



Microresistivity Log

Pioneer Energy Services

API No.

15-113-21,358-00-00

Company Marco Wind Operations, LLC

Well E. Goering No. 5

Field Ritz Canton

County McPherson State Kansas

Location SE SW NW NW
1250' FNL & 470' FWL

Sec: 4 Twp: 20 S Rge: 2 W

Permanent Datum Ground Level Elevation 1523

Log Measured From Kelly Bushing 10 Ft. Above Perm. Datum

Drilling Measured From Kelly Bushing Elevation
K.B. 1533
D.F. 1523
G.L. 1523

Date 4/9/2013

Run Number Two

Depth Driller 3665

Depth Logger 3665

Bottom Logged Interval 3664

Top Log Interval 200

Casing Driller 8.625 @ 220

Casing Logger 223

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 600

Density / Viscosity 7.6 94

pH / Fluid Loss 11.5 8.0

Source of Sample Flowline

Rm @ Meas. Temp 1.10 @ 68

Rmf @ Meas. Temp .83 @ 68

Rmc @ Meas. Temp 1.49 @ 68

Source of Rmf / Rmc Charts

Rm @ BHT .66 @ 113

Operating Rig Time 5 Hours

Max Rec. Temp. F 113

Equipment Number 108

Location Hays

Recorded By D. Martin

Witnessed By Delmar Nighthingale

Rex Savage

Mike Hadix

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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

Galva, KS
2 S on 21st Ave., 3/4 W, SW Into

Database File: marco_egoering_5hd.db

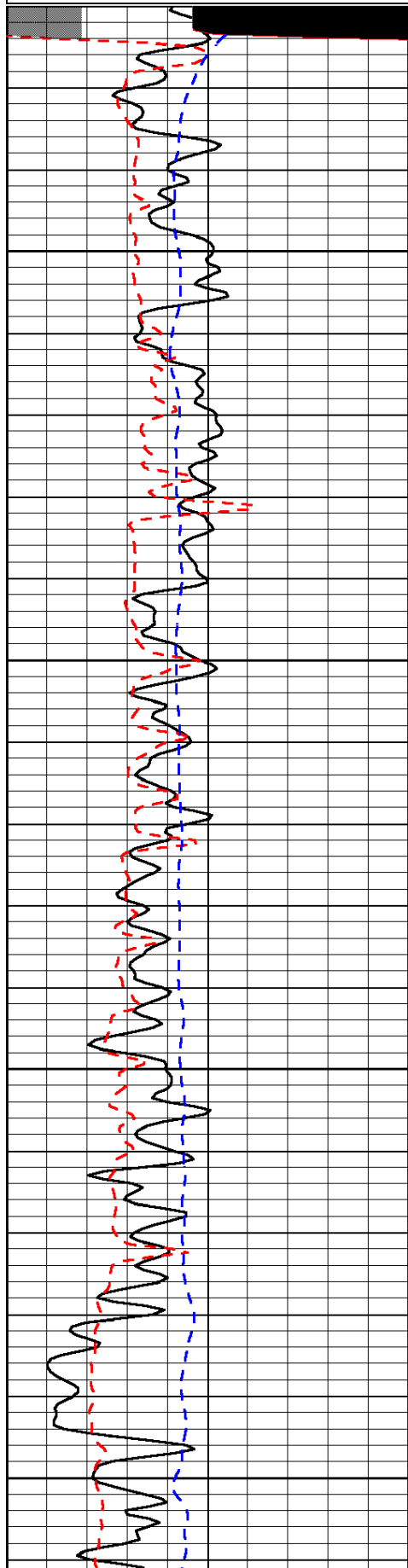
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Presentation Format: micro

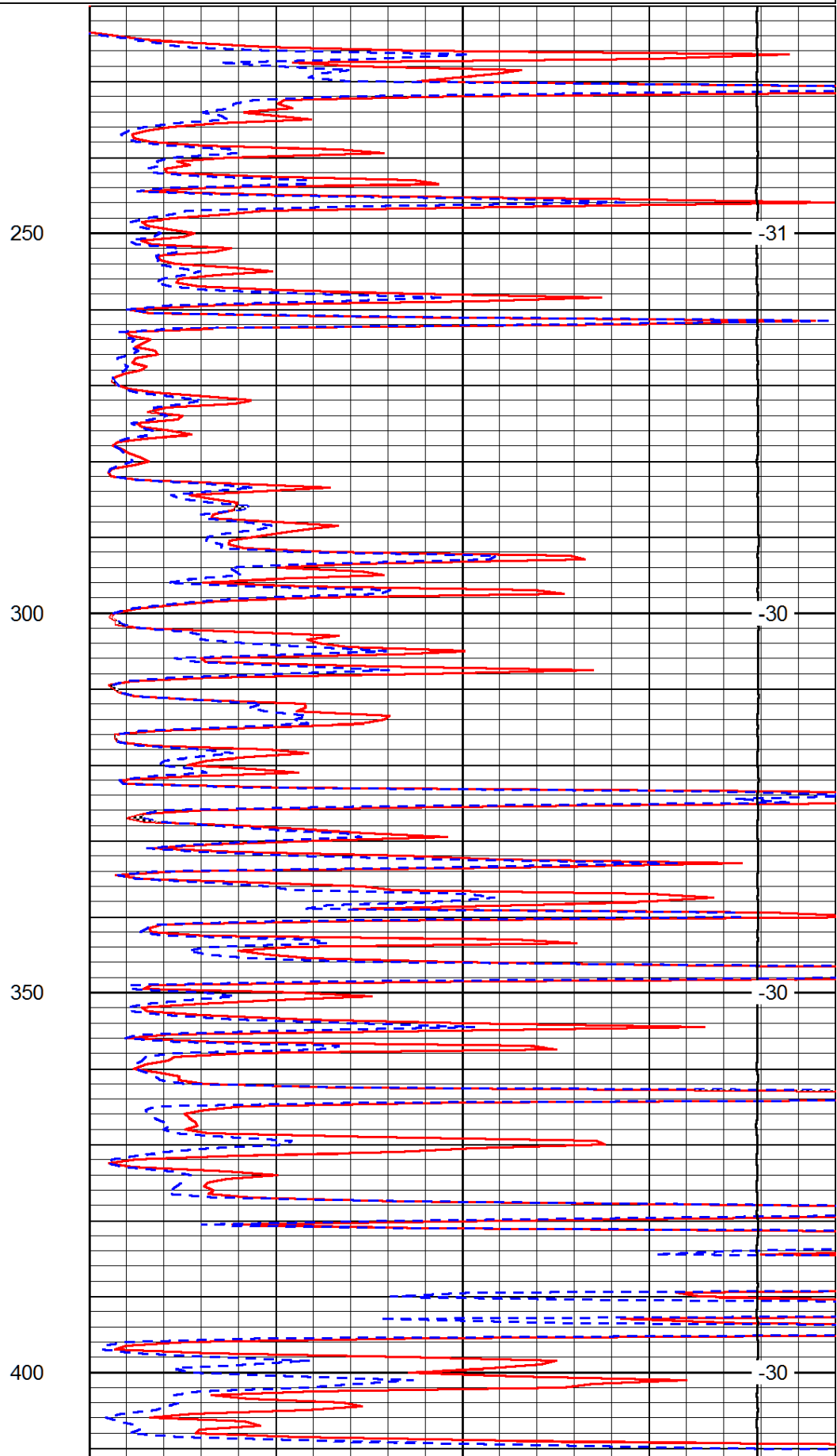
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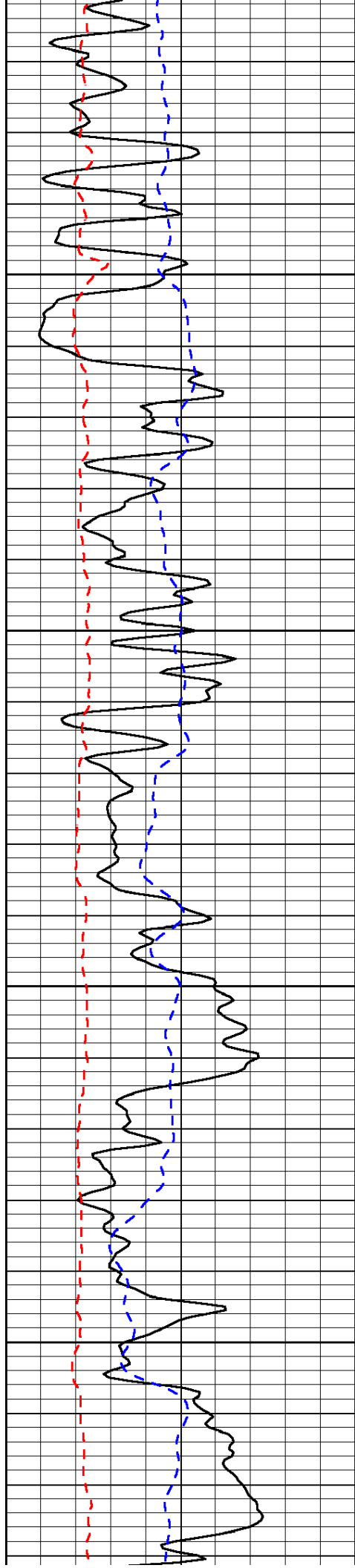
Charted by: Depth in Feet scaled 1:240

