



Pioneer Energy Services

Microresistivity Log

API No.

15-017-20919-00-00

Company Range Oil Comapny, Inc.

Well Madden Unit #3

Field Pather Ranch SW

County Chase State Kansas

Location

NW SW SE NW
2140' FNL / 1530' FWL

Sec: 31

Twp: 19S

Rge: 6E

Elevation

Permanent Datum Ground Level Elevation 1460
Log Measured From Kelly Bushing 6 Ft. Above Perm. Datum
Drilling Measured From Kelly Bushing

K.B. 1466
D.F.
G.L. 1460

Date 11/23/14

Run Number One

Depth Driller 2300

Depth Logger 2298

Bottom Logged Interval 2297

Top Log Interval 1500

Casing Driller 8.625 @ 218

Casing Logger 215

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 1300

Density / Viscosity 9.3 48

pH / Fluid Loss 9.5 9.4

Source of Sample Flowline

Rm @ Meas. Temp 0.80 @ 60

Rmf @ Meas. Temp 0.60 @ 60

Rmc @ Meas. Temp 1.08 @ 60

Source of Rmf / Rmc Charts

Rm @ BHT 0.48 @ 99

Operating Rig Time 4 Hours

Max Rec. Temp. F 99

Equipment Number 15

Location Hays

Recorded By R. Barnhart

Witnessed By Ken Wallace

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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

