



PIONEER

Pioneer Energy Services

Microresistivity Log

API No.

15-065-23859-00-00

Company H & C Oil Operating, Inc.

Well Billips #27-1

Field Mickleson

County Graham

State

Kansas

Location

NE NW NW
330' FNL / 990' FWL

Sec: 27

Twp: 8S

Rge: 22W

Elevation

Permanent Datum Ground Level Elevation 2166
Log Measured From Kelly Bushing 5 Ft. Above Perm. Datum
Drilling Measured From Kelly Bushing

K.B. 2171
D.F.
G.L. 2166

Date

9/28/2012

Run Number

Two

Depth Driller

3830

Depth Logger

3832

Bottom Logged Interval

3831

Top Log Interval

3050

Casing Driller

8.625 @ 232

Casing Logger

228

Bit Size

7.875

Type Fluid in Hole

Chemical

Salinity, ppm CL

900

Density / Viscosity

9.2

60

pH / Fluid Loss

10.5

6.8

Source of Sample

Flowline

Rm @ Meas. Temp

1.20 @ 73

Rmf @ Meas. Temp

0.90 @ 73

Rmc @ Meas. Temp

1.62 @ 73

Source of Rmf / Rmc

Charts

Rm @ BHT

0.77 @ 114

Operating Rig Time

4 Hours

Max Rec. Temp. F

114

Equipment Number

15

Location

Hays

Recorded By

R. Barnhart

Witnessed By

Marc Downing

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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.

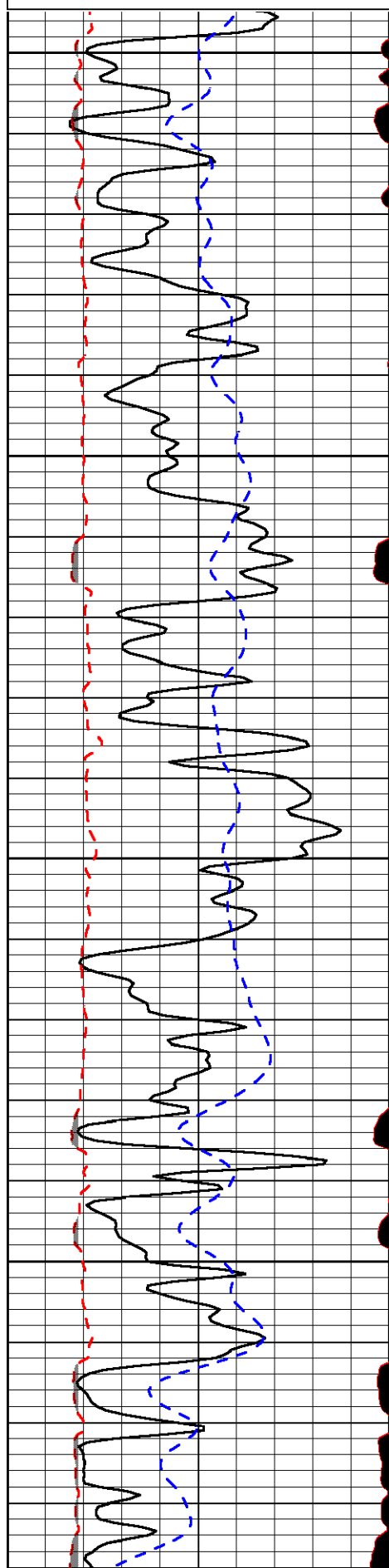
Comments

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

Bogue, KS:
1S, 3 1/2W, S into

Database File: h&c_hd.db
Dataset Pathname: dil/hcmain
Presentation Format: micro
Dataset Creation: Fri Sep 28 06:15:26 2012
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	0



