Schlumberger

Company: **International Ocean Discovery Program**

Well: **Expedition 396, Site U1572A**
Field: **Mid−Norwegian Cont. Margin Magmatism**
Rig: **JOIDES Resolution** Country: **Iceland**

Rig: JOIDES Resolution
Field: Mid−Norwegian Cont. Margin Ma
Location: Latitude: N 67.3308
Well: Expedition 396, Site U1572A
Company: International Ocean Discovery Pr

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

LOCATION

Latitude: N 67.3308
Longitude: E 3.6194

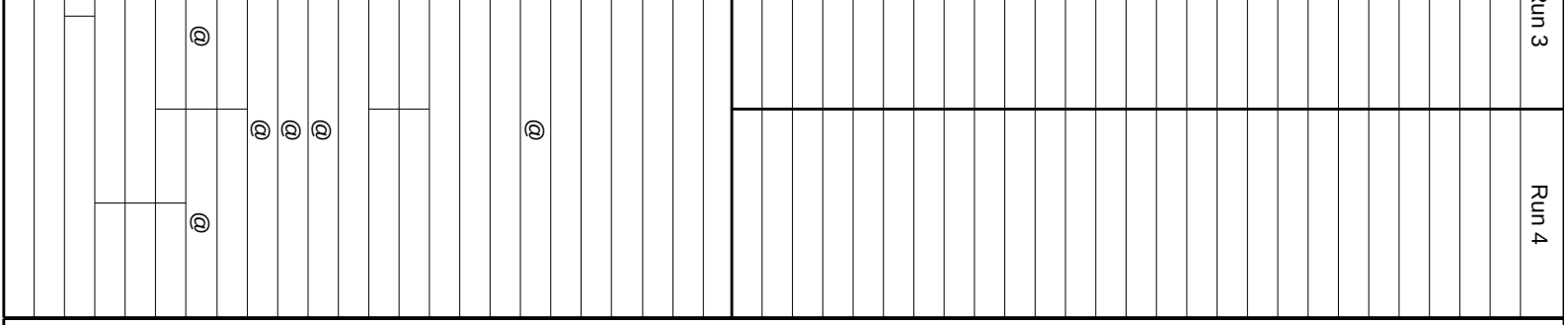
Elev.: K.B. 0.00 m
G.L. −1221.80 m
D.F. 0.00 m

Permanent Datum: Sea Floor — Elev.: −1221.80 m
Log Measured From: Rig Floor — 1221.80 m above Perm. Datum
Drilling Measured From: Rig Floor

Ocean: Atlantic	Max. Well Deviation 5 deg	Longitude E 3.6194	Latitude N 67.3308

		Run 1	Run 2	
Logging Date	14−Sep−2021			
Run Number	1			
Depth Driller	1552.8 m			
Schlumberger Depth	1474.5 m			
Bottom Log Interval	1472 m			
Top Log Interval	1216 m			
Casing Driller Size @ Depth	5.500 in @ 1302.8 m	@	@	
Casing Schlumberger	1303 m			
Bit Size	9.875 in			
Type Fluid In Hole	Barite Weighted Mud			
MUD Density / Viscosity	1.26 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	0.369 @ 5 / @ 5	@	@	@
Maximum Recorded Temperatures	5 degC			
Circulation Stopped / Time	14−Sep−2021 / 5:00			
Logger On Bottom / Time	14−Sep−2021 / 21:55			
Unit Number / Location	627314 / Larose, LA			
Recorded By	C. Furman			
Witnessed By	S. Midgley			

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



DISCLAIMER

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OTHER SERVICES1

OS1: FMS

OS2: DSI

OS3: VSI

REMARKS: RUN NUMBER 1

Hole drilled with RCB bottom hole assembly (BHA) at 9.875" BS

Drill pipe set at 1302.8mbrf (81mbrf).

Fluid type was sea water, displaced in the hole prior to logging.

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 at 1340mbrf for pipe entry

Hole obstructed at 1474.5mbrf (~80m from TD); logs conducted from that depth.

Significantly under−gauge hole (<6 in. vs. 9.875 in. bit size) observed at 1325mbrf.

Downlog flipped and note the caliper closed logging down.

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 (DTS)−A

DOWNHOLE EQUIPMENT

LEH−QT 31.80

LEH−QT 301

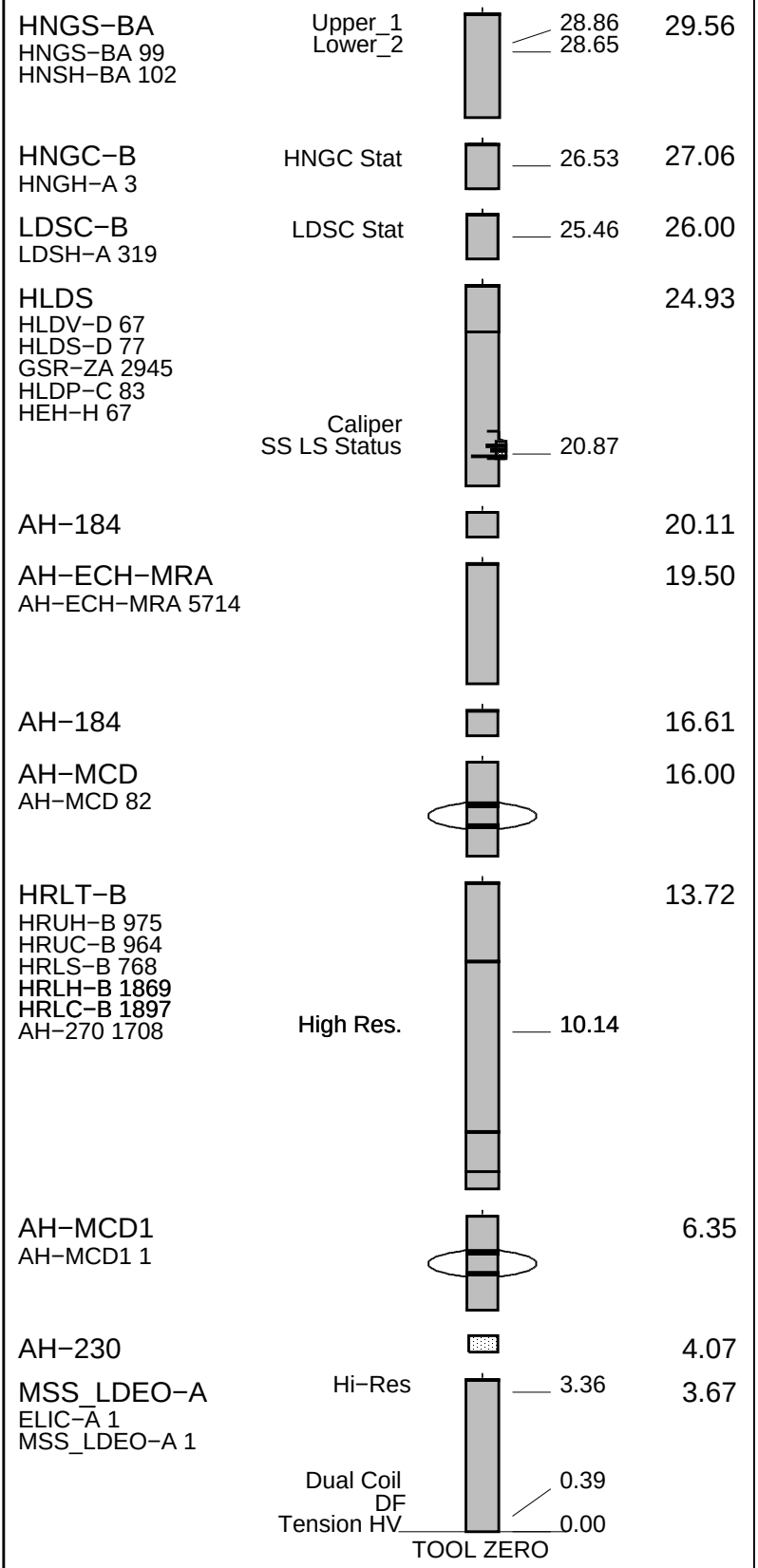
AH−369 30.91

CTEM 30.20

DTC−H TelStatus 30.48

ECH−KC 9842 ToolStatu 29.56

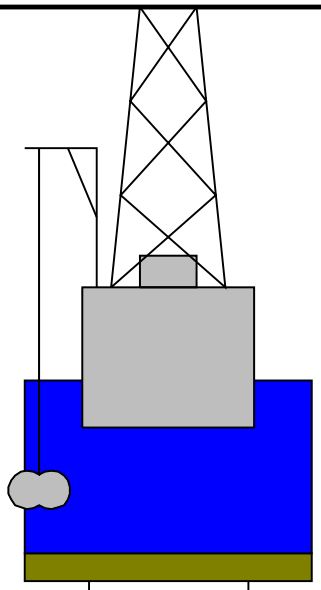
RUN 2



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			11.1
Seismic Gun depth below MSL			7.0



MD	OD	ID	
0.0	5.500	4.125	
1221.8	9.875		Sea Floor
1302.8	5.500	4.125	Pipe
1552.4	9.875		Driller's TD

Schlumberger

Downlog

MAXIS Field Log

Company: International Ocean Discovery Program **Well: Expedition 396, Site U1572A**

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_026LUP		PRODUCER	14−Sep−2021 22:06	1474.5 M	1186.4 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_027PUP	FN:19	PRODUCER	14−Sep−2021 22:06	1474.5 M	1186.4 M
RTB	MSS_LDEO_HRLA_LDL_027PUP	FN:20	PRODUCER	14−Sep−2021 22:06	1474.5 M	1186.4 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

DTC−H 19C0−187

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

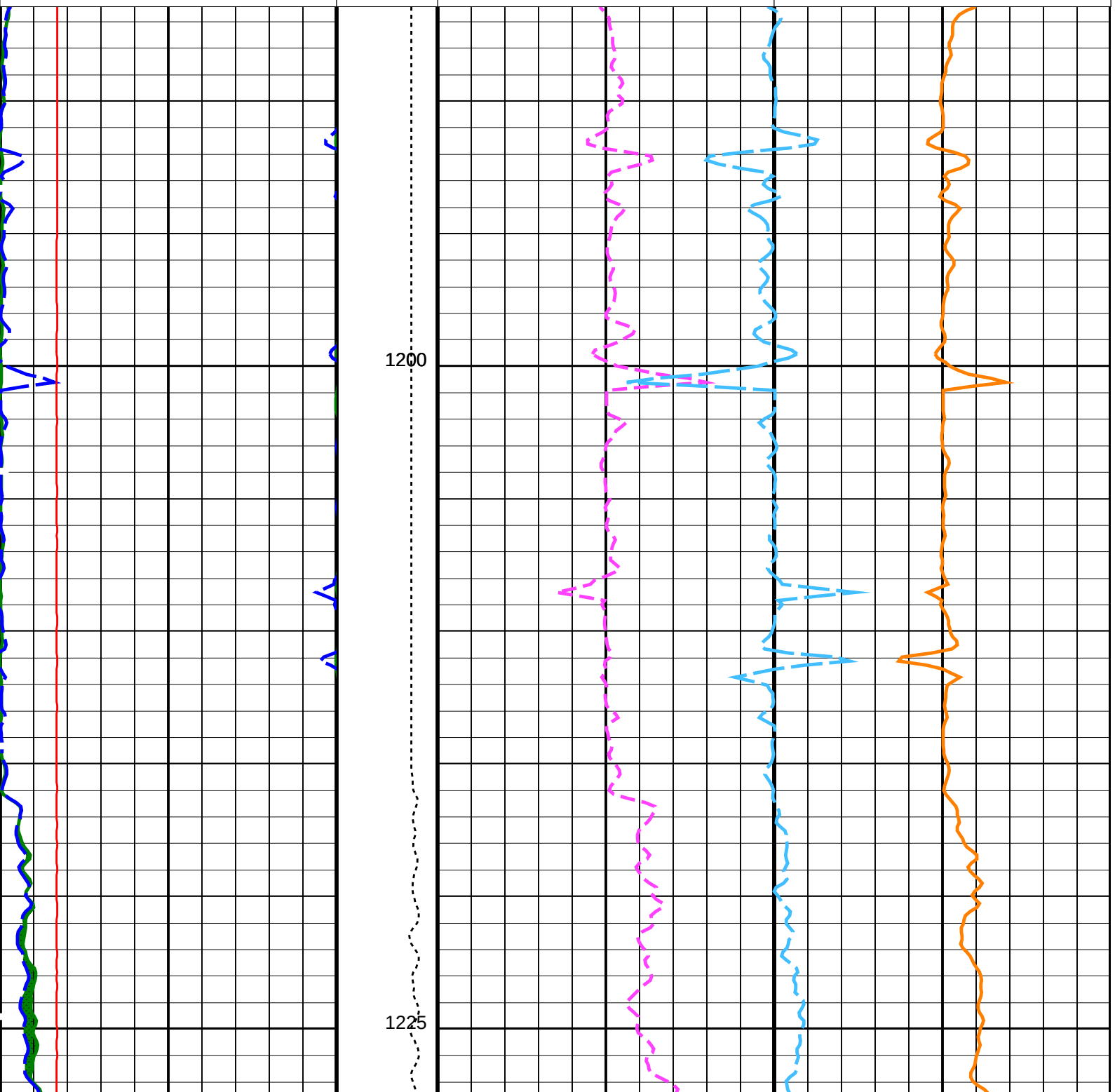
HNGS Uranium (HURA)
−5 (PPM) 5

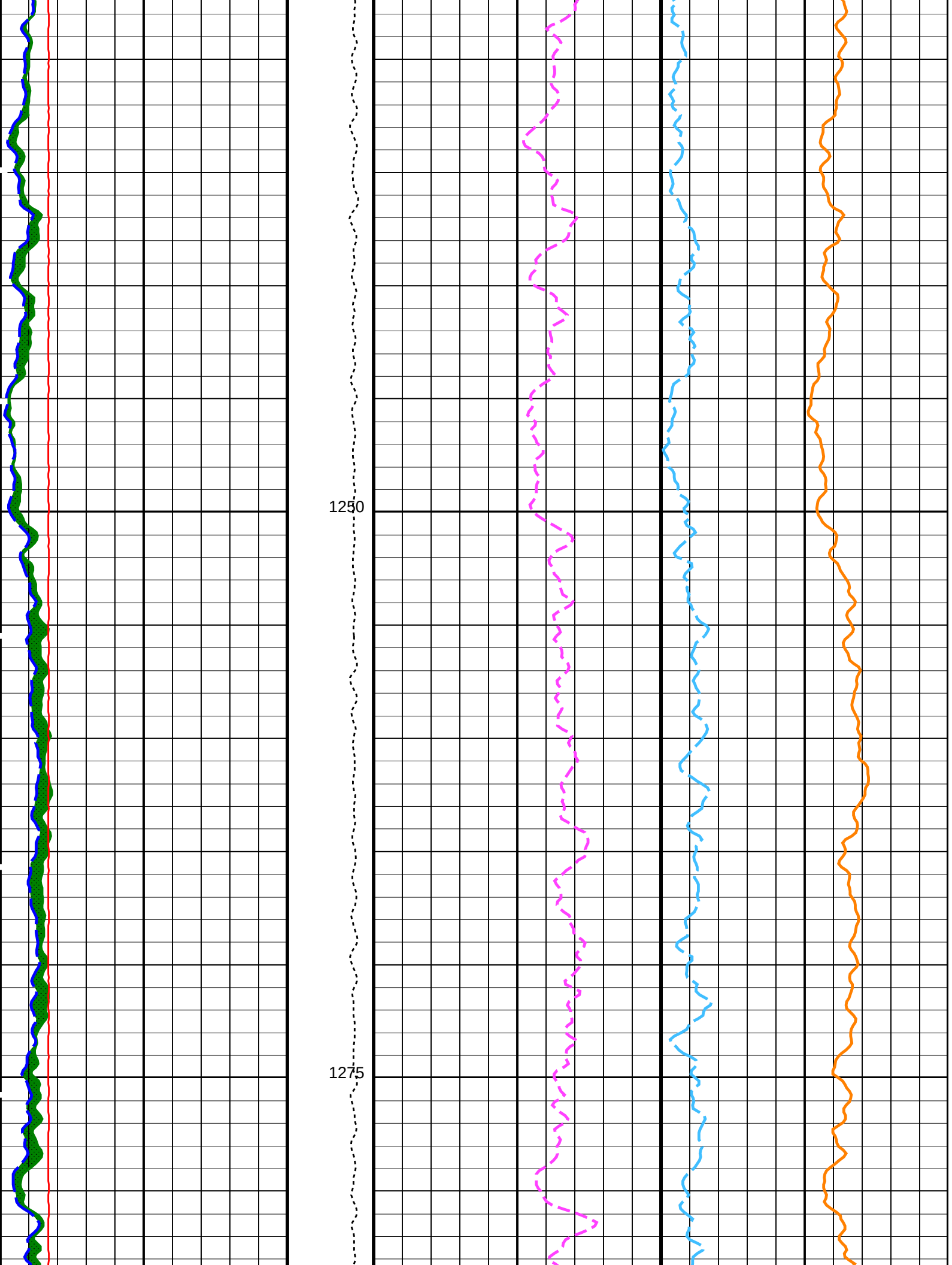
HLDS Caliper (LCAL)
0 (IN) 20

Tension (TENS) (LBF)
10000 0

HNGS Thorium (HTHO)
−5 (PPM) 5

HNGS Potassium (HFK)
−0.01 (V/V) 0.01

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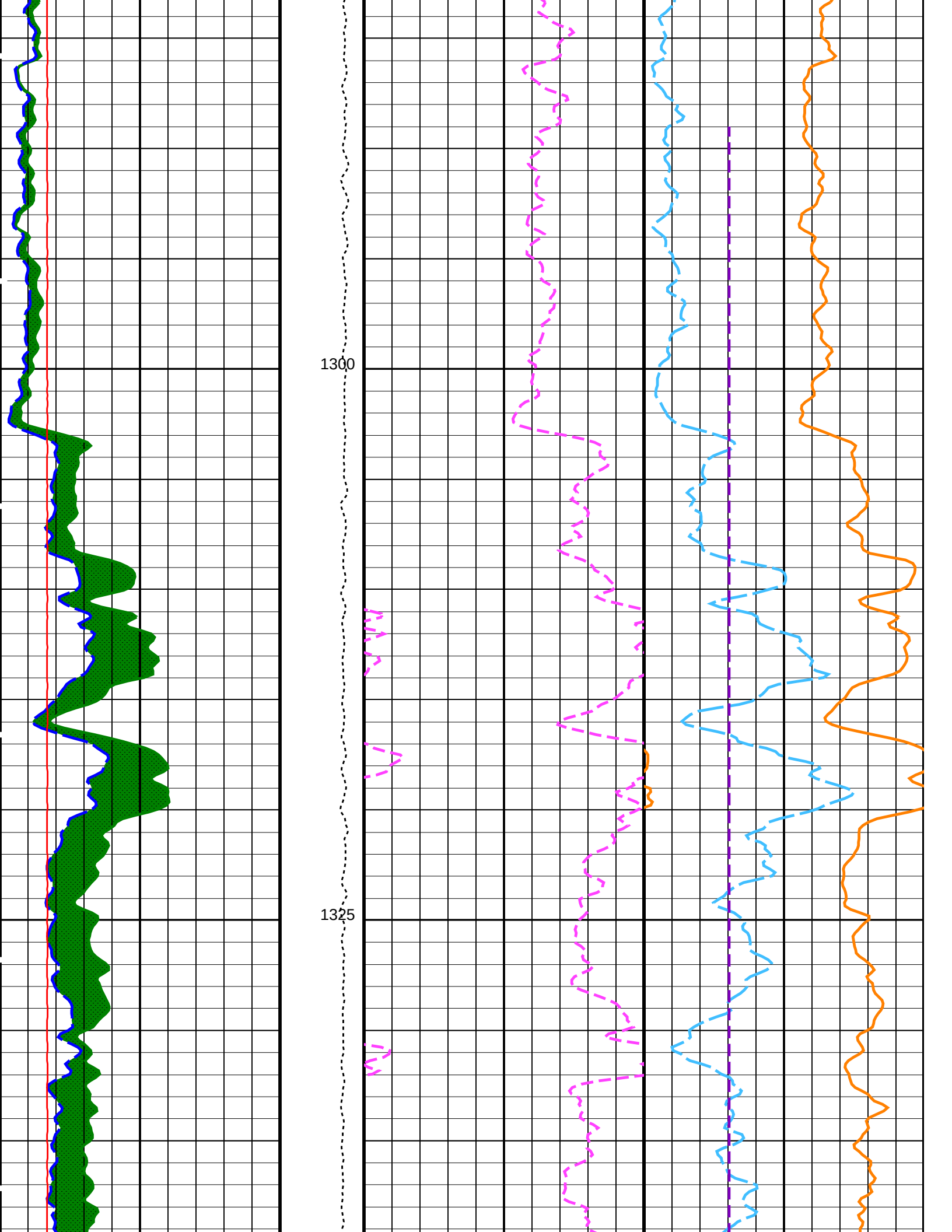
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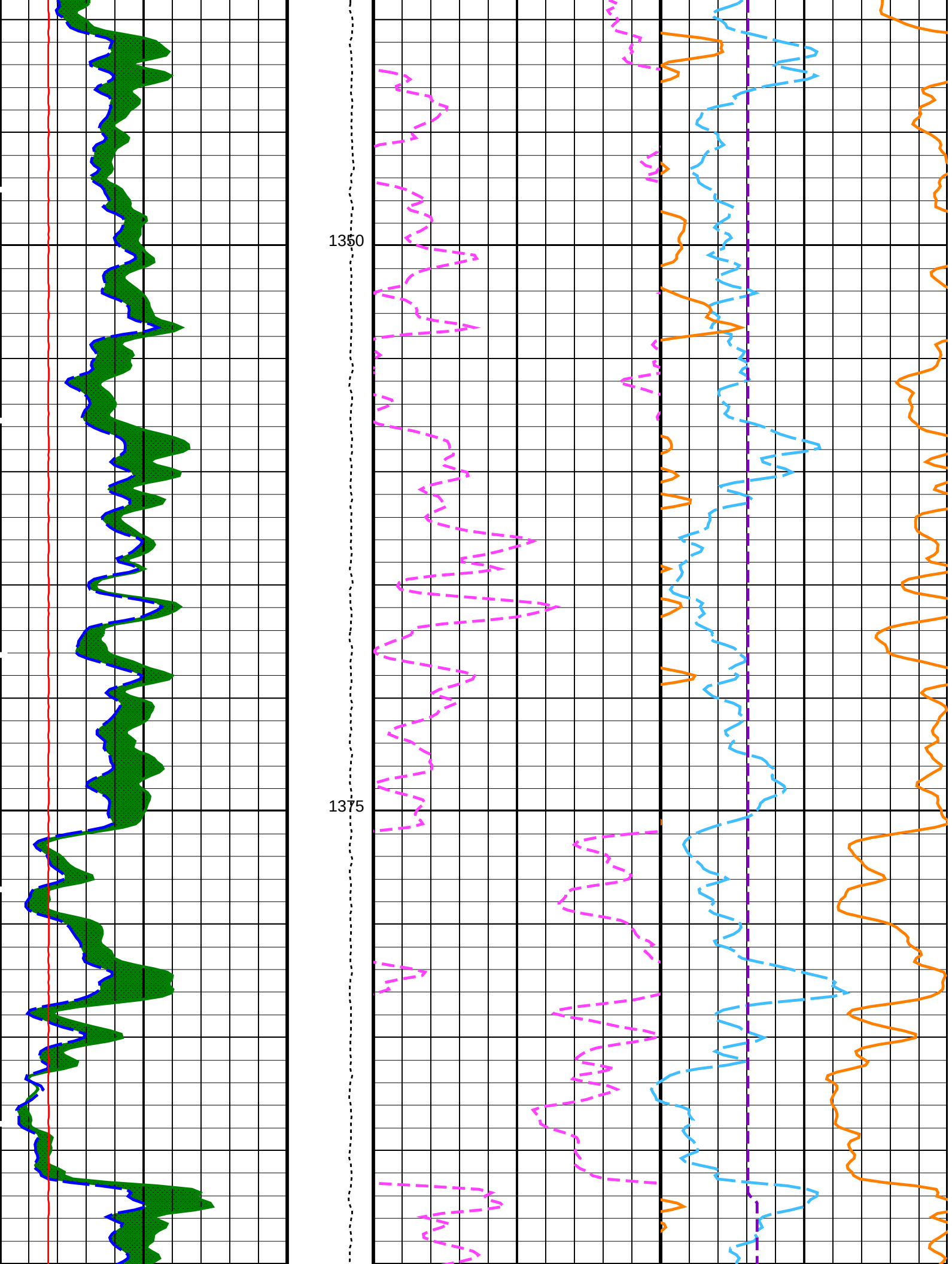
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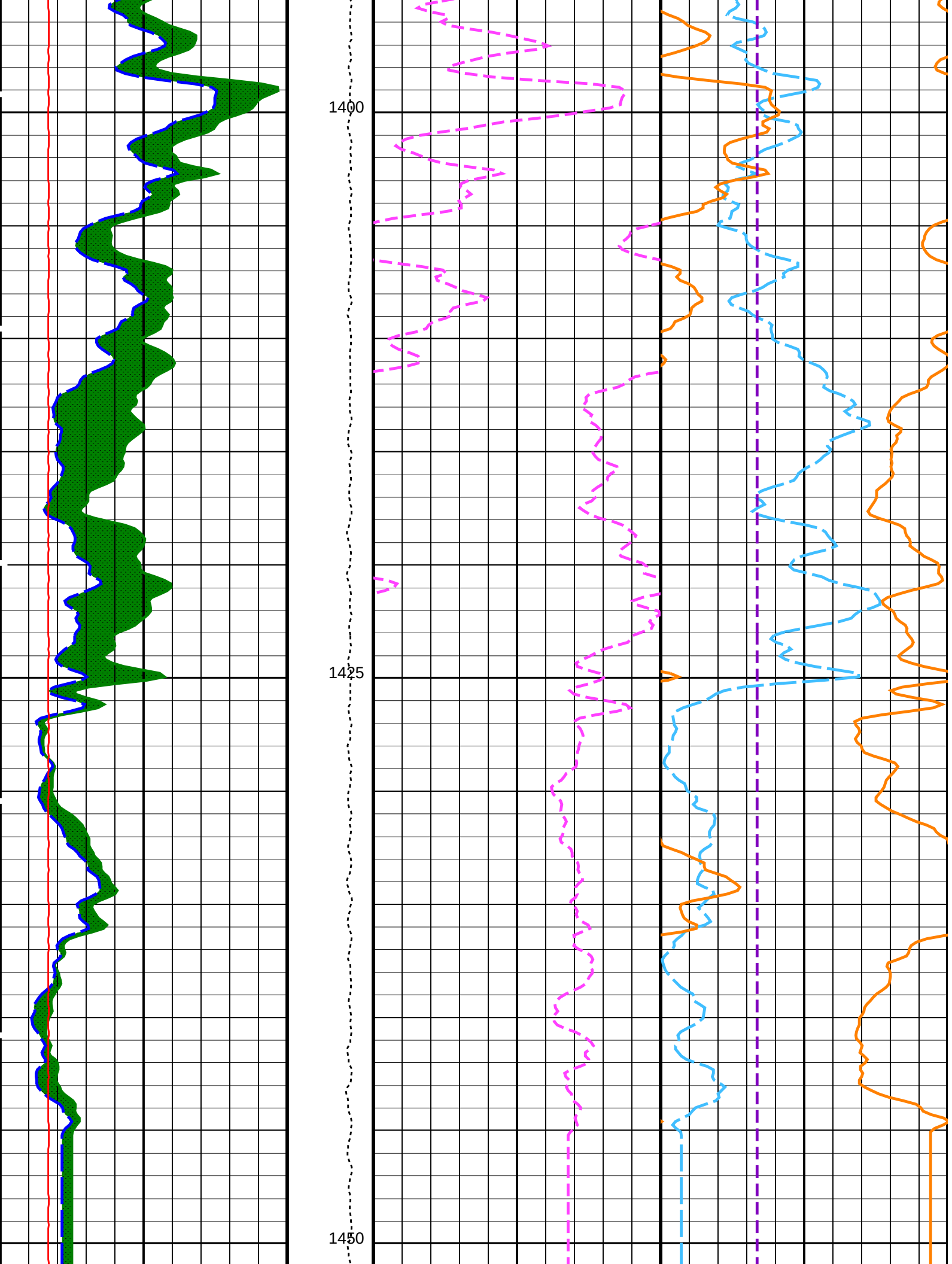
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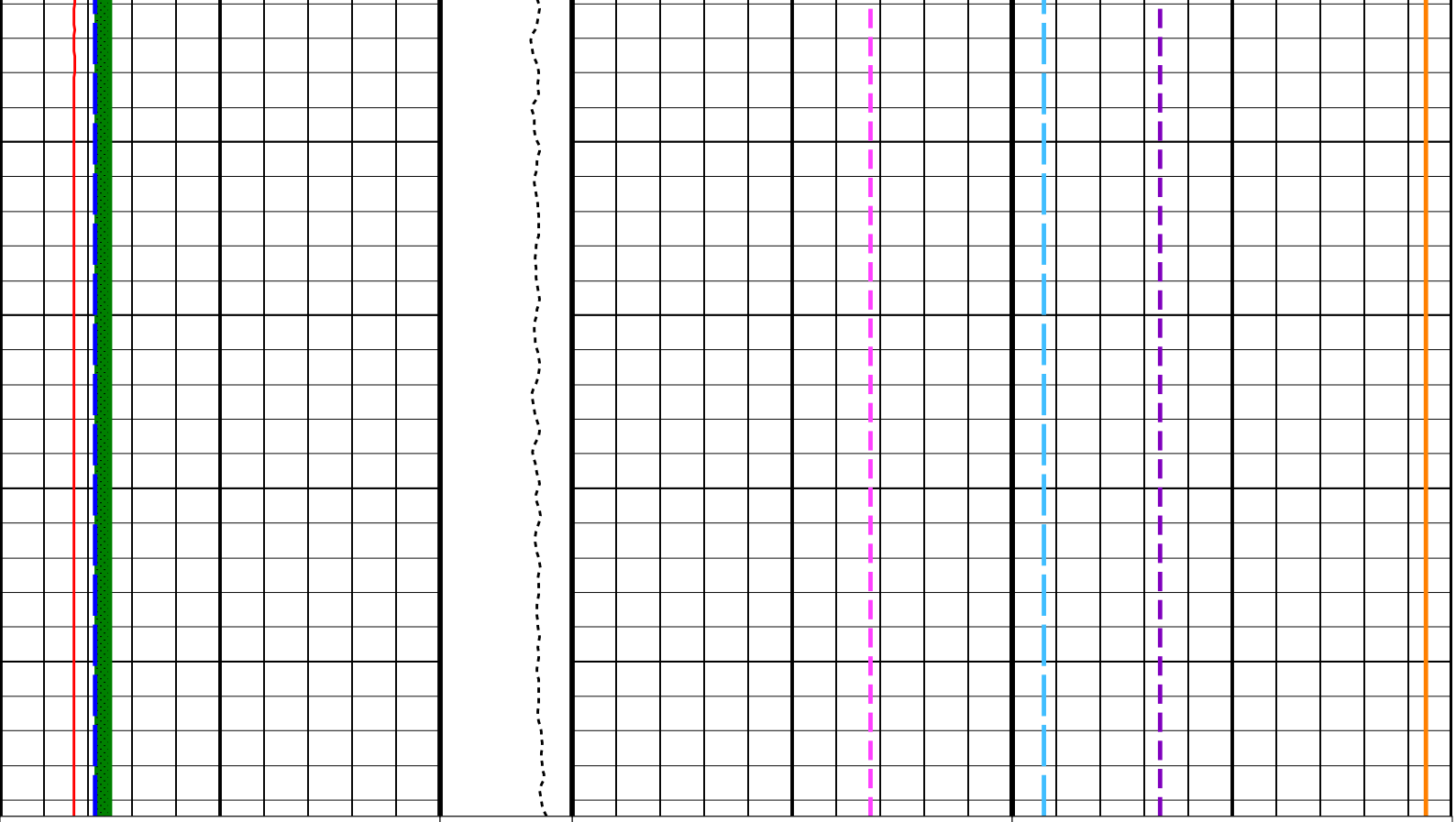


