



Dual Induction Log

Pioneer Energy Services

API No.

15-145-21,750-00-00

Company **Castle Resources, Inc.**

Well **Harms No. 1**

Field **Oro**

County **Pawnee** State

Kansas

Location **2,310' FSL & 990' FWL**

Sec: **10** Twp: **20S** Rge: **19W**

Other Services
CNL/CDL
MEL

Permanent Datum **Ground Level** Elevation **2240**

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

Drilling Measured From **Kelly Bushing**

Elevation
K.B. 2245
D.F. 2240
G.L. 2240

Date **2/24/2014**

Run Number **One**

Depth Driller **4275**

Depth Logger **4275**

Bottom Logged Interval **4274**

Top Log Interval **500**

Casing Driller **8.625 @ 532**

Casing Logger **532**

Bit Size **7.875**

Type Fluid in Hole **Chemical**

Salinity, ppm CL **7000**

Density / Viscosity **9.5 46**

pH / Fluid Loss **9.5 10.2**

Source of Sample **Flowline**

Rm @ Meas. Temp **.32 @ 60**

Rmf @ Meas. Temp **.24 @ 60**

Rmc @ Meas. Temp **.43 @ 60**

Source of Rmf / Rmc **Charts**

Rm @ BHT **.16 @ 119**

Operating Rig Time **4 Hours**

Max Rec. Temp. F **119**

Equipment Number **108**

Location **Hays**

Recorded By **J. Long**

Witnessed By **Chris Bean**

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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

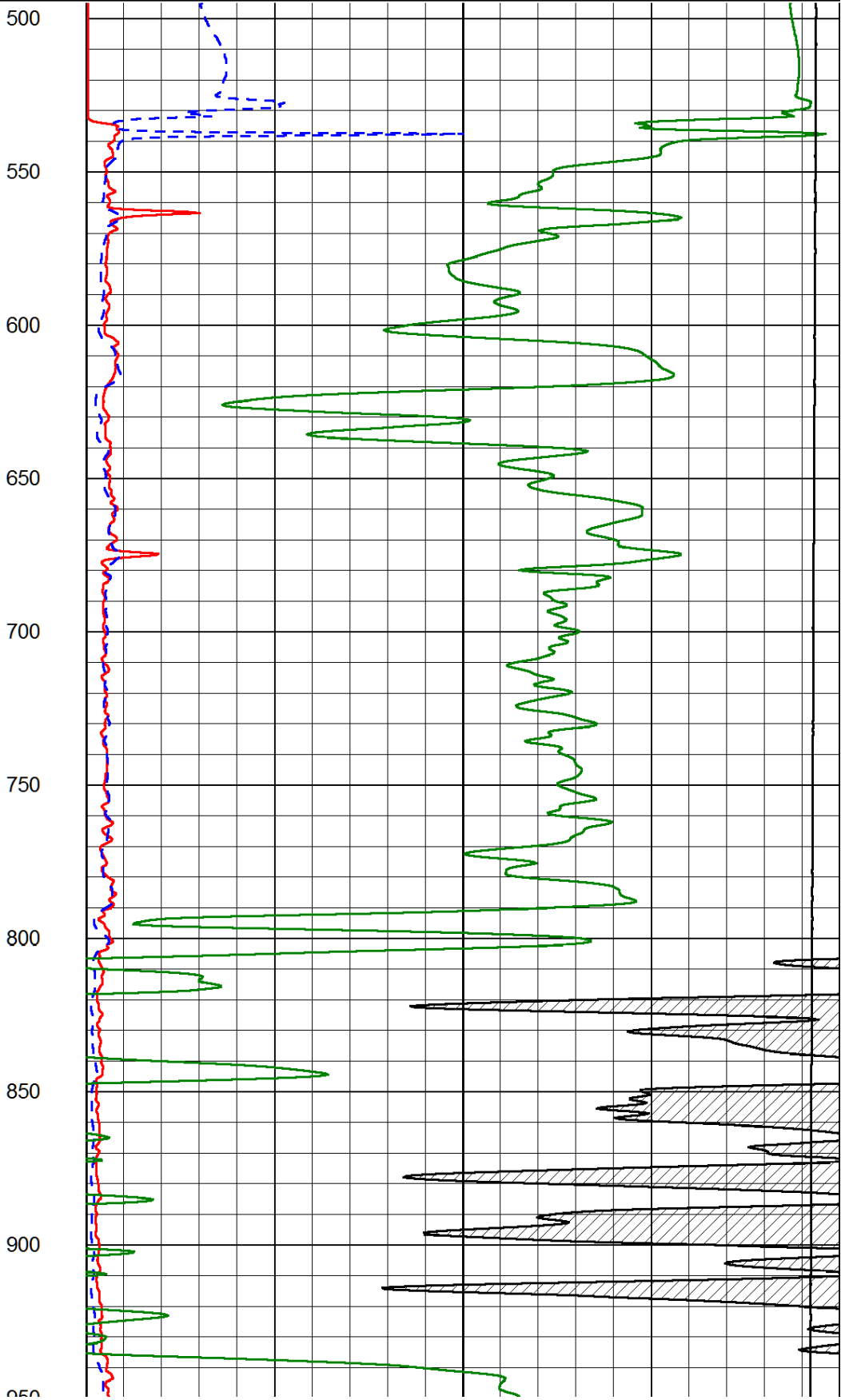
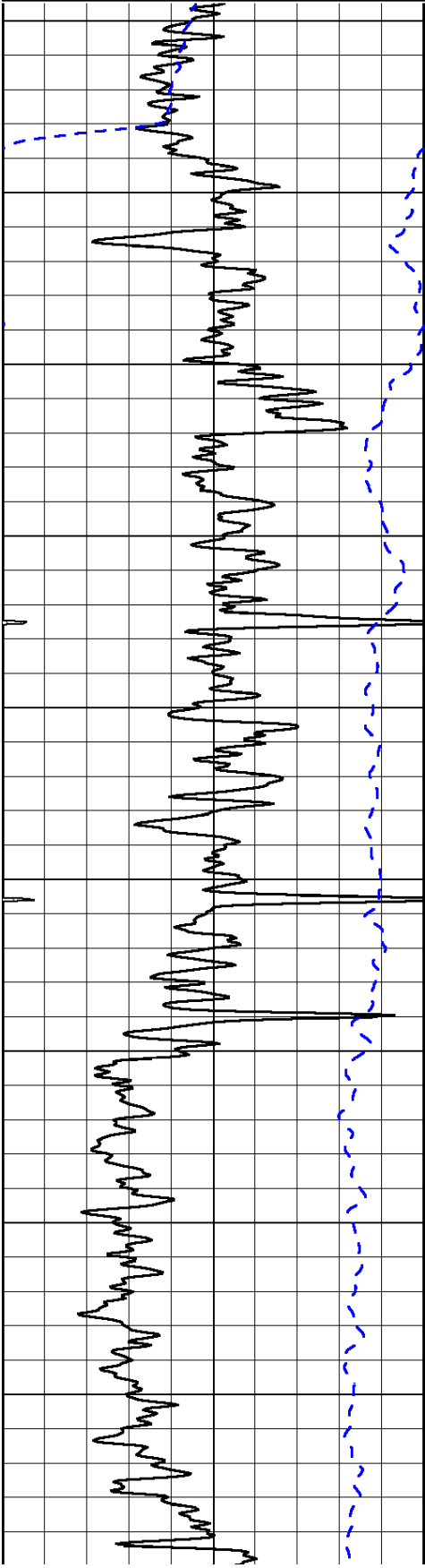
Thank you for using Log-Tech, Inc.
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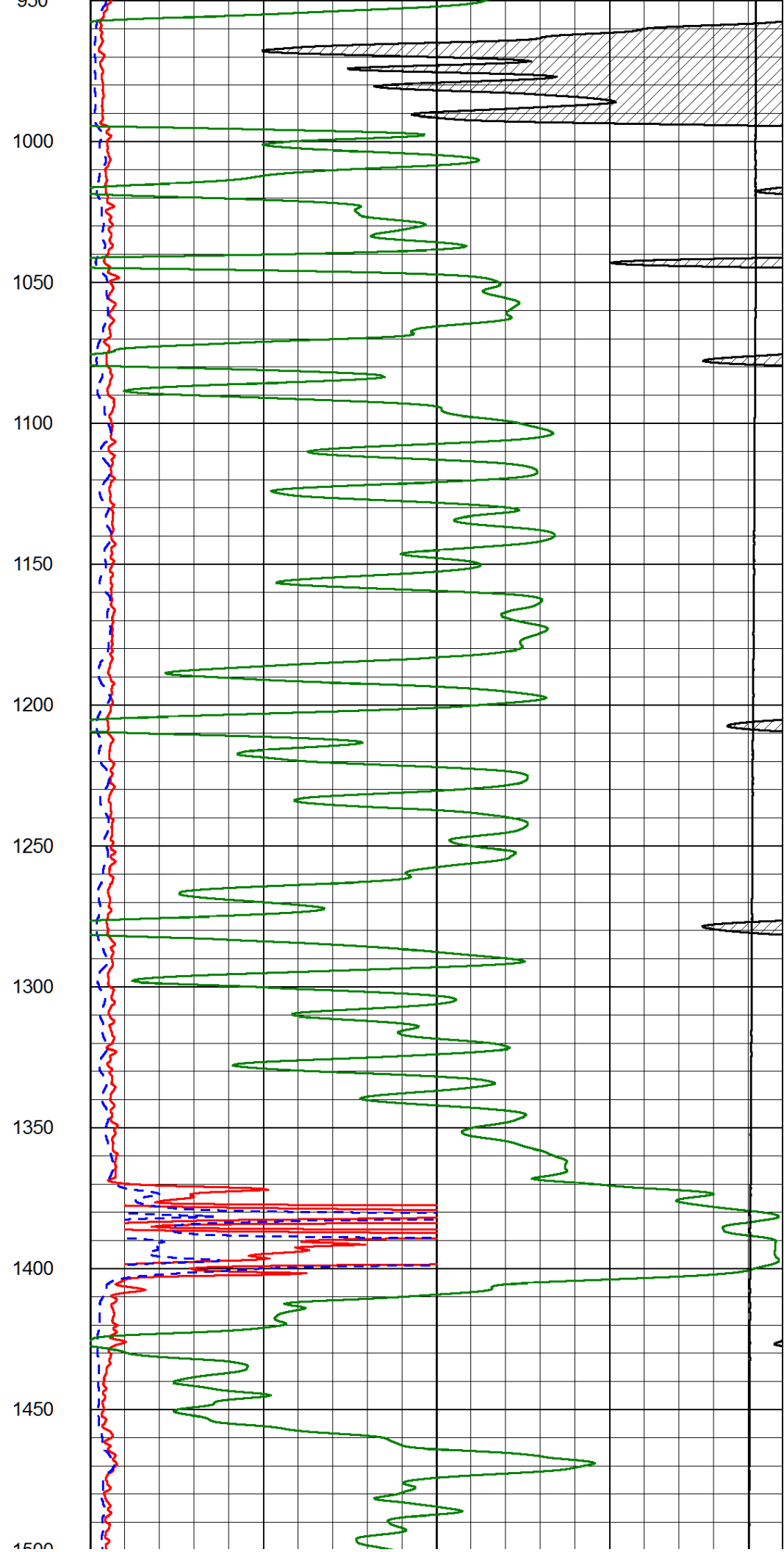
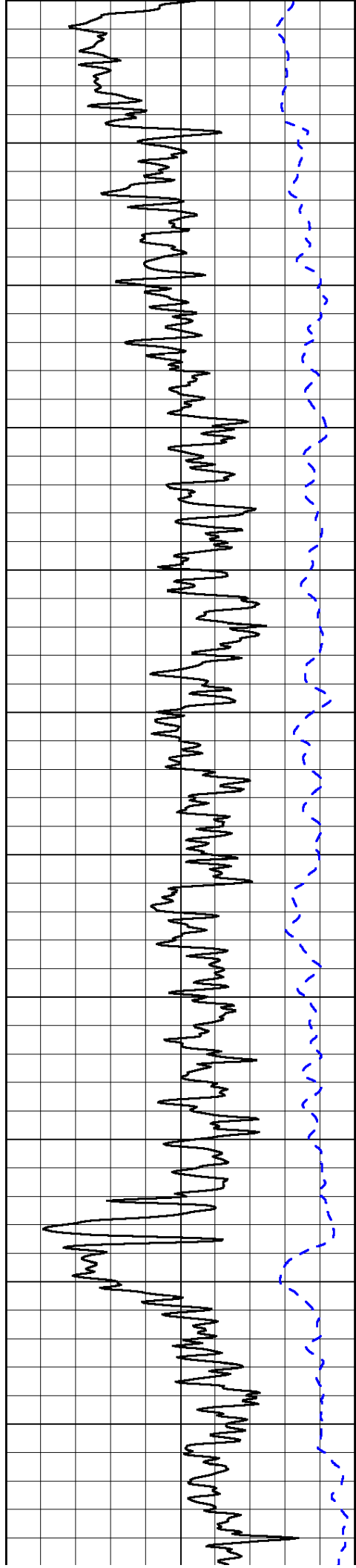
Rush Center, 10 1/2 South to X Road, 6 West, 1/2 North, East Into

