



Pioneer Energy Services

# Radiation Guard Log

15-023-21,416-00-00

**Company** Berexco, LLC.  
**Well** Owens Trust #1-19  
**Field** Wildcat  
**County** Cheyenne State **Kansas**  
**Location** 660' FNL & 1830' FWL  
**Sec:** 19 **Twp:** 1S **Rge:** 37W

Other Services  
 MEL  
 Elevation  
 K.B. 3183  
 D.F. G.L. 3170

Permanent Datum	Ground Level	Elevation 3170
Log Measured From	Kelly Bushing	13 Ft. Above Perm. Datum
Drilling Measured From	Kelly Bushing	
Date		12/5/2014
Run Number		One
Depth Driller		4750
Depth Logger		4746
Bottom Logged Interval		4745
Top Log Interval		300
Casing Driller		8.625 @ 310
Casing Logger		309
Bit Size		7.875
Type Fluid in Hole		Chemical
Salinity, ppm CL		600
Density / Viscosity		9.4 52
pH / Fluid Loss		10.0 6.8
Source of Sample		Flowline
Rm @ Meas. Temp		0.90 @ 64
Rmf @ Meas. Temp		0.68 @ 64
Rmc @ Meas. Temp		1.22 @ 64
Source of Rmf / Rmc		Charts
Rm @ BHT		0.47 @ 124
Operating Rig Time		4 Hours
Max Rec. Temp. F		124
Equipment Number		15
Location		Hays
Recorded By		D.Kerr
Witnessed By		Pete Vollmer

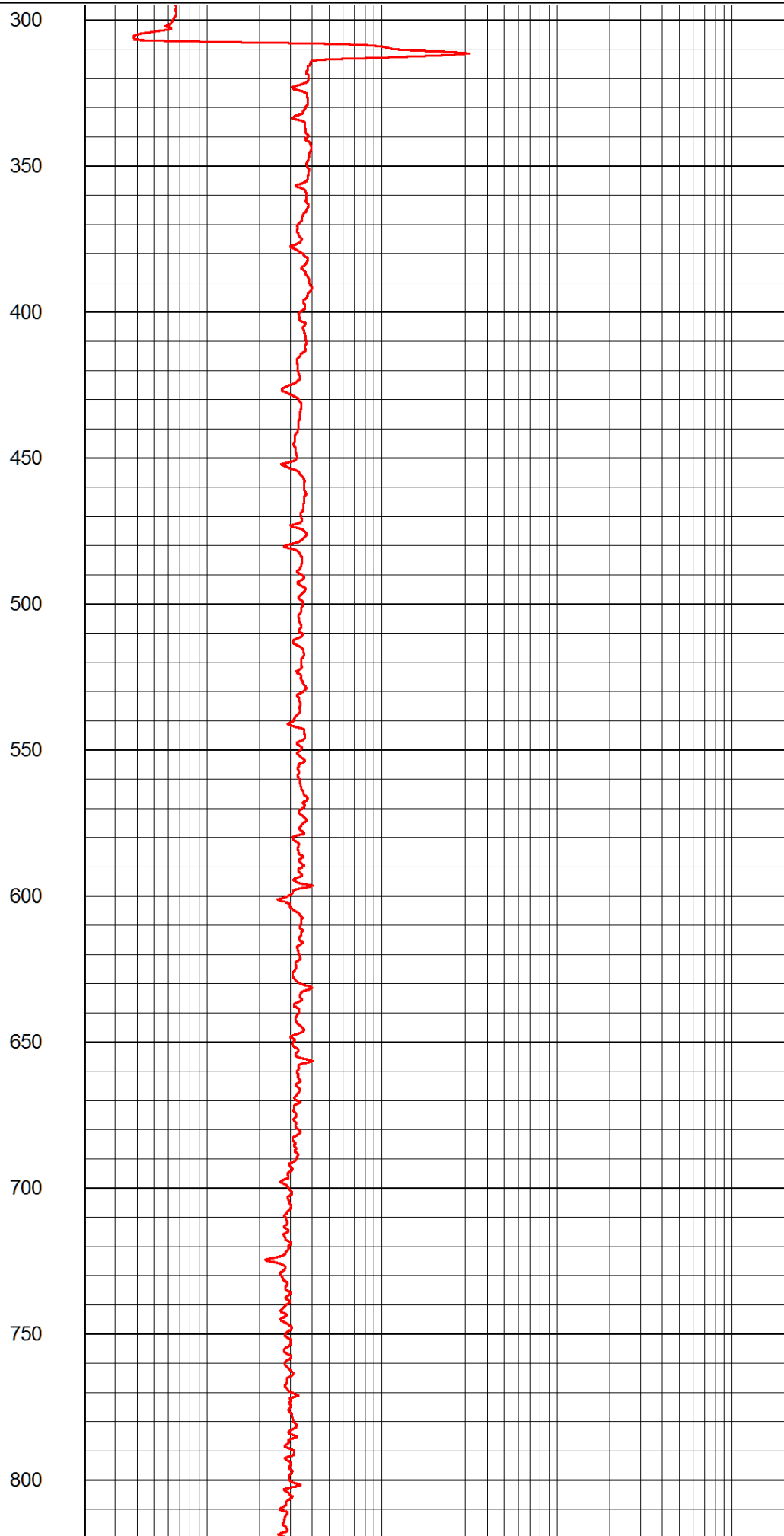
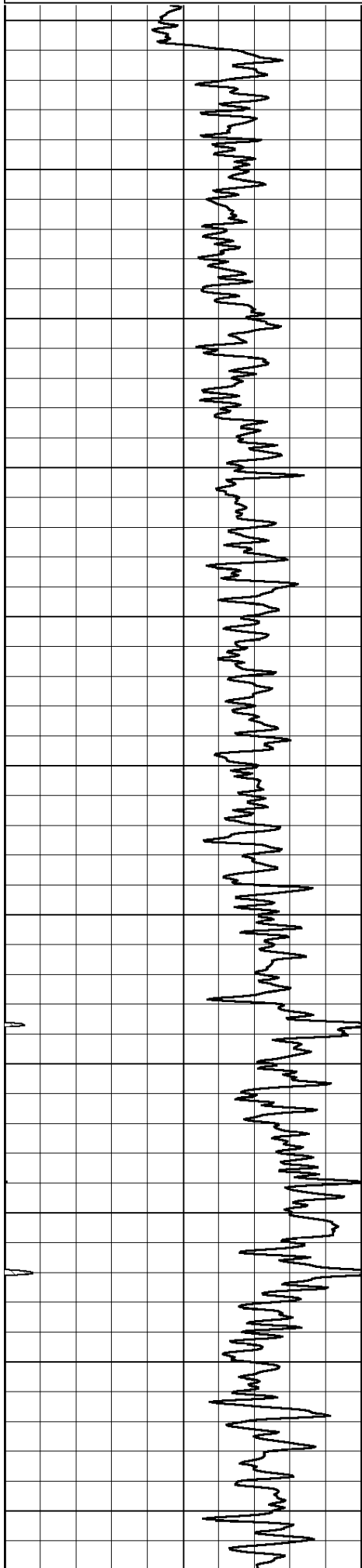
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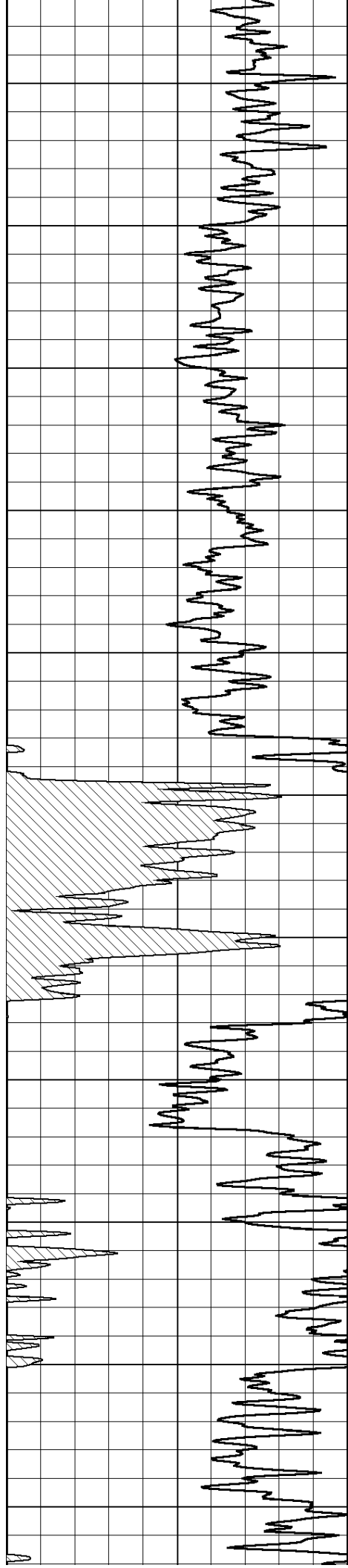
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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  
  
 Bird City KS, North to AA RD,  
 1 1/2 East to 30 RD, 1 1/2 North, West Into

Database File: berexco\_owens\_1\_19hd.db  
 Dataset Pathname: rag/berxrag  
 Presentation Format: rag2in  
 Dataset Creation: Fri Dec 05 15:00:18 2014  
 Charted by: Depth in Feet scaled 1:600