Charted by: Depth in Feet scaled 1:2.15		
0	Gamma Ray (GAPI)	150
6	MCAL (in)	16
2.875	Mud Cake (in)	7.875
-200	SP (mV)	0



0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0
		LSPD (ft/min)



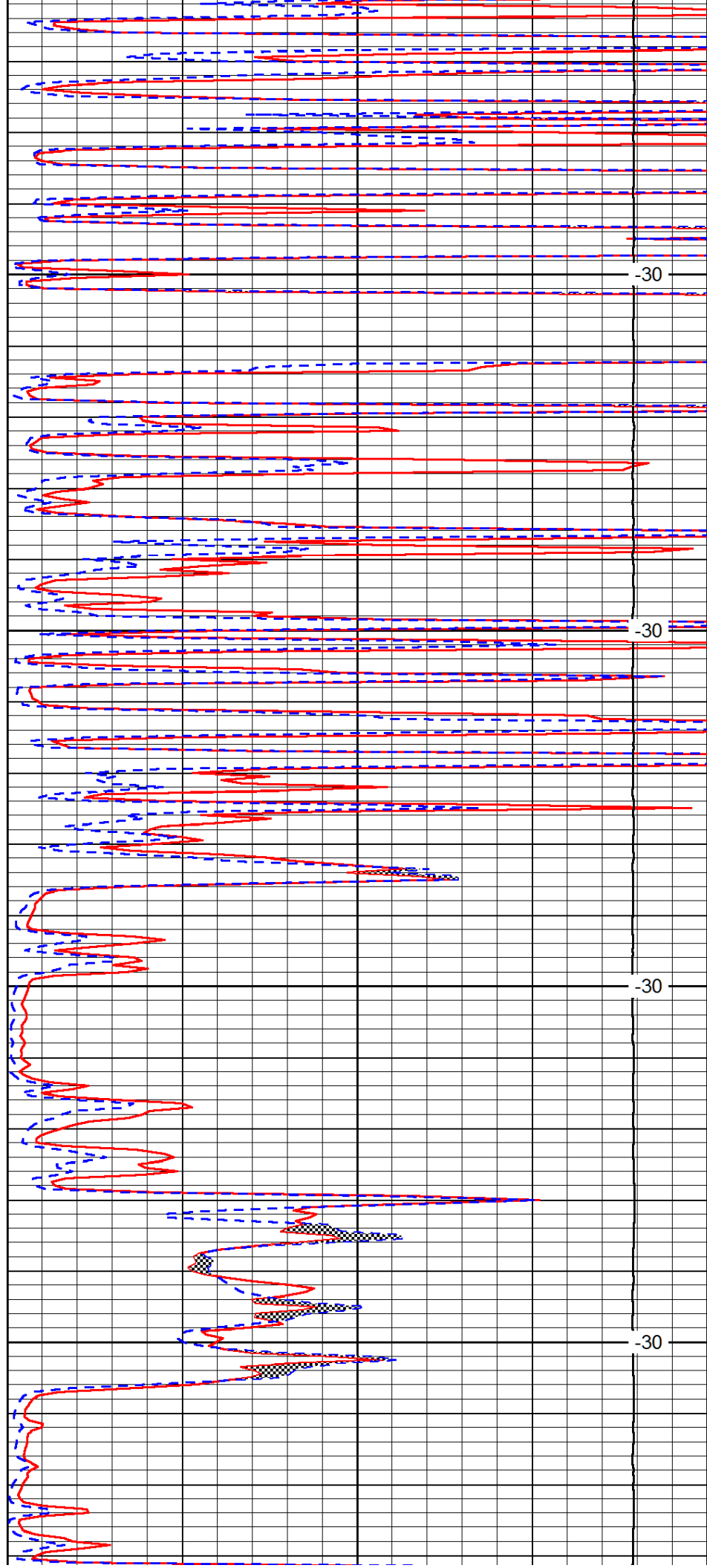


450

500

550

600

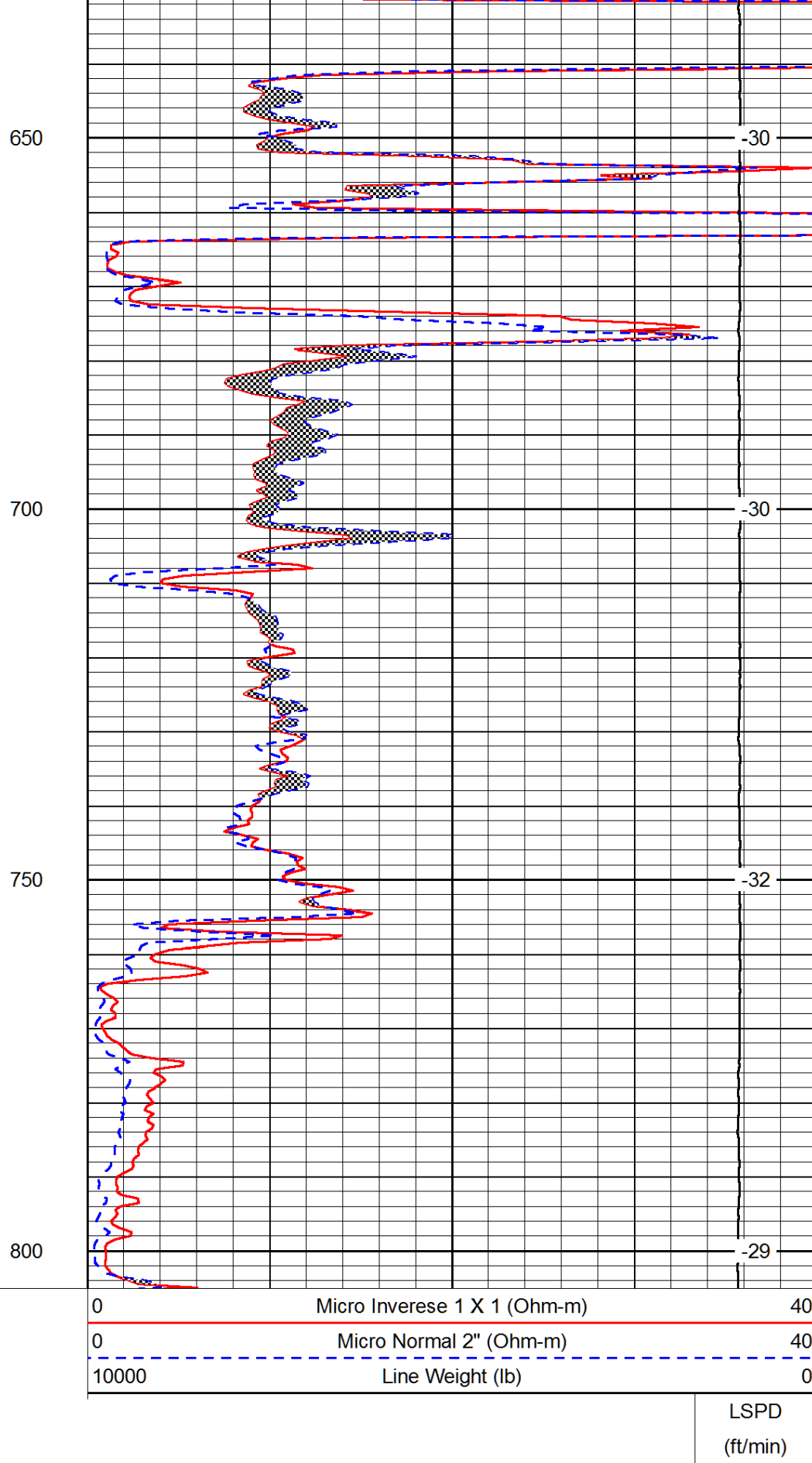
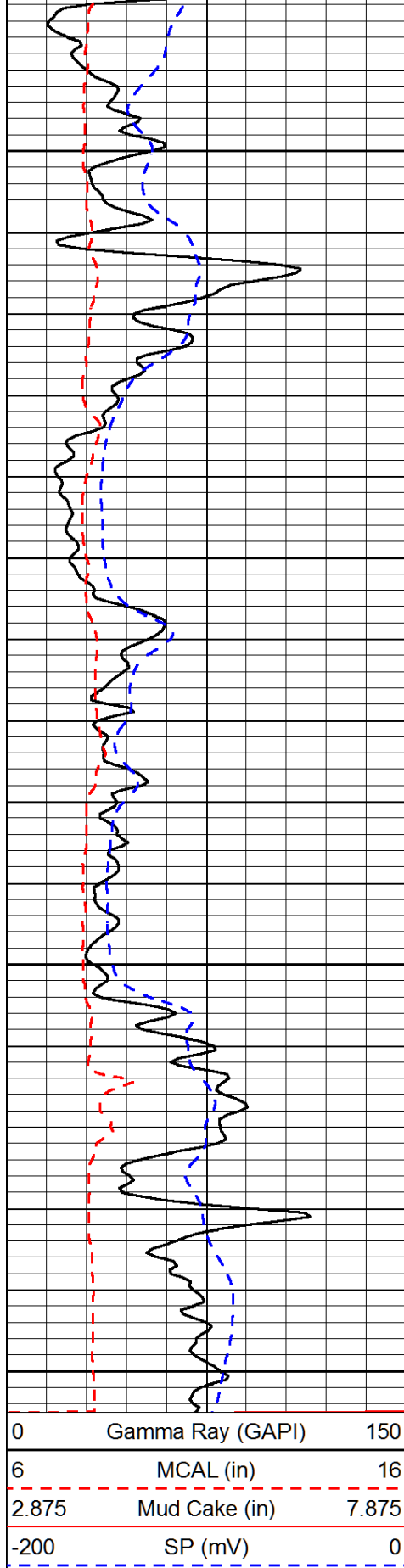