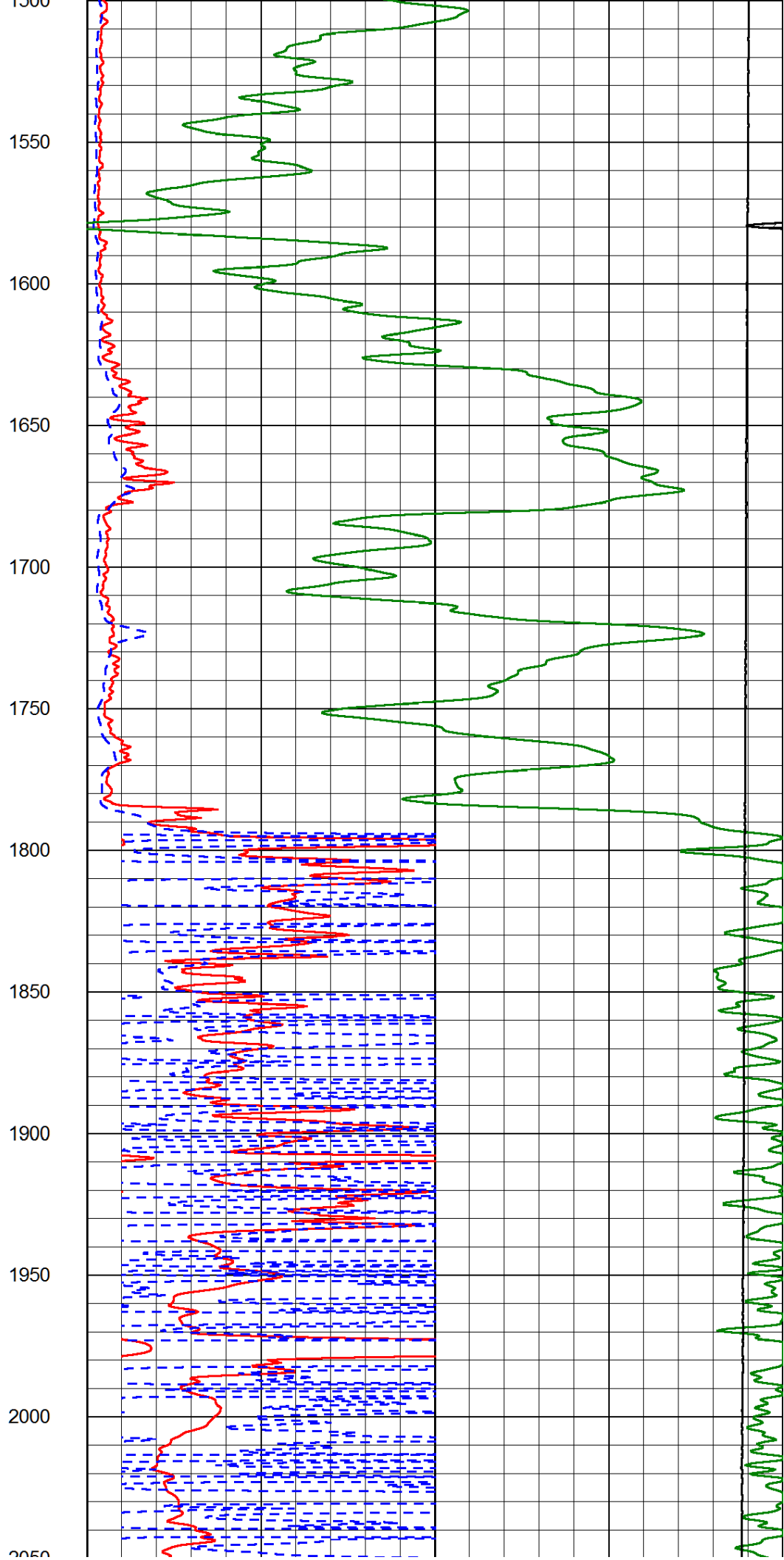
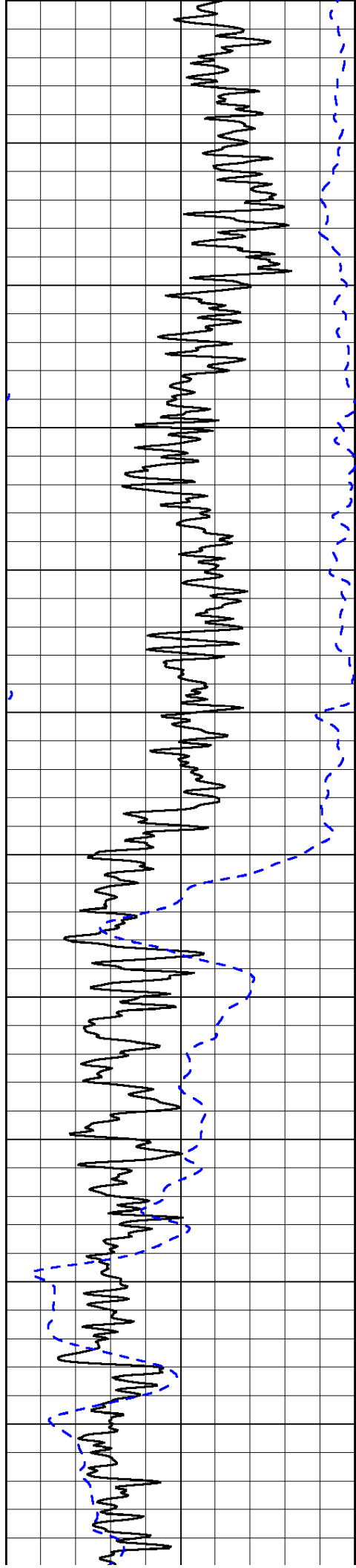
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Presentation Format: dil2in
Dataset Creation: Mon Feb 24 09:41:51 2014
Charted by: Depth in Feet scaled 1:600