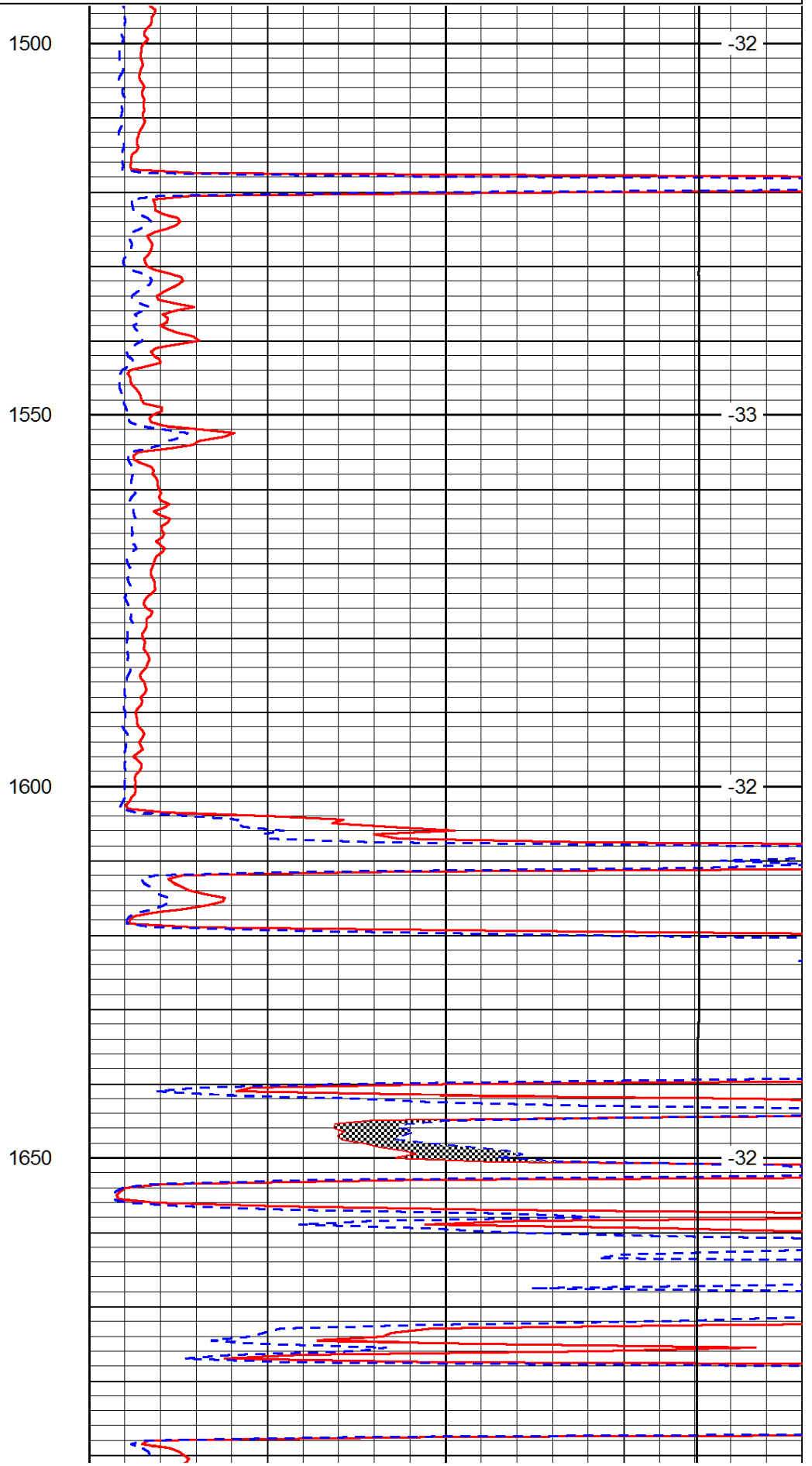
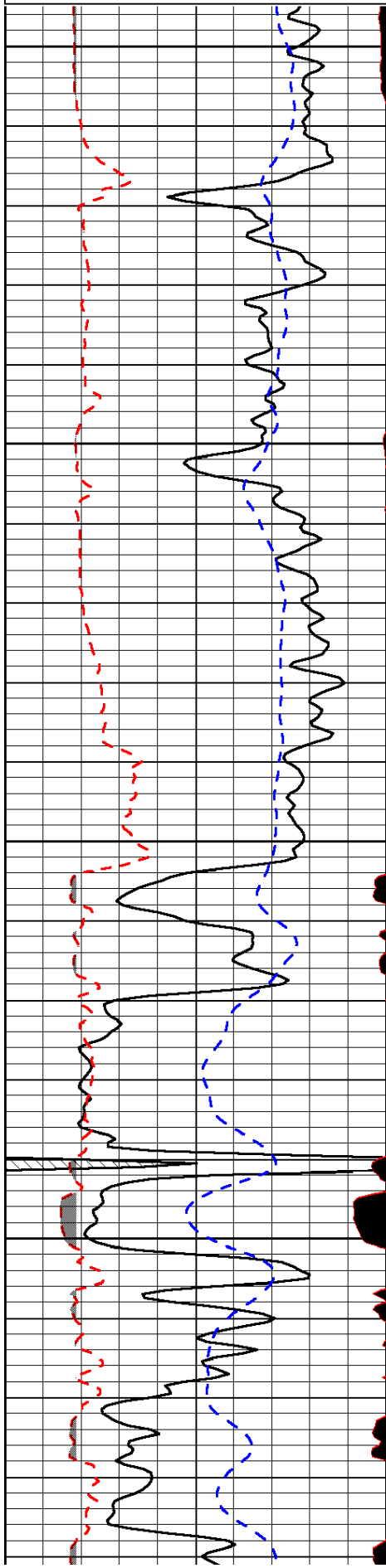
Thank you for using Log-Tech, Inc.
(785) 625-3858

