



Dual Induction Log

Pioneer Energy Services

API No.

15-179-21,368-00-00

Company Dan Haffner

Well Haffner # 5-18

Field Haffner Southwest

County Sheridan State

Kansas

Location 1850' FNL & 330' FWL

Other Services
CNL/CDL
MEL

Sec: 18 Twp: 9S Rge: 27W

Permanent Datum Ground Level Elevation 2746
Log Measured From Kelly Bushing 8 Ft. Above Perm. Datum
Drilling Measured From Kelly Bushing

Elevation

K.B. 2754
D.F. 2746
G.L. 2746

Date 8/4/2014

Run Number One

Depth Driller 4484

Depth Logger 4479

Bottom Logged Interval 4478

Top Log Interval 250

Casing Driller 8.625 @ 262

Casing Logger 260

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 1,100

Density / Viscosity 9.5 60

pH / Fluid Loss 10.0 8.0

Source of Sample Flowline

Rm @ Meas. Temp 1.2 @ 90

Rmf @ Meas. Temp .90 @ 90

Rmc @ Meas. Temp 1.62 @ 90

Source of Rmf / Rmc Charts

Rm @ BHT .89 @ 121

Operating Rig Time 3 Hours

Max Rec. Temp. F 121

Equipment Number 10

Location Hays

Recorded By J. Hennickson

Witnessed By Dan Haffner

Comments

Thank you for using Pioneer Energy Services
www.pioneerres.com
785 625 3858

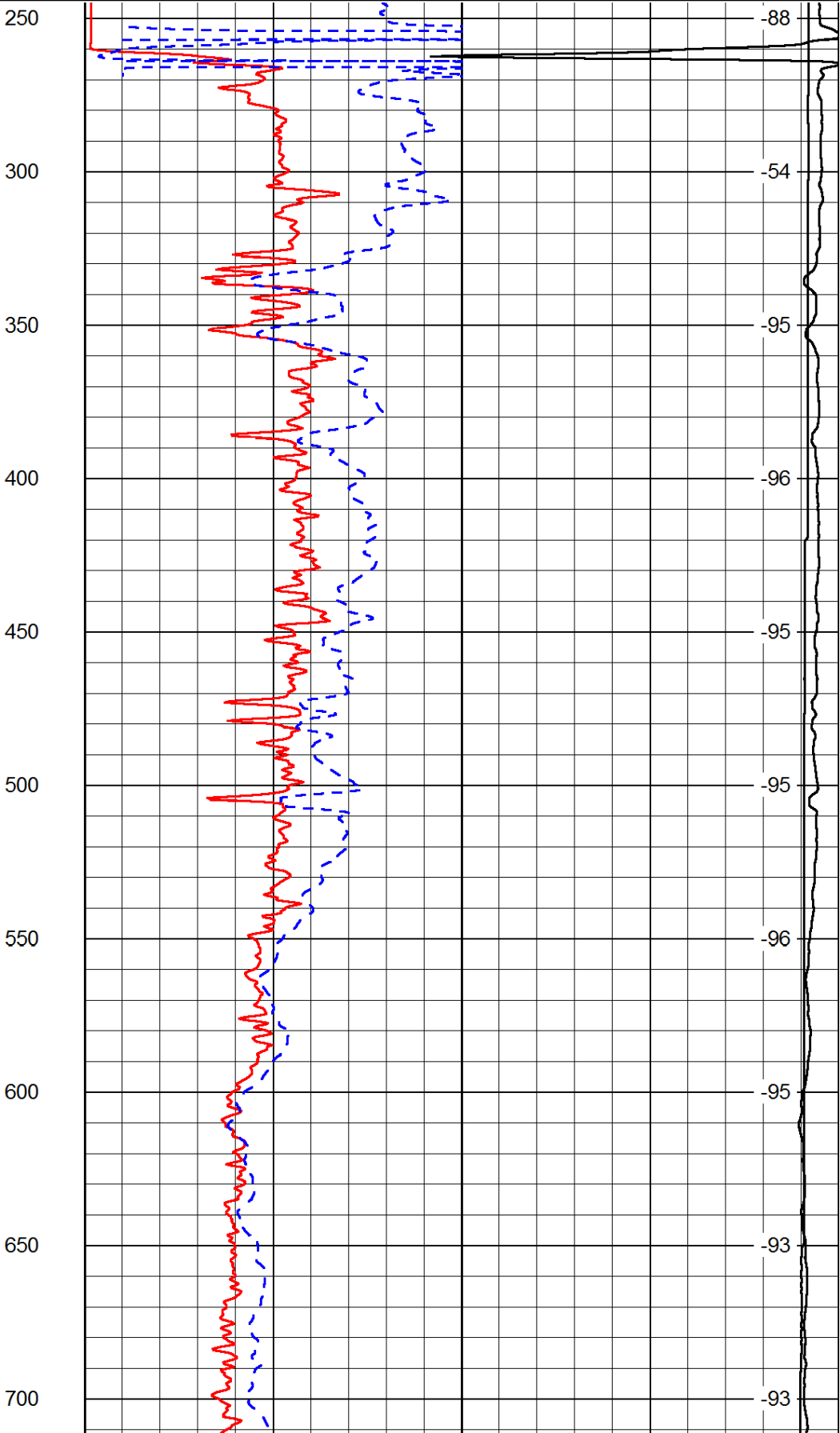
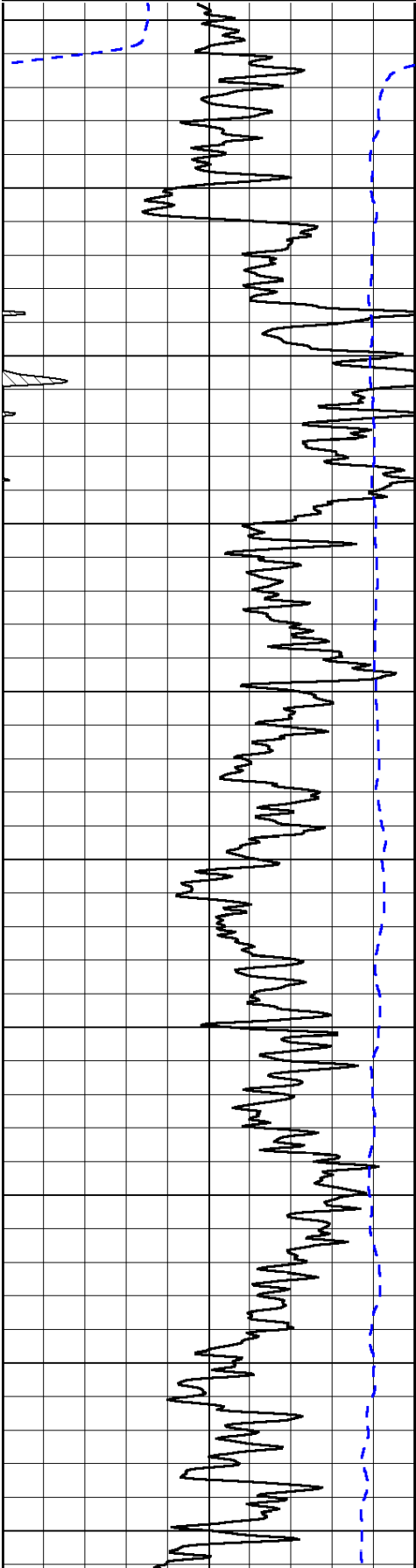
Hoxie Kansas
South to 70 S Rd, 3 1/2 East, North Into

