



Pioneer Energy Services

Dual Induction Log

API No.

15-051-26,602-00-00

Company TDI, Inc.

Well Henry No.1

Field Ellis Southeast

County Ellis State

Kansas

Location 1325' FSL & 2000' FWL

Sec: 5 Twp: 13S Rge: 20W

Other Services
CNL/CDL
MEL

Permanent Datum Ground Level Elevation 2133
Log Measured From Kelly Bushing 10 Ft. Above Perm. Datum
Drilling Measured From Kelly Bushing

Date 10/22/2013

Run Number One

Depth Driller 3931

Depth Logger 3931

Bottom Logged Interval 3930

Top Log Interval 200

Casing Driller 8.625 @ 222

Casing Logger 222

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity,ppm CL 2,000

Density / Viscosity 9.1 54

pH / Fluid Loss 10.5 6.8

Source of Sample Flowline

Rm @ Meas. Temp .75 @ 62

Rmf @ Meas. Temp .56 @ 62

Rmc @ Meas. Temp 1.01 @ 62

Source of Rmf / Rmc Charts

Rm @ BHT .4 @ 115

Operating Rig Time 3 1/2 Hours

Max Rec. Temp. F 115

Equipment Number 17

Location Hays

Recorded By C. Desaire

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.

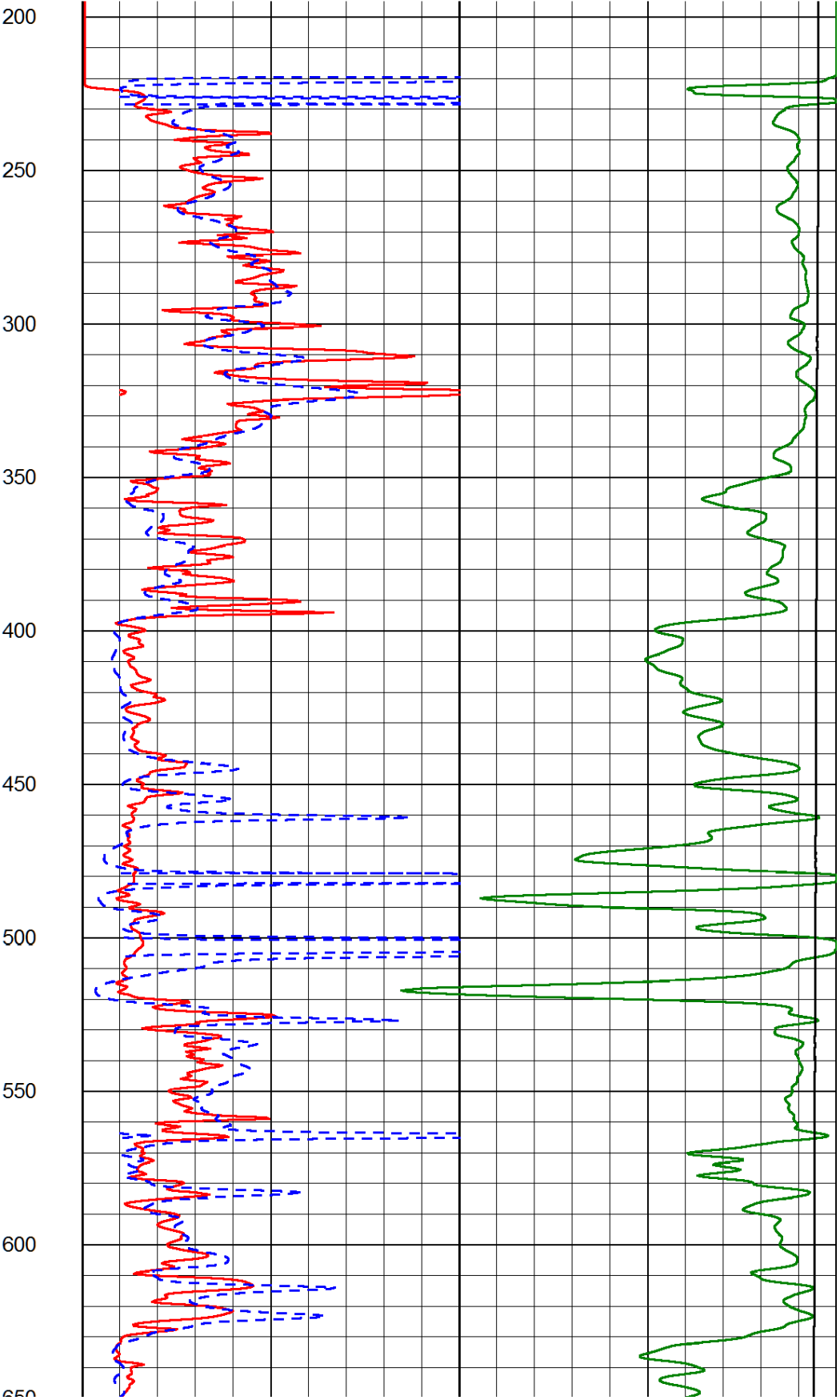
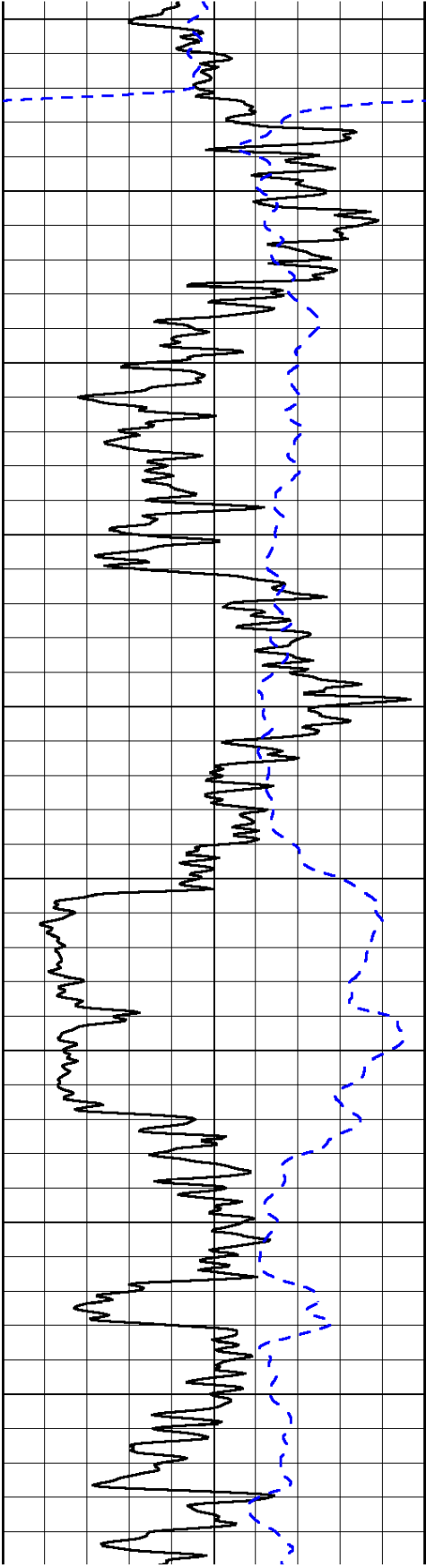
Comments

