



Pioneer Energy Services

Dual Induction Log

API No.

15-185-22075-00-01

Company H&D Exploration LLC

Well Fritzemeier "B" Unit #1 OWWO

Field Unknown

County Stafford State

Kansas

Location 2324' FSL & 2325' FEL

Sec: 3 Twp: 25 S Rge: 12 W

Other Services
CNL/CDL
MEL

Permanent Datum Ground Level Elevation 1868
Log Measured From Kelly Bushing 8 Ft. Above Perm. Datum
Drilling Measured From Kelly Bushing

Date 02-09-2014

Run Number One

Depth Driller 4168

Depth Logger 4140

Bottom Logged Interval 4139

Top Log Interval 300

Casing Driller 8.625 @ 338

Casing Logger 340

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 5400

Density / Viscosity 8.65 54

pH / Fluid Loss 11.0 9.2

Source of Sample Flowline

Rm @ Meas. Temp .45 @ 40

Rmf @ Meas. Temp 0.33 @ 40

Rmc @ Meas. Temp 0.60 @ 40

Source of Rmf / Rmc Charts

Rm @ BHT 0.15 @ 120

Operating Rig Time 4 Hours

Max Rec. Temp. F 120

Equipment Number 91

Location Hays

Recorded By Y. Ruiz

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

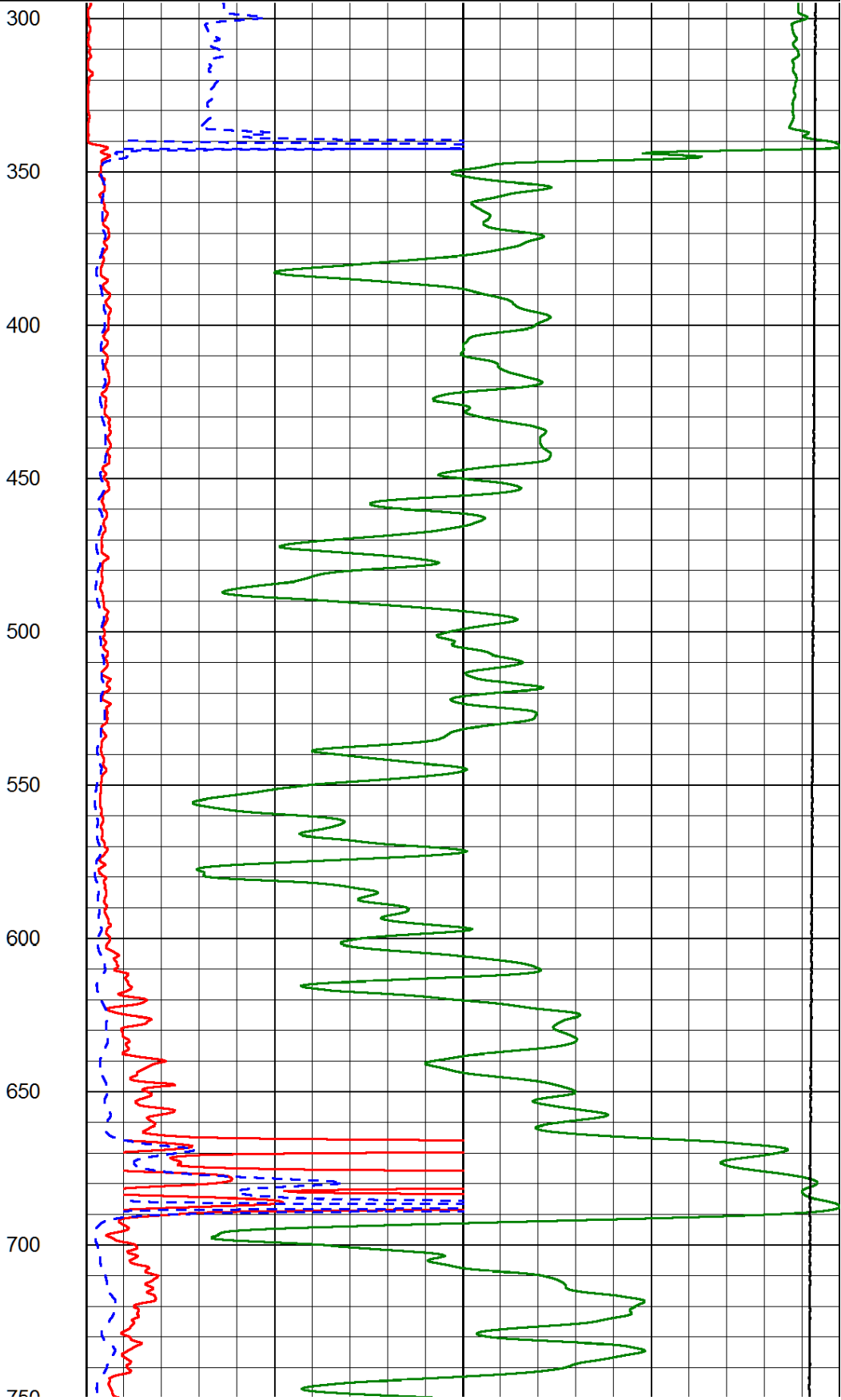
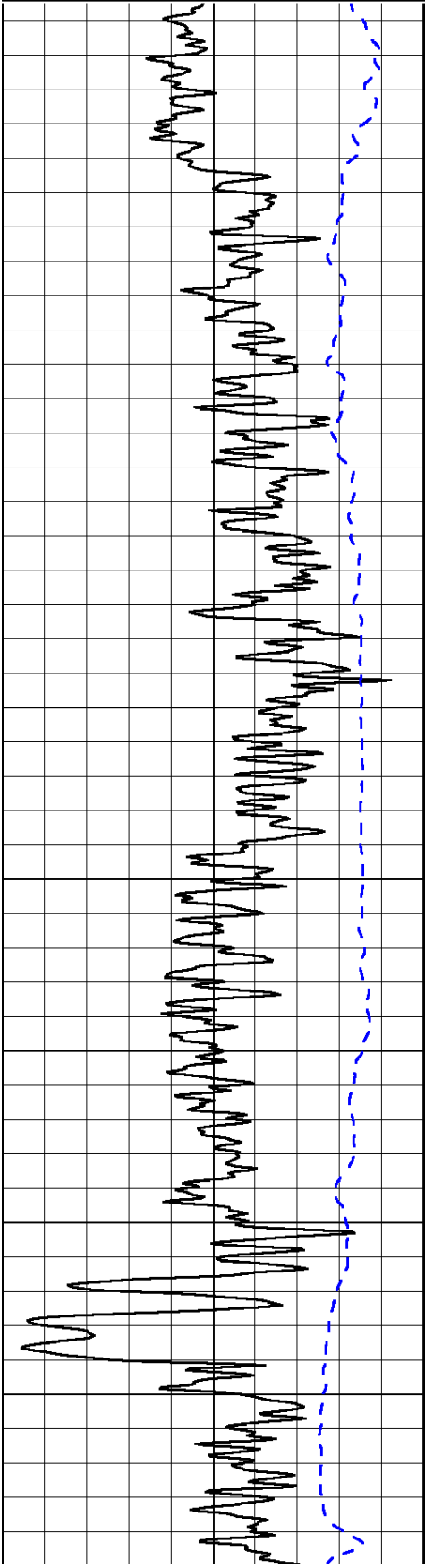
Thank you for using Log-Tech, Inc.
(785) 625-3858

