



Pioneer Energy Services

Radiation Guard Log

15-065-23964-00-00

API No.

Company **Spiral Energy Corp.**

Well **Pfeifer A #1**

Field **Emor, N**

County **Graham** State

Kansas

Location

1800' FSL & 1400' FWL

Other Services
MEL

Sec: 21 Twp: 9S Rge: 25W

Permanent Datum Ground Level Elevation 2566

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

Elevation
K.B. 2573
D.F.
G.L. 2566

Date 8/20/2013

Run Number One

Depth Driller 4112

Depth Logger 4113

Bottom Logged Interval 4112

Top Log Interval 200

Casing Driller 8.625 @ 225

Casing Logger 217

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity,ppm CL 1600

Density / Viscosity 9.2 58

pH / Fluid Loss 10.5 7.8

Source of Sample Flowline

Rm @ Meas. Temp 0.80 @ 74

Rmf @ Meas. Temp 0.60 @ 74

Rmc @ Meas. Temp 1.08 @ 74

Source of Rmf / Rmc Charts

Rm @ BHT 0.50 @ 119

Operating Rig Time 4 Hours

Max Rec. Temp. F 119

Equipment Number 91

Location Hays

Recorded By D. Schmidt

Witnessed By Gayland Simpson

Witnessed By	Gayland Simpson	Bill Robinson
Recorded By	D. Schmidt	
Location	Hays	
Equipment Number	91	
Max Rec. Temp. F	119	
Operating Rig Time	4 Hours	
Rm @ BHT	0.50 @ 119	
Source of Rmf / Rmc	Charts	
Rmc @ Meas. Temp	1.08 @ 74	
Rmf @ Meas. Temp	0.60 @ 74	
Rm @ Meas. Temp	0.80 @ 74	
Source of Sample	Flowline	
pH / Fluid Loss	10.5 7.8	
Density / Viscosity	9.2 58	
Salinity,ppm CL	1600	
Type Fluid in Hole	Chemical	
Bit Size	7.875	
Casing Logger	217	
Casing Driller	8.625 @ 225	
Top Log Interval	200	
Bottom Logged Interval	4112	
Depth Logger	4113	
Depth Driller	4112	
Run Number	One	
Date	8/20/2013	

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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 Pioneer Energy Services
www.pioneerenergy.com
 785 625 3858
 St. Peter,
 3 North to H Rd, 2 West to 120 Rd, 1 1/4 North,
 East into

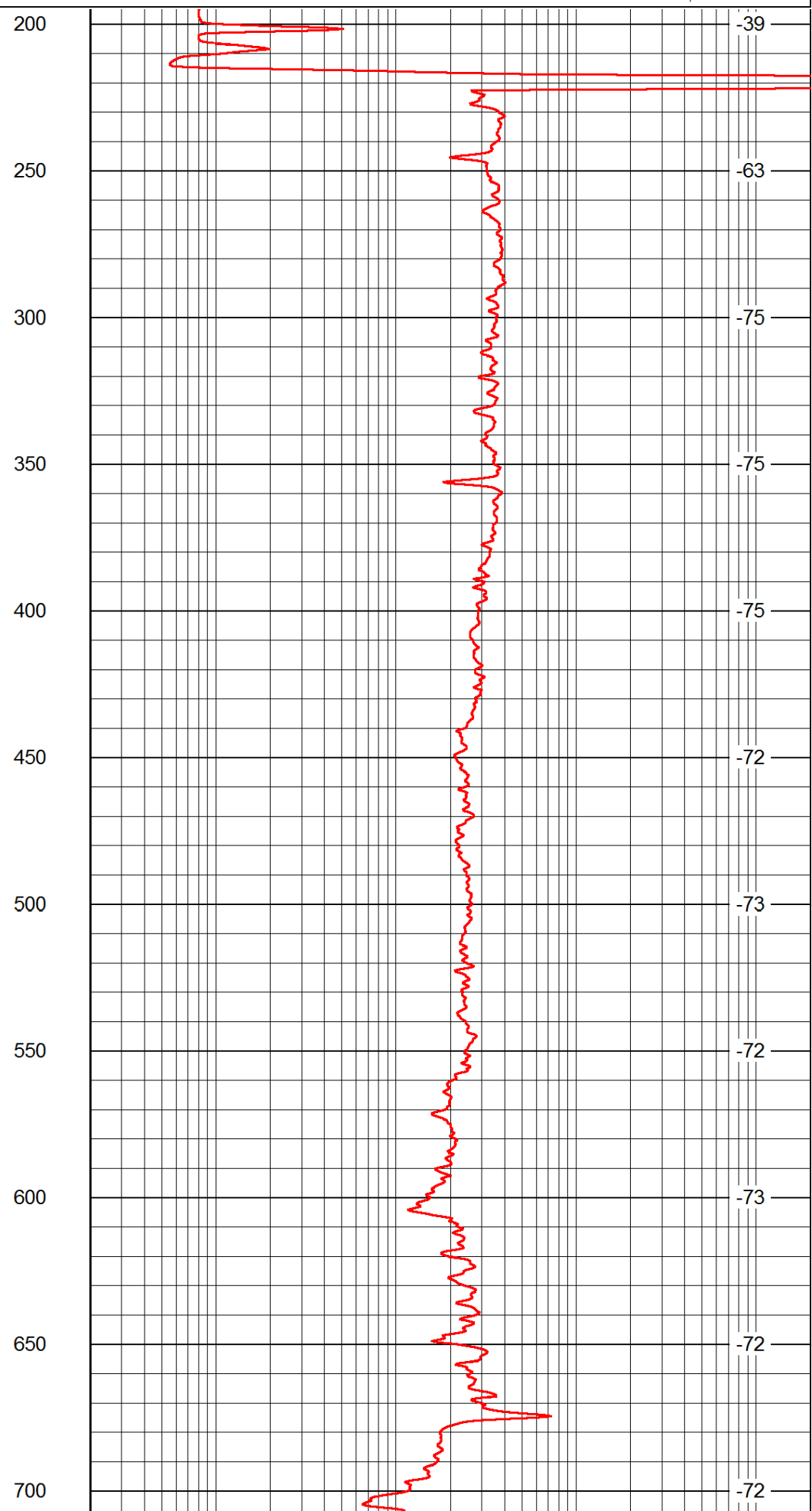
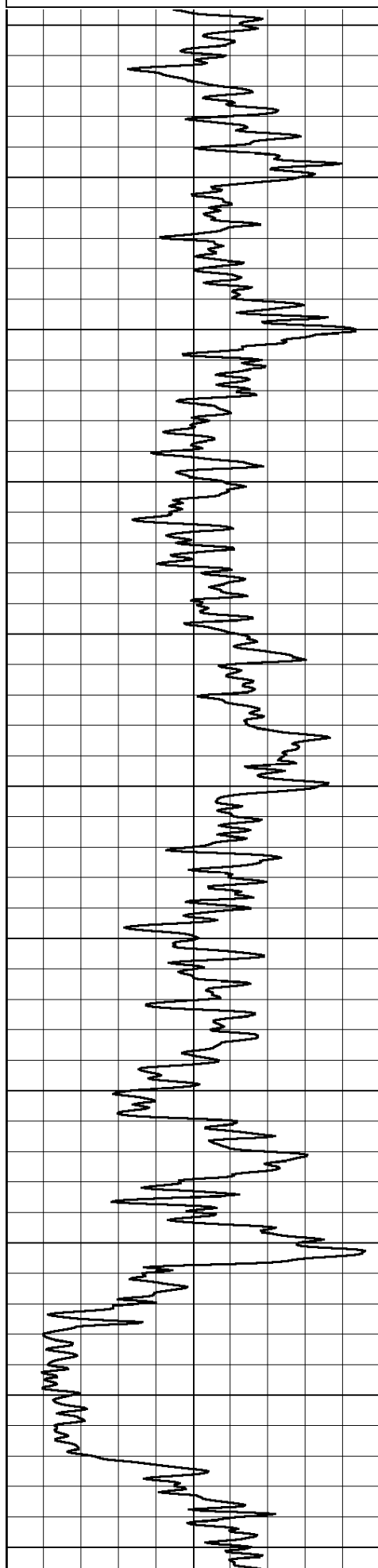
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 Dataset Creation: Tue Aug 20 11:47:36 2013
 Charted by: Depth in Feet scaled 1:600

