



Microresistivity Log

Pioneer Energy Services

API No.

15-135-25639-00-00

Company American Warrior, Inc.

Well Joseph #1-21

Field Chrif

County Ness

State

Kansas

Location

860' FNL & 769' FEL

Sec: 21 Twp: 19 S Rge: 25 W

Permanent Datum Ground Level Elevation 2470
Log Measured From Kelly Bushing 11 Ft. Above Perm. Datum
Drilling Measured From Kelly Bushing

Elevation

K.B. 2481
D.F. 2470
G.L. 2470

Other Services
CNL/CDL
DIL

Date 08-01-2013

Run Number Two

Depth Driller 4600

Depth Logger 4602

Bottom Logged Interval 4601

Top Log Interval 3750

Casing Driller 8.625 @ 235

Casing Logger 235

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 5300

Density / Viscosity 9.3 45

pH / Fluid Loss 9.5 9.6

Source of Sample Flowline

Rm @ Meas. Temp 0.85 @ 75

Rmf @ Meas. Temp 0.63 @ 75

Rmc @ Meas. Temp 1.14 @ 75

Source of Rmf / Rmc Charts

Rm @ BHT 0.51 @ 124

Operating Rig Time 4 Hours

Max Rec. Temp. F 124

Equipment Number 91

Location Hays

Recorded By Y. Ruiz

Witnessed By Kevin Timson

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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.

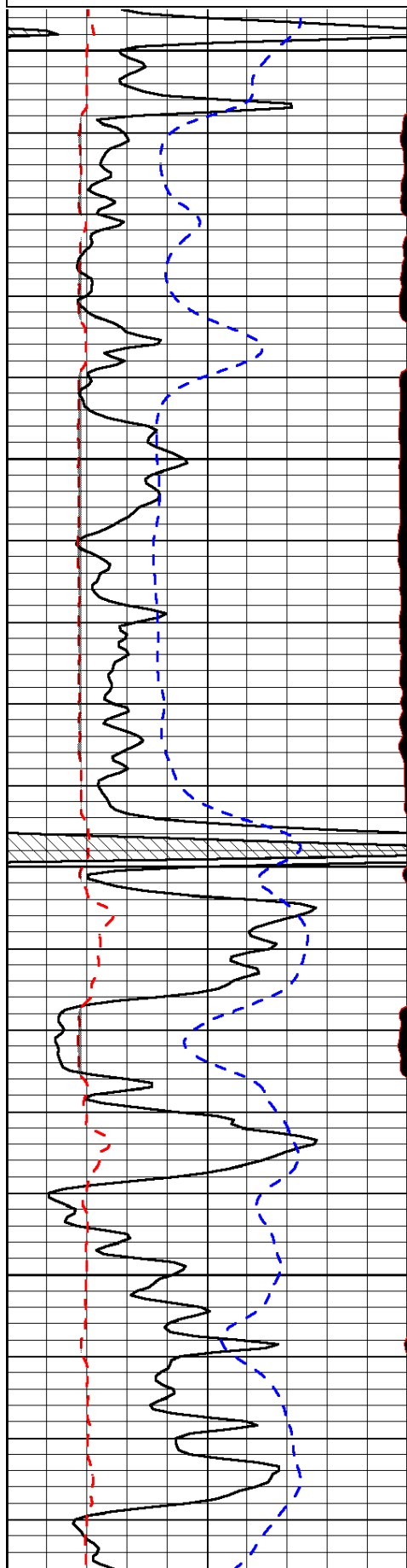
Comments

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

Ness City,
West to J Rd, 4 South,
1 1/2 West to location (stay right at 1st fork and left at 2nd fork)

Database File: amwar_080113hd.db
Dataset Pathname: dil/awstck
Presentation Format: micro
Dataset Creation: Thu Aug 01 12:33:20 2013
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



