Schlumberger

Company: **Lamont DohertyEarth Observatory**

Well: **Expedition 340T, Site U1309D**
Field: **Atlantis Massif**
Rig: **JOIDES Resolution** Country: **USA**

Rig: JOIDES Resolution
Field: Atlantis Massif
Location: Latitude: N 30* 10.1195'
Well: Expedition 340T, Site U1309D
Company: Lamont DohertyEarth Observatory

LDEO MSS

LOCATION

Latitude: N 30* 10.1195'
Longitude: W 42* 7.1131'

Elev.: K.B. 11.00 m
G.L. −1656.00 m
D.F. 11.00 m

Permanent Datum: Mean Sea Level — Elev.: 0.00 m
Log Measured From: Drill Floor — 11.00 m above Perm. Datum
Drilling Measured From: Drill Floor

Ocean: Atlantic	Max. Well Deviation 0 deg	Longitude N 30* 10.1195'	Latitude W 42* 7.1131'

	Run 1	Run 2	R
Logging Date	25−Feb−2012		
Run Number	6		
Depth Driller	3071.5 m		
Schlumberger Depth	3048 m		
Bottom Log Interval	2422 m		
Top Log Interval	1760 m		
Casing Driller Size @ Depth	11.750 in @ 1759 m	@	
Casing Schlumberger	1759 m		
Bit Size	9.875 in		
Type Fluid In Hole	Seawater		
MUD Density / Viscosity	1.05 g/cm3		
MUD Fluid Loss / PH			
MUD Source Of Sample	N/A		
RM @ Measured Temperature	@	@	
RMF @ Measured Temperature	@	@	
RMC @ Measured Temperature	@	@	
Source RMF / RMC	N/A / N/A		
RM @ MRT / RMF @ MRT	@ 77 / @ 77	@ / @	
Maximum Recorded Temperatures	77 degC		
Circulation Stopped / Time	31−Jan−2005 / 12:00		
Logger On Bottom / Time	25−Feb−2012 / 7:30		
Unit Number / Location	625003 / Houston		
Recorded By	C. Furman		
Witnessed By	A. Slagle, G. Guerrin		

	Run 1	Run 2	R
Logging Date			
Run Number			
Depth Driller			
Schlumberger Depth			
Bottom Log Interval			
Top Log Interval			
Casing Driller Size @ Depth	@		
Casing Schlumberger			
Bit Size			
Type Fluid In Hole			
MUD Density / Viscosity			
MUD Fluid Loss / PH			
MUD Source Of Sample			
RM @ Measured Temperature	@		
RMF @ Measured Temperature	@		
RMC @ Measured Temperature	@		
Source RMF / RMC			
RM @ MRT / RMF @ MRT	@	@	
Maximum Recorded Temperatures			
Circulation Stopped / Time			
Logger On Bottom / Time			
Unit Number / Location			
Recorded By			
Witnessed By			

@													Run 3
	@	@	@		@								
@													Run 4

DISCLAIMER

THE USE OF AND RELIANCE UPON THIS RECORDED−DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED−DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED−DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED−DATA.

OTHER SERVICES1

OS1: HRLA
OS2: HLDS
OS3: DSI
OS4: MTT
OS5: VSI

REMARKS: RUN NUMBER 1

Hole U1309D was originally drilled during ODP Leg 304 in 2004 and deepened during Leg 305 in 2005.
This is a run of the LDEO Magnetic Susceptibility Sonde, Model B (MSS−B) prototype, Deep Reading (low−res) sensor only.
Logs correlated to "Dual−Laterolog Tool" log recorded by Schlumberger on 31 JAN 05.
MSS−B is rated to log at up to 7200ft/h, so the downlog was run at 5000ft/hr until the measured
mud temperature reached a safe limit of 75 degC (tool rated to 80 degC). This occurred at 2419.2mbrf.
A fast upward pass was recorded at 5000 ft/h over the entire interval.
A slow repeat pass was recorded over an interval of interest at 1500 ft/h to demonstrate compatibility with triple combo, etc.
Repeat pass was continued inside pipe up to a point above sea bed to see if any signal change occurred −− none observed.

RUN 1			RUN 2		
SERVICE ORDER #:			SERVICE ORDER #:		
PROGRAM VERSION:		19C0−187	PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

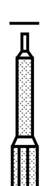
RUN 1 | RUN 2

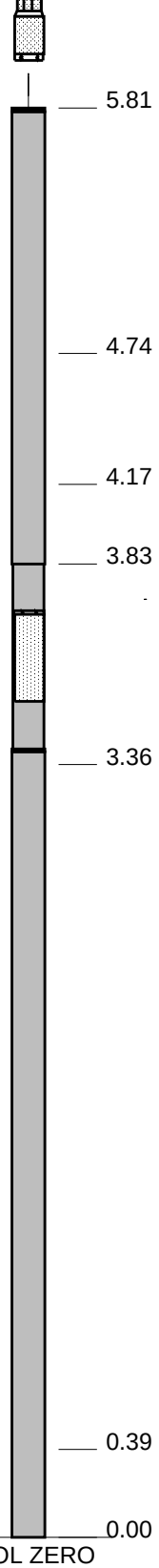
SURFACE EQUIPMENT

WITM (EDTS)−A

DOWNHOLE EQUIPMENT

LEH−MT 6.77
LEH−MT 101





EDTC−B
EDTH−B 8528
EDTC−B 8529
EDTG−A/B 77693

5.81

AH−230 ENP
AH−230 3

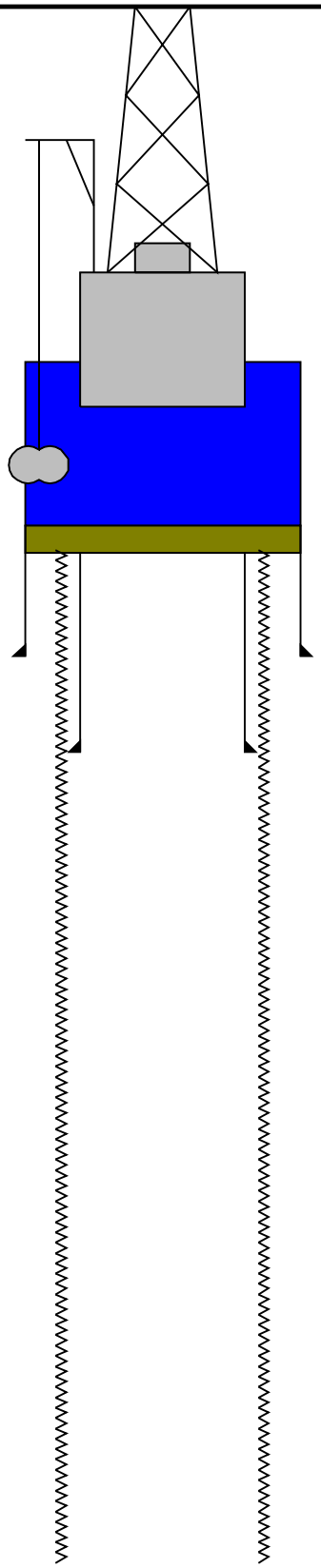
3.83

MSS_LDEO−A
ELIC−A 2
MSS_LDEO−A 1

3.43

MAXIMUM STRING DIAMETER 3.63 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

Production String	(in) OD	(in) ID	(m) MD	Well Schematic	(m) MD	(in) OD	(in) ID	Casing String

	OD	ID	MD		MD	OD	ID	
Kelly Bushing Elevation			0.0					
Derrick Floor Elevation			0.0					
Mean Sea Level			11.0					
Seismic Gun depth below MSL			7.0					
					1650.0			Top of Re−entry Cone
					1656.0	9.875		Sea Bed
					1676.0	13.375		Casing Shoe
					1711.0	8.000		Drill Pipe (Driller's Depth) 1711mbrf for Triple−Combo 1759mbrf for VSI & MSS 2356mbrf for DSI
					3071.5	9.875		Driller's Total Depth

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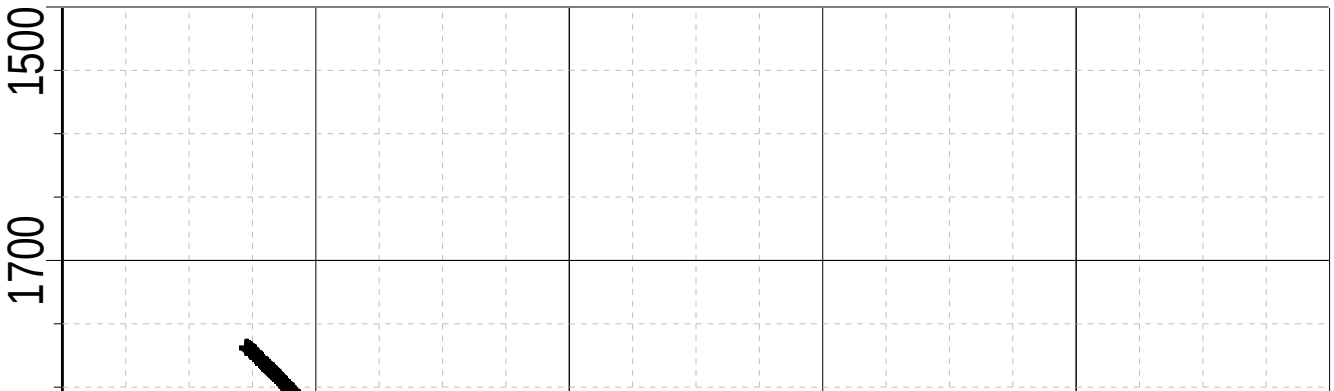
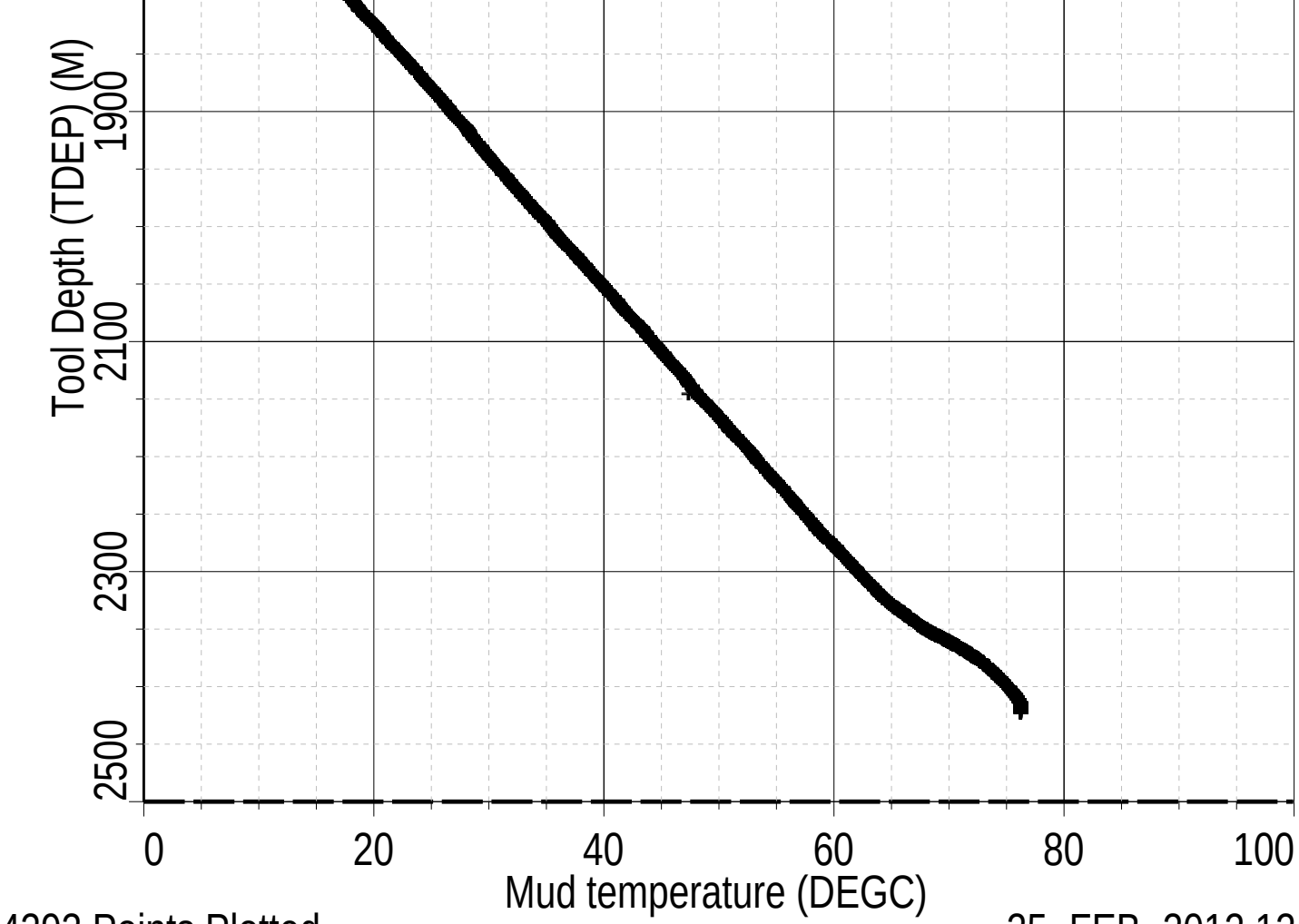
LEH−MT Mud Temperature

MAXIS Field Log

Index: 2422.1 − 1768.0 M





4293 Points Plotted

25−FEB−2012 12:17

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Down Log

MAXIS Field Log

Company: Lamont DohertyEarth Observatory	Well: Expedition 340T, Site U1309D

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_046LUP		PRODUCER	25−Feb−2012 12:09	2418.7 M	1732.0 M

Output DLIS Files

DEFAULT	MSS_LDEO_048PUP	FN:46	PRODUCER	25−Feb−2012 12:12	2421.5 M	1734.8 M

OP System Version: 19C0−187

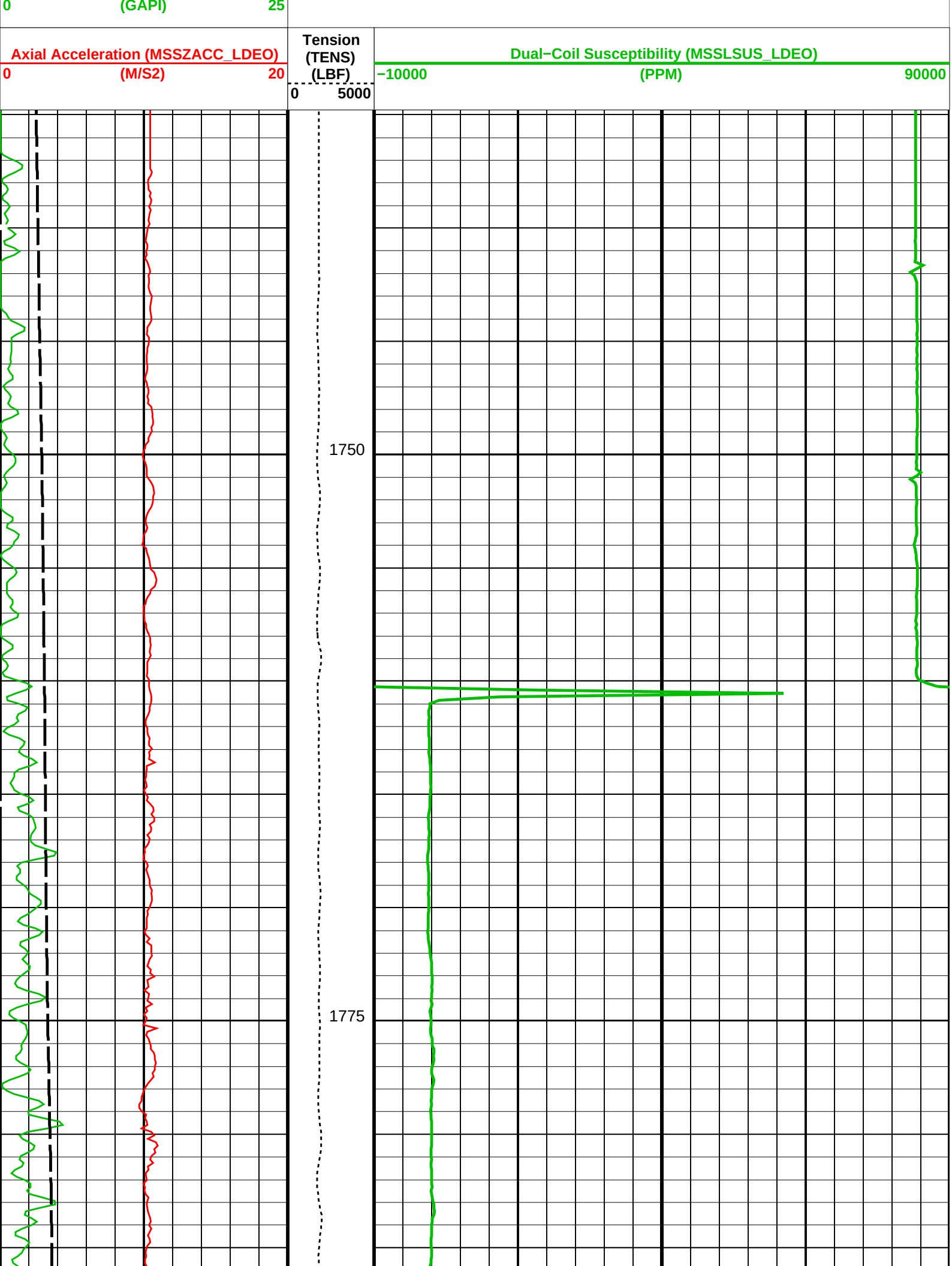
MSS_LDEO−A	19C0−187	EDTC−B	SKK−5169−EDTCB

