



Pioneer Energy Services

Dual Induction Log

API No.

15-147-20,743-00-00

Company **Bach Oil Production**

Well **Crystal #1**

Field **Wildcat**

County **Phillips**

State

Kansas

Location

**NE NW NE NW
150' FNL & 1870' FWL**

Sec: **35**

Twp: **1S**

Rge: **19W**

Elevation

Permanent Datum **Ground Level** Elevation **2165**
Log Measured From **Kelly Bushing** 5 Ft. Above Perm. Datum
Drilling Measured From **Kelly Bushing**

K.B. 2170
D.F. 2165
G.L. 2165

Date

9/26/2014

Run Number

One

Depth Driller

3550

Depth Logger

3543

Bottom Logged Interval

3542

Top Log Interval

200

Casing Driller

8.625 @ 220

Casing Logger

219

Bit Size

7.875

Type Fluid in Hole

Chemical

Salinity, ppm CL

200

Density / Viscosity

9.1 48

pH / Fluid Loss

11.0 5.6

Source of Sample

Flowline

Rm @ Meas. Temp

1.30 @ 70

Rmf @ Meas. Temp

0.98 @ 70

Rmc @ Meas. Temp

1.76 @ 70

Source of Rmf / Rmc

Charts

Rm @ BHT

0.82 @ 112

Operating Rig Time

4 1/2 Hours

Max Rec. Temp. F

112

Equipment Number

15

Location

Hays

Recorded By

D.Kerr

Witnessed By

Bob Peterson

<<< 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

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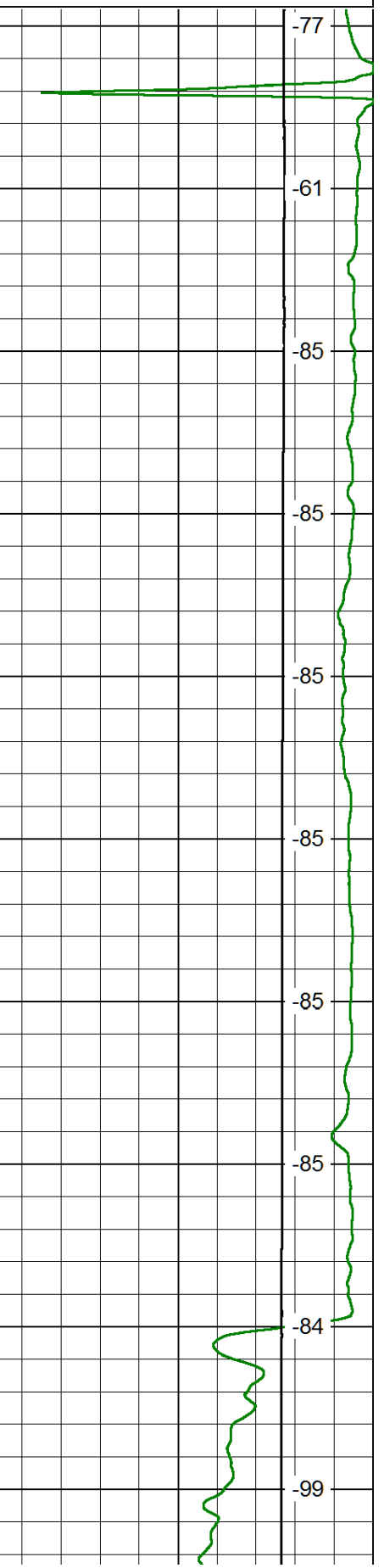
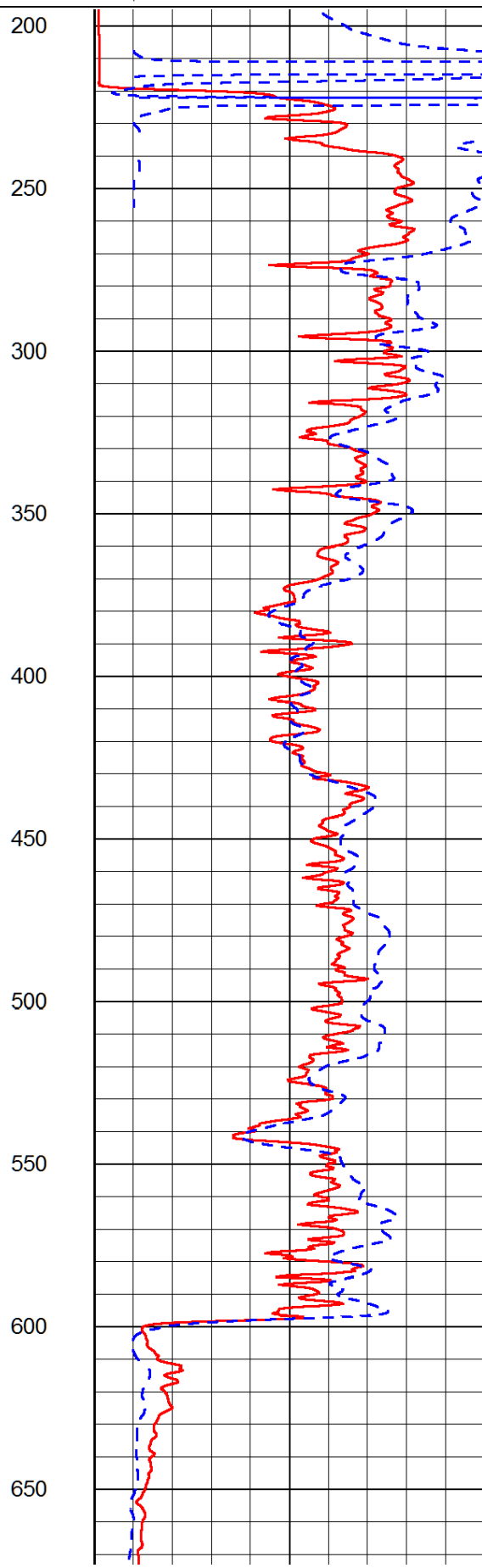
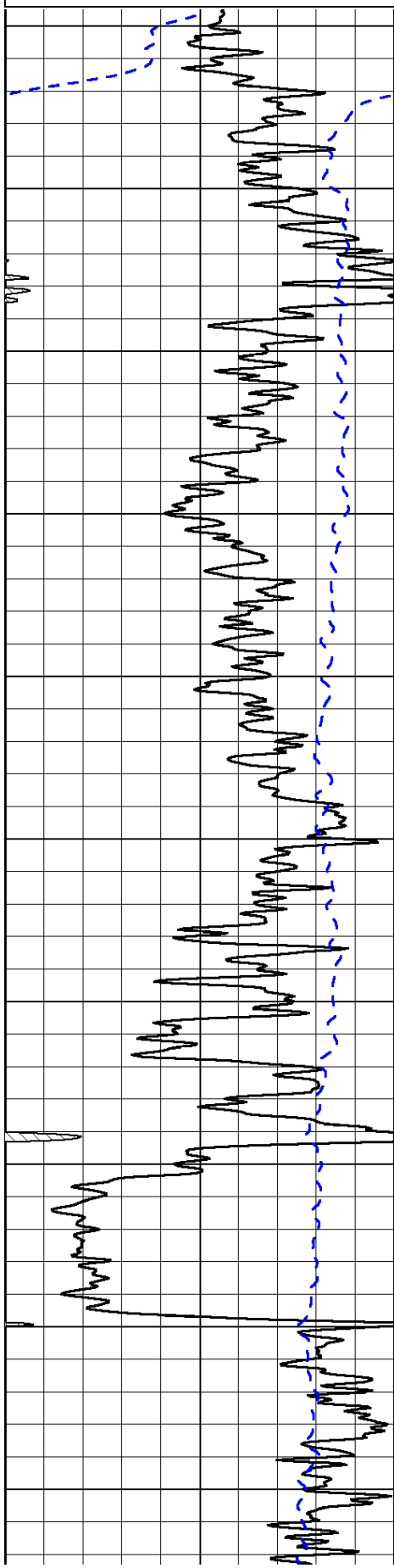
Phillilpsburg KS, 8 North to Hunter RD,
5 West to 500 RD, 2 1/4 North, West Into(1Mile)

