



Pioneer Energy Services

Dual Induction Log

15-179-21,346-00-00

API No.

Company **Cobalt Energy, LLC**

Well **Marx "A" #1-24**

Field **Allodium**

County **Sheridan** State

Kansas

Location **833' FSL & 763' FEL**

Other Services
CNL/CDL

Sec: **24** Twp: **6S** Rge: **26W**

Permanent Datum **Ground Level** Elevation **2598**

Log Measured From **Kelly Bushing** 5 Ft. Above Perm. Datum

Elevation
K.B. 2603
D.F. 2598
G.L. 2598

Date **1/8/2014**

Run Number **One**

Depth Driller **3933**

Depth Logger **3932**

Bottom Logged Interval **3931**

Top Log Interval **300**

Casing Driller **8.625 @ 316**

Casing Logger **316**

Bit Size **7.875**

Type Fluid in Hole **Chemical**

Salinity,ppm CL **1500**

Density / Viscosity **9.1 59**

pH / Fluid Loss **10.5 6.0**

Source of Sample **Flowline**

Rm @ Meas. Temp **.90 @ 58**

Rmf @ Meas. Temp **.68 @ 58**

Rmc @ Meas. Temp **1.22 @ 58**

Source of Rmf / Rmc **Charts**

Rm @ BHT **.45 @ 115**

Operating Rig Time **2 1/2 Hours**

Max Rec. Temp. F **115**

Equipment Number **108**

Location **Hays**

Recorded By **J. Long**

Witnessed By **Paul Gunzelman**

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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

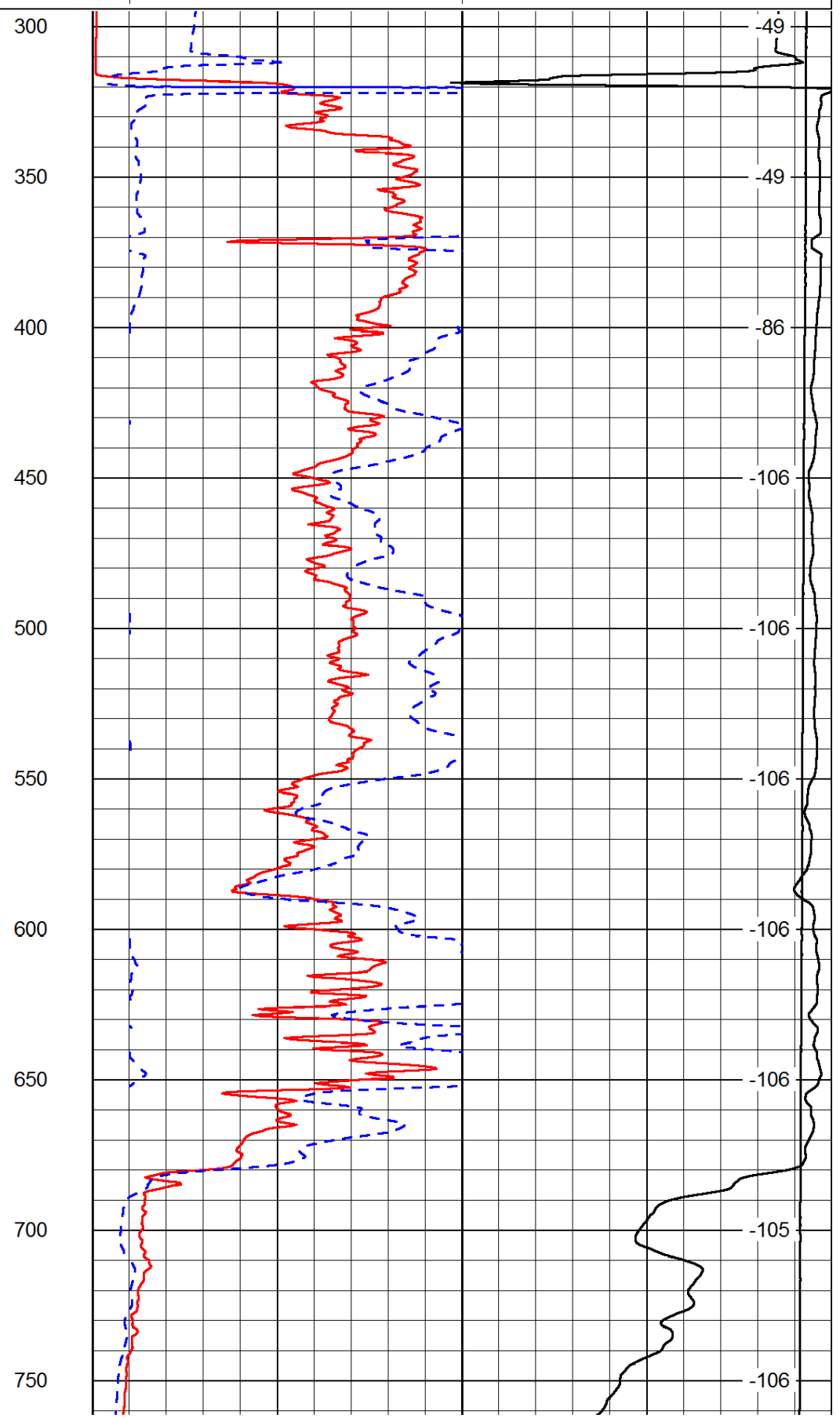
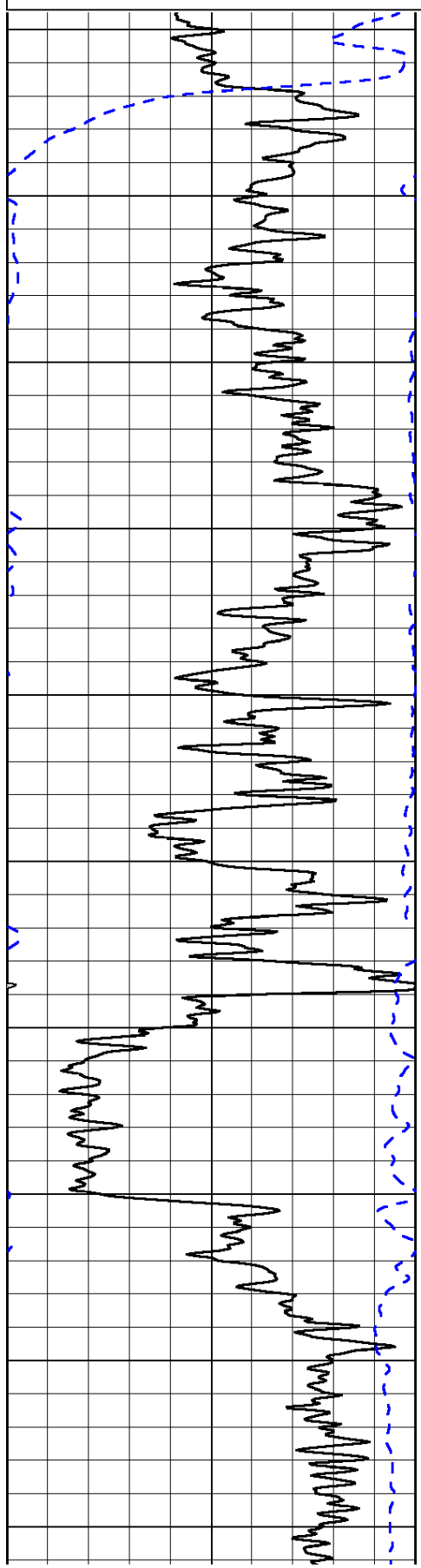
Studley, 11 1/8 North, West Into