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-30

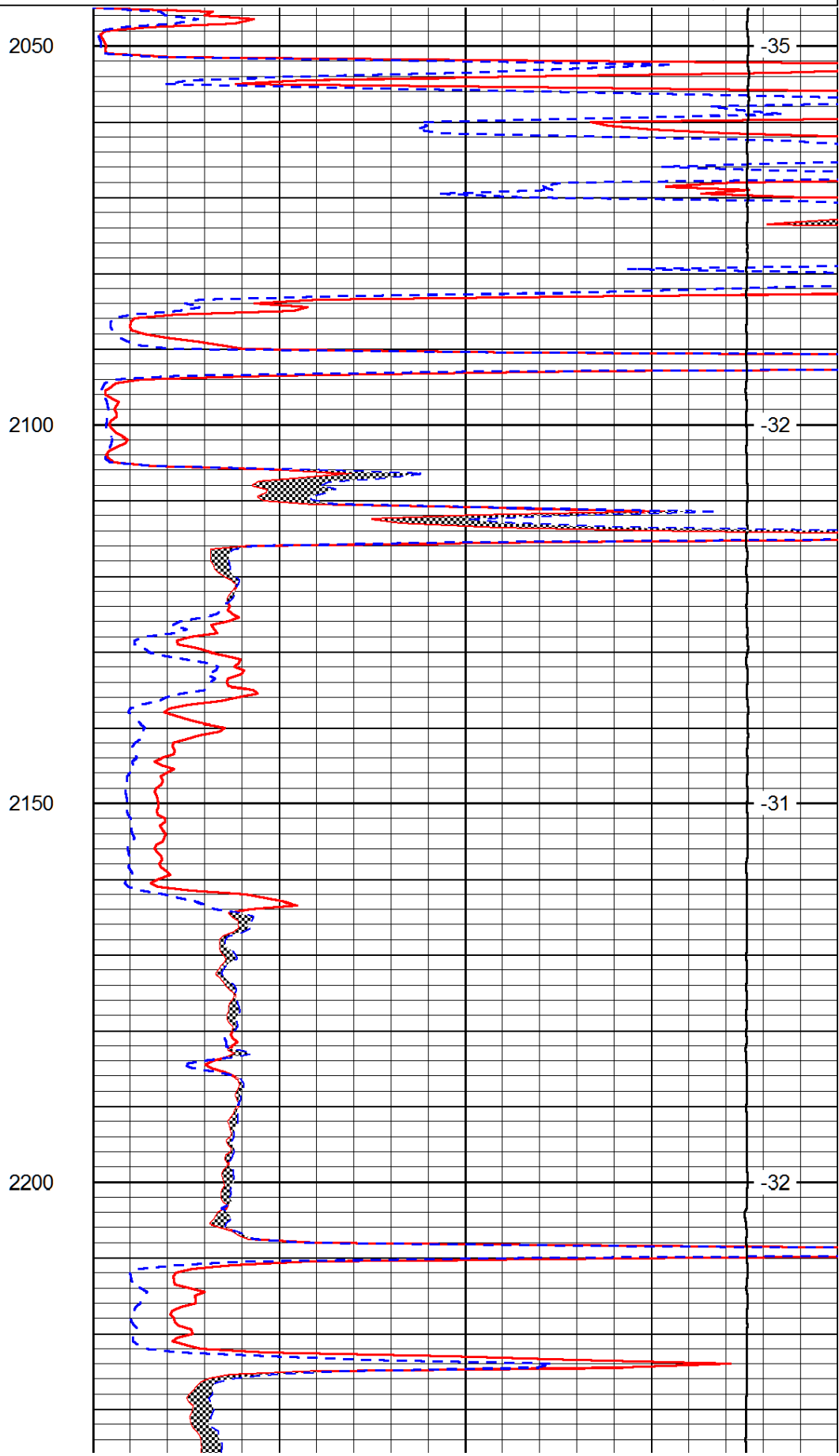
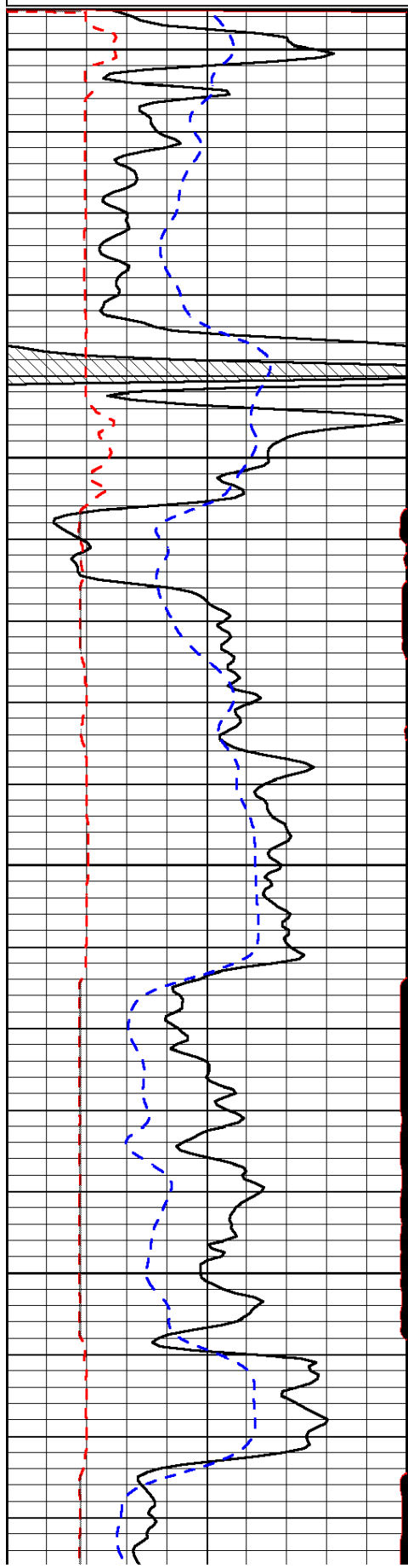
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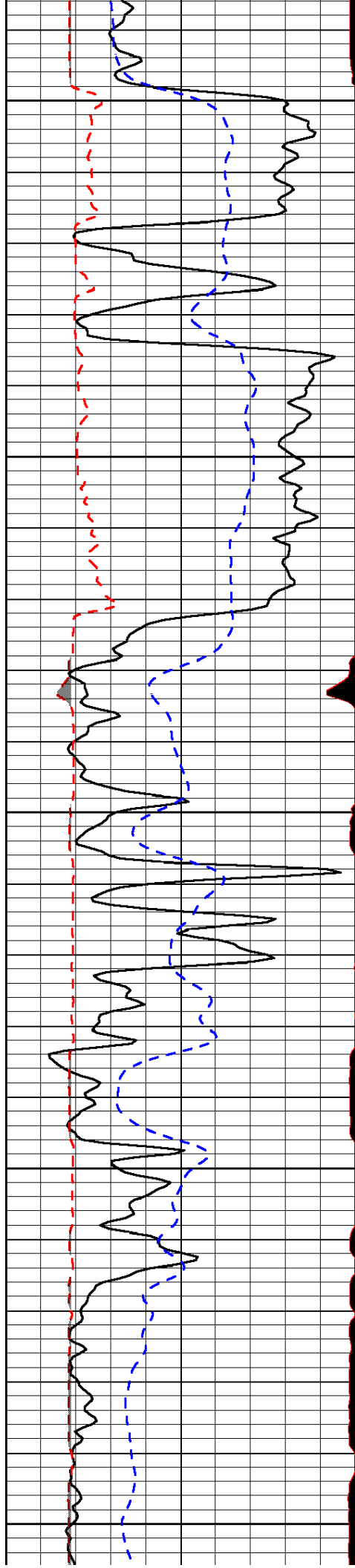
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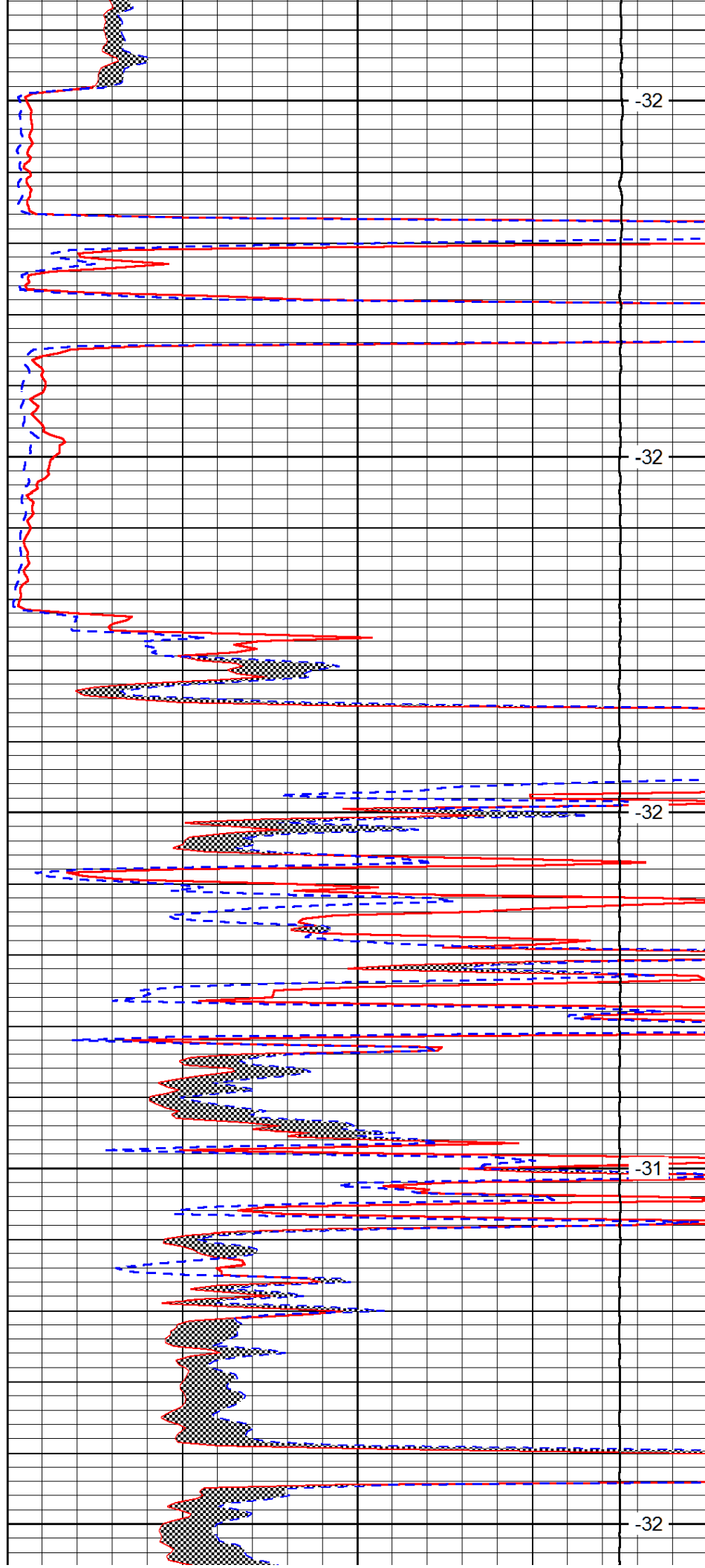
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2300