PIP SUMMARY

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	−0.0102276	
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	0.971082	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.976773	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	NORMAL	

Format: HNGSYields **Vertical Scale: 1:200** **Graphics File Created: 14−Sep−2021 22:06**

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
DTC−H	19C0−187		

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_026LUP	PRODUCER	14−Sep−2021 22:06	1474.5 M	1186.4 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_027PUP	FN:19	PRODUCER	14−Sep−2021 22:06	
RTB	MSS_LDEO_HRLA_LDL_027PUP	FN:20	PRODUCER	14−Sep−2021 22:06	

Company: International Ocean Discovery Program **Well: Expedition 396, Site U1572A**

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_026LUP	PRODUCER	14−Sep−2021 22:06	1474.5 M	1186.4 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_027PUP	FN:19	PRODUCER	14−Sep−2021 22:06	1474.5 M	1186.4 M
RTB	MSS_LDEO_HRLA_LDL_027PUP	FN:20	PRODUCER	14−Sep−2021 22:06	1474.5 M	1186.4 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
DTC−H	19C0−187		

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

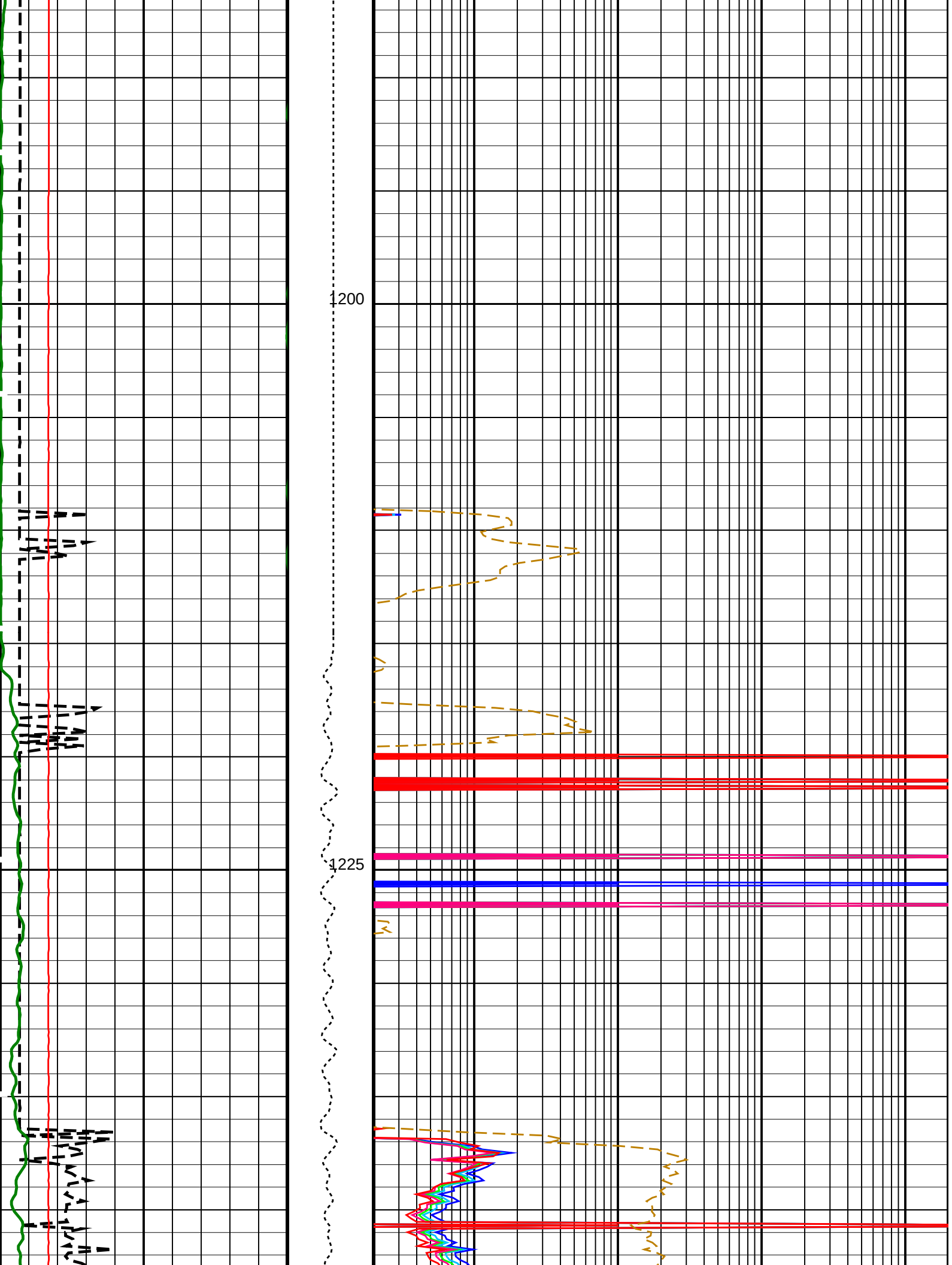
Invasion Diameter (DI_HRLT)
0 (IN) 50

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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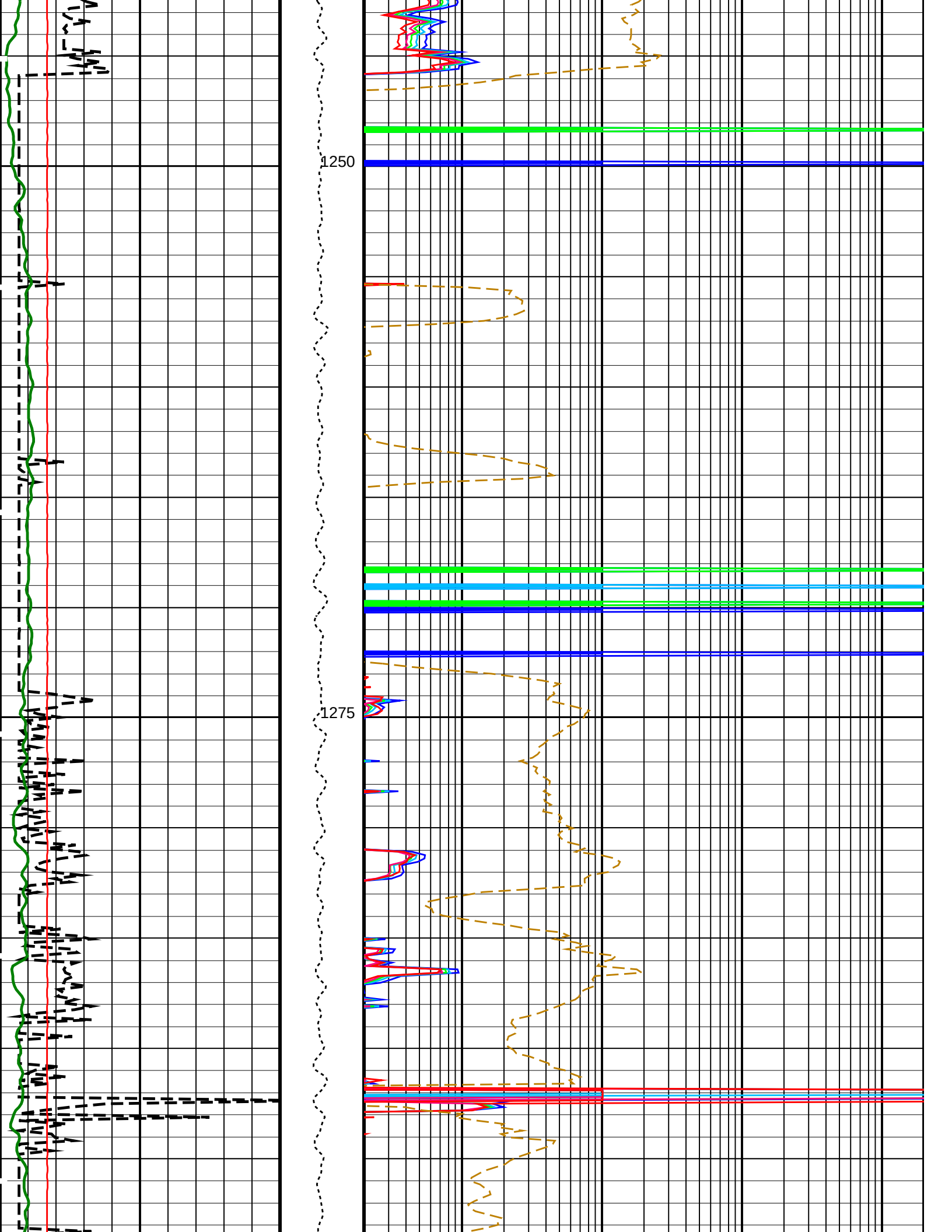
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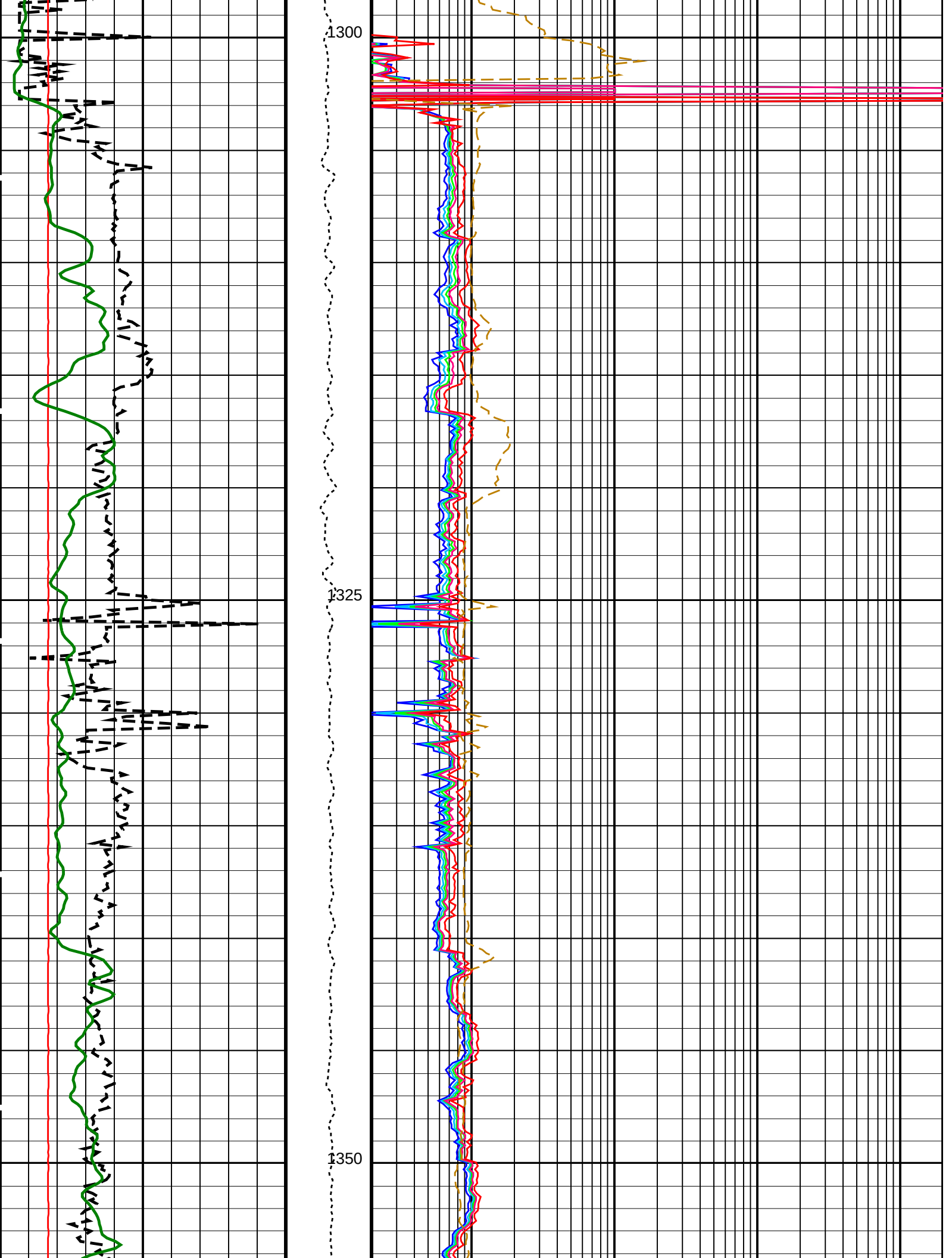
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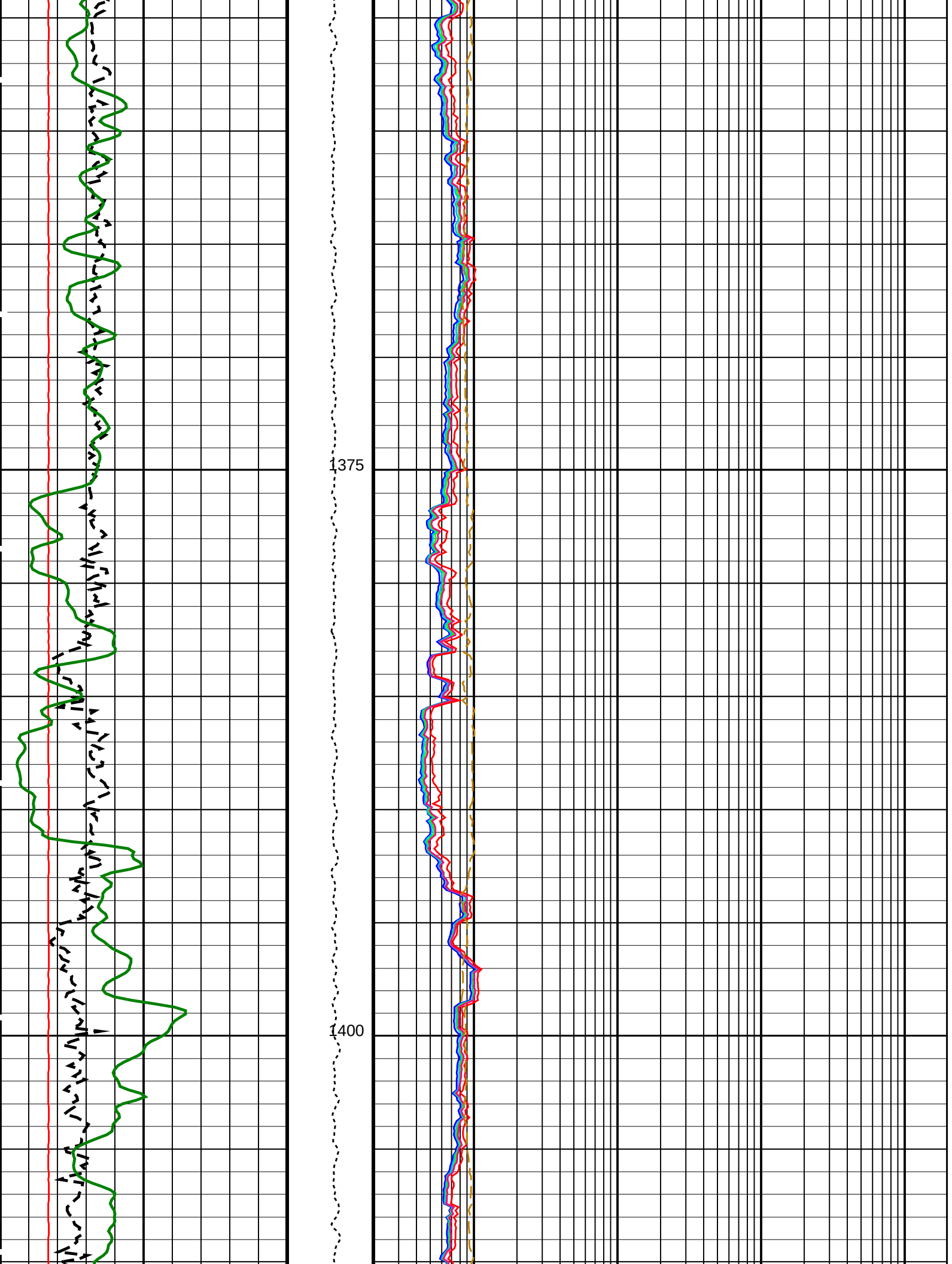
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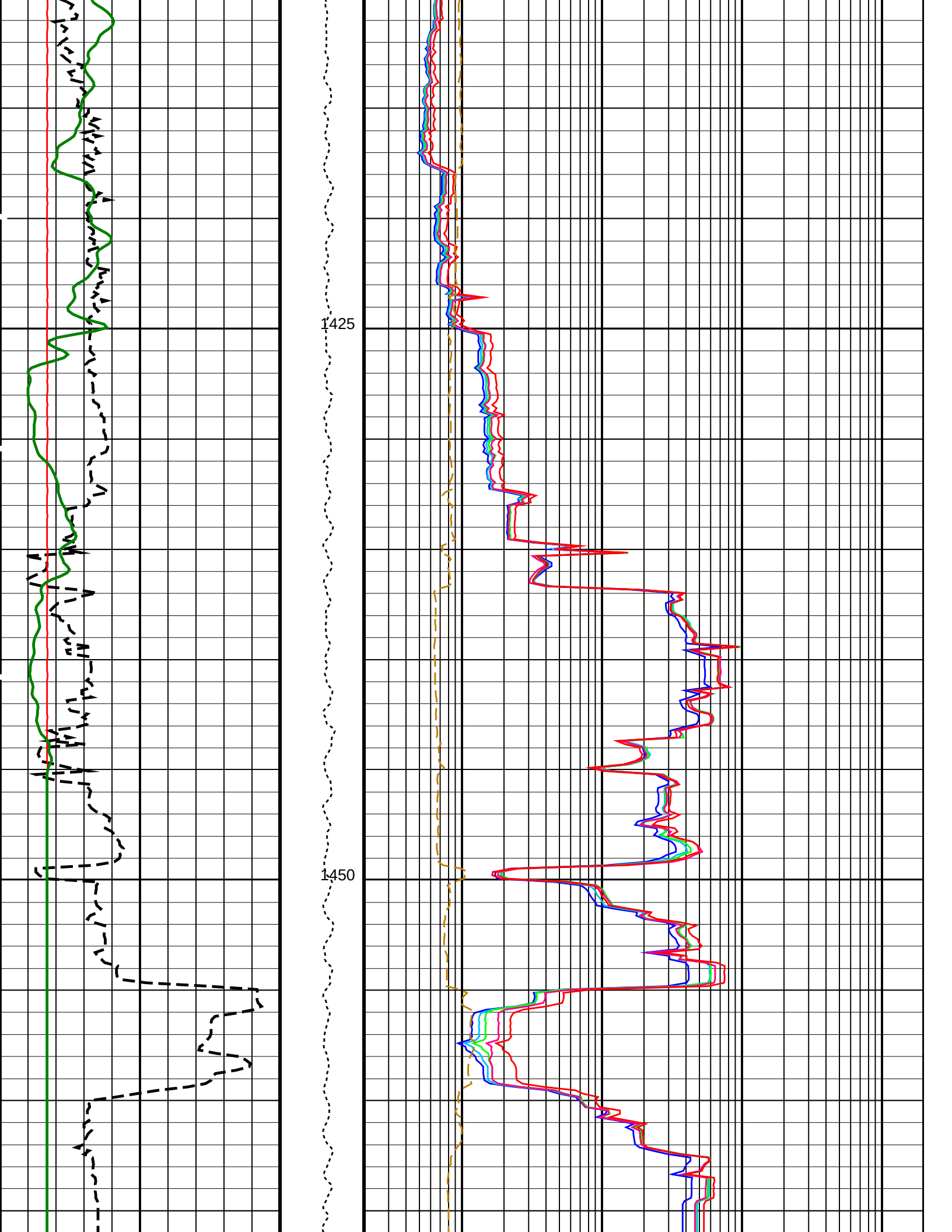
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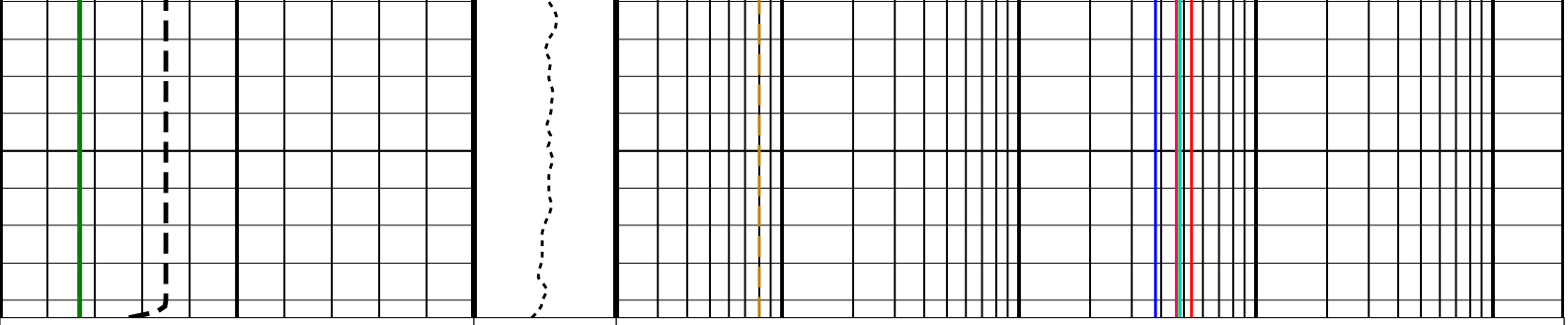

HLDS Caliper (LCAL)	Tension (TENS) (LBF)	HRLT Resistivity 1 (RLA1)
0 (IN) 20	0 5000	0.2 (OHMM) 2000
Invasion Diameter (DI_HRLT)		HRLT Resistivity 2 (RLA2)
0 (IN) 50		0.2 (OHMM) 2000
HNGS Spectroscopy Gamma Ray (HSGR)		HRLT Resistivity 3 (RLA3)
0 (GAPI) 150		0.2 (OHMM) 2000
		HRLT Resistivity 4 (RLA4)
		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)	7	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	Eccentered	
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)	7	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	−0.0102276	
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	0.971082	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.976773	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	NORMAL	
TD	Total Depth	2292	M

Format: HRLT **Vertical Scale: 1:200** **Graphics File Created: 14-Sep-2021 22:06**

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
DTC-H	19C0-187		

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_026LUP	PRODUCER	14-Sep-2021 22:06	1474.5 M	1186.4 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_027PUP	FN:19	PRODUCER	14-Sep-2021 22:06		
RTB	MSS_LDEO_HRLA_LDL_027PUP	FN:20	PRODUCER	14-Sep-2021 22:06		

Company: International Ocean Discovery Program **Well: Expedition 396, Site U1572A**

Input DLIS Files

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RTB	MSS_LDEO_HRLA_LDL_027PUP	FN:20	PRODUCER	14-Sep-2021 22:06	1474.5 M	1186.4 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
DTC-H	19C0-187		

PIP SUMMARY

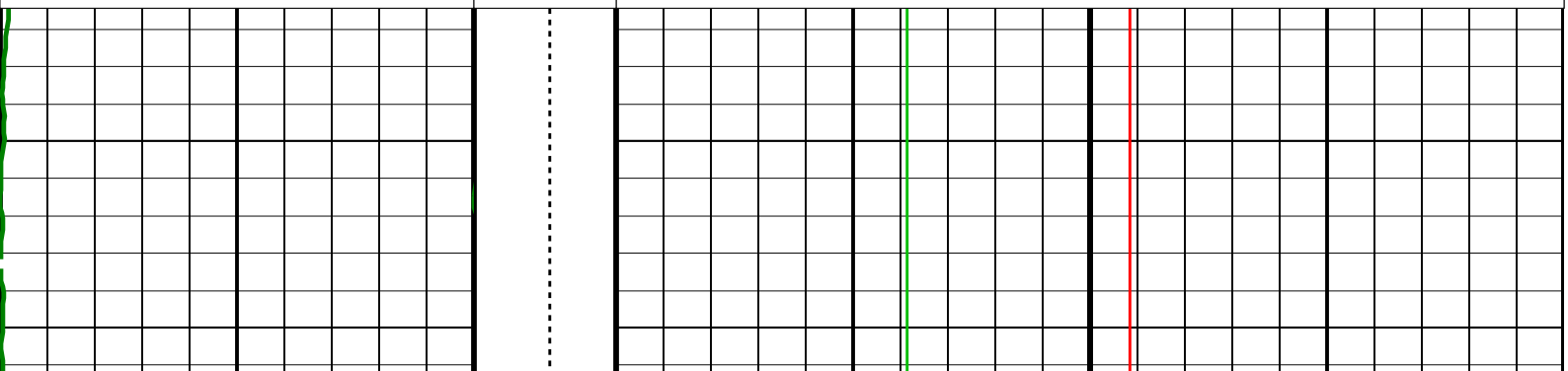
Time Mark Every 60 S

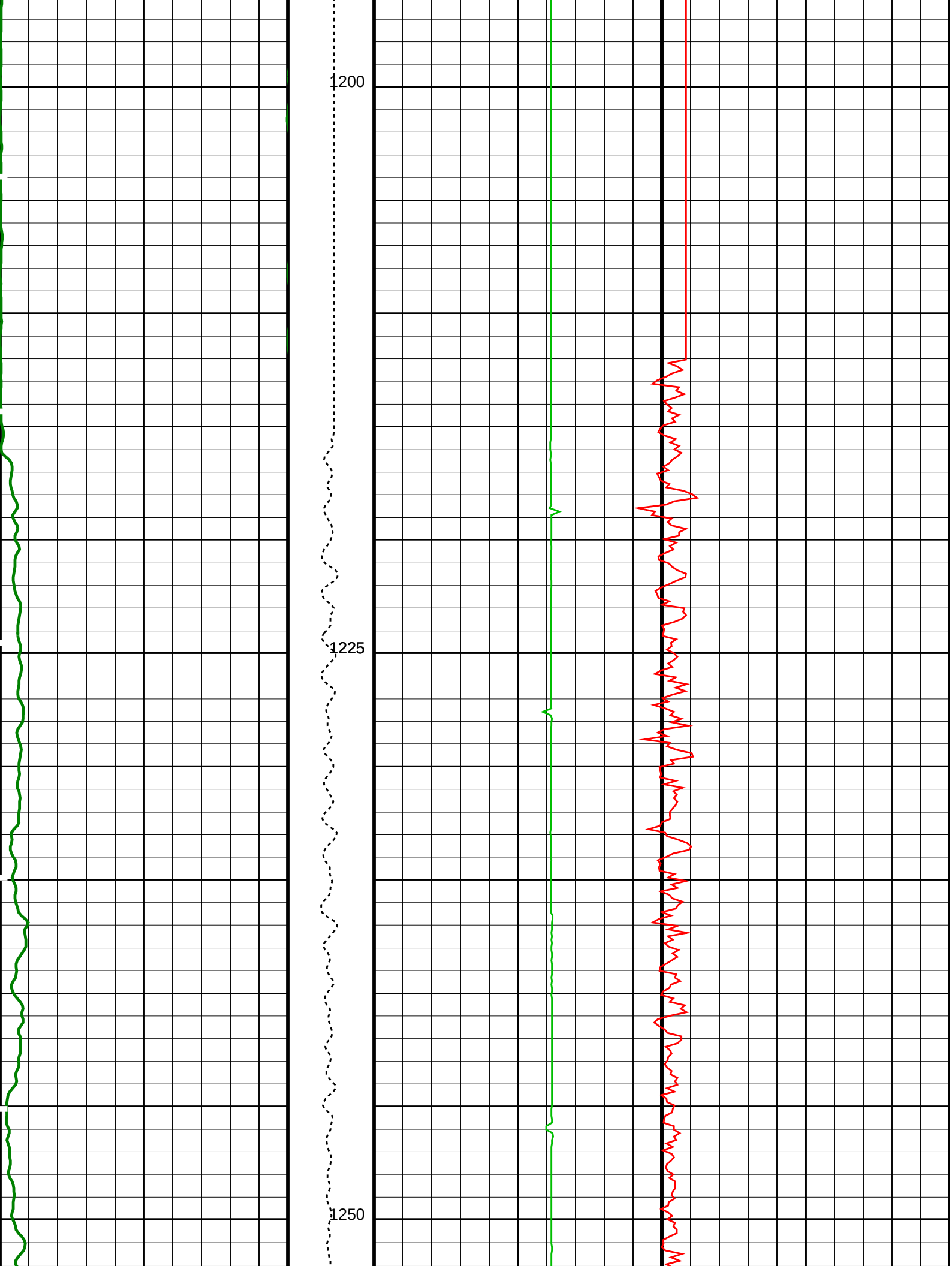
Dual-Coil Susceptibility (MSSLSUS_LDEO)
-10000 (PPM) 90000

