



Pioneer Energy Services

# Dual Induction Log

Company **AMERICAN WARRIOR, INC.**

Well **HARPER #1-10**

Field **WILDCAT**

County **ROOKS** State

**KANSAS**

Location **1,882' FSL & 335' FEL**

Sec: **10** Twp: **10S** Rge: **19W**

Permanent Datum **GROUND LEVEL** Elevation **2129**

Log Measured From **KELLY BUSHING** **8** Ft. Above Perm. Datum

Drilling Measured From **KELLY BUSHING**

Other Services  
CNL/CDL  
MEL

Elevation  
K.B. 2137  
D.F. 2129  
G.L. 2129

Date **5/14/2015**

Run Number **ONE**

Depth Driller **3748**

Depth Logger **3747**

Bottom Logged Interval **3746**

Top Log Interval **200**

Casing Driller **8.625 @ 214**

Casing Logger **214**

Bit Size **7.875**

Type Fluid in Hole **CHEMICAL**

Salinity, ppm CL **4200**

Density / Viscosity **9.3 51**

pH / Fluid Loss **9.0 9.2**

Source of Sample **Flowline**

Rm @ Meas. Temp **.25 @ 76**

Rmf @ Meas. Temp **.20 @ 76**

Rmc @ Meas. Temp **.35 @ 76**

Source of Rmf / Rmc **Charts**

Rm @ BHT **.17 @ 113**

Operating Rig Time **3 HOURS**

Max Rec. Temp. F **113**

Equipment Number **108**

Location **Hays**

Recorded By **J. LONG**

Witnessed By **MARC DOWNING**

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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

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785 625 3858

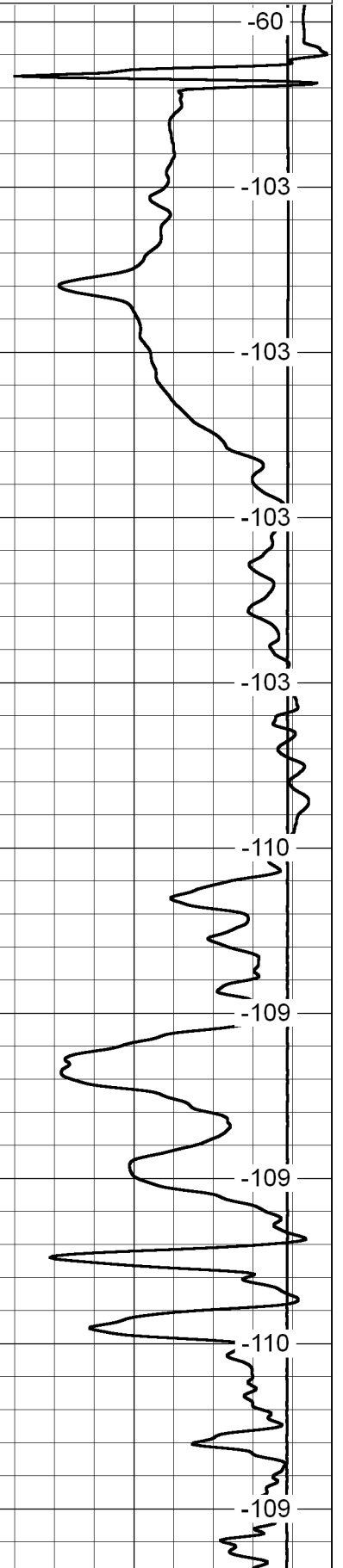
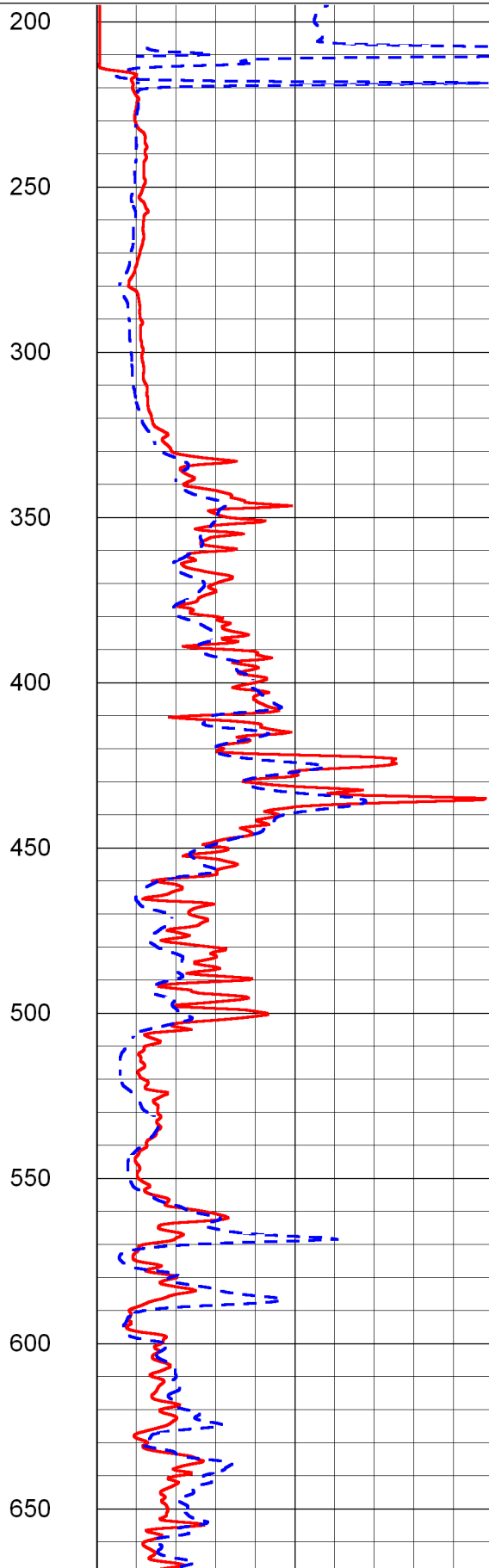
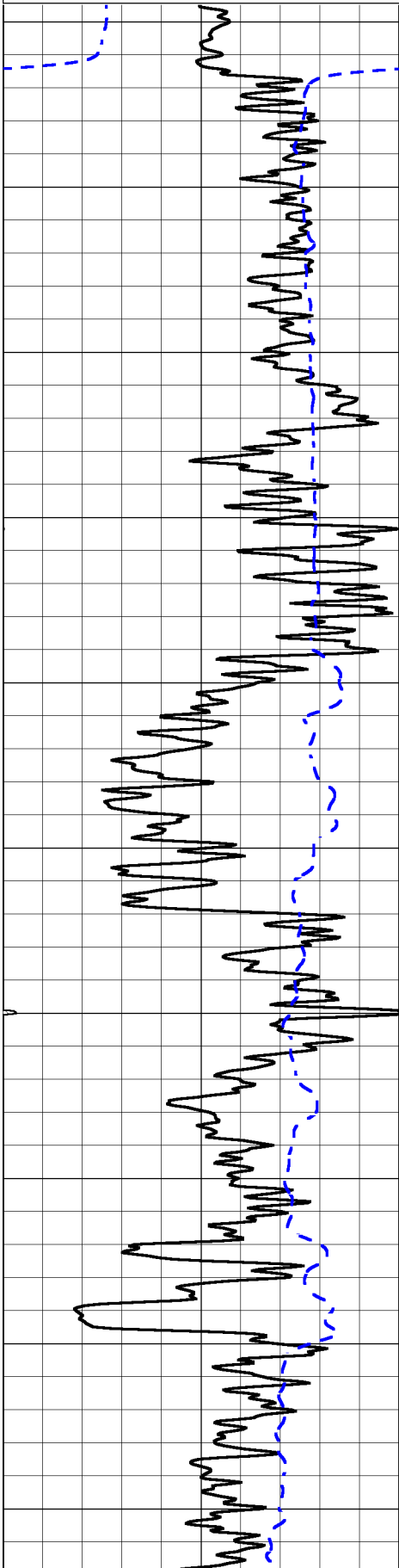
HAYS, NORTH TO COUNTY LINE, NORTH TO AA ROAD, 6 WEST, NORTH INTO