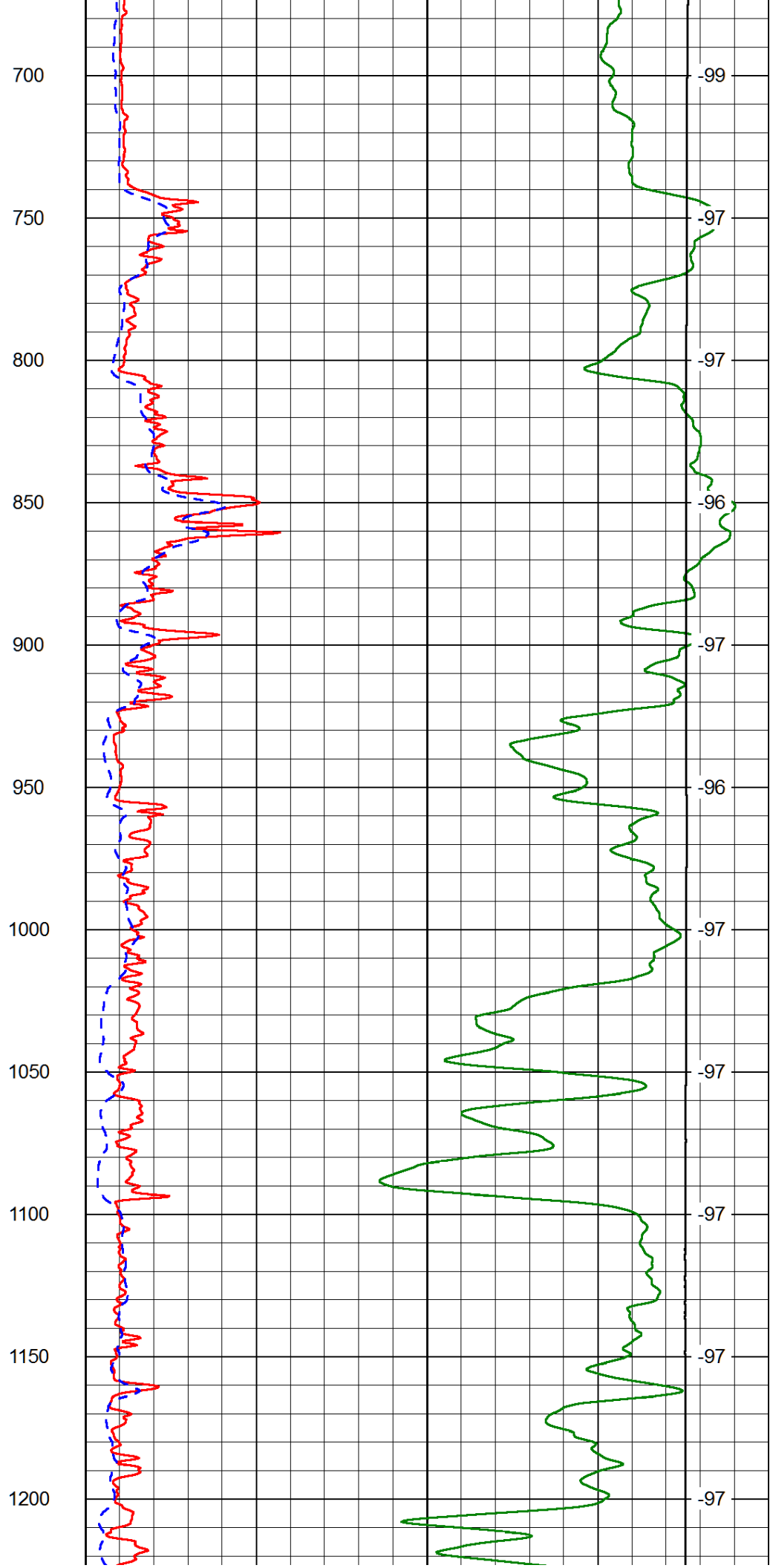
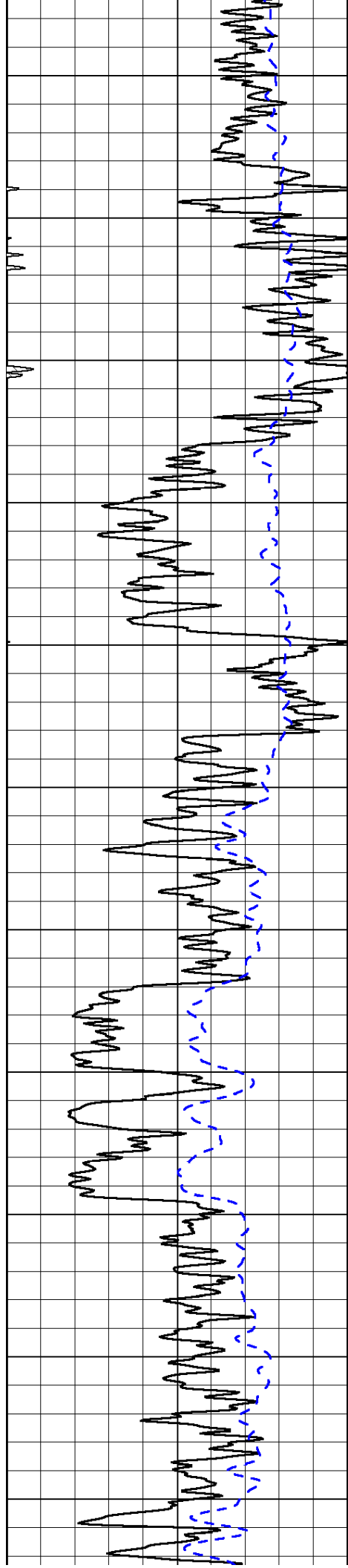
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Presentation Format: dil2in
Dataset Creation: Fri Sep 26 12:22:40 2014
Charted by: Depth in Feet scaled 1:600