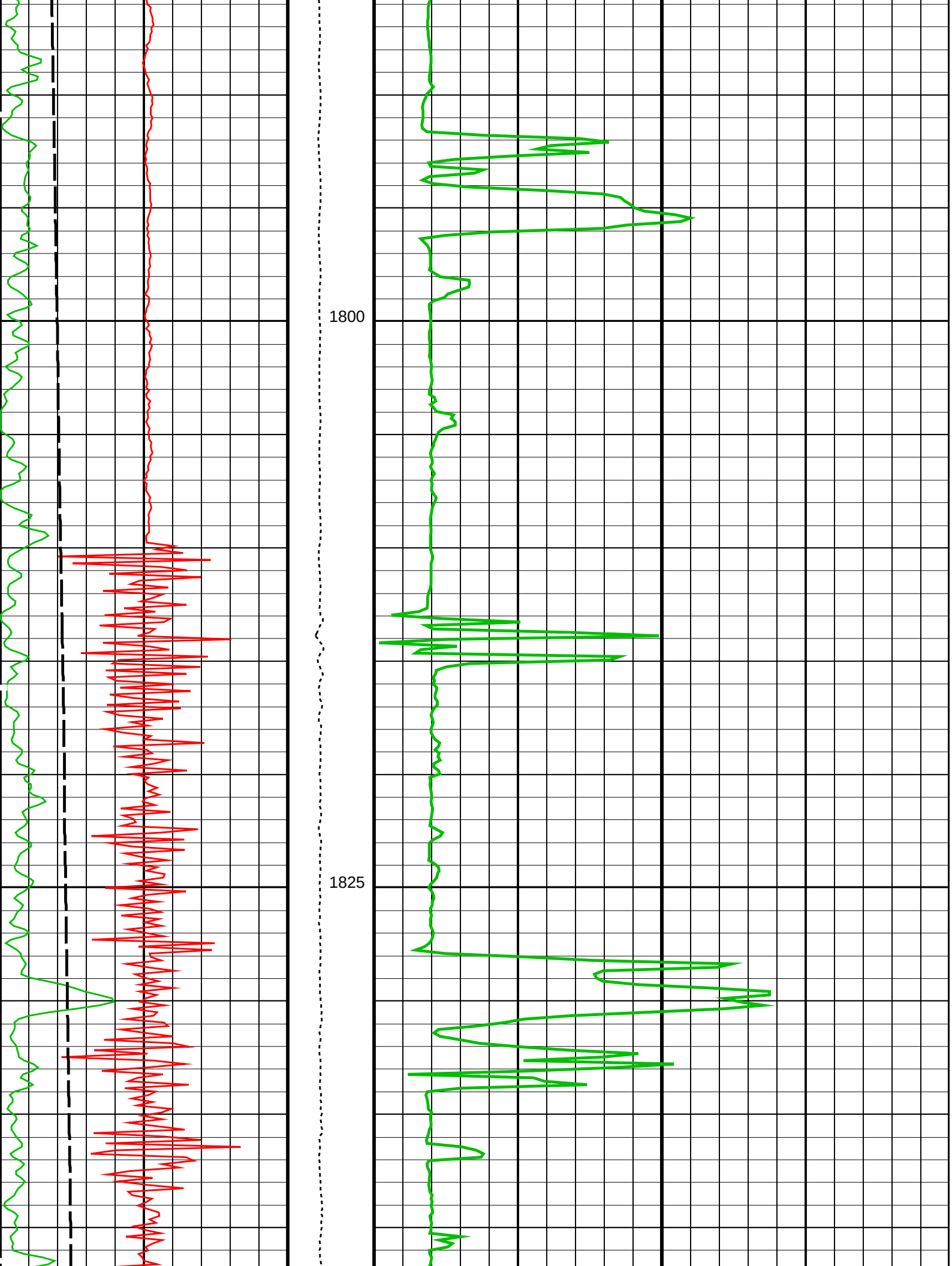
PIP SUMMARY

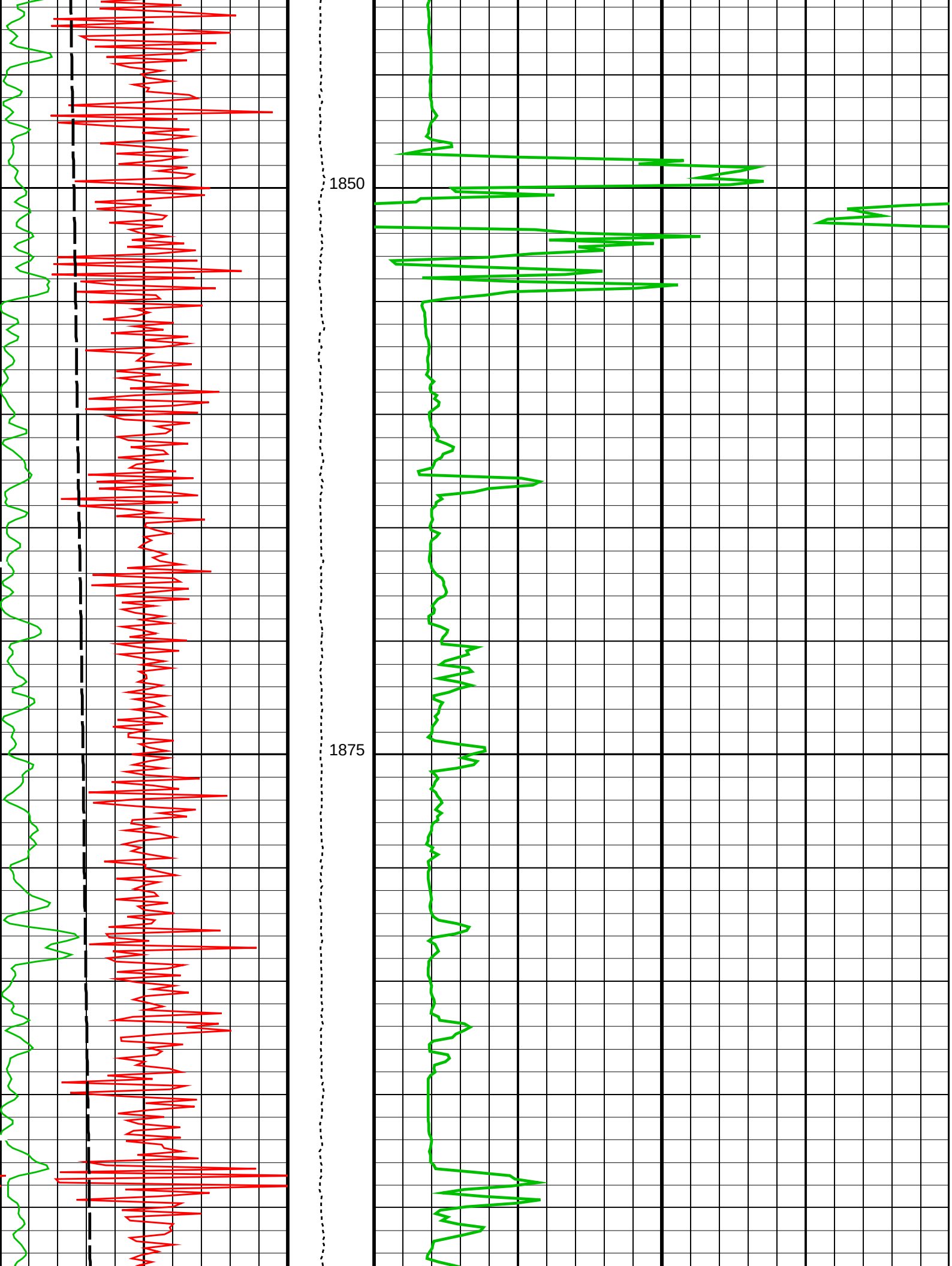
Time Mark Every 60 S

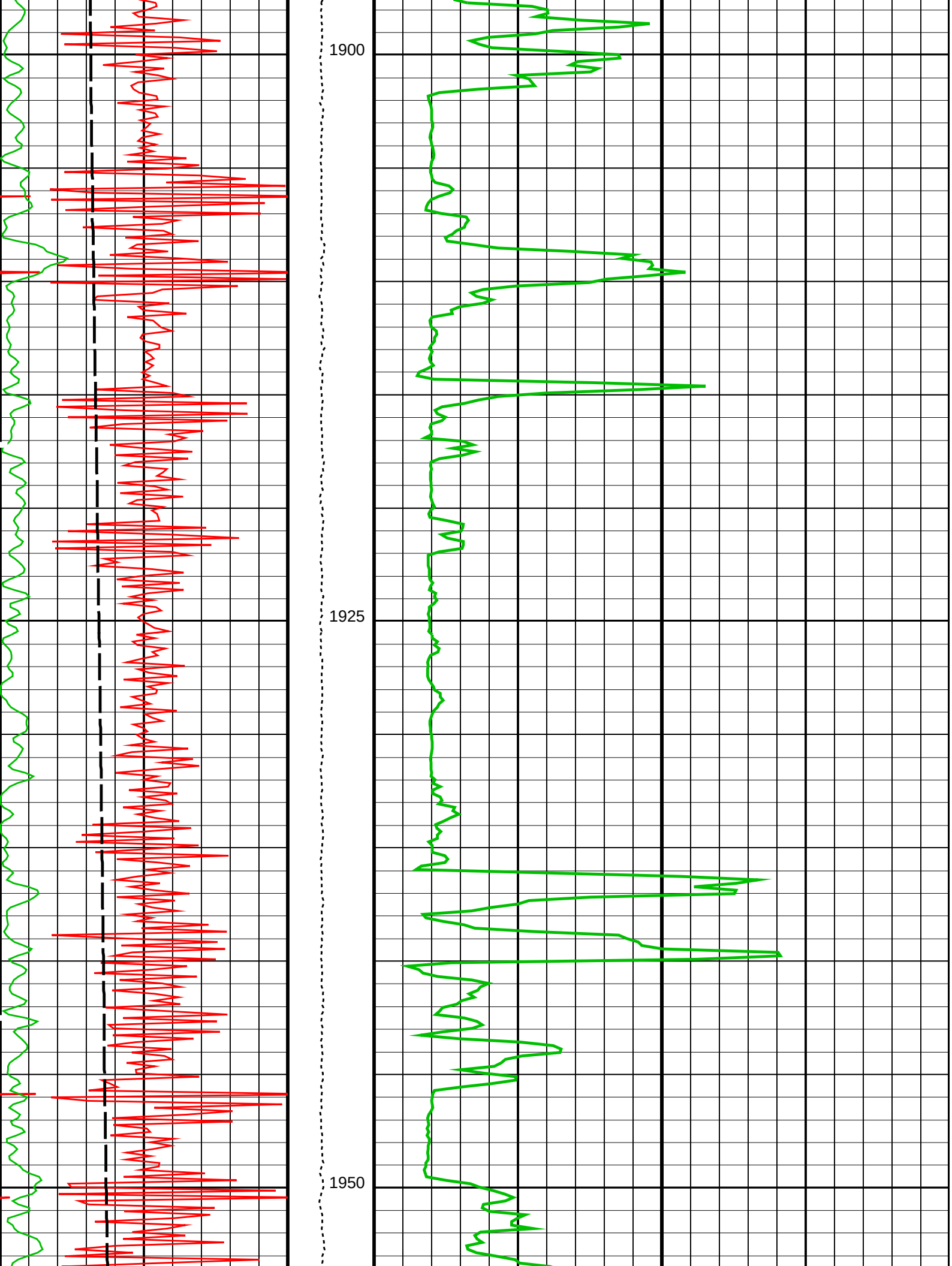
Mud temperature (MTEM)		
0	(DEGC)	80

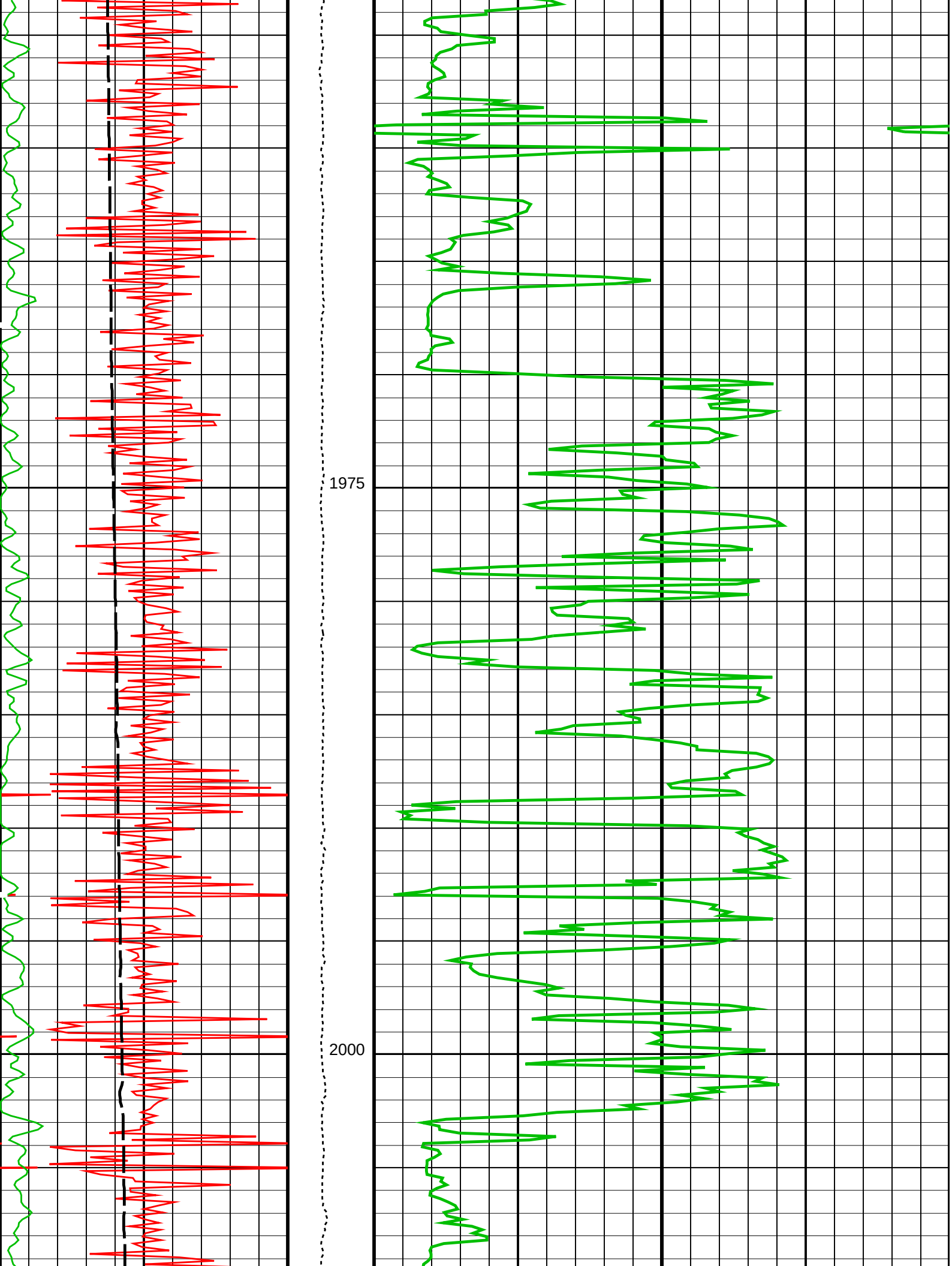
Gamma Ray (GR_EDTC)

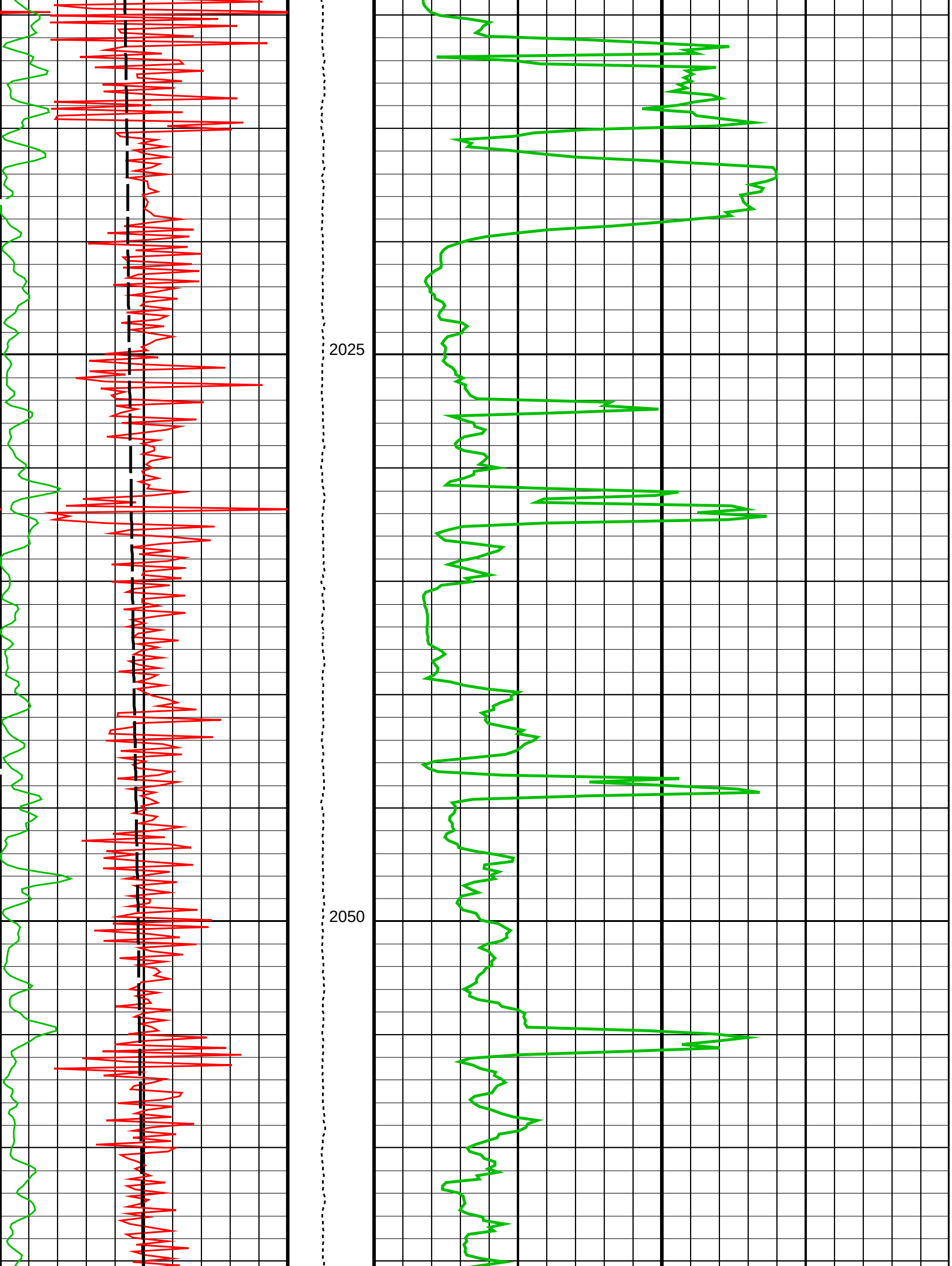

0
(GAPI)
25
Axial Acceleration (MSSZACC_LDEO)
0
(M/S2)
20
Tension
(TENS)
(LBF)
0
5000
Dual−Coil Susceptibility (MSSLSUS_LDEO)
−10000
(PPM)
90000
1750
1775

