



**DUAL INDUCTION LOG**

Company **CARMEN SCHMITT, INC.**  
 Well **LAWRENCE #1-14**  
 Field **DEMAND NORTHWEST**  
 County **LANE**  
 State **KANSAS**

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 Well **LAWRENCE #1-14**  
 Field **DEMAND NORTHWEST**  
 County **LANE** State **KANSAS**

Location: **API # : 15-101-22567-00-00**  
**1617 FSL & 680' FEL**  
**SEC 14 TWP 16S RGE 28W**  
 Permanent Datum **GROUND LEVEL Elevation 2723**  
 Log Measured From **KELLY BUSHING**  
 Drilling Measured From **KELLY BUSHING**  
 Other Services **CNL/CDL MEL**  
 Elevation **K.B. 2731**  
**D.F. N/A**  
**G.L. 2723**

Date	8/8/2015
Run Number	ONE
Depth Driller	4640
Depth Logger	4639
Bottom Logged Interval	4638
Top Log Interval	200
Casing Driller	8:625 @ 221
Casing Logger	221
Bit Size	7.875
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	3700
Density / Viscosity	9.2 51
pH / Fluid Loss	8.0 10.0
Source of Sample	Flowline
Rm @ Meas. Temp	0.80 @ 94
Rmt @ Meas. Temp	0.60 @ 94
Rmc @ Meas. Temp	1.08 @ 94
Source of Rmf / Rmc	Charts
Rm @ BHT	0.61 @ 122
Operating Rig Time	3 1/2 HOURS
Max Rec. Temp. F	122
Equipment Number	91
Location	Hays
Recorded By	D. SCHMIDT
Witnessed By	BRAD RINE

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All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not 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.

**Comments**

**N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.**

**PENDENNIS,  
 2 WEST TO PAWNEE RD, 1 1/2 NORTH,  
 WEST AND NORTH INTO**

**Log Measured From: KELLY BUSHING 8 Ft. Above Permanent Datum**

**THANK YOU FOR USING PIONEER ENERGY SERVICES**  
**www.pioneerenergy.com 785-625-3858**

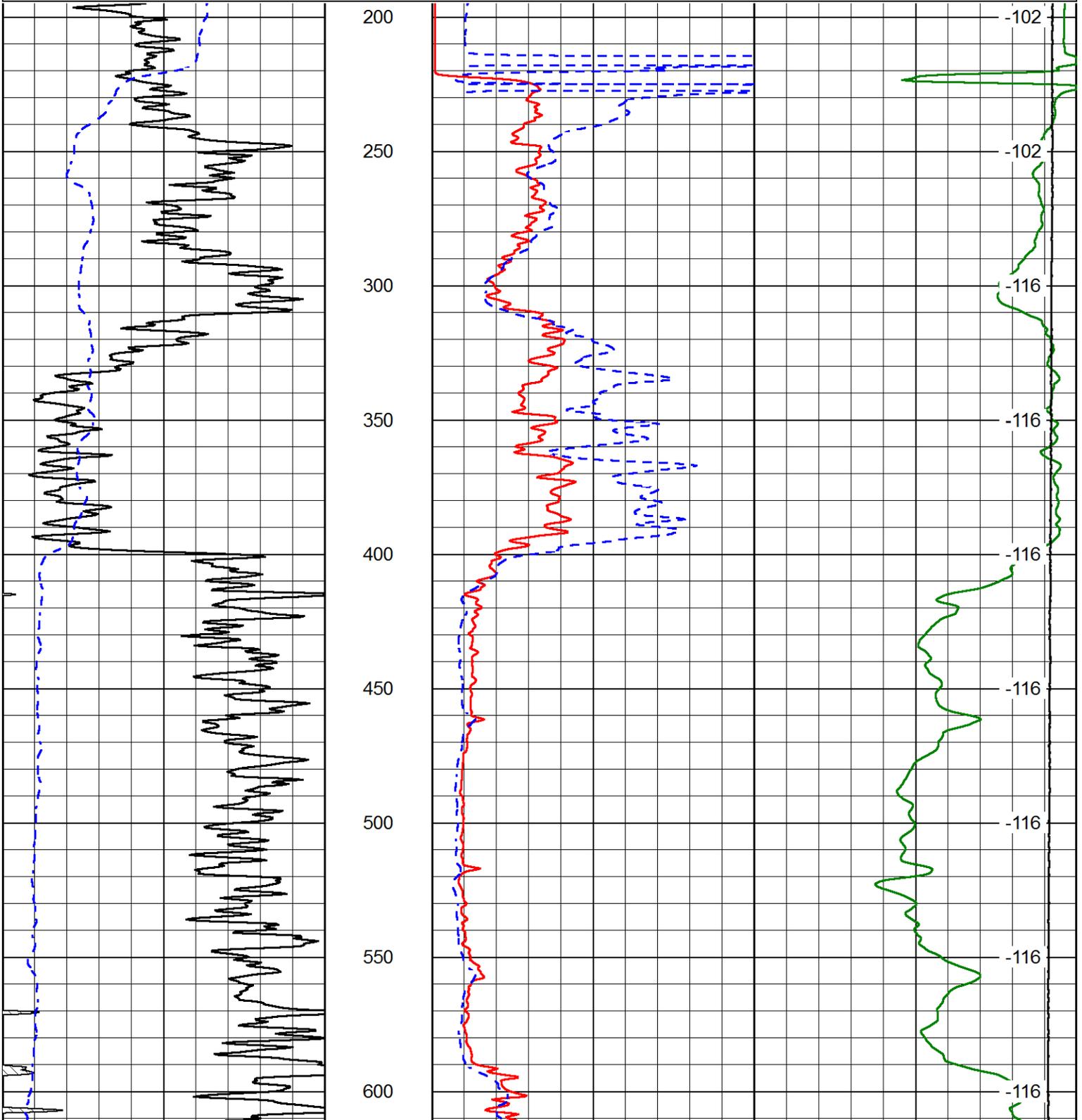
<b>Your Pioneer Energy Services Crew</b>	<b>This Log Record Was Witnessed By</b>
Engineer: <b>D. SCHMIDT</b>	Primary Witness: <b>BRAD RINE</b>
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

