



Microresistivity Log

Pioneer Energy Services

API No.

15-167-23,839-00-00

Company Larson Operating Company

Well Boardman No.1-23

Field Dreher

County Russell

State

Kansas

Location

2180' FSL & 1310' FWL

Sec: 23

Twp: 11S

Rge: 15W

Elevation

Permanent Datum Ground Level

Log Measured From Kelly Bushing

Other Services
CNL/CDL
DIL

Drilling Measured From Kelly Bushing

Elevation 1848
5 Ft. Above Perm. Datum

Date

12/5/2012

Run Number

Two

Depth Driller

3400

Depth Logger

3406

Bottom Logged Interval

3405

Top Log Interval

2400

Casing Driller

8.625 @ 227

Casing Logger

227

Bit Size

7.875

Type Fluid in Hole

Chemical

Salinity,ppm CL

3,800

Density / Viscosity

9.4 42

pH / Fluid Loss

10.0 8.0

Source of Sample

Flowline

Rm @ Meas. Temp

.7 @ 46

Rmf @ Meas. Temp

.53 @ 46

Rmc @ Meas. Temp

.95 @ 46

Source of Rmf / Rmc

Charts

Rm @ BHT

.29 @ 110

Operating Rig Time

4 Hours

Max Rec. Temp. F

110

Equipment Number

17

Location

Hays

Recorded By

C. Desaire

Witnessed By

Tom Larson

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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

