Schlumberger

Company: **International Ocean Discovery Program**

Well: **Expedition 390, Site U1556B**
Field: **South Atlantic Transect 1**
Rig: **JOIDES Resolution** Country: **South Africa**

Rig: JOIDES Resolution
Field: South Atlantic Transect 1
Location: Latitude: S 30.94207 Deg
Well: Expedition 390, Site U1556B
Company: International Ocean Discovery Pr

High Resolution Laterolog (HRLA)
Litho Density (HLDS)
Natural Gamma / MSS (HNGS)

LOCATION

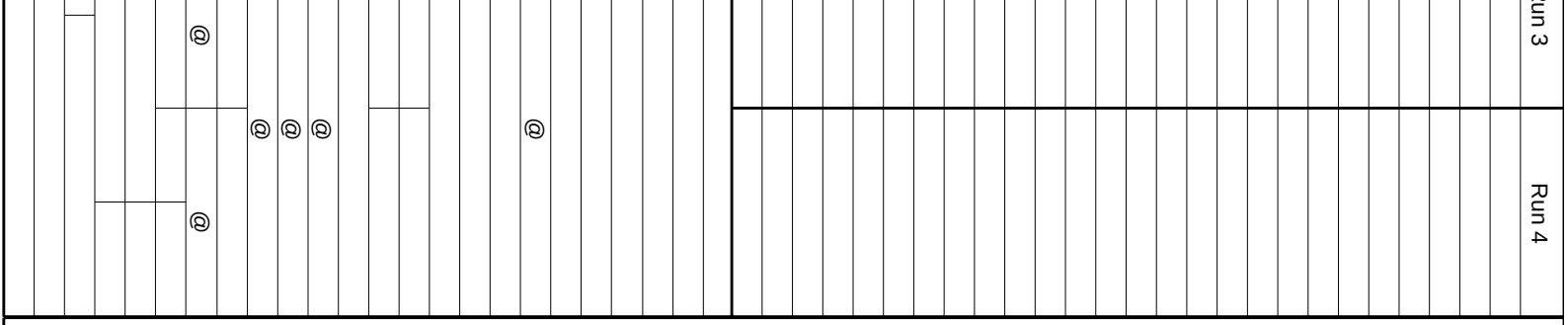
Latitude: S 30.94207 Deg
Longitude: W 26.69912 Deg

Elev.: K.B. 0.00 m
G.L. −5013.10 m
D.F. 0.00 m

Permanent Datum: Sea Floor — Elev.: −5013.10 m
Log Measured From: Rig Floor — 5013.10 m above Perm. Datum
Drilling Measured From: Rig Floor

Ocean:	Max. Well Deviation	Longitude	Latitude
Atlantic	0 deg	−26.69912	−30.94207

	Run 1	Run 2	Run 1	Run 2
Logging Date	5−May−2022			
Run Number	1			
Depth Driller	5645.3 m			
Schlumberger Depth	5641 m			
Bottom Log Interval	5641 m			
Top Log Interval	5013.1 m			
Casing Driller Size @ Depth	10.750 in @ 5297 m	@		@
Casing Schlumberger	5298 m			
Bit Size	9.875 in			
Type Fluid In Hole	Seawater			
MUD Density / Viscosity	1.03 g/cm3			
MUD Fluid Loss / PH		8.07		
MUD Source Of Sample	Mudpit			
RM @ Measured Temperature	0.220 ohm.m @ 23 degC	@	@	@
RMF @ Measured Temperature	@		@	@
RMC @ Measured Temperature	@		@	@
Source RMF / RMC	N/A	N/A		
RM @ MRT / RMF @ MRT	0.301 @ 11	@ 11	@	@
Maximum Recorded Temperatures	11 degC			
Circulation Stopped / Time	3−May−2022	9:00		
Logger On Bottom / Time	5−May−2022	14:30		
Unit Number / Location	627314	Larose, LA		
Recorded By	C. Furman			
Witnessed By	A. Slagle			



OTHER SERVICES1

OS1: FMS/DSI

OS2: UBI / APS

REMARKS: RUN NUMBER 1

Hole drilled with RCB BHA at 9 7/8" BS

Casing Shoe at 5297.0 mbrf

Drill pipe set at 5054.0 mbrf.

Depth recorded from drill floor; logs presented as−logged without depth corrections or shifts, as per client instructions.

All logs presented in wireline measured depth below rig floor (MDBRF).

Caliper opened during upward passes; closed inside pipe and while logging down.

Hole size corrections made using caliper measurements for upward passes bit size

used for downlog corrections.

AHC used from TD then switched off to facilitate pipe entry.

Caliper closed prior to shutting off compensator and entering pipe or casing.

Caliper offset adjusted to read nominal casing ID of 10.05in. inside casing; OH caliper corrected using same offset.

RUN 1

SERVICE ORDER #:

PROGRAM VERSION: 19C0−187

FLUID LEVEL:

LOGGED INTERVAL	START	STOP

RUN 2

SERVICE ORDER #:

PROGRAM VERSION:

FLUID LEVEL:

LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

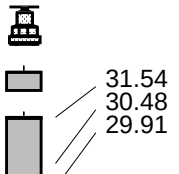
RUN 1

SURFACE EQUIPMENT

GSR−U 6098

WITM (EDTS)−A

DOWNHOLE EQUIPMENT



RUN 2

EDTC−B 8529
EDTG−A/B 77693

EDTCB Ele — 29.56

HNGS−BA — 29.56
HNGS−BA 177
HNSH−BA 174

Upper_1 — 28.86
Lower_2 — 28.65

HNGC−B — 27.06
HNGH−A 115

HNGC Stat — 26.53

LDSC−B — 26.00
LDSH−A 303

LDSC Stat — 25.46

HLDS — 24.93
HLDV−D 35
HLDS−D 35
GSR−ZA 2945
HLDP−C 35
HEH−H 35

Caliper
SS LS Status — 20.87

AH−184_#1737 — 20.11

AH−ECHMRA_#4999 — 19.50
AH−ECHMRA_#4999 4999

AH−184_#1701 — 16.61

AH−MCD — 16.00
AH−MCD 82

HRLT−B — 13.72
HRUH−B 975
HRUC−B 964
HRLS−B 768
HRLH−B 1869
HRLC−B 1897
AH−270 1708

High Res. — 10.14

AH−MCD1 — 6.35
AH−MCD1 1

AH−230 — 4.07

MSS_LDEO−A — 3.67
ELIC−A 1
MSS_LDEO−A 1

Hi−Res — 3.36

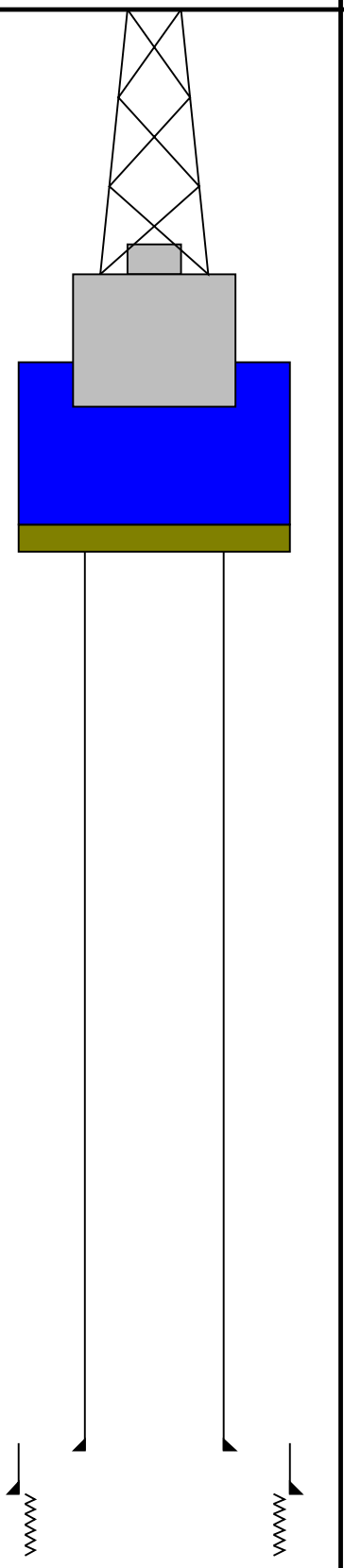
Dual Coil
DF ACCZ — 0.39
Tension HV — 0.00

TOOL ZERO

MAXIMUM STRING DIAMETER 3.75 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
Kelly Bushing Elevation			0.0
Derrick Floor Elevation			0.0
Mean Sea Level			11.0



MD	OD	ID	
0.0	5.500	4.125	Mean Sea Level
5054.0	5.500	4.125	Bit
5013.0	10.750	9.900	Sea Bed
5297.0	10.750	9.900	Casing Shoe
5297.0	9.875		Open Hole
5645.3	9.875		TD – Driller

Schlumberger

Downlog

MAXIS Field Log

Company: International Ocean Discovery Program **Well: Expedition 390, Site U1556B**

Input DLIS Files

DEFAULT	**Flip_MSS_LDEO_HRLA_035LUP**		**PRODUCER**	**05−May−2022 09:12**	**5610.8 M**	**4976.6 M**

Output DLIS Files

DEFAULT	**MSS_LDEO_HRLA_LDL_068PUP**	**FN:79**	**PRODUCER**	**06−May−2022 03:25**	**5610.8 M**	**4976.6 M**

OP System Version: 19C0−187

MSS_LDEO−A	**19C0−187**	**HRLT−B**	**19C0−187**
HLDS	**19C0−187**	**LDSC−B**	**19C0−187**
HNGC−B	**19C0−187**	**HNGS−BA**	**19C0−187**
EDTC−B	**SKK−5169−EDTCB**		

PIP SUMMARY

Time Mark Every 60 S

HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 100

Area1
From HCGR to HSGR

HNGS Computed Gamma Ray (HCGR)
0 (GAPI) 100

HNGS Borehole Potassium (HBHK)
−0.01 (V/V) 0.01

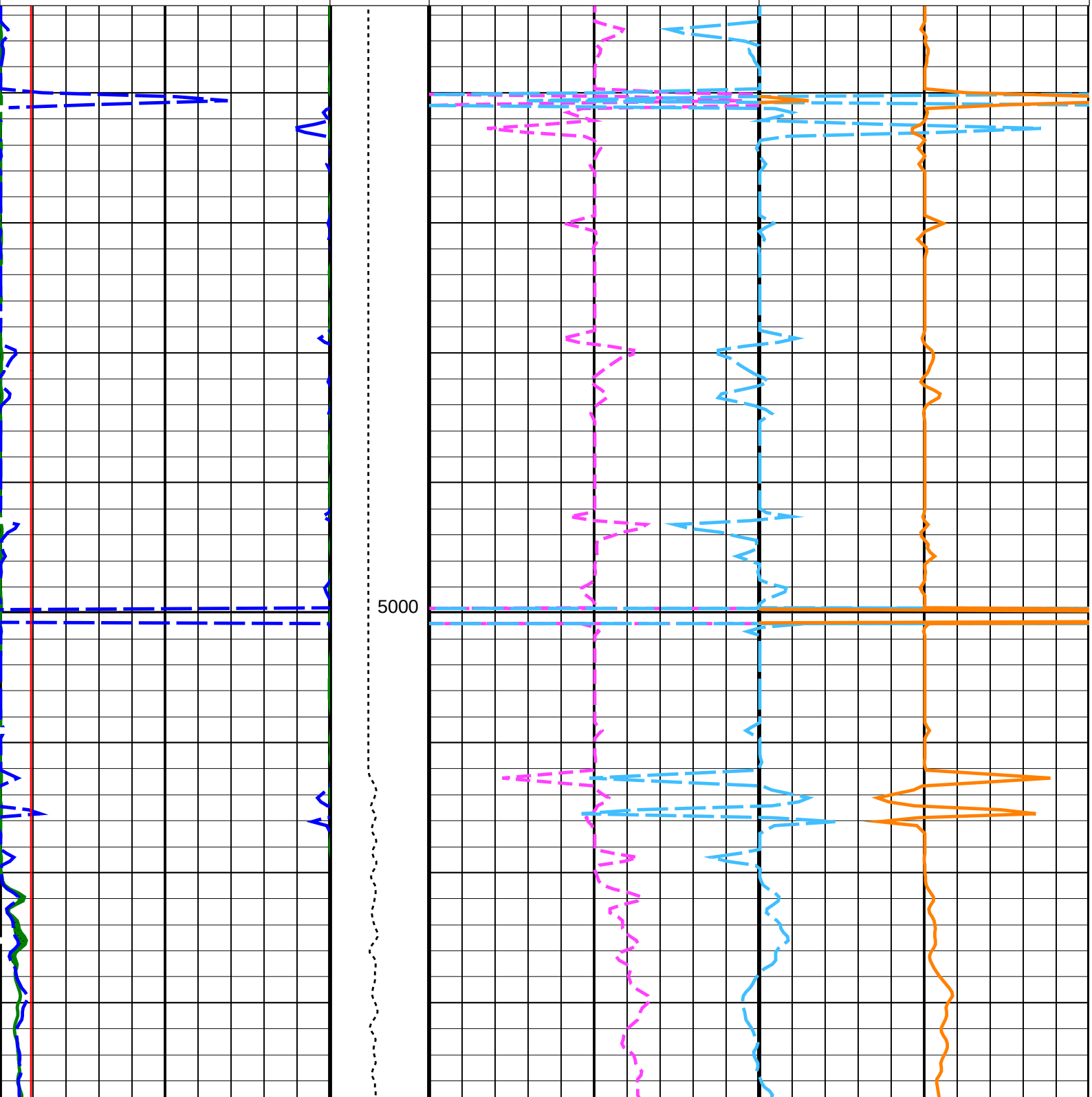
HNGS Uranium (HURA)
−5 (PPM) 5

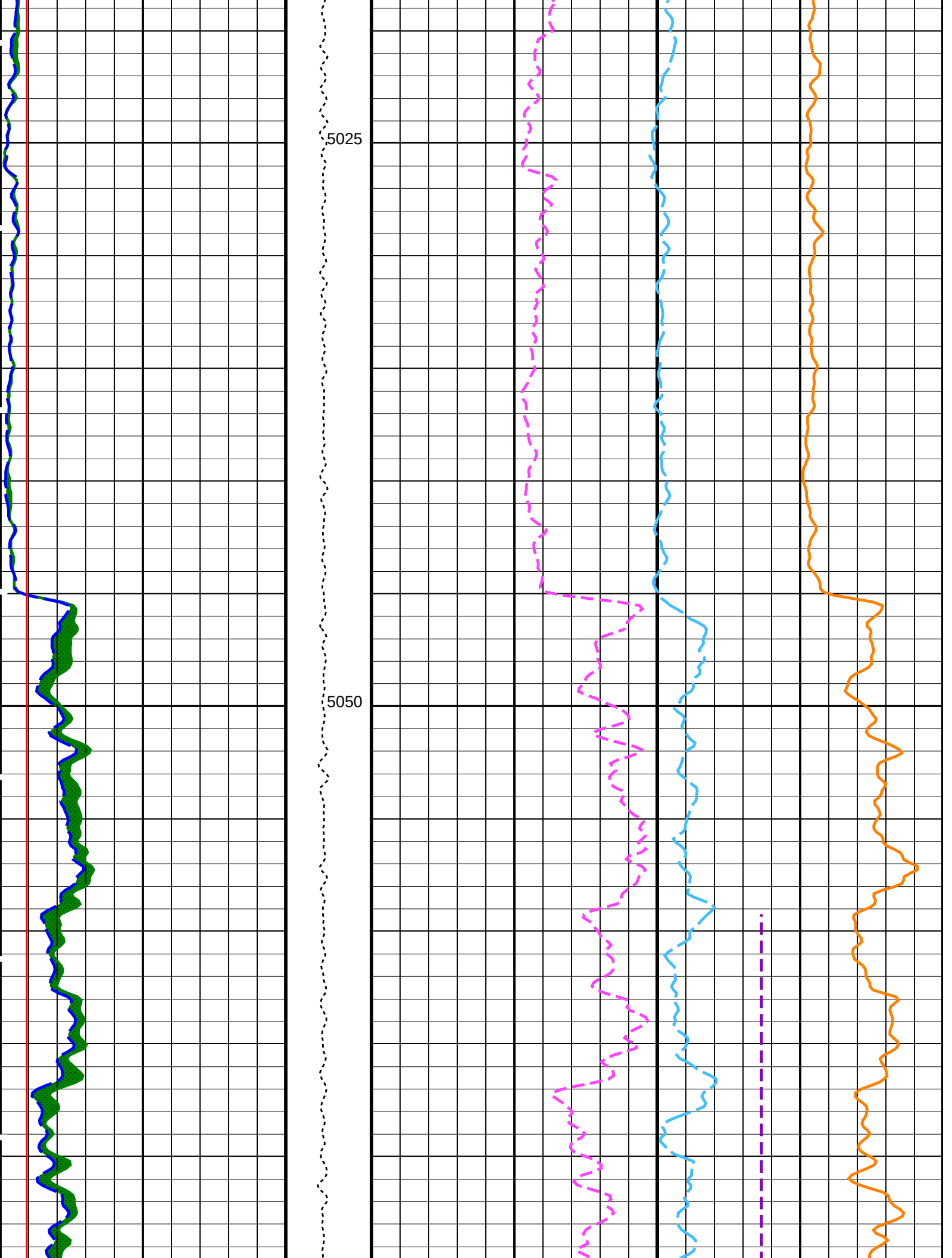
HLDS Caliper (LCAL)
0 (IN) 20

Tension (TENS) (LBF)
10000 0

HNGS Thorium (HTHO)
−5 (PPM) 5

HNGS Potassium (HFK)
−0.01 (V/V) 0.01

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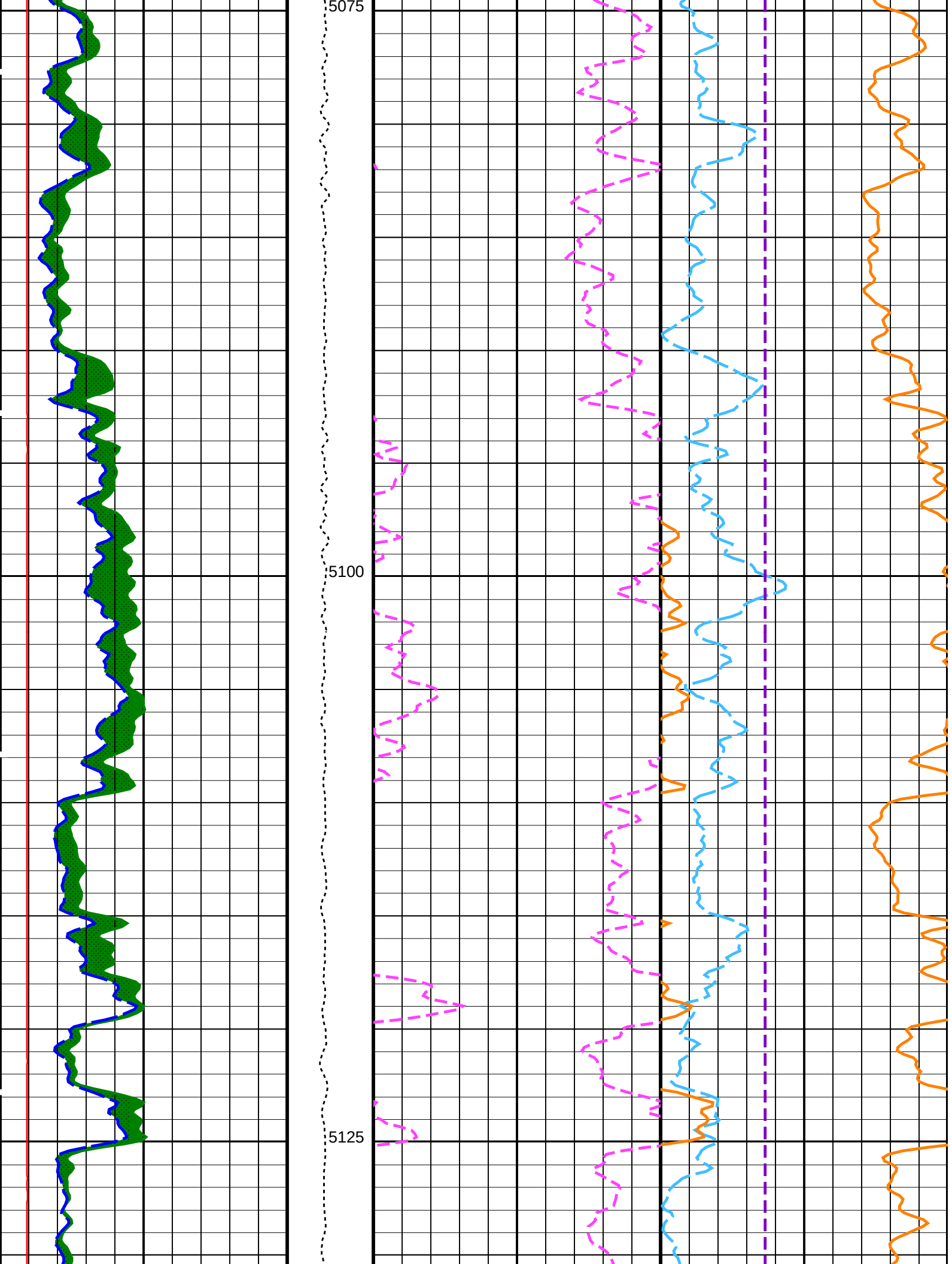
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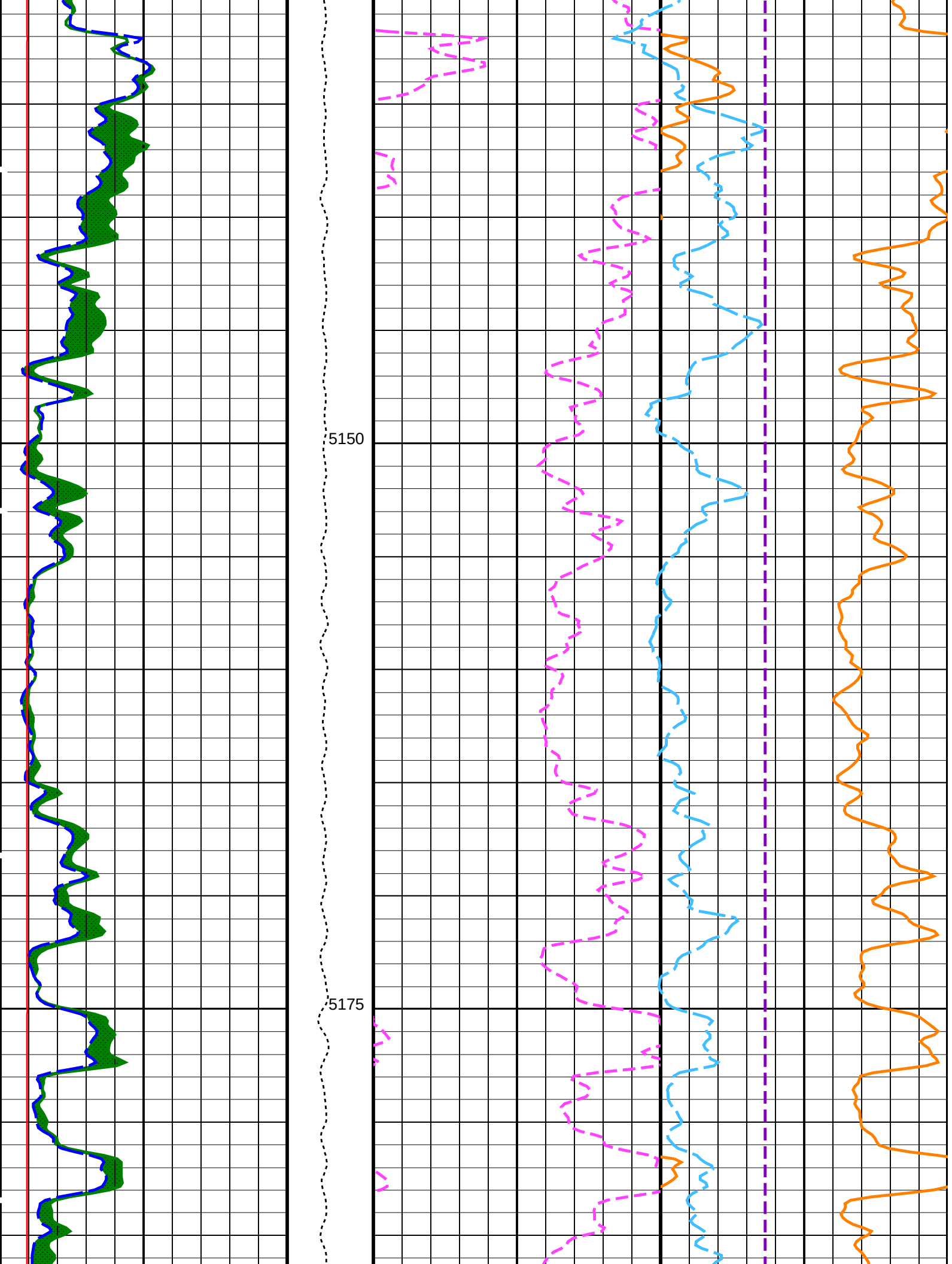
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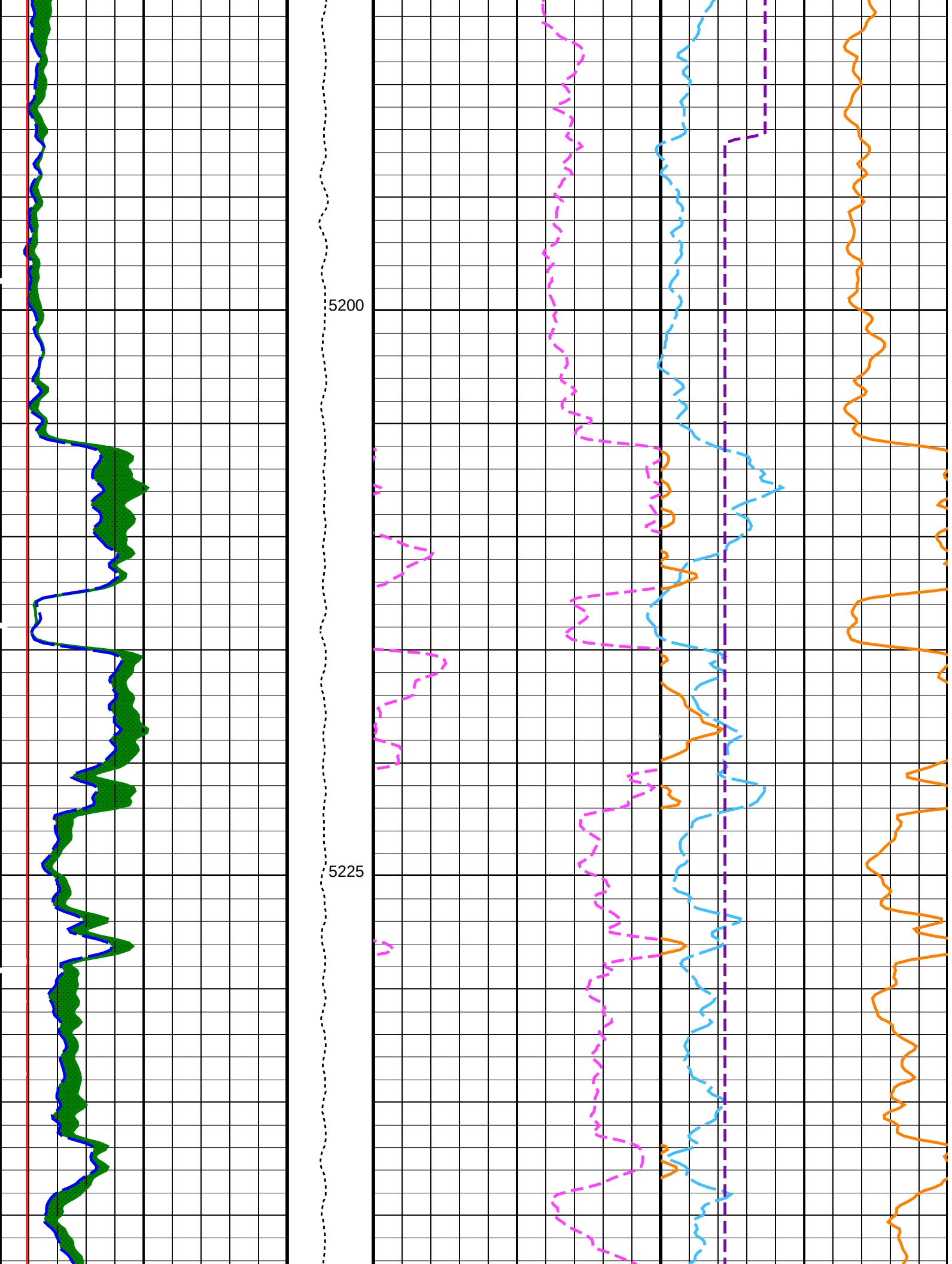
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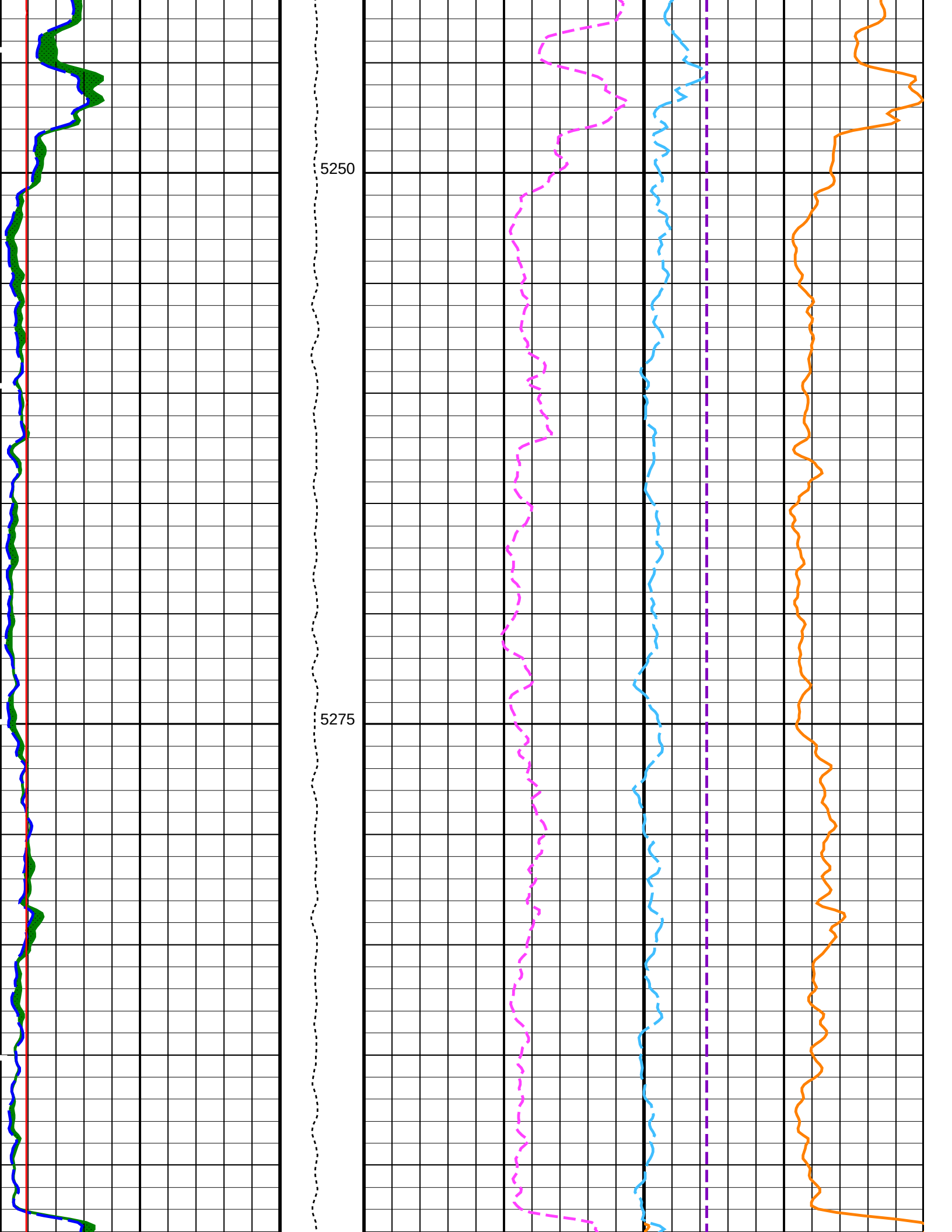
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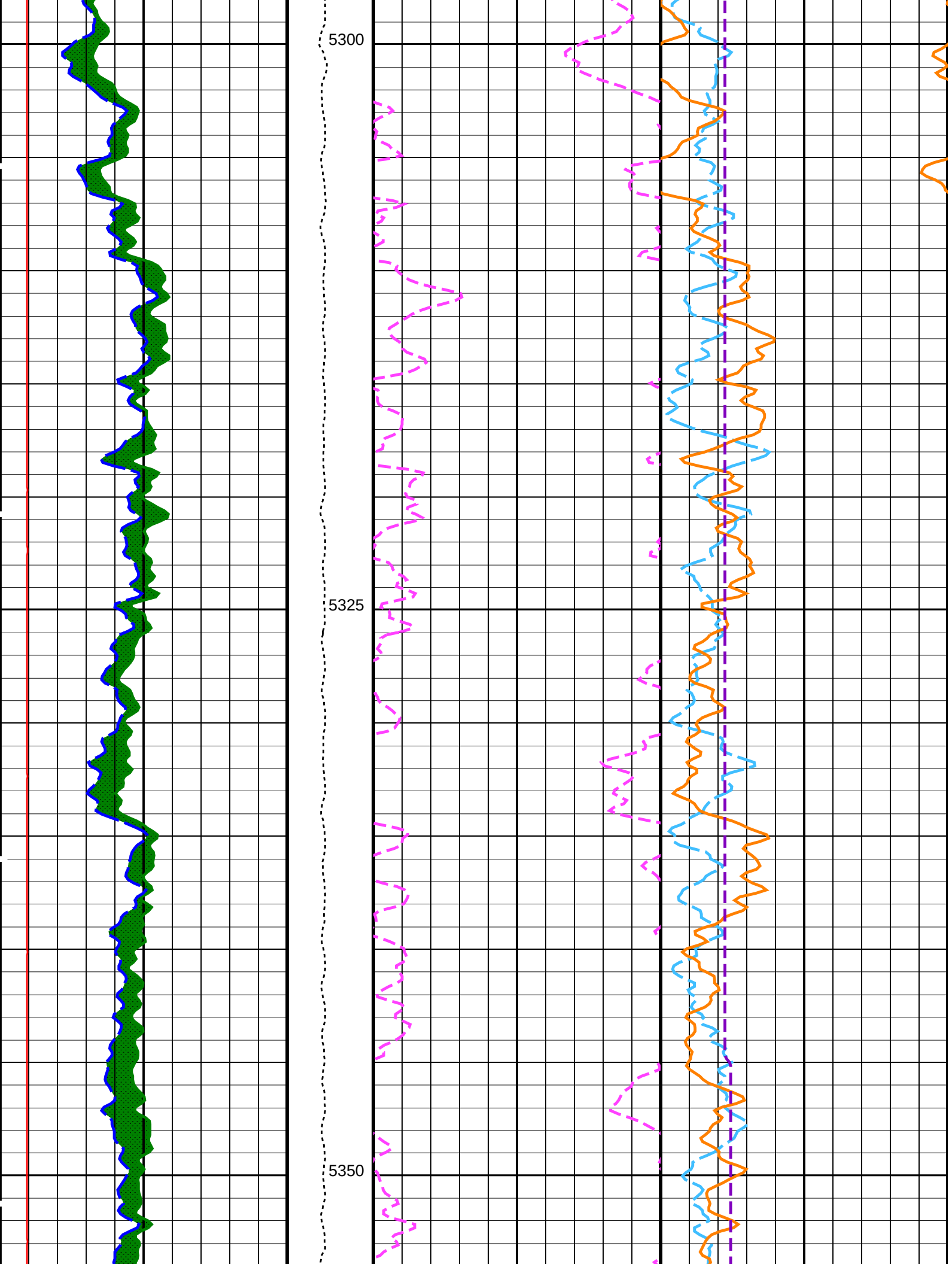
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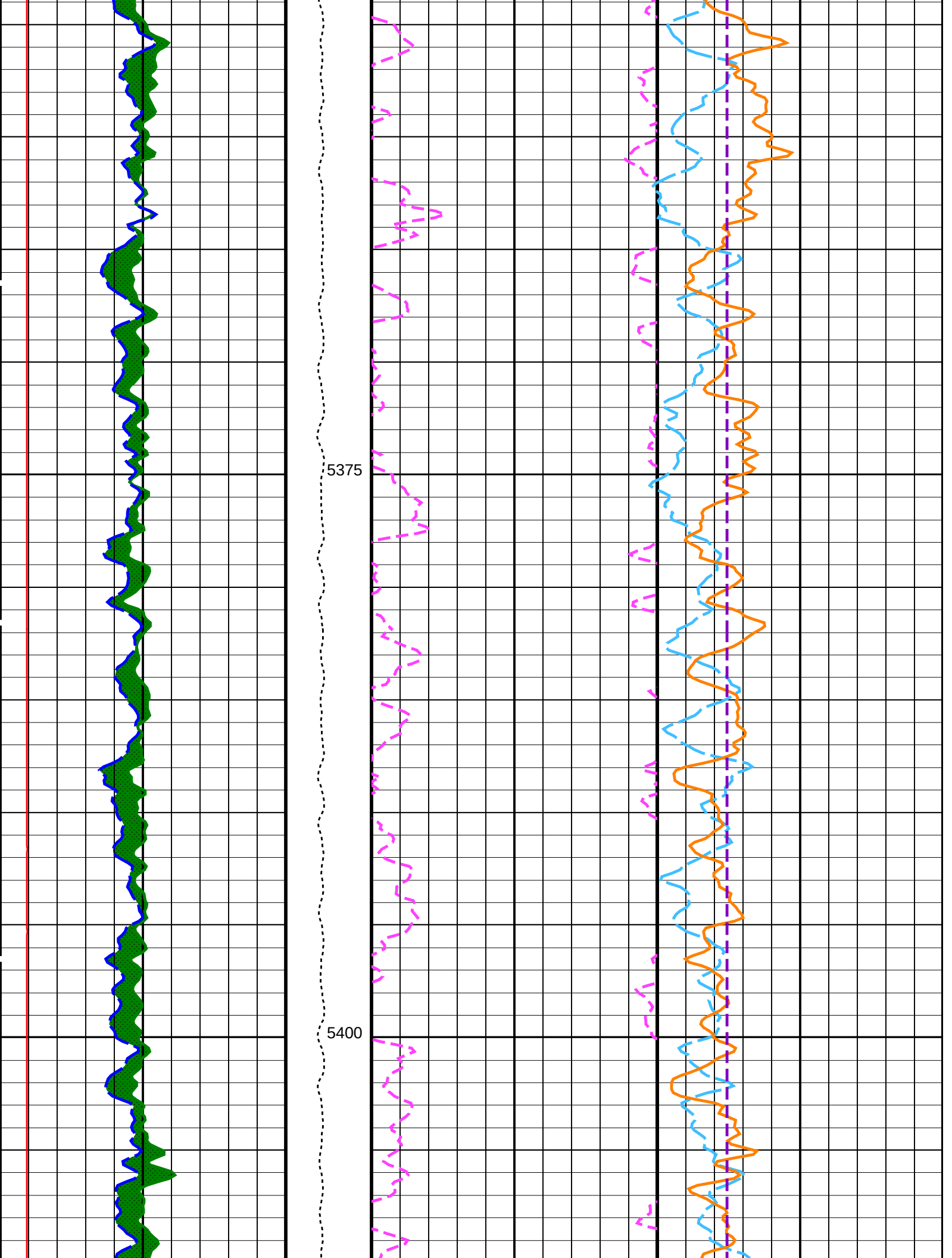
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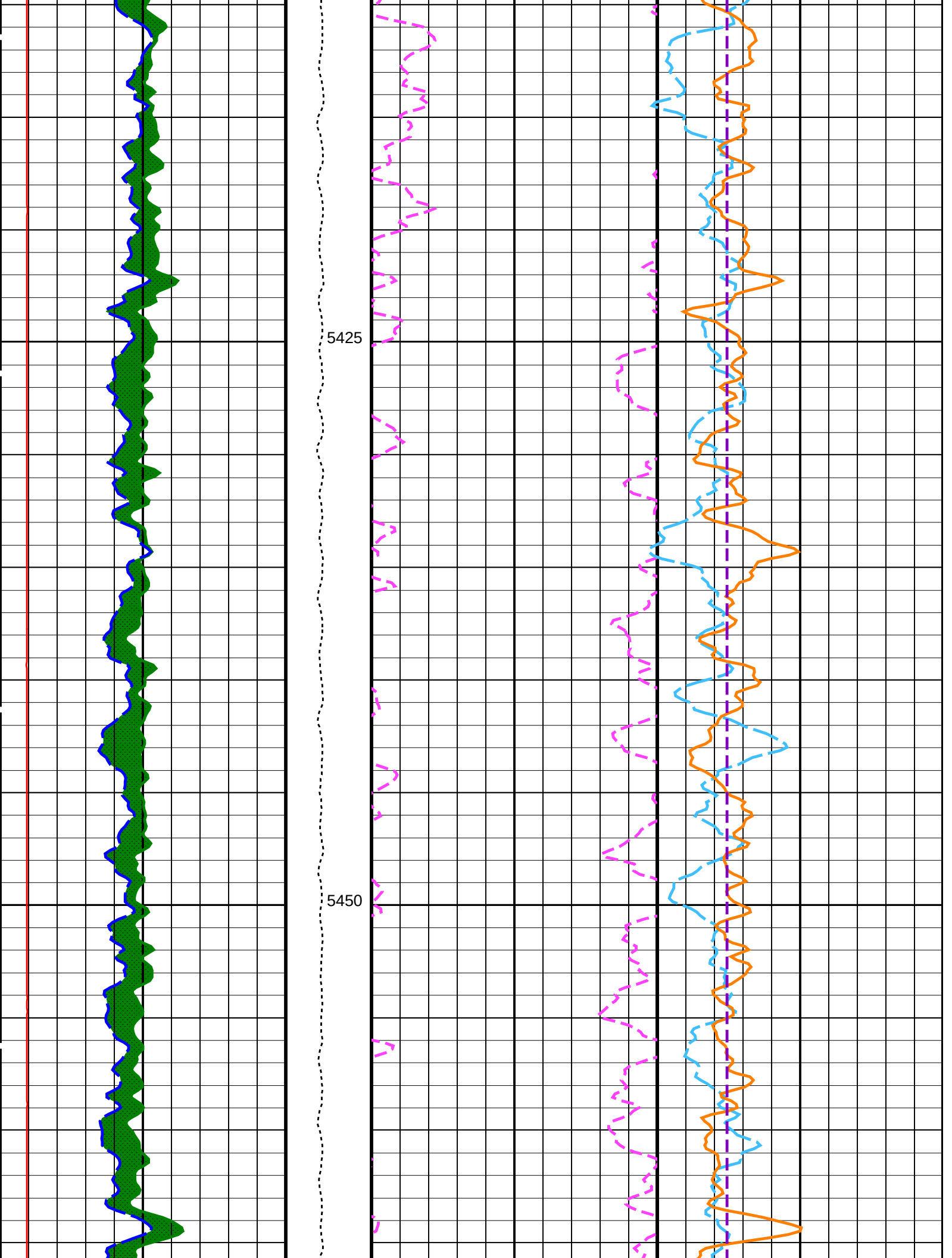
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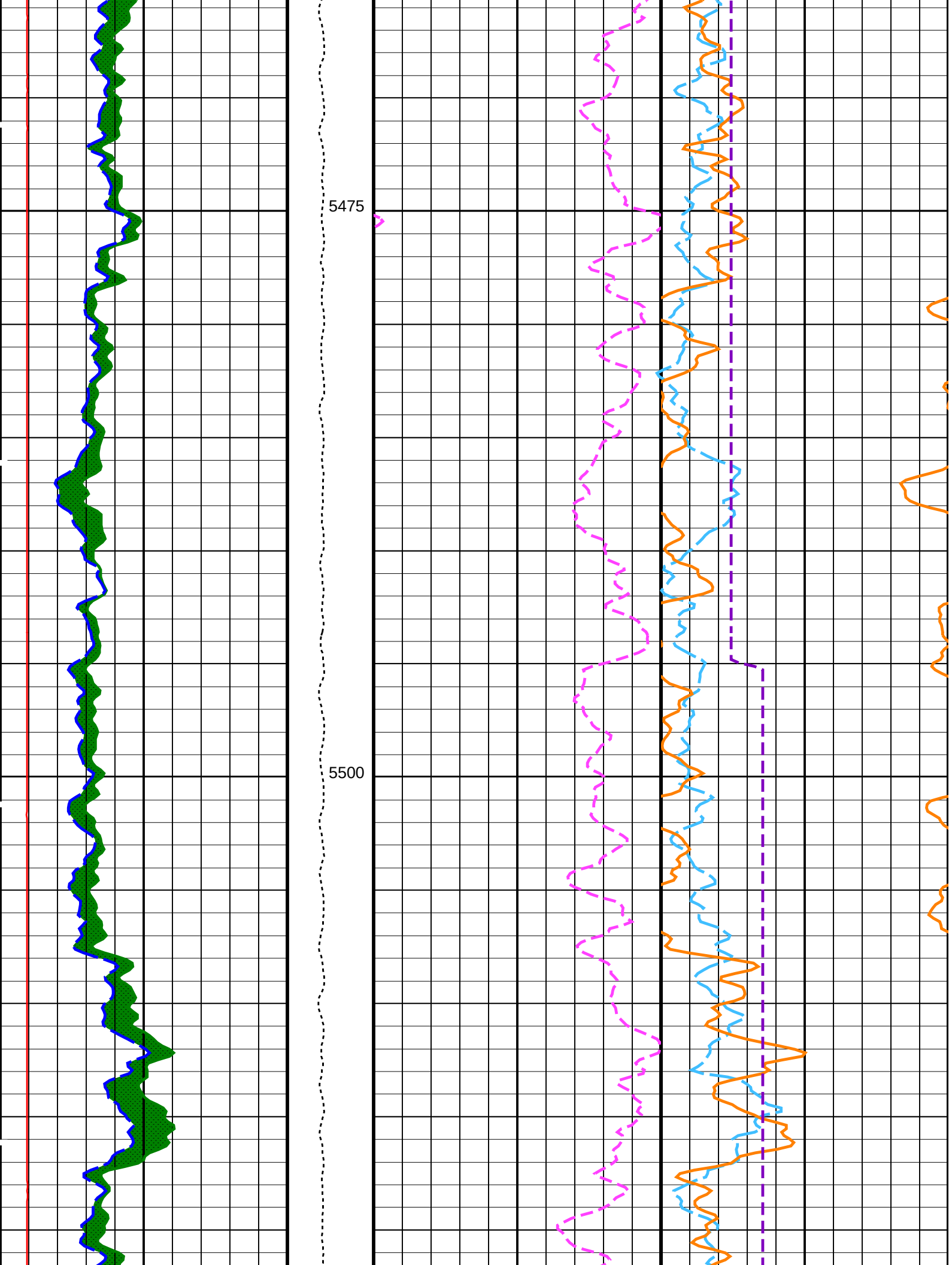
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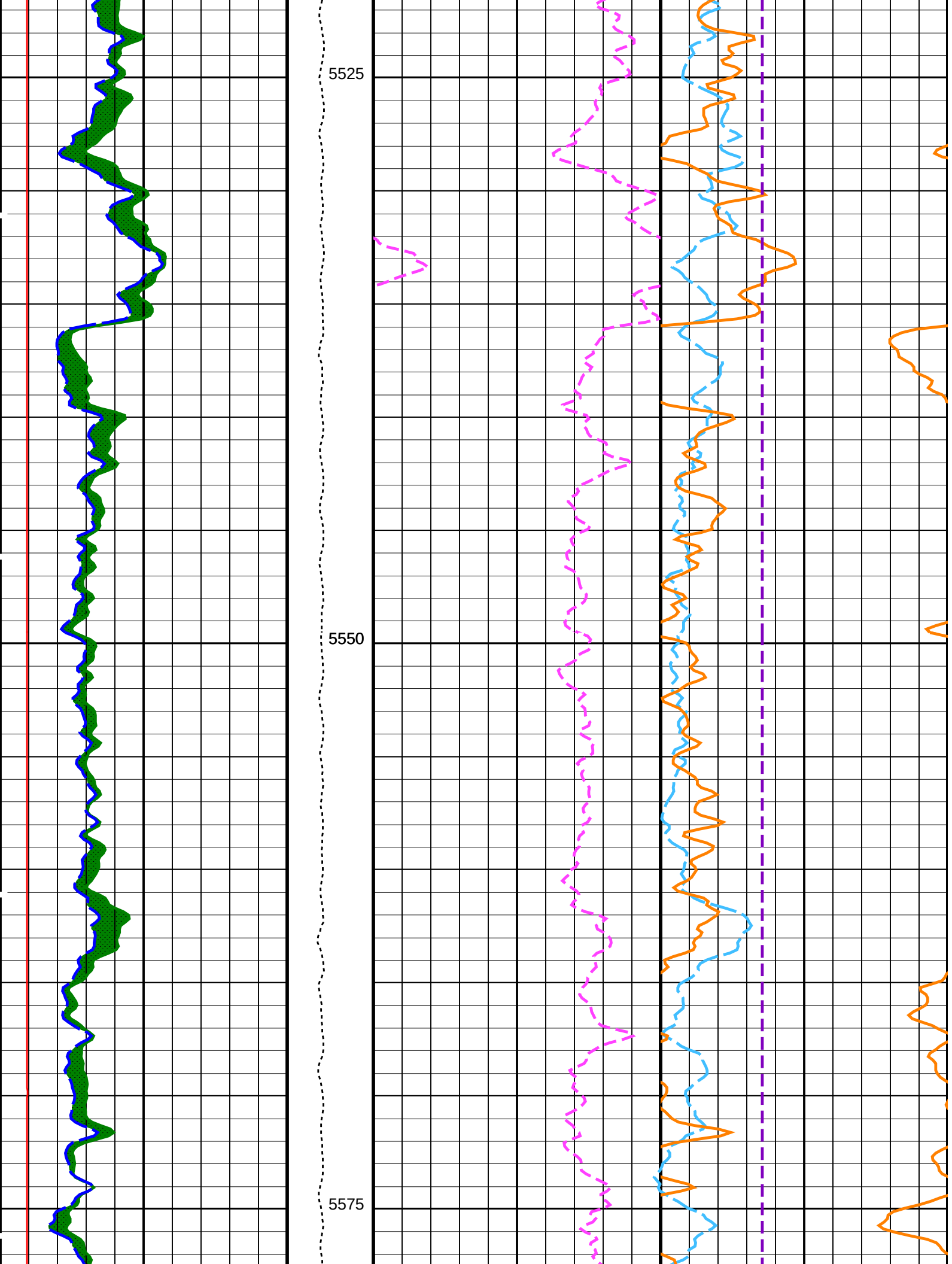
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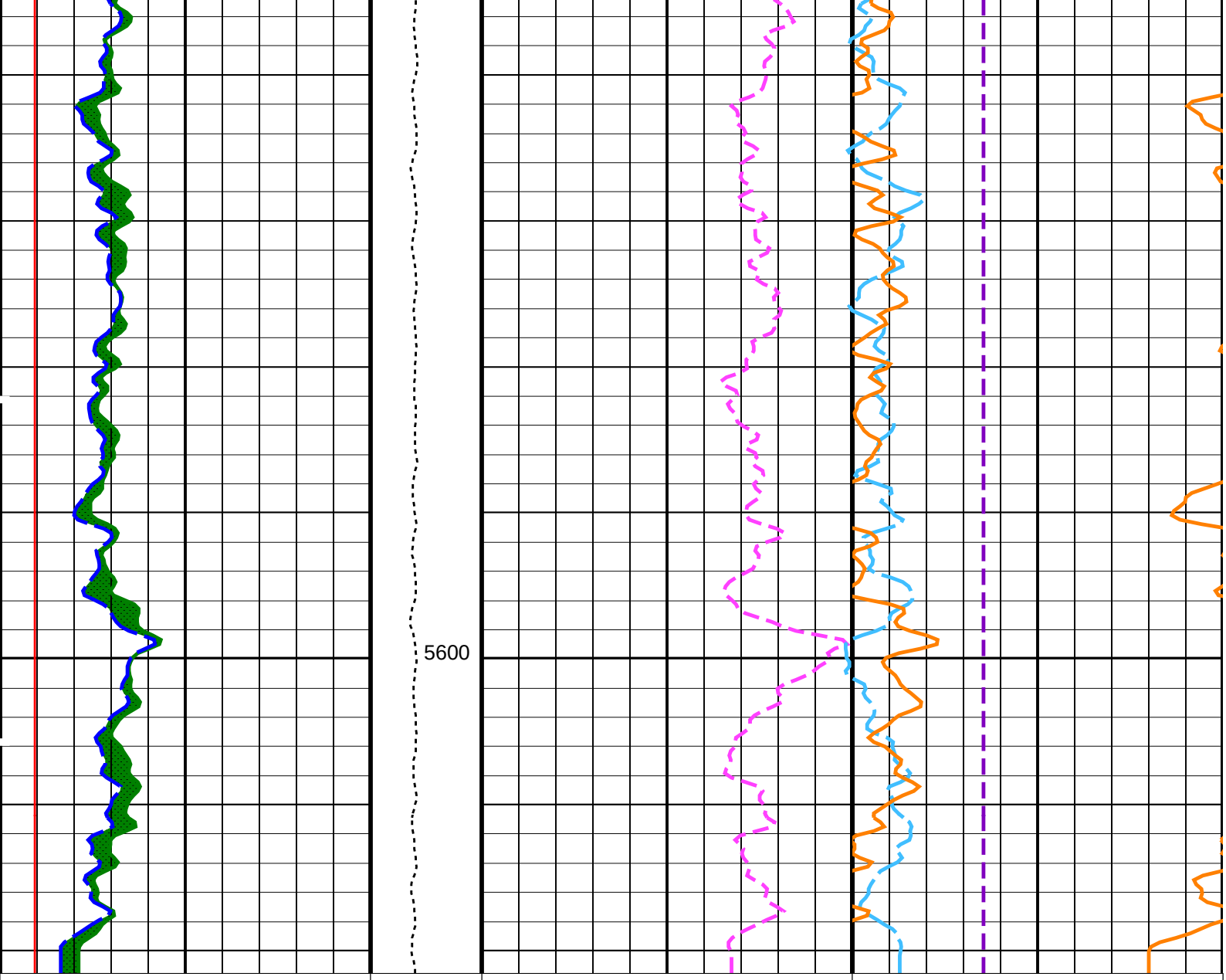


HLDS Caliper (LCAL)
0 (IN) 20

Tension (TENS) (LBF)
10000 0

HNGS Thorium (HTHO)
−5 (PPM) 5

HNGS Potassium (HFK)
−0.01 (V/V) 0.01

HNGS Computed Gamma Ray (HCGR)
0 (GAPI) 100

HNGS Uranium (HURA)
−5 (PPM) 5

Area1
From HCGR to HSGR

HNGS Borehole Potassium (HBHK)
−0.01 (V/V) 0.01

HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 100

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
	HRLT−B: High Resolution Laterolog Array − B	
BHS	Borehole Status	OPEN
GCSE	Generalized Caliper Selection	LCAL
	HNGS−BA: Hostile Natural Gamma Ray Sonde	
BAR1	HNGS Detector 1 Barite Constant	1
BAR2	HNGS Detector 2 Barite Constant	1
BHK	HNGS Borehole Potassium Correction Concentration	0
BHS	Borehole Status	OPEN

BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	−0.0248554	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.01332	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.00738	
EDTC−B: Enhanced DTS Cartridge			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
System and Miscellaneous			
BS	Bit Size	9.875	IN
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	NORMAL	

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 06−May−2022 03:25

OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_035LUP	PRODUCER	05−May−2022 09:12	5610.8 M	4976.6 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_068PUP	FN:79	PRODUCER	06−May−2022 03:25	

Company: International Ocean Discovery Program Well: Expedition 390, Site U1556B

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_035LUP	PRODUCER	05−May−2022 09:12	5610.8 M	4976.6 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_068PUP	FN:79	PRODUCER	06−May−2022 03:25	5610.8 M	4976.6 M

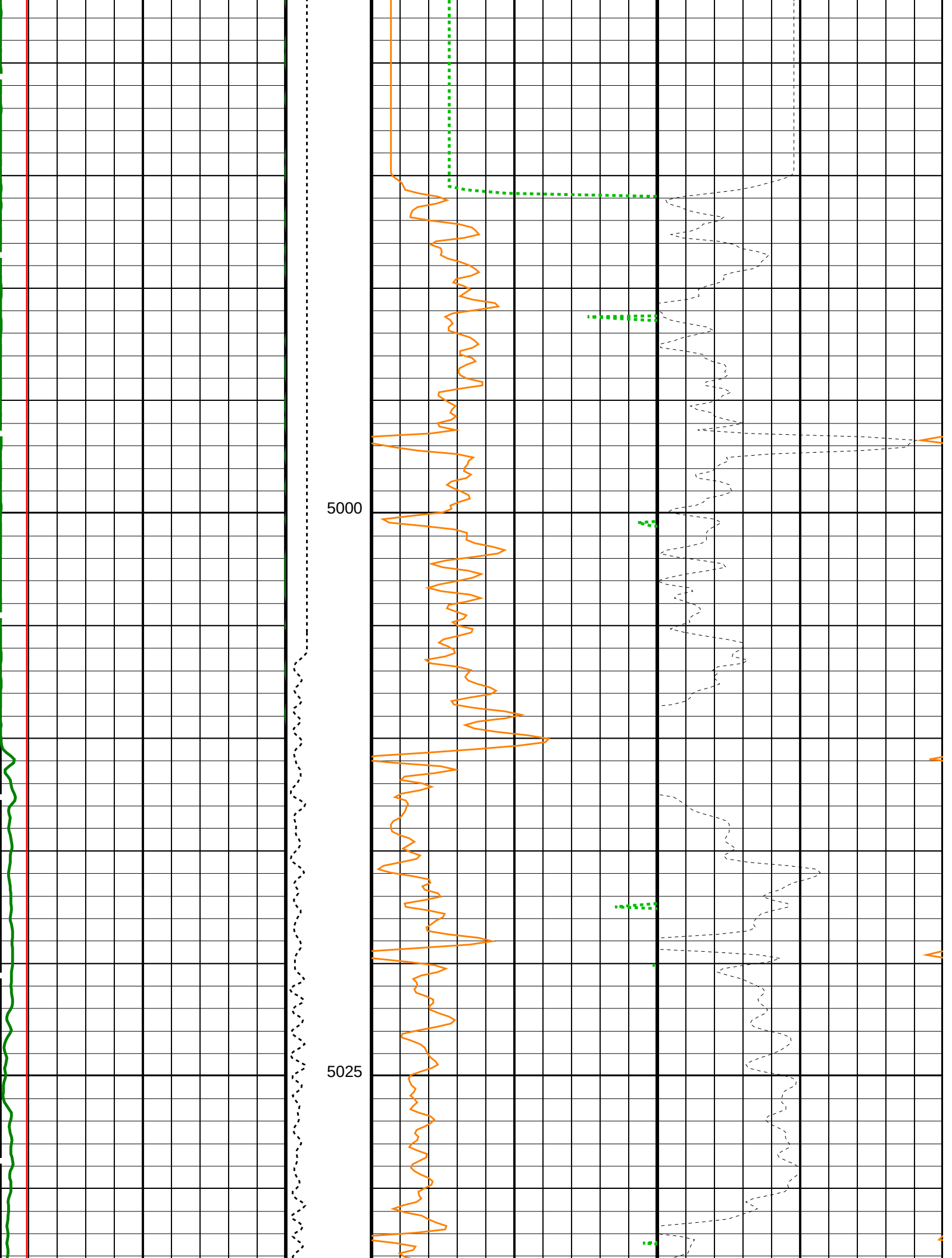
OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

