



Dual Induction Log

Pioneer Energy Services

API No.

15-009-25863-00-00

Company K&N Petroleum, Inc.

Well Betty Mae #1

Field Klepper

County Barton State

Kansas

Location 943' FSL & 1875' FEL

Sec: 3 Twp: 19 S Rge: 11 W

Other Services
CNL/CDL
MEL/BHCS

Permanent Datum Ground Level Elevation 1780

Log Measured From Kelly Bushing 7 Ft. Above Perm. Datum

Drilling Measured From Kelly Bushing Elevation
K.B. 1787
D.F. 1787
G.L. 1780

Date 08-17-2013

Run Number One

Depth Driller 3460

Depth Logger 3460

Bottom Logged Interval 3459

Top Log Interval 350

Casing Driller 8.625 @ 390

Casing Logger 386

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 7000

Density / Viscosity 9.3 52

pH / Fluid Loss 9.5 8.8

Source of Sample Flowline

Rm @ Meas. Temp 0.65 @ 75

Rmf @ Meas. Temp 0.48 @ 75

Rmc @ Meas. Temp 0.87 @ 75

Source of Rmf / Rmc Charts

Rm @ BHT 0.43 @ 113

Operating Rig Time 4 Hours

Max Rec. Temp. F 113

Equipment Number 91

Location Hays

Recorded By Y. Ruiz

Witnessed By Wyatt Urban

<<< Fold Here >>>

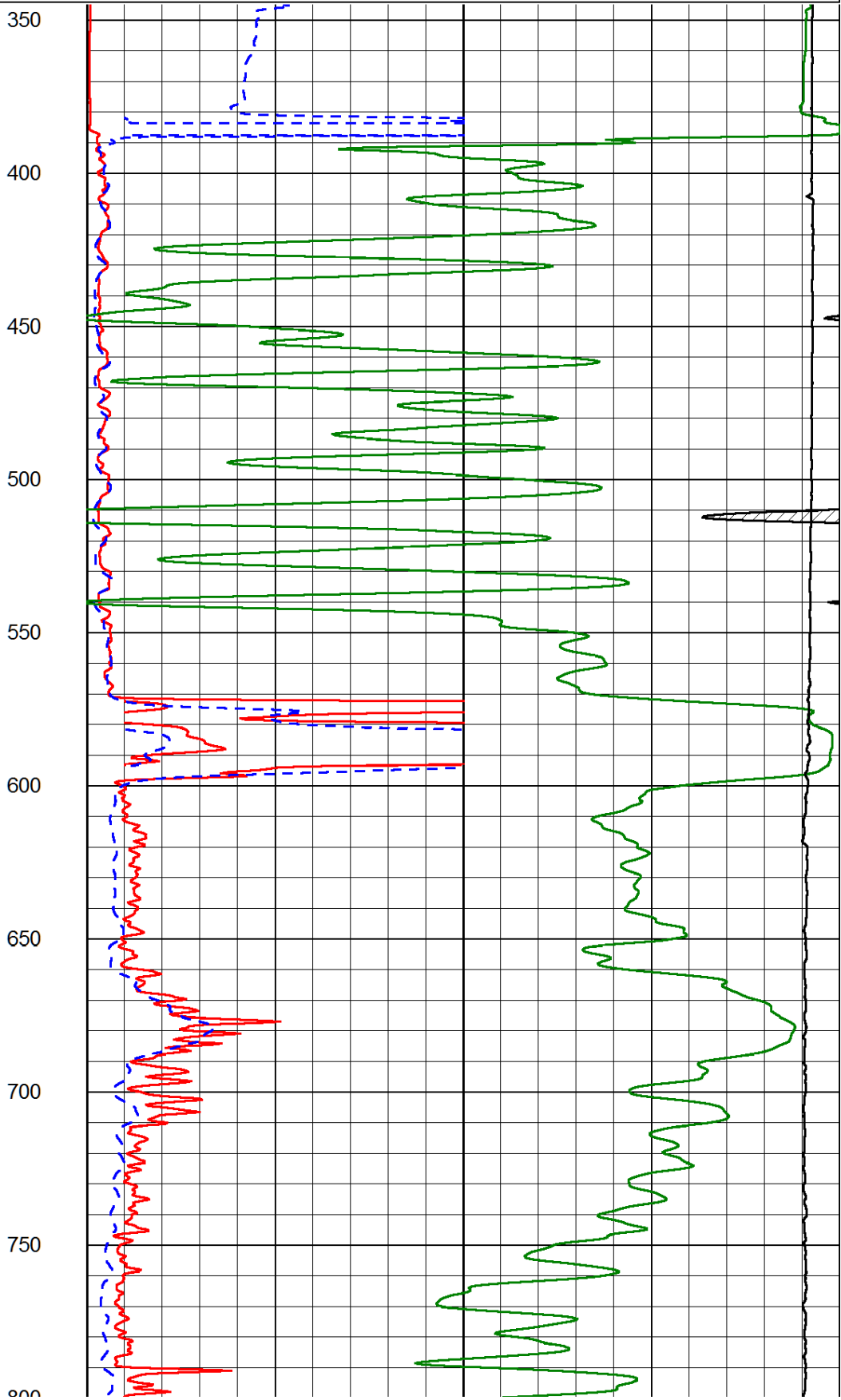
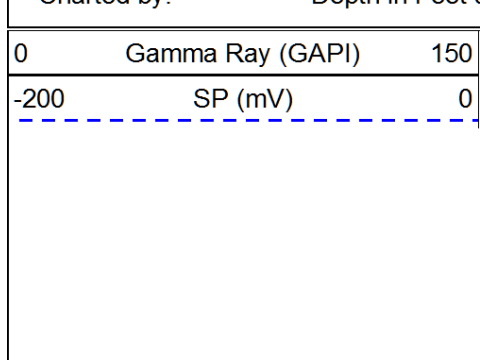
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

