



Microresistivity Log

Pioneer Energy Services

API No.

15-069-20440-00-00

Company American Warrior, Inc.

Well Kramer #2-31

Field Wildcat

County Gray State

Kansas

Location

1016' FSL / 1229' FWL

Sec: 31 Twp: 24S Rge: 29W

Permanent Datum Ground Level Elevation 2824
Log Measured From Kelly Bushing 11 Ft. Above Perm. Datum
Drilling Measured From Kelly Bushing

Elevation

K.B. 2835
D.F. 2824
G.L. 2824

Other Services
CNL / CDL
DIL

Date 8/17/2013

Run Number Two

Depth Driller 5050

Depth Logger 5050

Bottom Logged Interval 5049

Top Log Interval 4050

Casing Driller 8.625 @ 524

Casing Logger 520

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 2200

Density / Viscosity 9.4 49

pH / Fluid Loss 10.0 9.2

Source of Sample Flowline

Rm @ Meas. Temp 0.50 @ 75

Rmf @ Meas. Temp 0.38 @ 75

Rmc @ Meas. Temp 0.68 @ 75

Source of Rmf / Rmc Charts

Rm @ BHT 0.30 @ 127

Operating Rig Time 5 Hours

Max Rec. Temp. F 127

Equipment Number 15

Location Hays

Recorded By R. Barnhart

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.

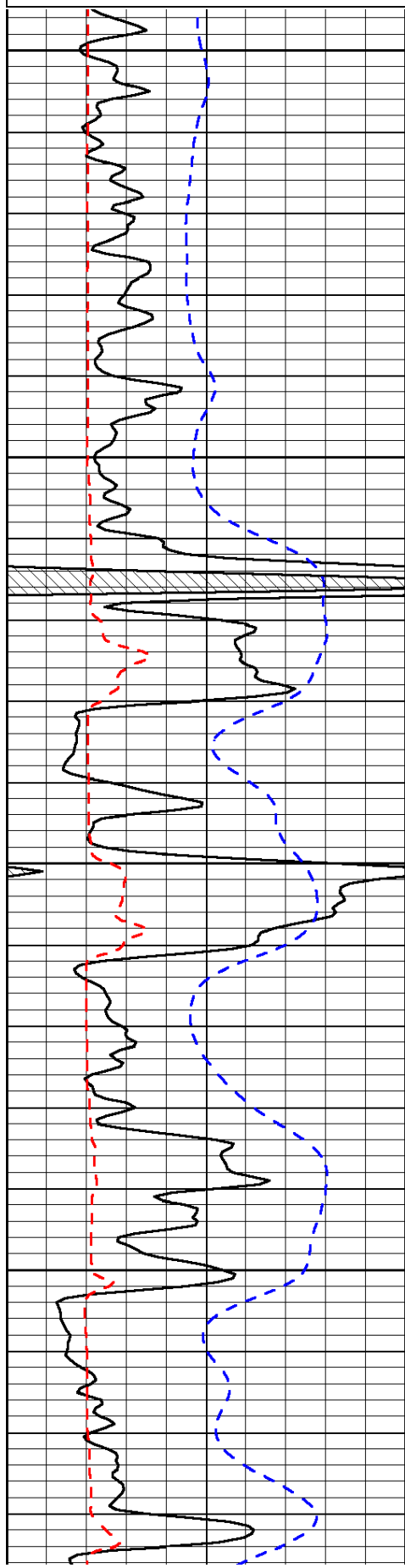
Comments

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

Kalvesta, KS:
14 1/2W, 10S, 1/4E, N into

Database File: amwar_hd.db
Dataset Pathname: dil/amwmain
Presentation Format: micro
Dataset Creation: Sat Aug 17 10:32:18 2013
Charted by: Depth in Feet scaled 1:240

Charted by: Depth in Feet scaled 1:2.15		
0	Gamma Ray (GAPI)	150
6	MCAL (in)	16
2.875	Mud Cake (in)	7.875
-200	SP (mV)	0



