



Pioneer Energy Services

Dual Induction Log

API No.

15-017-20,918-00-00

Company Range Oil Company, Inc.

Well Madden A Unit No.1

Field Panther Ranch SW

County Chase State Kansas

Location 330' FNL & 2190' FWL

Sec: 31 Twp: 19S Rge: 6E

Other Services
CNL/CDL
MEL

Elevation

Permanent Datum Ground Level Elevation 1452
Log Measured From Kelly Bushing 6 Ft. Above Perm. Datum
Drilling Measured From Kelly Bushing

K.B. 1458
D.F.
G.L. 1452

Date 10/13/2014

Run Number One

Depth Driller 2315

Depth Logger 2313

Bottom Logged Interval 2312

Top Log Interval 200

Casing Driller 8.625 @ 220

Casing Logger 218

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 900

Density / Viscosity 9.2 53

pH / Fluid Loss 9.0 8.8

Source of Sample Flowline

Rm @ Meas. Temp 1.4 @ 63

Rmf @ Meas. Temp 1.05 @ 63

Rmc @ Meas. Temp 1.89 @ 63

Source of Rmf / Rmc Charts

Rm @ BHT .89 @ 99

Operating Rig Time 3 1/2 Hours

Max Rec. Temp. F 99

Equipment Number 10

Location Hays

Recorded By C. Desaire

Witnessed By Ken Wallace

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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

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(785) 625-3858

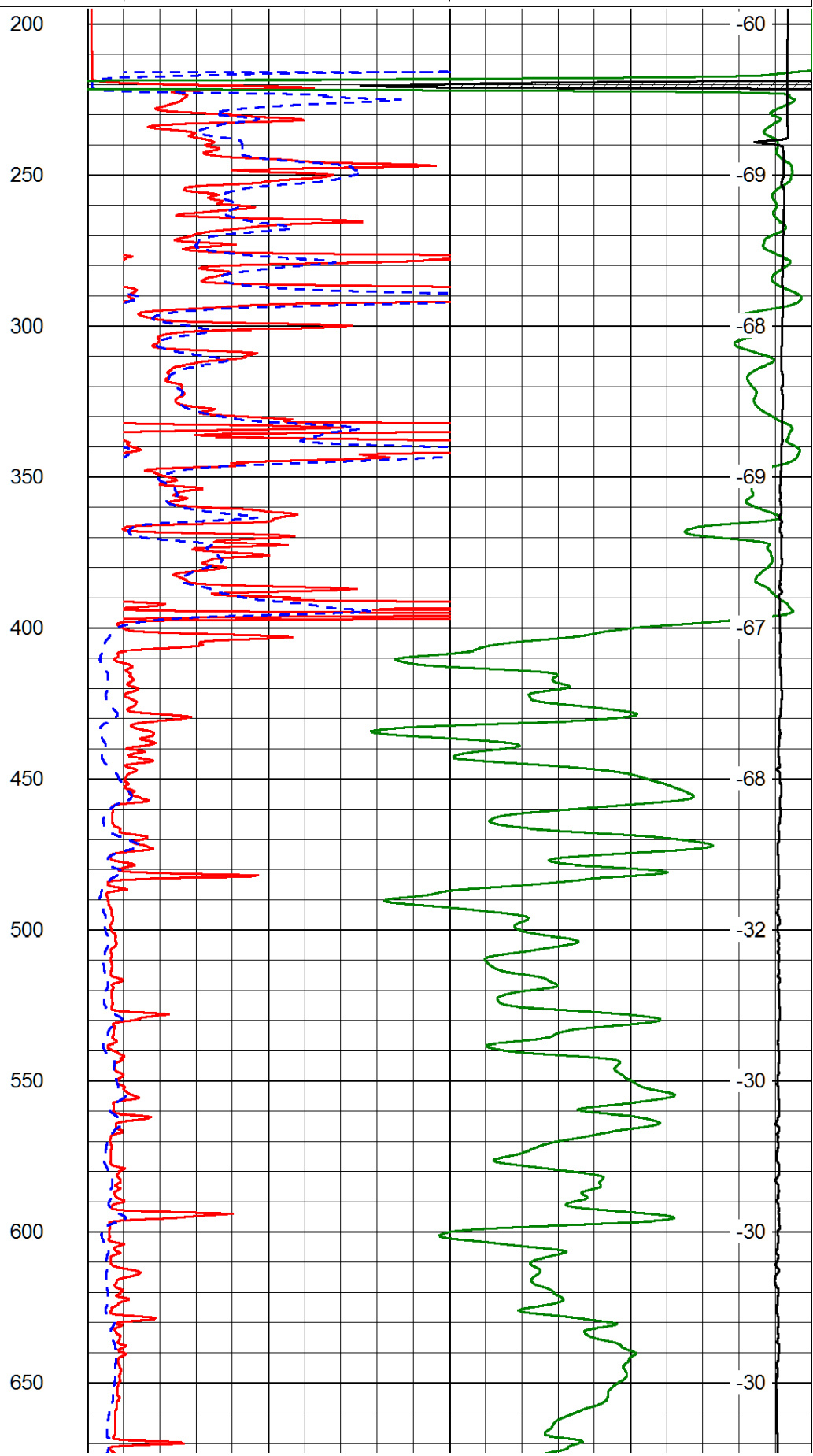
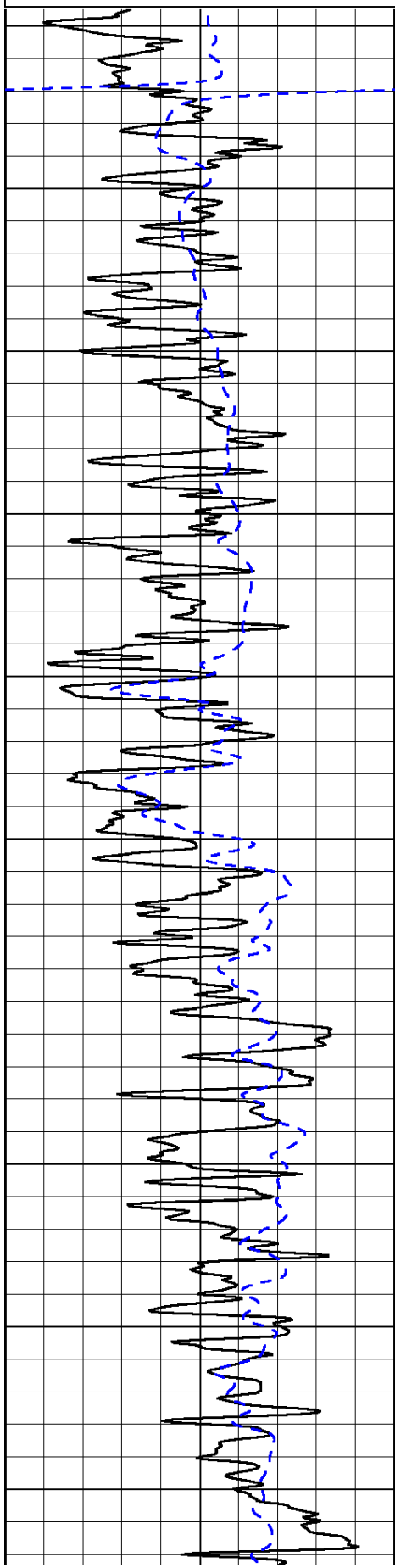
Marion KS, Hwy 77 & Hwy 50,
8 E, 200 yds S, E Into

