



Pioneer Energy Services

Microresistivity Log

15-167-24,007-00-00

API No.

Company **H&D Exploration, LLC**

Well **Michaelis #1**

Field **Roosevelt**

County **Russell** State

Kansas

Location **1793' FNL & 2310' FWL**

Sec: **25**

Twp: **15S**

Rge: **15W**

Other Services
CNL/CDL
DIL/BHCS

Permanent Datum **Ground Level** Elevation **1903**
Log Measured From **Kelly Bushing** **9** Ft. Above Perm. Datum
Drilling Measured From **Frontkelly Bushing**

K.B. 1912
D.F. G.L. 1903

Date **12/11/2014**

Run Number **Two**

Depth Driller **3480**

Depth Logger **3479**

Bottom Logged Interval **3478**

Top Log Interval **2400**

Casing Driller **8.625 @ 390**

Casing Logger **390**

Bit Size **7.875**

Type Fluid in Hole **Chemical**

Salinity, ppm CL **10,000**

Density / Viscosity **9.3 44**

pH / Fluid Loss **10.0 11.2**

Source of Sample **Flowline**

Rm @ Meas. Temp **.45 @ 55**

Rmf @ Meas. Temp **.34 @ 55**

Rmc @ Meas. Temp **.61 @ 55**

Source of Rmf / Rmc **Charts**

Rm @ BHT **.22 @ 111**

Operating Rig Time **4 Hours**

Max Rec. Temp. F **111**

Equipment Number **51**

Location **Hays**

Recorded By **C. Desaire**

Witnessed By **Clint Musgrove**

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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 Pioneer Energy Services
www.pioneeres.com
785 625 3858

