



Pioneer Energy Services

# Dual Induction Log

15-159-25,789-00-00

API No.

Company **Bird Dog Oil, LLC**  
 Well **Lakin-Wendel #1-18**  
 Field **Chase-Silica**  
 County **Rice** State **Kansas**

Location **330' FNL & 2310' FWL**  
 Sec: **18** Twp: **19S** Rge: **10W**

Other Services  
 CNL/CDL  
 MEL/BHCS

Permanent Datum **Ground Level** Elevation **1772**  
 Log Measured From **Kelly Bushing** **8** Ft. Above Perm. Datum  
 Drilling Measured From **Kelly Bushing**

Elevation  
 K.B. 1780  
 D.F. G.L. 1772

Date	7/31/2014
Run Number	One
Depth Driller	3430
Depth Logger	3428
Bottom Logged Interval	3427
Top Log Interval	300
Casing Driller	8.625 @ 347
Casing Logger	344
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	7800
Density / Viscosity	9.25   58
pH / Fluid Loss	11.0   9.2
Source of Sample	Flowline
Rm @ Meas. Temp	0.50 @ 80
Rmf @ Meas. Temp	0.38 @ 80
Rmc @ Meas. Temp	0.68 @ 80
Source of Rmf / Rmc	Charts
Rm @ BHT	0.36 @ 110
Operating Rig Time	5 Hours
Max Rec. Temp. F	110
Equipment Number	10
Location	Hays
Recorded By	D.Kerr
Witnessed By	Adam Nighswonger

<<< 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 Log-Tech, Inc.  
 (785) 625-3858

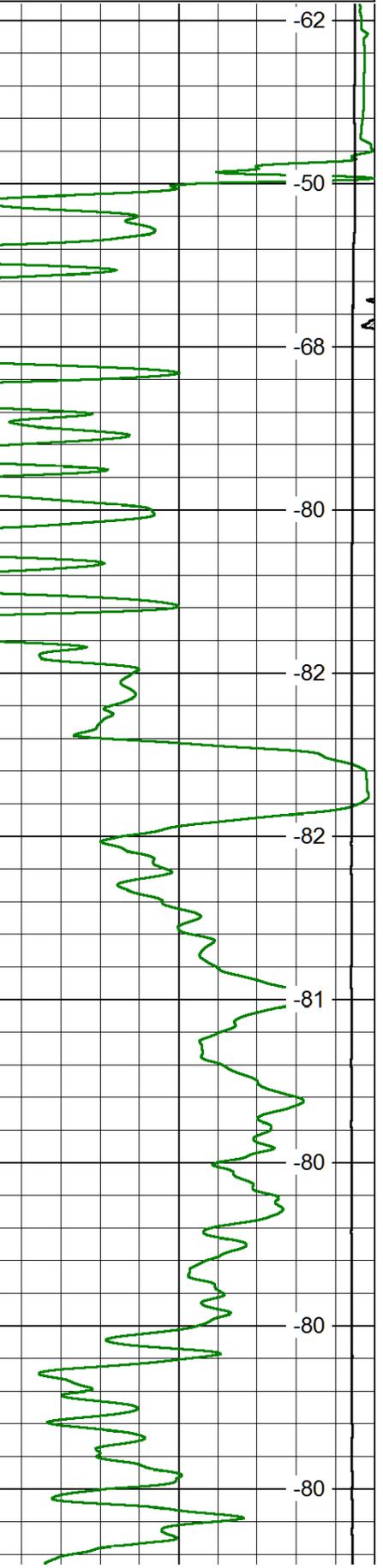
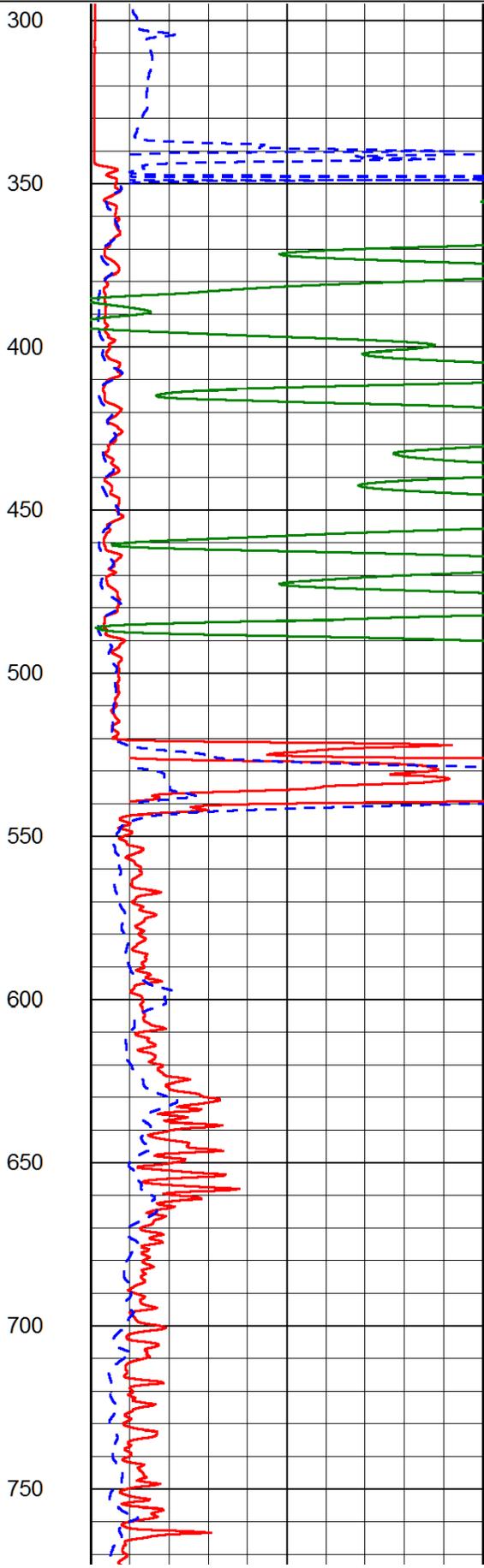
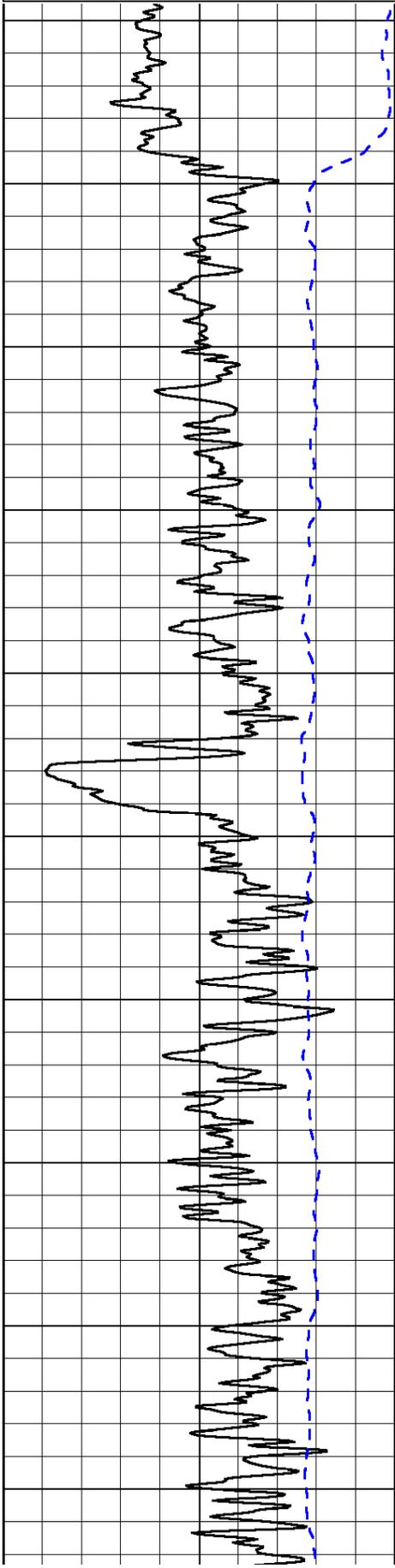
Ellinwood KS, East to County Line,  
 4 North to I RD, 1/2 East, South Into

