



Pioneer Energy Services

Dual Induction Log

15-159-22,775-00-00

API No.	Company		RAMA Operating Company, Inc.
	Well	Knop No. 7-30	
	Field	Chase-Silica	
	County	Rice	State
	Location	NE-NE-SW 2310' FSL & 2310' FWL	
	Sec: 30	Twp: 19S	Rge: 10W
	Permanent Datum	Ground Level	Elevation 1769
	Log Measured From	Kelly Bushing	9 Ft. Above Perm. Datum
	Drilling Measured From	Kelly Bushing	
			Other Services CNL/CDL MEL
			Elevation K.B. 1778 D.F. 1769 G.L. 1769

Date	4/27/14
Run Number	One
Depth Driller	3700
Depth Logger	3695
Bottom Logged Interval	3694
Top Log Interval	350
Casing Driller	8.625 @ 372
Casing Logger	366
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	3,000
Density / Viscosity	9.2 46
pH / Fluid Loss	9.5 8.8
Source of Sample	Flowline
Rm @ Meas. Temp	.21 @ 64
Rmf @ Meas. Temp	.16 @ 64
Rmc @ Meas. Temp	.28 @ 64
Source of Rmf / Rmc	Charts
Rm @ BHT	.12 @ 113
Operating Rig Time	3 Hours
Max Rec. Temp. F	113
Equipment Number	15
Location	Hays
Recorded By	J. Henrickson
Witnessed By	Josh Austin

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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

Ellinwood Kansas
East to County Line, 1 North, 1/2 East, North Into

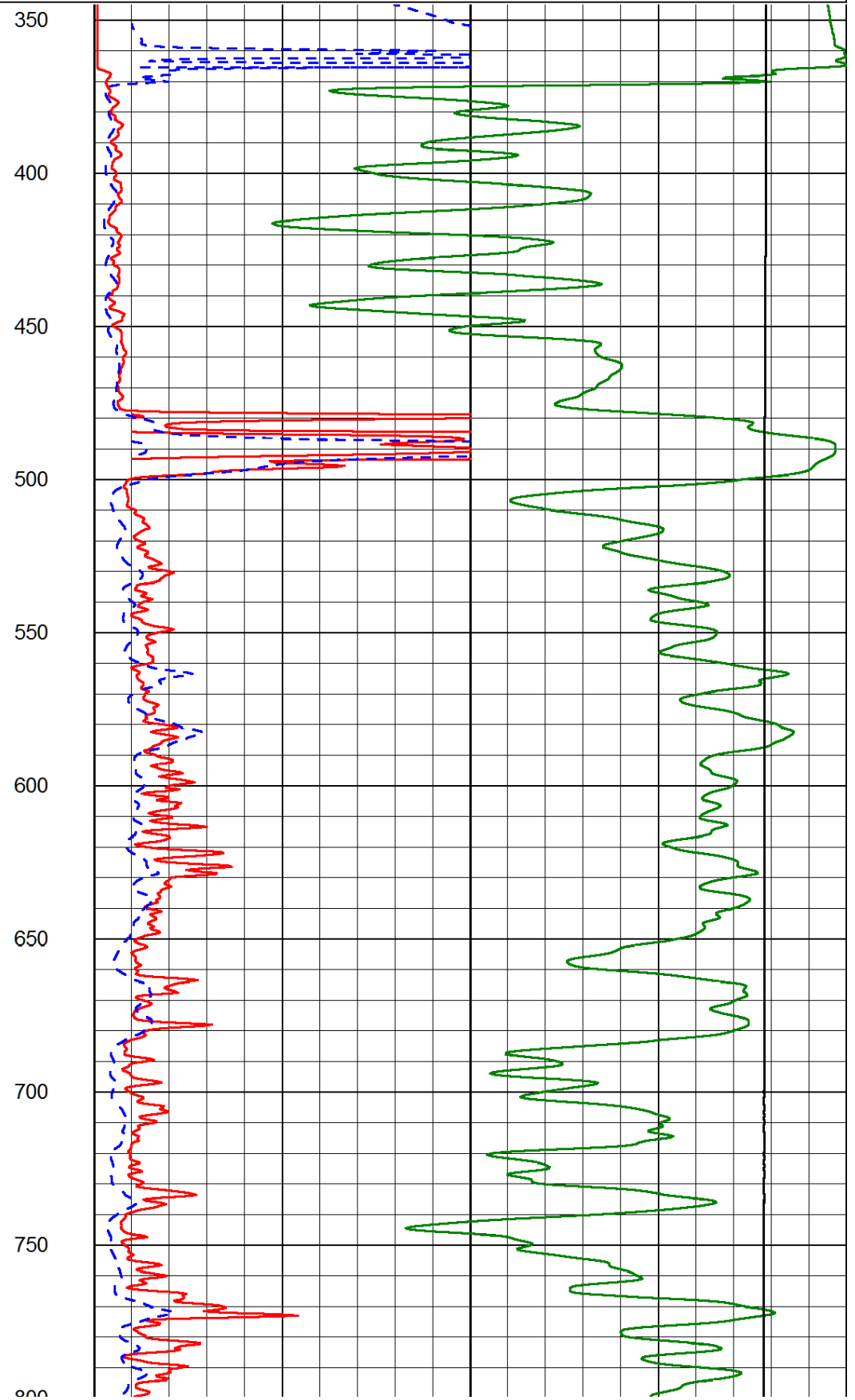
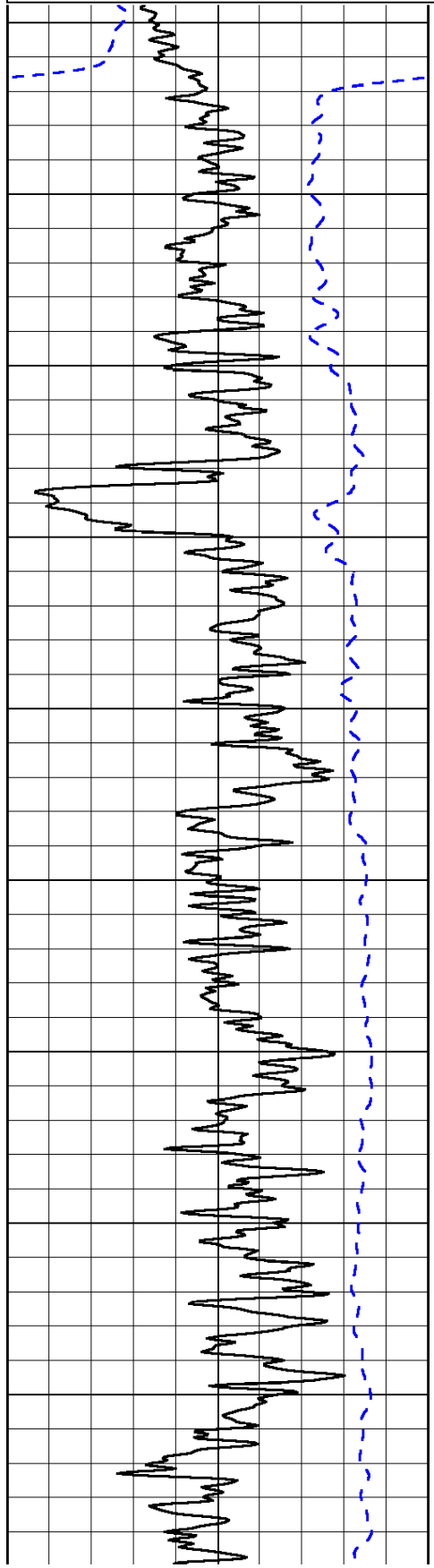
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 Presentation Format: dil2in
 Dataset Creation: Sun Apr 27 08:47:57 2014
 Charted by: Depth in Feet scaled 1:600

