



Pioneer Energy Services

Dual Induction Log

API No.	15-153-20995-00-00		
Company	Murfin Drilling Company, Inc.		
Well	Frisbie #3-23		
Field	Happy Southwest		
County	Rawlins	State	Kansas
Location	1320' FNL & 1815' FWL		
Sec: 23	Twp: 2S	Rge: 36W	Other Services CNL/CDL MEL/BHCS

Permanent Datum	Ground Level	Elevation	3309
Log Measured From	Kelly Bushing	5	Ft. Above Perm. Datum
Drilling Measured From	Kelly Bushing		
Date	3/24/2014		
Run Number	One		
Depth Driller	4830		
Depth Logger	4830		
Bottom Logged Interval	4829		
Top Log Interval	0		
Casing Driller	8.625 @ 345		
Casing Logger	345		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	1400		
Density / Viscosity	9.3	55	
pH / Fluid Loss	9.5	6.8	
Source of Sample	Flowline		
Rm @ Meas. Temp	0.92 @ 46		
Rmf @ Meas. Temp	0.69 @ 46		
Rmc @ Meas. Temp	1.24 @ 46		
Source of Rmf / Rmc	Charts		
Rm @ BHT	0.34 @ 126		
Operating Rig Time	5 Hours		
Max Rec. Temp. F	126		
Equipment Number	91		
Location	Hays		
Recorded By	D. Schmidt		
Witnessed By	Rocky Milford		

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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 Log-Tech, Inc.
 (785) 625-3858

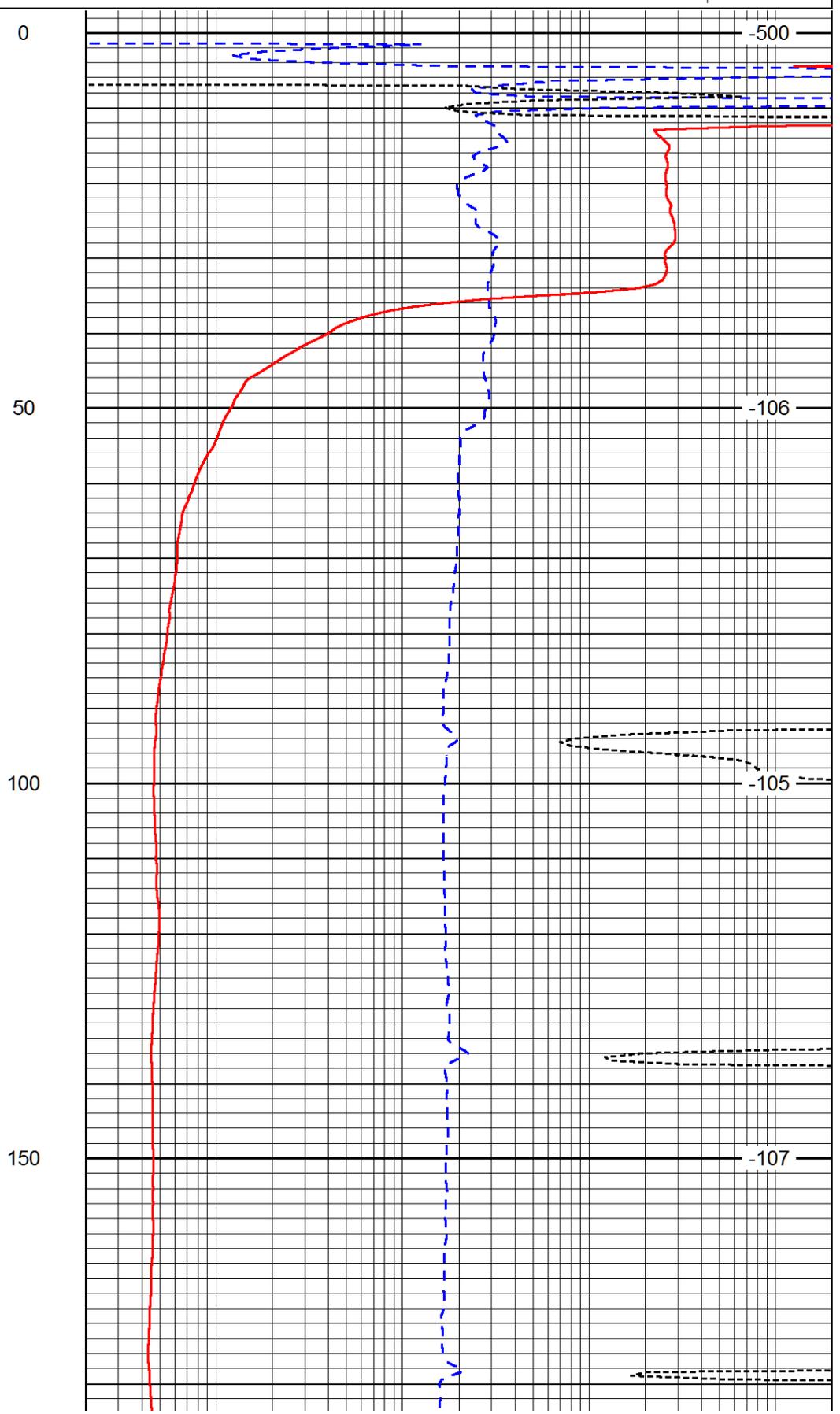
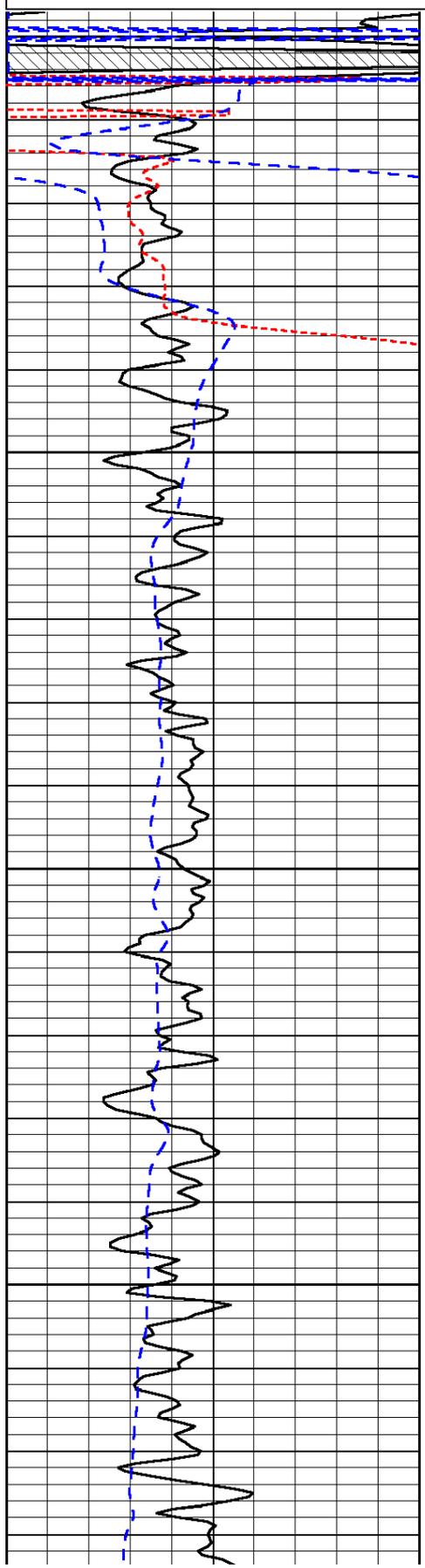
 McDonald,
 2 East to 5 Rd, 6 North to V Rd, 1/2 East,
 South and West into

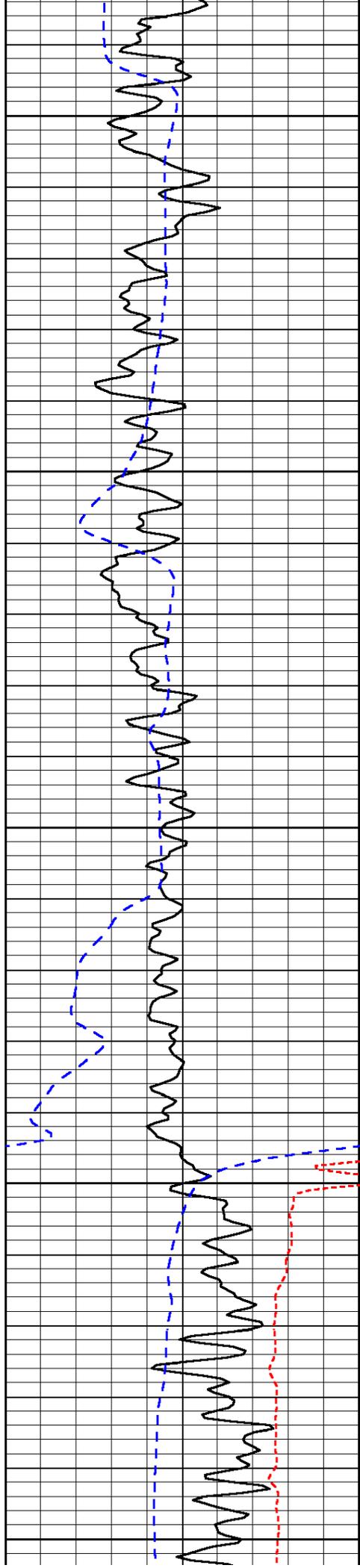
Database File: murfin_032414hd.db
 Dataset Pathname: dil/mrfstck
 Presentation Format: dil
 Dataset Creation: Tue Mar 25 02:47:56 2014
 Charted by: Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
-160	RXO/RT	40
-200	SP (mV)	0

0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0

LSPD
(ft/min)





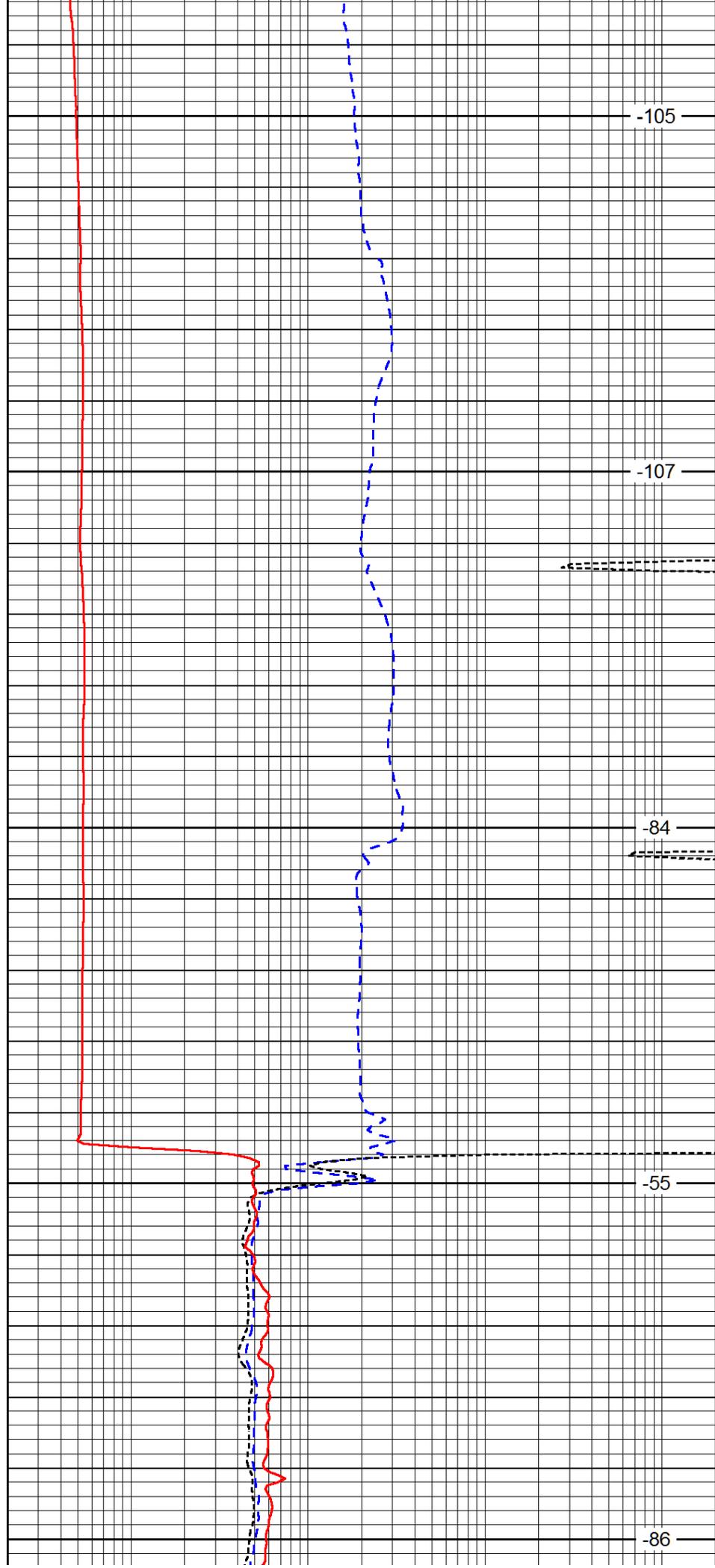
200

250

300

350

400



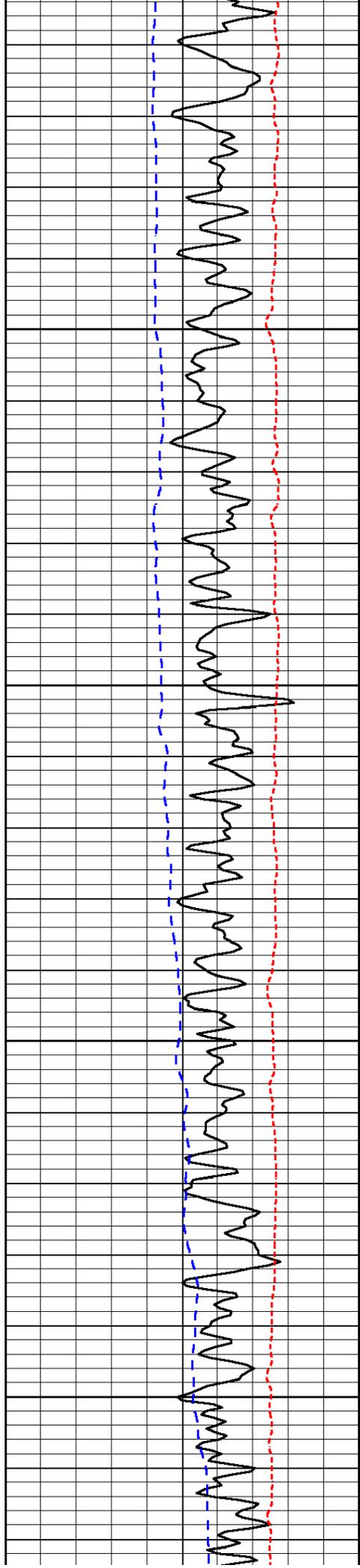
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-107