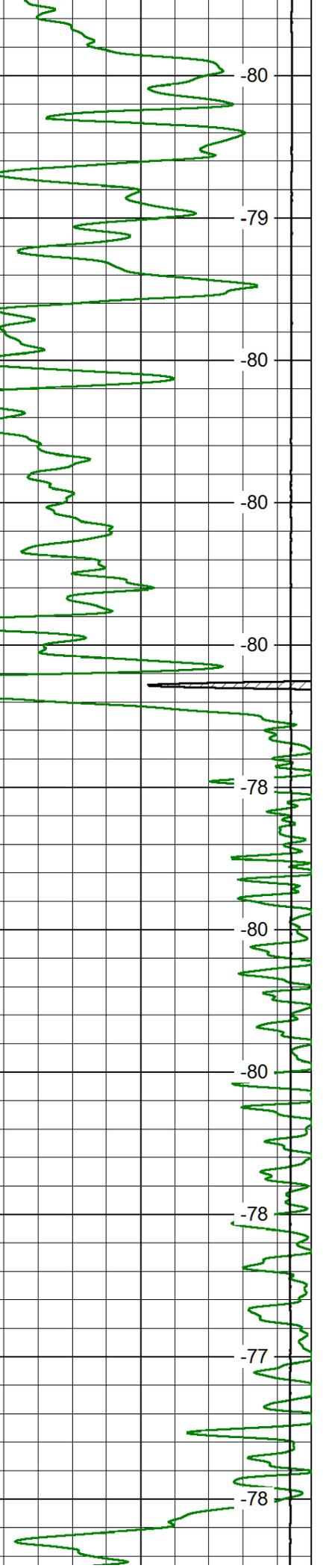
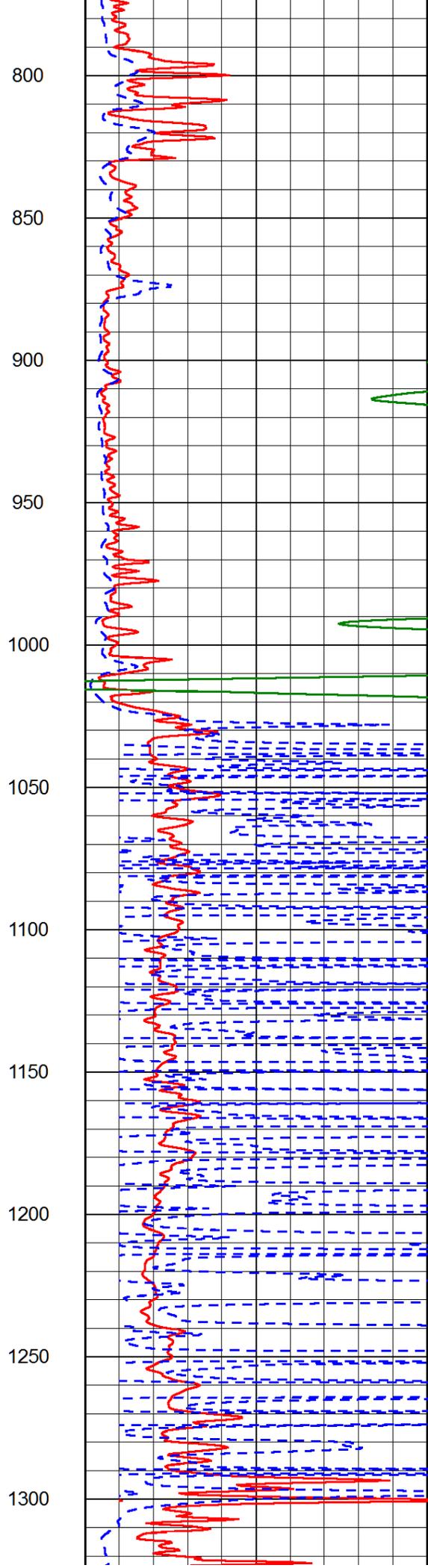
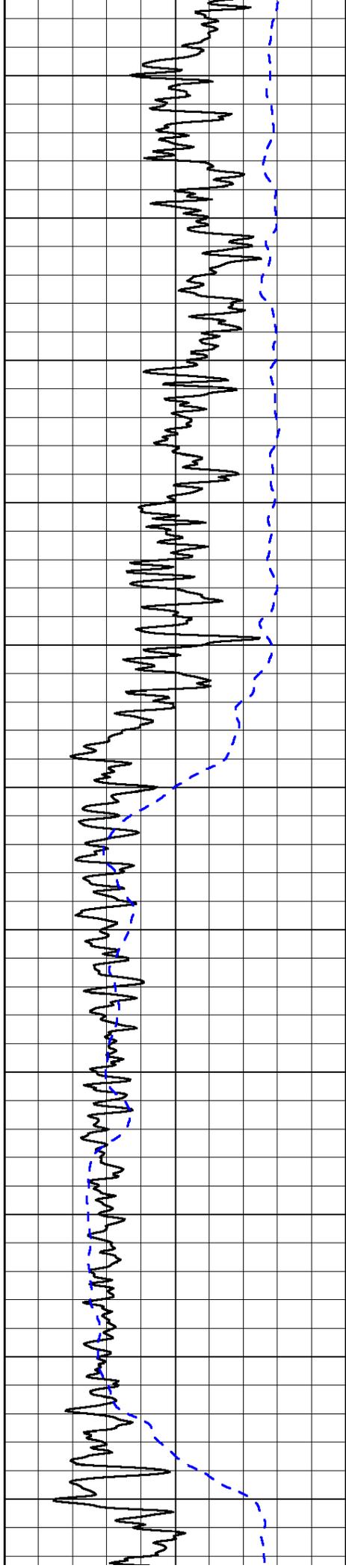
Database File: birddog\_lakinwendel\_1\_18hd.db  
 Dataset Pathname: DIL/bdstk  
 Presentation Format: dil2in  
 Dataset Creation: Thu Jul 31 12:39:38 2014  
 Charted by: Depth in Feet scaled 1:600