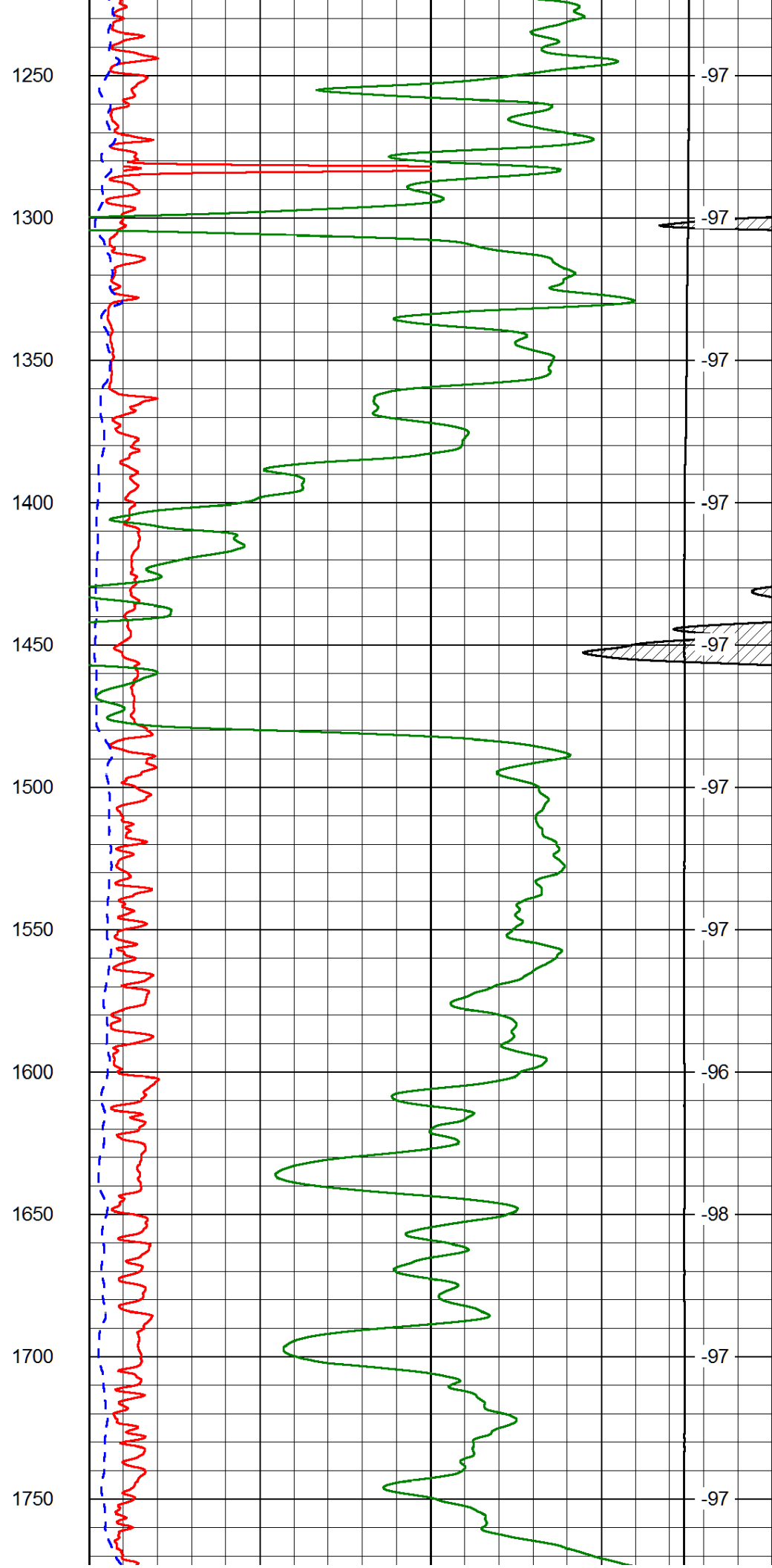
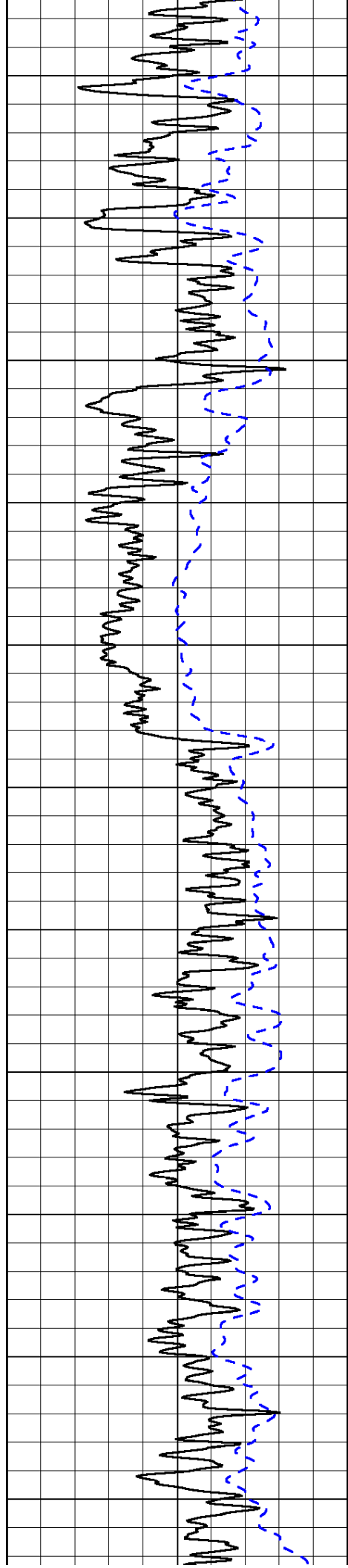
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-200	SP (mV)	0

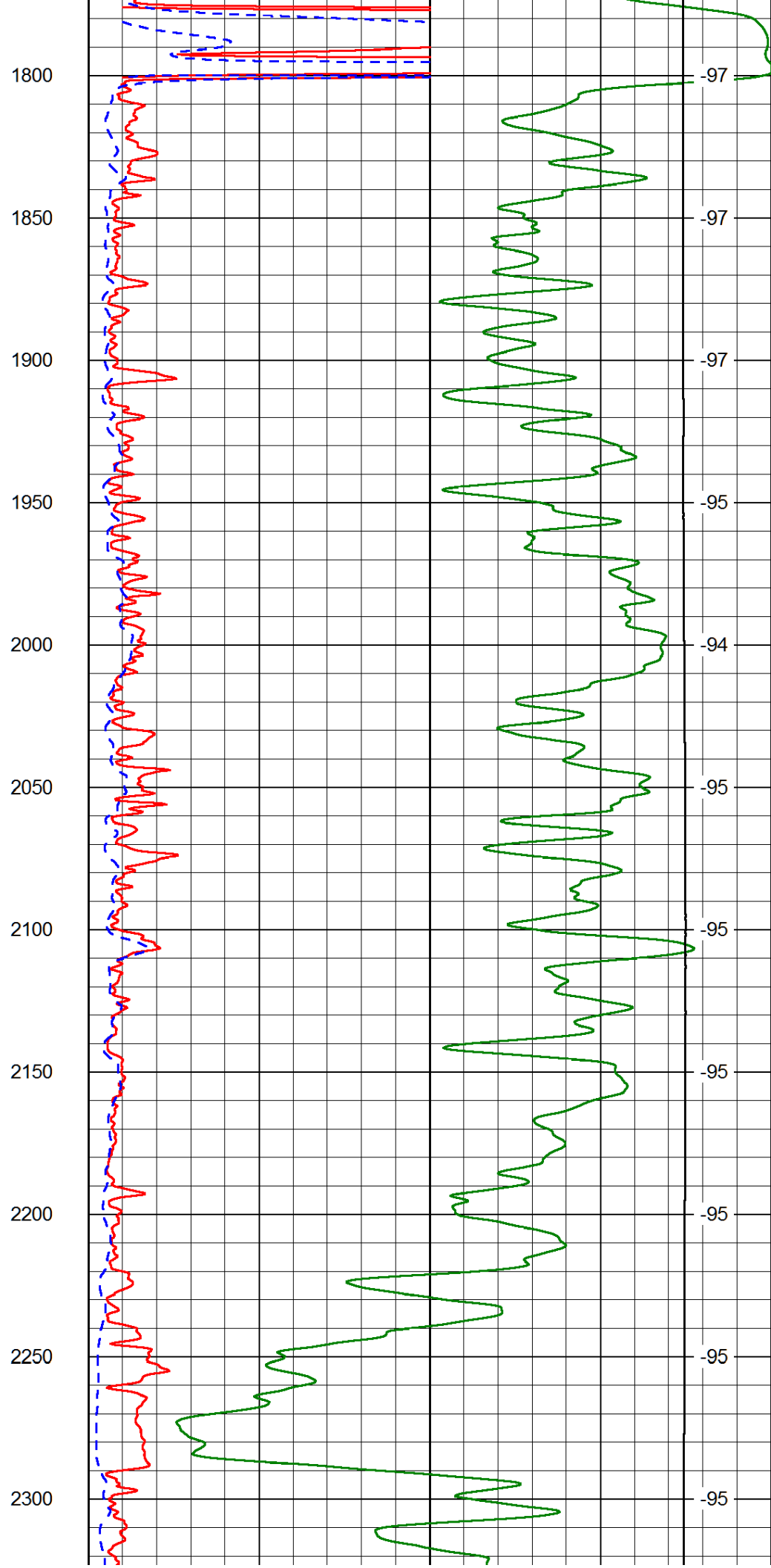
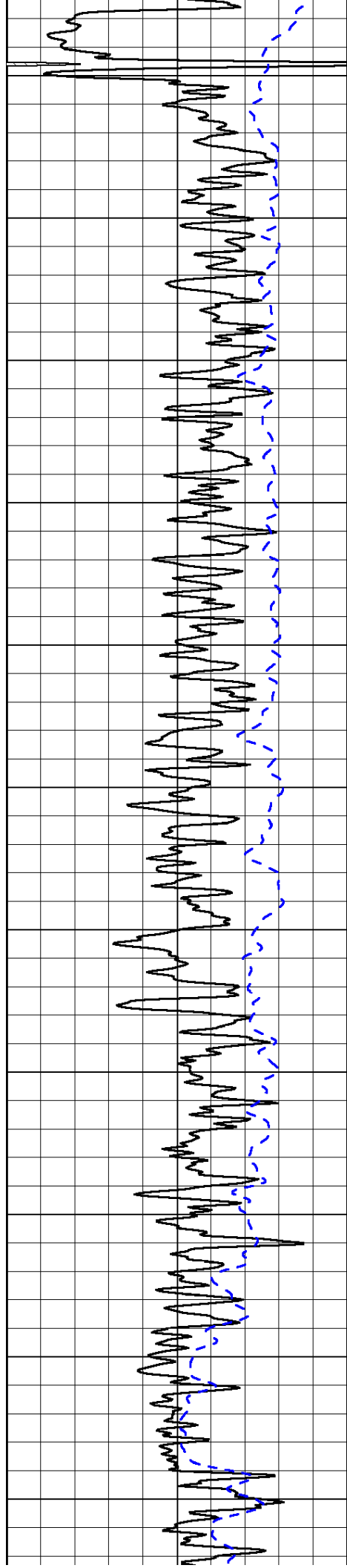
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0	Deep Resistivity	50
1000	Conductivity	0
15000	Line Tension	0
50	Shallow Resistivity	500
50	Deep Resistivity	500