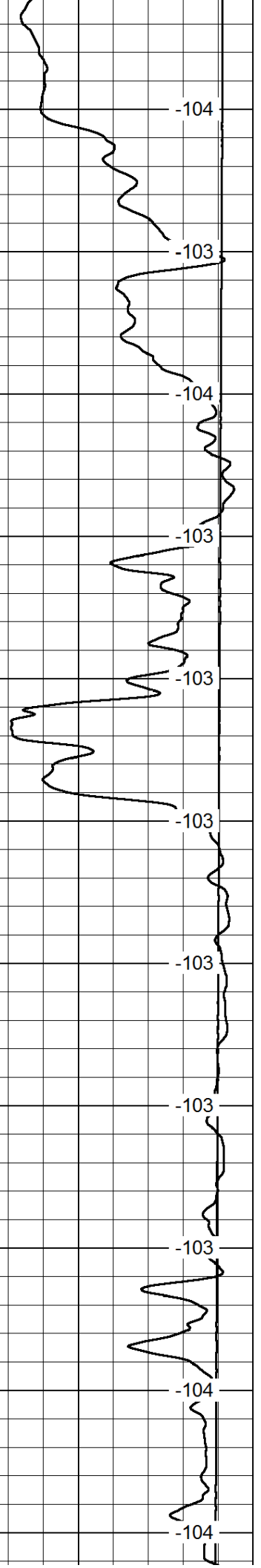
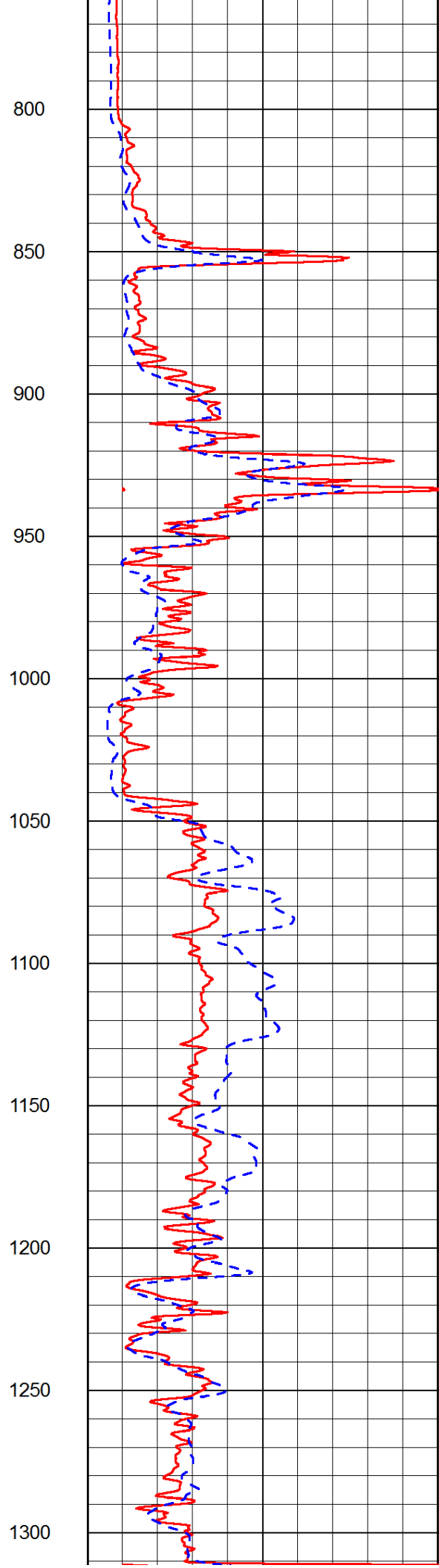
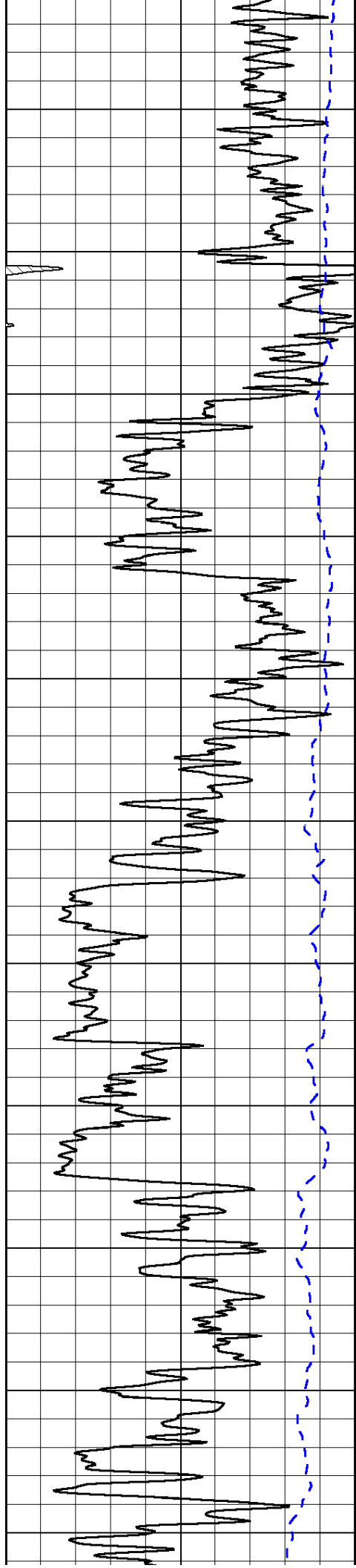
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 Presentation Format: dil2in
 Dataset Creation: Wed Jan 08 07:33:17 2014
 Charted by: Depth in Feet scaled 1:600