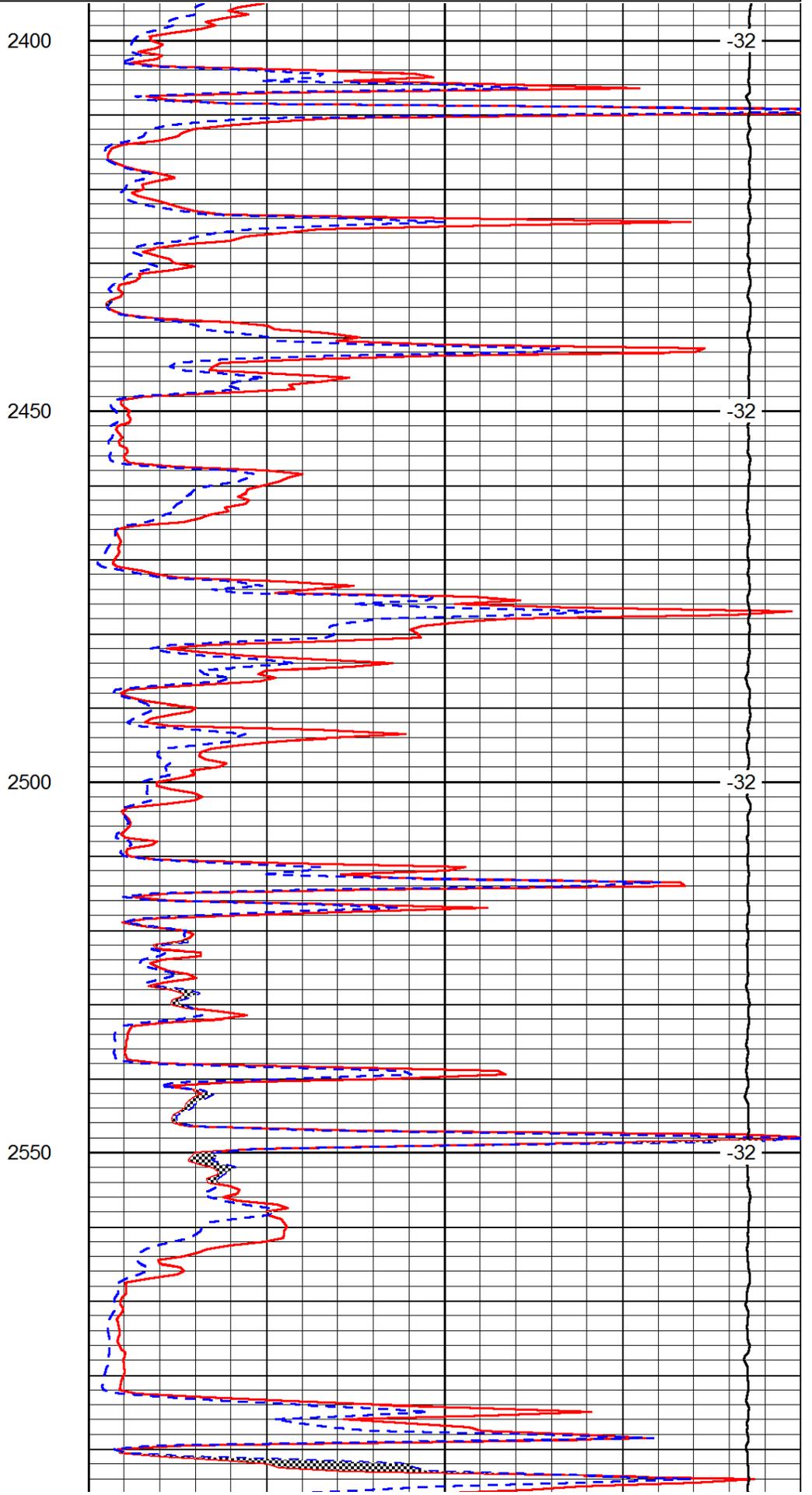
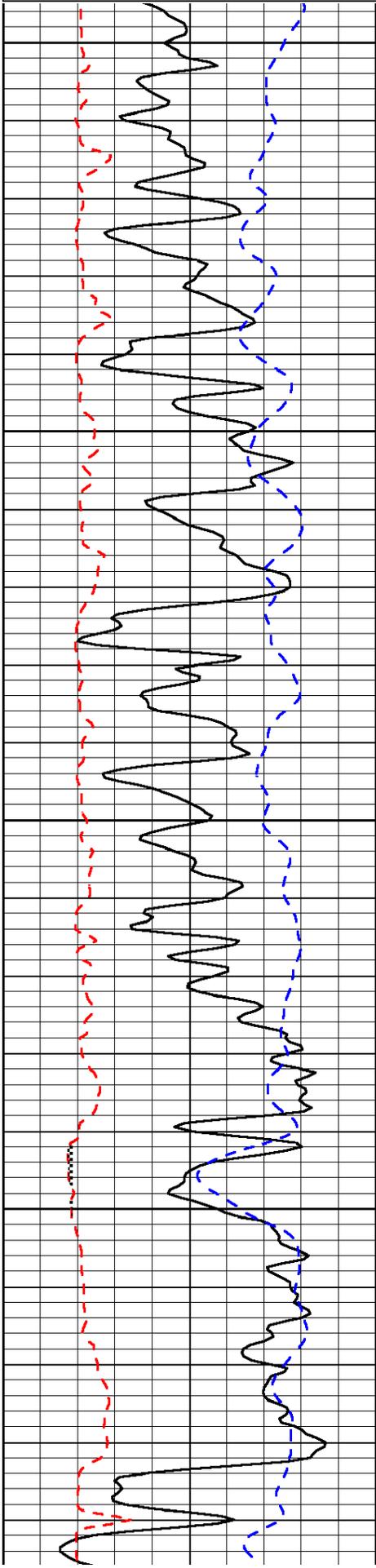
Russell KS, W on I-70 to Balta Rd,
9 1/2 S, 1/2 W, S Into

