



Pioneer Energy Services

Dual Induction Log

API No.

15-051-26504-00-00

Company TDI, Inc.

Well GR #2

Field Martina North

County Ellis State

Kansas

Location 1565' FNL & 330' FWL

Sec: 14 Twp: 15 S Rge: 19 W

Permanent Datum Ground Level Elevation 2009

Log Measured From Kelly Bushing 10 Ft. Above Perm. Datum

Drilling Measured From Kelly Bushing

Elevation

K.B. 2019
D.F. 2009
G.L. 2009

Other Services
CNL/CDL
MEL

Date 04-26-2013

Run Number One

Depth Driller 3750

Depth Logger 3751

Bottom Logged Interval 3750

Top Log Interval 1200

Casing Driller 8.625 @ 1227

Casing Logger 1227

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 4500

Density / Viscosity 9.1 52

pH / Fluid Loss 10.5 7.2

Source of Sample Flowline

Rm @ Meas. Temp 0.54 @ 64

Rmf @ Meas. Temp 0.40 @ 64

Rmc @ Meas. Temp 0.72 @ 64

Source of Rmf / Rmc Charts

Rm @ BHT 0.30 @ 116

Operating Rig Time 3 1/2 Hours

Max Rec. Temp. F 116

Equipment Number 91

Location Hays

Recorded By Y. Ruiz

Witnessed By Tom Denning

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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.

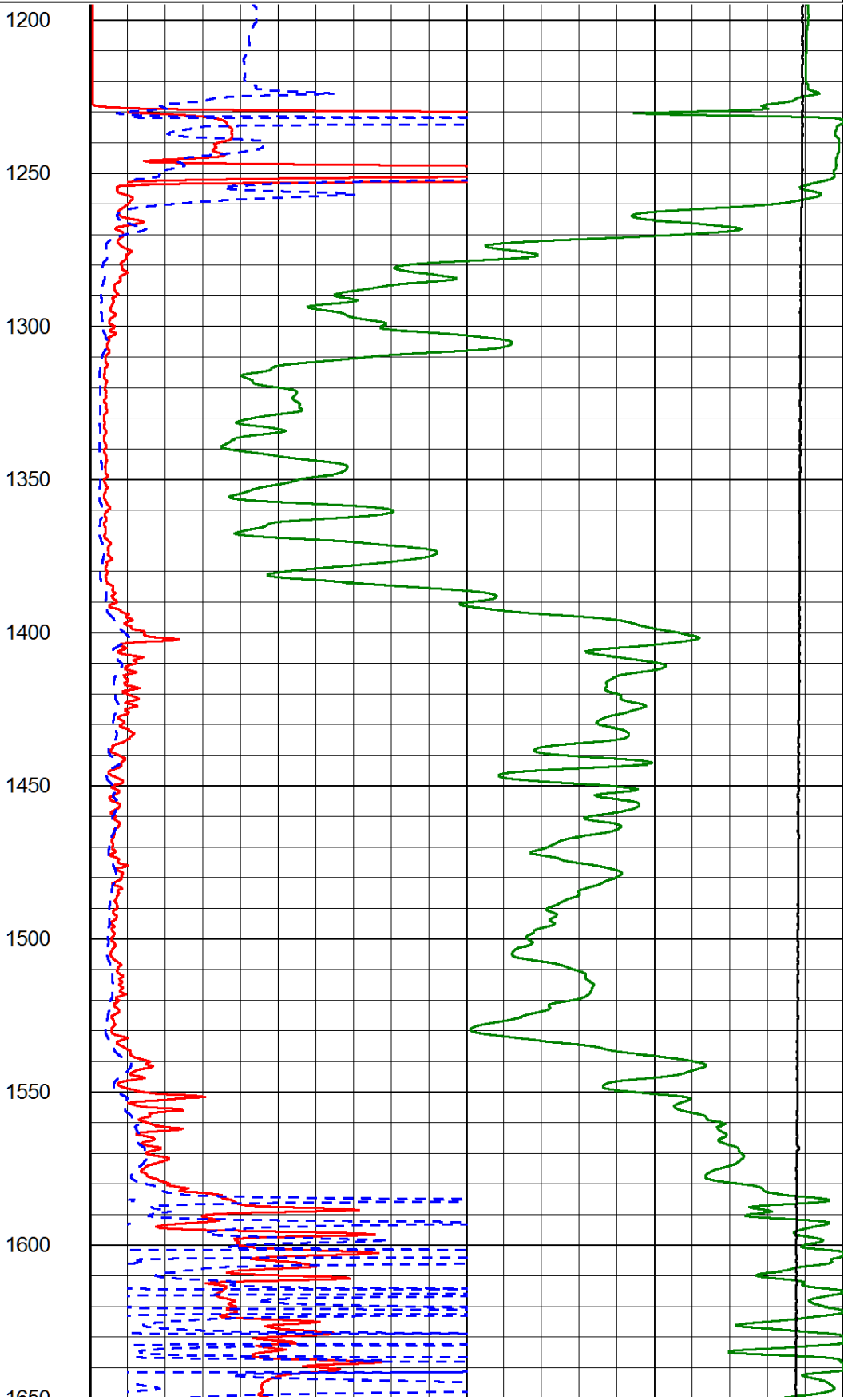
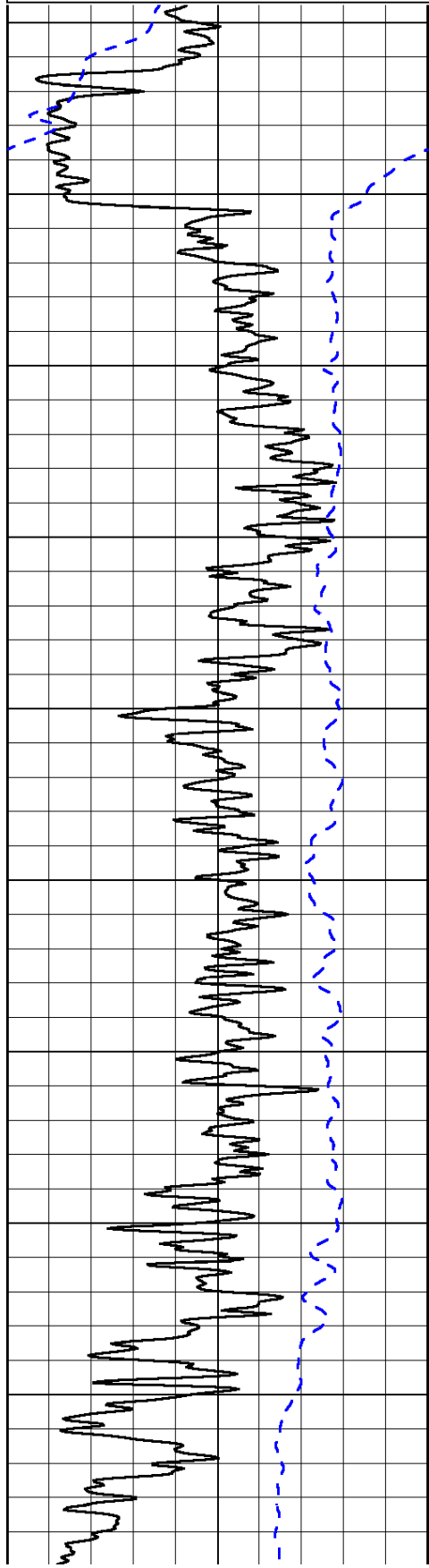
Comments