2350

2400

2450



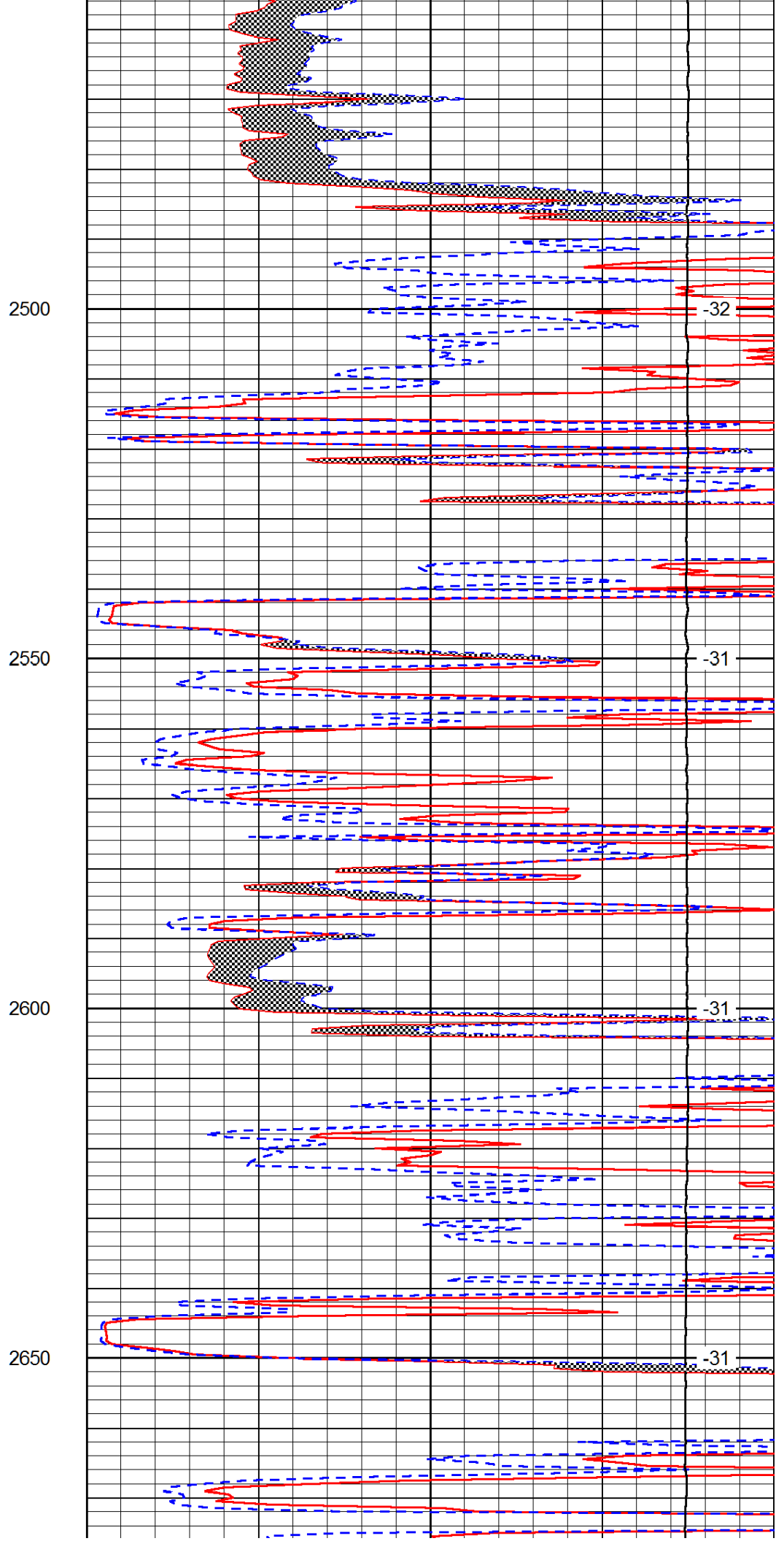
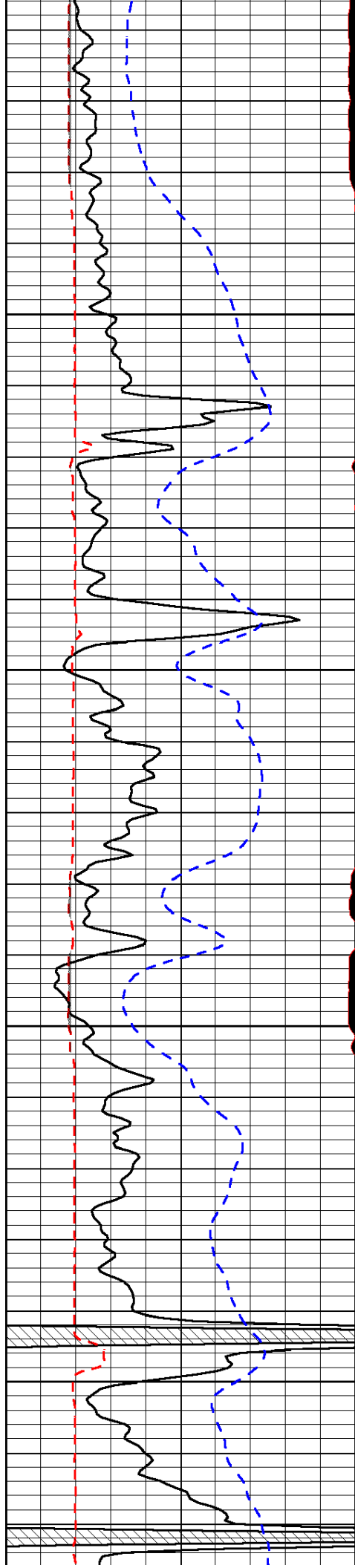
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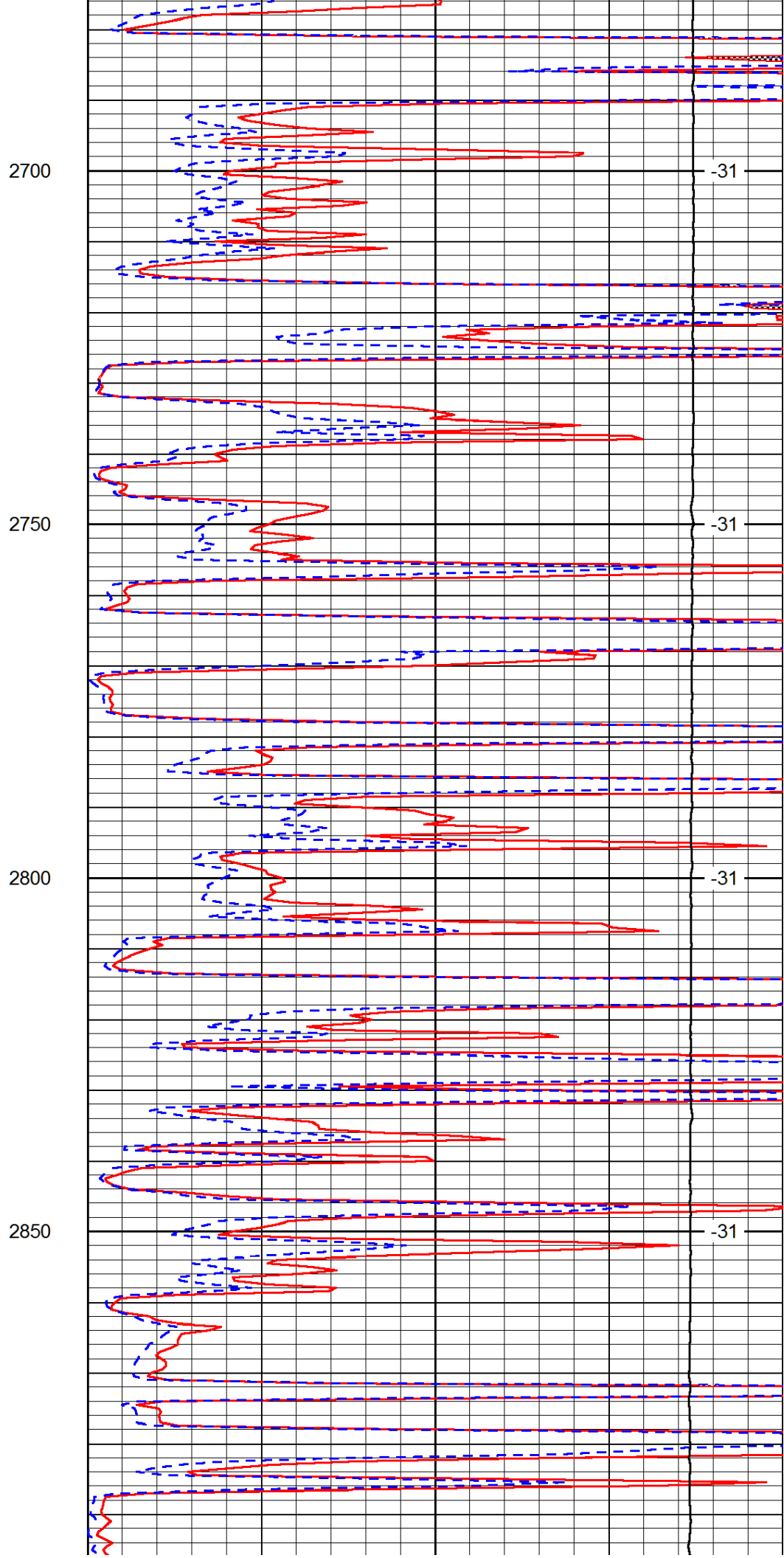
