



Pioneer Energy Services

# Dual Induction Log

15-009-25,881-00-00

**Company** L.D. Drilling, Inc.  
**Well** Frank No. 2  
**Field** Maybach West  
**County** Barton **State** Kansas  
**Location** NE-SE-SW-SE  
 1657' FEL & 343' FSL  
**Sec:** 23 **Twp:** 20S **Rge:** 14W

Other Services  
 CNL/CDL  
 MEL

**Elevation**  
 K.B. 1899  
 D.F. 1894  
 G.L. 1894

Date	9/26/13	
Run Number	One	
Depth Driller	3650	
Depth Logger	3649	
Bottom Logged Interval	3648	
Top Log Interval	800	
Casing Driller	8.625 @ 812	
Casing Logger	810	
Bit Size	7.875	
Type Fluid in Hole	Chemical	
Salinity, ppm CL	7.000	
Density / Viscosity	9.1   50	
pH / Fluid Loss	8.5   9.6	
Source of Sample	Flowline	
Rm @ Meas. Temp	.18 @ 78	
Rmf @ Meas. Temp	.14 @ 78	
Rmc @ Meas. Temp	.24 @ 78	
Source of Rmf / Rmc	Charts	
Rm @ BHT	.12 @ 113	
Operating Rig Time	4 Hours	
Max Rec. Temp. F	113	
Equipment Number	17	
Location	Hays	
Recorded By	J. Henrickson	
Witnessed By	Kim Shoemaker	

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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  
  
 Great Bend Kansas  
 5 South, 4 1/4 West, North Into

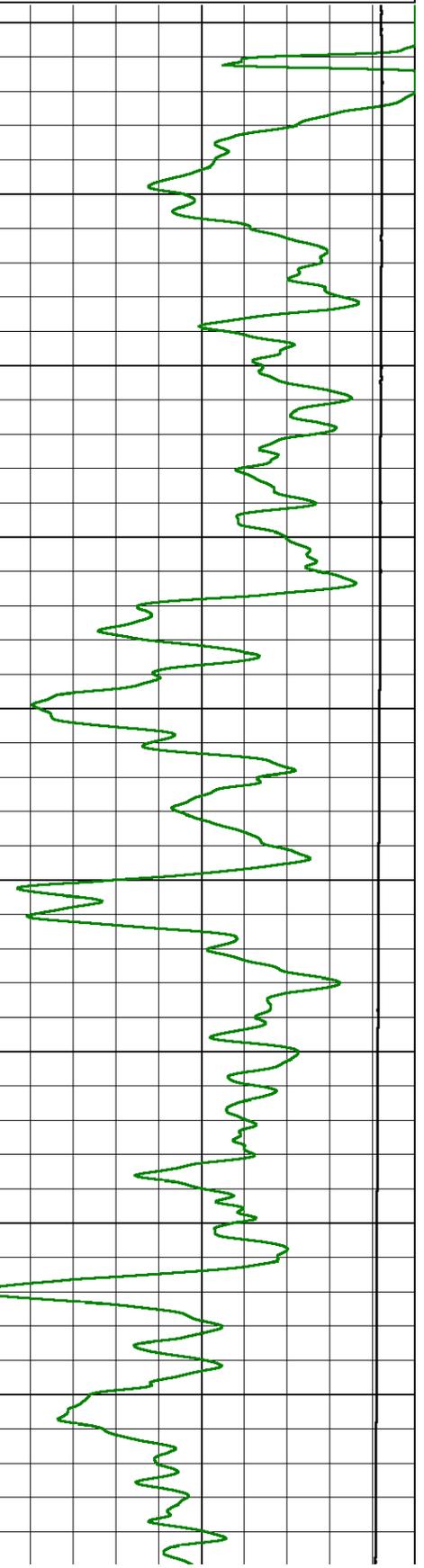
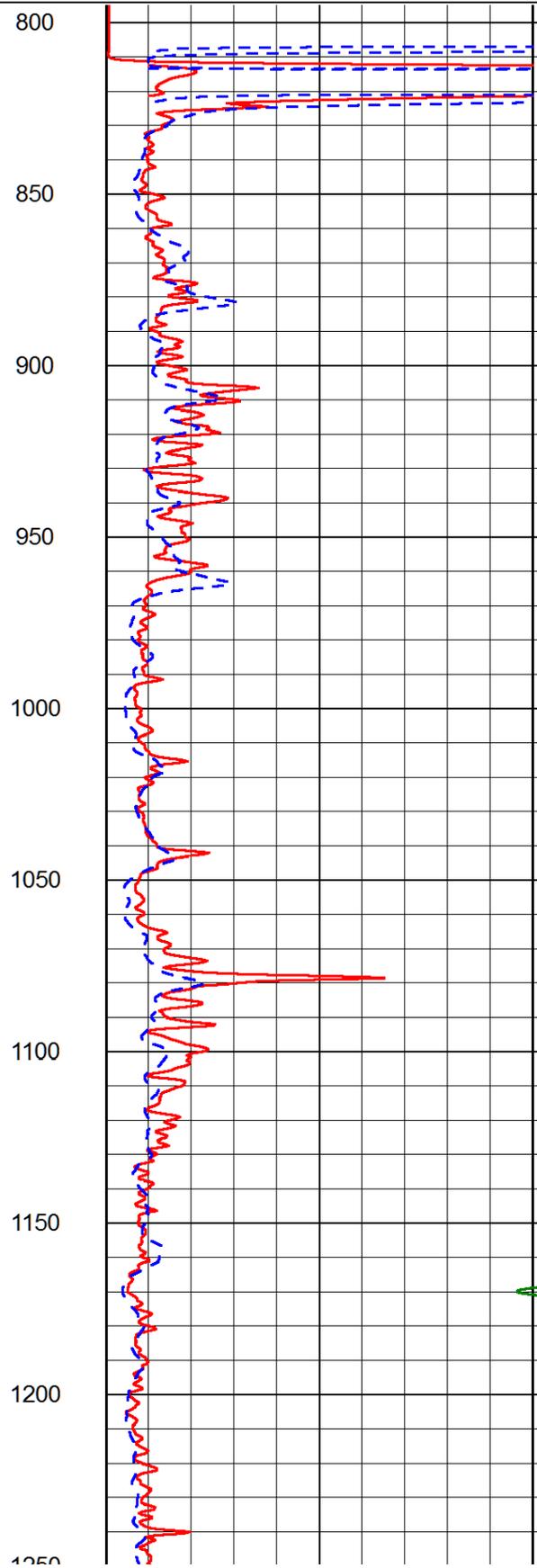
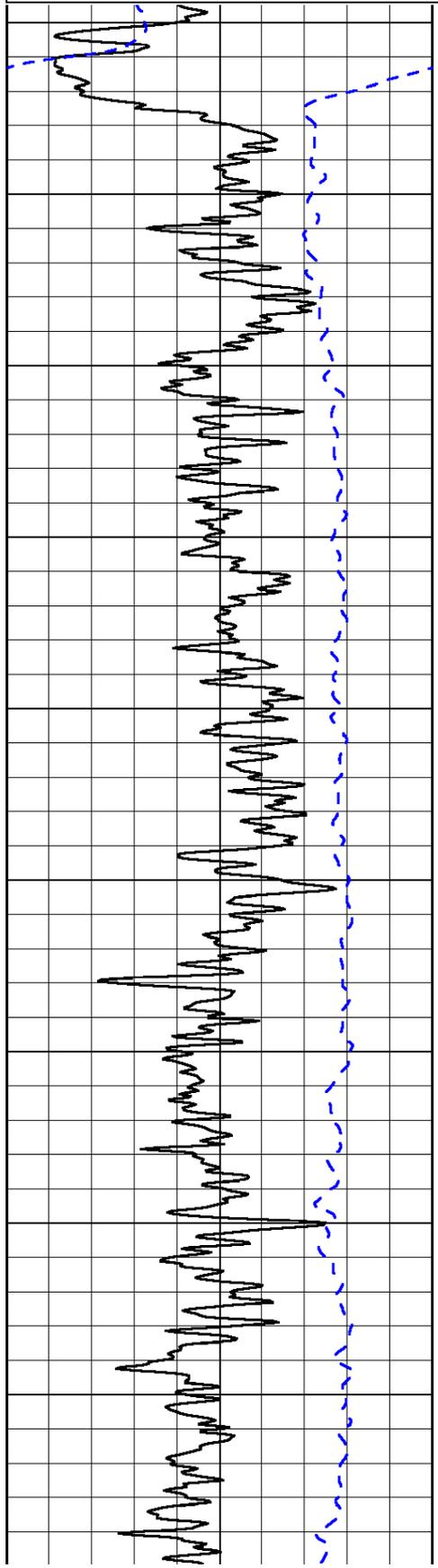
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 Presentation Format: dil2in  
 Dataset Creation: Thu Sep 26 17:00:22 2013  
 Charted by: Depth in Feet scaled 1:600

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

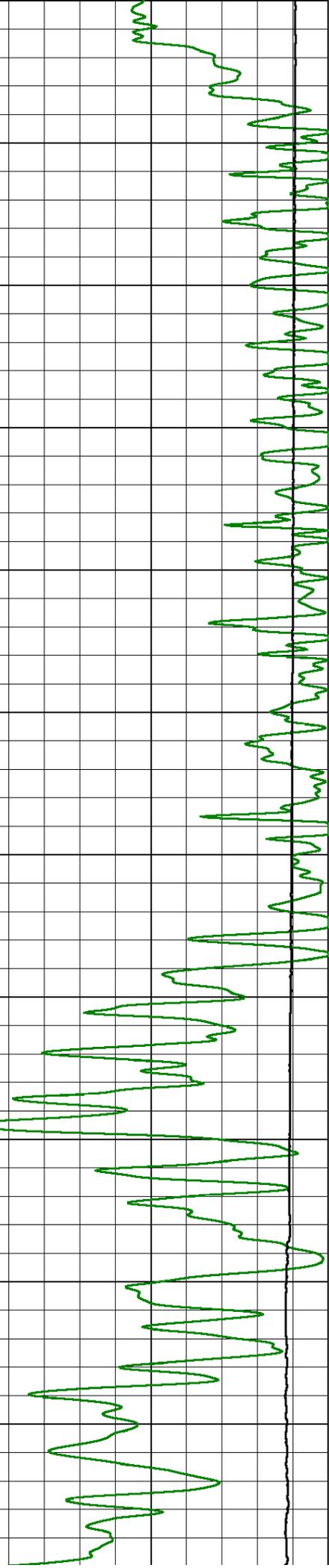
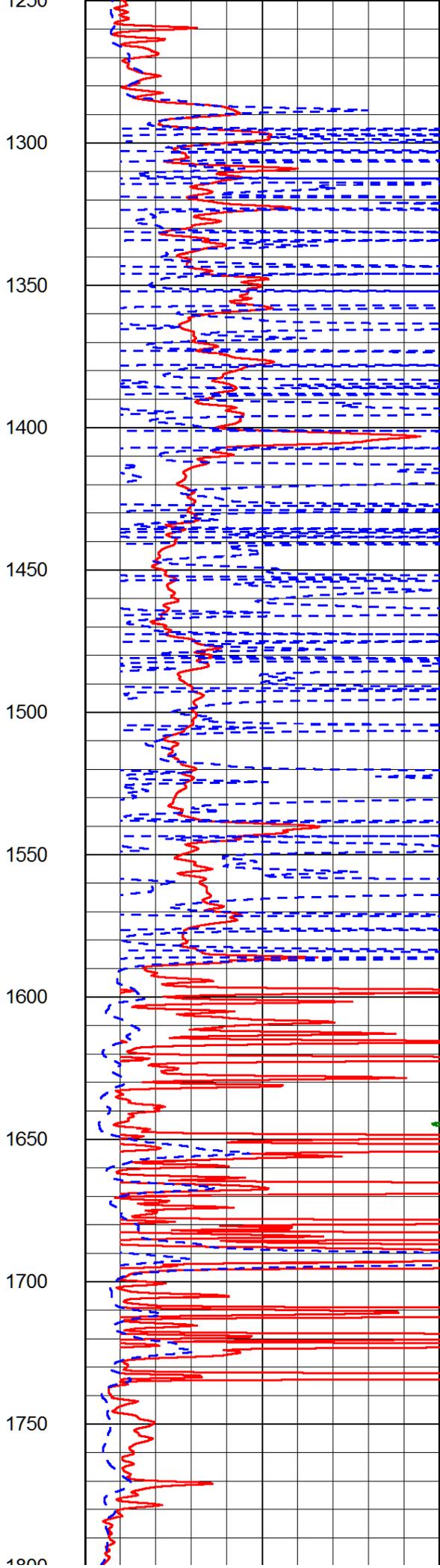
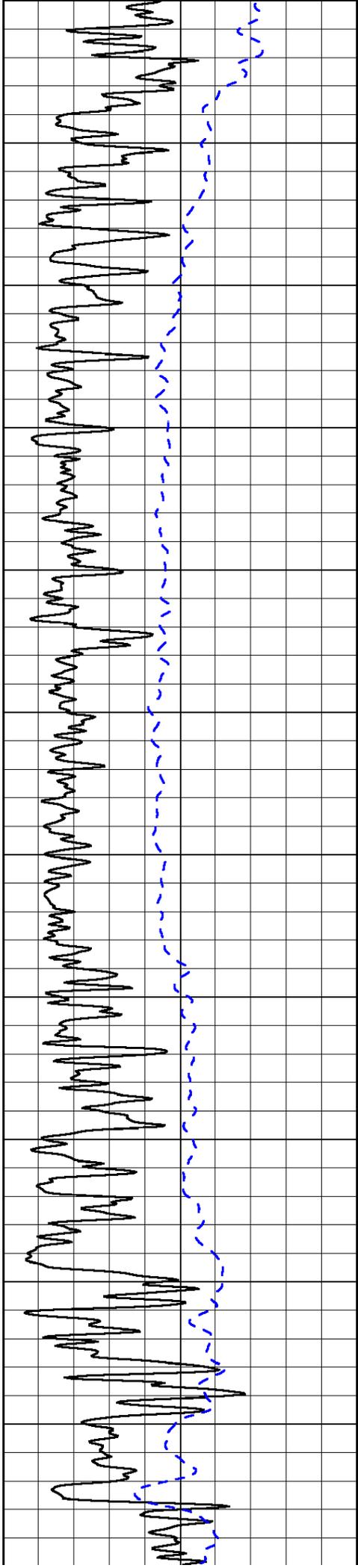
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0	Deep Resistivity (Ohm-m)	50

