



Pioneer Energy Services

# Dual Induction Log

15-135-25,722-00-00

API No.

Company American Warrior, Inc.

Well TNA #1-11 Unit

Field Wildcat

County Ness State

Kansas

Location

2240' FNL & 2460' FWL

Other Services  
CNL/CDL

Sec: 11 Twp: 18S Rge: 22W

Permanent Datum Ground Level Elevation 2196  
Log Measured From Kelly Bushing 8 Ft. Above Perm. Datum  
Drilling Measured From Kelly Bushing

Elevation

K.B. 2204

D.F. 2196

G.L. 2196

Date 1/22/2014

Run Number One

Depth Driller 4410

Depth Logger 4412

Bottom Logged Interval 4411

Top Log Interval 200

Casing Driller 8.625 @ 221

Casing Logger 221

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 5,500

Density / Viscosity 9.2 50

pH / Fluid Loss 10.5 8.8

Source of Sample Flowline

Rm @ Meas. Temp .46 @ 51

Rmf @ Meas. Temp .35 @ 51

Rmc @ Meas. Temp .62 @ 51

Source of Rmf / Rmc Charts

Rm @ BHT .2 @ 120

Operating Rig Time 2 Hours

Max Rec. Temp. F 120

Equipment Number 17

Location Hays

Recorded By C. Desai

Witnessed By Jason Alm

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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 Pioneer Energy Services  
www.pioneerenergy.com  
785 625 3858

Bazine KS, W edge,  
4 N, 1 1/2 W, S Into

Database File: c:\warrior\data\amwar\_tna #1-11 unit\awhd.db  
Dataset Pathname: dil/awstc  
Presentation Format: dil2in  
Dataset Creation: Thu Jan 23 00:49:45 2014  
Charted by: Depth in Feet scaled 1:600

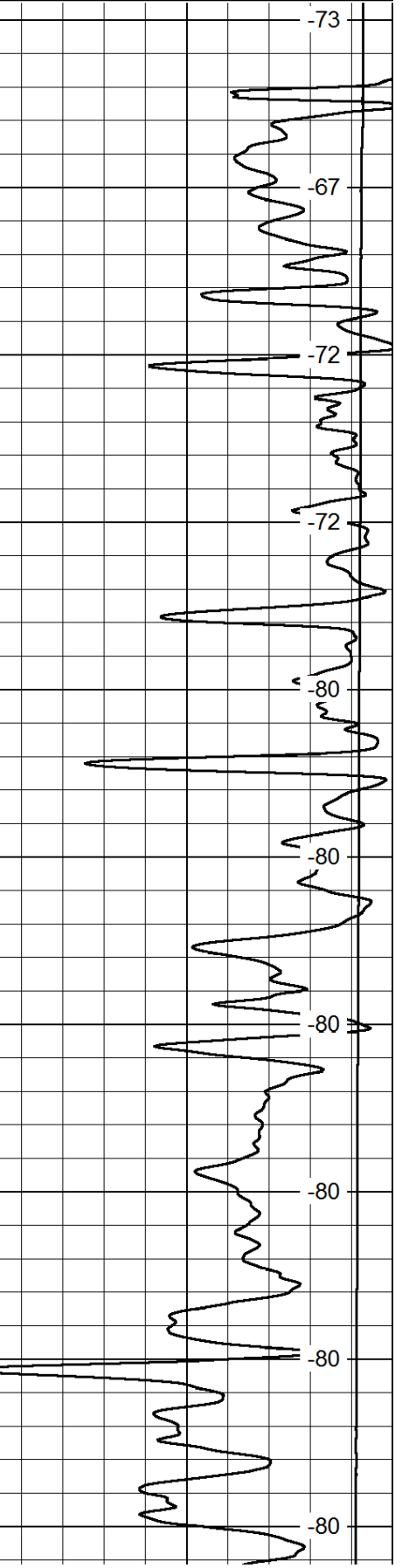
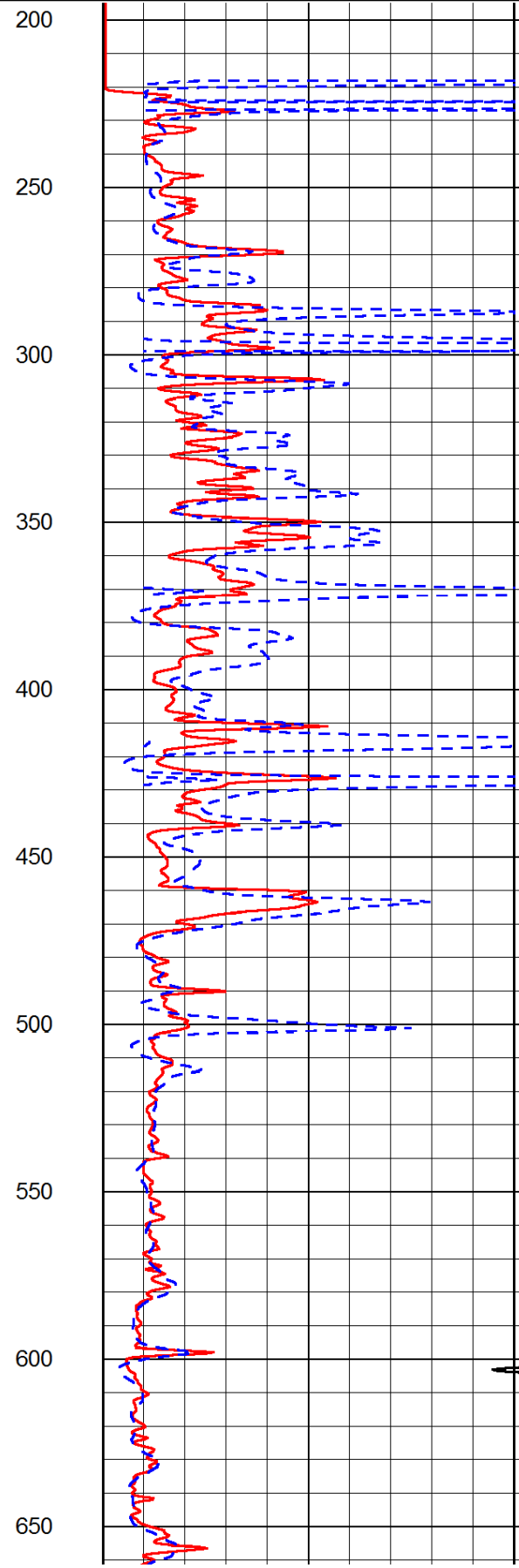
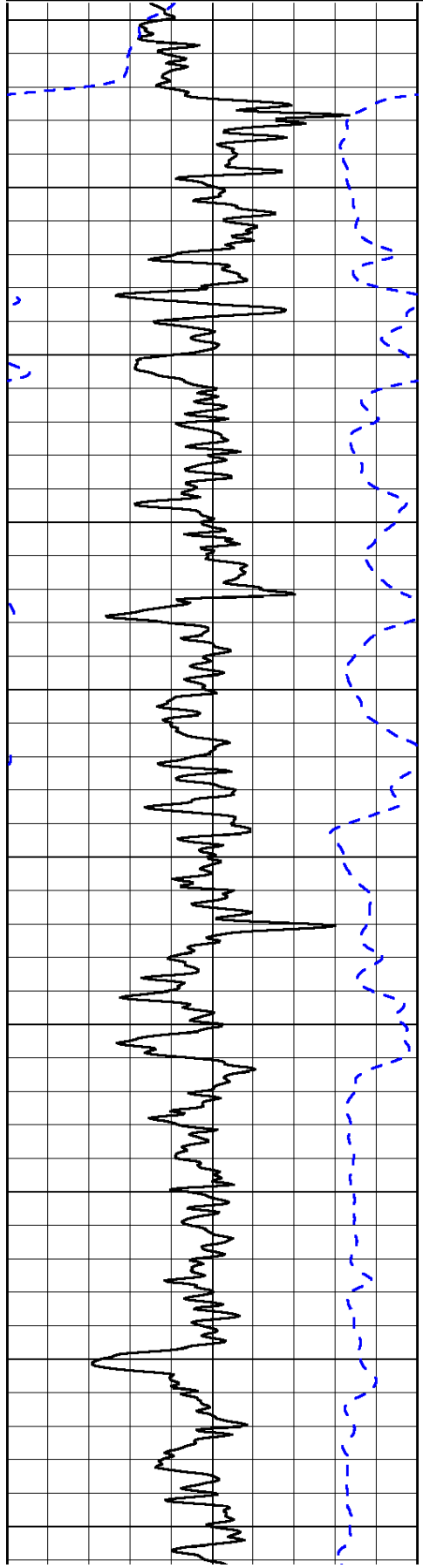
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-200	SP (mV)	0