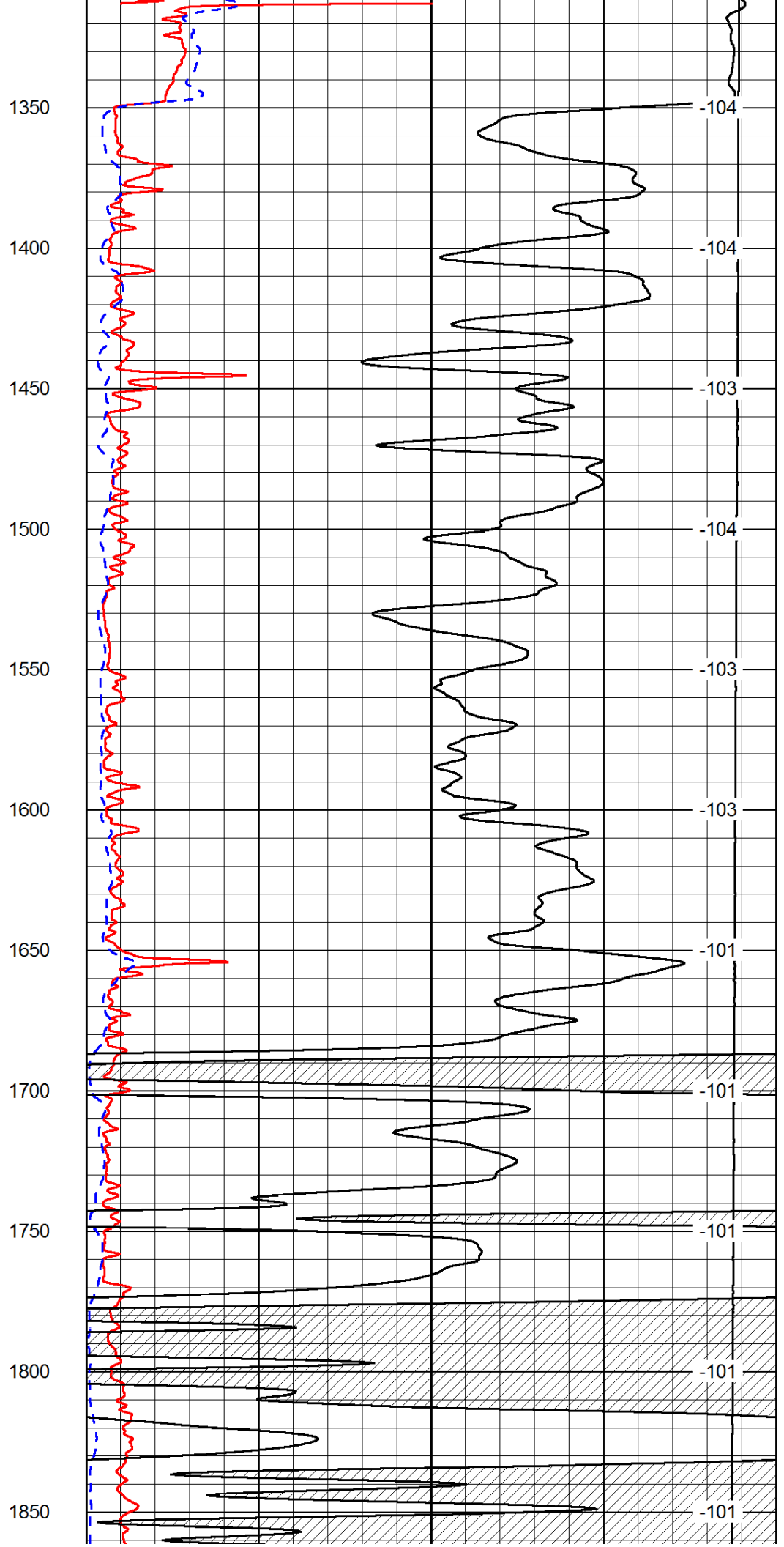
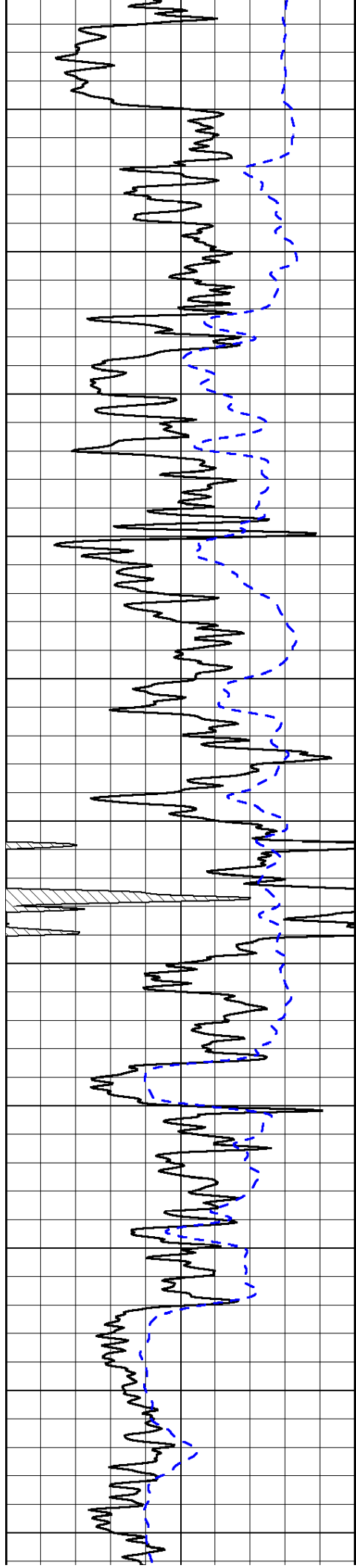
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-200	SP (mV)	0

0	Shallow Resistivity	50
0	Deep Resistivity	50
1000	Conductivity	0
15000	Line Tension	0
50	Shallow Resistivity	500
50	Deep Resistivity	500

LSPD

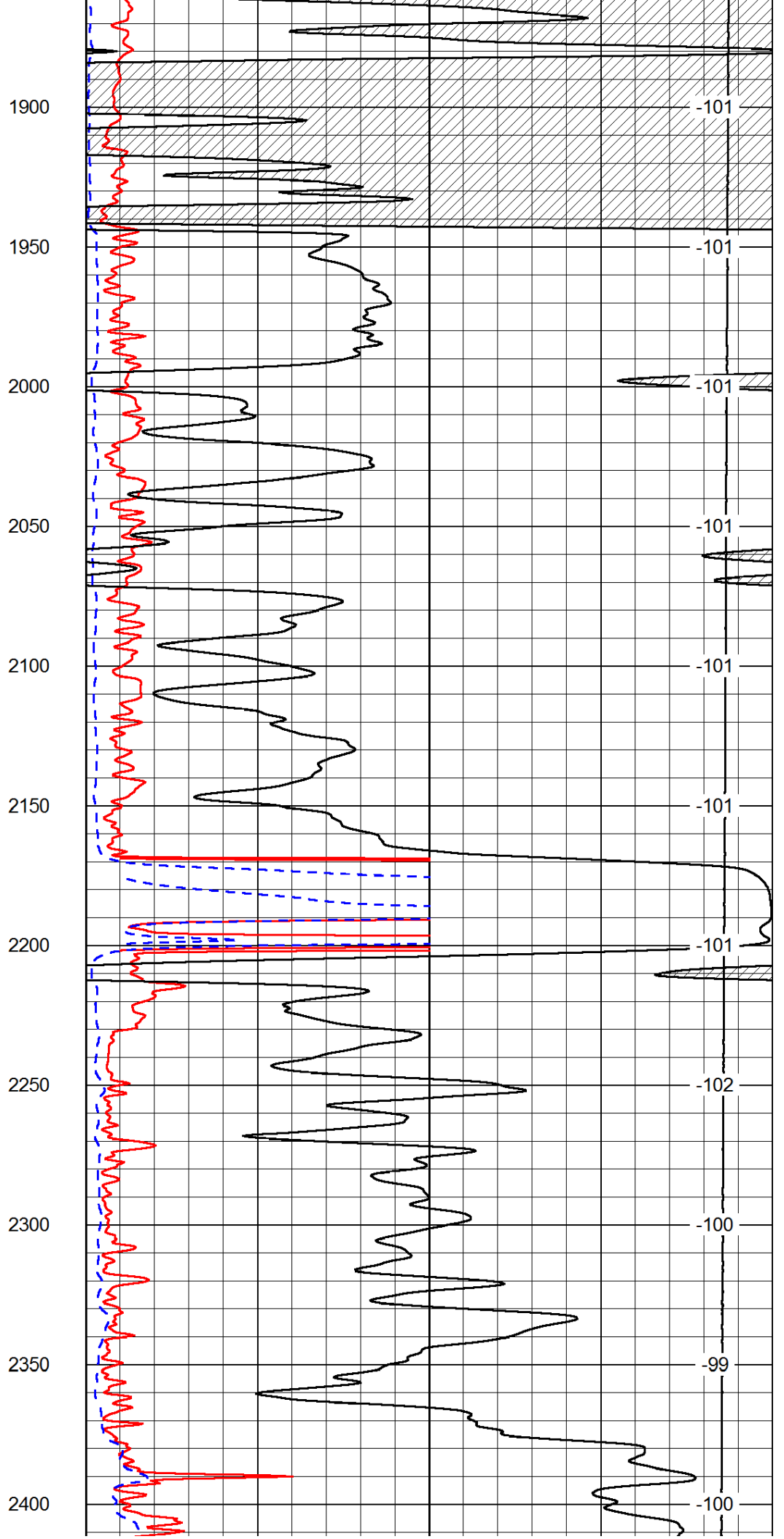
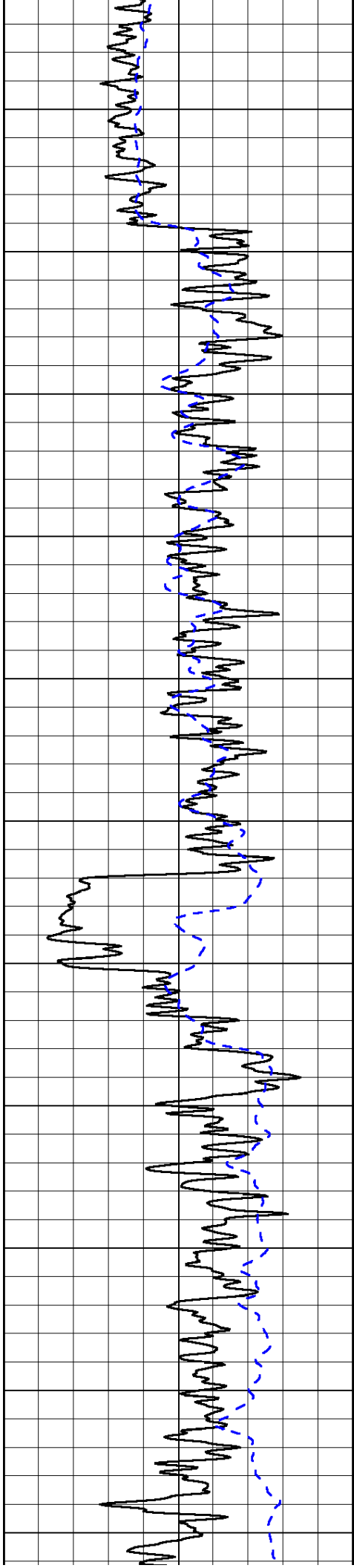