-84

-55

-86

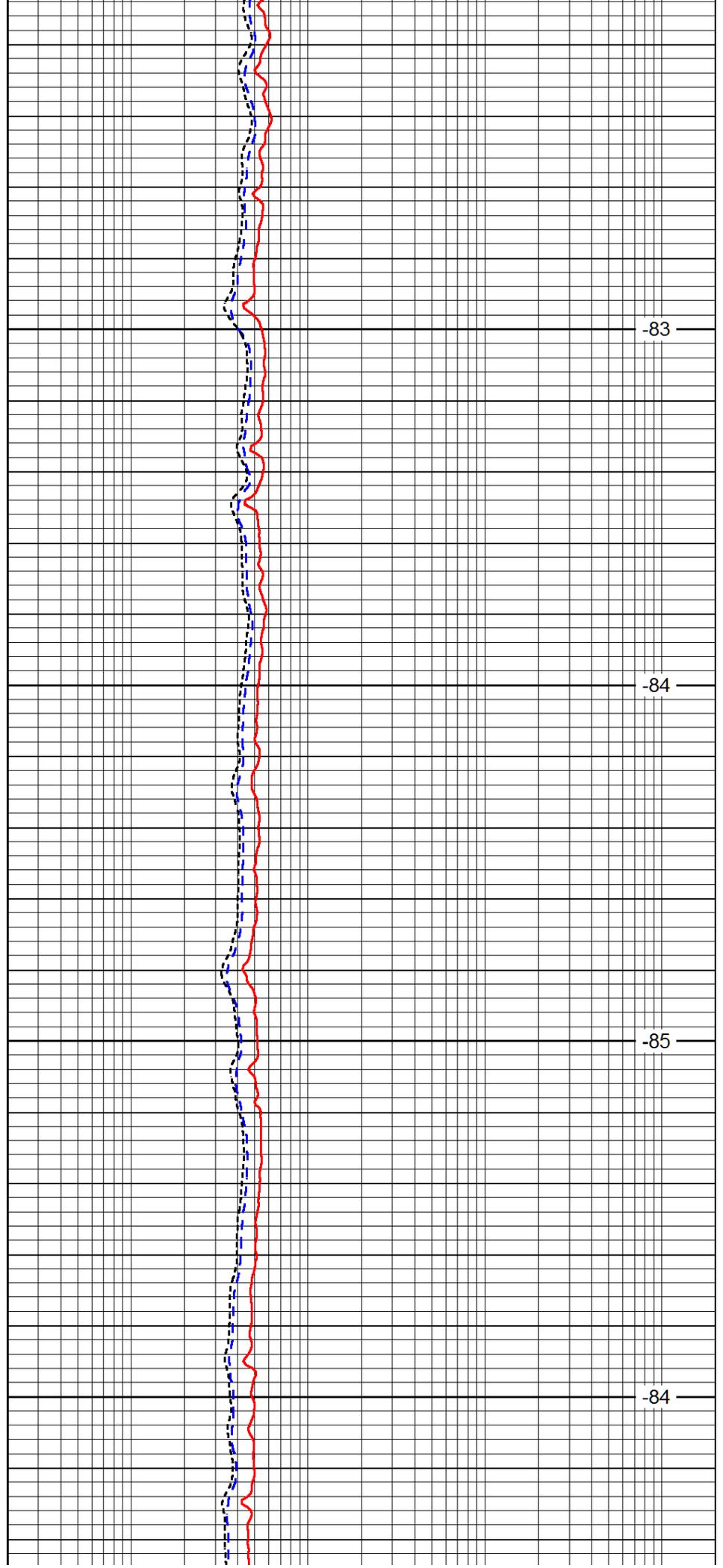


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500

550

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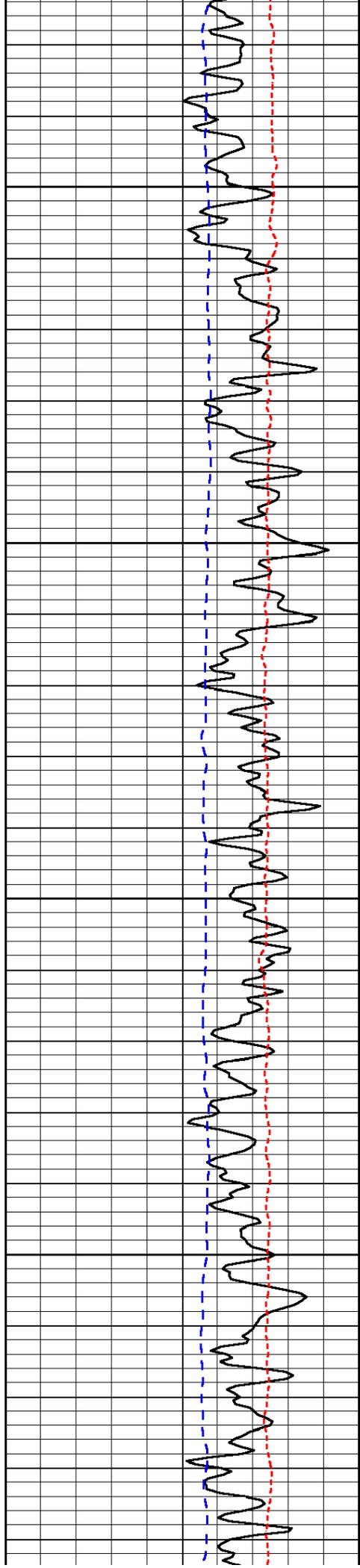


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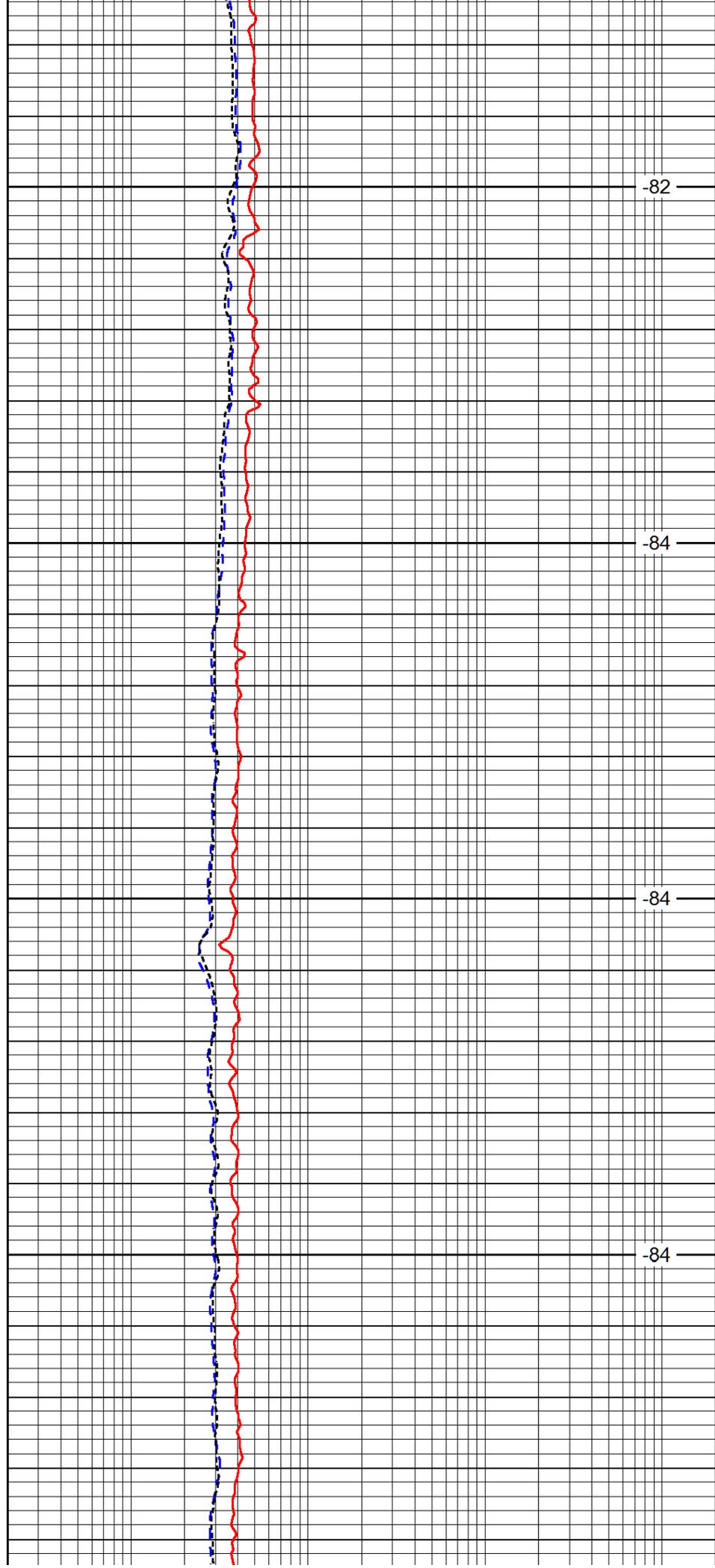


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700

750

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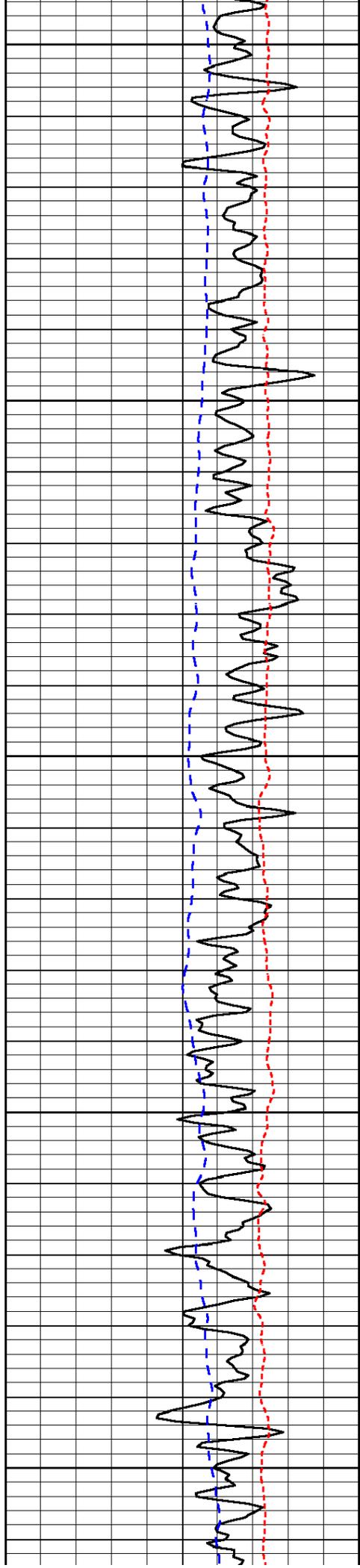


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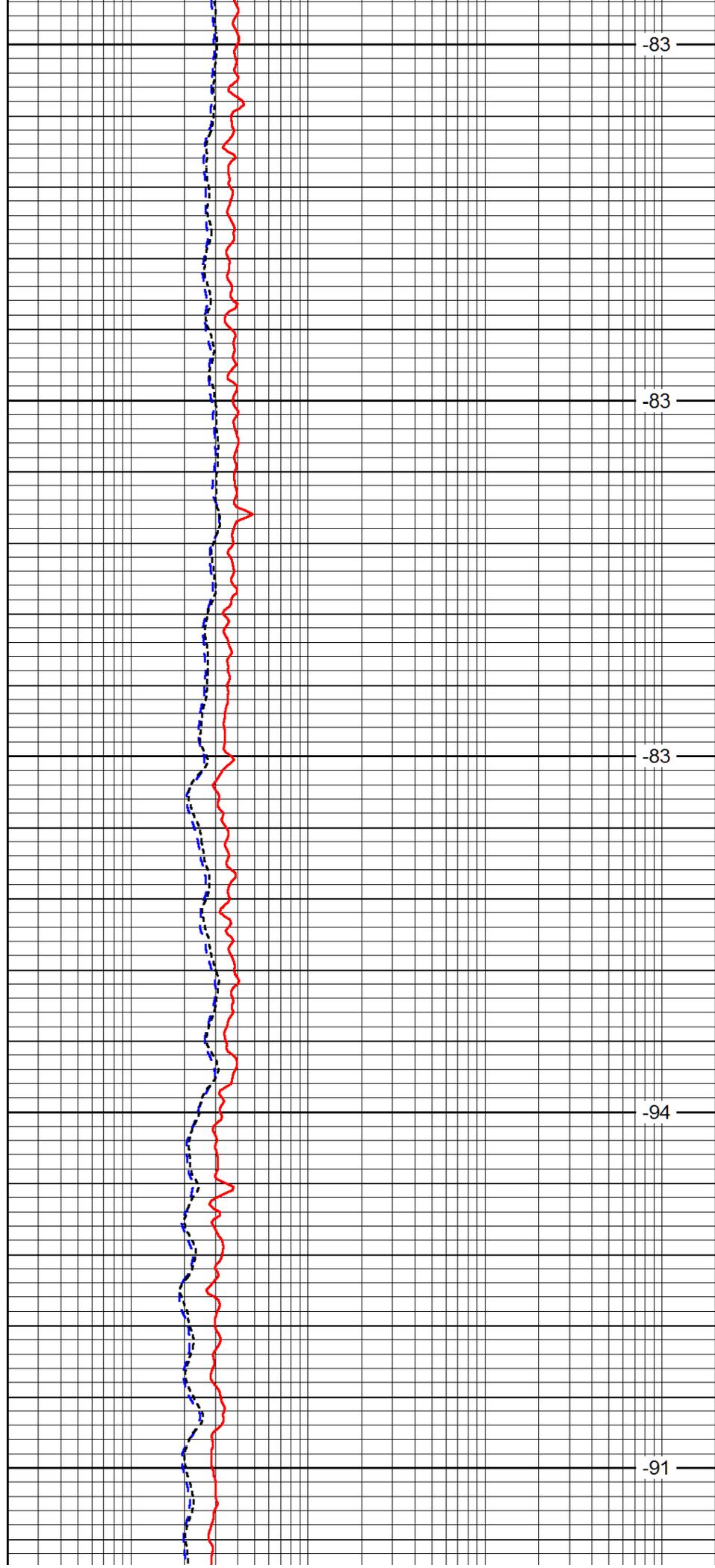
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900