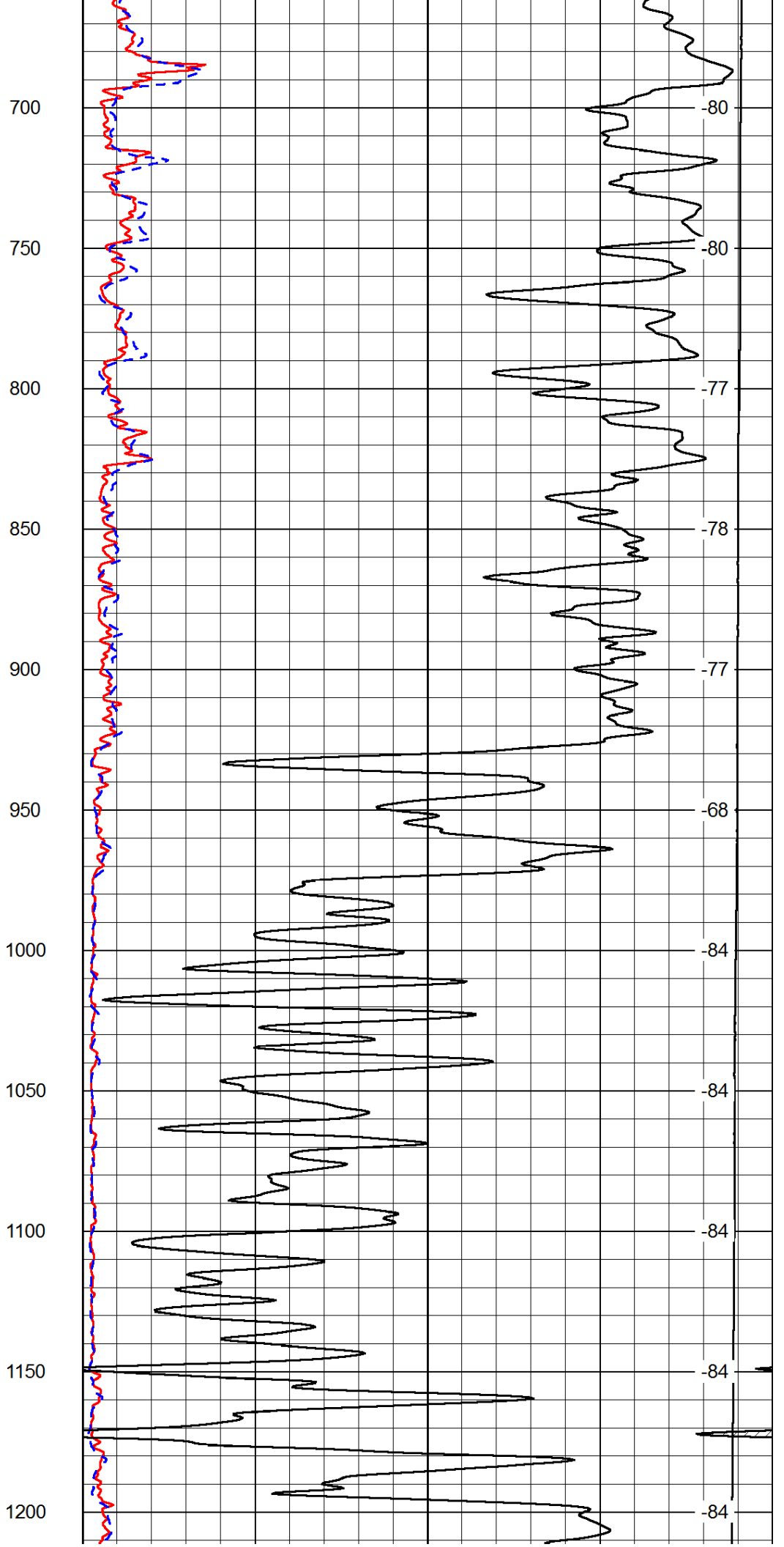
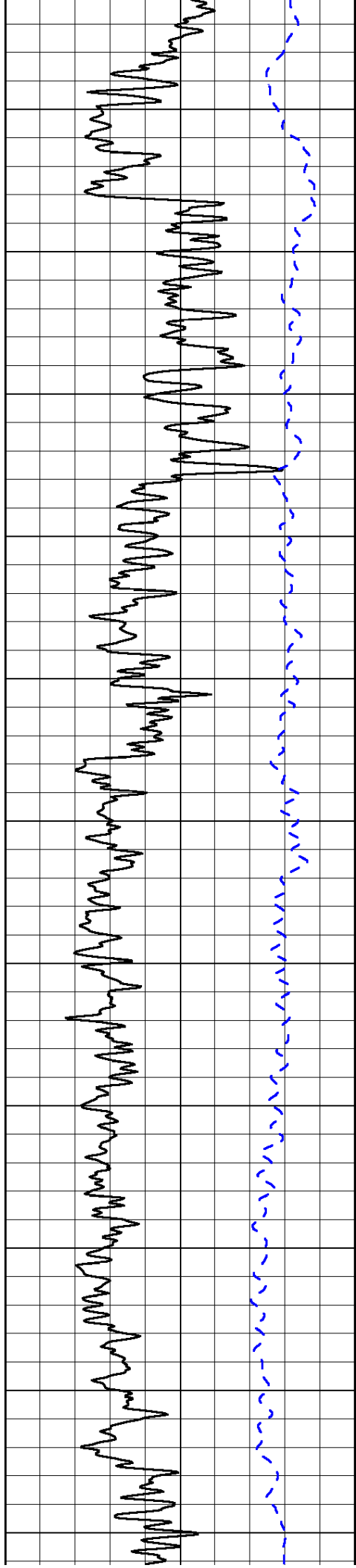
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0	Deep Resistivity	50

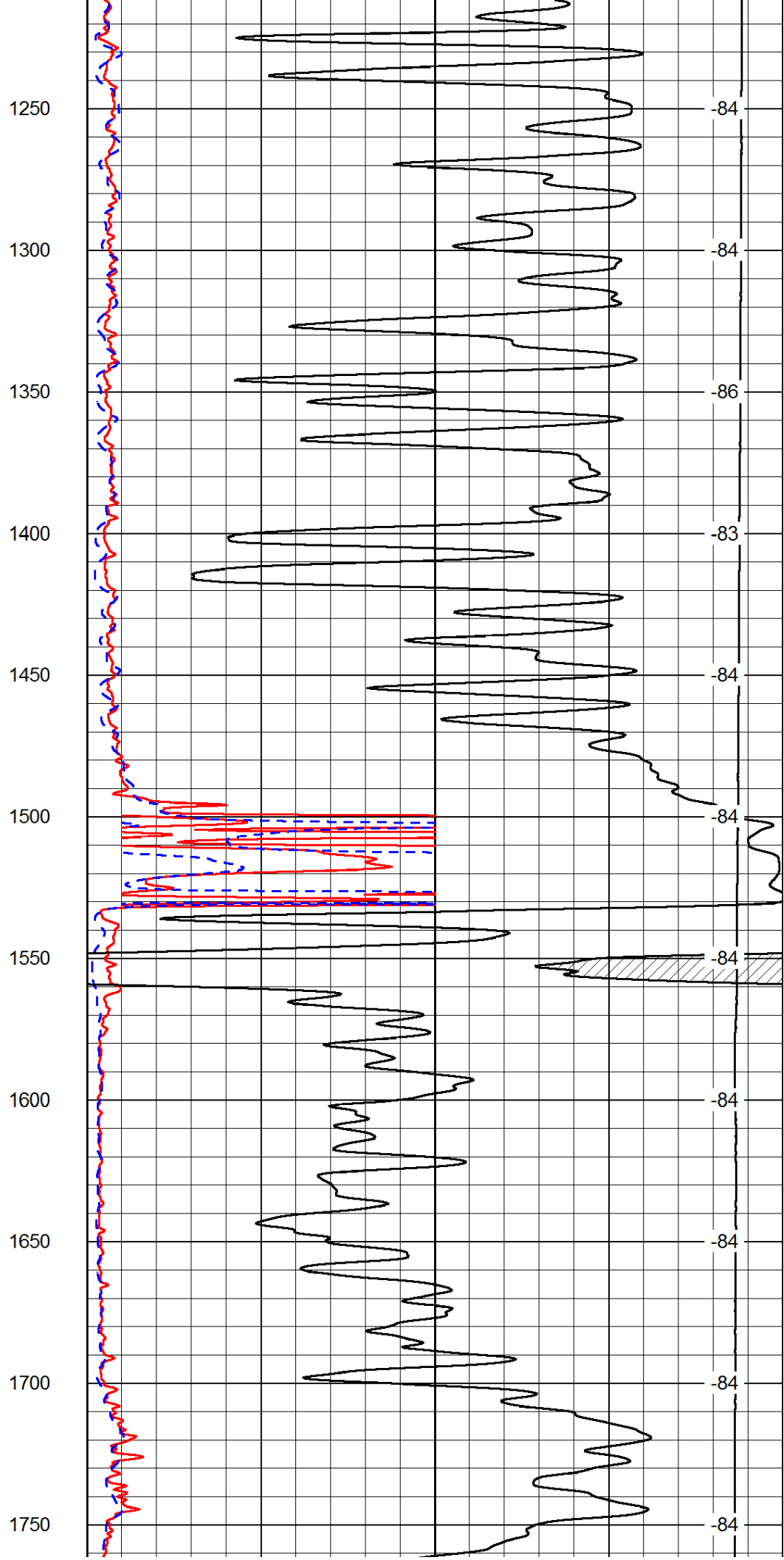
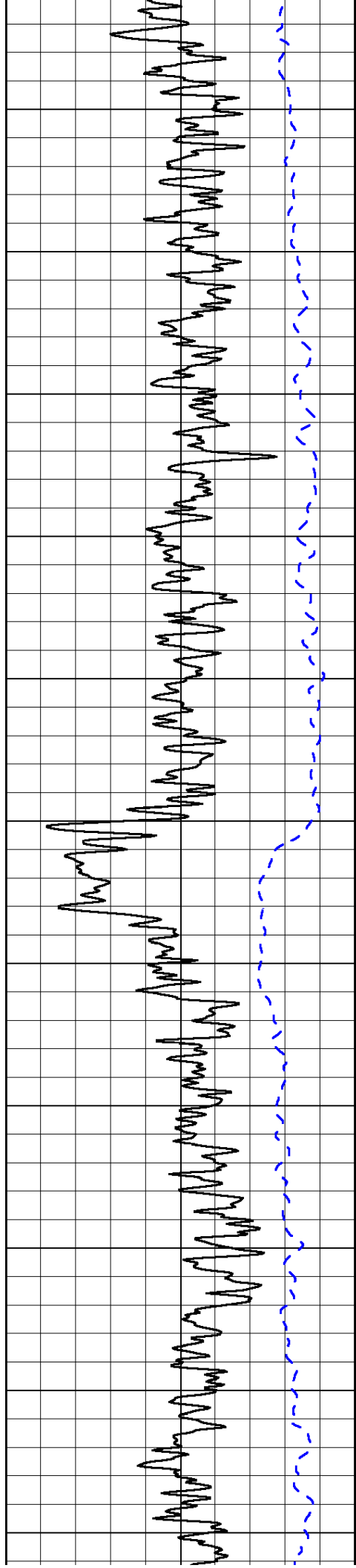
LSPD

