



Pioneer Energy Services

Dual Induction Log

15-145-21,747-00-00

API No.

Company **H&B Petroleum Corporation**

Well **Ashworth #1**

Field **Hurray**

County **Pawnee** State **Kansas**

Location **1615' FSL & 330' FEL**

Sec: **3** Twp: **22S** Rge: **15W**

Permanent Datum **Ground Level** Elevation **1973**

Log Measured From **Kelly Bushing** 10 Ft. Above Perm. Datum

Drilling Measured From **Kelly Bushing**

Other Services
CNL/CDL
MEL/BHCS

Elevation

K.B. 1983
D.F. 1983
G.L. 1973

Date **1/23/2014**

Run Number **One**

Depth Driller **4035**

Depth Logger **4034**

Bottom Logged Interval **4033**

Top Log Interval **950**

Casing Driller **8.625 @ 962**

Casing Logger **960**

Bit Size **7.875**

Type Fluid in Hole **Chemical**

Salinity, ppm CL **5000**

Density / Viscosity **9.1 52**

pH / Fluid Loss **8.5 9.2**

Source of Sample **Flowline**

Rm @ Meas. Temp **0.43 @ 53**

Rmf @ Meas. Temp **0.32 @ 53**

Rmc @ Meas. Temp **0.58 @ 53**

Source of Rmf / Rmc **Charts**

Rm @ BHT **0.20 @ 116**

Operating Rig Time **5 Hours**

Max Rec. Temp. F **116**

Equipment Number **15**

Location **Hays**

Recorded By **D.Kerr**

Witnessed By **Jim Musgrove**

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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