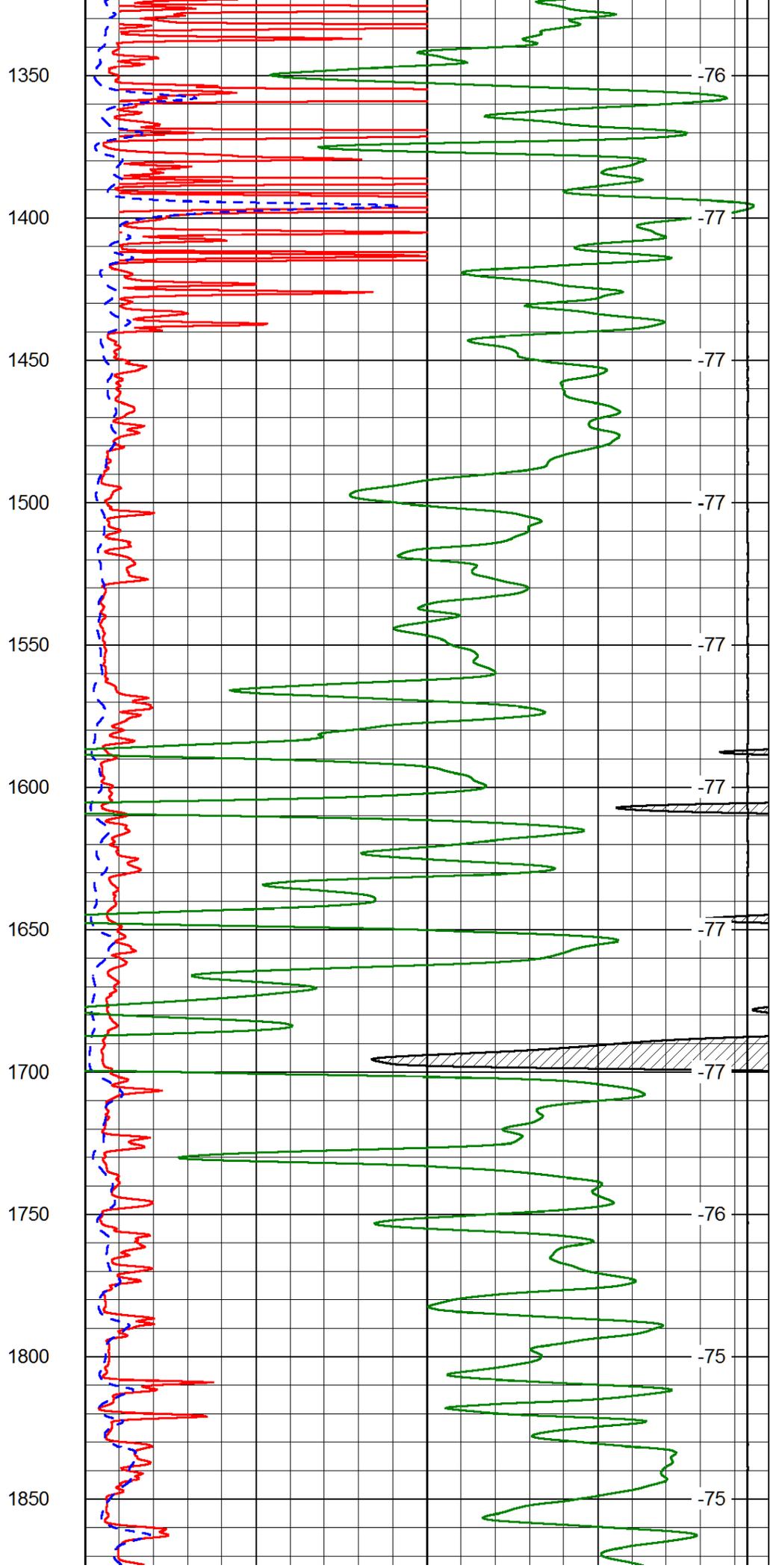
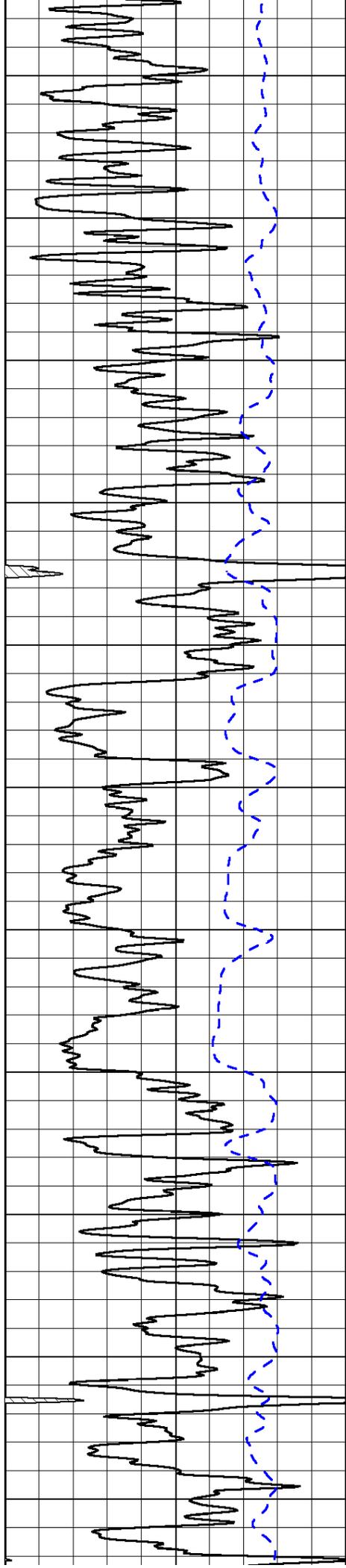
0 Gamma Ray 150  
-200 SP (mV) 0

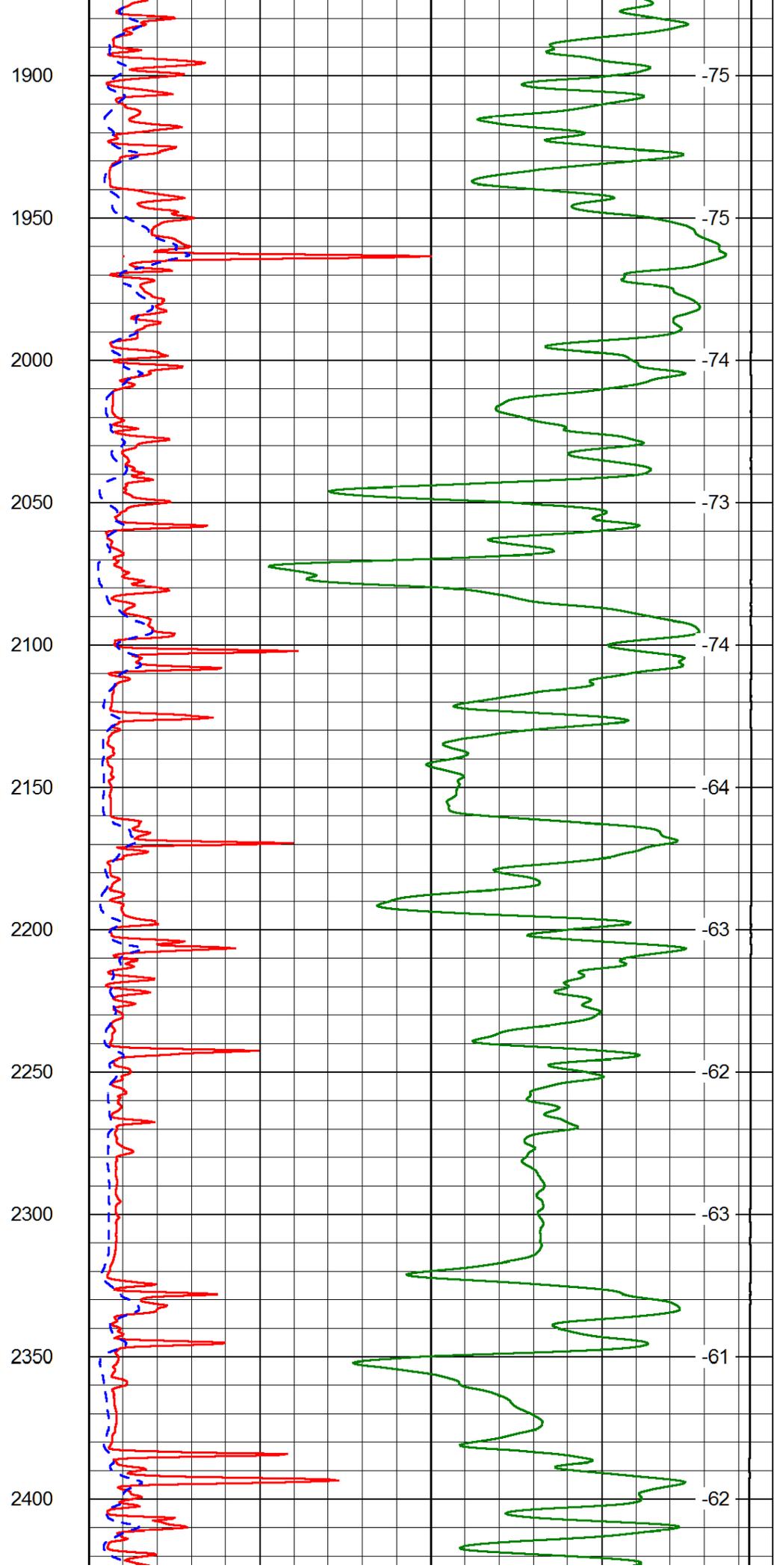
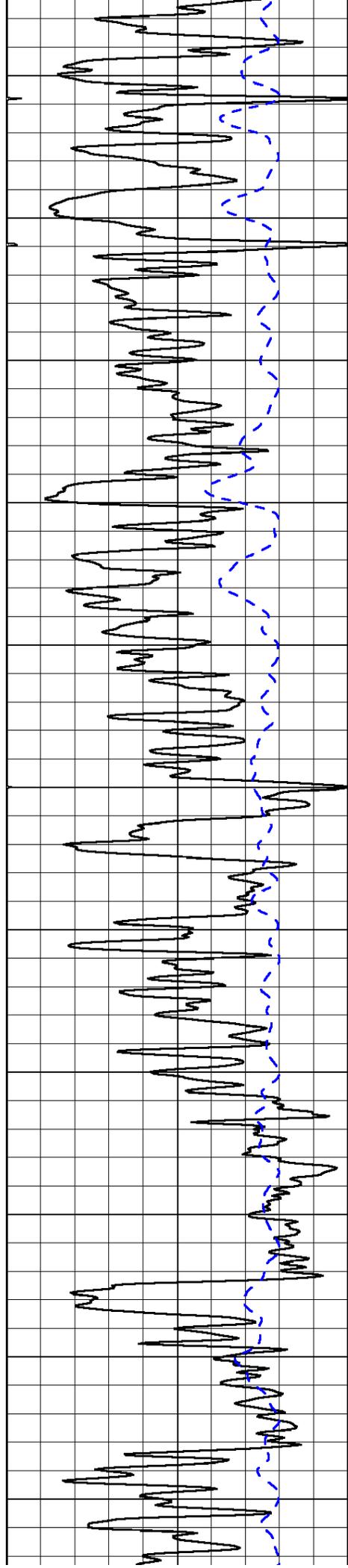
0 Shallow Resistivity 50  
0 Deep Resistivity 50  
1000 Conductivity 0  
15000 Line Tension 0  
50 Shallow Resistivity 500  
50 Deep Resistivity 500