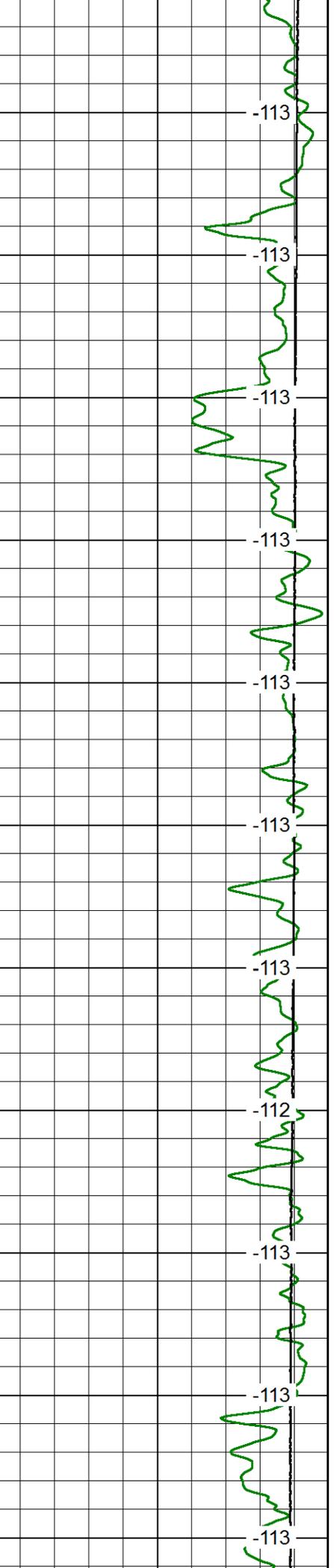
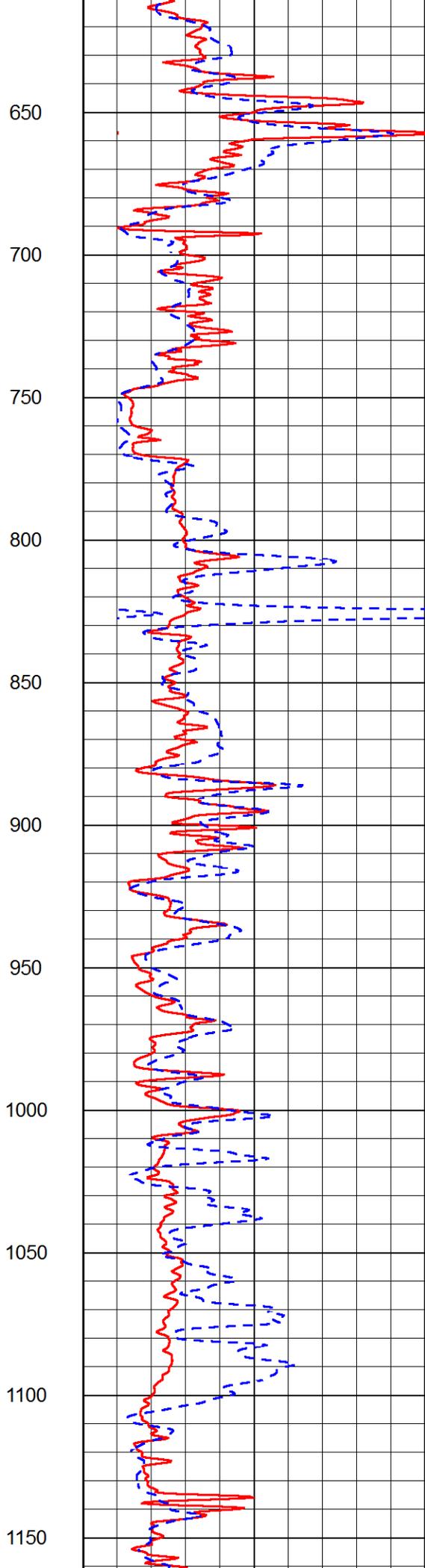
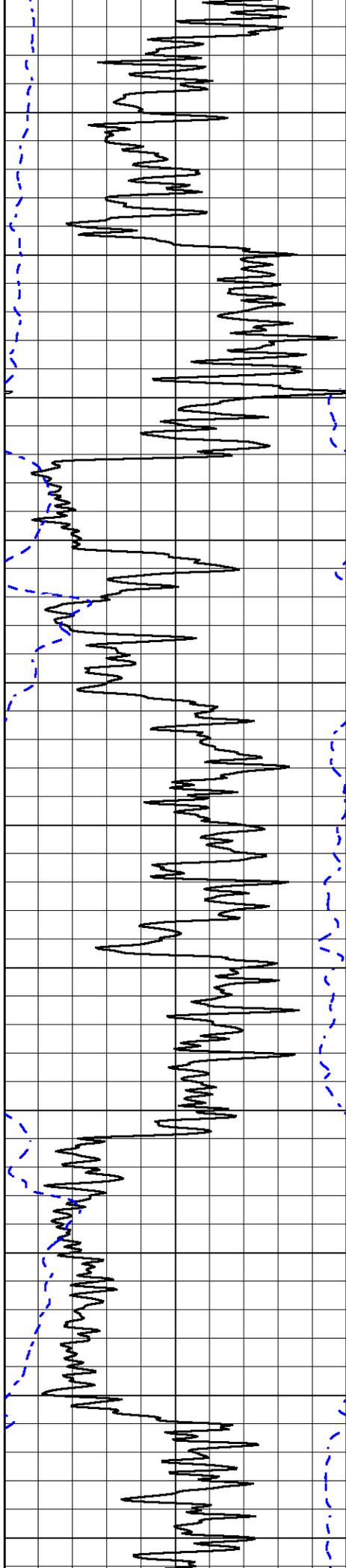
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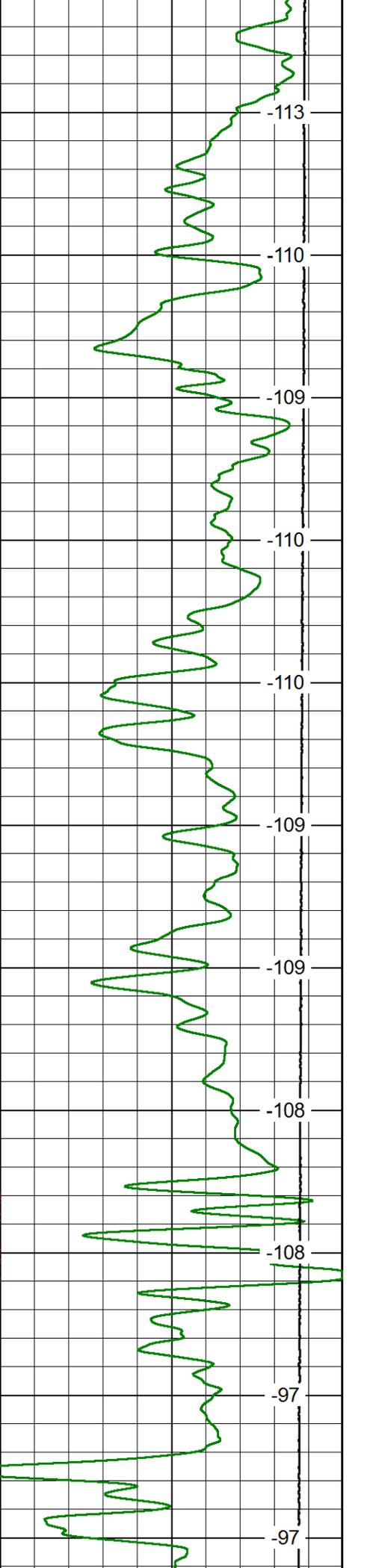
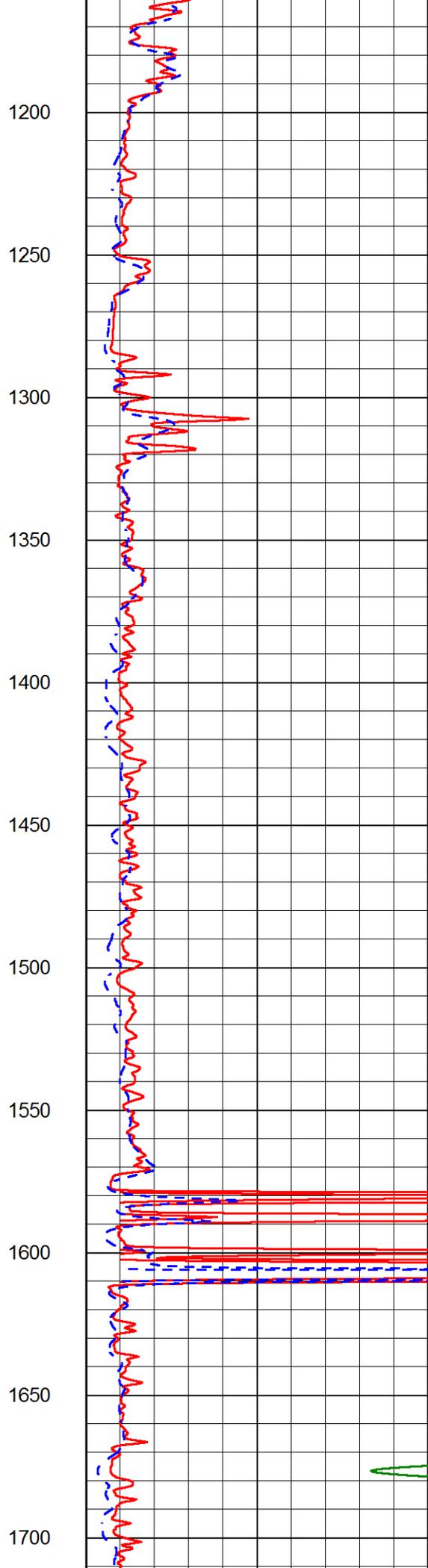
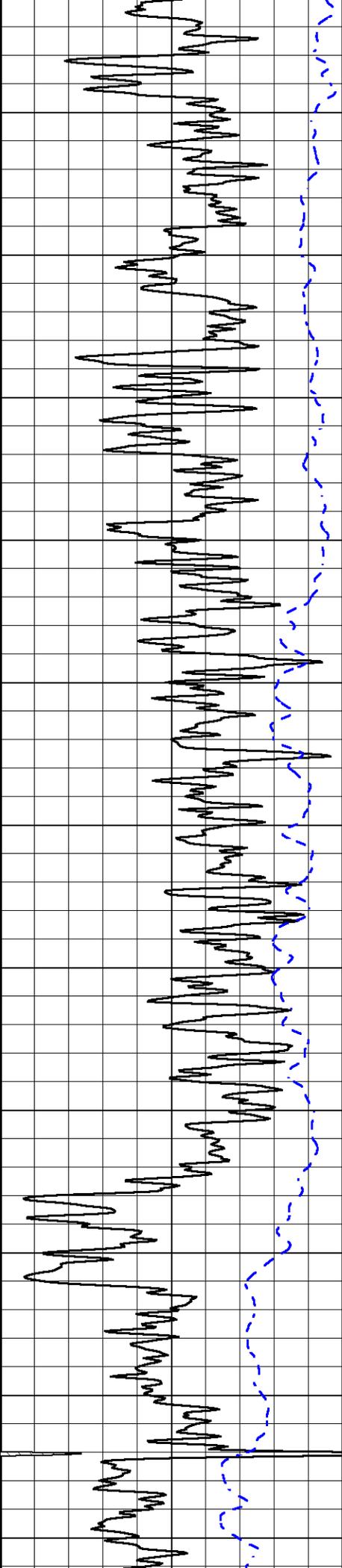
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 -200 SP (mV) 0

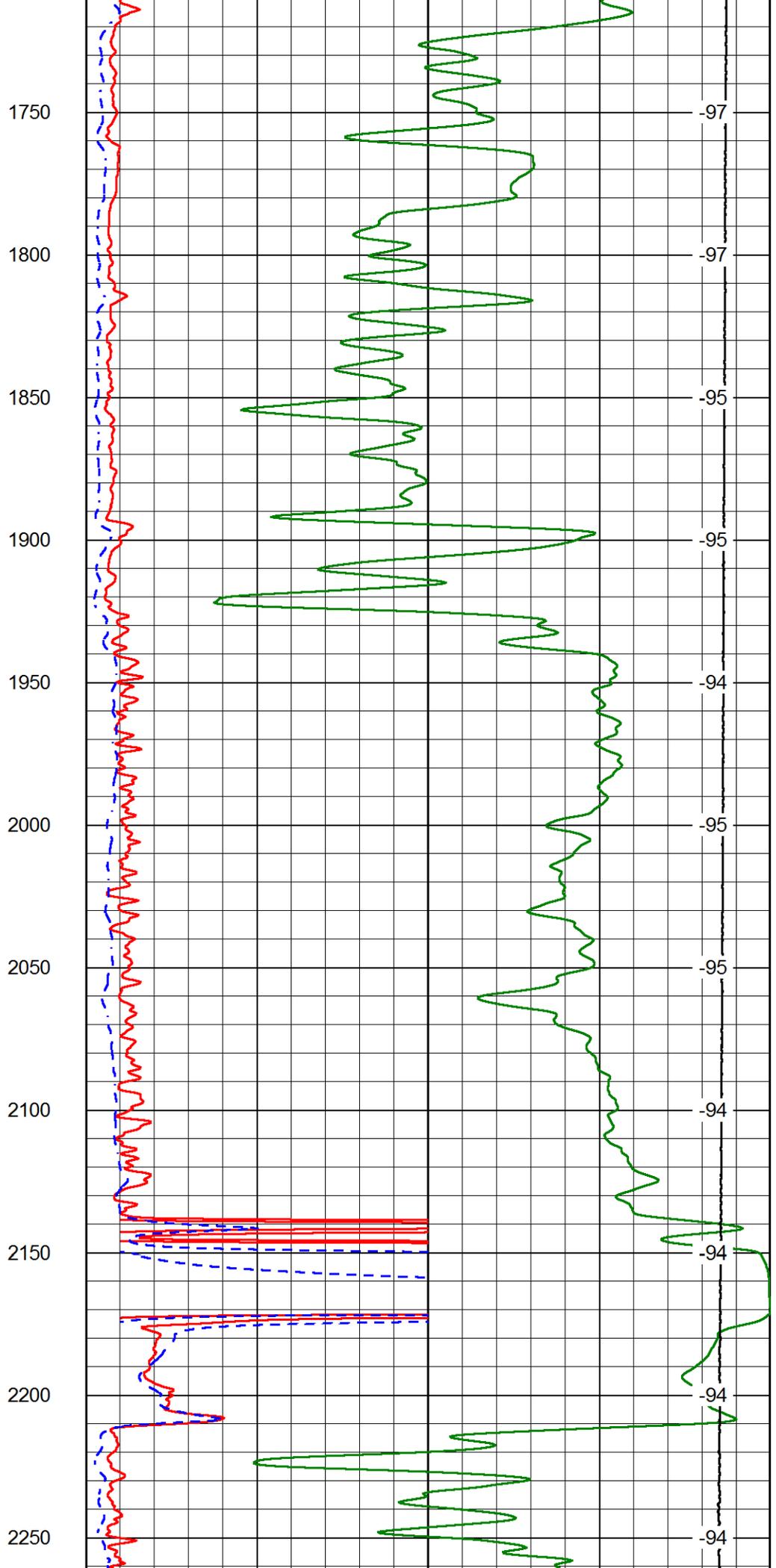
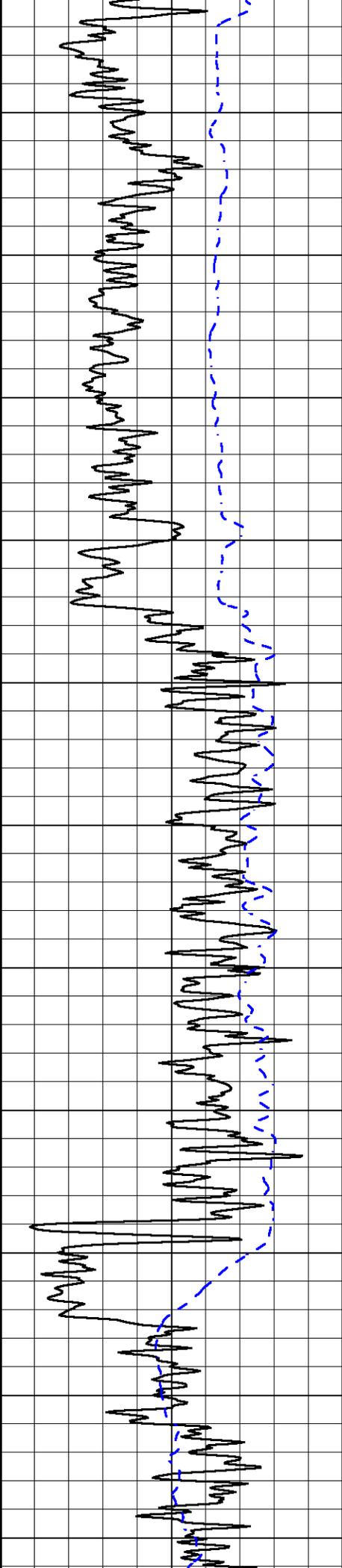
1000 Conductivity 0  
 15000 Line Tension (lb) 0

