



Pioneer Energy Services

Dual Induction Log

API No.

15-023-21420-00-00

Company Murfin Drilling Company, Inc.

Well Culwell "C" #3-10

Field Jones Canyon Southeast

County Cheyenne State Kansas

Location

SE SW

660' FSL / 1980' FWL

Sec: 10

Twp: 1S

Rge: 37W

Elevation

K.B. 3200
D.F.
G.L. 3189

Permanent Datum Ground Level

Elevation 3189

Log Measured From Kelly Bushing

11 Ft. Above Perm. Datum

Drilling Measured From Kelly Bushing

Date

2/15/2015

Run Number

One

Depth Driller

4730

Depth Logger

4726

Bottom Logged Interval

4725

Top Log Interval

0

Casing Driller

8.625 @ 225

Casing Logger

222

Bit Size

7.875

Type Fluid in Hole

Chemical

Salinity, ppm CL

500

Density / Viscosity

9.3

62

pH / Fluid Loss

10.0

7.6

Source of Sample

Flowline

Rm @ Meas. Temp

0.90 @ 70

Rmf @ Meas. Temp

0.68 @ 70

Rmc @ Meas. Temp

1.22 @ 70

Source of Rmf / Rmc

Charts

Rm @ BHT

0.51 @ 123

Operating Rig Time

5 Hours

Max Rec. Temp. F

123

Equipment Number

51

Location

Hays

Recorded By

R. Barnhart

Witnessed By

Chuck Schmalz

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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

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(785) 625-3858

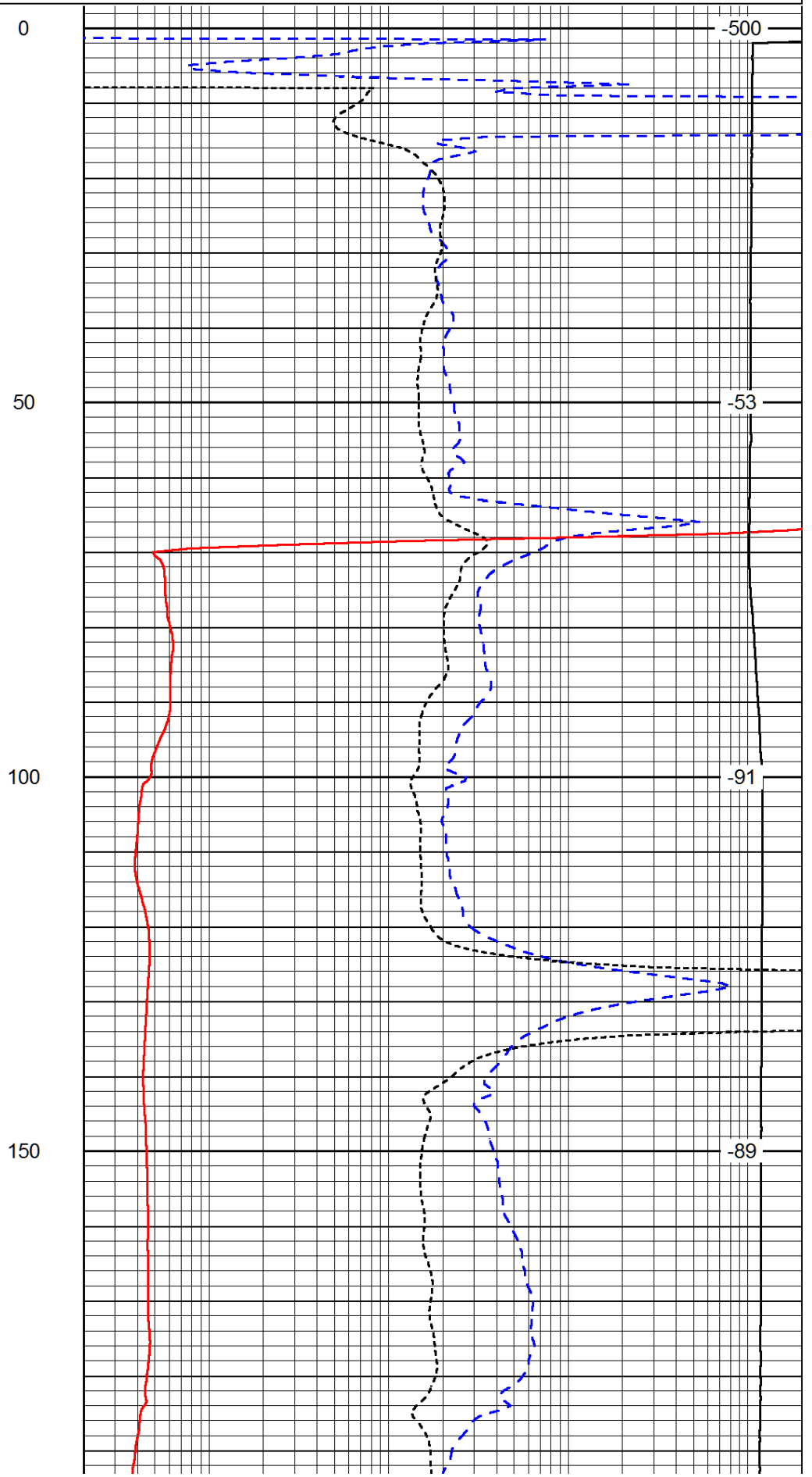
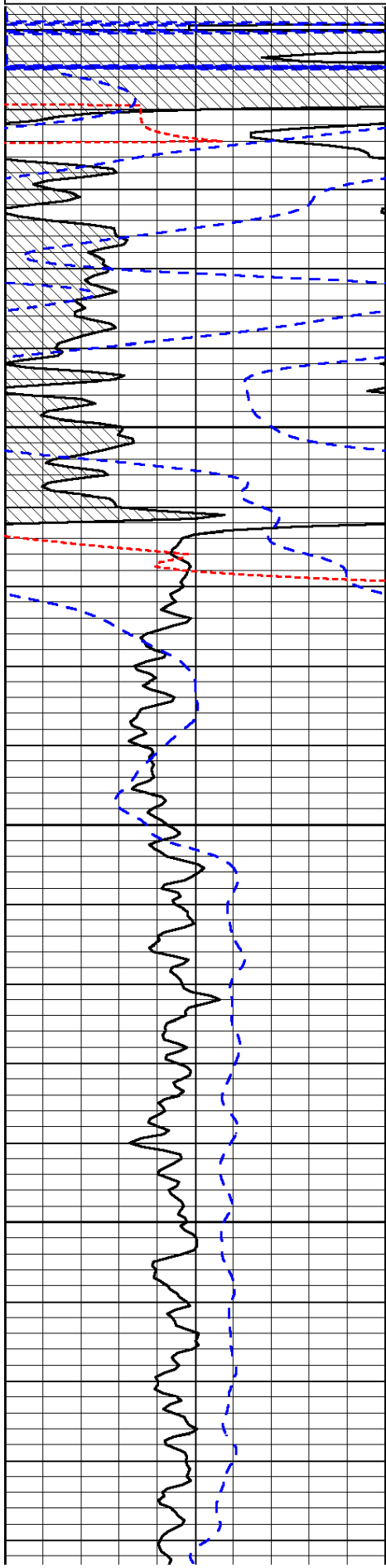
Bird City, KS:
N to AA Rd., 3 1/2E to a T, 2N to a Y, E past CG to rig

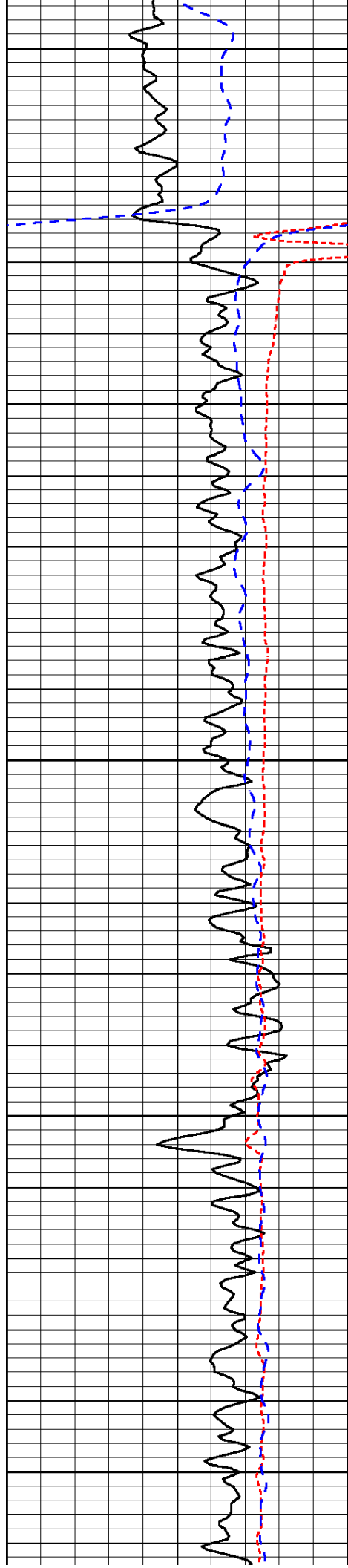
Database File: murfin_hd.db
Dataset Pathname: dil/mrfmain
Presentation Format: dil
Dataset Creation: Sun Feb 15 06:15:23 2015
Charted by: Depth in Feet scaled 1:240