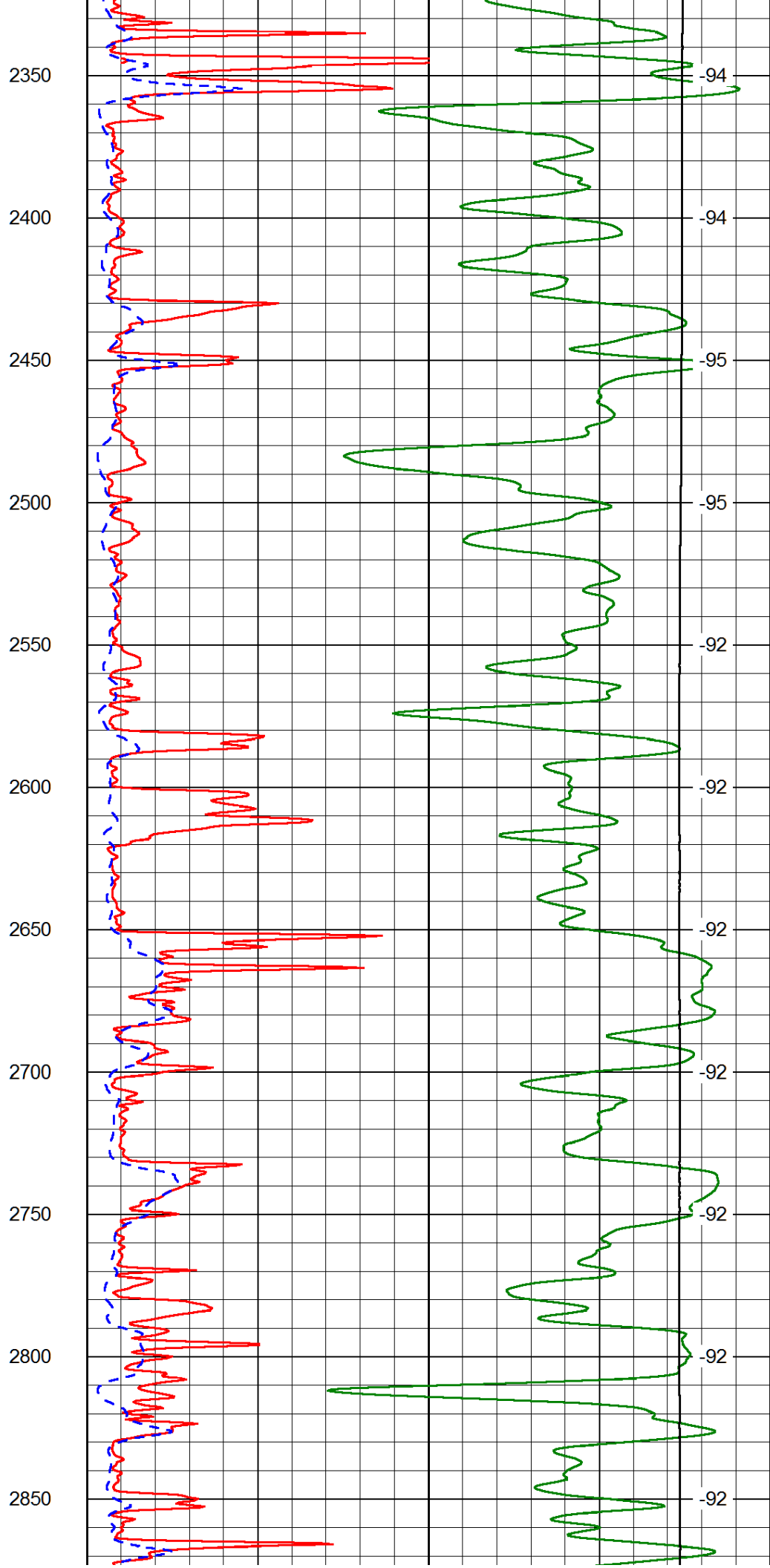
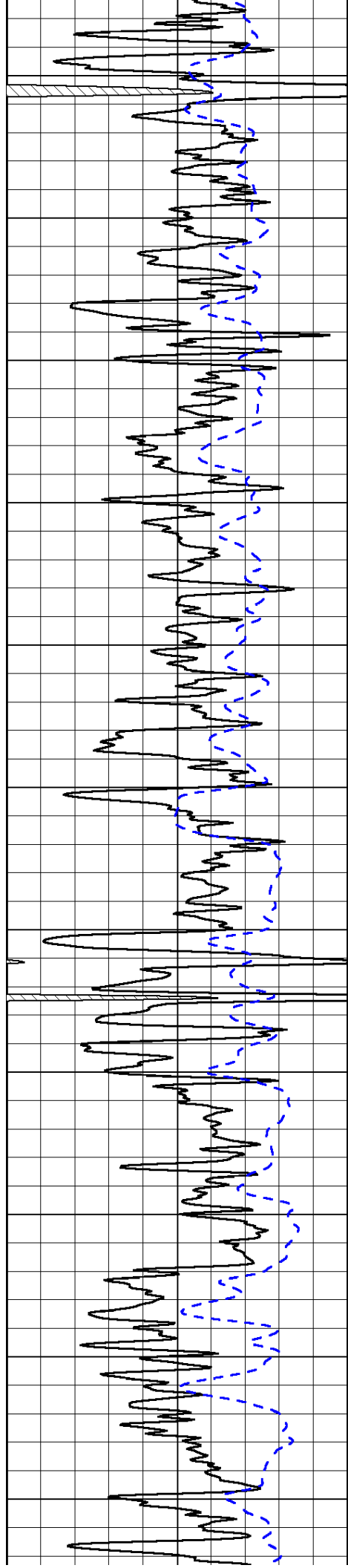
LSPD	0
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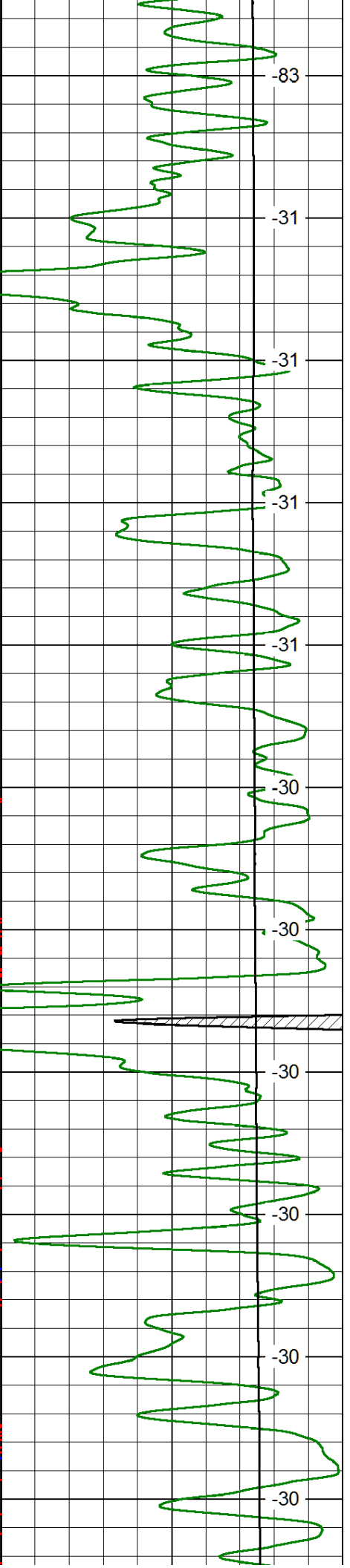
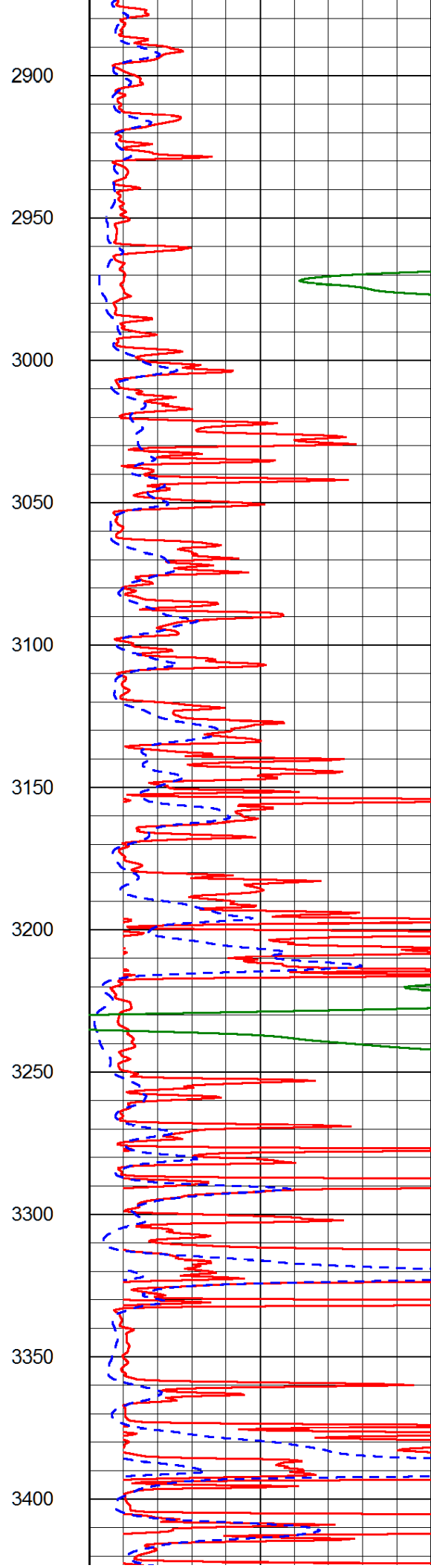
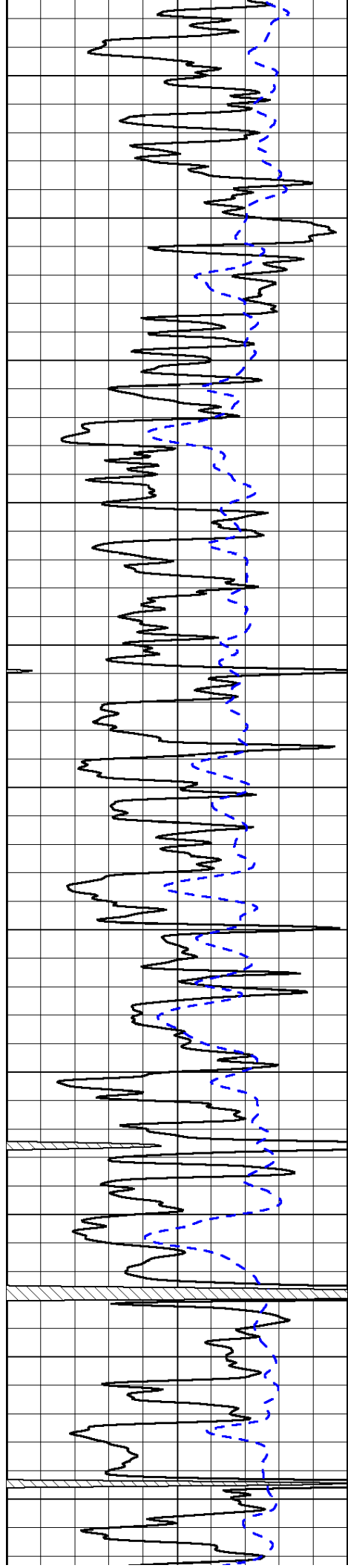