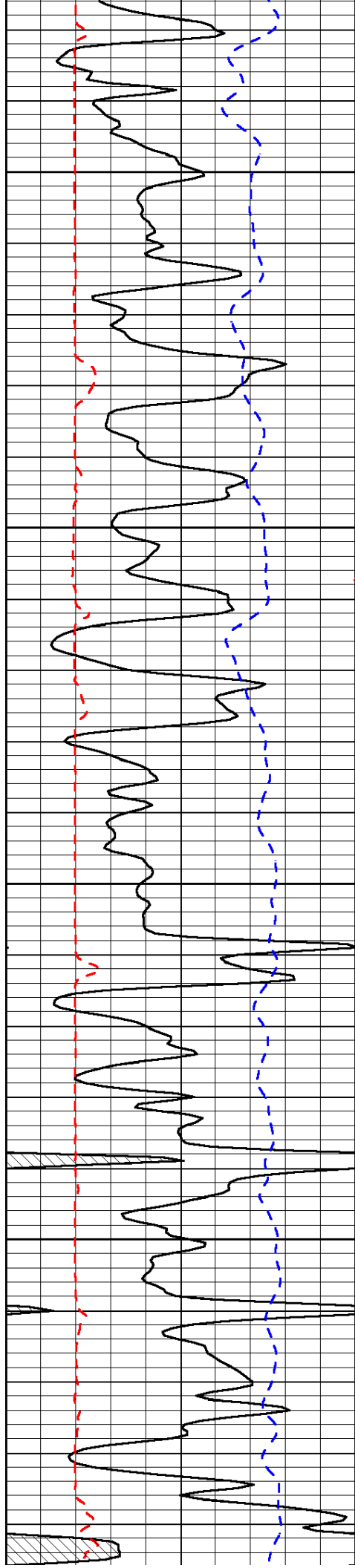
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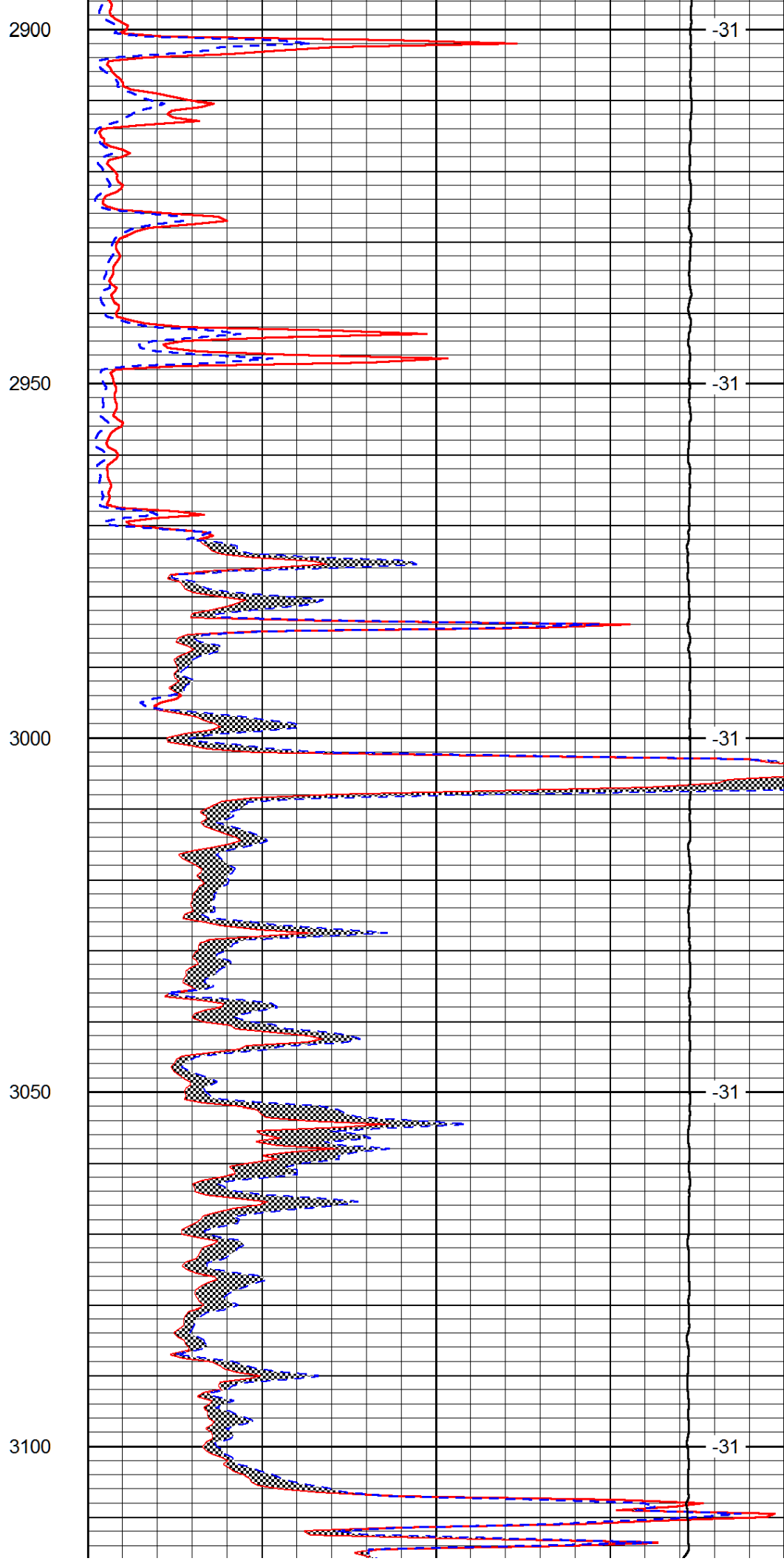
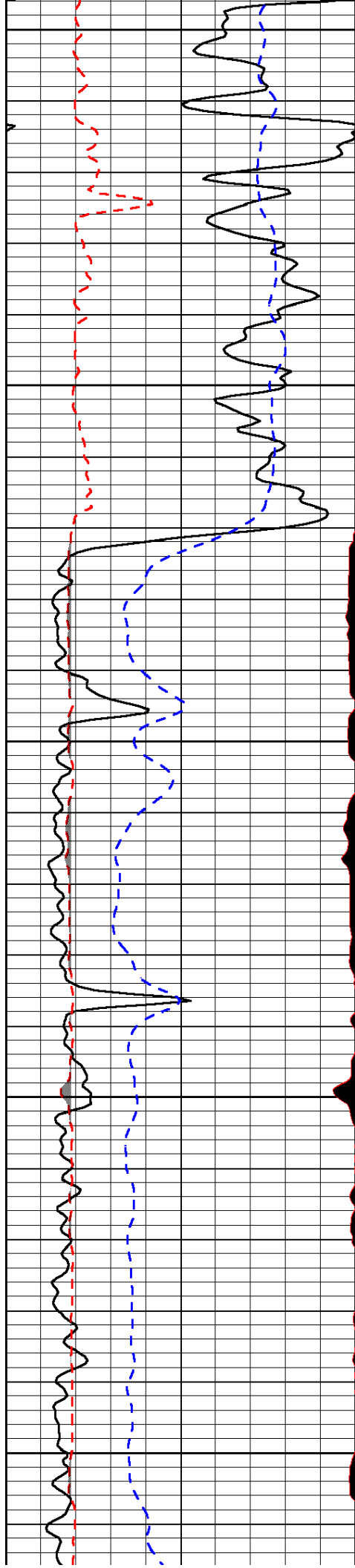