Larned KS, East on K-19 to 30 RD,
 1/2 North, West Into

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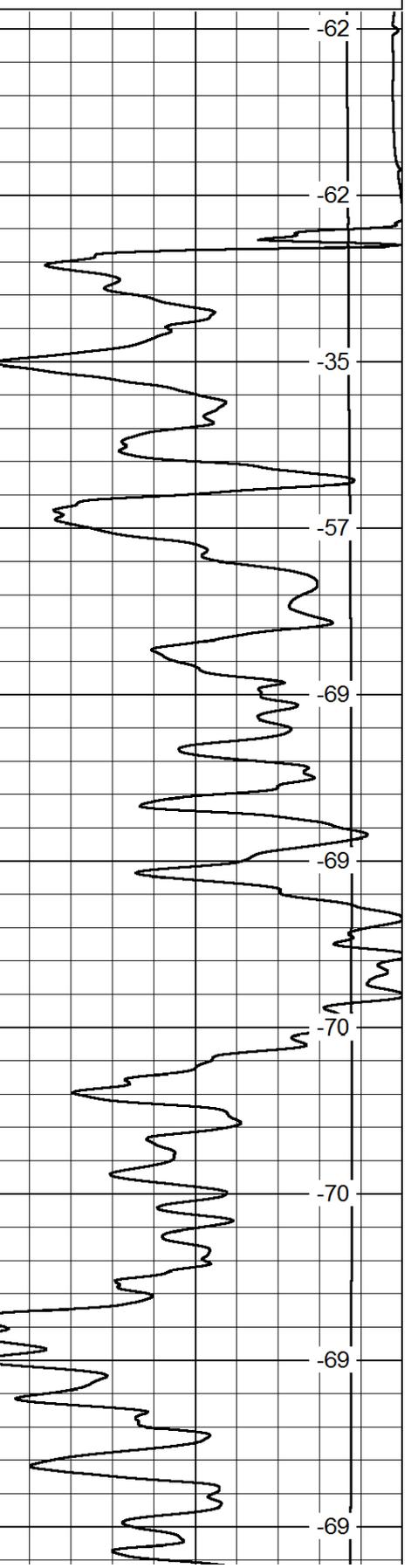
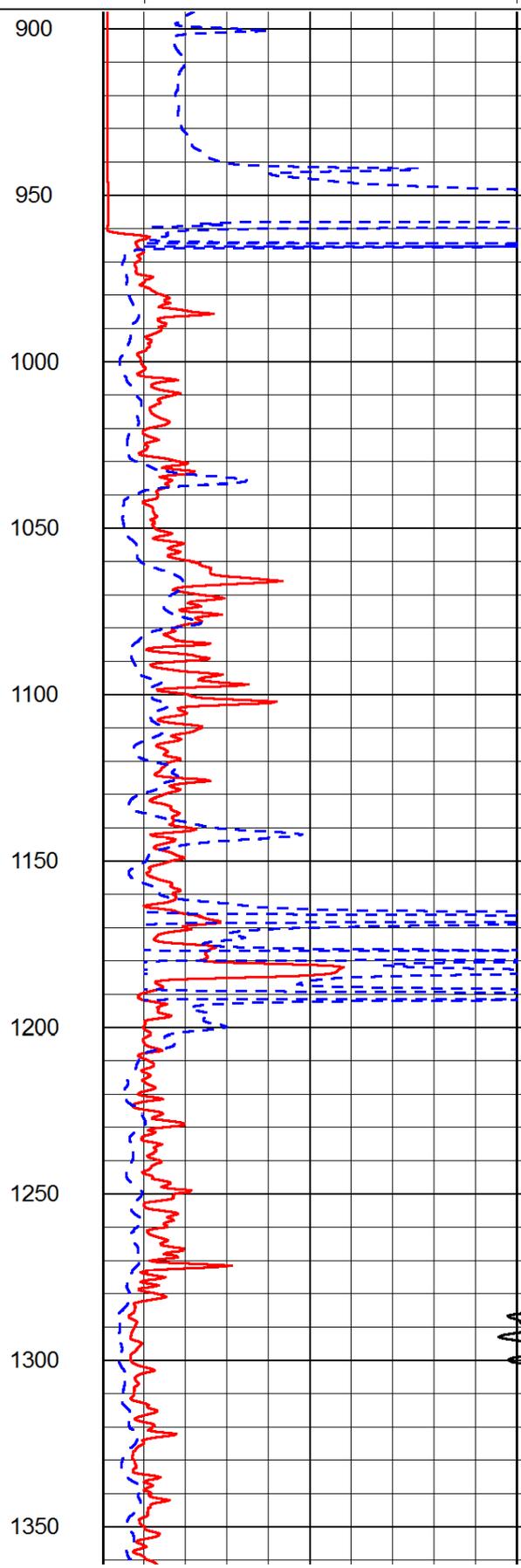
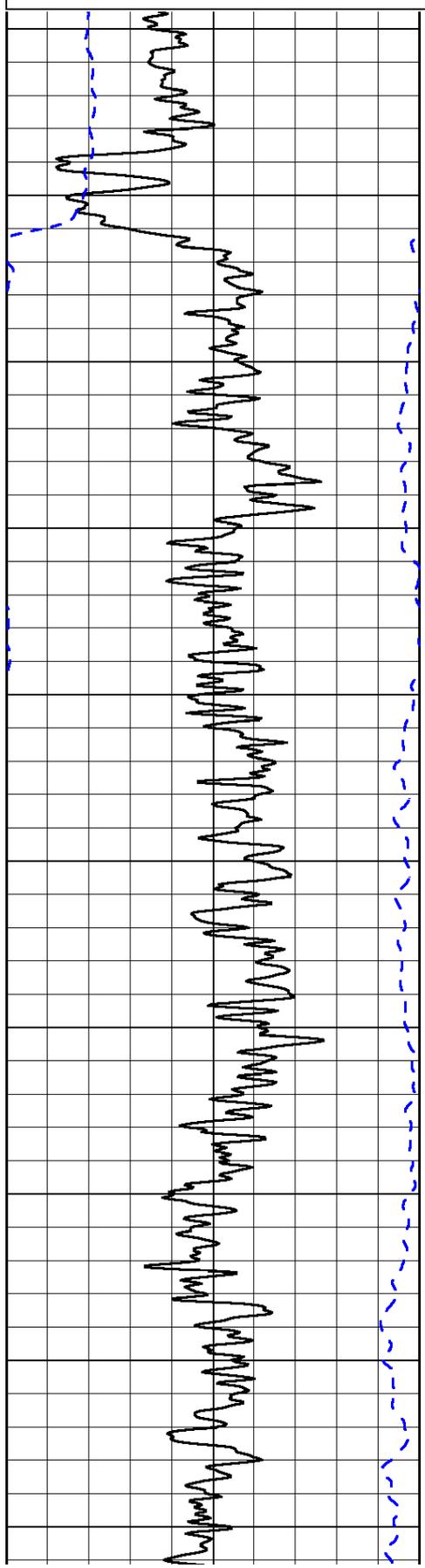
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