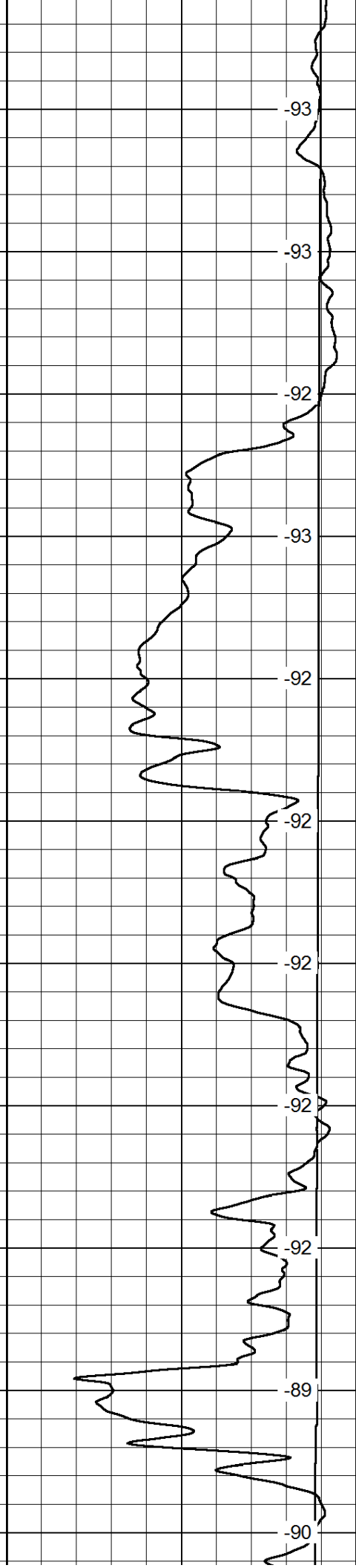
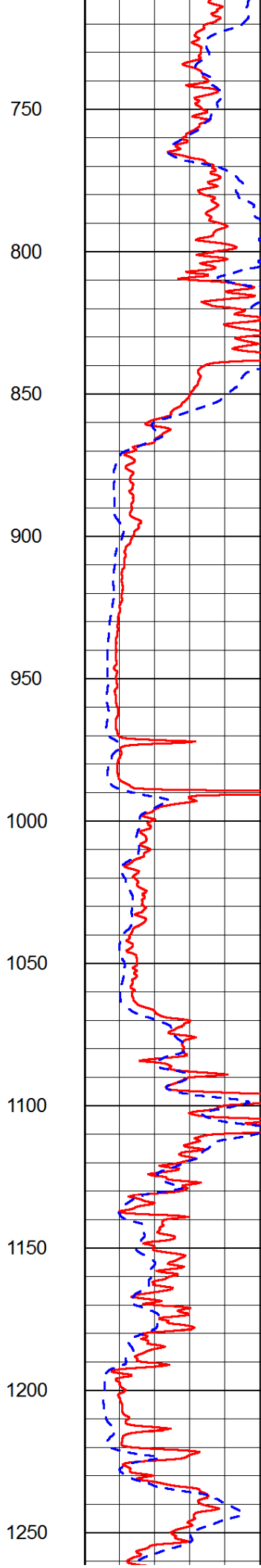
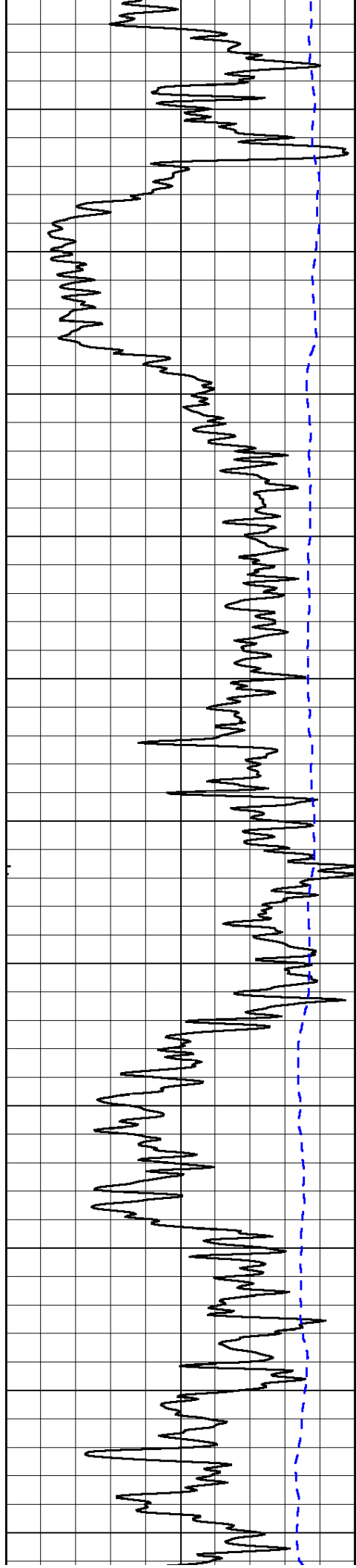
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Presentation Format: dil2in
Dataset Creation: Mon Aug 04 18:25:14 2014
Charted by: Depth in Feet scaled 1:600

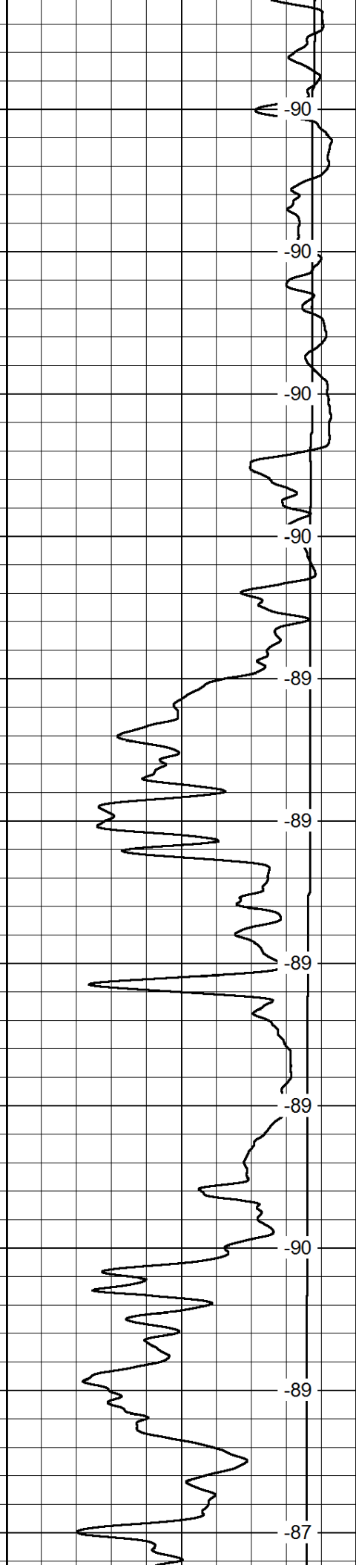
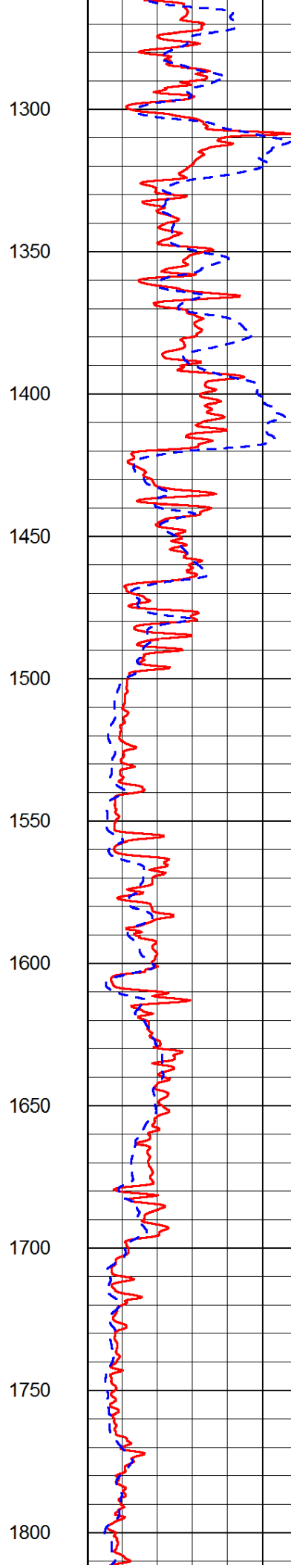
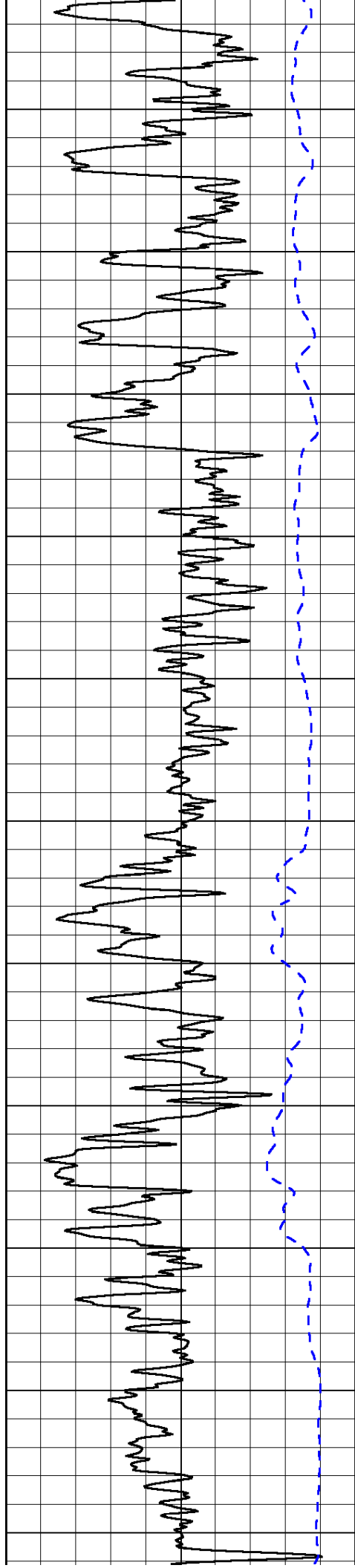
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-200	SP (mV)	0

