



DUAL INDUCTION LOG

Company **AMERICAN WARRIOR, INC.**
 Well **MELVIN NO. 2-16 UNIT**
 Field **MANTZ SOUTHEAST**
 County **NESS**
 State **KANSAS**

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 Well **MELVIN NO. 2-16 UNIT**
 Field **MANTZ SOUTHEAST**
 County **NESS** State **KANSAS**

Location: **API #: 15-135-25885-00-00**
900' FSL & 2675' FWL;
SEC 16 TWP 18S RGE 21W
 Permanent Datum **GROUND LEVEL Elevation 2167'**
 Log Measured From **KELLY BUSHING**
 Drilling Measured From **KELLY BUSHING**
 Other Services **DUCP**
 Elevation **K.B. 2175'**
D.F. N/A
G.L. 2167'

Date	8/30/15
Run Number	ONE
Depth Driller	4265'
Depth Logger	4261'
Bottom Logged Interval	4260'
Top Log Interval	200'
Casing Driller	8.625" @ 220'
Casing Logger	219'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	3,400
Density / Viscosity	9.4 50
pH / Fluid Loss	11.5 8.8
Source of Sample	Flowline
Rm @ Meas. Temp	.60 @ 81
Rmt @ Meas. Temp	.45 @ 81
Rmc @ Meas. Temp	.81 @ 81
Source of Rmf / Rmc	Charts
Rm @ BHT	.41 @ 119
Operating Rig Time	2 HOURS
Max Rec. Temp. F	119
Equipment Number	91
Location	Hays
Recorded By	J. HENRICKSON
Witnessed By	JASON ALM

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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.

BAZINE KANSAS
2 EAST, 2 NORTH, 1/2 EAST. 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

Your Pioneer Energy Services Crew	This Log Record Was Witnessed By
Engineer: J. HENRICKSON	Primary Witness: JASON ALM
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

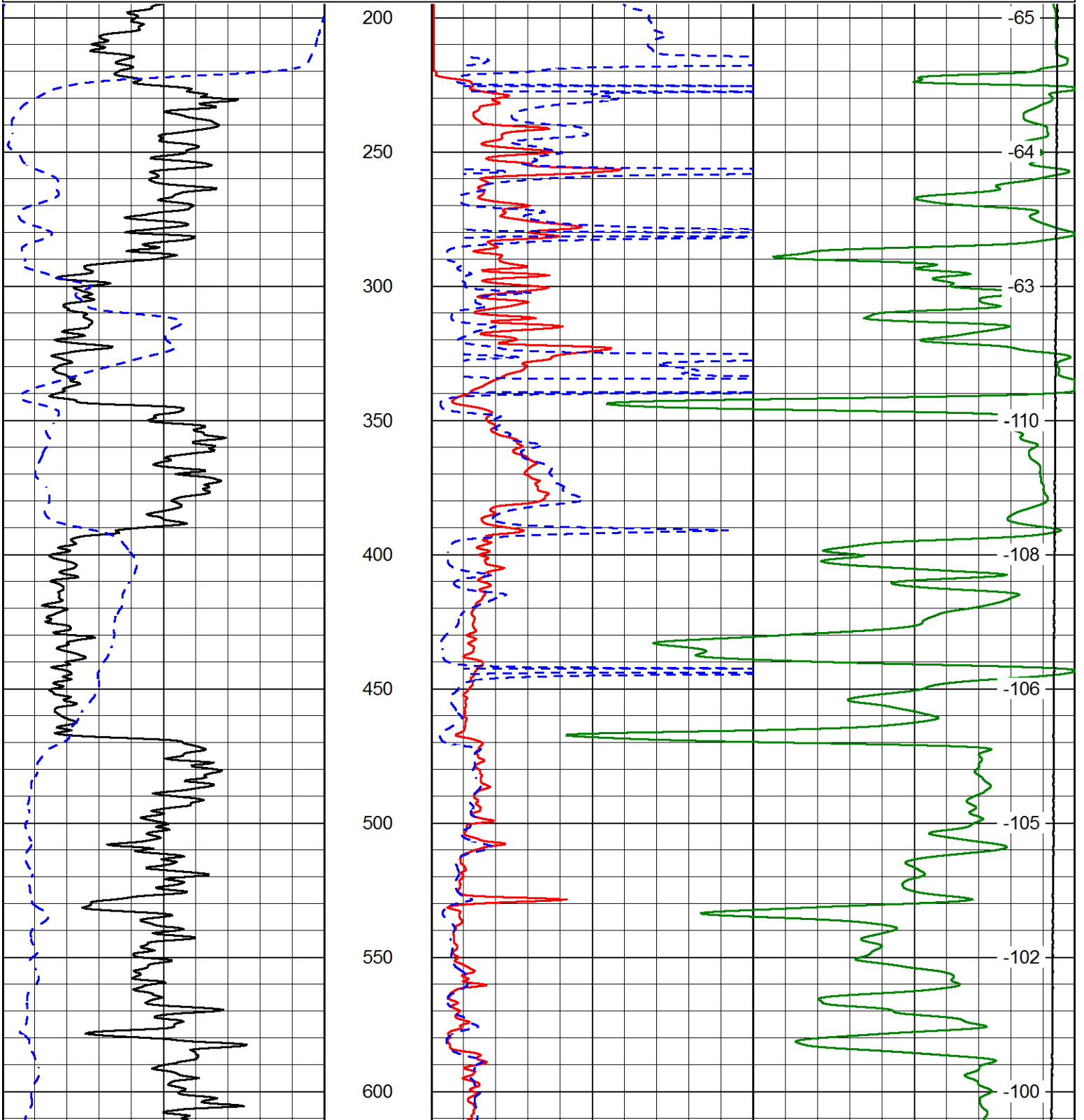
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 Dataset Pathname DIL/awstk
 Presentation Format dil2in
 Dataset Creation Sun Aug 30 19:29:46 2015
 Charted by Depth in Feet scaled 1:600