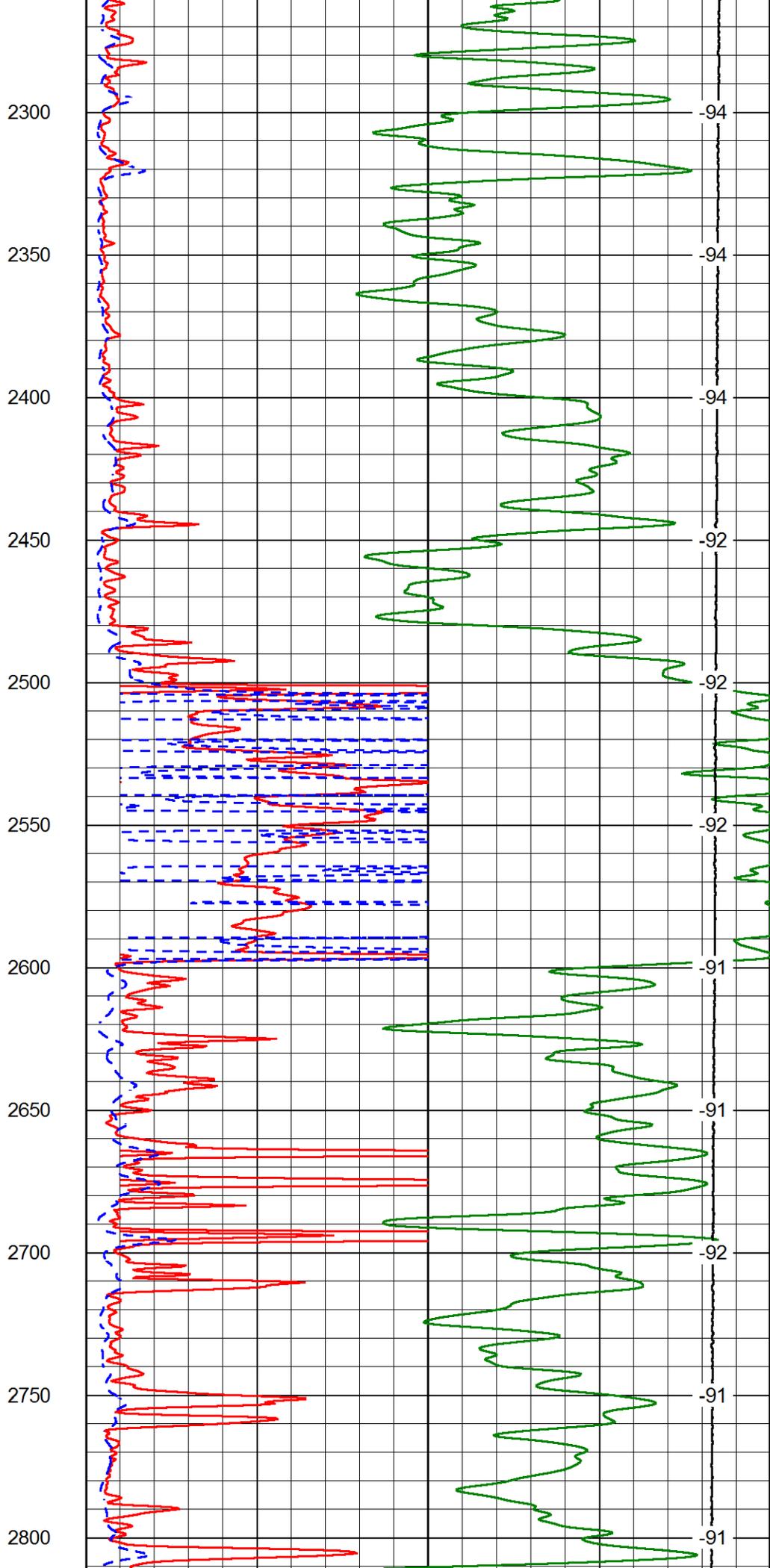
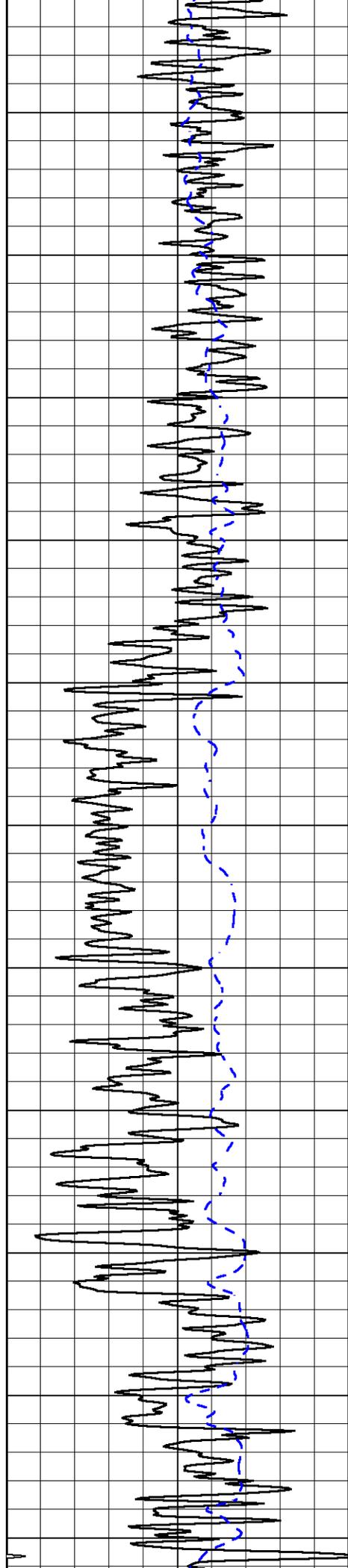
0 Shallow Resistivity (Ohm-m) 50  
 0 Deep Resistivity (Ohm-m) 50  
 Shallow Resistivity  
 50 (Ohm-m) 500  
 50 Deep Resistivity (Ohm-m) 500  
 LSPD (ft/min)