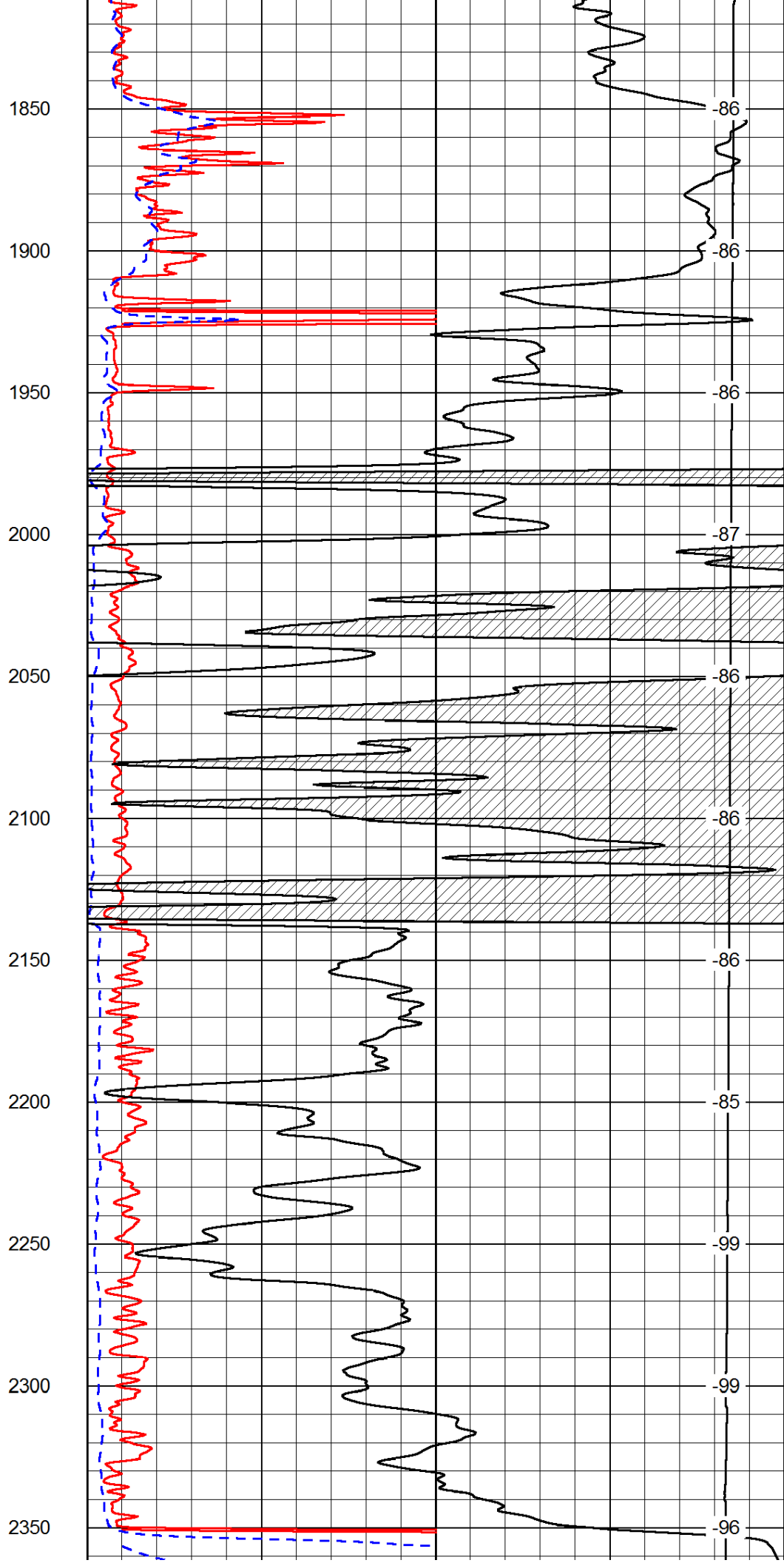
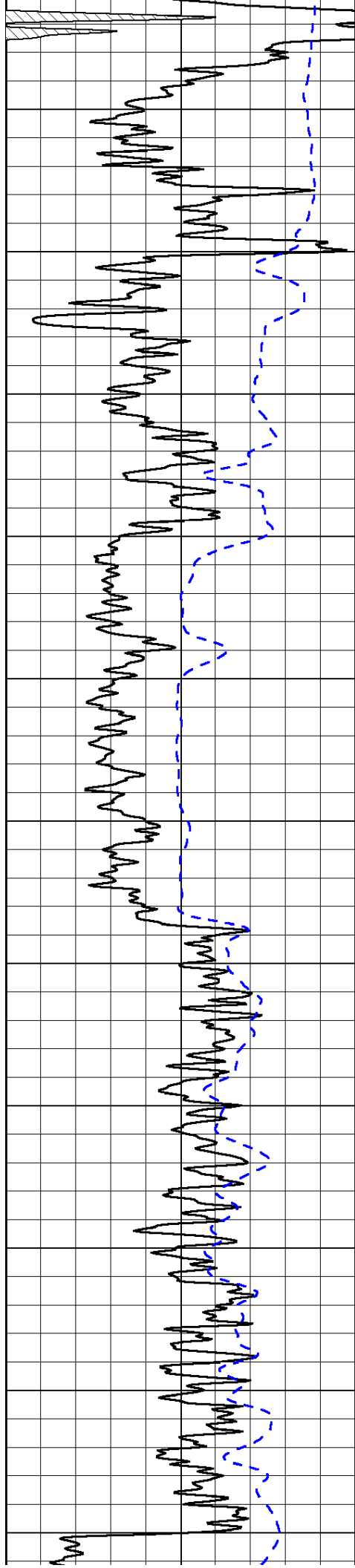
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0	Deep Resistivity	50
1000	Conductivity	0
15000	Line Tension	0
50	Shallow Resistivity	500
50	Deep Resistivity	500

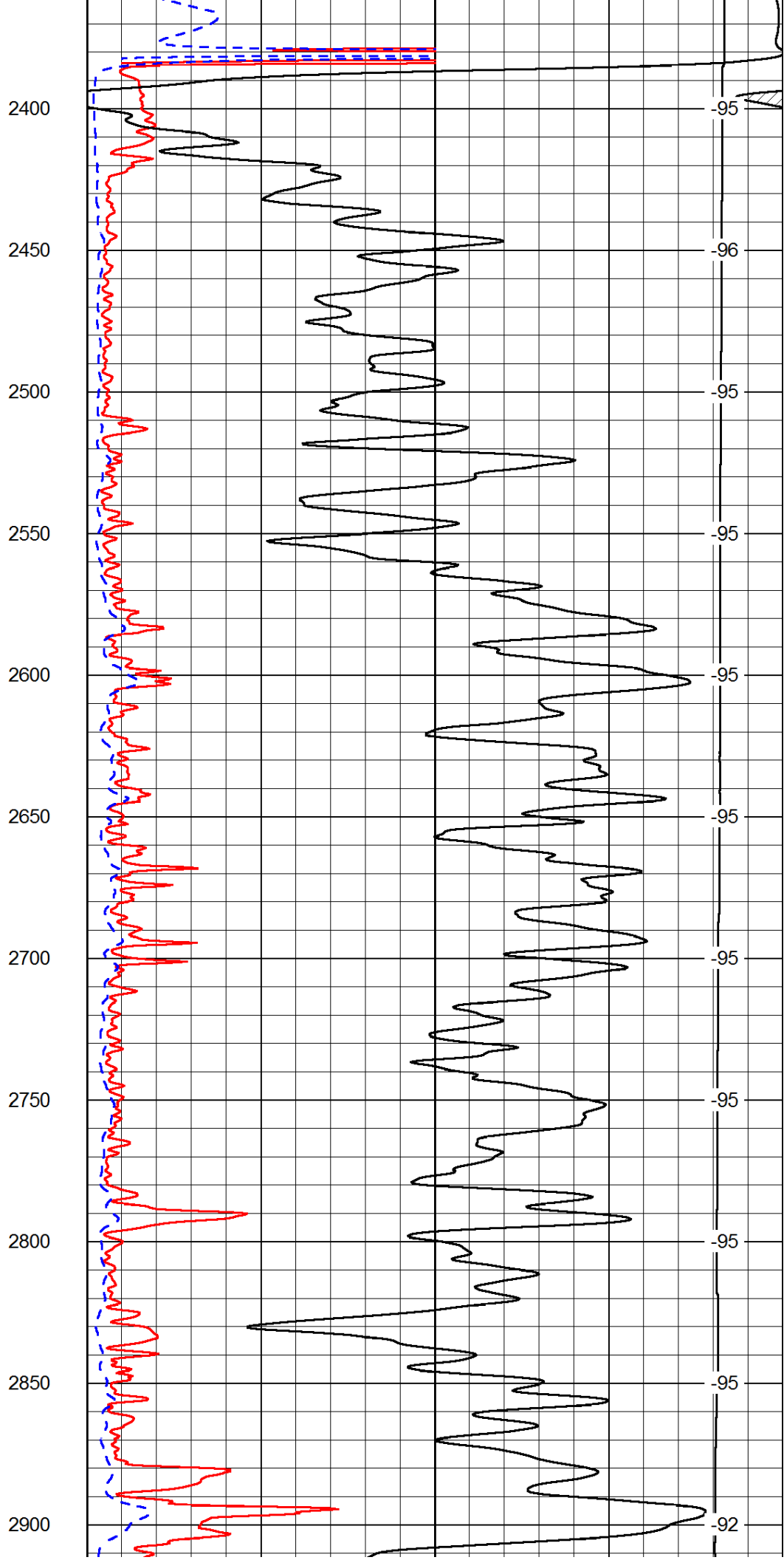
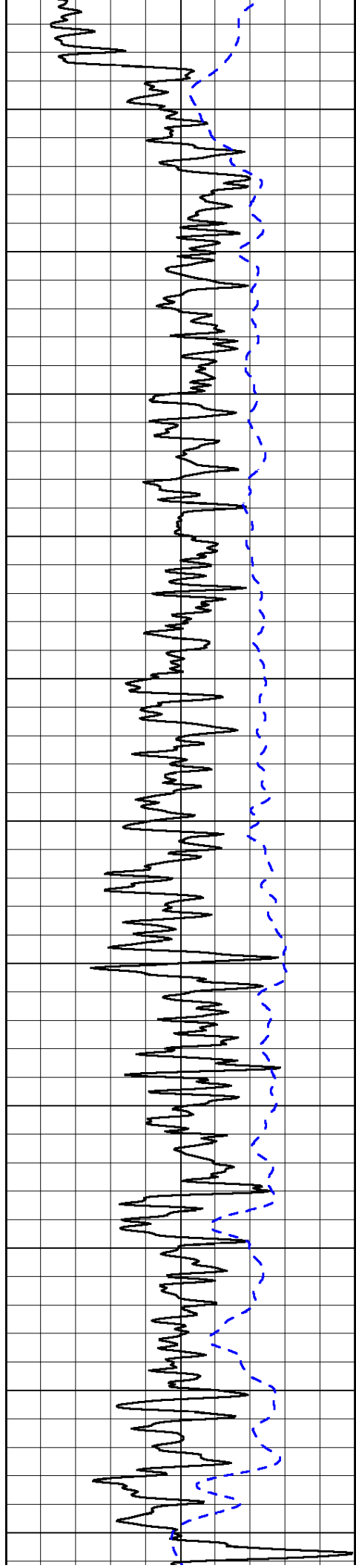
LSPD
0
0

