



Pioneer Energy Services

Dual Induction Log

15-145-21,707-00-00

API No.

Company Apollo Energies, Inc.

Well Hutchinson "A" #1

Field Garfield Pool

County Pawnee State

Kansas

Location

E/2 SE
1320' FSL & 660' FEL

Other Services
CNL/CDL

Sec: 9

Twp: 23S

Rge: 17W

Elevation

K.B. 2105
D.F. 2093
G.L. 2093

Permanent Datum Ground Level

Log Measured From Kelly Bushing

12 Ft. Above Perm. Datum

Drilling Measured From Kelly Bushing

Date 2/9/2013

Run Number One

Depth Driller 4385

Depth Logger 4390

Bottom Logged Interval 4389

Top Log Interval 300

Casing Driller 8.625 @ 330

Casing Logger 331

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 9,200

Density / Viscosity 8.9 68

pH / Fluid Loss 10.0 8.8

Source of Sample Flowline

Rm @ Meas. Temp .4 @ 51

Rmf @ Meas. Temp .3 @ 51

Rmc @ Meas. Temp .54 @ 51

Source of Rmf / Rmc Charts

Rm @ BHT .17 @ 120

Operating Rig Time 2 1/2 Hours

Max Rec. Temp. F 120

Equipment Number 15

Location Hays

Recorded By C. Desai

Witnessed By Scott Alberg

<<< Fold Here >>>

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.pioneerenergy.com
 785 625 3858

Garfield KS, E Edge,
 2 1/2 S to D Rd, 2 E to 160 Ave, 1 1/4 N, W Into

Database File: c:\warrior\data\apollo_hutchinson a #1\apollohd.db
 Dataset Pathname: dil/apolstk
 Presentation Format: dil2in
 Dataset Creation: Sat Feb 09 18:20:19 2013
 Charted by: Depth in Feet scaled 1:600

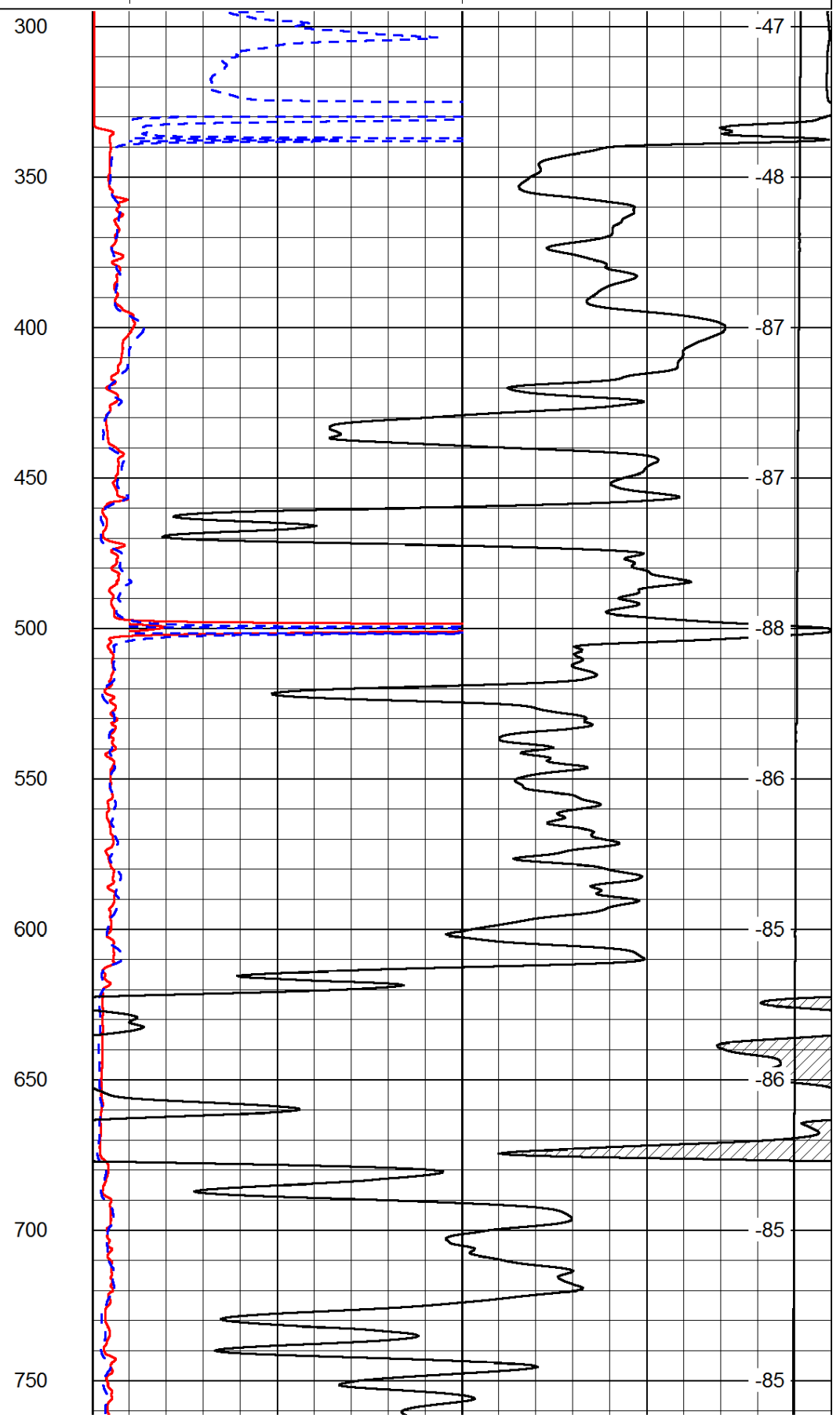
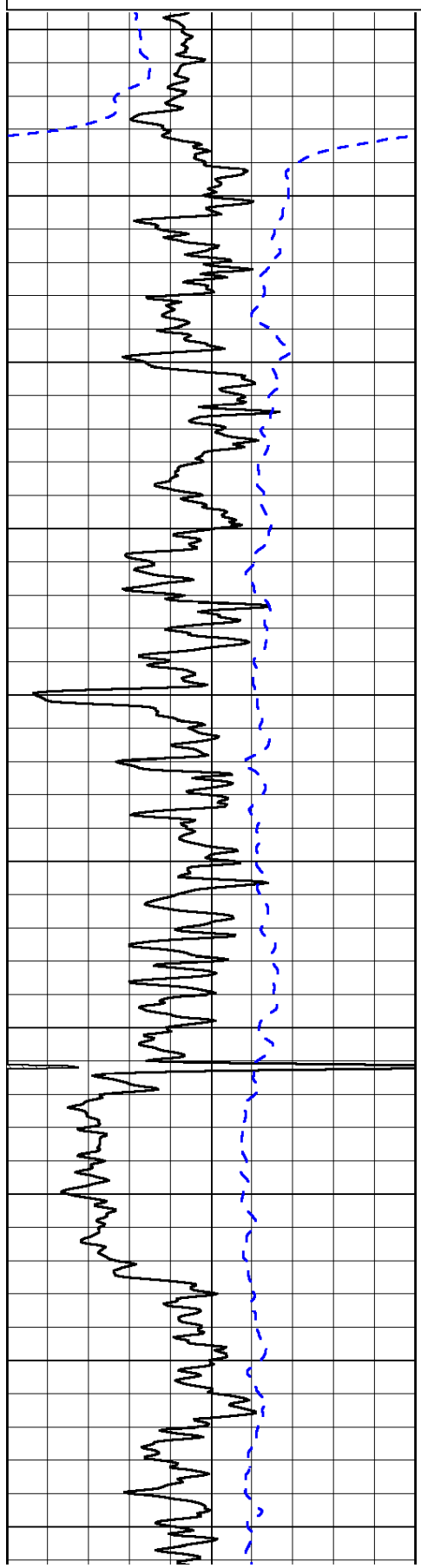
0	Gamma Ray	150
-200	SP (mV)	0