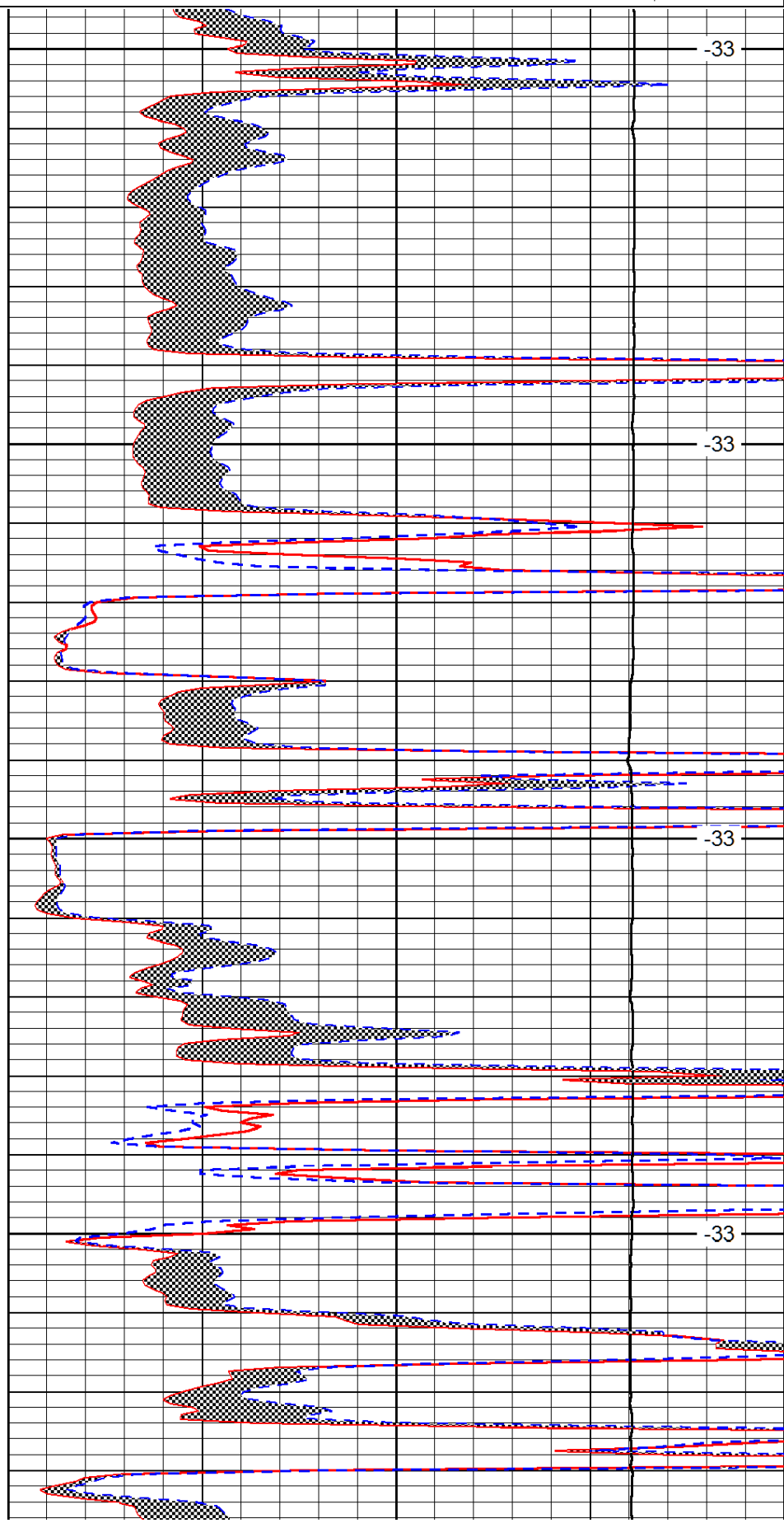
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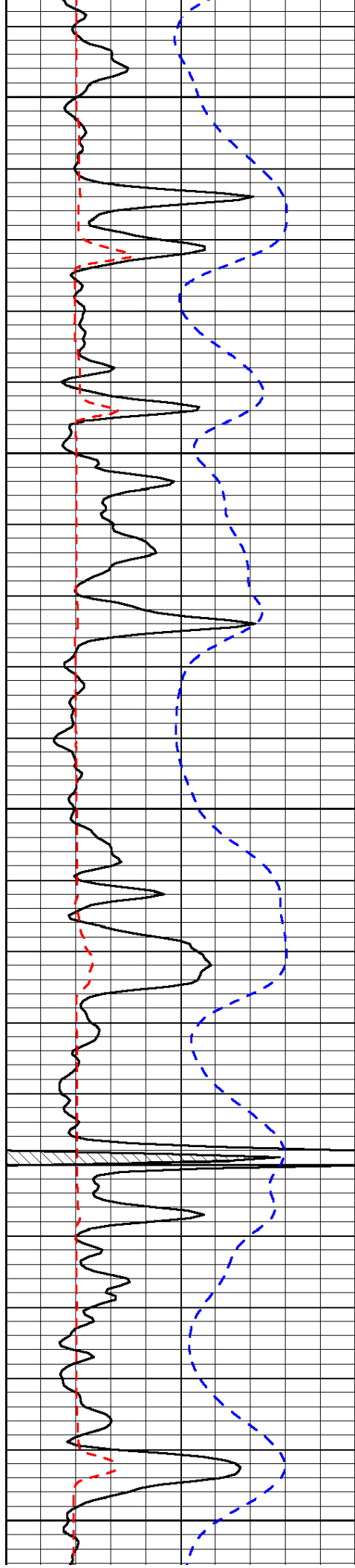
4100

