



Microresistivity Log

Pioneer Energy Services

API No.

15-135-25,647-00-00

Company American Warrior, Inc.

Well Joseph No. 2 - 21

Field Chrif

County Ness

State

Kansas

Location

1753' FNL & 133' FEL

Sec: 21

Twp: 19 S

Rge: 25 W

Elevation

Permanent Datum Ground Level
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing

Elevation 2471
11 Ft. Above Perm. Datum

Date

8/17/2013

Run Number

Two

Depth Driller

4600

Depth Logger

4596

Bottom Logged Interval

4595

Top Log Interval

3800

Casing Driller

8.625 @ 240

Casing Logger

237

Bit Size

7.875

Type Fluid in Hole

Chemical

Salinity, ppm CL

3600

Density / Viscosity

9.4 55

pH / Fluid Loss

10.5 8.8

Source of Sample

Flowline

Rm @ Meas. Temp

.48 @ 84

Rmf @ Meas. Temp

.36 @ 84

Rmc @ Meas. Temp

.65 @ 84

Source of Rmf / Rmc

Charts

Rm @ BHT

.33 @ 122

Operating Rig Time

5 Hours

Max Rec. Temp. F

122

Equipment Number

108

Location

Hays

Recorded By

D. Martin

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.

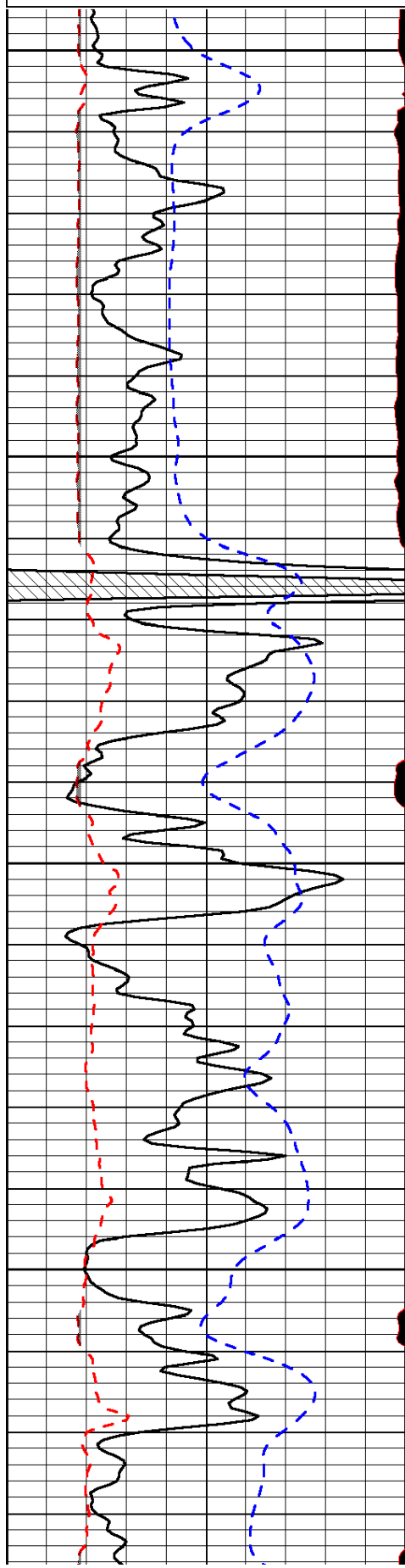
Comments

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

Ness City, KS
W to Laird Elevator, 1/2 W to J Rd.,
4 S, W Into

Database File: amwarr_joseph_2-21hd.db
Dataset Pathname: dil/amwstk
Presentation Format: micro
Dataset Creation: Sat Aug 17 17:54:19 2013
Charted by: Depth in Feet scaled 1:240

Charted by: Depth in Feet scaled 1:210		
0	Gamma Ray (GAPI)	150
6	MCAL (in)	16
2.875	Mud Cake (in)	7.875
-200	SP (mV)	0