850

900

950

1000

1050

1100

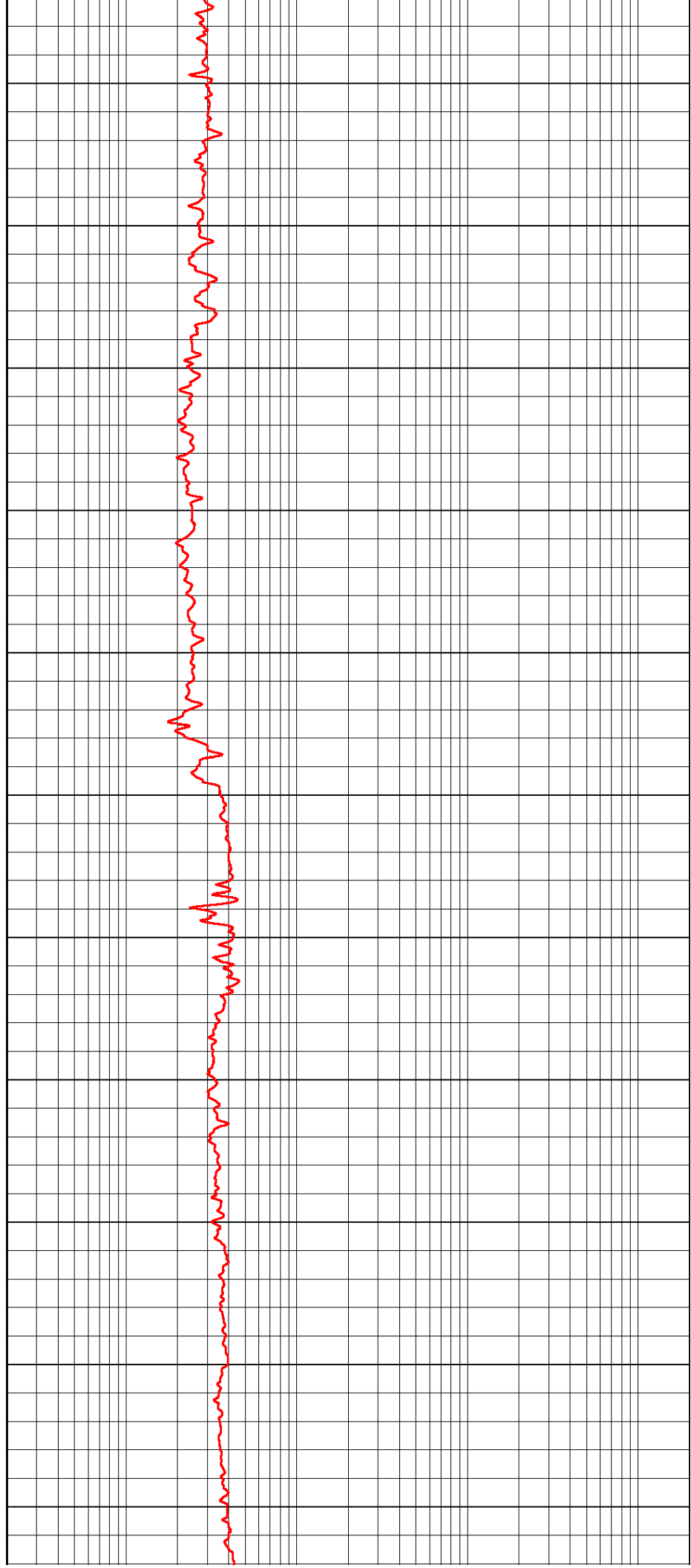
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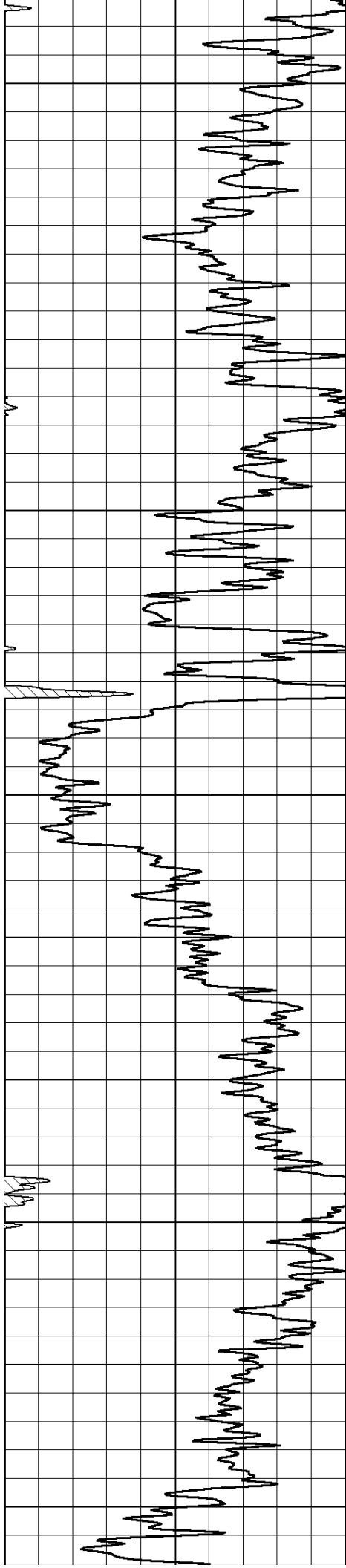
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1250

1300

1350





1400

1450

1500

1550

1600

1650

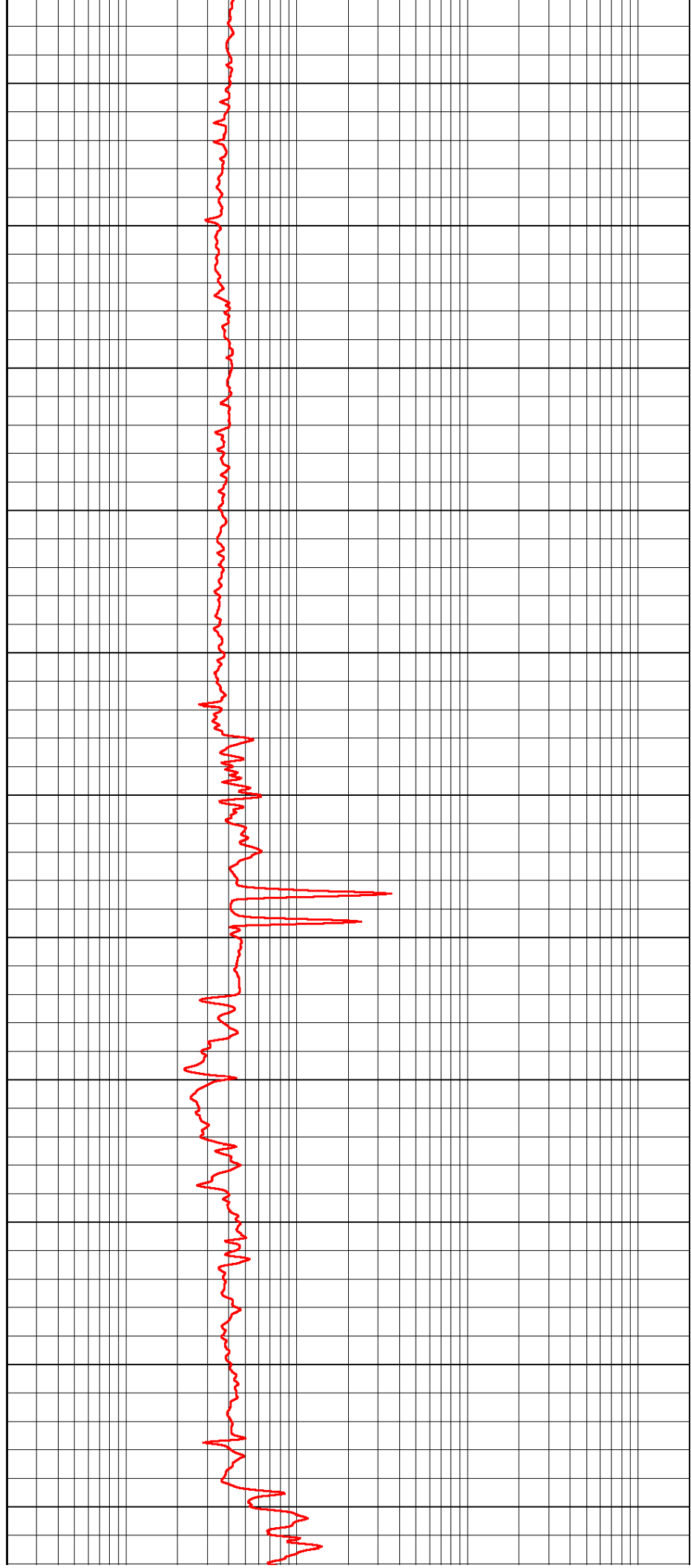
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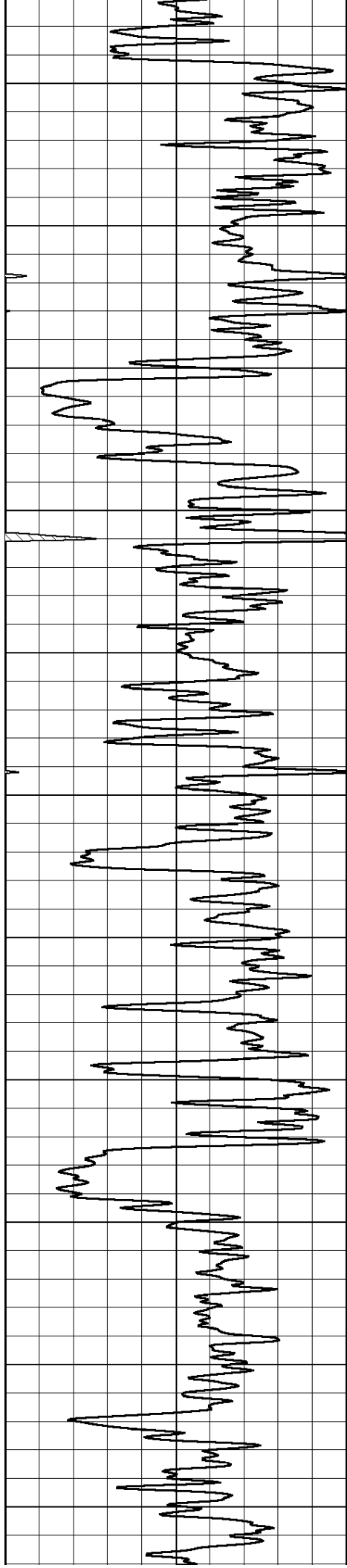
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1800