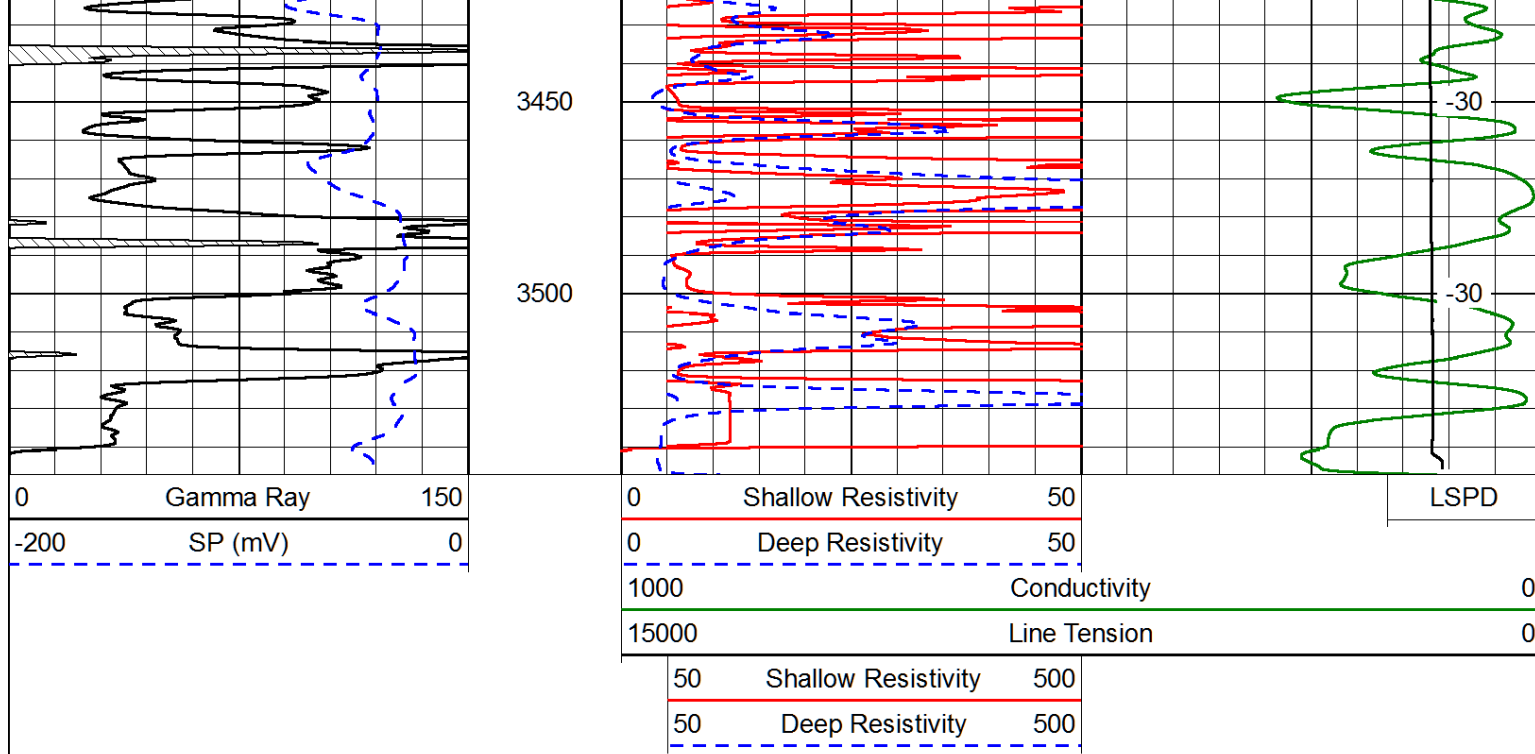




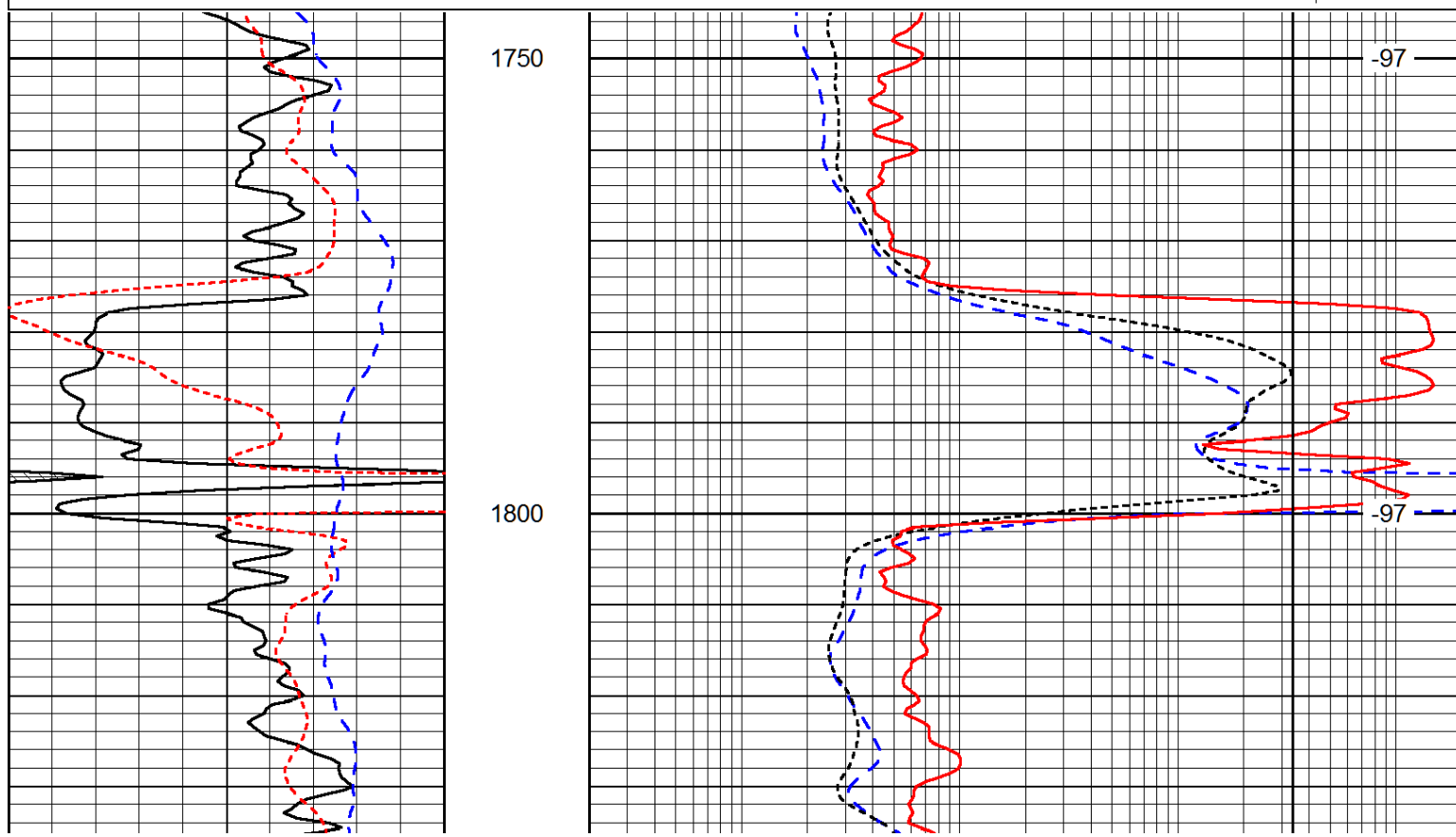
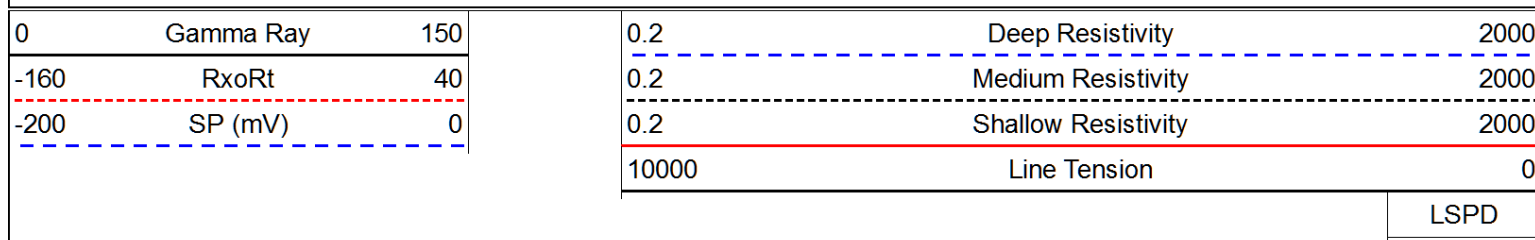


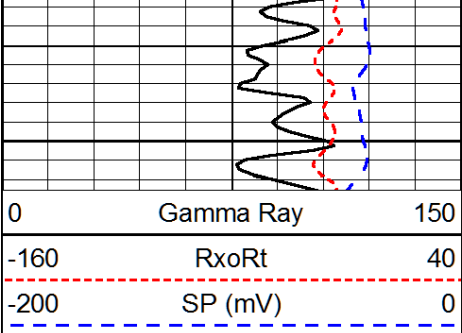




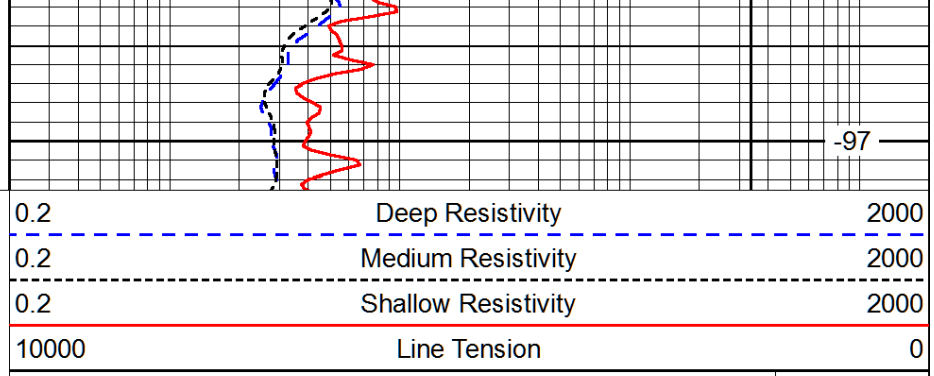


Database File: bach_crystal_1hd.db
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 Presentation Format: dil
 Dataset Creation: Fri Sep 26 12:22:40 2014
 Charted by: Depth in Feet scaled 1:240