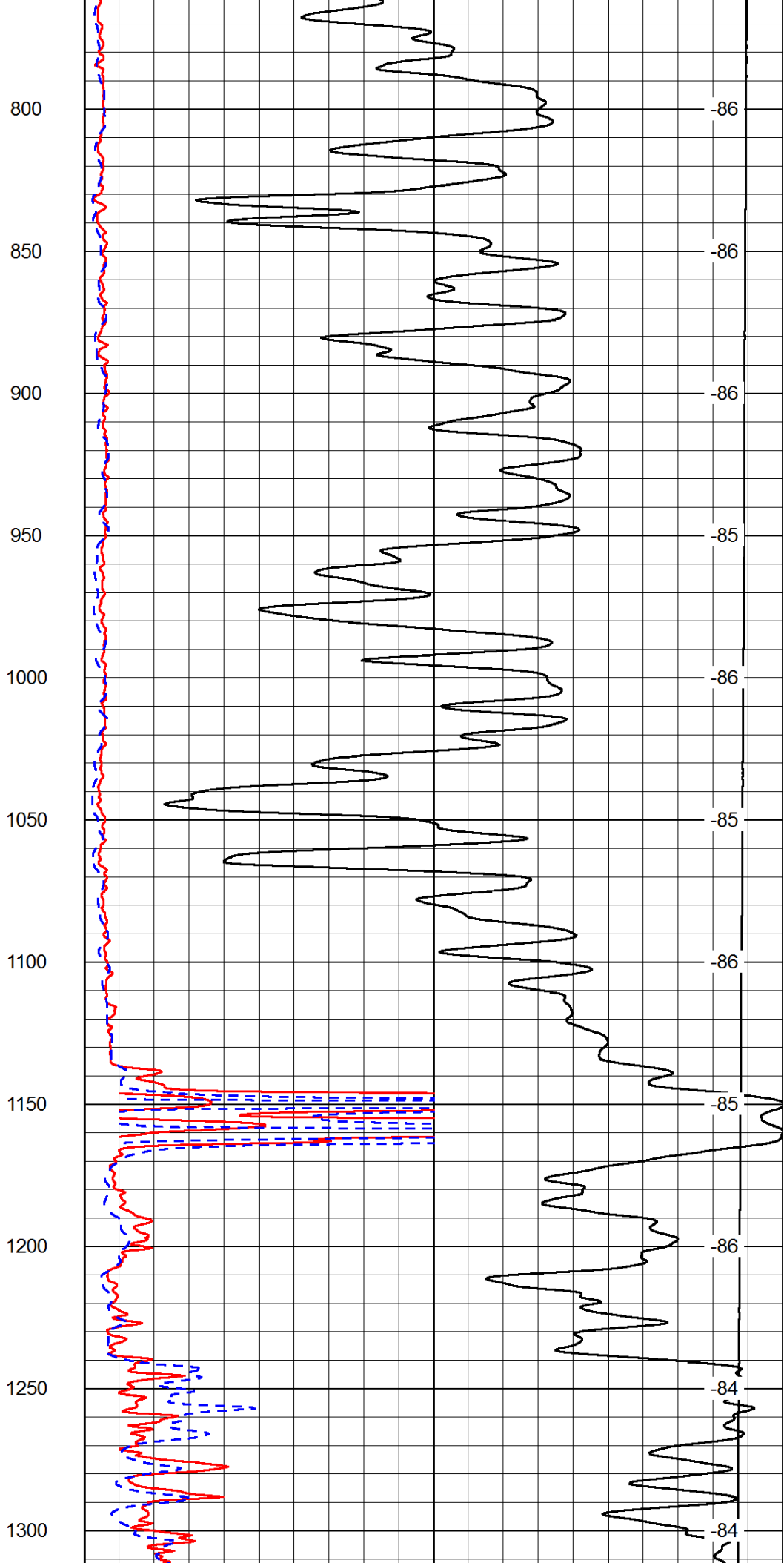
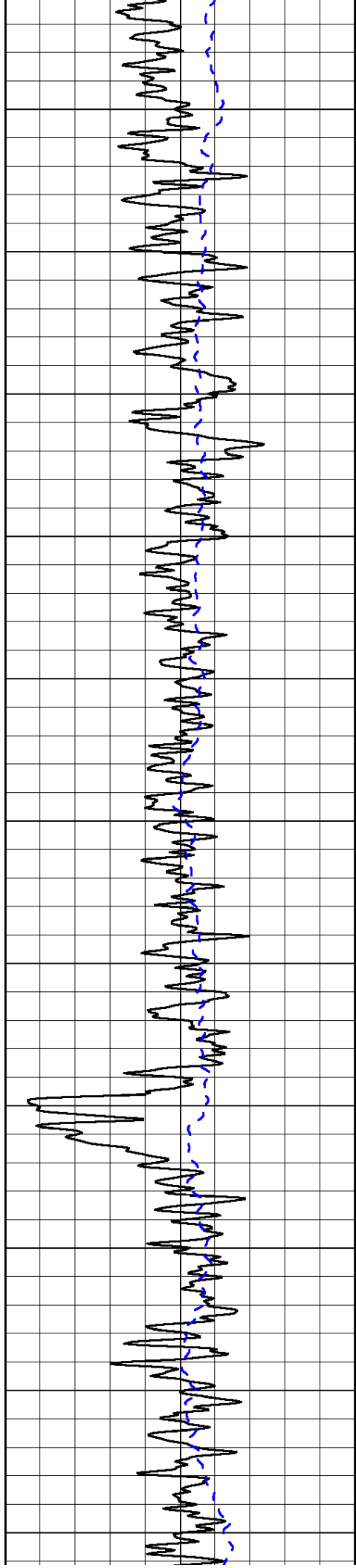
0	Shallow Resistivity	50
0	Deep Resistivity	50

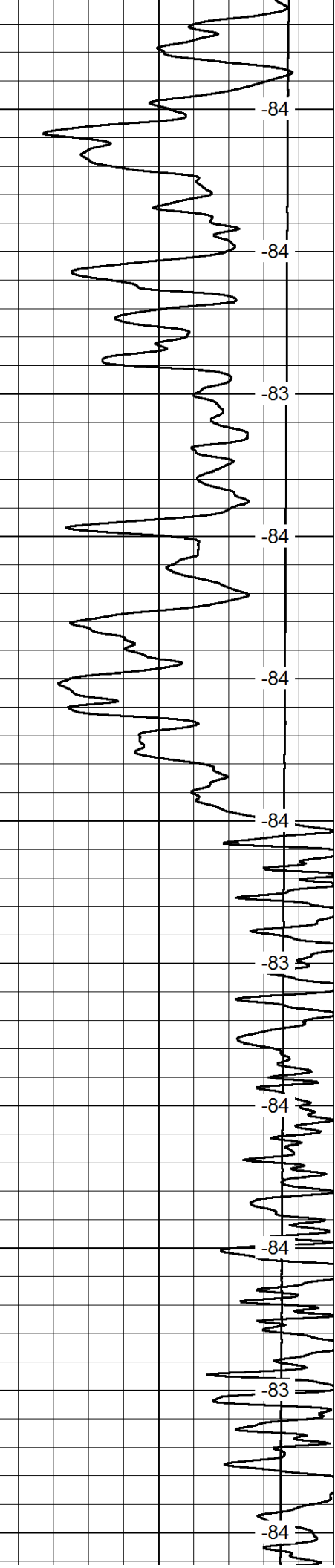
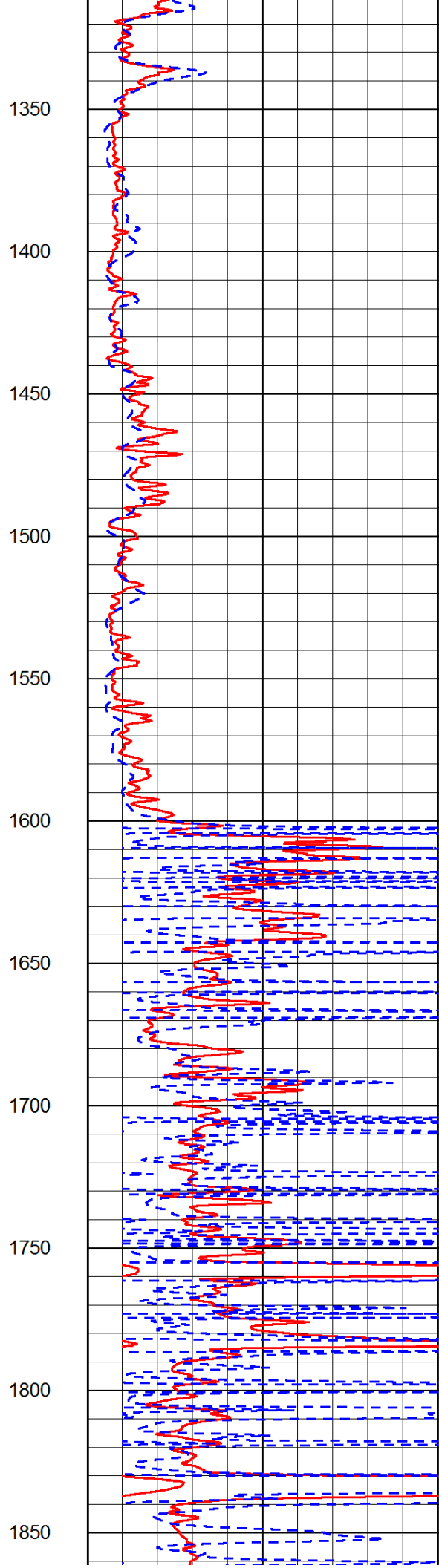
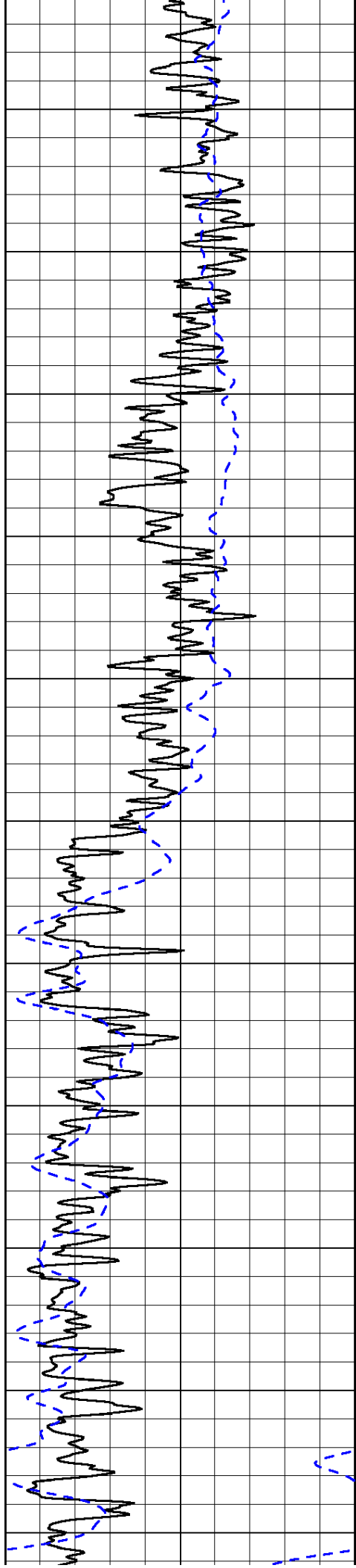
LSPD

