



## Dual Induction Log

Pioneer Energy Services

API No.

15-039-21,179-00-00

Company **Murfin Drilling Company, Inc.**

Well **Urban #1-3**

Field **Wildcat**

County **Decatur**

State

**Kansas**

Location

**1850' FSL & 1650' FWL**

Other Services  
CNL/CDL  
MEI/BHCS

Sec: 3

Twp: 2S

Rge: 29W

Elevation

Permanent Datum Ground Level Kelly Bushing 5 Ft. Above Perm. Datum

Log Measured From Kelly Bushing

Drilling Measured From Kelly Bushing

Date 6/5/2013

Run Number One

Depth Driller 4100

Depth Logger 4101

Bottom Logged Interval 4100

Top Log Interval 00

Casing Driller 8.625 @ 263

Casing Logger 262

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 1700

Density / Viscosity 9.3 62

pH / Fluid Loss 10.0 6.4

Source of Sample Flowline

Rm @ Meas. Temp 0.70 @ 65

Rmf @ Meas. Temp 0.53 @ 65

Rmc @ Meas. Temp 0.95 @ 65

Source of Rmf / Rmc Charts

Rm @ BHT .39 @ 117

Operating Rig Time 5 1/2 Hours

Max Rec. Temp. F 117

Equipment Number 10

Location Hays

Recorded By D. Kerr

Witnessed By Robert Stolzle

<<< 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

Oberlin KS, 5 North, 1 3/4 West, North Into

Database File: murfin\_urban\_1\_3hd.db

Dataset Pathname: DIL/murfstk

Presentation Format: dil

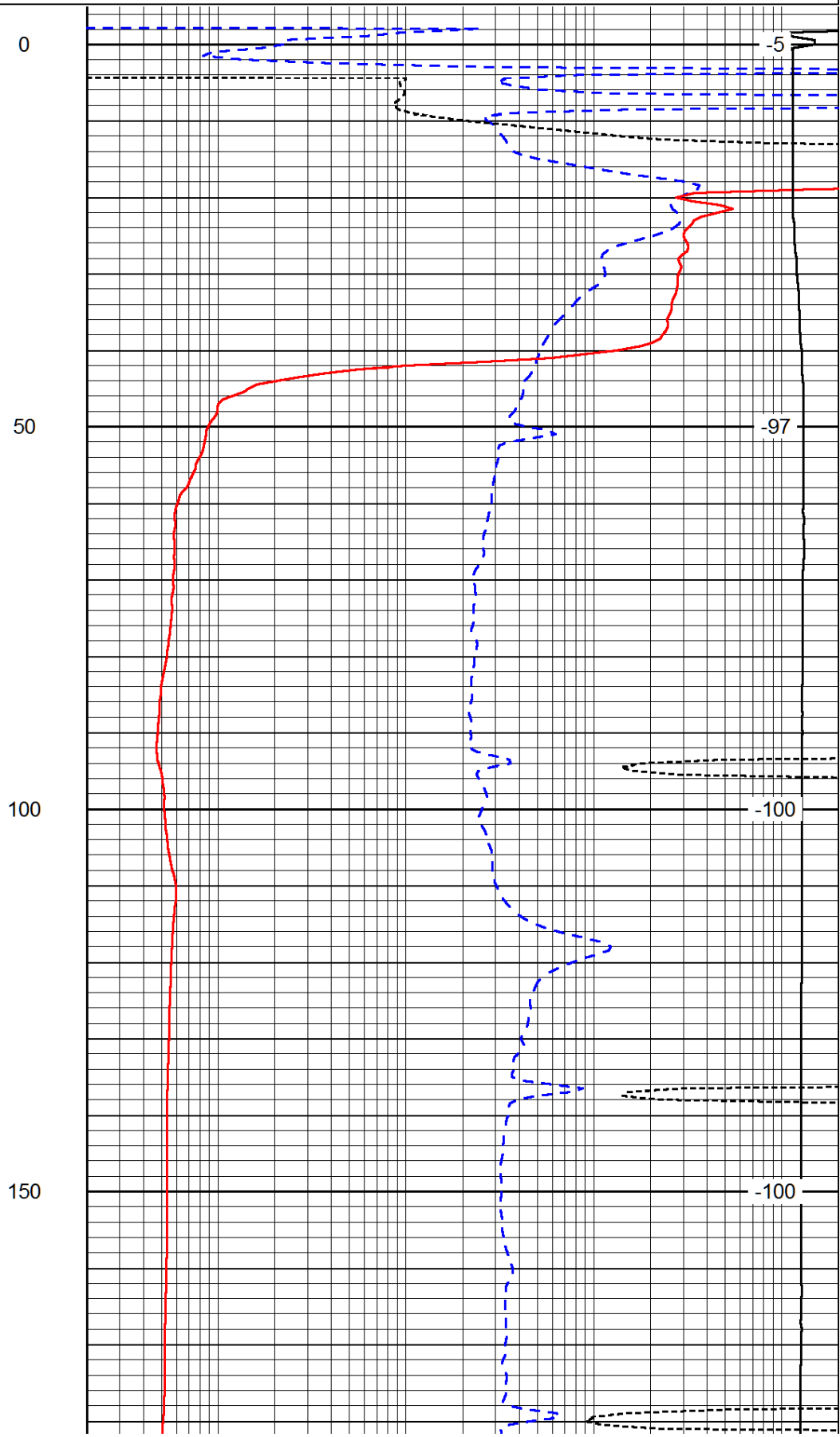
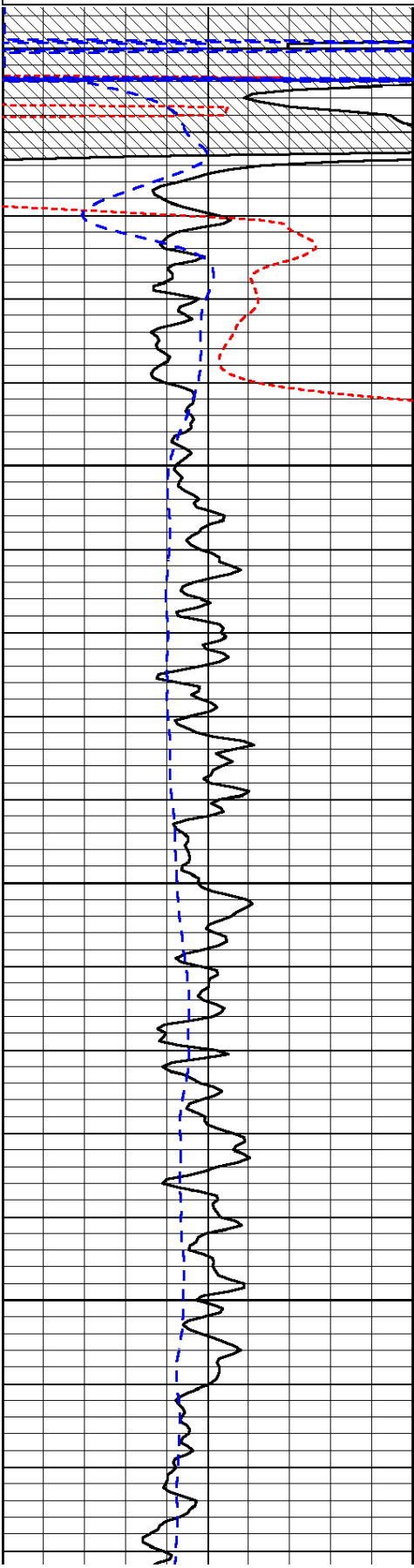
Dataset Creation: Wed Jun 05 23:37:43 2013

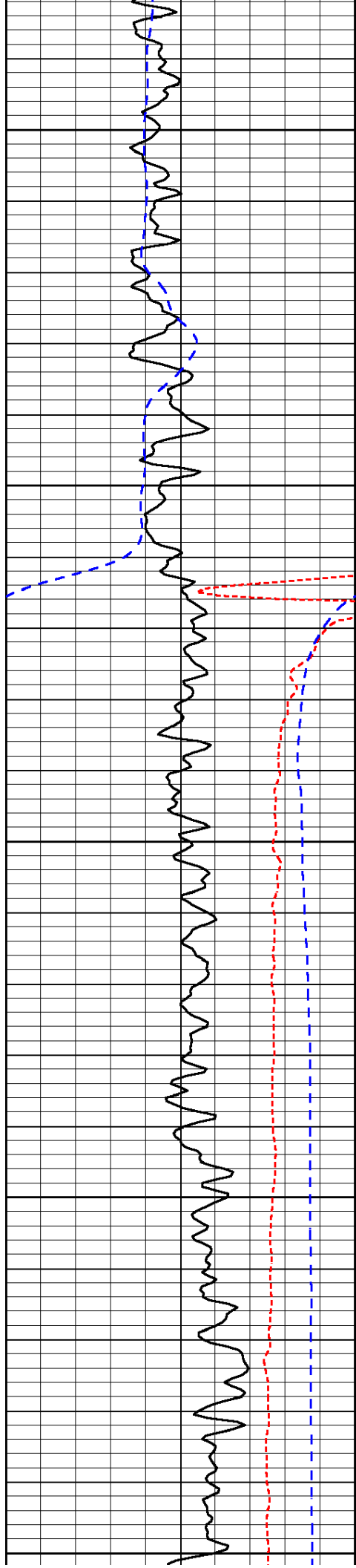
Charted by: Depth in Feet scaled 1:240

|      |                  |     |
|------|------------------|-----|
| 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)