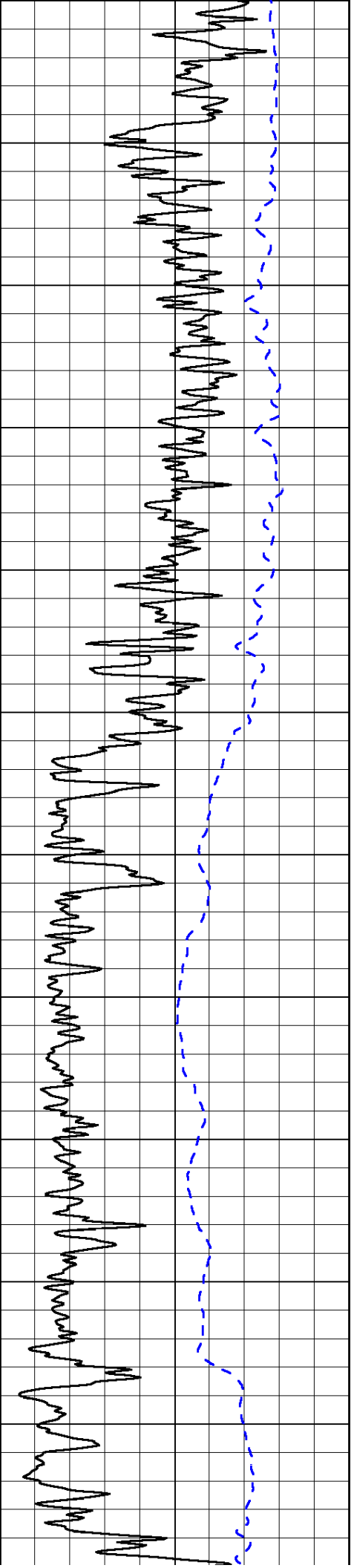
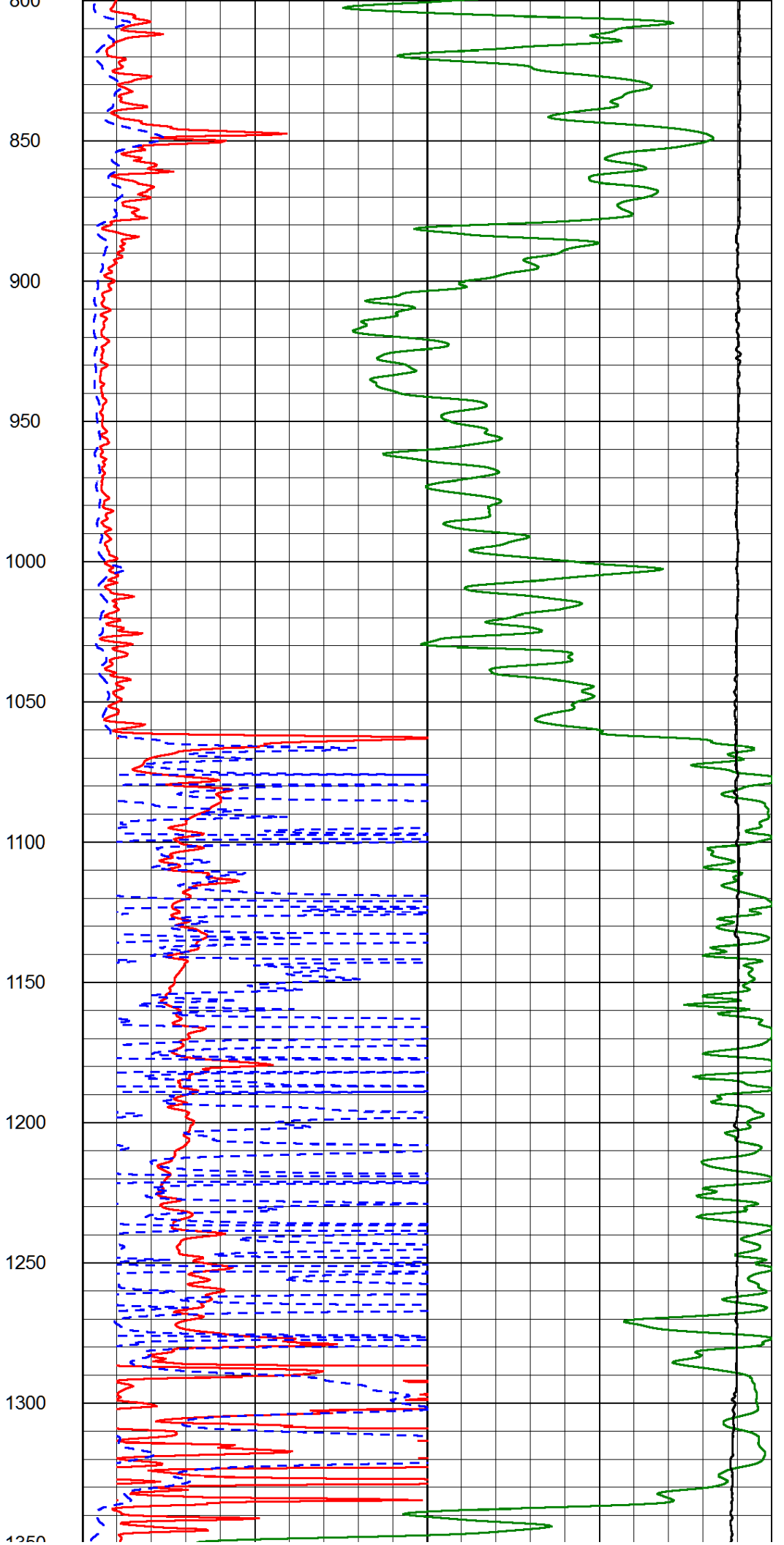
Comments

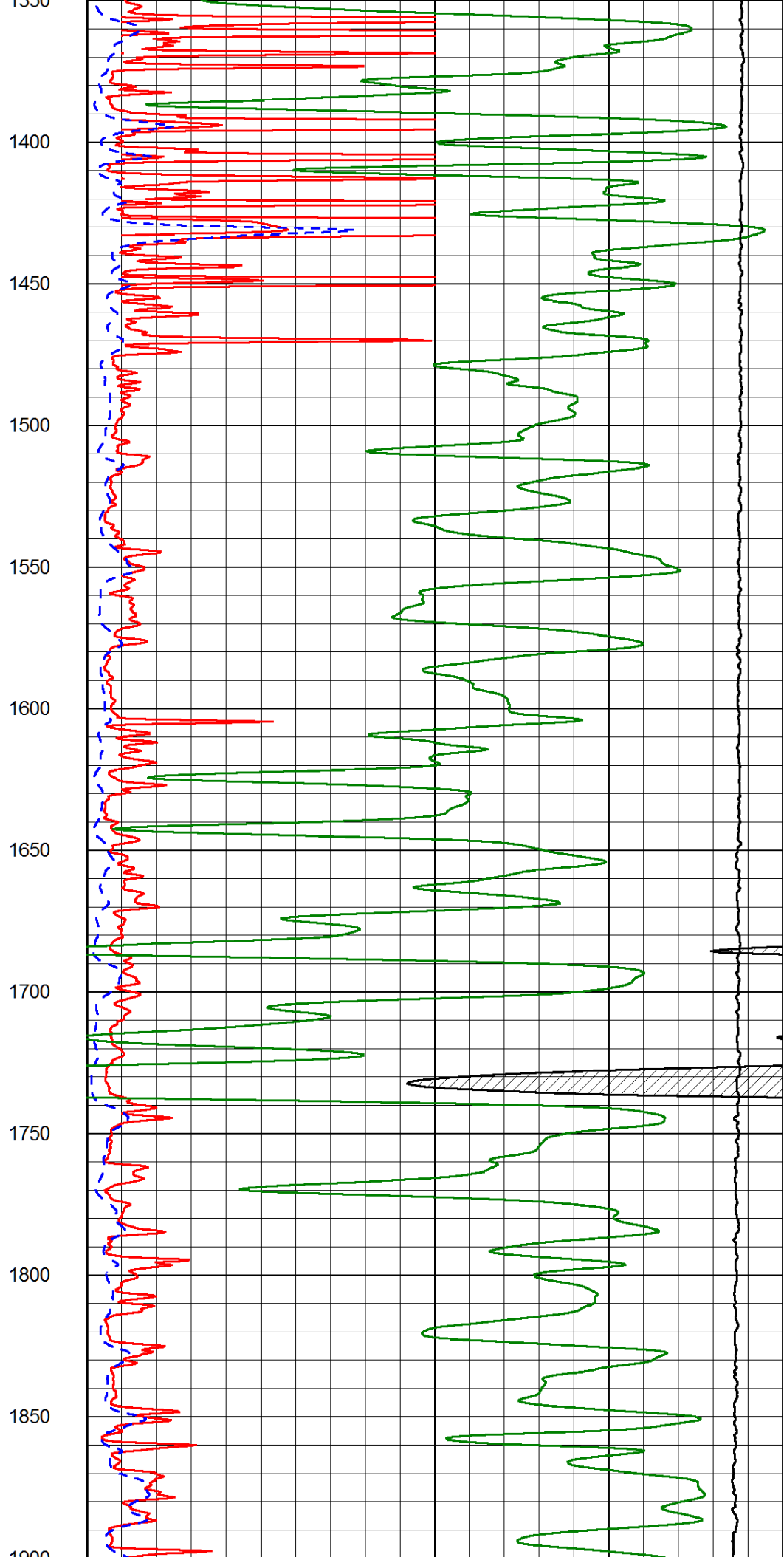
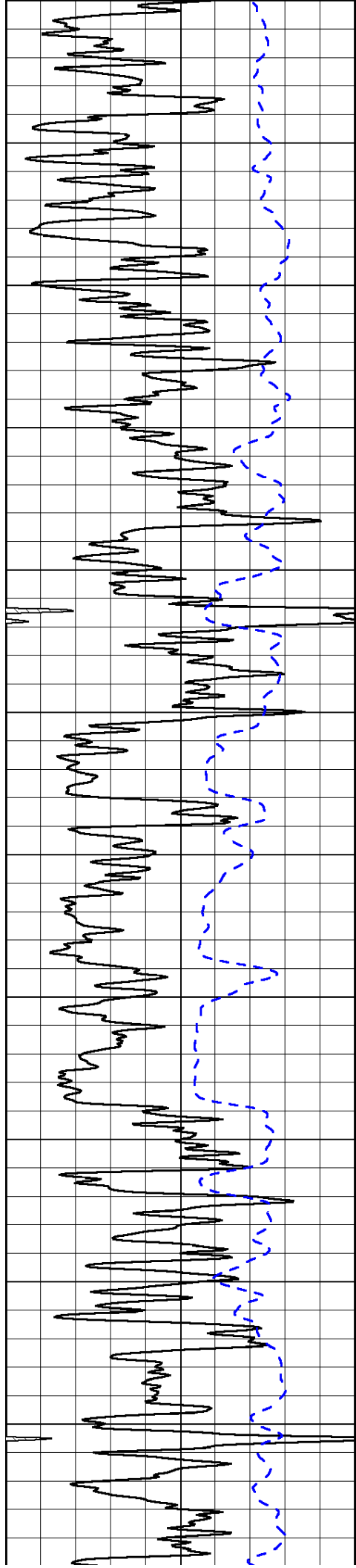
Thank you for using Log-Tech, Inc.
(785) 625-3858

