



Pioneer Energy Services

Dual Induction Log

API No.

15-167-23941-00-00

Company Brungardt Oil and Leasing, Inc.

Well Miller #1

Field Dreher

County Russell

State

Kansas

Location

1370' FSL & 860' FEL

Other Services
CNL/CDL
MEL/BHCS

Sec: 22

Twp: 11S

Rge: 15W

Elevation

Permanent Datum Ground Level Elevation 1849
Log Measured From Kelly Bushing 5 Ft. Above Perm. Datum

Drilling Measured From Kelly Bushing

K.B. 1854
D.F.
G.L. 1849

Date

10/20/2014

Run Number

One

Depth Driller

3390

Depth Logger

3387

Bottom Logged Interval

3386

Top Log Interval

200

Casing Driller

8.625 @ 218

Casing Logger

215

Bit Size

7.875

Type Fluid in Hole

Chemical

Salinity, ppm CL

8200

Density / Viscosity

9.2 49

pH / Fluid Loss

10.5 7.8

Source of Sample

Flowline

Rm @ Meas. Temp

0.45 @ 68

Rmf @ Meas. Temp

0.34 @ 68

Rmc @ Meas. Temp

0.61 @ 68

Source of Rmf / Rmc

Charts

Rm @ BHT

0.28 @ 110

Operating Rig Time

5 Hours

Max Rec. Temp. F

110

Equipment Number

91

Location

Hays

Recorded By

D. Schmidt

Witnessed By

Roger Fisher

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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

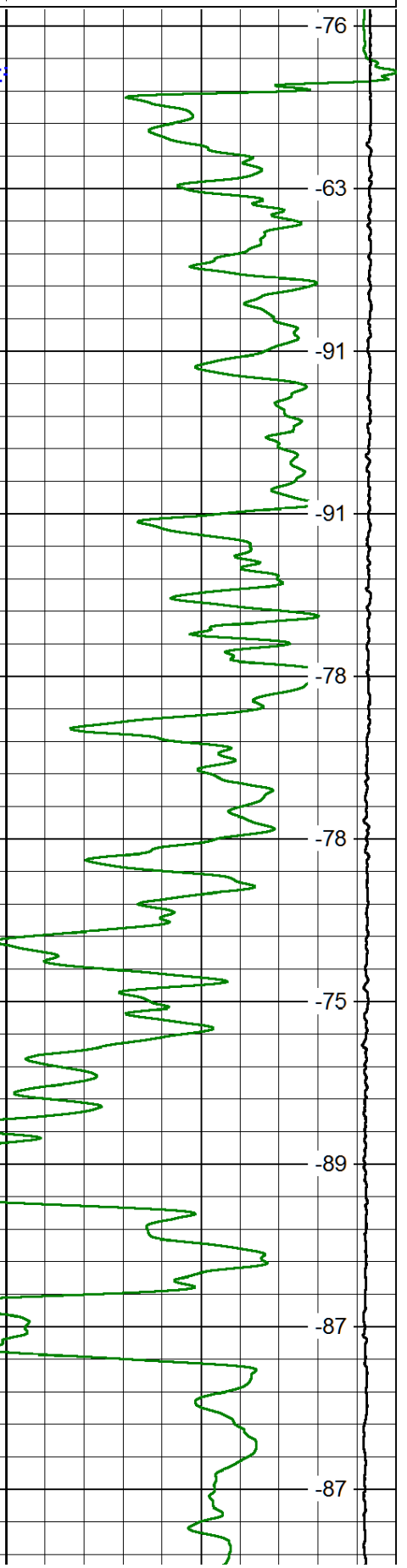
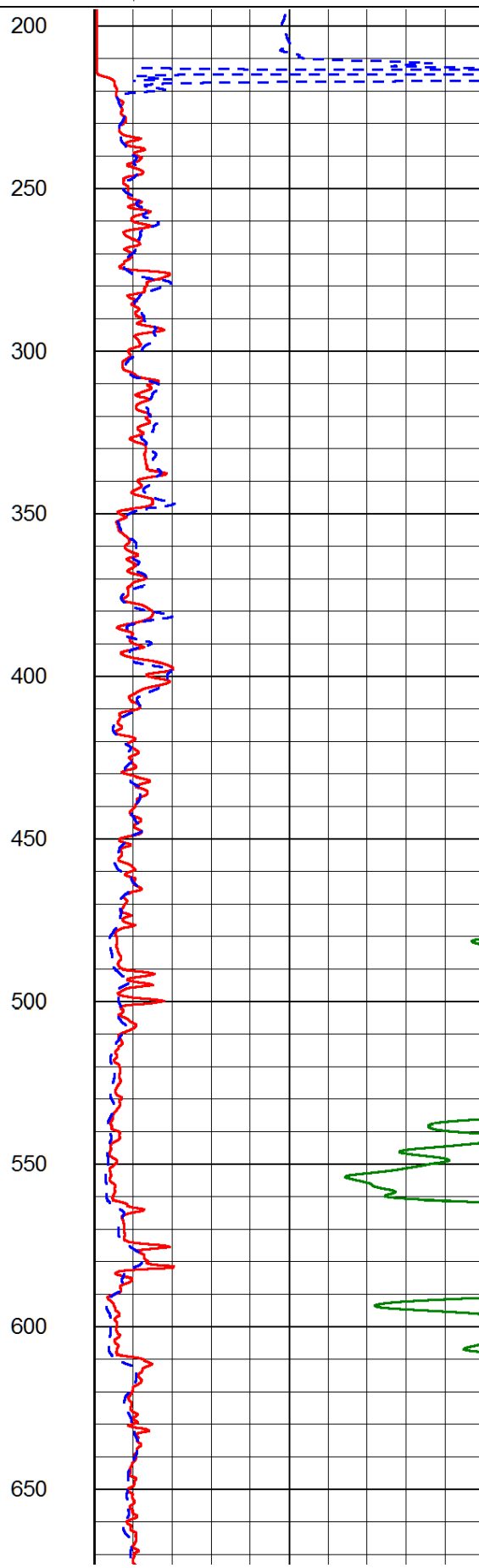
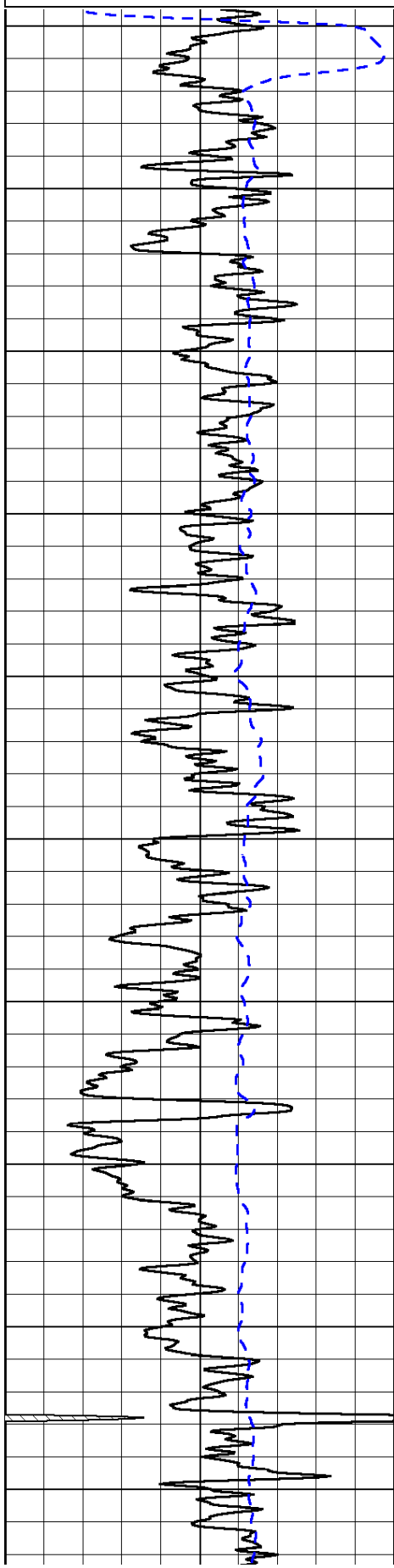
Thank you for using Log-Tech, Inc.
(785) 625-3858
Gorham,
1 East to 177th Rd,
North to Saline Lane,
1/2 East,
North to Fariview Rd, 1 East,
North Into