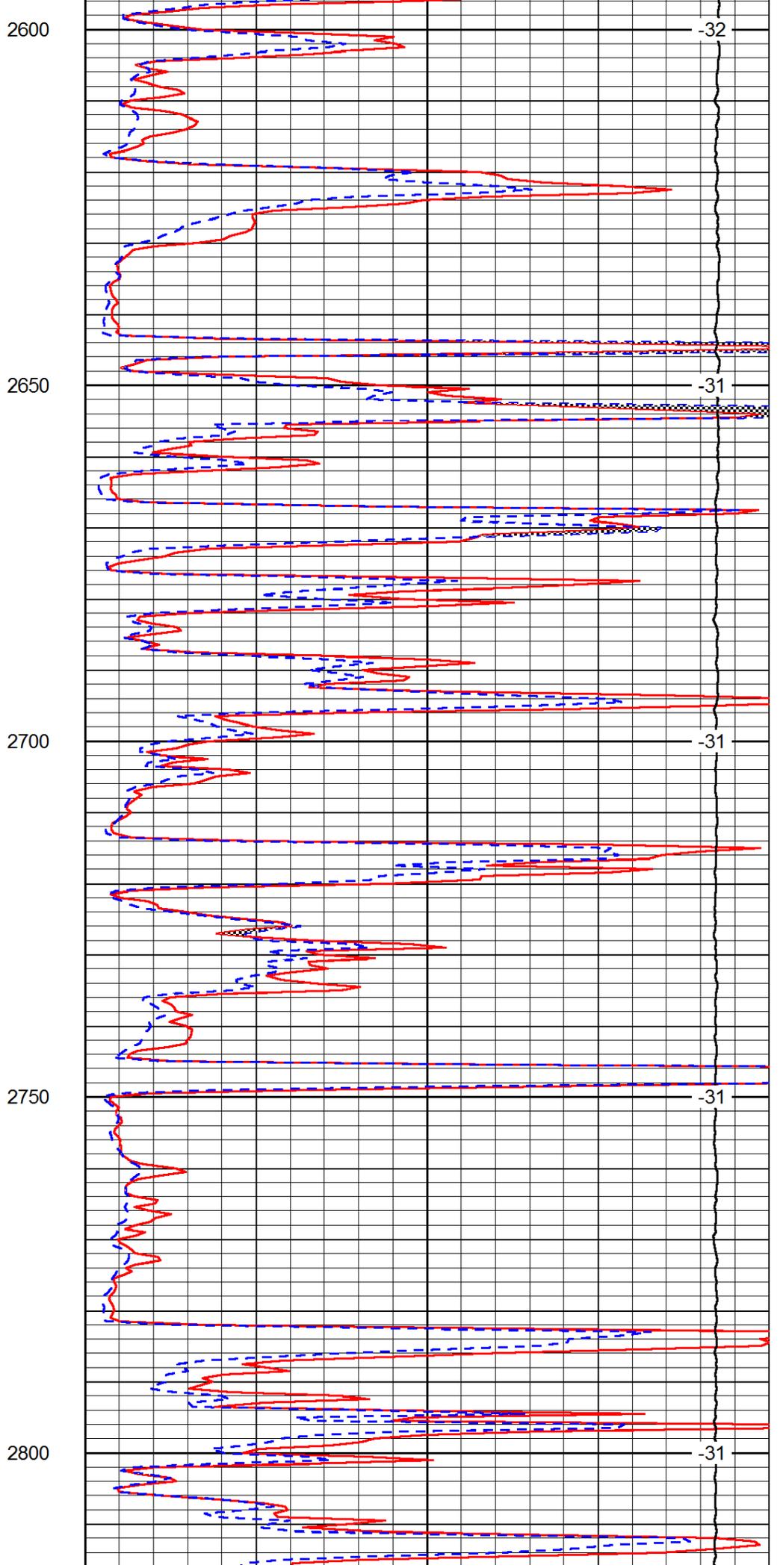
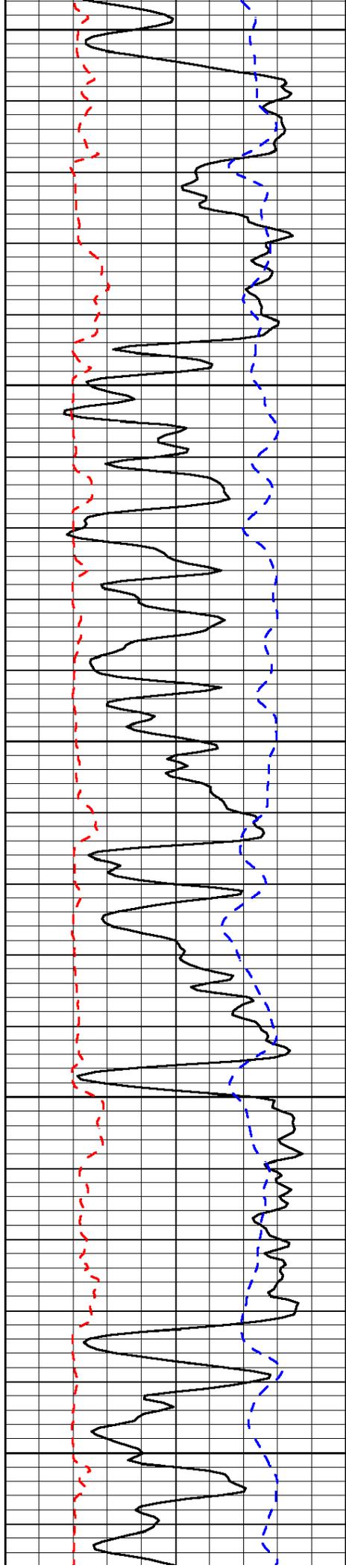
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Presentation Format: micro
Dataset Creation: Thu Dec 11 22:24:07 2014
Charted by: Depth in Feet scaled 1:240

