



Dual Induction Log

Pioneer Energy Services

API No.

15-101-22432-00-00

Company Larson Engineering, Inc.

Well Harper-James #1-22

Field Wildcat

County Lane State

Kansas

Location 224' FNL & 1916' FWL

Other Services
CNL/CDL
MEL

Sec: 22 Twp: 18 S Rge: 29 W

Permanent Datum Ground Level Elevation 2796
Log Measured From Kelly Bushing 7 Ft. Above Perm. Datum
Drilling Measured From Kelly Bushing

Elevation
K.B. 2803
D.F. 2796
G.L. 2796

Date

4/15/2013

Run Number

One

Depth Driller

4630

Depth Logger

4632

Bottom Logged Interval

4631

Top Log Interval

250

Casing Driller

8.625 @ 283

Casing Logger

279

Bit Size

7.875

Type Fluid in Hole

Chemical

Salinity, ppm CL

2400

Density / Viscosity

9.6 53

pH / Fluid Loss

10.0 7.2

Source of Sample

Flowline

Rm @ Meas. Temp

0.78 @ 54

Rmf @ Meas. Temp

0.58 @ 54

Rmc @ Meas. Temp

1.05 @ 54

Source of Rmf / Rmc

Charts

Rm @ BHT

0.34 @ 124

Operating Rig Time

4 Hours

Max Rec. Temp. F

124

Equipment Number

91

Location

Hays

Recorded By

Y. Ruiz

Witnessed By

Vern Schrag

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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.

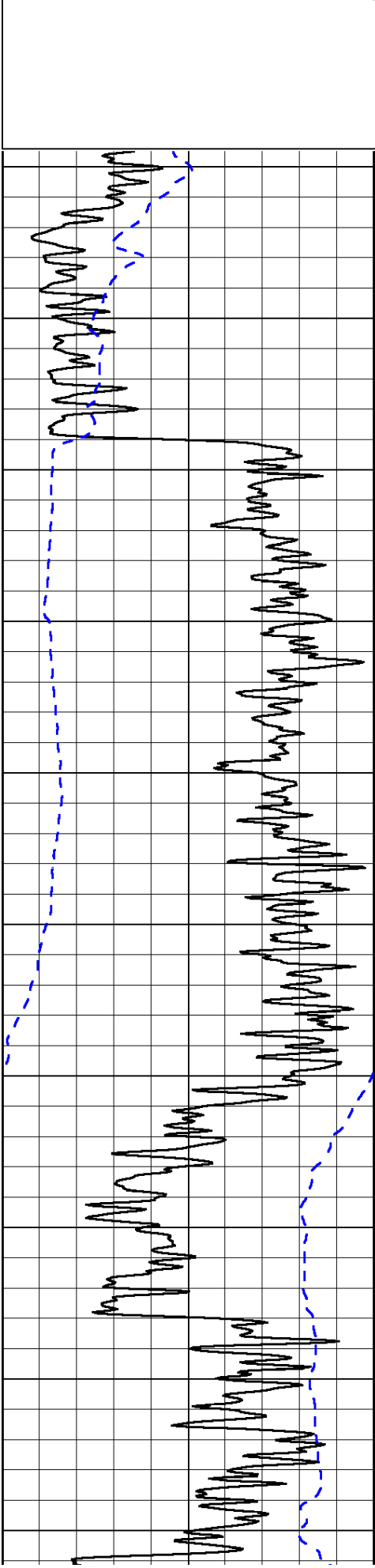
Comments

Thank you for using Pioneer Energy Services
www.pioneerres.com
785 625 3858
Dighton,
2 1/2 West,
South into

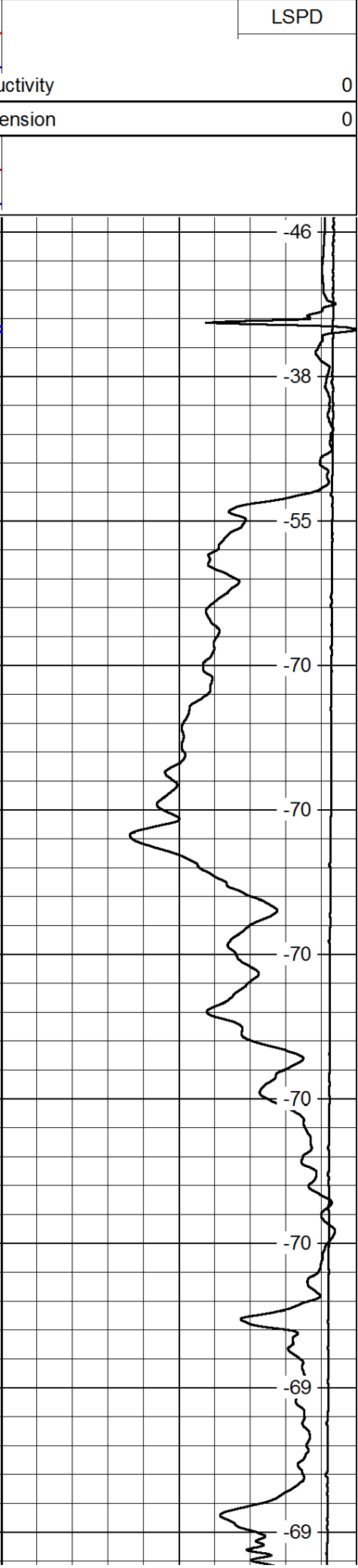
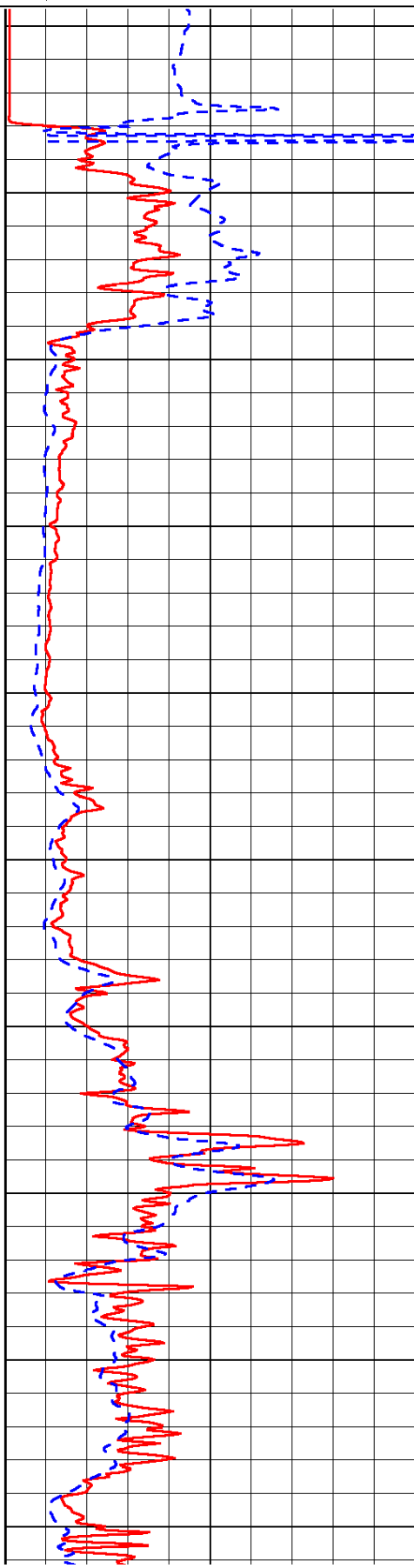
Database File: c:\warrior\data\larson_harper-james #1-22\larson_041513hd.db
Dataset Pathname: dil\larstk
Presentation Format: dil2in
Dataset Creation: Mon Apr 15 22:54:16 2013
Charted by: Depth in Feet scaled 1:600