950

1000

1050



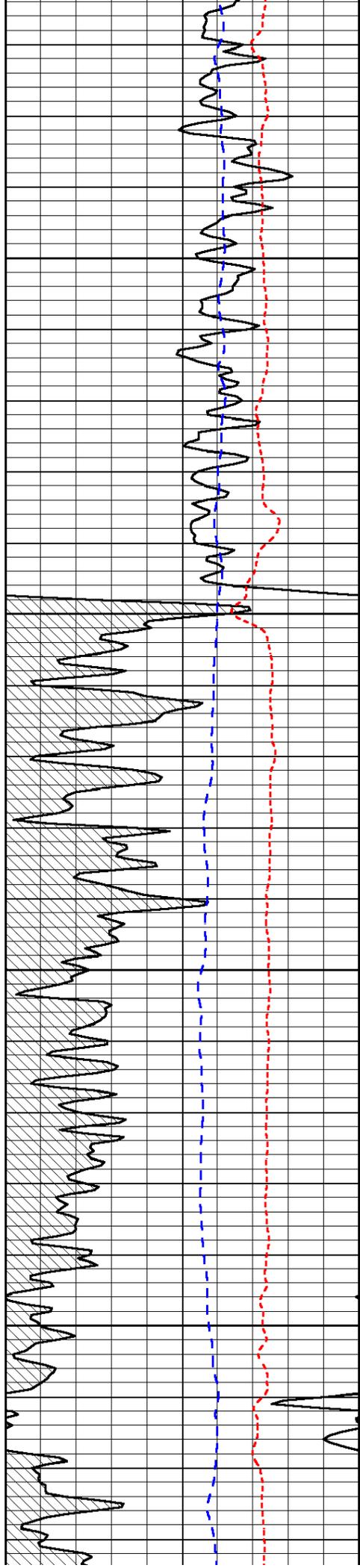
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1150

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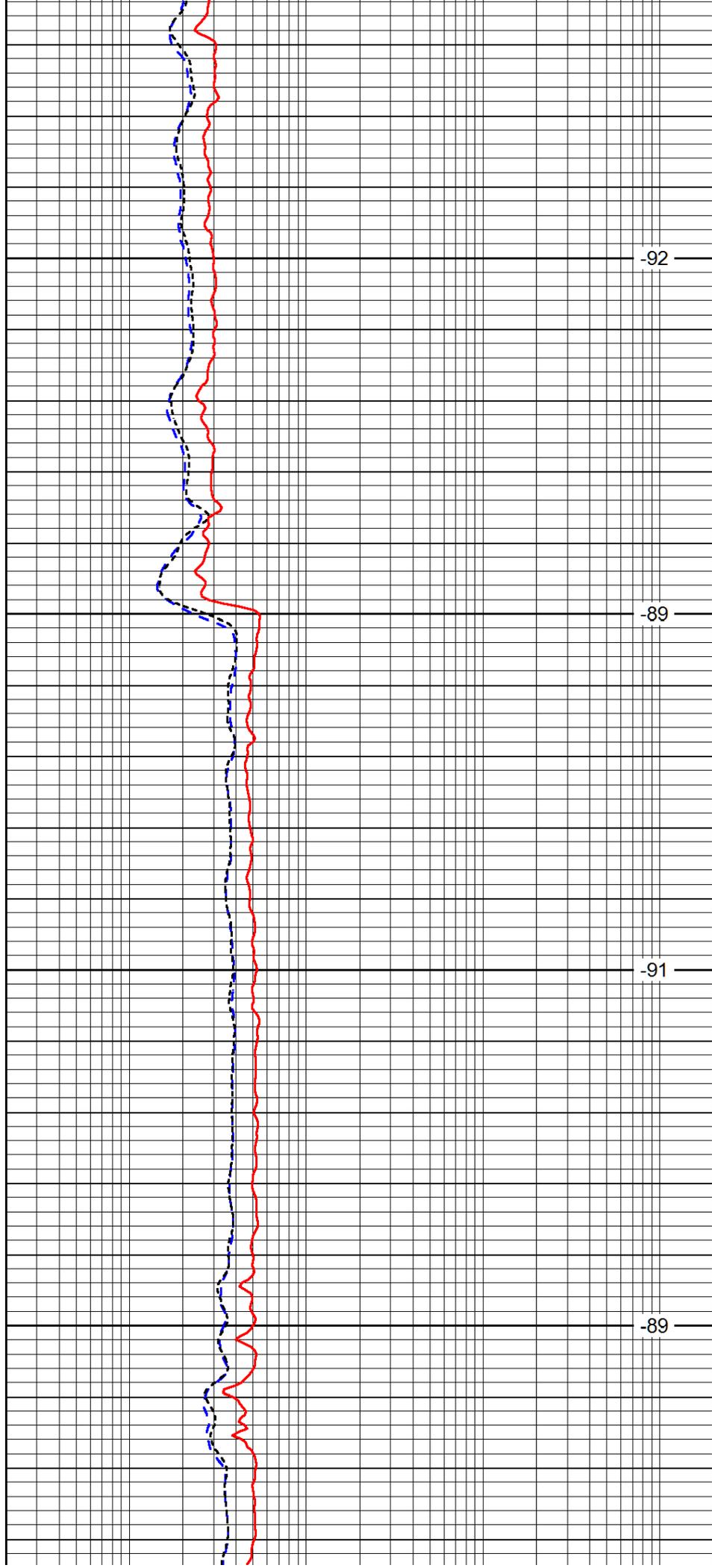
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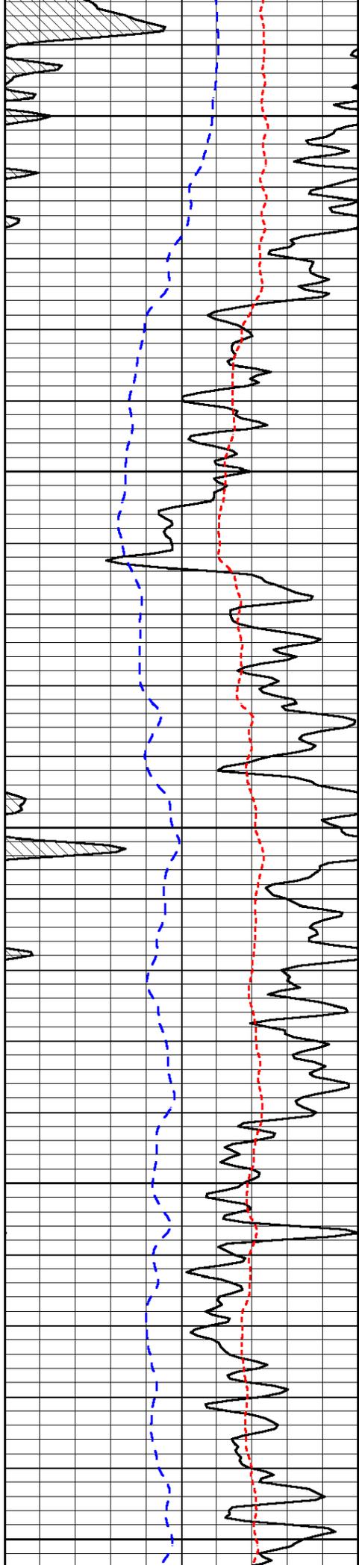
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1400

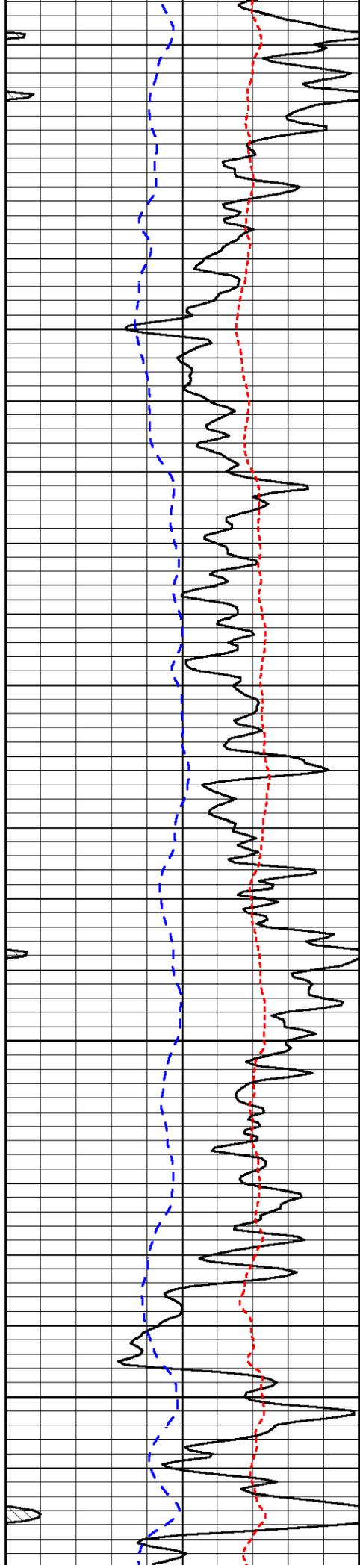
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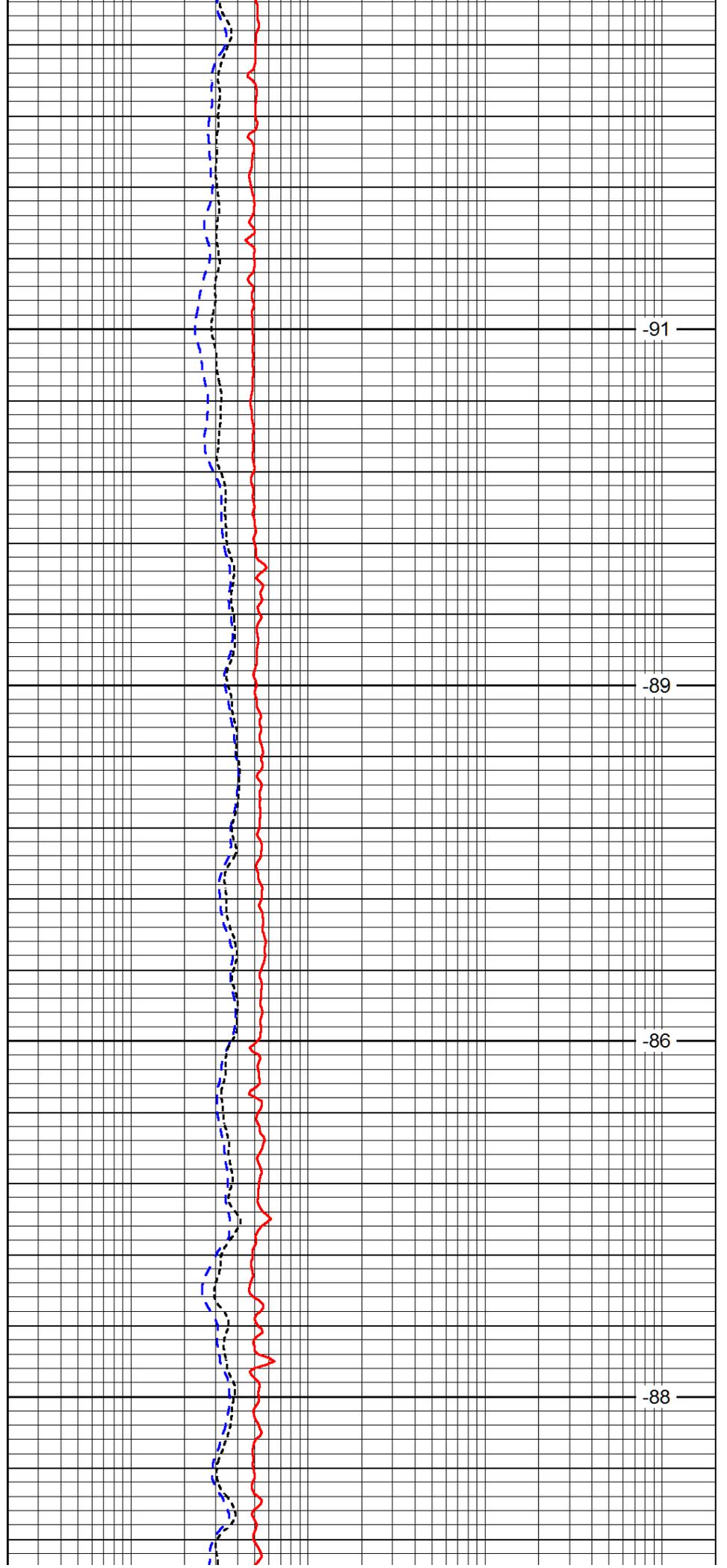