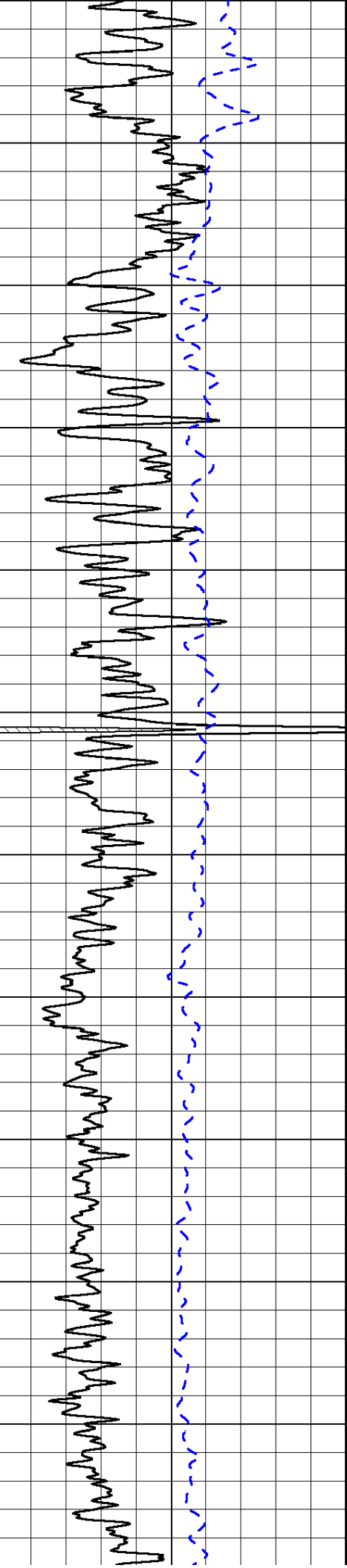
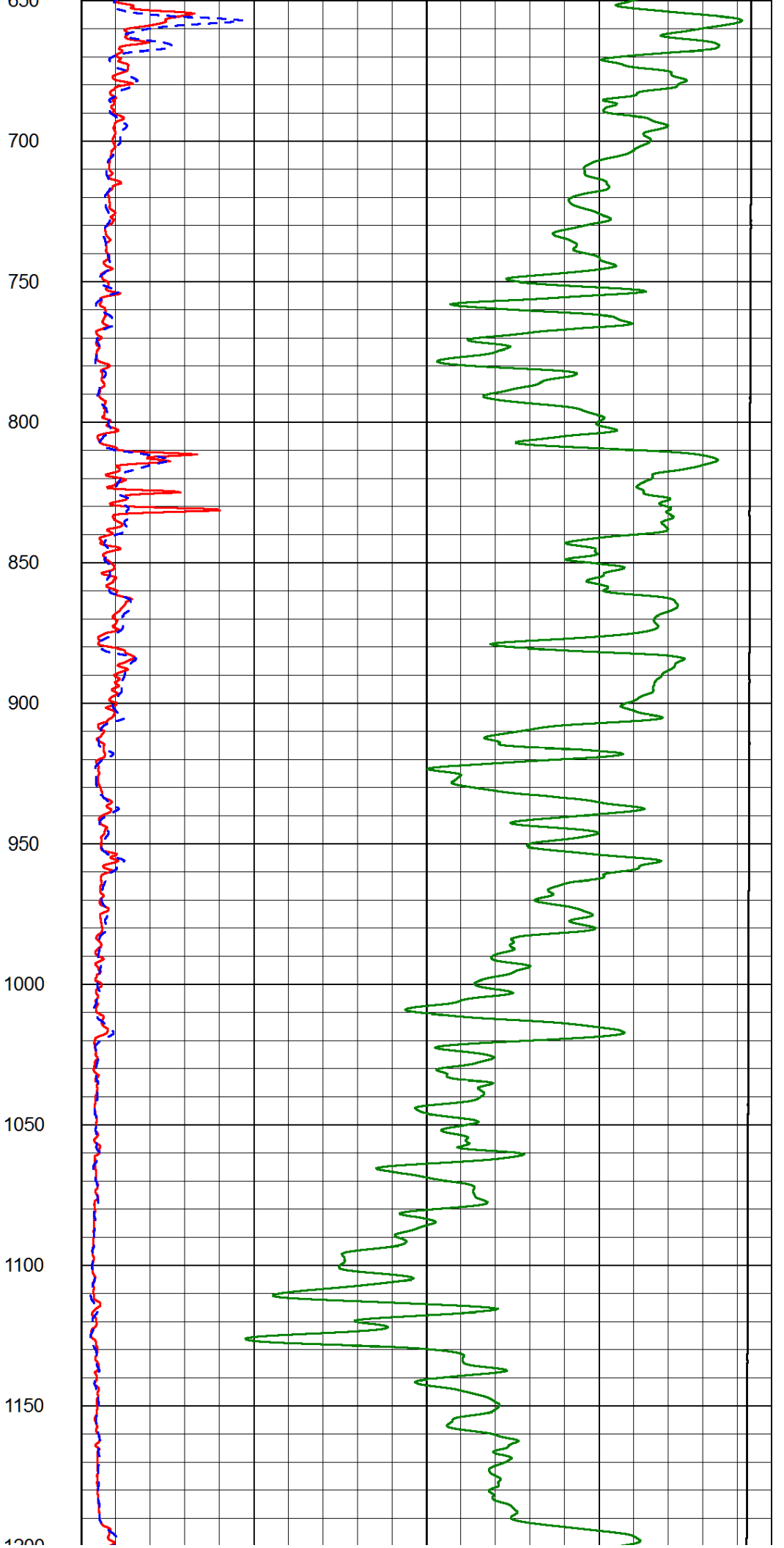
Thank you for using Log-Tech, Inc.
(785) 625-3858

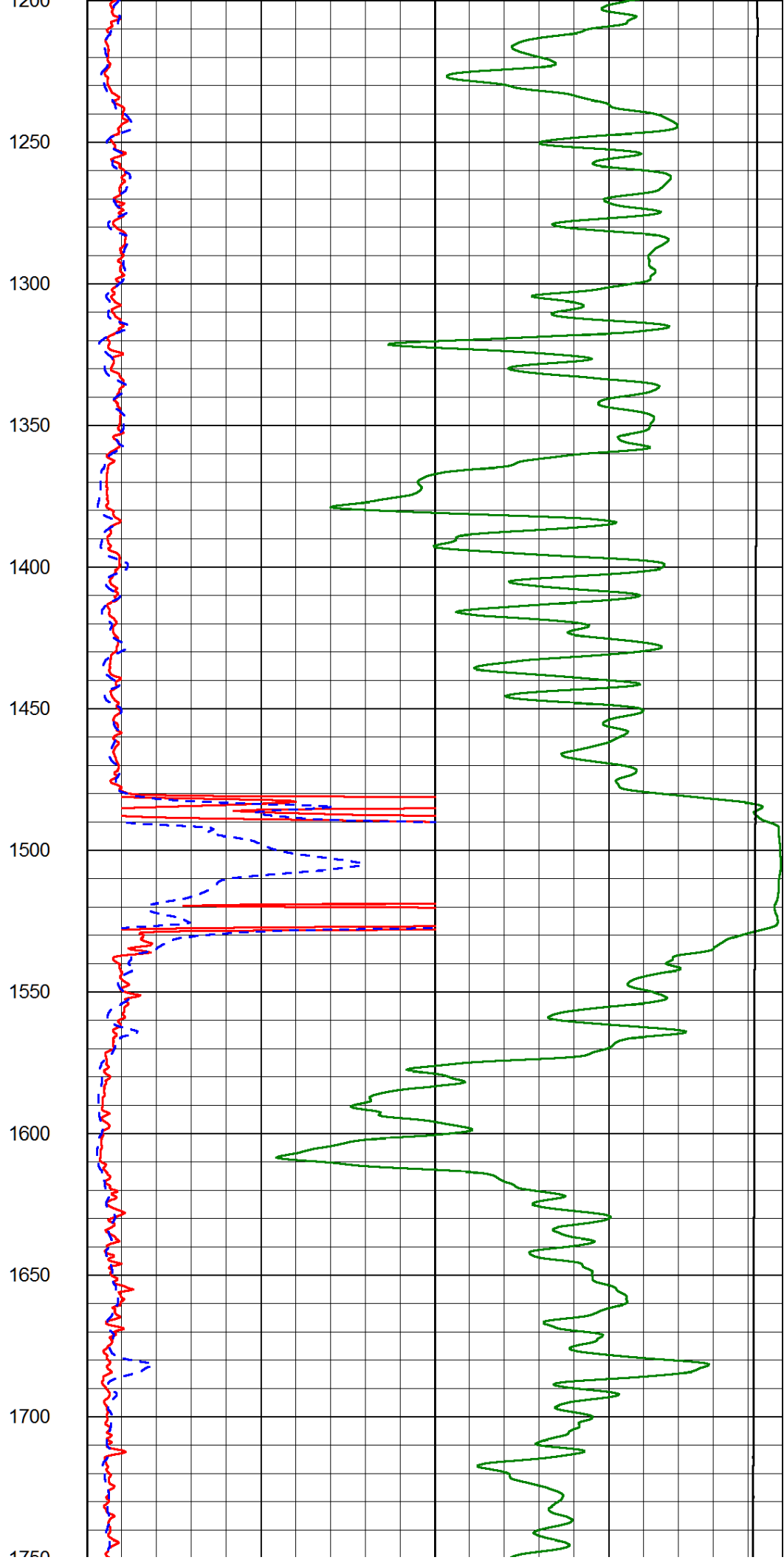
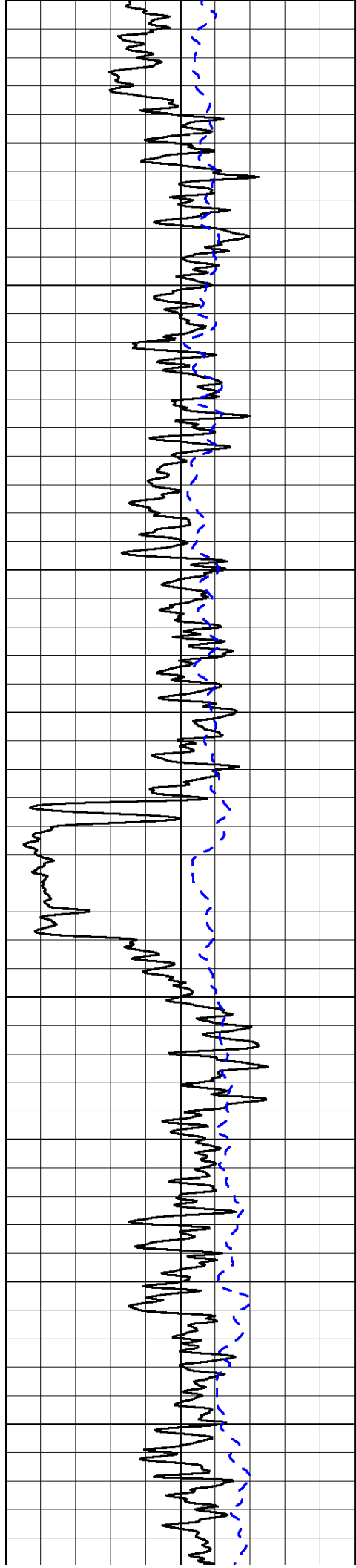
Ellis KS, 3 blks W on 3rd St, W Into