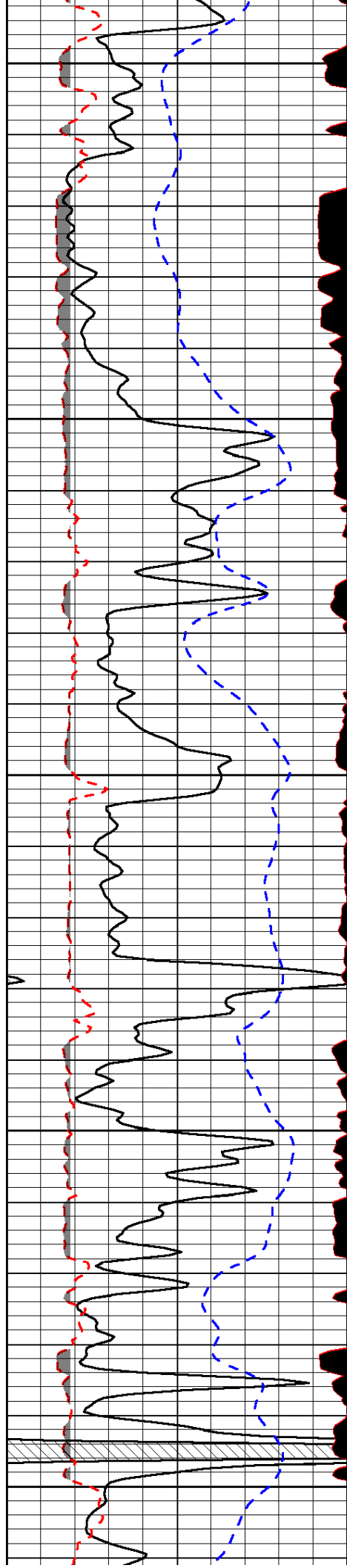
Marion, KS:
Hwy 77 & 150: 8.2E, S into

Database File: range_hd.db
Dataset Pathname: dil/rngmain
Presentation Format: micro
Dataset Creation: Sun Nov 23 10:16:58 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