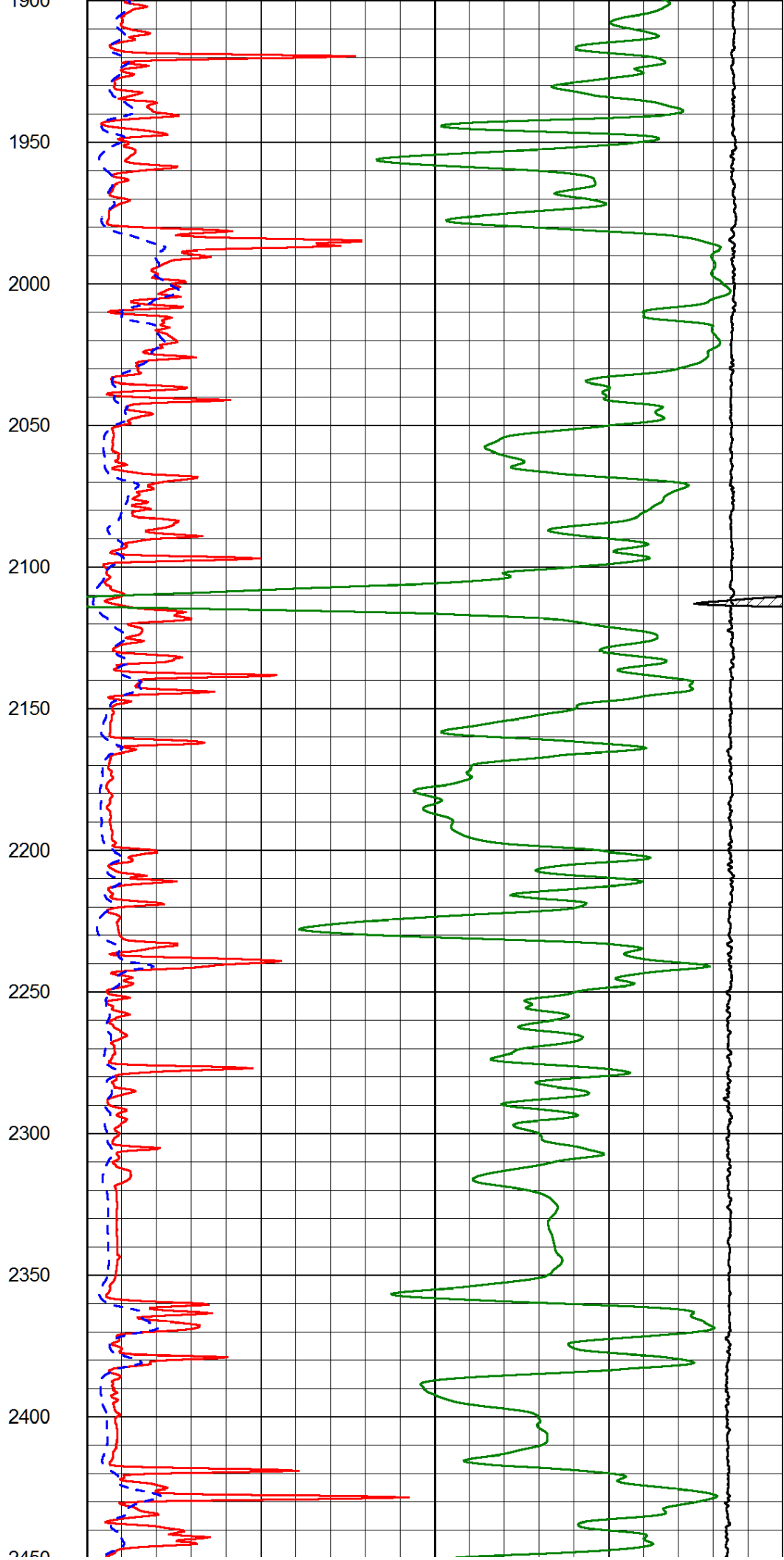
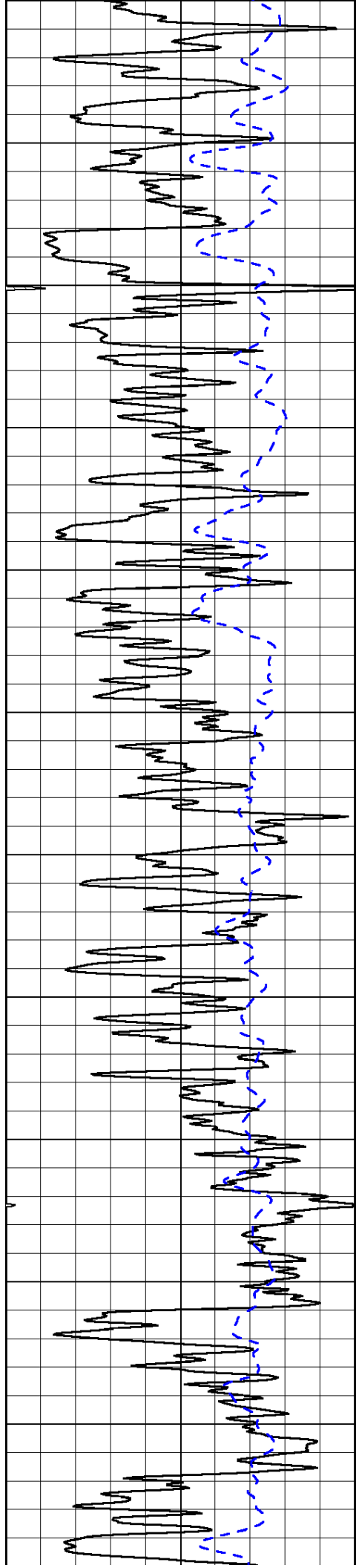
Ellinwood,
4 1/2 North, 3 1/2 East,
North into

