



Pioneer Energy Services

Dual Induction Log

15-163-24,141-00-00

API No.

Company **The Bill Bowman Oil Company**

Well **Hrabe 'A' No. 5**

Field **Westhusin**

County **Rooks** State **Kansas**

Location **4134' FSL & 2172' FEL**

Sec: **1** Twp: **9S** Rge: **17W**

Other Services
CNL/CDL
MEL

Permanent Datum **Ground Level** Elevation **1944**

Log Measured From **Kelly Bushing** **5** Ft. Above Perm. Datum

Drilling Measured From **Kelly Bushing**

Elevation
K.B. 1949
D.F. 1944
G.L. 1944

Date	10/12/13	
Run Number	One	
Depth Driller	3478	
Depth Logger	3480	
Bottom Logged Interval	3479	
Top Log Interval	200	
Casing Driller	8.625 @ 222	
Casing Logger	218	
Bit Size	7.875	
Type Fluid in Hole	Chemical	
Salinity, ppm Cl	3,000	
Density / Viscosity	9.1 56	
pH / Fluid Loss	9.5 8.0	
Source of Sample	Flowline	
Rm @ Meas. Temp	.50 @ 62	
Rmf @ Meas. Temp	.38 @ 62	
Rmc @ Meas. Temp	.68 @ 62	
Source of Rmf / Rmc	Charts	
Rm @ BHT	.28 @ 111	
Operating Rig Time	3 1/2 Hours	
Max Rec. Temp. F	111	
Equipment Number	108	
Location	Hays	
Recorded By	J. Henrickson	
Witnessed By	Ed Glassman	

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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

Plainville Kansas
North to S Rd, 7 1/2 East, South Into

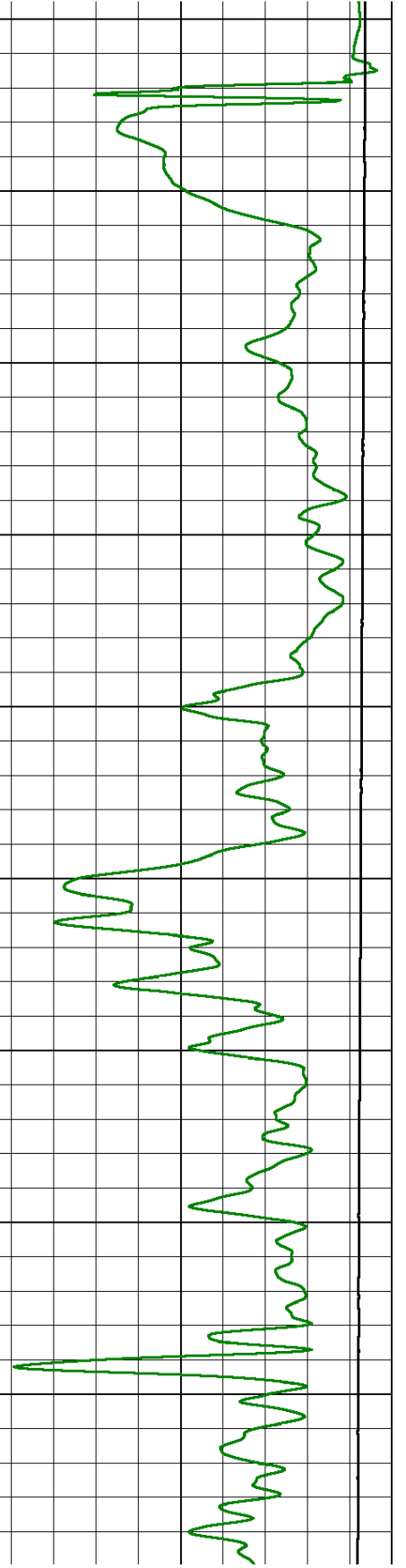
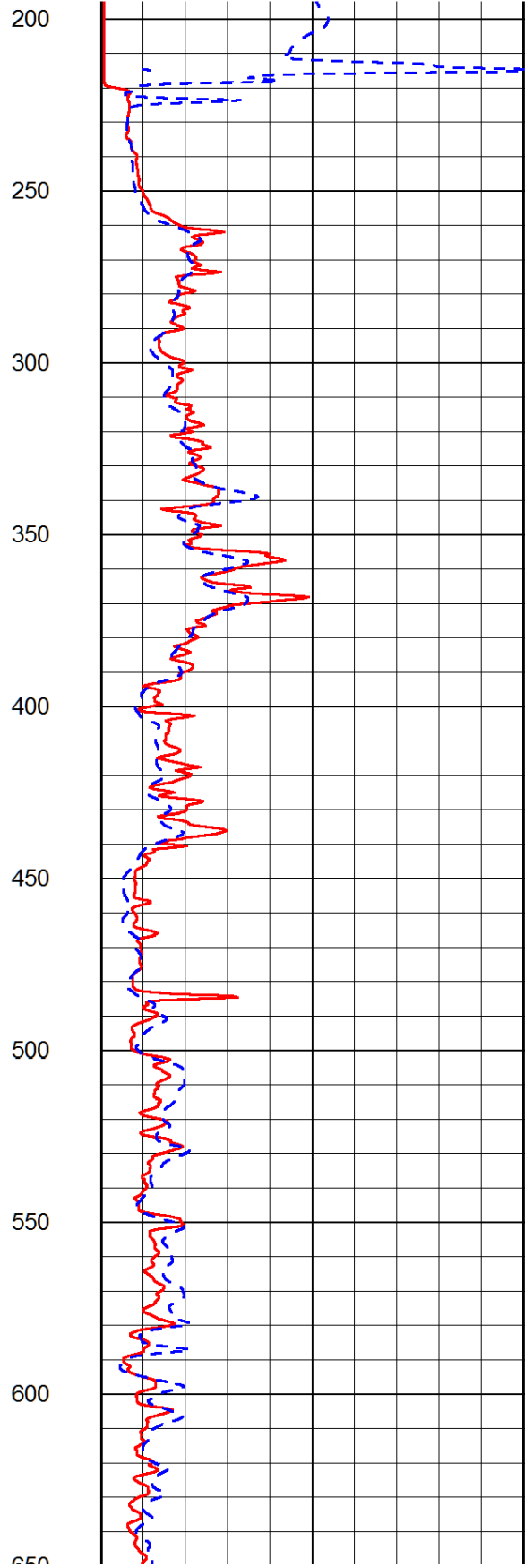
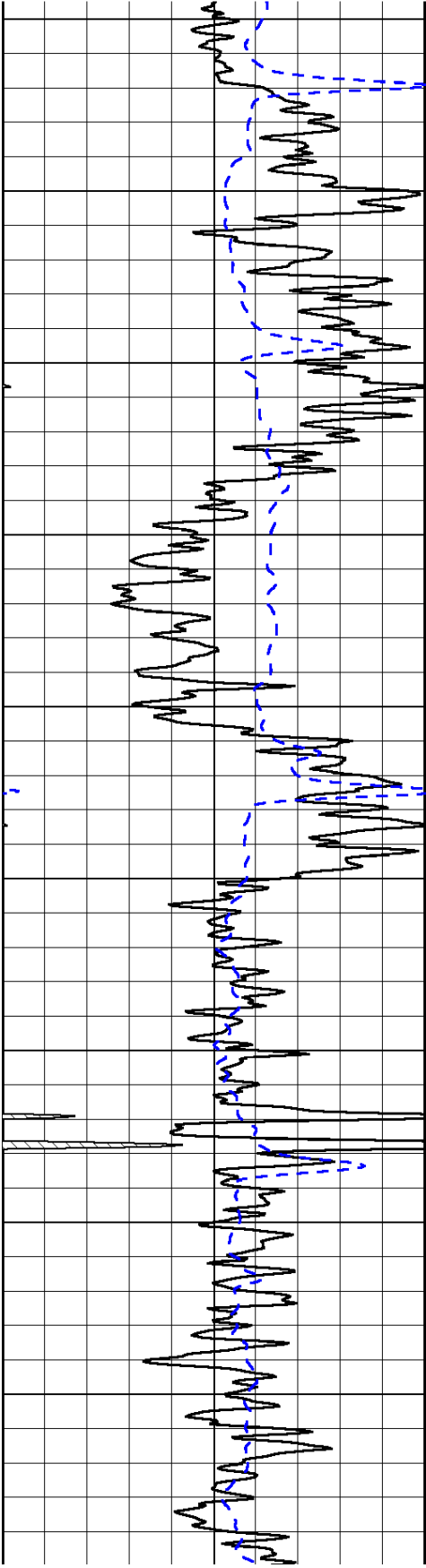
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 Dataset Pathname: DIL/bowstk
 Presentation Format: dil2in
 Dataset Creation: Sat Oct 12 23:19:54 2013
 Charted by: Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150
-200	SP (mV)	0