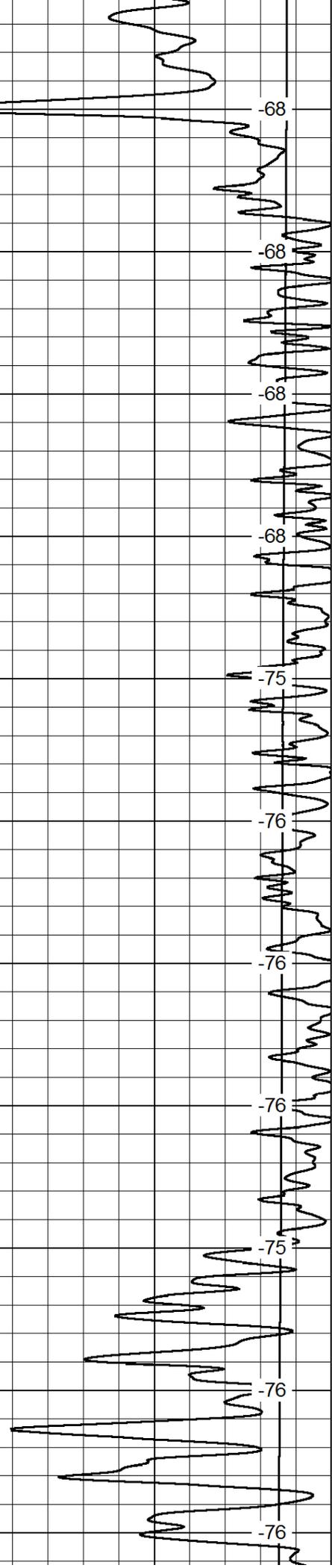
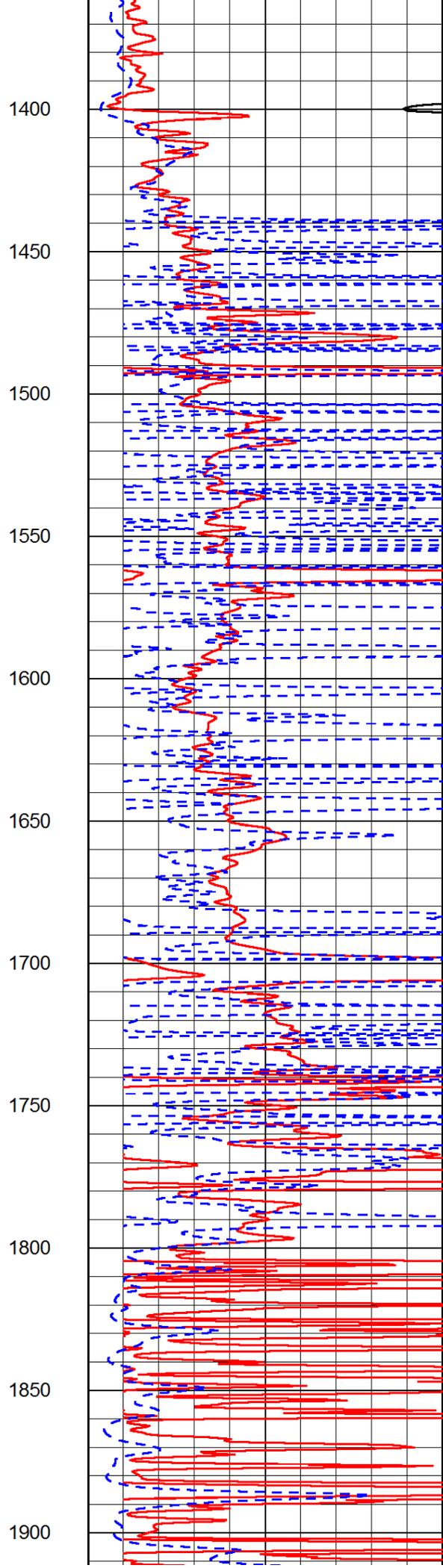
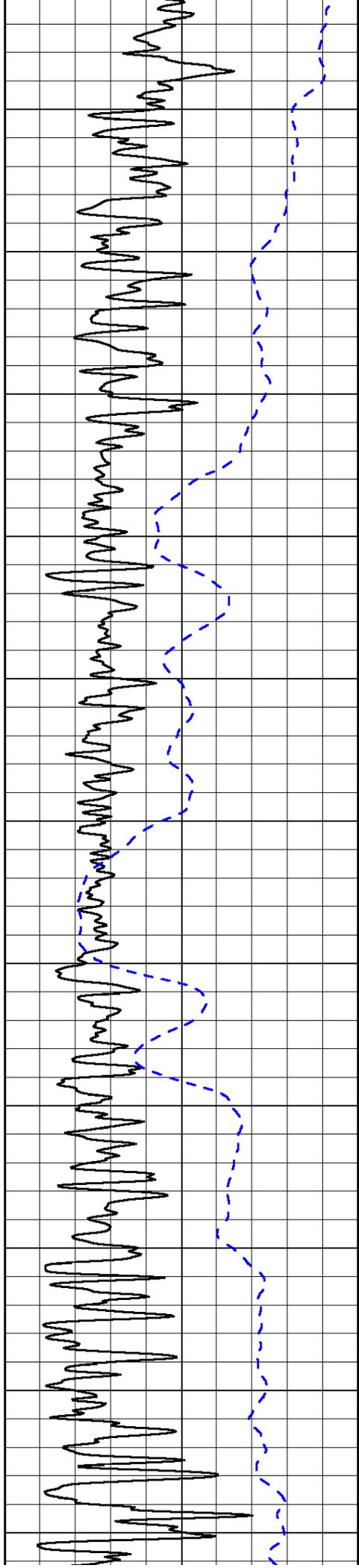
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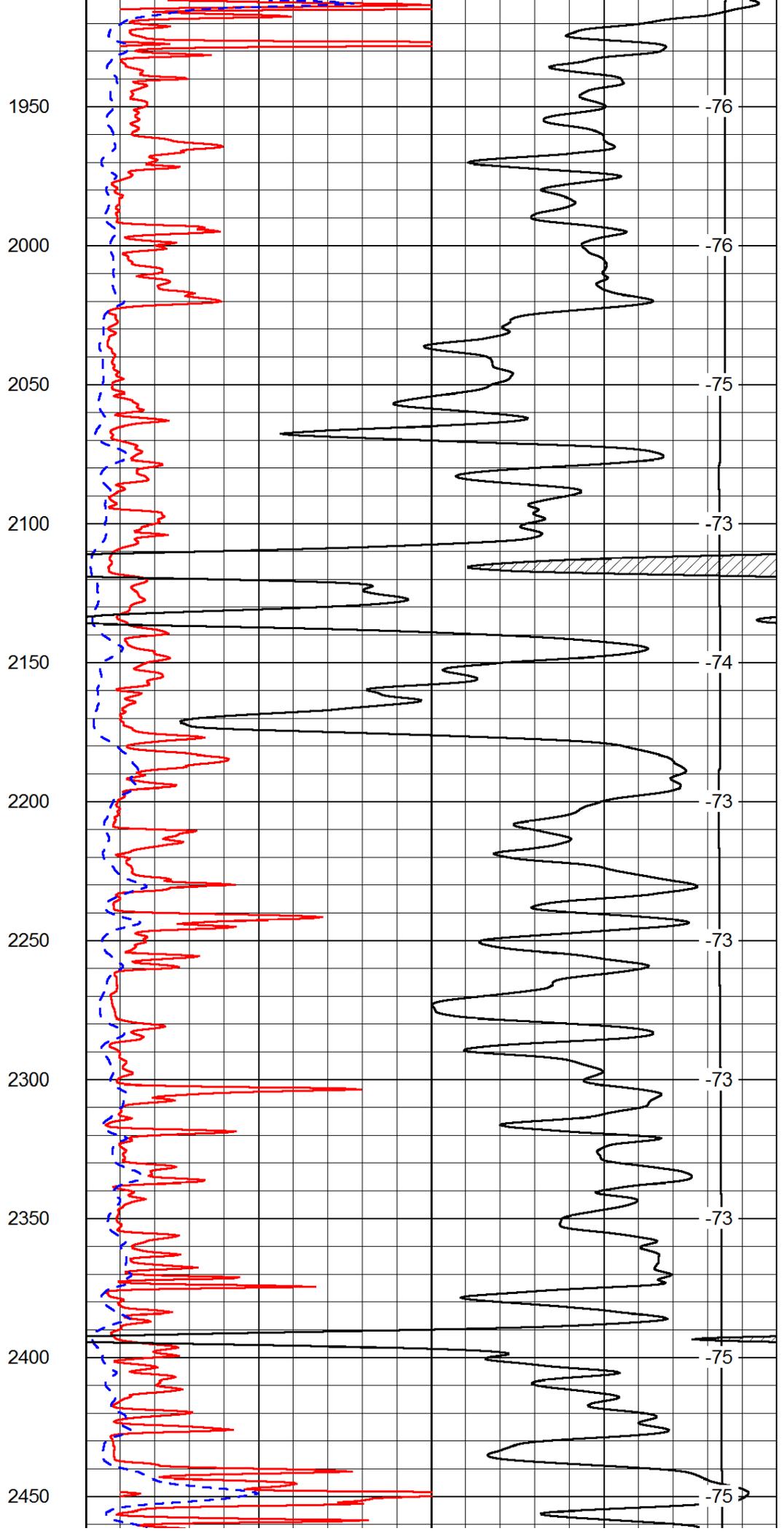
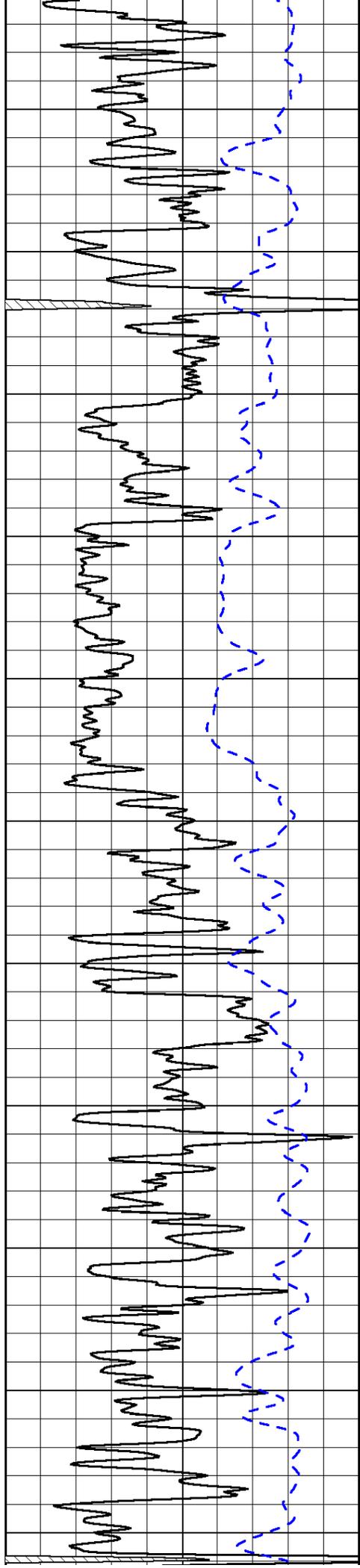
LSPD