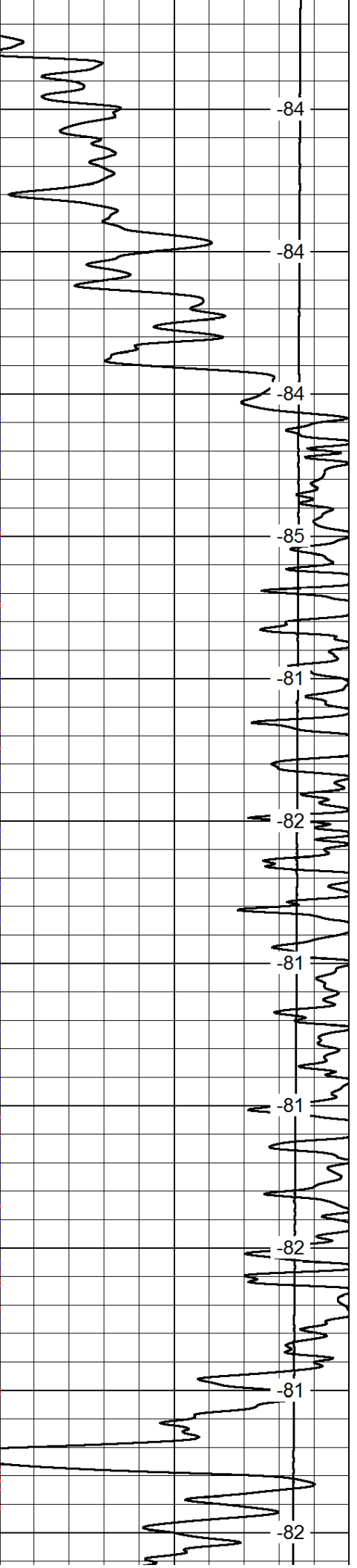
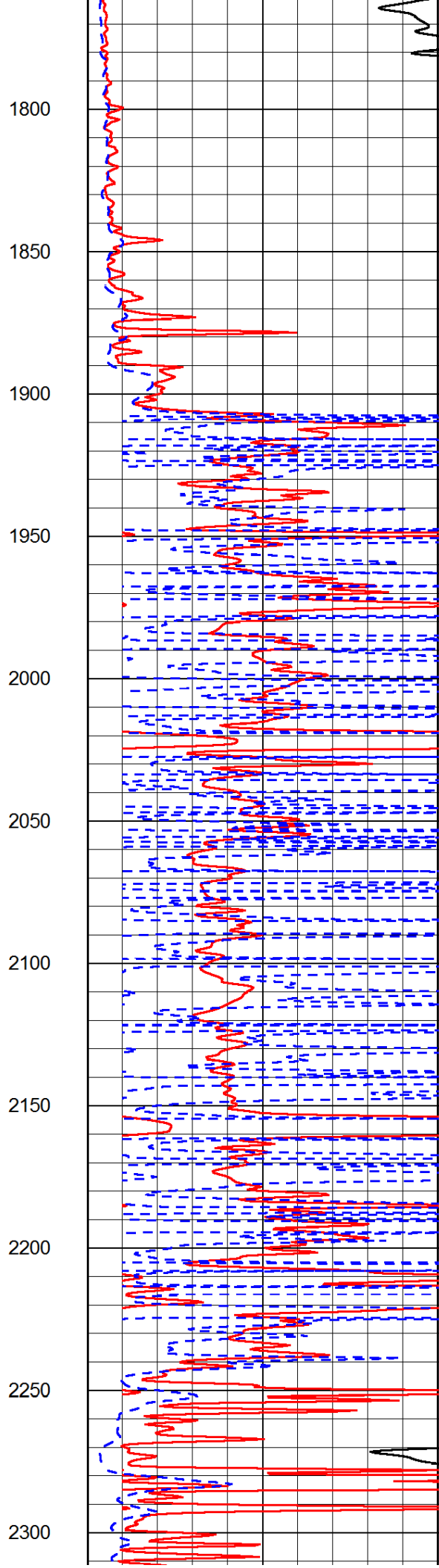
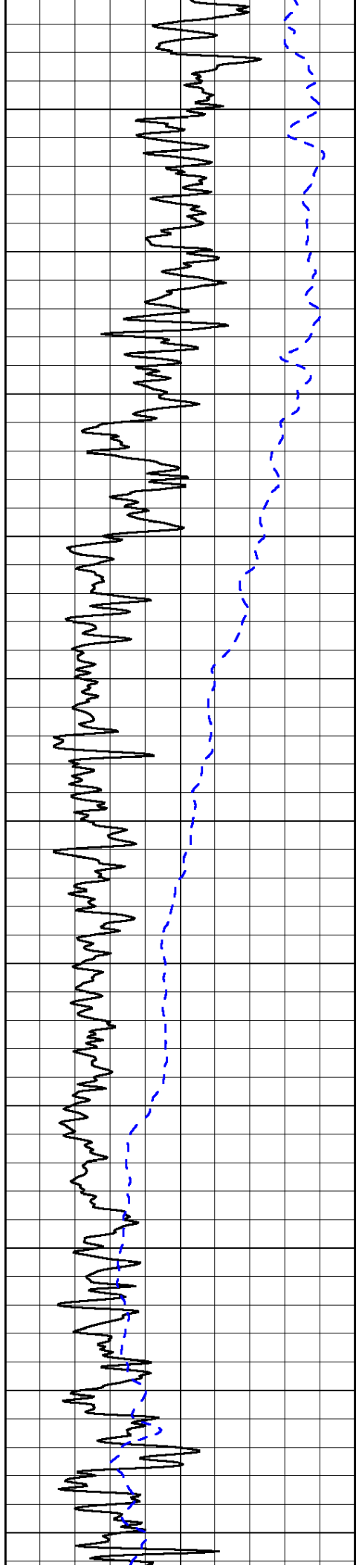
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15000	Line Tension	0

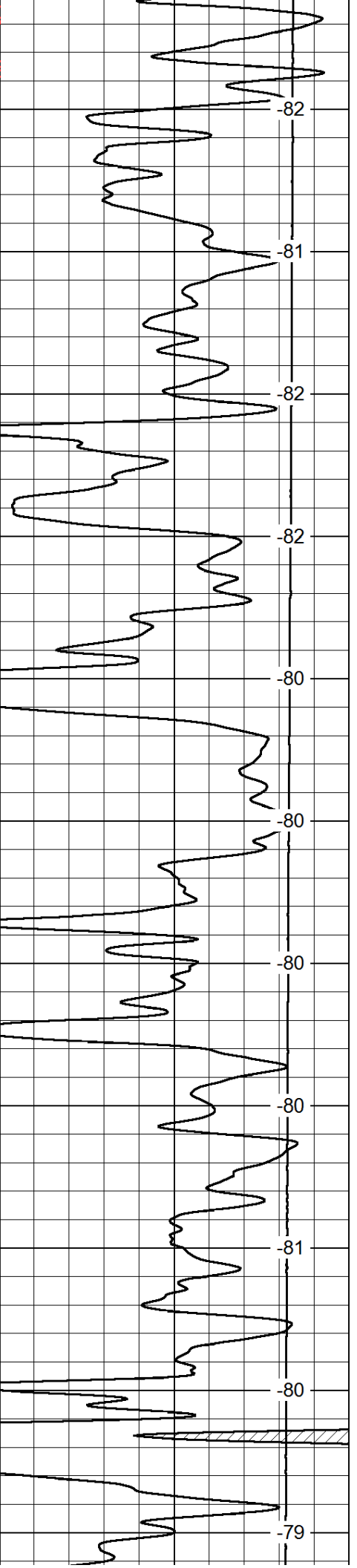
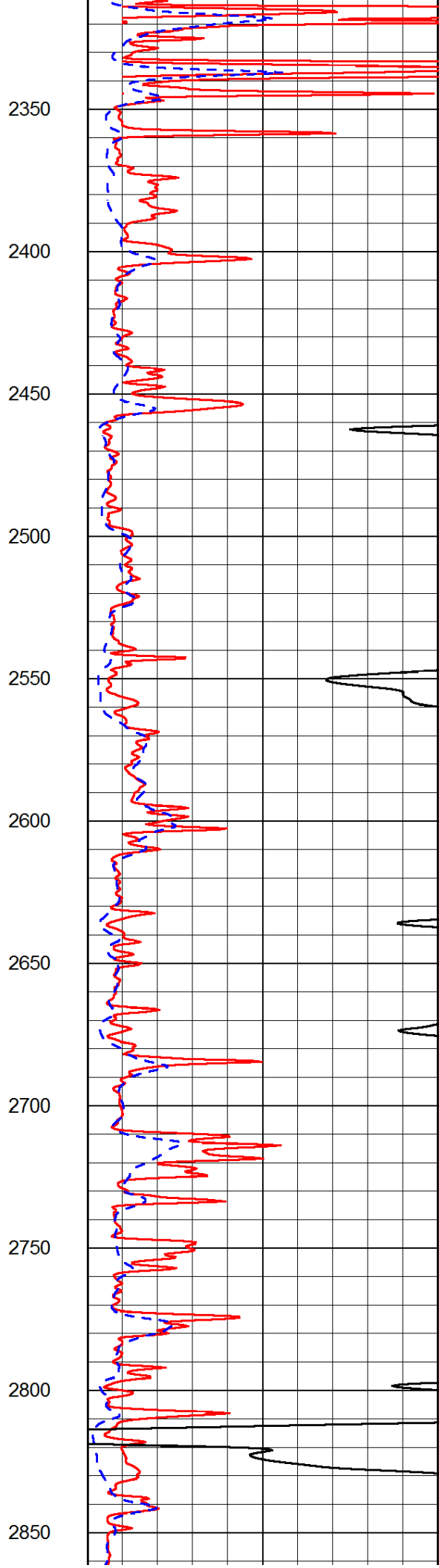
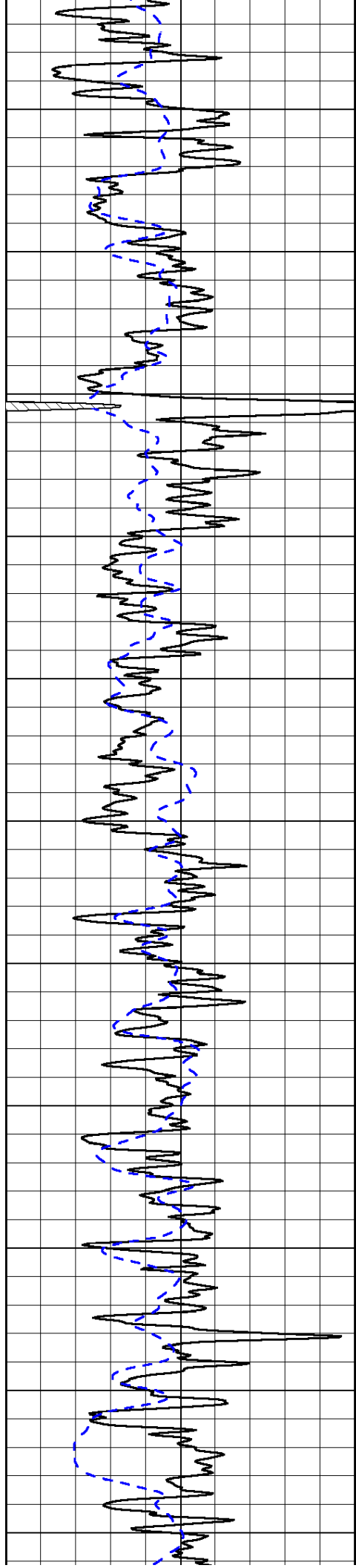
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50	Deep Resistivity	500