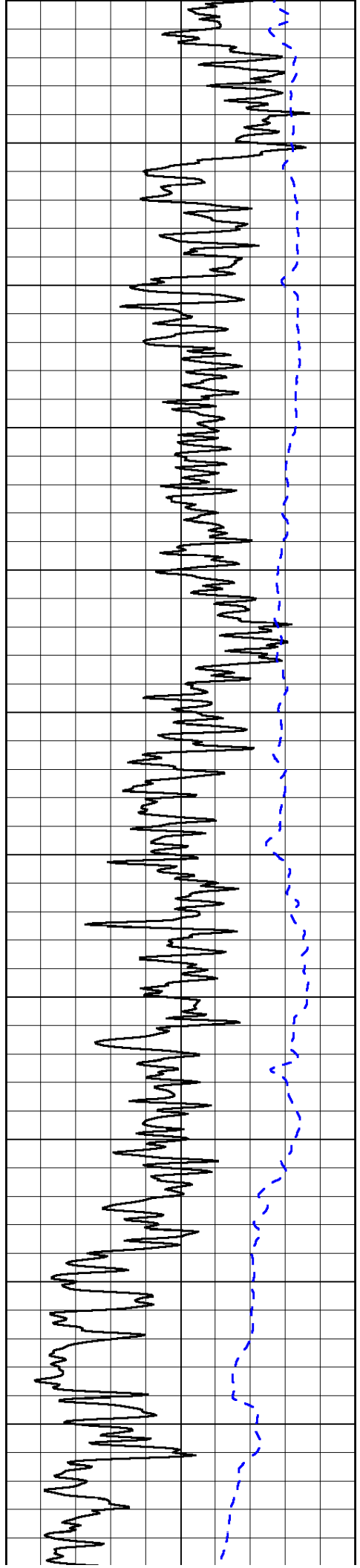
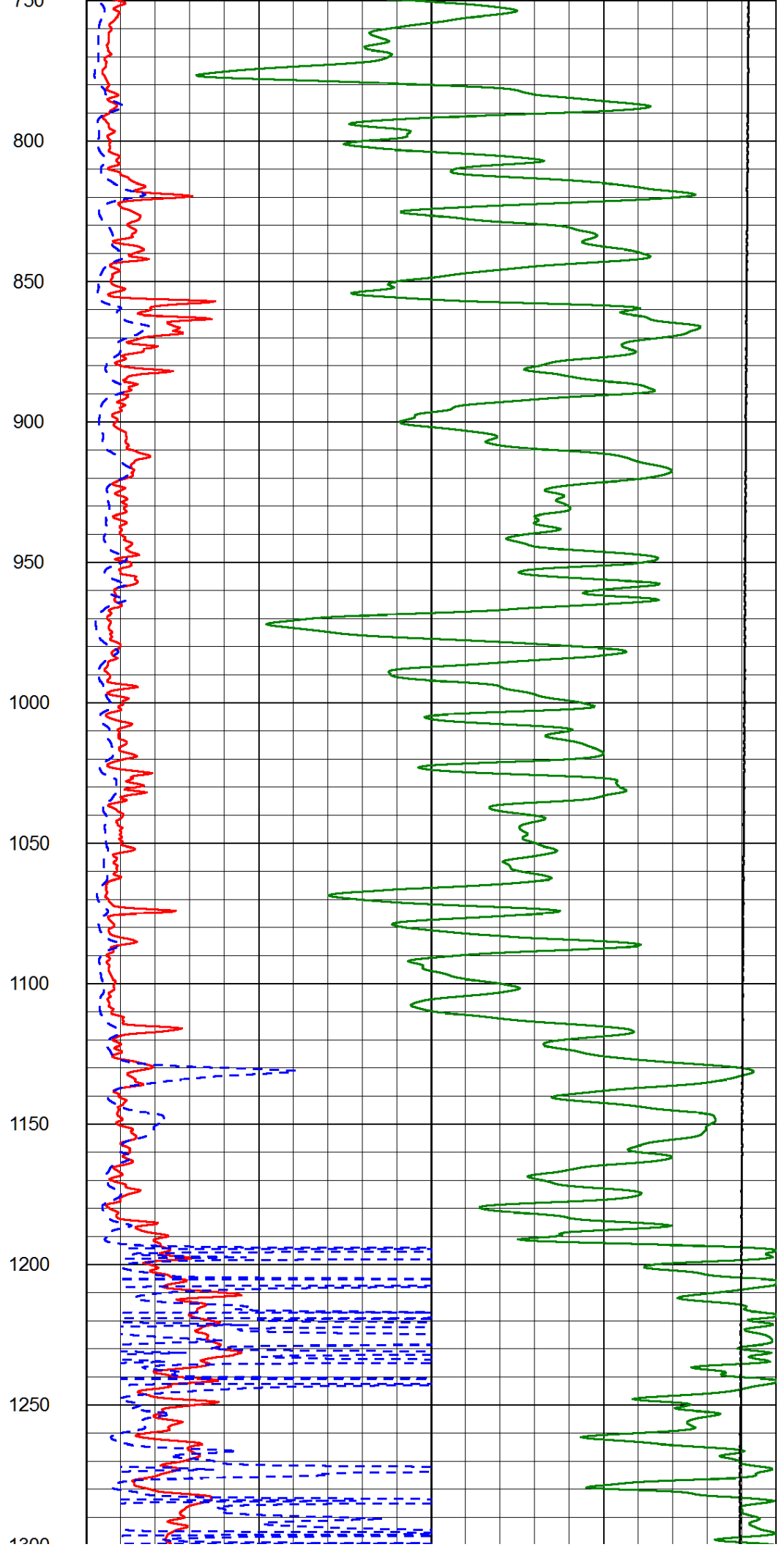
Stafford,
4 South, 1 1/2 West,
North into

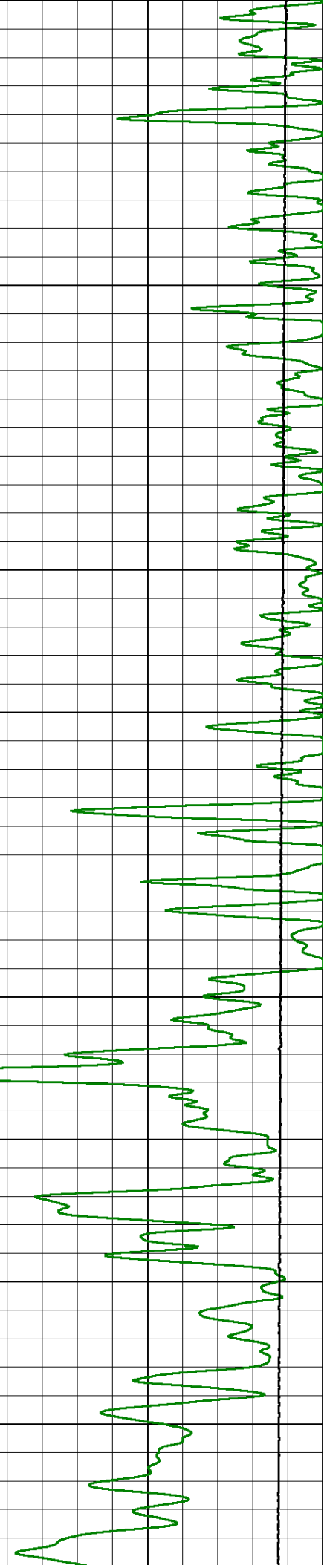
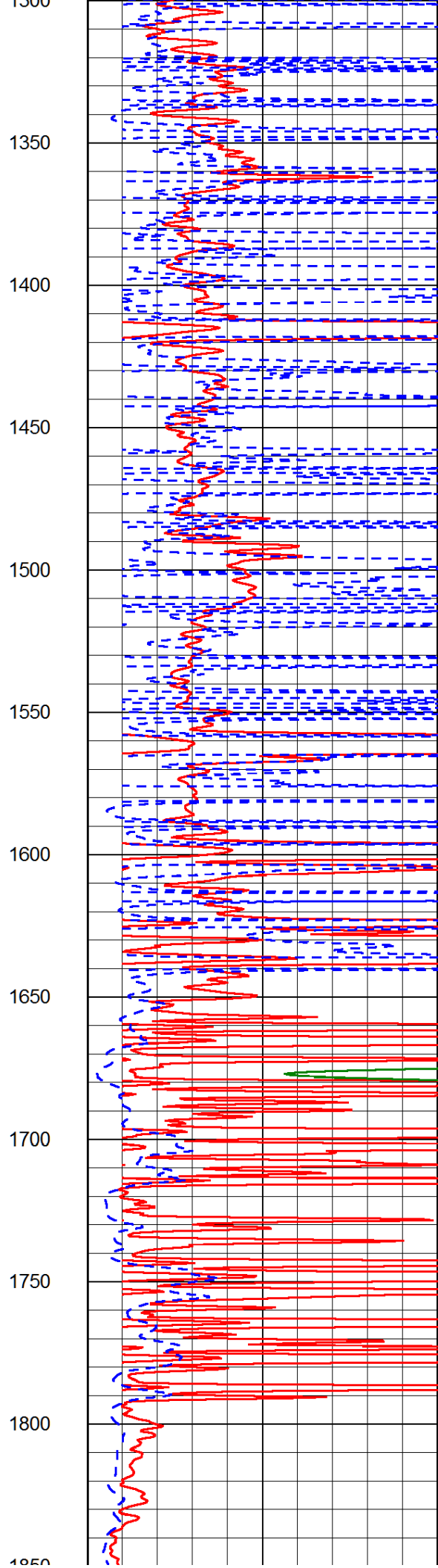
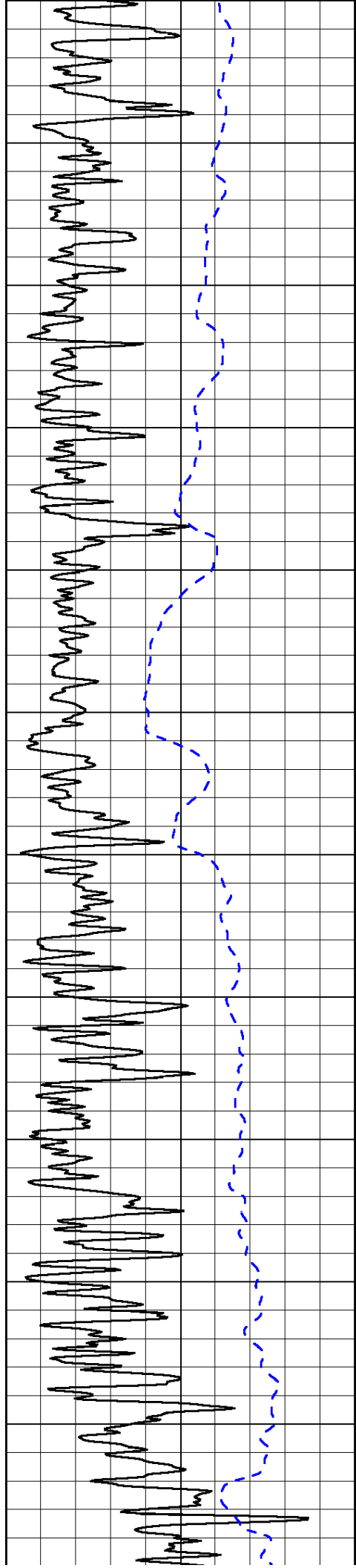
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Presentation Format: dil2in
Dataset Creation: Sun Feb 09 23:07:45 2014
Charted by: Depth in Feet scaled 1:600