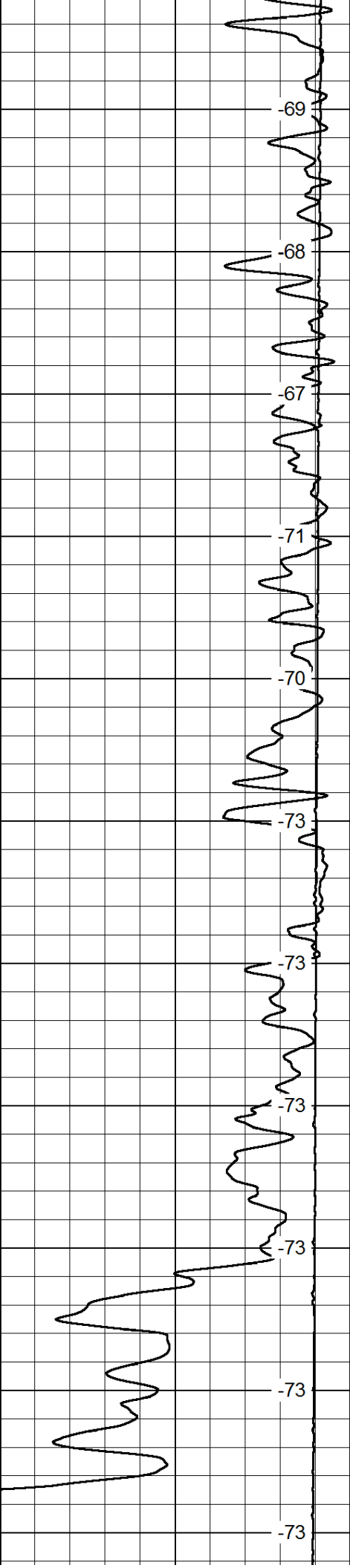
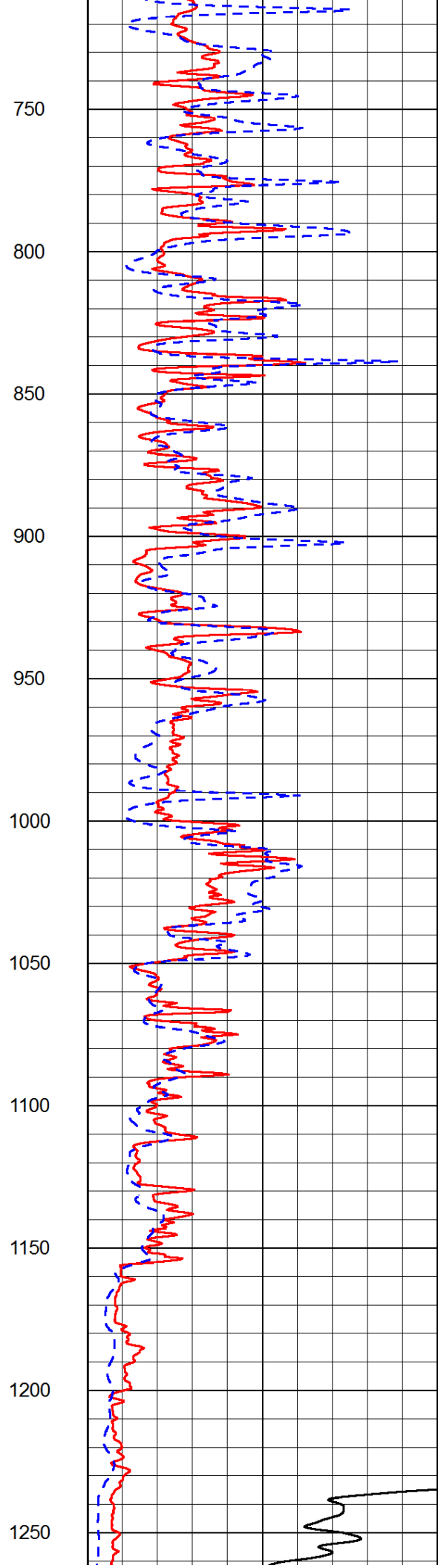
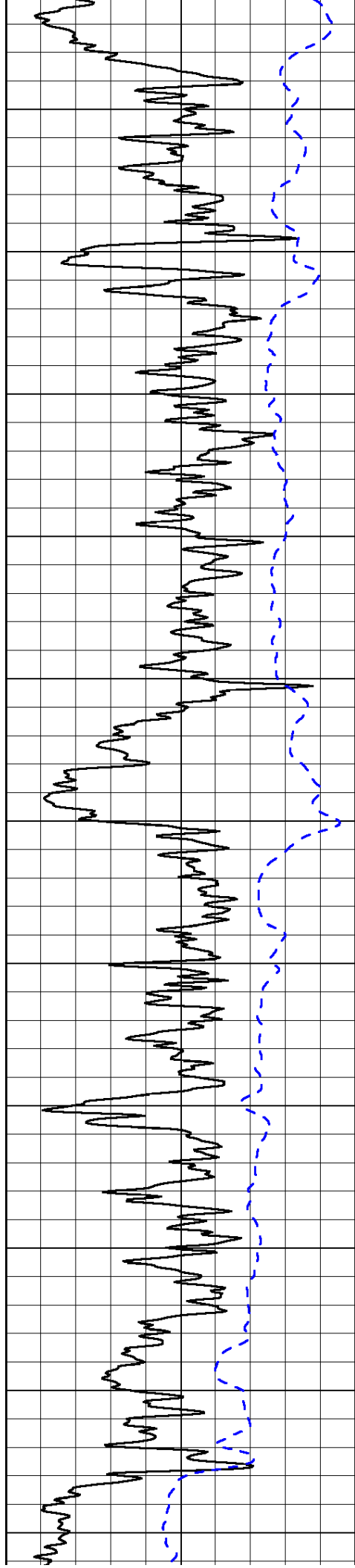
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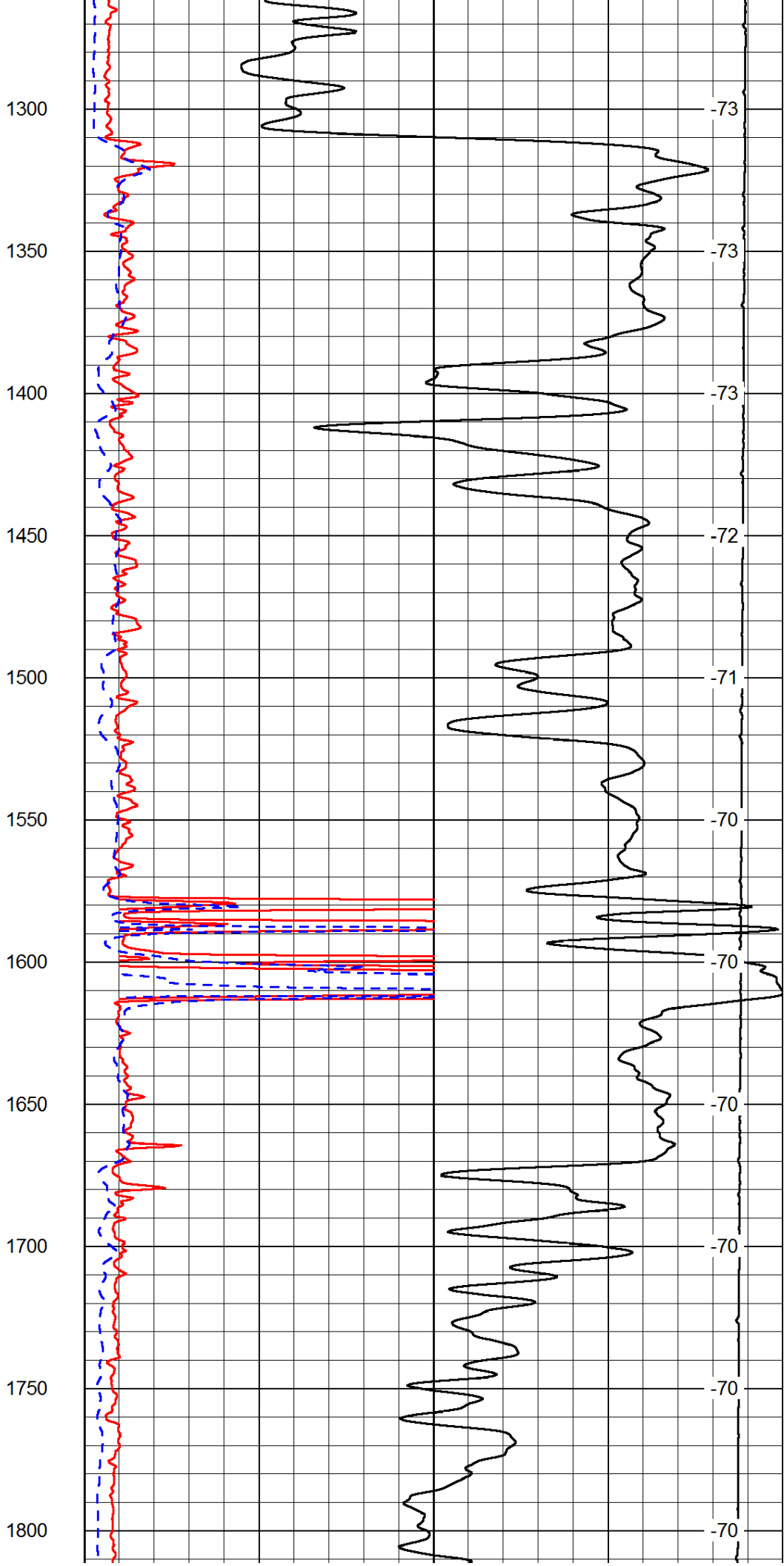
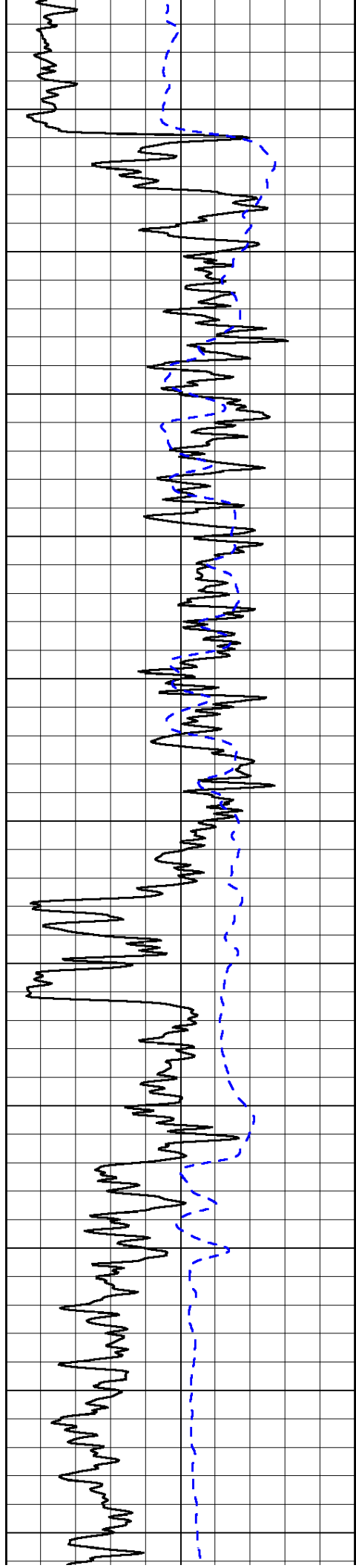
0	Gamma Ray	150
-200	SP (mV)	0