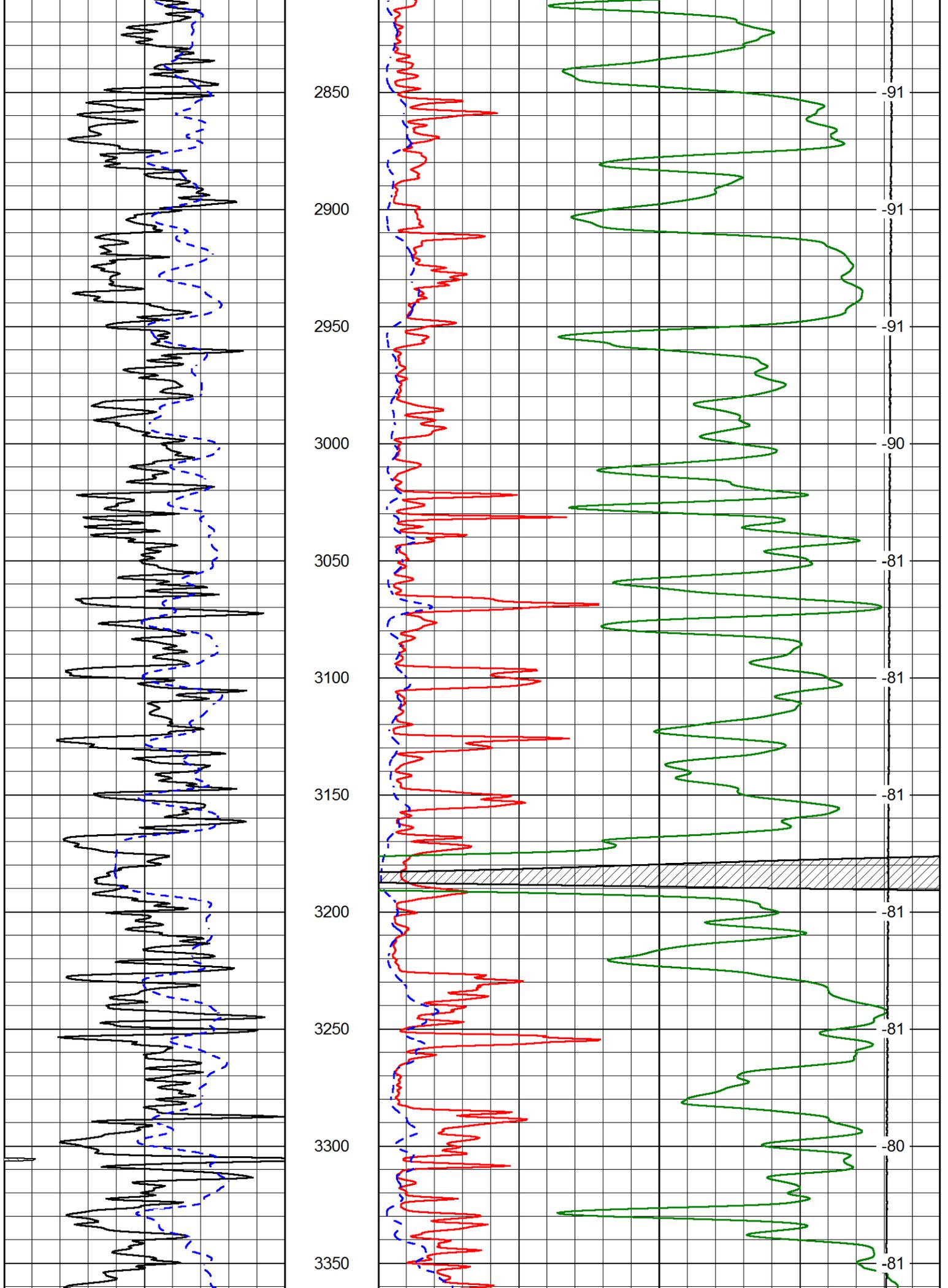


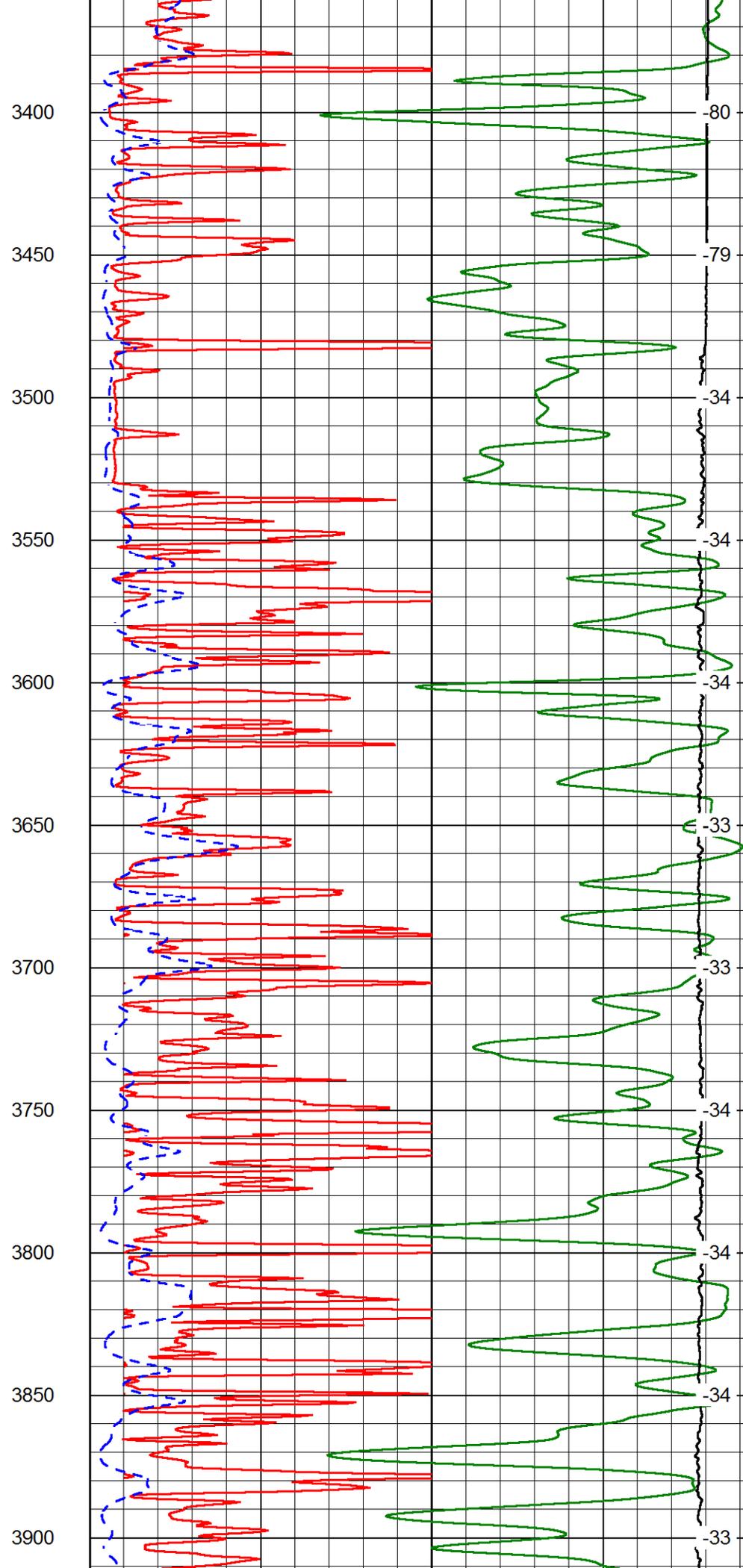
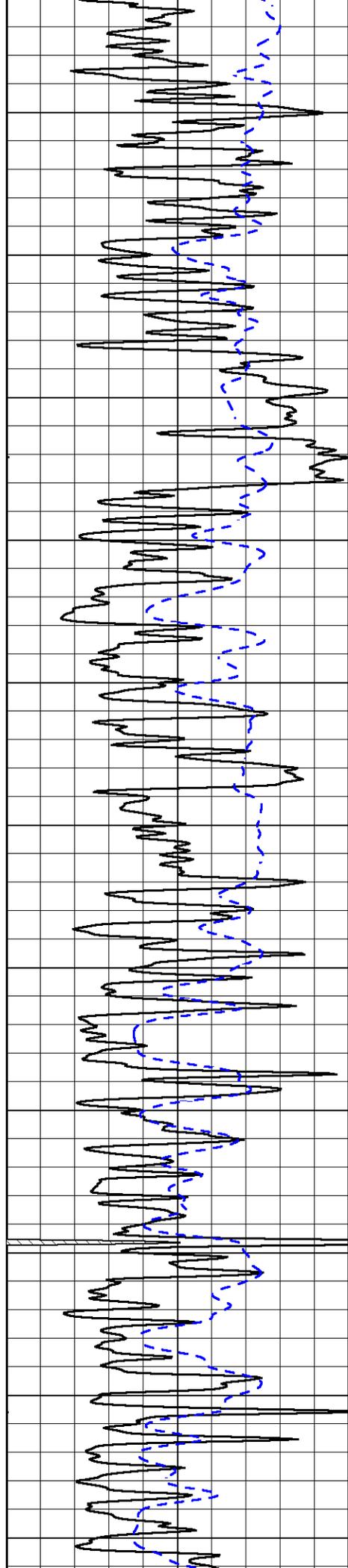


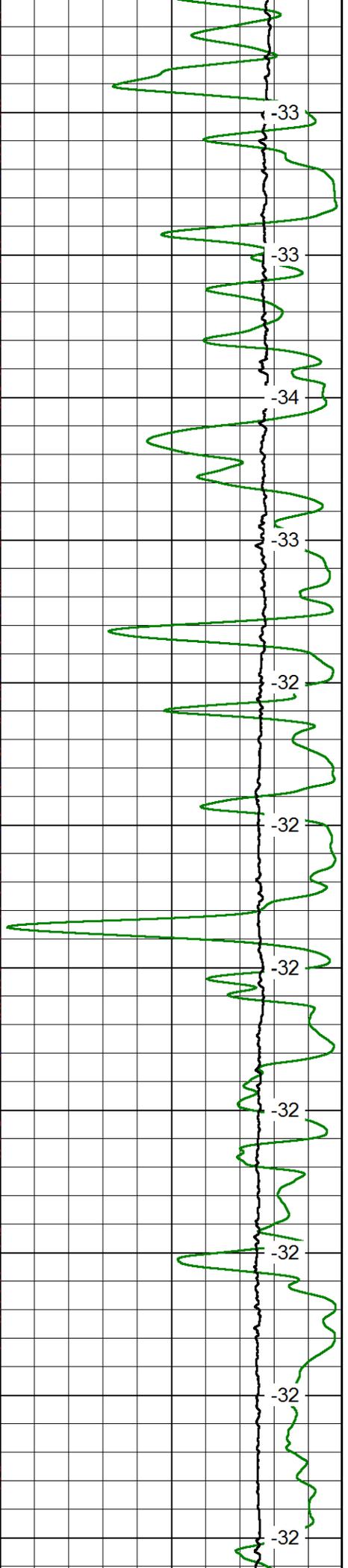
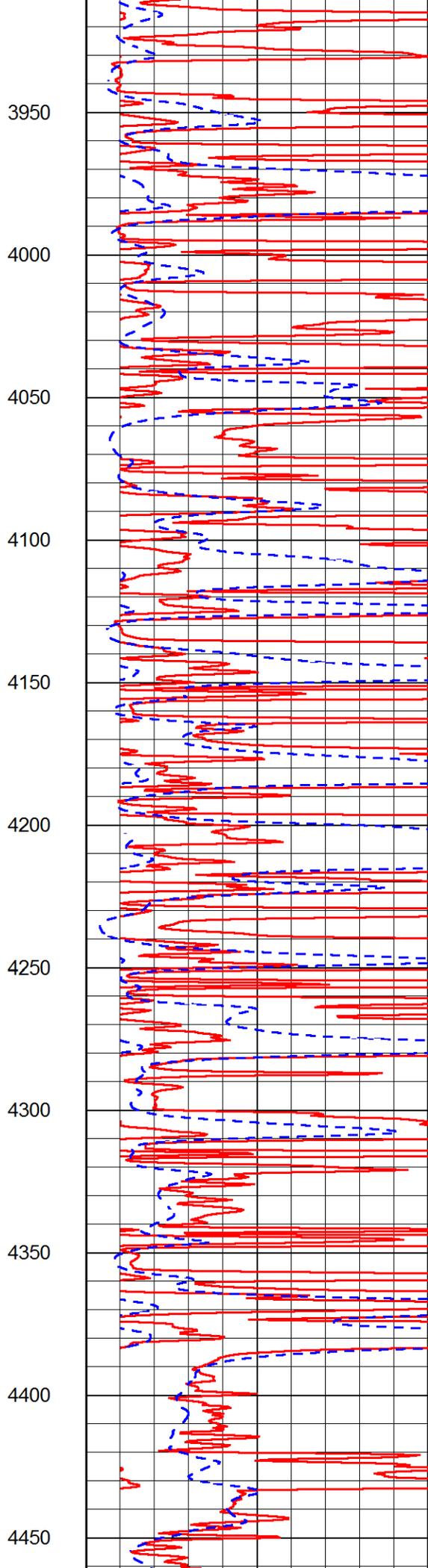
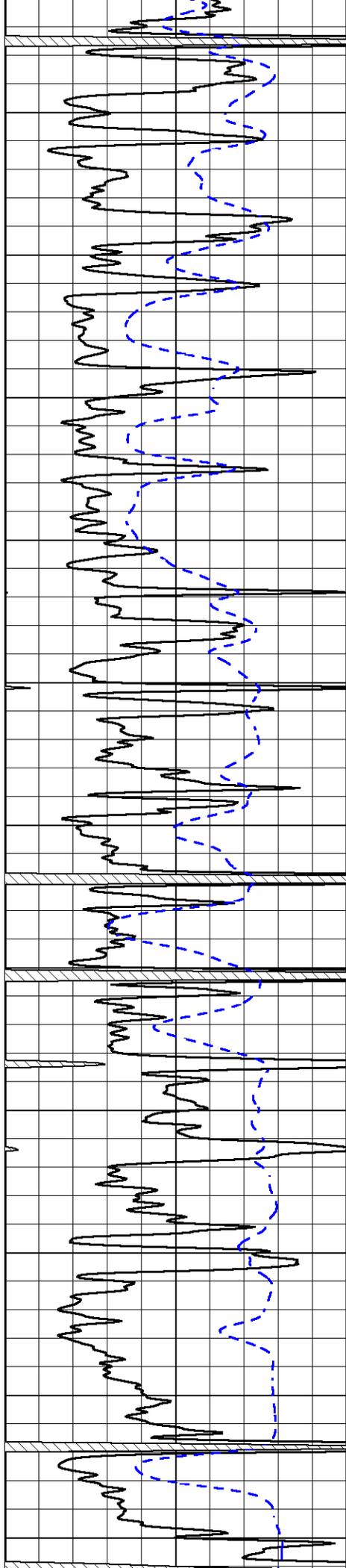