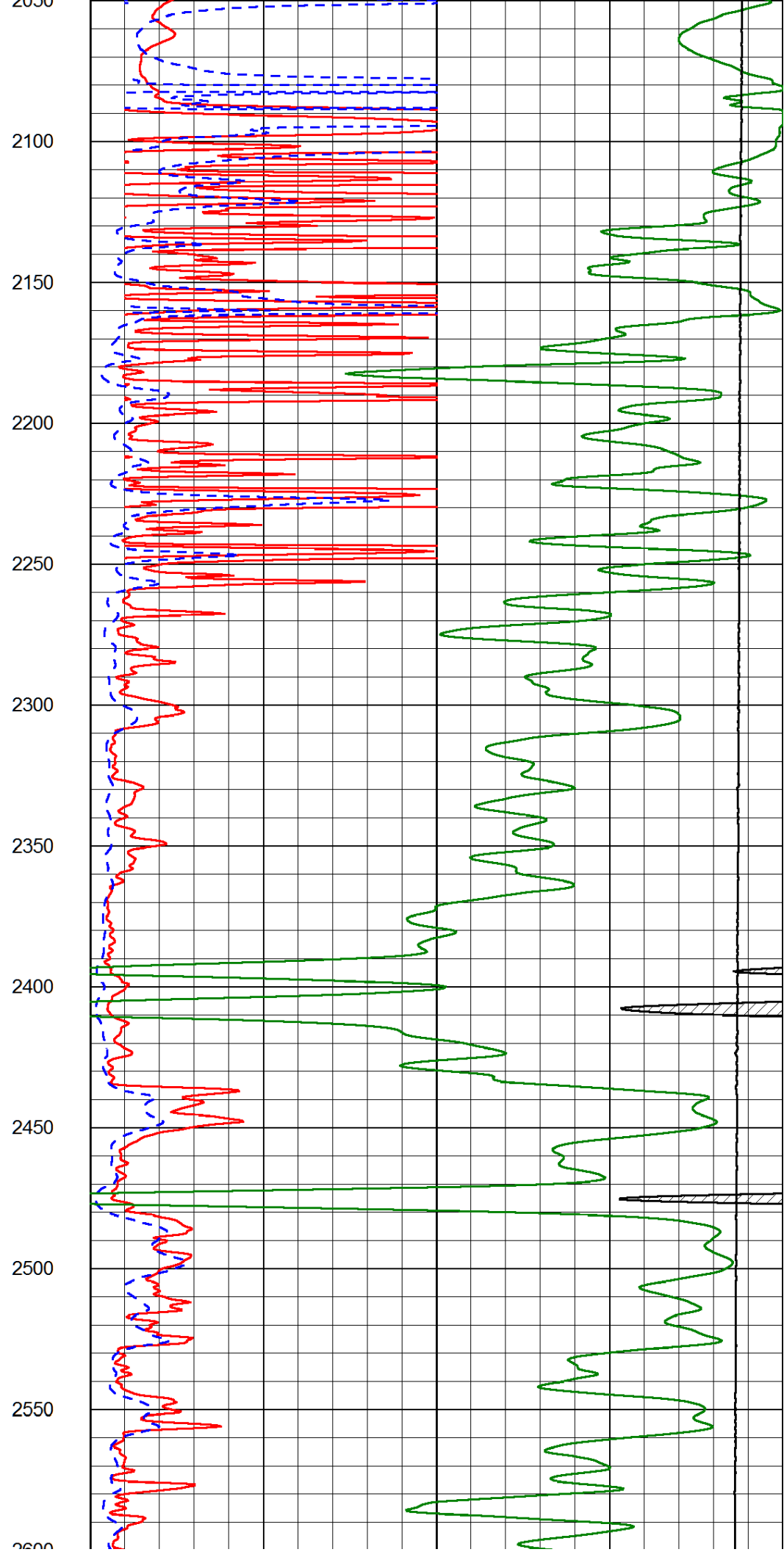
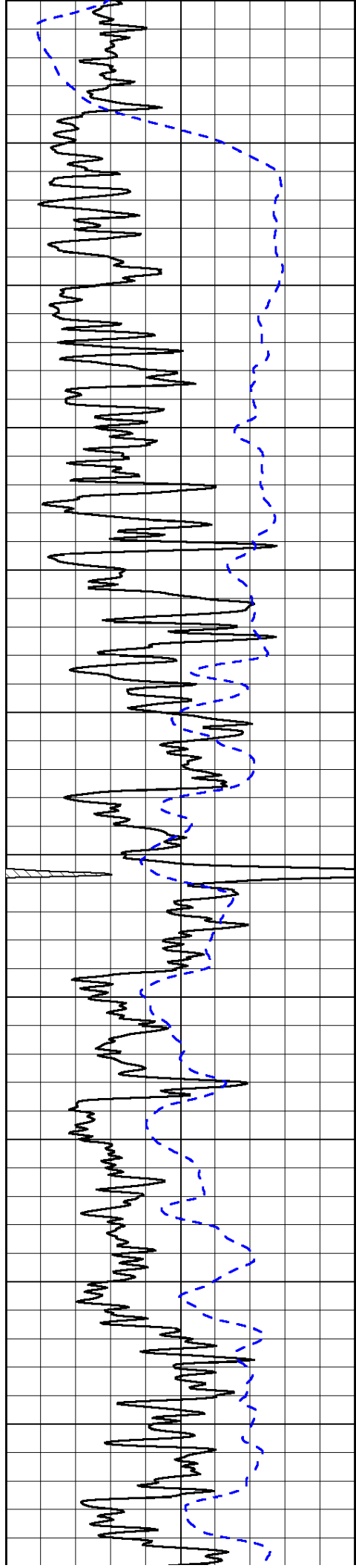
0	Gamma Ray (GAPI)	150
-200	SP (mV)	0

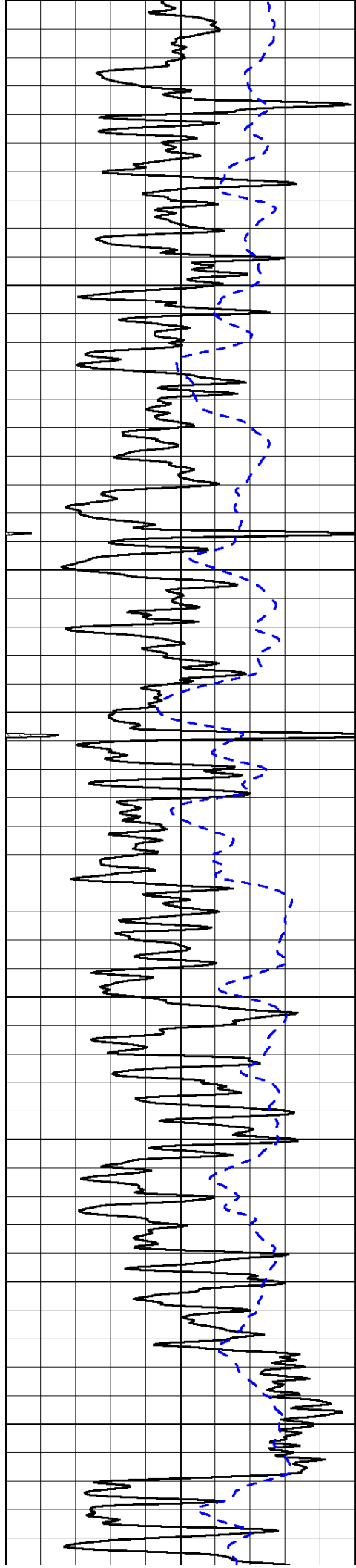
0	Shallow Resistivity (Ohm-m)	50
0	Deep Resistivity (Ohm-m)	50
1000	Conductivity (Ohm-m)	0
15000	Line Tension (lb)	0
Shallow Resistivity		
50	(Ohm-m)	500
50	Deep Resistivity (Ohm-m)	500