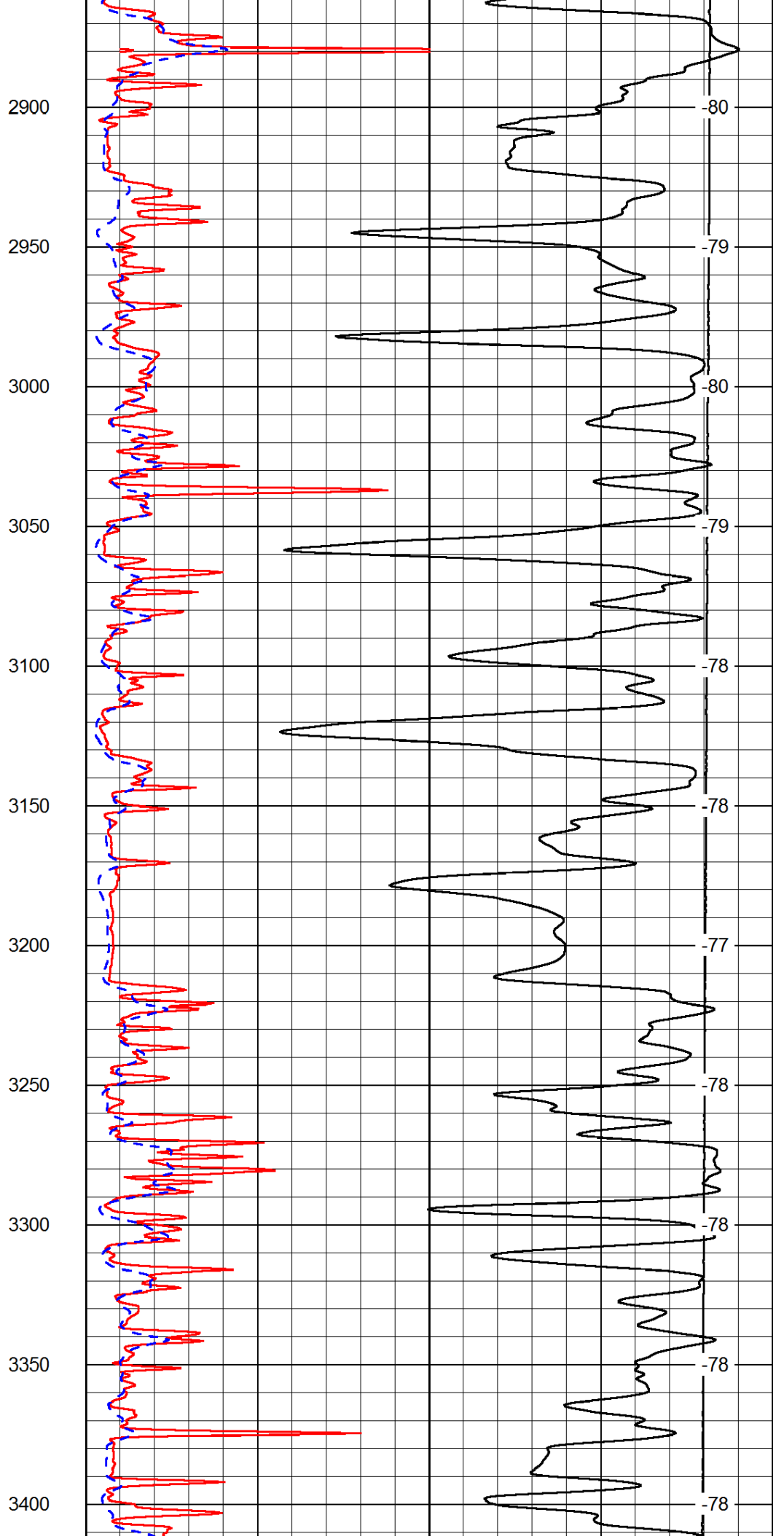
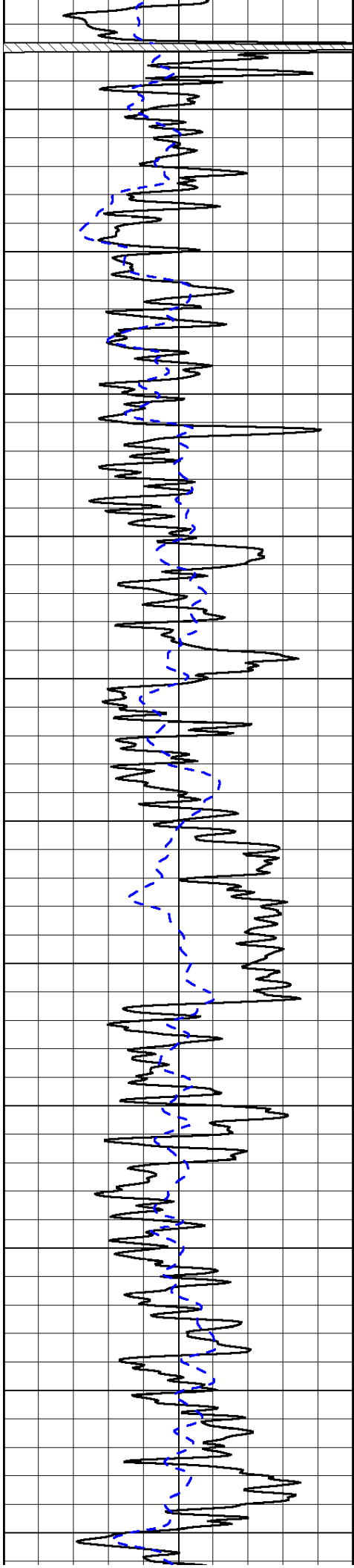