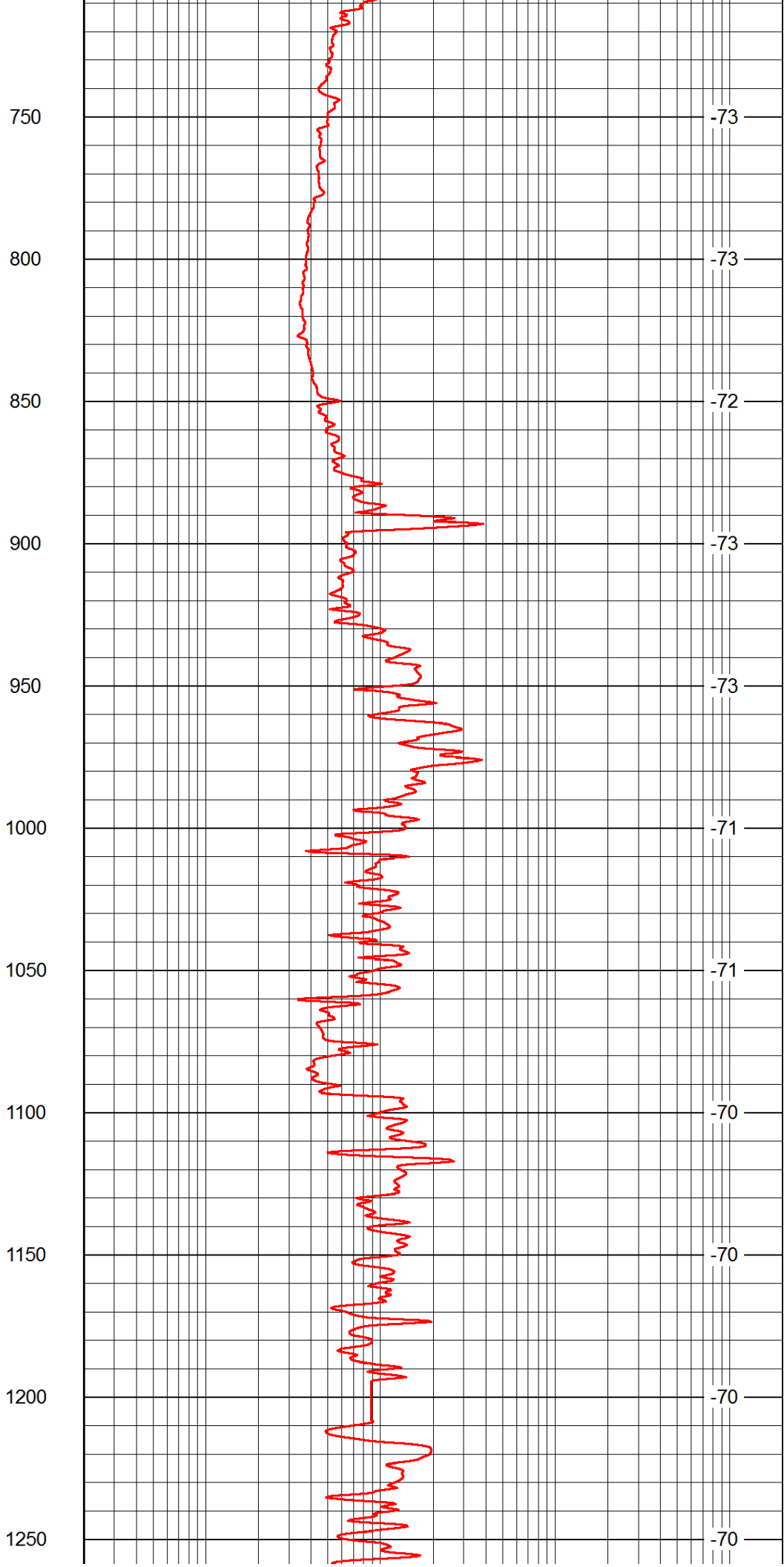
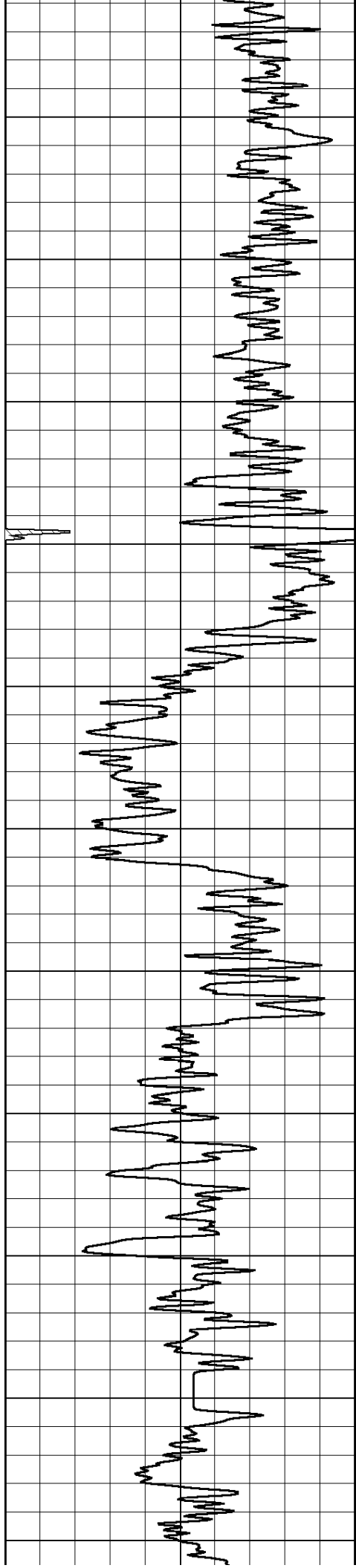
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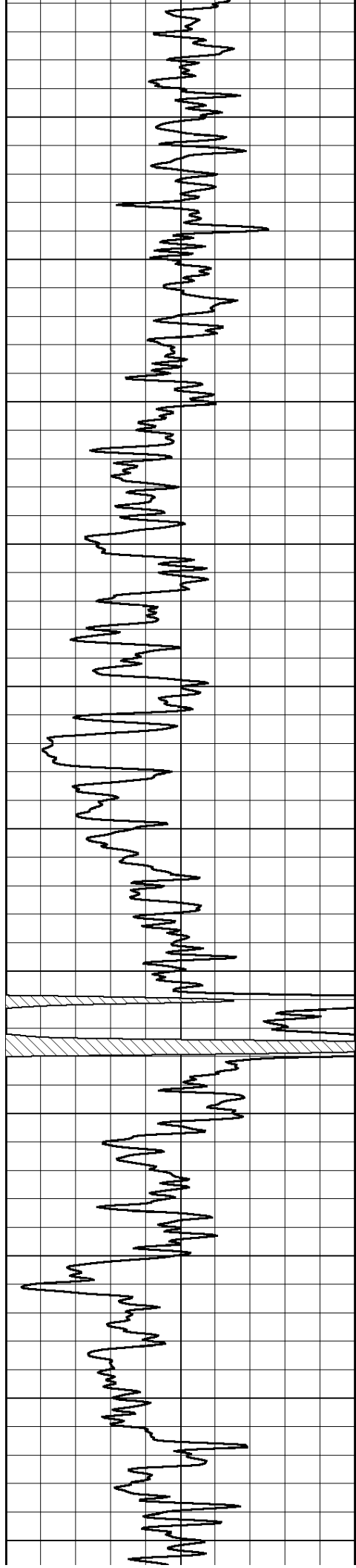
0.2 Igrd

