Schlumberger

Company: **International Ocean Discovery Program**

Well: **Expedition 396, Site U1571A**
Field: **Mid−Norwegian Cont. Margin Magmatism**
Rig: **JOIDES Resolution** Country: **Iceland**

Rig: JOIDES Resolution
Field: Mid−Norwegian Cont. Margin Ma
Location: Latitude: N 67.3067
Well: Expedition 396, Site U1571A
Company: International Ocean Discovery Pr

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

LOCATION

Latitude: N 67.3067
Longitude: E 3.7375

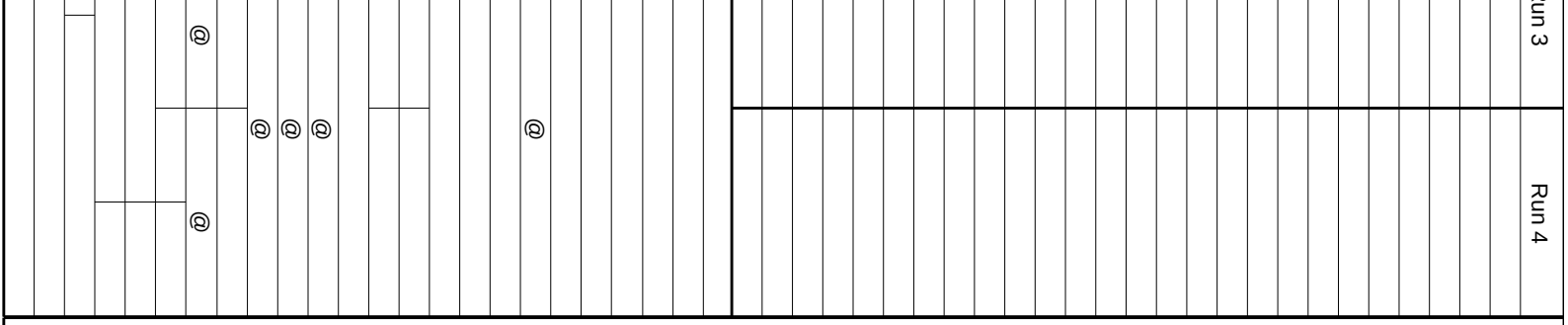
Elev.: K.B. 0.00 m
G.L. −1217.00 m
D.F. 0.00 m

Permanent Datum: Sea Floor — Elev.: −1217.00 m
Log Measured From: Rig Floor — 1217.00 m above Perm. Datum
Drilling Measured From: Rig Floor

Ocean:	Max. Well Deviation	Longitude	Latitude
Atlantic	5 deg	E 3.7375	N 67.3067

	Run 1	Run 2	Run 3
Logging Date	9−Sep−2021		
Run Number	1		
Depth Driller	1464 m		
Schlumberger Depth	1464 m		
Bottom Log Interval	1464 m		
Top Log Interval	1217 m		
Casing Driller Size @ Depth	5.500 in @ 1304 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	5−Sep−2021 / 5:00		
Logger On Bottom / Time	9−Sep−2021 / 11:55		
Unit Number / Location	627314 / Larose, LA	/	/
Recorded By	C. Furman		
Witnessed By	S. Midgley		

	Run 4	Run 5	Run 6
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: UBI

REMARKS: RUN NUMBER 1

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

Drill pipe set at 1304mbrf (87mbrf).