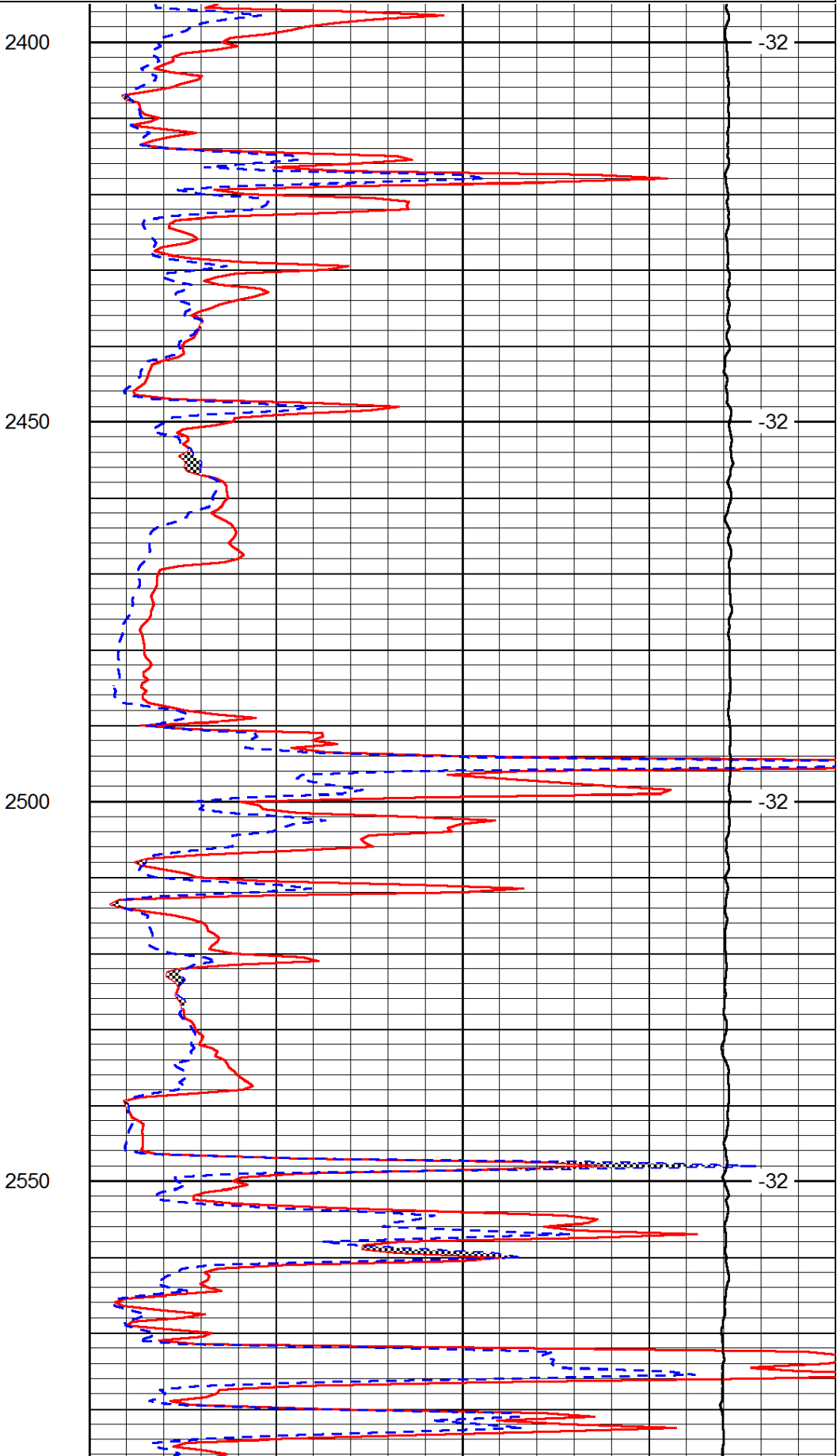
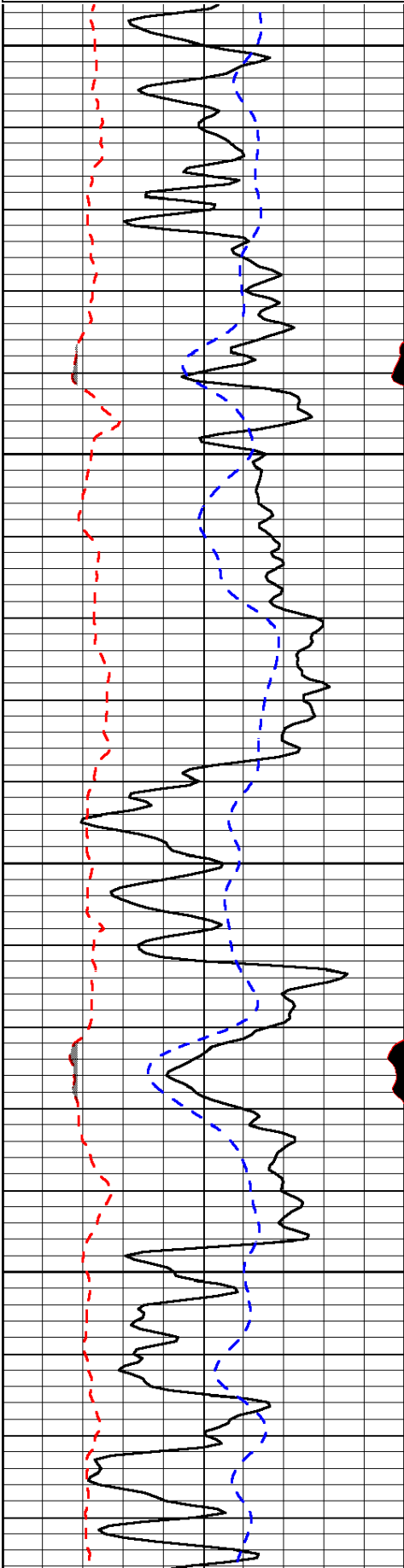
Thank you for using Log-Tech, Inc.
(785) 625-3858

