



Dual Induction Log

Pioneer Energy Services

API No.

15-167-23,880-00-00

Company Miller-Becker Enterprises, LLC

Well Jacobs No. 1

Field Gorham

County Russell State

Kansas

Location 4,748' FSL & 1,714' FEL

Sec: 22 Twp: 14S Rge: 15W

Other Services
CNL/CDL
MEL

Permanent Datum Ground Level Elevation 1807

Log Measured From Kelly Bushing 7 Ft. Above Perm. Datum

Drilling Measured From Kelly Bushing

Elevation
K.B. 1814
D.F. 1814
G.L. 1807

Date 5/20/2013

Run Number One

Depth Driller 3300

Depth Logger 3296

Bottom Logged Interval 3295

Top Log Interval 200

Casing Driller 8.625 @ 225

Casing Logger 219

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 2500

Density / Viscosity 9.0 48

pH / Fluid Loss 10.0 8.8

Source of Sample Flowline

Rm @ Meas. Temp .26 @ 80

Rmf @ Meas. Temp .20 @ 80

Rmc @ Meas. Temp .35 @ 80

Source of Rmf / Rmc Charts

Rm @ BHT .19 @ 109

Operating Rig Time 4 Hours

Max Rec. Temp. F 109

Equipment Number 108

Location Hays

Recorded By J. Long

Witnessed By Jeff Lawler

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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

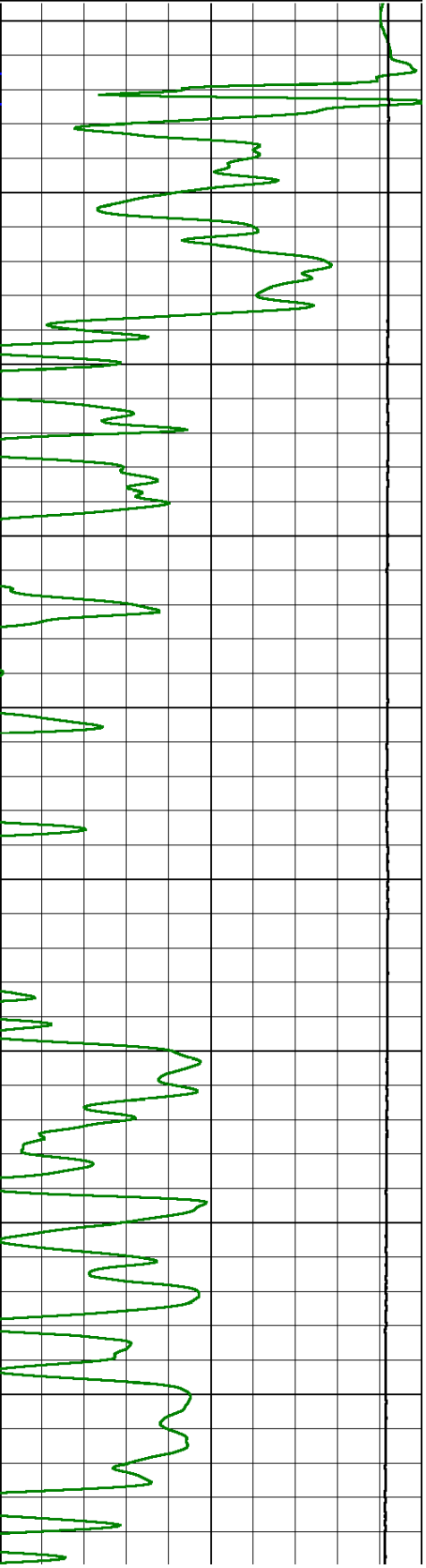
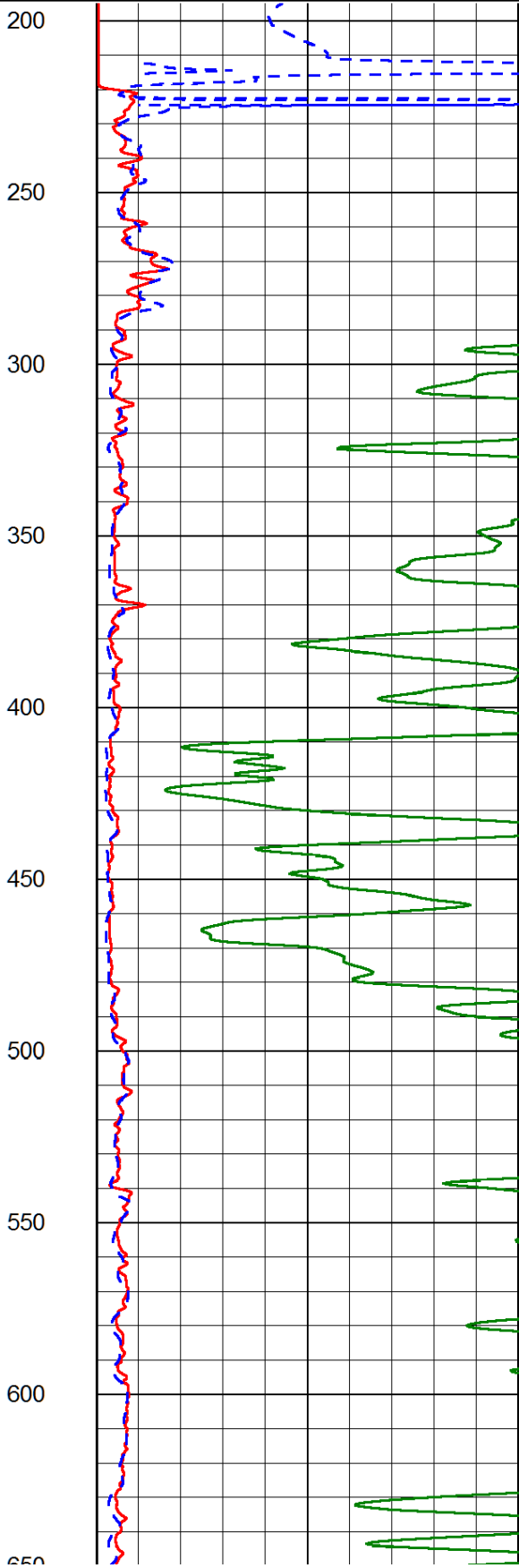
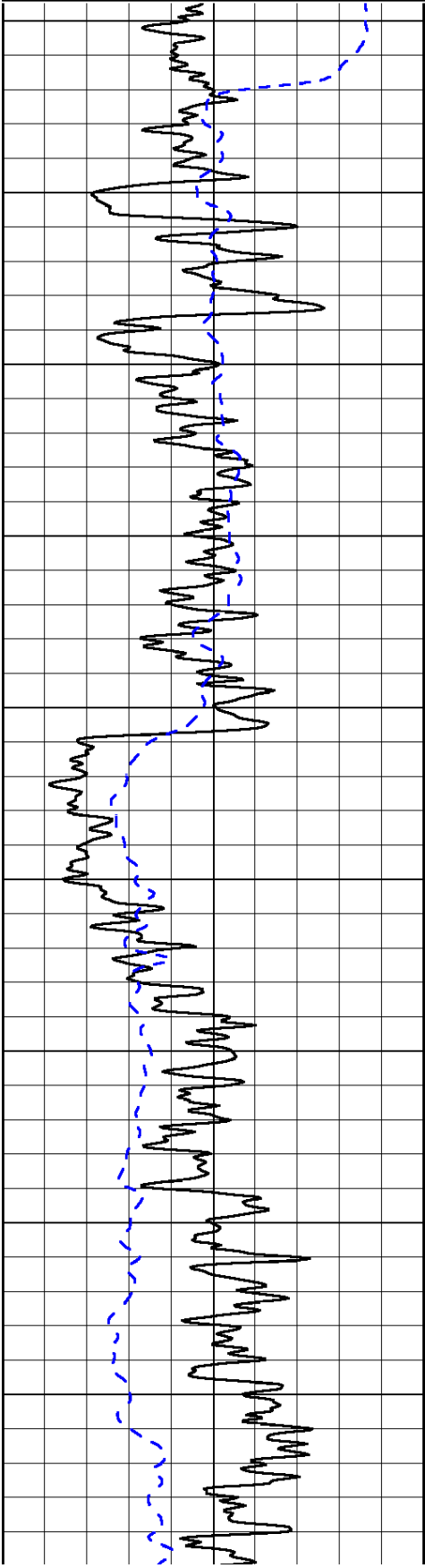
Thank you for using Log-Tech, Inc.
(785) 625-3858