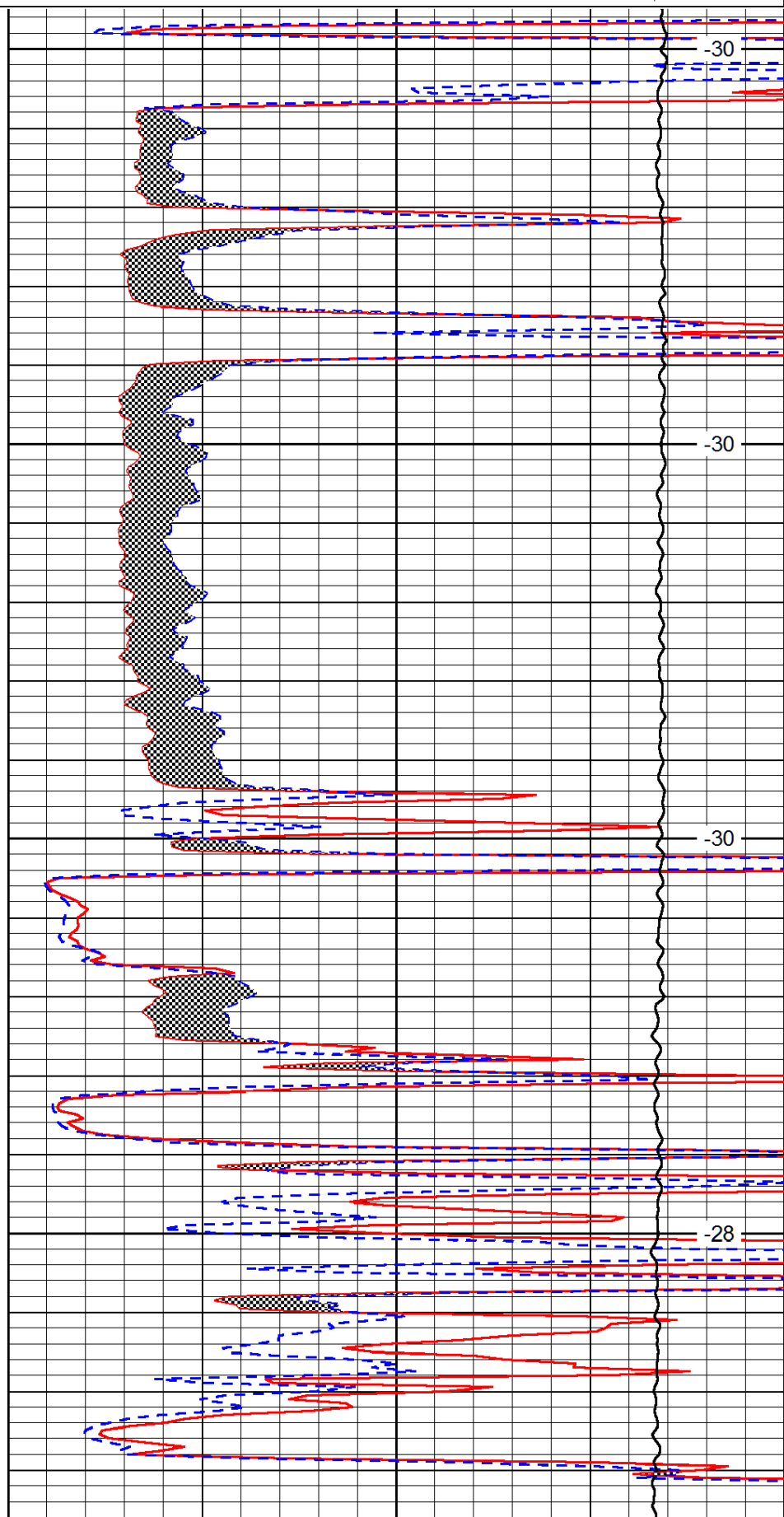
3750

3800

3850

3900

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