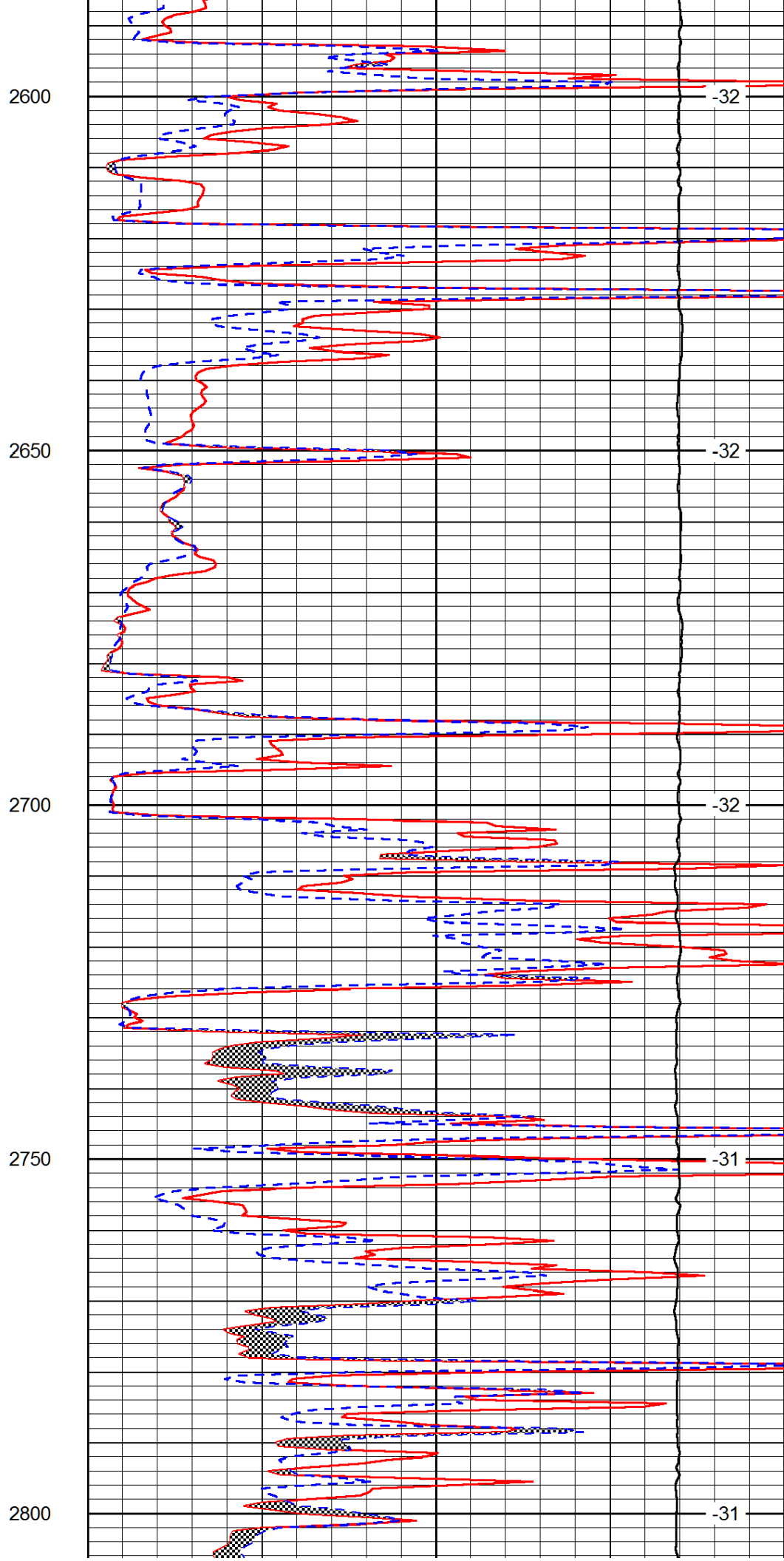
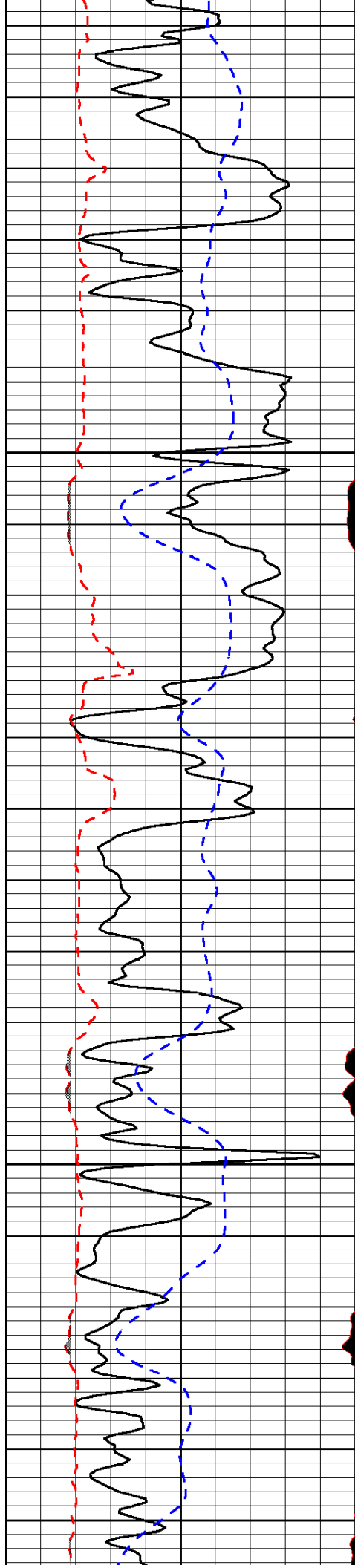
Paradise KS, 2 S on Main St through the curves to Paradise Rd,
2 W to 1799 Rd, 1/2 S, E Into