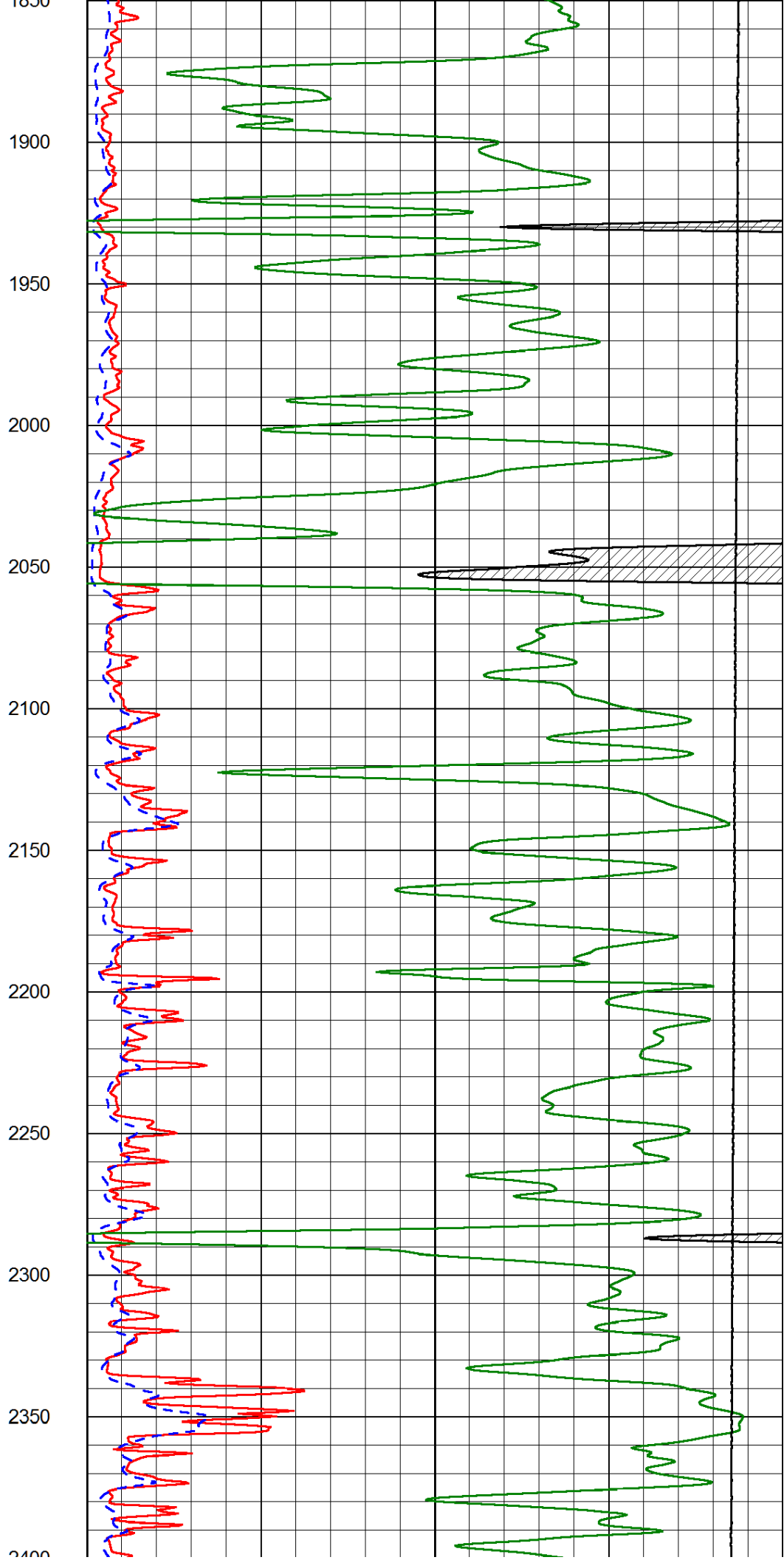
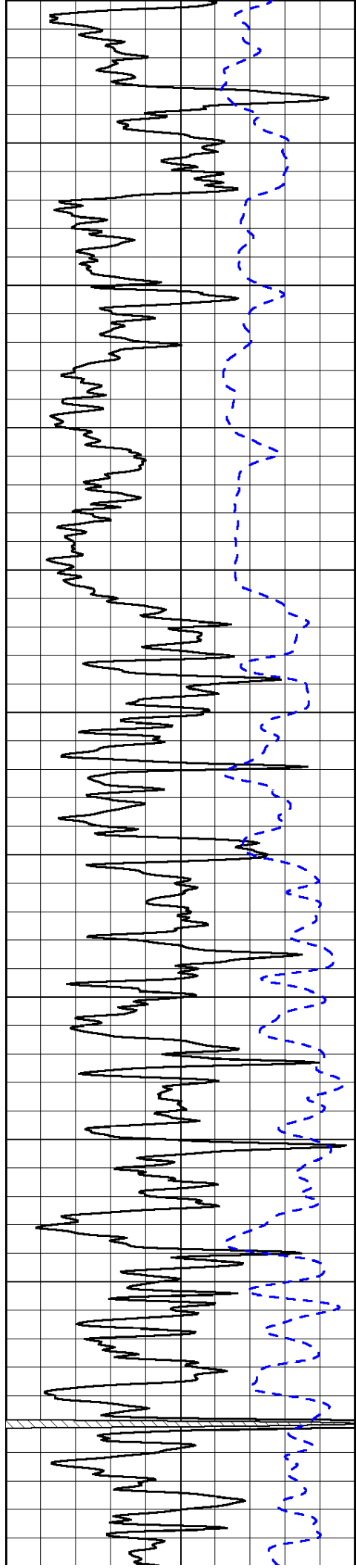
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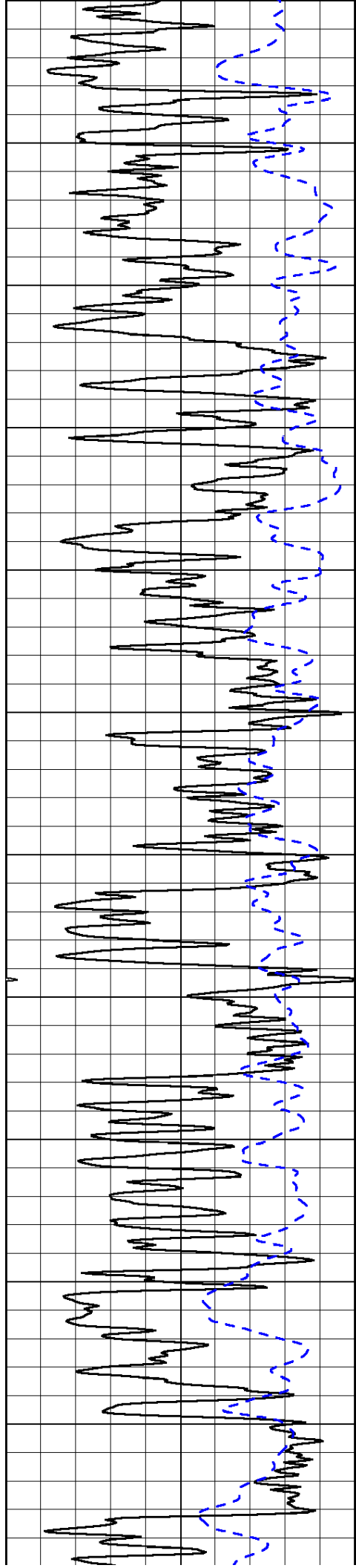
0	Shallow Resistivity (Ohm-m)	50
0	Deep Resistivity (Ohm-m)	50
1000	Conductivity (Ohm-m)	0
15000	Line Tension (lb)	0
Shallow Resistivity		
50	(Ohm-m)	500
50	Deep Resistivity (Ohm-m)	500