4150

4200

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





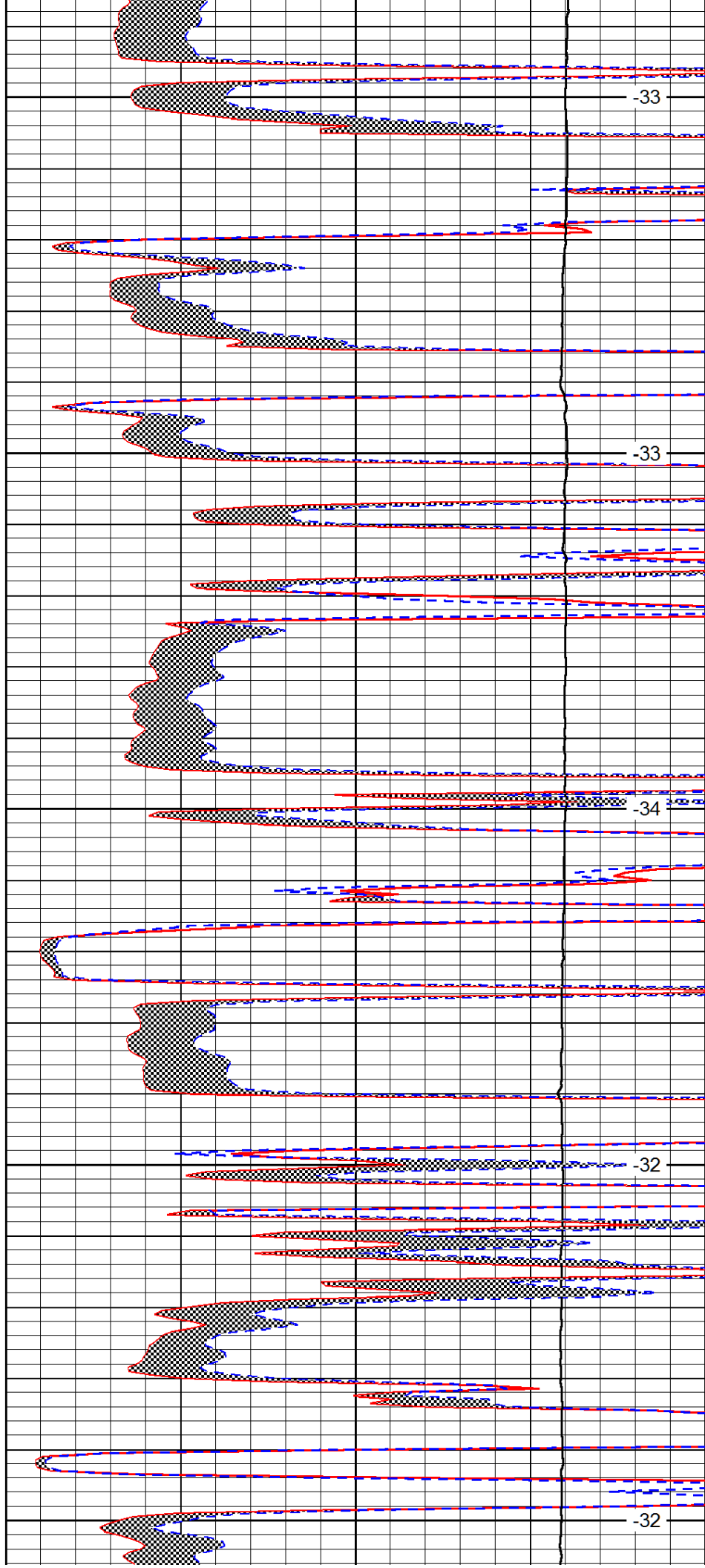
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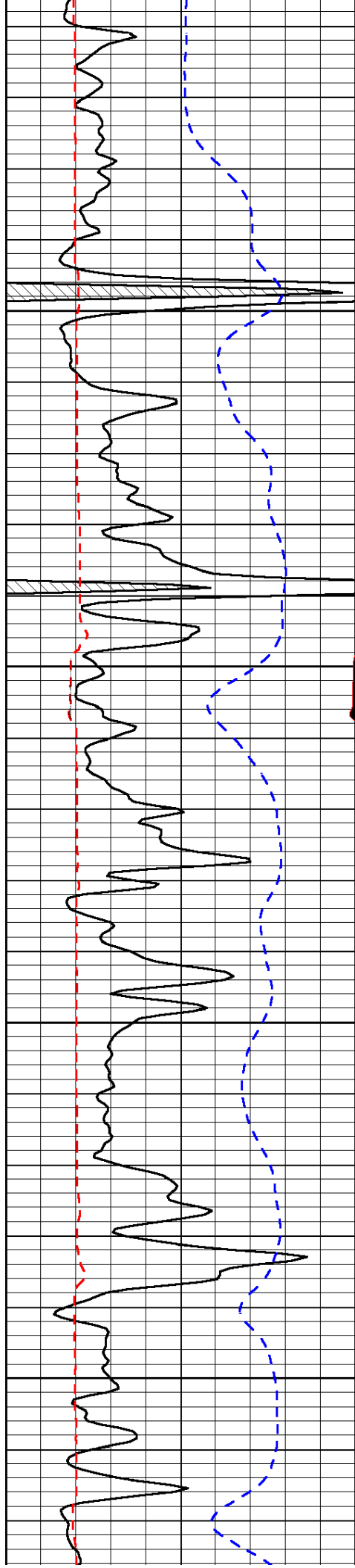
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4350