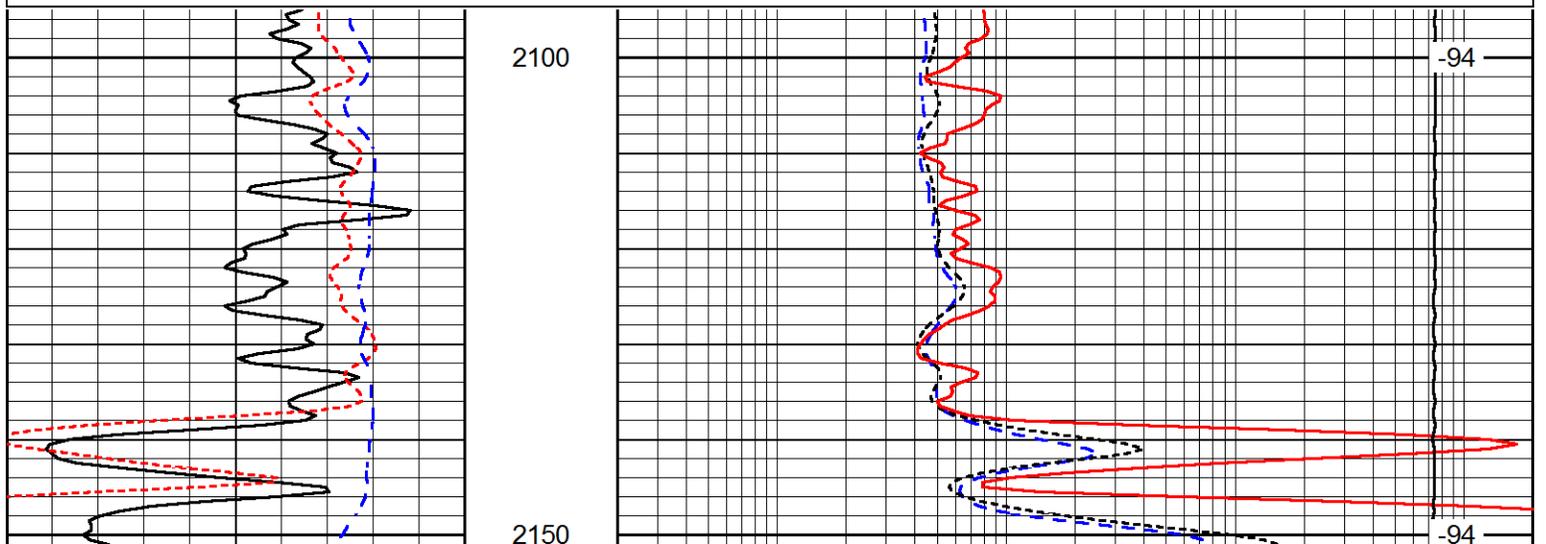
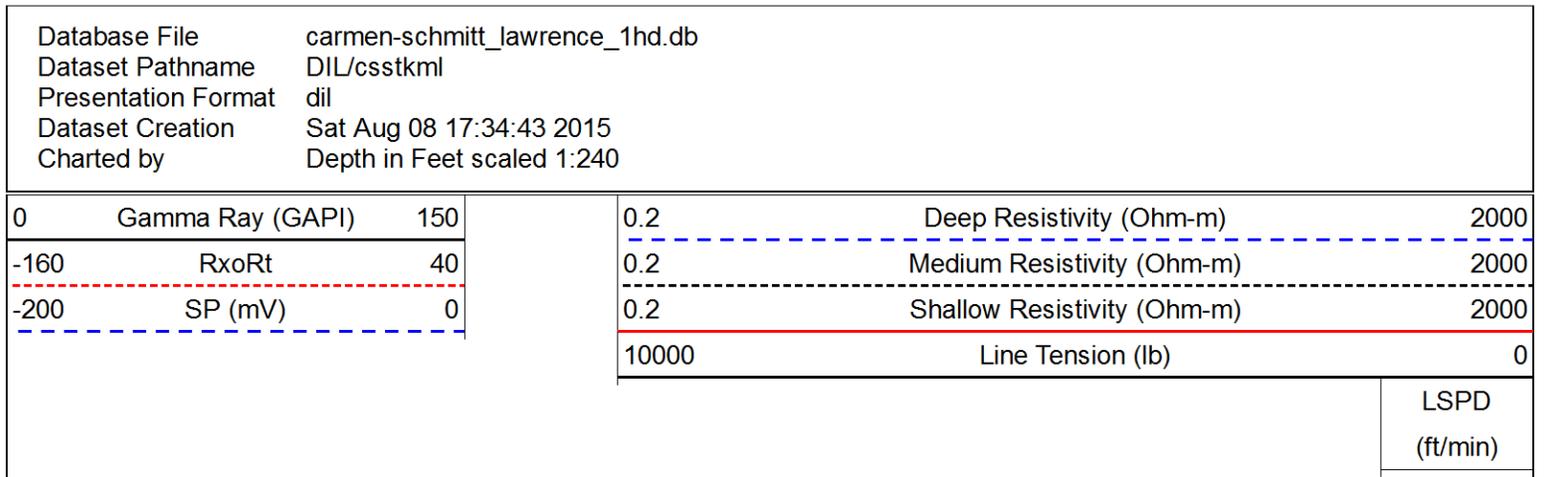
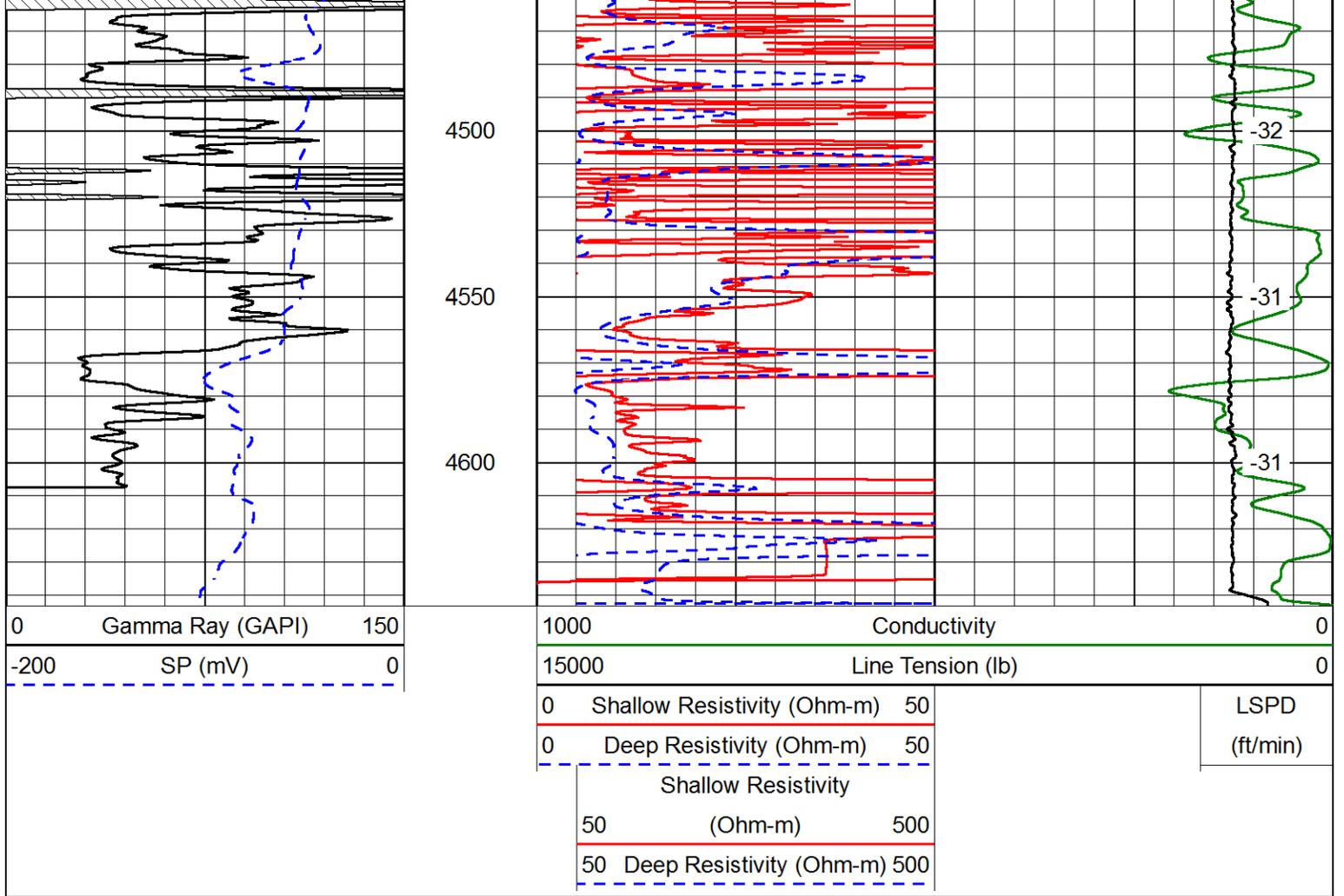