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 1335mbrf for pipe entry

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

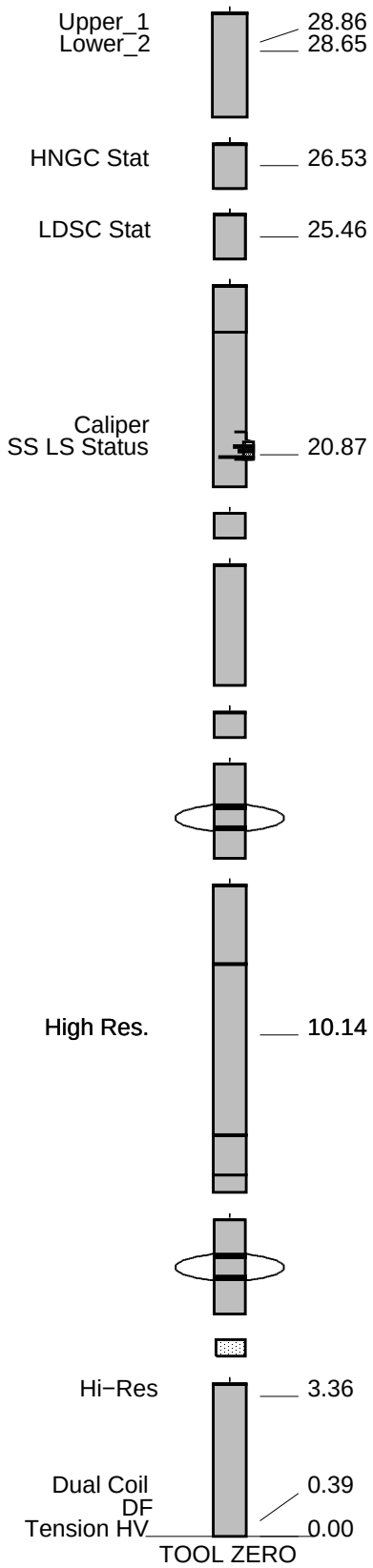
LEH−QT 301

AH−369 30.91

DTC−H 30.48

ECH−KC 9842

RUN 2



HNGS−BA 29.56
HNGS−BA 99
HNSH−BA 102

HNGC−B 27.06
HNGH−A 3

LDSC−B 26.00
LDSH−A 319

HLDS 24.93
HLDV−D 67
HLDS−D 77
GSR−ZA 2945
HLDP−C 83
HEH−H 67

AH−184 20.11

AH−ECH−MRA 19.50
AH−ECH−MRA 5714

AH−184 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

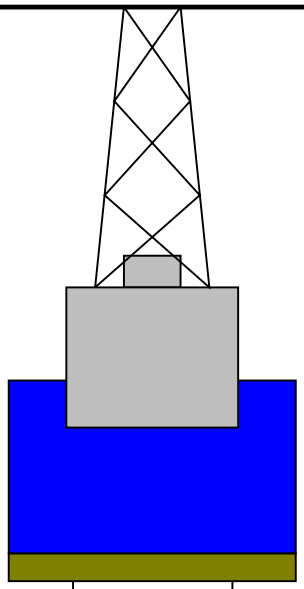
AH−MCD1 6.35
AH−MCD1 1

AH−230 4.07

MSS_LDEO−A 3.67
ELIC−A 1
MSS_LDEO−A 1

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		MD	OD	ID	
Kelly Bushing Elevation			0.0					
Derrick Floor Elevation			0.0					
Mean Sea Level			11.1					
					0.0	5.500	4.125	
					1217.0	9.875		Sea Floor
					1304.0	5.500	4.125	Pipe
					1464.0	9.875		TD– Driller

Schlumberger

Downlog

MAXIS Field Log

Company: International Ocean Discovery Program **Well: Expedition 396, Site U1571A**

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_022PUP		PRODUCER	09−Sep−2021 12:48	1458.5 M	1181.9 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_023PUP	FN:26	PRODUCER	09−Sep−2021 12:49	1458.5 M	1181.9 M
RTB	MSS_LDEO_HRLA_LDL_023PUP	FN:27	PRODUCER	09−Sep−2021 12:49	1458.5 M	1181.9 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) 50