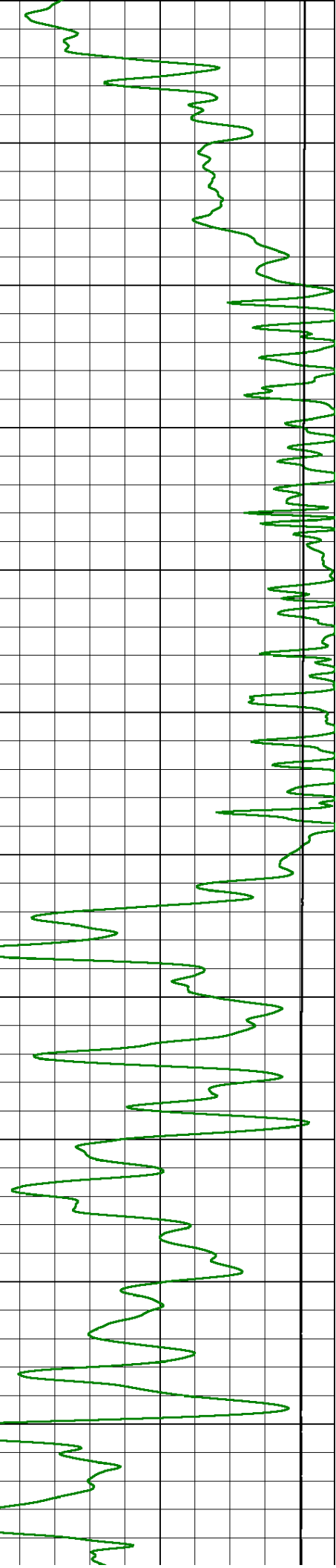
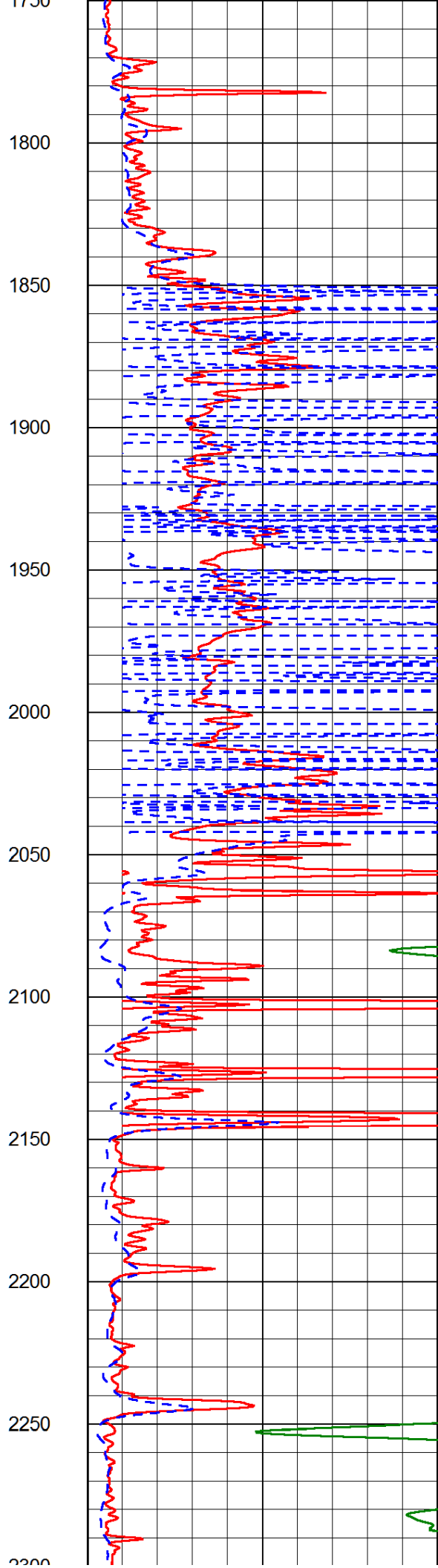
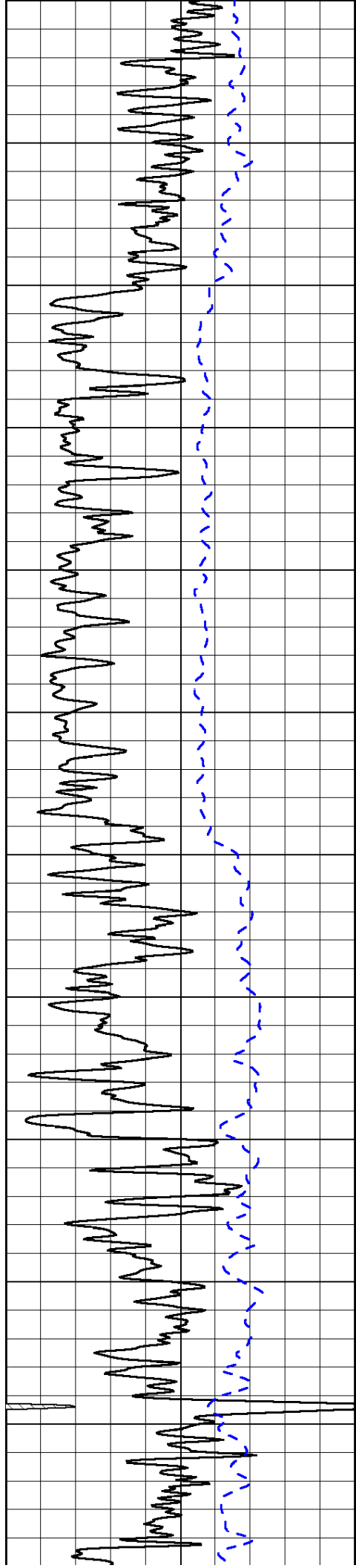
0	Gamma Ray (GAPI)	150
-200	SP (mV)	0