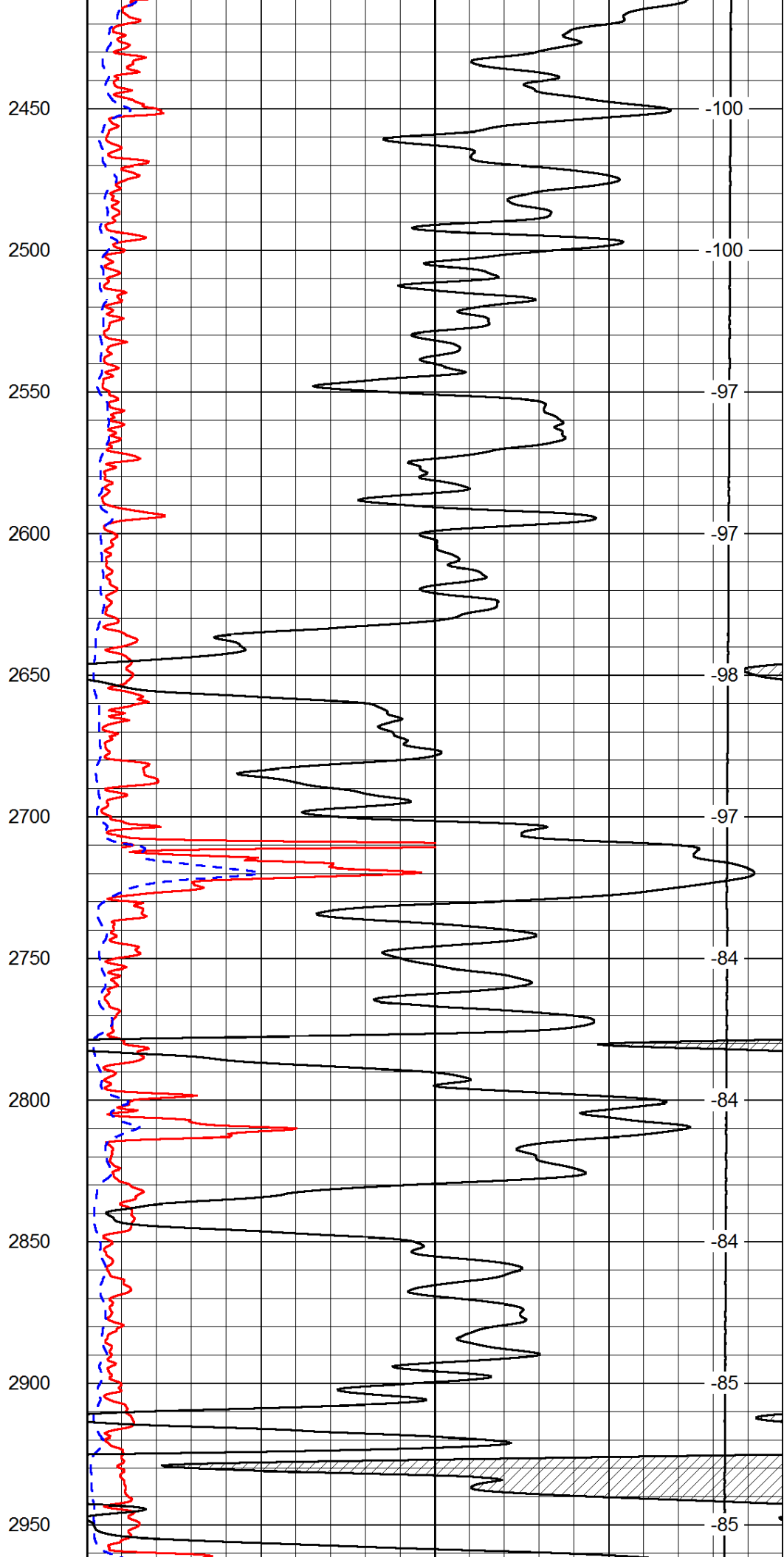
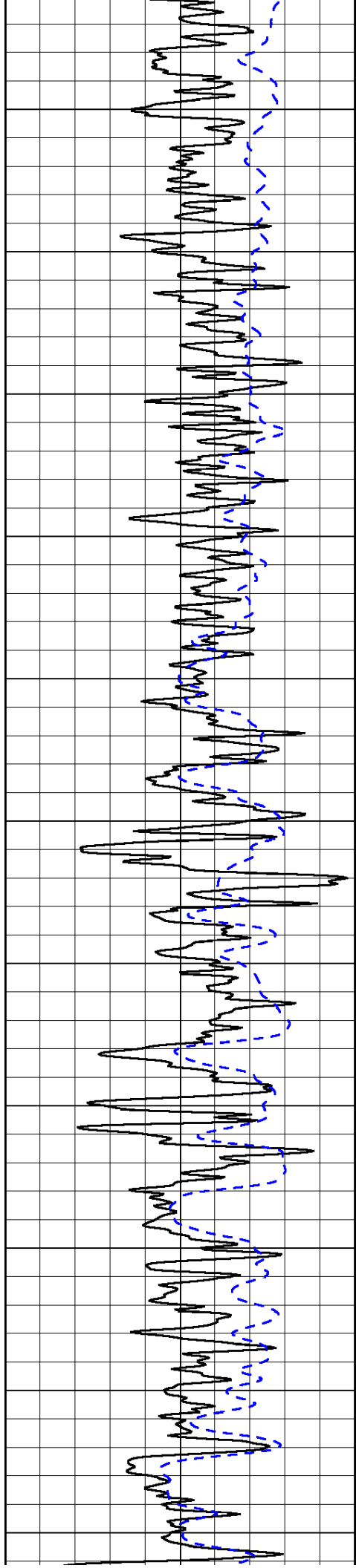


