

Schlumberger

Company: **Beach Petroleum Ltd, Santos Ltd
& Origin Energy Resources Ltd**

Well: **Glenaire-1**
Field: **Exploration**
Rig: **Ensign Rig 32**

Country: **Australia**

HALS-BHC-PEX
Resistivity-Sonic-GR-SI
Scale 1:200

Company: Beach Petroleum Ltd, Santos Ltd		Elev.: R.T. 76.1 m	
Field: Exploration		G.L. 70 m	
Location: PEP 160		Elev.: 0 m	
Well: Glenaire-1		76.1 m above Perm. Datum	
Logging Date: 24-Sep-2006		Longitude 140 59' 52.25" E	
Run Number: 1		Latitude 37 34' 47.03" S	
Depth Driller: 3002 m			
Schlumberger Depth: 3002 m			
Bottom Log Interval: 29999.8 m			
Top Log Interval: 1252 m			
Casing Driller Size @ Depth: 9.625 in @ 1252 m			
Casing Schlumberger: 1252 m			
Bit Size: 8.500 in			
Type Fluid In Hole: KCL-PHPA-Polymer			
Density: 1.128 g/cm3		49 s	
Fluid Loss: 492 cm3		10	
Source Of Sample: Pit			
RM @ Measured Temperature: 0.171 ohm.m @ 17 degC			
RMF @ Measured Temperature: 0.141 ohm.m @ 17 degC			
RMC @ Measured Temperature: 0.206 ohm.m @ 17 degC			
Source RMF: Press			
RM @ MRT: 0.052 @ 104		0.043 @ 104	
Maximum Recorded Temperatures: 104 degC		104	
Circulation Stopped Time: 23-Sep-2006		15:00	
Logger On Bottom Time: 24-Sep-2006		0:30	
Unit Number: 3170		AUMB	
Recorded By: Herdy Mahmud			
Witnessed By: Mr David Horner			

Logging Date	Run Number	Run 1	Run 2	Run 3
24-Sep-2006	1			
Depth Driller	3002 m			
Schlumberger Depth	3002 m			
Bottom Log Interval	29999.8 m			
Top Log Interval	1252 m			
Casing Driller Size @ Depth	9.625 in @ 1252 m			
Casing Schlumberger	1252 m			
Bit Size	8.500 in			
Type Fluid In Hole	KCL-PHPA-Polymer			
Density	1.128 g/cm3			
Fluid Loss	492 cm3			
Source Of Sample	Pit			
RM @ Measured Temperature	0.171 ohm.m @ 17 degC			
RMF @ Measured Temperature	0.141 ohm.m @ 17 degC			
RMC @ Measured Temperature	0.206 ohm.m @ 17 degC			
Source RMF	Press			
RM @ MRT	0.052 @ 104			
Maximum Recorded Temperatures	104 degC			
Circulation Stopped Time	23-Sep-2006			
Logger On Bottom Time	24-Sep-2006			
Unit Number	3170			
Recorded By	Herdy Mahmud			
Witnessed By	Mr David Horner			

DEPTH SUMMARY LISTING

Date Created: 24-SEP-2006 3:35:01

Depth System Equipment

Depth Measuring Device	Tension Device	Logging Cable
Type: IDW-E Serial Number: 2001 Calibration Date: 5-June-06 Calibrator Serial Number: 1009 Calibration Cable Type: 7-42ZV-XS Wheel Correction 1: -4 Wheel Correction 2: -2	Type: CMTD-B/A Serial Number: 2251 Calibration Date: 10-Sep-06 Calibrator Serial Number: 88297 Calibration Gain: 0.90 Calibration Offset: 138.00	Type: 7-42ZV-XS Serial Number: 6093 Length: 4742.99 M <hr/> Conveyance Method: Wireline Rig Type: LAND

Depth Control Parameters

Log Sequence:	First Log In the Well
Rig Up Length At Surface:	82.79 M
Rig Up Length At Bottom:	82.77 M
Rig Up Length Correction:	0.02 M
Stretch Correction:	1.20 M
Tool Zero Check At Surface:	0.12 M

Depth Control Remarks

1. First run in hole.
2. All Schlumberger depth control procedures followed.
3. IDW used as primary depth reference, Z-Chart as secondary depth reference.
4.
5.
6.

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	OTHER SERVICES2
OS1:	OS1:
OS2:	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:

REMARKS: RUN NUMBER 1
Tool String run as per tool sketch with 5 x 1.5" standoffs without bow spring
HGNS run for GR only.
HRCC failed during first run, caliper and RXO data are not available from the first run.
Maximum recorded temperature 104degC from LEH-QT thermometers.
Sonic Check In Casing 57 ms/ft

Mud properties (taken from mud report dated 23-Sep-06):
 Chlorides = 29,400 mg/L
 K+ = 30,450 mg/L
 KCL (% by Wt.) = 5.8

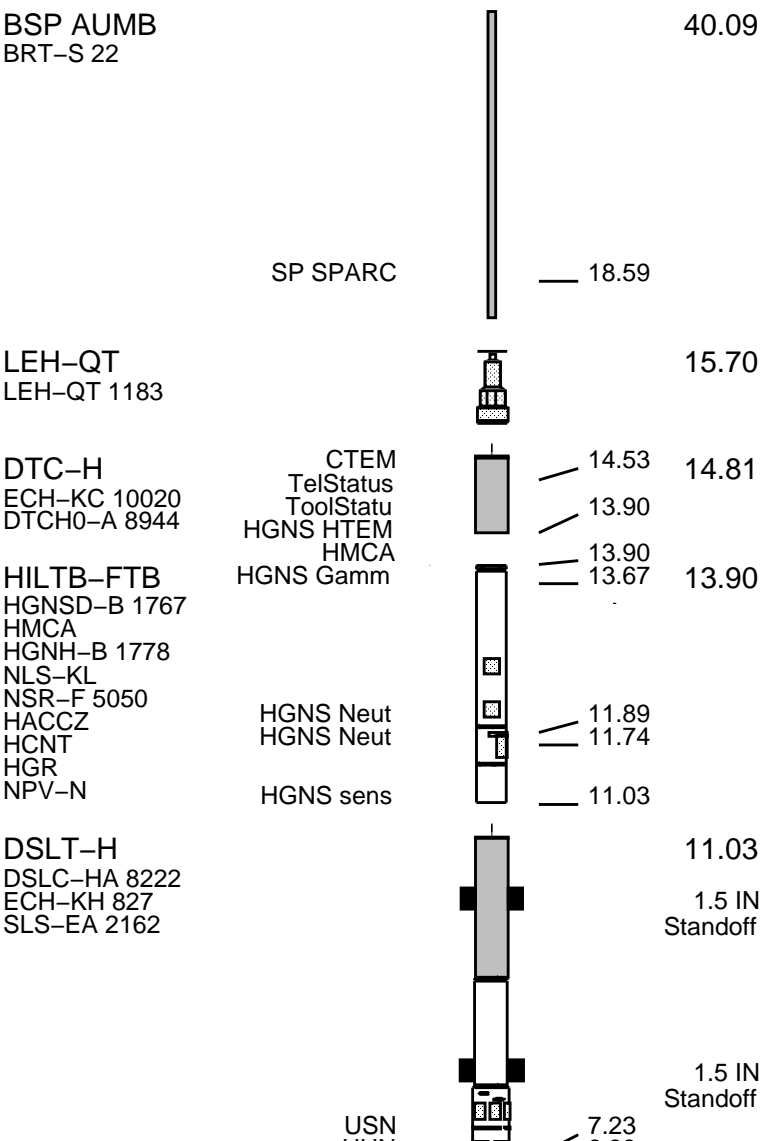
RUN 1			RUN 2		
SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:			SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:		
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LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

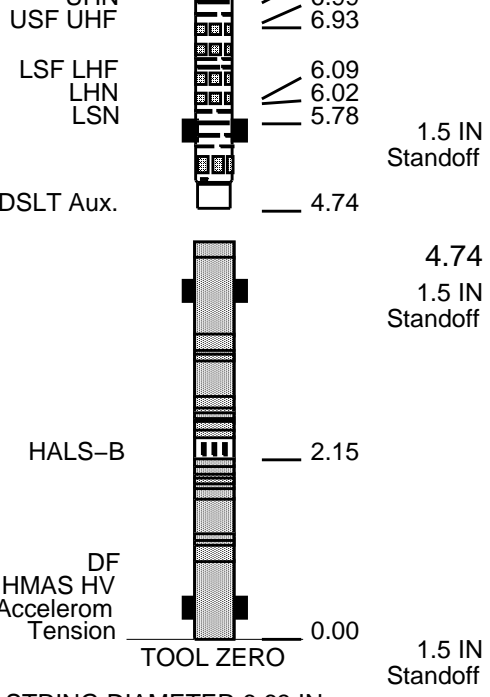
EQUIPMENT DESCRIPTION

RUN 1 RUN 2

SURFACE EQUIPMENT
 LCM-AA 2726 NCS-YC 5051
 GSR-U 2006 WITM (DTS)-A 929
 NCT-B
 CNB-AB

DOWNHOLE EQUIPMENT



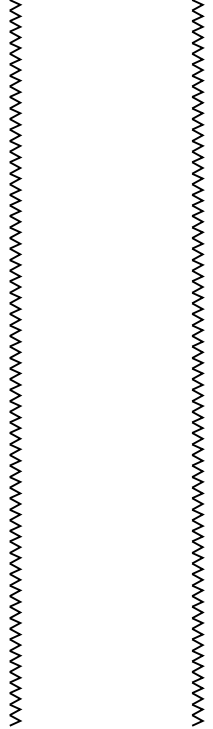


MAXIMUM STRING DIAMETER 6.63 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

Client: Beach Petroleum Ltd
Well: Glenaire-1
Field: Exploration
State: Victoria
Country: Australia

Rig Name: Ensign # 32
Elevation: 76.1 m

Production String	(in) (m)			Well Schematic	(m) (in)			Casing String
	OD	ID	MD		MD	OD	ID	
					0.0	9.625		Casing String
					303.5	12.288		Borehole Segment Bottom
					1252.0	9.625		Casing Shoe
					1252.0	8.500		Borehole Segment



3002.0

8.500

Borehole Segment Bottom



Sonic-Resistivity-GR Standard Resolution

MAXIS Field Log

Input DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_013LUP FN:15	PRODUCER	24-Sep-2006 03:24	3003.5 M	13.0 M
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Output DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_021PUP FN:17	PRODUCER	24-Sep-2006 06:06	3004.7 M	14.8 M
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OP System Version: 14C0-302

MCM

HALS-B
HILTB-FTB
BSP

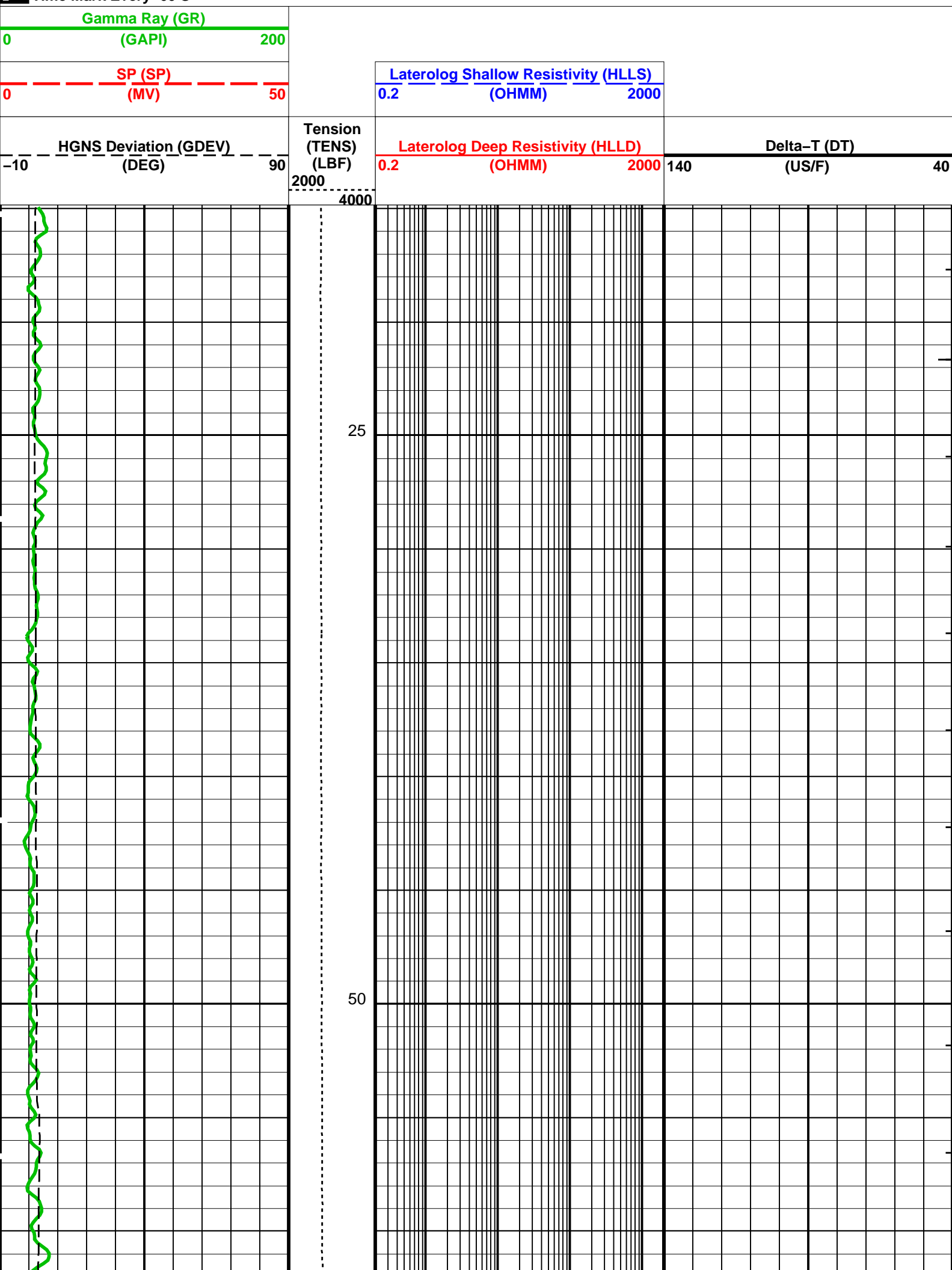
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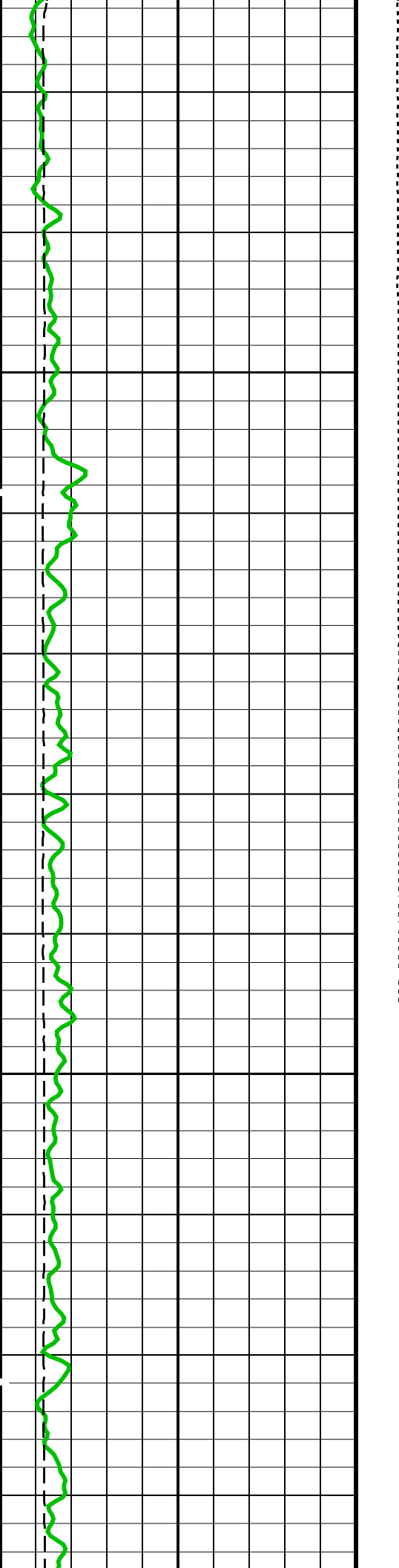
DSLT-H
DTC-H

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PIP SUMMARY

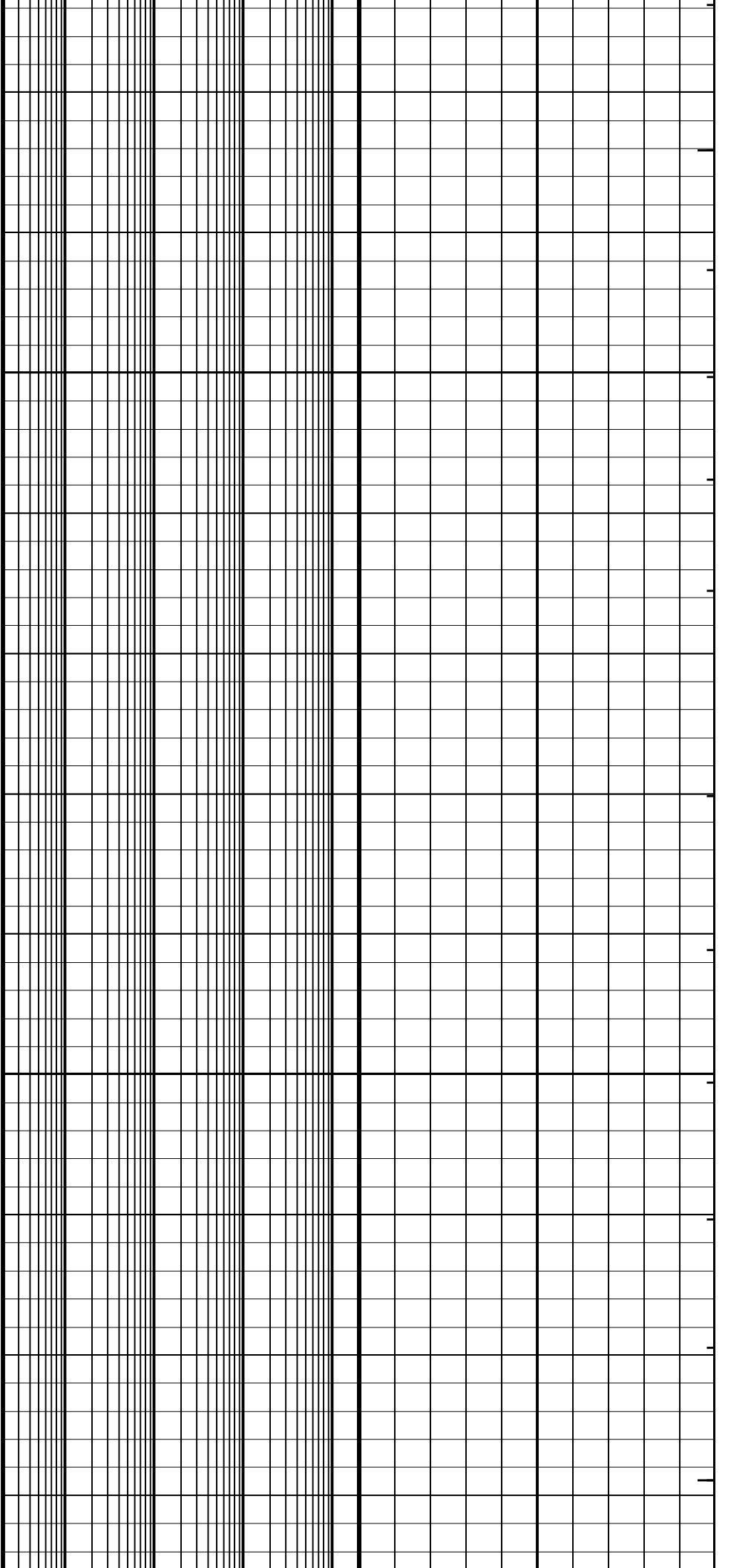
Integrated Transit Time Minor Pip Every 1 MS →
Integrated Transit Time Major Pip Every 10 MS →

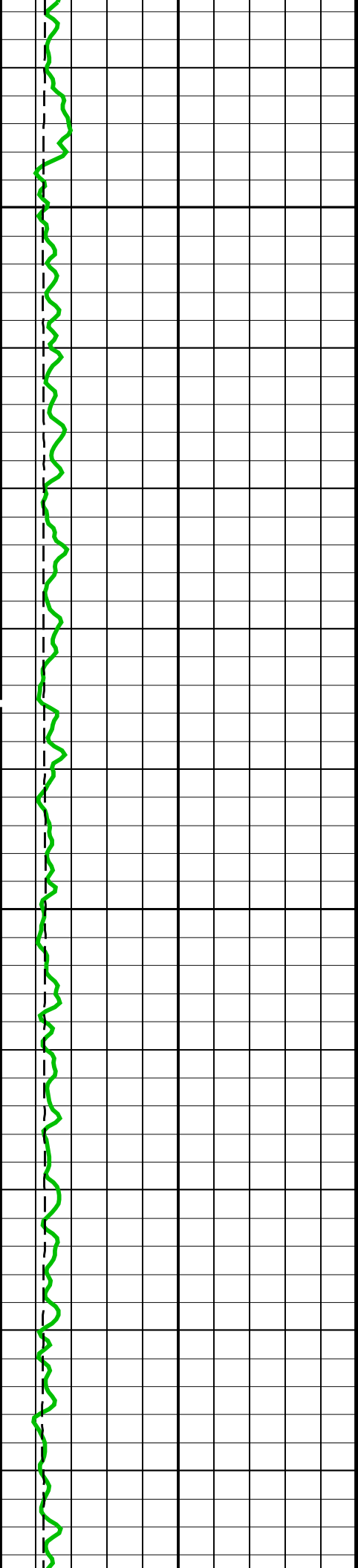




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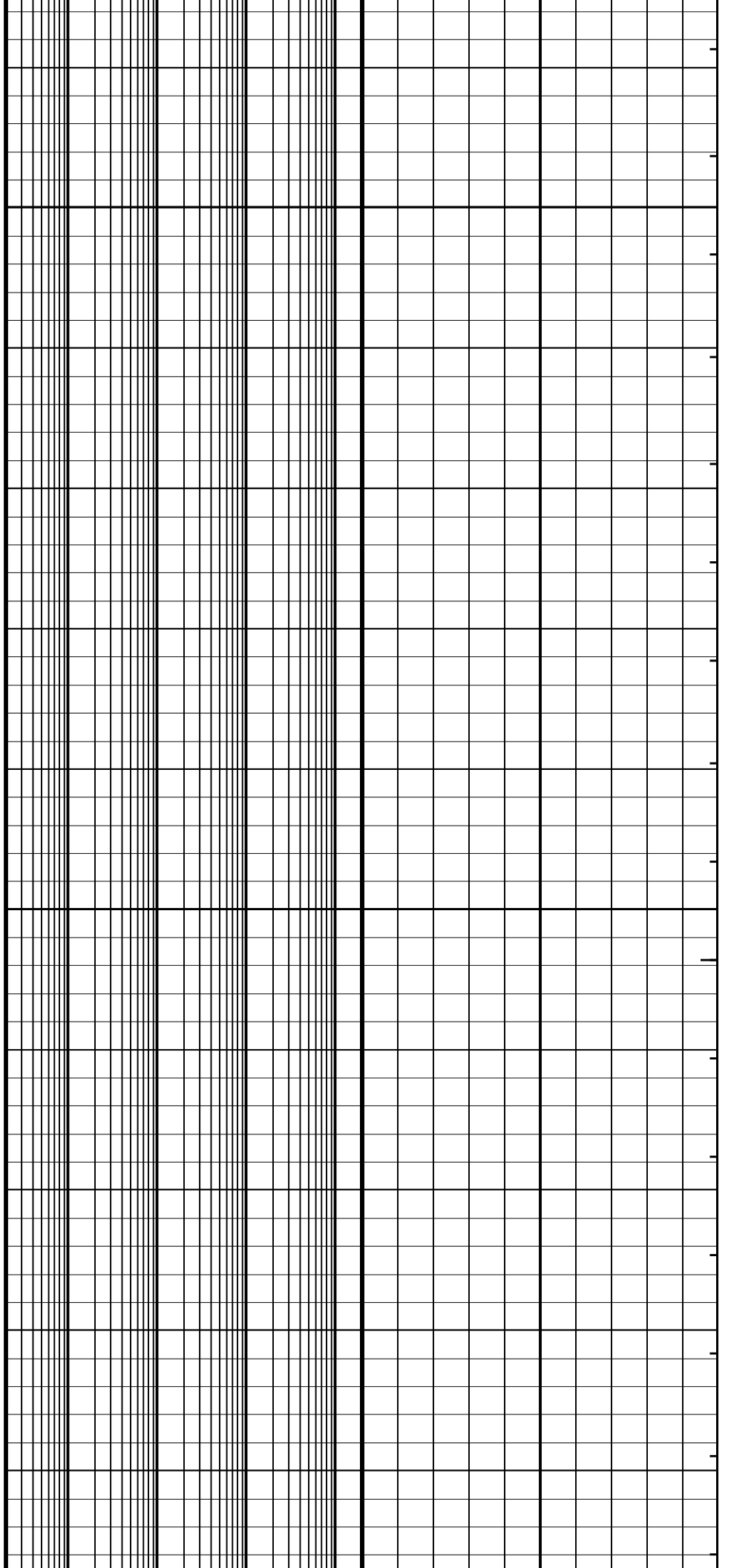
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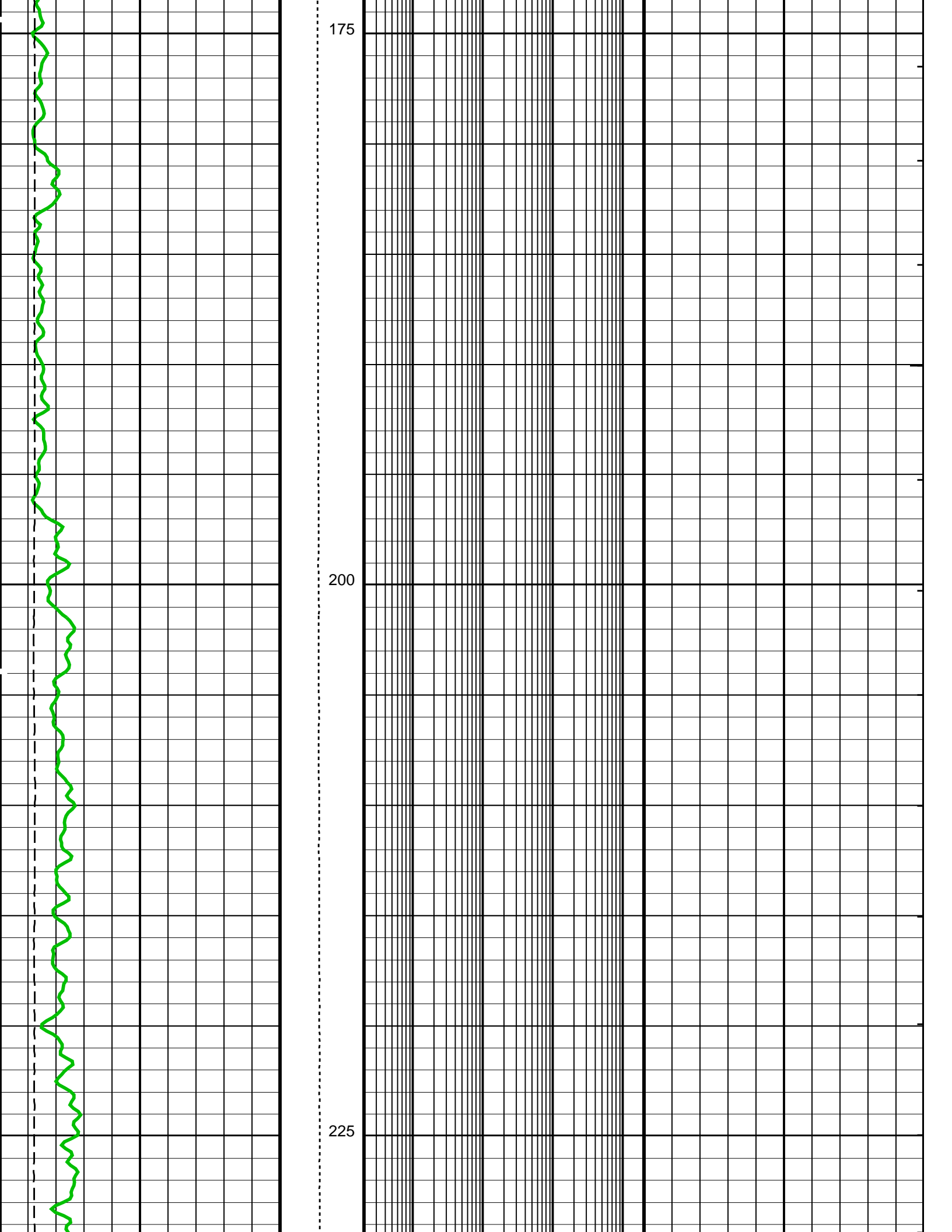


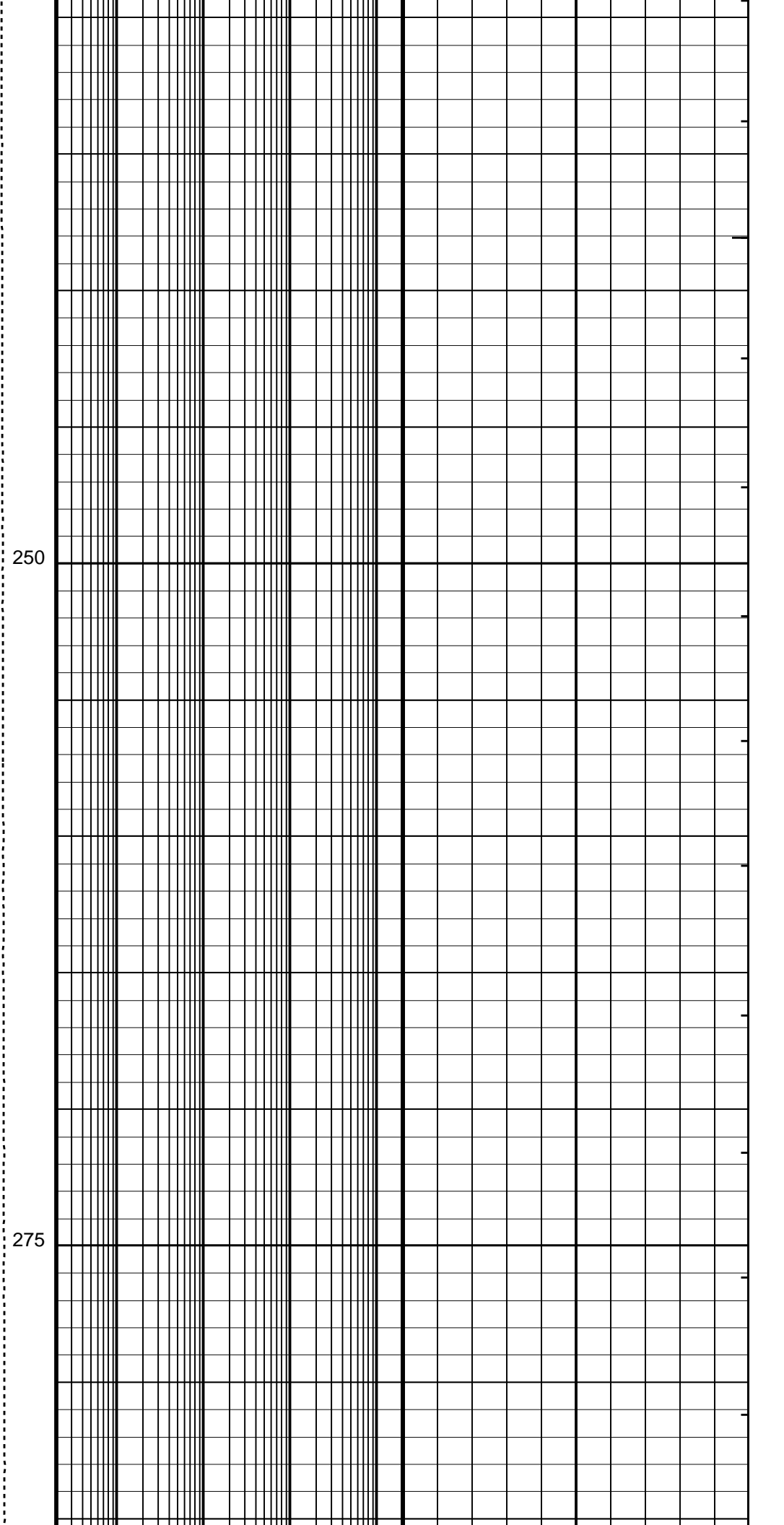
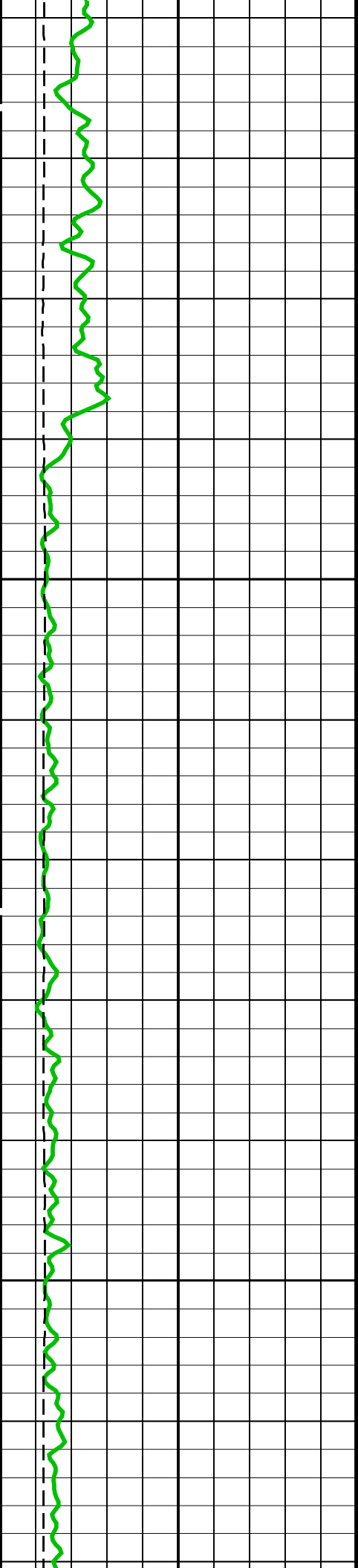