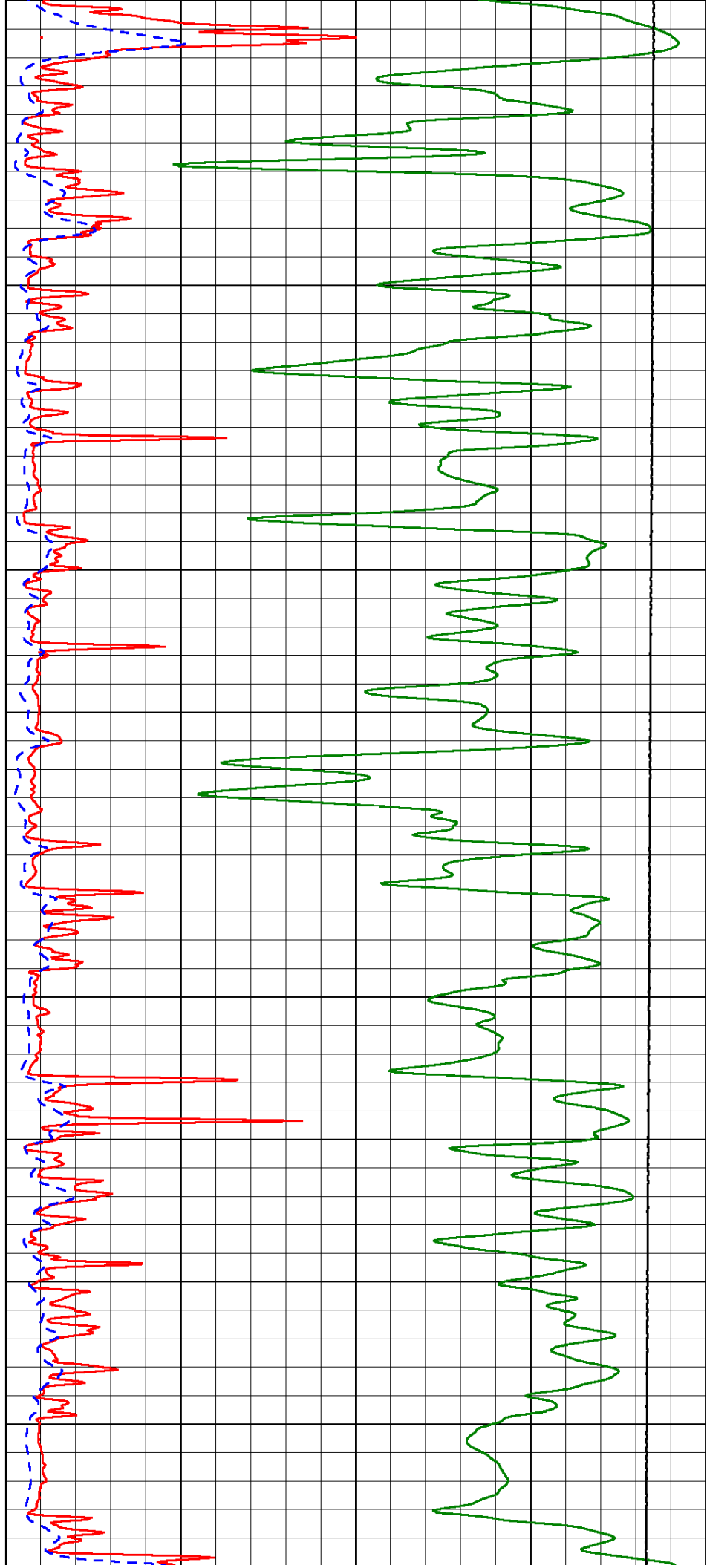


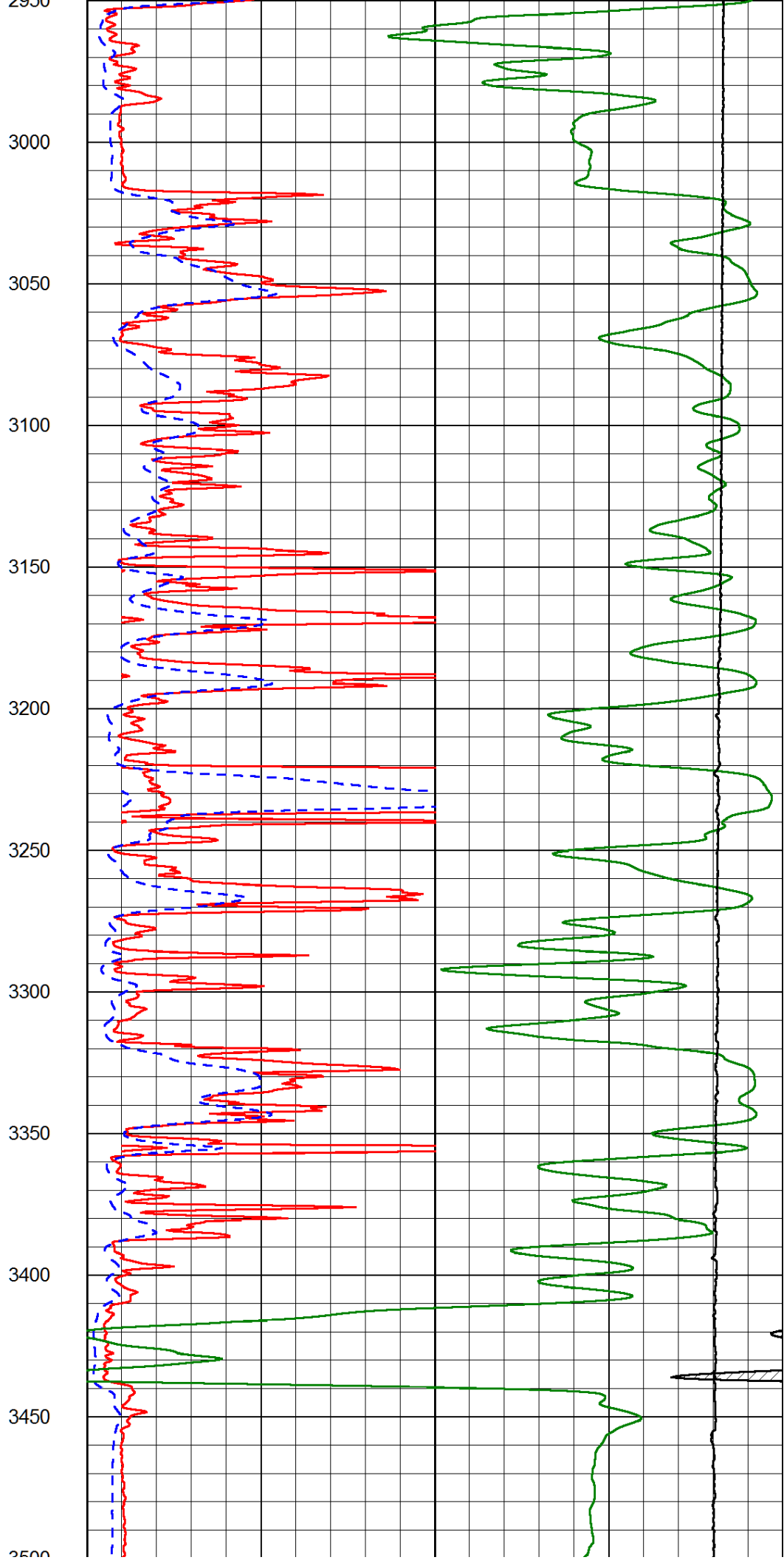
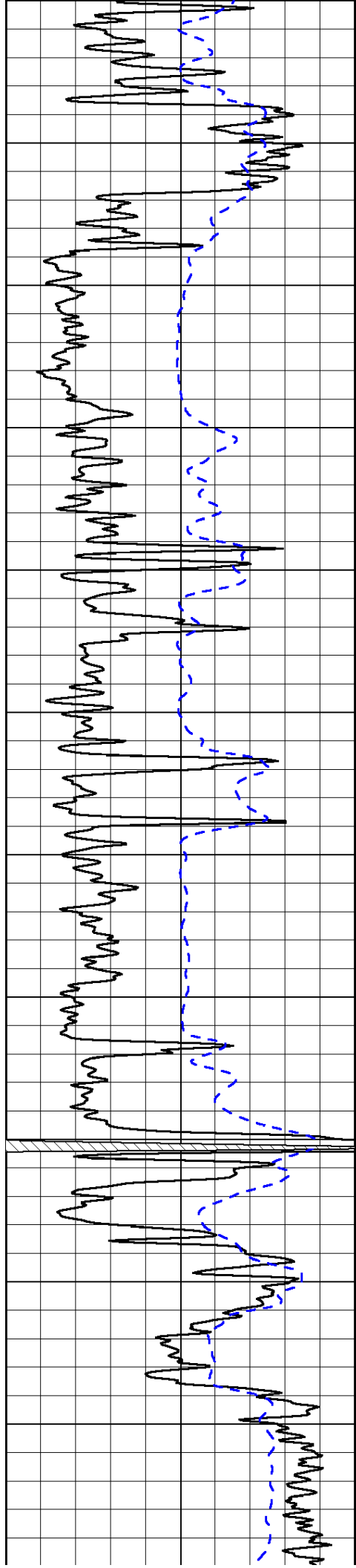


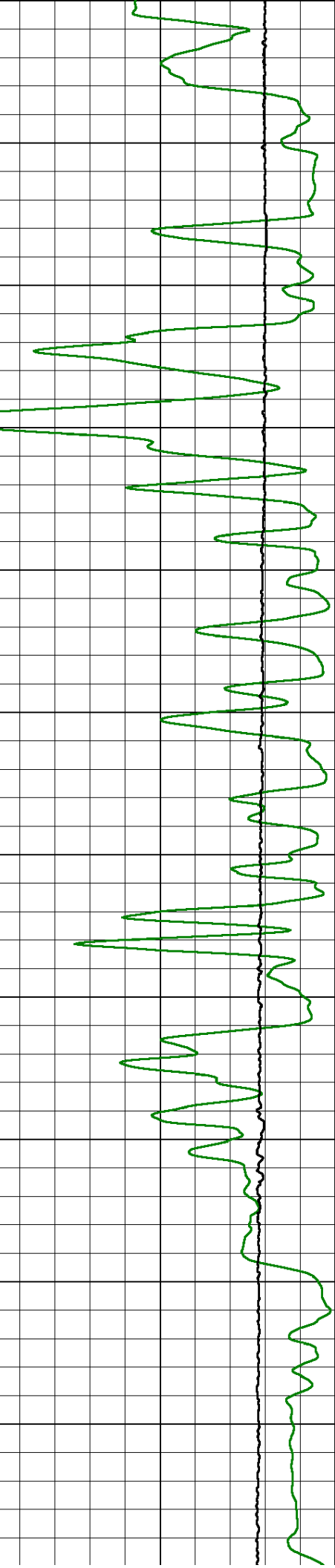
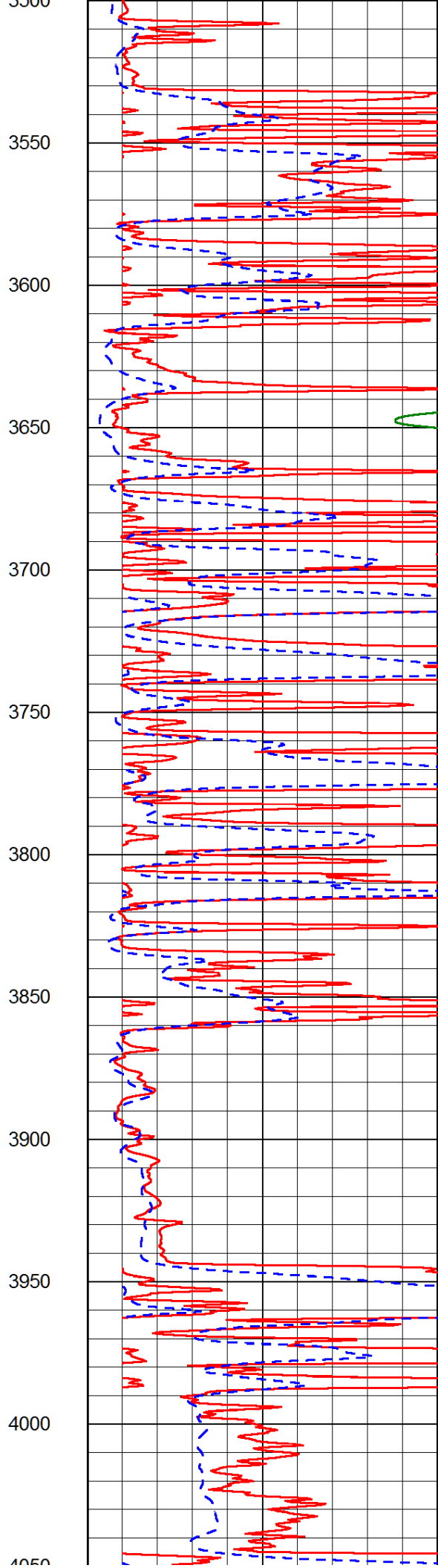
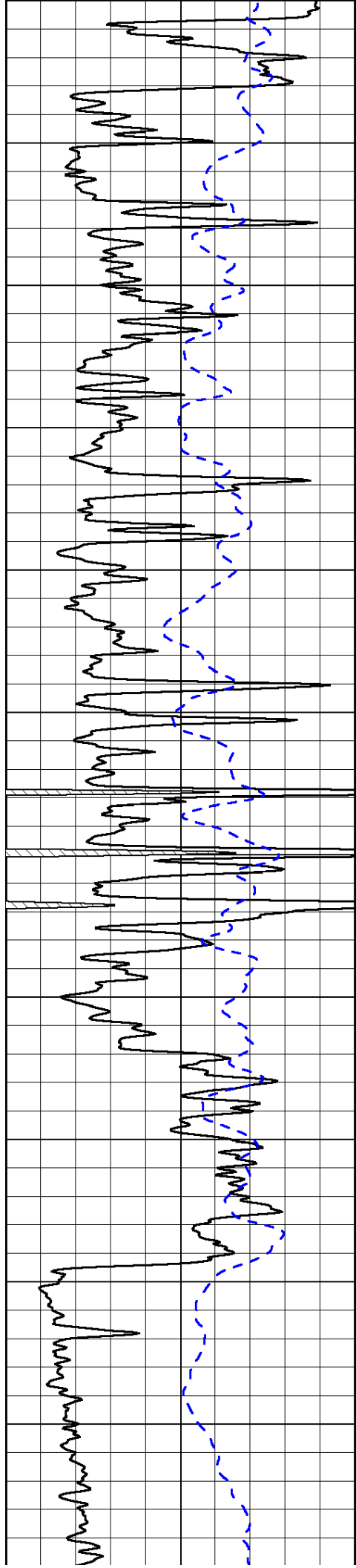