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1700

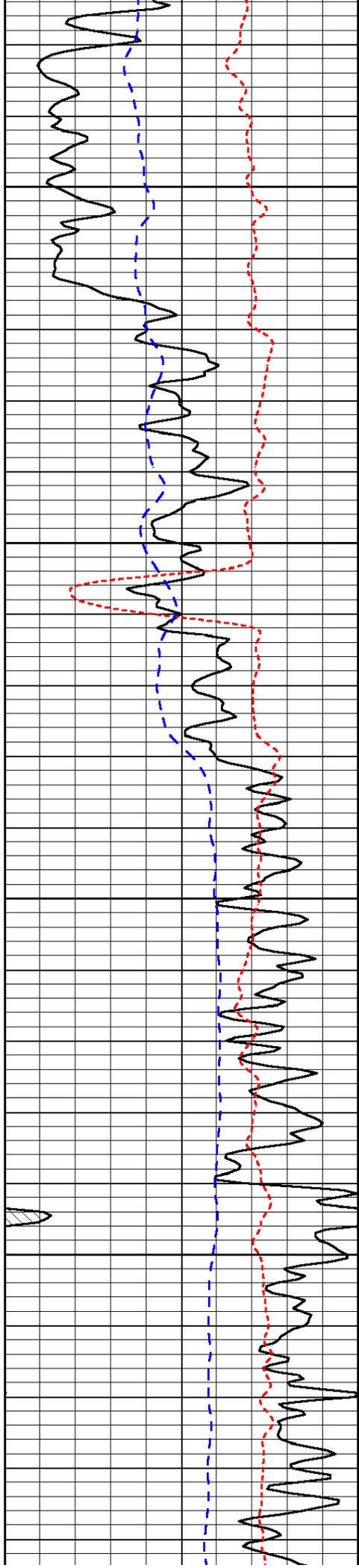


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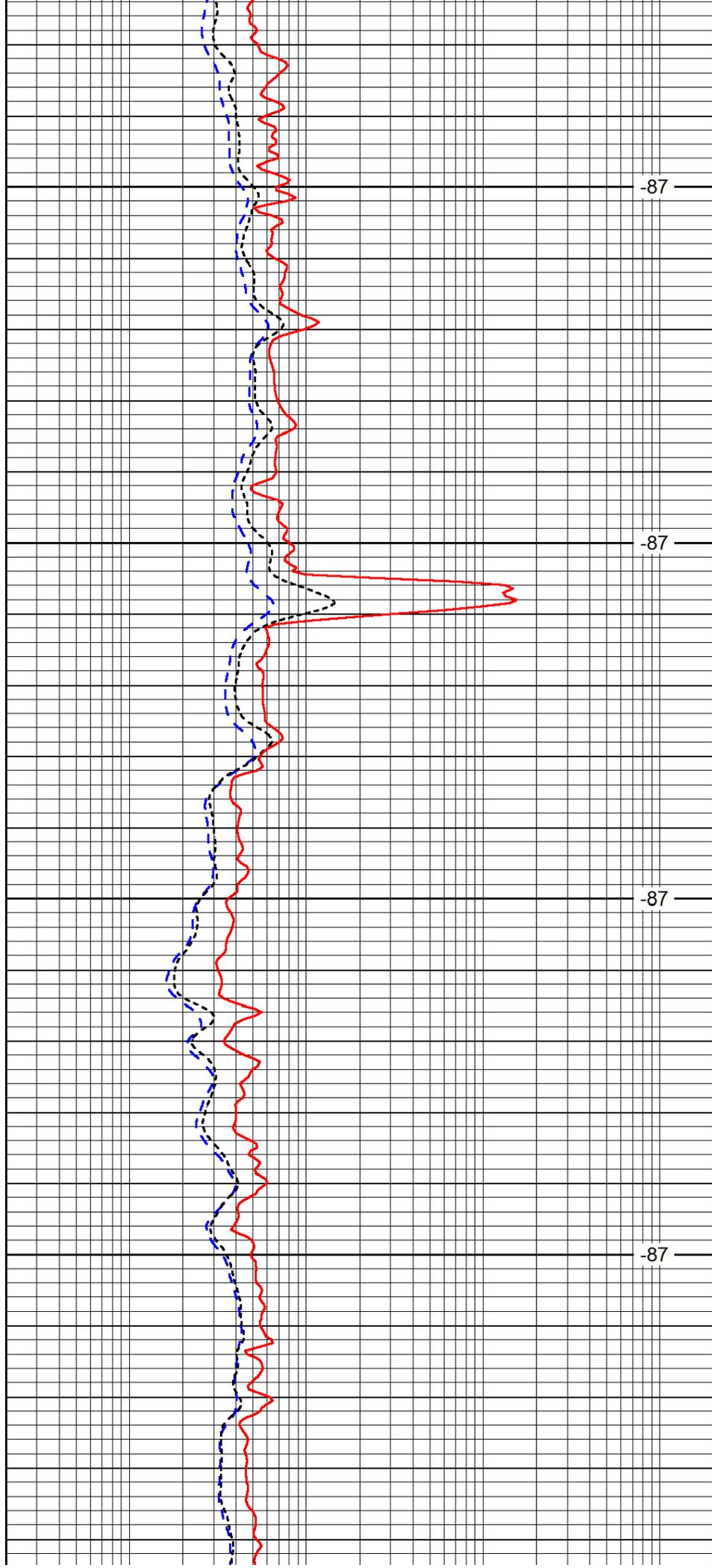
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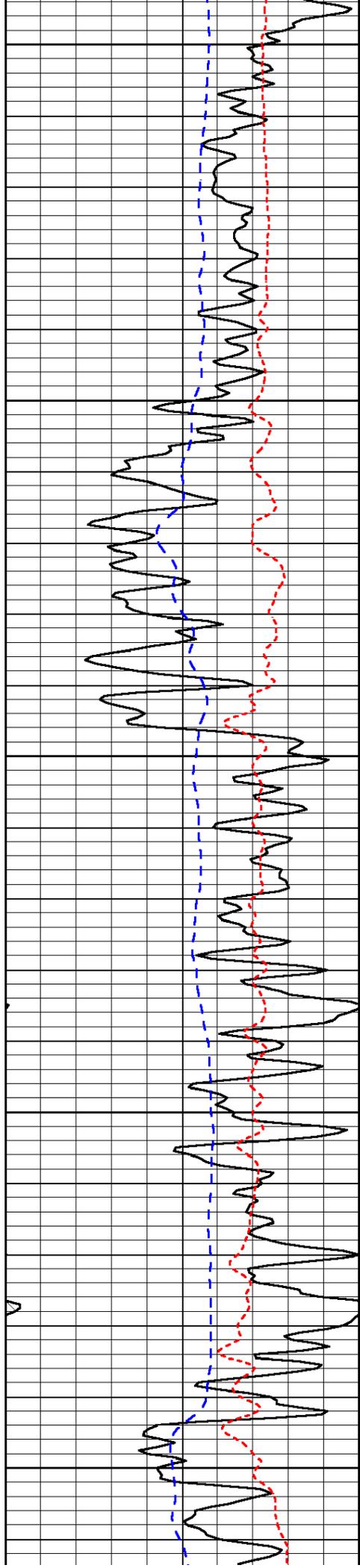
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2100

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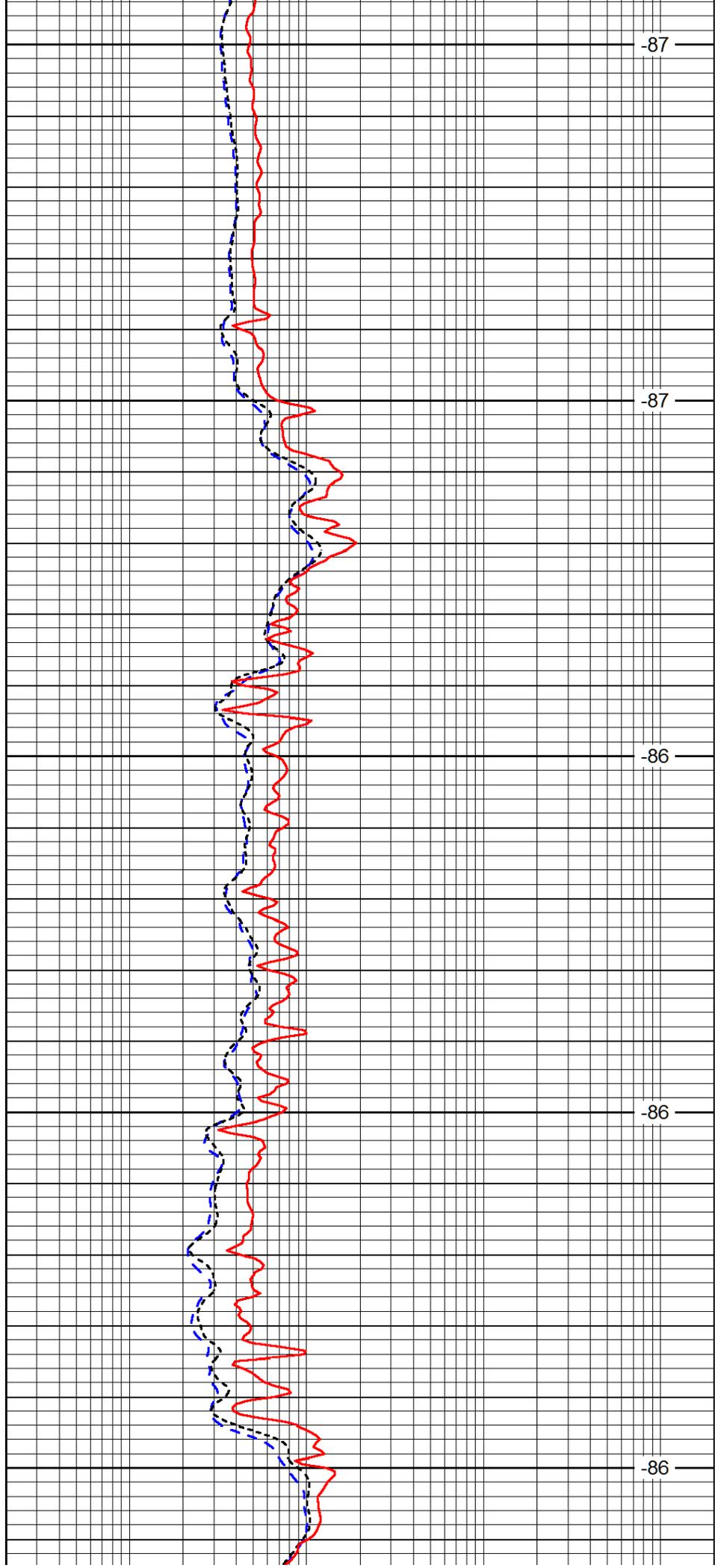
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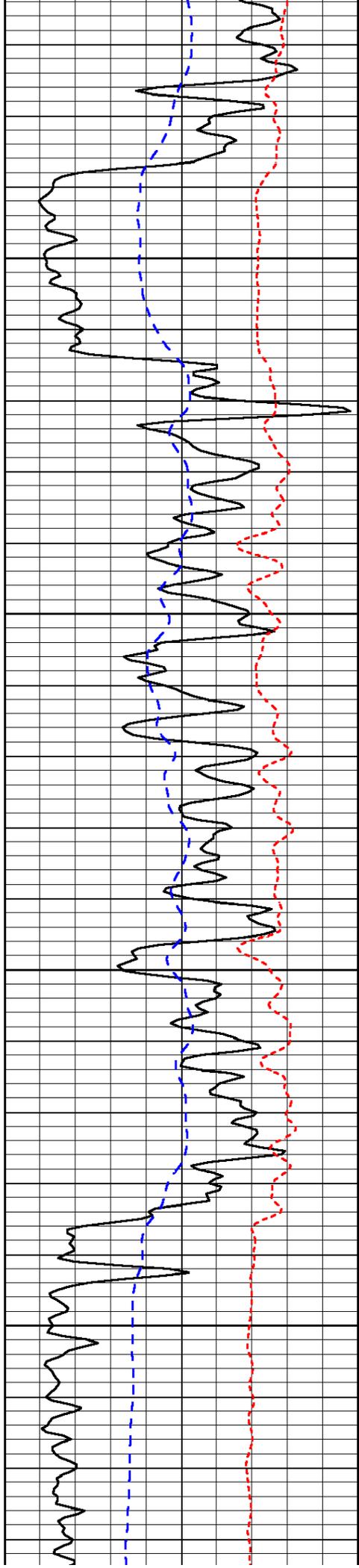
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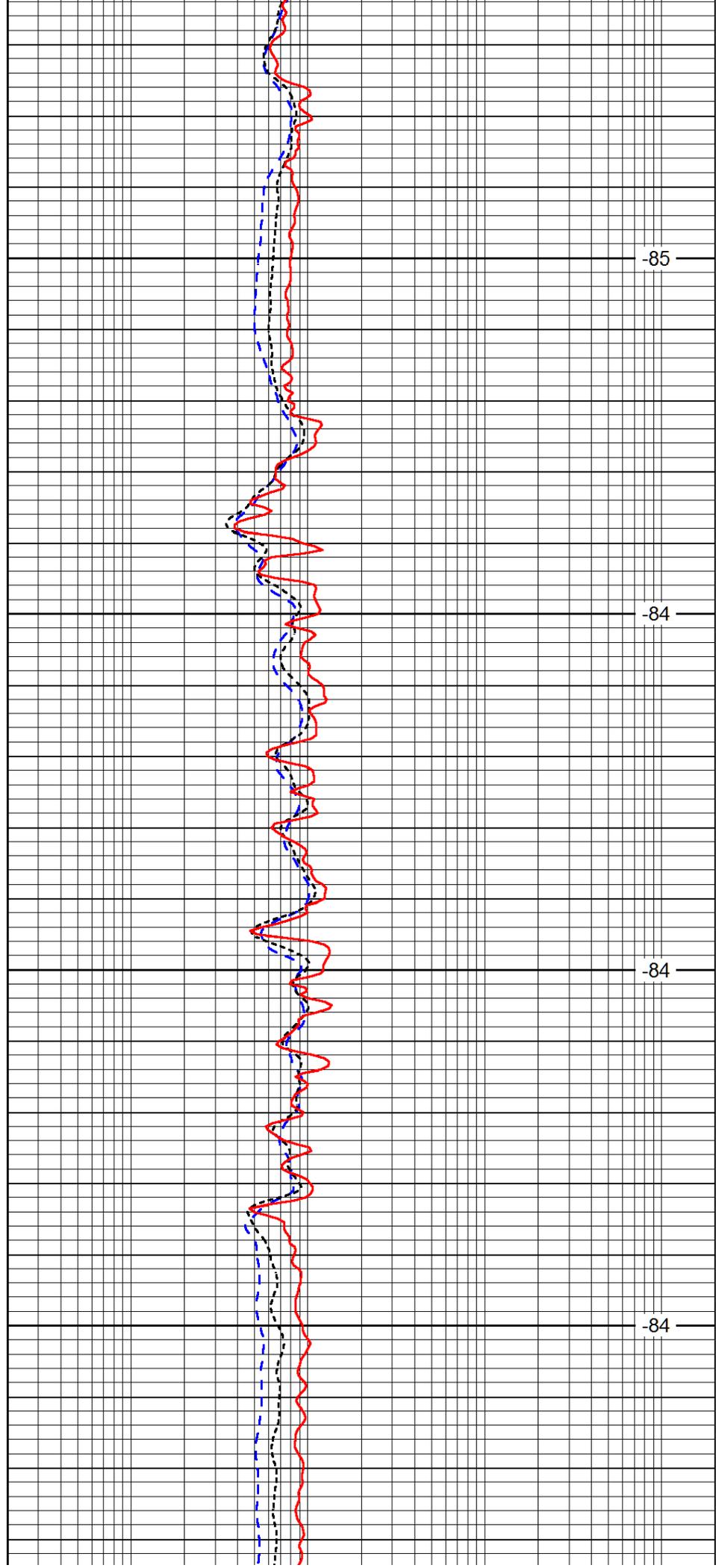


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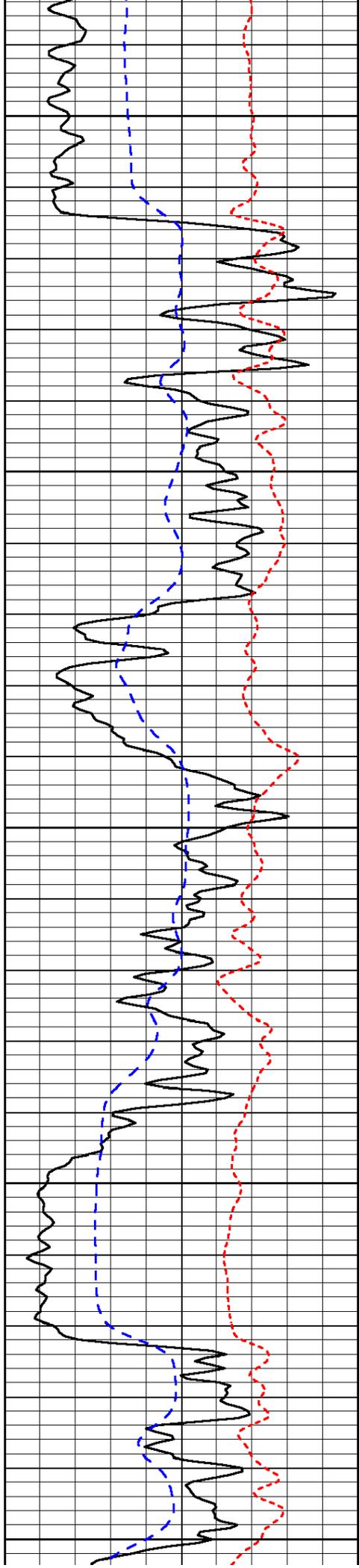