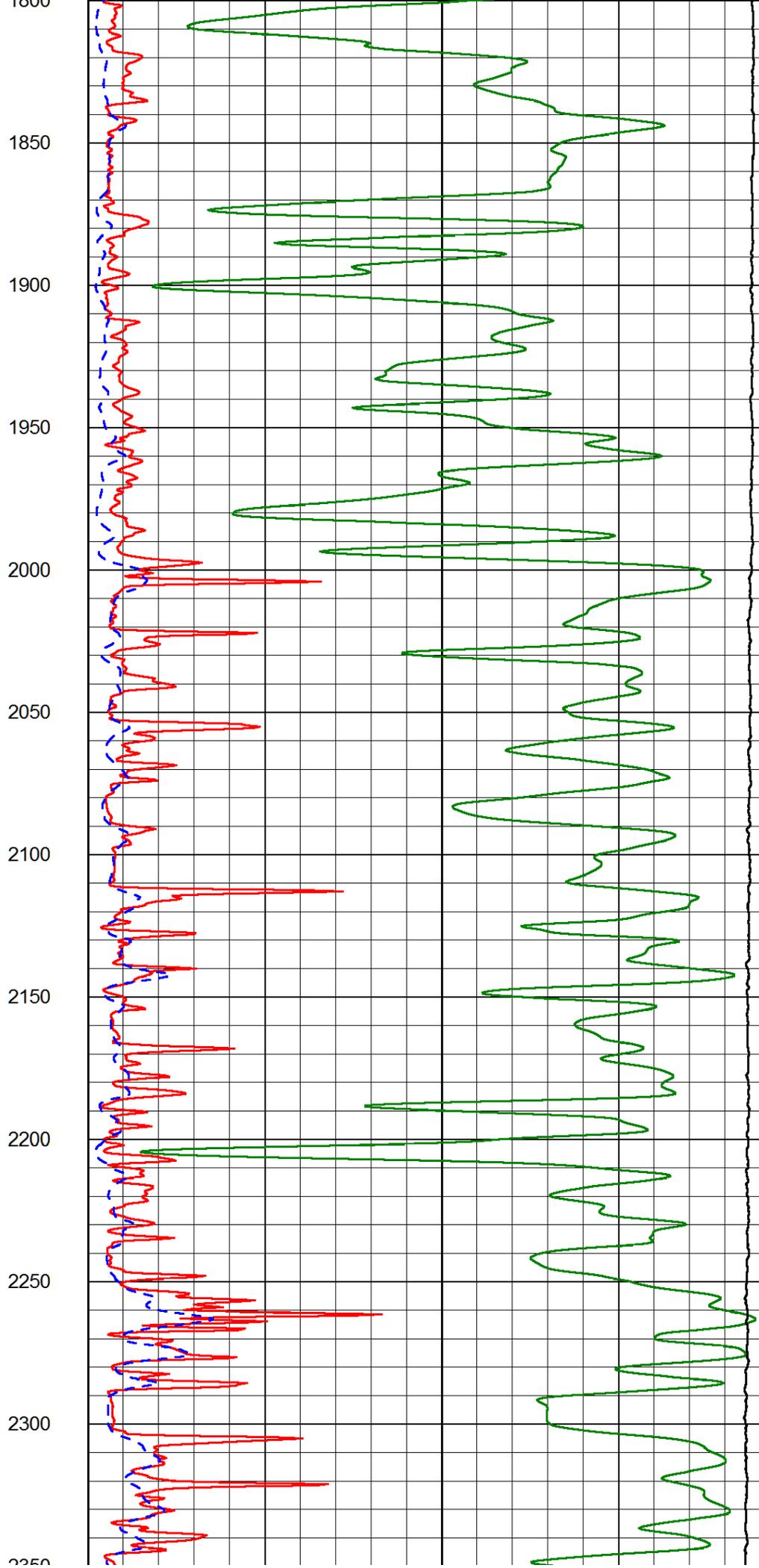
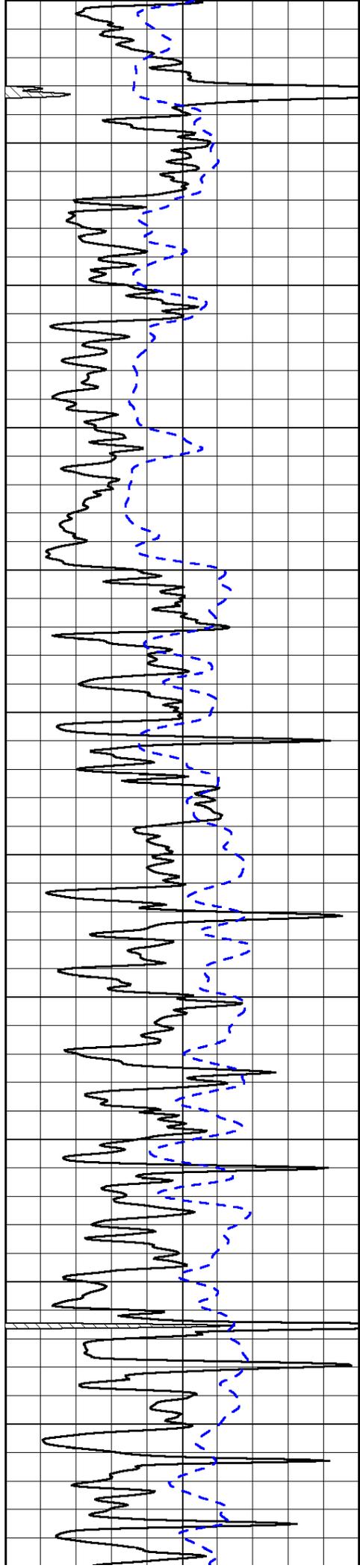
1000	Conductivity (Ohm-m)	0
15000	Line Tension (lb)	0

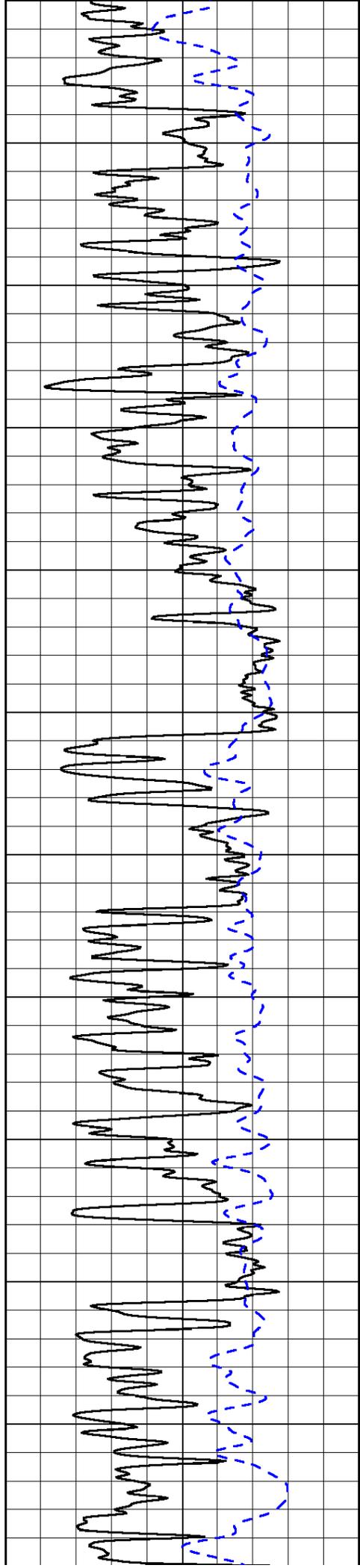
Shallow Resistivity		
50	(Ohm-m)	500
50	Deep Resistivity (Ohm-m)	500