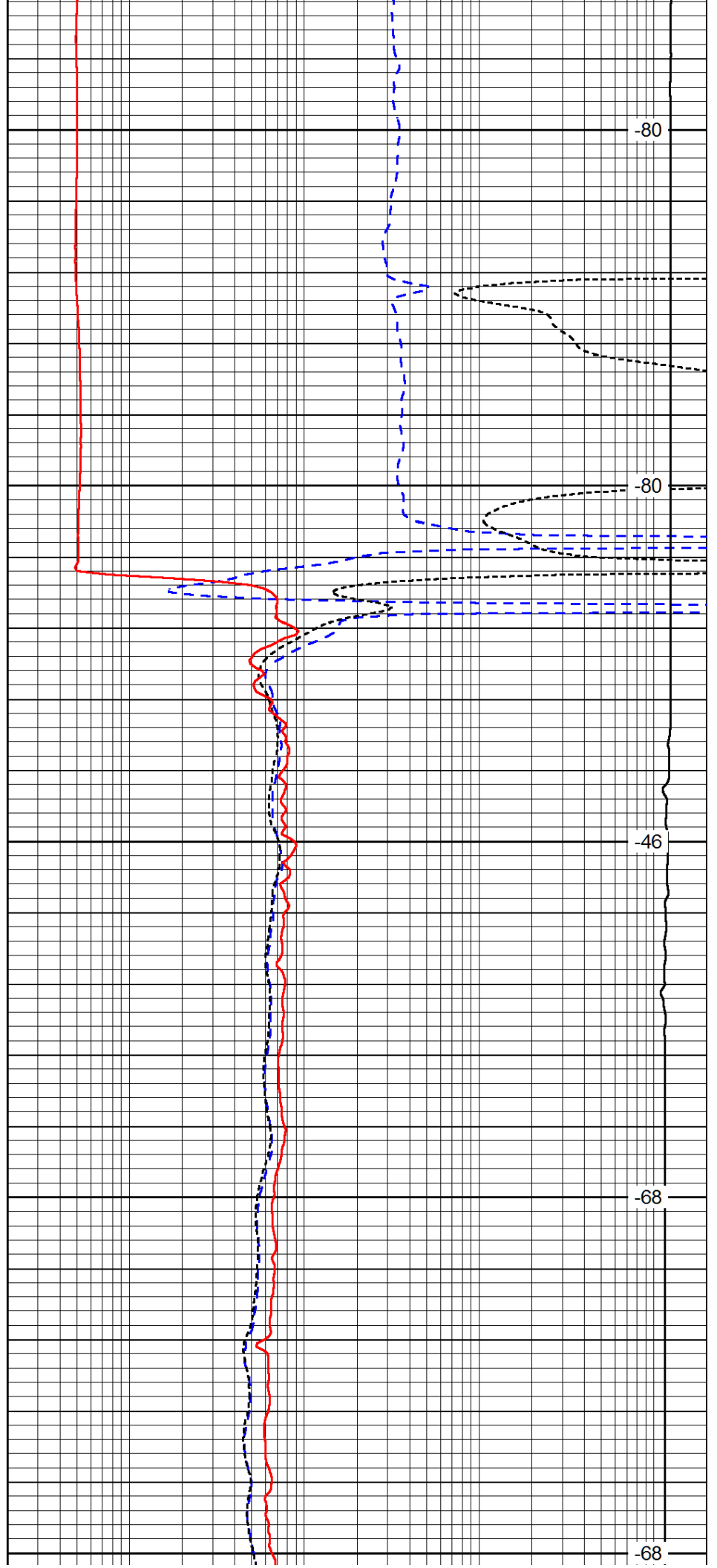
200

250

300

350

400



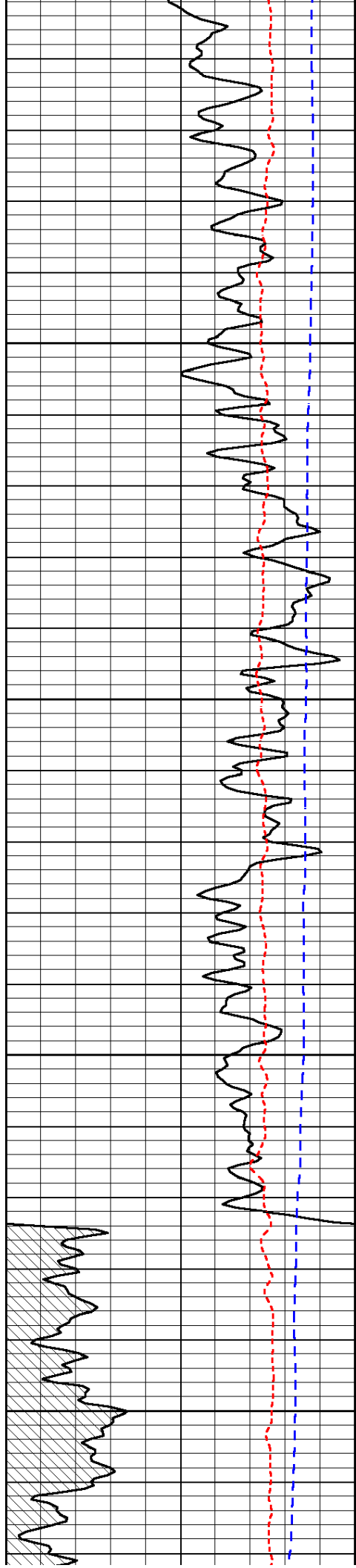
-80

-80

-46

-68

-68

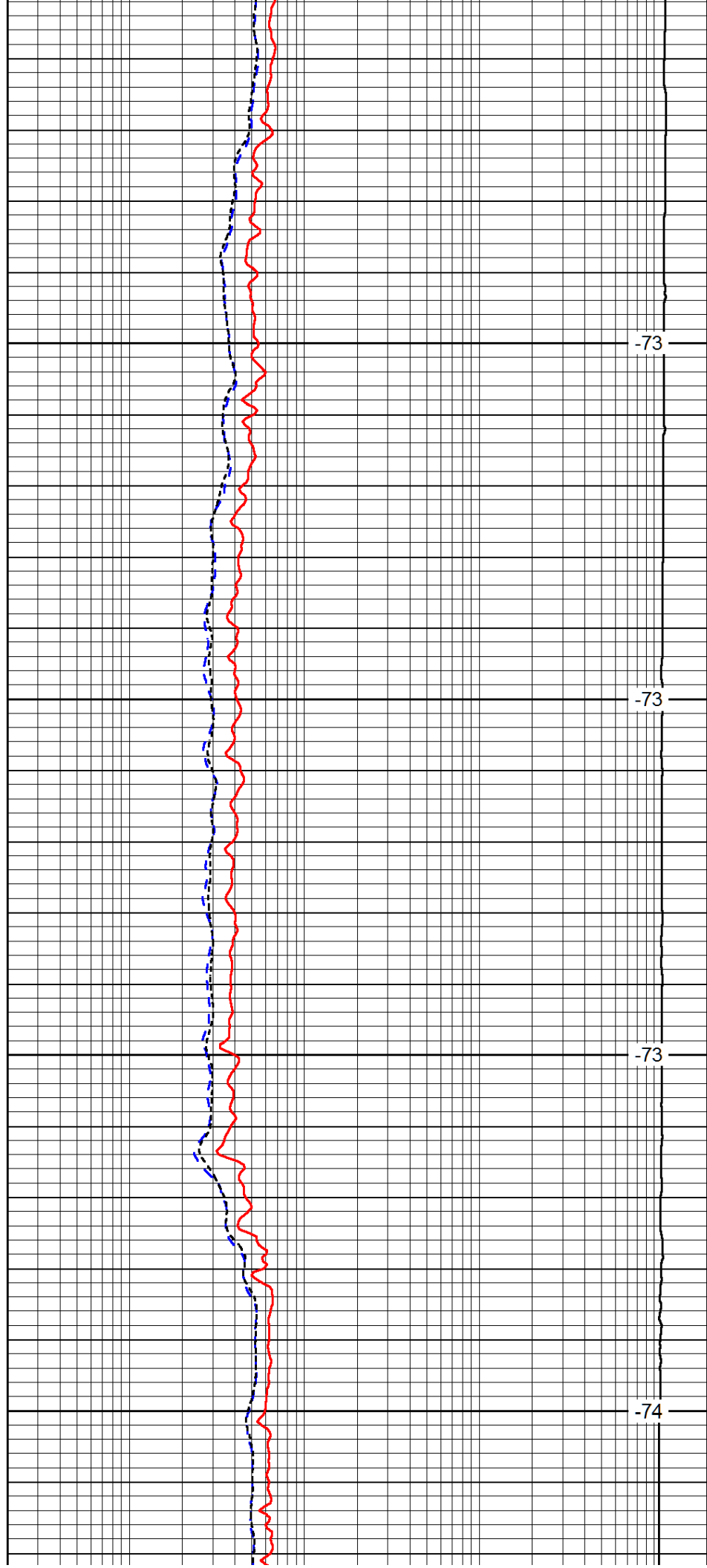


450

500

550

600

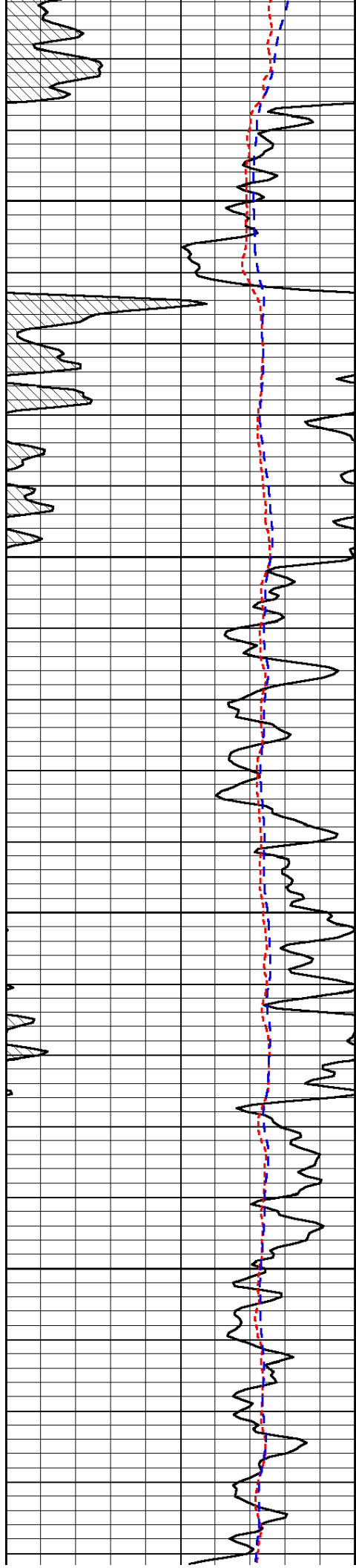


-73

-73

-73

-74

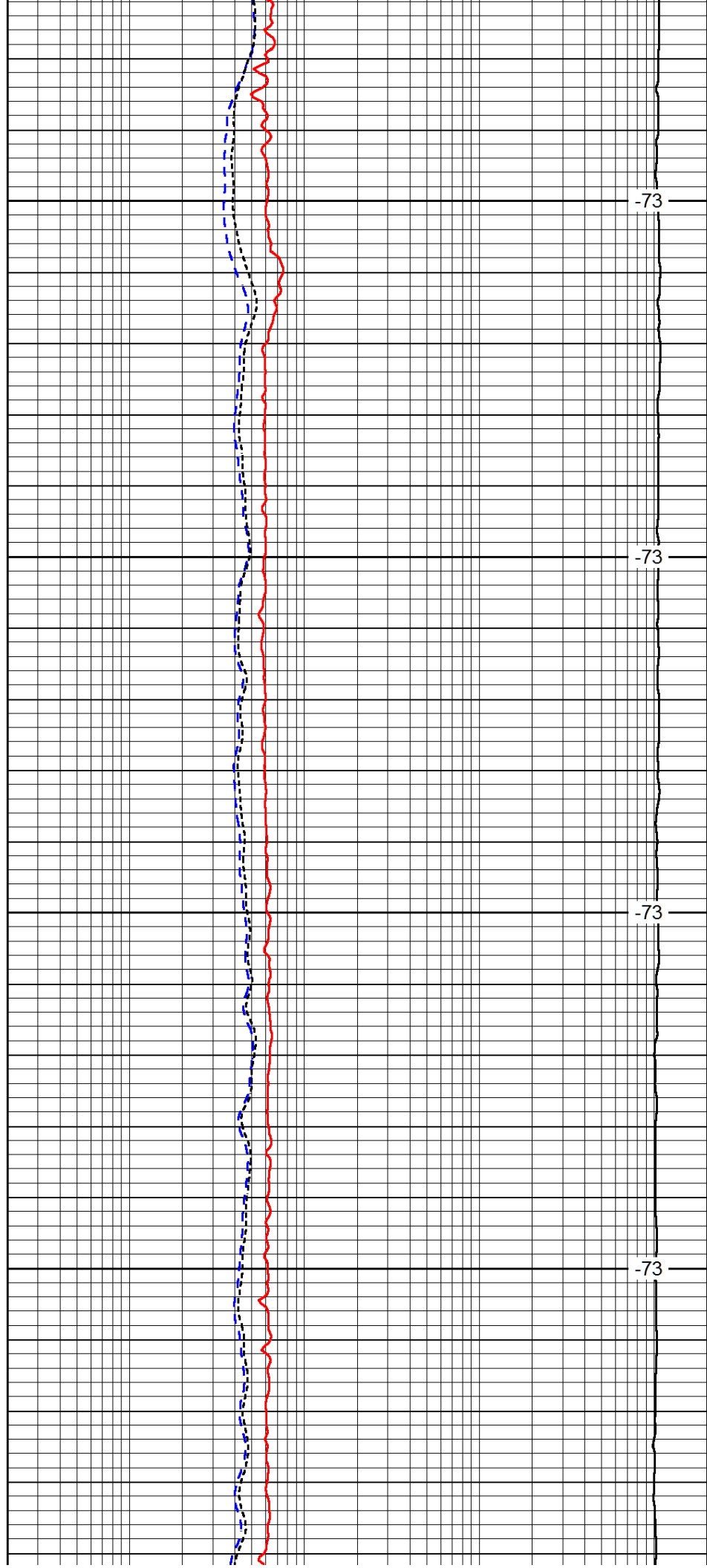


650

700

750

800

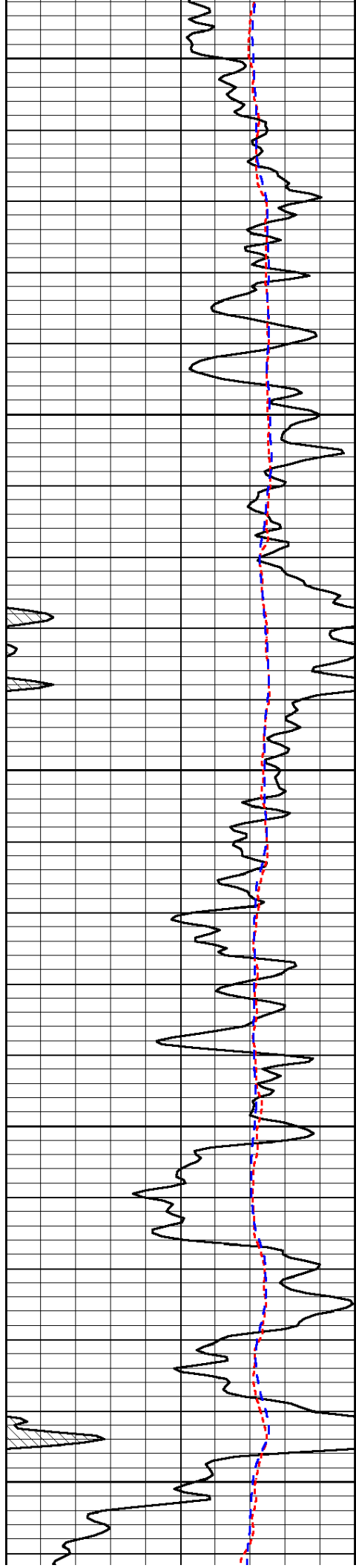