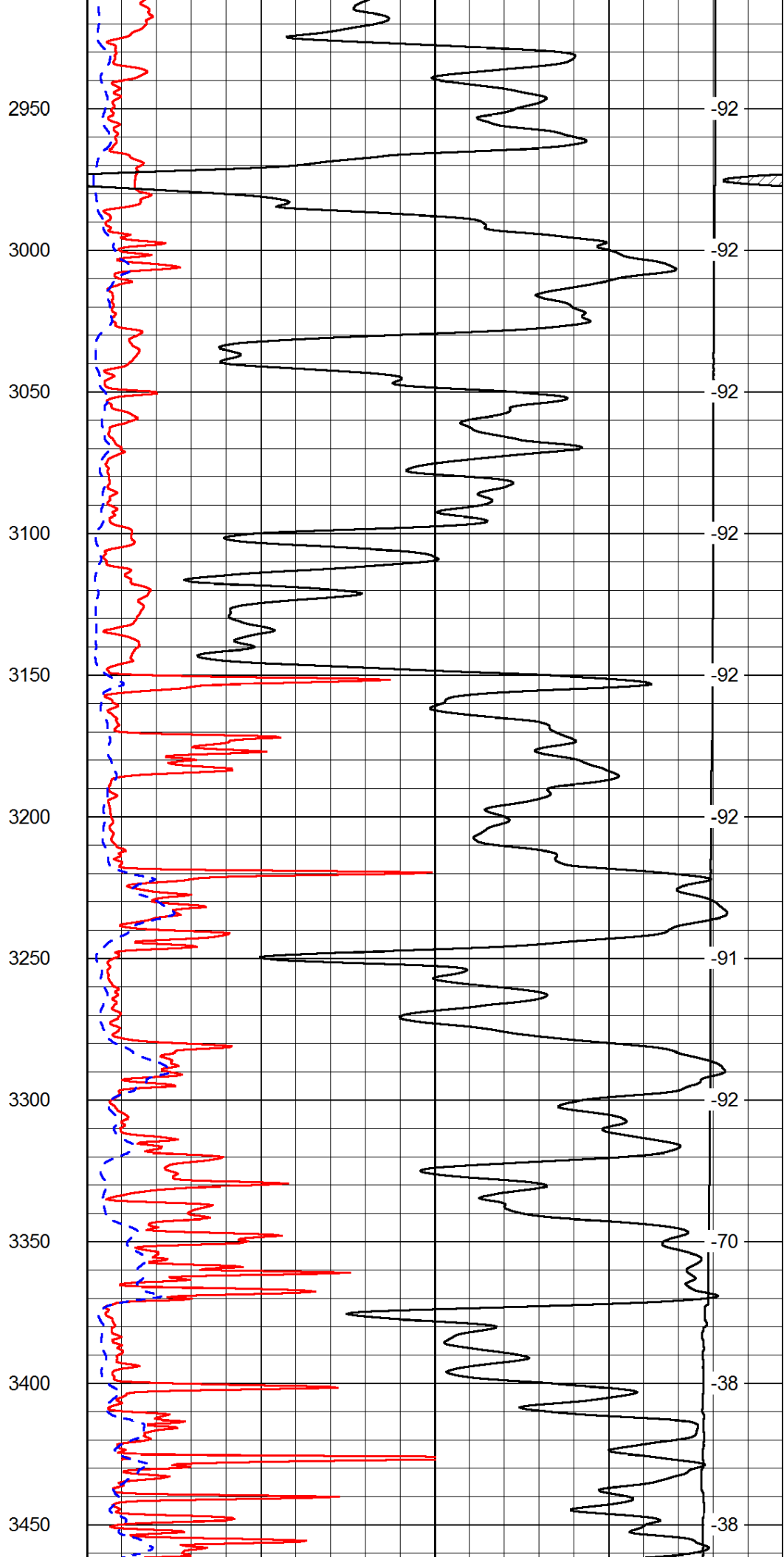
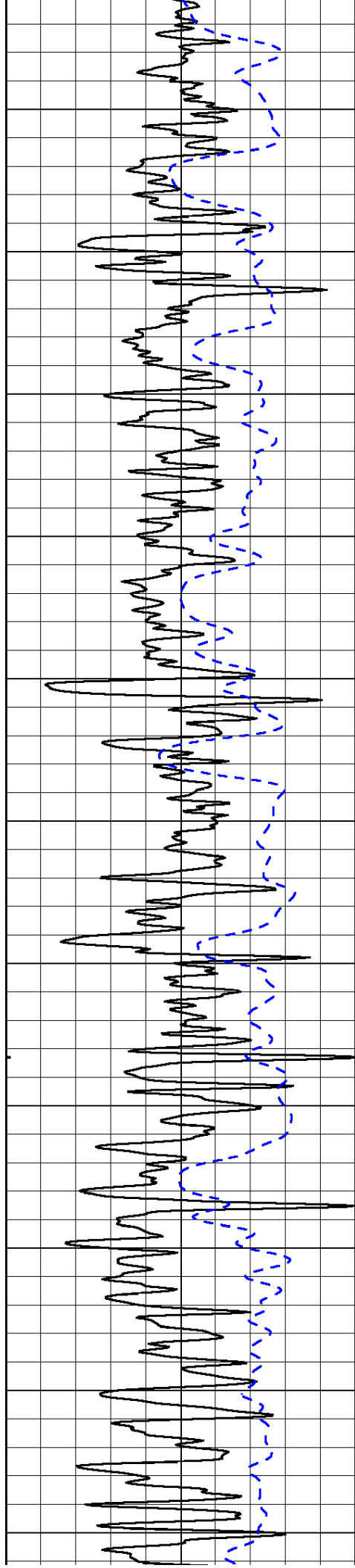


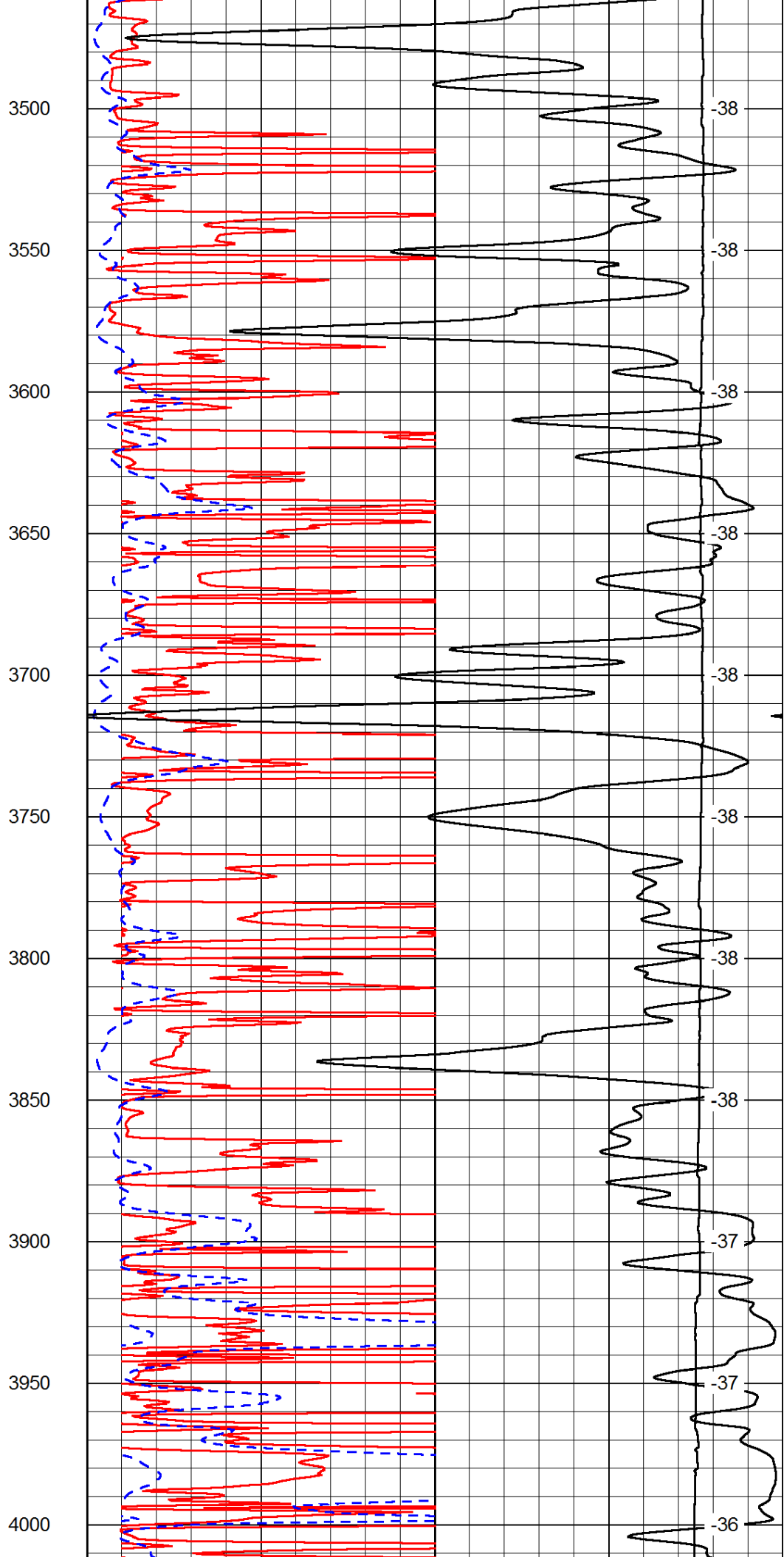
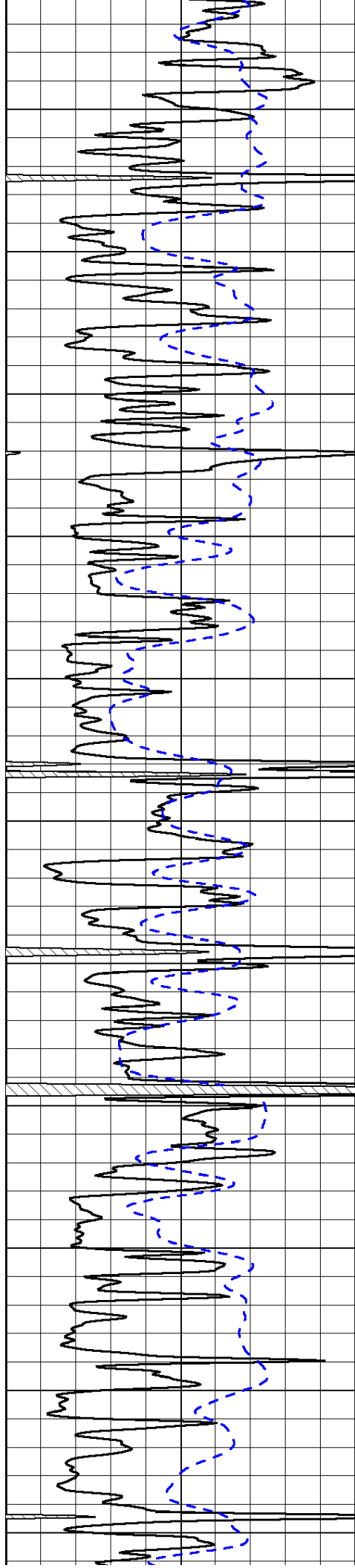