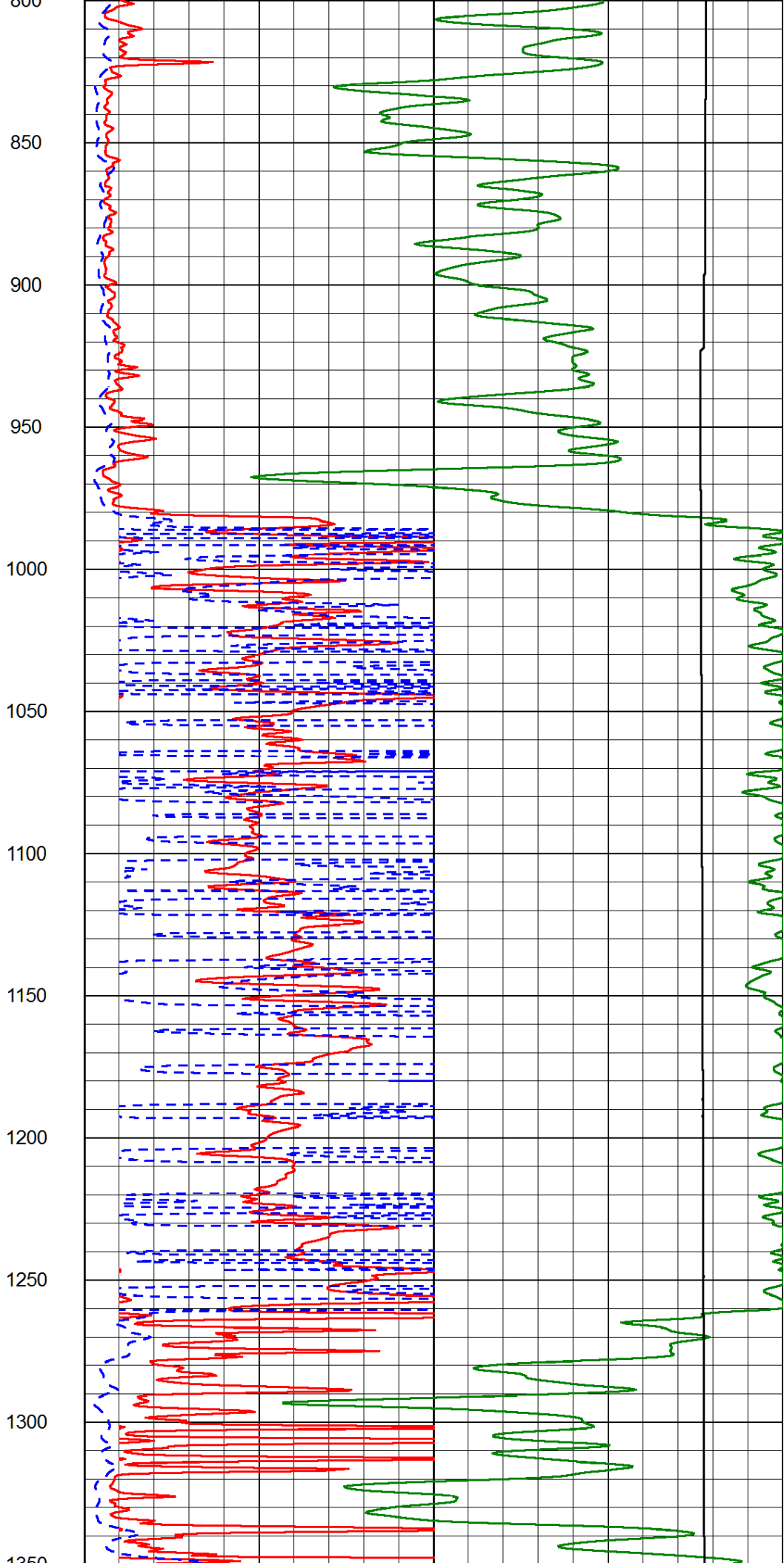
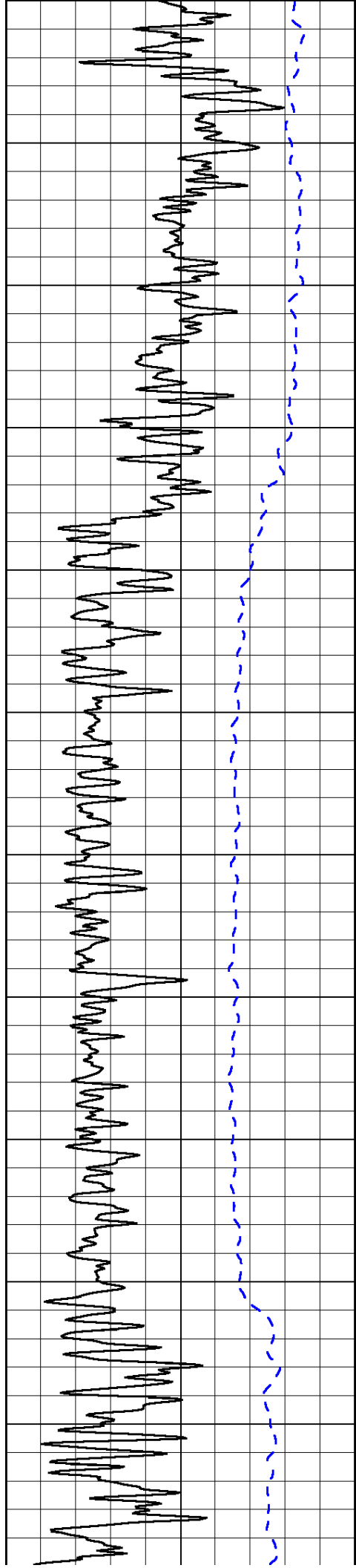
0	Gamma Ray (GAPI)	150
-200	SP (mV)	0

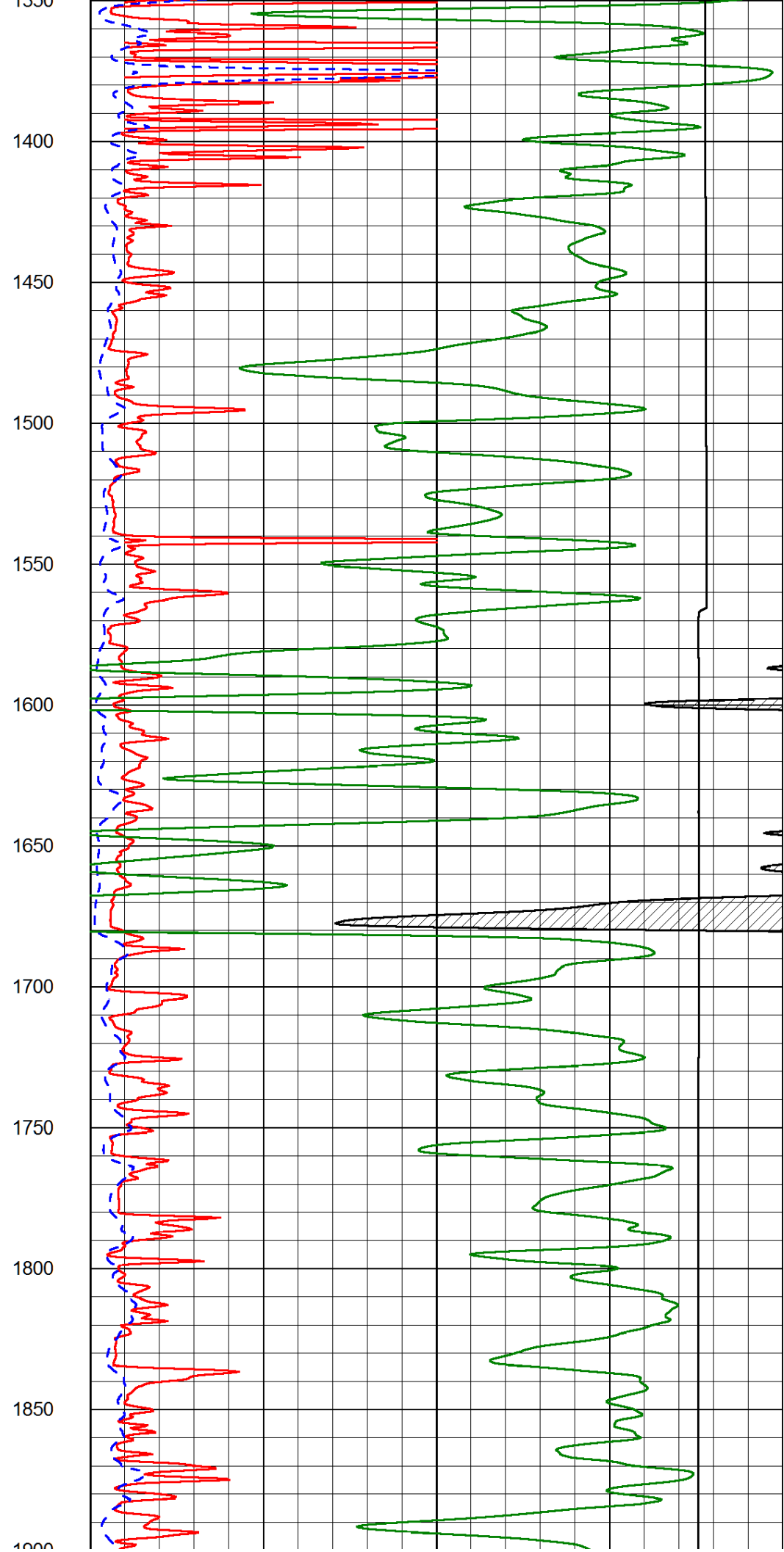
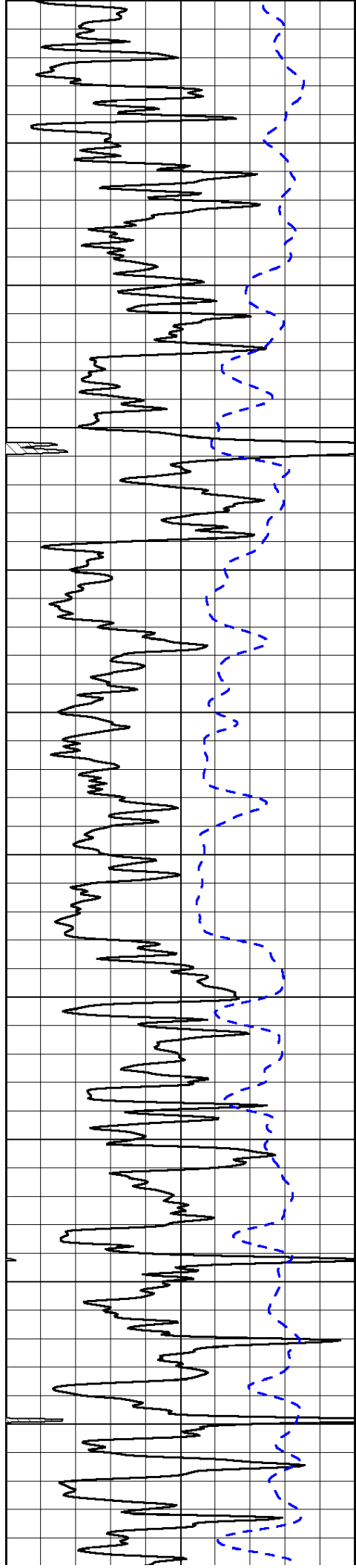
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0	Deep Resistivity (Ohm-m)	50