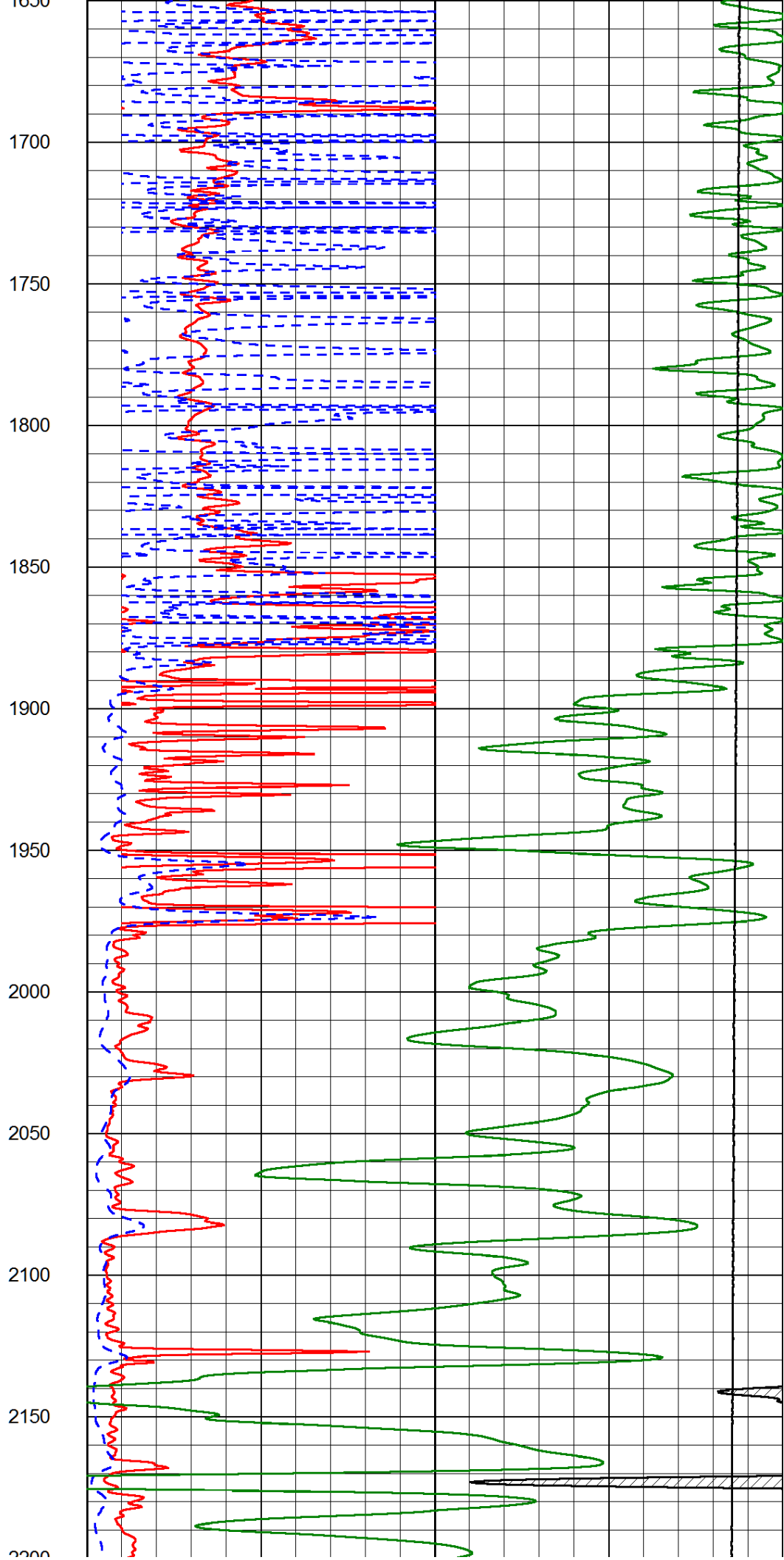
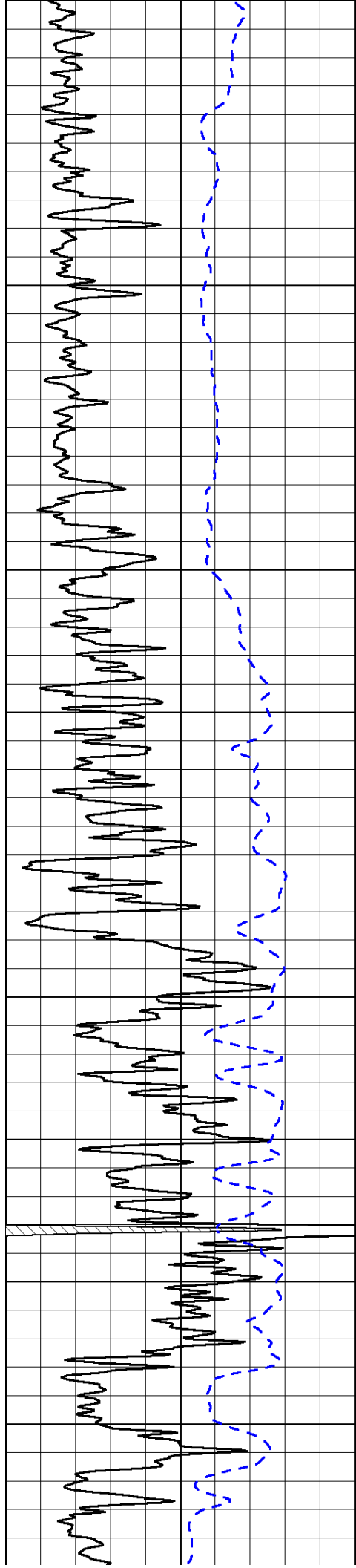
Thank you for using Log-Tech, Inc.
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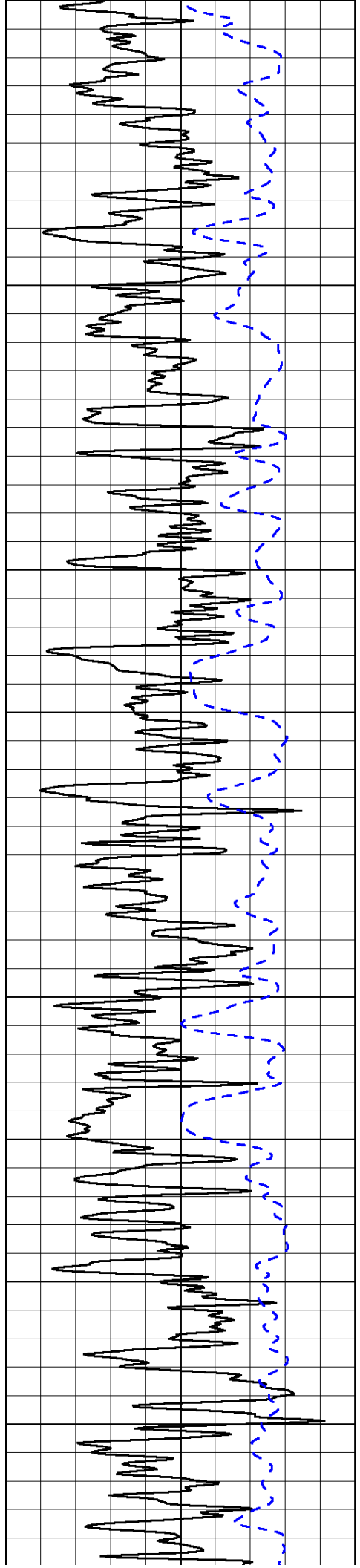
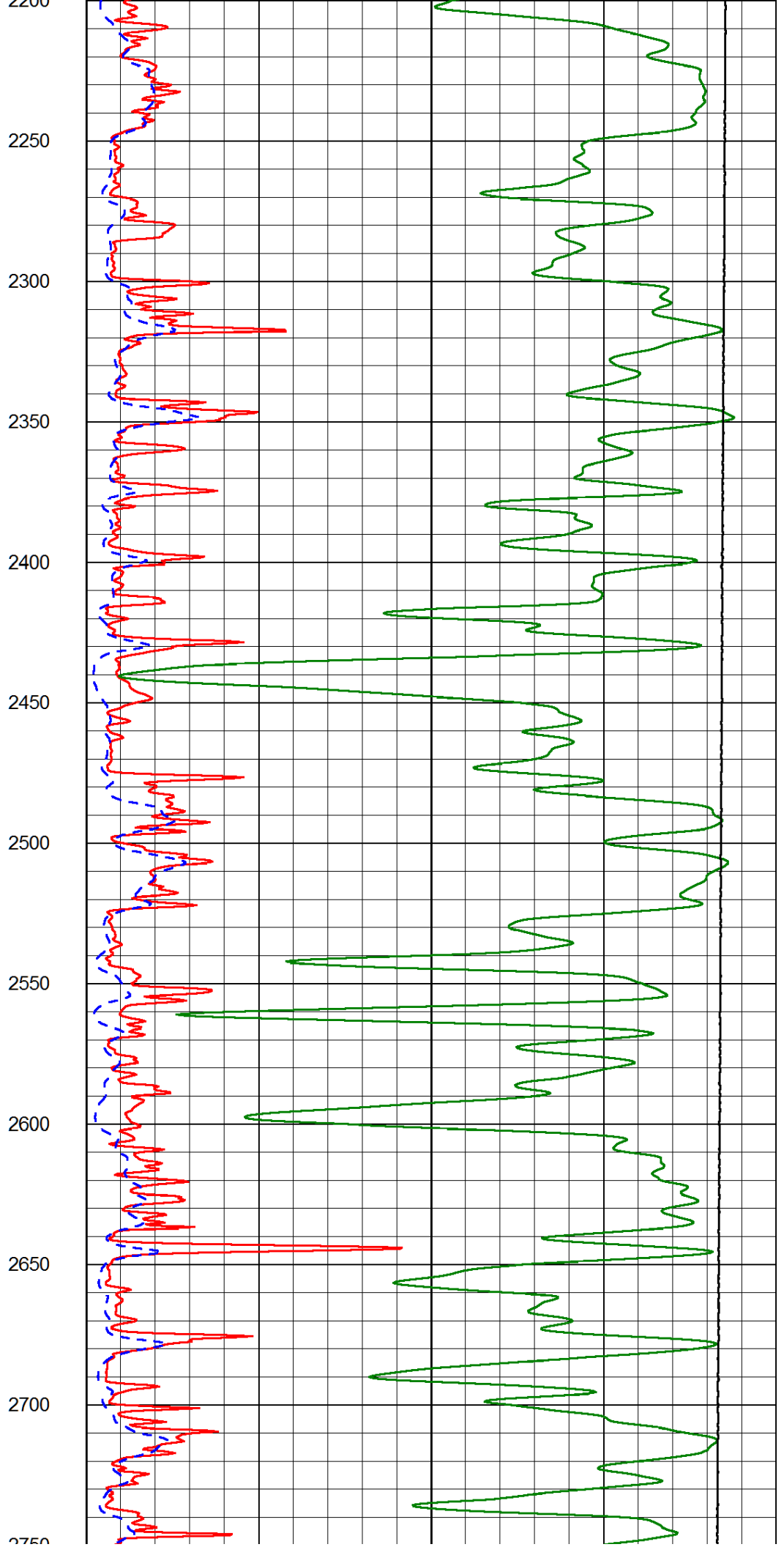
Antonino,
1 West, 2 South,
East and South at the TB