1850

1900





1950

2000

2050

2100

2150

2200

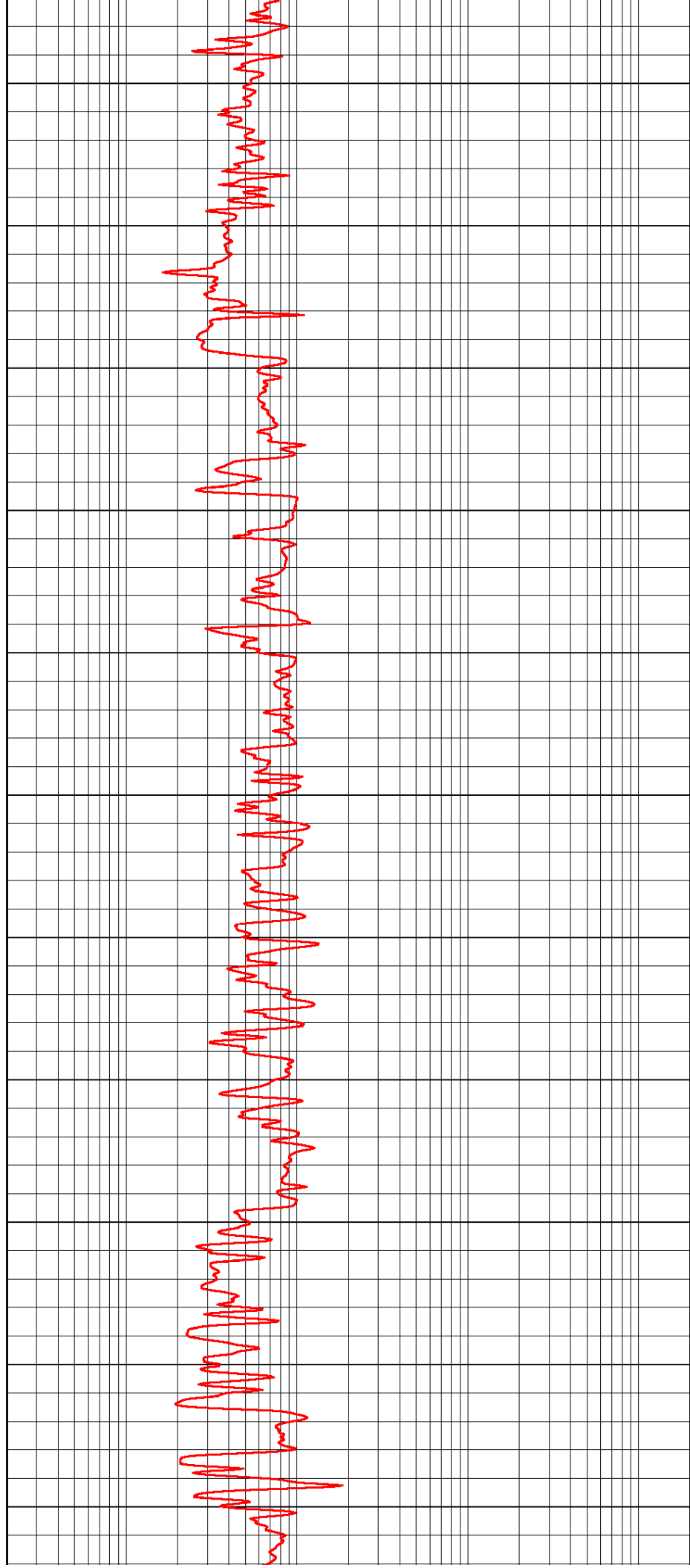
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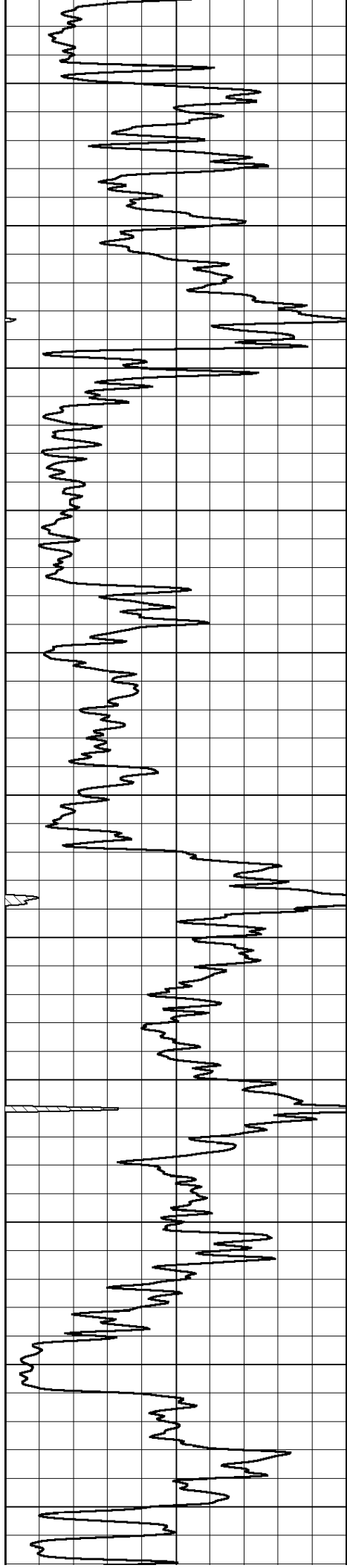
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2350

2400

2450





2500

2550

2600

2650

2700

2750

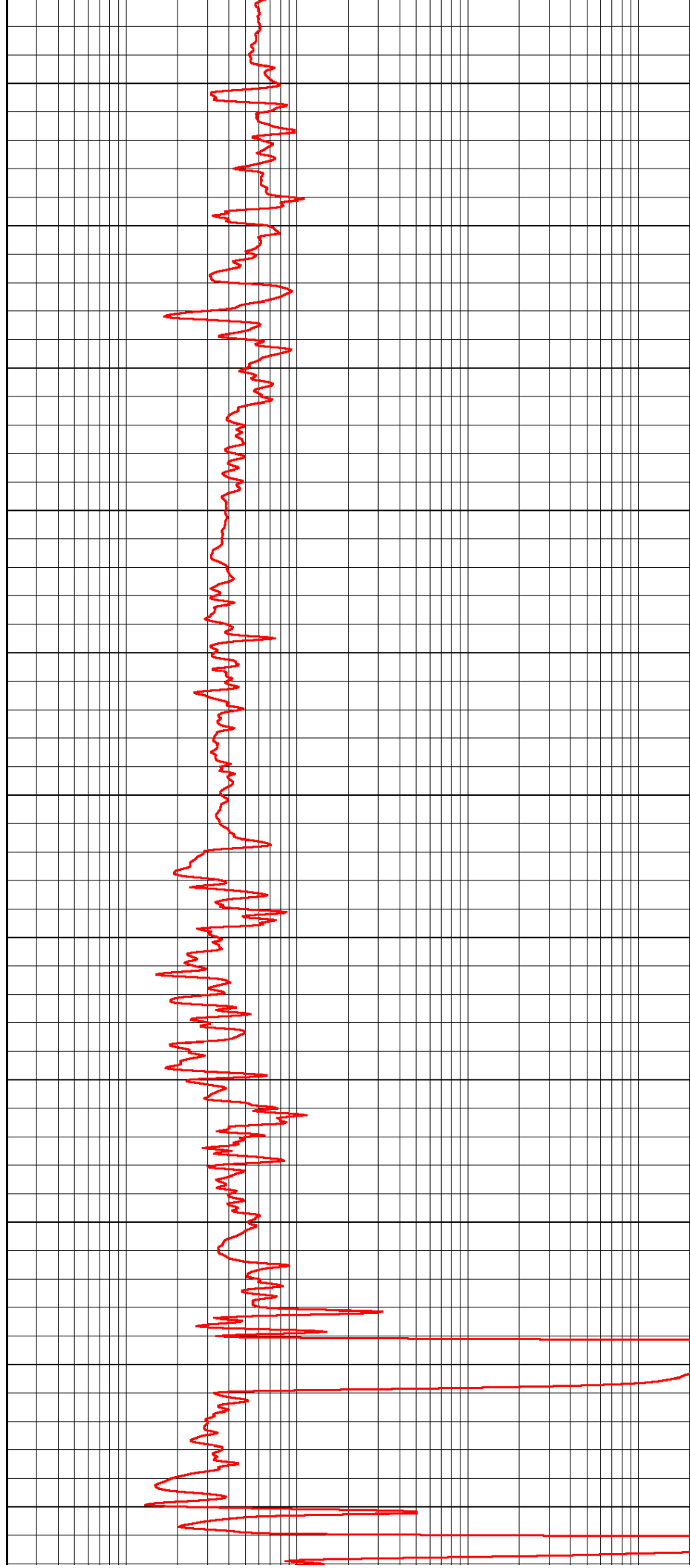
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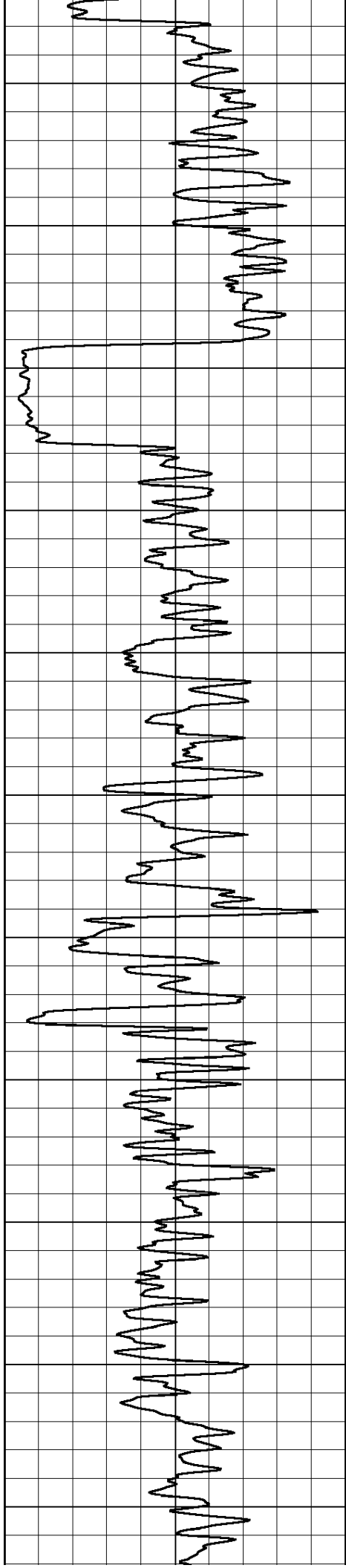
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2900