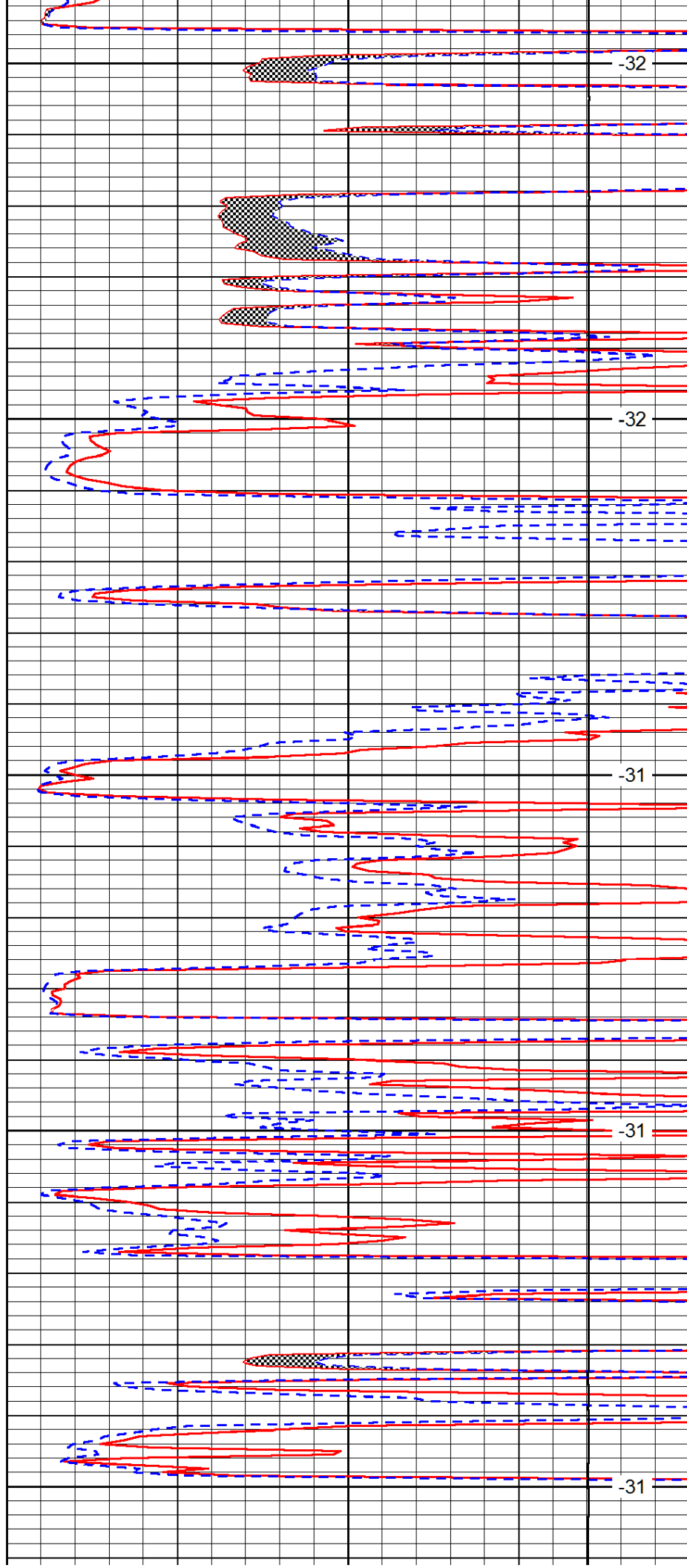
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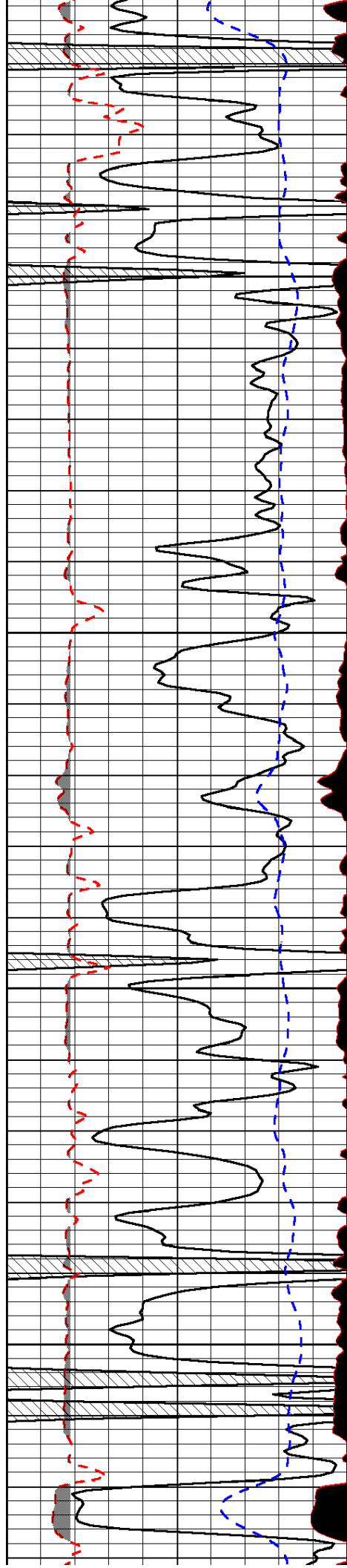
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1800