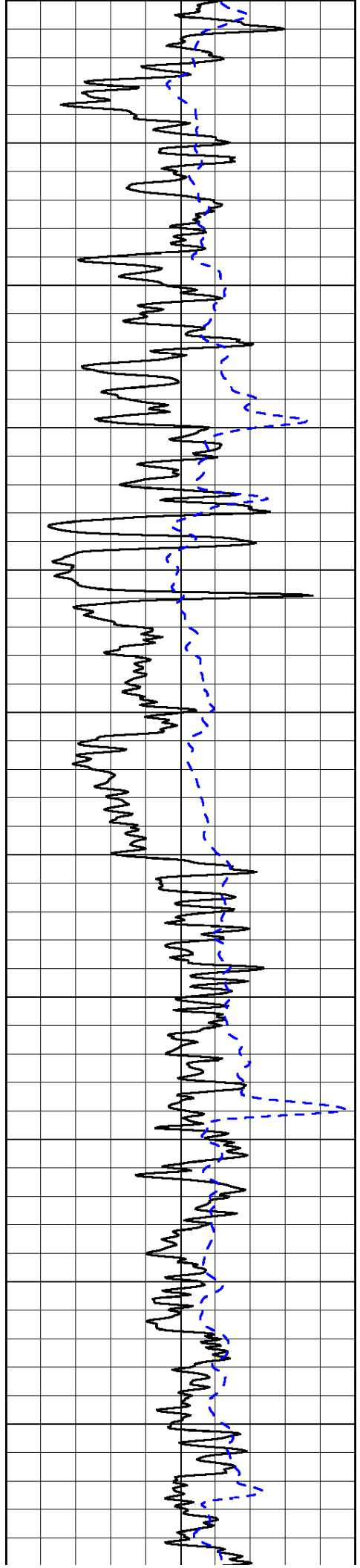
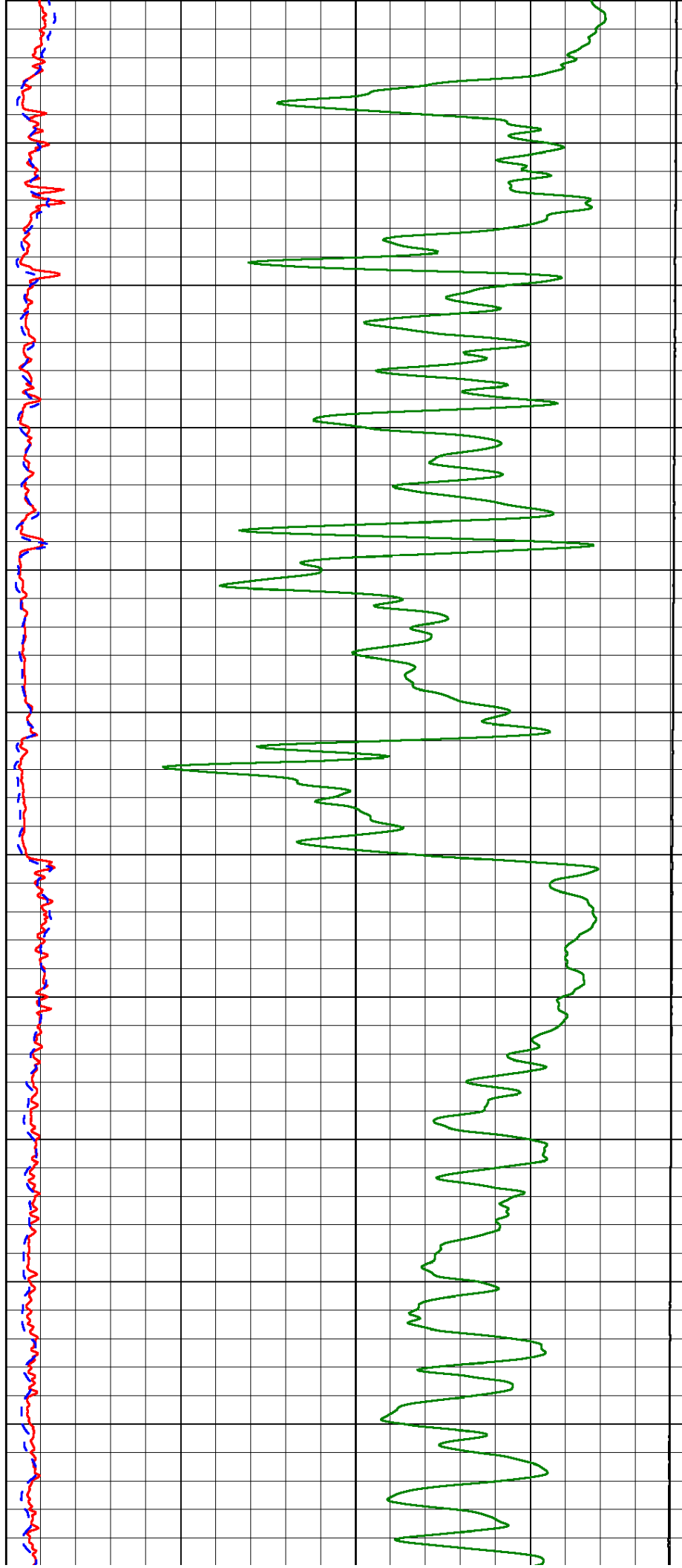
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0	Deep Resistivity (Ohm-m)	50