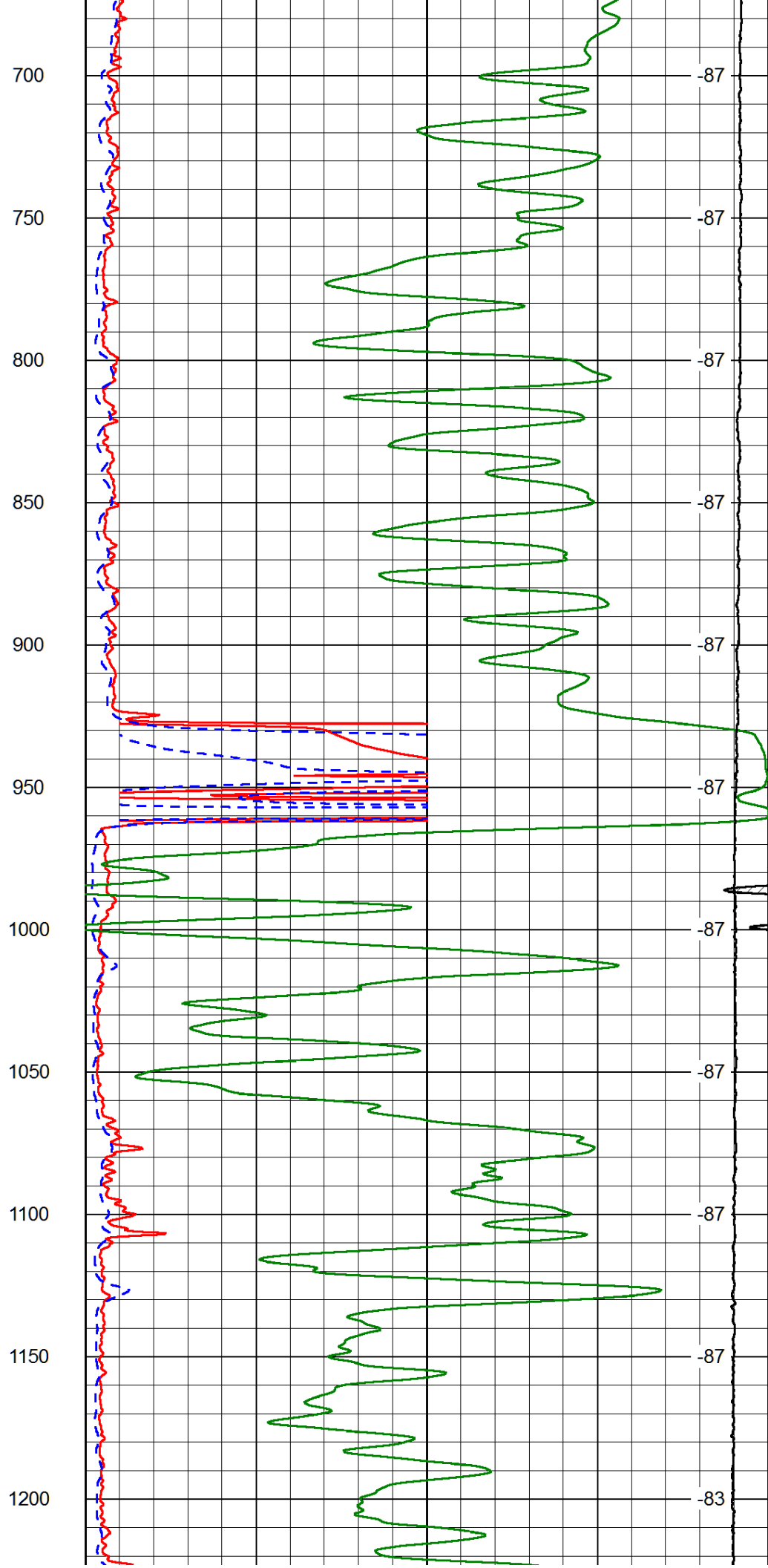
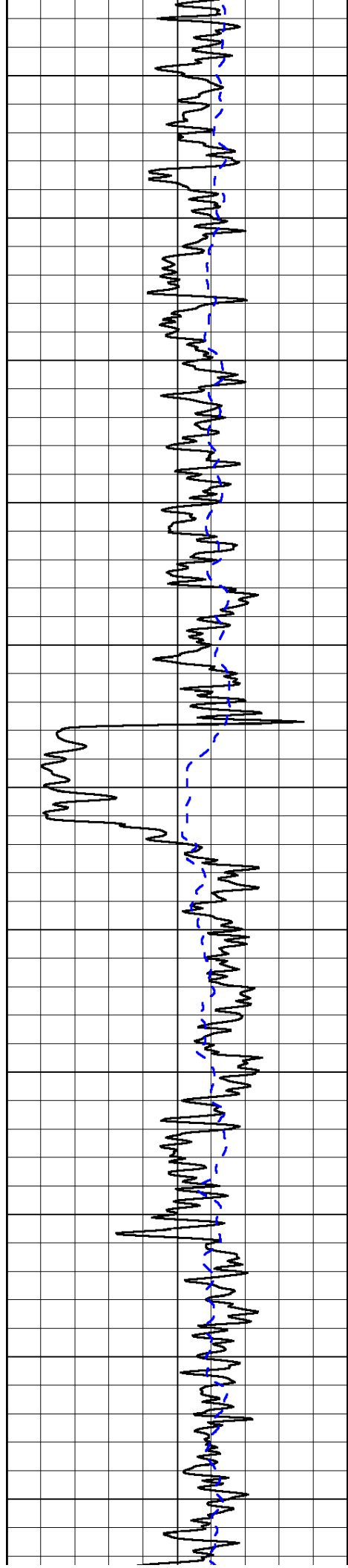
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Dataset Pathname: dil/brstack
Presentation Format: dil2in
Dataset Creation: Mon Oct 20 20:28:09 2014
Charted by: Depth in Feet scaled 1:600