2950

3000





3050

3100

3150

3200

3250

3300

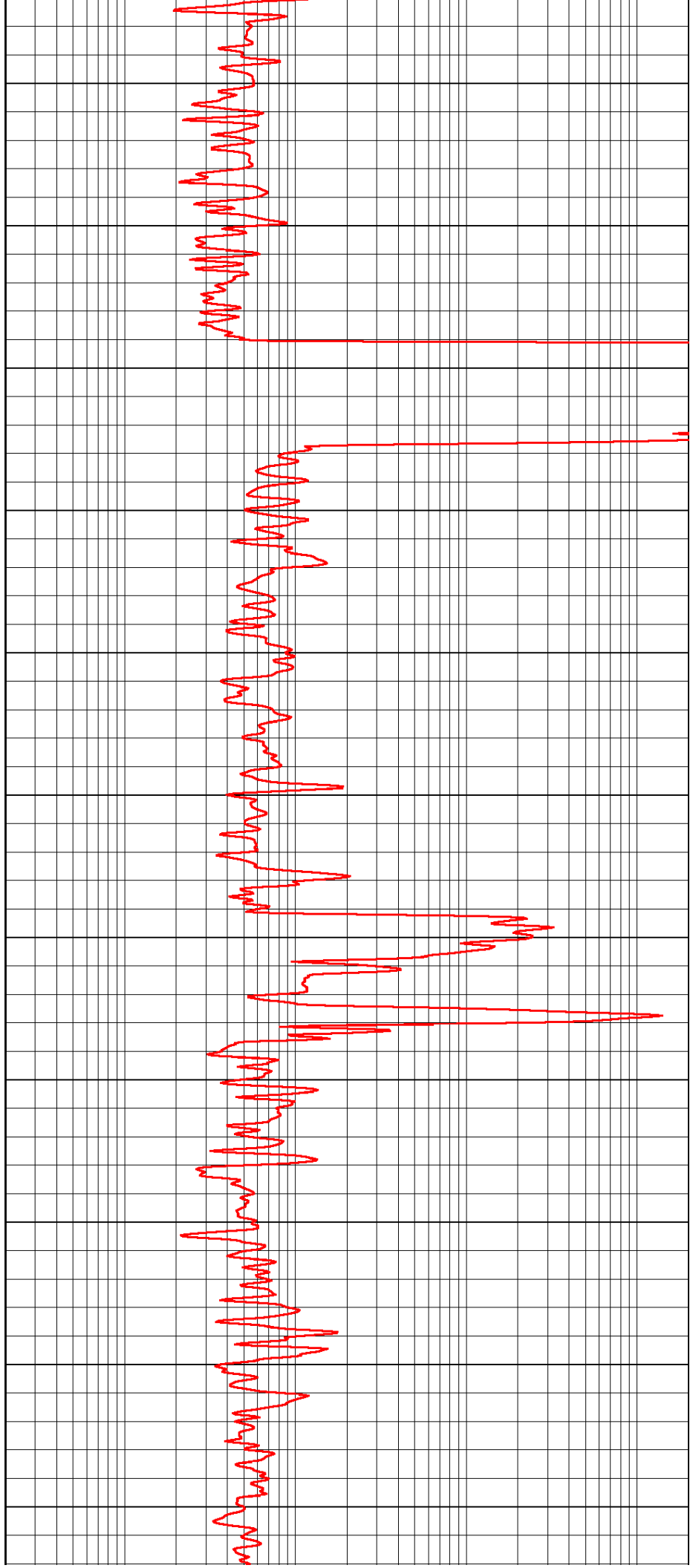
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3400

3450

3500

3550



3050

3100

3150

3200

3250

3300

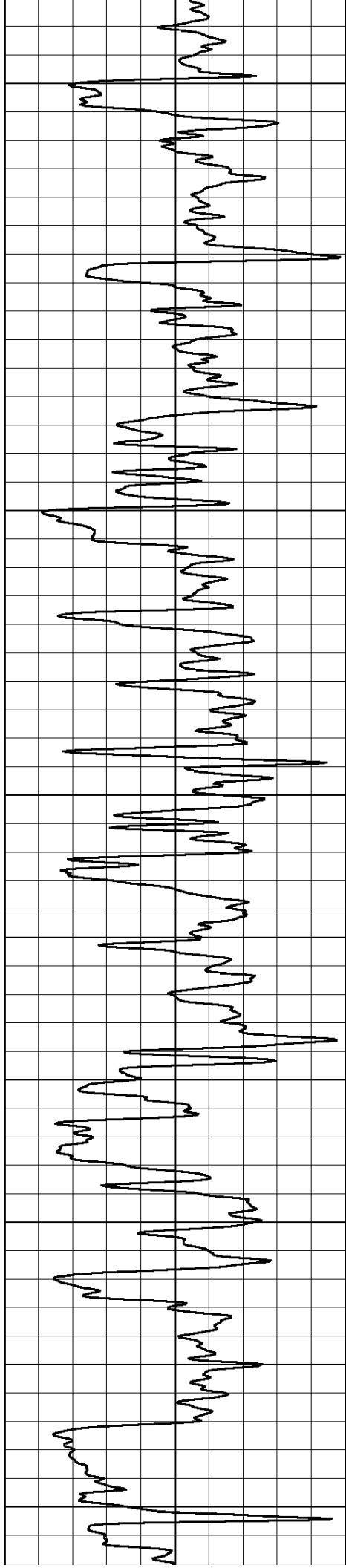
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3400