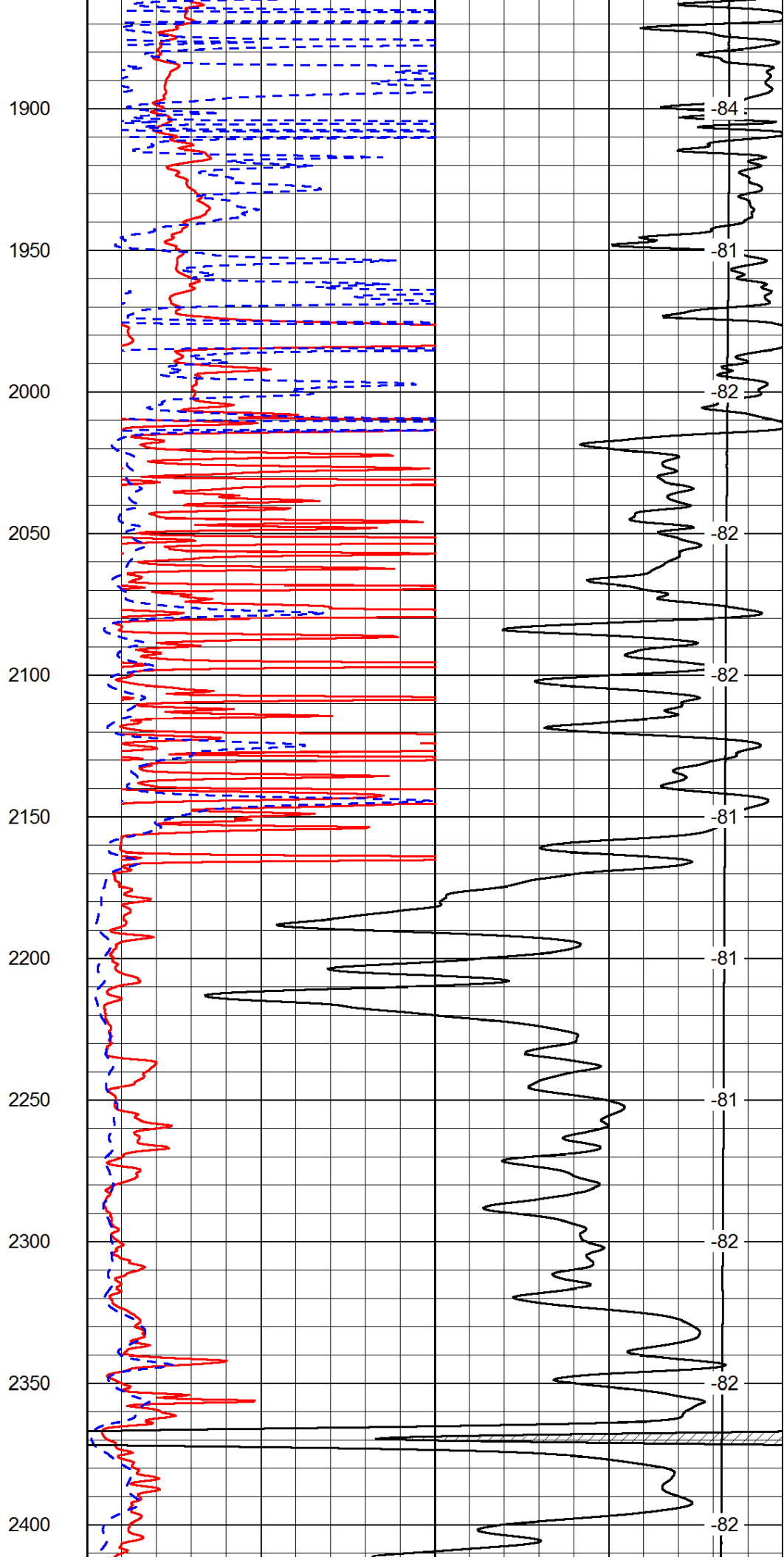
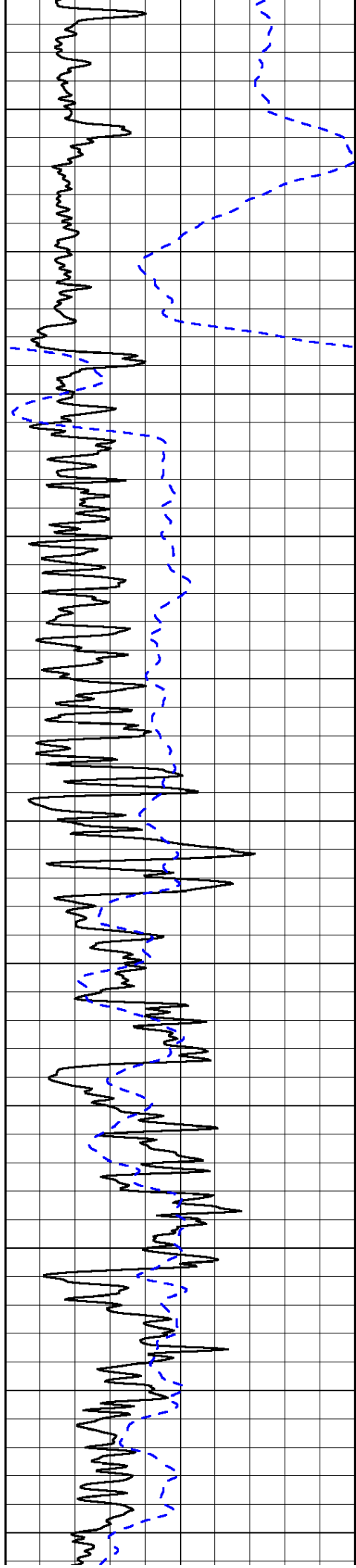
1000	Conductivity	0
15000	Line Tension	0

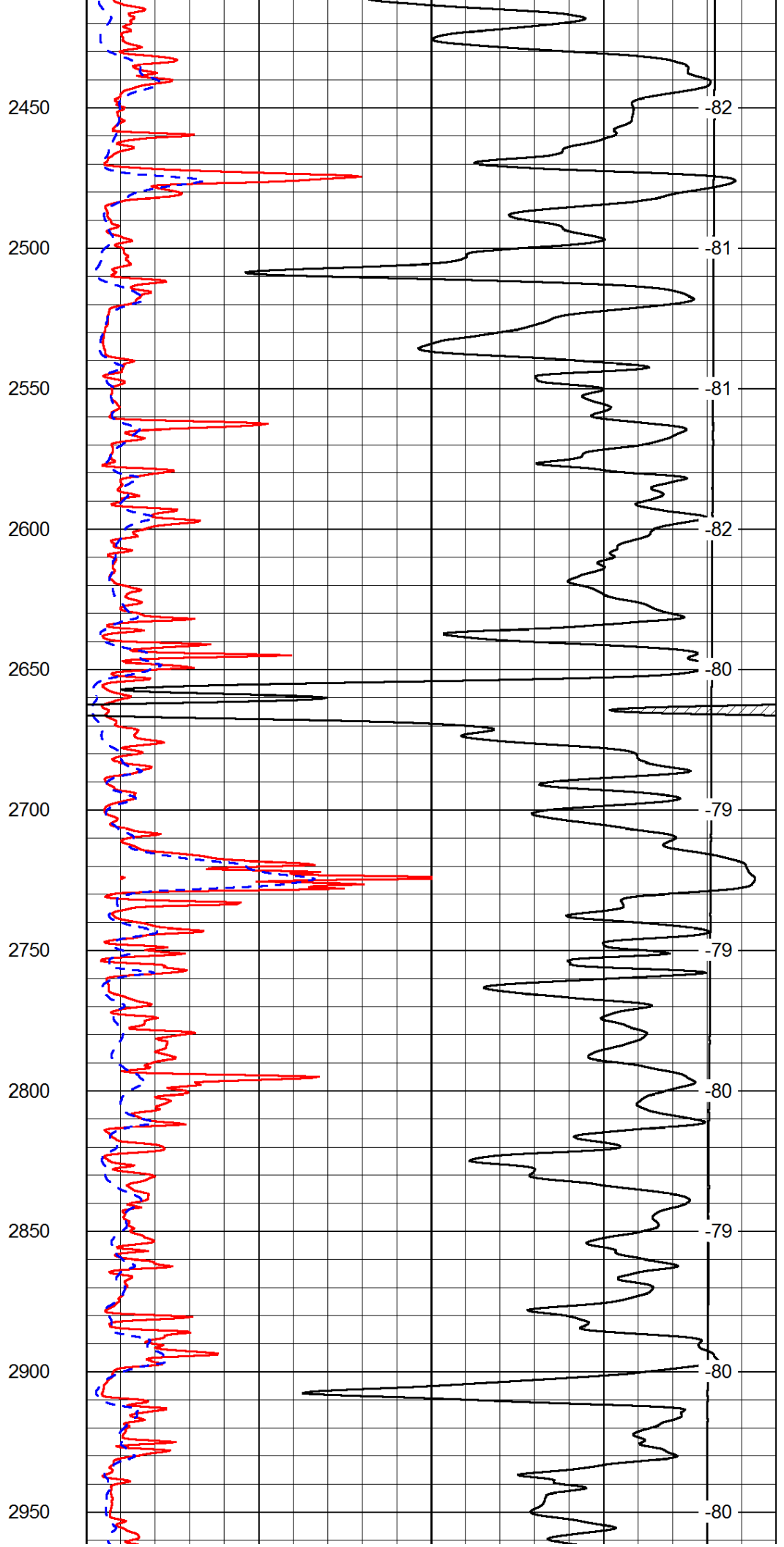
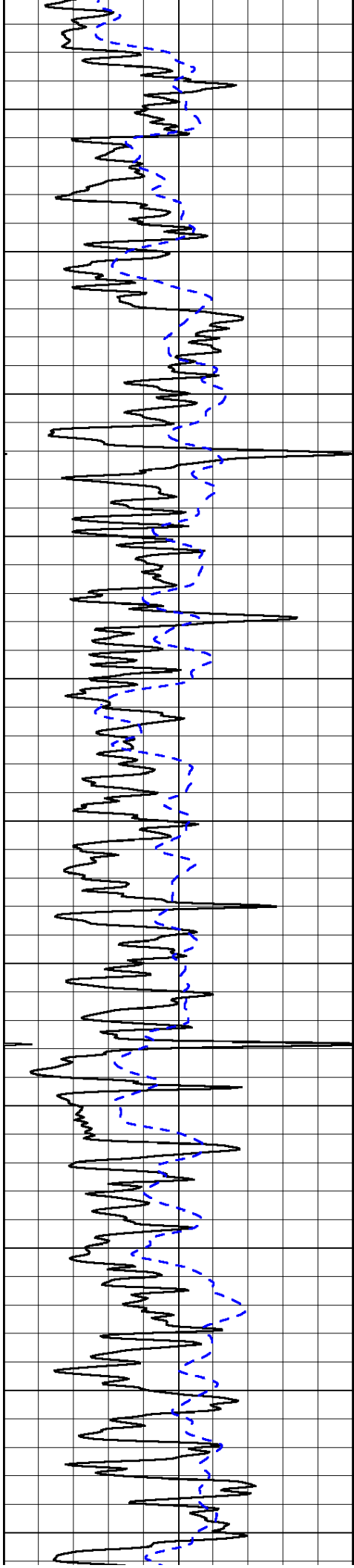
50	Shallow Resistivity	500
50	Deep Resistivity	500