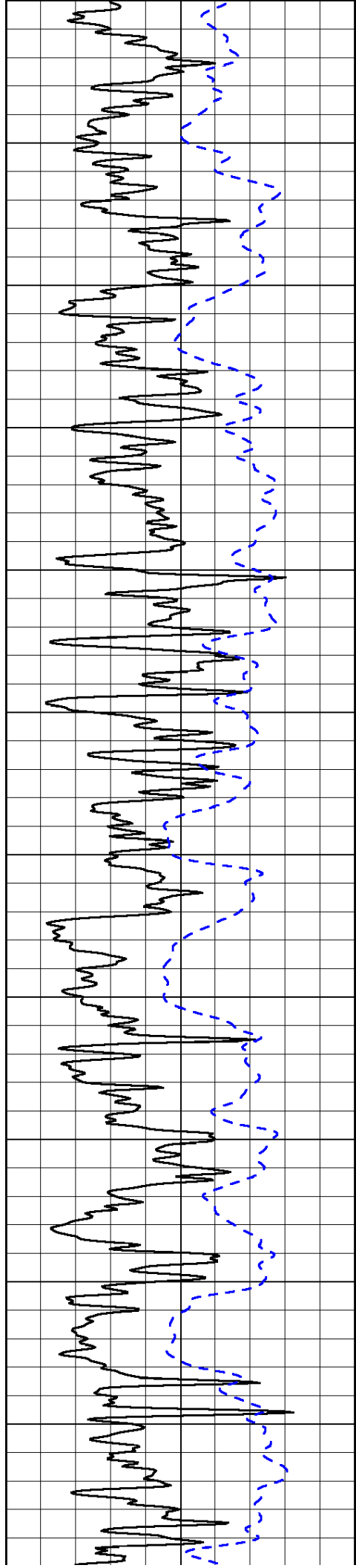
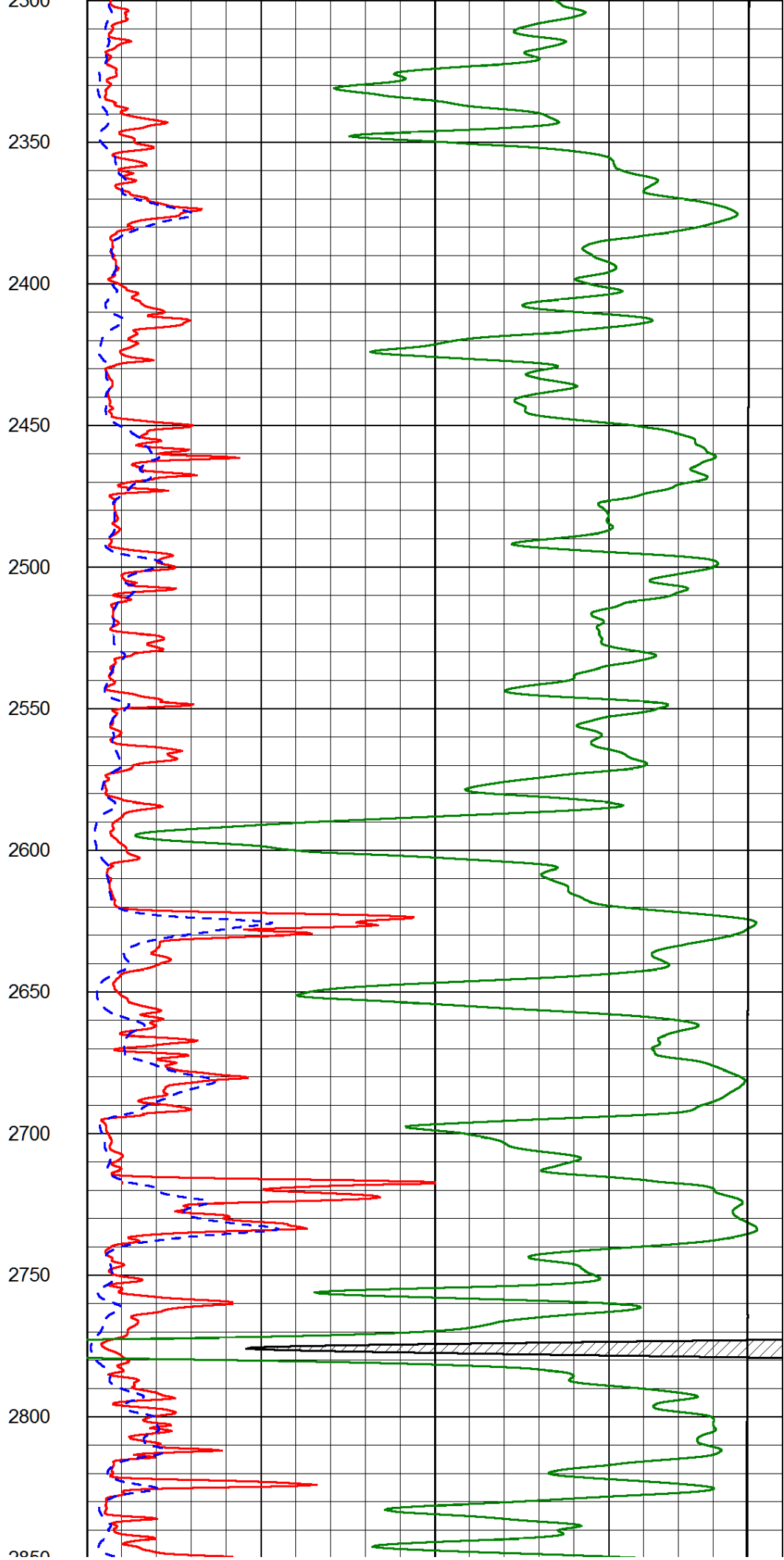
0	Shallow Resistivity (Ohm-m)	50
0	Deep Resistivity (Ohm-m)	50
1000	Conductivity (Ohm-m)	0
15000	Line Tension (lb)	0
50	Shallow Resistivity (Ohm-m)	500
50	Deep Resistivity (Ohm-m)	500