-73

-73

-73

-73



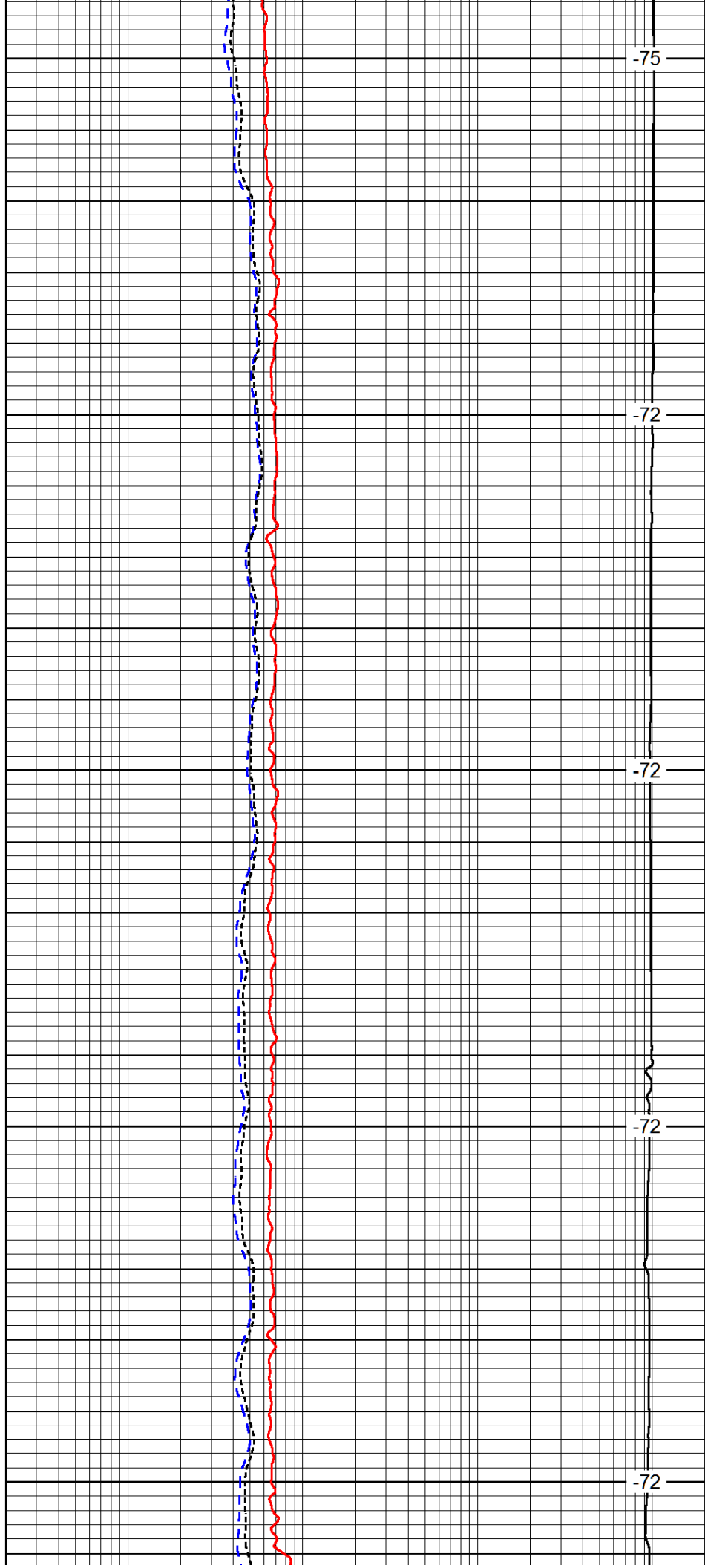
850

900

950

1000

1050



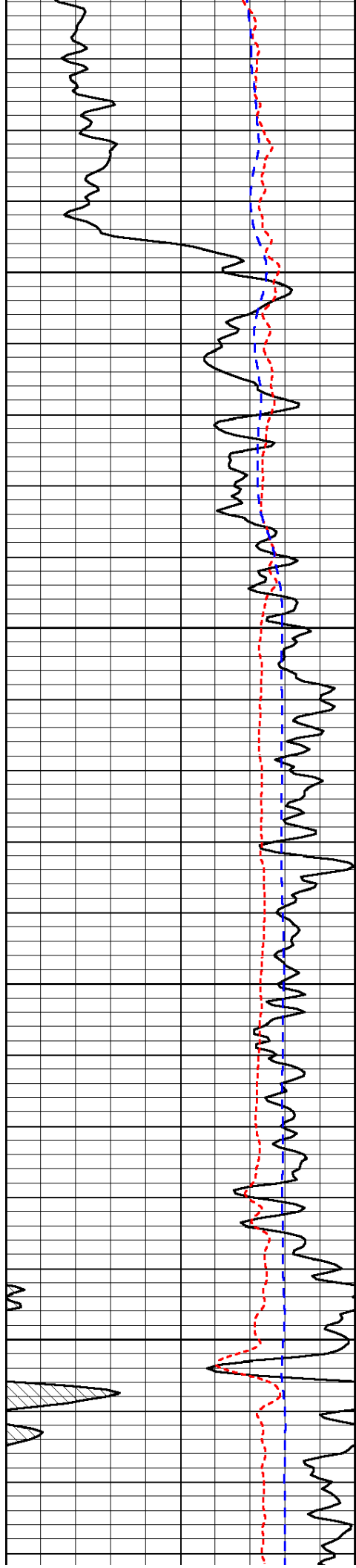
-75

-72

-72

-72

-72

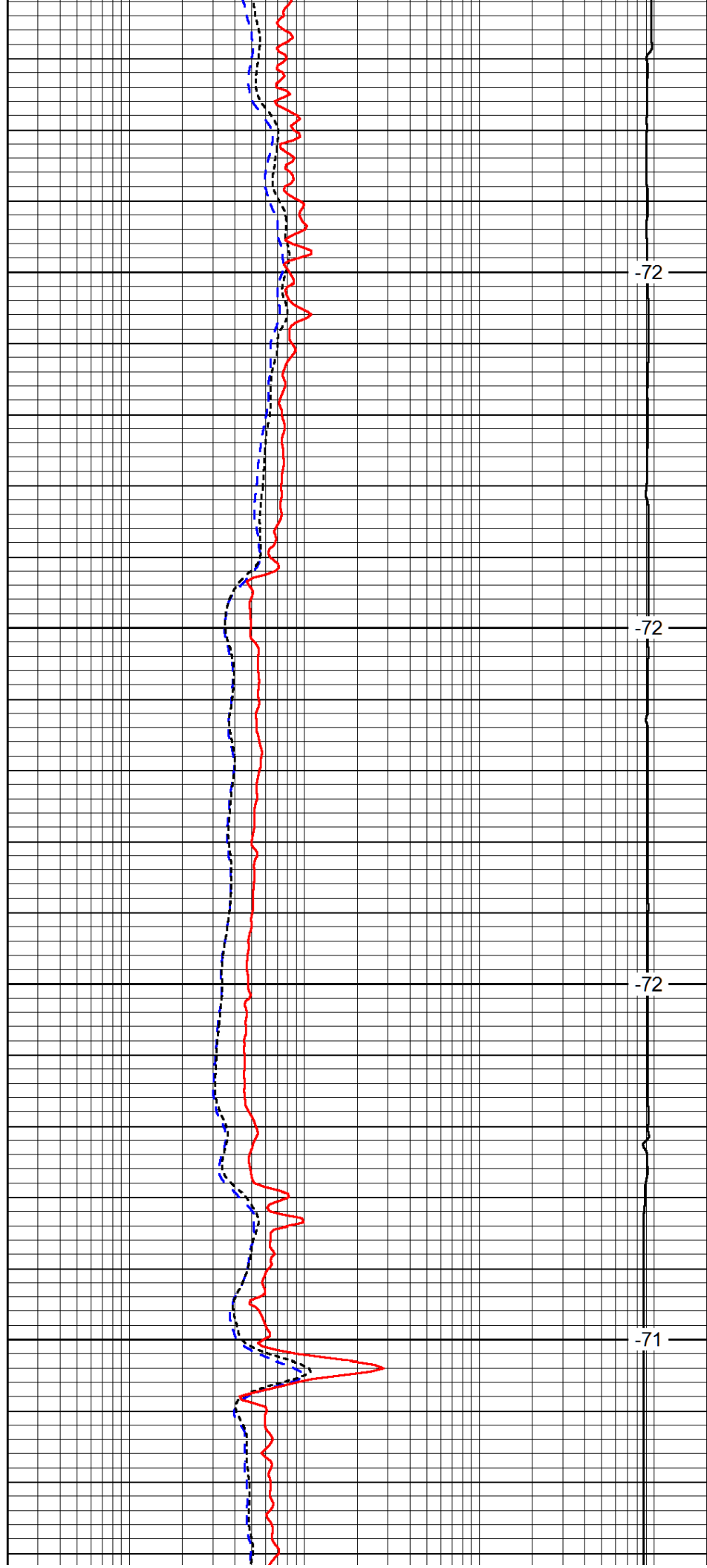


1100

1150

1200

1250

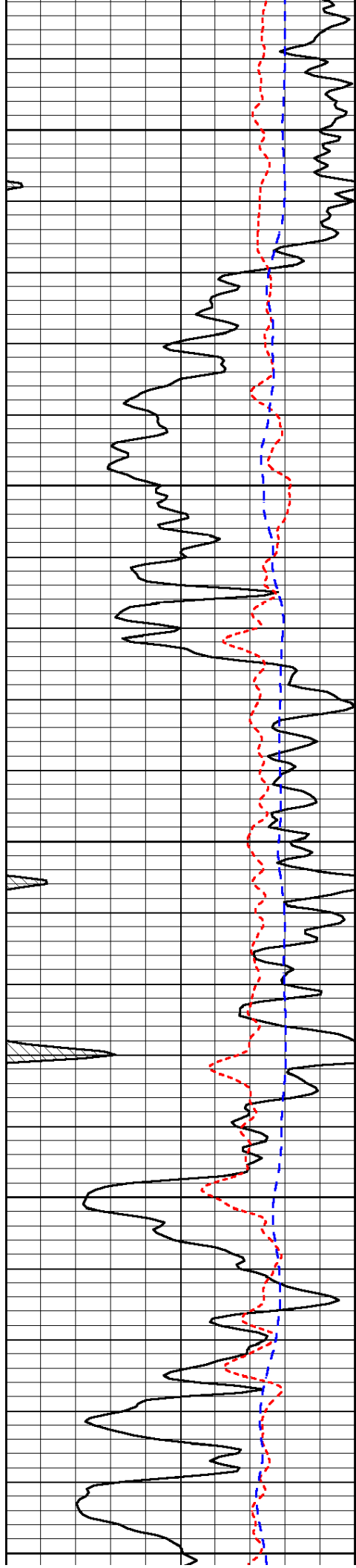


-72

-72

-72

-71



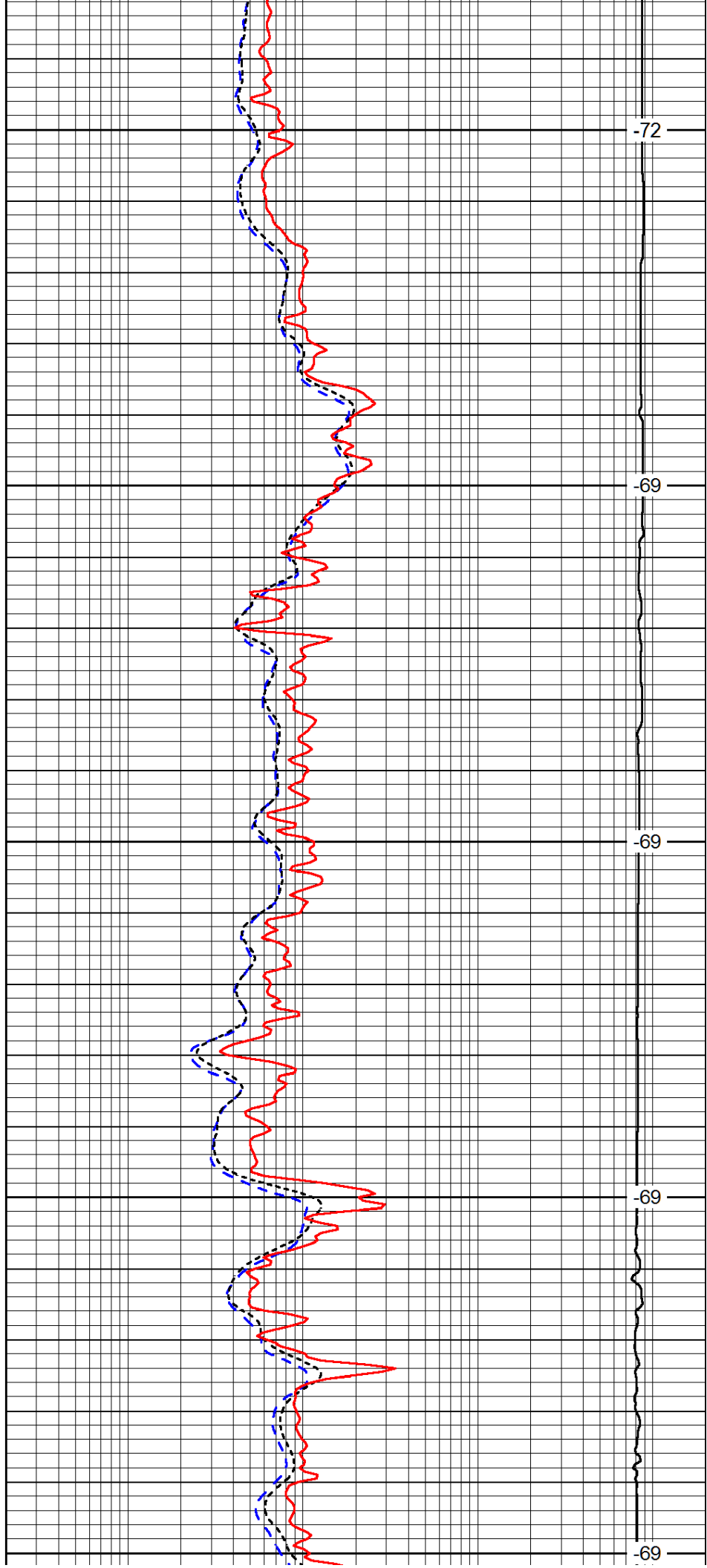