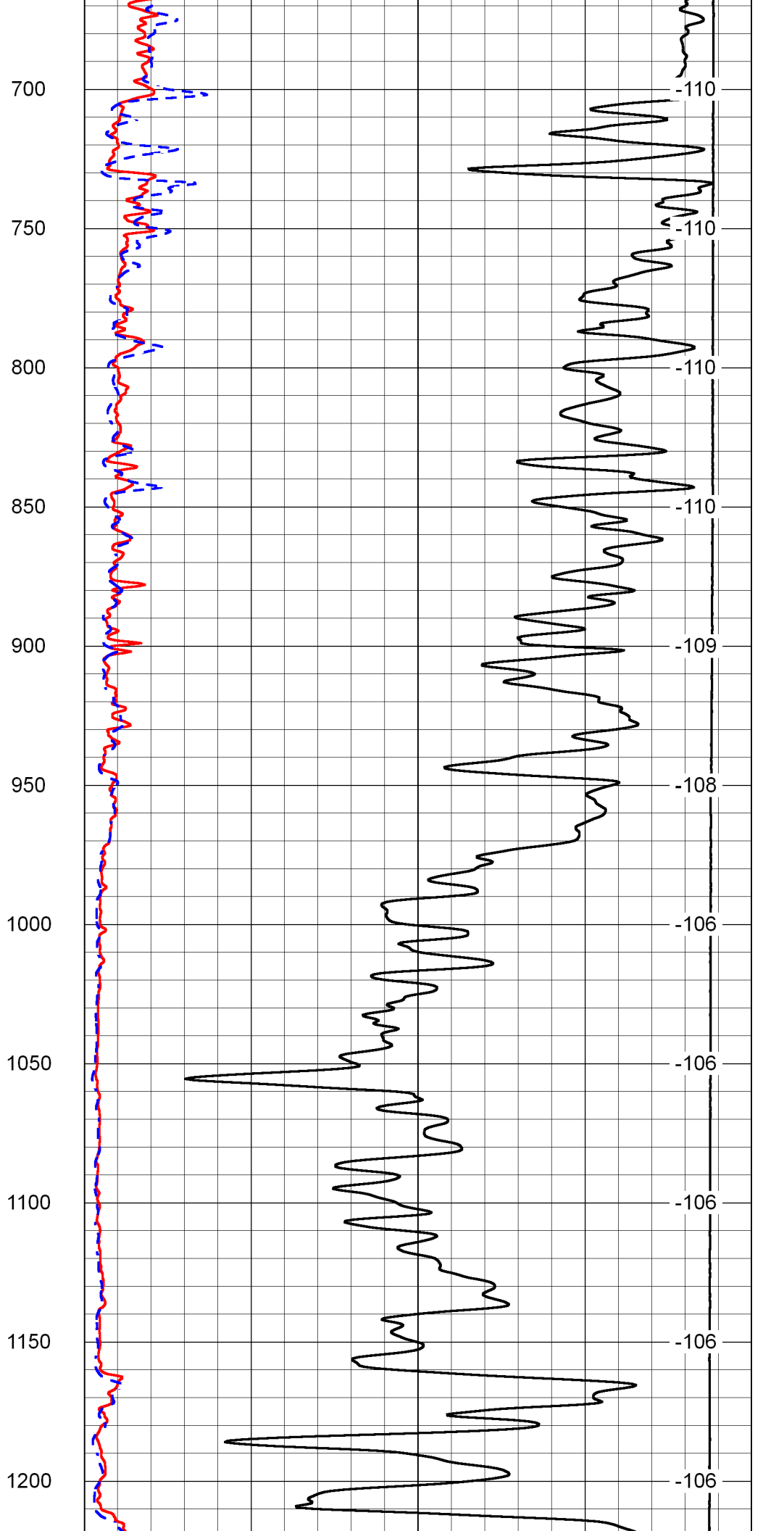
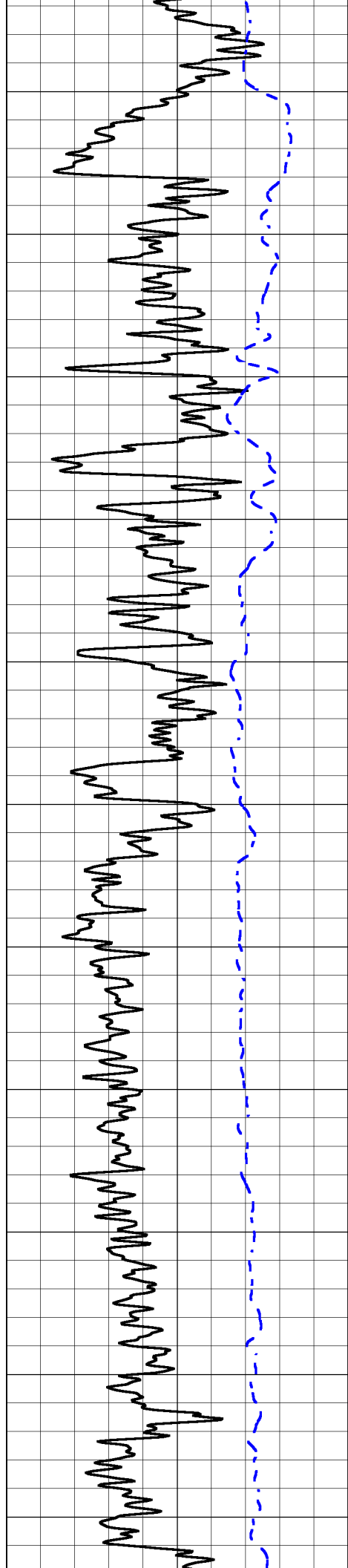
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Presentation Format dil2in  
Dataset Creation Fri May 15 02:05:46 2015  
Charted by Depth in Feet scaled 1:600