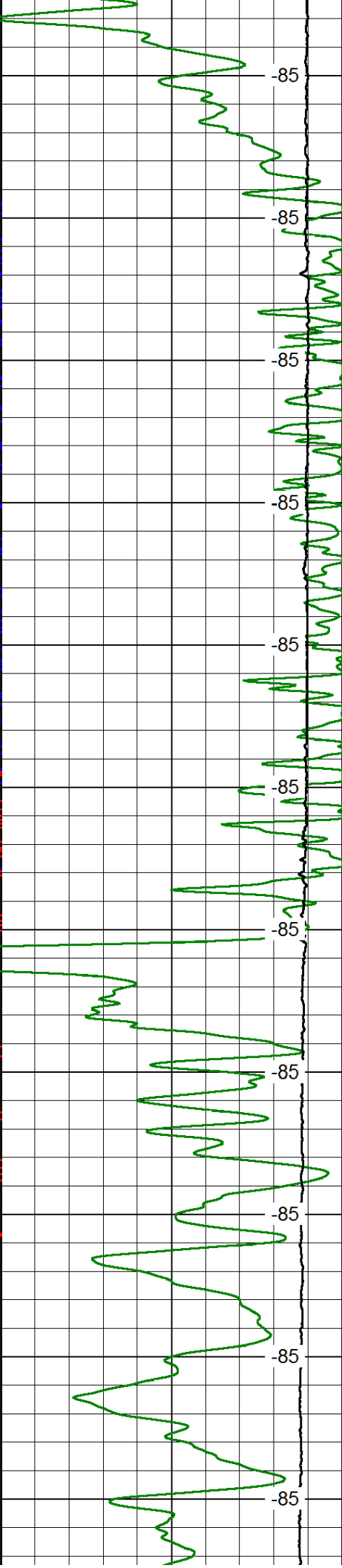
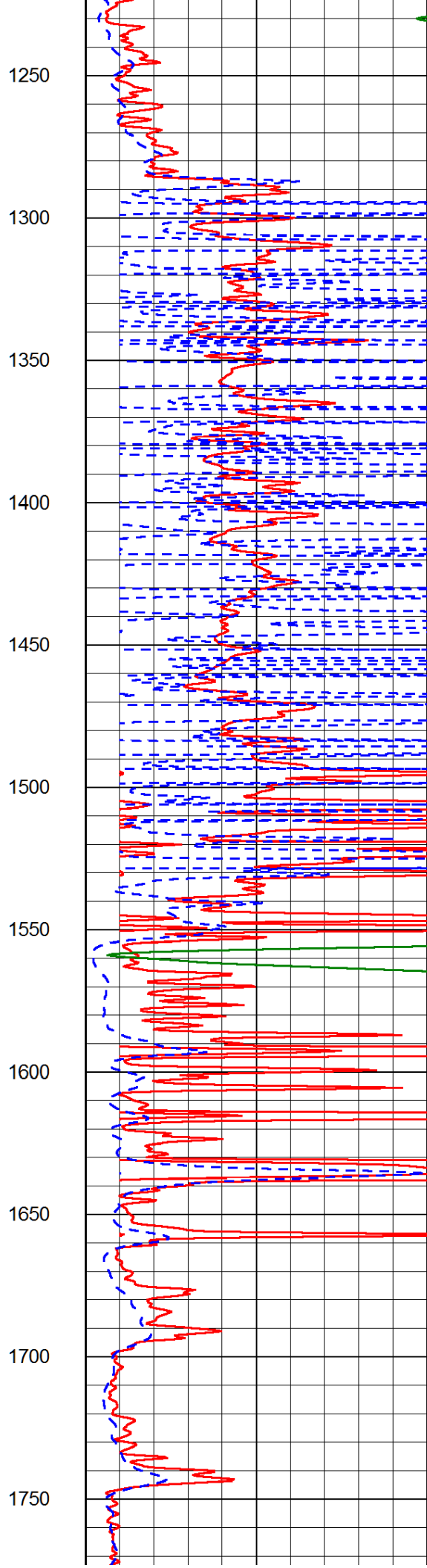
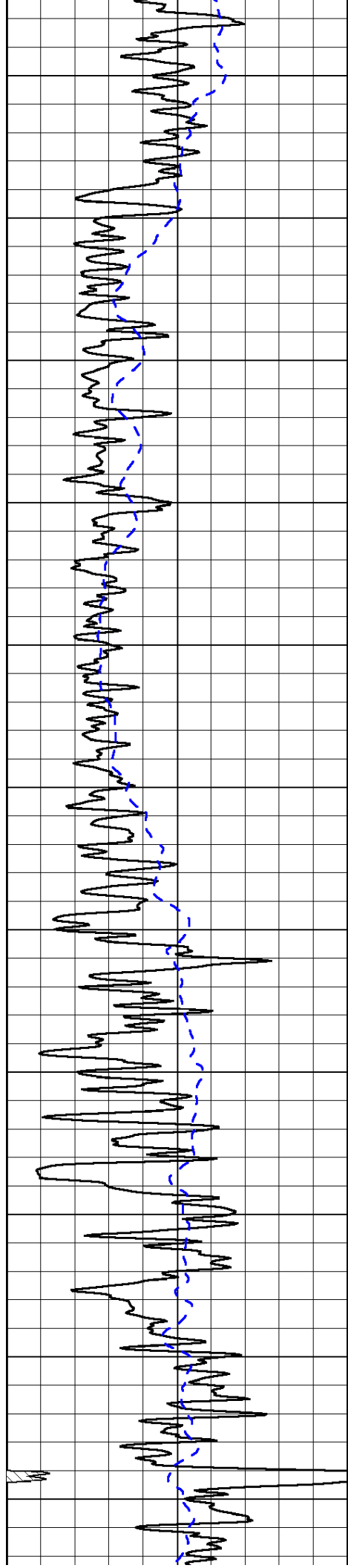
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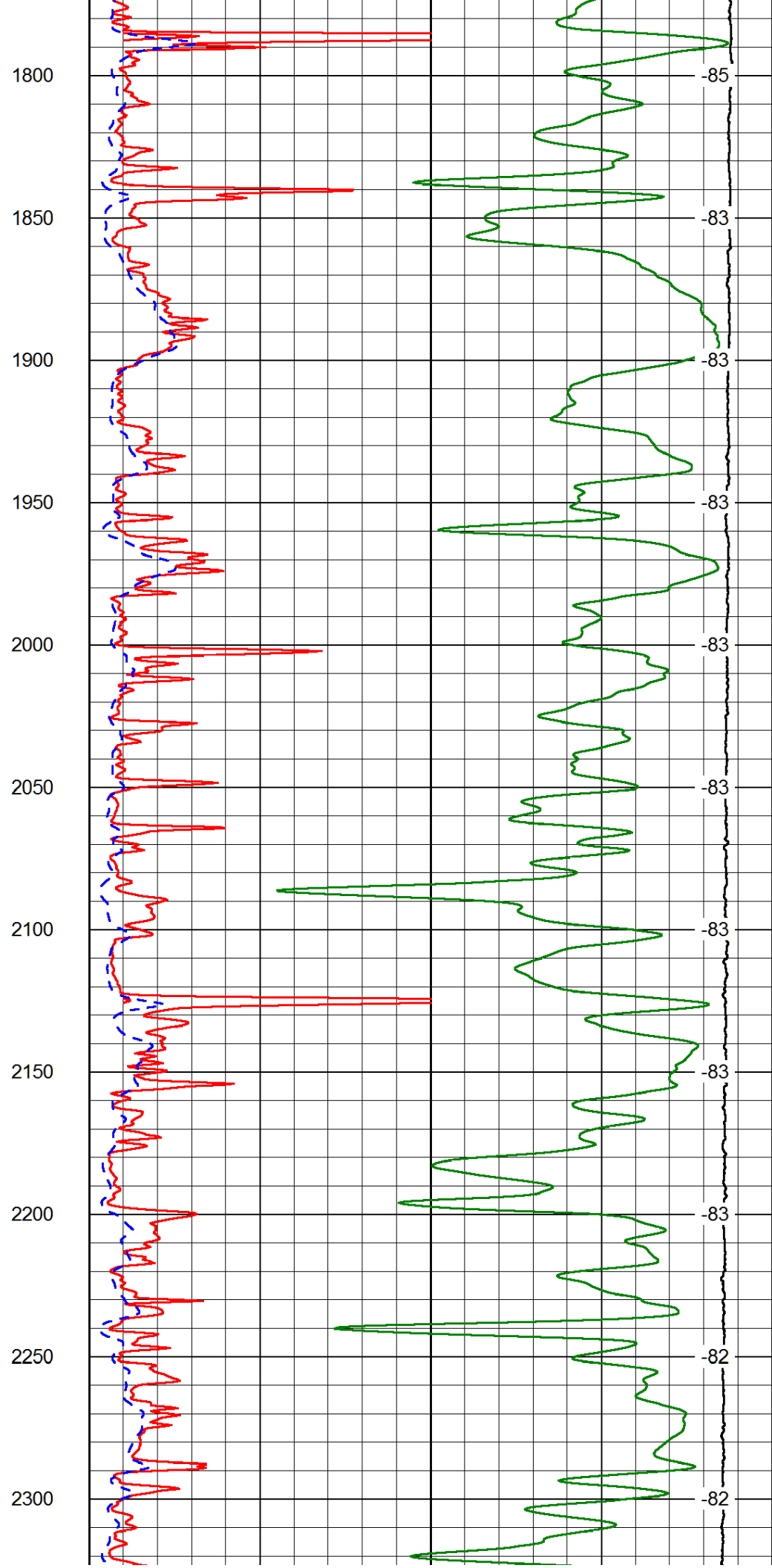
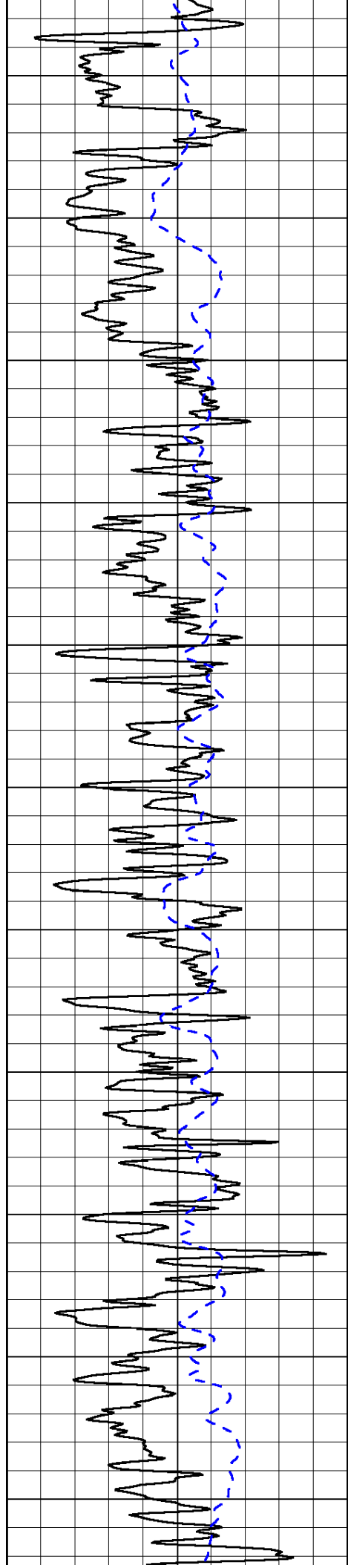
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0	Deep Resistivity	50
1000	Conductivity	0
15000	Line Tension	0
50	Shallow Resistivity	500
50	Deep Resistivity	500