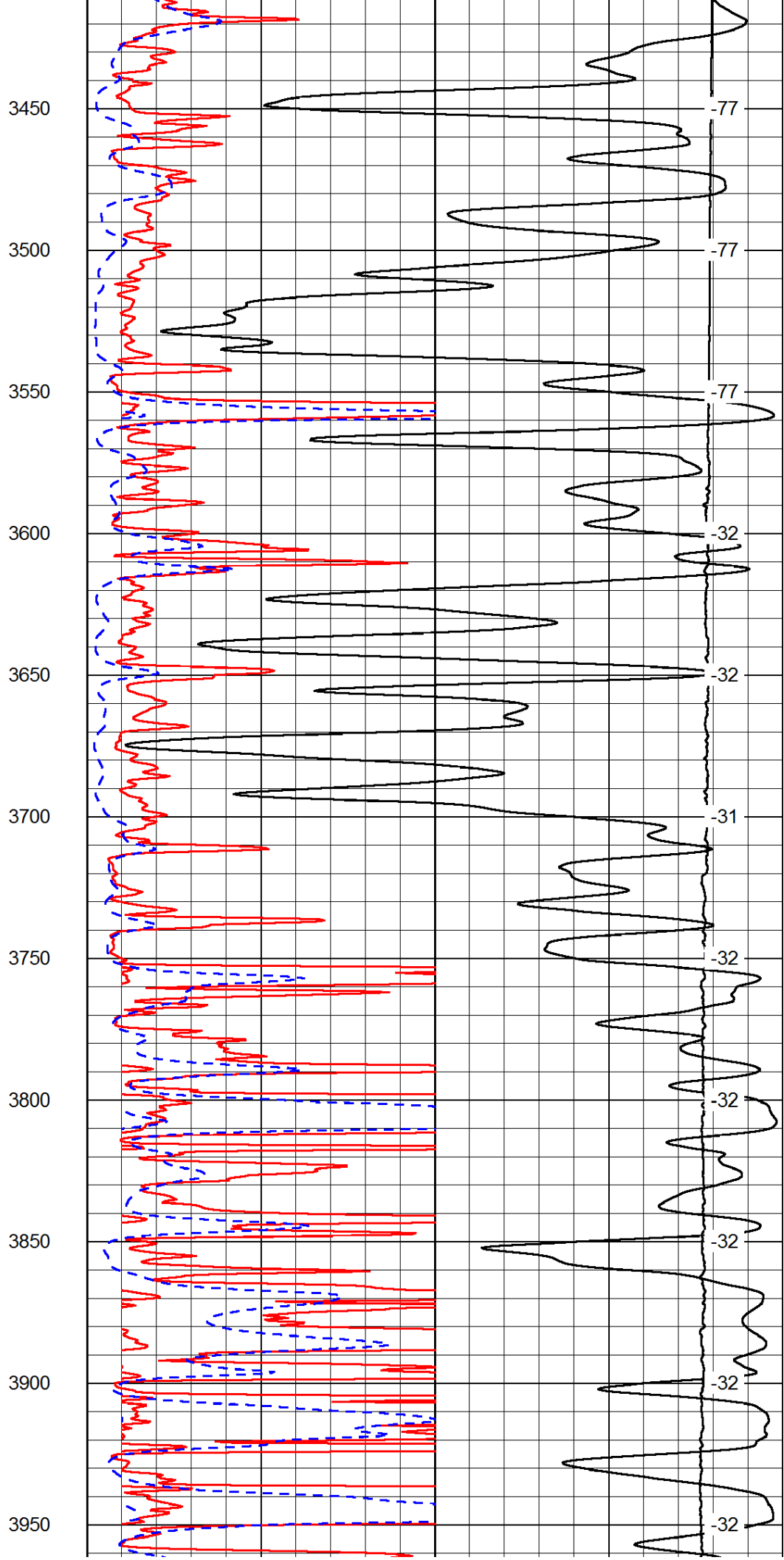
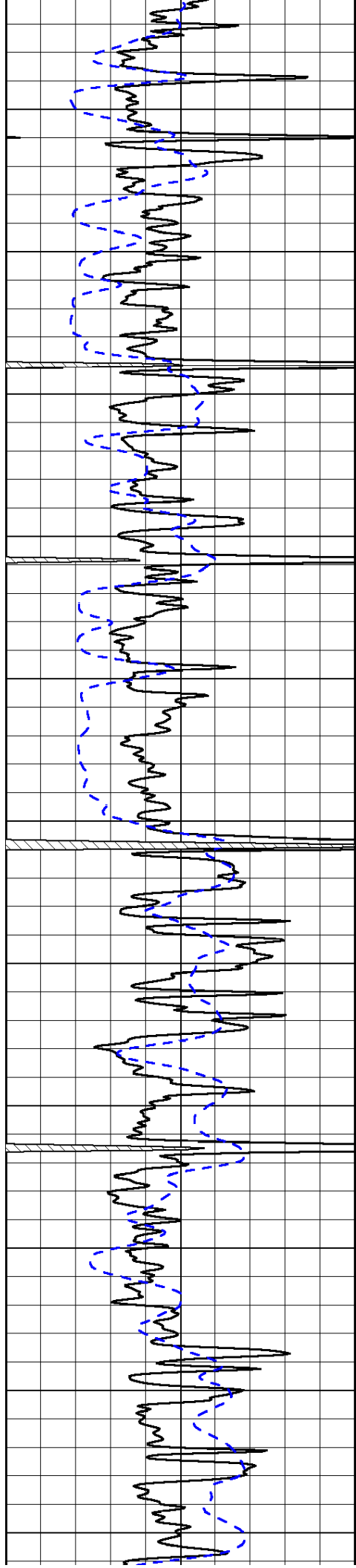


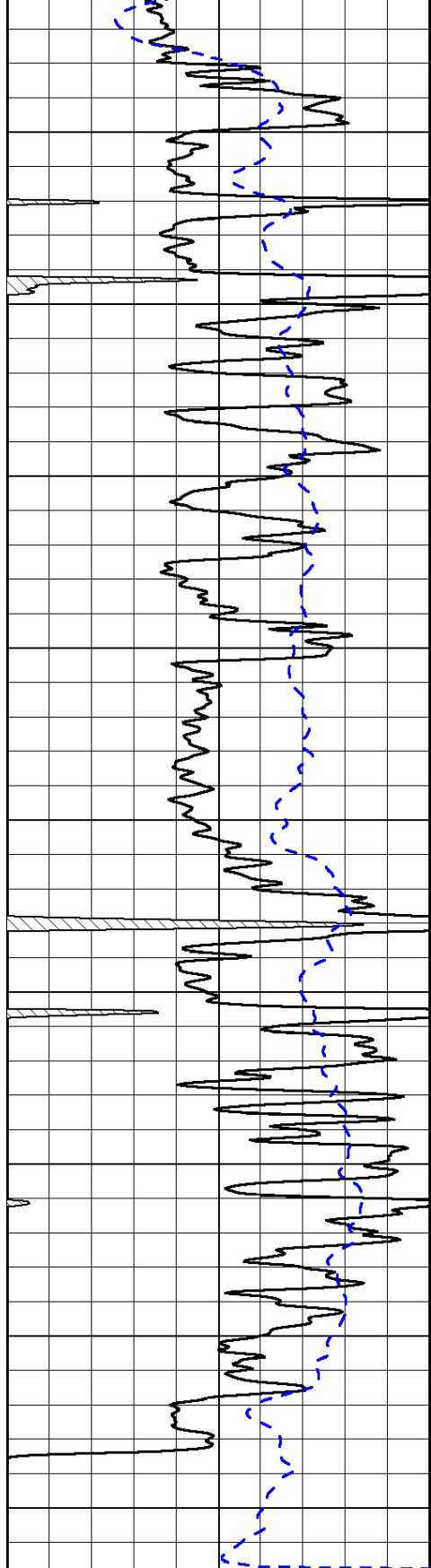




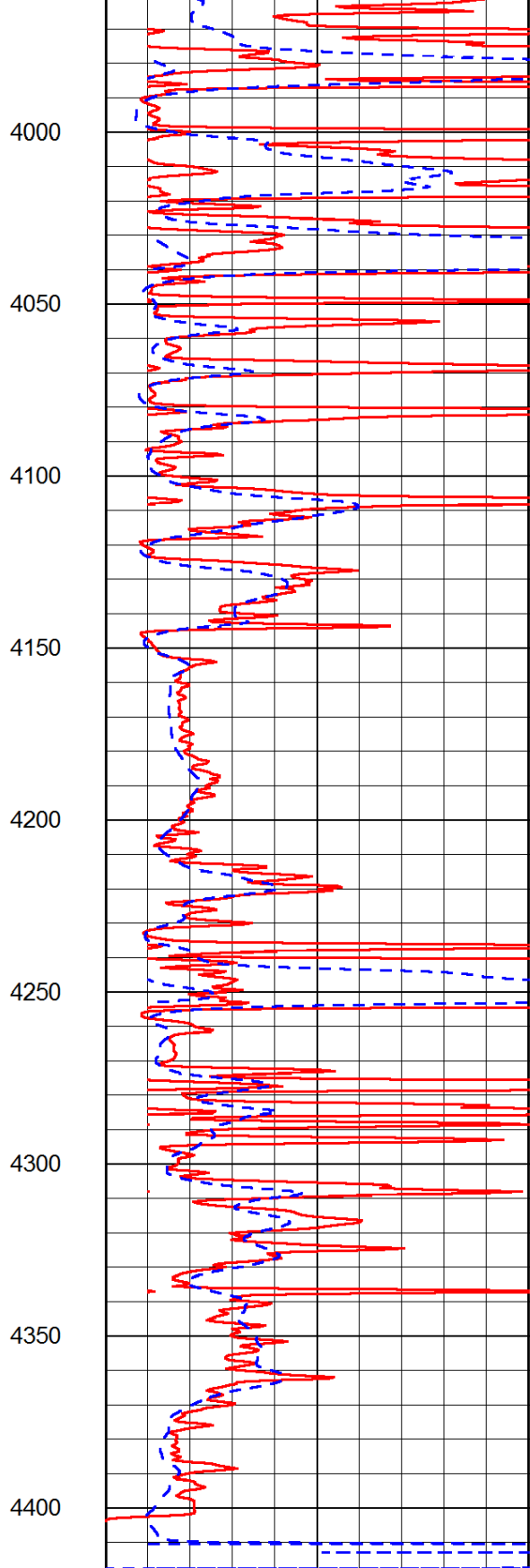






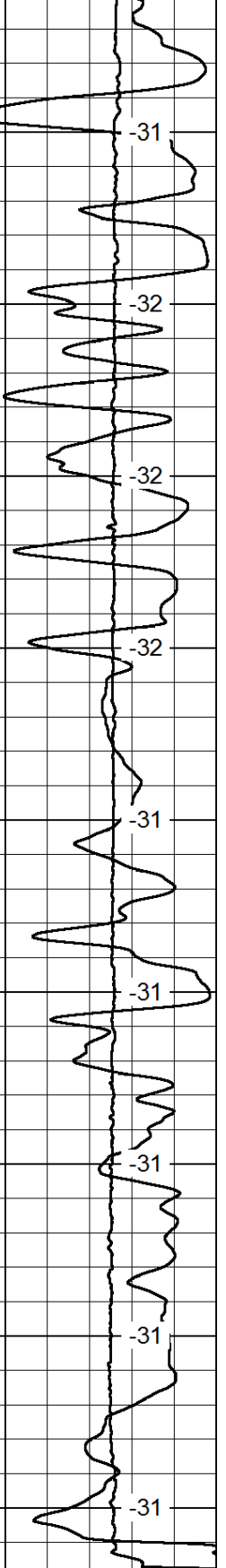


0      Gamma Ray      150  
 -200      SP (mV)      0



0      Shallow Resistivity      50  
 0      Deep Resistivity      50  
 1000      Conductivity      0  
 15000      Line Tension      0