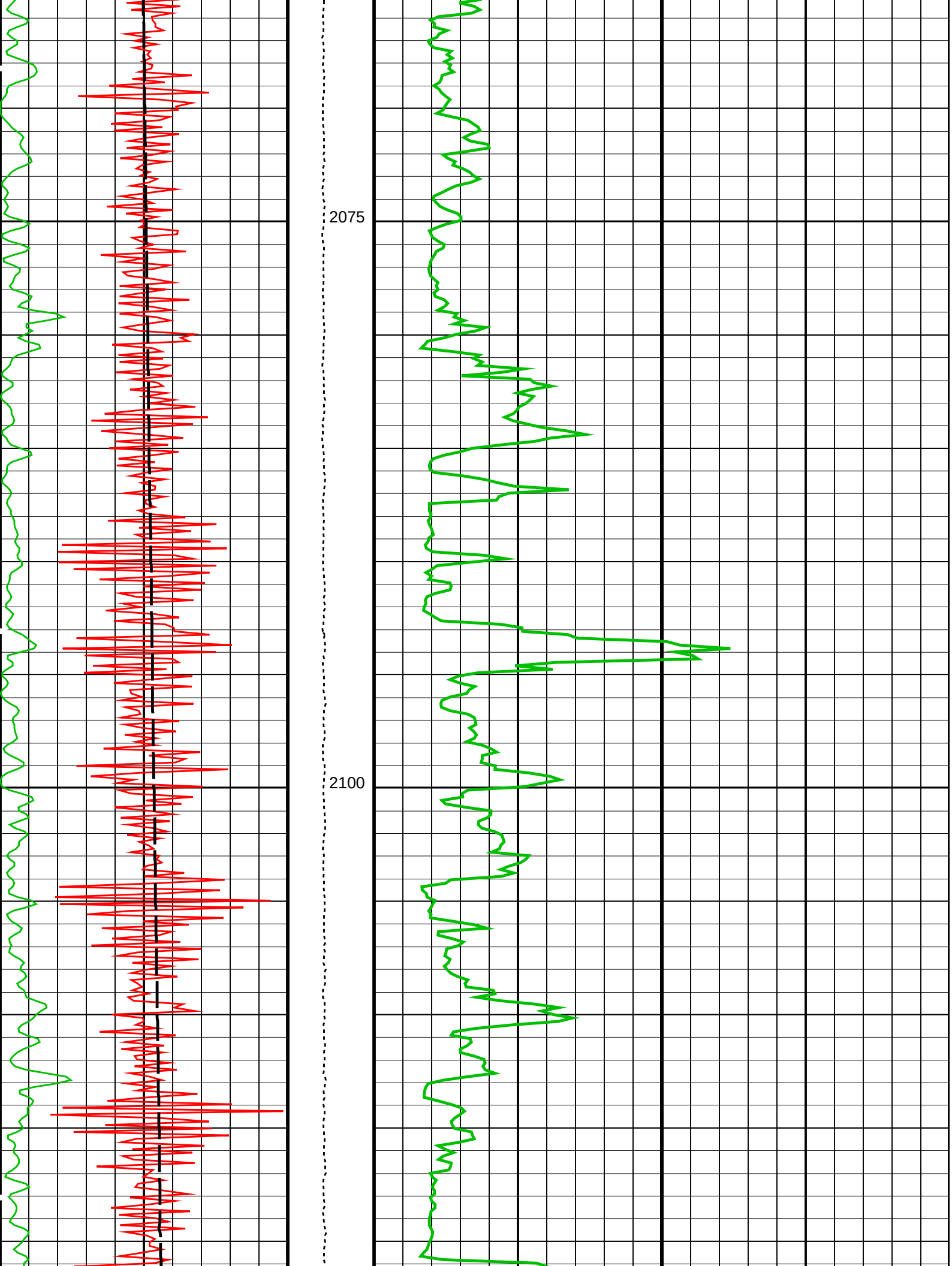

1800
1825

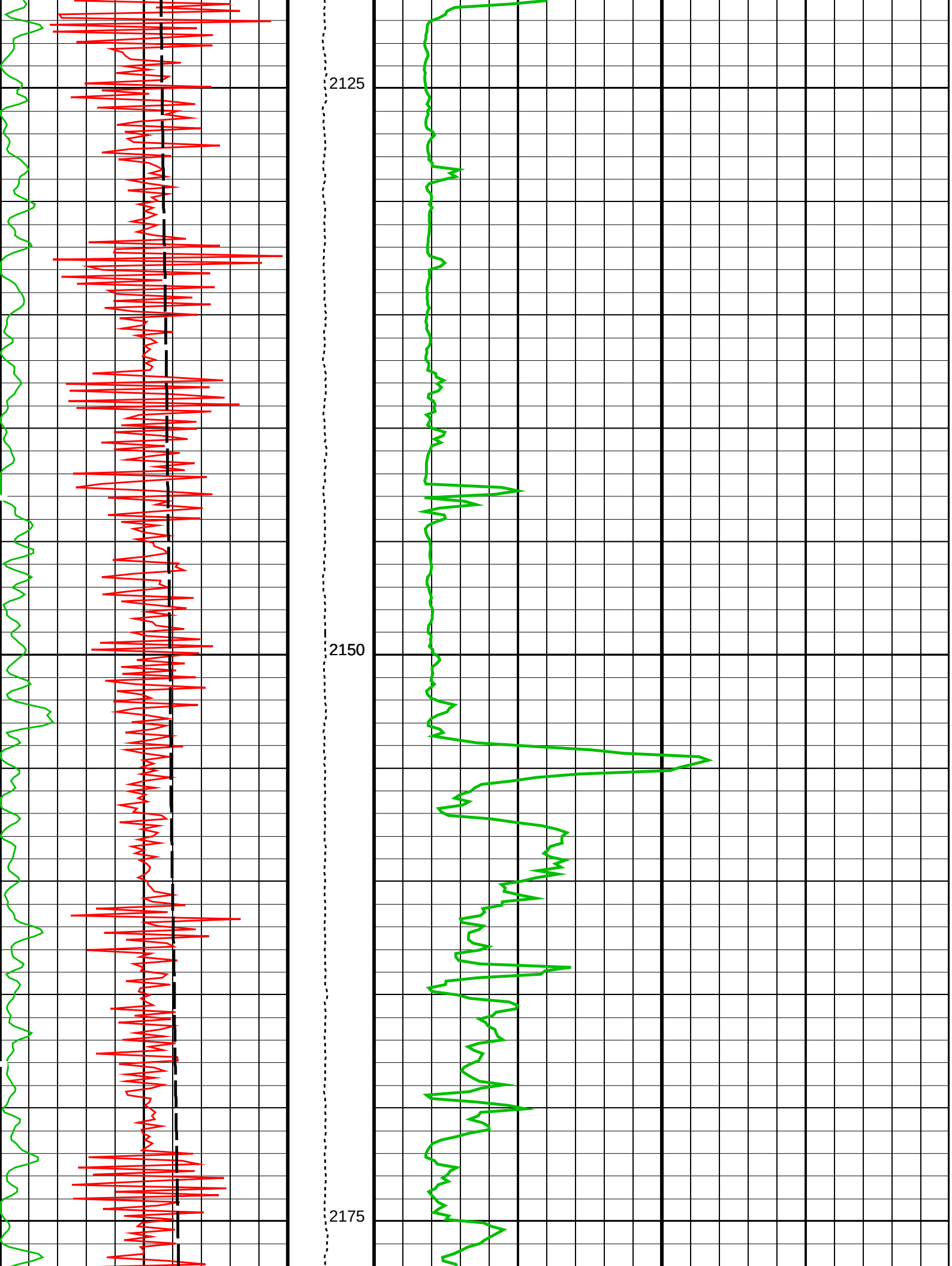

1850
1875

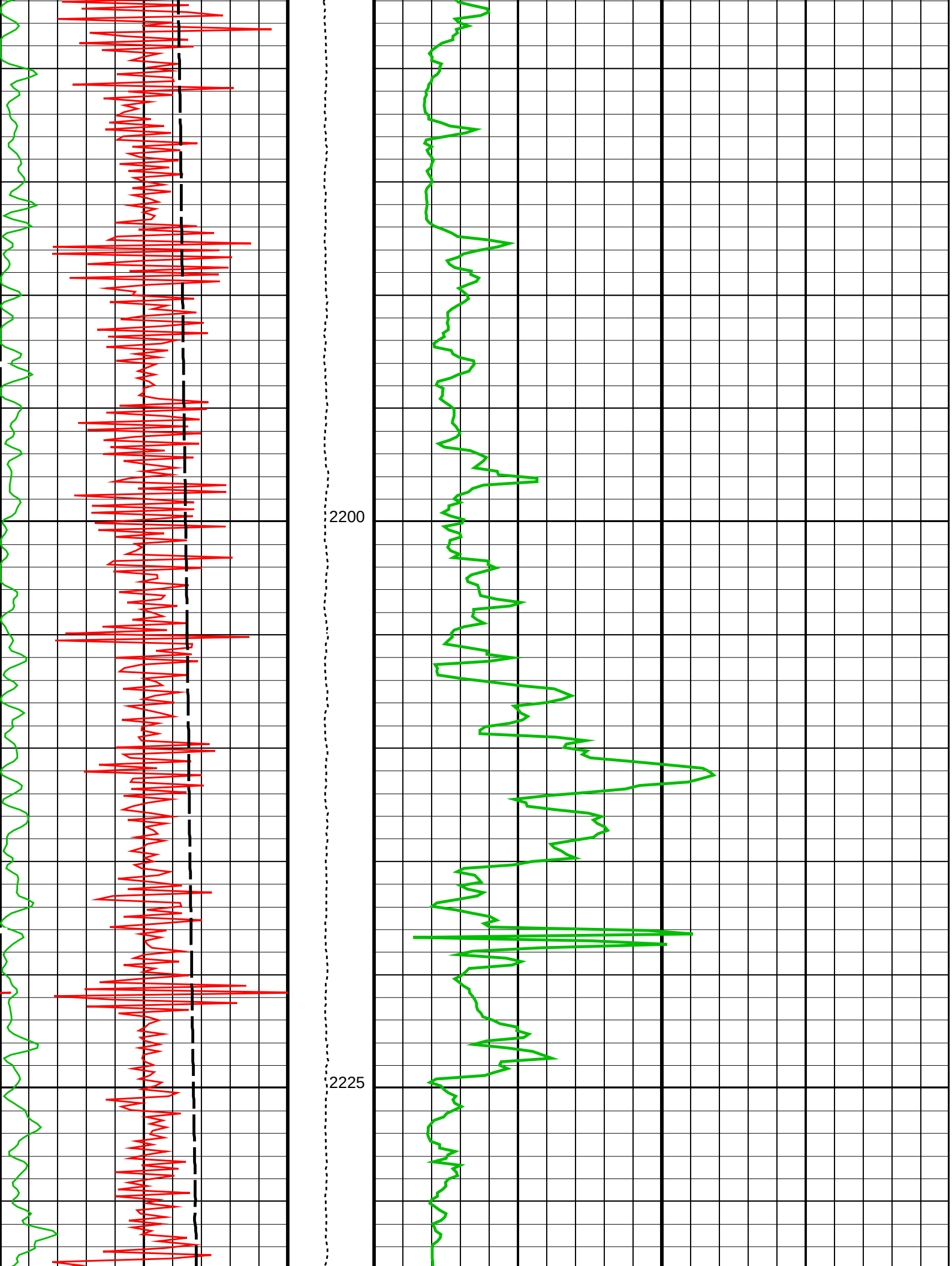

1900
1925
1950

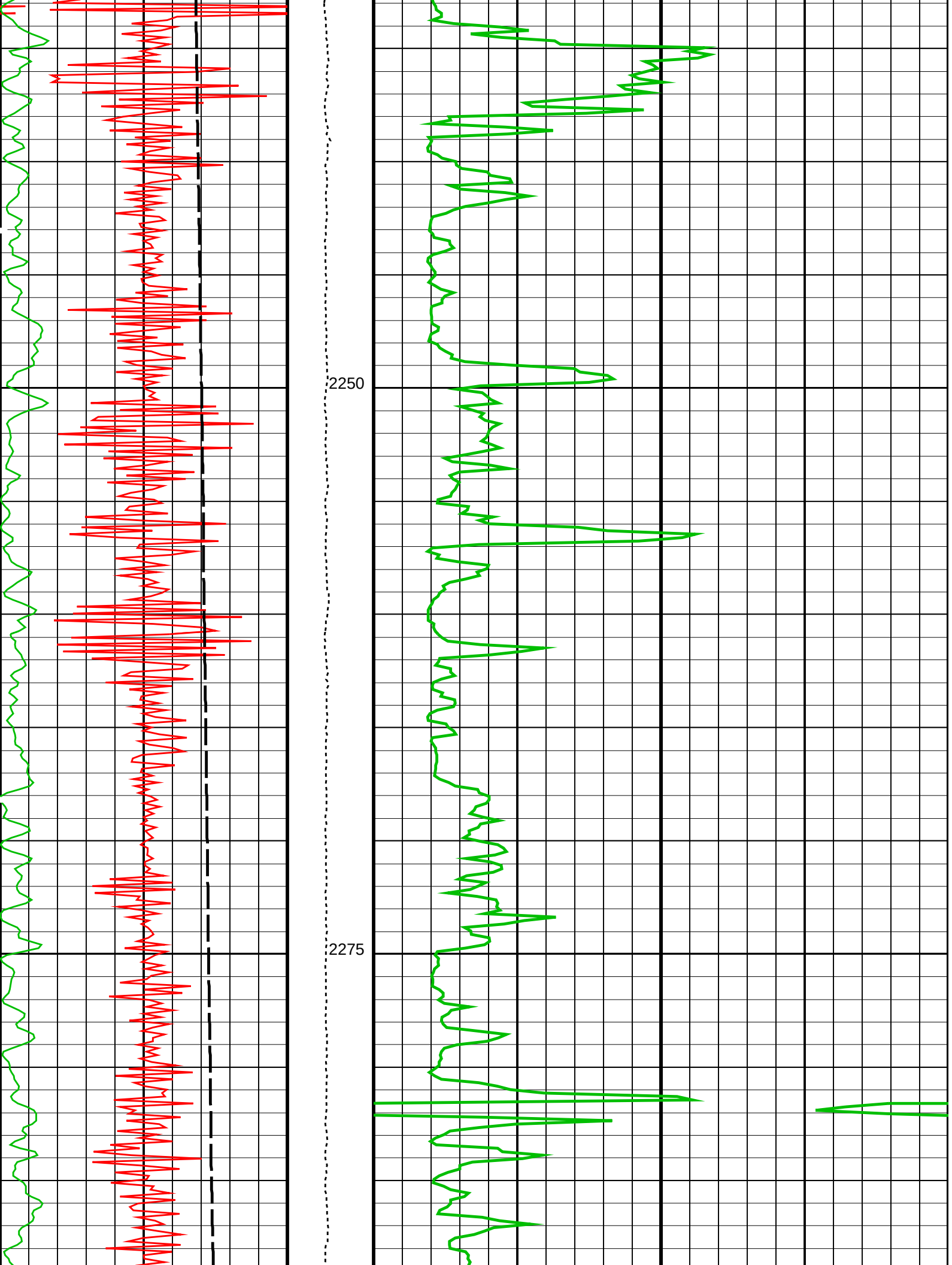

1975
2000


2025
2050


2075
2100


2125
2150
2175


2200
2225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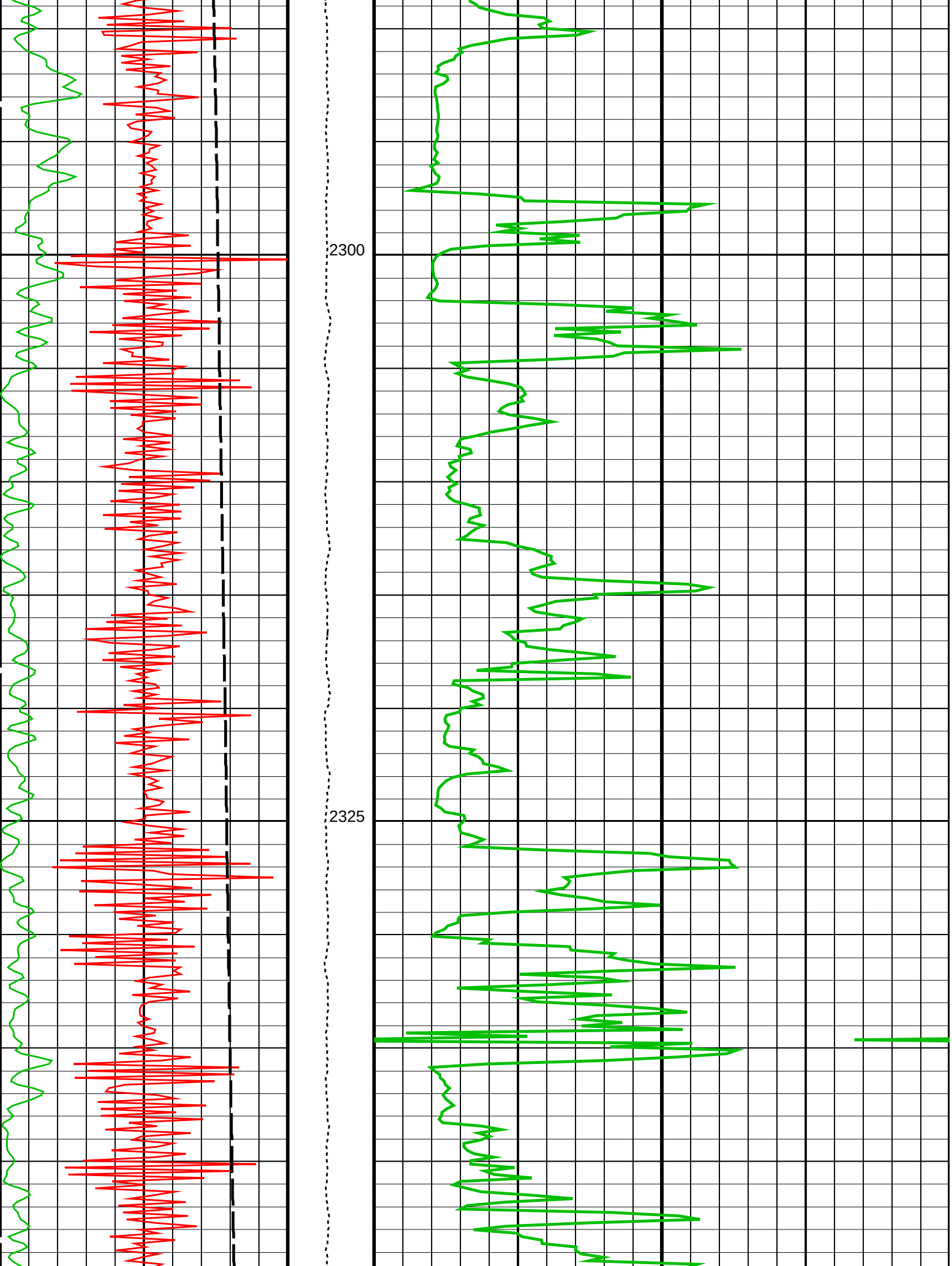
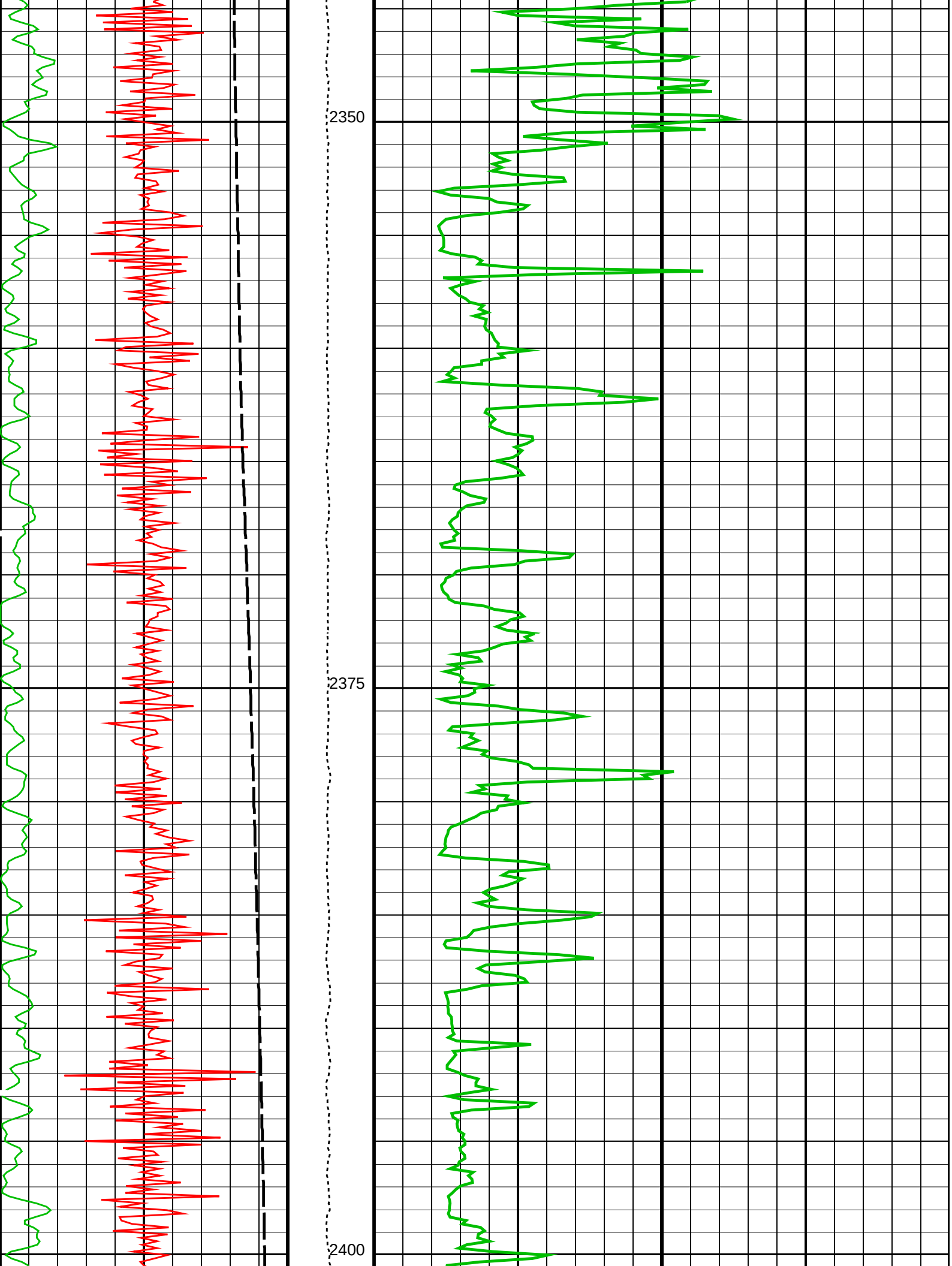
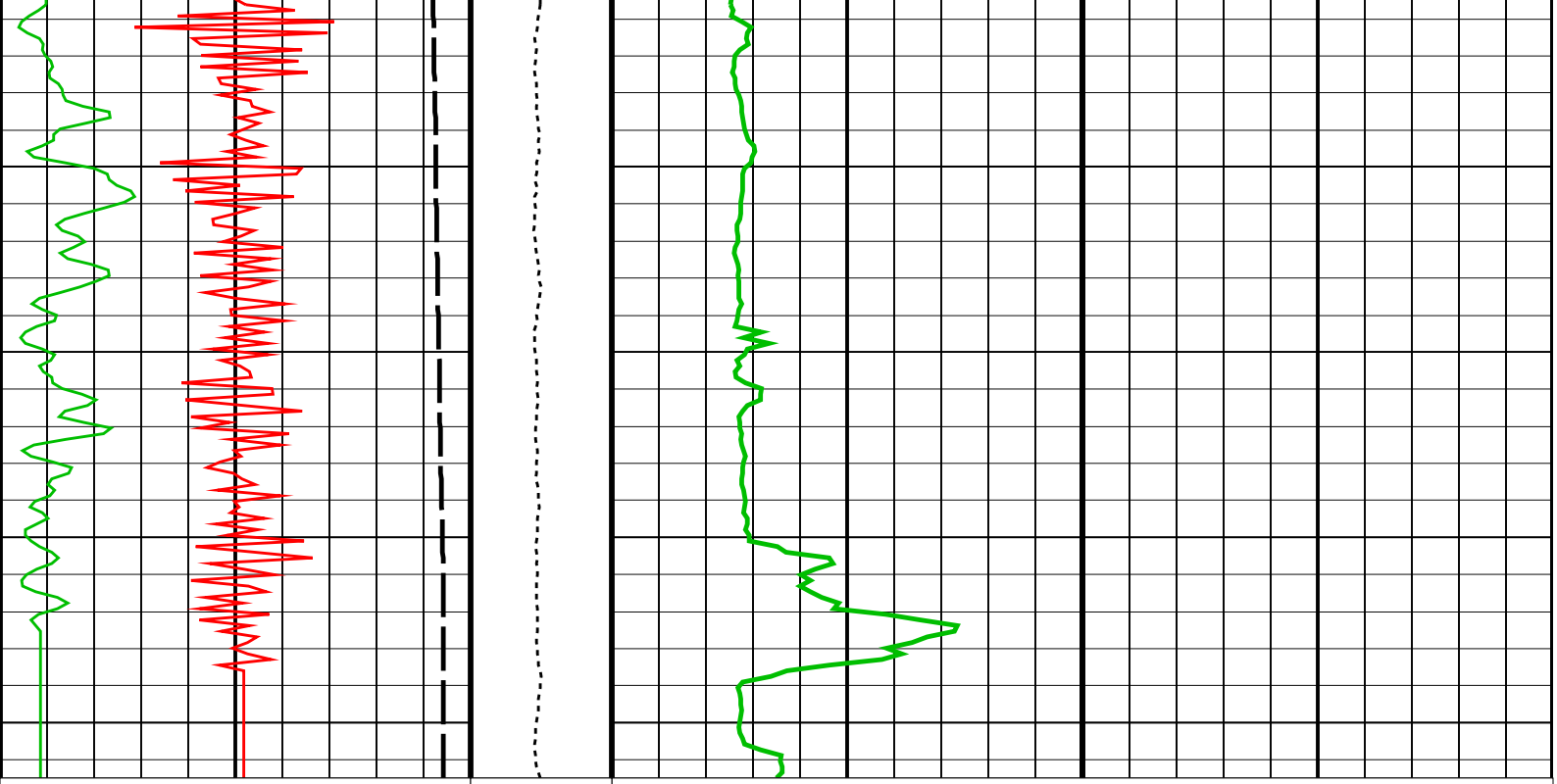
2275


2300
2325


2350
2375
2400



Axial Acceleration (MSSZACC_LDEO)	Tension (TENS)	Dual−Coil Susceptibility (MSSLSUS_LDEO)
0 (M/S2) 20	(LBF) 0 5000	−10000 (PPM) 90000

Gamma Ray (GR_EDTC)	Mud temperature (MTEM)
0 (GAPI) 25	0 (DEGC) 80

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
	System and Miscellaneous	
DO	Depth Offset for Playback	2.8 M
PP	Playback Processing	NORMAL

Format: MSS_Logging Vertical Scale: 1:200 Graphics File Created: 25−Feb−2012 12:12

OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	EDTC−B	SKK−5169−EDTCB

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_046LUP	PRODUCER	25−Feb−2012 12:09	2418.7 M	1732.0 M

Output DLIS Files

DEFAULT	MSS_LDEO_048PUP	FN:46	PRODUCER	25−Feb−2012 12:12

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Repeat Pass

Company: Lamont DohertyEarth Observatory | Well: Expedition 340T, Site U1309D

Input DLIS Files

DEFAULT	MSS_LDEO_045LUP	FN:44	PRODUCER	25−Feb−2012 11:07	2165.6 M	1641.6 M

Output DLIS Files

DEFAULT	MSS_LDEO_051PUP	FN:49	PRODUCER	25−Feb−2012 12:20	2168.0 M	1644.1 M

OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	EDTC−B	SKK−5169−EDTCB

PIP SUMMARY

Time Mark Every 60 S

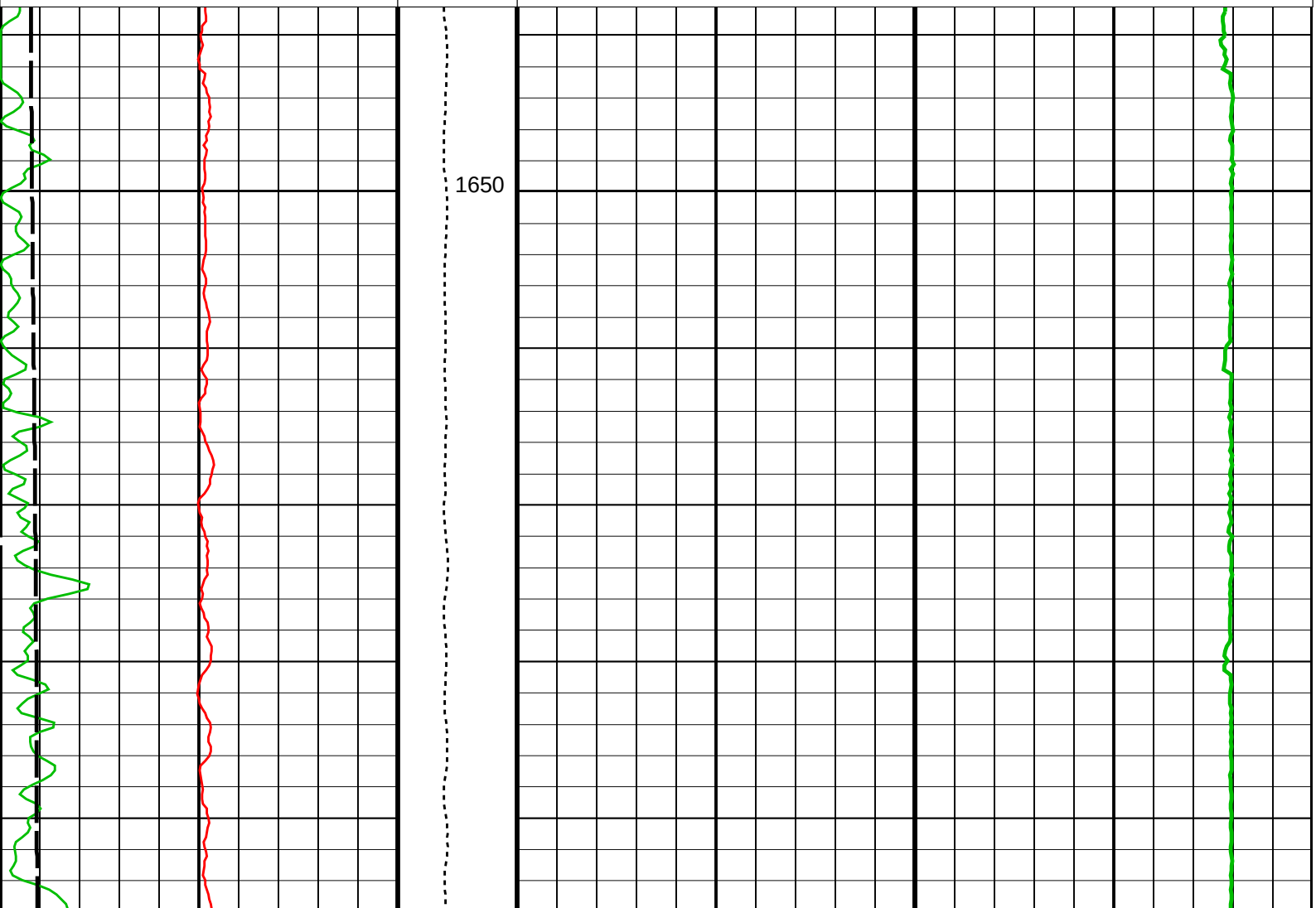
Mud temperature (MTEM)
0 (DEGC) 80

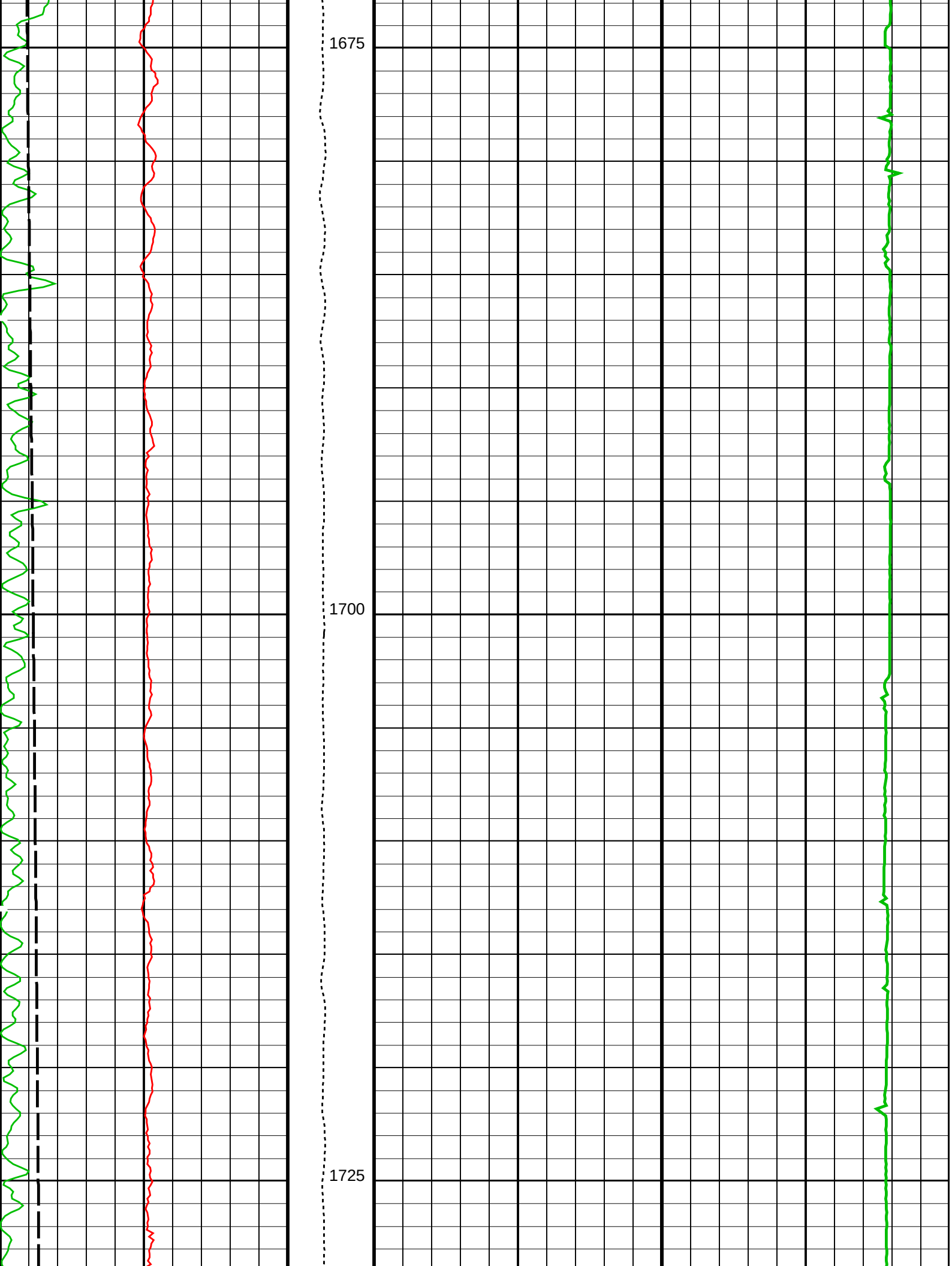
Gamma Ray (GR_EDTC)
0 (GAPI) 25

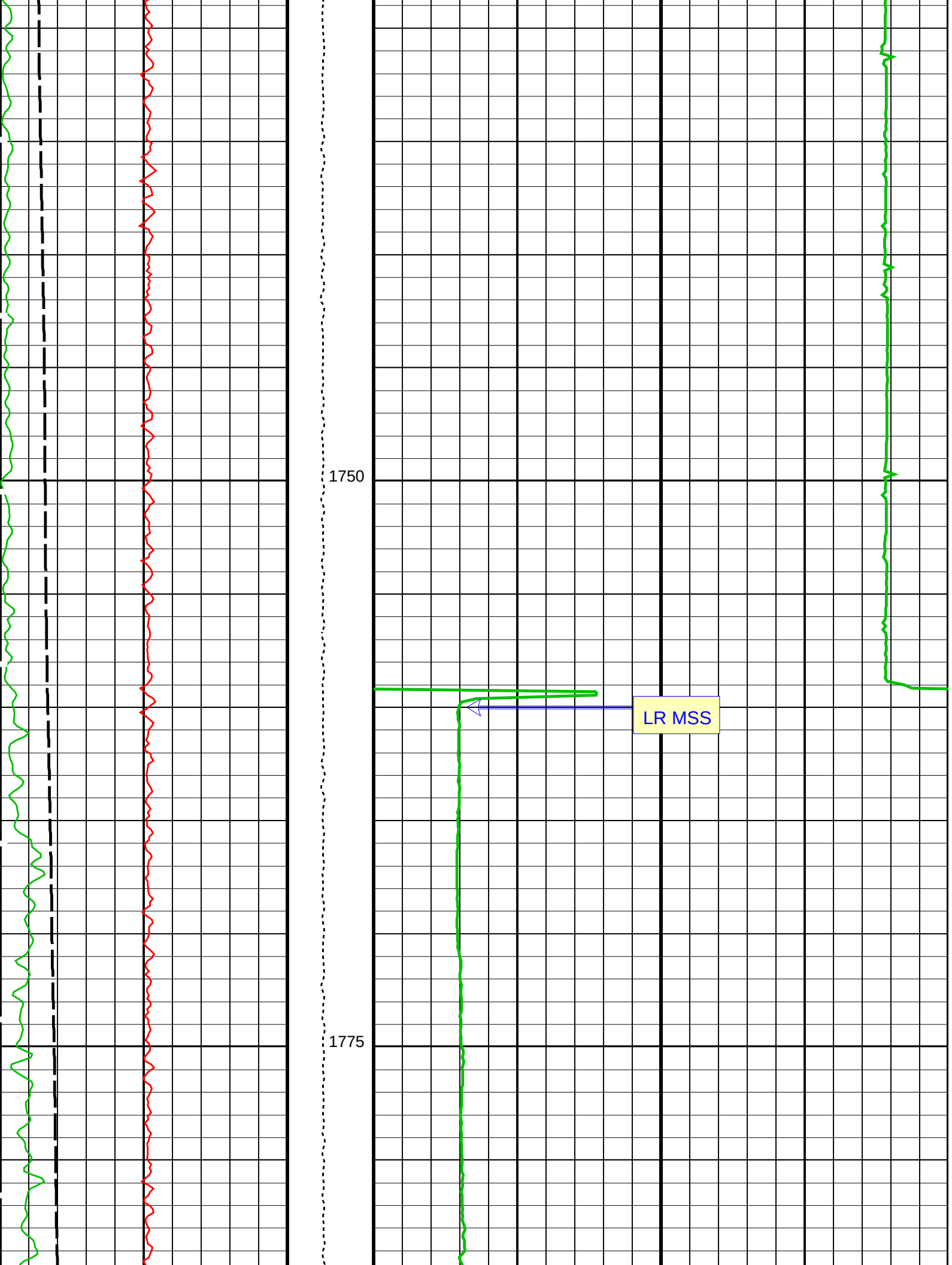
Axial Acceleration (MSSZACC_LDEO)
0 (M/S2) 20