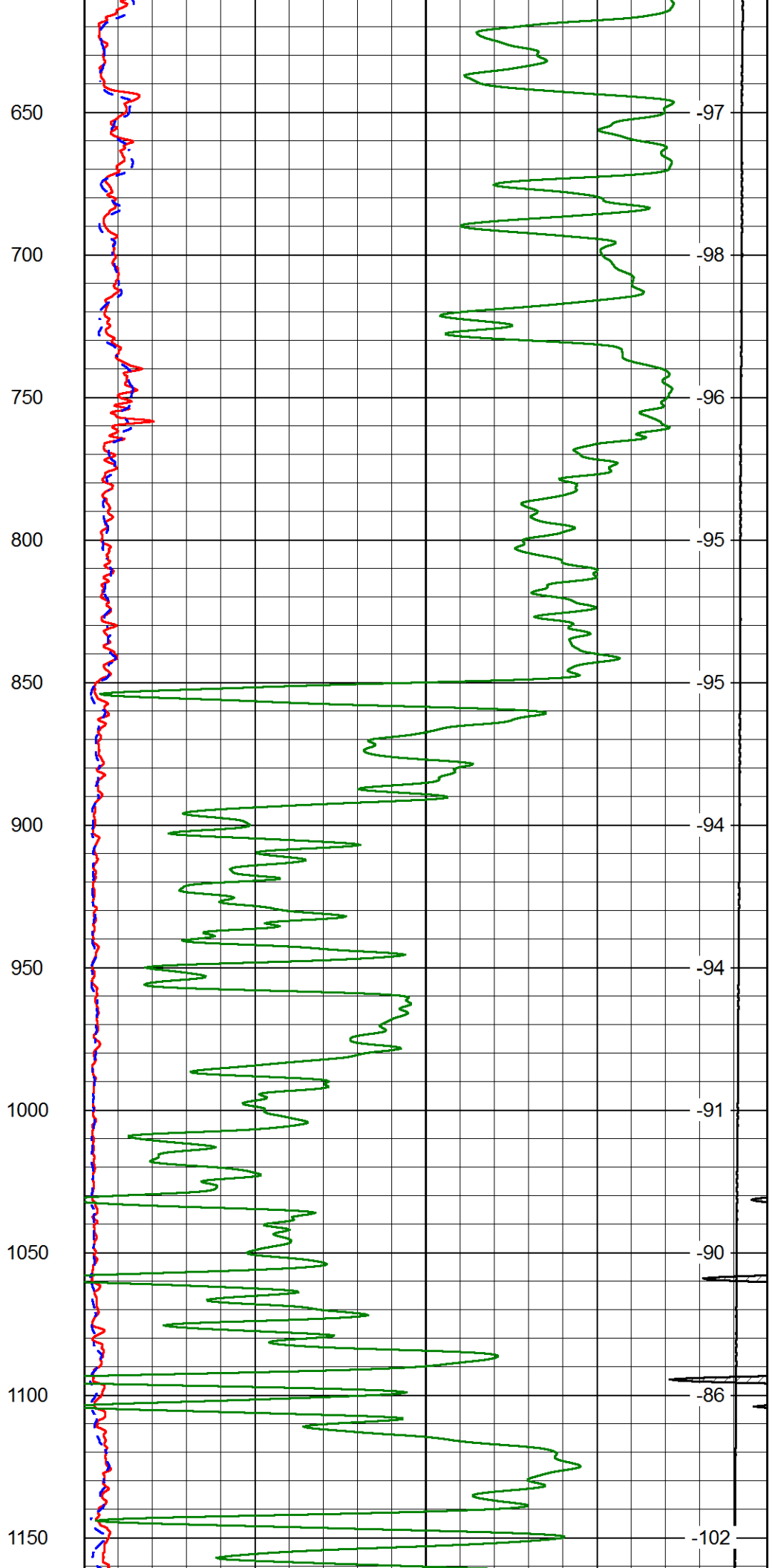
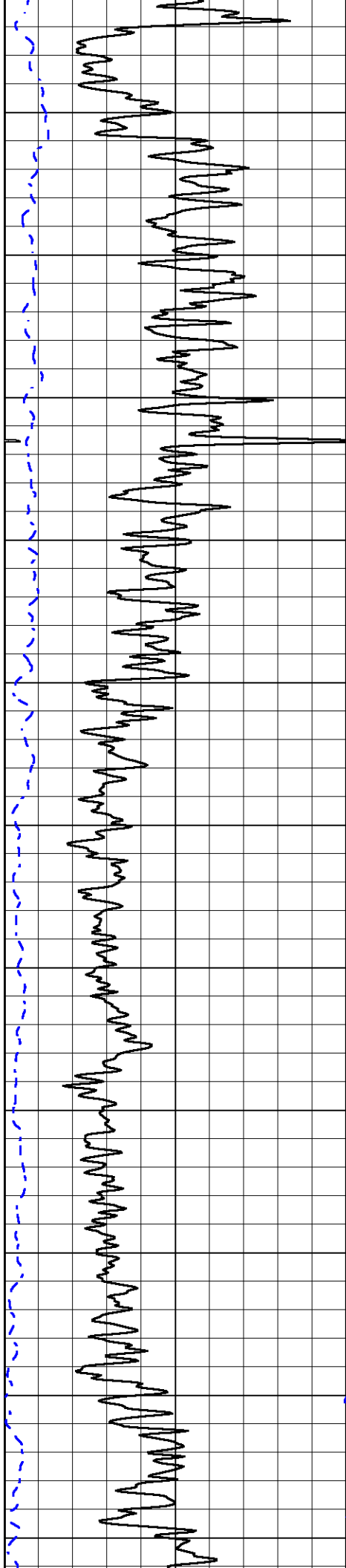
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 -200 SP (mV) 0

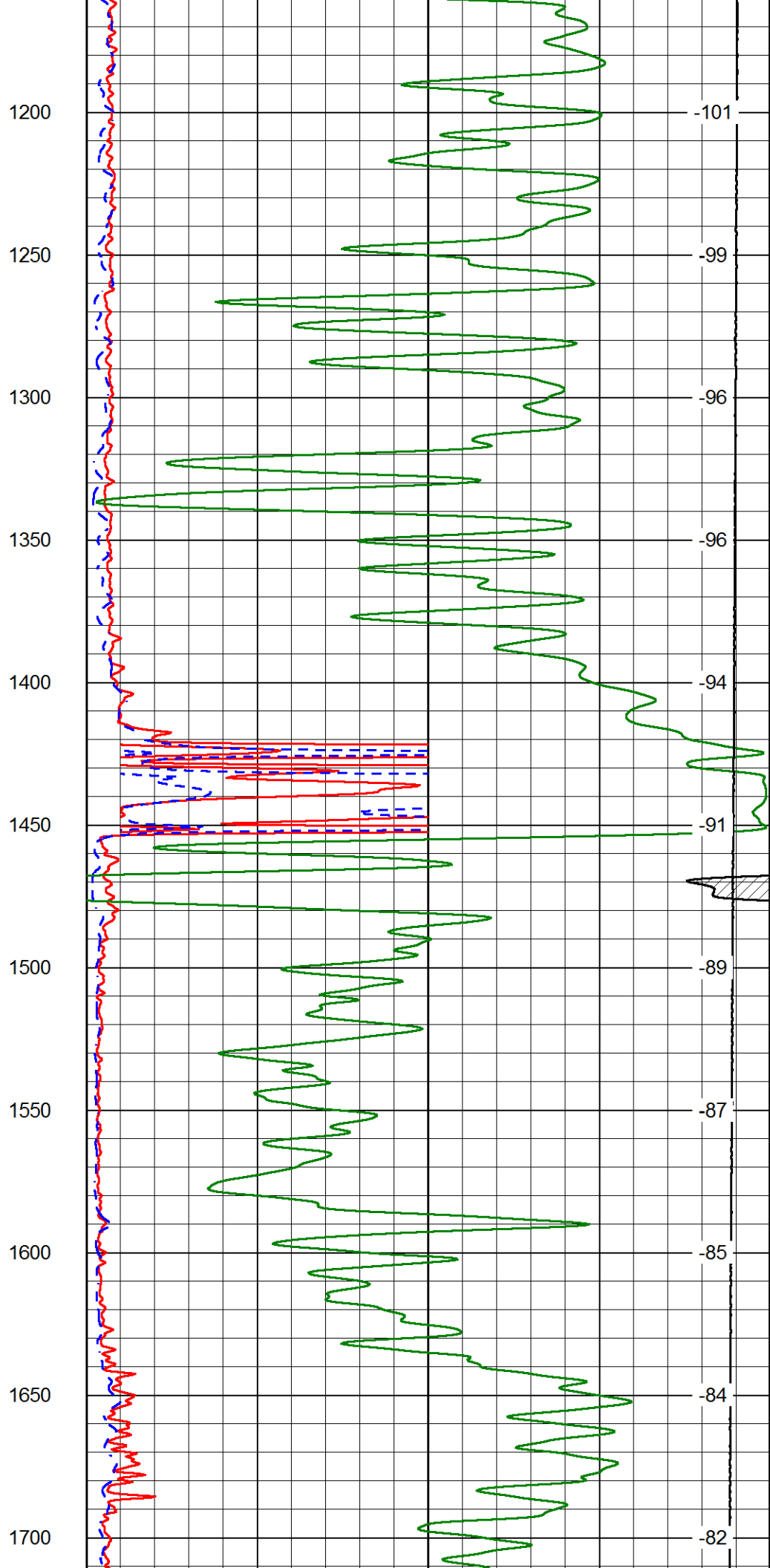
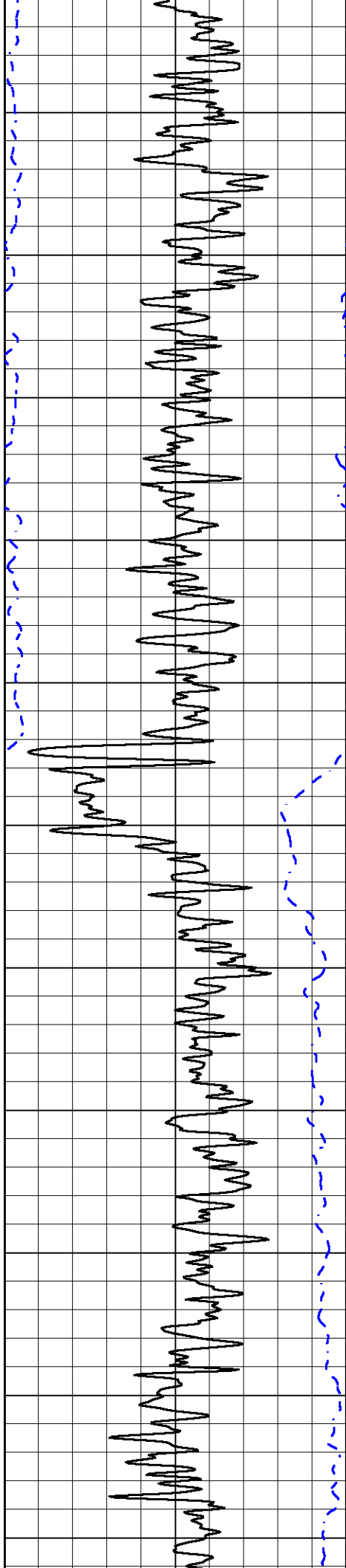
1000 Conductivity 0
 15000 Line Tension (lb) 0

