



Pioneer Energy Services

Dual Induction Log

API No.

15-051-26729-00-00

Company TDI, Inc.

Well Zimmerman Unit #2

Field Schoenchen

County Ellis

State

Kansas

Location

NW NE SE NE
1480' FNL / 430' FEL

Sec: 22

Twp: 15S

Rge: 18W

Elevation

Permanent Datum Ground Level
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing
Elevation 2008
10 Ft. Above Perm. DatumK.B. 2018
D.F.
G.L. 2008

Date

9/14/2014

Run Number

One

Depth Driller

3760

Depth Logger

3756

Bottom Logged Interval

3755

Top Log Interval

1150

Casing Driller

8.625 @ 1181

Casing Logger

1175

Bit Size

7.875

Type Fluid in Hole

Chemical

Salinity, ppm CL

6600

Density / Viscosity

9.5

53

pH / Fluid Loss

10.0

9.2

Source of Sample

Flowline

Rm @ Meas. Temp

0.85 @ 68

Rmf @ Meas. Temp

0.64 @ 68

Rmc @ Meas. Temp

1.15 @ 68

Source of Rmf / Rmc

Charts

Rm @ BHT

0.51 @ 114

Operating Rig Time

3 Hours

Max Rec. Temp. F

114

Equipment Number

15

Location

Hays

Recorded By

R. Barnhart

Witnessed By

Herb Deines

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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

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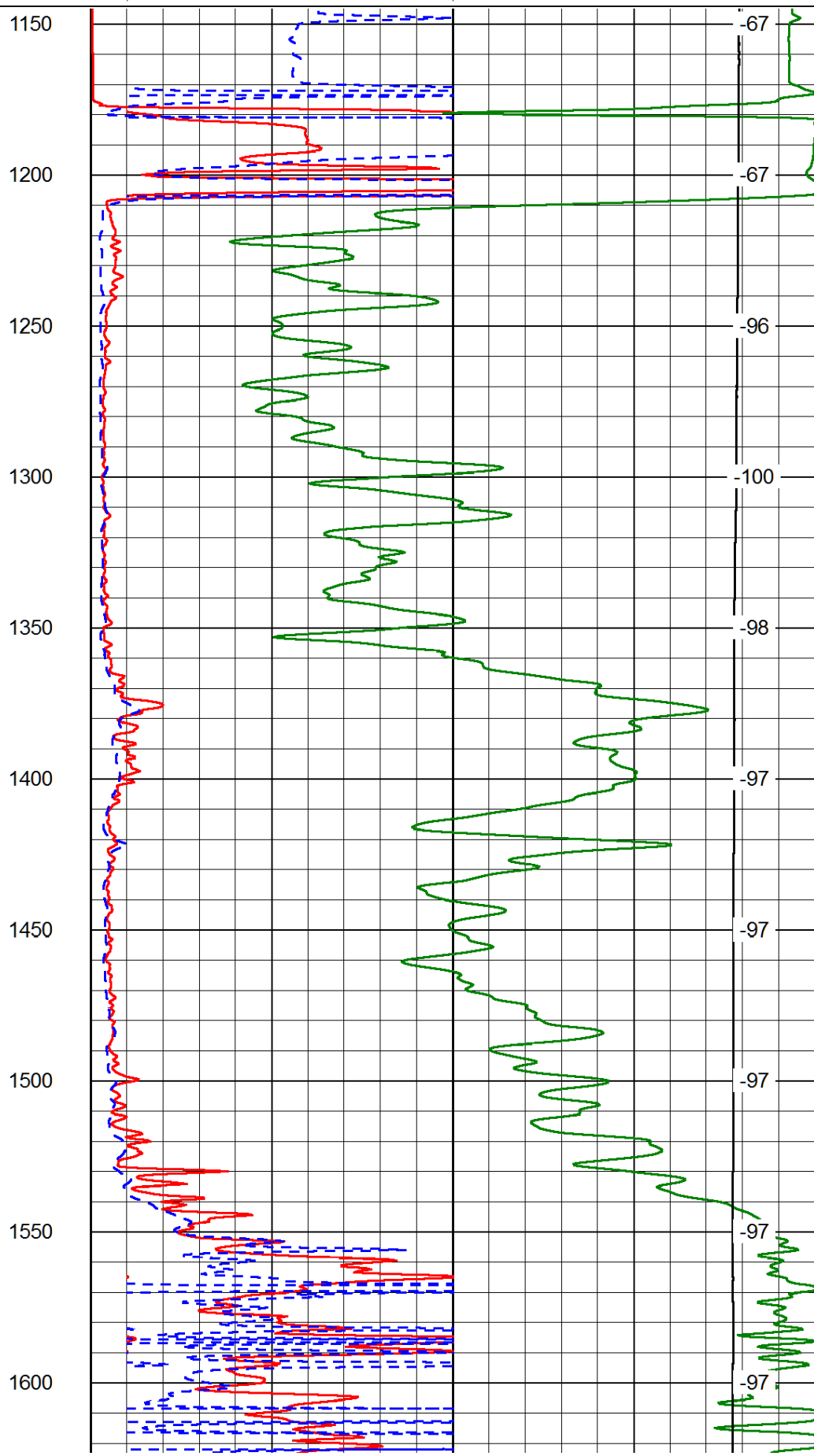
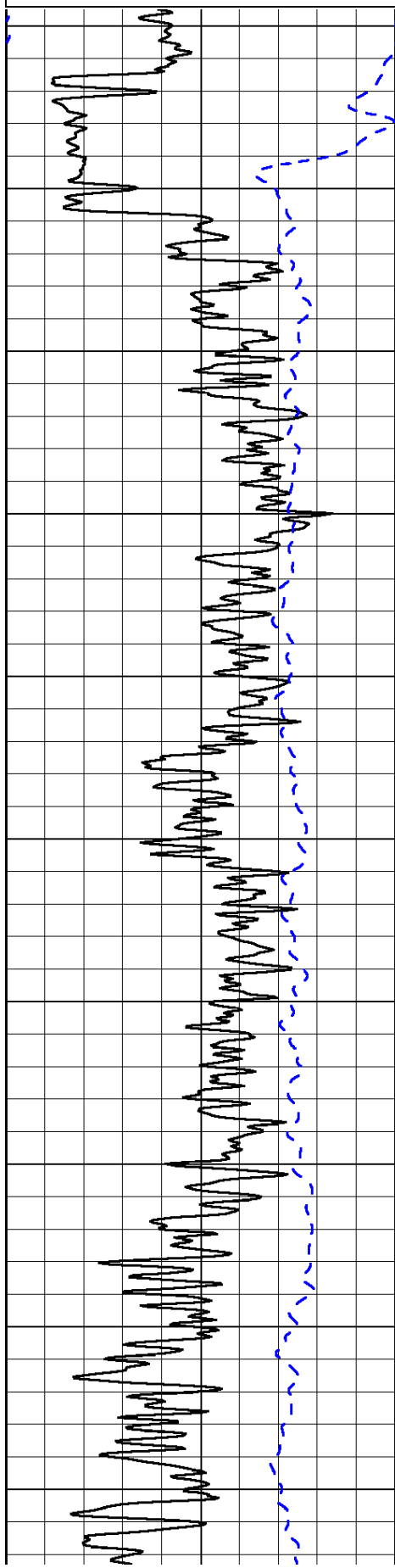
Hays, KS:
S to Mack Dealer: 1E, 1/2S, W into