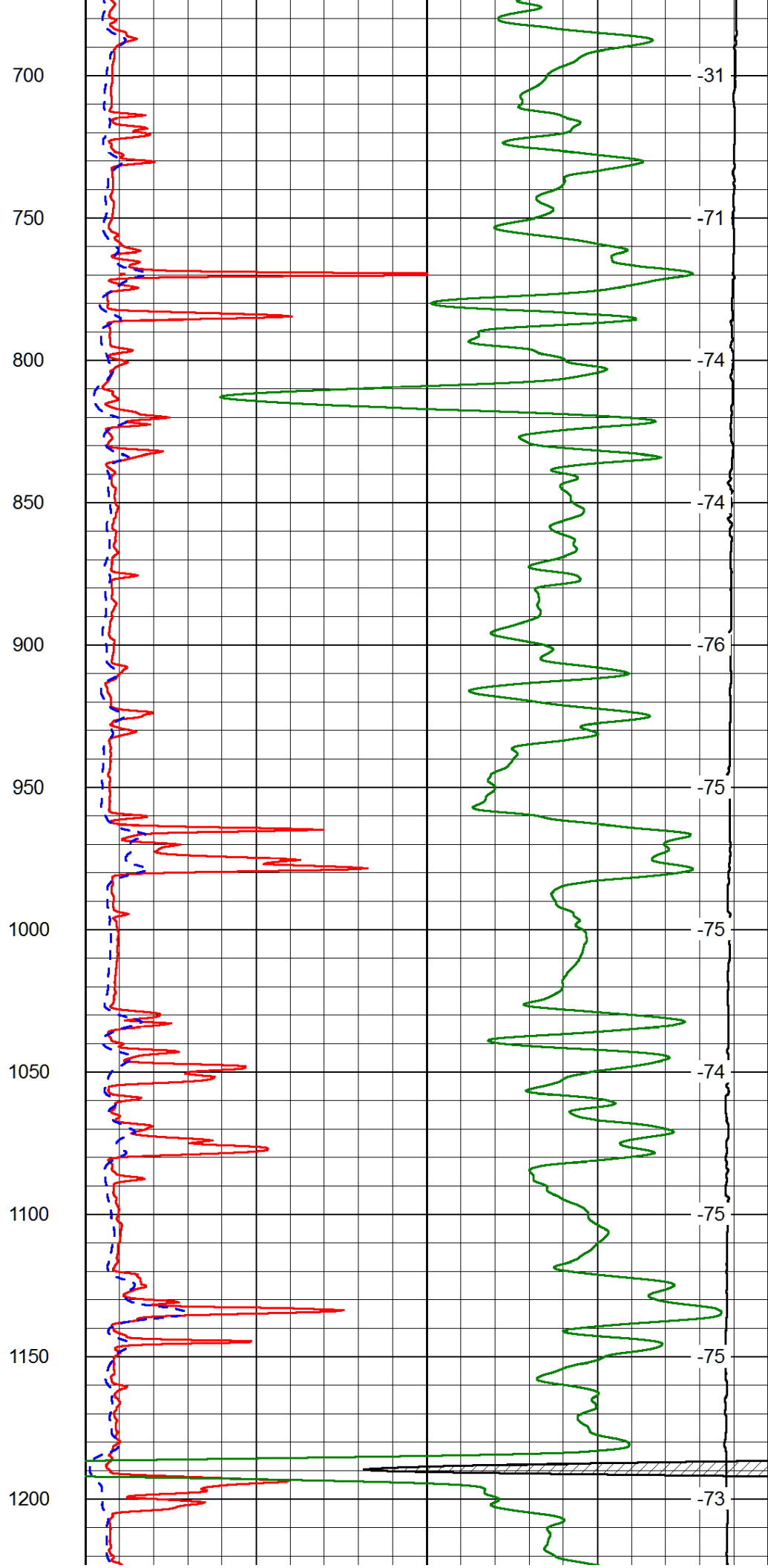
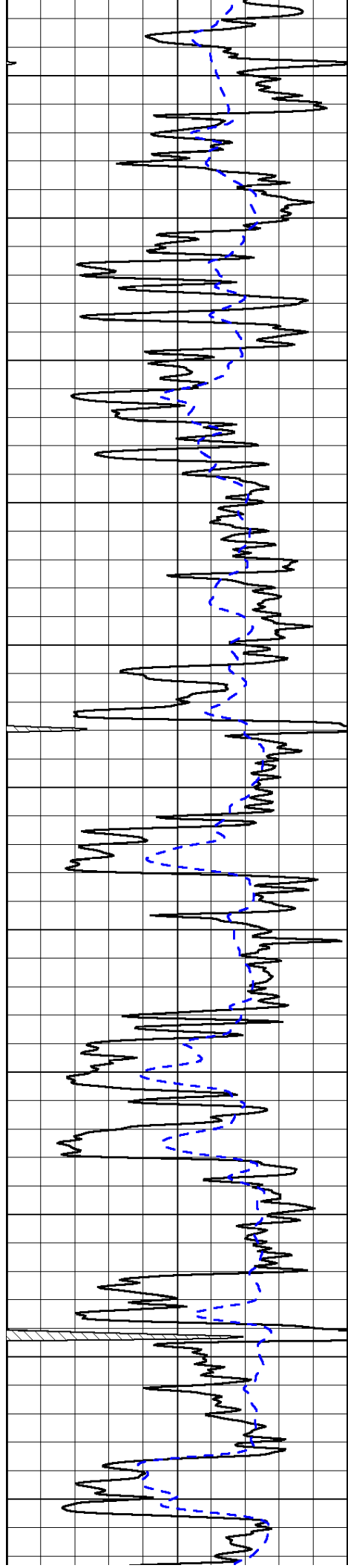
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Dataset Pathname: dil/rngstk
Presentation Format: dil2in
Dataset Creation: Mon Oct 13 08:23:59 2014
Charted by: Depth in Feet scaled 1:600

