



Pioneer Energy Services

Microresistivity Log

API No.

15-023-21,414-00-00

Company Murfin Drilling Company, Inc.

Well Sowers No. 1-19

Field Wildcat

County Cheyenne State

Kansas

Location

330' FSL & 1000' FEL

Sec: 19

Twp: 1S

Rge: 37W

Permanent Datum

Ground Level

Elevation 3199

Log Measured From

Kelly Bushing

11 Ft. Above Perm. Datum

Drilling Measured From

Kelly Bushing

Elevation

K.B. 3210

D.F. 3199

G.L. 3199

Other Services
CNL/CDL
DIL/BHCS

Date

12/16/14

Run Number

One

Depth Driller

4770

Depth Logger

4772

Bottom Logged Interval

4771

Top Log Interval

3500

Casing Driller

8.625 @ 225

Casing Logger

218

Bit Size

7.875

Type Fluid in Hole

Chemical

Salinity, ppm CL

700

Density / Viscosity

9.3

73

pH / Fluid Loss

10.0

7.6

Source of Sample

Flowline

Rm @ Meas. Temp

1.35 @ 43

Rmf @ Meas. Temp

1.01 @ 43

Rmc @ Meas. Temp

1.82 @ 43

Source of Rmf / Rmc

Charts

Rm @ BHT

.47 @ 124

Operating Rig Time

5 Hours

Max Rec. Temp. F

124

Equipment Number

10

Location

Hays

Recorded By

J. Henrickson

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

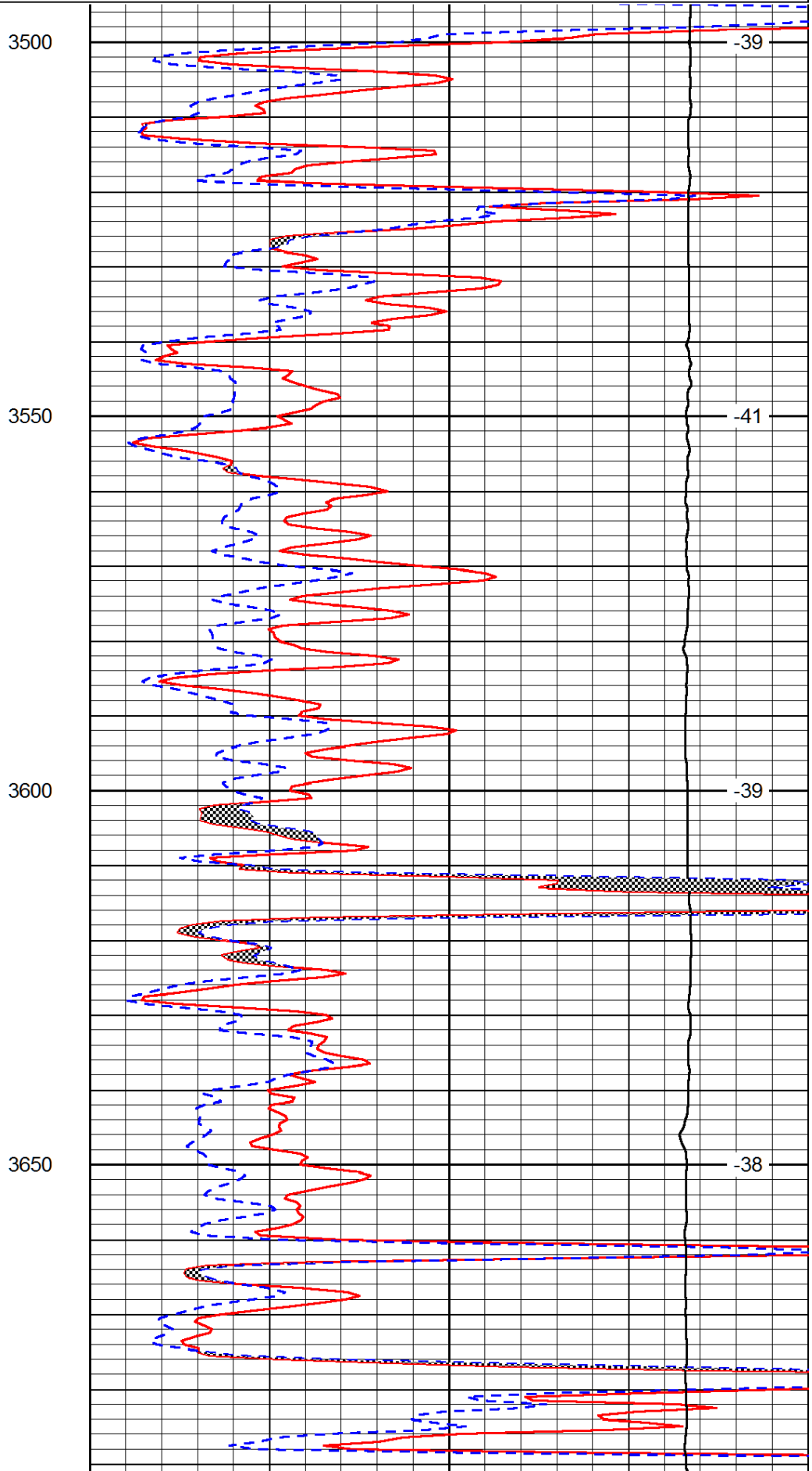
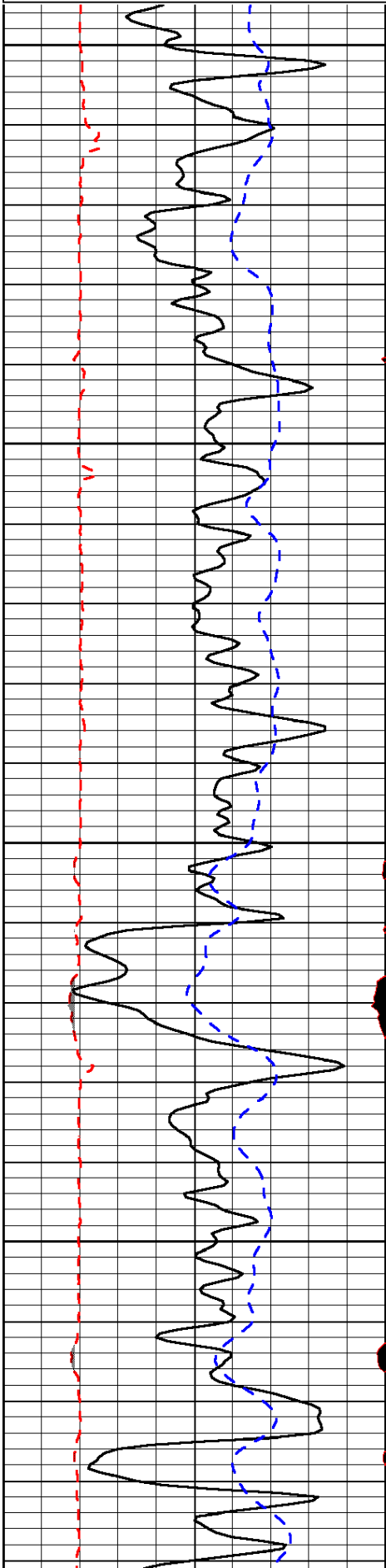
Thank you for using Log-Tech, Inc.
(785) 625-3858