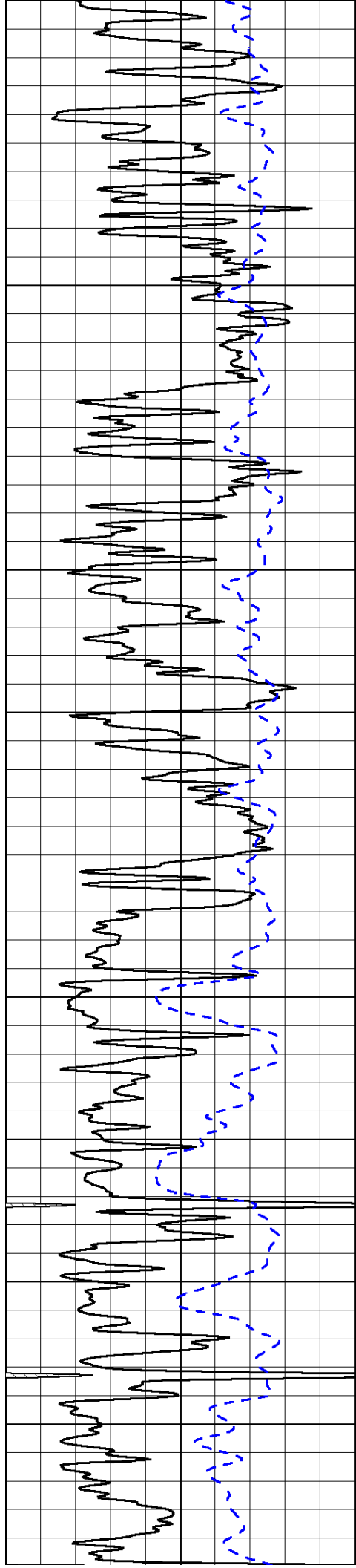




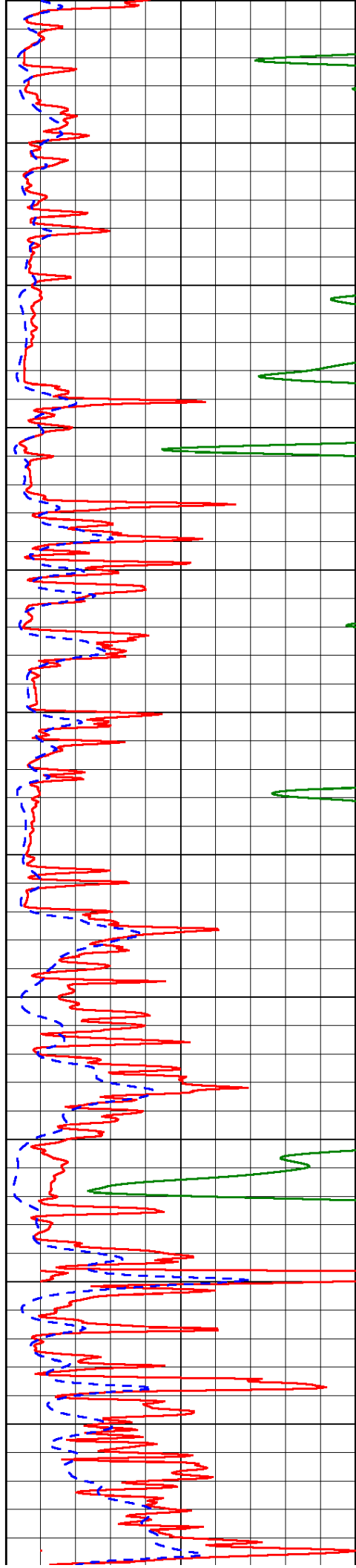


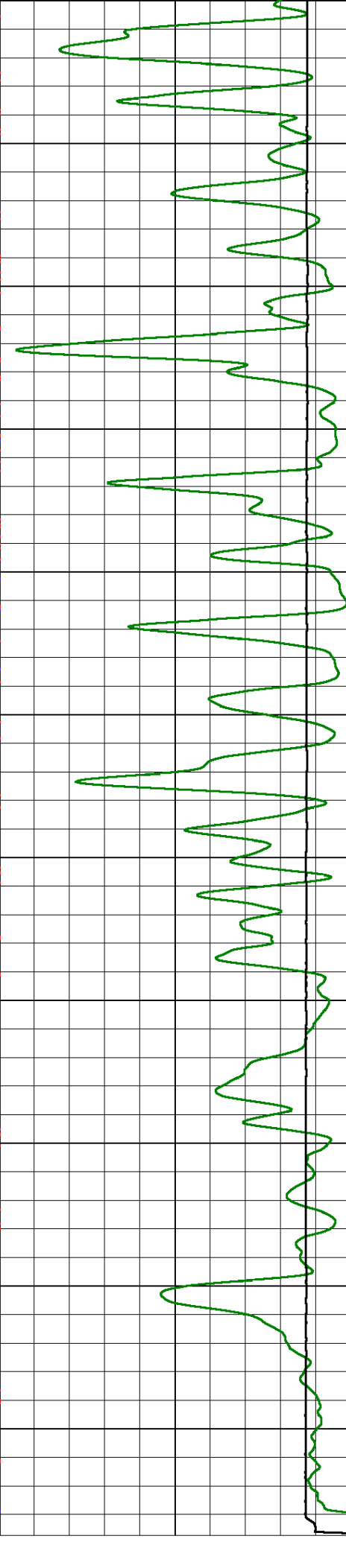
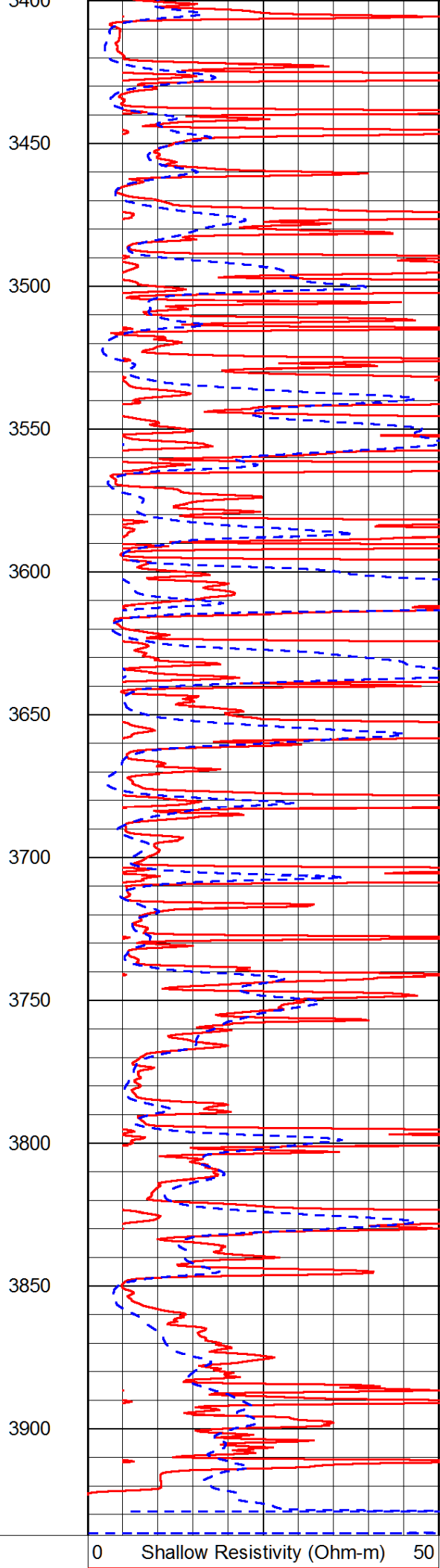
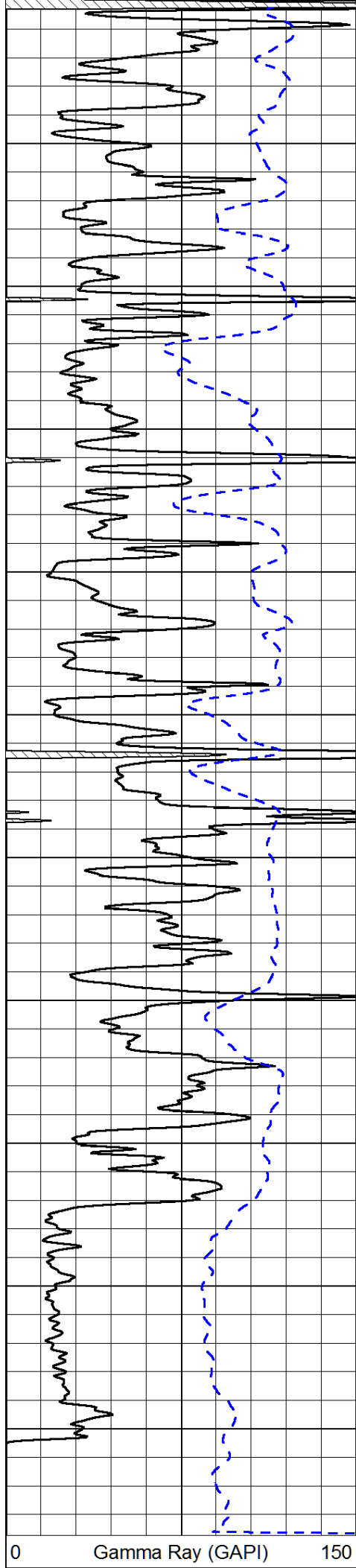






2850
2900
2950
3000
3050
3100
3150
3200
3250
3300
3350
3400





-200 SP (mV) 0

0 Deep Resistivity (Ohm-m) 50

1000 Conductivity (Ohm-m) 0

15000 Line Tension (lb) 0

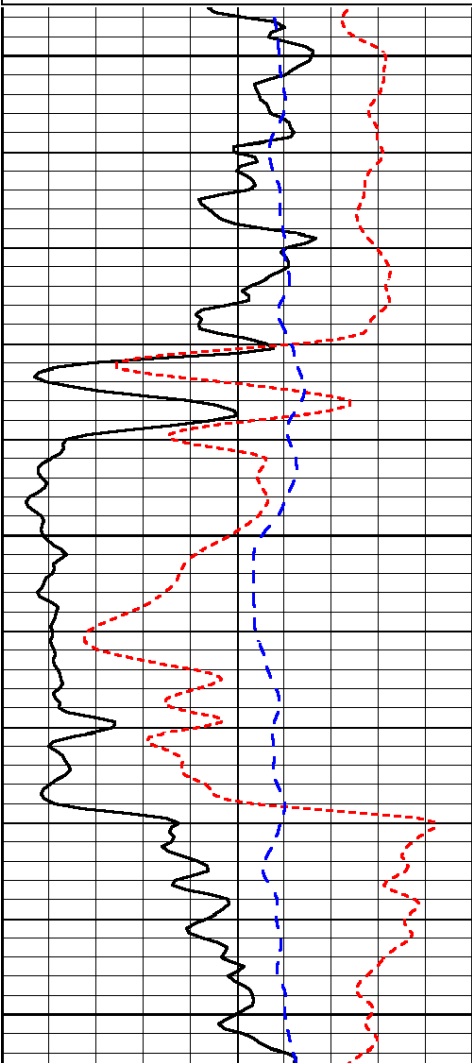
Shallow Resistivity
50 (Ohm-m) 500
50 Deep Resistivity (Ohm-m) 500

Database File: tdihd.db
Dataset Pathname: dil/tdistk
Presentation Format: dil
Dataset Creation: Tue Oct 22 22:10:34 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