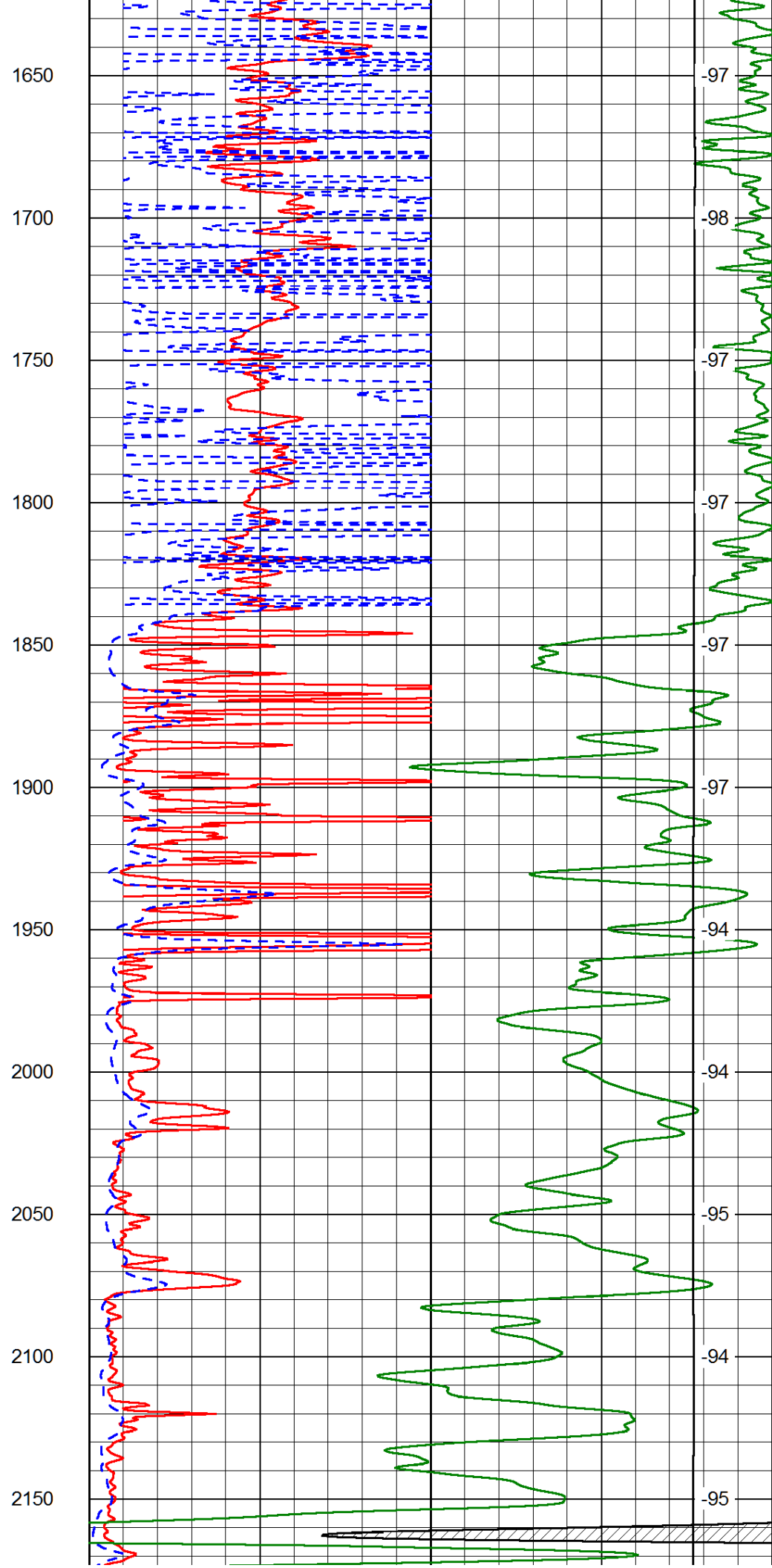
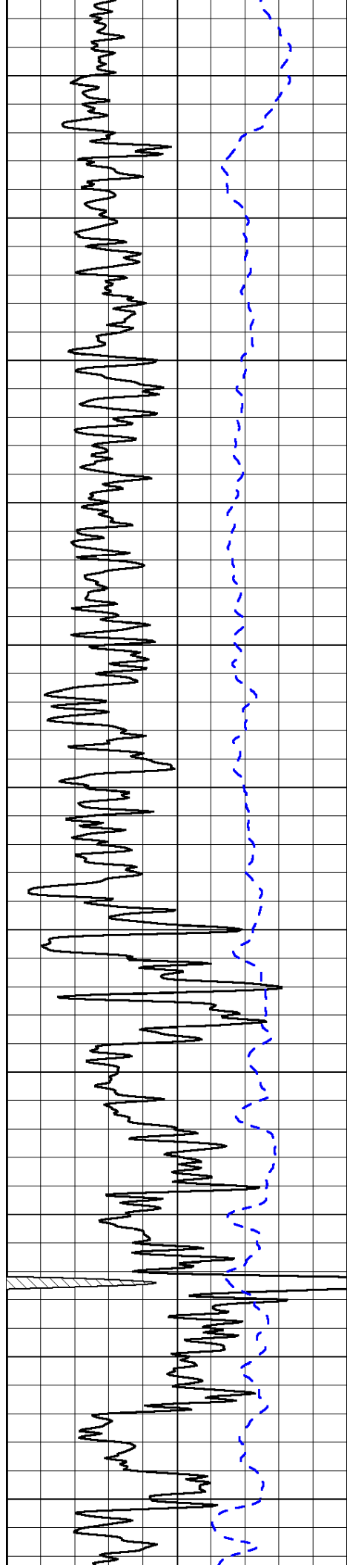
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Presentation Format: dil2in
Dataset Creation: Sun Sep 14 17:23:22 2014
Charted by: Depth in Feet scaled 1:600