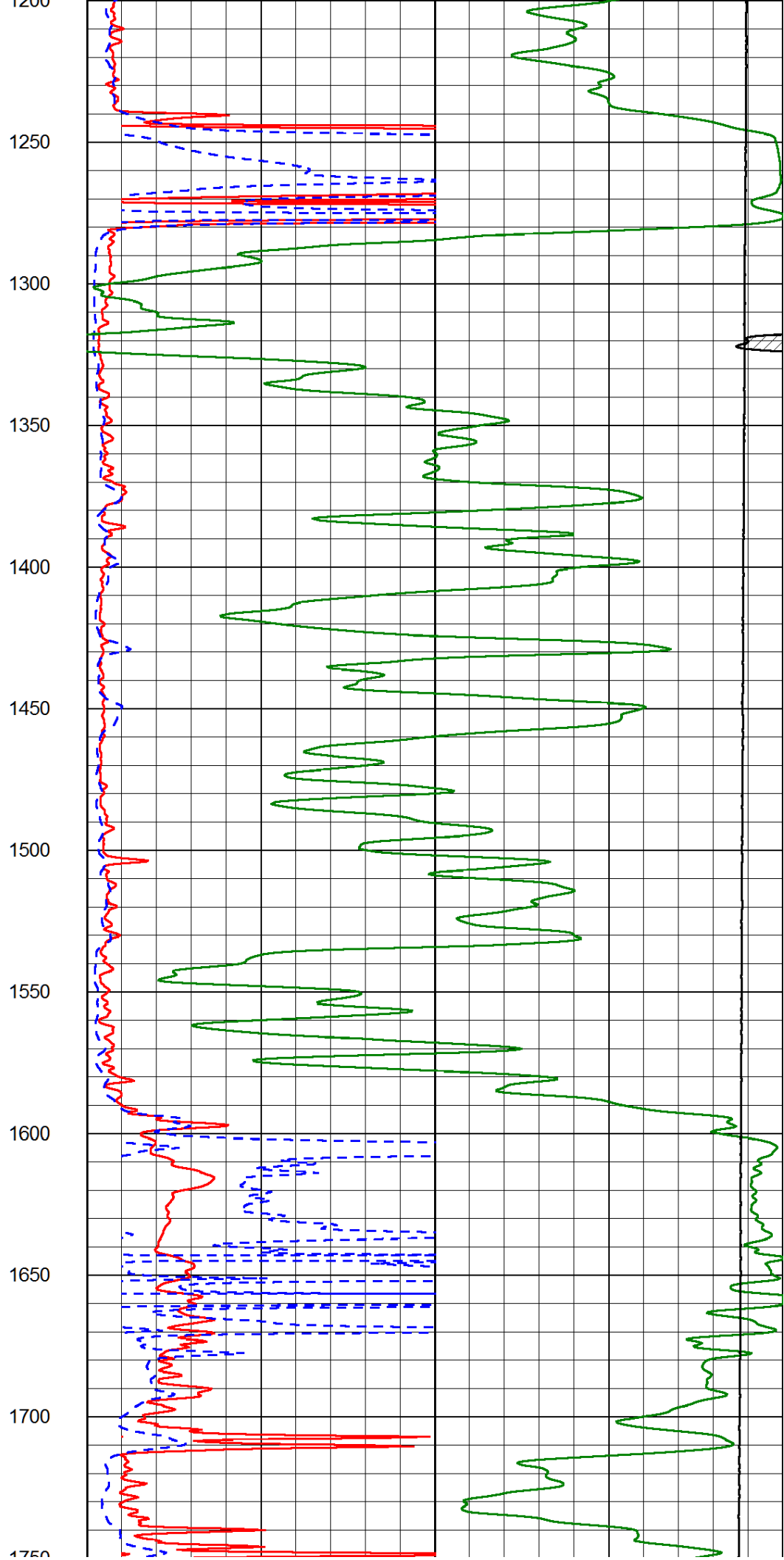
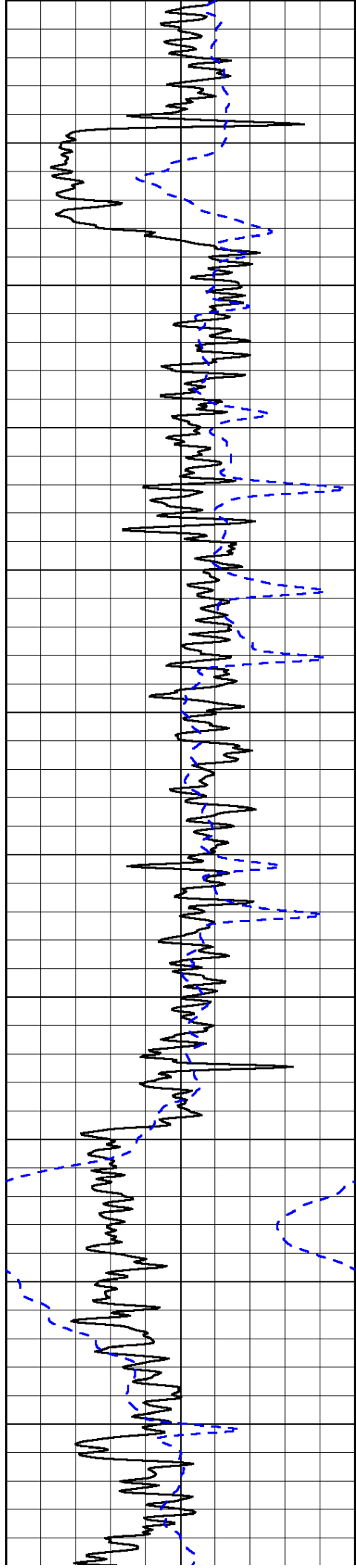
1000	Conductivity (Ohm-m)	0
15000	Line Tension (lb)	0

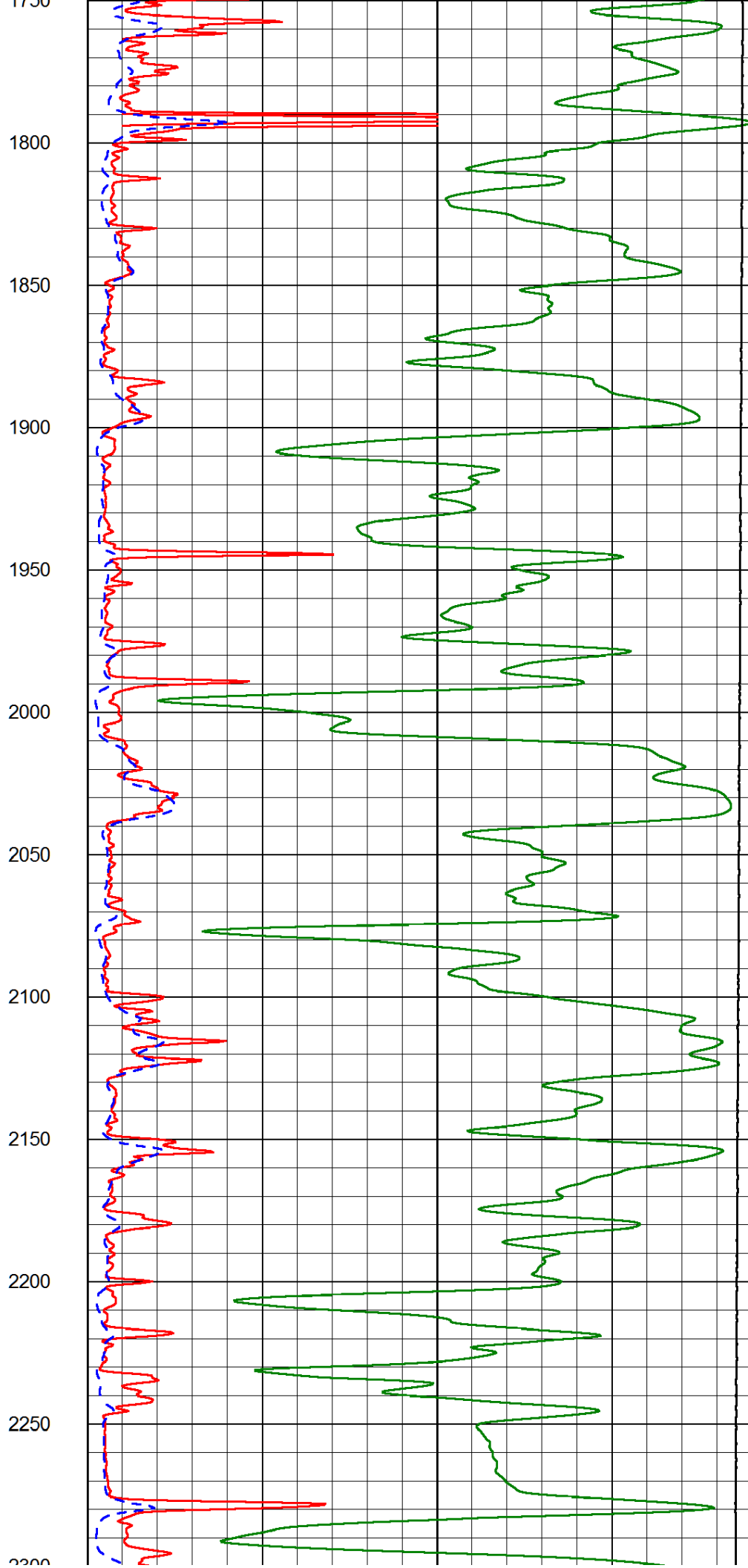
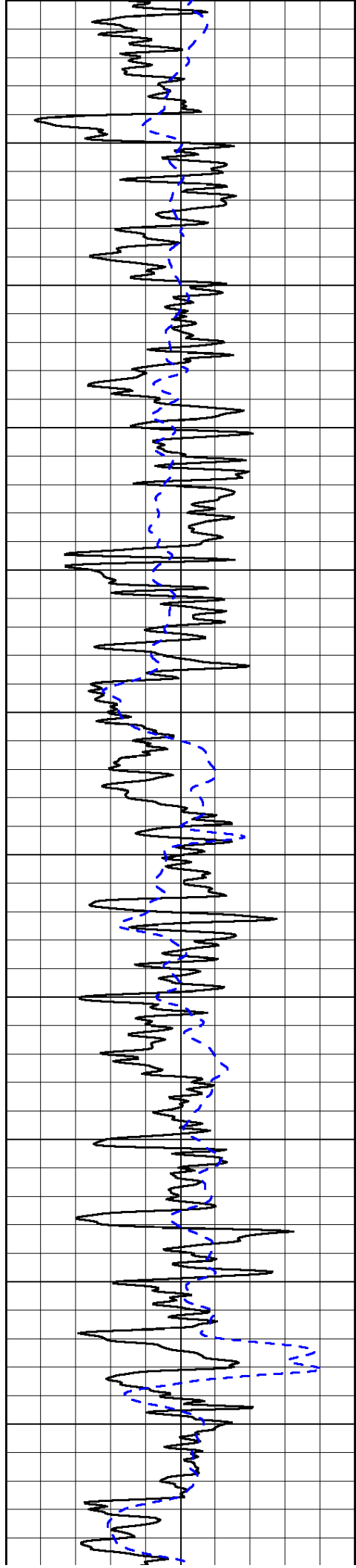
Shallow Resistivity		
50	(Ohm-m)	500
Deep Resistivity (Ohm-m)		
50	Deep Resistivity (Ohm-m)	500