Area1
From HCGR to HSGR

HNGS Computed Gamma Ray (HCGR)
0 (GAPI) 50

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

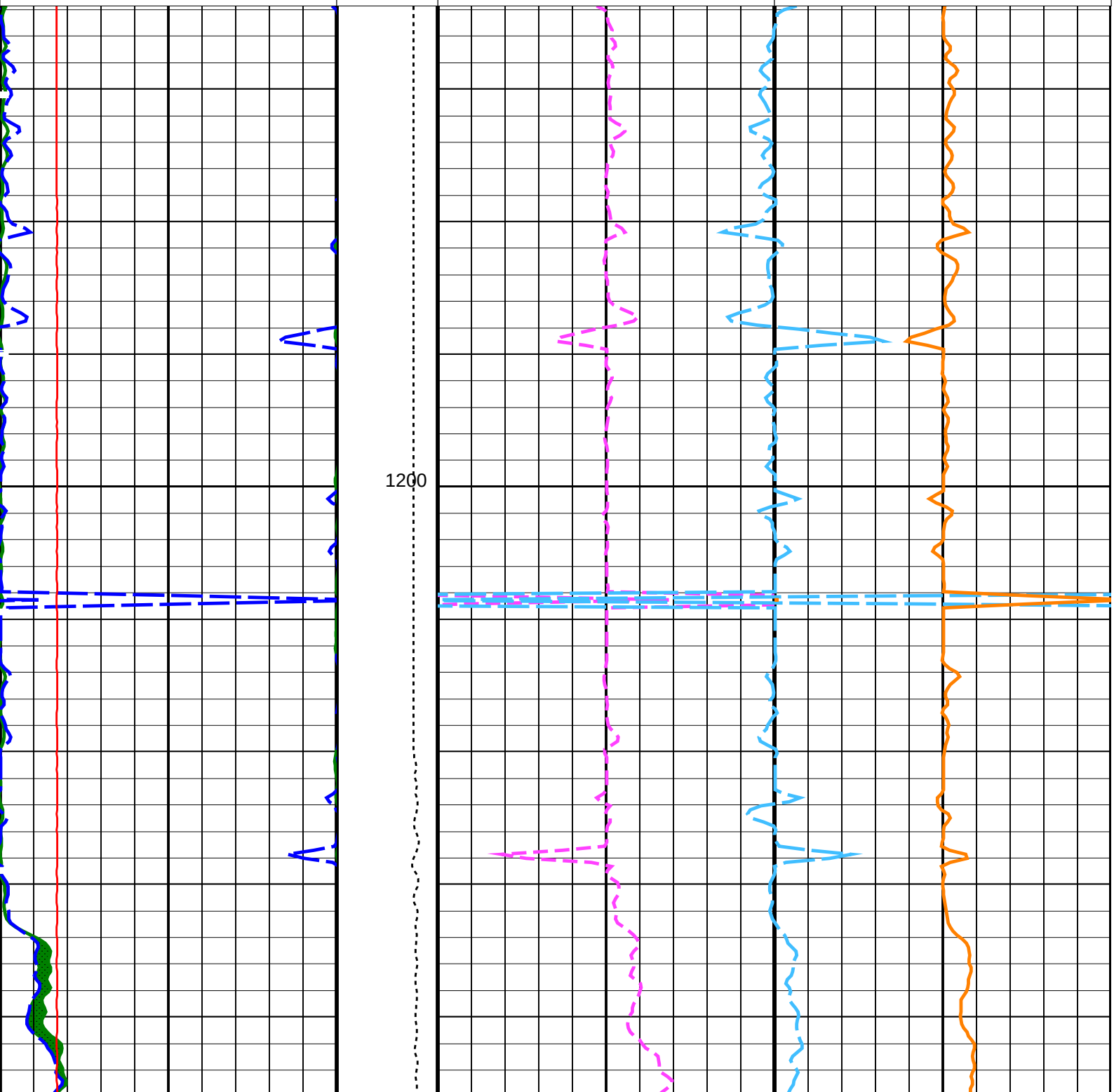
HNGS Uranium (HURA)