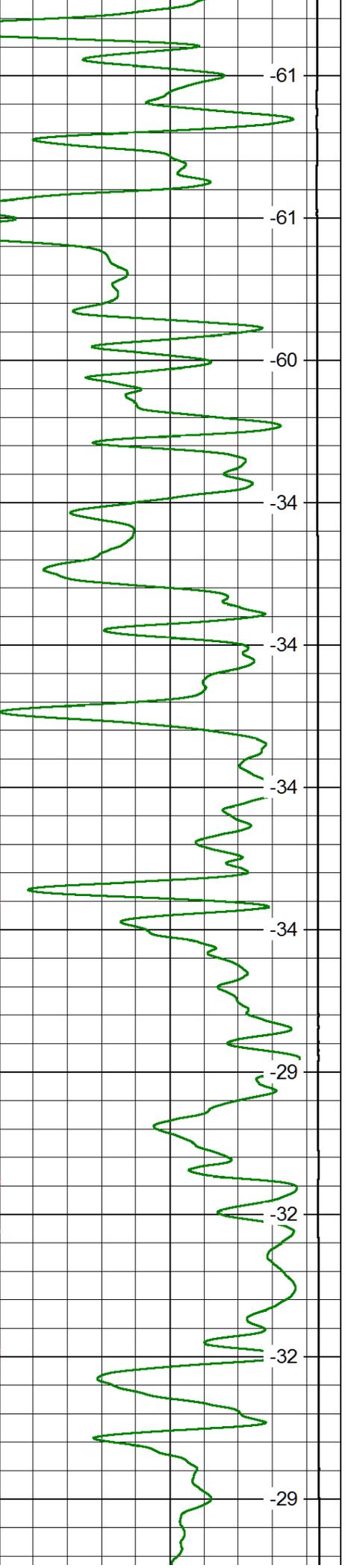
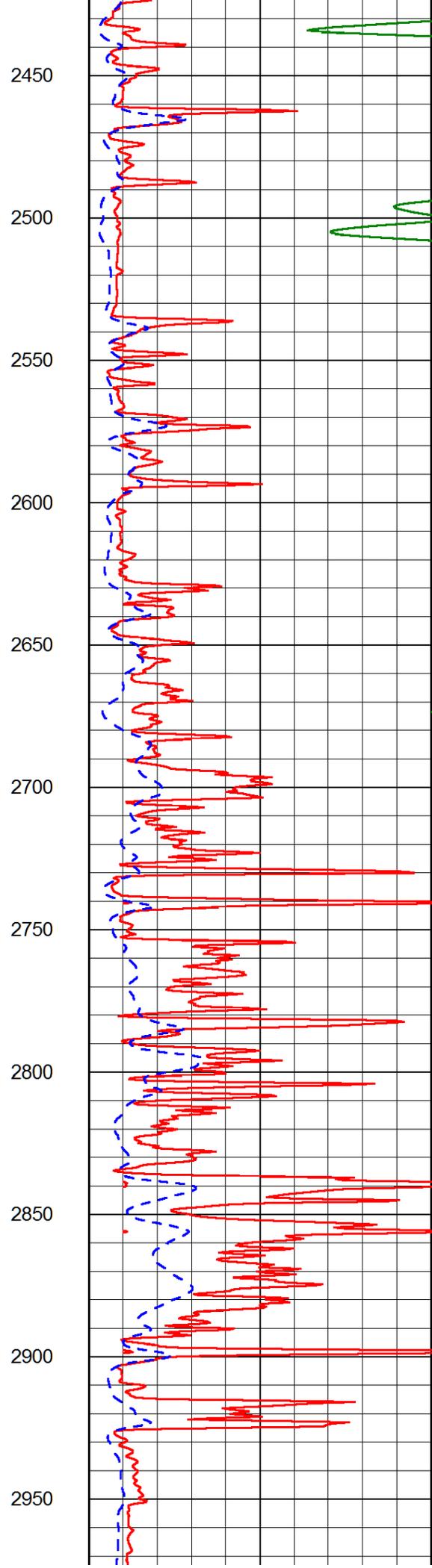
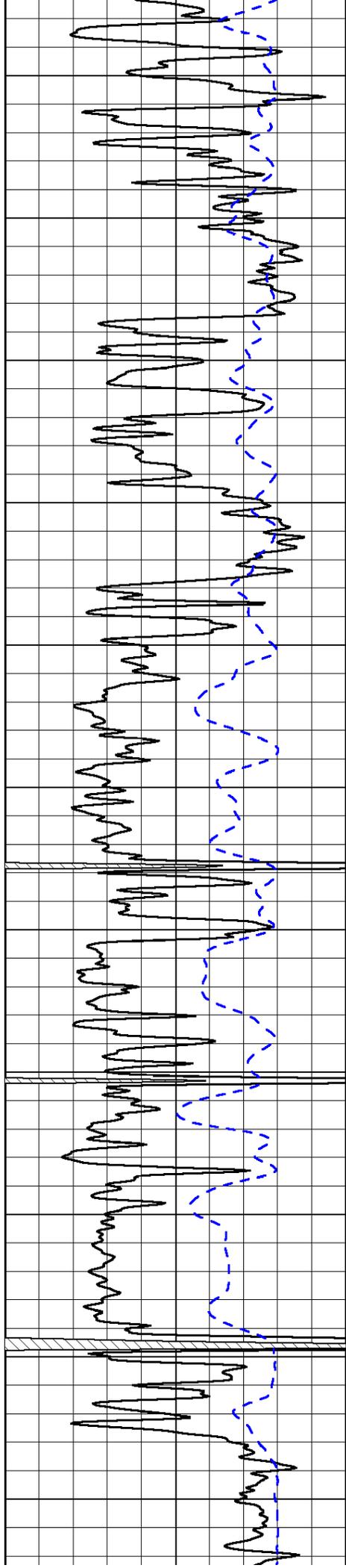
LSPD 0