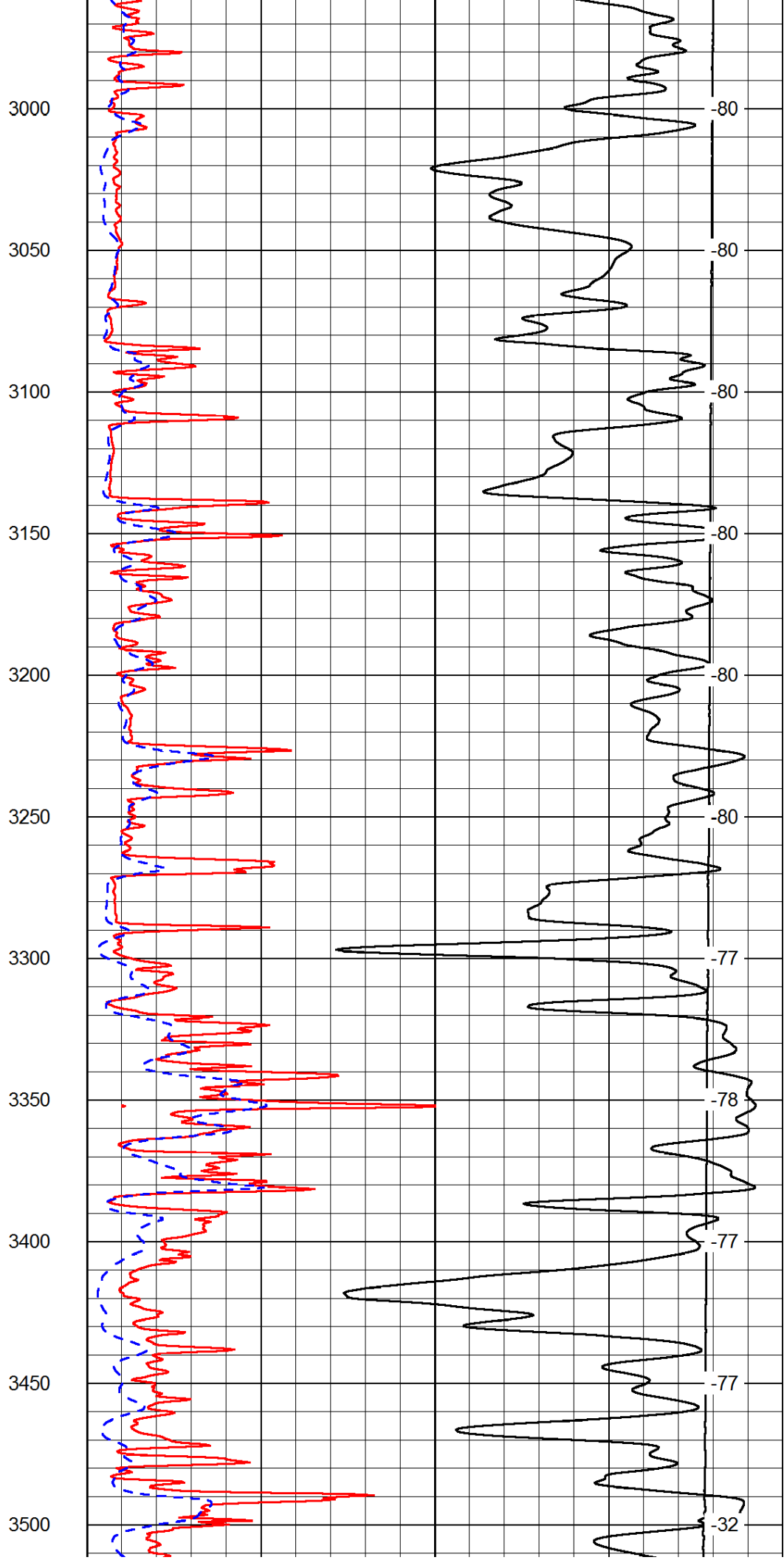
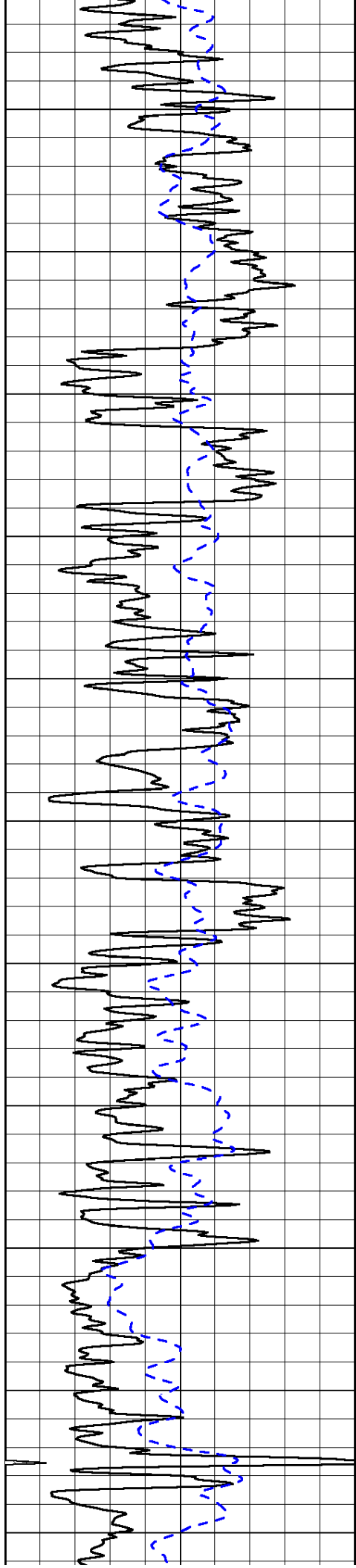