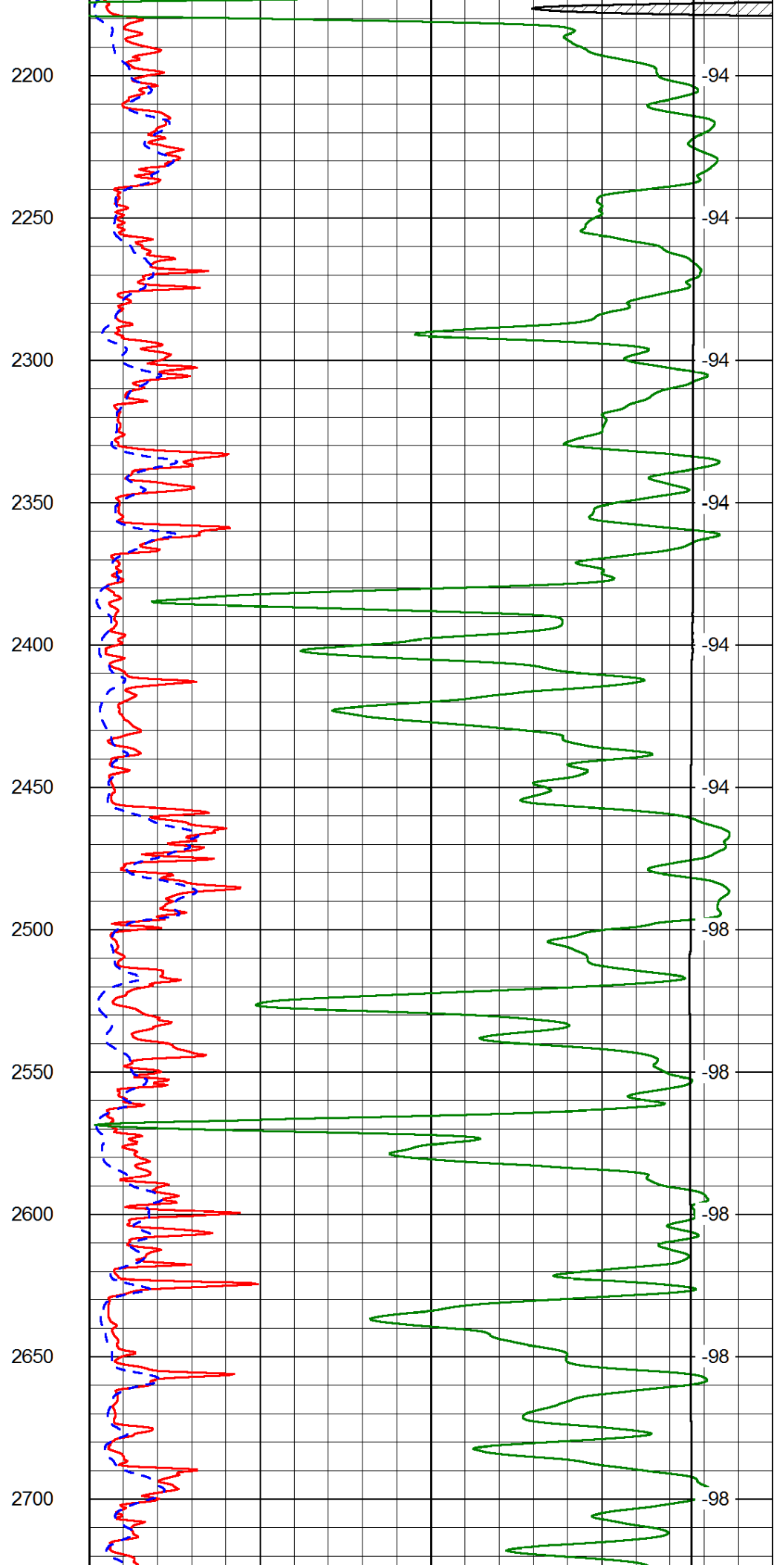
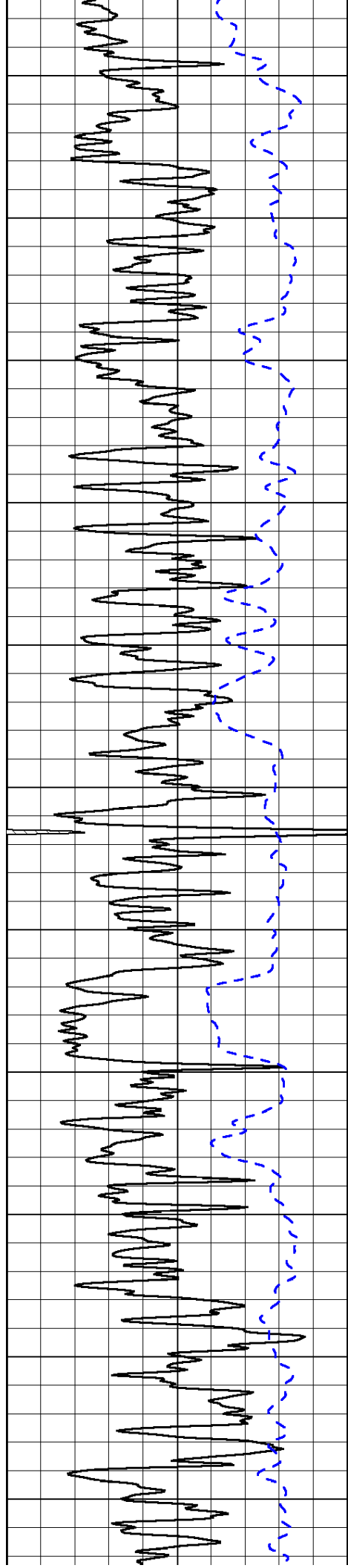
0	Gamma Ray	150
-200	SP (mV)	0

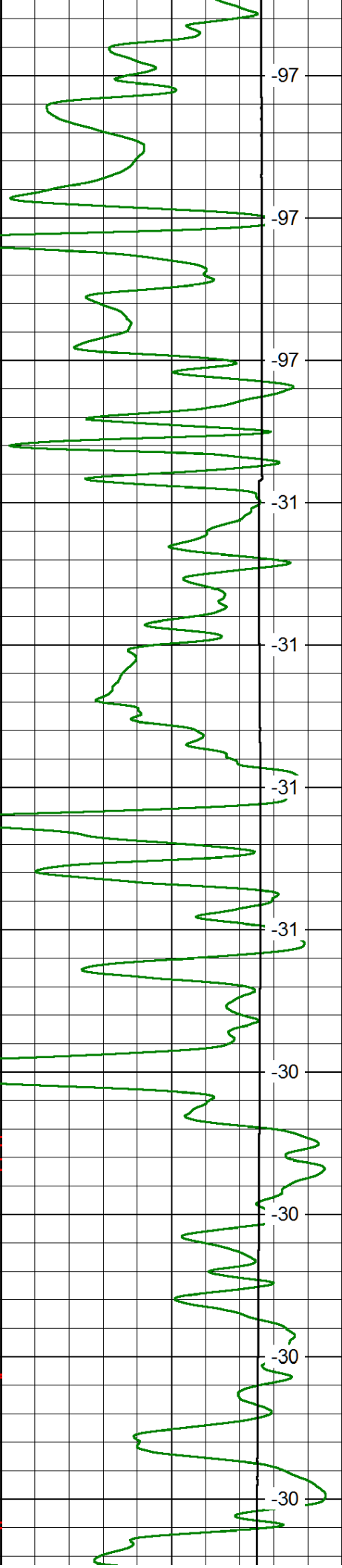
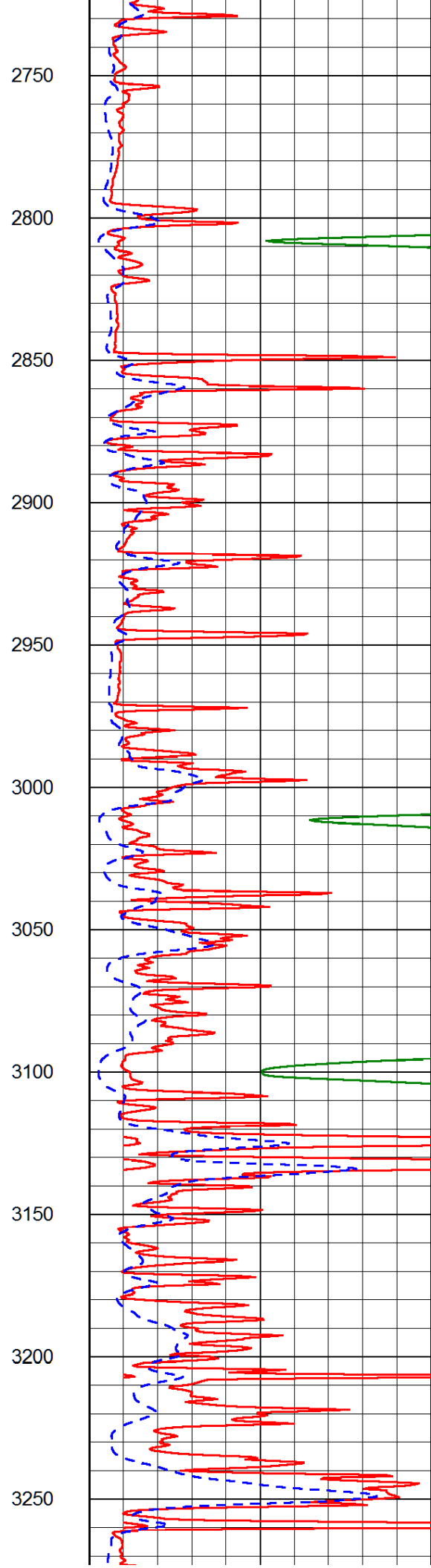
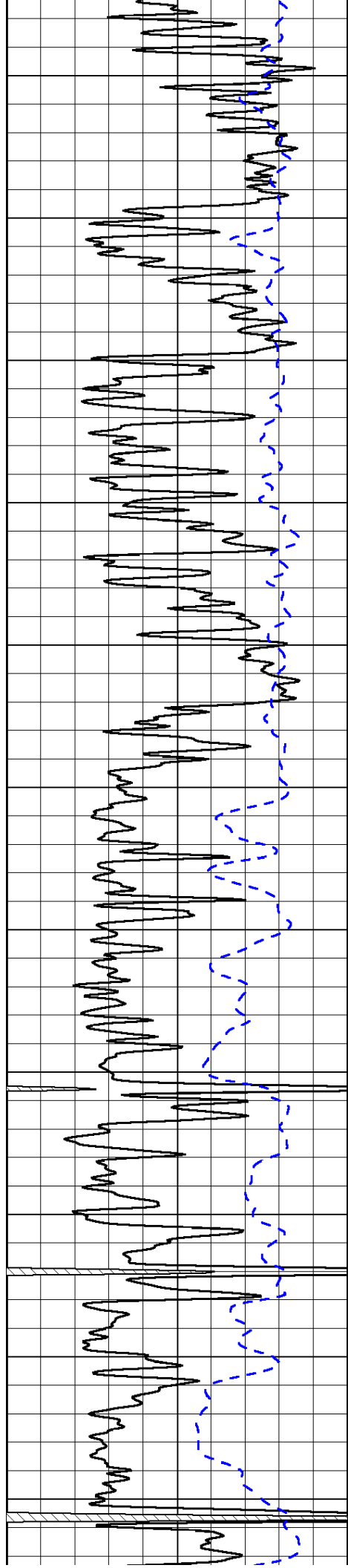
0	Shallow Resistivity	50
0	Deep Resistivity	50
1000	Conductivity	0
15000	Line Tension	0