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

Tension (TENS) (LBF)
0 5000

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

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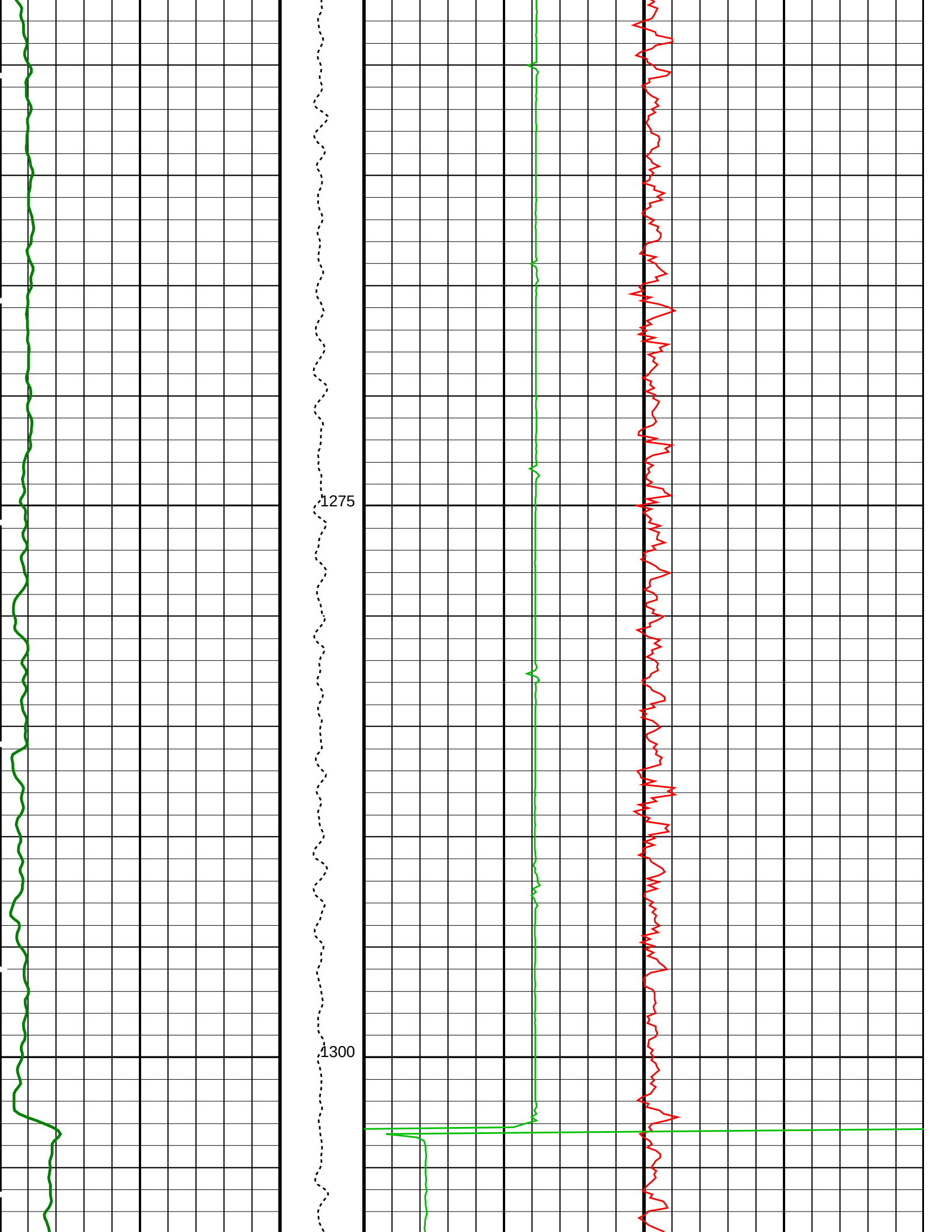
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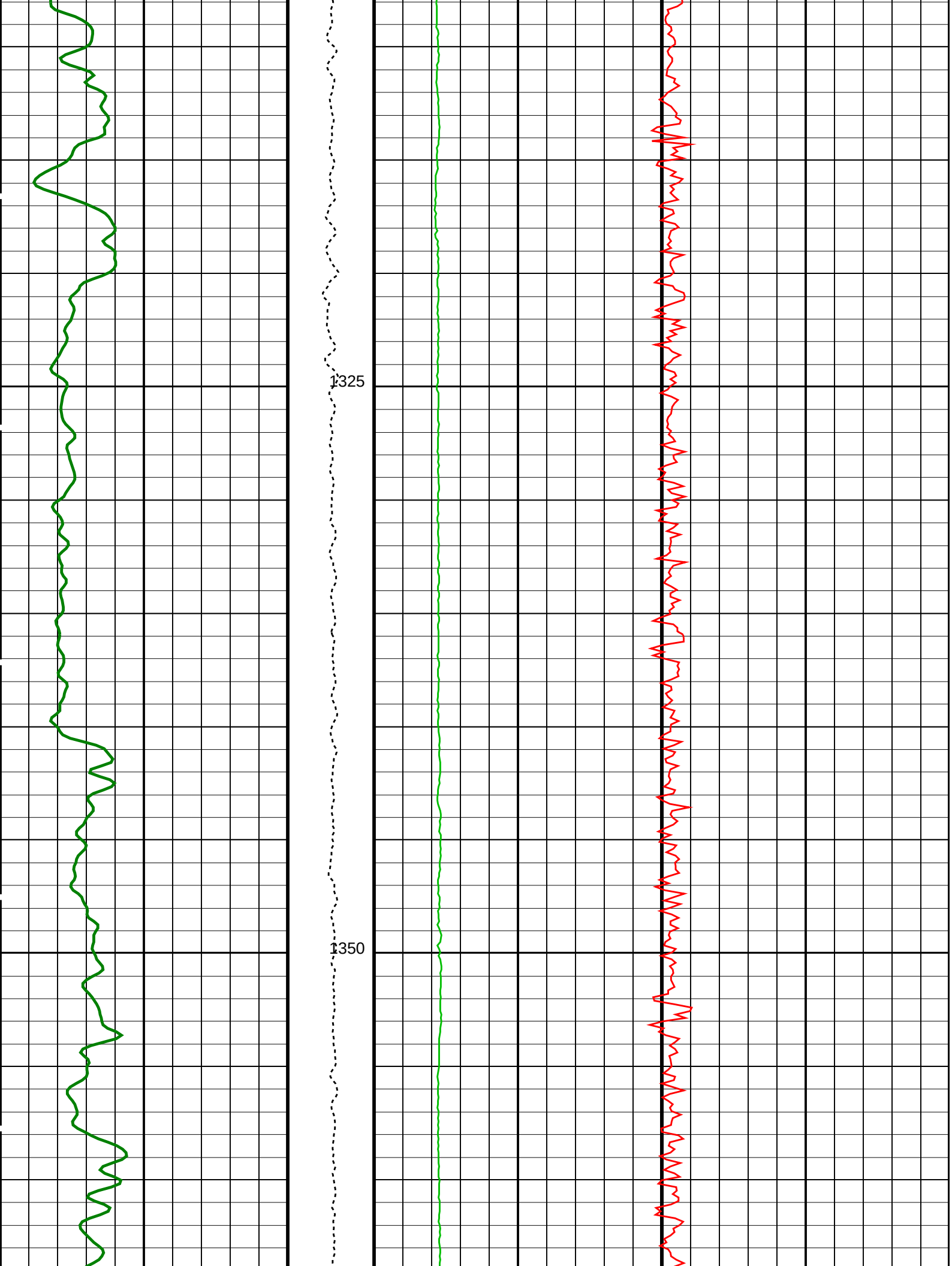
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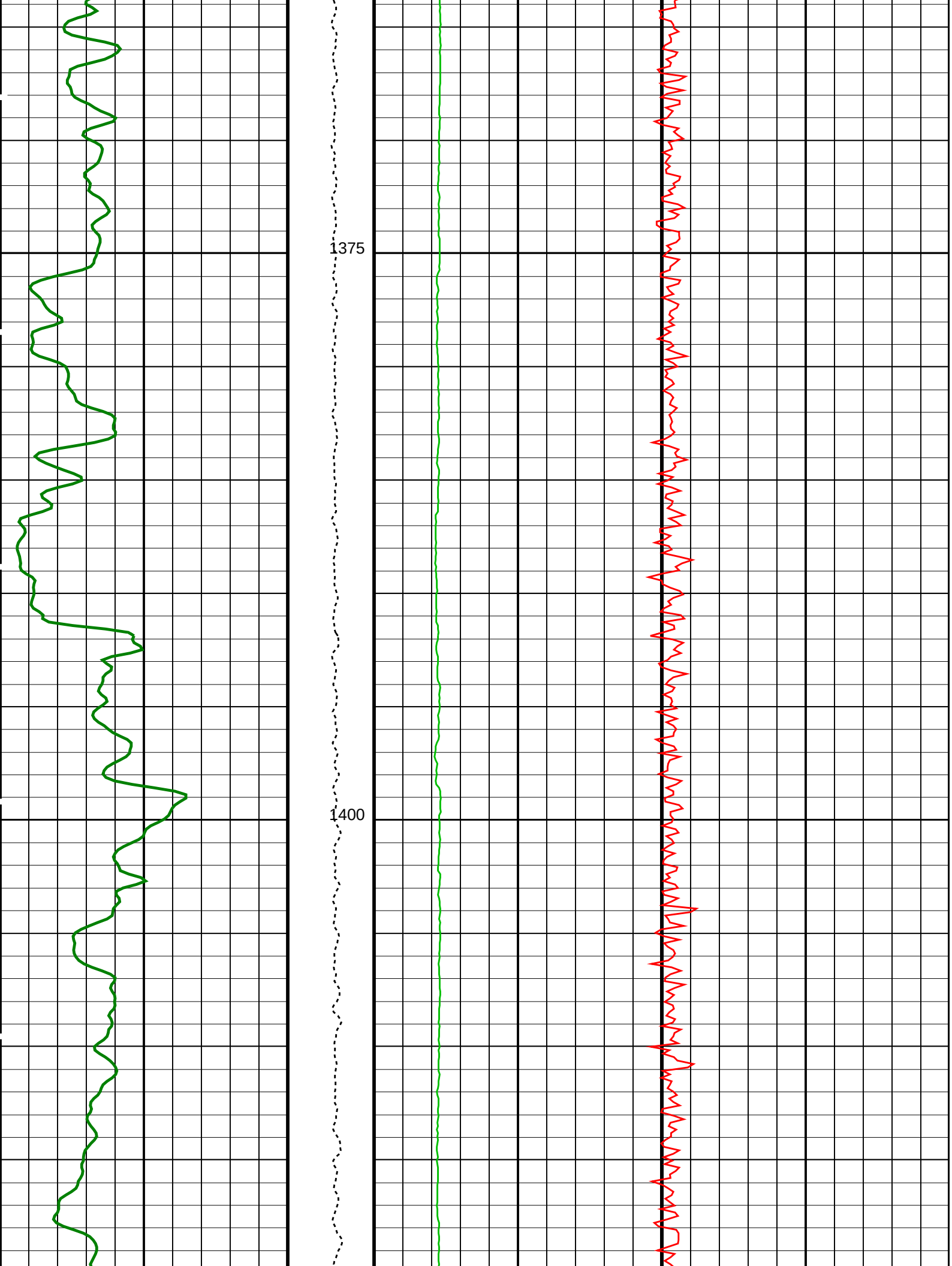
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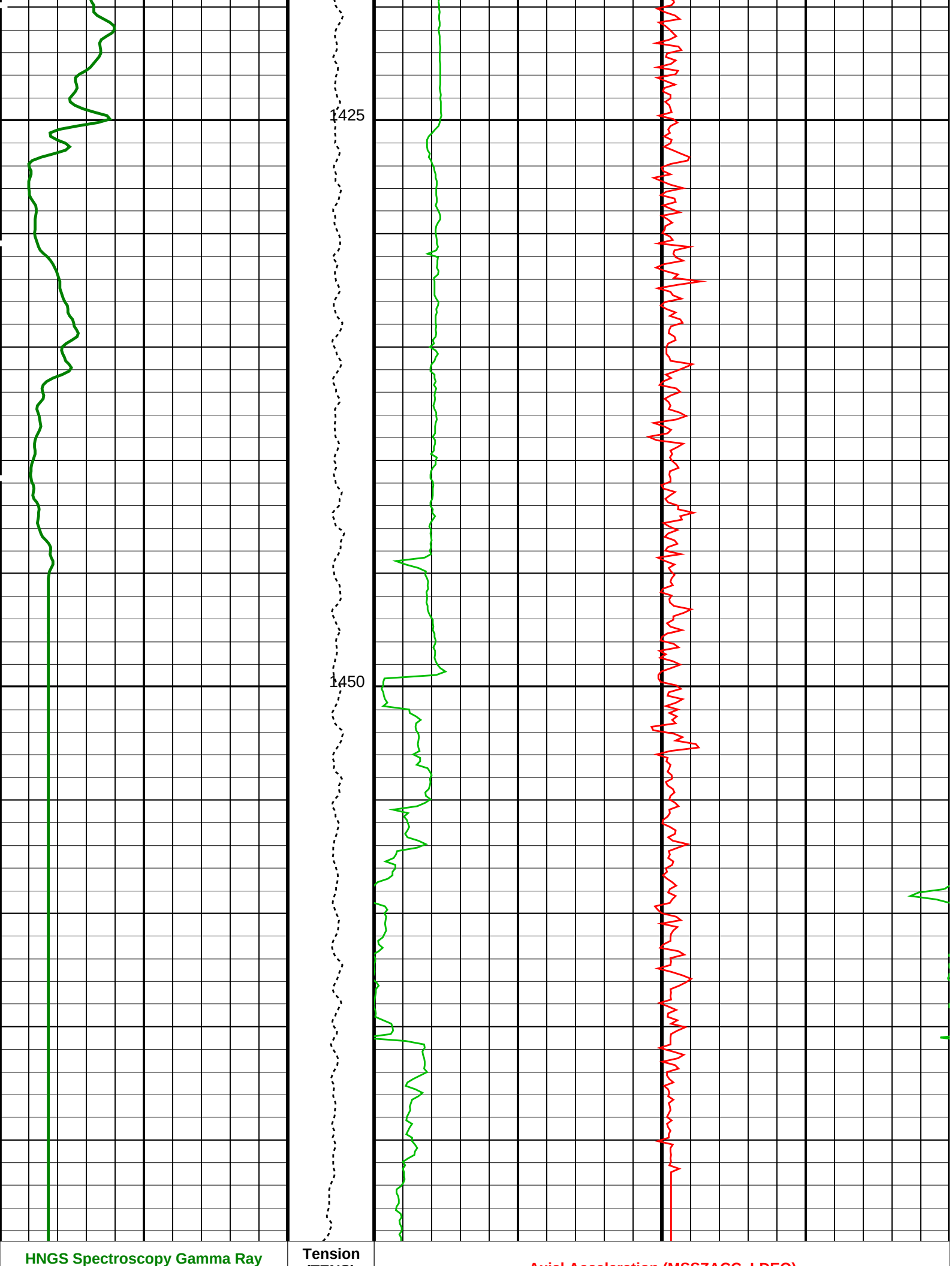
1400


1425
1450
HNGS Spectroscopy Gamma Ray
Tension
Axial Acceleration (MSSZACC_LDEC)

(HSGR)	(TENS)	Axial Acceleration (MSSZACC_LDEO)
0 (GAPI) 150	(LBF) 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	−0.0102276	
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	0.971082	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.976773	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	NORMAL	

Format: MSS_Logging Vertical Scale: 1:200 Graphics File Created: 14−Sep−2021 22:06

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
DTC−H	19C0−187		

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_026LUP	PRODUCER	14−Sep−2021 22:06	1474.5 M	1186.4 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_027PUP FN:19	PRODUCER	14−Sep−2021 22:06	
RTB	MSS_LDEO_HRLA_LDL_027PUP FN:20	PRODUCER	14−Sep−2021 22:06	

Schlumberger

First Pass

Company: International Ocean Discovery Program | Well: Expedition 396, Site U1572A

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_022LUP	FN:13	PRODUCER	14−Sep−2021 20:19	1472.2 M	1339.6 M
RTB	MSS_LDEO_HRLA_LDL_022LUP	FN:14	PRODUCER	14−Sep−2021 20:19	1472.2 M	1339.6 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
DTC−H	19C0−187		

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

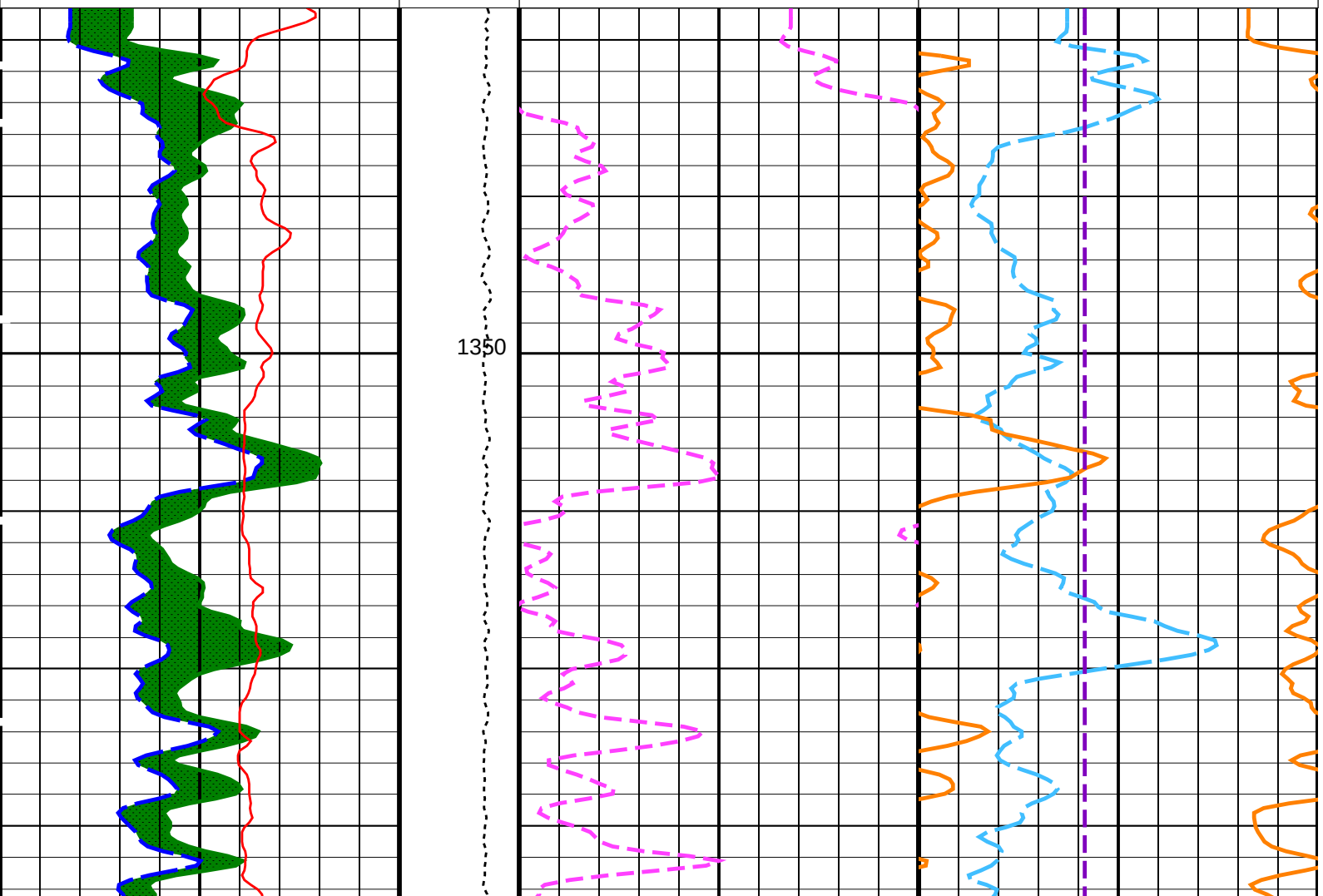
HNGS Uranium (HURA)
−5 (PPM) 5

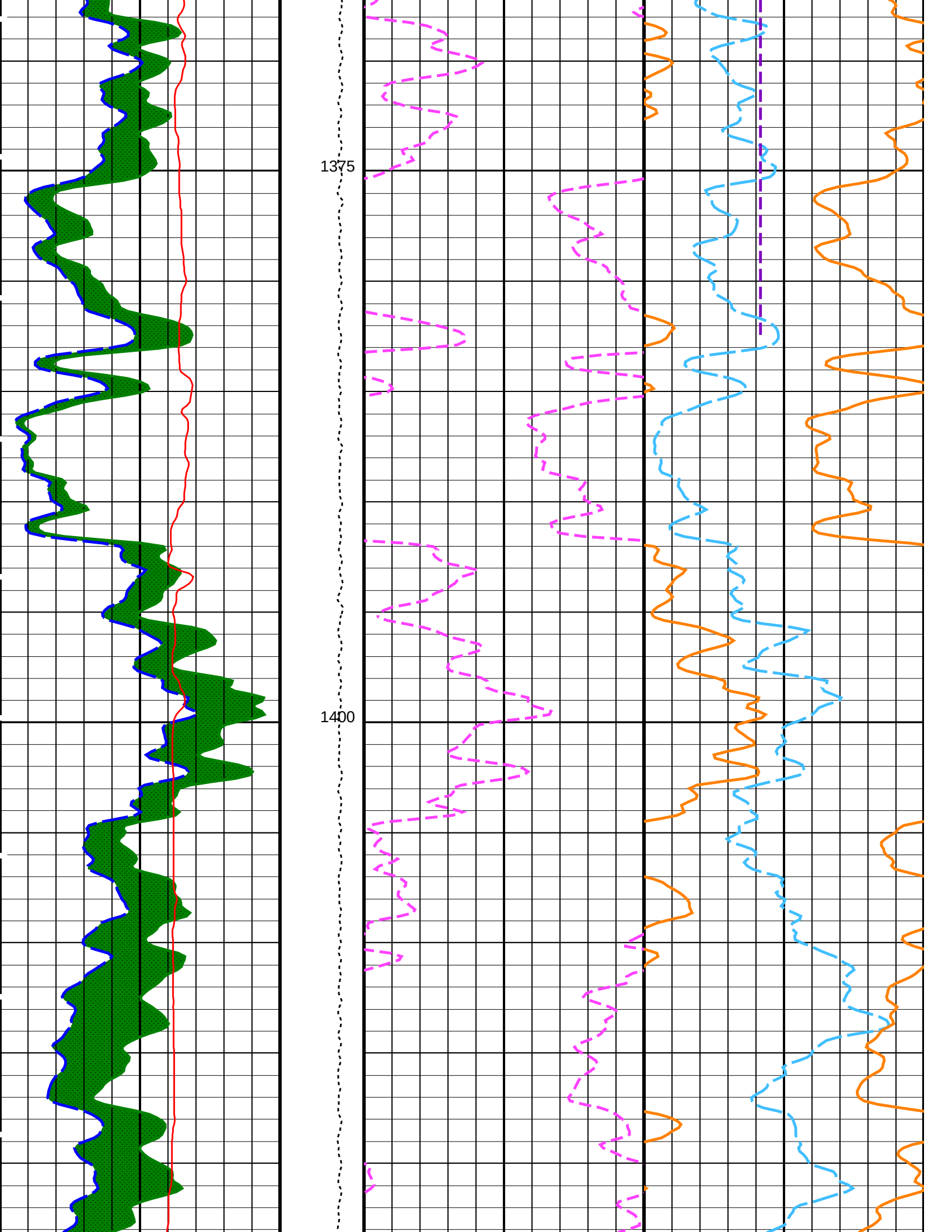
HLDS Caliper (LCAL)
0 (IN) 20

Tension (TENS) (LBF)
10000 0

HNGS Thorium (HTHO)
−5 (PPM) 5

HNGS Potassium (HFK)
−0.01 (V/V) 0.01

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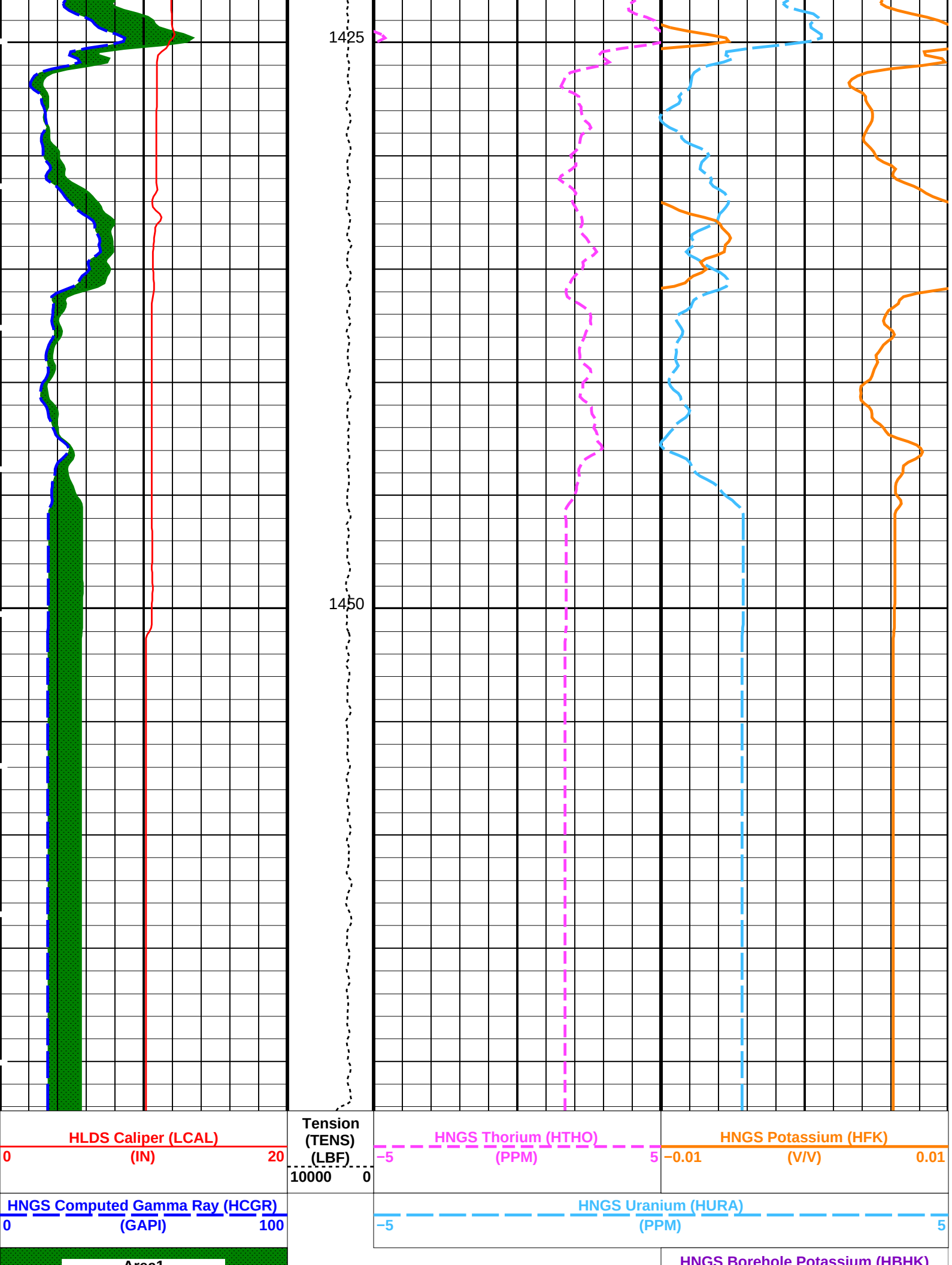

1425
1450
HLDS Caliper (LCAL)
0
(IN)
20
Tension
(TENS)
(LBF)
10000
0
HNGS Thorium (HTHO)
−5
(PPM)
5
HNGS Potassium (HFK)
−0.01
(V/V)
0.01
HNGS Computed Gamma Ray (HCGR)
0
(GAPI)
100
HNGS Uranium (HURA)
−5
(PPM)
5
Area1
HNGS Borehole Potassium (HBHK)

Area1
From HCGR to HSGR

HNGS Spectroscopy Gamma Ray (HSGR)

0 (GAPI) 100

−0.01 (V/V) 0.01

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	−0.00363038	
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	0.940042	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.953595	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 14−Sep−2021 20:19

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
DTC−H	19C0−187		

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_022LUP	FN:13	PRODUCER	14−Sep−2021 20:19	
RTB	MSS_LDEO_HRLA_LDL_022LUP	FN:14	PRODUCER	14−Sep−2021 20:19	

Company: International Ocean Discovery Program Well: Expedition 396, Site U1572A

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_022LUP	FN:13	PRODUCER	14−Sep−2021 20:19	1472.2 M	1339.6 M
RTB	MSS_LDEO_HRLA_LDL_022LUP	FN:14	PRODUCER	14−Sep−2021 20:19	1472.2 M	1339.6 M

OP System Version: 19C0−187

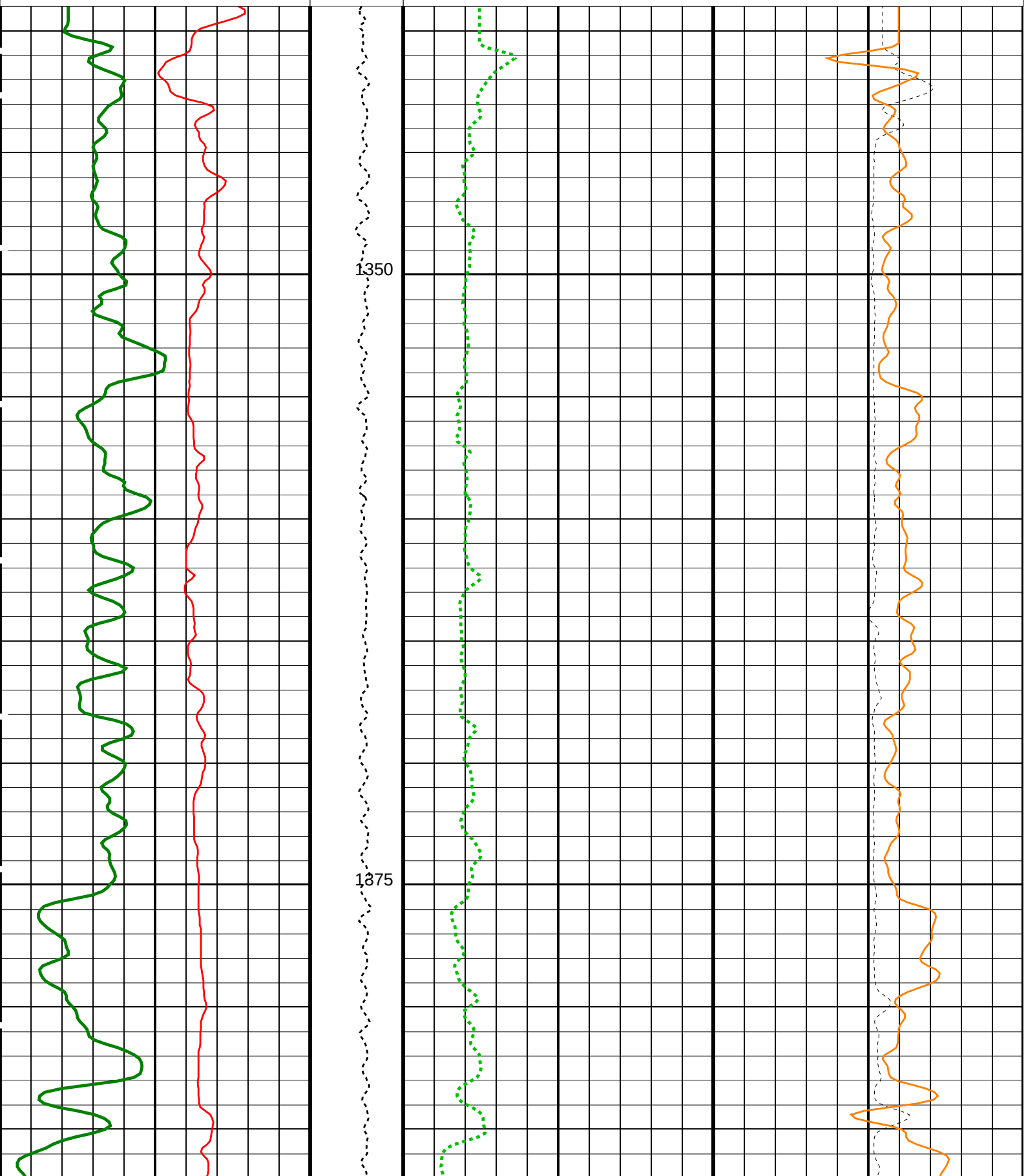
MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
DTC−H	19C0−187		