1850

1900



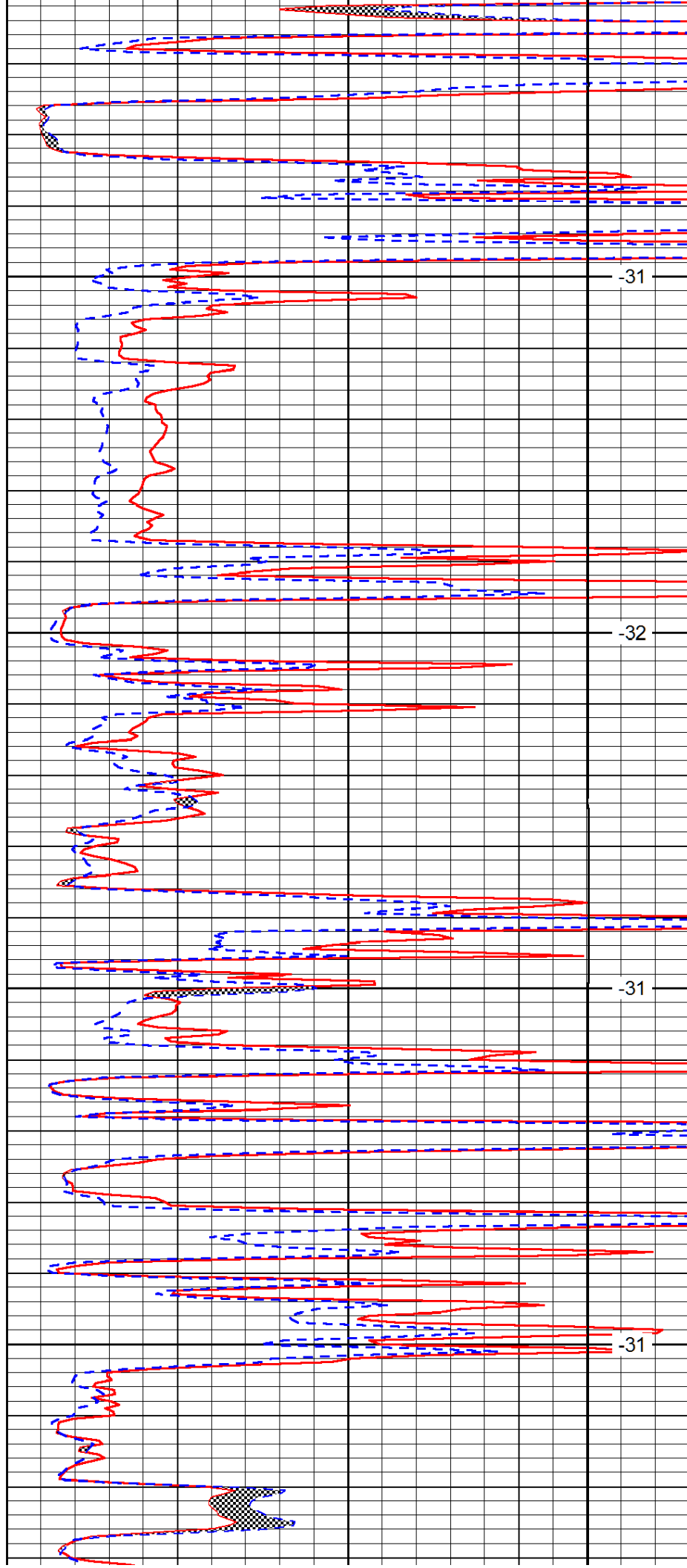


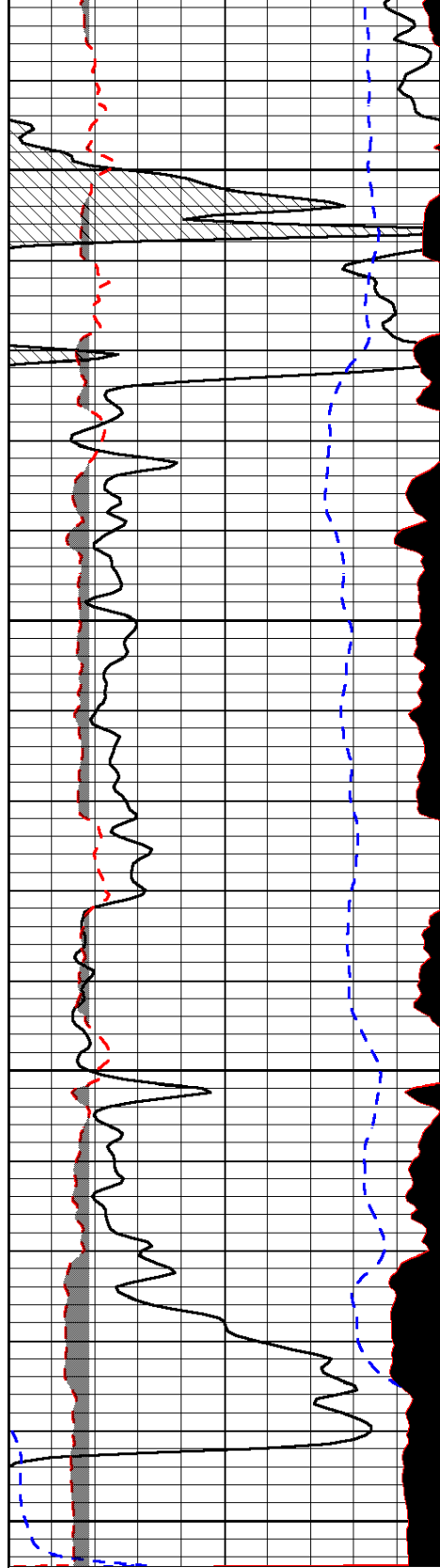
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