PIP SUMMARY

Time Mark Every 60 S

HNGS Spectroscopy Gamma Ray (HSGR)		HLDS Long Spaced Photoelectric Effect (PEFL)	HLDS Bulk Density Correction (DRH)
0 (GAPI) 150		0 (−−−−) 10	−0.25 (G/C3) 0.25
HLDS Caliper (LCAL)	Tension (TENS) (LBF)	HLDS Bulk Density (RHOM)	
0 (IN) 20	0 5000	3 (G/C3) 1	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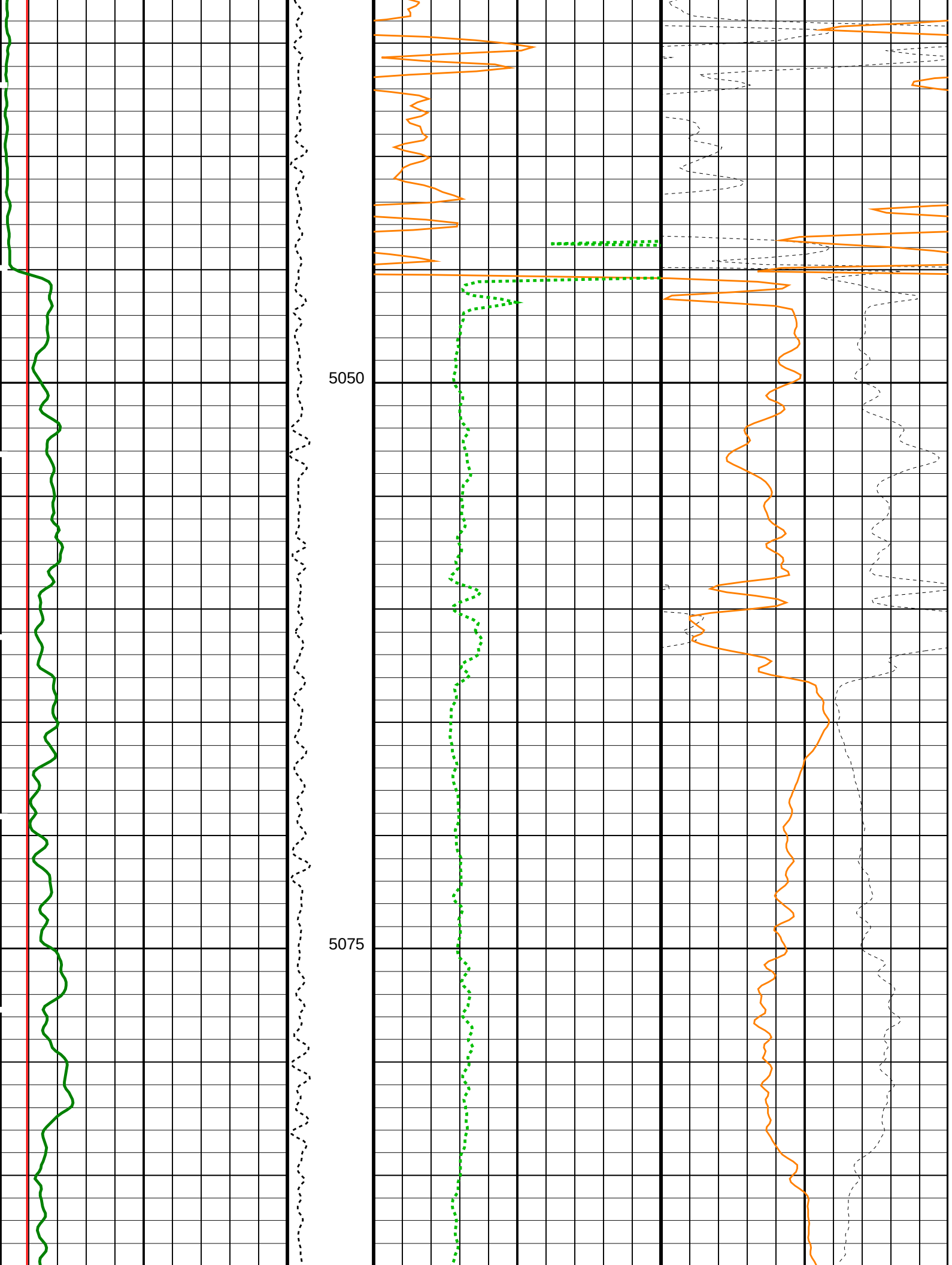
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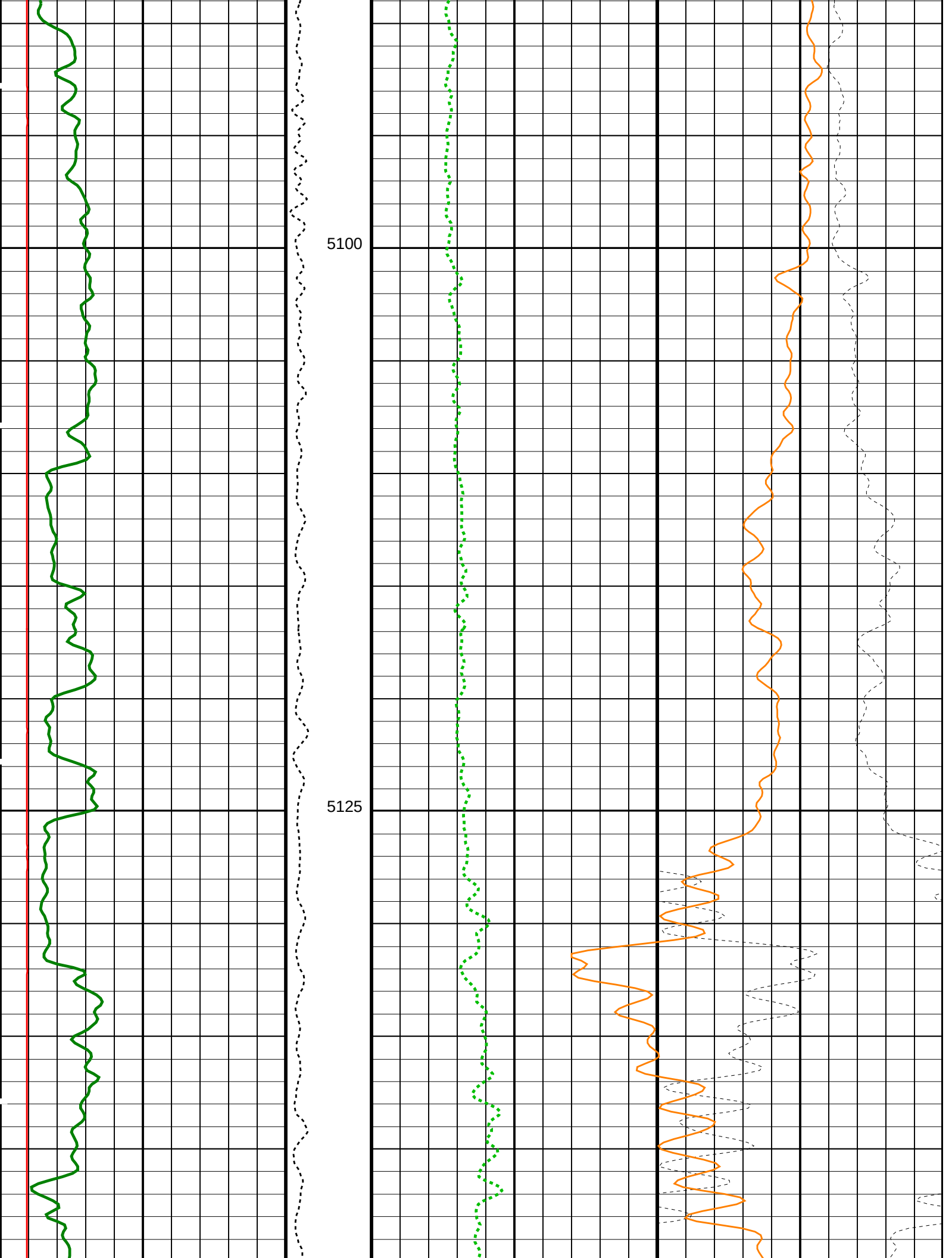
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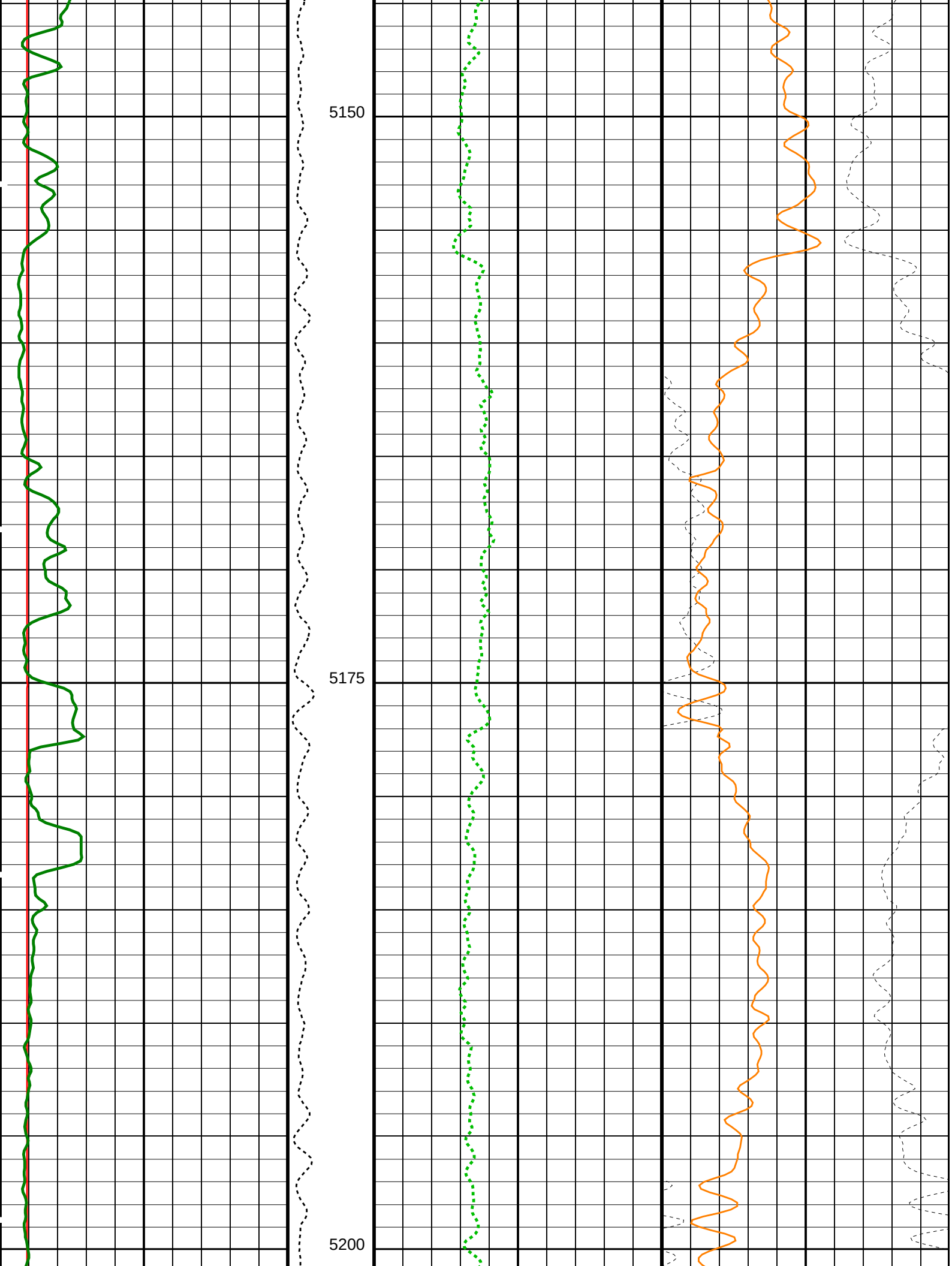
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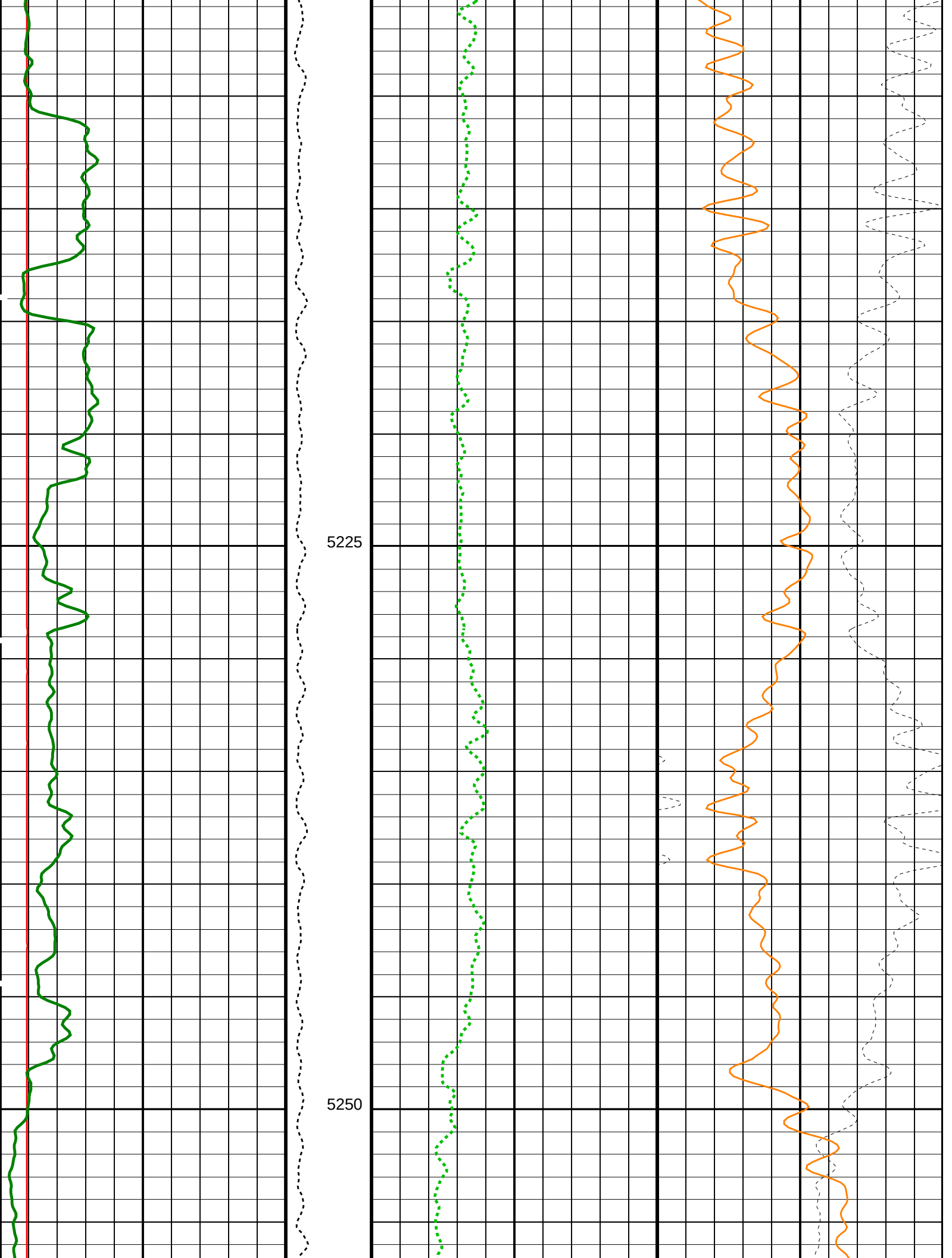
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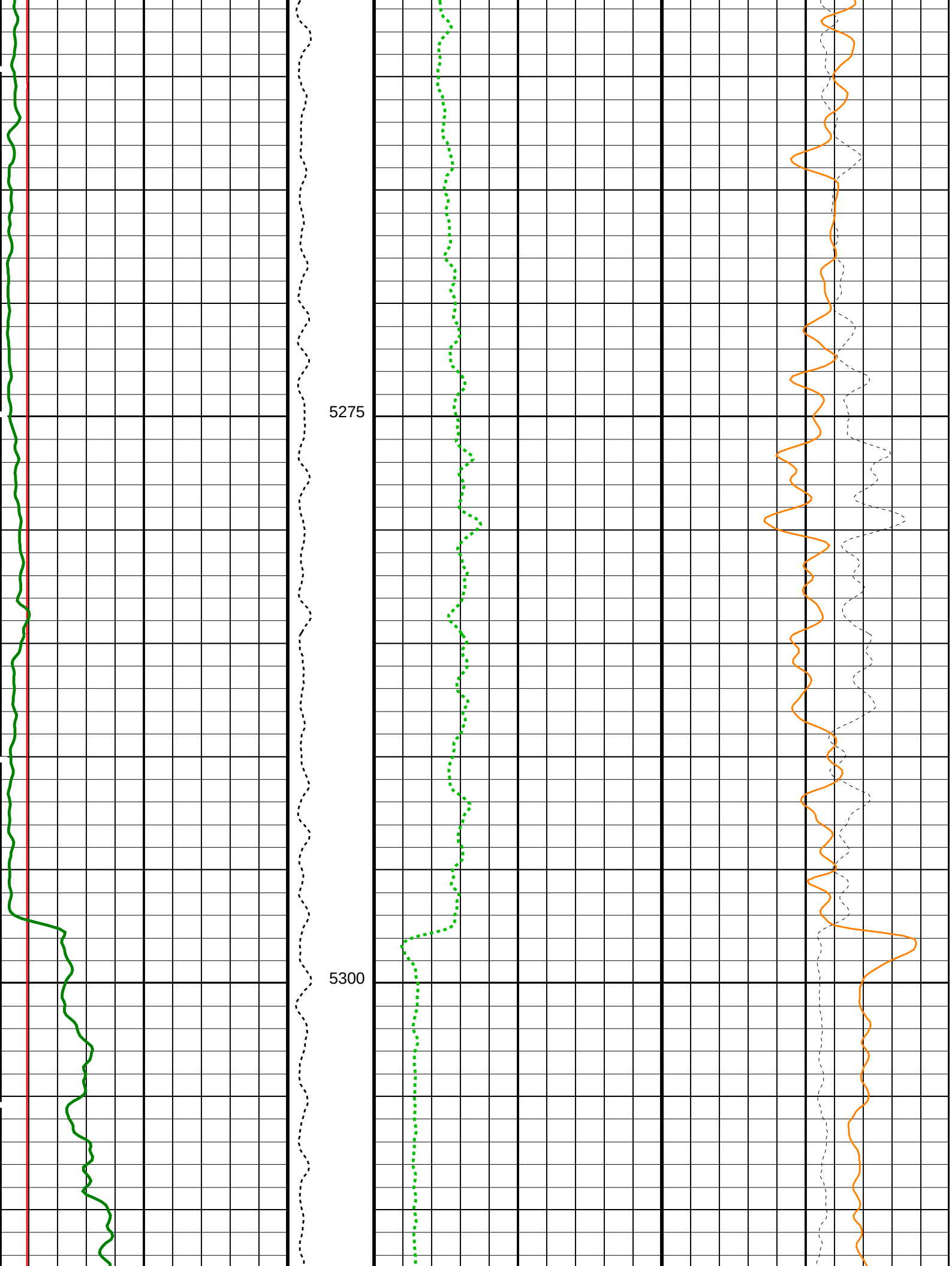
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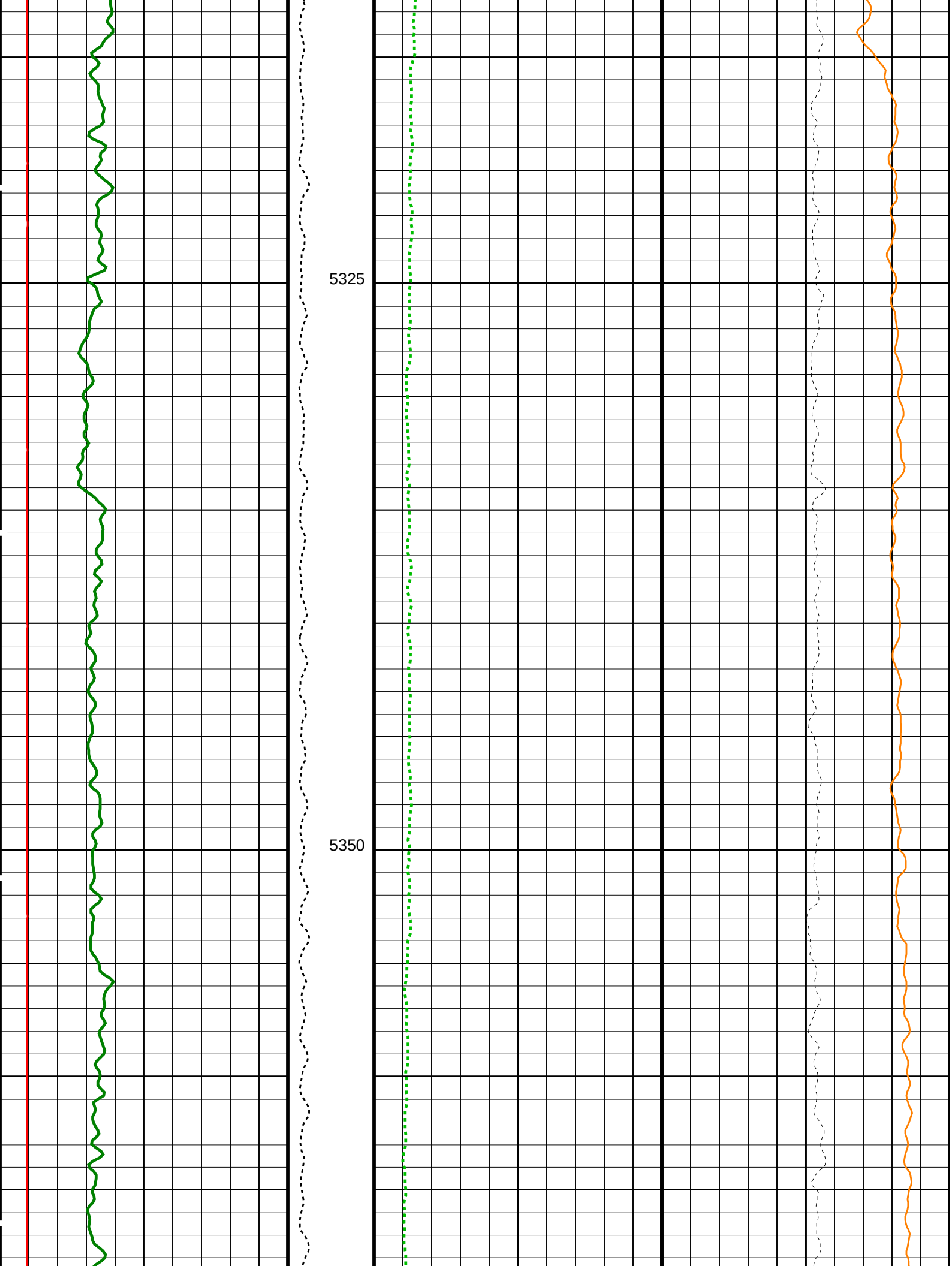
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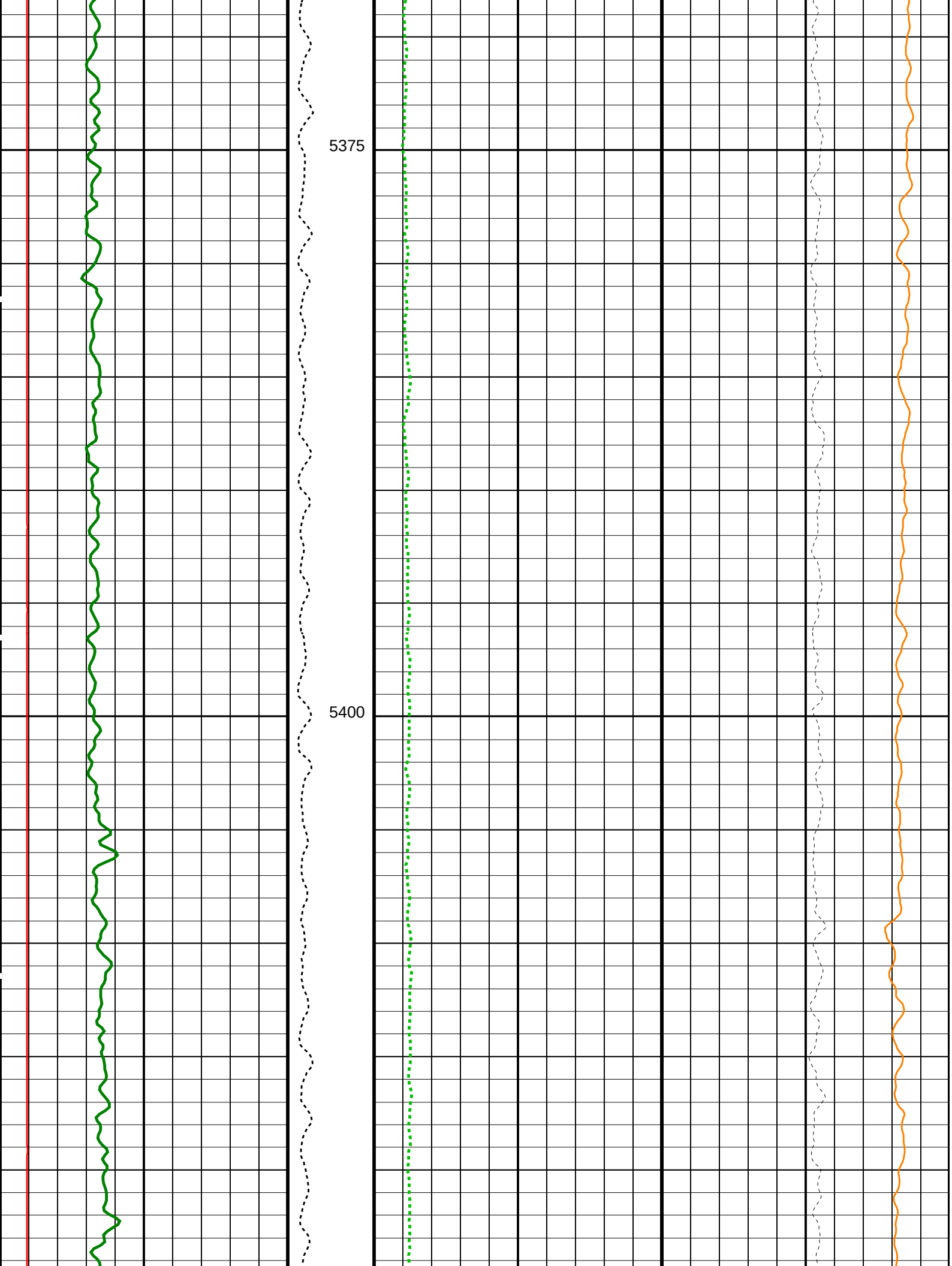
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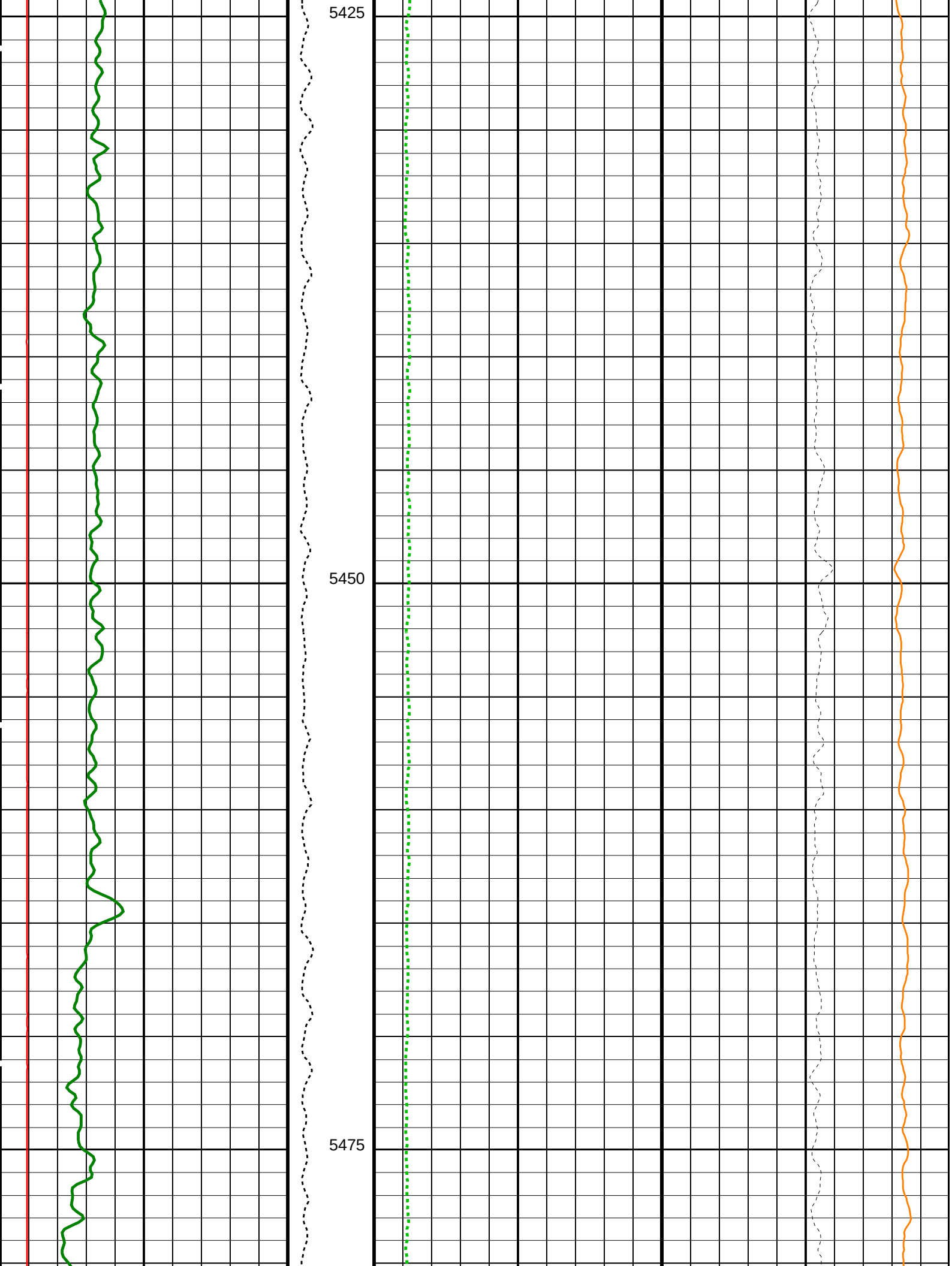
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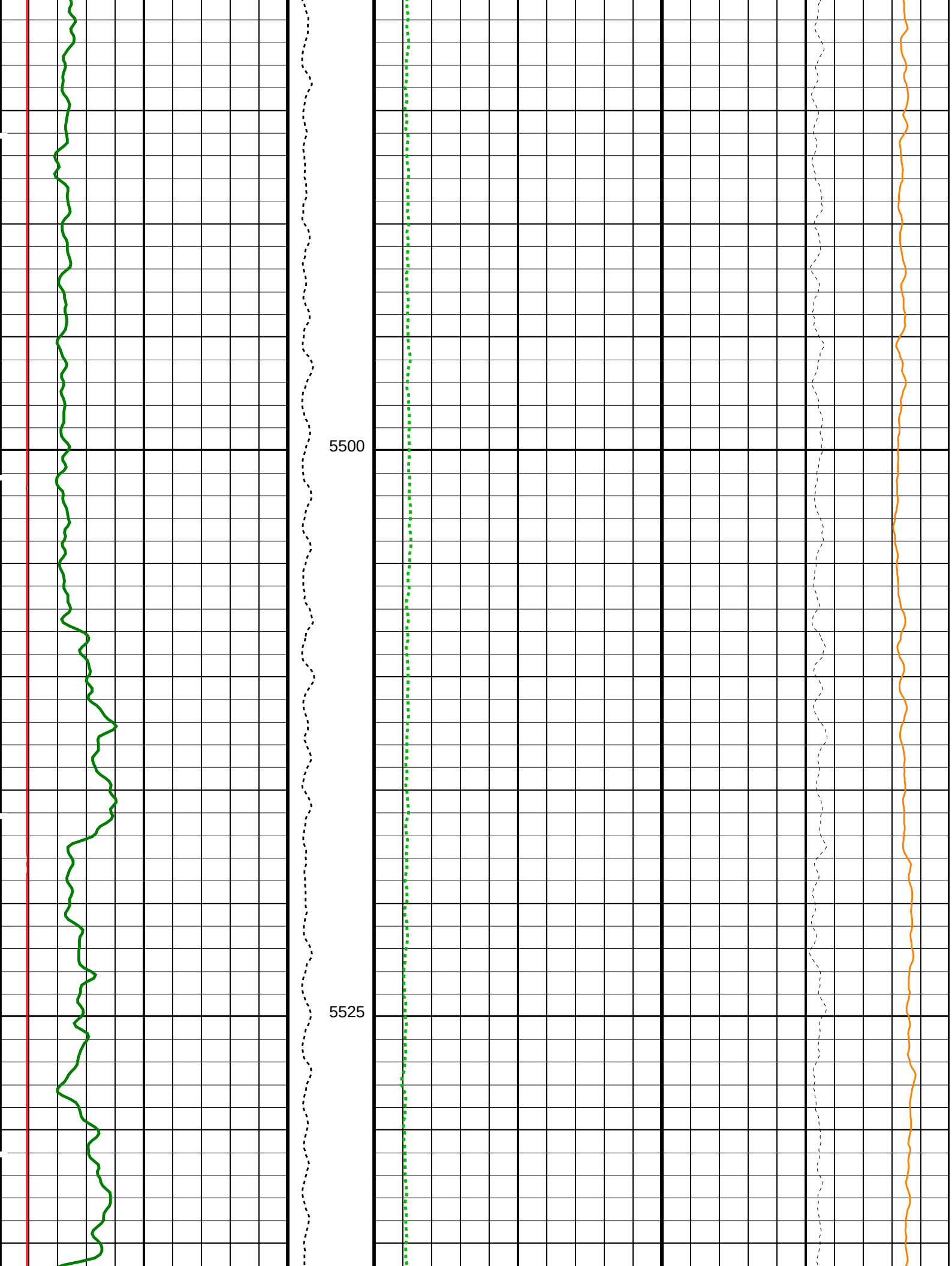
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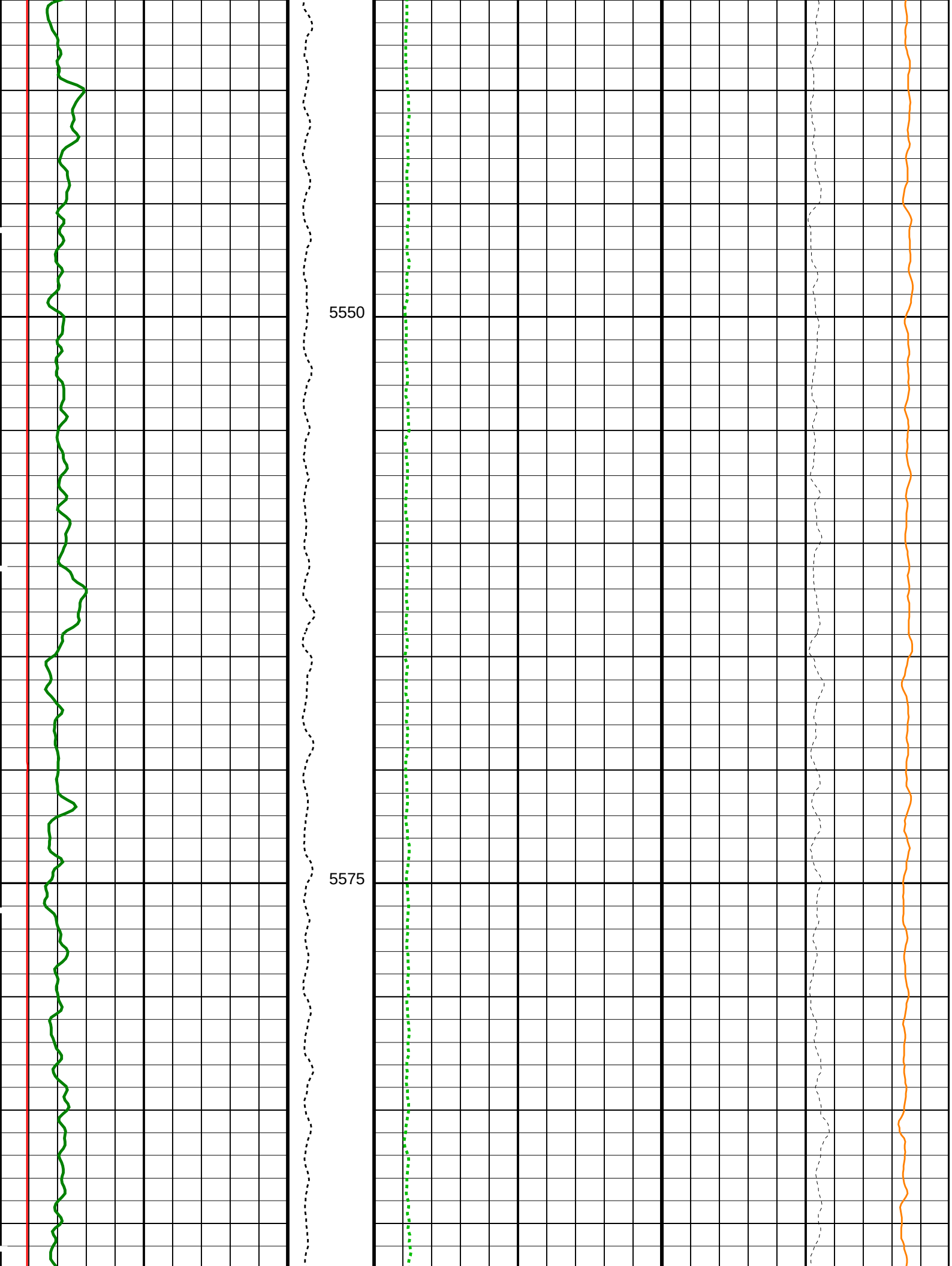
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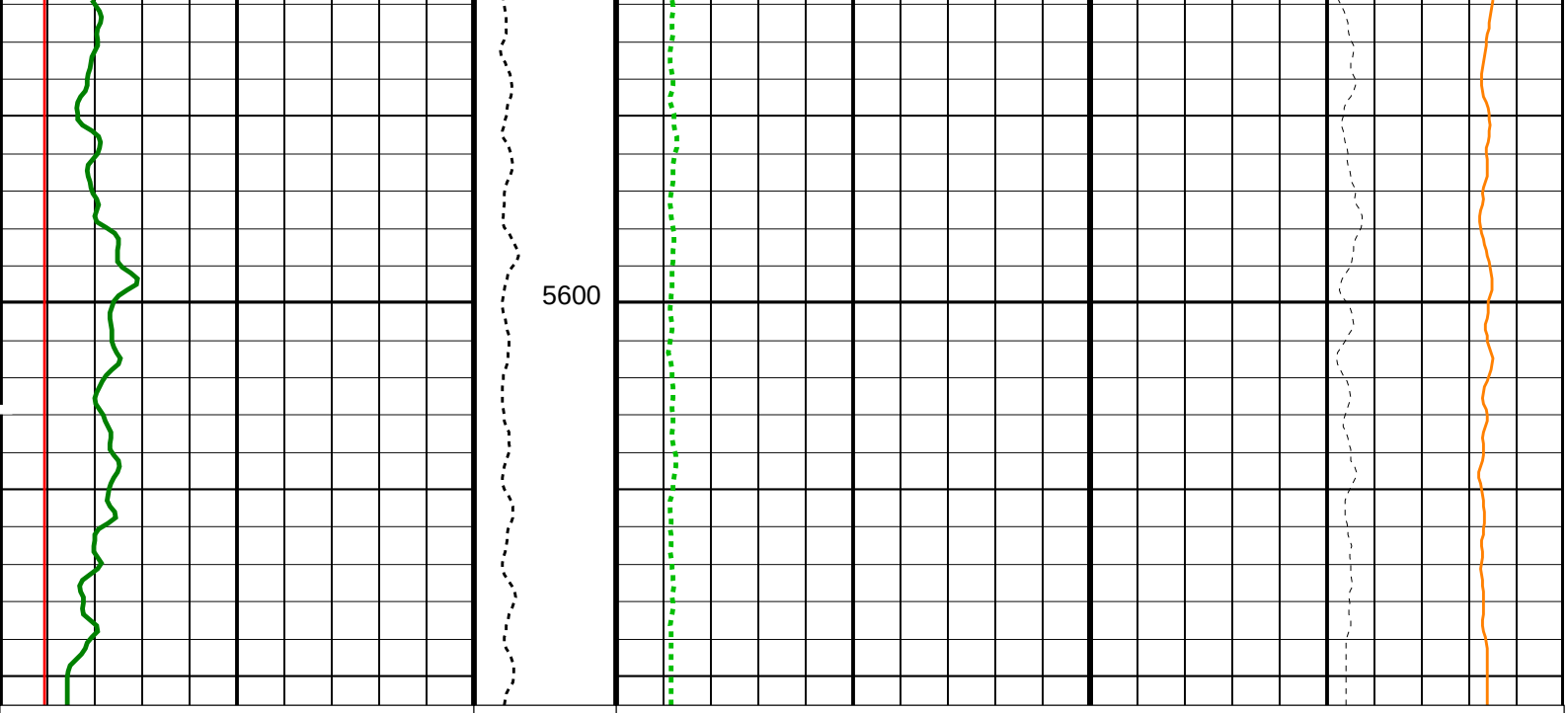


HLDS Caliper (LCAL)	Tension (TENS)	HLDS Bulk Density (RHOM)
0 (IN) 20	(LBF) 0 5000	3 (G/C3) 1

HNGS Spectroscopy Gamma Ray (HSGR)	HLDS Long Spaced Photoelectric Effect (PEFL)	HLDS Bulk Density Correction (DRH)
0 (GAPI) 150	0 (−−−−) 10	−0.25 (G/C3) 0.25

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	HRLT−B: High Resolution Laterolog Array − B		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
	HLDS: Hostile Litho−Density Sonde		
DHC	Density Hole Correction	CALIPER	
DPPM	Density Porosity Processing Mode	HIRS	
FD	Fluid Density	1	G/C3
LATC	HLDS Activation Correction	OFF	
MDEN	Matrix Density	2.71	G/C3
	HNGS−BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	−0.0248554	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.01332	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.00738	
	EDTC−B: Enhanced DTS Cartridge		
BHS	Borehole Status	OPEN	
DPPM	Density Porosity Processing Mode	HIRS	
GCSE	Generalized Caliper Selection	LCAL	

System and Miscellaneous

BS	Bit Size	9.875	IN
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	NORMAL	

Format: HLDSDensityPE Vertical Scale: 1:200 Graphics File Created: 06−May−2022 03:25

OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_035LUP	PRODUCER	05−May−2022 09:12	5610.8 M	4976.6 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_068PUP	FN:79	PRODUCER	06−May−2022 03:25		

Company: International Ocean Discovery Program Well: Expedition 390, Site U1556B

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_035LUP	PRODUCER	05−May−2022 09:12	5610.8 M	4976.6 M

Output DLIS Files

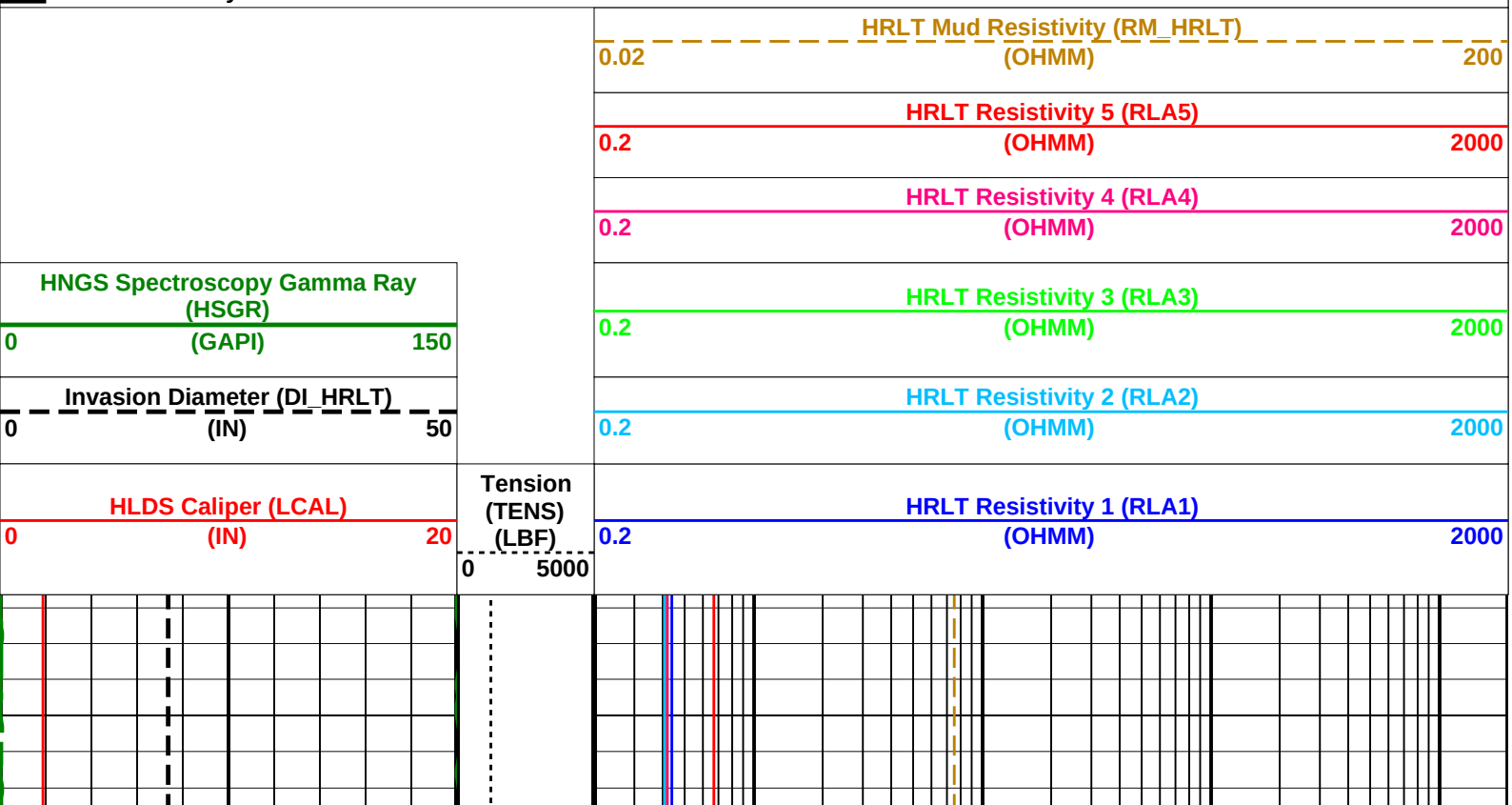
DEFAULT	MSS_LDEO_HRLA_LDL_068PUP	FN:79	PRODUCER	06−May−2022 03:25	5610.8 M	4976.6 M

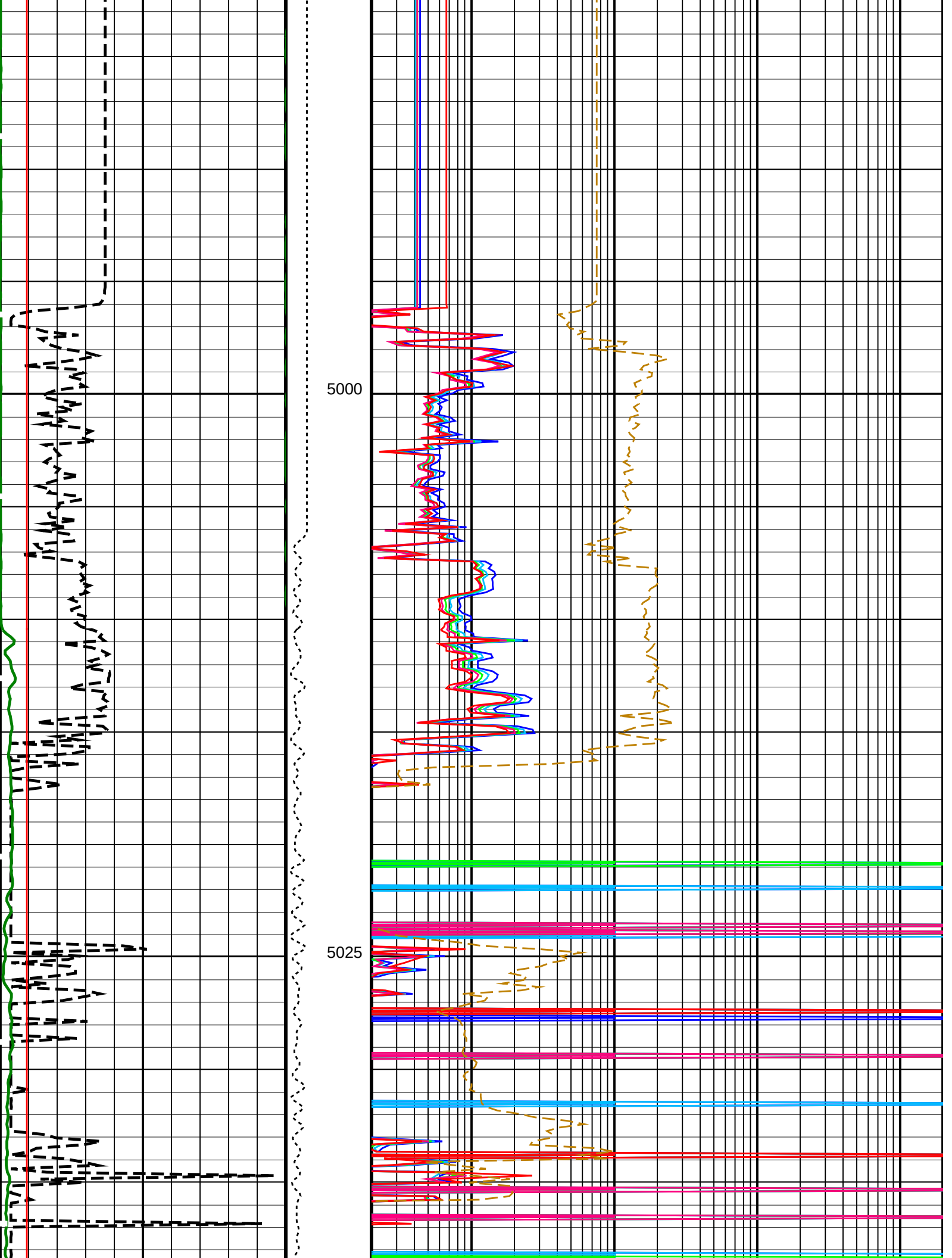
OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

PIP SUMMARY

Time Mark Every 60 S

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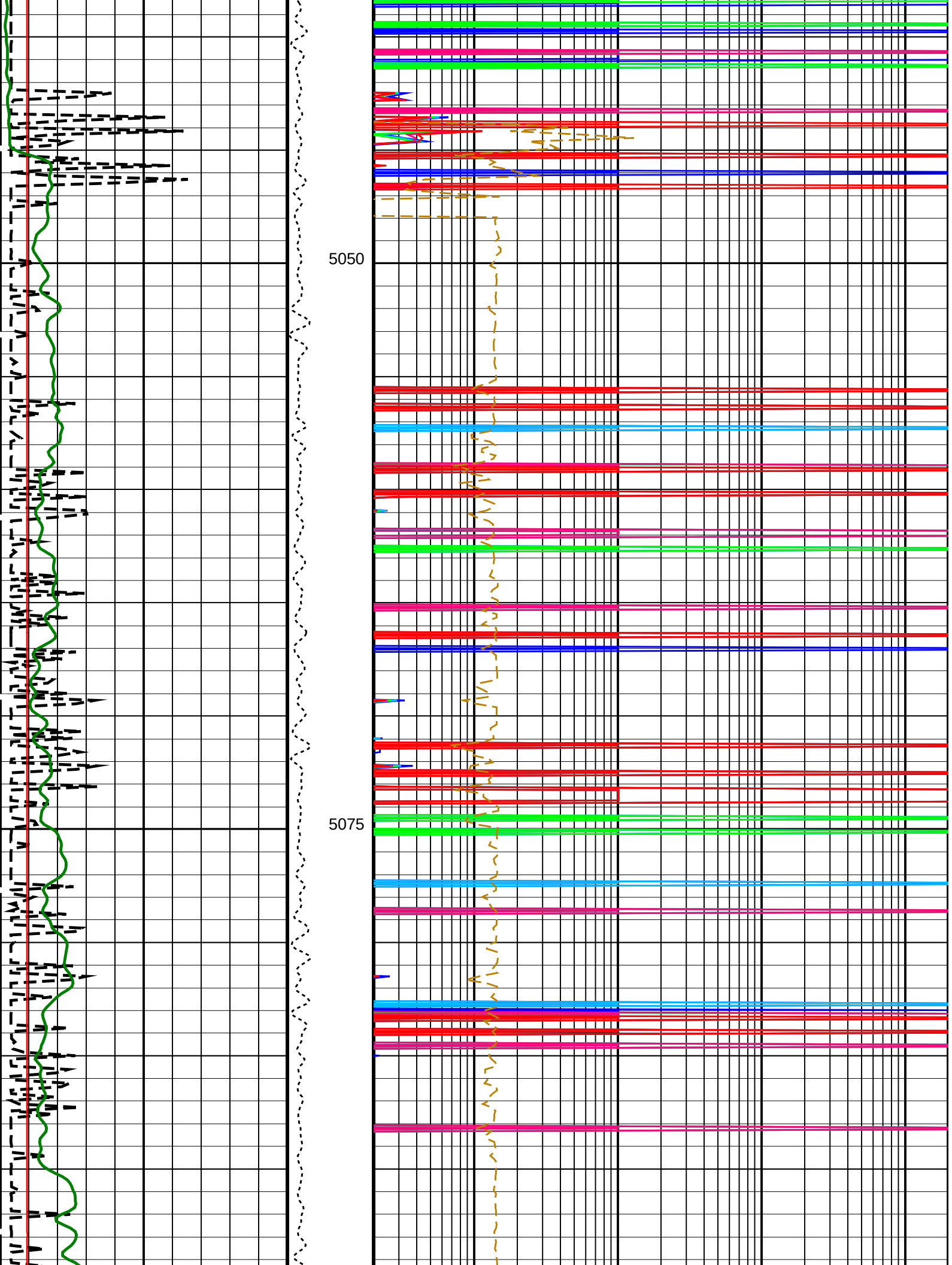
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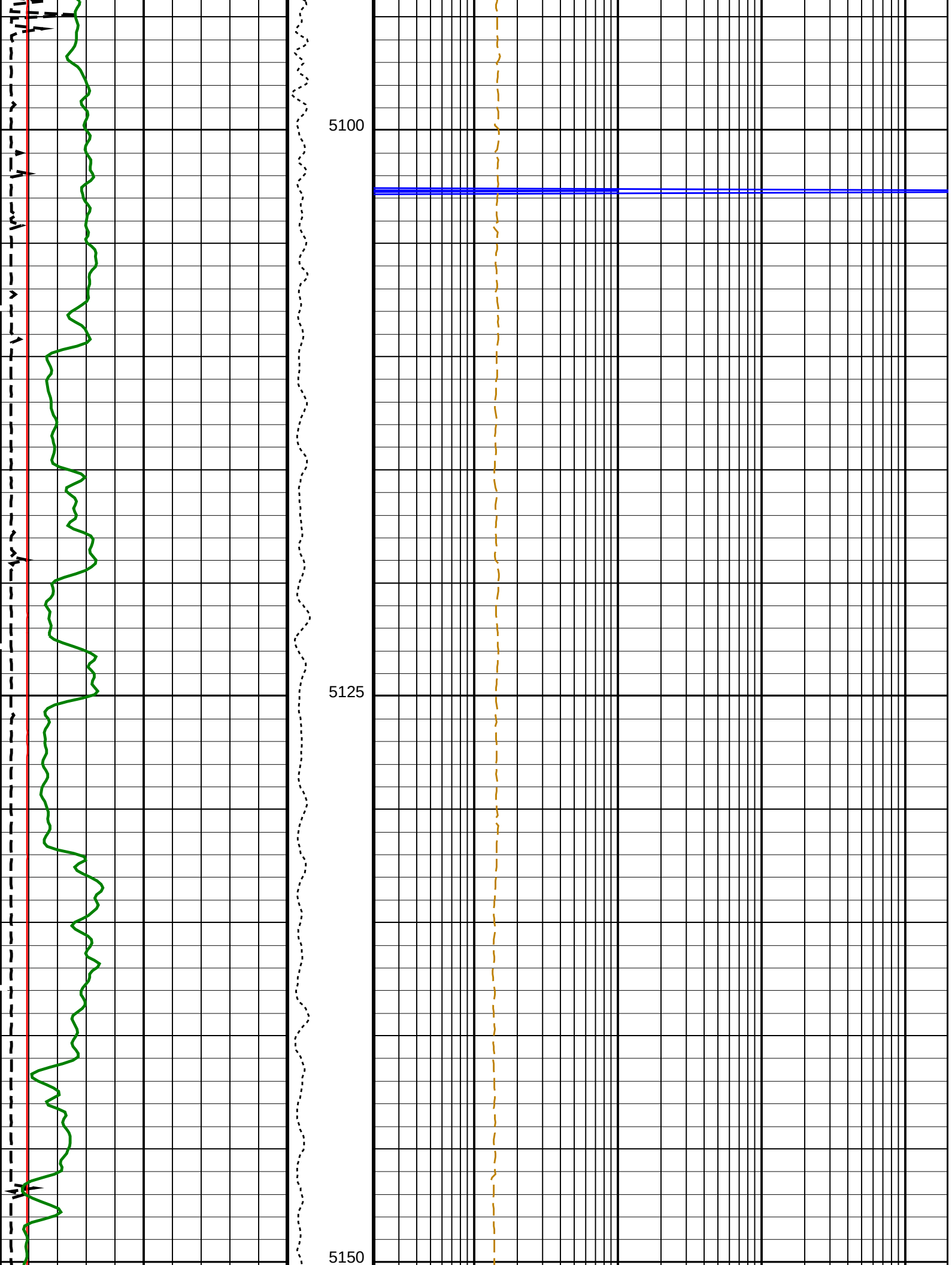
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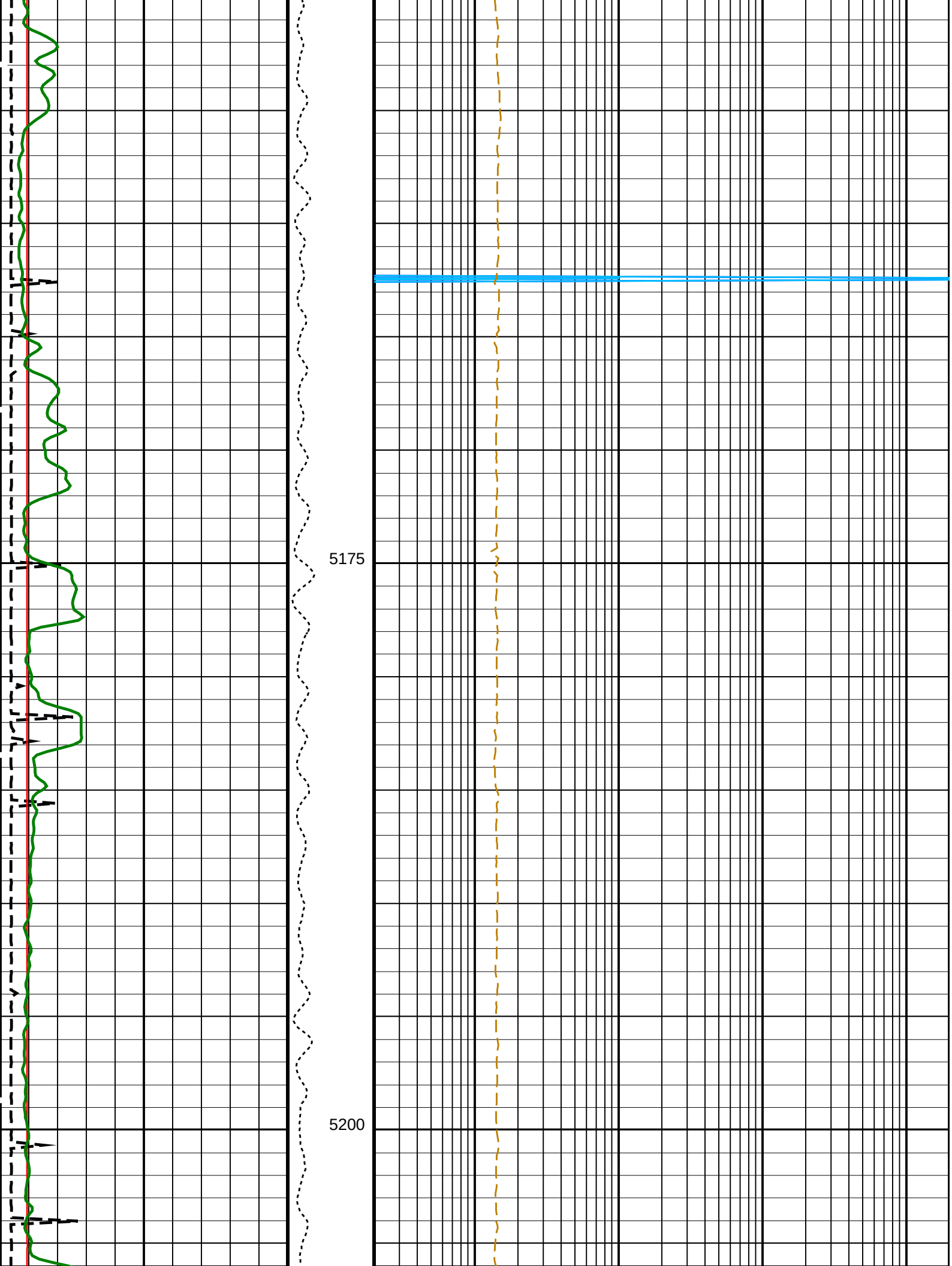
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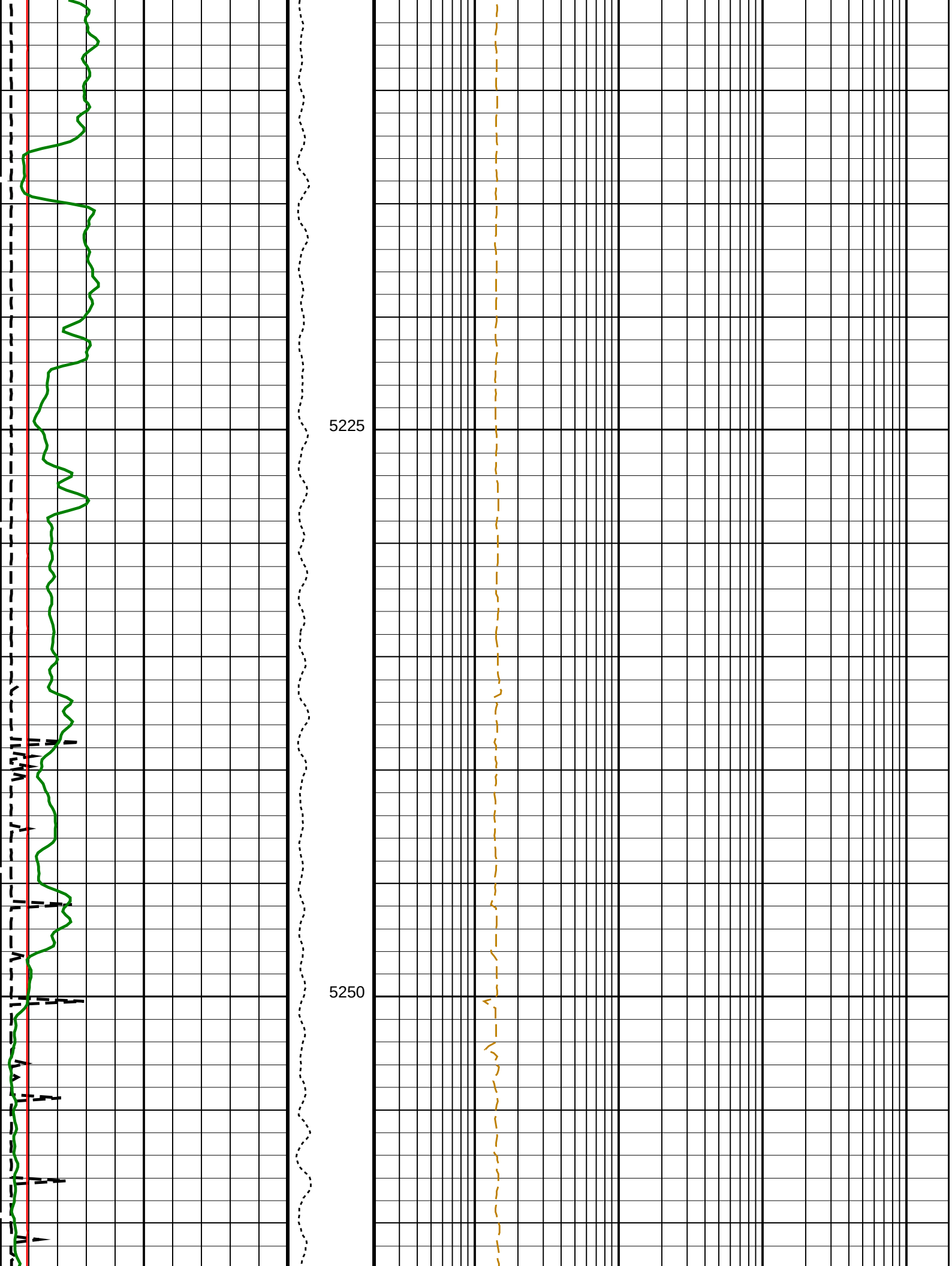
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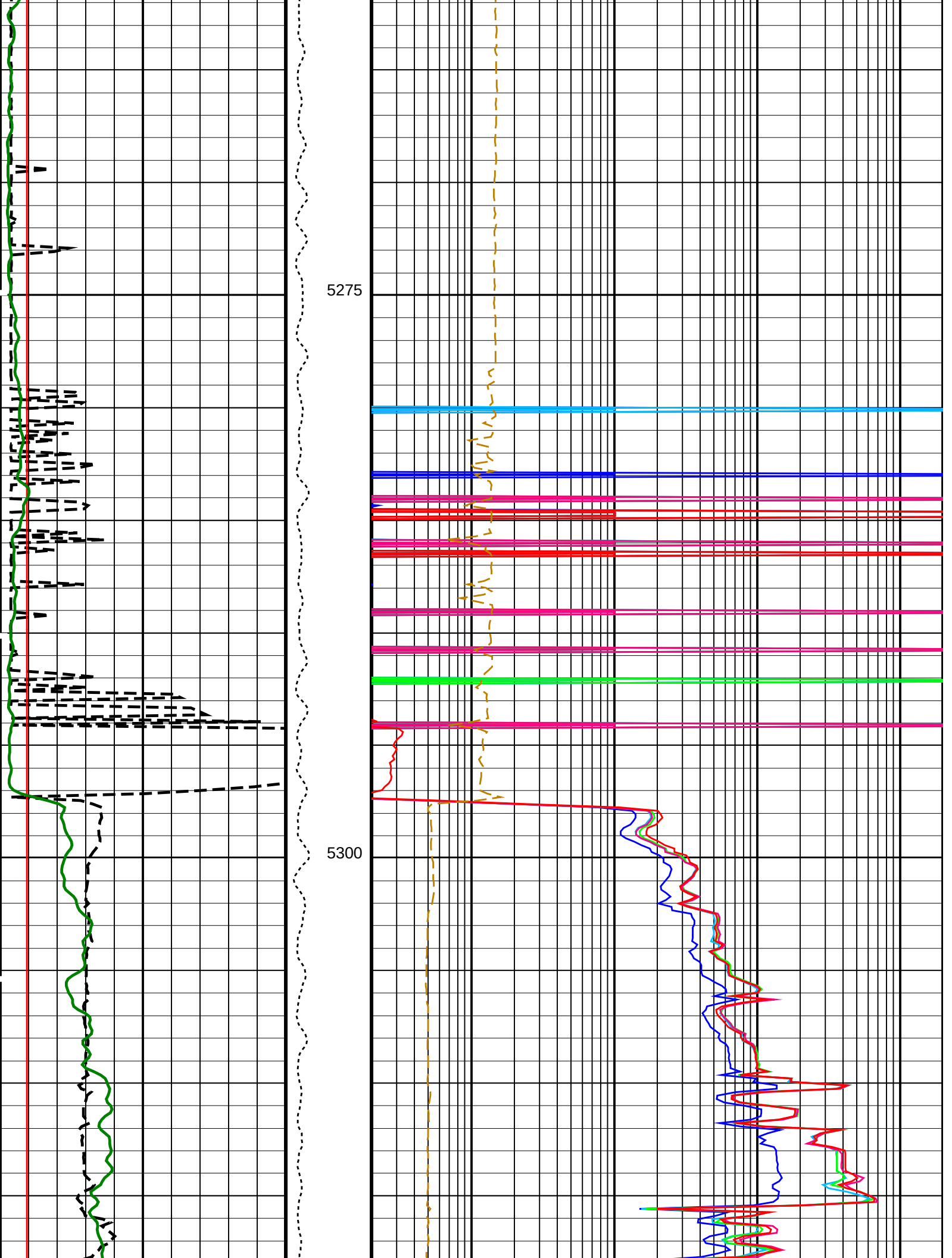
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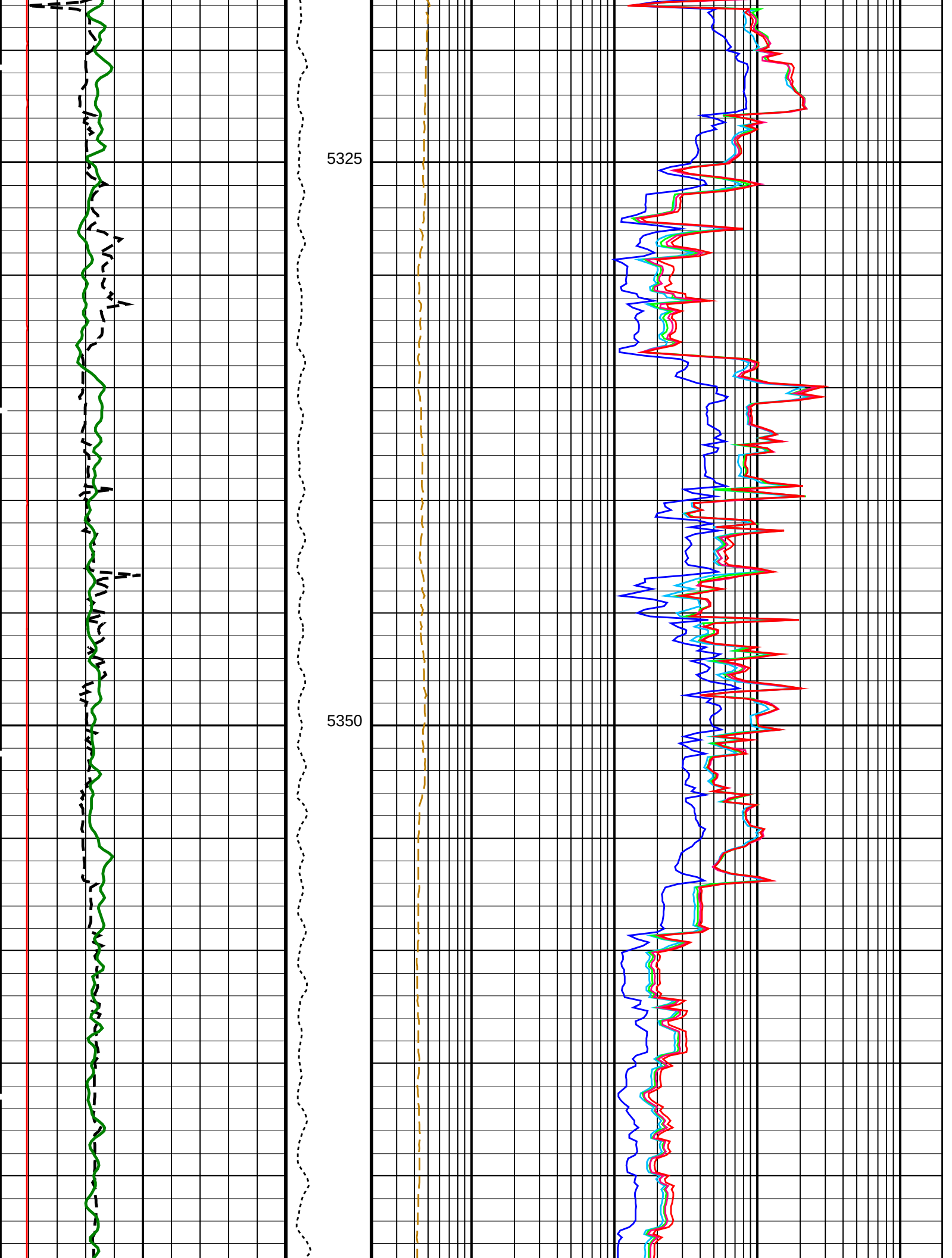
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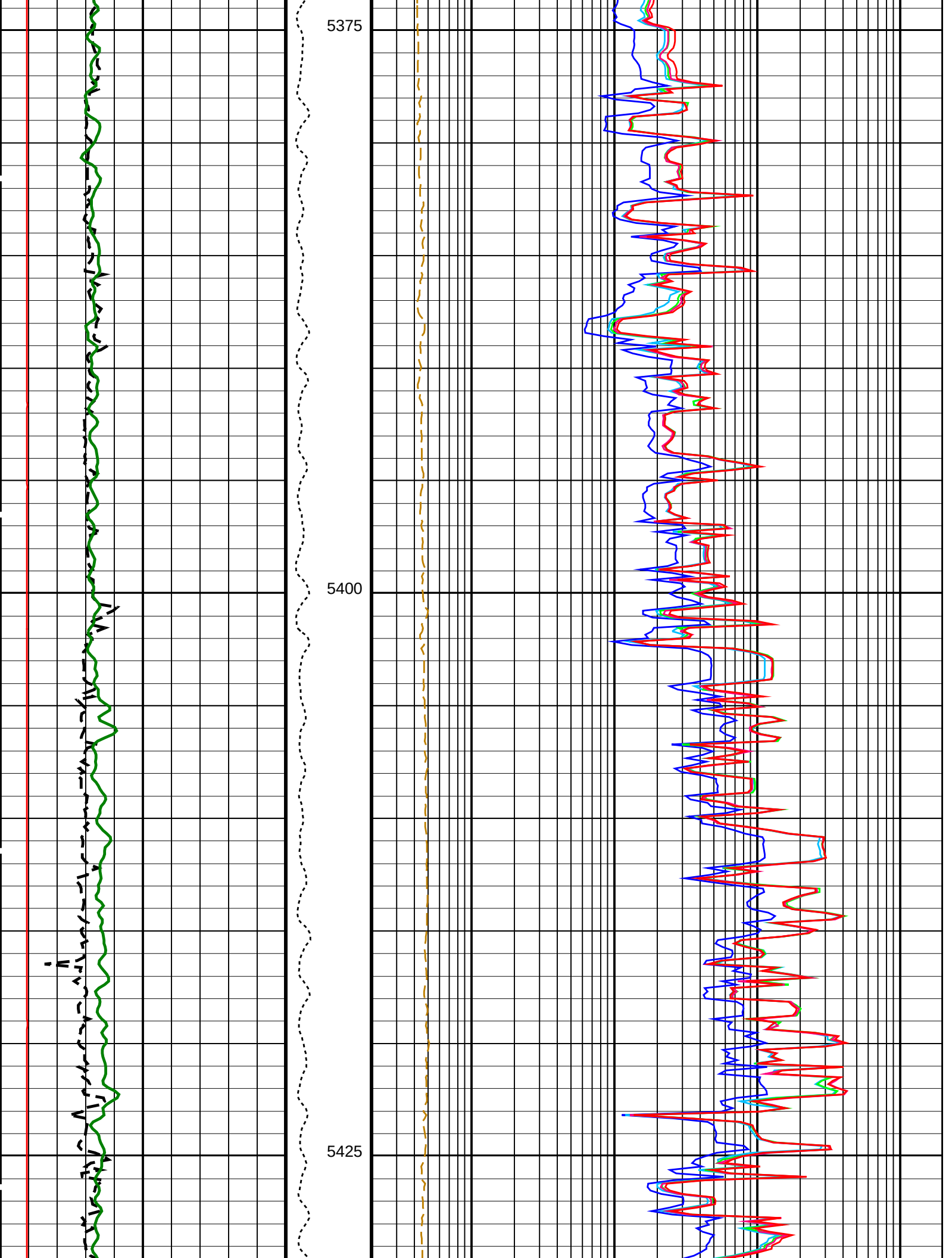
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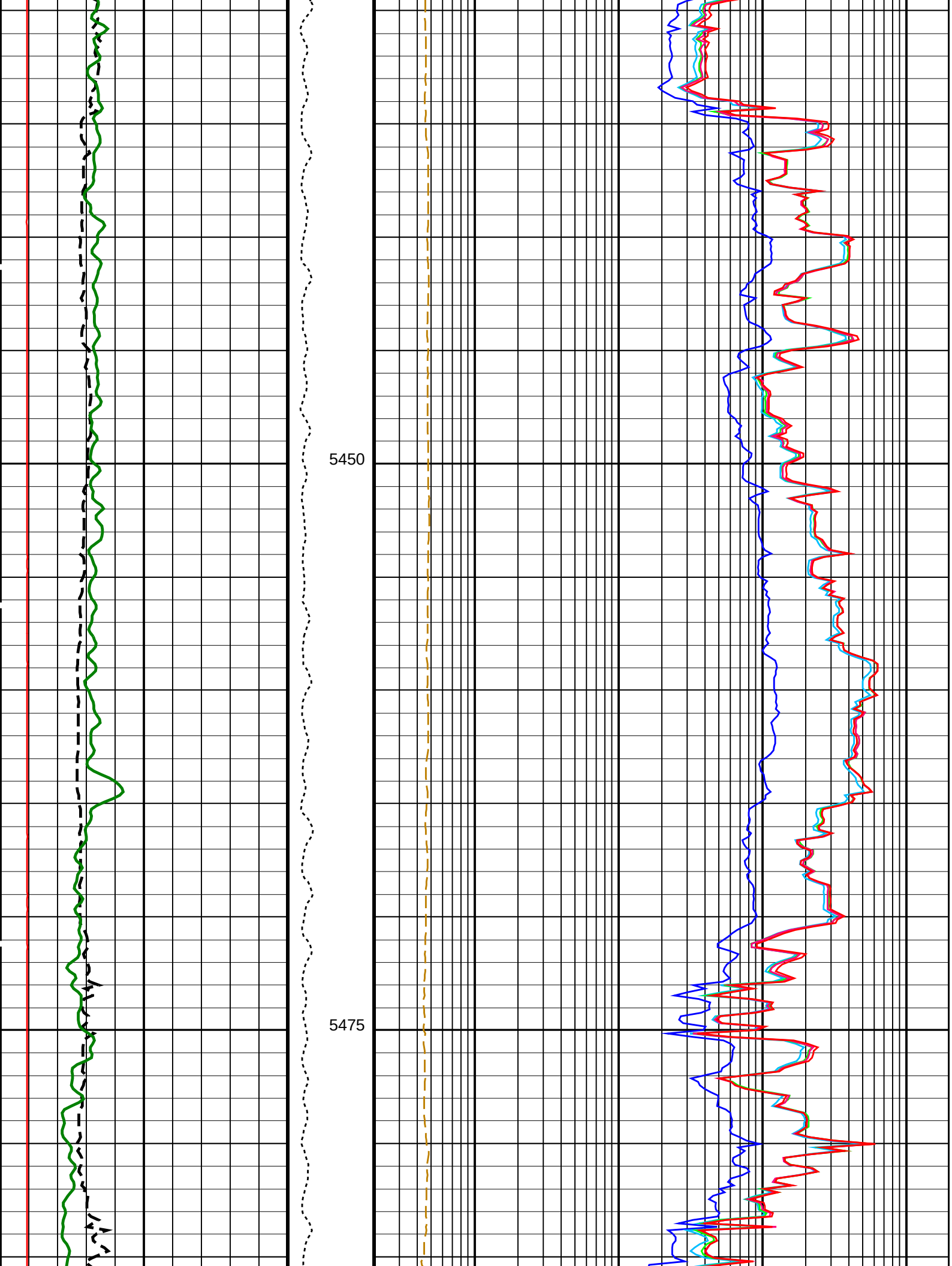
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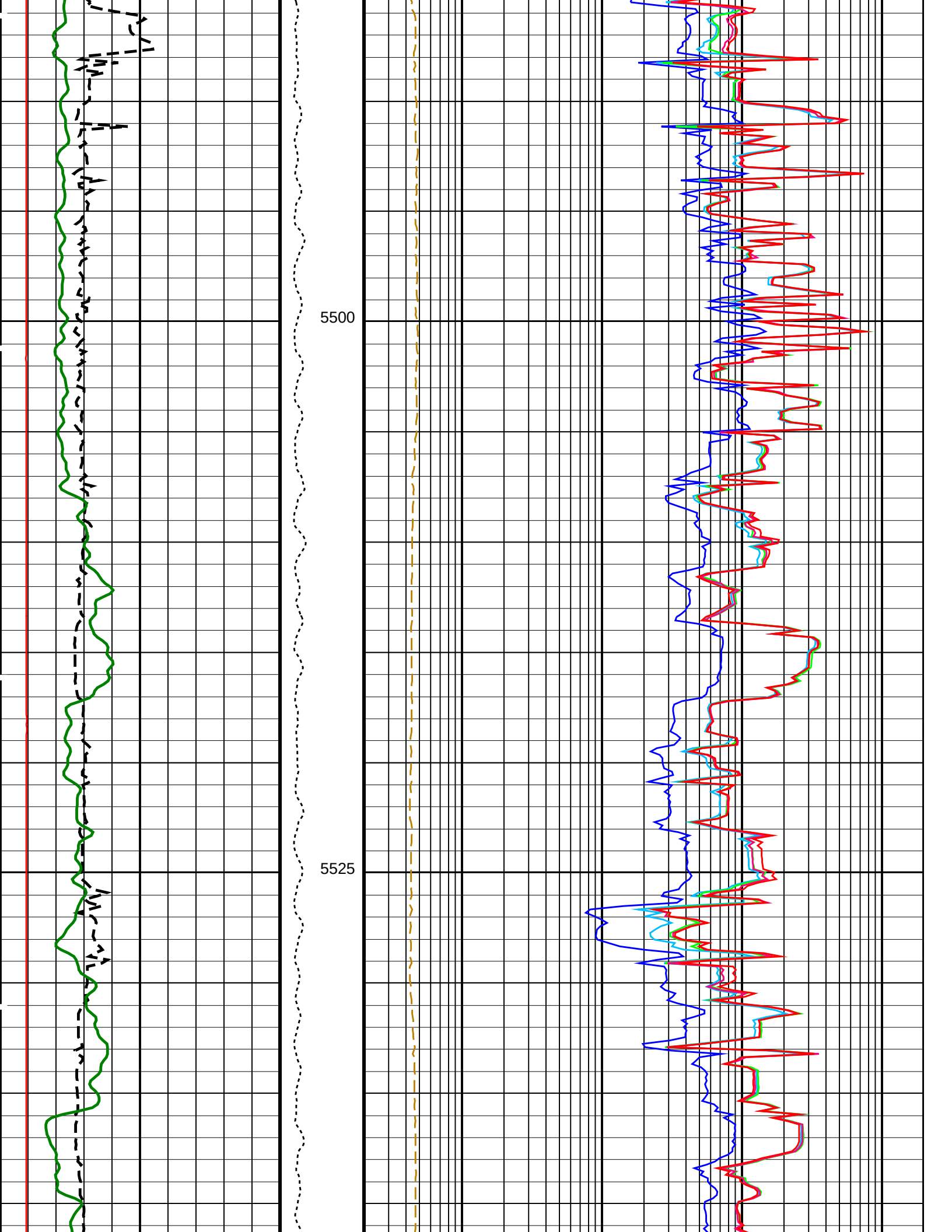
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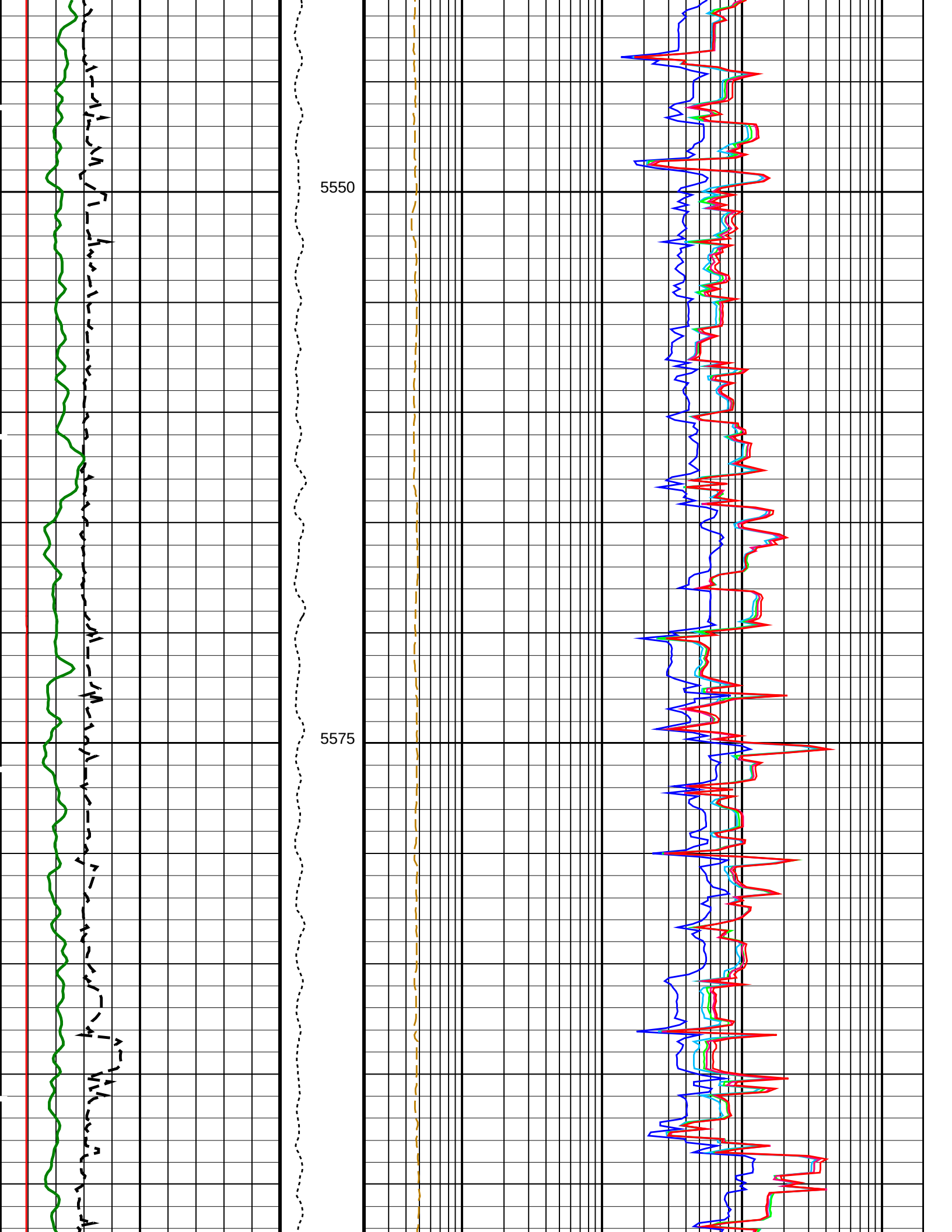
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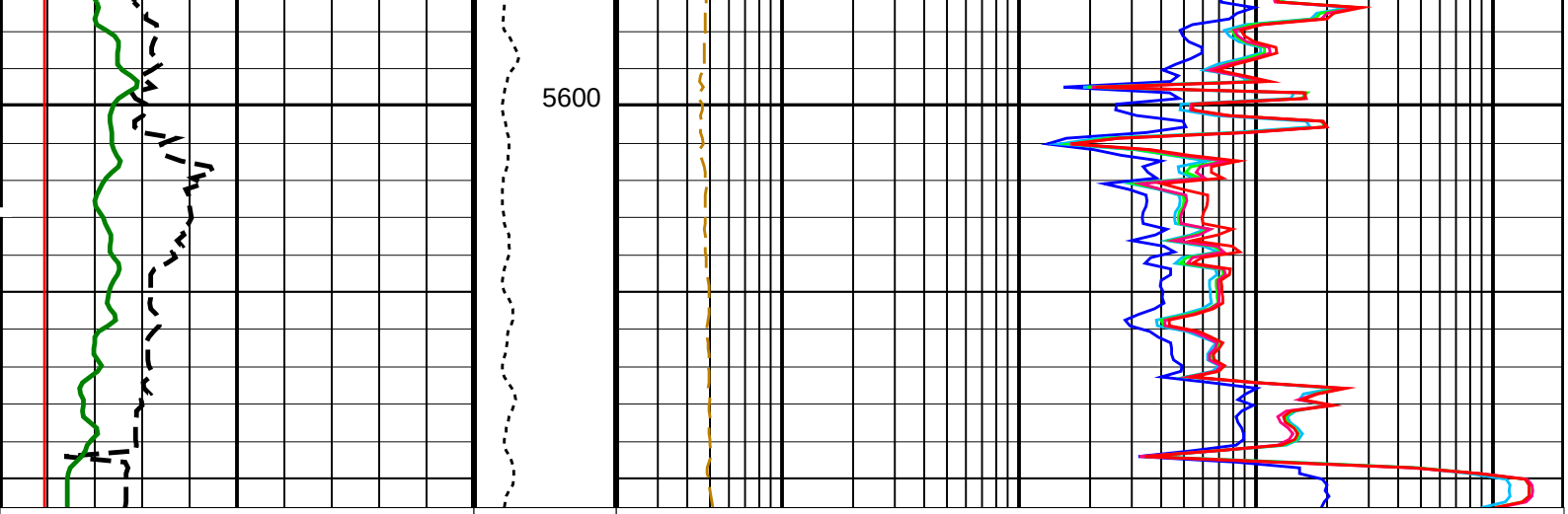