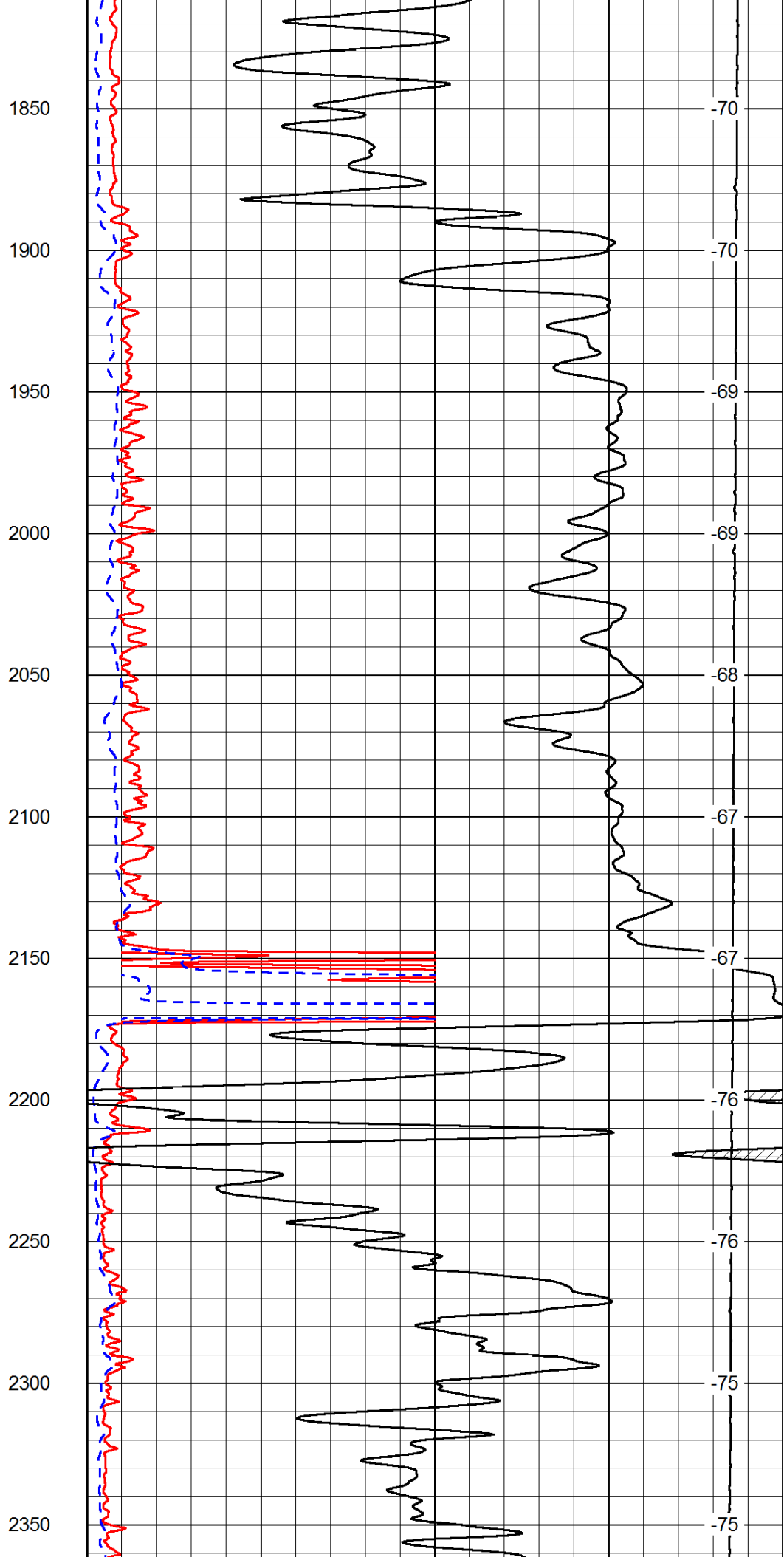
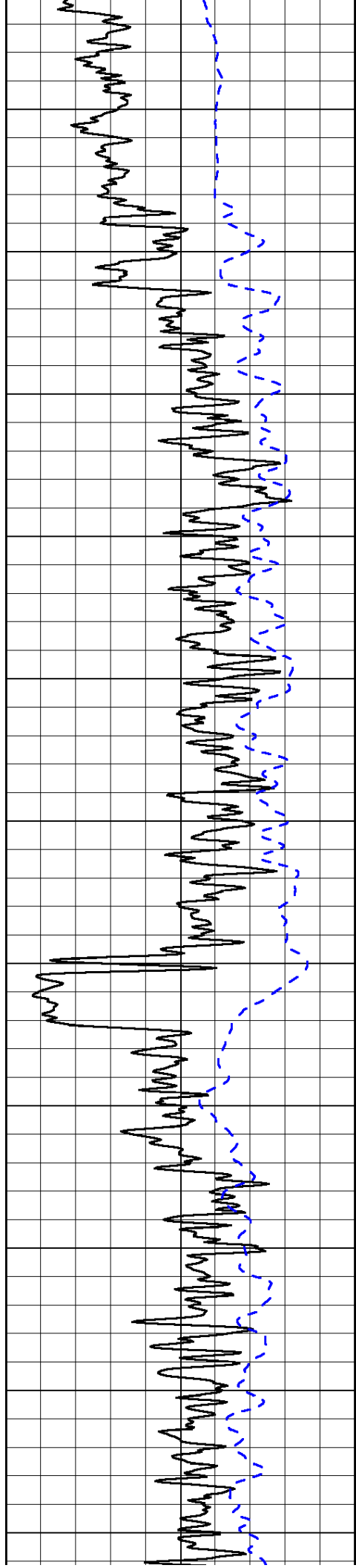


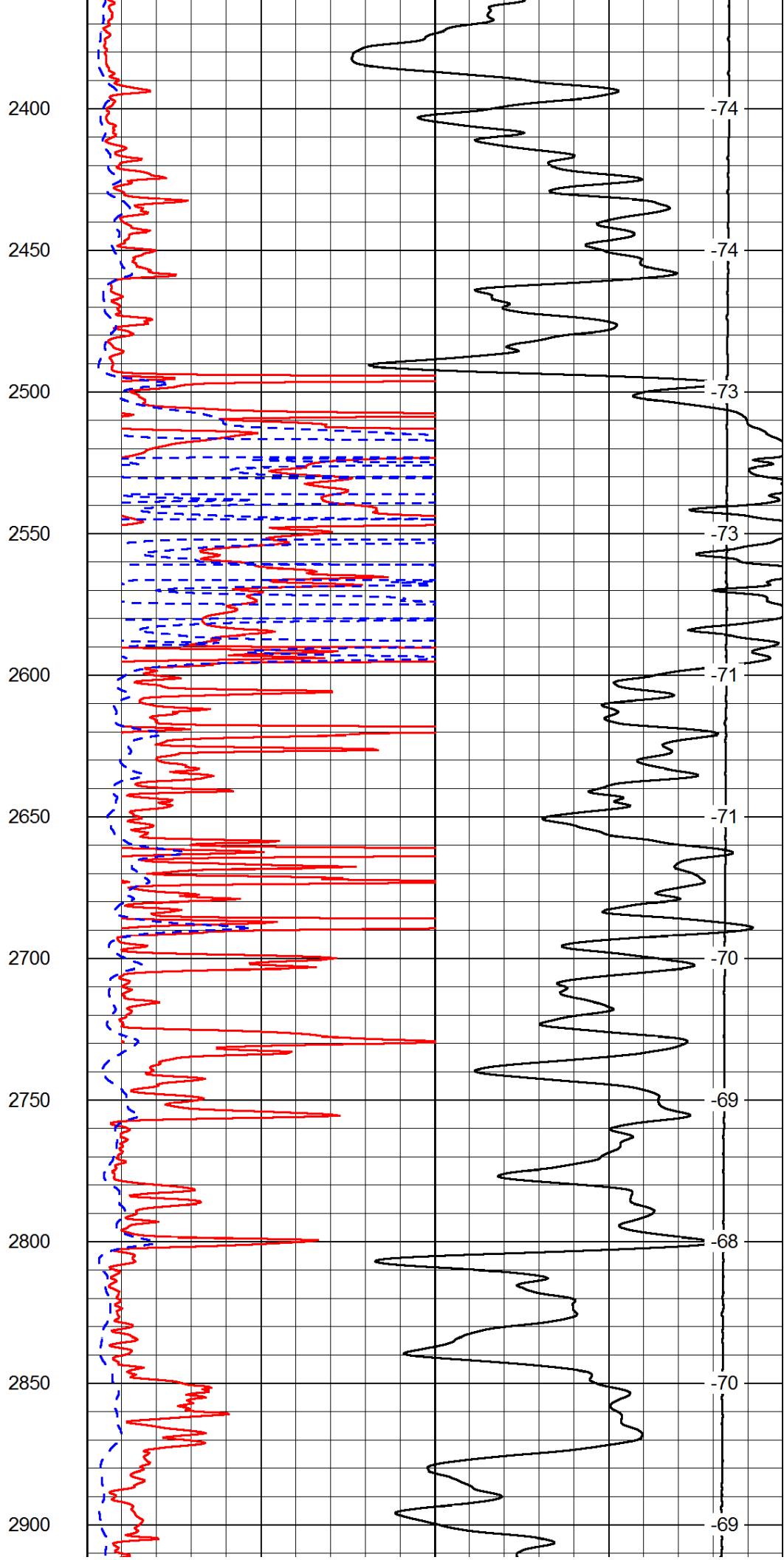
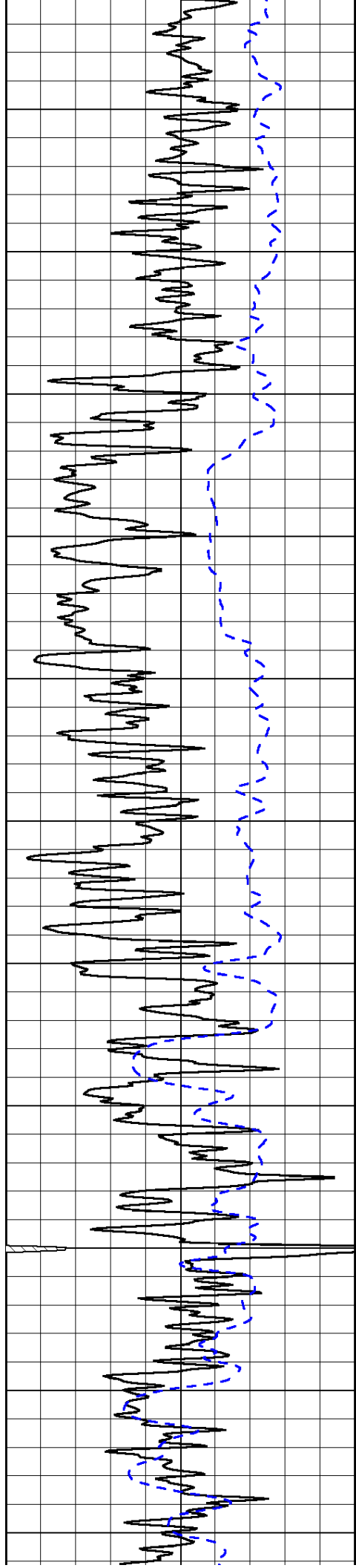
0	Shallow Resistivity	50
0	Deep Resistivity	50
1000	Conductivity	0
15000	Line Tension	0
50	Shallow Resistivity	500
50	Deep Resistivity	500