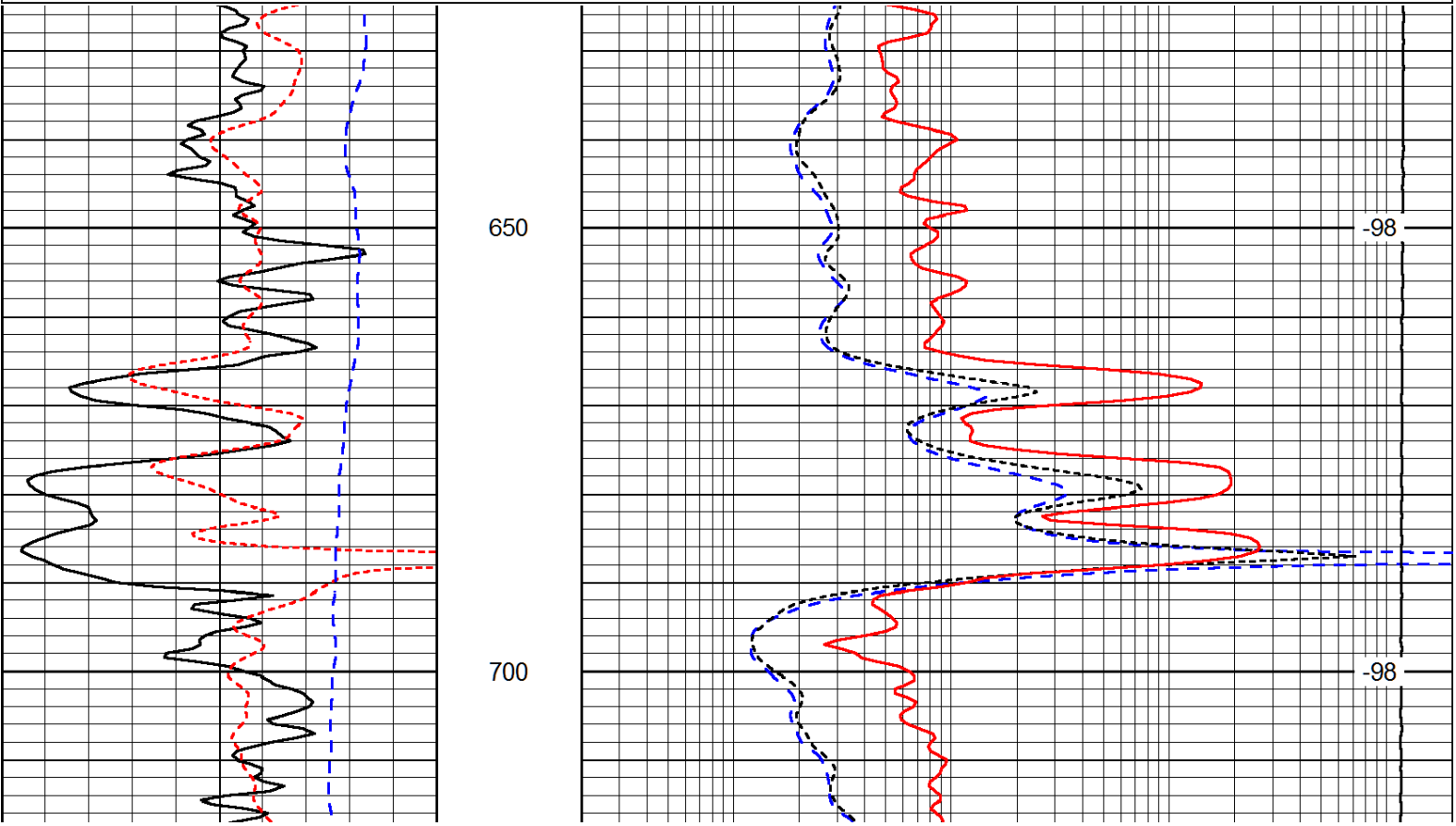
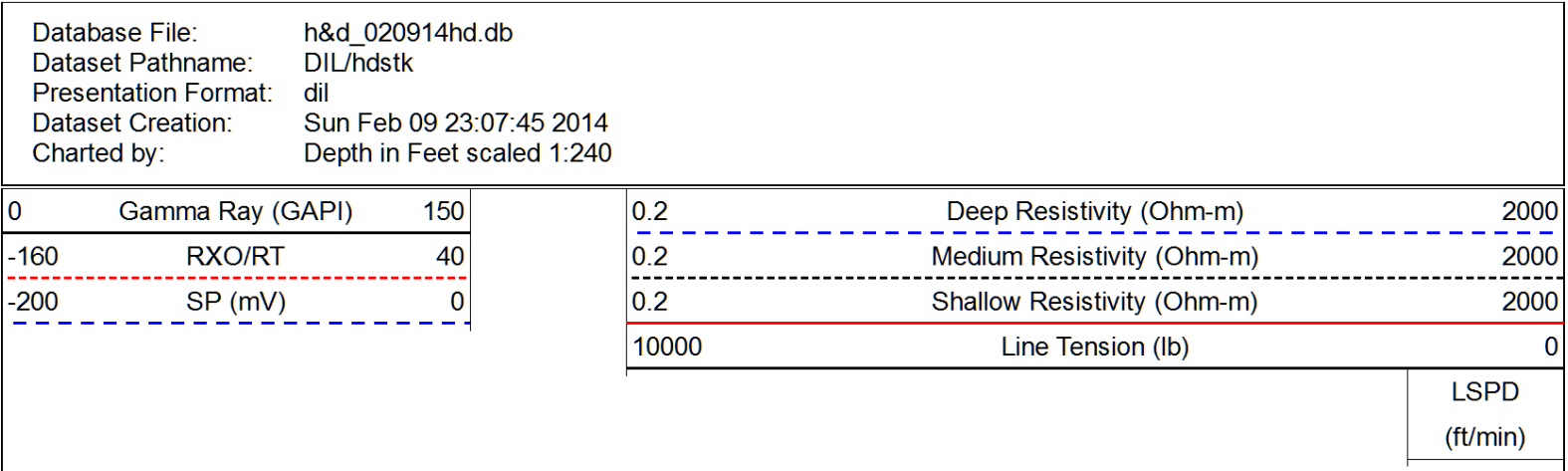
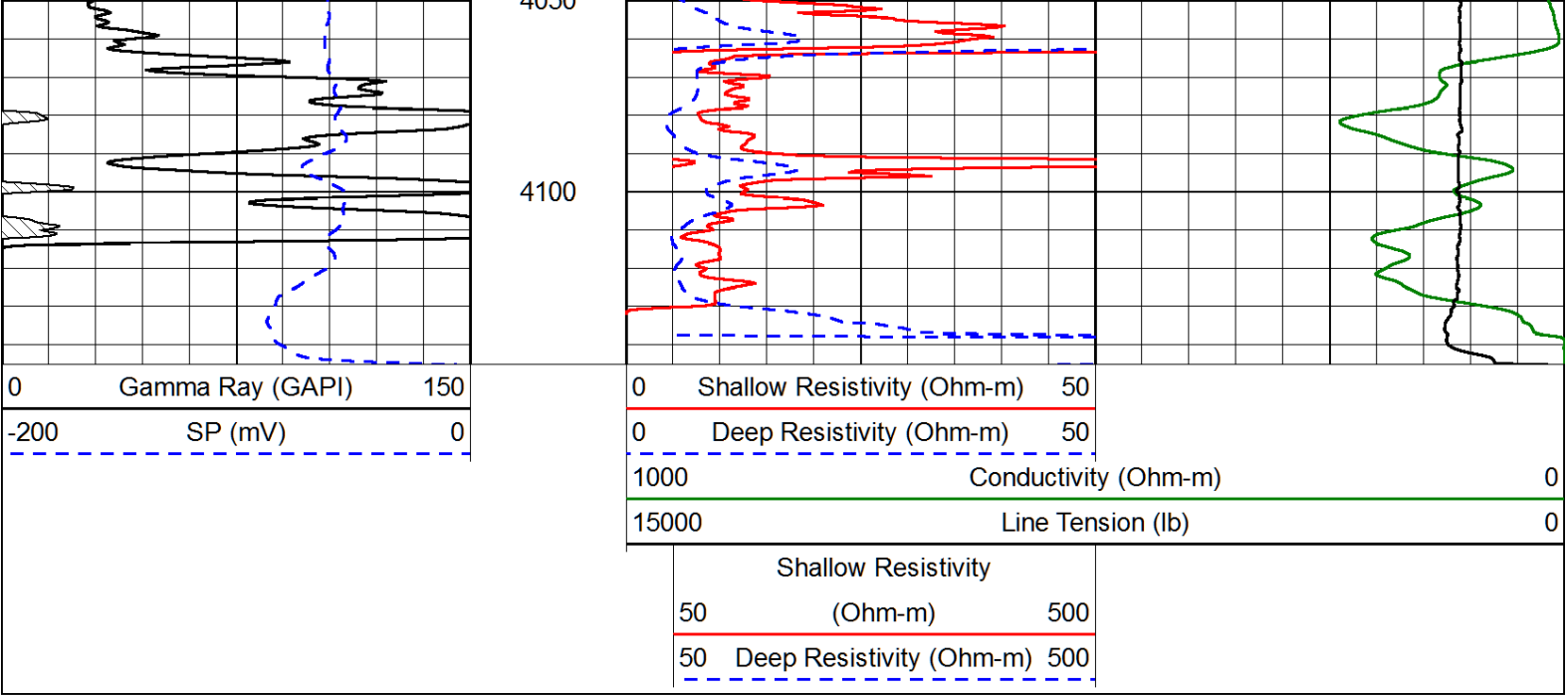