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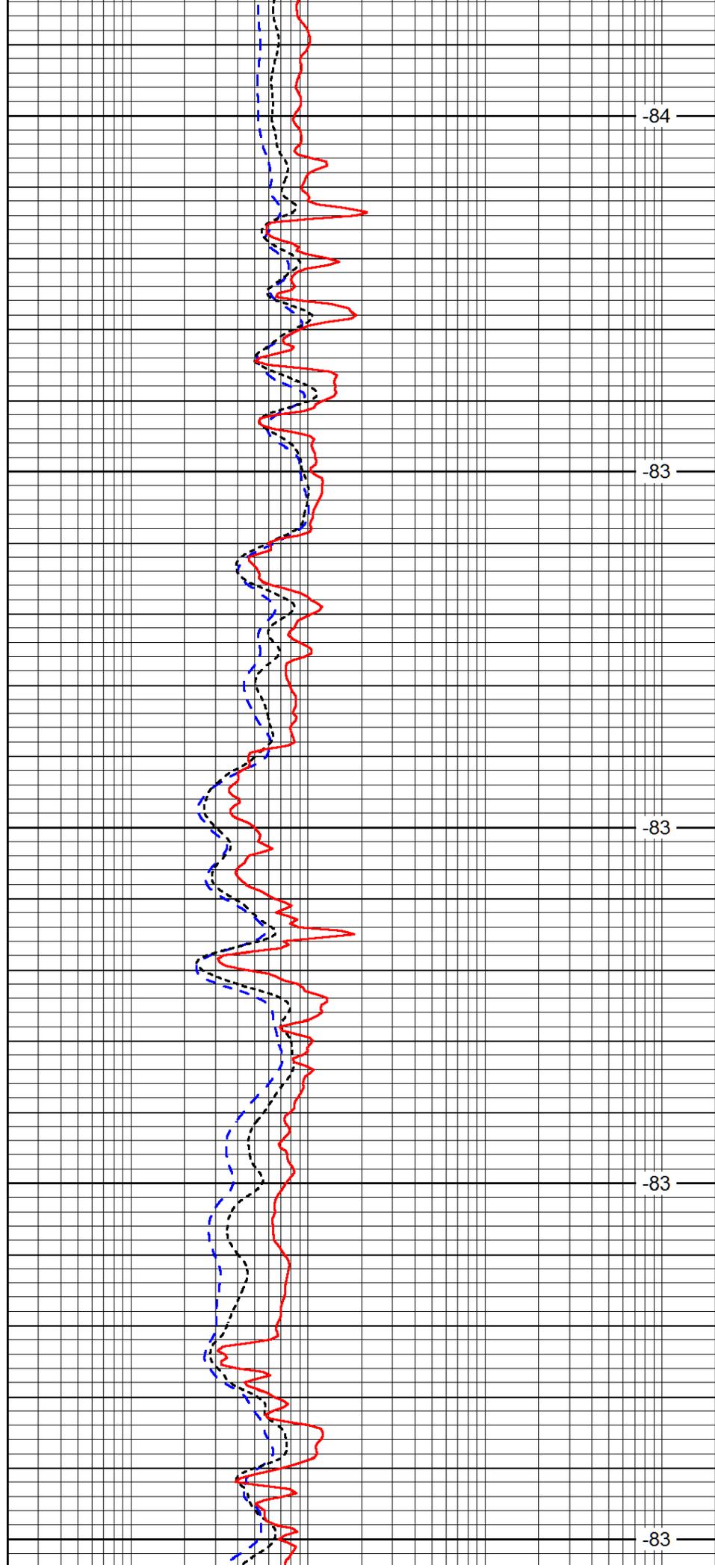
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2500

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2600



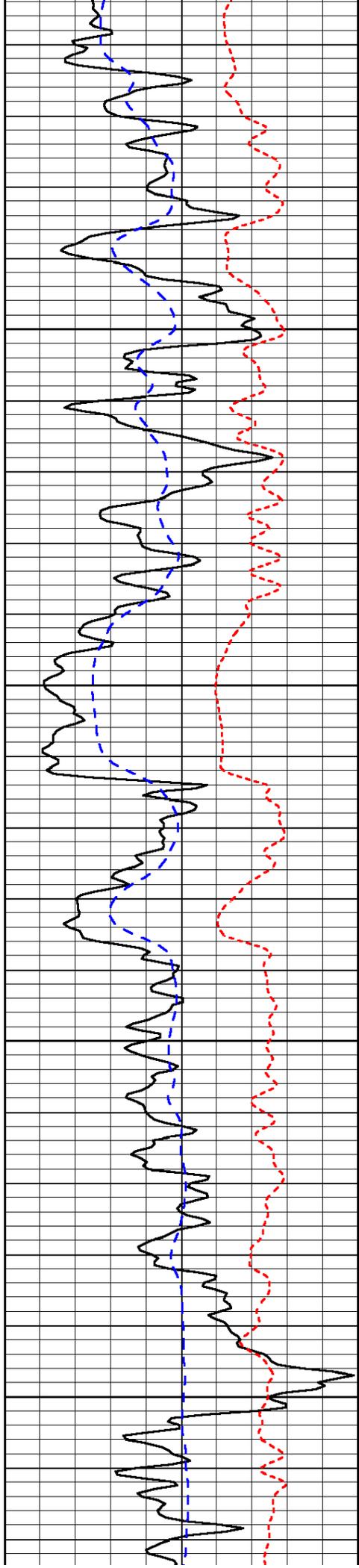
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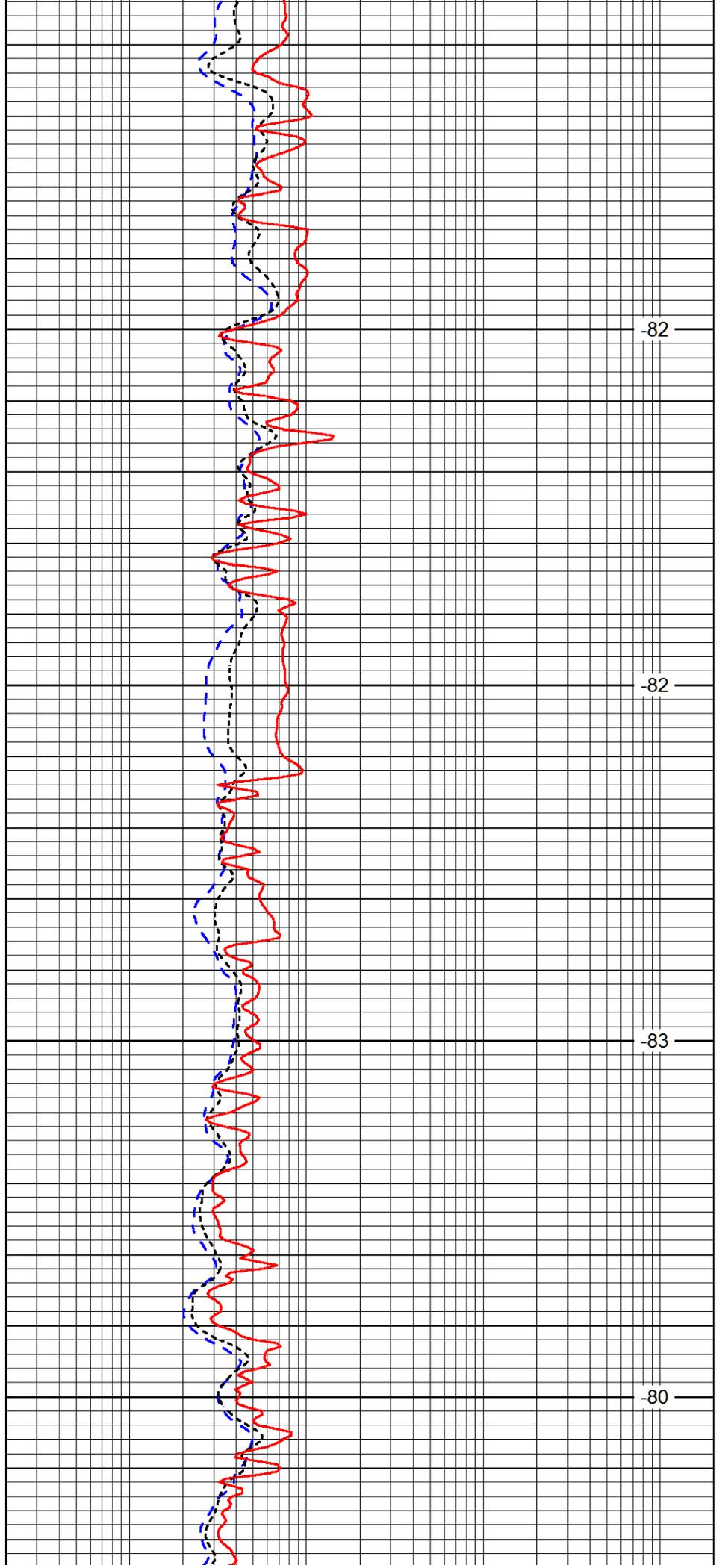


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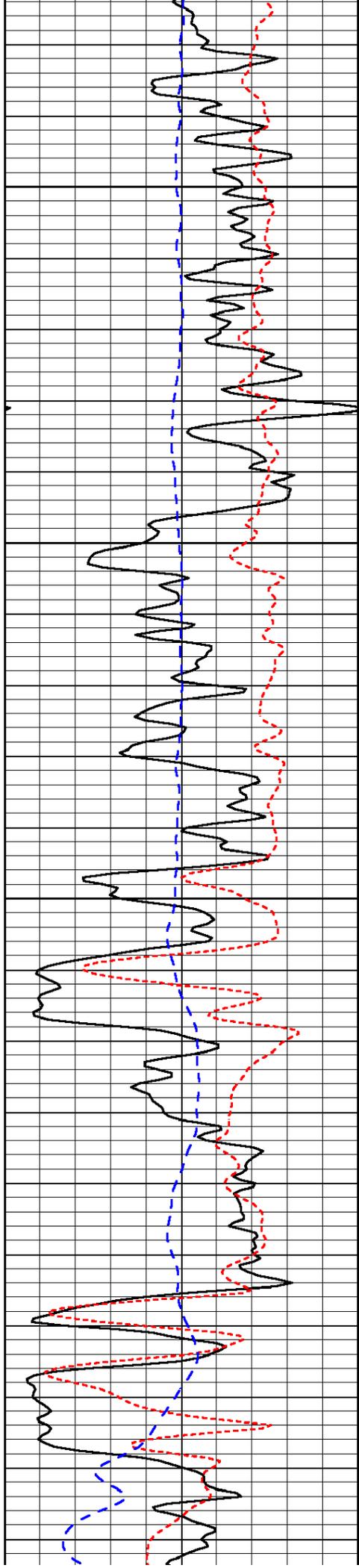


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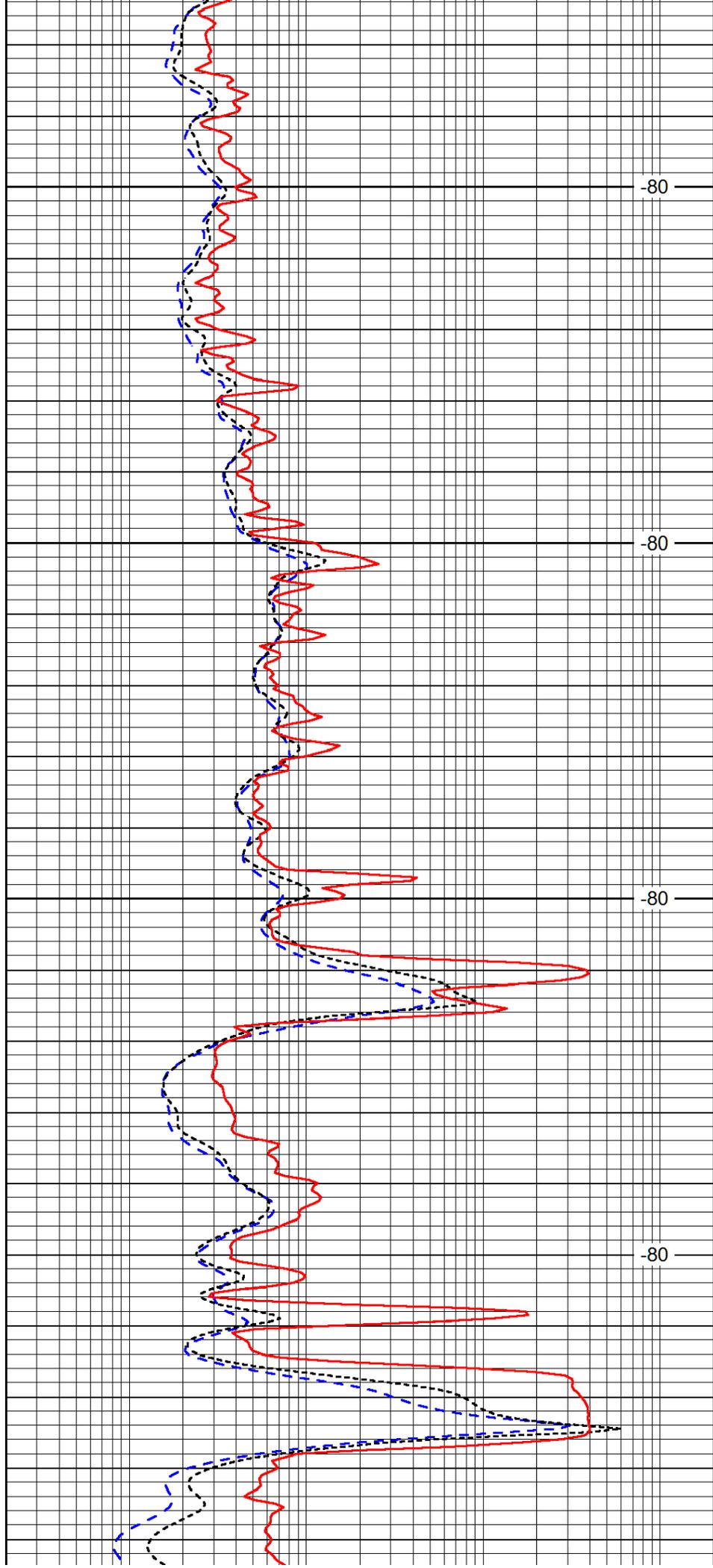