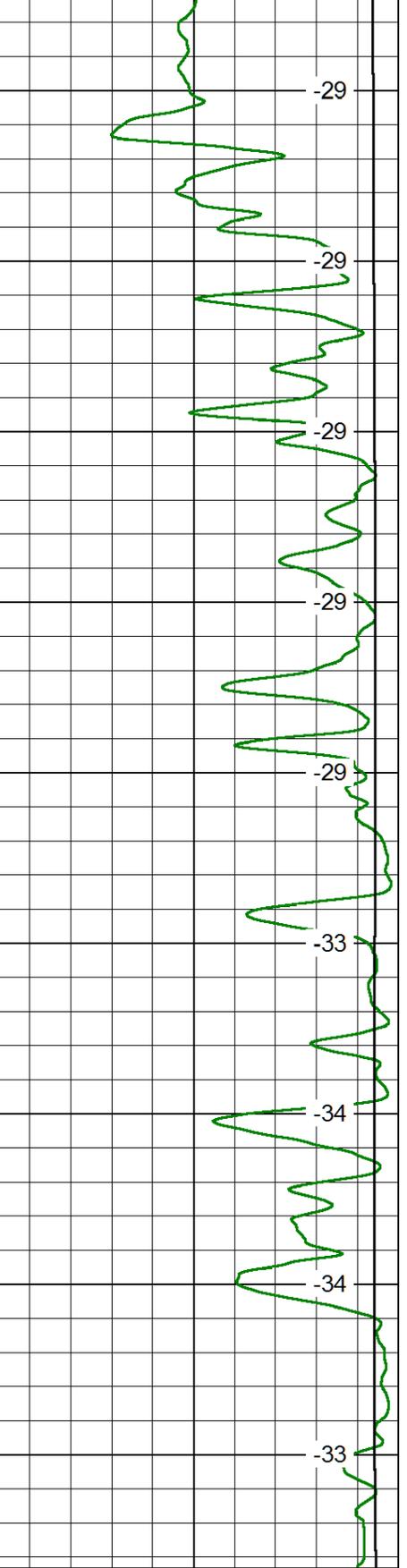
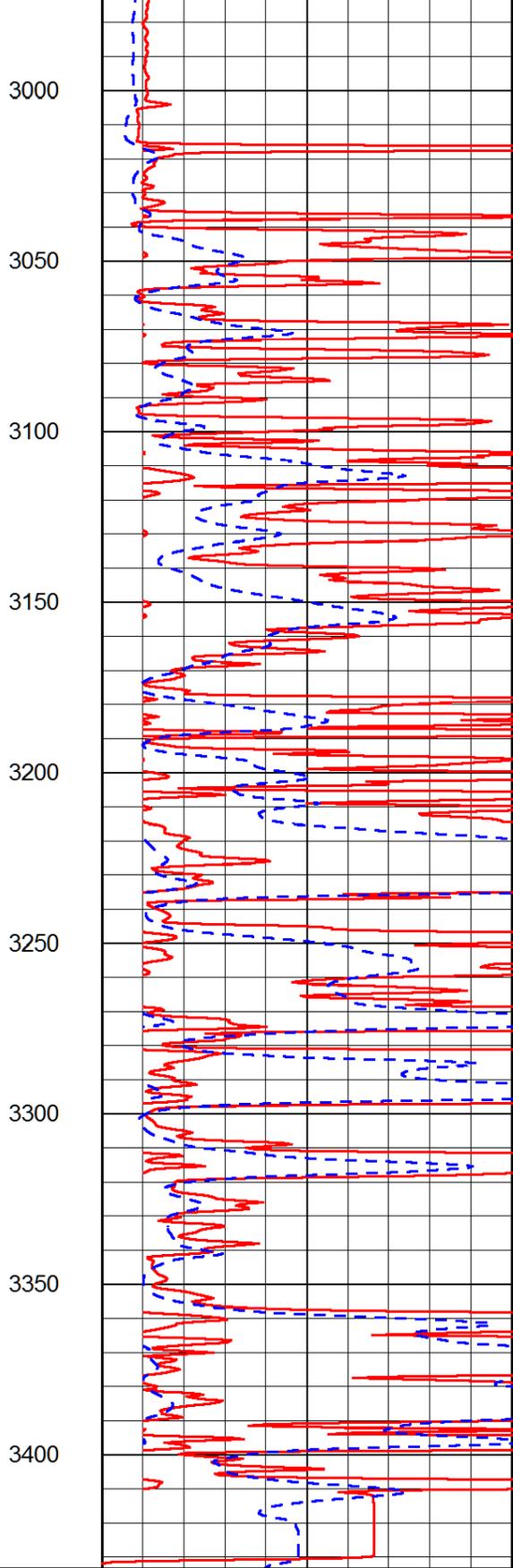
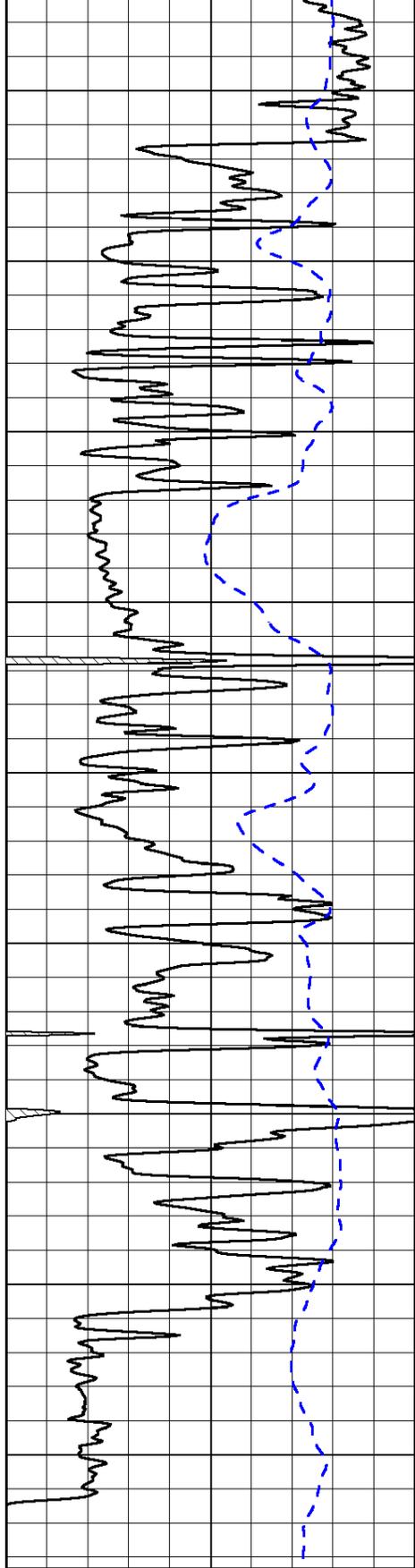