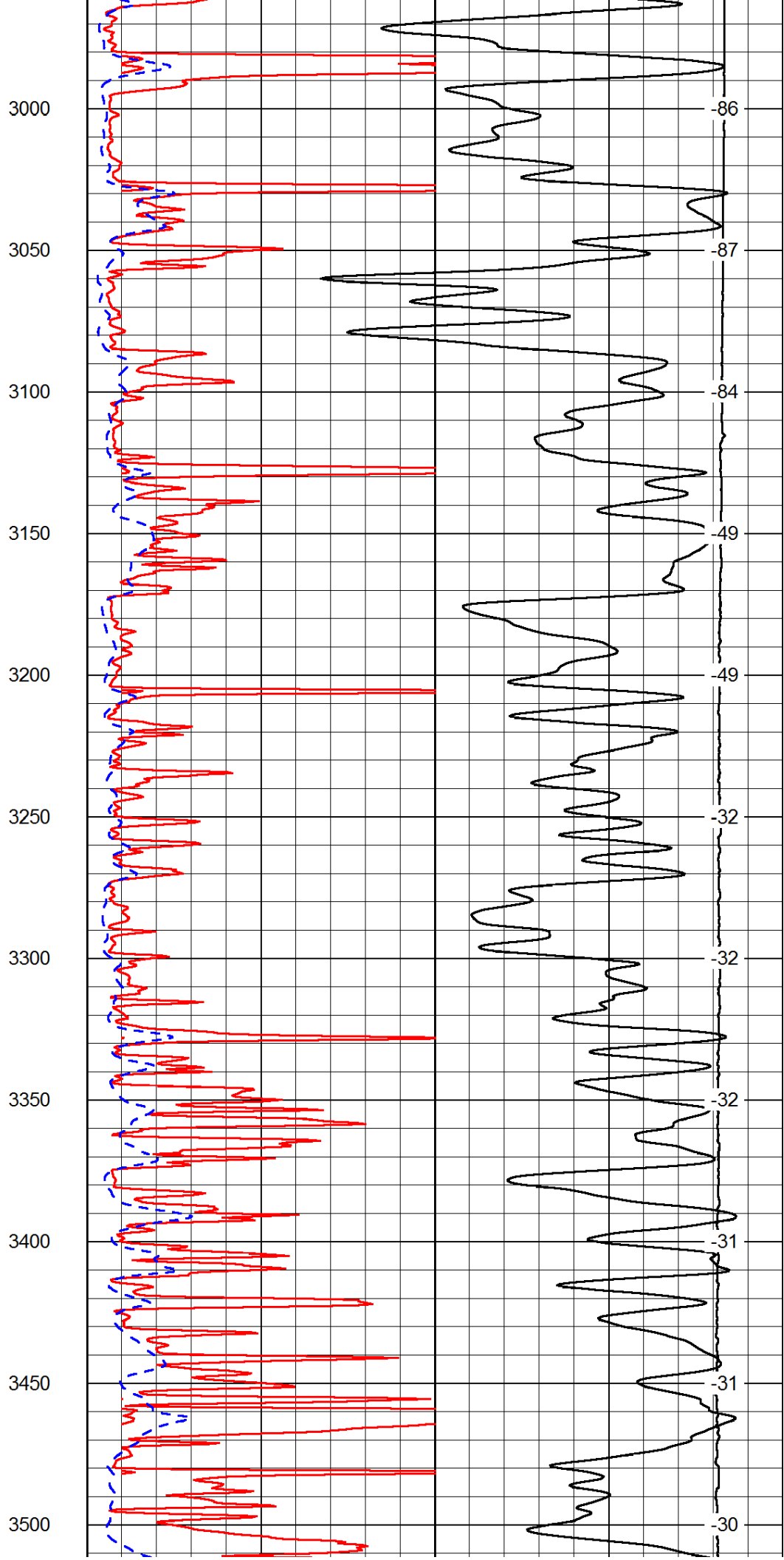
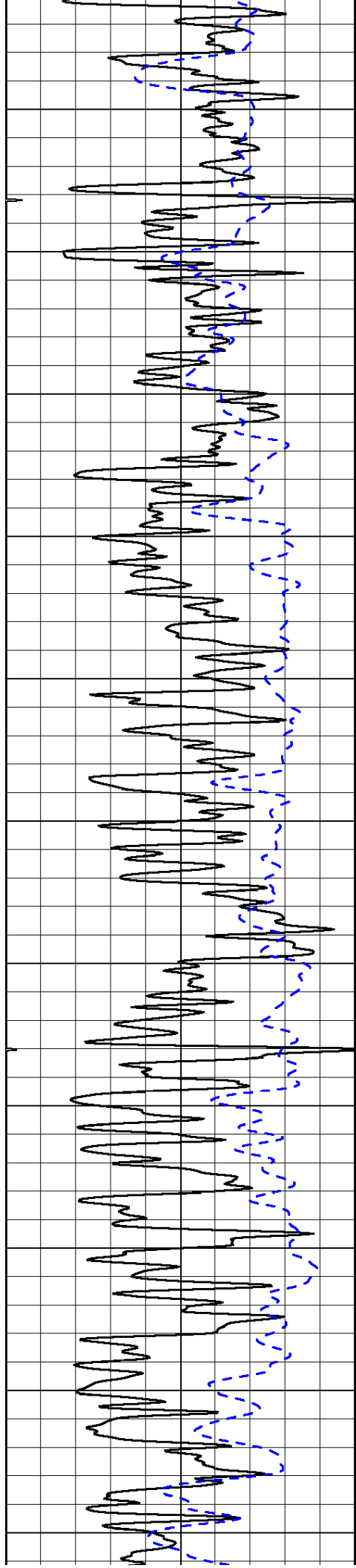


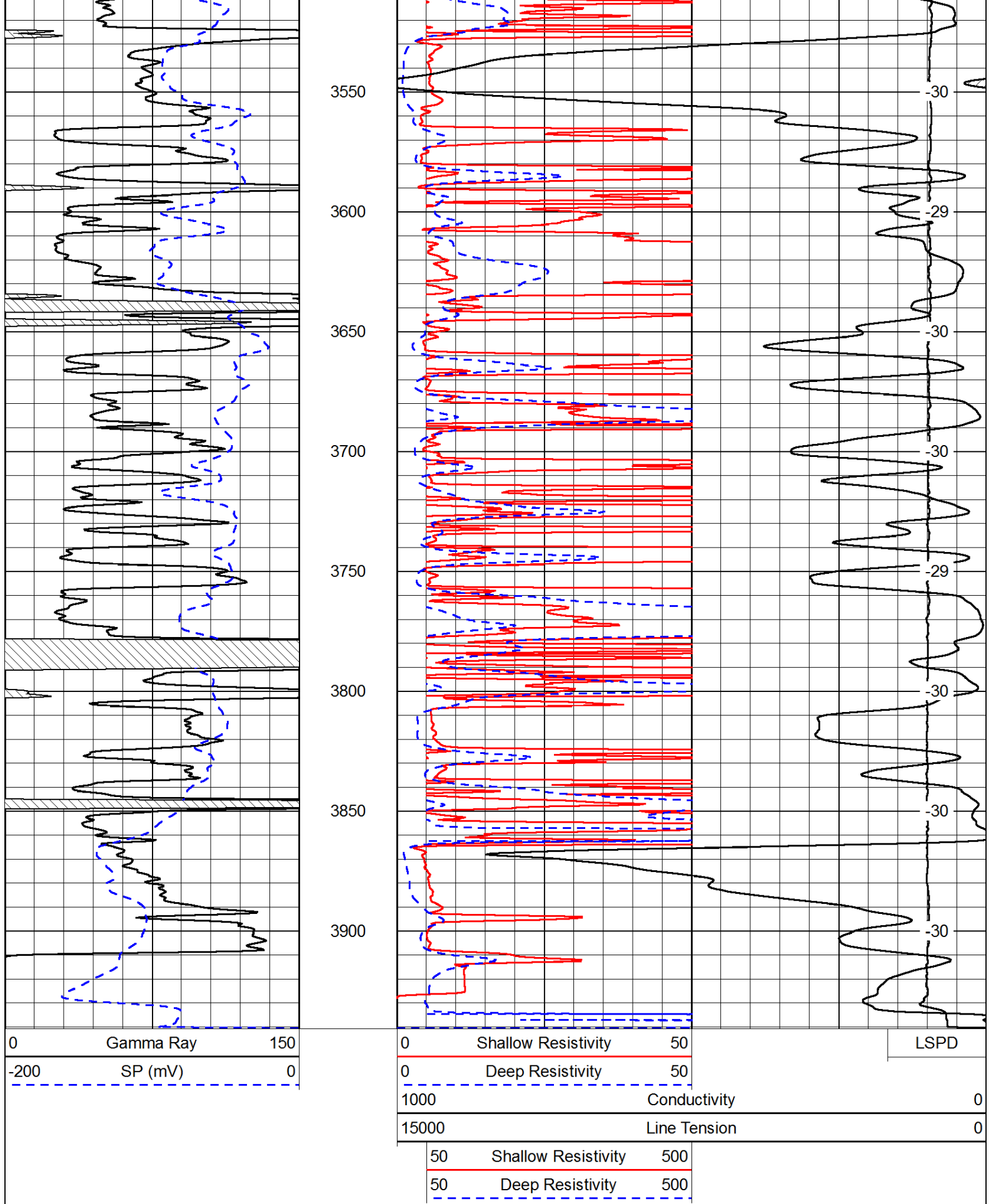
1350
1400
1450
1500
1550
1600
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1700
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1800
1850