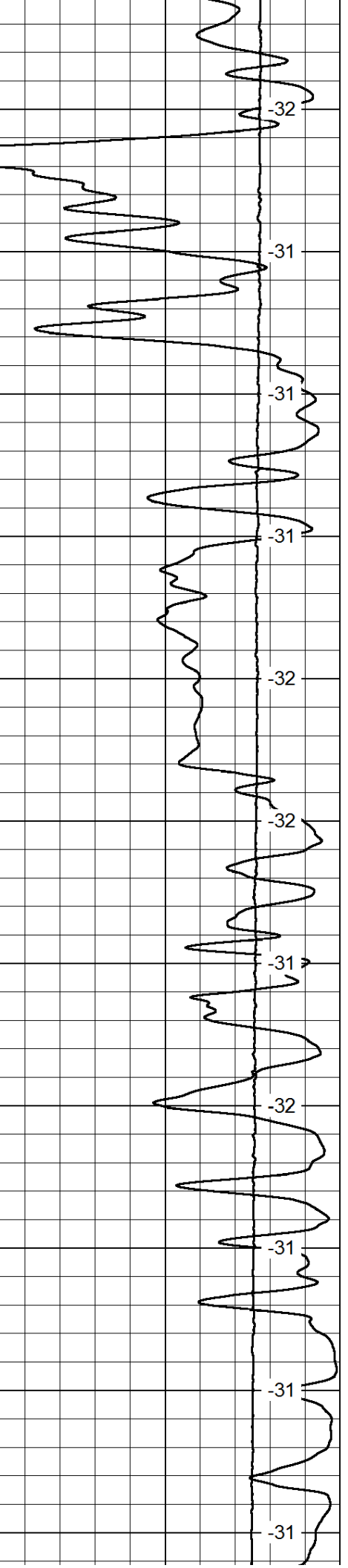
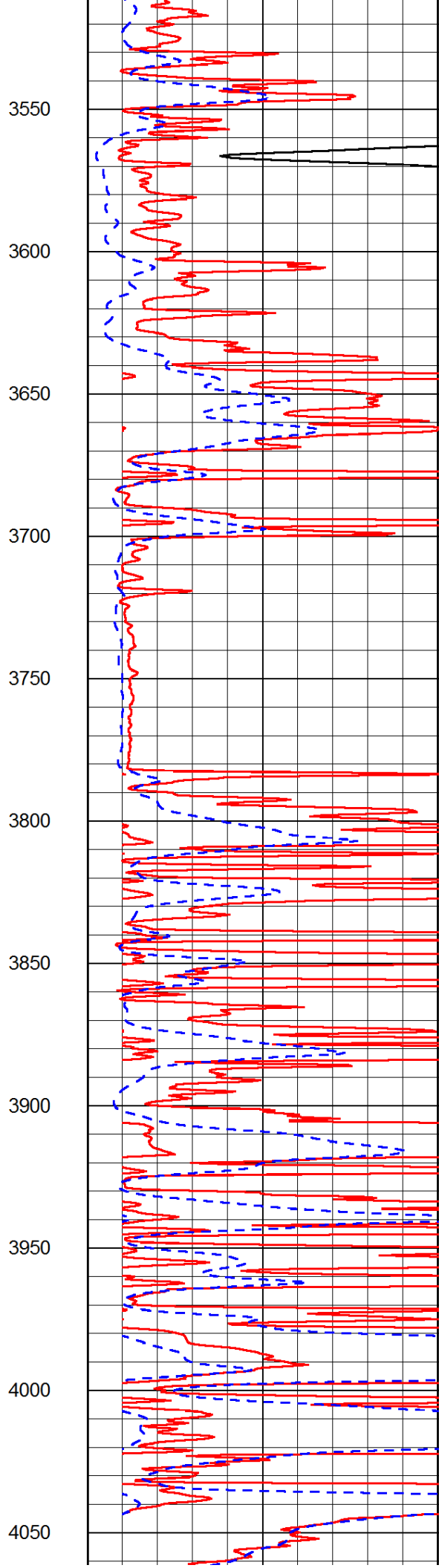
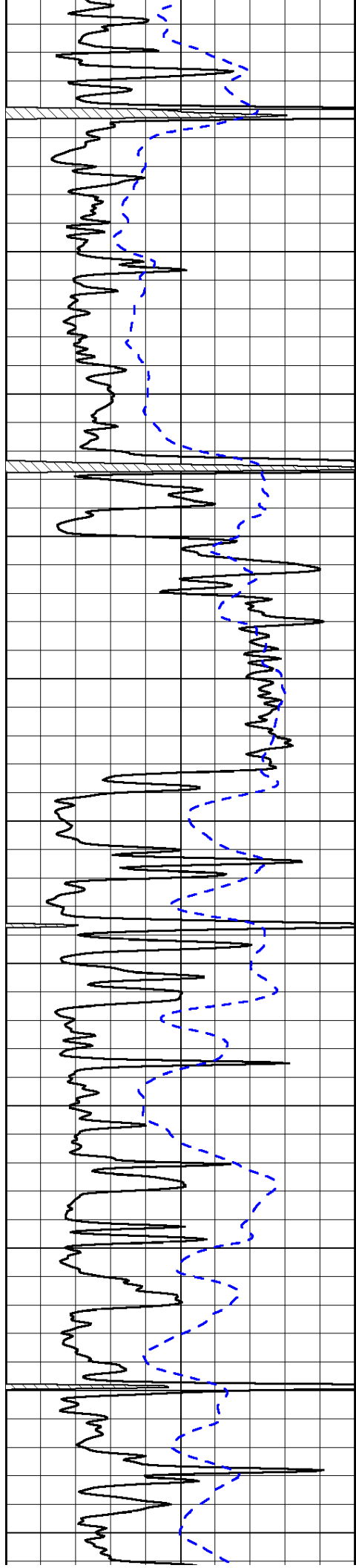


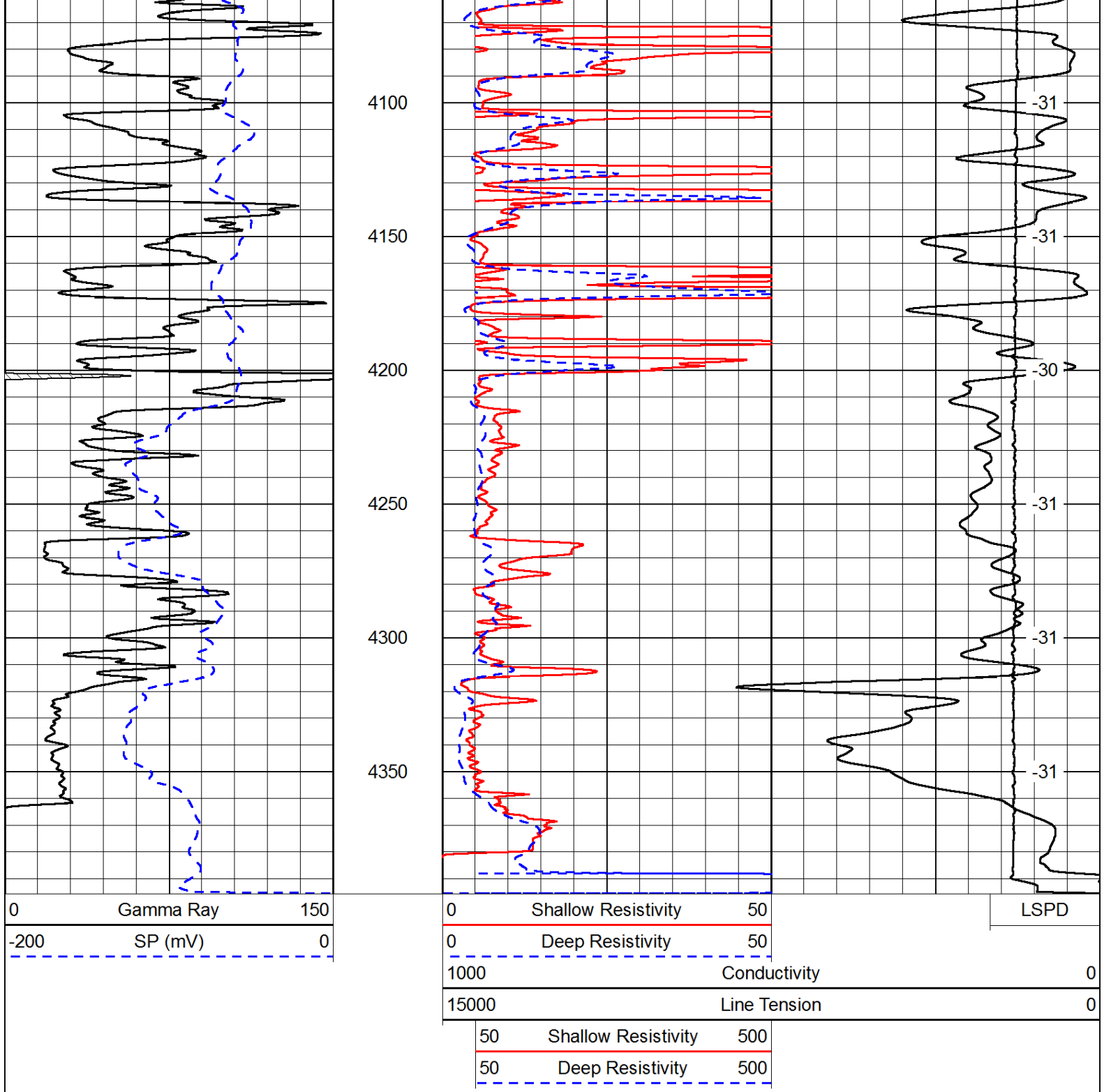




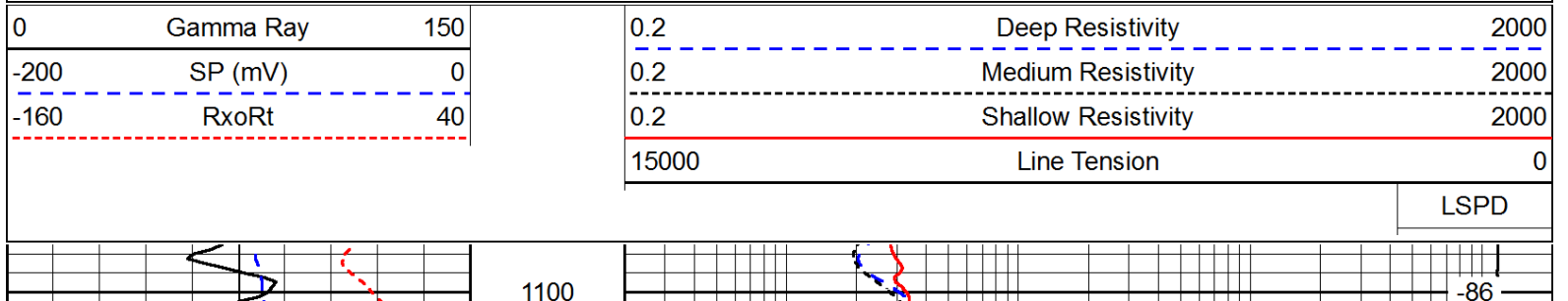


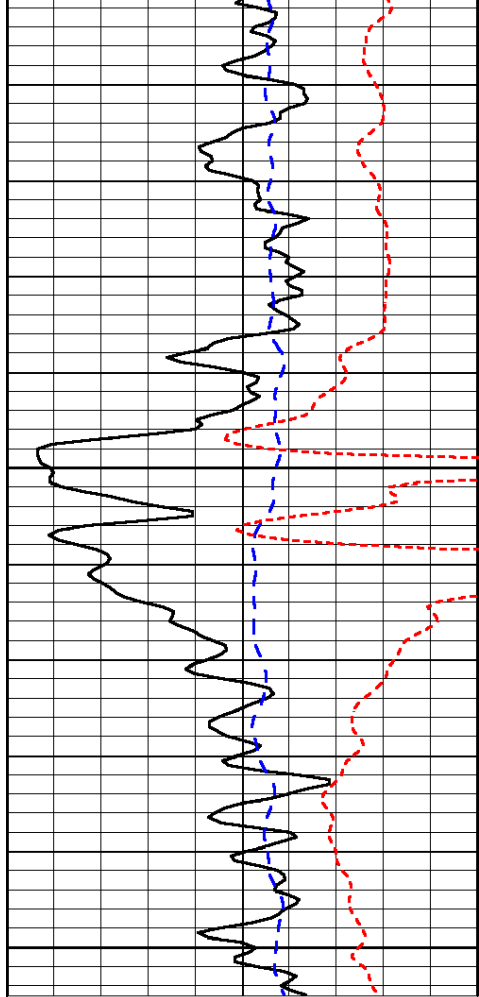






Database File: c:\warrior\data\apollo_hutchinson a #1\apollohd.db
 Dataset Pathname: dil/apolstk
 Presentation Format: dil
 Dataset Creation: Sat Feb 09 18:20:19 2013
 Charted by: Depth in Feet scaled 1:240