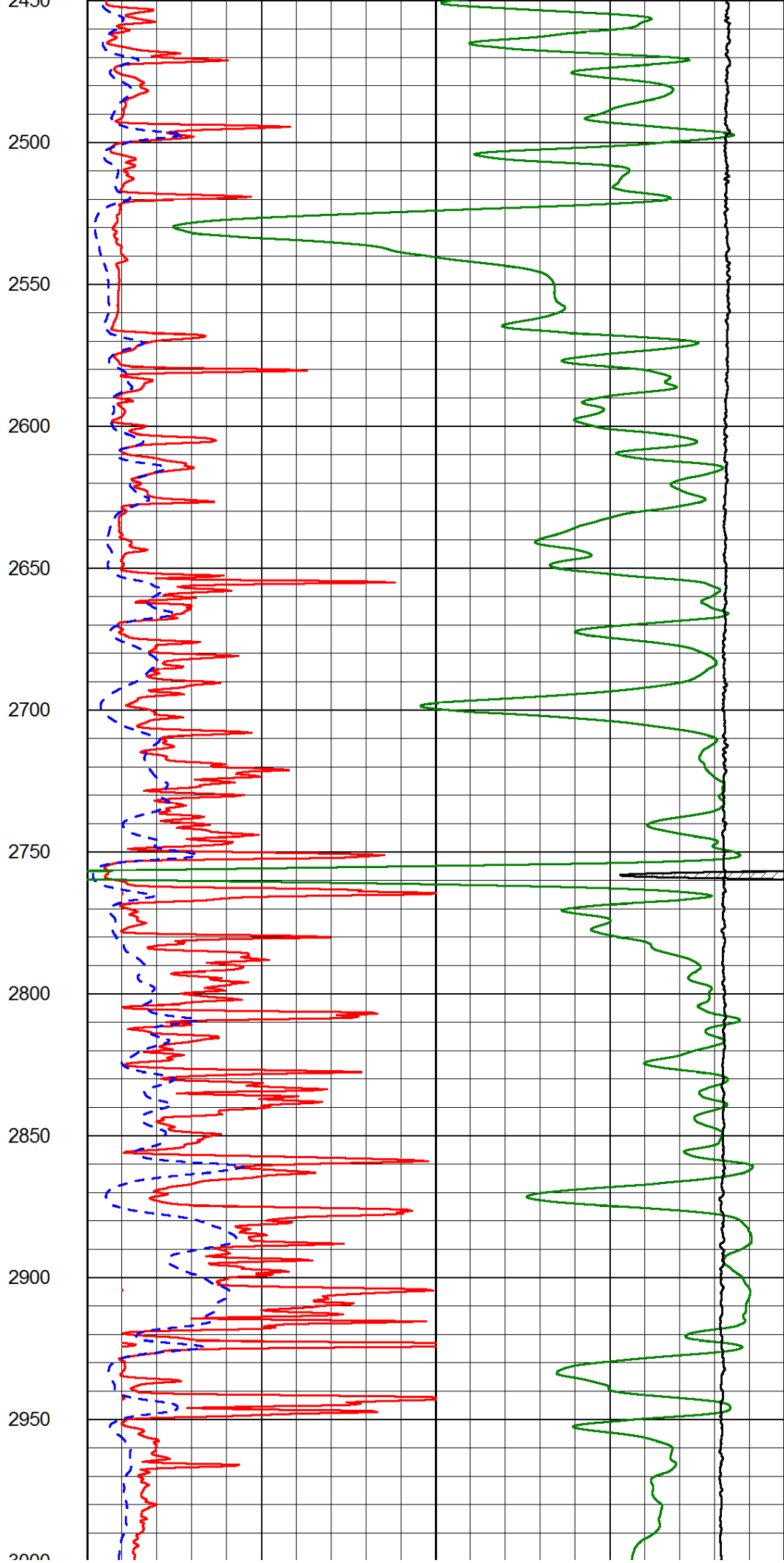
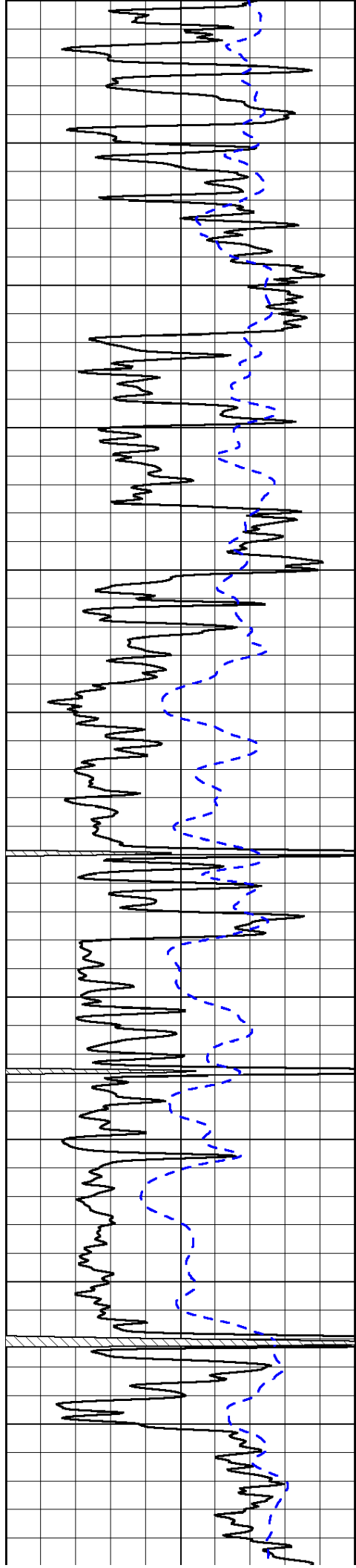
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Dataset Creation: Sat Aug 17 23:11:04 2013
Charted by: Depth in Feet scaled 1:600