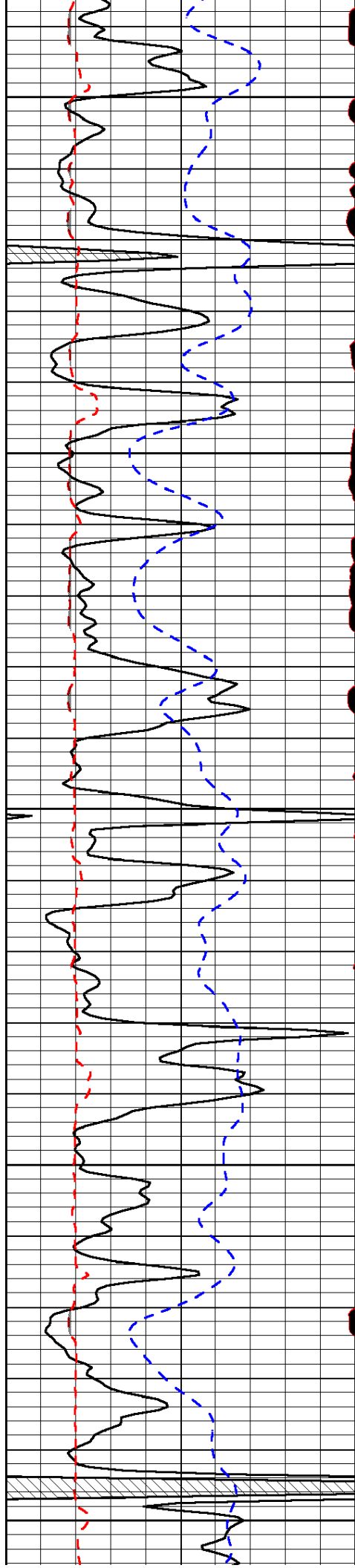


-30

-30

-30

-28



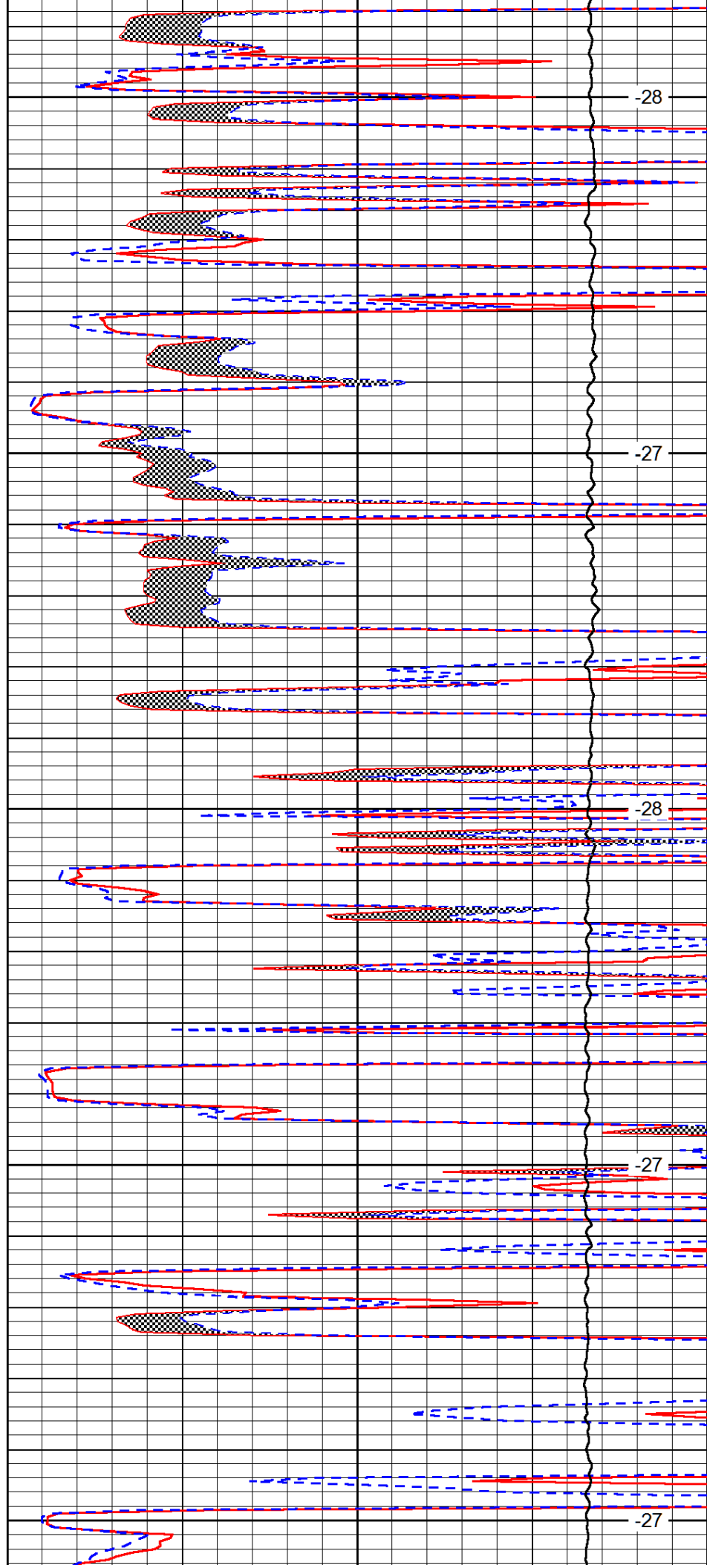