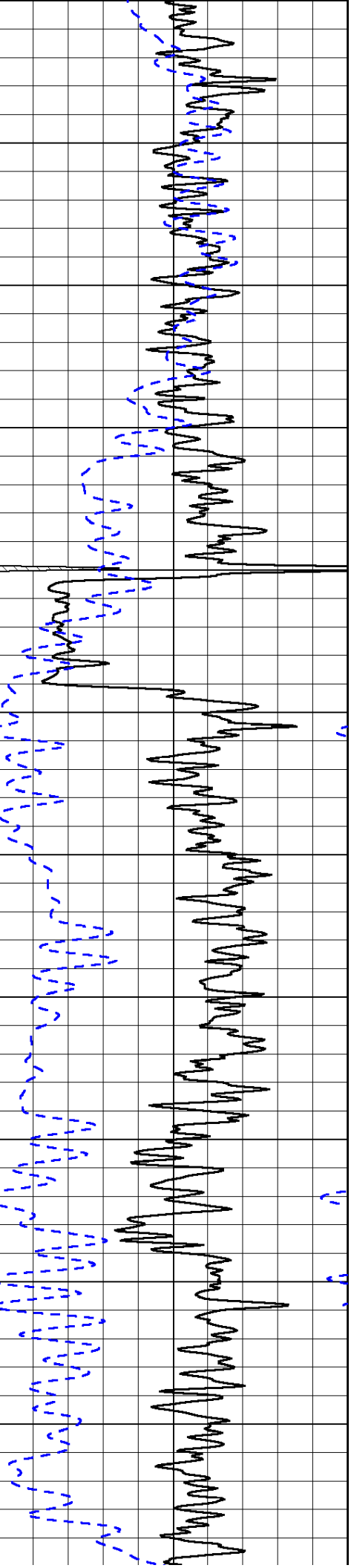
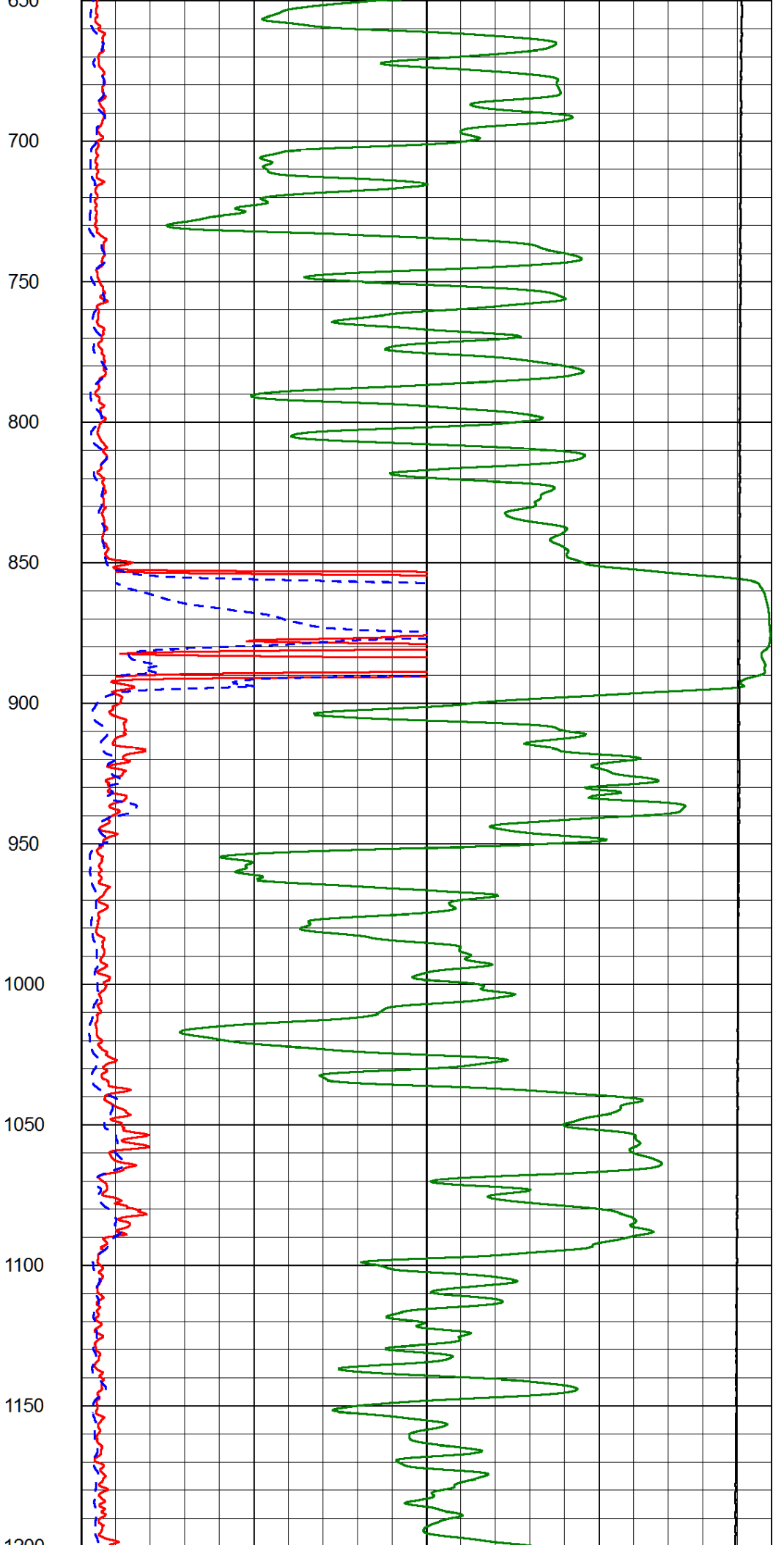
Gorham Exit, 2 1/2 South, 2 1/2 East, South Into

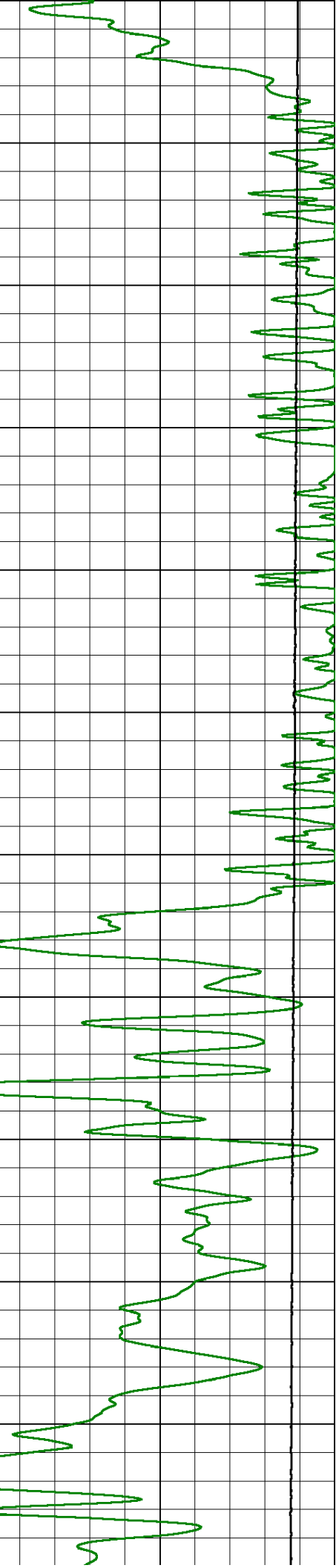
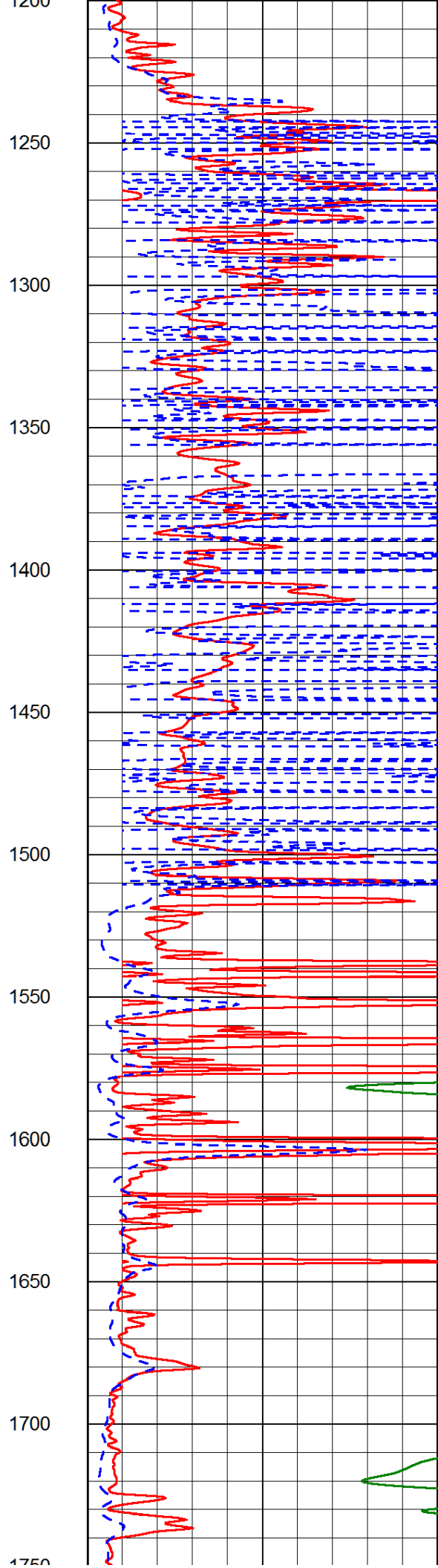
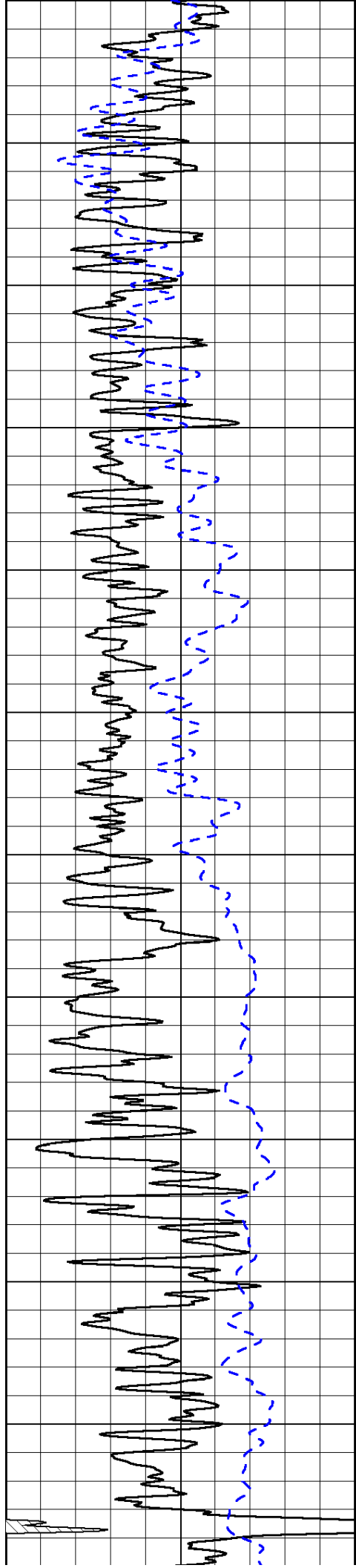
Database File: miller-becker_jacobs_1hd.db
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Presentation Format: dil2in
Dataset Creation: Mon May 20 20:21:11 2013
Charted by: Depth in Feet scaled 1:600