2000

LSPD







1300

1350

1400

1450

1500

1550

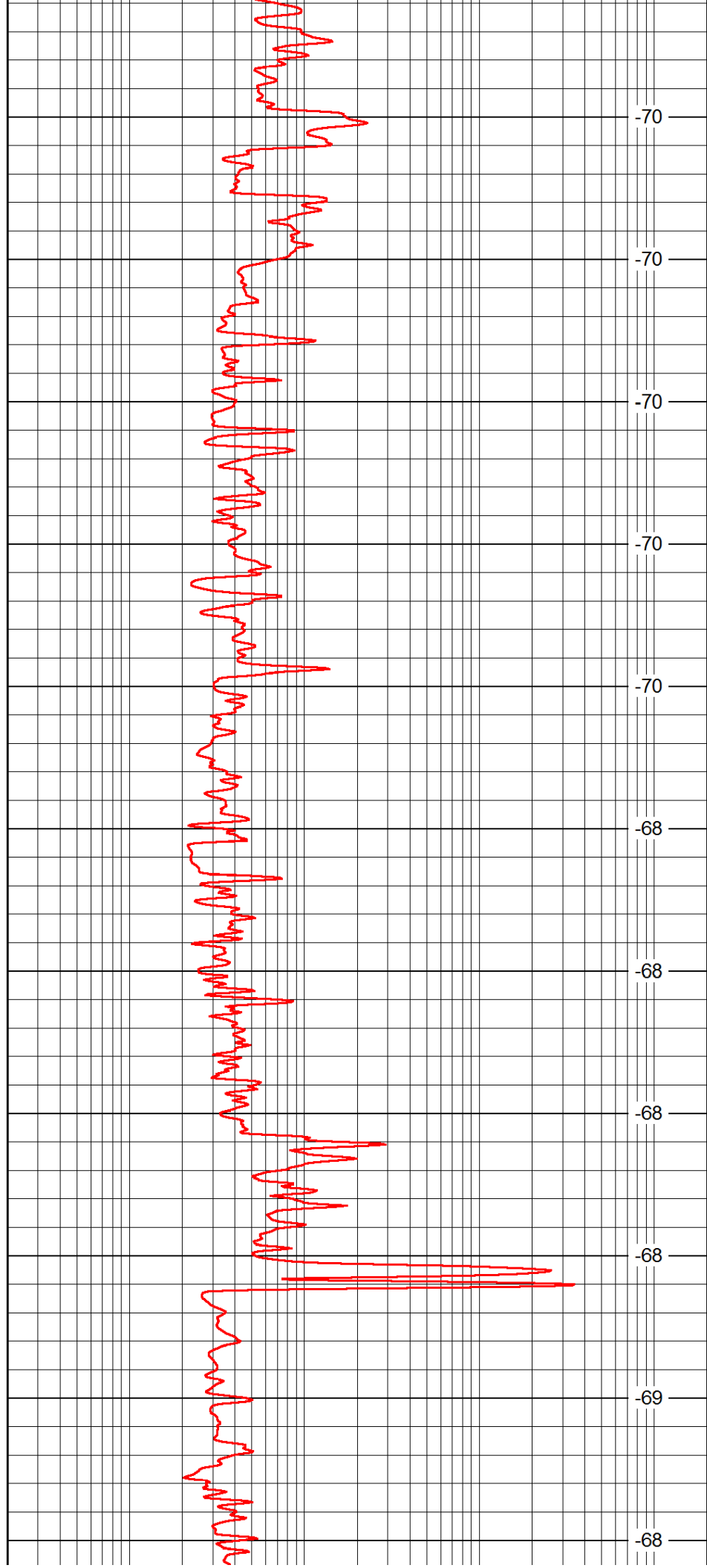
1600

1650

1700

1750

1800



-70

-70

-70

-70

-70

-68

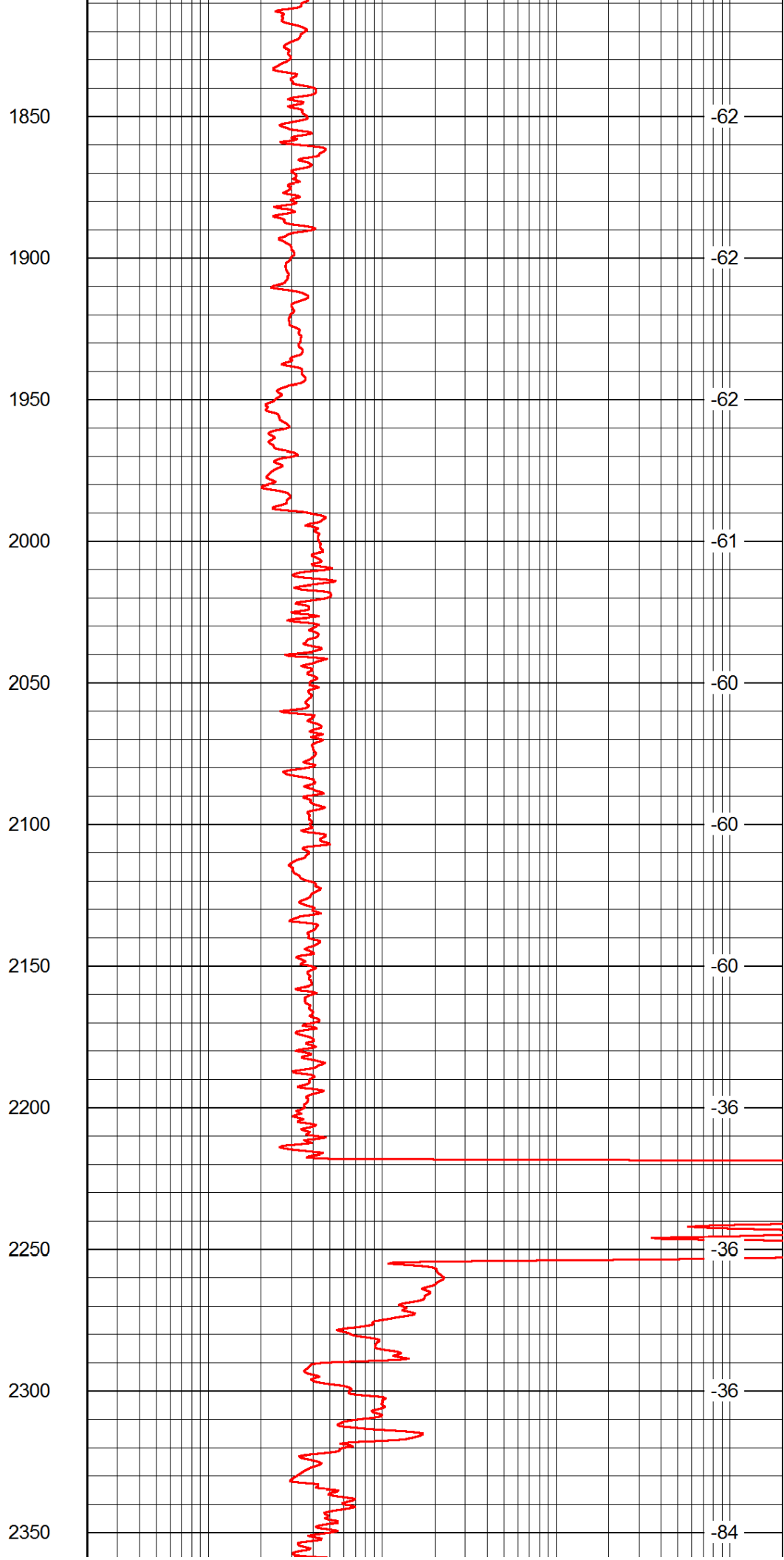
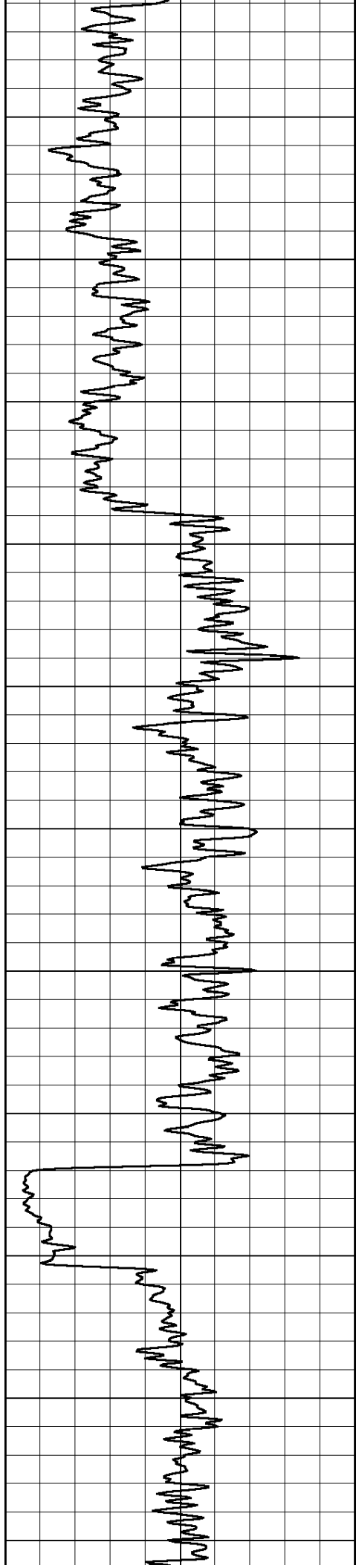