HLDS Caliper (LCAL)
0 (IN) 20

Tension (TENS) (LBF)
0 5000

Invasion Diameter (DI_HRLT)
0 (IN) 50

HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 150

HRLT Resistivity 1 (RLA1)
0.2 (OHMM) 2000

HRLT Resistivity 2 (RLA2)
0.2 (OHMM) 2000

HRLT Resistivity 3 (RLA3)
0.2 (OHMM) 2000

HRLT Resistivity 4 (RLA4)
0.2 (OHMM) 2000

HRLT Resistivity 5 (RLA5)
0.2 (OHMM) 2000

HRLT Mud Resistivity (RM_HRLT)
0.02 (OHMM) 200

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	HRLT−B: High Resolution Laterolog Array − B		
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	20	DEGC
GCSE	Generalized Caliper Selection	LCAL	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
PROCINV	Inversion Selection	ON	
PROCMFL	Inversion Micro−Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCSPO	Sonde Position	Centered	
SHT	Surface Hole Temperature	20	DEGC
	HNGS−BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	20	DEGC
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	

H2P	HNGS Detector 2 Allow/Disallow in Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	−0.0248554	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
SHT	Surface Hole Temperature	20	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.01332	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.00738	
	EDTC−B: Enhanced DTS Cartridge		
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	20	DEGC
GCSE	Generalized Caliper Selection	LCAL	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
SHT	Surface Hole Temperature	20	DEGC
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DO	Depth Offset for Playback	0.0	M
MST	Mud Sample Temperature	23.00	DEGC
PP	Playback Processing	NORMAL	
TD	Total Depth	10190.3	FT

Format: HRLT Vertical Scale: 1:200 Graphics File Created: 06−May−2022 03:25

OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_035LUP	PRODUCER	05−May−2022 09:12	5610.8 M	4976.6 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_068PUP	FN:79	PRODUCER	06−May−2022 03:25	

Company: International Ocean Discovery Program Well: Expedition 390, Site U1556B

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_035LUP	PRODUCER	05−May−2022 09:12	5610.8 M	4976.6 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_068PUP	FN:79	PRODUCER	06−May−2022 03:25	5610.8 M	4976.6 M

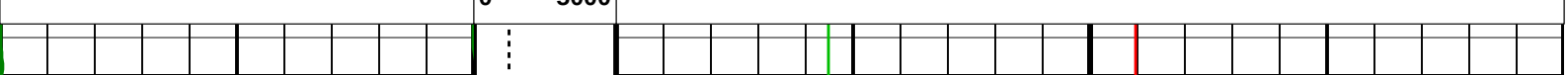
OP System Version: 19C0−187

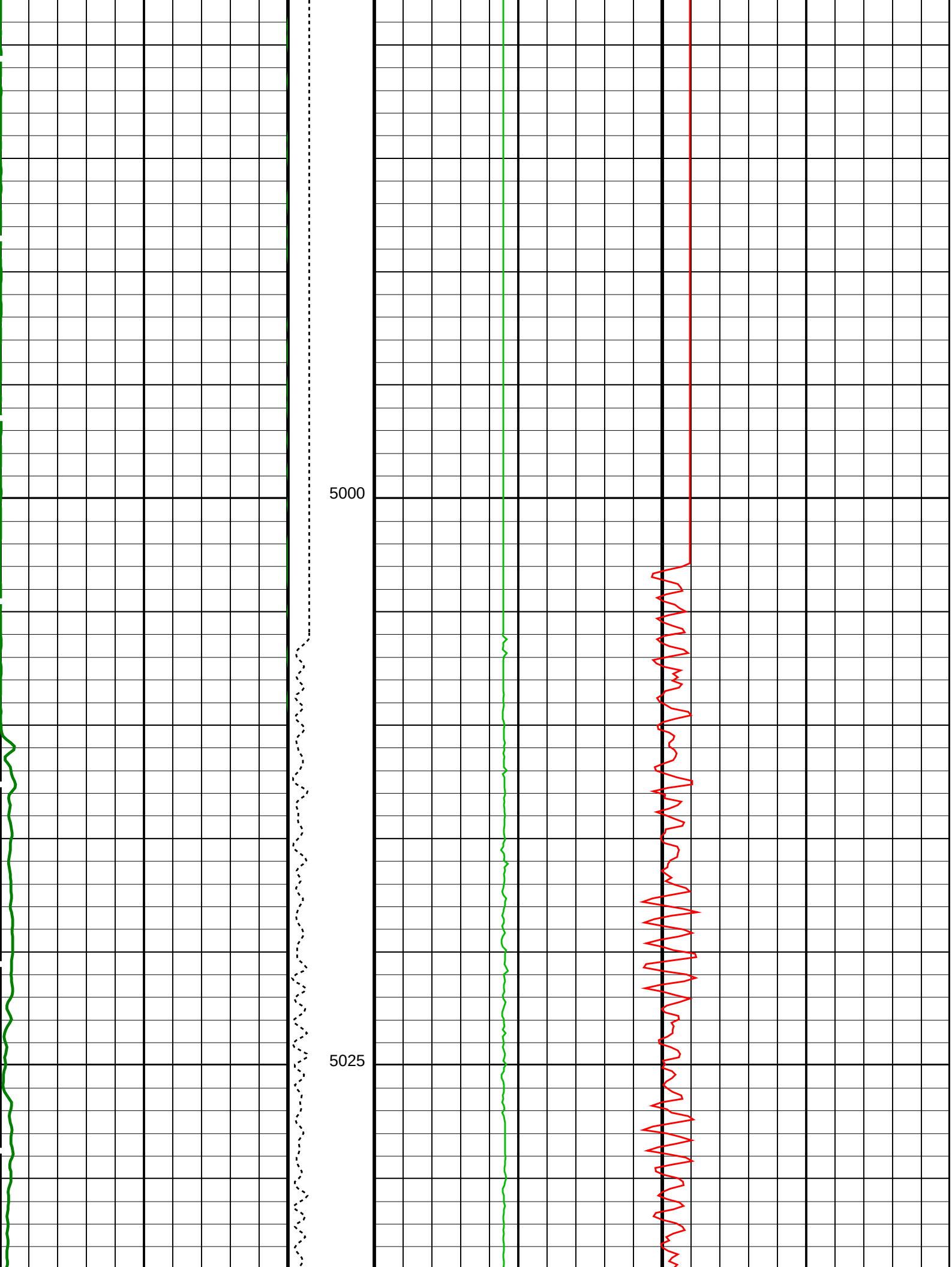
MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

PIP SUMMARY

Time Mark Every 60 S

	Dual−Coil Susceptibility (MSSLSUS_LDEO)	
	−10000 (PPM) 90000	
HNGS Spectroscopy Gamma Ray (HSGR)	Tension (TENS) (LBF)	Axial Acceleration (MSSZACC_LDEO)
0 (GAPI) 150	0 5000	0 (M/S2) 20

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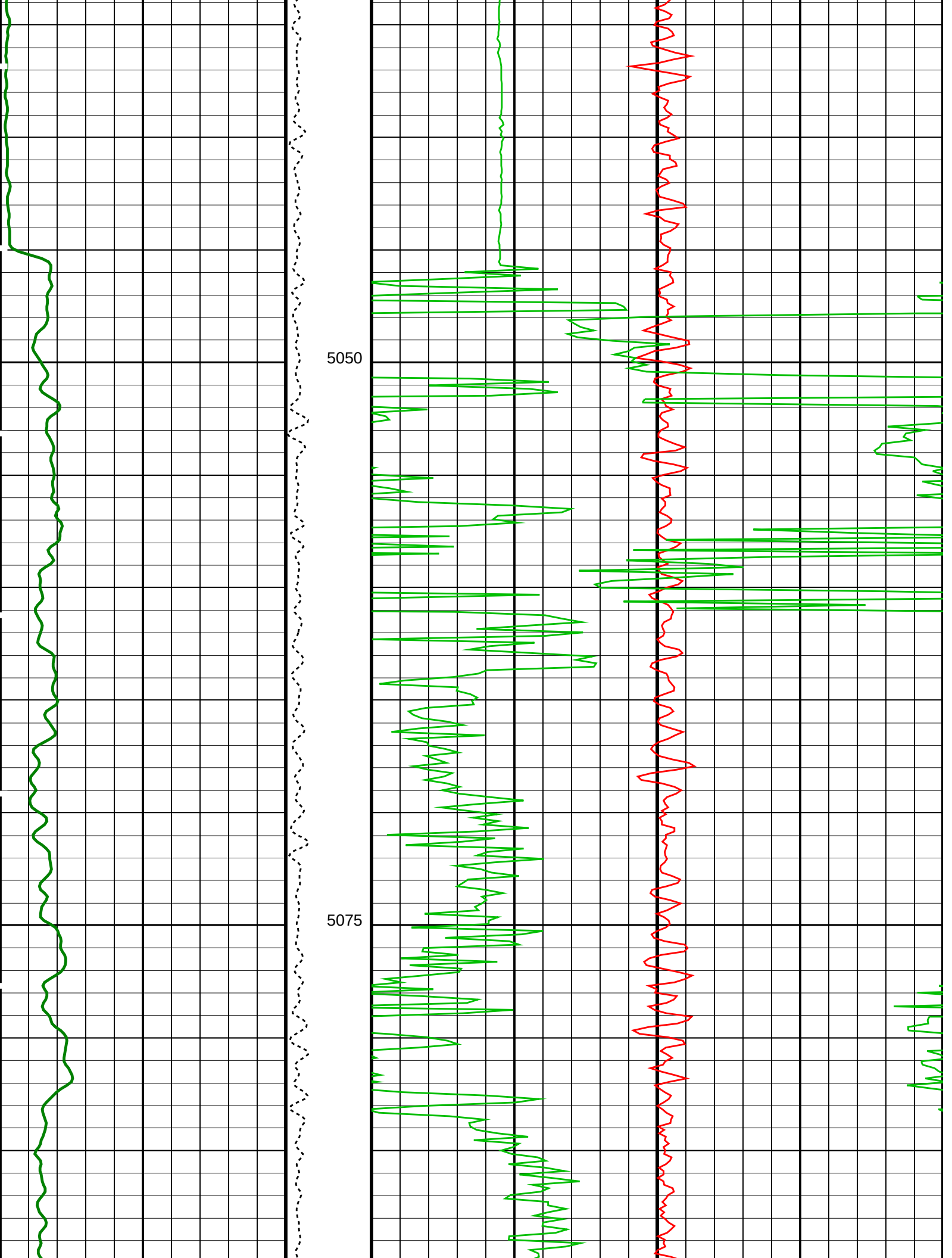
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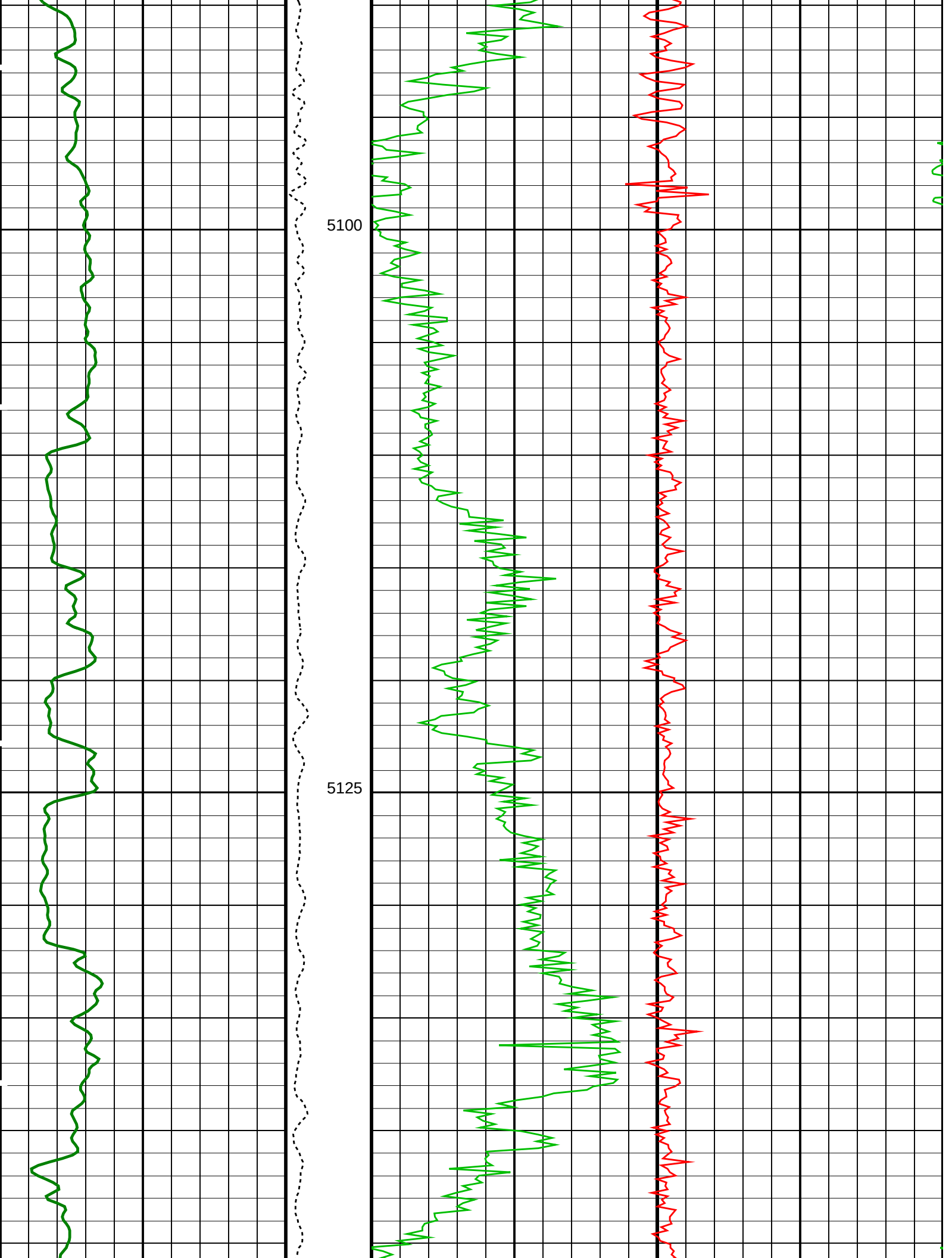
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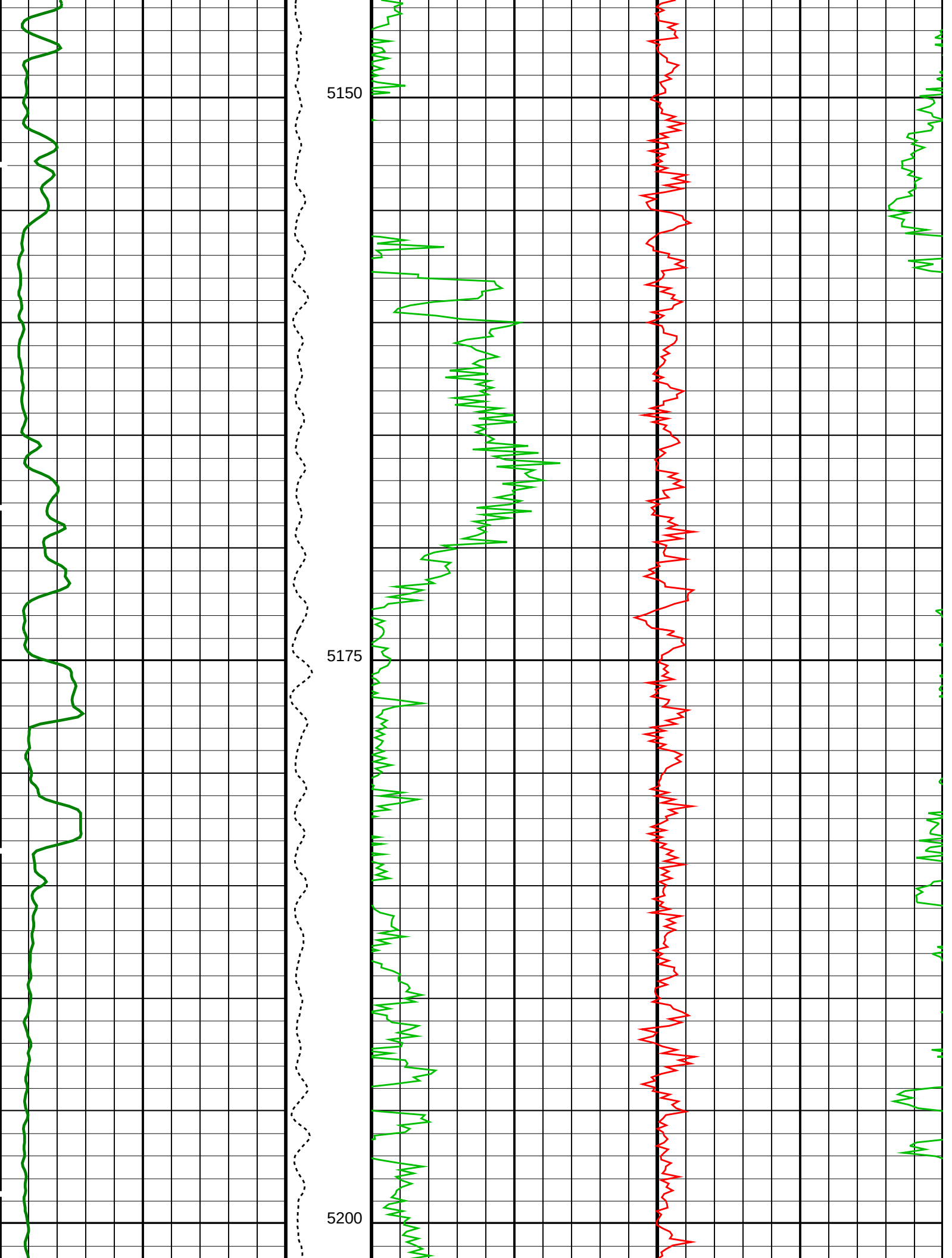
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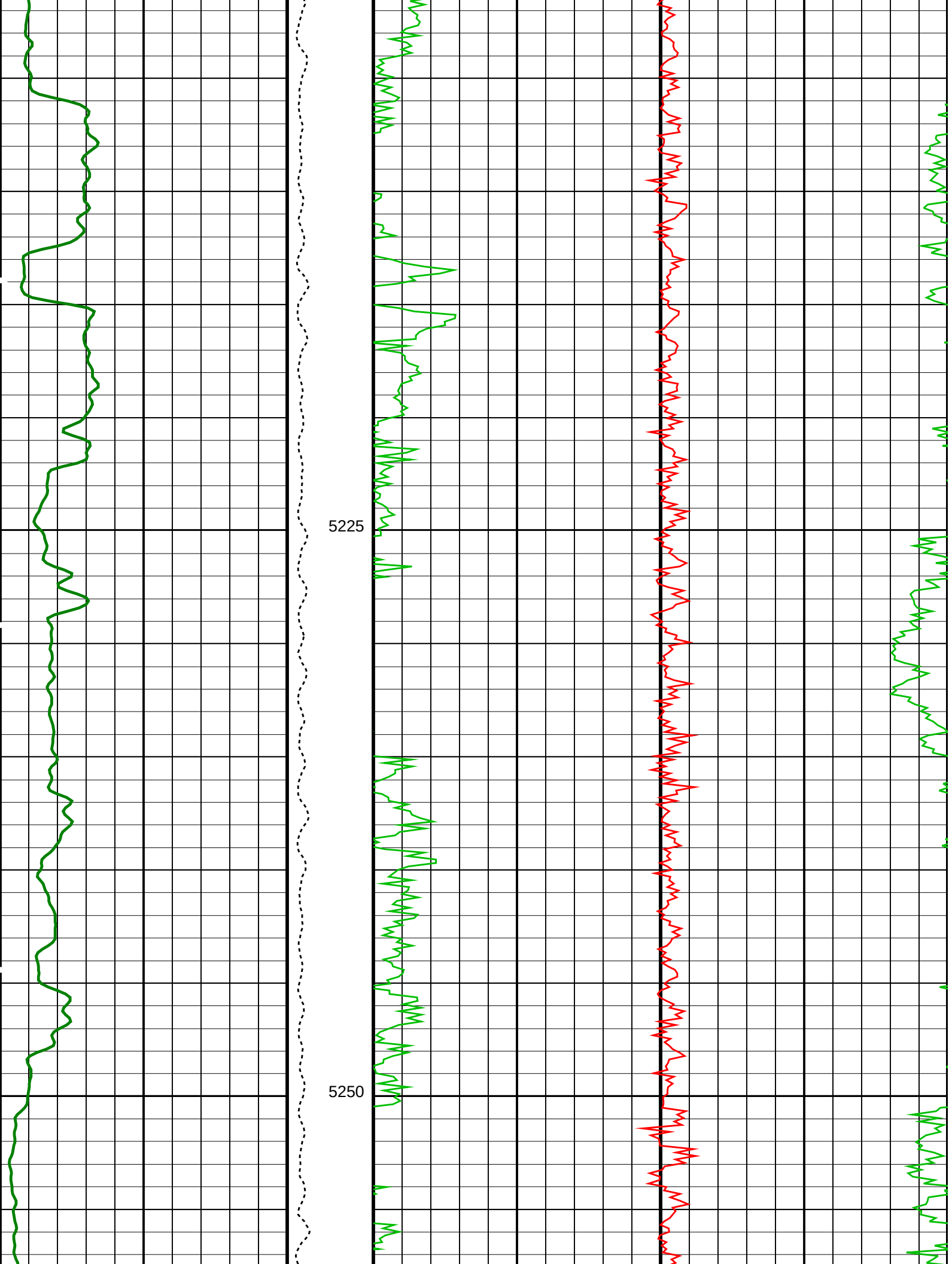
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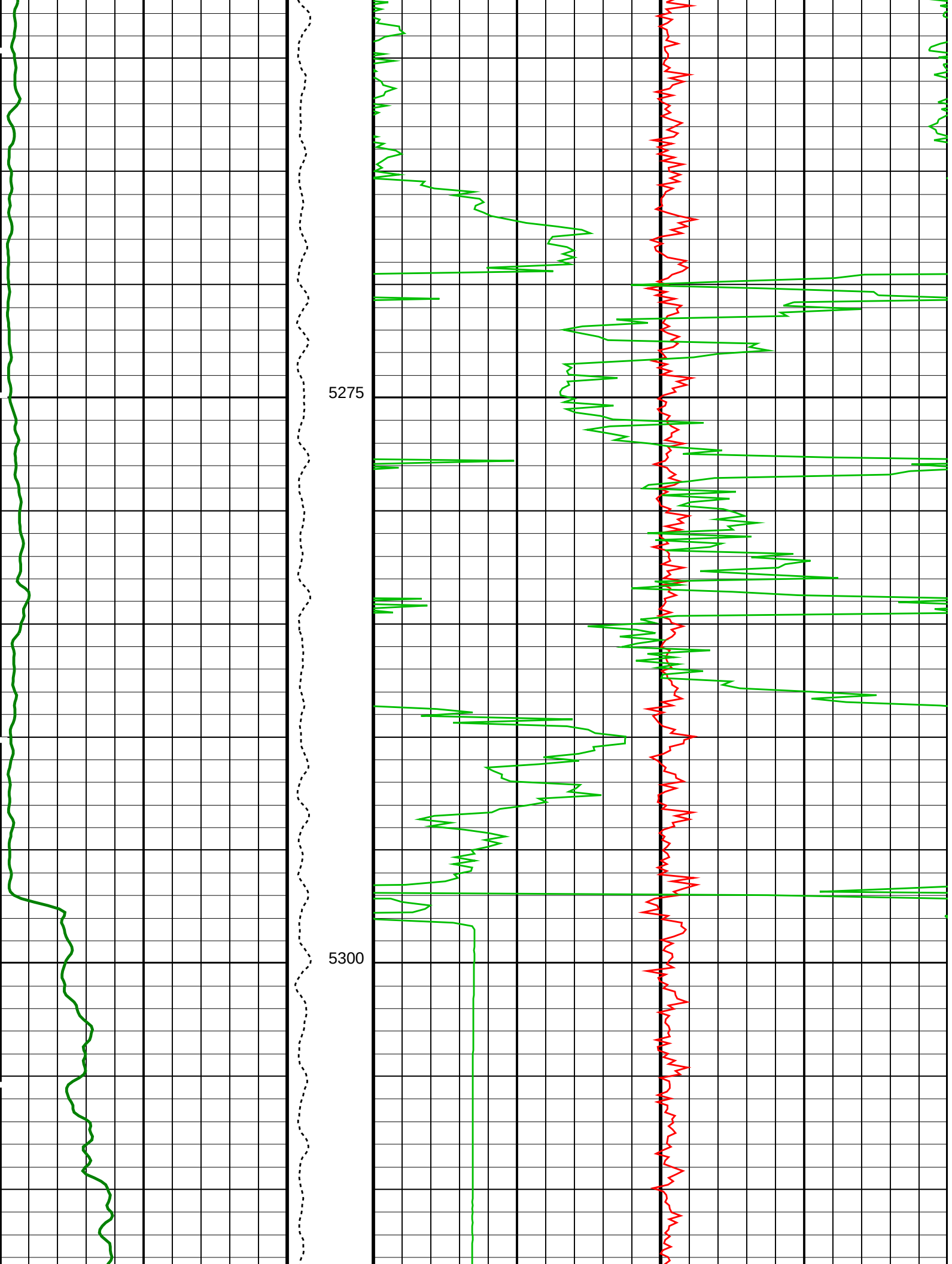
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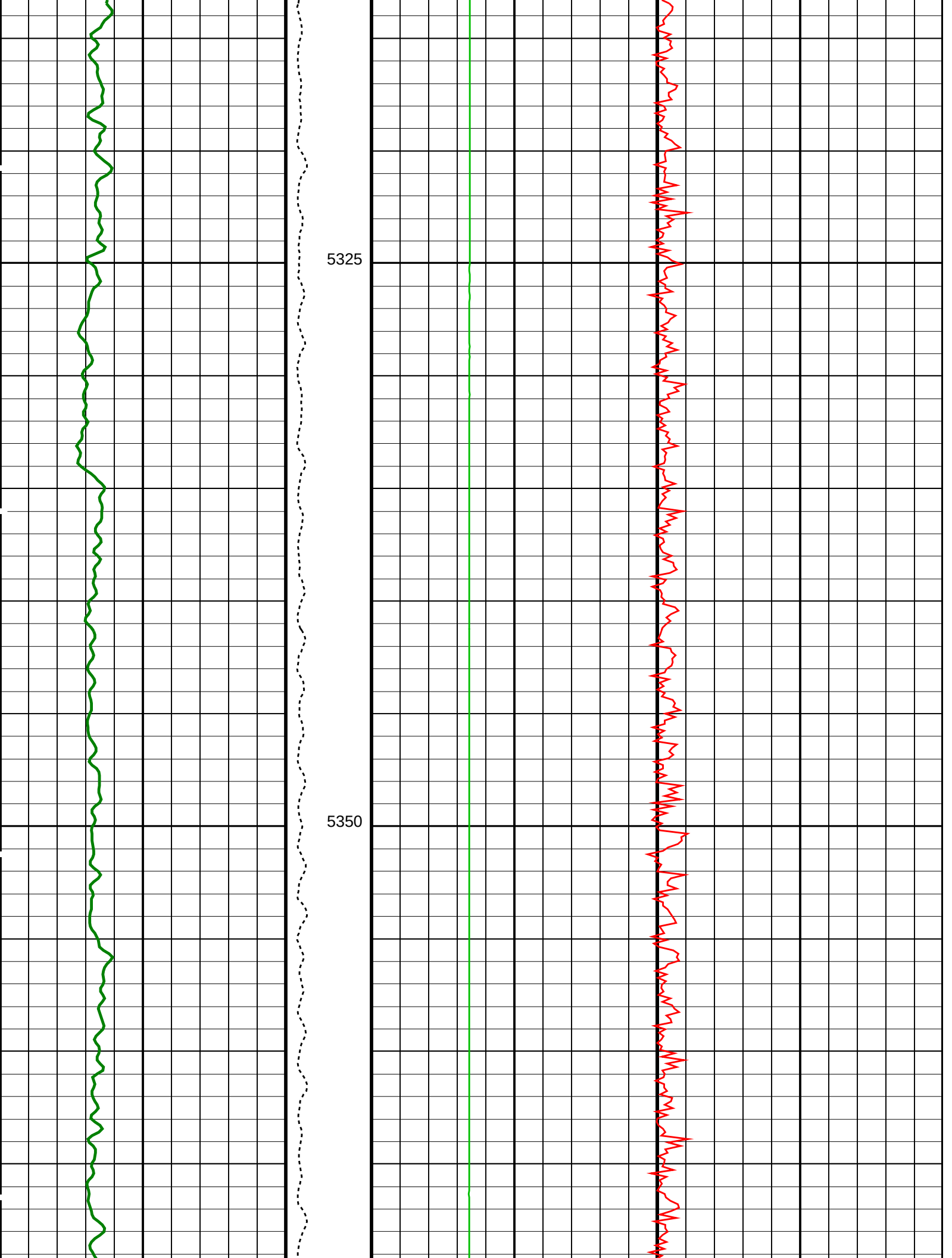
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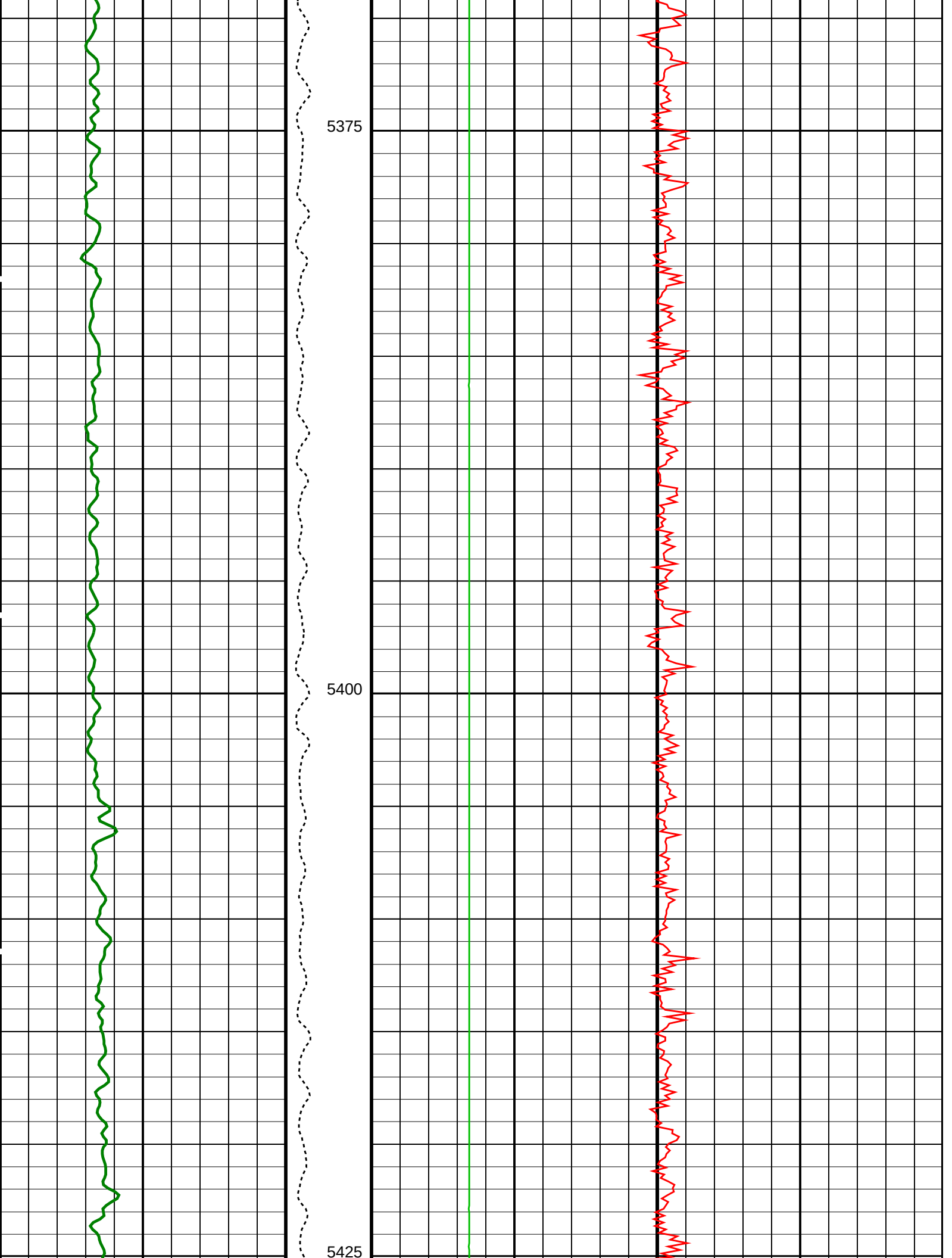
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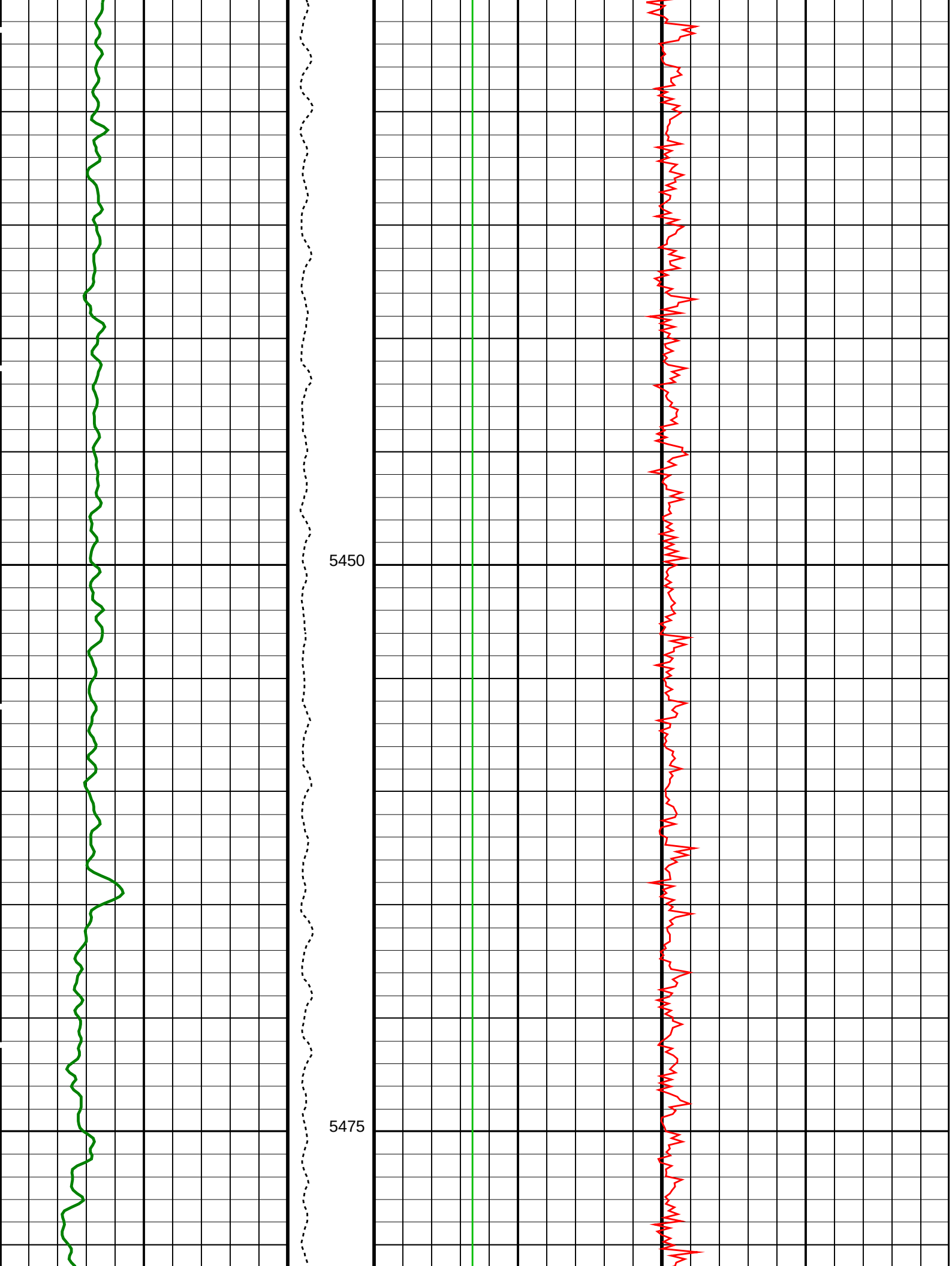
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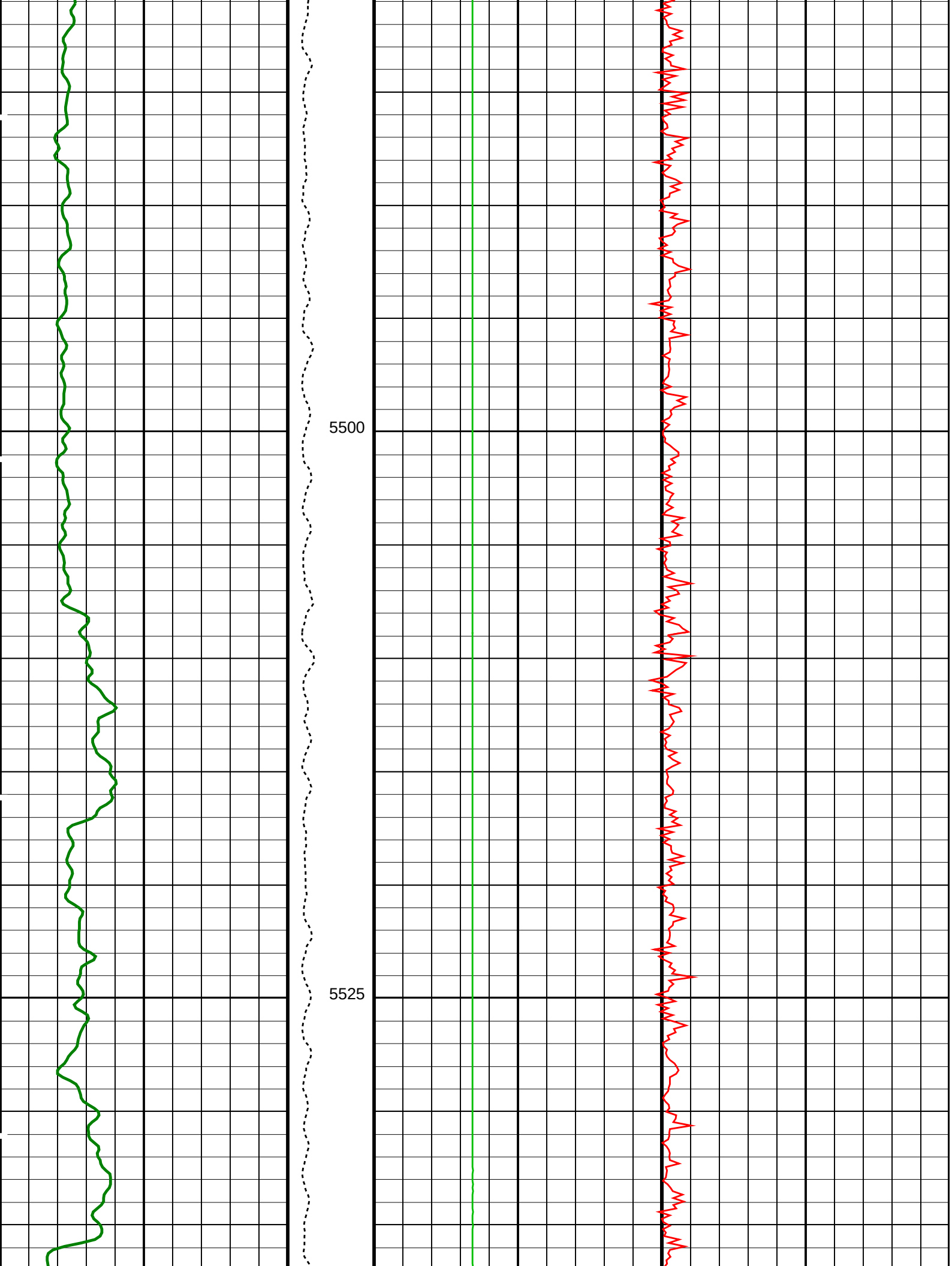
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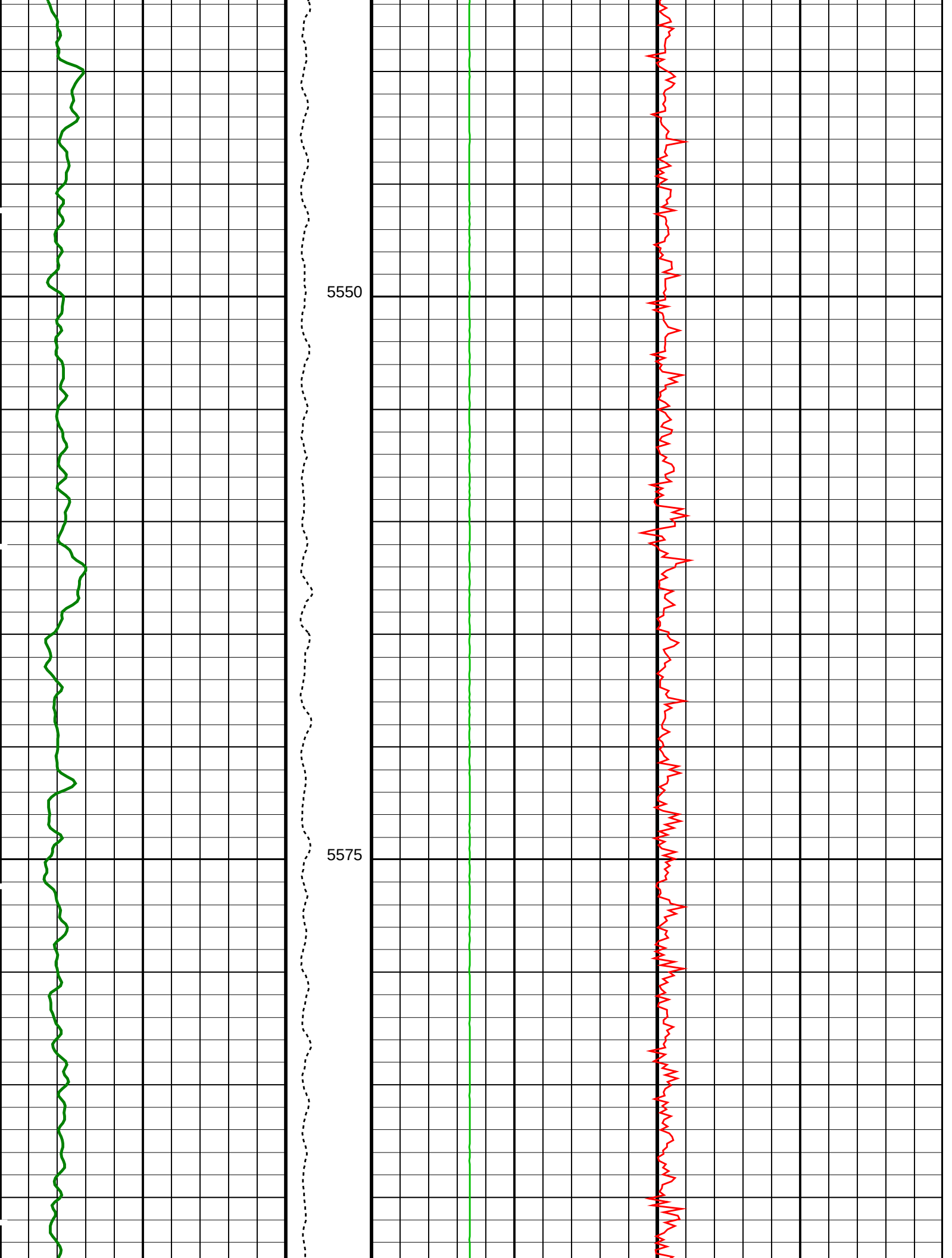
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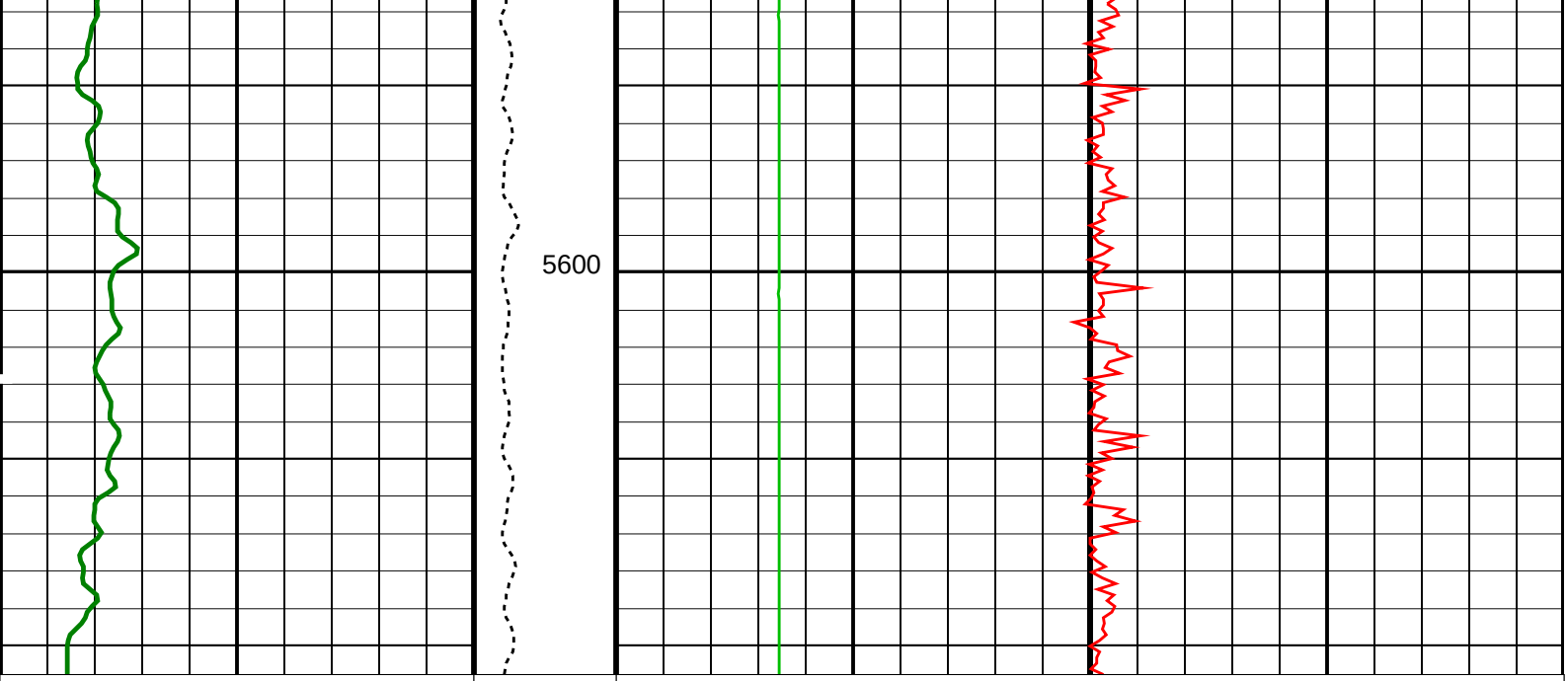


HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 150

Tension (TENS) (LBF)
0 5000

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

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

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	HRLT−B: High Resolution Laterolog Array − B		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
	HNGS−BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	−0.0248554	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.01332	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.00738	
	EDTC−B: Enhanced DTS Cartridge		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	NORMAL	

Format: MSS_Logging Vertical Scale: 1:200 Graphics File Created: 06−May−2022 03:25

OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_035LUP	PRODUCER	05−May−2022 09:12	5610.8 M	4976.6 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_068PUP	FN:79	PRODUCER	06−May−2022 03:25