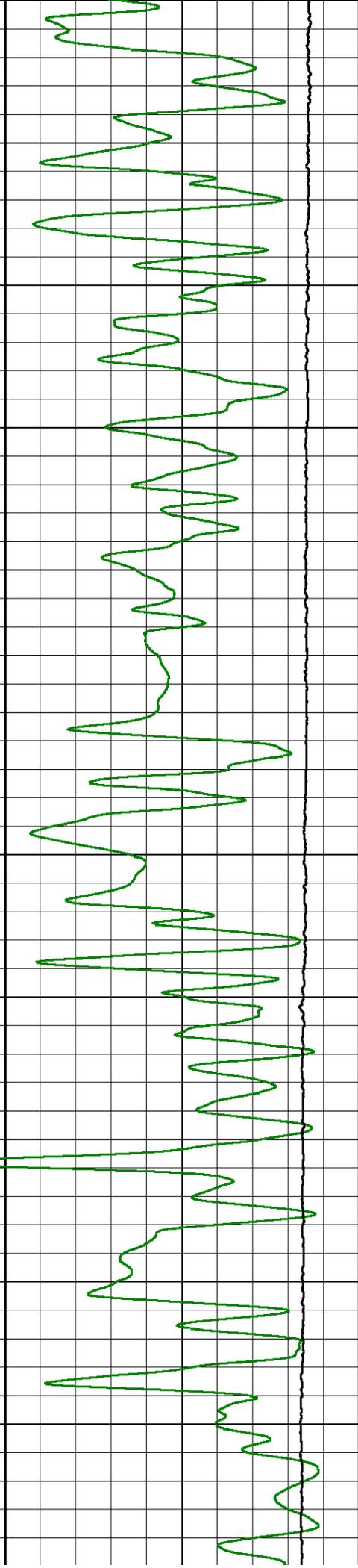
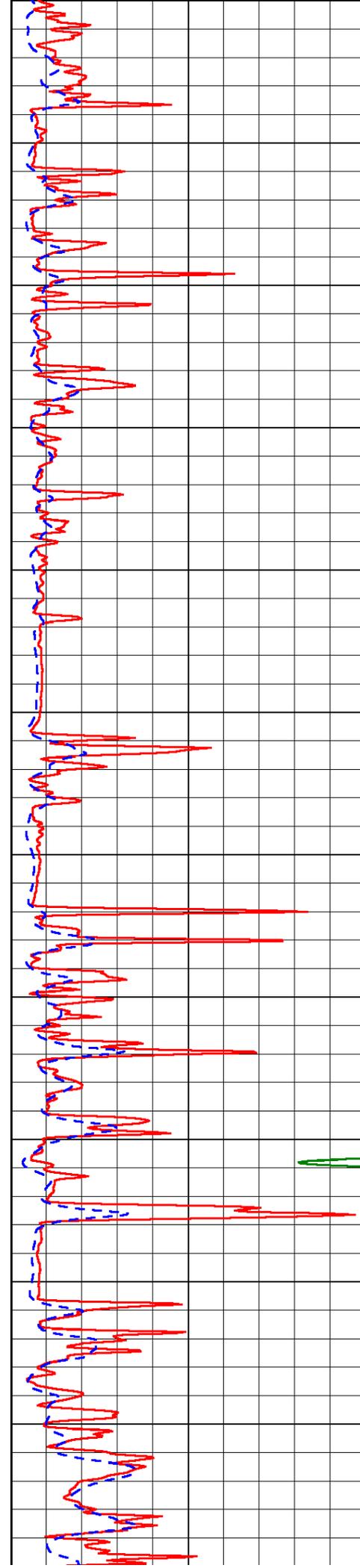
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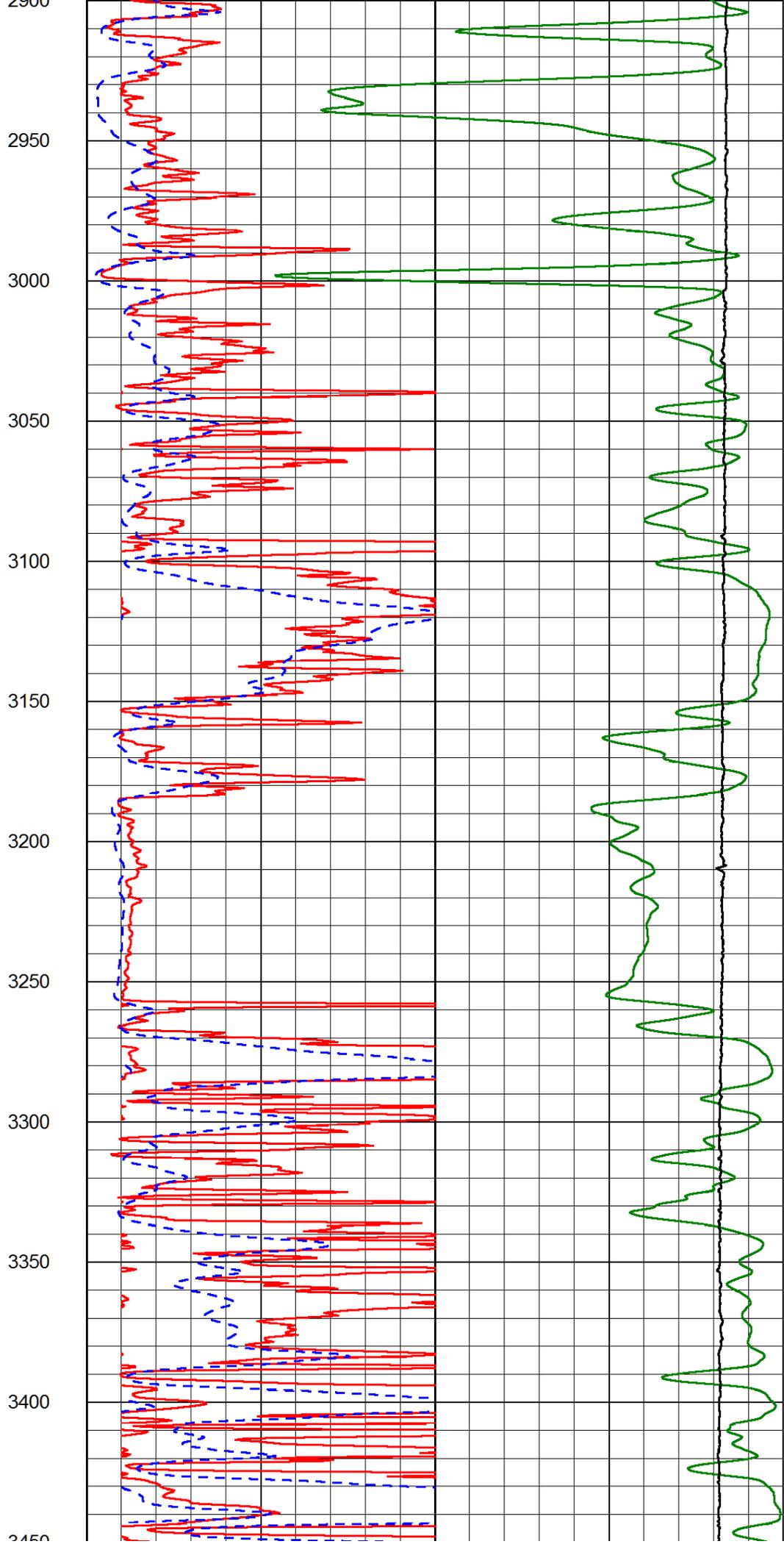
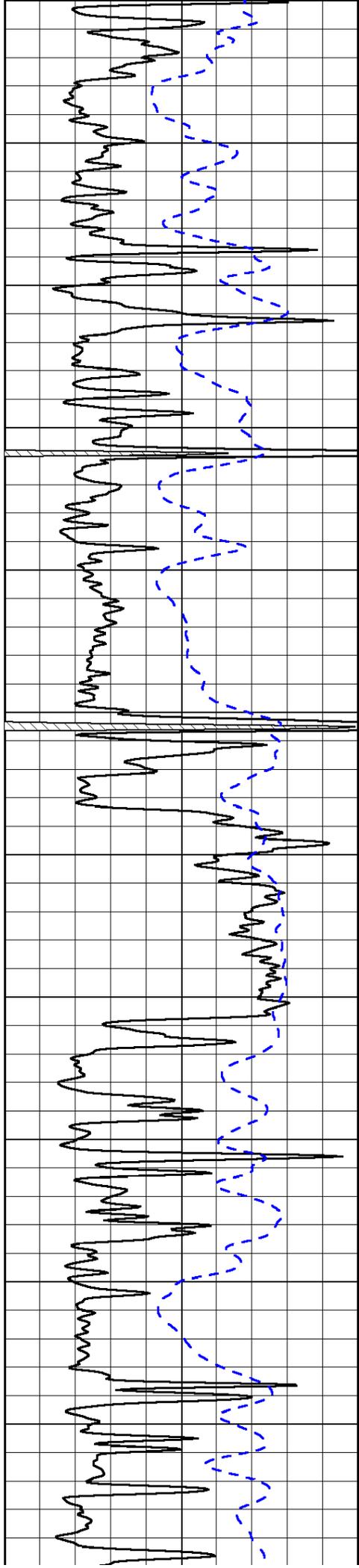