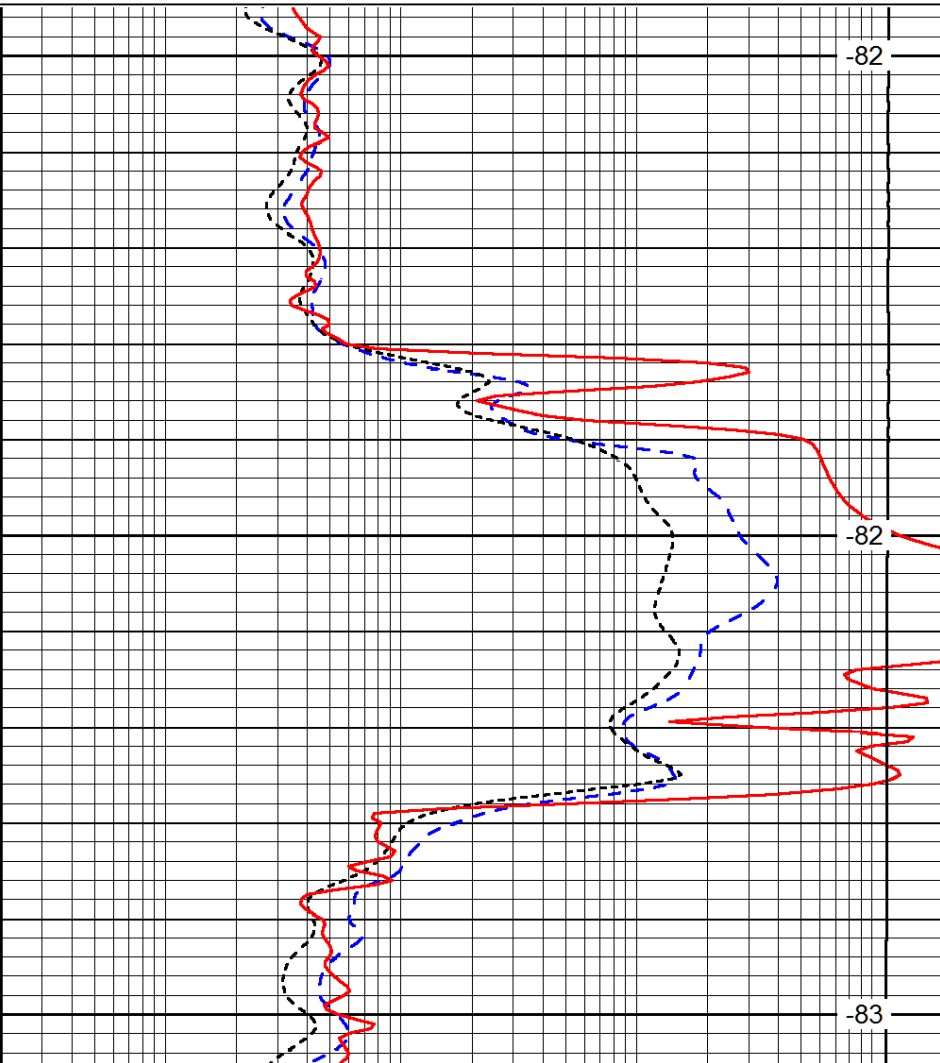
LSPD
(ft/min)



1450

1500

1550



-82

-82

-83

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

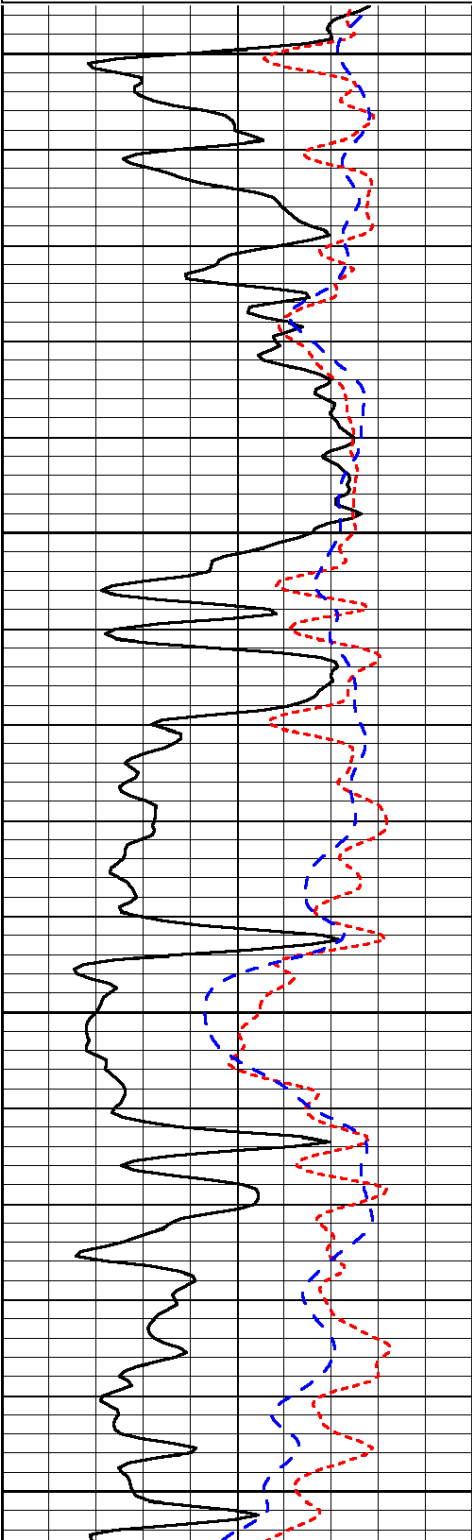
LSPD

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LSPD
(ft/min)