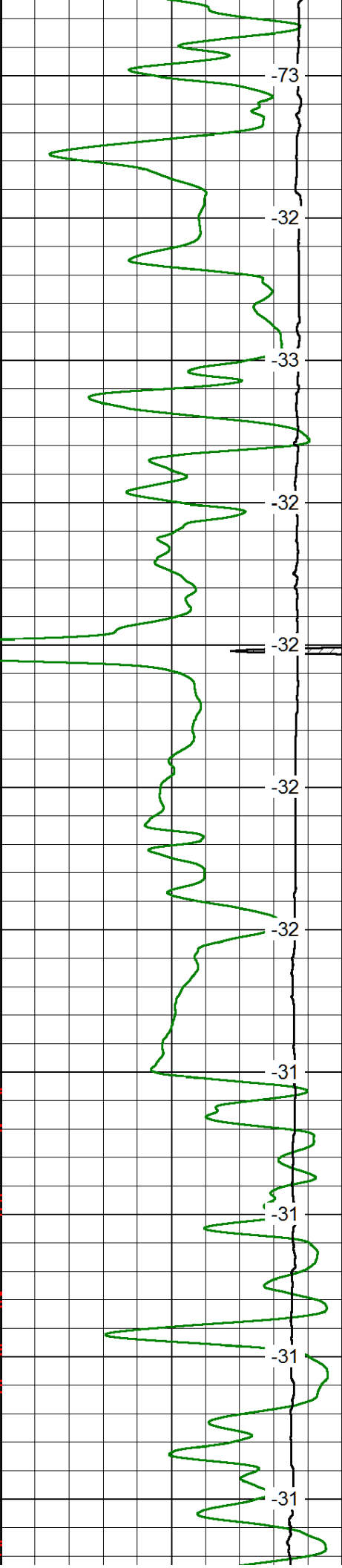
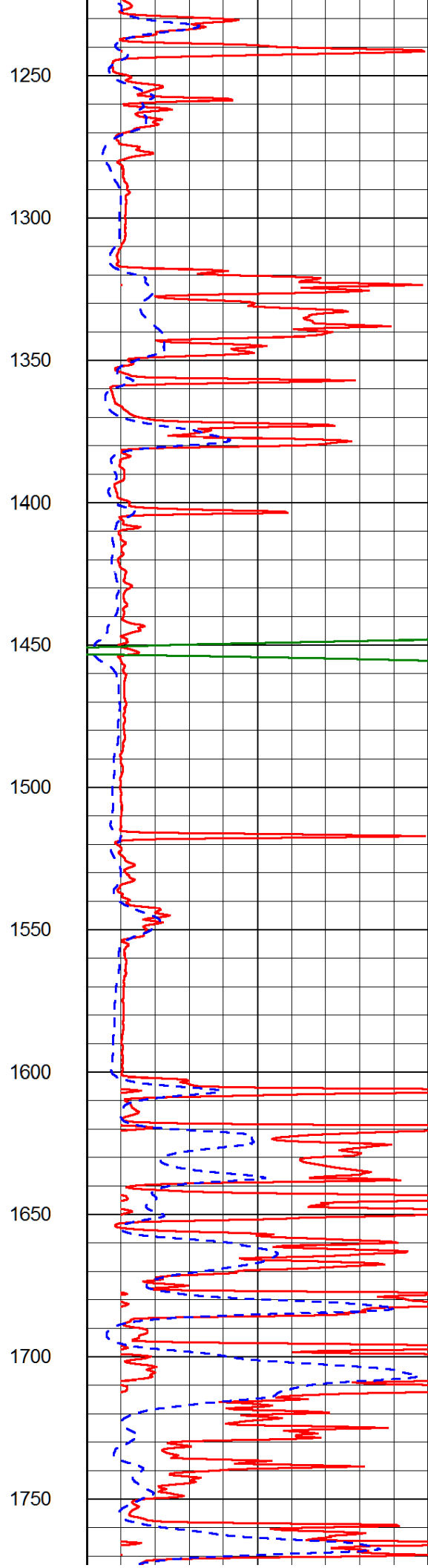
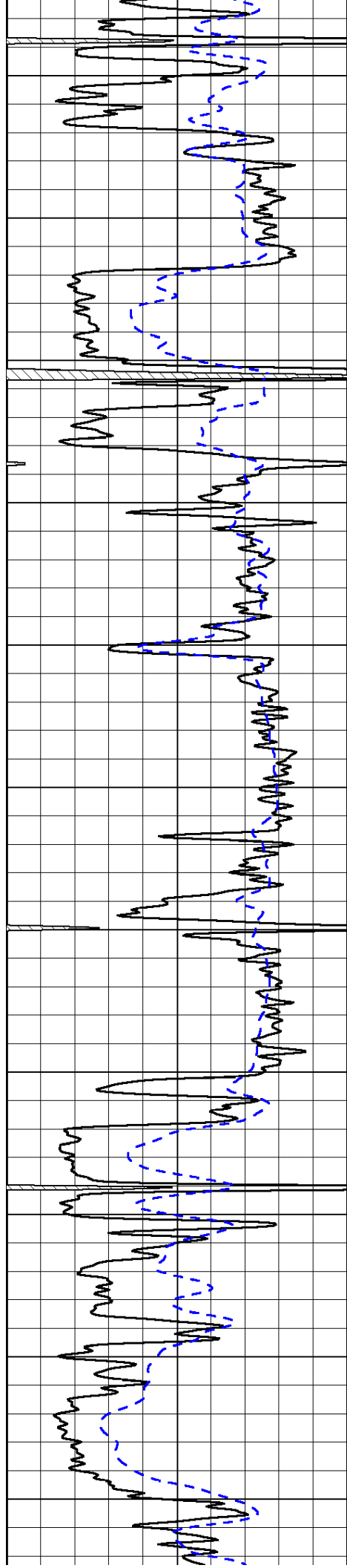
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-200	SP (mV)	0