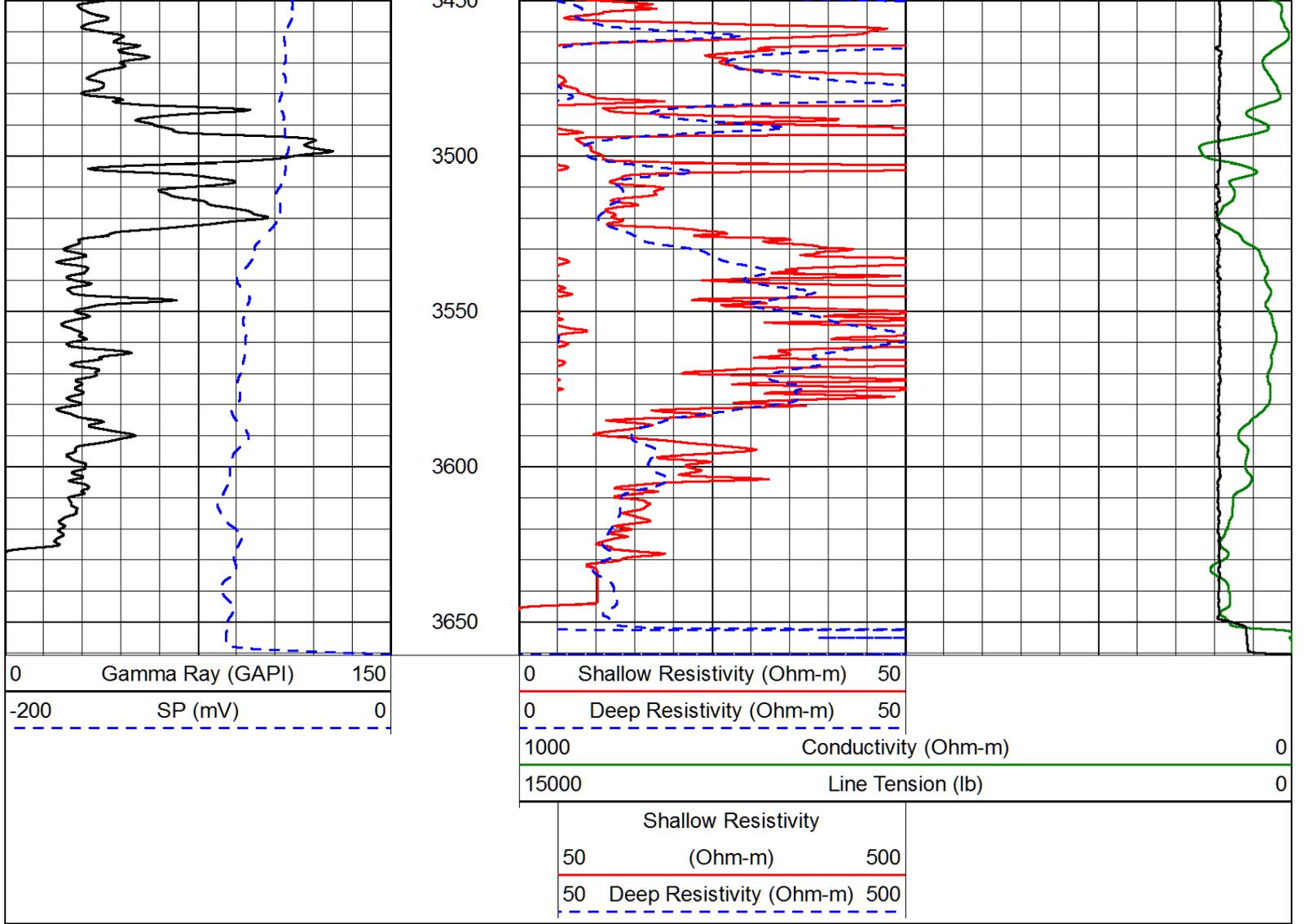




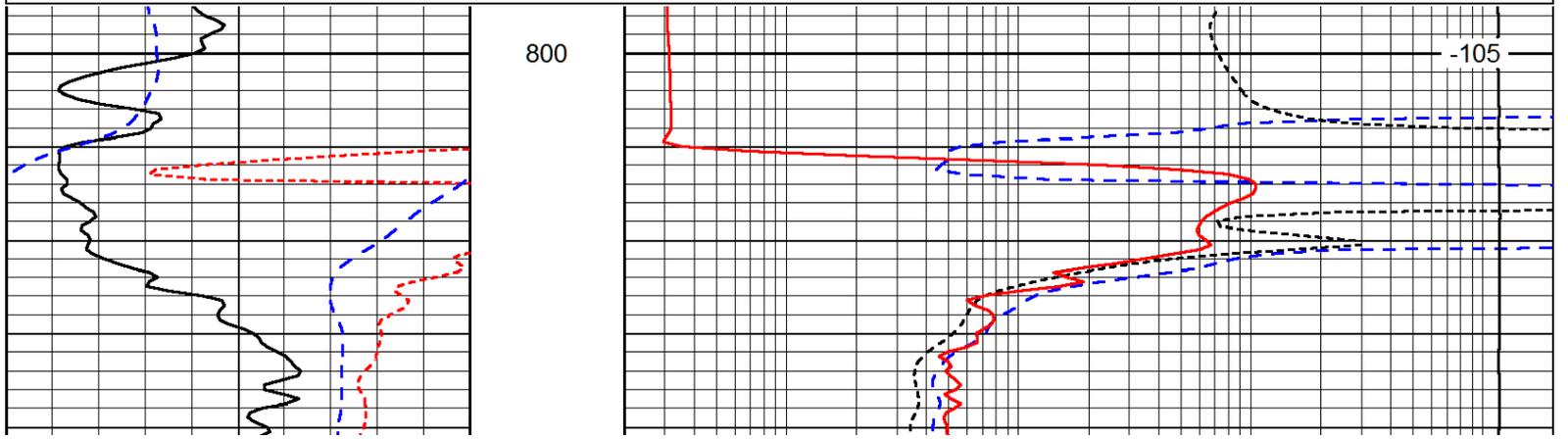
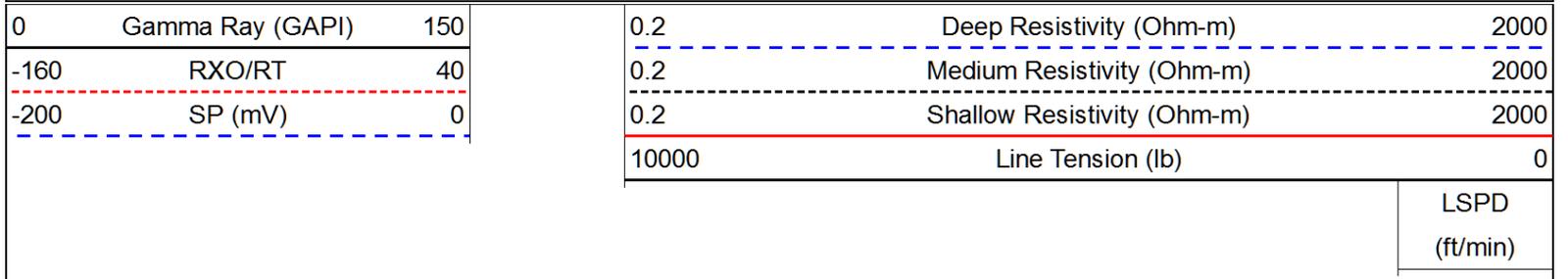
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2450  
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2600  
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2700  
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2800  
2850  
2900

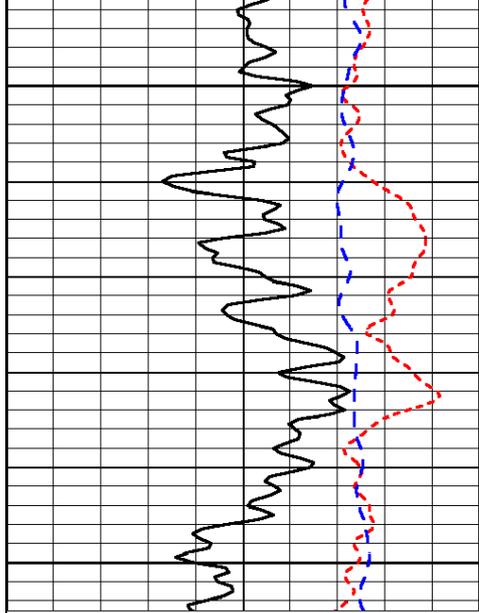






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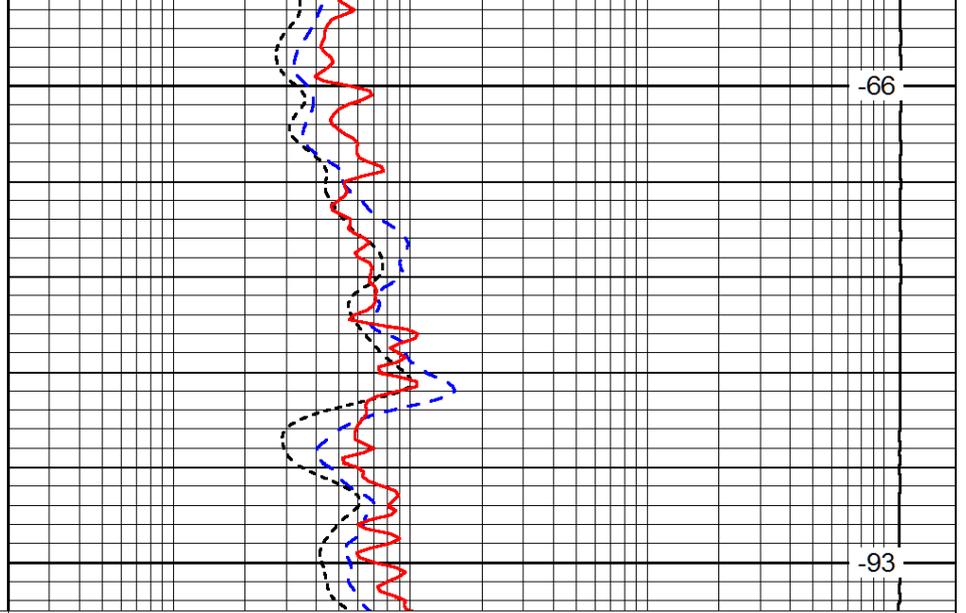




850

900

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



-66

-93

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

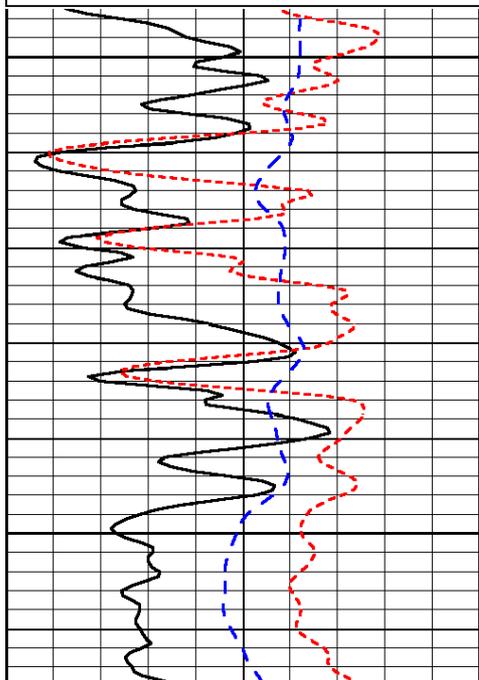
LSPD  
(ft/min)

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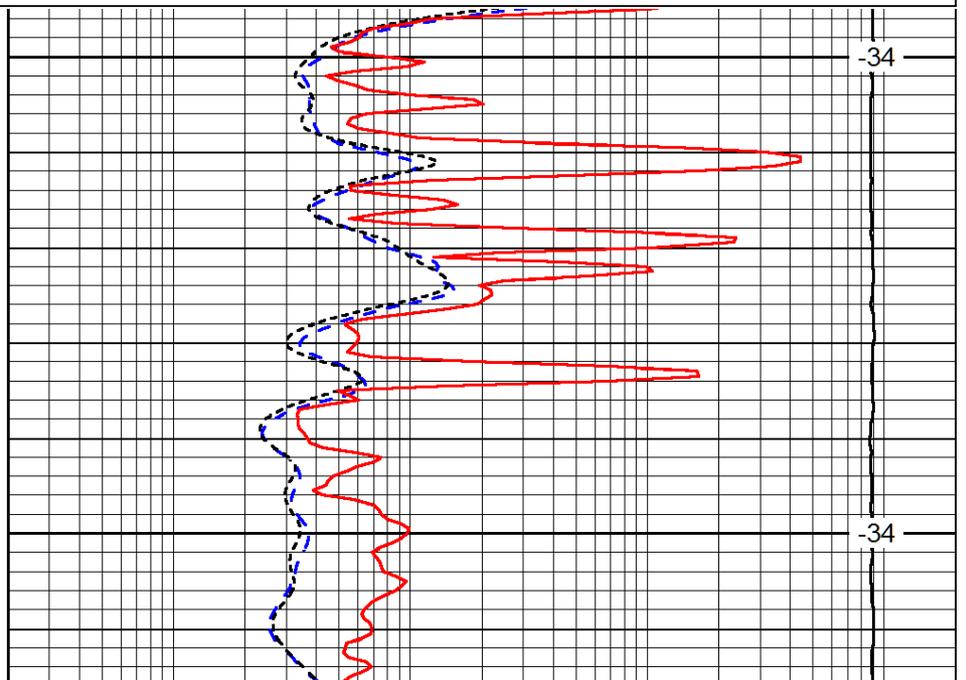
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10000	Line Tension (lb)	0

LSPD  
(ft/min)



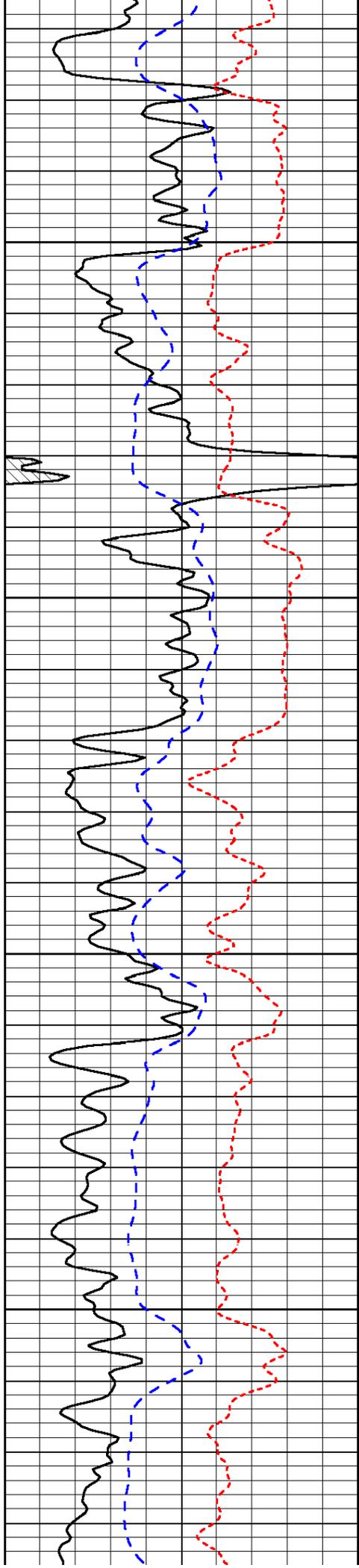
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1750