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

0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
10000	Line Tension	0

LSPD





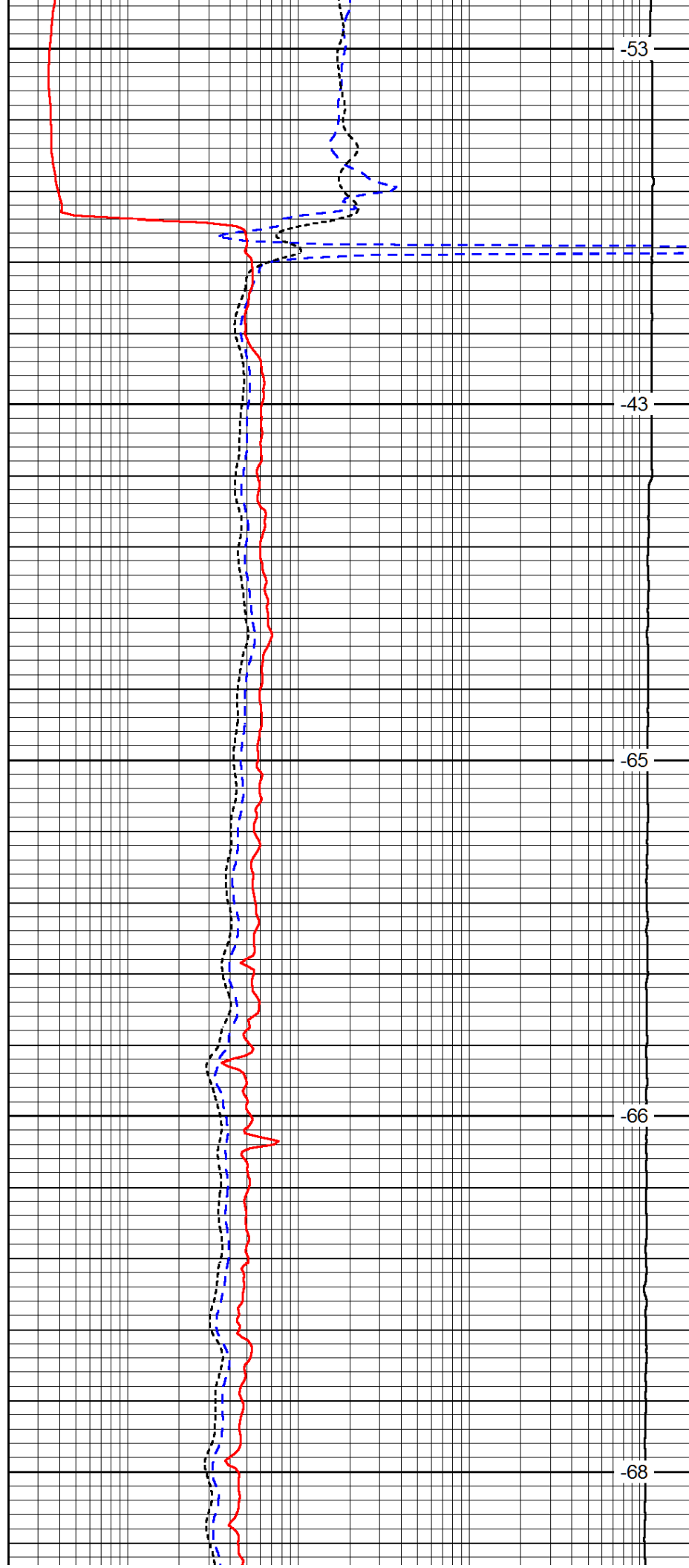
200

250

300

350

400



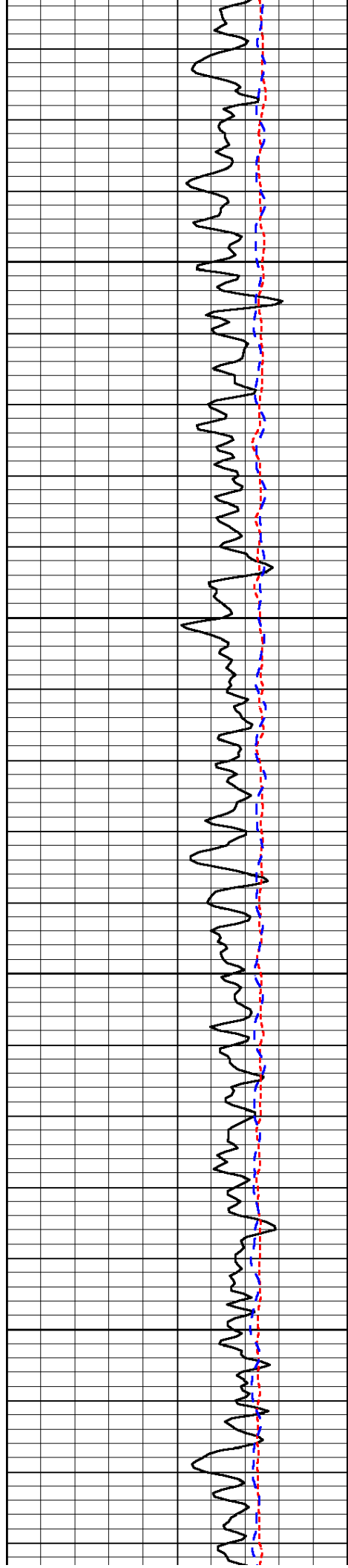
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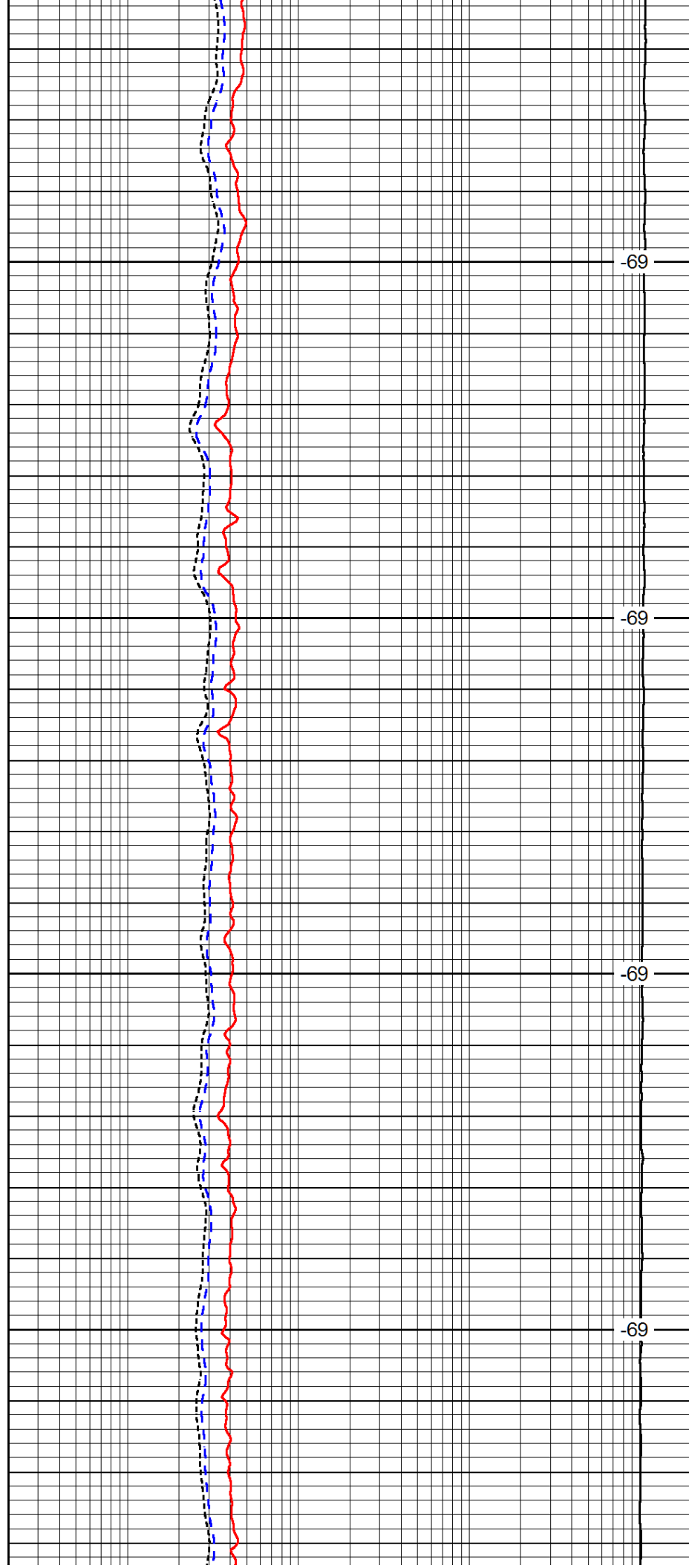


450

500

550

600

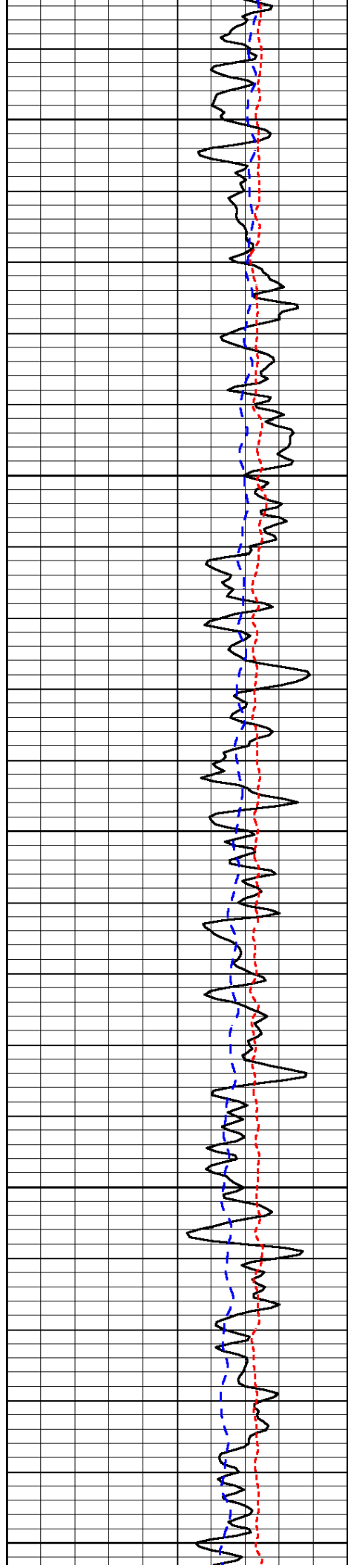


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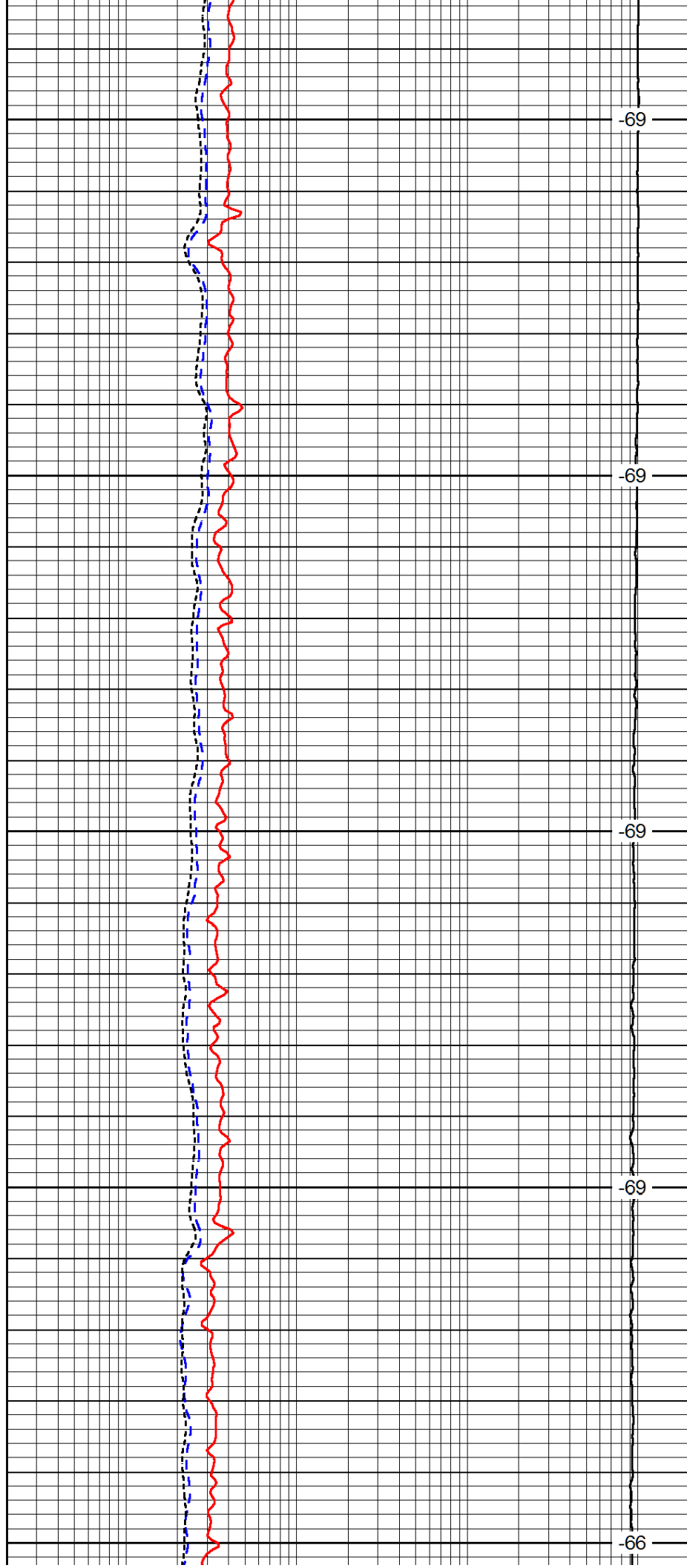
650

700

750

800

850



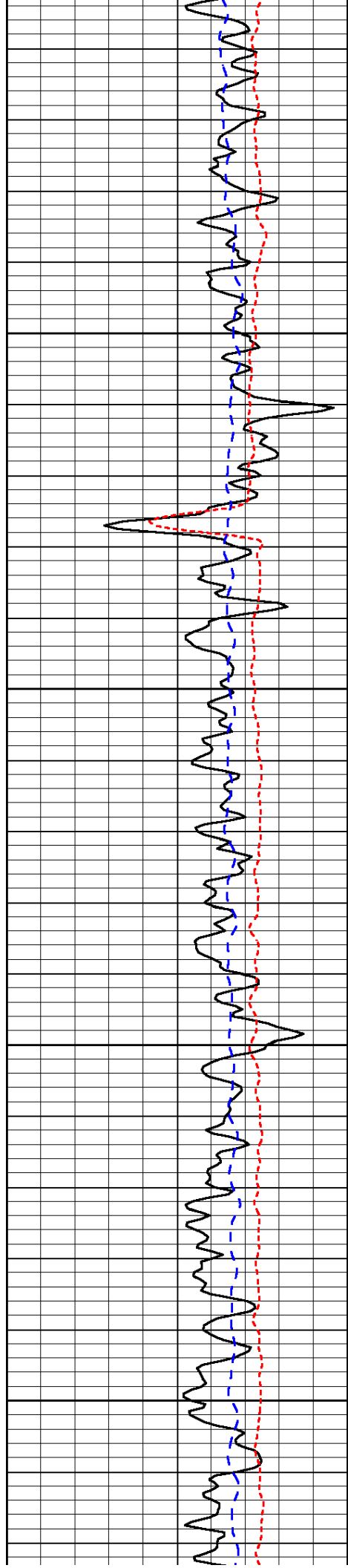
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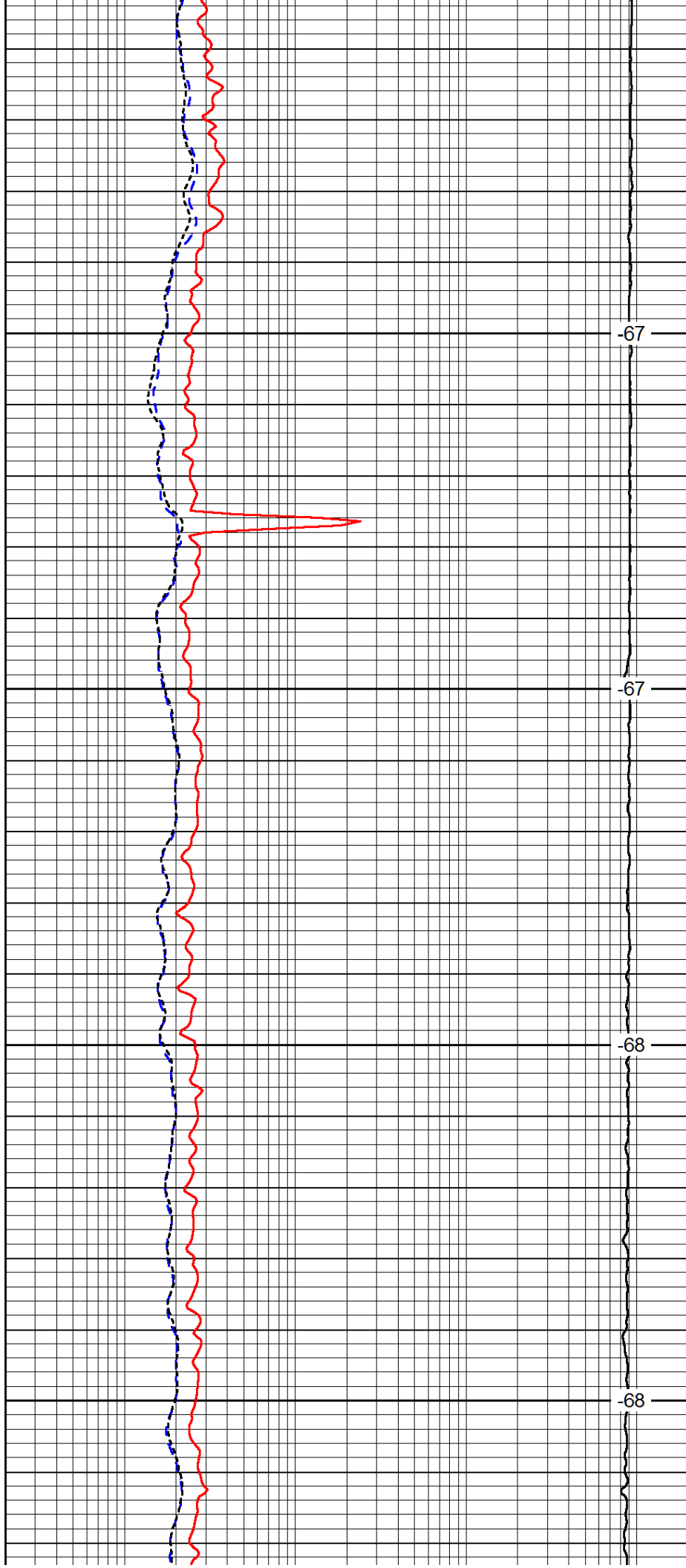


