



Pioneer Energy Services

Microresistivity Log

API No.

15-179-21,364-00-00

Company H&C Oil Operating Inc.

Well Delbert Walt Trust #13-5

Field Gurk

County Sheridan

State

Kansas

Location

NW SW NE
1650' FNL & 2310' FEL

Other Services
CNL/CDL
DIL

Sec: 13

Twp: 10S

Rge: 26W

Permanent Datum

Ground Level

Elevation 2571

Log Measured From Kelly Bushing 7 Ft. Above Perm. Datum

K.B. 2578
D.F.
G.L. 2571

Drilling Measured From

Kelly Bushing

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Date

7/15/2014

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Run Number

Two

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Depth Driller

4110

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Depth Logger

4110

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Bottom Logged Interval

4109

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Top Log Interval

3450

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Casing Driller

8.625 @ 262

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Casing Logger

262

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Bit Size

7.875

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Type Fluid in Hole

Chemical

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Salinity, ppm CL

2000

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Density / Viscosity

9.3 50

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

pH / Fluid Loss

10.5 7.2

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Source of Sample

Flowline

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Rm @ Meas. Temp

0.61 @ 86

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Rmf @ Meas. Temp

0.46 @ 86

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Rmc @ Meas. Temp

0.82 @ 86

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Source of Rmf / Rmc

Charts

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Rm @ BHT

0.45 @ 117

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Operating Rig Time

4 Hours

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Max Rec. Temp. F

117

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Equipment Number

15

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Location

Hays

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Recorded By

D.Kerr

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

Witnessed By

Steve Murphy

Elevation 2571

K.B. 2578
D.F.
G.L. 2571

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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

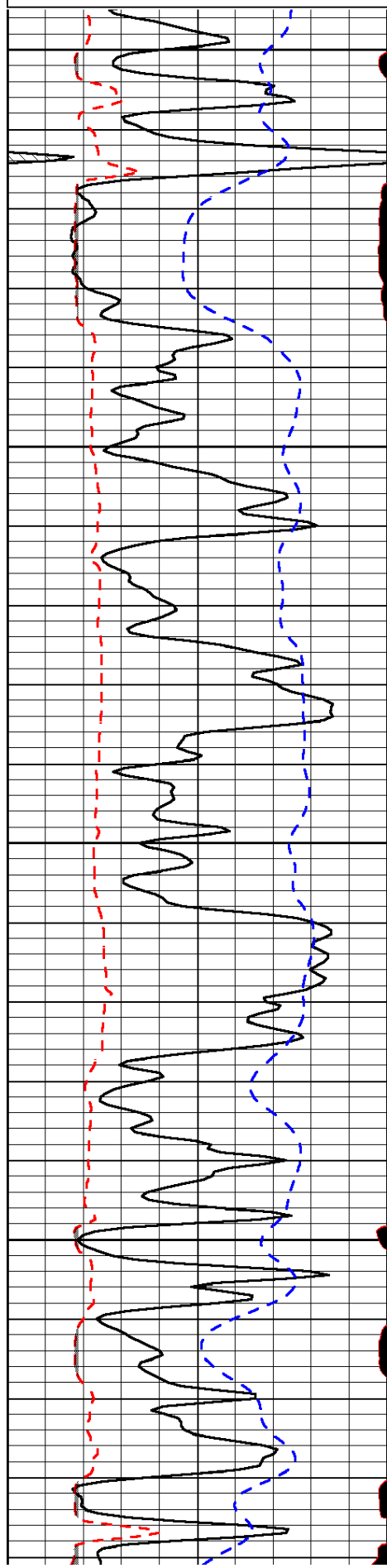
Collyer KS, West to 78 RD,
9 North to 120 RD, 1/2 East, South Into

Database File: h&c_delbertwalt_13_5hd.db
Dataset Pathname: DIL/hcstk
Presentation Format: micro
Dataset Creation: Tue Jul 15 23:05:43 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