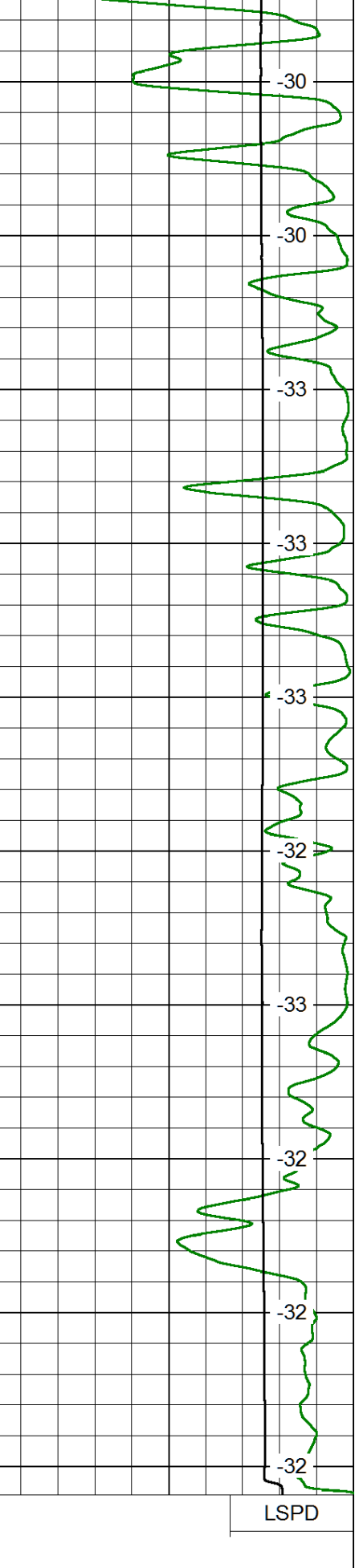
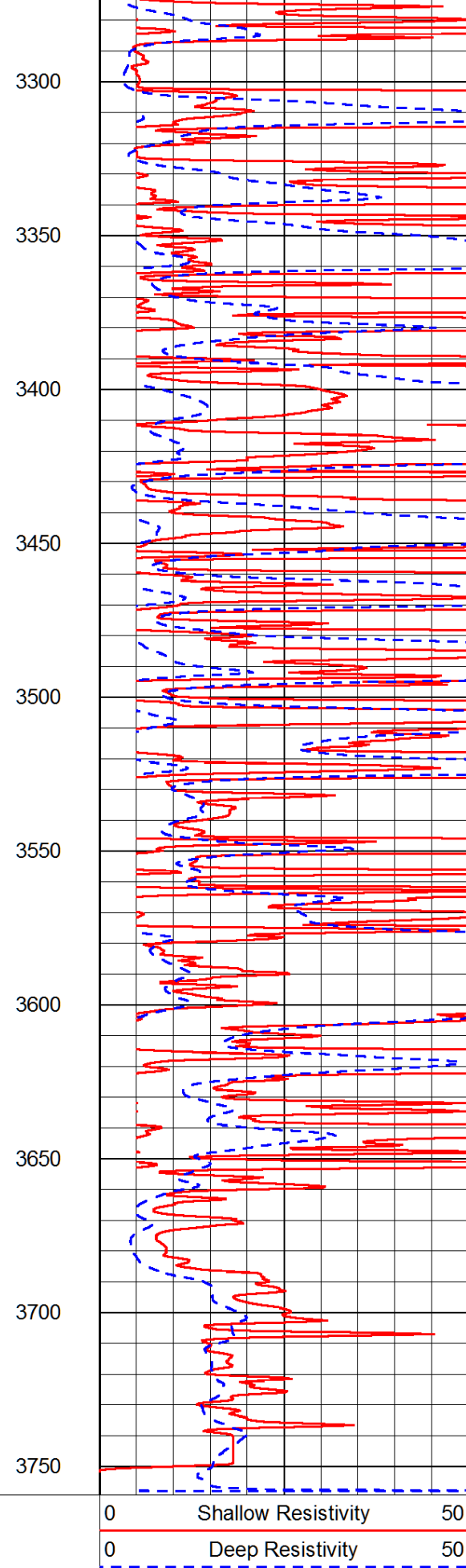
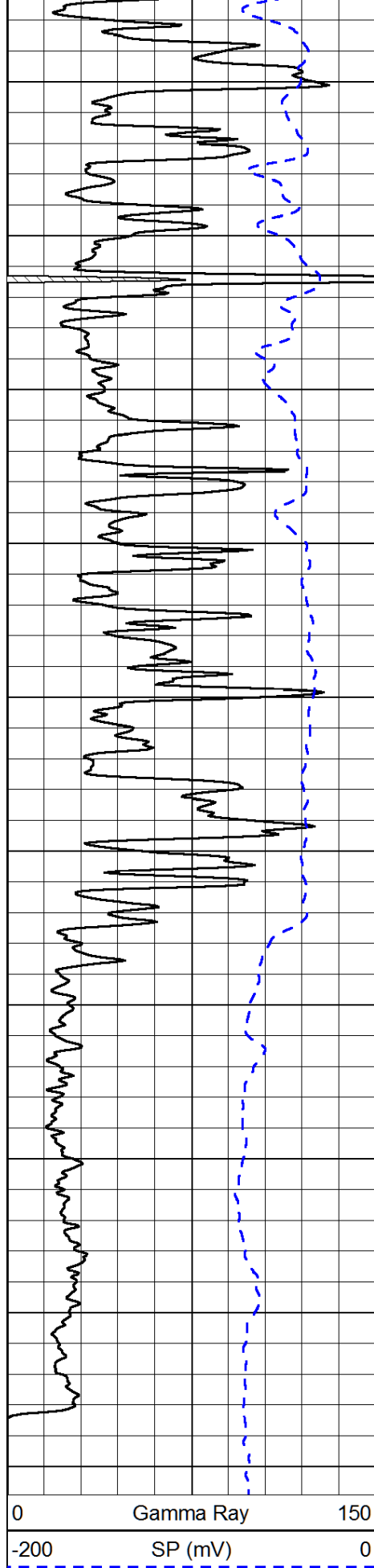
50	Shallow Resistivity	500
50	Deep Resistivity	500