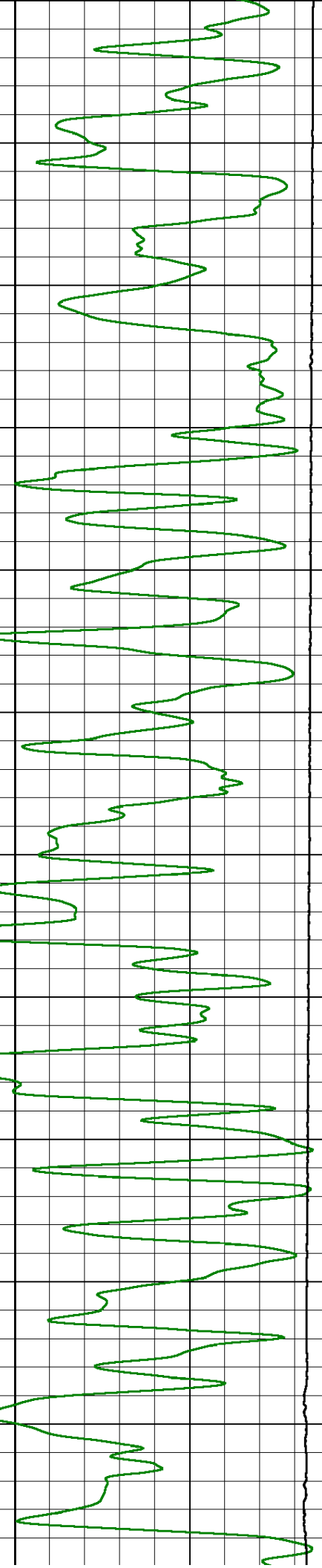
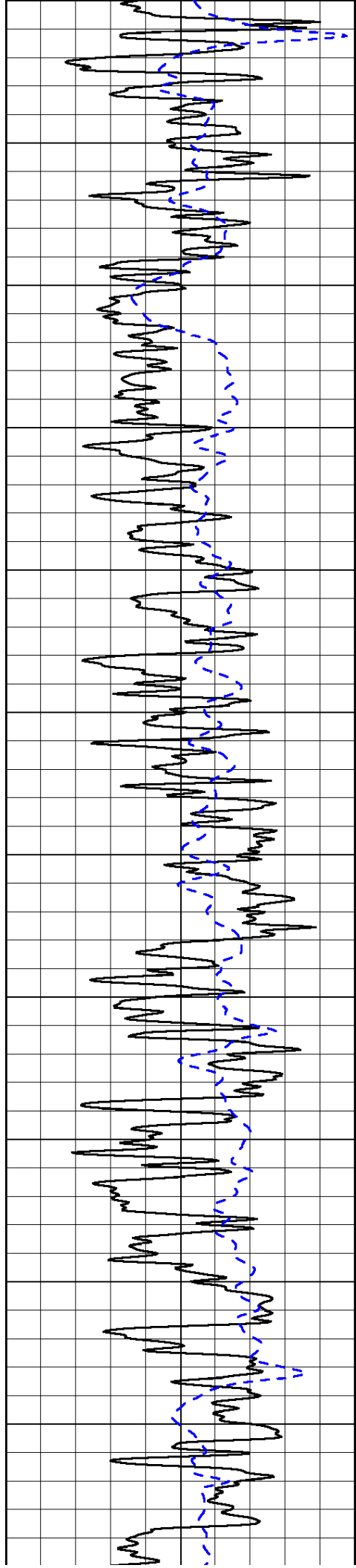


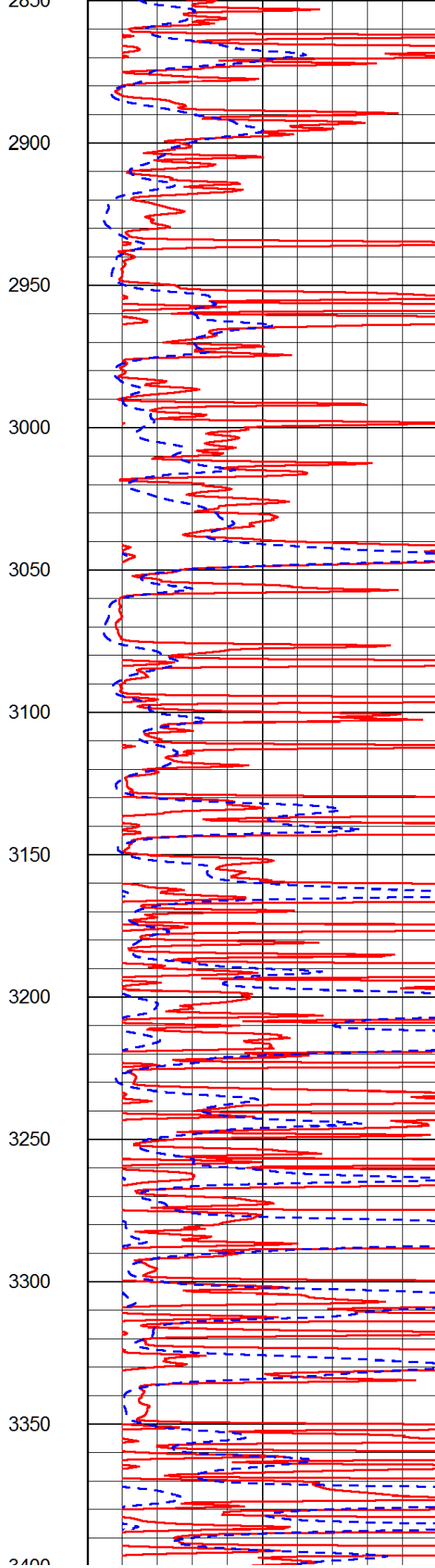
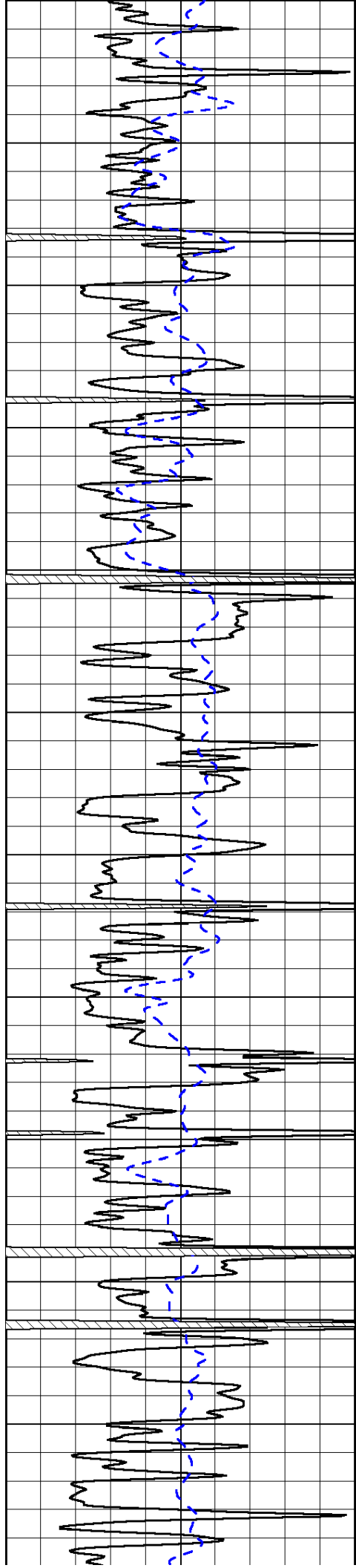
650
700
750
800
850
900
950
1000
1050
1100
1150
1200