−5 (PPM) 5

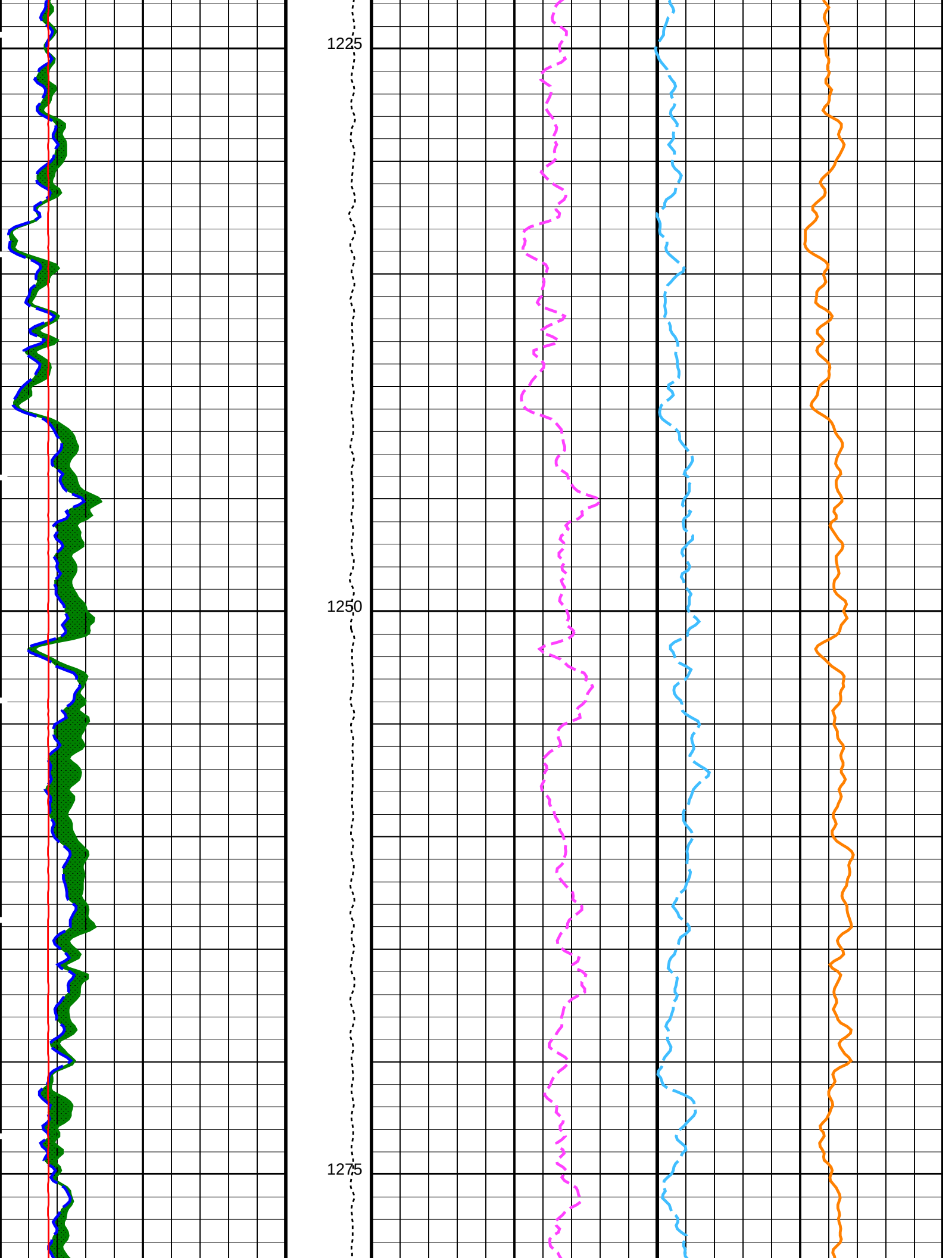
HLDS Caliper (LCAL)
0 (IN) 20

Tension (TENS) (LBF)
10000 0

HNGS Thorium (HTHO)
−5 (PPM) 5

HNGS Potassium (HFK)
−0.01 (V/V) 0.01