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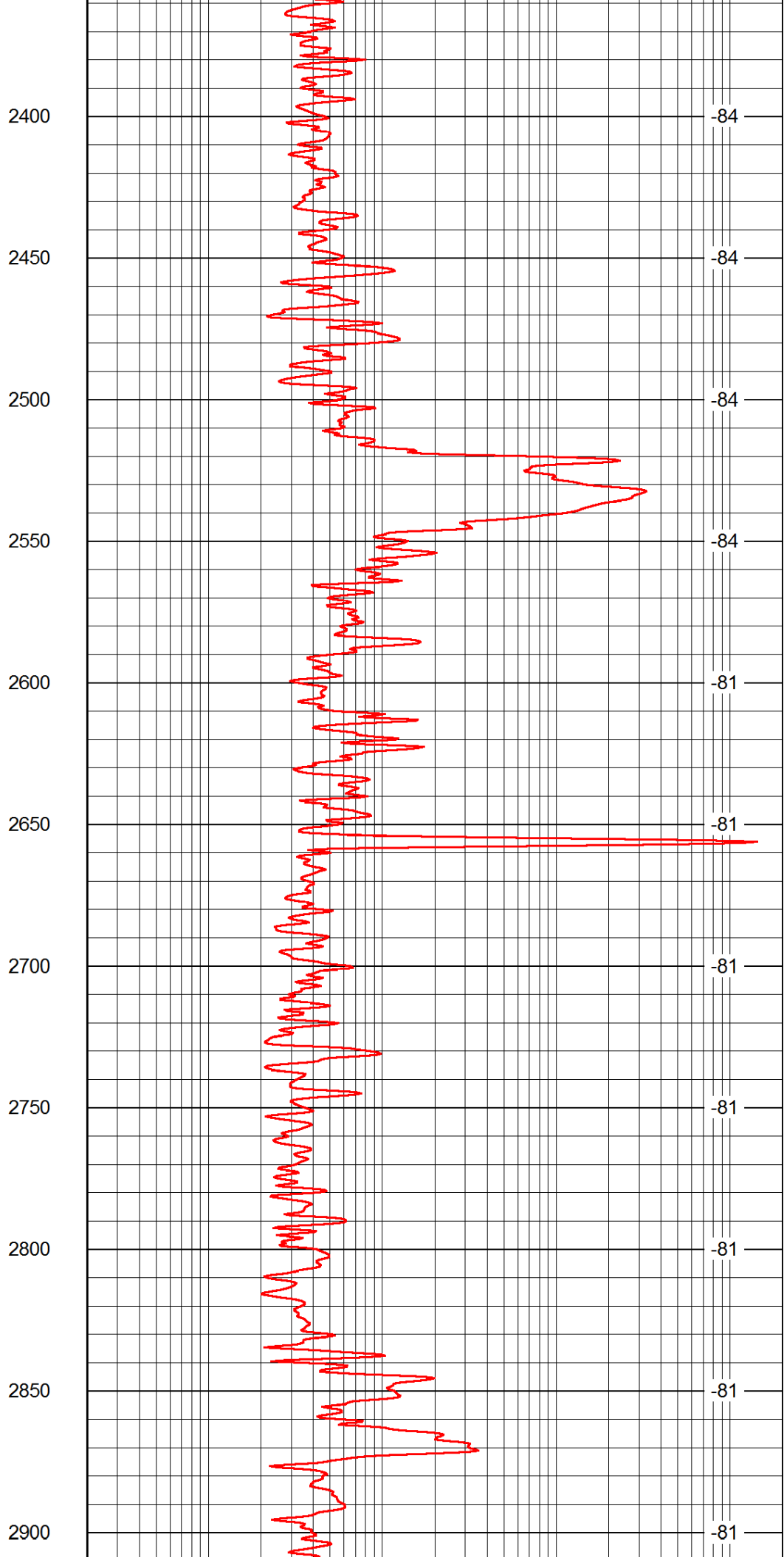
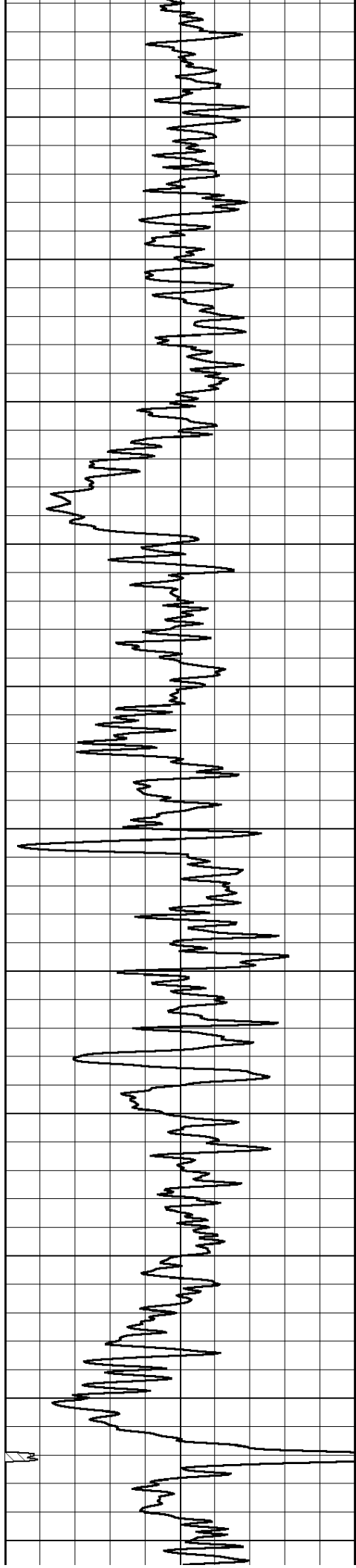
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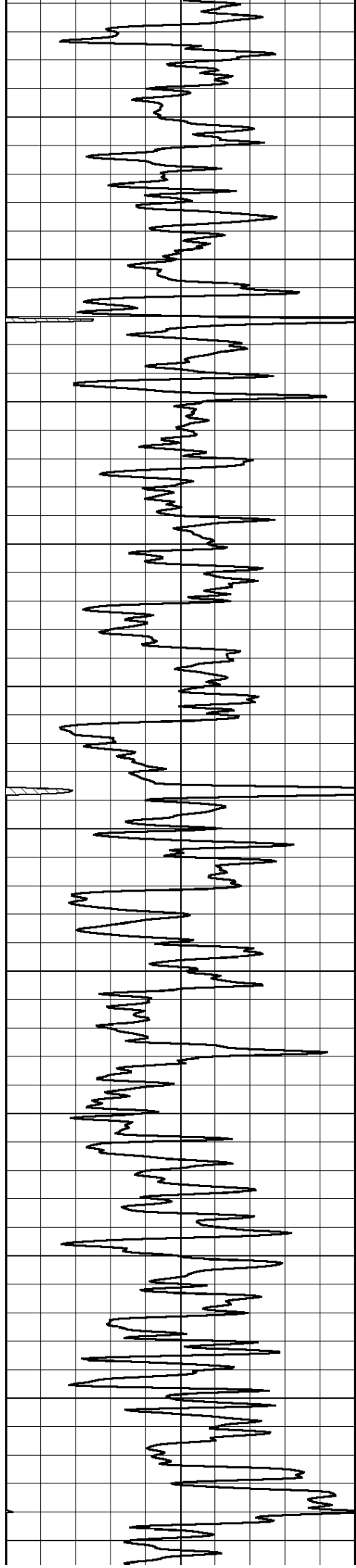
-68