0	Gamma Ray	150
-200	SP (mV)	0

0	Shallow Resistivity	50
0	Deep Resistivity	50

LSPD

1000	Conductivity	0
15000	Line Tension	0

50	Shallow Resistivity	500
50	Deep Resistivity	500

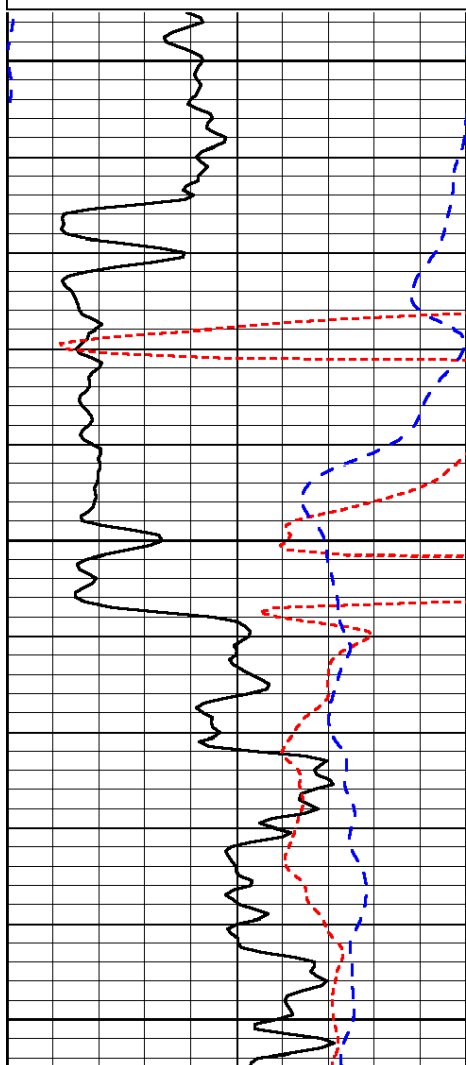
50 Deep Resistivity 500

Database File: tdihd.db
Dataset Pathname: dil/tdimain
Presentation Format: dil
Dataset Creation: Sun Sep 14 17:23:22 2014
Charted by: Depth in Feet scaled 1:240

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

0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
10000	Line Tension	0

LSPD

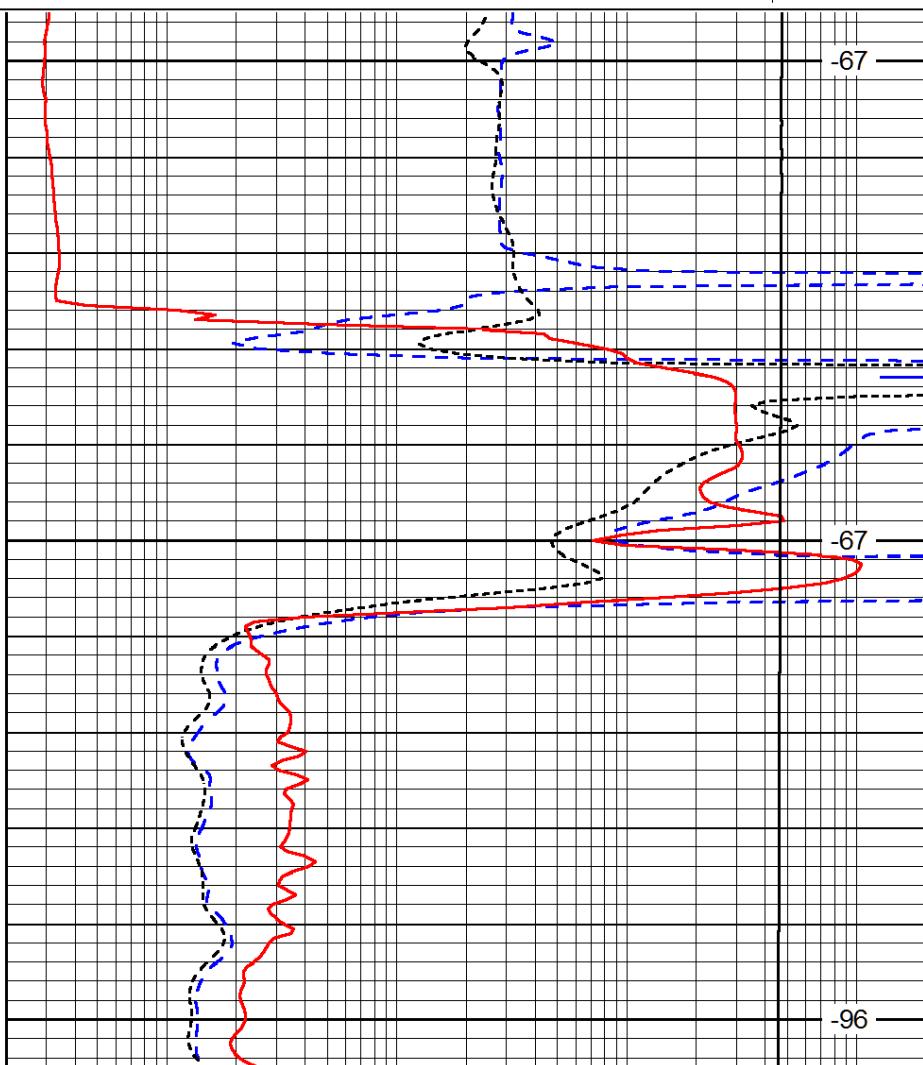


1150

1200

1250

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



-67

-67

-96

0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
10000	Line Tension	0

LSPD

Database File: tdihd.db
Dataset Pathname: dil/tdimain
Presentation Format: dil
Dataset Creation: Sun Sep 14 17:23:22 2014
Charted by: Depth in Feet scaled 1:240