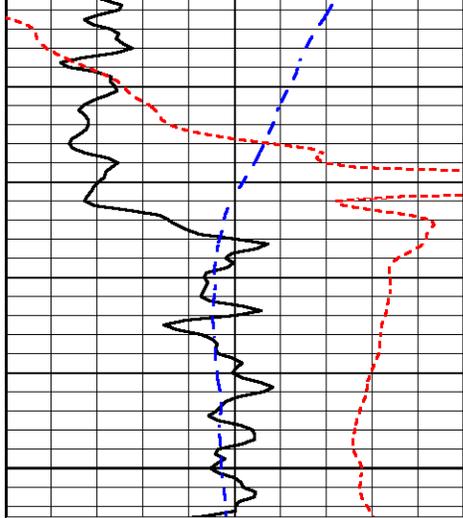






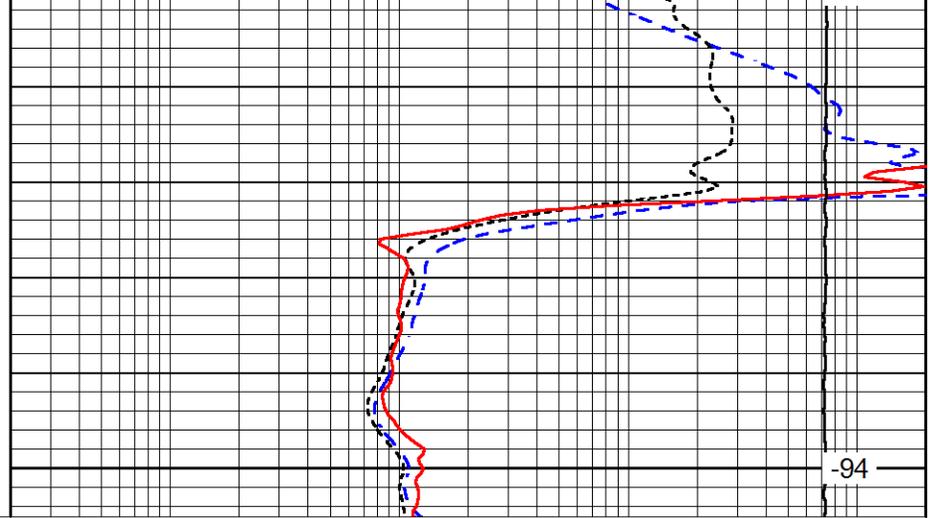






2200

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



-94

0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0

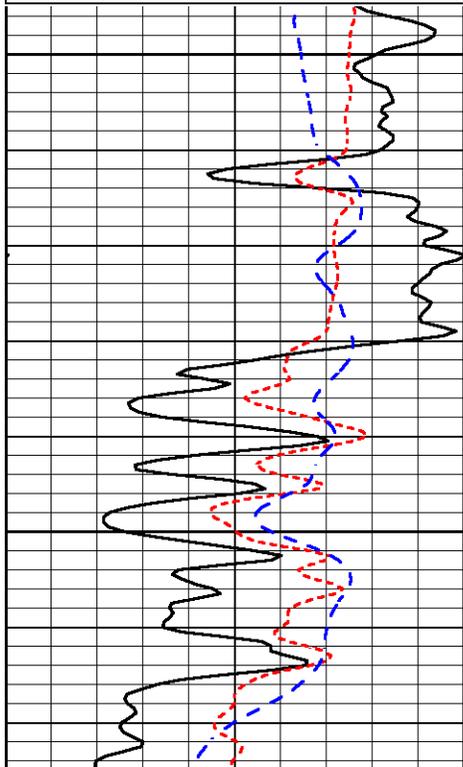
LSPD  
(ft/min)

Database File carmen-schmitt\_lawrence\_1hd.db  
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 Dataset Creation Sat Aug 08 17:34:43 2015  
 Charted by Depth in Feet scaled 1:240

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

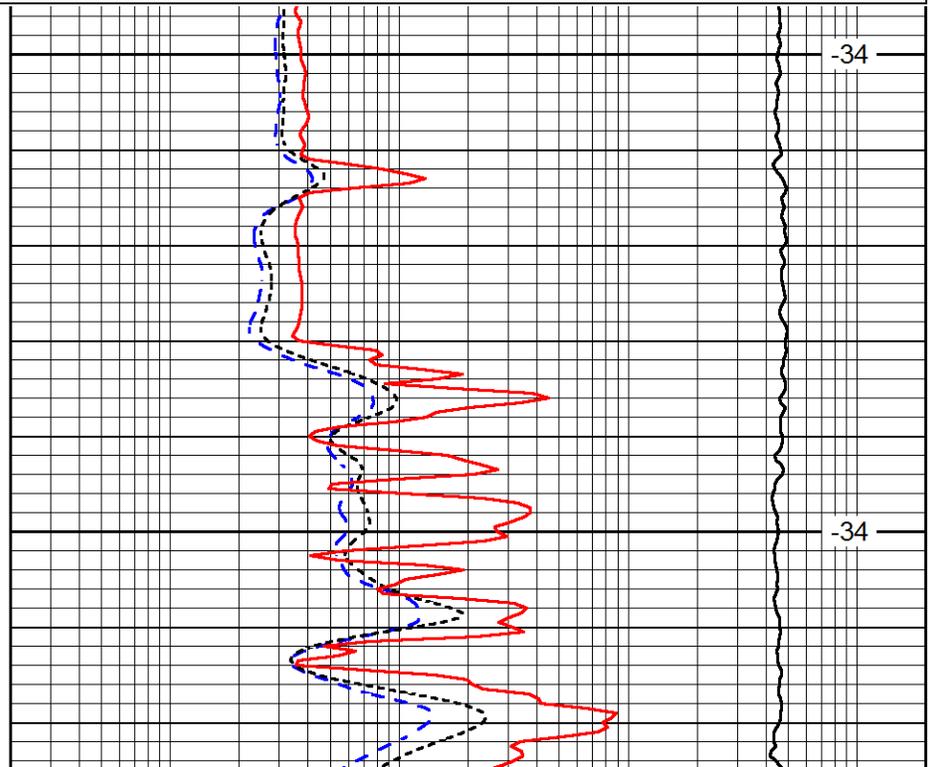
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0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0

LSPD  
(ft/min)



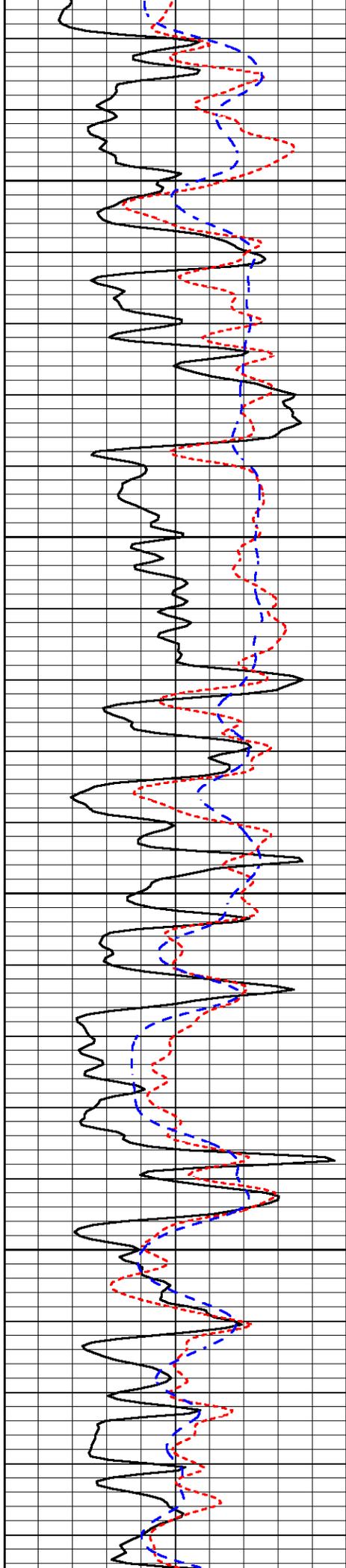
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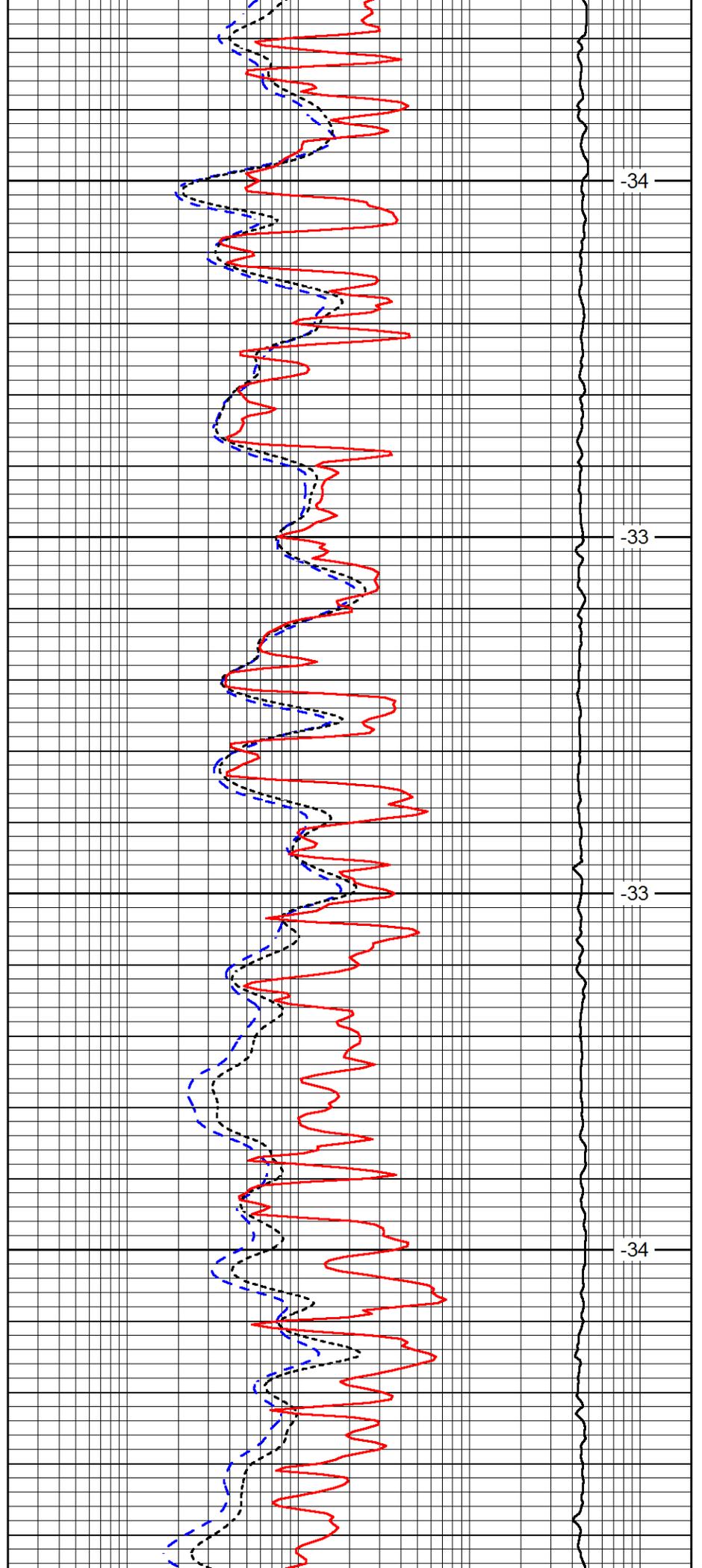