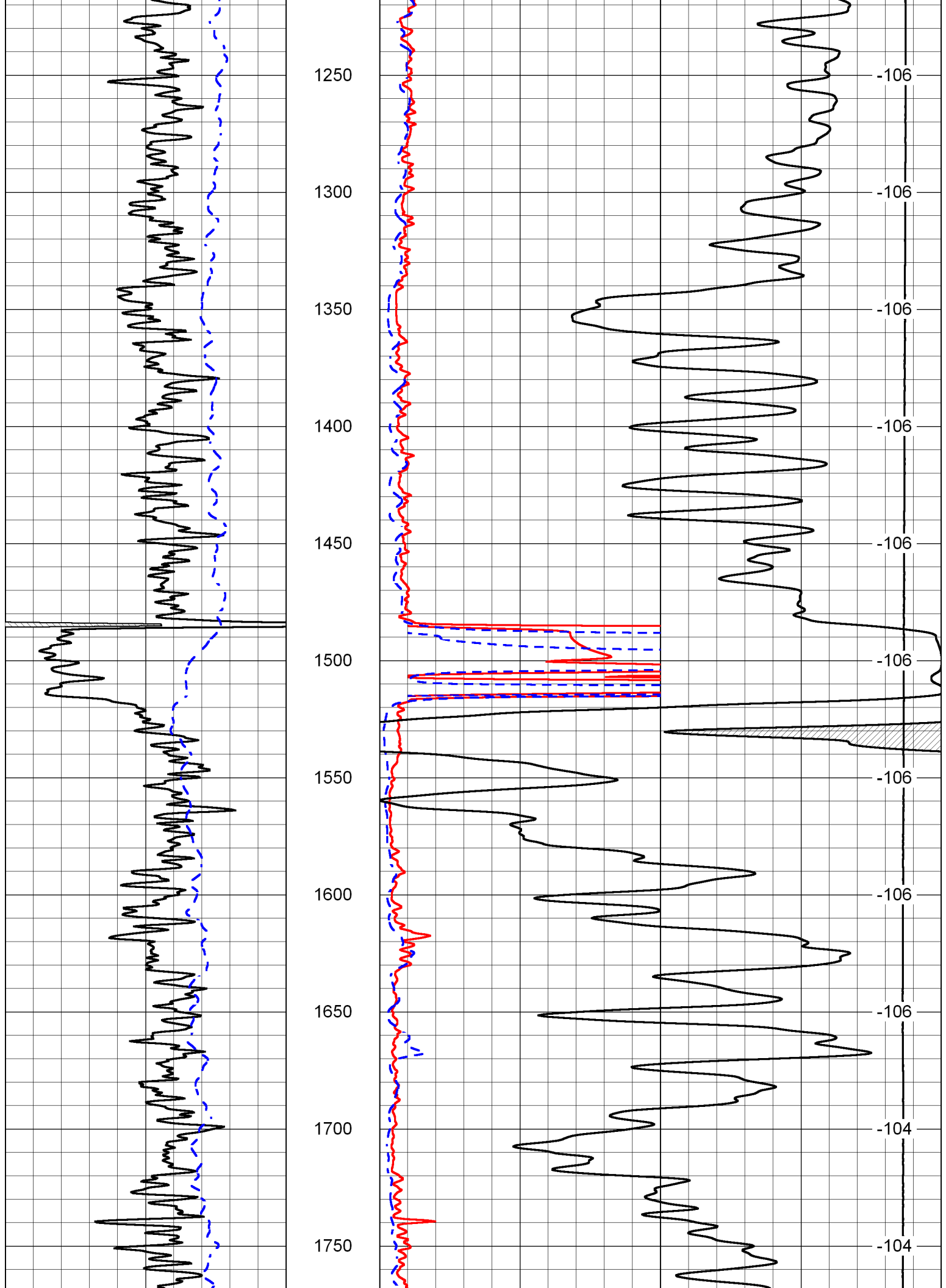
0	Gamma Ray	150
-200	SP (mV)	0

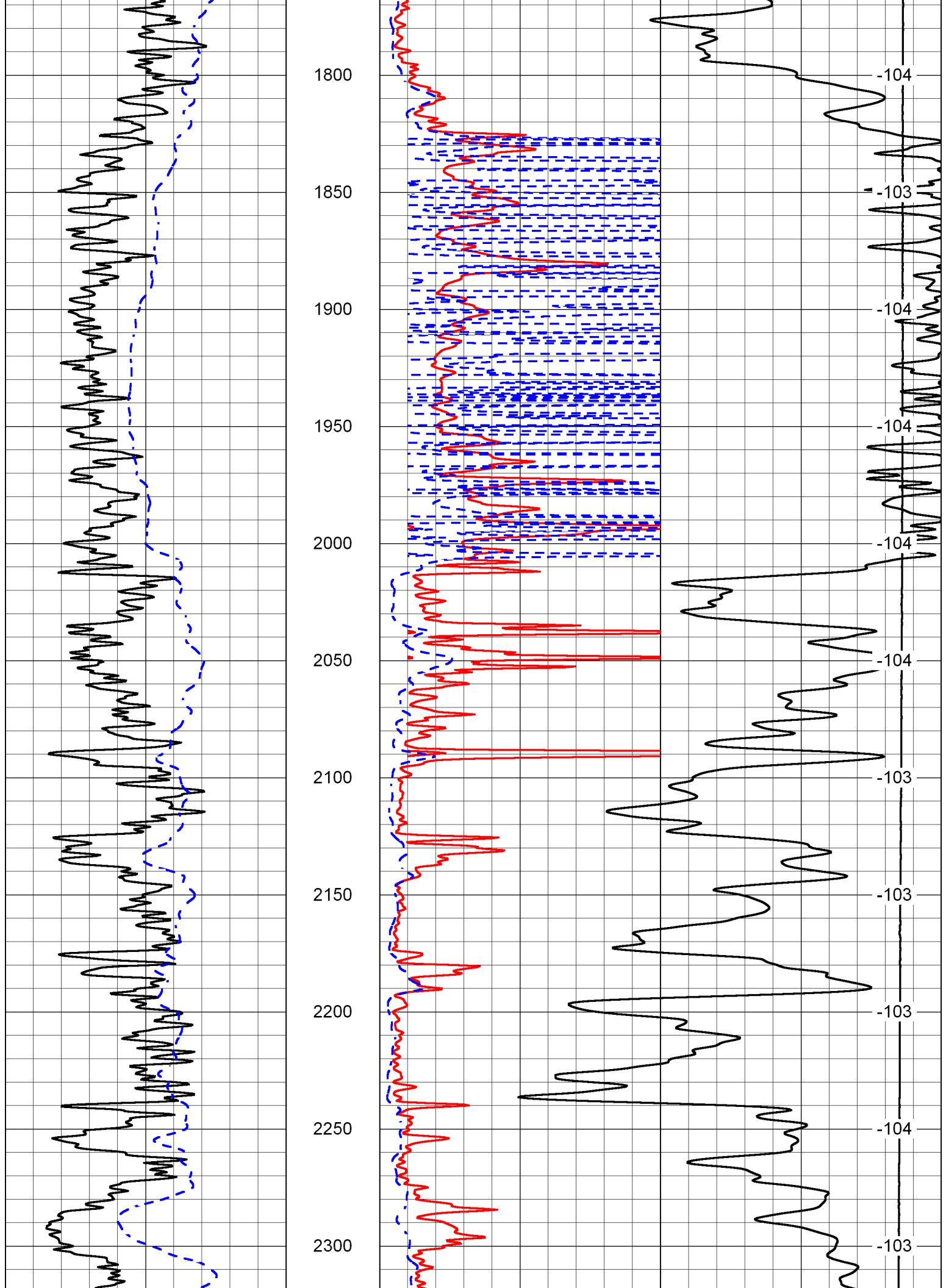
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15000	Line Tension	0
0	Shallow Resistivity	50
0	Deep Resistivity	50
50	Shallow Resistivity	500
50	Deep Resistivity	500