3450

3500

3550



3600

3650

3700

3750

3800

3850

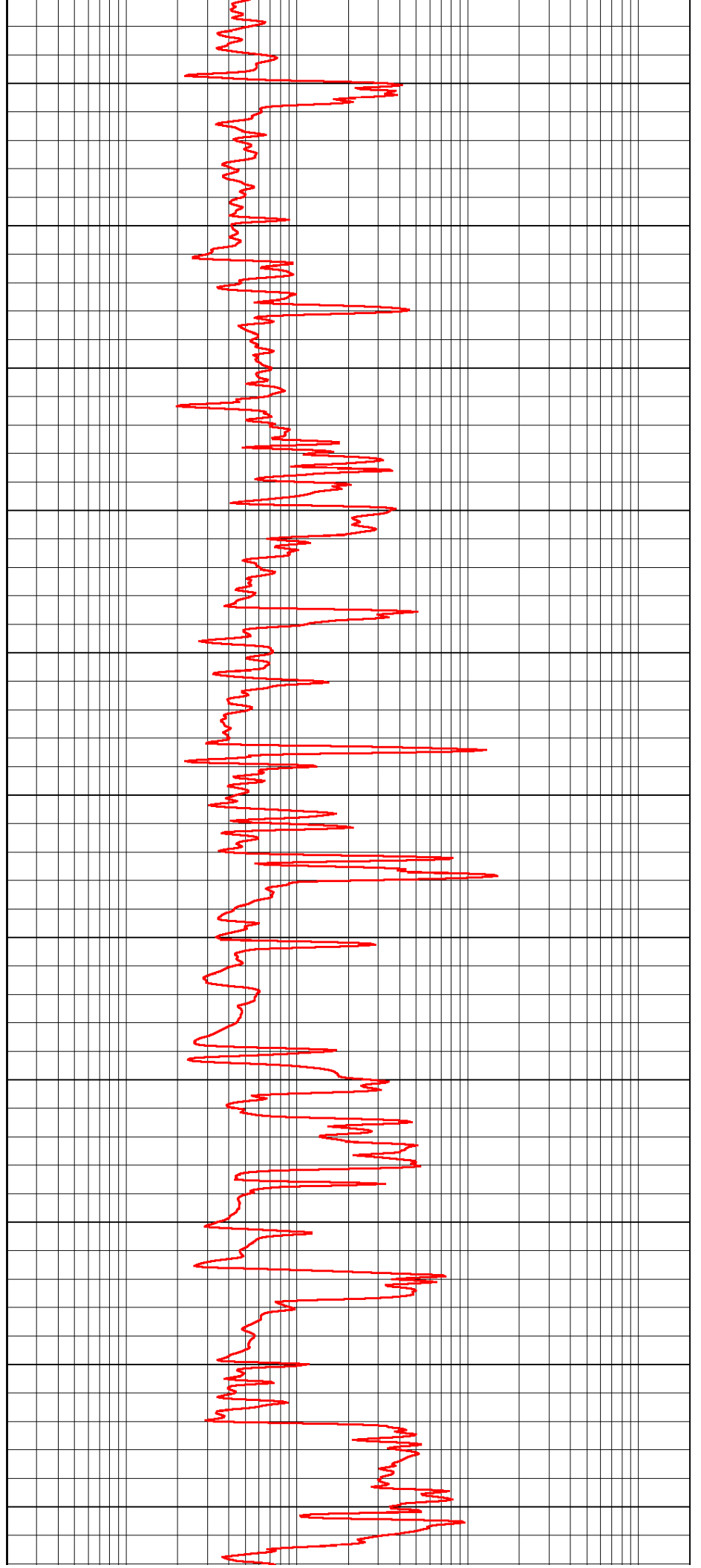
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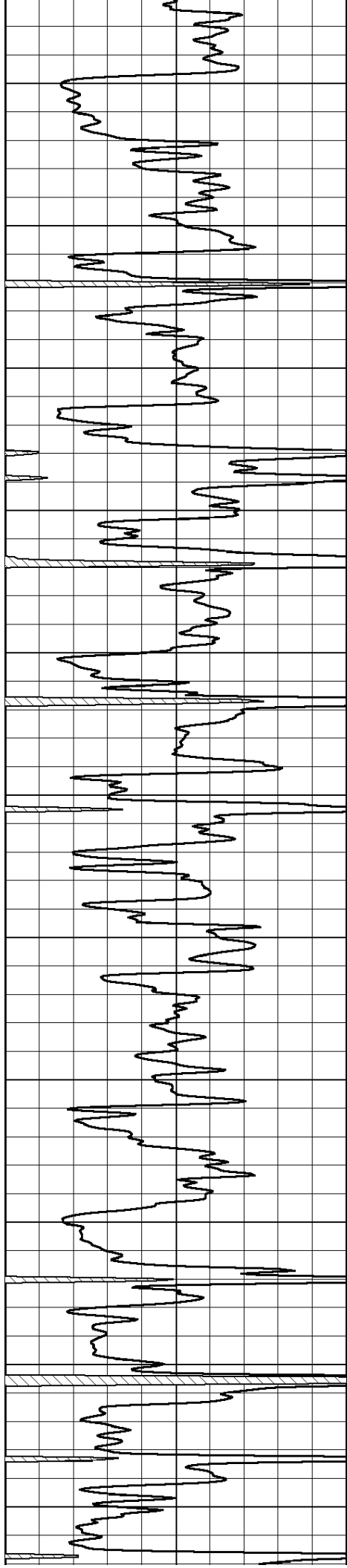
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4000

4050

4100





4150

4200

4250

4300

4350

4400

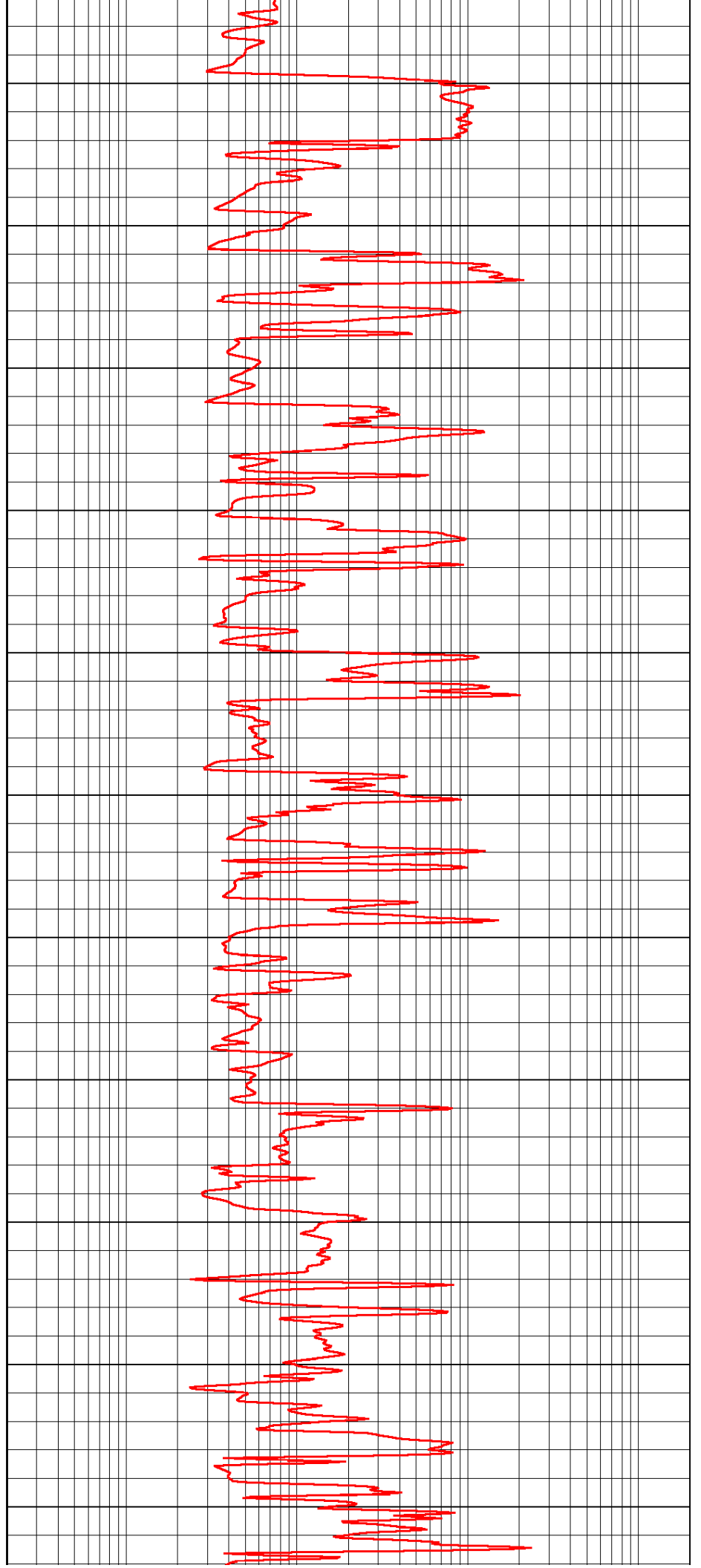
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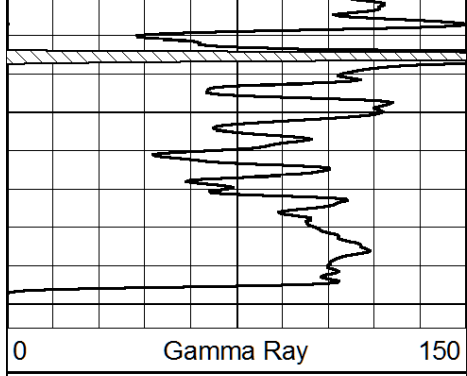
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4550

4600

4650

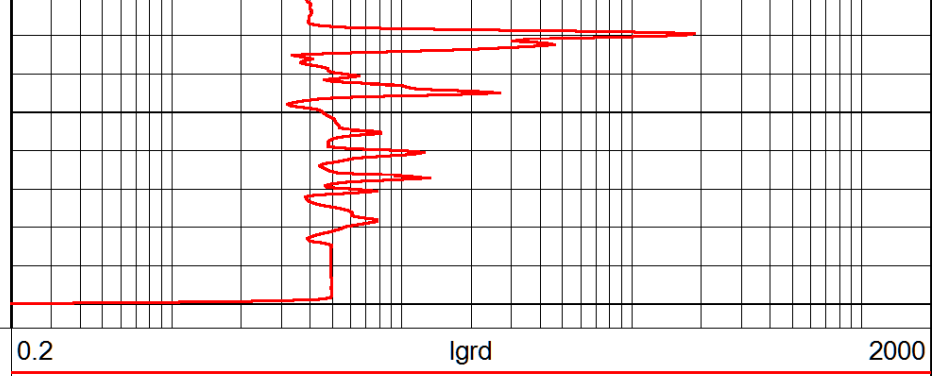




4700

4750

0 Gamma Ray 150



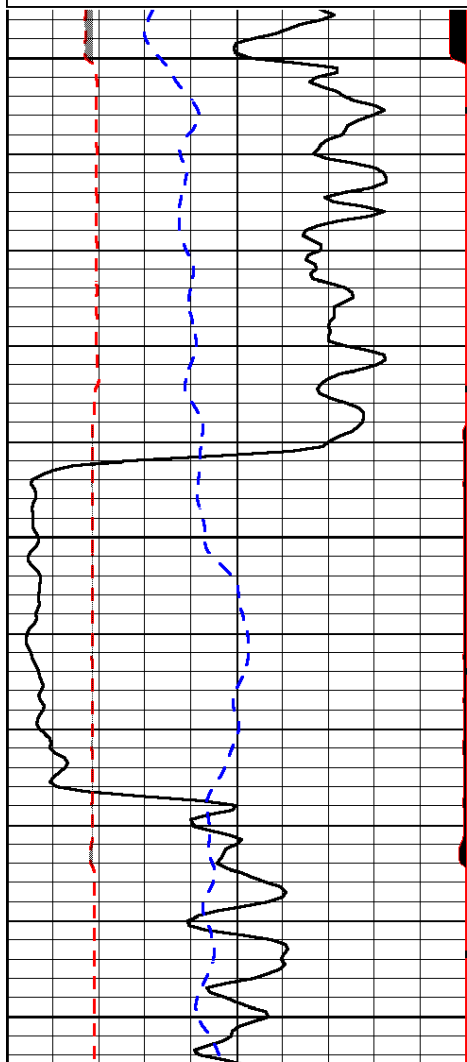
0.2 lgrd 2000

Database File: berexco\_owens\_1\_19hd.db  
 Dataset Pathname: rag/berxrag  
 Presentation Format: rag  
 Dataset Creation: Fri Dec 05 15:00:18 2014  
 Charted by: Depth in Feet scaled 1:240