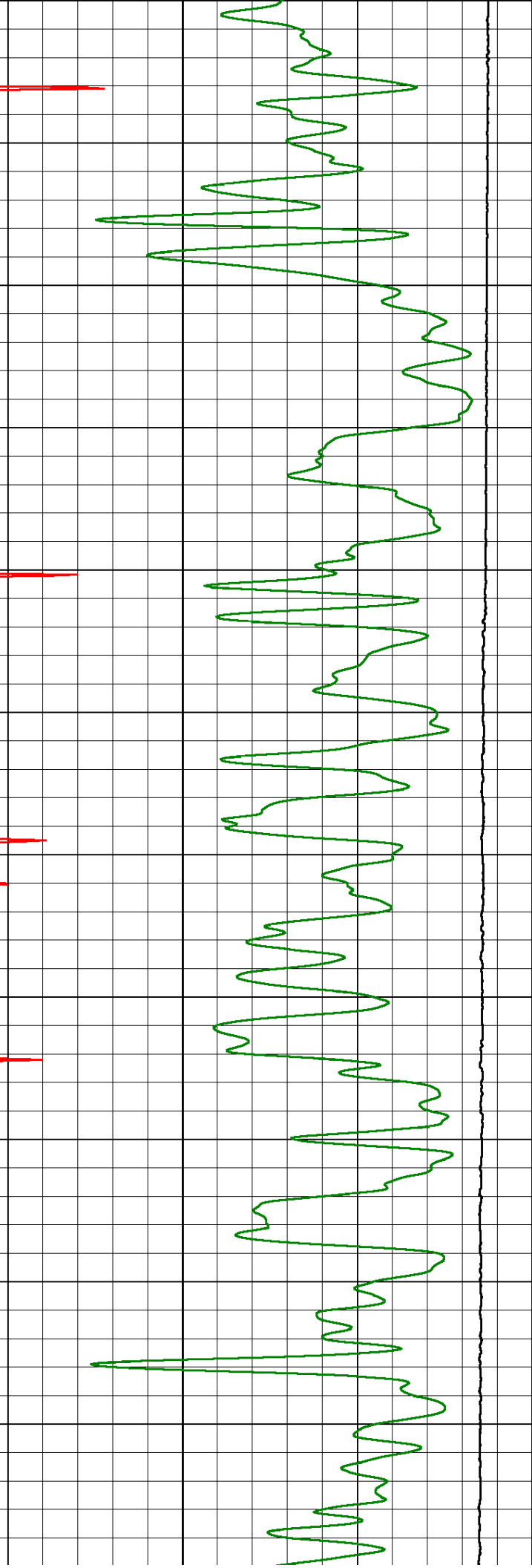
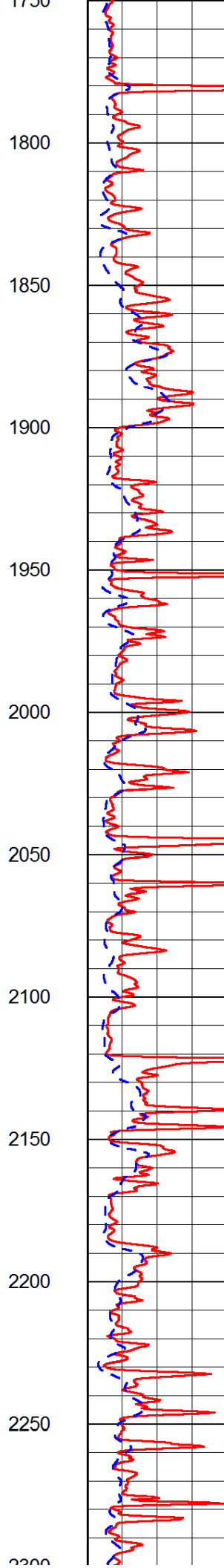
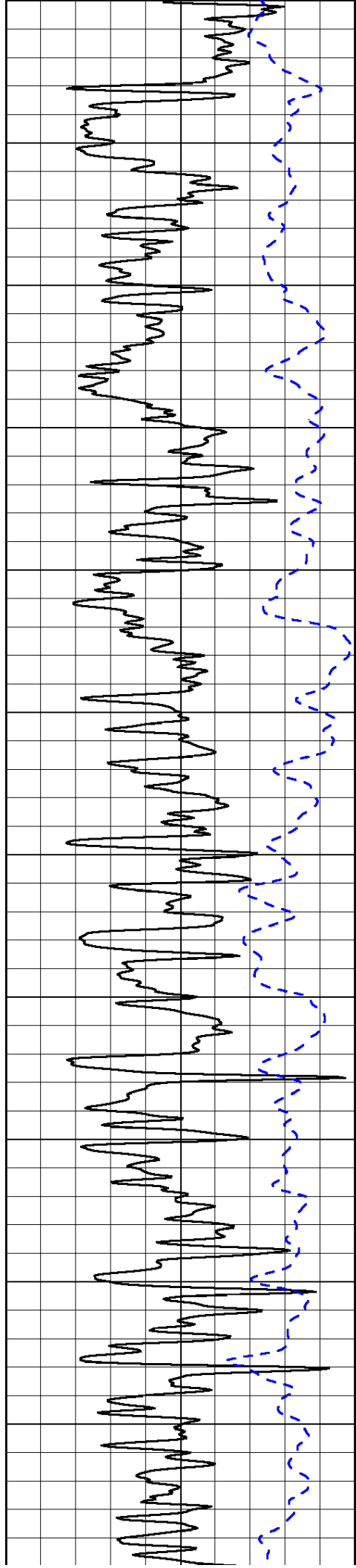
0	Gamma Ray (GAPI)	150
-200	SP (mV)	0