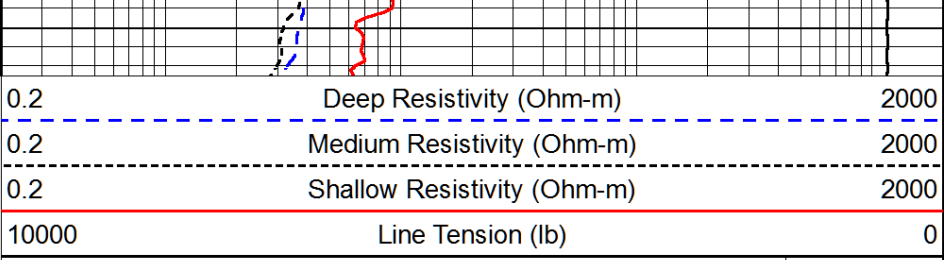
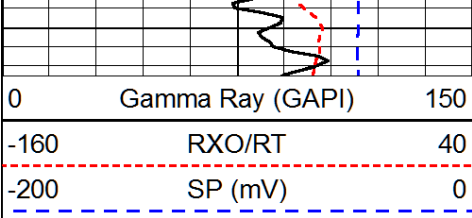
2400
2450
2500
2550
2600
2650
2700
2750
2800
2850
2900
2950





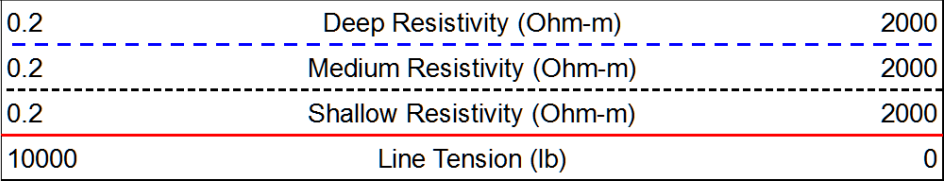
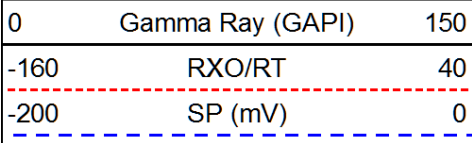




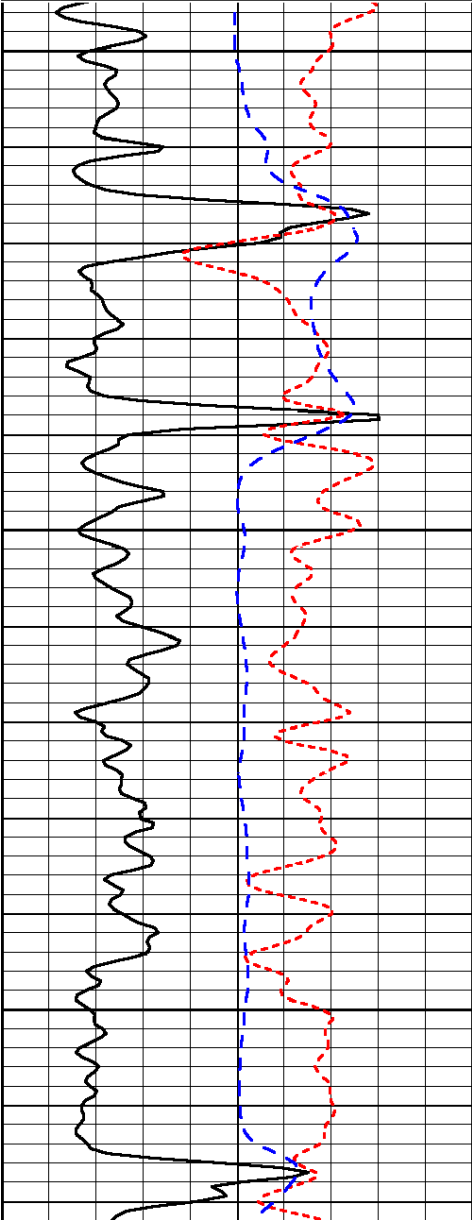


LSPD
(ft/min)

Database File: h&d_020914hd.db
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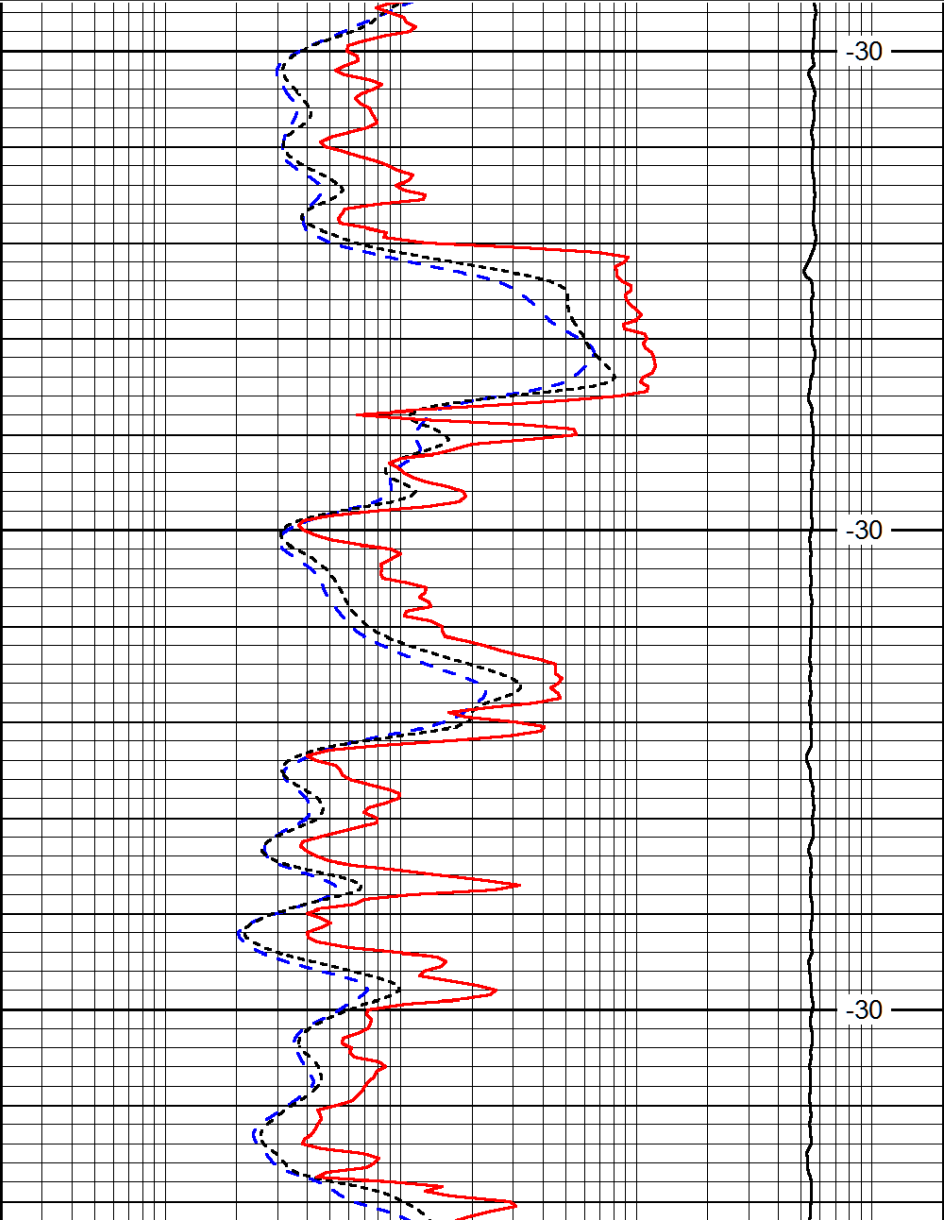
LSPD
(ft/min)



3200

3250

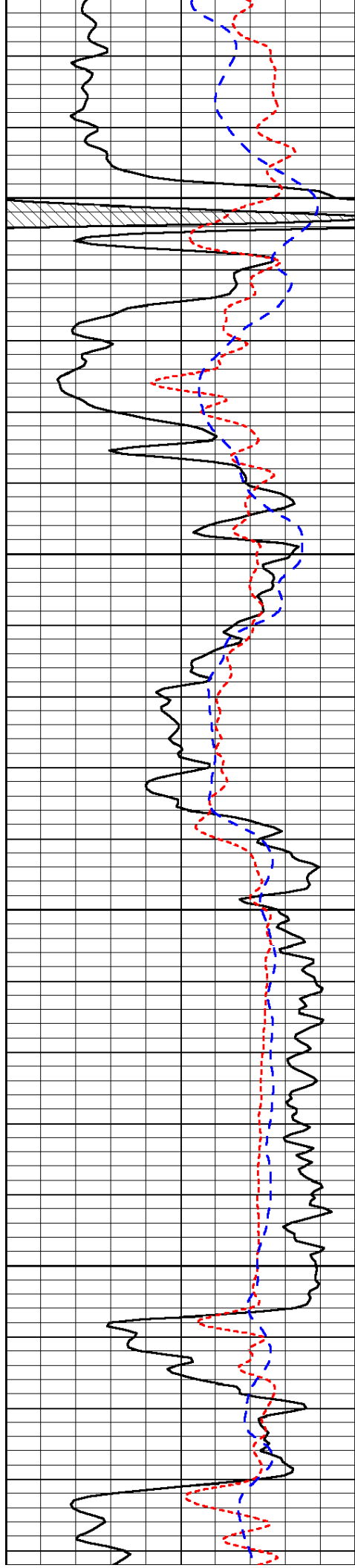
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-30