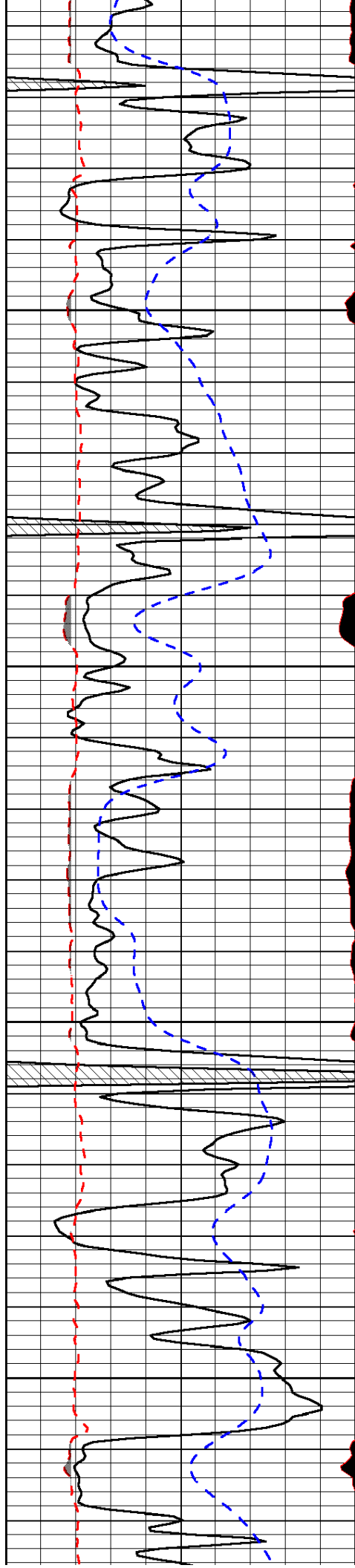
Database File: c:\warrior\data\larson_boardman_#1-23\larsonhd.db
Dataset Pathname: dil\larstk
Presentation Format: micro
Dataset Creation: Wed Dec 05 07:45:41 2012
Charted by: Depth in Feet scaled 1:240