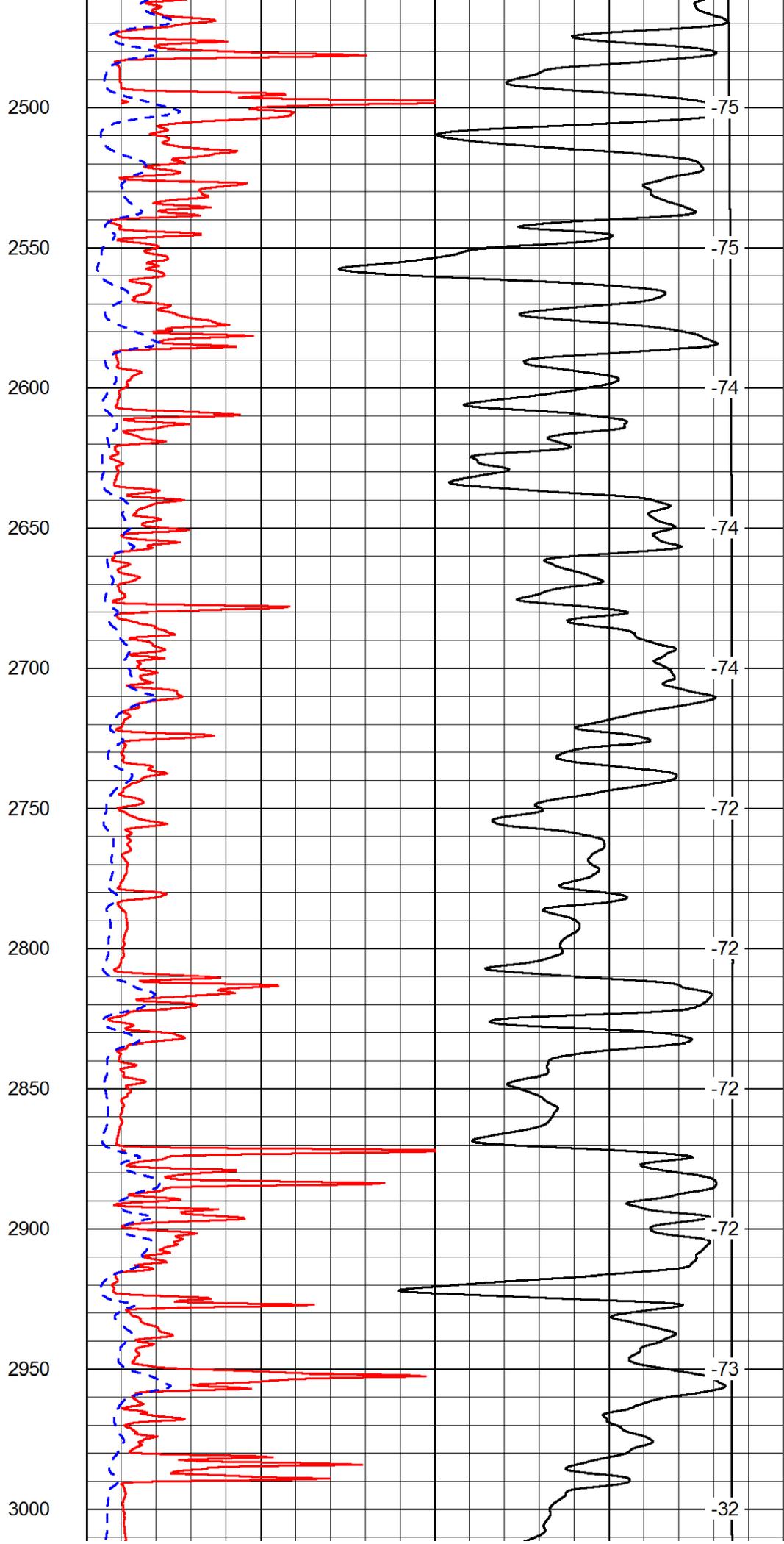
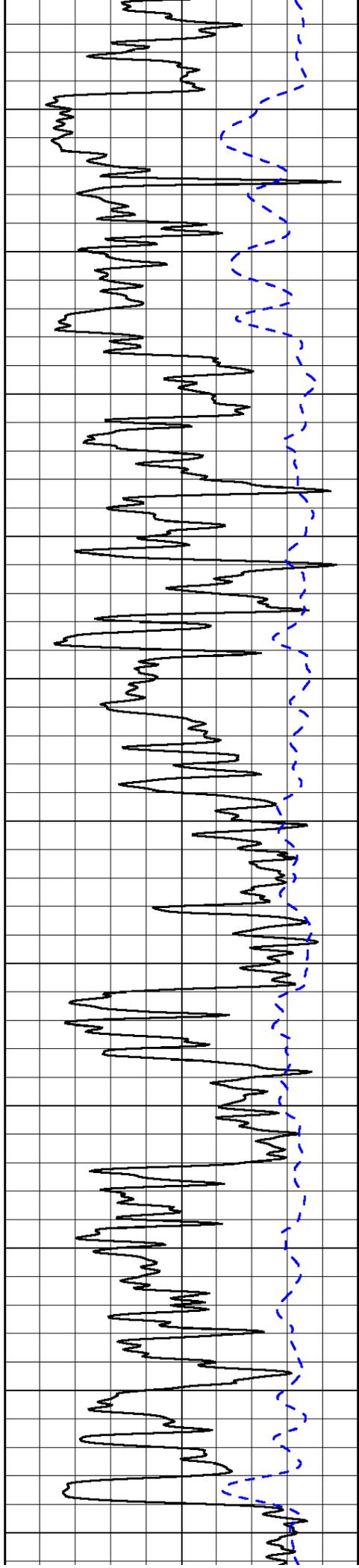
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15000	Line Tension	0