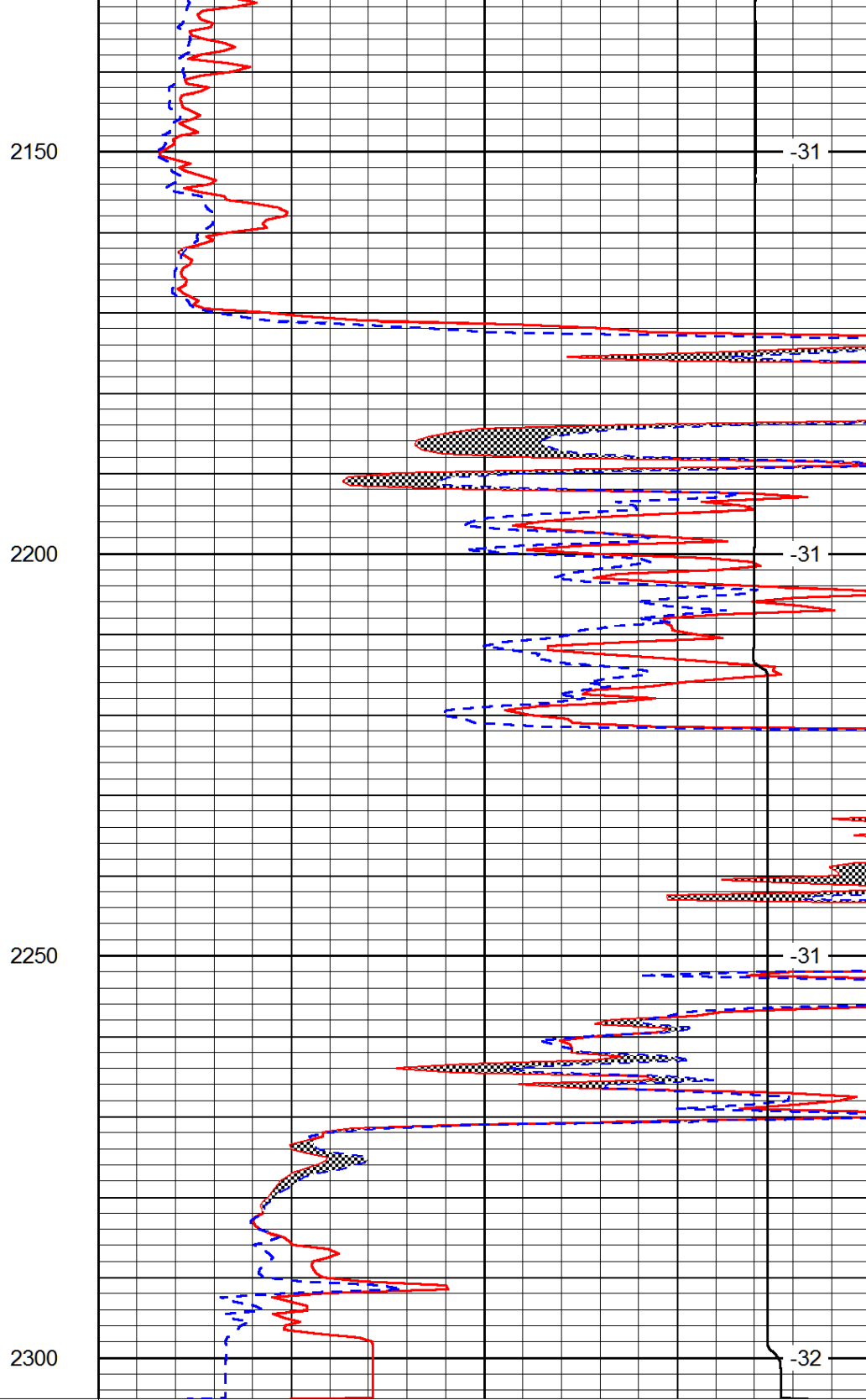
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2100





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