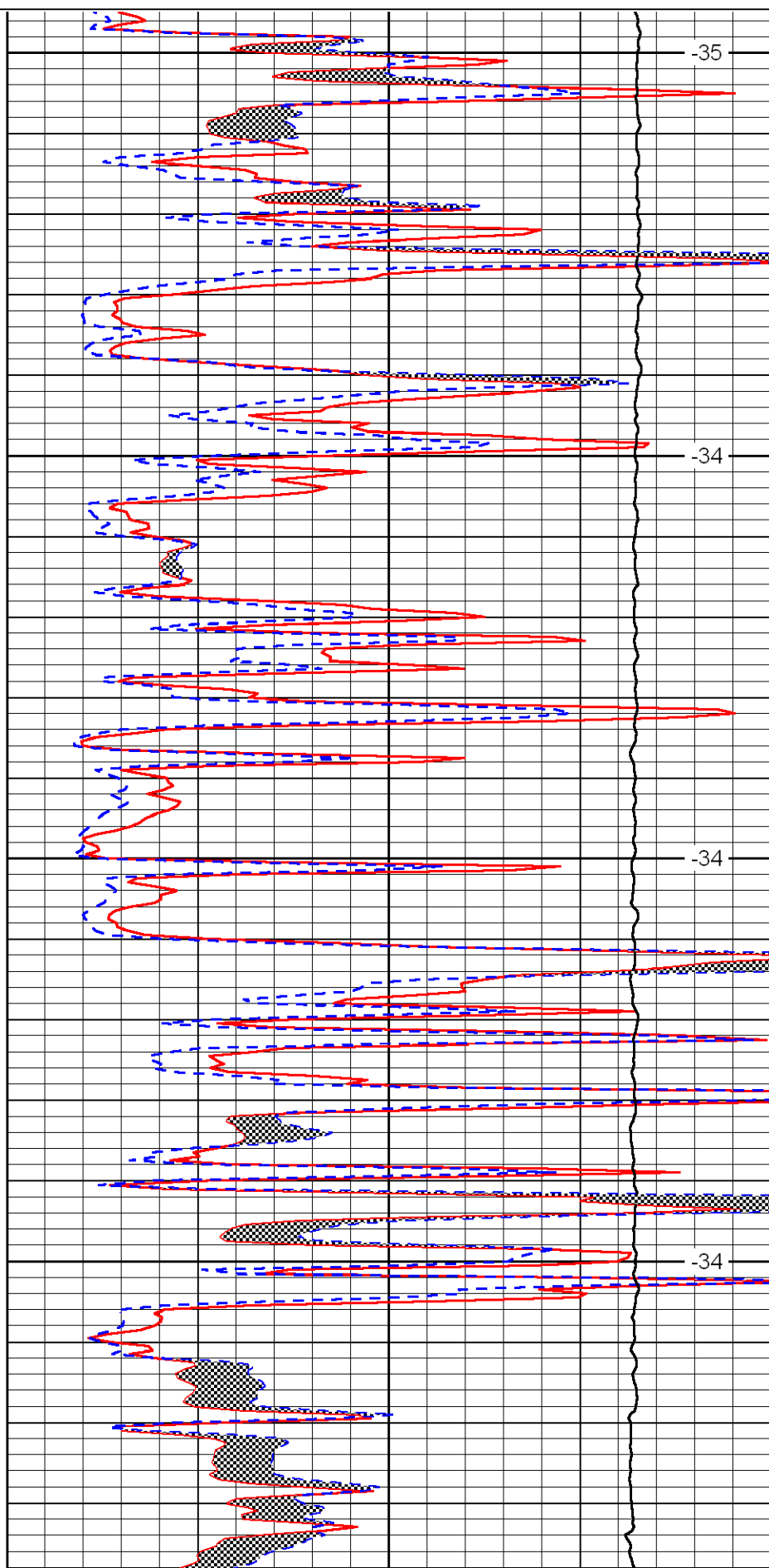
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3100