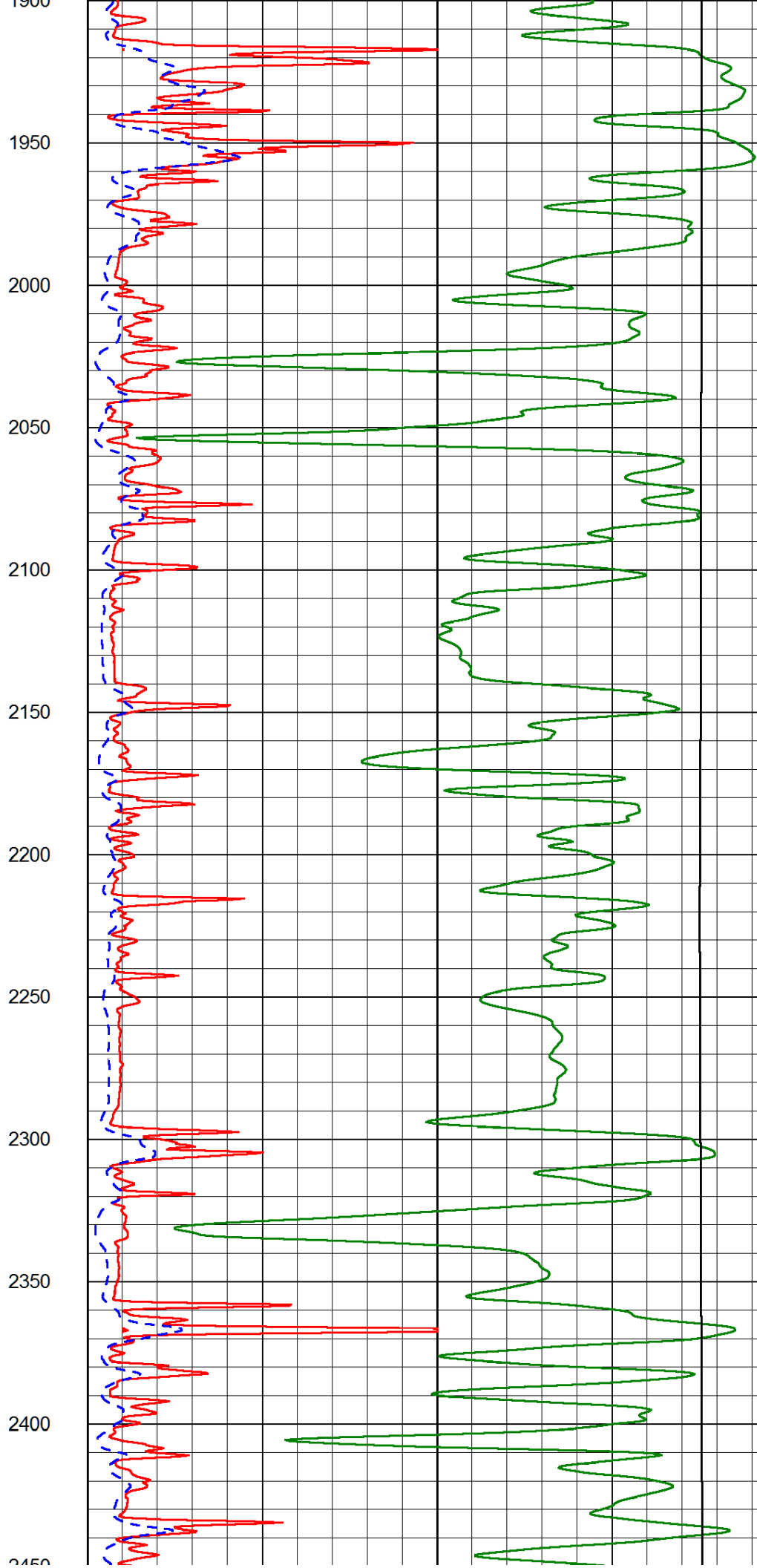
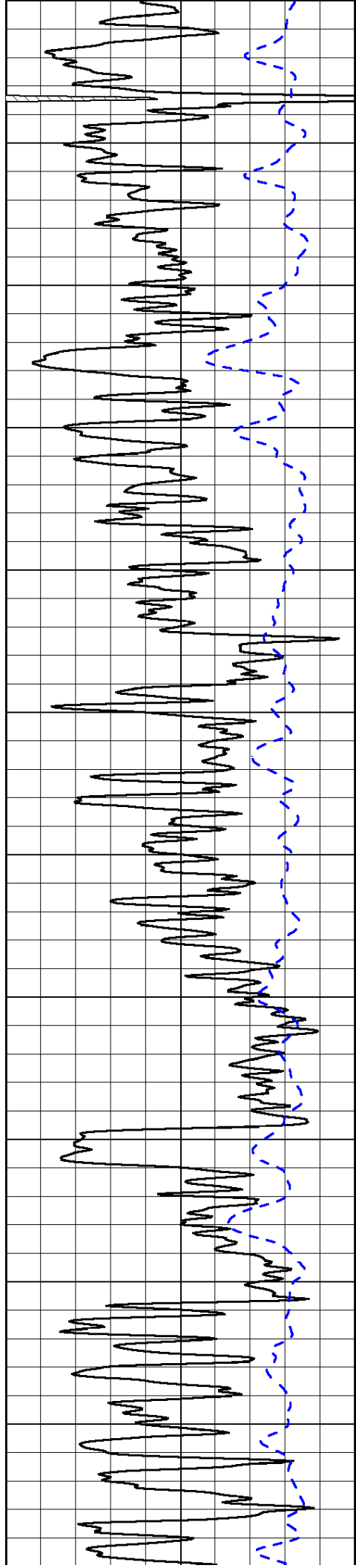
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15000	Line Tension (lb)	0

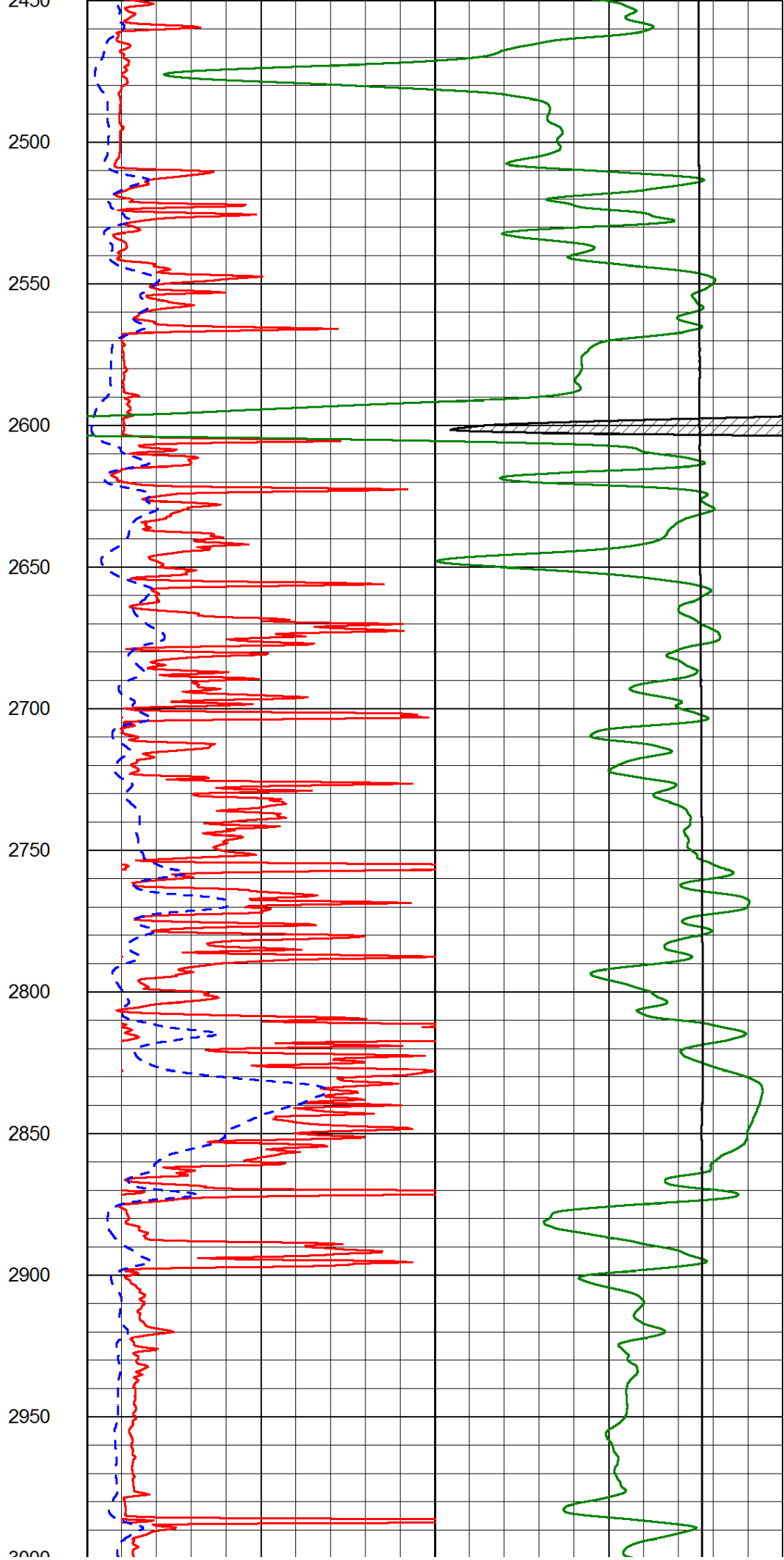
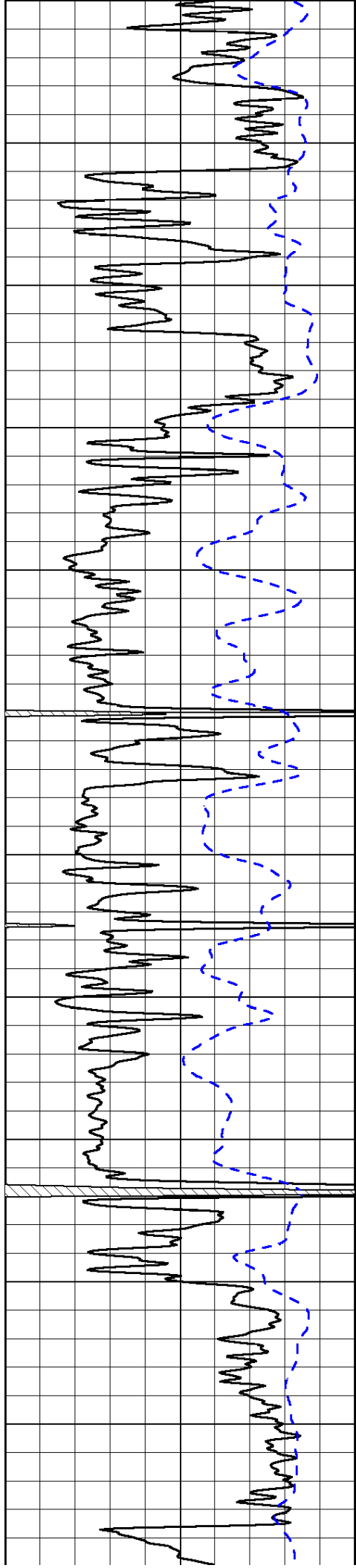
Shallow Resistivity		
50	(Ohm-m)	500
50	Deep Resistivity (Ohm-m)	500