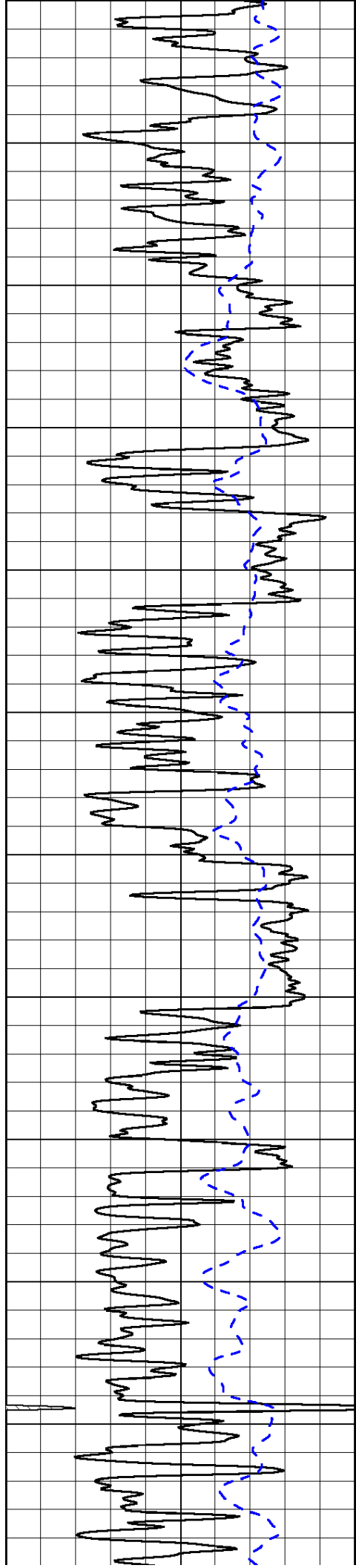
0	Shallow Resistivity (Ohm-m)	50
0	Deep Resistivity (Ohm-m)	50
1000	Conductivity (Ohm-m)	0
15000	Line Tension (lb)	0
50	Shallow Resistivity (Ohm-m)	500
50	Deep Resistivity (Ohm-m)	500



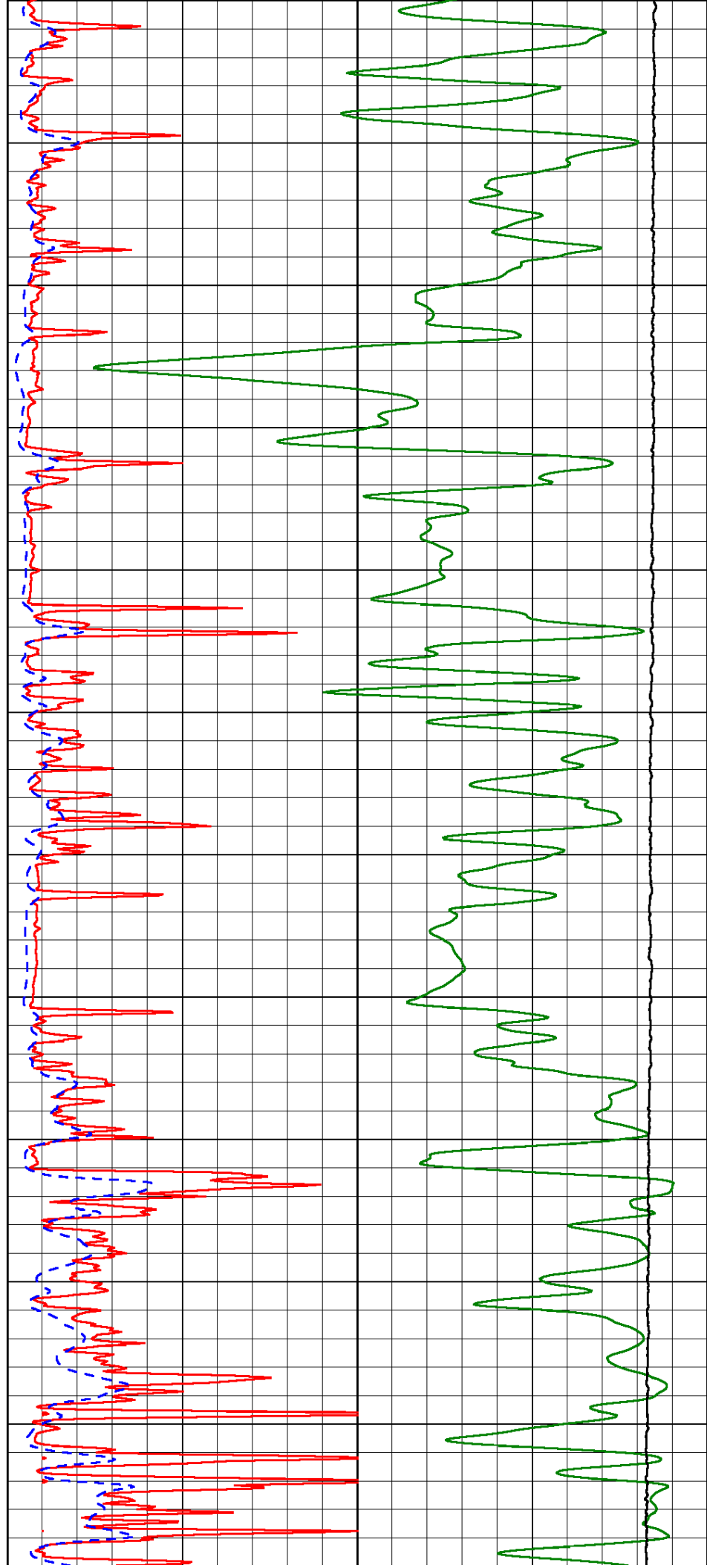


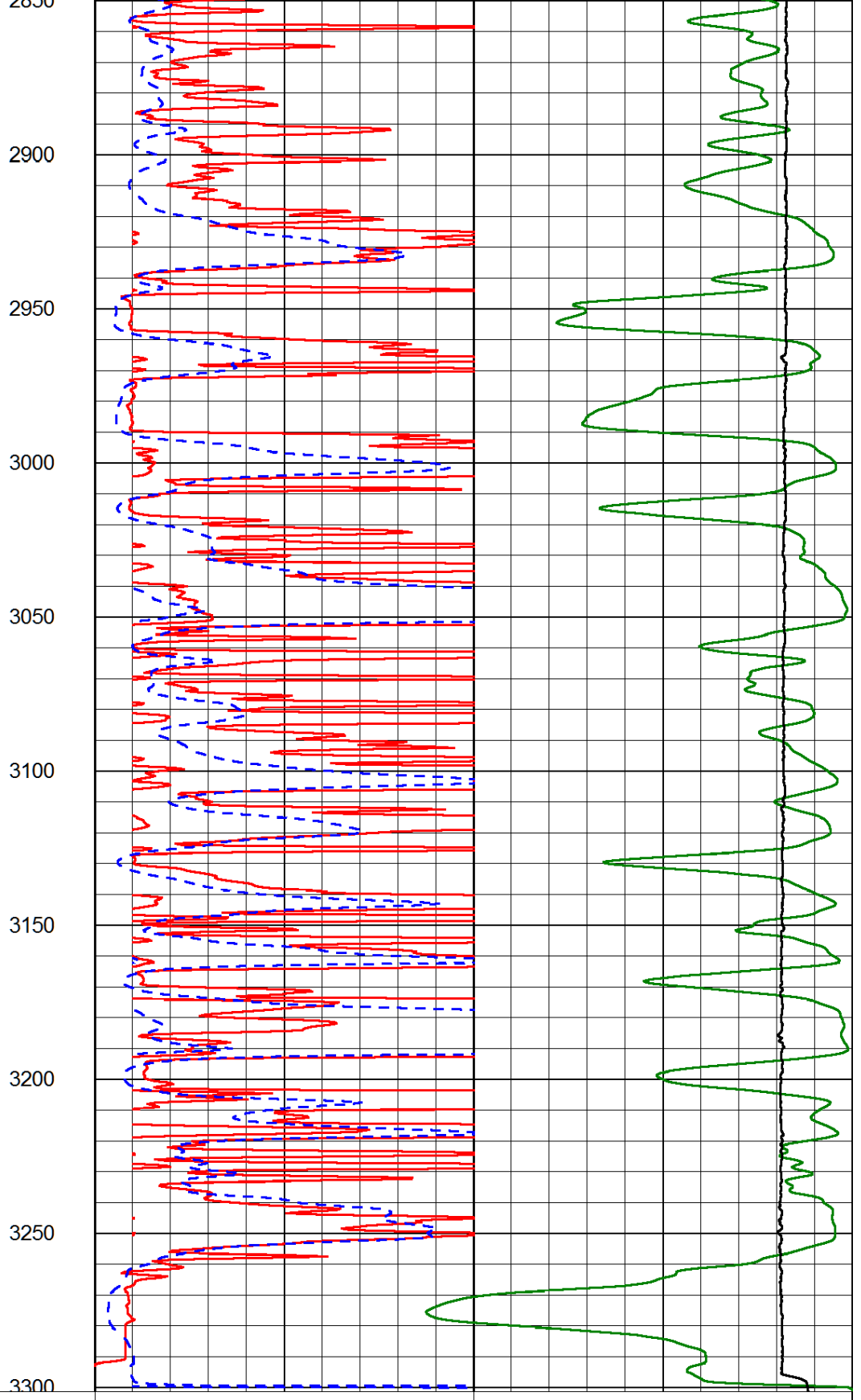
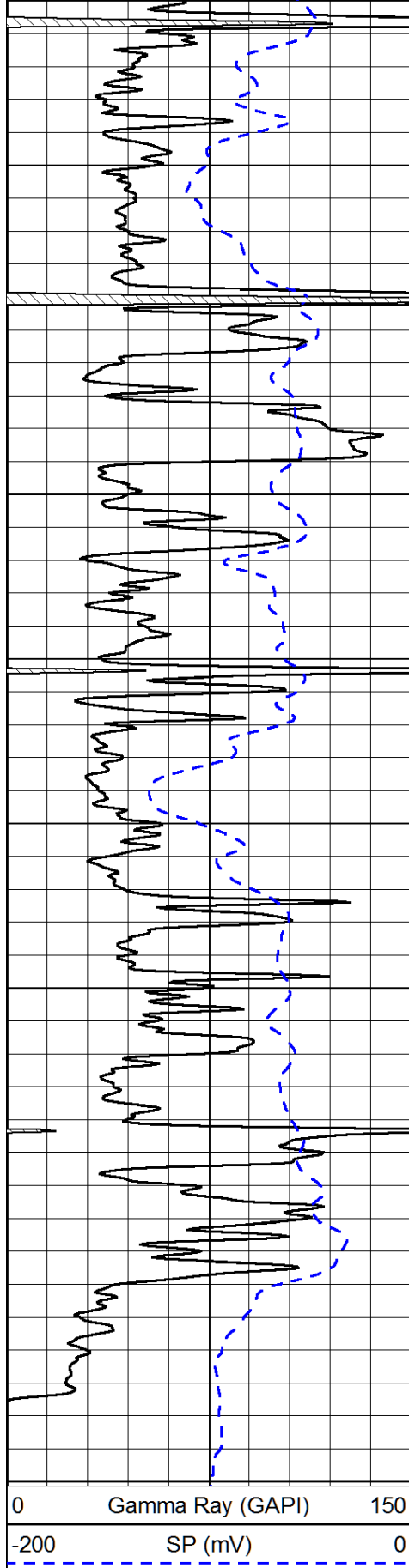