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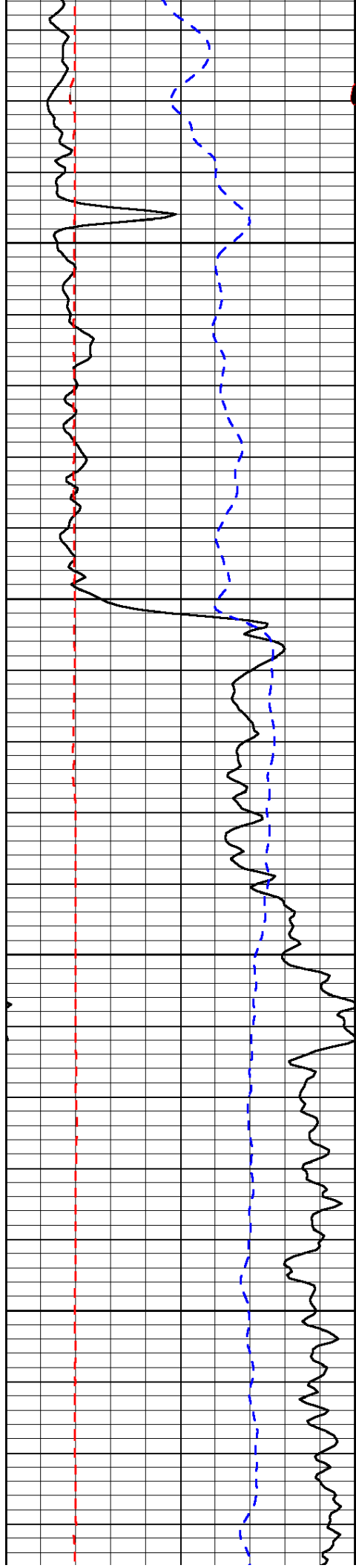
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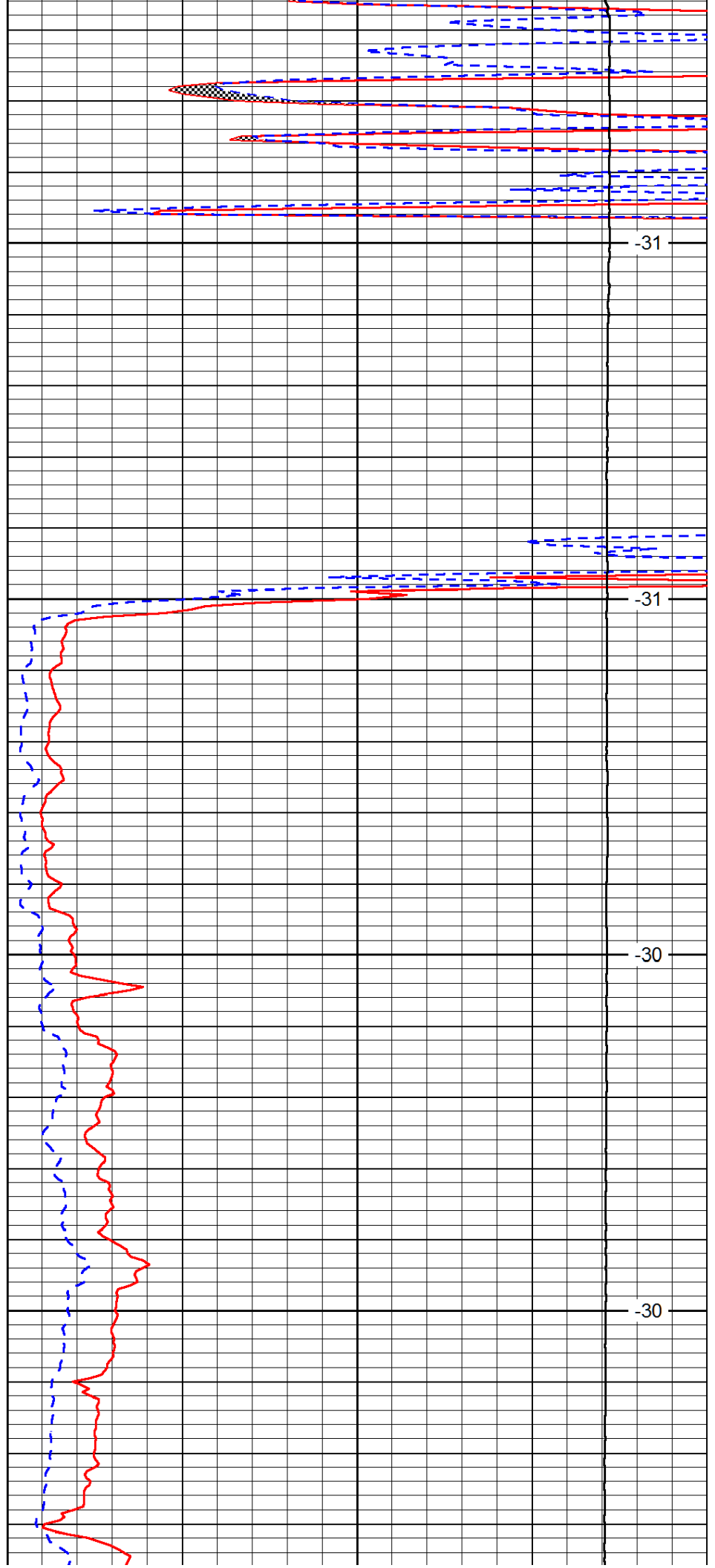