1300

1350

1400

1450

1500



-72

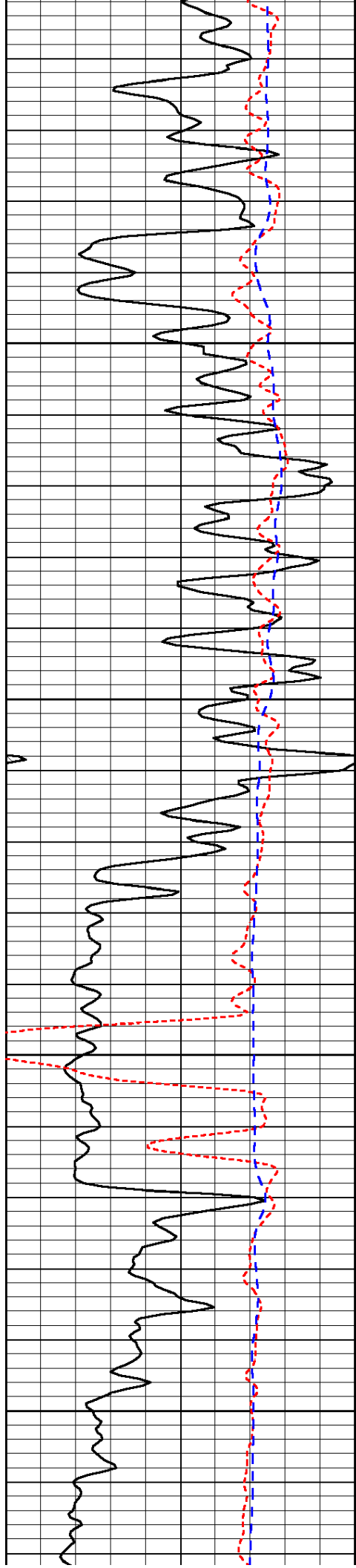
-69

-69

-69

-69



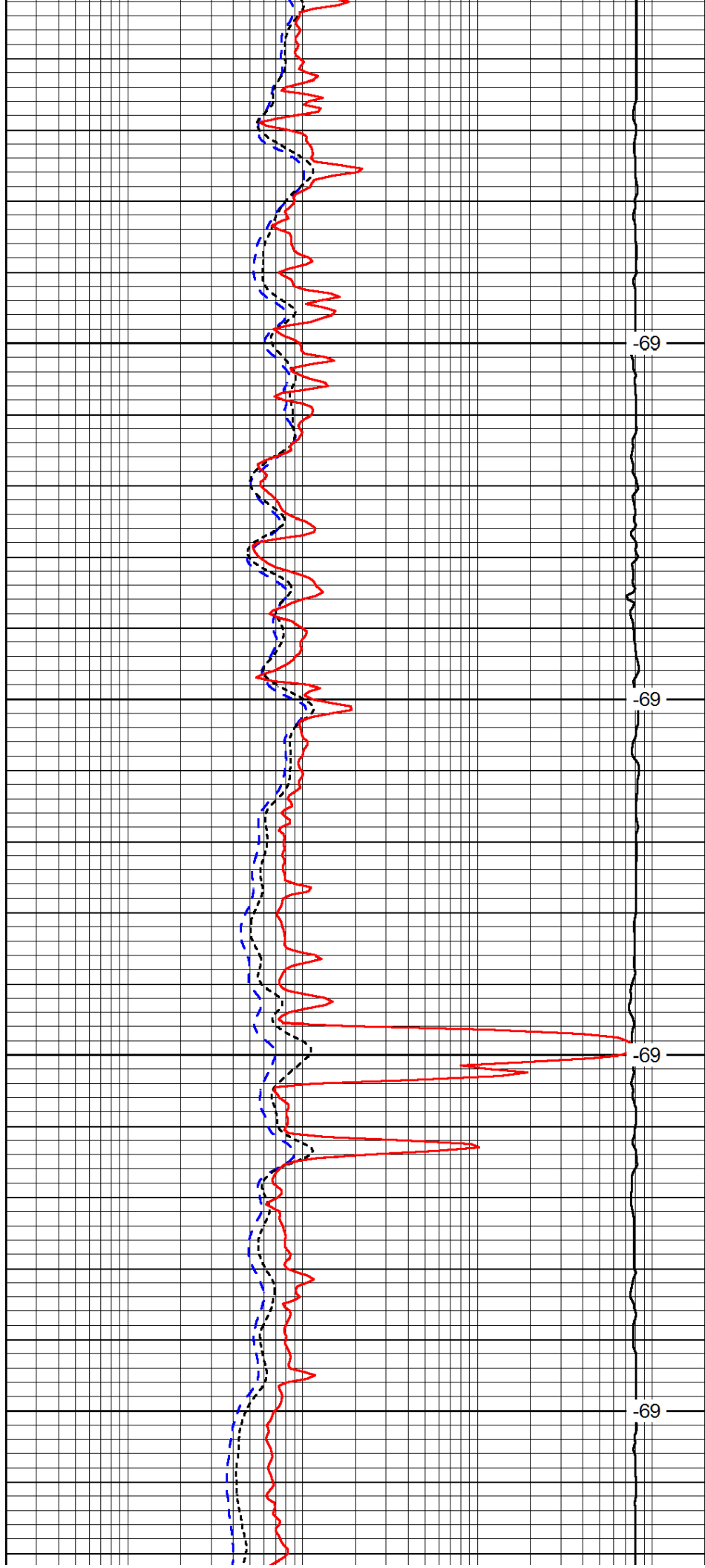


1550

1600

1650

1700

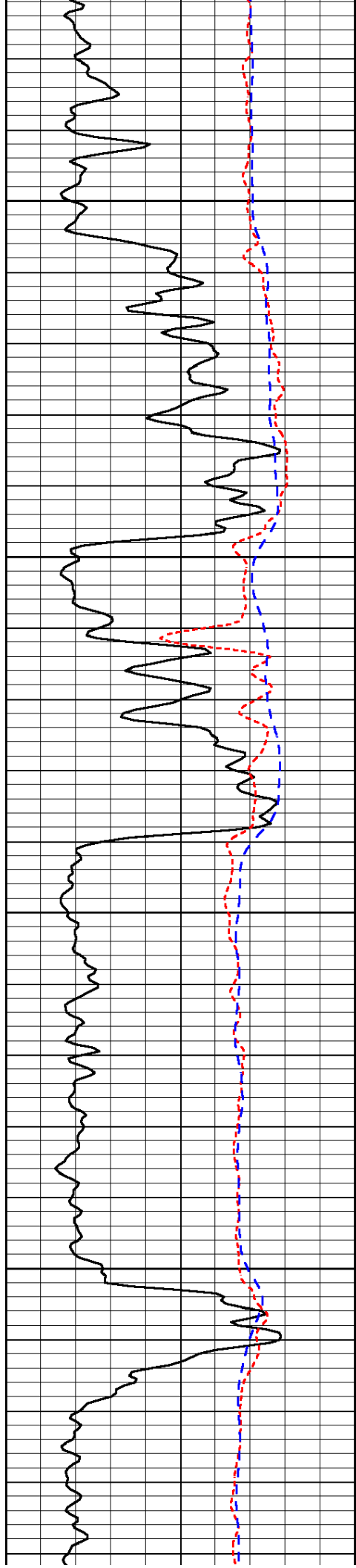


1550

1600

1650

1700

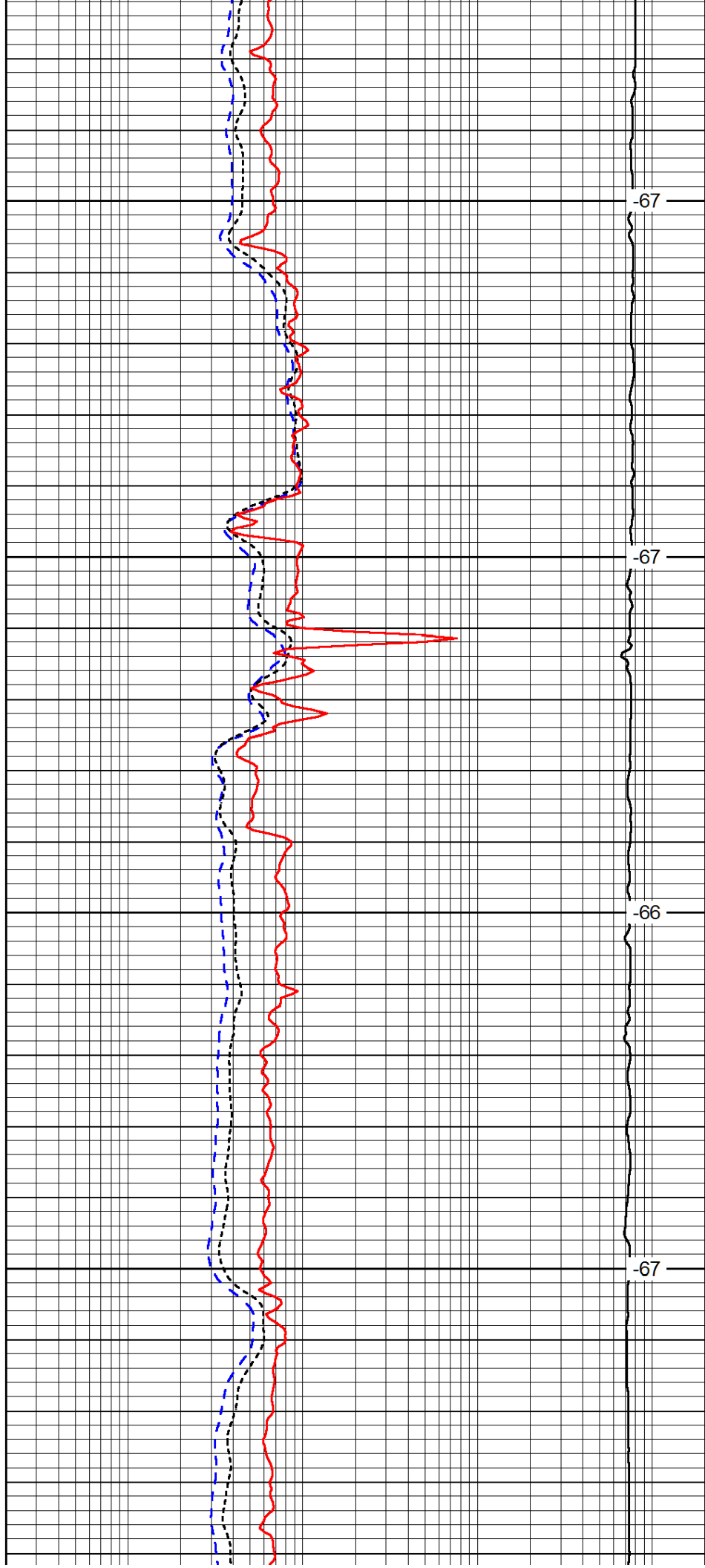


1750

1800

1850

1900

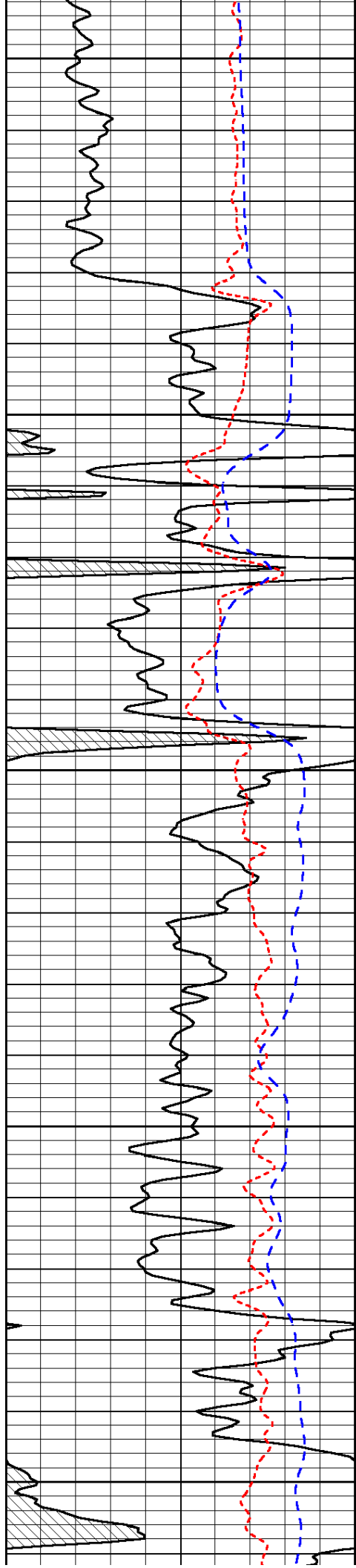


-67