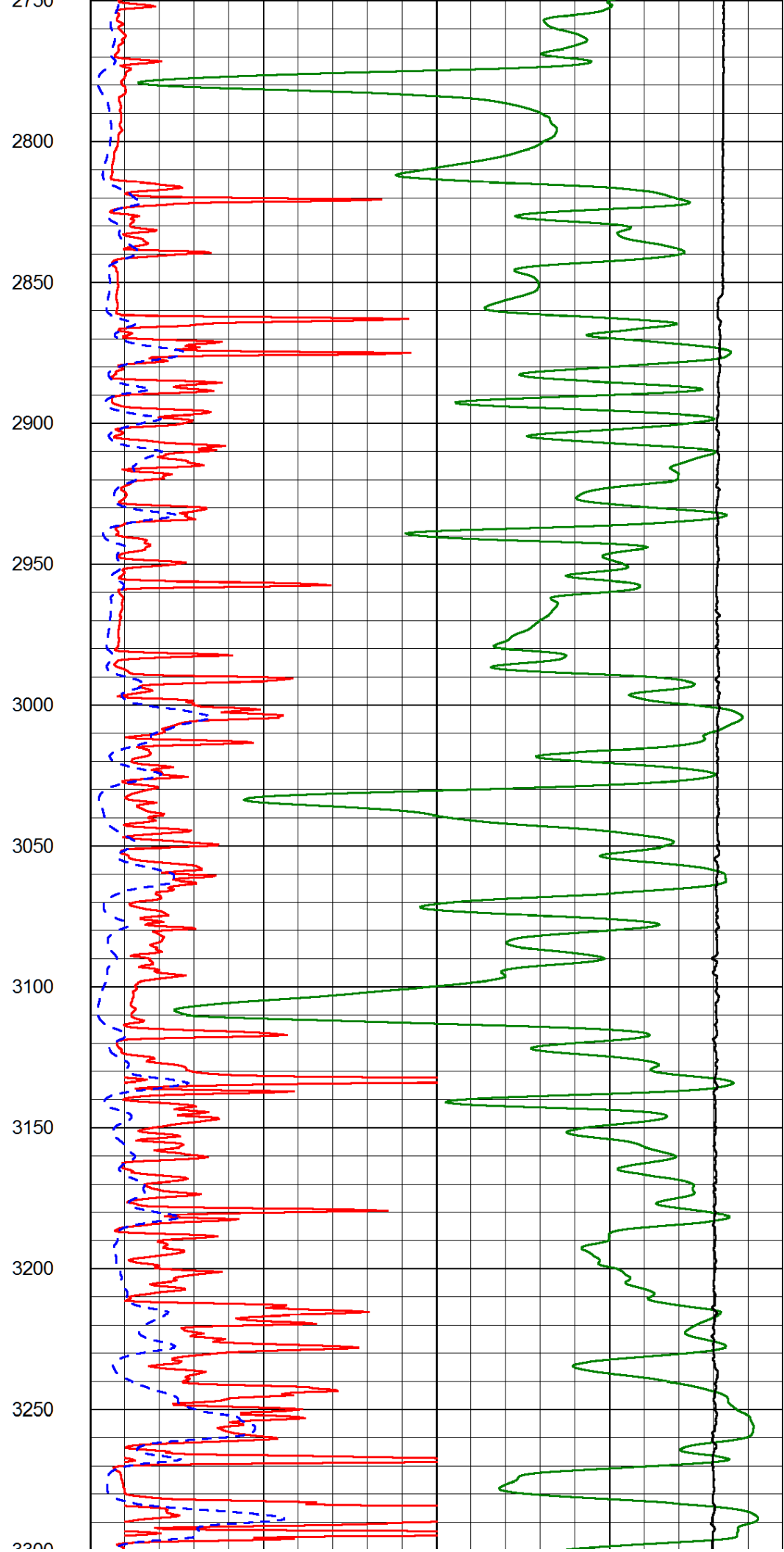
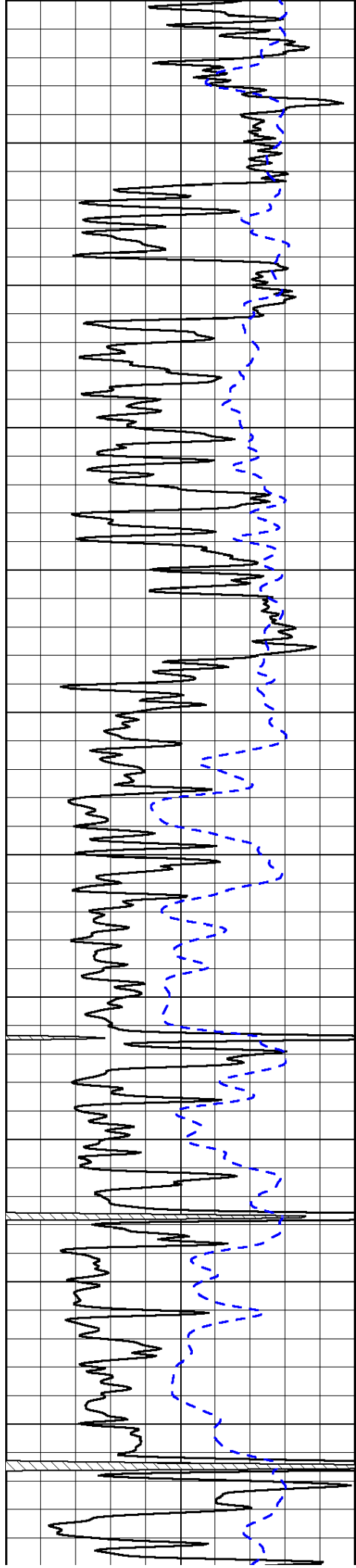
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-200	SP (mV)	0