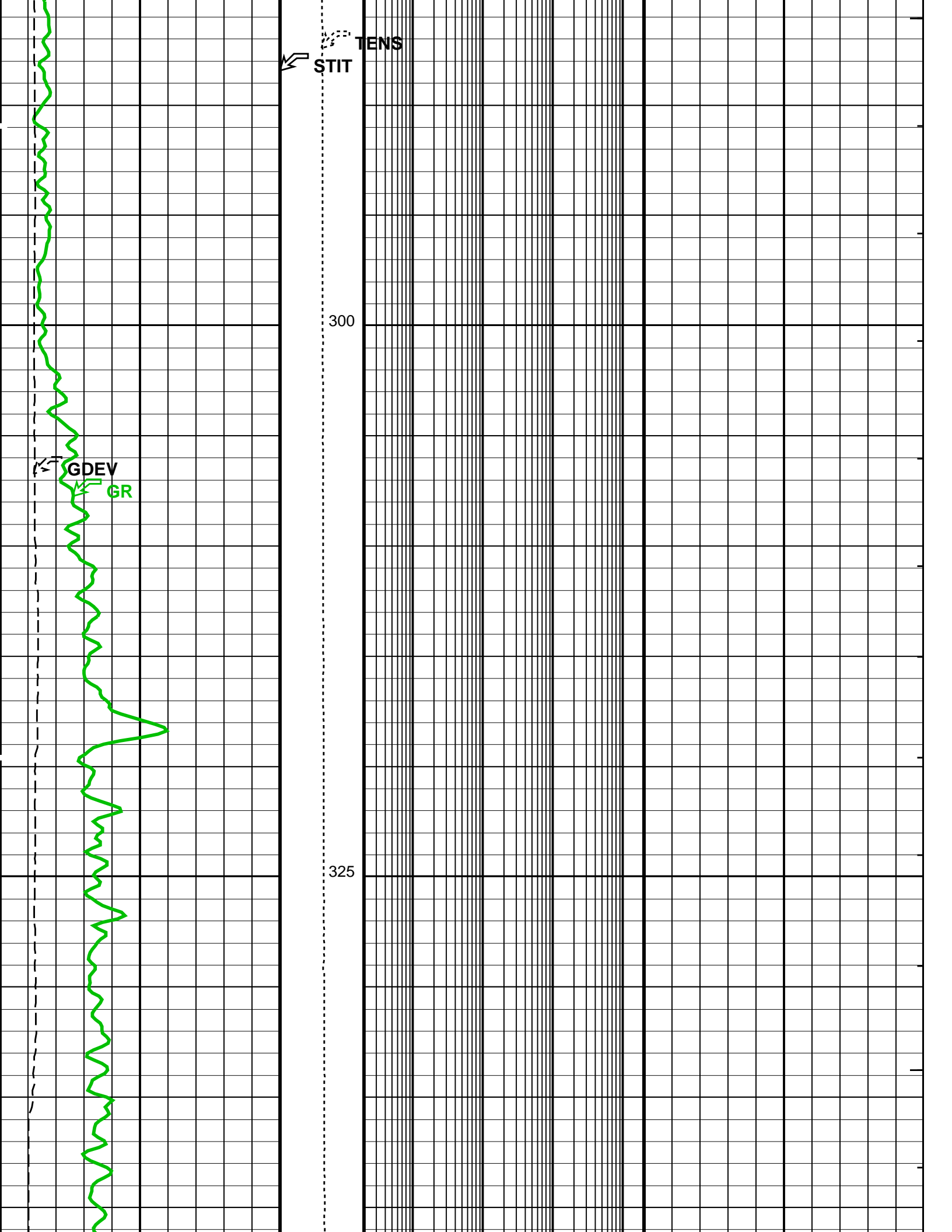
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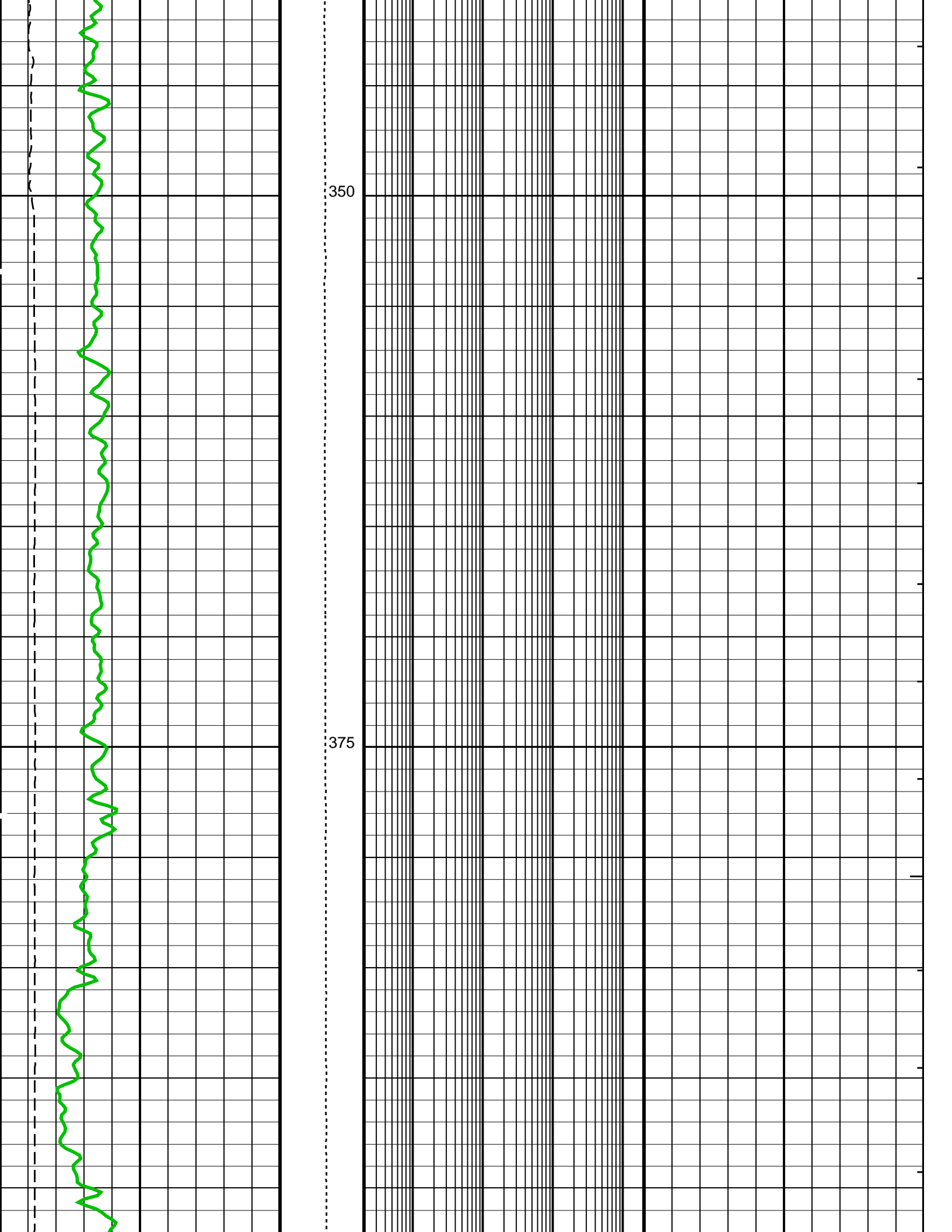
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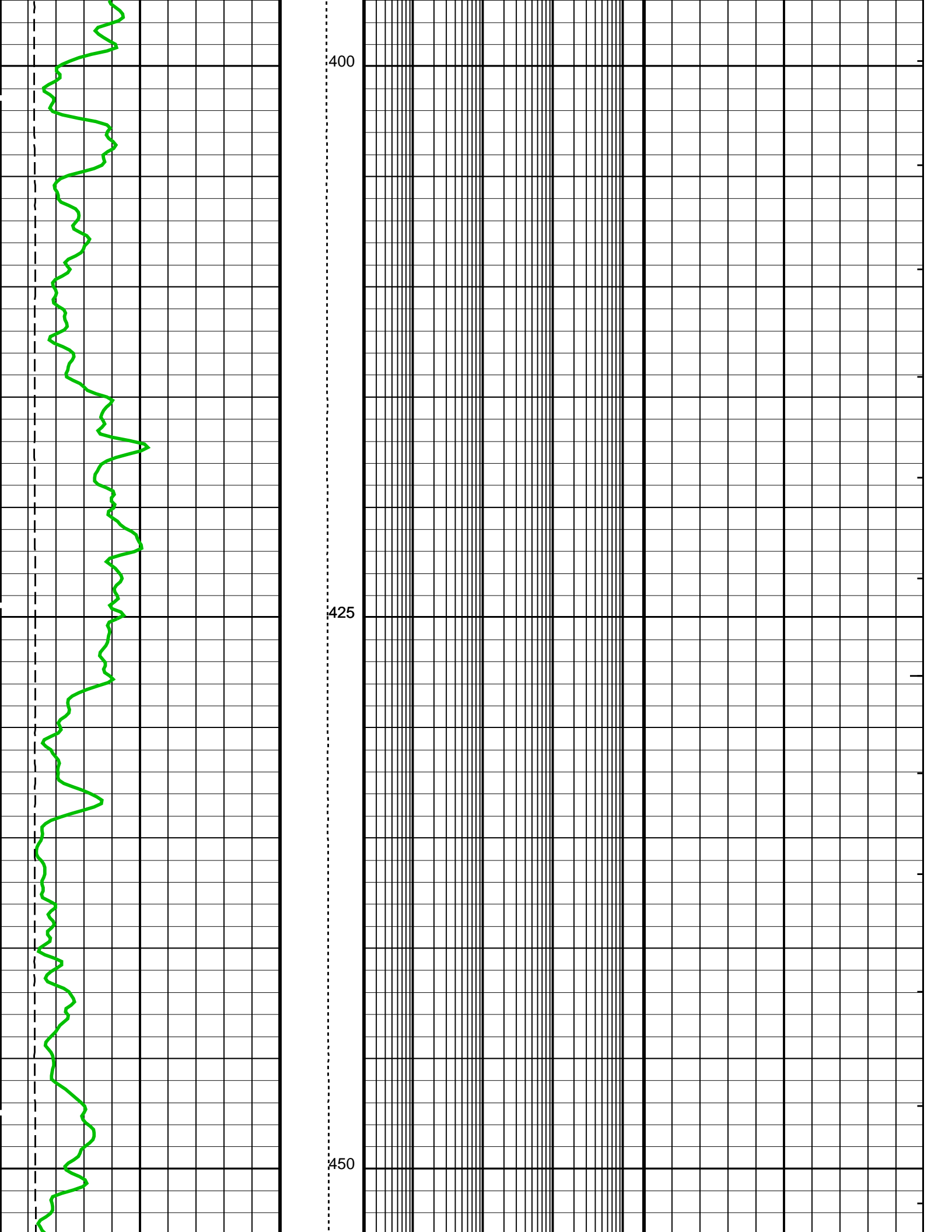


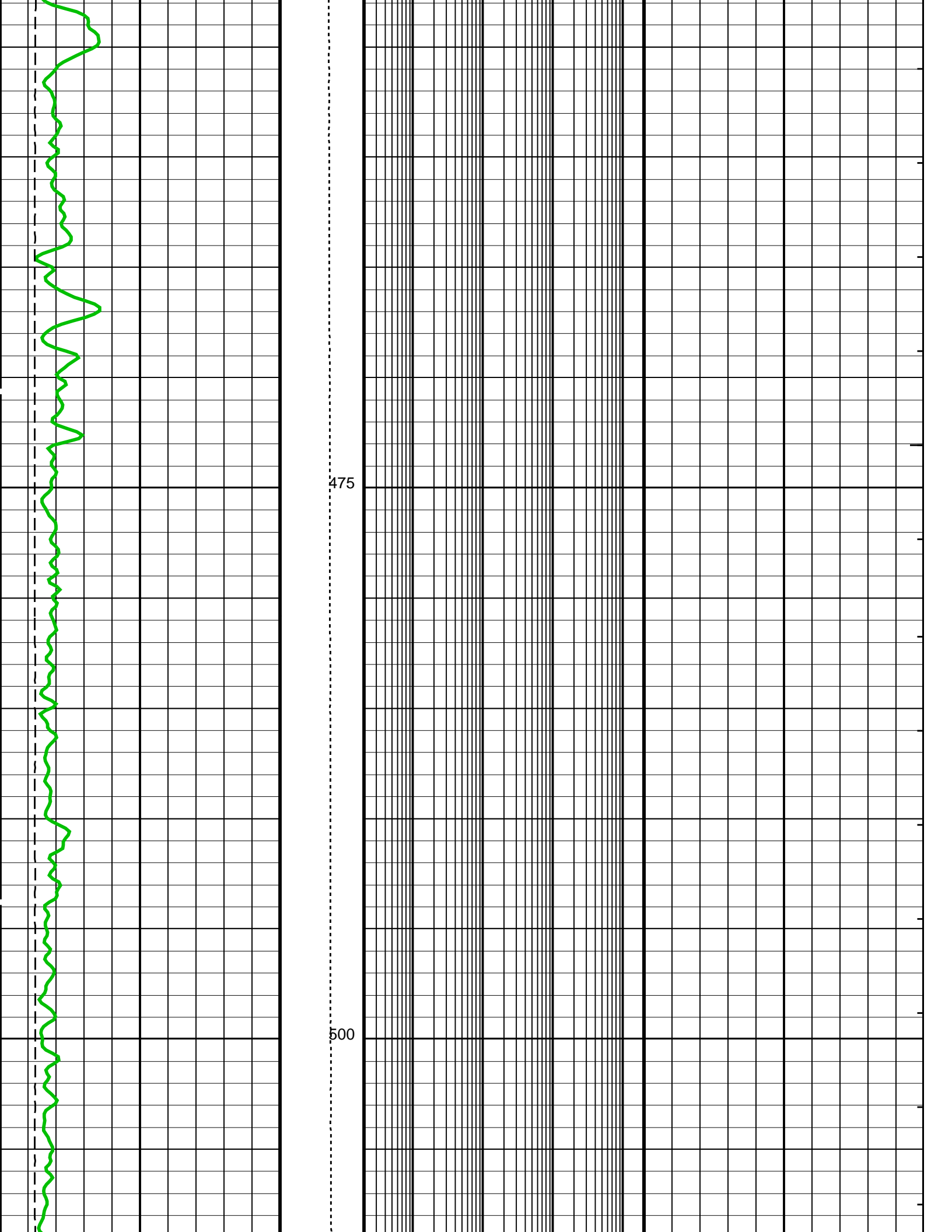


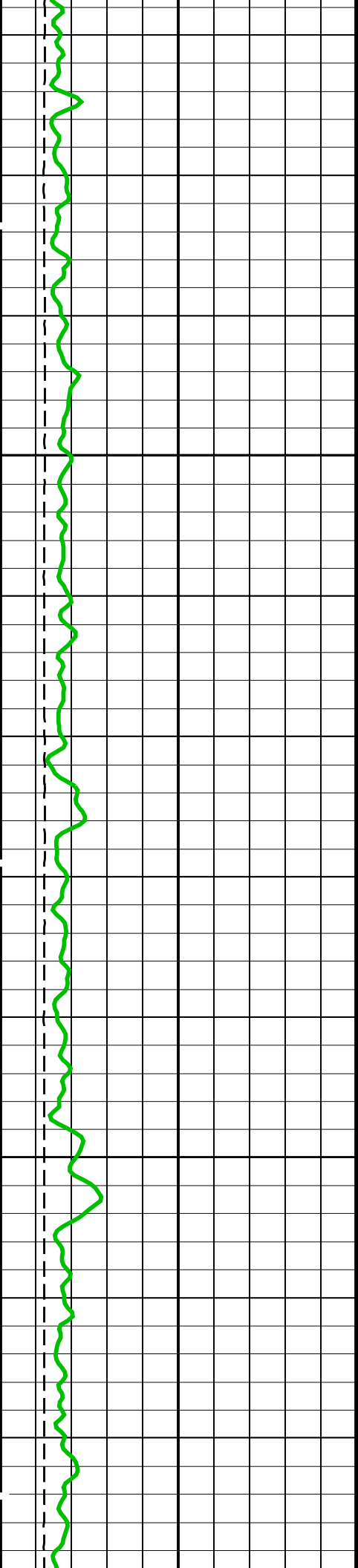






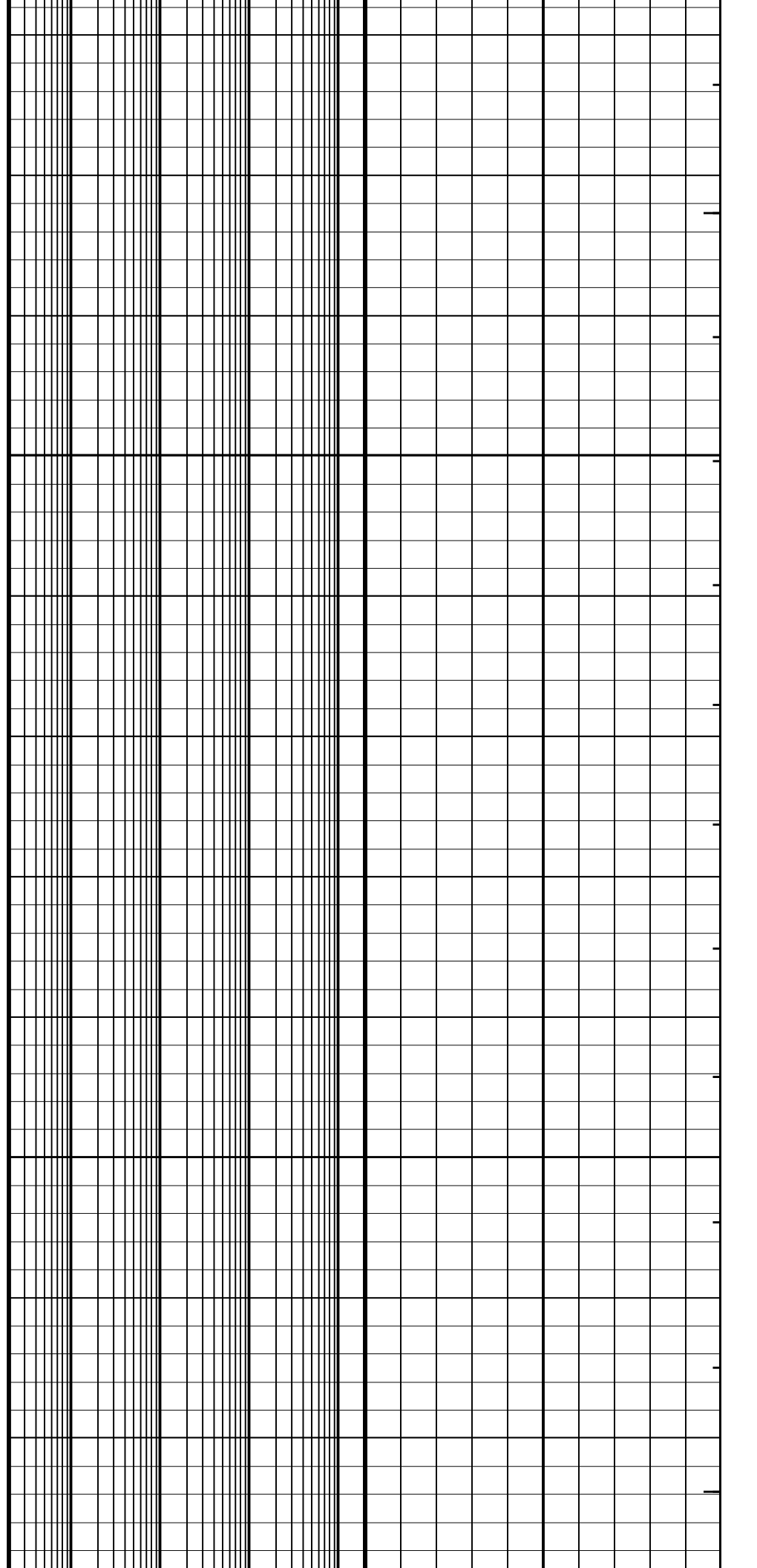


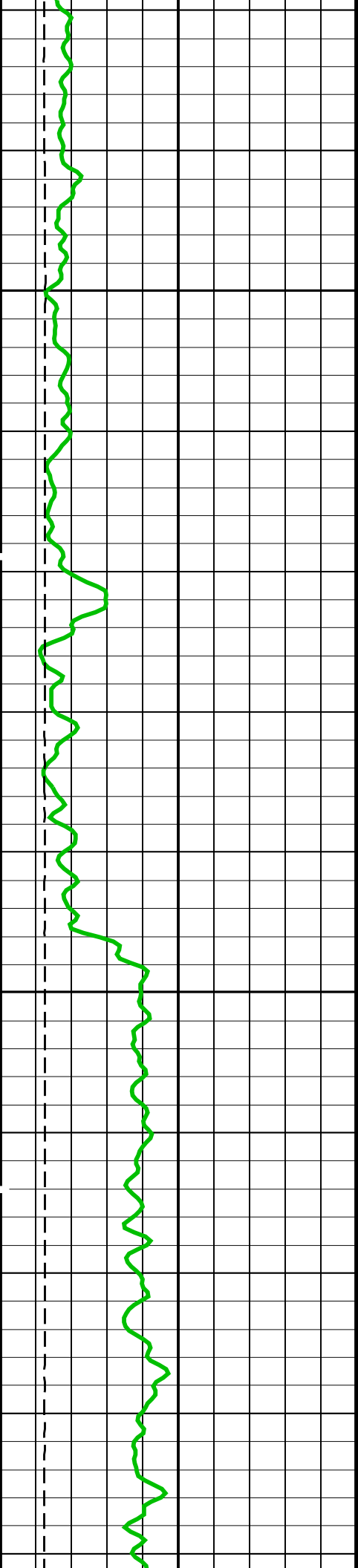




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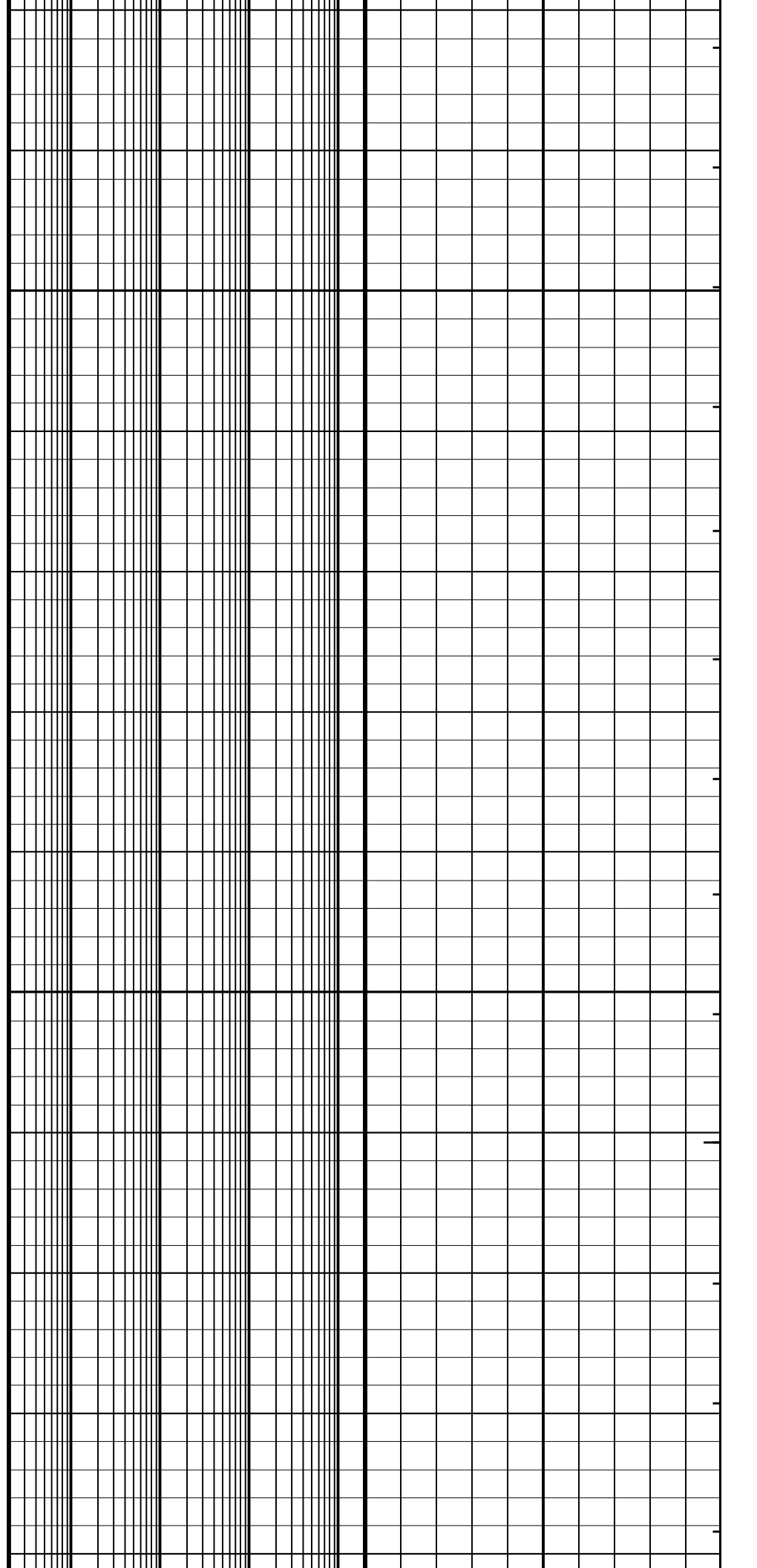
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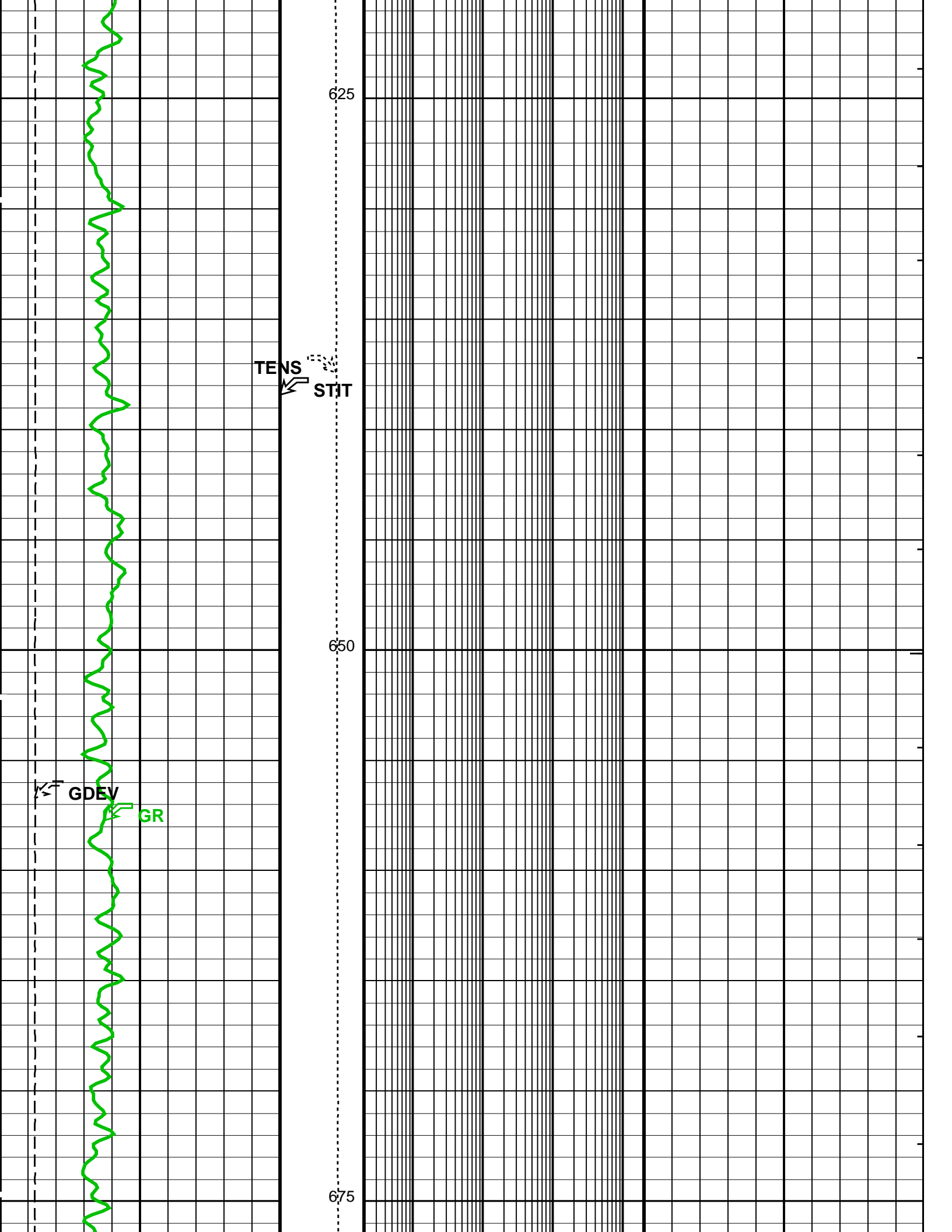


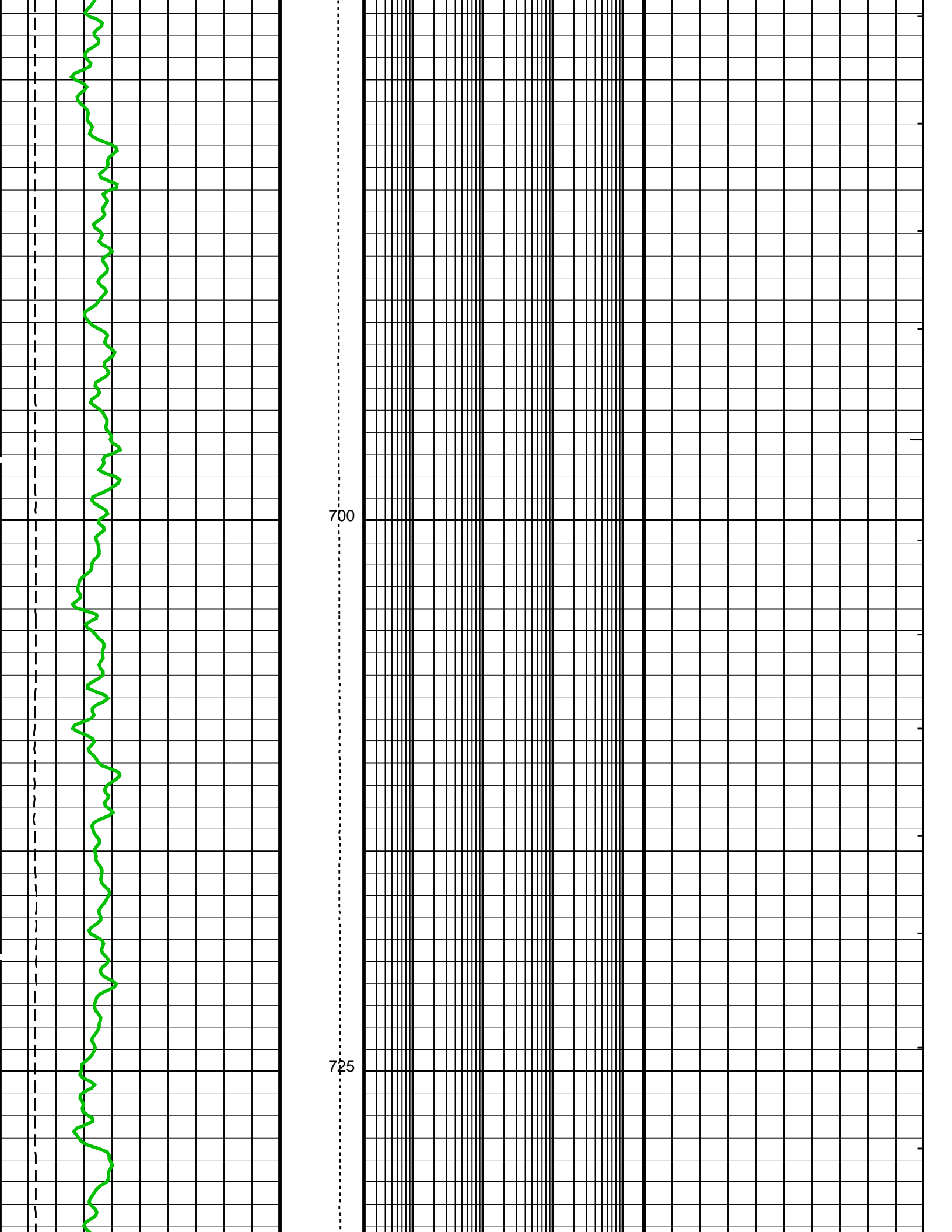


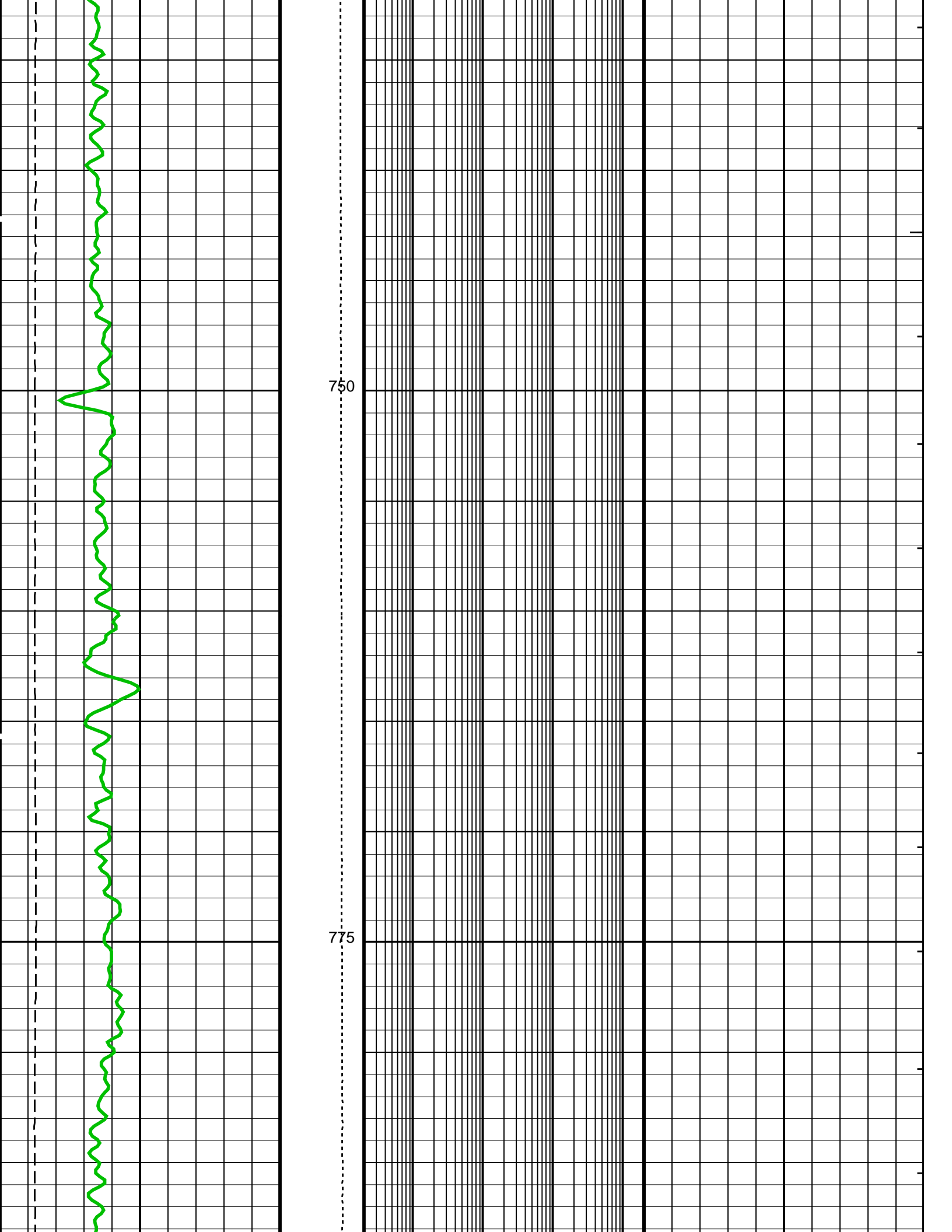
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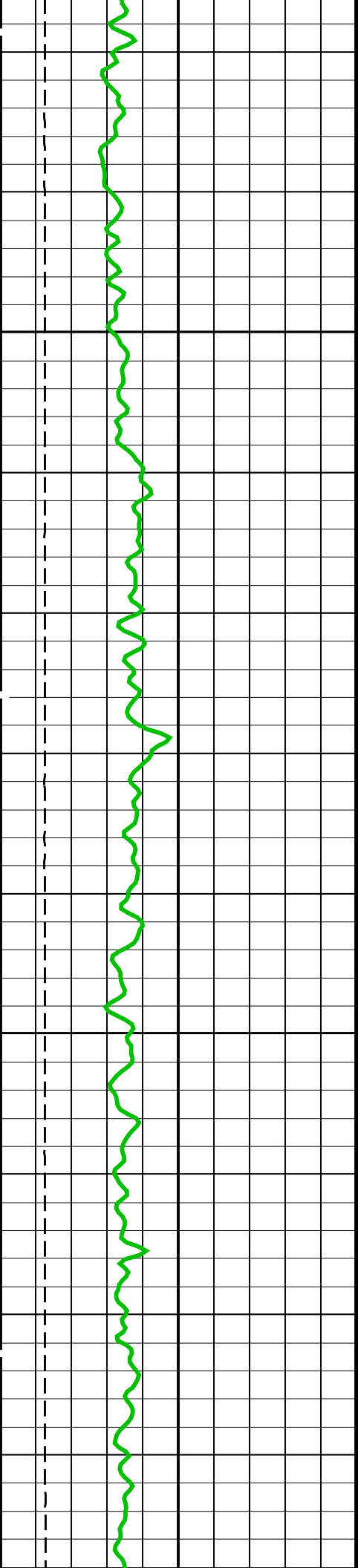
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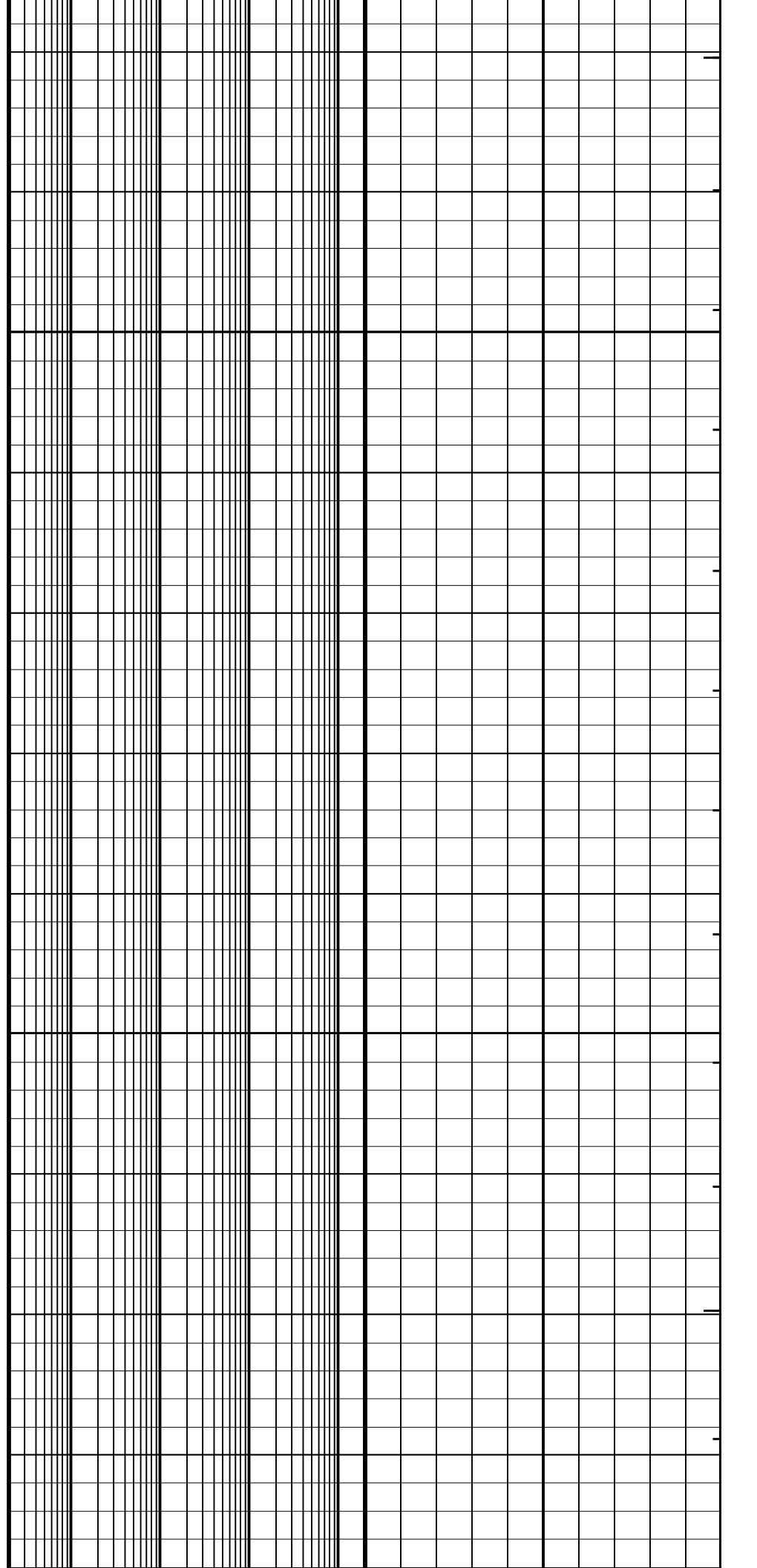