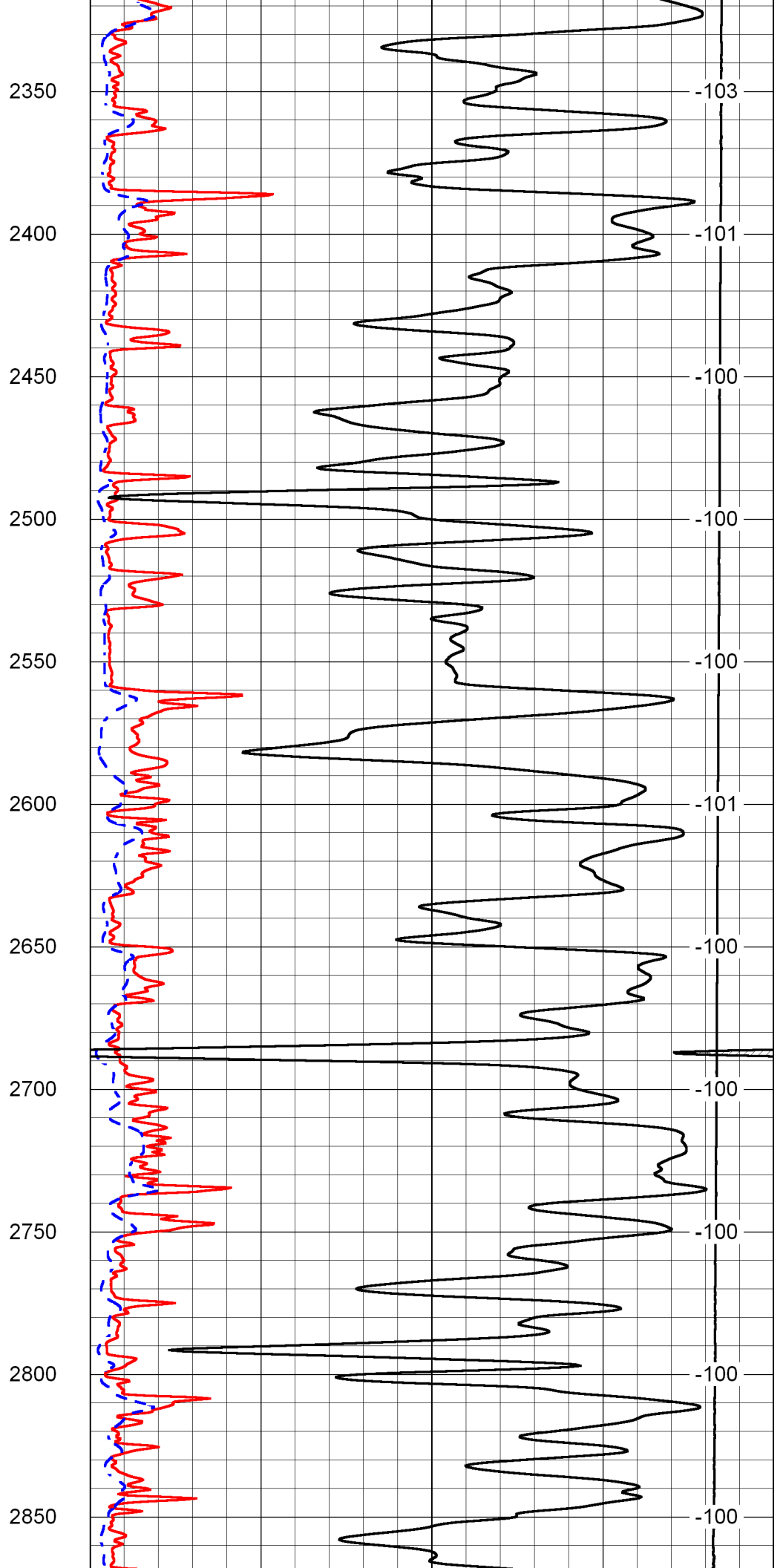
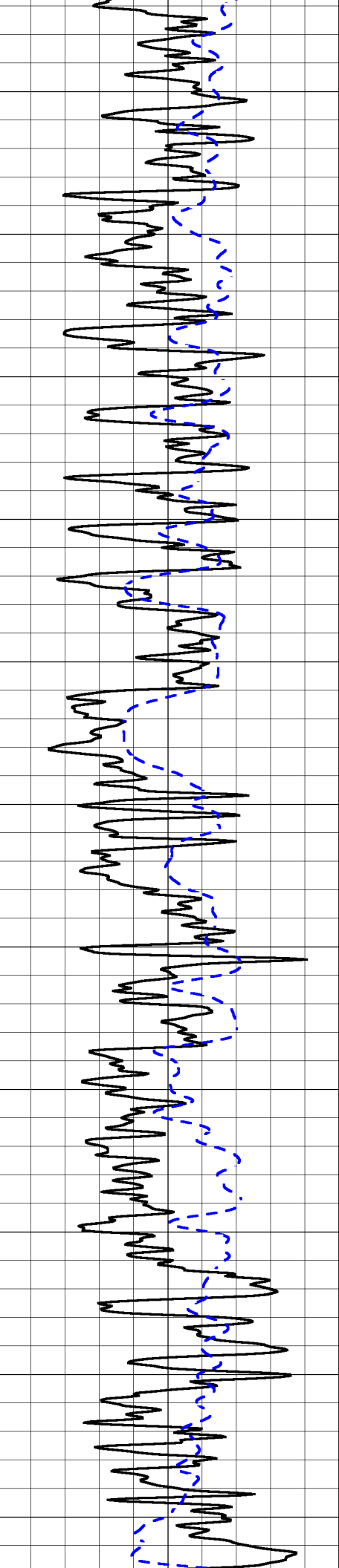
LSPD