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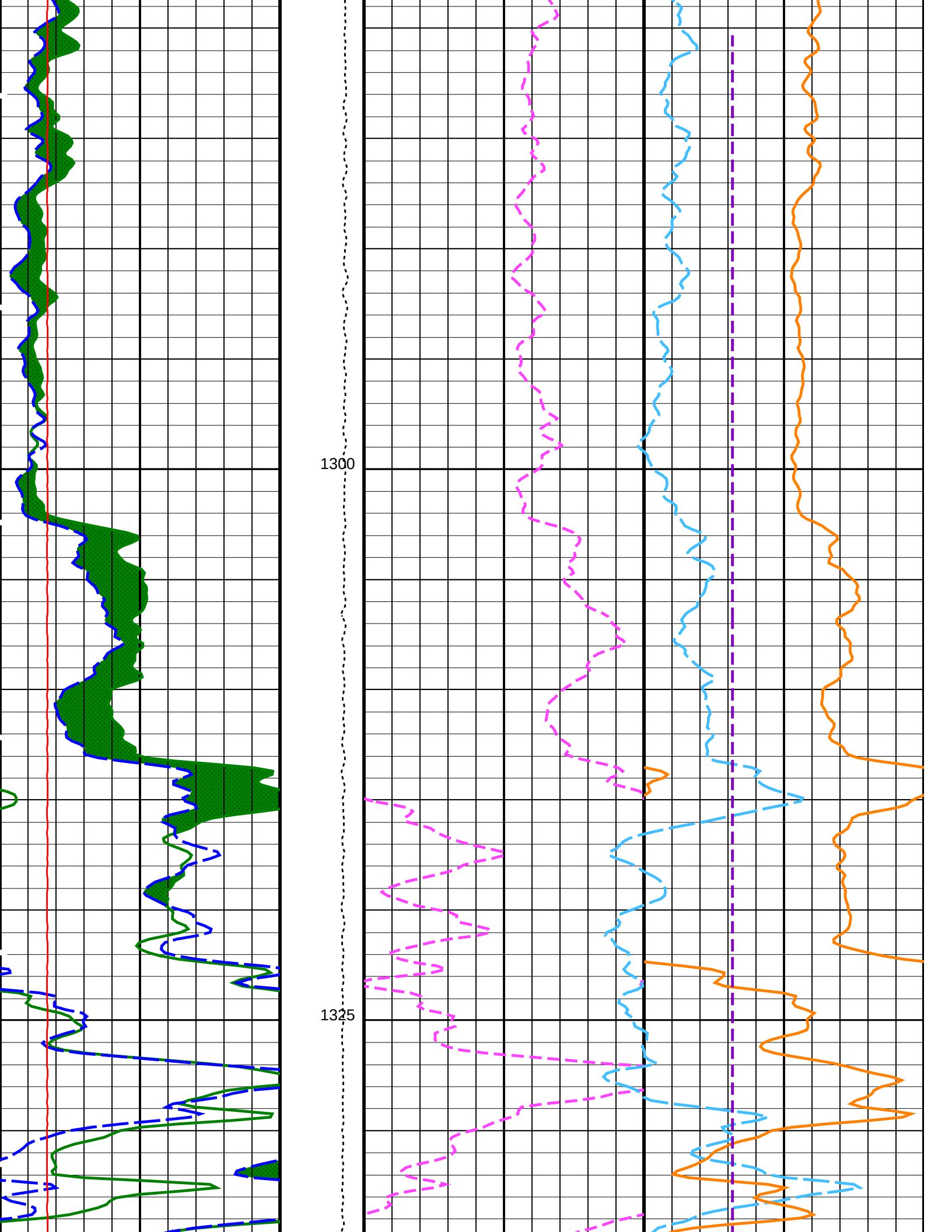
1250
1275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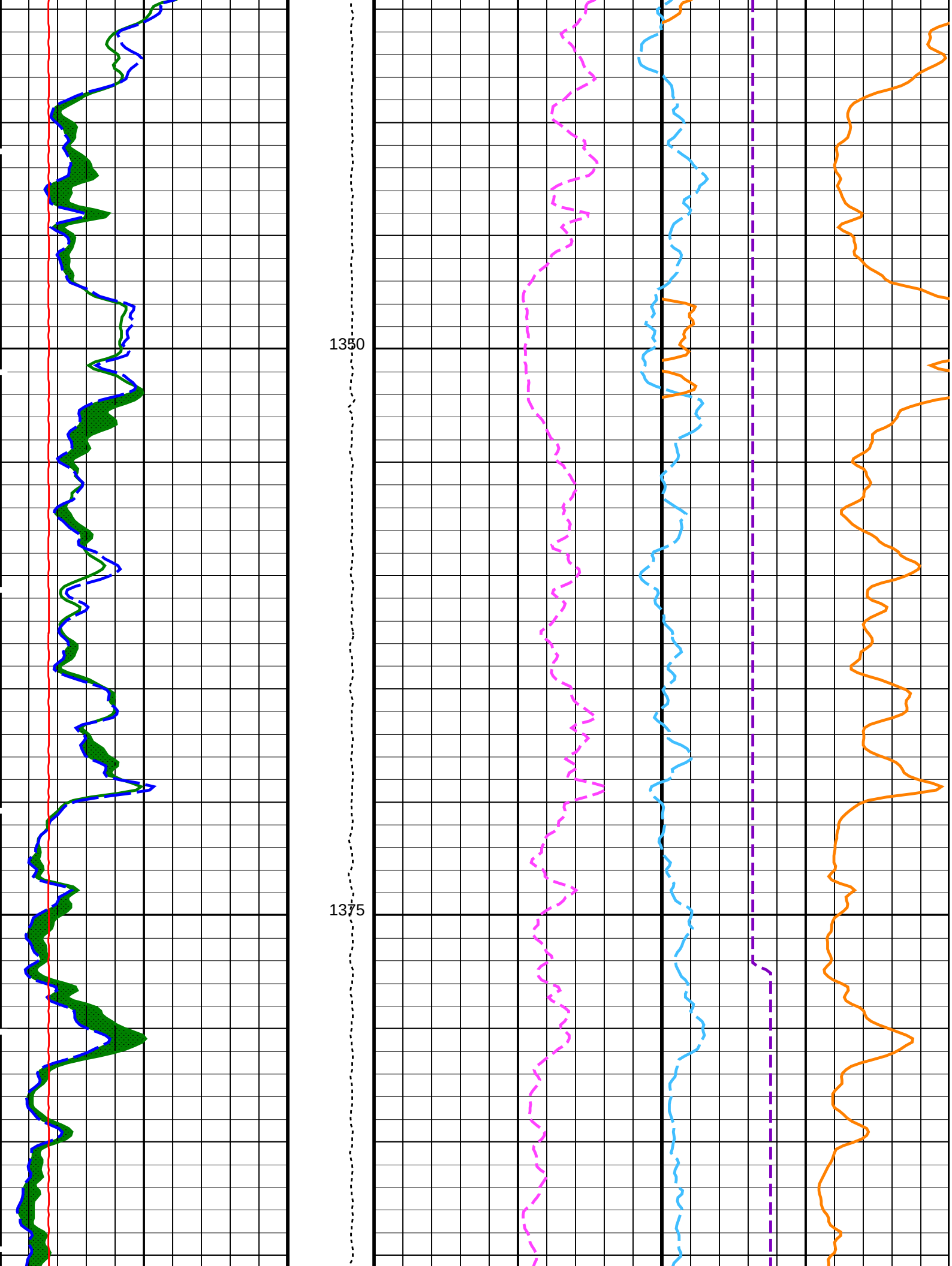