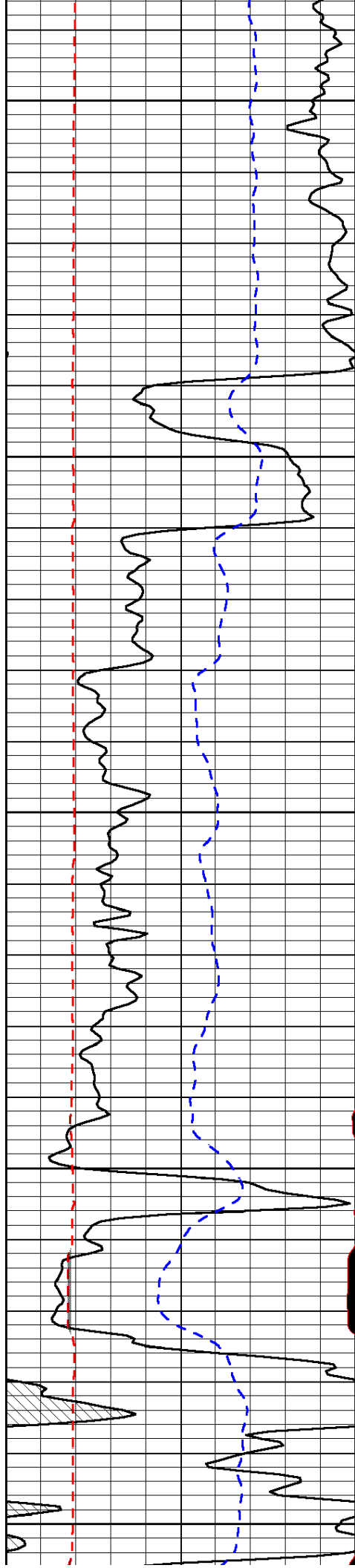
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3200