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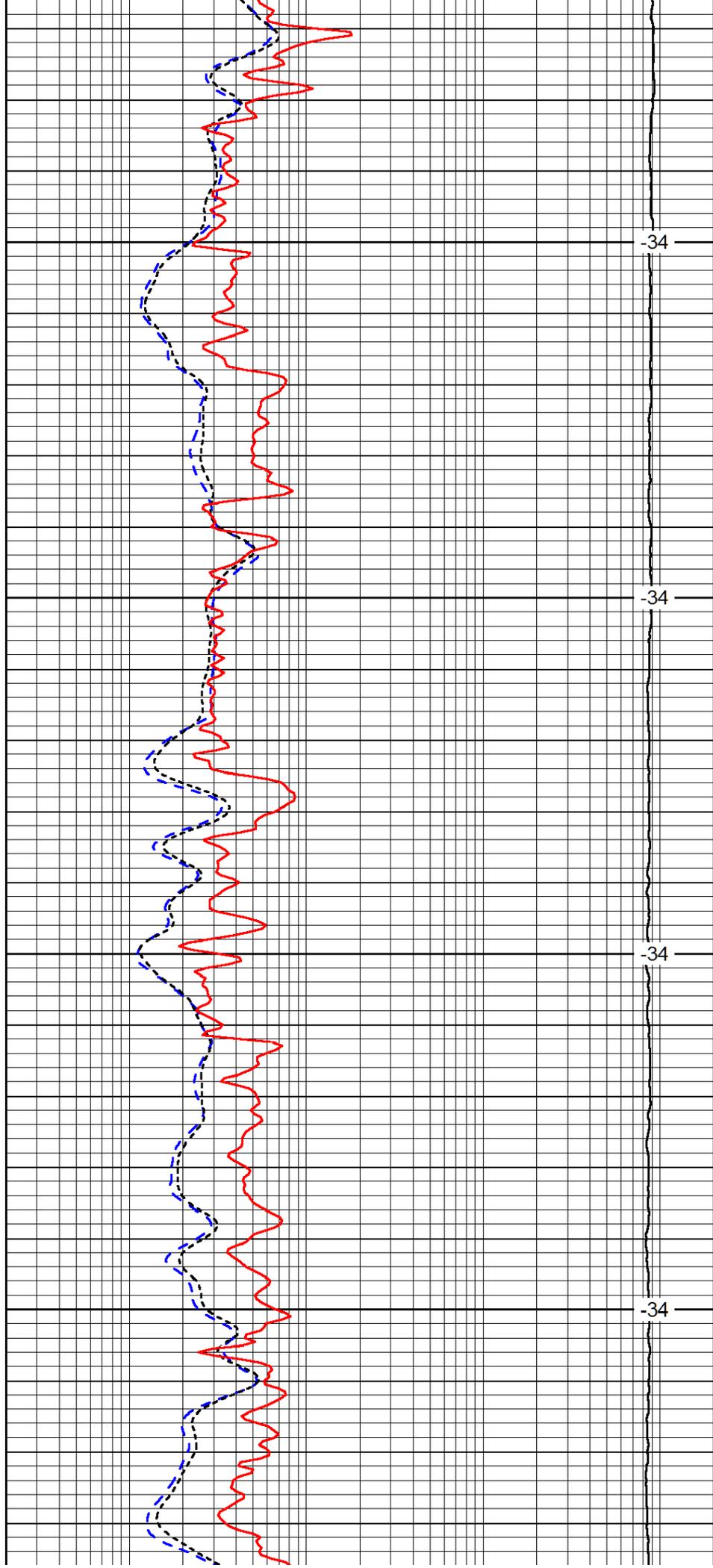


1800

1850

1900

1950

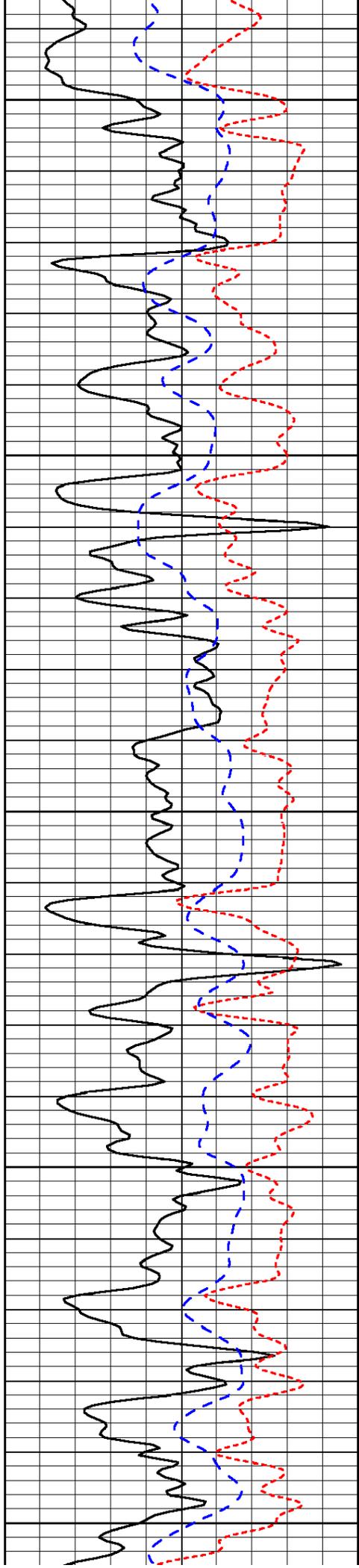


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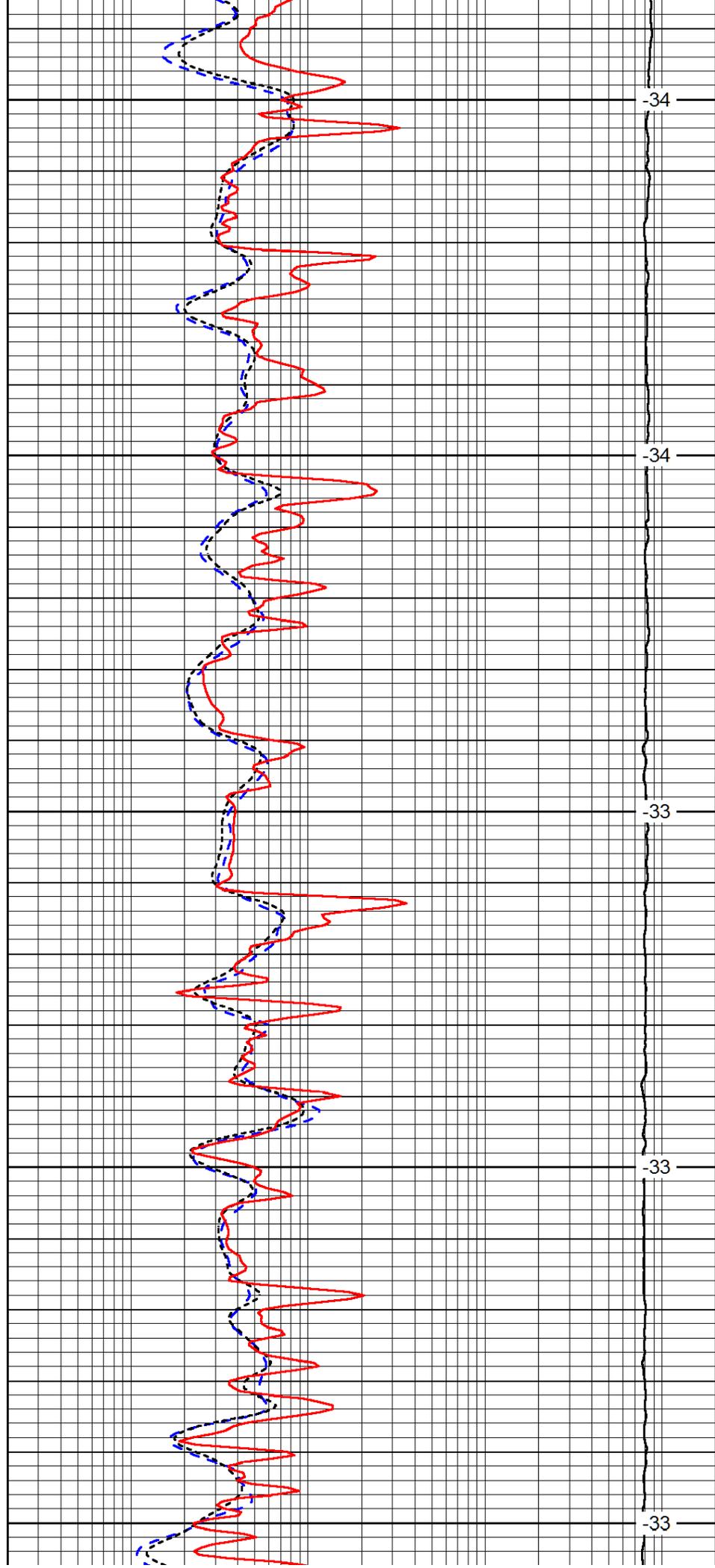
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2050

2100

2150

2200



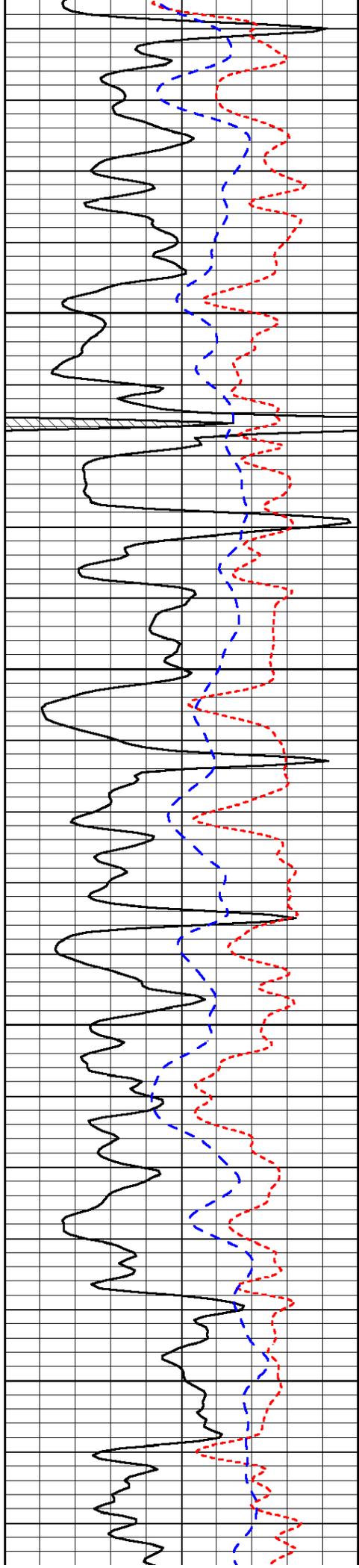
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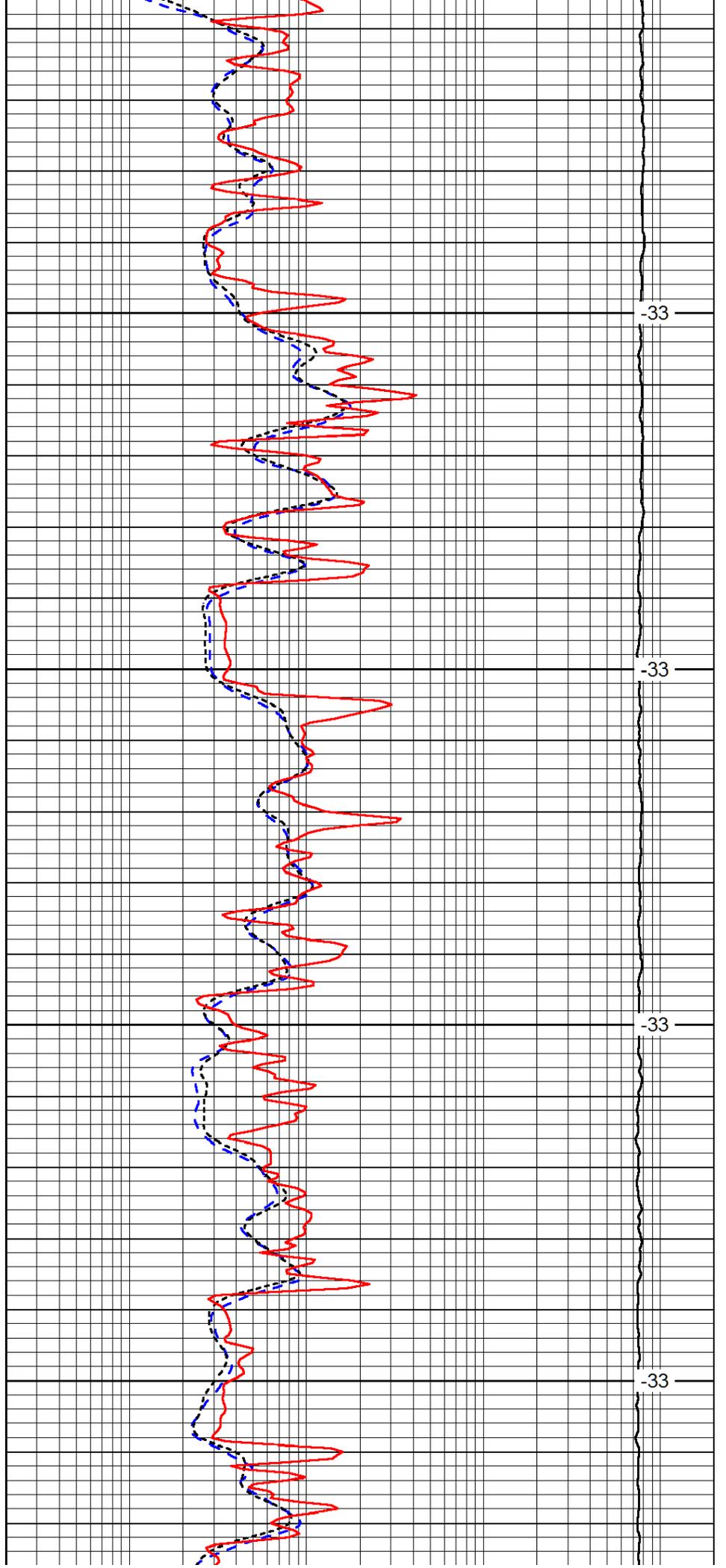