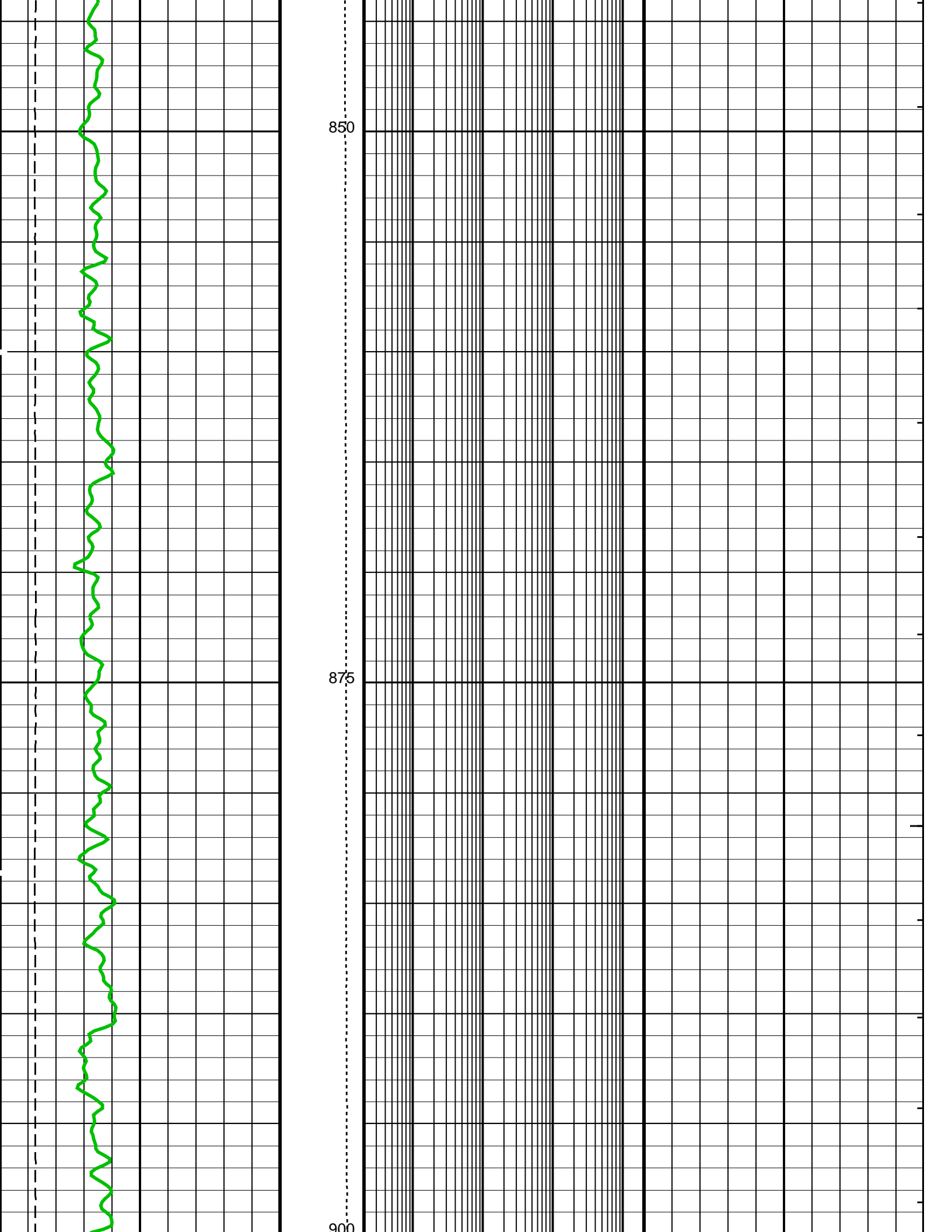


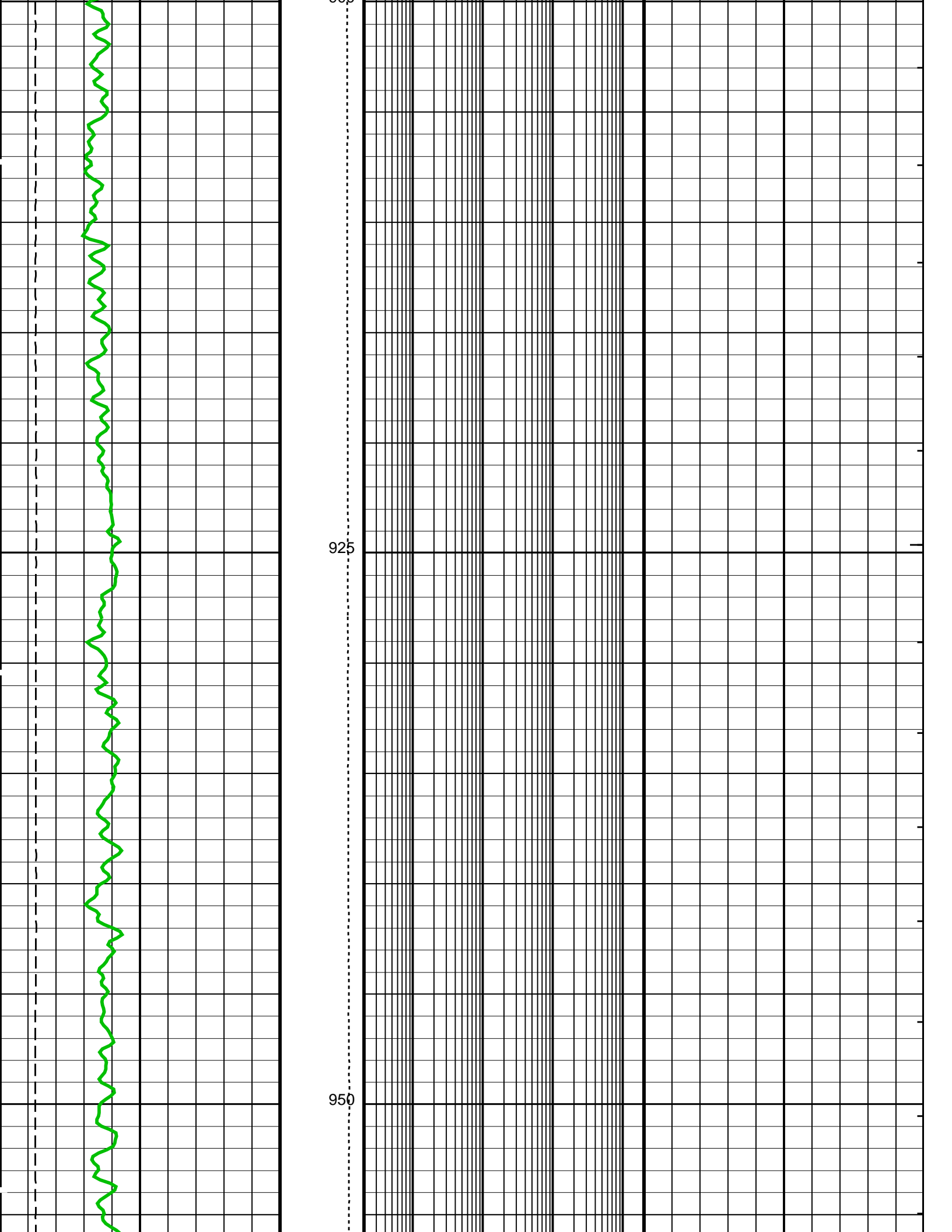


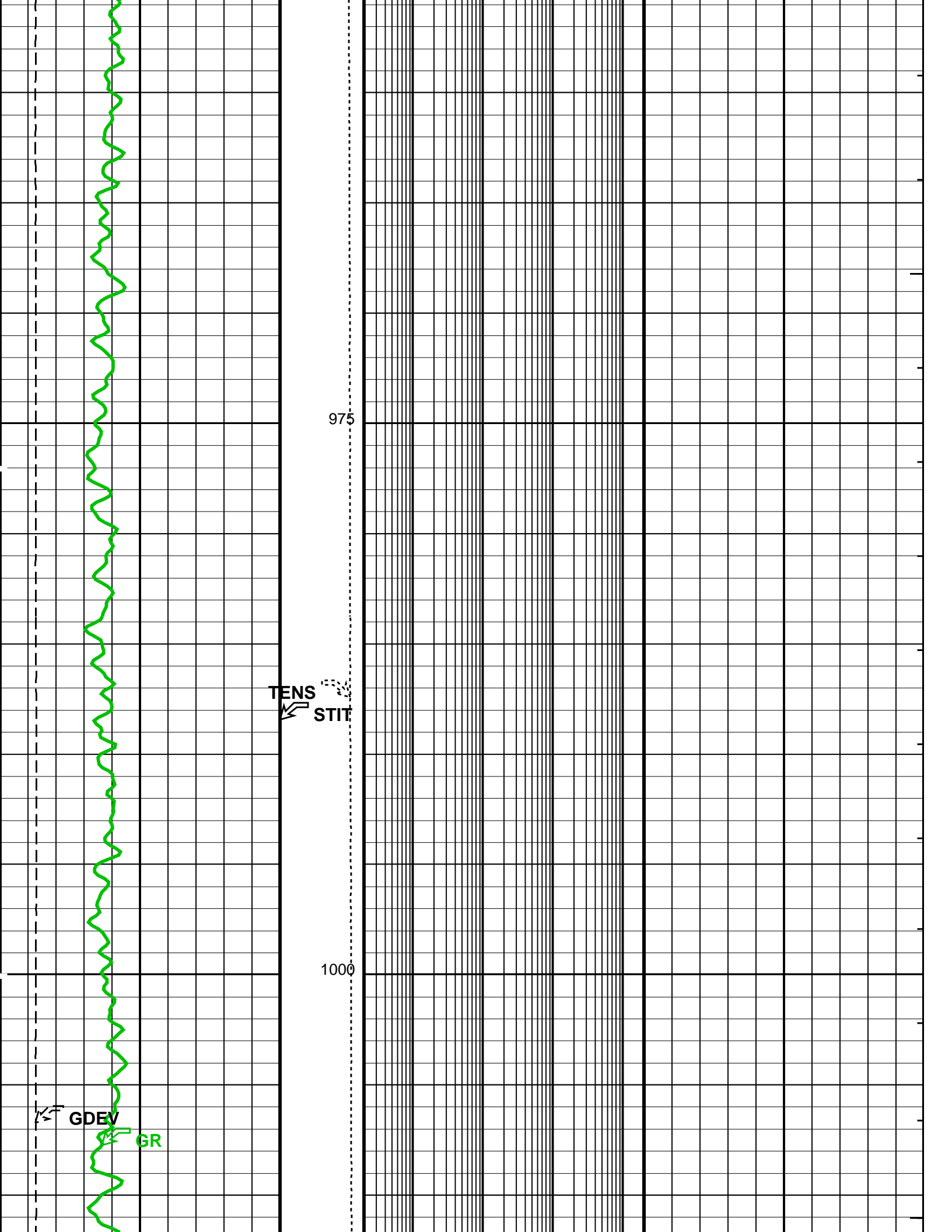
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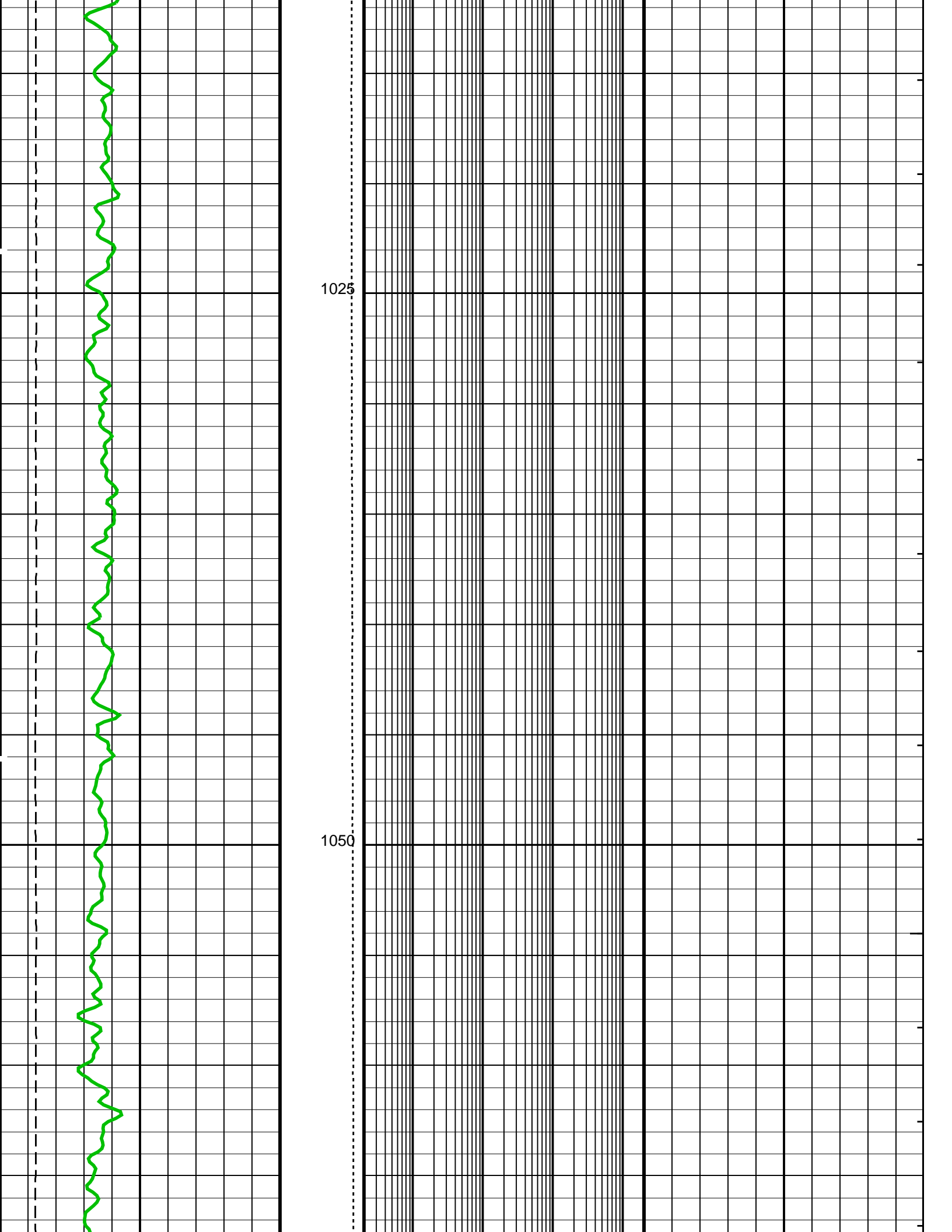
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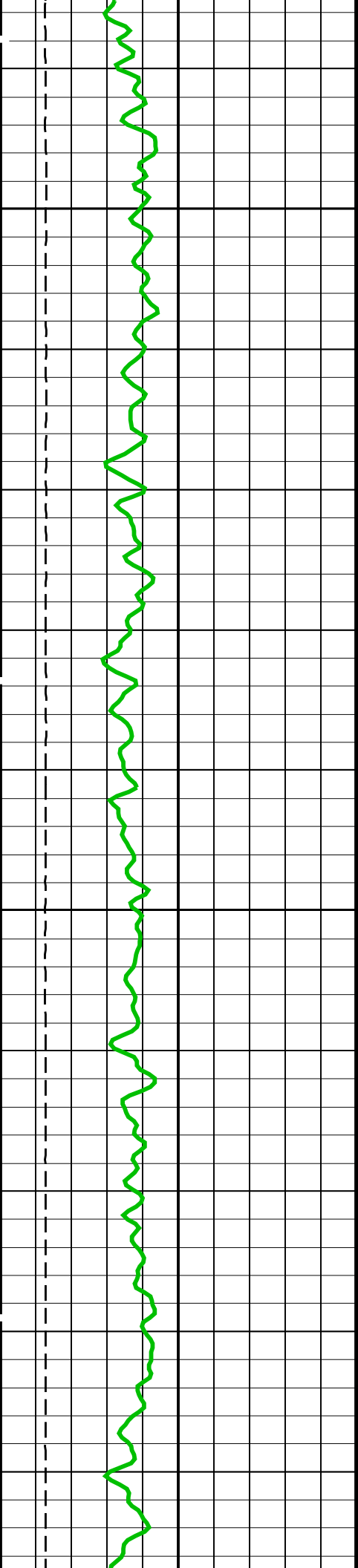






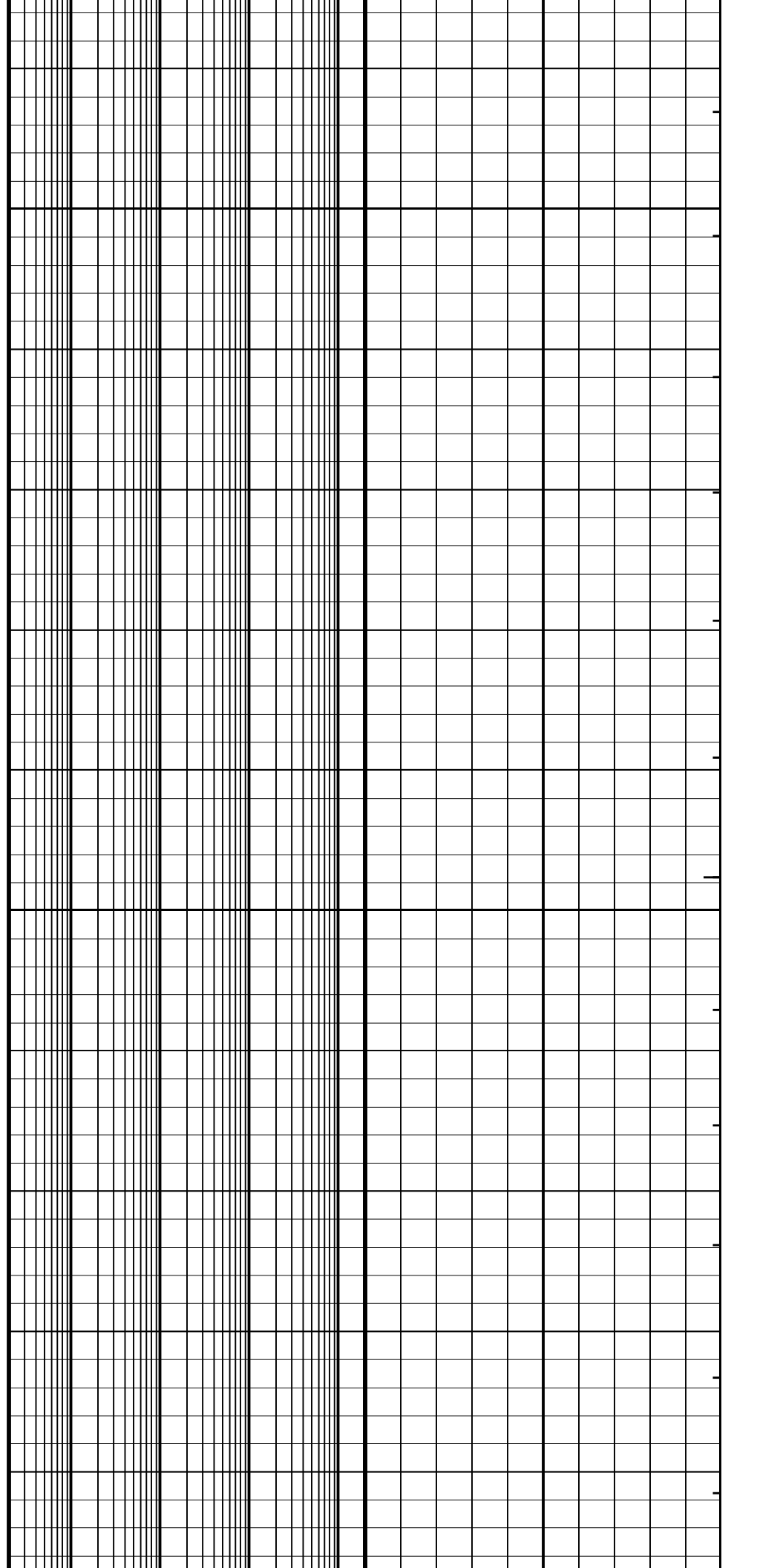


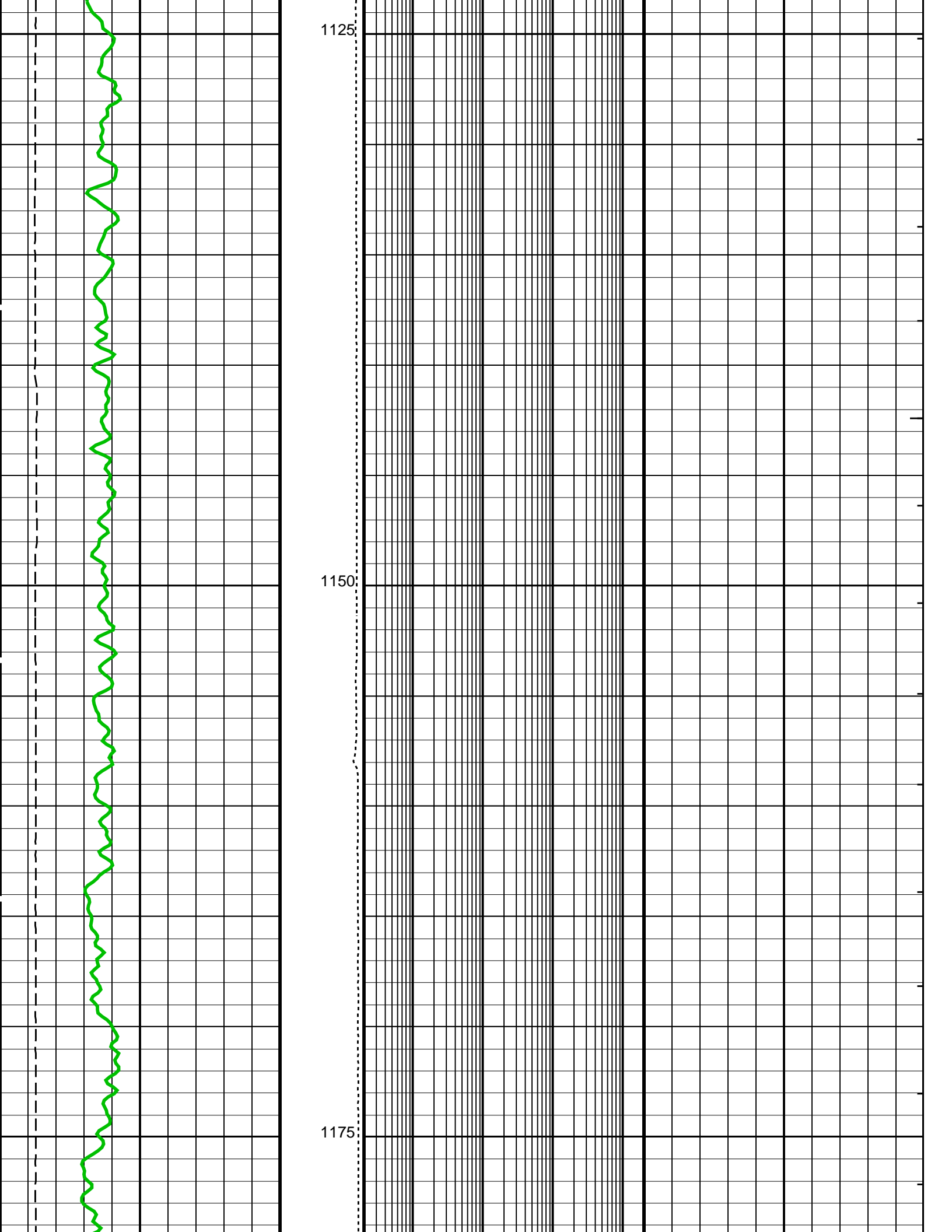


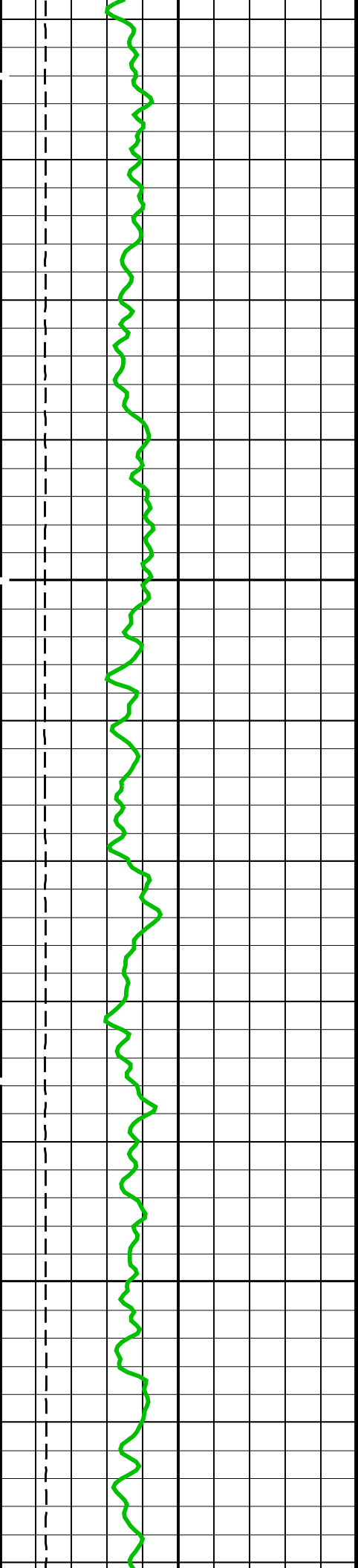


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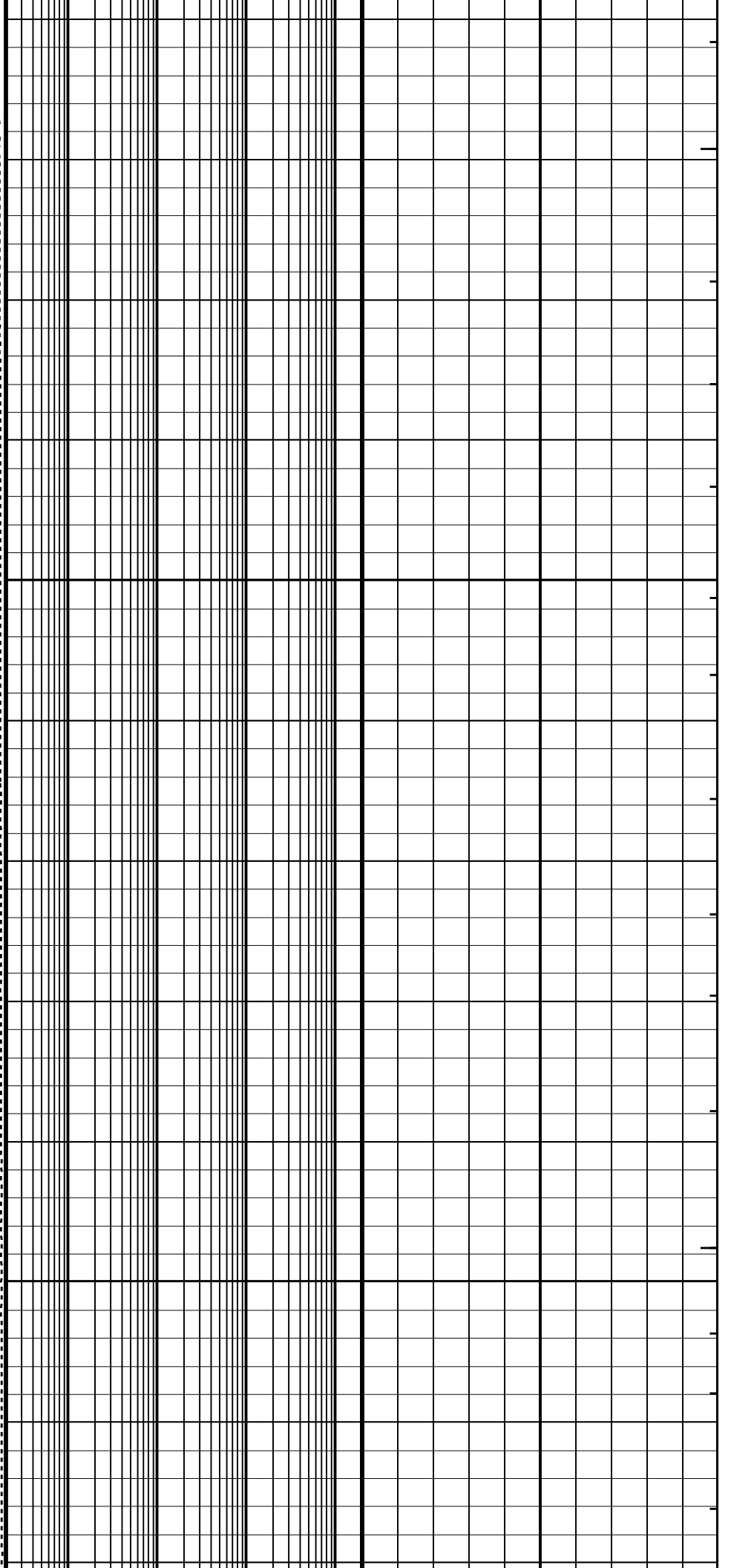