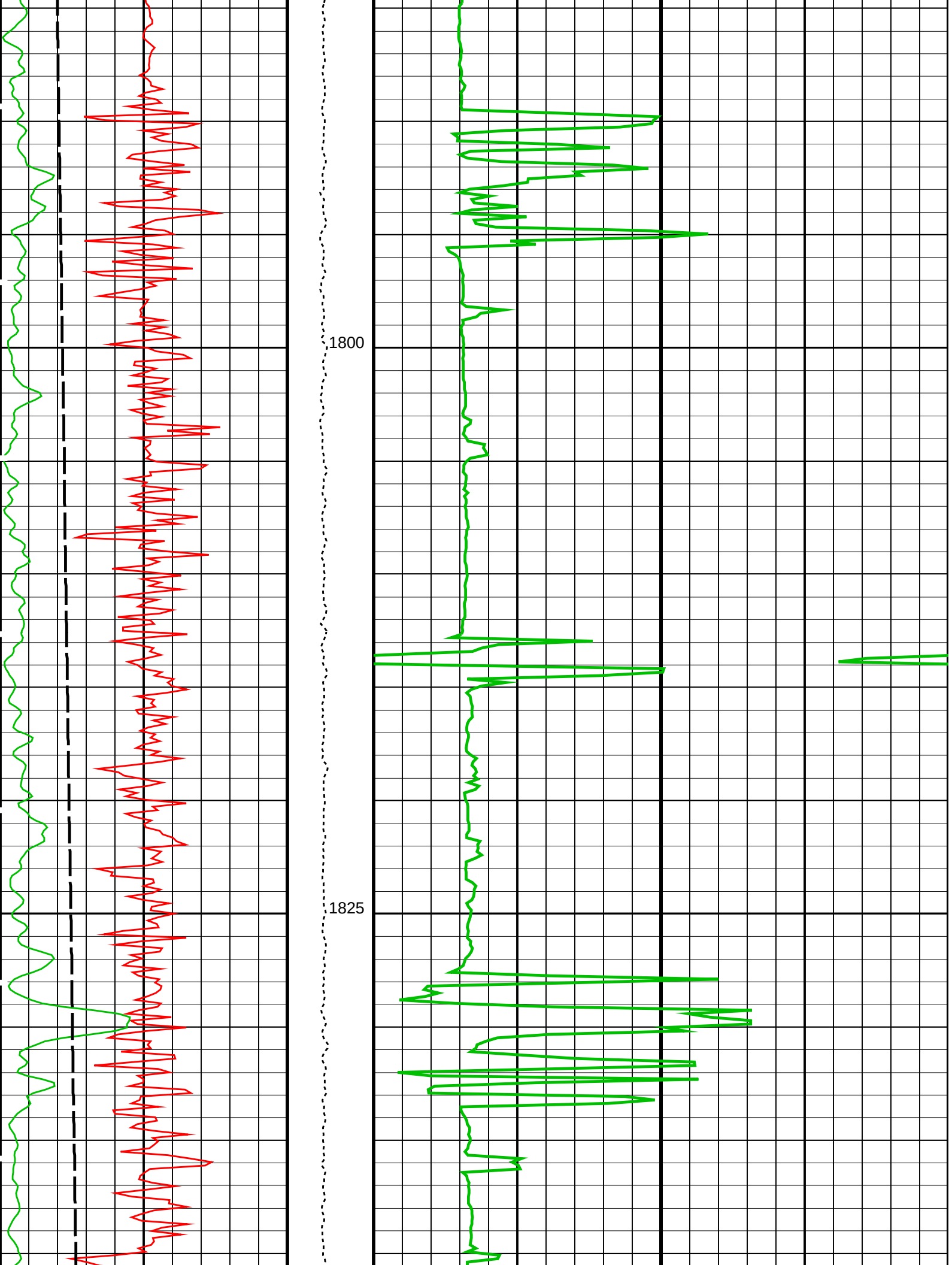
Tension (TENS) (LBF)
0 5000

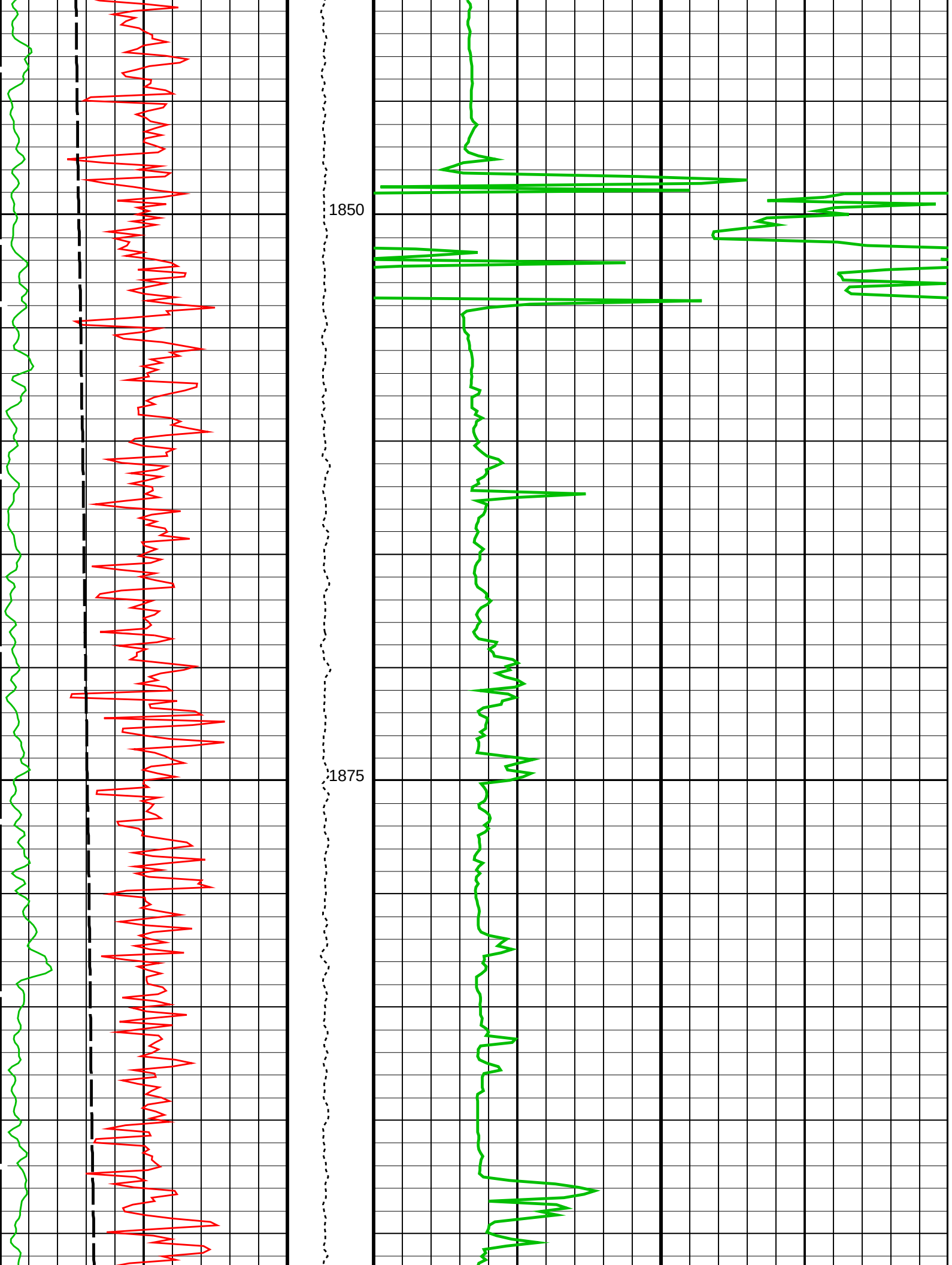
Dual−Coil Susceptibility (MSSLSUS_LDEO)
−10000 (PPM) 90000




1675
1700
1725


1750
1775
LR MSS


1800
1825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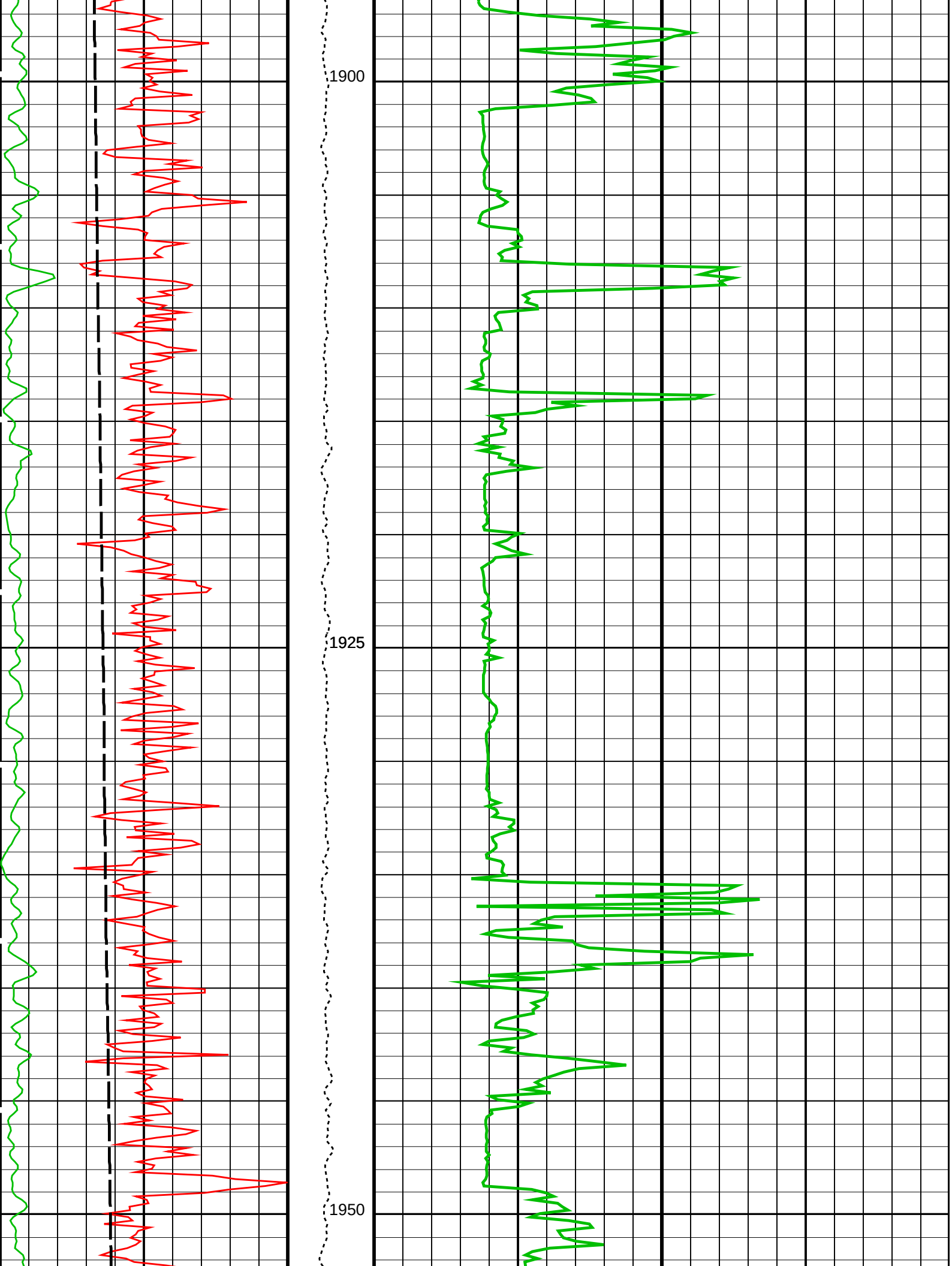
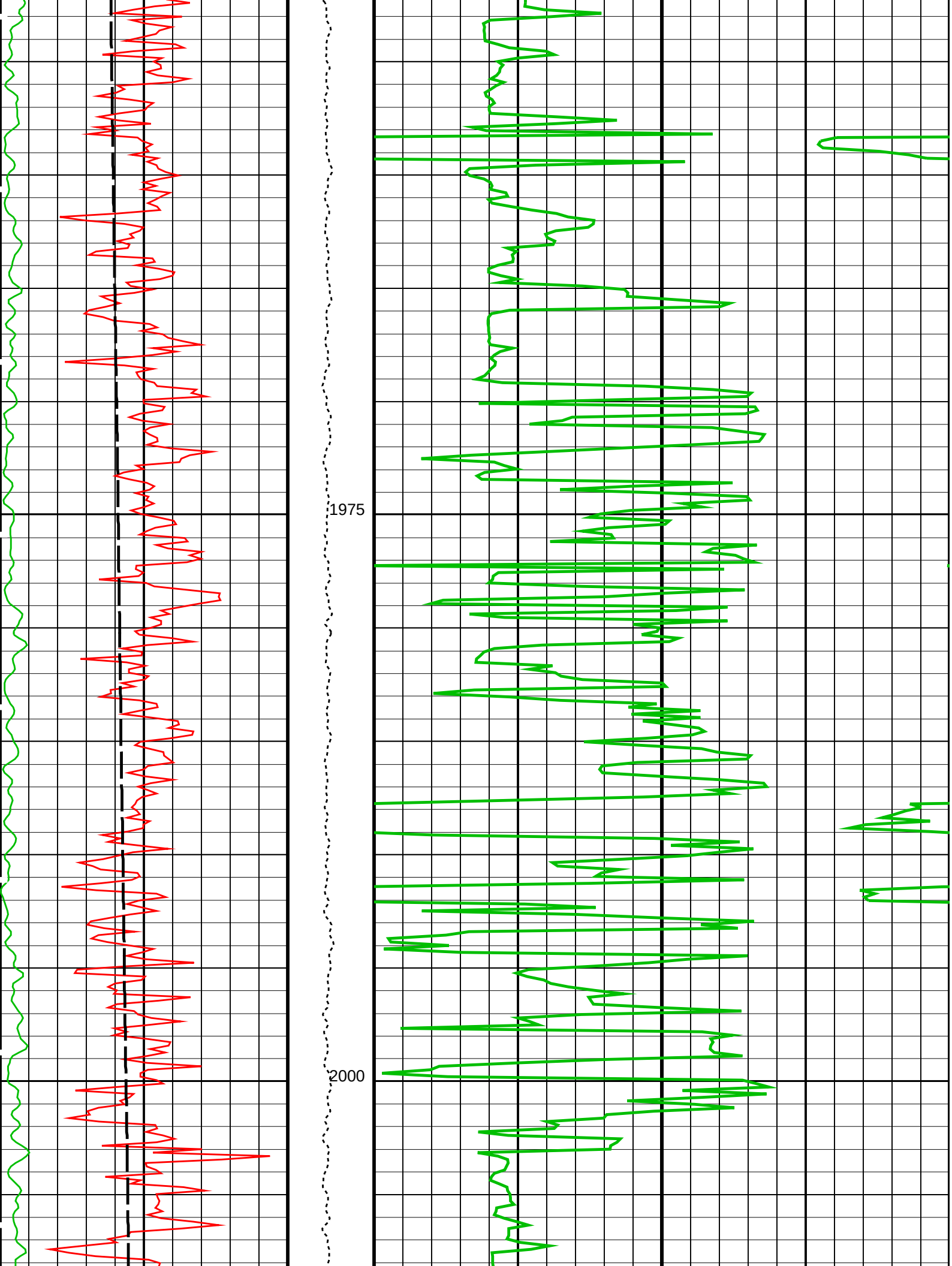