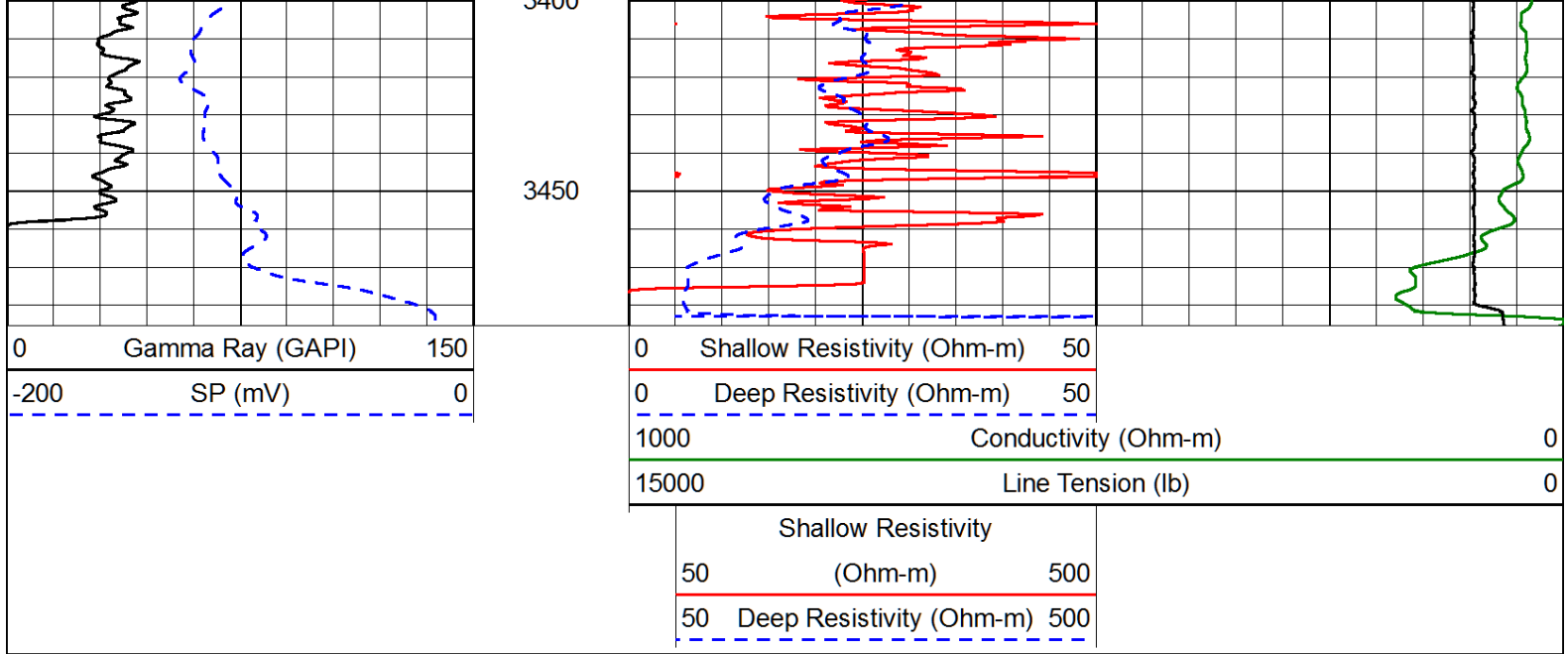




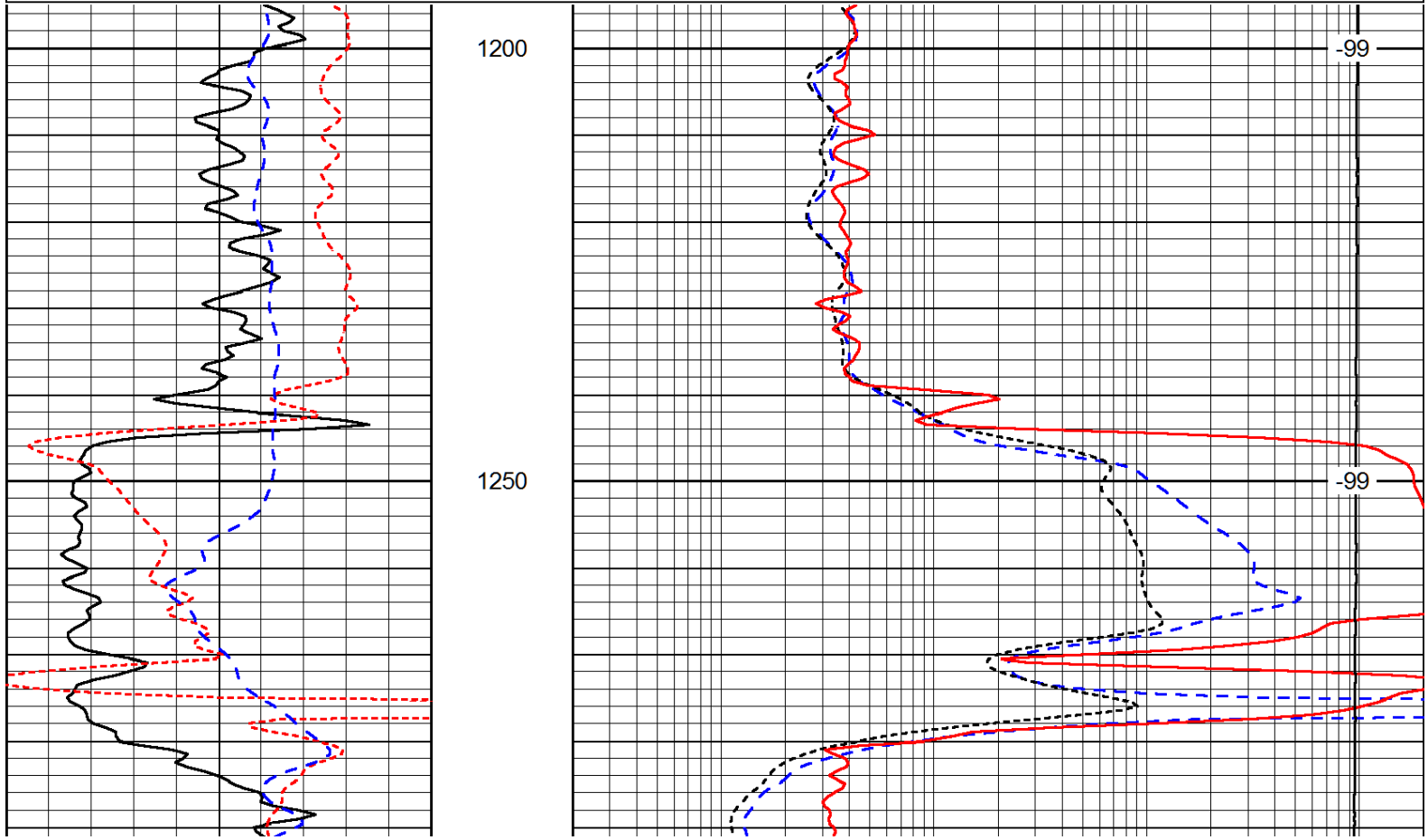
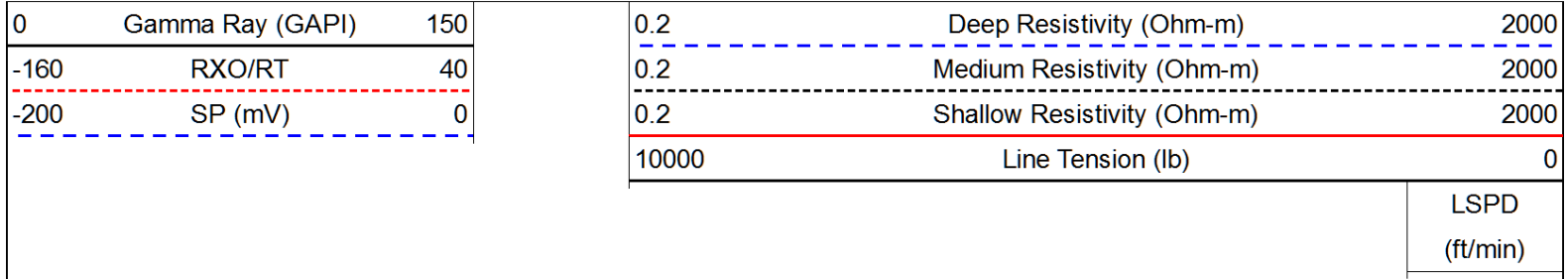