0	Gamma Ray	150
6	Caliper (GAPI)	16
-200	sp (mV)	0

0.2	LGRD	2000
560	SWNC	2160
15000	Line Tension	0

LSPD

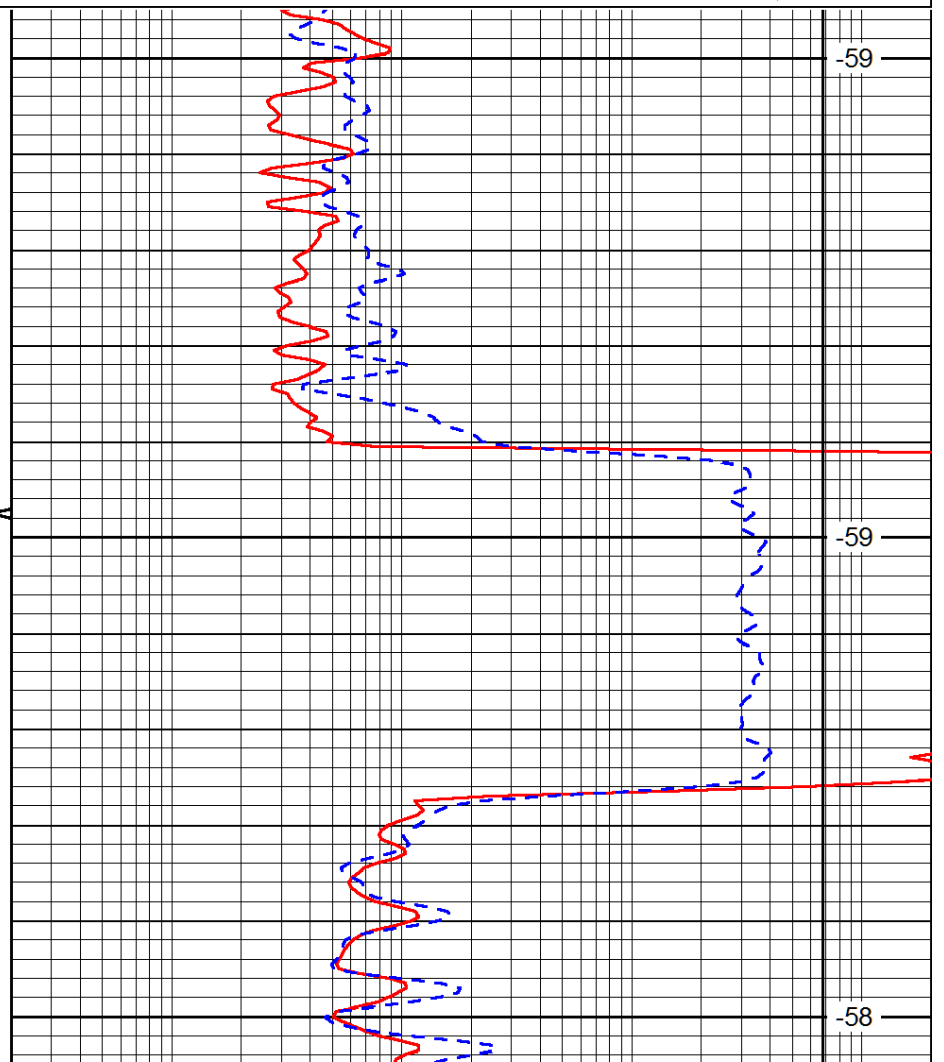


3100

3150

3200

0 Gamma Ray 150



-59

-59

-58

0.2 LGRD 2000

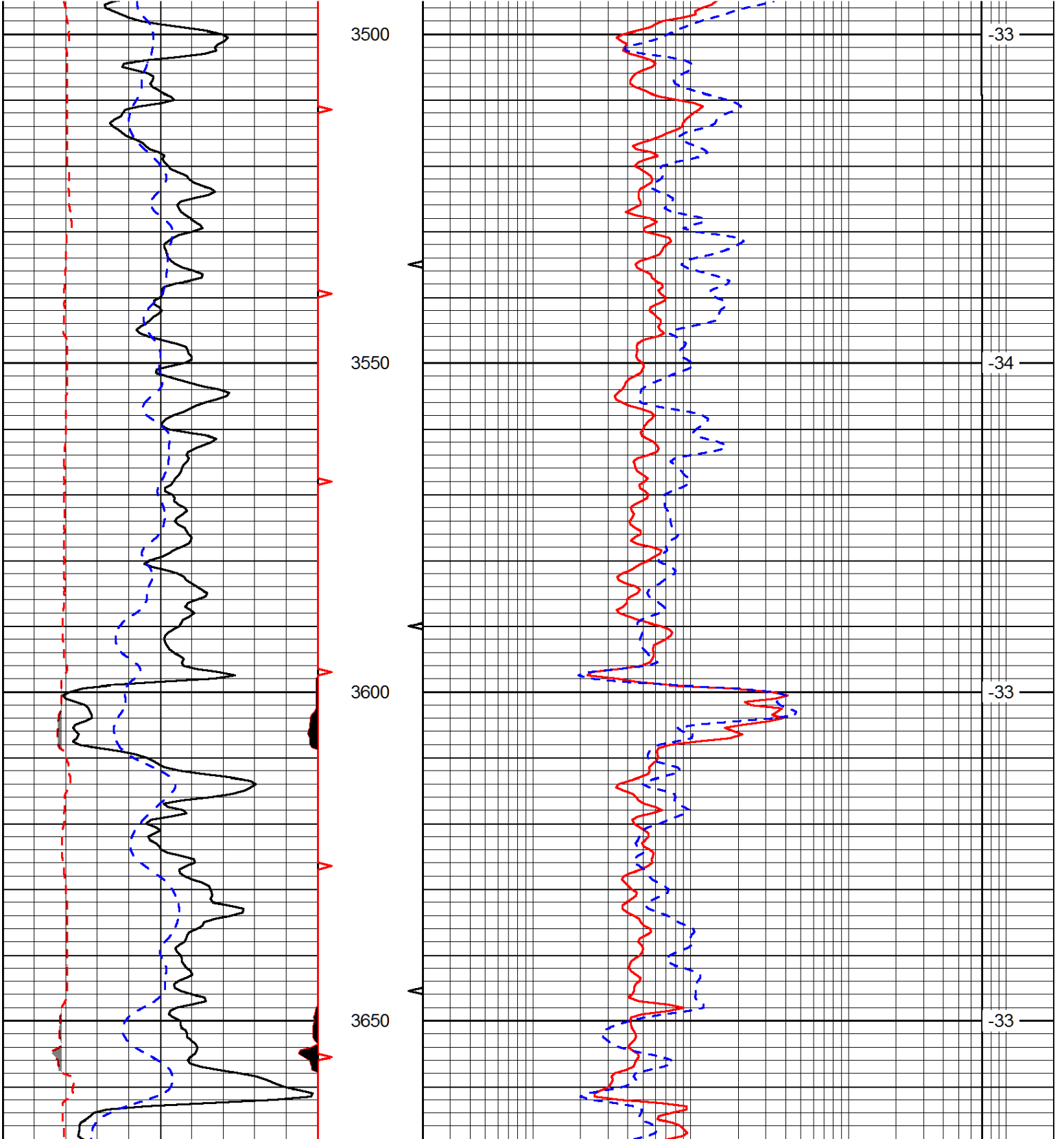
6	Caliper (GAPI)	16
-200	sp (mV)	0

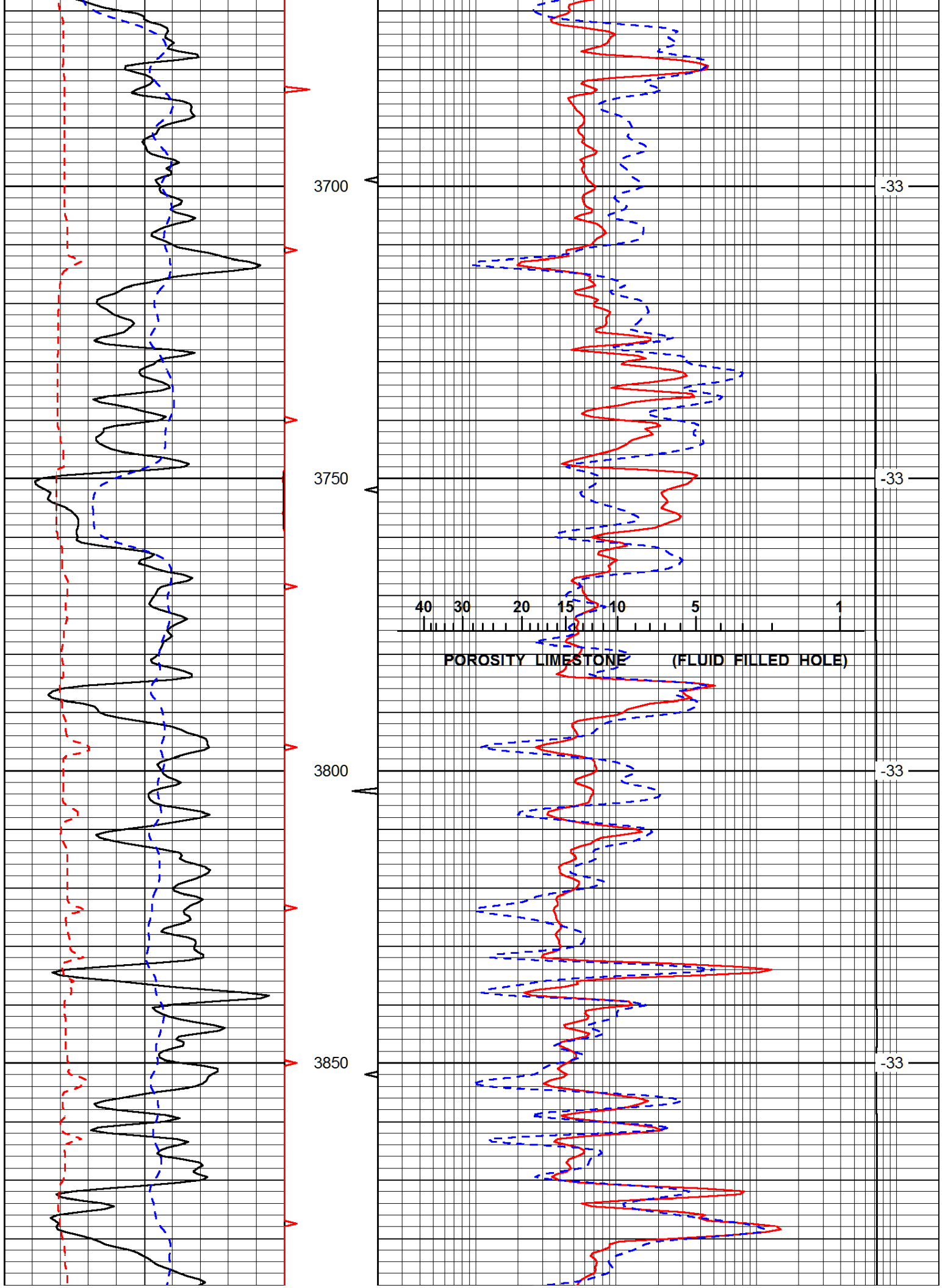