-30

-30

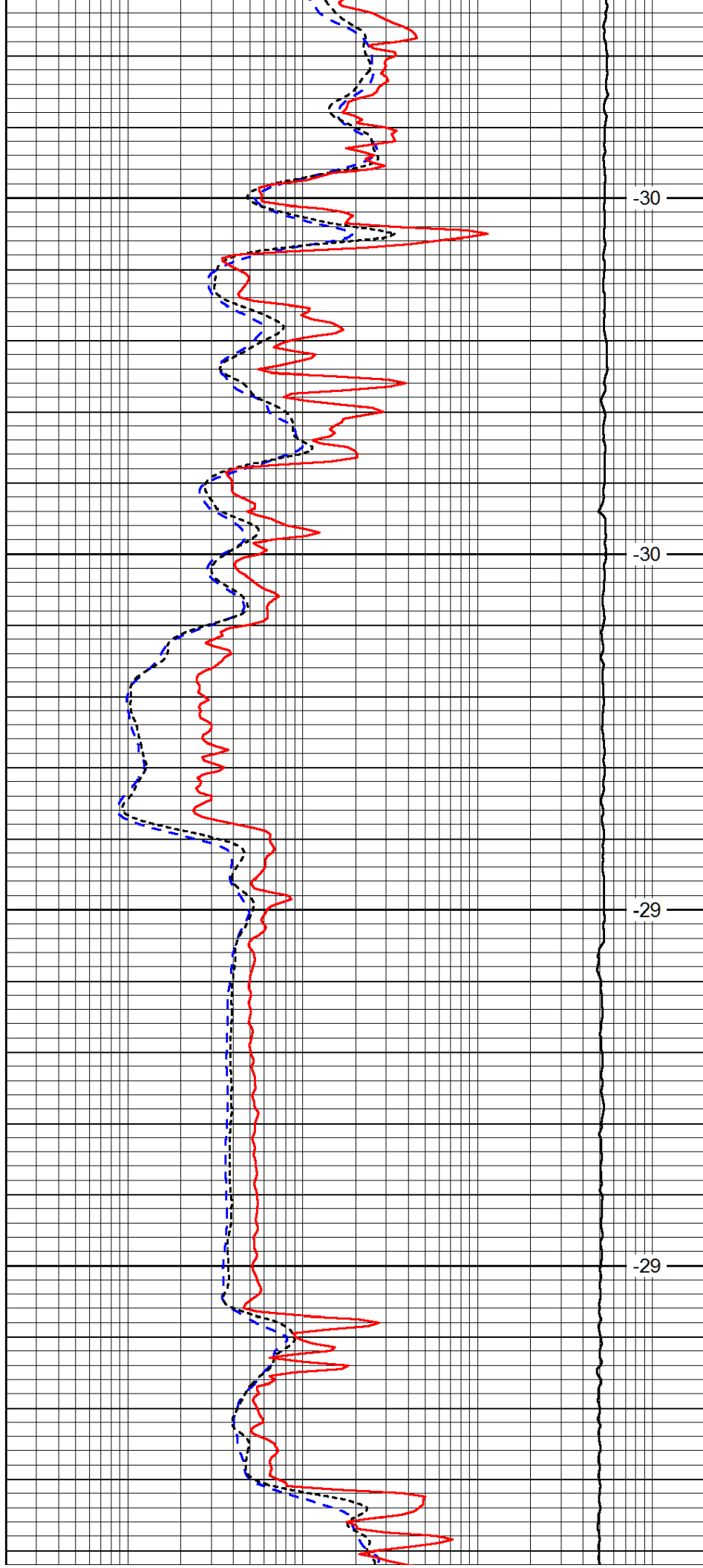


3350

3400

3450

3500

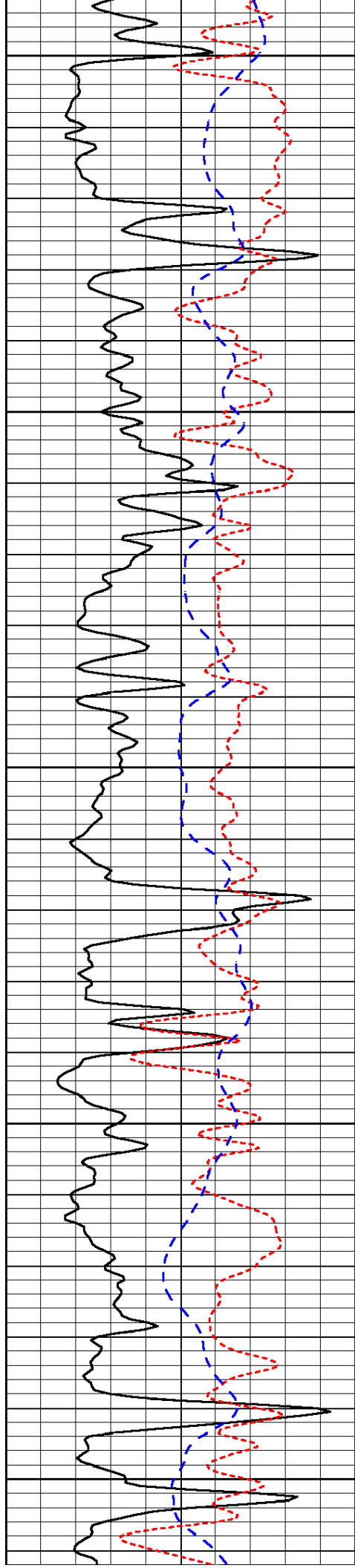


-30

-30

-29

-29



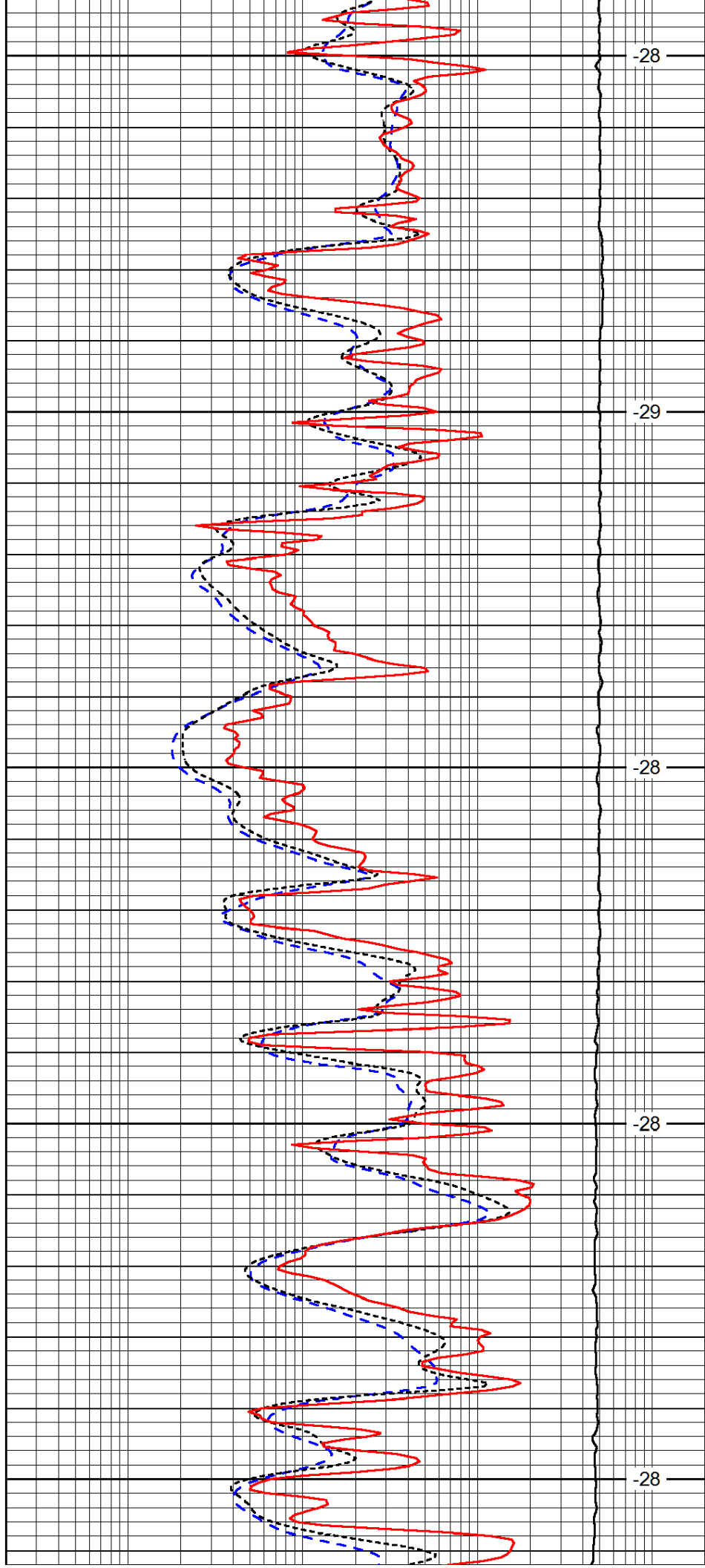
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3600