3800

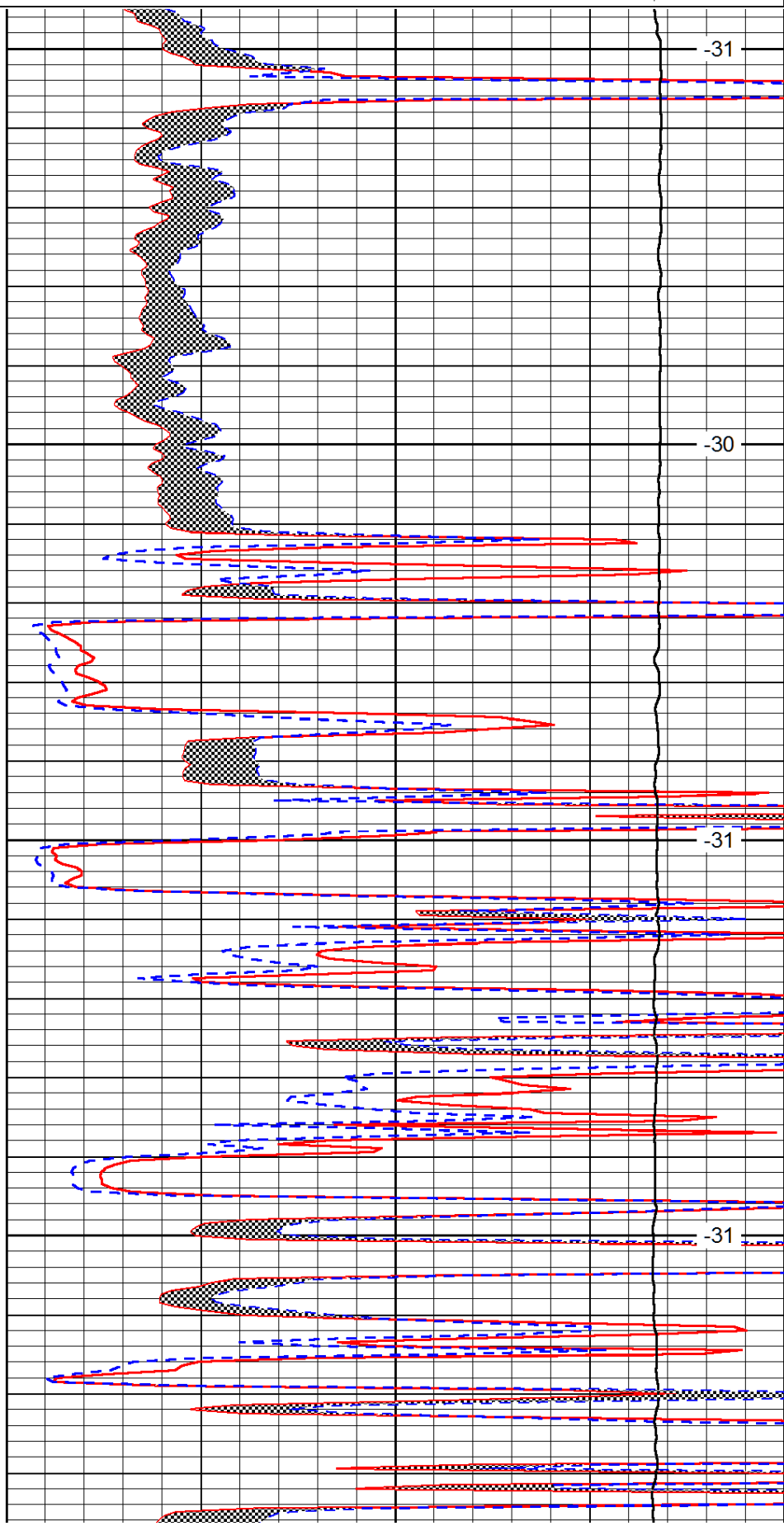
3850

3900

3950

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

LSPD
(ft/min)