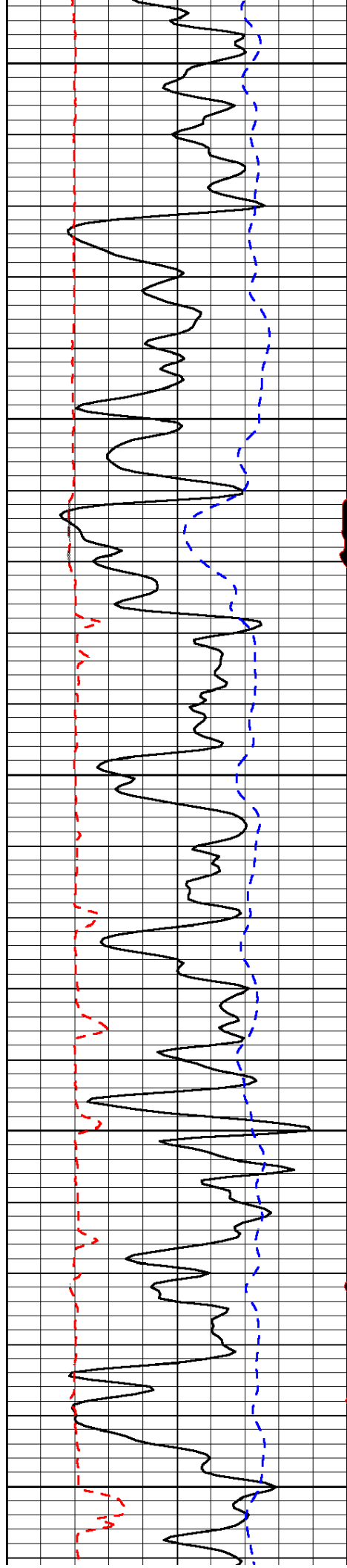
Bird City Kansas
North to AA Rd, 1 3/4 East, North Into