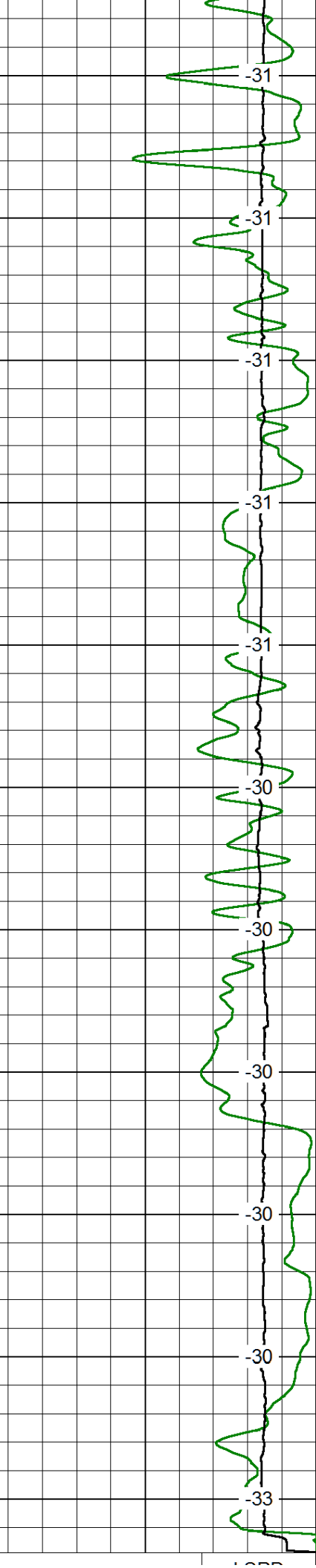
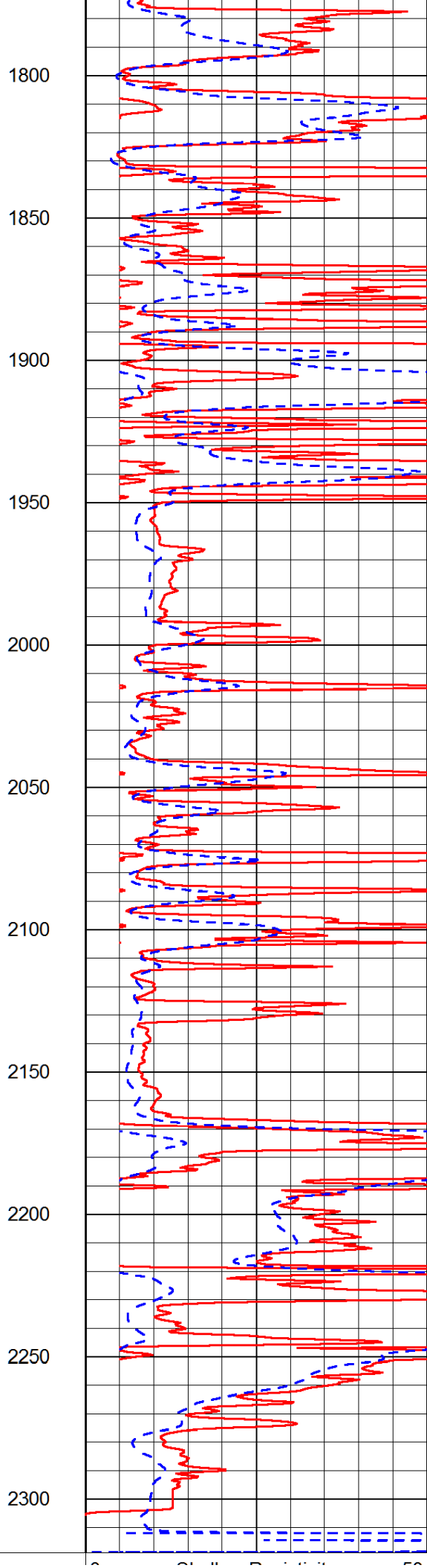
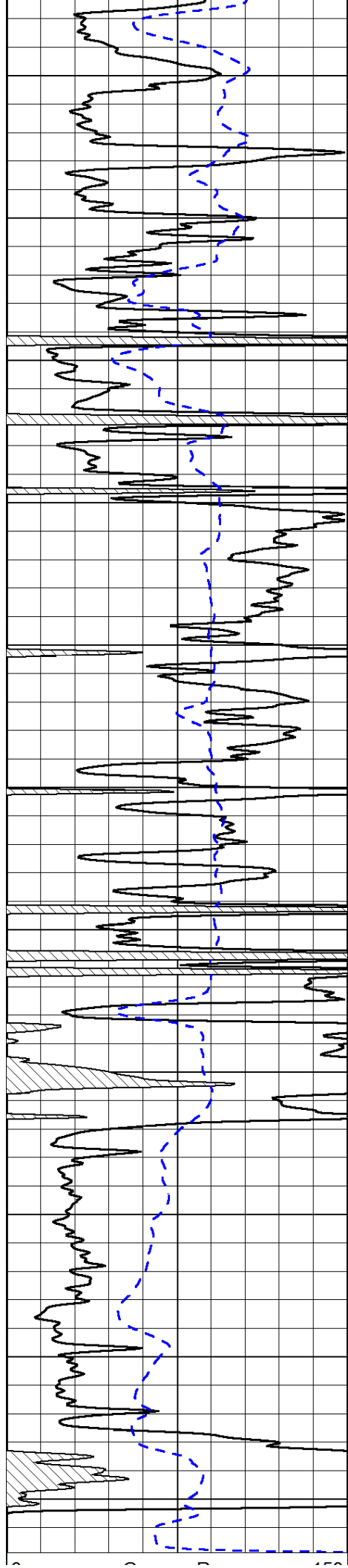
0	Shallow Resistivity	50
0	Deep Resistivity	50
1000	Conductivity	0
15000	Line Tension	0
50	Shallow Resistivity	500
50	Deep Resistivity	500

LSPD
0
0









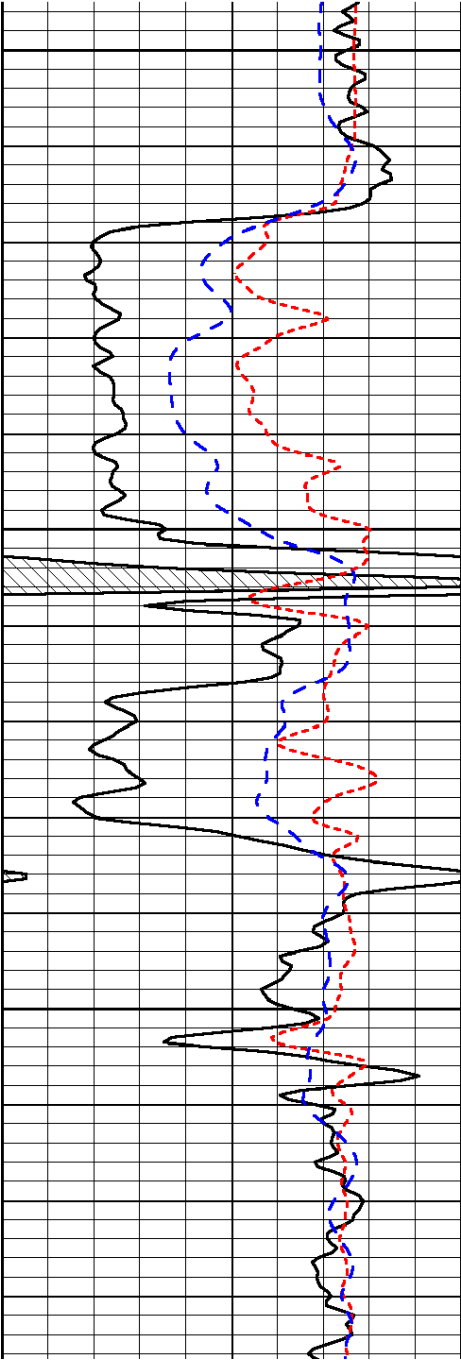
0	Gamma Ray	150
-200	SP (mV)	0

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

Database File:	rangehd.db
Dataset Pathname:	dil/rngstk
Presentation Format:	dil
Dataset Creation:	Mon Oct 13 08:23:59 2014
Charted by:	Depth in Feet scaled 1:240