-67

-66

-67



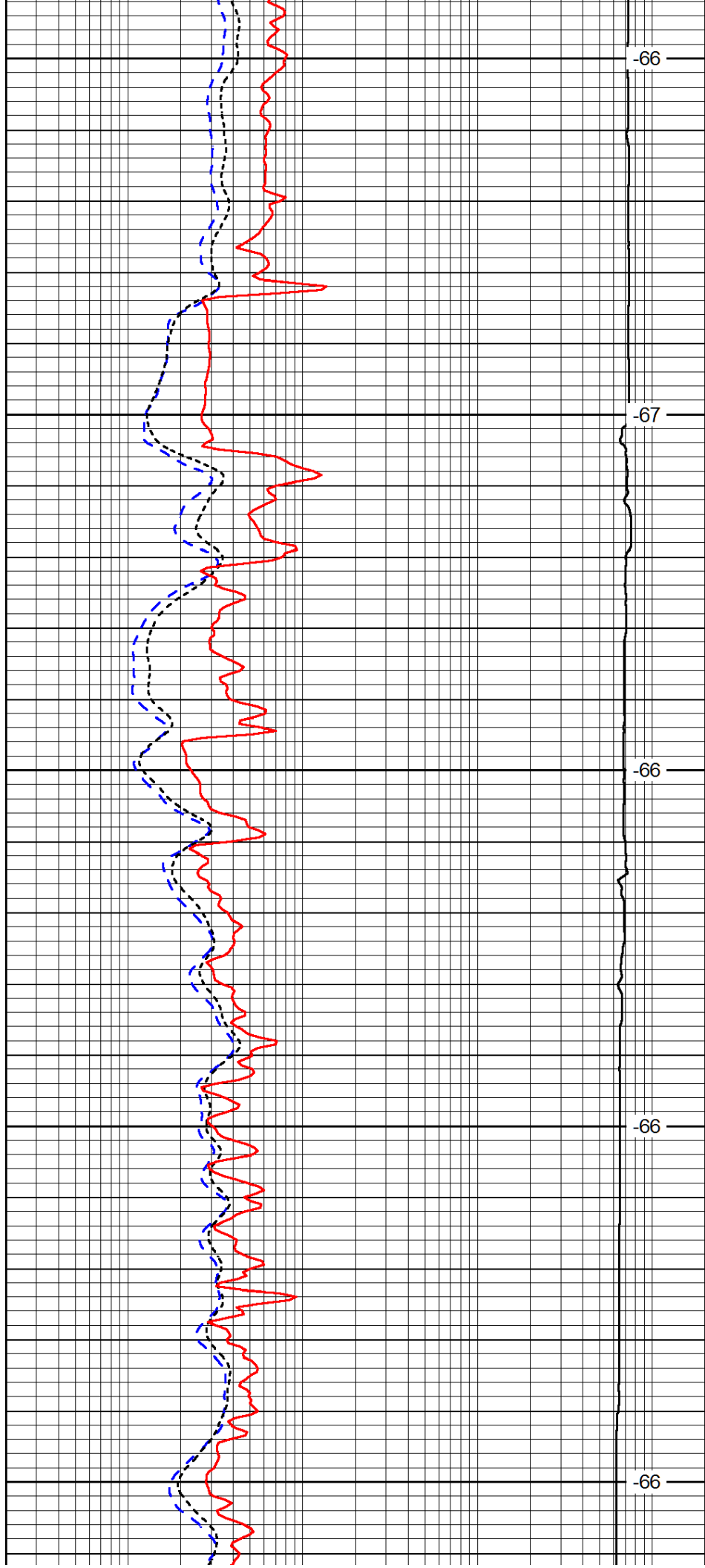
1950

2000

2050

2100

2150



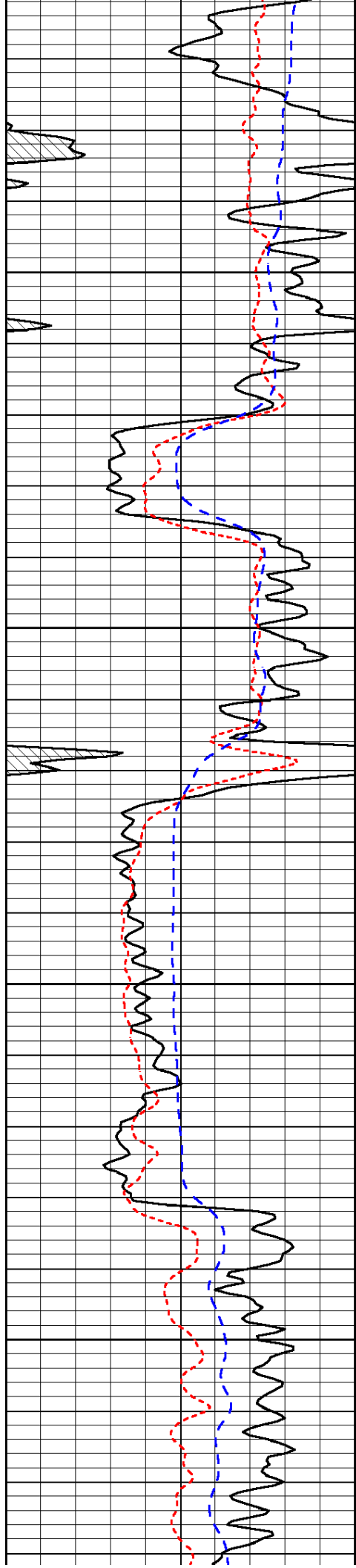
-66

-67

-66

-66

-66

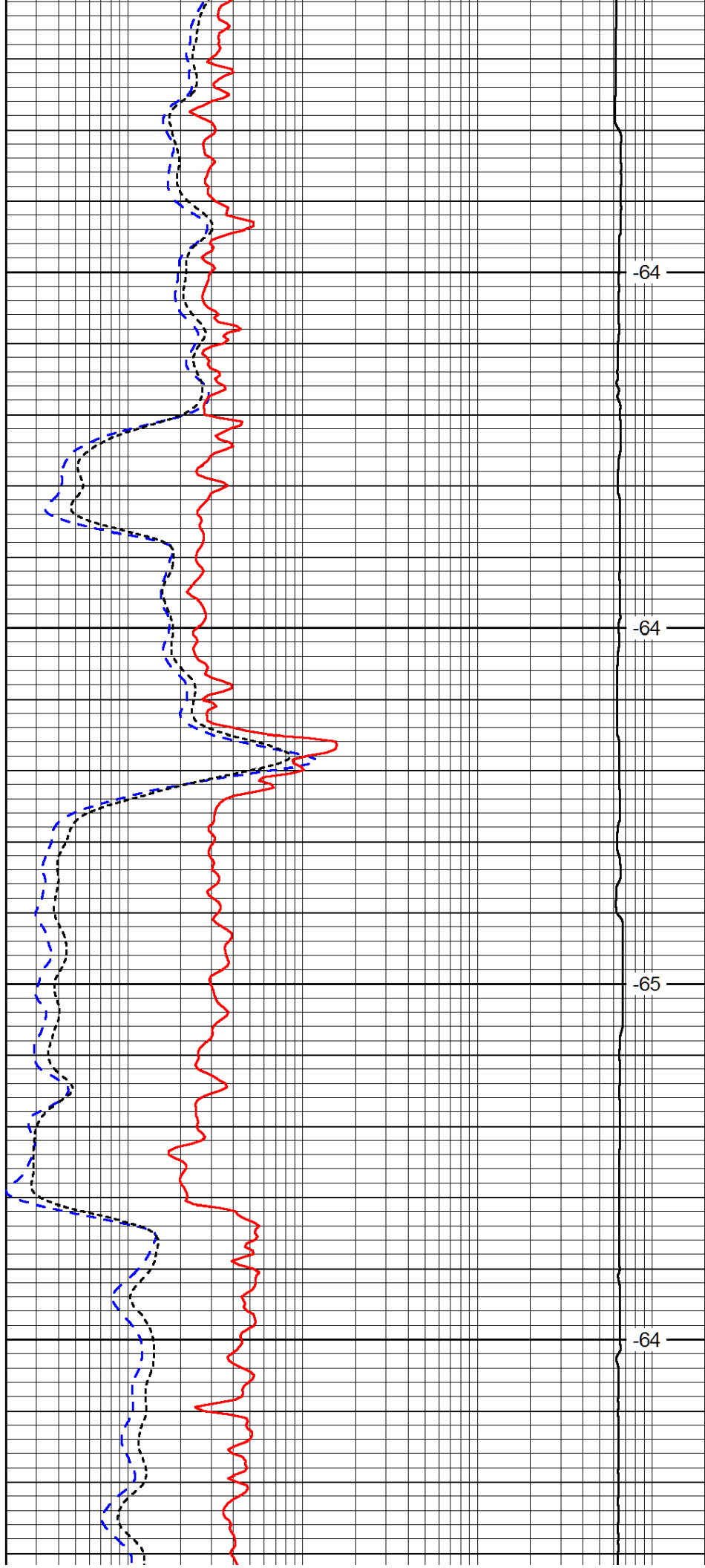


2200

2250

2300

2350

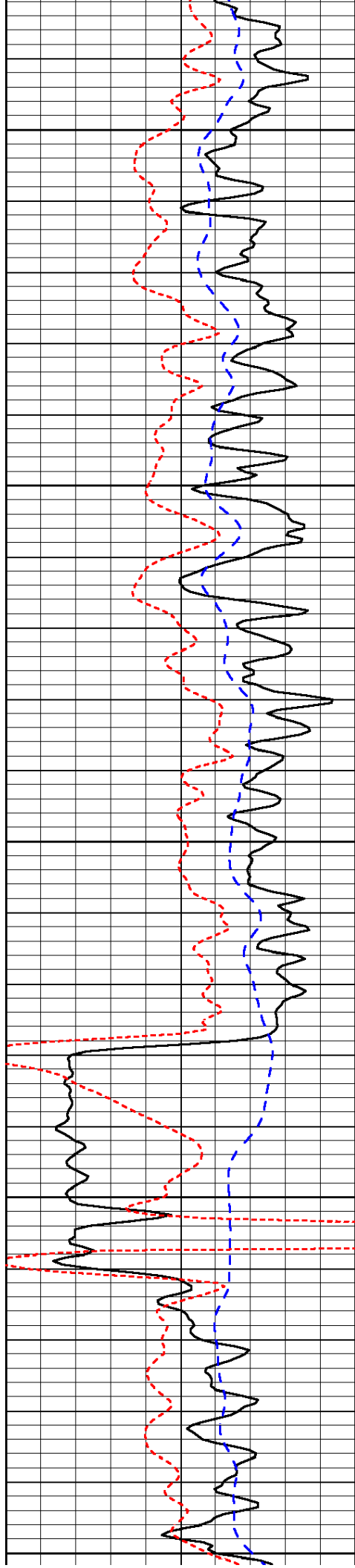


-64

-64

-65

-64



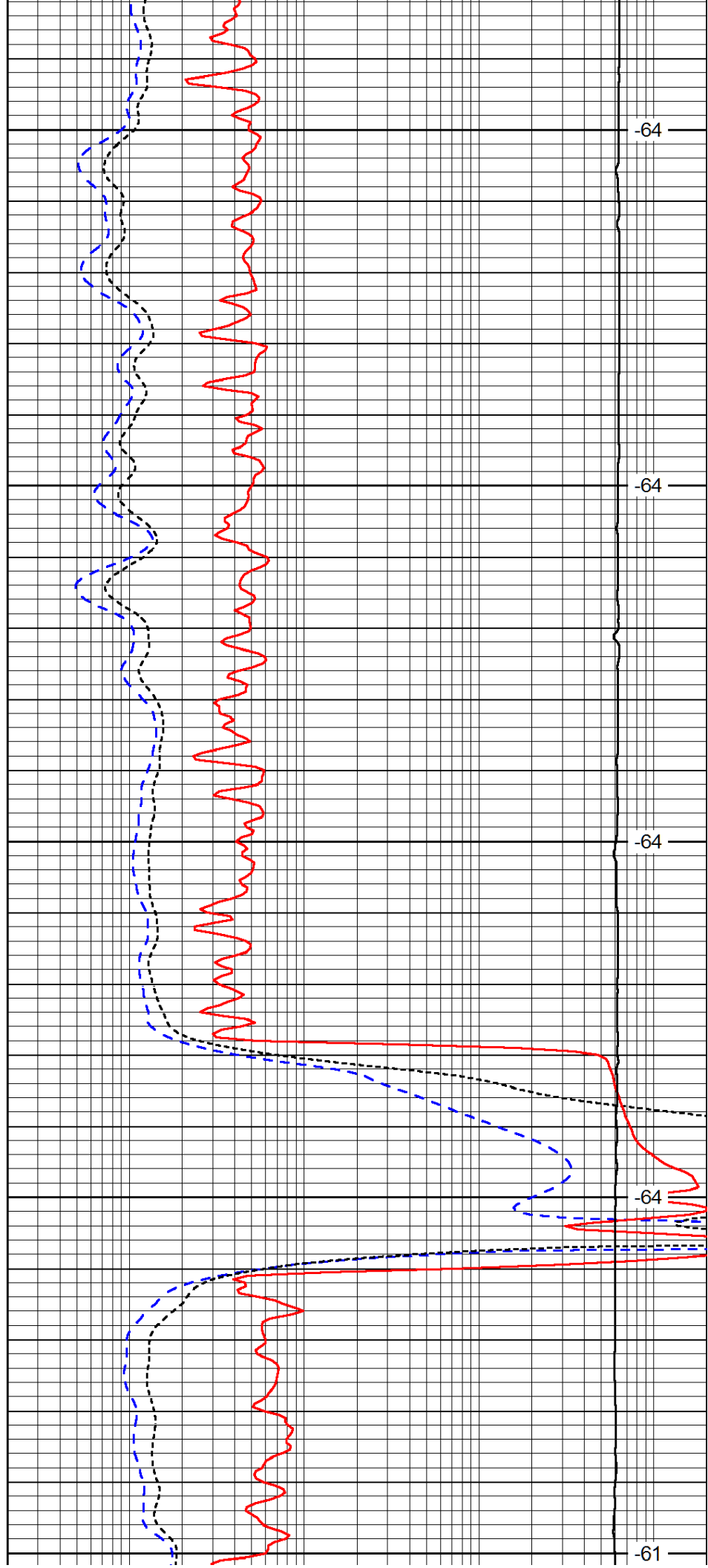
2400

2450

2500

2550