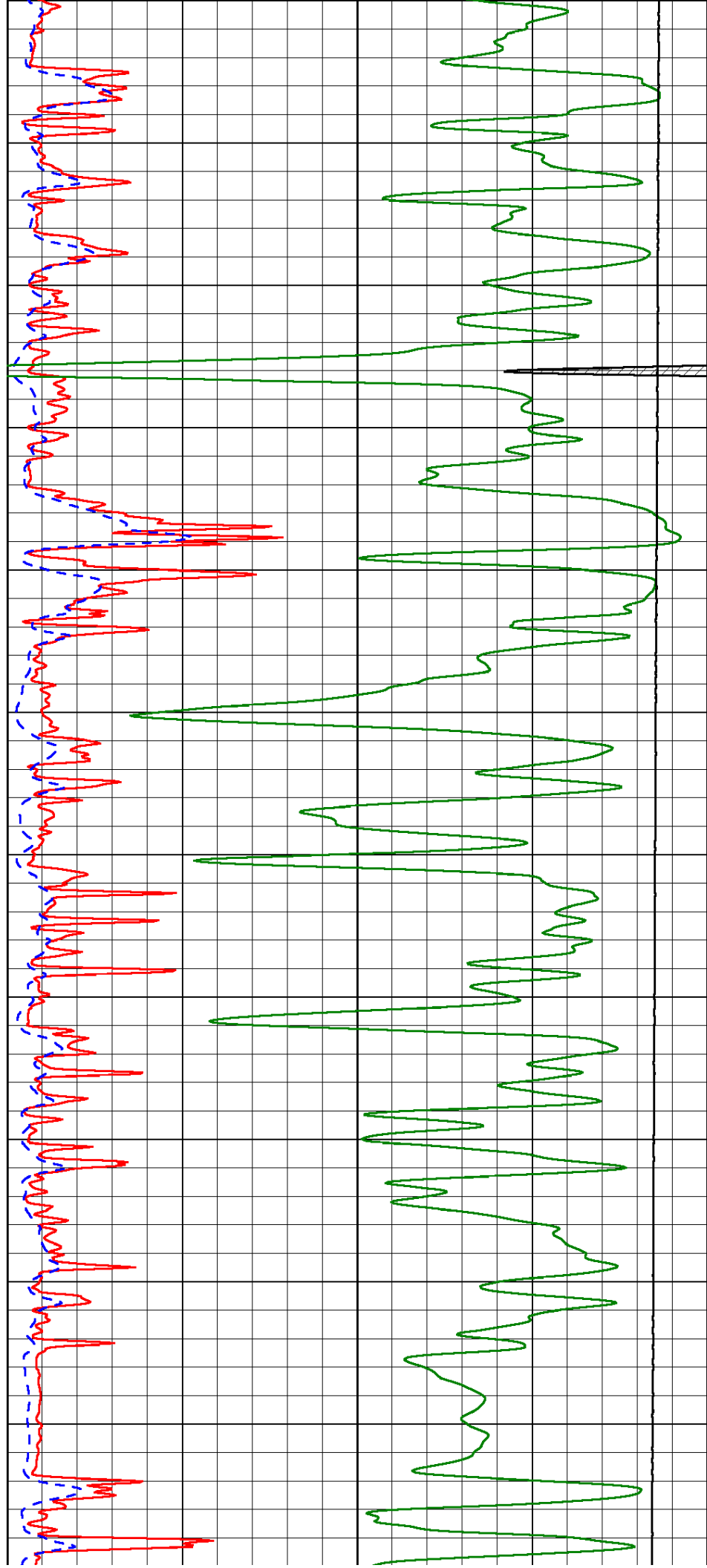


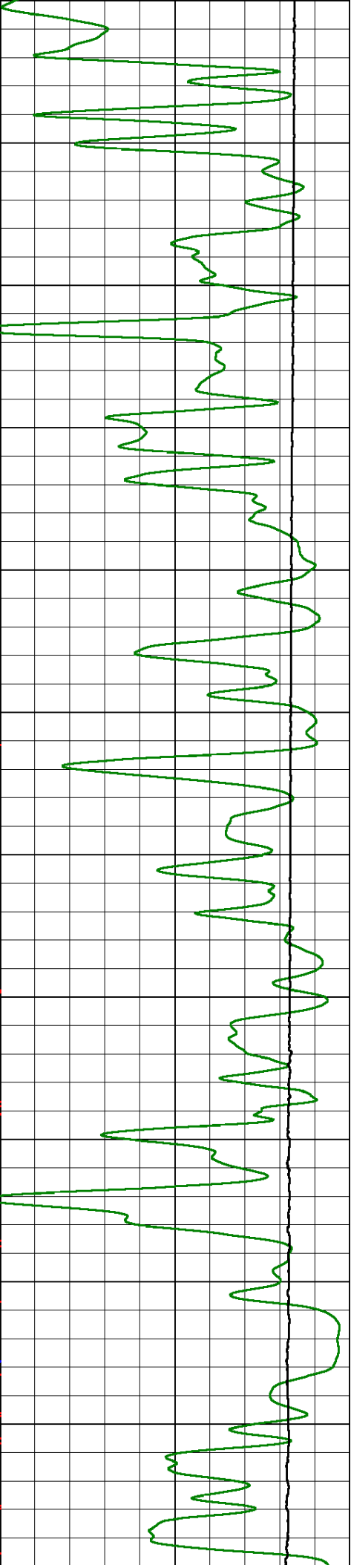
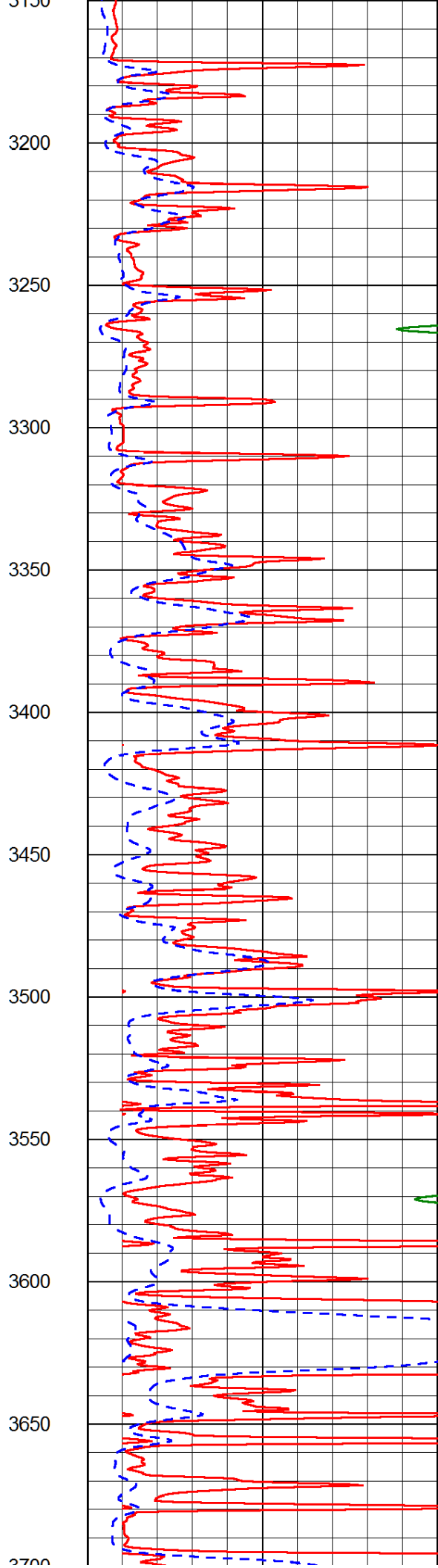
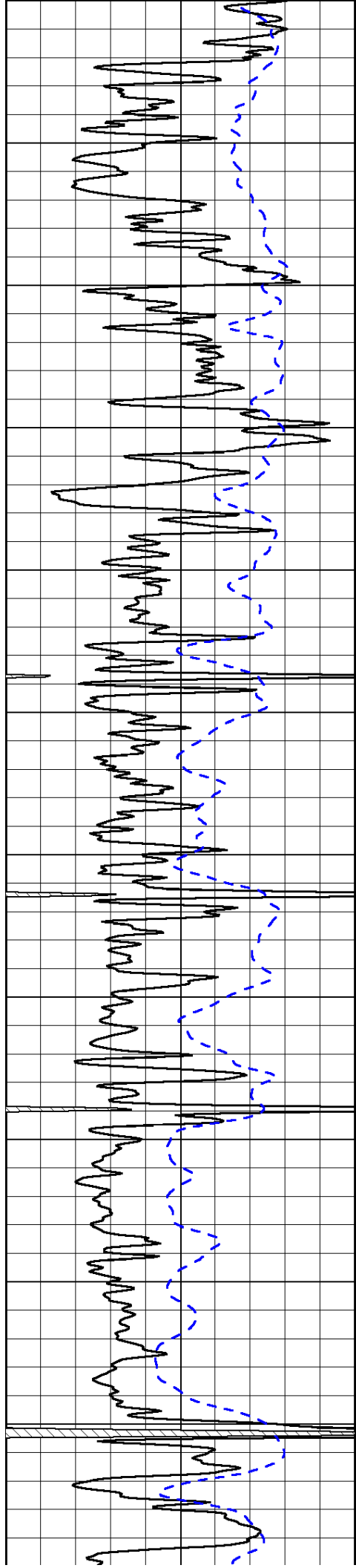