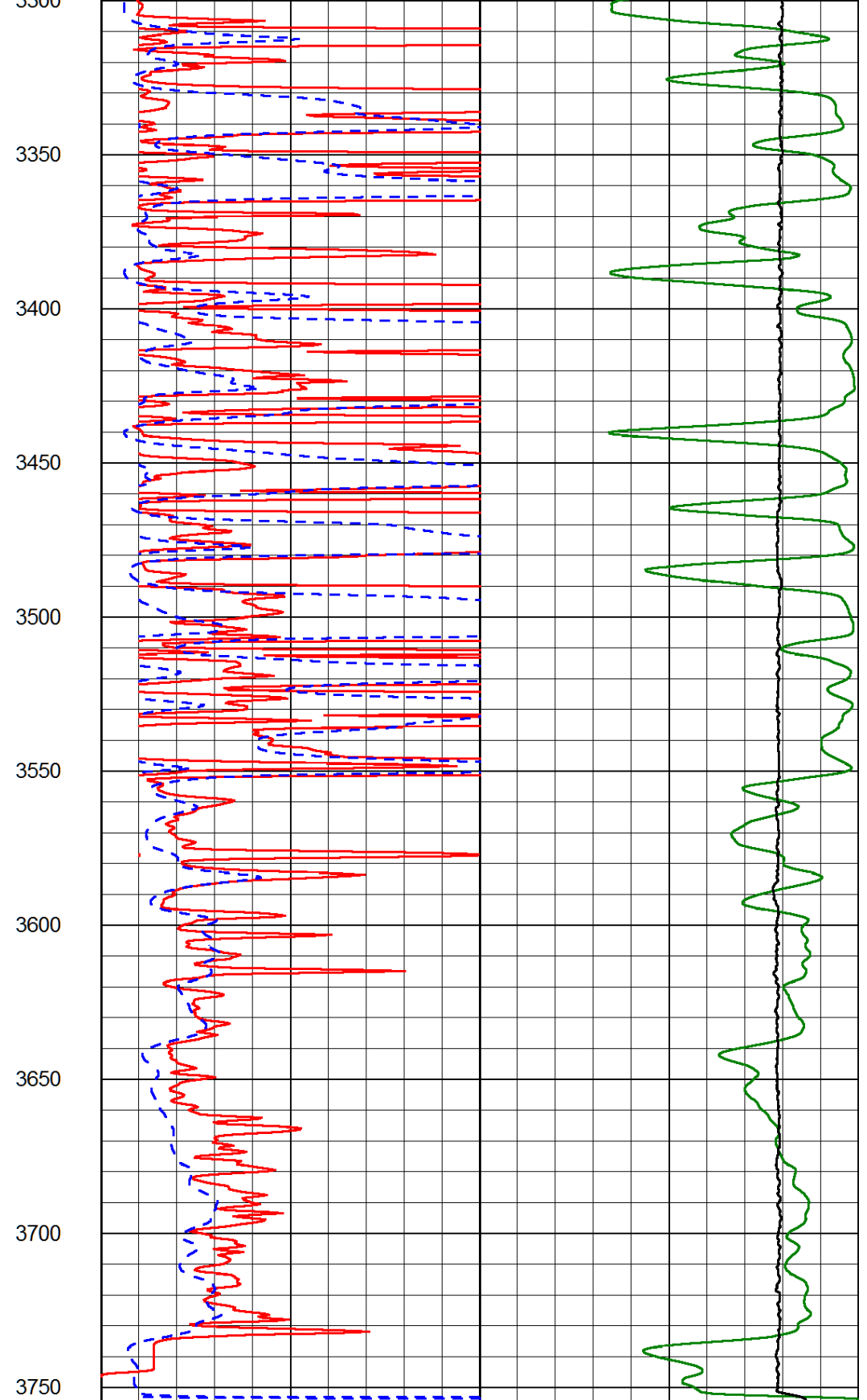
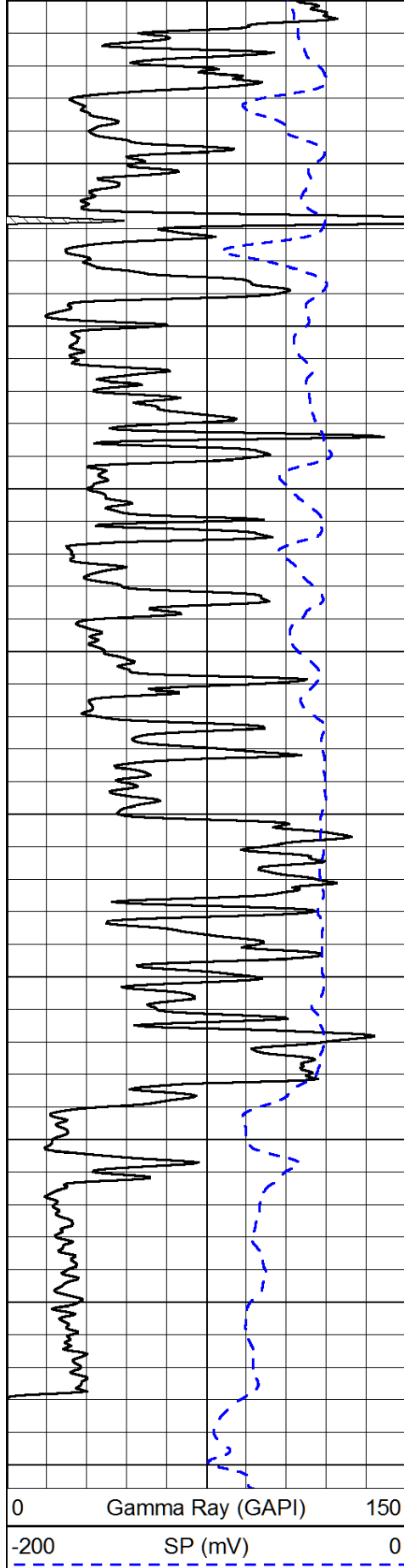
0	Shallow Resistivity (Ohm-m)	50
0	Deep Resistivity (Ohm-m)	50
1000	Conductivity (Ohm-m)	0
15000	Line Tension (lb)	0
	Shallow Resistivity	
50	(Ohm-m)	500
50	Deep Resistivity (Ohm-m)	500