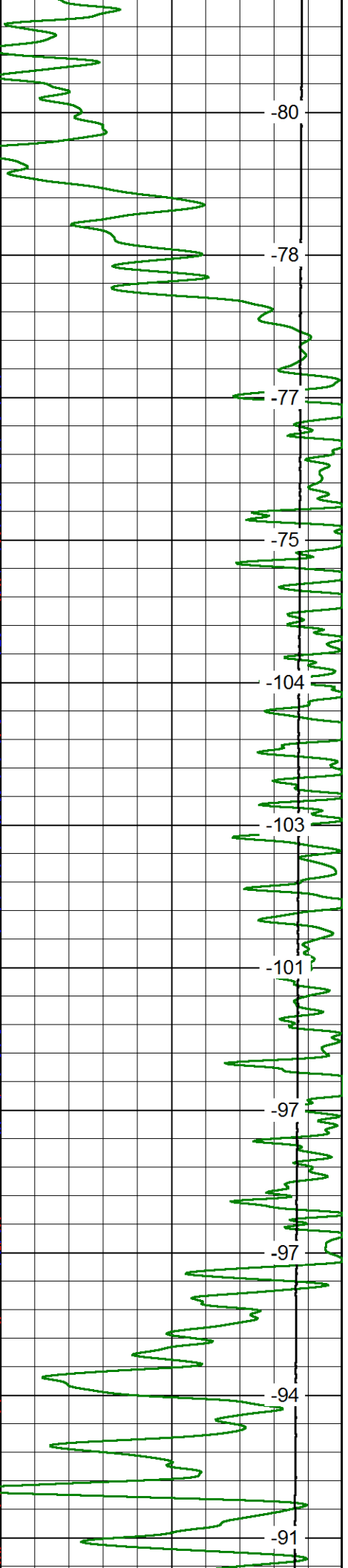
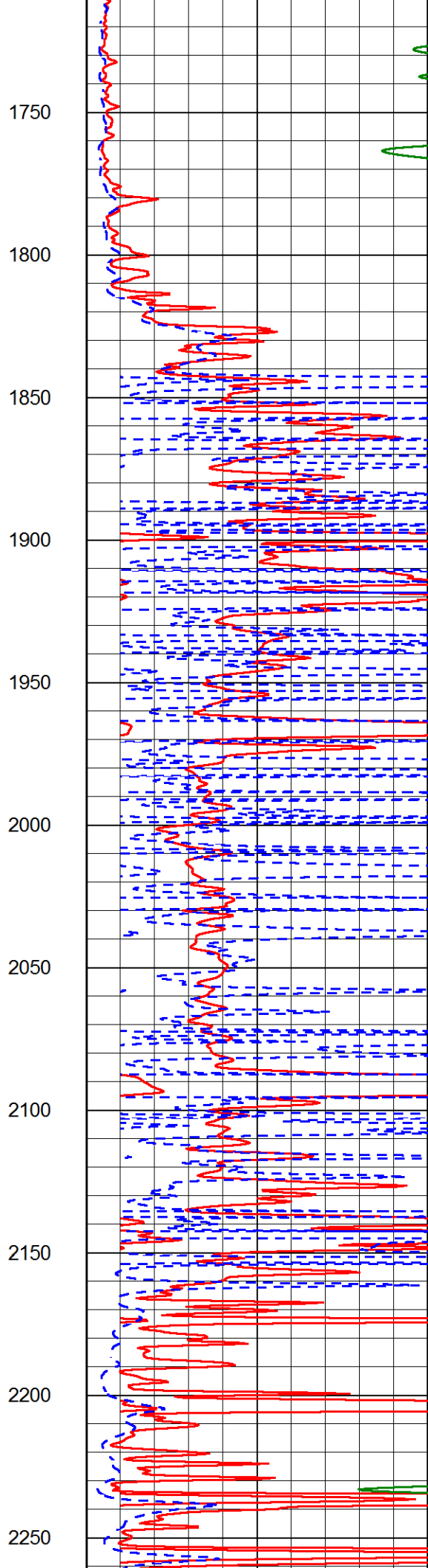
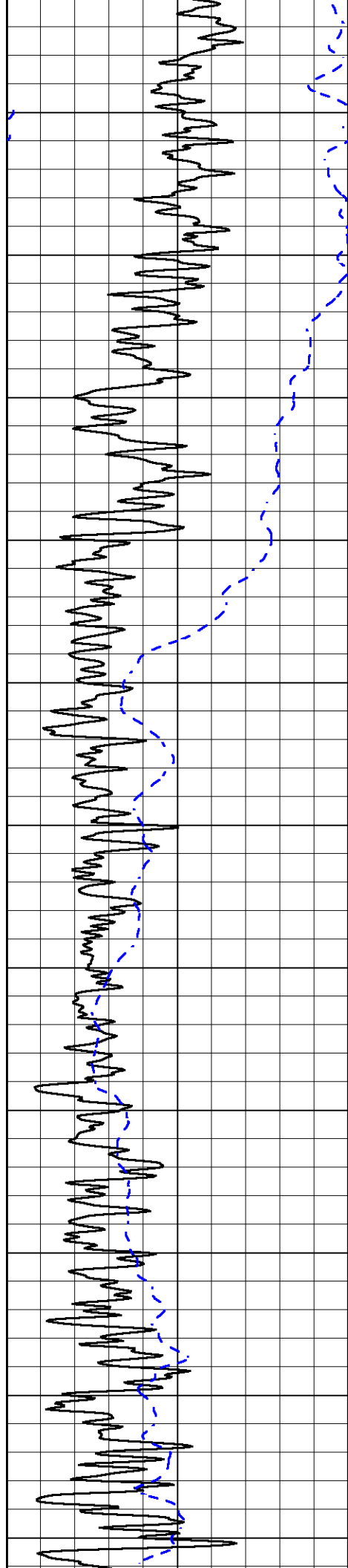
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 0 Deep Resistivity (Ohm-m) 50
 Shallow Resistivity
 50 (Ohm-m) 500
 50 Deep Resistivity (Ohm-m) 500