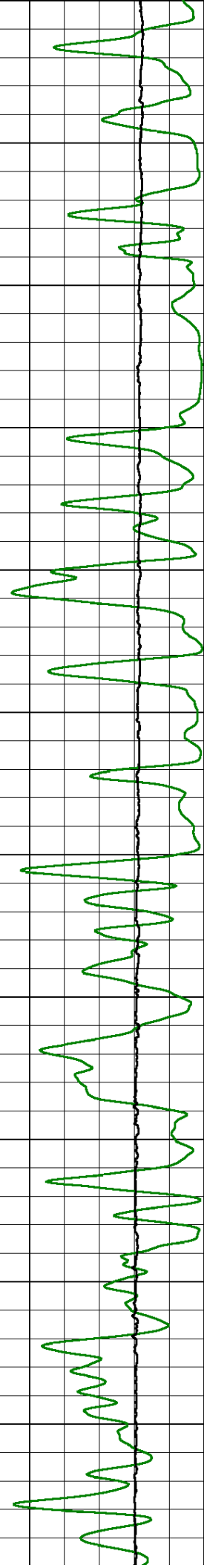
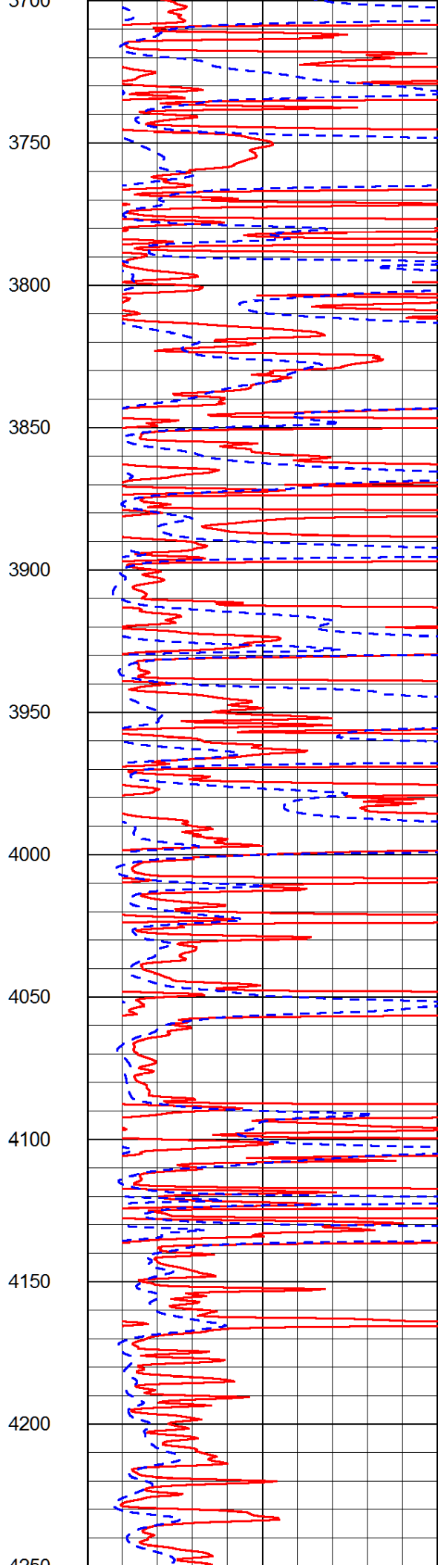
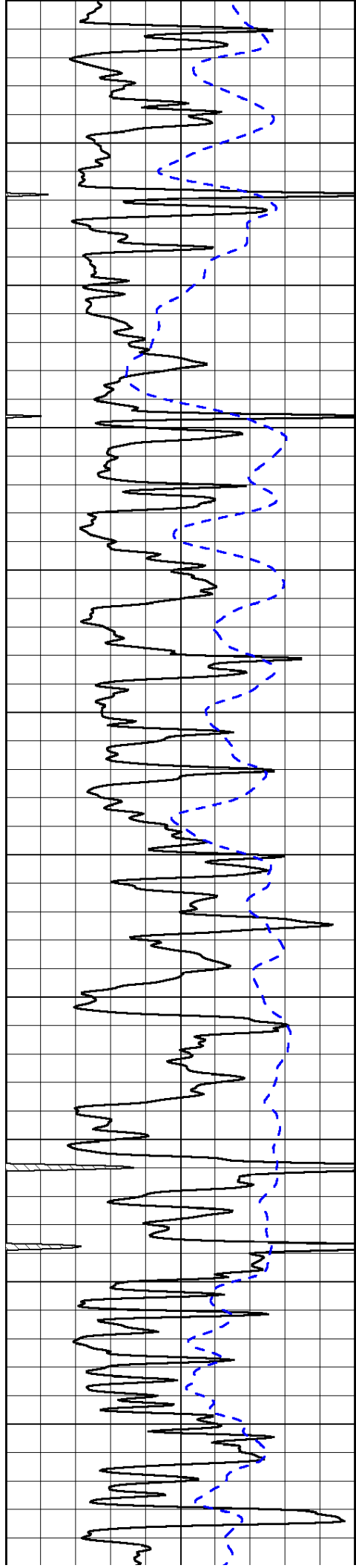