Schlumberger

First Up Pass

MAXIS Field Log

Company: International Ocean Discovery Program **Well: Expedition 390, Site U1556B**

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_020LUP	FN:21	PRODUCER	05−May−2022 01:04	5641.8 M	5292.1 M

Output DLIS Files

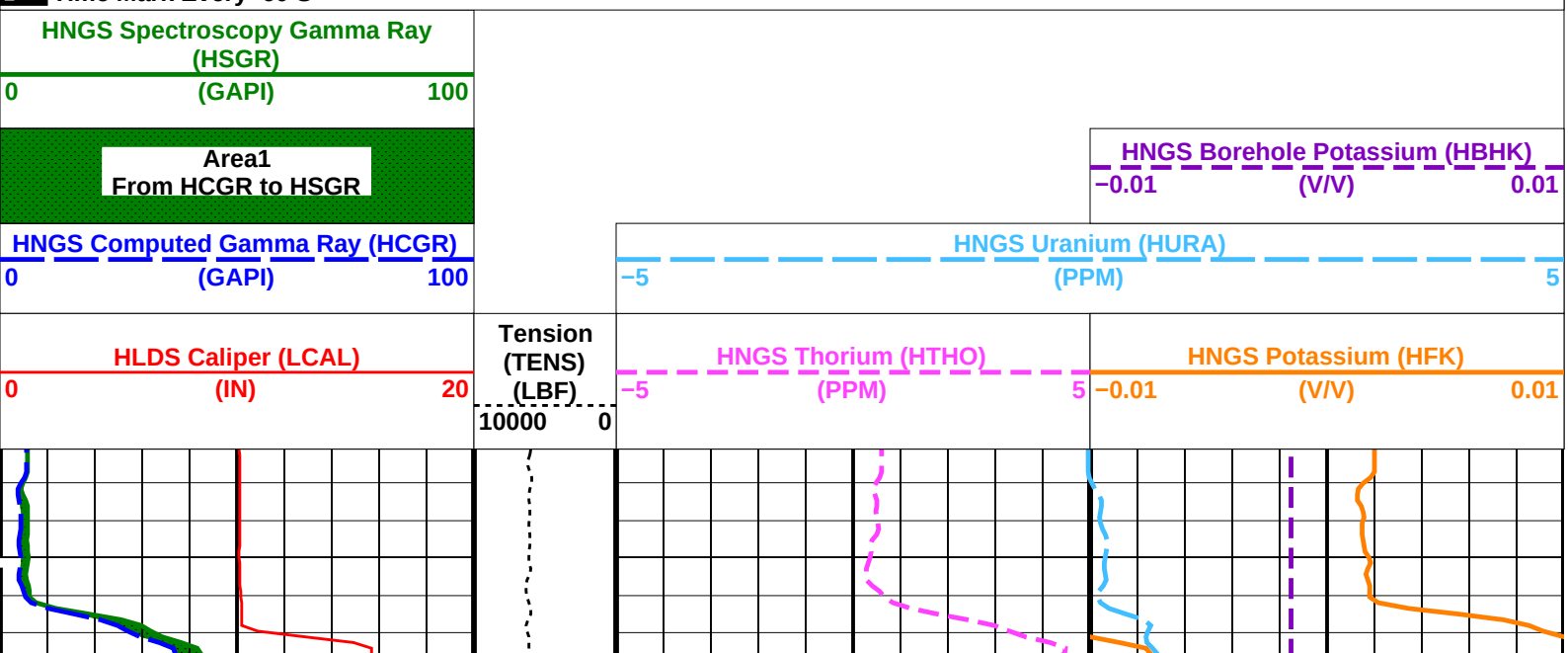
DEFAULT	MSS_LDEO_HRLA_LDL_024PUP	FN:27	PRODUCER	05−May−2022 04:58	5641.8 M	5292.1 M
RTB	MSS_LDEO_HRLA_LDL_024PUP	FN:28	PRODUCER	05−May−2022 04:58	5641.8 M	5292.1 M

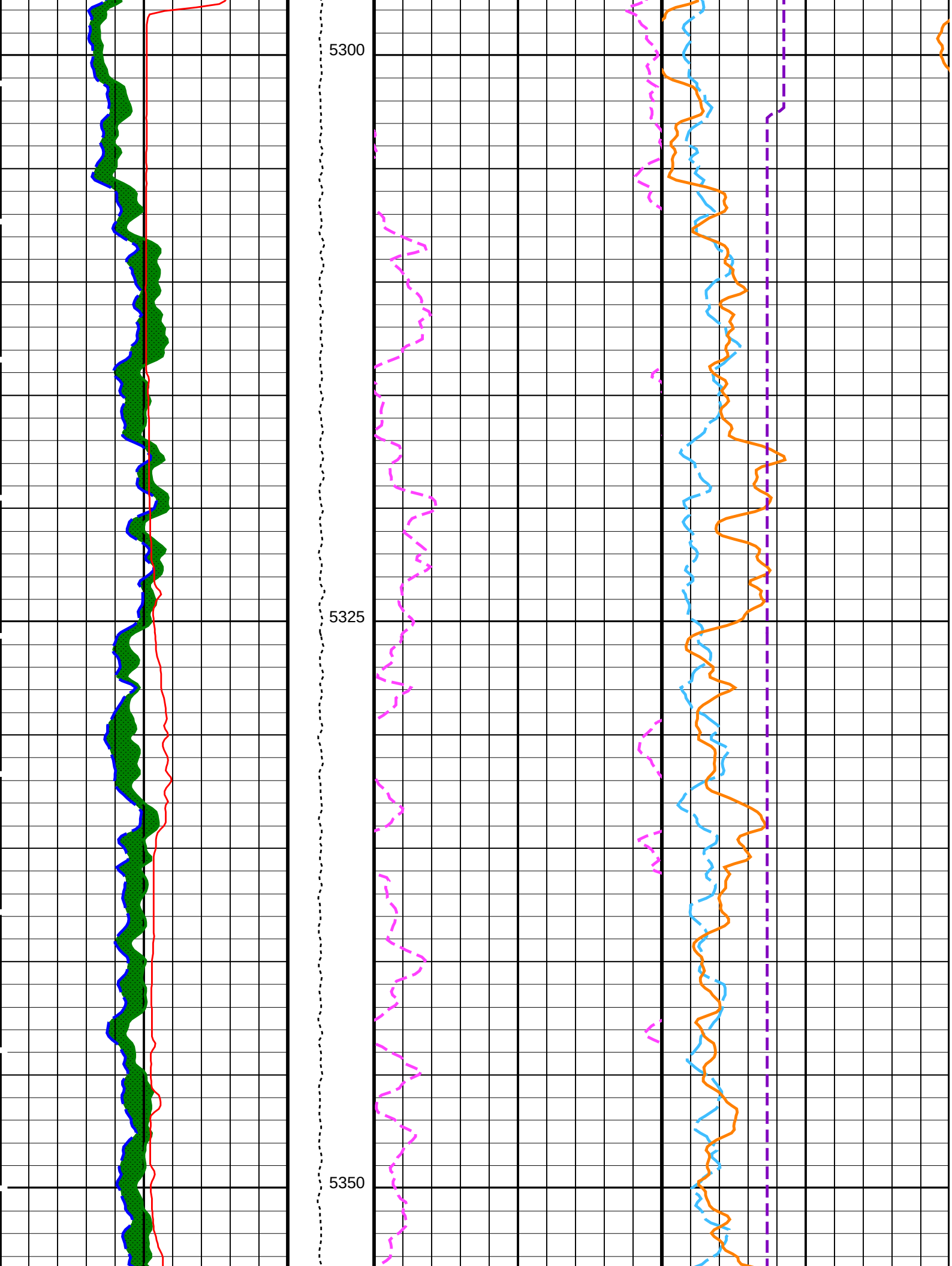
OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

PIP SUMMARY

Time Mark Every 60 S

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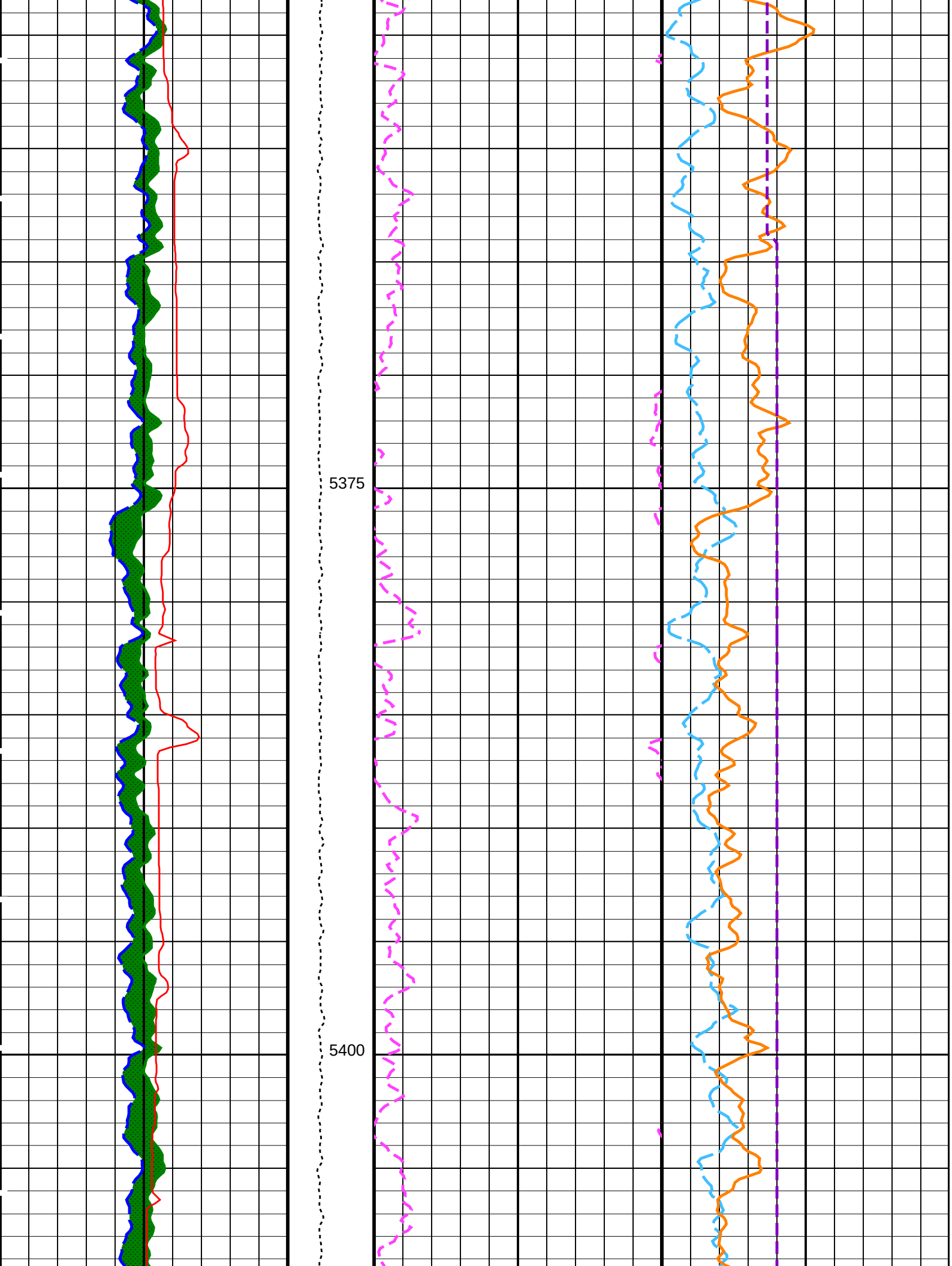
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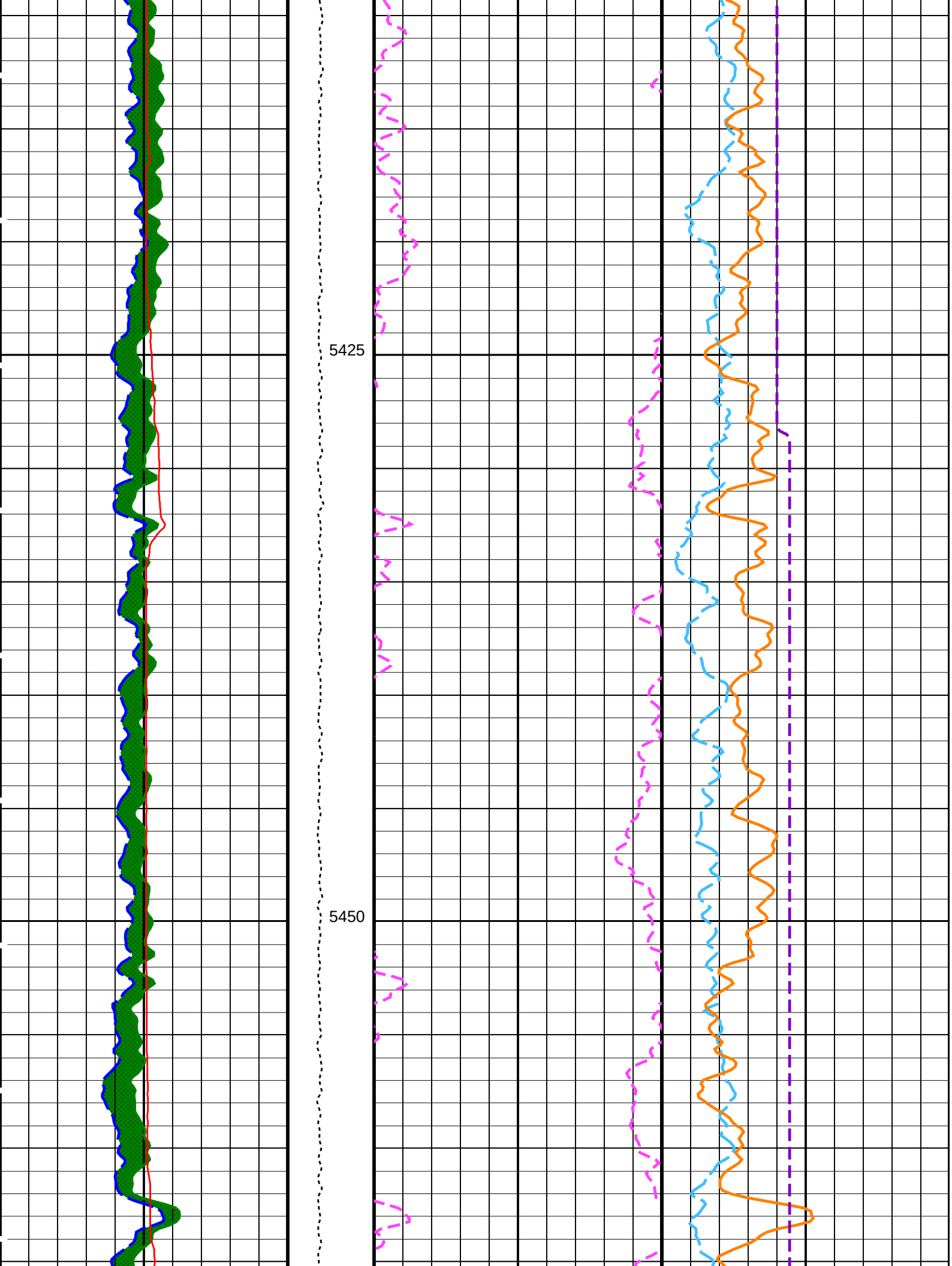
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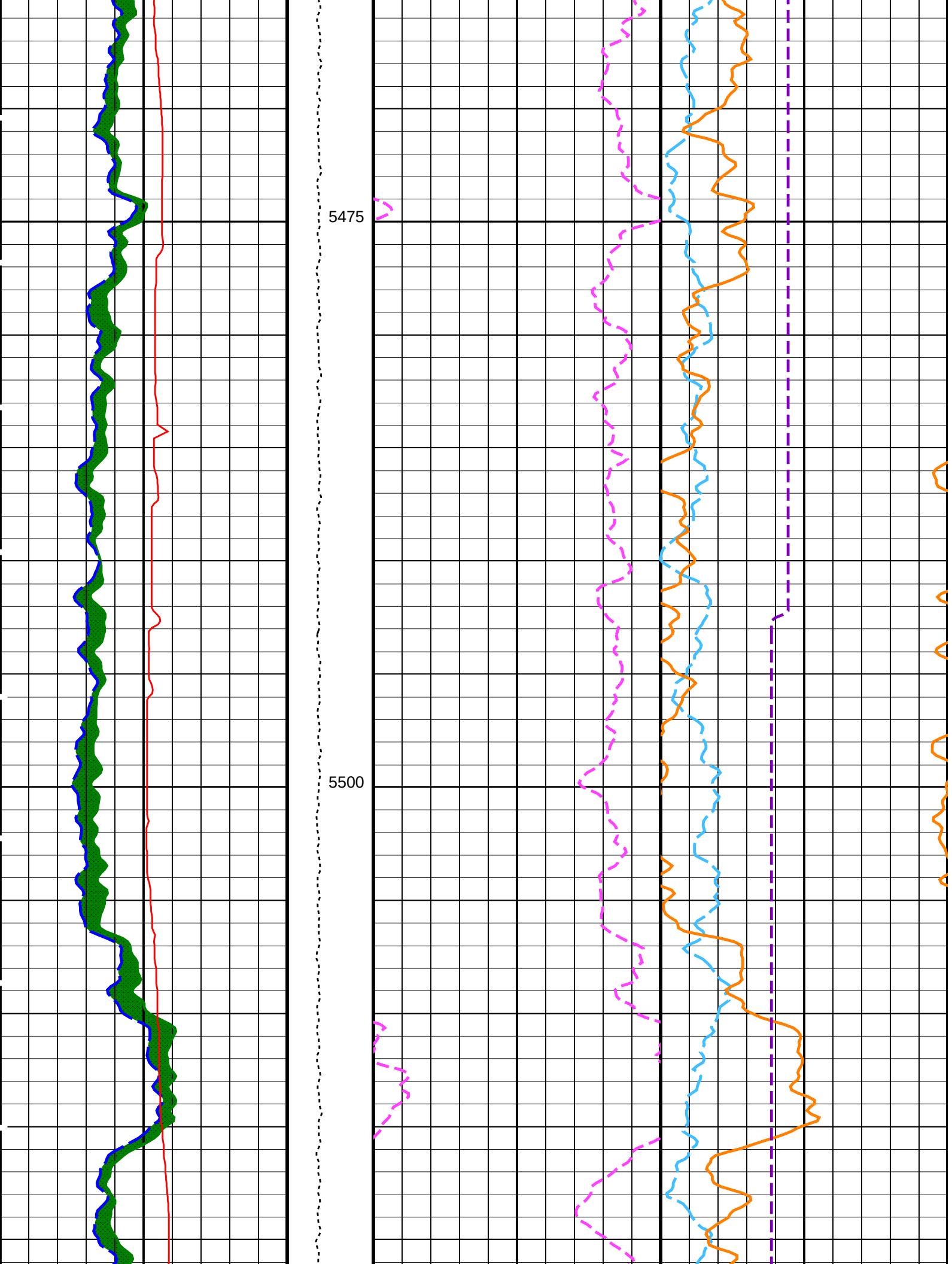
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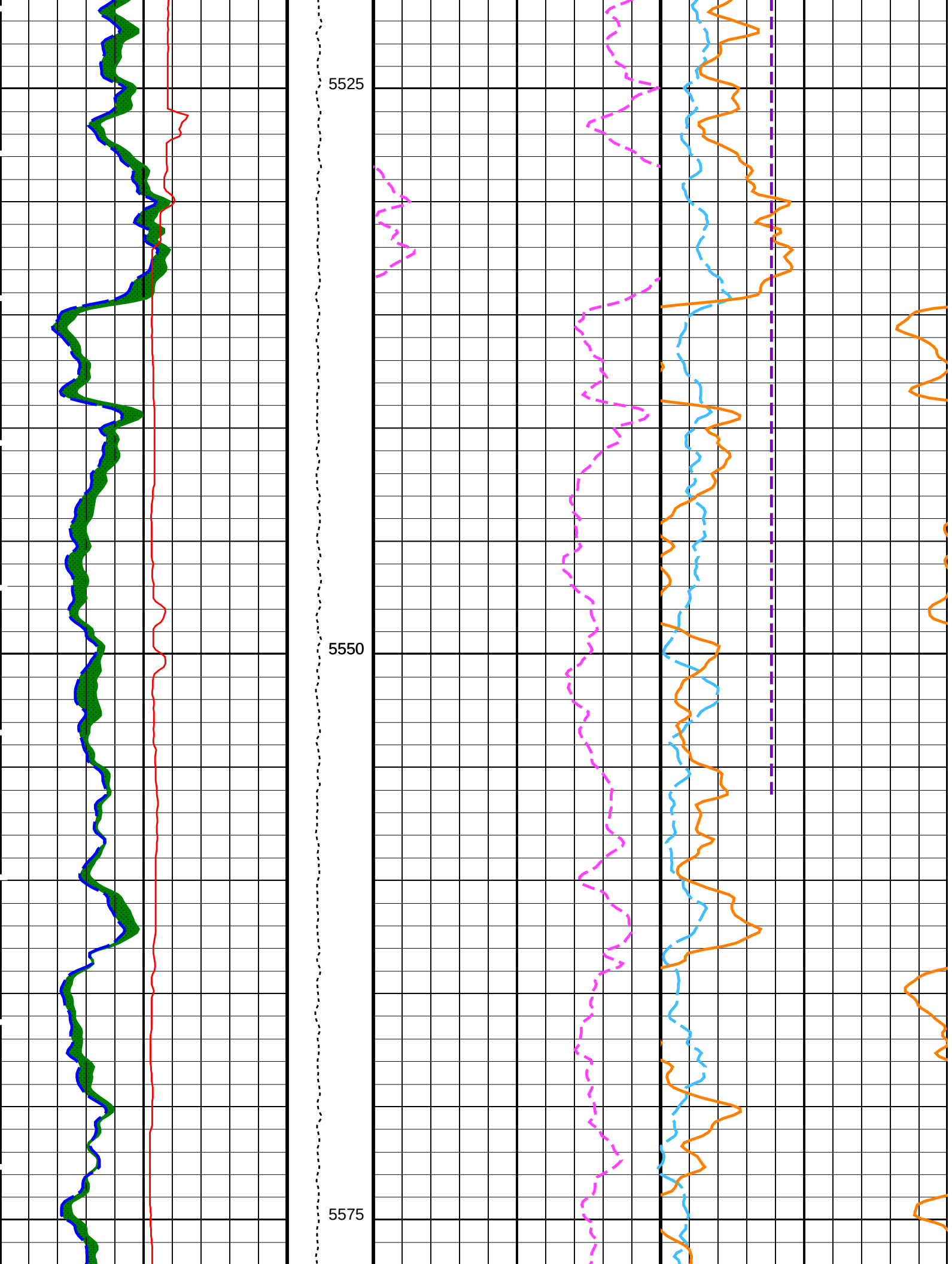
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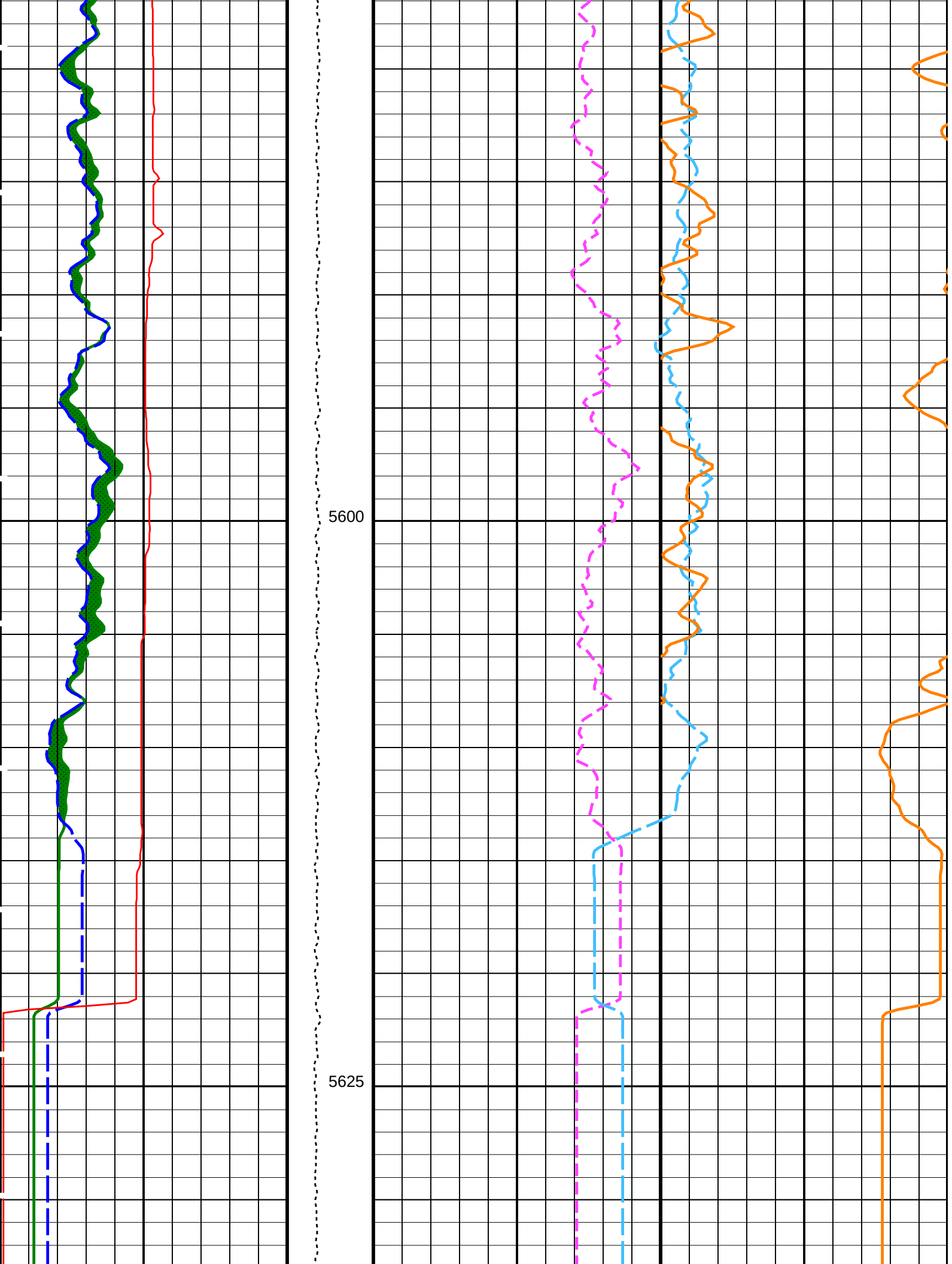
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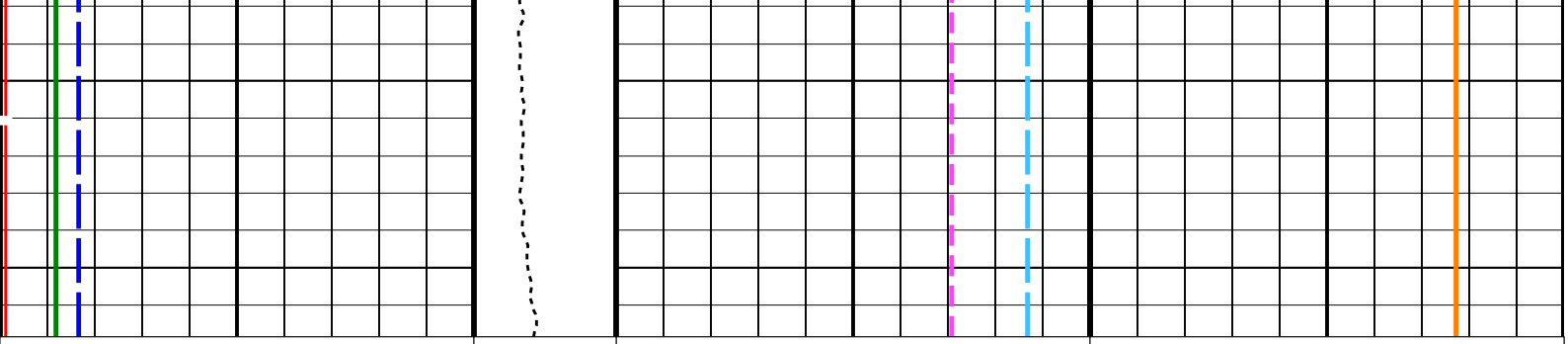


PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	HRLT−B: High Resolution Laterolog Array − B		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
	HNGS−BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	−0.0140694	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.01332	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.00746	
	EDTC−B: Enhanced DTS Cartridge		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.03	G/C3
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	RECOMPUTE	

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 05−May−2022 04:58

OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187

EDTC-B	SKK-5169-EDTCB

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_020LUP	FN:21	PRODUCER	05-May-2022 01:04	5641.8 M	5292.1 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_024PUP	FN:27	PRODUCER	05-May-2022 04:58		
RTB	MSS_LDEO_HRLA_LDL_024PUP	FN:28	PRODUCER	05-May-2022 04:58		

Company: International Ocean Discovery Program — Well: Expedition 390, Site U1556B

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_020LUP	FN:21	PRODUCER	05-May-2022 01:04	5641.8 M	5292.1 M

Output DLIS Files

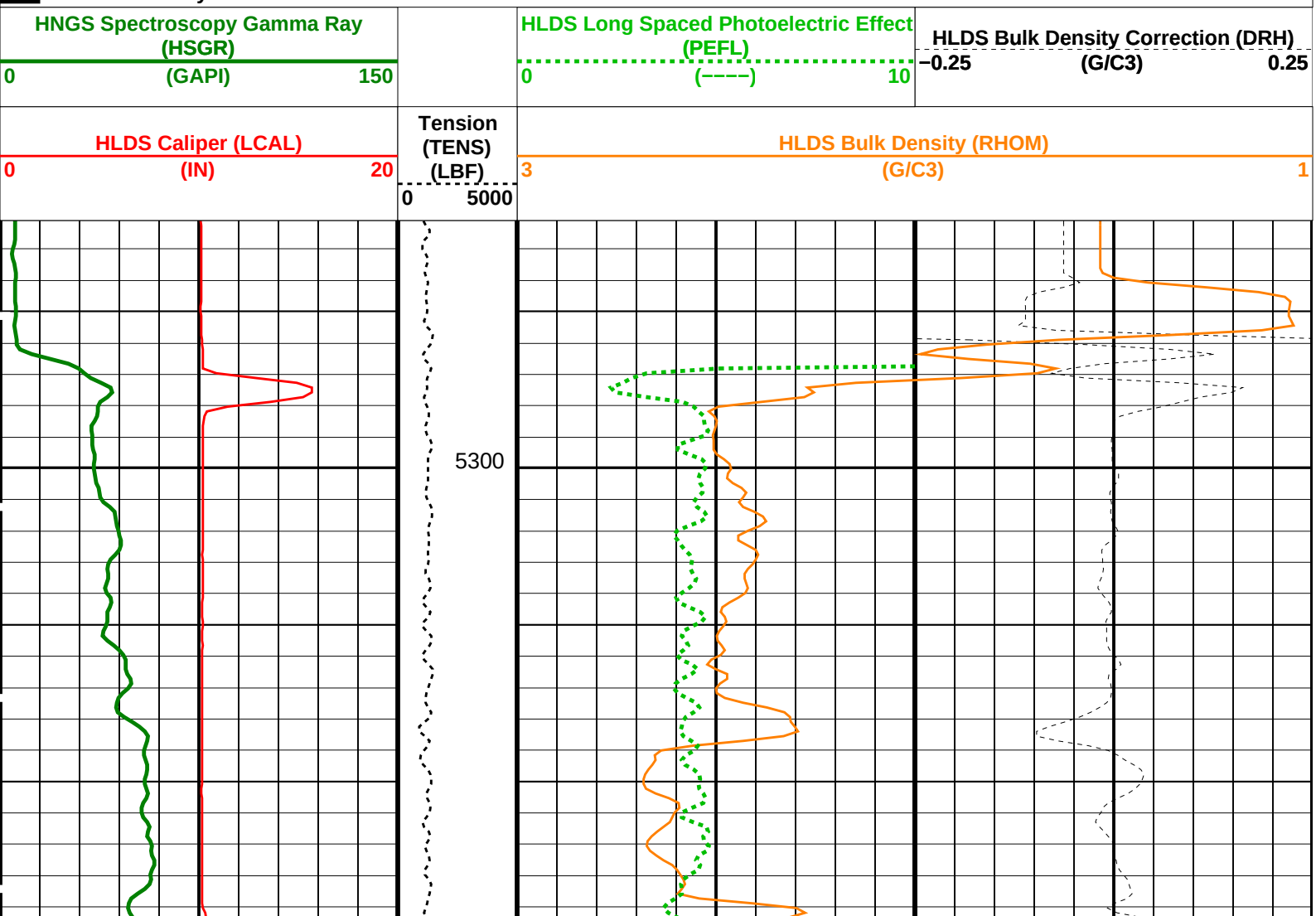
DEFAULT	MSS_LDEO_HRLA_LDL_024PUP	FN:27	PRODUCER	05-May-2022 04:58	5641.8 M	5292.1 M
RTB	MSS_LDEO_HRLA_LDL_024PUP	FN:28	PRODUCER	05-May-2022 04:58	5641.8 M	5292.1 M

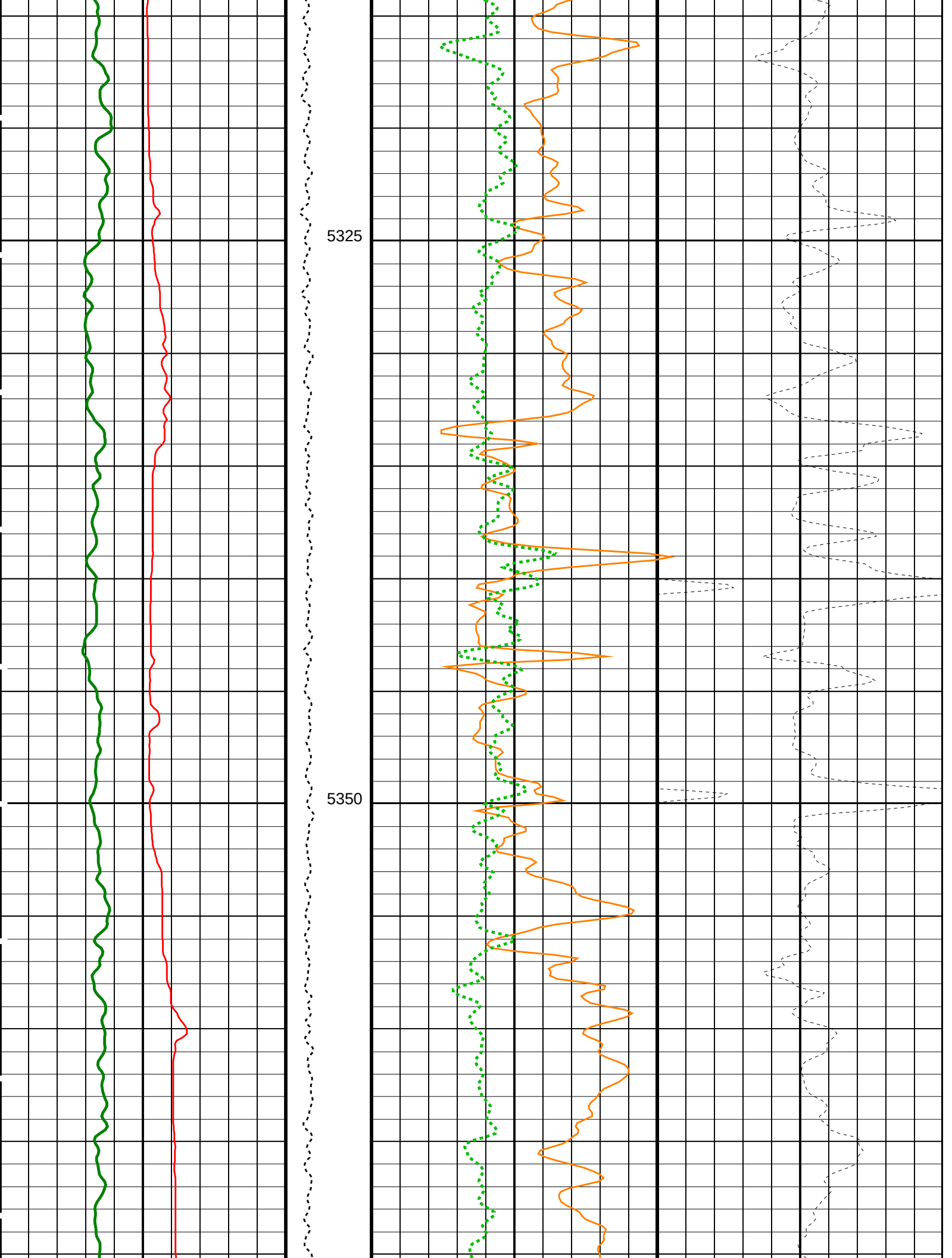
OP System Version: 19C0-187

MSS_LDEO-A	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
HNGC-B	19C0-187	HNGS-BA	19C0-187
EDTC-B	SKK-5169-EDTCB		

PIP SUMMARY

Time Mark Every 60 S

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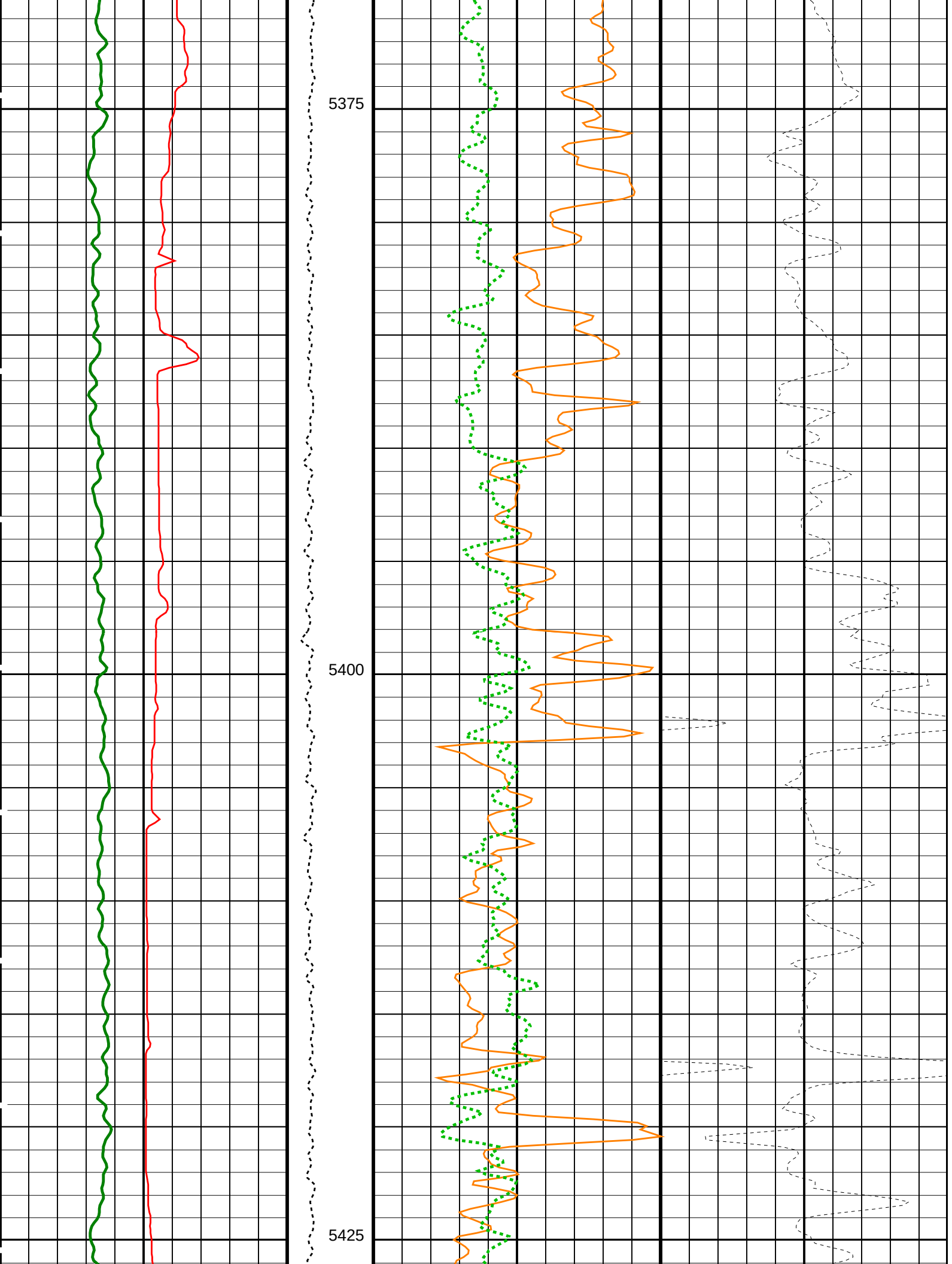
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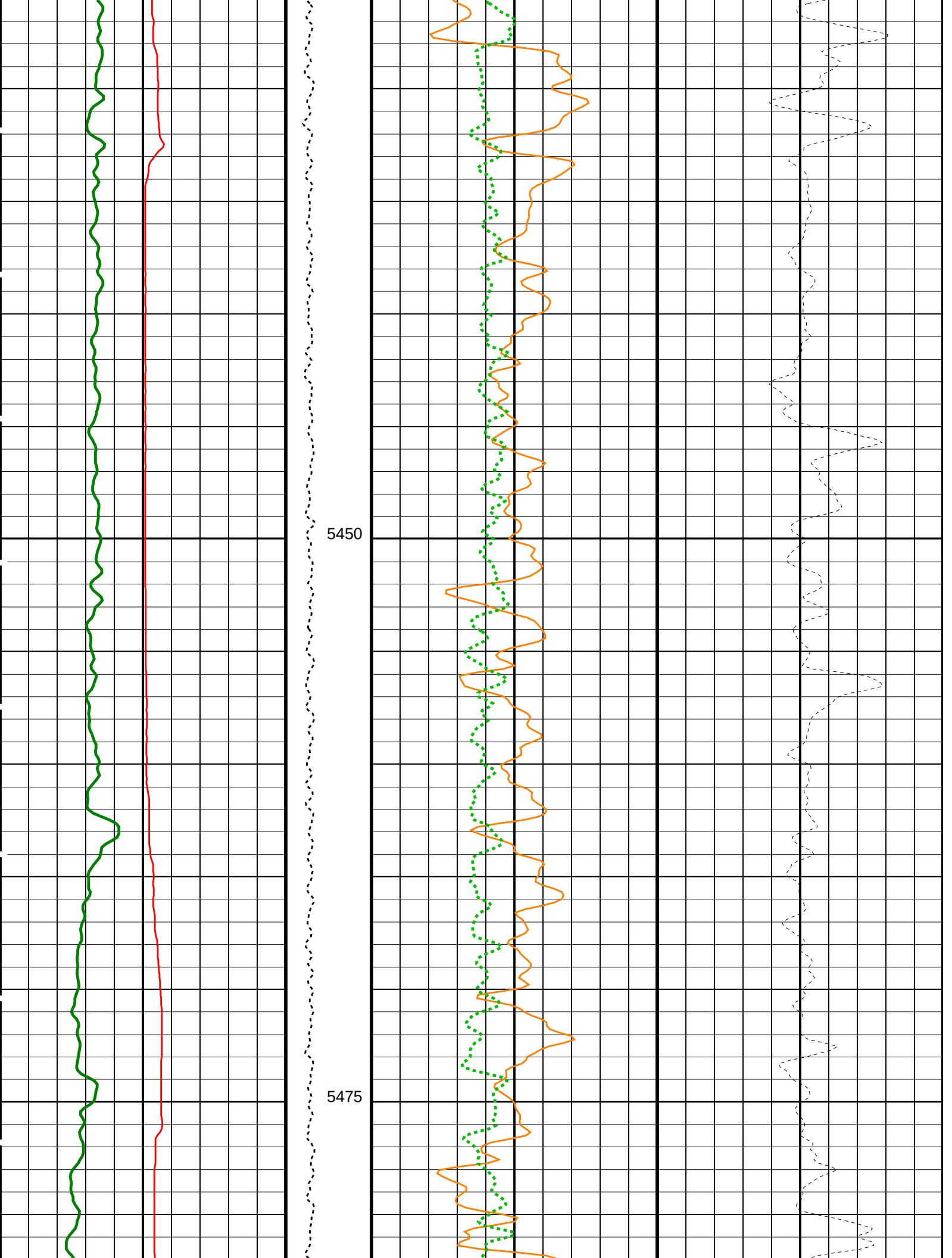
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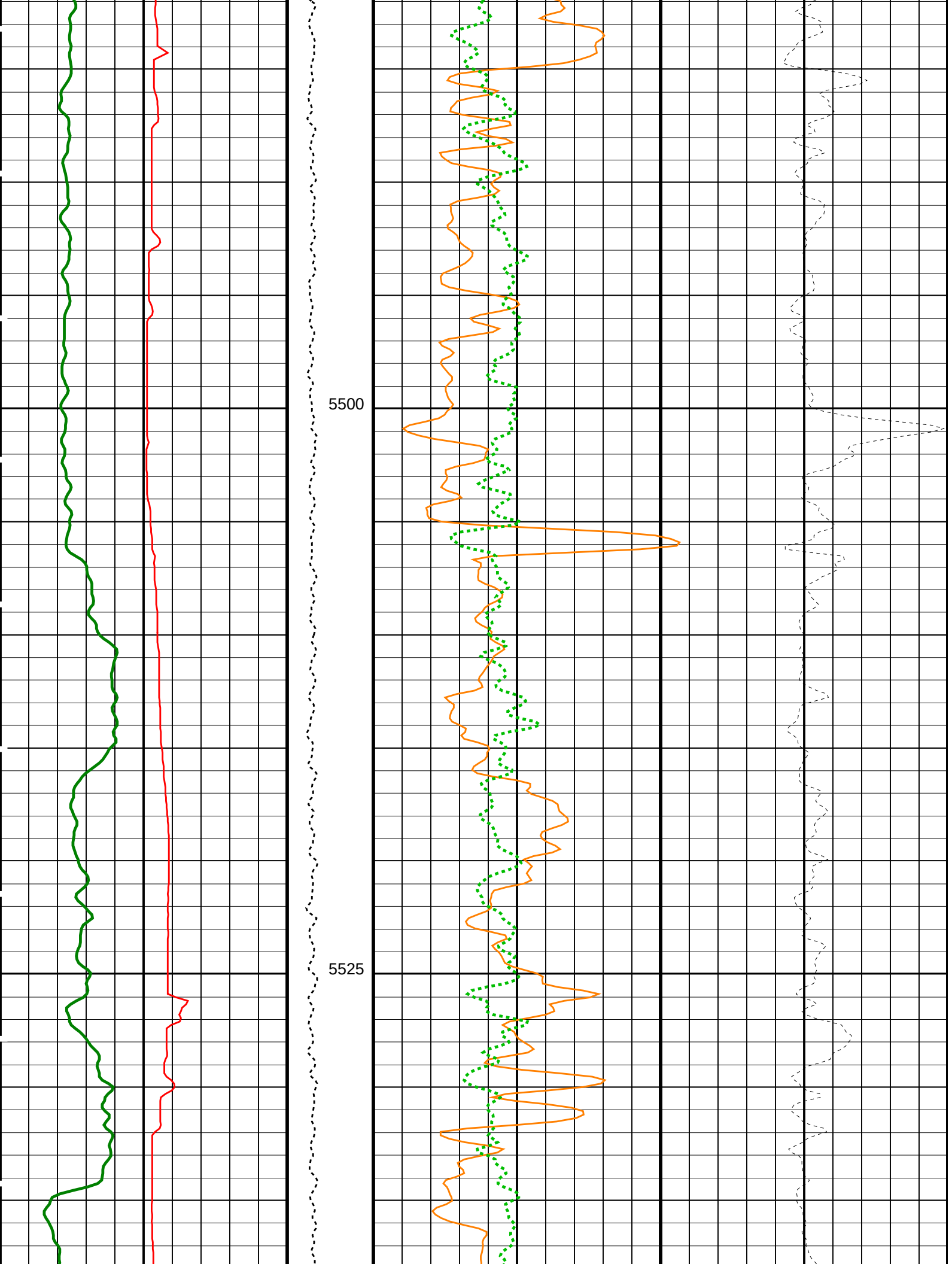
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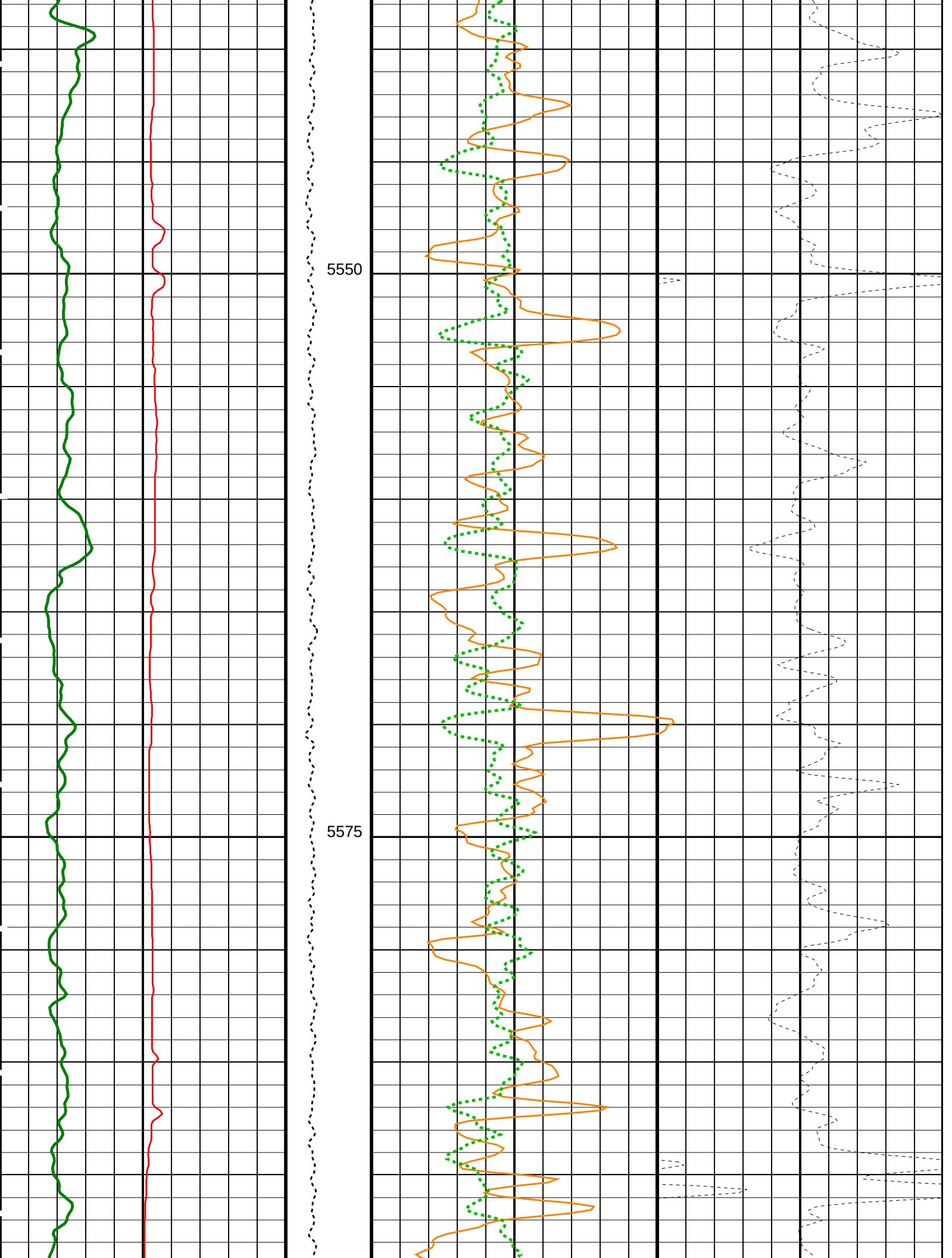
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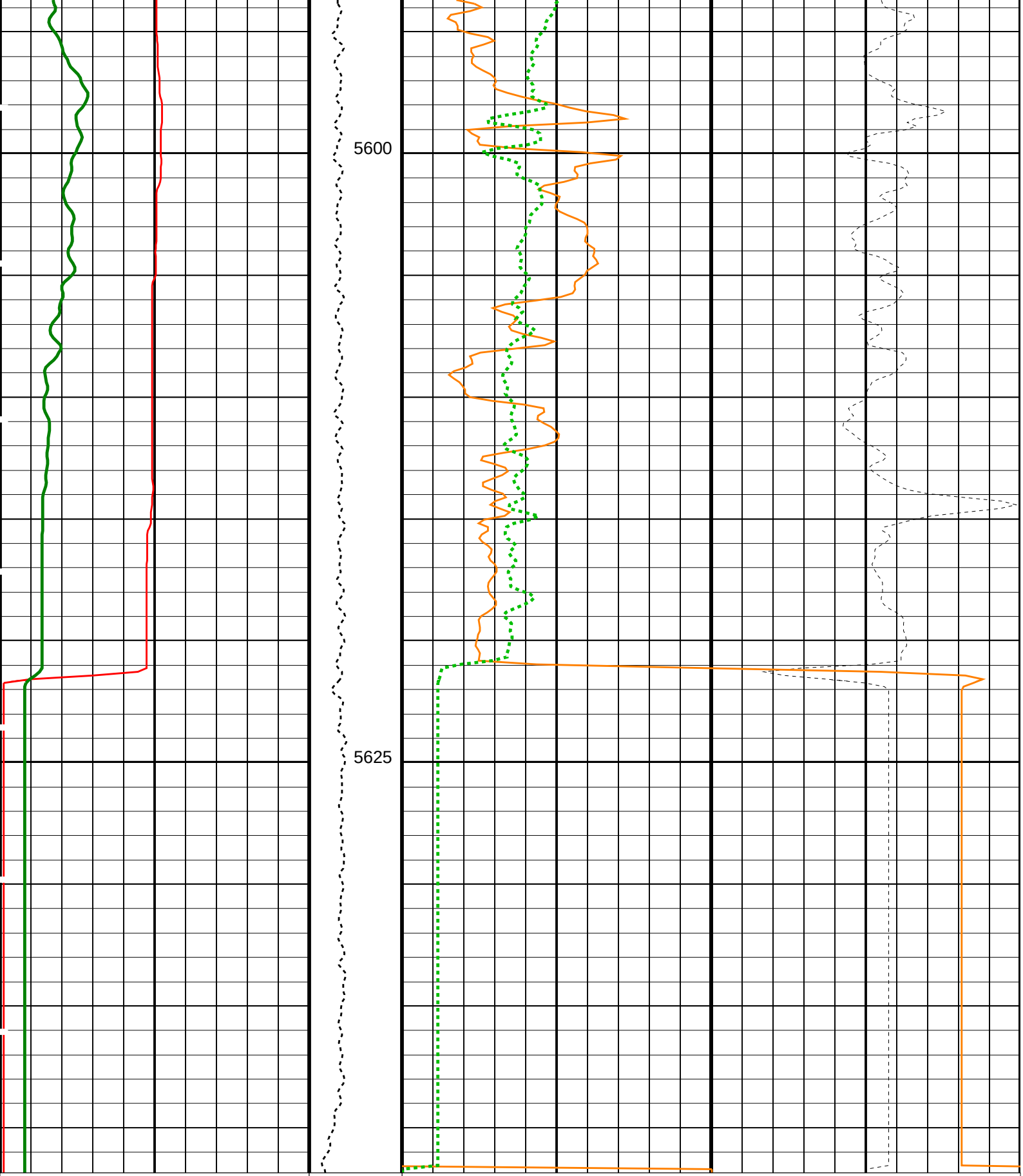


HLDS Caliper (LCAL) 0 (IN) 20	Tension (TENS) (LBF) 0 5000	HLDS Bulk Density (RHOM) 3 (G/C3) 1
HNGS Spectroscopy Gamma Ray (HSGR) 0 (GAPI) 150		HLDS Long Spaced Photoelectric Effect (PEFL) 0 (–––––) 10
		HLDS Bulk Density Correction (DRH) –0.25 (G/C3) 0.25

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	HRLT−B: High Resolution Laterolog Array − B		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
	HLDS: Hostile Litho−Density Sonde		
DHC	Density Hole Correction	CALIPER	
DPPM	Density Porosity Processing Mode	HIRS	
FD	Fluid Density	1	G/C3
LATC	HLDS Activation Correction	OFF	
MDEN	Matrix Density	2.71	G/C3
	HNGS−BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	−0.0140694	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.01332	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.00746	
	EDTC−B: Enhanced DTS Cartridge		
BHS	Borehole Status	OPEN	
DPPM	Density Porosity Processing Mode	HIRS	
GCSE	Generalized Caliper Selection	LCAL	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.03	G/C3
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	RECOMPUTE	

Format: HLDSDensityPE Vertical Scale: 1:200 Graphics File Created: 05−May−2022 04:58

OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_020LUP	FN:21	PRODUCER	05−May−2022 01:04	5641.8 M	5292.1 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_024PUP	FN:27	PRODUCER	05−May−2022 04:58		
RTB	MSS_LDEO_HRLA_LDL_024PUP	FN:28	PRODUCER	05−May−2022 04:58		

Company: International Ocean Discovery Program Well: Expedition 390, Site U1556B

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_020LUP	FN:21	PRODUCER	05−May−2022 01:04	5641.8 M	5292.1 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_024PUP	FN:27	PRODUCER	05−May−2022 04:58	5641.8 M	5292.1 M

RTB	MSS_LDEO_HRLA_LDL_024PUP	FN:28	PRODUCER	05−May−2022 04:58	5641.8 M	5292.1 M

OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

PIP SUMMARY

Time Mark Every 60 S

HRLT Mud Resistivity (RM_HRLT)
0.02 (OHMM) 200

HRLT Resistivity 5 (RLA5)
0.2 (OHMM) 2000

HRLT Resistivity 4 (RLA4)
0.2 (OHMM) 2000

HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 150

HRLT Resistivity 3 (RLA3)
0.2 (OHMM) 2000

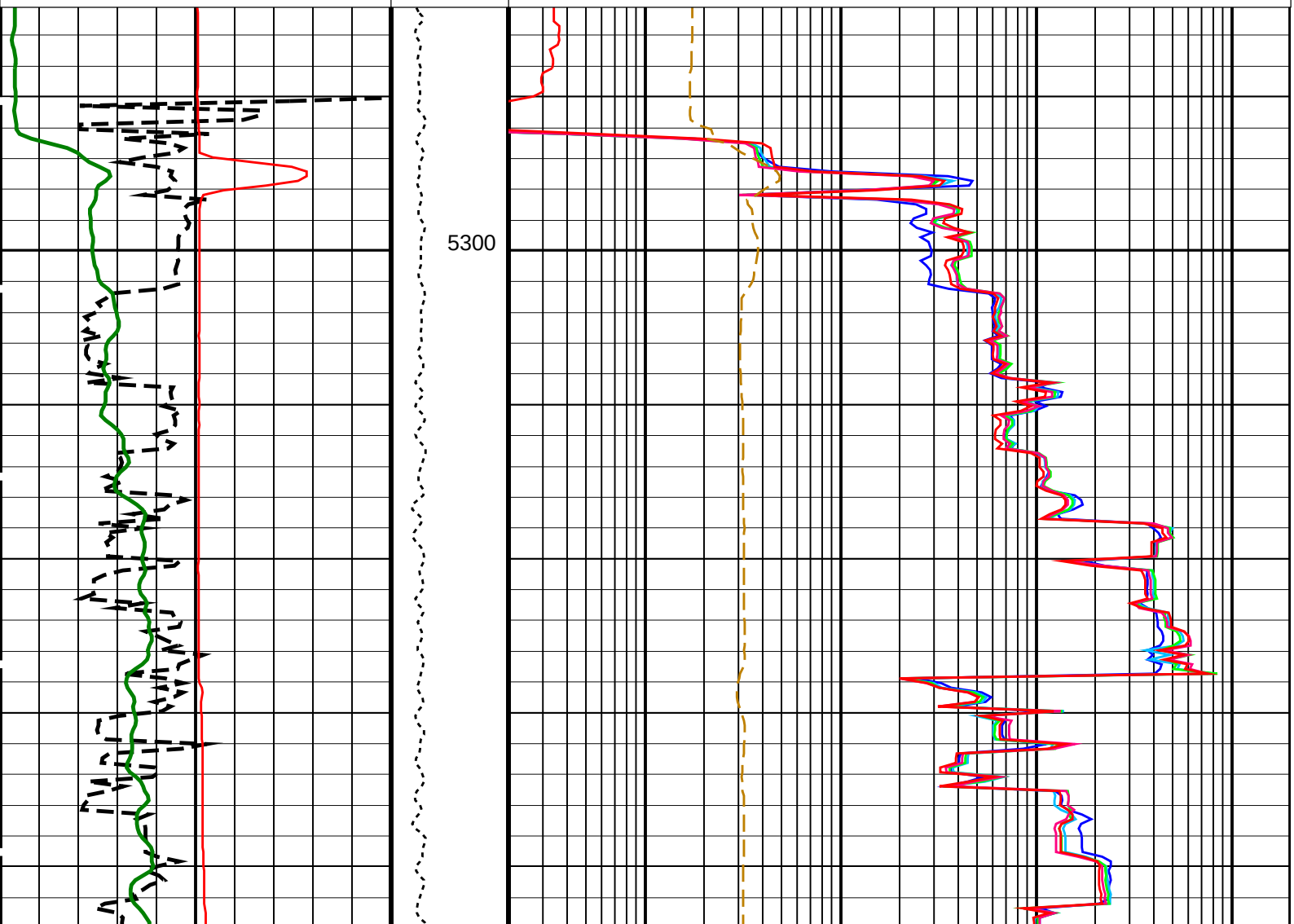
Invasion Diameter (DI_HRLT)
0 (IN) 50

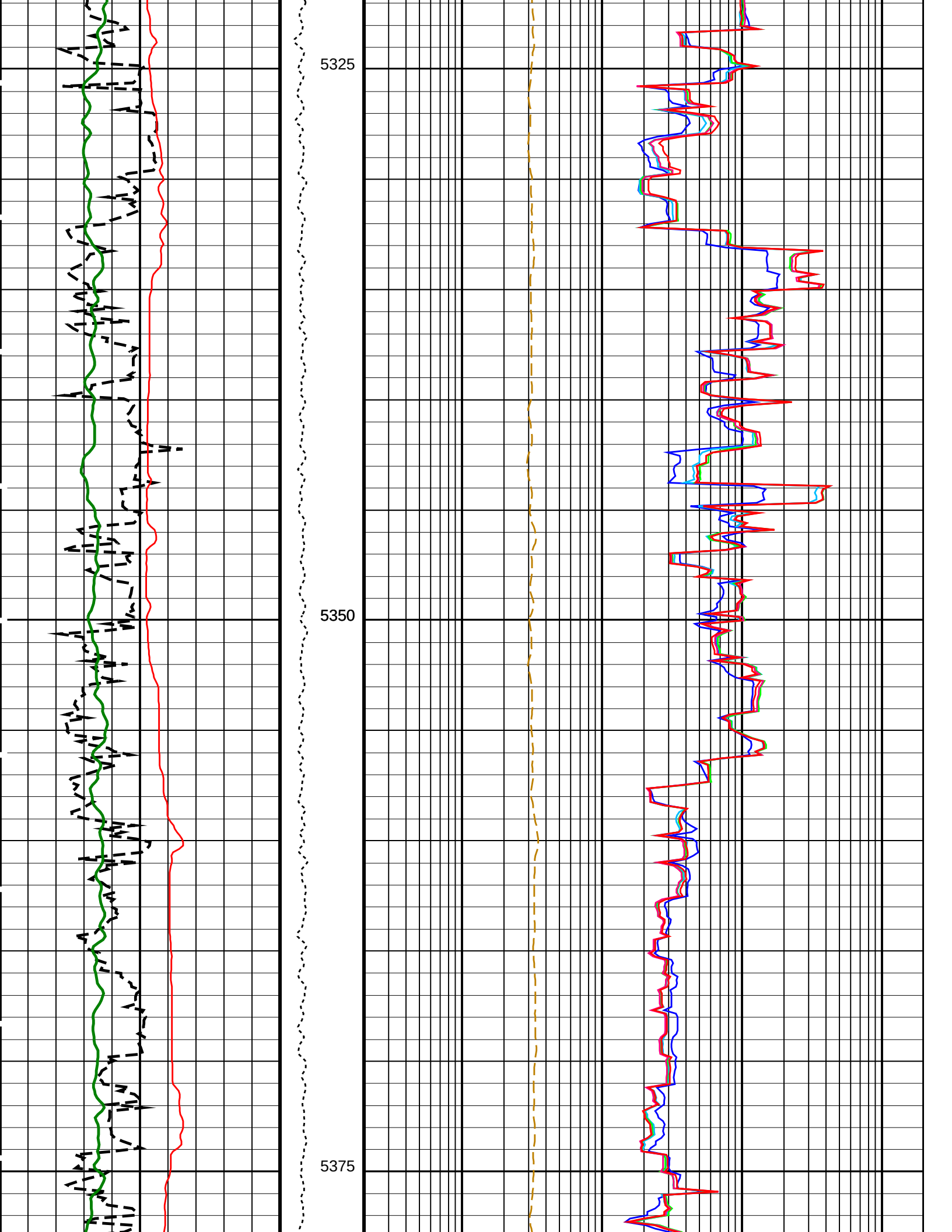
HRLT Resistivity 2 (RLA2)
0.2 (OHMM) 2000