3950

4000

4050

4100

4150



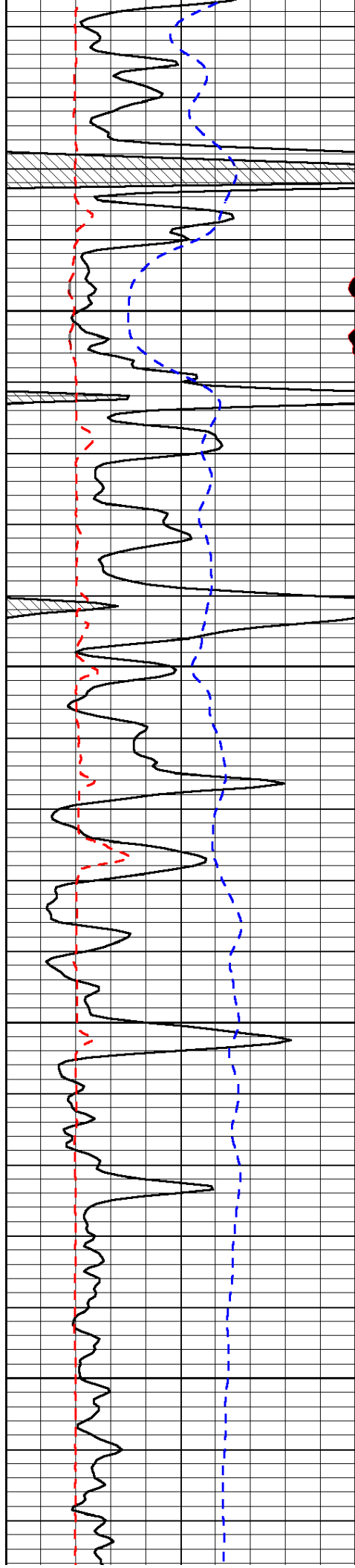
-28

-27

-28