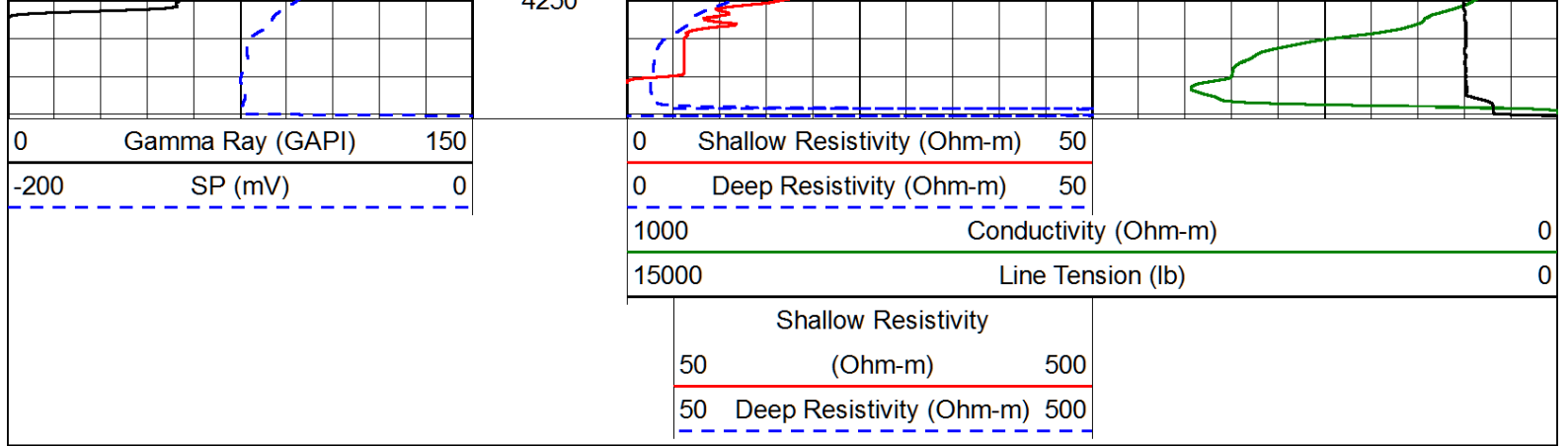


2600
2650
2700
2750
2800
2850
2900
2950
3000
3050
3100
3150

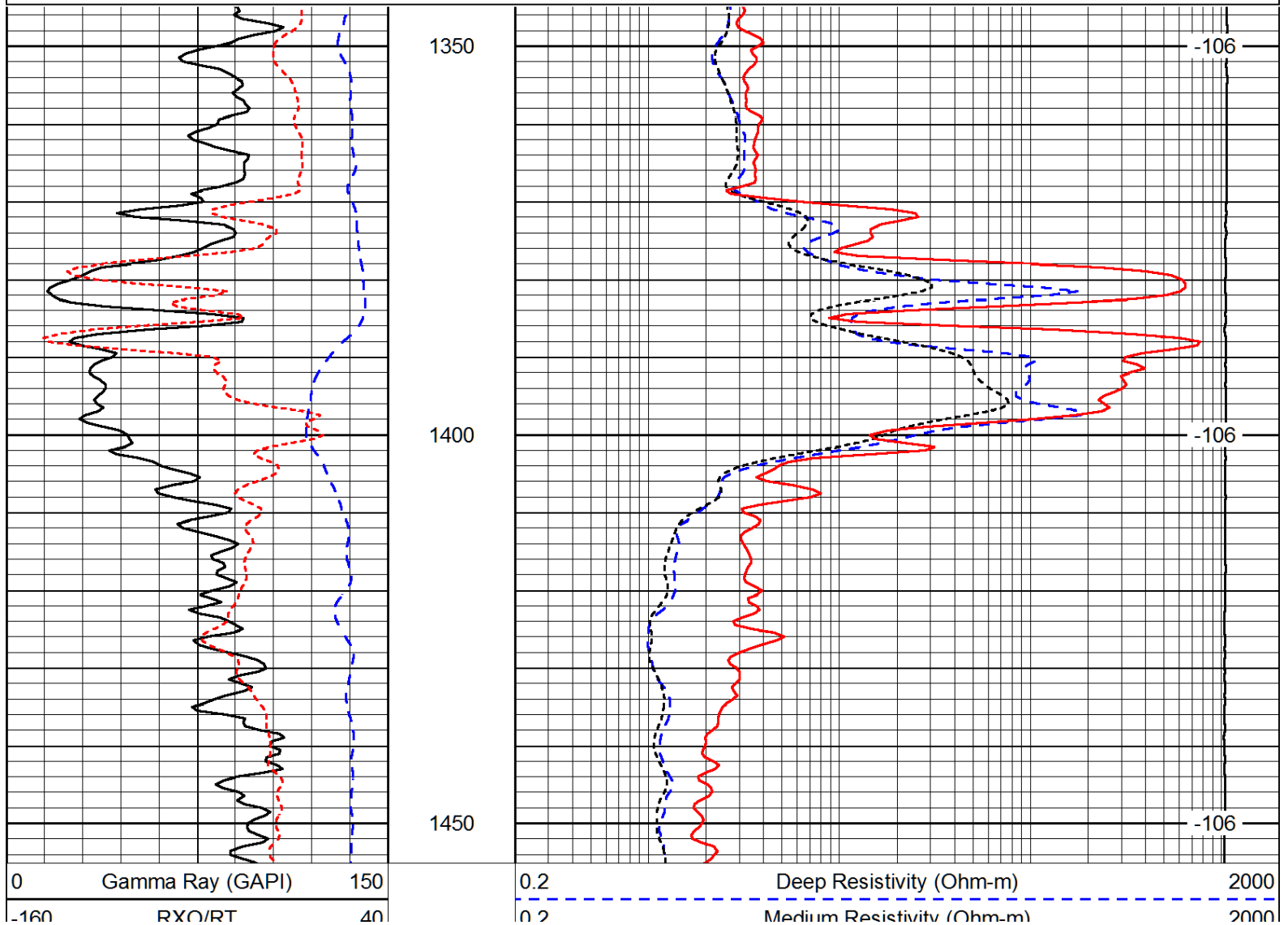
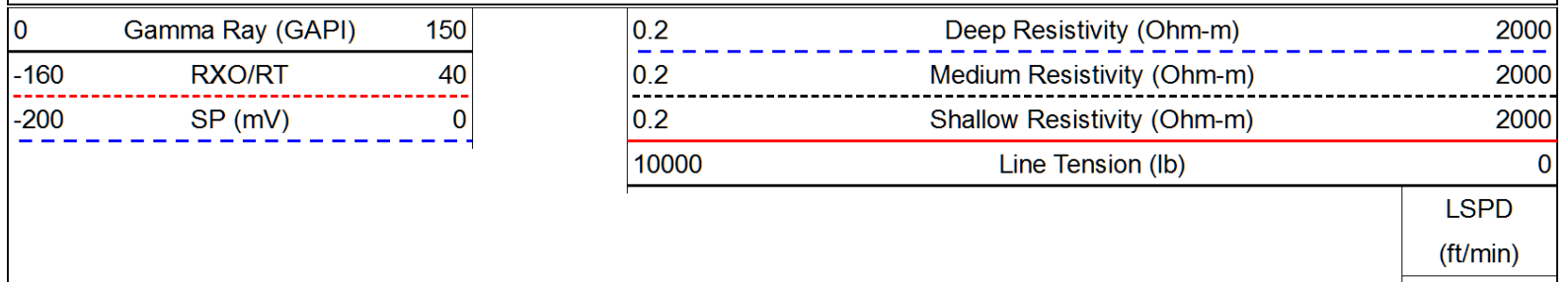








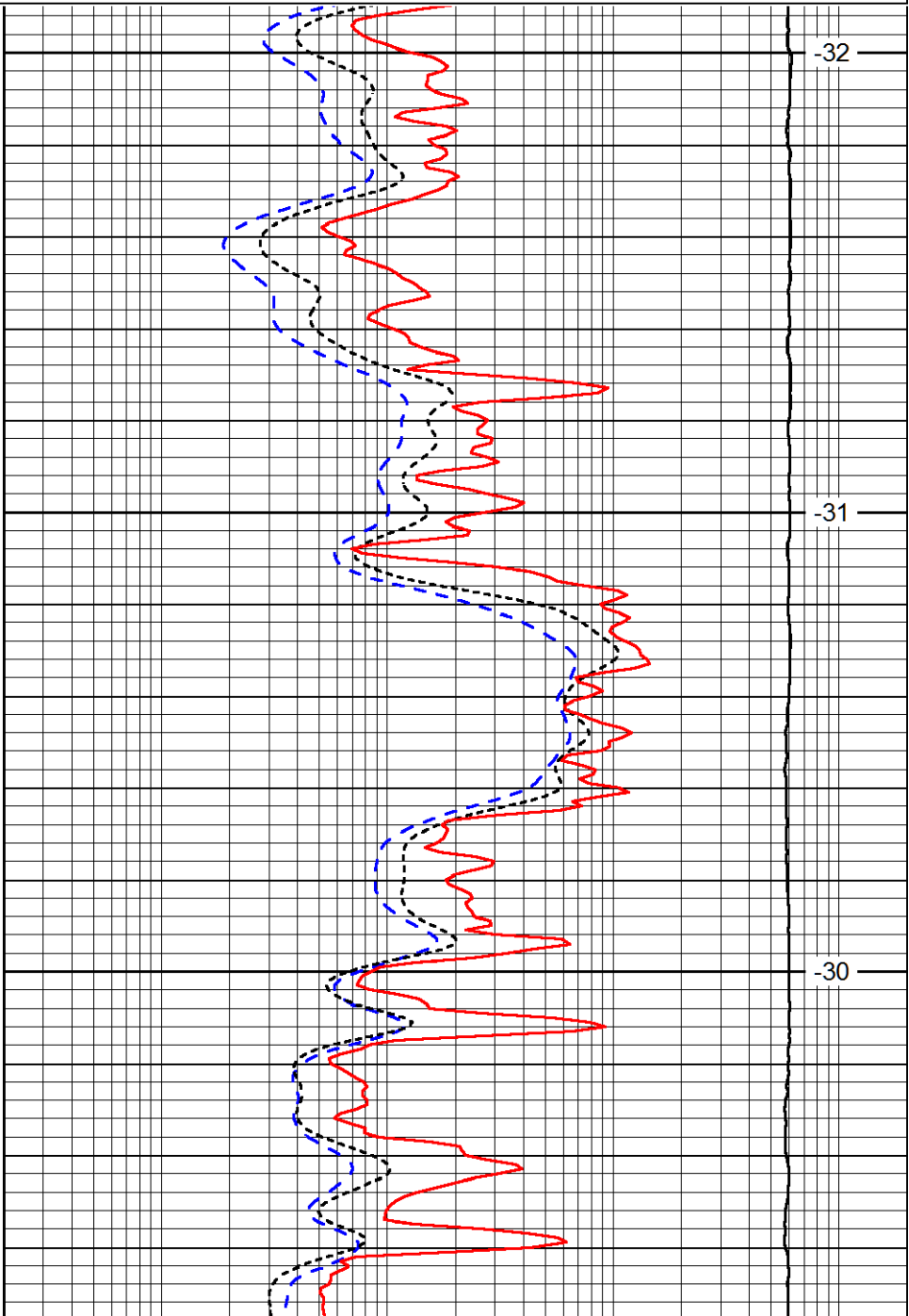
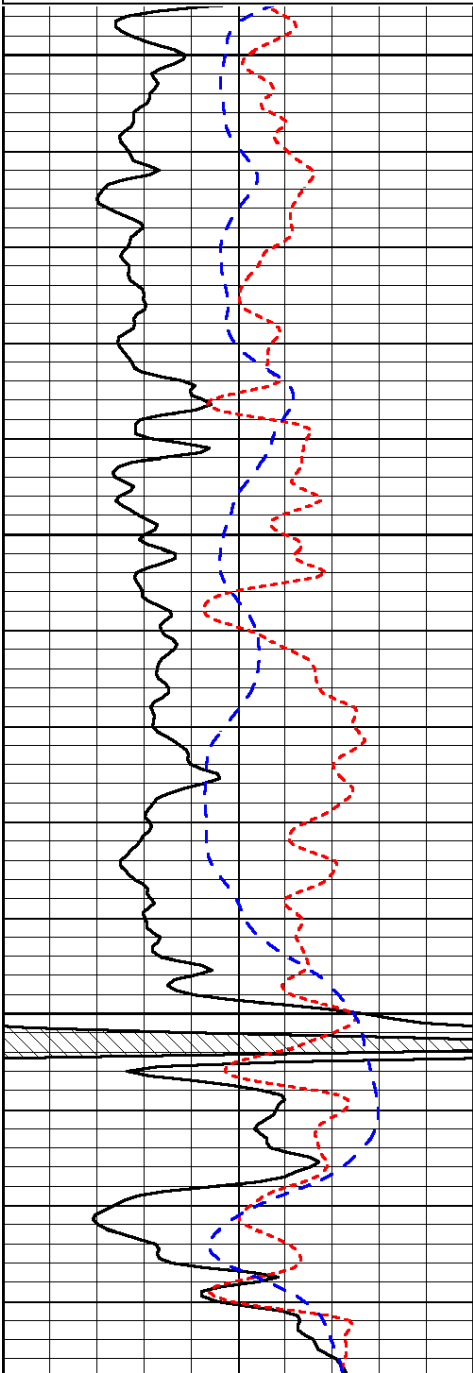
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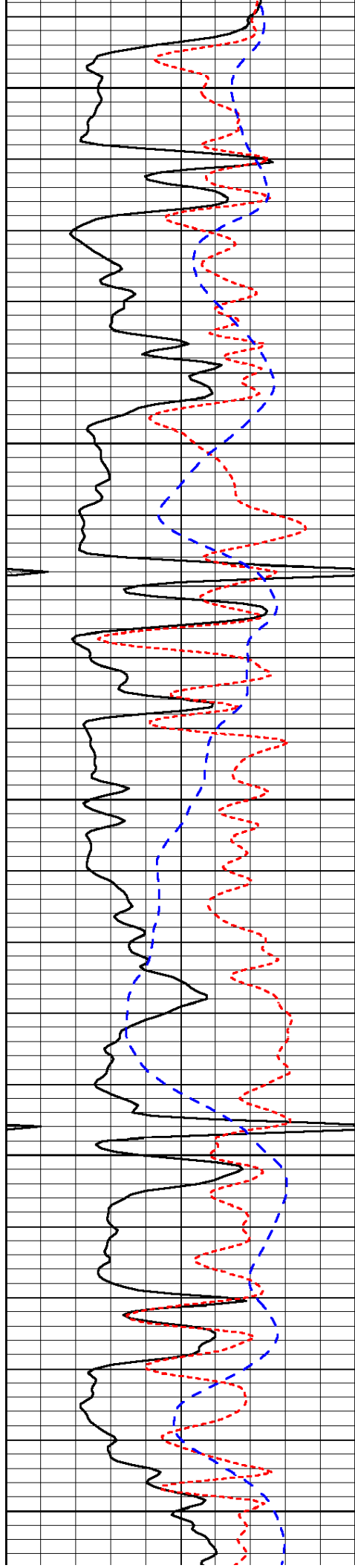