HLDS Caliper (LCAL)
0 (IN) 20

Tension (TENS) (LBF)
0 5000

HRLT Resistivity 1 (RLA1)
0.2 (OHMM) 2000

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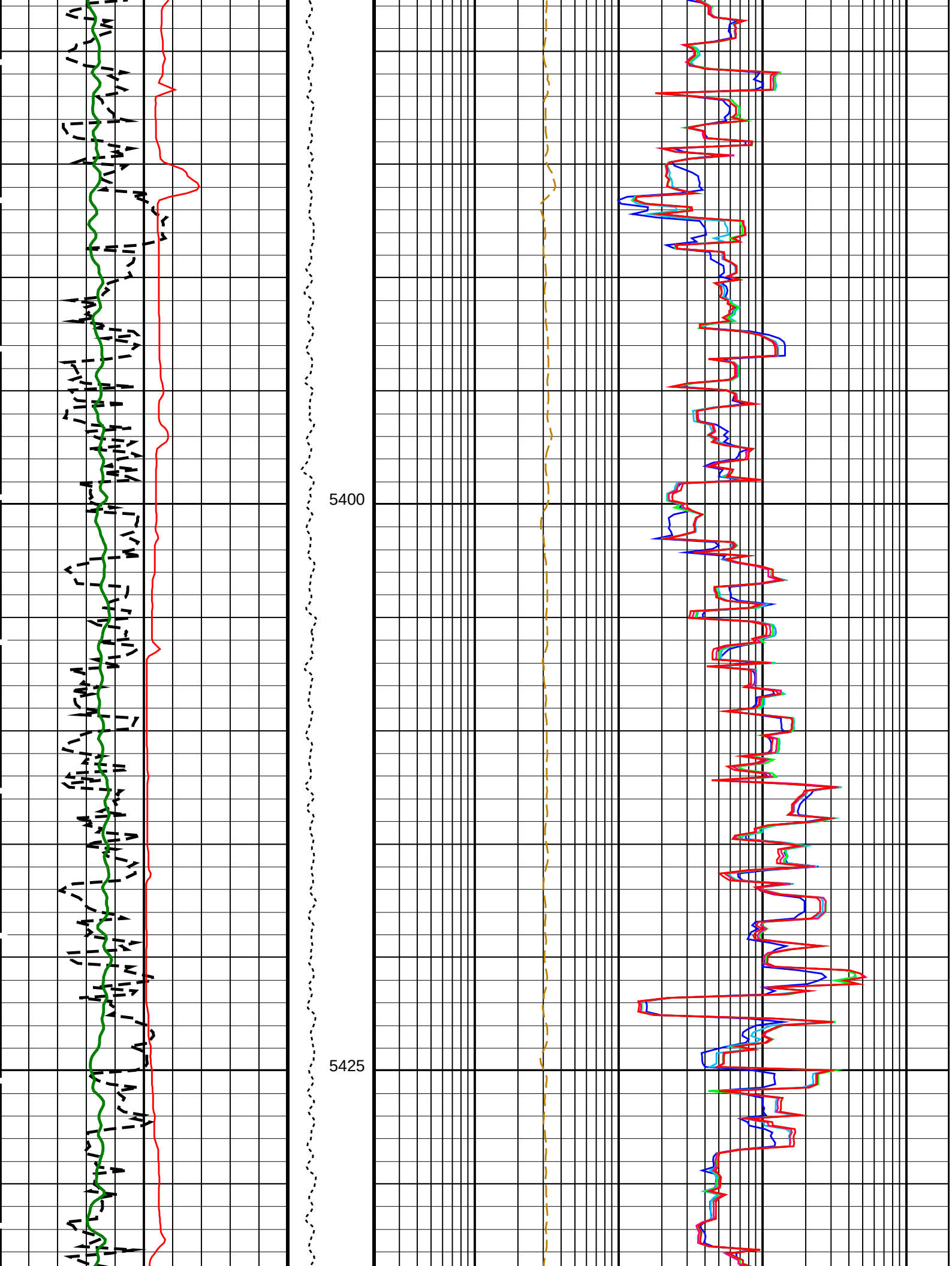
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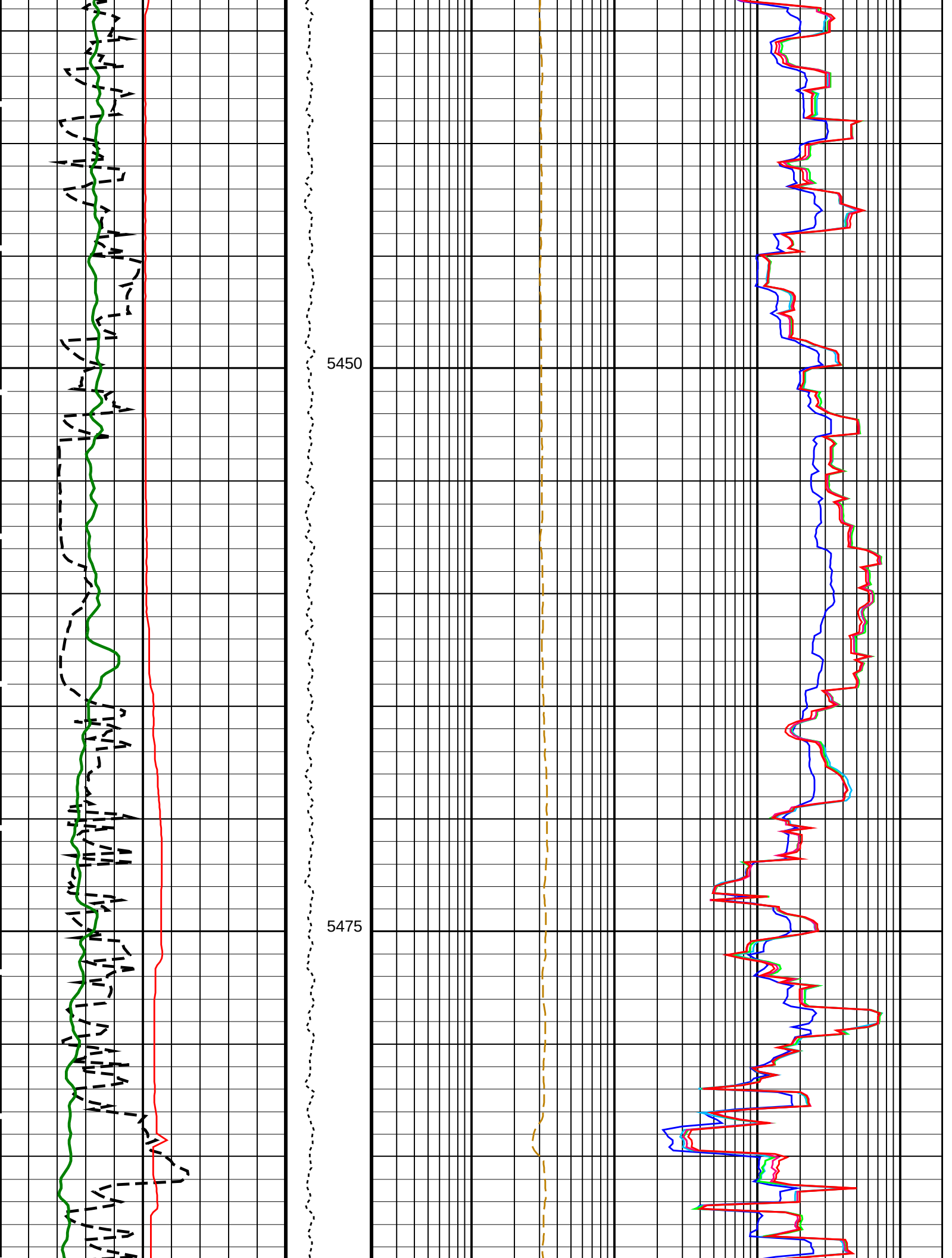
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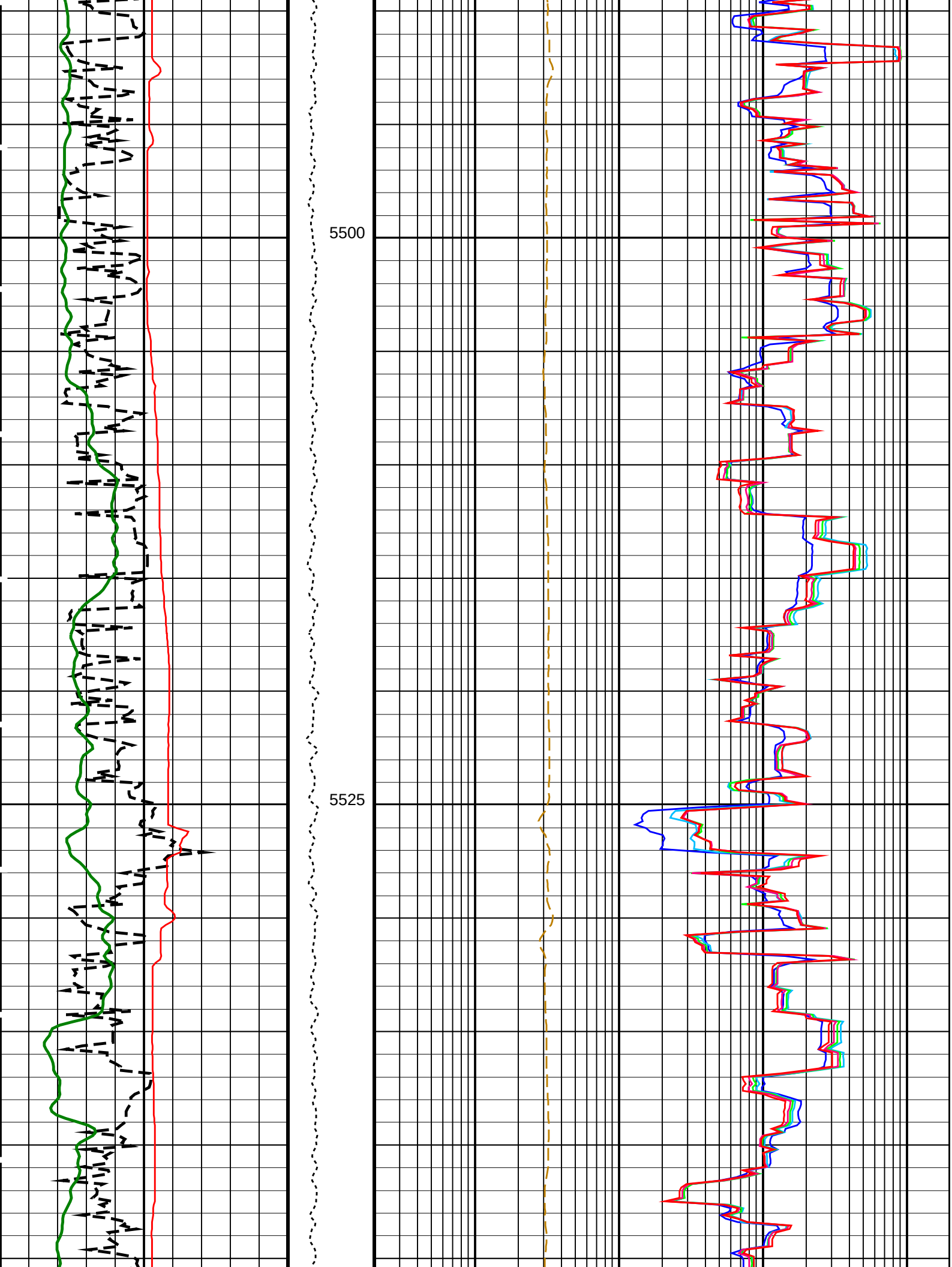
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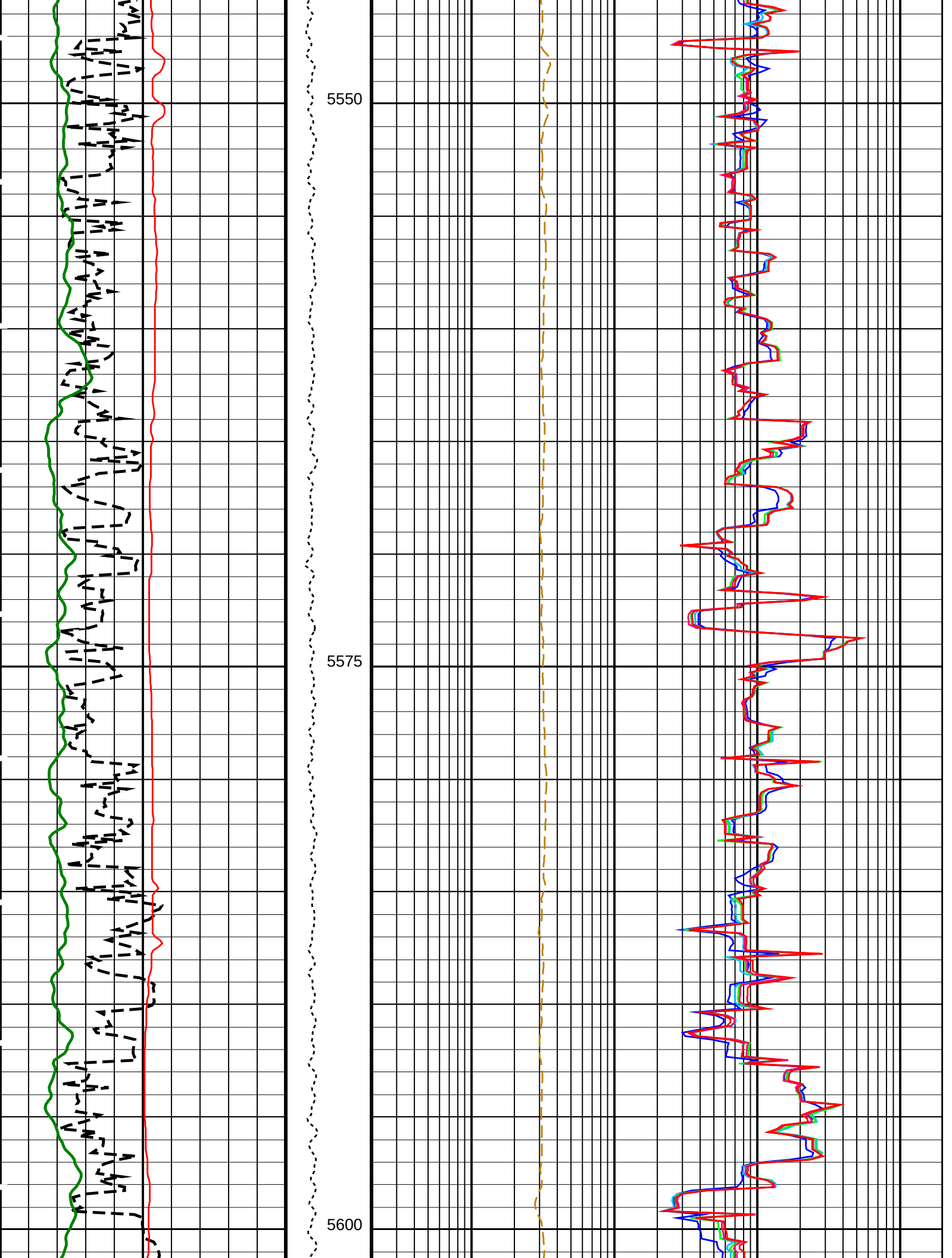
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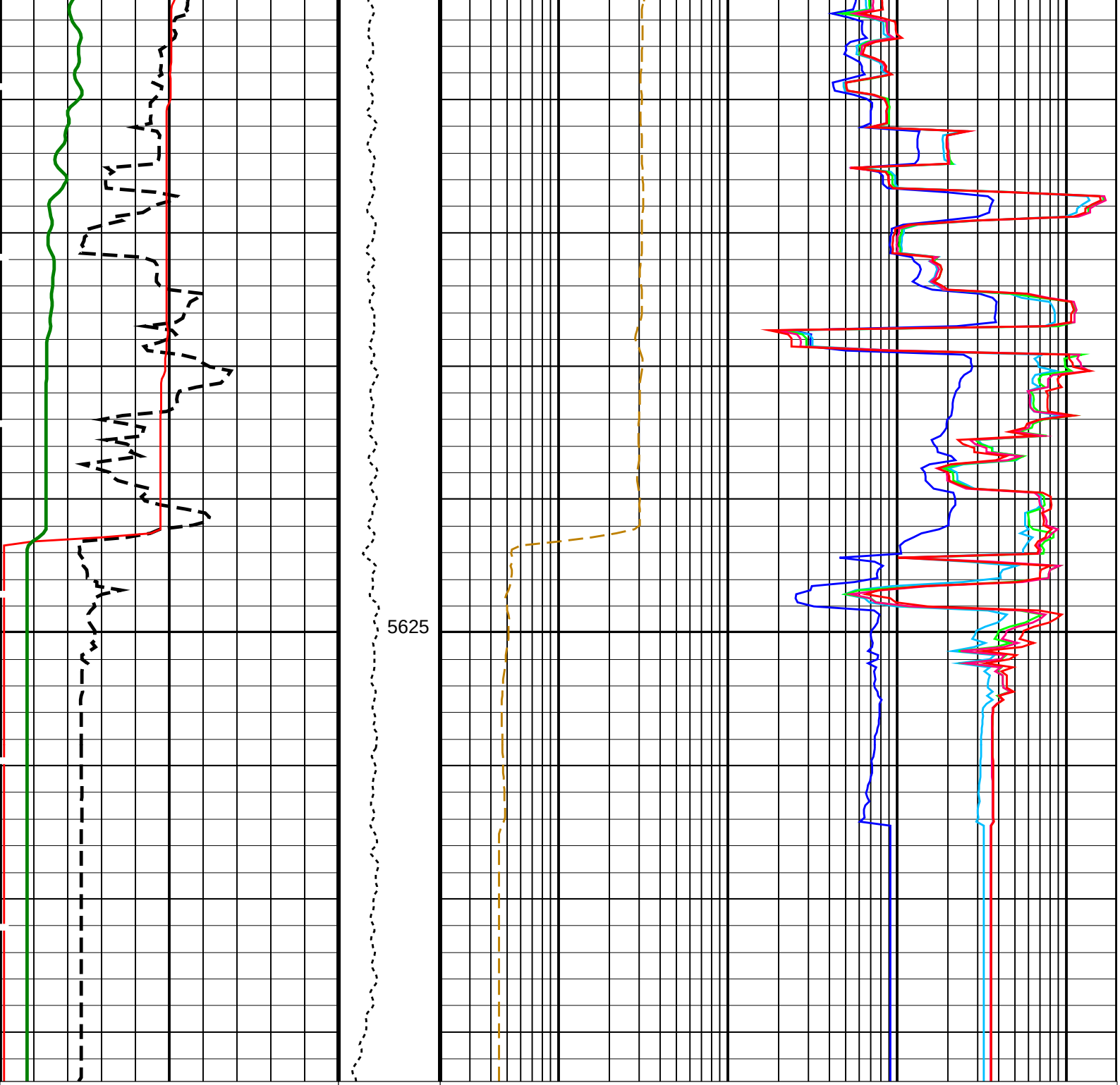


HLDS Caliper (LCAL)
0 (IN) 20

Invasion Diameter (DI_HRLT)
0 (IN) 50

HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 150

Tension (TENS) (LBF)
0 5000

HRLT Resistivity 1 (RLA1)
0.2 (OHMM) 2000

HRLT Resistivity 2 (RLA2)
0.2 (OHMM) 2000

HRLT Resistivity 3 (RLA3)
0.2 (OHMM) 2000

HRLT Resistivity 4 (RLA4)
0.2 (OHMM) 2000

HRLT Resistivity 5 (RLA5)
0.2 (OHMM) 2000

HRLT Mud Resistivity (RM_HRLT)
0.02 (OHMM) 200

0.02	(OHMM)	200

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	HRLT−B: High Resolution Laterolog Array − B		
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	20	DEGC
GCSE	Generalized Caliper Selection	LCAL	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
PROCINV	Inversion Selection	ON	
PROCMFL	Inversion Micro−Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCSPO	Sonde Position	Centered	
SHT	Surface Hole Temperature	20	DEGC
	HNGS−BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	20	DEGC
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	−0.0140694	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
SHT	Surface Hole Temperature	20	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.01332	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.00746	
	EDTC−B: Enhanced DTS Cartridge		
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	20	DEGC
GCSE	Generalized Caliper Selection	LCAL	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
SHT	Surface Hole Temperature	20	DEGC
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.03	G/C3
DO	Depth Offset for Playback	0.0	M
MST	Mud Sample Temperature	23.00	DEGC
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	10190.3	FT

Format: HRLT **Vertical Scale: 1:200** **Graphics File Created: 05−May−2022 04:58**

OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_020LUP	FN:21	PRODUCER	05−May−2022 01:04	5641.8 M	5292.1 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_024PUP	FN:27	PRODUCER	05−May−2022 04:58	
RTB	MSS_LDEO_HRLA_LDL_024PUP	FN:28	PRODUCER	05−May−2022 04:58	

Company: International Ocean Discovery Program **Well: Expedition 390, Site U1556B**

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_020LUP	FN:21	PRODUCER	05−May−2022 01:04	5641.8 M	5292.1 M

Output DLIS Files

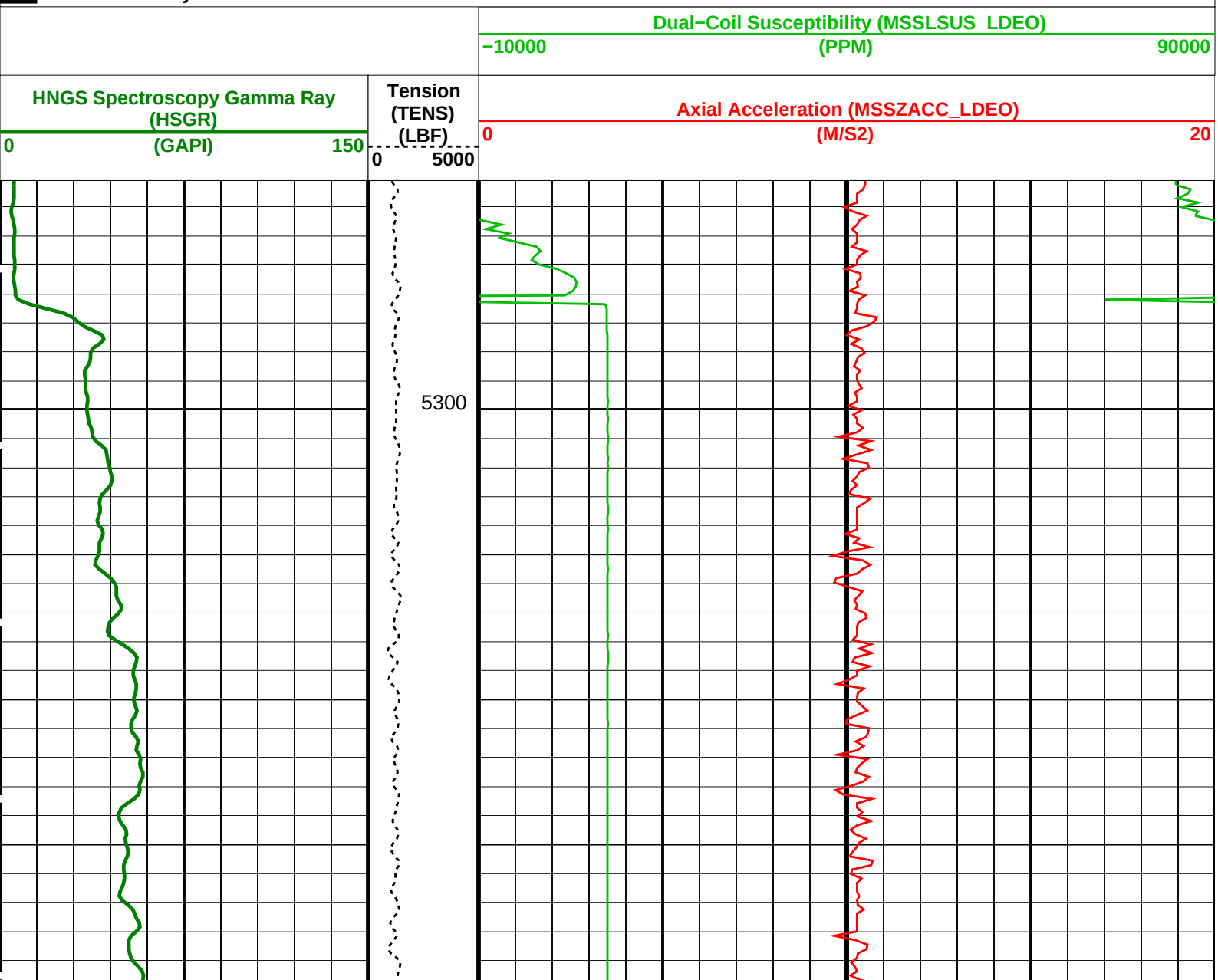
DEFAULT	MSS_LDEO_HRLA_LDL_024PUP	FN:27	PRODUCER	05−May−2022 04:58	5641.8 M	5292.1 M
RTB	MSS_LDEO_HRLA_LDL_024PUP	FN:28	PRODUCER	05−May−2022 04:58	5641.8 M	5292.1 M

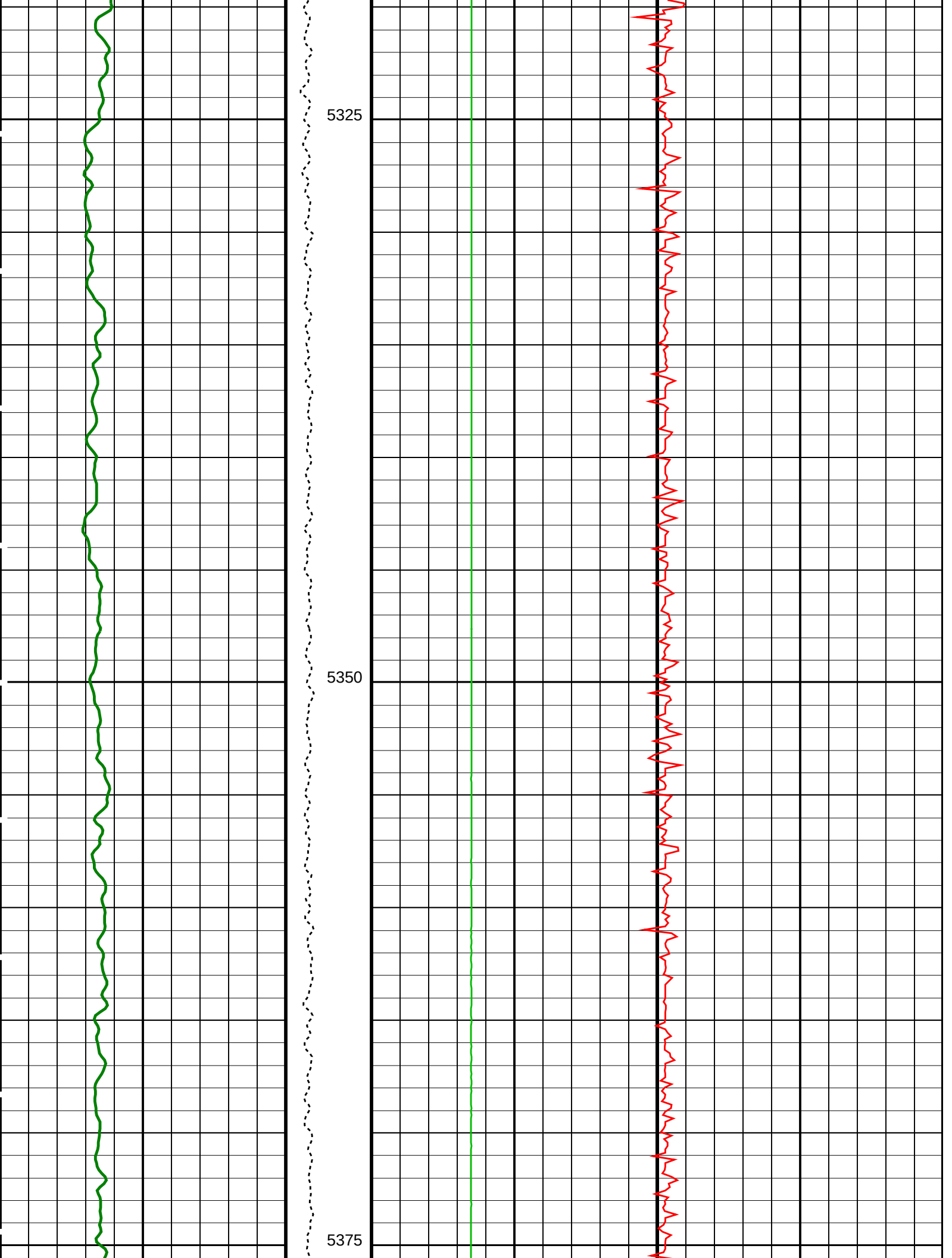
OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

PIP SUMMARY

Time Mark Every 60 S

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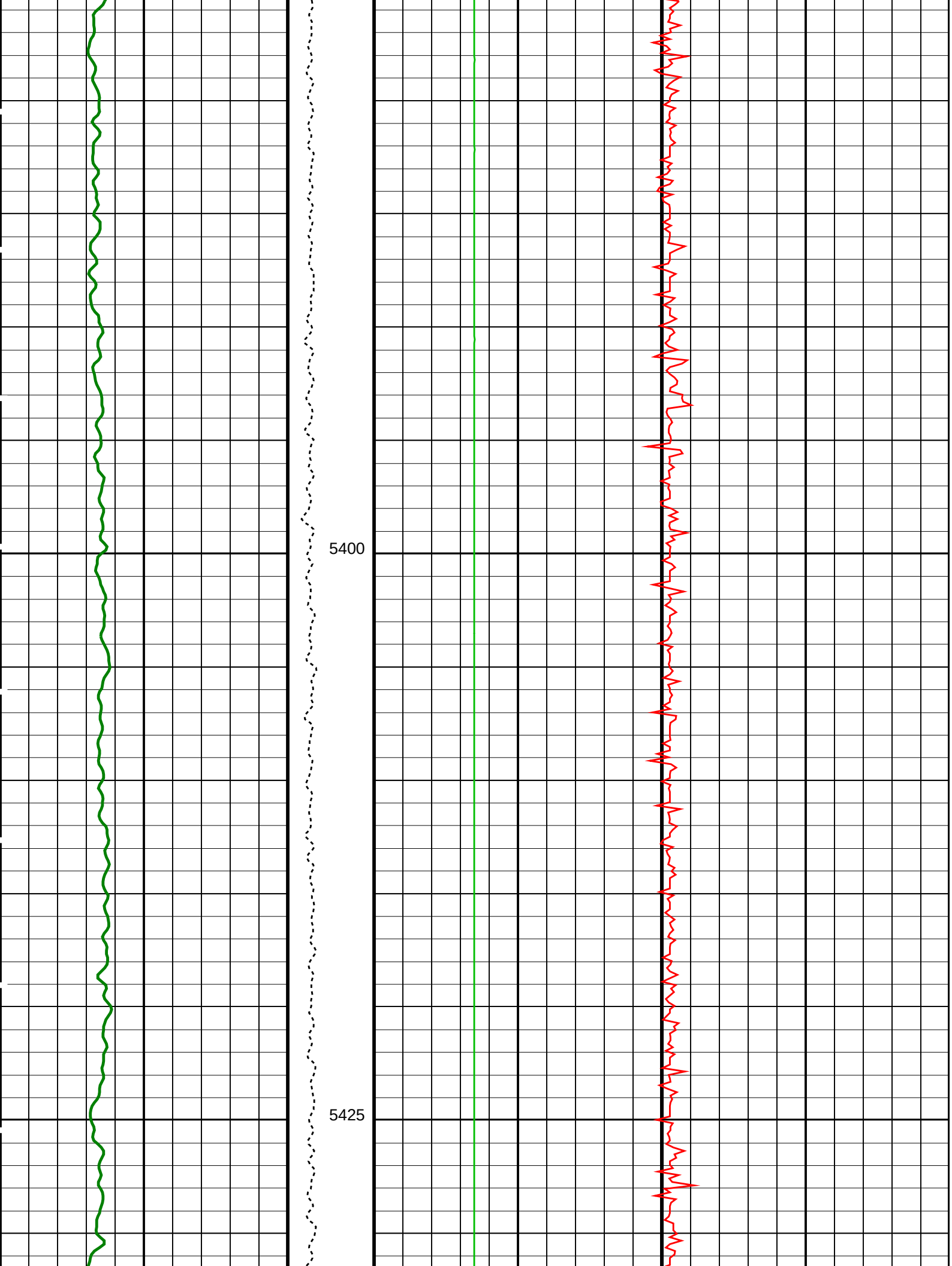
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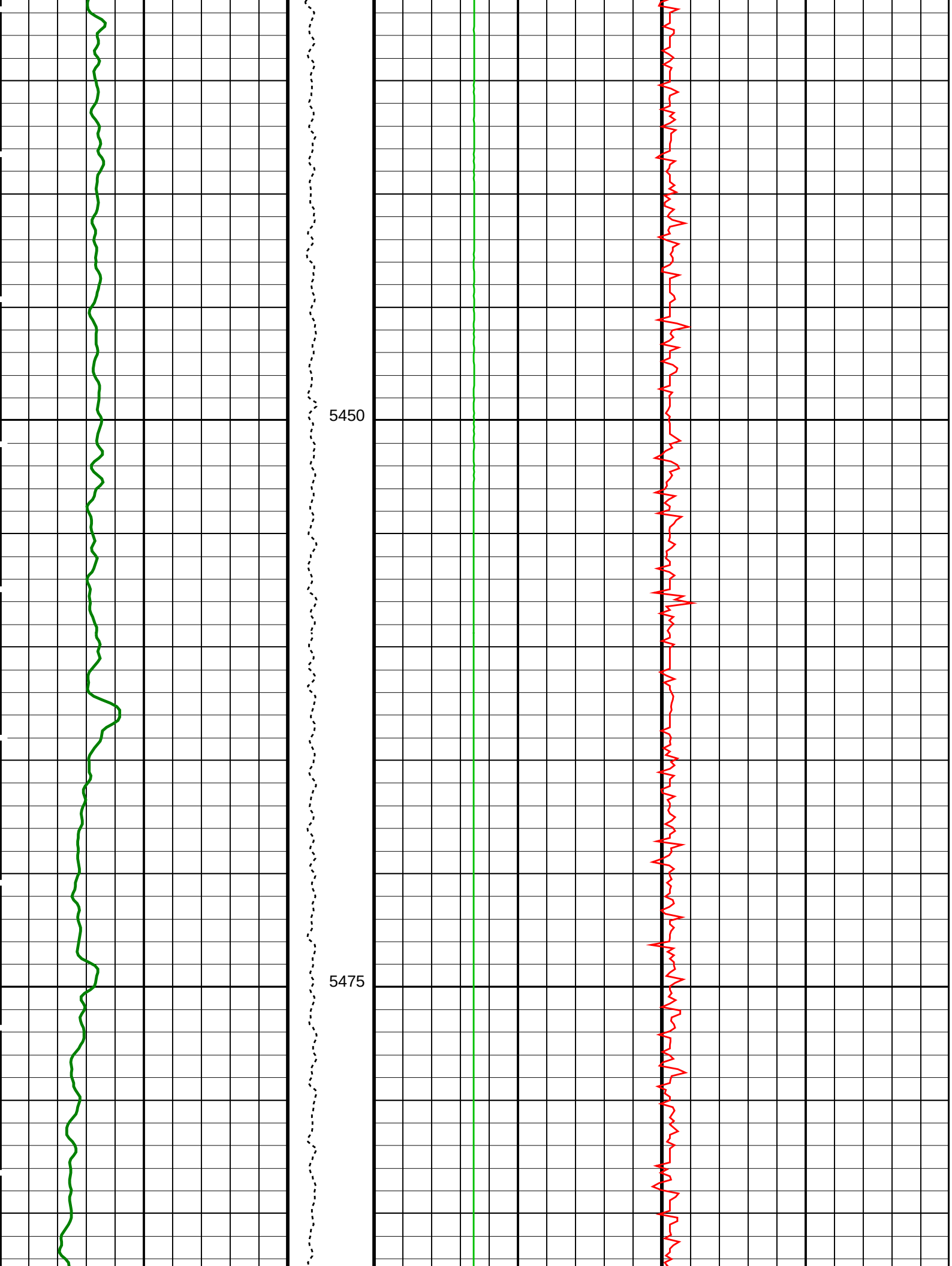
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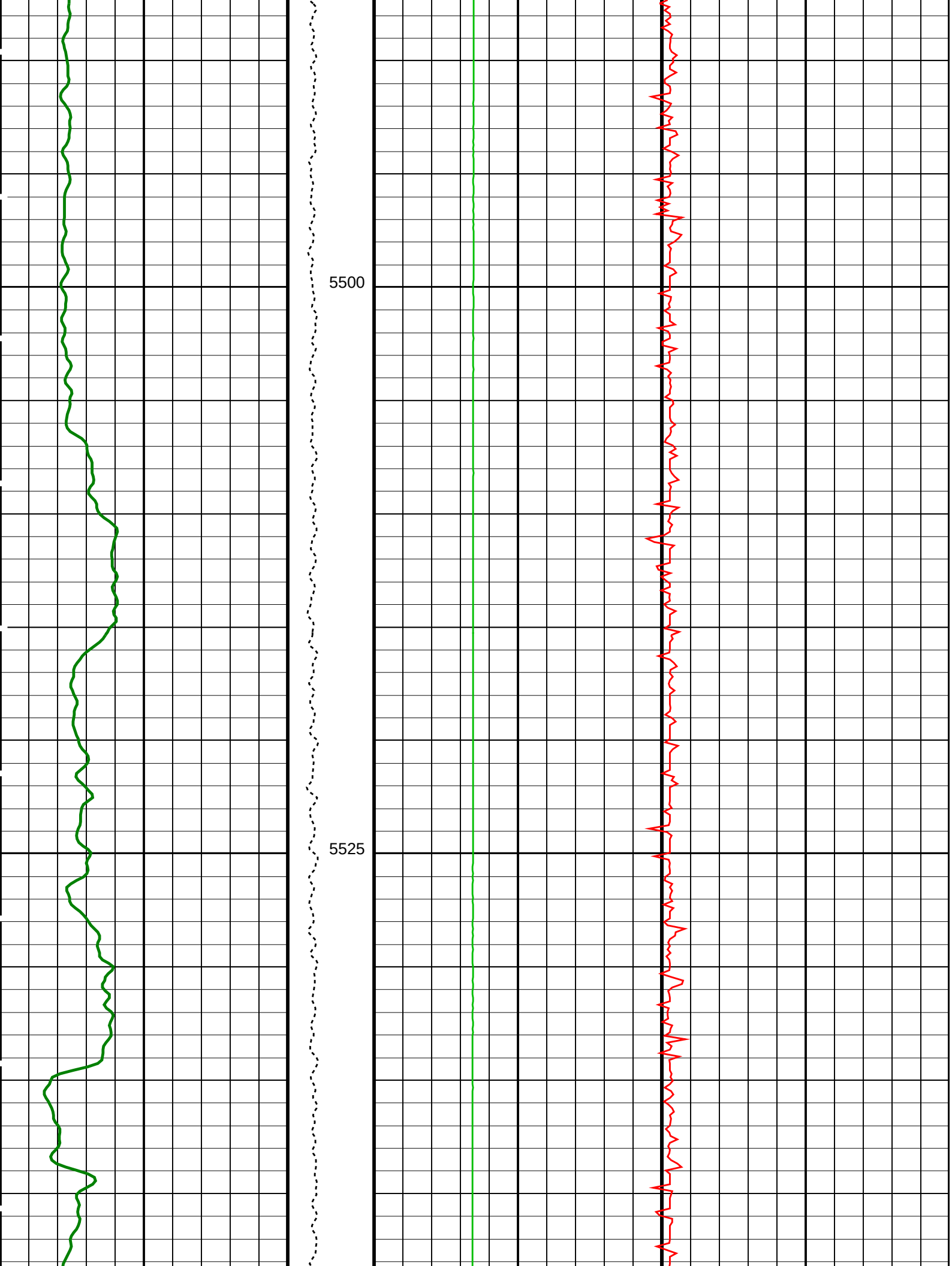
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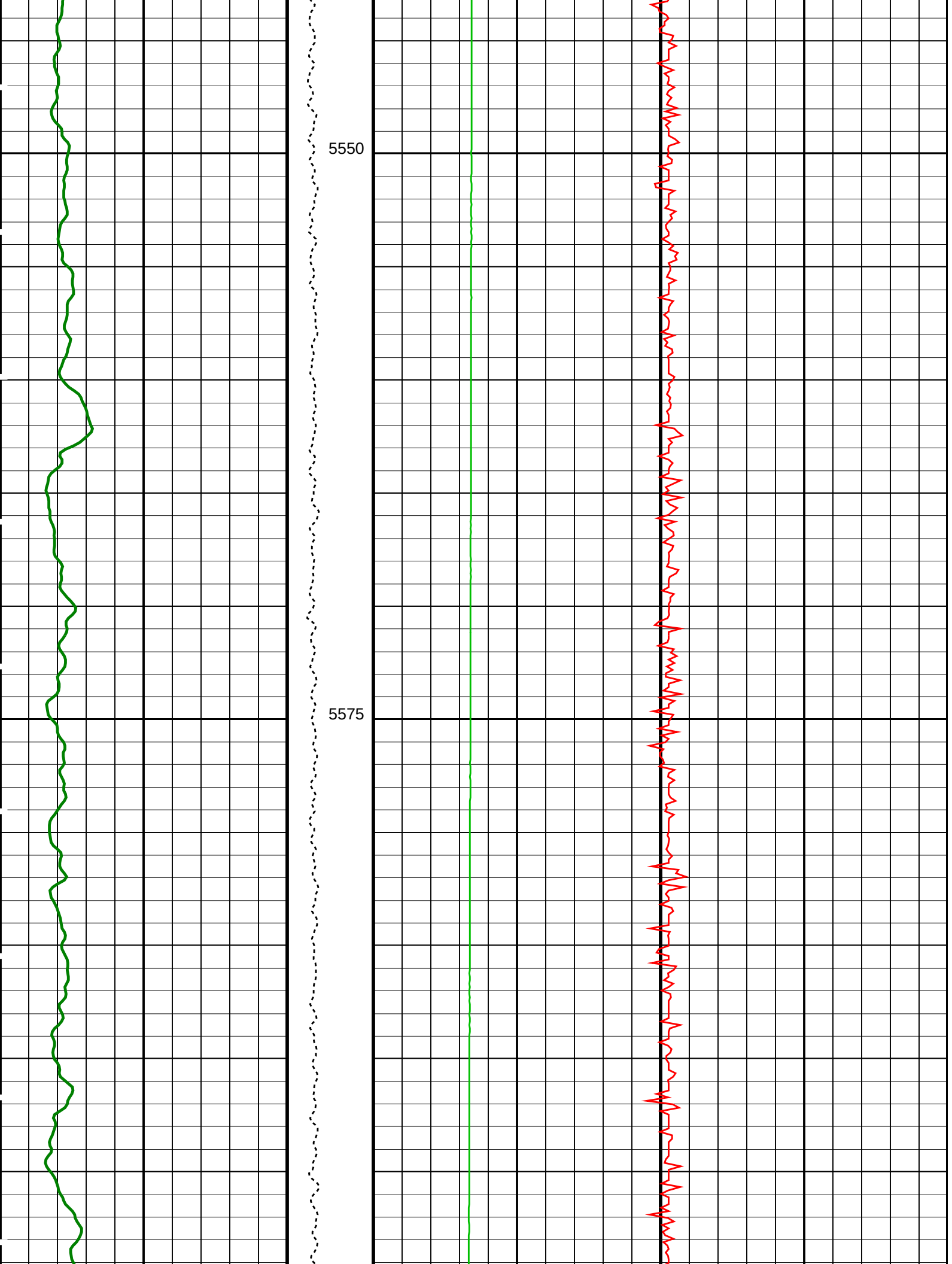
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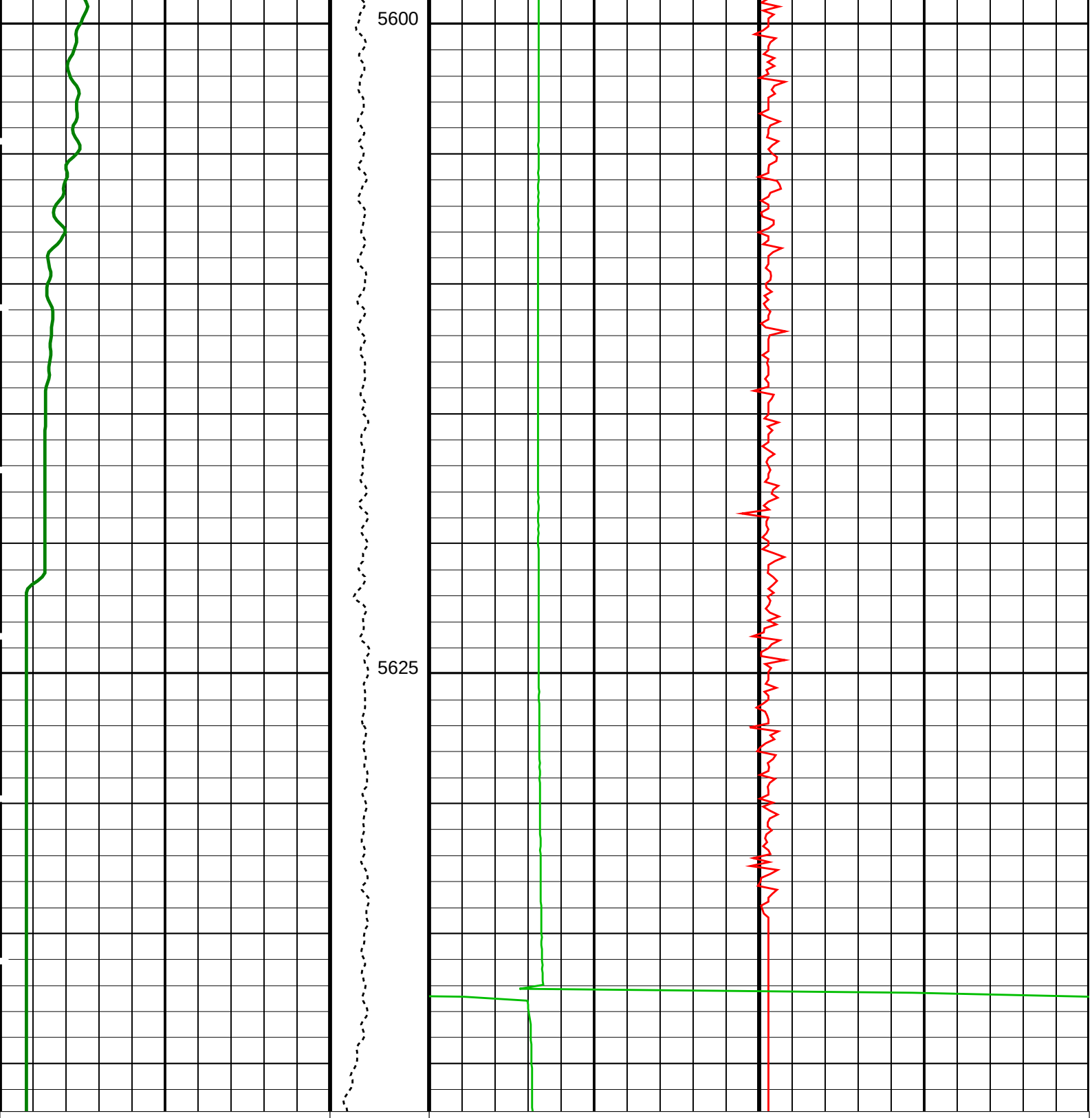


HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 150

Tension (TENS) (LBF)
0 5000

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

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

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
	HRLT−B: High Resolution Laterolog Array − B	
BHS	Borehole Status	OPEN

GCSE	Generalized Caliper Selection	LCAL	
HNGS−BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	−0.0140694	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.01332	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.00746	
EDTC−B: Enhanced DTS Cartridge			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
System and Miscellaneous			
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.03	G/C3
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	RECOMPUTE	

Format: MSS_Logging Vertical Scale: 1:200 Graphics File Created: 05−May−2022 04:58

OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_020LUP	FN:21	PRODUCER	05−May−2022 01:04	5641.8 M	5292.1 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_024PUP	FN:27	PRODUCER	05−May−2022 04:58		
RTB	MSS_LDEO_HRLA_LDL_024PUP	FN:28	PRODUCER	05−May−2022 04:58		

Schlumberger

Second Up Pass

MAXIS Field Log

Company: International Ocean Discovery Program Well: Expedition 390, Site U1556B

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_021LUP	FN:22	PRODUCER	05−May−2022 02:29	5639.6 M	4998.3 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_025PUP	FN:29	PRODUCER	05−May−2022 04:59	5639.6 M	4998.3 M

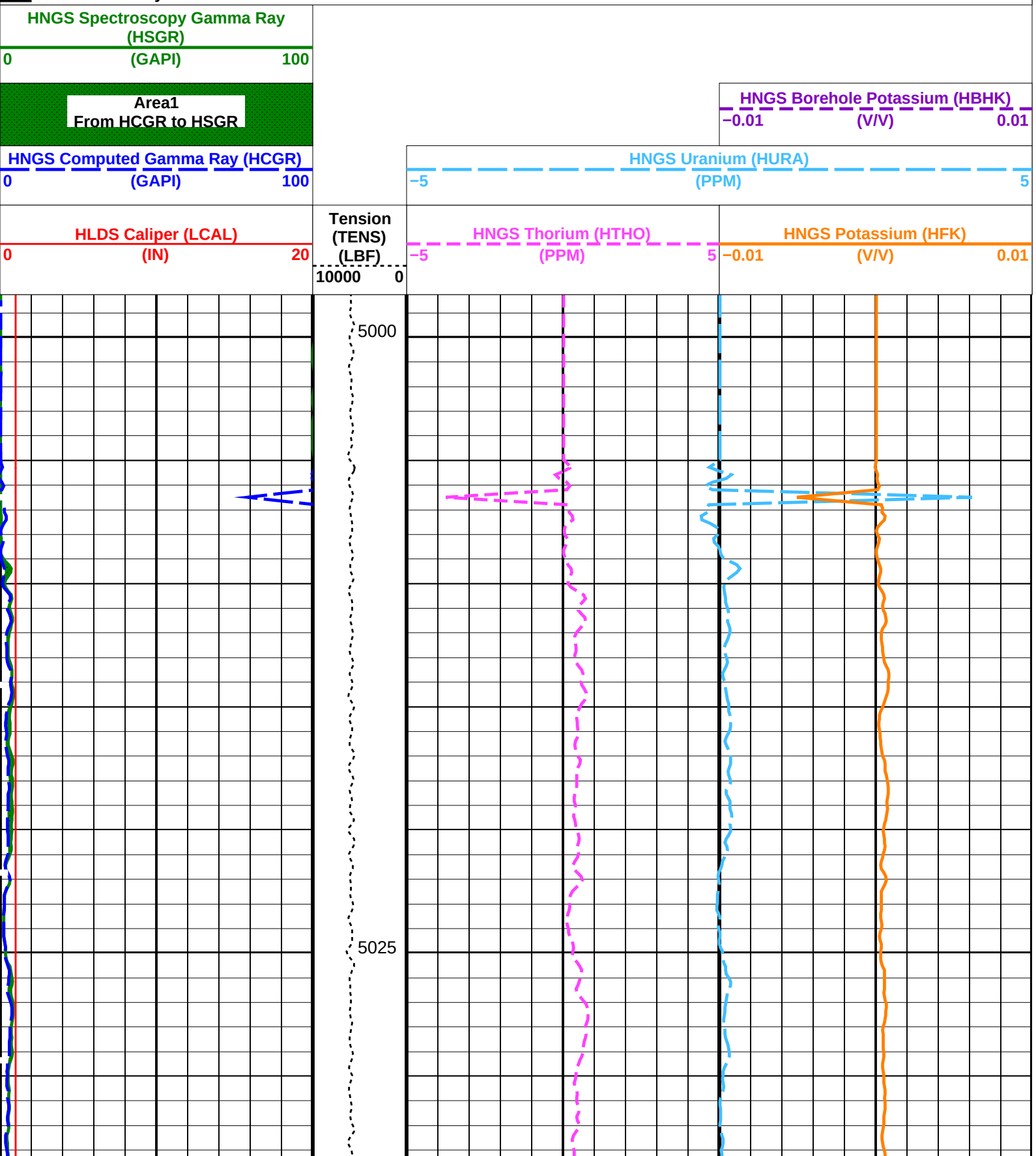
RTB | MSS_LDEO_HRLA_LDL_025PUP | FN:30 | PRODUCER | 05-May-2022 04:59 | 5639.6 M | 4998.3 M

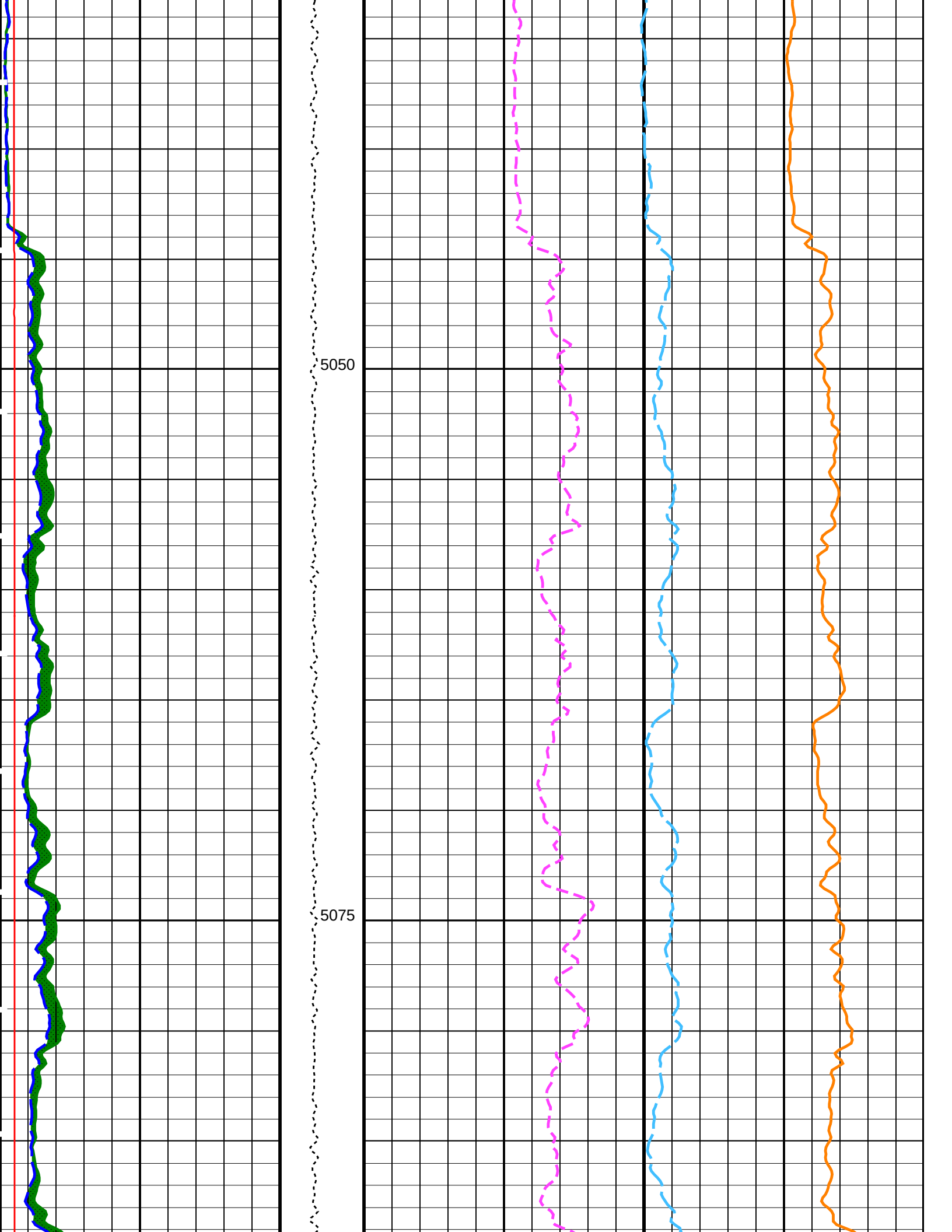
OP System Version: 19C0-187

MSS_LDEO-A	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
HNGC-B	19C0-187	HNGS-BA	19C0-187
EDTC-B	SKK-5169-EDTCB		