2300
2350
2400
2450
2500
2550
2600
2650
2700
2750
2800
2850





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

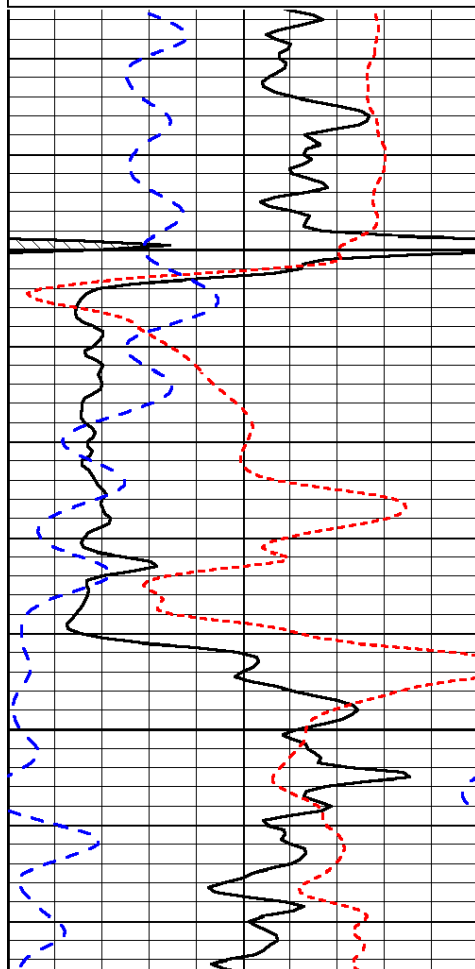
Shallow Resistivity		
50	(Ohm-m)	500
50	Deep Resistivity (Ohm-m)	500

Database File: miller-becker_jacobs_1hd.db
Dataset Pathname: dil/millstck
Presentation Format: dil
Dataset Creation: Mon May 20 20:21:11 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

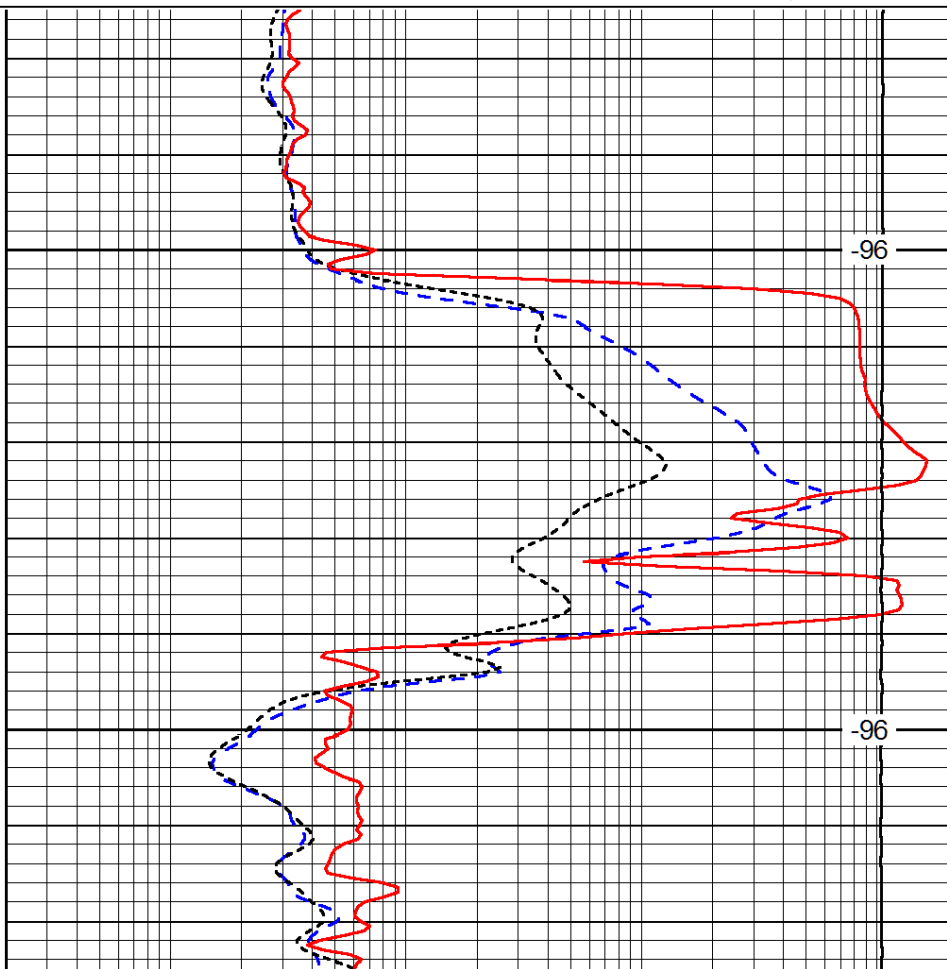
LSPD
(ft/min)



850

900

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



-96

-96

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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-160	RXO/RT	40
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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)