3250

3300





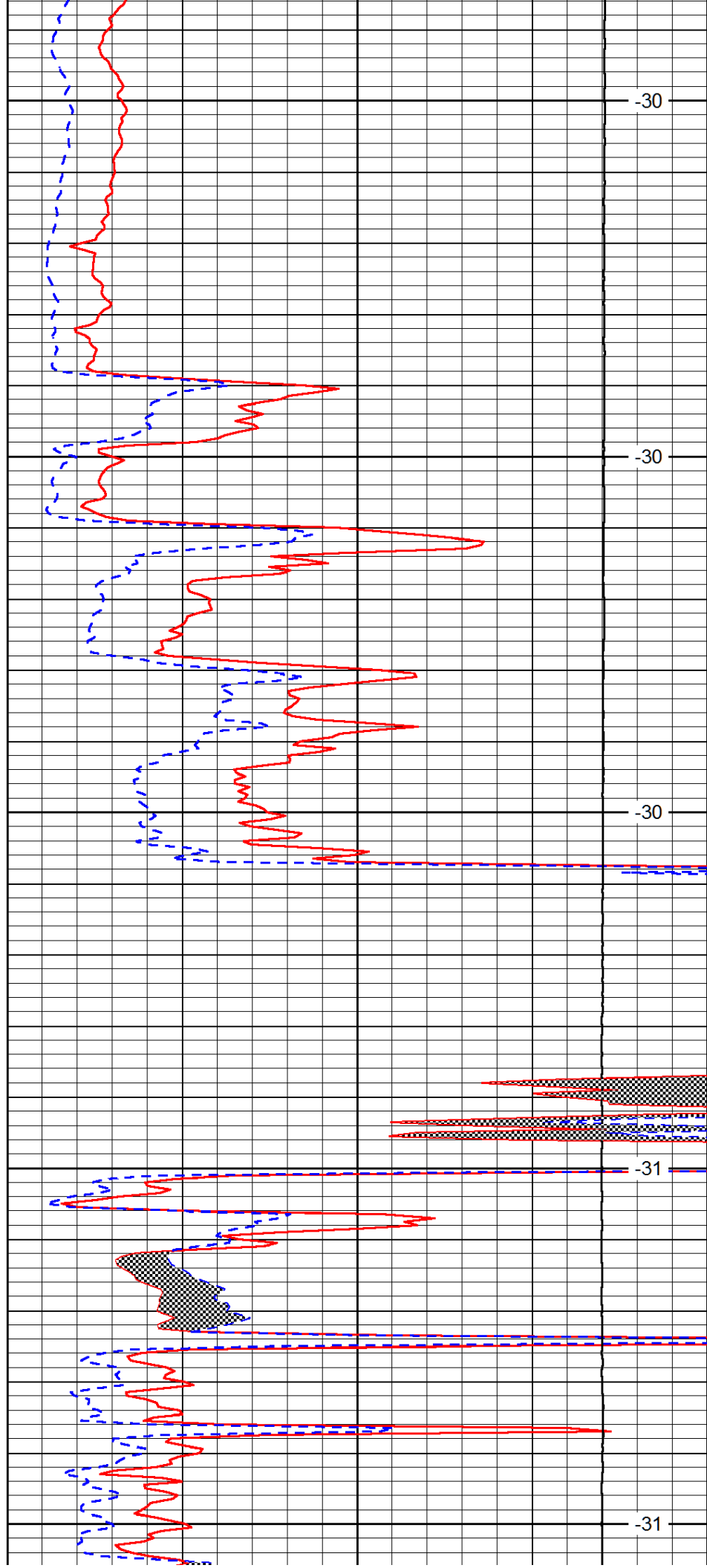
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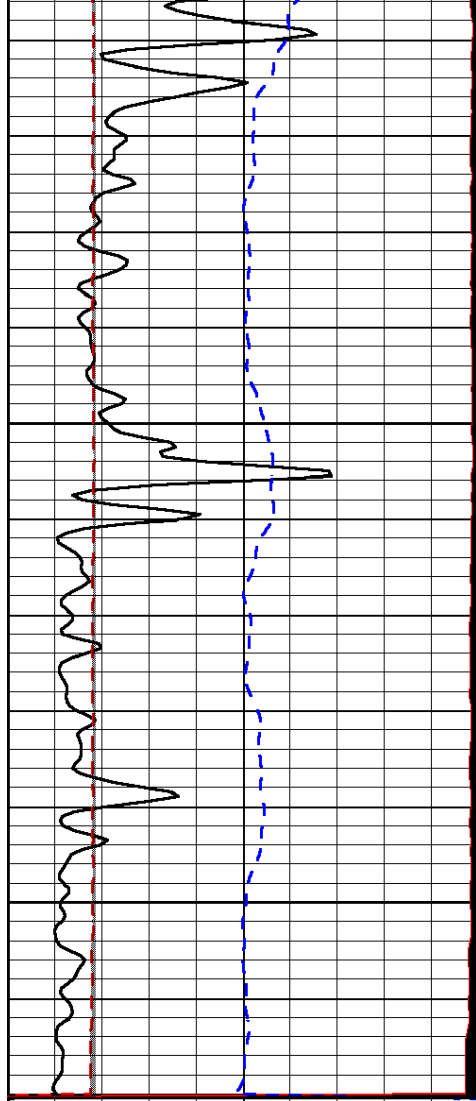
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3450

3500

3550

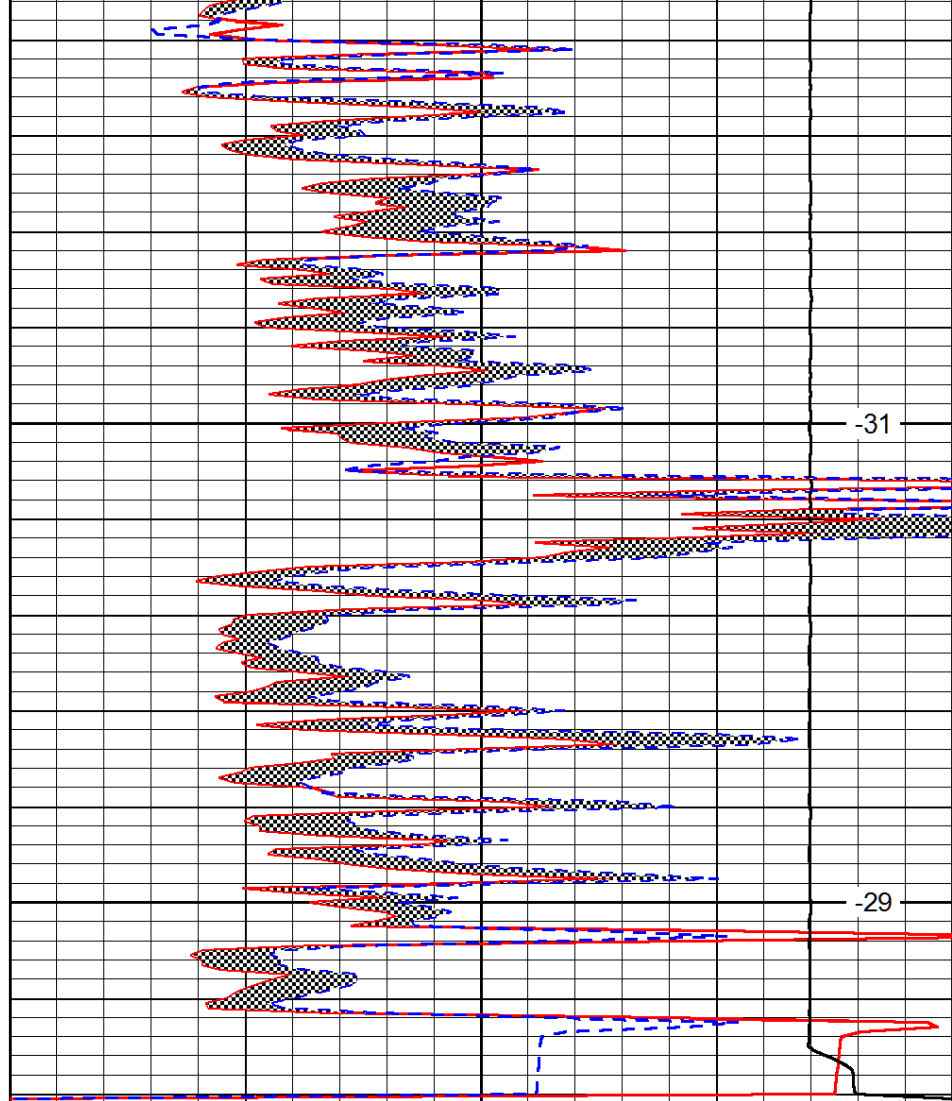




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(ft/min)