-104
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-103
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-101
-101







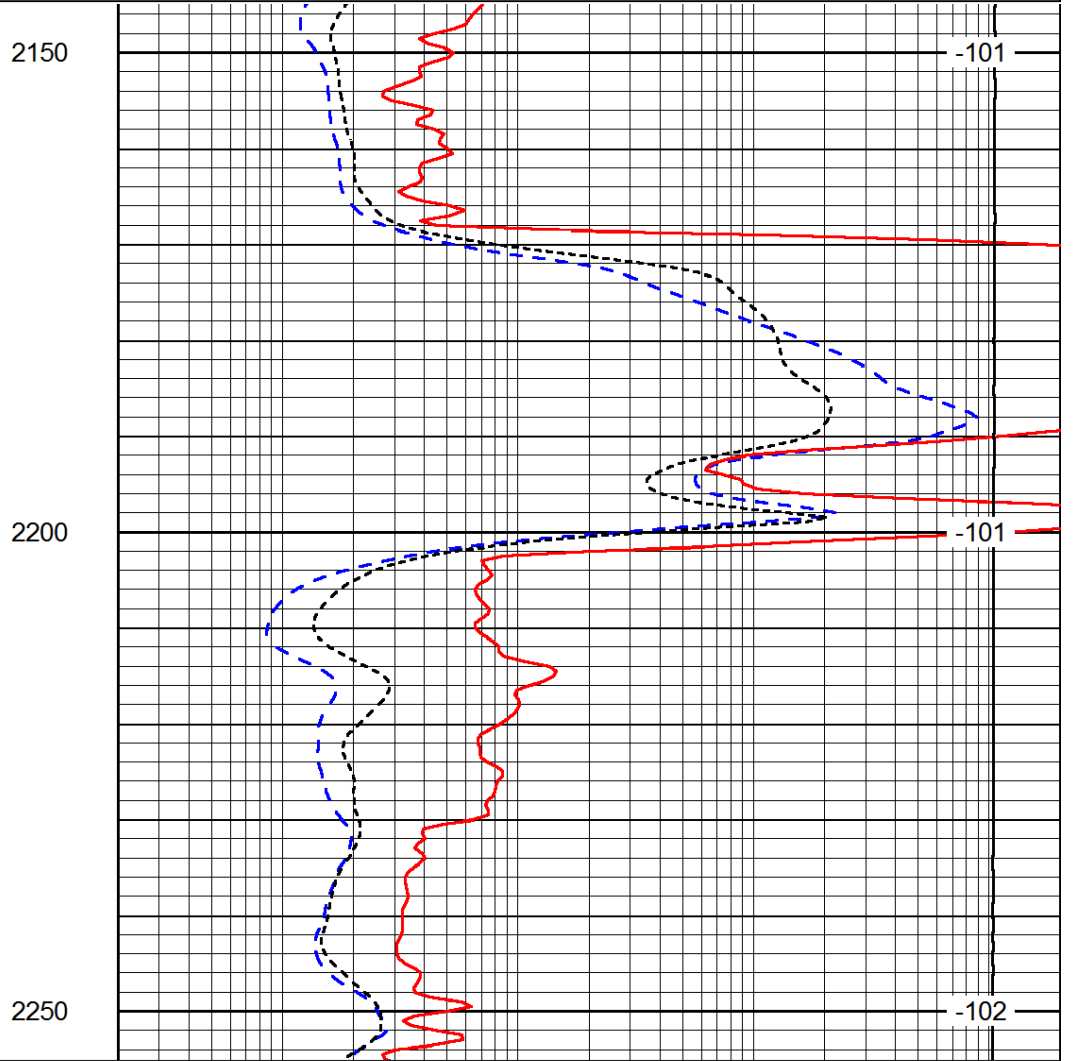
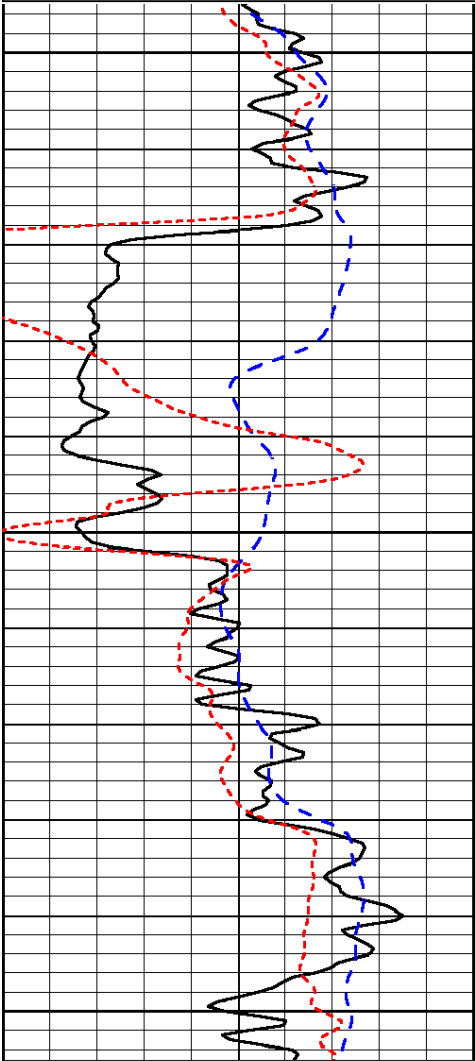


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 Dataset Creation: Wed Jan 08 07:33:17 2014

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



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-200	SP (mV)	0
-160	RxoRt	40