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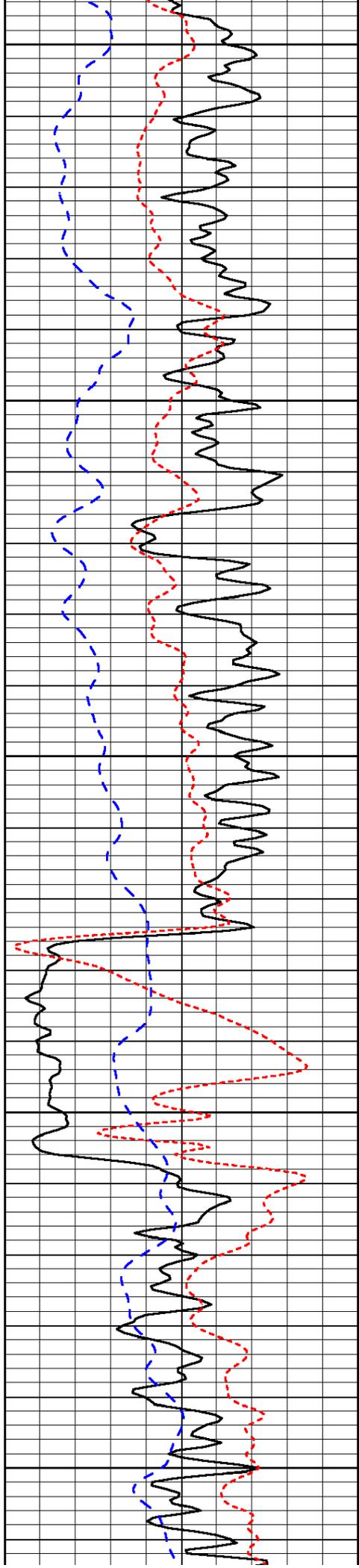


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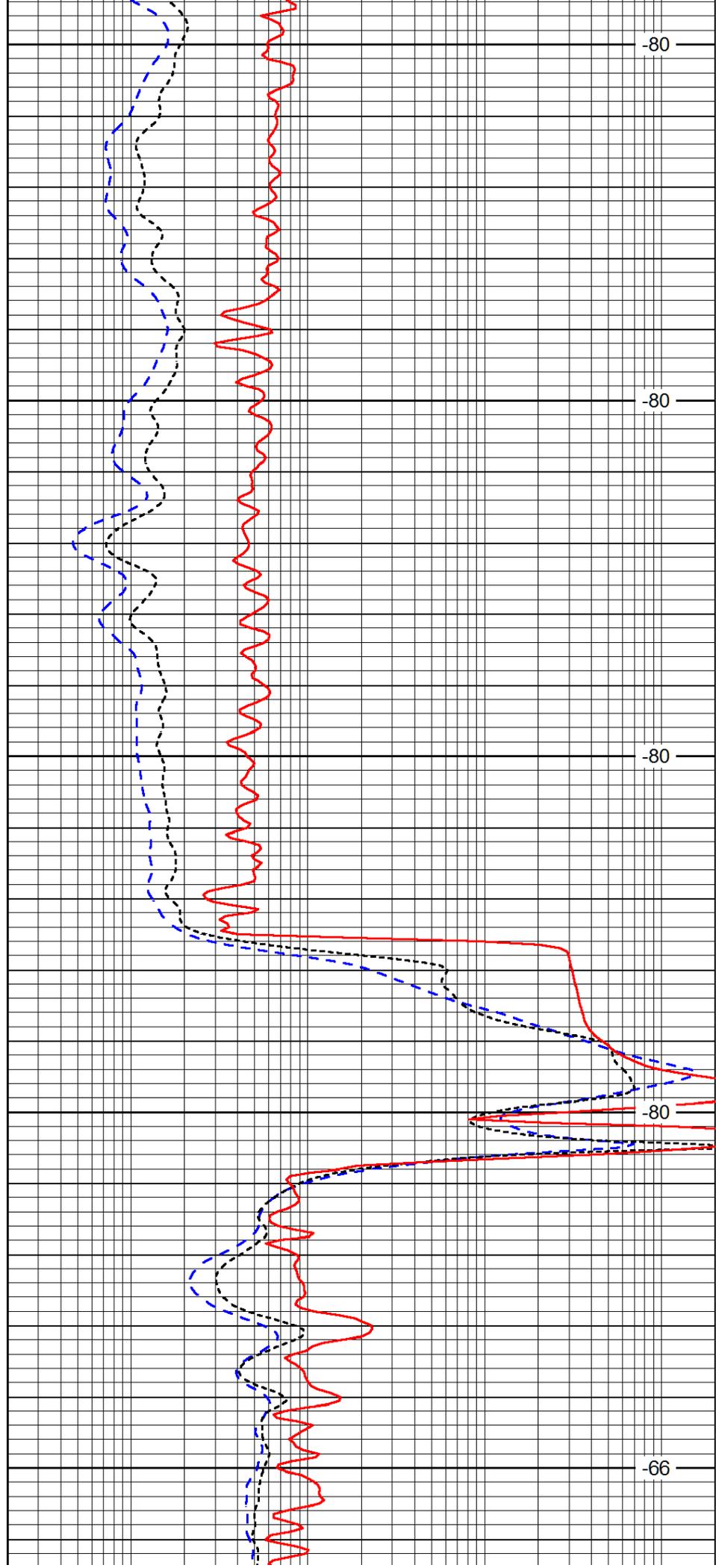
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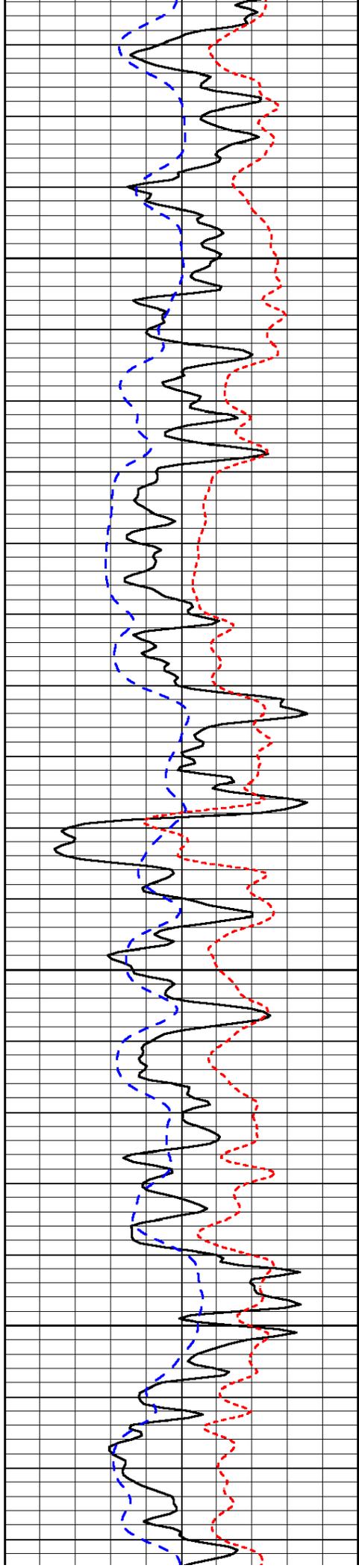
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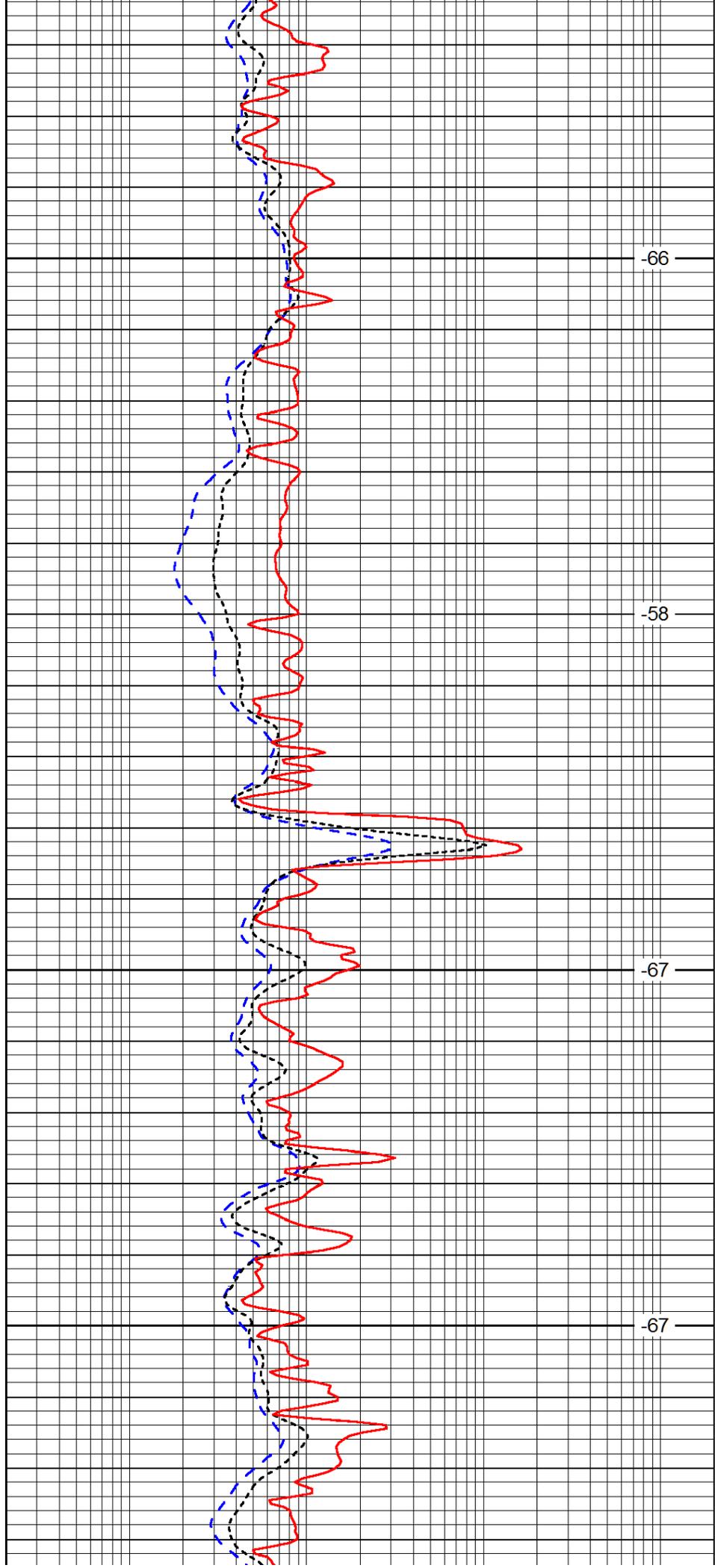


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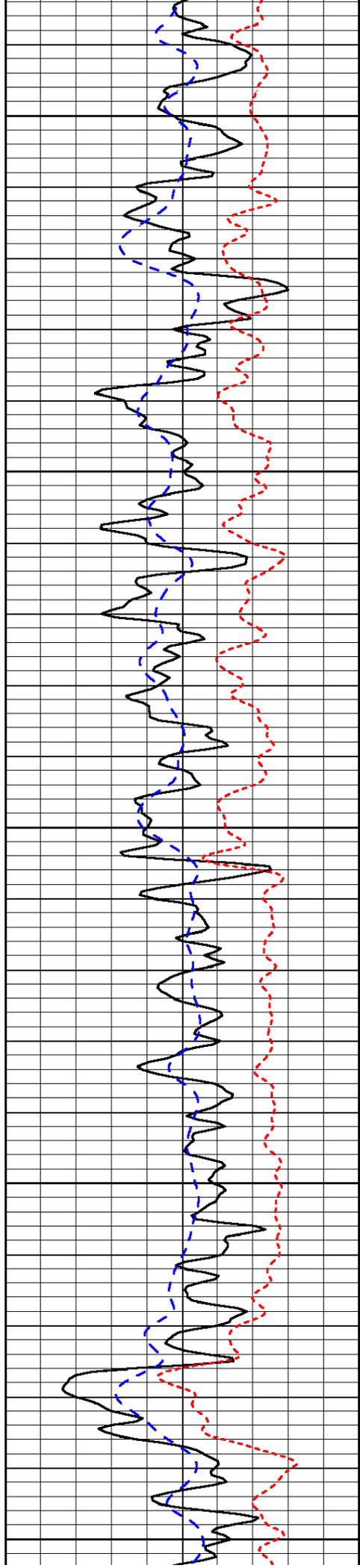