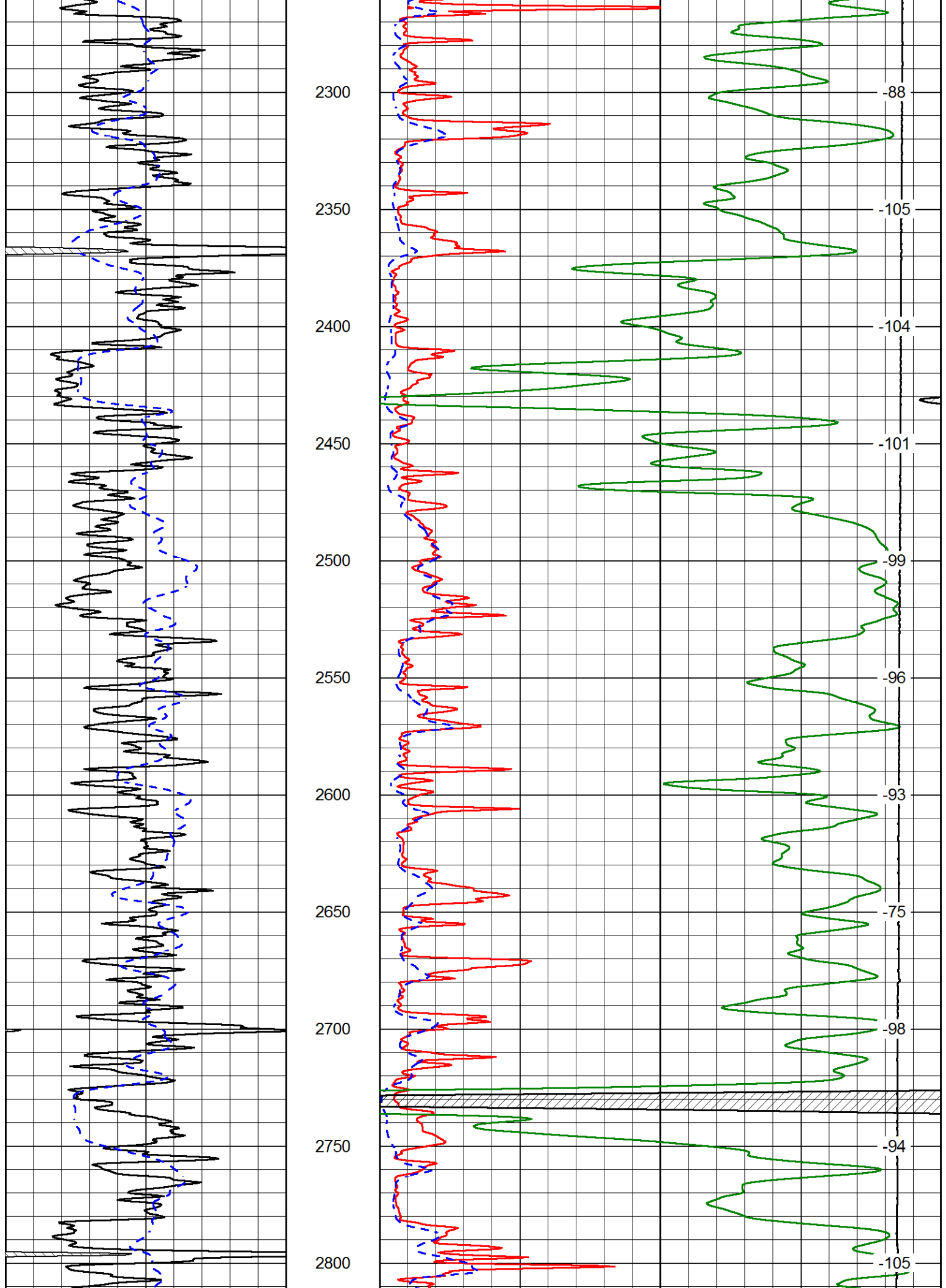
LSPD
 (ft/min)

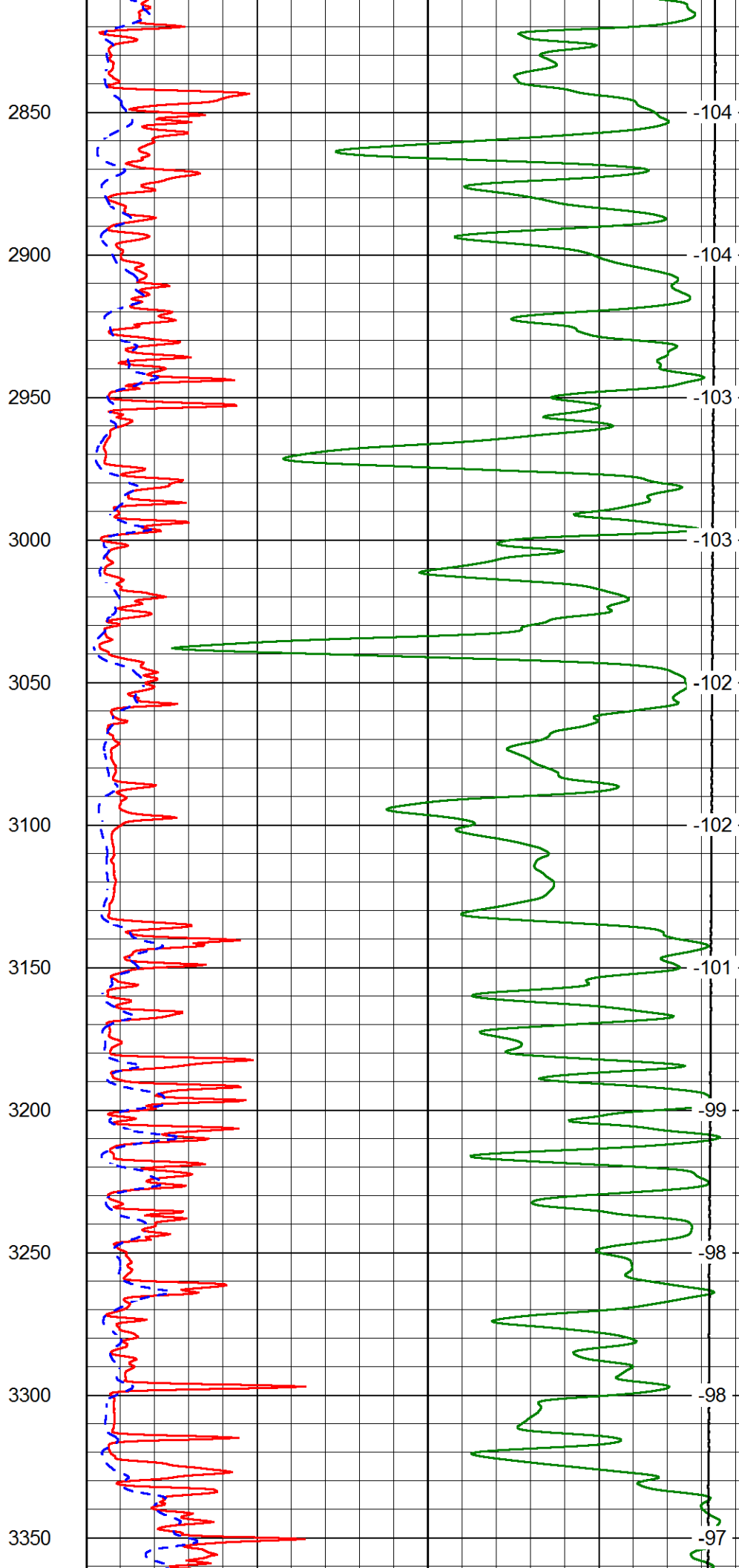
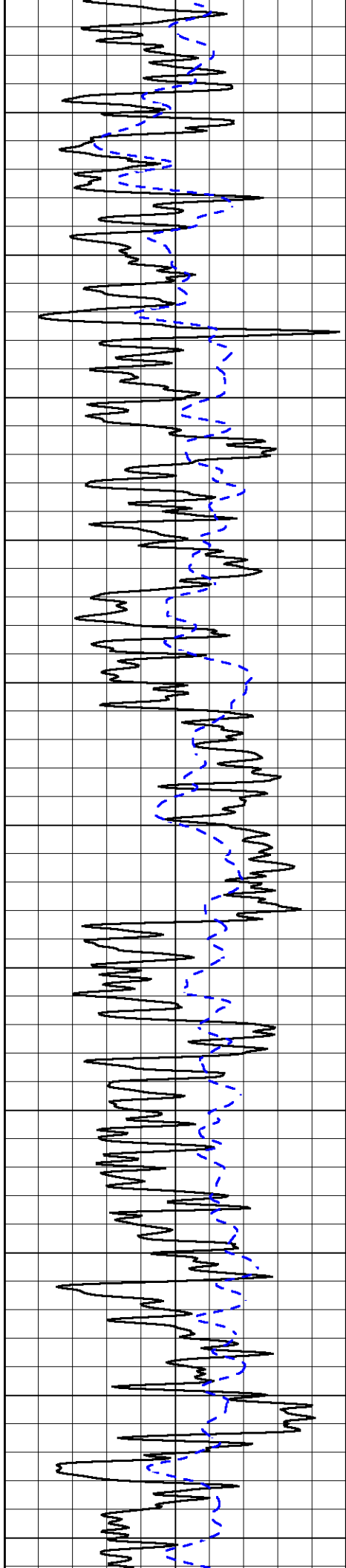