2600



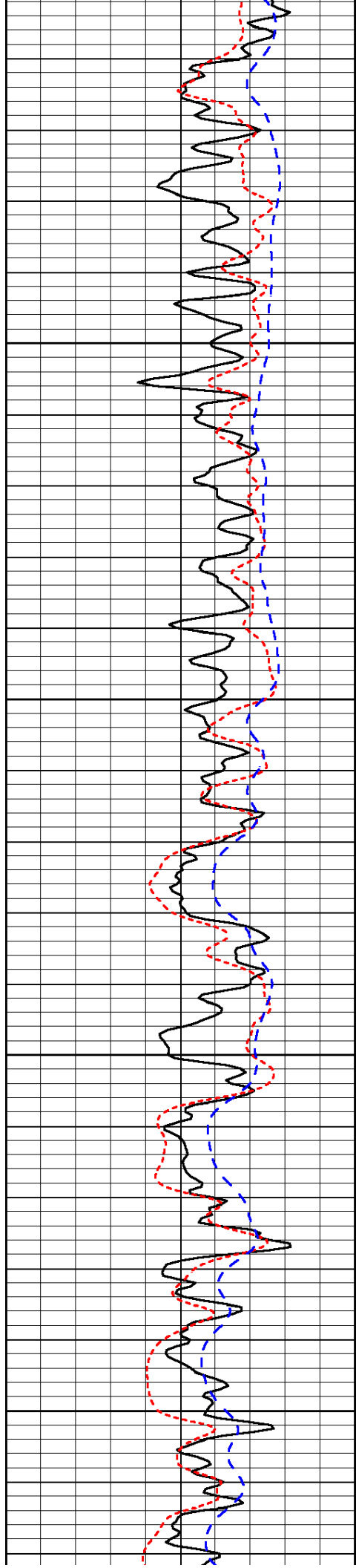
-64

-64

-64

-64

-61

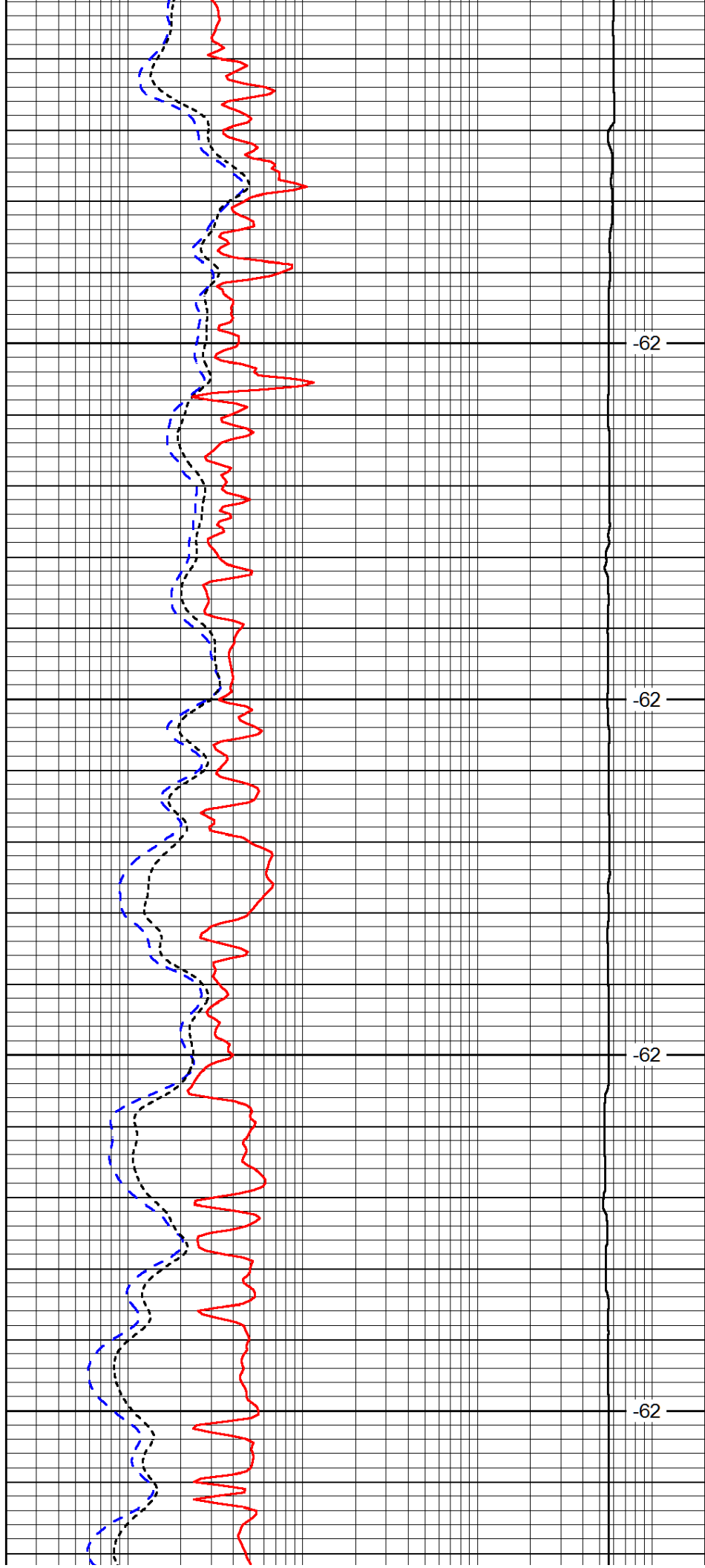


2650

2700

2750

2800

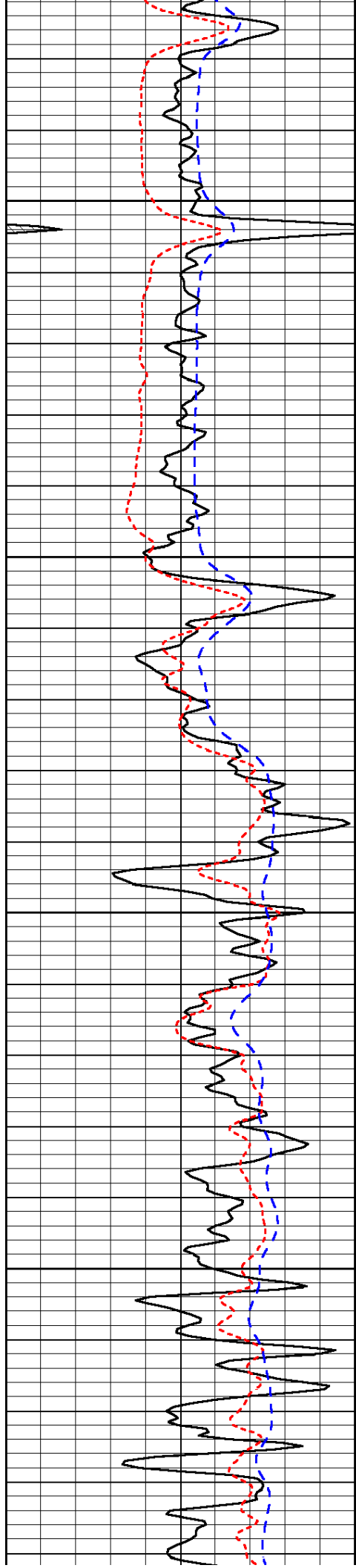


-62

-62

-62

-62

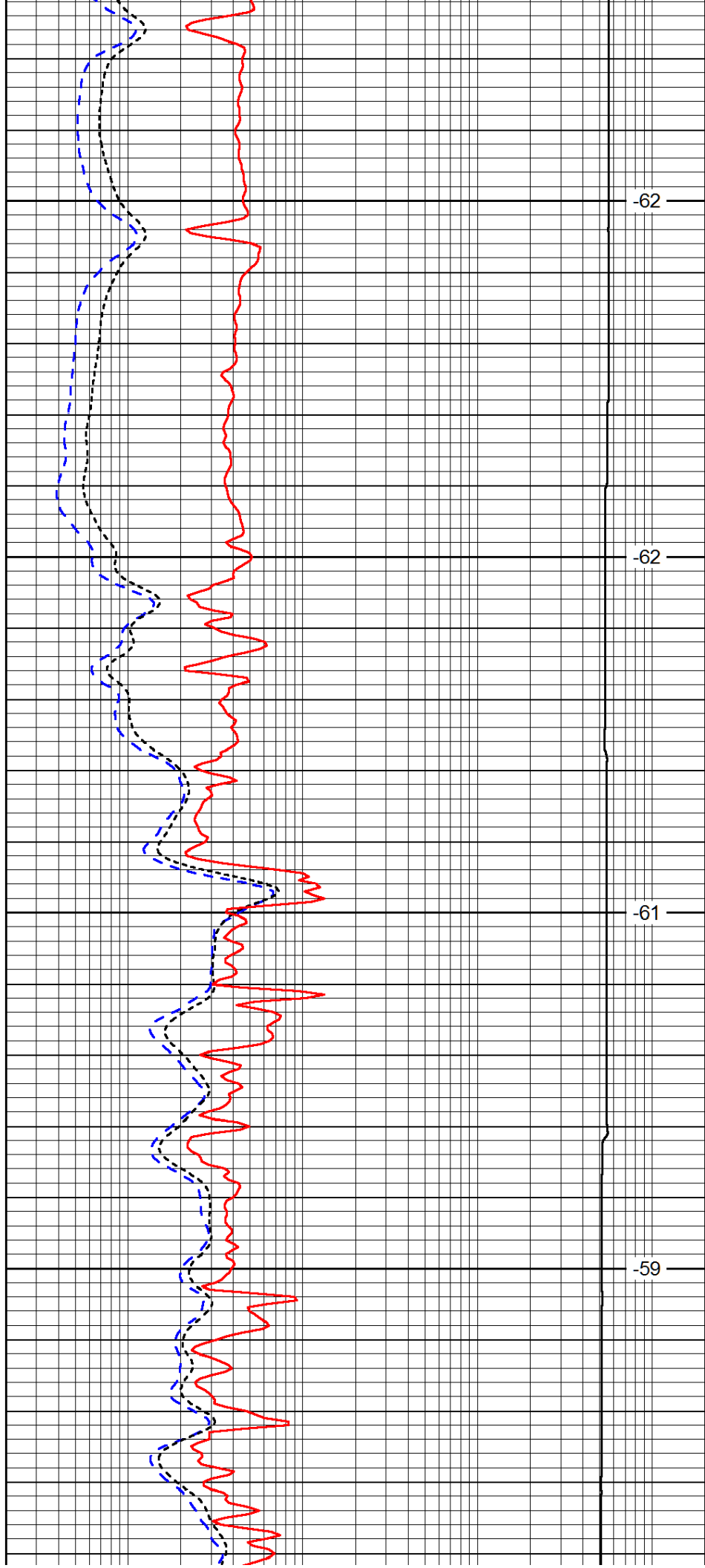


2850

2900

2950

3000

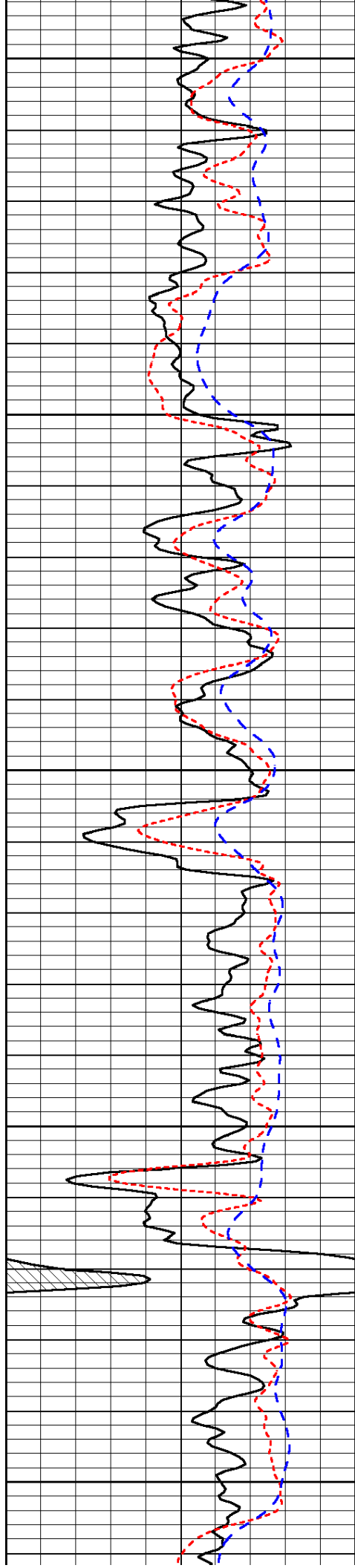


-62

-62

-61

-59