3150

3200

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

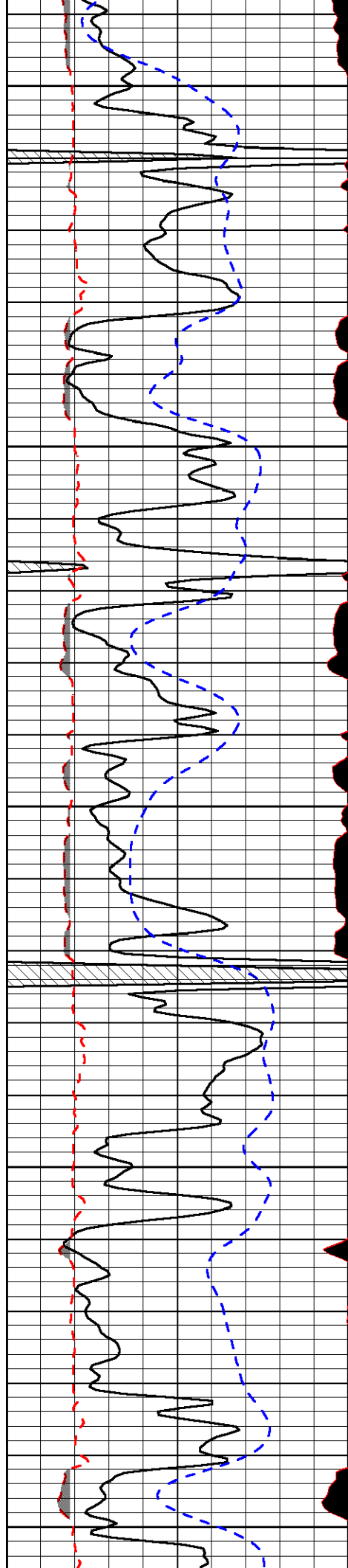


-35

-34

-34

-34



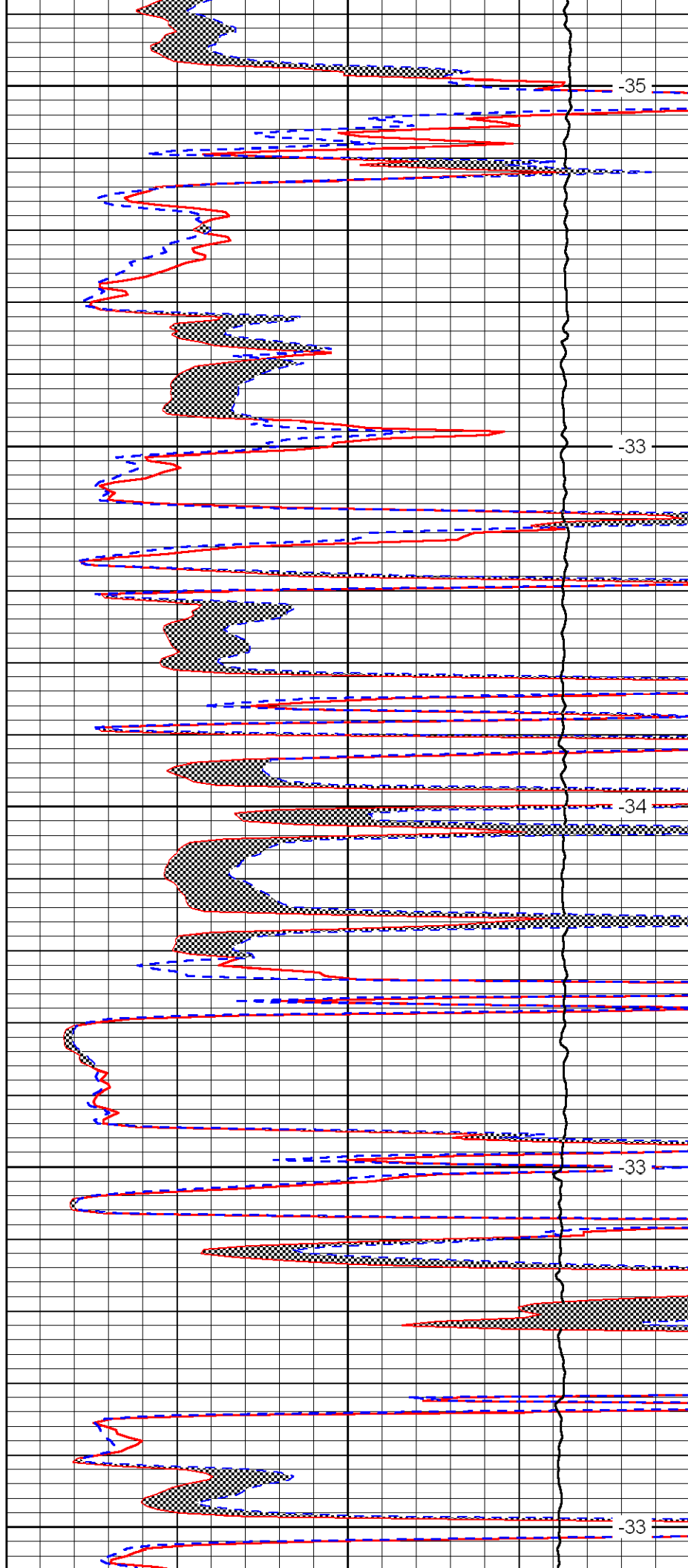
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3300