100	SP (mV)	0
-200		

0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0
		LSPD (ft/min)

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Dataset Pathname: dil/cstlstck			
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Charted by: Depth in Feet scaled 1:240			
0	Gamma Ray (GAPI)	150	
-160	RXO/RT	40	
-200	SP (mV)	0	
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)





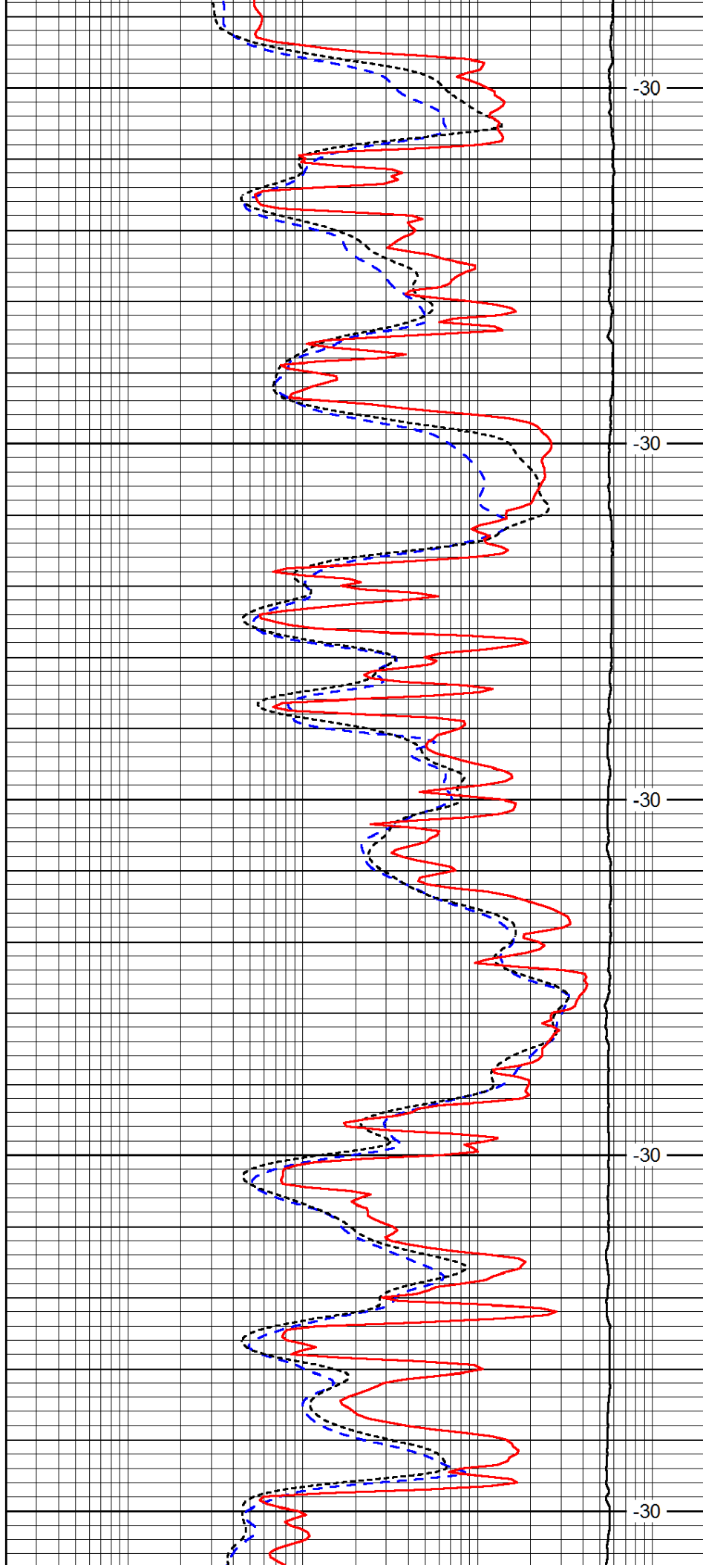
3700

3750

3800

3850

3900



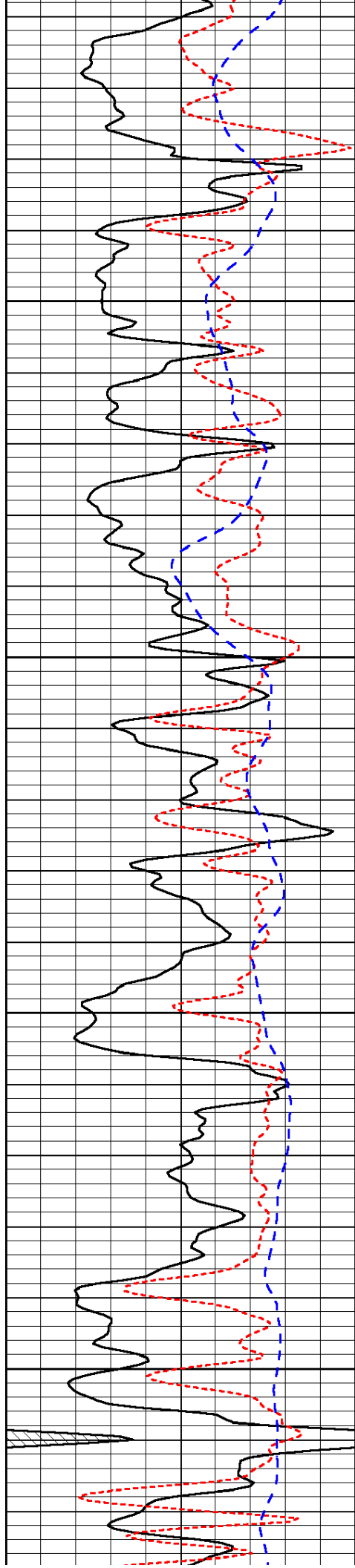
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-30