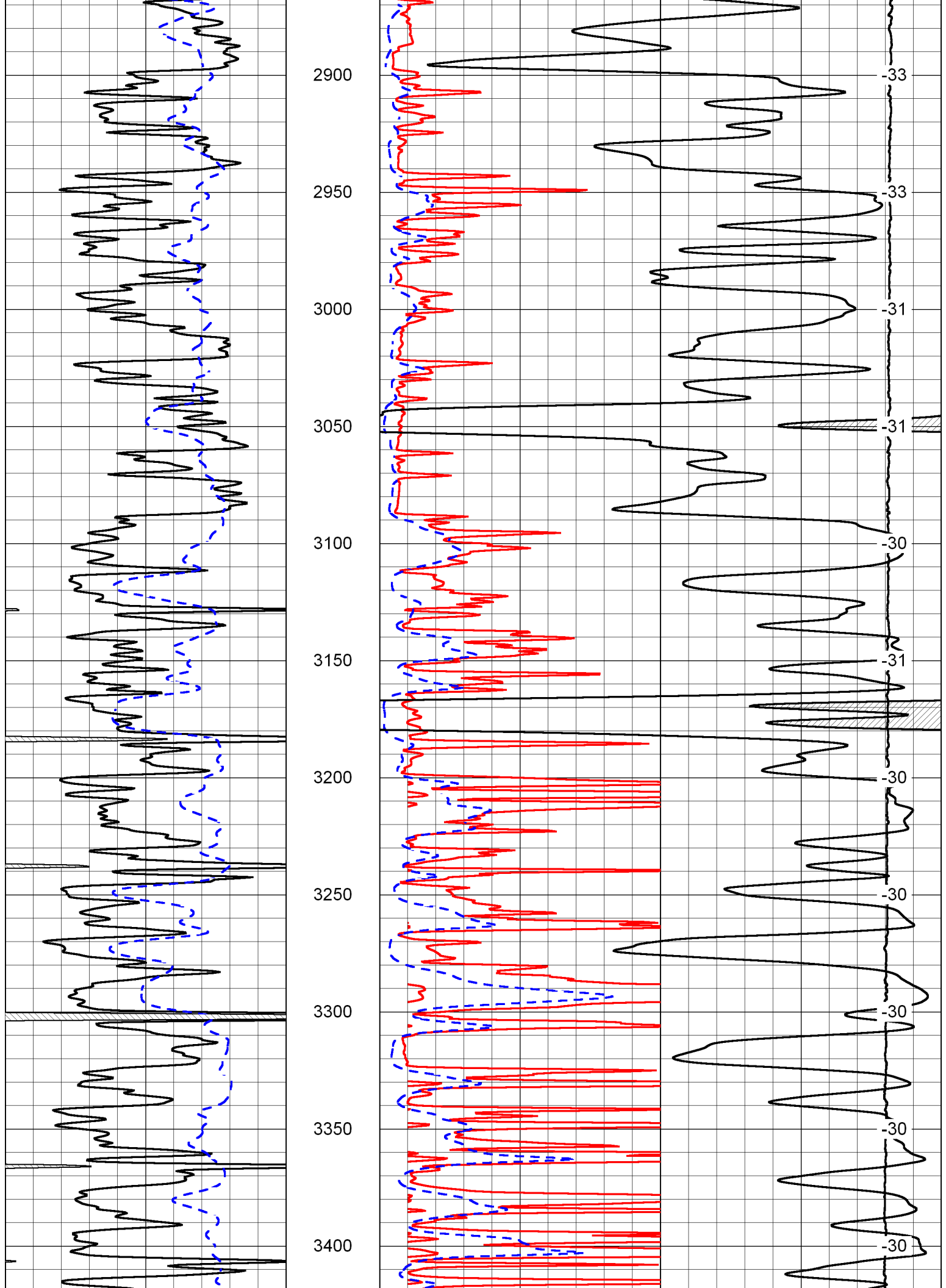


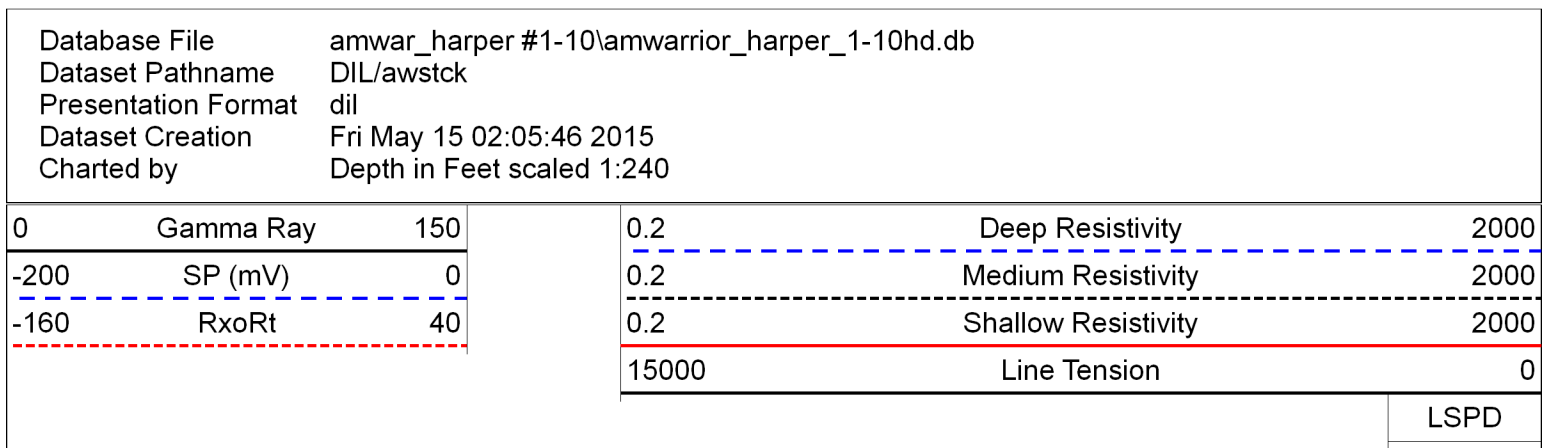
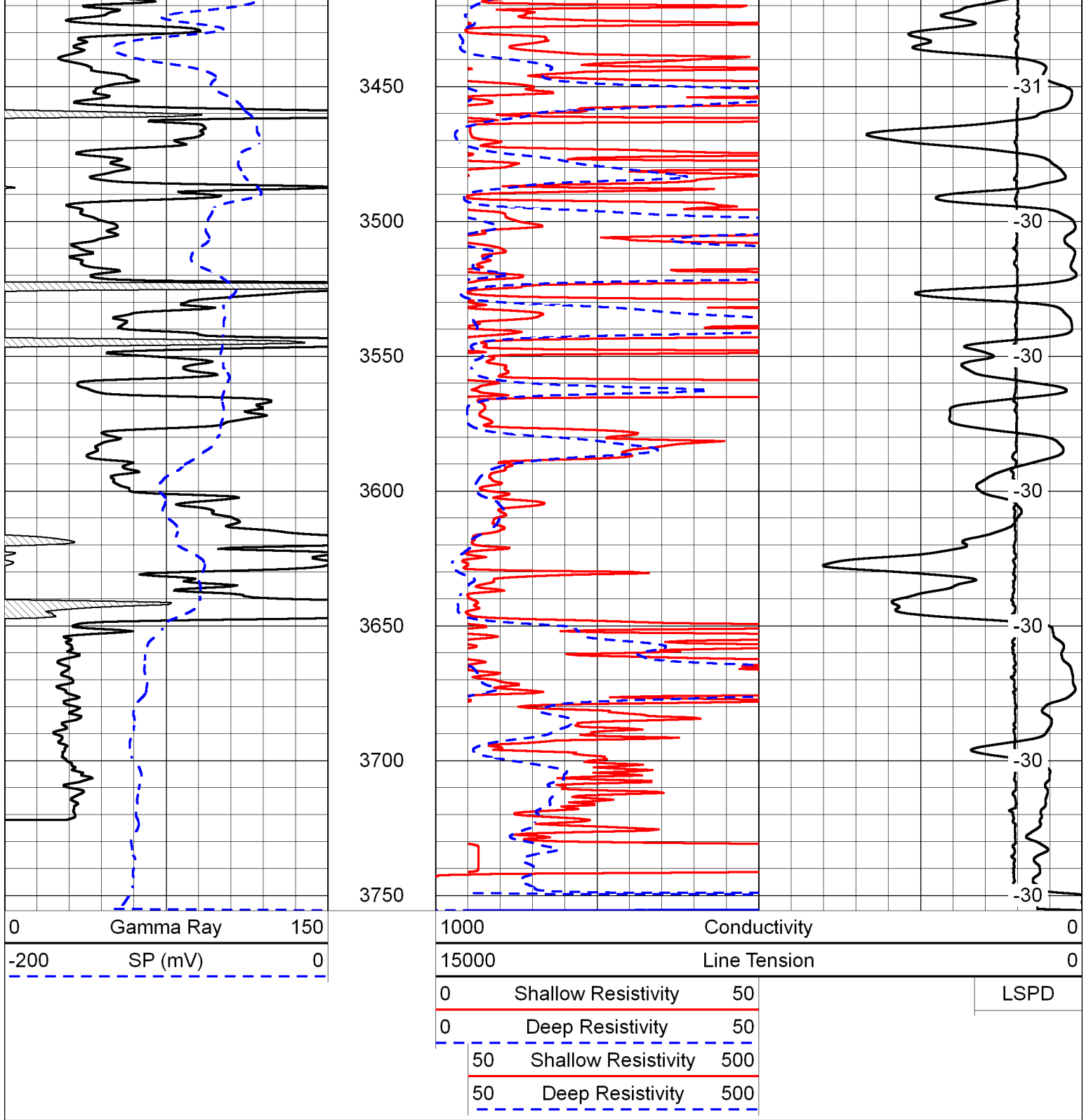


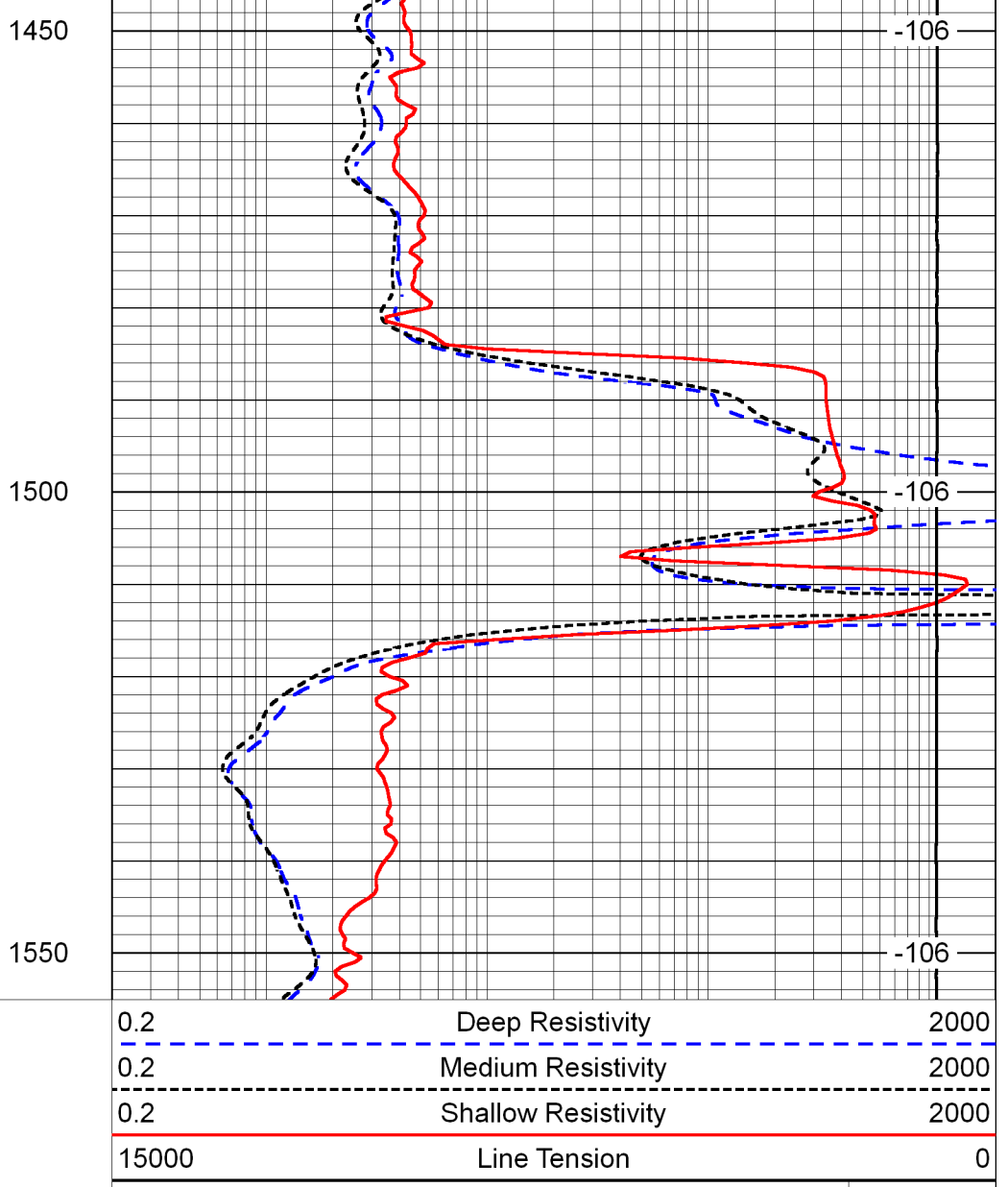
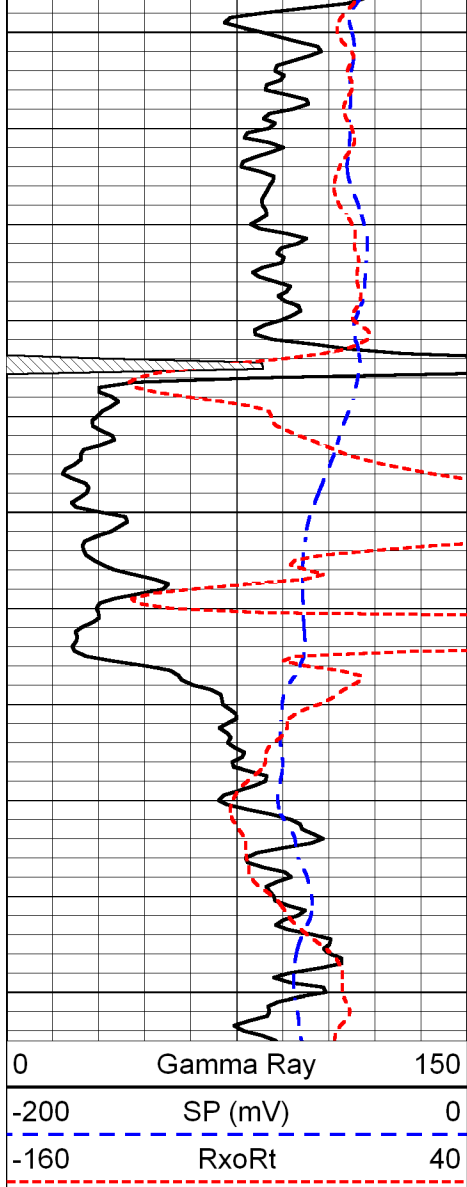