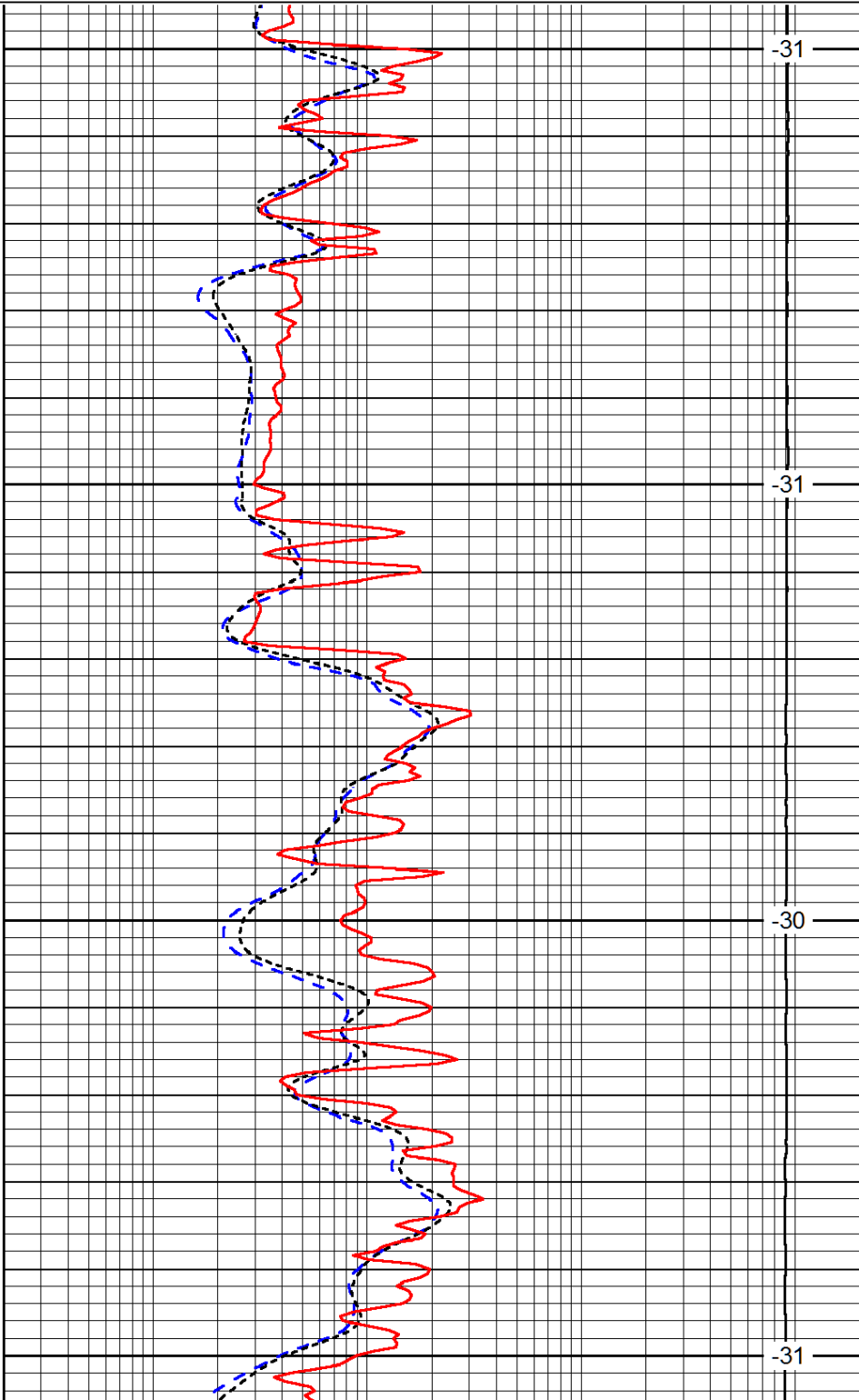


3100

3150

3200

3250

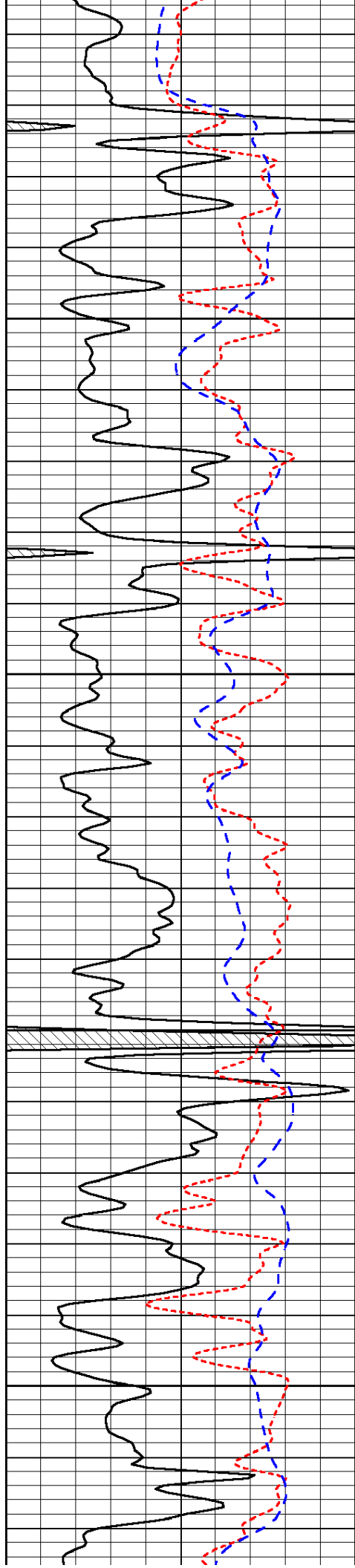


-31

-31

-30

-31

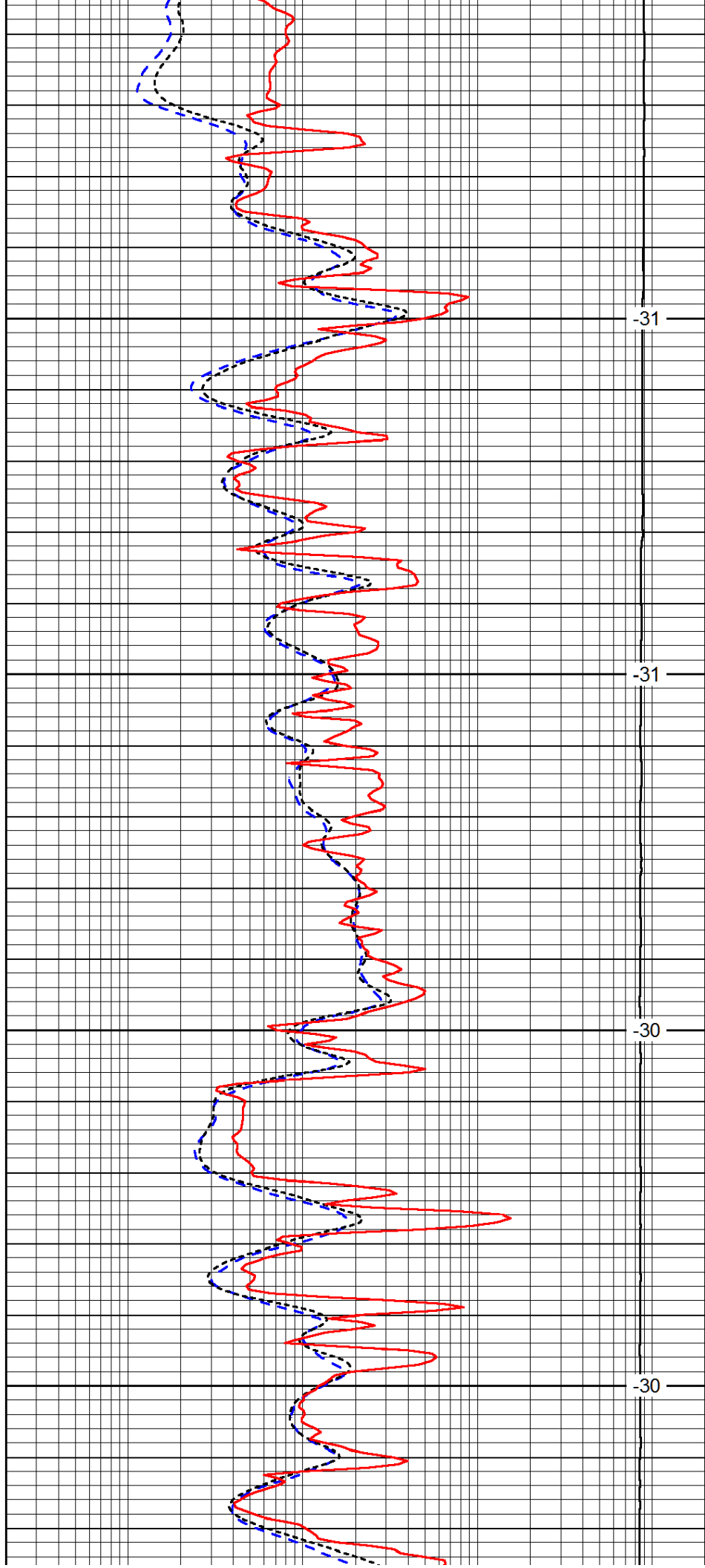


3300

3350

3400

3450

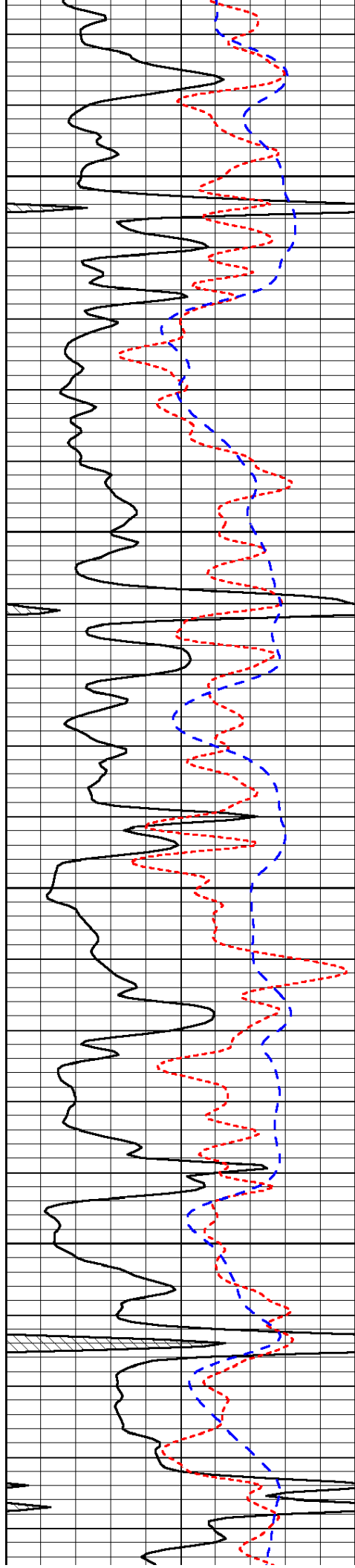