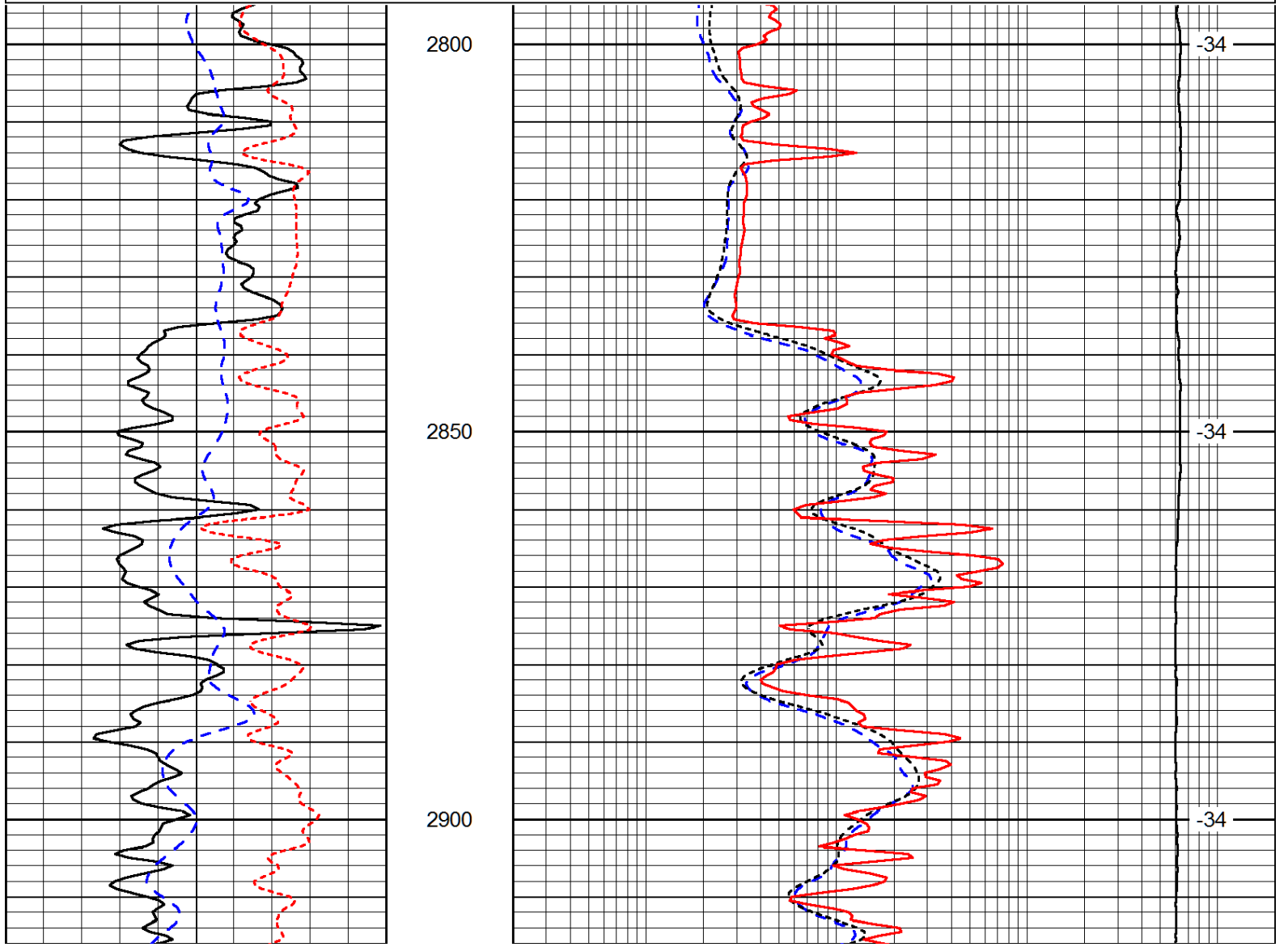
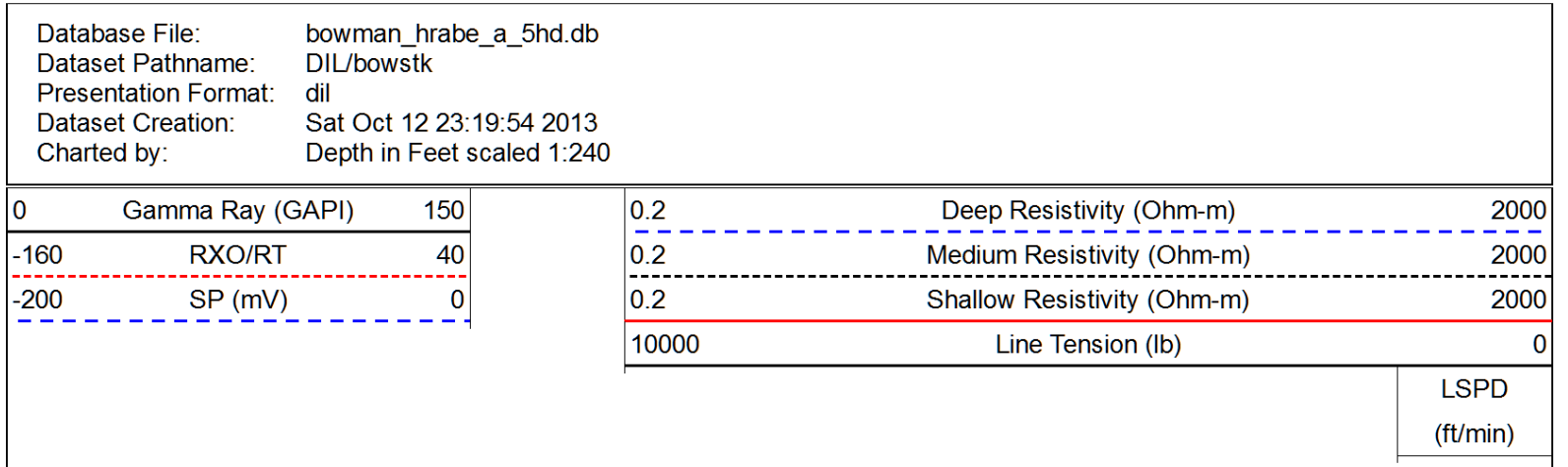
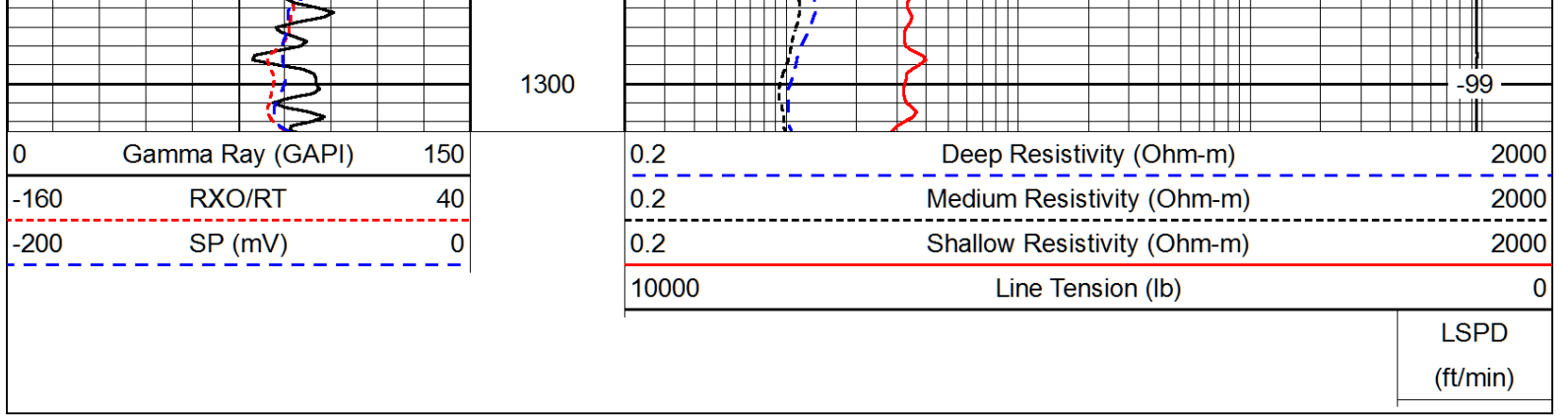