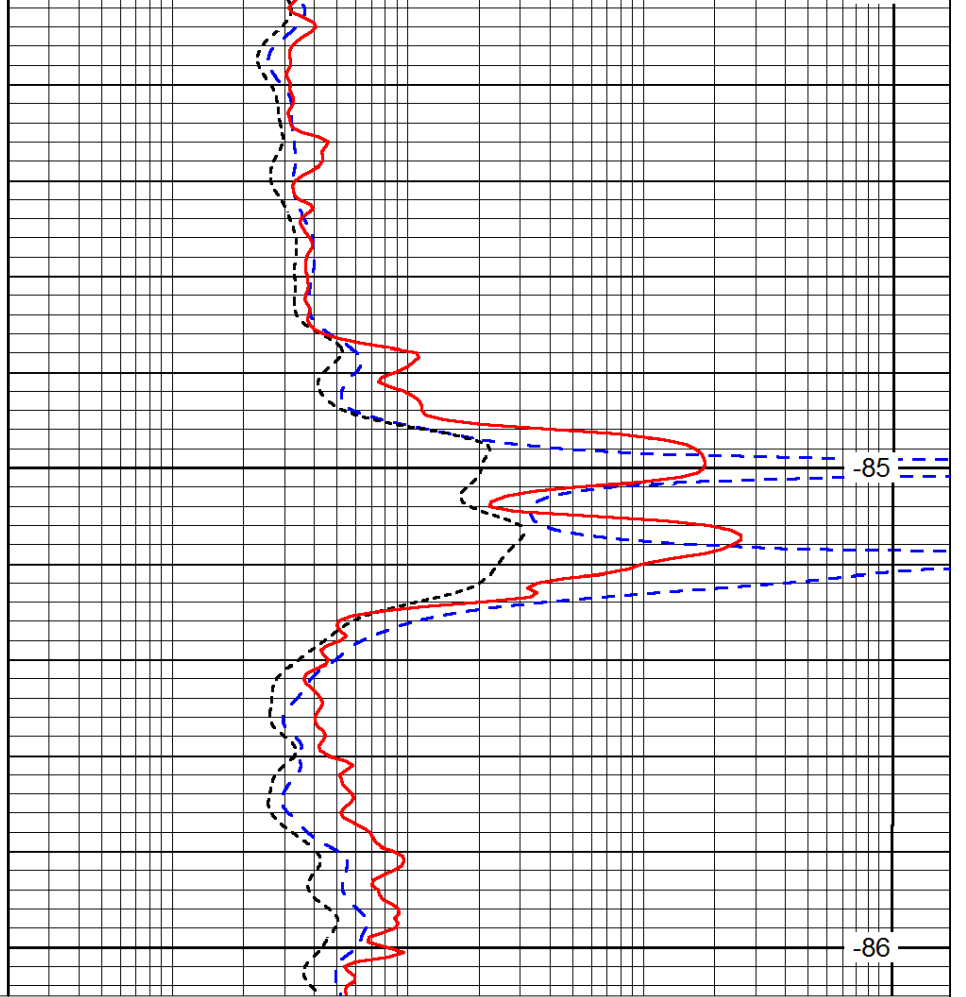




0	Gamma Ray	150
-200	SP (mV)	0
-160	RxoRt	40

1150

1200



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

-85

-86

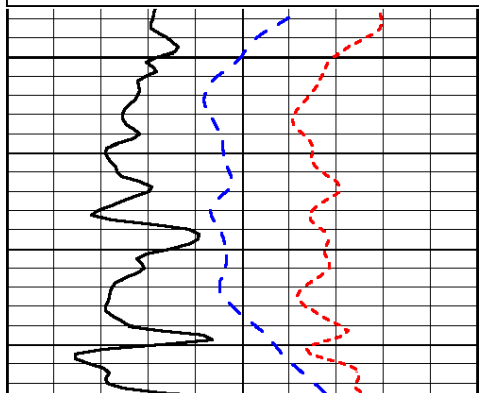
LSPD

Database File: c:\warrior\data\apollo_hutchinson a #1\apollohd.db
 Dataset Pathname: dil/apolstk
 Presentation Format: dil
 Dataset Creation: Sat Feb 09 18:20:19 2013
 Charted by: Depth in Feet scaled 1:240

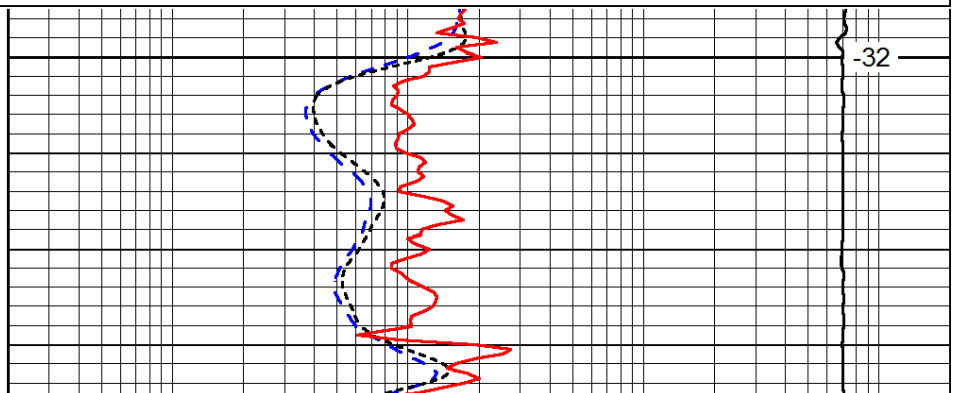
0	Gamma Ray	150
-200	SP (mV)	0
-160	RxoRt	40