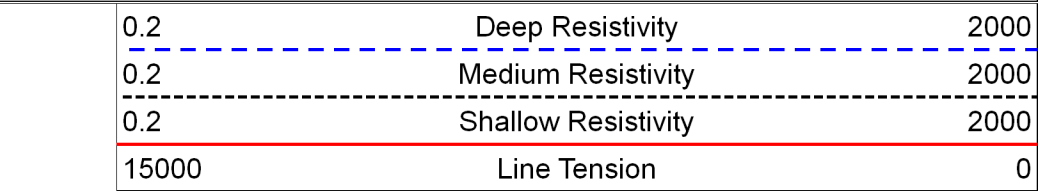
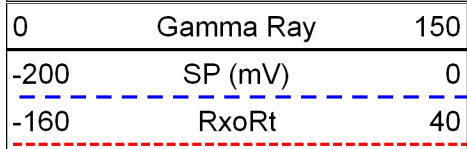




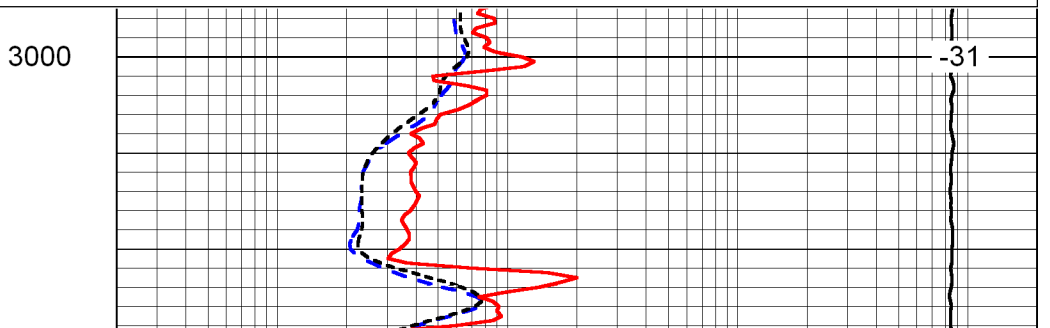
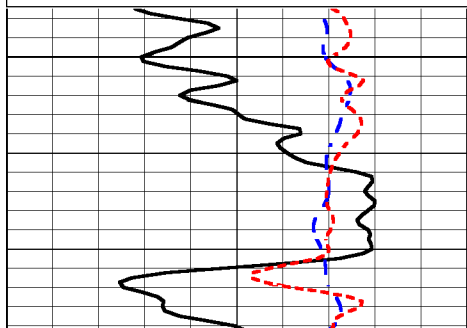


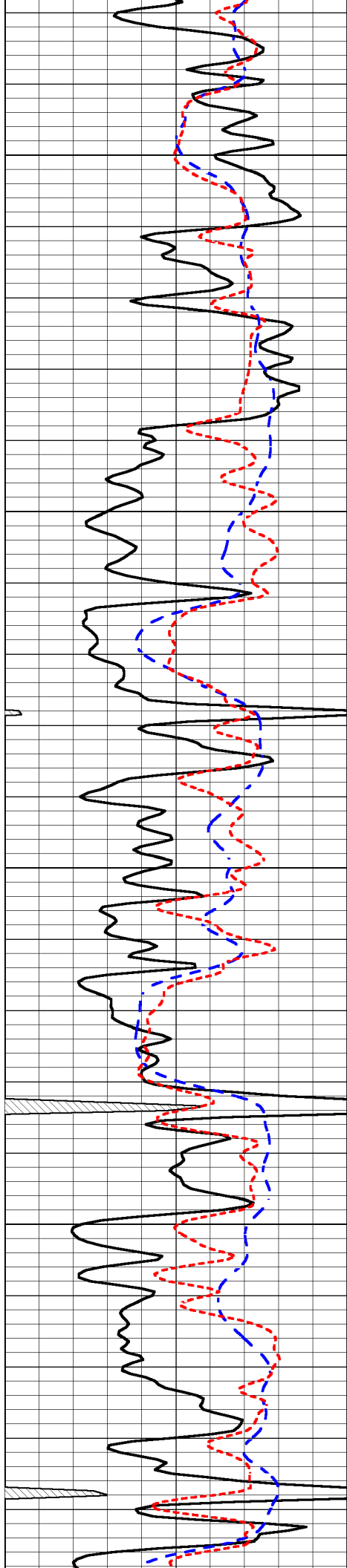
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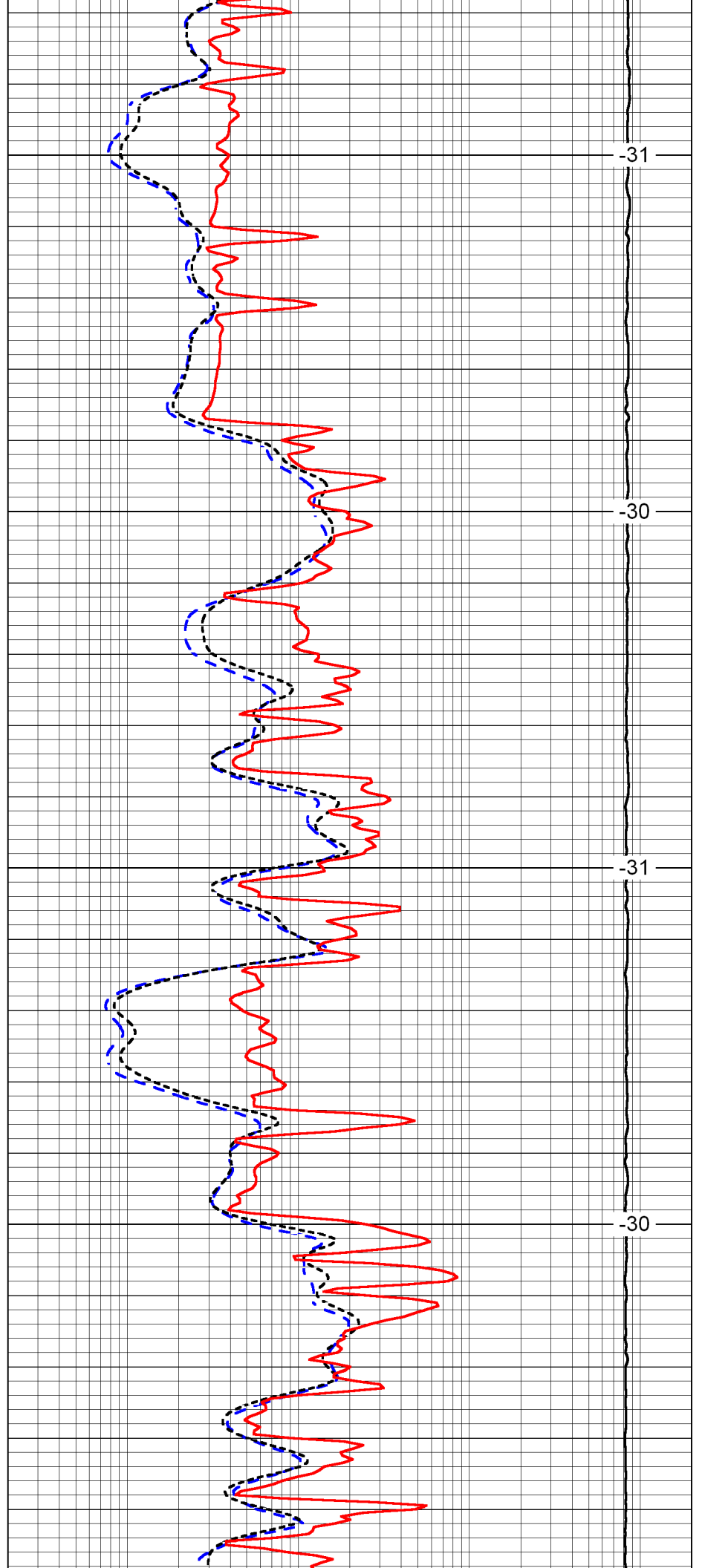