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2300

2350

2400

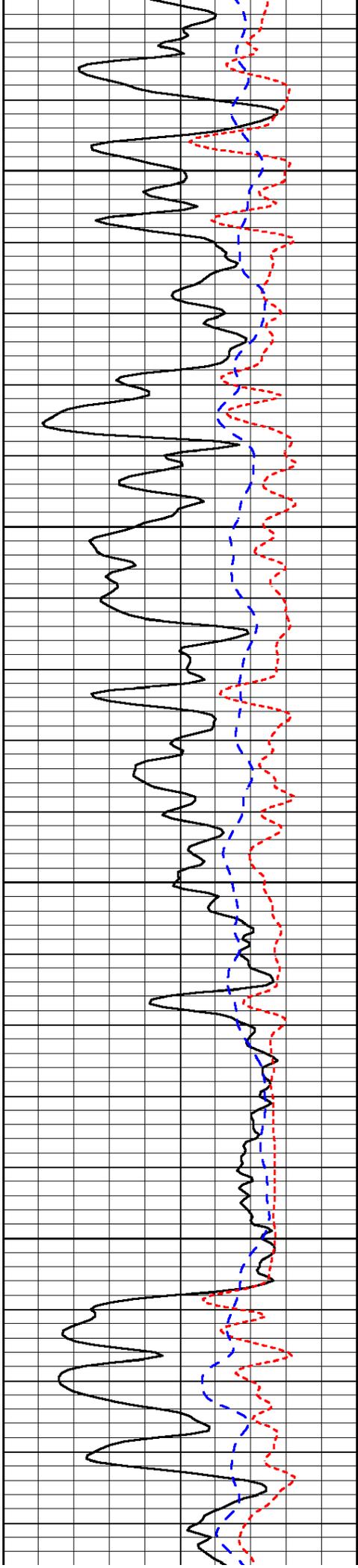


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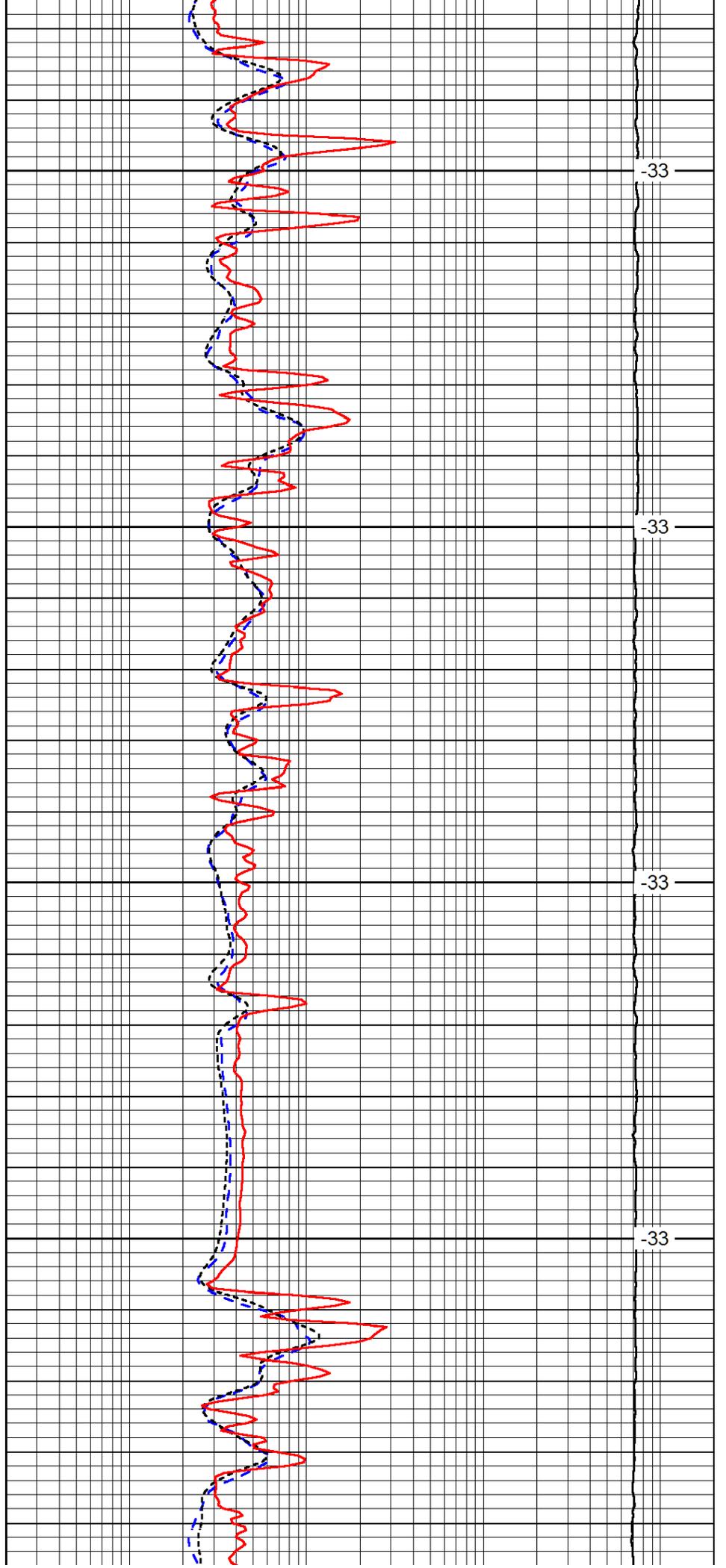