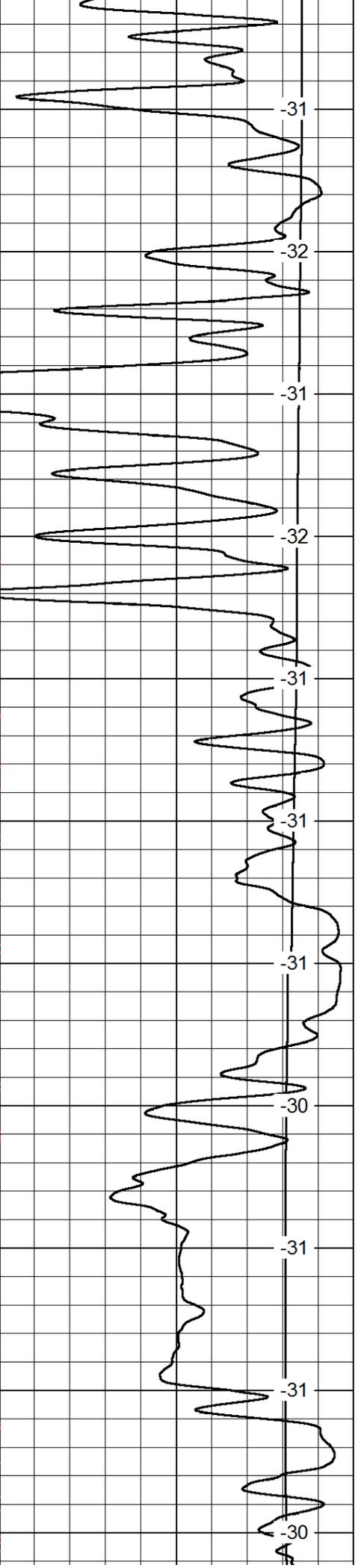
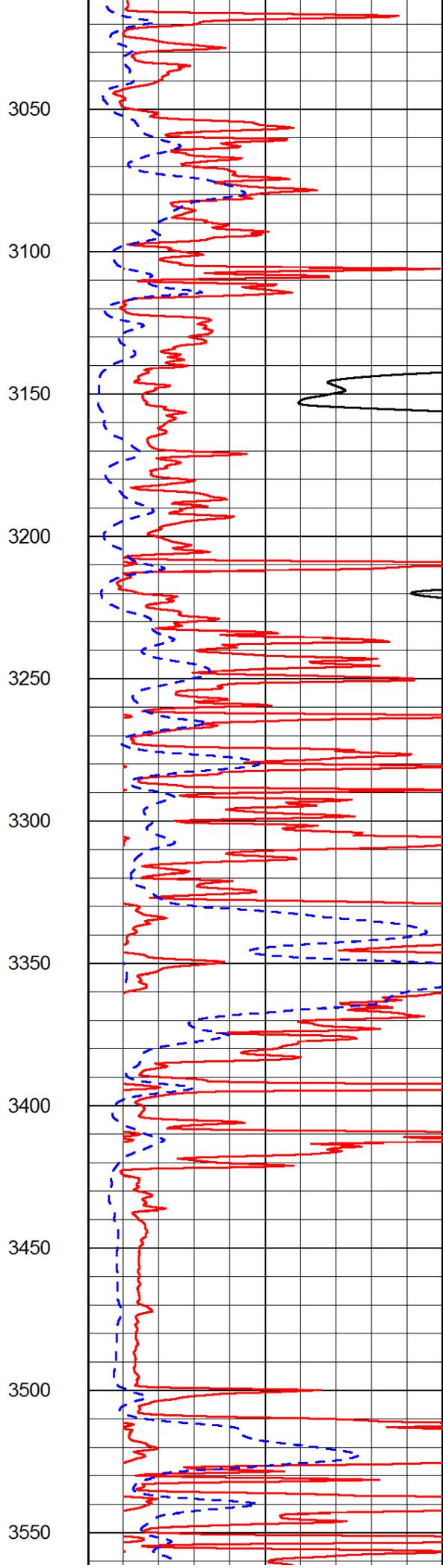
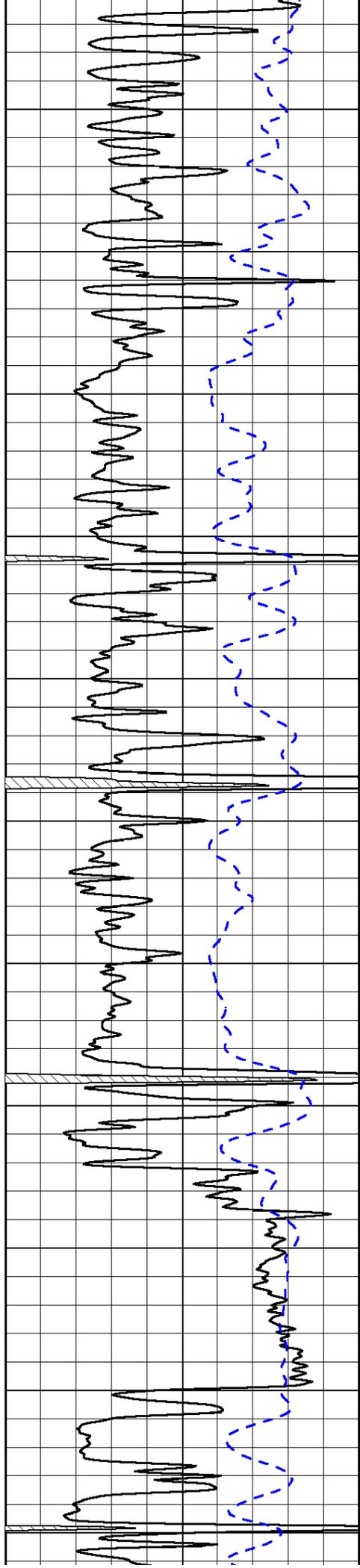
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50	Deep Resistivity	500