1900
1925
1950


1975
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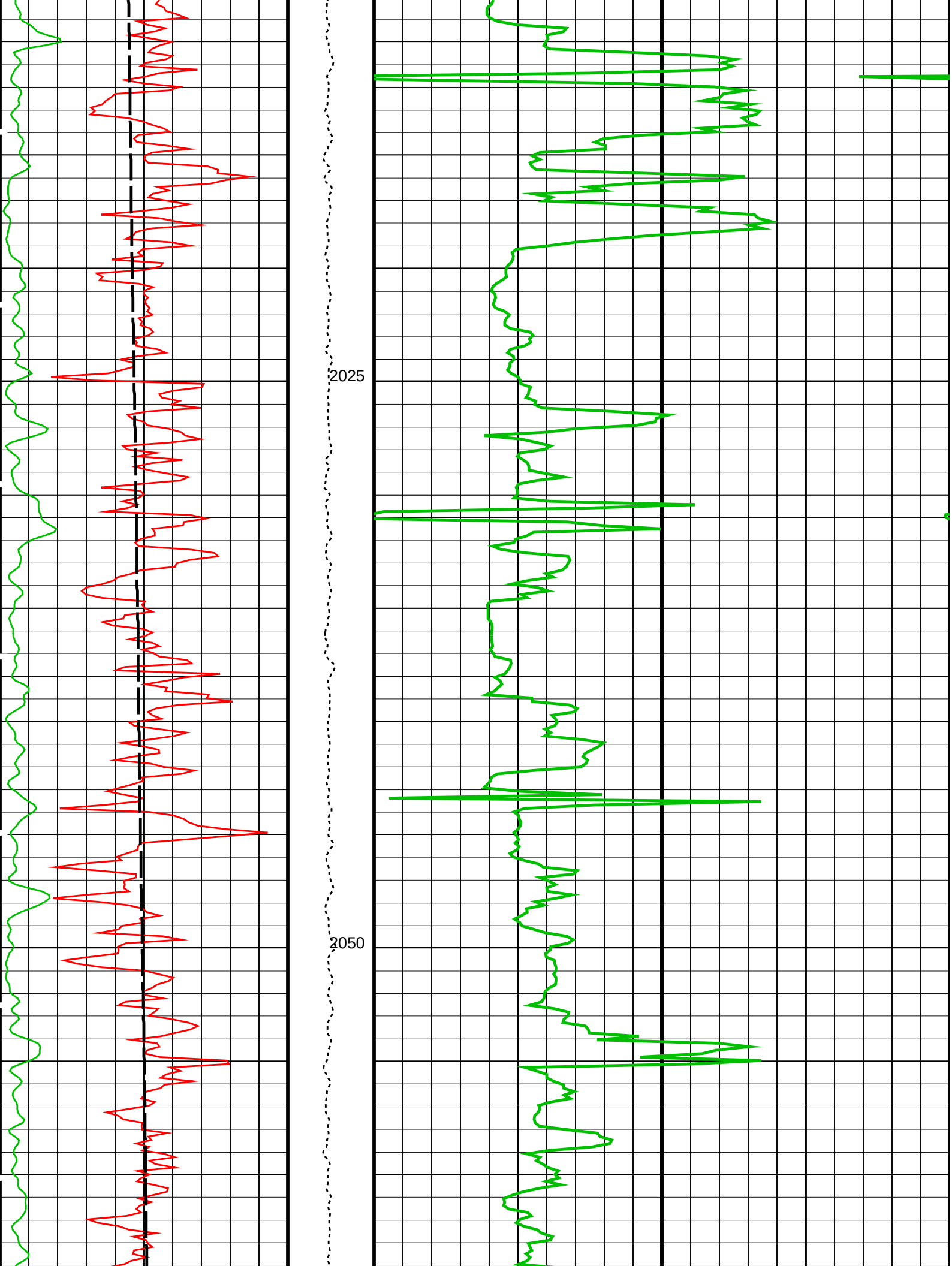
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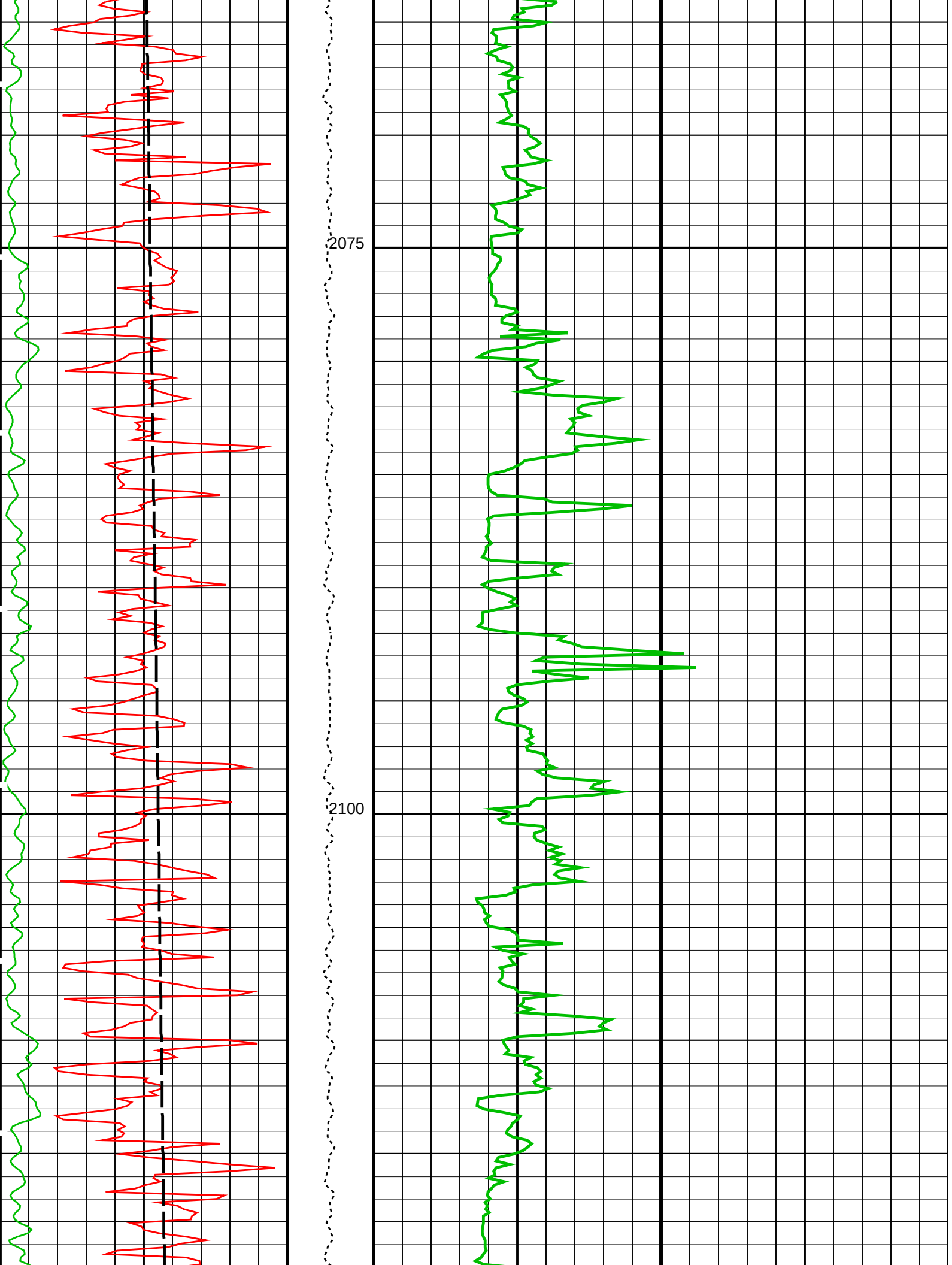
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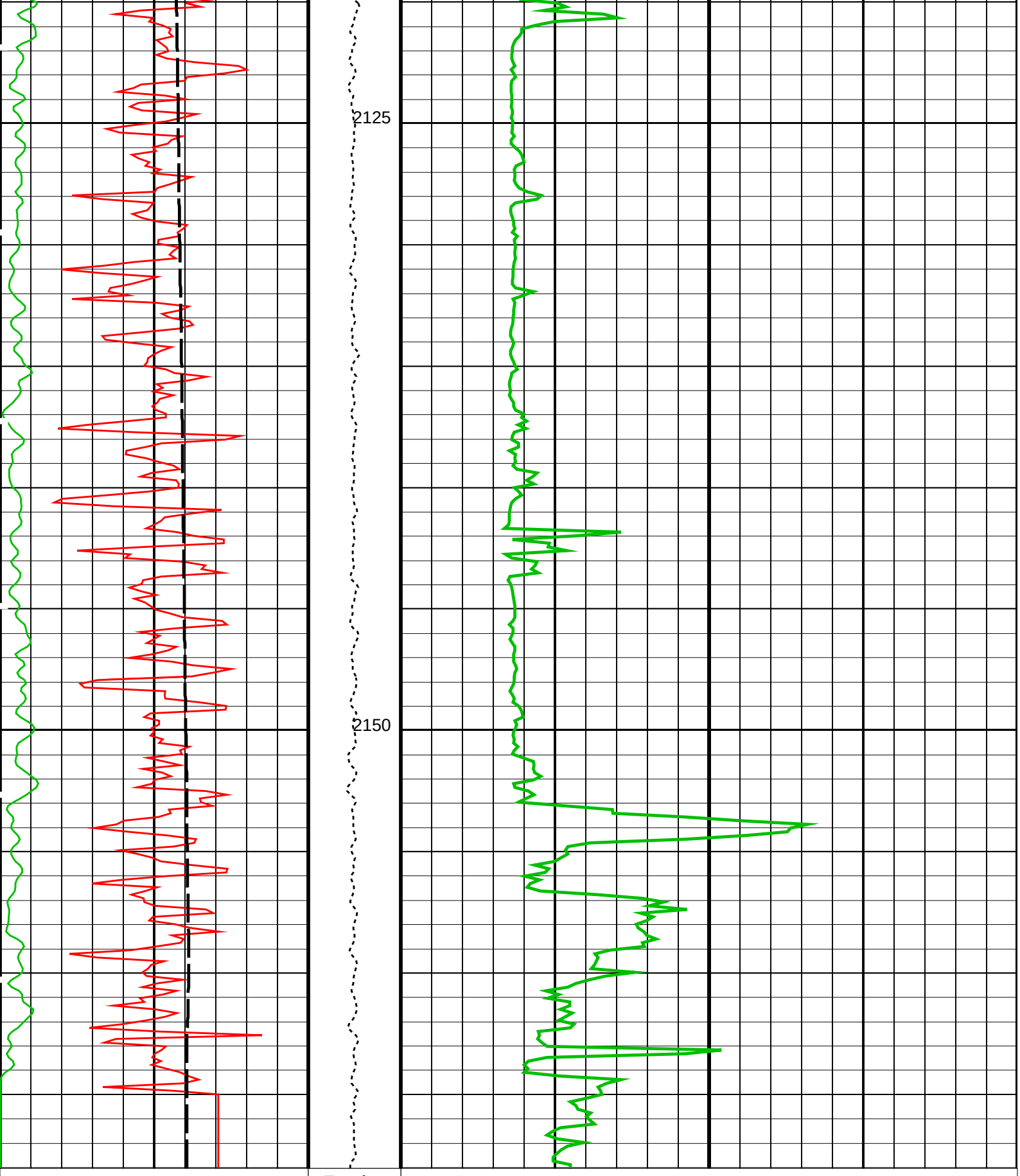
2100



Axial Acceleration (MSSZACC_LDEO)
0 (M/S2) 20

Tension (TENS) (LBF)
0 5000

Dual−Coil Susceptibility (MSSLSUS_LDEO)
−10000 (PPM) 90000

Gamma Ray (GR_EDTC)
0 (GAPI) 25

Mud temperature (MTEM)
0 (DEGC) 80

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
	System and Miscellaneous	
DO	Depth Offset for Playback	2.5 M
PP	Playback Processing	NORMAL

Format: MSS_Logging Vertical Scale: 1:200 Graphics File Created: 25−Feb−2012 12:20

OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	EDTC−B	SKK−5169−EDTCB

Input DLIS Files

DEFAULT	MSS_LDEO_045LUP	FN:44	PRODUCER	25−Feb−2012 11:07	2165.6 M	1641.6 M

Output DLIS Files

DEFAULT	MSS_LDEO_051PUP	FN:49	PRODUCER	25−Feb−2012 12:20		

Schlumberger

Main Pass

MAXIS Field Log

Company: Lamont DohertyEarth Observatory Well: Expedition 340T, Site U1309D

Input DLIS Files

DEFAULT	MSS_LDEO_043LUP	FN:42	PRODUCER	25−Feb−2012 10:29	2419.0 M	1764.9 M

Output DLIS Files

DEFAULT	MSS_LDEO_049PUP	FN:47	PRODUCER	25−Feb−2012 12:16	2422.1 M	1768.0 M

OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	EDTC−B	SKK−5169−EDTCB

PIP SUMMARY

Time Mark Every 60 S

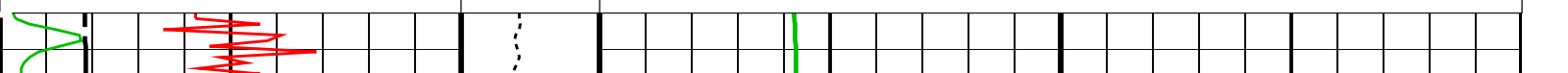
Mud temperature (MTEM)
0 (DEGC) 80

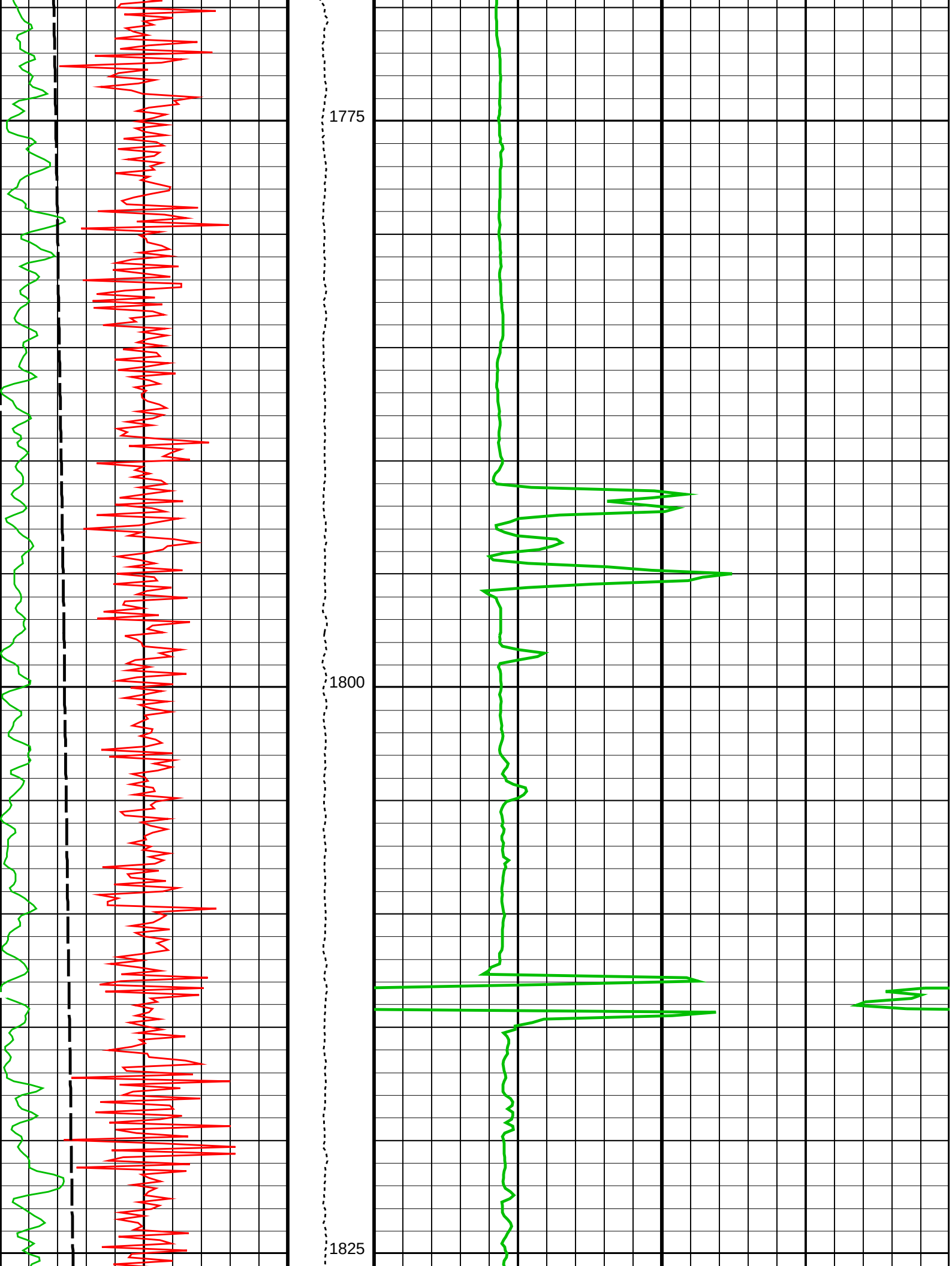
Gamma Ray (GR_EDTC)
0 (GAPI) 25

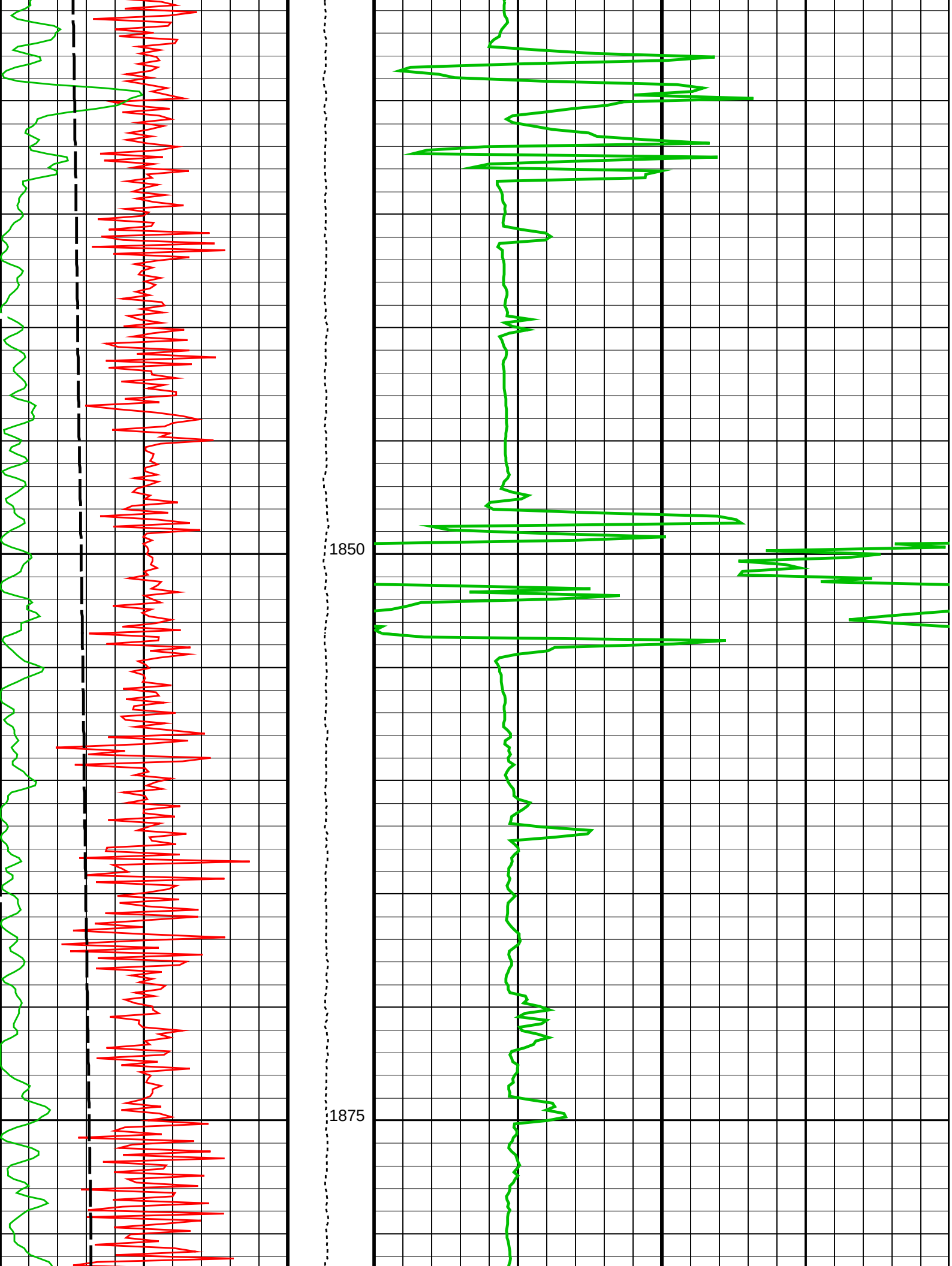
Axial Acceleration (MSSZACC_LDEO)
0 (M/S2) 20