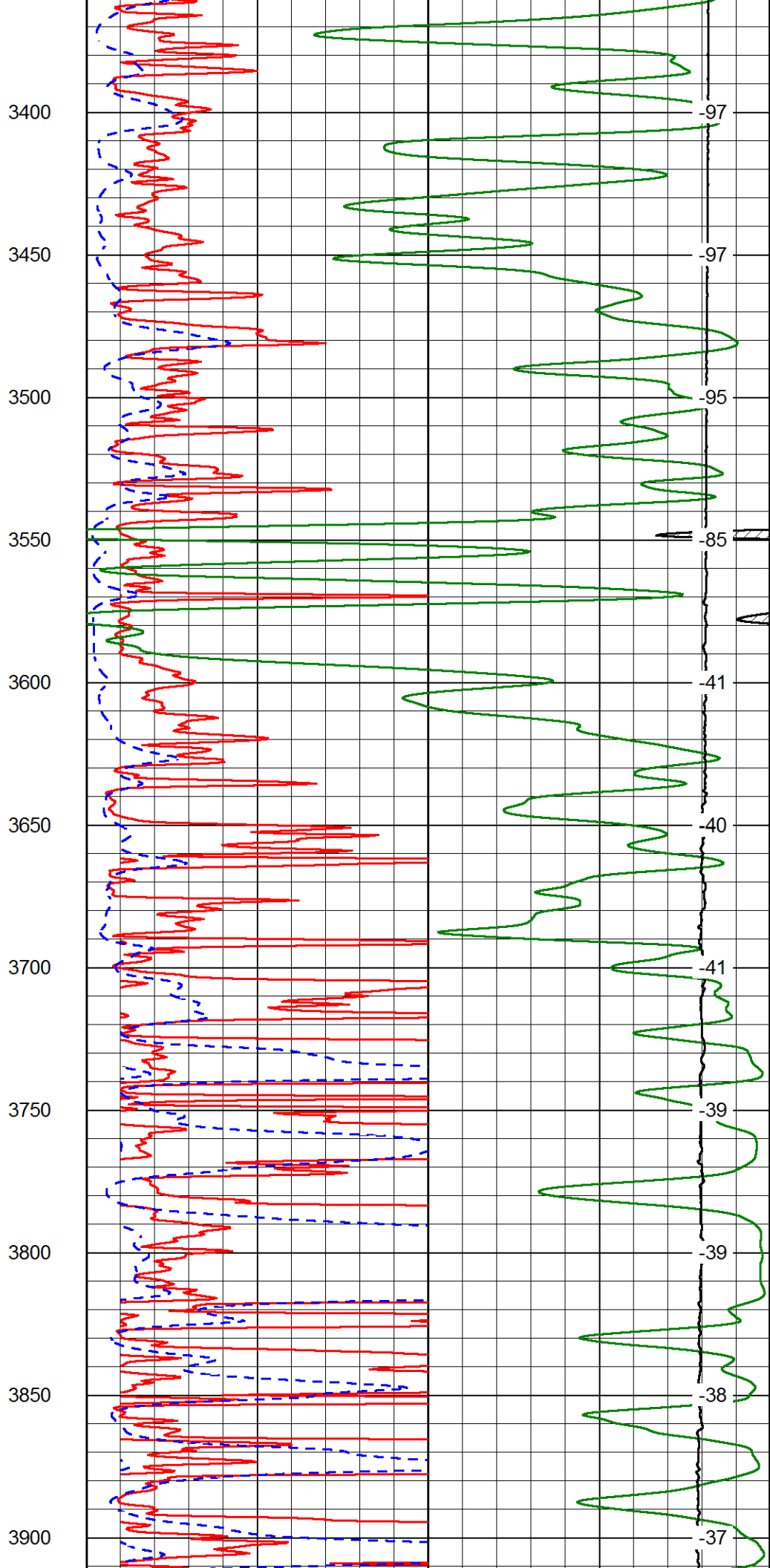
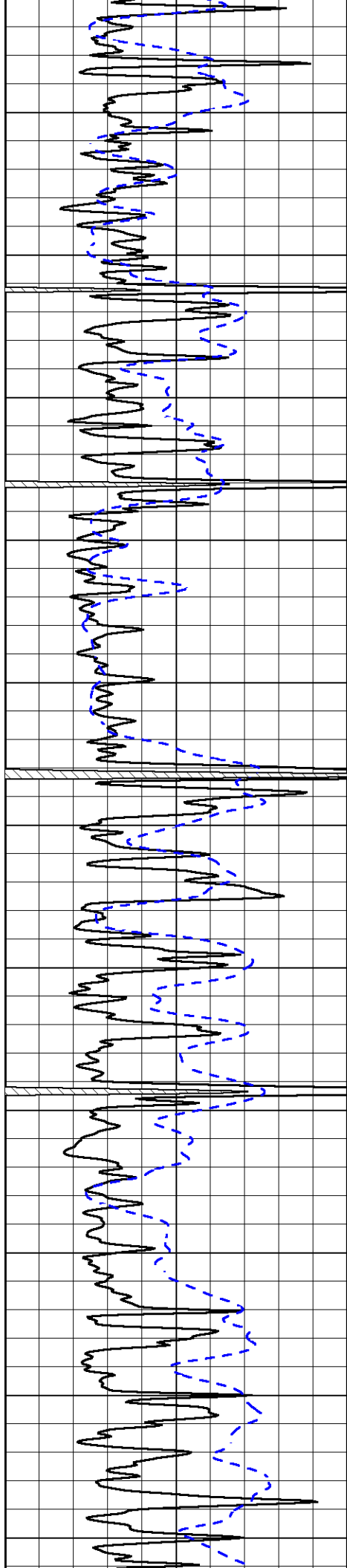