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3100

3150

3200

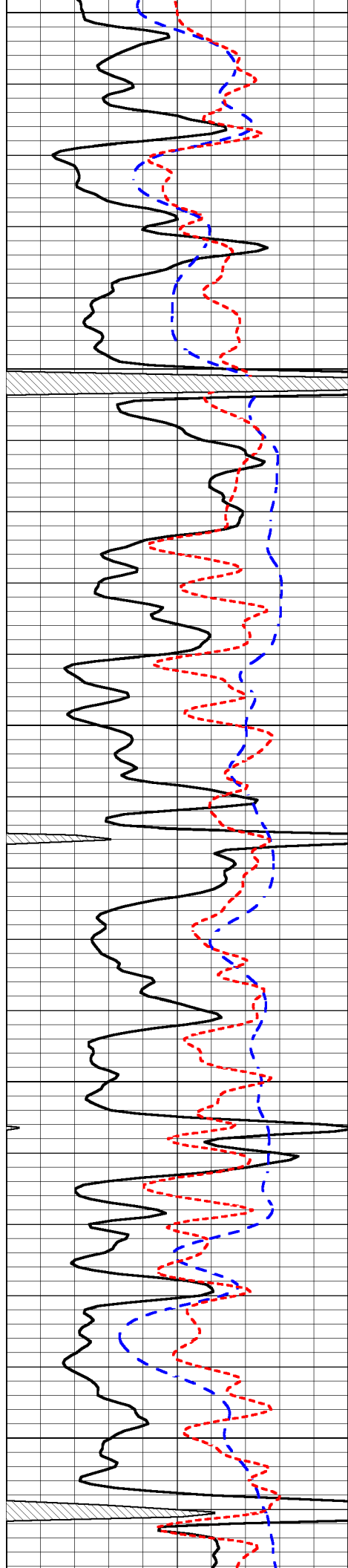


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-30

-31

-30



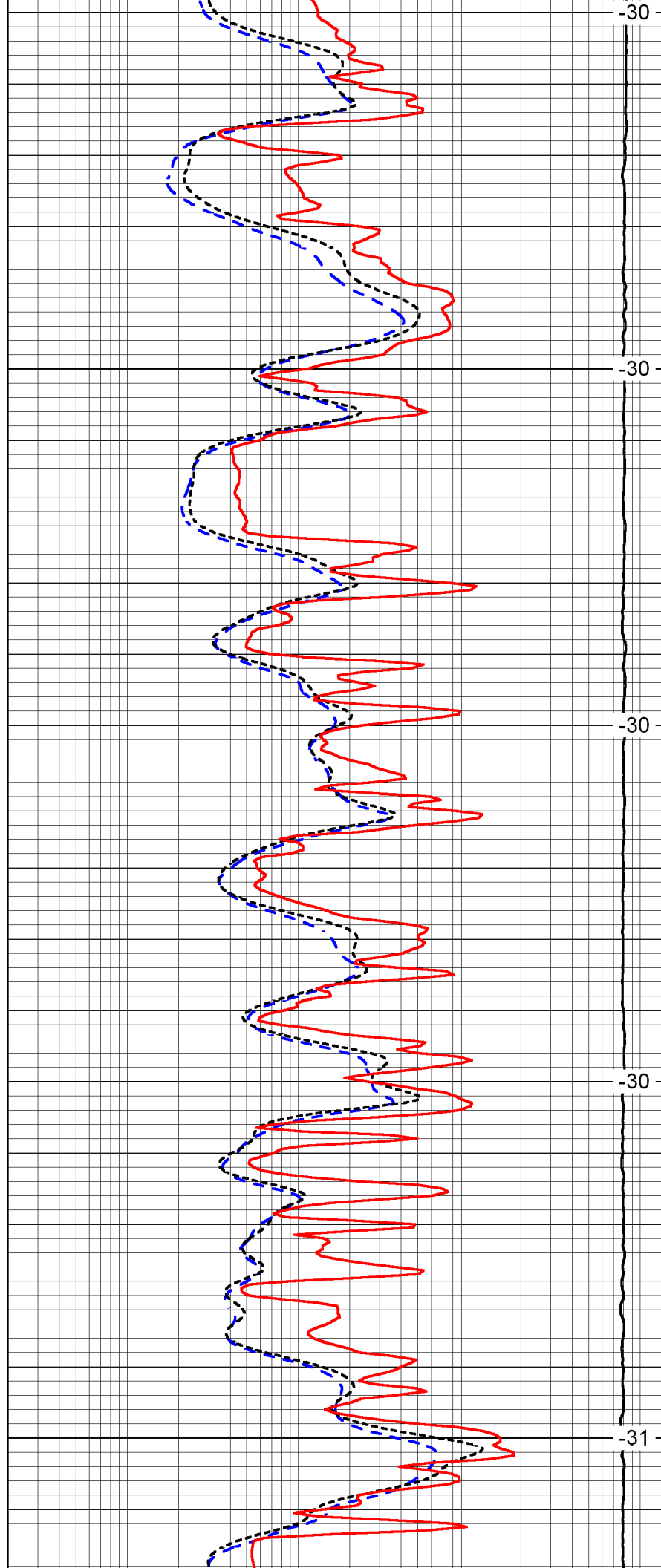
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3300