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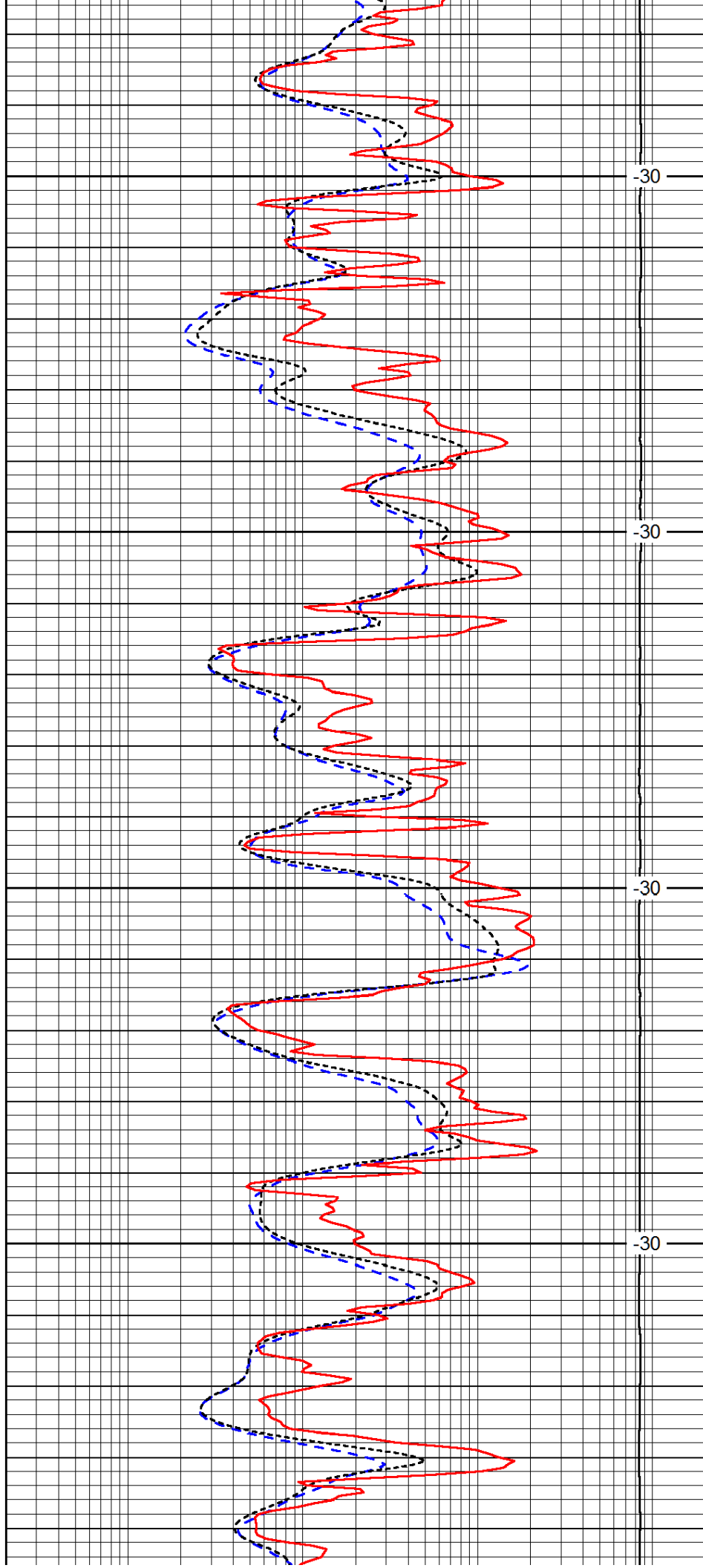


3500

3550

3600

3650

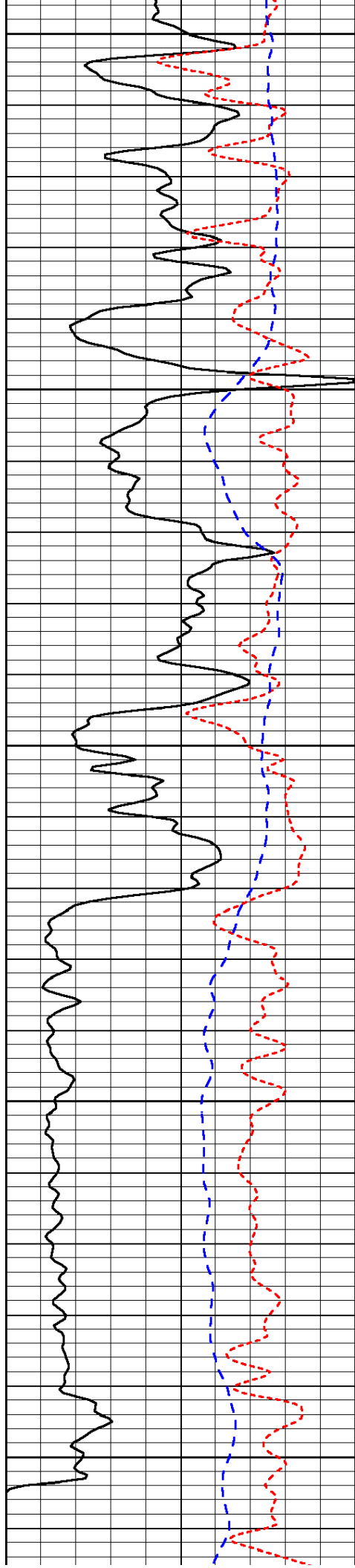


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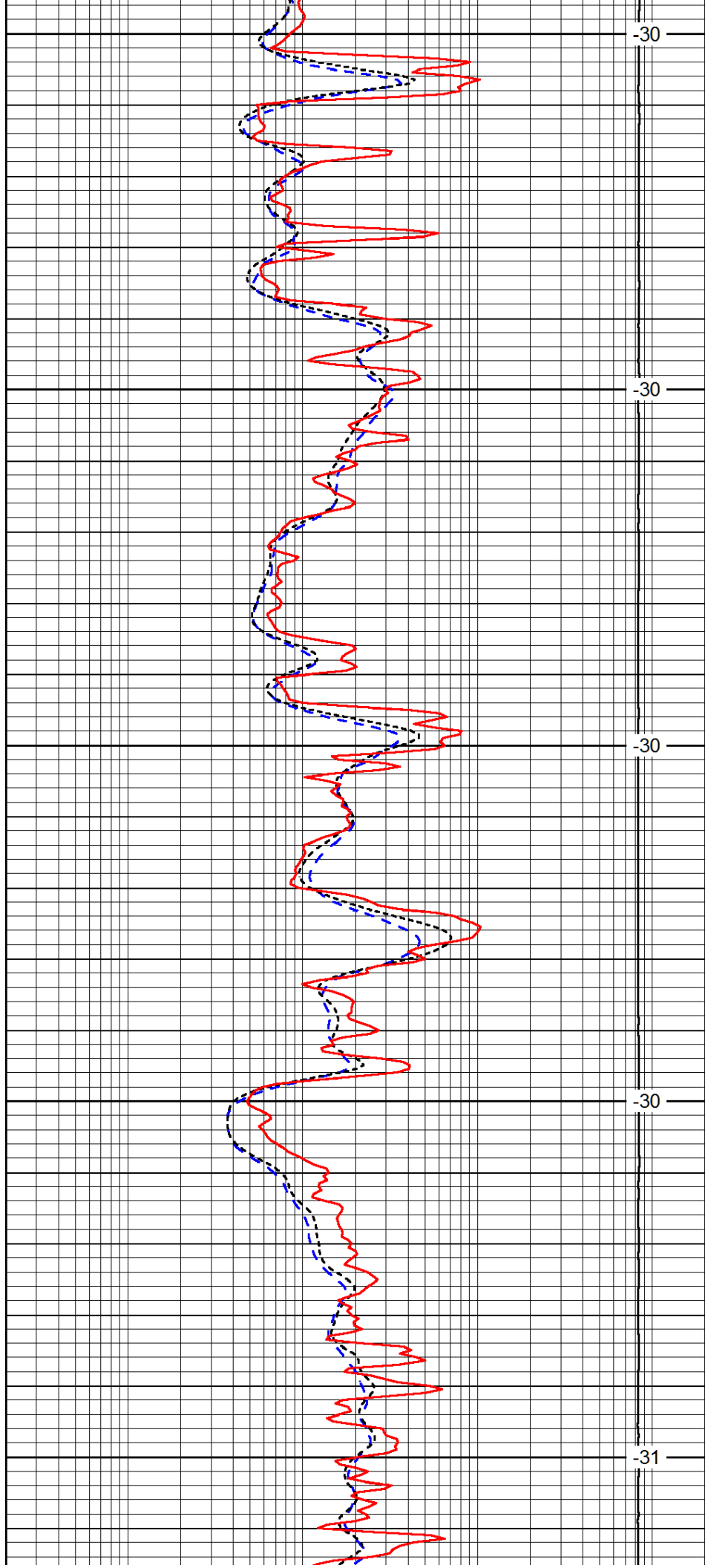
3700

3750

3800

3850

3900



-30

-30

-30

-30

-31