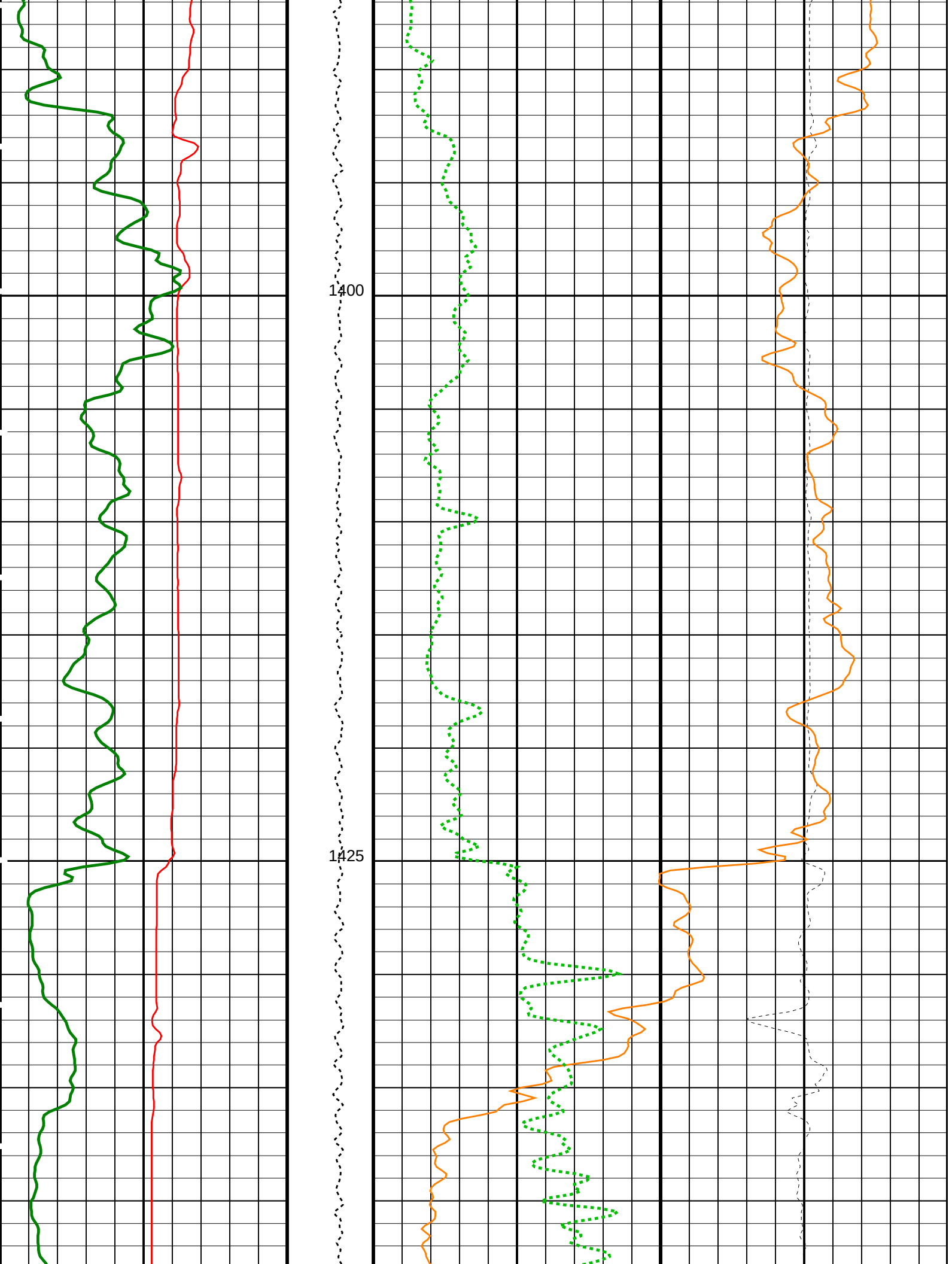
PIP SUMMARY

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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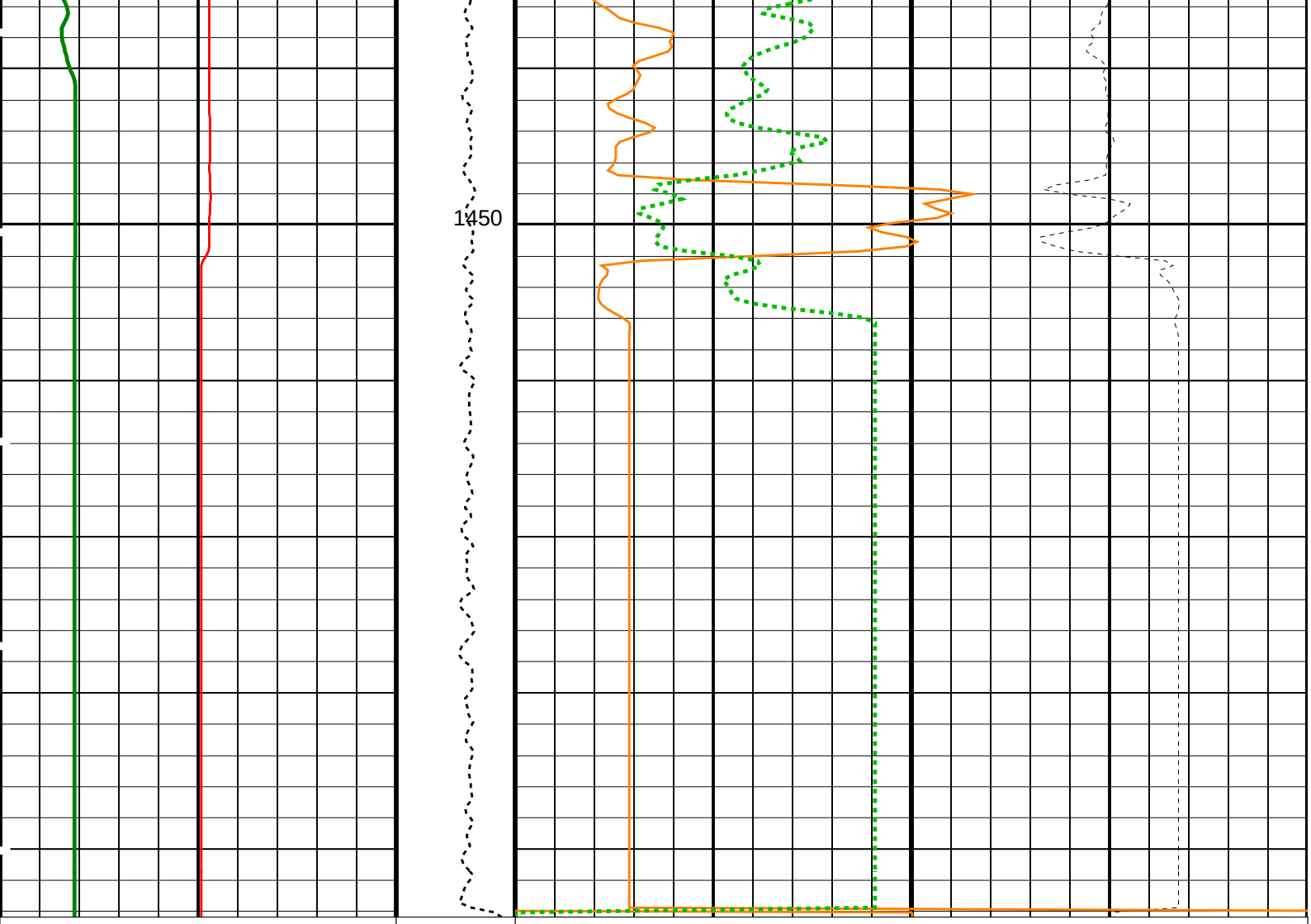
1425



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	ON	
MDEN	Matrix Density	2.6	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	−0.00363038	
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	0.940042	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.953595	
System and Miscellaneous			
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3

Format: HLDSDensityPE Vertical Scale: 1:200 Graphics File Created: 14−Sep−2021 20:19

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
DTC−H	19C0−187		

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_022LUP	FN:13	PRODUCER	14−Sep−2021 20:19		
RTB	MSS_LDEO_HRLA_LDL_022LUP	FN:14	PRODUCER	14−Sep−2021 20:19		

Company: International Ocean Discovery Program Well: Expedition 396, Site U1572A

Output DLIS Files

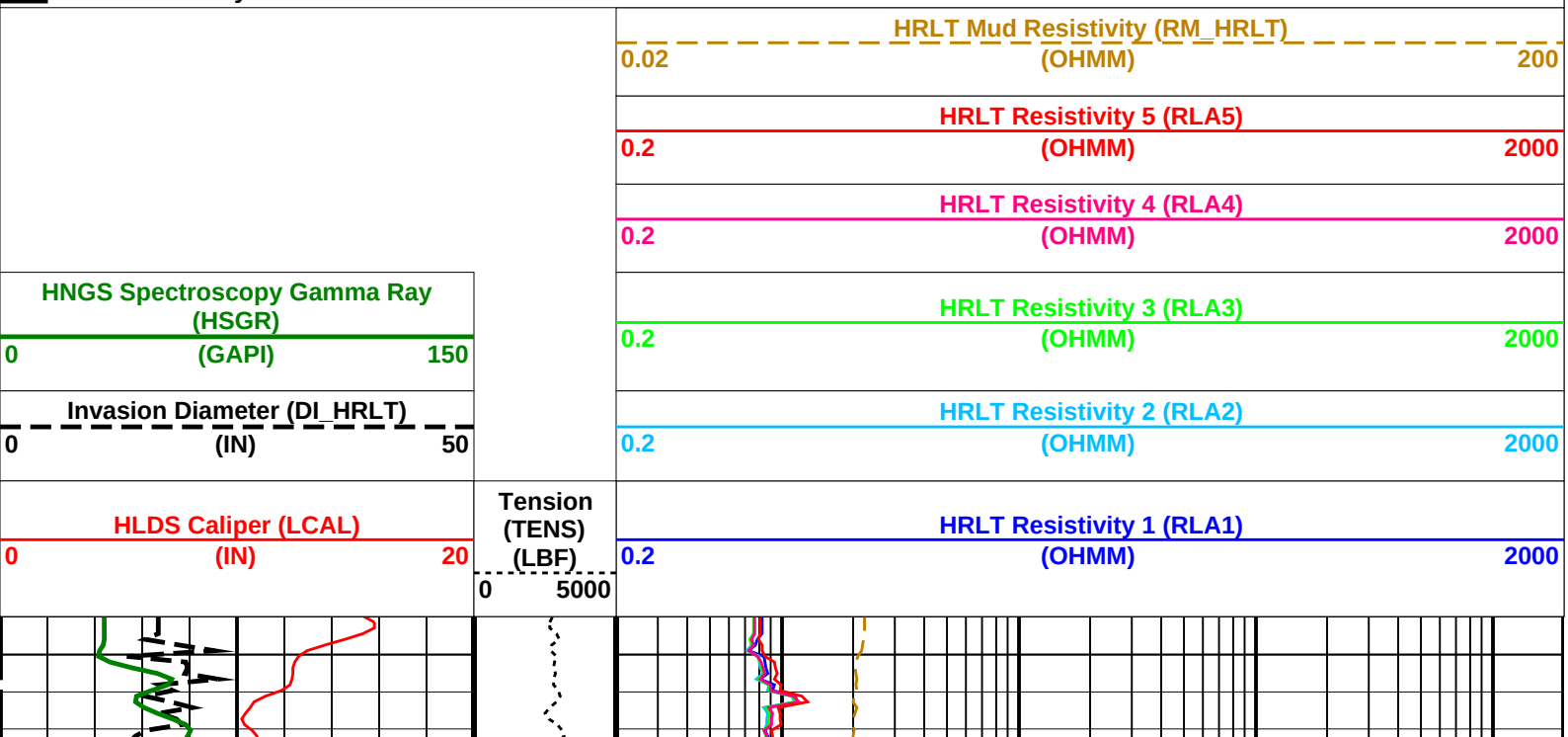
DEFAULT	MSS_LDEO_HRLA_LDL_022LUP	FN:13	PRODUCER	14−Sep−2021 20:19	1472.2 M	1339.6 M
RTB	MSS_LDEO_HRLA_LDL_022LUP	FN:14	PRODUCER	14−Sep−2021 20:19	1472.2 M	1339.6 M

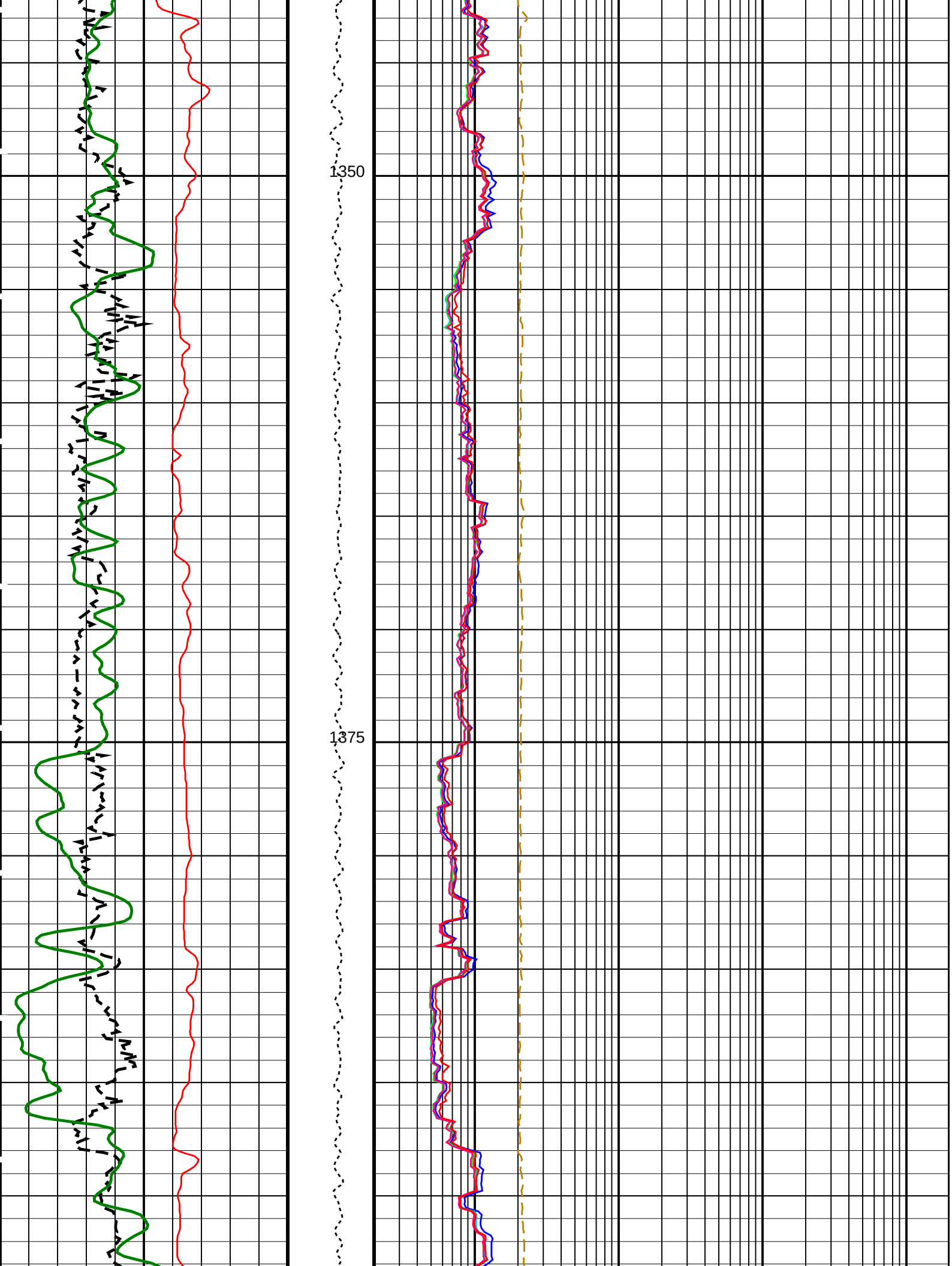
OP System Version: 19C0−187

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

PIP SUMMARY

Time Mark Every 60 S

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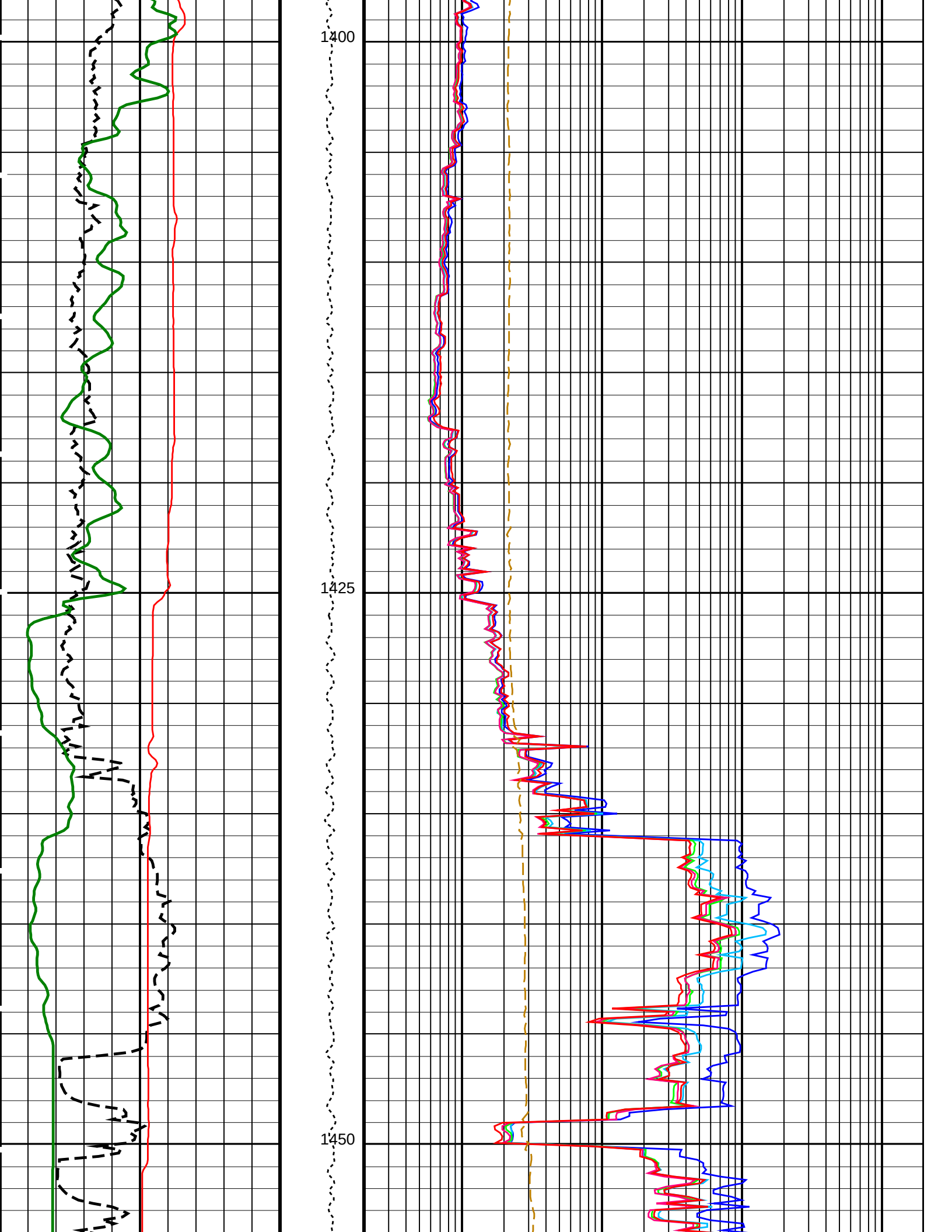
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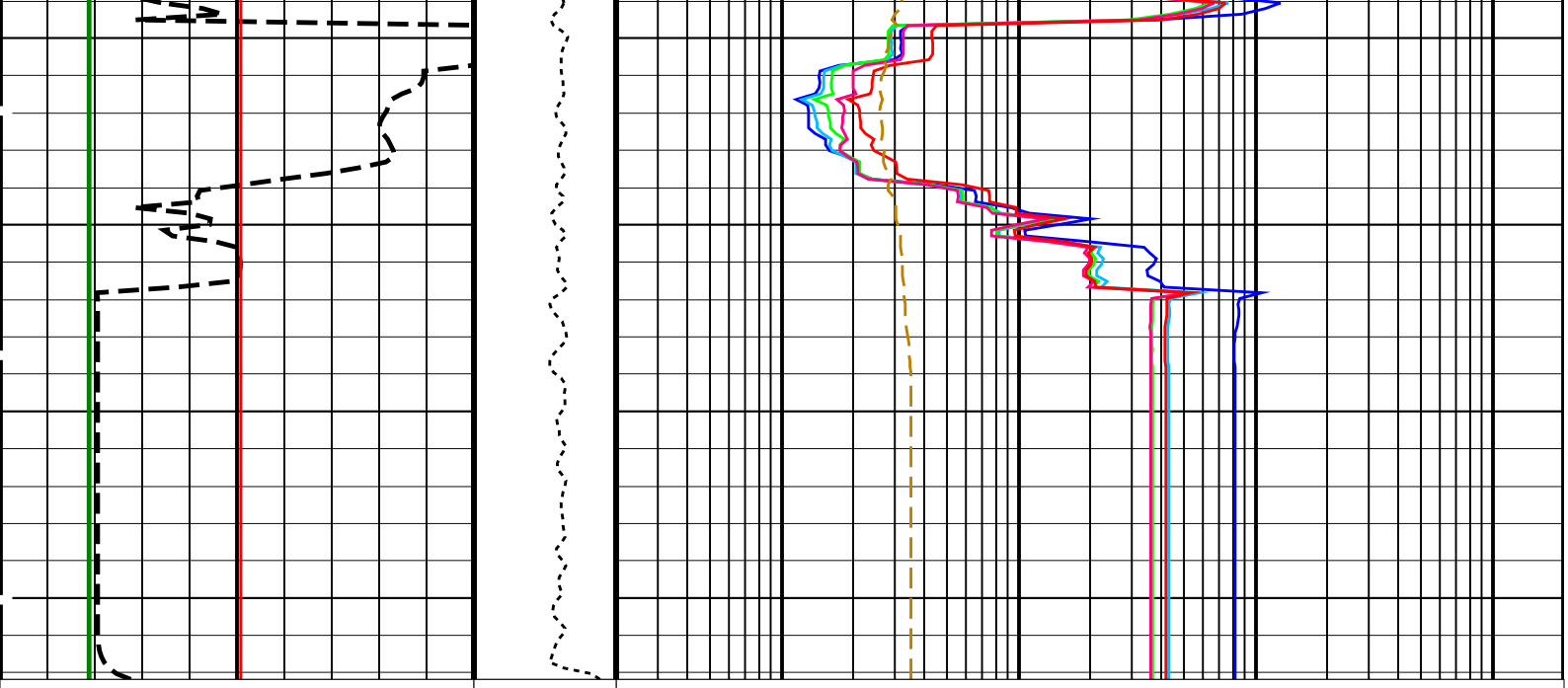


HLDS Caliper (LCAL)	Tension (TENS) (LBF)	HRLT Resistivity 1 (RLA1)
0 (IN) 20	0 5000	0.2 (OHMM) 2000
Invasion Diameter (DI_HRLT)		**HRLT Resistivity 2 (RLA2)**
0 (IN) 50		0.2 (OHMM) 2000
HNGS Spectroscopy Gamma Ray (HSGR)		**HRLT Resistivity 3 (RLA3)**
0 (GAPI) 150		0.2 (OHMM) 2000
		HRLT Resistivity 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)	7	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	Eccentered	
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)	7	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

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	−0.00363038	
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	0.940042	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.953595	
System and Miscellaneous			
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3
TD	Total Depth	2292	M

Format: HRLT Vertical Scale: 1:200 Graphics File Created: 14−Sep−2021 20:19

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
DTC−H	19C0−187		

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_022LUP	FN:13	PRODUCER	14−Sep−2021 20:19	
RTB	MSS_LDEO_HRLA_LDL_022LUP	FN:14	PRODUCER	14−Sep−2021 20:19	

Company: International Ocean Discovery Program Well: Expedition 396, Site U1572A

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_022LUP	FN:13	PRODUCER	14−Sep−2021 20:19	1472.2 M	1339.6 M
RTB	MSS_LDEO_HRLA_LDL_022LUP	FN:14	PRODUCER	14−Sep−2021 20:19	1472.2 M	1339.6 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
DTC−H	19C0−187		

PIP SUMMARY

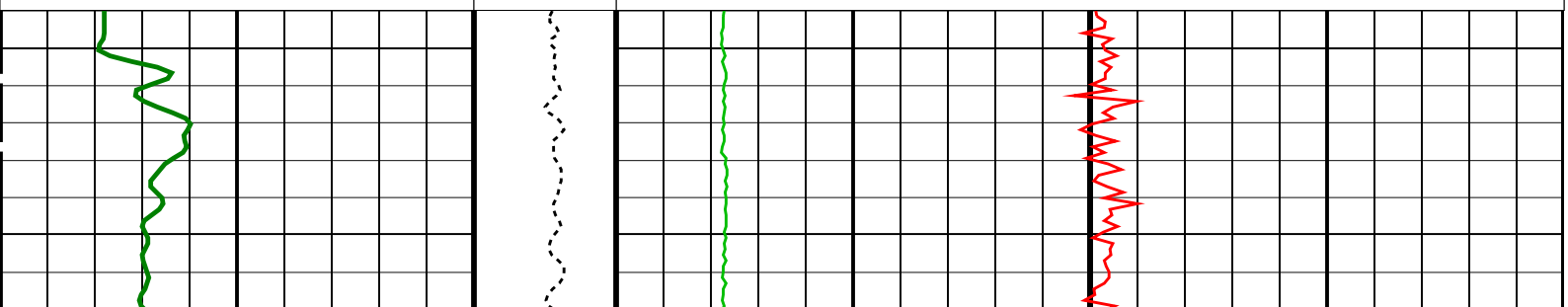
Time Mark Every 60 S

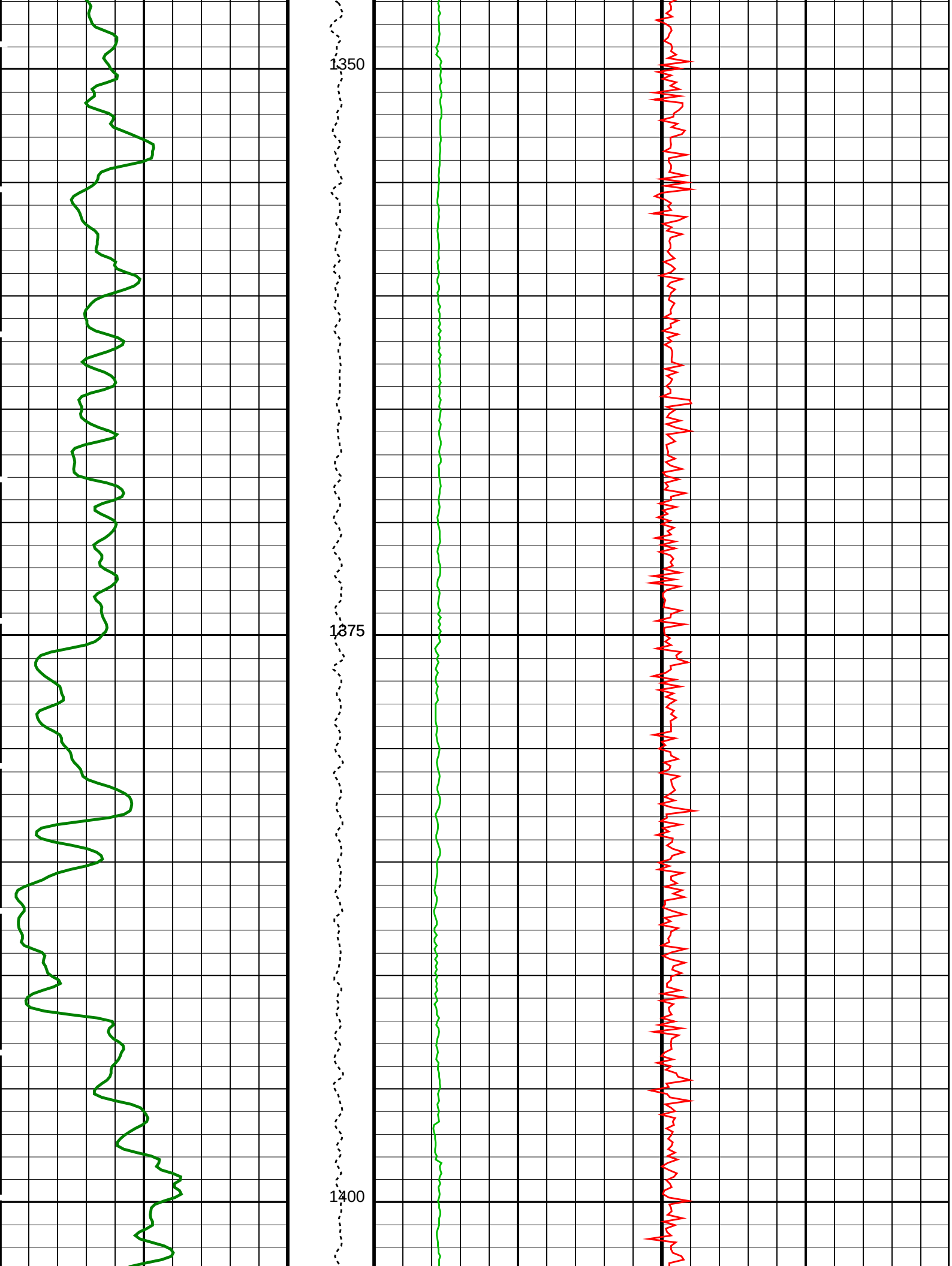
Dual−Coil Susceptibility (MSSLSUS_LDEO)
−10000 (PPM) 90000