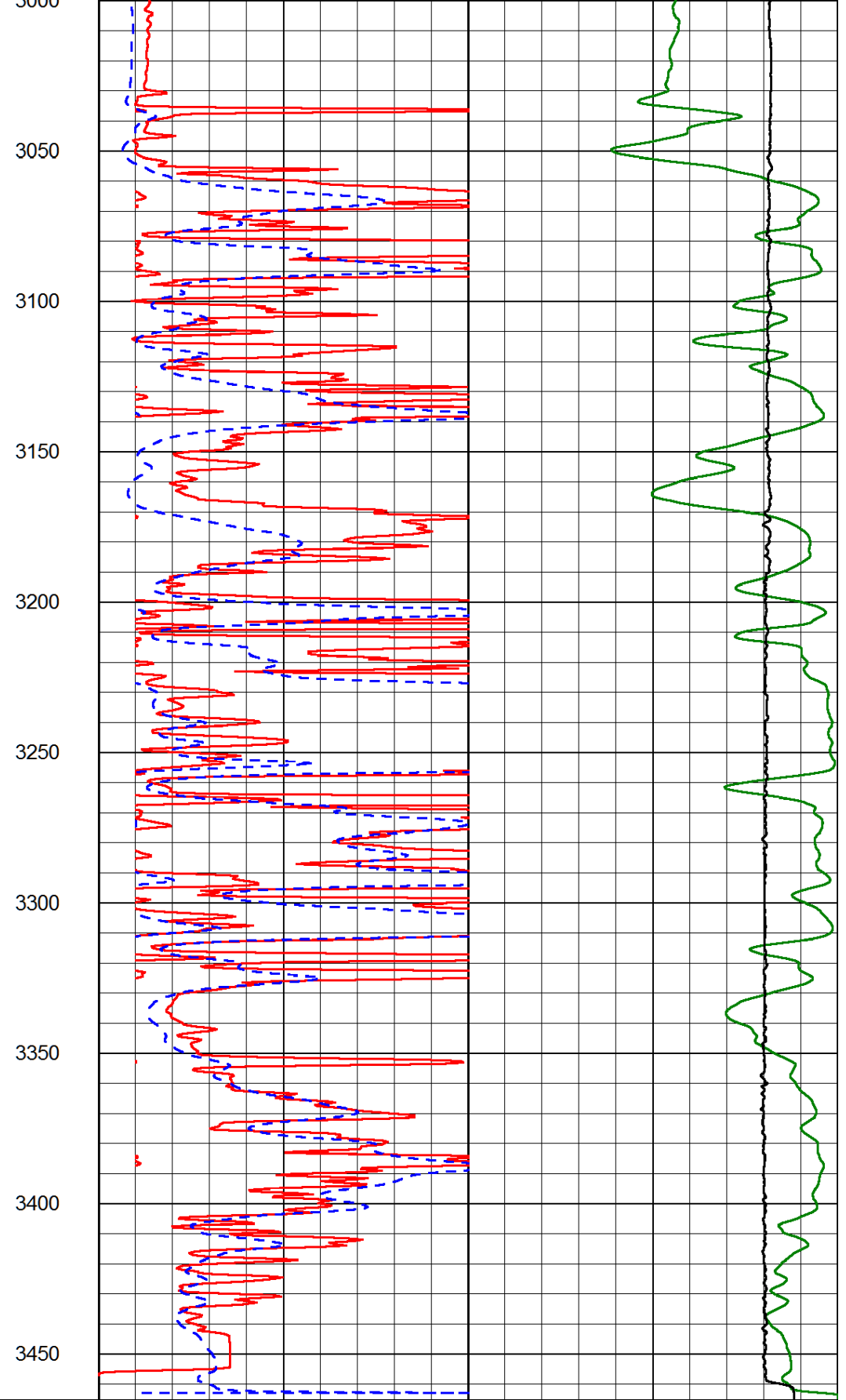
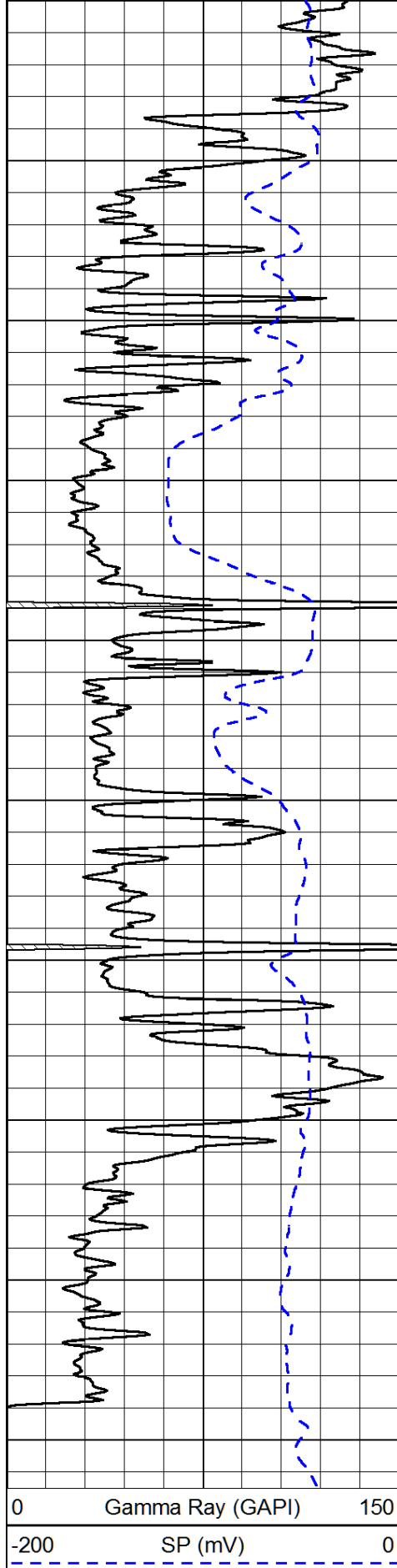












0	Shallow Resistivity (Ohm-m)	50
0	Deep Resistivity (Ohm-m)	50
1000	Conductivity (Ohm-m)	0
15000	Line Tension (lb)	0

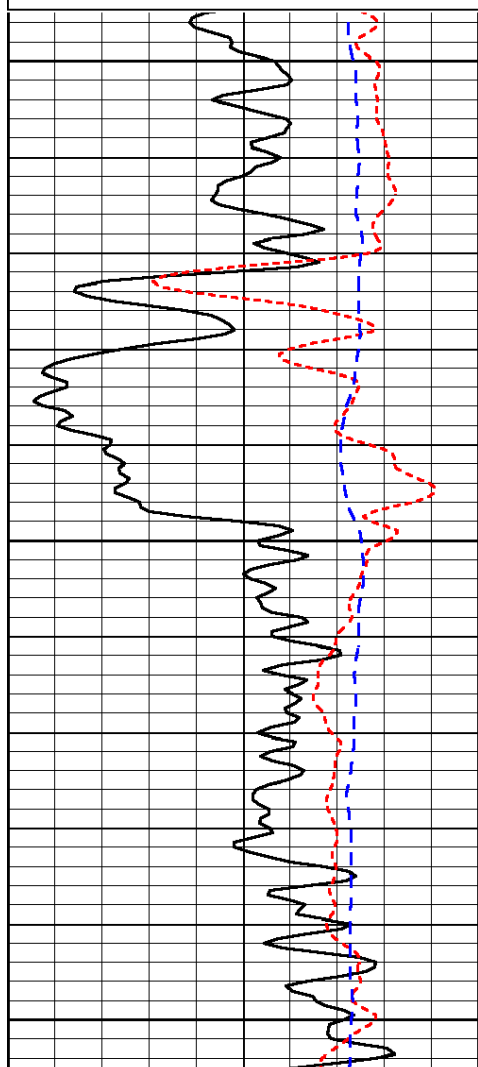
Shallow Resistivity		
50	(Ohm-m)	500
50	Deep Resistivity (Ohm-m)	500

Database File: k&n081713hd.db
 Dataset Pathname: dil/knstck
 Presentation Format: dil
 Dataset Creation: Sat Aug 17 23:11:04 2013
 Charted by: Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
-160	RXO/RT	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)