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

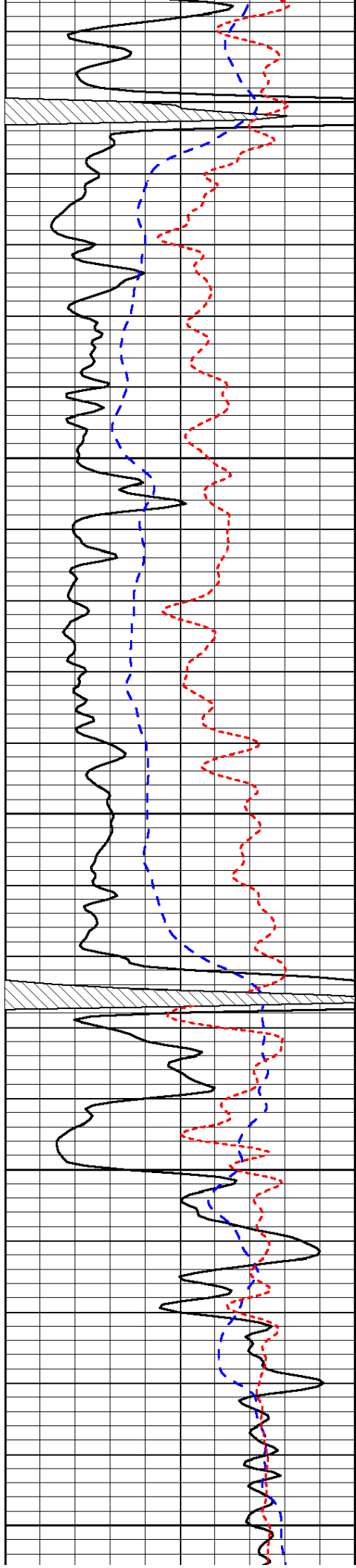
LSPD



3500



-32



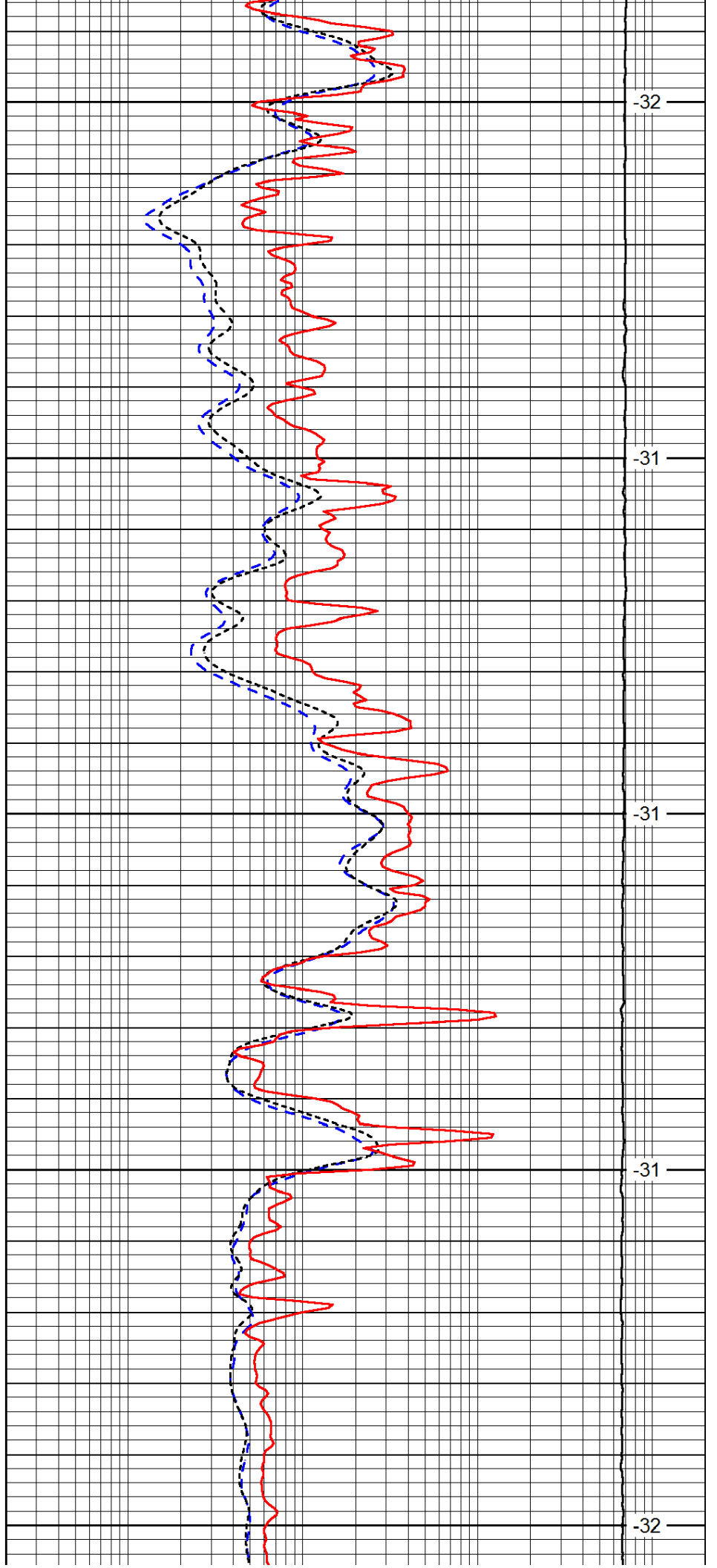
3550

3600

3650

3700

3750



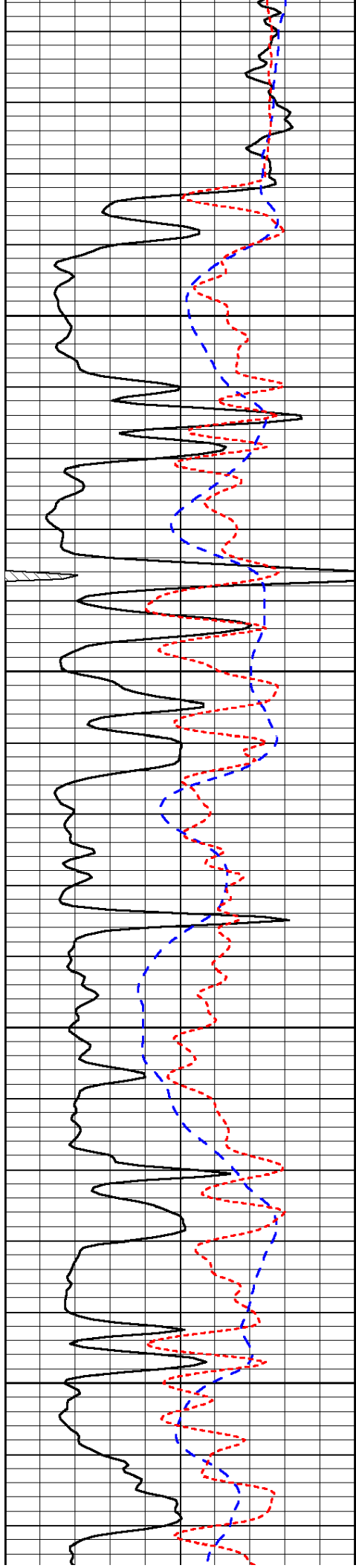
-32

-31

-31

-31

-32

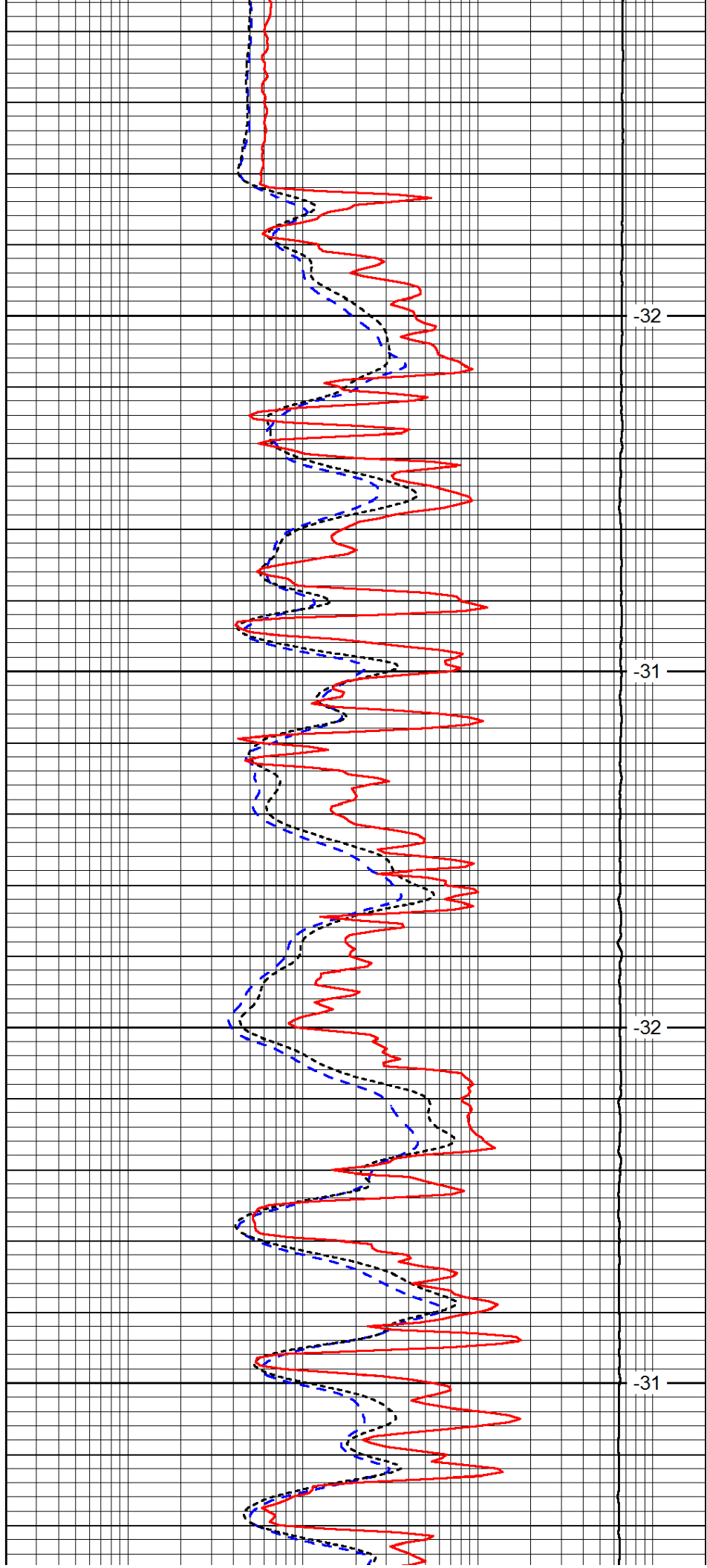


3800