PIP SUMMARY

Time Mark Every 60 S

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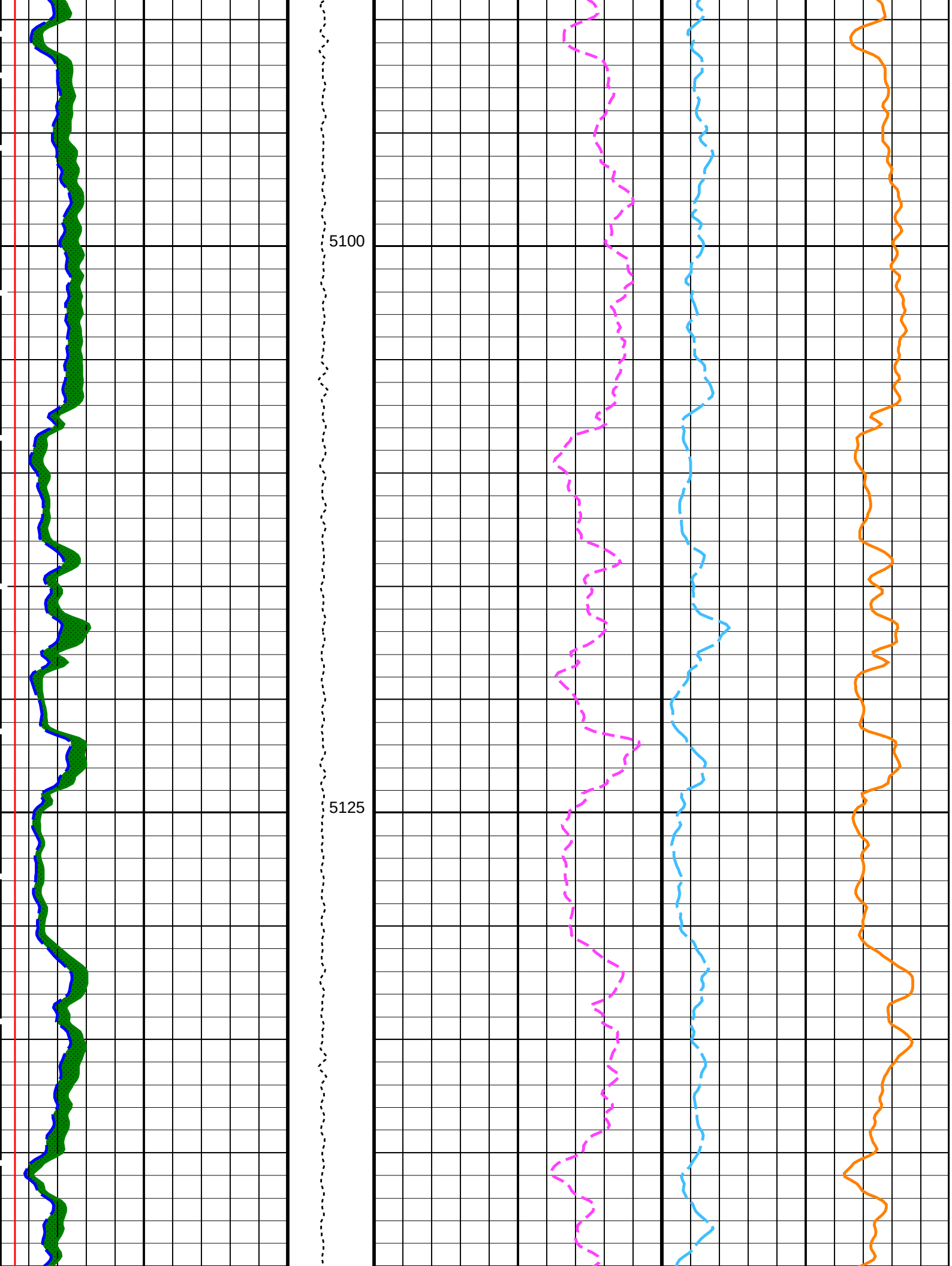
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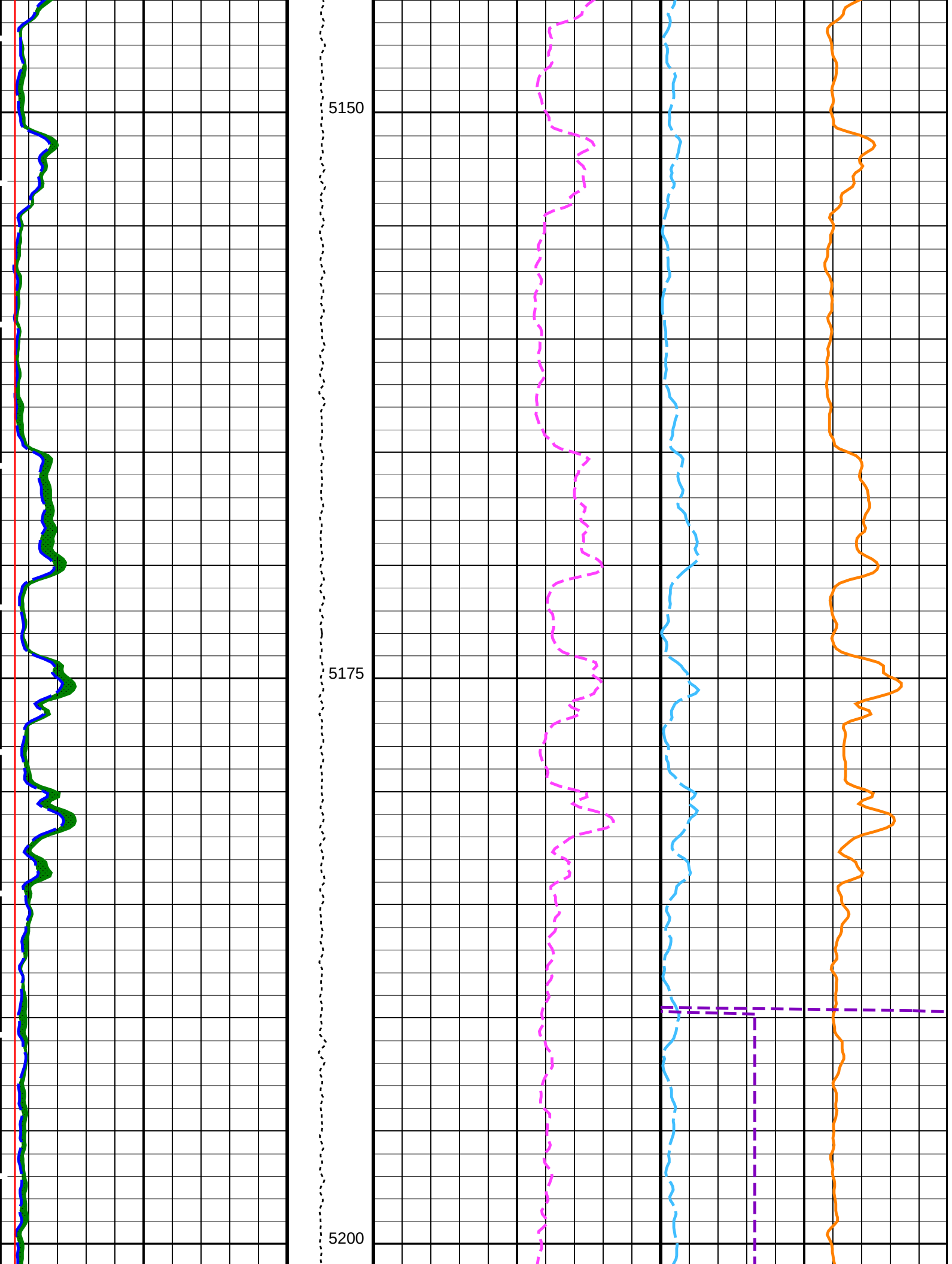
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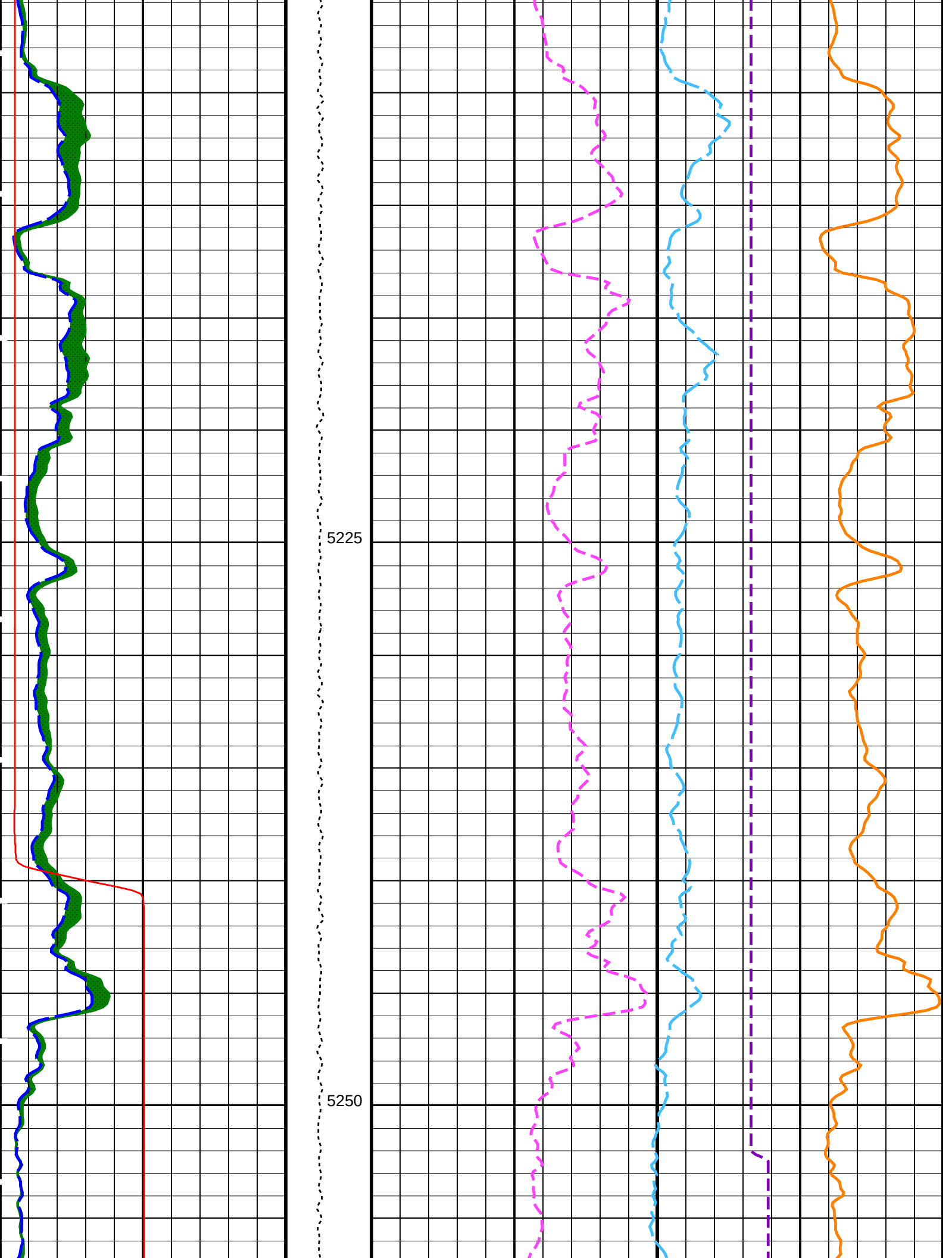
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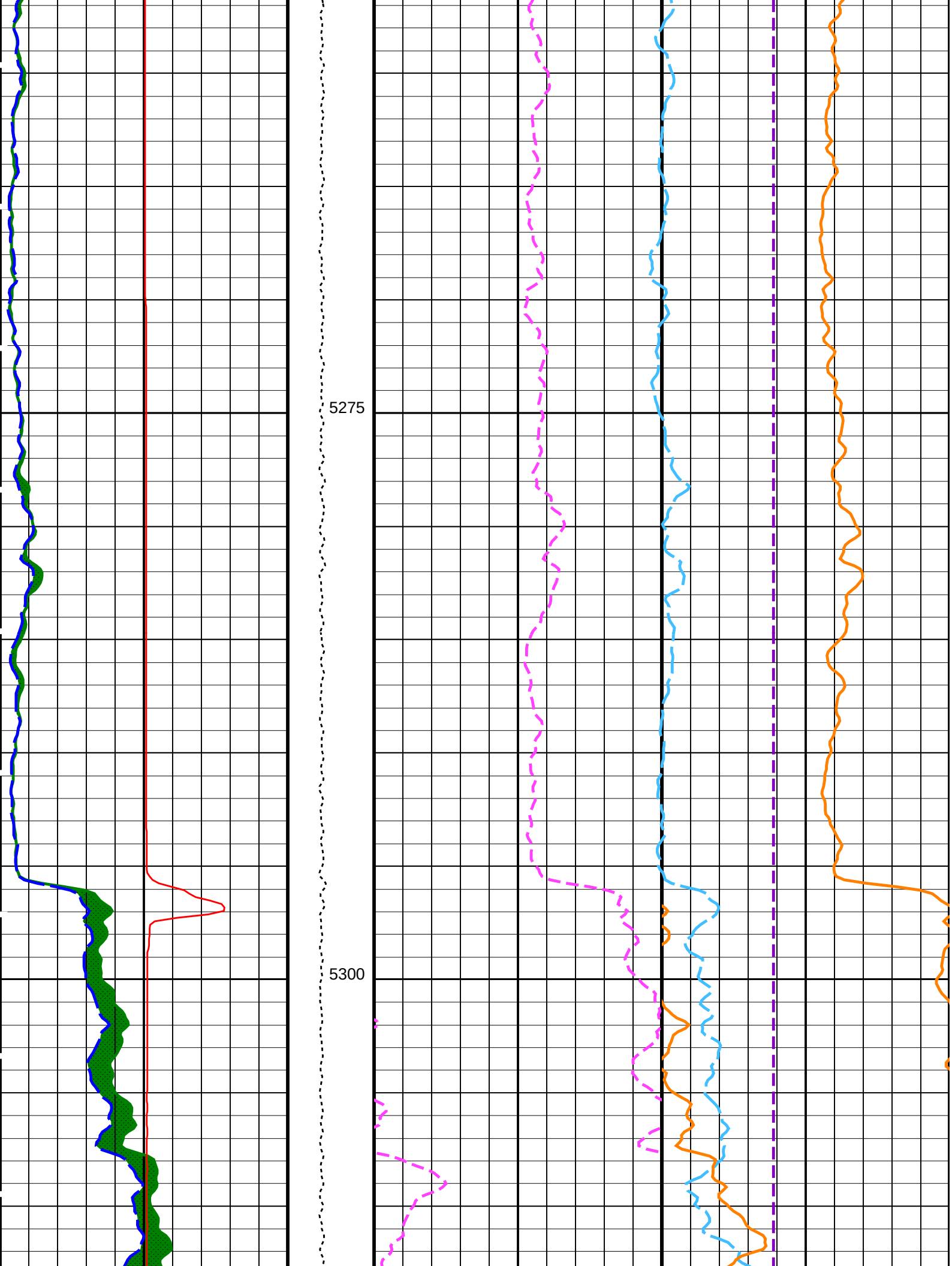
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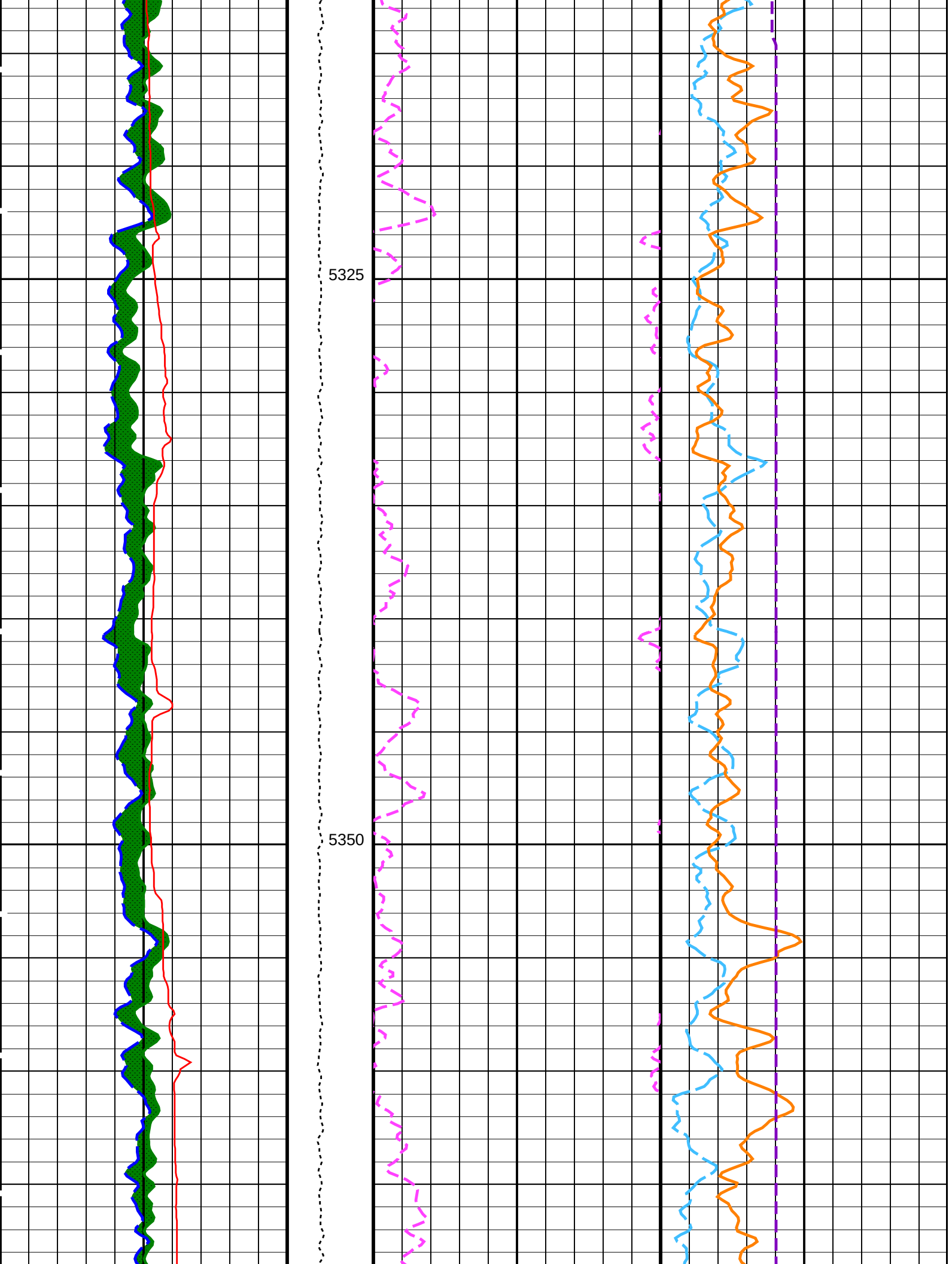
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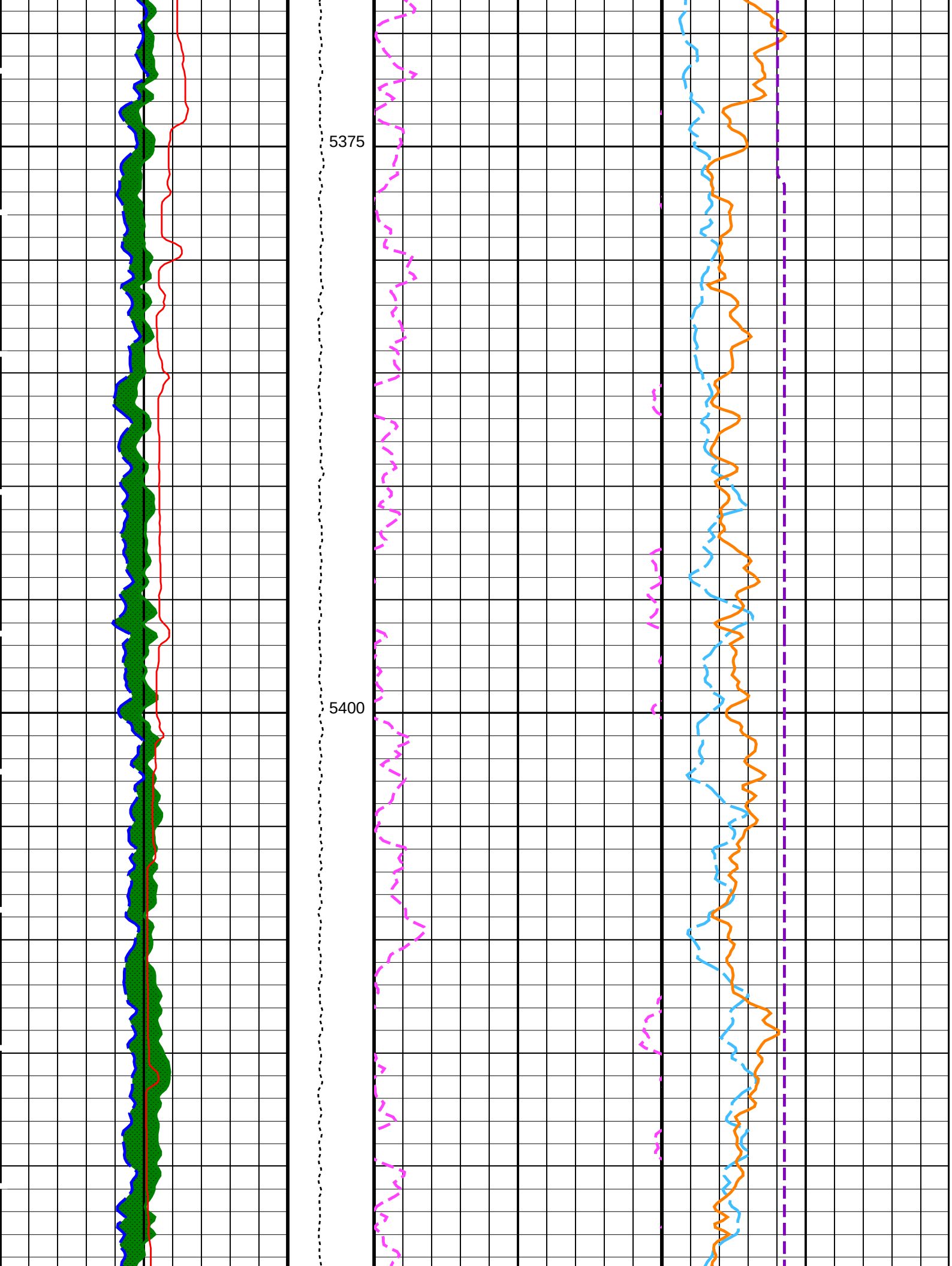
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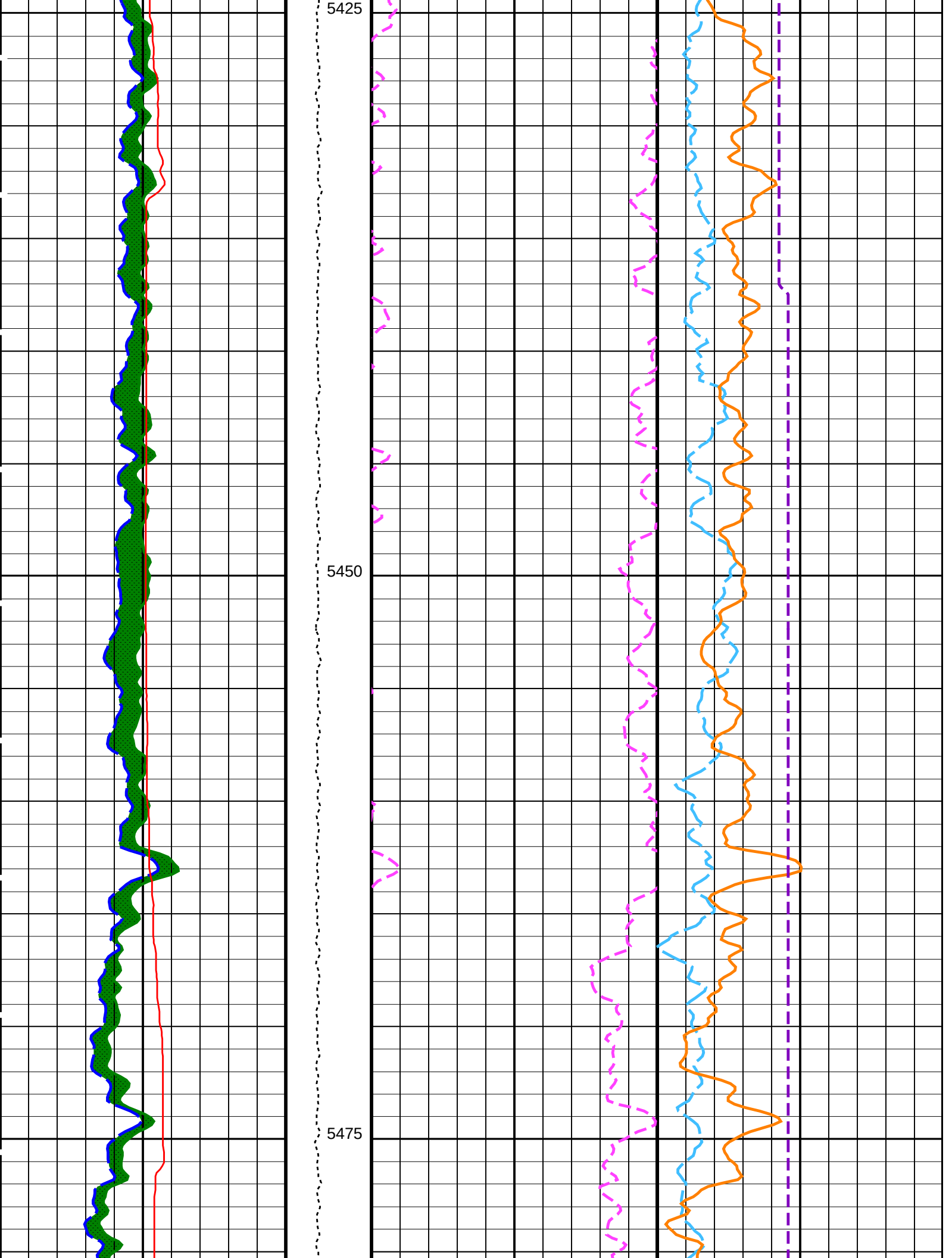
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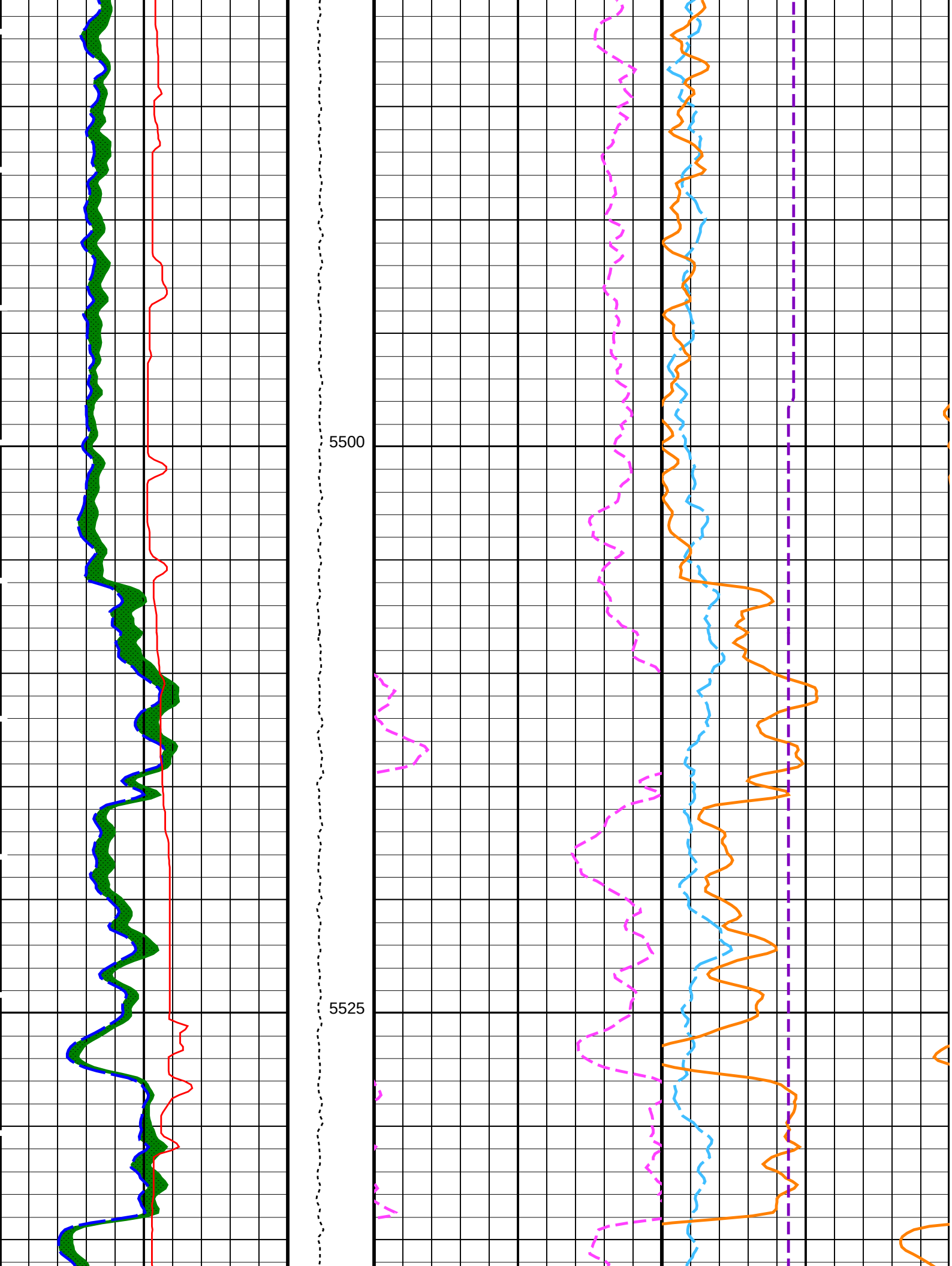
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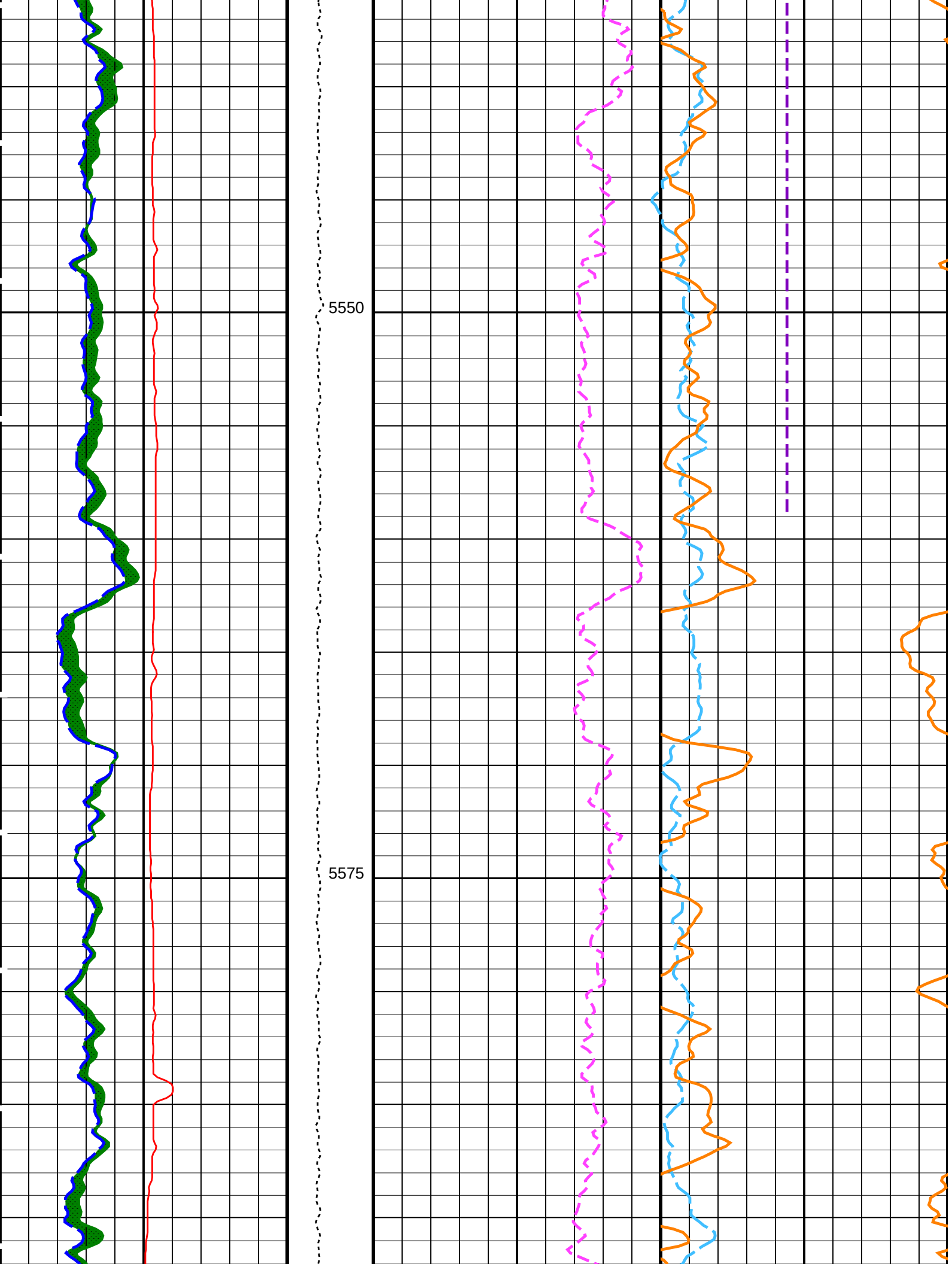
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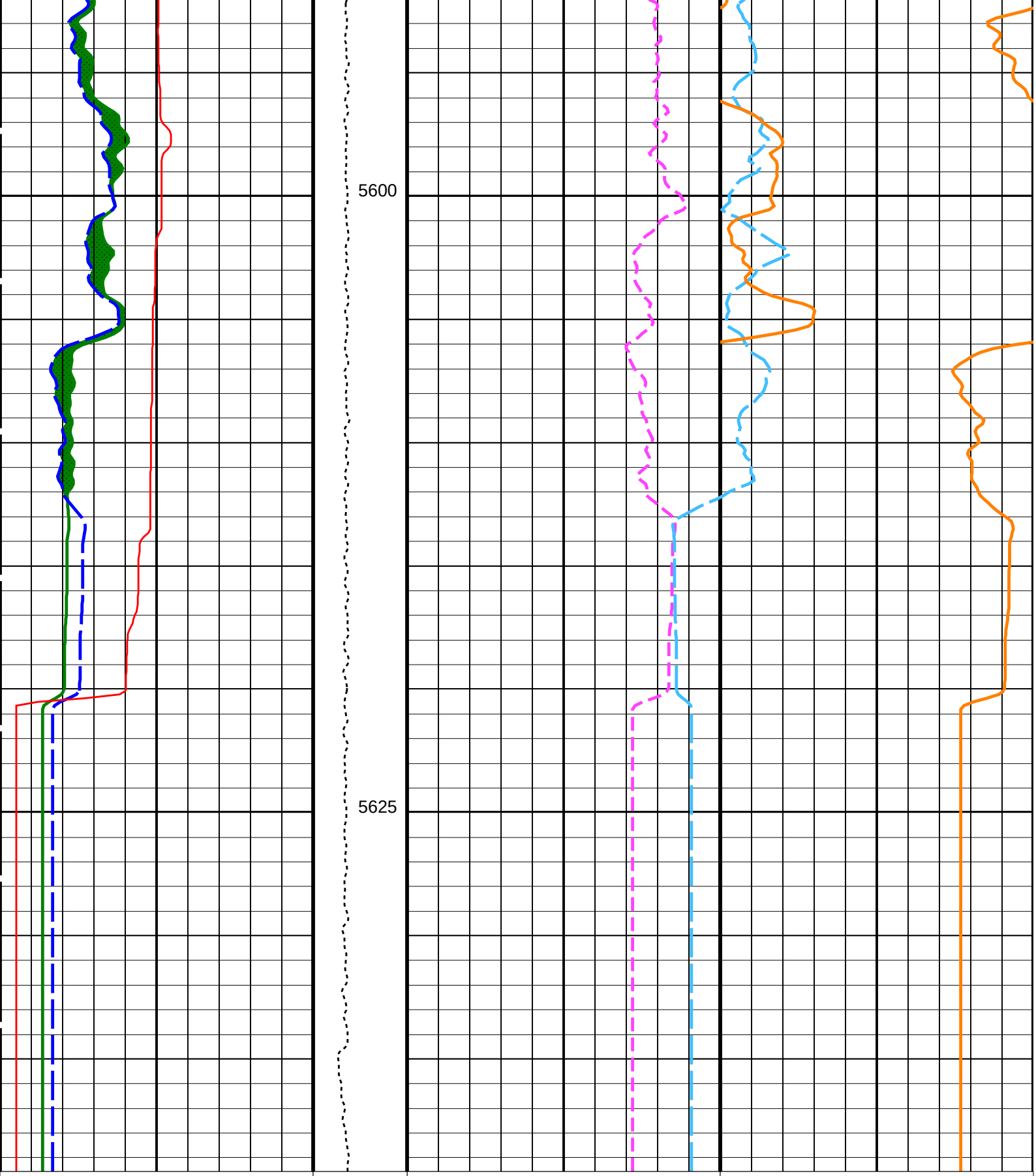


HLDS Caliper (LCAL)
0 (IN) 20

Tension (TENS) (LBF)
10000 0

HNGS Thorium (HTHO)
−5 (PPM) 5

HNGS Potassium (HFK)
−0.01 (V/V) 0.01

HNGS Computed Gamma Ray (HCGR)
0 (GAPI) 100

HNGS Uranium (HURA)
−5 (PPM) 5

Area1
From HCGR to HSGR

HNGS Borehole Potassium (HBHK)
−0.01 (V/V) 0.01

HNGS Spectroscopy Gamma Ray (HSGR)		
0	(GAPI)	100

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	HRLT−B: High Resolution Laterolog Array − B		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
	HNGS−BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	−0.00196491	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.01459	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.01089	
	EDTC−B: Enhanced DTS Cartridge		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.03	G/C3
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	RECOMPUTE	

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 05−May−2022 04:59

OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_021LUP	FN:22	PRODUCER	05−May−2022 02:29	5639.6 M	4998.3 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_025PUP	FN:29	PRODUCER	05−May−2022 04:59		
RTB	MSS_LDEO_HRLA_LDL_025PUP	FN:30	PRODUCER	05−May−2022 04:59		

Company: International Ocean Discovery Program Well: Expedition 390, Site U1556B

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_021LUP	FN:22	PRODUCER	05−May−2022 02:29	5639.6 M	4998.3 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_025PUP	FN:29	PRODUCER	05−May−2022 04:59	5639.6 M	4998.3 M

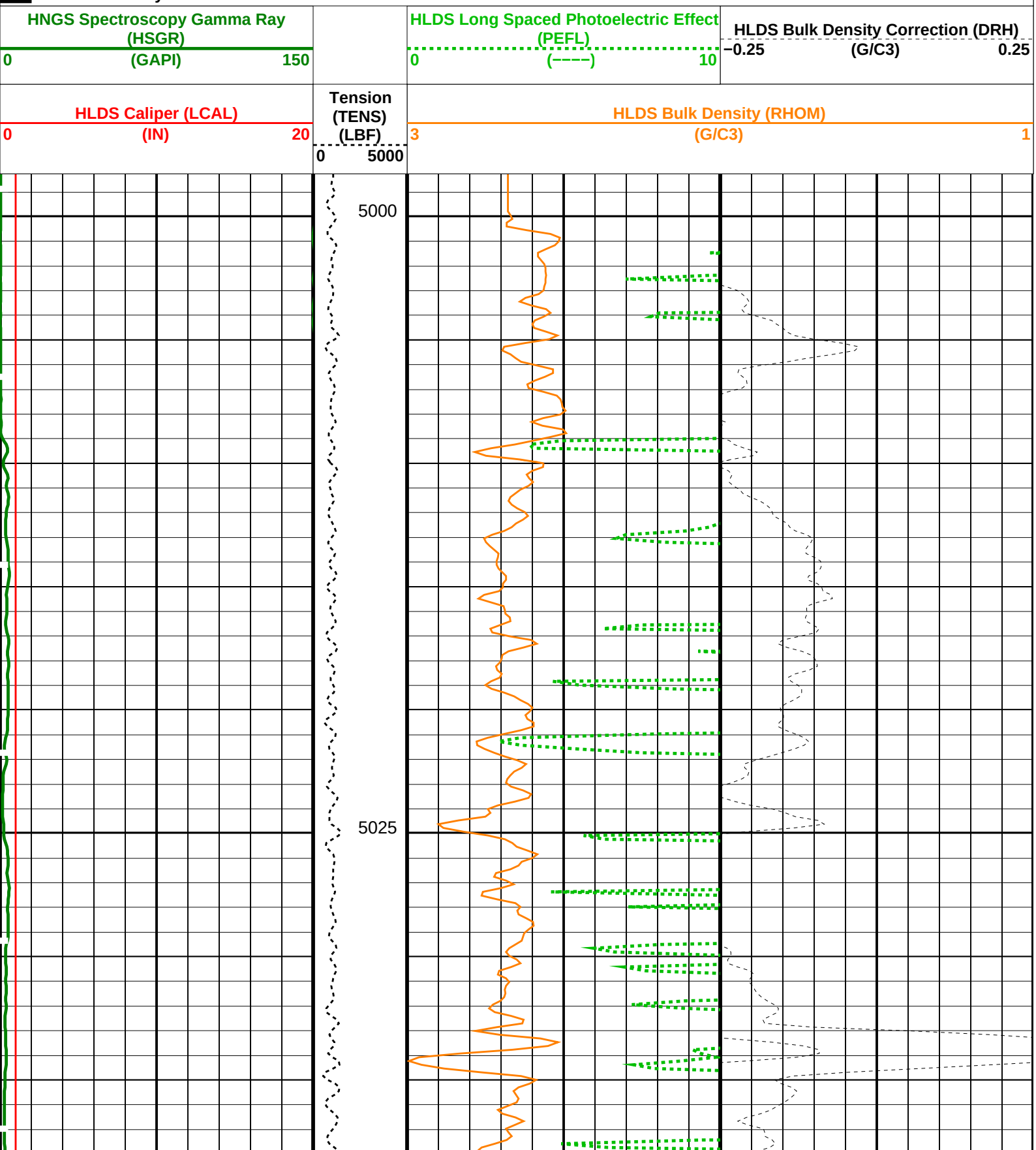
RTB	MSS_LDEO_HRLA_LDL_025PUP	FN:30	PRODUCER	05−May−2022 04:59	5639.6 M	4998.3 M

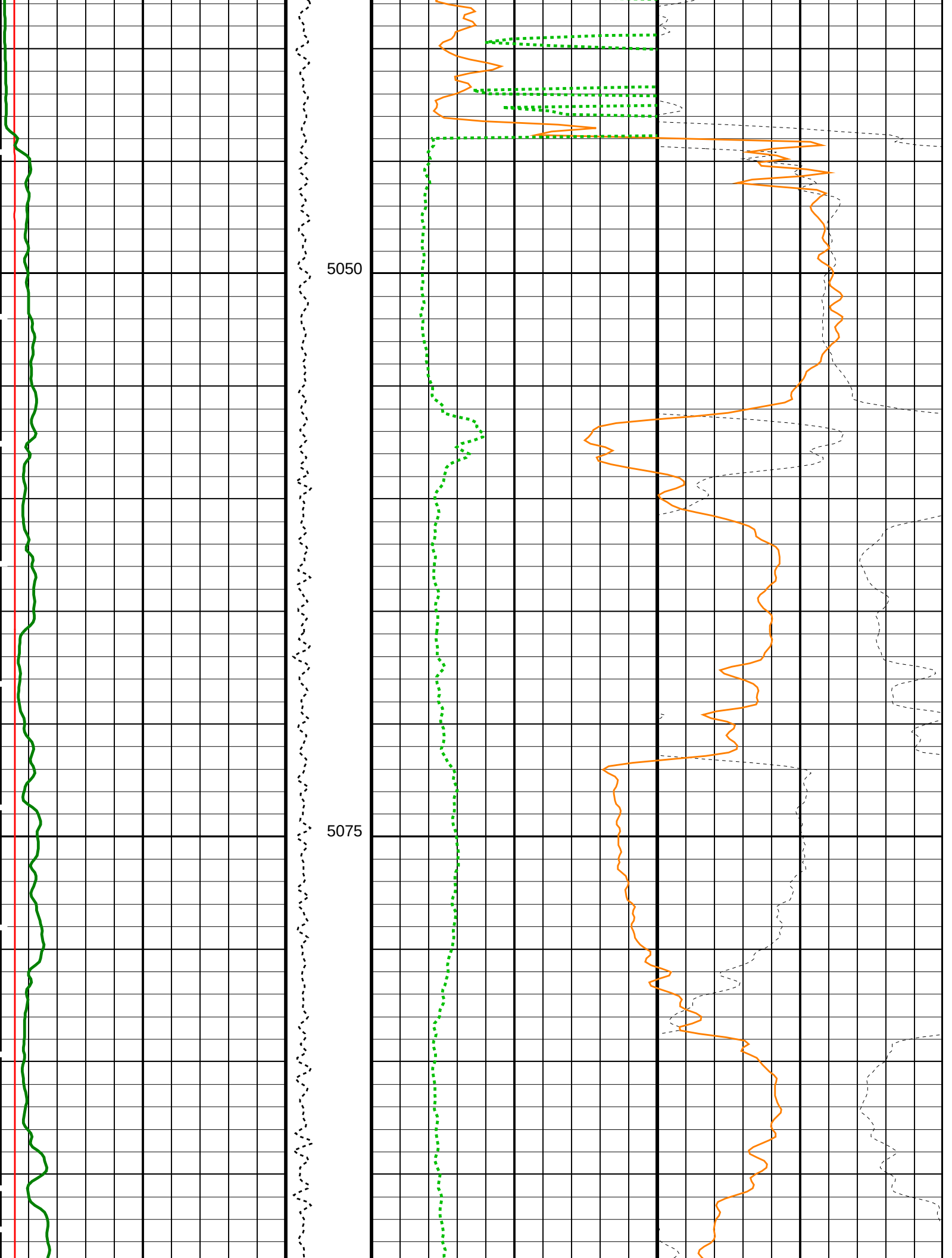
OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

PIP SUMMARY

Time Mark Every 60 S

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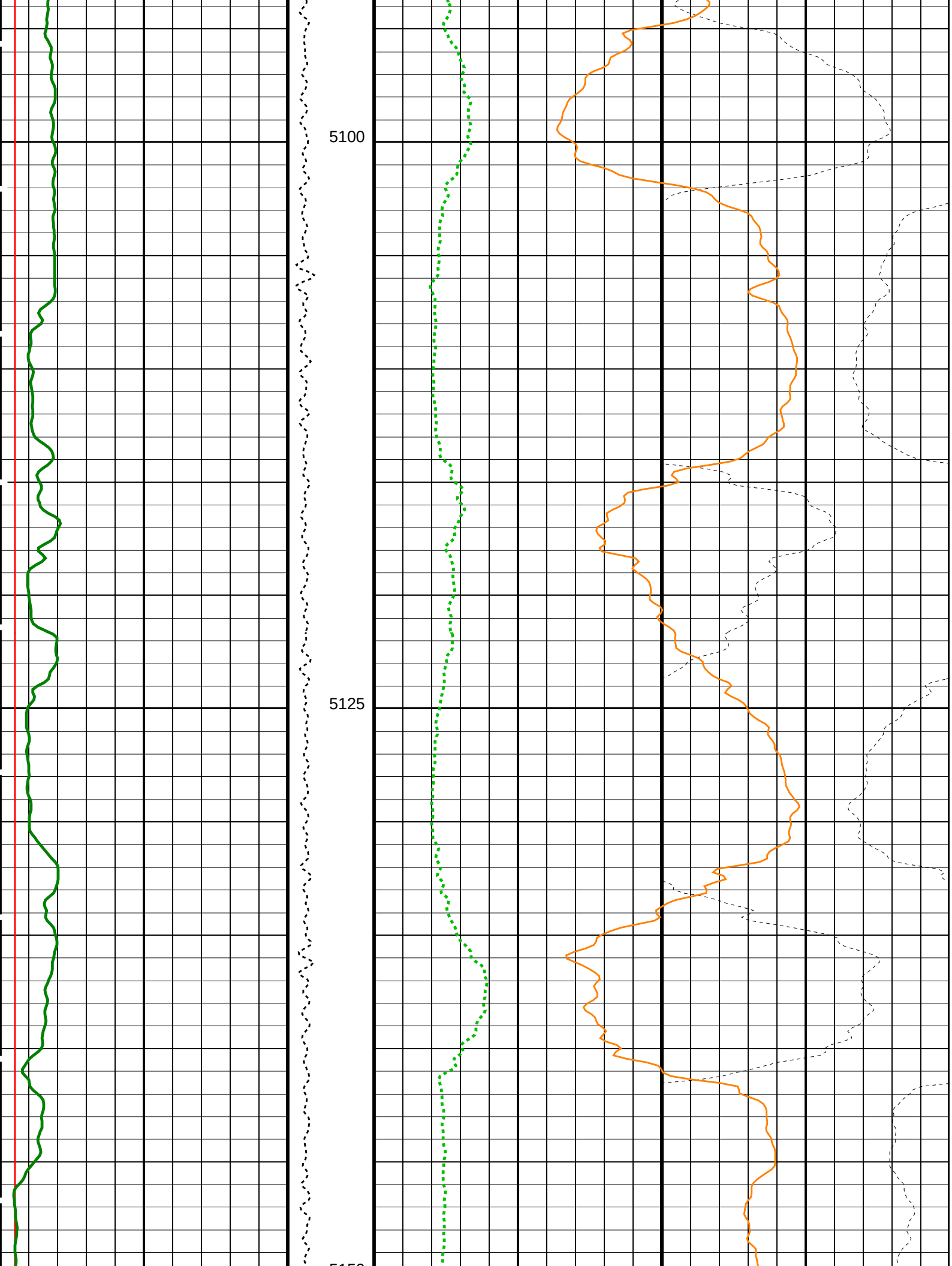
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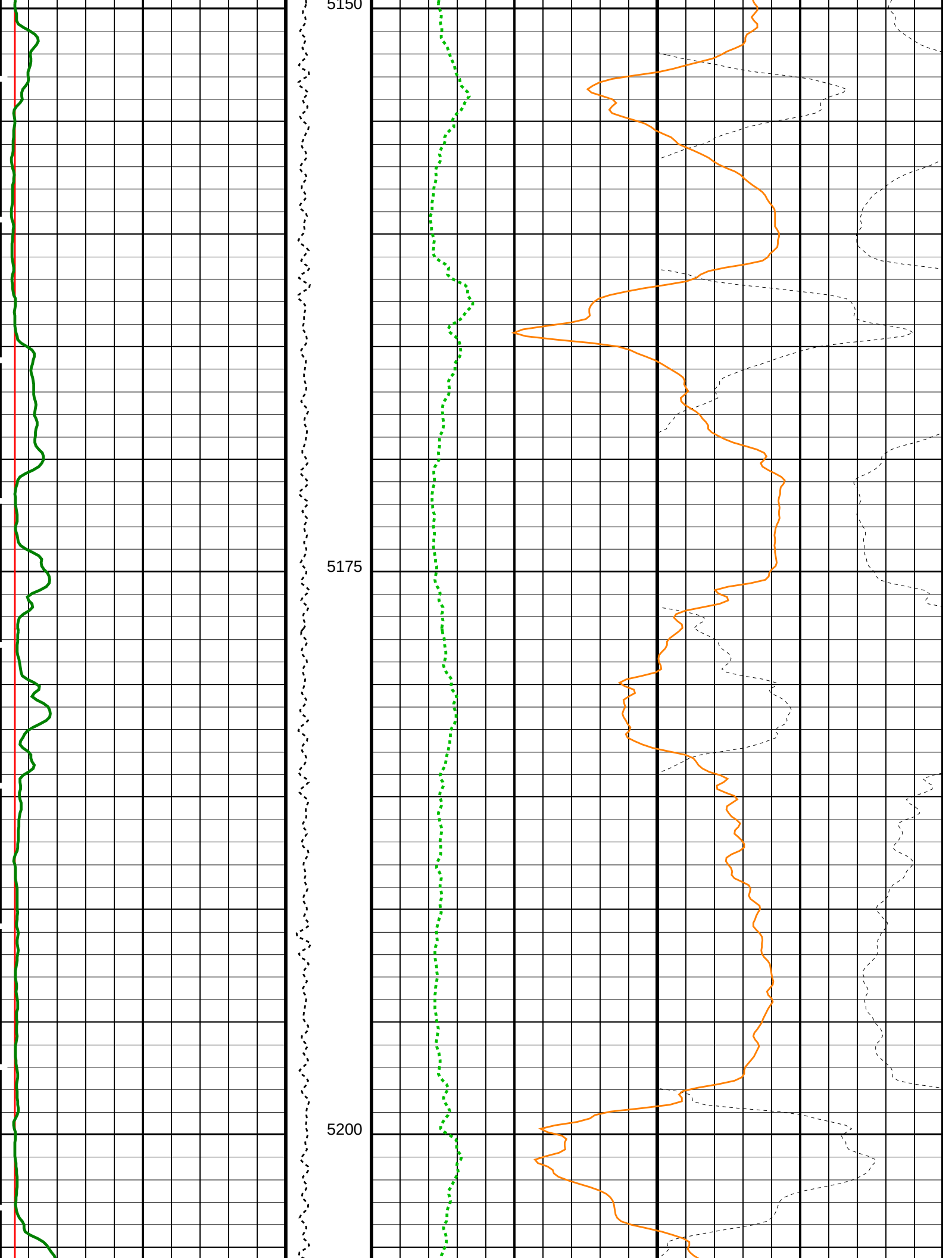
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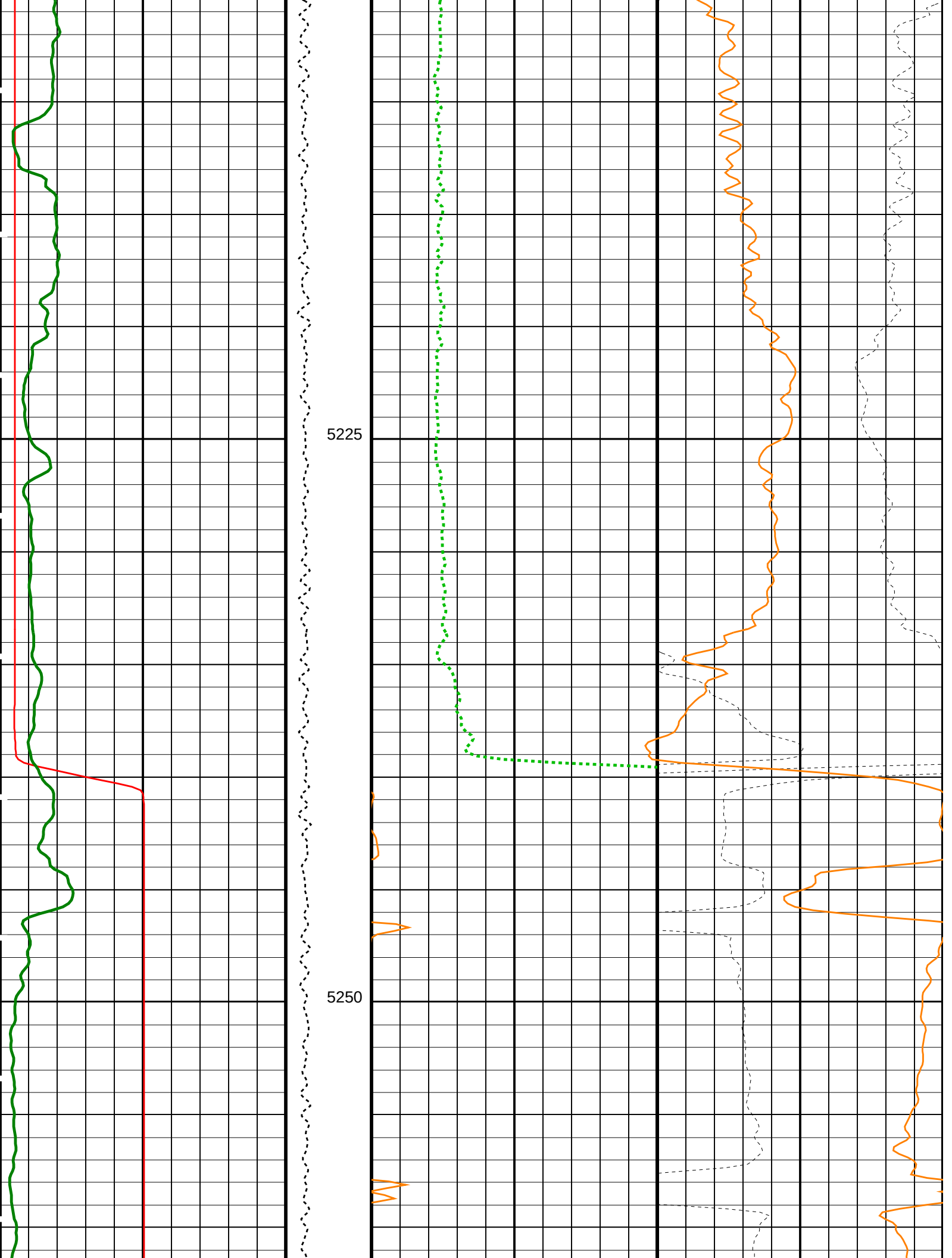
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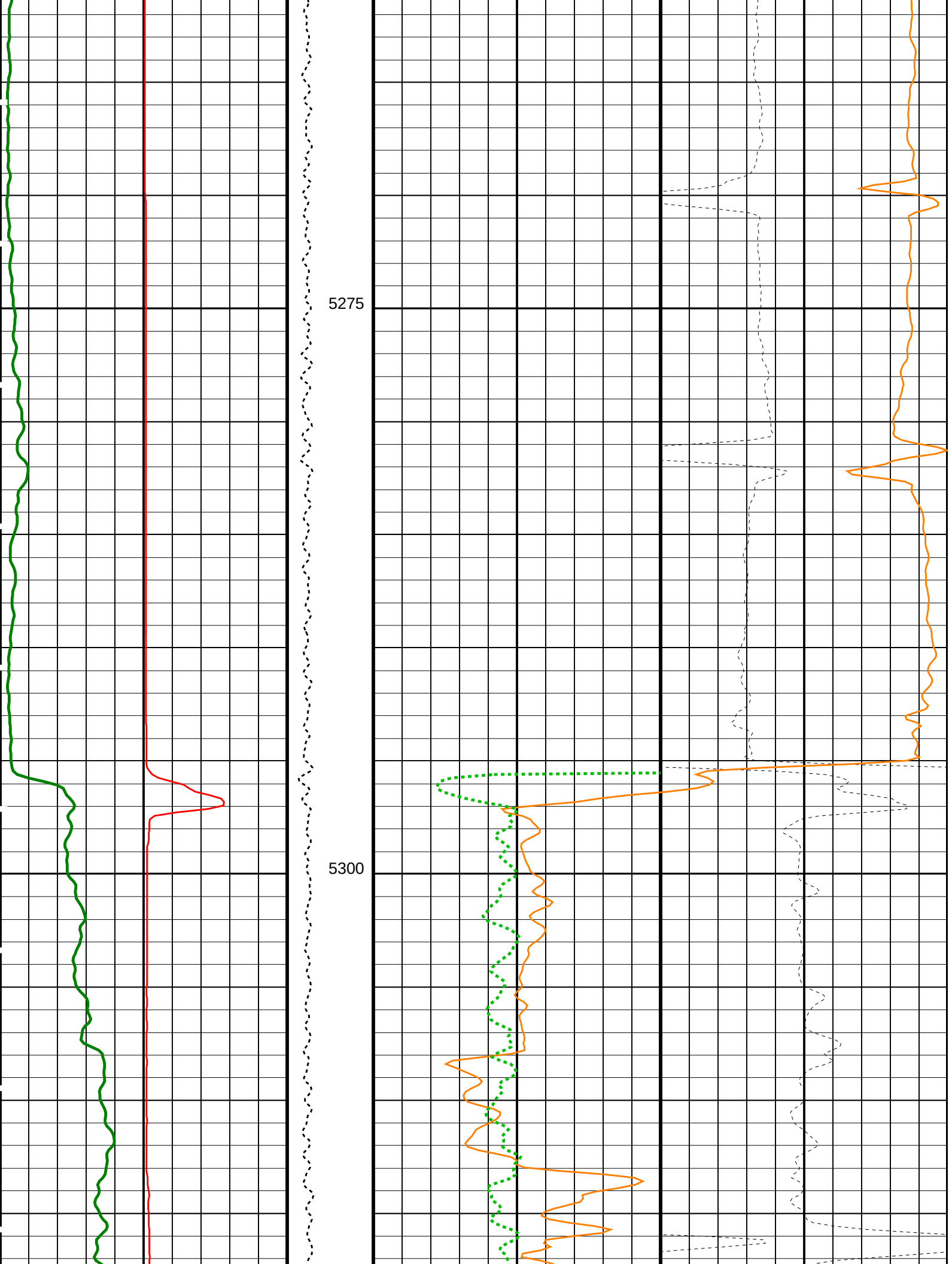
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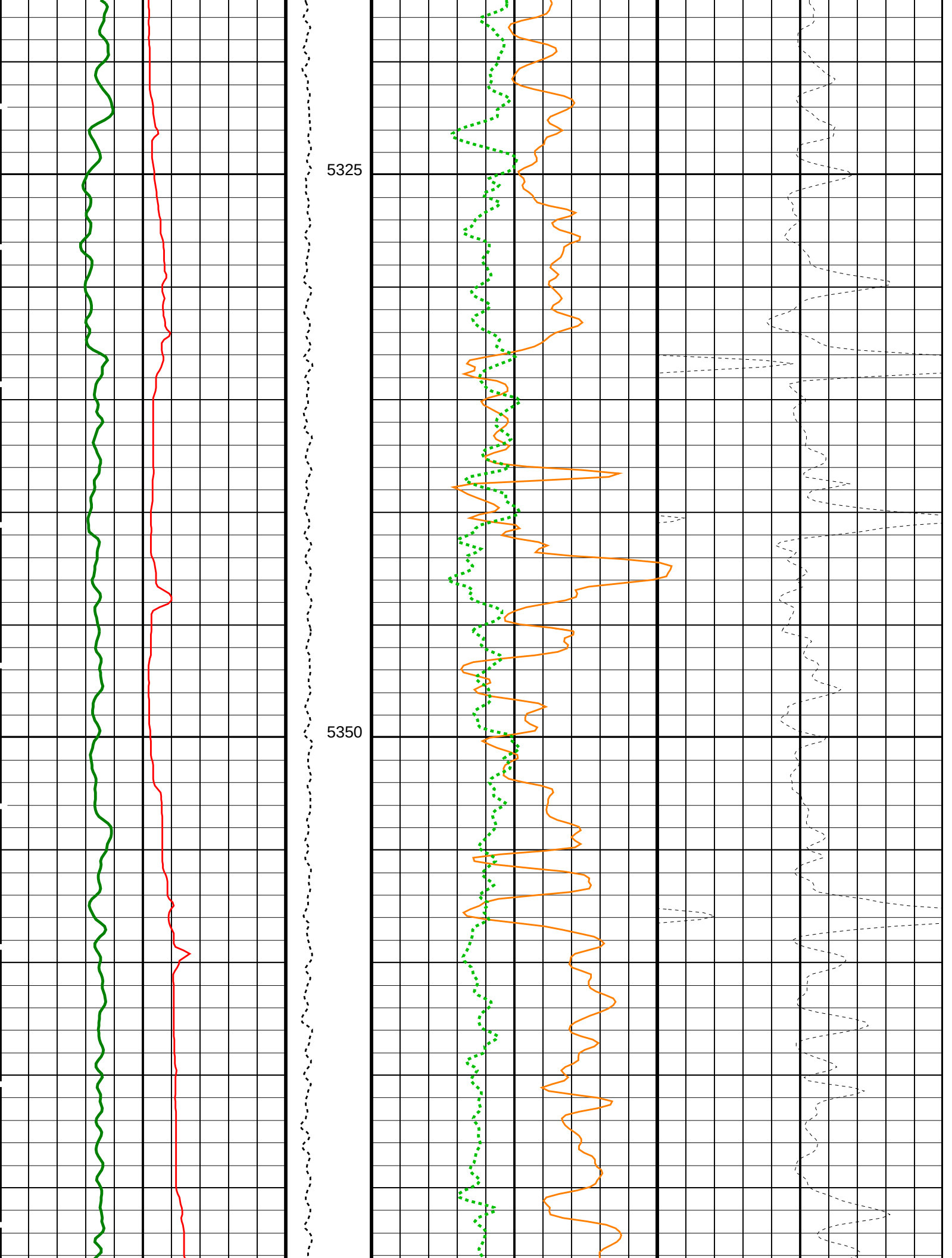
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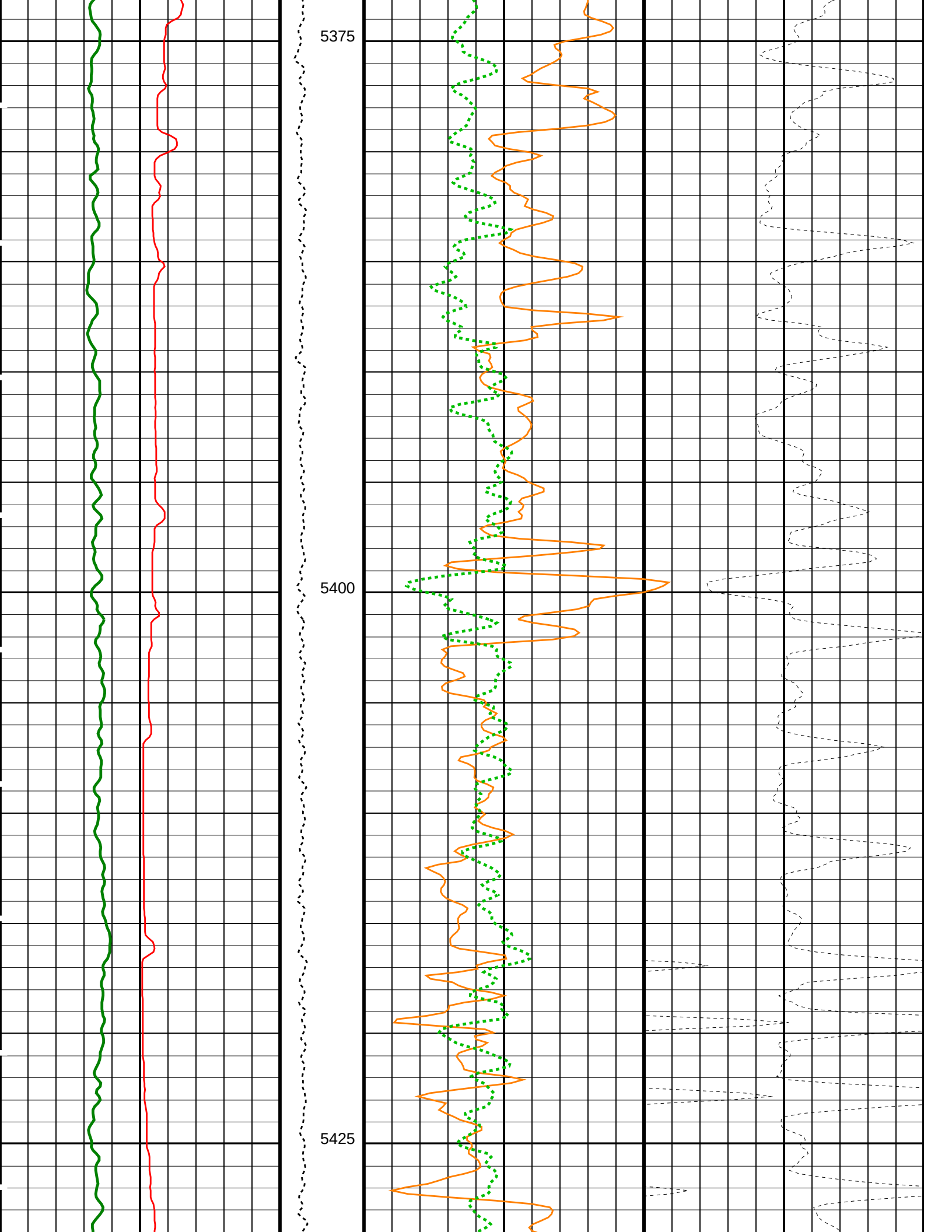
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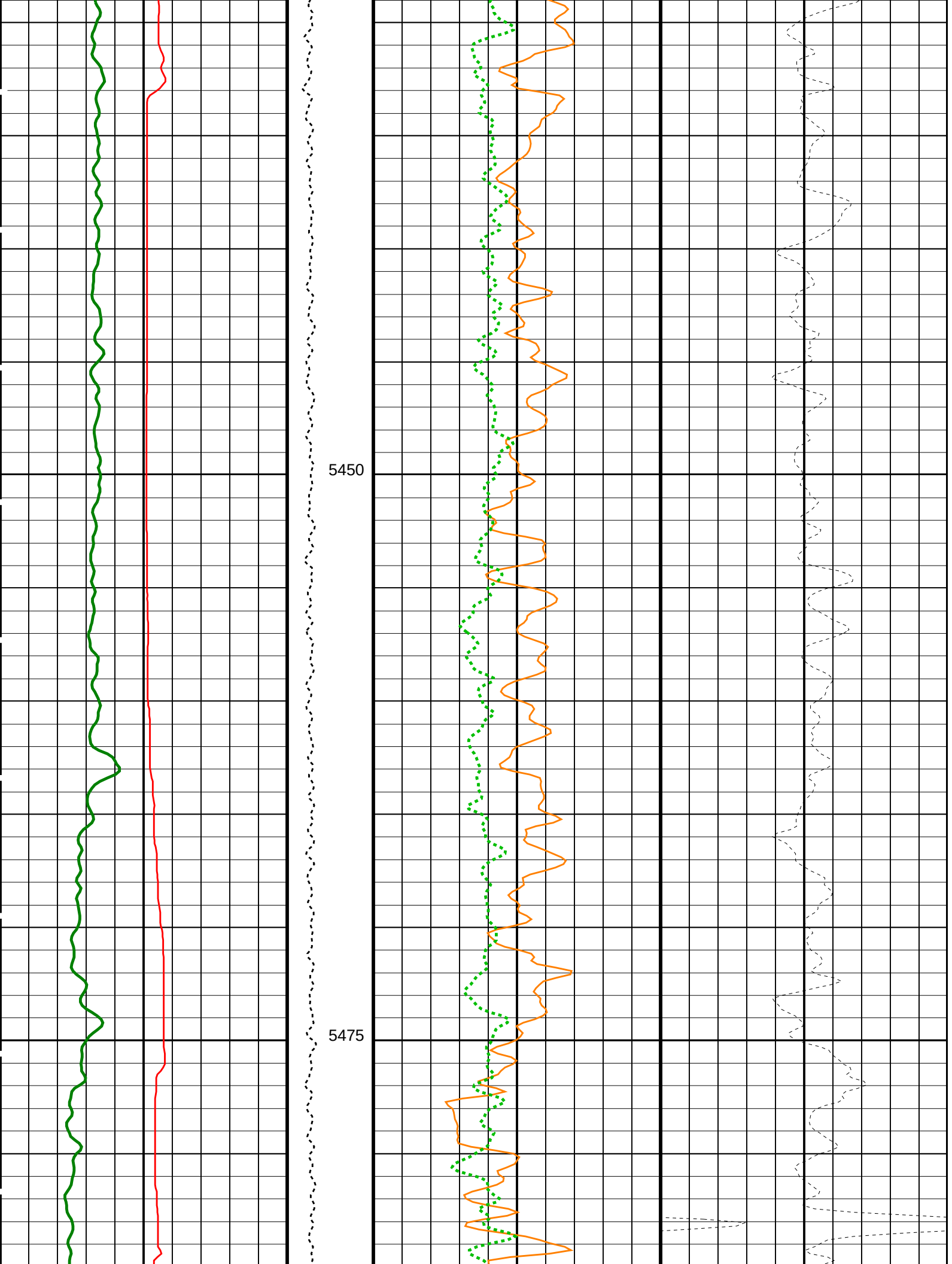
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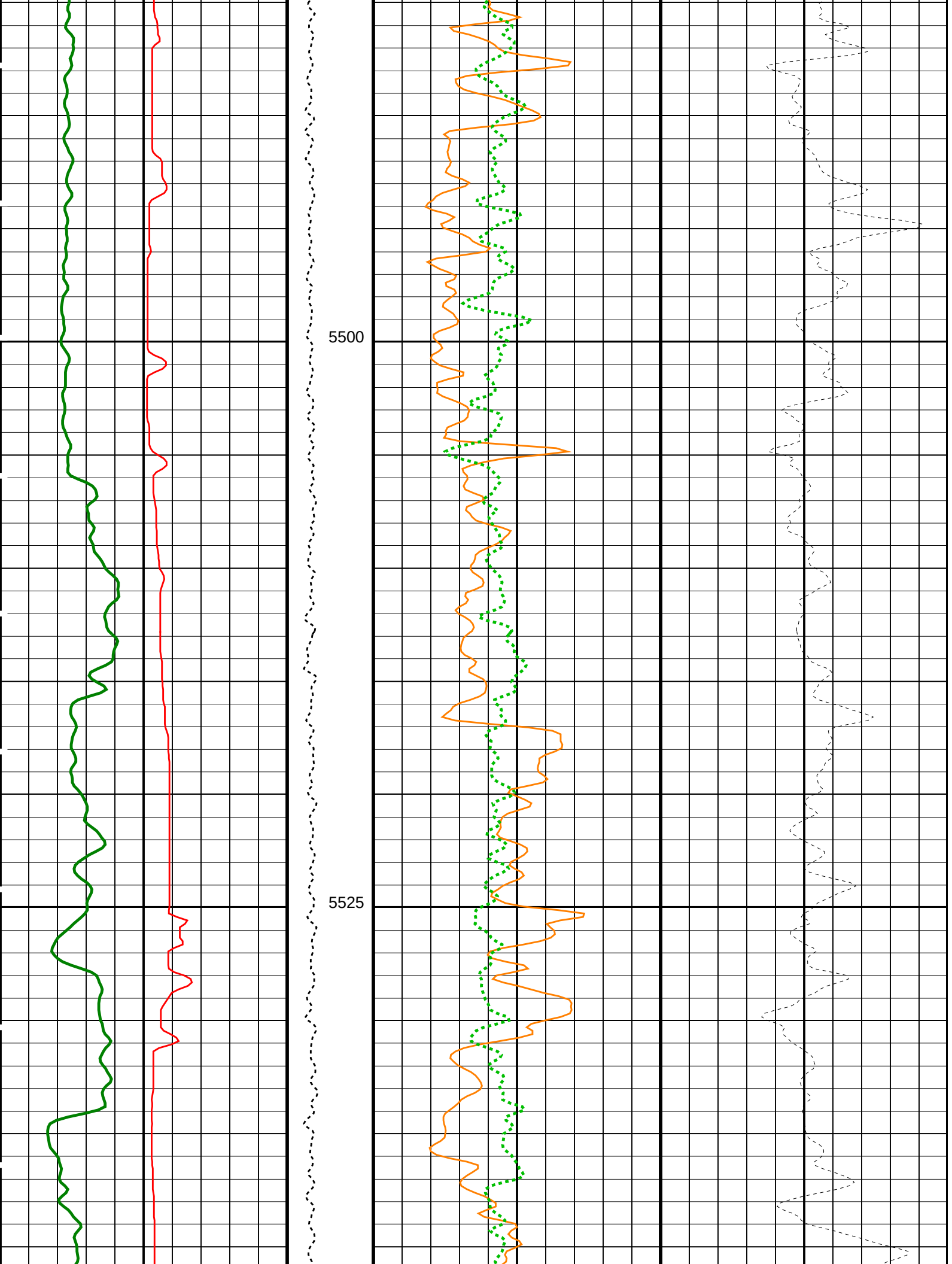
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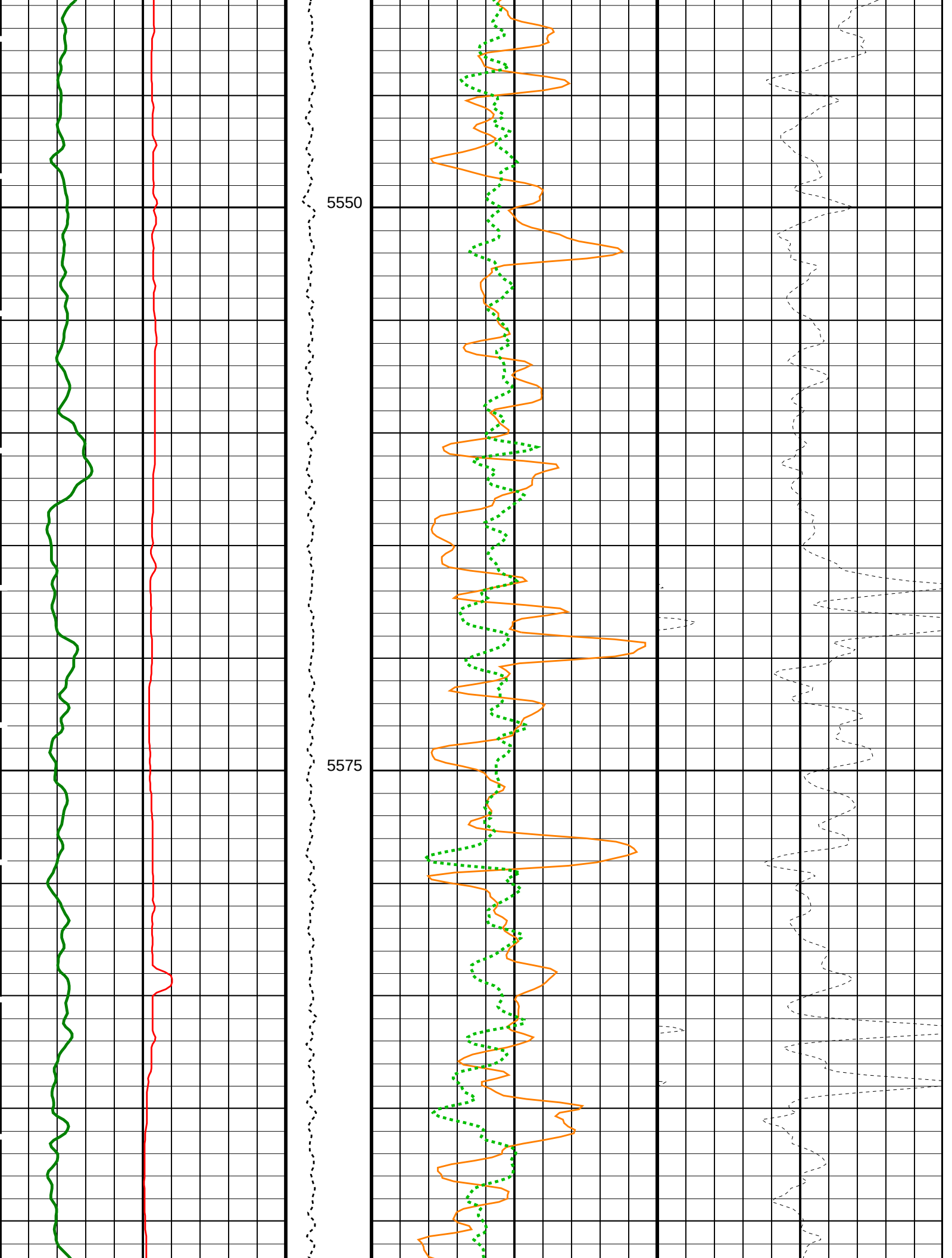
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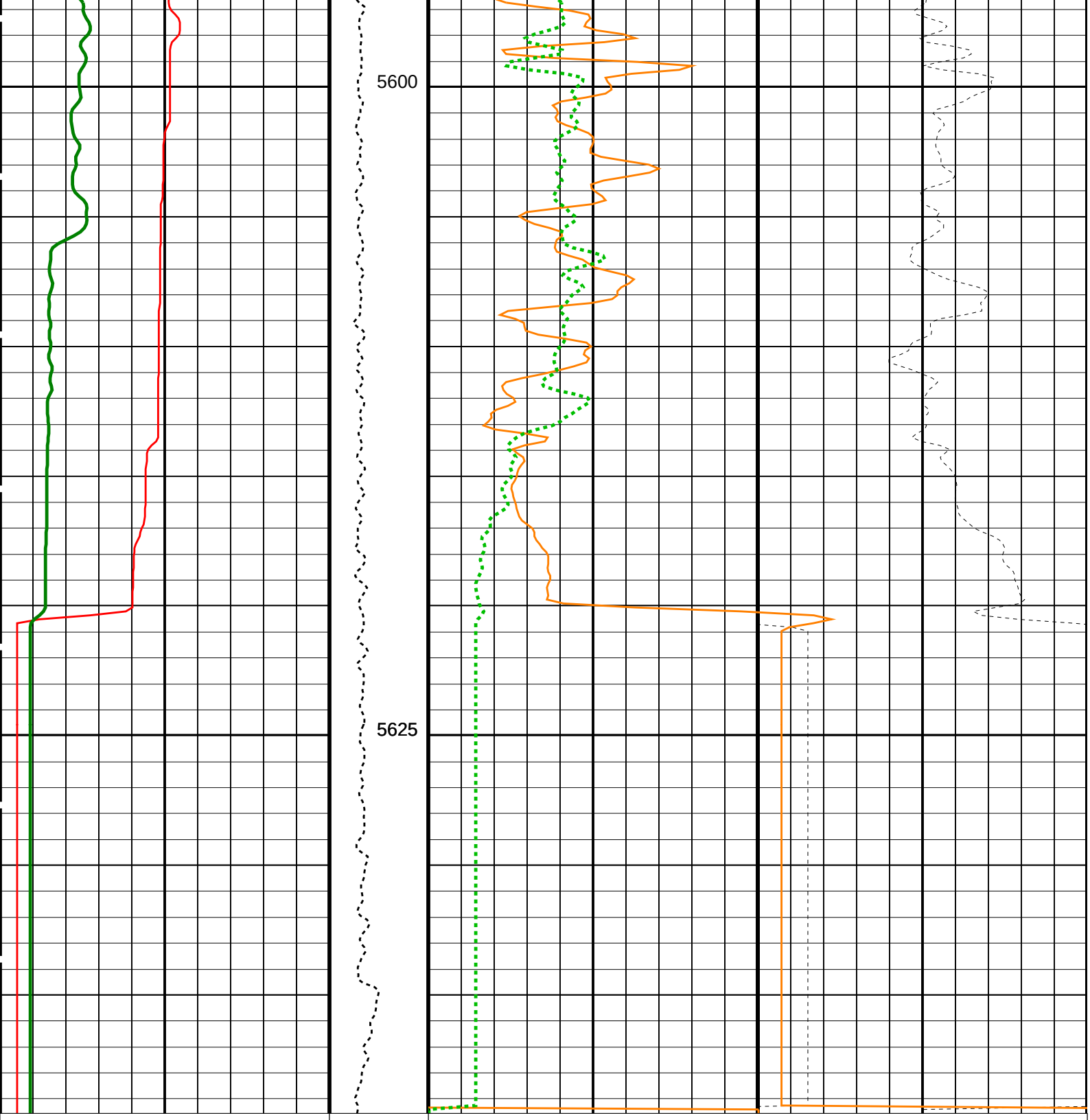