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-160	RxoRt	40
-200	SP (mV)	0

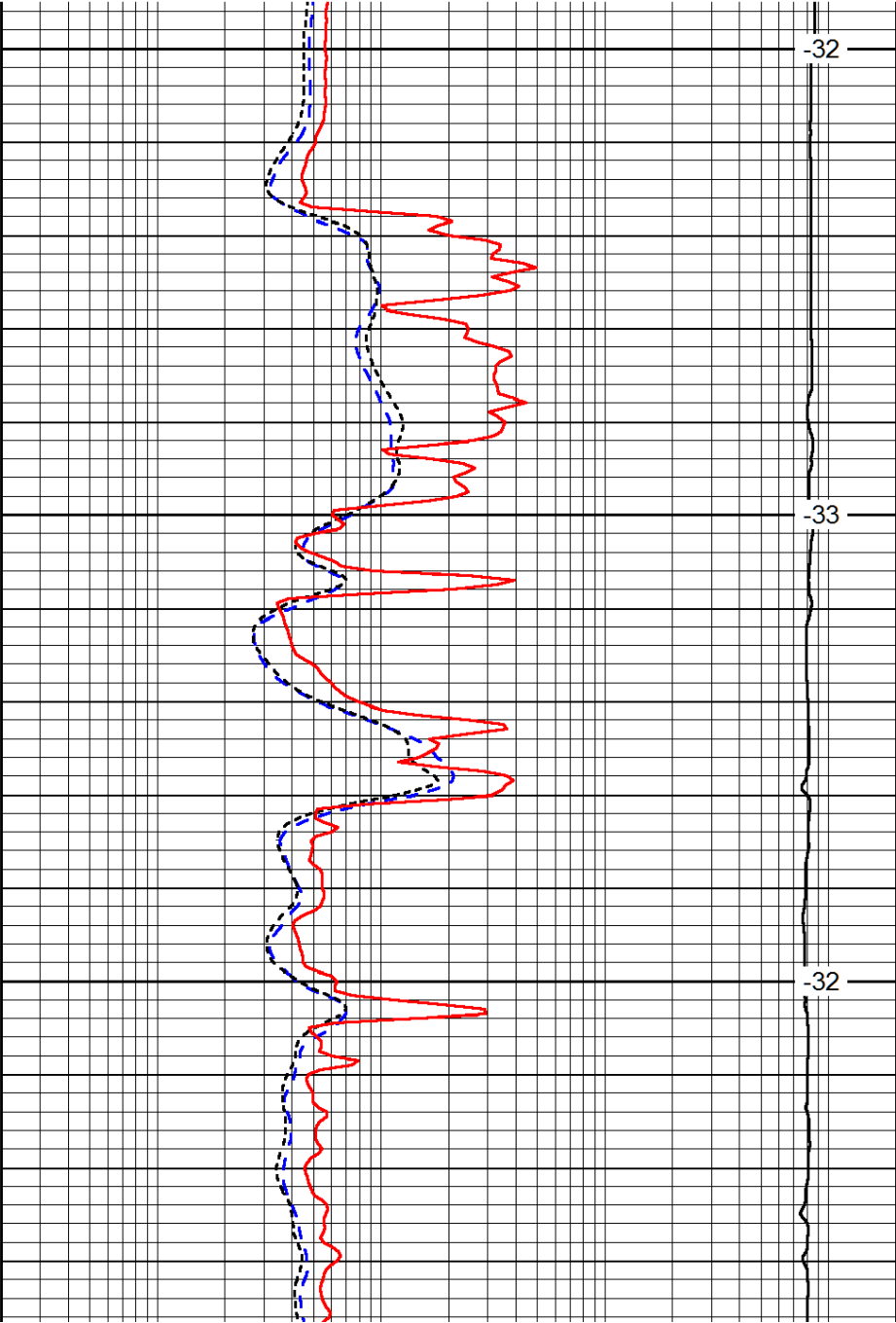
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0.2	Medium Resistivity	2000	
0.2	Shallow Resistivity	2000	
10000	Line Tension	0	