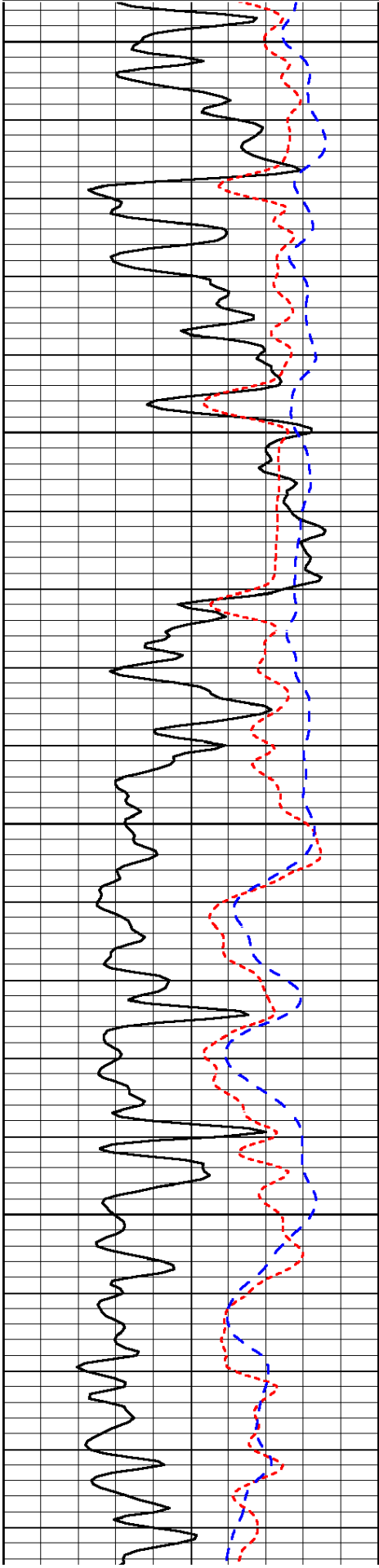
0	Gamma Ray	150
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0.2	Deep Resistivity	2000
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-160	RXO/RT	40
-200	SP (mV)	0