560	SWNC	2160
15000	Line Tension	0

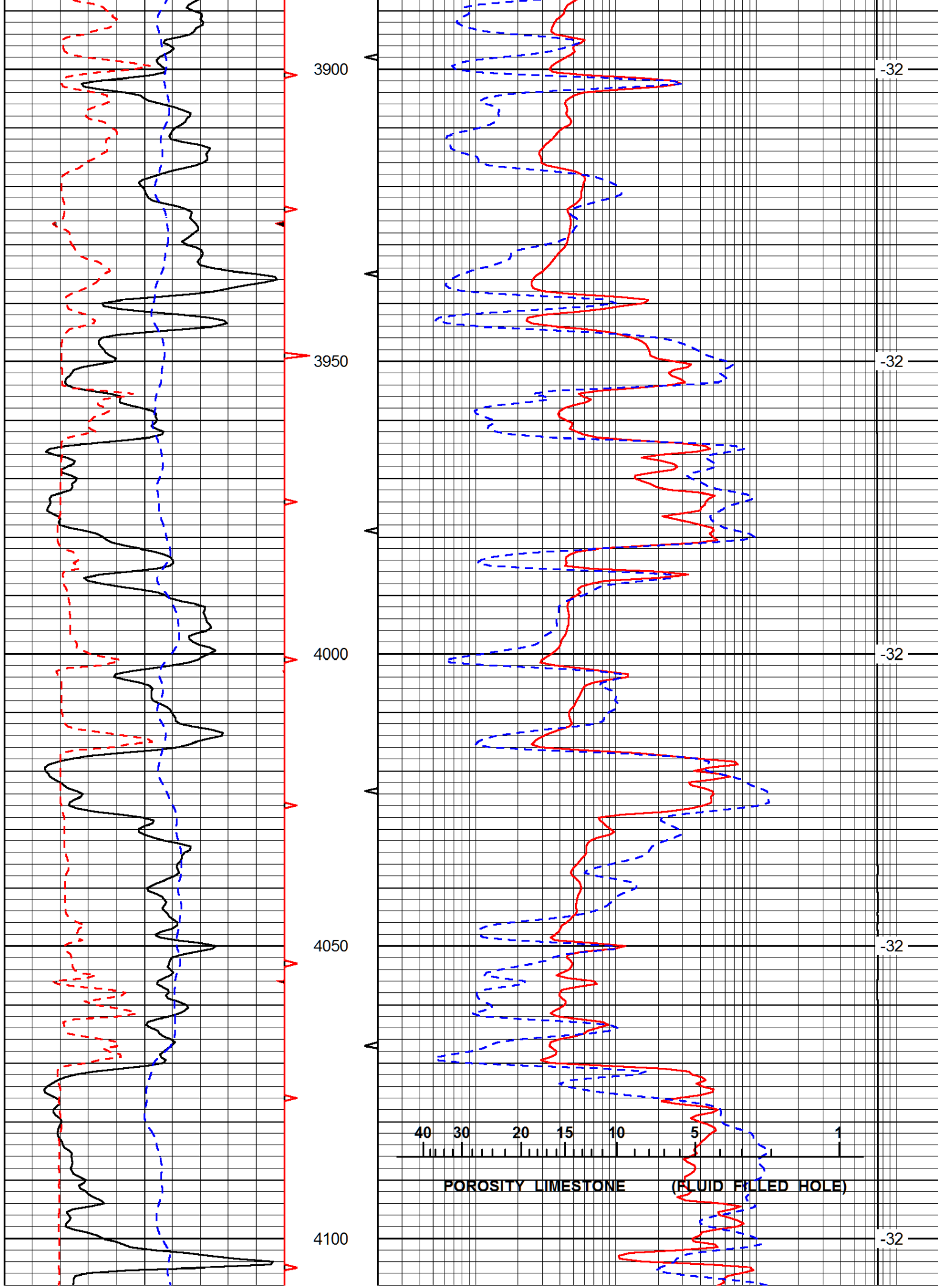
LSPD

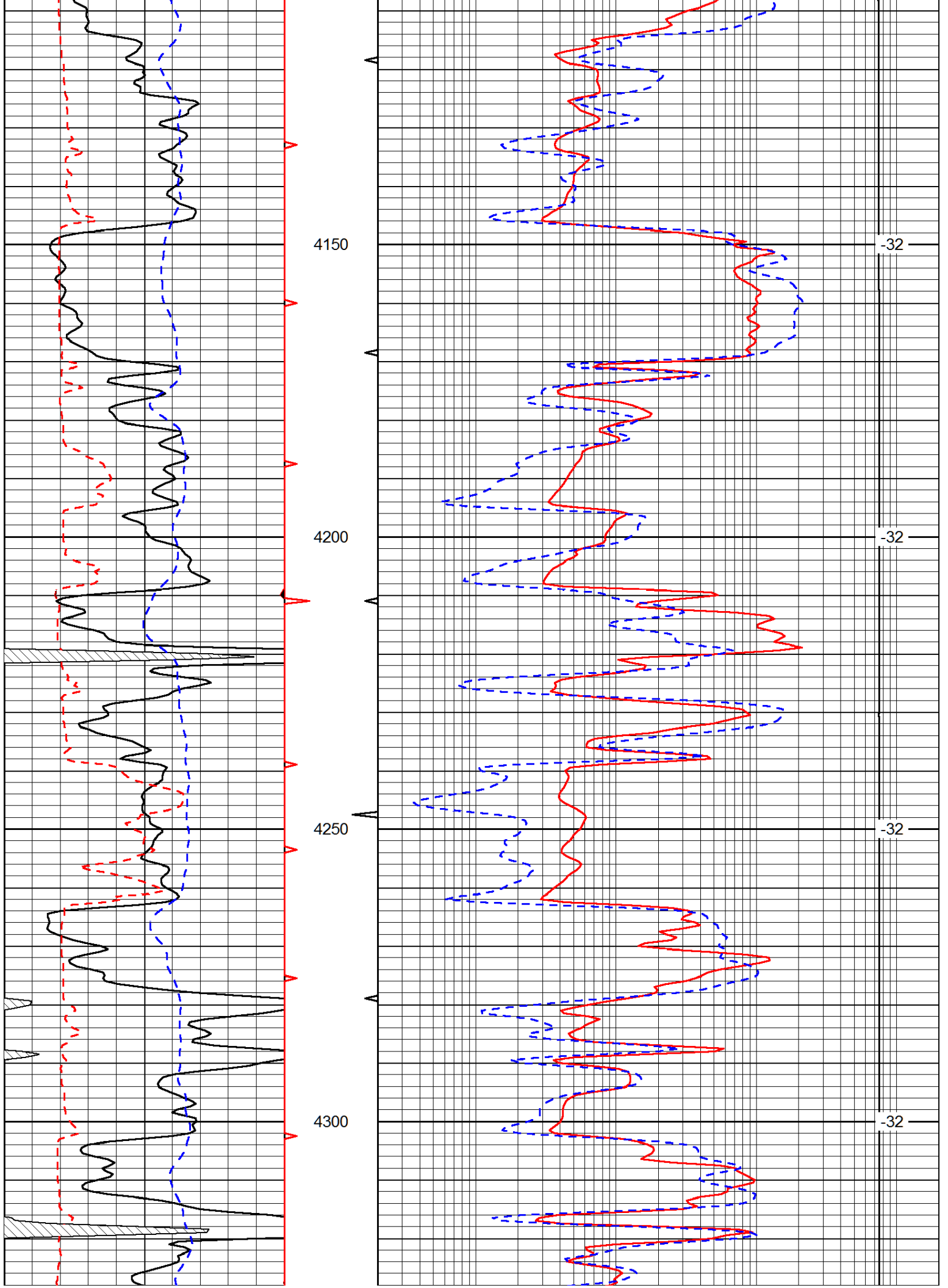
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0	Gamma Ray	150	0.2	LGRD	2000
6	Caliper (GAPI)	16	560	SWNC	2160
-200	sp (mV)	0	15000	Line Tension	0
					LSPD