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2500

2550

2600

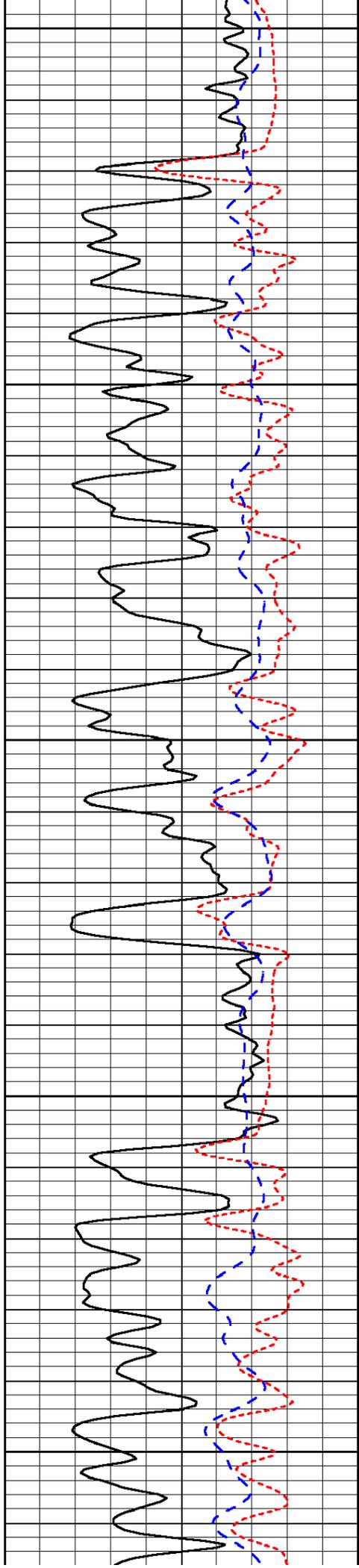


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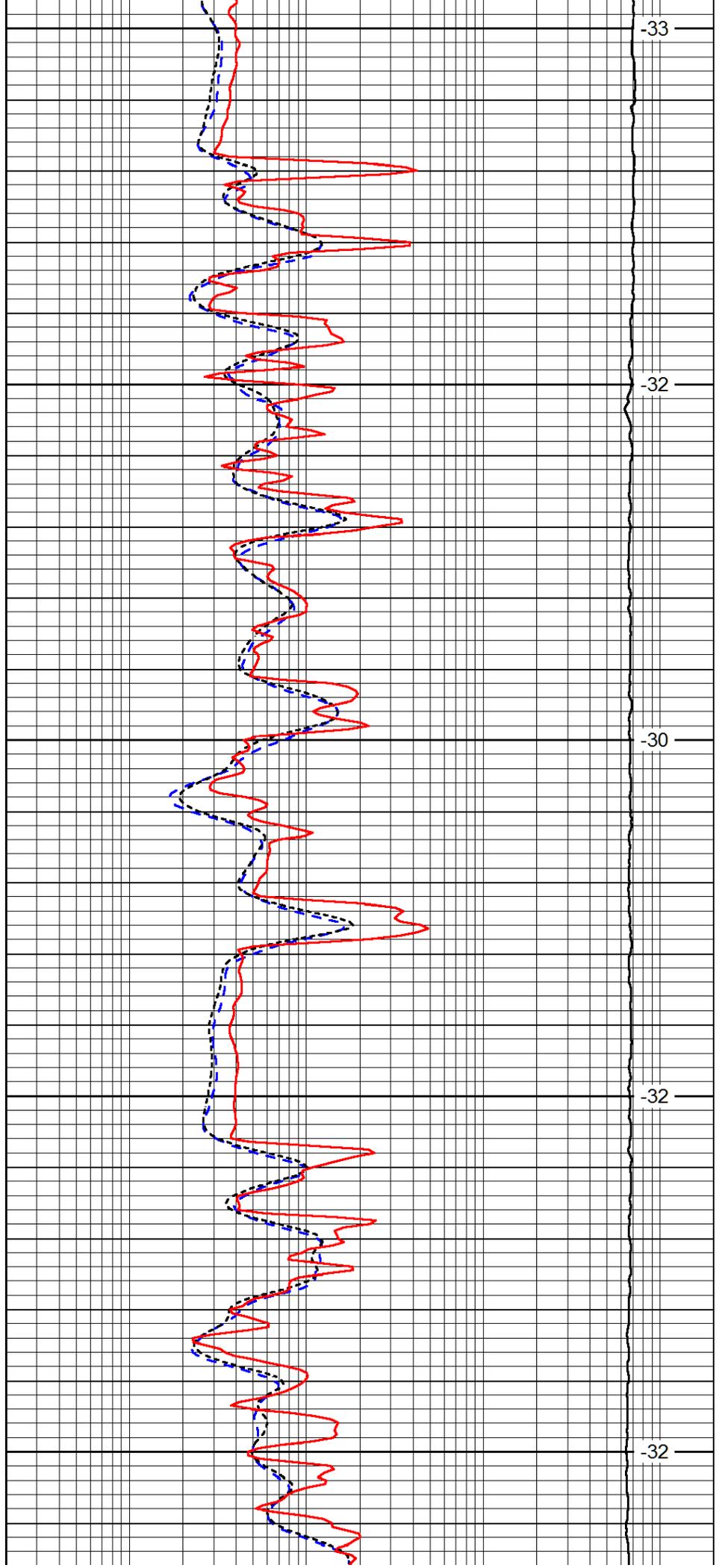
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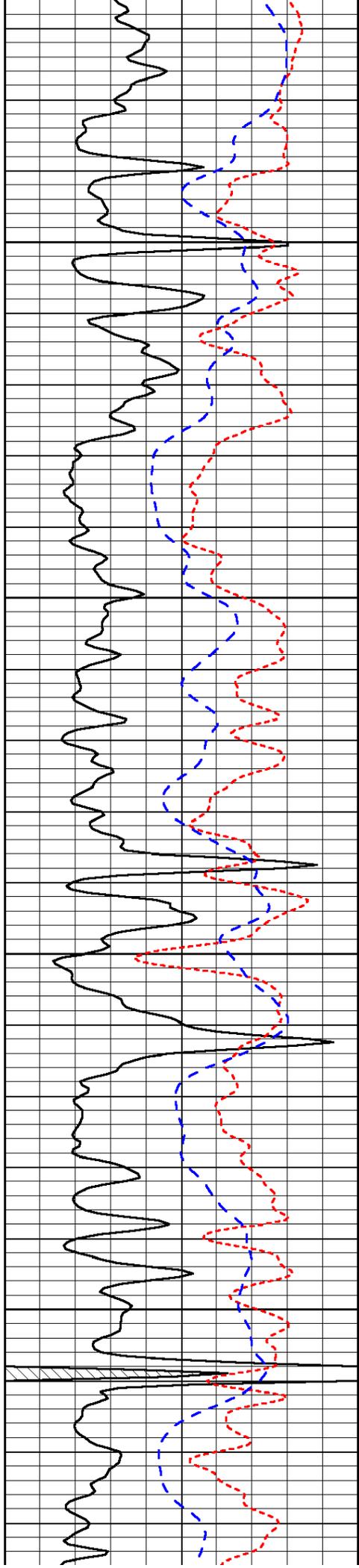
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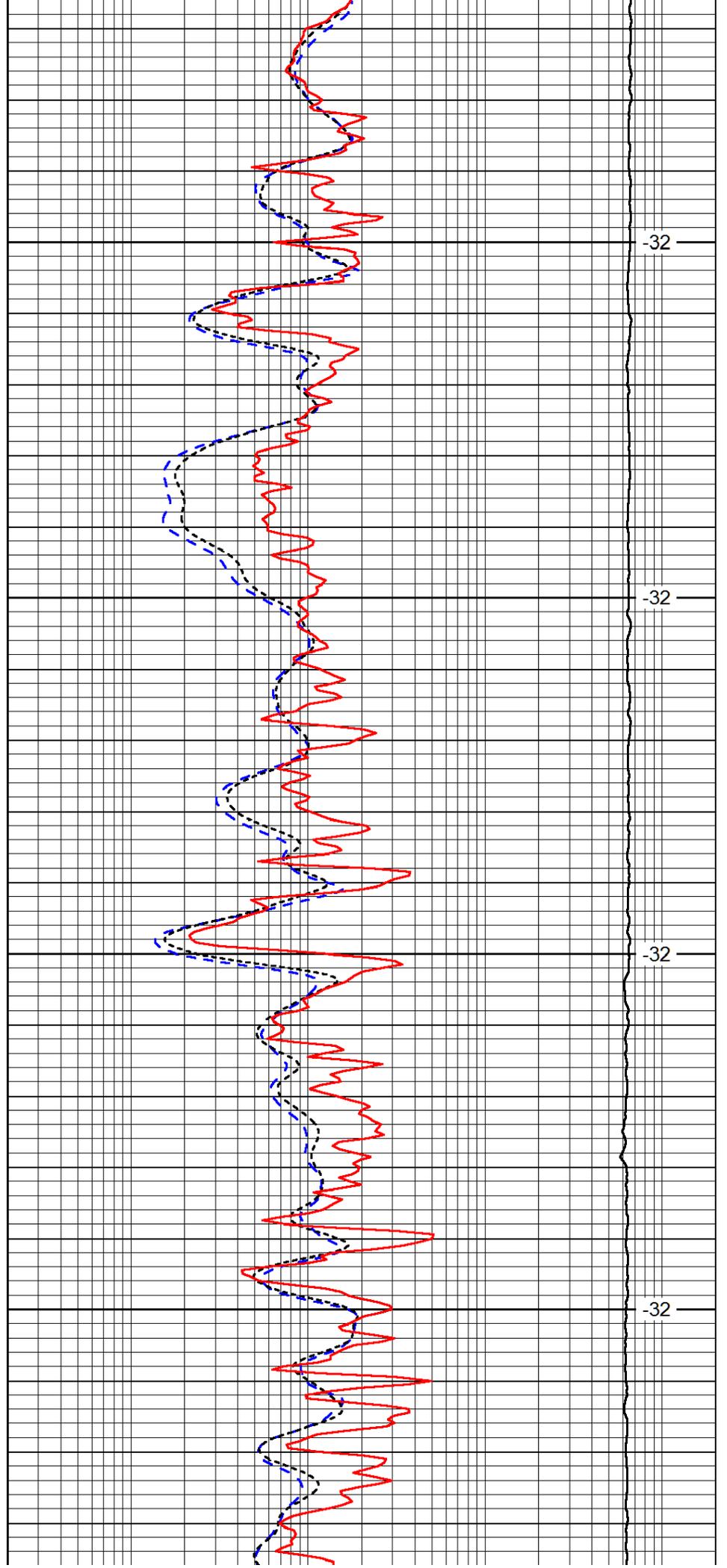


2900

2950

3000

3050

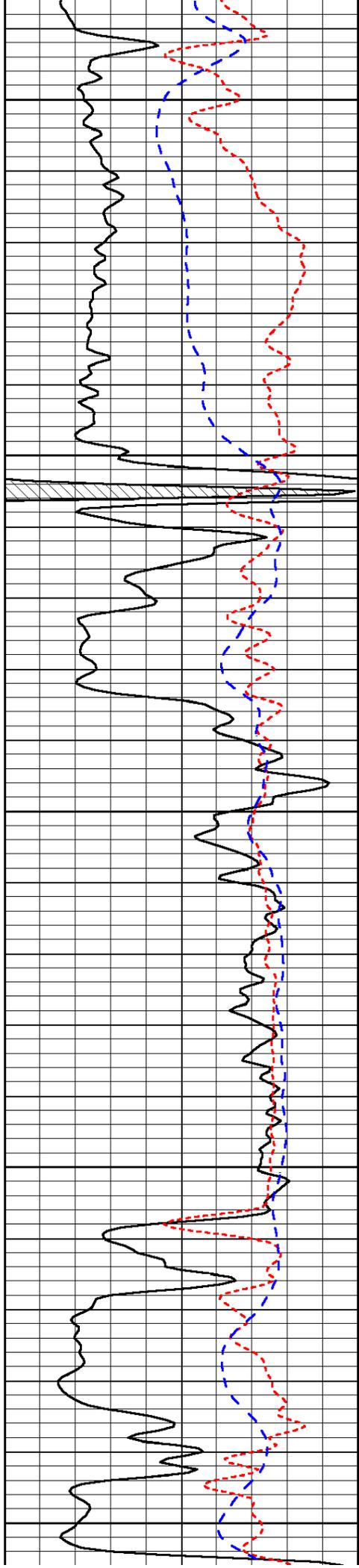


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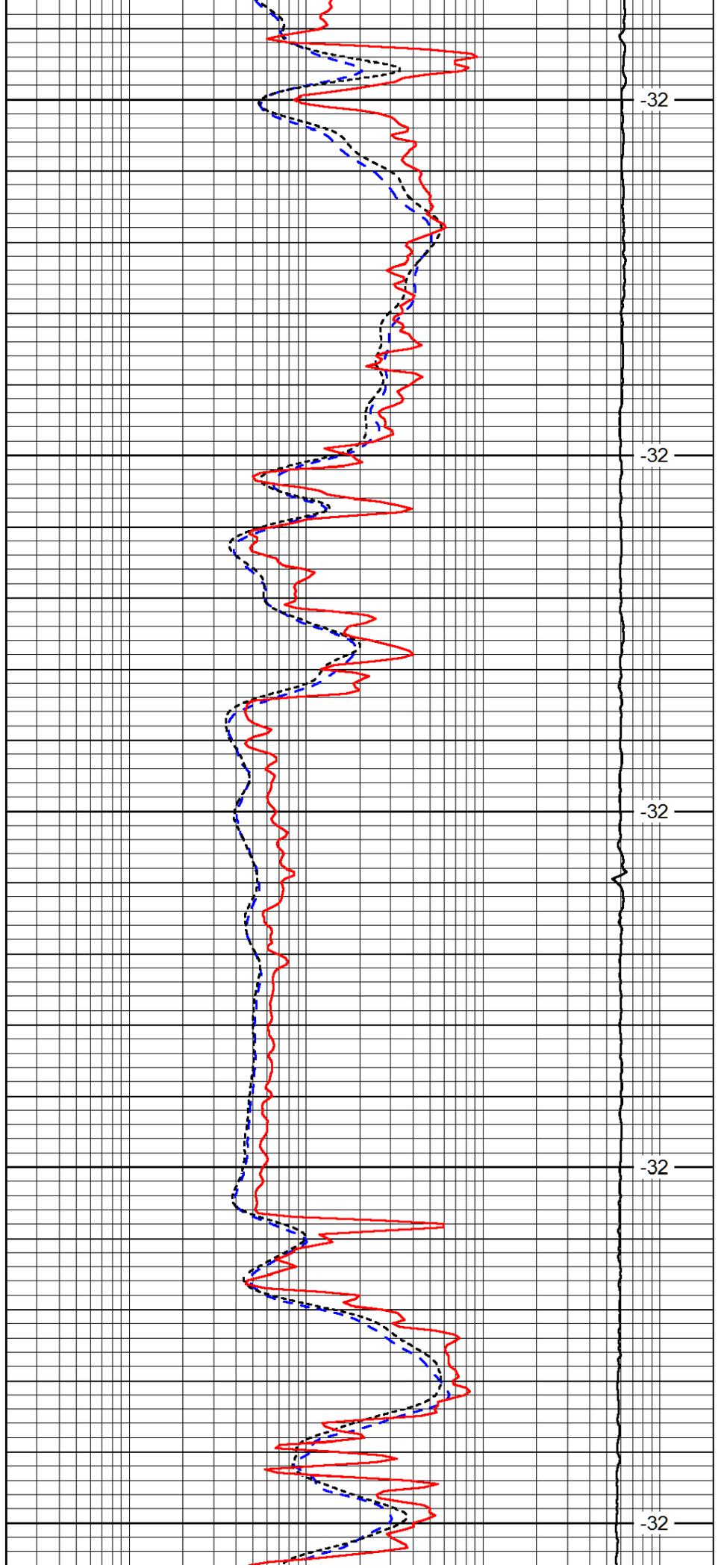
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3150