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

0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0
		LSPD (ft/min)





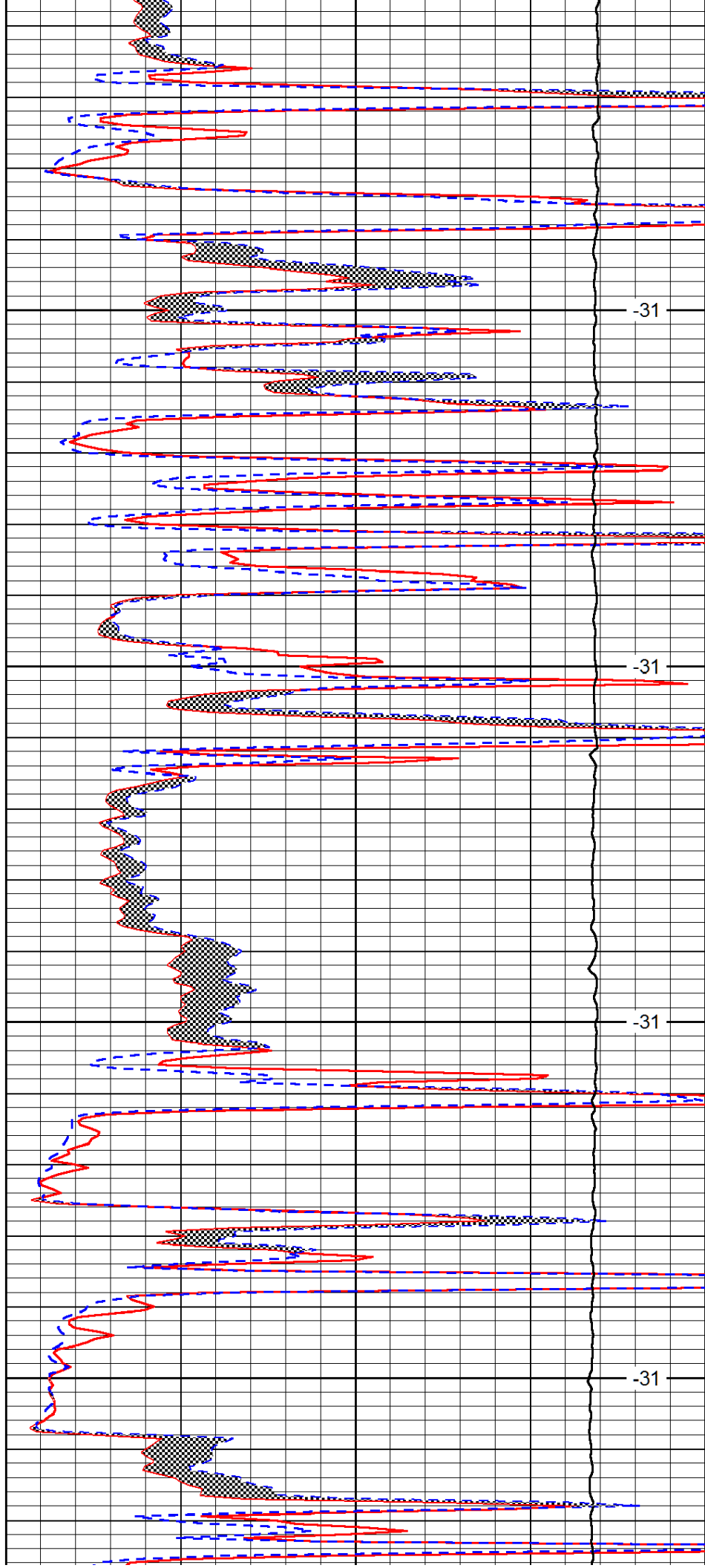


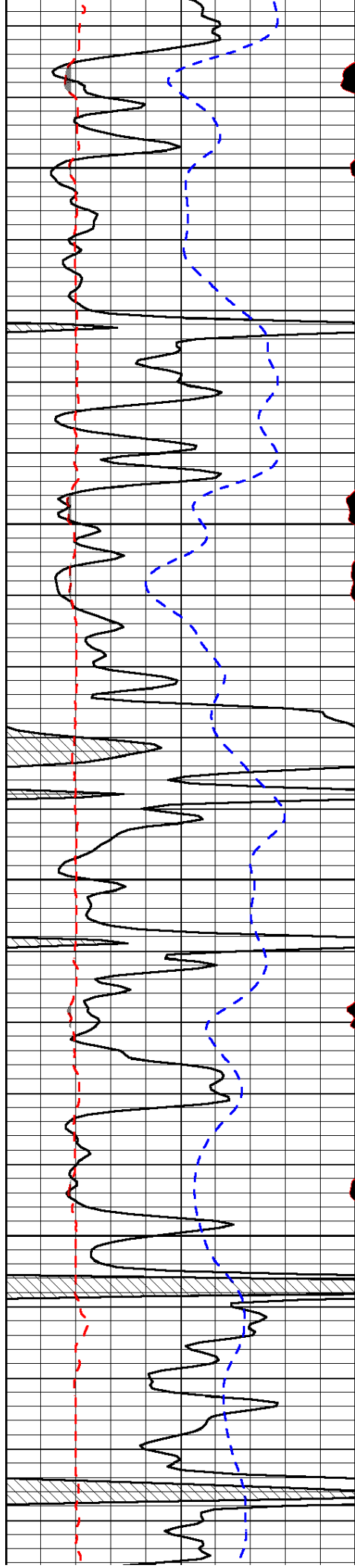
2850