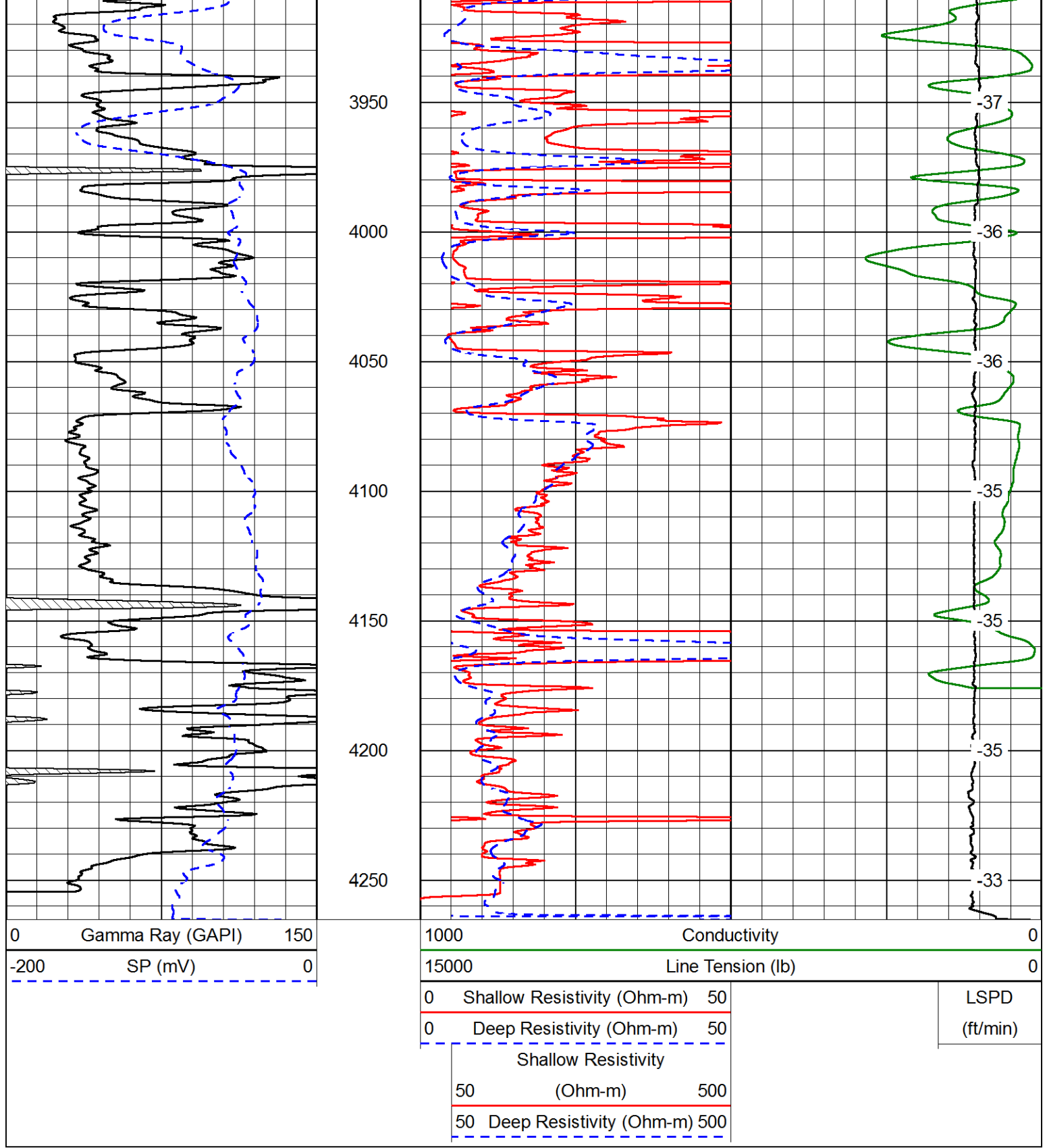




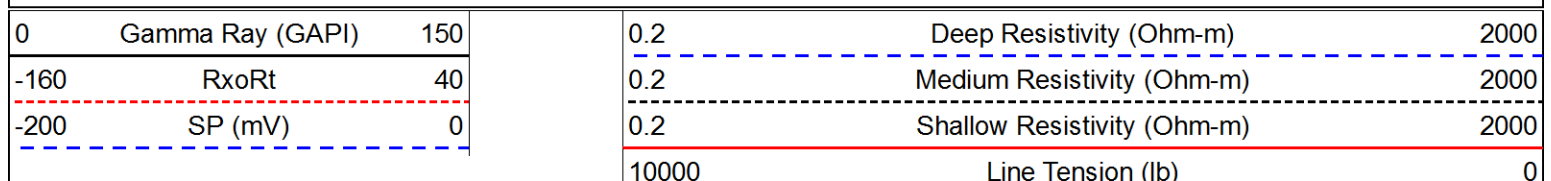




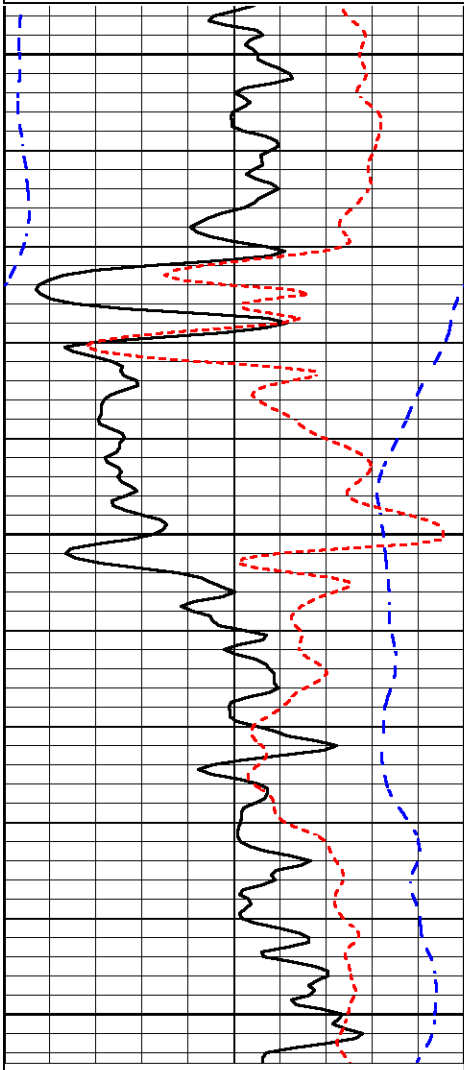




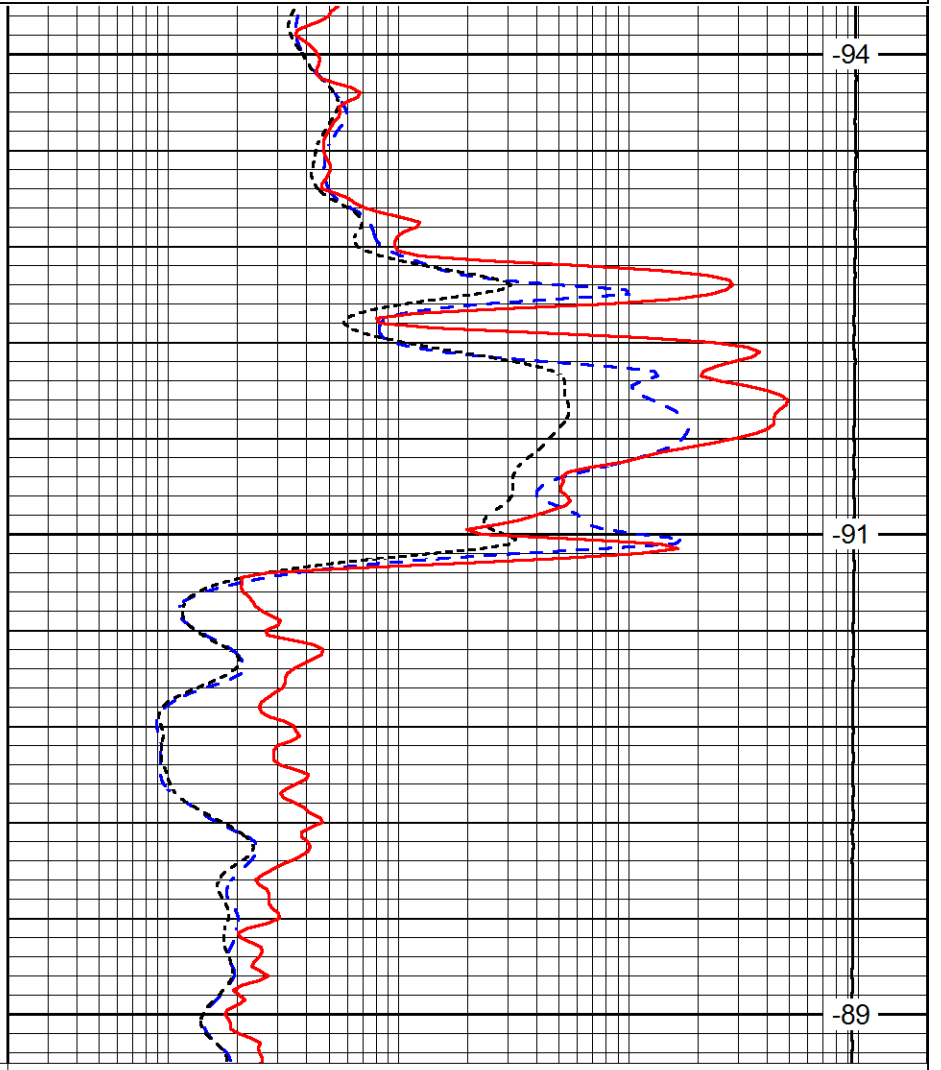
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LSPD
(ft/min)



1400
1450
1500



-94
-91
-89

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

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)

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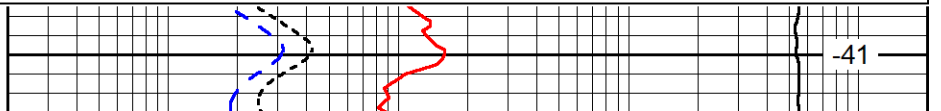
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-160	RxoRt	40
-200	SP (mV)	0