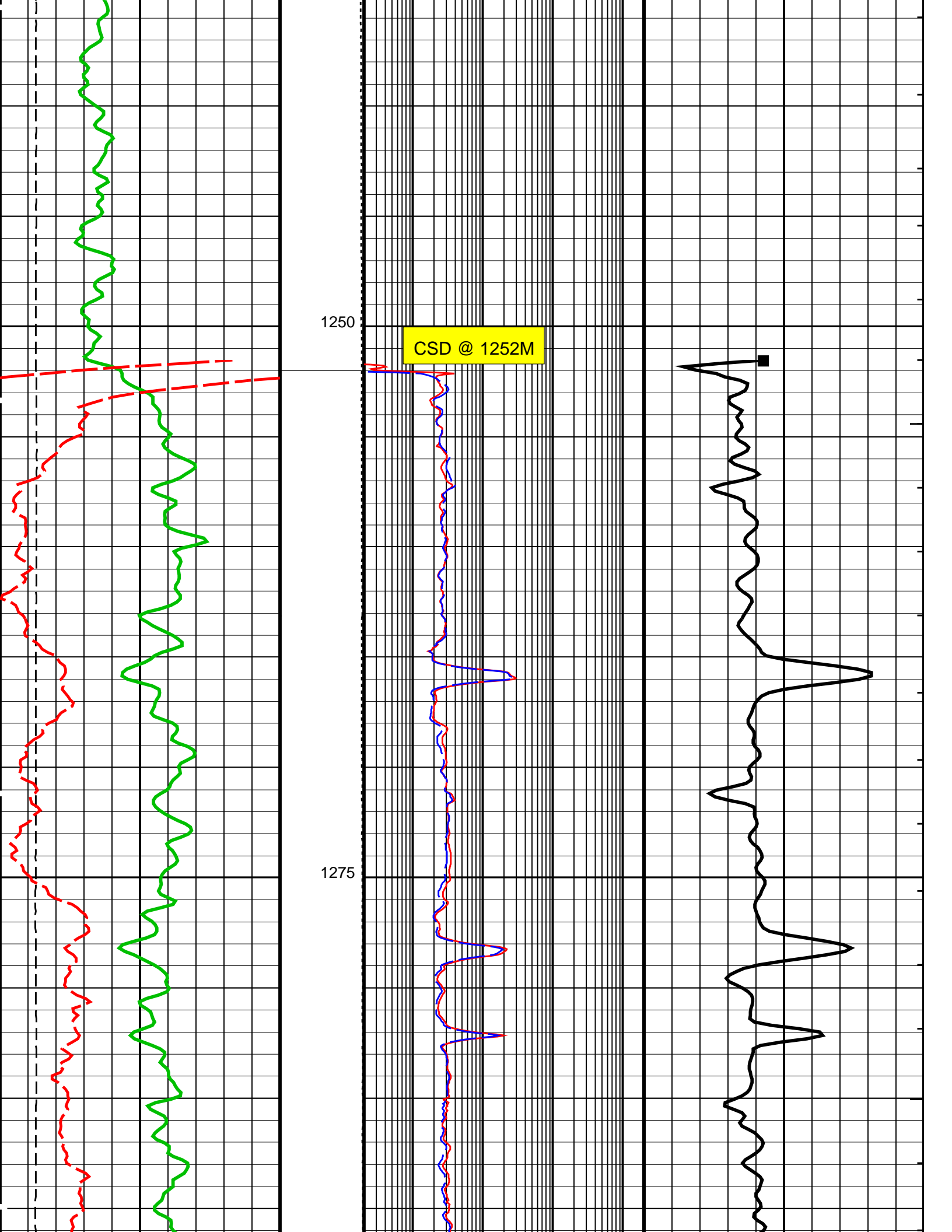


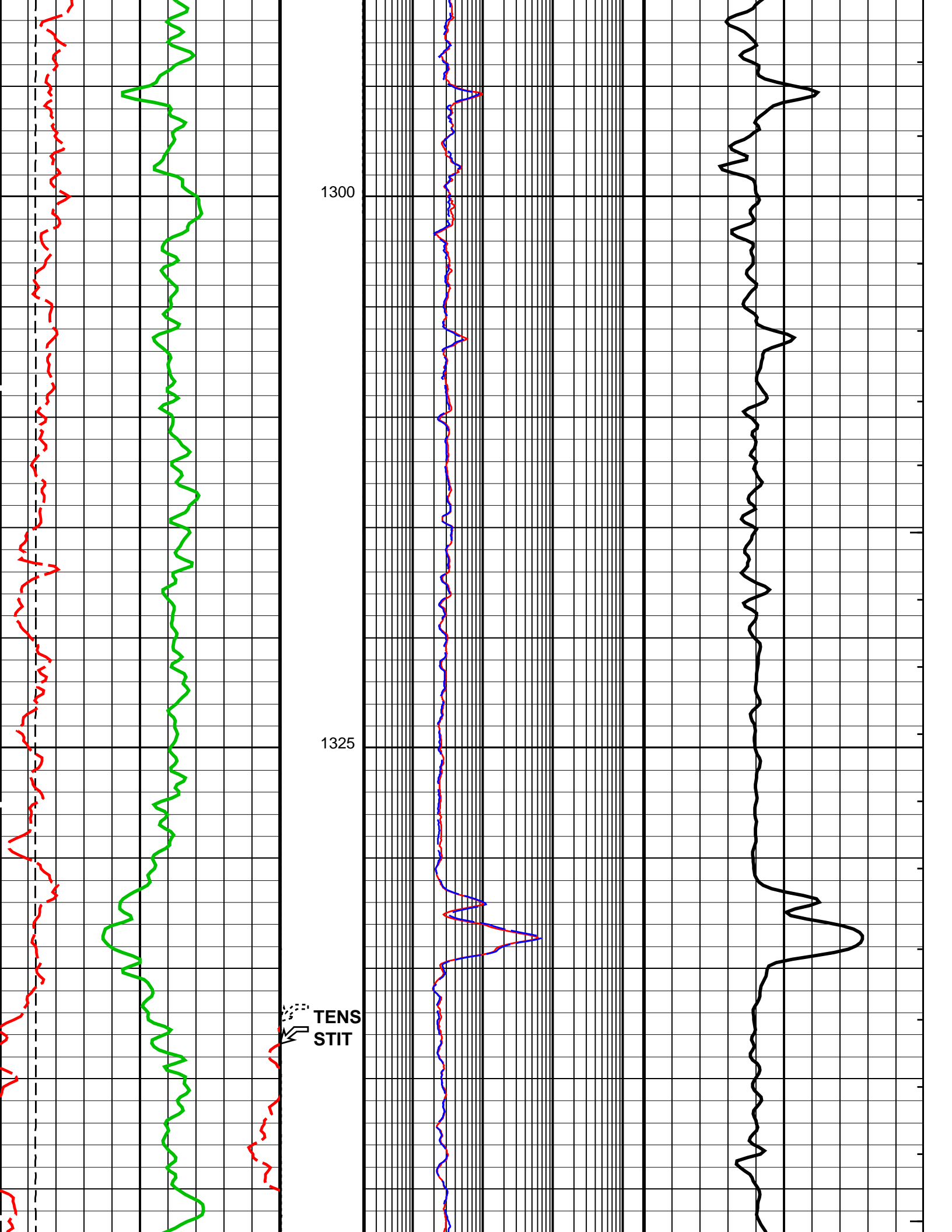


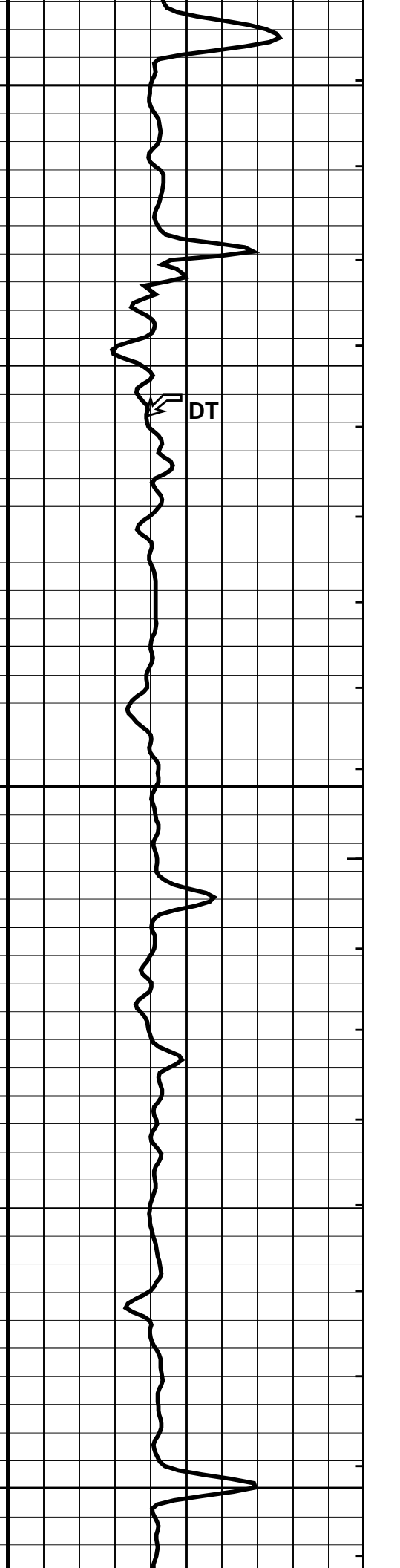
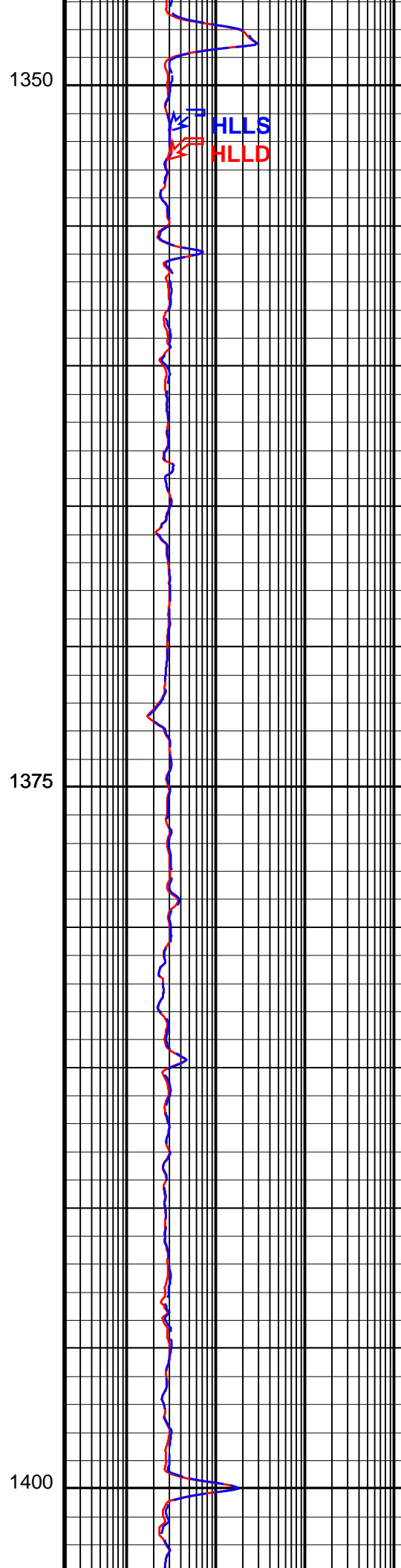
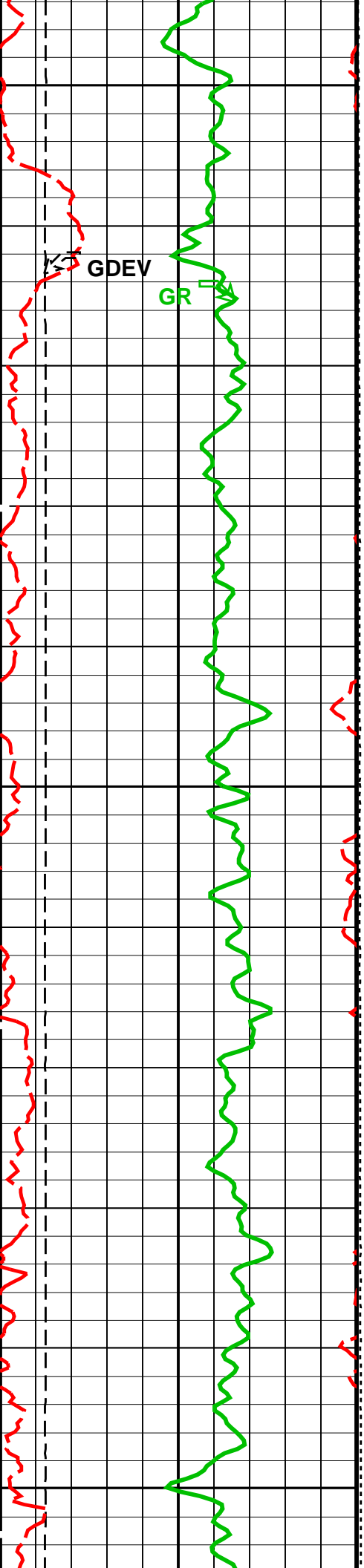
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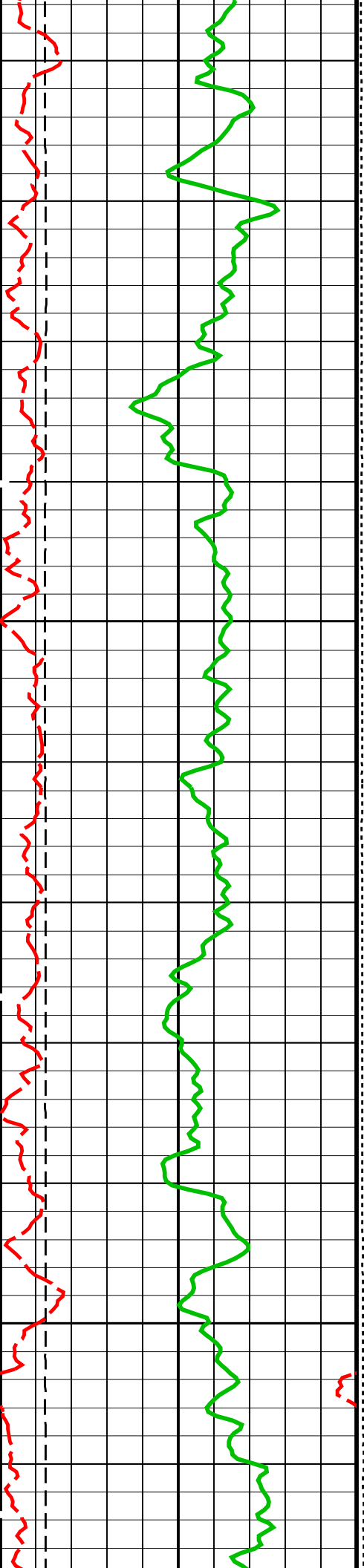
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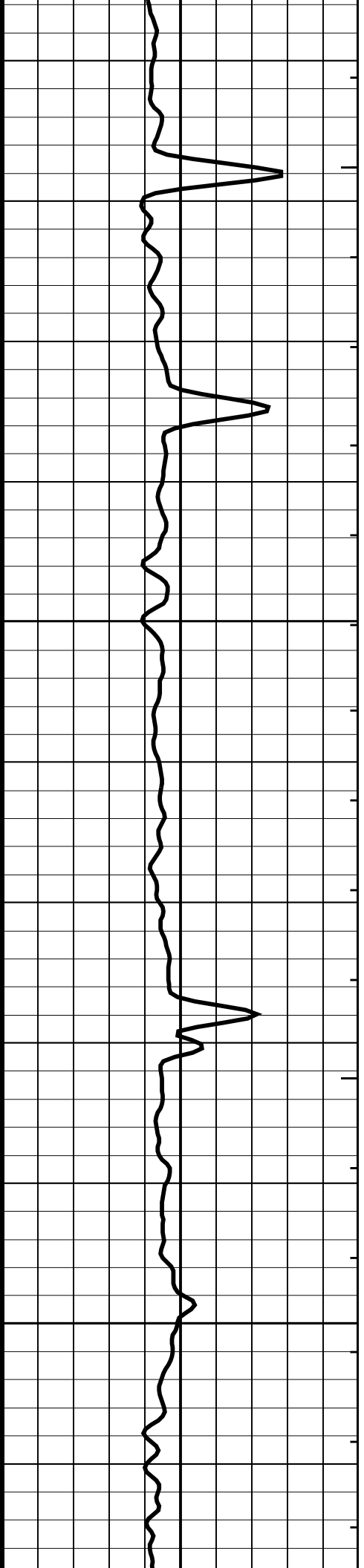
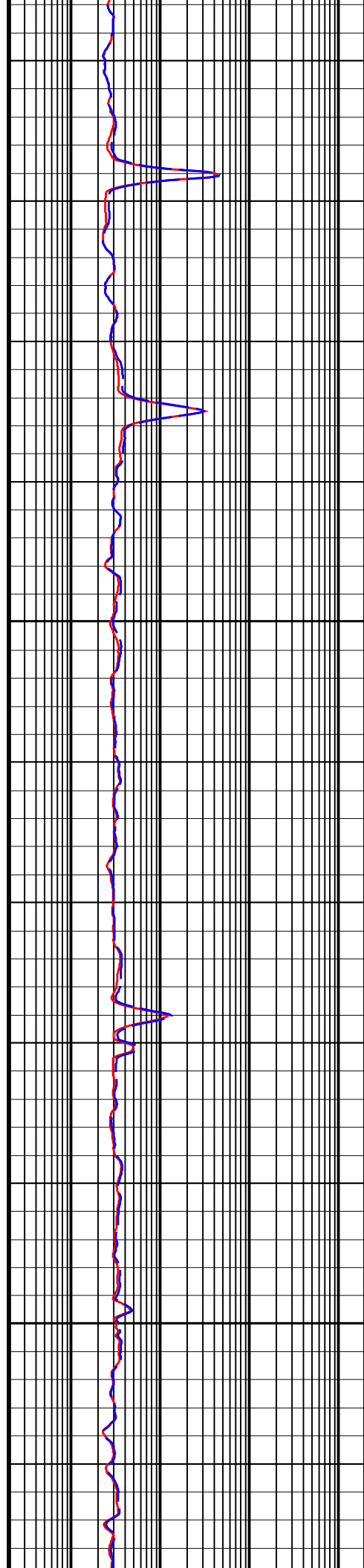


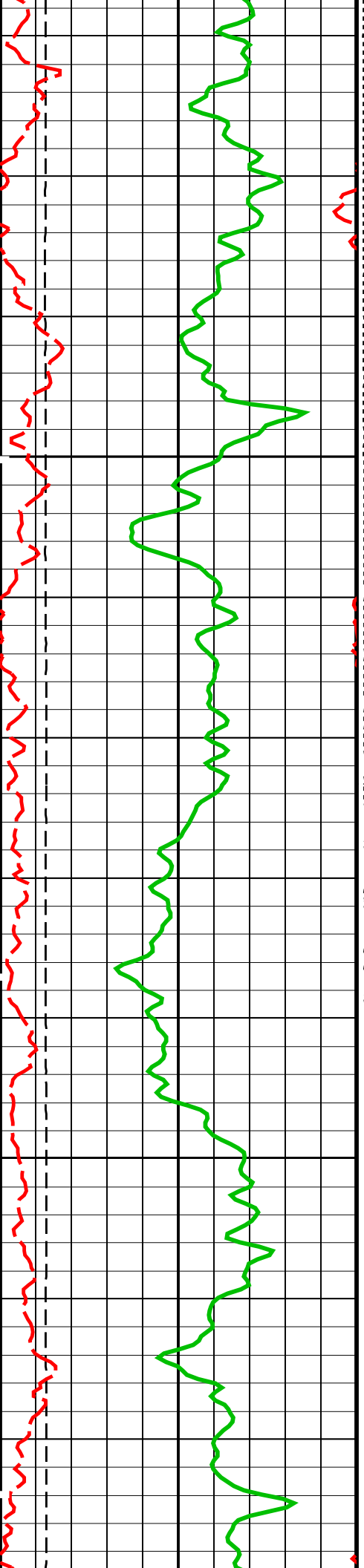




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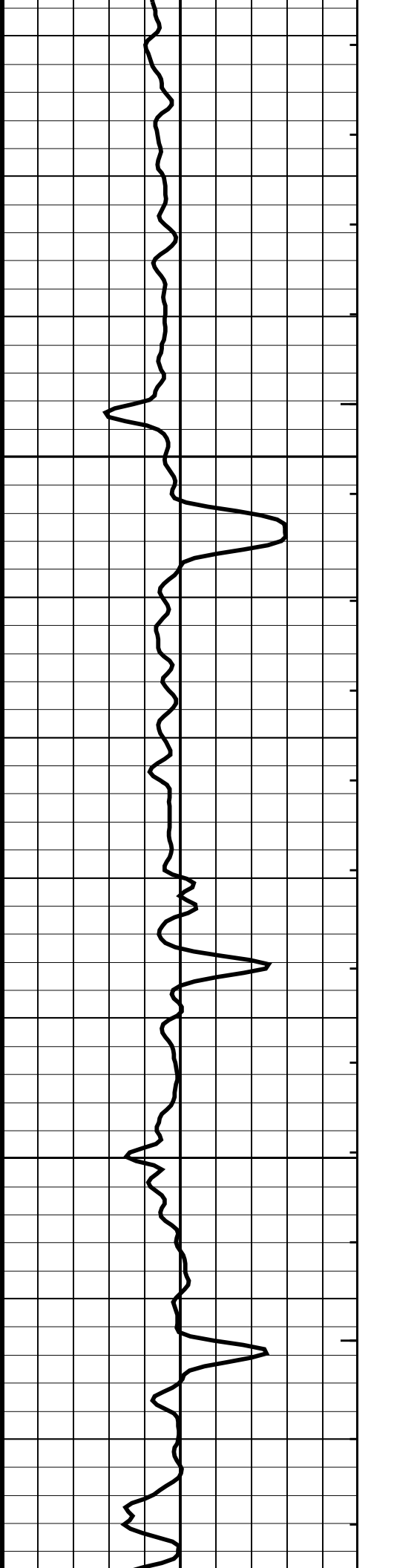
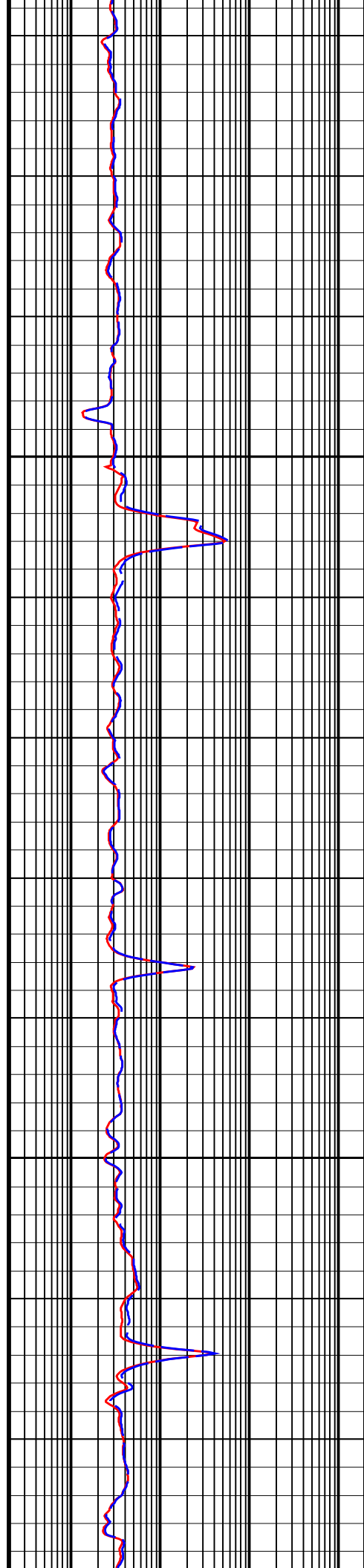
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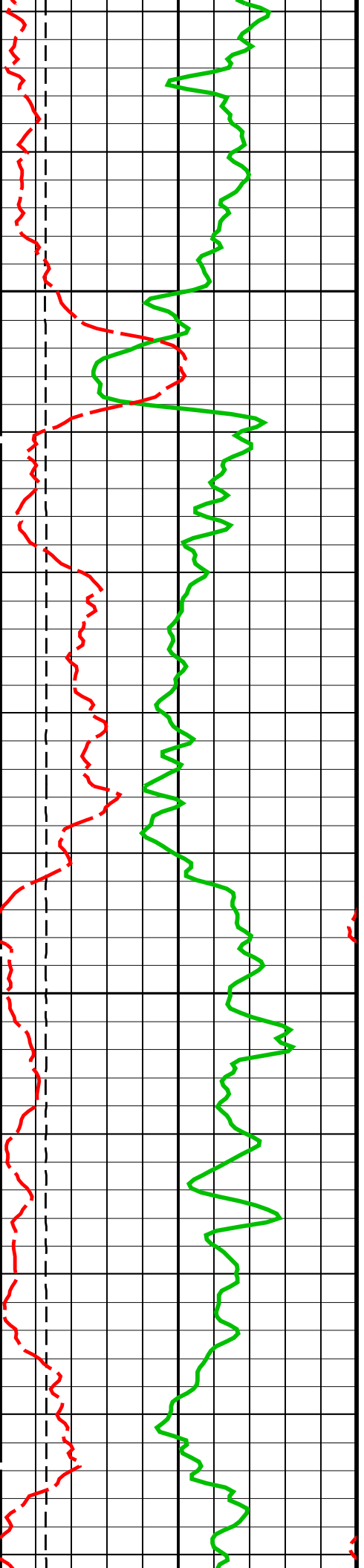




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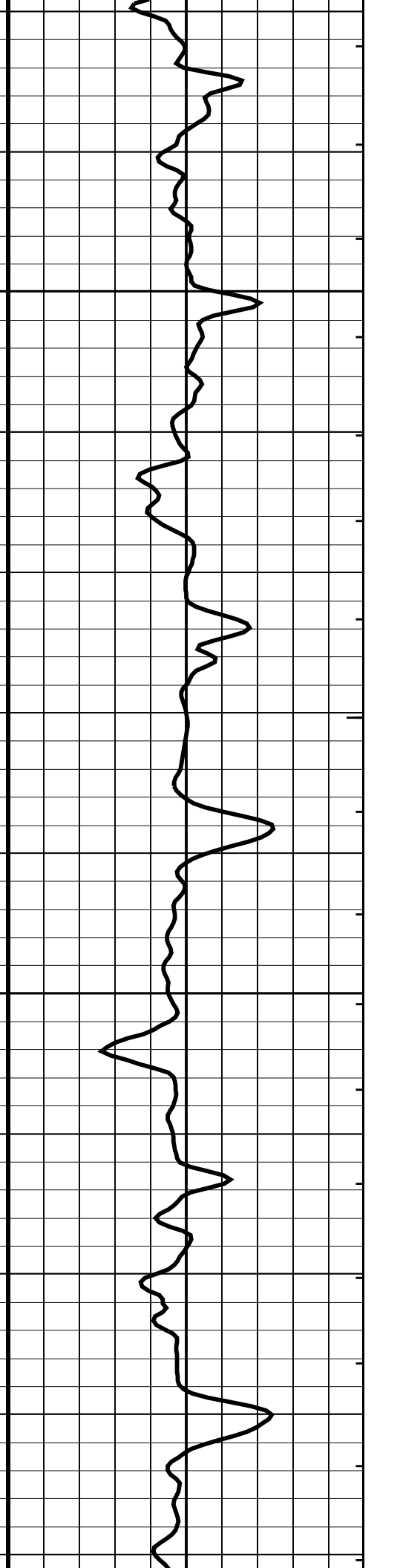
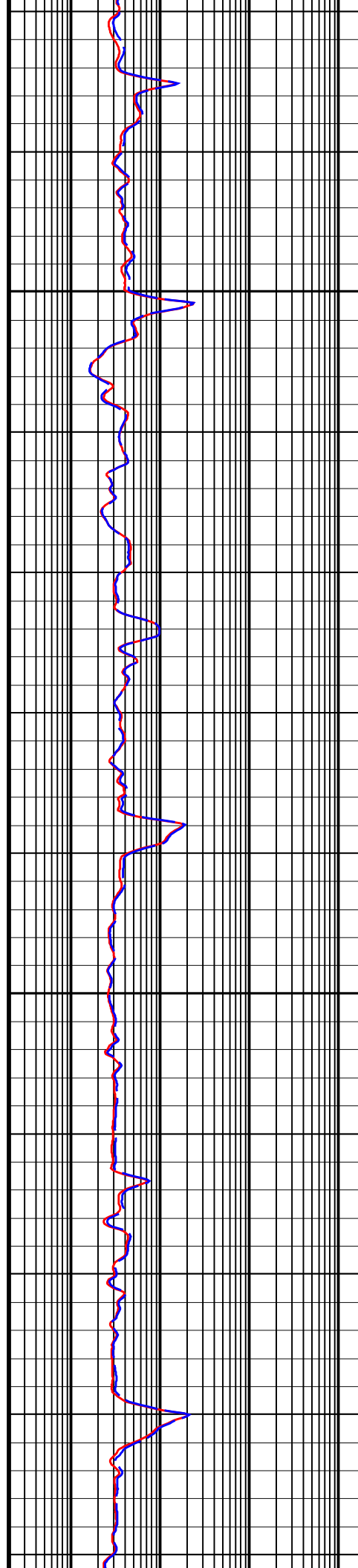
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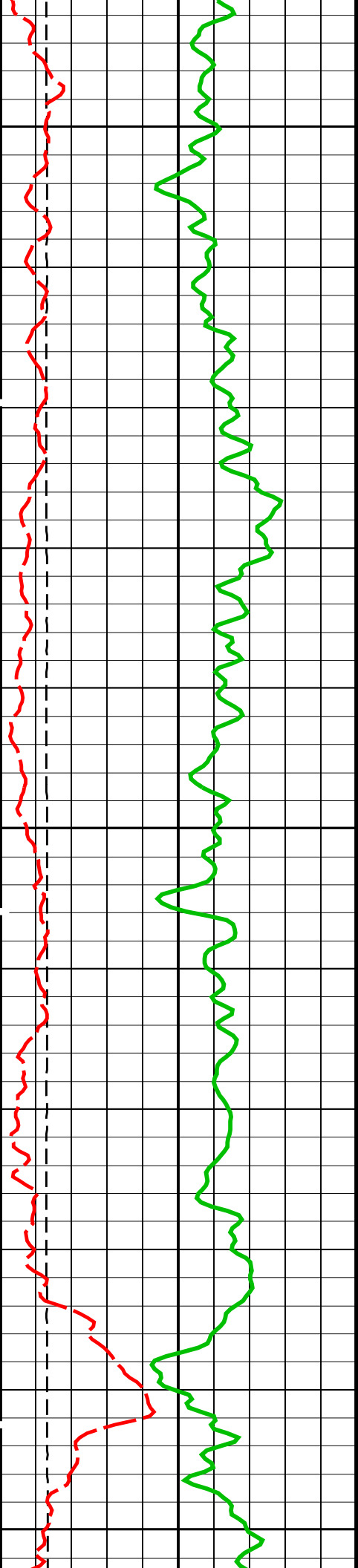




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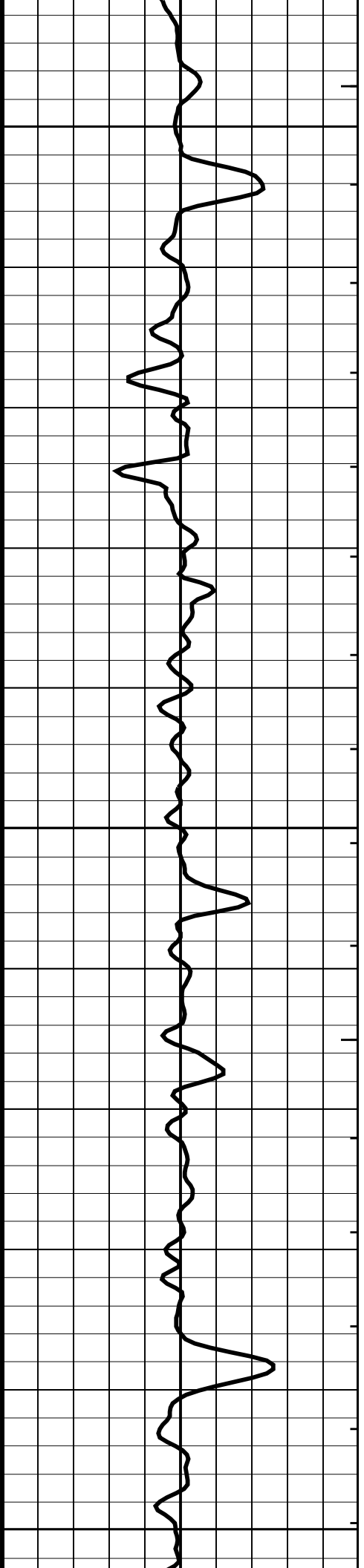
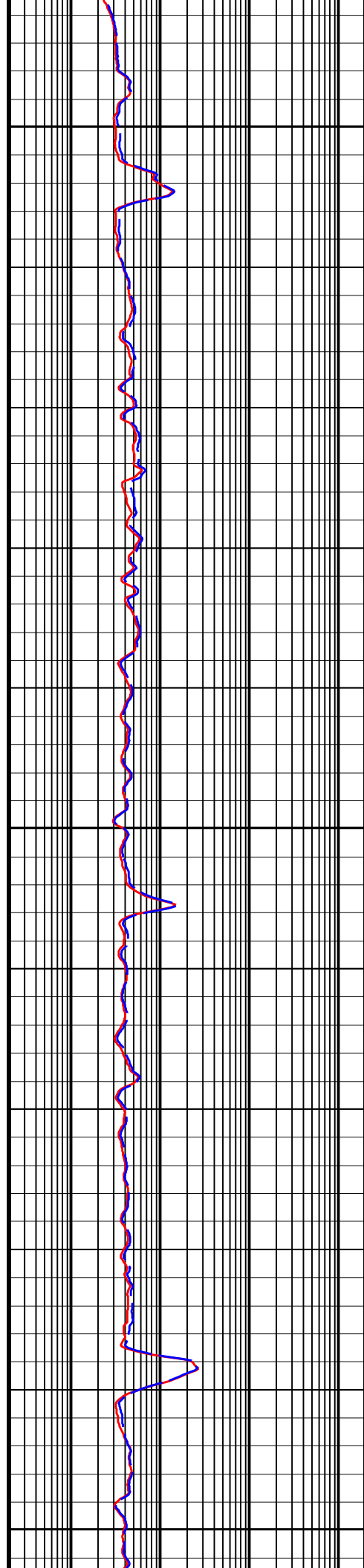


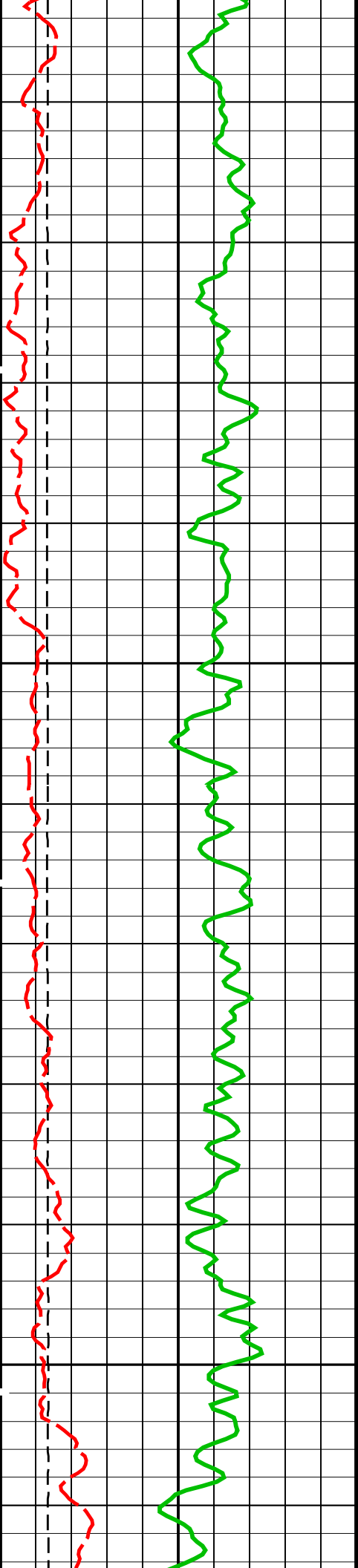


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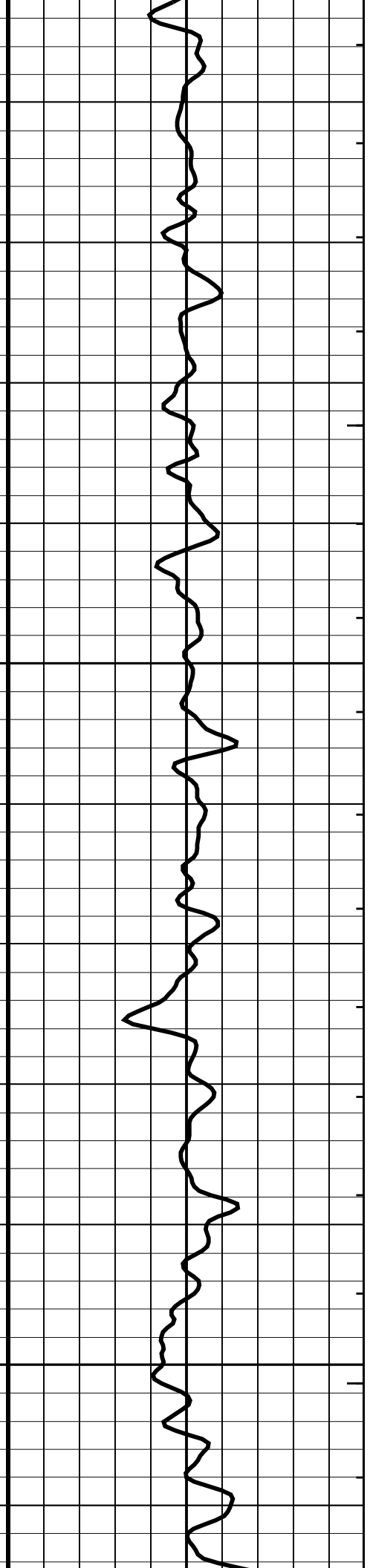
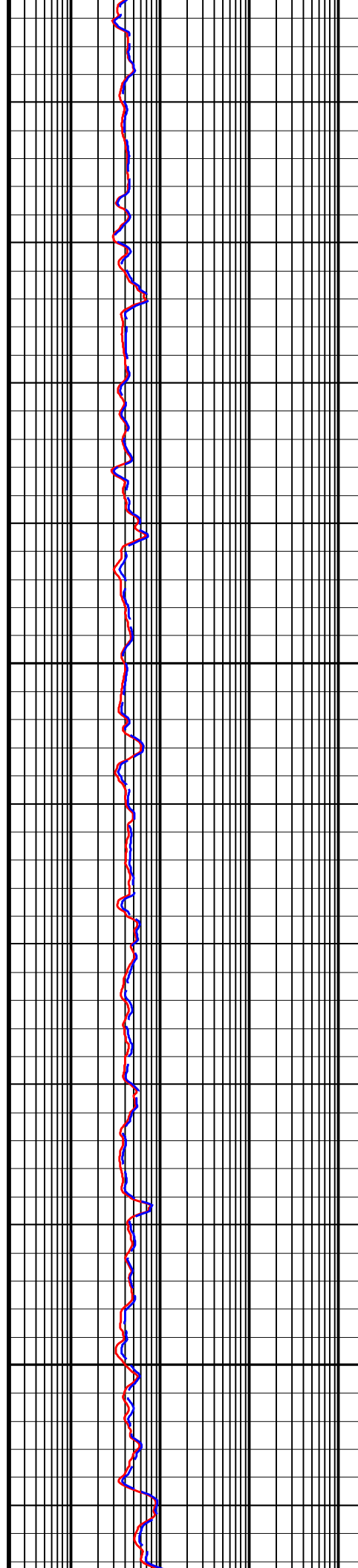
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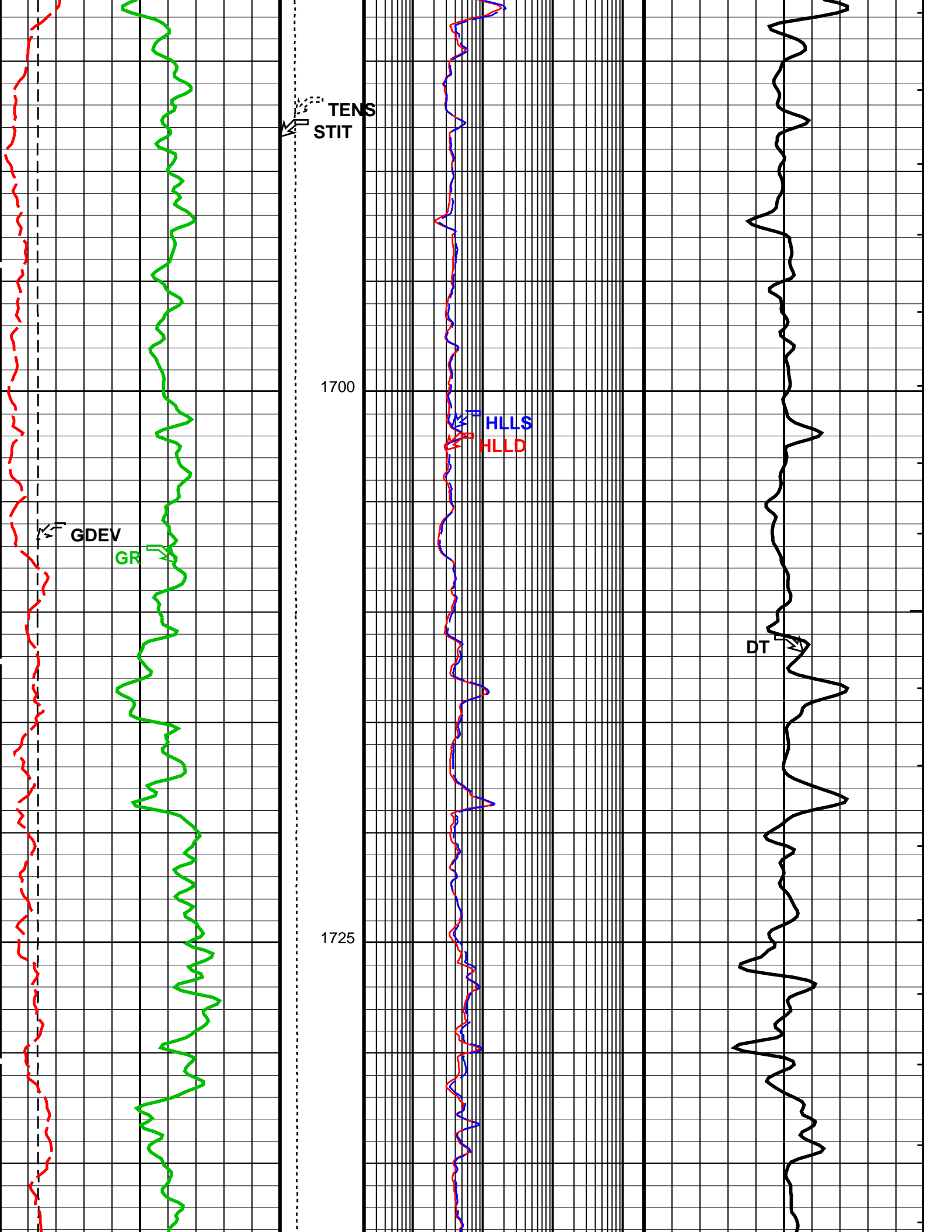


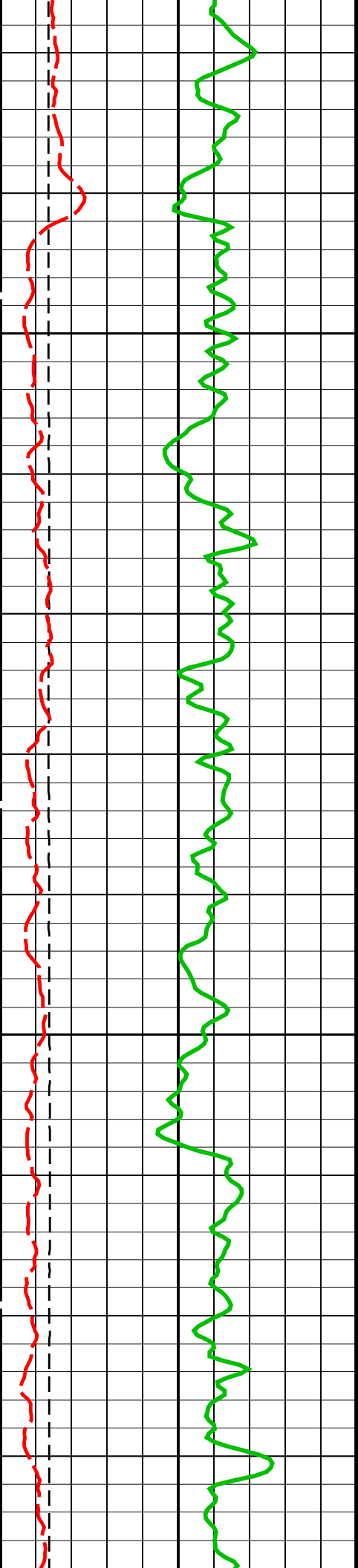


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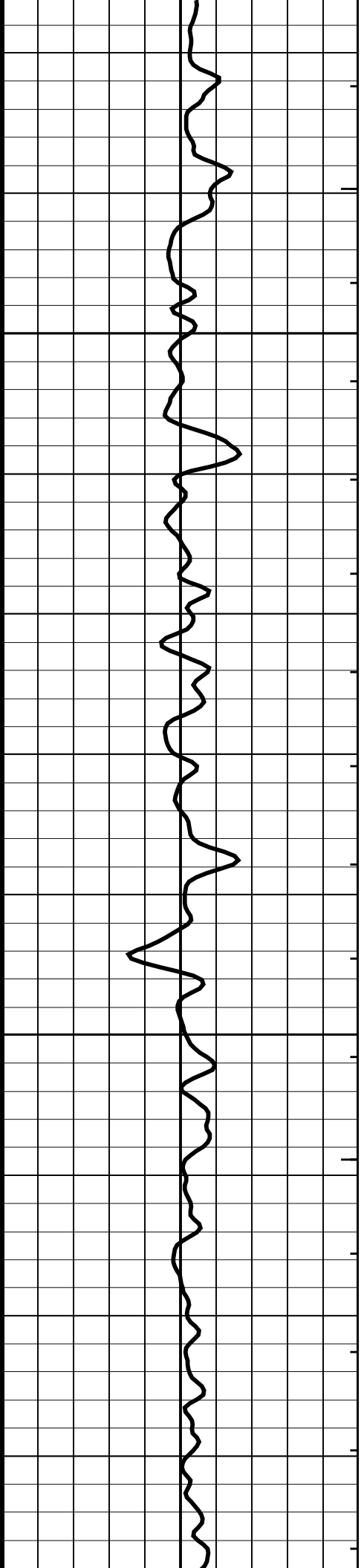
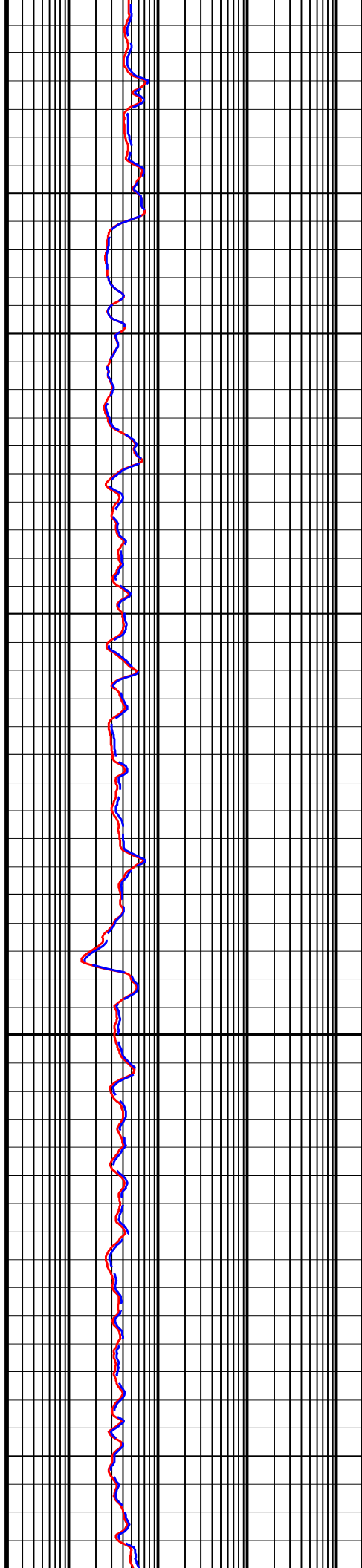