1300

1350

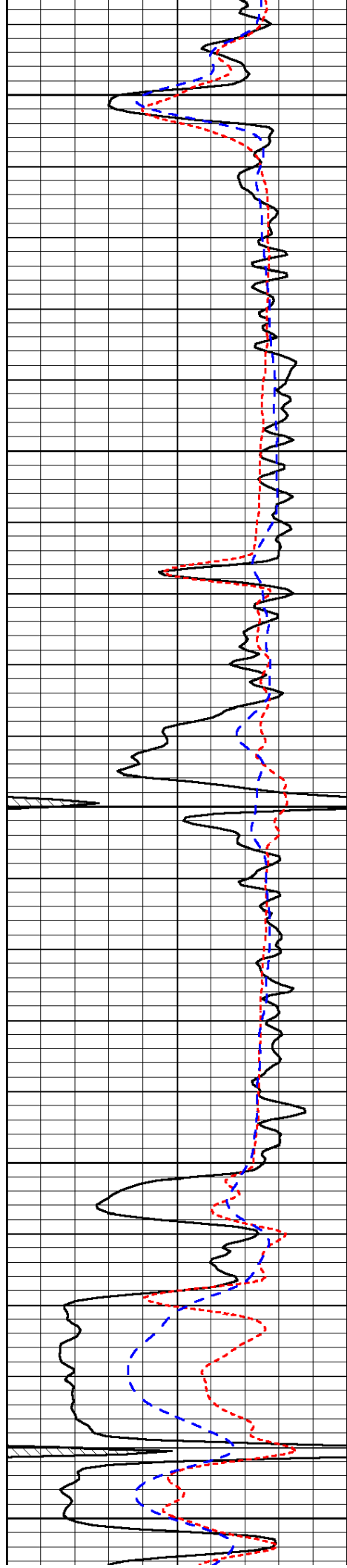
1400



-32

-33

-32



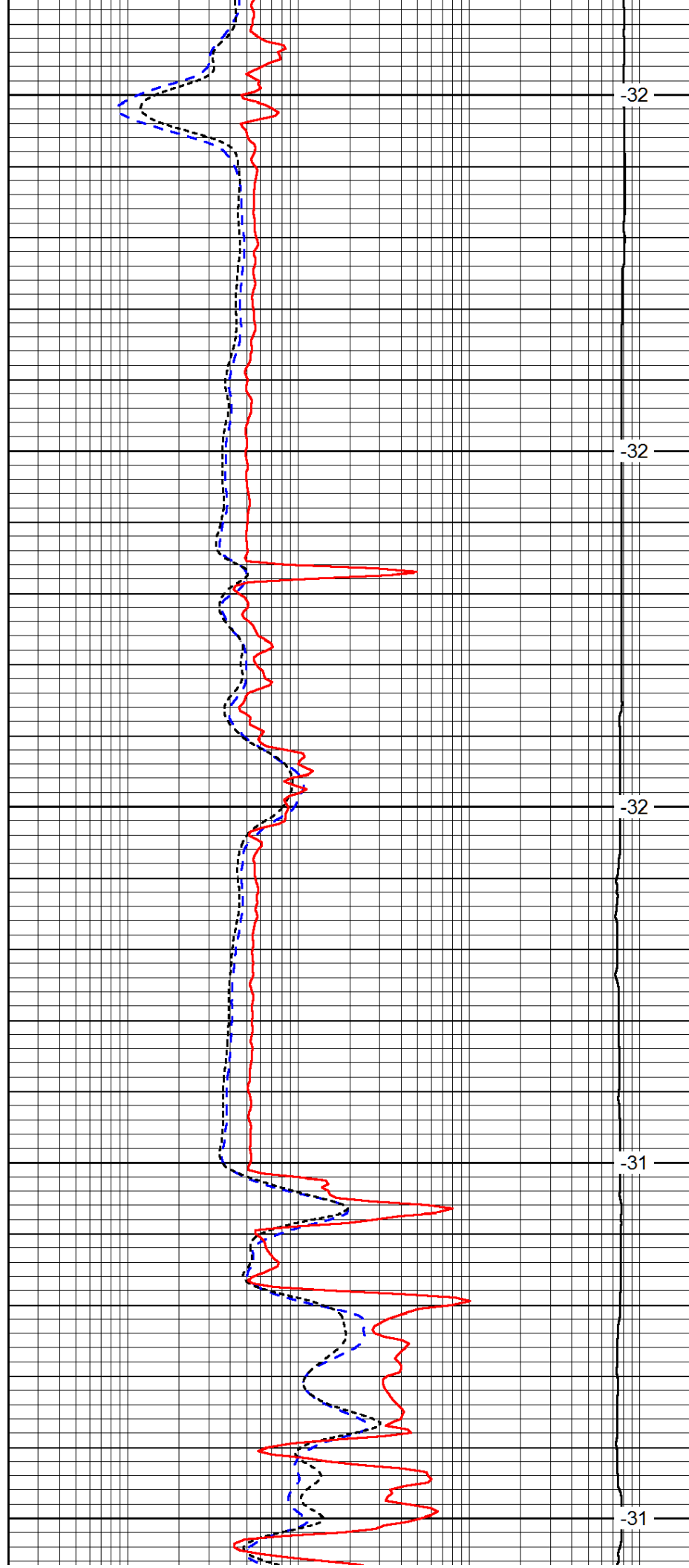
1450

1500

1550

1600

1650



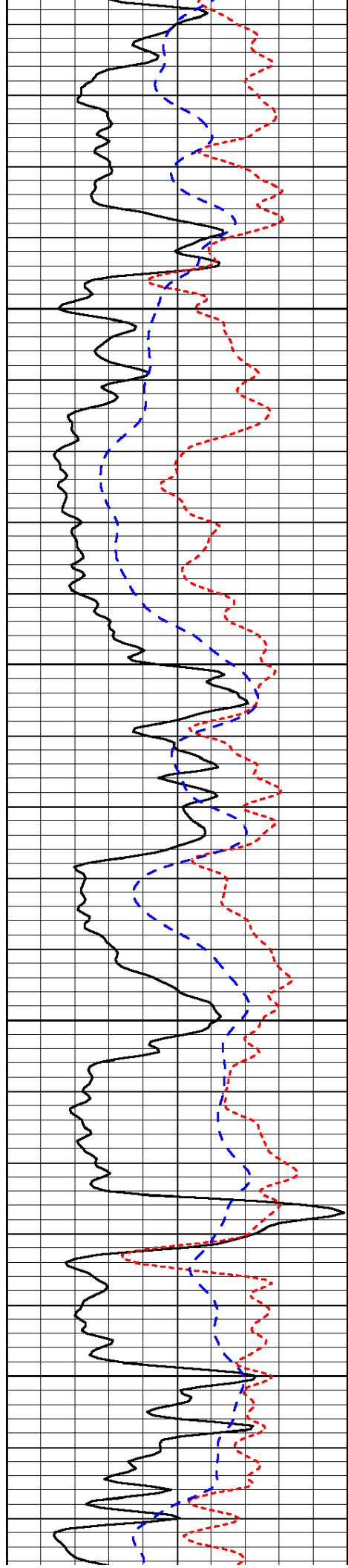
-32

-32

-32

-31

-31

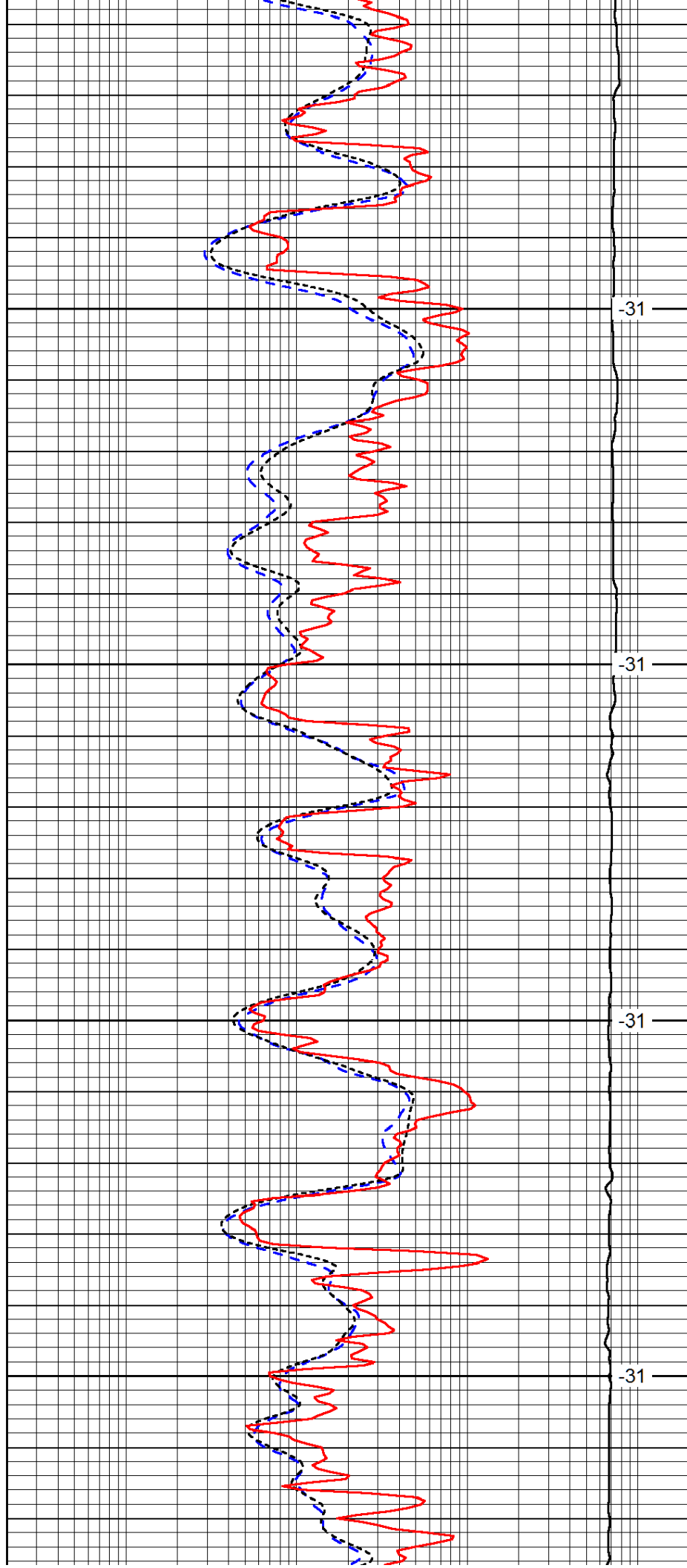