900

950

1000

1050

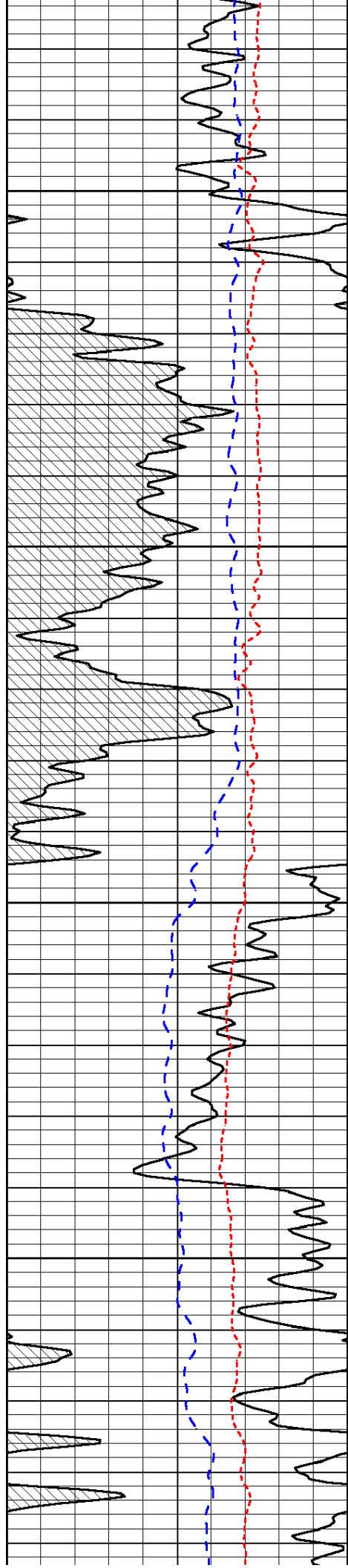


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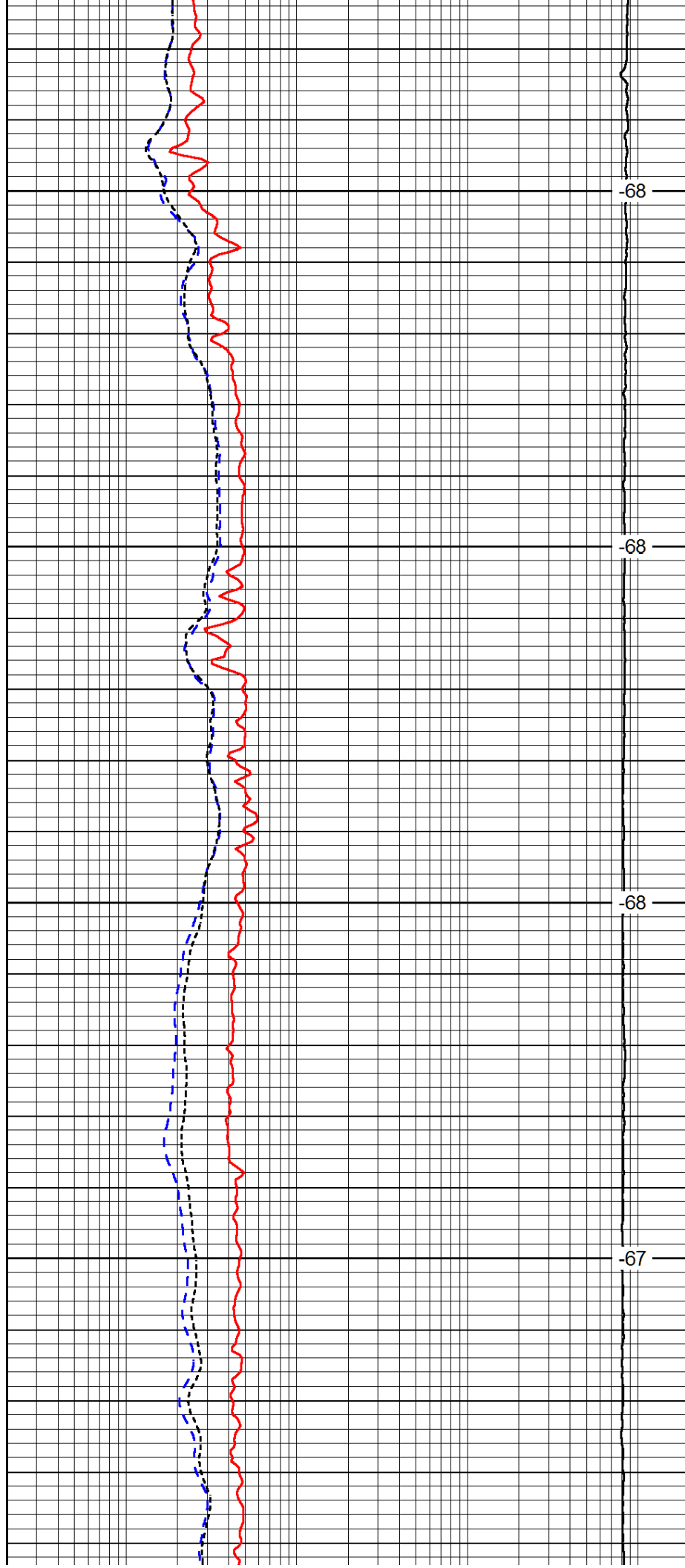


1100

1150

1200

1250

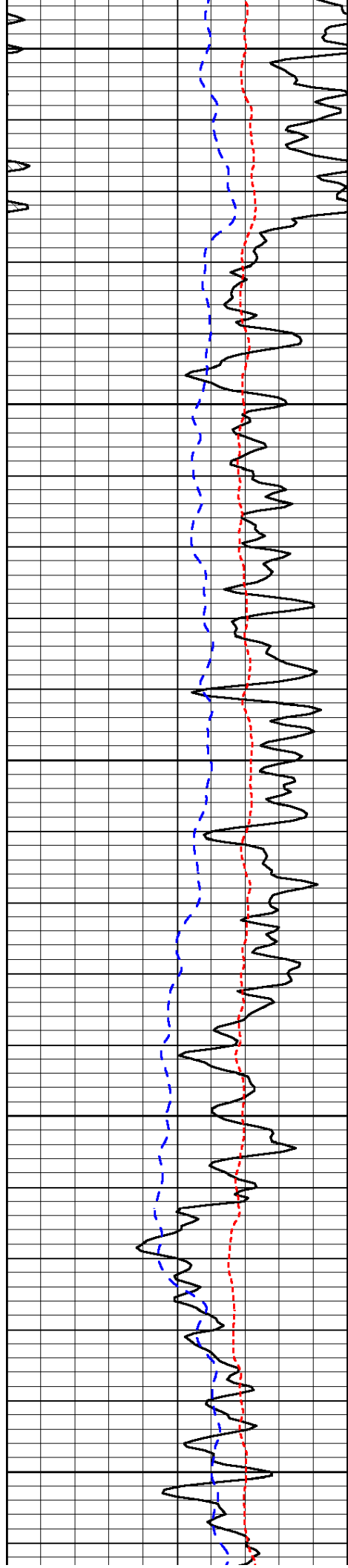


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1300

1350

1400

1450

1500

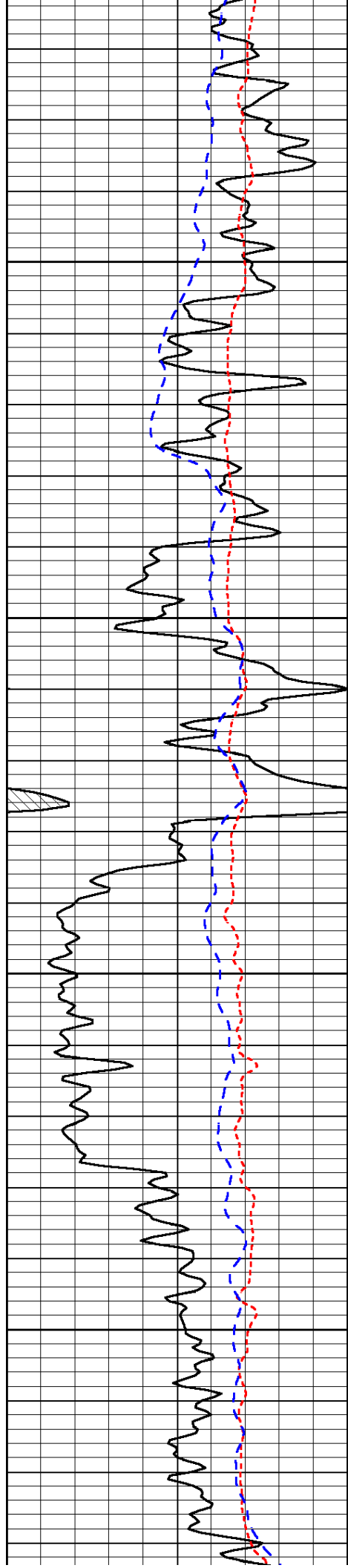
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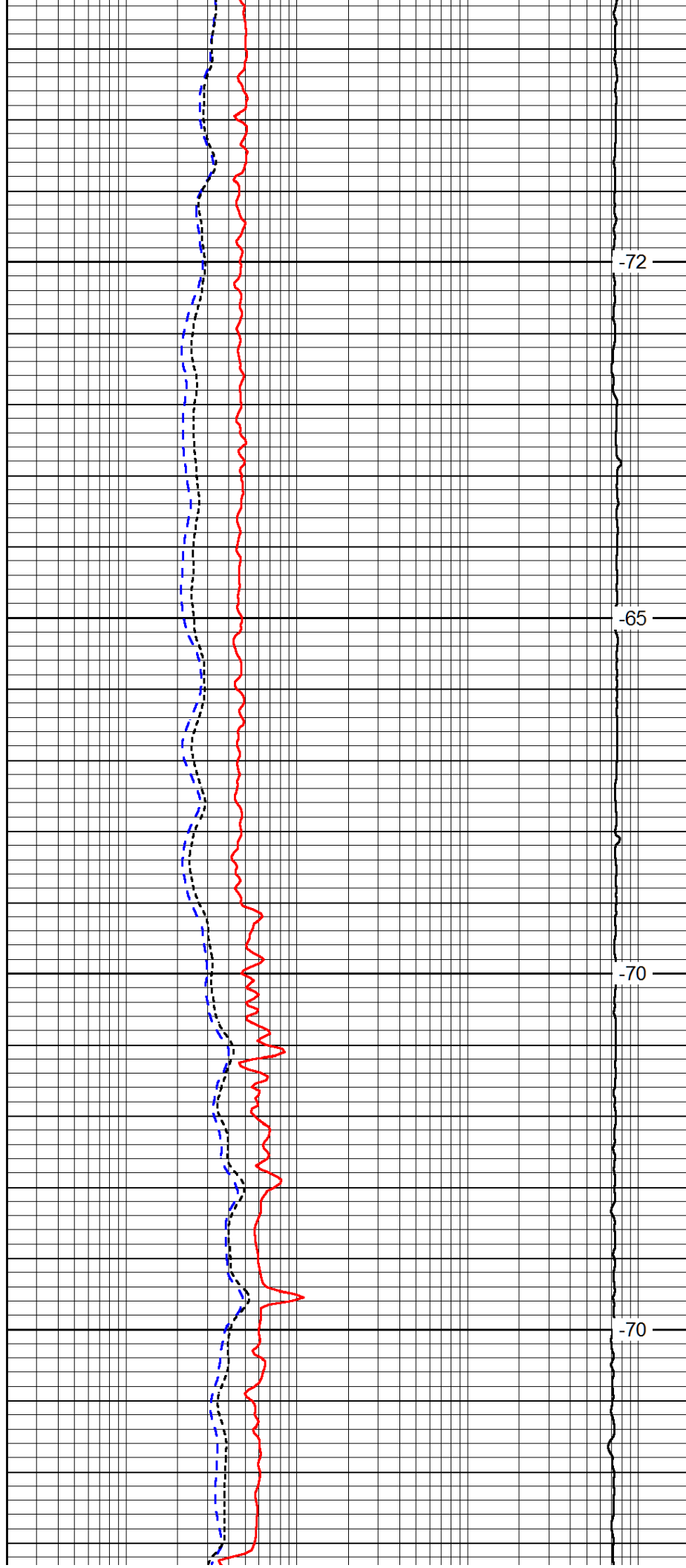