3350

3400

3450



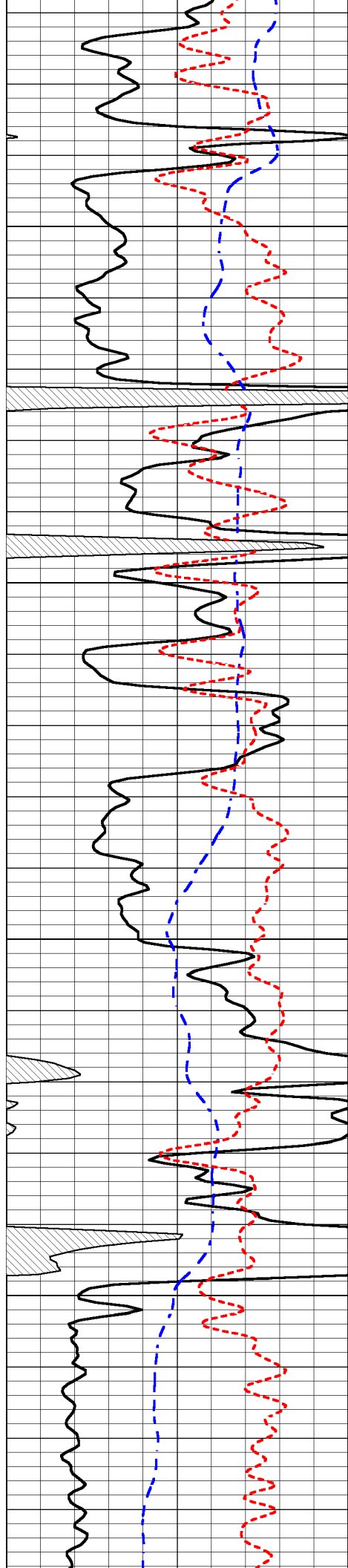
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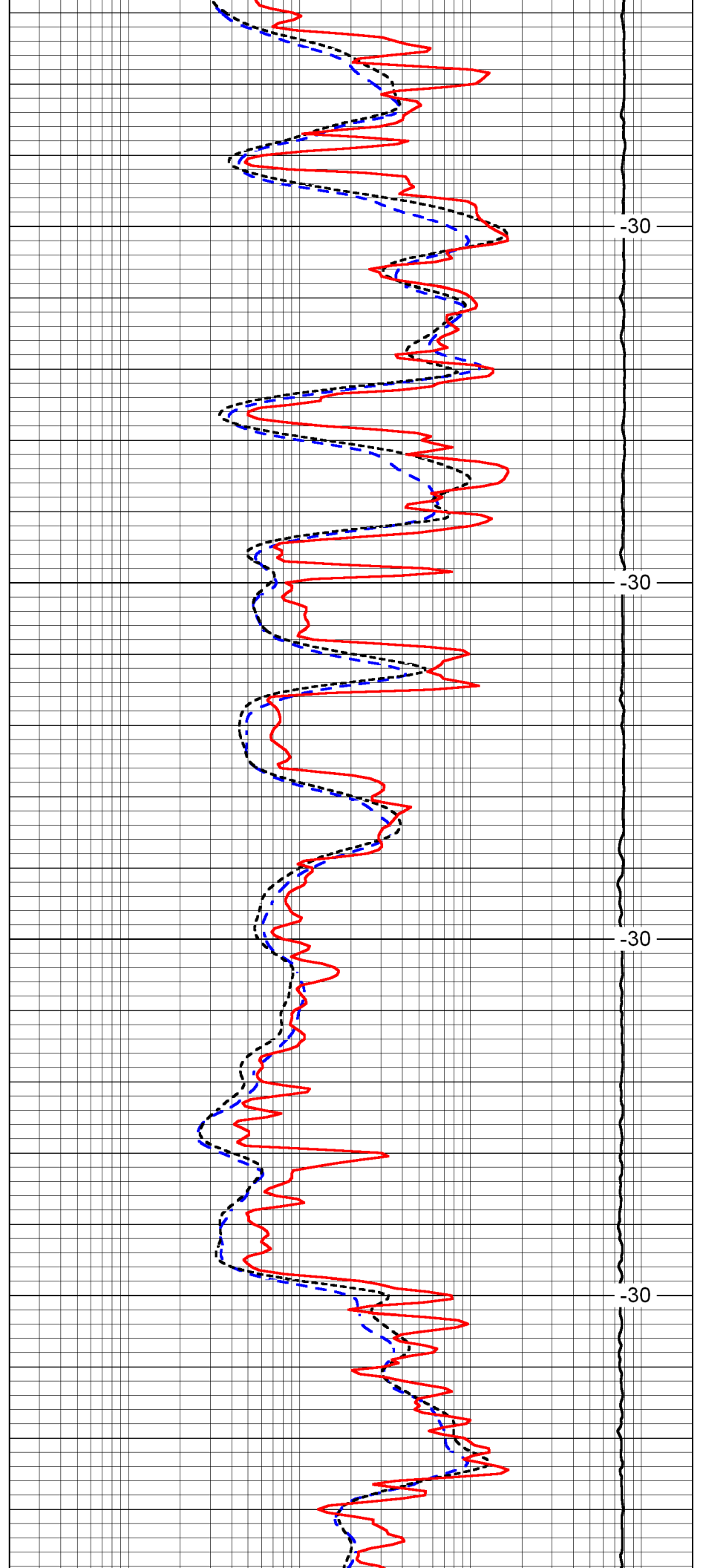


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3600

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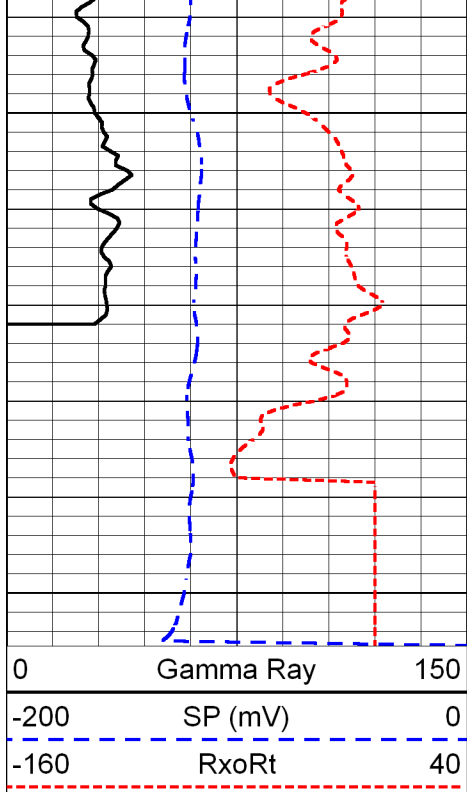


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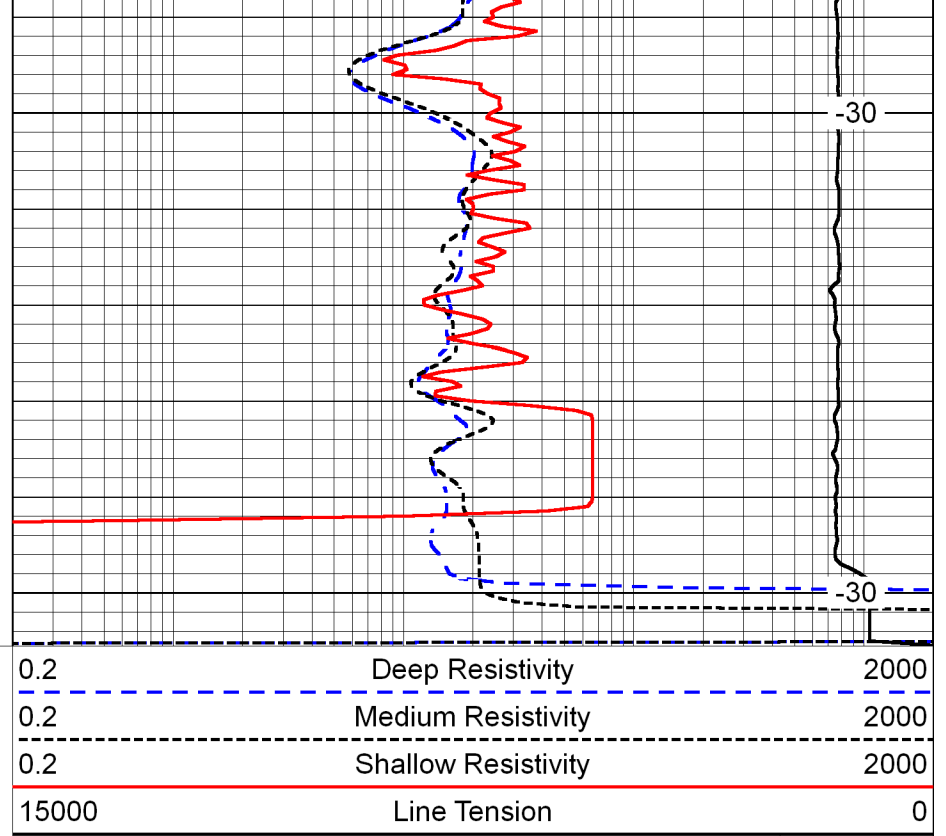
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3700

3750



-30

-30

LSPD