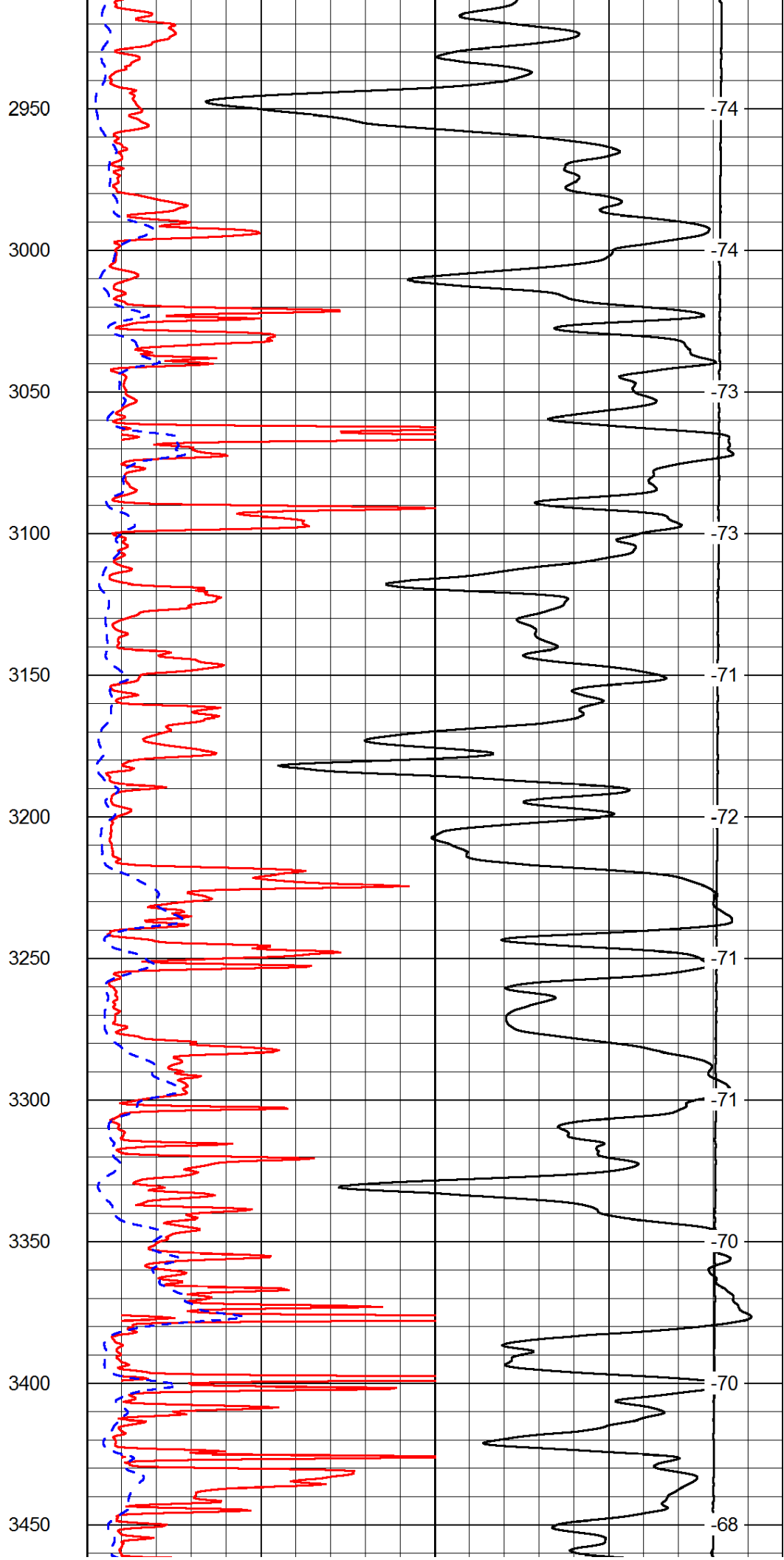
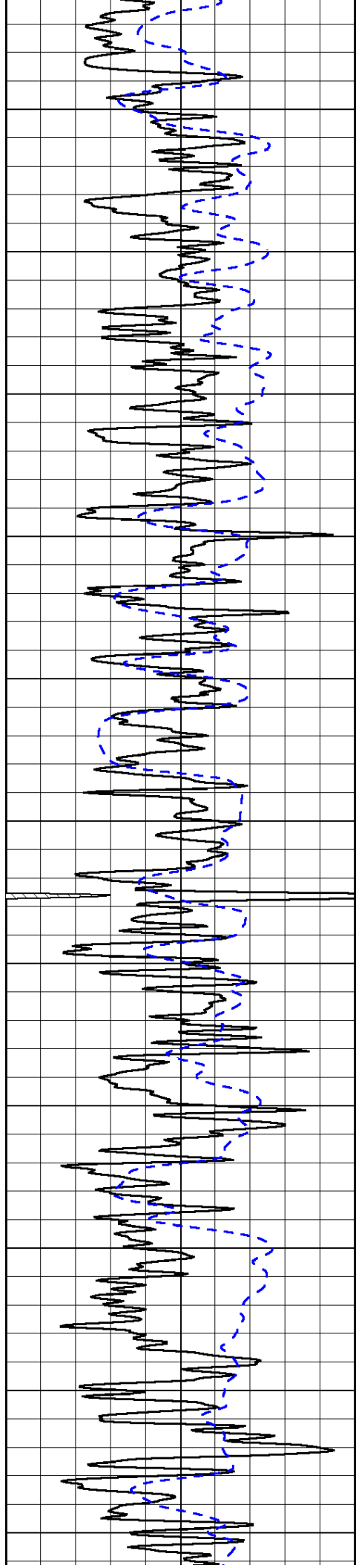


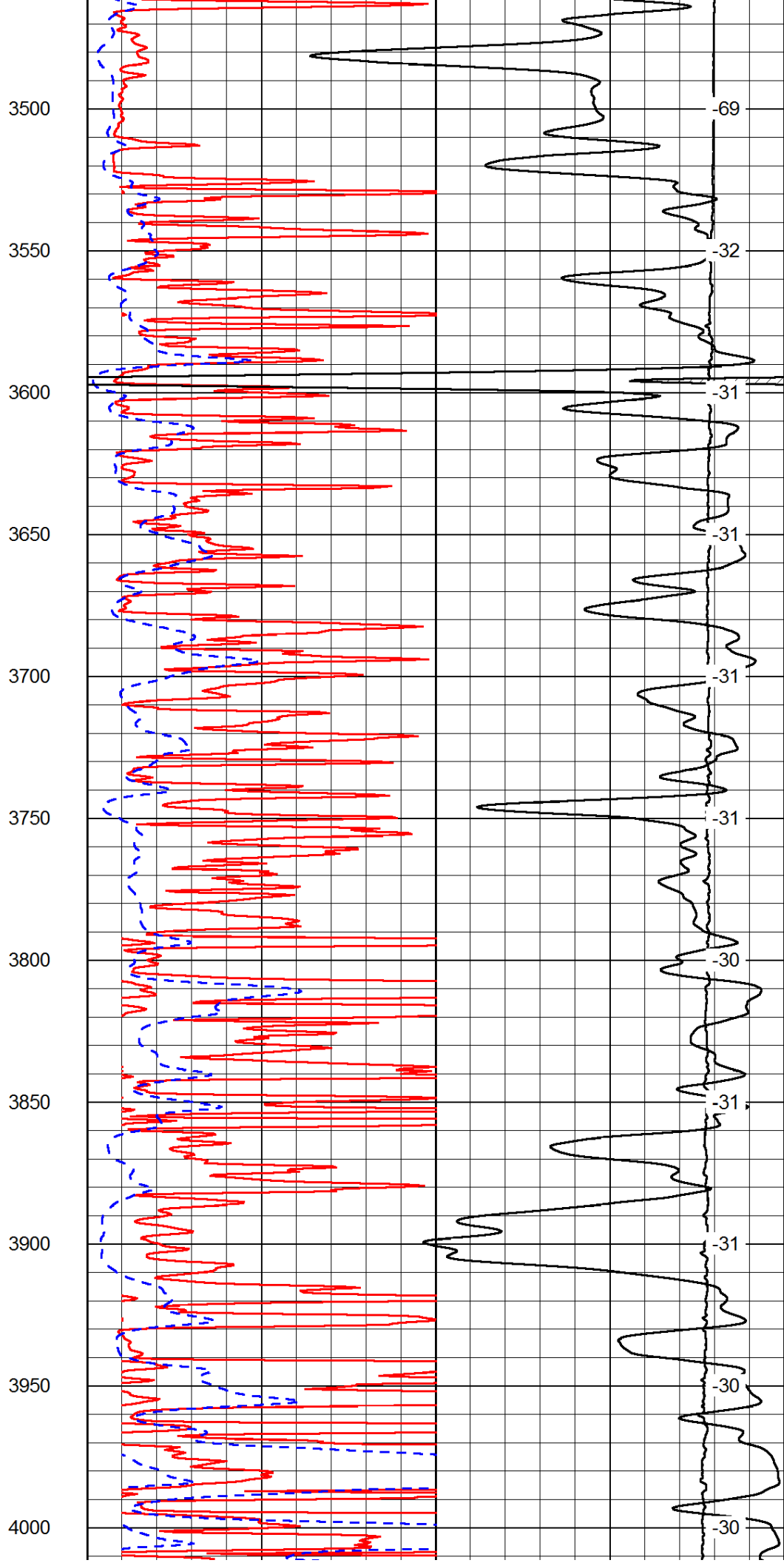
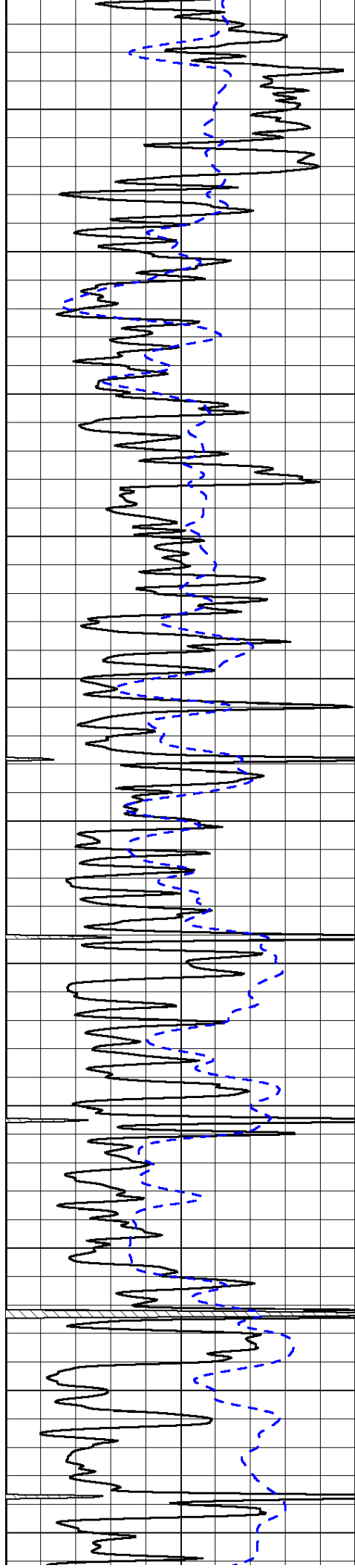