2000

-34

2050

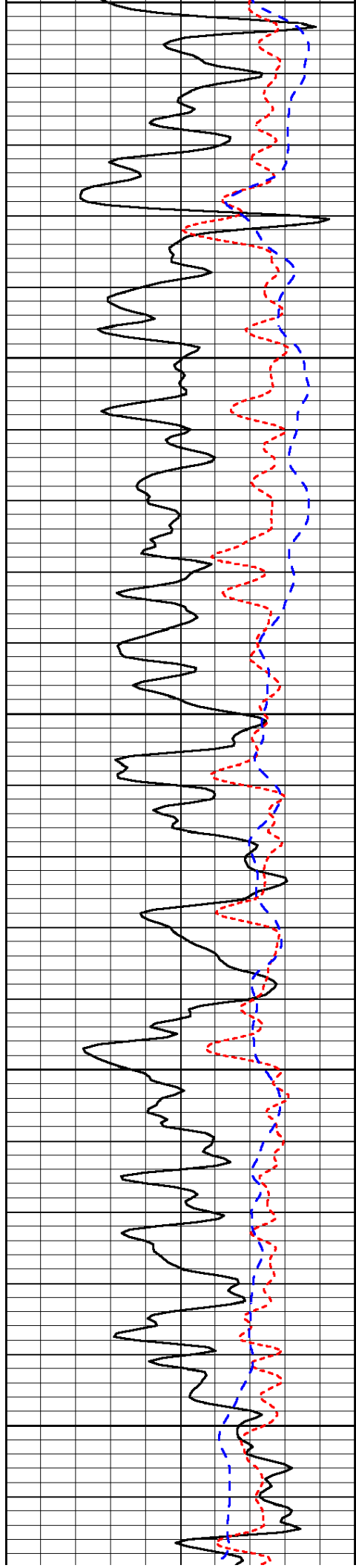
-33

2100

-33

2150

-33



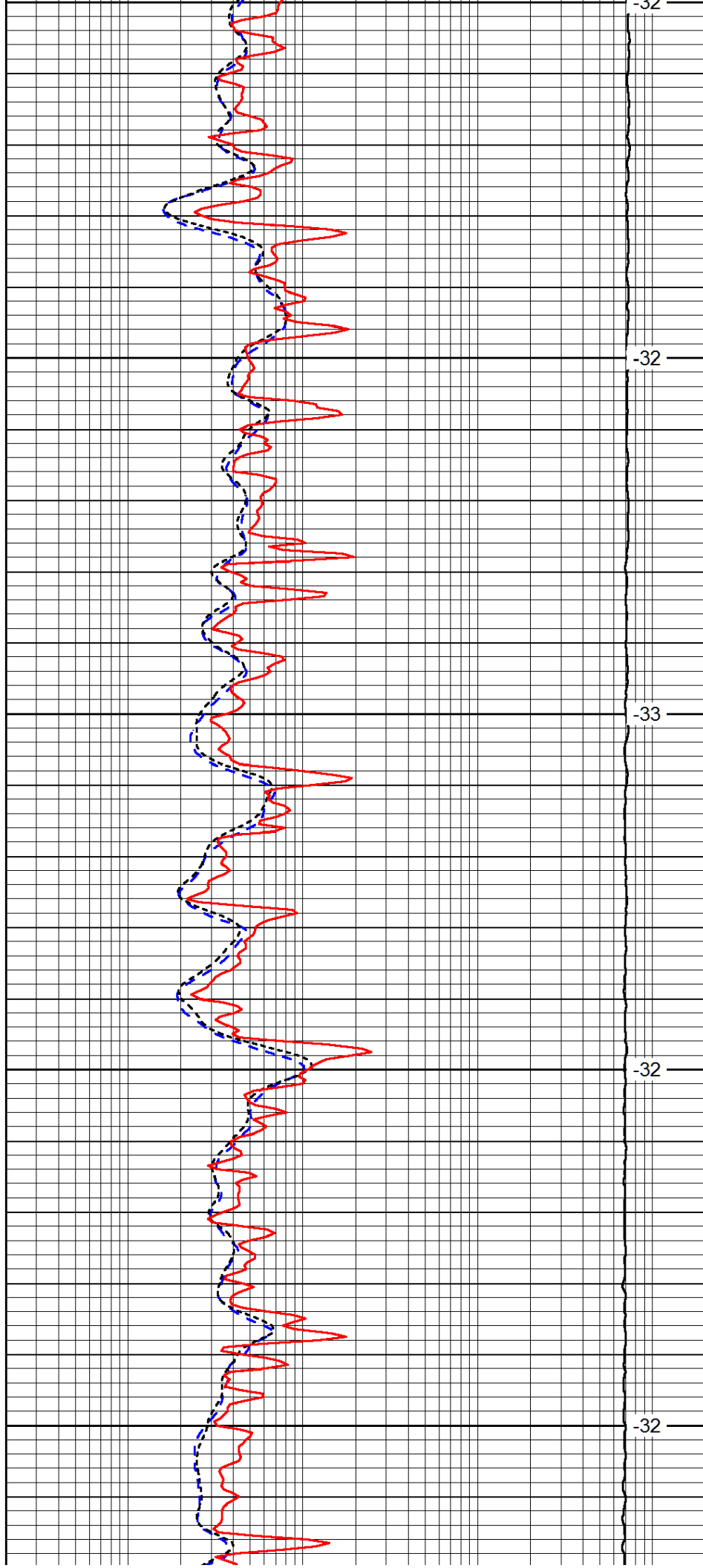
2200

2250

2300

2350

2400



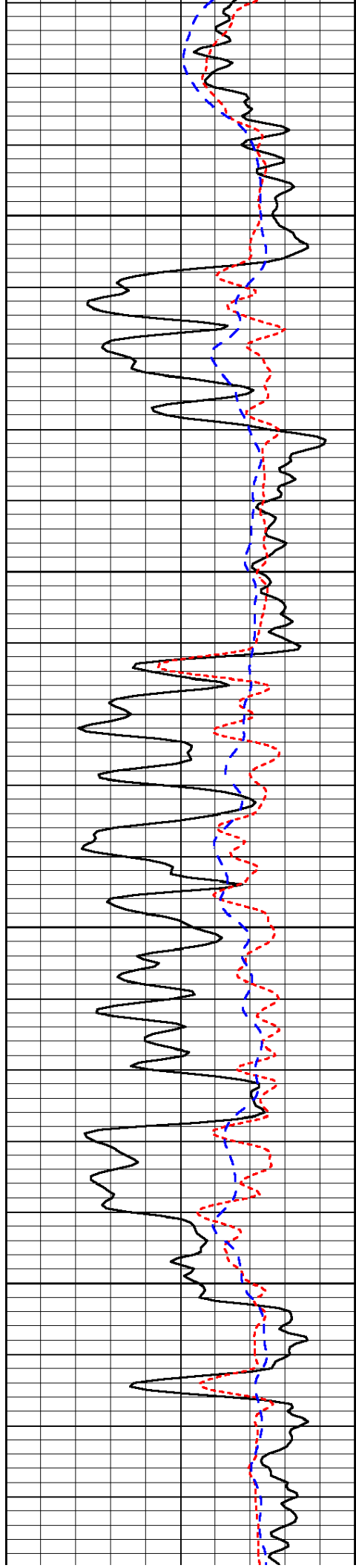
-32

-32

-33

-32

-32

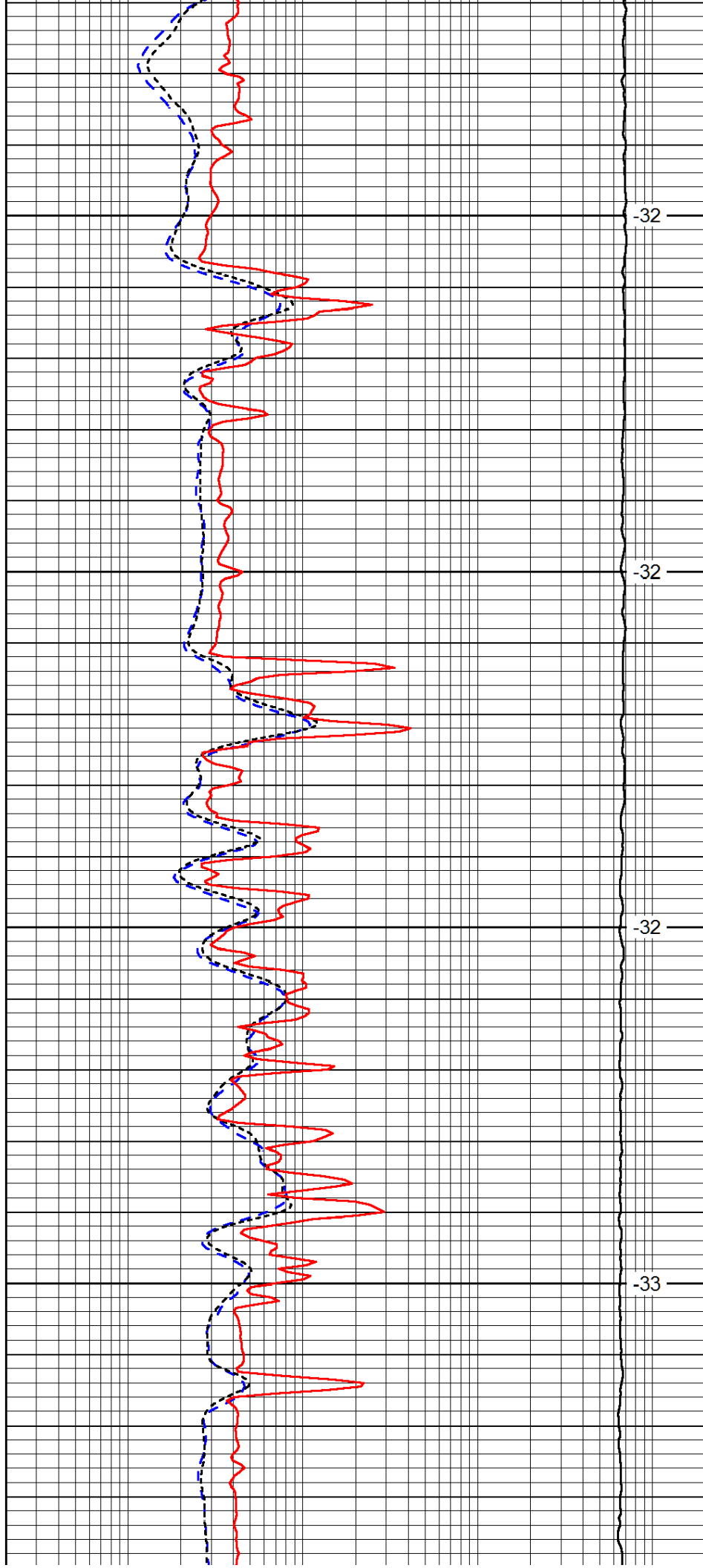


2450

2500

2550

2600

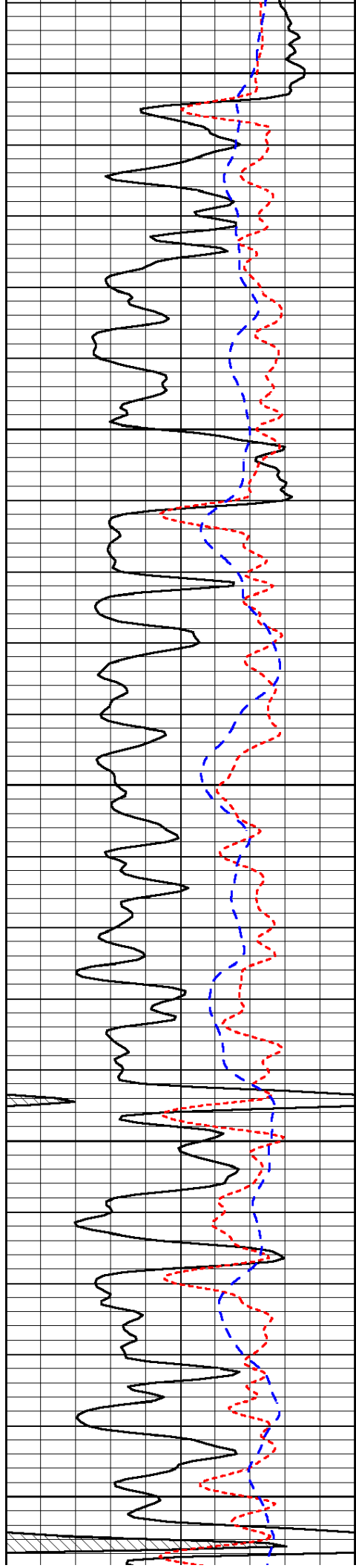