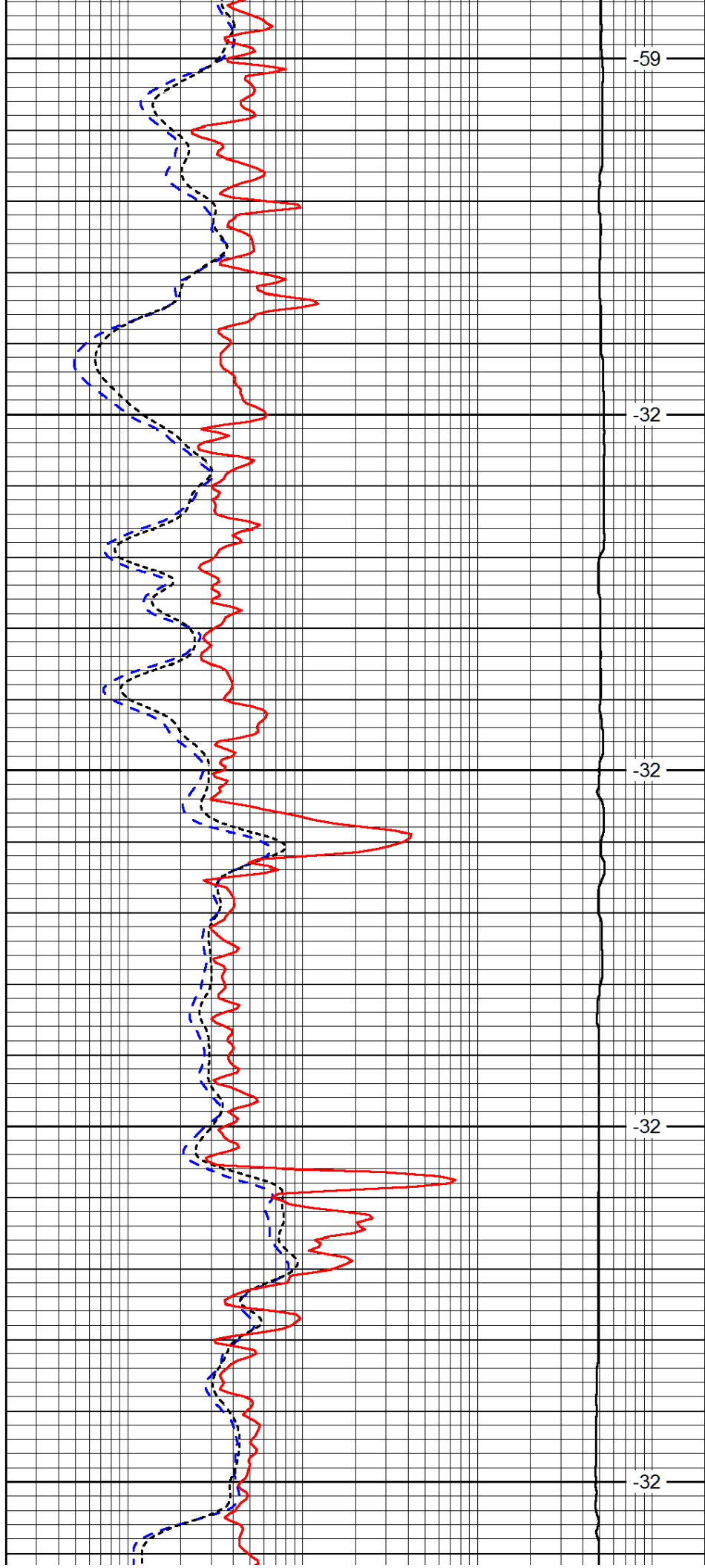
3050

3100

3150

3200

3250



-59

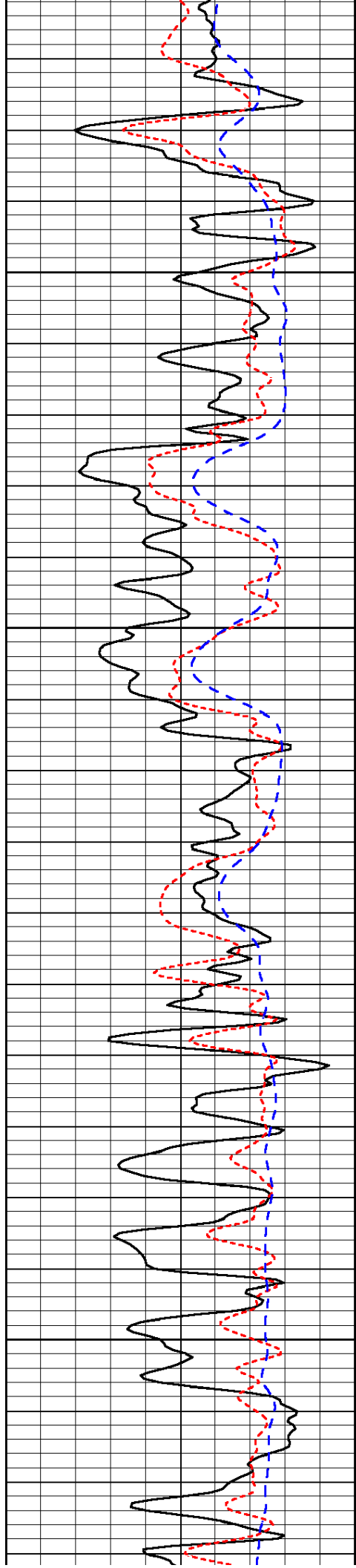
-32

-32

-32

-32



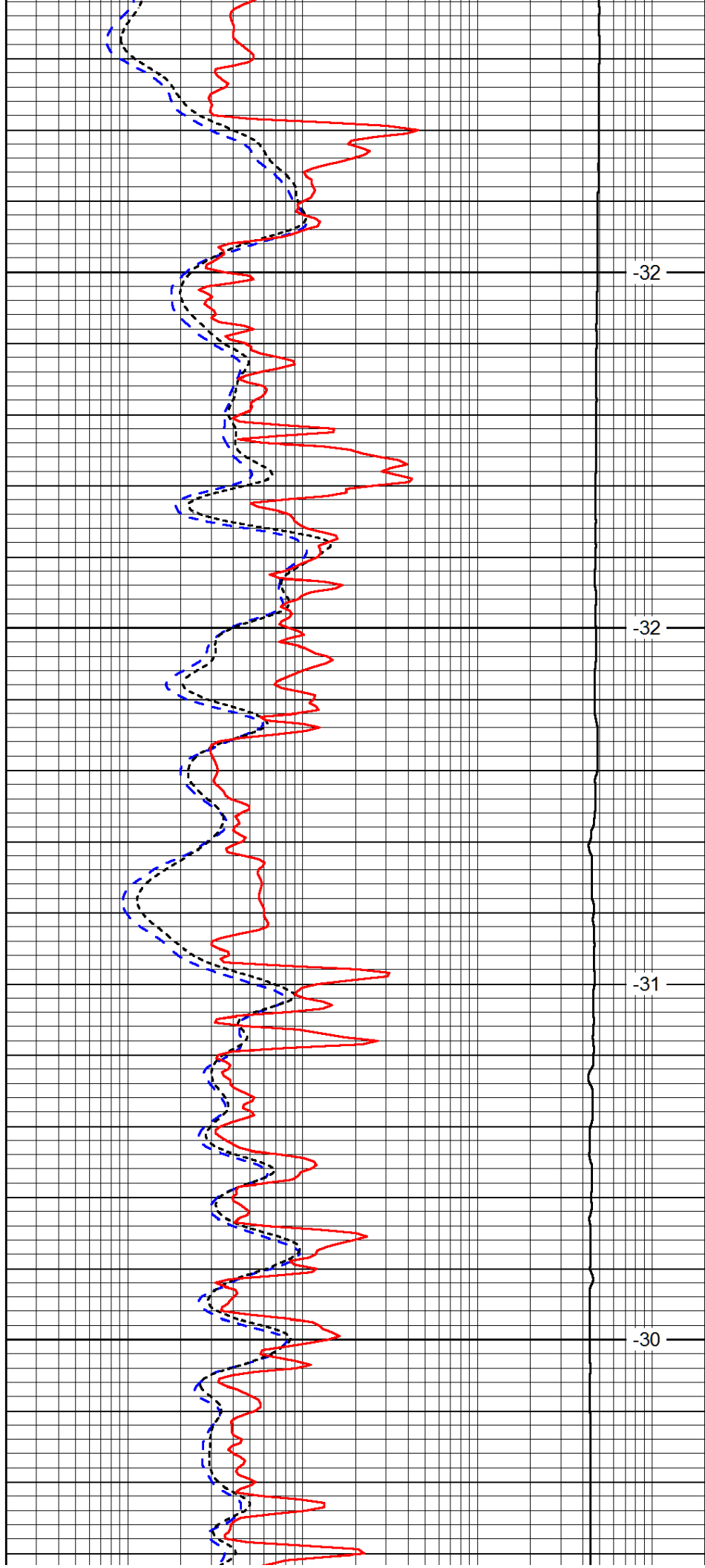


3300

3350

3400

3450

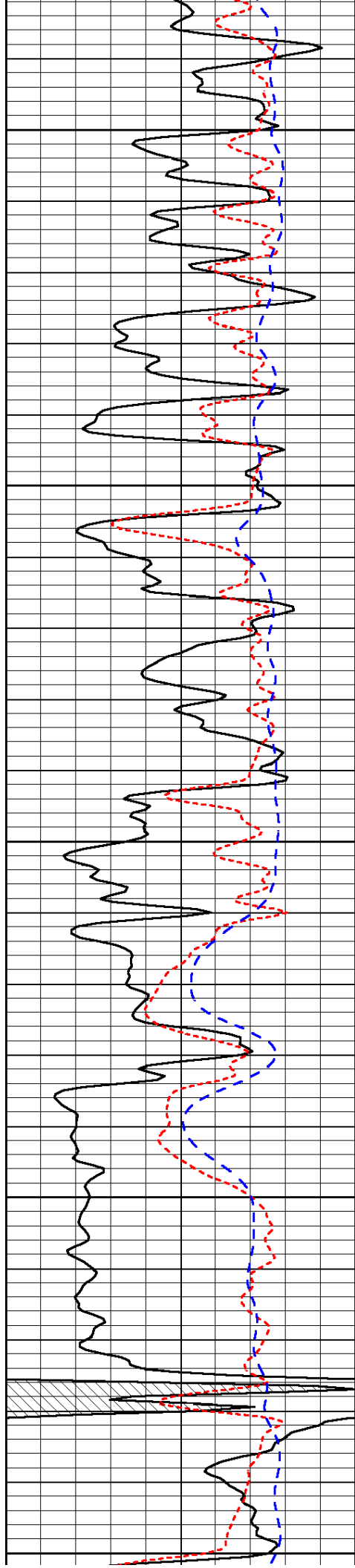


-32

-32

-31

-30



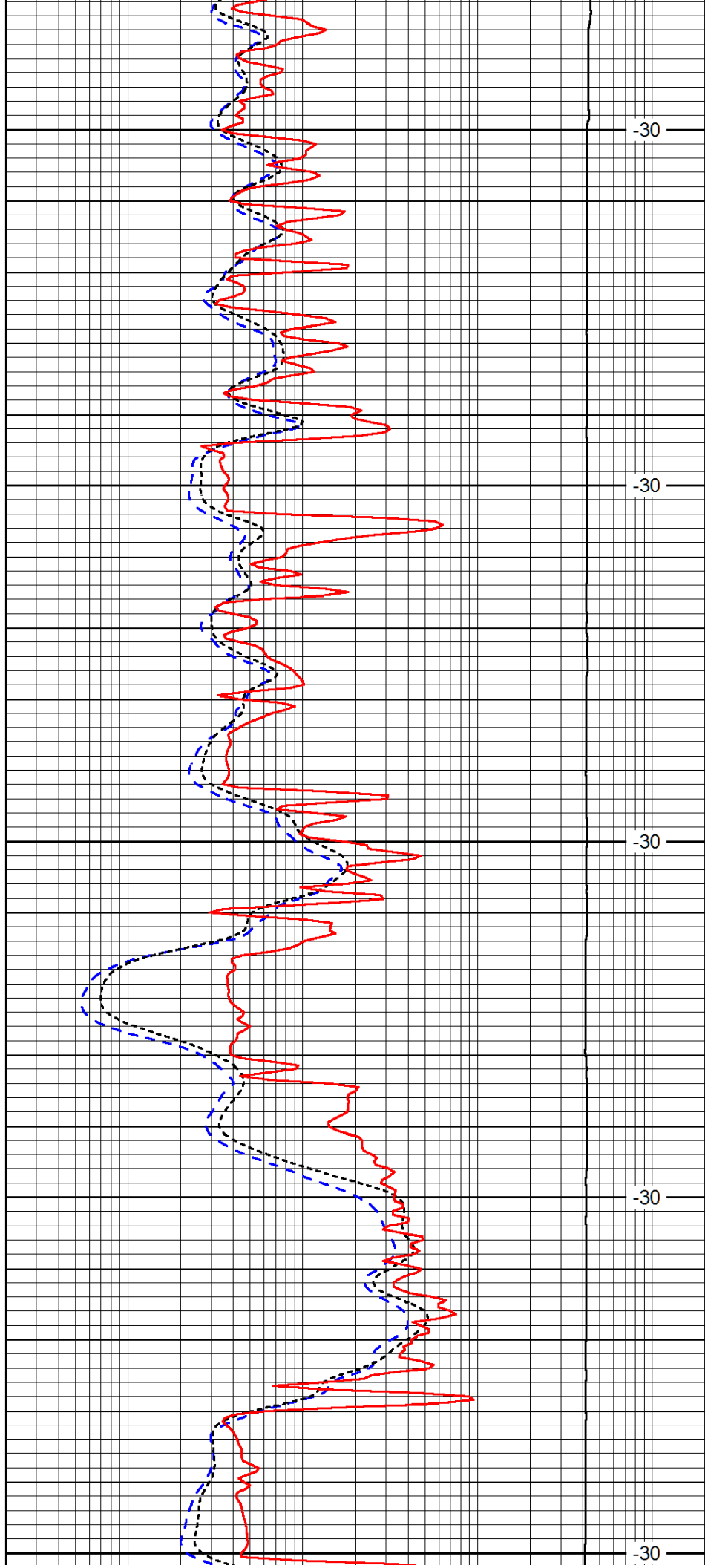
3500

3550

3600

3650

3700