-69

-68







2950

3000

3050

3100

3150

3200

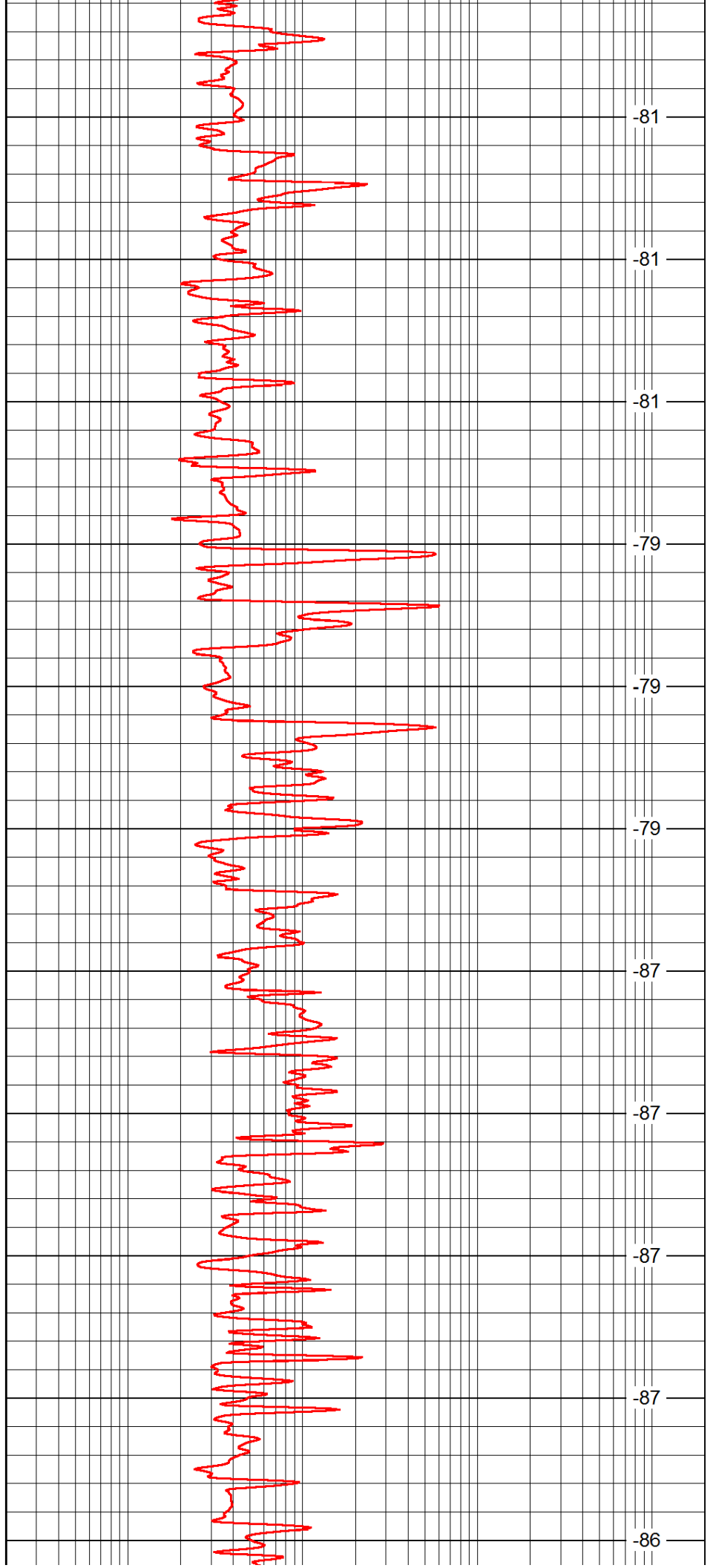
3250

3300

3350

3400

3450



-81

-81

-81

-79

-79

-79

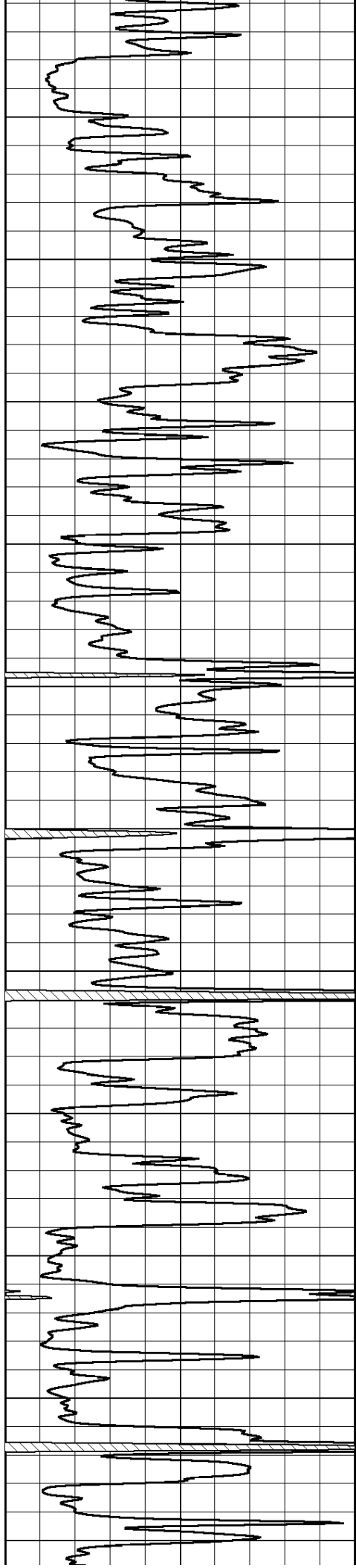
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-87