3350

3400

3450



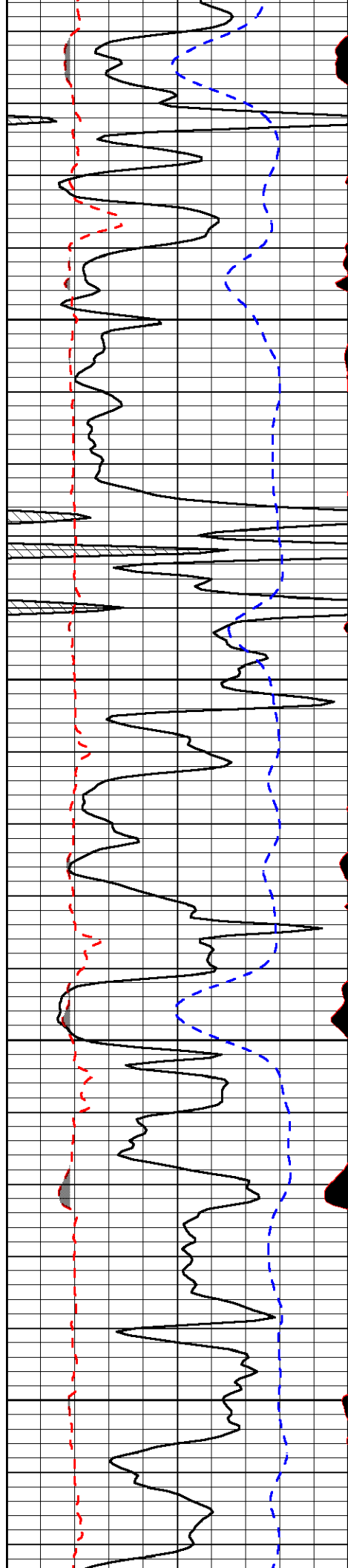
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-34