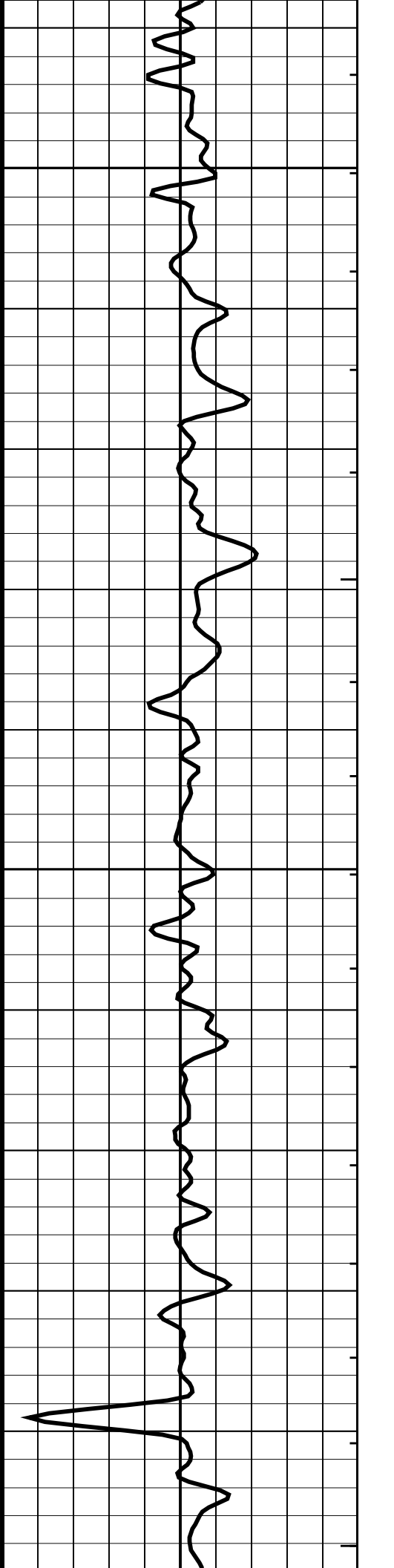
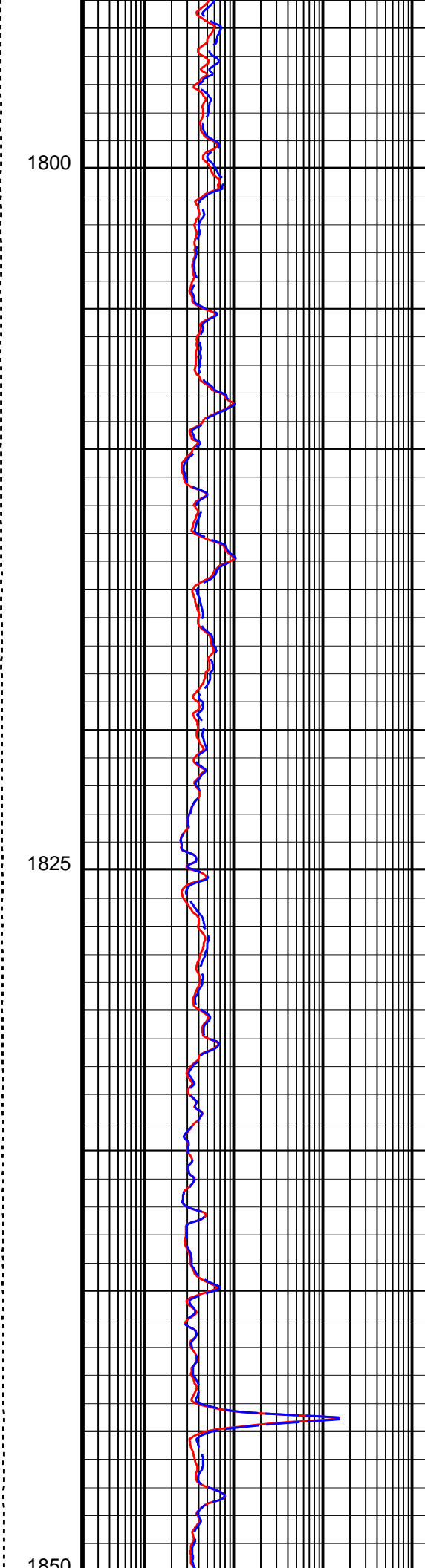
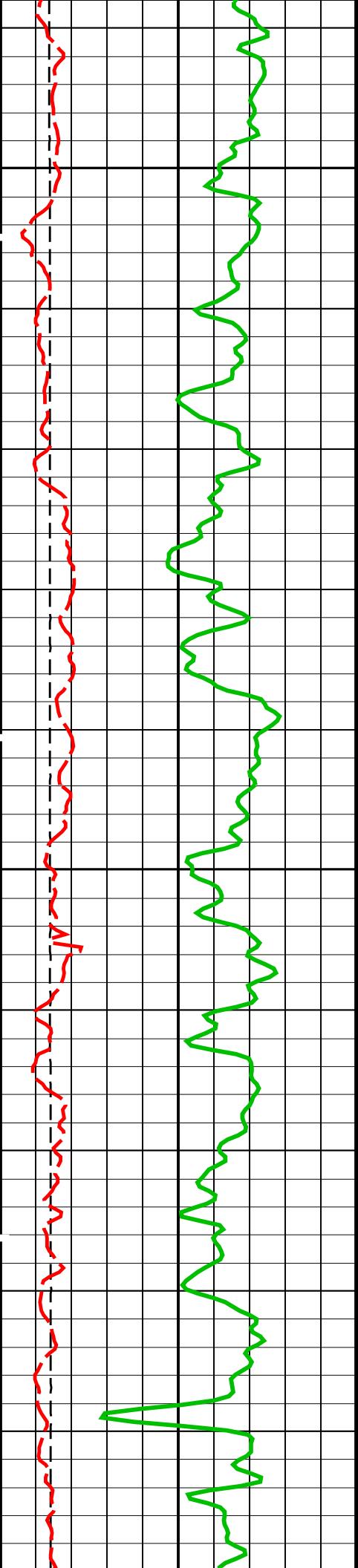


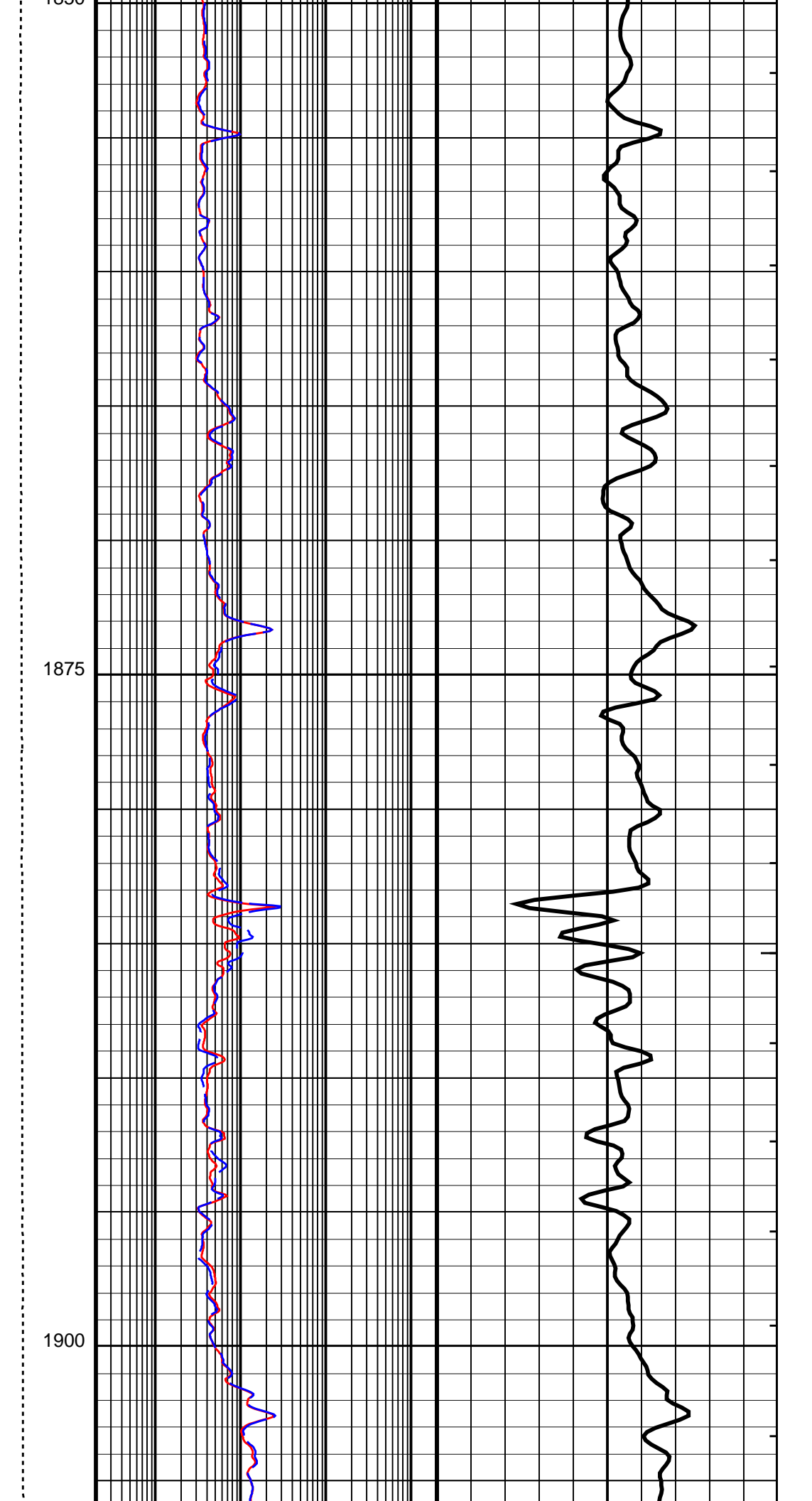
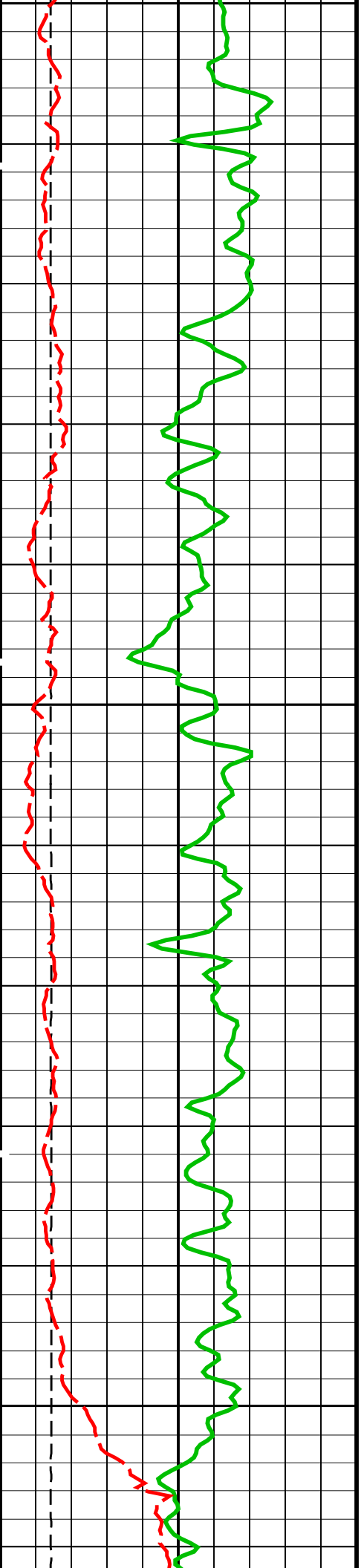


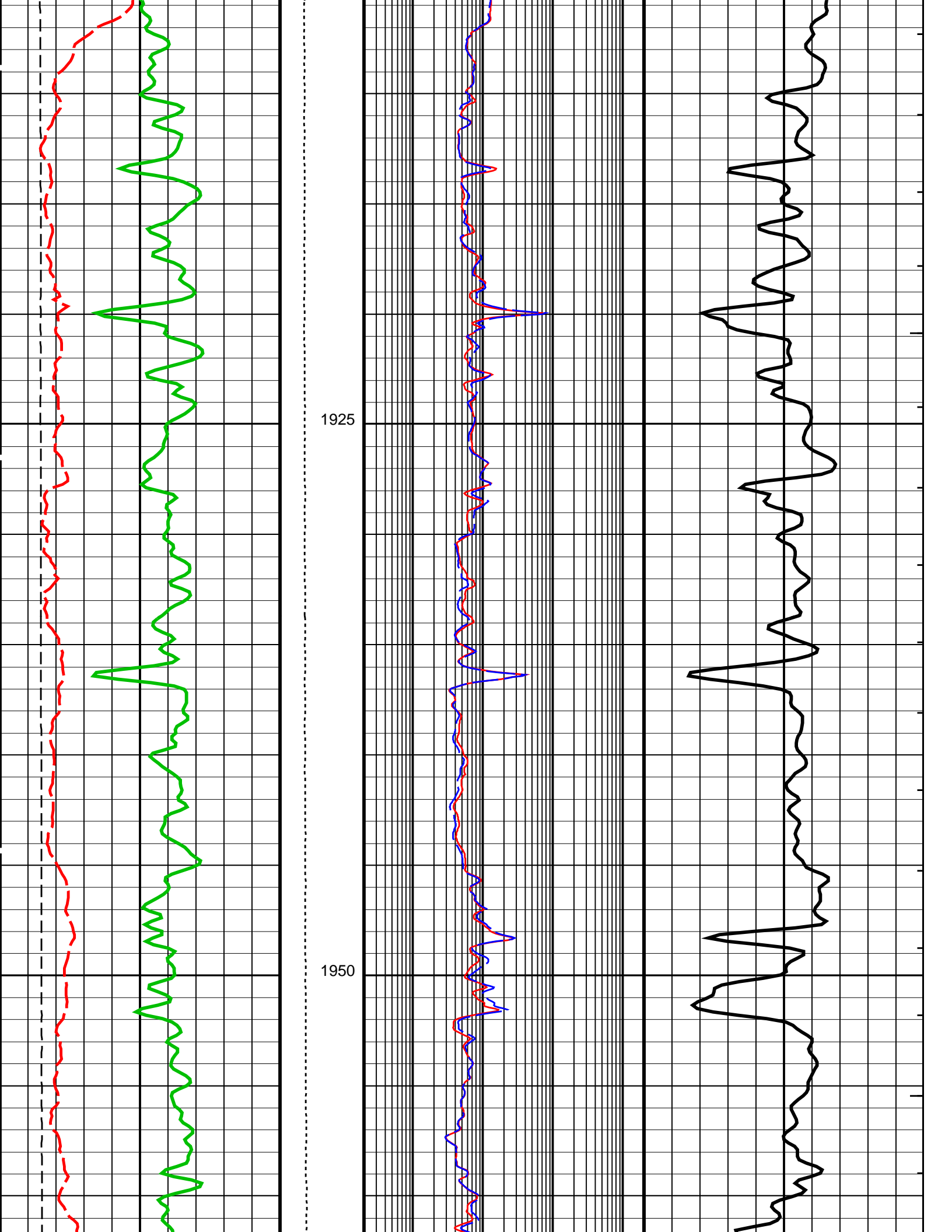
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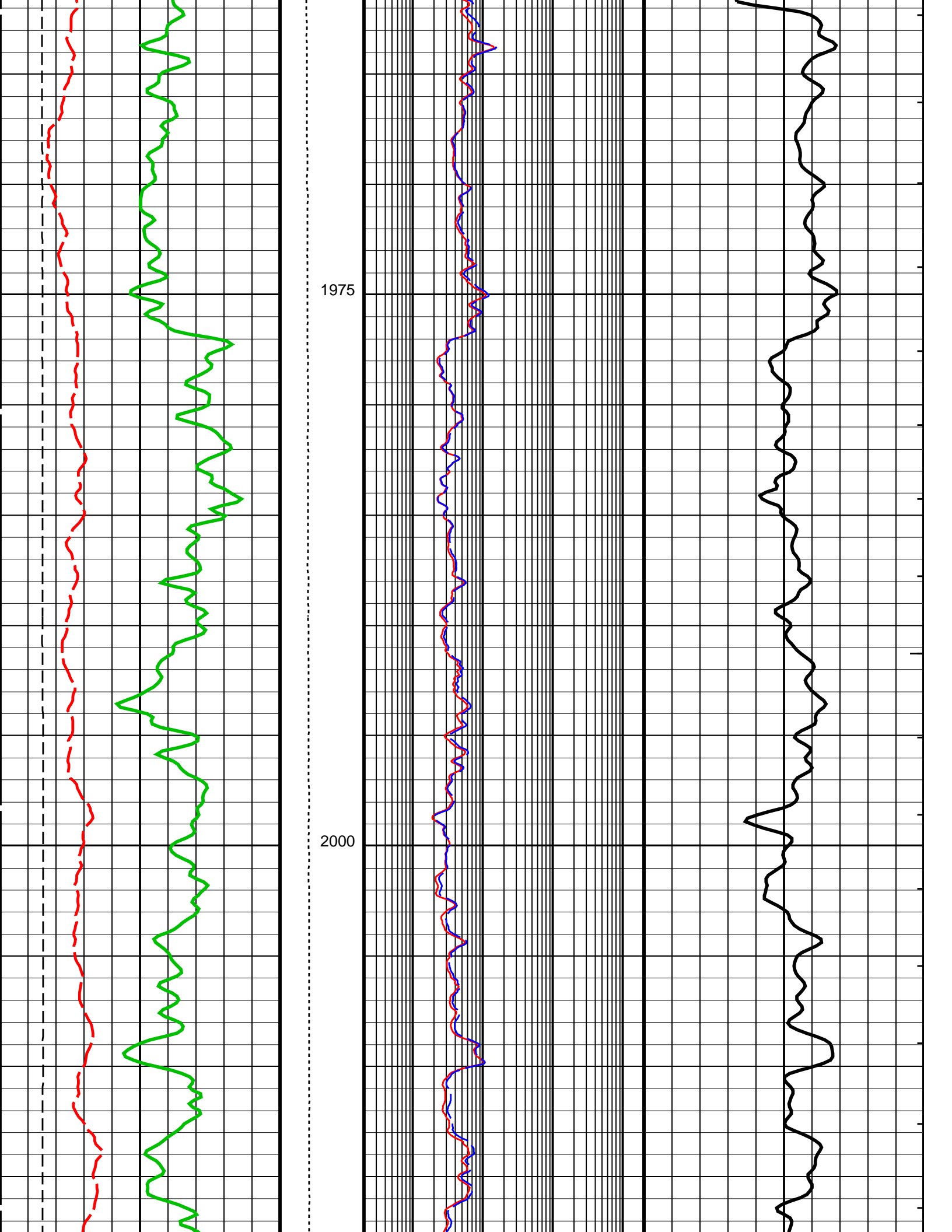
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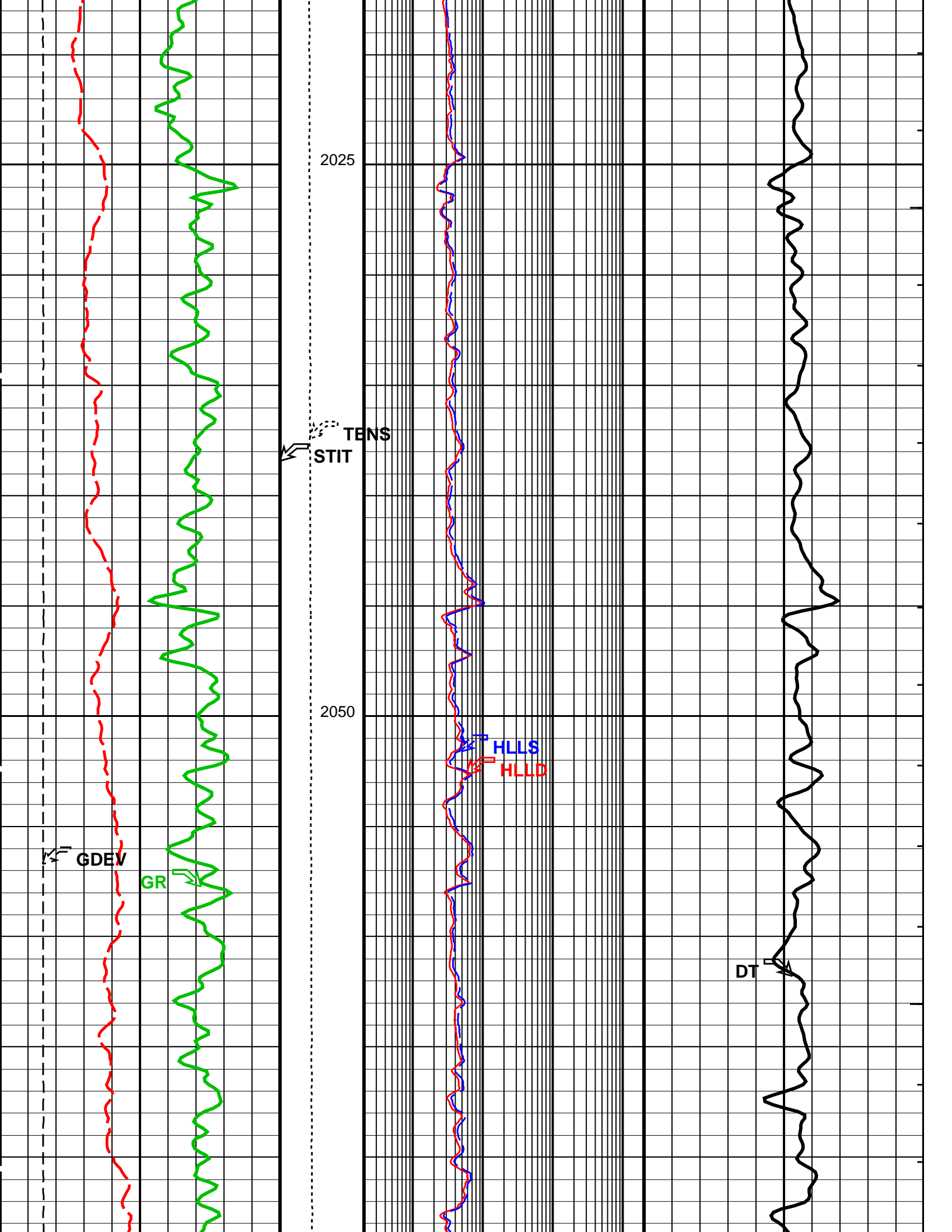


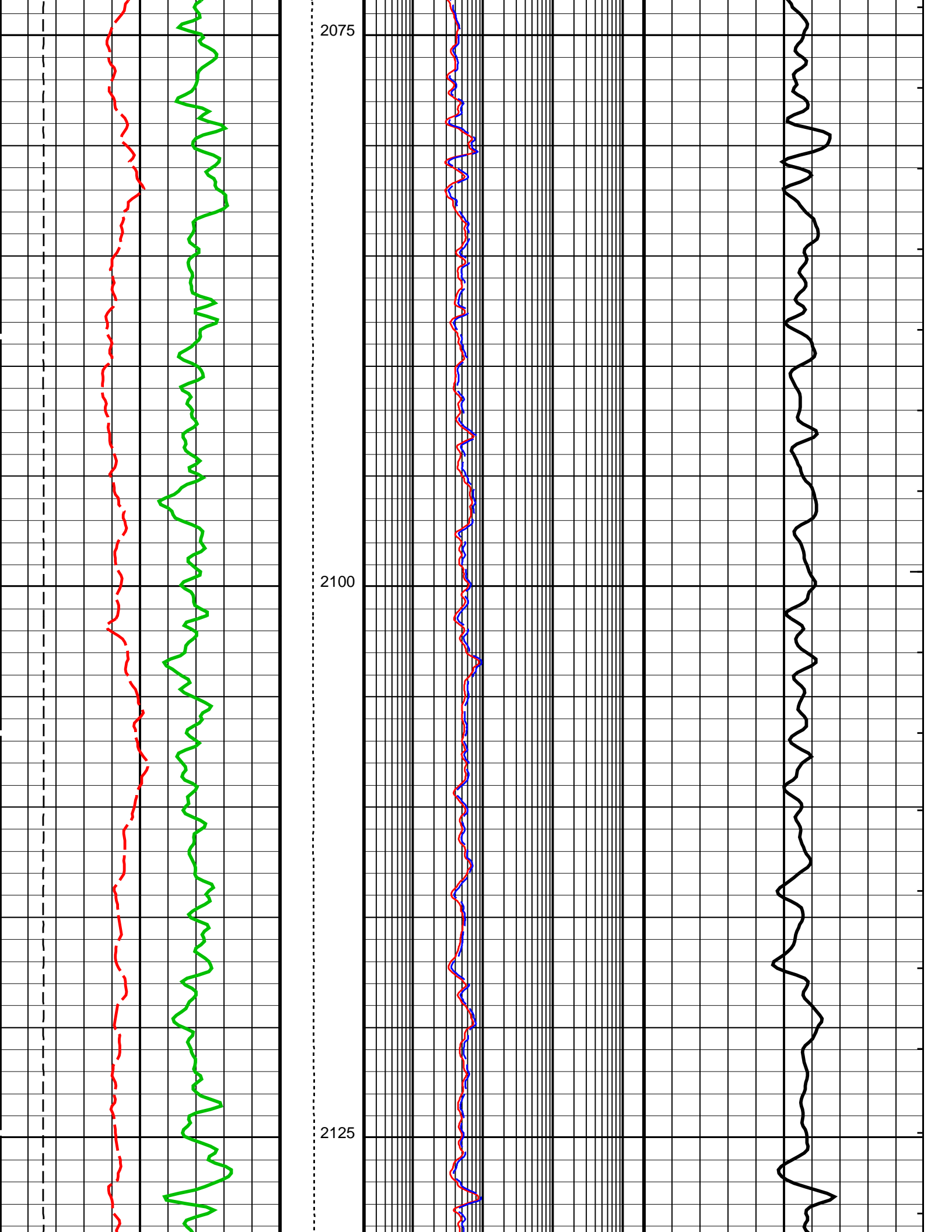


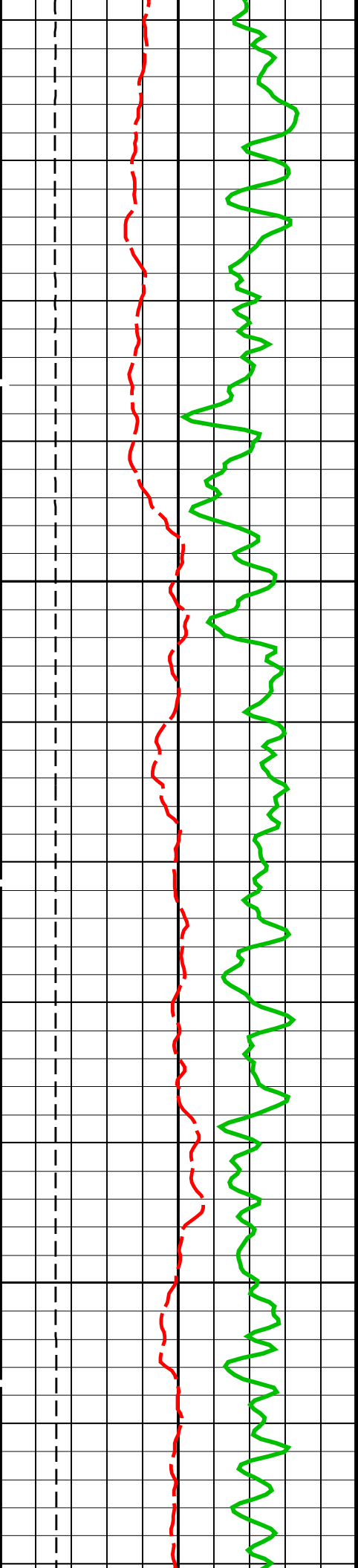






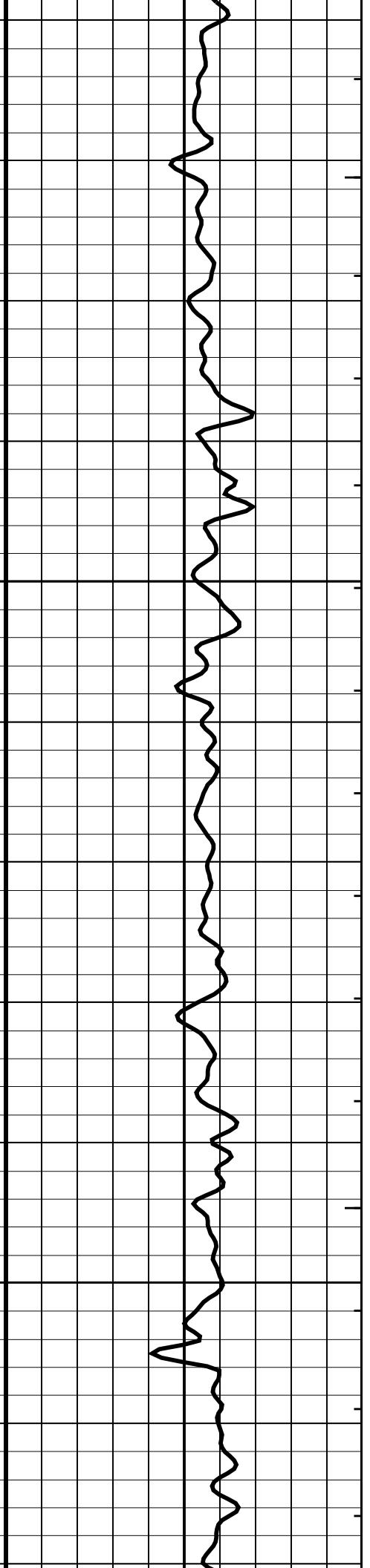
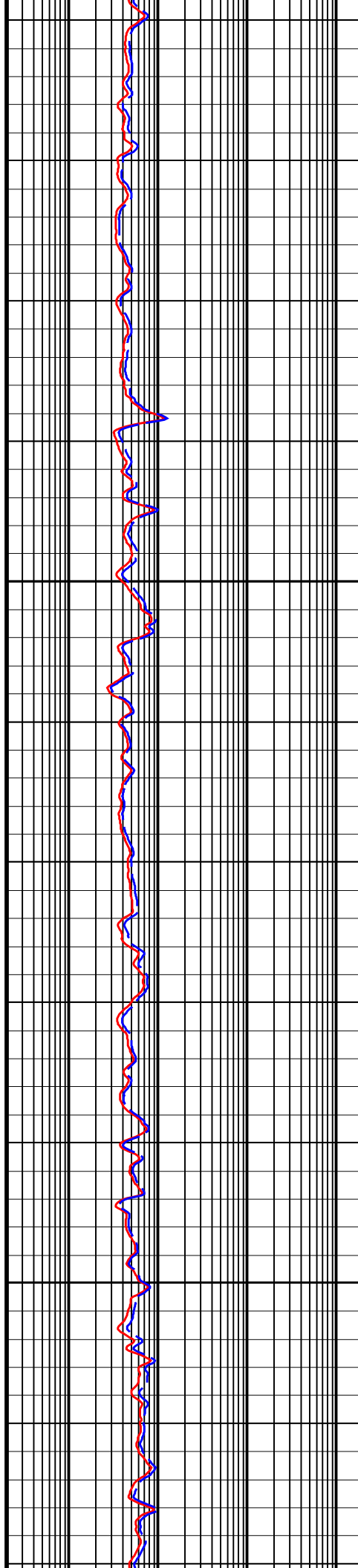


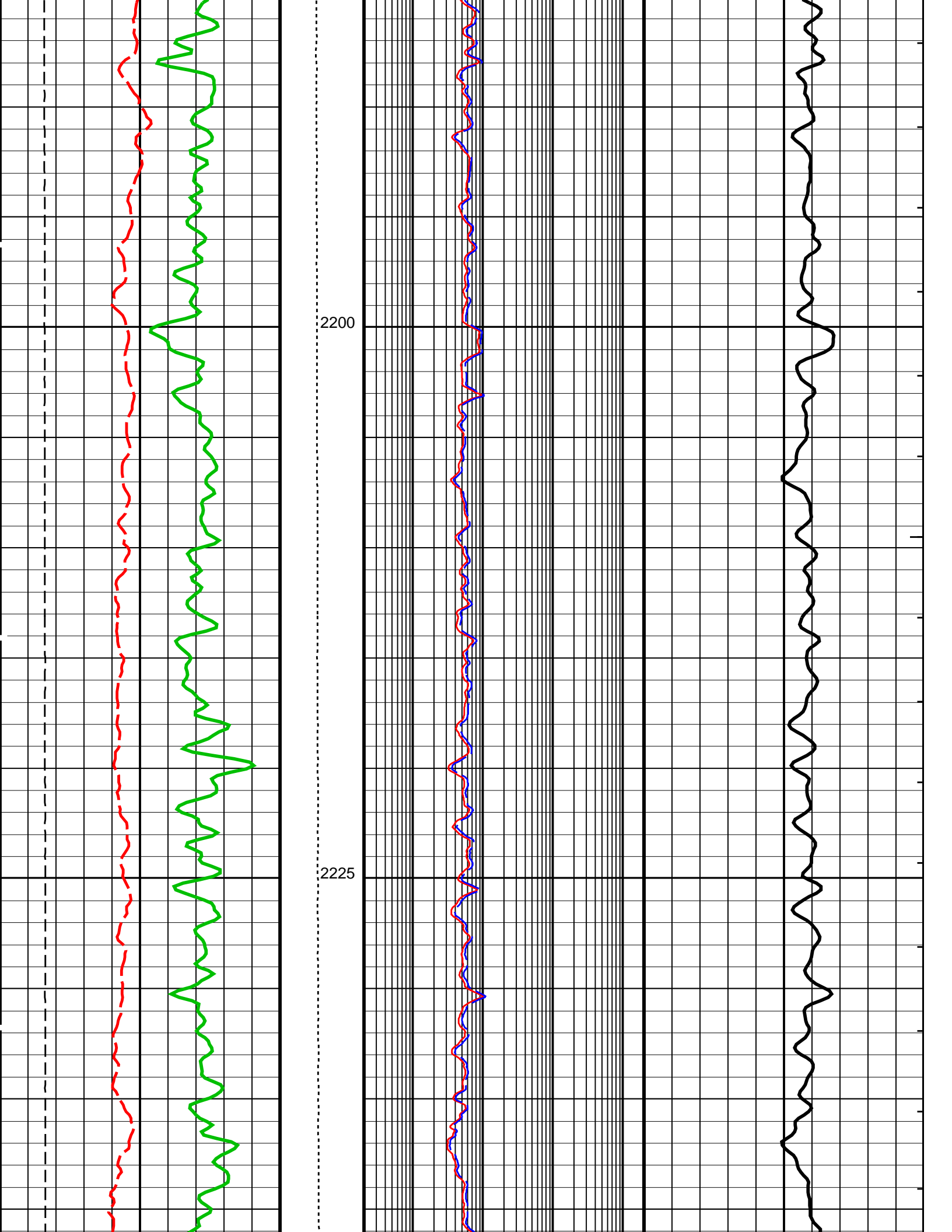


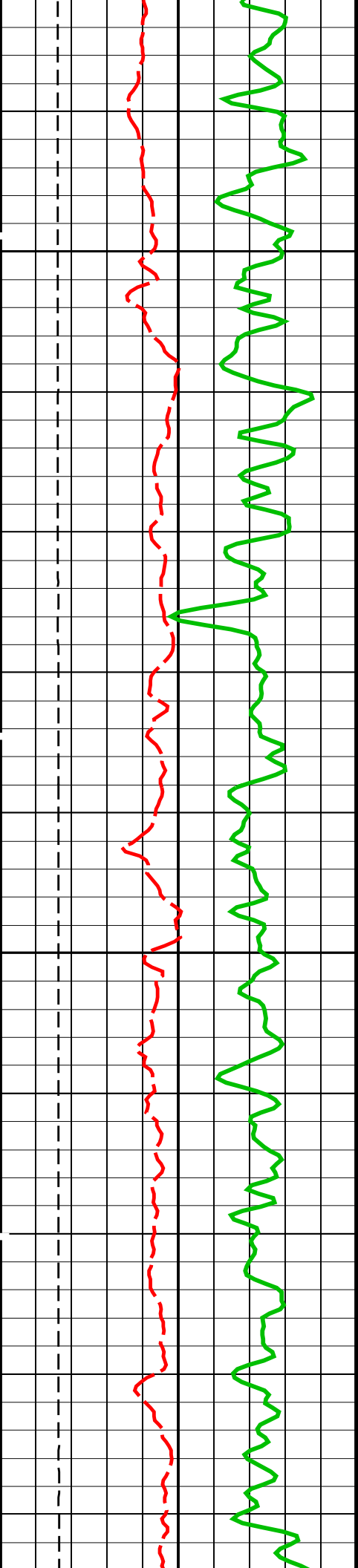


2150

2175

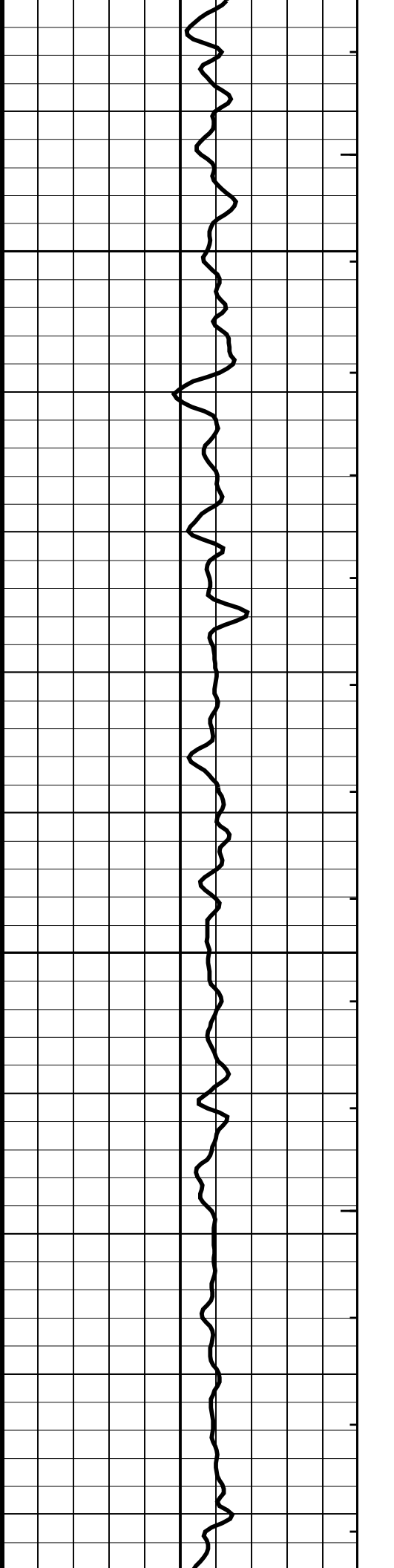
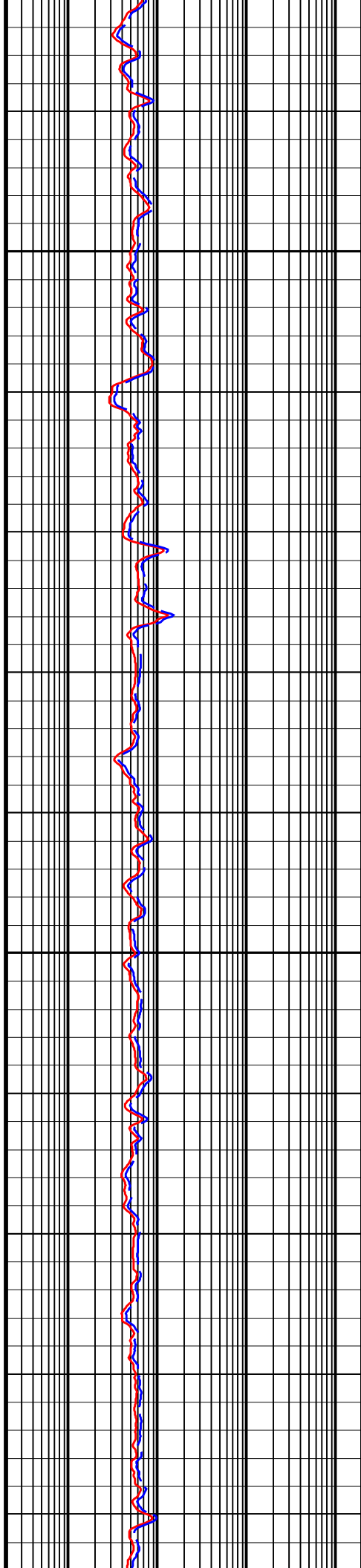