2900

2950

3000



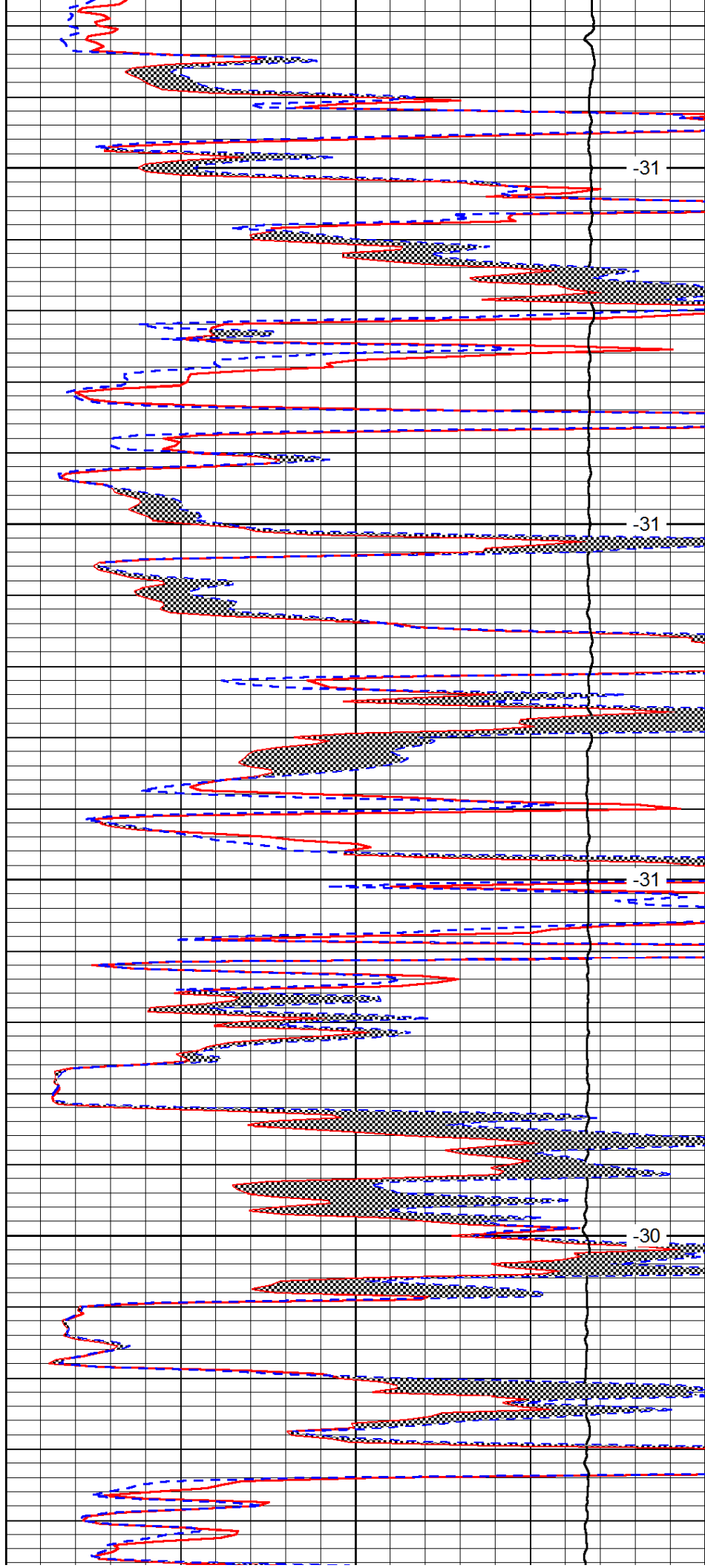


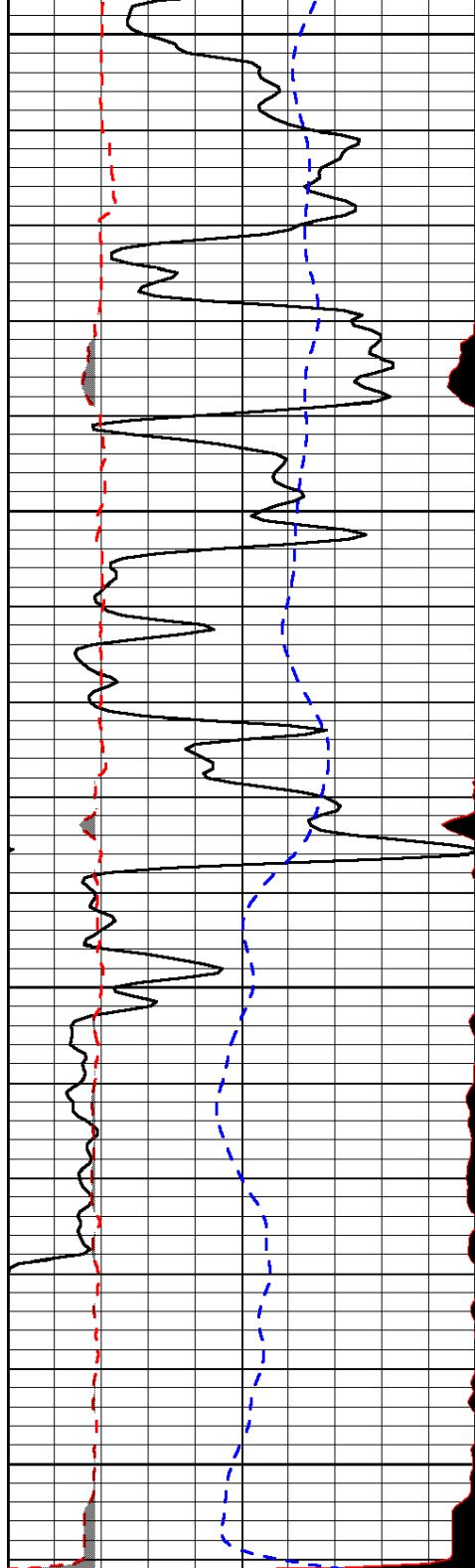
3050

3100