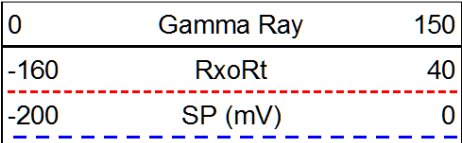


1850

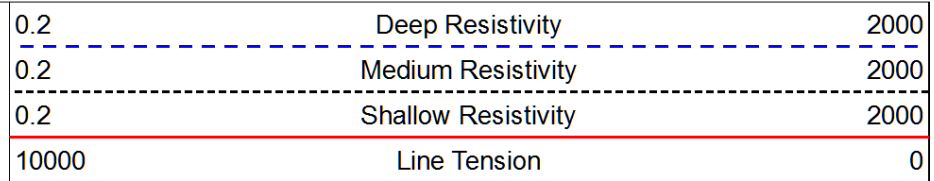


LSPD

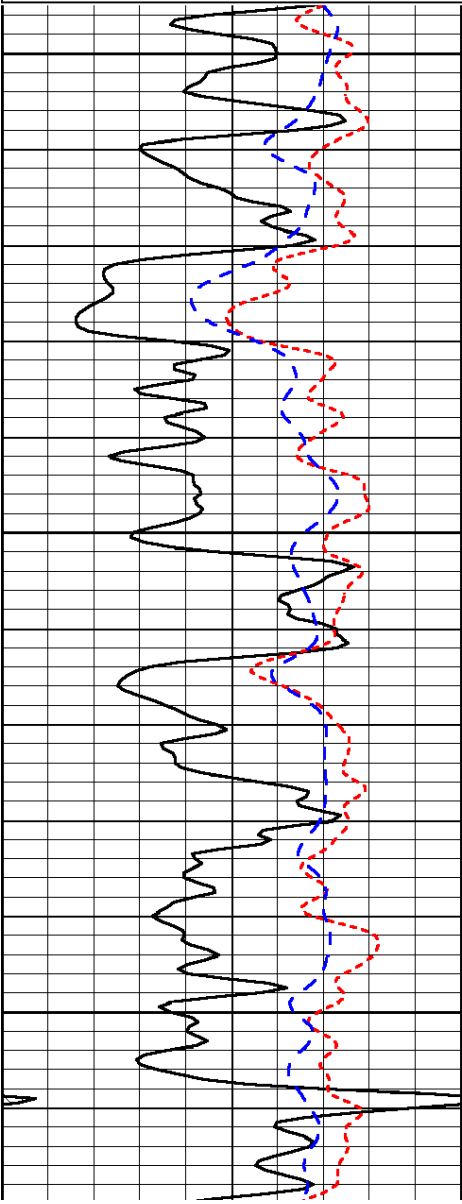
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Presentation Format: dil
Dataset Creation: Fri Sep 26 12:22:40 2014
Charted by: Depth in Feet scaled 1:240