0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
10000	Line Tension	0

LSPD

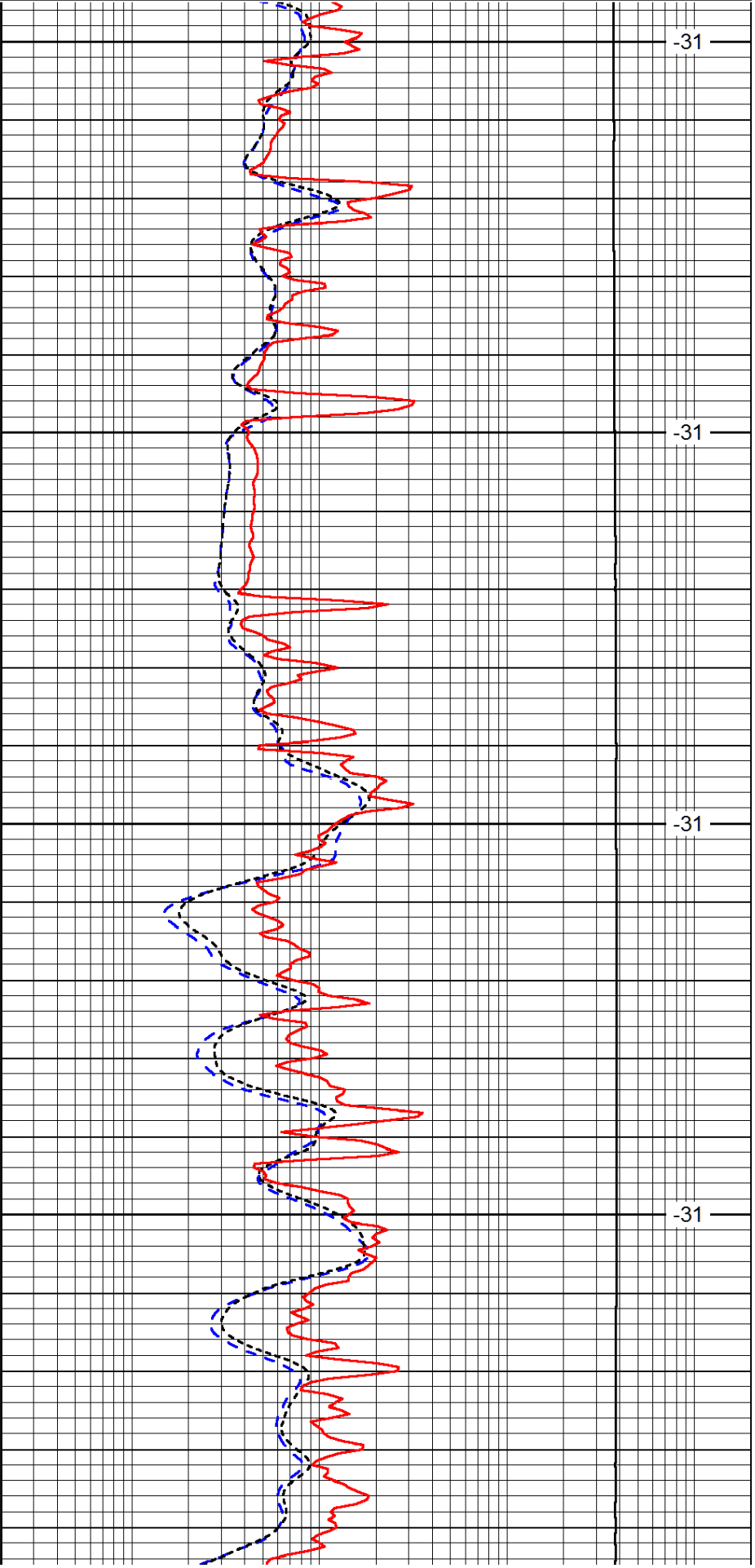


2900

2950

3000

3050

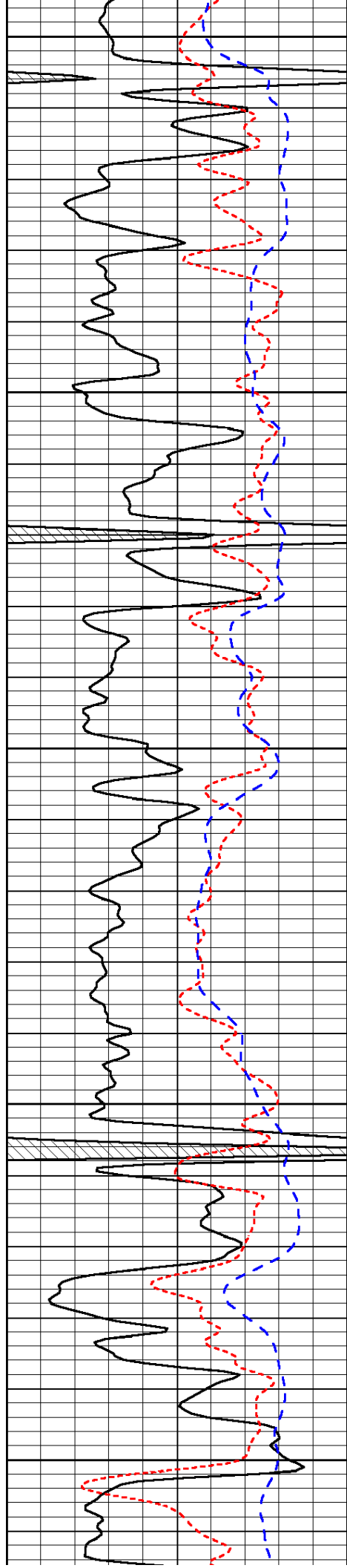


-31

-31

-31

-31



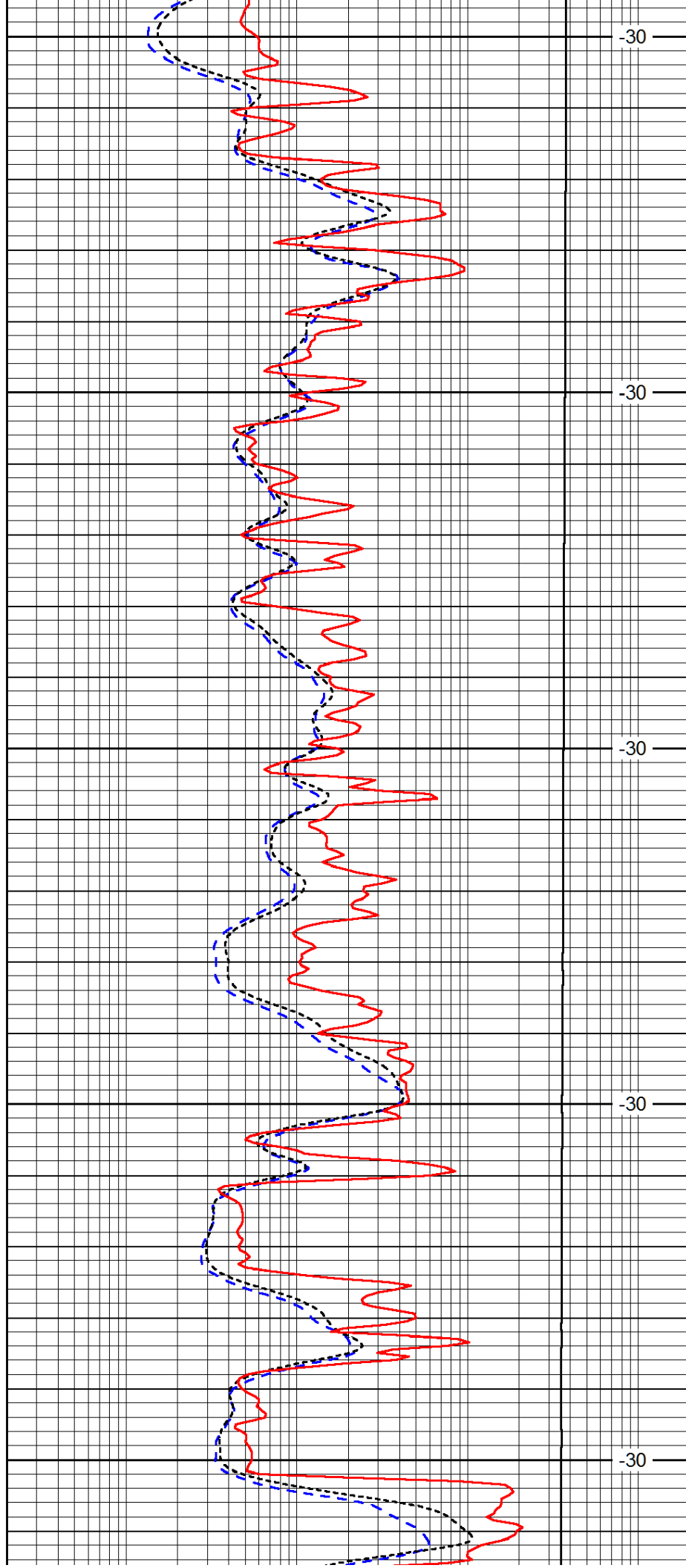
3100

3150

3200

3250

3300