-30

-30

-30

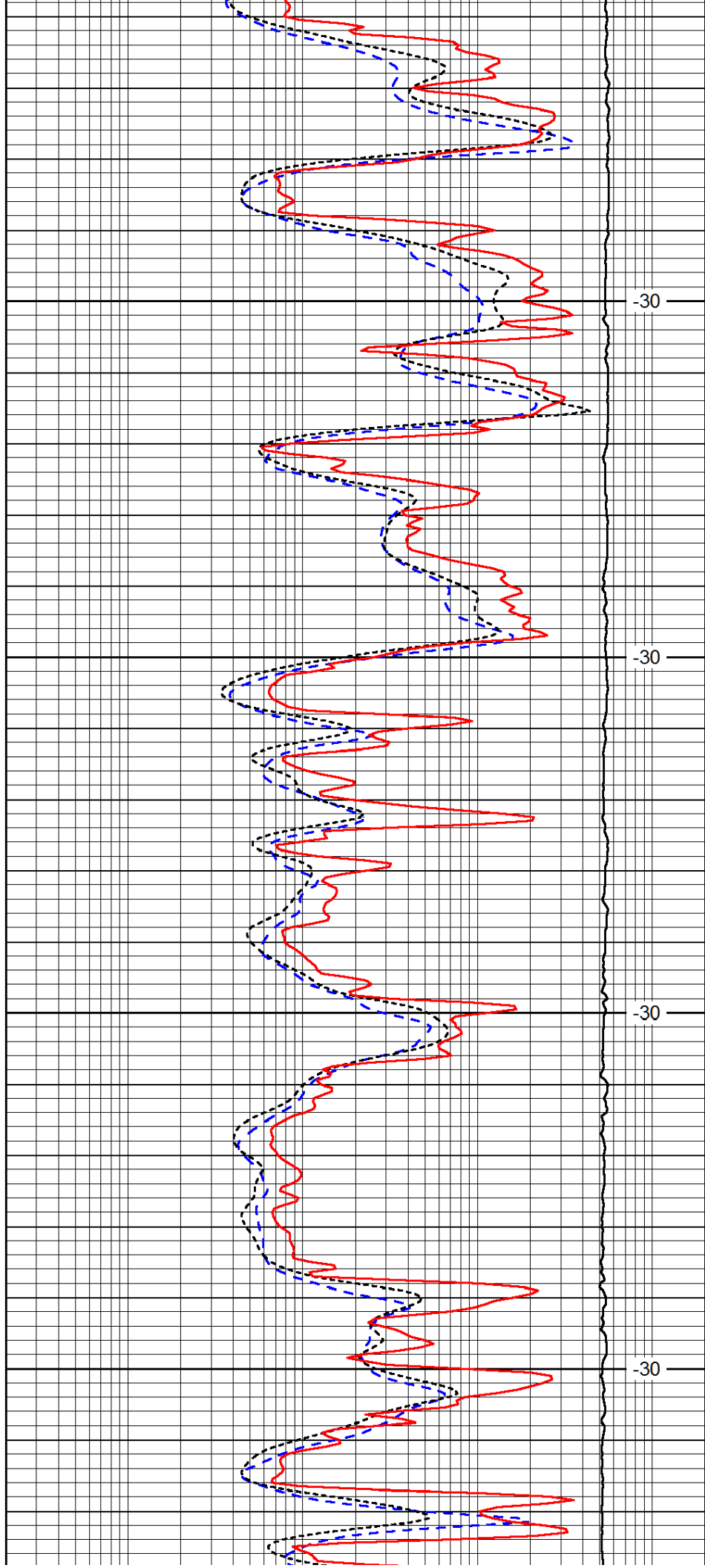


3950

4000

4050

4100

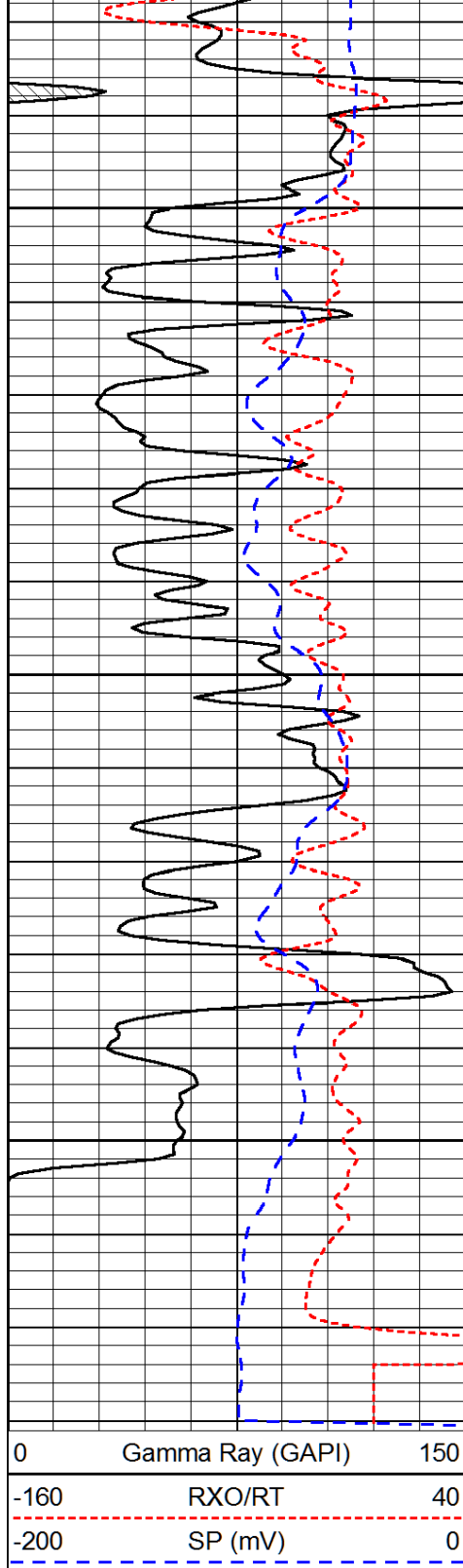


-30

-30

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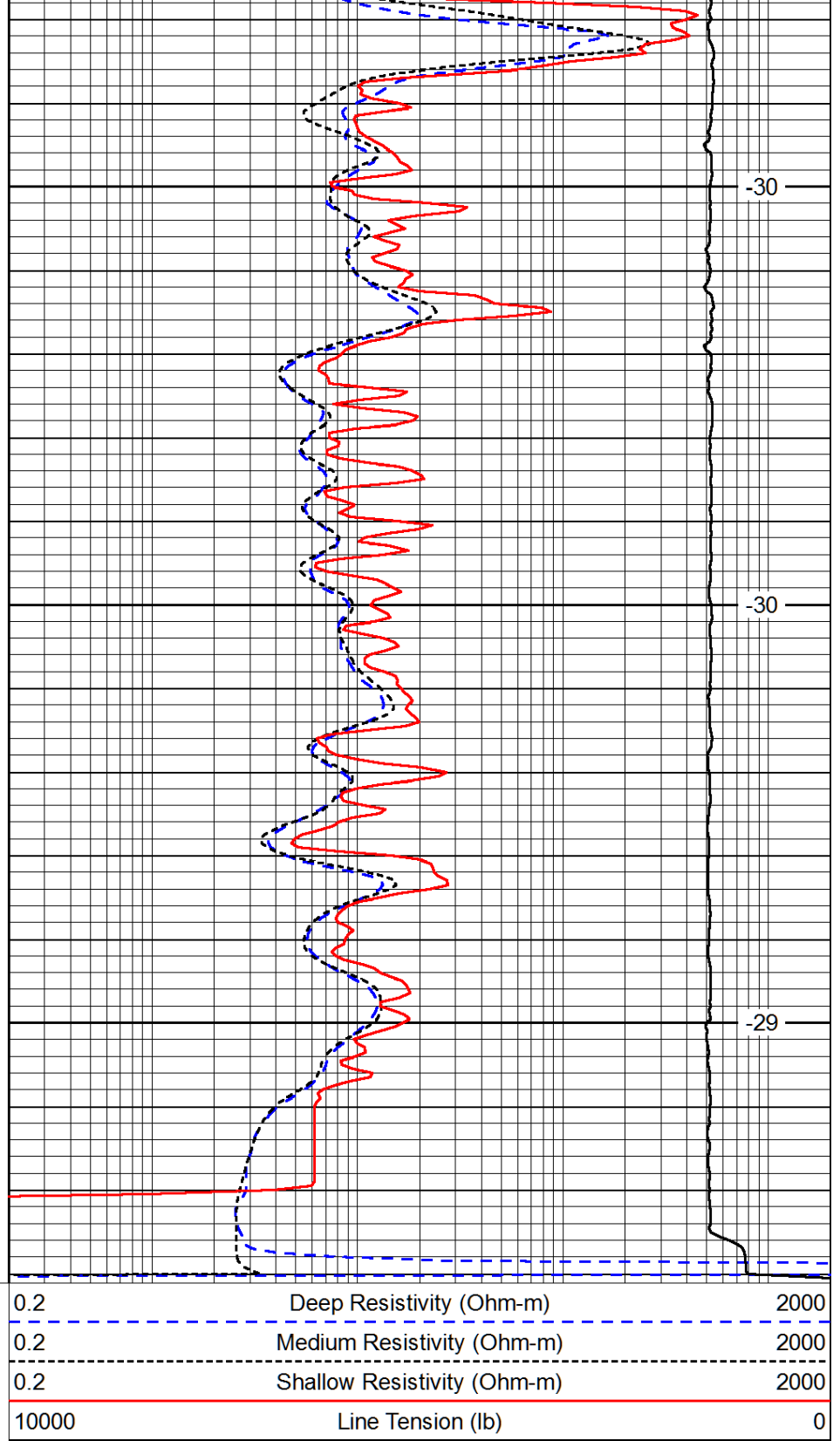
-30



4150

4200

4250



-30

-30

-29

LSPD
(ft/min)