1700

1750

1800

1850

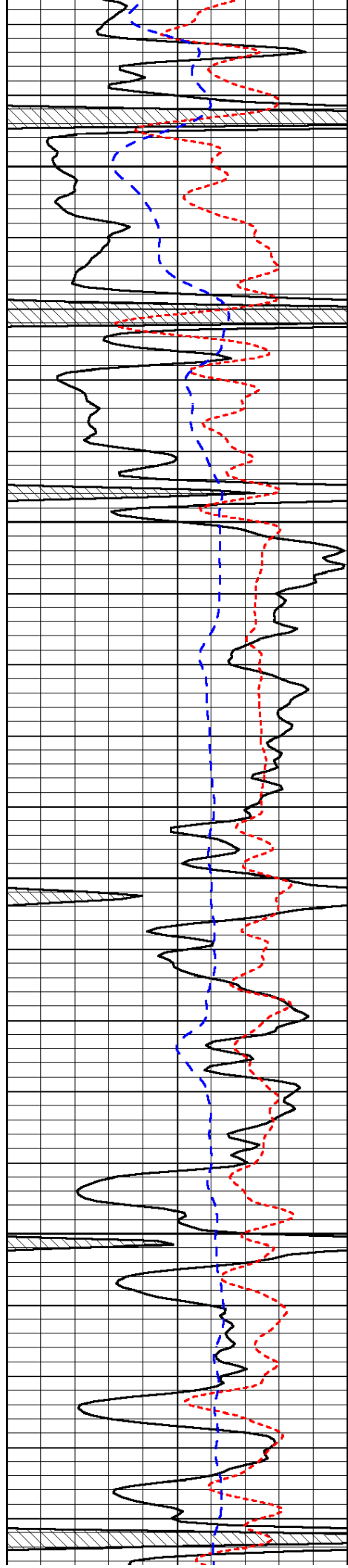


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-31

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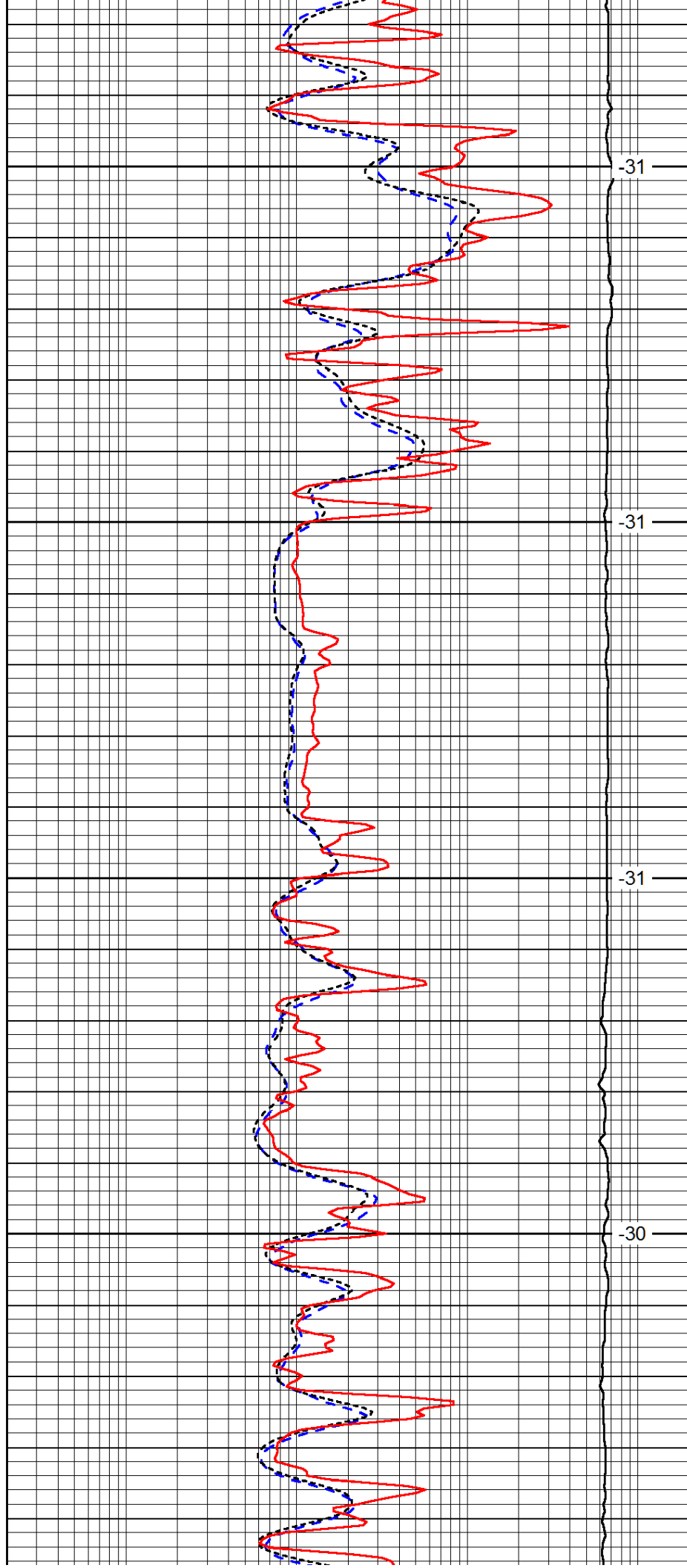