550

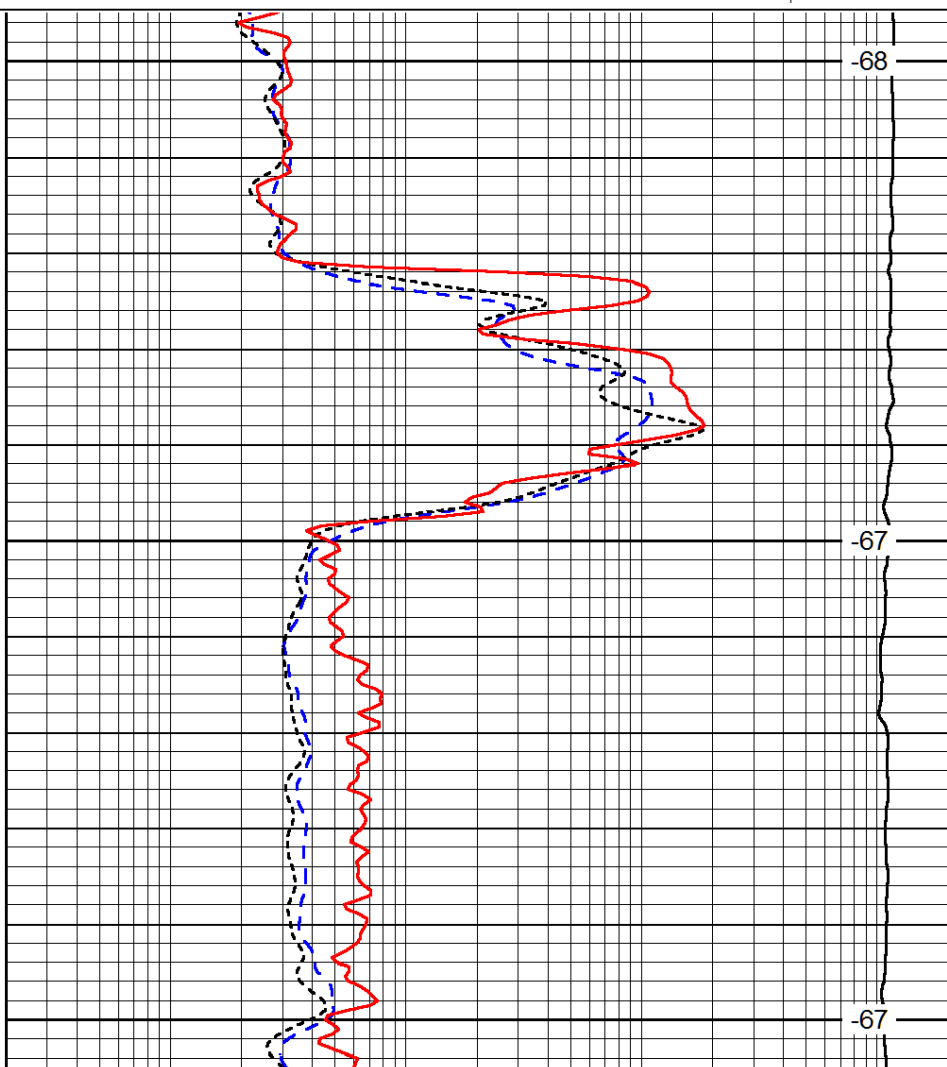
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650

0	Gamma Ray (GAPI)	150
-160	RXO/RT	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)



-68

-67

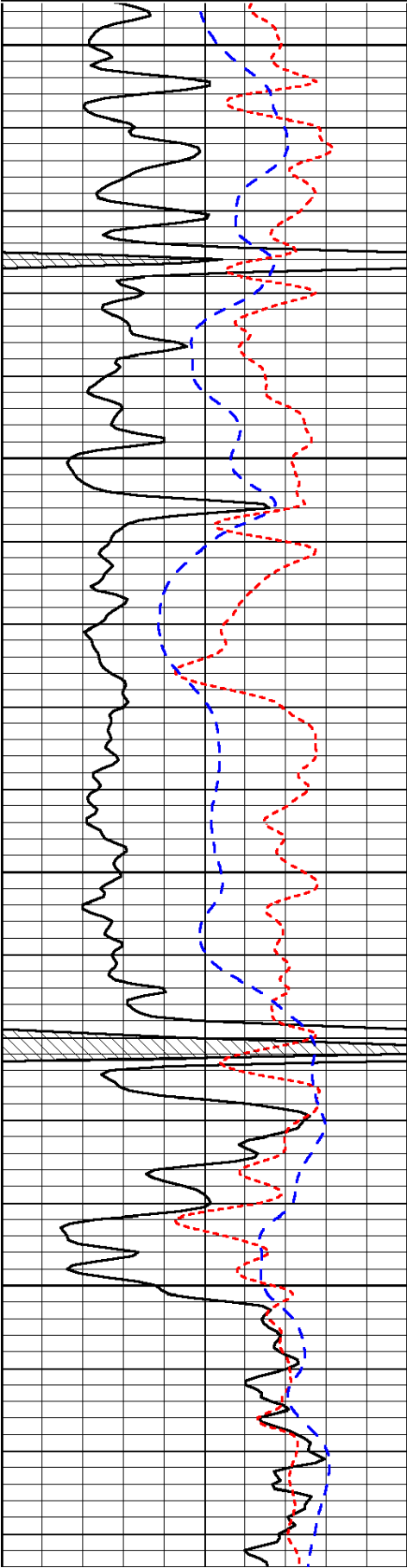
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Database File: k&n081713hd.db
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LSPD
(ft/min)