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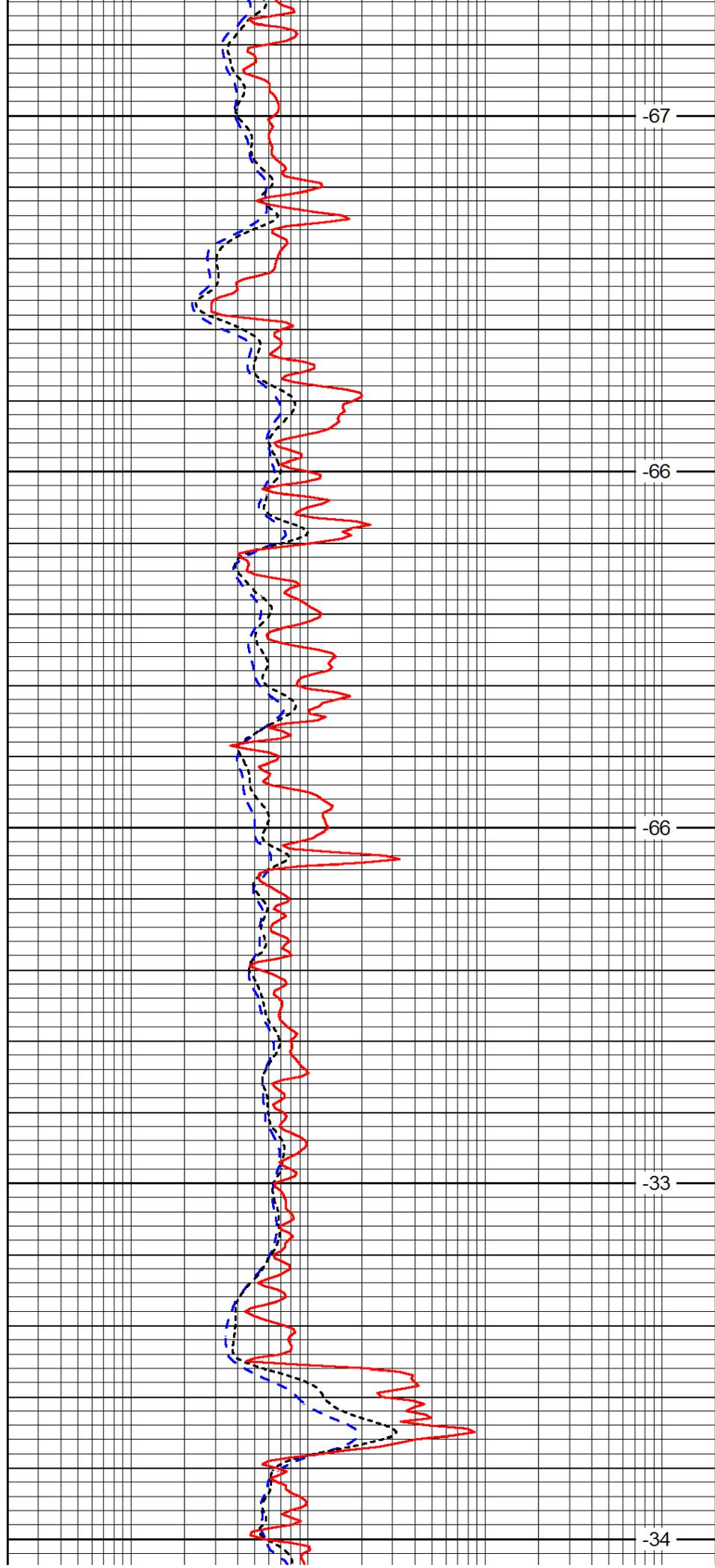
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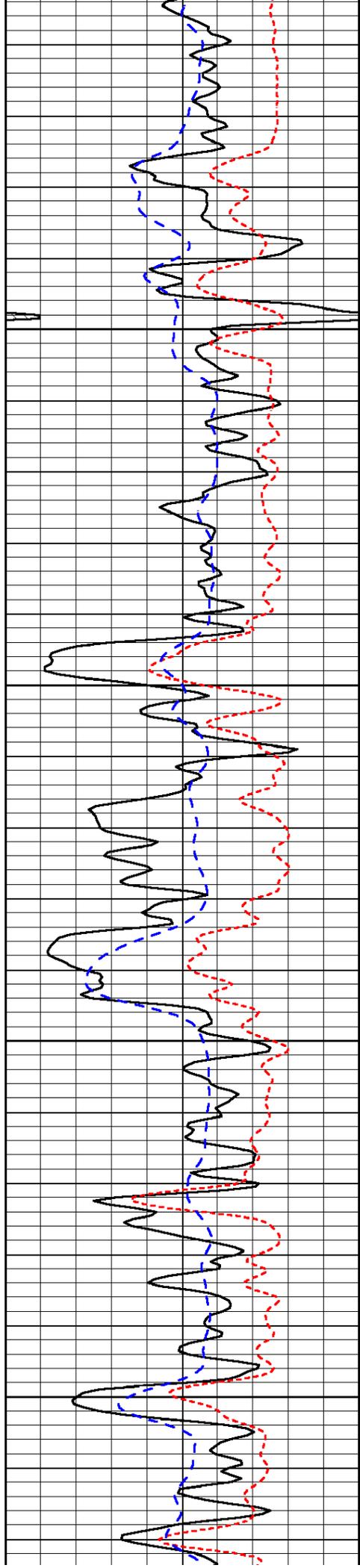
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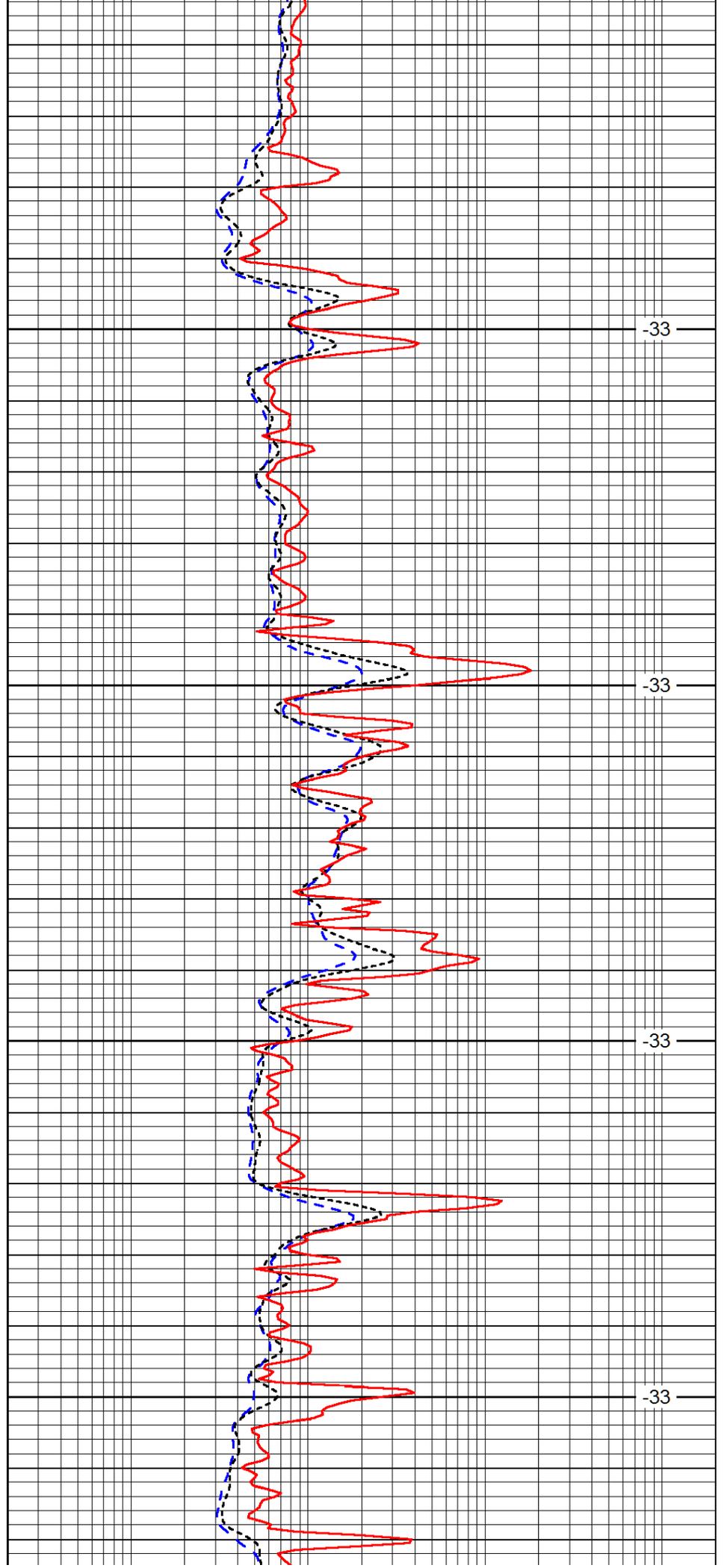


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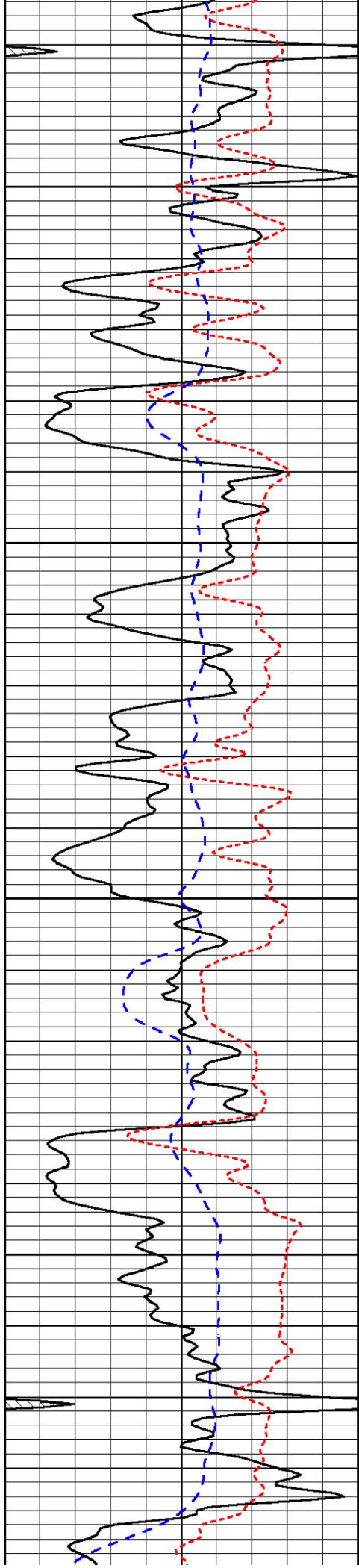


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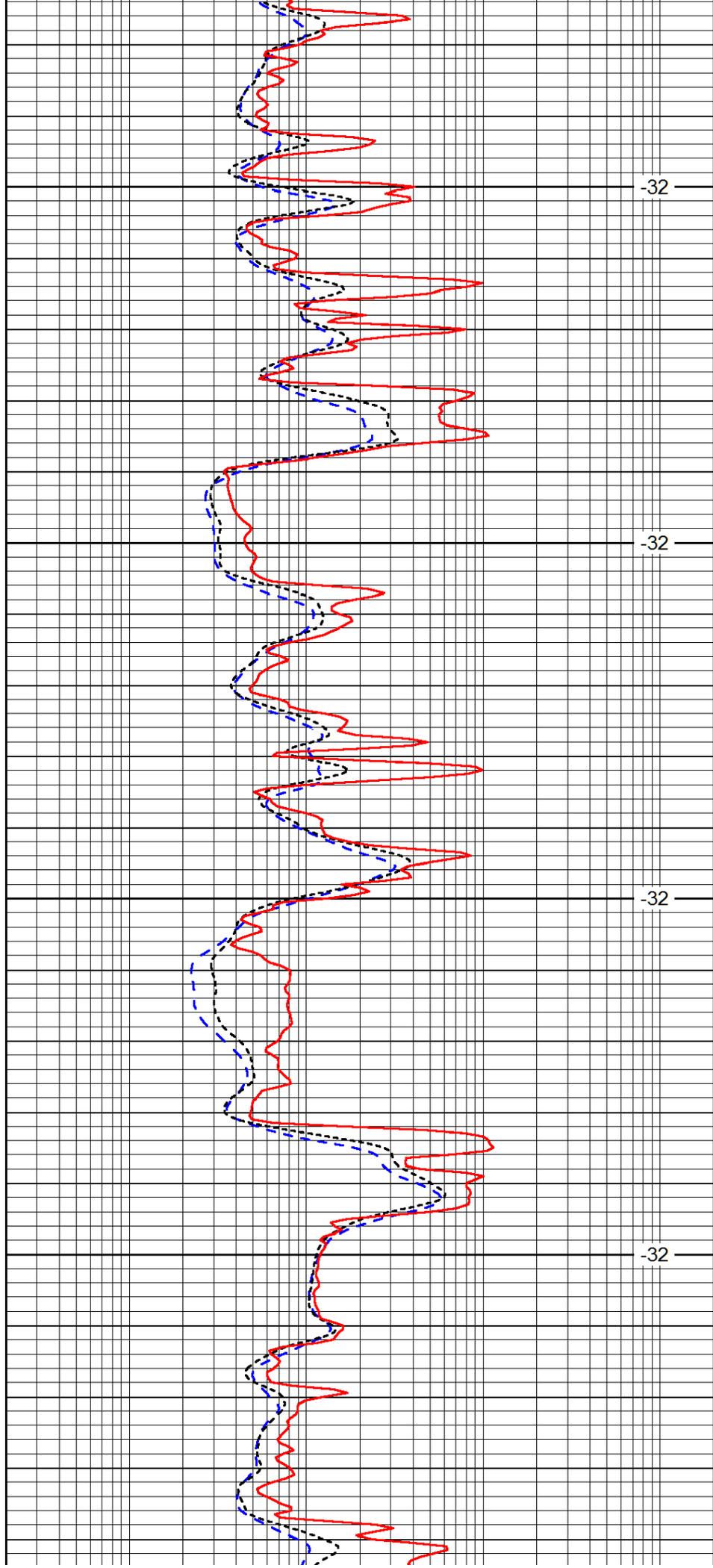


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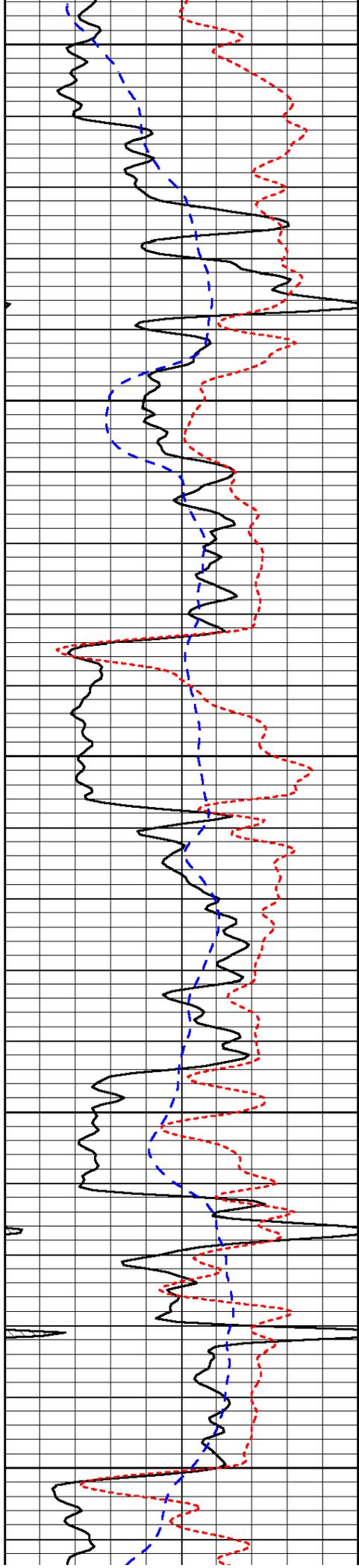