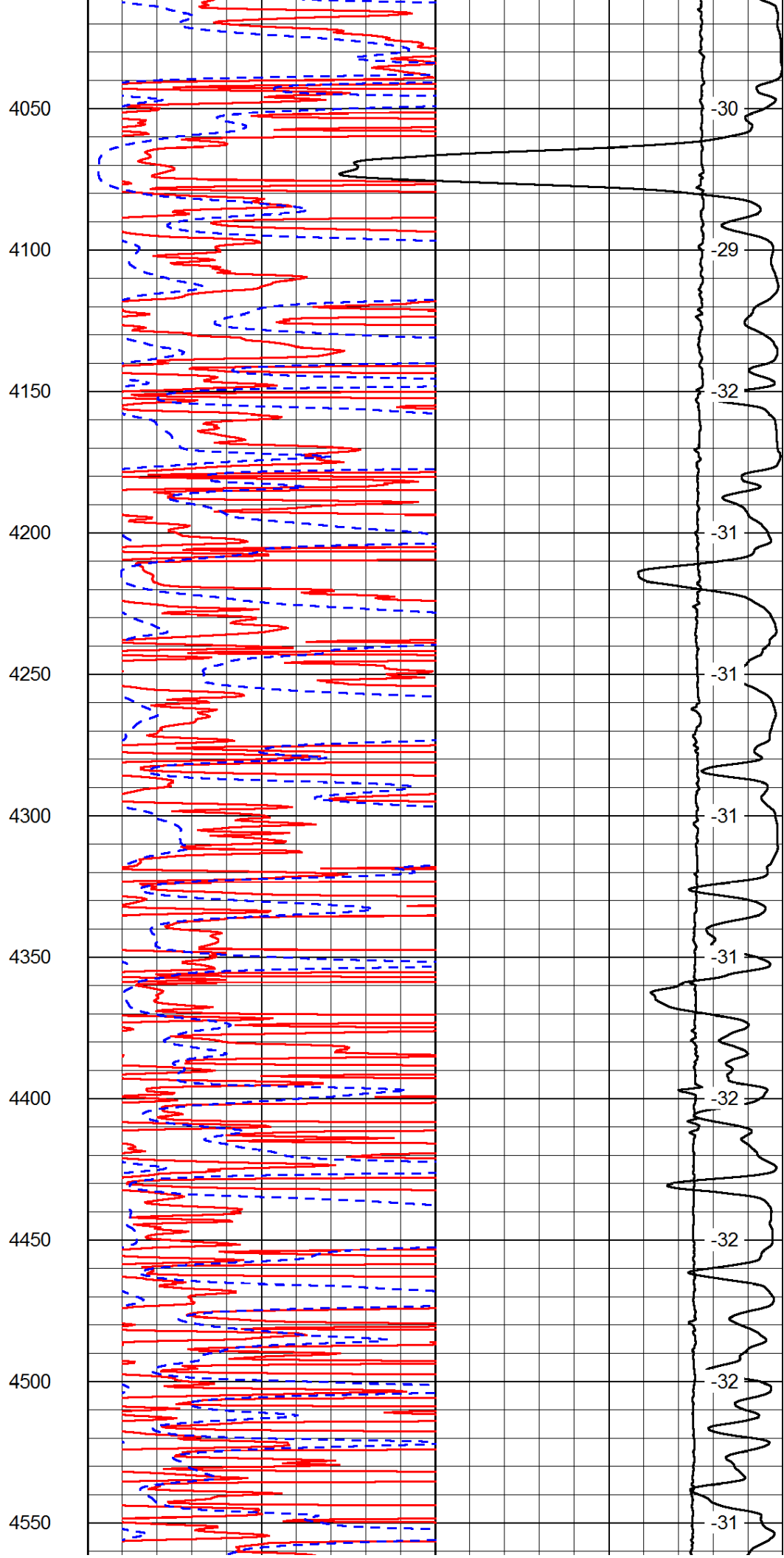
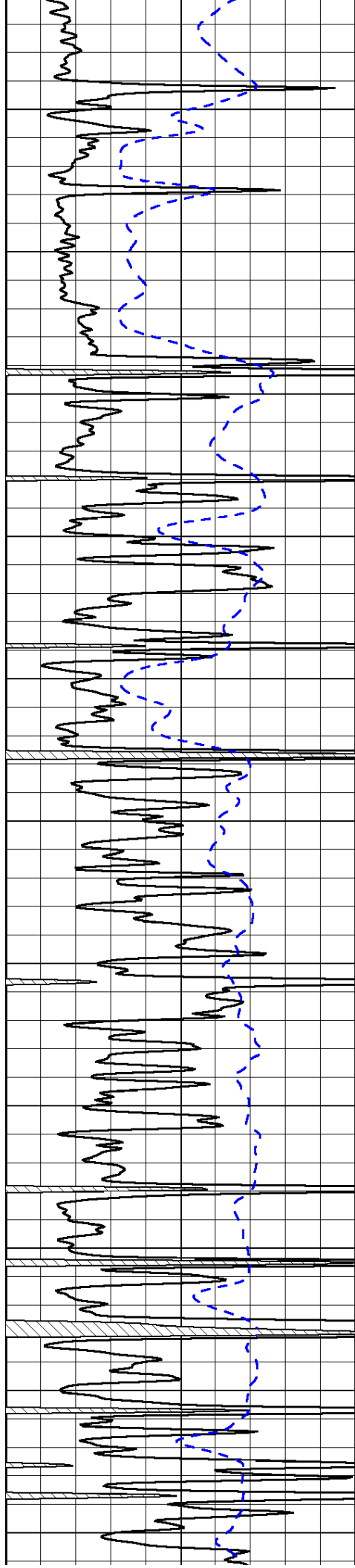


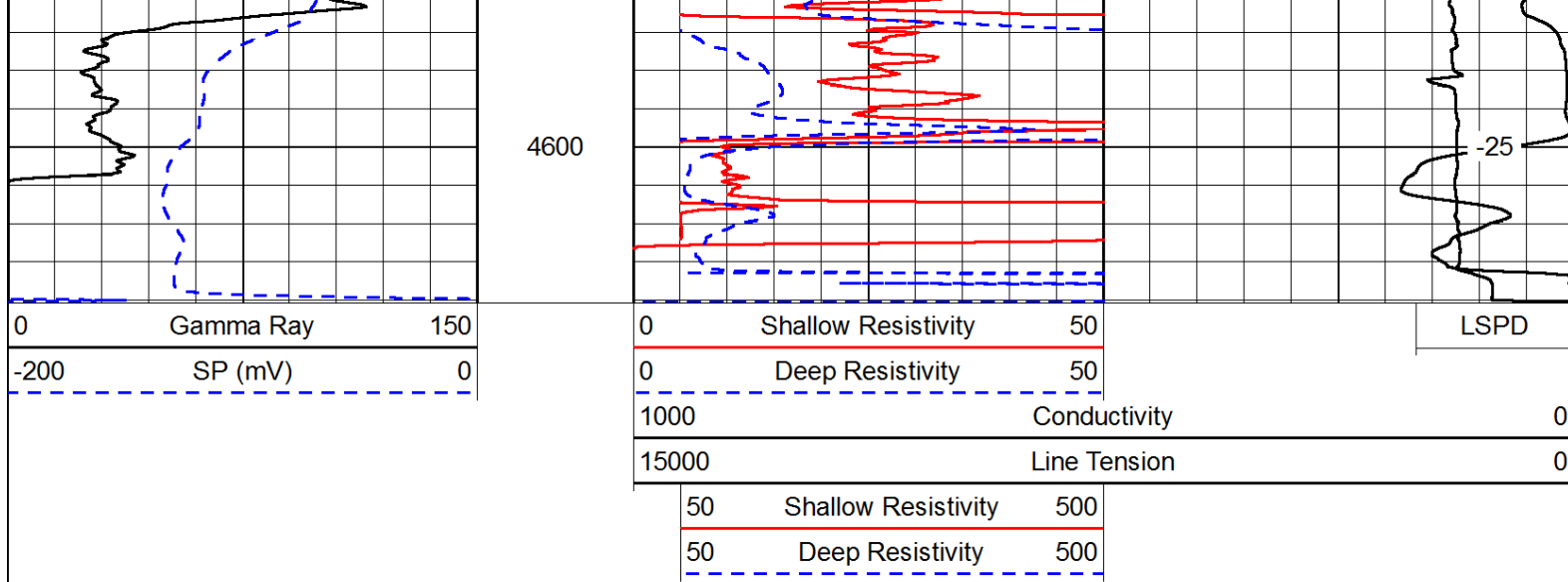




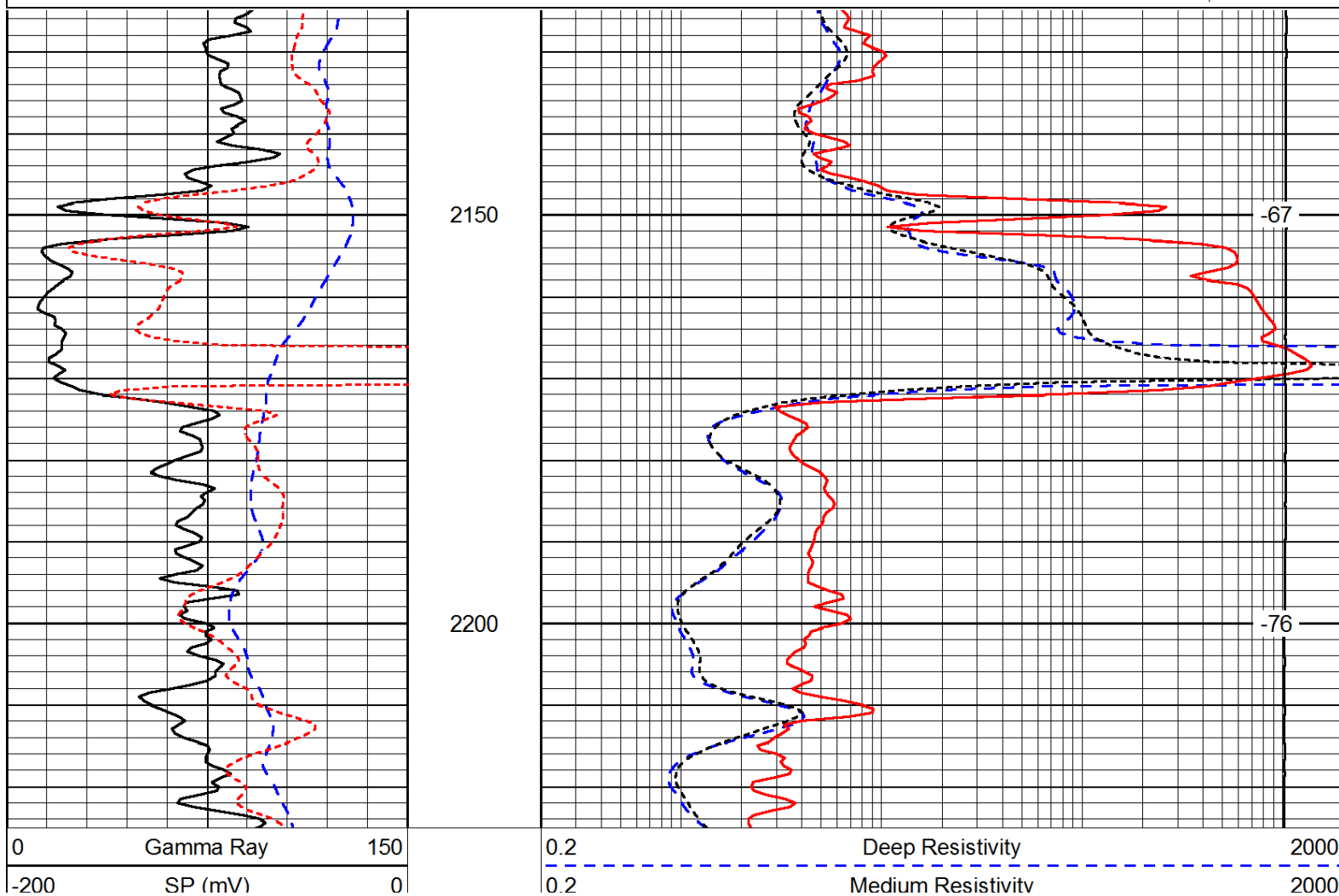
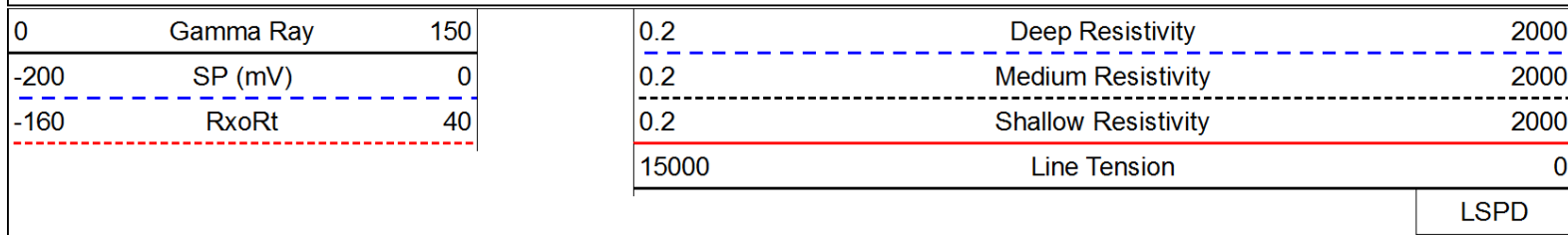