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0.2	Shallow Resistivity	2000
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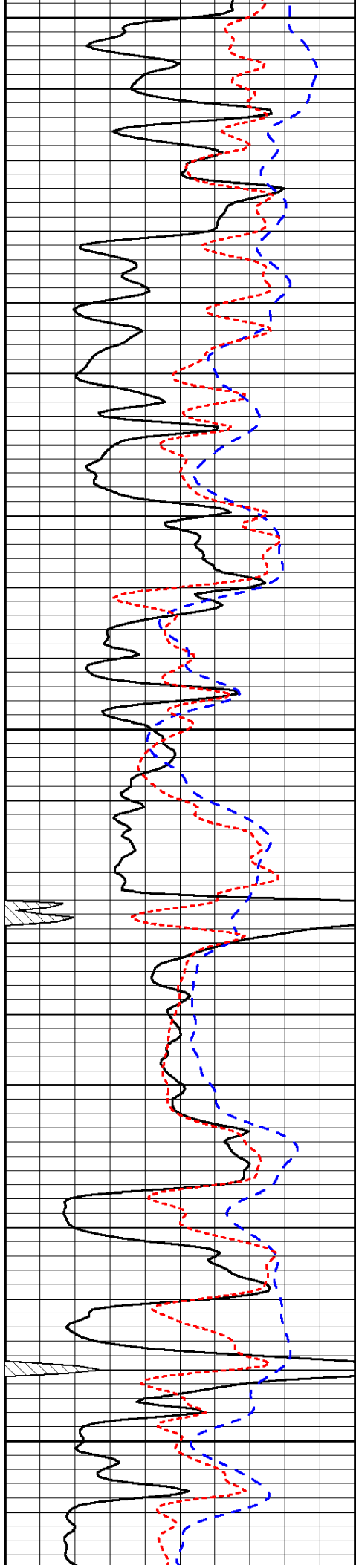
LSPD

Database File: c:\warrior\data\cobalt_marx_a #1-24\cobalt_marx_a_1-24hd.db
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 Presentation Format: dil
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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



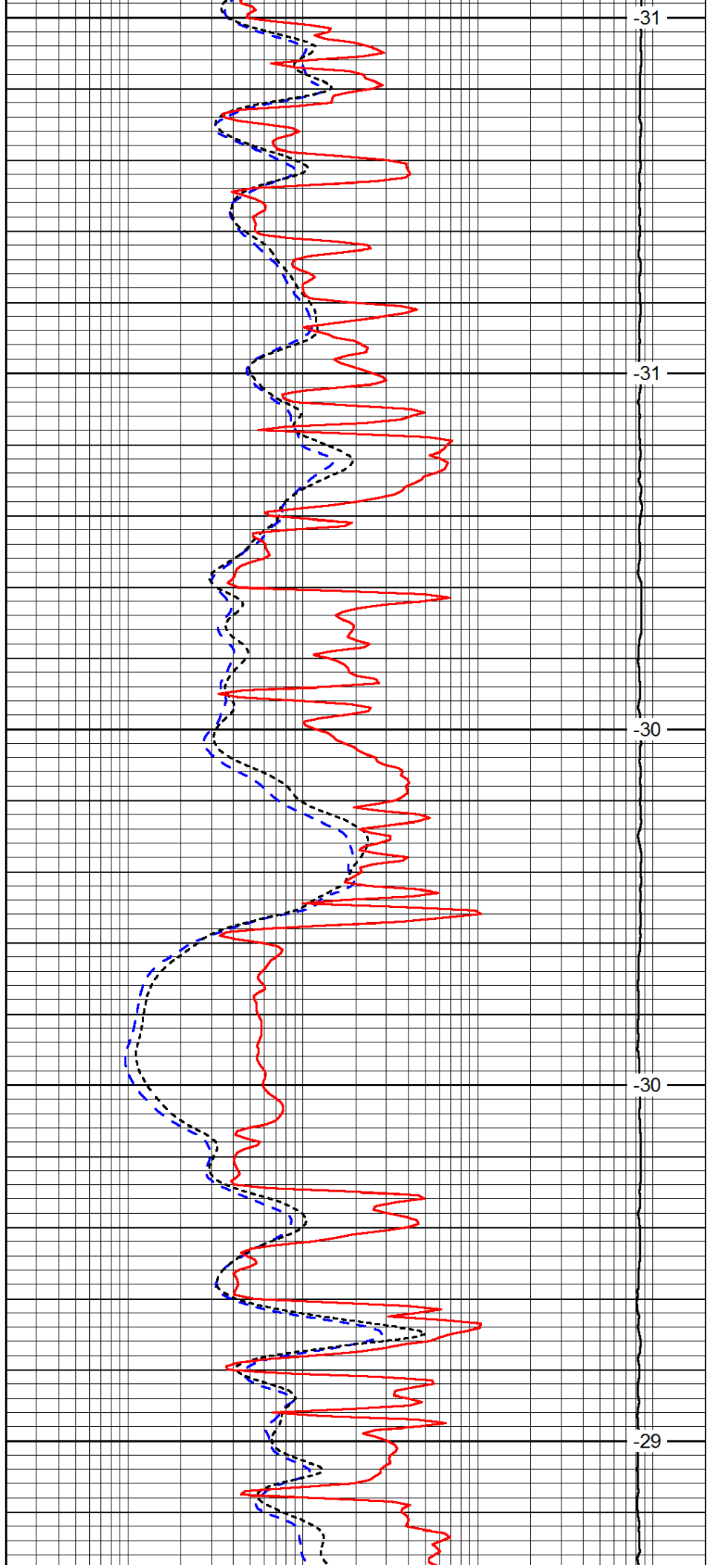
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3450

3500

3550

3600



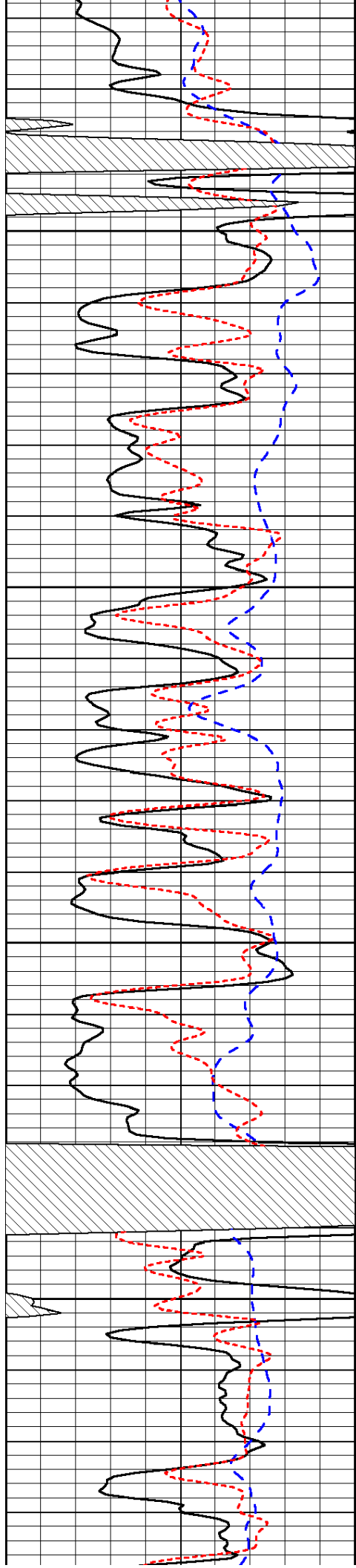
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-31