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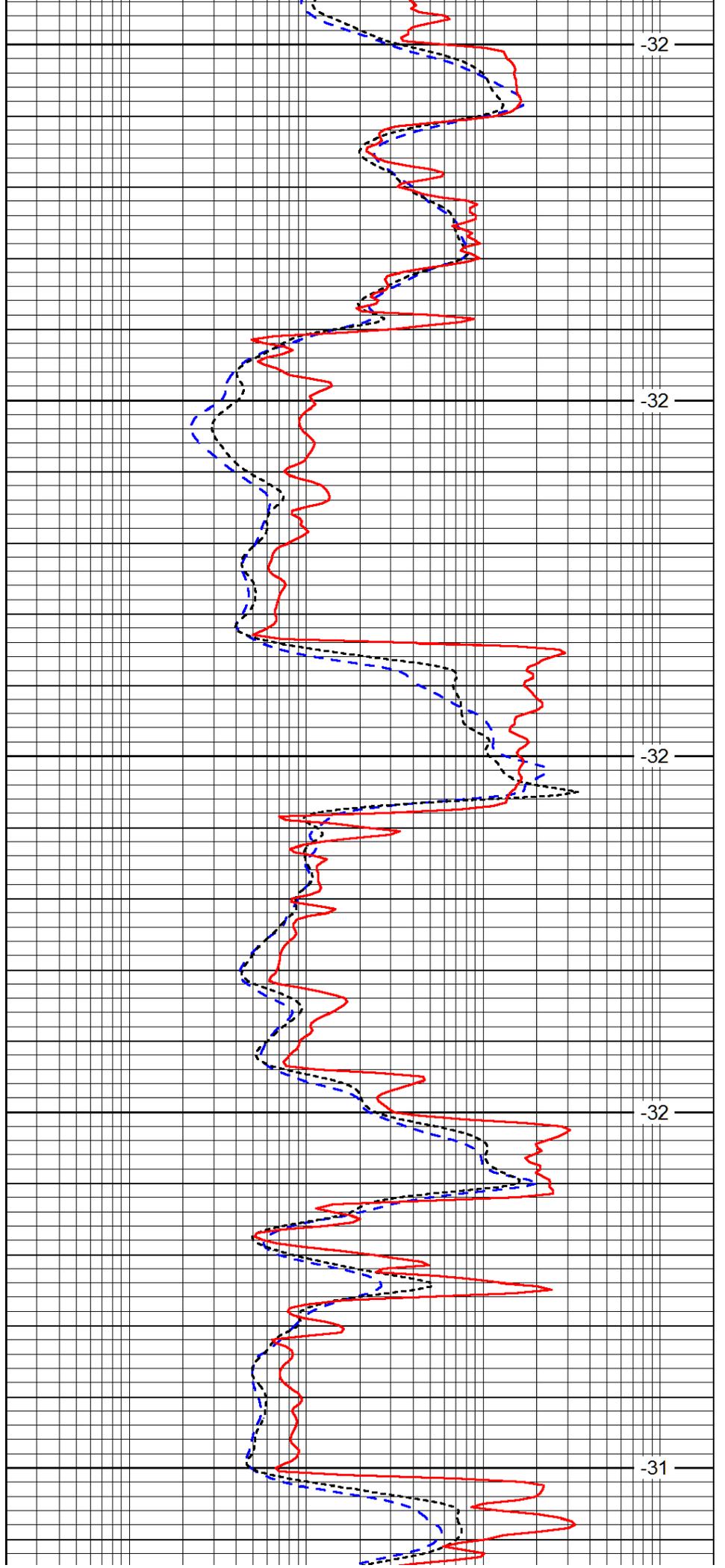
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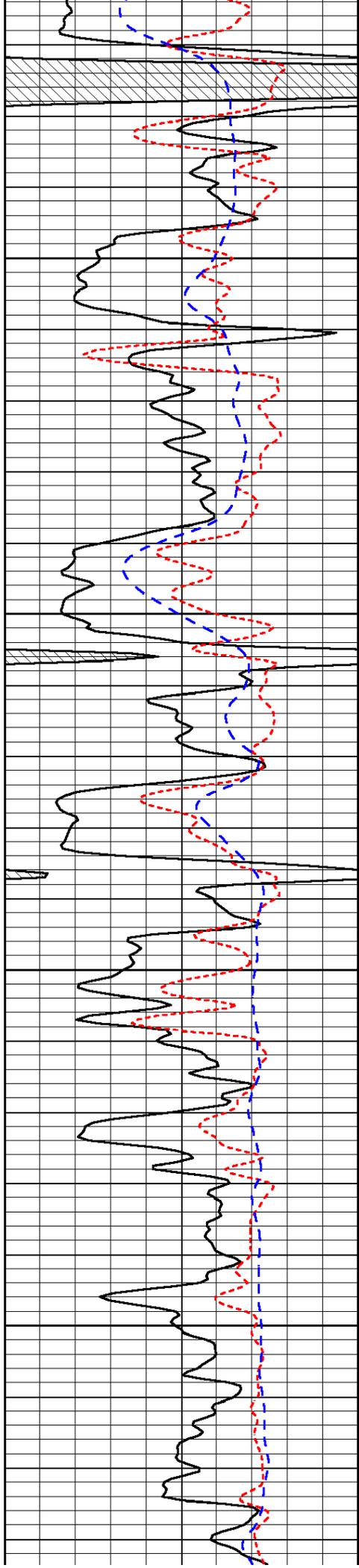
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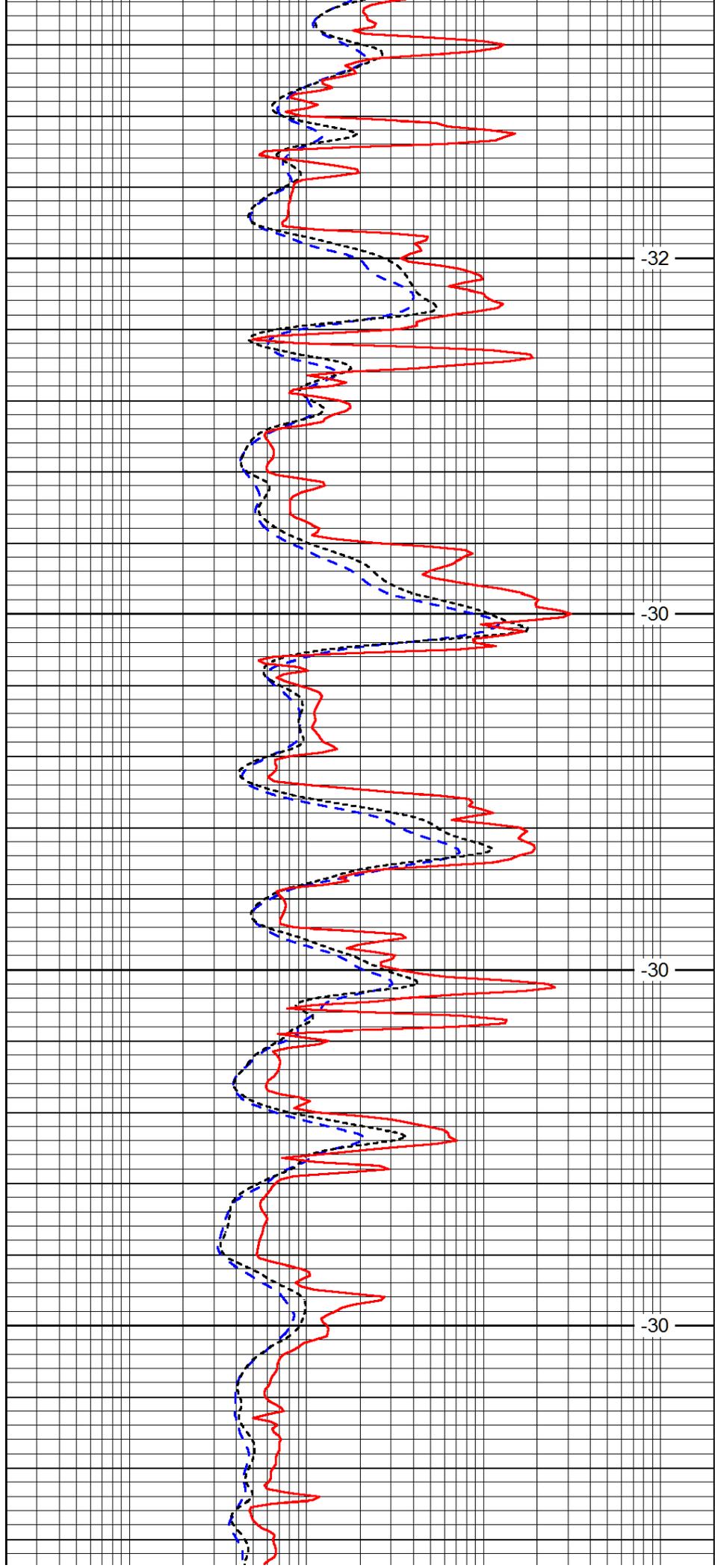


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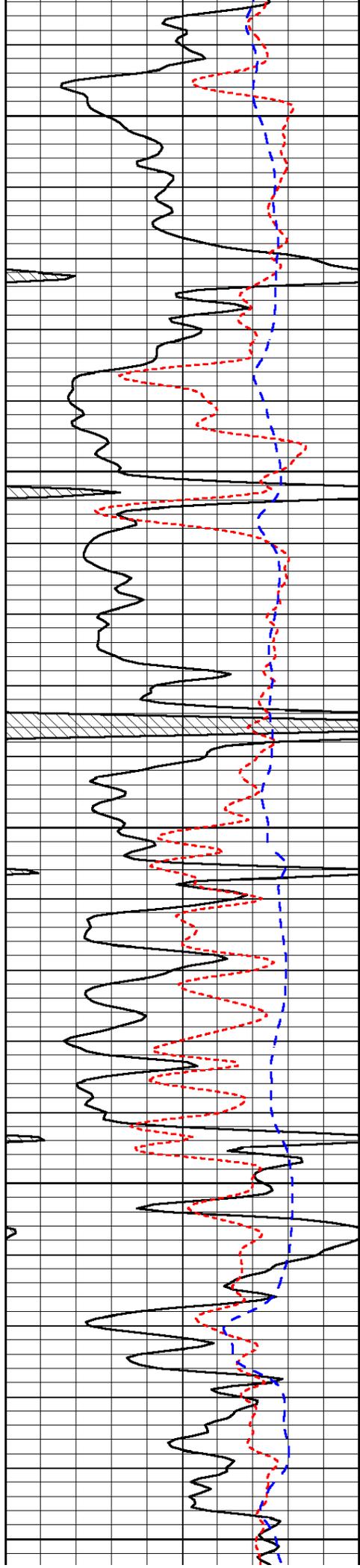


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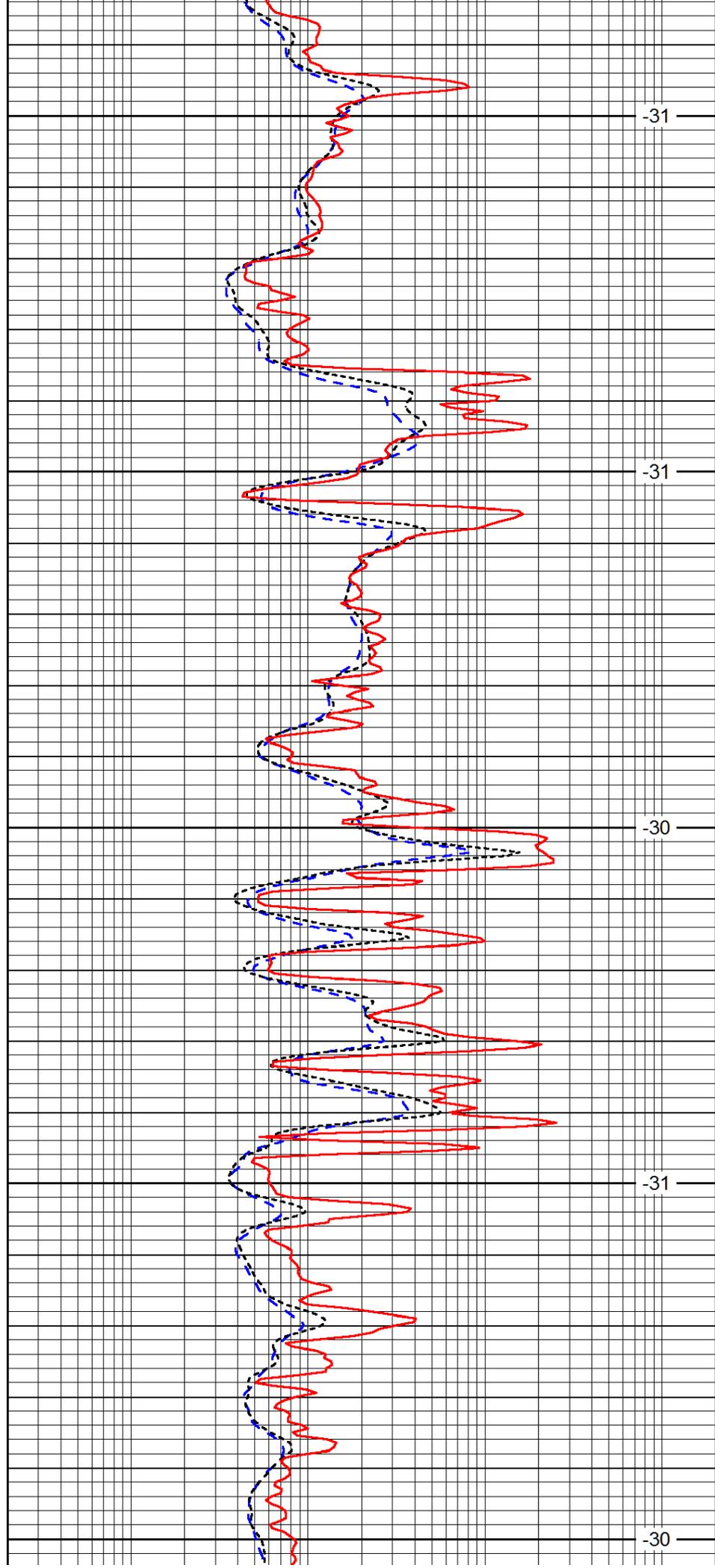
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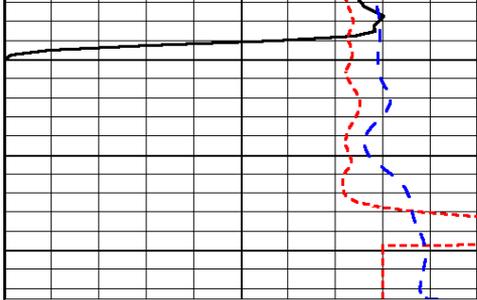
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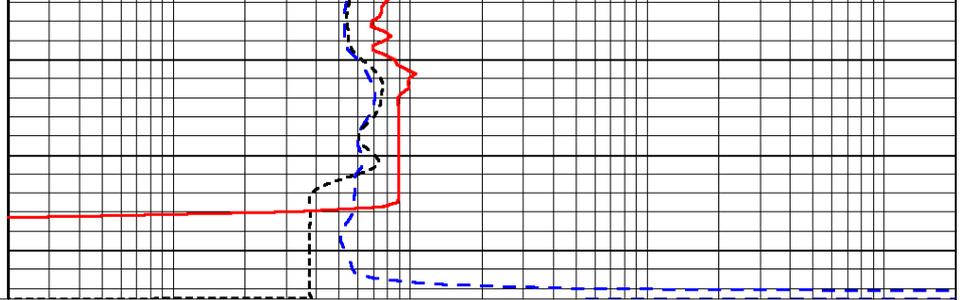
-30

-31

-30



0	Gamma Ray (GAPI)	150
-160	RXO/RT	40
-200	SP (mV)	0



0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0

LSPD (ft/min)