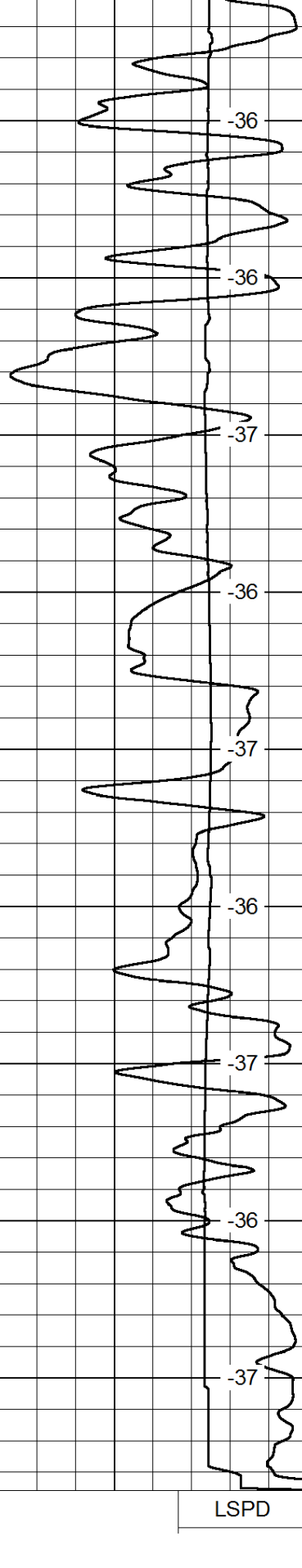
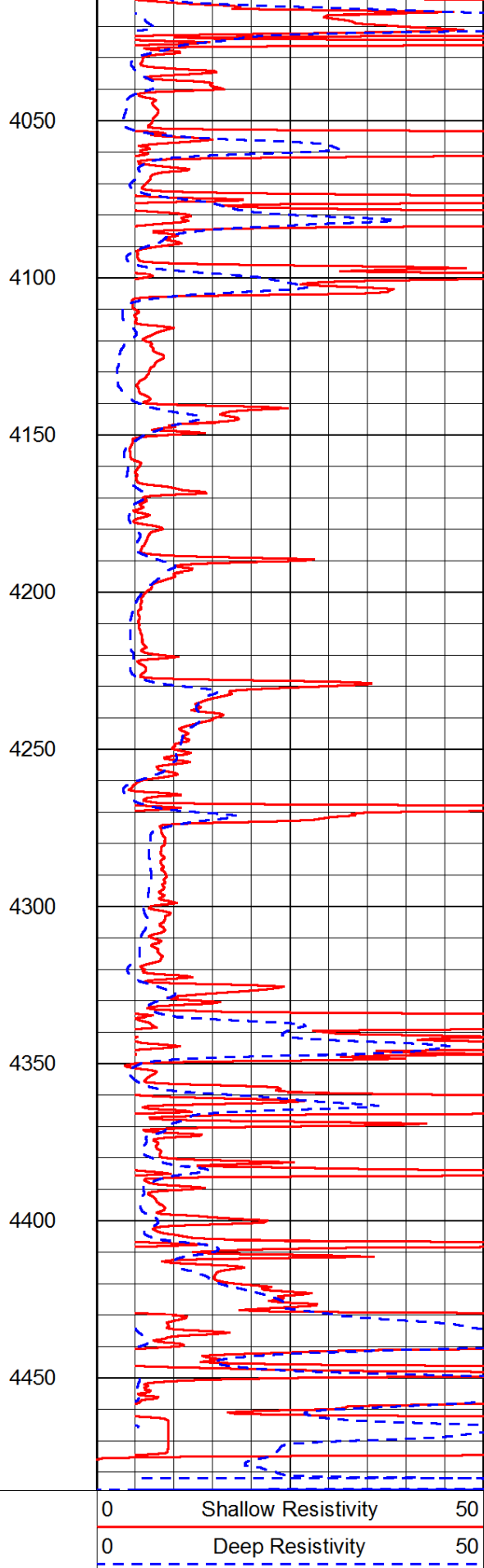
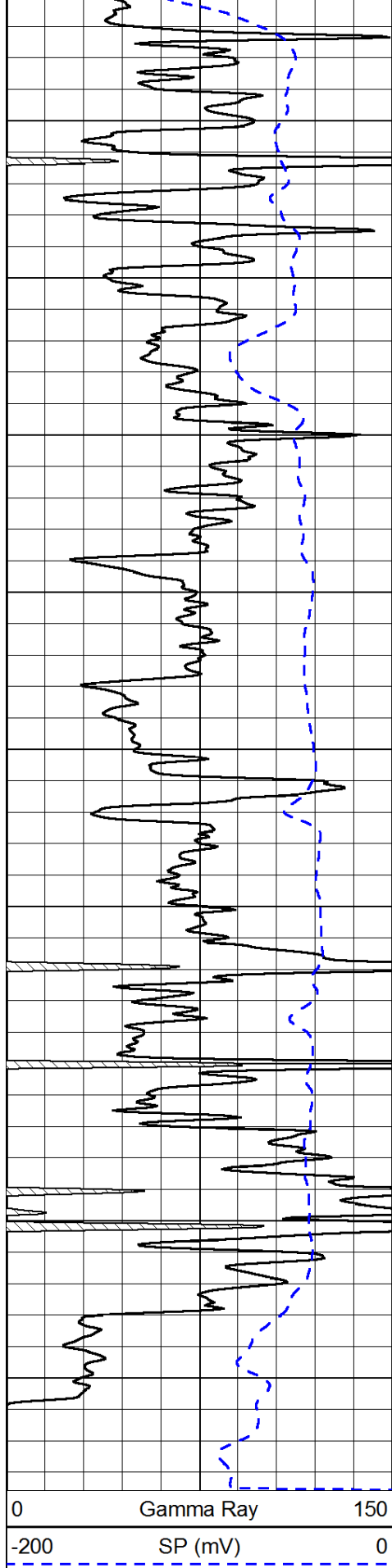












0 Gamma Ray 150
-200 SP (mV) 0

0 Shallow Resistivity 50
0 Deep Resistivity 50

LSPD
-36
-37

1000 Conductivity 0
15000 Line Tension 0

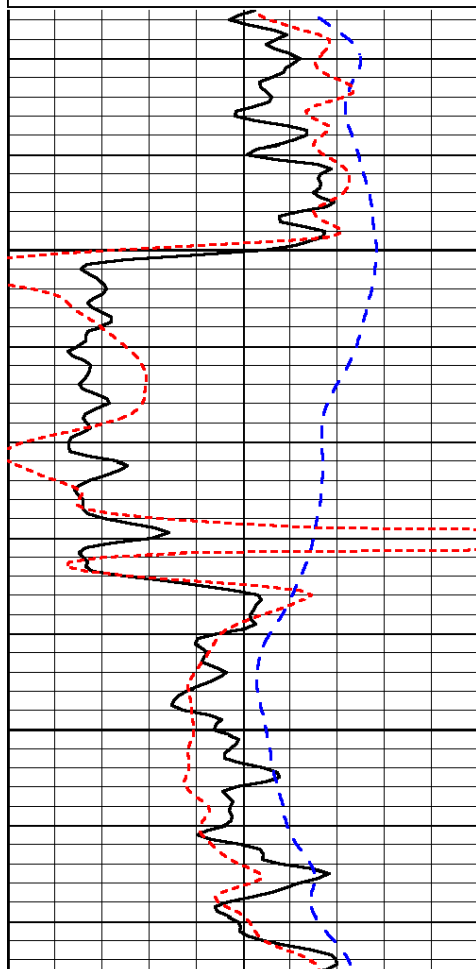
50 Shallow Resistivity 500
50 Deep Resistivity 500

Database File: c:\warrior\data\dan haffner_haffner # 5-18\haffner_haffner_5_18hd.db
 Dataset Pathname: DIL/haffstk
 Presentation Format: dil
 Dataset Creation: Mon Aug 04 18:25:14 2014
 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