3850

3900

3950

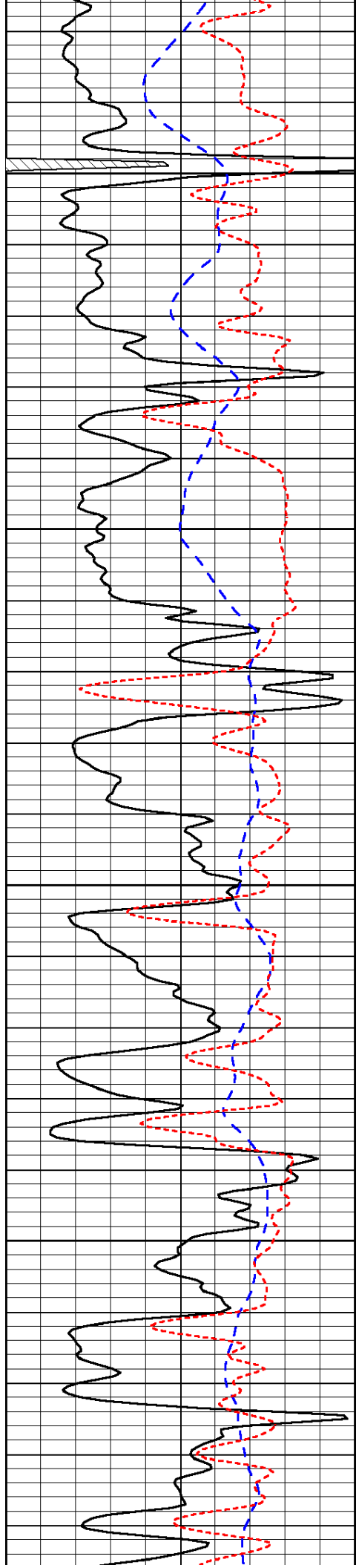


-32

-31

-32

-31

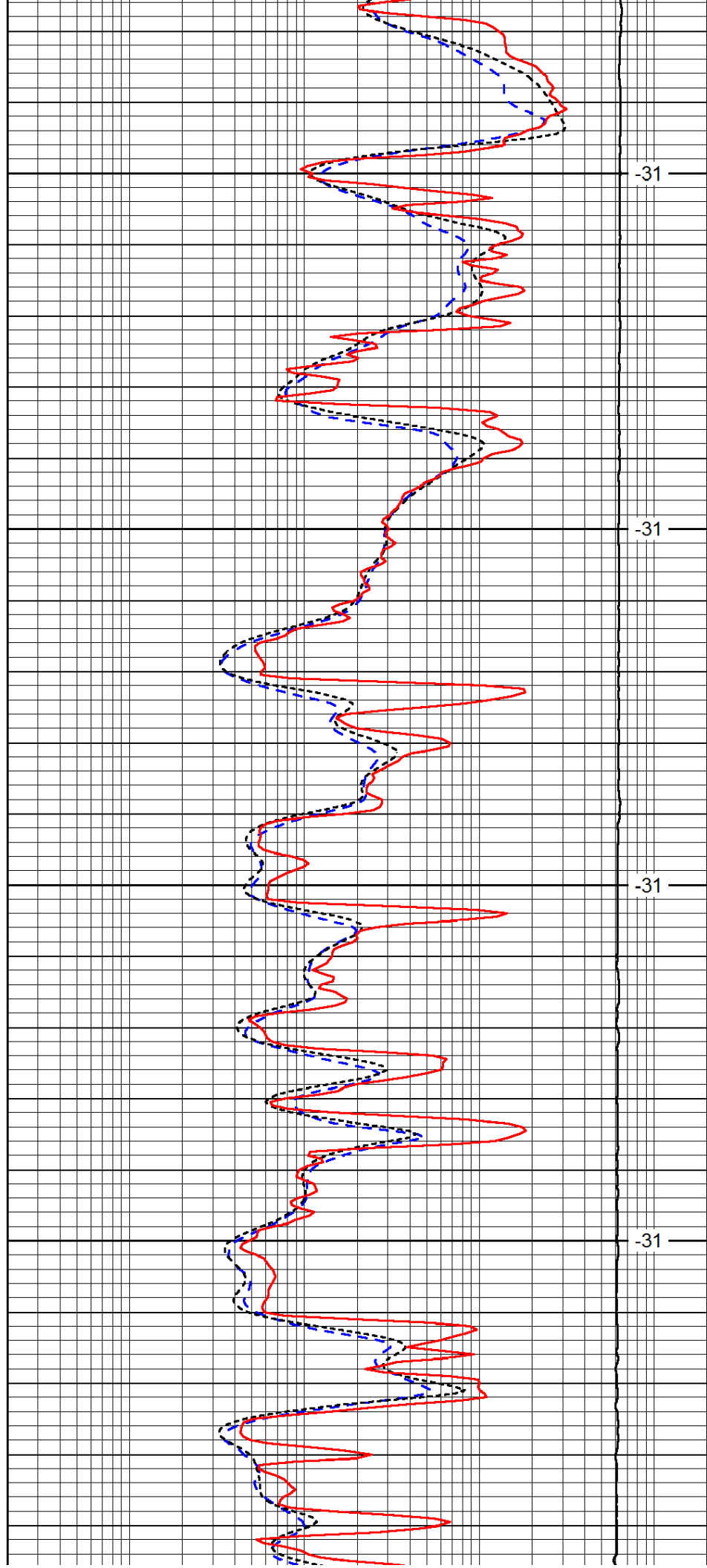


4000

4050

4100

4150

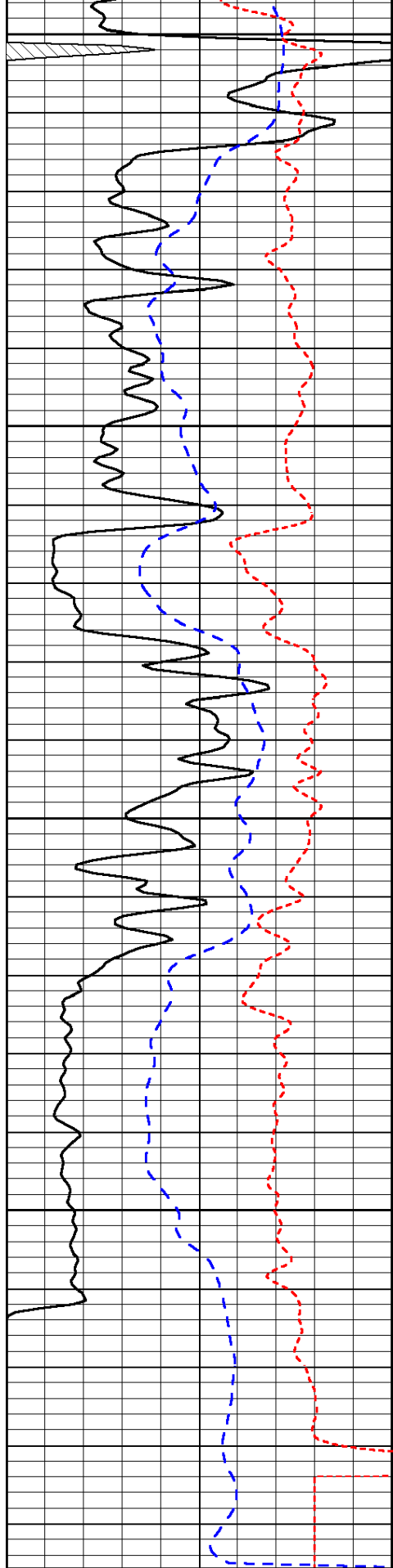


-31

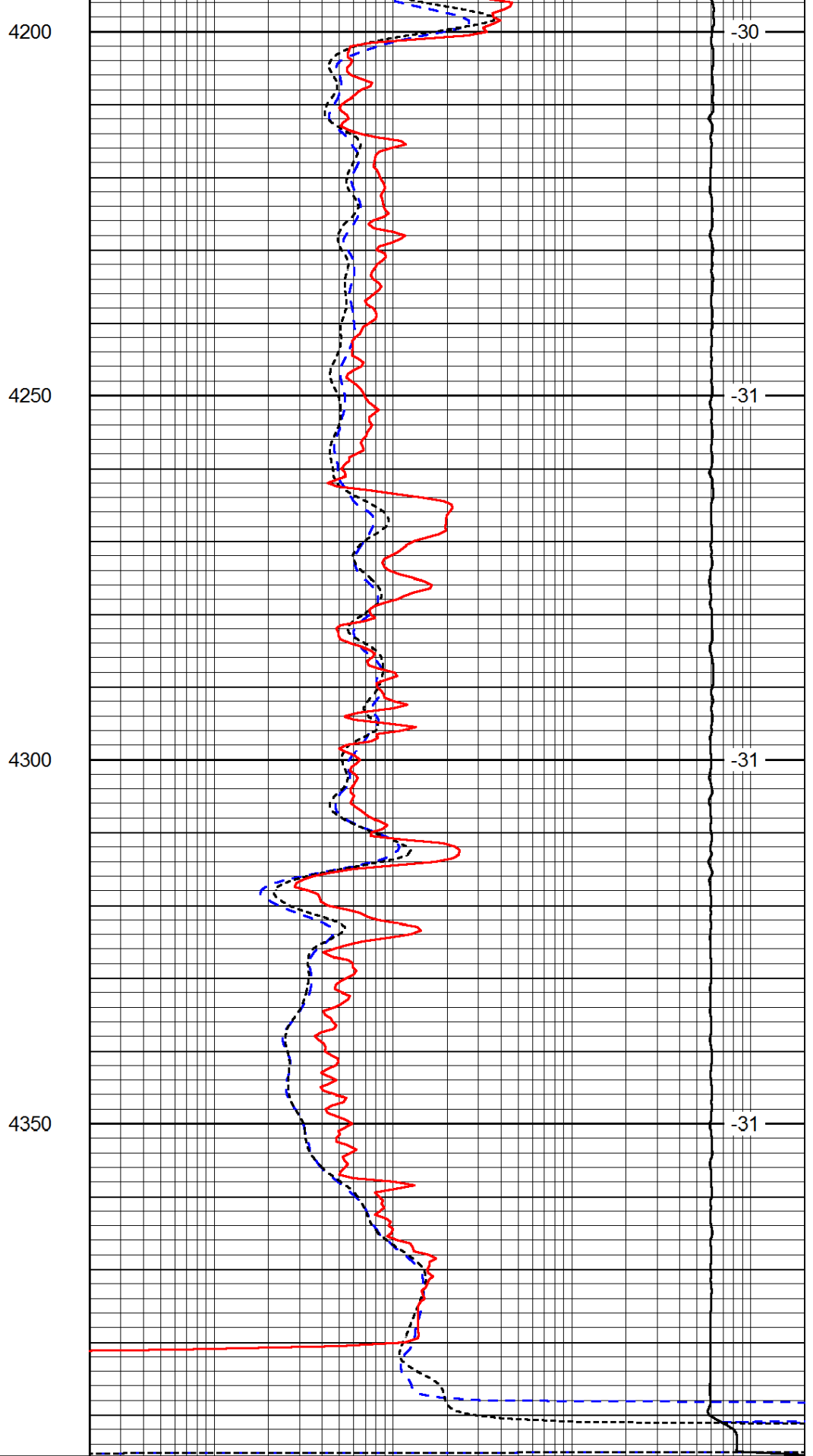
-31

-31

-31



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