4400

4450



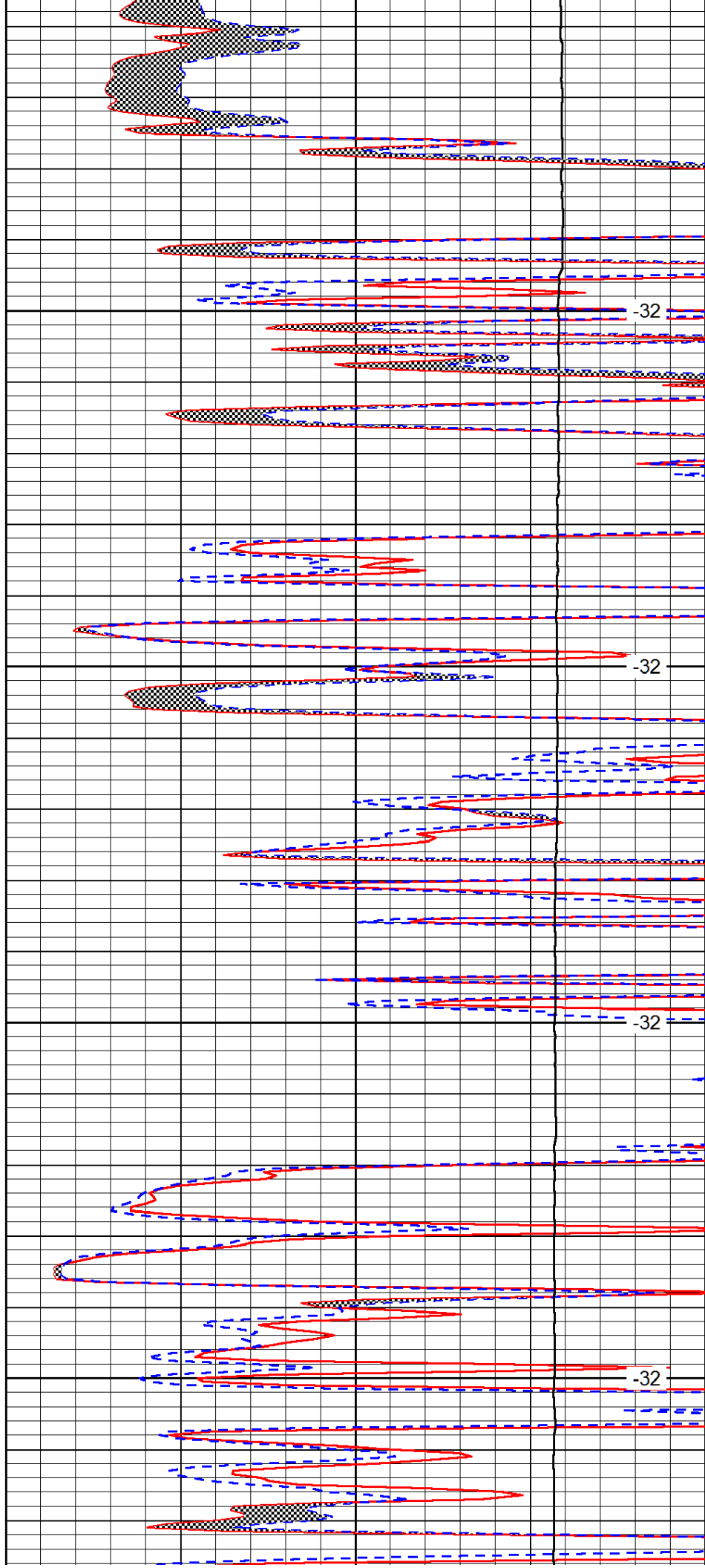


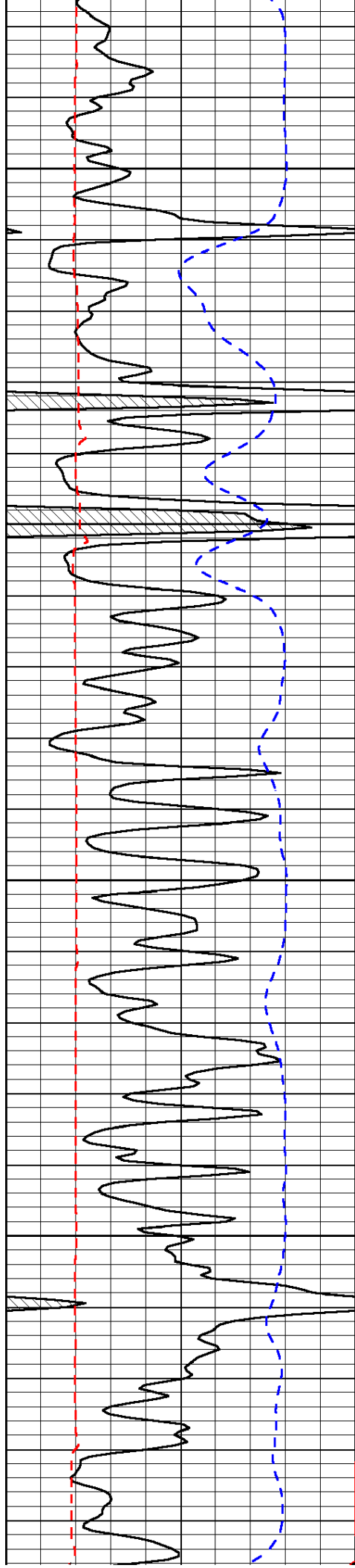
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4550