0 150

-200 0

0 50

0 50

1000 Conductivity 0

15000 Line Tension 0

50 Shallow Resistivity 500

50 Deep Resistivity 500

LSPD

0

0

0

500

500

3000

3050

3100

3150

3200

3250

3300

3350

3400

-29

-29

-29

-29

-29

-33

-34

-34

-34

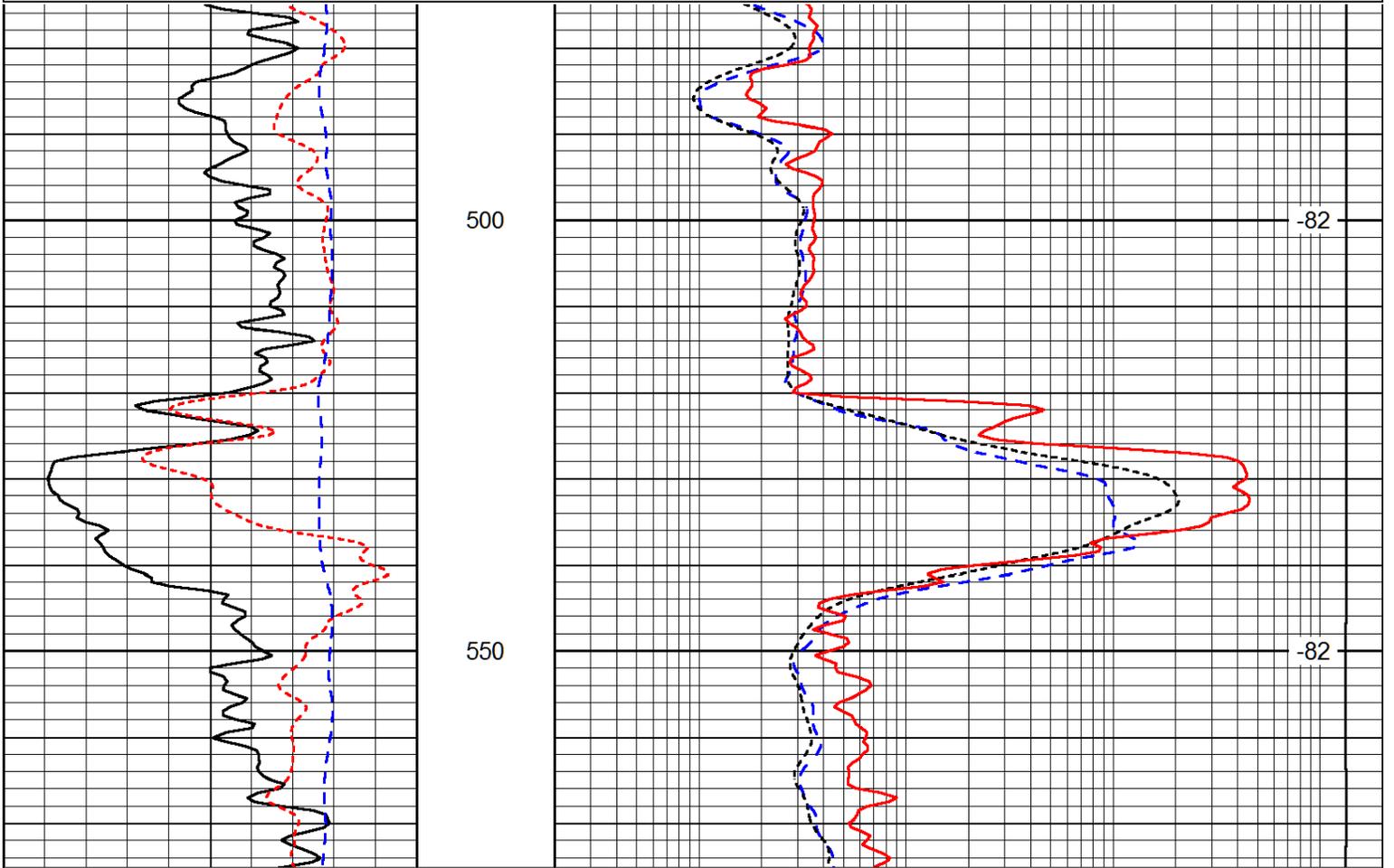
-33

Database File: birddog\_lakinwendel\_1\_18hd.db  
 Dataset Pathname: DIL/bdstk  
 Presentation Format: dil  
 Dataset Creation: Thu Jul 31 12:39:38 2014  
 Charted by: Depth in Feet scaled 1:240

0	Gamma Ray	150
-160	RXO/RT	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



0	Gamma Ray	150
-160	RXO/RT	40
-200	SP (mV)	0

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

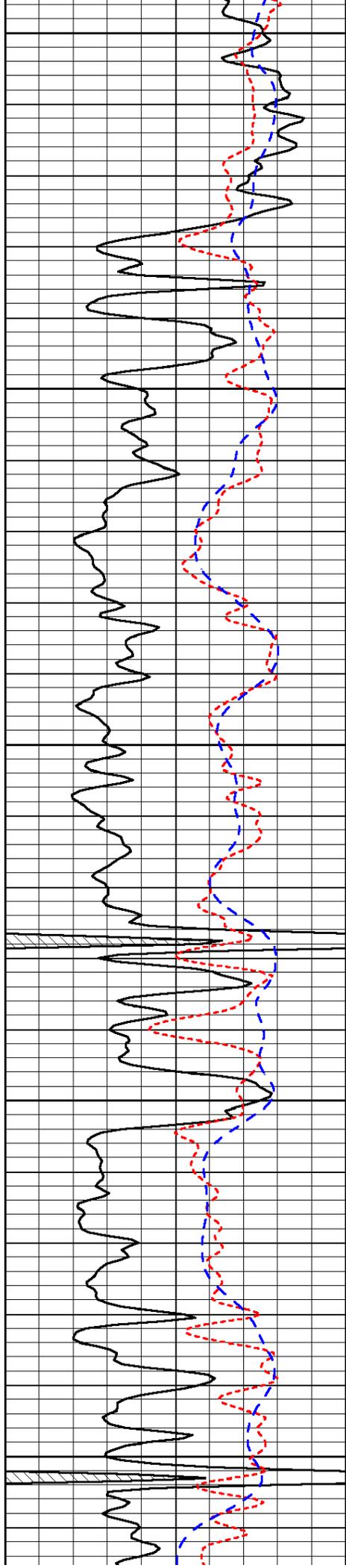
LSPD

Database File: birddog\_lakinwendel\_1\_18hd.db  
 Dataset Pathname: DIL/bdstk  
 Presentation Format: dil  
 Dataset Creation: Thu Jul 31 12:39:38 2014  
 Charted by: Depth in Feet scaled 1:240