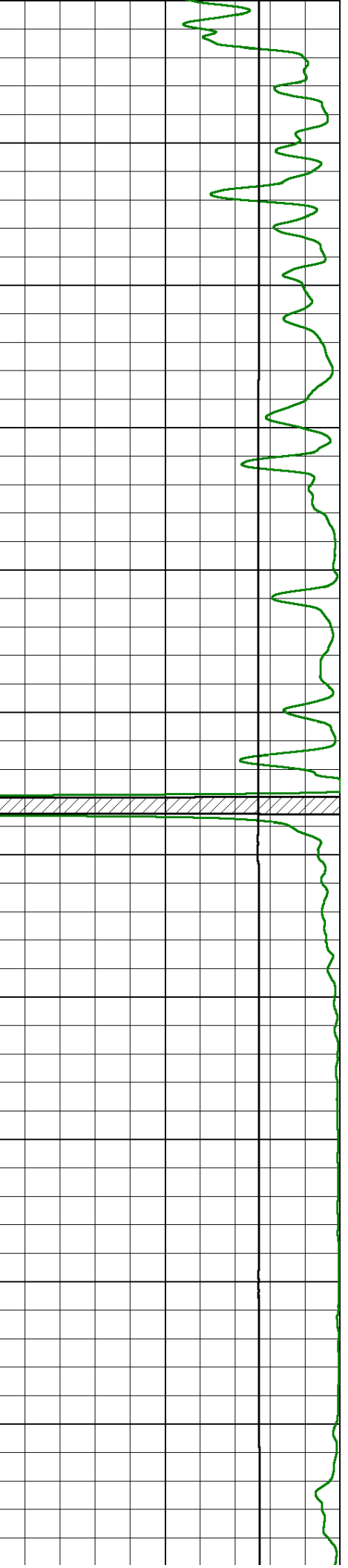
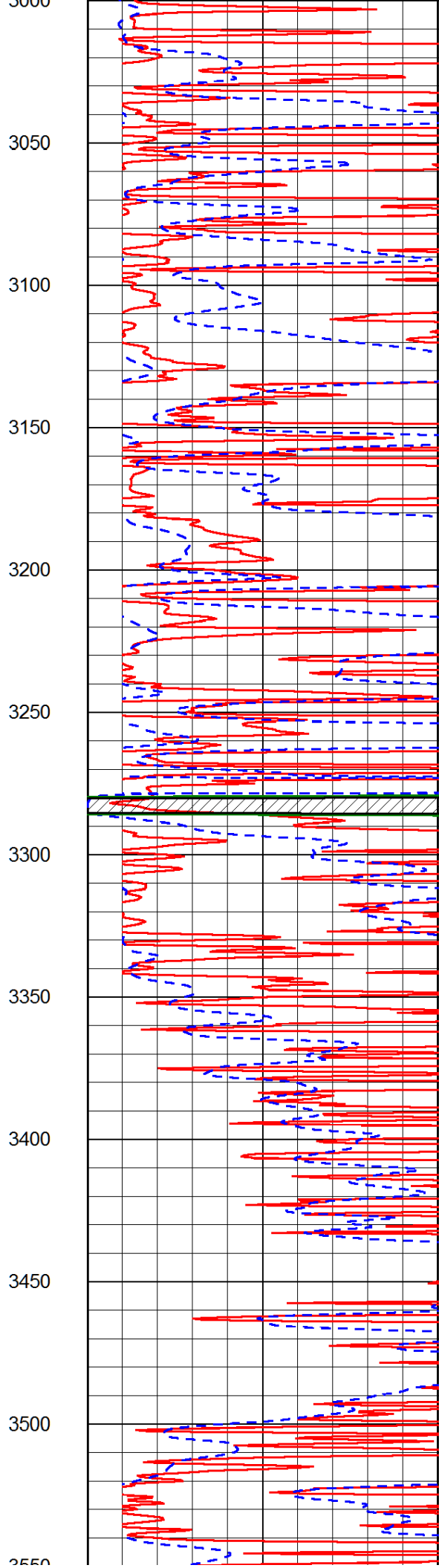
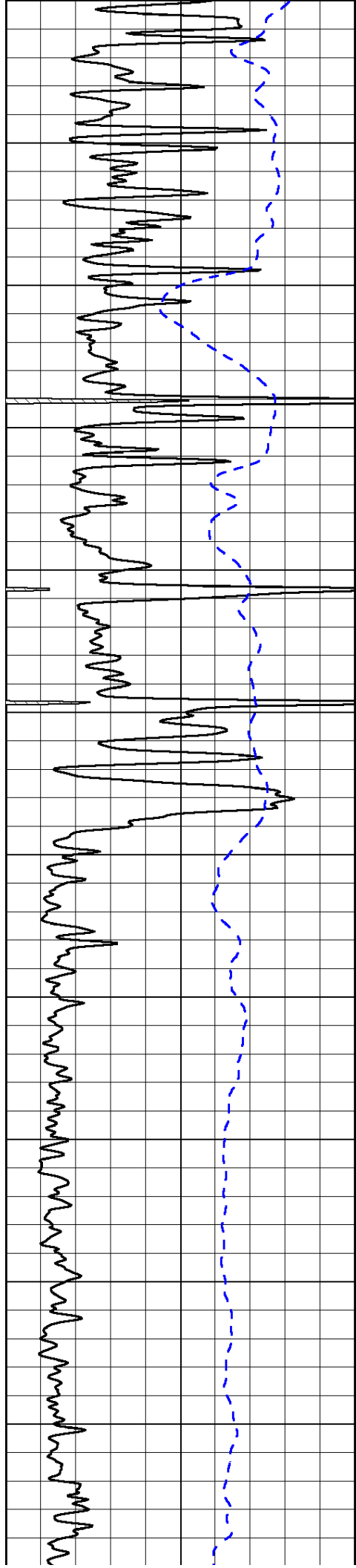