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

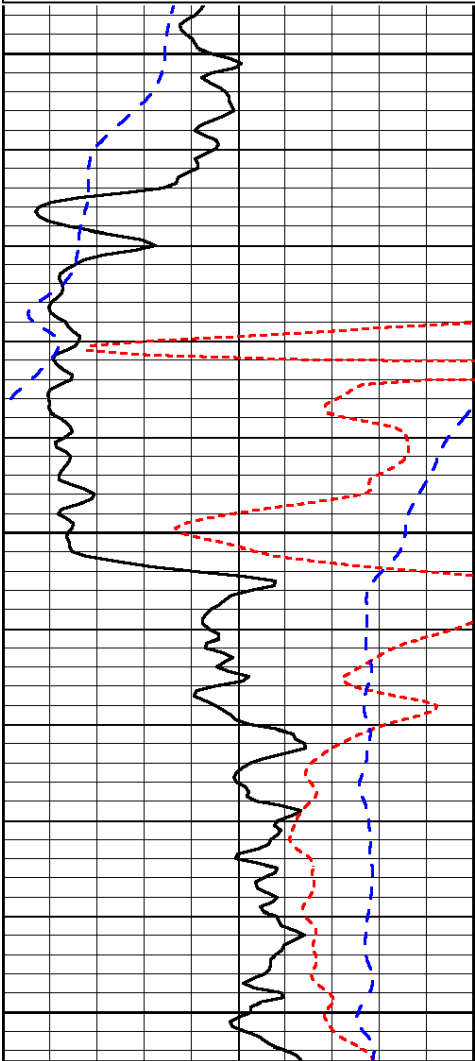
Shallow Resistivity
50 (Ohm-m) 500
50 Deep Resistivity (Ohm-m) 500

Database File: tdi_042613hd.db
Dataset Pathname: DIL/tdistk
Presentation Format: dil
Dataset Creation: Fri Apr 26 03:55:51 2013
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)