Database File: c:\warrior\data\larson_harper-james #1-22\larson_041513hd.db
 Dataset Pathname: dil\larstk
 Presentation Format: dil
 Dataset Creation: Mon Apr 15 22:54:16 2013
 Charted by: Depth in Feet scaled 1:240



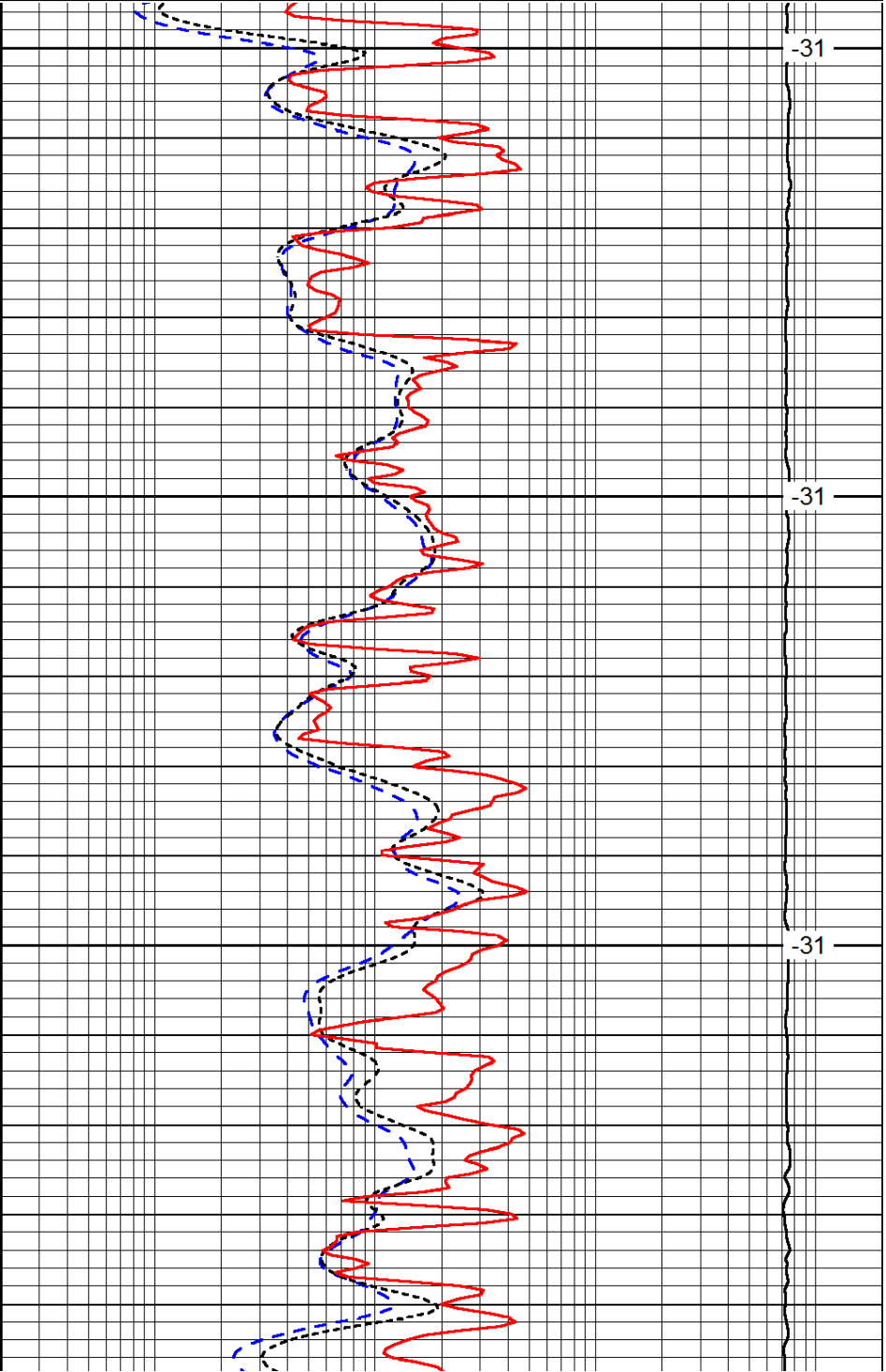
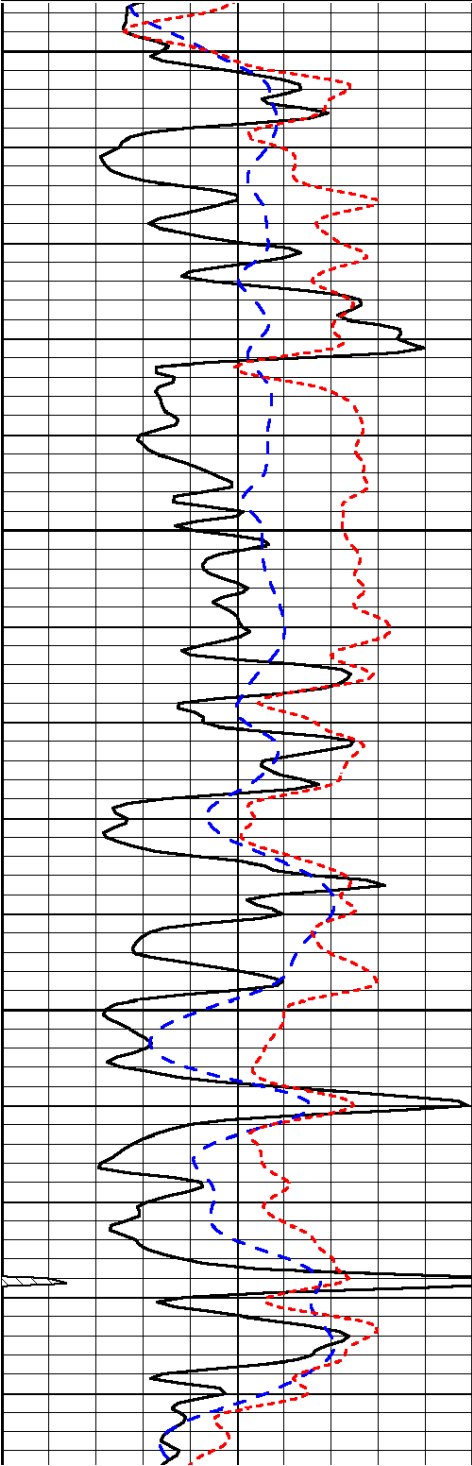
-160	RxoRt	40

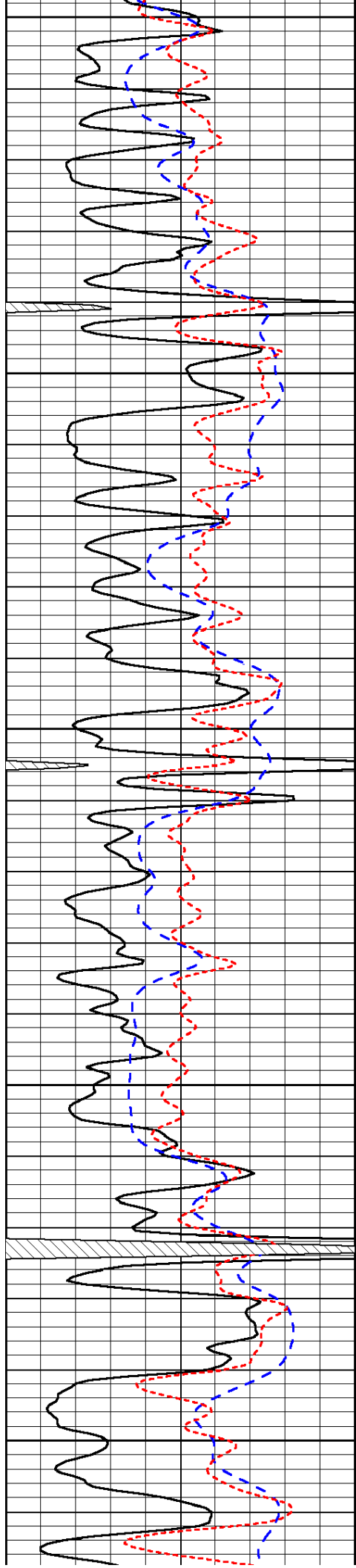
0.2	Shallow Resistivity	2000
15000	Line Tension	0
		LSPD

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0	Gamma Ray	150
-200	SP (mV)	0
-160	RxoRt	40

0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
15000	Line Tension	0
		LSPD