-87

-87

-86



3500

3550

3600

3650

3700

3750

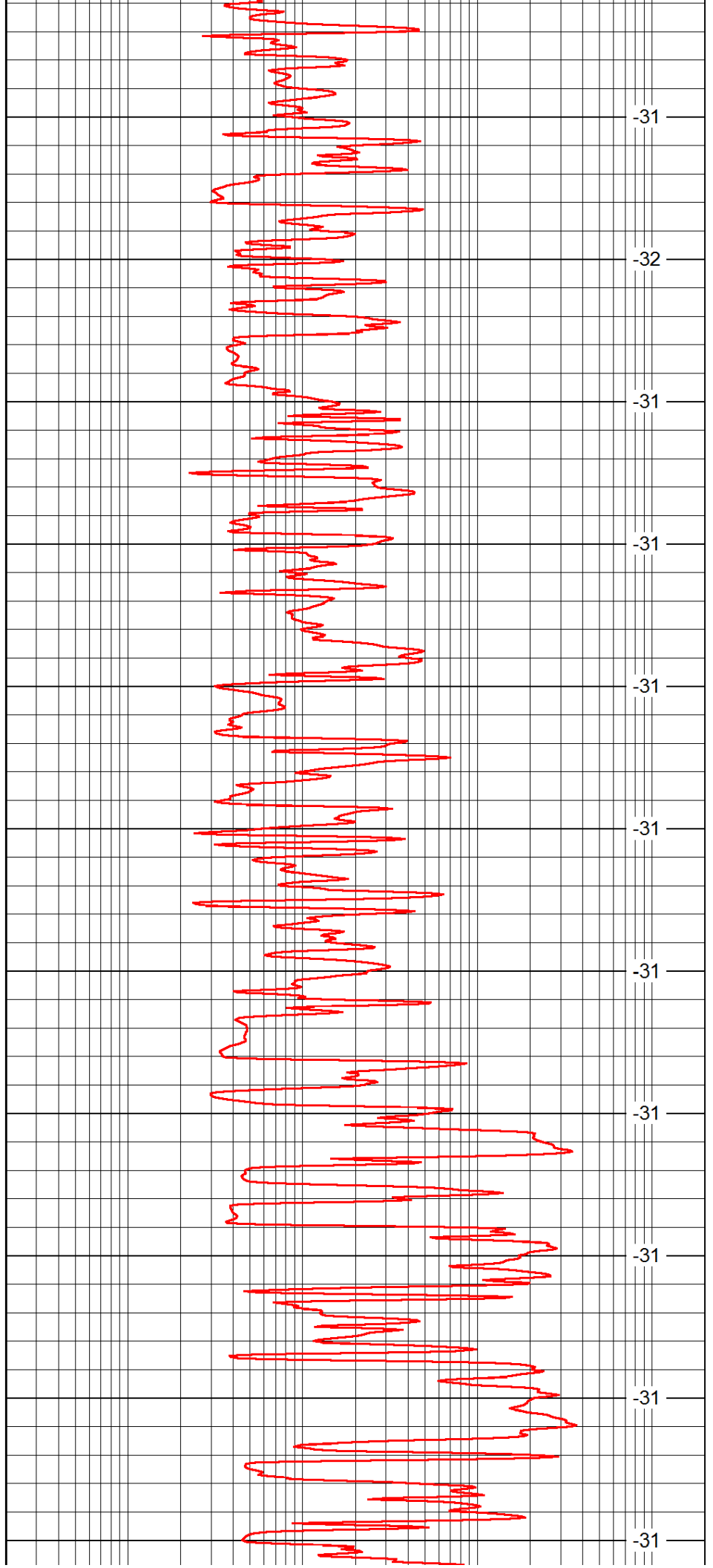
3800

3850

3900

3950

4000



-31

-32

-31

-31

-31

-31

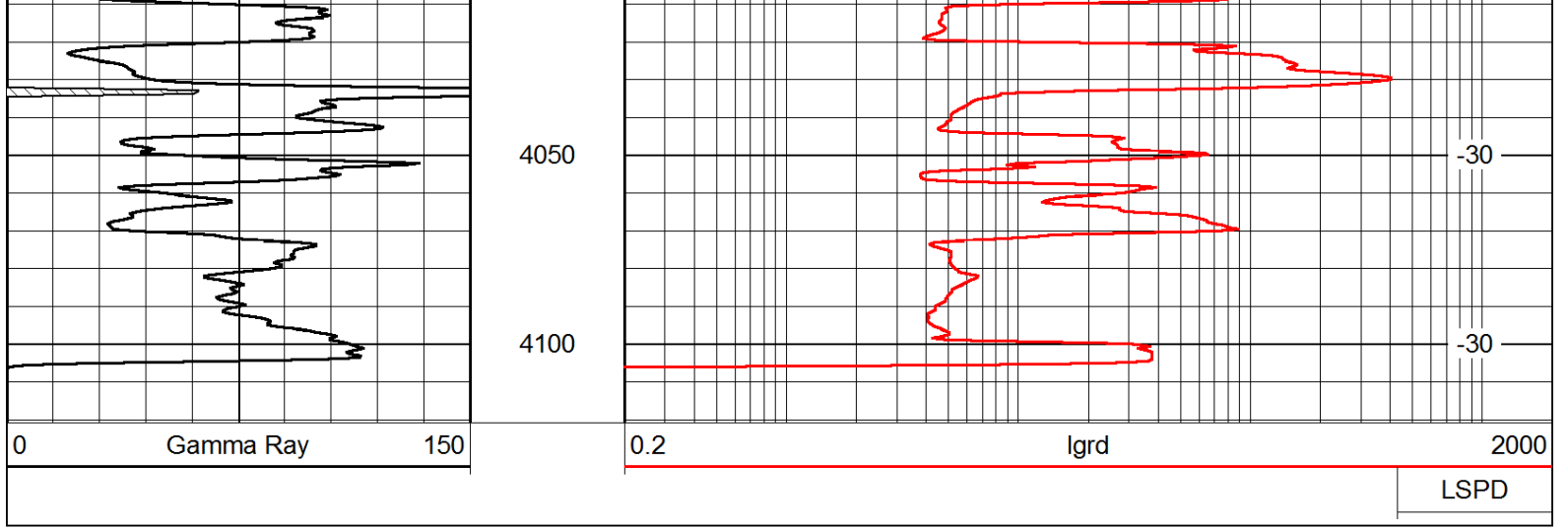
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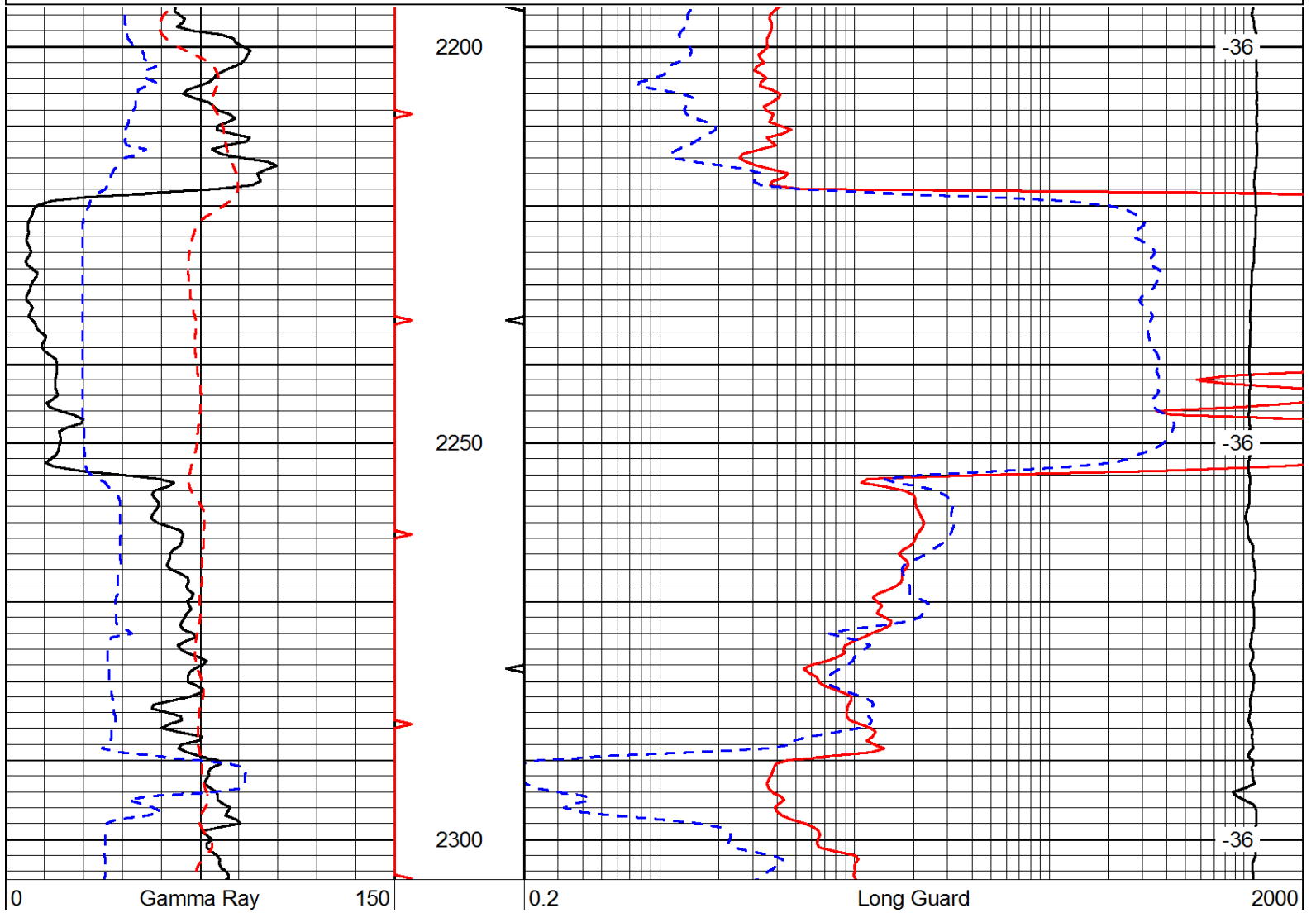
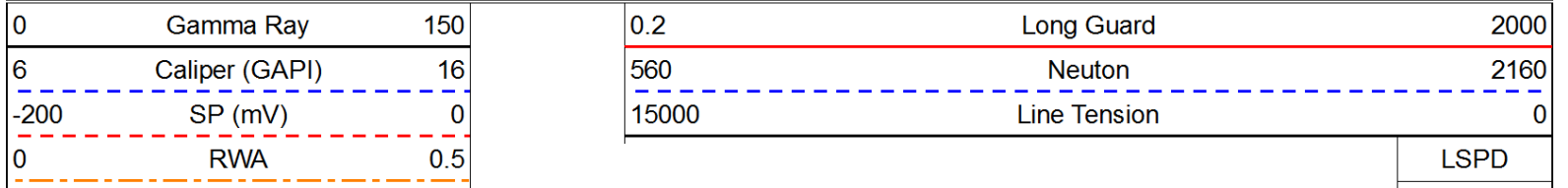
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 Charted by: Depth in Feet scaled 1:240