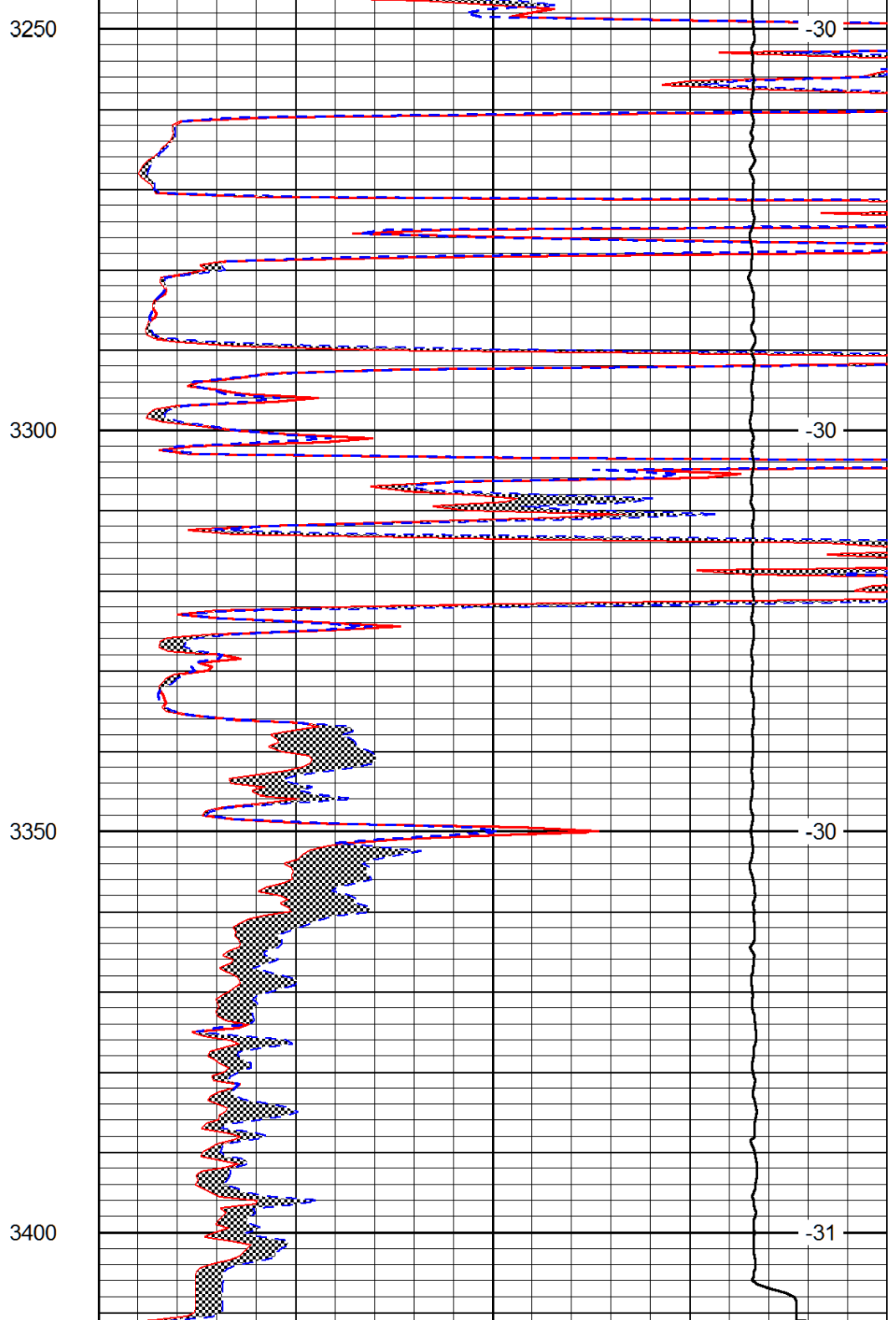
3150

3200





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