Database File: murfin_sowers_1_19hd.db
Dataset Pathname: DIL/mrfstkm12
Presentation Format: micro
Dataset Creation: Tue Dec 16 03:58:58 2014
Charted by: Depth in Feet scaled 1:240

0	Gamma Ray	150
6	MCAL (GAPI)	16
2.875	Mud Cake (GAPI)	7.875
-200	SP (mV)	0

0	Micro Inverse 1 X 1	40
0	Micro Normal 2"	40
10000	Line Weight	0
		LSPD





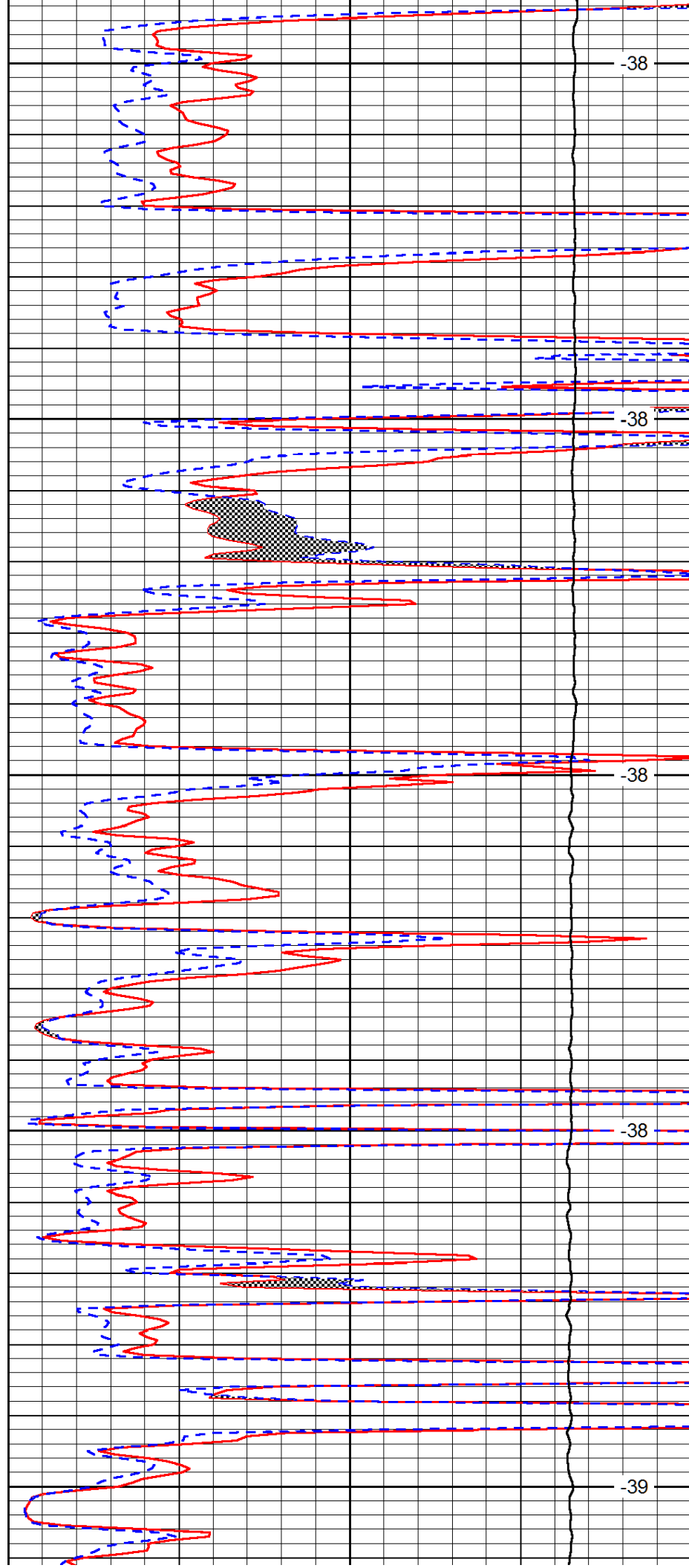
3700

3750

3800

3850

3900



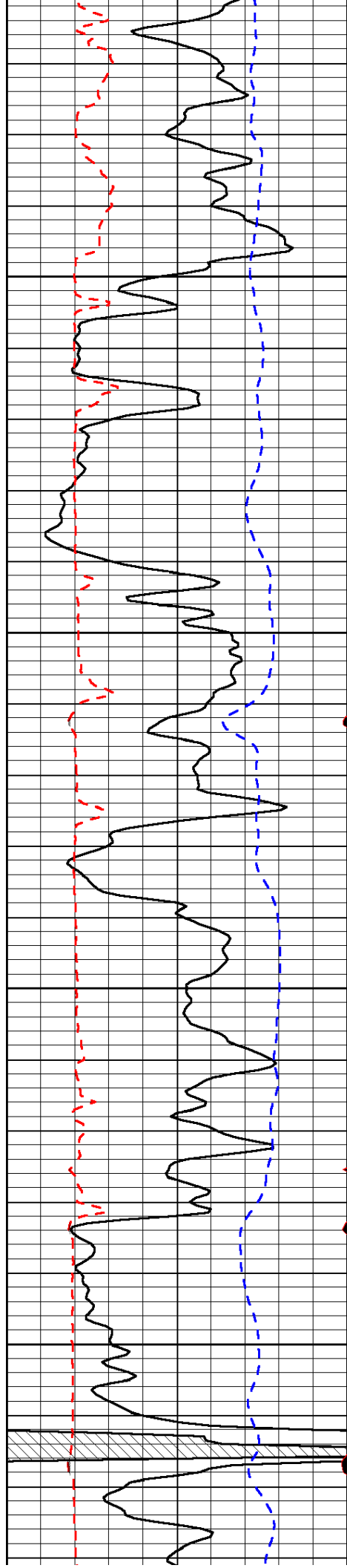
-38

-38

-38

-38

-39

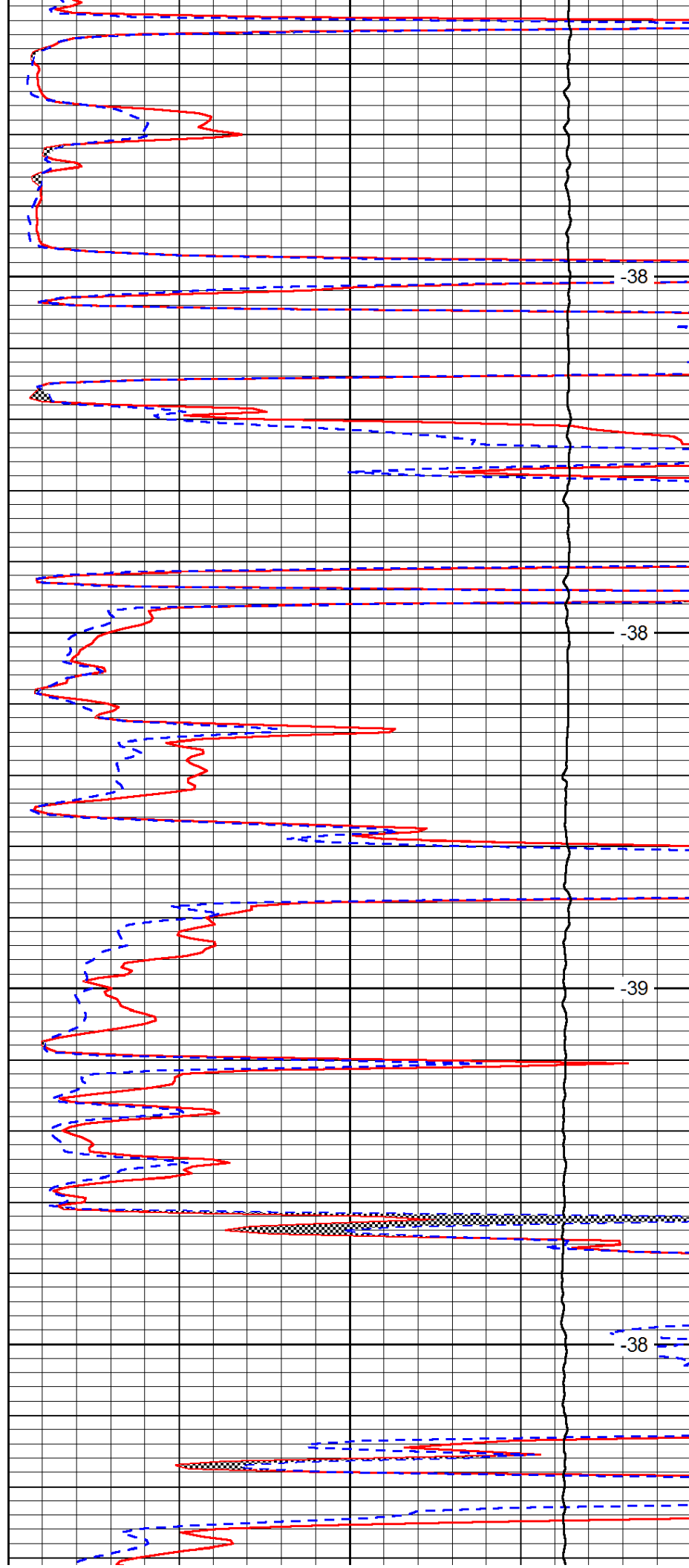


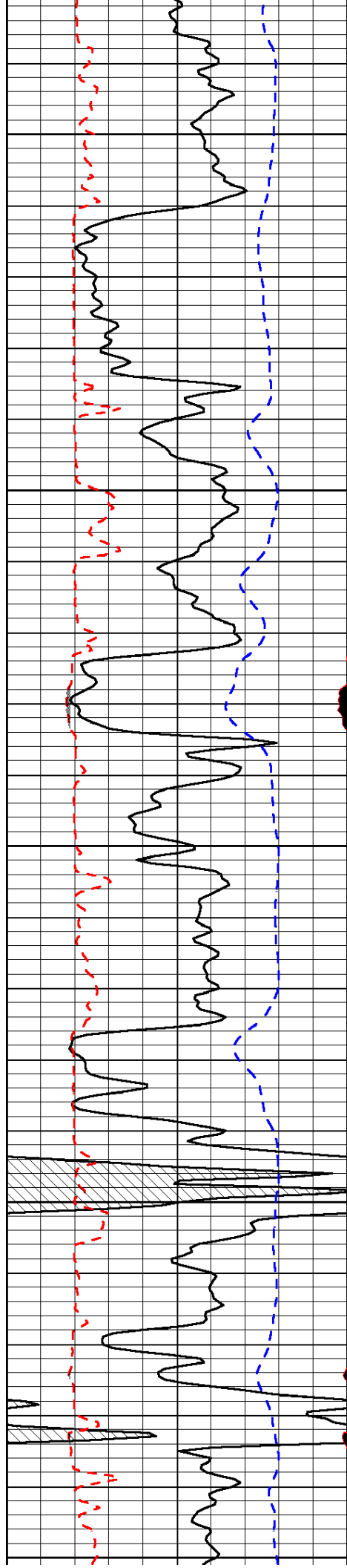
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4000