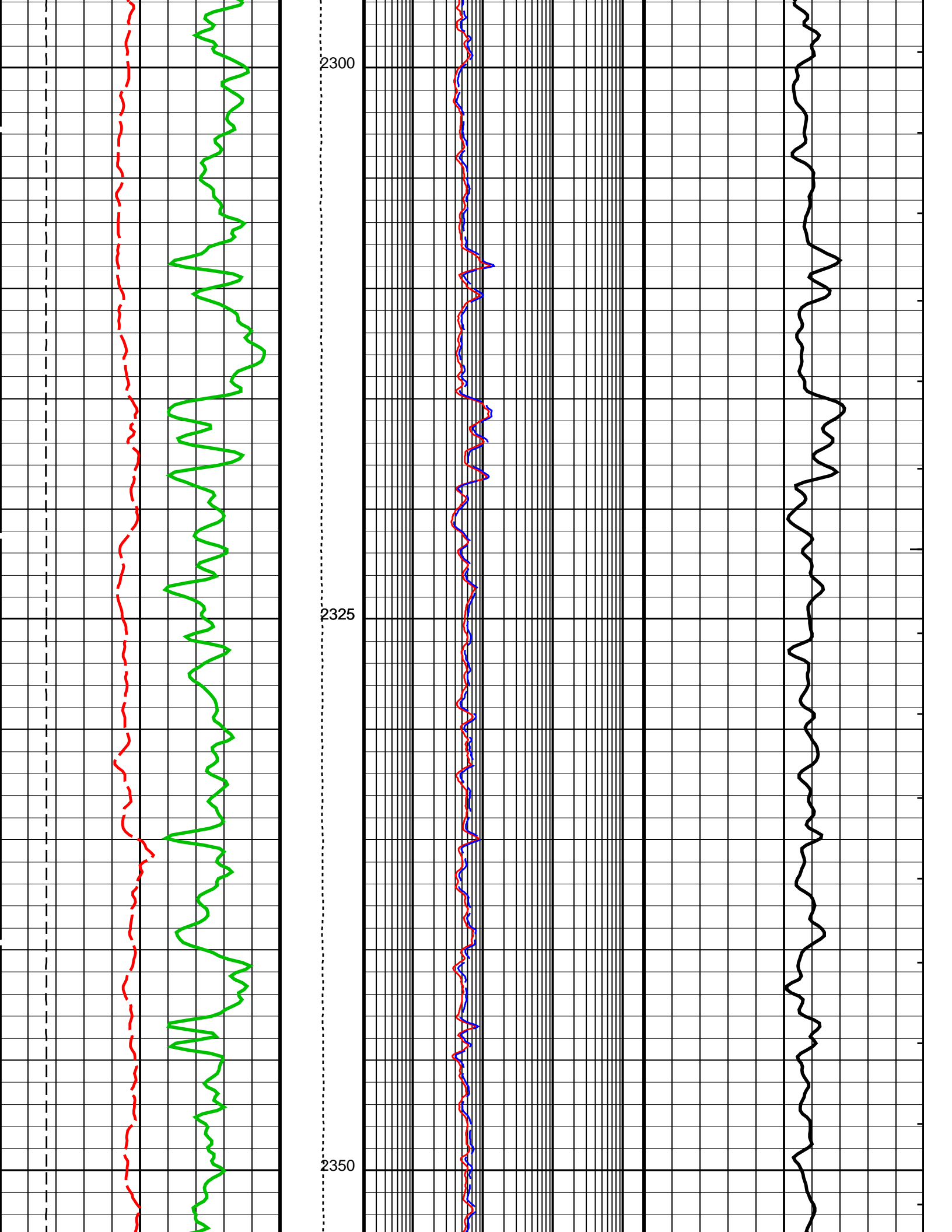


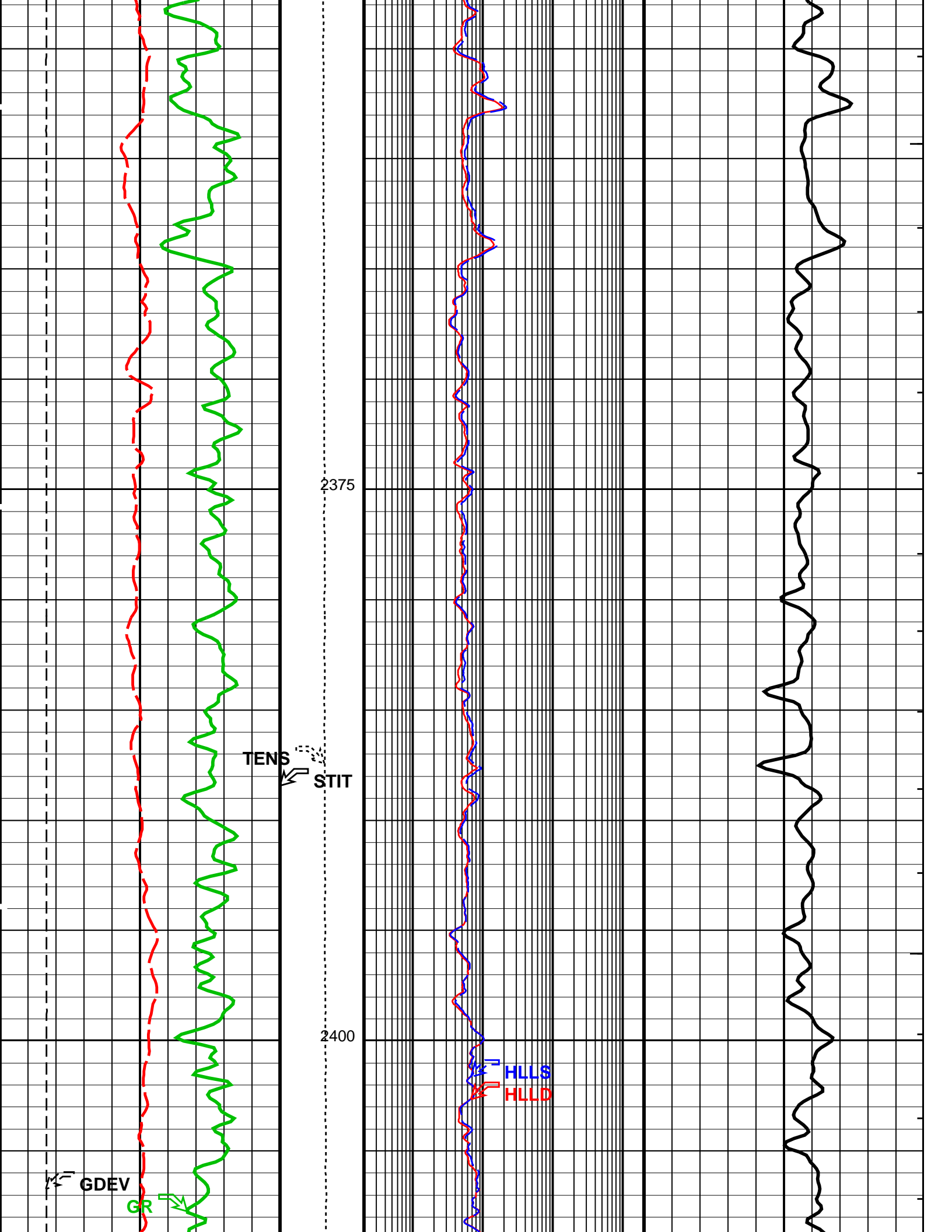


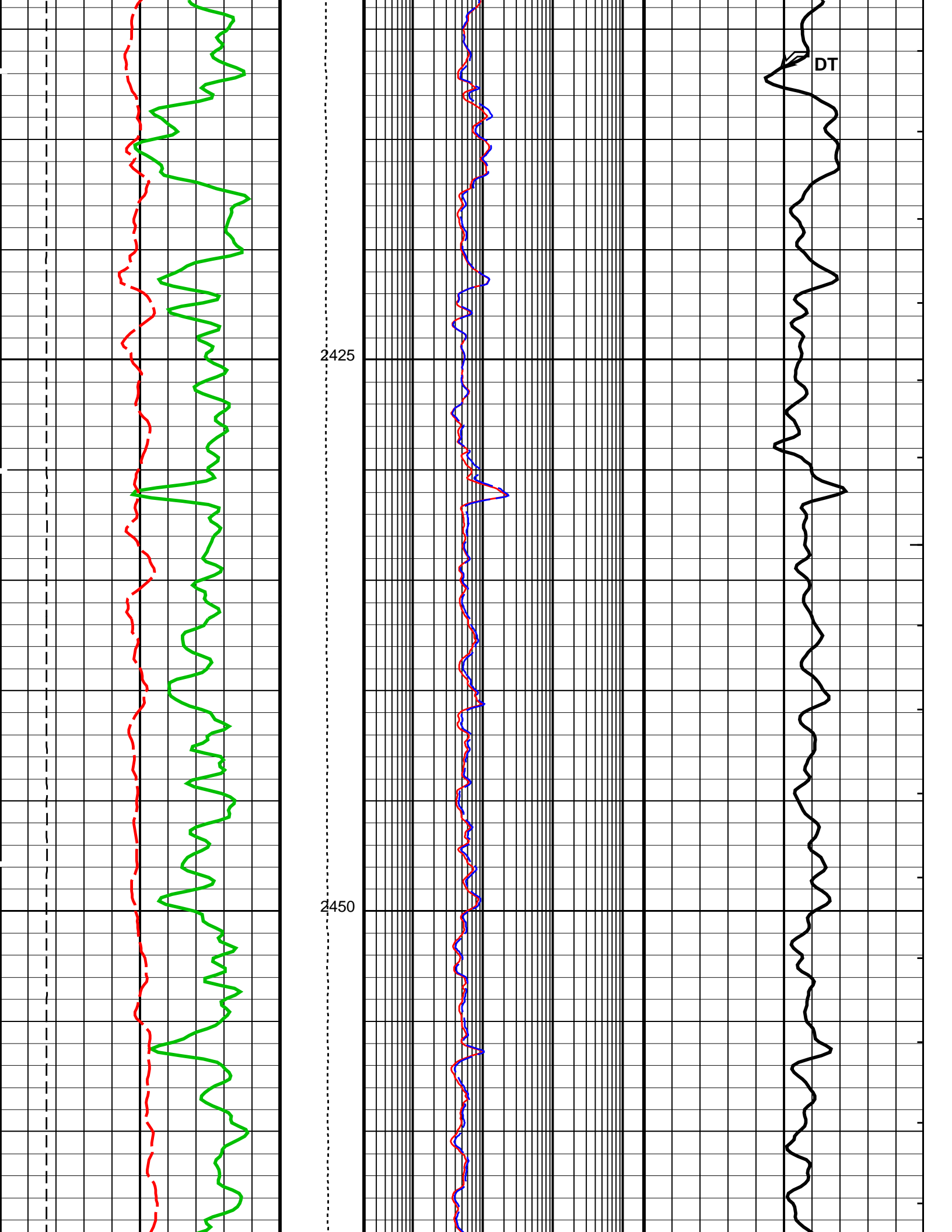
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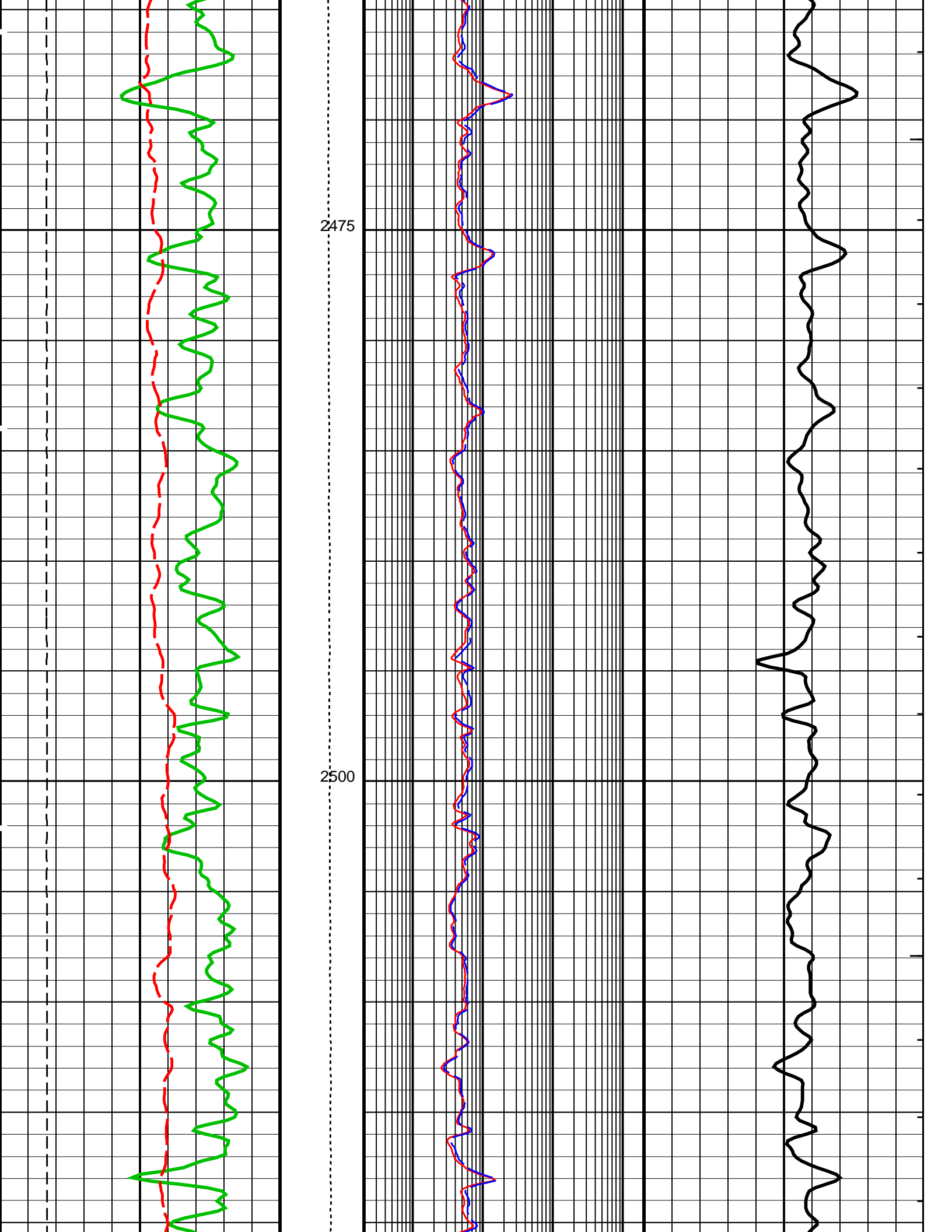
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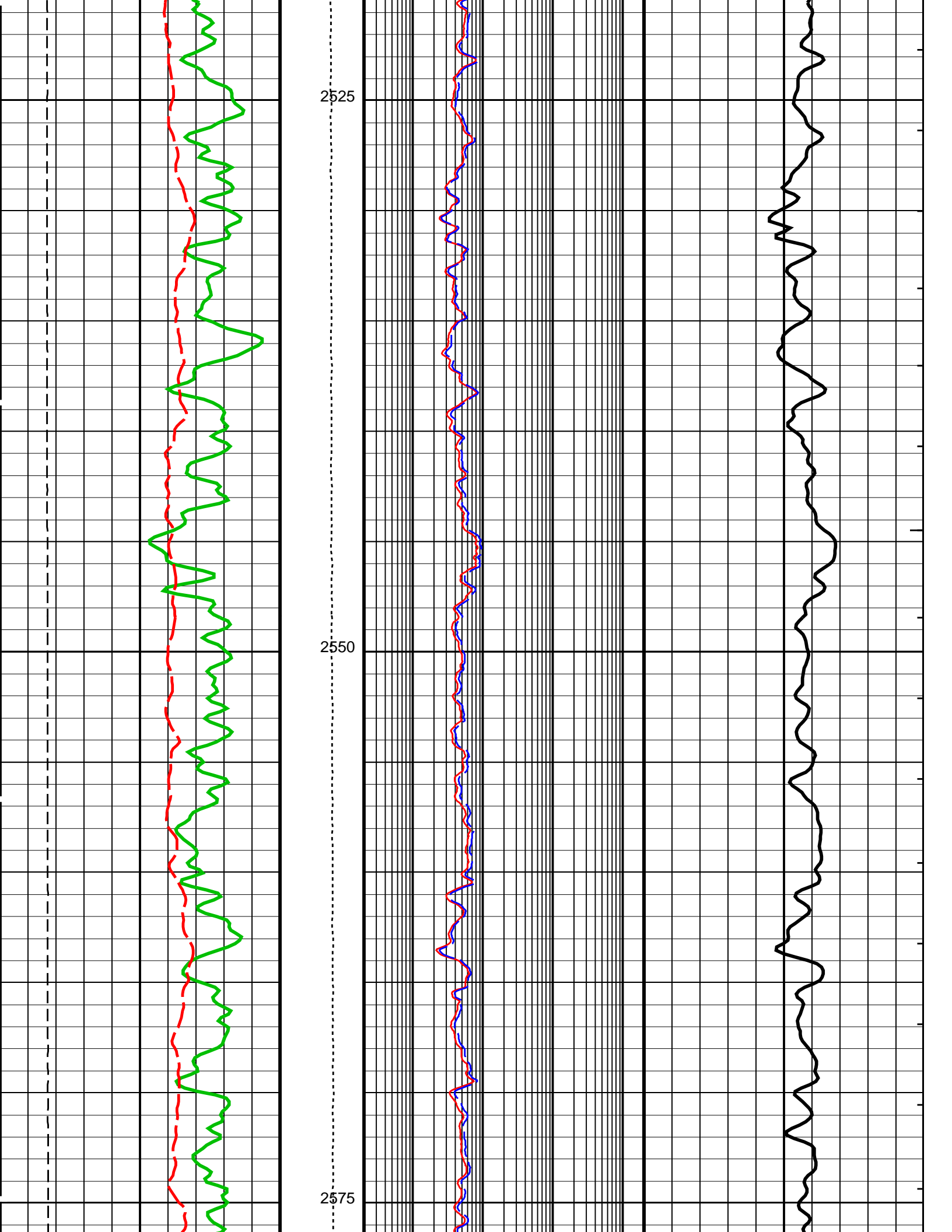