1550

1600

1650

1700

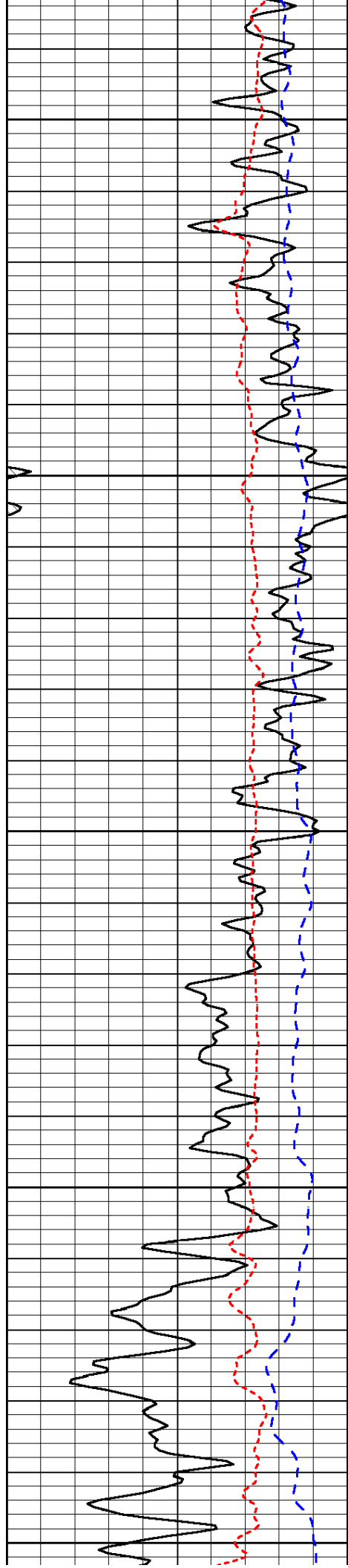


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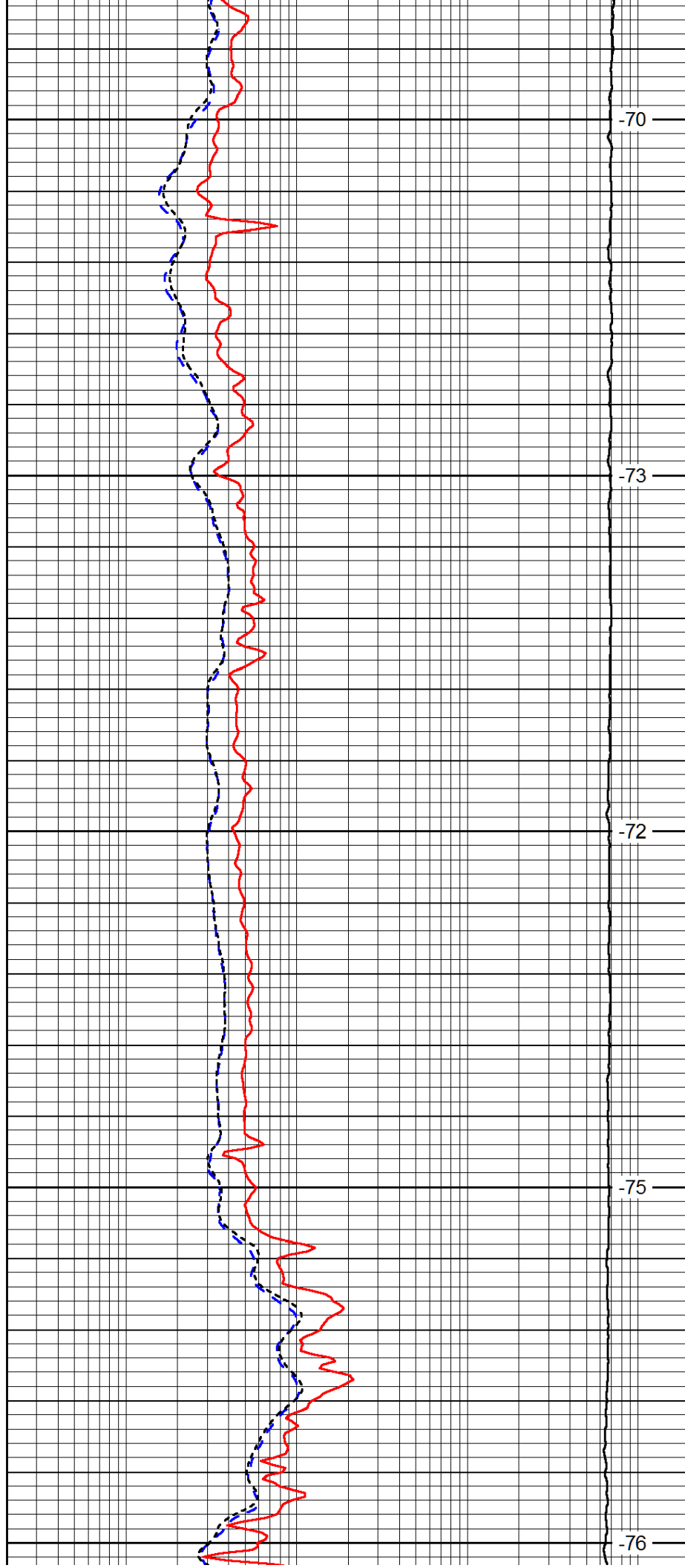
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1800

1850

1900

1950



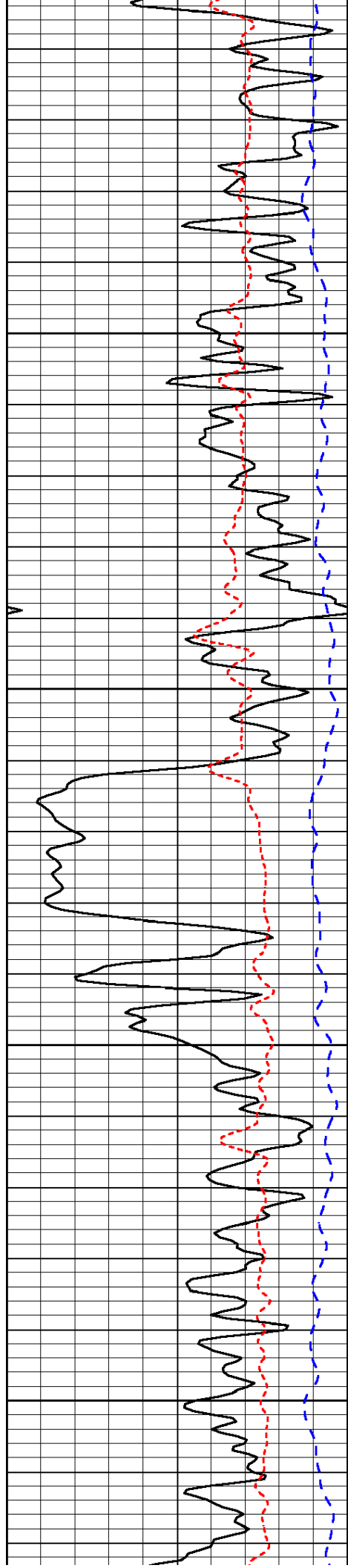
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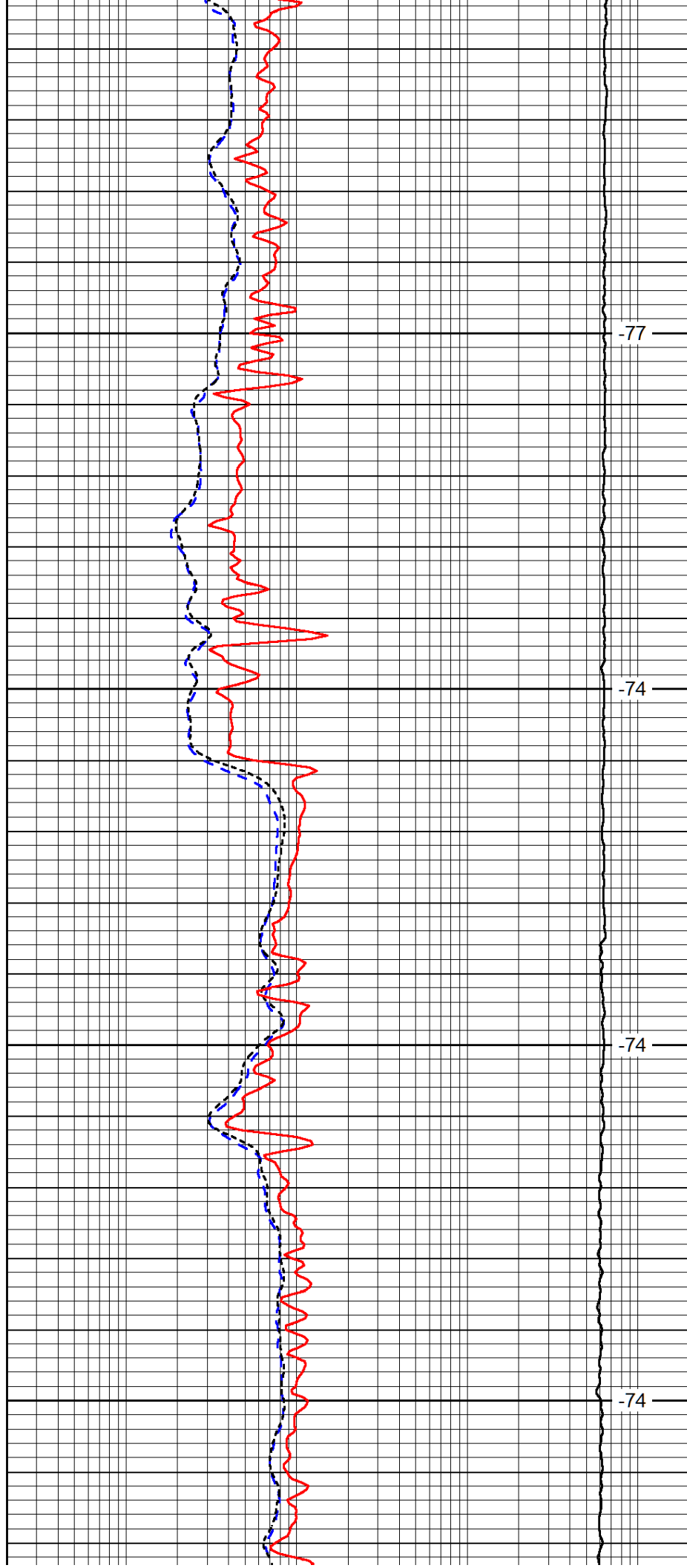


2000

2050

2100

2150

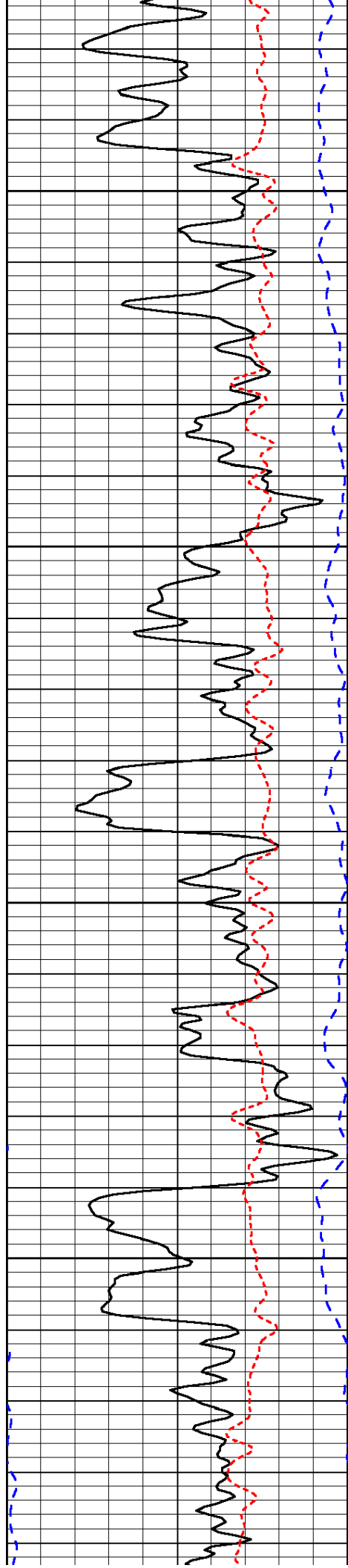


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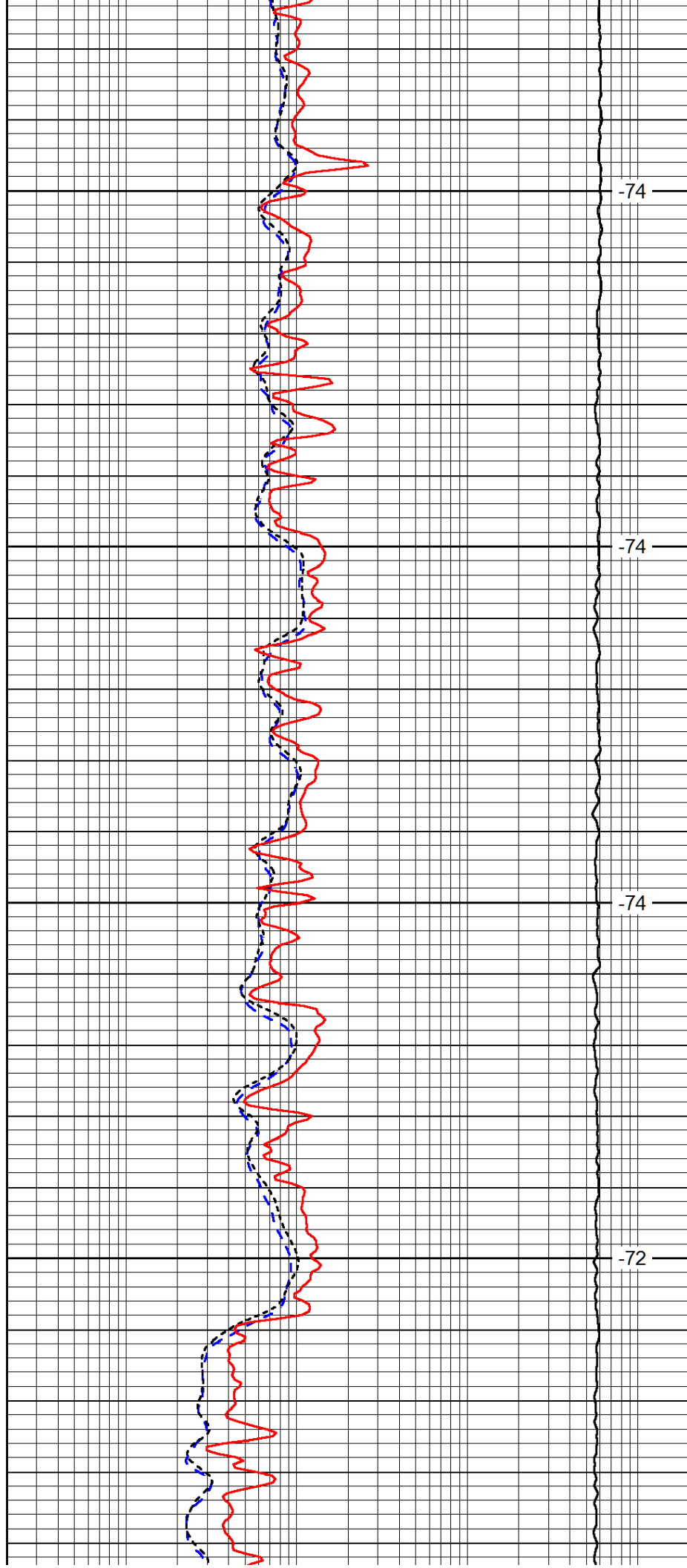