4050

4100





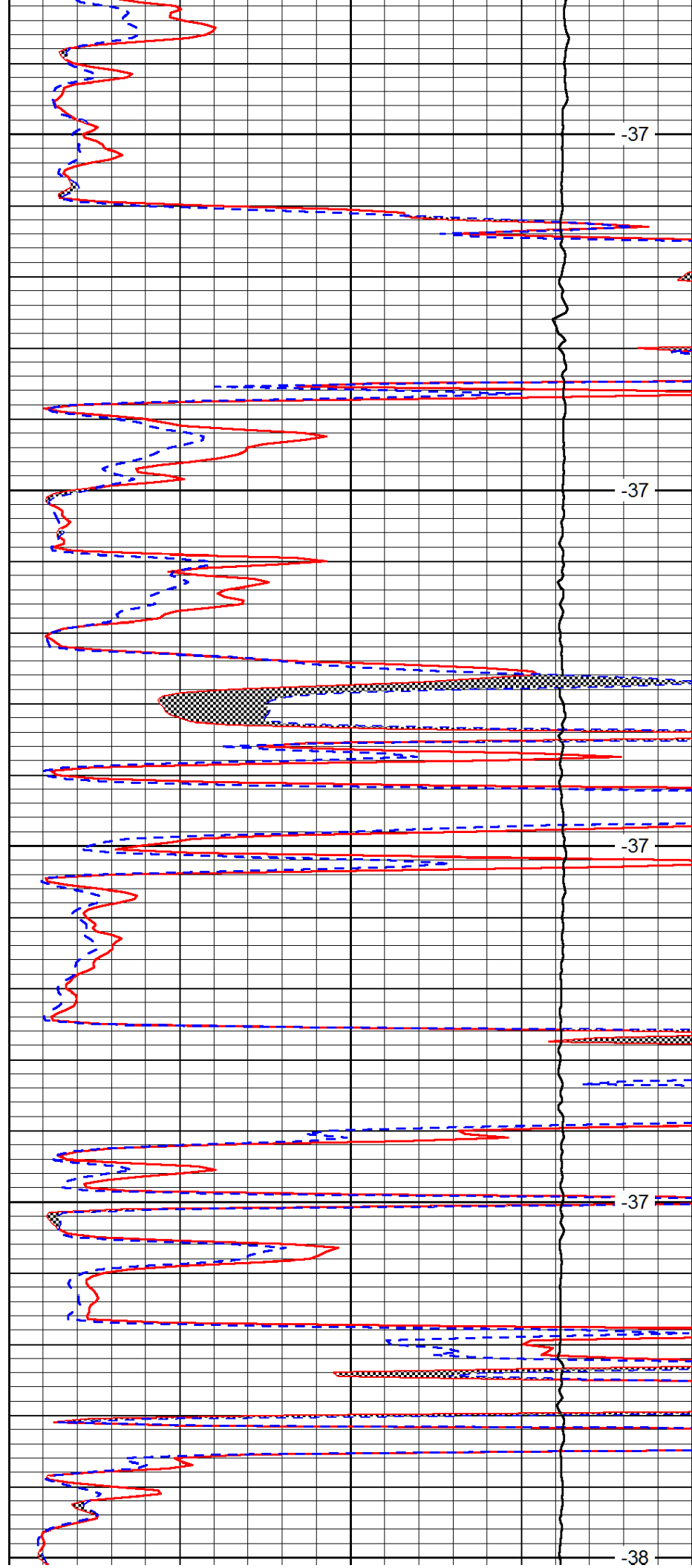
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4200