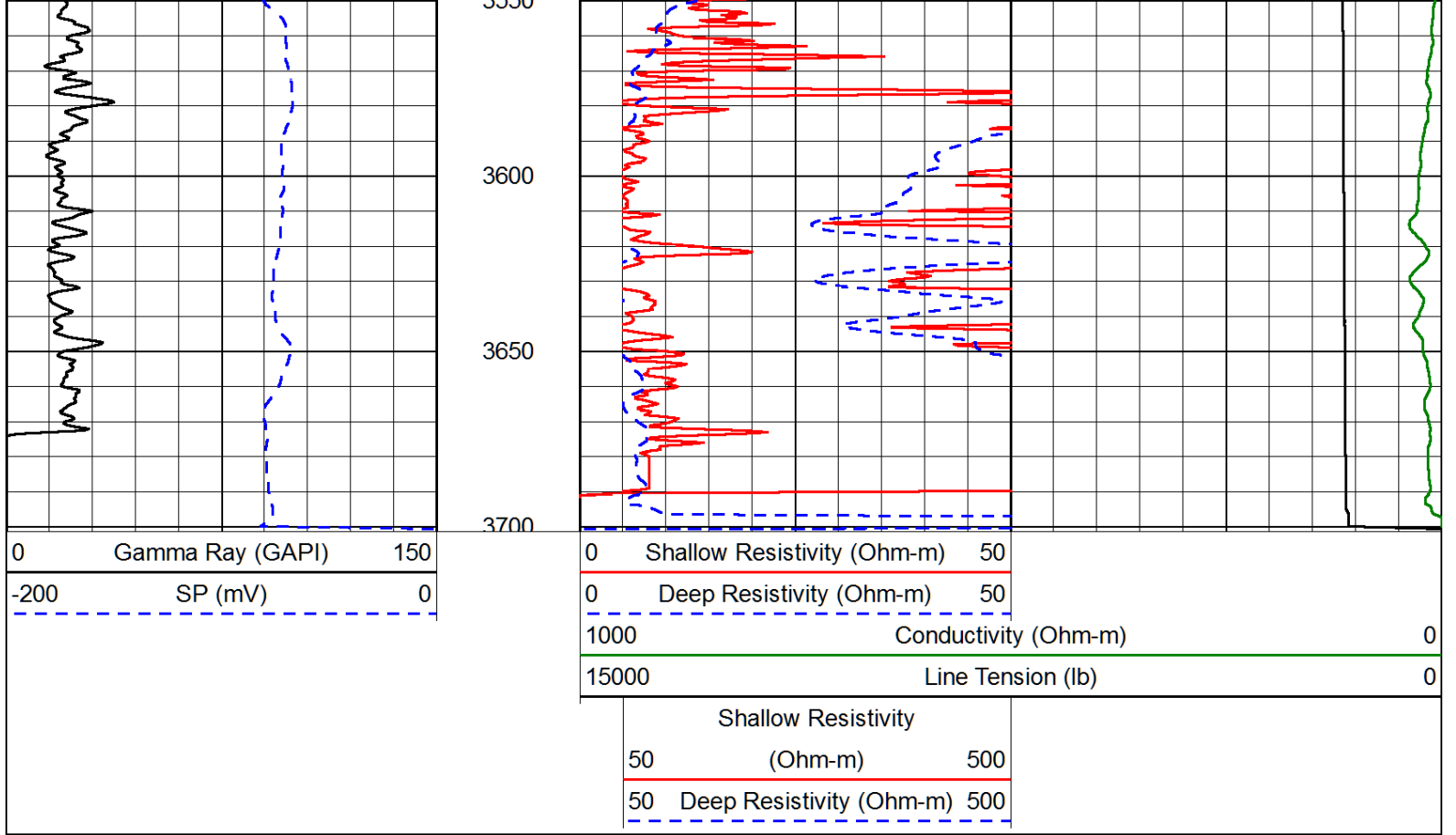




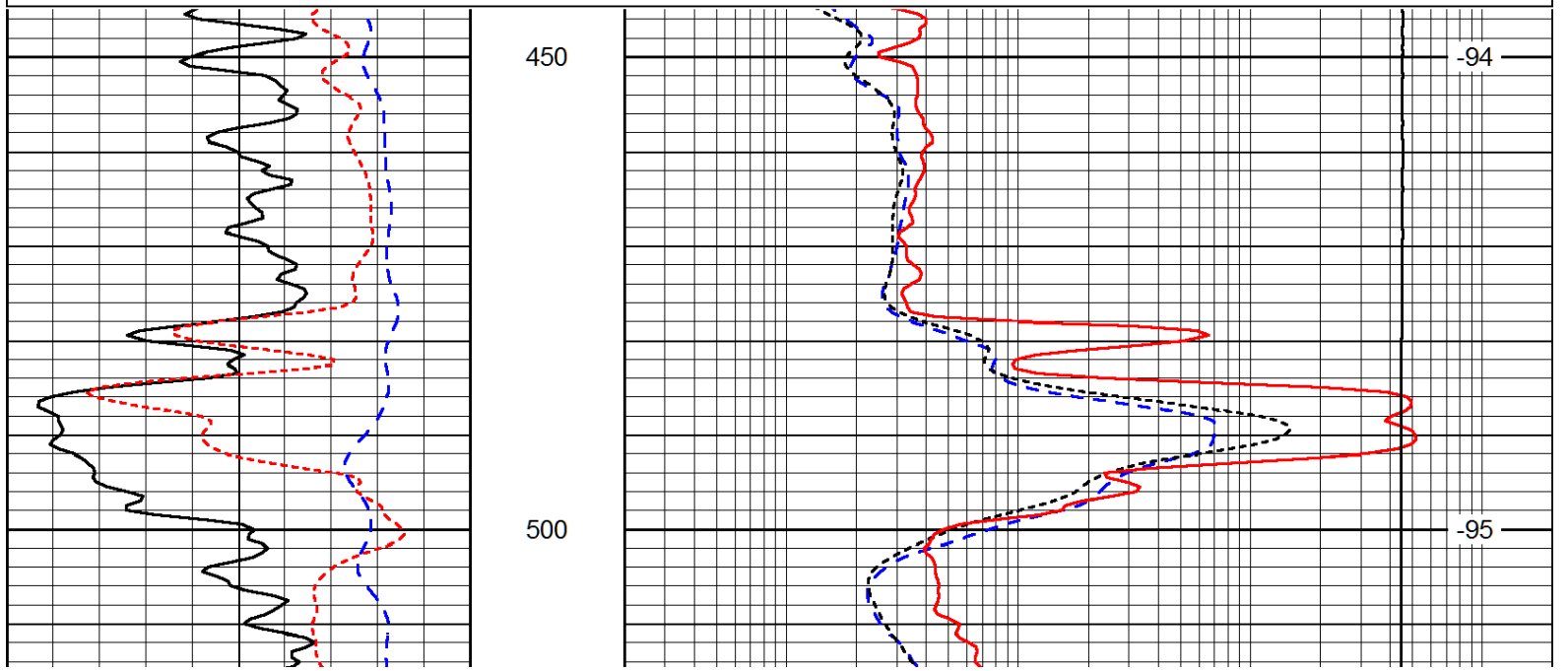
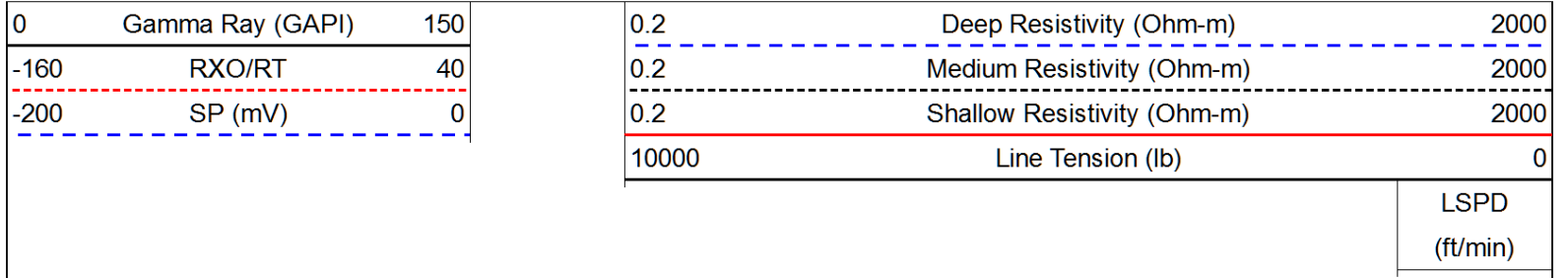


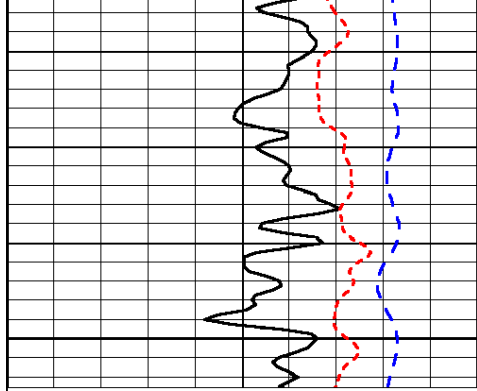






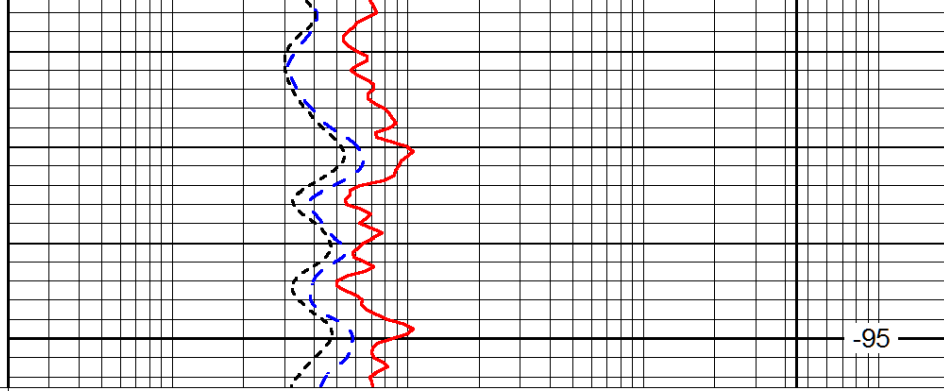
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0	Gamma Ray (GAPI)	150
-160	RXO/RT	40
-200	SP (mV)	0

550



0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0

LSPD
(ft/min)