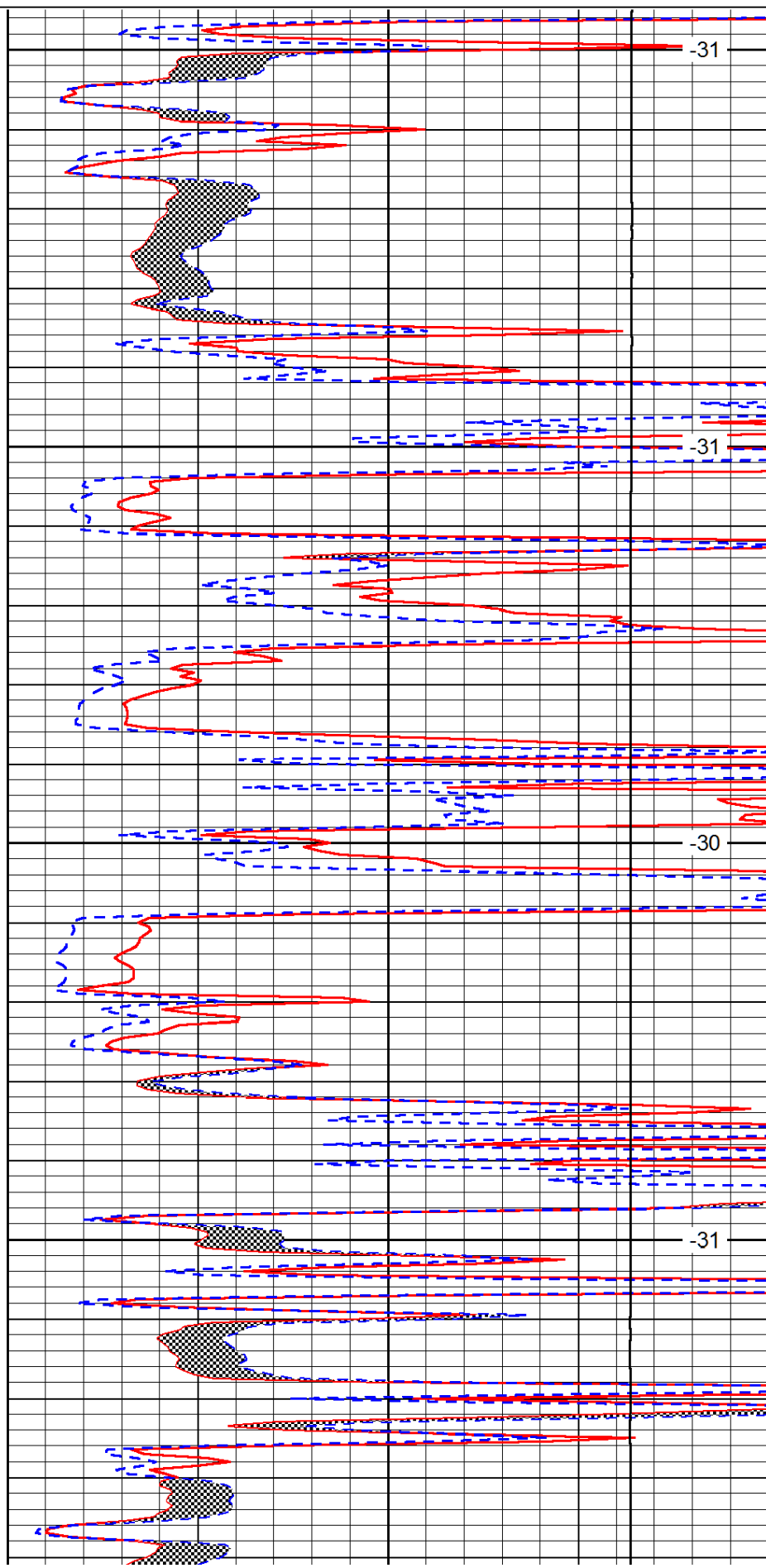


3450

3500

3550

3600

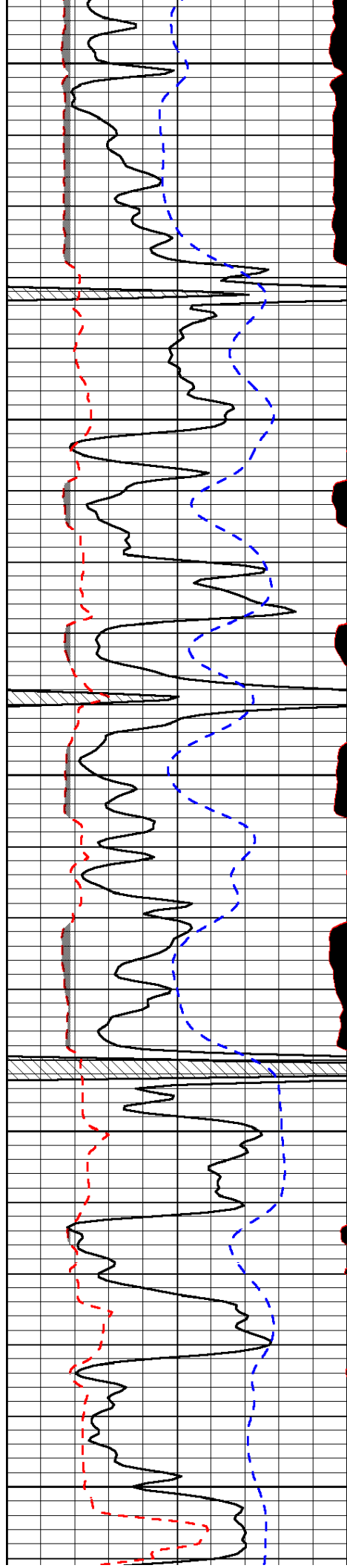