0	Gamma Ray	150
-160	RXO/RT	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



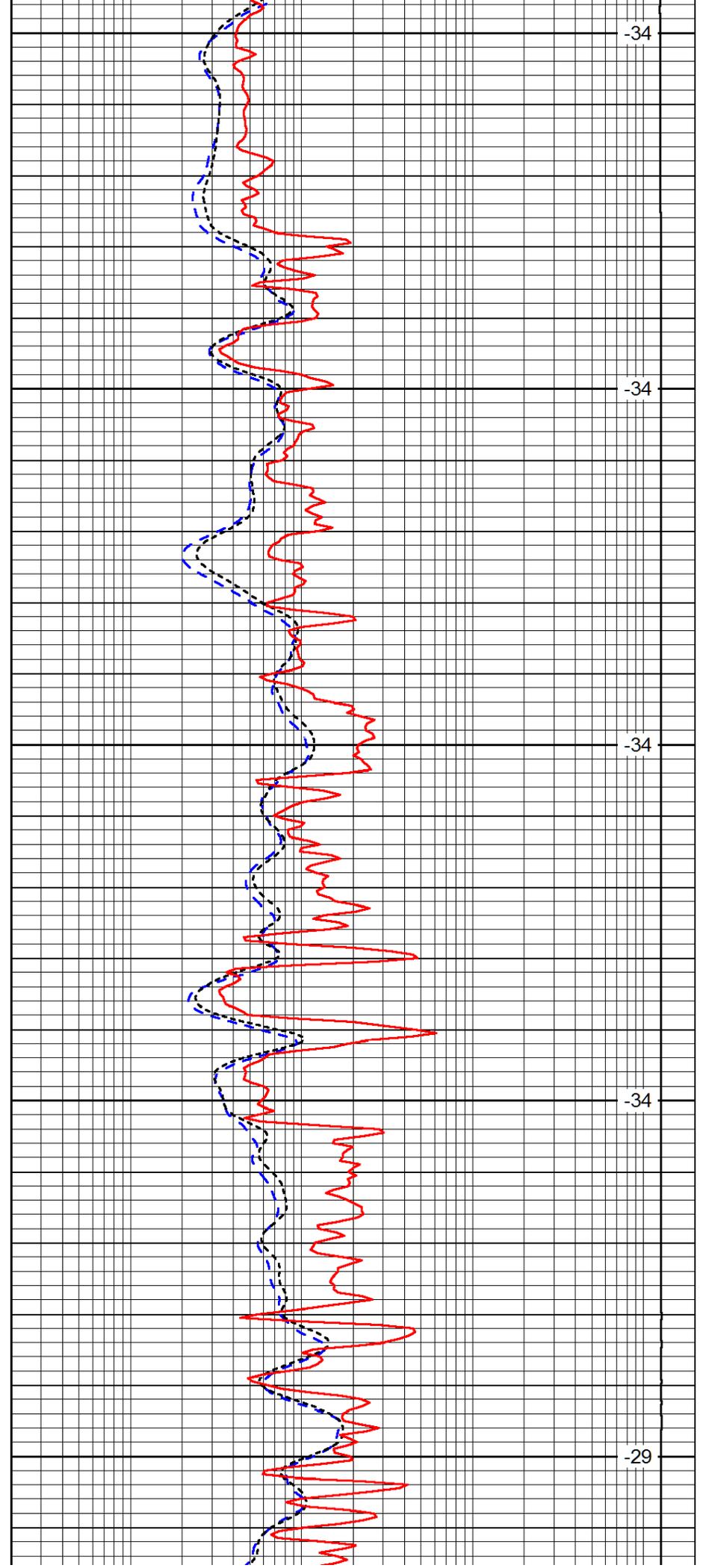
2600

2650

2700

2750

2800



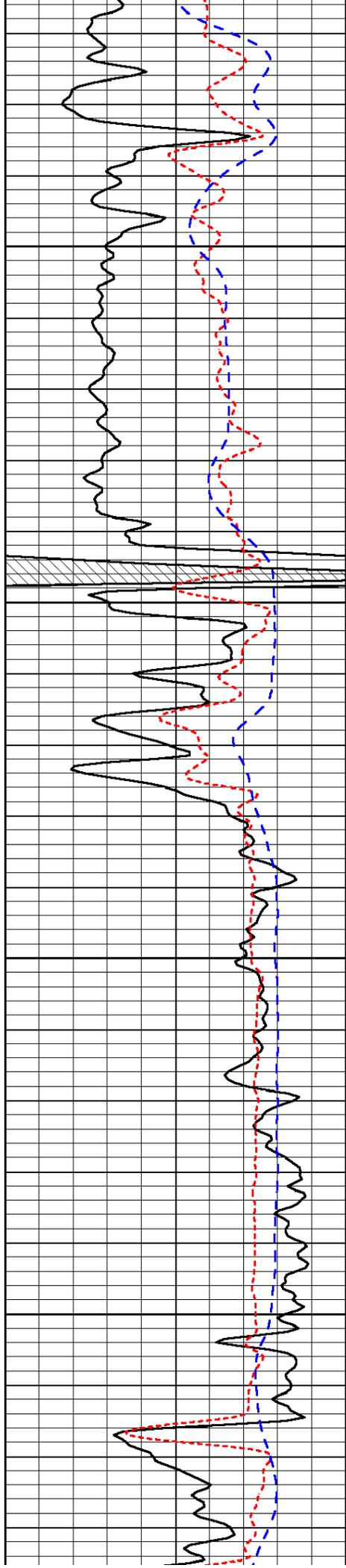
-34

-34

-34

-34

-29

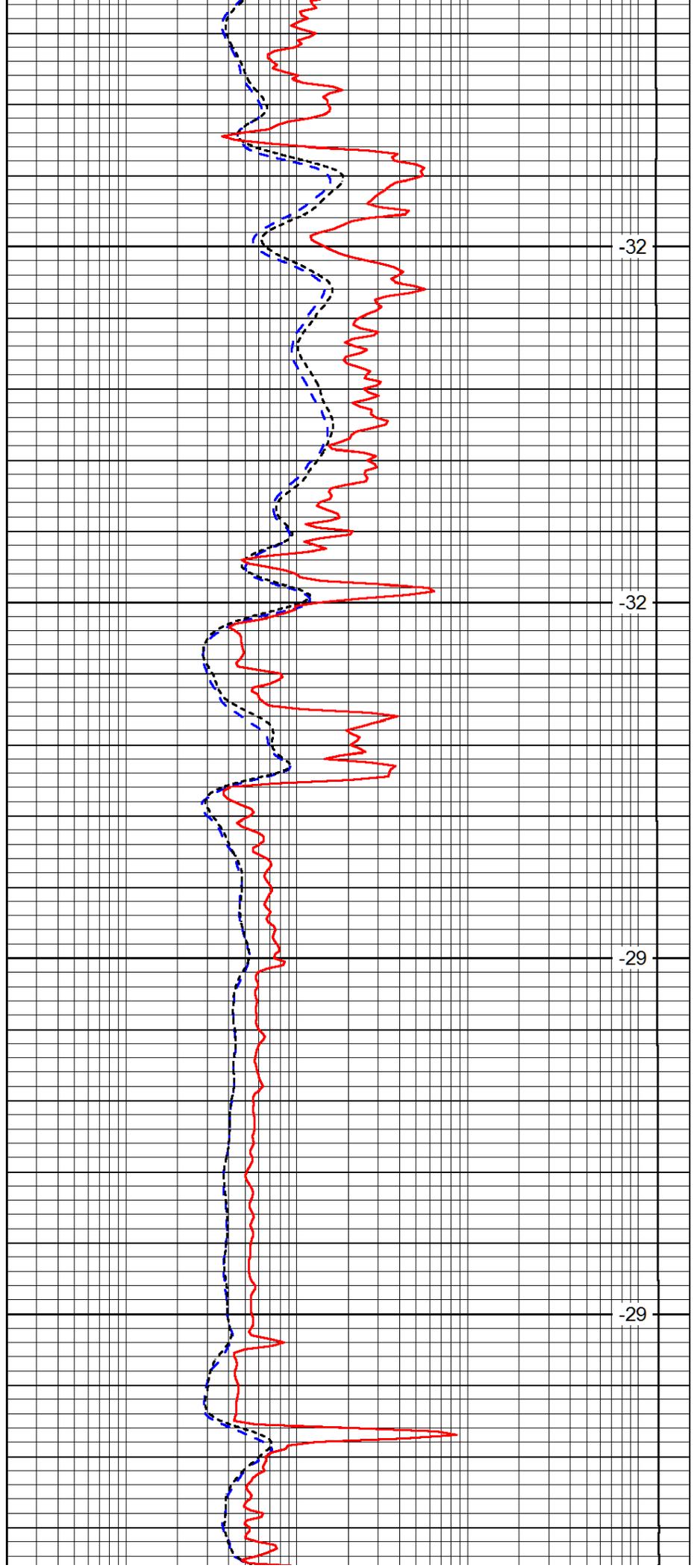


2850

2900

2950

3000

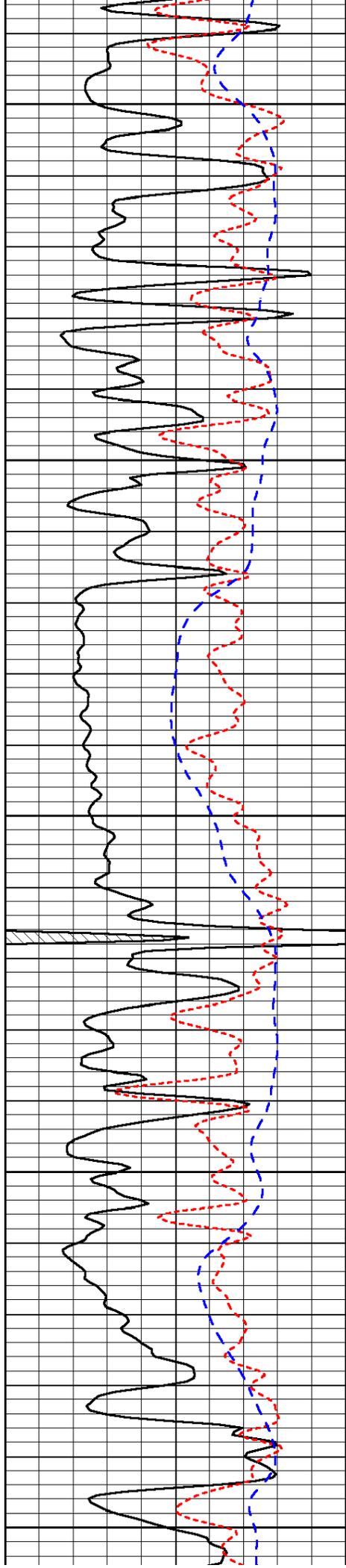


-32