HLDS Caliper (LCAL)	Tension (TENS)	HLDS Bulk Density (RHOM)
0 (IN) 20	(LBF) 0 5000	3 (G/C3) 1

HNGS Spectroscopy Gamma Ray (HSGR)		HLDS Long Spaced Photoelectric Effect (PEFL)	HLDS Bulk Density Correction (DRH)
0 (GAPI) 150		0 (----) 10	−0.25 (G/C3) 0.25

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
HRLT-B: High Resolution Laterolog Array – B		

	HRLT−B: High Resolution Laterolog Array − B		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
	HLDS: Hostile Litho−Density Sonde		
DHC	Density Hole Correction	CALIPER	
DPPM	Density Porosity Processing Mode	HIRS	
FD	Fluid Density	1	G/C3
LATC	HLDS Activation Correction	OFF	
MDEN	Matrix Density	2.71	G/C3
	HNGS−BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	−0.00196491	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.01459	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.01089	
	EDTC−B: Enhanced DTS Cartridge		
BHS	Borehole Status	OPEN	
DPPM	Density Porosity Processing Mode	HIRS	
GCSE	Generalized Caliper Selection	LCAL	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.03	G/C3
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	RECOMPUTE	

Format: HLDSDensityPE **Vertical Scale: 1:200** **Graphics File Created: 05−May−2022 04:59**

OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_021LUP	FN:22	PRODUCER	05−May−2022 02:29	5639.6 M	4998.3 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_025PUP	FN:29	PRODUCER	05−May−2022 04:59		
RTB	MSS_LDEO_HRLA_LDL_025PUP	FN:30	PRODUCER	05−May−2022 04:59		

Company: International Ocean Discovery Program **Well: Expedition 390, Site U1556B**

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_021LUP	FN:22	PRODUCER	05−May−2022 02:29	5639.6 M	4998.3 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_025PUP	FN:29	PRODUCER	05−May−2022 04:59	5639.6 M	4998.3 M
RTB	MSS_LDEO_HRLA_LDL_025PUP	FN:30	PRODUCER	05−May−2022 04:59	5639.6 M	4998.3 M

OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187

HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

PIP SUMMARY

Time Mark Every 60 S

HRLT Mud Resistivity (RM_HRLT)
0.02 (OHMM) 200

HRLT Resistivity 5 (RLA5)
0.2 (OHMM) 2000

HRLT Resistivity 4 (RLA4)
0.2 (OHMM) 2000

HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 150

HRLT Resistivity 3 (RLA3)
0.2 (OHMM) 2000

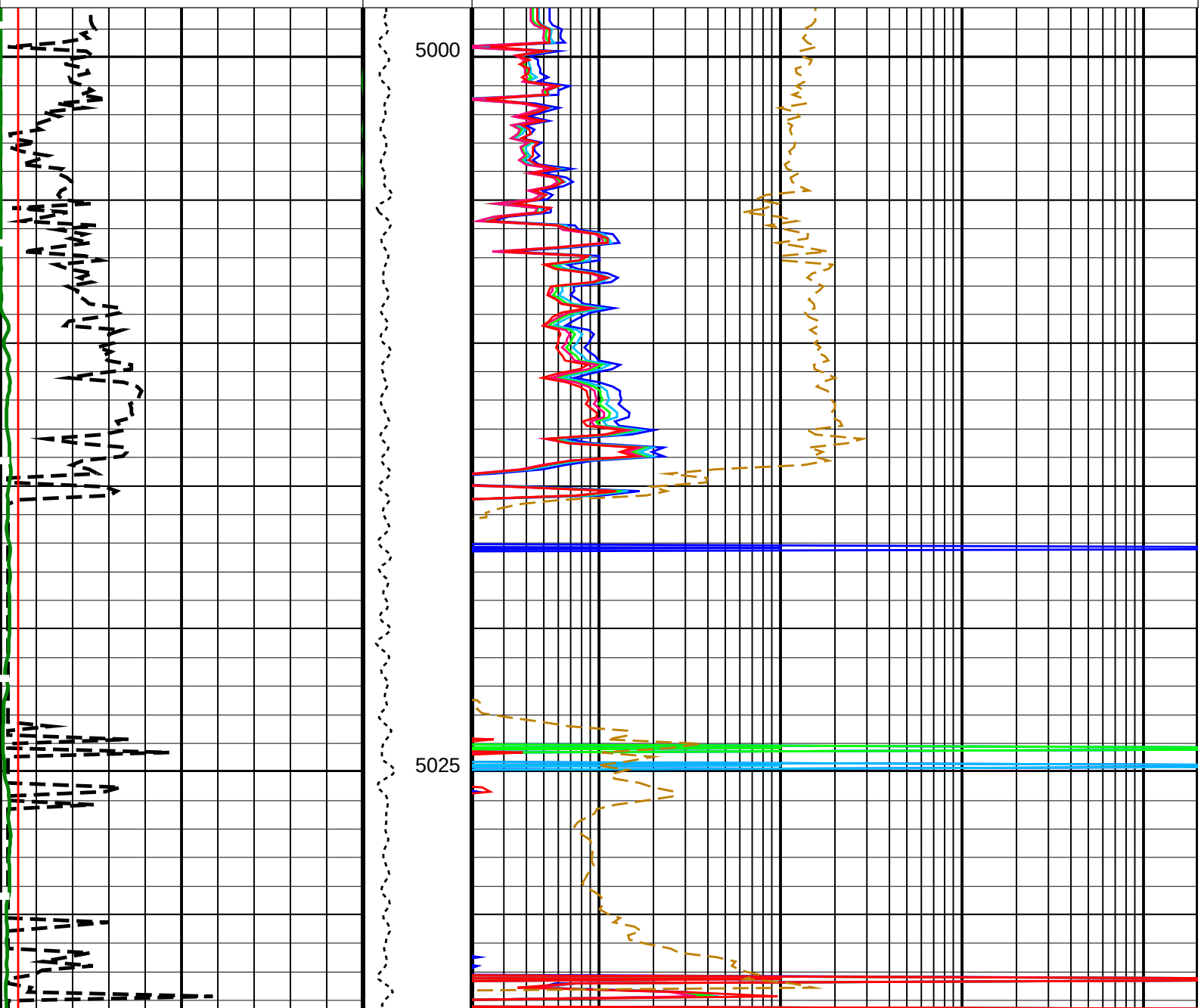
Invasion Diameter (DI_HRLT)
0 (IN) 50

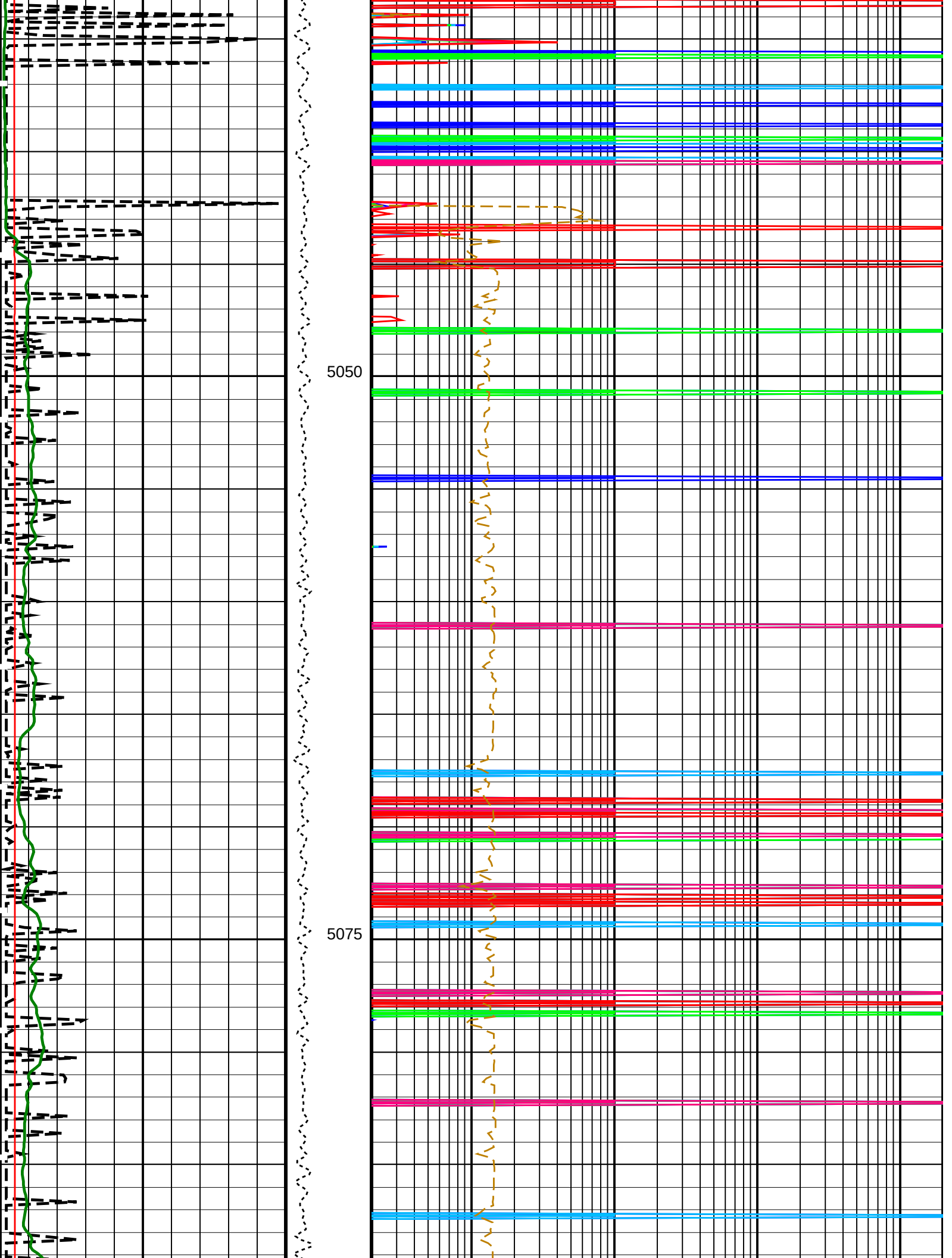
HRLT Resistivity 2 (RLA2)
0.2 (OHMM) 2000

HLDS Caliper (LCAL)
0 (IN) 20

Tension (TENS) (LBF)
0 5000

HRLT Resistivity 1 (RLA1)
0.2 (OHMM) 2000

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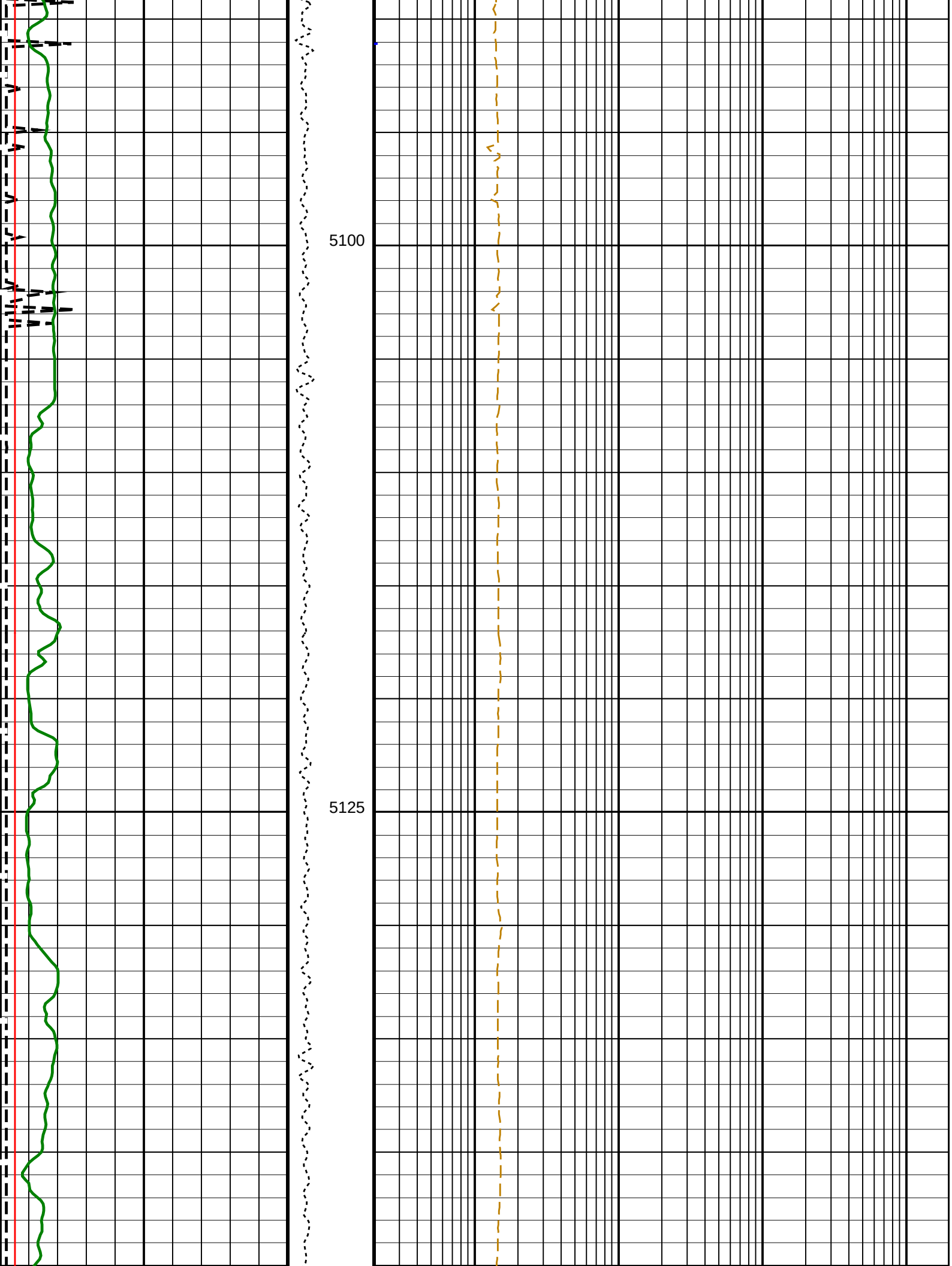
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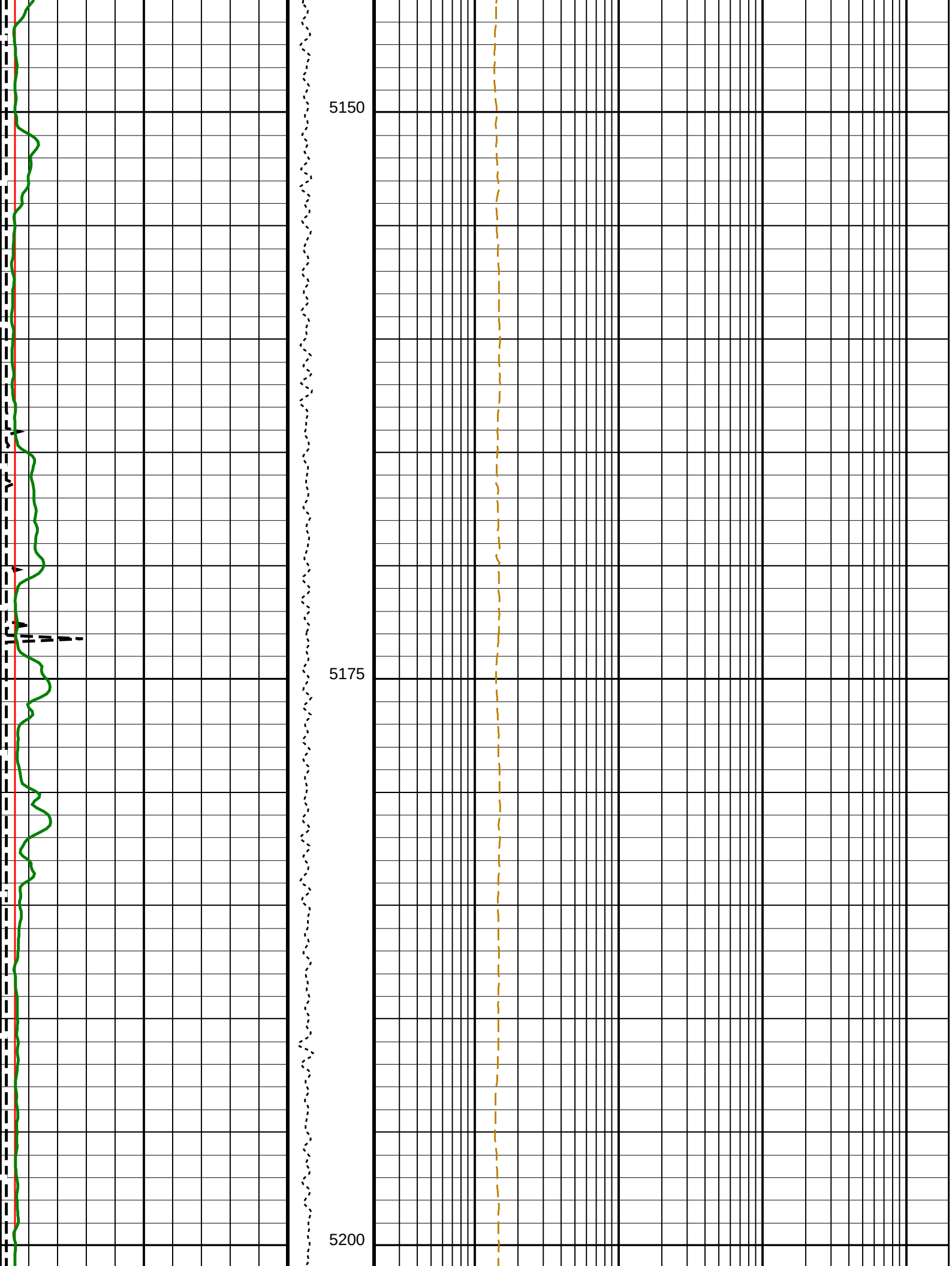
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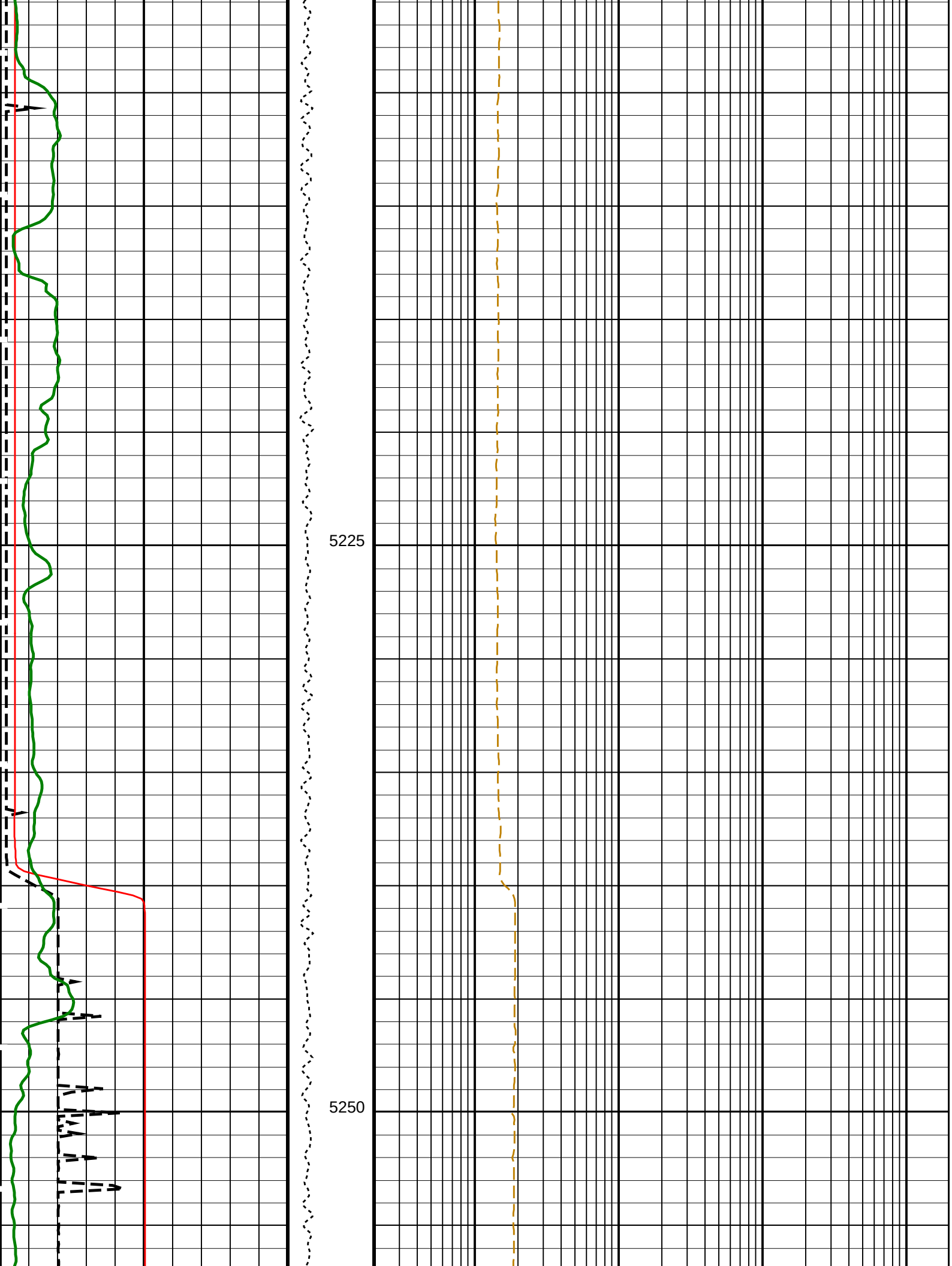
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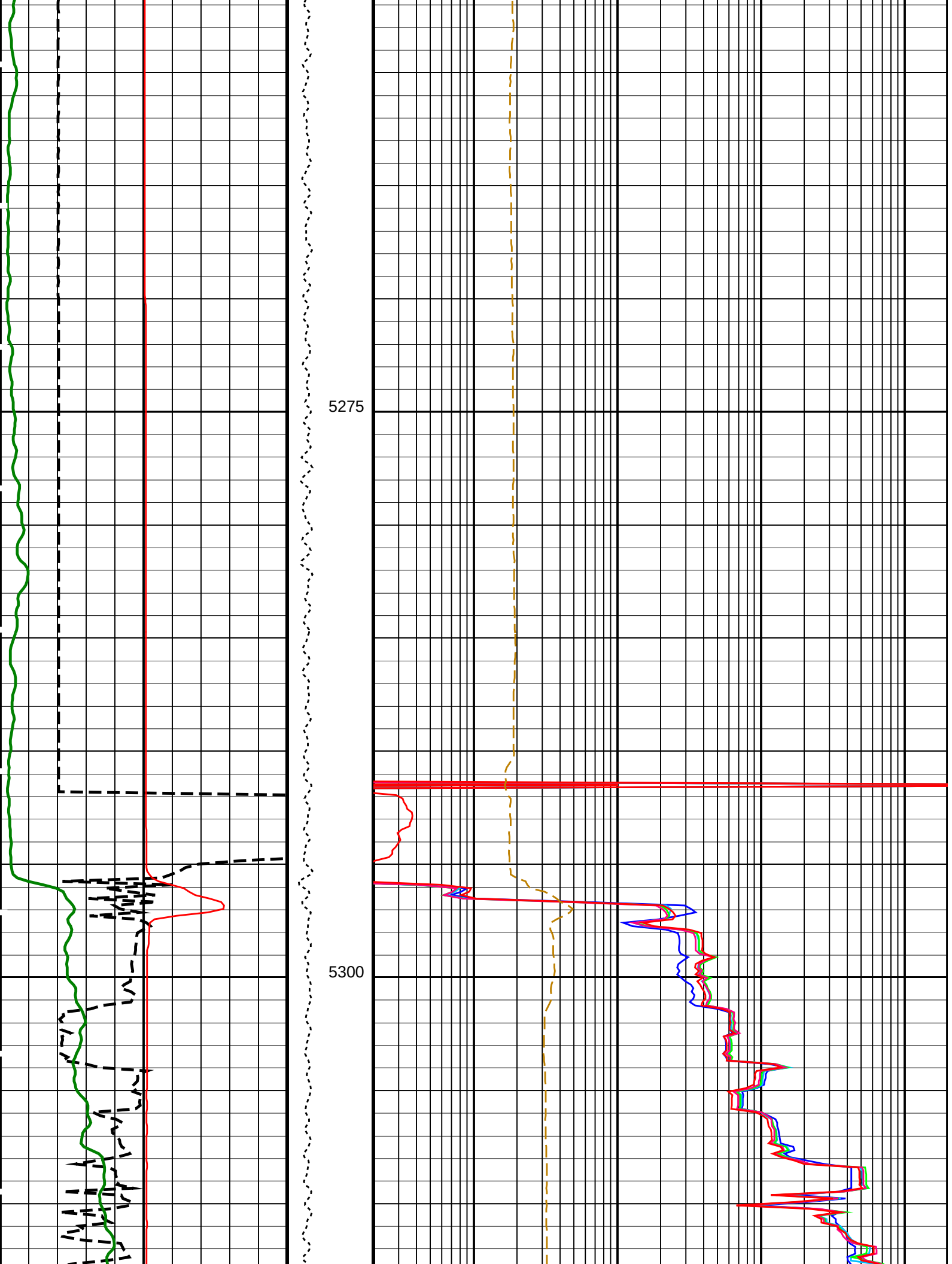
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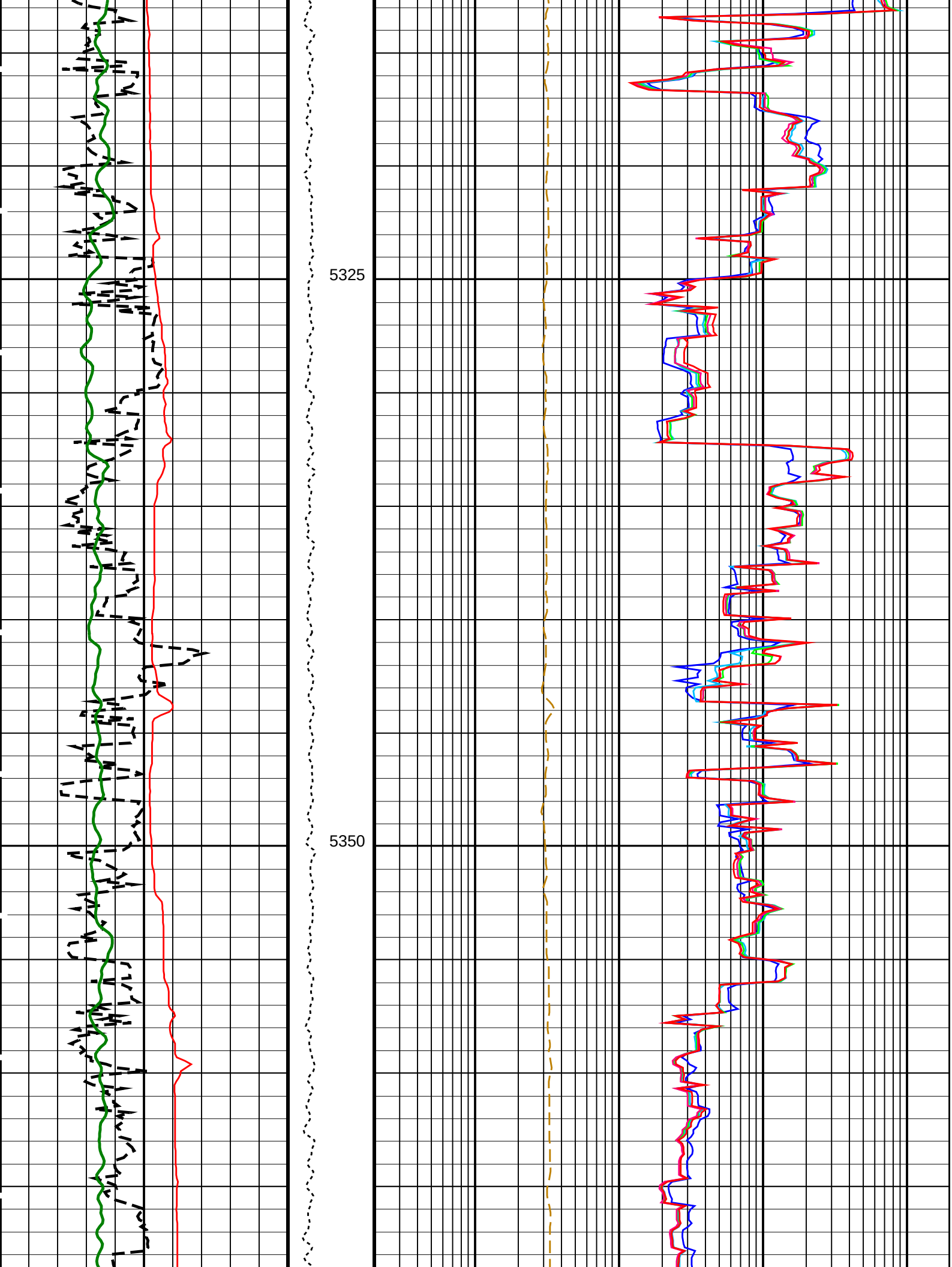
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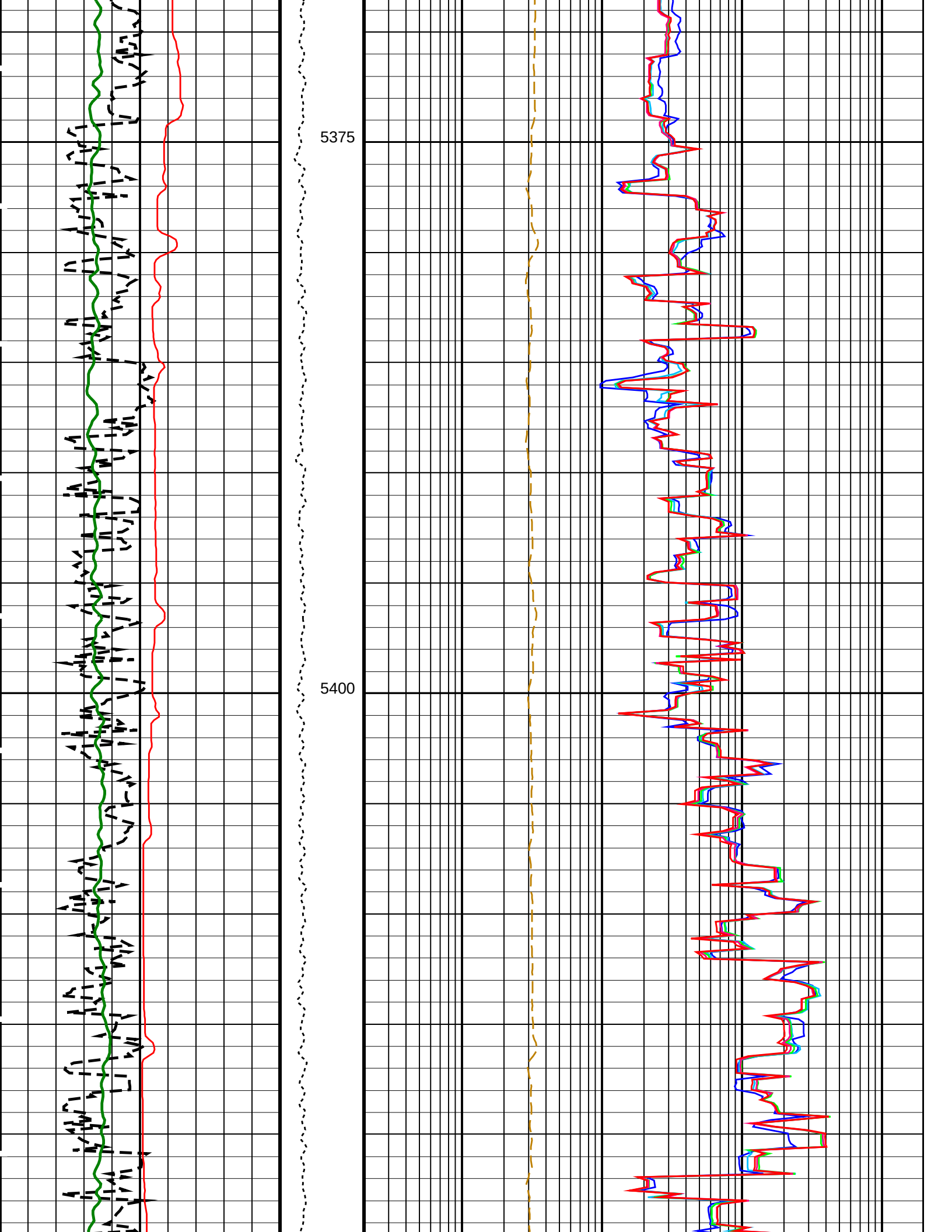
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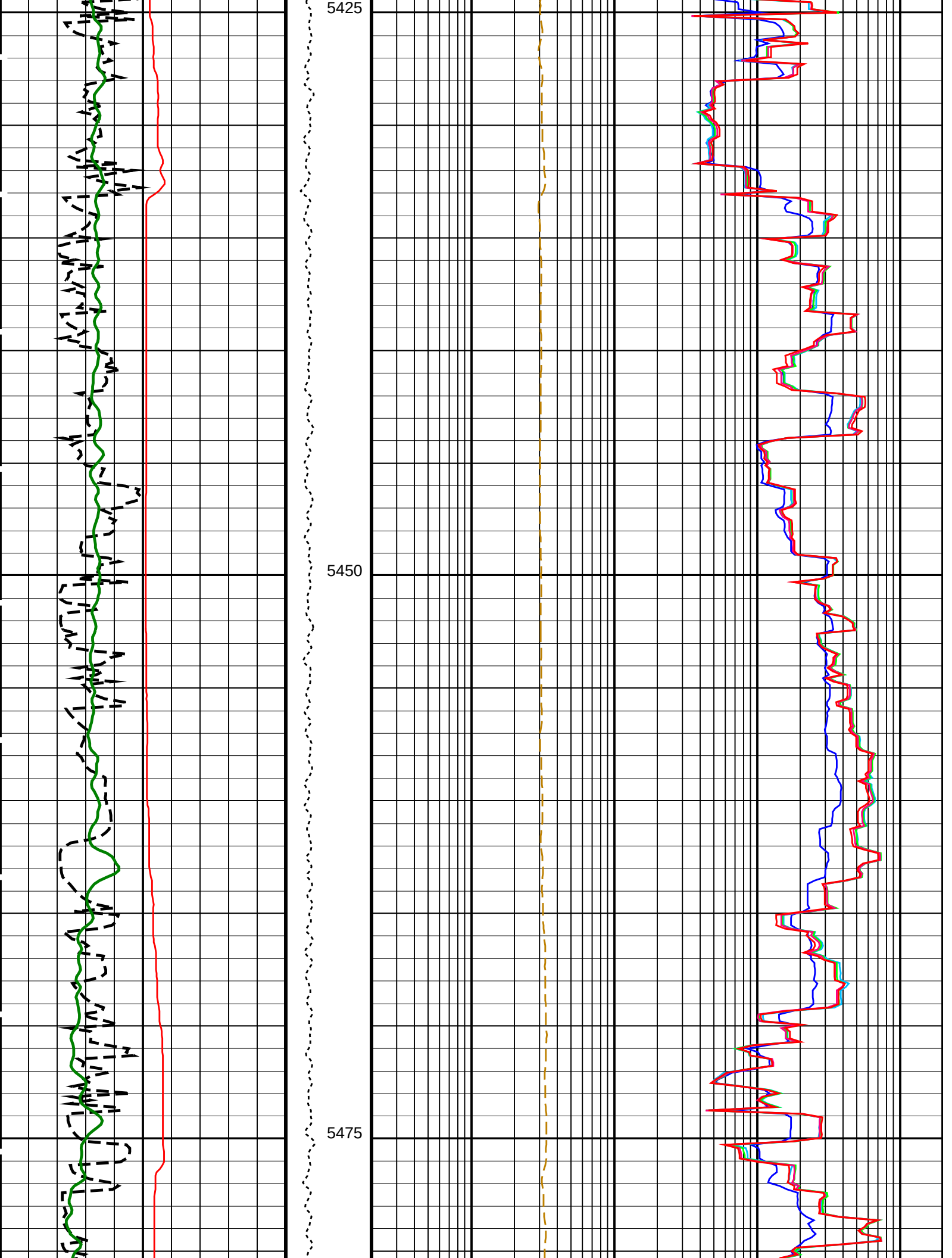
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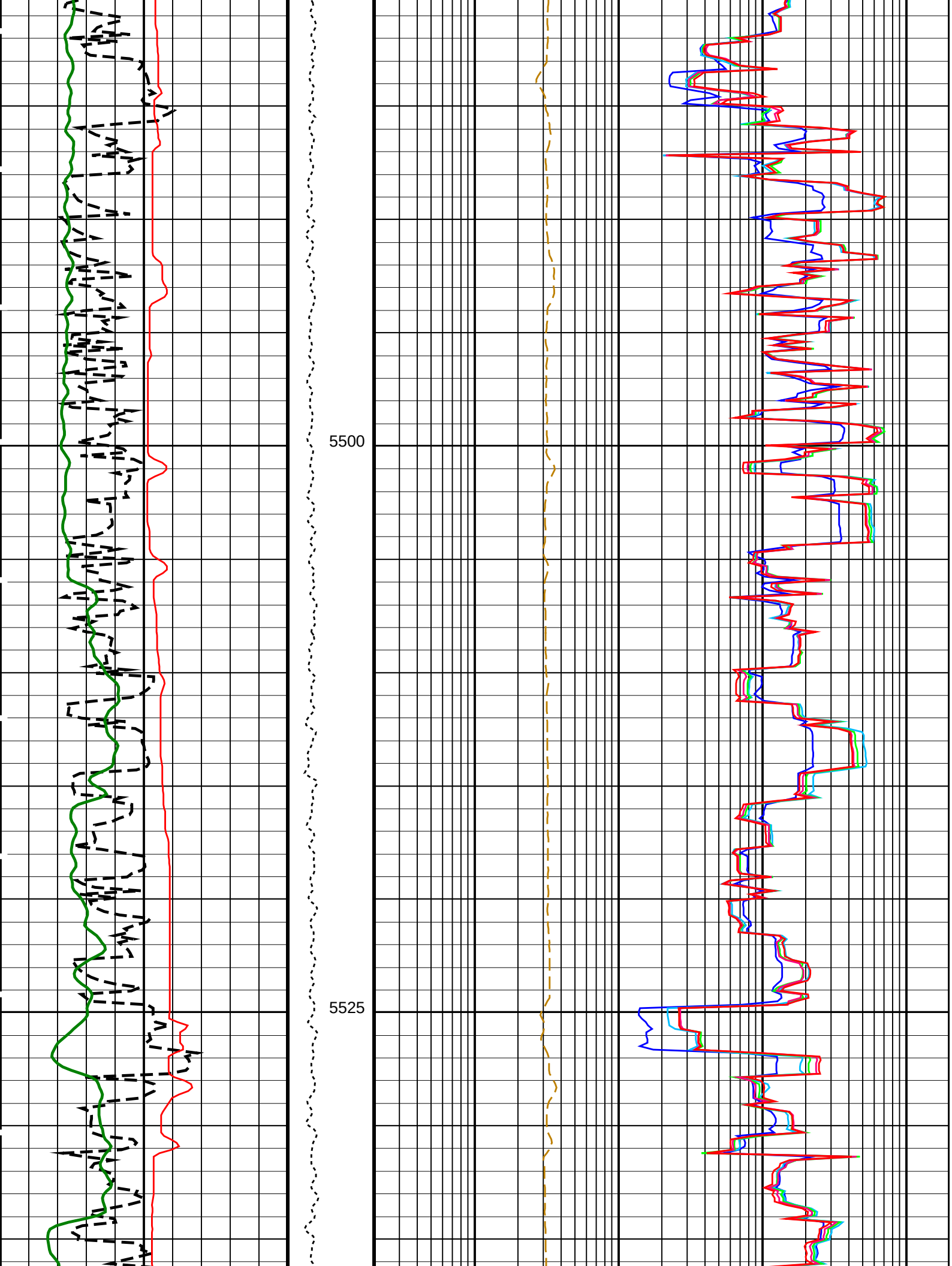
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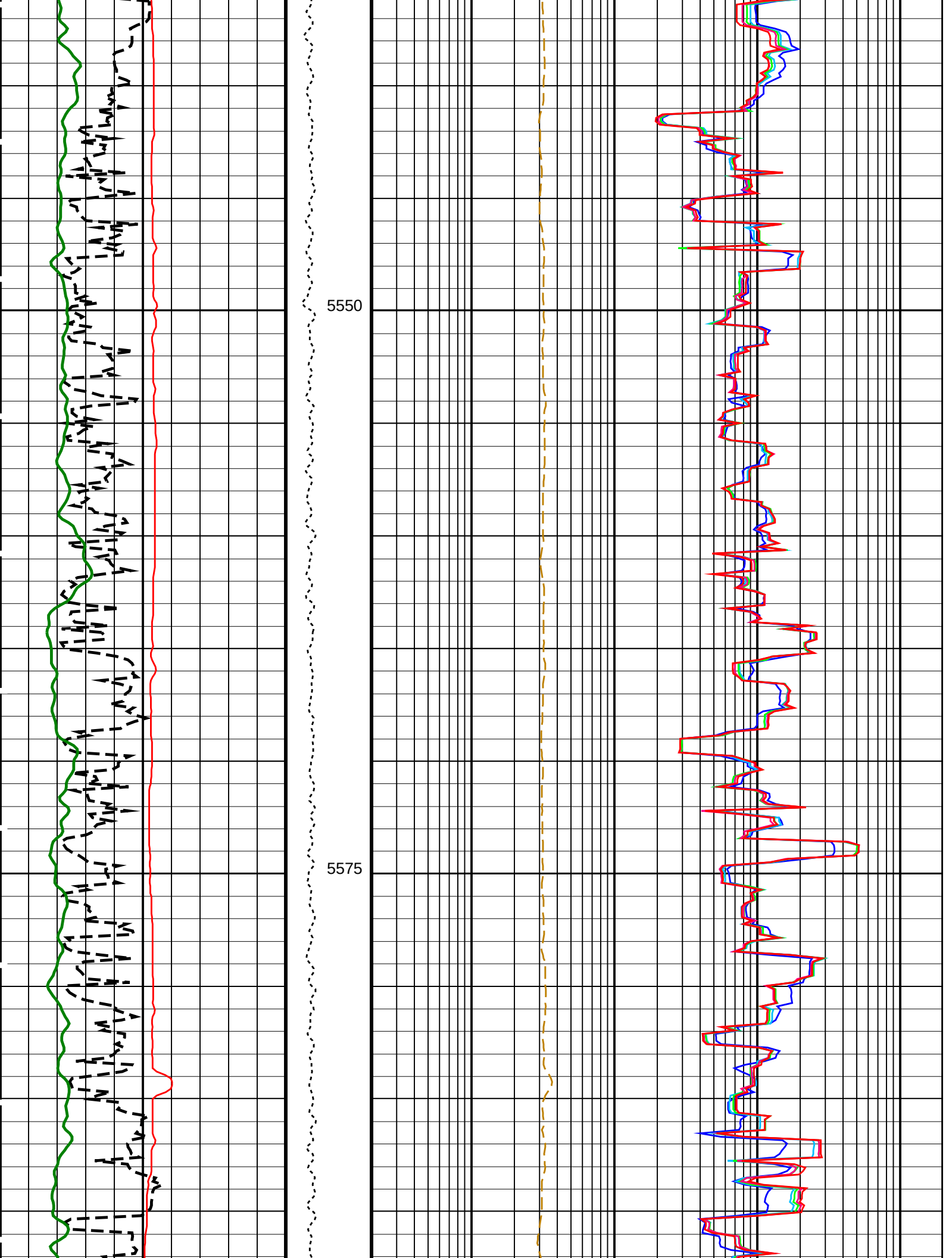
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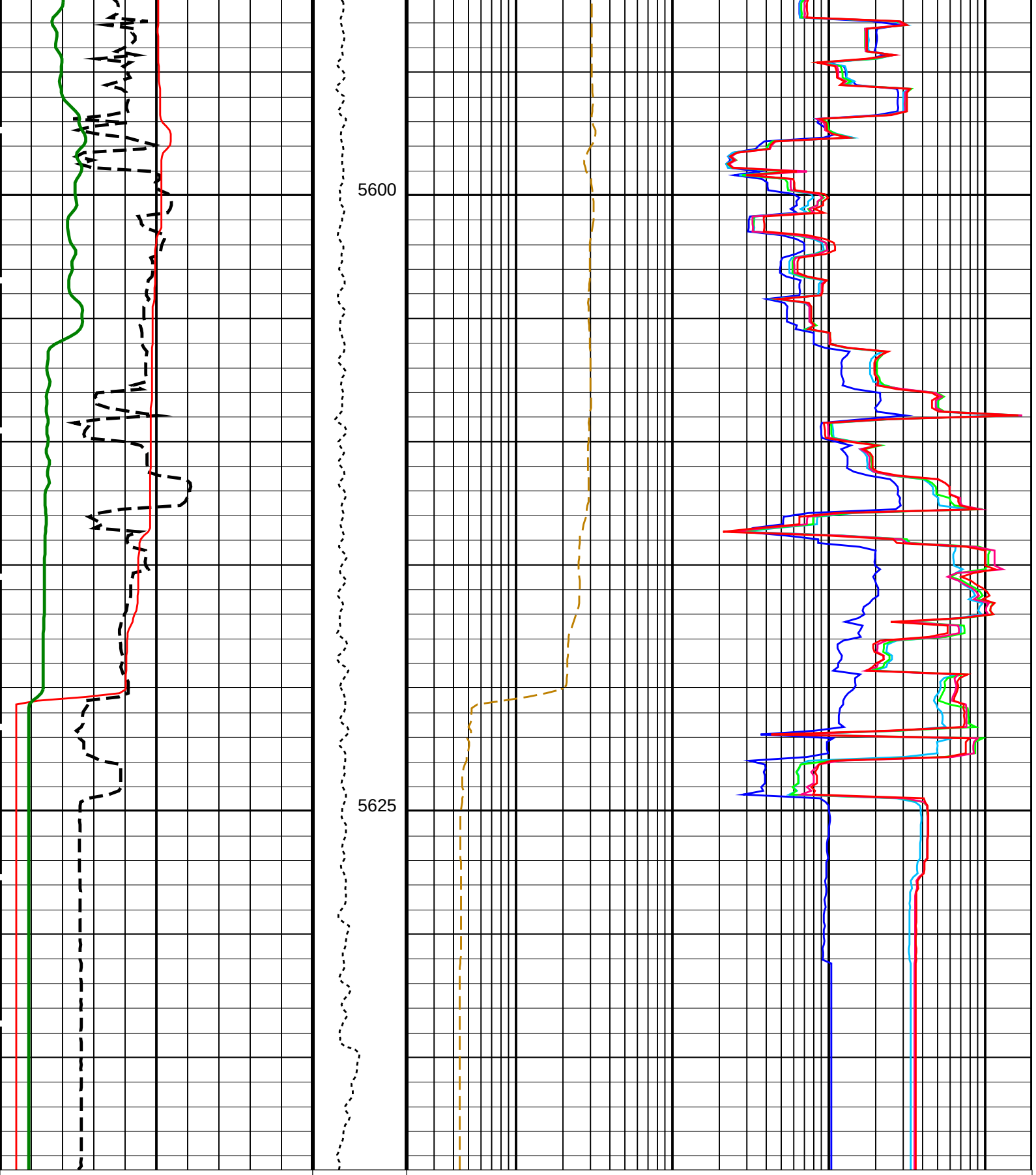


HLDS Caliper (LCAL)
0 (IN) 20

Invasion Diameter (DI_HRLT)
0 (IN) 50

HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 150

Tension (TENS) (LBF)
0 5000

HRLT Resistivity 1 (RLA1)
0.2 (OHMM) 2000

HRLT Resistivity 2 (RLA2)
0.2 (OHMM) 2000

HRLT Resistivity 3 (RLA3)
0.2 (OHMM) 2000

HRLT Resistivity 4 (RLA4)		
0.2	(OHMM)	2000
HRLT Resistivity 5 (RLA5)		
0.2	(OHMM)	2000
HRLT Mud Resistivity (RM_HRLT)		
0.02	(OHMM)	200

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	HRLT−B: High Resolution Laterolog Array − B		
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	20	DEGC
GCSE	Generalized Caliper Selection	LCAL	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
PROCINV	Inversion Selection	ON	
PROCMFL	Inversion Micro−Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCSPO	Sonde Position	Centered	
SHT	Surface Hole Temperature	20	DEGC
	HNGS−BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	20	DEGC
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	−0.00196491	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
SHT	Surface Hole Temperature	20	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.01459	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.01089	
	EDTC−B: Enhanced DTS Cartridge		
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	20	DEGC
GCSE	Generalized Caliper Selection	LCAL	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
SHT	Surface Hole Temperature	20	DEGC
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.03	G/C3
DO	Depth Offset for Playback	0.0	M
MST	Mud Sample Temperature	23.00	DEGC
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	10190.3	FT

Format: HRLT Vertical Scale: 1:200 Graphics File Created: 05−May−2022 04:59

OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_021LUP	FN:22	PRODUCER	05−May−2022 02:29	5639.6 M	4998.3 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_025PUP	FN:29	PRODUCER	05−May−2022 04:59		
RTB	MSS_LDEO_HRLA_LDL_025PUP	FN:30	PRODUCER	05−May−2022 04:59		

Company: International Ocean Discovery Program — Well: Expedition 390, Site U1556B

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_021LUP	FN:22	PRODUCER	05−May−2022 02:29	5639.6 M	4998.3 M

Output DLIS Files

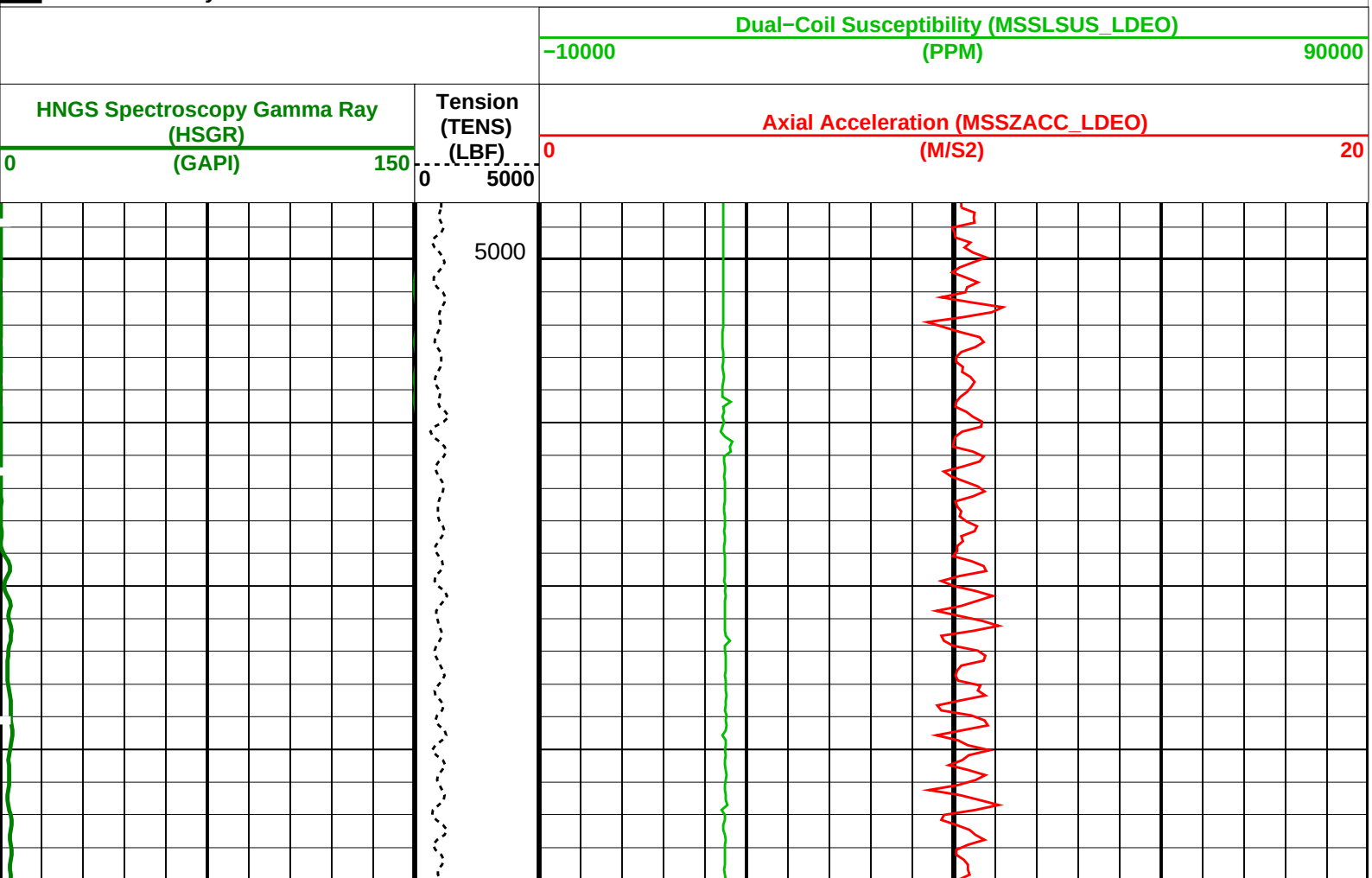
DEFAULT	MSS_LDEO_HRLA_LDL_025PUP	FN:29	PRODUCER	05−May−2022 04:59	5639.6 M	4998.3 M
RTB	MSS_LDEO_HRLA_LDL_025PUP	FN:30	PRODUCER	05−May−2022 04:59	5639.6 M	4998.3 M

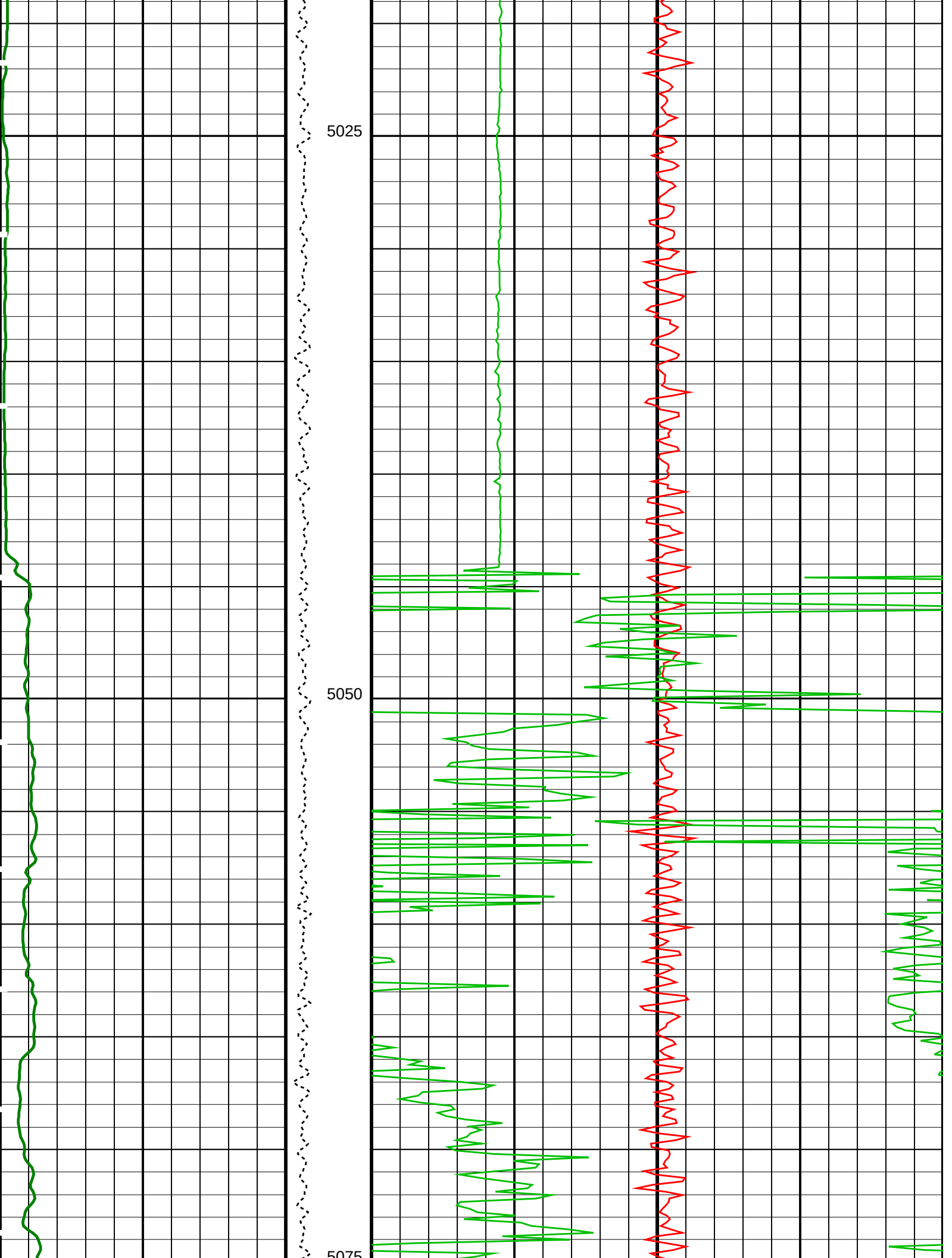
OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