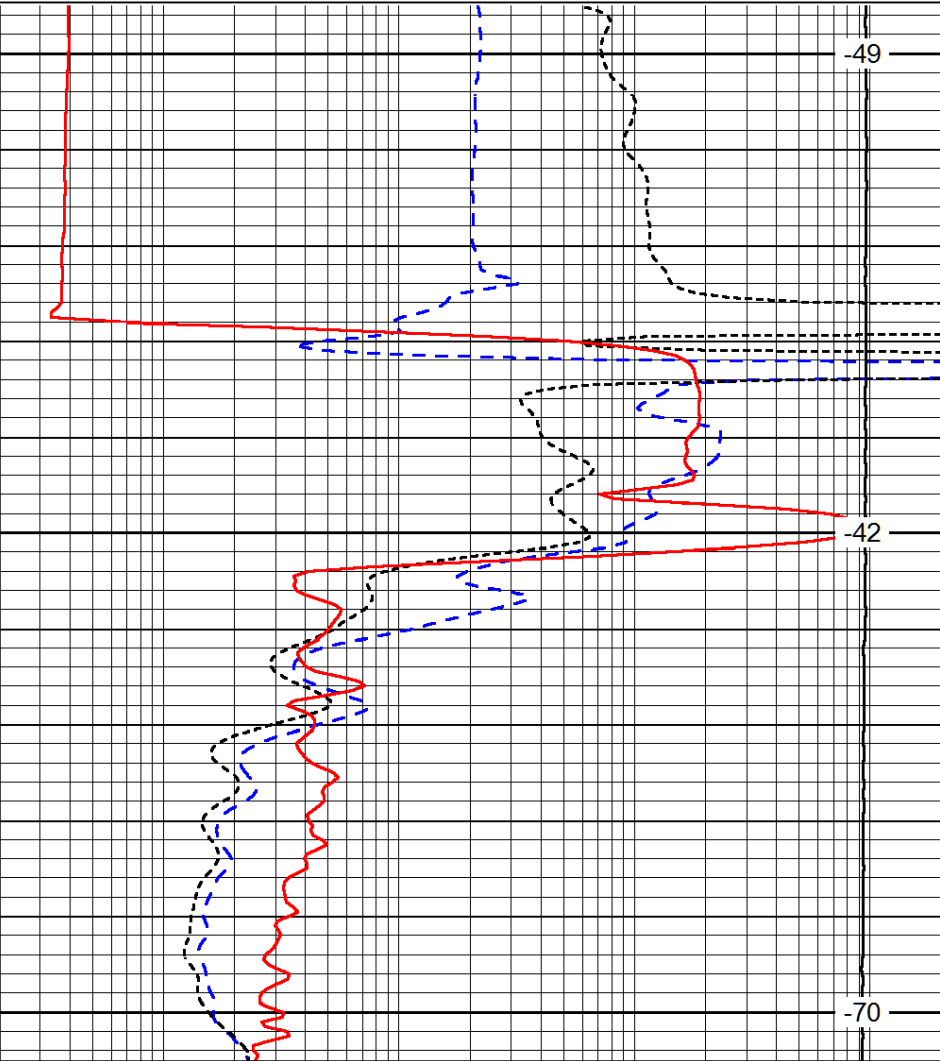


1200

1250

1300

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



-49

-42

-70

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
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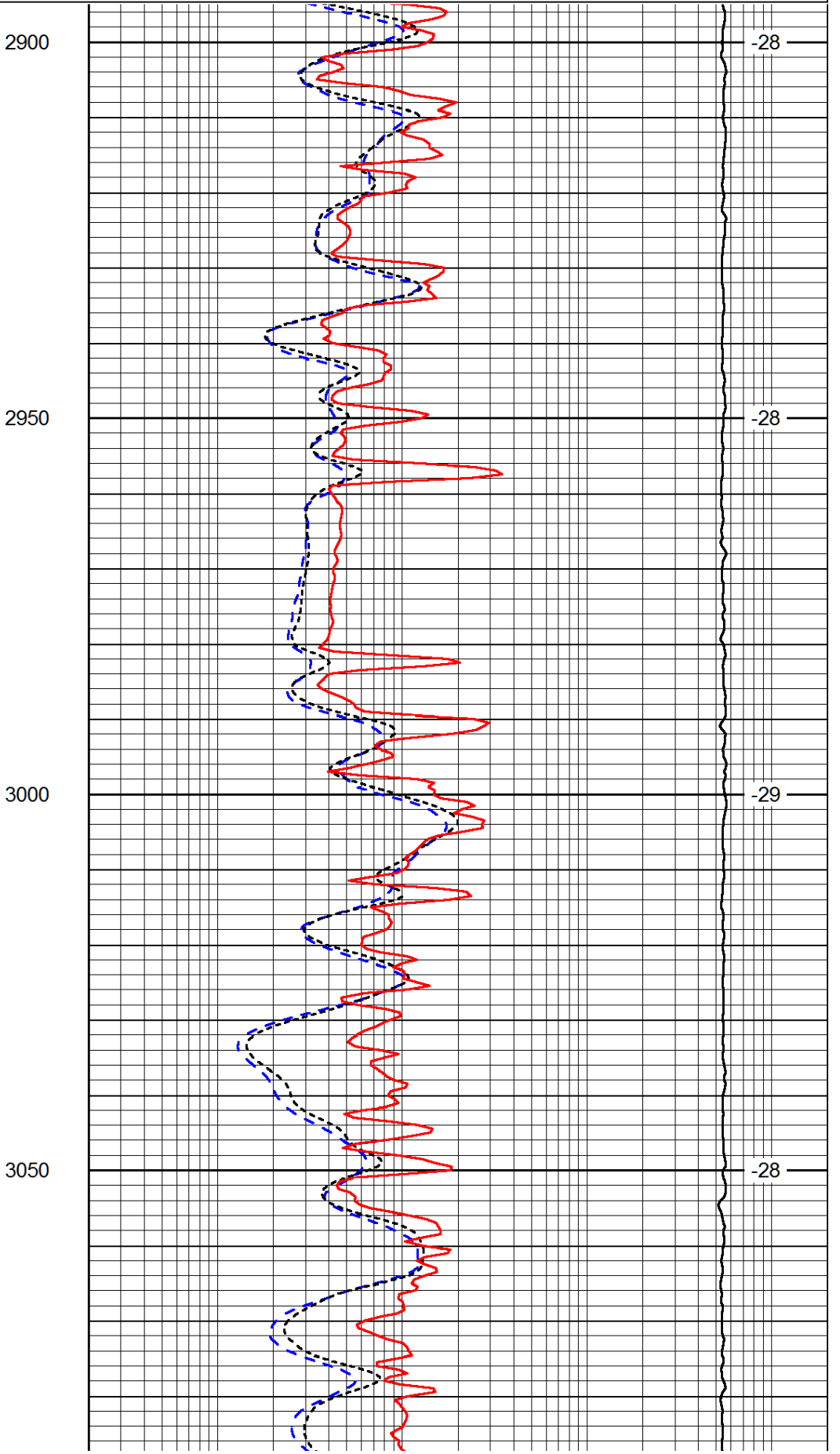
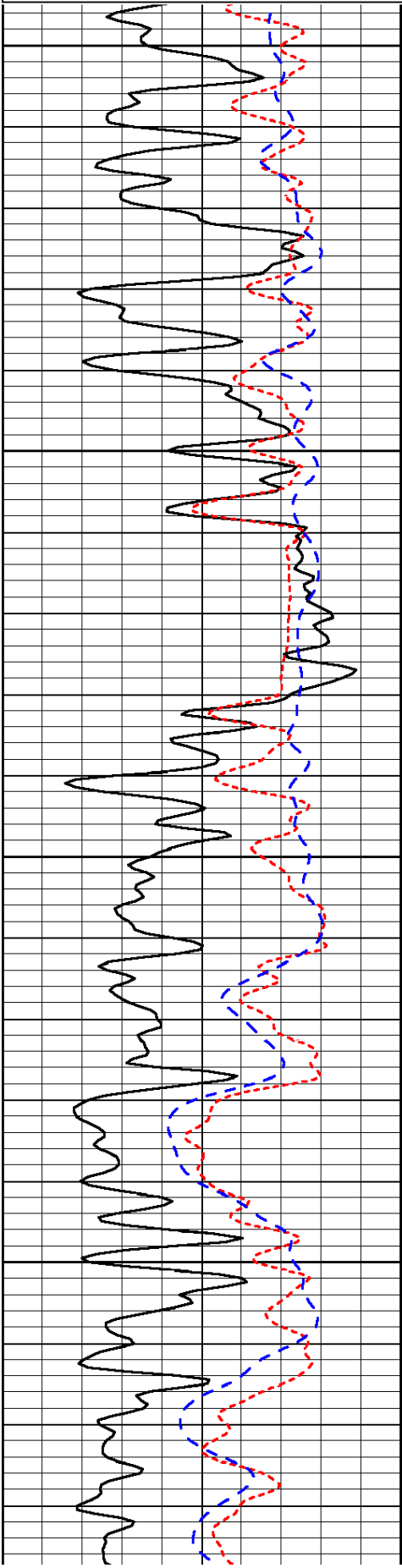
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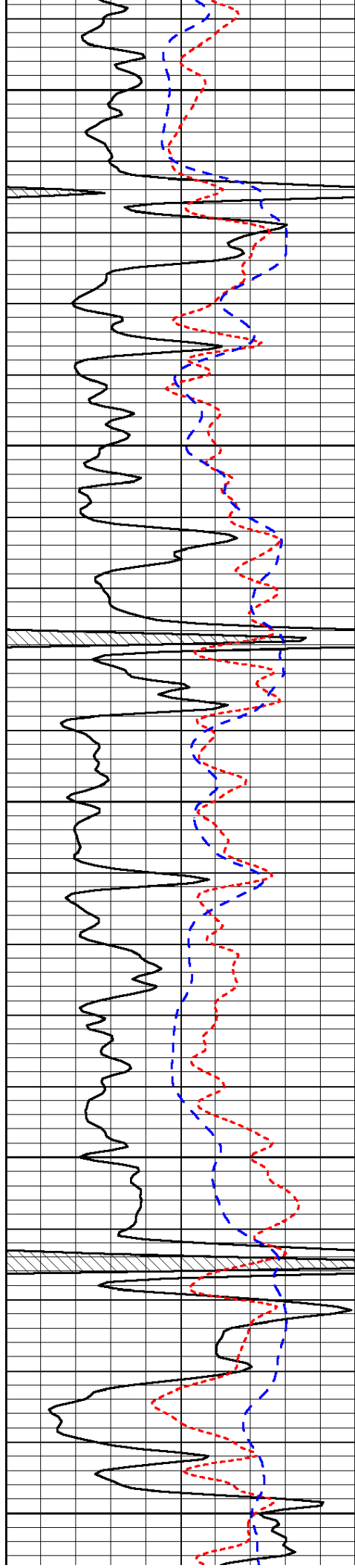
0.2	Deep Resistivity (Ohm-m)	2000
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Gamma Ray (GAPI)	150
RXO/RT	40
SP (mV)	0