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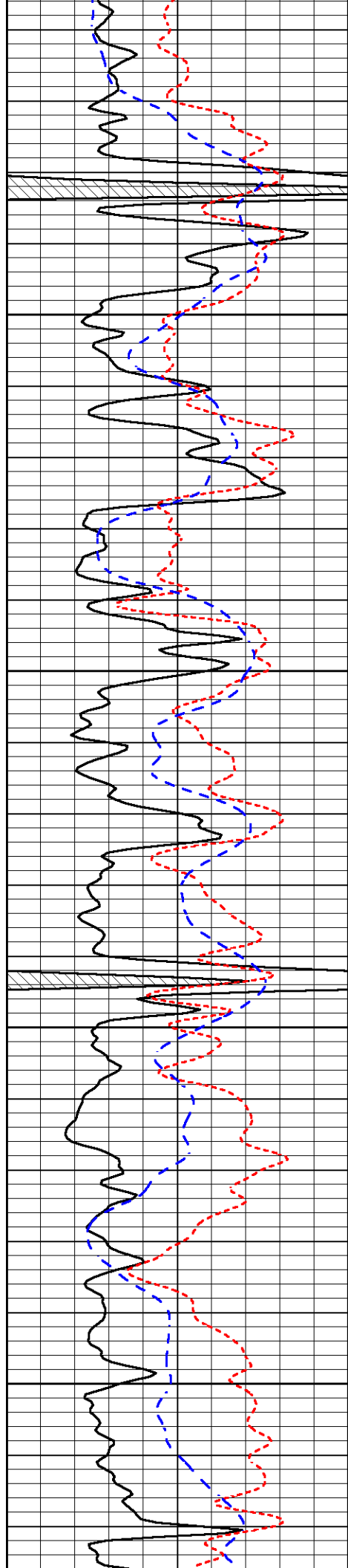
LSPD
(ft/min)