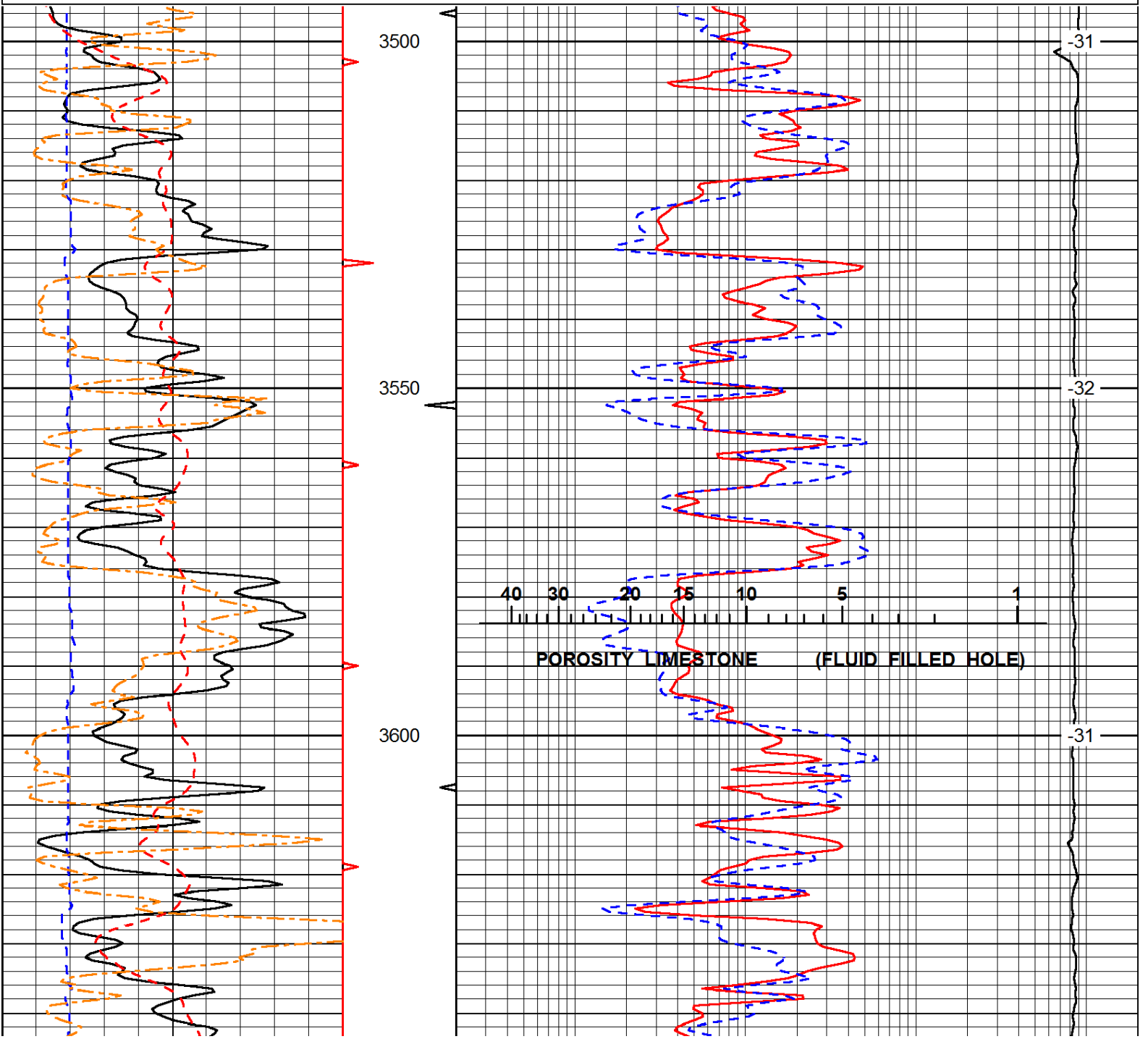
6	Caliper (GAPI)	16
-200	SP (mV)	0
0	RWA	0.5

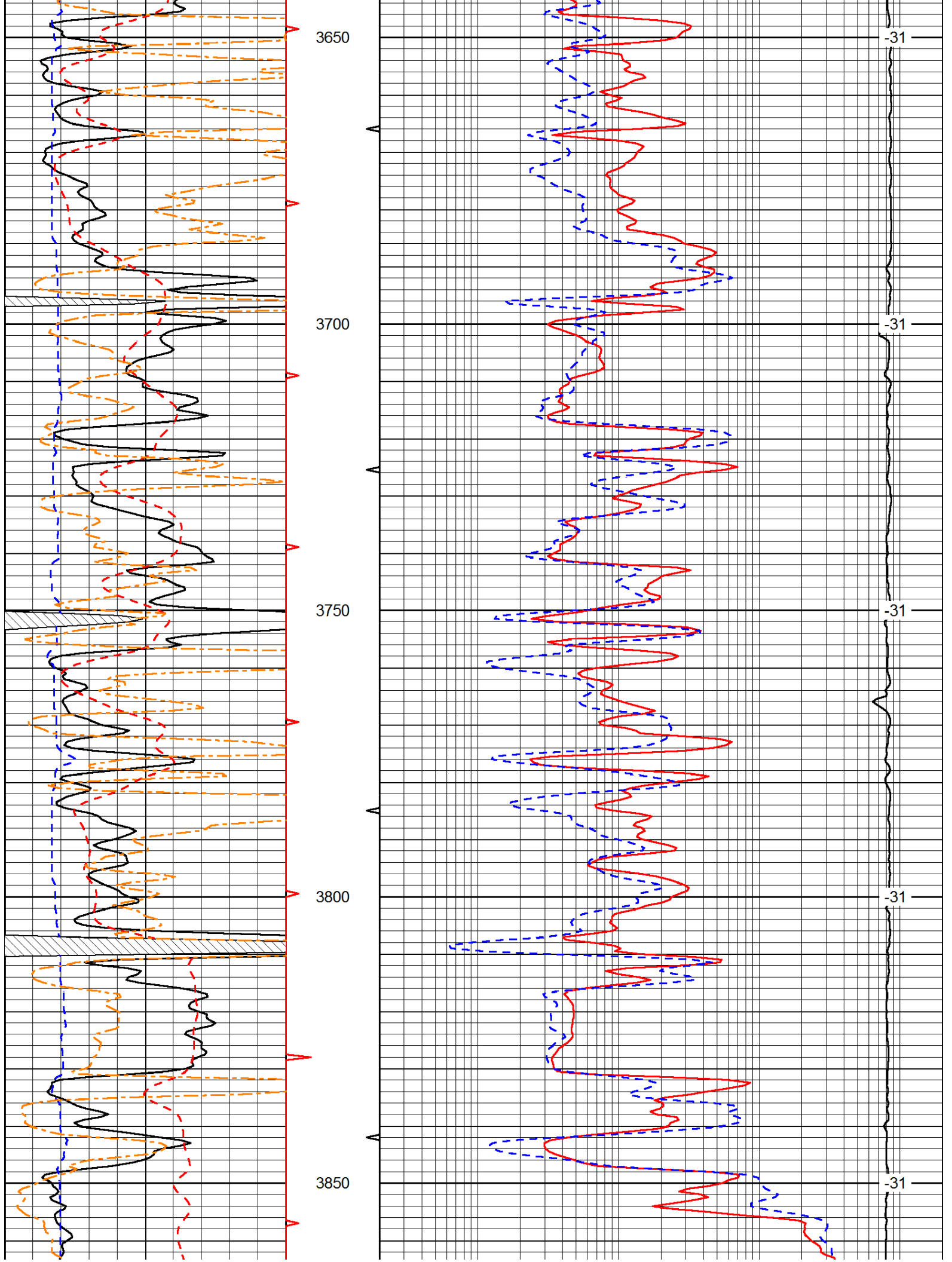
560	Neutron	2160
15000	Line Tension	0
		LSPD