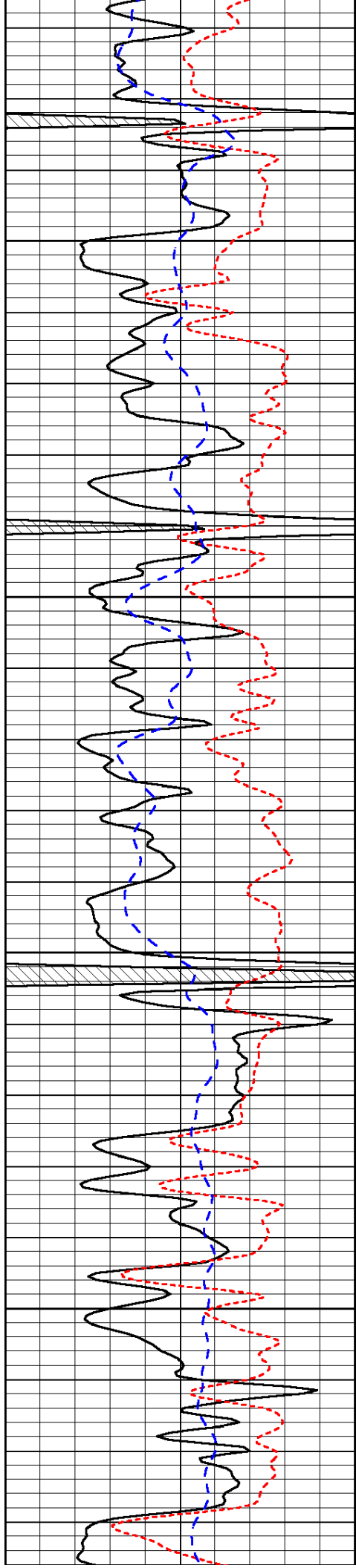




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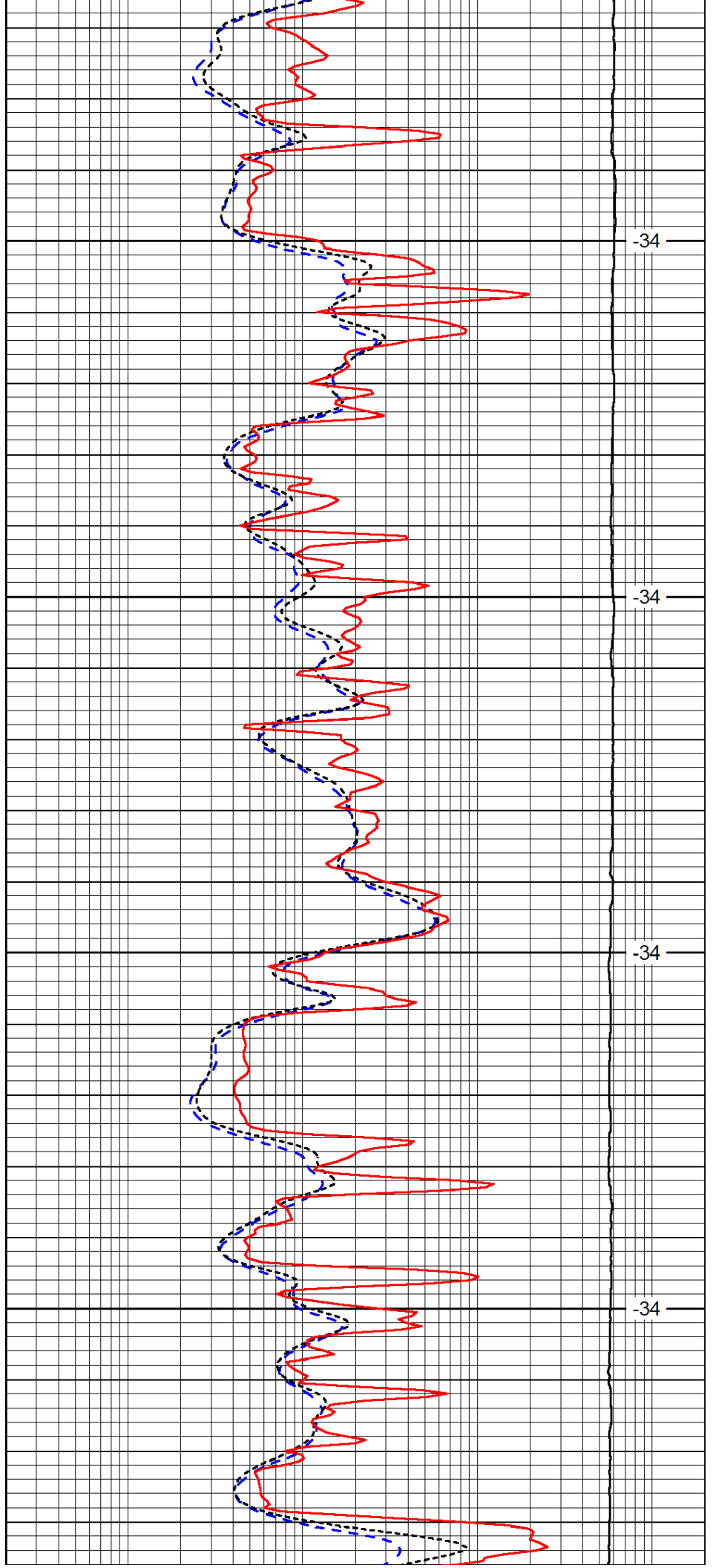