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2250

2300

2350

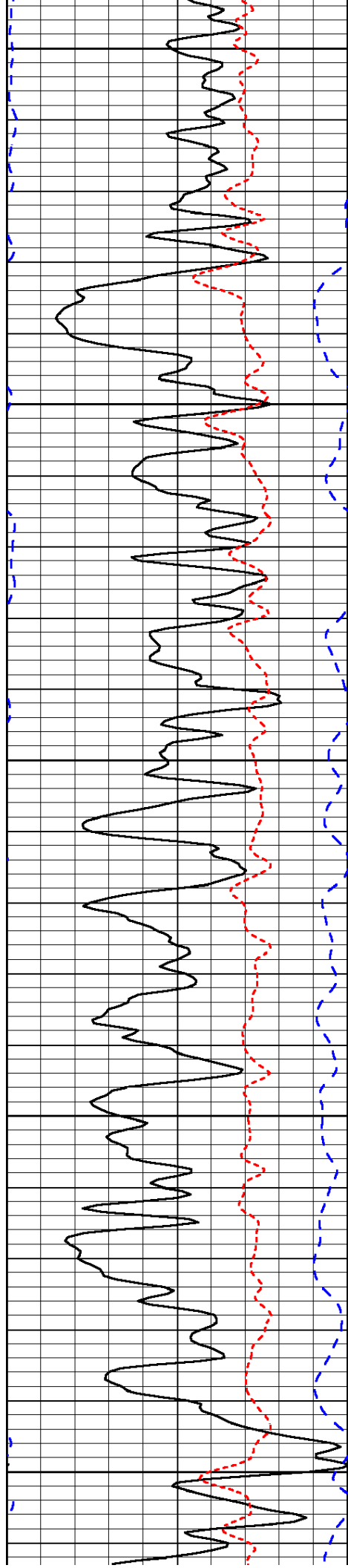


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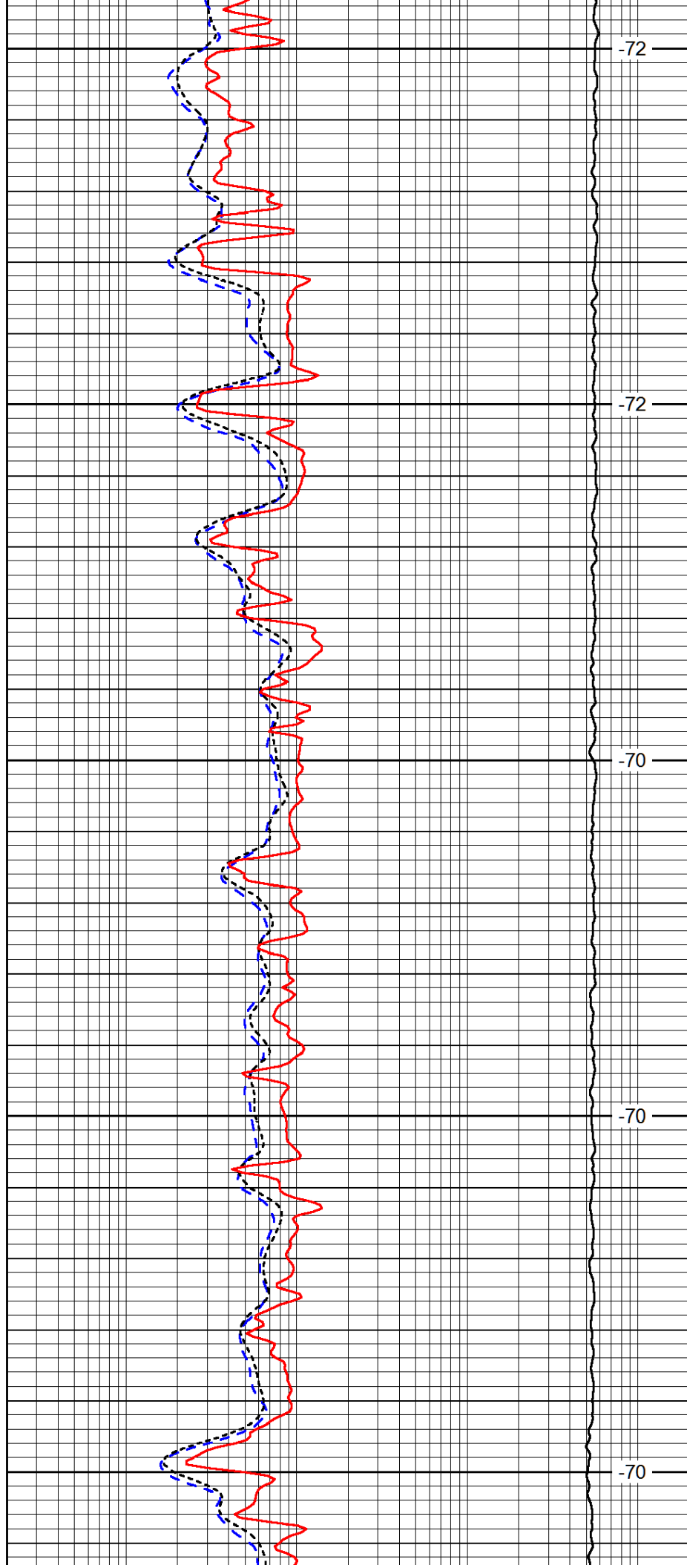
2400

2450

2500

2550

2600



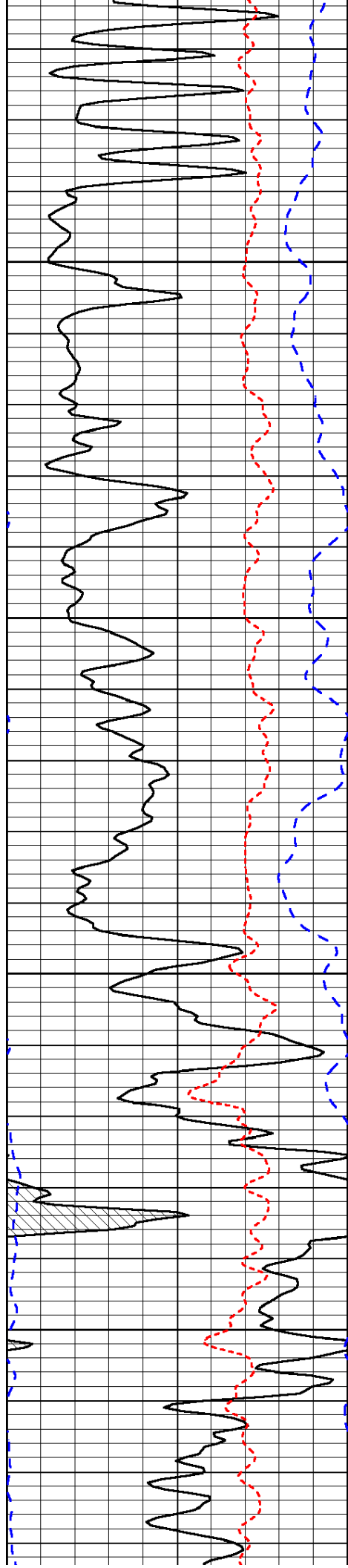
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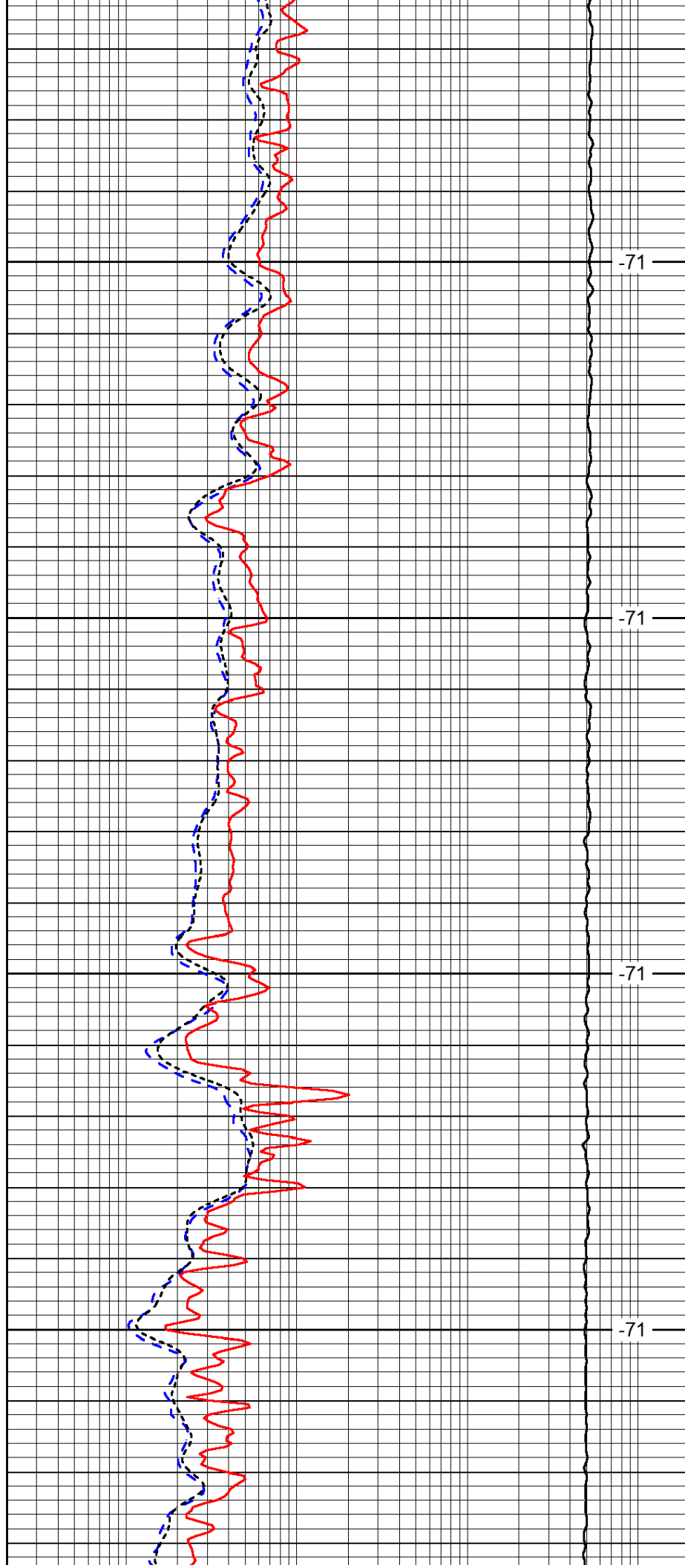


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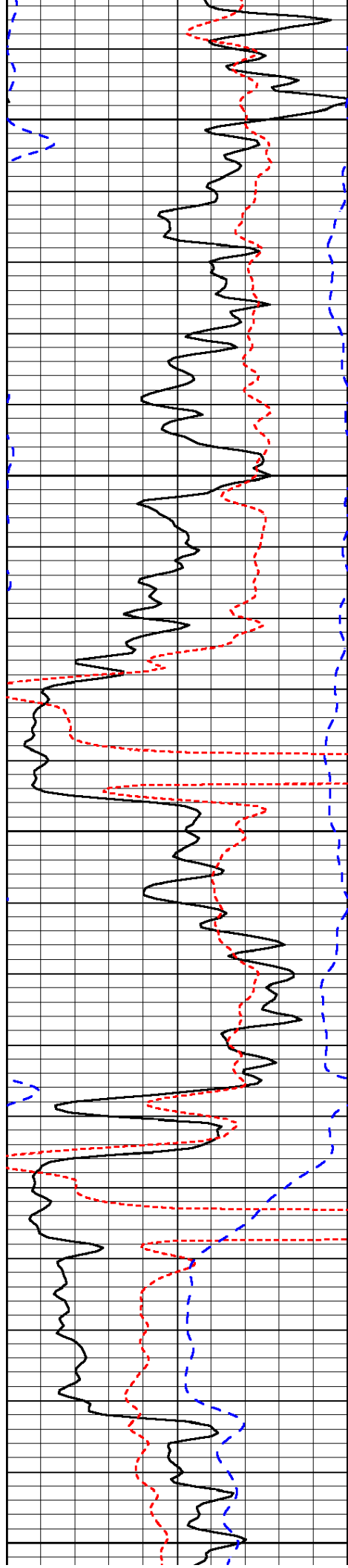