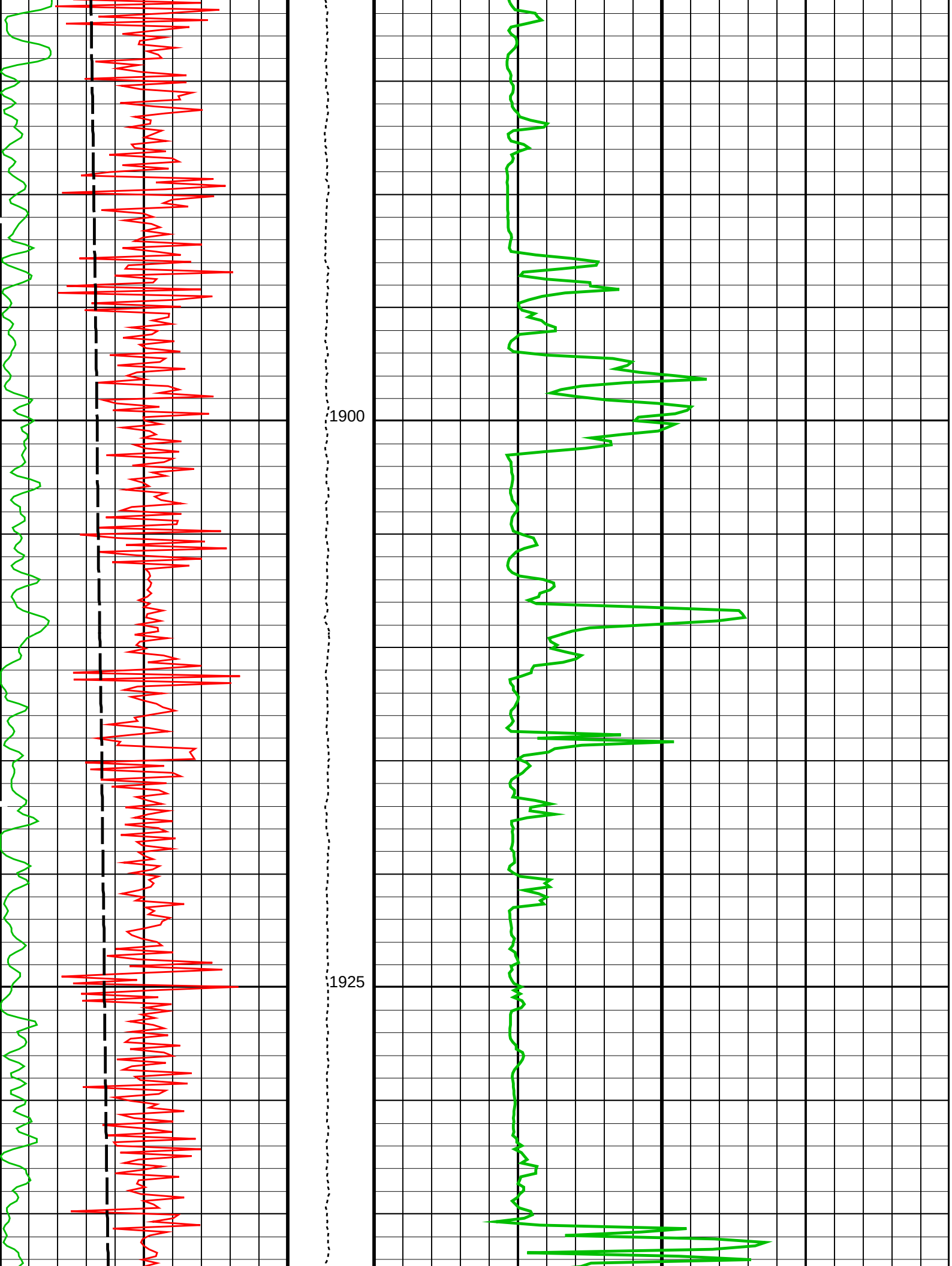
Tension (TENS) (LBF)
0 5000

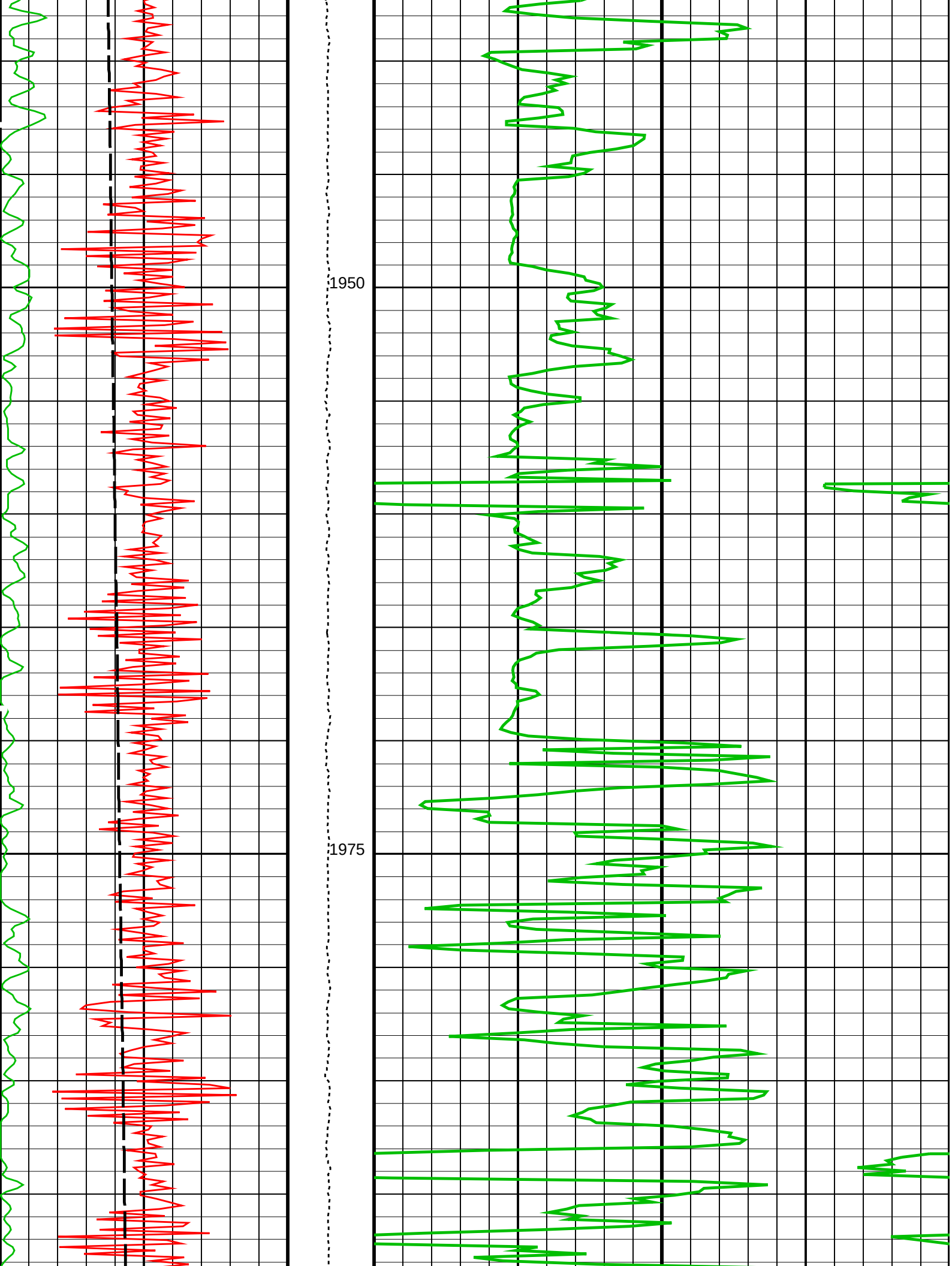
Dual−Coil Susceptibility (MSSLSUS_LDEO)
−10000 (PPM) 90000