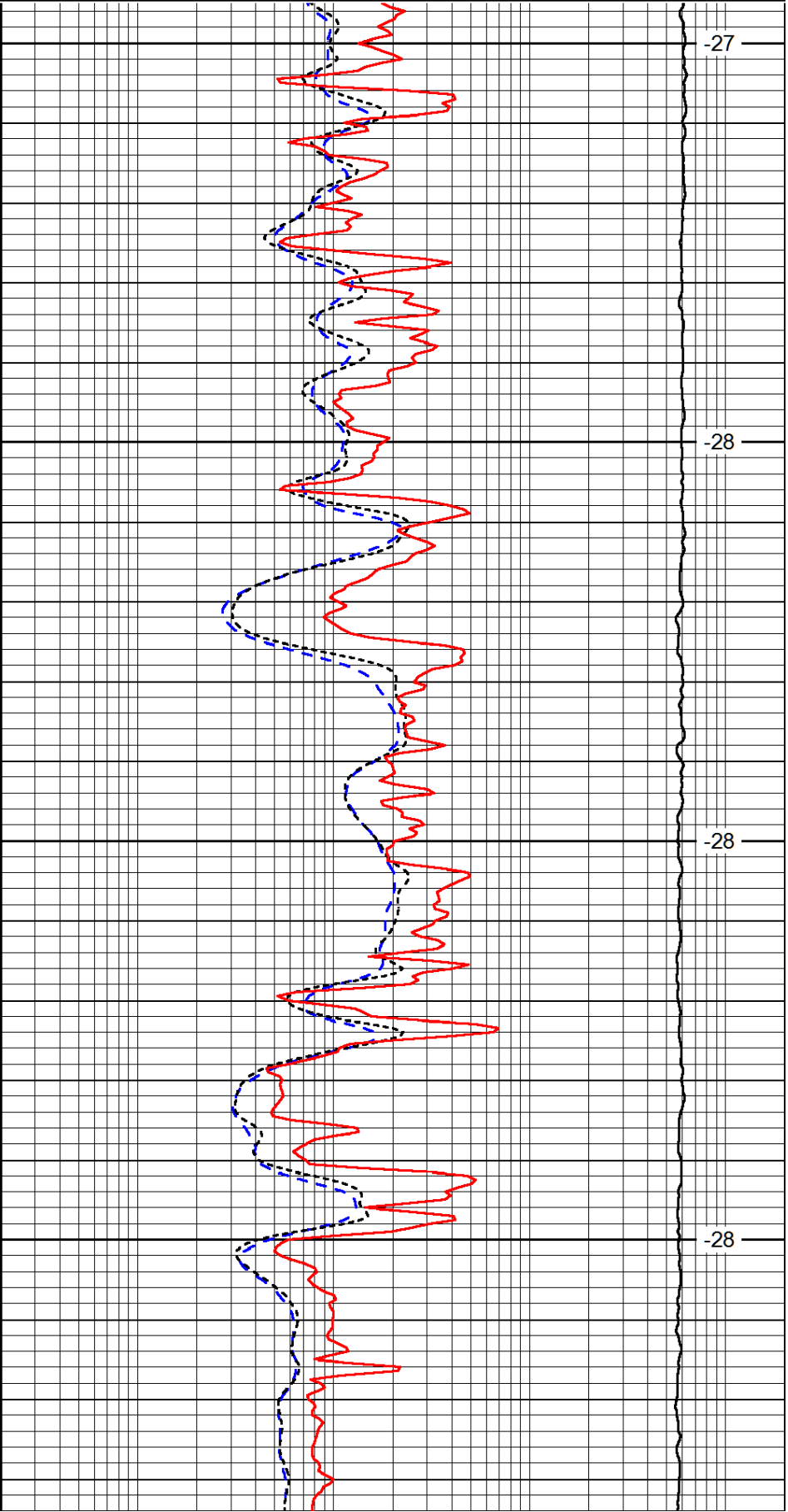


2800

2850

2900

2950

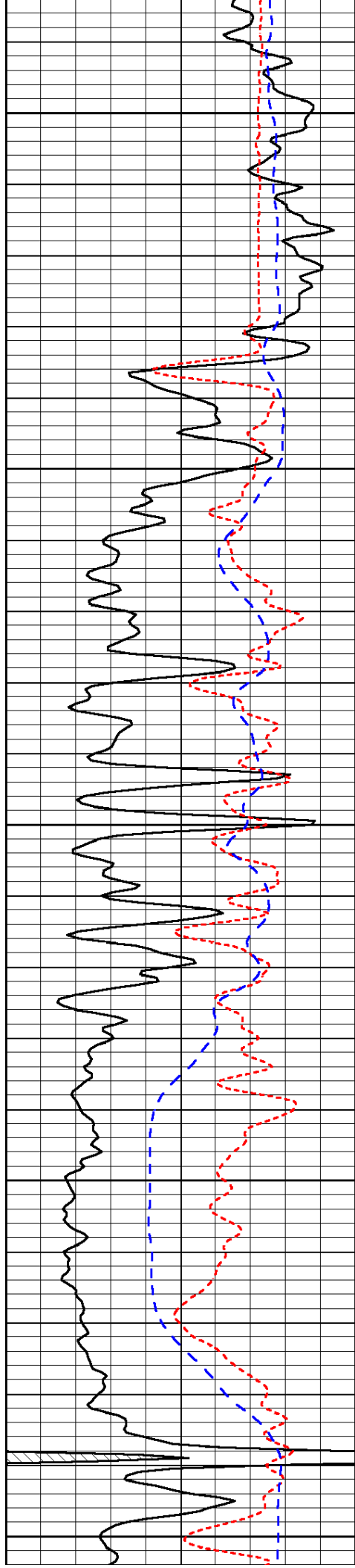


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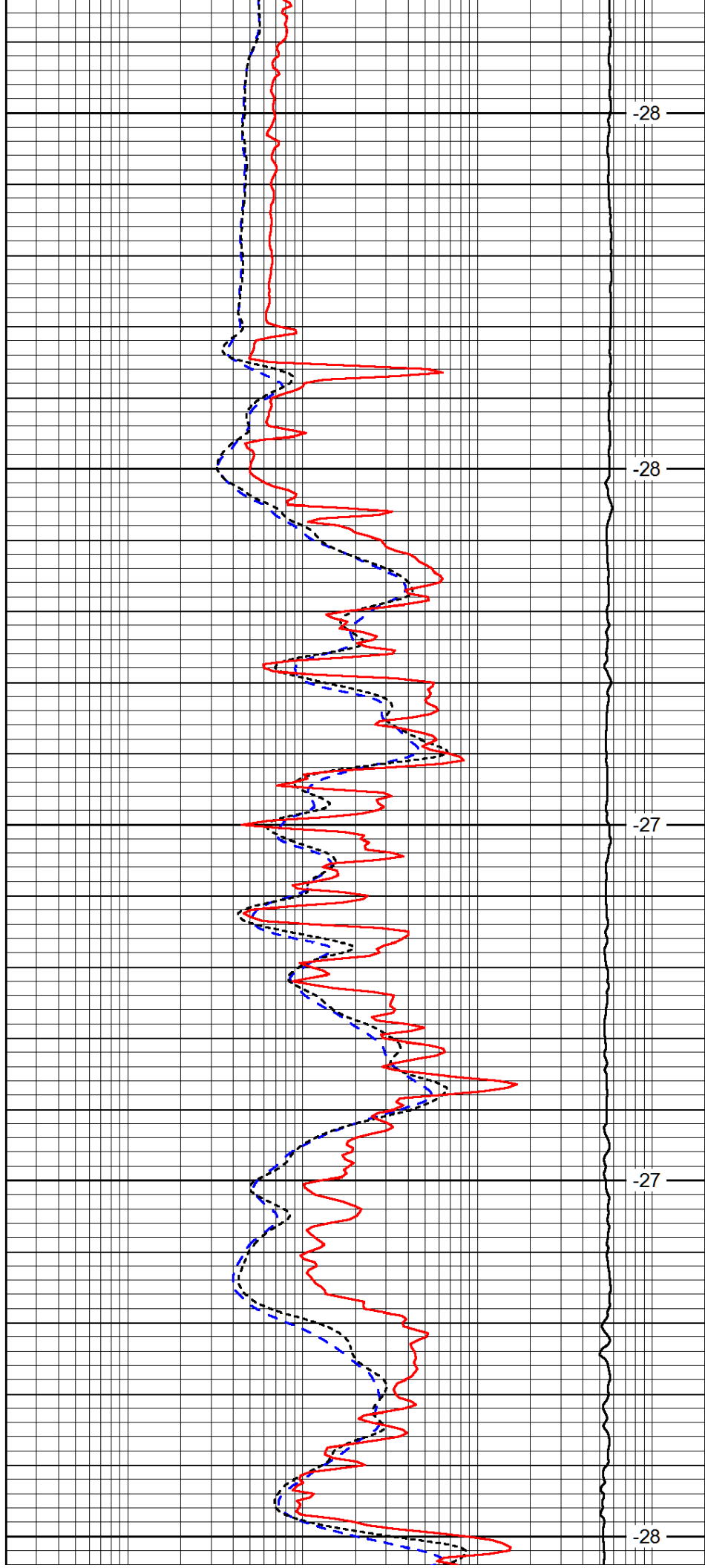
3000