50      Shallow Resistivity      50  
 50      Deep Resistivity      50



LSPD

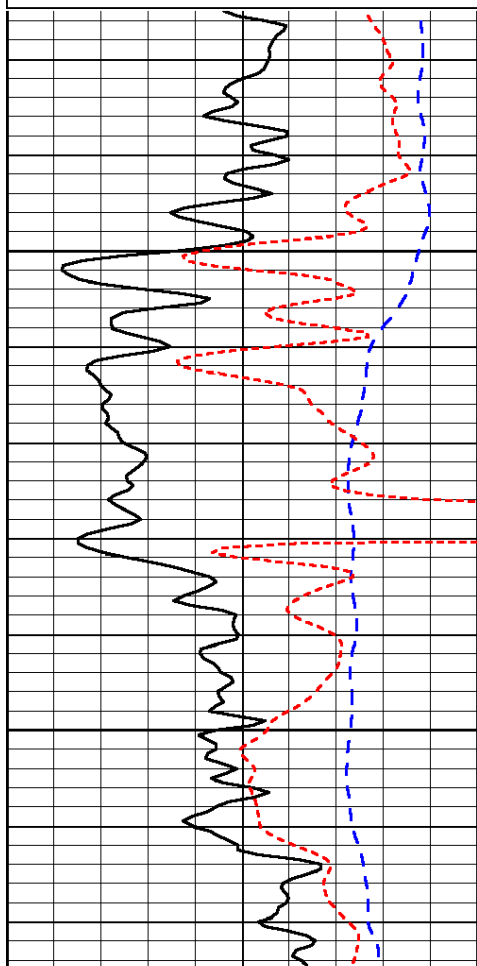


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 Presentation Format: dil  
 Dataset Creation: Thu Jan 23 00:49:45 2014  
 Charted by: Depth in Feet scaled 1:240

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-200	SP (mV)	0
-160	RxoRt	40

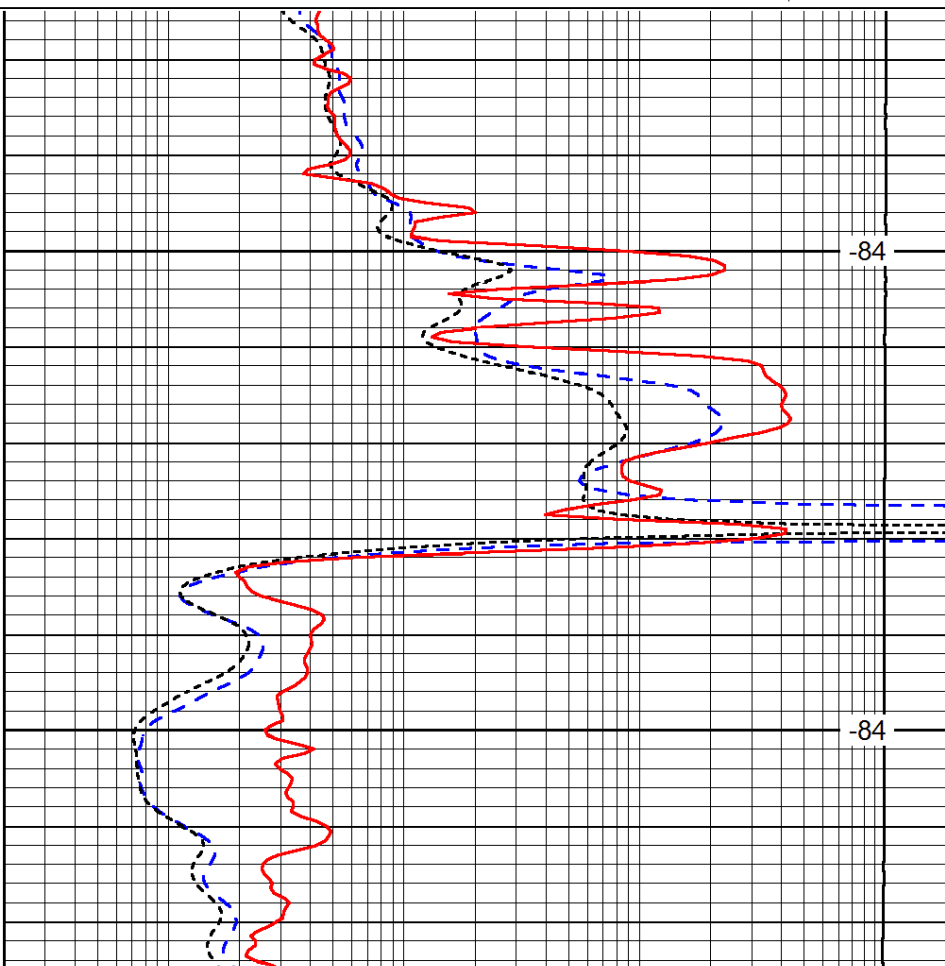
0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
15000	Line Tension	0

LSPD



1500

1550



-84

-84

0	Gamma Ray	150
-200	SP (mV)	0
-160	RxoRt	40

0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
15000	Line Tension	0

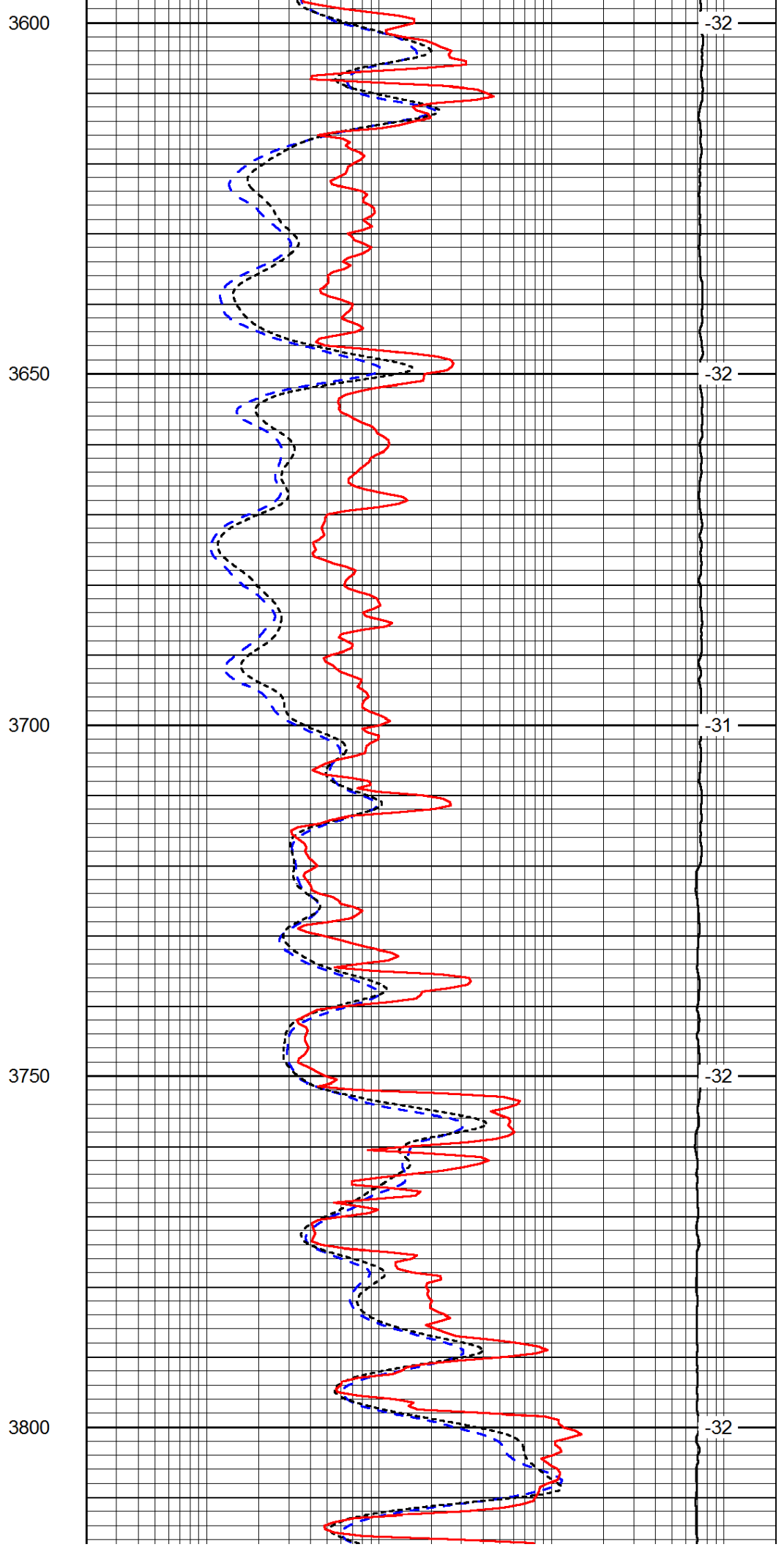
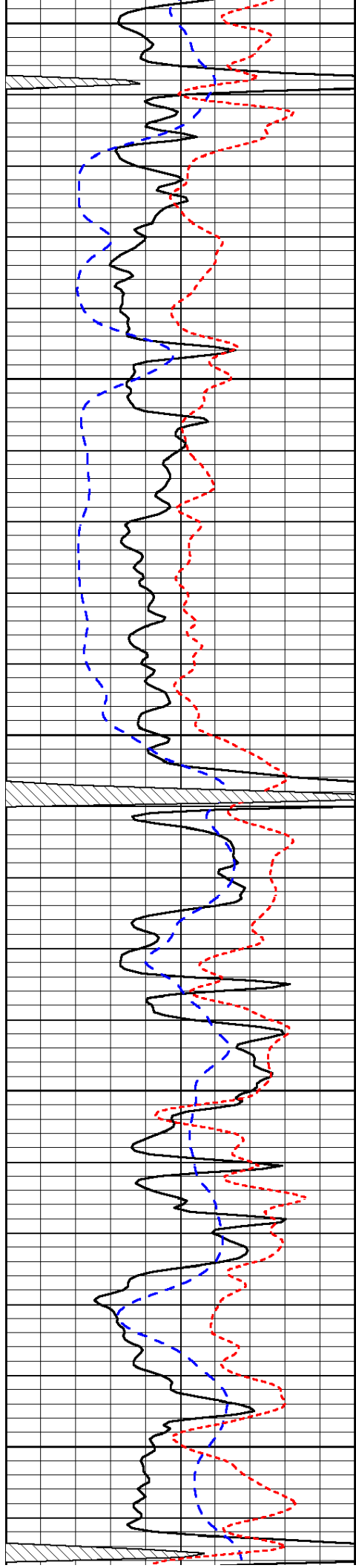
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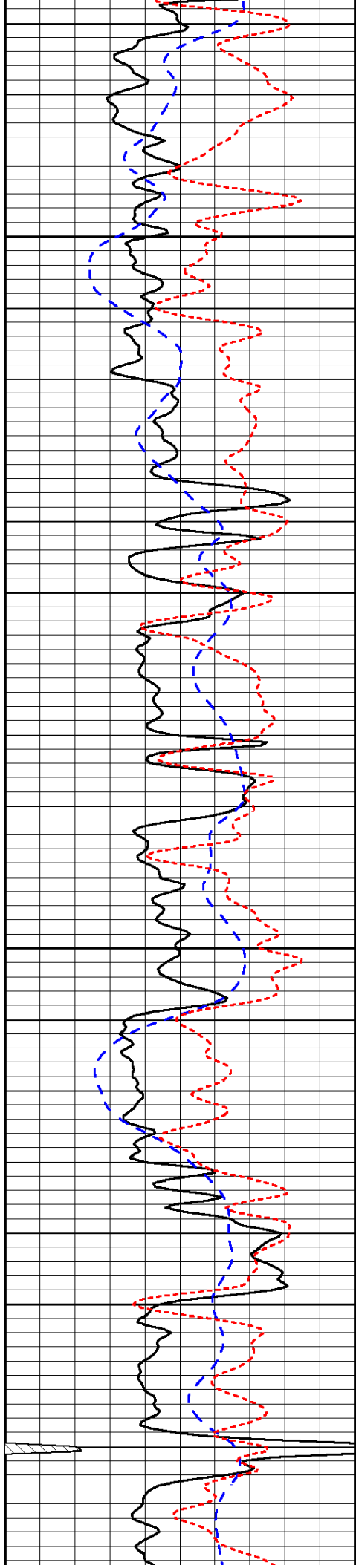
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 Charted by: Depth in Feet scaled 1:240