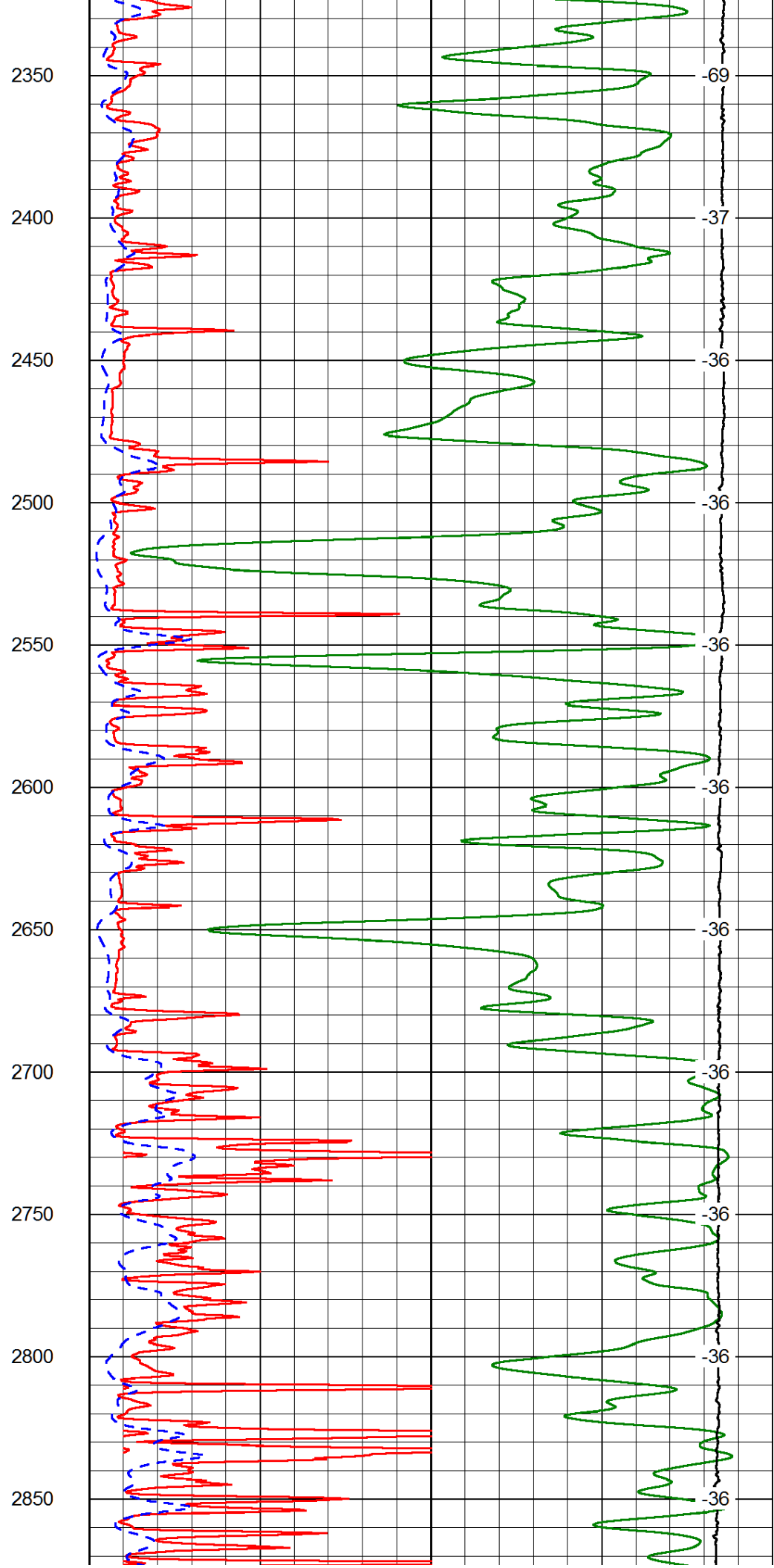
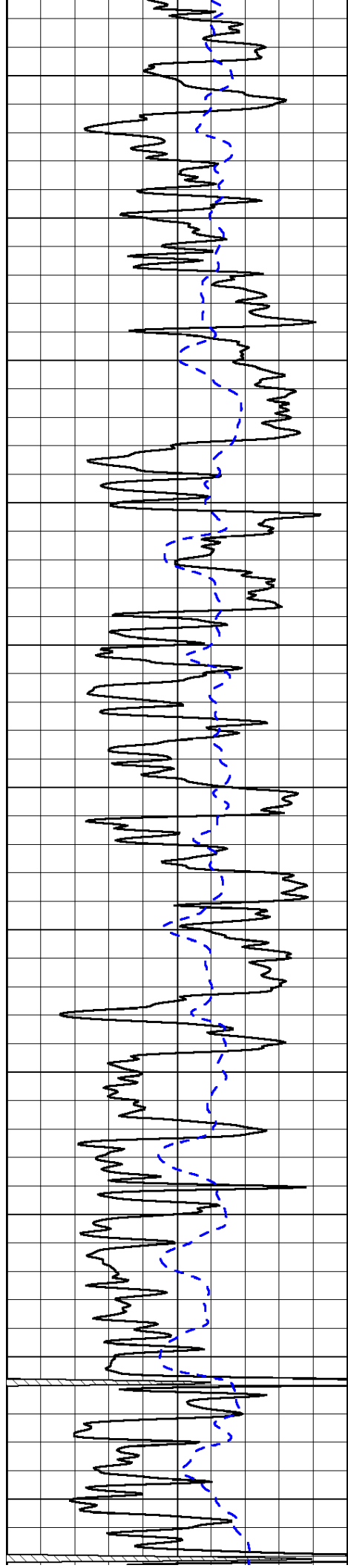
LSPD	0
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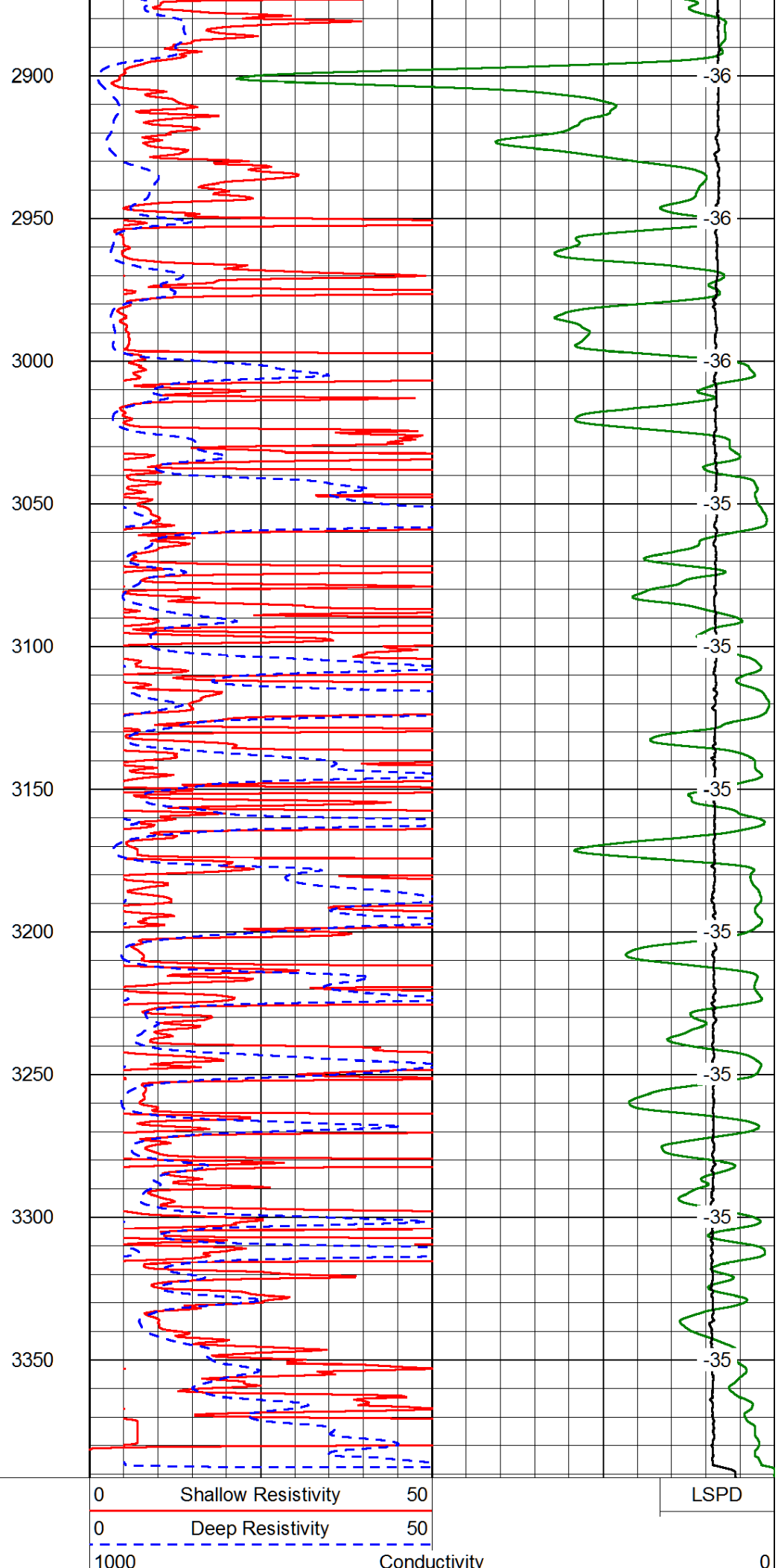
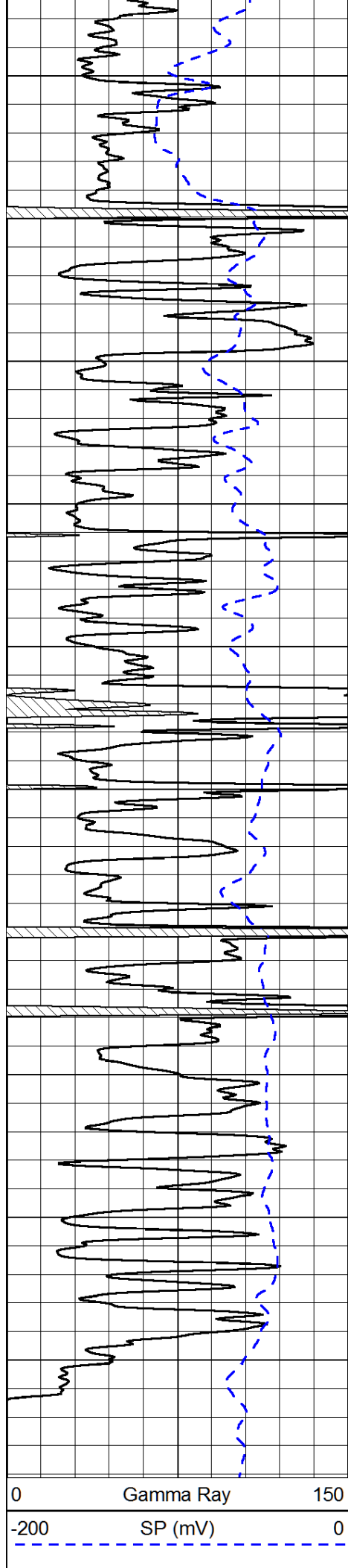