-27

-27

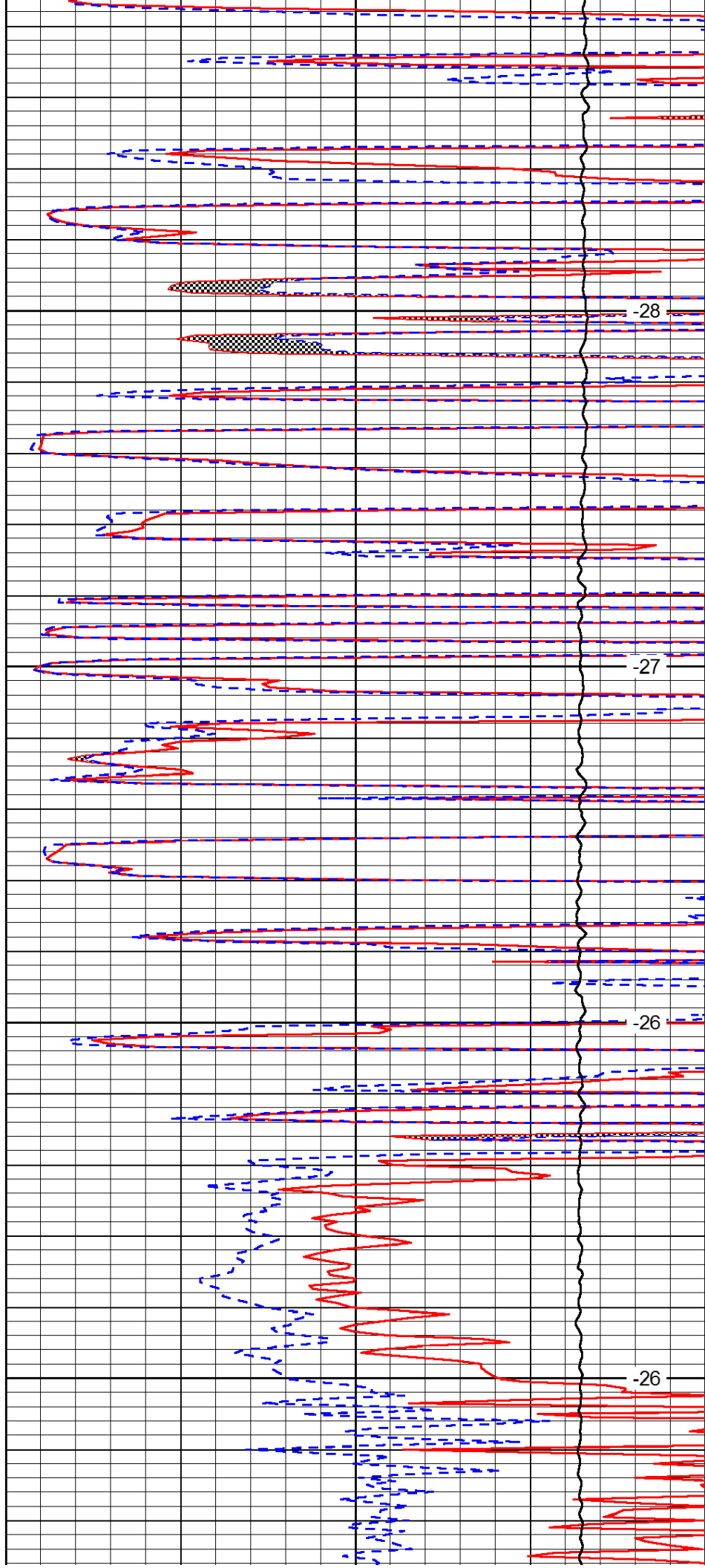


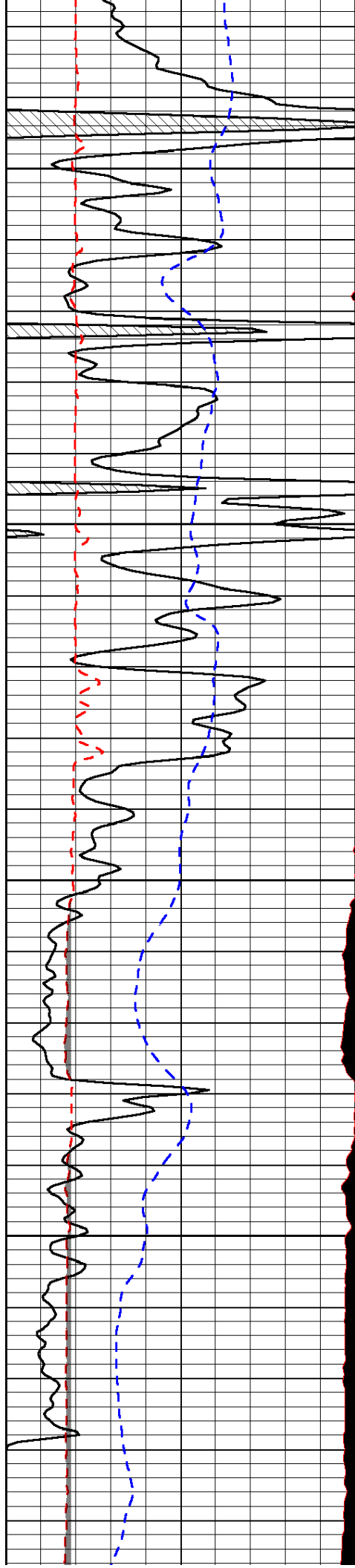
4200

4250