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)





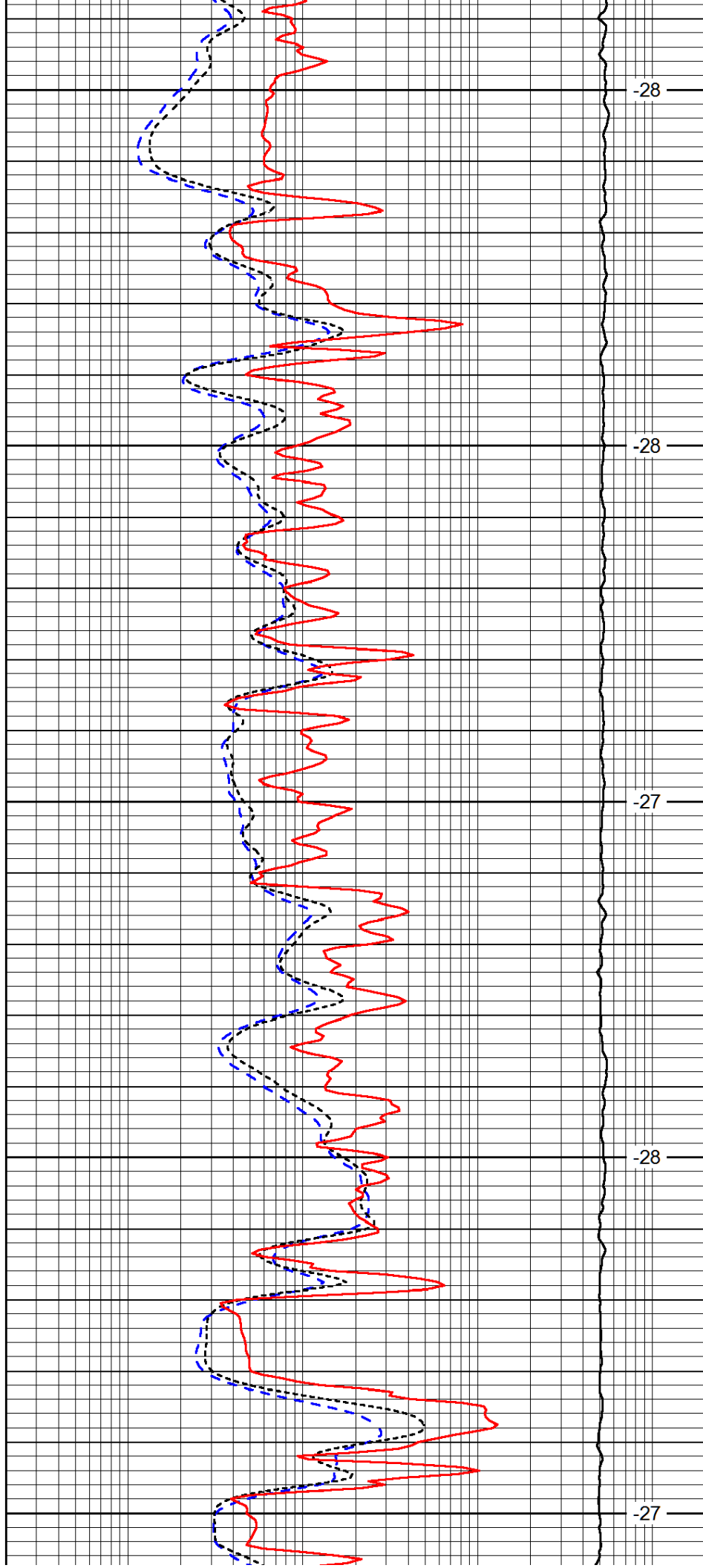
3100

3150

3200

3250

3300



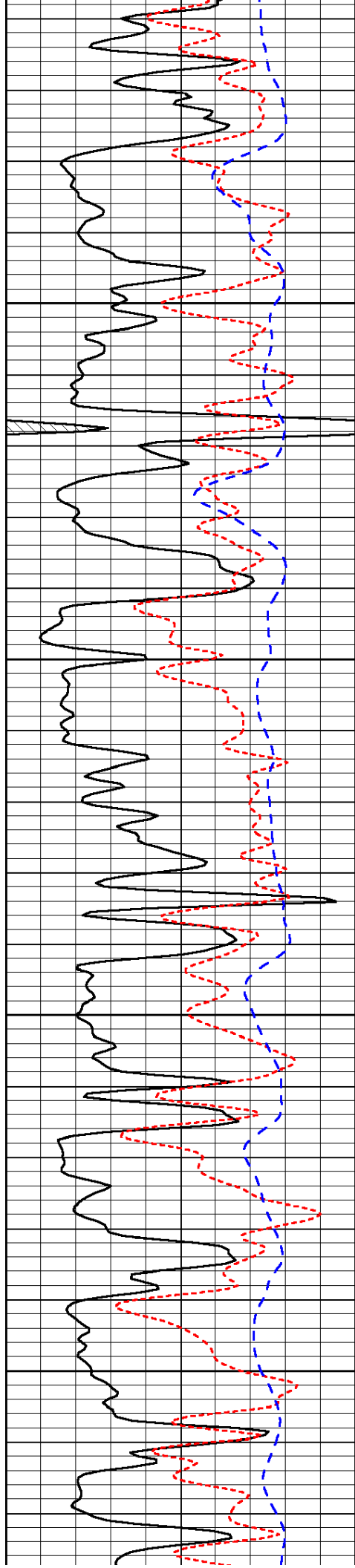
-28

-28

-27

-28

-27

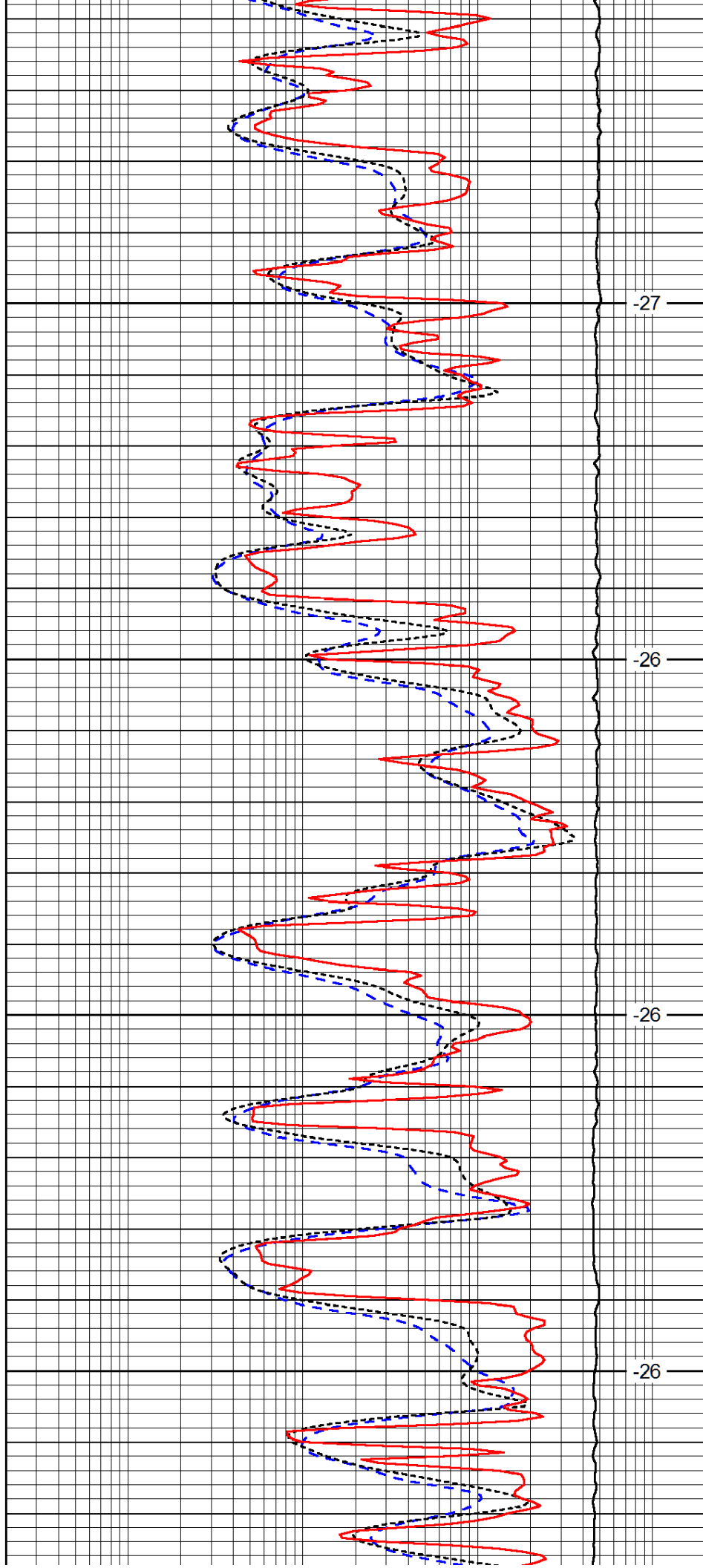