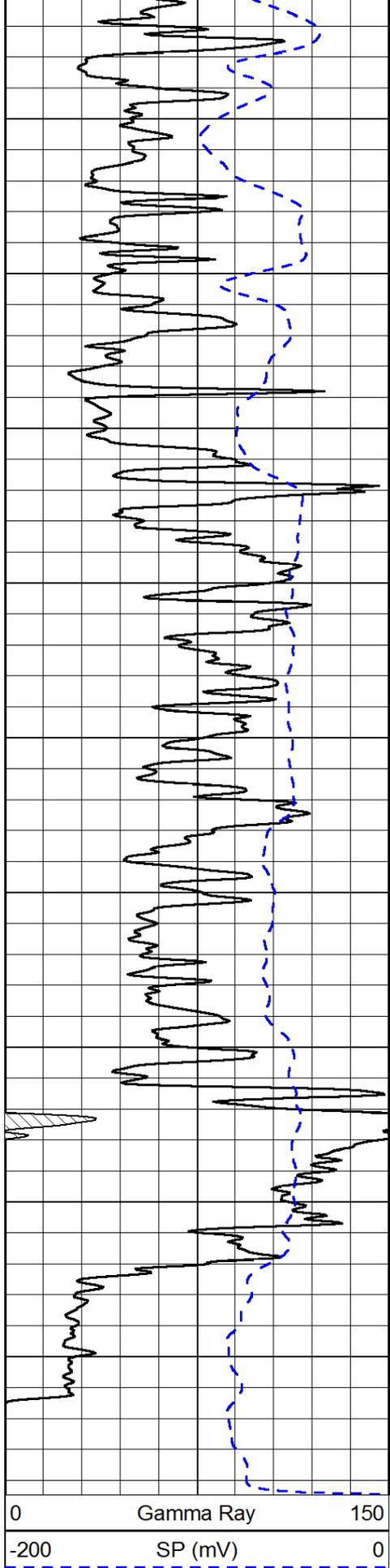




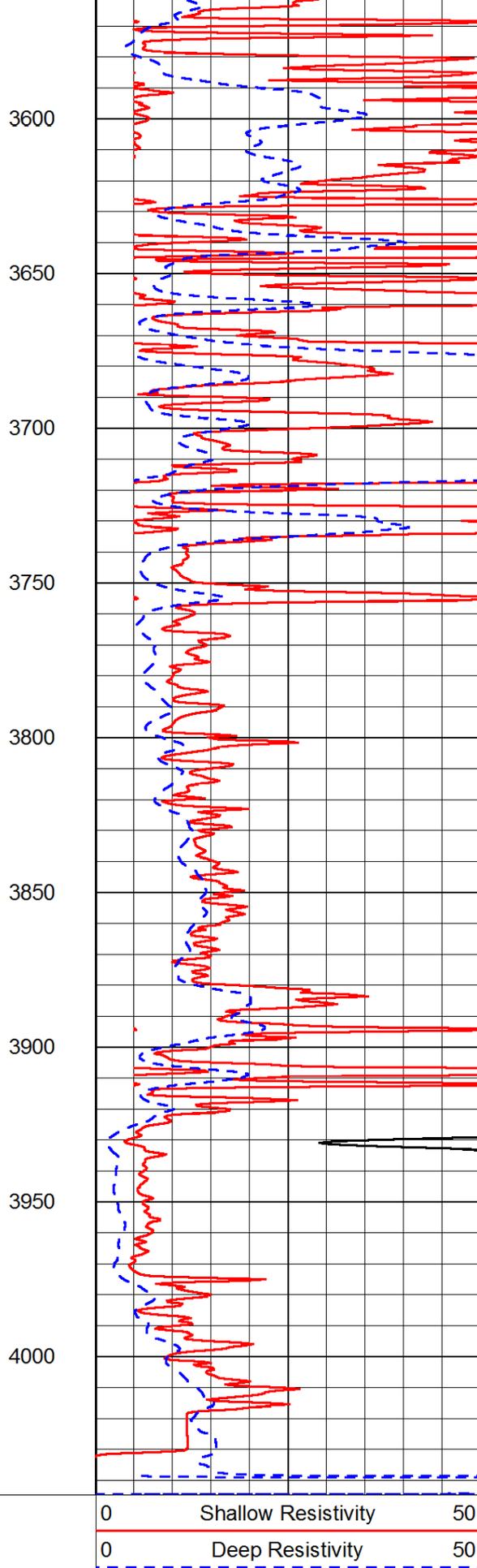




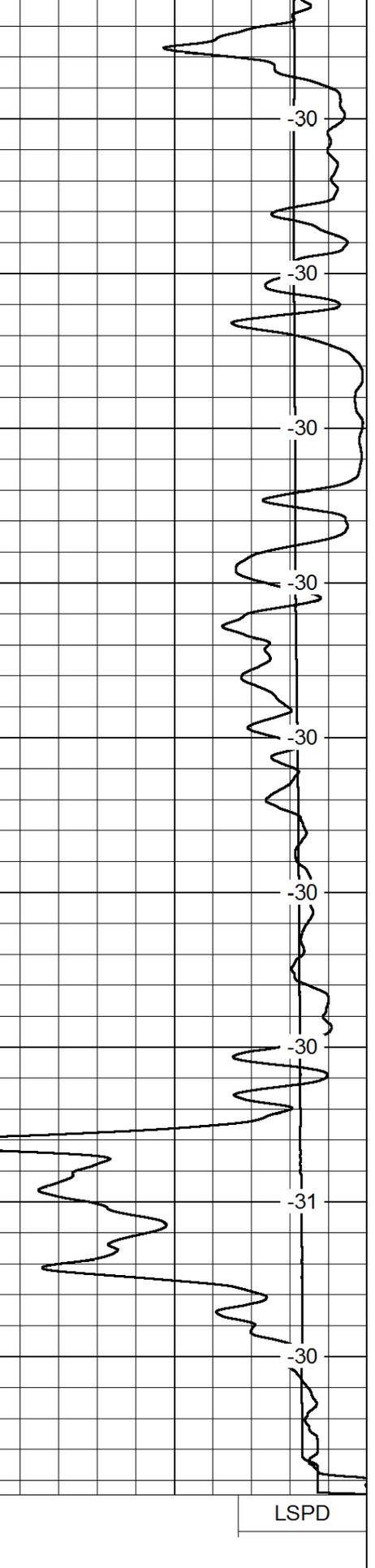




0 Gamma Ray 150
 -200 SP (mV) 0



0 Shallow Resistivity 50
 0 Deep Resistivity 50



LSPD

1000 Conductivity 0
 15000 Line Tension 0

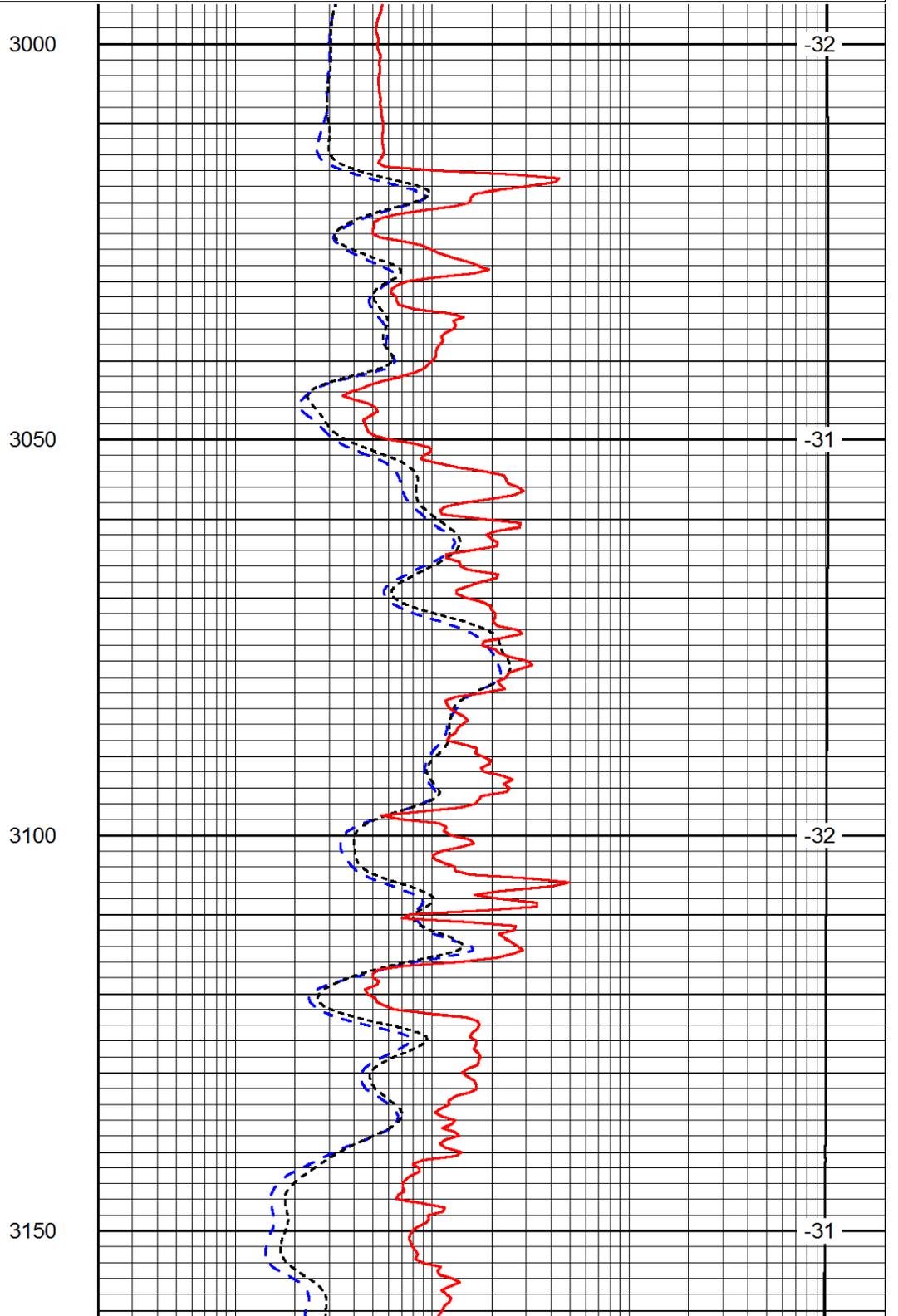
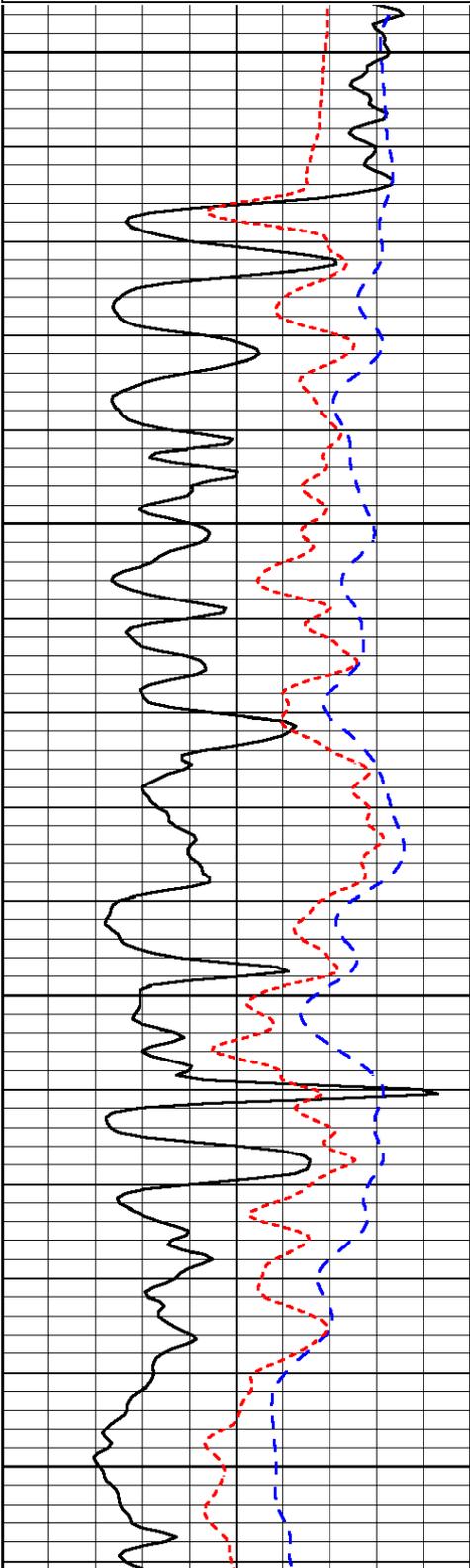
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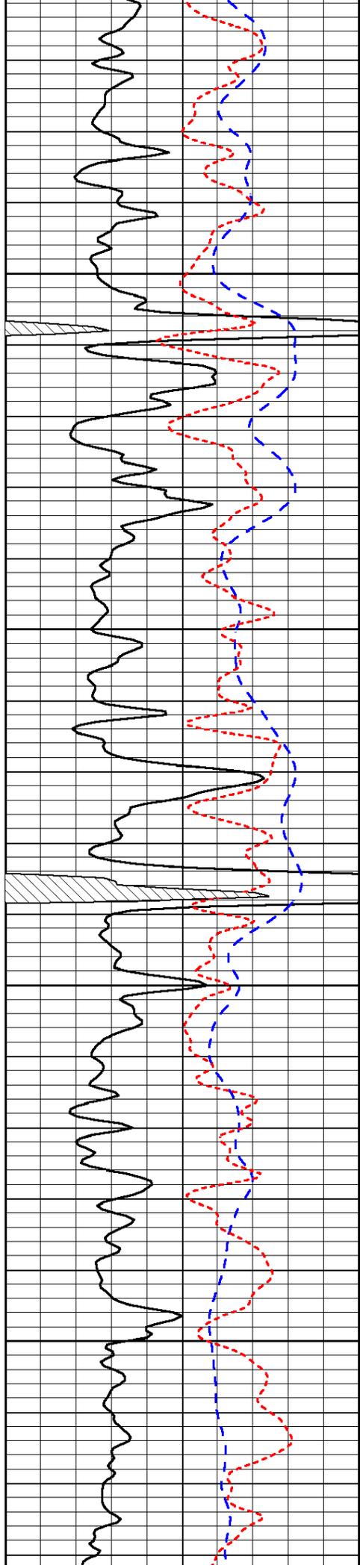
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0	Gamma Ray	150
-200	SP (mV)	0
-160	RxoRt	40