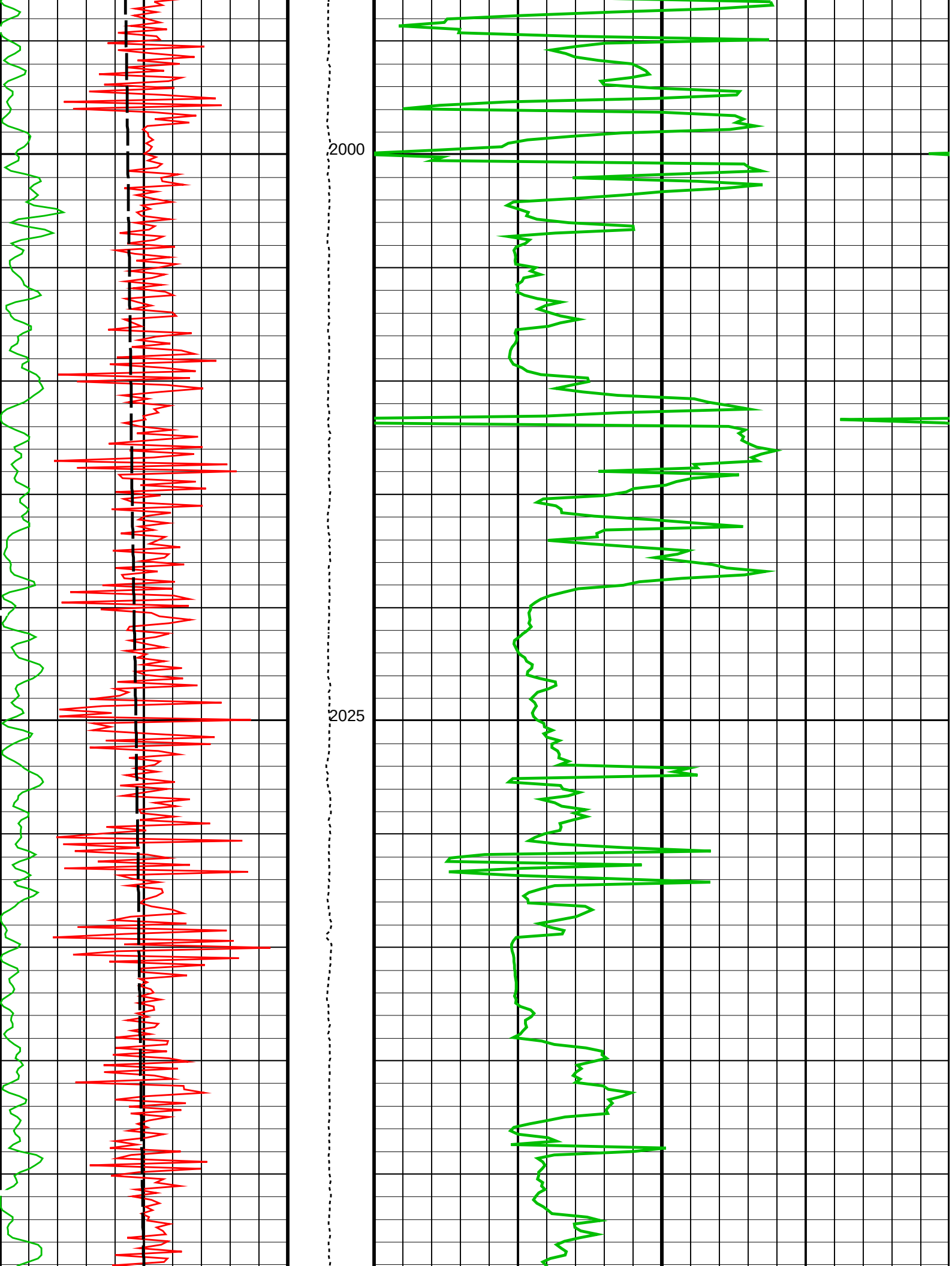


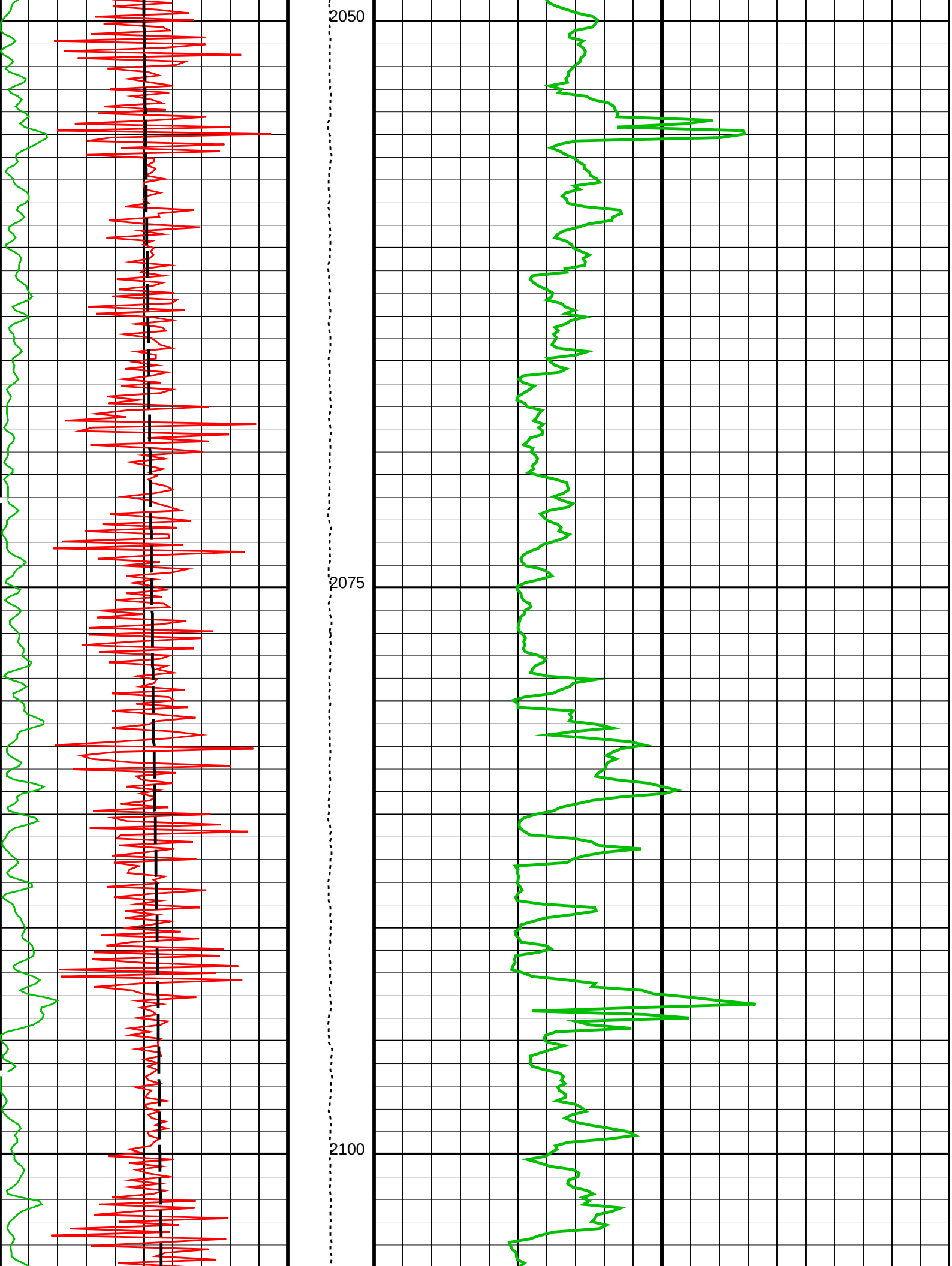

1775
1800
1825

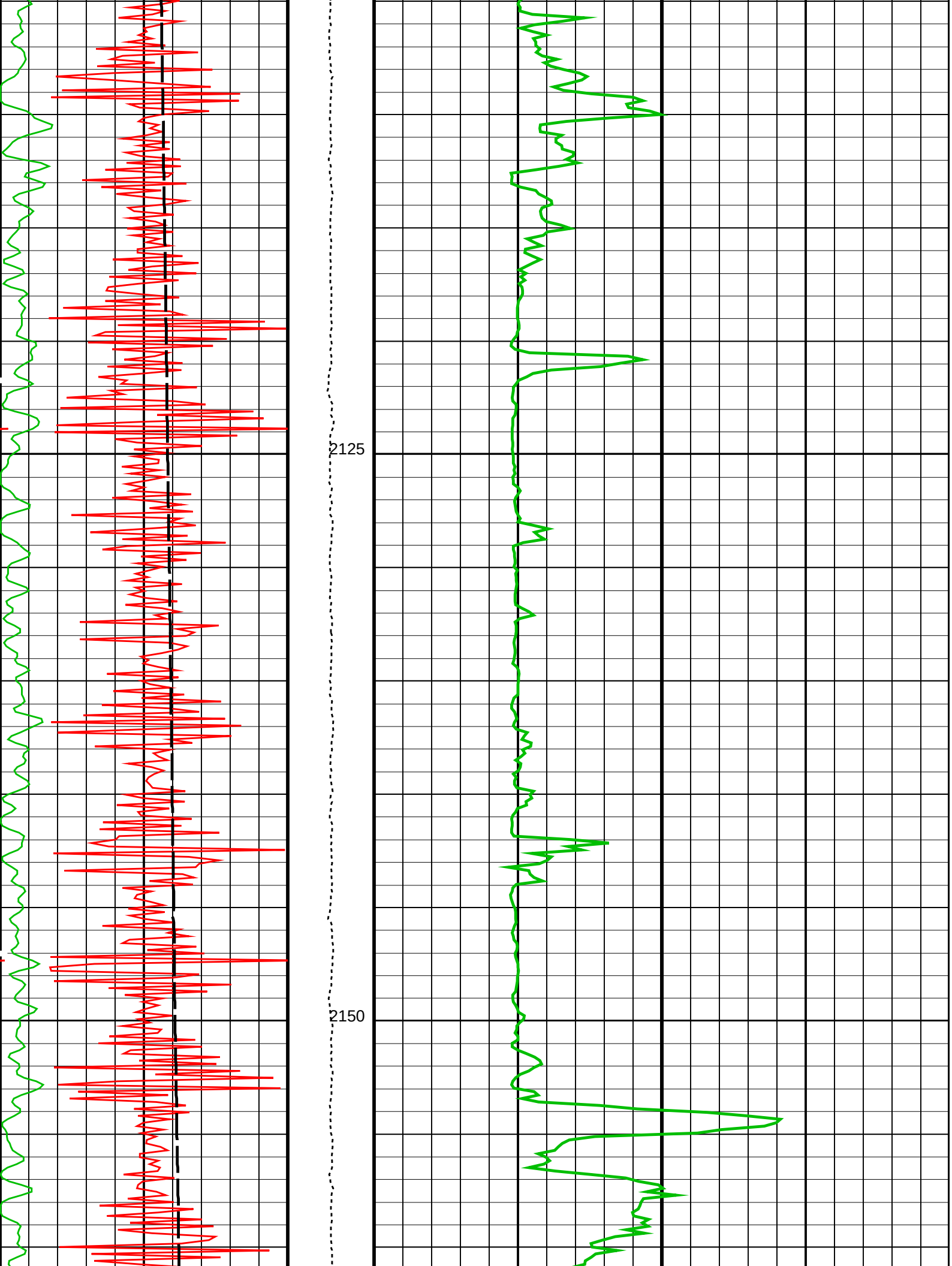

1850
1875


1900
1925


1950
1975


2000
2025


2050
2075
2100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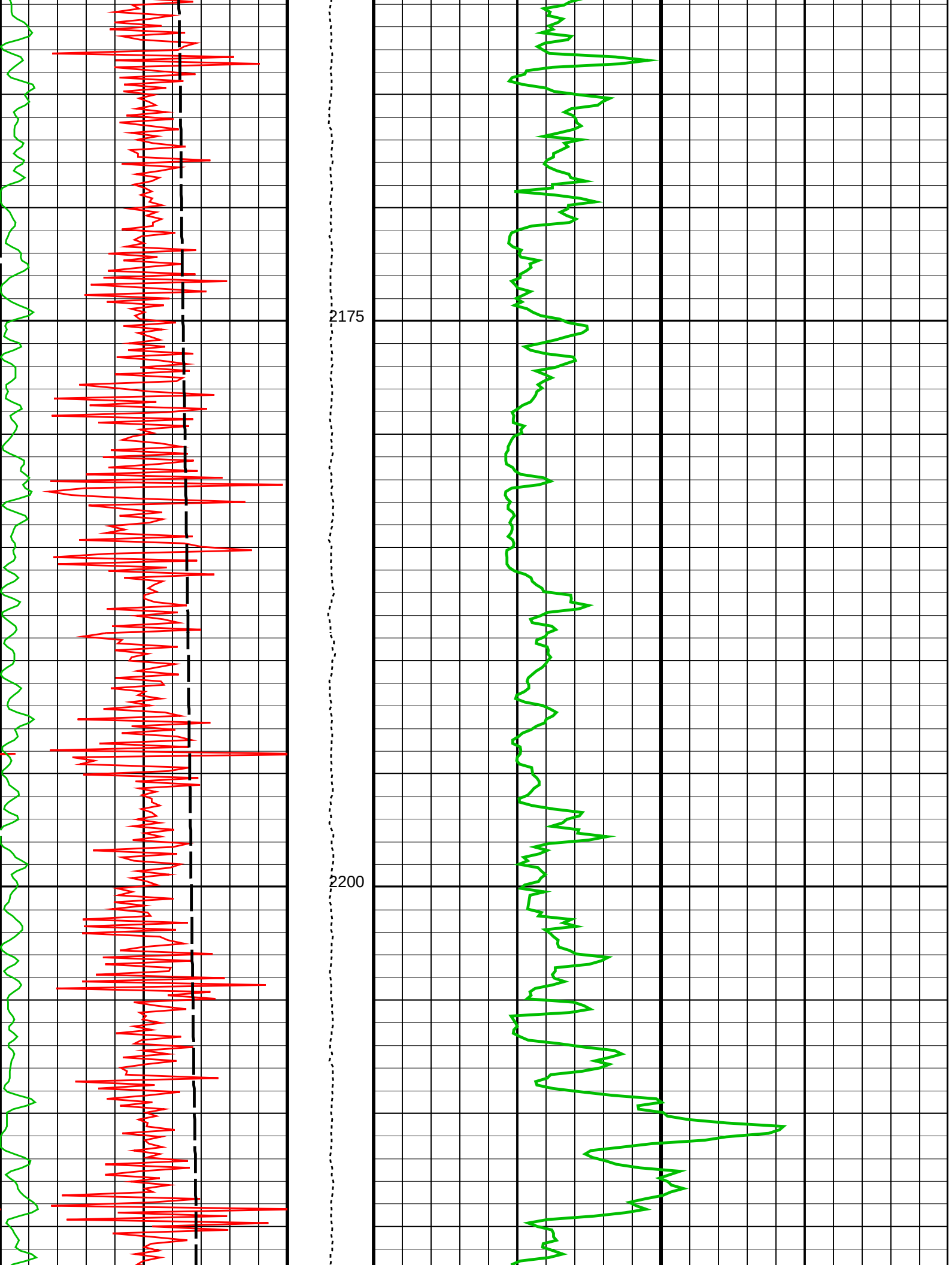
2150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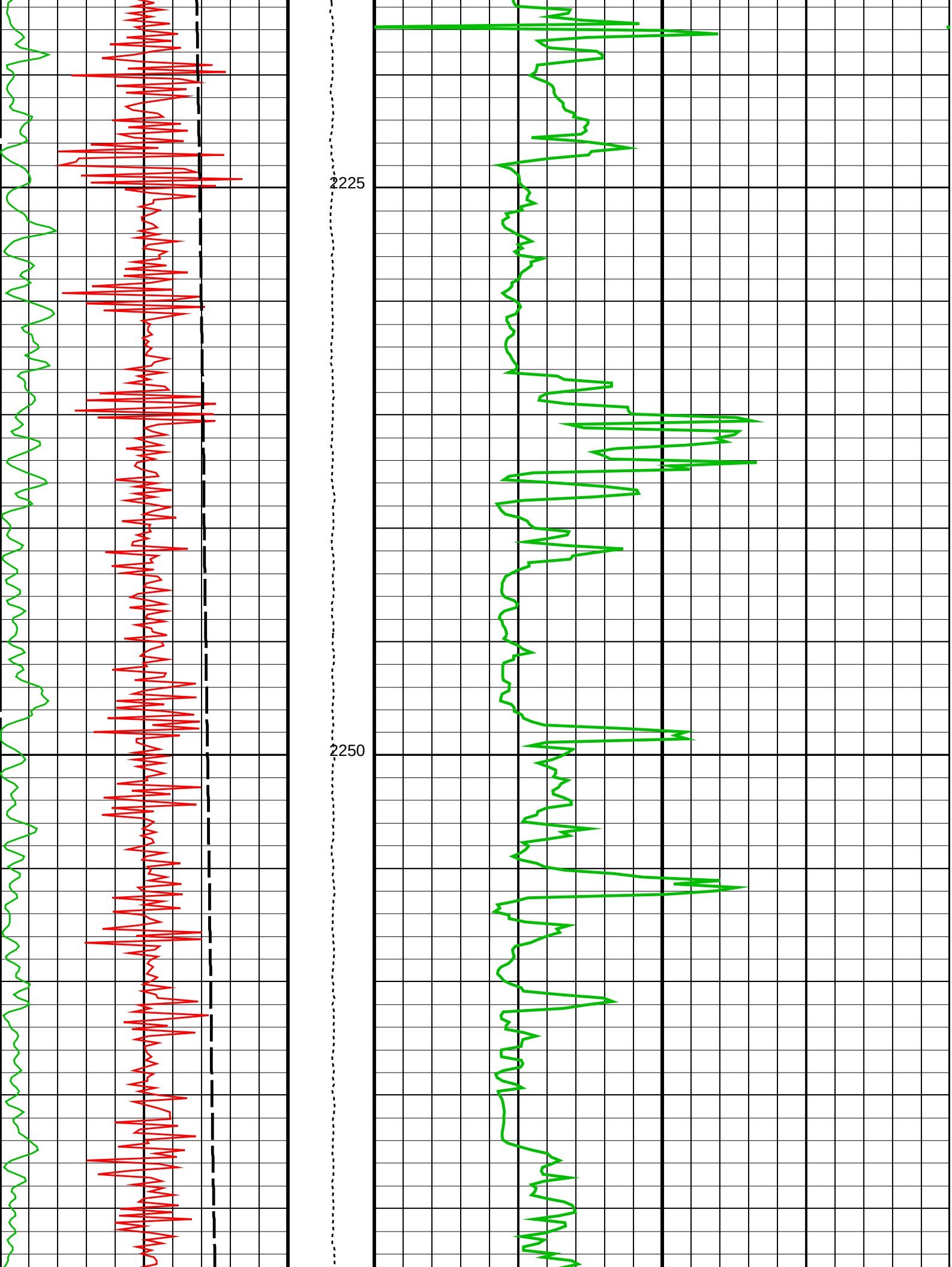
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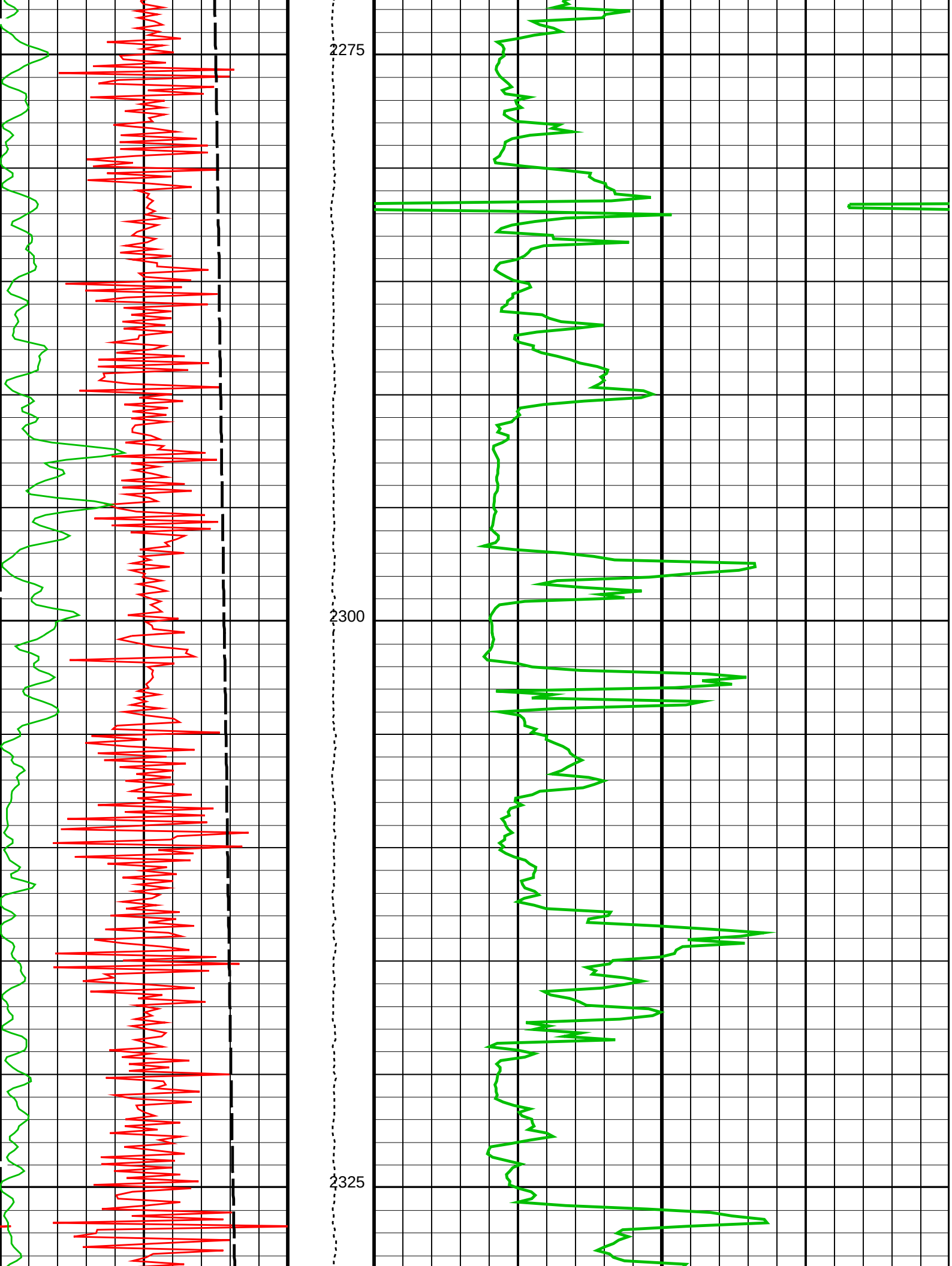
2250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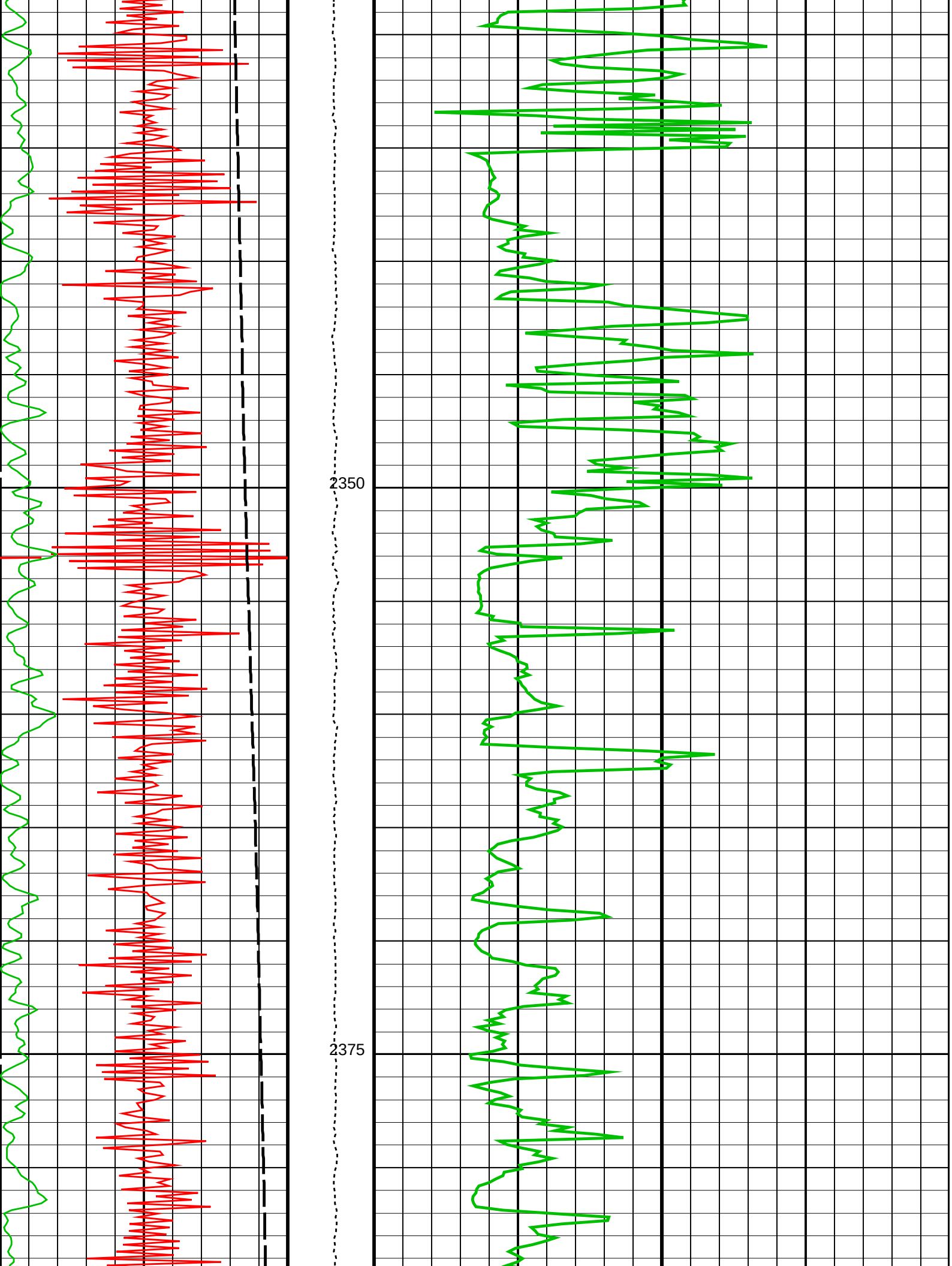
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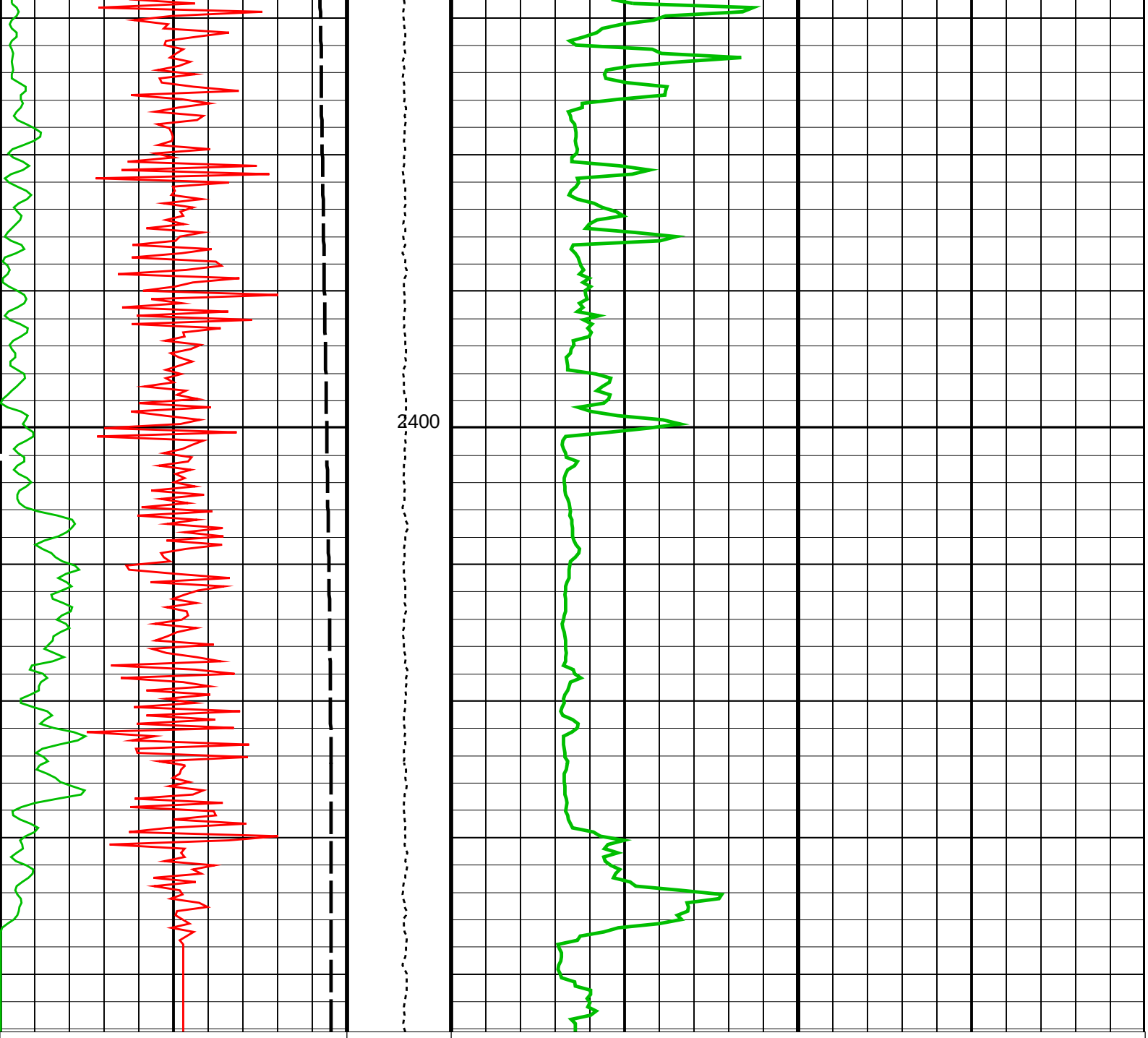
2375



Axial Acceleration (MSSZACC_LDEO)	Tension (TENS)	Dual−Coil Susceptibility (MSSLSUS_LDEO)
0 (M/S2) 20	(LBF) 0 5000	−10000 (PPM) 90000

Gamma Ray (GR_EDTC)	Mud temperature (MTEM)
0 (GAPI) 25	0 (DEGC) 80

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
	System and Miscellaneous	
DO	Depth Offset for Playback	3.0 M
PP	Playback Processing	NORMAL

Format: MSS_Logging **Vertical Scale: 1:200** **Graphics File Created: 25−Feb−2012 12:16**

OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	EDTC−B	SKK−5169−EDTCB

Input DLIS Files

DEFAULT	MSS_LDEO_043LUP	FN:42	PRODUCER	25−Feb−2012 10:29	2419.0 M	1764.9 M

Output DLIS Files

DEFAULT	MSS_LDEO_049PUP	FN:47	PRODUCER	25−Feb−2012 12:16

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Calibrations

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Enhanced DTS Cartridge Wellsite Calibration − EDTC Accelerometer Calibration							
Before: 23−Feb−2012 11:41							
EDTC Z−Axis Acceleration	9.810	N/A	9.784	N/A	N/A	N/A	M/S2
Enhanced DTS Cartridge Wellsite Calibration − Detector Calibration							
Before: 23−Feb−2012 11:36 After: 25−Feb−2012 12:59							
Gamma Ray (Jig − Bkg)	156.5	N/A	156.5	158.5	2.013	14.23	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	167.1	2.122	15.00	GAPI

Enhanced DTS Cartridge / Equipment Identification

Primary Equipment:		
EDTC Gamma Ray Detector	EDTG − A/B	77693
Enhanced DTS Cartridge	EDTC − B	8529
Auxiliary Equipment:		
EDTC Housing	EDTH − B	8528

Enhanced DTS Cartridge Wellsite Calibration

EDTC Accelerometer Calibration

Phase	EDTC Z−Axis Acceleration M/S2	Value
Before		9.784

9.610 (Minimum) 9.810 (Nominal) 10.01 (Maximum)

Before: 23−Feb−2012 11:41

Enhanced DTS Cartridge Wellsite Calibration

Detector Calibration

Phase	Gamma Ray Background GAPI	Value	Phase	Gamma Ray (Jig − Bkg) GAPI	Value	Phase	Gamma Ray (Calibrated) GAPI	Value
Before		3.372	Before		156.5	Before		165.0
After		2.808	After		158.5	After		167.1

0 (Minimum) 30.00 (Nominal) 120.0 (Maximum)

142.3 (Minimum) 156.5 (Nominal) 170.8 (Maximum)

150.0 (Minimum) 165.0 (Nominal) 180.0 (Maximum)

Company:	**Lamont DohertyEarth Observatory**
Well:	**Expedition 340T, Site U1309D**
Field:	**Atlantis Massif**
Rig:	**JOIDES Resolution**
Country:	**USA**

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LDEO MSS