40 30 20 15 10 5 1

POROSHY LIMESTONE (FLUID FILLED HOLE)

4350

-32

4400

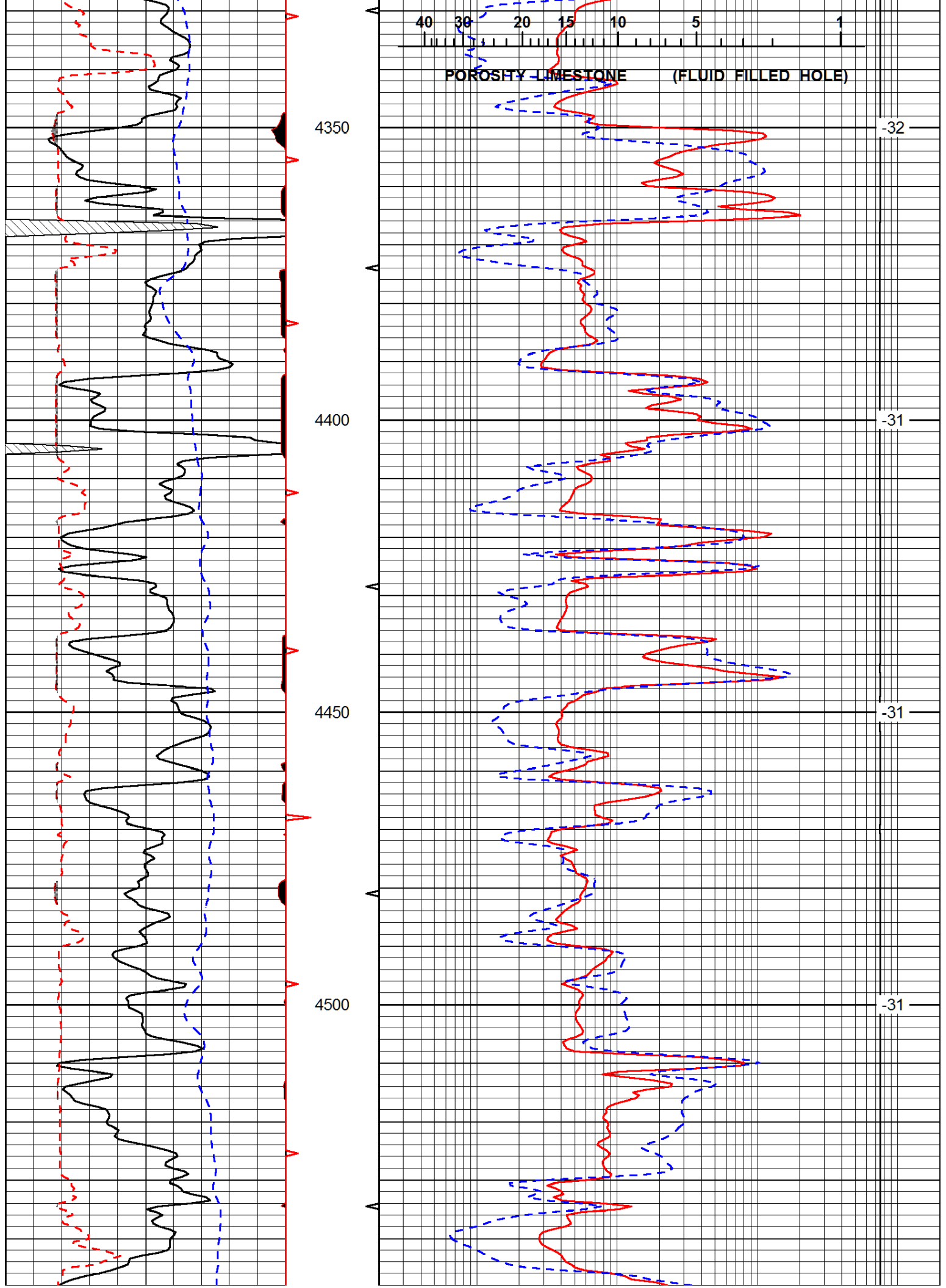
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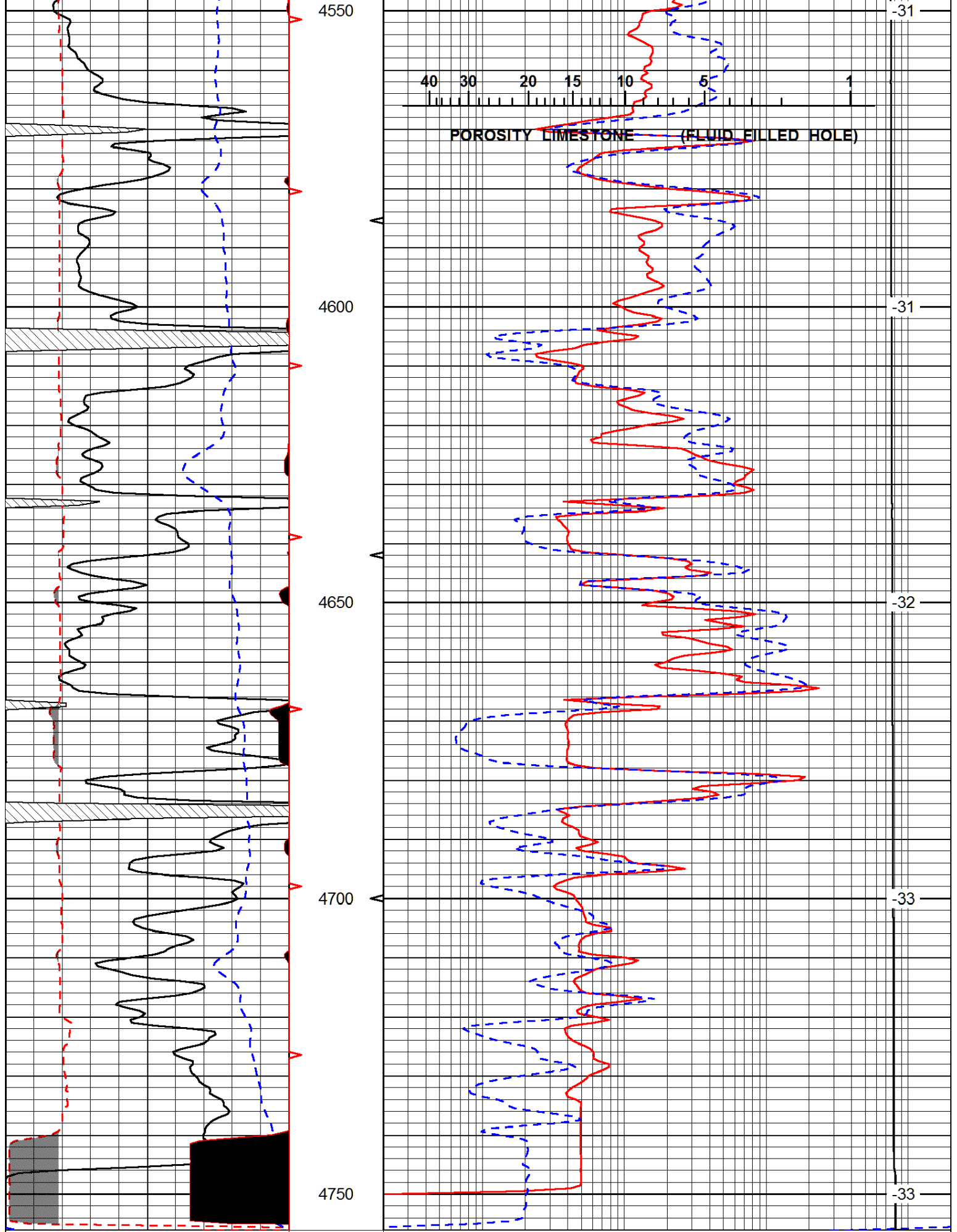
4450

-31

4500

-31





0 Gamma Ray 150

6 Caliper (GAPI) 16

200 en (mV) 0

0.2 LGRD 2000

560 SWNC 2160

15000 Line Tension 0

200 sp (mv) 0

15000 Line Tension 0

LSPD