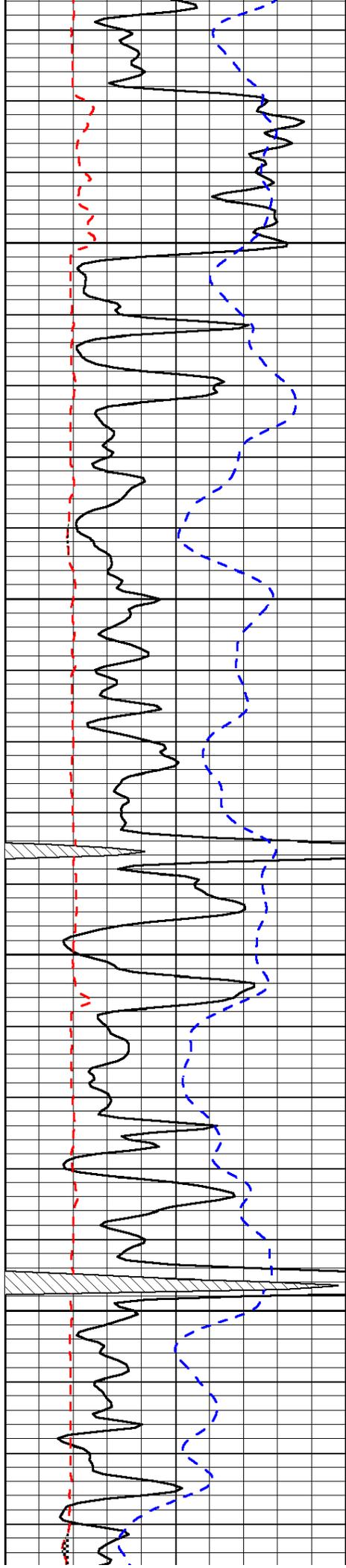
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6	MCAL (GAPI)	16
-200	SP (mV)	0