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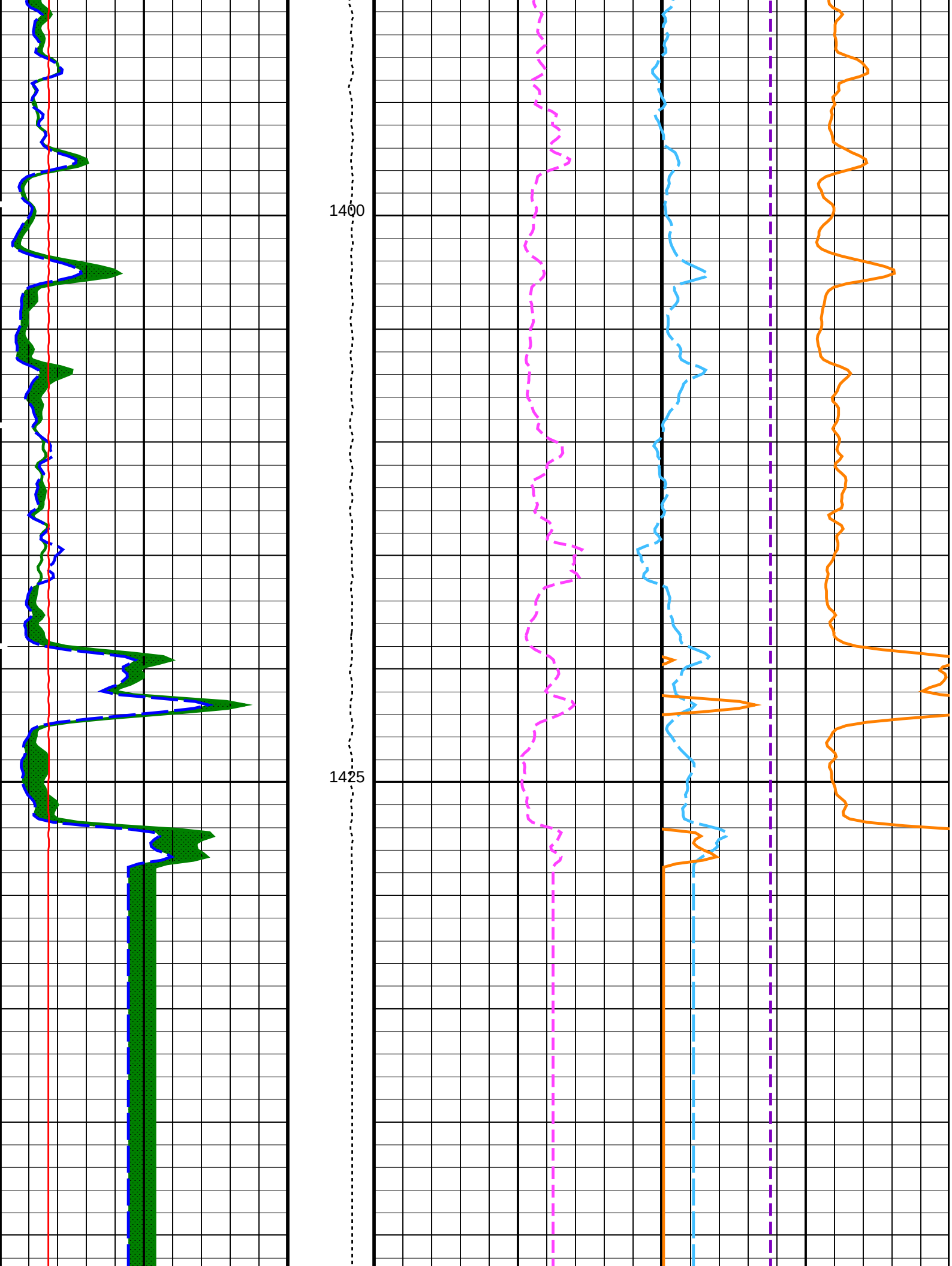
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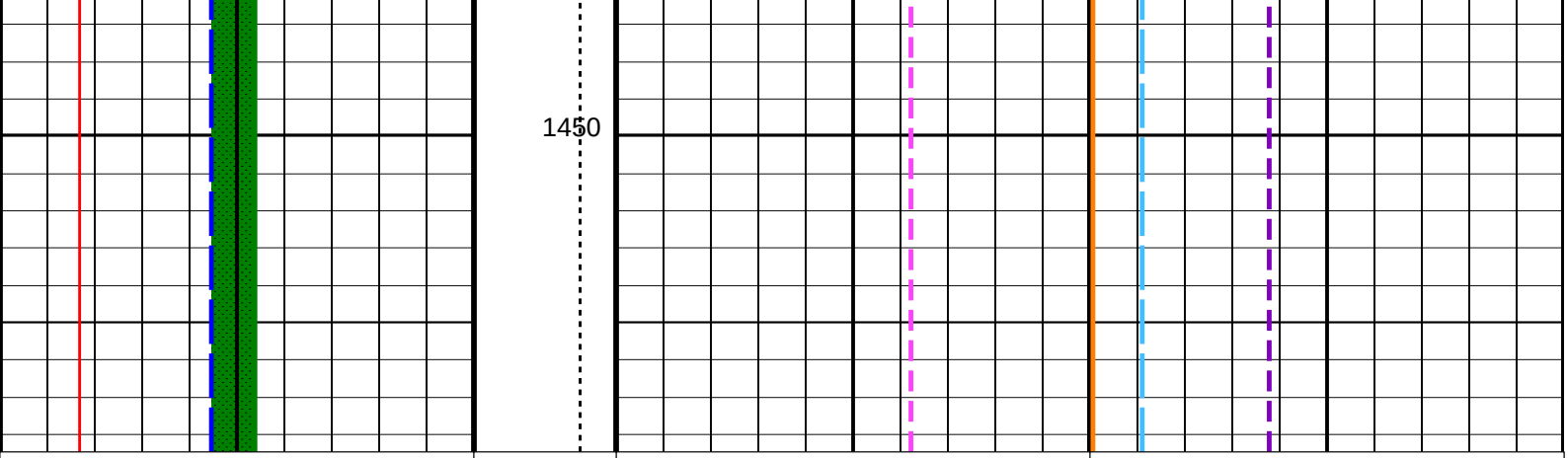