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

Tension (TENS) (LBF)
0 5000

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

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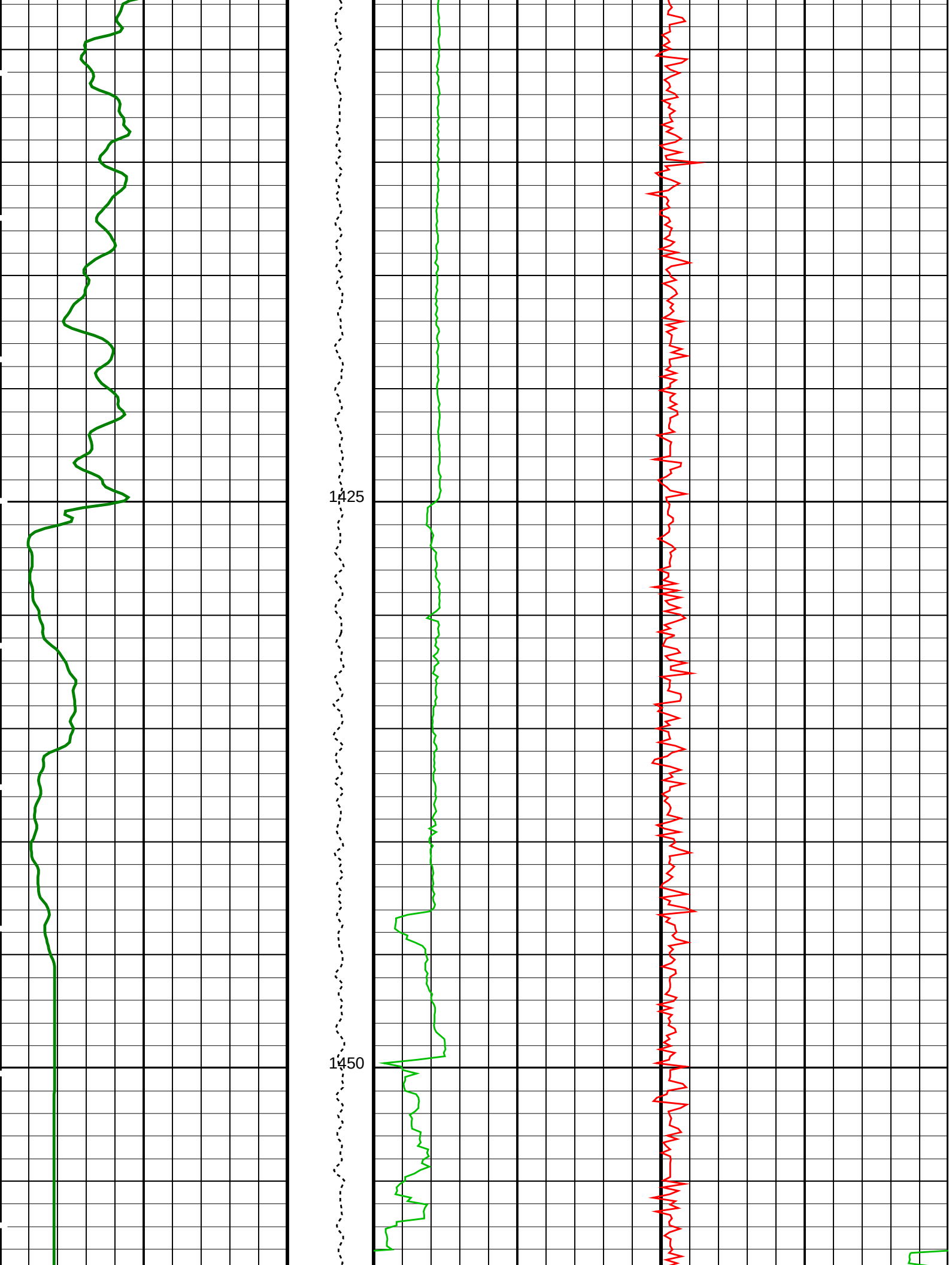
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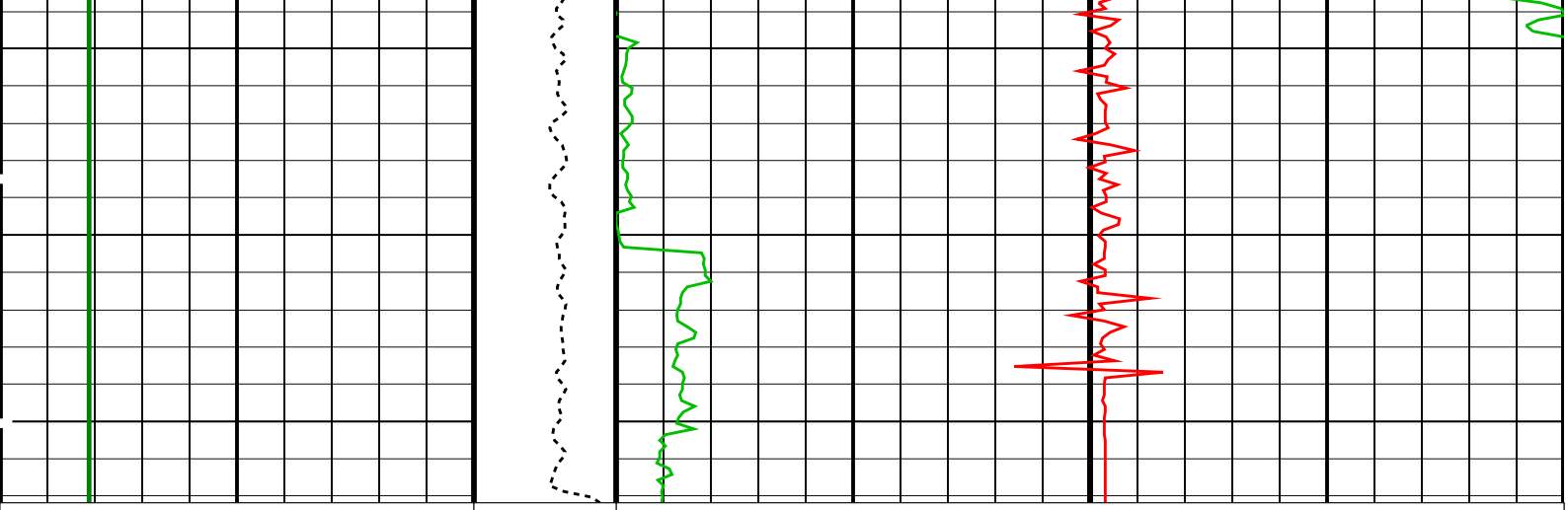


HNGS Spectroscopy Gamma Ray (HSGR)	Tension (TENS) (LBF)	Axial Acceleration (MSSZACC_LDEO)
0 (GAPI) 150	0 5000	0 (M/S2) 20
		Dual−Coil Susceptibility (MSSLSUS_LDEO)
		−10000 (PPM) 90000

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	−0.00363038	
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	0.940042	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.953595	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3

Format: MSS_Logging **Vertical Scale: 1:200** **Graphics File Created: 14−Sep−2021 20:19**

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
DTC−H	19C0−187		

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_022LUP	FN:13	PRODUCER	14−Sep−2021 20:19
DTP	MSS_LDEO_HRLA_LDL_022LUP	FN:14	PRODUCER	14−Sep−2021 20:19

RTB	MSS_LDEO_HRLA_LDL_022LUP	FN:14	PRODUCER	14−Sep−2021 20:19	

Schlumberger

Second Pass

MAXIS Field Log

Company: International Ocean Discovery Program **Well: Expedition 396, Site U1572A**

Output DLIS Files

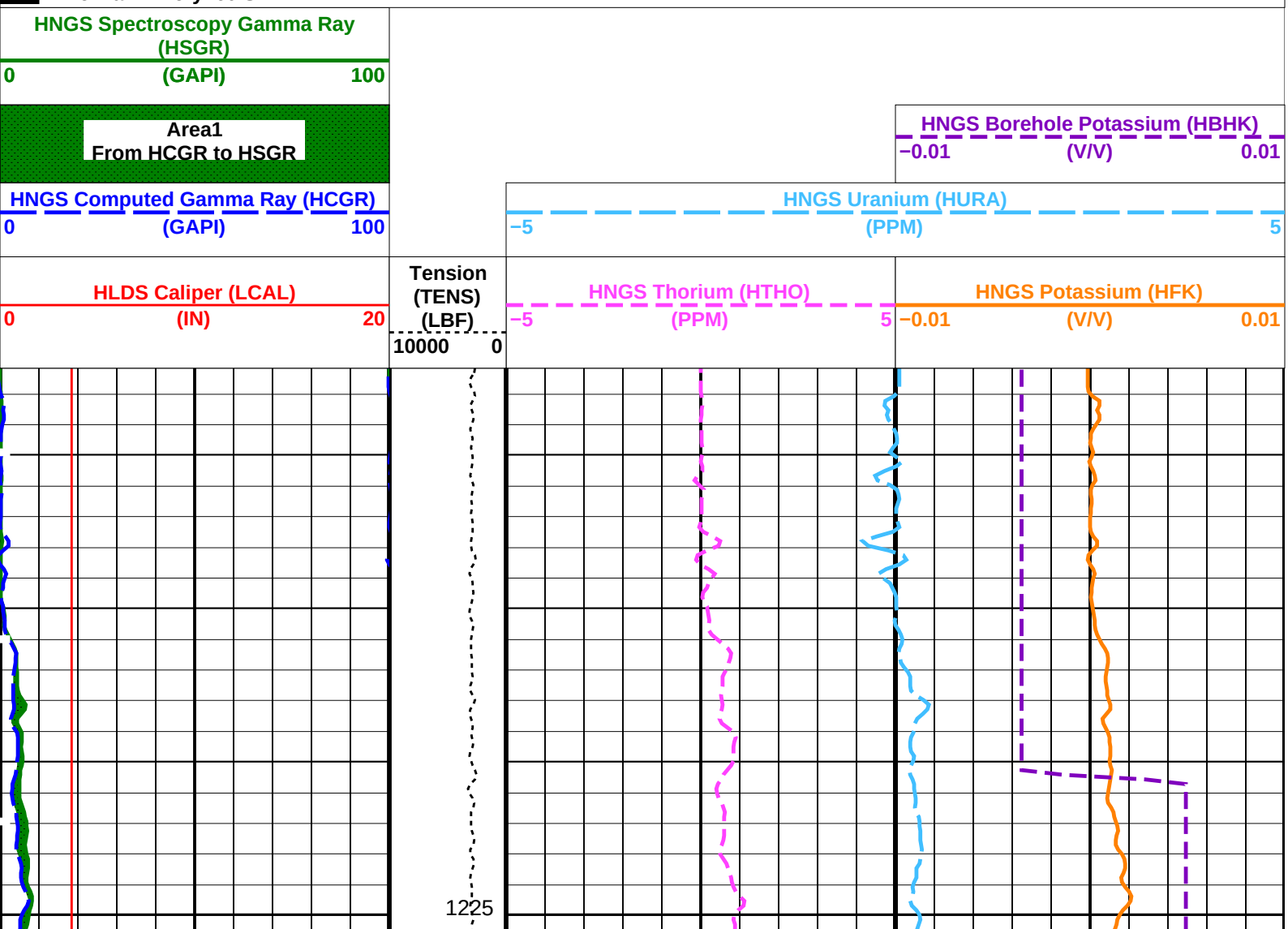
DEFAULT	MSS_LDEO_HRLA_LDL_023LUP	FN:15	PRODUCER	14−Sep−2021 20:56	1472.2 M	1209.3 M
RTB	MSS_LDEO_HRLA_LDL_023LUP	FN:16	PRODUCER	14−Sep−2021 20:56	1472.2 M	1209.3 M

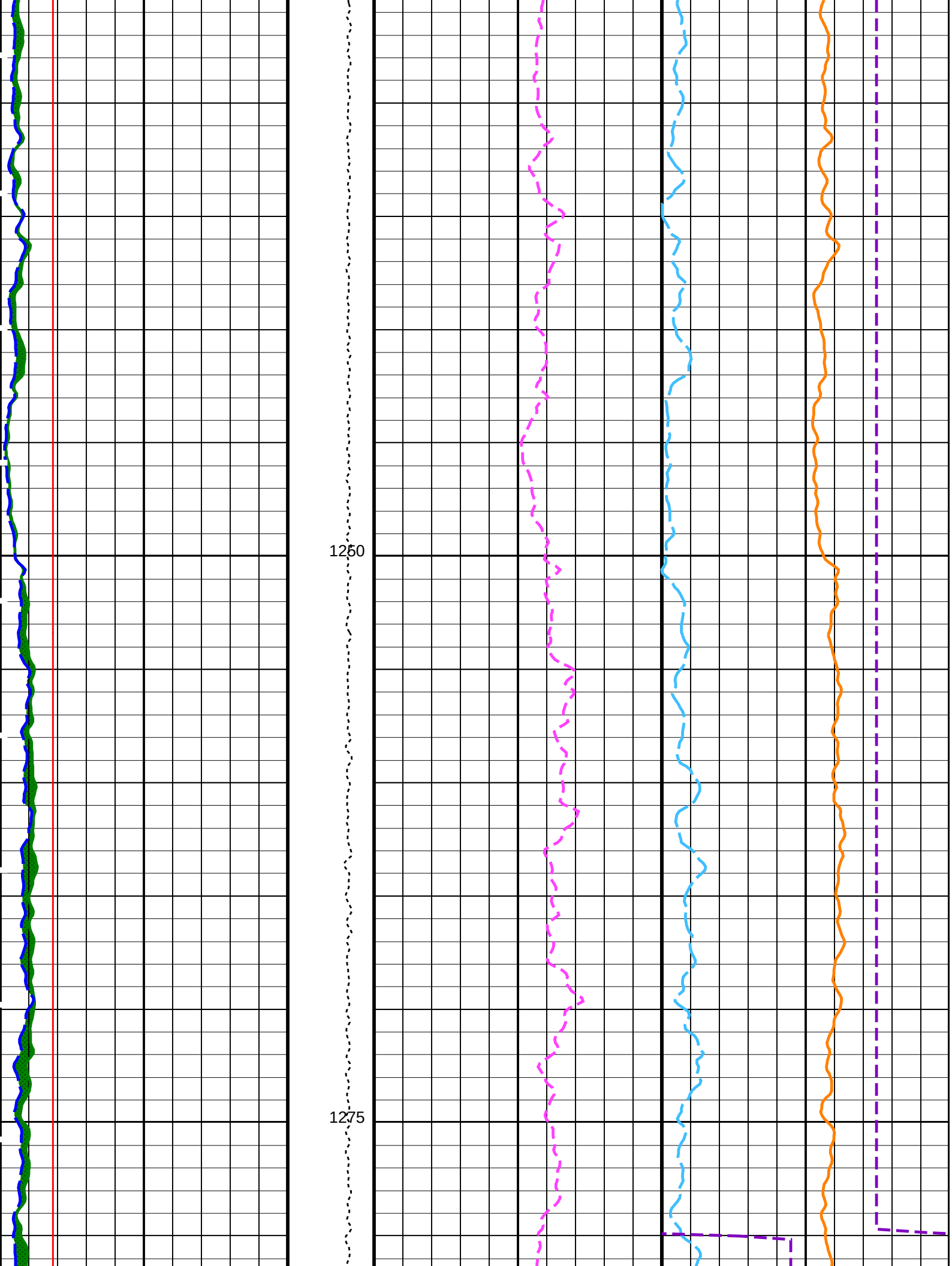
OP System Version: 19C0−187

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

PIP SUMMARY

Time Mark Every 60 S

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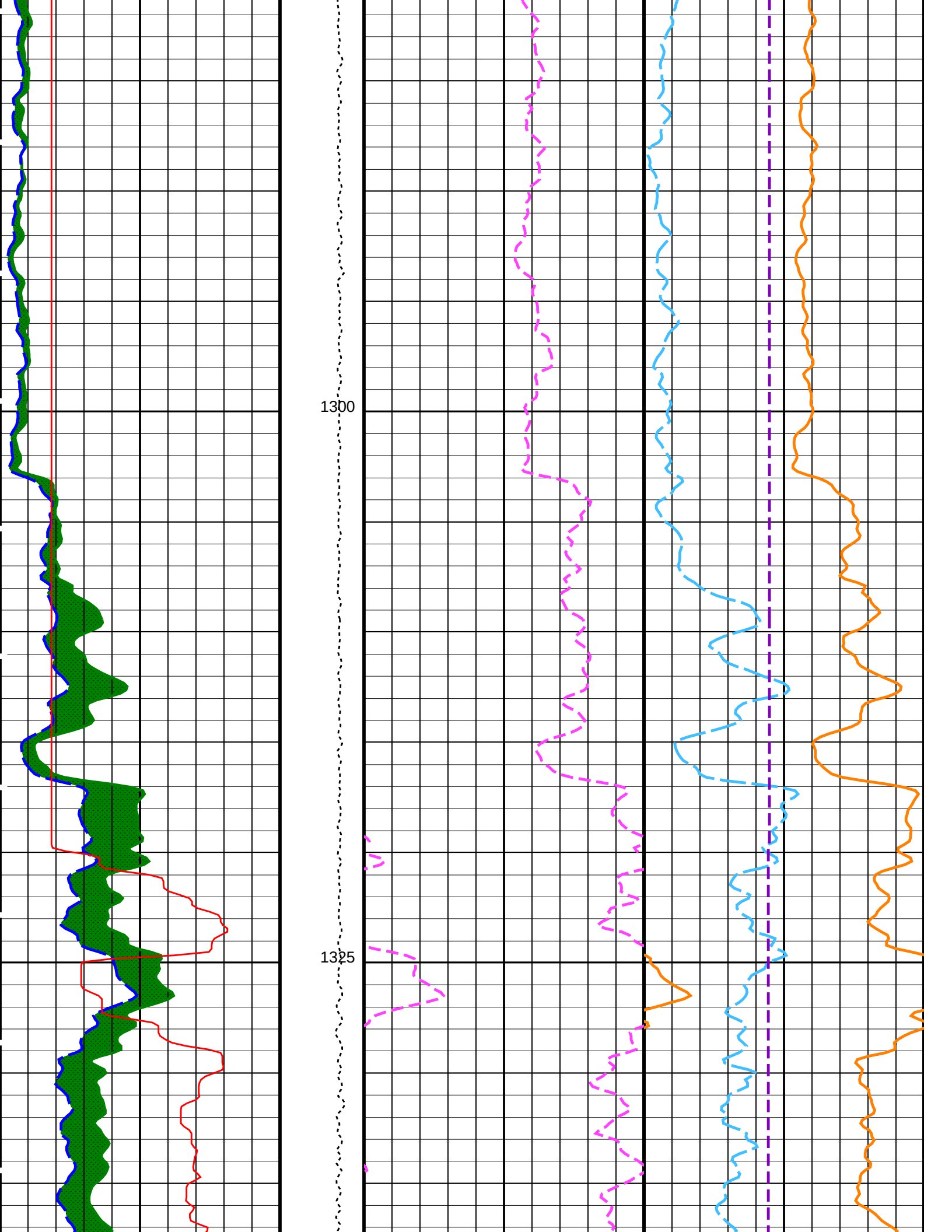
1275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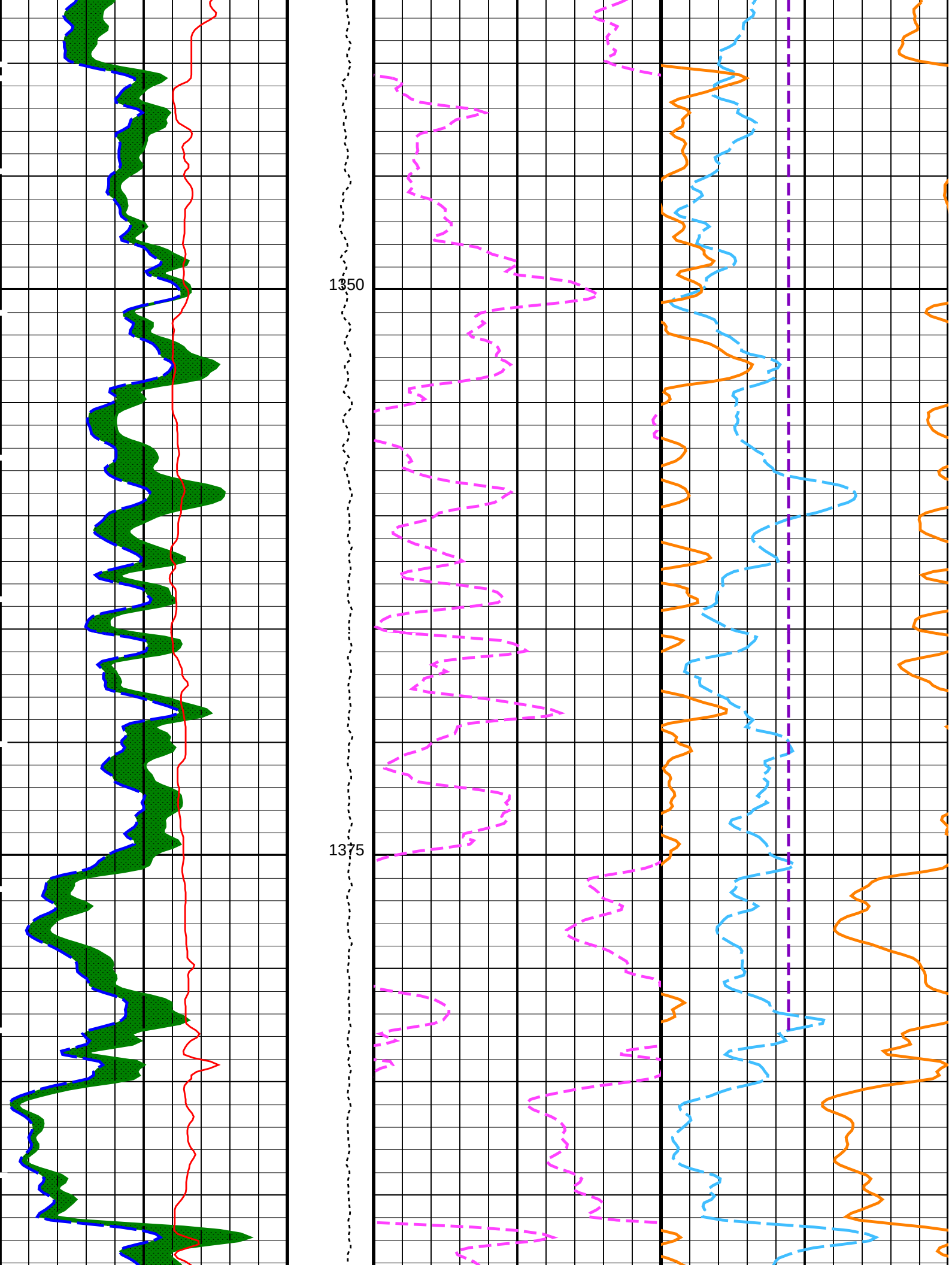
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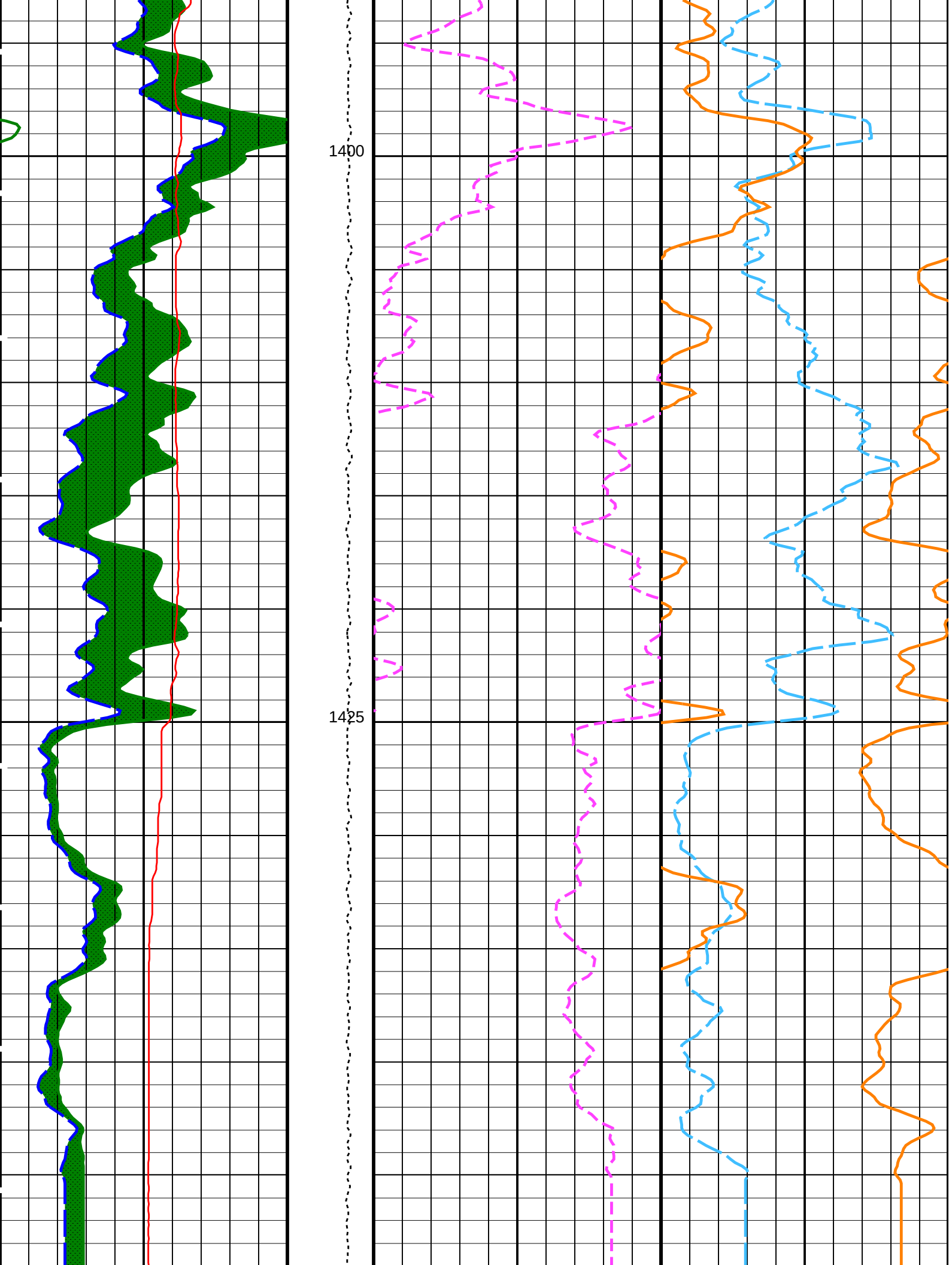
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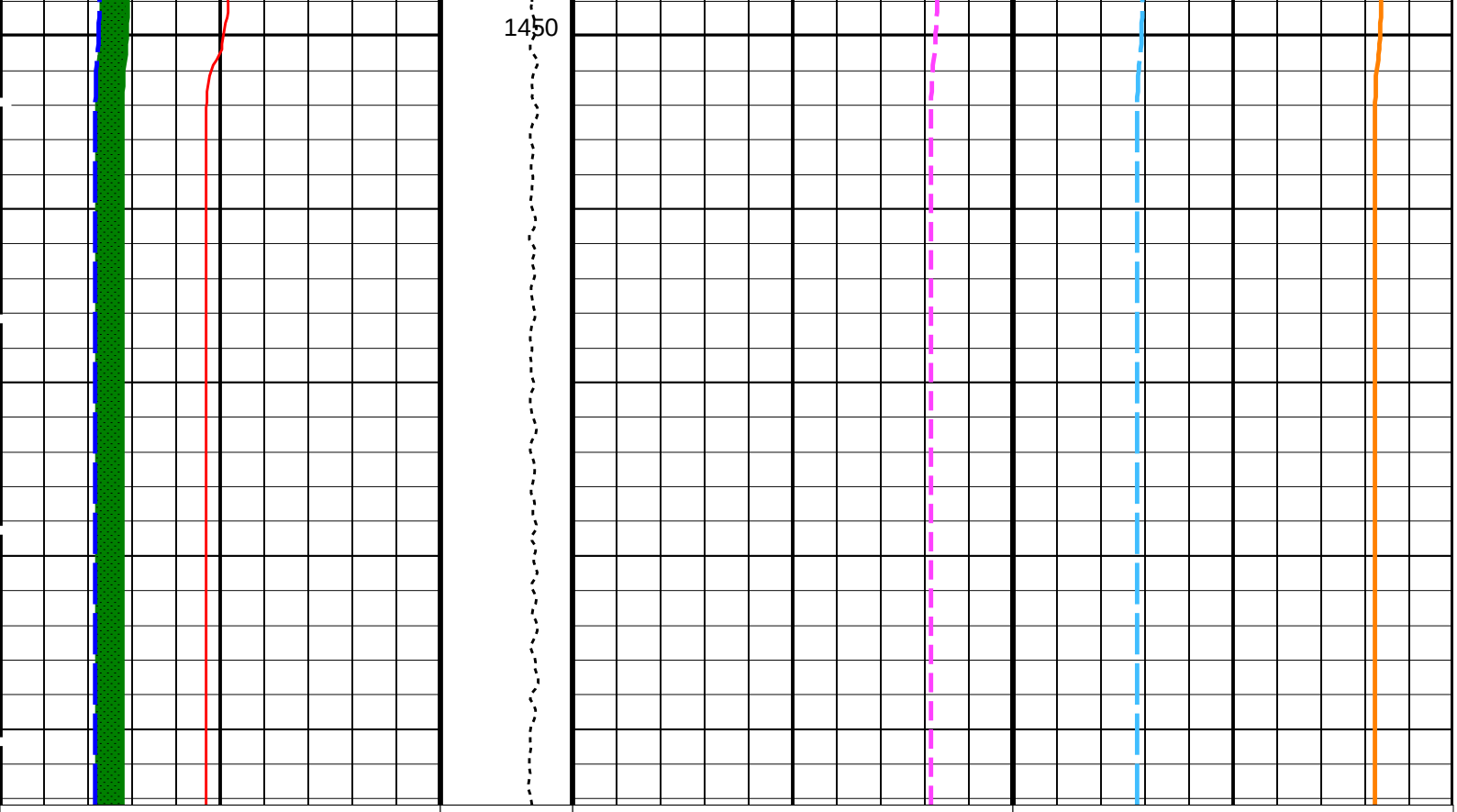


Parameters

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	−0.00170464	
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	1.01238	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.01194	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 14−Sep−2021 20:56

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
DTC−H	19C0−187		

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_023LUP	FN:15	PRODUCER	14−Sep−2021 20:56	
RTB	MSS_LDEO_HRLA_LDL_023LUP	FN:16	PRODUCER	14−Sep−2021 20:56	