4250

4300

4350



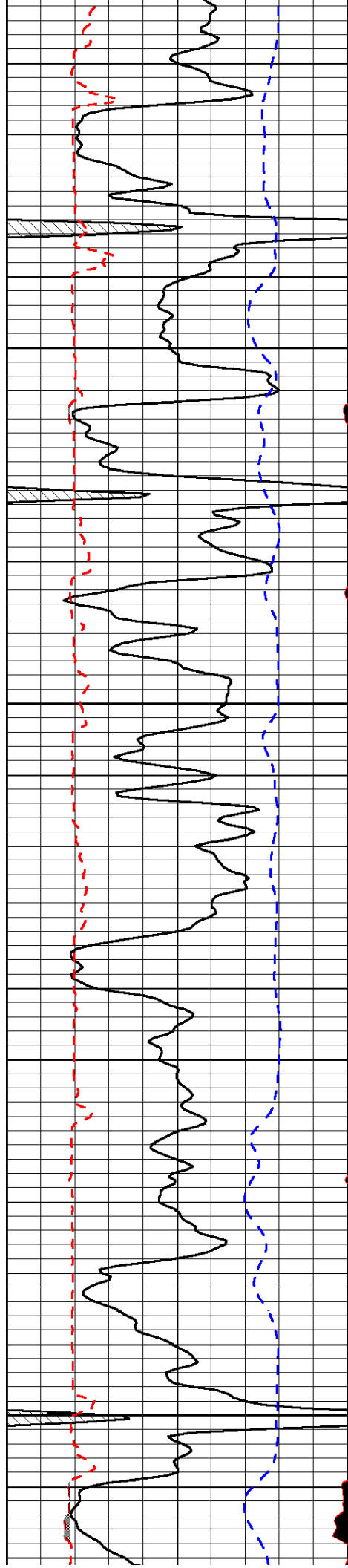
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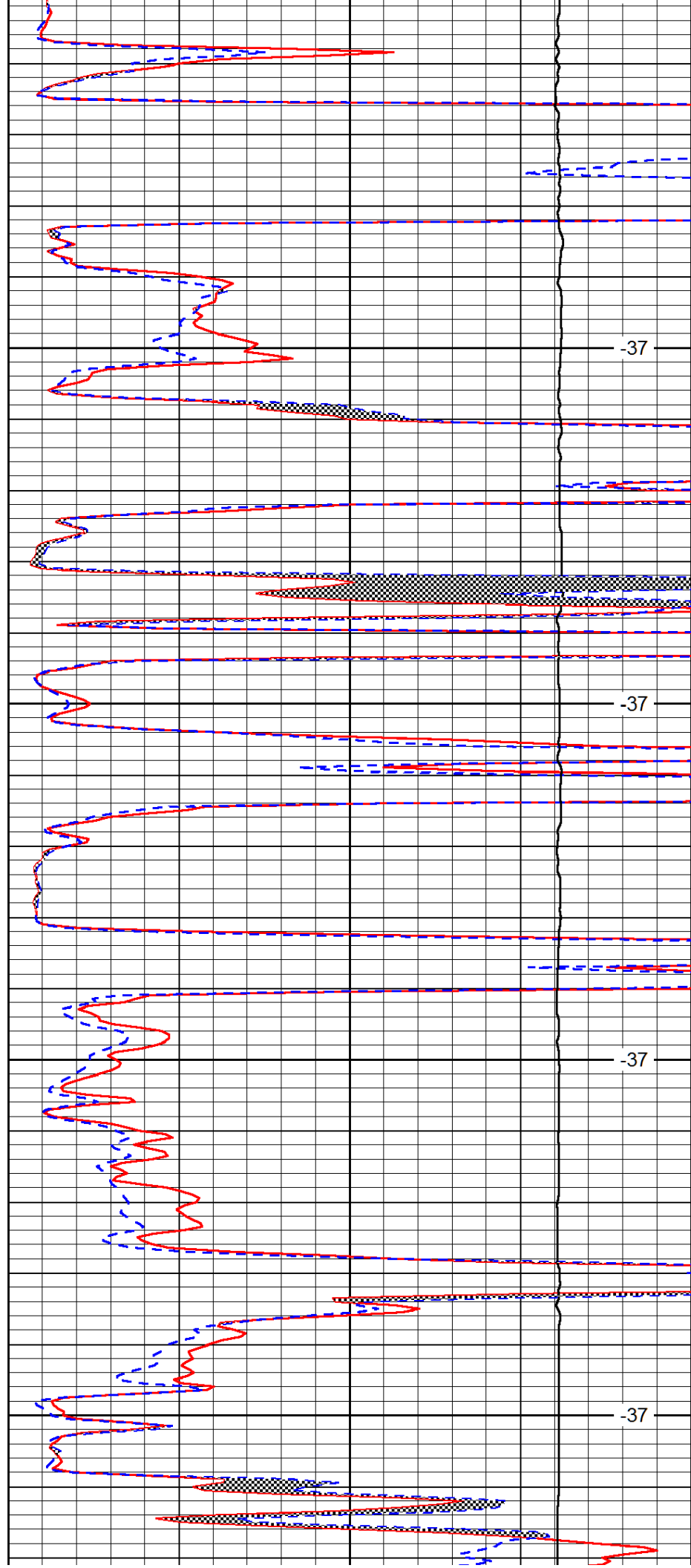


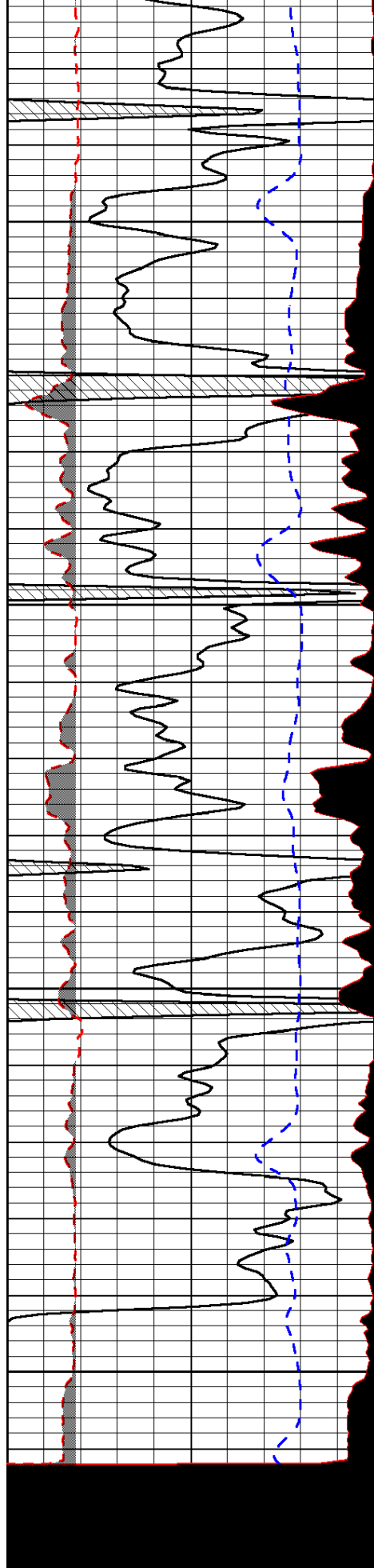
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4500