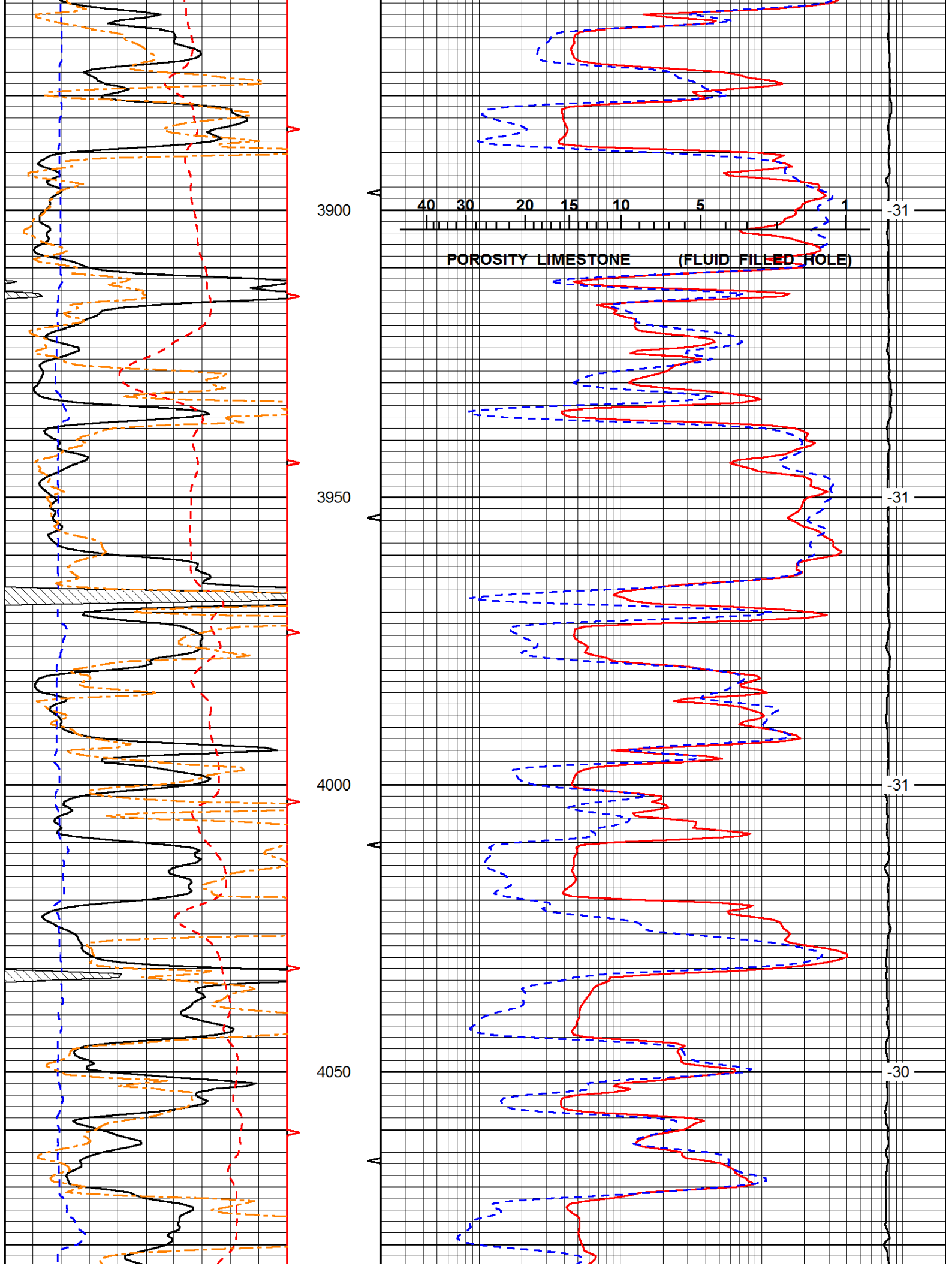
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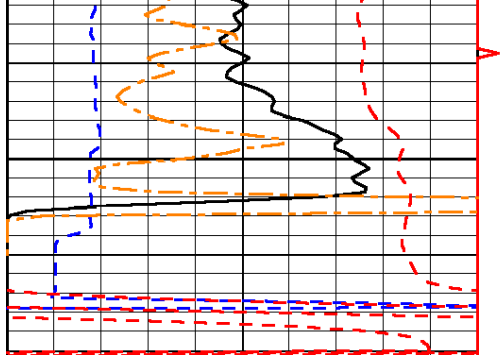
0	Gamma Ray	150
6	Caliper (GAPI)	16
-200	SP (mV)	0
0	RWA	0.5

0.2	Long Guard	2000
560	Neutron	2160
15000	Line Tension	0
		LSPD



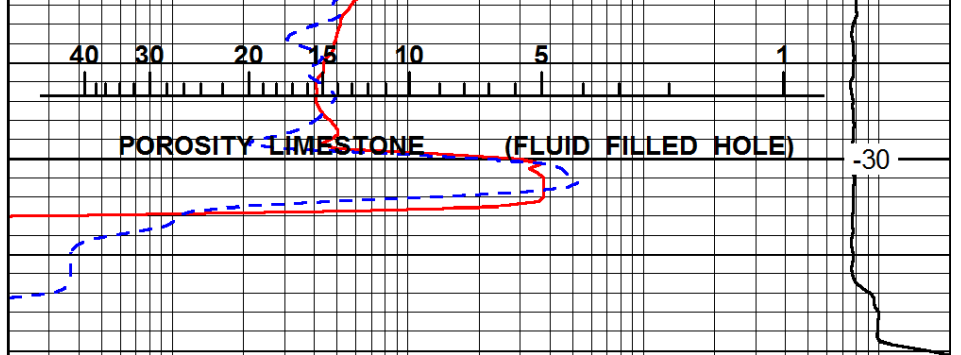






0	Gamma Ray	150
6	Caliper (GAPI)	16
-200	SP (mV)	0
0	RWA	0.5

4100



0.2	Long Guard	2000
560	Neutron	2160
15000	Line Tension	0

-30

LSPD