-31

-31

-30

-31



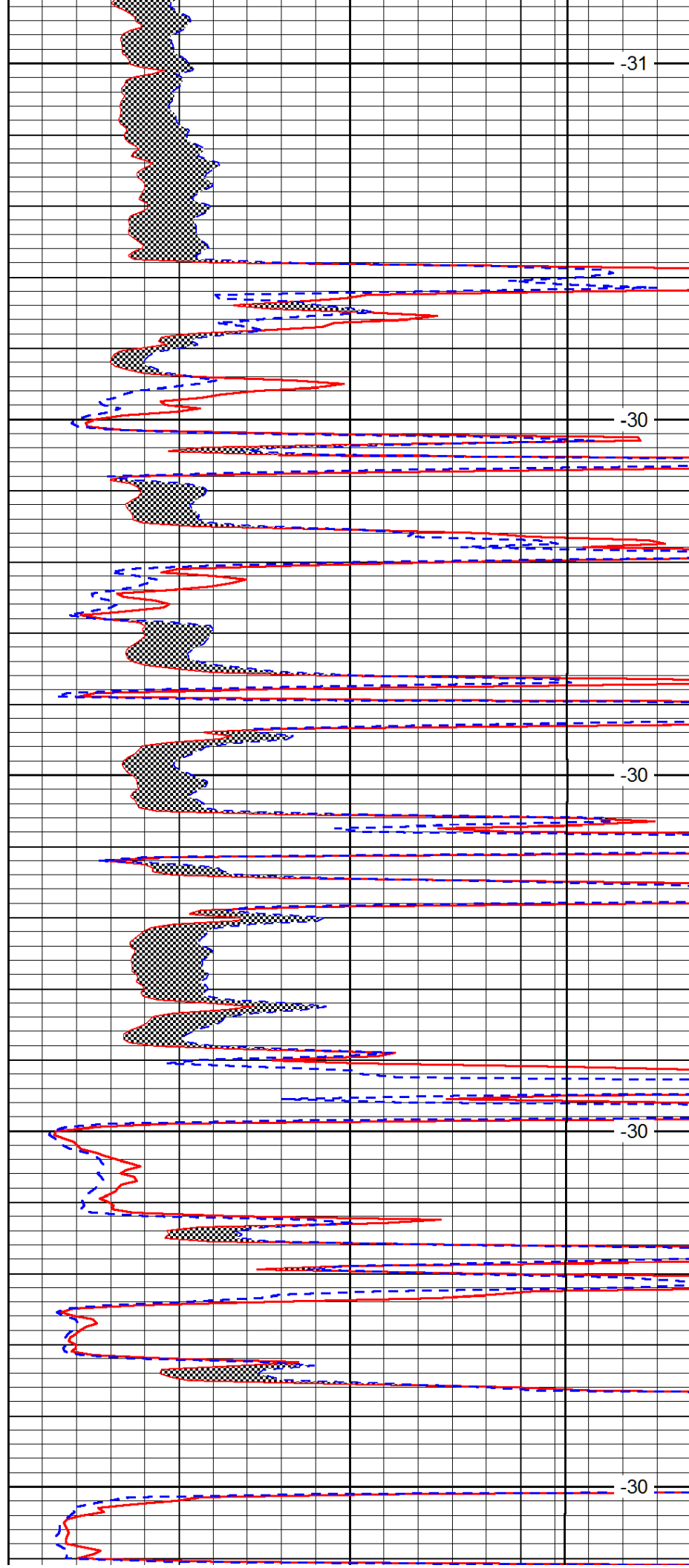
3650

3700

3750

3800

3850