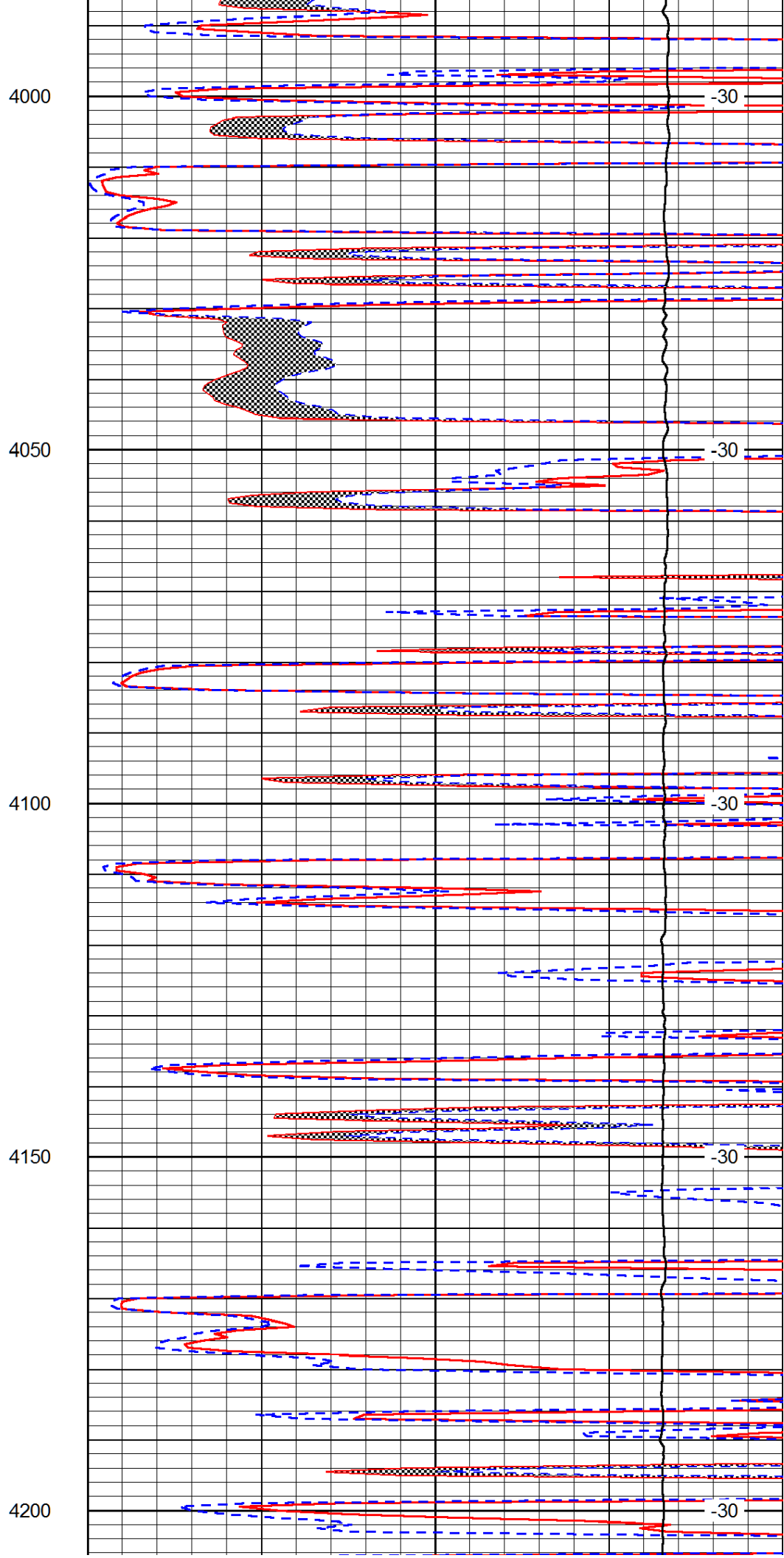
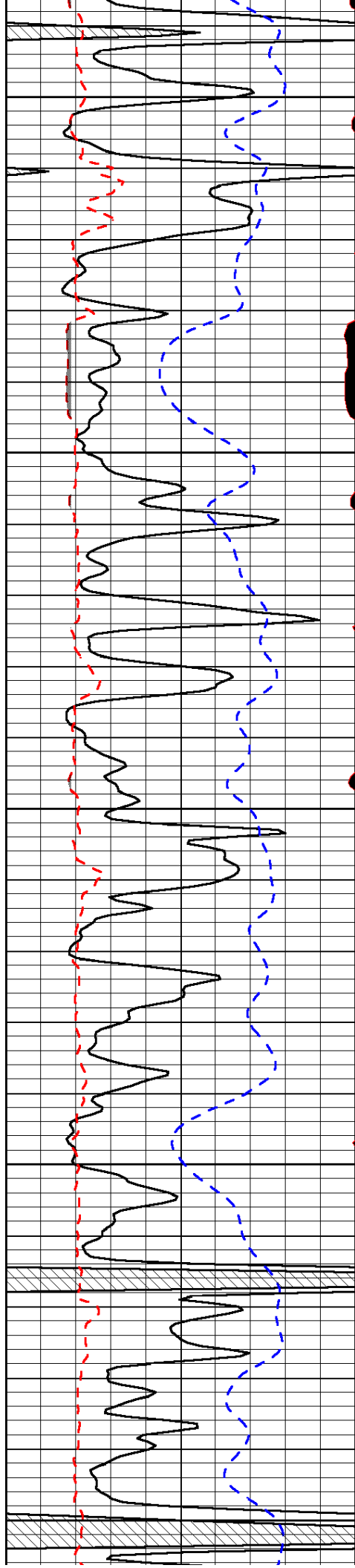