-32

-32

-32

-33



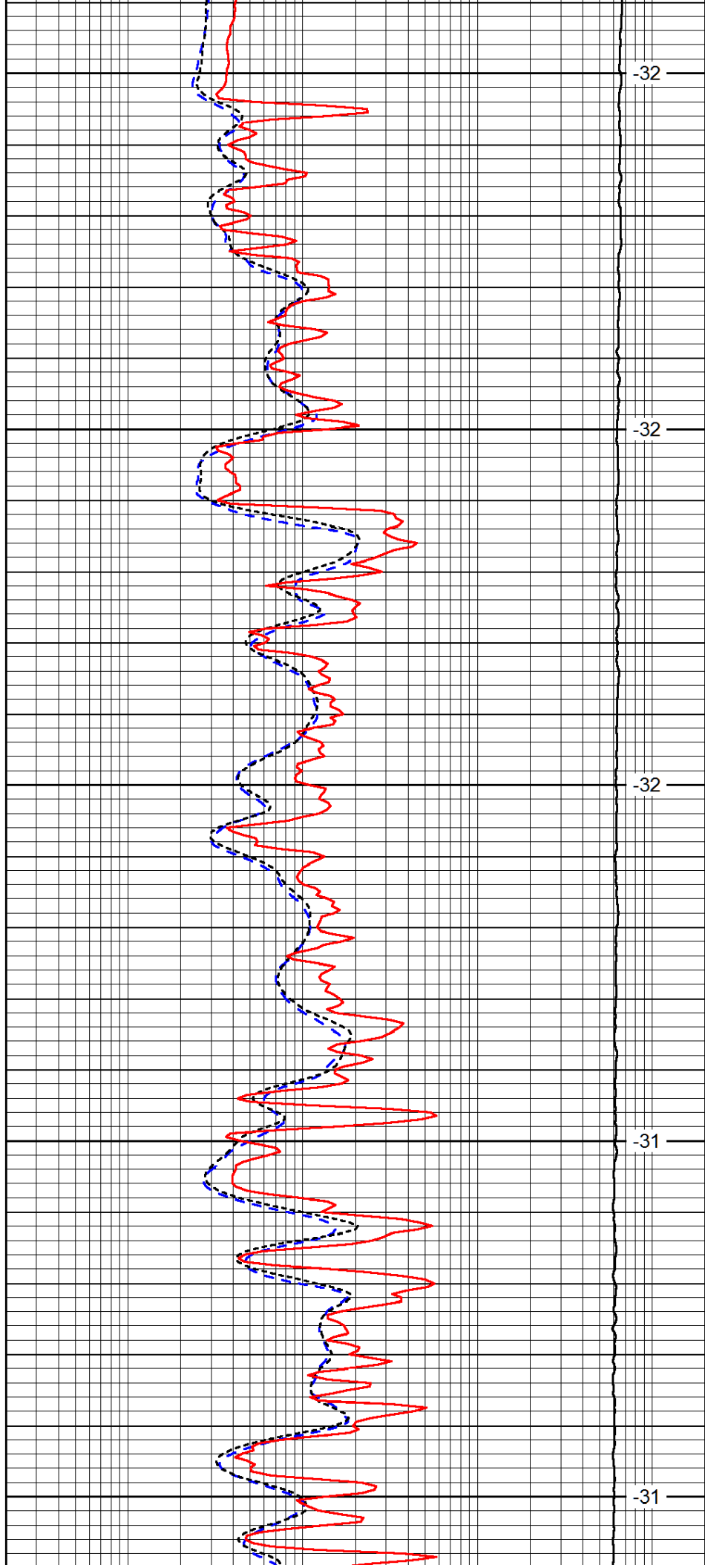
2650

2700

2750

2800

2850



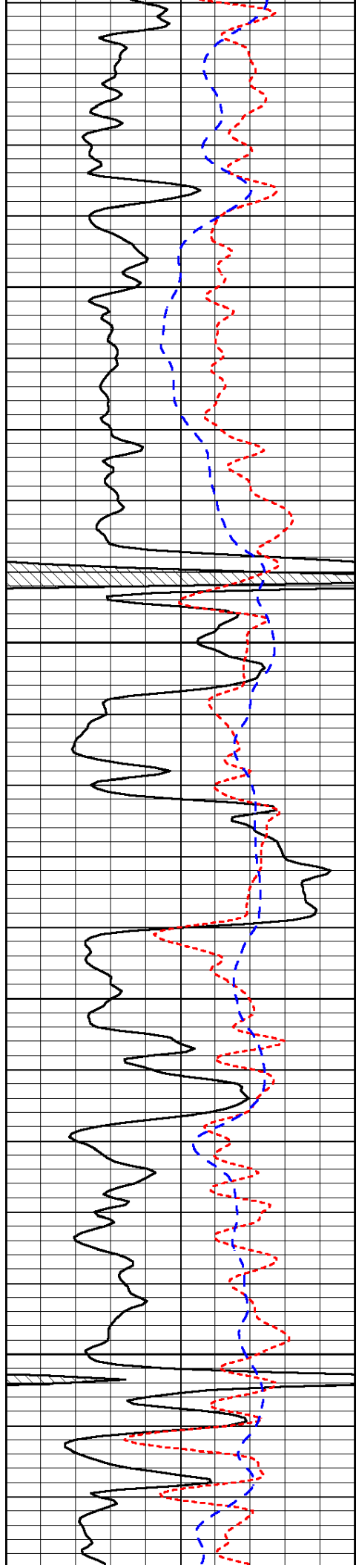
-32

-32

-32

-31

-31

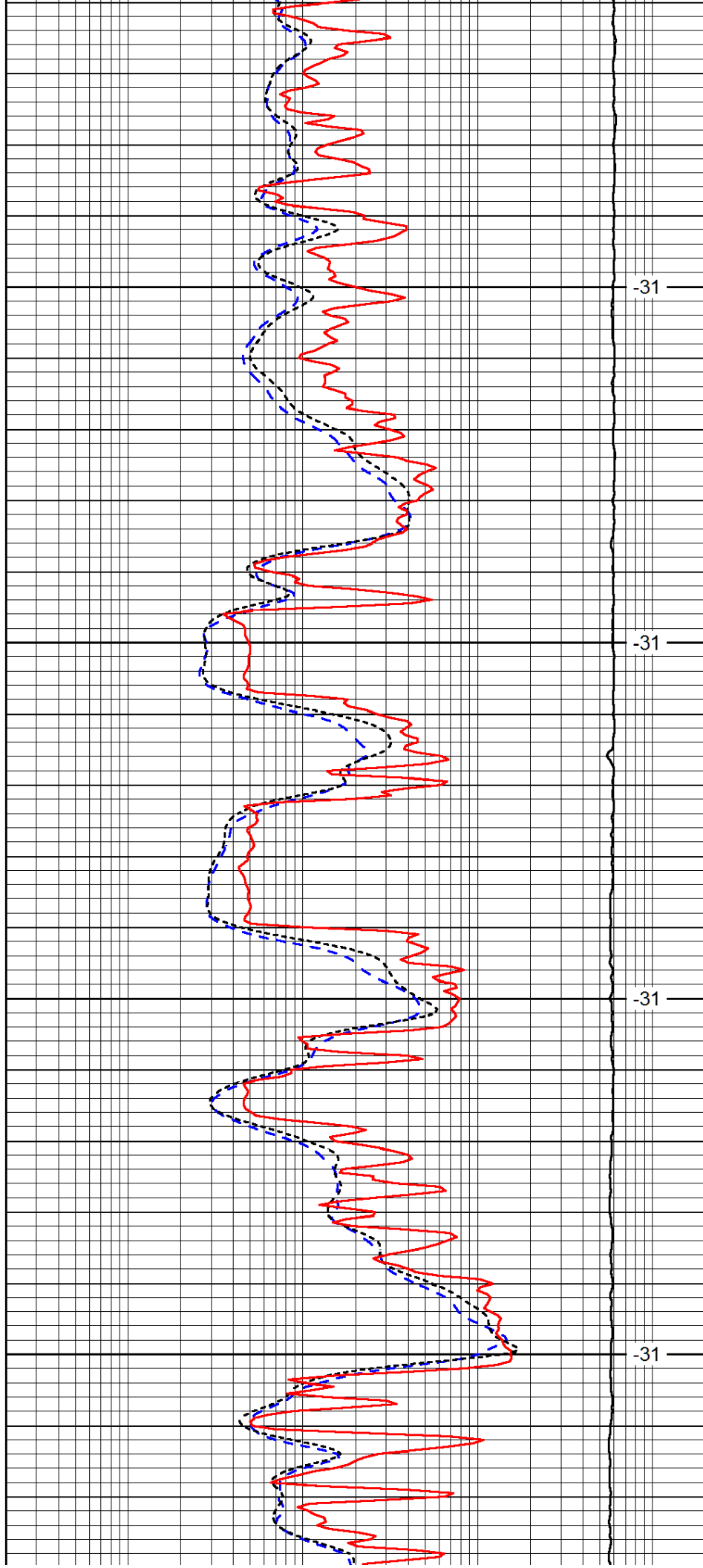


2900

2950

3000

3050

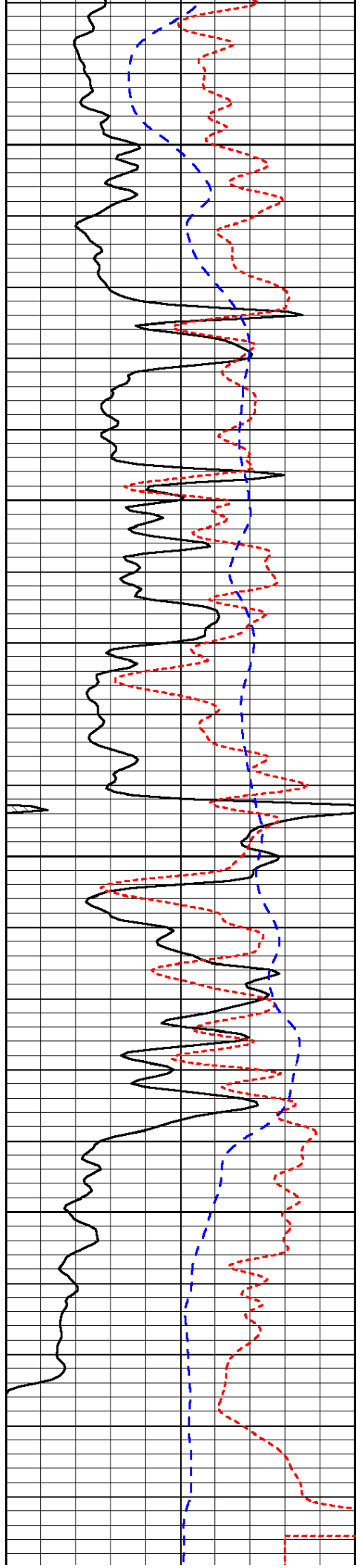


-31

-31

-31

-31