4600

4650



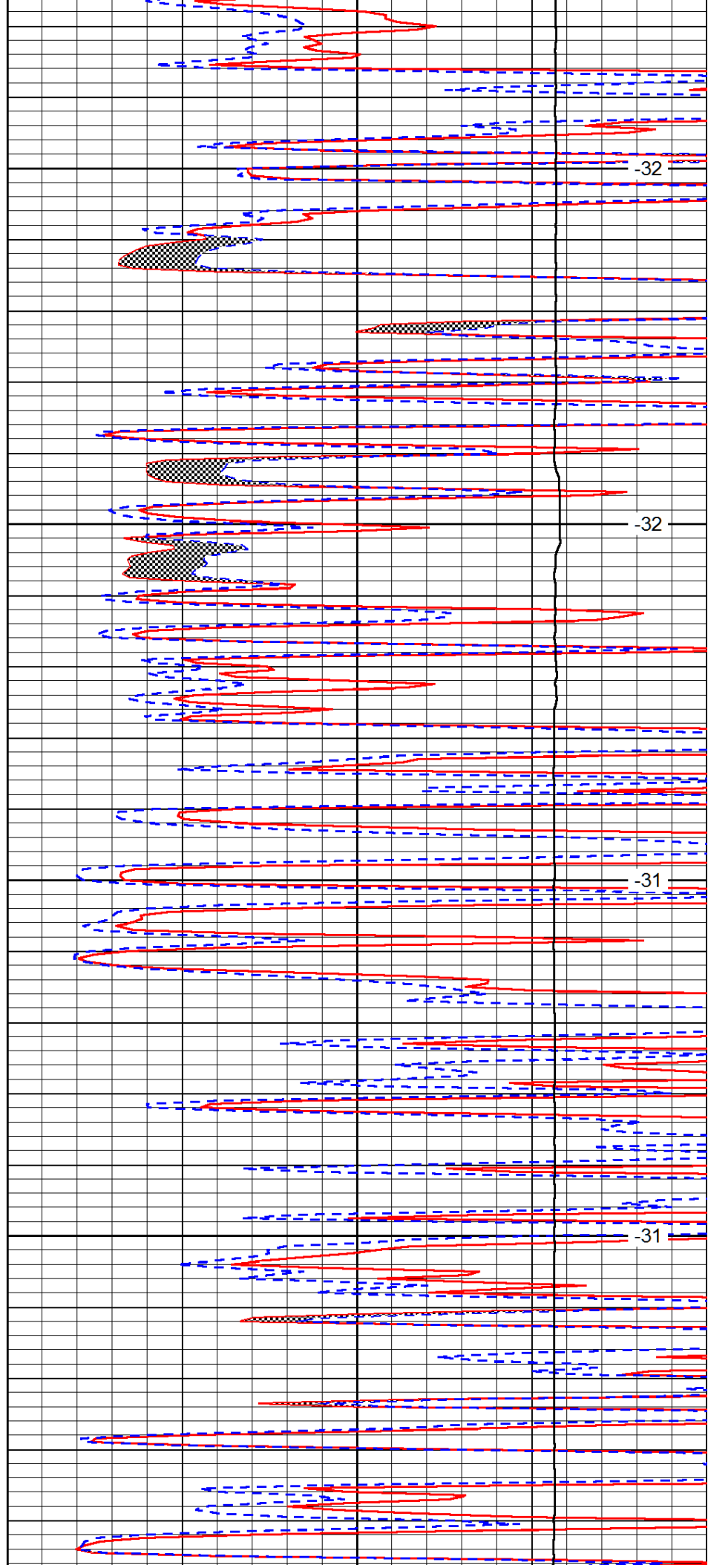


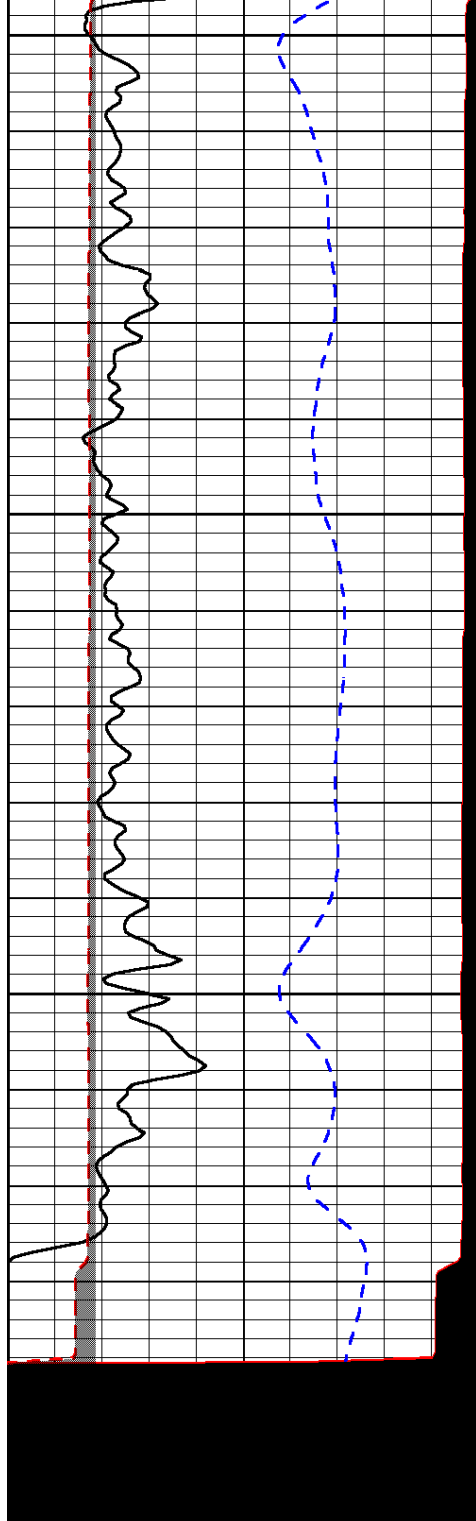
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4800