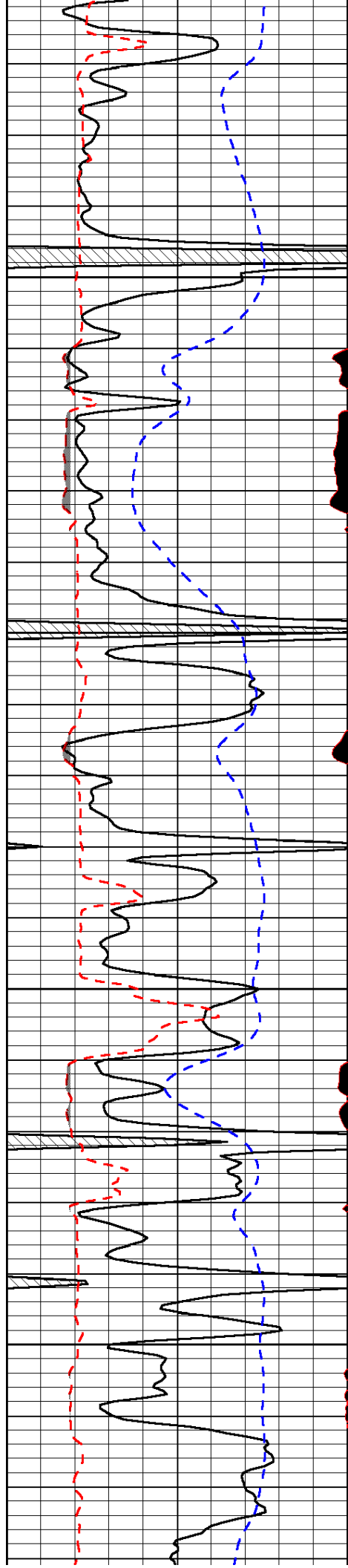
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-30