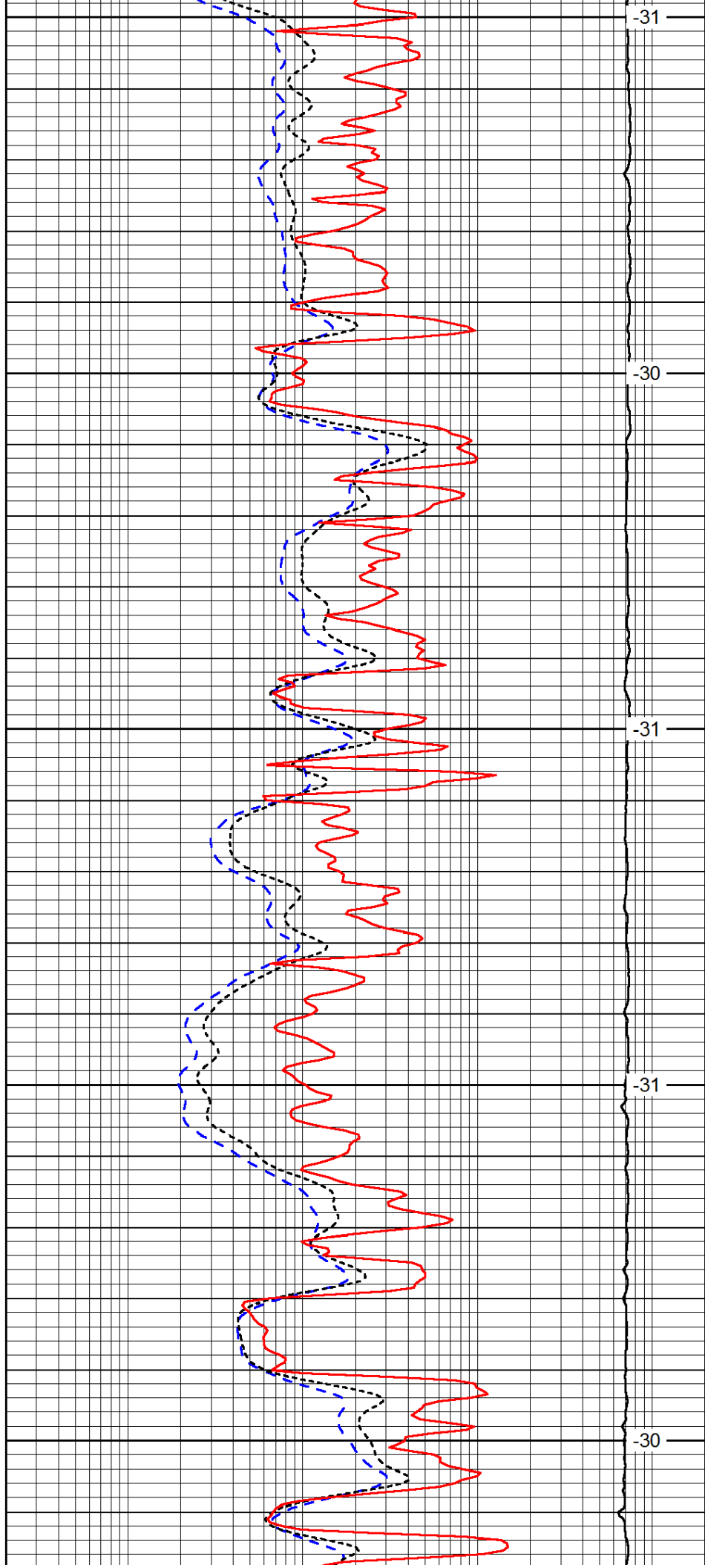
3750

3800

3850

3900

3950



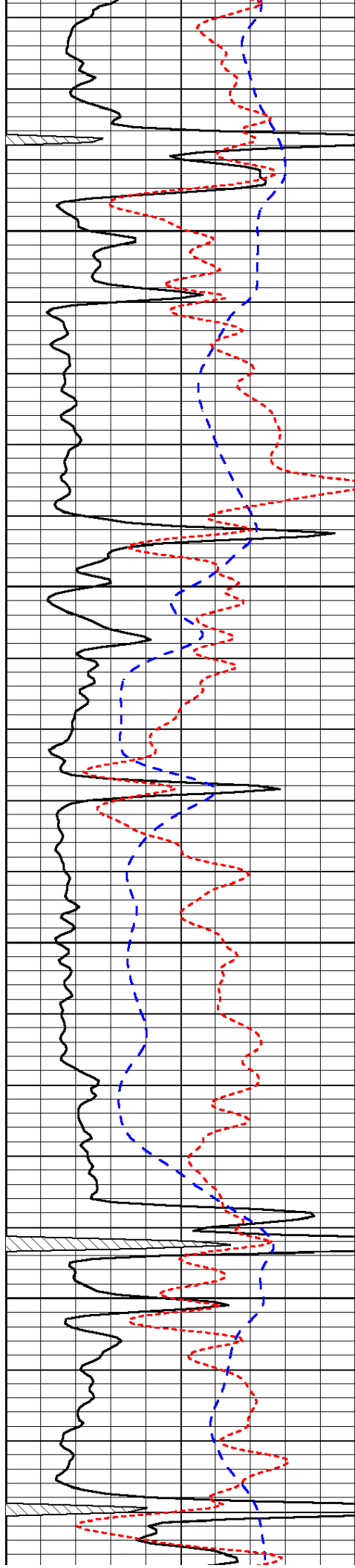
-31

-30

-31

-31

-30

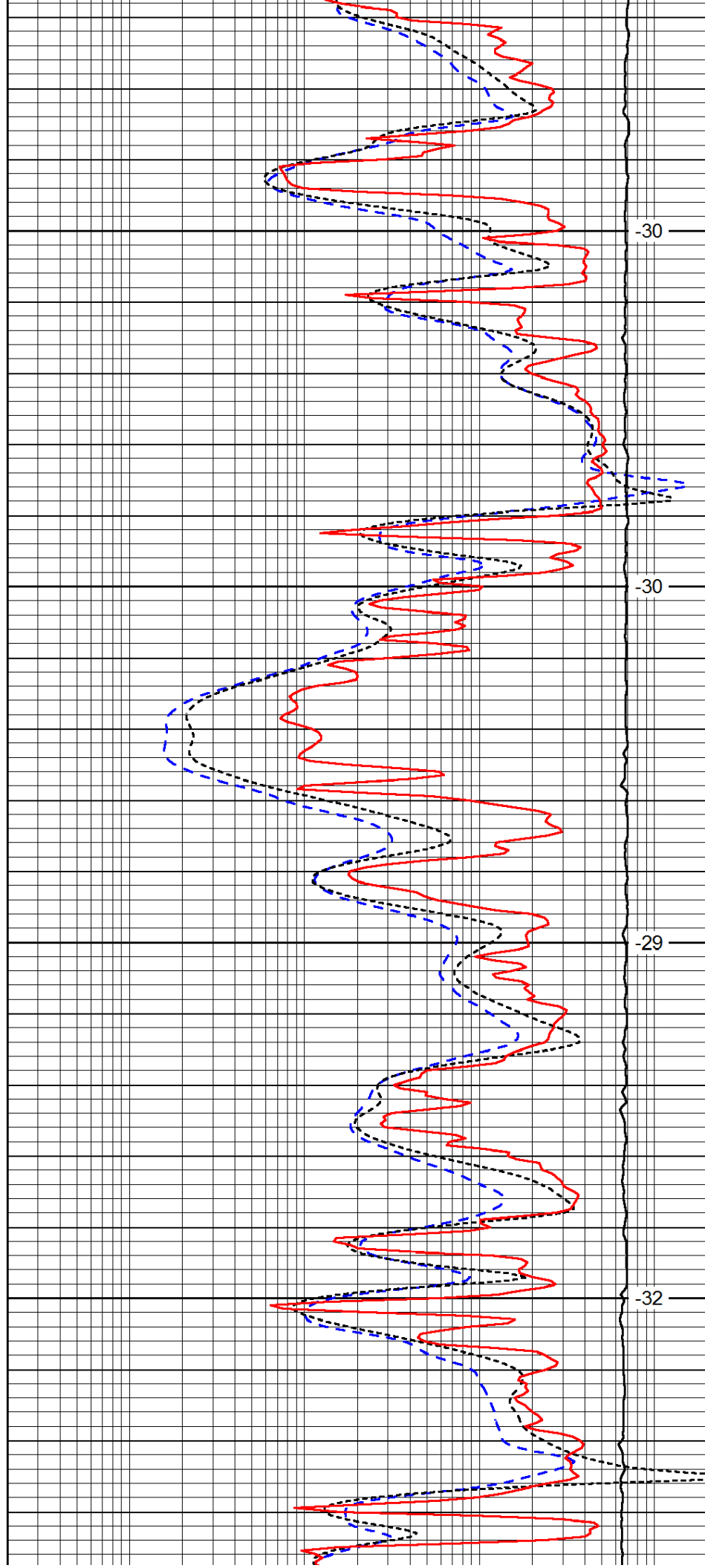


4000

4050

4100

4150

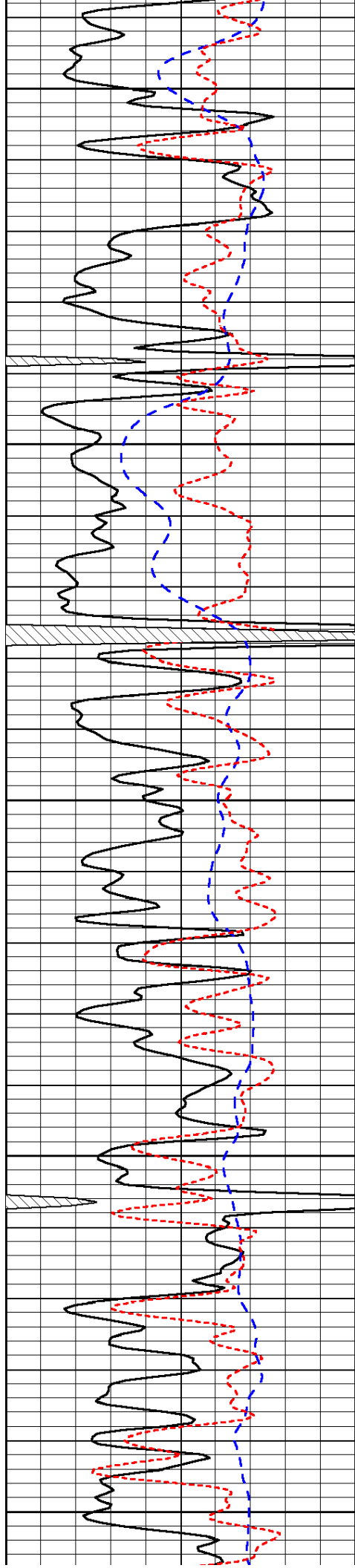


-30

-30

-29

-32



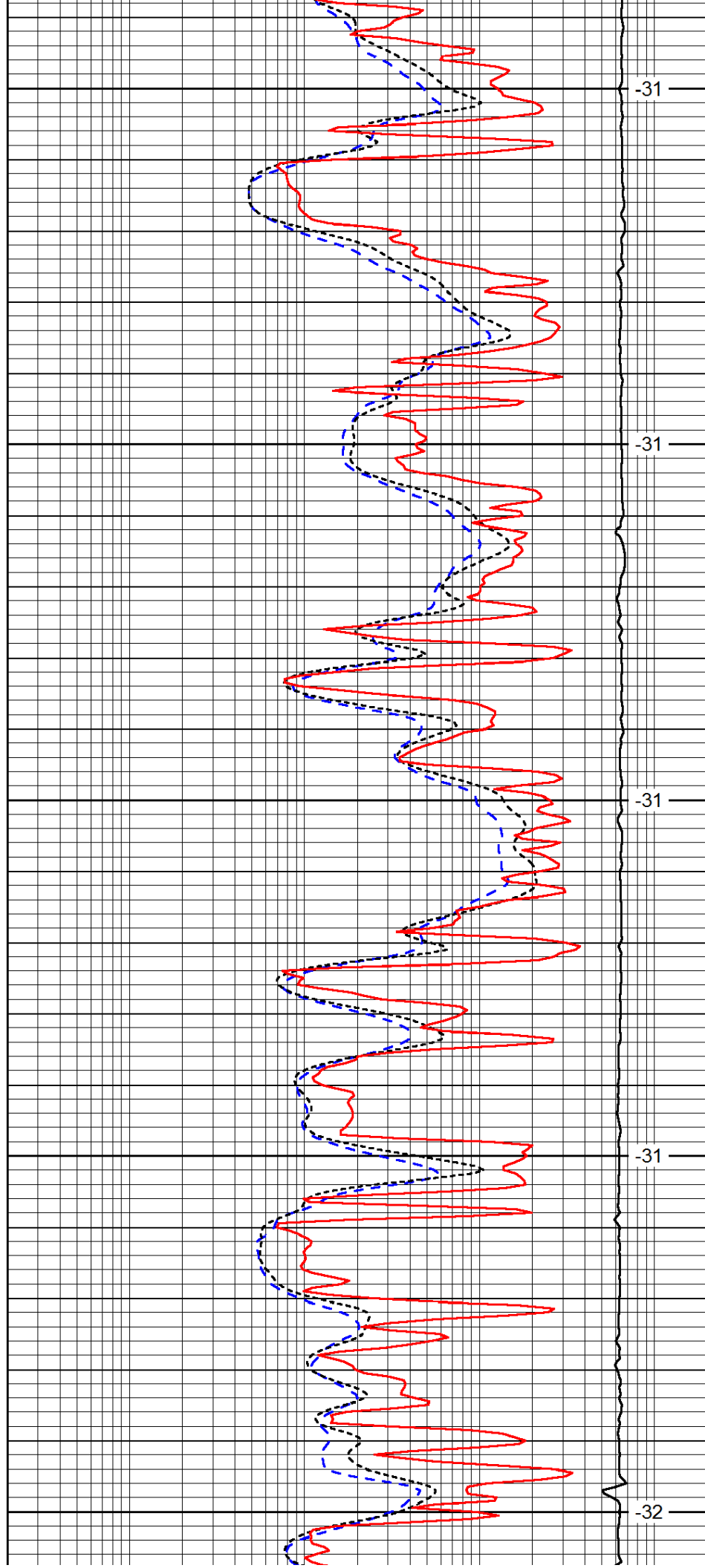