-33

-33

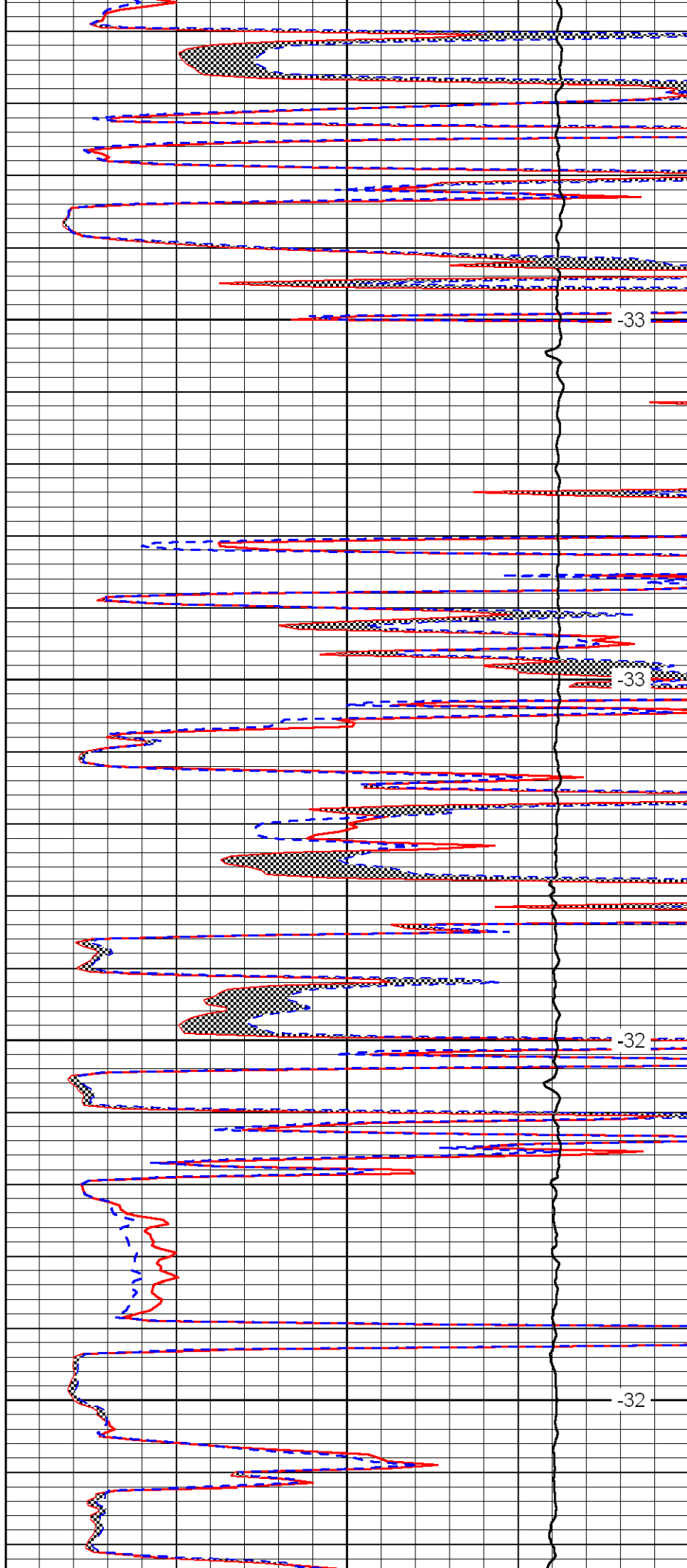


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3550

3600

3650

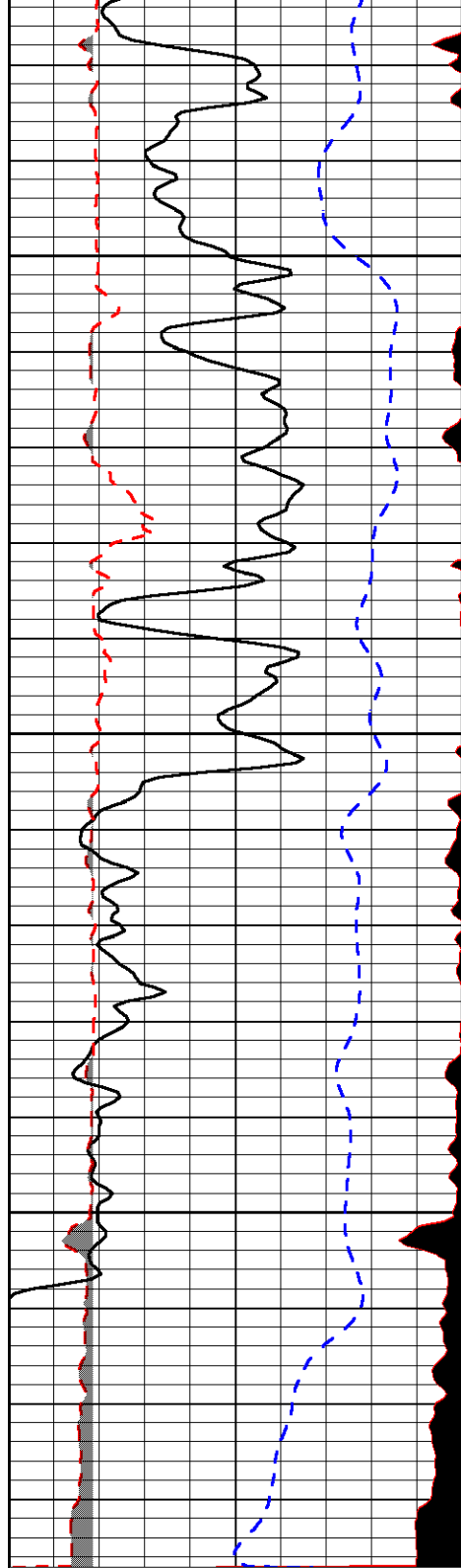