3650

3700

3750



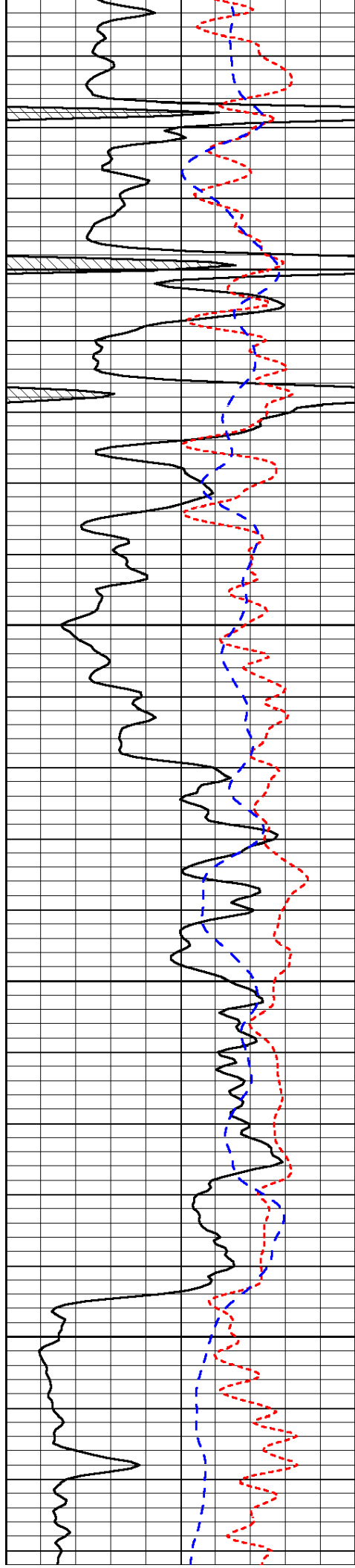
-28

-29

-28

-28

-28

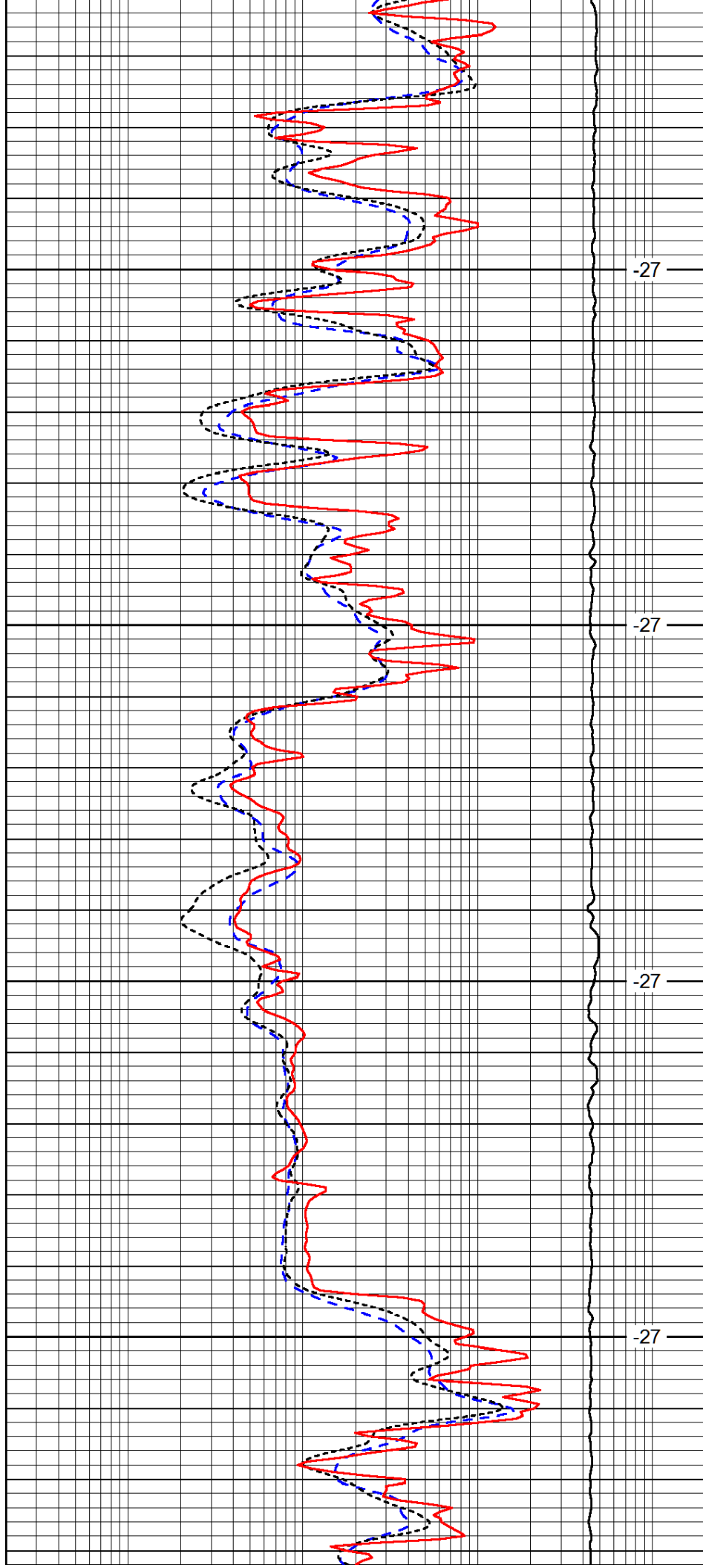


3800

3850

3900

3950

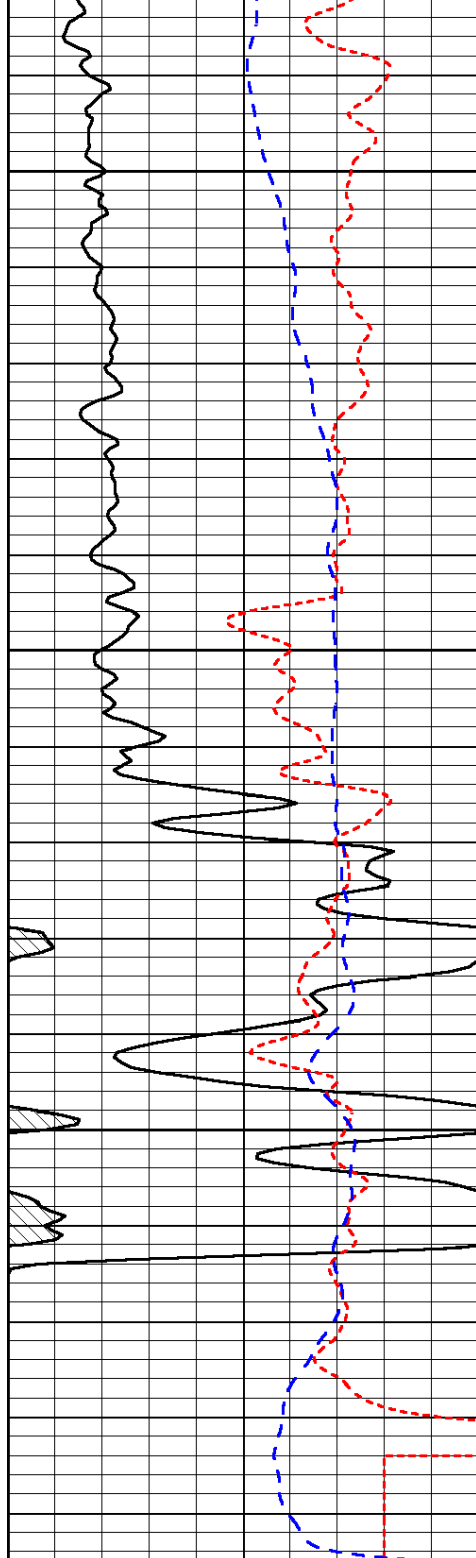


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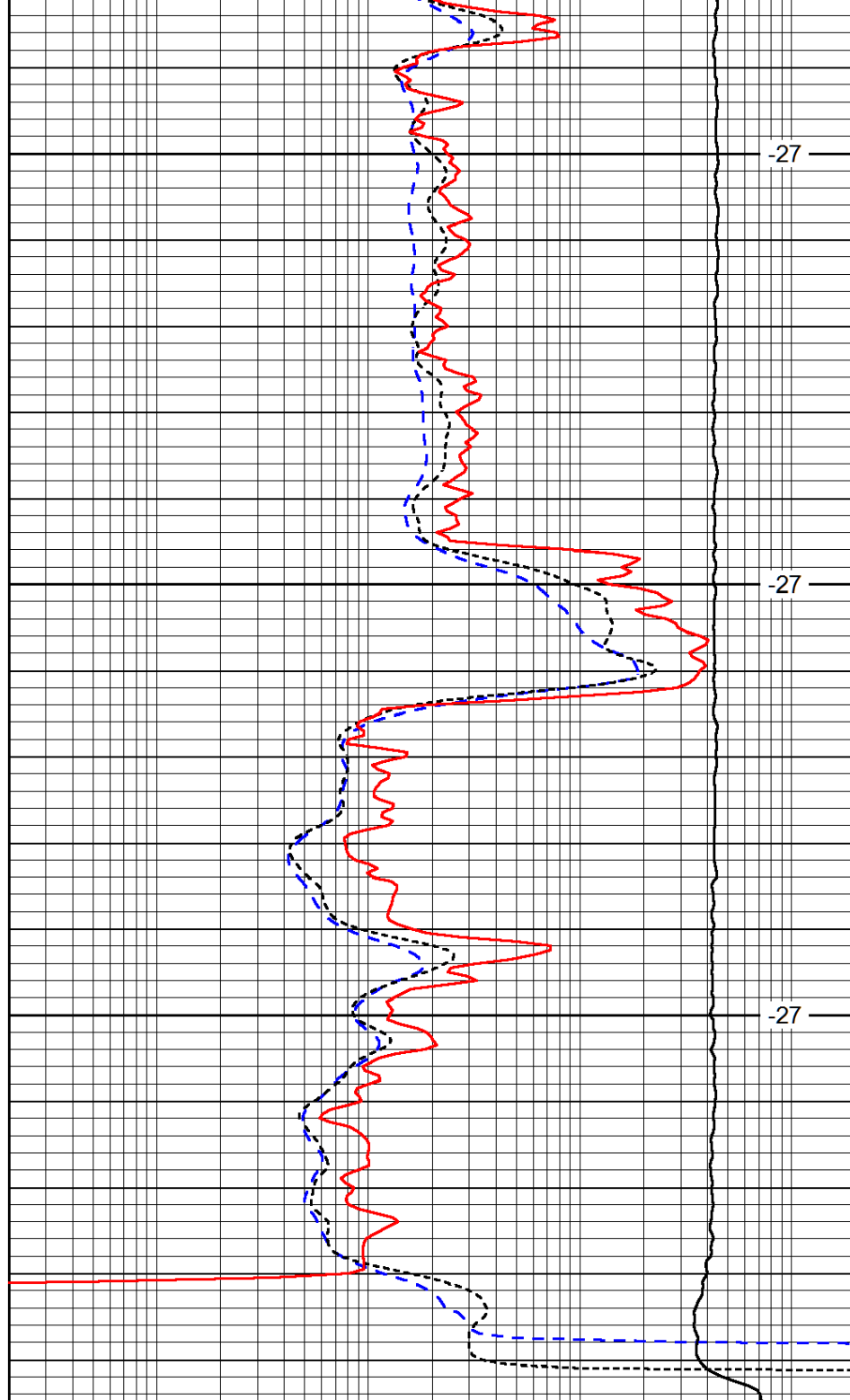


0	Gamma Ray (GAPI)	150
-160	RXO/RT	40
-200	SP (mV)	0

4000

4050

4100



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)