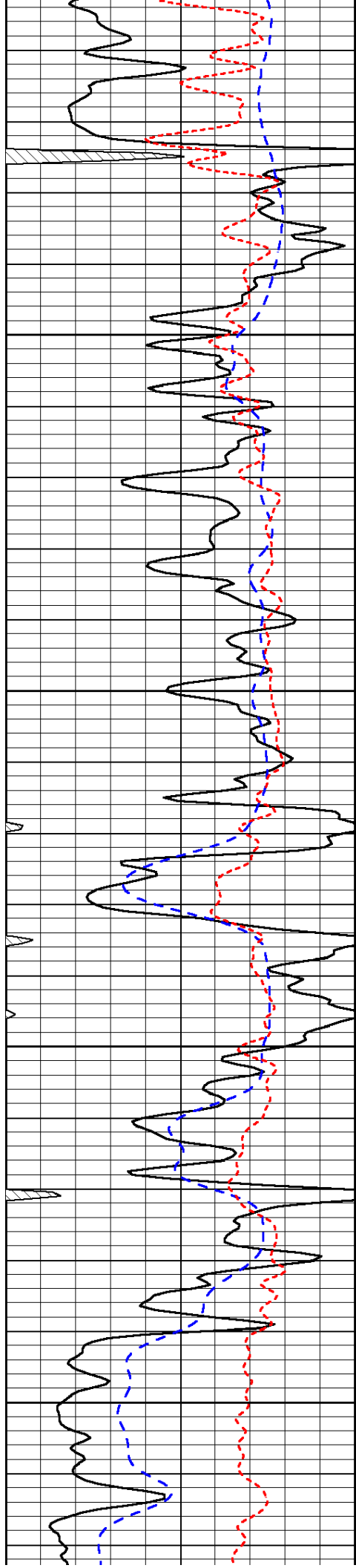
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-31