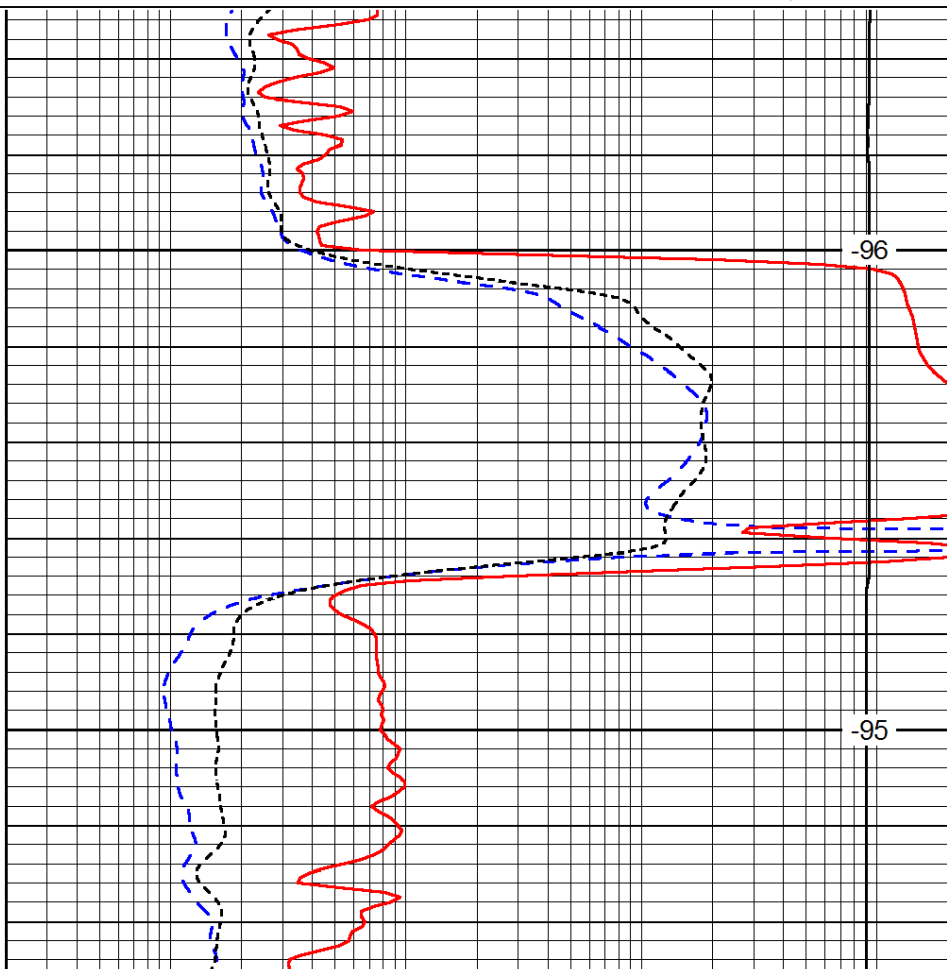
LSPD



2350

2400

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



-96

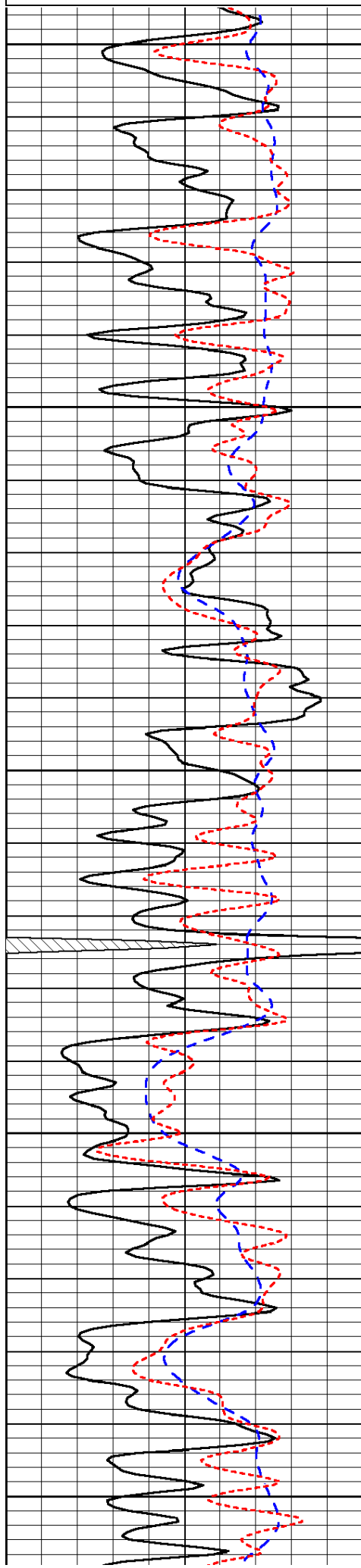
-95

LSPD

Database File: c:\warrior\data\dan haffner_haffner # 5-18\haffner_haffner_5_18hd.db
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 Dataset Creation: Mon Aug 04 18:25:14 2014
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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