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3650

3700

3750

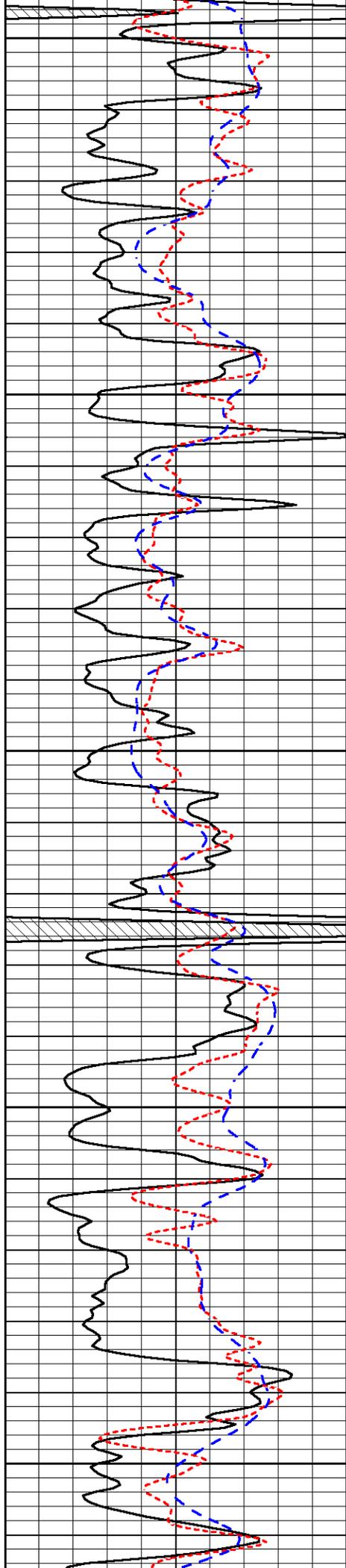


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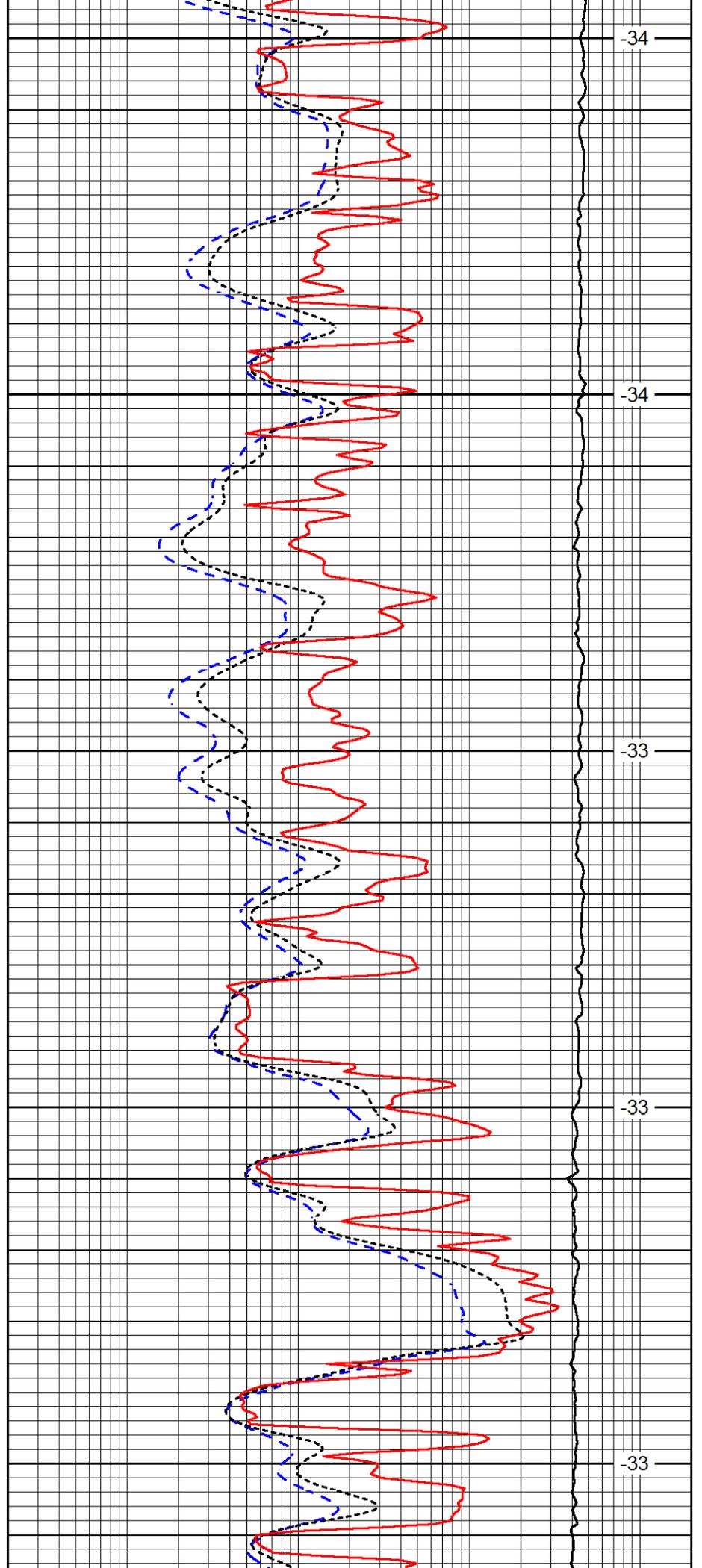
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3850

3900

3950

4000



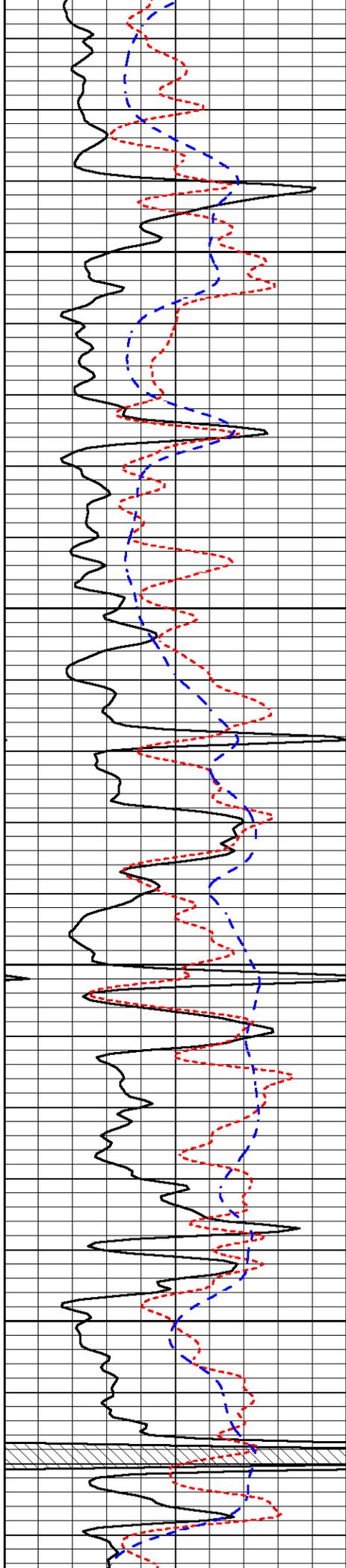
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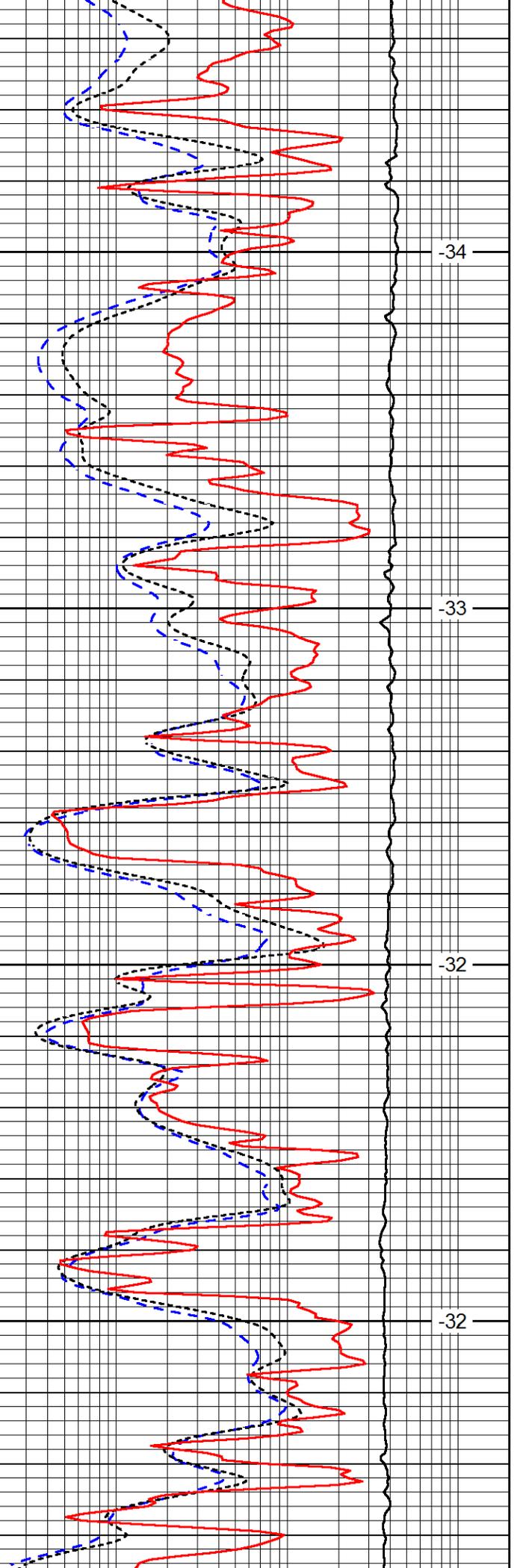