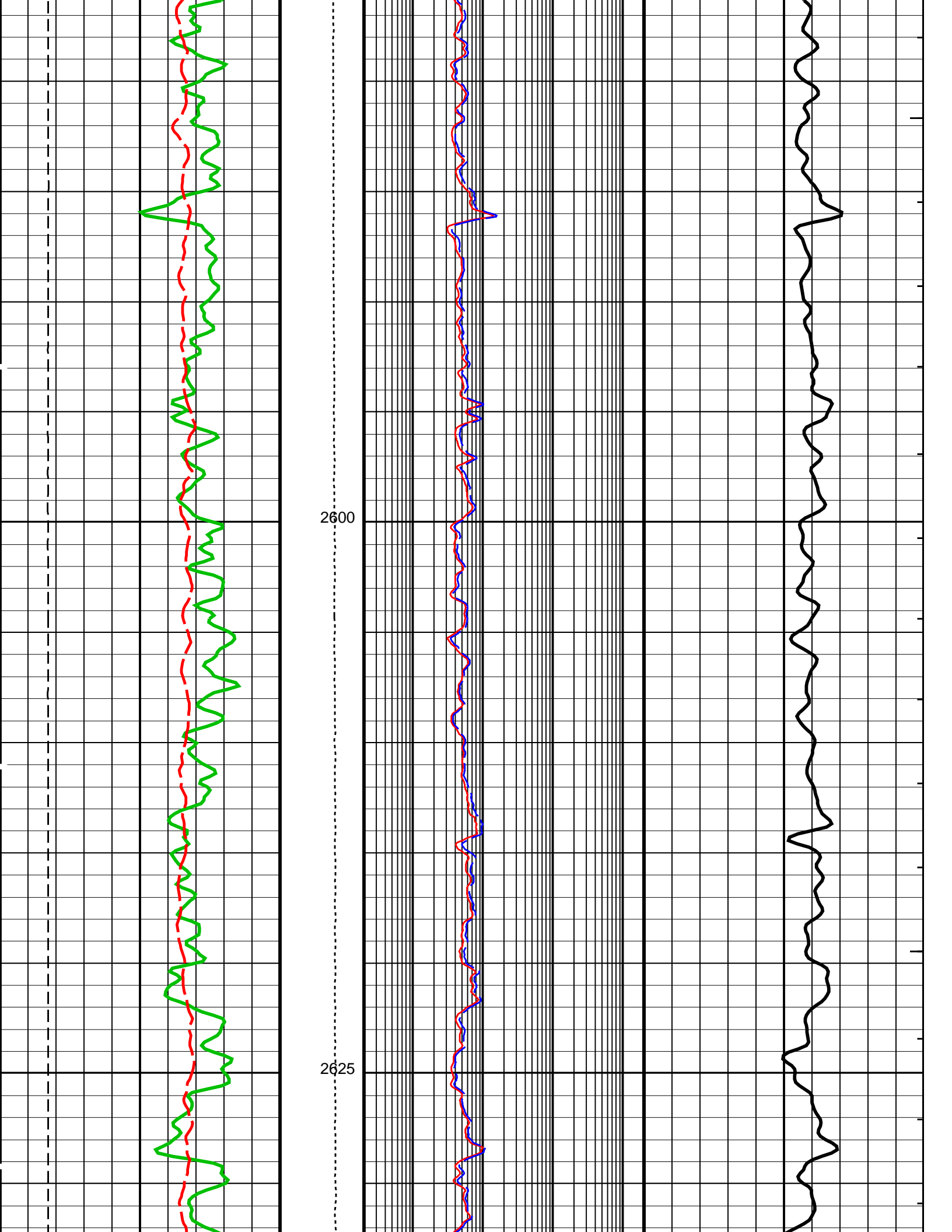


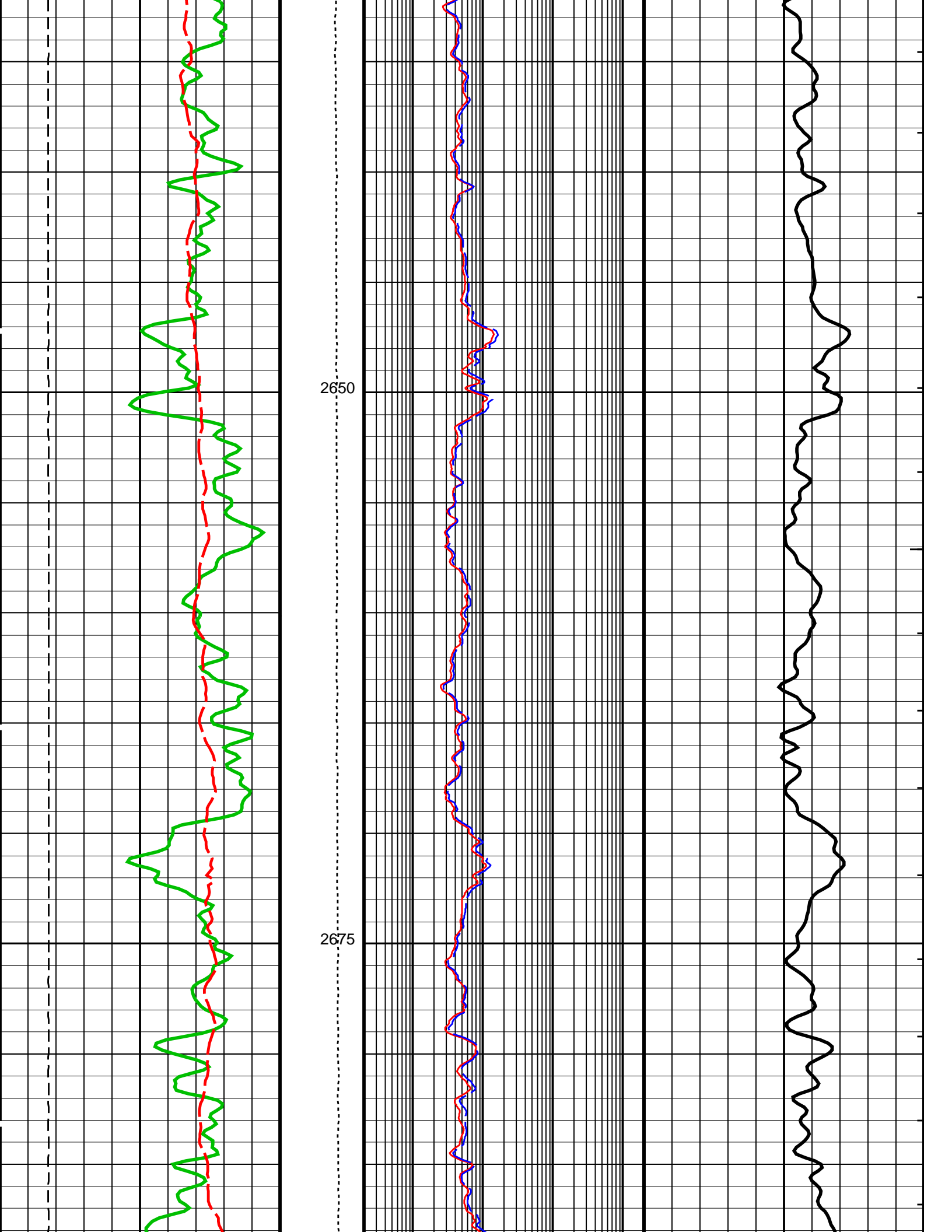


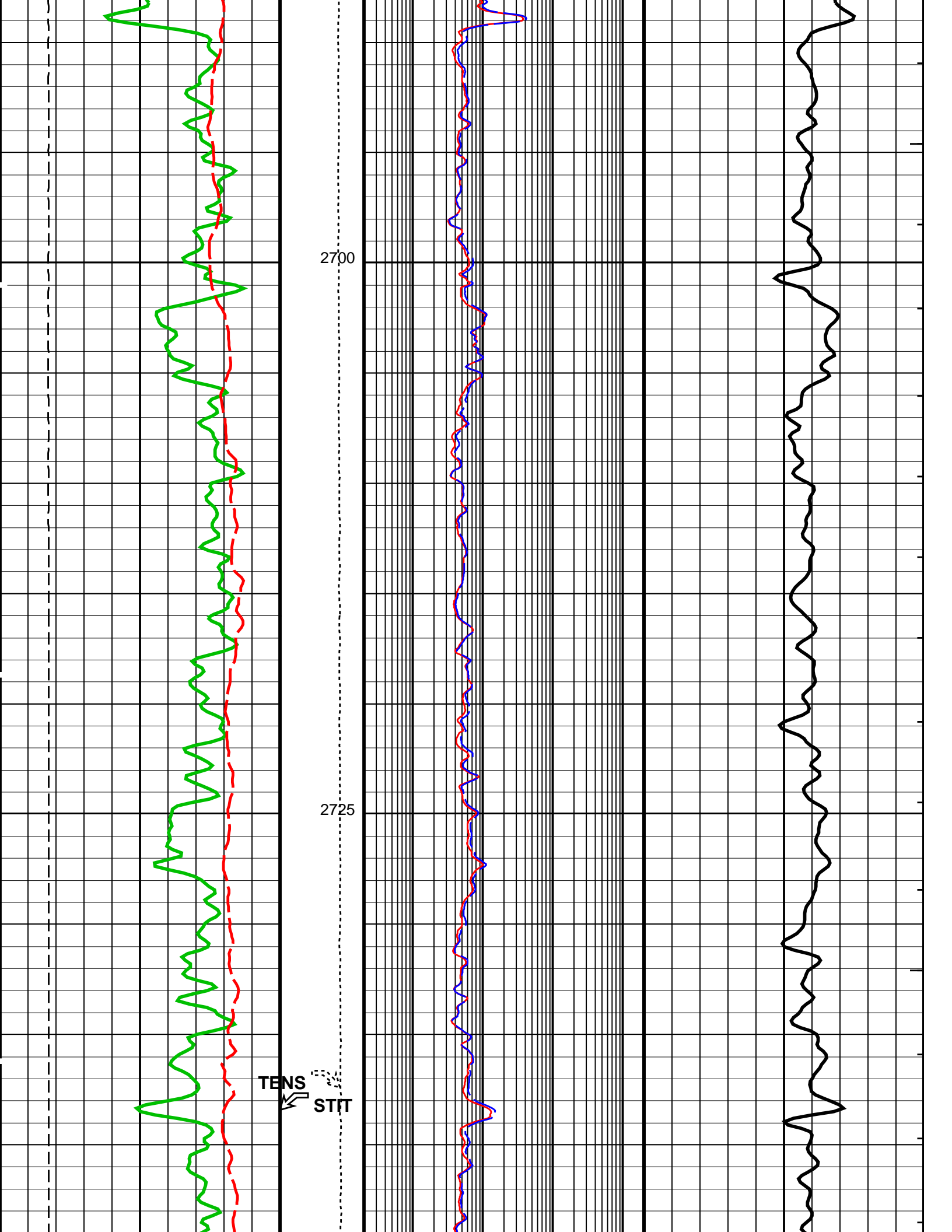


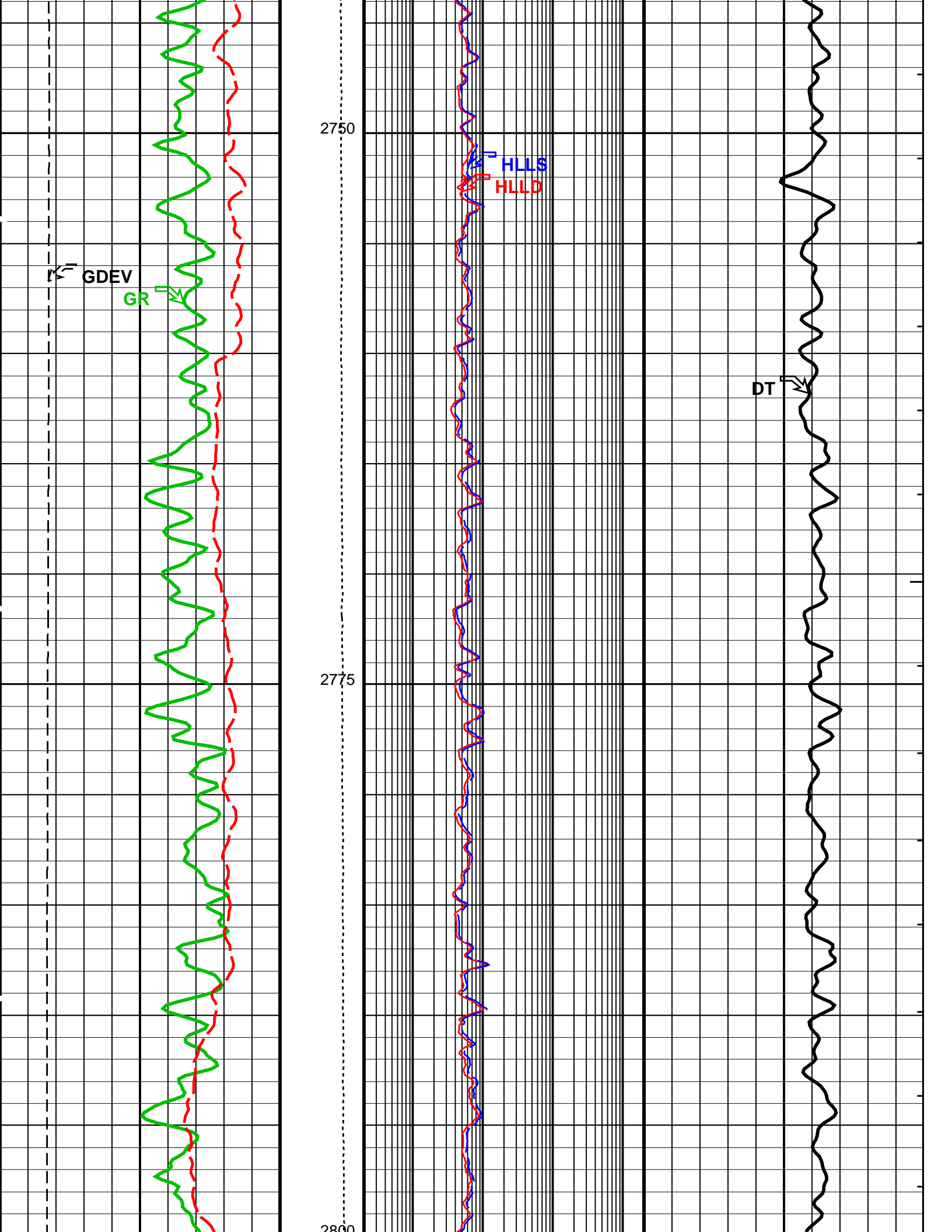


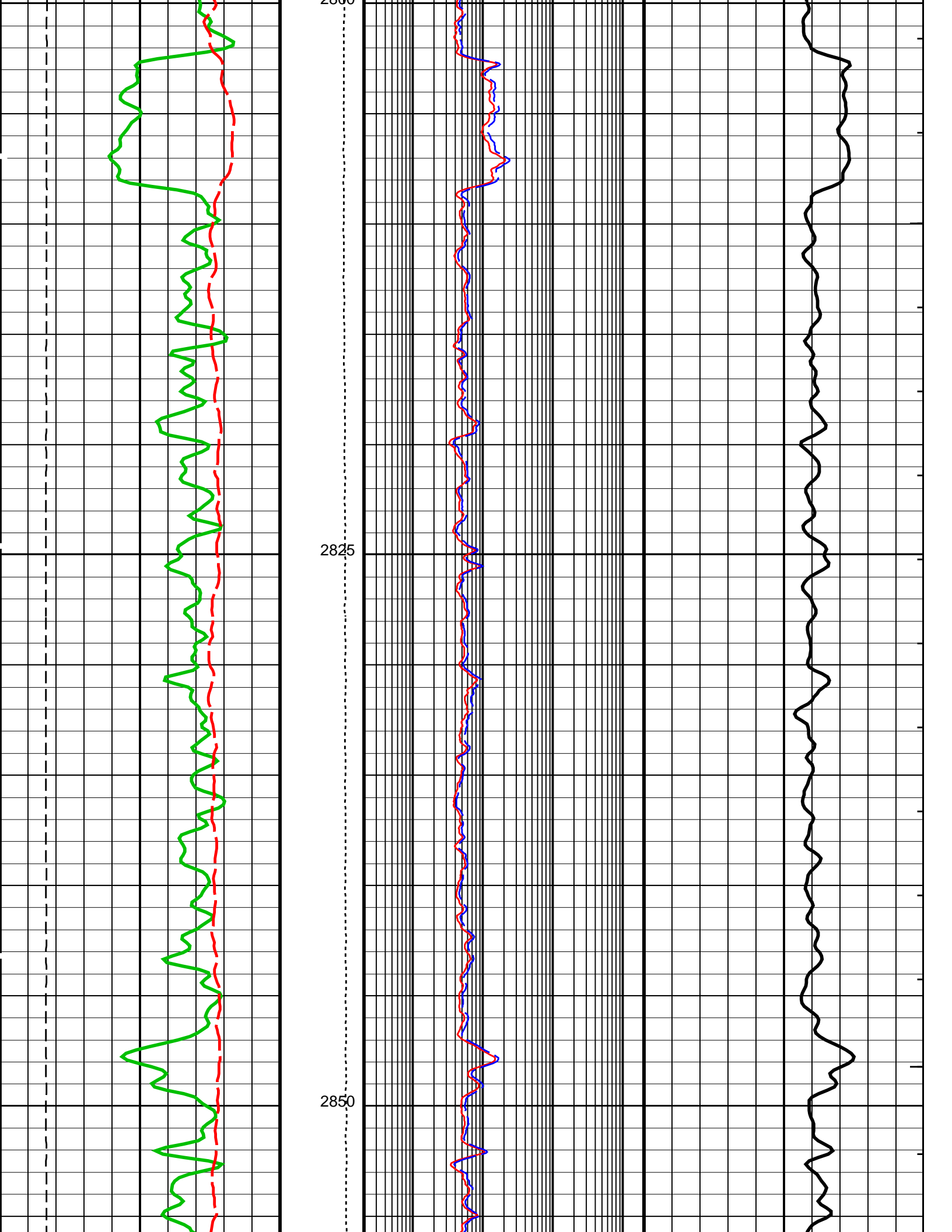


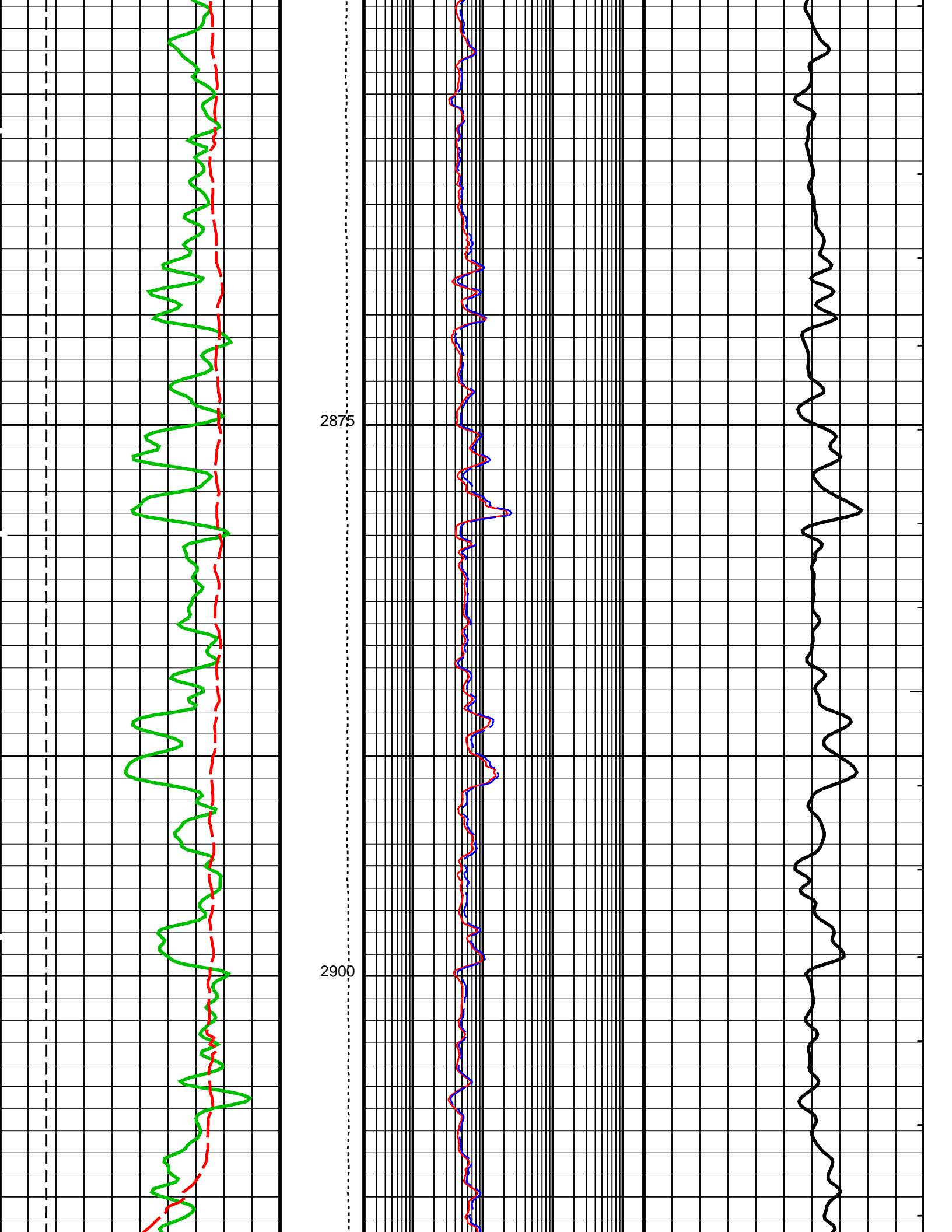


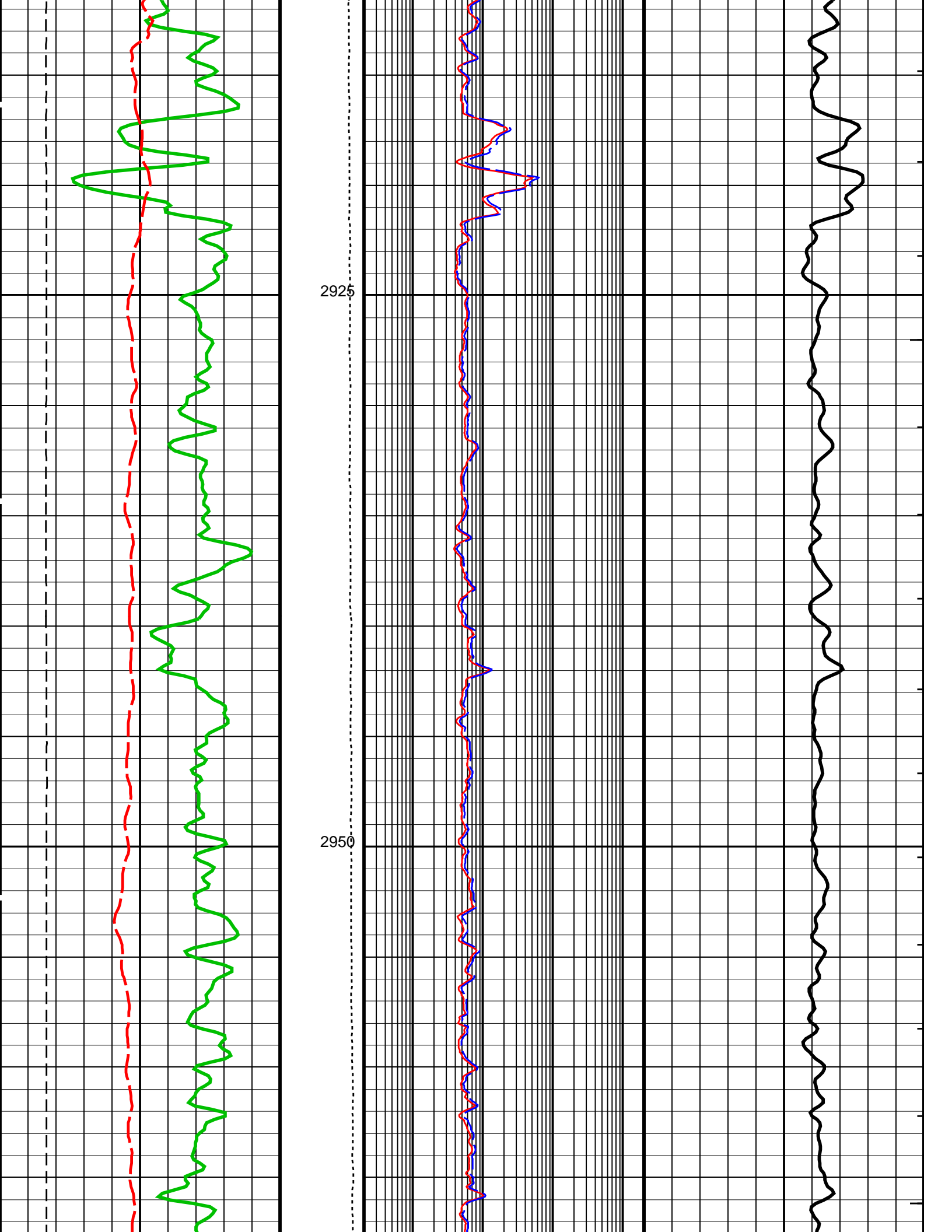


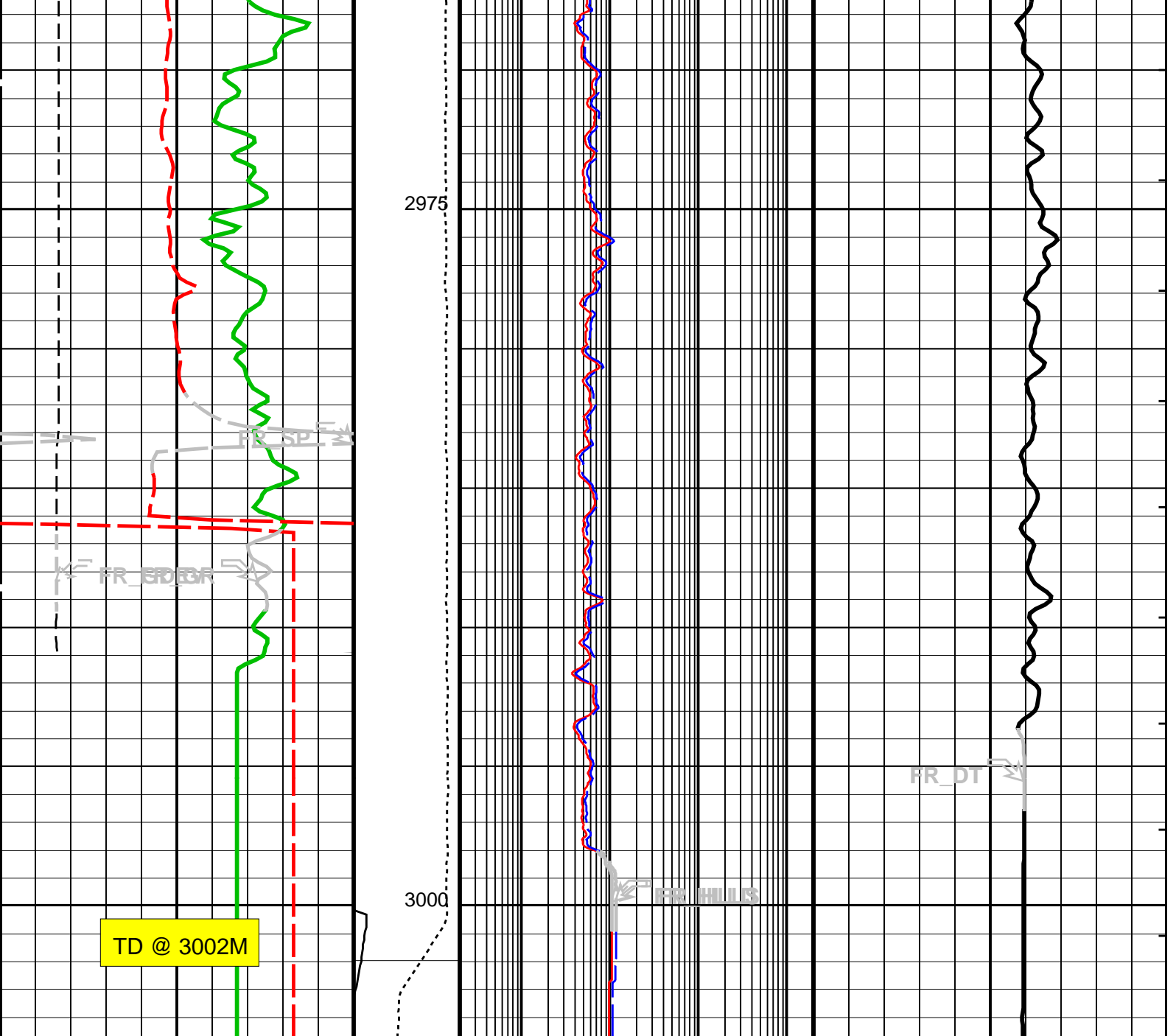












HGNS Deviation (GDEV) (DEG)	Tension (TENS) (LBF)	Laterolog Deep Resistivity (HLLD) (OHMM)	Delta-T (DT) (US/F)
-10 0 50 90	2000 4000	0.2 2000	140 40
SP (SP) (MV)	Laterolog Shallow Resistivity (HLLS) (OHMM)		
0 50	0.2 2000		
Gamma Ray (GR) (GAPI)			
0 200			

PIP SUMMARY

Integrated Transit Time Minor Pip Every 1 MS
 Integrated Transit Time Major Pip Every 10 MS

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
HALS-B: HILT Azimuthal Laterolog Sonde B		
A2EX	HALS Type of Image	Conductivities
AGOS	HALS-B A2 Extended (Groningen effect)	OFF
	HALS-GPIT OFFSET	-84.5 IN

ARIP_LTS	HALS Long Tool String Correction	OFF	
ARIP_SHOULDER	HALS Shoulder Correction	OFF	
BHCC	HALS Borehole Correction	ON	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	103	DEGC
DHOP	Diameter & Eccentering used in HALS Borehole Corrections	Caliper_Eccentered	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRCC	HALS Groningen Correction	OFF	
GRSE	Generalized Mud Resistivity Selection	HALS_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HLAC	HALS-B Loop A Coefficient	LOW	
HLMO	HALS Logging Mode	STAN	
HMSO	HALS Mechanical Standoff	1.5	IN
HRUN	HALS-B Record Uncalibrated Channels	NO	
IMOS	HALS Image Orientation	OFF	
ISSBAR	Barite Mud Switch	NOBARITE	
LIMP	HALS Left Image Processing	DeepRaw	
LOP1	HALS-B Mode 1 Loop Mode	OFF	
LOP2	HALS-B Mode 2 Loop Mode	OFF	
LOP3	HALS-B Mode 3 Loop Mode	OFF	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
RIMP	HALS Right Image Processing	ShallowRaw	
RTCOMP	HALS Rt Computation	Off	
RTRE	HALS Resistivity Threshold	10000	OHMM
SHT	Surface Hole Temperature	20	DEGC
SPCO	HALS-B Special Power Connection	OFF	
TCOR	HALS TLC Correction	OFF	
UNSPK	HALS Despiking Filter Option	OFF	
UNSPK_THOLD	HALS Despiking Filter Threshold (in %)	20	%
UNSPK_WINDOW	HALS Despiking Filter Window (inches)	6	IN
	DSL-T-H: Digitizing Sonic Logging Tool		
	DSL-T Firing Mode	BHC	
	Telemetry Mode	DSLCL_FTB	
AGC	Automatic Gain Control Status	ON	
AMSG	Auxiliary Minimum Sliding Gate	140	US
CBAF	CBL Adjustment Factor	1	
CBLG	CBL Gate Width	45	US
CDTS	C-Delta-T Shale	100	US/F
DDEL	Digitizing Delay	0	US
DETE	Delta-T Detection	E2	
DFAD	Digital First Arrival Detection Switch	HOST	
DIVL	DSL-T Depth Sampling Interval	20	
DRCS	DSL-T DLIS Recording Size	150	
DSIN	Digitizing Sample Interval	10	
DTCM	Delta-T Computation Mode	FULL	
DTF	Delta-T Fluid	189	US/F
DTFS	DSLCL Telemetry Frame Size	336	
DTM	Delta-T Matrix	56	US/F
DWCO	Digitizing Word Count	150	
GAI	Manual Gain	40	
HRSP	High Resolution Spacing	5.118	IN
ITTS	Integrated Transit Time Source	DT	
LTUT	Lower to Upper Transmitter Spacing Ratio	1	
MAHTR	Manual High Threshold Reference	120	
MGAI	Maximum Gain	60	
MIGA	Minimum Gain	1	
MNHTR	Minimum High Threshold Reference	100	
MODE	Sonic Firing Mode	BHC	
NMSG	Near Minimum Sliding Gate	140	US
NMXG	Near Maximum Sliding Gate	970	US
NUMP	Number of Detection Passes	2	
RATE	Firing Rate	R15	
RDFA	Reset DFAD	OFF	
SDTH	Switch Down Threshold	20000	
SFAF	Sonic Formation Attenuation Factor	10	DB/M
SGAD	Sliding Gate Status	ON	
SGAI	Selectable Acquisition Gain	AUTO	
SGCL	Sliding Gate Closing Delta-T	140	US/F
SGCW	Sliding Gate Closing Width	25	US
SGDT	Sliding Gate Delta-T	40	US/F
SGW	Sliding Gate Width	110	US
SLEV	Signal Level for AGC	5000	
SPFS	Sonic Porosity Formula	RAYMER_HUNT	
SPSO	Sonic Porosity Source	DT	
SUTH	Switch Up Threshold	1000	
VDLG	VDL Manual Gain	40	
WAGC	Waveform AGC Allow/Disallow	OFF	
WGAI	Waveform Manual Gain	20	
WGDT	Waveform Gain Delta-T	240	US/F
WGIN	Waveform Gain Interval	2540	US
WMOD	Waveform Firing Mode	FULL	

HLLT_FTB: High resolution Integrated Logging Tool, DTS

BHFL	Borehole Fluid Type	WATER	
BHFL_TLD	HILT Nuclear Mud Base	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	103	DEGC
BSCO	Borehole Salinity Correction Option	YES	
CCCO	Casing & Cement Thickness Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
EXSICL	External Shale Indicator Clean Value	20	
EXSISH	External Shale Indicator Shale Value	150	
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
FPHI	Form Factor Porosity Source	DPHZ	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	YES	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	HALS_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HACPP	Accelerometer PROM Presence	PRESENT_FILE	
HART	Accelerometer Reference Temperature	20	DEGC
HDCOD	HILT Density Coal detection	2	G/C3
HDSAD	HILT Density Salt detection	2.1	G/C3
HILT_GAS_DENSITY	HILT Gas Downhole Density	0	G/C3
HILT_GAS_OPTION	HILT Gas Computation Option	OFF	
HNCOD	HILT Neutron Coal detection	45	PU
HNSAD	HILT Neutron Salt detection	5	PU
HPHIECUT	HILT effective Porosity Cutoff	5	PU
HSCO	Hole Size Correction Option	YES	
HSIS	HILT Shale Indicator Selection	GR	
HSWCUT	HILT Water Saturation from AITH cutoff	50	%
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	YES	
NMT	HILT Nuclear Mud Type	NOBARITE	
PHIMAX	HILT max porosity	35	PU
PTCO	Pressure/Temperature Correction Option	YES	
SDAT	Standoff Data Source	SOCN	
SEXP_HILT	HILT Saturation Exponent	2	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0.125	IN
SOCO	Standoff Correction Option	YES	
BSP: Bridle SP			
SPNV	SP Next Value	0	MV
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	103	DEGC
FCD	Future Casing (Outer) Diameter	7	IN
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	HALS_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HVCS	Integrated Hole Volume Caliper Selection	HCAL	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
SHT	Surface Hole Temperature	20	DEGC
STI: Stuck Tool Indicator			
LBFR	Trigger for MAXIS First Reading Label	TDL	
STKT	STI Stuck Threshold	0.762	M
TDD	Total Depth - Driller	3002.00	M
TDL	Total Depth - Logger	3002.00	M
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	8.500	IN
BSAL	Borehole Salinity	59500.00	PPM
CSIZ	Current Casing Size	9.625	IN
CWEI	Casing Weight	36.00	LB/F
DFD	Drilling Fluid Density	1.13	G/C3
DO	Depth Offset for Playback	1.2	M
MST	Mud Sample Temperature	16.60	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	0.1410	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	3002	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

HALS-B SRPC-3193-Q3_2006
 HILTB-FTB SRPC-3193-Q3_2006
 BSP SRPC-3193-Q3_2006

DSL-T-H
 DTC-H

SRPC-3193-Q3_2006
 SRPC-3193-Q3_2006

Input DLIS Files

DEFAULT HALS_SONIC_TLD_MCFL_013LUP FN:15 PRODUCER 24-Sep-2006 03:24 3003.5 M 13.0 M

Output DLIS Files

DEFAULT HALS_SONIC_TLD_MCFL_021PUP FN:17 PRODUCER 24-Sep-2006 06:06



Repeat Analysis

MAXIS Field Log

Input DLIS Files

DEFAULT HALS_SONIC_TLD_MCFL_013LUP FN:15 PRODUCER 24-Sep-2006 03:24 3003.5 M 0.0 M
 DEFAULT HALS_SONIC_TLD_MCFL_009LUP FN:10 PRODUCER 24-Sep-2006 00:47 3003.3 M 2858.1 M

OP System Version: 14C0-302

MCM

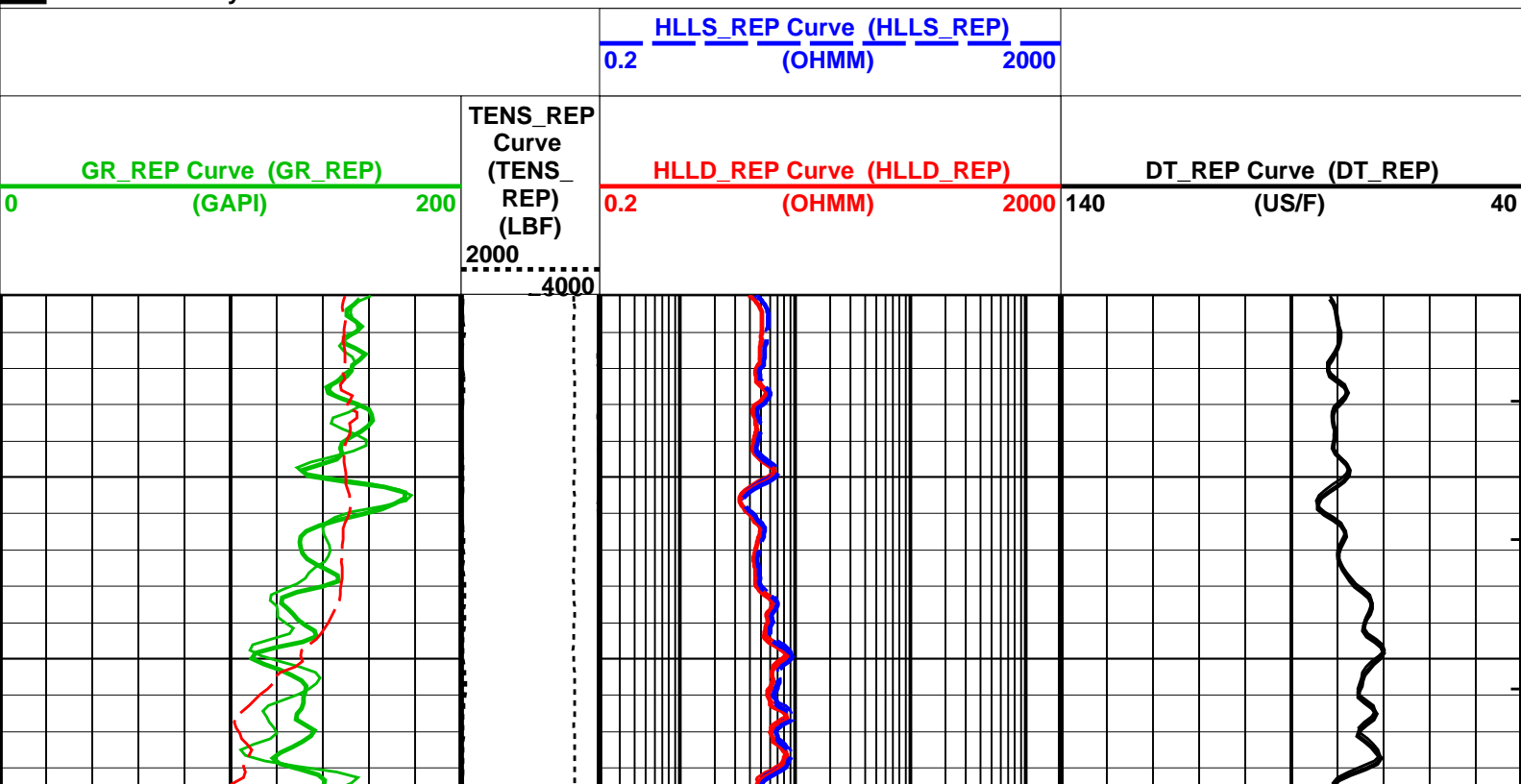
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 HILTD SRPC-3193-Q3_2006 DTCH SRPC-3193-Q3_2006
 BSP SRPC-3193-Q3_2006

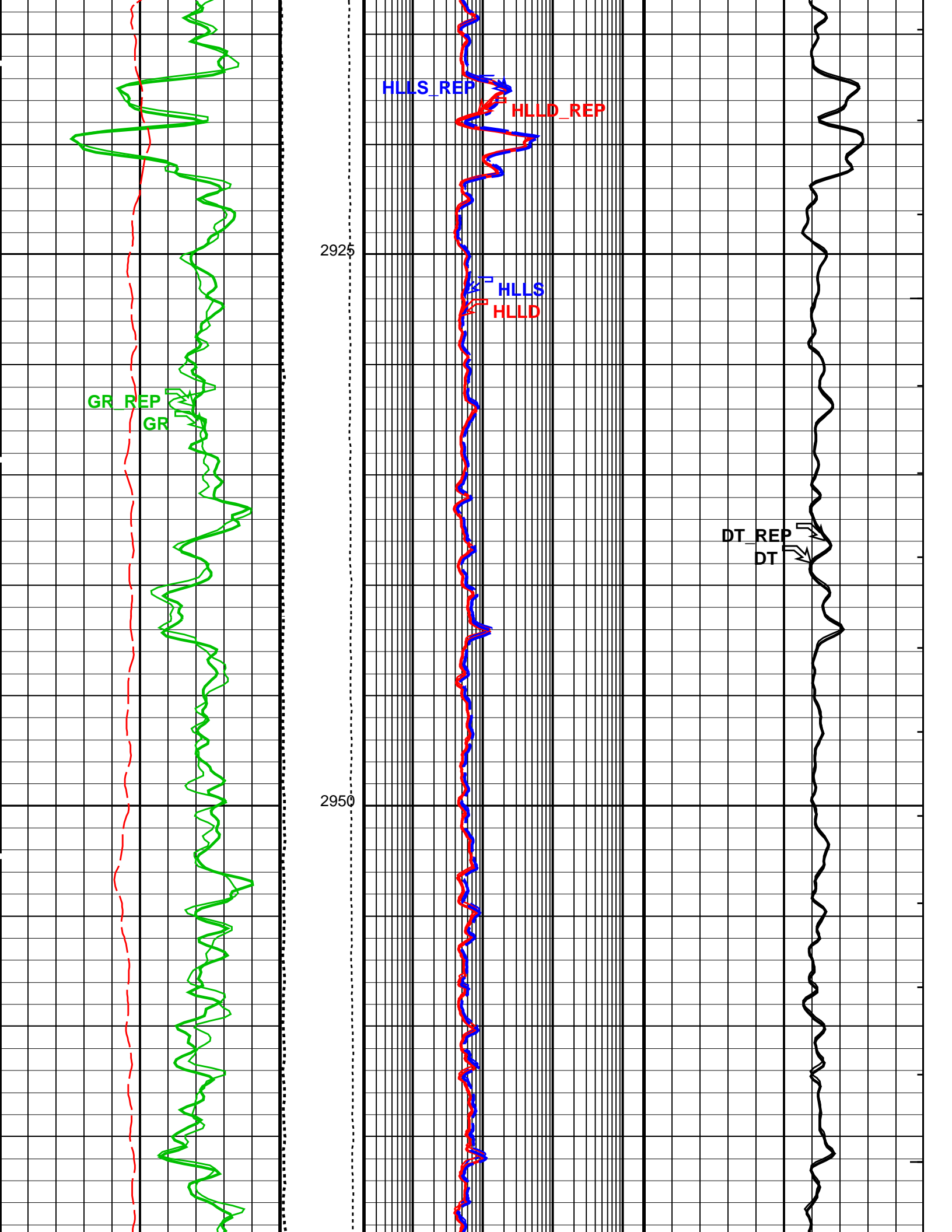
PIP SUMMARY

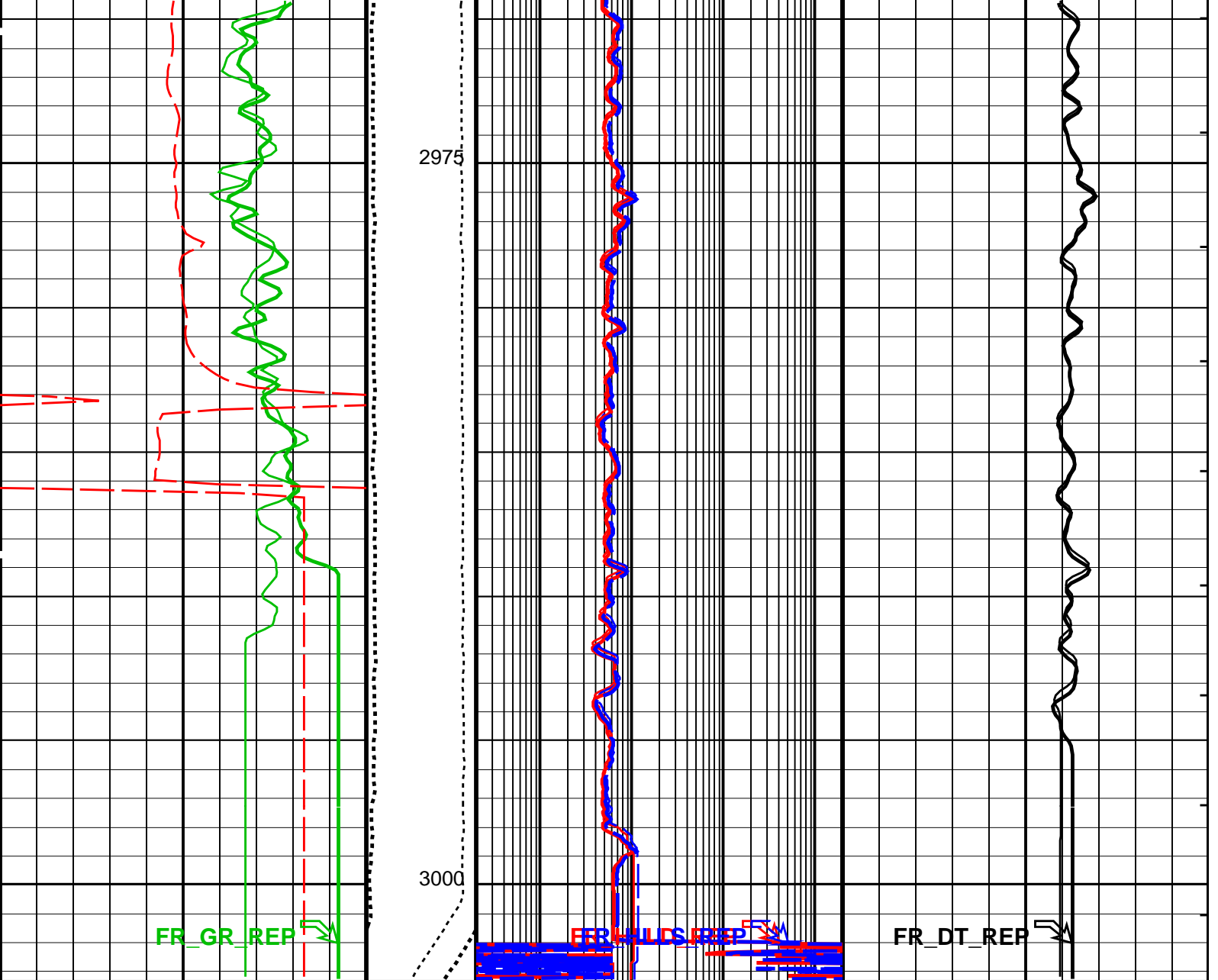
REPEAT ANALYSIS

Integrated Transit Time Minor Pip Every 1 MS →
 Integrated Transit Time Major Pip Every 10 MS →

Time Mark Every 60 S







<p>GR_REP Curve (GR_REP) (GAPI)</p> <p>0 200</p>	<p>TENS_REP Curve (TENS_REP) (LBF)</p> <p>2000 4000</p>	<p>HLLD_REP Curve (HLLD_REP) (OHMM)</p> <p>0.2 2000</p>	<p>DT_REP Curve (DT_REP) (US/F)</p> <p>140 40</p>
		<p>HLLS_REP Curve (HLLS_REP) (OHMM)</p> <p>0.2 2000</p>	

PIP SUMMARY

Integrated Transit Time Minor Pip Every 1 MS
 Integrated Transit Time Major Pip Every 10 MS

Time Mark Every 60 S

Format: ResSon_StdRes_200_REP Vertical Scale: 1:200 Graphics File Created: 24-Sep-2006 04:53

OP System Version: 14C0-302
MCM

HALS-B	SRPC-3193-Q3_2006	DSLTD-H	SRPC-3193-Q3_2006
HILTD	SRPC-3193-Q3_2006	DTCH	SRPC-3193-Q3_2006
BSP	SRPC-3193-Q3_2006		

Input DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_013LUP FN:15	PRODUCER	24-Sep-2006 03:24	3003.5 M	0.0 M
DEFAULT	HALS_SONIC_TLD_MCFL_009LUP FN:10	PRODUCER	24-Sep-2006 00:47	3003.3 M	2858.1 M

Input DLIS Files

DEFAULT Flip_HALS_SONIC_TLD_018LUP PRODUCER 24-Sep-2006 05:13 3001.2 M 86.6 M

OP System Version: 14C0-302
MCM

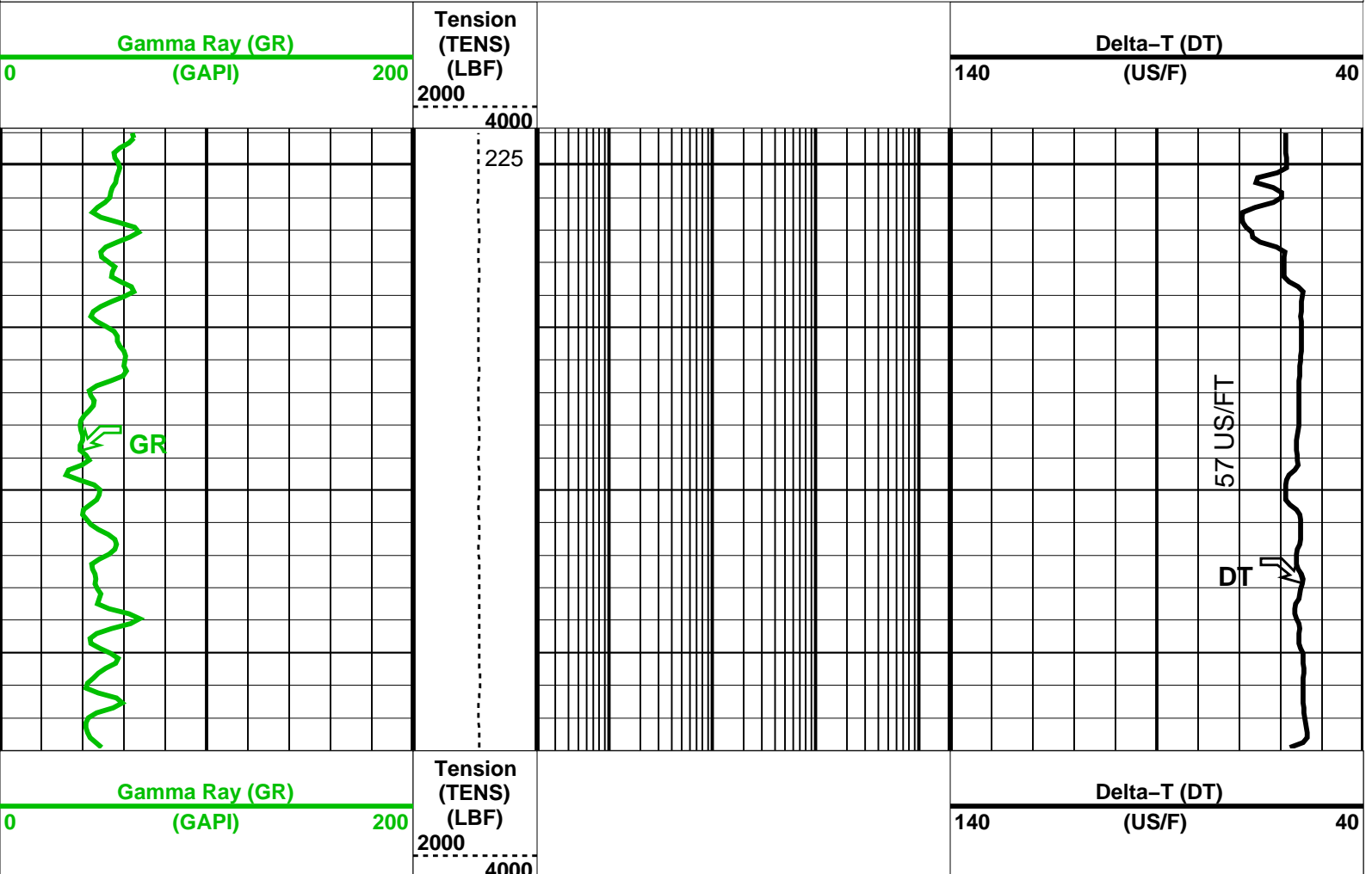
HALS-B SRPC-3193-Q3_2006 DSLT-H SRPC-3193-Q3_2006
HILTD SRPC-3193-Q3_2006 DTCH SRPC-3193-Q3_2006
BSP SRPC-3193-Q3_2006