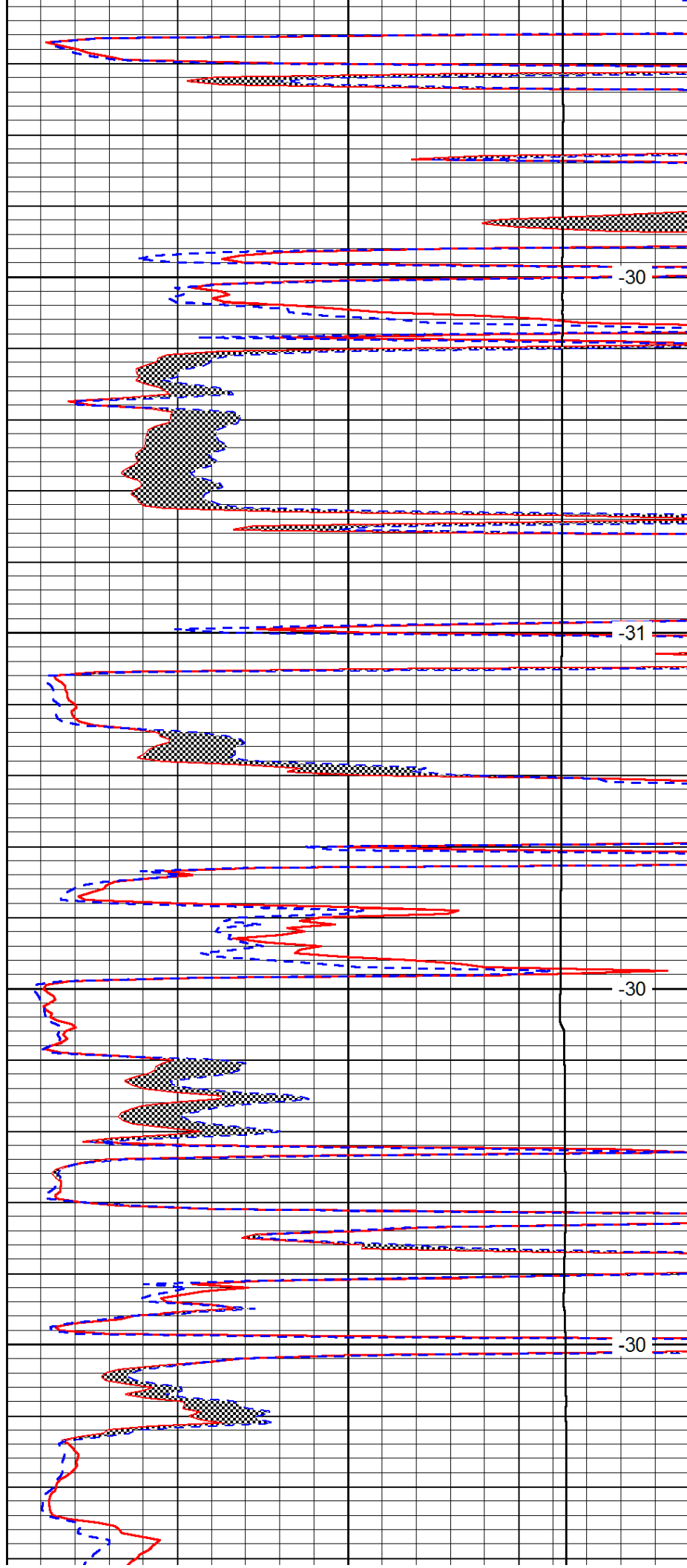


3900

3950

4000

4050

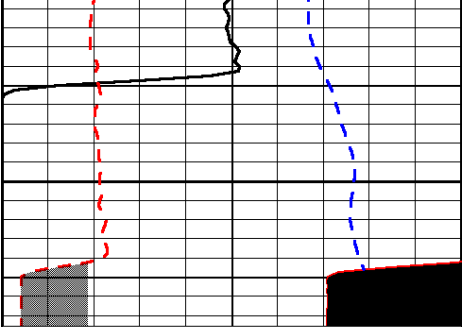


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-31

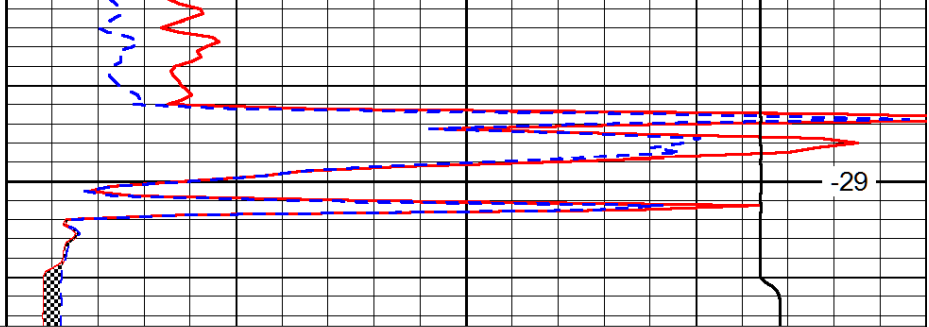
-30

-30



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