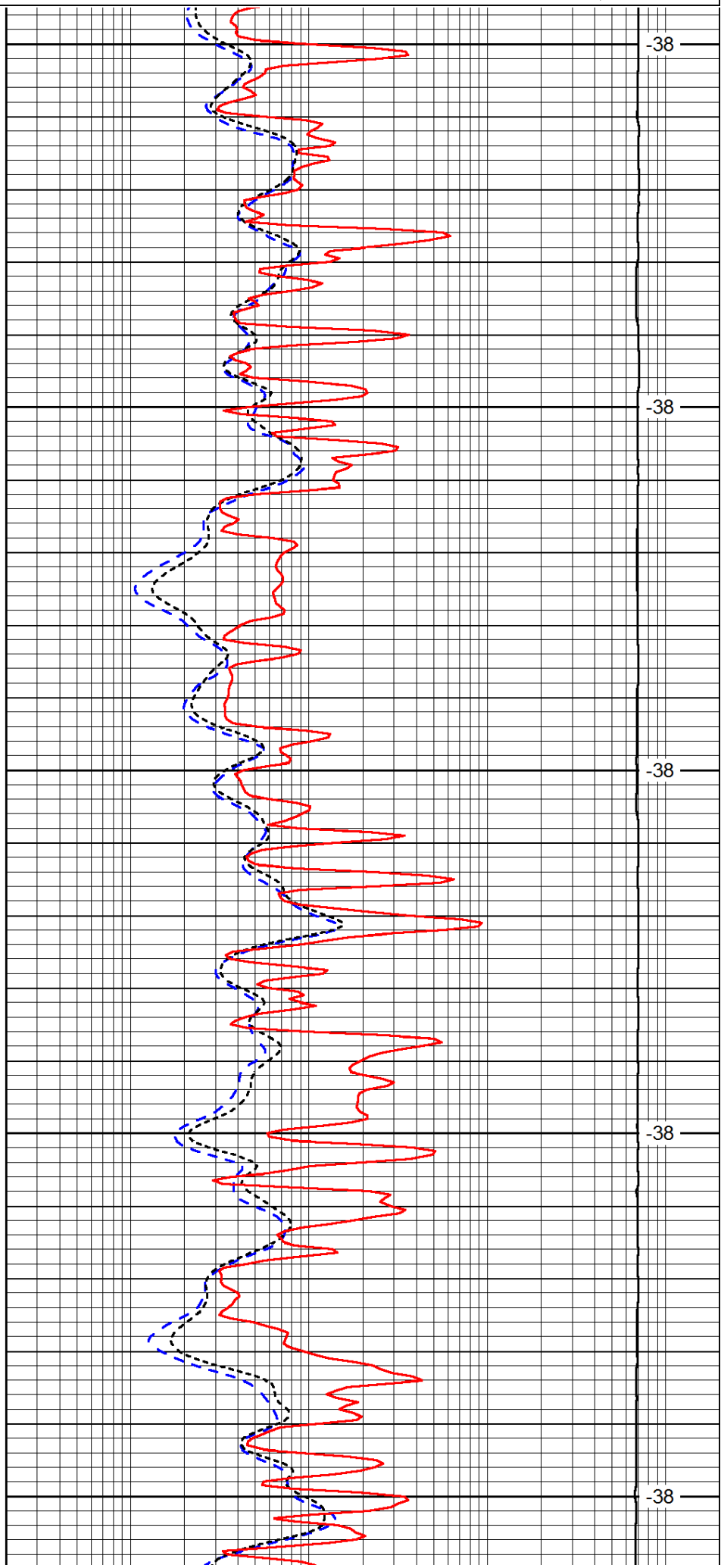
3400

3450

3500

3550

3600



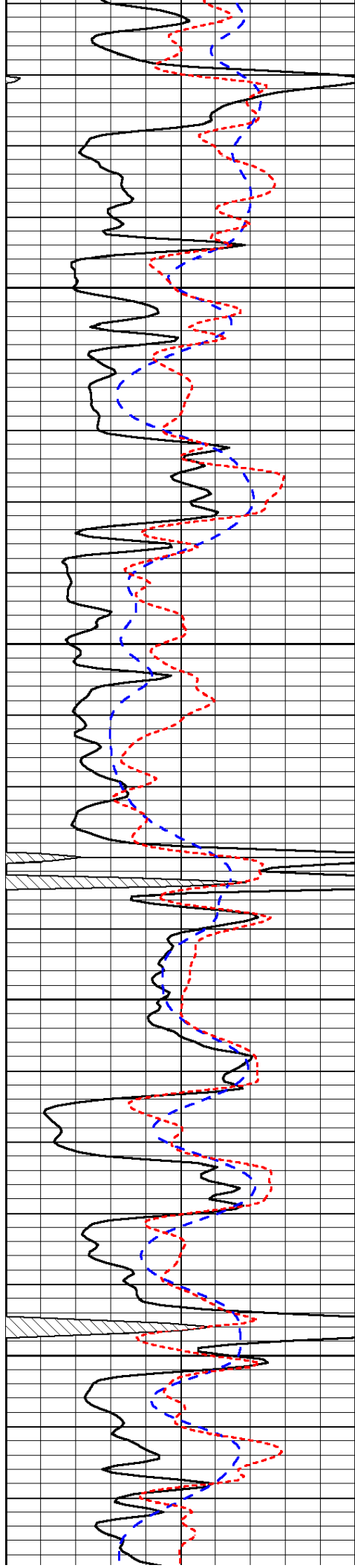
-38

-38

-38

-38

-38

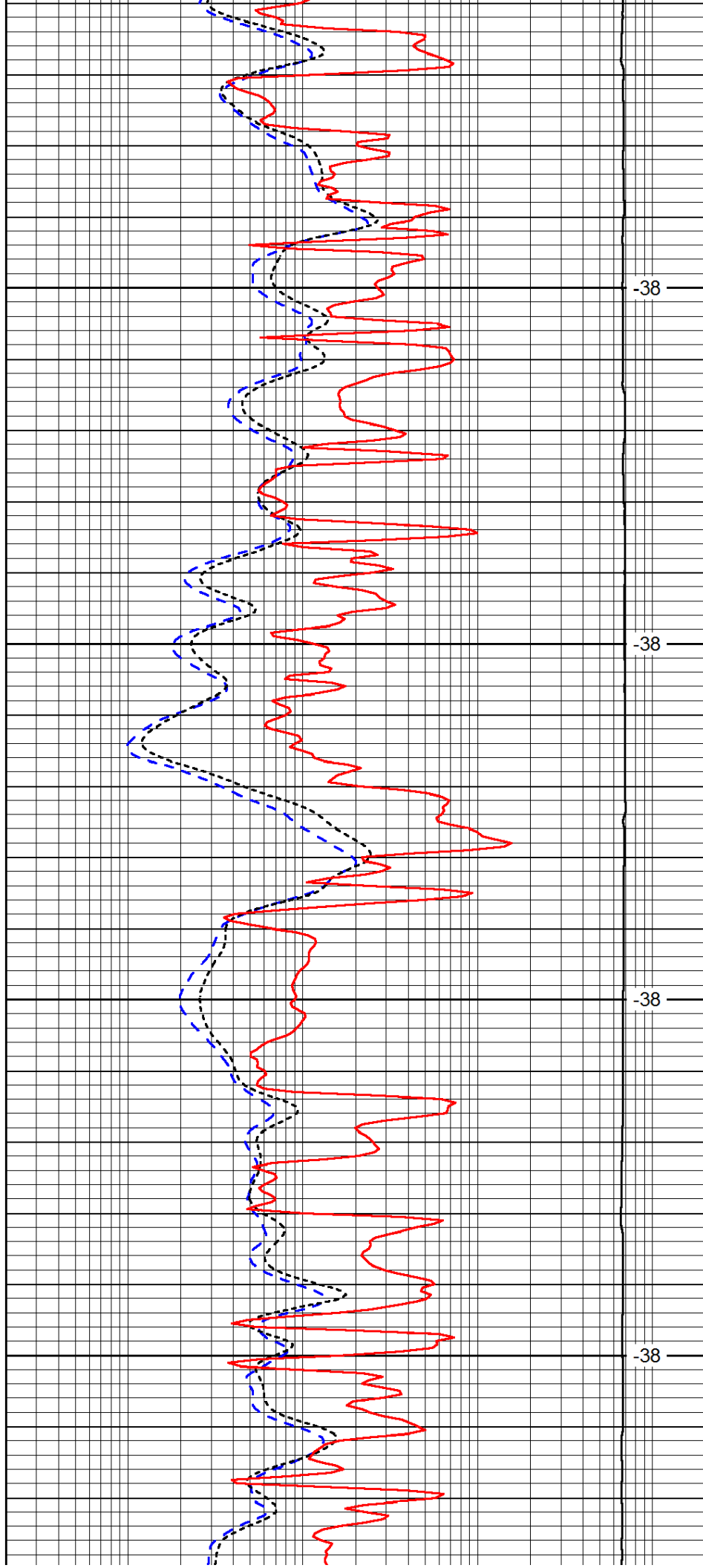


3650

3700

3750

3800

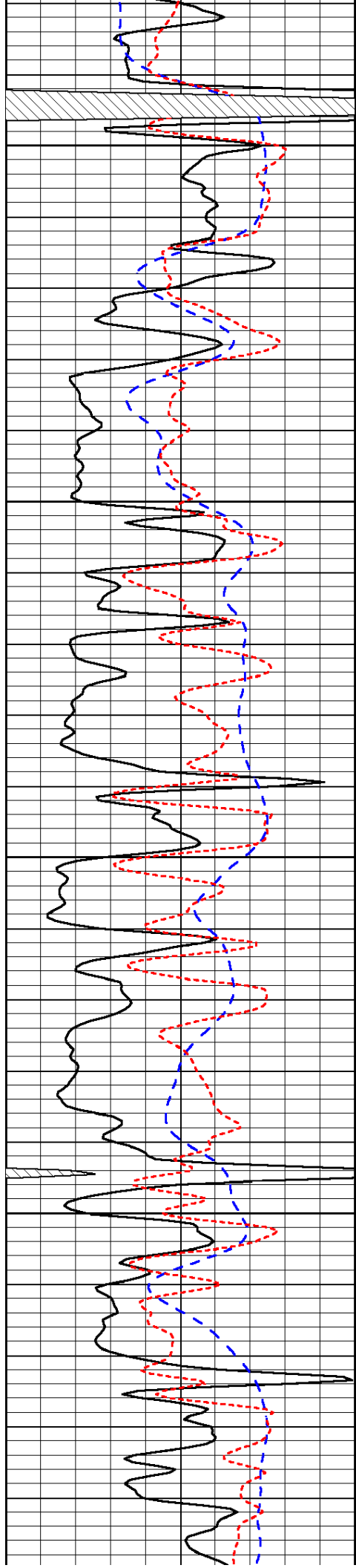


-38

-38

-38

-38



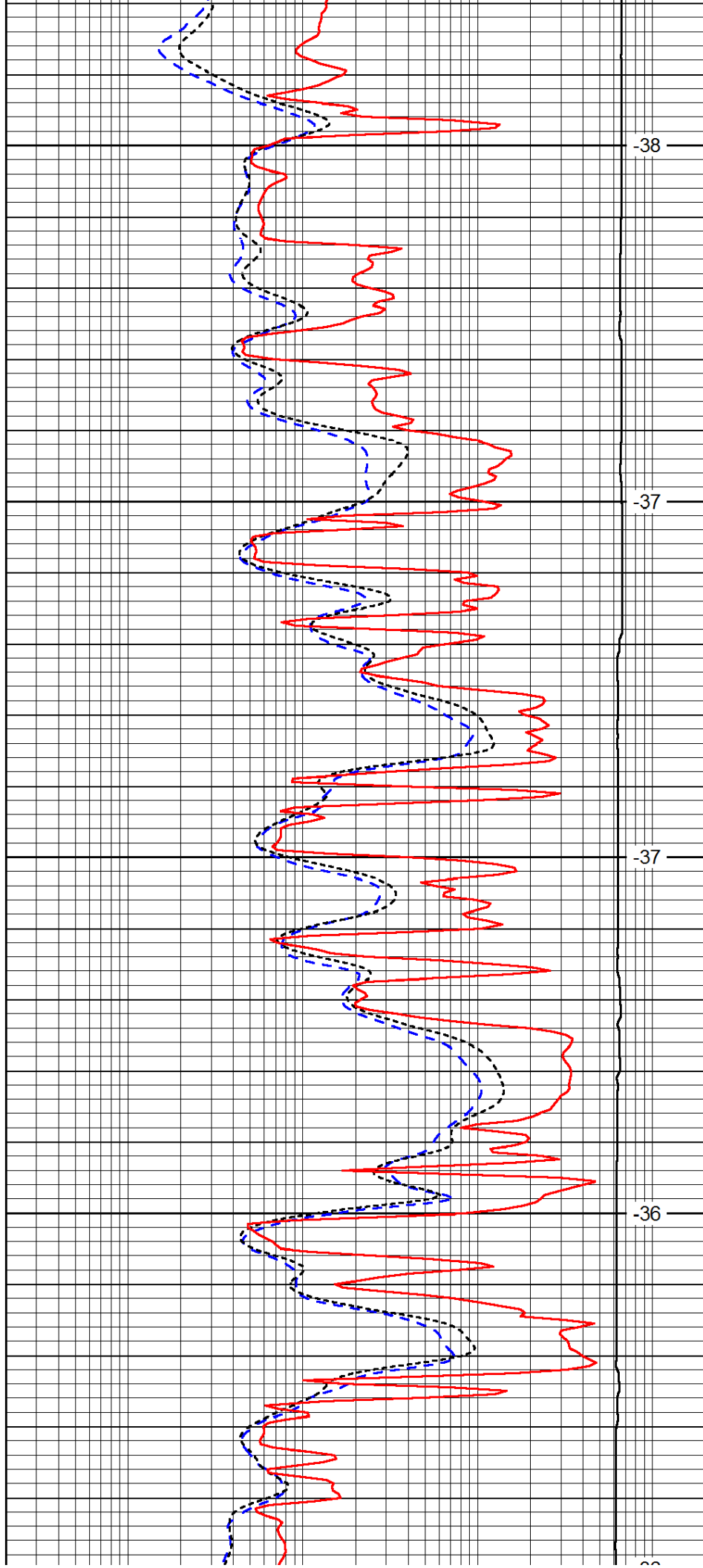
3850

3900

3950

4000

4050



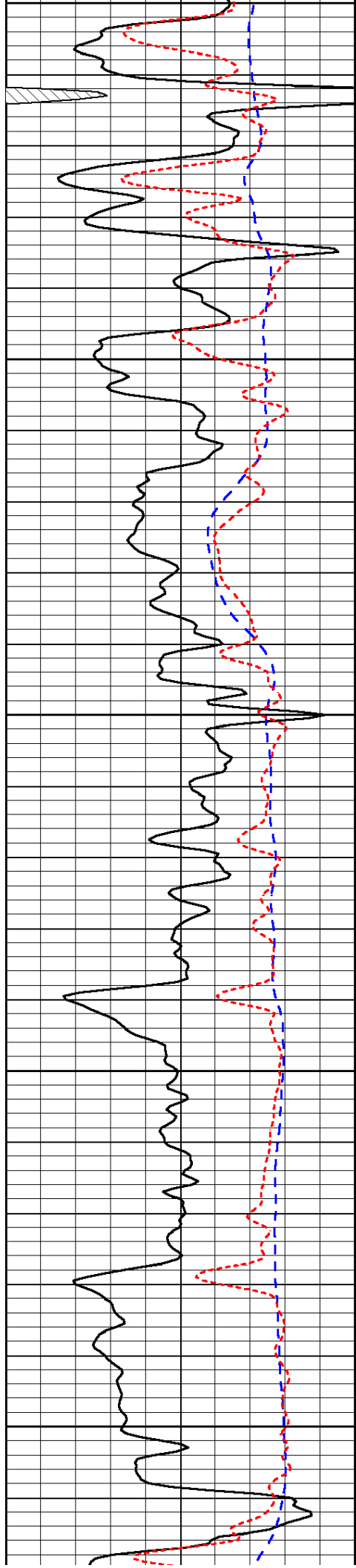
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-37