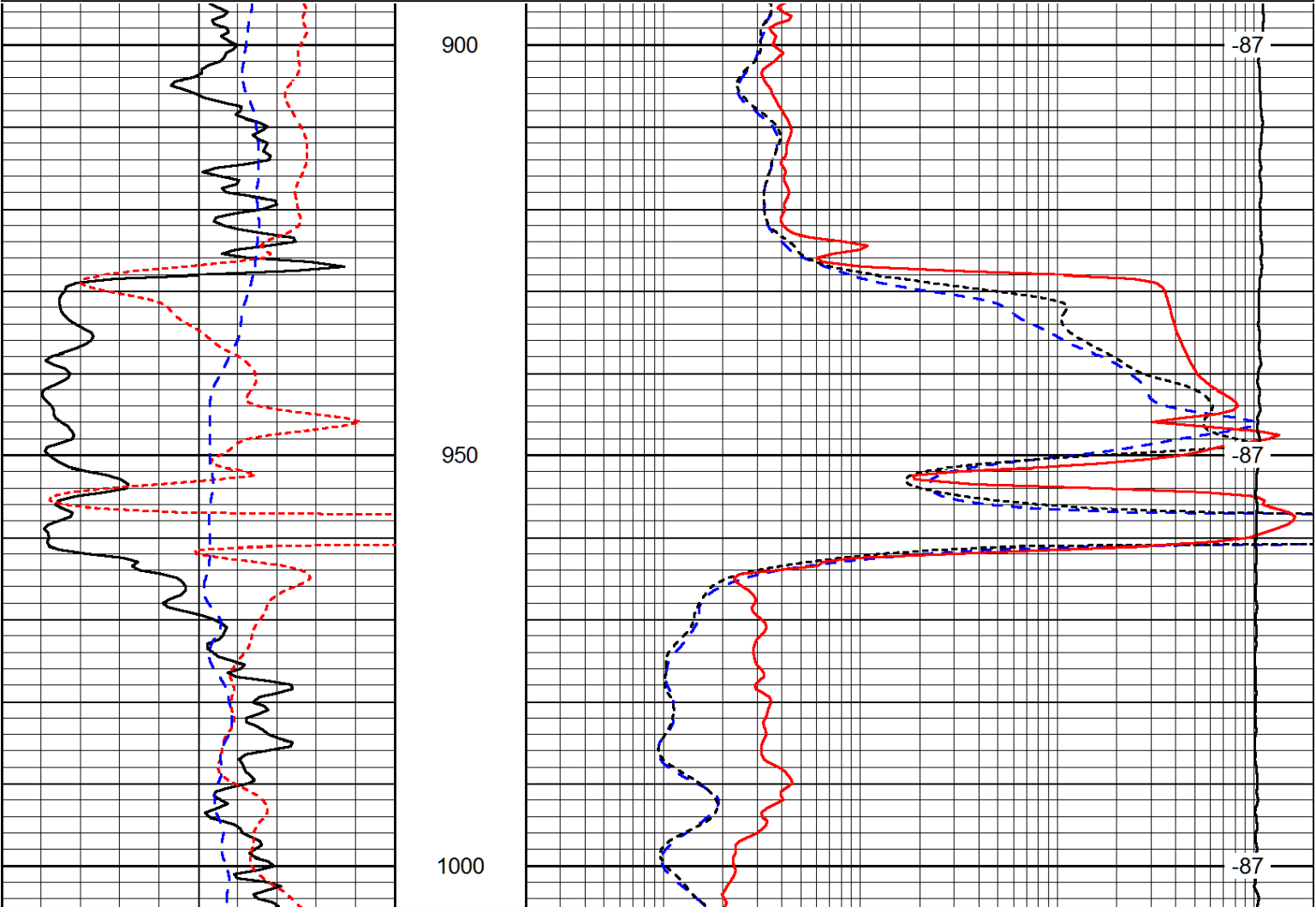






15000		Line Tension		0
50	Shallow Resistivity	500		
50	Deep Resistivity	500		

Database File: brungardt_miller_1hd.db					
Dataset Pathname: dil/brstack					
Presentation Format: dil					
Dataset Creation: Mon Oct 20 20:28:09 2014					
Charted by: Depth in Feet scaled 1:240					
0	Gamma Ray	150	0.2	Deep Resistivity	2000
-160	RxoRt	40	0.2	Medium Resistivity	2000
-200	SP (mV)	0	0.2	Shallow Resistivity	2000
			10000	Line Tension	0
					LSPD