2950

3000

3050

3100

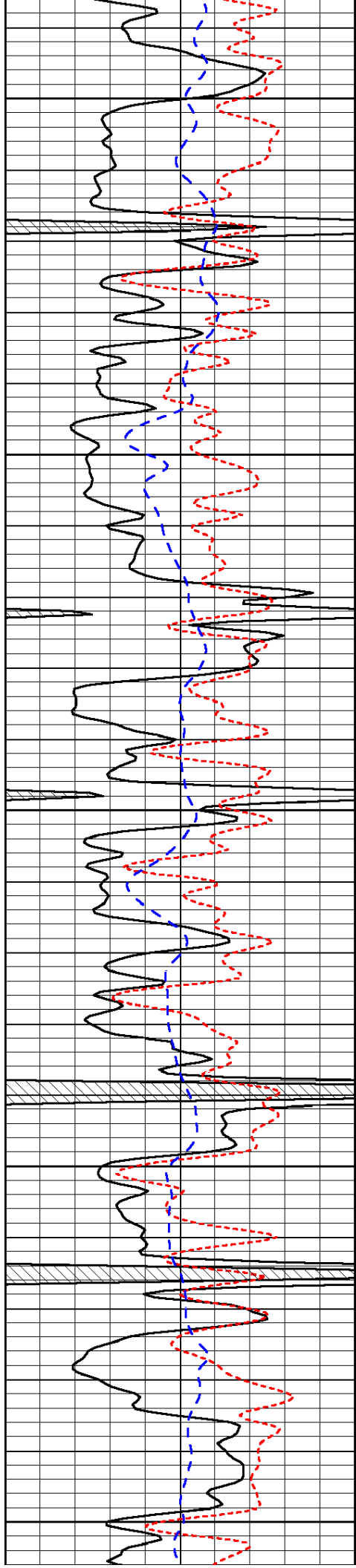


-34

-34

-34

-34



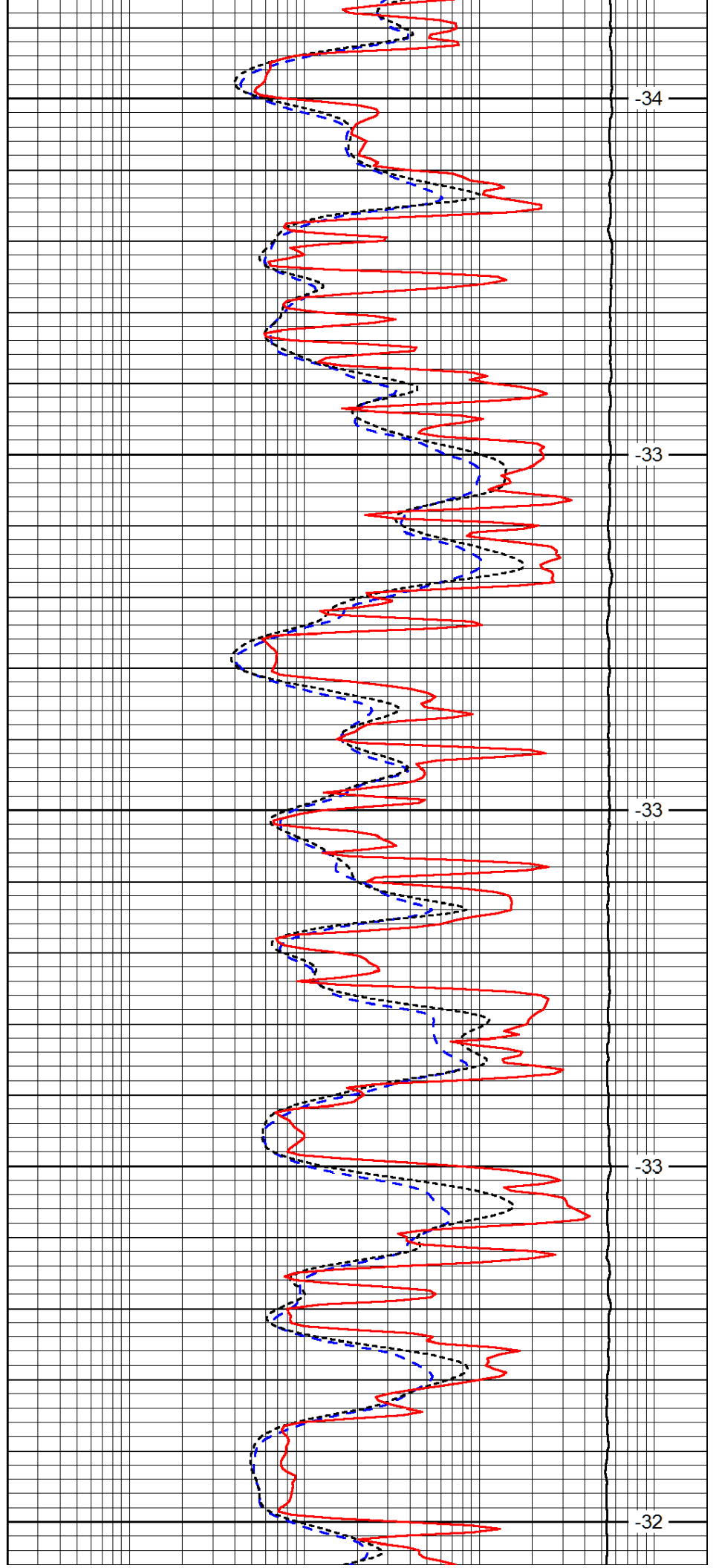
3150

3200

3250

3300

3350



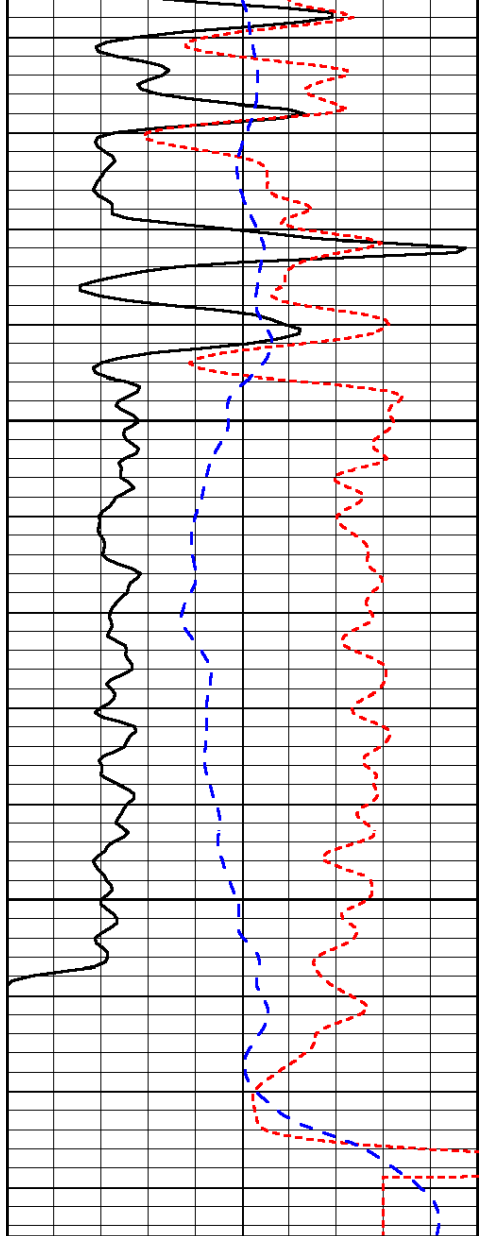
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-33

-33

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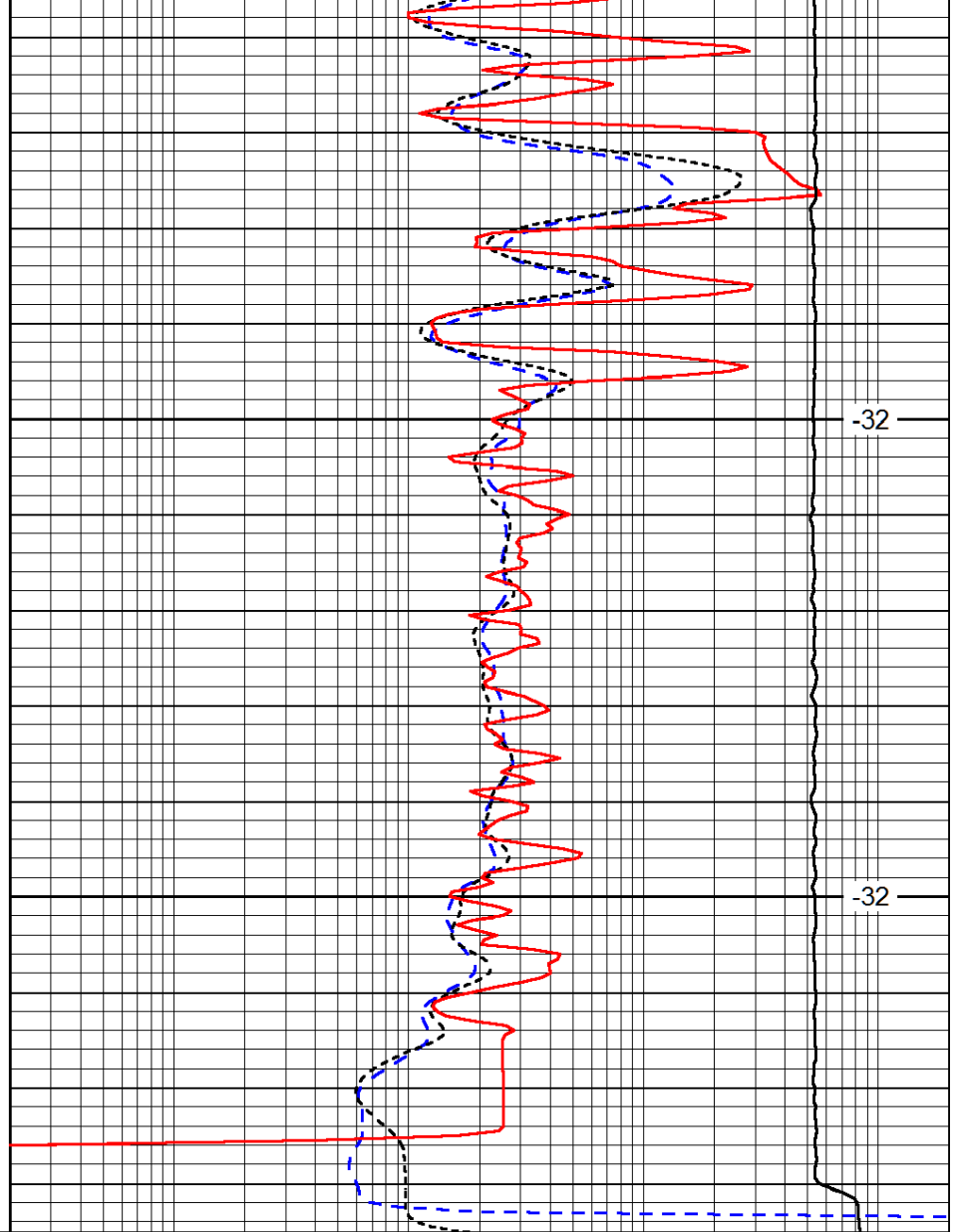
-32



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

3400

3450



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

-32

-32

LSPD
(ft/min)