4300

4350



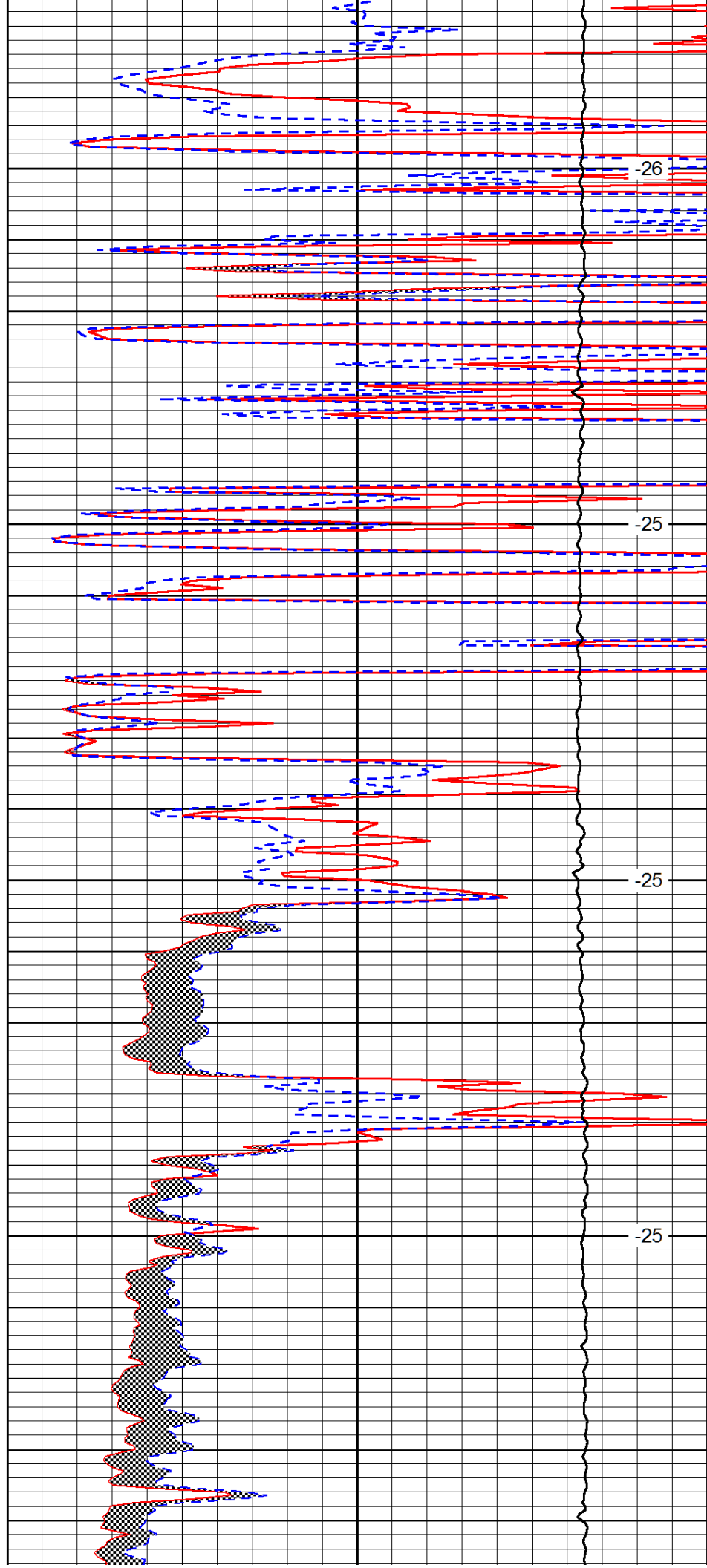


4400

4450

4500

4550



-26

-25

-25

-25