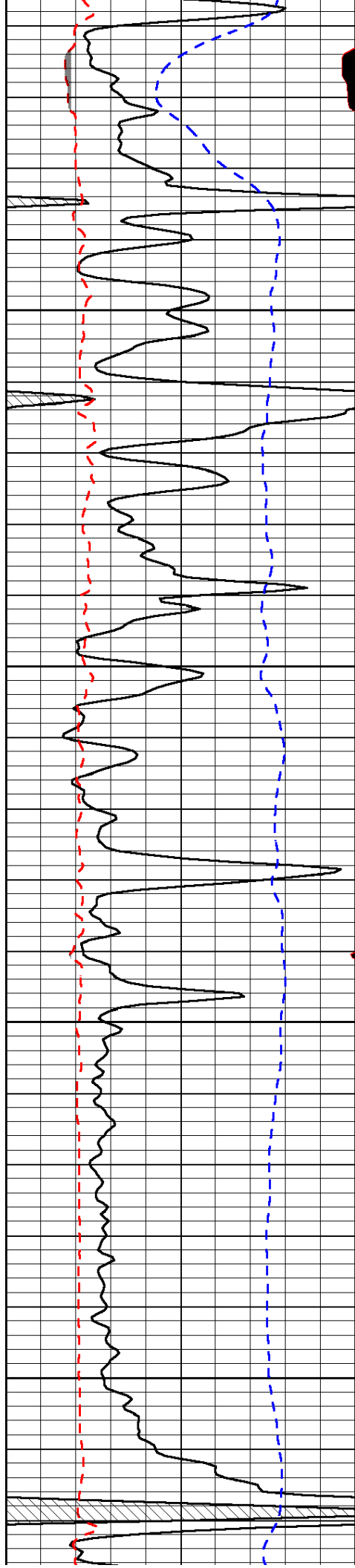
-31

-30

-31

-31