3600



-41

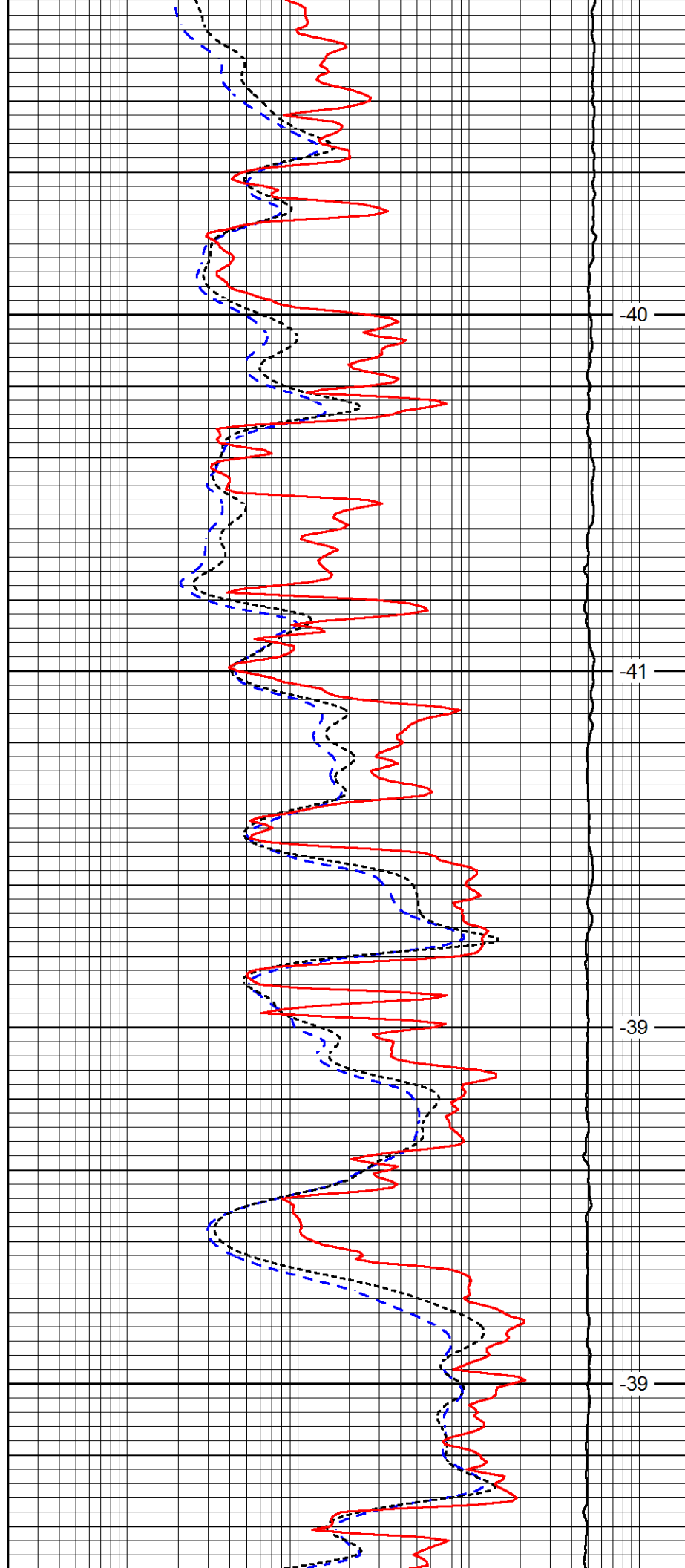


3650

3700

3750

3800

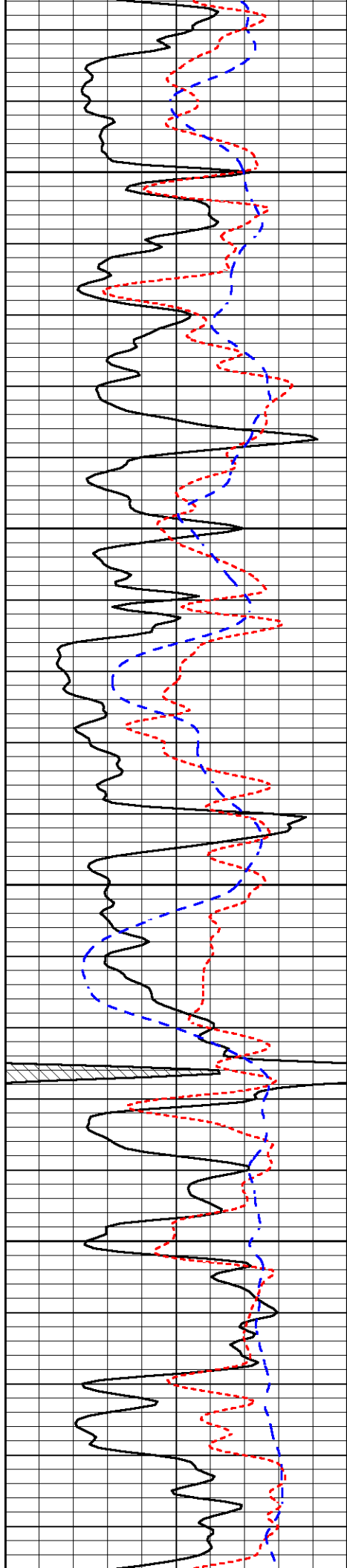


-40

-41

-39

-39

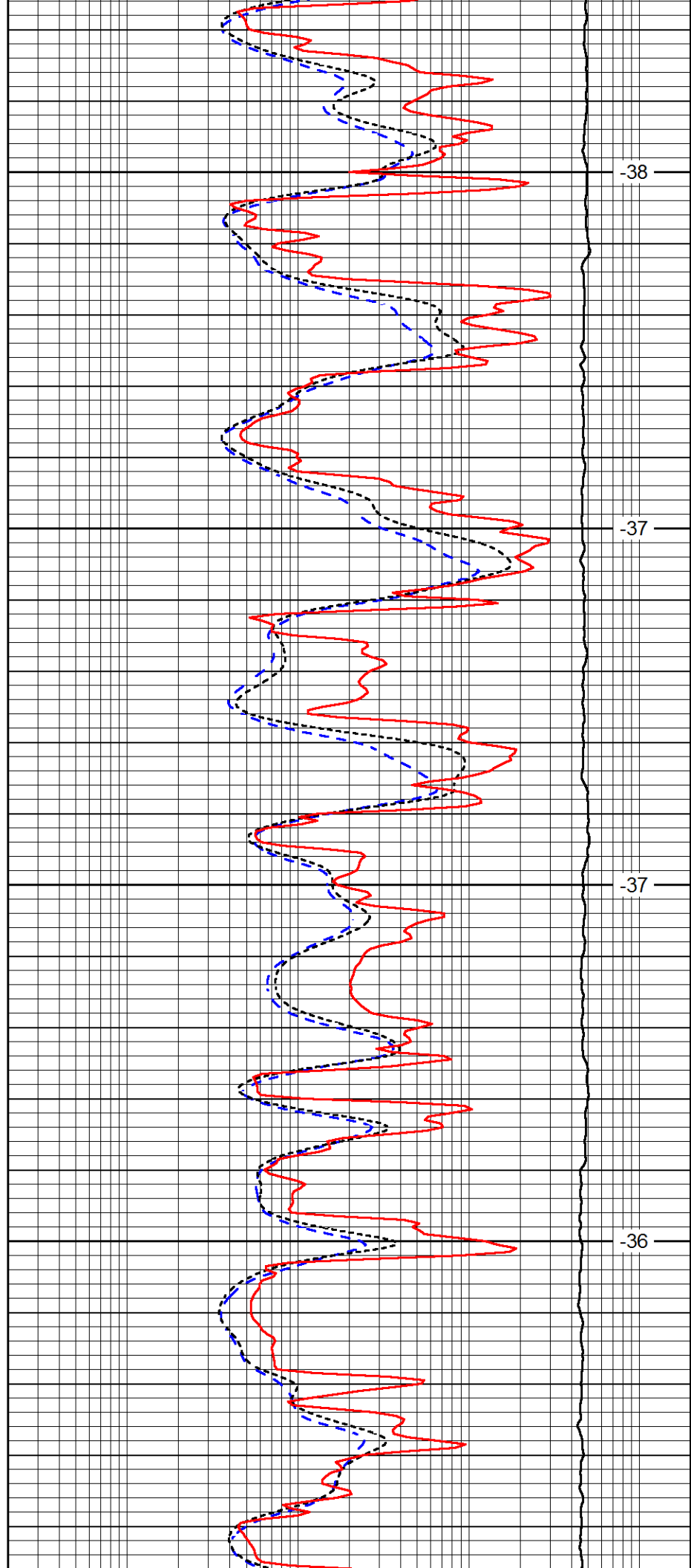


3850

3900

3950

4000

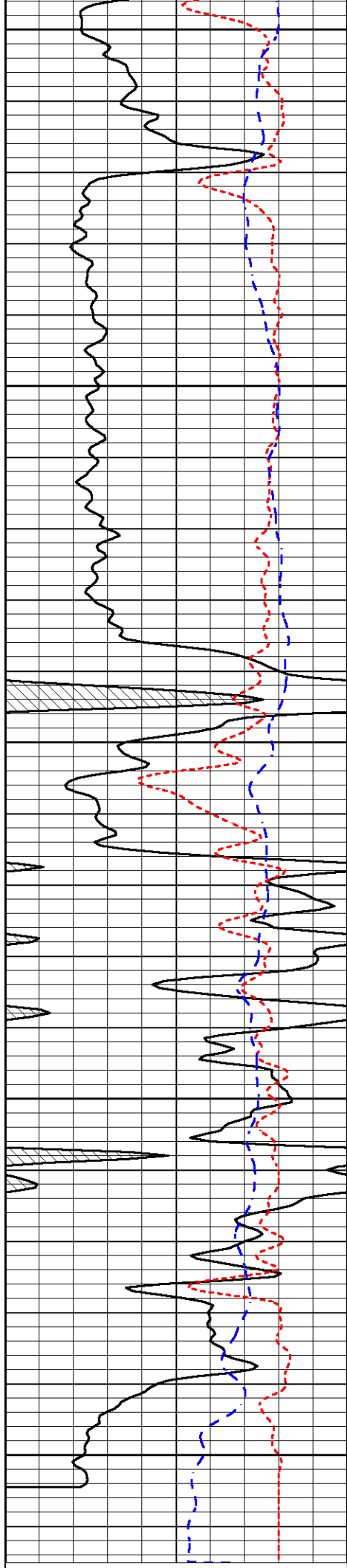


-38

-37

-37

-36



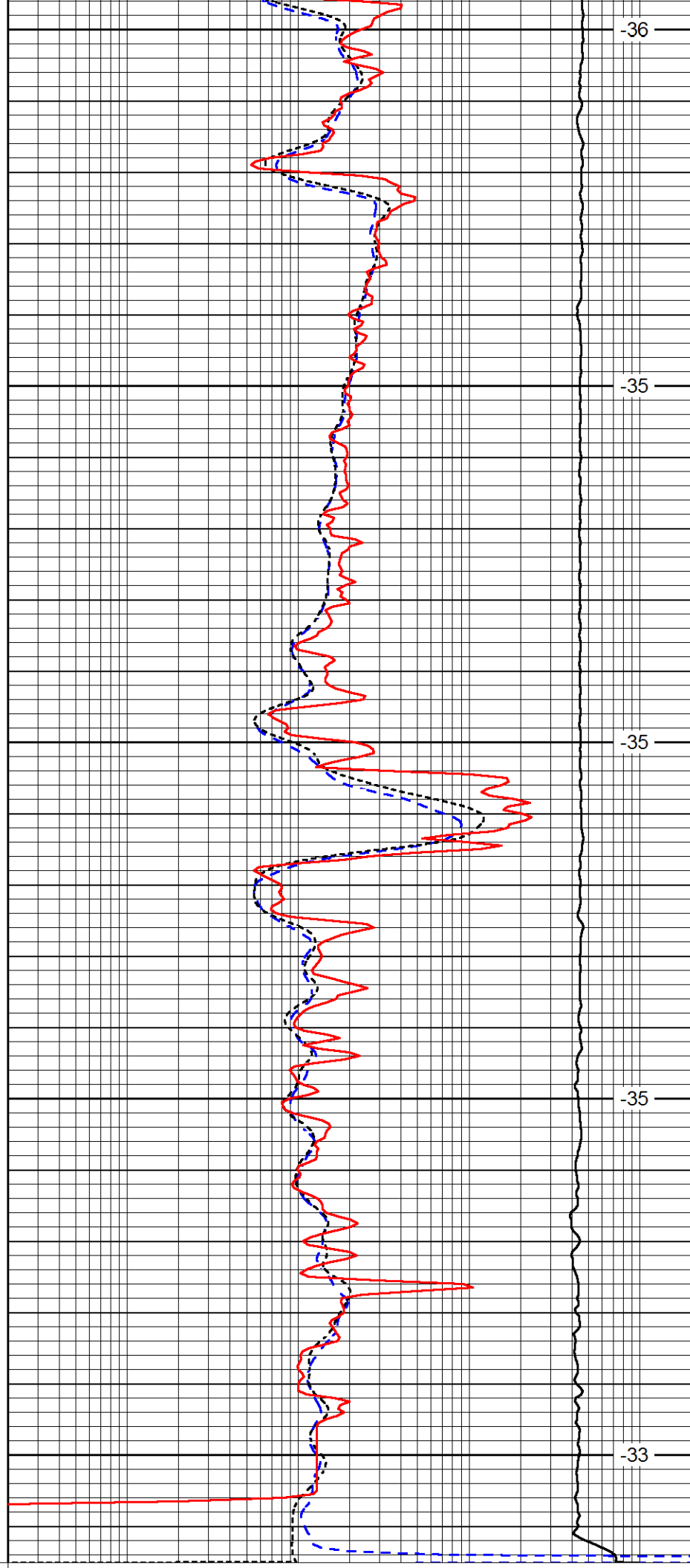
4050

4100

4150

4200

4250



-36

-35

-35

-35

-33

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-160	RxoRt	40
-200	SP (mV)	0

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LSPD
(ft/min)