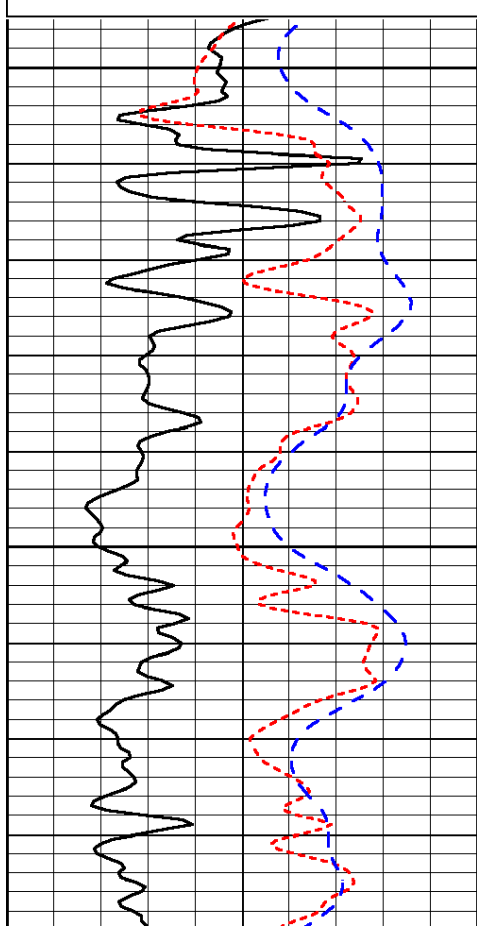
-95

Database File: rama_knop_7_30hd.db
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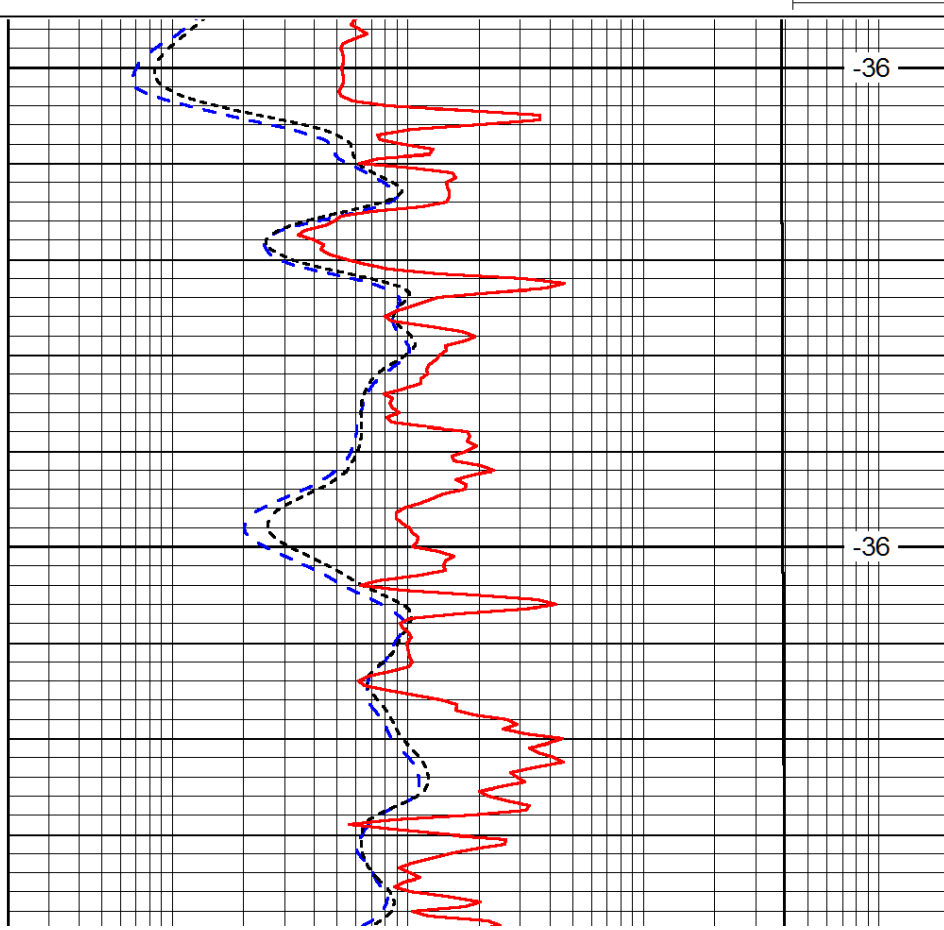
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LSPD
(ft/min)



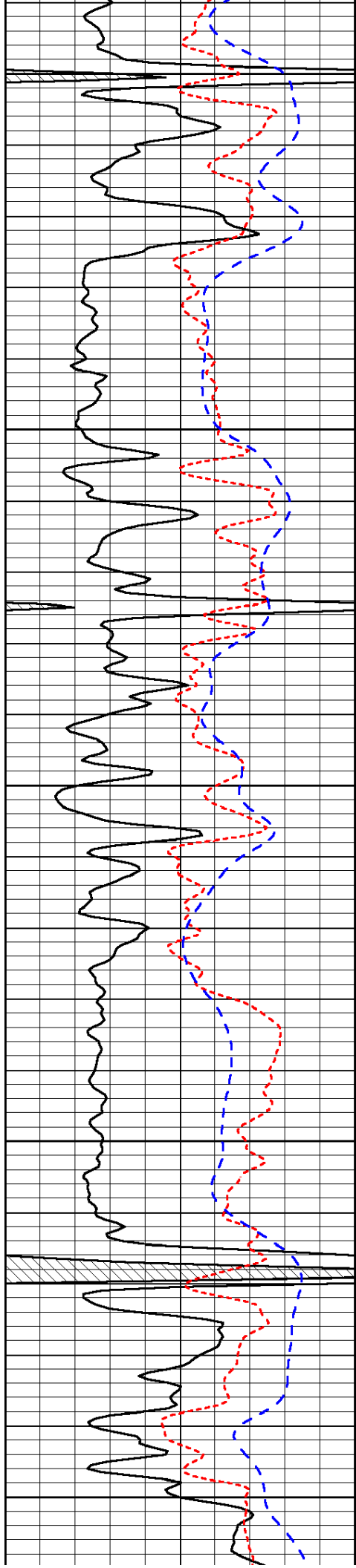
2600

2650



-36

-36



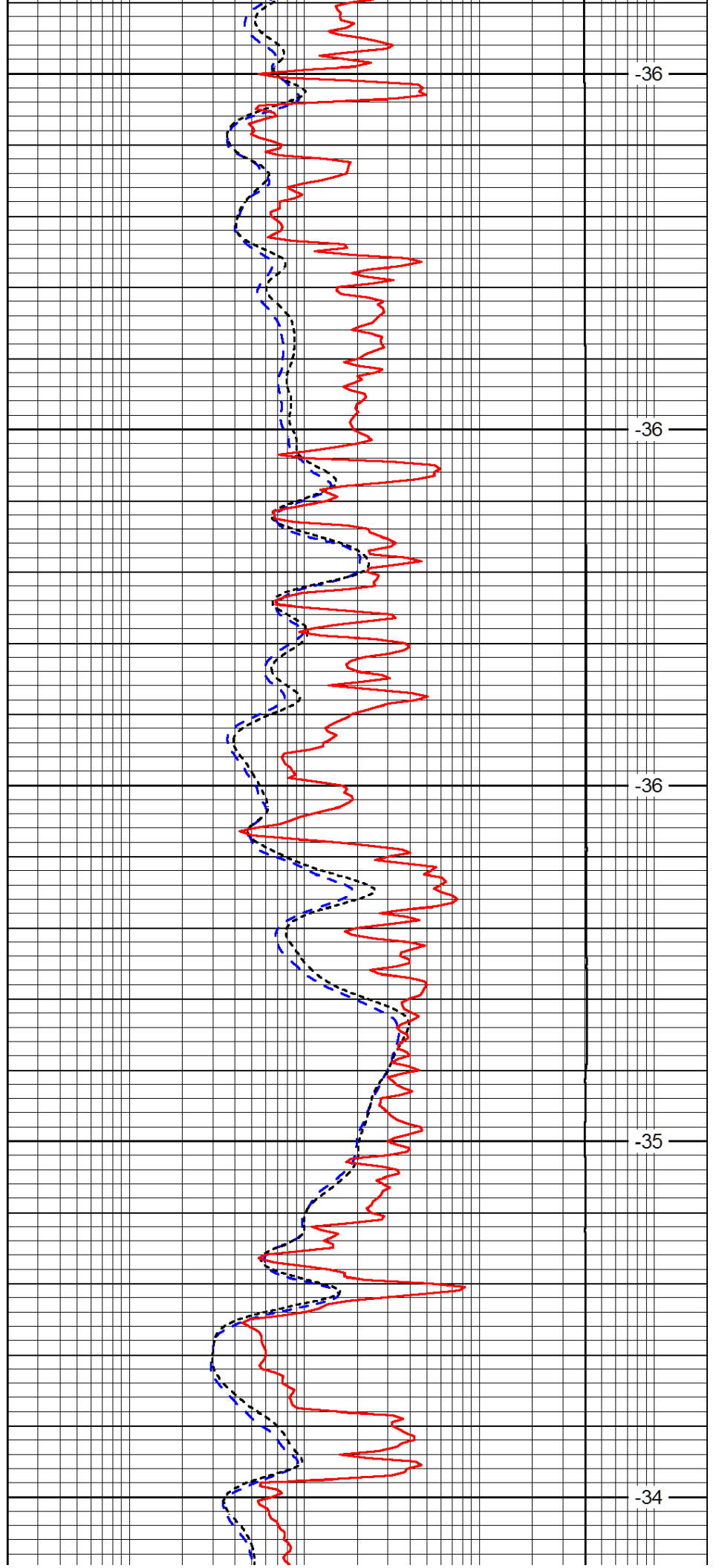
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2750

2800

2850

2900



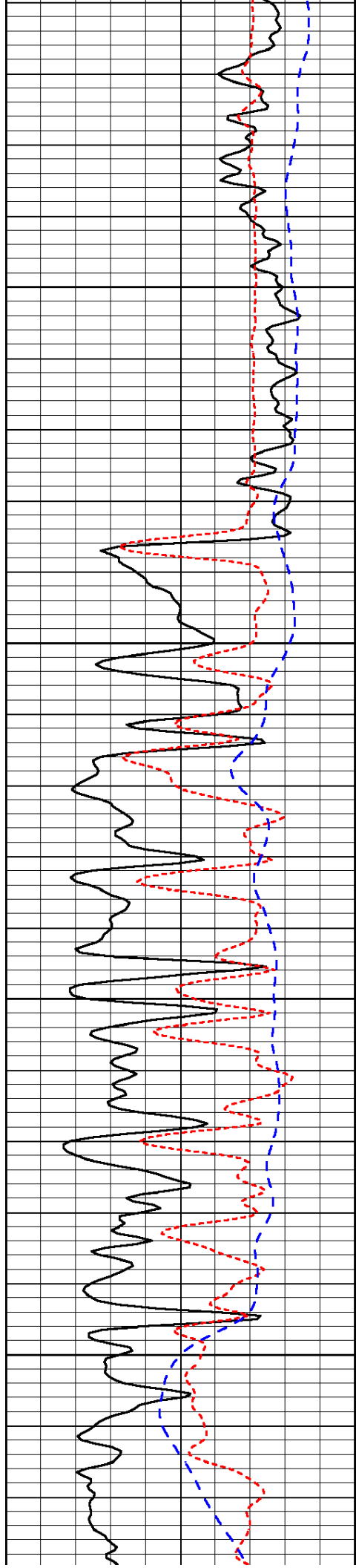
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-36