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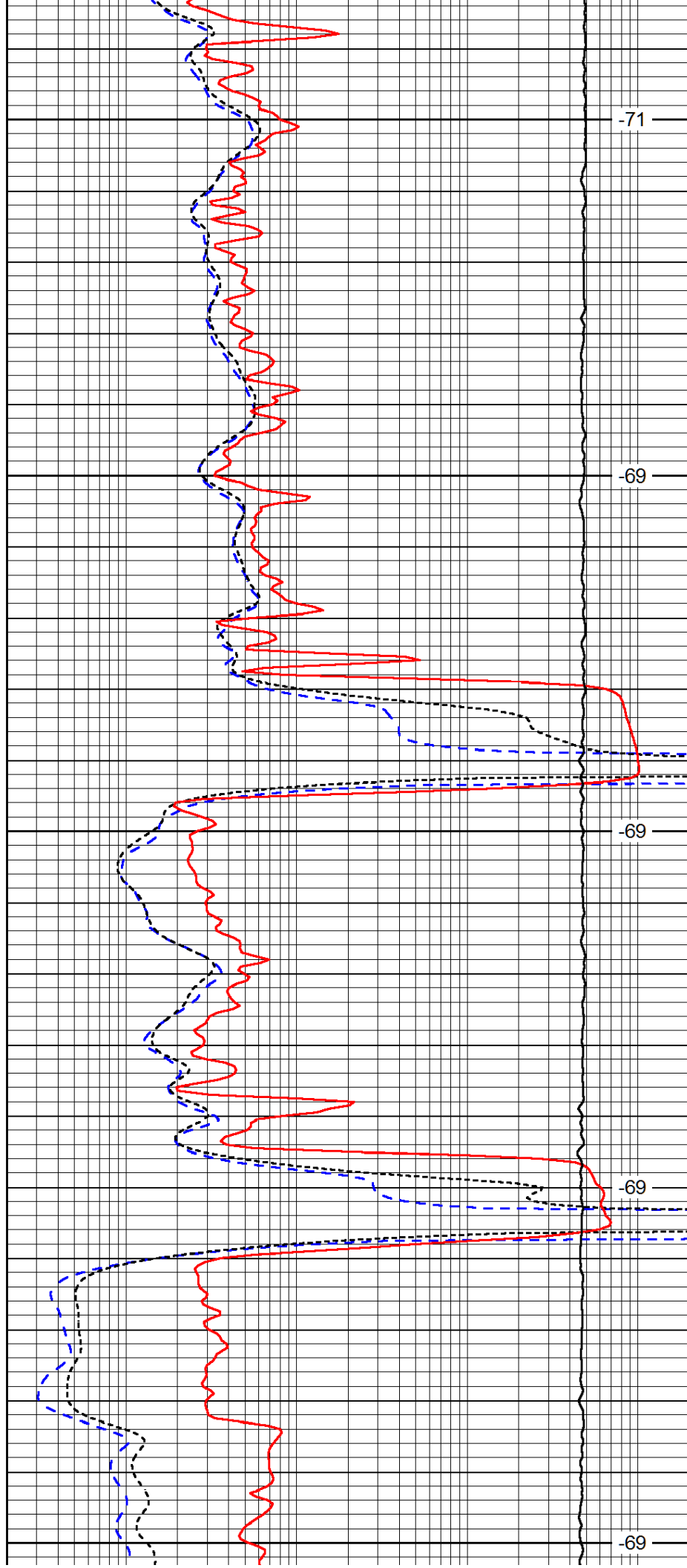
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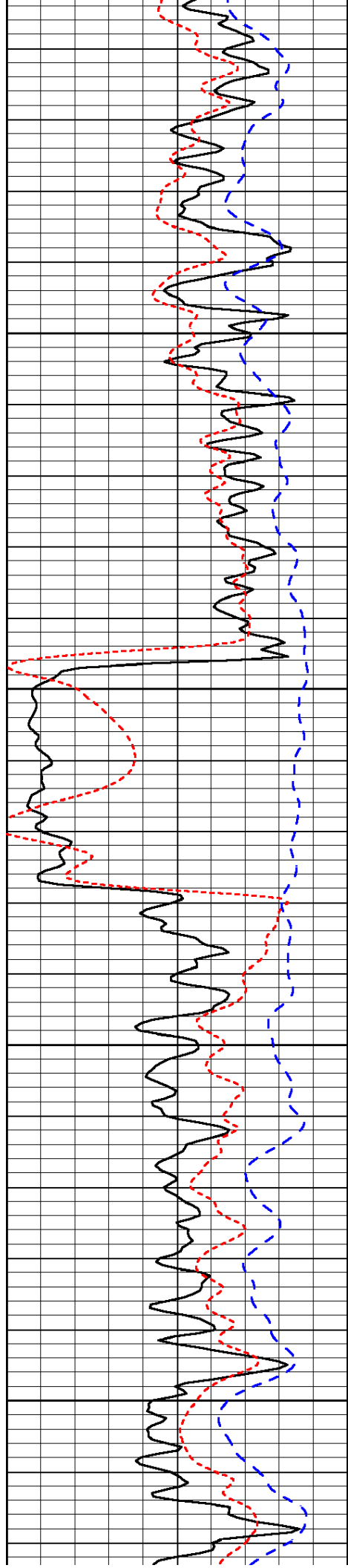
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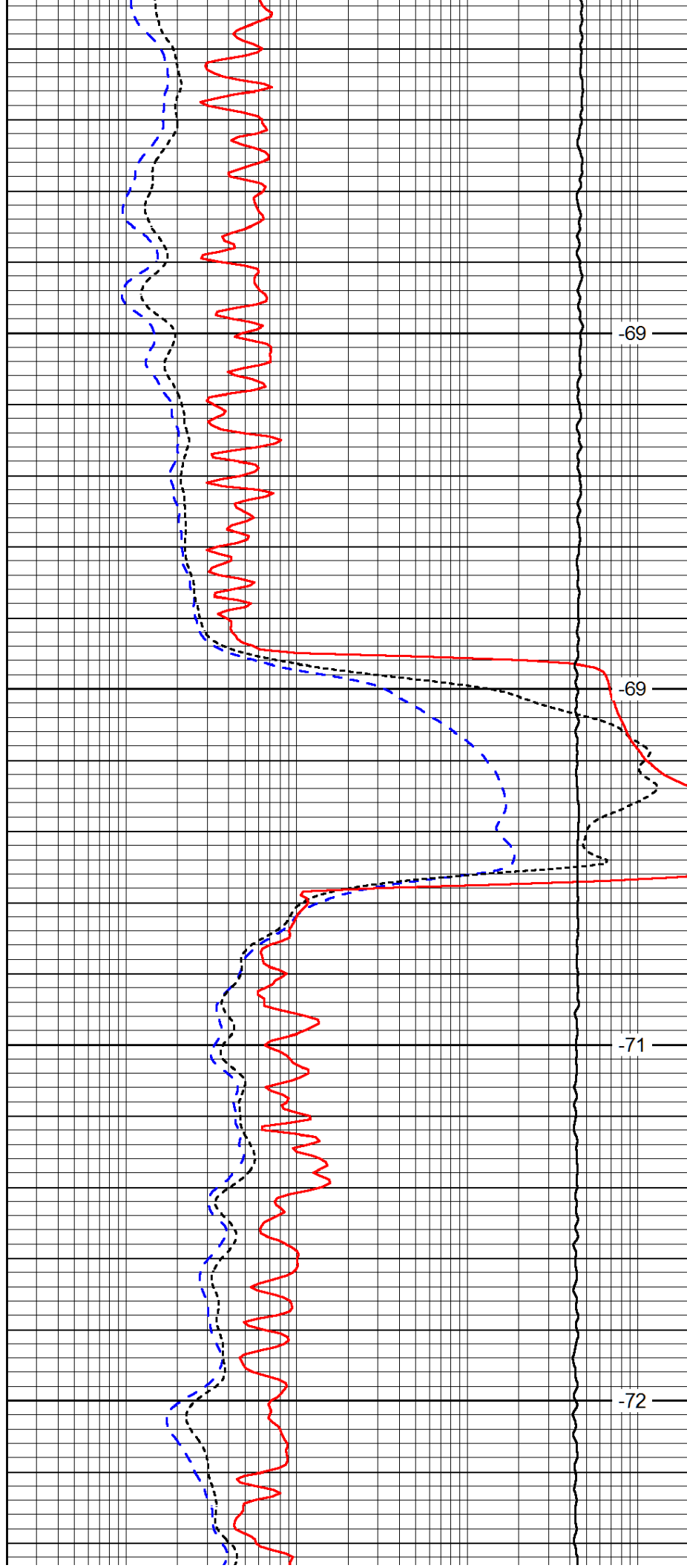


3100

3150

3200

3250

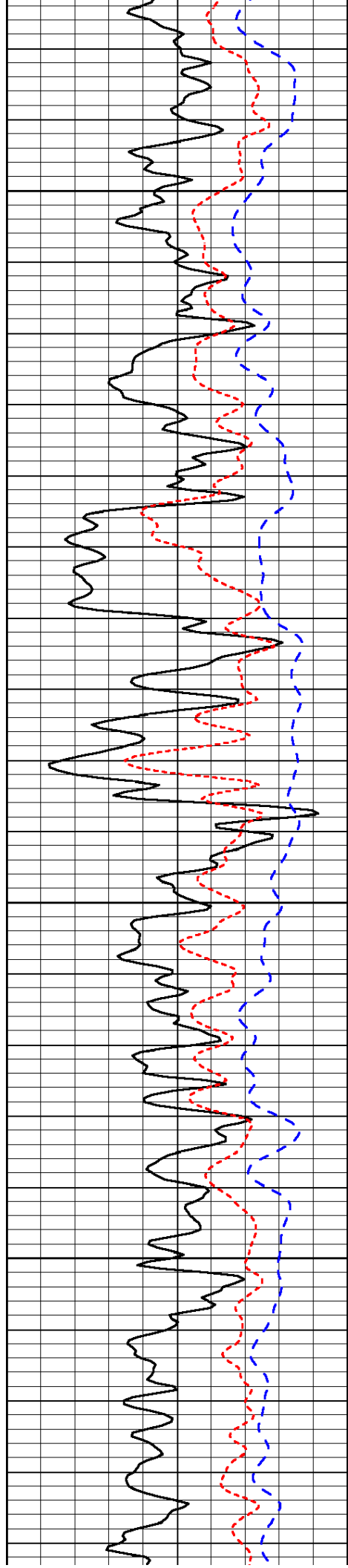


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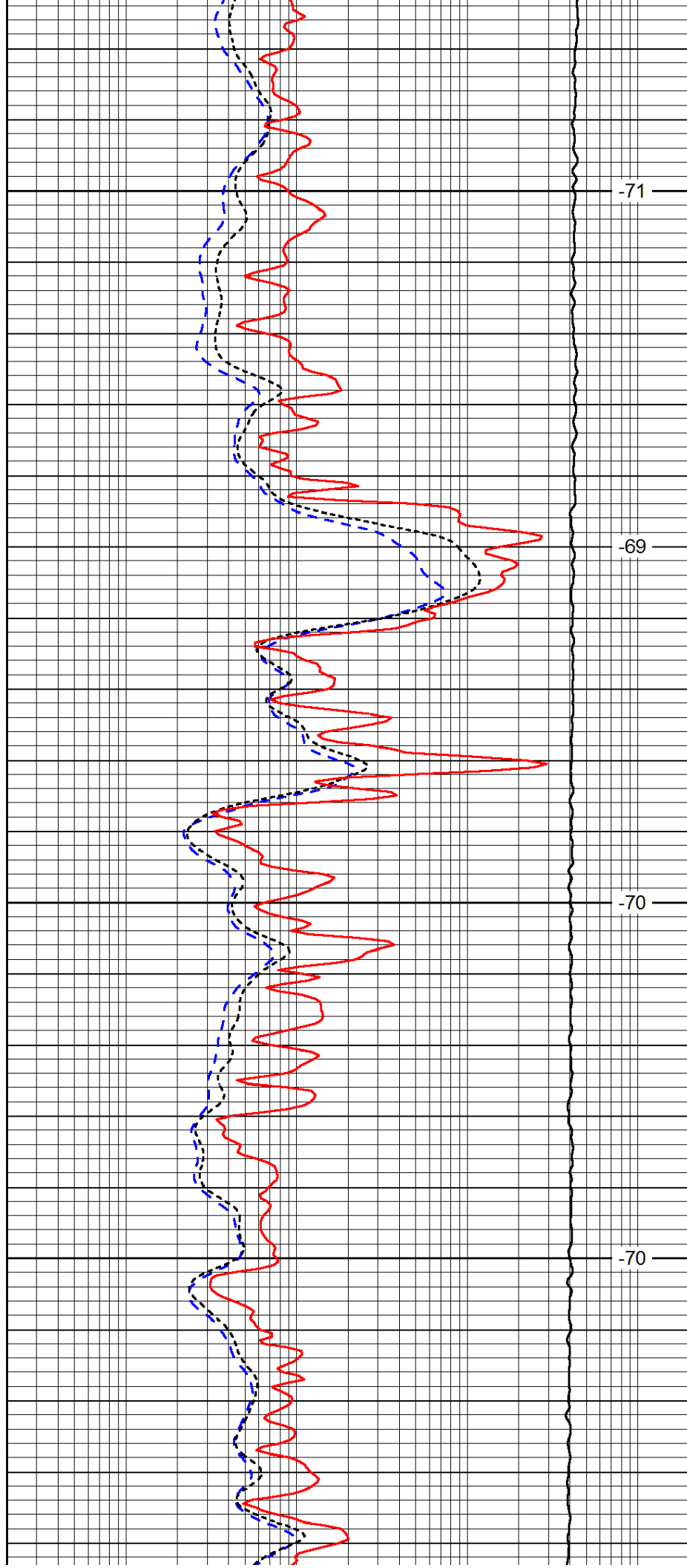


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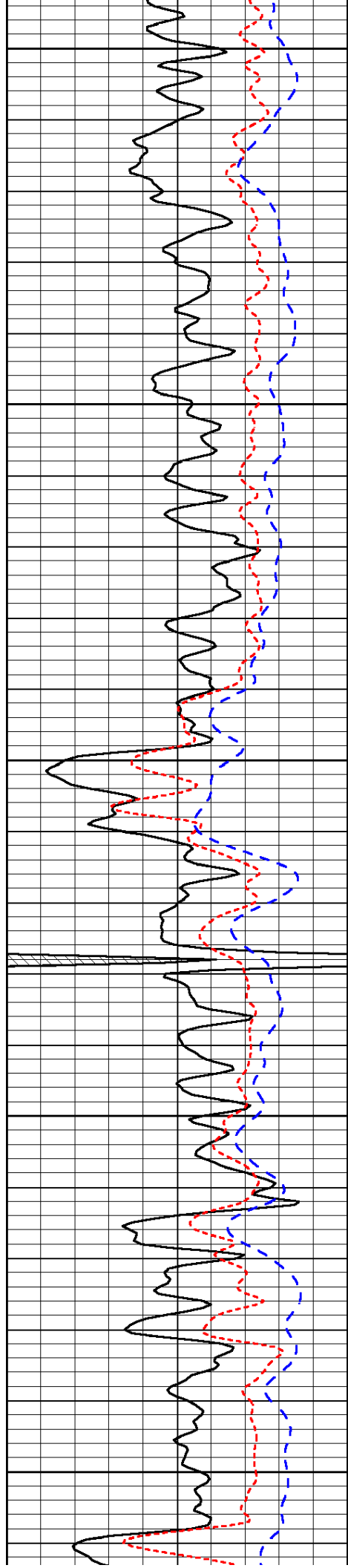