0	Gamma Ray	150
-200	SP (mV)	0
-160	RxoRt	40

0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
15000	Line Tension	0

LSPD



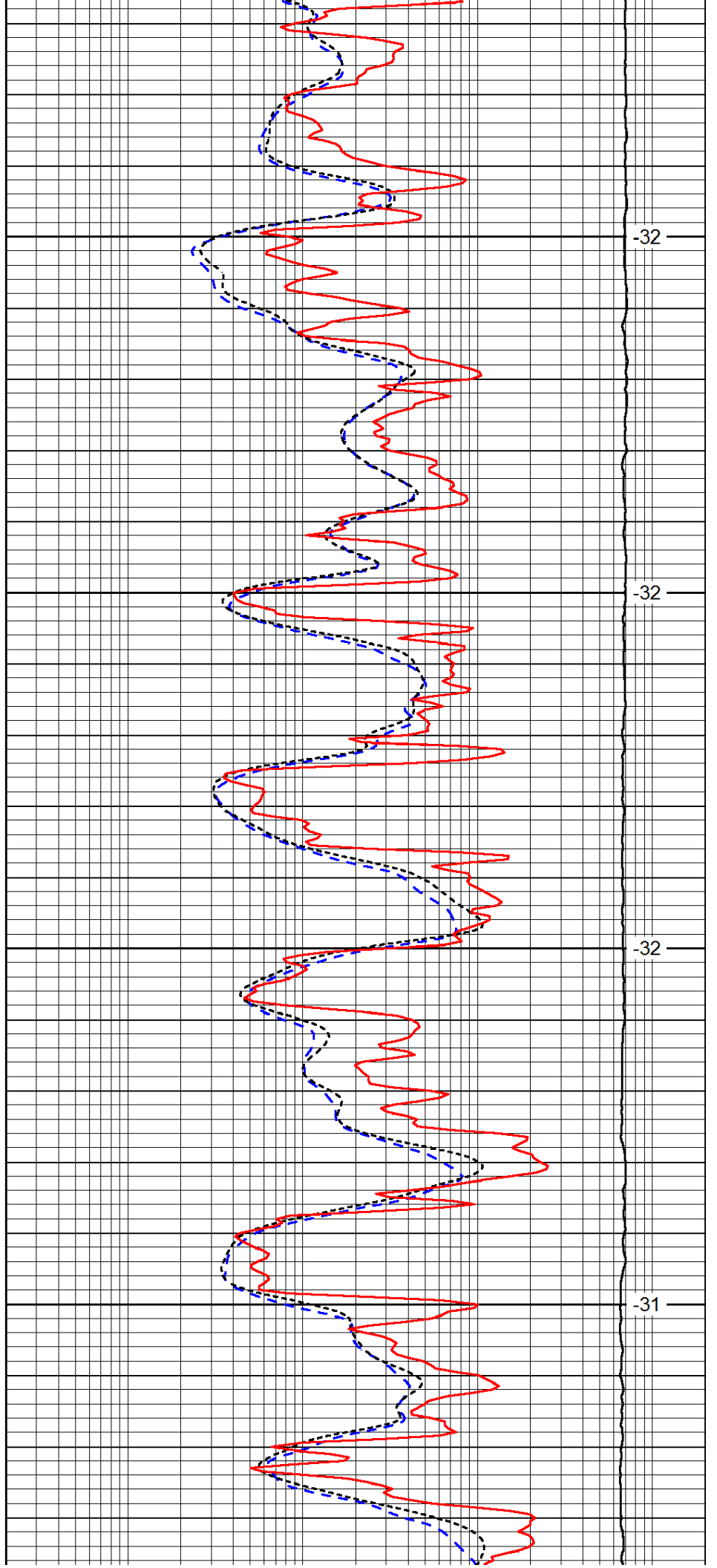


3850

3900

3950

4000

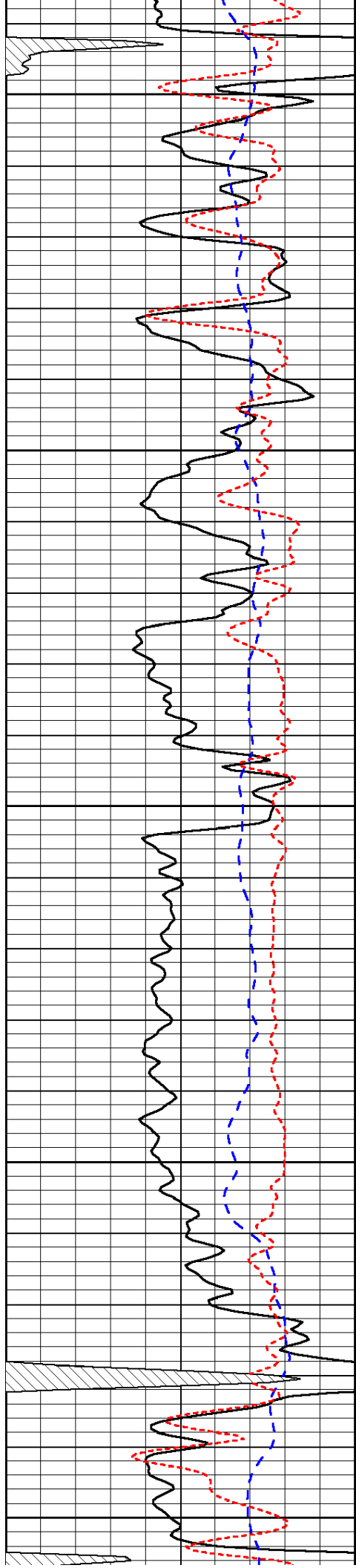


-32

-32

-32

-31



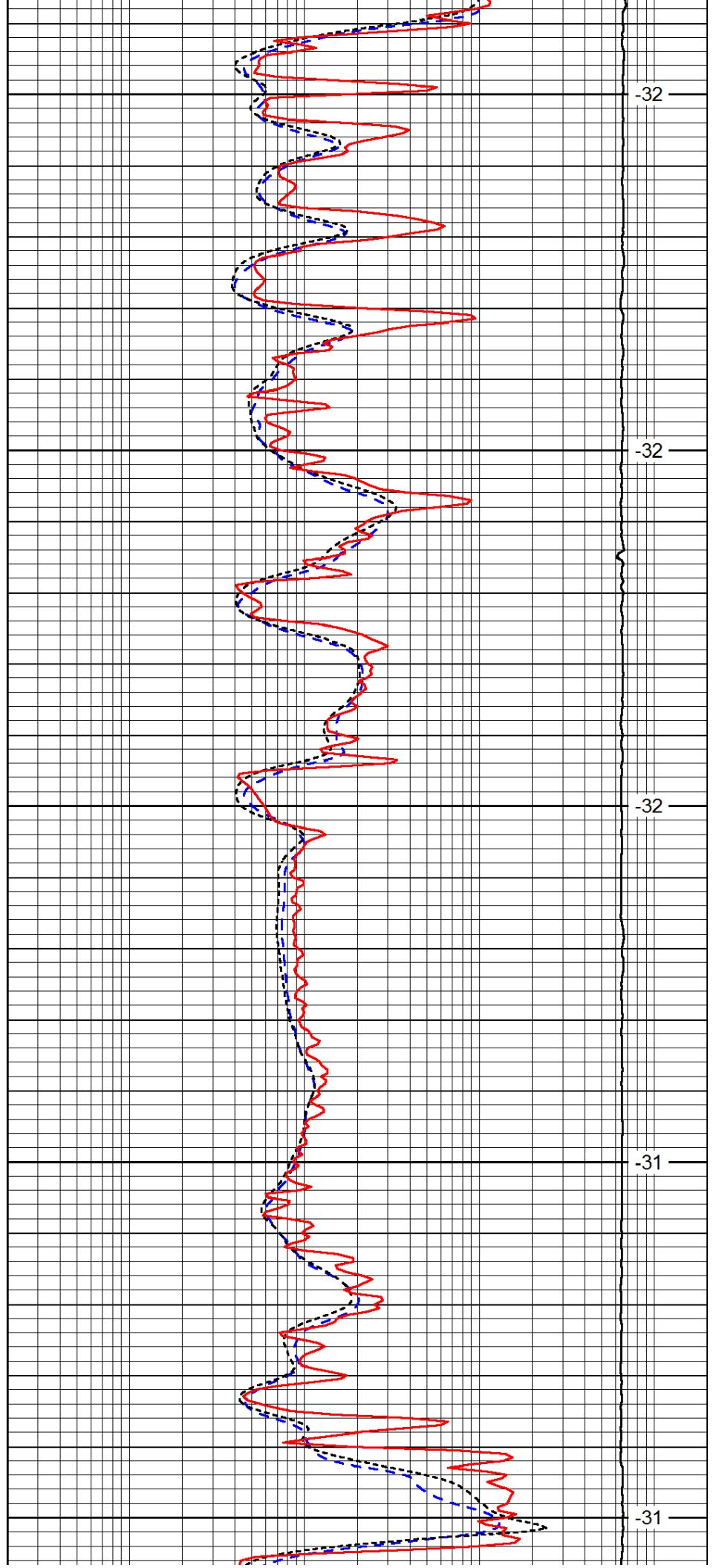
4050