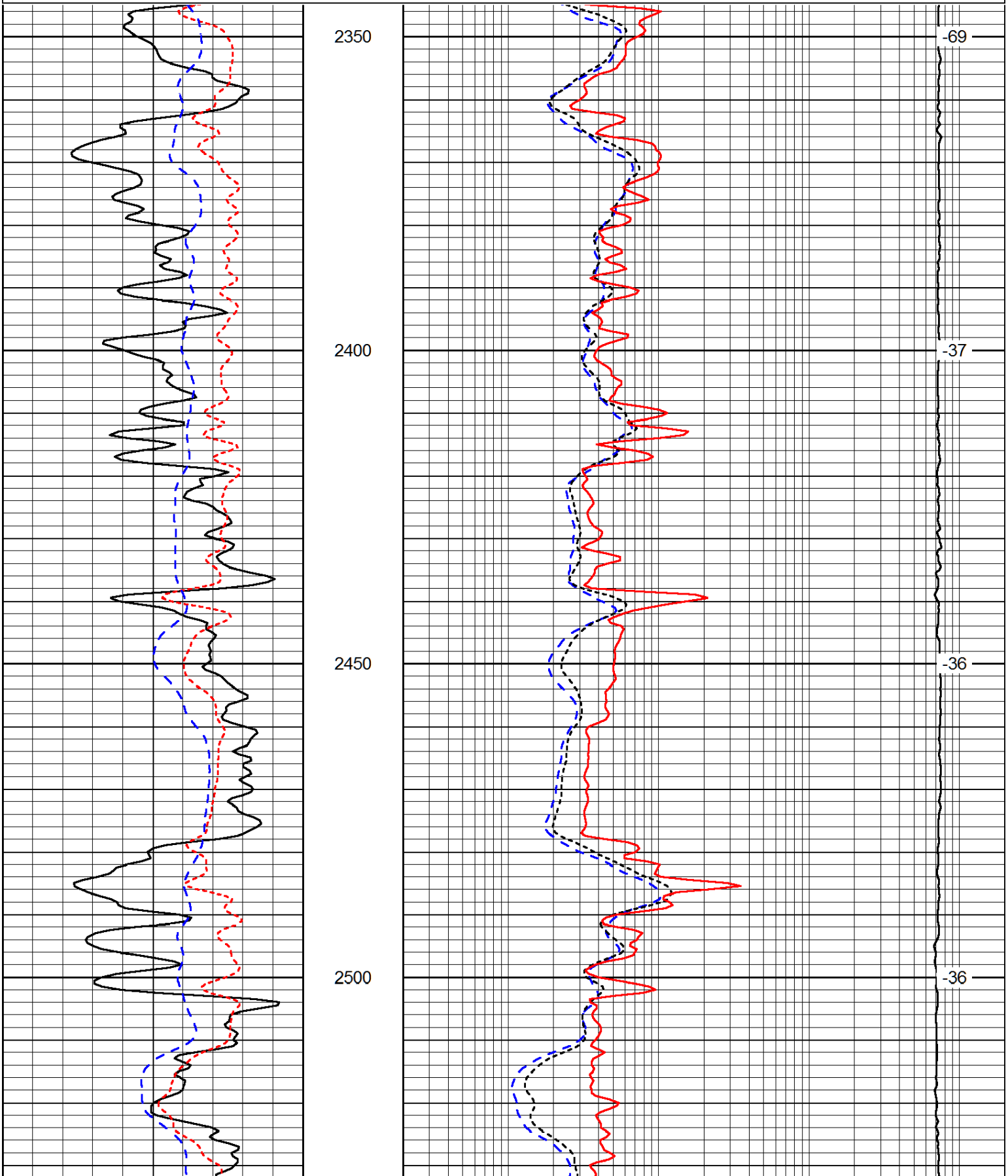
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-160	RxoRt	40	0.2	Medium Resistivity	2000
-200	SP (mV)	0	0.2	Shallow Resistivity	2000
			10000	Line Tension	0
					LSPD

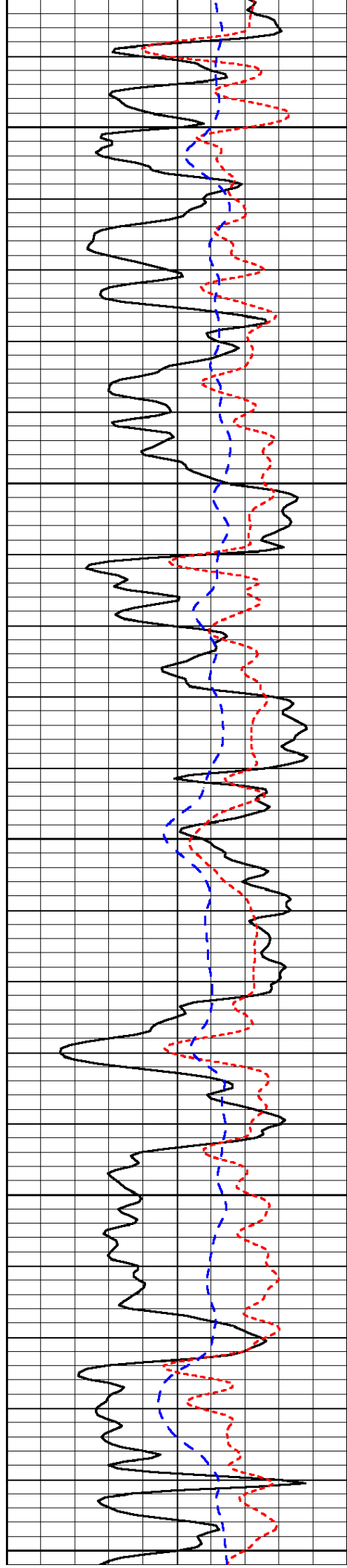
Database File: brungardt_miller_1hd.db Dataset Pathname: dil/brstack Presentation Format: dil Dataset Creation: Mon Oct 20 20:28:09 2014 Charted by:				
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0	Gamma Ray	150
-160	RxoRt	40
-200	SP (mV)	0