3050

3100

3150

3200



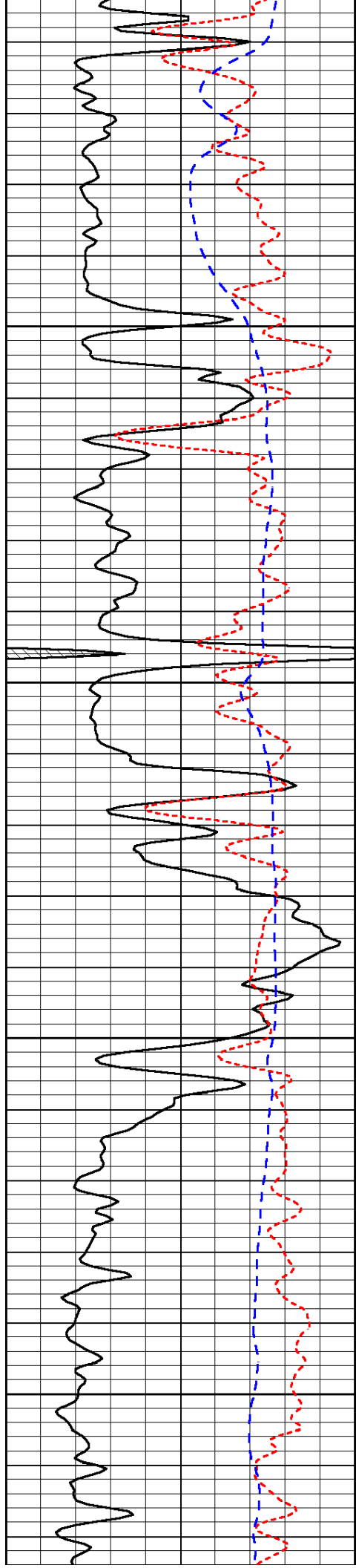
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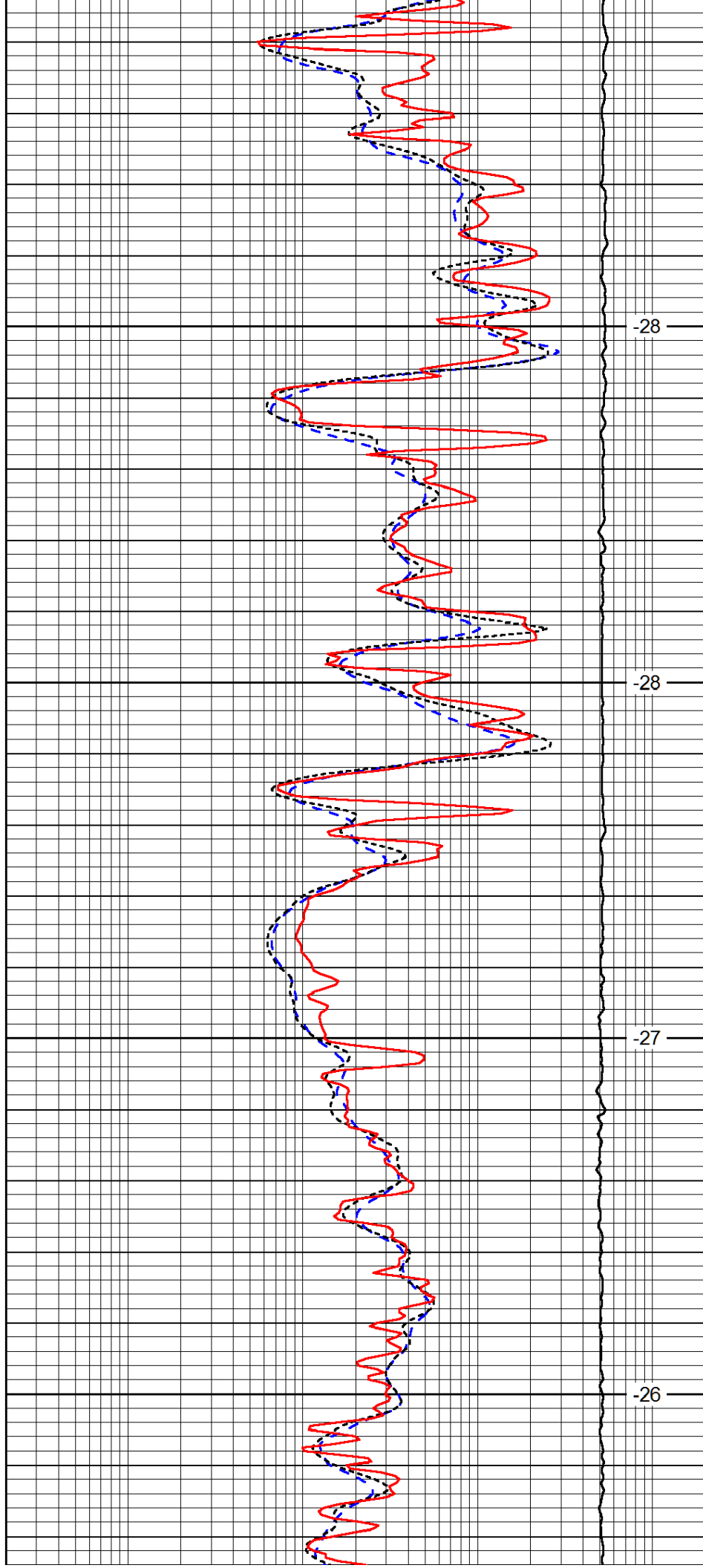


3250

3300

3350

3400

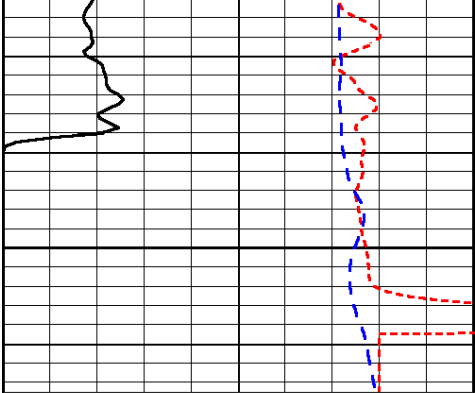


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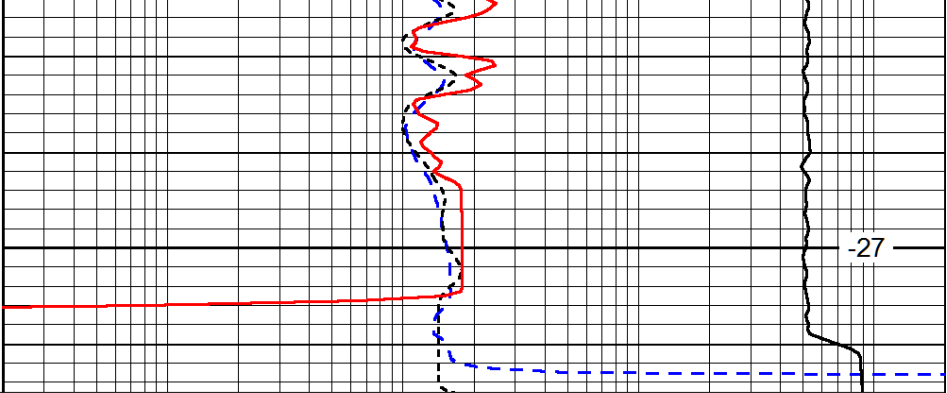
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-26



3450

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



-27

0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
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(ft/min)