4100

4150

4200

4250



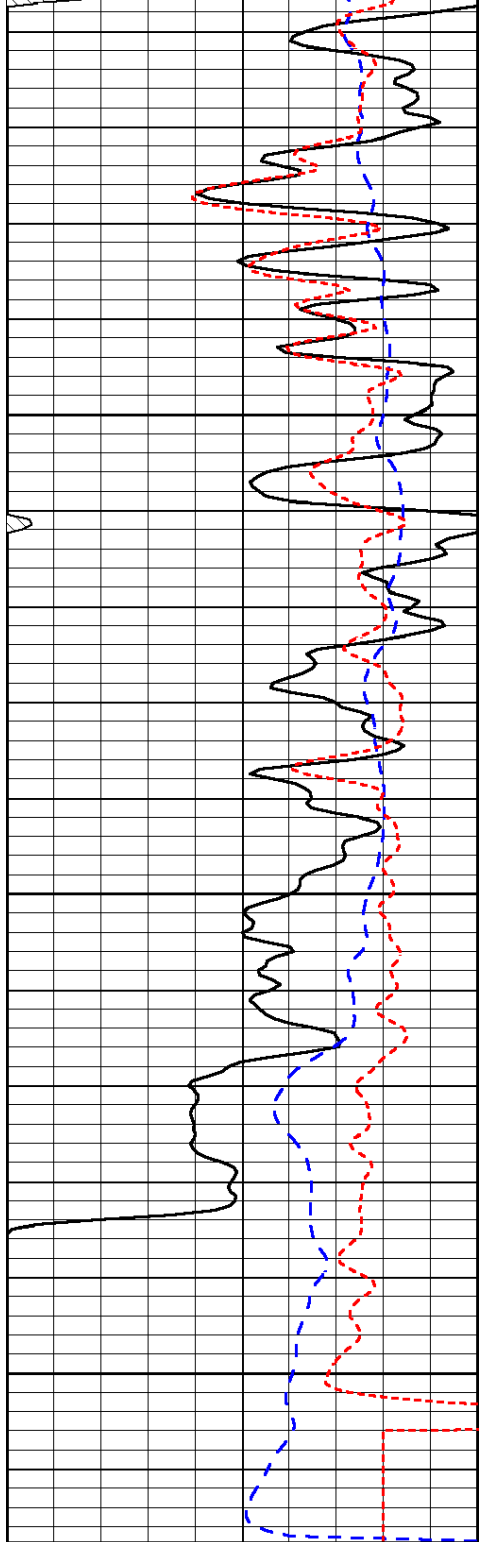
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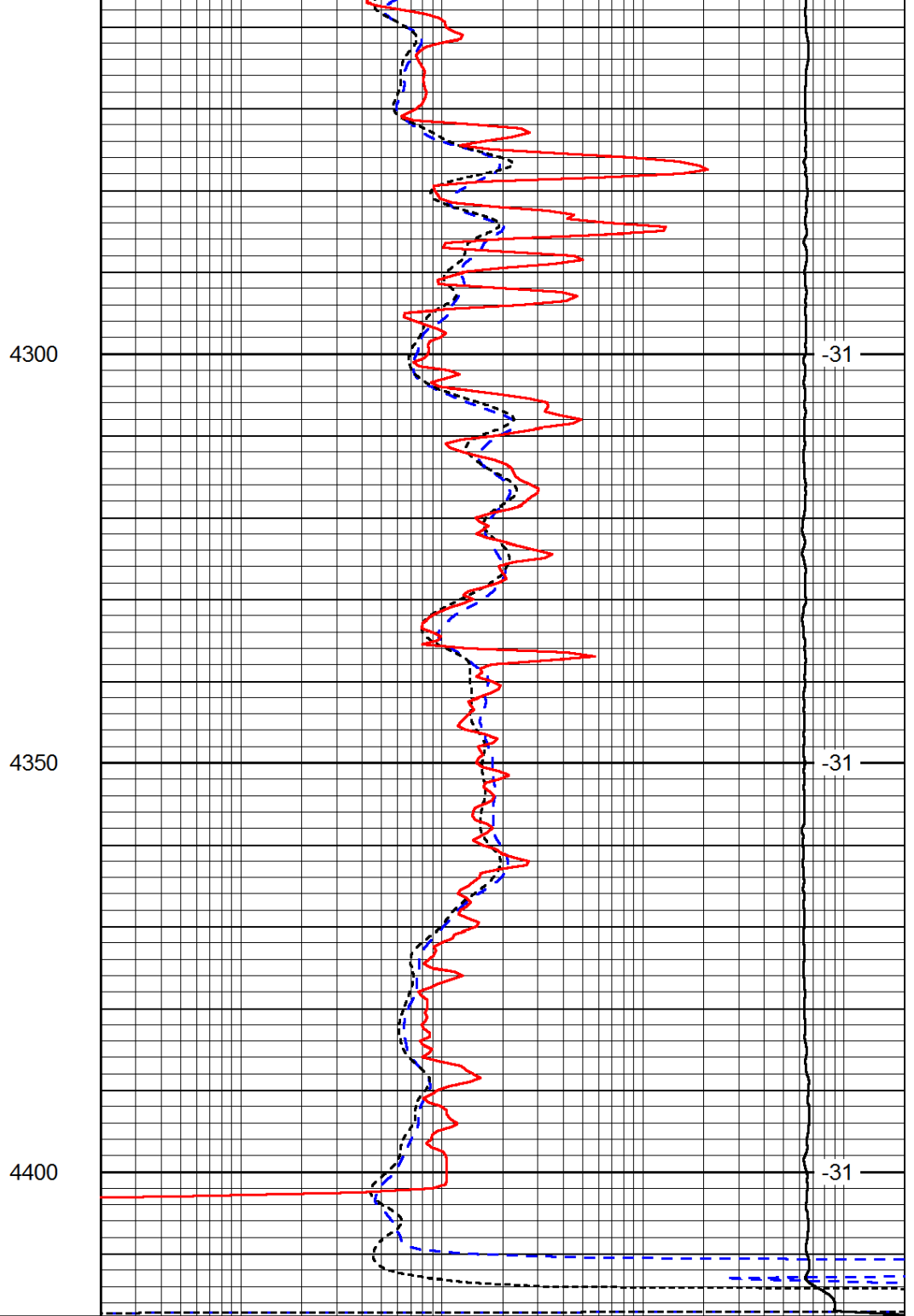
-32

-31

-31



0	Gamma Ray	150
-200	SP (mV)	0
-160	RxoRt	40



0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
15000	Line Tension	0

LSPD