0	Micro Inverse 1 X 1	40
0	Micro Normal 2"	40
15000	Line Weight	0

LSPD





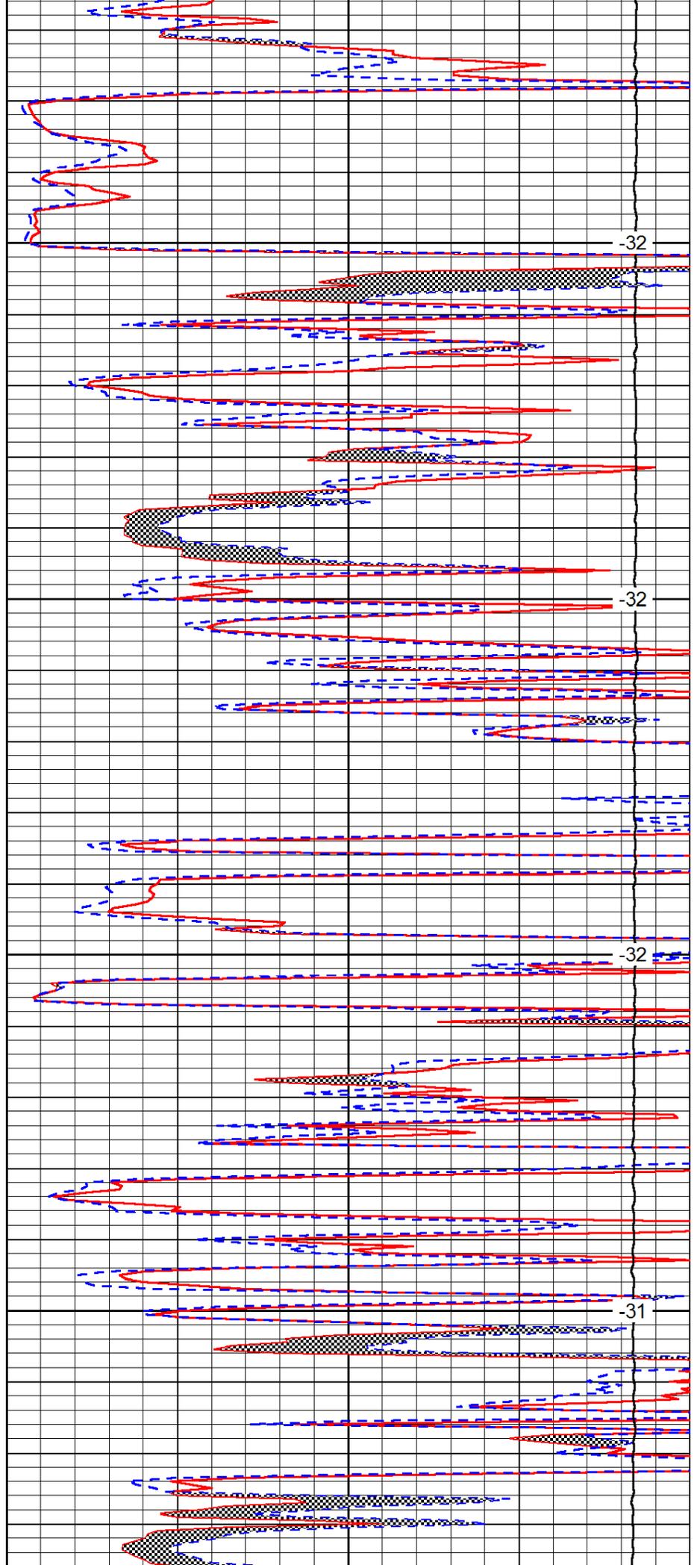


2850

2900

2950

3000

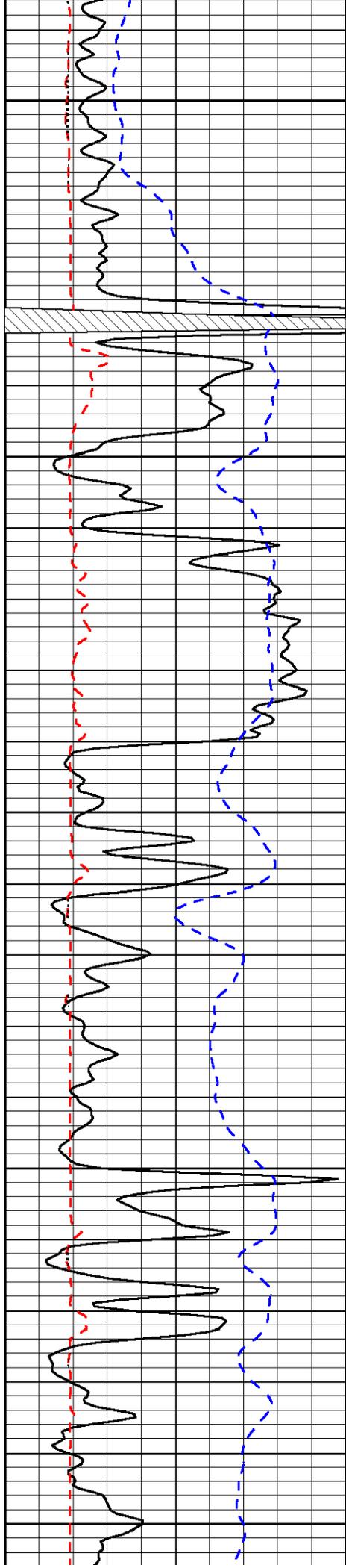