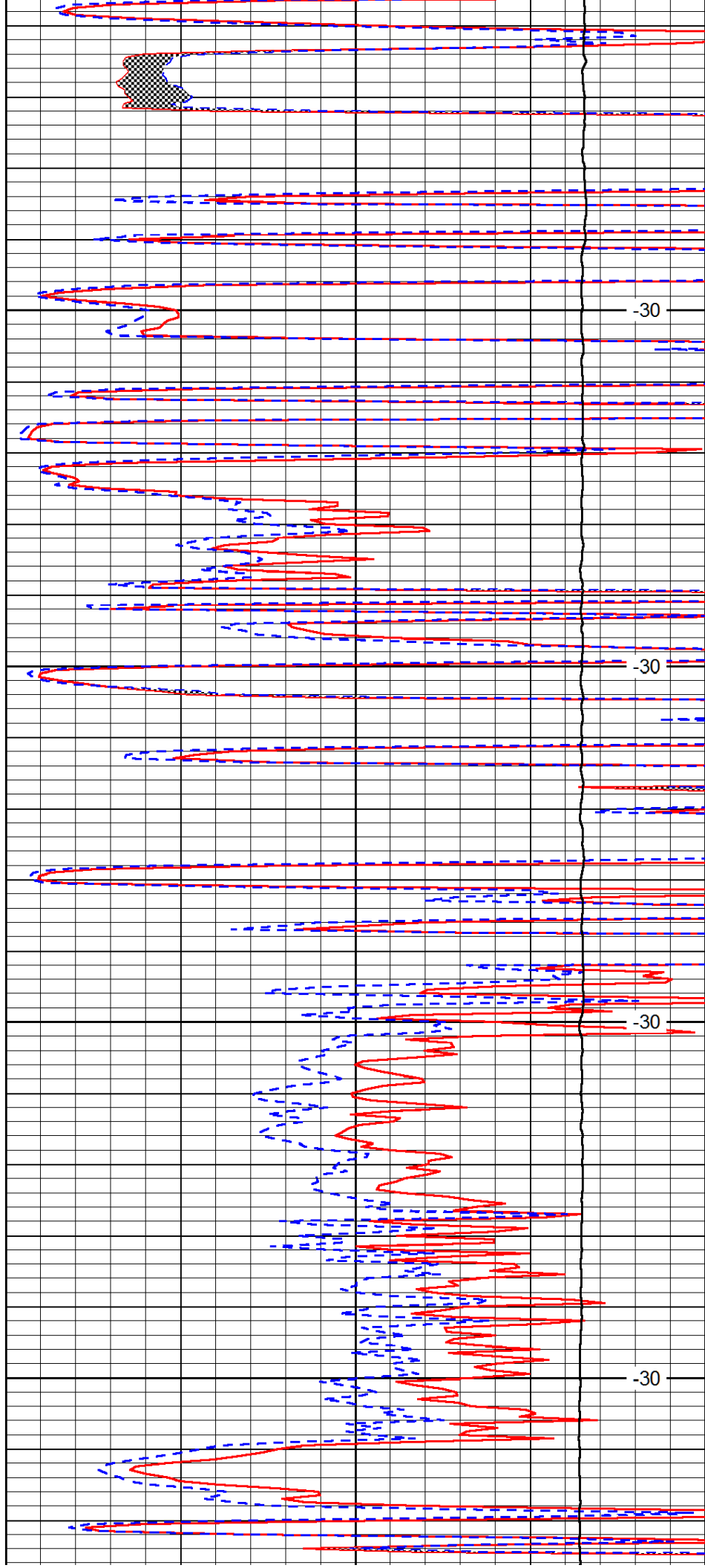


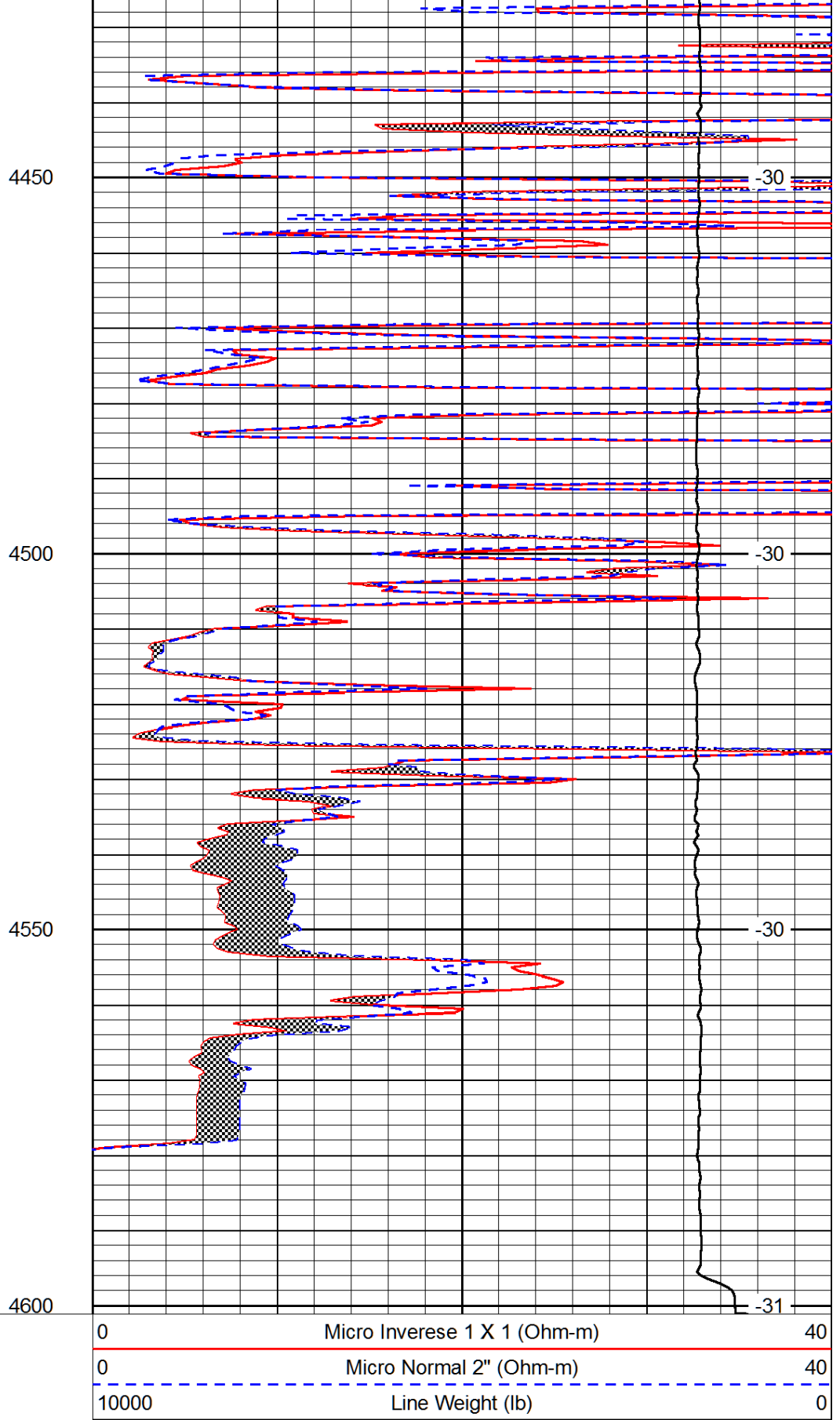