3000

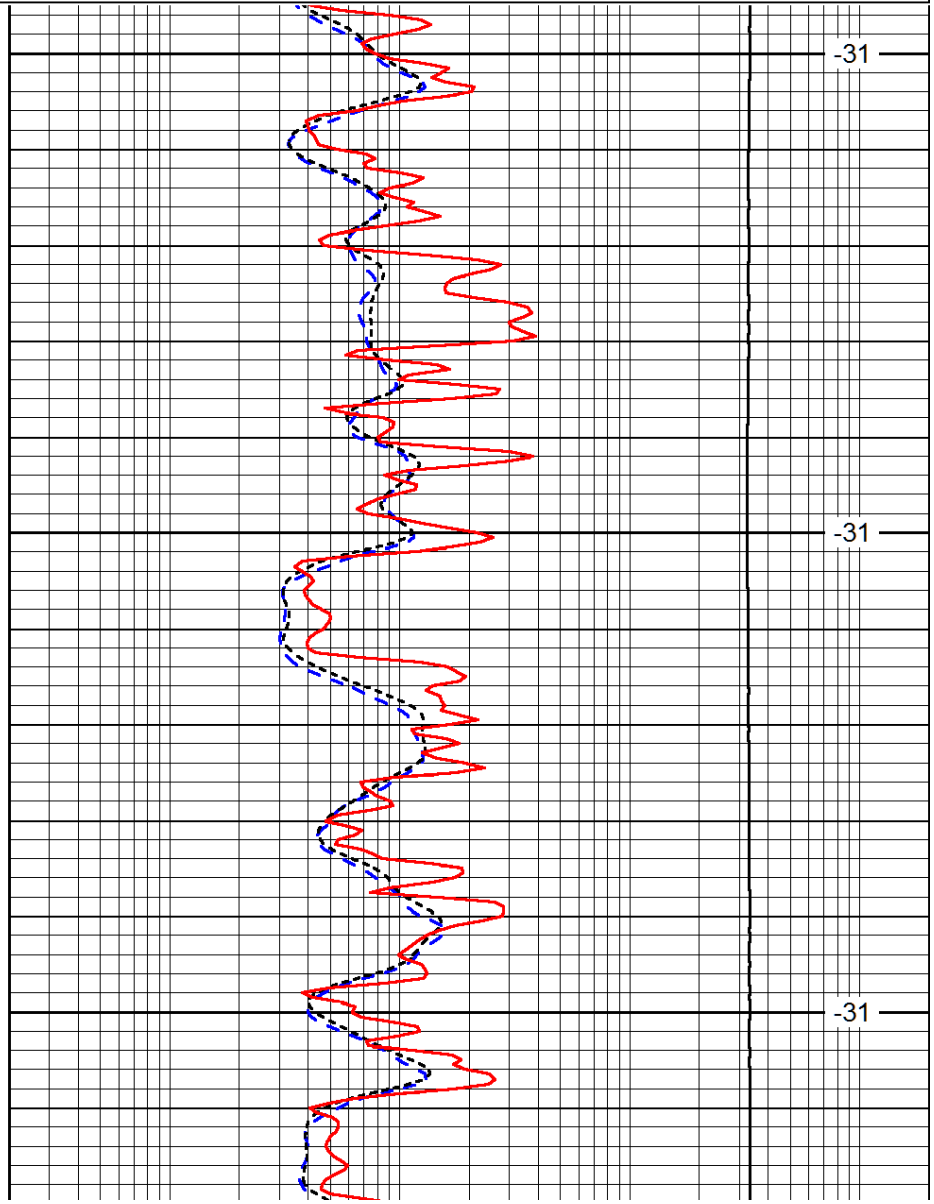


LSPD



3050

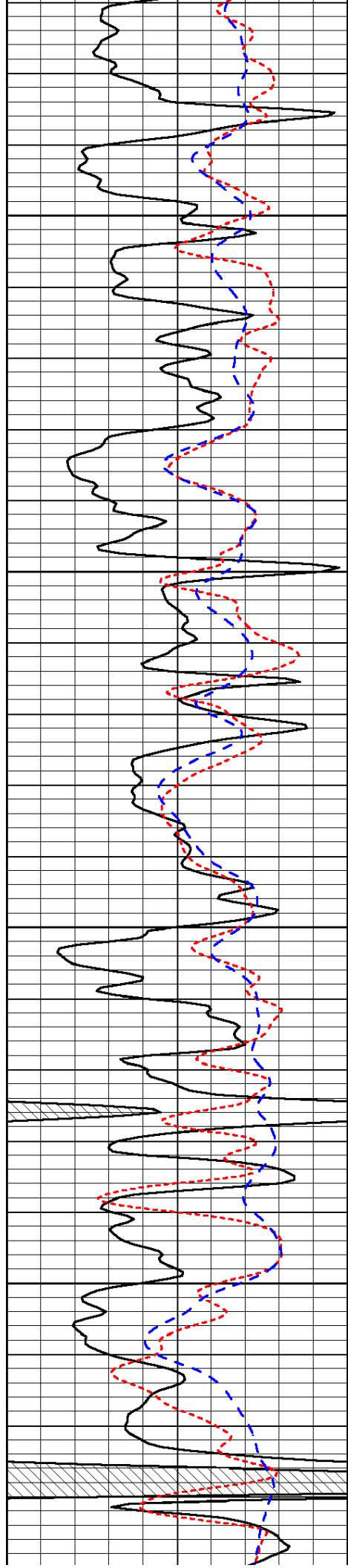
3100



-31

-31

-31

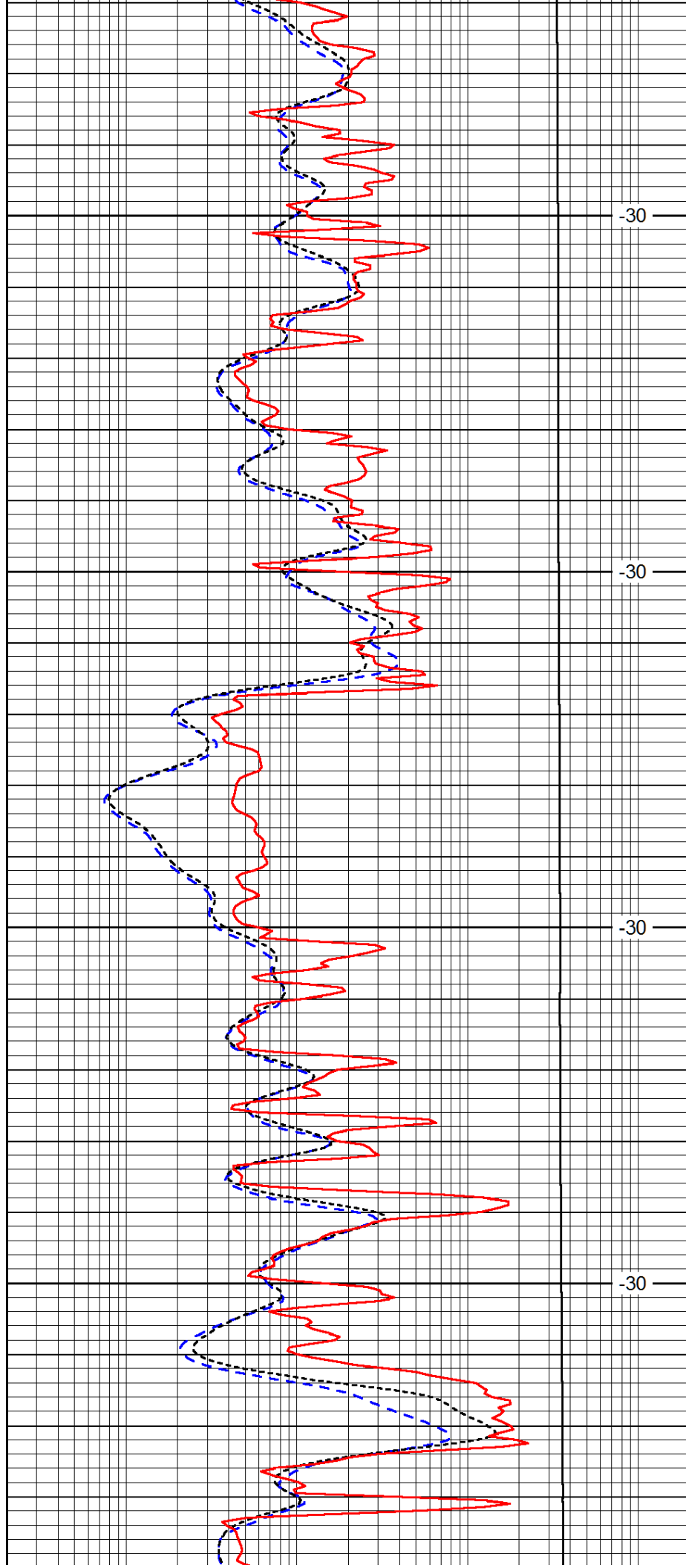


3150

3200

3250

3300

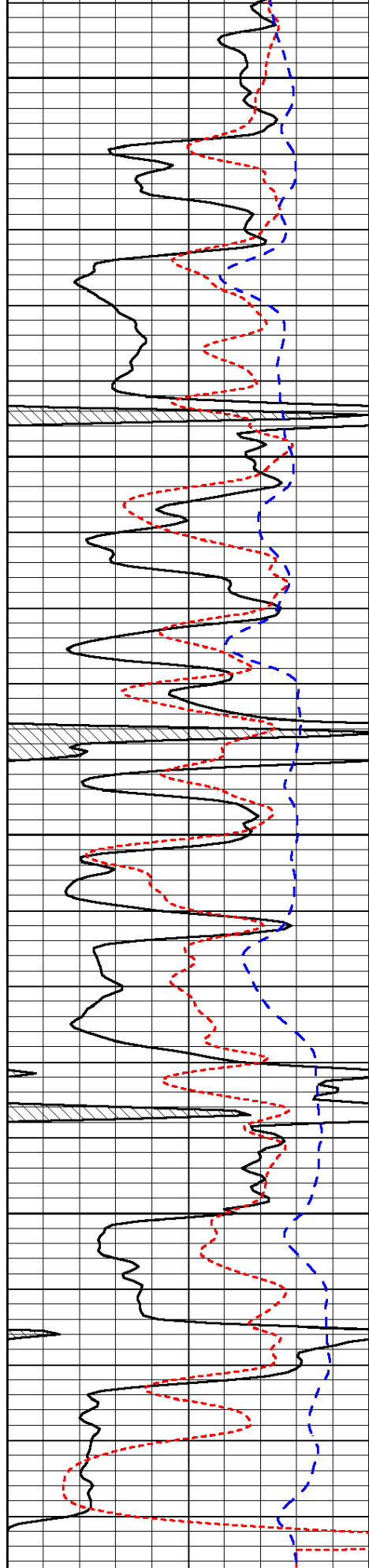