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-32

-31



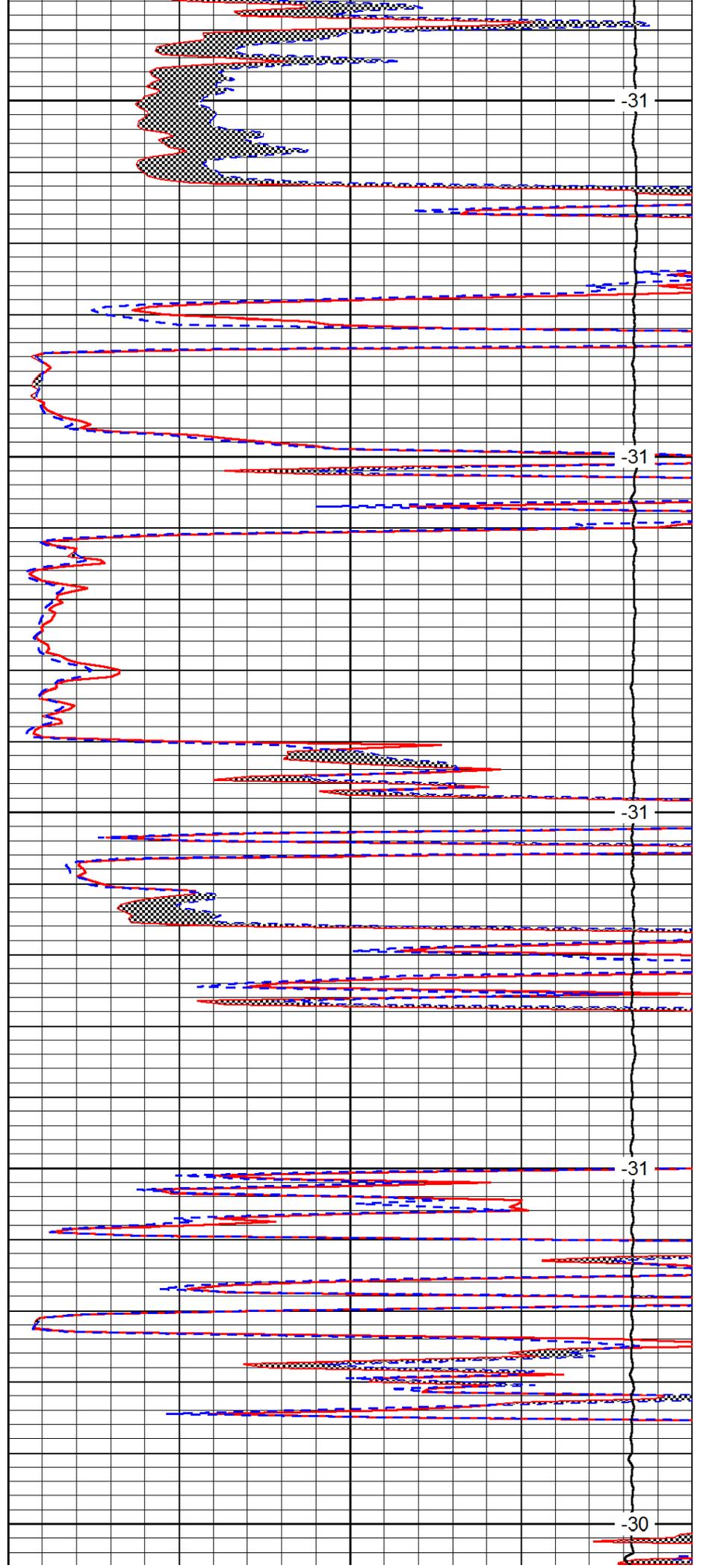
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3150