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

LSPD



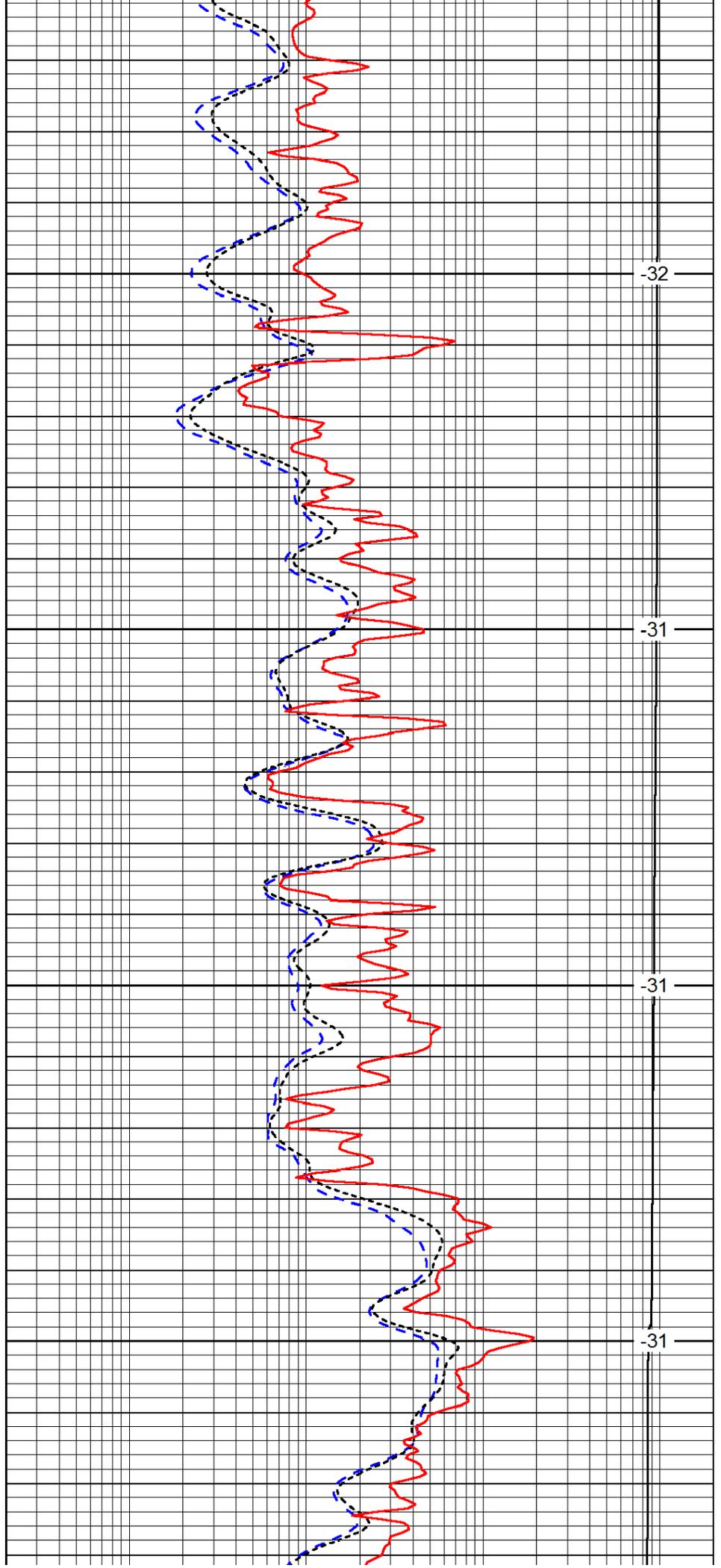


3200

3250

3300

3350

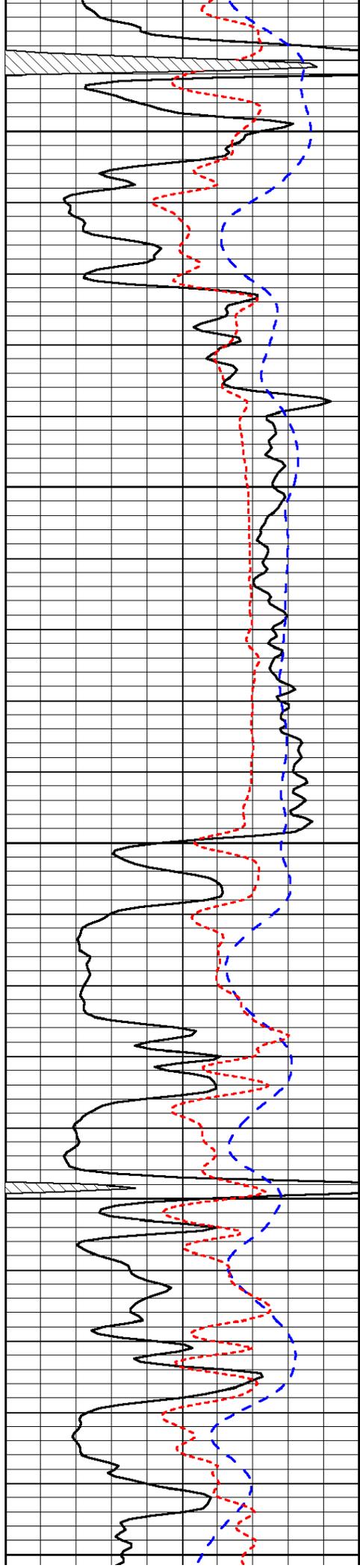


-32

-31

-31

-31



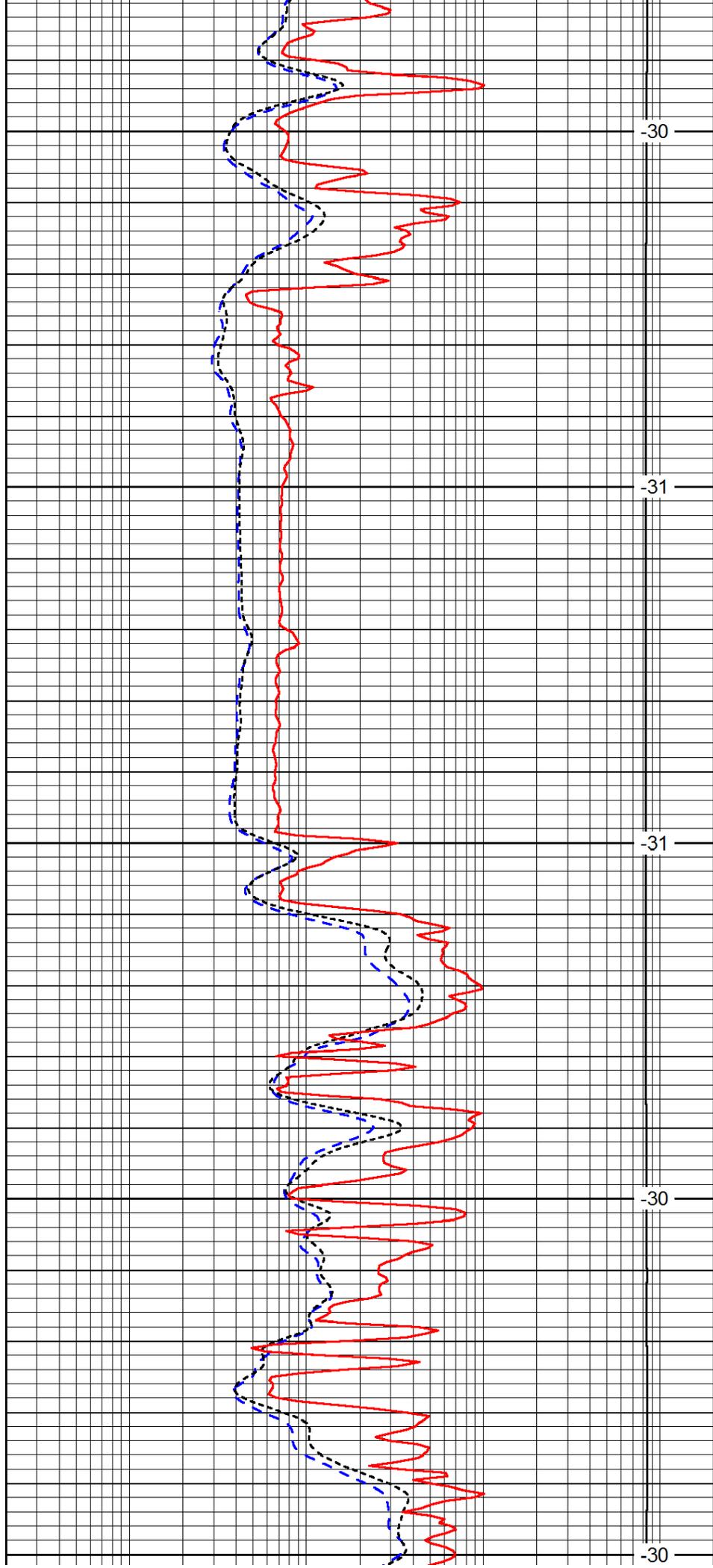
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3450

3500

3550

3600



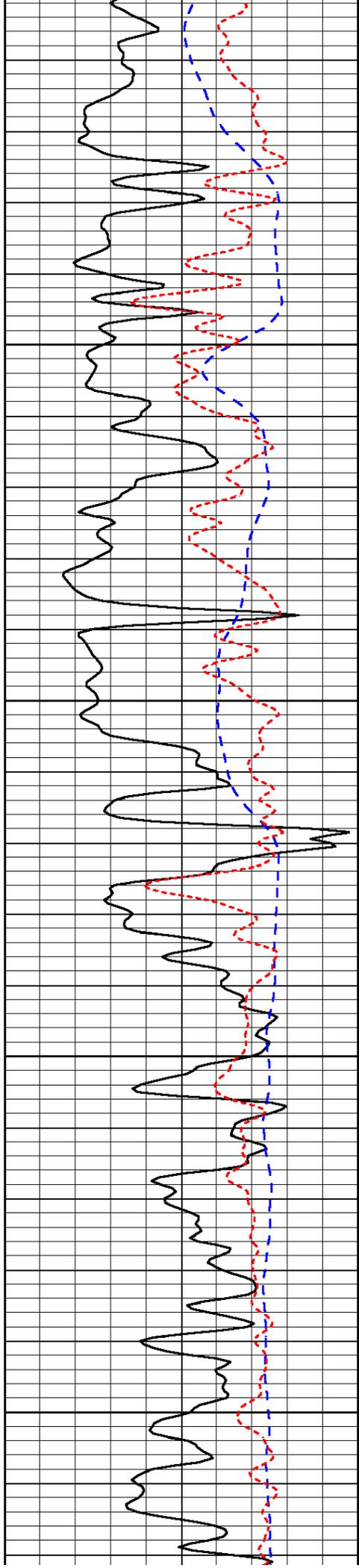
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-31