4200

4250

4300

4350

4400



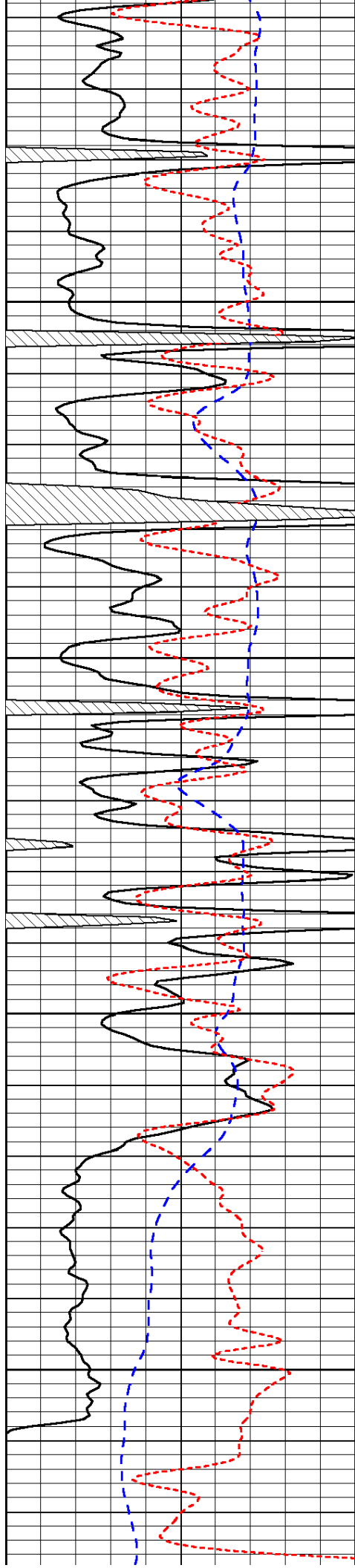
-31

-31

-31

-31

-32

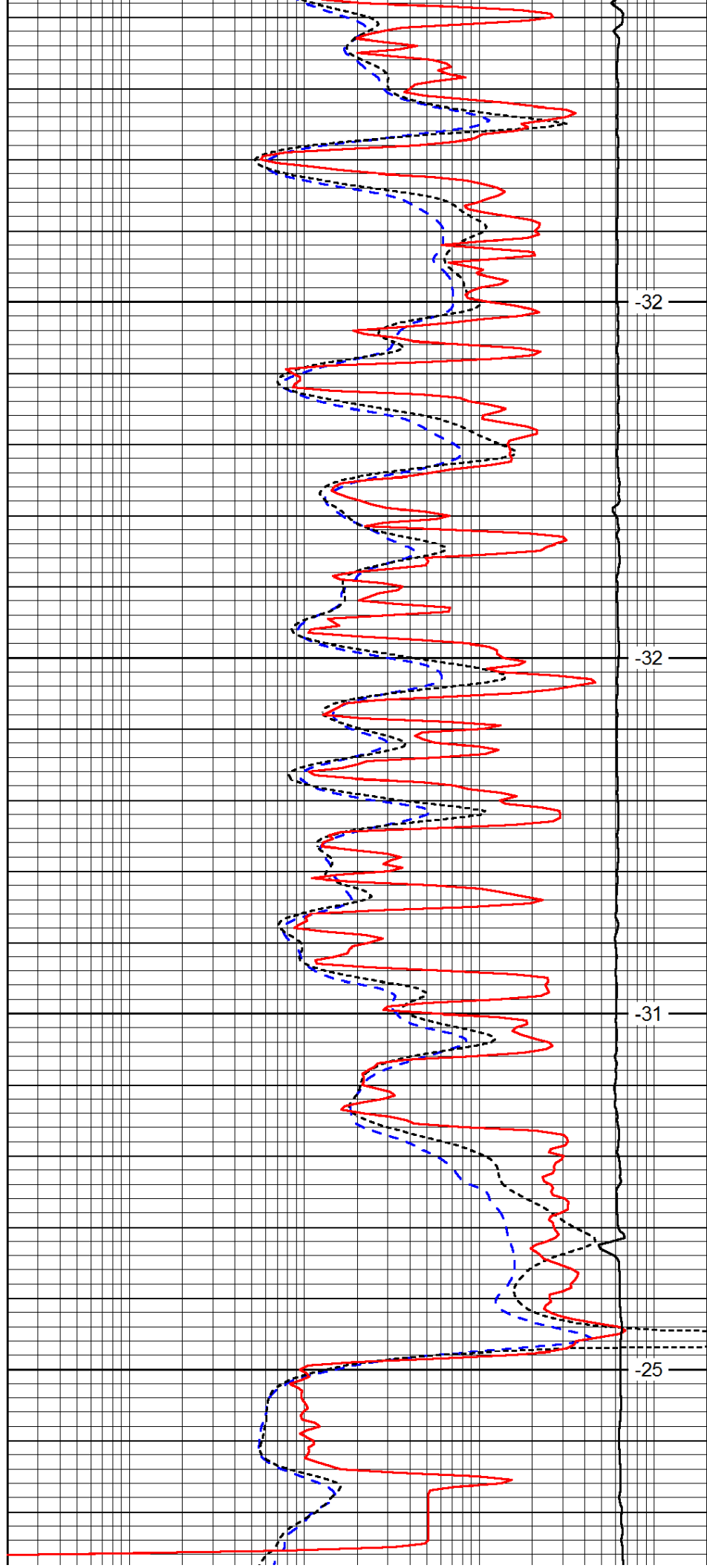


4450

4500

4550

4600

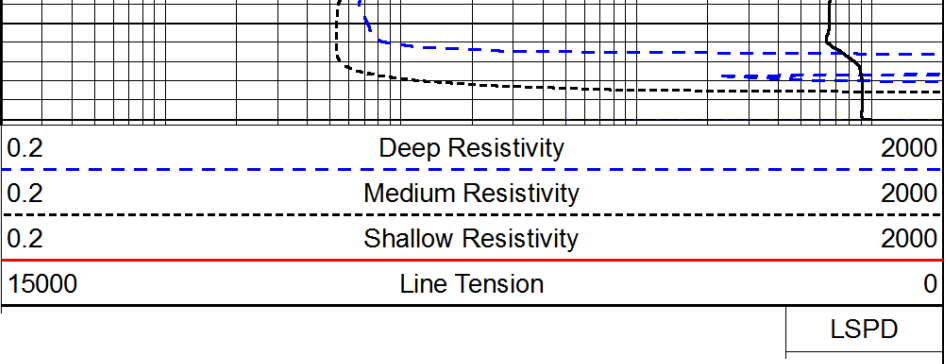
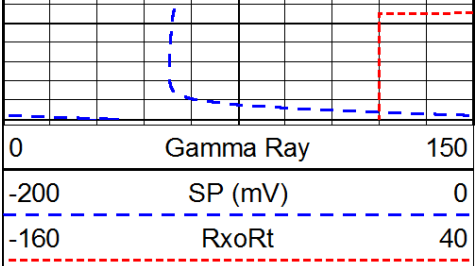


-32

-32

-31

-25



LSPD