PIP SUMMARY

Integrated Transit Time Minor Pip Every 1 MS
Integrated Transit Time Major Pip Every 10 MS

Time Mark Every 60 S

SONIC CHECK IN CASING



PIP SUMMARY

Integrated Transit Time Minor Pip Every 1 MS
Integrated Transit Time Major Pip Every 10 MS

Time Mark Every 60 S

OP System Version: 14C0-302

MCM

HALS-B SRPC-3193-Q3_2006
 HILTD SRPC-3193-Q3_2006
 BSP SRPC-3193-Q3_2006

DSLT-H
 DTCH

SRPC-3193-Q3_2006
 SRPC-3193-Q3_2006

Input DLIS Files

DEFAULT Flip_HALS_SONIC_TLD_018LUP PRODUCER 24-Sep-2006 05:13 3001.2 M 86.6 M

Calibration Report

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Total current mode 1							
Before: 24-Sep-2006 0:46							
Itot 1 Gain	1.000	N/A	0.995	N/A	N/A	0.026	MA
Itot 1 Phase	0.000	N/A	0.000	N/A	N/A	0.100	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux current mode 1							
Before: 24-Sep-2006 0:46							
Iaux 1 Gain	1.000	N/A	0.989	N/A	N/A	0.035	MA
Iaux 1 Phase	0.000	N/A	0.902	N/A	N/A	1.900	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux current mode 2							
Before: 24-Sep-2006 0:46							
Iaux 2 Gain	1.000	N/A	0.979	N/A	N/A	0.048	MA
Iaux 2 Phase	0.000	N/A	0.000	N/A	N/A	0.100	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0 current mode 3A							
Before: 24-Sep-2006 0:46							
I0 3A Gain	1.000	N/A	0.983	N/A	N/A	0.036	UA
I0 3A Phase	0.000	N/A	-0.000	N/A	N/A	0.100	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0 current mode 3B							
Before: 24-Sep-2006 0:46							
I0 3B Gain	1.000	N/A	0.980	N/A	N/A	0.036	UA
I0 3B Phase	0.000	N/A	0.000	N/A	N/A	0.100	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Torpedo Voltage gains							
Before: 24-Sep-2006 0:46							
Zvt 1 Gain	1.000	N/A	0.990	N/A	N/A	0.025	MV
Zvt 2 Gain	1.000	N/A	0.979	N/A	N/A	0.045	MV
Zvt 3 Gain	1.000	N/A	0.983	N/A	N/A	0.045	MV
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Torpedo Voltage Phases							
Before: 24-Sep-2006 0:46							
Zvt 1 Phase	0.000	N/A	0.398	N/A	N/A	2.300	DEG
Zvt 2 Phase	0.000	N/A	0.224	N/A	N/A	0.800	DEG
Zvt 3 Phase	0.000	N/A	0.056	N/A	N/A	0.500	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Upper Bridle Voltage mode 1							
Before: 24-Sep-2006 0:46							
Zvb 1 Gain	1.000	N/A	0.990	N/A	N/A	0.025	MV
Zvb 1 Phase	0.000	N/A	0.449	N/A	N/A	2.300	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1-M2 Voltage gains							
Before: 24-Sep-2006 0:46							
ZVM 1 Gain	1.000	N/A	0.996	N/A	N/A	0.039	MV

ZVM 1 Gain	1.000	N/A	0.999	N/A	N/A	0.019	UV
ZVM 2 Gain	1.000	N/A	0.992	N/A	N/A	0.019	UV
ZVM 3 Gain	1.000	N/A	0.990	N/A	N/A	0.019	UV

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1–M2 Voltage Phases

Before: 24–Sep–2006 0:46

ZVM 1 Phase	0.000	N/A	0.152	N/A	N/A	3.800	DEG
ZVM 2 Phase	0.000	N/A	1.286	N/A	N/A	1.300	DEG
ZVM 3 Phase	0.000	N/A	0.612	N/A	N/A	1.000	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1–A0* Voltage gains

Before: 24–Sep–2006 0:46

ZVH 1 Gain	1.000	N/A	0.999	N/A	N/A	0.013	UV
ZVH 2 Gain	1.000	N/A	0.999	N/A	N/A	0.046	UV
ZVH 3 Gain	1.000	N/A	0.995	N/A	N/A	0.046	UV

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1–A0* Voltage Phases

Before: 24–Sep–2006 0:46

ZVH 1 Phase	0.000	N/A	0.292	N/A	N/A	3.800	DEG
ZVH 2 Phase	0.000	N/A	1.870	N/A	N/A	1.300	DEG
ZVH 3 Phase	0.000	N/A	1.001	N/A	N/A	1.000	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux Voltage gains

Before: 24–Sep–2006 0:46

ZVA 1 Gain	1.000	N/A	1.056	N/A	N/A	0.032	MV
ZVA 2 Gain	1.000	N/A	1.043	N/A	N/A	0.045	MV
ZVA 3 Gain	1.000	N/A	1.014	N/A	N/A	0.045	MV

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux Voltage Phases

Before: 24–Sep–2006 0:46

ZVA 1 Phase	0.000	N/A	1.262	N/A	N/A	2.300	DEG
ZVA 2 Phase	0.000	N/A	-0.330	N/A	N/A	0.800	DEG
ZVA 3 Phase	0.000	N/A	0.160	N/A	N/A	0.500	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*–A0** Diff. Voltage mode 1

Before: 24–Sep–2006 0:46

ZVD 1 Gain	1.000	N/A	0.992	N/A	N/A	0.047	UV
ZVD 1 Phase	0.000	N/A	0.075	N/A	N/A	3.800	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*–A0** Diff. Voltage mode 2

Before: 24–Sep–2006 0:46

ZVD 2 Gain	1.000	N/A	0.981	N/A	N/A	0.056	UV
ZVD 2 Phase	0.000	N/A	1.051	N/A	N/A	1.300	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*–A0** Diff. Voltage mode 3A

Before: 24–Sep–2006 0:46

ZVD 3A Gain	1.000	N/A	0.984	N/A	N/A	0.056	UV
ZVD 3A Phase	0.000	N/A	0.412	N/A	N/A	1.000	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*–A0** Diff. Voltage mode 3B

Before: 24–Sep–2006 0:46

ZVD 3B Gain	1.000	N/A	1.005	N/A	N/A	0.054	UV
ZVD 3B Phase	0.000	N/A	0.340	N/A	N/A	1.000	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB vertical Voltage mode 1

Before: 24–Sep–2006 0:46

ZVV 1 Gain	1.000	N/A	0.993	N/A	N/A	0.022	UV
ZVV 1 Phase	0.000	N/A	1.156	N/A	N/A	2.800	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB vertical Voltage mode 2

Before: 24–Sep–2006 0:46

ZVV 2 Gain	1.000	N/A	0.985	N/A	N/A	0.036	UV
ZVV 2 Phase	0.000	N/A	2.401	N/A	N/A	1.300	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Azimuthal Voltages mode 1

Before: 24–Sep–2006 0:46

Az 1 Gain – 0	1.000	N/A	0.997	N/A	N/A	0.047	UV
Az 1 Gain – 1	1.000	N/A	0.997	N/A	N/A	0.047	UV
Az 1 Gain – 2	1.000	N/A	0.993	N/A	N/A	0.047	UV
Az 1 Gain – 3	1.000	N/A	0.999	N/A	N/A	0.047	UV
Az 1 Gain – 4	1.000	N/A	0.999	N/A	N/A	0.047	UV
Az 1 Gain – 5	1.000	N/A	0.994	N/A	N/A	0.047	UV
Az 1 Gain – 6	1.000	N/A	0.994	N/A	N/A	0.047	UV
Az 1 Gain – 7	1.000	N/A	0.990	N/A	N/A	0.047	UV
Az 1 Gain – 8	1.000	N/A	0.994	N/A	N/A	0.047	UV
Az 1 Gain – 9	1.000	N/A	0.995	N/A	N/A	0.047	UV
Az 1 Gain – 10	1.000	N/A	0.992	N/A	N/A	0.047	UV
Az 1 Gain – 11	1.000	N/A	0.997	N/A	N/A	0.047	UV
AZ 1 Phase – 0	0.000	N/A	-0.163	N/A	N/A	3.800	DEG
AZ 1 Phase – 1	0.000	N/A	-0.067	N/A	N/A	3.800	DEG
AZ 1 Phase – 2	0.000	N/A	0.086	N/A	N/A	3.800	DEG
AZ 1 Phase – 3	0.000	N/A	-0.007	N/A	N/A	3.800	DEG

AZ 1 Phase - 4	0.000	N/A	-0.109	N/A	N/A	3.800	DEG
AZ 1 Phase - 5	0.000	N/A	0.048	N/A	N/A	3.800	DEG
AZ 1 Phase - 6	0.000	N/A	0.106	N/A	N/A	3.800	DEG
AZ 1 Phase - 7	0.000	N/A	-0.176	N/A	N/A	3.800	DEG
AZ 1 Phase - 8	0.000	N/A	0.064	N/A	N/A	3.800	DEG
AZ 1 Phase - 9	0.000	N/A	-0.050	N/A	N/A	3.800	DEG
AZ 1 Phase - 10	0.000	N/A	-0.007	N/A	N/A	3.800	DEG
AZ 1 Phase - 11	0.000	N/A	-0.079	N/A	N/A	3.800	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration - HALSB Azimuthal Voltages mode 2

Before: 24-Sep-2006 0:46

Az 2 Gain - 0	1.000	N/A	0.985	N/A	N/A	0.056	UV
Az 2 Gain - 1	1.000	N/A	0.985	N/A	N/A	0.056	UV
Az 2 Gain - 2	1.000	N/A	0.981	N/A	N/A	0.056	UV
Az 2 Gain - 3	1.000	N/A	0.987	N/A	N/A	0.056	UV
Az 2 Gain - 4	1.000	N/A	0.987	N/A	N/A	0.056	UV
Az 2 Gain - 5	1.000	N/A	0.982	N/A	N/A	0.056	UV
Az 2 Gain - 6	1.000	N/A	0.982	N/A	N/A	0.056	UV
Az 2 Gain - 7	1.000	N/A	0.977	N/A	N/A	0.056	UV
Az 2 Gain - 8	1.000	N/A	0.982	N/A	N/A	0.056	UV
Az 2 Gain - 9	1.000	N/A	0.982	N/A	N/A	0.056	UV
Az 2 Gain - 10	1.000	N/A	0.980	N/A	N/A	0.056	UV
Az 2 Gain - 11	1.000	N/A	0.985	N/A	N/A	0.056	UV
Az 2 Phase - 0	0.000	N/A	0.901	N/A	N/A	1.300	DEG
Az 2 Phase - 1	0.000	N/A	1.031	N/A	N/A	1.300	DEG
Az 2 Phase - 2	0.000	N/A	1.005	N/A	N/A	1.300	DEG
Az 2 Phase - 3	0.000	N/A	1.006	N/A	N/A	1.300	DEG
Az 2 Phase - 4	0.000	N/A	1.036	N/A	N/A	1.300	DEG
Az 2 Phase - 5	0.000	N/A	0.988	N/A	N/A	1.300	DEG
Az 2 Phase - 6	0.000	N/A	1.042	N/A	N/A	1.300	DEG
Az 2 Phase - 7	0.000	N/A	0.952	N/A	N/A	1.300	DEG
Az 2 Phase - 8	0.000	N/A	1.050	N/A	N/A	1.300	DEG
Az 2 Phase - 9	0.000	N/A	1.006	N/A	N/A	1.300	DEG
Az 2 Phase - 10	0.000	N/A	1.040	N/A	N/A	1.300	DEG
Az 2 Phase - 11	0.000	N/A	1.008	N/A	N/A	1.300	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration - HALSB Azimuthal Voltages mode 3A

Before: 24-Sep-2006 0:46

Az 3A Gain - 0	1.000	N/A	0.988	N/A	N/A	0.056	UV
Az 3A Gain - 1	1.000	N/A	0.988	N/A	N/A	0.056	UV
Az 3A Gain - 2	1.000	N/A	0.984	N/A	N/A	0.056	UV
Az 3A Gain - 3	1.000	N/A	0.990	N/A	N/A	0.056	UV
Az 3A Gain - 4	1.000	N/A	0.990	N/A	N/A	0.056	UV
Az 3A Gain - 5	1.000	N/A	0.986	N/A	N/A	0.056	UV
Az 3A Gain - 6	1.000	N/A	0.985	N/A	N/A	0.056	UV
Az 3A Gain - 7	1.000	N/A	0.981	N/A	N/A	0.056	UV
Az 3A Gain - 8	1.000	N/A	0.986	N/A	N/A	0.056	UV
Az 3A Gain - 9	1.000	N/A	0.986	N/A	N/A	0.056	UV
Az 3A Gain - 10	1.000	N/A	0.984	N/A	N/A	0.056	UV
Az 3A Gain - 11	1.000	N/A	0.989	N/A	N/A	0.056	UV
Az 3A Phase - 0	0.000	N/A	0.322	N/A	N/A	1.000	DEG
Az 3A Phase - 1	0.000	N/A	0.409	N/A	N/A	1.000	DEG
Az 3A Phase - 2	0.000	N/A	0.419	N/A	N/A	1.000	DEG
Az 3A Phase - 3	0.000	N/A	0.394	N/A	N/A	1.000	DEG
Az 3A Phase - 4	0.000	N/A	0.383	N/A	N/A	1.000	DEG
Az 3A Phase - 5	0.000	N/A	0.377	N/A	N/A	1.000	DEG
Az 3A Phase - 6	0.000	N/A	0.426	N/A	N/A	1.000	DEG
Az 3A Phase - 7	0.000	N/A	0.347	N/A	N/A	1.000	DEG
Az 3A Phase - 8	0.000	N/A	0.447	N/A	N/A	1.000	DEG
Az 3A Phase - 9	0.000	N/A	0.400	N/A	N/A	1.000	DEG
Az 3A Phase - 10	0.000	N/A	0.415	N/A	N/A	1.000	DEG
Az 3A Phase - 11	0.000	N/A	0.368	N/A	N/A	1.000	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration - HALSB Azimuthal Voltages mode 3B

Before: 24-Sep-2006 0:46

Az 3B Gain - 0	1.000	N/A	1.003	N/A	N/A	0.054	UV
Az 3B Gain - 1	1.000	N/A	1.010	N/A	N/A	0.054	UV
Az 3B Gain - 2	1.000	N/A	1.004	N/A	N/A	0.054	UV
Az 3B Gain - 3	1.000	N/A	1.010	N/A	N/A	0.054	UV
Az 3B Gain - 4	1.000	N/A	1.012	N/A	N/A	0.054	UV
Az 3B Gain - 5	1.000	N/A	1.002	N/A	N/A	0.054	UV
Az 3B Gain - 6	1.000	N/A	1.006	N/A	N/A	0.054	UV
Az 3B Gain - 7	1.000	N/A	0.997	N/A	N/A	0.054	UV
Az 3B Gain - 8	1.000	N/A	1.007	N/A	N/A	0.054	UV
Az 3B Gain - 9	1.000	N/A	1.005	N/A	N/A	0.054	UV
Az 3B Gain - 10	1.000	N/A	1.005	N/A	N/A	0.054	UV
Az 3B Gain - 11	1.000	N/A	1.008	N/A	N/A	0.054	UV
Az 3B Phase - 0	0.000	N/A	0.057	N/A	N/A	1.000	DEG
Az 3B Phase - 1	0.000	N/A	0.468	N/A	N/A	1.000	DEG
Az 3B Phase - 2	0.000	N/A	0.262	N/A	N/A	1.000	DEG
Az 3B Phase - 3	0.000	N/A	0.358	N/A	N/A	1.000	DEG
Az 3B Phase - 4	0.000	N/A	0.389	N/A	N/A	1.000	DEG

Az 3B Phase – 4	0.000	N/A	0.339	N/A	N/A	1.000	DEG
Az 3B Phase – 5	0.000	N/A	0.290	N/A	N/A	1.000	DEG
Az 3B Phase – 6	0.000	N/A	0.324	N/A	N/A	1.000	DEG
Az 3B Phase – 7	0.000	N/A	0.283	N/A	N/A	1.000	DEG
Az 3B Phase – 8	0.000	N/A	0.386	N/A	N/A	1.000	DEG
Az 3B Phase – 9	0.000	N/A	0.352	N/A	N/A	1.000	DEG
Az 3B Phase – 10	0.000	N/A	0.366	N/A	N/A	1.000	DEG
Az 3B Phase – 11	0.000	N/A	0.388	N/A	N/A	1.000	DEG

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Stab Measurement Summary

Before: 23–Sep–2006 15:29

BS Window Ratio	0.7067	N/A	0.7055	N/A	N/A	N/A	
BS Window Sum	9013	N/A	9018	N/A	N/A	N/A	CPS
SS Window Ratio	0.5082	N/A	0.5116	N/A	N/A	N/A	
SS Window Sum	11120	N/A	11100	N/A	N/A	N/A	CPS
LS Window Ratio	0.2907	N/A	0.2945	N/A	N/A	N/A	
LS Window Sum	1057	N/A	1050	N/A	N/A	N/A	CPS

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Photo–multiplier High Voltages Calibrations

Before: 23–Sep–2006 15:29

BS PM High Voltage (Command)	1804	N/A	1792	N/A	N/A	N/A	V
SS PM High Voltage (Command)	1580	N/A	1606	N/A	N/A	N/A	V
LS PM High Voltage (Command)	1687	N/A	1699	N/A	N/A	N/A	V

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Crystal Quality Resolutions Calibration

Before: 23–Sep–2006 15:29

BS Crystal Resolution	13.20	N/A	13.13	N/A	N/A	N/A	%
SS Crystal Resolution	10.01	N/A	10.36	N/A	N/A	N/A	%
LS Crystal Resolution	9.740	N/A	9.890	N/A	N/A	N/A	%

High resolution Integrated Logging Tool–DTS Wellsite Calibration – MCFL Calibration

Before: 23–Sep–2006 15:30

Raw B0 Resistivity	3875	N/A	3860	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3819	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3814	N/A	N/A	N/A	OHMM

High resolution Integrated Logging Tool–DTS Wellsite Calibration – HILT Caliper Calibration

Before: 23–Sep–2006 15:26

HILT Caliper Zero Measurement	8.000	N/A	8.027	N/A	N/A	N/A	IN
HILT Caliper Plus Measurement	12.00	N/A	12.26	N/A	N/A	N/A	IN

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Detector Calibration

Before: 23–Sep–2006 15:23

Gamma Ray Background	30.00	N/A	29.85	N/A	N/A	N/A	GAPI
Gamma Ray (Jig – Bkg)	150.9	N/A	150.9	N/A	N/A	13.72	GAPI
Gamma Ray (Calibrated)	162.0	N/A	162.0	N/A	N/A	15.00	GAPI

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Zero Measurement

Master: 14–Aug–2006 13:12 Before: 23–Sep–2006 15:24

CNTC Background	28.32	28.32	28.41	N/A	N/A	4.248	CPS
CFTC Background	31.43	31.43	30.74	N/A	N/A	4.715	CPS

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Ratio Measurement

Master: 14–Aug–2006 13:12

Thermal Near Corr. (Tank)	5800	5009	N/A	N/A	N/A	N/A	CPS
Thermal Far Corr. (Tank)	2400	2098	N/A	N/A	N/A	N/A	CPS
CNTC/CFTC (Tank)	2.159	2.388	N/A	N/A	N/A	N/A	

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Accelerometer Calibration

Before: 23–Sep–2006 23:06

Z–Axis Acceleration	9.810	N/A	9.798	N/A	N/A	N/A	M/S2
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The GLS–VJ source activity is acceptable.

The HGNS Neutron Master Calibration was done with the following parameters :

NCT–B Water Temperature 26.5 DEGC.
 Thermal Housing Size 3.378 IN.
 NSR–F serial number 5050

HILT Azimuthal Laterolog Sonde B / Equipment Identification

Primary Equipment:

Auxiliary Equipment:

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Total current mode 1					
Itot 1 Gain MA		Value	Itot 1 Phase DEG		Value
		0.995			0.000
0.926 (Minimum)	1.000 (Nominal)	1.081 (Maximum)	-0.100 (Minimum)	0.000 (Nominal)	0.100 (Maximum)
Before: 24-Sep-2006 0:46					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Aux current mode 1					
Iaux 1 Gain MA		Value	Iaux 1 Phase DEG		Value
		0.989			0.902
0.854 (Minimum)	1.000 (Nominal)	1.180 (Maximum)	-4.600 (Minimum)	0.000 (Nominal)	4.600 (Maximum)
Before: 24-Sep-2006 0:46					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Aux current mode 2					
Iaux 2 Gain MA		Value	Iaux 2 Phase DEG		Value
		0.979			0.000
0.816 (Minimum)	1.000 (Nominal)	1.232 (Maximum)	-1.000 (Minimum)	0.000 (Nominal)	0.100 (Maximum)
Before: 24-Sep-2006 0:46					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB A0 current mode 3A					
IO 3A Gain UA		Value	IO 3A Phase DEG		Value
		0.983			-0.000
0.893 (Minimum)	1.000 (Nominal)	1.114 (Maximum)	-1.000 (Minimum)	0.000 (Nominal)	0.100 (Maximum)
Before: 24-Sep-2006 0:46					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB A0 current mode 3B					
IO 3B Gain UA		Value	IO 3B Phase DEG		Value
		0.980			0.000
0.893 (Minimum)	1.000 (Nominal)	1.114 (Maximum)	-1.000 (Minimum)	0.000 (Nominal)	0.100 (Maximum)
Before: 24-Sep-2006 0:46					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Torpedo Voltage gains					
Zvt 1 Gain MV		Value	Zvt 2 Gain MV		Value
		0.990			0.979
0.925 (Minimum)	1.000 (Nominal)	1.078 (Maximum)	0.865 (Minimum)	1.000 (Nominal)	1.153 (Maximum)
Zvt 3 Gain MV		Value	Zvt 3 Gain MV		Value
		0.983			0.983
0.865 (Minimum)	1.000 (Nominal)	1.153 (Maximum)	0.865 (Minimum)	1.000 (Nominal)	1.153 (Maximum)
Before: 24-Sep-2006 0:46					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Torpedo Voltage Phases					
Zvt 1 Phase DEG		Value	Zvt 2 Phase DEG		Value
		0.398			0.224
-4.400 (Minimum)	0.000 (Nominal)	4.400 (Maximum)	-2.800 (Minimum)	0.000 (Nominal)	2.800 (Maximum)
Zvt 3 Phase DEG <th>Value</th> <td colspan="2"></td> <td>0.056</td>		Value			0.056
		0.056			0.056
-1.400 (Minimum)	0.000 (Nominal)	1.400 (Maximum)	-1.400 (Minimum)	0.000 (Nominal)	1.400 (Maximum)
Before: 24-Sep-2006 0:46					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Upper Bridle Voltage mode 1					
Zvb 1 Gain MV		Value	Zvb 1 Phase DEG		Value
		0.990			0.449
0.925 (Minimum)	1.000 (Nominal)	1.078 (Maximum)	-4.400 (Minimum)	0.000 (Nominal)	4.400 (Maximum)
Before: 24-Sep-2006 0:46					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB M1-M2 Voltage gains					
ZVM 1 Gain UV		Value	ZVM 2 Gain UV		Value
		0.996			0.992
0.895 (Minimum)	1.000 (Nominal)	1.117 (Maximum)	0.943 (Minimum)	1.000 (Nominal)	1.056 (Maximum)
ZVM 3 Gain UV <th>Value</th> <td colspan="2"></td> <td>0.990</td>		Value			0.990
		0.990			0.990
0.943 (Minimum)	1.000 (Nominal)	1.056 (Maximum)	0.943 (Minimum)	1.000 (Nominal)	1.056 (Maximum)
Before: 24-Sep-2006 0:46					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB M1-M2 Voltage Phases					
ZVM 1 Phase DEG		Value	ZVM 2 Phase DEG		Value
		0.152			1.286
-6.500 (Minimum)	0.000 (Nominal)	6.500 (Maximum)	-3.300 (Minimum)	0.000 (Nominal)	3.300 (Maximum)
ZVM 3 Phase DEG <th>Value</th> <td colspan="2"></td> <td>0.612</td>		Value			0.612
		0.612			0.612
-2.000 (Minimum)	0.000 (Nominal)	2.000 (Maximum)	-2.000 (Minimum)	0.000 (Nominal)	2.000 (Maximum)
Before: 24-Sep-2006 0:46					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB M1-A0* Voltage gains					
ZVH 1 Gain UV		Value	ZVH 2 Gain UV		Value
ZVH 3 Gain UV <th>Value</th> <td colspan="2"></td> <td></td>		Value			

HILTB A0*-A0** Diff. Voltage mode 1			HILTB A0*-A0** Diff. Voltage mode 2			HILTB A0*-A0** Diff. Voltage mode 3		
	0.999			0.999			0.995	
0.962 (Minimum) (Nominal)	1.000 (Maximum)	1.039	0.864 (Minimum) (Nominal)	1.000 (Maximum)	1.154	0.864 (Minimum) (Nominal)	1.000 (Maximum)	1.154

Before: 24-Sep-2006 0:46

HILTB Azimuthal Laterolog Sonde B Wellsite Calibration						
HALSB M1-A0* Voltage Phases						
ZVH 1 Phase DEG	Value	ZVH 2 Phase DEG	Value	ZVH 3 Phase DEG	Value	
	0.292		1.870		1.001	
-6.500 (Minimum) (Nominal)	0.000 (Maximum)	6.500	-3.300 (Minimum) (Nominal)	0.000 (Maximum)	3.300	
				-2.000 (Minimum) (Nominal)	0.000 (Maximum)	2.000

Before: 24-Sep-2006 0:46

HILTB Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Aux Voltage gains					
ZVA 1 Gain MV	Value	ZVA 2 Gain MV	Value	ZVA 3 Gain MV	Value
	1.056		1.043		1.014
0.905 (Minimum) (Nominal)	1.000 (Maximum)	1.103	0.866 (Minimum) (Nominal)	1.000 (Maximum)	1.151
			0.866 (Minimum) (Nominal)	1.000 (Maximum)	1.151

Before: 24-Sep-2006 0:46

HILTB Azimuthal Laterolog Sonde B Wellsite Calibration						
HALSB Aux Voltage Phases						
ZVA 1 Phase DEG	Value	ZVA 2 Phase DEG	Value	ZVA 3 Phase DEG	Value	
	1.262		-0.330		0.160	
-4.100 (Minimum) (Nominal)	0.000 (Maximum)	4.100	-2.300 (Minimum) (Nominal)	0.000 (Maximum)	2.300	
				-1.000 (Minimum) (Nominal)	0.000 (Maximum)	1.000

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HILTB Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB A0*-A0** Diff. Voltage mode 1					
ZVD 1 Gain UV	Value	ZVD 1 Phase DEG	Value		
	0.992		0.075		
0.874 (Minimum) (Nominal)	1.000 (Maximum)	1.147	-6.300 (Minimum) (Nominal)	0.000 (Maximum)	6.300

Before: 24-Sep-2006 0:46

HILTB Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB A0*-A0** Diff. Voltage mode 2					
ZVD 2 Gain UV	Value	ZVD 2 Phase DEG	Value		
	0.981		1.051		
0.842 (Minimum) (Nominal)	1.000 (Maximum)	1.187	-3.300 (Minimum) (Nominal)	0.000 (Maximum)	3.300

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HILTB Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB A0*-A0** Diff. Voltage mode 3A					
ZVD 3A Gain UV	Value	ZVD 3A Phase DEG	Value		
	0.984		0.412		
0.842 (Minimum) (Nominal)	1.000 (Maximum)	1.187	-2.000 (Minimum) (Nominal)	0.000 (Maximum)	2.000

Before: 24-Sep-2006 0:46

HILTB Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB A0*-A0** Diff. Voltage mode 3B					
ZVD 3B Gain UV	Value	ZVD 3B Phase DEG	Value		
	1.005		0.340		
0.845 (Minimum) (Nominal)	1.000 (Maximum)	1.183	-2.000 (Minimum) (Nominal)	0.000 (Maximum)	2.000

Before: 24-Sep-2006 0:46

HILTB Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB vertical Voltage mode 1					
ZVV 1 Gain UV	Value	ZVV 1 Phase DEG	Value		
	0.993		1.156		
0.936 (Minimum) (Nominal)	1.000 (Maximum)	1.065	-4.600 (Minimum) (Nominal)	0.000 (Maximum)	4.600

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HILTB Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB vertical Voltage mode 2					
ZVV 2 Gain UV	Value	ZVV 2 Phase DEG	Value		
	0.985		2.401		
0.895 (Minimum) (Nominal)	1.000 (Maximum)	1.112	-2.800 (Minimum) (Nominal)	0.000 (Maximum)	2.800

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HILTB Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Azimuthal Voltages mode 1					
Idx	Az 1 Gain UV	Value	Idx	Az 1 Phase DEG	Value
0		0.997	0		-0.163
1		0.997	1		-0.067
2		0.993	2		0.086
3		0.999	3		-0.007
4		0.999	4		-0.109
5		0.994	5		0.048
6		0.994	6		0.106
7		0.990	7		-0.176

HILTB Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Azimuthal Voltages mode 2					
Idx	Az 2 Gain UV	Value	Idx	Az 2 Phase DEG	Value
0		0.985	0		0.901
1		0.985	1		1.031
2		0.981	2		1.005
3		0.987	3		1.006
4		0.987	4		1.036
5		0.982	5		0.988
6		0.982	6		1.042
7		0.977	7		0.952

Idx	Az 3A Gain UV	Value	Idx	Az 3A Phase DEG	Value
8		0.994	8		0.064
9		0.995	9		-0.050
10		0.992	10		-0.007
11		0.997	11		-0.079
0.874 (Minimum)		1.000 (Nominal)	1.147 (Maximum)		
-6.300 (Minimum)		0.000 (Nominal)	6.300 (Maximum)		

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Idx	Az 3B Gain UV	Value	Idx	Az 3B Phase DEG	Value
8		0.982	8		1.050
9		0.982	9		1.006
10		0.980	10		1.040
11		0.985	11		1.008
0.842 (Minimum)		1.000 (Nominal)	1.187 (Maximum)		
-3.300 (Minimum)		0.000 (Nominal)	3.300 (Maximum)		

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HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Azimuthal Voltages mode 3A					
Idx	Az 3A Gain UV	Value	Idx	Az 3A Phase DEG	Value
0		0.988	0		0.322
1		0.988	1		0.409
2		0.984	2		0.419
3		0.990	3		0.394
4		0.990	4		0.383
5		0.986	5		0.377
6		0.985	6		0.426
7		0.981	7		0.347
8		0.986	8		0.447
9		0.986	9		0.400
10		0.984	10		0.415
11		0.989	11		0.368
0.842 (Minimum)		1.000 (Nominal)	1.187 (Maximum)		
-2.000 (Minimum)		0.000 (Nominal)	2.000 (Maximum)		

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HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Azimuthal Voltages mode 3B					
Idx	Az 3B Gain UV	Value	Idx	Az 3B Phase DEG	Value
0		1.003	0		0.057
1		1.010	1		0.468
2		1.004	2		0.262
3		1.010	3		0.358
4		1.012	4		0.389
5		1.002	5		0.290
6		1.006	6		0.324
7		0.997	7		0.283
8		1.007	8		0.386
9		1.005	9		0.352
10		1.005	10		0.366
11		1.008	11		0.388
0.845 (Minimum)		1.000 (Nominal)	1.183 (Maximum)		
-2.000 (Minimum)		0.000 (Nominal)	2.000 (Maximum)		

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High resolution Integrated Logging Tool-DTS / Equipment Identification		
Primary Equipment:		
HILT high-Resolution Mechanical Sonde	HRMS - B	788
HILT Rxo Gamma-ray Device	HRGD - B	754
HILT Micro Cylindrically Focused Log Dev	MCFL -	
GR Logging Source	GLS - J	3820
HILT High Res. Control Cartridge	HRCC - B	868
HILT Gamma-Ray Neutron Sonde-DTS	HGNS - B	1767
HGNS Gamma-Ray Device	HGR -	
HGNS Neutron Detector with Alpha Source	HCNT -	
Auxiliary Equipment:		
Neutron Calibration Tank	NCT - B	
Gamma Source Radioactive	GSR - U	2006
HGNS Housing	HGNH - B	1778

High resolution Integrated Logging Tool-DTS Wellsite Calibration												
Stab Measurement Summary												
Phase	BS Window Ratio		Value	Phase	SS Window Ratio		Value	Phase	LS Window Ratio		Value	
Before			0.7055	Before			0.5116	Before			0.2945	
0.6714 (Minimum)			0.7067 (Nominal)	0.7421 (Maximum)			0.4828 (Minimum)			0.5082 (Nominal)	0.5336 (Maximum)	
0.2762 (Minimum)			0.2907 (Nominal)	0.3053 (Maximum)			10570 (Minimum)			11120 (Nominal)	11680 (Maximum)	
Phase	BS Window Sum CPS		Value	Phase	SS Window Sum CPS		Value	Phase	LS Window Sum CPS		Value	
Before			9018	Before			11100	Before			1050	
8562 (Minimum)			9013 (Nominal)	9463 (Maximum)			1004 (Minimum)			1057 (Nominal)	1110 (Maximum)	

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High resolution Integrated Logging Tool-DTS Wellsite Calibration											
Photo-multiplier High Voltages Calibrations											
Phase	BS PM High Voltage (Command) V		Value	Phase	SS PM High Voltage (Command) V		Value	Phase	LS PM High Voltage (Command) V		Value
Before				Before				Before			

Before				1792	Before				1606	Before				1699
1704 (Minimum)	1804 (Nominal)	1904 (Maximum)			1480 (Minimum)	1580 (Nominal)	1680 (Maximum)			1587 (Minimum)	1687 (Nominal)	1787 (Maximum)		

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High resolution Integrated Logging Tool-DTS Wellsite Calibration											
Crystal Quality Resolutions Calibration											
Phase	BS Crystal Resolution %		Value	Phase	SS Crystal Resolution %		Value	Phase	LS Crystal Resolution %		Value
Before			13.13	Before			10.36	Before			9.890
	12.20 (Minimum)	13.20 (Nominal)	14.20 (Maximum)		9.012 (Minimum)	10.01 (Nominal)	11.01 (Maximum)		8.740 (Minimum)	9.740 (Nominal)	10.74 (Maximum)

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High resolution Integrated Logging Tool-DTS Wellsite Calibration											
MCFL Calibration											
Phase	Raw B0 Resistivity OHMM		Value	Phase	Raw B1 Resistivity OHMM		Value	Phase	Raw B2 Resistivity OHMM		Value
Before			3860	Before			3819	Before			3814
	3565 (Minimum)	3875 (Nominal)	4185 (Maximum)		3524 (Minimum)	3830 (Nominal)	4136 (Maximum)		3524 (Minimum)	3830 (Nominal)	4136 (Maximum)

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High resolution Integrated Logging Tool-DTS Wellsite Calibration							
HILT Caliper Calibration							
Phase	HILT Caliper Zero Measurement IN		Value	Phase	HILT Caliper Plus Measurement IN		Value
Before			8.027	Before			12.26
	6.000 (Minimum)	8.000 (Nominal)	10.00 (Maximum)		9.000 (Minimum)	12.00 (Nominal)	15.00 (Maximum)

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High resolution Integrated Logging Tool-DTS Wellsite Calibration											
Detector Calibration											
Phase	Gamma Ray Background GAPI		Value	Phase	Gamma Ray (Jig - Bkg) GAPI		Value	Phase	Gamma Ray (Calibrated) GAPI		Value
Before			29.85	Before			150.9	Before			162.0
	0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)		137.2 (Minimum)	150.9 (Nominal)	164.6 (Maximum)		147.0 (Minimum)	162.0 (Nominal)	177.0 (Maximum)

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High resolution Integrated Logging Tool-DTS Wellsite Calibration							
Zero Measurement							
Phase	CNTC Background CPS		Value	Phase	CFTC Background CPS		Value
Master			28.32	Master			31.43
Before			28.41	Before			30.74
	5.000 (Minimum)	28.32 (Nominal)	40.00 (Maximum)		5.000 (Minimum)	31.43 (Nominal)	40.00 (Maximum)

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High resolution Integrated Logging Tool-DTS Wellsite Calibration											
Ratio Measurement											
Phase	Thermal Near Corr. (Tank) CPS		Value	Phase	Thermal Far Corr. (Tank) CPS		Value	Phase	CNTC/CFTC (Tank)		Value
Master			5009	Master			2098	Master			2.388
	4700 (Minimum)	5800 (Nominal)	6900 (Maximum)		1900 (Minimum)	2400 (Nominal)	2900 (Maximum)		2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)

Master: 14-Aug-2006 13:12

High resolution Integrated Logging Tool-DTS Wellsite Calibration		
Accelerometer Calibration		
Phase	Z-Axis Acceleration M/S2	Value
Before		9.798
	9.610 (Minimum)	9.810 (Nominal)
		10.01 (Maximum)

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Primary Equipment:

DTC-H Auxiliary Cartridge
DTC-H Telemetry CartridgeDTCH - A
DTCH - A

8944

Auxiliary Equipment:

DTCH Telemetry Cartridge Housing

ECH - KC

10020

Company: **Beach Petroleum Ltd, Santos Ltd
& Origin Energy Resources Ltd**

Schlumberger

Well: **Glenaire-1**

Field: **Exploration**

Rig: **Ensign Rig 32**

Country: **Australia**

HALS-BHC-PEX

Resistivity-Sonic-GR-SI

Scale 1:200