-36

-35

-34

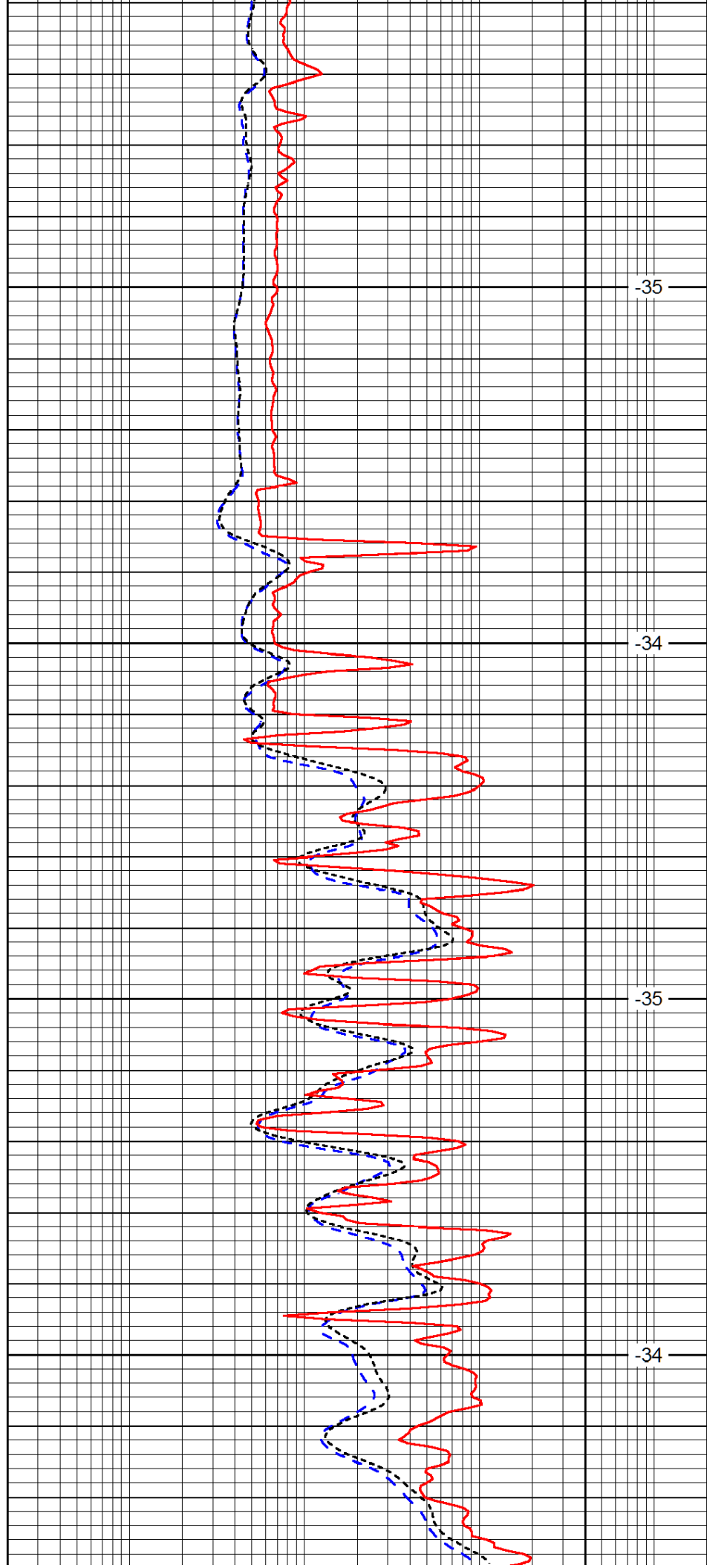


2950

3000

3050

3100

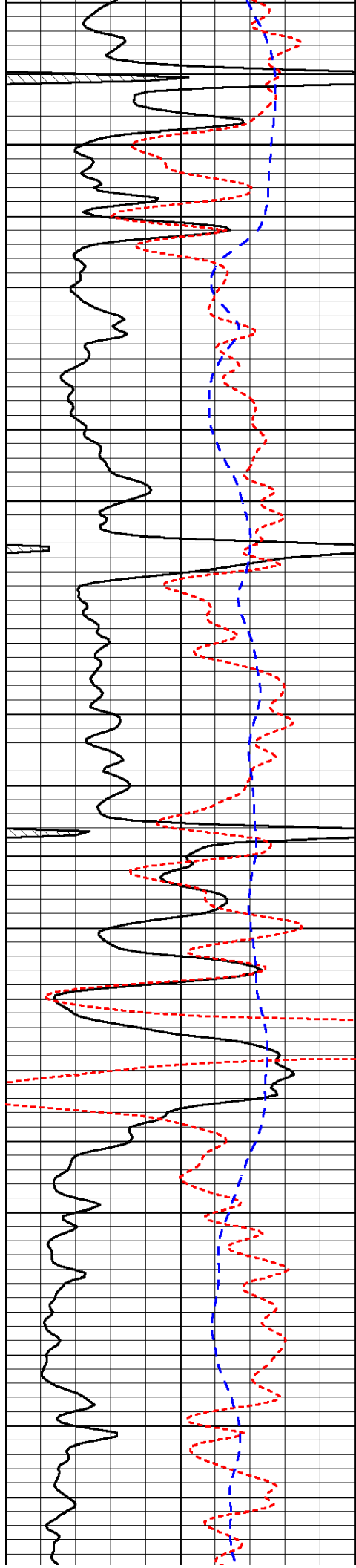


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-34

-35

-34



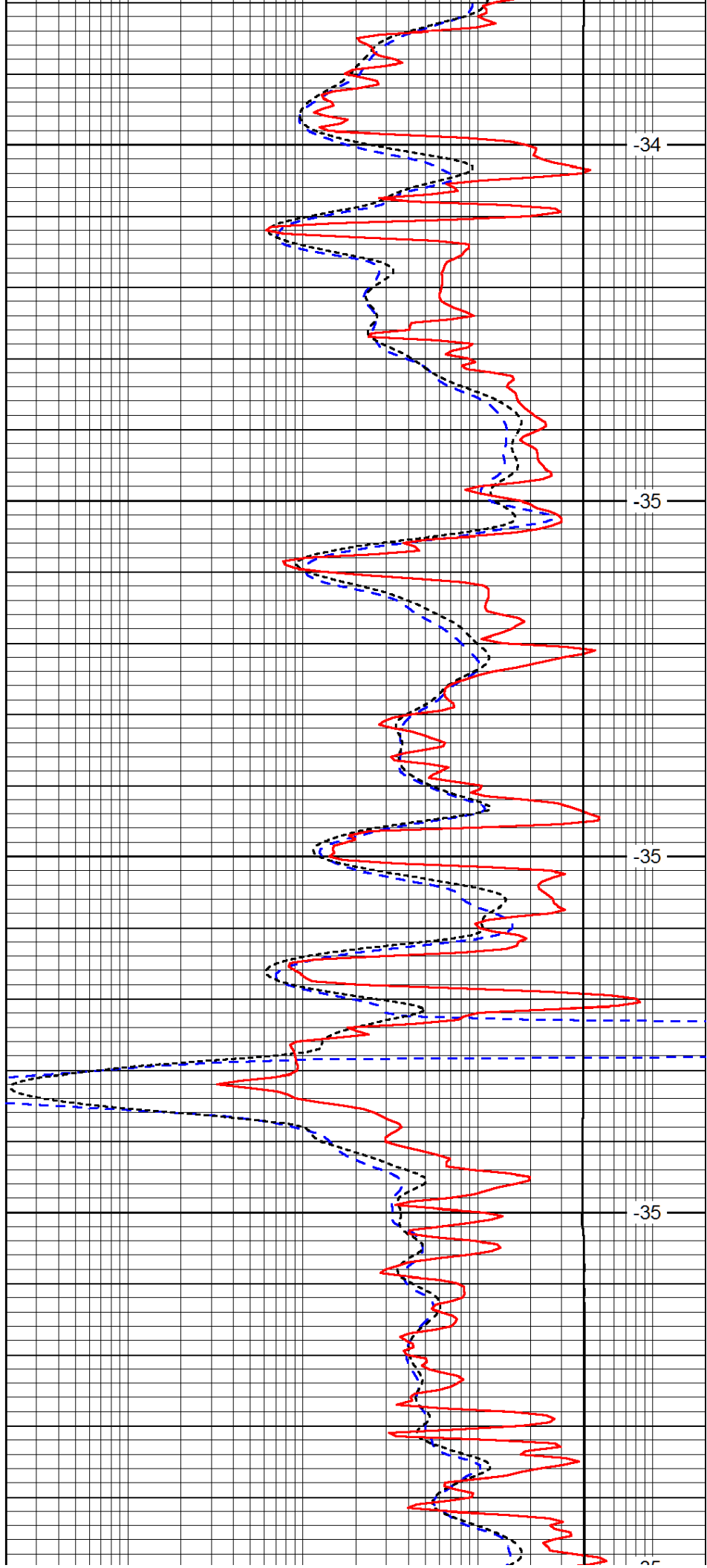
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3200