Company: International Ocean Discovery Program Well: Expedition 396, Site U1572A

Output DLIS Files

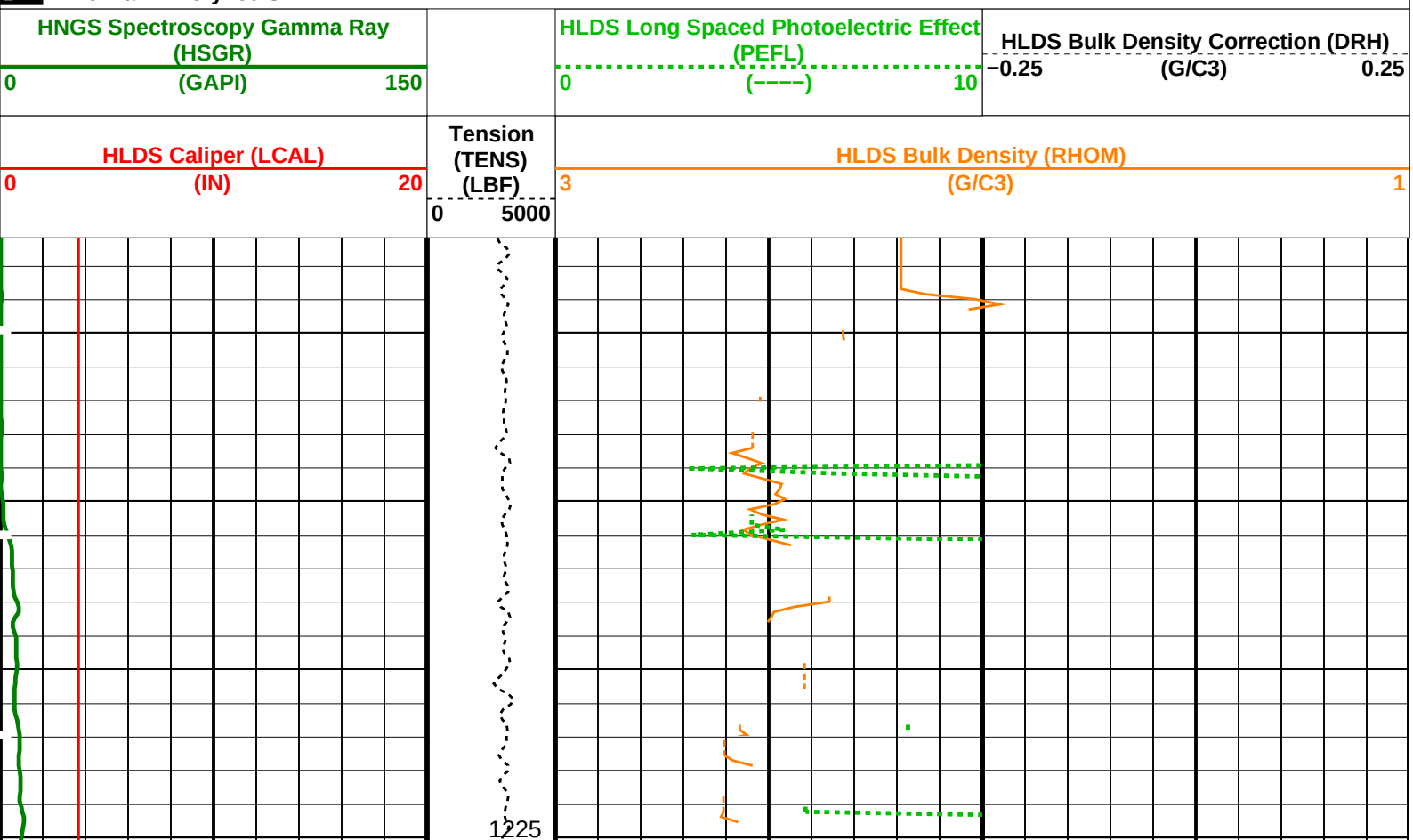
DEFAULT	MSS_LDEO_HRLA_LDL_023LUP	FN:15	PRODUCER	14−Sep−2021 20:56	1472.2 M	1209.3 M
RTB	MSS_LDEO_HRLA_LDL_023LUP	FN:16	PRODUCER	14−Sep−2021 20:56	1472.2 M	1209.3 M

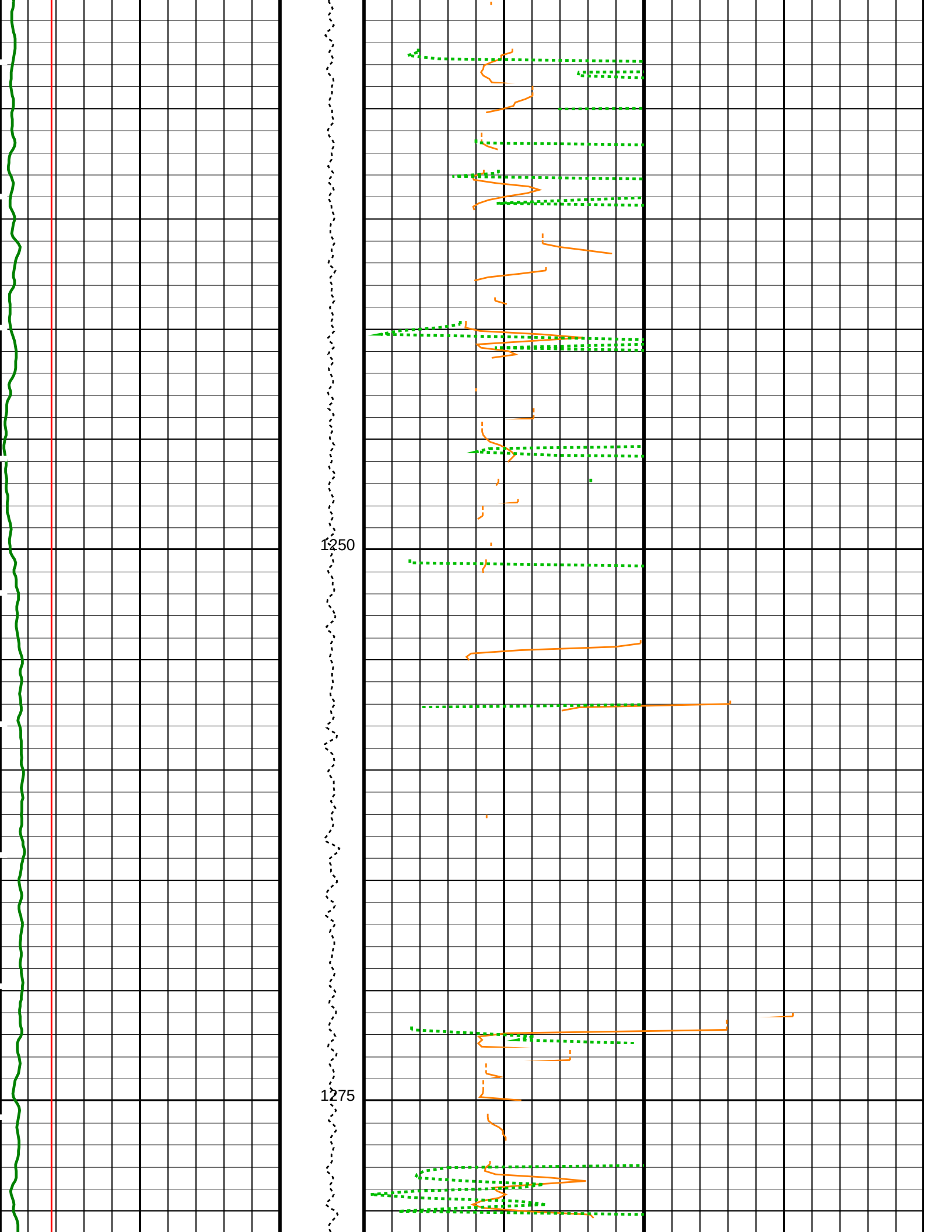
OP System Version: 19C0−187

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

PIP SUMMARY

Time Mark Every 60 S

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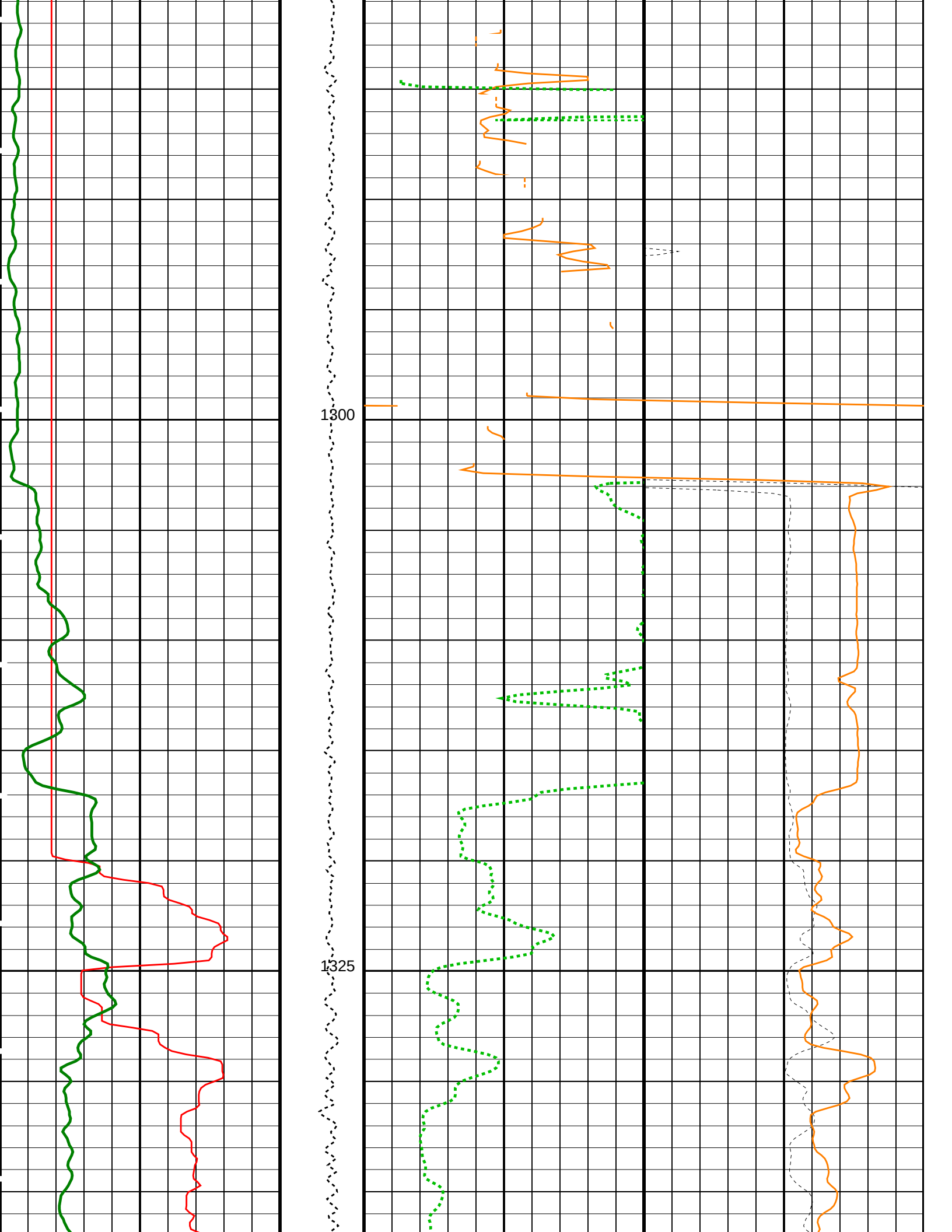
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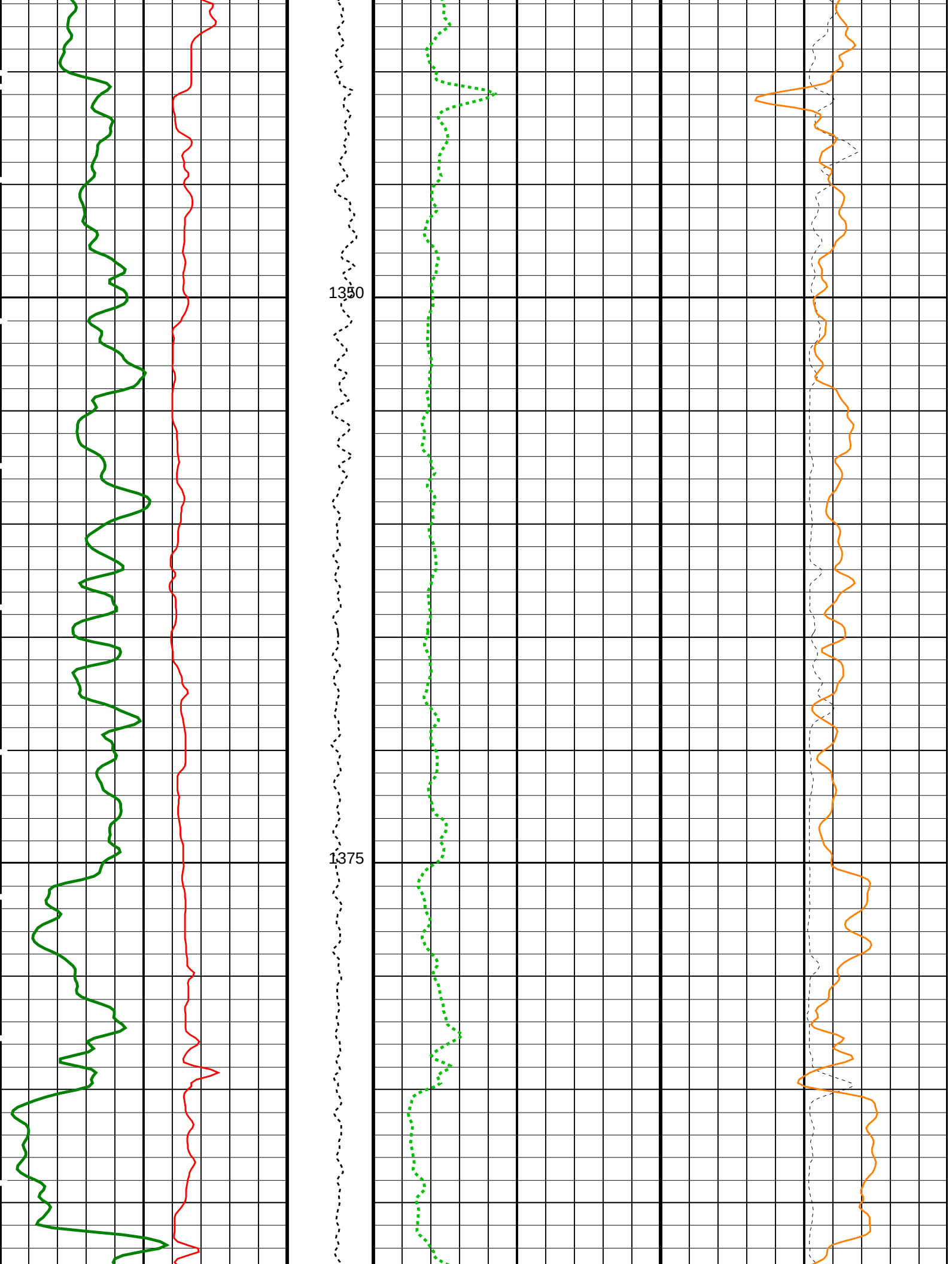
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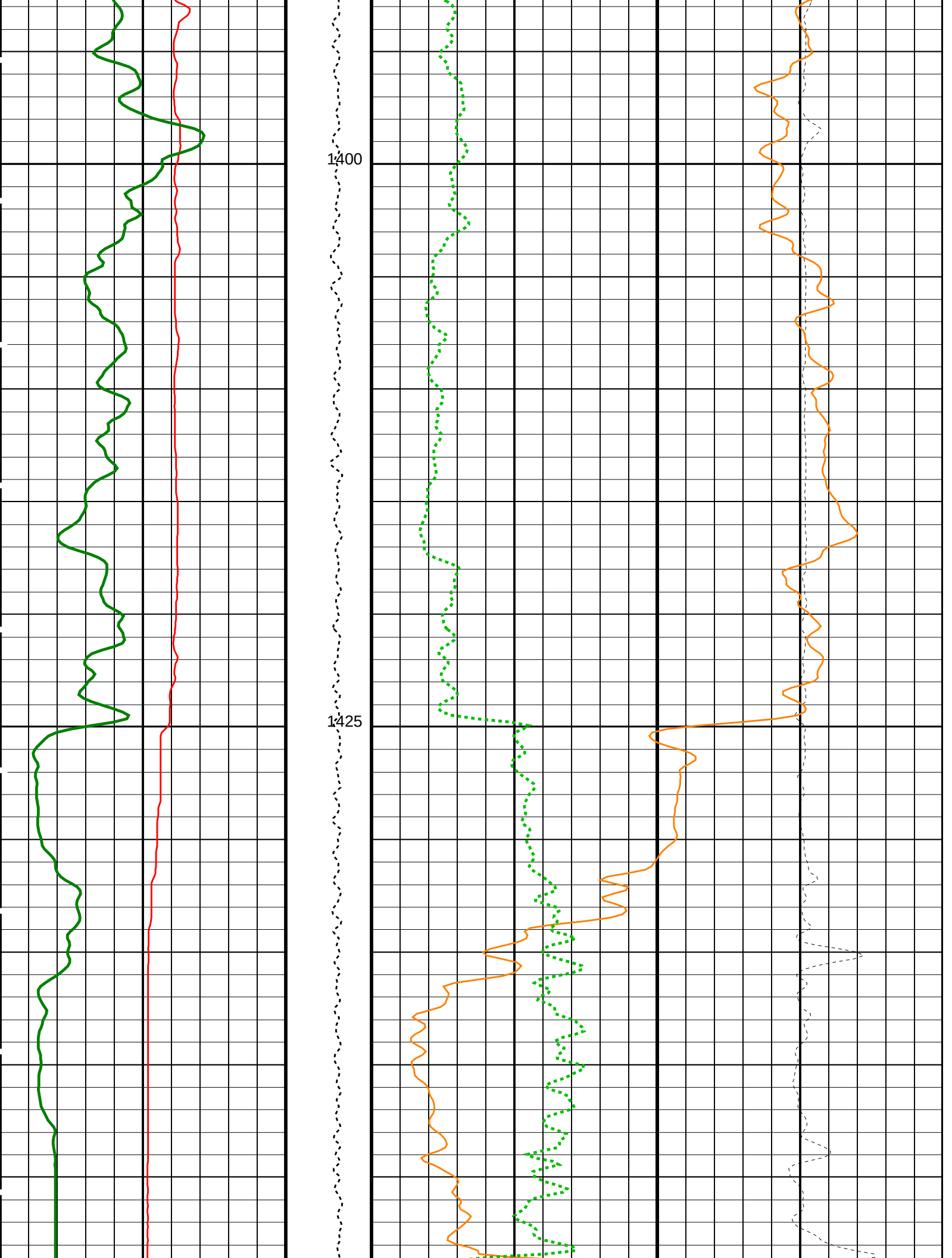
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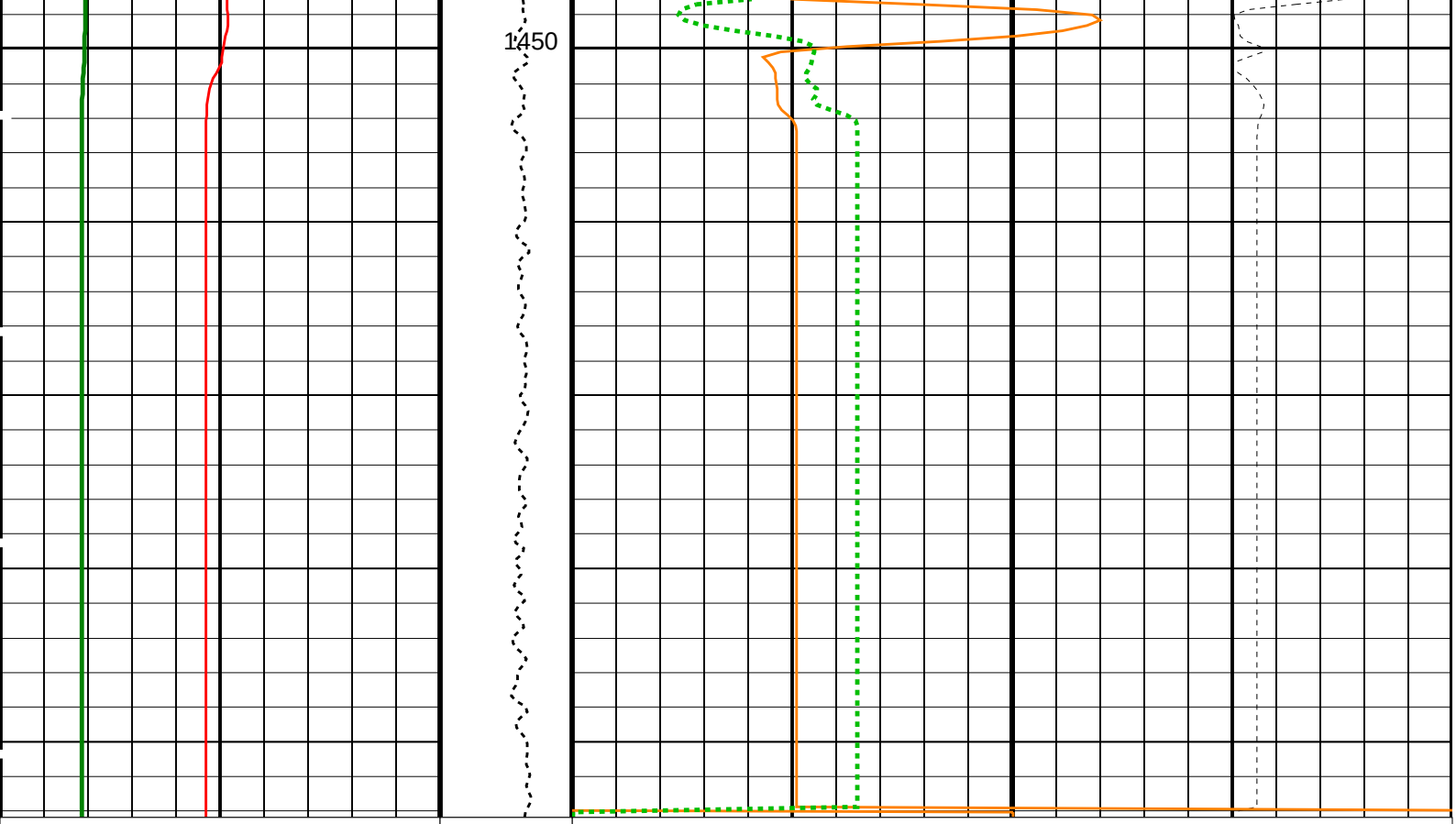


Parameters

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	ON	
MDEN	Matrix Density	2.6	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	-0.00170464	
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	1.01238	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.01194	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3

Format: HLDSDensityPE Vertical Scale: 1:200 Graphics File Created: 14−Sep−2021 20:56

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
DTC−H	19C0−187		

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_023LUP	FN:15	PRODUCER	14−Sep−2021 20:56		
RTB	MSS_LDEO_HRLA_LDL_023LUP	FN:16	PRODUCER	14−Sep−2021 20:56		

Company: International Ocean Discovery Program Well: Expedition 396, Site U1572A

Output DLIS Files

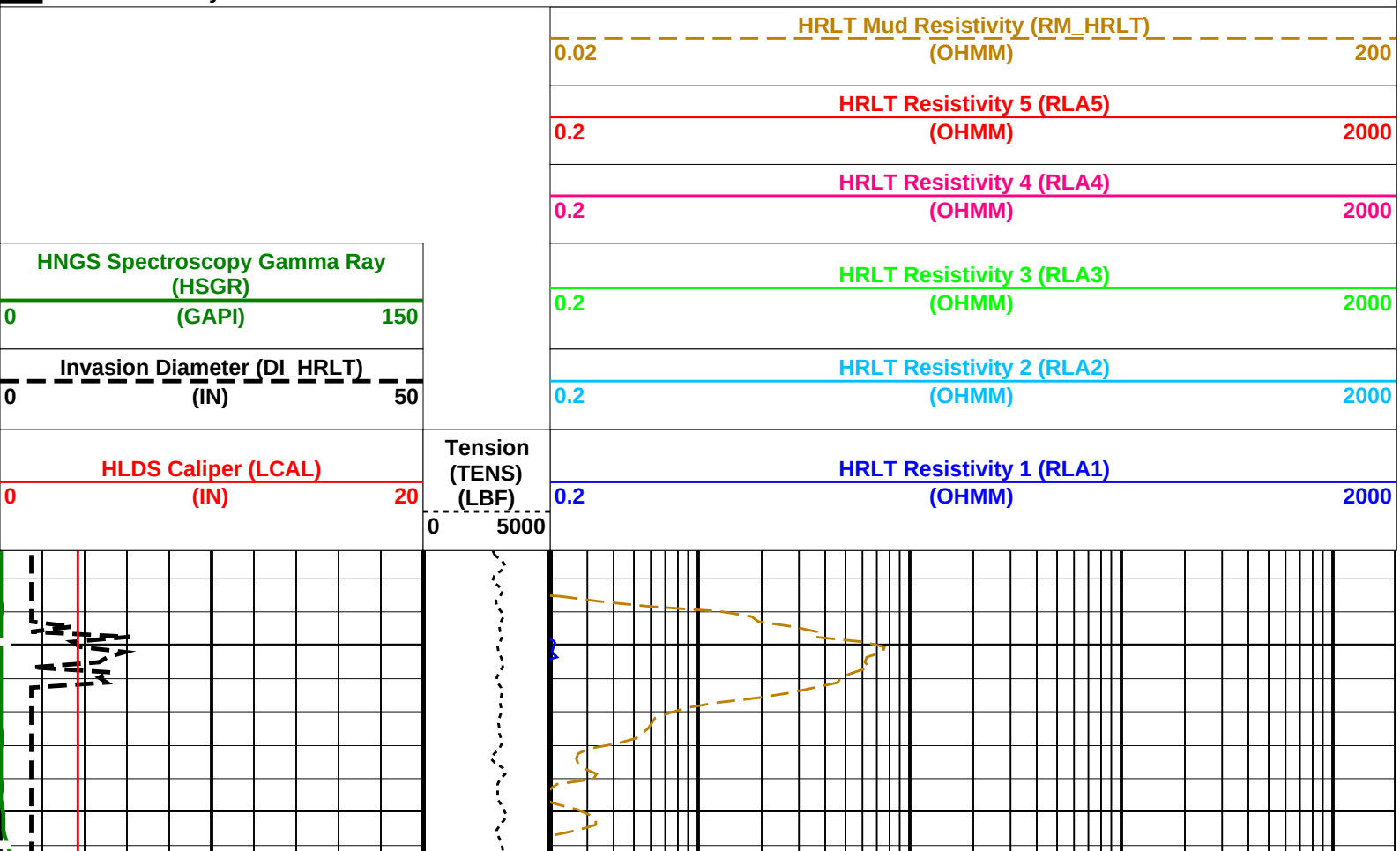
DEFAULT	MSS_LDEO_HRLA_LDL_023LUP	FN:15	PRODUCER	14−Sep−2021 20:56	1472.2 M	1209.3 M
RTB	MSS_LDEO_HRLA_LDL_023LUP	FN:16	PRODUCER	14−Sep−2021 20:56	1472.2 M	1209.3 M