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

LSPD





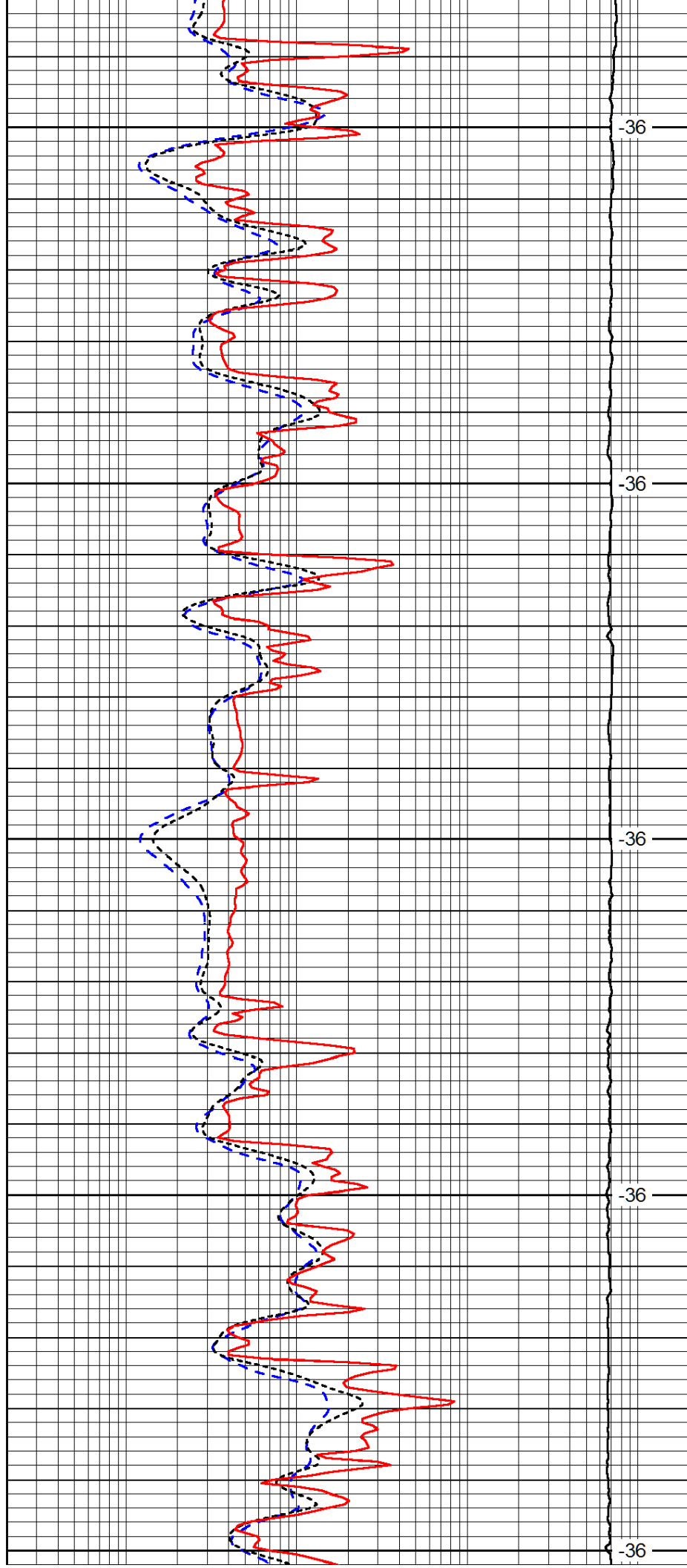
2550

2600

2650

2700

2750



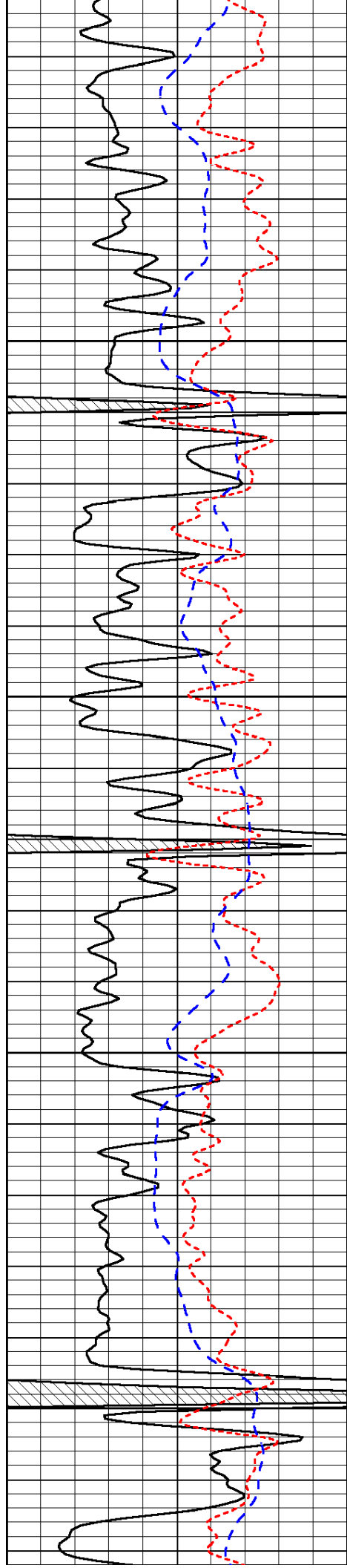
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-36

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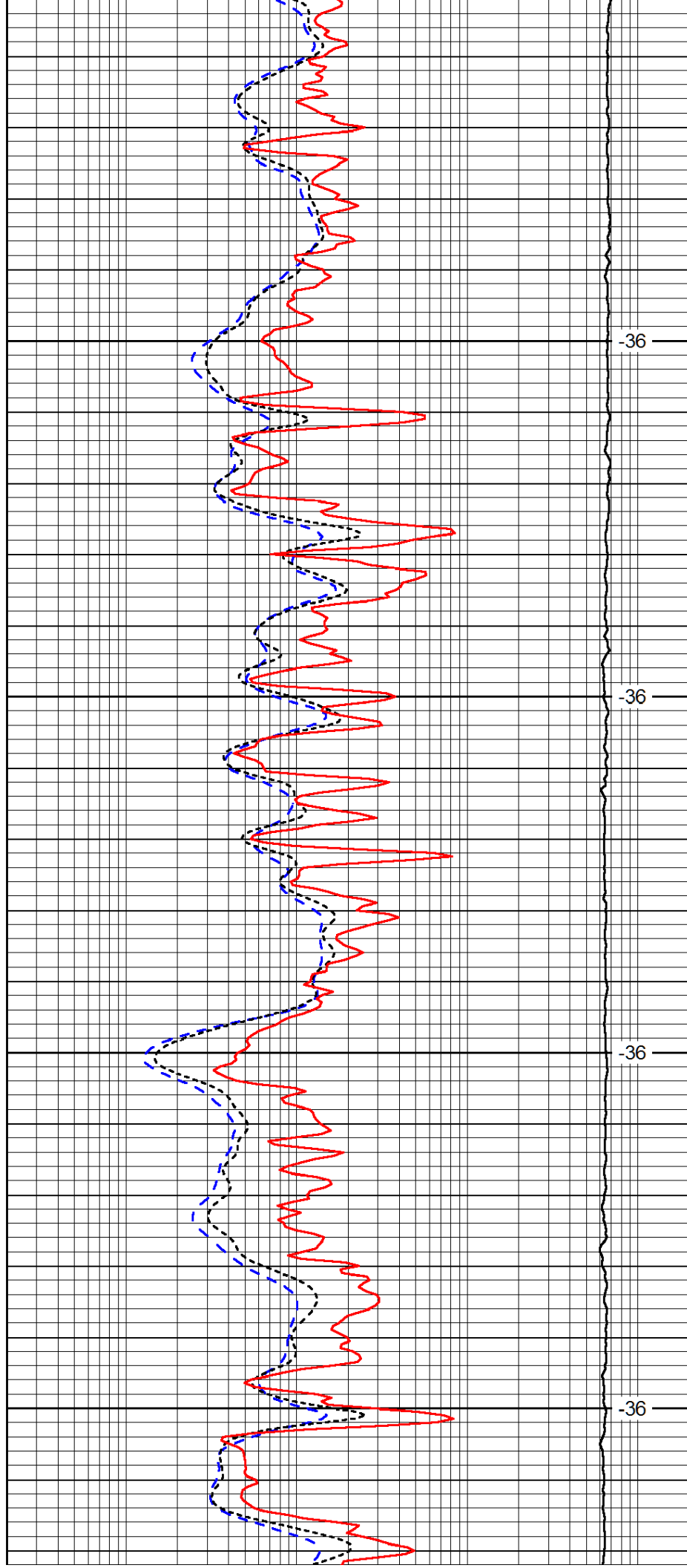