3250

3300

3350



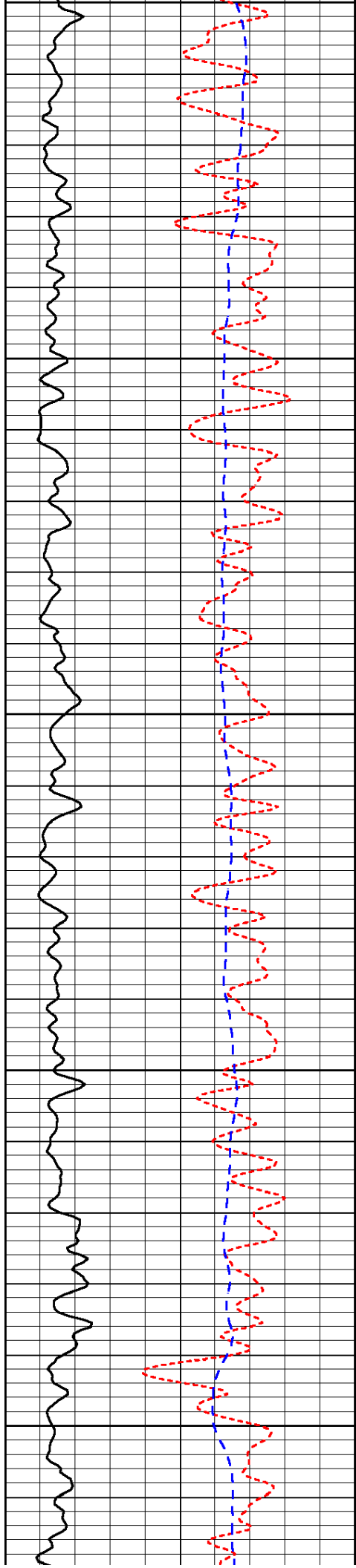
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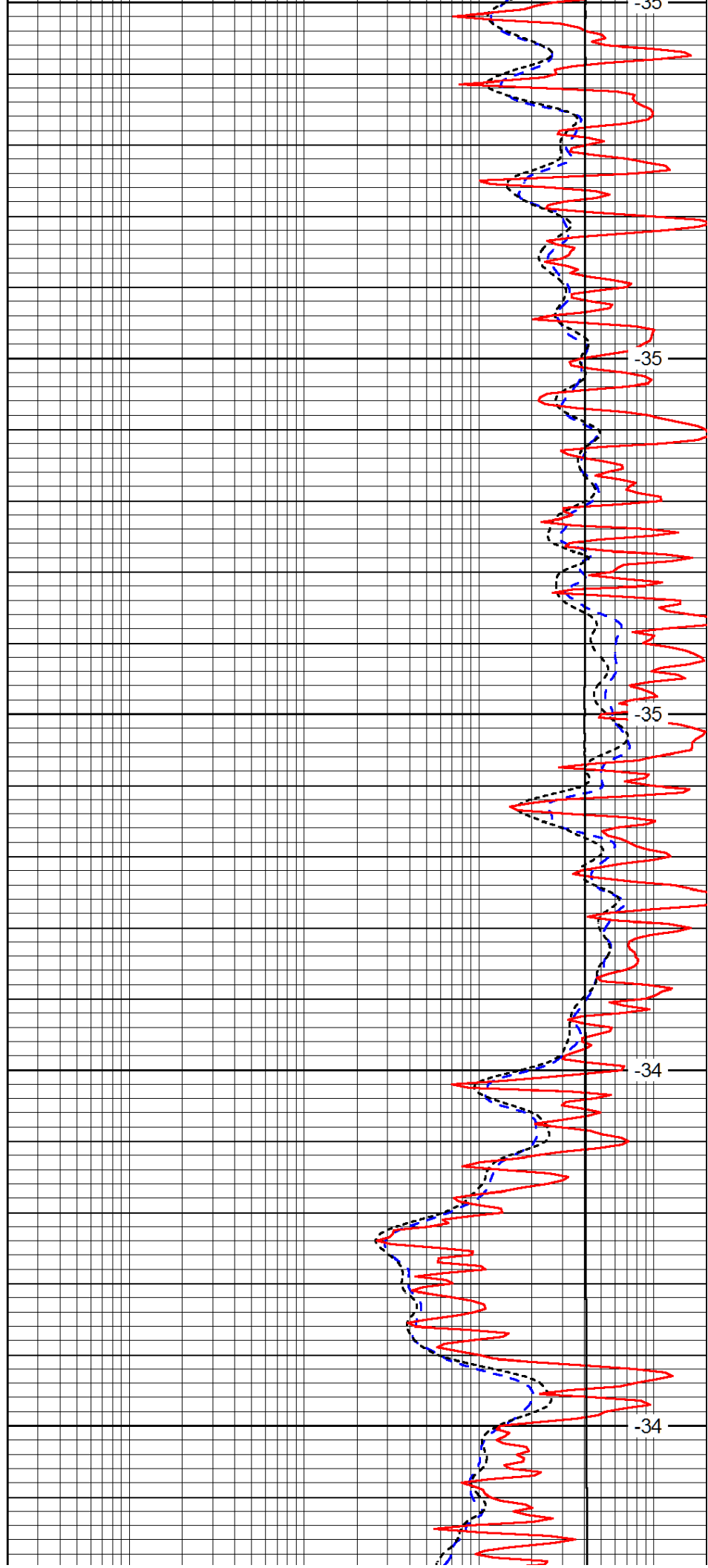
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3400

3450

3500

3550



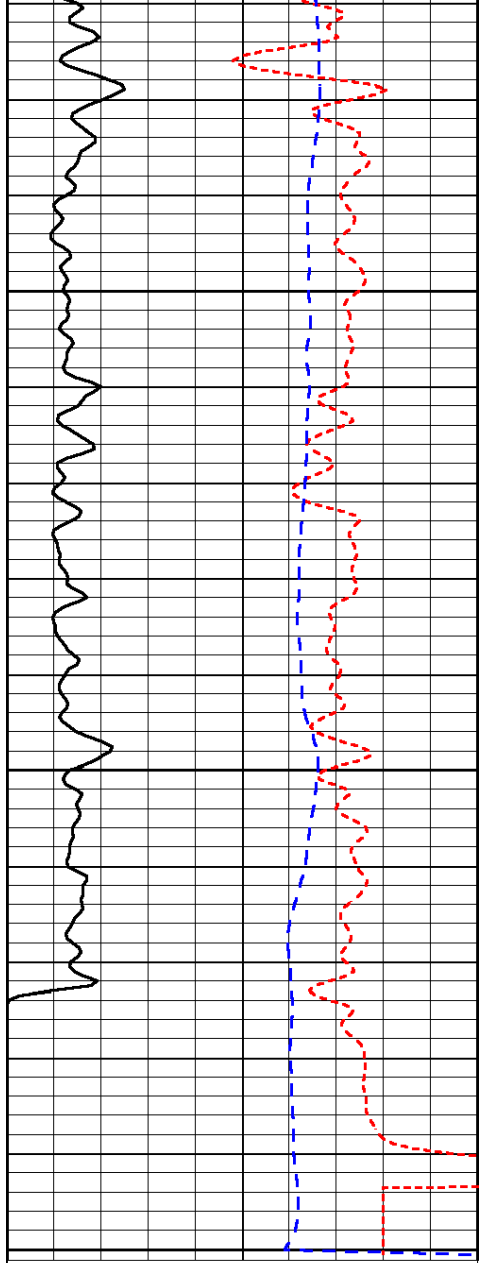
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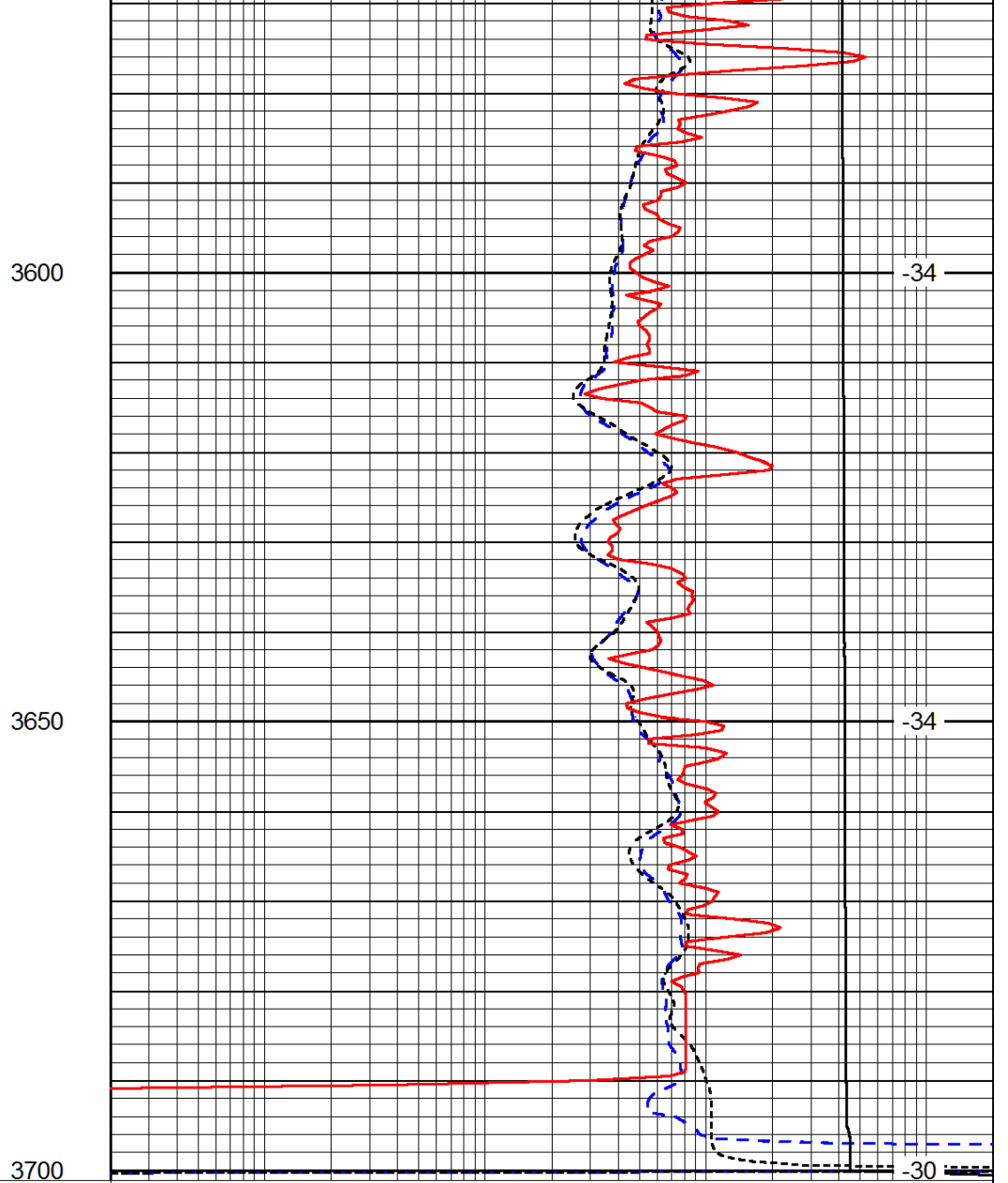
-35

-34

-34



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LSPD
(ft/min)