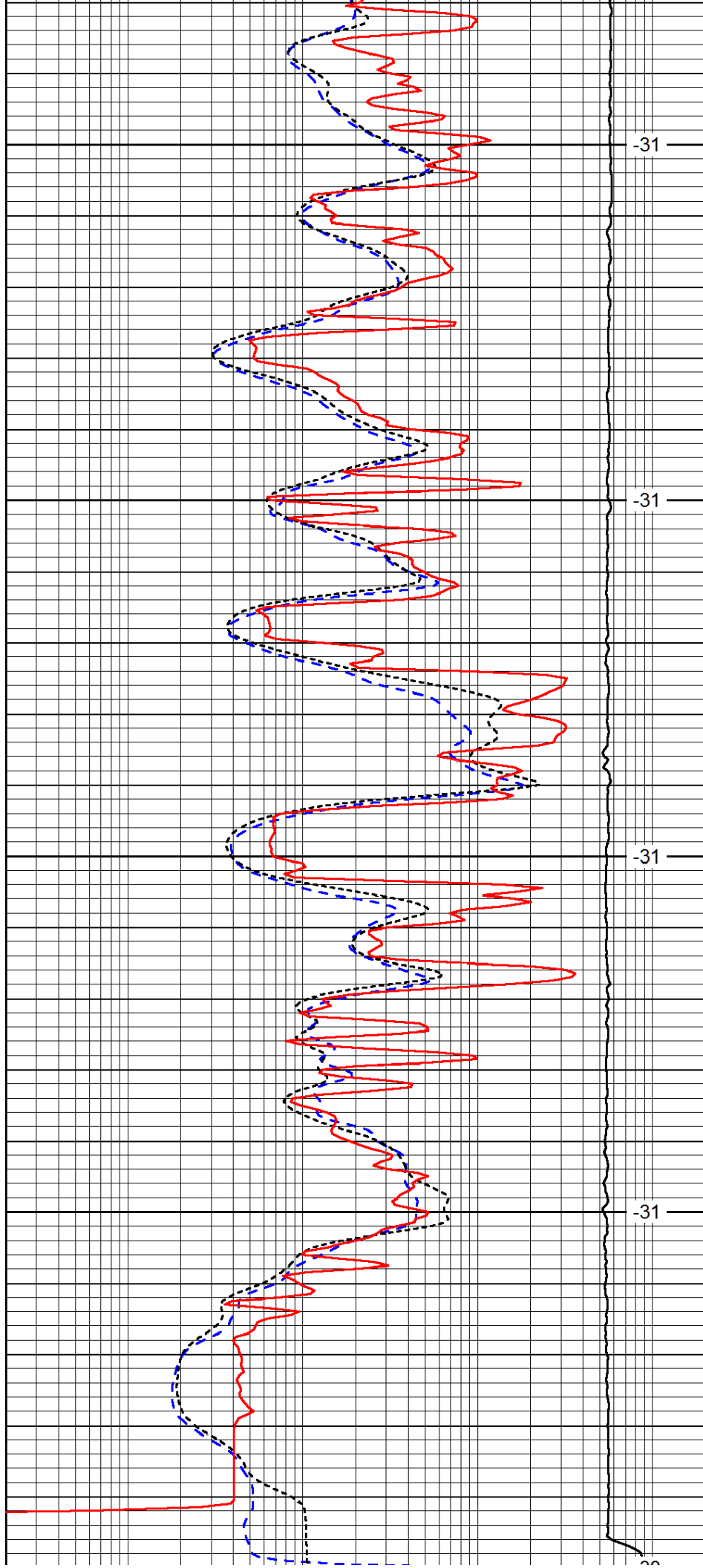
3100

3150

3200

3250

3300



-31

-31

-31

-31

3300

0	Gamma Ray (GAPI)	150	3300	0.2	Deep Resistivity (Ohm-m)	2000
-160	RXO/RT	40		0.2	Medium Resistivity (Ohm-m)	2000
-200	SP (mV)	0		0.2	Shallow Resistivity (Ohm-m)	2000
				10000	Line Tension (lb)	0
						LSPD (ft/min)