4550





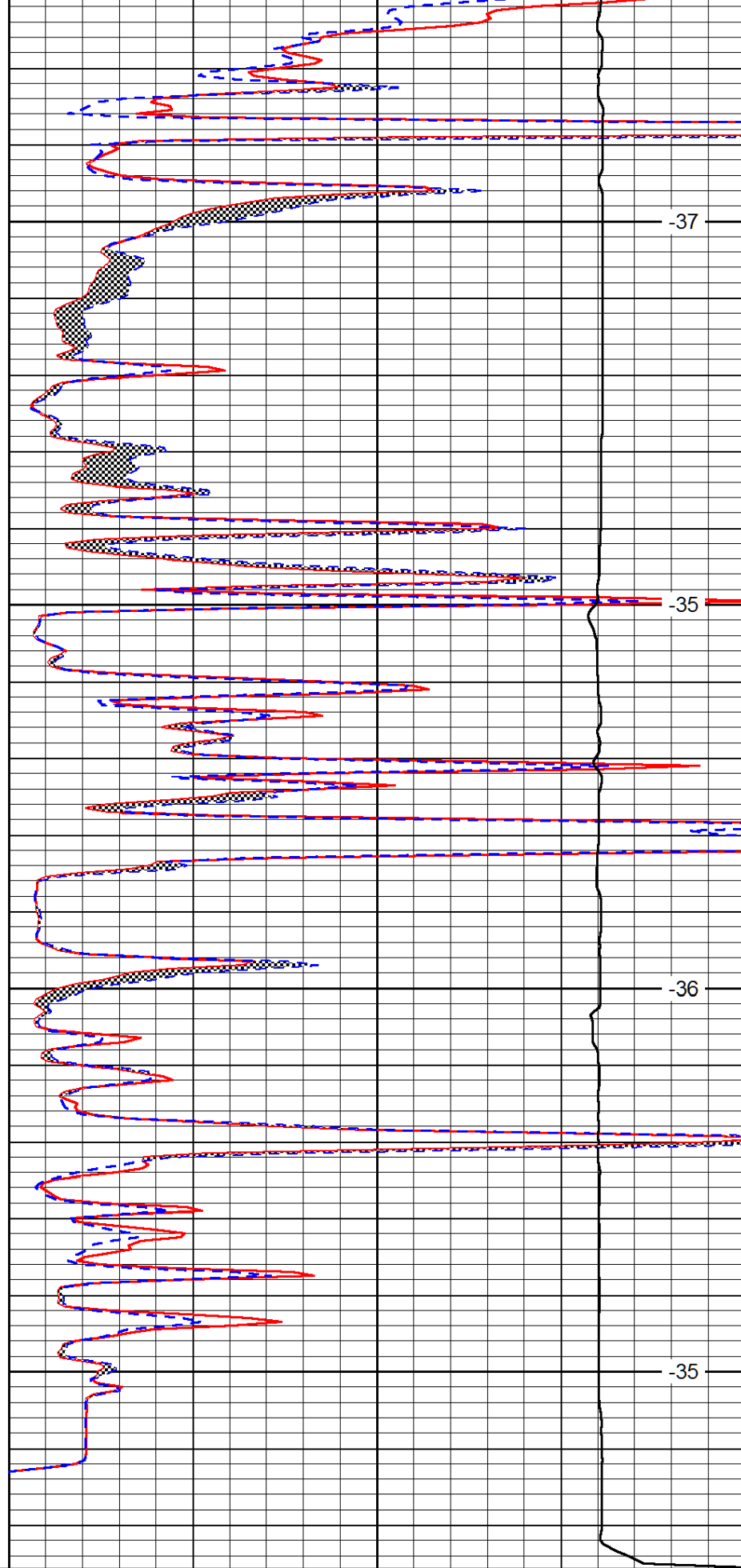
0	Gamma Ray	150
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4600

4650

4700

4750



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0	Micro Normal 2"	40
10000	Line Weight	0

-200 SP (mV) 0

LSPD