4050

4100

4150

4200

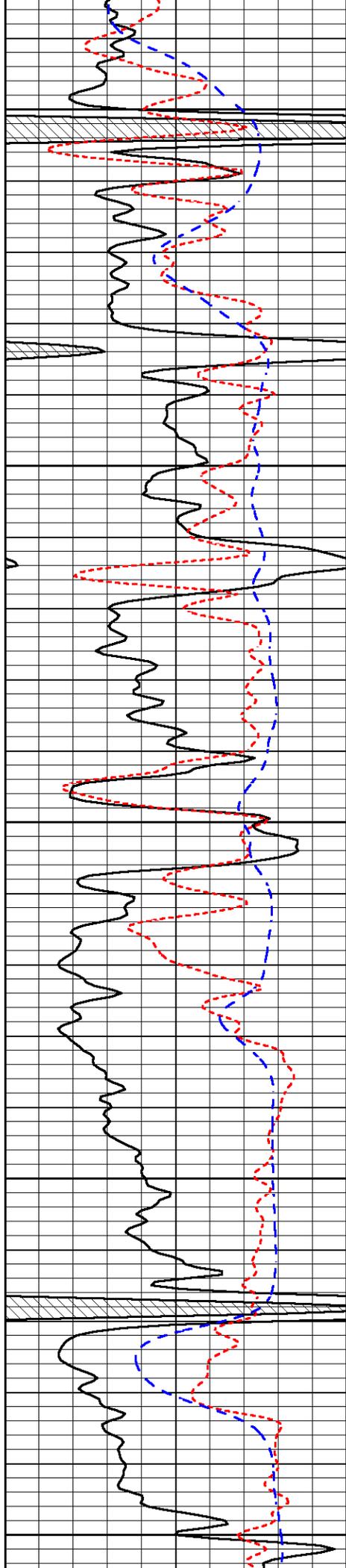


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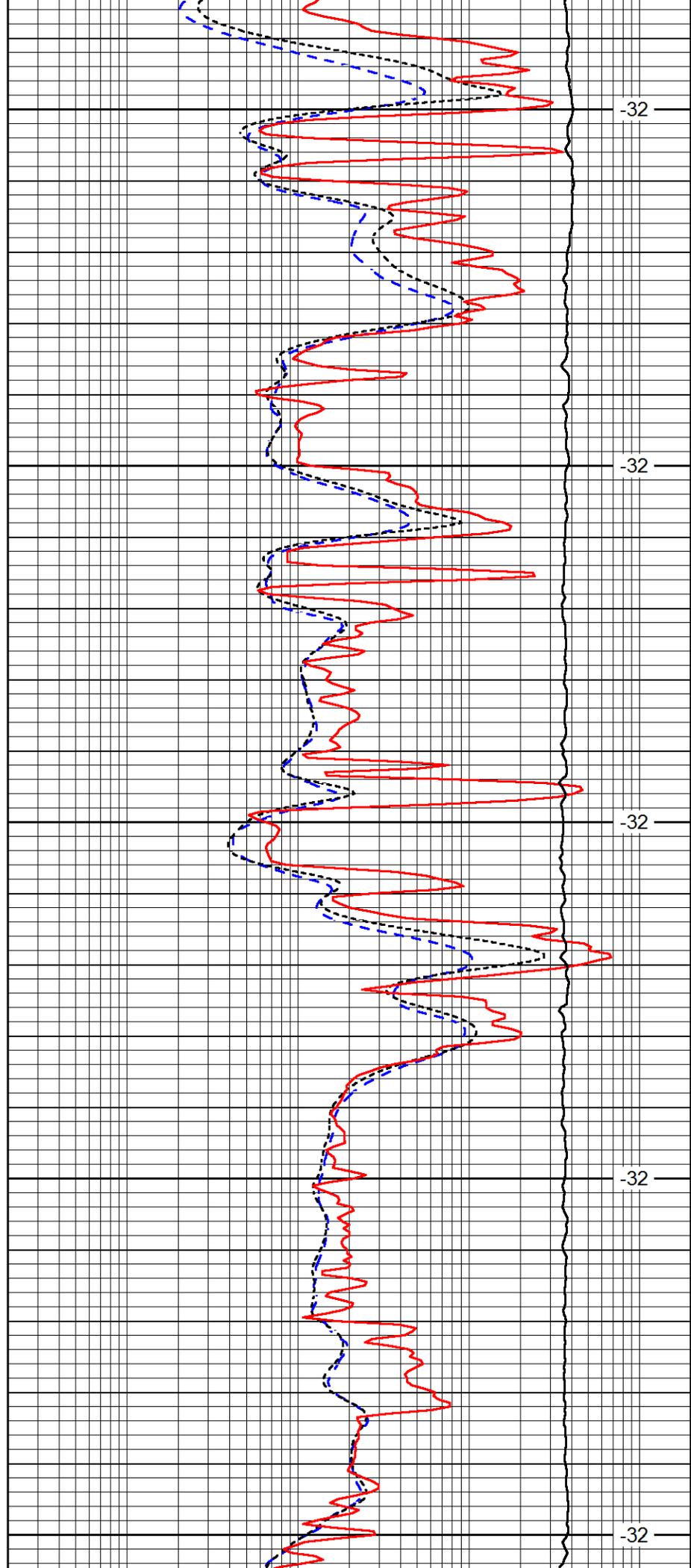
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4300

4350

4400

4450



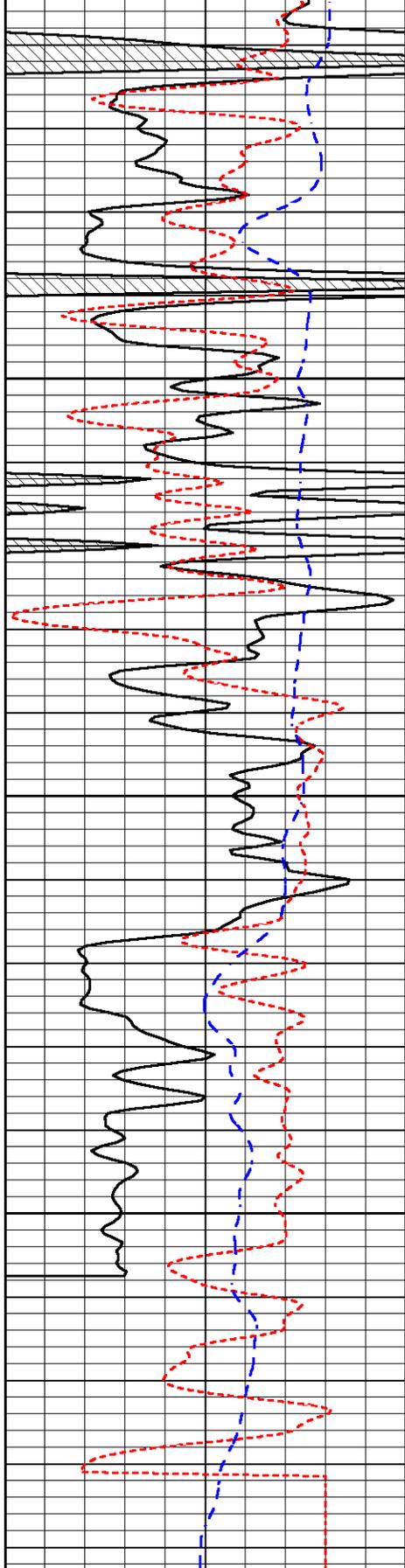
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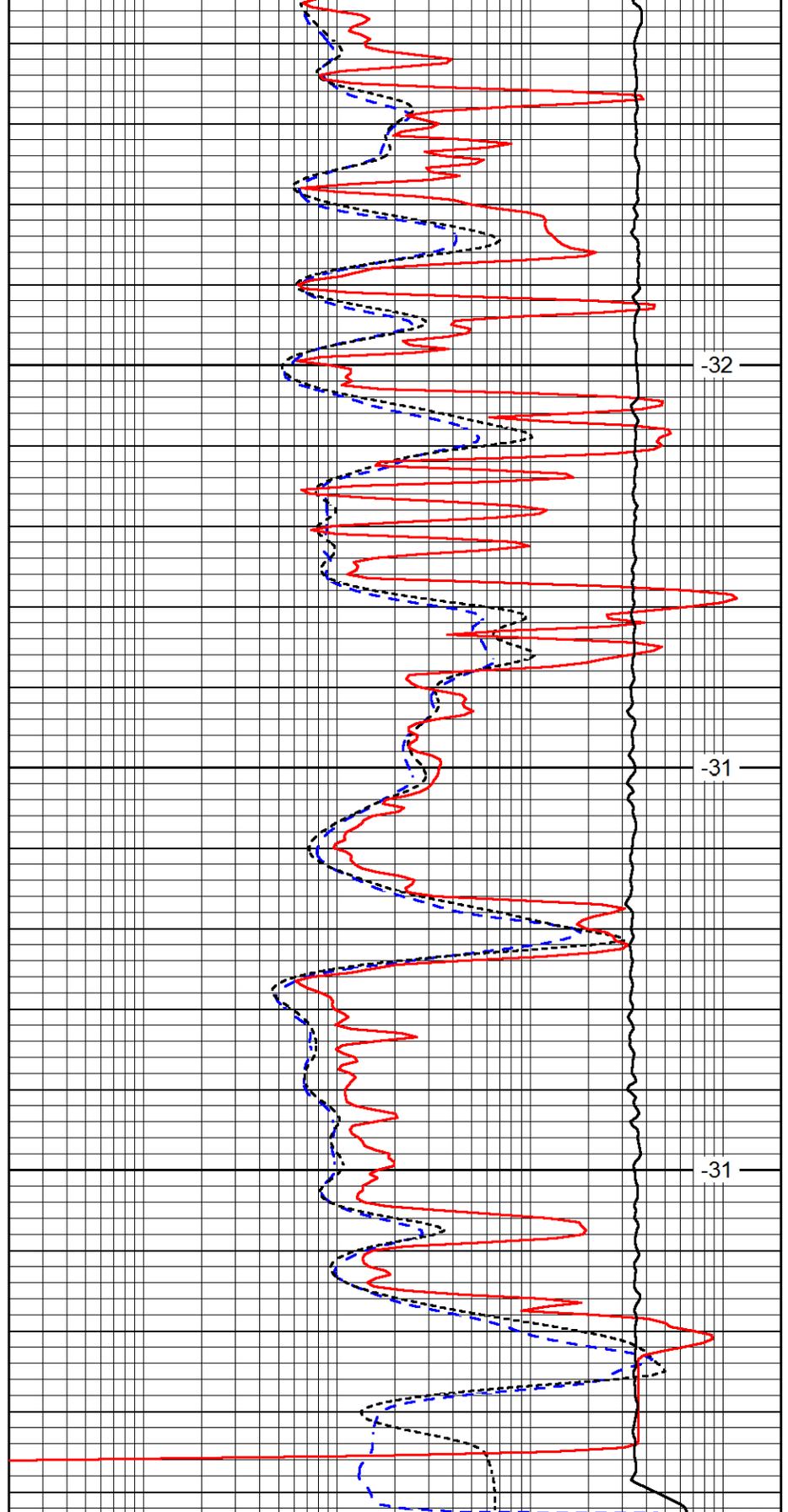


4500

4550

4600

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-32

-31

-31

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(ft/min)