3200

3250



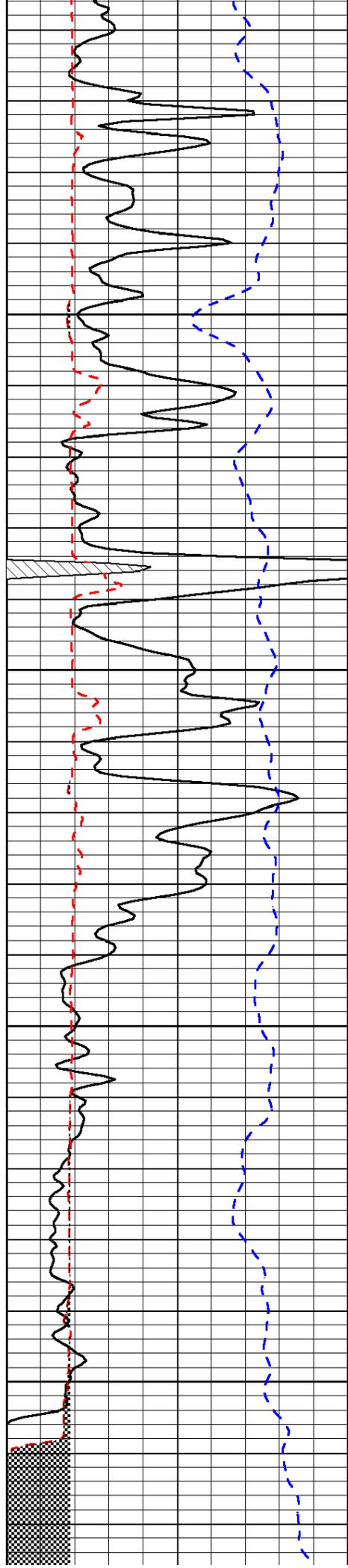
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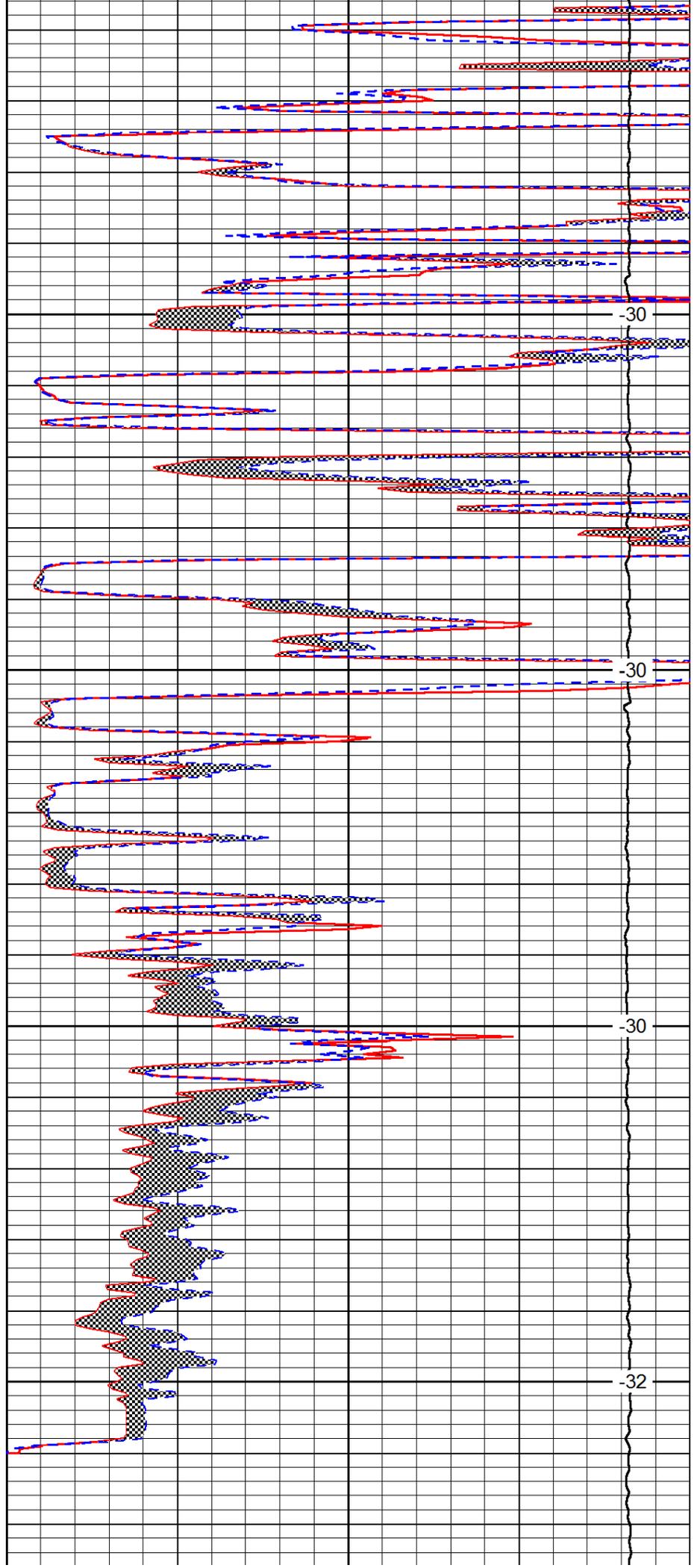


3300

3350

3400

3450



-30

-30

-30

-32

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