-30

-30

-30

-30



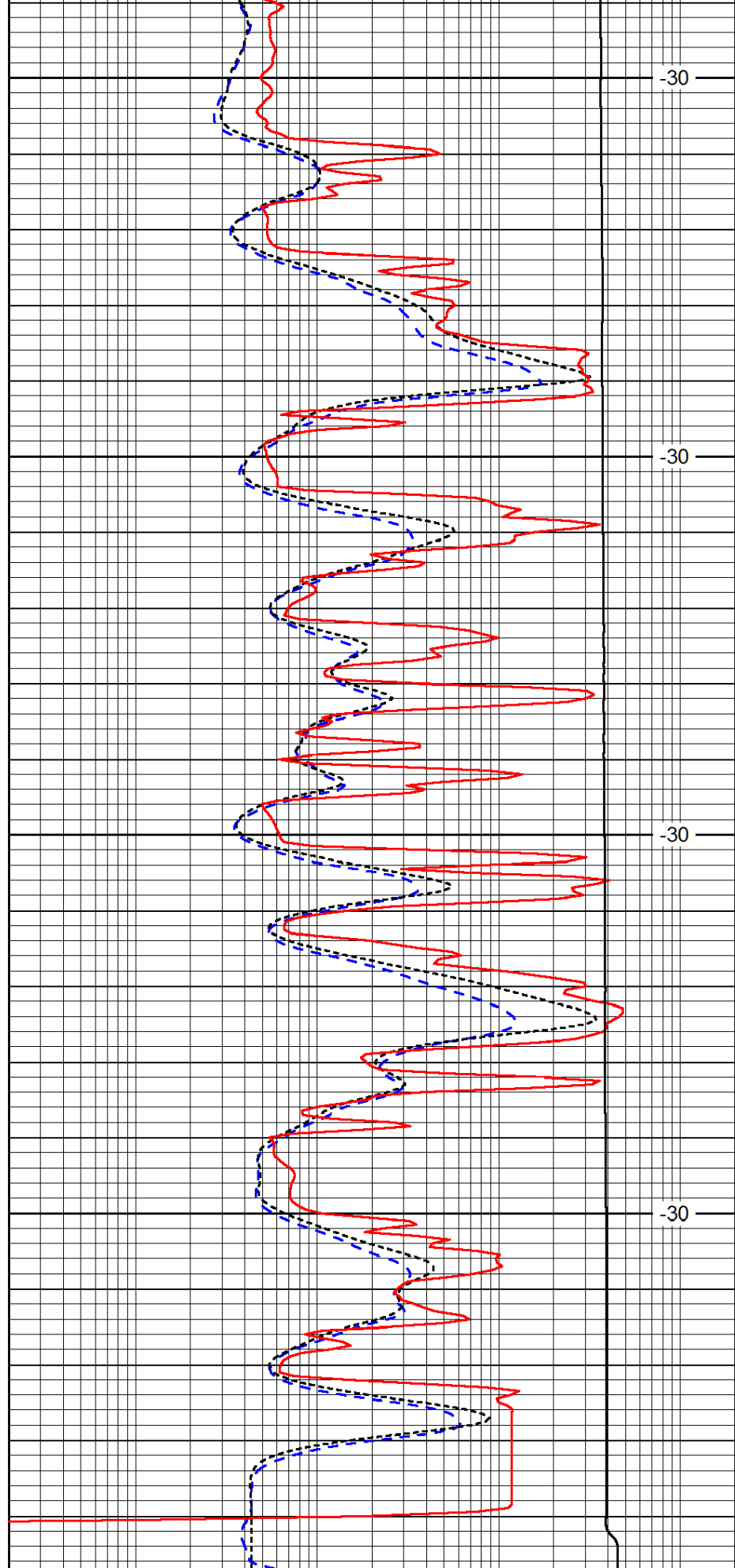
0	Gamma Ray	150
-160	RxoRt	40
-200	SP (mV)	0

3350

3400

3450

3500



-30

-30

-30

-30

0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000

		Line Tension	0
		LSPD	