-32

-31

-31

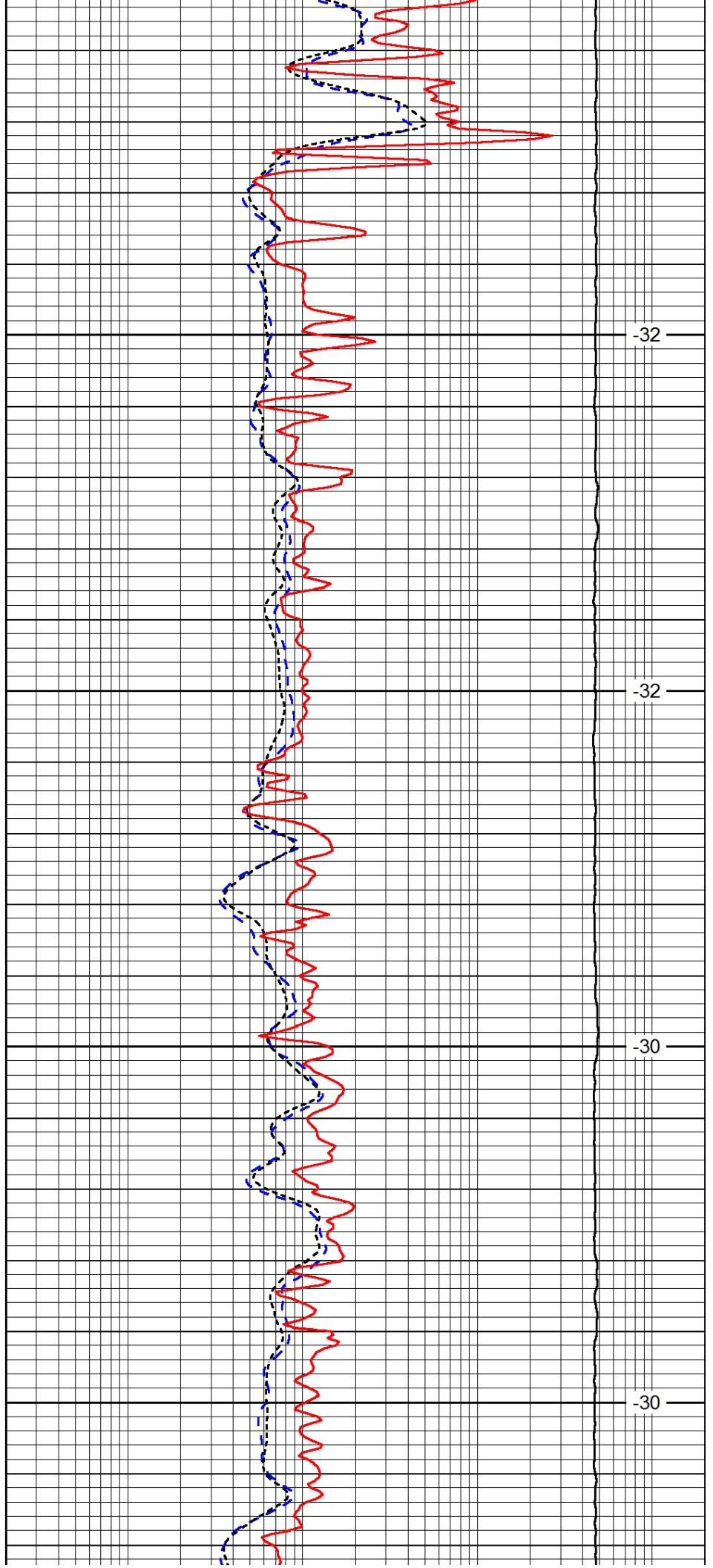


4750

4800

4850

4900

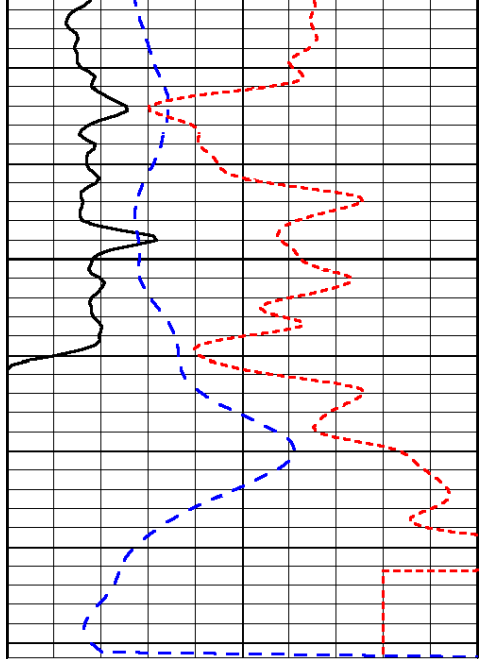


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-32

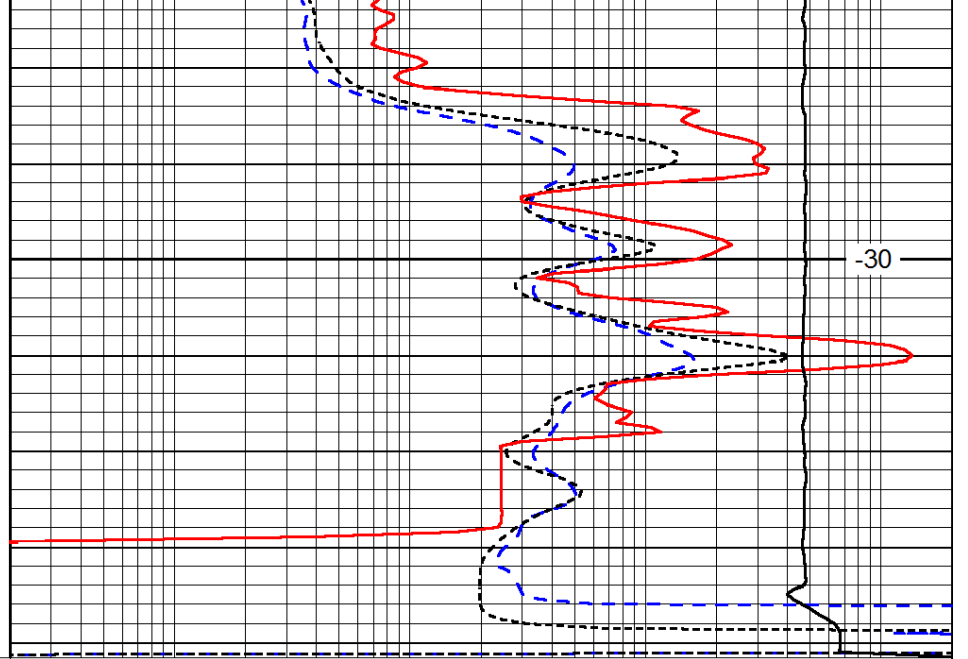
-30

-30



4950

0	Gamma Ray	150
-200	SP (mV)	0
-160	RxoRt	40



-30

0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
15000	Line Tension	0

LSPD