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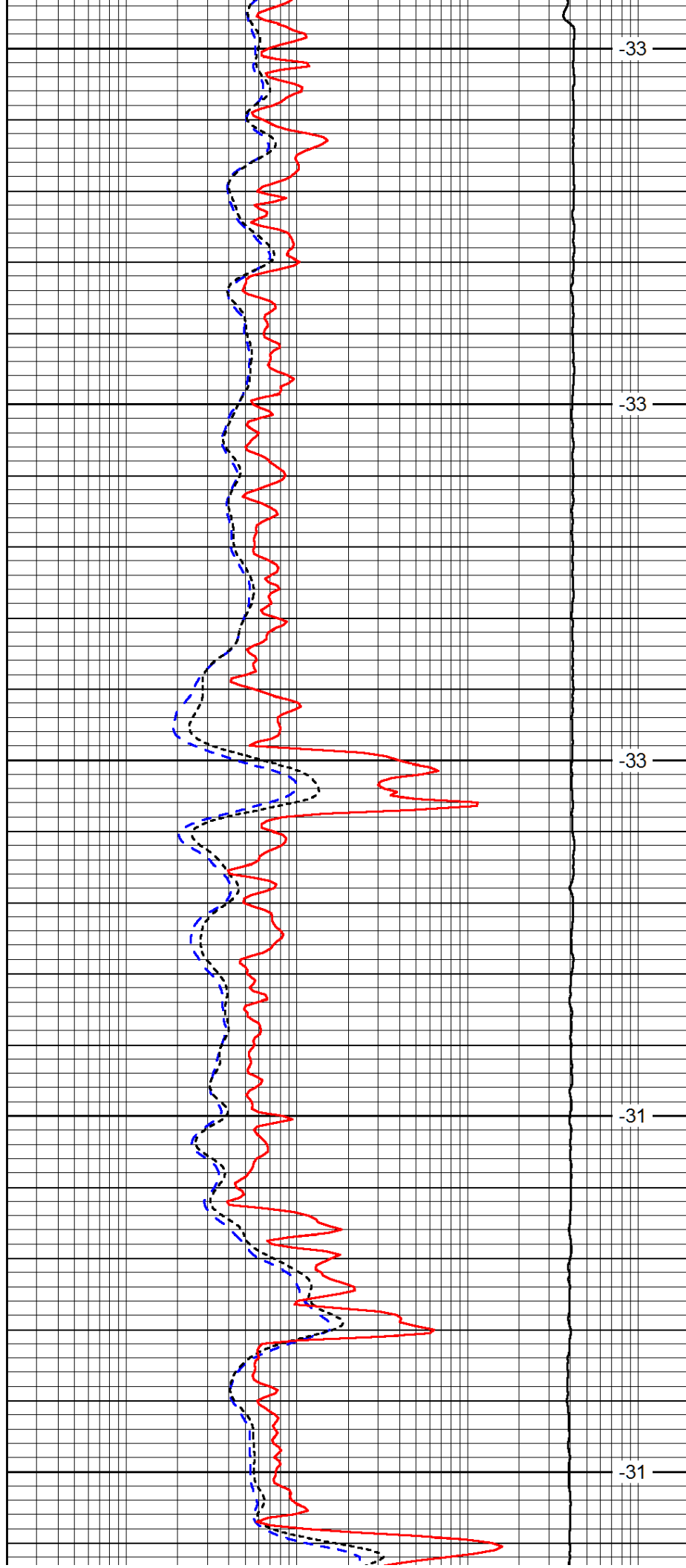
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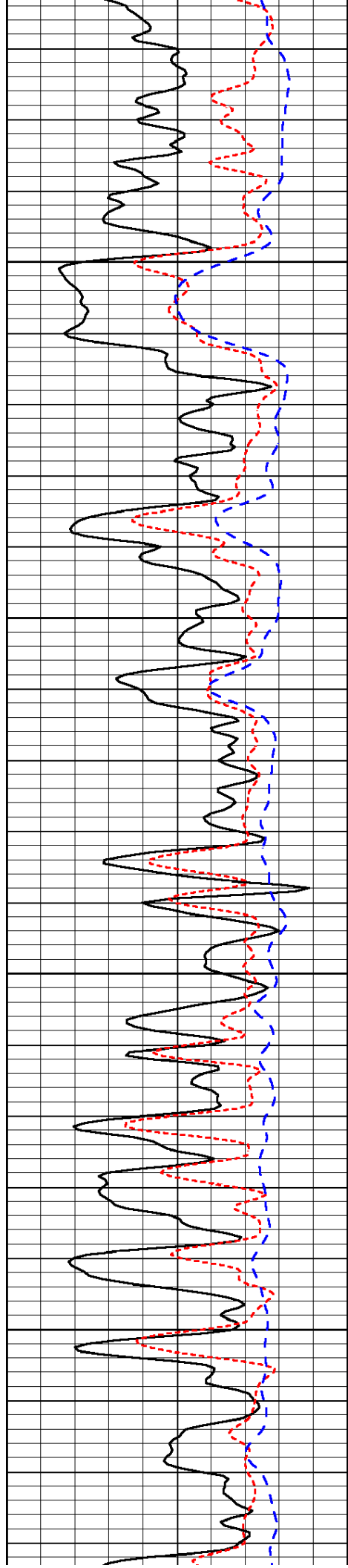
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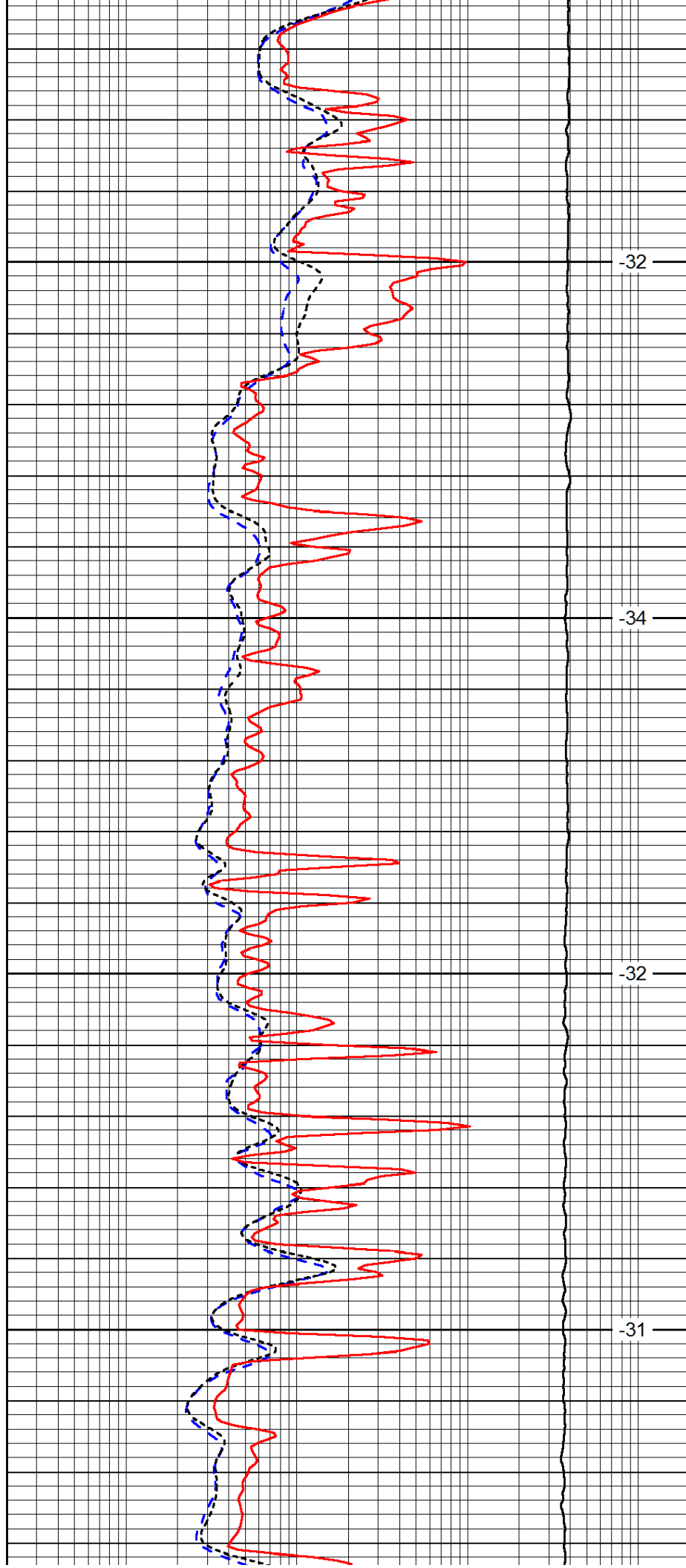


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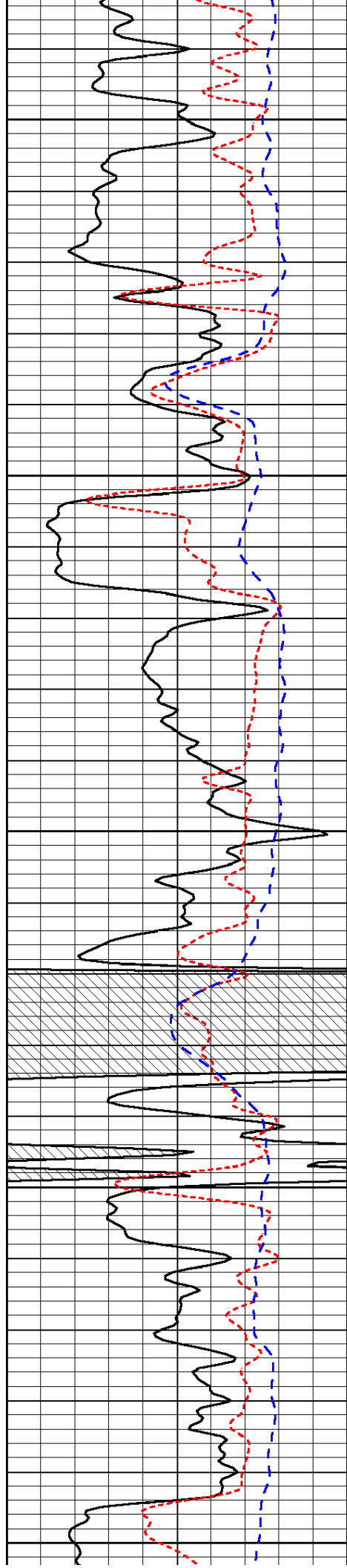


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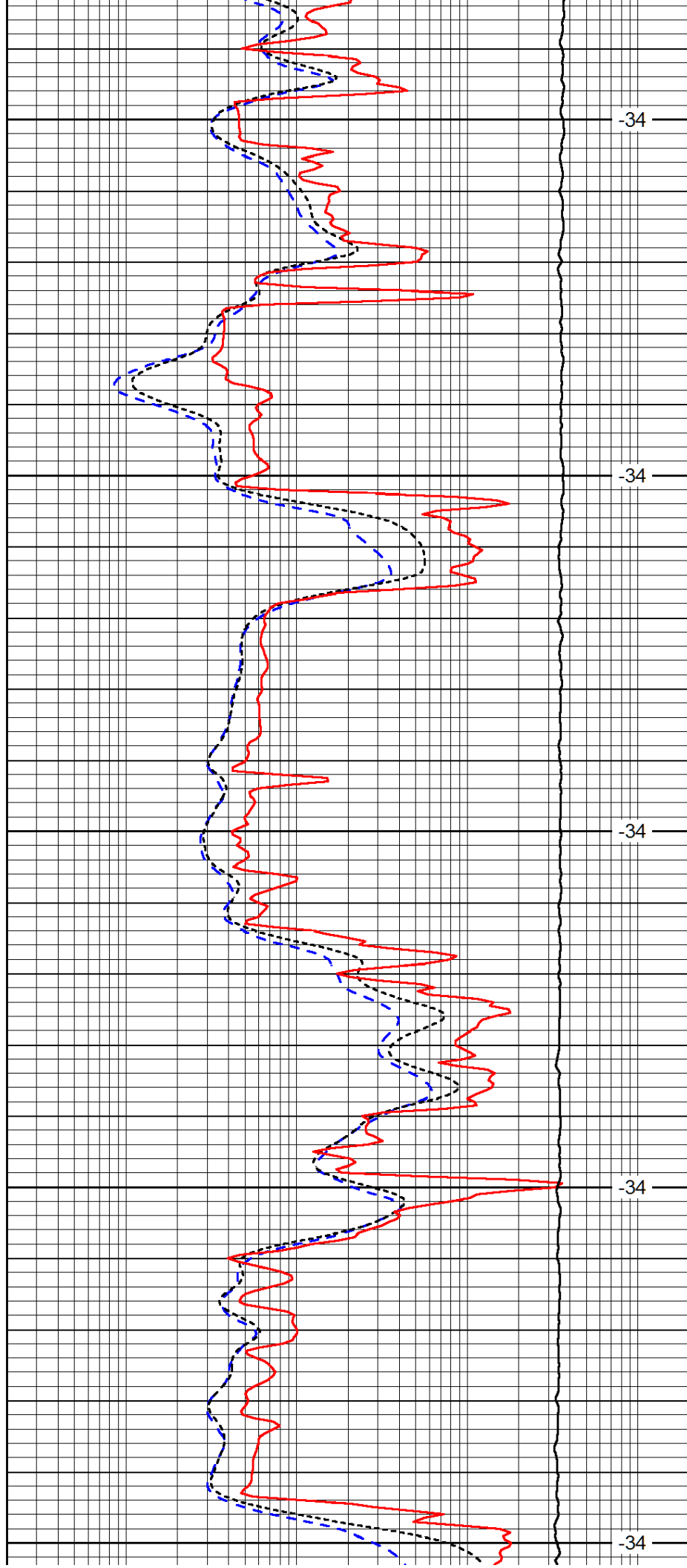
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4000