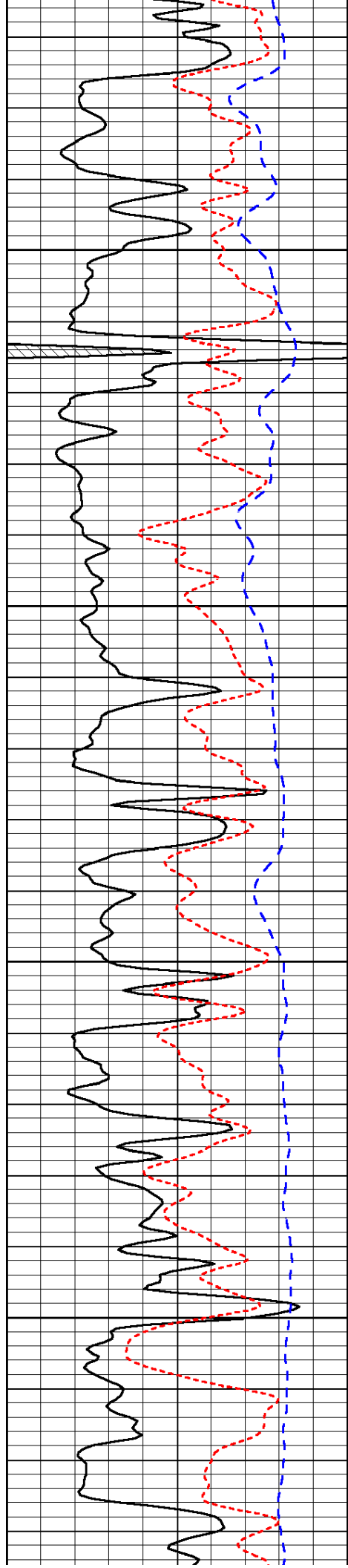
-30

-30

-30

-30

-30

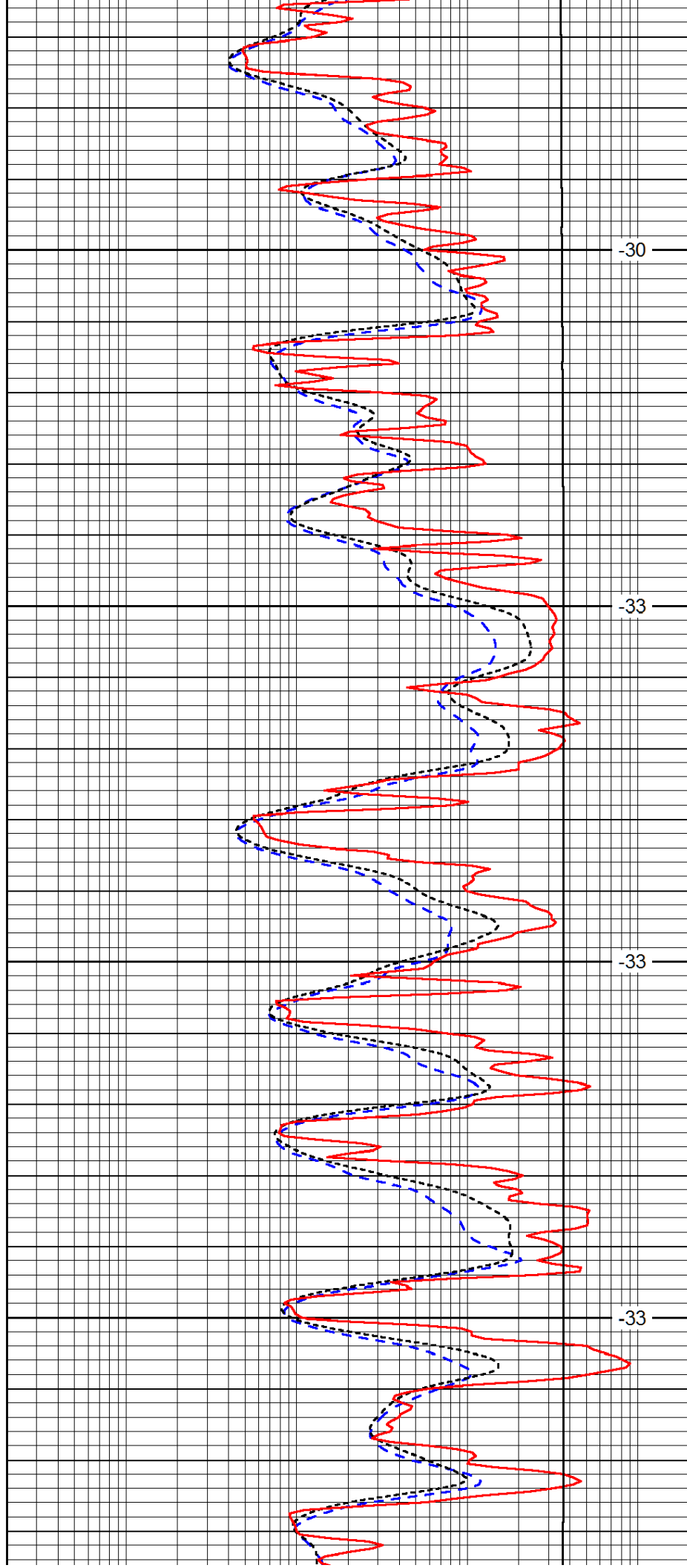


3350

3400

3450

3500

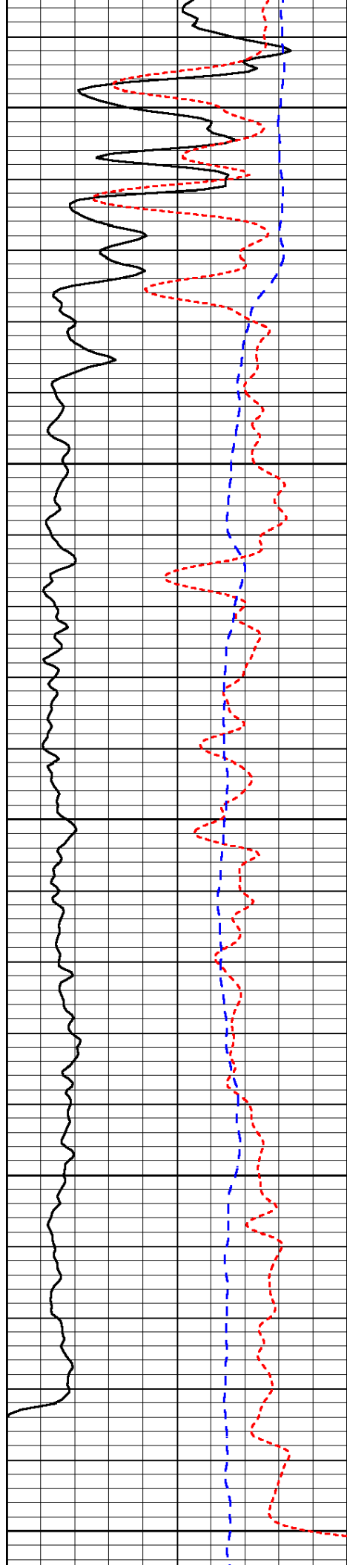


-30

-33

-33

-33



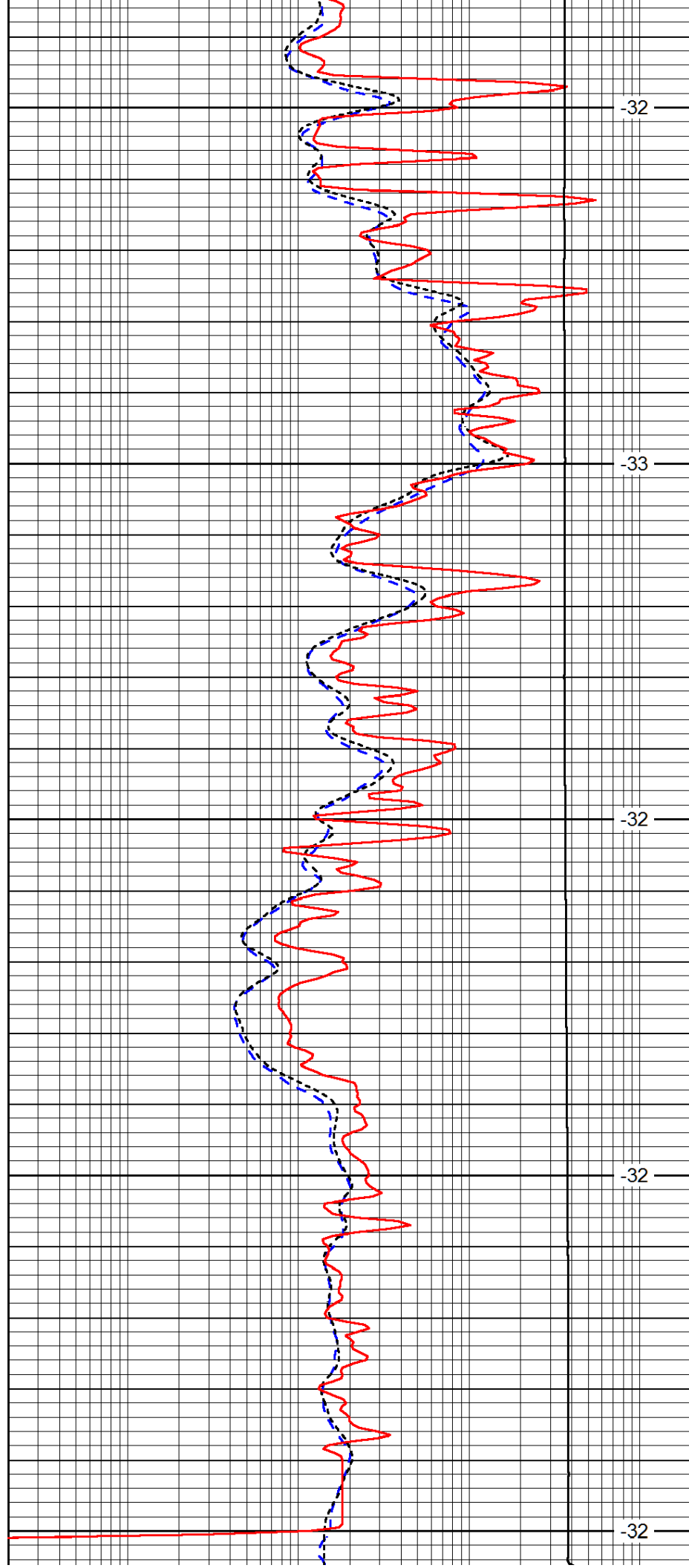
3550

3600

3650

3700

3750



-32

-33

-32

-32

-32