-30

-30

-29

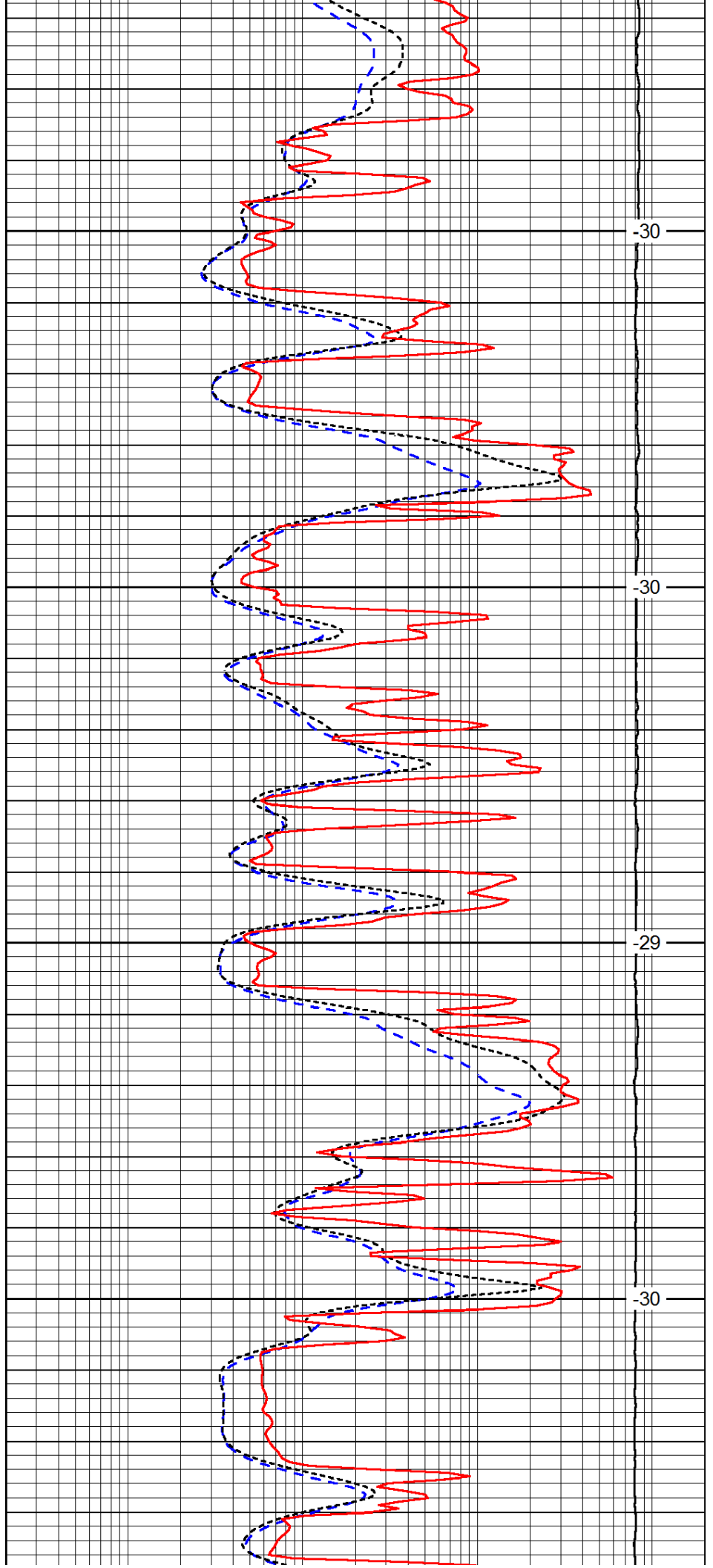


3650

3700

3750

3800

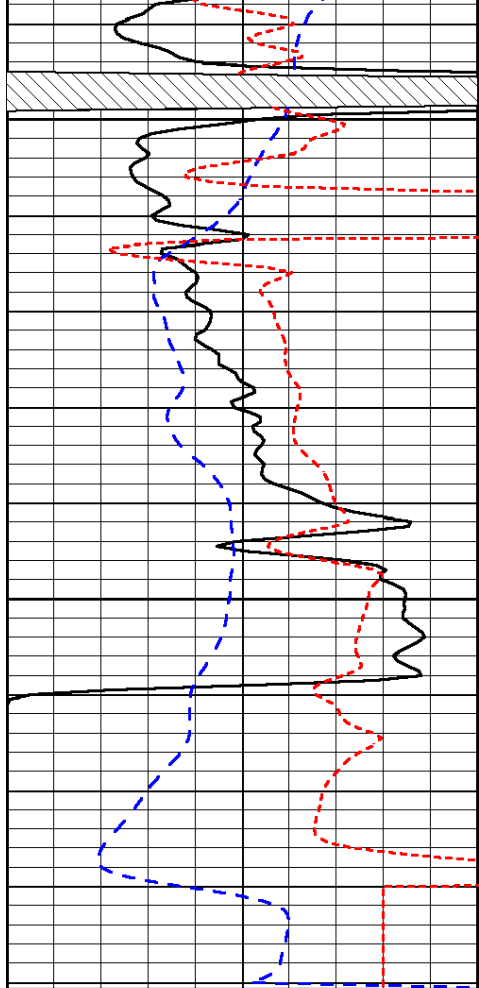


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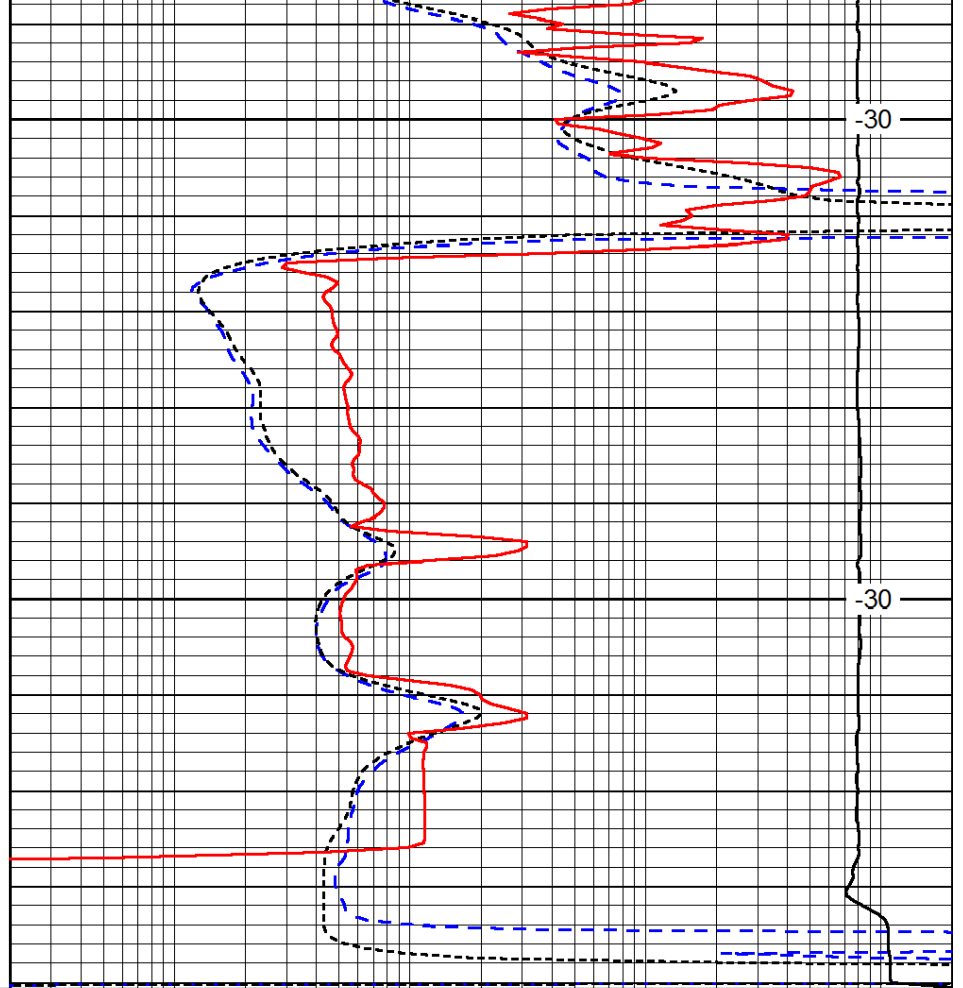
-30



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3850

3900



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