4050

4100

4150



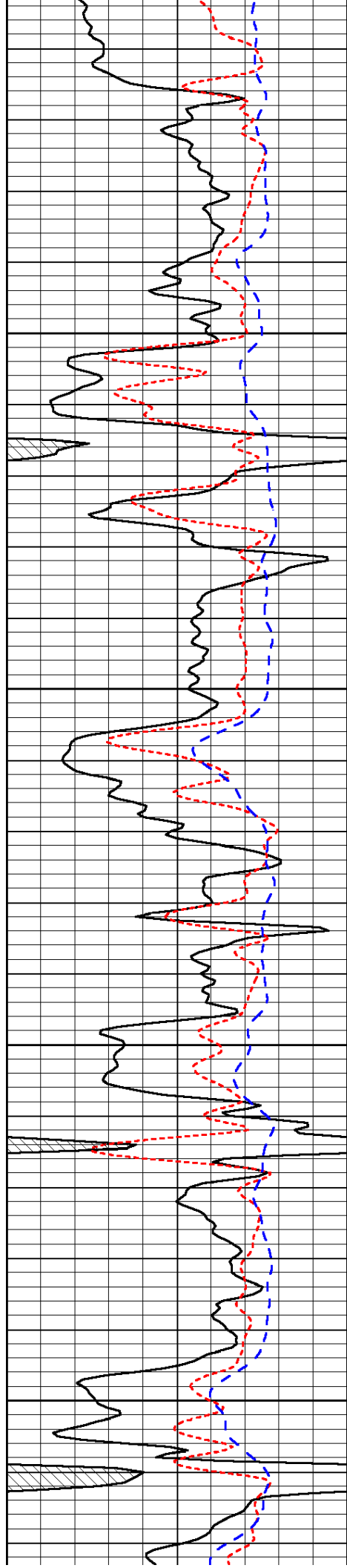
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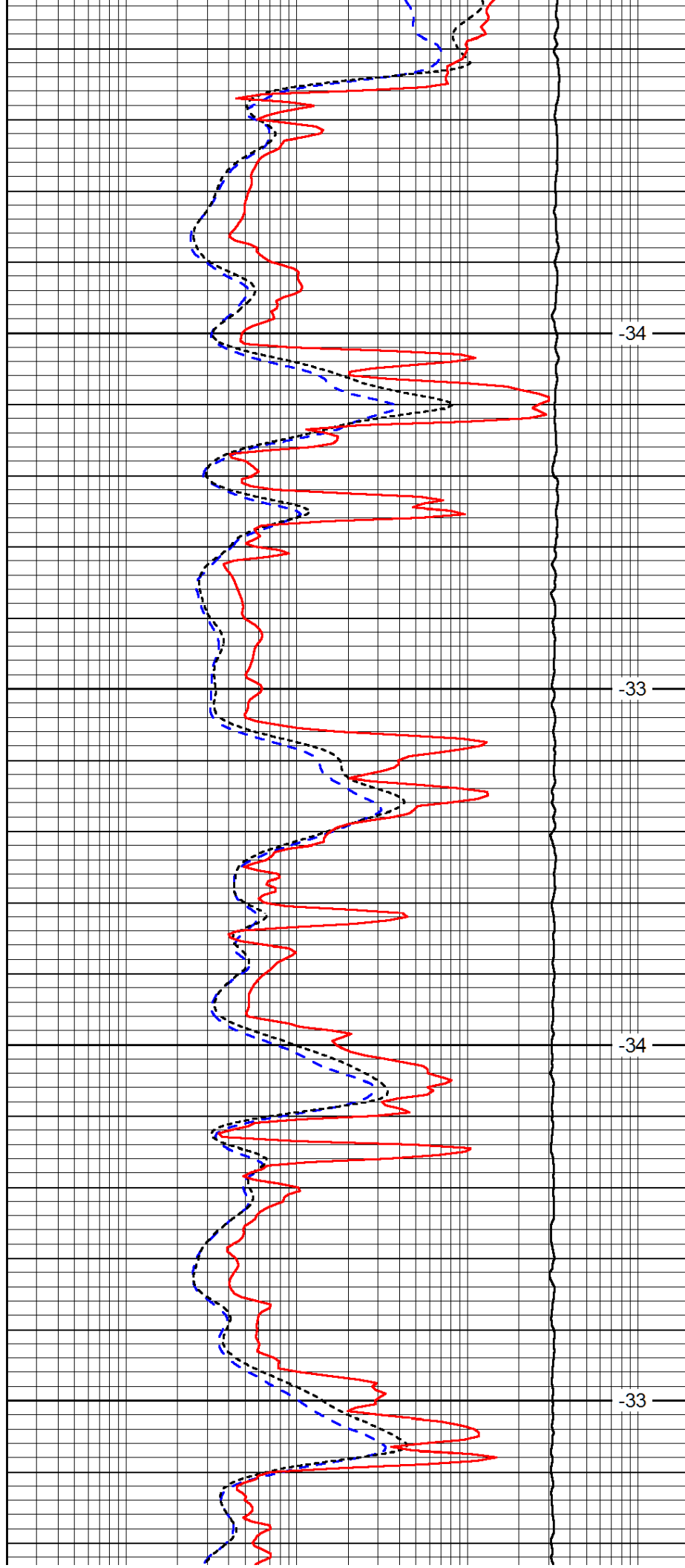


4200

4250

4300

4350

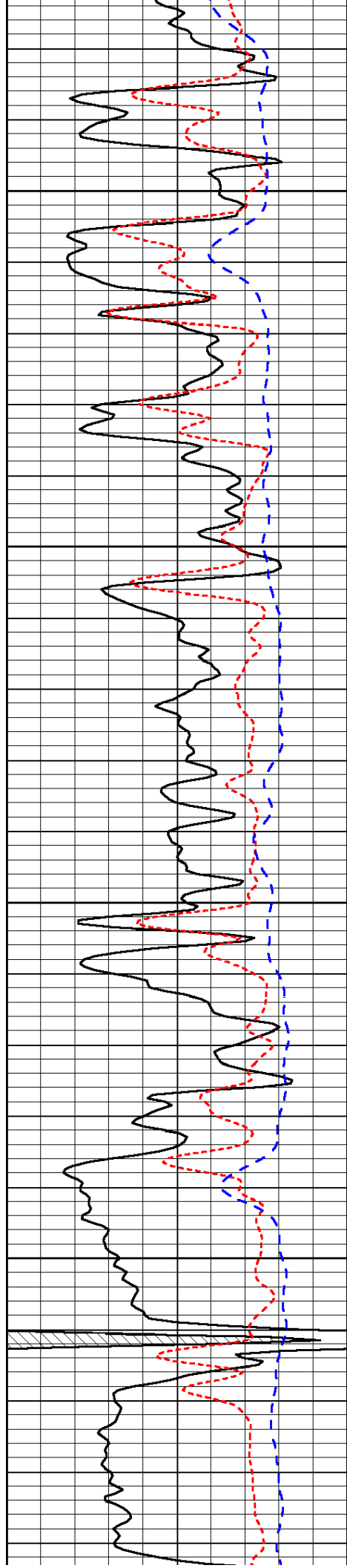


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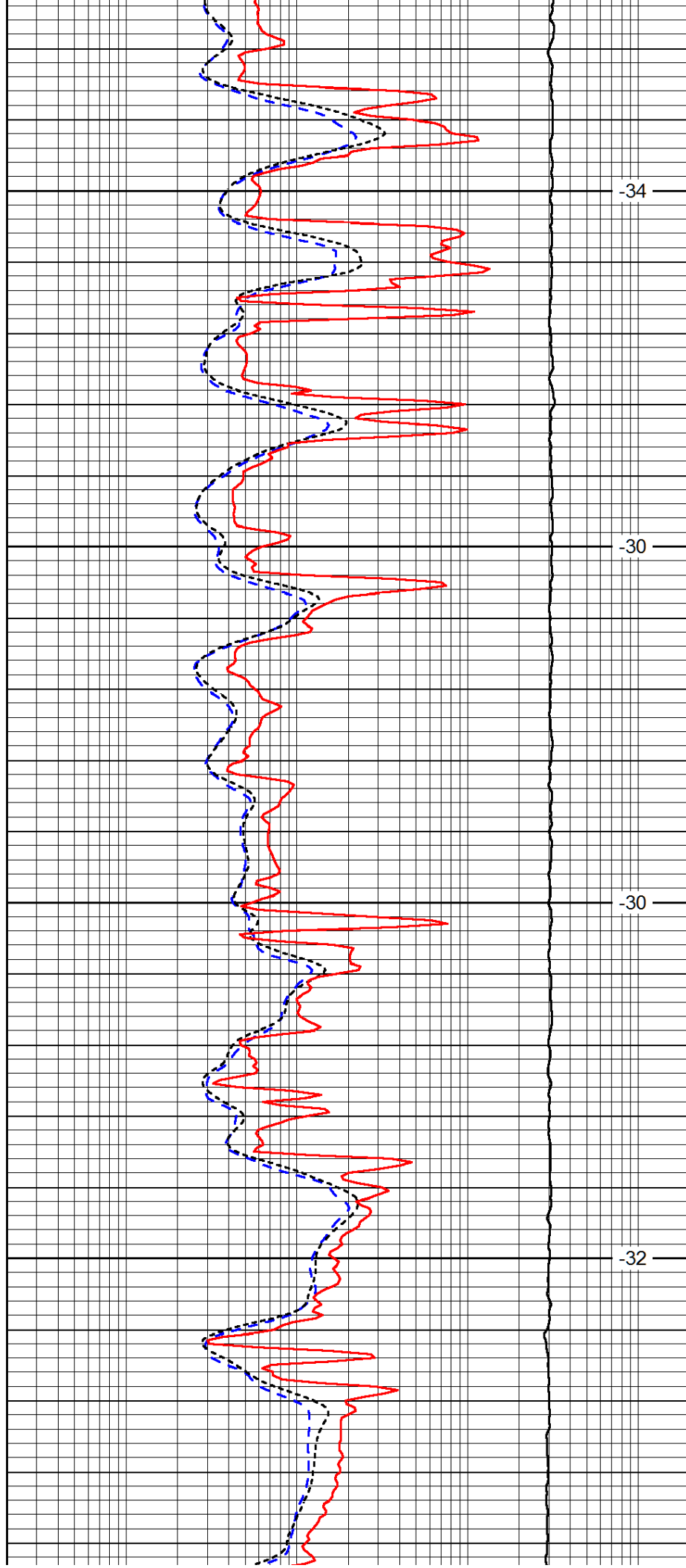


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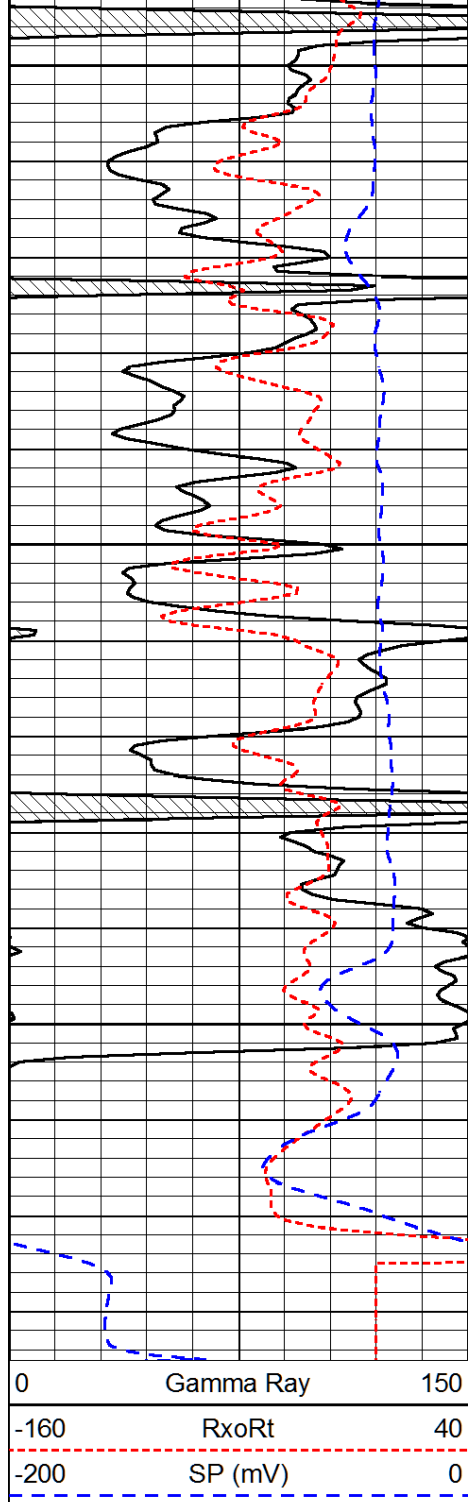


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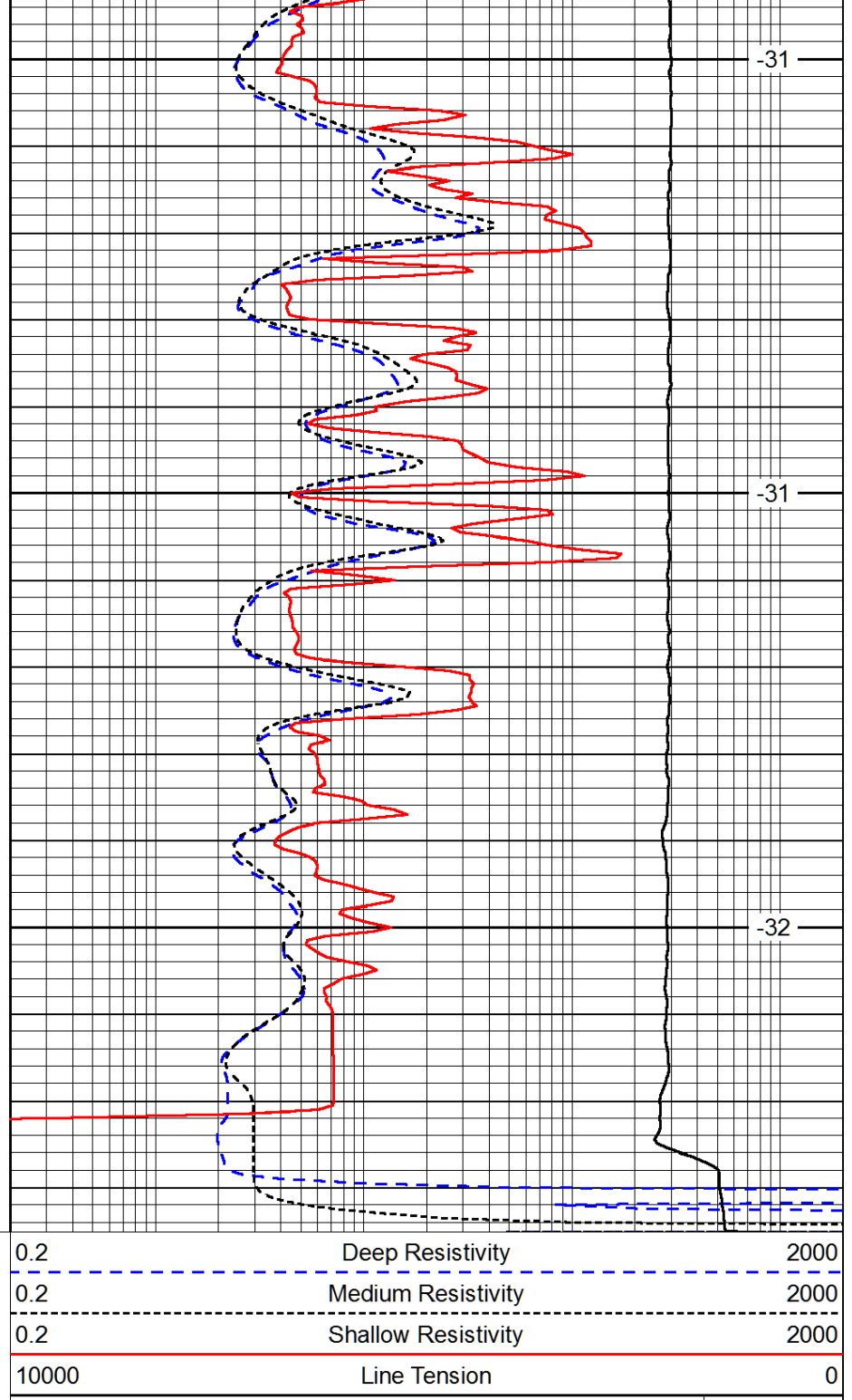
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4600

4650

4700



-31

-31

-32

LSPD