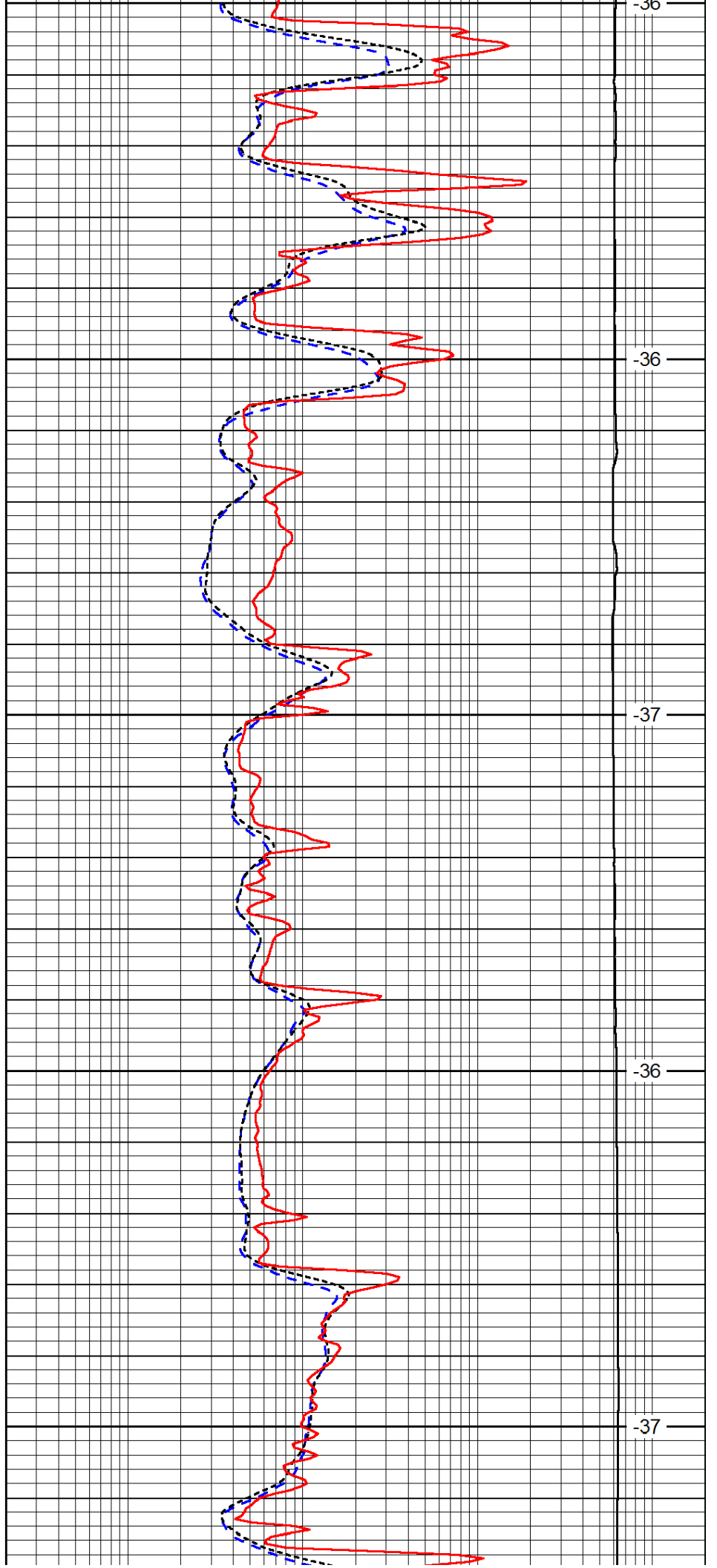
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-36

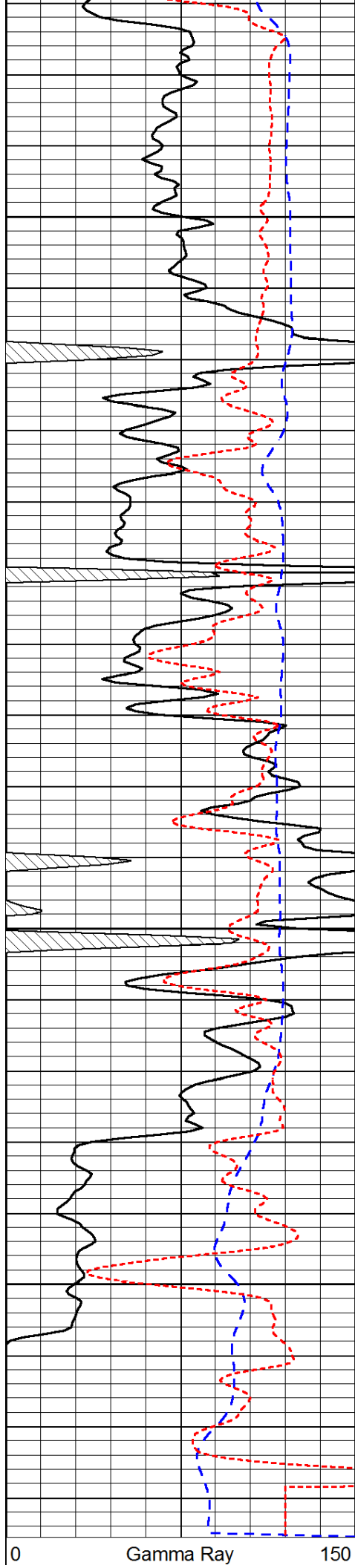
-35



4050
4100
4150
4200
4250



-36
-36
-37
-36
-37

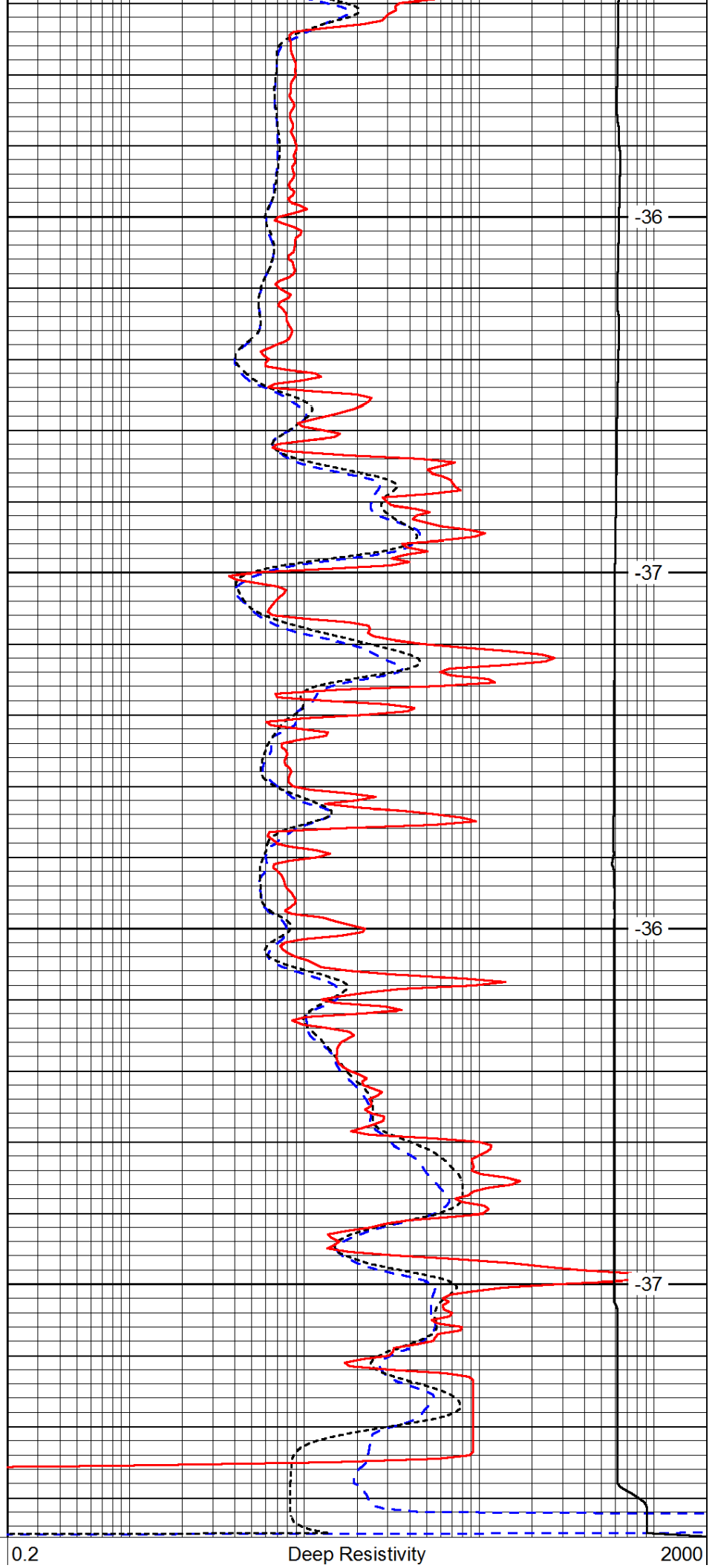


4300

4350

4400

4450



-36

-37

-36

-37

-200	SP (mV)	0
-160	RxoRt	40

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