Parameters

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	−0.00688793	
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	1.02076	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.03488	
	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: 09−Sep−2021 12:49

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_022PUP	PRODUCER	09−Sep−2021 12:48	1458.5 M	1181.9 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_023PUP	FN:26	PRODUCER	09−Sep−2021 12:49	
RTB	MSS_LDEO_HRLA_LDL_023PUP	FN:27	PRODUCER	09−Sep−2021 12:49	

Company: International Ocean Discovery Program — Well: Expedition 396, Site U1571A

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_022PUP	PRODUCER	09−Sep−2021 12:48	1458.5 M	1181.9 M

Output DLIS Files

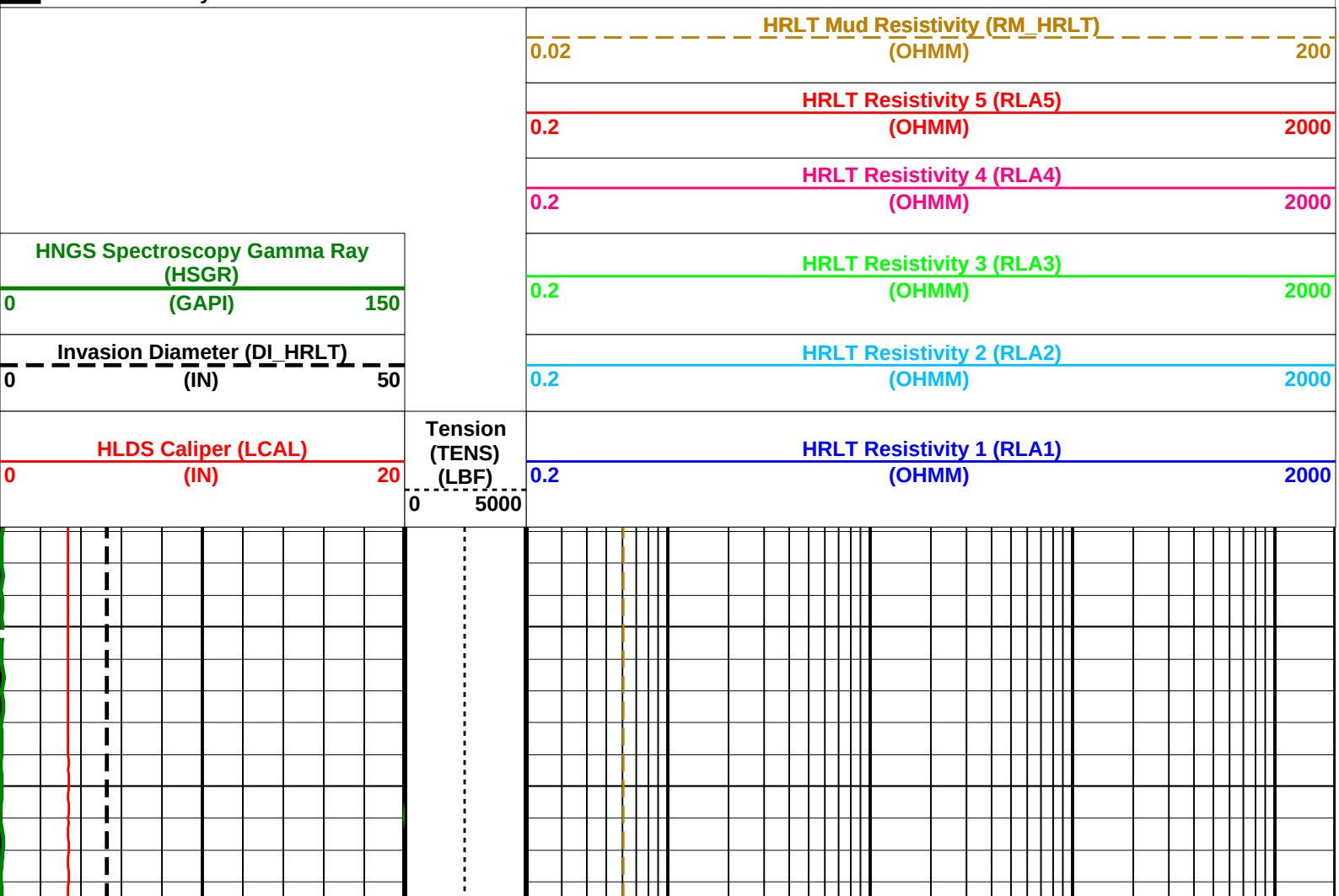
DEFAULT	MSS_LDEO_HRLA_LDL_023PUP	FN:26	PRODUCER	09−Sep−2021 12:49	1458.5 M	1181.9 M
RTB	MSS_LDEO_HRLA_LDL_023PUP	FN:27	PRODUCER	09−Sep−2021 12:49	1458.5 M	1181.9 M