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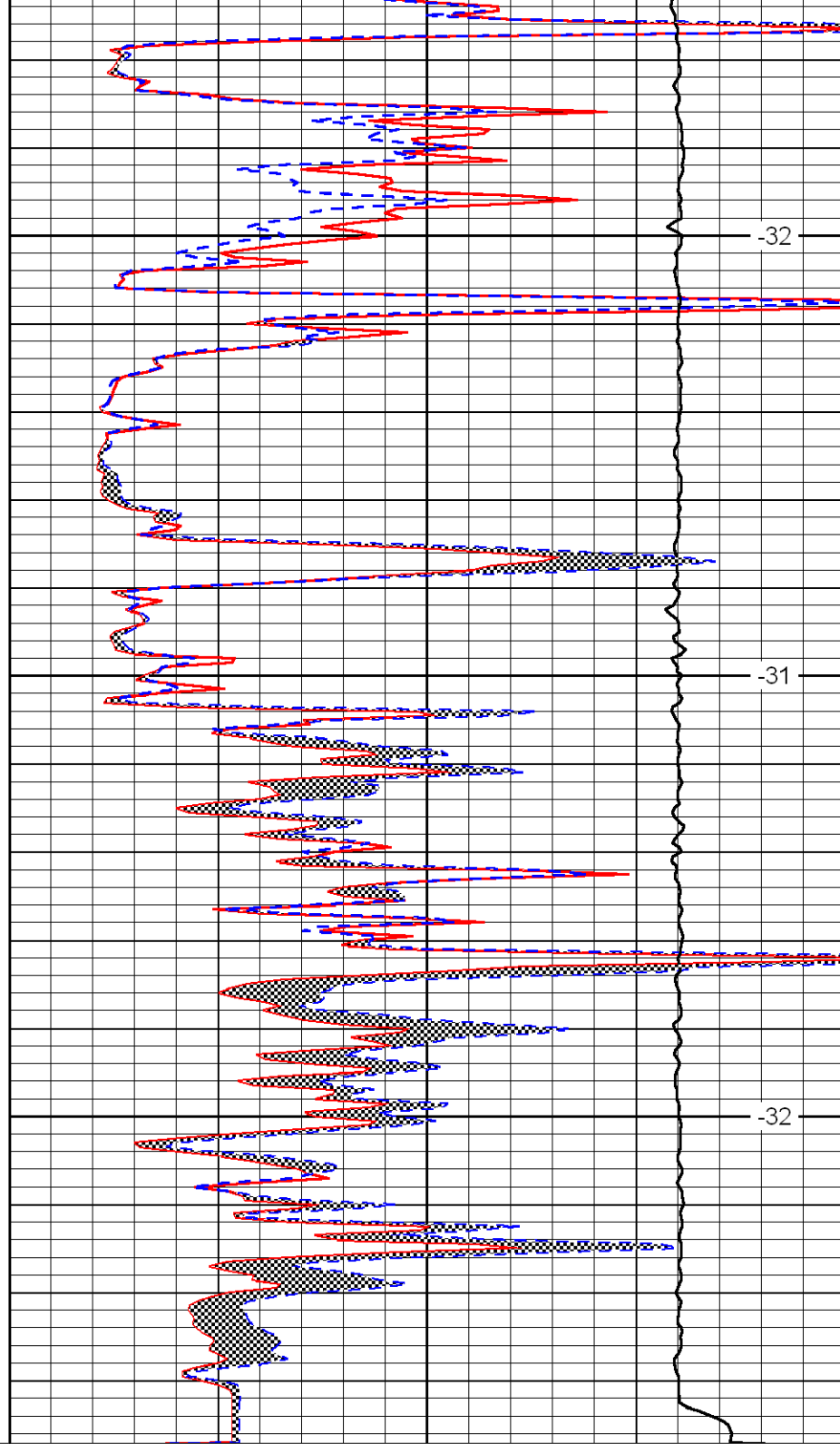


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-32

-31

-32