PIP SUMMARY

Time Mark Every 60 S

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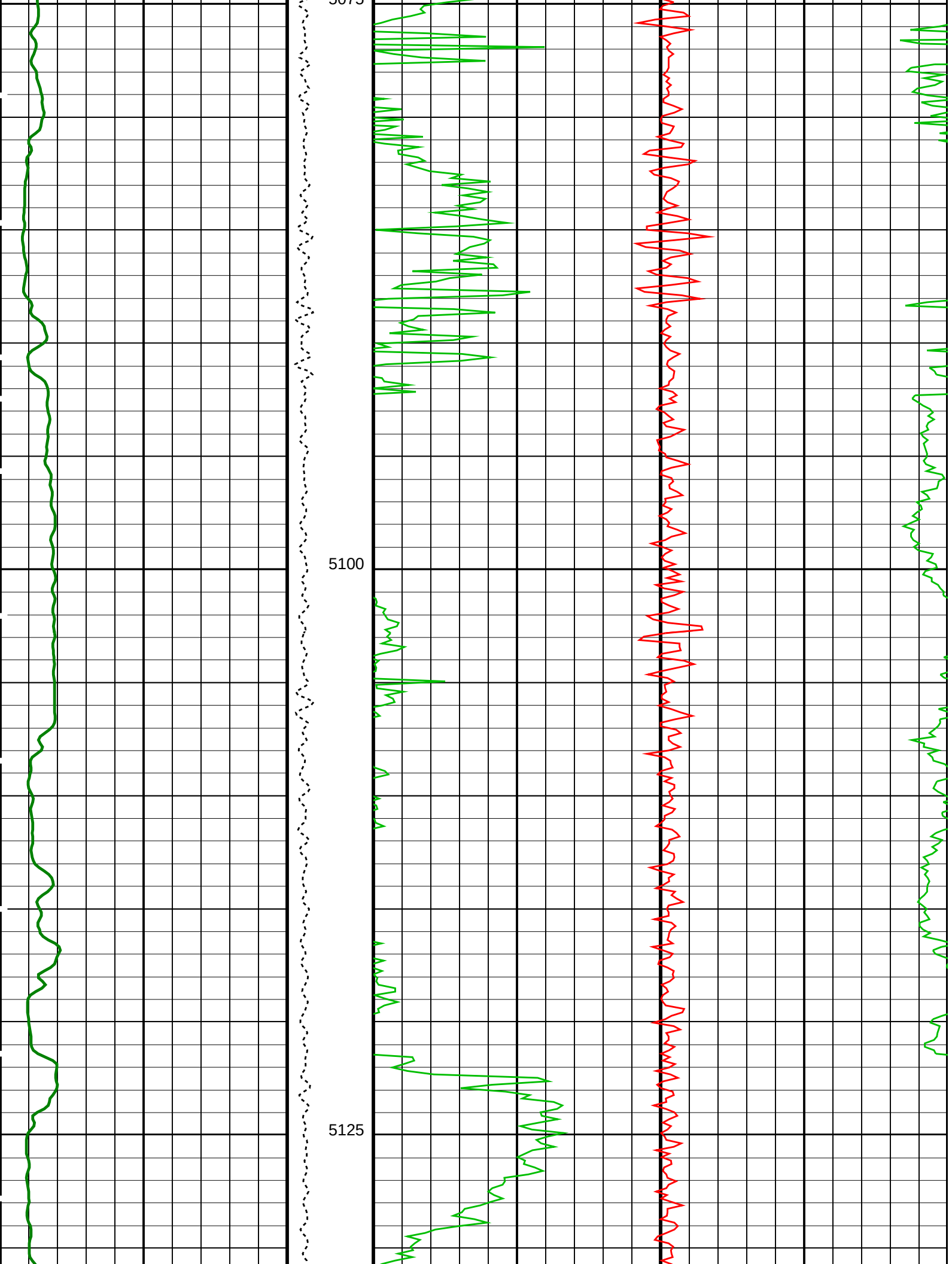
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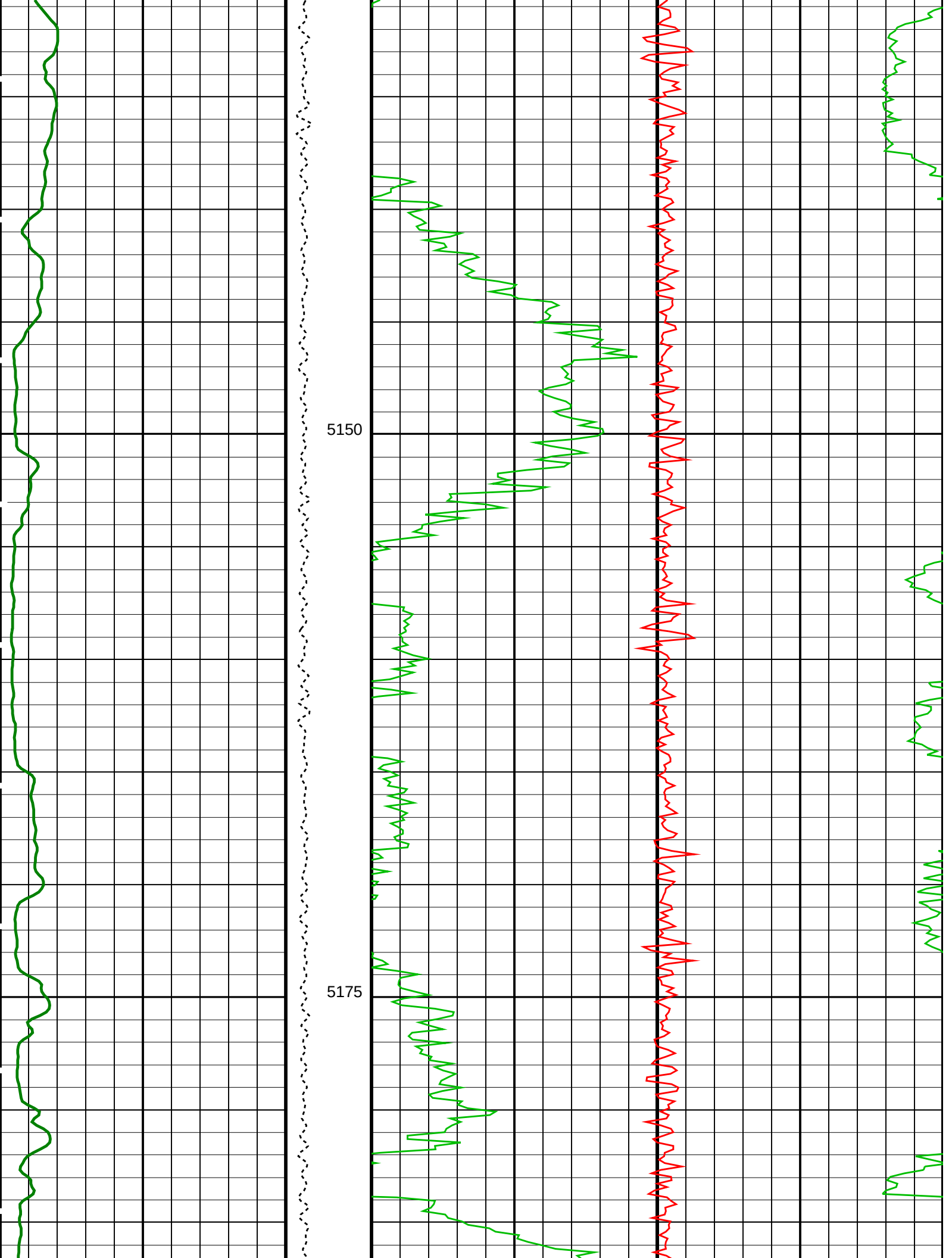
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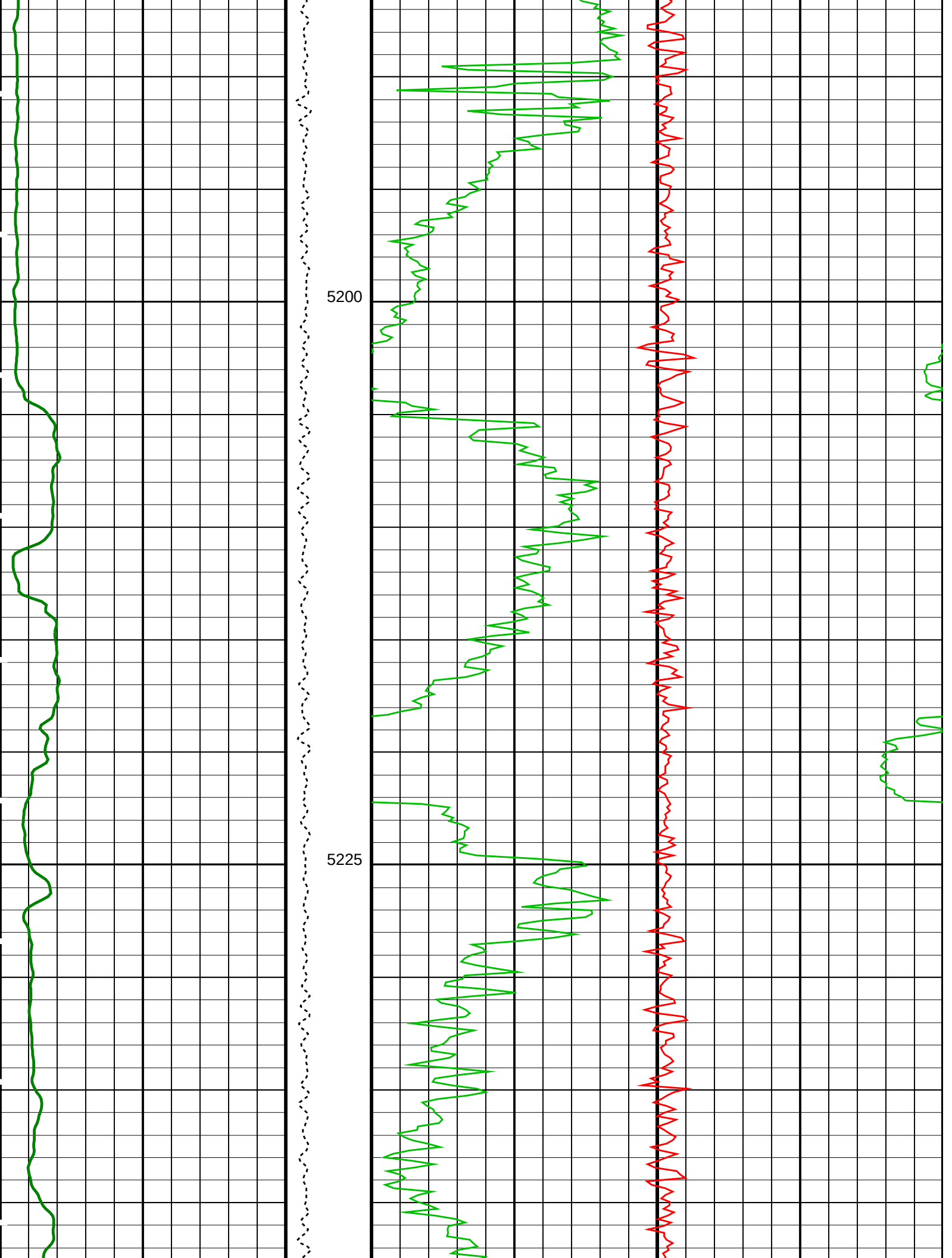
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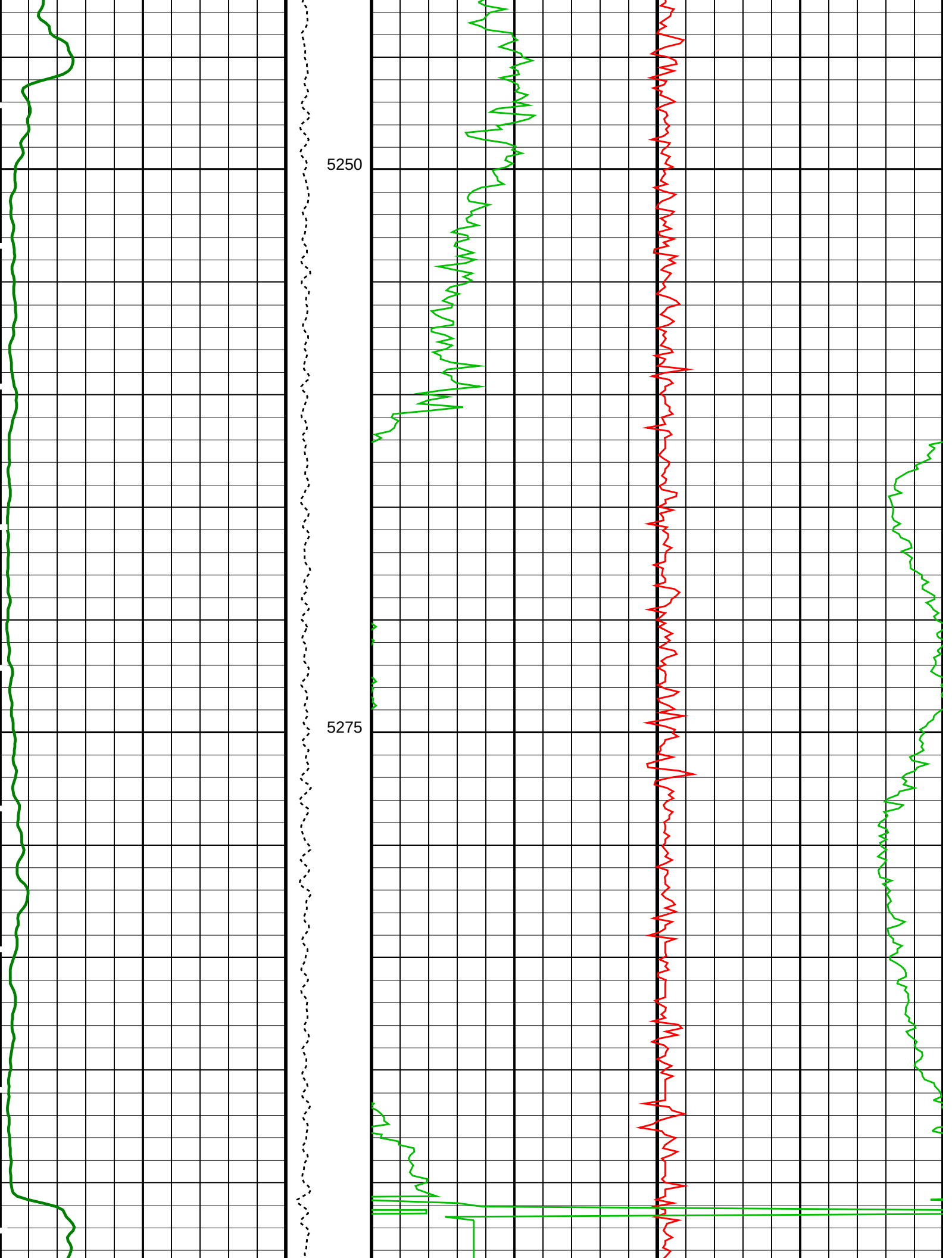
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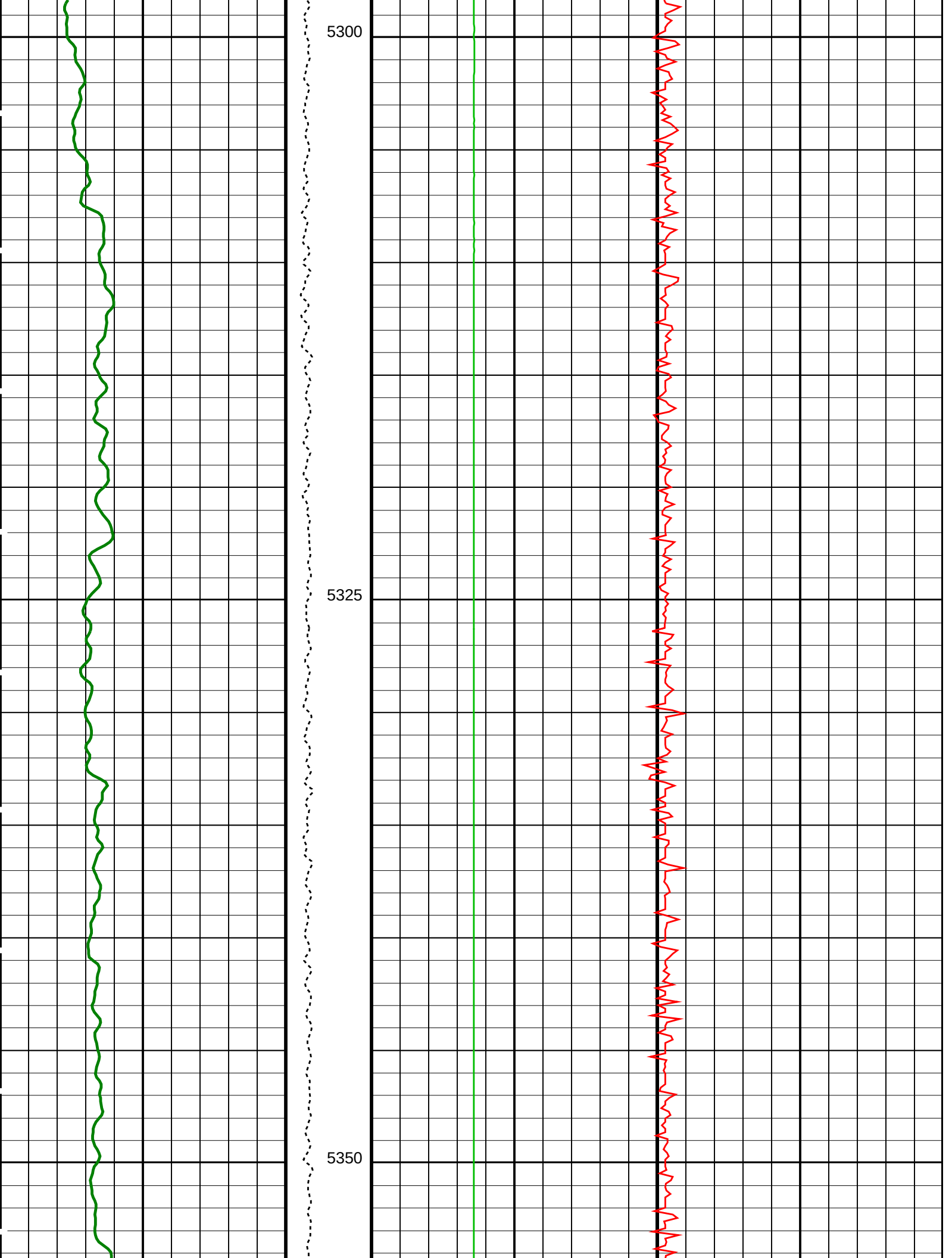
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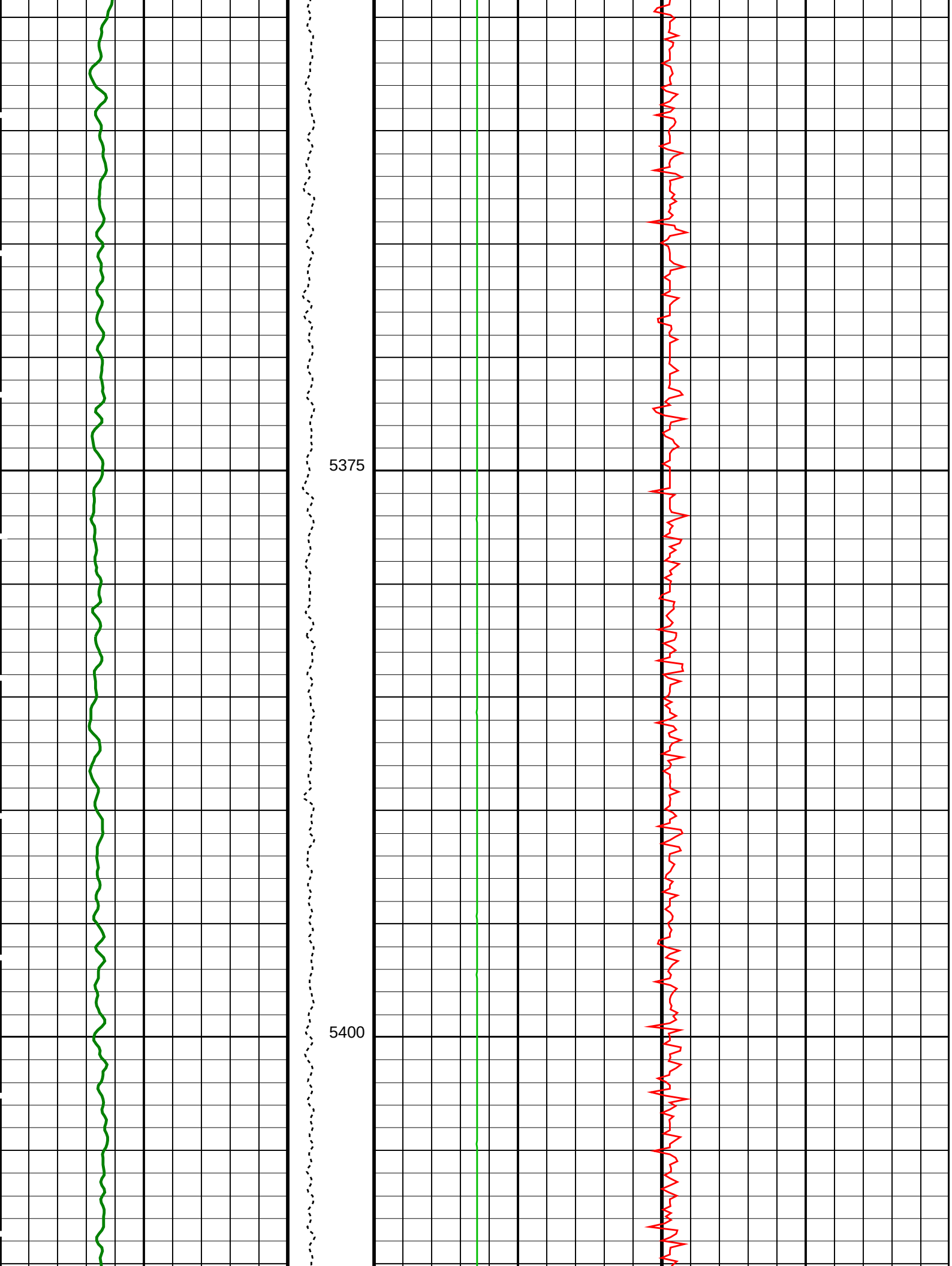
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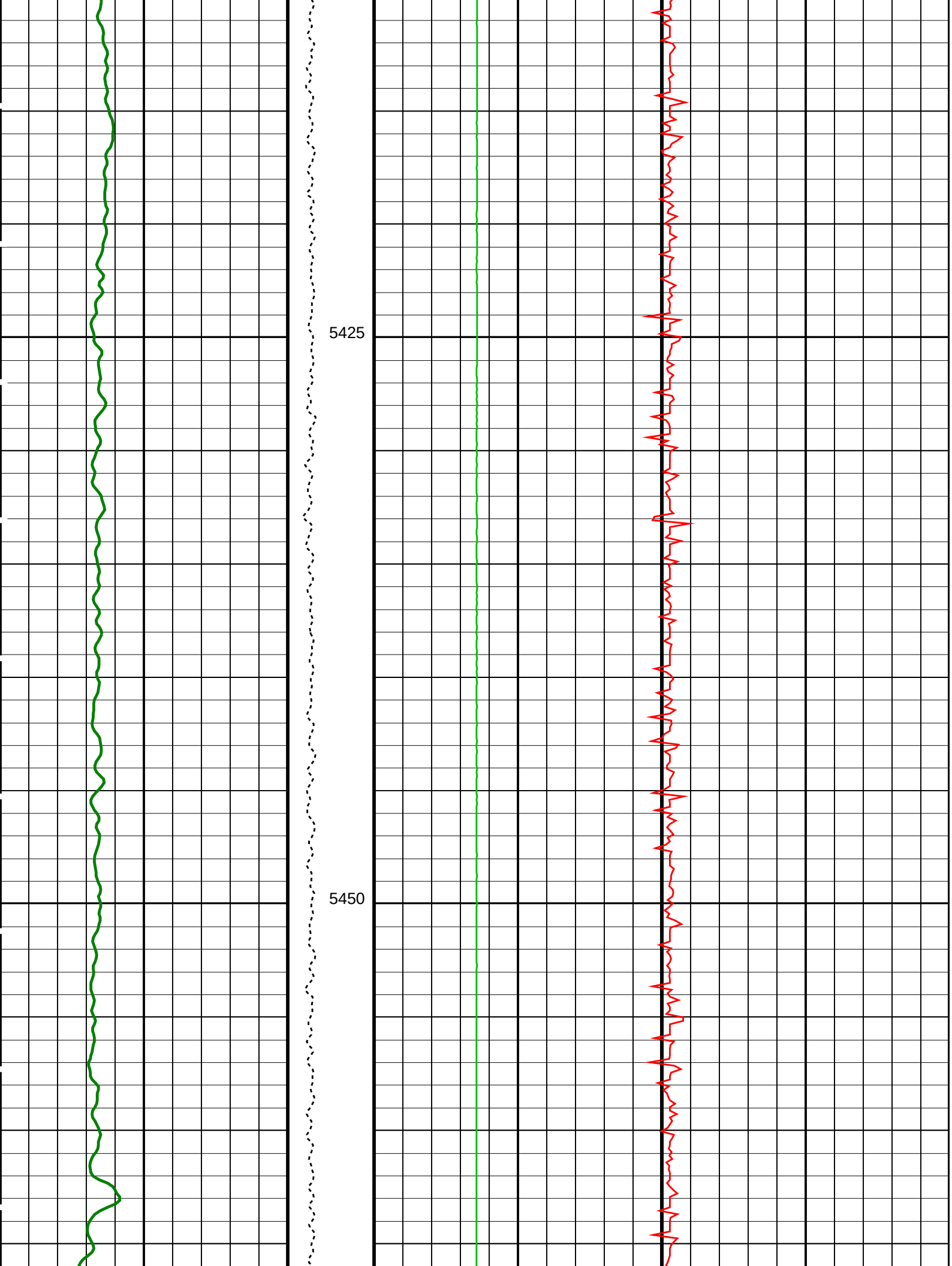
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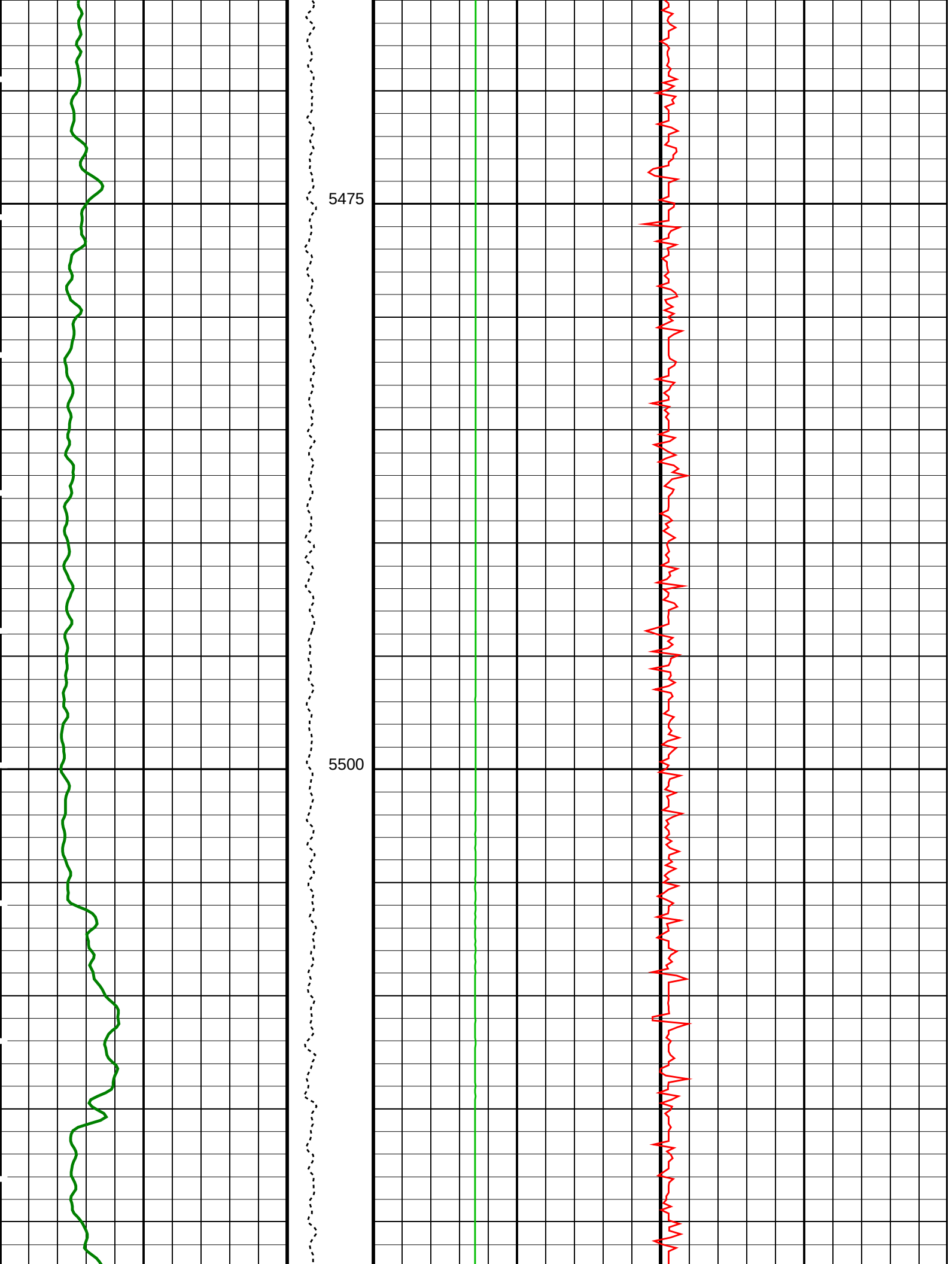
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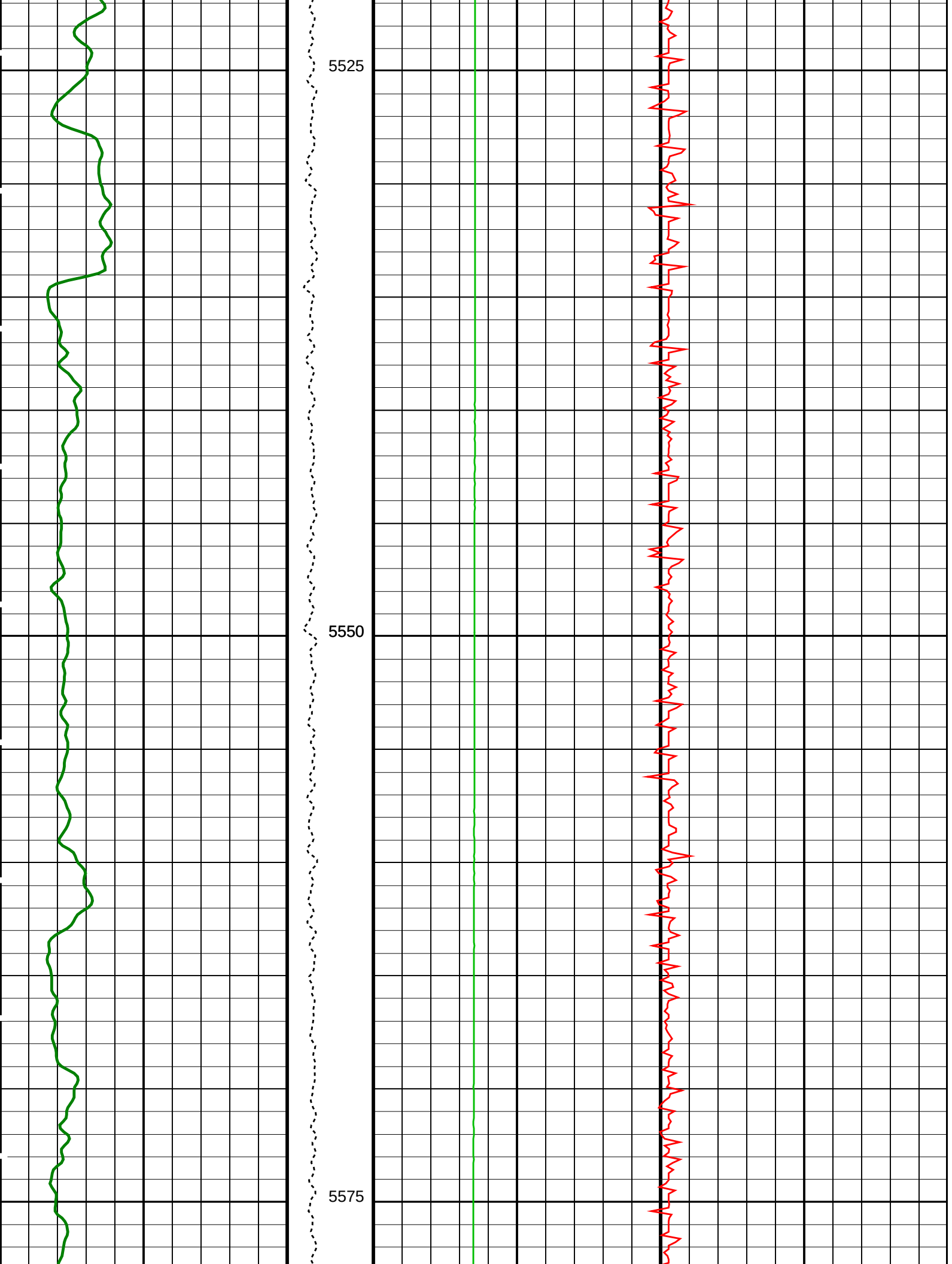
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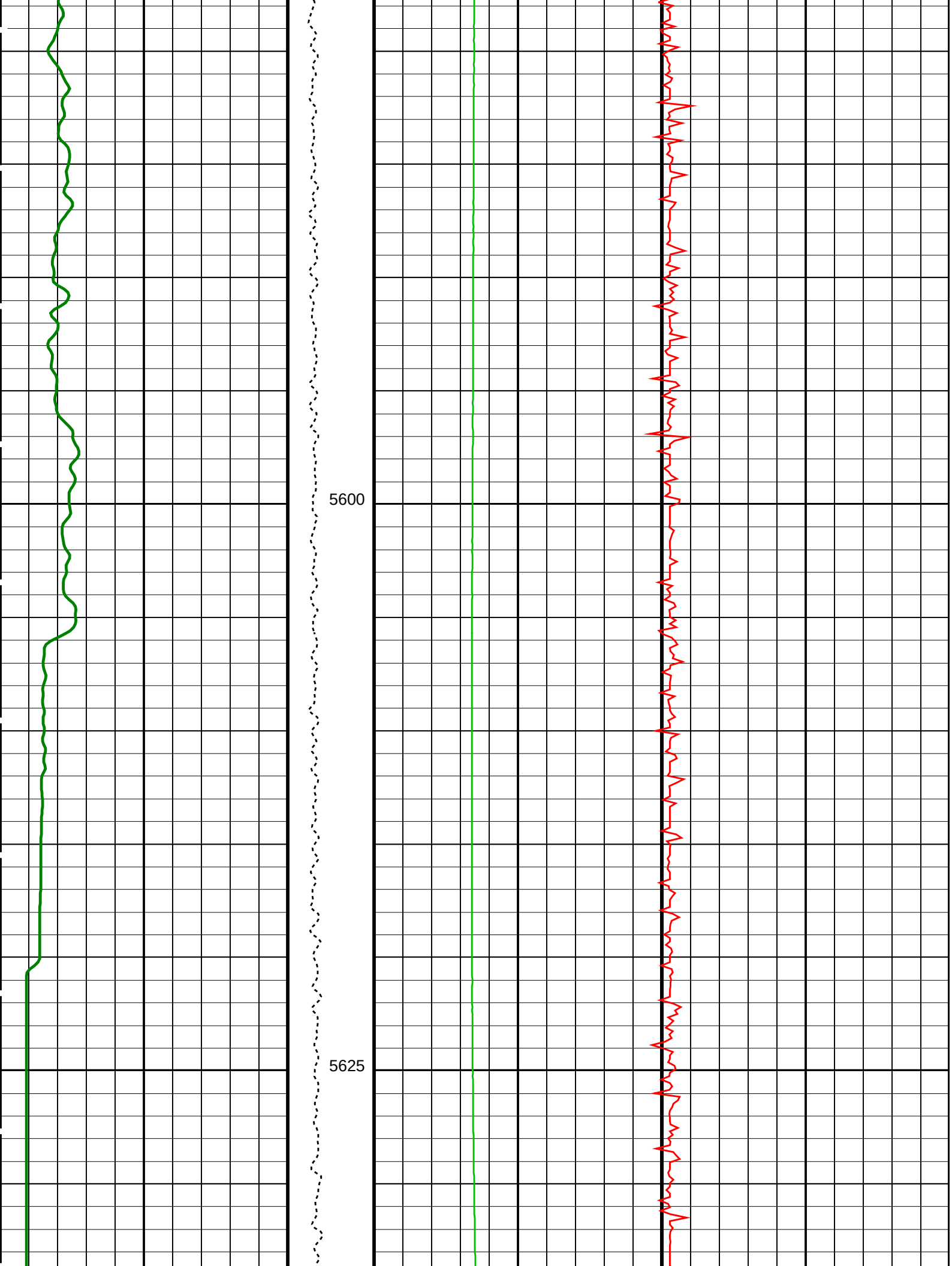
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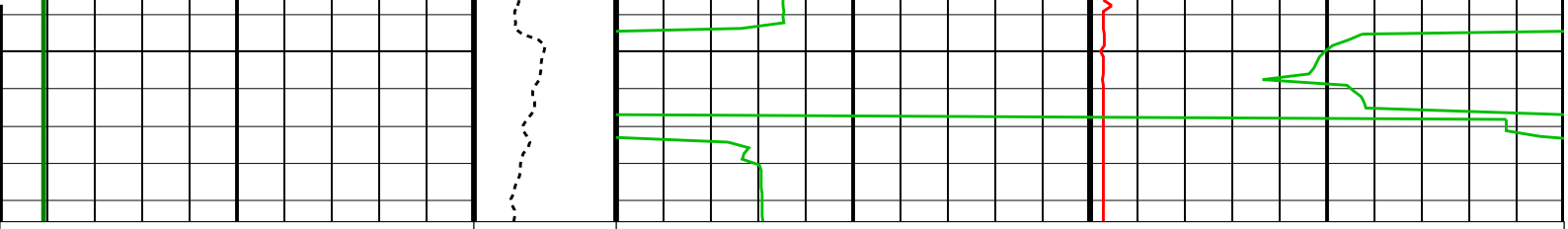

HNGS Spectroscopy Gamma Ray (HSGR)	Tension (TENS) (LBF)	Axial Acceleration (MSSZACC_LDEO)
0 (GAPI) 150	0 5000	0 (M/S2) 20
		Dual−Coil Susceptibility (MSSLSUS_LDEO)
		−10000 (PPM) 90000

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	HRLT−B: High Resolution Laterolog Array − B		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
	HNGS−BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	−0.00196491	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.01459	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.01089	
	EDTC−B: Enhanced DTS Cartridge		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.03	G/C3
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	RECOMPUTE	

Format: MSS_Logging **Vertical Scale: 1:200** **Graphics File Created: 05−May−2022 04:59**

OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_021LUP	FN:22	PRODUCER	05−May−2022 02:29	5639.6 M	4998.3 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_025PUP	FN:29	PRODUCER	05−May−2022 04:59
RTB	MSS_LDEO_HRLA_LDL_025PUP	FN:30	PRODUCER	05−May−2022 04:59

Schlumberger

Callibrations

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
High Resolution Laterolog Array − B Wellsite Calibration − HRLT M01							
Before: 4−May−2022 20:43 After: 5−May−2022 7:16							
HRLT M0−M1 Voltage Plus − 0	0	N/A	−318.3	−318.9	−0.6427	9.681	UV
HRLT M0−M1 Voltage Plus − 1	0	N/A	−330.7	−331.8	−1.141	9.681	UV
HRLT M0−M1 Voltage Plus − 2	0	N/A	−338.5	−338.7	−0.2328	9.681	UV
HRLT M0−M1 Voltage Plus − 3	0	N/A	−328.8	−329.4	−0.6151	9.681	UV
HRLT M0−M1 Voltage Plus − 4	0	N/A	−319.7	−320.1	−0.3489	9.681	UV
HRLT M0−M1 Voltage Plus − 5	0	N/A	−321.6	−321.9	−0.2676	9.681	UV
HRLT M0−M1 Voltage Plus − 6	0	N/A	319.9	320.7	0.7791	9.681	UV
HRLT M0−M1 Voltage Plus − 7	0	N/A	−322.7	−322.7	0	9.681	UV
High Resolution Laterolog Array − B Wellsite Calibration − HRLT M12							
Before: 4−May−2022 20:43 After: 5−May−2022 7:16							
HRLT M1−M2 Voltage Plus − 0	0	N/A	1738	1742	3.486	53.42	UV
HRLT M1−M2 Voltage Plus − 1	0	N/A	1813	1819	6.052	53.42	UV
HRLT M1−M2 Voltage Plus − 2	0	N/A	1849	1850	1.016	53.42	UV
HRLT M1−M2 Voltage Plus − 3	0	N/A	1794	1798	3.714	53.42	UV
HRLT M1−M2 Voltage Plus − 4	0	N/A	1743	1745	2.012	53.42	UV
HRLT M1−M2 Voltage Plus − 5	0	N/A	1754	1756	1.310	53.42	UV
HRLT M1−M2 Voltage Plus − 6	0	N/A	−1762	−1767	−4.470	53.42	UV
HRLT M1−M2 Voltage Plus − 7	0	N/A	1781	1781	0	53.42	UV
High Resolution Laterolog Array − B Wellsite Calibration − HRLT M23							
Before: 4−May−2022 20:43 After: 5−May−2022 7:16							
HRLT M2−M3 Voltage Plus − 0	0	N/A	1730	1733	3.165	53.42	UV
HRLT M2−M3 Voltage Plus − 1	0	N/A	1815	1822	6.412	53.42	UV
HRLT M2−M3 Voltage Plus − 2	0	N/A	1853	1854	1.091	53.42	UV
HRLT M2−M3 Voltage Plus − 3	0	N/A	1801	1805	4.051	53.42	UV
HRLT M2−M3 Voltage Plus − 4	0	N/A	1745	1747	1.630	53.42	UV
HRLT M2−M3 Voltage Plus − 5	0	N/A	1757	1758	1.234	53.42	UV
HRLT M2−M3 Voltage Plus − 6	0	N/A	−1753	−1757	−4.192	53.42	UV
HRLT M2−M3 Voltage Plus − 7	0	N/A	1781	1781	0	53.42	UV
High Resolution Laterolog Array − B Wellsite Calibration − HRLT V34							
Before: 4−May−2022 20:43 After: 5−May−2022 7:16							
HRLT A3−A4 Voltage Plus − 0	0	N/A	68590	68720	129.2	2100	UV
HRLT A3−A4 Voltage Plus − 1	0	N/A	71800	72010	216.7	2100	UV
HRLT A3−A4 Voltage Plus − 2	0	N/A	73570	73600	25.47	2100	UV
HRLT A3−A4 Voltage Plus − 3	0	N/A	71790	71950	158.6	2100	UV
HRLT A3−A4 Voltage Plus − 4	0	N/A	69500	69580	80.22	2100	UV
HRLT A3−A4 Voltage Plus − 5	0	N/A	70000	70040	48.55	2100	UV
HRLT A3−A4 Voltage Plus − 6	0	N/A	−68340	−68510	−175.1	2100	UV
HRLT A3−A4 Voltage Plus − 7	0	N/A	70000	70000	0	2100	UV
High Resolution Laterolog Array − B Wellsite Calibration − HRLT V45							
Before: 4−May−2022 20:43 After: 5−May−2022 7:16							
HRLT A4−A5 Voltage Plus − 0	0	N/A	68660	68790	133.6	2100	UV
HRLT A4−A5 Voltage Plus − 1	0	N/A	72000	72220	214.9	2100	UV
HRLT A4−A5 Voltage Plus − 2	0	N/A	73750	73780	27.11	2100	UV
HRLT A4−A5 Voltage Plus − 3	0	N/A	71950	72080	123.7	2100	UV
HRLT A4−A5 Voltage Plus − 4	0	N/A	69600	69680	79.55	2100	UV
HRLT A4−A5 Voltage Plus − 5	0	N/A	70090	70140	51.13	2100	UV
HRLT A4−A5 Voltage Plus − 6	0	N/A	−68550	−68720	−170.8	2100	UV
HRLT A4−A5 Voltage Plus − 7	0	N/A	70000	70000	0	2100	UV
High Resolution Laterolog Array − B Wellsite Calibration − HRLT V56							
Before: 4−May−2022 20:43 After: 5−May−2022 7:16							

HRLT A5−A6 Voltage Plus − 0	0	N/A	68510	68650	139.9	2100	UV
HRLT A5−A6 Voltage Plus − 1	0	N/A	71840	72070	235.9	2100	UV
HRLT A5−A6 Voltage Plus − 2	0	N/A	73590	73650	61.62	2100	UV
HRLT A5−A6 Voltage Plus − 3	0	N/A	71800	71950	153.3	2100	UV
HRLT A5−A6 Voltage Plus − 4	0	N/A	69490	69550	58.82	2100	UV
HRLT A5−A6 Voltage Plus − 5	0	N/A	69950	70000	47.25	2100	UV
HRLT A5−A6 Voltage Plus − 6	0	N/A	−68390	−68560	−166.4	2100	UV
HRLT A5−A6 Voltage Plus − 7	0	N/A	70000	70000	0	2100	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT VTP
Before: 4−May−2022 20:43 After: 5−May−2022 7:16

HRLT Torpedo−M0 Voltage − 0	0	N/A	−68040	−68150	−109.6	2100	UV
HRLT Torpedo−M0 Voltage − 1	0	N/A	−71630	−71850	−213.0	2100	UV
HRLT Torpedo−M0 Voltage − 2	0	N/A	−73430	−73460	−32.84	2100	UV
HRLT Torpedo−M0 Voltage − 3	0	N/A	−71710	−71830	−115.0	2100	UV
HRLT Torpedo−M0 Voltage − 4	0	N/A	−69420	−69470	−51.06	2100	UV
HRLT Torpedo−M0 Voltage − 5	0	N/A	−69910	−69920	−16.70	2100	UV
HRLT Torpedo−M0 Voltage − 6	0	N/A	68150	68290	145.1	2100	UV
HRLT Torpedo−M0 Voltage − 7	0	N/A	−70000	−70000	0	2100	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT VBD
Before: 4−May−2022 20:43 After: 5−May−2022 7:16

HRLT Bridle#9−M0 Voltage − 0	0	N/A	−68070	−68210	−141.4	2100	UV
HRLT Bridle#9−M0 Voltage − 1	0	N/A	−71720	−71960	−235.6	2100	UV
HRLT Bridle#9−M0 Voltage − 2	0	N/A	−73500	−73570	−68.04	2100	UV
HRLT Bridle#9−M0 Voltage − 3	0	N/A	−71780	−71930	−149.0	2100	UV
HRLT Bridle#9−M0 Voltage − 4	0	N/A	−69470	−69540	−71.49	2100	UV
HRLT Bridle#9−M0 Voltage − 5	0	N/A	−69950	−69990	−46.37	2100	UV
HRLT Bridle#9−M0 Voltage − 6	0	N/A	68240	68410	171.5	2100	UV
HRLT Bridle#9−M0 Voltage − 7	0	N/A	−70000	−70000	0	2100	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT ISO
Before: 4−May−2022 20:43 After: 5−May−2022 7:16

HRLT Source Current Plus − 0	0	N/A	284.0	284.6	0.5433	8.520	UA
HRLT Source Current Plus − 1	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus − 2	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus − 3	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus − 4	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus − 5	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus − 6	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus − 7	0	N/A	281.1	281.1	0	8.520	UA

High Resolution Laterolog Array − B Wellsite Calibration − HRLT MV
Before: 4−May−2022 20:43 After: 5−May−2022 7:16

HRLT Vertical Voltage Pl − 0	0	N/A	−320.0	−320.6	−0.6097	9.681	UV
HRLT Vertical Voltage Pl − 1	0	N/A	−325.4	−326.5	−1.106	9.681	UV
HRLT Vertical Voltage Pl − 2	0	N/A	−331.9	−332.0	−0.1097	9.681	UV
HRLT Vertical Voltage Pl − 3	0	N/A	−320.6	−321.2	−0.6102	9.681	UV
HRLT Vertical Voltage Pl − 4	0	N/A	−308.8	−309.0	−0.2475	9.681	UV
HRLT Vertical Voltage Pl − 5	0	N/A	−325.5	−325.7	−0.2248	9.681	UV
HRLT Vertical Voltage Pl − 6	0	N/A	327.4	328.3	0.9046	9.681	UV
HRLT Vertical Voltage Pl − 7	0	N/A	−322.7	−322.7	0	9.681	UV

Hostile Litho−Density Sonde Wellsite Calibration − Background Measurement
Master: 7−Apr−2022 22:41 Before: 4−May−2022 20:08 After: 5−May−2022 7:19

SS Cs Resolution Bkg	9.000	8.010	8.101	7.873	−0.2276	1.800	%
LS Cs Resolution Bkg	9.000	7.678	7.685	7.756	0.07034	1.800	%
LSW1 Background	100.0	58.91	58.97	57.72	−1.254	3.000	CPS
LSW2 Background	100.0	53.03	54.29	54.01	−0.2803	3.000	CPS
LSW3 Background	200.0	117.9	119.6	118.6	−1.039	6.000	CPS
LSW4 Background	250.0	142.0	143.4	144.9	1.495	7.500	CPS
LSW5 Background	600.0	328.3	325.1	329.2	4.148	18.00	CPS
SSW1 Background	100.0	66.11	65.28	65.38	0.09779	3.000	CPS
SSW2 Background	200.0	116.3	114.9	116.1	1.213	6.000	CPS
SSW3 Background	500.0	311.2	309.4	313.7	4.296	15.00	CPS
SSW4 Background	270.0	163.1	163.2	161.3	−1.873	8.100	CPS
SSW5 Background	200.0	118.9	118.6	118.5	−0.08235	6.000	CPS

Hostile Litho−Density Sonde Wellsite Calibration − Aluminum Measurement
Master: 8−Apr−2022 0:54

LSW1 Aluminum	600.0	425.7	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	625.0	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	755.3	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	380.7	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	351.8	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2010	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	5500	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	7680	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	3178	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	386.3	N/A	N/A	N/A	N/A	CPS

Hostile Litho−Density Sonde Wellsite Calibration − Lithology Measurement

Hostile Litho−Density Sonde Wellsite Calibration − Lithology Measurement
Master: 8−Apr−2022 0:49

LSW1 Iron	400.0	296.1	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	510.2	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	668.0	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	344.0	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	322.1	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1478	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	4607	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	7034	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	2907	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	346.5	N/A	N/A	N/A	N/A	CPS

Hostile Litho−Density Sonde Wellsite Calibration − Caliper Calibration
Before: 8−Apr−2022 1:48

HLDS Caliper Small Ring	12.00	N/A	14.85	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	15.19	N/A	18.31	N/A	N/A	N/A	IN

Hostile Natural Gamma Ray Sonde Wellsite Calibration − Detector 1 Check
Master: Calibration out of date 2−May−2021 11:41 Before: 4−May−2022 21:16 After: 5−May−2022 7:20

Na 511 Peak Loc	40.00	38.51	39.50	39.73	0.2305	1.000	
Na 511 Peak Res	15.50	16.08	17.62	15.66	−1.958	2.000	%
High Voltage	1150	1210	1201	1204	2.887	N/A	V
Na 1785 Peak Loc	142.6	140.8	142.1	143.8	1.677	7.000	
Na 1785 Peak Res	8.500	9.038	9.852	10.96	1.109	2.000	%
Temperature	15.50	27.21	25.30	23.60	−1.697	N/A	DEGC
Na Count Rate	45.00	10.57	7.728	7.547	−0.1816	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration − Detector 2 Check
Master: Calibration out of date 2−May−2021 11:41 Before: 4−May−2022 21:16 After: 5−May−2022 7:20

Na 511 Peak Loc	40.00	39.36	40.54	40.51	−0.03148	1.000	
Na 511 Peak Res	15.50	16.98	16.01	16.19	0.1873	2.000	%
High Voltage	1150	1089	1085	1086	1.412	N/A	V
Na 1785 Peak Loc	142.6	142.8	144.7	143.8	−0.8383	7.000	
Na 1785 Peak Res	8.500	9.374	8.734	11.55	2.812	2.000	%
Temperature	15.50	26.50	24.48	23.98	−0.4942	N/A	DEGC
Na Count Rate	45.00	10.57	7.625	7.501	−0.1244	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration − Ratio Of Detector 1 To Detector 2
Master: Calibration out of date 2−May−2021 11:41 Before: 4−May−2022 21:16 After: 5−May−2022 7:20

Coincidence Count Rate Ratio	1.000	0.9991	1.012	1.005	−0.007119	0.05000	

Enhanced DTS Cartridge Wellsite Calibration − EDTC Accelerometer Calibration
Before: 4−May−2022 20:04

EDTC Z−Axis Acceleration	9.810	N/A	9.850	N/A	N/A	N/A	M/S2

Enhanced DTS Cartridge Wellsite Calibration − Detector Calibration
Before: 4−May−2022 20:05 After: 5−May−2022 7:16

Gamma Ray (Jig − Bkg)	113.5	N/A	113.5	110.6	−2.907	10.31	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	160.8	−4.228	15.00	GAPI

High Resolution Laterolog Array − B / Equipment Identification

Primary Equipment:		
HRLT Sonde	HRLS − B	768
Auxiliary Equipment:		
HRLT lower Housing	HRLH − B	1869
HRLT Lower Cartridge	HRLC − B	1897
HRLT upper Housing	HRUH − B	975
HRLT Upper Cartridge	HRUC − B	964

High Resolution Laterolog Array − B Wellsite Calibration
HRLT M01

Idx	Phase	HRLT M0−M1 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−318.3	−322.7	−280.7	−379.7
	After		−318.9			
1	Before		−330.7	−322.7	−280.7	−379.7
	After		−331.8			
2	Before		−338.5	−322.7	−280.7	−379.7
	After		−338.7			

3	Before	−328.8	−322.7	−280.7	−379.7
	After	−329.4			
4	Before	−319.7	−322.7	−280.7	−379.7
	After	−320.1			
5	Before	−321.6	−322.7	−280.7	−379.7
	After	−321.9			
6	Before	319.9	322.7	379.7	280.7
	After	320.7			
7	Before	−322.7	−322.7	−280.7	−379.7
	After	−322.7			
	(Minimum) (Nominal) (Maximum)				

Before: 4−May−2022 20:43

After: 5−May−2022 7:16

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M12

Idx	Phase	HRLT M1−M2 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1738	1781	2095	1549
	After		1742			
1	Before		1813	1781	2095	1549
	After		1819			
2	Before		1849	1781	2095	1549
	After		1850			
3	Before		1794	1781	2095	1549
	After		**1798**			
4	Before		1743	1781	2095	1549
	After		1745			
5	Before		1754	1781	2095	1549
	After		1756			
6	Before		−1762	−1781	−1549	−2095
	After		−1767			
7	Before		1781	1781	2095	1549
	After		1781			
	(Minimum) (Nominal) (Maximum)					

Before: 4−May−2022 20:43

After: 5−May−2022 7:16

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M23

Idx	Phase	HRLT M2−M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1730	1781	2095	1549
	After		1733			
1	Before		1815	1781	2095	1549
	After		1822			
2	Before		1853	1781	2095	1549
	After		1854			
3	Before		1801	1781	2095	1549
	After		1805			

4	Before	1745	1781	2095	1549
	After	1747			
5	Before	1757	1781	2095	1549
	After	1758			
6	Before	−1753	−1781	−1549	−2095
	After	−1757			
7	Before	1781	1781	2095	1549
	After	1781			
	(Minimum) (Nominal) (Maximum)				

Before: 4−May−2022 20:43
After: 5−May−2022 7:16

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V34

Idx	Phase	HRLT A3−A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68590	70000	82360	60900
	After		68720			
1	Before		71800	70000	82360	60900
	After		72010			
2	Before		73570	70000	82360	60900
	After		73600			
3	Before		71790	70000	82360	60900
	After		71950			
4	Before		69500	70000	82360	60900
	After		**69580**			
5	Before		70000	70000	82360	60900
	After		70040			
6	Before		−68340	−70000	−60900	−82360
	After		−68510			
7	Before		70000	70000	82360	60900
	After		70000			
	(Minimum) (Nominal) (Maximum)					

Before: 4−May−2022 20:43
After: 5−May−2022 7:16

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V45

Idx	Phase	HRLT A4−A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68660	70000	82360	60900
	After		68790			
1	Before		72000	70000	82360	60900
	After		72220			
2	Before		73750	70000	82360	60900
	After		73780			
3	Before		71950	70000	82360	60900
	After		72080			
4	Before		69600	70000	82360	60900
	After		69680			

5	Before	70090	70000	82360	60900
	After	70140			
6	Before	−68550	−70000	−60900	−82360
	After	−68720			
7	Before	70000	70000	82360	60900
	After	70000			
	(Minimum) (Nominal) (Maximum)				

Before: 4−May−2022 20:43
After: 5−May−2022 7:16

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V56

Idx	Phase	HRLT A5−A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68510	70000	82360	60900
	After		68650			
1	Before		71840	70000	82360	60900
	After		72070			
2	Before		73590	70000	82360	60900
	After		73650			
3	Before		71800	70000	82360	60900
	After		71950			
4	Before		69490	70000	82360	60900
	After		69550			
5	Before		69950	70000	82360	60900
	After		**70000**			
6	Before		−68390	−70000	−60900	−82360
	After		−68560			
7	Before		70000	70000	82360	60900
	After		70000			
	(Minimum) (Nominal) (Maximum)					

Before: 4−May−2022 20:43
After: 5−May−2022 7:16

High Resolution Laterolog Array − B Wellsite Calibration

HRLT VTP

Idx	Phase	HRLT Torpedo−M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−68040	−70000	−60900	−82360
	After		−68150			
1	Before		−71630	−70000	−60900	−82360
	After		−71850			
2	Before		−73430	−70000	−60900	−82360
	After		−73460			
3	Before		−71710	−70000	−60900	−82360
	After		−71830			
4	Before		−69420	−70000	−60900	−82360
	After		−69470			
5	Before		−69910	−70000	−60900	−82360
	After		−69920			

6	Before		68150	70000	82360	60900
	After		68290			
7	Before		−70000	−70000	−60900	−82360
	After		−70000			
	(Minimum)	(Nominal)	(Maximum)			

Before: 4−May−2022 20:43
After: 5−May−2022 7:16

High Resolution Laterolog Array − B Wellsite Calibration

HRLT VBD

Idx	Phase	HRLT Bridle#9−M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−68070	−70000	−60900	−82360
	After		−68210			
1	Before		−71720	−70000	−60900	−82360
	After		−71960			
2	Before		−73500	−70000	−60900	−82360
	After		−73570			
3	Before		−71780	−70000	−60900	−82360
	After		−71930			
4	Before		−69470	−70000	−60900	−82360
	After		−69540			
5	Before		−69950	−70000	−60900	−82360
	After		−69990			
6	Before		68240	70000	82360	60900
	After		68410			
7	Before		−70000	−70000	−60900	−82360
	After		−70000			
	(Minimum)	(Nominal)	(Maximum)			

Before: 4−May−2022 20:43
After: 5−May−2022 7:16

High Resolution Laterolog Array − B Wellsite Calibration

HRLT ISO

Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum
0	Before		284.0	284.0	334.1	247.0
	After		284.6			
1	Before		281.1	281.1	330.7	244.4
	After		281.1			
2	Before		281.1	281.1	330.7	244.4
	After		281.1			
3	Before		281.1	281.1	330.7	244.4
	After		281.1			
4	Before		281.1	281.1	330.7	244.4
	After		281.1			
5	Before		281.1	281.1	330.7	244.4
	After		281.1			
6	Before		281.1	281.1	330.7	244.4
	After		281.1			

Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
7	Before		281.1	281.1	330.7	244.4
	After		281.1			
		(Minimum) (Nominal) (Maximum)				

Before: 4−May−2022 20:43
After: 5−May−2022 7:16

High Resolution Laterolog Array − B Wellsite Calibration

HRLT MV

Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−320.0	−322.7	−280.7	−379.7
	After		−320.6			
1	Before		−325.4	−322.7	−280.7	−379.7
	After		−326.5			
2	Before		−331.9	−322.7	−280.7	−379.7
	After		−332.0			
3	Before		−320.6	−322.7	−280.7	−379.7
	After		−321.2			
4	Before		−308.8	−322.7	−280.7	−379.7
	After		−309.0			
5	Before		−325.5	−322.7	−280.7	−379.7
	After		−325.7			
6	Before		327.4	322.7	379.7	280.7
	After		328.3			
7	Before		−322.7	−322.7	−280.7	−379.7
	After		−322.7			
		(Minimum) (Nominal) (Maximum)				

Before: 4−May−2022 20:43
After: 5−May−2022 7:16

Hostile Litho−Density Sonde / Equipment Identification

Primary Equipment:

Gamma Source Radioactive	GSR − ZA	2945
Hostile Litho Density Sonde	HLDS − D	35
Hostile Litho Density High Voltage	HLDV − D	35

Auxiliary Equipment:

Hostile Litho Density High Voltage Housi	HEH − H	35
Hostile Litho Density Pad	HLDP − C	35

Hostile Litho−Density Sonde Wellsite Calibration

Background Measurement

Phase	SS Cs Resolution Bkg %	Value
Master		8.010
Before		8.101
After		7.873
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)	

Phase	LS Cs Resolution Bkg %	Value
Master		7.678
Before		7.685
After		7.756
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)	

Phase	LSW1 Background CPS	Value
Master		58.91
Before		58.97
After		57.72
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)	

Phase	LSW2 Background CPS	Value
Master		53.03
Before		54.29
After		54.01
	50.00 100.0 140.0	

Phase	LSW3 Background CPS	Value
Master		117.9
Before		119.6
After		118.6
	110.0 200.0 290.0	

Phase	LSW4 Background CPS	Value
Master		142.0
Before		143.4
After		144.9
	140.0 250.0 360.0	

Phase	LSW5 Background CPS	Value
Master	EXCEEDS LIMIT	328.3
Before	EXCEEDS LIMIT	325.1
After	EXCEEDS LIMIT	329.2
	330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)	

Phase	SSW1 Background CPS	Value
Master		66.11
Before		65.28
After		65.38
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)	

Phase	SSW2 Background CPS	Value
Master		116.3
Before		114.9
After		116.1
	100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)	

Phase	SSW3 Background CPS	Value
Master		311.2
Before		309.4
After		313.7
	280.0 (Minimum) 500.0 (Nominal) 700.0 (Maximum)	

Phase	SSW4 Background CPS	Value
Master		163.1
Before		163.2
After		161.3
	150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum)	

Phase	SSW5 Background CPS	Value
Master		118.9
Before		118.6
After		118.5
	110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum)	

Master: 7−Apr−2022 22:41 Before: 4−May−2022 20:08 After: 5−May−2022 7:19

Litho−Density Spectroscopy Cartridge − B / Equipment Identification

Primary Equipment:		
LDSC Cartridge	LDSC − B	326
Auxiliary Equipment:		
LDSC Housing	LDSH − A	303

Hostile Natural Gamma Ray Cartridge − B / Equipment Identification

Primary Equipment:		
HNGC Cartridge	HNGC − B	300
Auxiliary Equipment:		
HNGC Housing	HNGH − A	115

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:		
HNGS Sonde	HNGS − BA	177
Auxiliary Equipment:		
HNGS Sonde Housing	HNSH − BA	174
Gamma Source Radioactive	GSR − U	6098

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 1 Check

Phase	Na 511 Peak Loc	Value
Master		38.51
Before		39.50
After		39.73
	37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)	

Phase	Na 511 Peak Res %	Value
Master		16.08
Before		17.62
After		15.66
	12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)	

Phase	High Voltage V	Value
Master		1210
Before		1201
After		1204
	900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	

Phase	Na 1785 Peak Loc	Value
Master		140.8
Before		142.1
After		143.8
	135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)	

Phase	Na 1785 Peak Res %	Value
Master		9.038
Before		9.852
After		10.96
	7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)	

Phase	Temperature DEGC	Value
Master		27.21
Before		25.30
After		23.60
	−28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)	

Phase	Na Count Rate CPS	Value
Master		10.57
Before	EXCEEDS LIMIT	7.728
After	EXCEEDS LIMIT	7.547

	10.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)

Master: Calibration out of date 2−May−2021 11:41 Before: 4−May−2022 21:16 After: 5−May−2022 7:20

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 2 Check

Phase	Na 511 Peak Loc	Value	Phase	Na 511 Peak Res %	Value	Phase	High Voltage V	Value
Master	MASTER−BEFORE LIMIT	39.36	Master		16.98	Master		1089
Before		40.54	Before		16.01	Before		1085
After		40.51	After		16.19	After		1086
	37.50 (Minimum) / 40.00 (Nominal) / 43.50 (Maximum)			12.00 (Minimum) / 15.50 (Nominal) / 19.00 (Maximum)			900.0 (Minimum) / 1150 (Nominal) / 1600 (Maximum)	

Phase	Na 1785 Peak Loc	Value	Phase	Na 1785 Peak Res %	Value	Phase	Temperature DEGC	Value
Master		142.8	Master		9.374	Master		26.50
Before		144.7	Before		8.734	Before		24.48
After		143.8	After	EXCEEDS LIMIT	11.55	After		23.98
	135.0 (Minimum) / 142.6 (Nominal) / 150.3 (Maximum)			7.000 (Minimum) / 8.500 (Nominal) / 11.00 (Maximum)			−28.89 (Minimum) / 15.50 (Nominal) / 60.00 (Maximum)	

Phase	Na Count Rate CPS	Value
Master		10.57
Before	EXCEEDS LIMIT	7.625
After	EXCEEDS LIMIT	7.501
	10.00 (Minimum) / 45.00 (Nominal) / 100.0 (Maximum)	

Master: Calibration out of date 2−May−2021 11:41 Before: 4−May−2022 21:16 After: 5−May−2022 7:20

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Ratio Of Detector 1 To Detector 2

Phase	Coincidence Count Rate Ratio	Value
Master		0.9991
Before		1.012
After		1.005
	0.9500 (Minimum) / 1.000 (Nominal) / 1.050 (Maximum)	

Master: Calibration out of date 2−May−2021 11:41
Before: 4−May−2022 21:16
After: 5−May−2022 7:20

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		9.850
	9.610 (Minimum) / 9.810 (Nominal) / 10.01 (Maximum)	

Before: 4−May−2022 20:04

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		1.703	Before		113.5	Before		165.0
After		9.782	After		110.6	After		160.8

0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)	103.1 (Minimum)	113.5 (Nominal)	123.8 (Maximum)	150.0 (Minimum)	165.0 (Nominal)	180.0 (Maximum)
Before: 4−May−2022 20:05			After: 5−May−2022 7:16					

Company: **International Ocean Discovery Program**

Schlumberger

Well: **Expedition 390, Site U1556B**
Field: **South Atlantic Transect 1**
Rig: **JOIDES Resolution**
Country: **South Africa**

High Resolution Laterolog (HRLA)
Litho Density (HLDS)
Natural Gamma / MSS (HNGS)