3350

3400

3450

3500

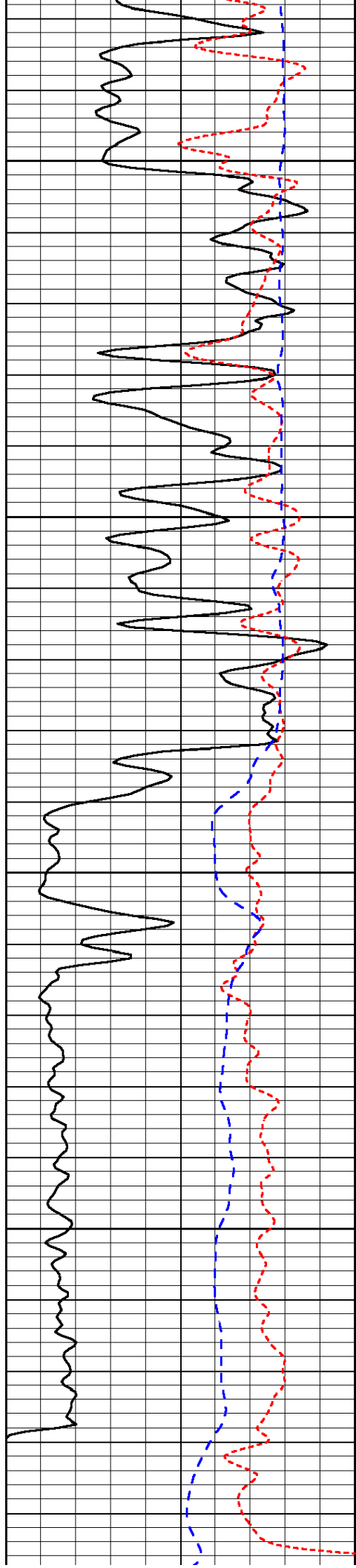


-27

-26

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-26

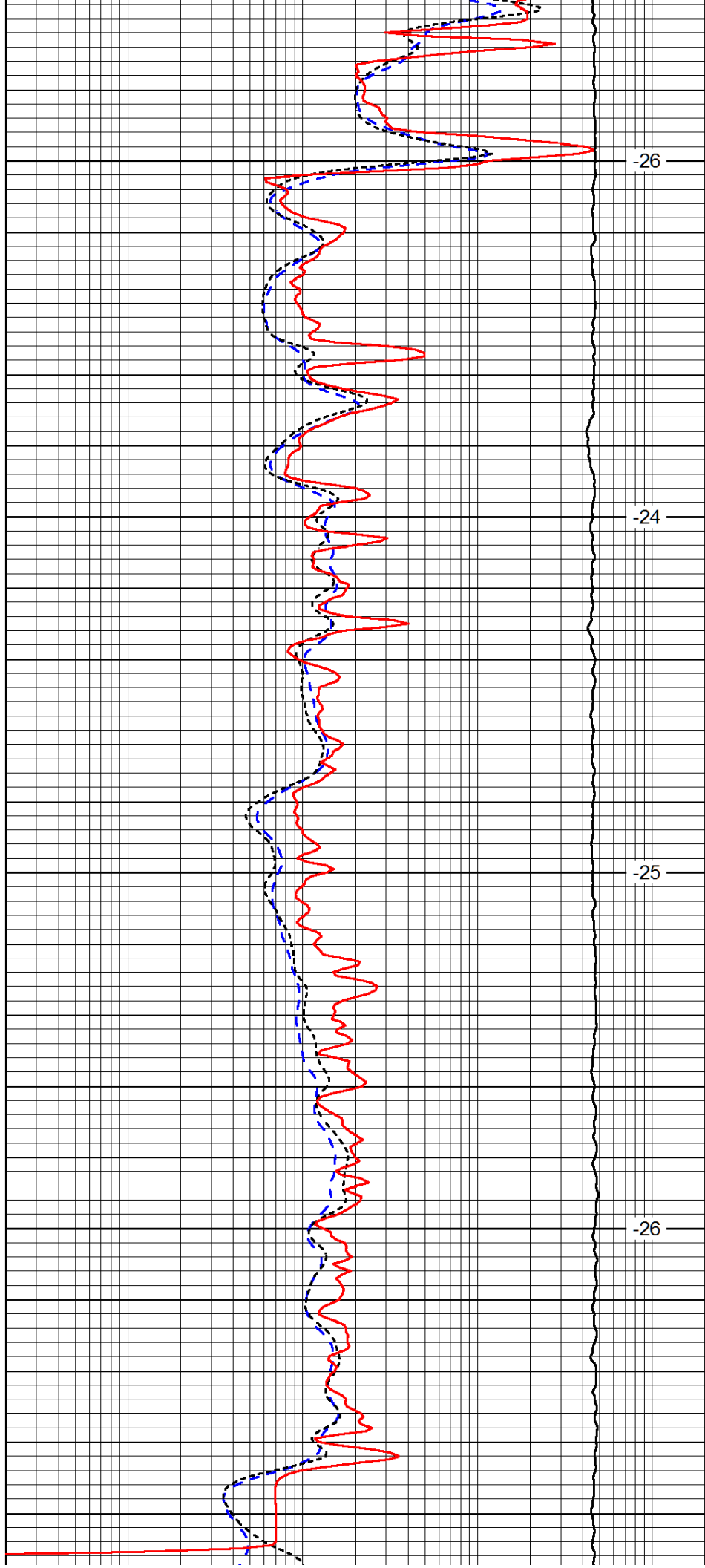


3550

3600

3650

3700



-26

-24

-25

-26