2800

2850

2900

2950

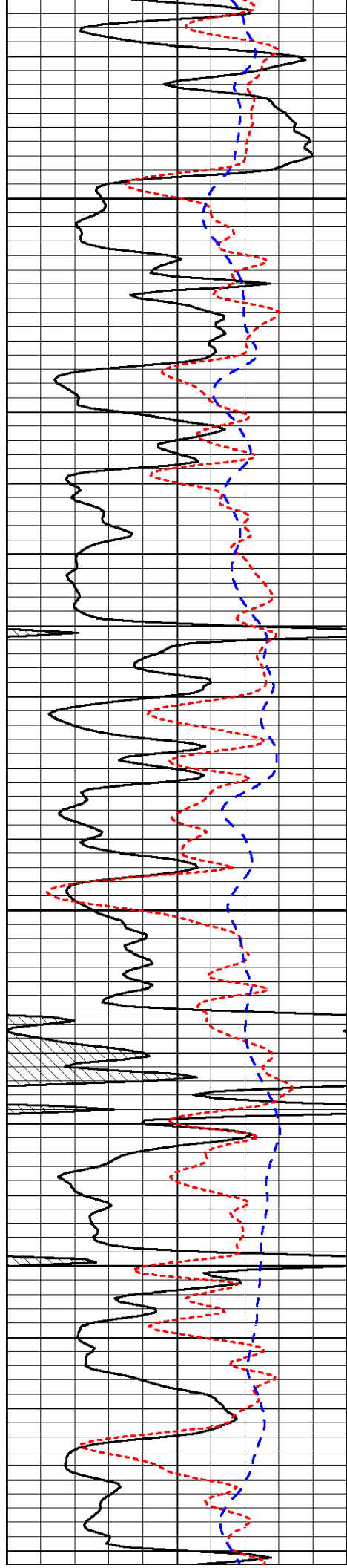


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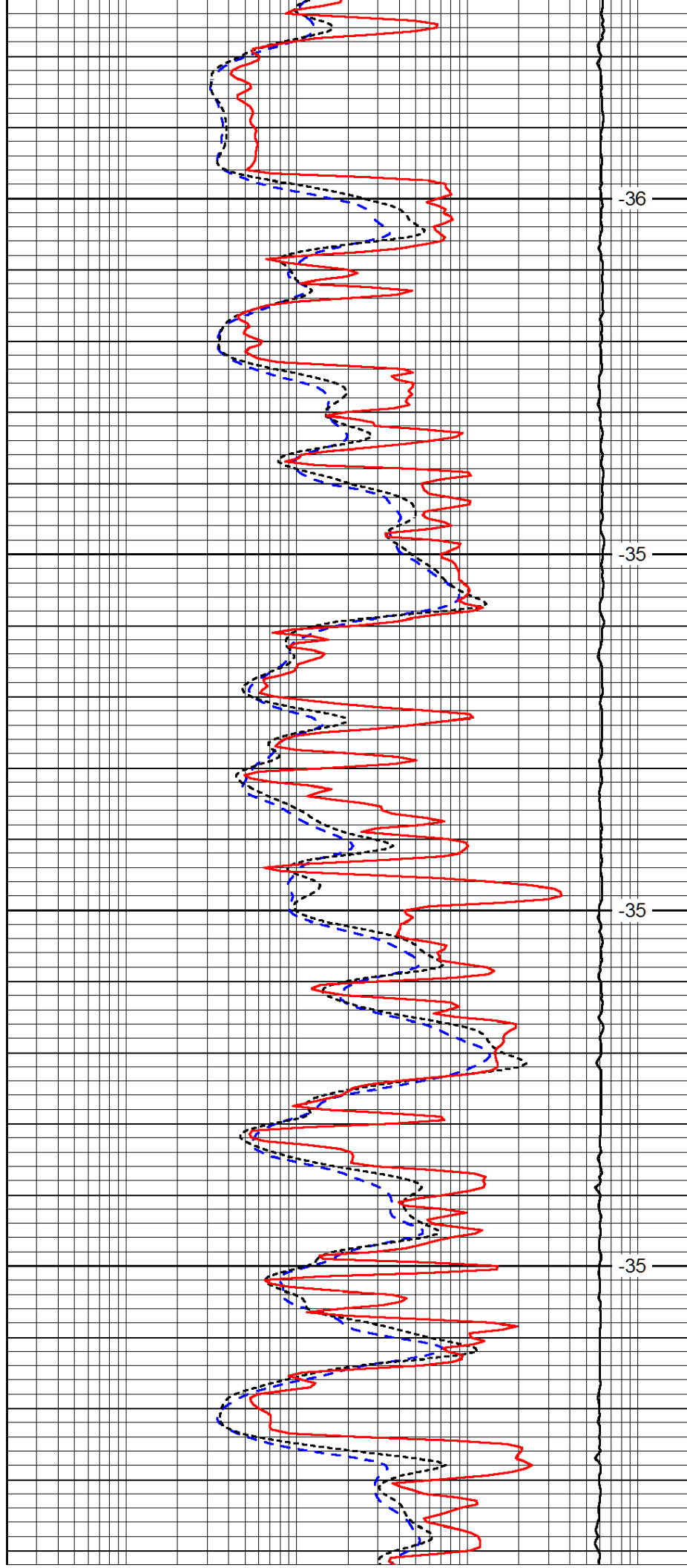


3000

3050

3100

3150

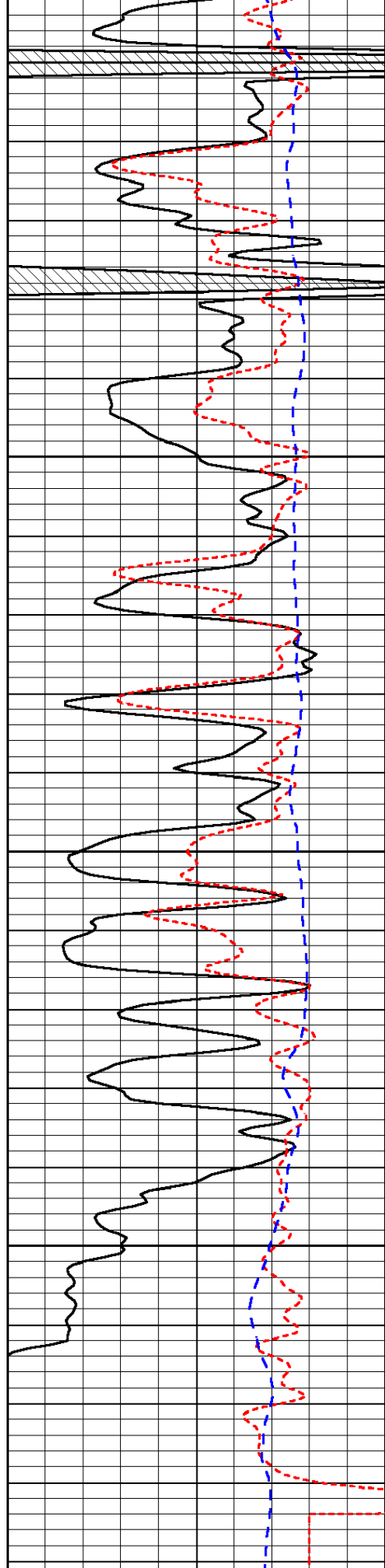


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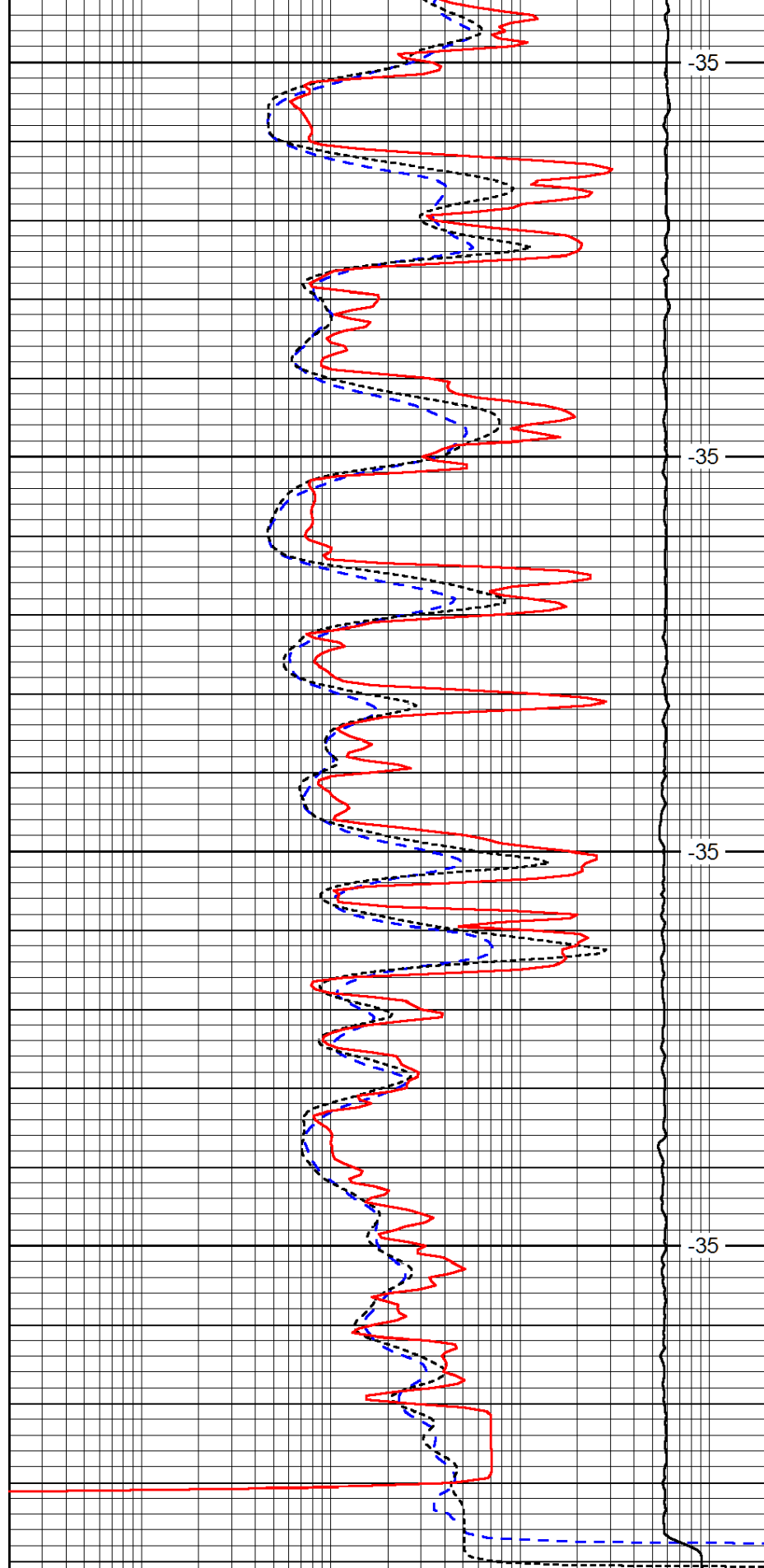
3200

3250

3300

3350

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



-35

-35

-35

-35

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

LSPD	