4850





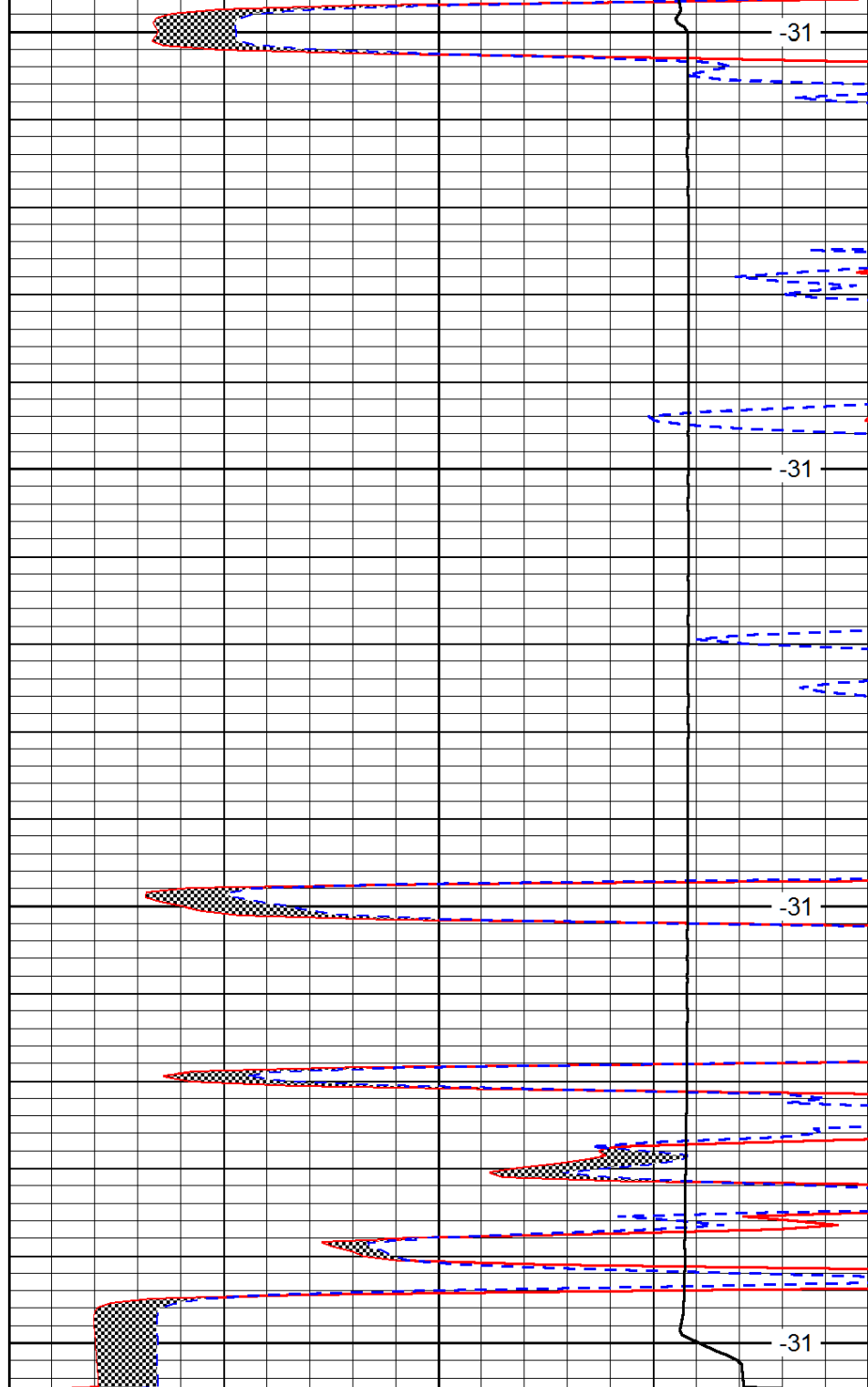
0	Gamma Ray (GAPI)	150
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4900

4950

5000

5050



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

LSPD
(ft/min)