1900

1950

2000

2050

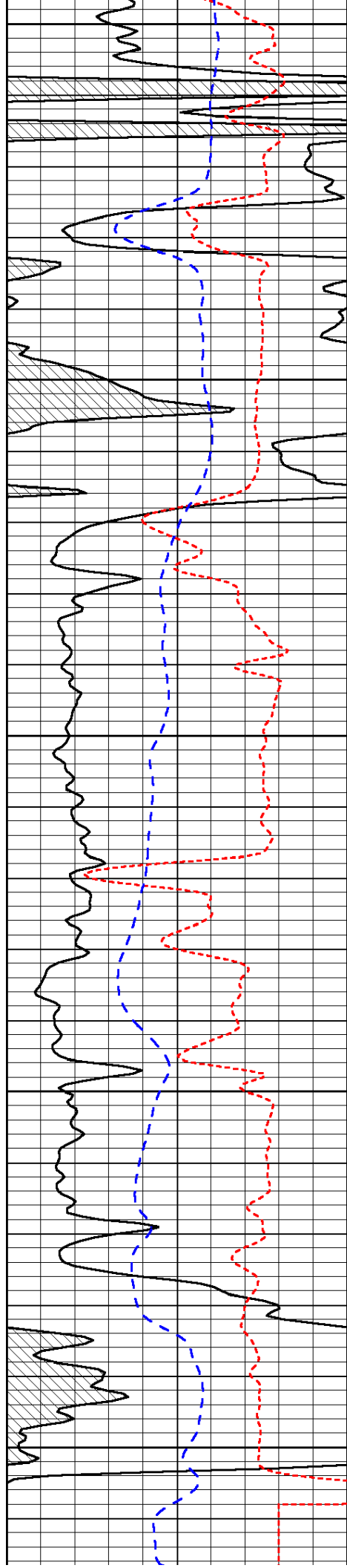


-31

-31

-31

-30



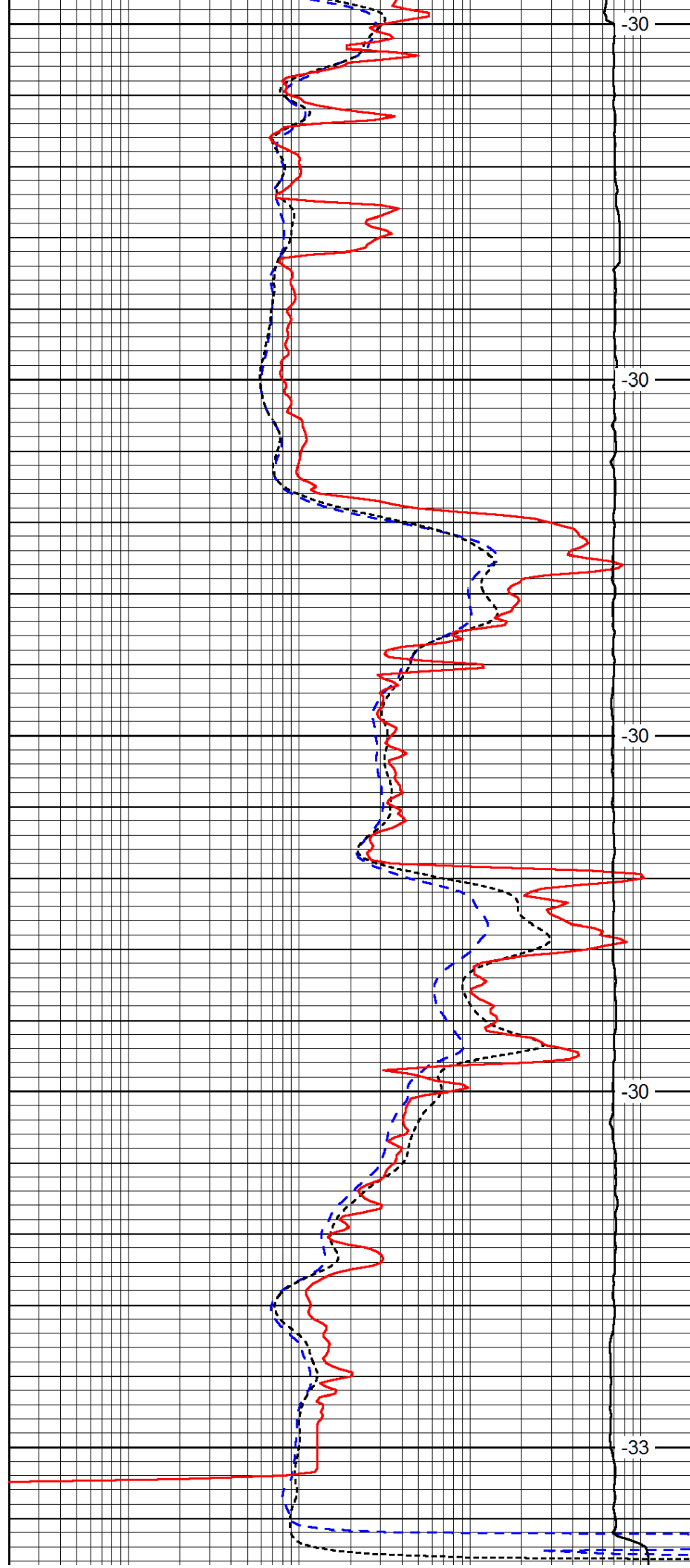
2100

2150

2200

2250

2300



-30

-30

-30

-30

-33

0	Gamma Ray	150
-160	RxoRt	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