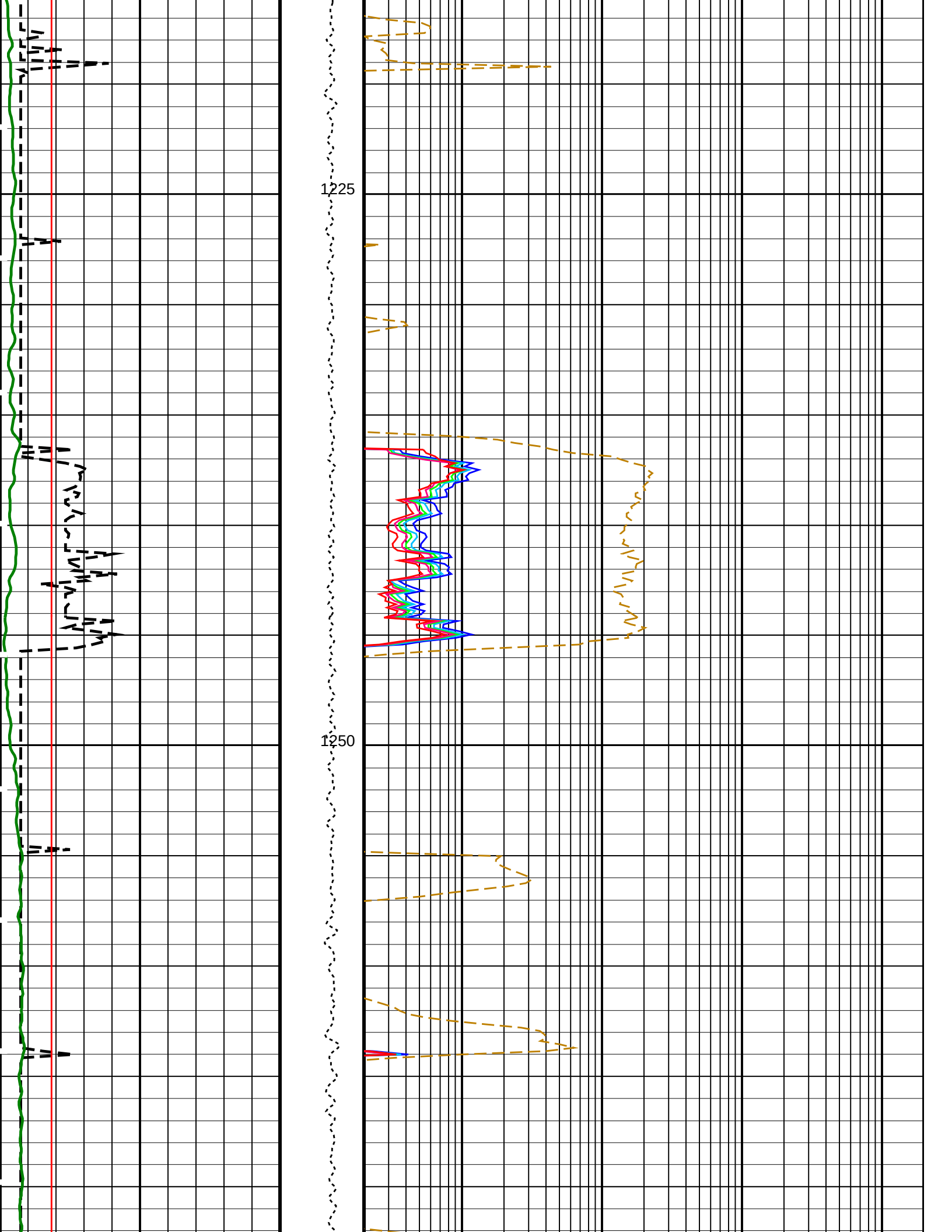
OP System Version: 19C0−187

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

PIP SUMMARY

Time Mark Every 60 S

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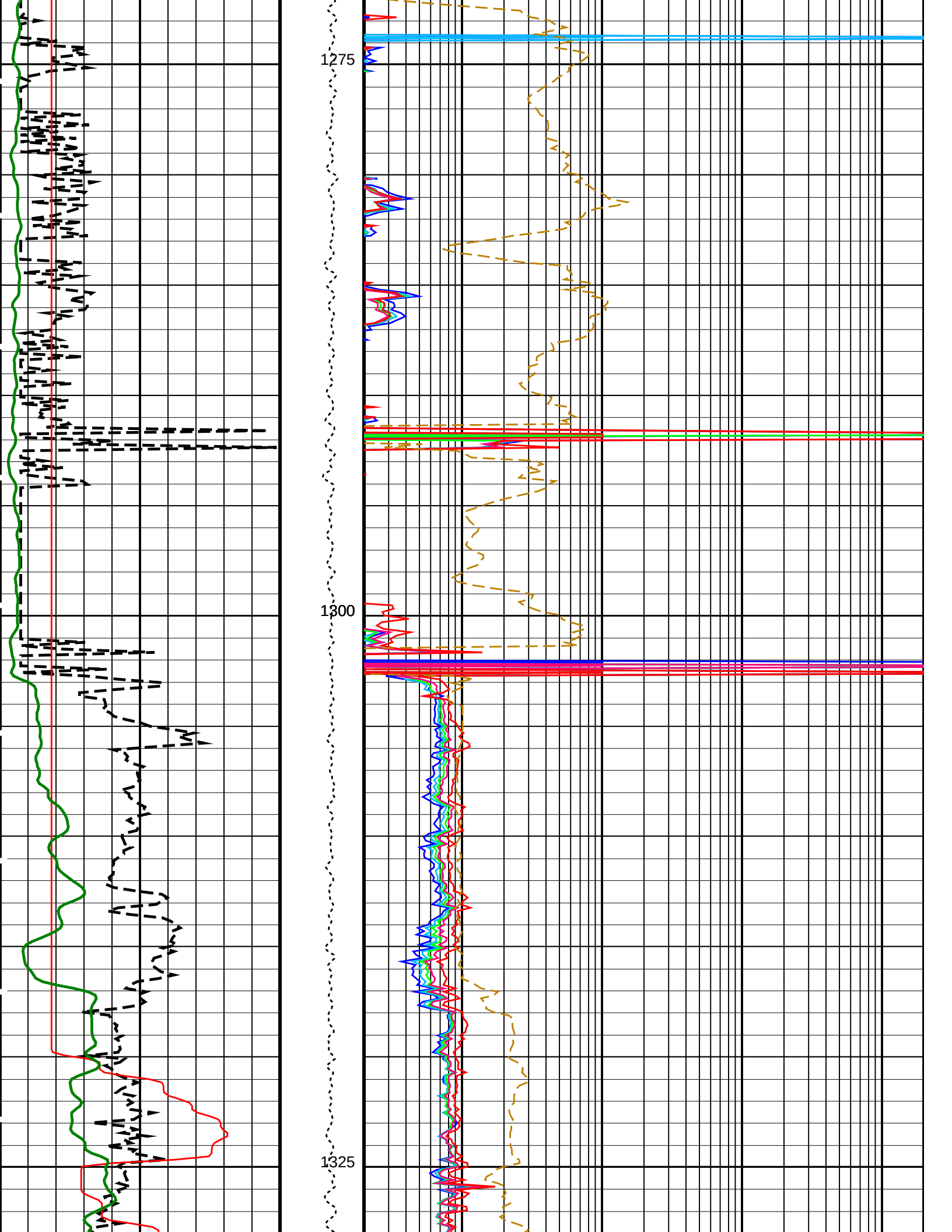
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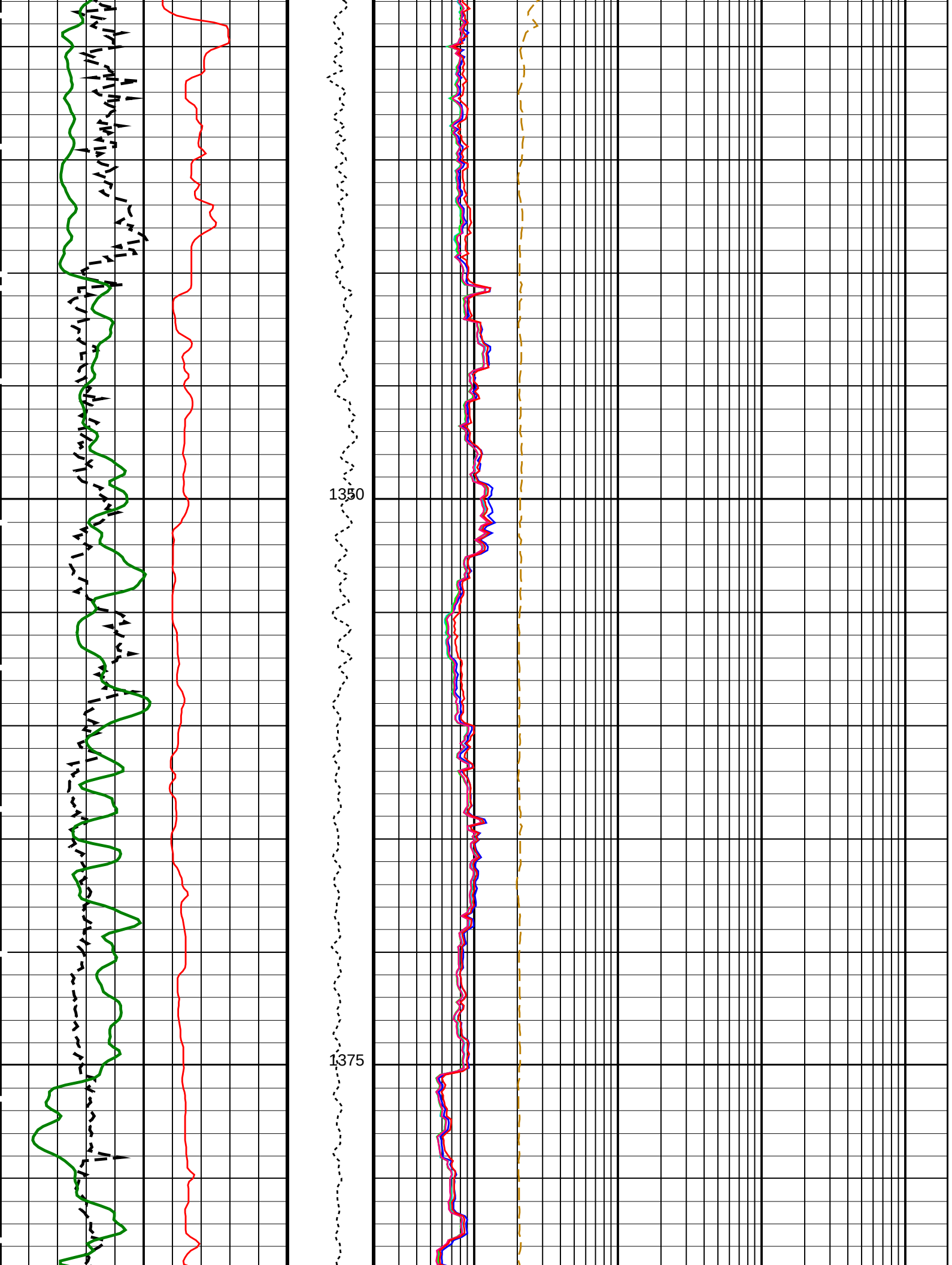
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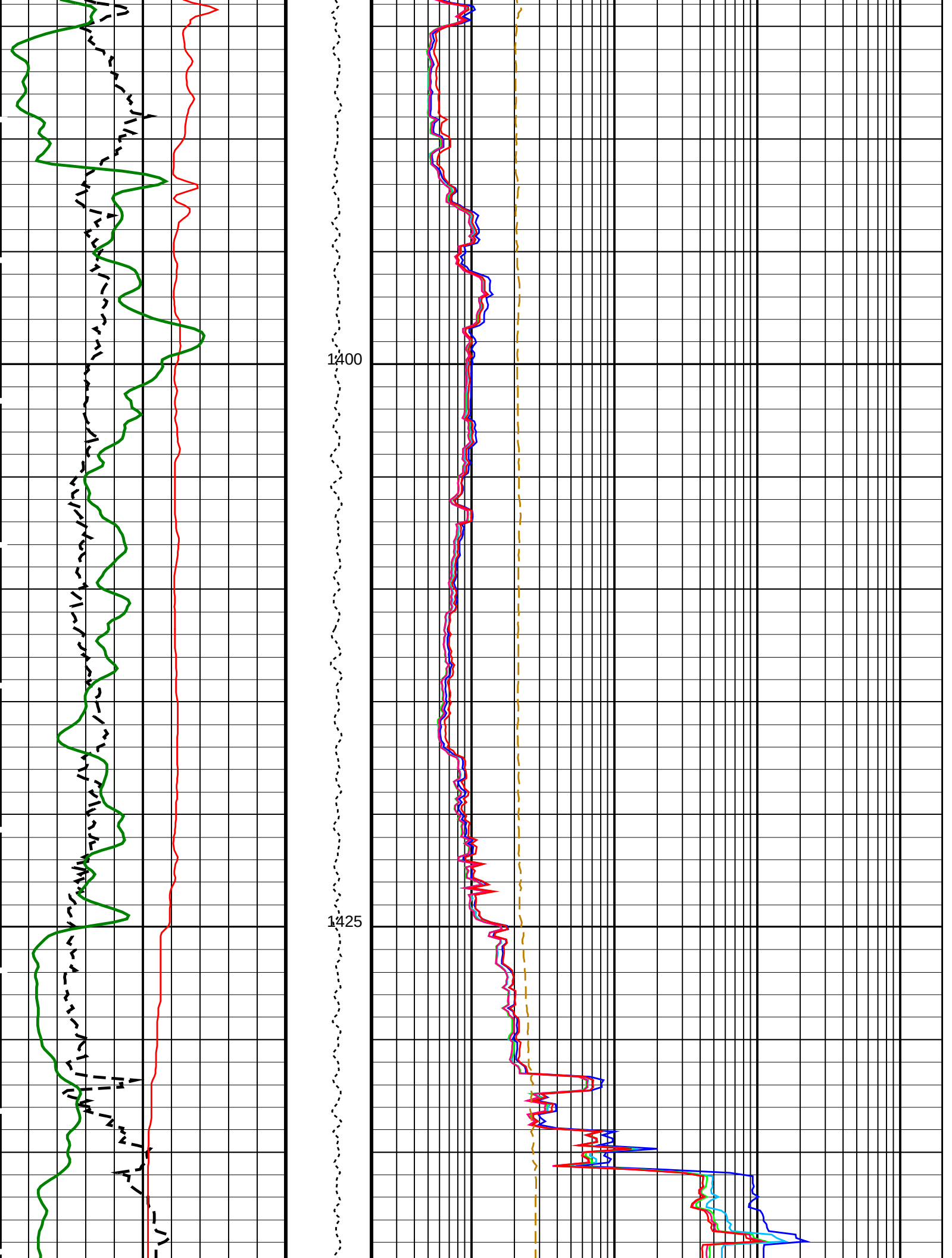
1375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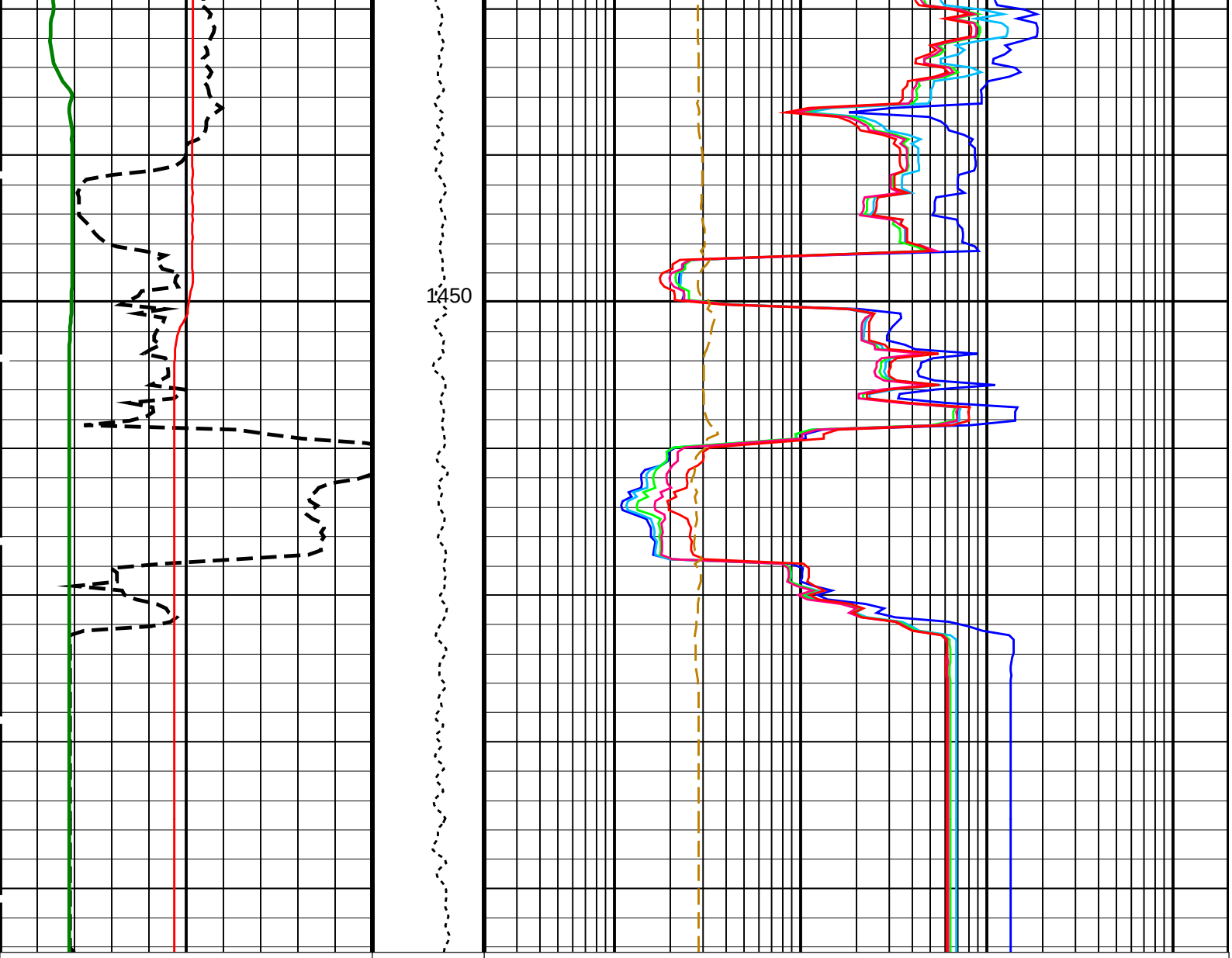


HLDS Caliper (LCAL) 0 (IN) 20	Tension (TENS) (LBF) 0 5000	HRLT Resistivity 1 (RLA1) 0.2 (OHMM) 2000
Invasion Diameter (DI_HRLT) 0 (IN) 50		HRLT Resistivity 2 (RLA2) 0.2 (OHMM) 2000
HNGS Spectroscopy Gamma Ray (HSGR) 0 (GAPI) 150		HRLT Resistivity 3 (RLA3) 0.2 (OHMM) 2000
		HRLT Resistivity 4 (RLA4) 0.2 (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)	7	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	Eccentered	
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)	7	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	−0.00170464	
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	1.01238	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.01194	
System and Miscellaneous			
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3
TD	Total Depth	2292	M

Format: HRLT Vertical Scale: 1:200 Graphics File Created: 14−Sep−2021 20:56

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
DTC−H	19C0−187		

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_023LUP	FN:15	PRODUCER	14−Sep−2021 20:56		
RTB	MSS_LDEO_HRLA_LDL_023LUP	FN:16	PRODUCER	14−Sep−2021 20:56		

Company: International Ocean Discovery Program Well: Expedition 396, Site U1572A

Output DLIS Files

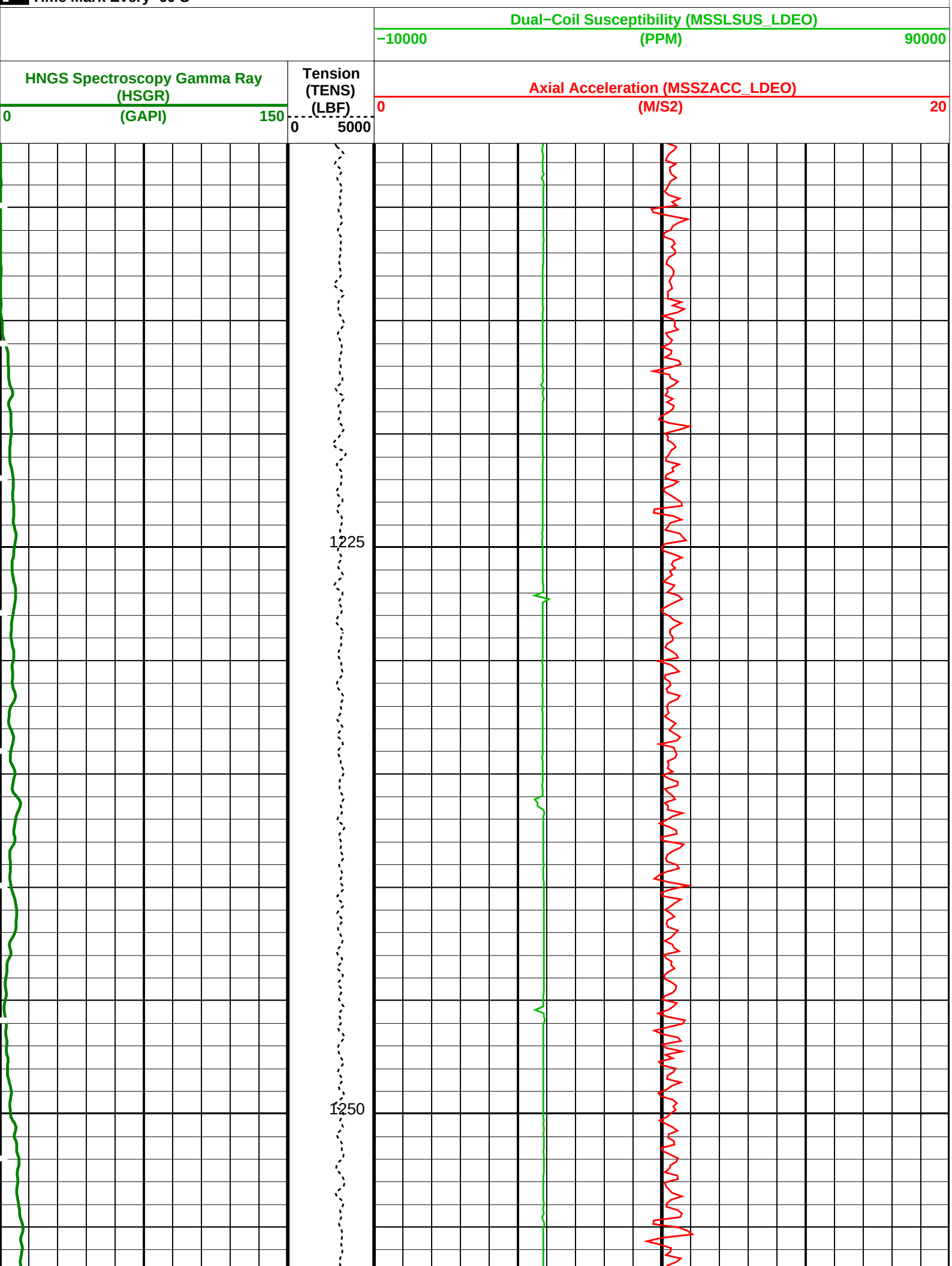
DEFAULT	MSS_LDEO_HRLA_LDL_023LUP	FN:15	PRODUCER	14−Sep−2021 20:56	1472.2 M	1209.3 M
RTB	MSS_LDEO_HRLA_LDL_023LUP	FN:16	PRODUCER	14−Sep−2021 20:56	1472.2 M	1209.3 M

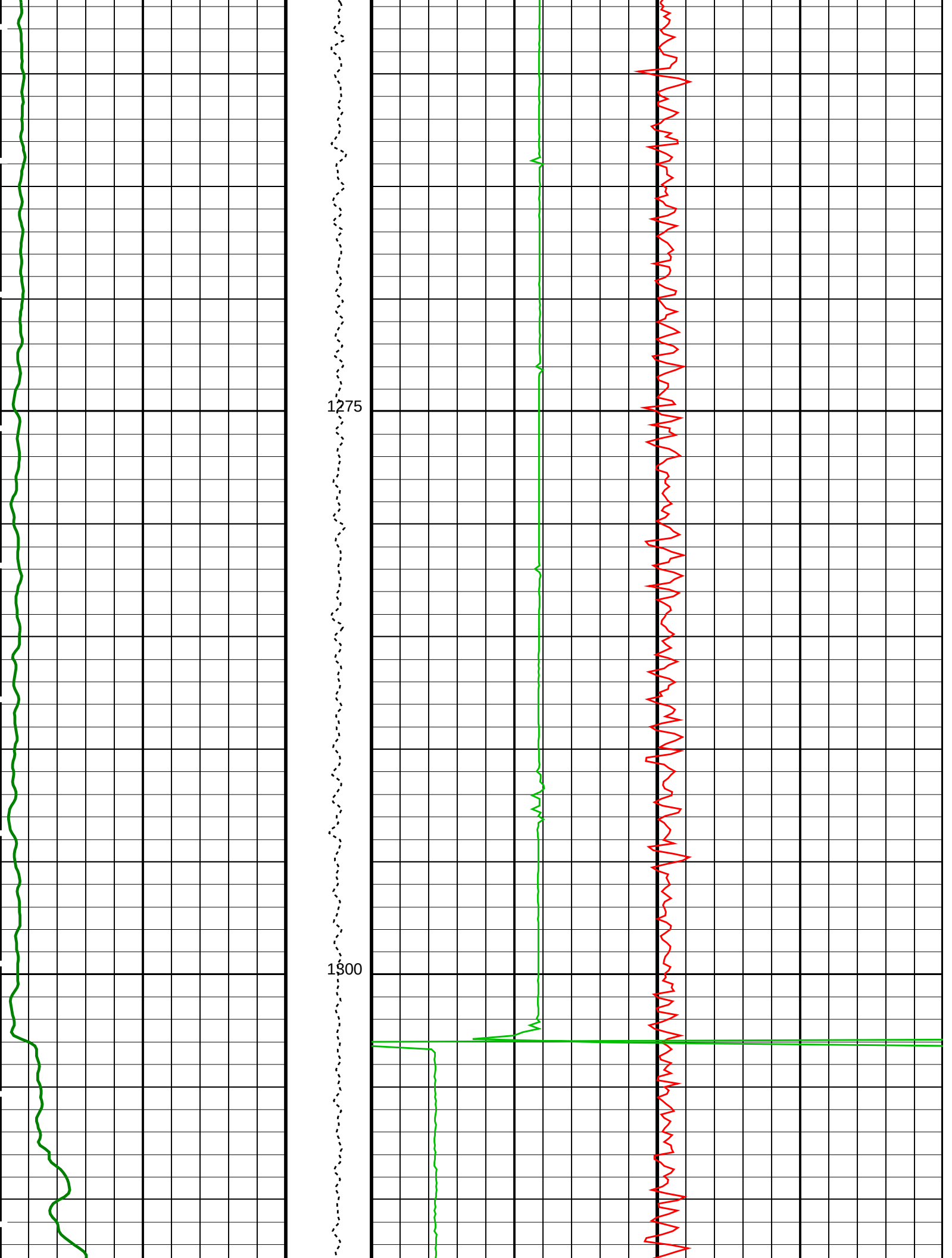
OP System Version: 19C0−187

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

PIP SUMMARY

Time Mark Every 60 S


Dual−Coil Susceptibility (MSSLSUS_LDEO)
−10000
(PPM)
90000
HNGS Spectroscopy Gamma Ray (HSGR)
0
(GAPI)
150
Tension (TENS) (LBF)
0
5000
Axial Acceleration (MSSZACC_LDEO)
0
(M/S2)
20
1225
1250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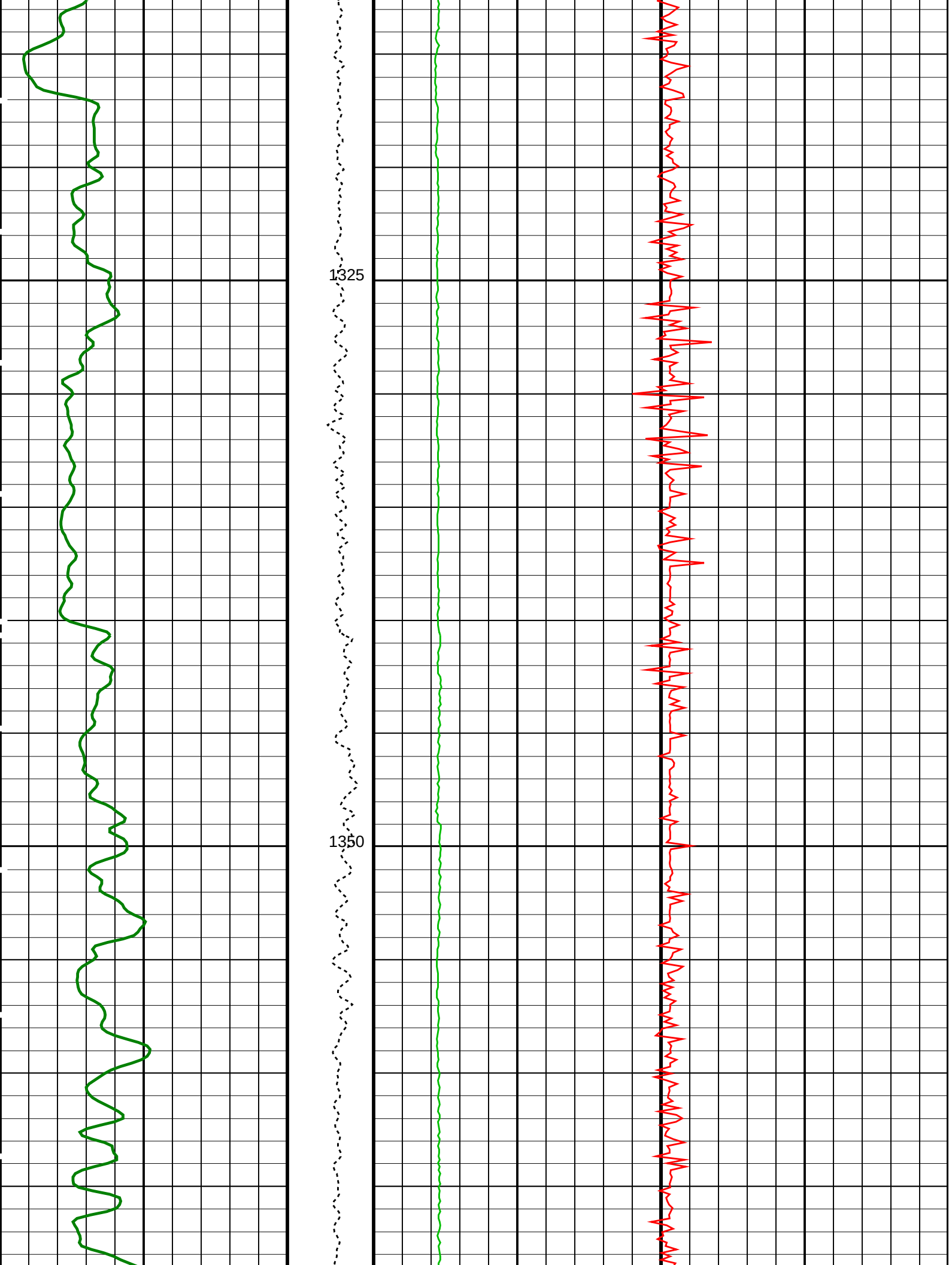
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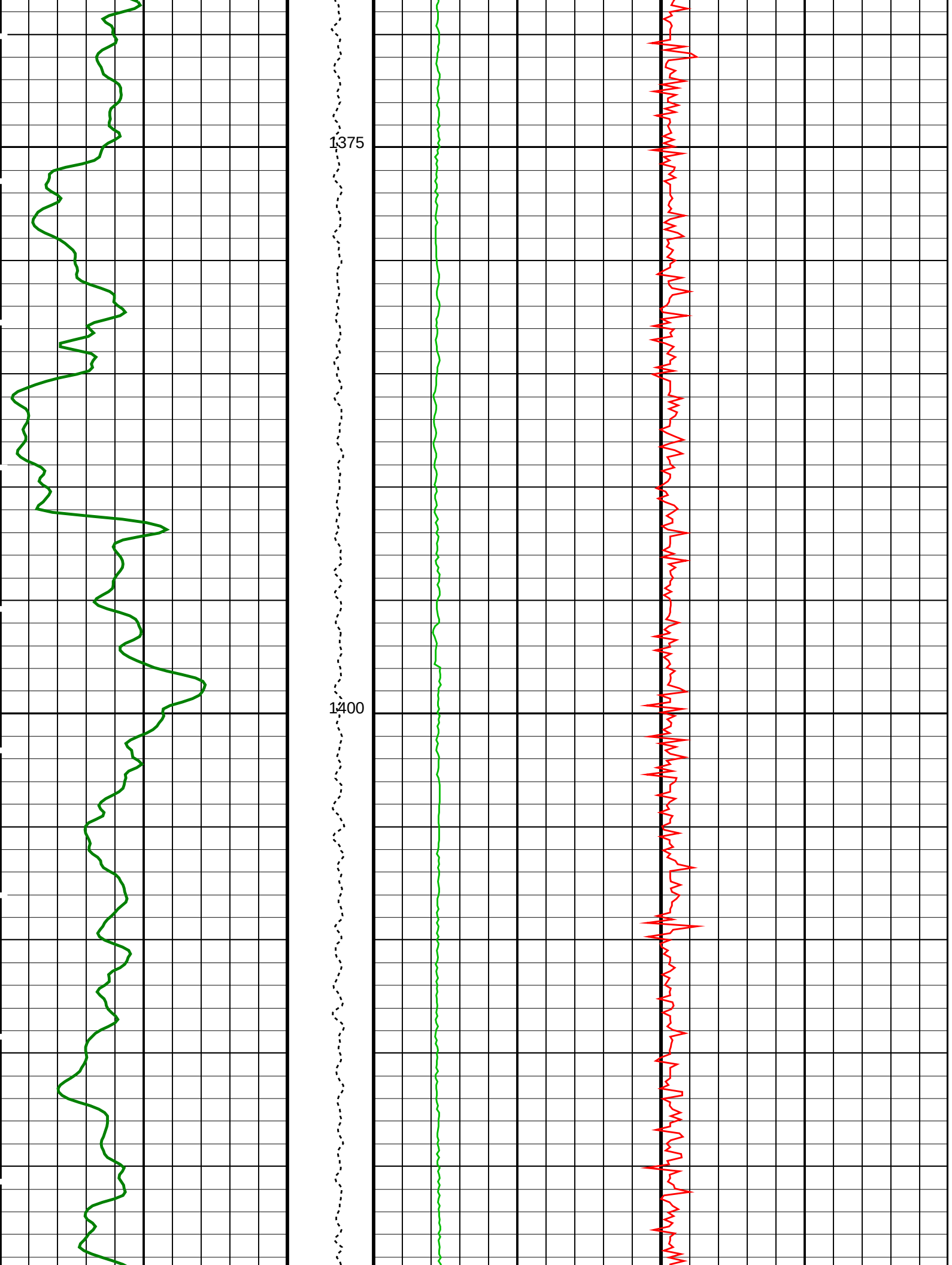
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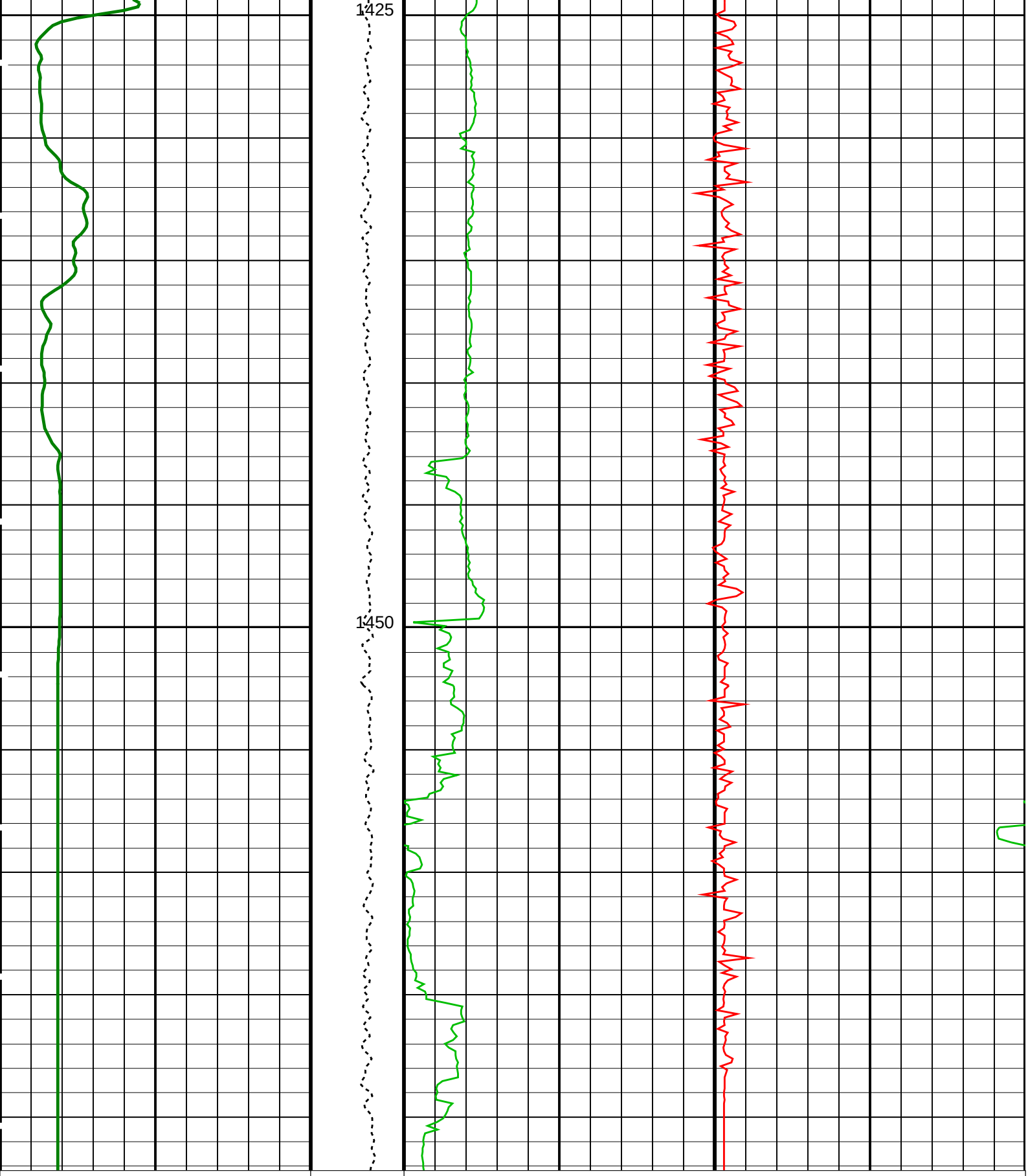


HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 150

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	−0.00170464	
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	1.01238	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.01194	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3

Format: MSS_Logging **Vertical Scale: 1:200** **Graphics File Created: 14−Sep−2021 20:56**

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
DTC−H	19C0−187		

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_023LUP	FN:15	PRODUCER	14−Sep−2021 20:56
RTB	MSS_LDEO_HRLA_LDL_023LUP	FN:16	PRODUCER	14−Sep−2021 20:56

Schlumberger

Calibrations

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: 14−Sep−2021 18:47 After: 14−Sep−2021 22:34							
HRLT M0−M1 Voltage Plus − 0	0	N/A	−318.8	−318.7	0.1131	9.681	UV
HRLT M0−M1 Voltage Plus − 1	0	N/A	−330.2	−330.3	−0.05151	9.681	UV
HRLT M0−M1 Voltage Plus − 2	0	N/A	−337.3	−337.4	−0.07089	9.681	UV
HRLT M0−M1 Voltage Plus − 3	0	N/A	−328.5	−328.4	0.01584	9.681	UV

HRLT M0−M1 Voltage Plus −	4	0	N/A	−319.9	−319.8	0.05478	9.681	UV
HRLT M0−M1 Voltage Plus −	5	0	N/A	−321.7	−321.6	0.02817	9.681	UV
HRLT M0−M1 Voltage Plus −	6	0	N/A	319.3	319.3	0.05991	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: 14−Sep−2021 18:47 After: 14−Sep−2021 22:34

HRLT M1−M2 Voltage Plus −	0	0	N/A	1739	1739	−0.8499	53.42	UV
HRLT M1−M2 Voltage Plus −	1	0	N/A	1809	1809	−0.03320	53.42	UV
HRLT M1−M2 Voltage Plus −	2	0	N/A	1841	1841	0.04541	53.42	UV
HRLT M1−M2 Voltage Plus −	3	0	N/A	1791	1791	−0.05688	53.42	UV
HRLT M1−M2 Voltage Plus −	4	0	N/A	1743	1742	−0.5289	53.42	UV
HRLT M1−M2 Voltage Plus −	5	0	N/A	1753	1753	−0.2898	53.42	UV
HRLT M1−M2 Voltage Plus −	6	0	N/A	−1758	−1758	−0.0002441	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: 14−Sep−2021 18:47 After: 14−Sep−2021 22:34

HRLT M2−M3 Voltage Plus −	0	0	N/A	1732	1731	−1.467	53.42	UV
HRLT M2−M3 Voltage Plus −	1	0	N/A	1812	1812	−0.9506	53.42	UV
HRLT M2−M3 Voltage Plus −	2	0	N/A	1846	1845	−0.7383	53.42	UV
HRLT M2−M3 Voltage Plus −	3	0	N/A	1799	1798	−1.133	53.42	UV
HRLT M2−M3 Voltage Plus −	4	0	N/A	1745	1744	−1.178	53.42	UV
HRLT M2−M3 Voltage Plus −	5	0	N/A	1757	1756	−1.473	53.42	UV
HRLT M2−M3 Voltage Plus −	6	0	N/A	−1750	−1749	0.9375	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: 14−Sep−2021 18:47 After: 14−Sep−2021 22:34

HRLT A3−A4 Voltage Plus −	0	0	N/A	68630	68620	−8.156	2100	UV
HRLT A3−A4 Voltage Plus −	1	0	N/A	71630	71660	36.57	2100	UV
HRLT A3−A4 Voltage Plus −	2	0	N/A	73270	73270	0	2100	UV
HRLT A3−A4 Voltage Plus −	3	0	N/A	71670	71680	10.63	2100	UV
HRLT A3−A4 Voltage Plus −	4	0	N/A	69480	69480	2.008	2100	UV
HRLT A3−A4 Voltage Plus −	5	0	N/A	69950	69940	−3.883	2100	UV
HRLT A3−A4 Voltage Plus −	6	0	N/A	−68170	−68200	−29.48	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: 14−Sep−2021 18:47 After: 14−Sep−2021 22:34

HRLT A4−A5 Voltage Plus −	0	0	N/A	68720	68710	−6.906	2100	UV
HRLT A4−A5 Voltage Plus −	1	0	N/A	71850	71870	19.20	2100	UV
HRLT A4−A5 Voltage Plus −	2	0	N/A	73450	73450	0.8203	2100	UV
HRLT A4−A5 Voltage Plus −	3	0	N/A	71800	71830	33.40	2100	UV
HRLT A4−A5 Voltage Plus −	4	0	N/A	69580	69580	0	2100	UV
HRLT A4−A5 Voltage Plus −	5	0	N/A	70040	70040	−5.180	2100	UV
HRLT A4−A5 Voltage Plus −	6	0	N/A	−68370	−68400	−33.80	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: 14−Sep−2021 18:47 After: 14−Sep−2021 22:34

HRLT A5−A6 Voltage Plus −	0	0	N/A	68570	68560	−9.406	2100	UV
HRLT A5−A6 Voltage Plus −	1	0	N/A	71680	71730	51.21	2100	UV
HRLT A5−A6 Voltage Plus −	2	0	N/A	73280	73320	49.30	2100	UV
HRLT A5−A6 Voltage Plus −	3	0	N/A	71670	71690	15.94	2100	UV
HRLT A5−A6 Voltage Plus −	4	0	N/A	69450	69440	−5.344	2100	UV
HRLT A5−A6 Voltage Plus −	5	0	N/A	69900	69900	−0.6406	2100	UV
HRLT A5−A6 Voltage Plus −	6	0	N/A	−68220	−68240	−22.54	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: 14−Sep−2021 18:47 After: 14−Sep−2021 22:34

HRLT Torpedo−M0 Voltage −	0	0	N/A	−68100	−68090	8.984	2100	UV
HRLT Torpedo−M0 Voltage −	1	0	N/A	−71490	−71520	−25.22	2100	UV
HRLT Torpedo−M0 Voltage −	2	0	N/A	−73130	−73150	−17.20	2100	UV
HRLT Torpedo−M0 Voltage −	3	0	N/A	−71580	−71610	−31.10	2100	UV
HRLT Torpedo−M0 Voltage −	4	0	N/A	−69410	−69410	0	2100	UV
HRLT Torpedo−M0 Voltage −	5	0	N/A	−69870	−69870	4.328	2100	UV
HRLT Torpedo−M0 Voltage −	6	0	N/A	67980	68000	20.62	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: 14−Sep−2021 18:47 After: 14−Sep−2021 22:34

HRLT Bridle#9−M0 Voltage −	0	0	N/A	−68160	−68140	27.55	2100	UV
HRLT Bridle#9−M0 Voltage −	1	0	N/A	−71600	−71600	7.828	2100	UV
HRLT Bridle#9−M0 Voltage −	2	0	N/A	−73230	−73250	−15.64	2100	UV
HRLT Bridle#9−M0 Voltage −	3	0	N/A	−71670	−71670	−0.7188	2100	UV
HRLT Bridle#9−M0 Voltage −	4	0	N/A	−69470	−69450	17.23	2100	UV
HRLT Bridle#9−M0 Voltage −	5	0	N/A	−69930	−69910	16.70	2100	UV
HRLT Bridle#9−M0 Voltage −	6	0	N/A	68080	68090	18.96	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: 14−Sep−2021 18:47 After: 14−Sep−2021 22:34

HRLT Source Current Plus − 0	0	N/A	284.2	284.2	−0.005280	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: 14−Sep−2021 18:47 After: 14−Sep−2021 22:34

HRLT Vertical Voltage Pl − 0	0	N/A	−320.8	−320.3	0.4817	9.681	UV
HRLT Vertical Voltage Pl − 1	0	N/A	−325.3	−325.0	0.2837	9.681	UV
HRLT Vertical Voltage Pl − 2	0	N/A	−331.1	−330.8	0.3292	9.681	UV
HRLT Vertical Voltage Pl − 3	0	N/A	−320.6	−320.2	0.3799	9.681	UV
HRLT Vertical Voltage Pl − 4	0	N/A	−309.2	−308.8	0.3884	9.681	UV
HRLT Vertical Voltage Pl − 5	0	N/A	−325.8	−325.4	0.4074	9.681	UV
HRLT Vertical Voltage Pl − 6	0	N/A	327.2	326.9	−0.2790	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: Calibration out of date 2−May−2021 7:20 Before: 14−Sep−2021 18:50 After: 14−Sep−2021 22:37

SS Cs Resolution Bkg	9.000	7.698	7.758	7.599	−0.1594	1.800	%
LS Cs Resolution Bkg	9.000	7.989	8.002	8.024	0.02226	1.800	%
LSW1 Background	100.0	71.96	70.11	68.63	−1.484	3.000	CPS
LSW2 Background	100.0	65.02	64.73	63.85	−0.8731	3.000	CPS
LSW3 Background	200.0	146.1	145.1	144.5	−0.6333	6.000	CPS
LSW4 Background	250.0	183.2	181.9	179.2	−2.707	7.500	CPS
LSW5 Background	600.0	424.9	418.4	421.1	2.726	18.00	CPS
SSW1 Background	100.0	68.97	68.88	67.84	−1.041	3.000	CPS
SSW2 Background	200.0	118.2	117.4	117.6	0.1385	6.000	CPS
SSW3 Background	500.0	331.3	328.6	327.9	−0.6940	15.00	CPS
SSW4 Background	270.0	178.4	177.6	177.7	0.07129	8.100	CPS
SSW5 Background	200.0	127.4	126.3	127.3	0.9480	6.000	CPS

Hostile Litho−Density Sonde Wellsite Calibration − Aluminum Measurement
Master: Calibration out of date 2−May−2021 7:46

LSW1 Aluminum	600.0	437.4	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	651.2	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	787.2	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	396.8	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	364.1	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2070	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	5832	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	8191	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	3322	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	384.2	N/A	N/A	N/A	N/A	CPS

Hostile Litho−Density Sonde Wellsite Calibration − Lithology Measurement
Master: Calibration out of date 2−May−2021 7:41

LSW1 Iron	400.0	298.6	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	524.2	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	699.6	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	360.1	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	333.9	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1520	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	4870	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	7479	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3030	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	343.3	N/A	N/A	N/A	N/A	CPS

Hostile Litho−Density Sonde Wellsite Calibration − Caliper Calibration
Before: Calibration out of date 2−May−2021 8:12

HLDS Caliper Small Ring	12.00	N/A	16.10	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	15.19	N/A	20.13	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 10:04 Before: 14−Sep−2021 18:50 After: 14−Sep−2021 22:38

Na 511 Peak Loc	40.00	39.25	39.45	39.63	0.1818	1.000	
Na 511 Peak Res	15.50	16.53	16.75	15.84	−0.9083	2.000	%
High Voltage	1150	1197	1171	1173	1.727	N/A	V
Na 1785 Peak Loc	142.6	141.8	142.8	142.7	−0.1399	7.000	
Na 1785 Peak Res	8.500	8.905	8.912	8.480	−0.4322	2.000	%
Temperature	15.50	26.59	13.02	13.00	−0.02270	N/A	DEGC
Na Count Rate	45.00	12.01	10.20	10.37	0.1789	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration − Detector 2 Check
Master: Calibration out of date 2−May−2021 10:04 Before: 14−Sep−2021 18:50 After: 14−Sep−2021 22:38

Na 511 Peak Loc	40.00	39.88	39.58	39.56	−0.02211	1.000	

Na 511 Peak Res	15.50	15.29	16.14	15.93	−0.2089	2.000	%
High Voltage	1150	1122	1097	1095	−2.425	N/A	V
Na 1785 Peak Loc	142.6	142.6	142.9	139.6	−3.287	7.000	
Na 1785 Peak Res	8.500	8.040	9.365	9.609	0.2438	2.000	%
Temperature	15.50	27.21	13.58	14.41	0.8287	N/A	DEGC
Na Count Rate	45.00	12.32	10.33	10.83	0.4979	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 10:04 Before: 14−Sep−2021 18:50 After: 14−Sep−2021 22:38

Coincidence Count Rate Ratio	1.000	0.9728	0.9925	0.9572	−0.03536	0.05000	

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

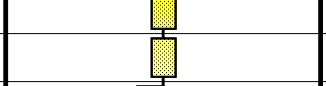
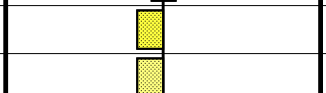
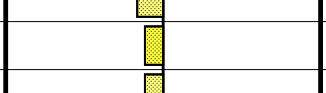
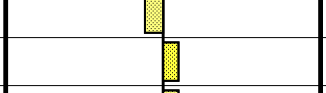
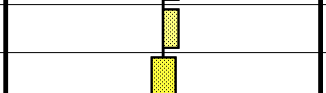
Idx	Phase	HRLT M0−M1 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−318.8	−322.7	−280.7	−379.7
	After		−318.7			
1	Before		−330.2	−322.7	−280.7	−379.7
	After		−330.3			
2	Before		−337.3	−322.7	−280.7	−379.7
	After		−337.4			
3	Before		−328.5	−322.7	−280.7	−379.7
	After		−328.4			
4	Before		−319.9	−322.7	−280.7	−379.7
	After		−319.8			
5	Before		−321.7	−322.7	−280.7	−379.7
	After		−321.6			
6	Before		319.3	322.7	379.7	280.7
	After		319.3			
7	Before		−322.7	−322.7	−280.7	−379.7
	After		−322.7			
		(Minimum) (Nominal) (Maximum)				

Before: 14−Sep−2021 18:47
After: 14−Sep−2021 22:34

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M12

Idx	Phase	HRLT M1−M2 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1739	1781	2095	1549
	After		1739			
1	Before		1809	1781	2095	1549
	After		1809			
2	Before		1841	1781	2095	1549
	After		1841			

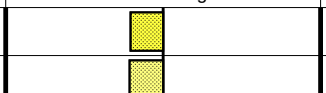
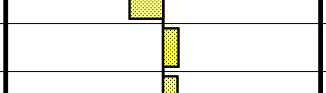
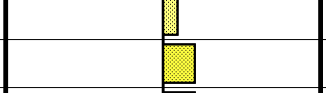
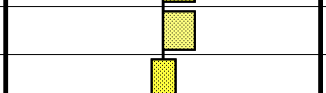
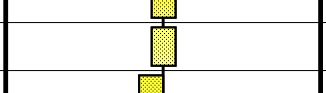
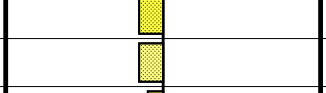
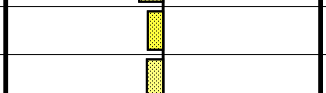
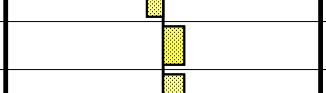
3	Before		1791	1781	2095	1549
	After		1791			
4	Before		1743	1781	2095	1549
	After		1742			
5	Before		1753	1781	2095	1549
	After		1753			
6	Before		−1758	−1781	−1549	−2095
	After		−1758			
7	Before		1781	1781	2095	1549
	After		1781			
	(Minimum) (Nominal) (Maximum)					

Before: 14−Sep−2021 18:47

After: 14−Sep−2021 22:34

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M23

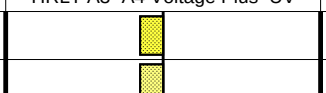
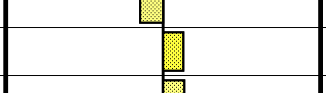
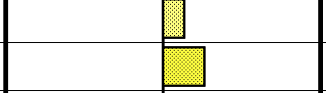
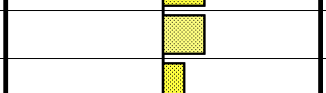
Idx	Phase	HRLT M2−M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1732	1781	2095	1549
	After		1731			
1	Before		1812	1781	2095	1549
	After		1812			
2	Before		1846	1781	2095	1549
	After		1845			
3	Before		1799	1781	2095	1549
	After		1798			
4	Before		1745	1781	2095	1549
	After		1744			
5	Before		1757	1781	2095	1549
	After		1756			
6	Before		−1750	−1781	−1549	−2095
	After		−1749			
7	Before		1781	1781	2095	1549
	After		1781			
	(Minimum) (Nominal) (Maximum)					

Before: 14−Sep−2021 18:47

After: 14−Sep−2021 22:34

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V34

Idx	Phase	HRLT A3−A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68630	70000	82360	60900
	After		68620			
1	Before		71630	70000	82360	60900
	After		71660			
2	Before		73270	70000	82360	60900
	After		73270			
3	Before		71670	70000	82360	60900
	After		71680			

4	Before		69480	70000	82360	60900
	After		69480			
5	Before		69950	70000	82360	60900
	After		69940			
6	Before		−68170	−70000	−60900	−82360
	After		−68200			
7	Before		70000	70000	82360	60900
	After		70000			
	(Minimum)	(Nominal)	(Maximum)			

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High Resolution Laterolog Array − B Wellsite Calibration

HRLT V45

Idx	Phase	HRLT A4−A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68720	70000	82360	60900
	After		68710			
1	Before		71850	70000	82360	60900
	After		71870			
2	Before		73450	70000	82360	60900
	After		73450			
3	Before		71800	70000	82360	60900
	After		71830			
4	Before		69580	70000	82360	60900
	After		69580			
5	Before		70040	70000	82360	60900
	After		70040			
6	Before		−68370	−70000	−60900	−82360
	After		−68400			
7	Before		70000	70000	82360	60900
	After		70000			
	(Minimum)	(Nominal)	(Maximum)			

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High Resolution Laterolog Array − B Wellsite Calibration

HRLT V56

Idx	Phase	HRLT A5−A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68570	70000	82360	60900
	After		68560			
1	Before		71680	70000	82360	60900
	After		71730			
2	Before		73280	70000	82360	60900
	After		73320			
3	Before		71670	70000	82360	60900
	After		71690			
4	Before		69450	70000	82360	60900
	After		69440			

5	Before	69900	70000	82360	60900
	After	69900			
6	Before	−68220	−70000	−60900	−82360
	After	−68240			
7	Before	70000	70000	82360	60900
	After	70000			
	(Minimum) (Nominal) (Maximum)				

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High Resolution Laterolog Array − B Wellsite Calibration

HRLT VTP

Idx	Phase	HRLT Torpedo−M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−68100	−70000	−60900	−82360
	After		−68090			
1	Before		−71490	−70000	−60900	−82360
	After		−71520			
2	Before		−73130	−70000	−60900	−82360
	After		−73150			
3	Before		−71580	−70000	−60900	−82360
	After		−71610			
4	Before		−69410	−70000	−60900	−82360
	After		−69410			
5	Before		−69870	−70000	−60900	−82360
	After		−69870			
6	Before		67980	70000	82360	60900
	After		68000			
7	Before		−70000	−70000	−60900	−82360
	After		−70000			
	(Minimum) (Nominal) (Maximum)					

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High Resolution Laterolog Array − B Wellsite Calibration

HRLT VBD

Idx	Phase	HRLT Bridle#9−M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−68160	−70000	−60900	−82360
	After		−68140			
1	Before		−71600	−70000	−60900	−82360
	After		−71600			
2	Before		−73230	−70000	−60900	−82360
	After		−73250			
3	Before		−71670	−70000	−60900	−82360
	After		−71670			
4	Before		−69470	−70000	−60900	−82360
	After		−69450			
5	Before		−69930	−70000	−60900	−82360
	After		−69910			

6	Before		68080	70000	82360	60900
	After		68090			
7	Before		−70000	−70000	−60900	−82360
	After		−70000			
	(Minimum)	(Nominal)	(Maximum)			

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High Resolution Laterolog Array − B Wellsite Calibration

HRLT ISO

Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum
0	Before		284.2	284.0	334.1	247.0
	After		284.2			
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			
7	Before		281.1	281.1	330.7	244.4
	After		281.1			
	(Minimum)	(Nominal)	(Maximum)			

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High Resolution Laterolog Array − B Wellsite Calibration

HRLT MV

Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−320.8	−322.7	−280.7	−379.7
	After		−320.3			
1	Before		−325.3	−322.7	−280.7	−379.7
	After		−325.0			
2	Before		−331.1	−322.7	−280.7	−379.7
	After		−330.8			
3	Before		−320.6	−322.7	−280.7	−379.7
	After		−320.2			
4	Before		−309.2	−322.7	−280.7	−379.7
	After		−308.8			
5	Before		−325.8	−322.7	−280.7	−379.7
	After		−325.4			
6	Before		327.2	322.7	379.7	280.7
	After		326.9			

7	Before	−322.7	−322.7	−280.7	−379.7
	After	−322.7			
	(Minimum) (Nominal) (Maximum)				

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Hostile Litho−Density Sonde / Equipment Identification

Primary Equipment:		
Gamma Source Radioactive	GSR − ZA	2945
Hostile Litho Density Sonde	HLDS − D	77
Hostile Litho Density High Voltage	HLDV − D	67
Auxiliary Equipment:		
Hostile Litho Density High Voltage Housi	HEH − H	67
Hostile Litho Density Pad	HLDP − C	83

Hostile Litho−Density Sonde Wellsite Calibration

Background Measurement

Phase	SS Cs Resolution Bkg %	Value
Master		7.698
Before		7.758
After		7.599
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)	

Phase	LS Cs Resolution Bkg %	Value
Master		7.989
Before		8.002
After		8.024
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)	

Phase	LSW1 Background CPS	Value
Master		71.96
Before		70.11
After		68.63
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)	

Phase	LSW2 Background CPS	Value
Master		65.02
Before		64.73
After		63.85
	50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)	

Phase	LSW3 Background CPS	Value
Master		146.1
Before		145.1
After		144.5
	110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)	

Phase	LSW4 Background CPS	Value
Master		183.2
Before		181.9
After		179.2
	140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)	

Phase	LSW5 Background CPS	Value
Master		424.9
Before		418.4
After		421.1
	330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)	

Phase	SSW1 Background CPS	Value
Master		68.97
Before		68.88
After		67.84
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)	

Phase	SSW2 Background CPS	Value
Master		118.2
Before		117.4
After		117.6
	100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)	

Phase	SSW3 Background CPS	Value
Master		331.3
Before		328.6
After		327.9
	280.0 (Minimum) 500.0 (Nominal) 700.0 (Maximum)	

Phase	SSW4 Background CPS	Value
Master		178.4
Before		177.6
After		177.7
	150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum)	

Phase	SSW5 Background CPS	Value
Master		127.4
Before		126.3
After		127.3
	110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum)	

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Litho−Density Spectroscopy Cartridge − B / Equipment Identification

Primary Equipment:		
LDSC Cartridge	LDSC − B	521
Auxiliary Equipment:		
LDSC Housing	LDSH − A	319

Hostile Natural Gamma Ray Cartridge − B / Equipment Identification

Primary Equipment:		
HNGC Cartridge	HNGC − B	304
Auxiliary Equipment:		

HNGC Housing	HNGH − A	3

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:

HNGS Sonde	HNGS − BA	99

Auxiliary Equipment:

HNGS Sonde Housing	HNSH − BA	102
Gamma Source Radioactive	GSR − U	6098

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 1 Check

Phase	Na 511 Peak Loc	Value
Master		39.25
Before		39.45
After		39.63
37.50 (Minimum)	40.00 (Nominal)	43.50 (Maximum)

Phase	Na 511 Peak Res %	Value
Master		16.53
Before		16.75
After		15.84
12.00 (Minimum)	15.50 (Nominal)	19.00 (Maximum)

Phase	High Voltage V	Value
Master		1197
Before		1171
After		1173
900.0 (Minimum)	1150 (Nominal)	1600 (Maximum)

Phase	Na 1785 Peak Loc	Value
Master		141.8
Before		142.8
After		142.7
135.0 (Minimum)	142.6 (Nominal)	150.3 (Maximum)

Phase	Na 1785 Peak Res %	Value
Master		8.905
Before		8.912
After		8.480
7.000 (Minimum)	8.500 (Nominal)	11.00 (Maximum)

Phase	Temperature DEGC	Value
Master		26.59
Before		13.02
After		13.00
−28.89 (Minimum)	15.50 (Nominal)	60.00 (Maximum)

Phase	Na Count Rate CPS	Value
Master		12.01
Before		10.20
After		10.37
10.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)

Master: Calibration out of date 2−May−2021 10:04 Before: 14−Sep−2021 18:50 After: 14−Sep−2021 22:38

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 2 Check

Phase	Na 511 Peak Loc	Value
Master		39.88
Before		39.58
After		39.56
37.50 (Minimum)	40.00 (Nominal)	43.50 (Maximum)

Phase	Na 511 Peak Res %	Value
Master		15.29
Before		16.14
After		15.93
12.00 (Minimum)	15.50 (Nominal)	19.00 (Maximum)

Phase	High Voltage V	Value
Master		1122
Before		1097
After		1095
900.0 (Minimum)	1150 (Nominal)	1600 (Maximum)

Phase	Na 1785 Peak Loc	Value
Master		142.6
Before		142.9
After		139.6
135.0 (Minimum)	142.6 (Nominal)	150.3 (Maximum)

Phase	Na 1785 Peak Res %	Value
Master		8.040
Before		9.365
After		9.609
7.000 (Minimum)	8.500 (Nominal)	11.00 (Maximum)

Phase	Temperature DEGC	Value
Master		27.21
Before		13.58
After		14.41
−28.89 (Minimum)	15.50 (Nominal)	60.00 (Maximum)

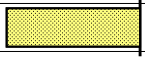
Phase	Na Count Rate CPS	Value
Master		12.32
Before		10.33
After		10.83
10.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)

Master: Calibration out of date 2−May−2021 10:04 Before: 14−Sep−2021 18:50 After: 14−Sep−2021 22:38

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Ratio Of Detector 1 To Detector 2

Phase	Coincidence Count Rate Ratio	Value

Phase	Coincidence Count Rate Ratio	Value
Master		0.9728
Before		0.9925
After		0.9572
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)	

Master: Calibration out of date 2−May−2021 10:04

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DTS Telemetry Tool / Equipment Identification

Primary Equipment:		
DTC−H Auxiliary Cartridge	DTCH − A	8799
DTC−H Telemetry Cartridge	DTCH − A	8799
Auxiliary Equipment:		
DTCH Telemetry Cartridge Housing	ECH − KC	9842

Company: **International Ocean Discovery Program**

Schlumberger

Well: **Expedition 396, Site U1572A**
Field: **Mid−Norwegian Cont. Margin Magmatism**
Rig: **JOIDES Resolution**
Country: **Iceland**

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