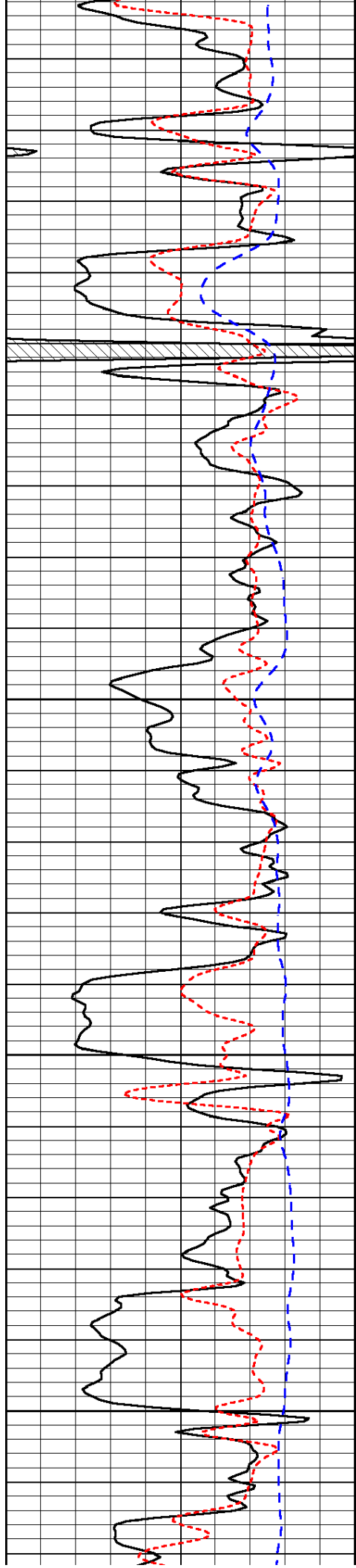
-30

-30

-30

-30

-30

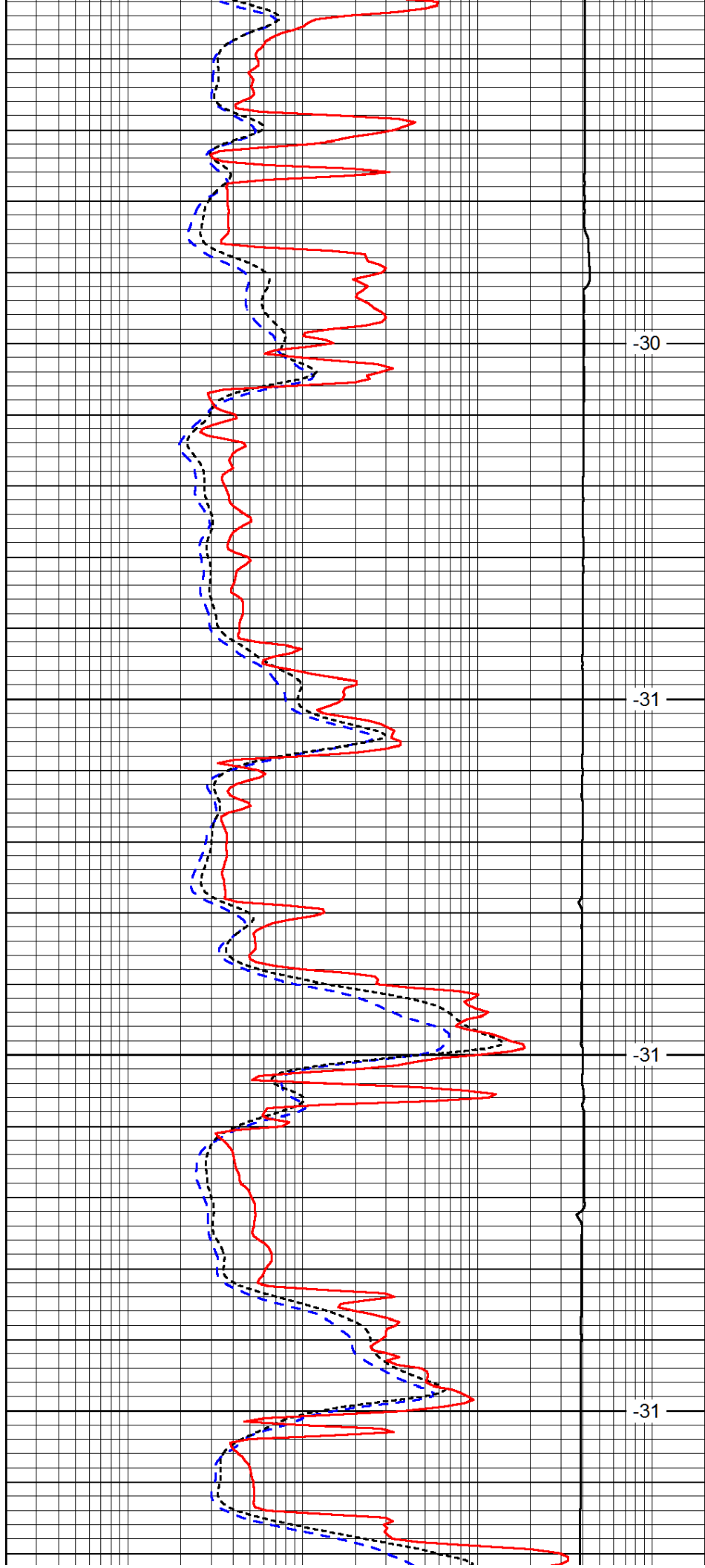


3750

3800

3850

3900

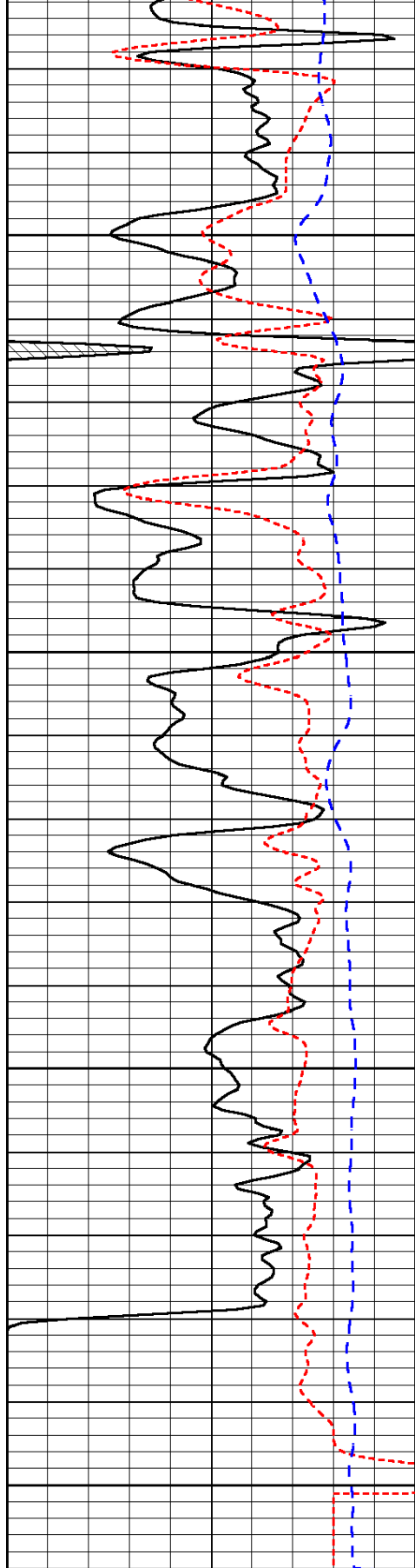


-30

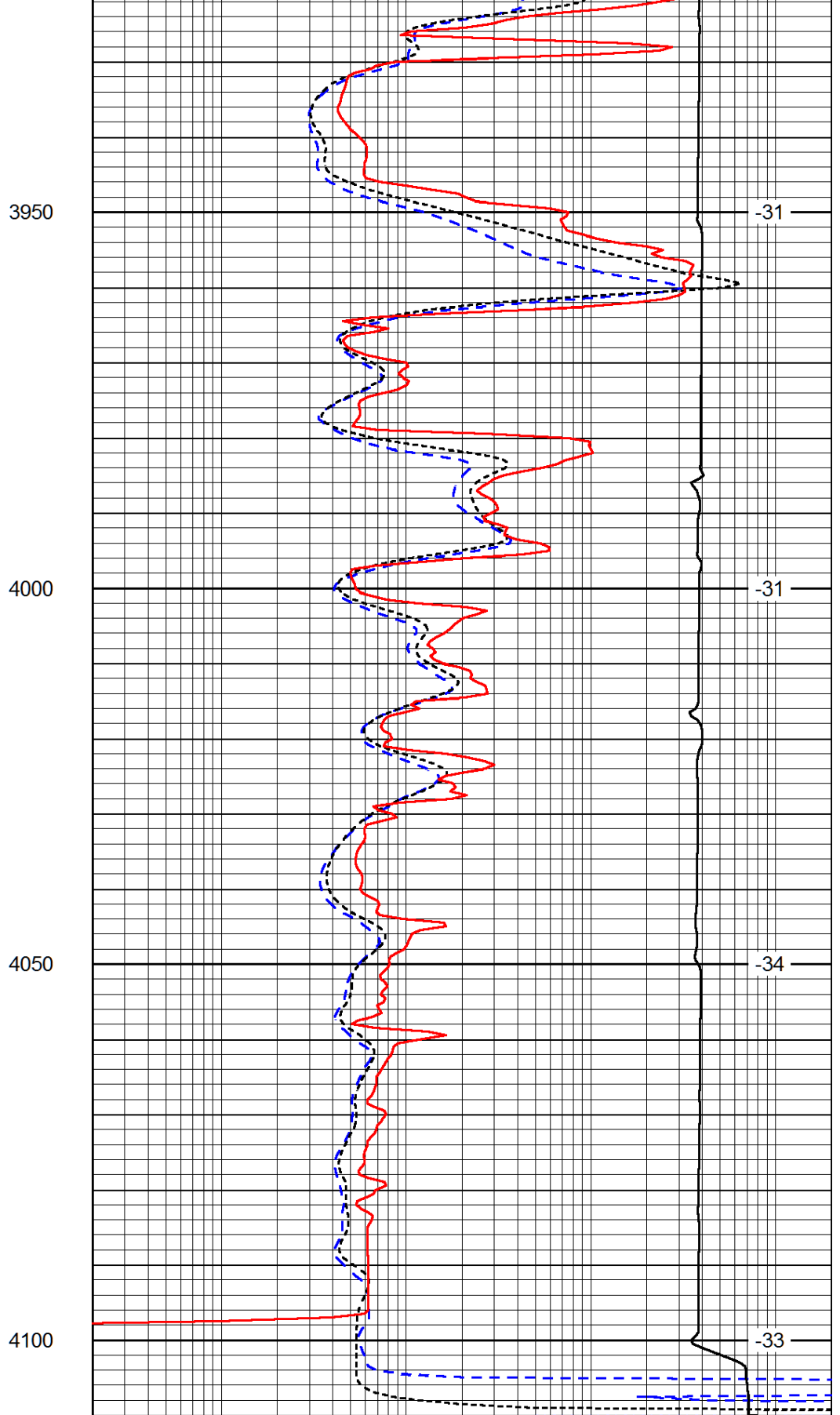
-31

-31

-31



|      |                  |     |
|------|------------------|-----|
| 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)