3200

3250

3300



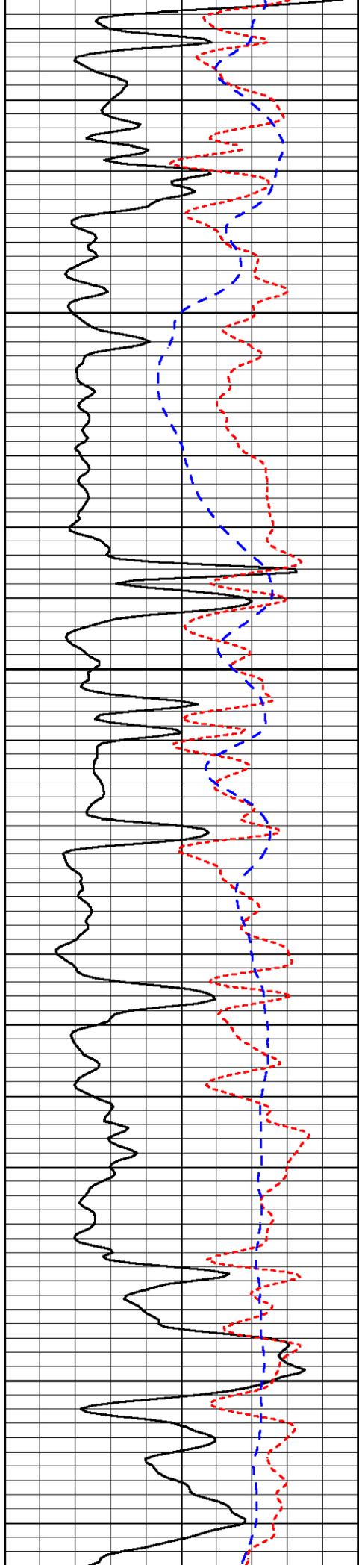
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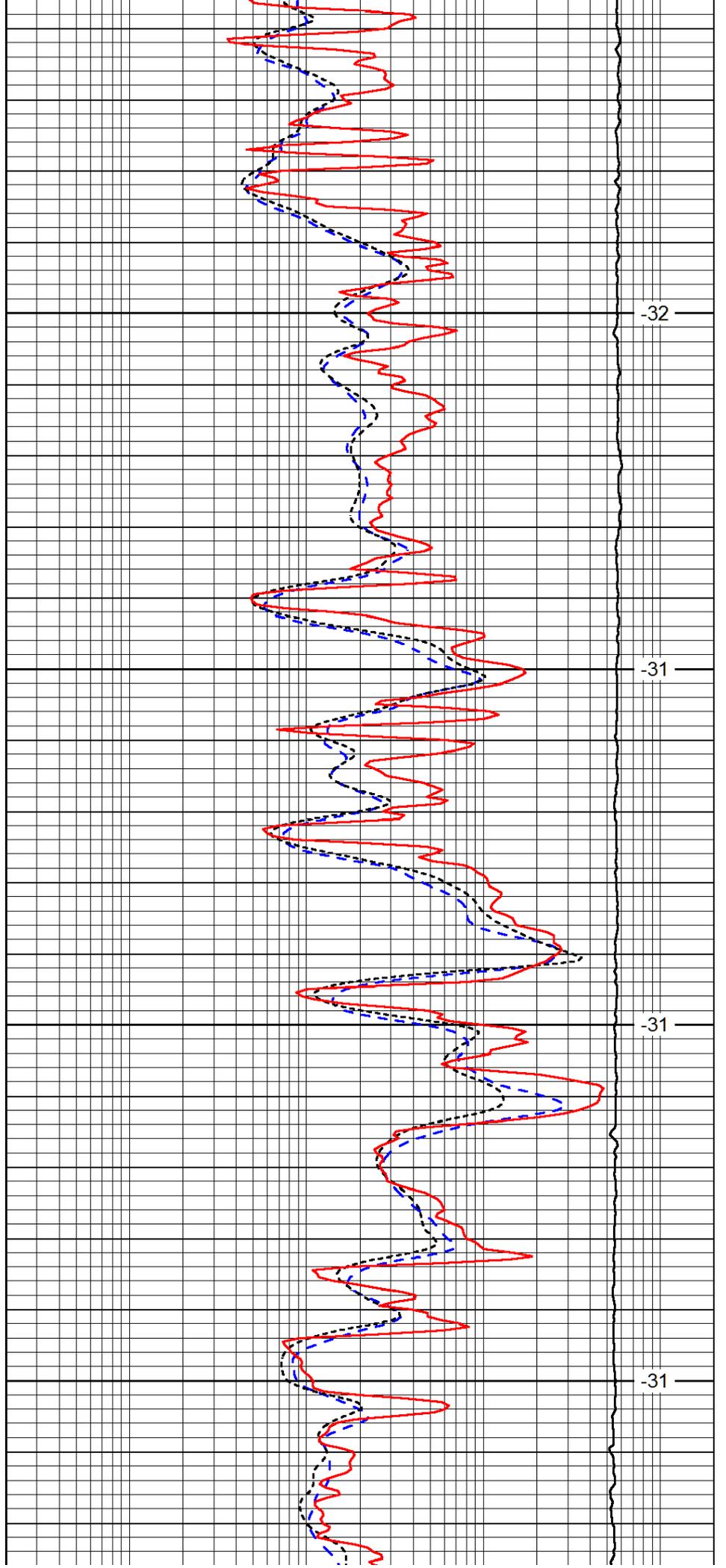


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3400

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3500

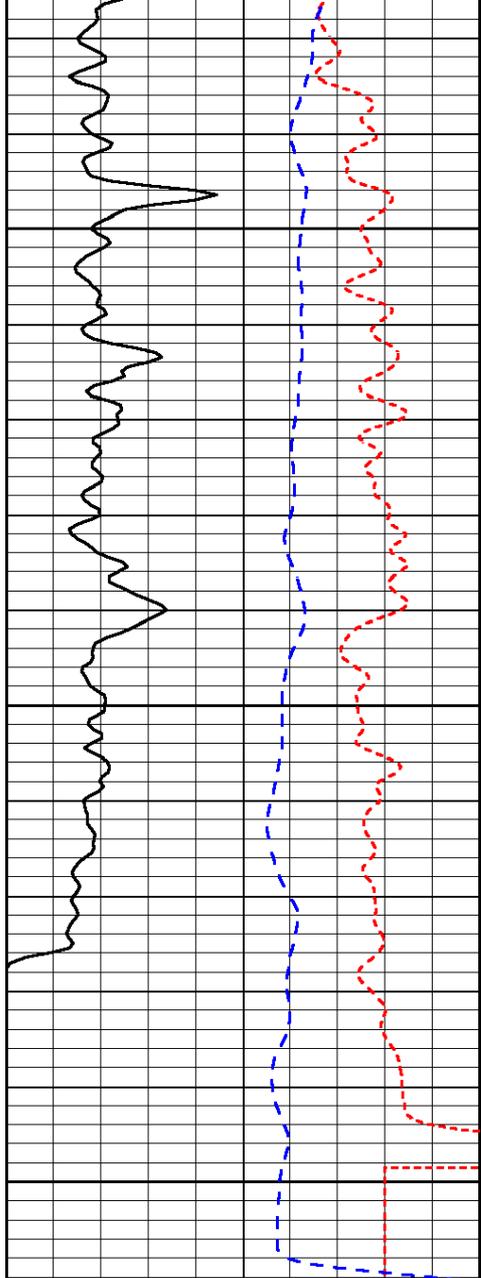


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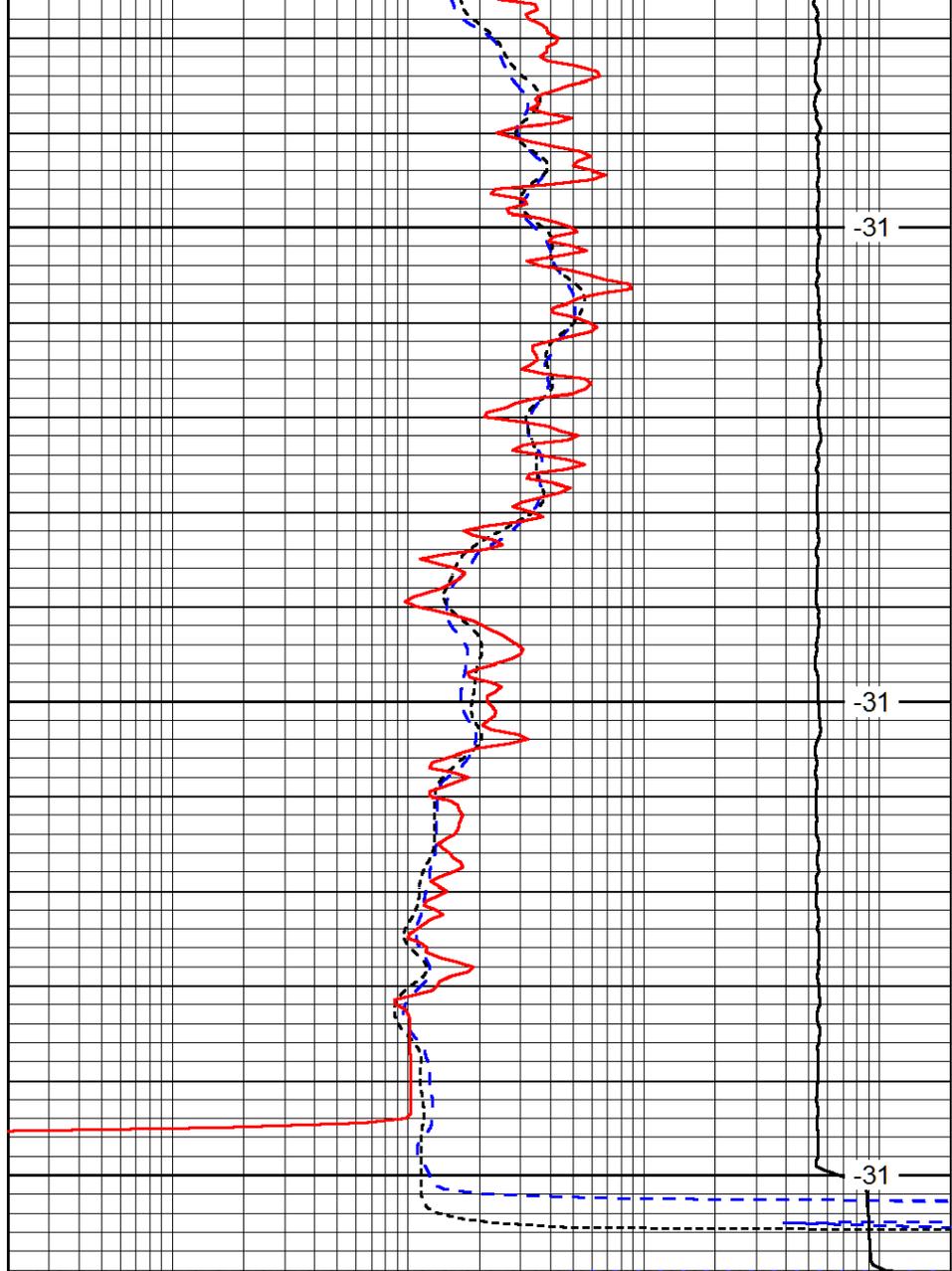


3550

3600

3650

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-160	RXO/RT	40
-200	SP (mV)	0



-31

-31

-31

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

LSPD  
(ft/min)