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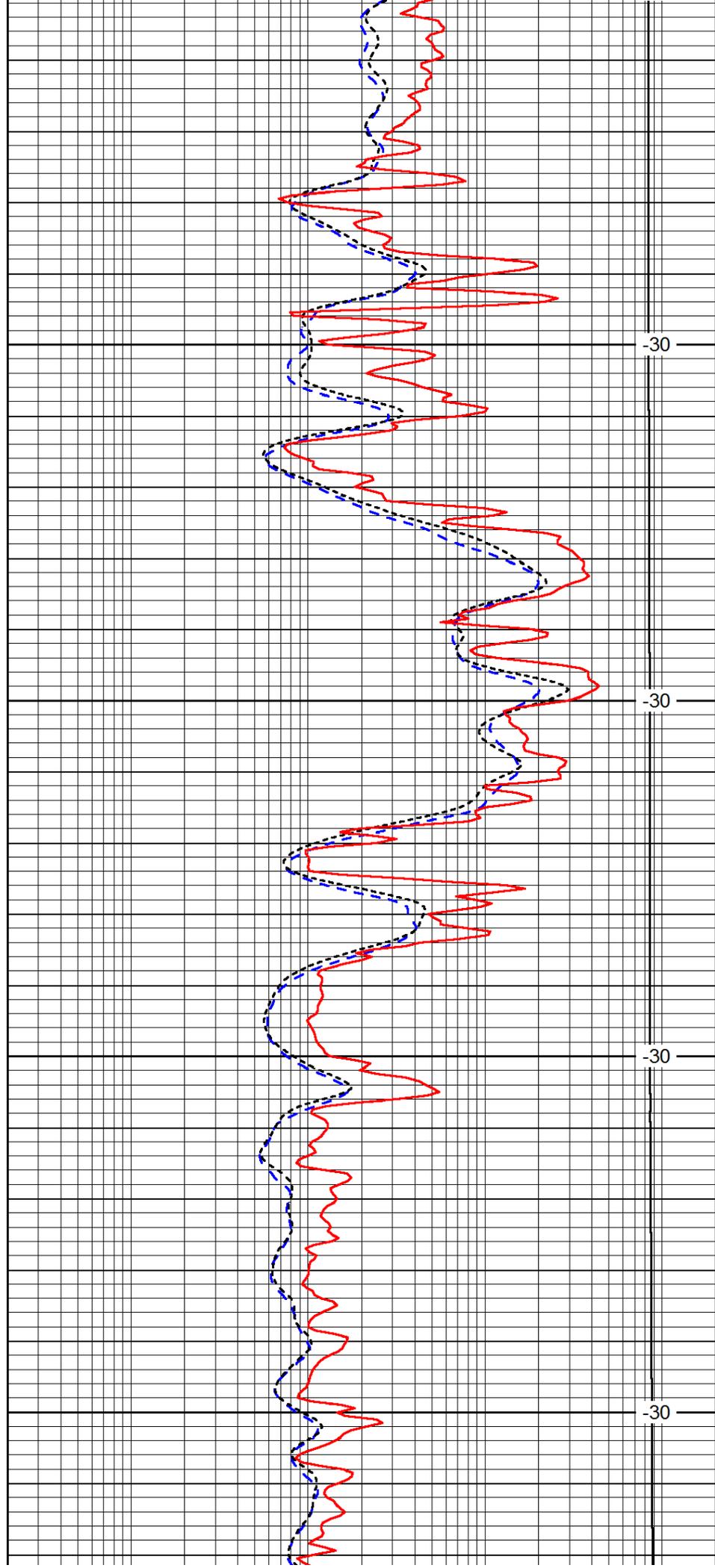


3650

3700

3750

3800

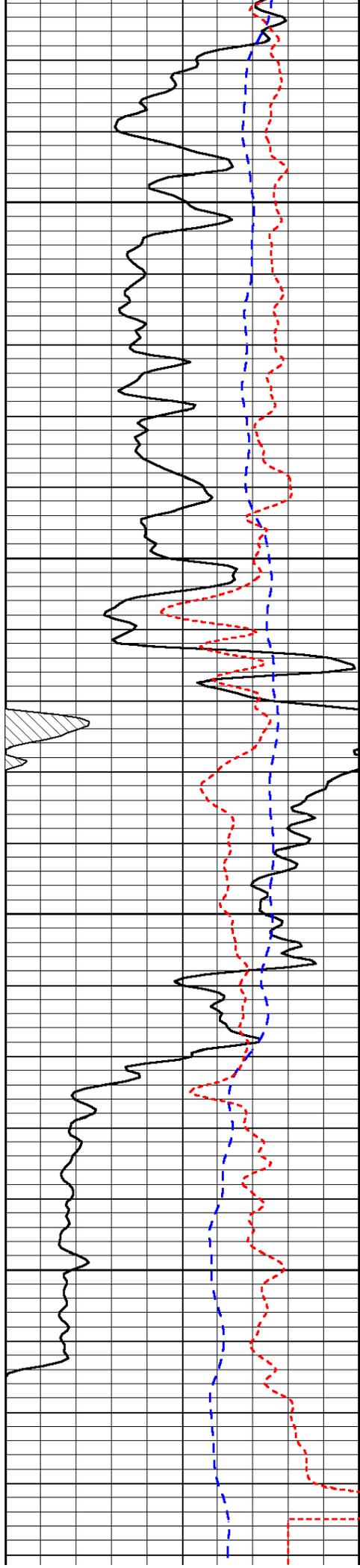


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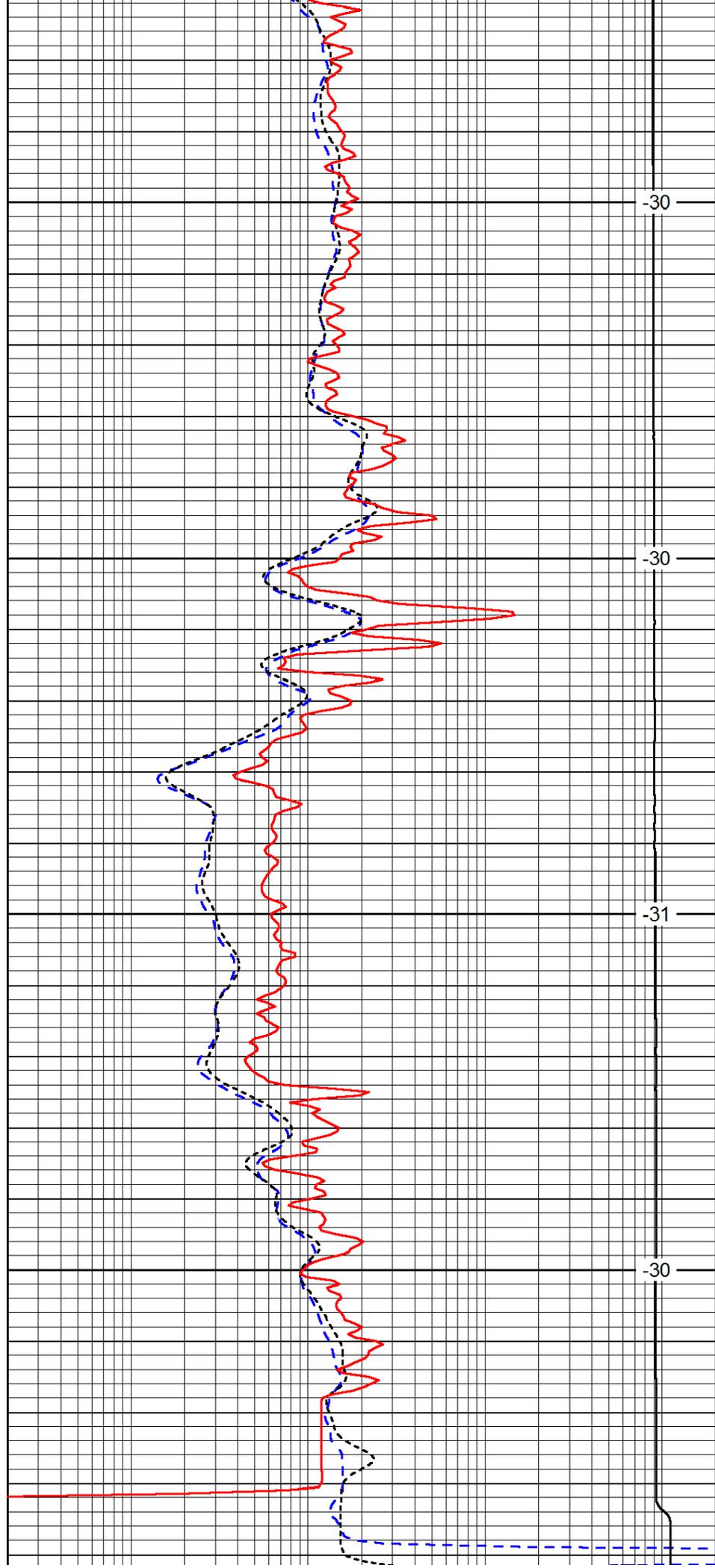


3850

3900

3950

4000



-30

-30

-31

-30

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