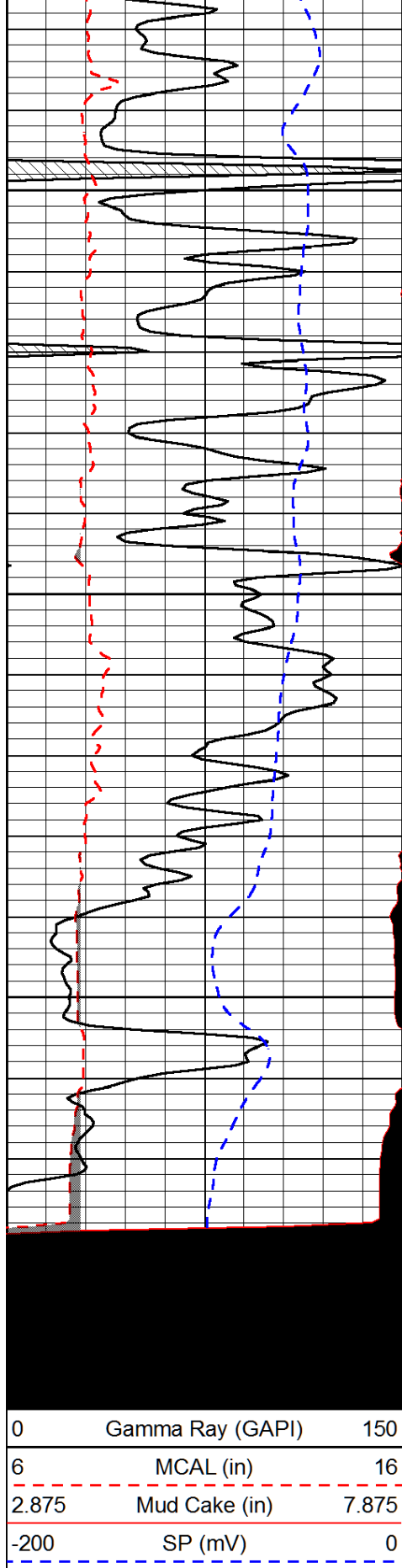
4250

4300

4350

4400





LSPD
(ft/min)