-32

-29

-29



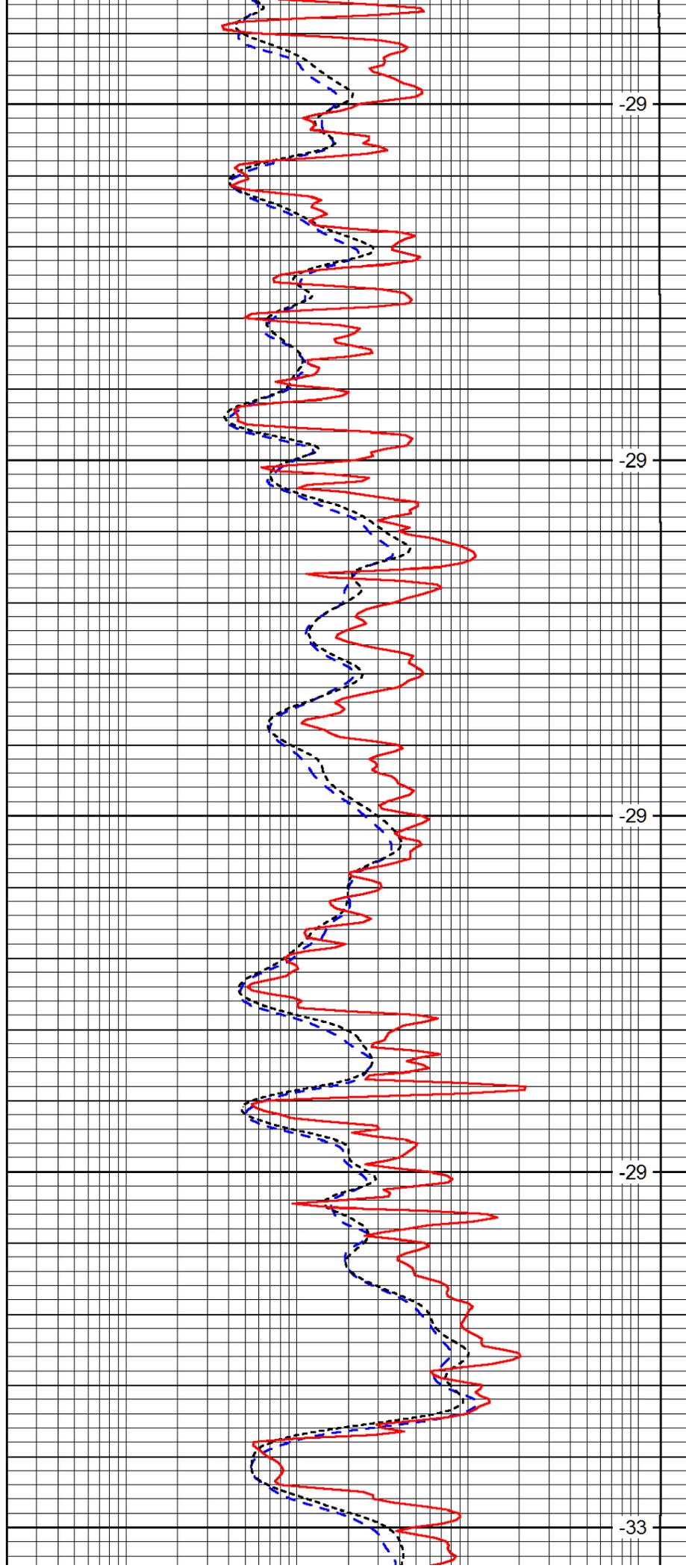
3050

3100

3150

3200

3250



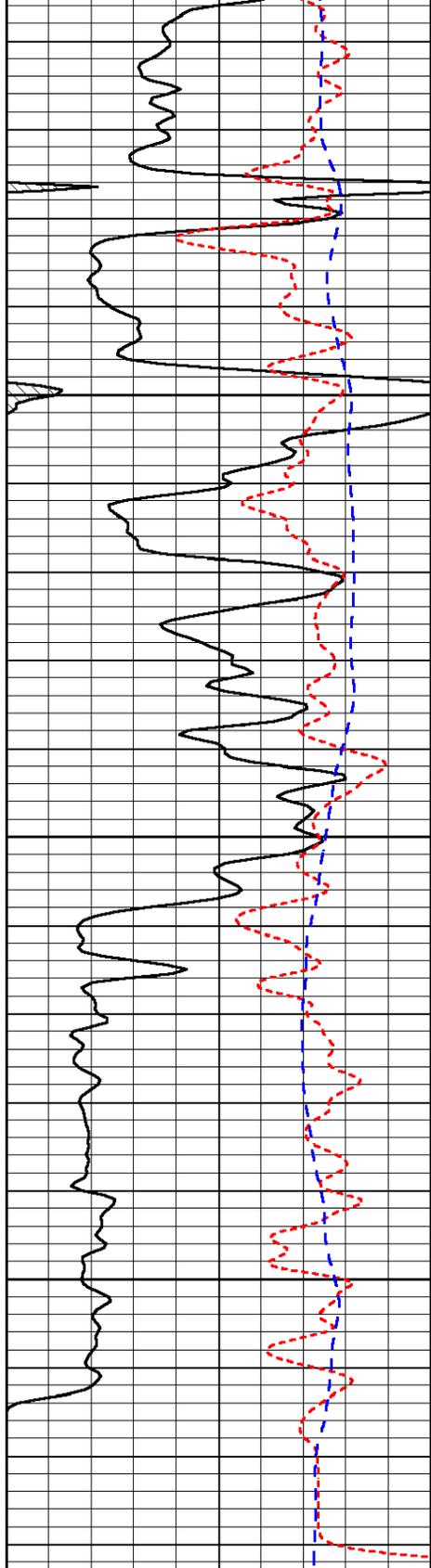
-29

-29

-29

-29

-33

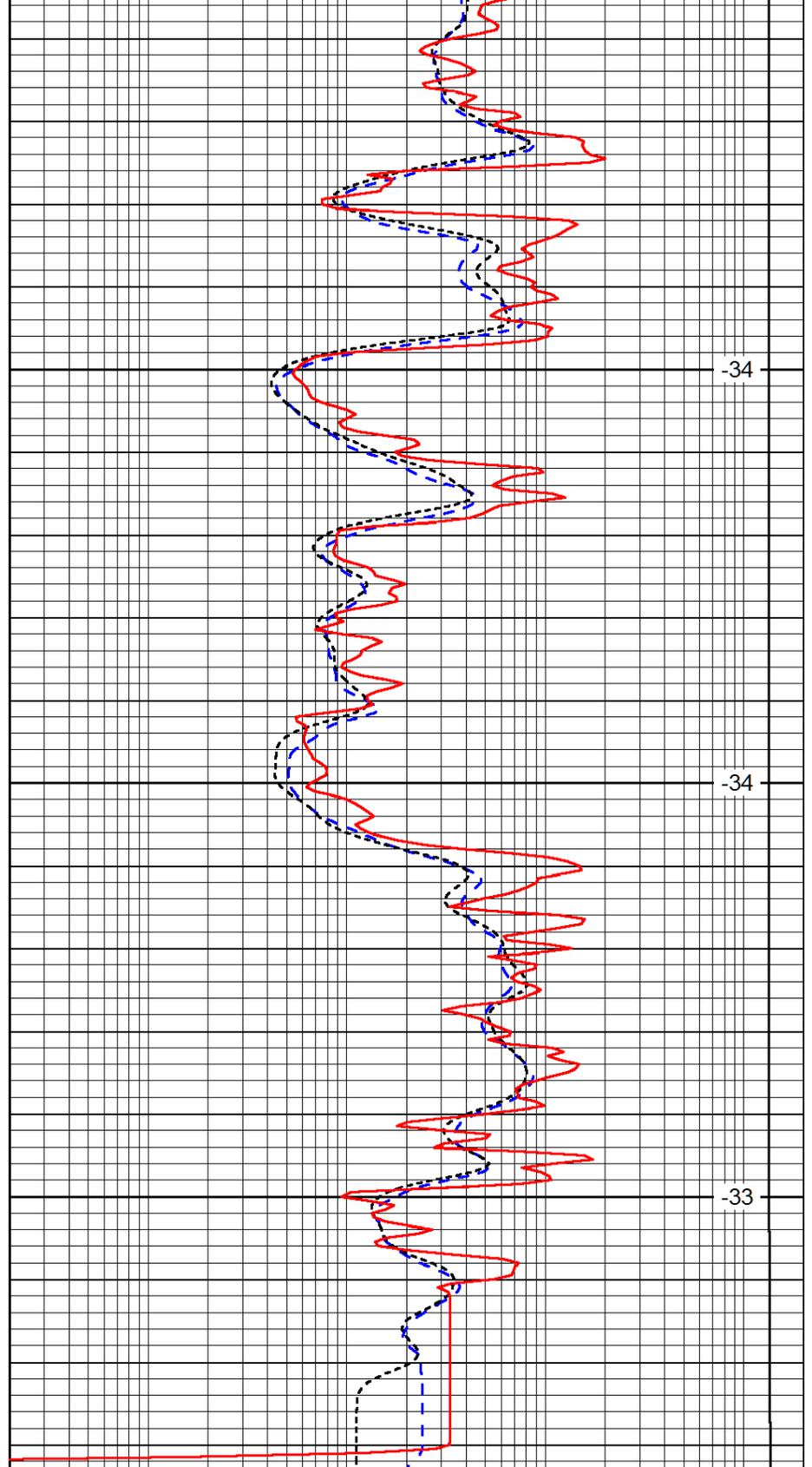


3300

3350

3400

0	Gamma Ray	150
-160	RXO/RT	40
-200	SP (mV)	0



-34

-34

-33

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

LSPD