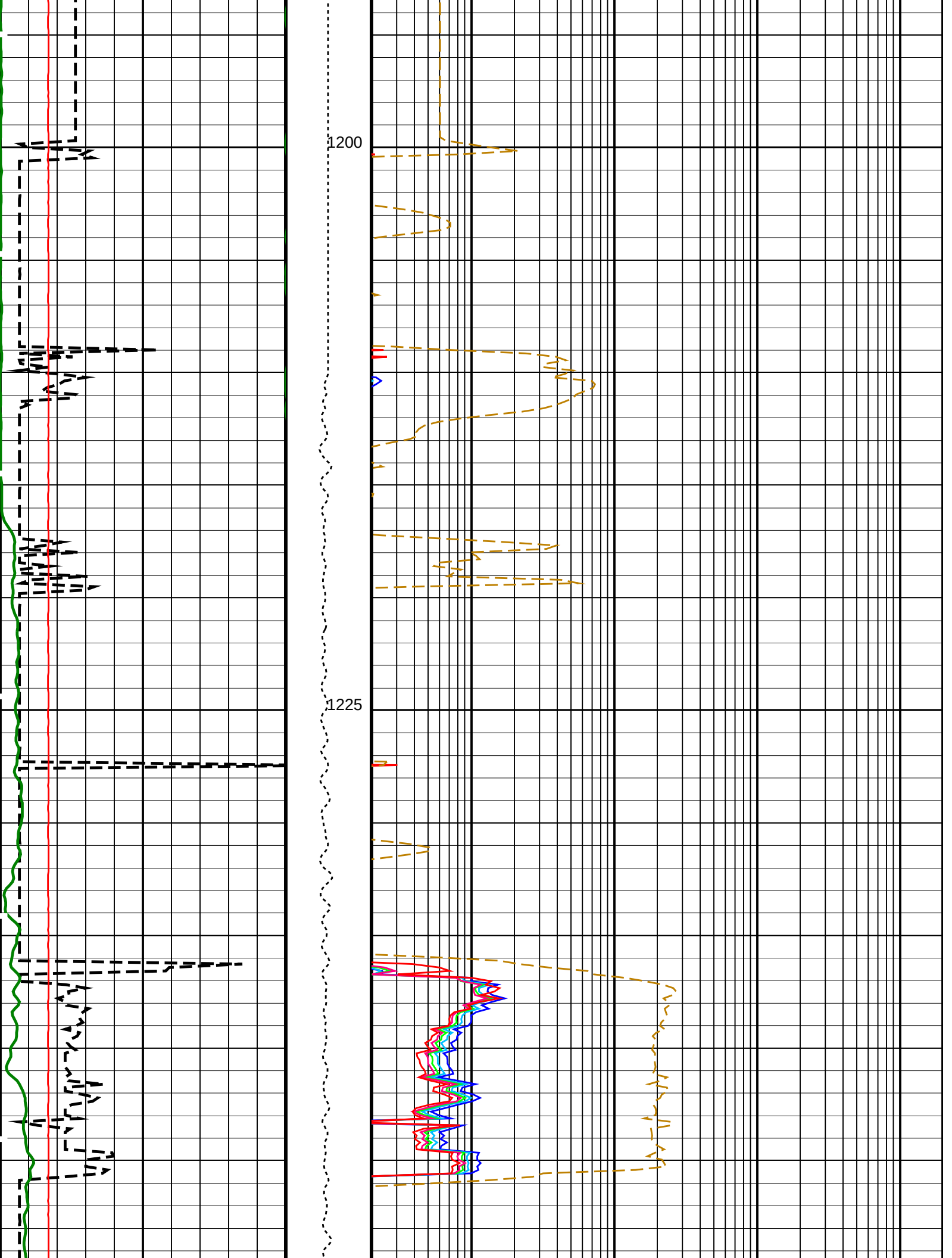
OP System Version: 19C0−187

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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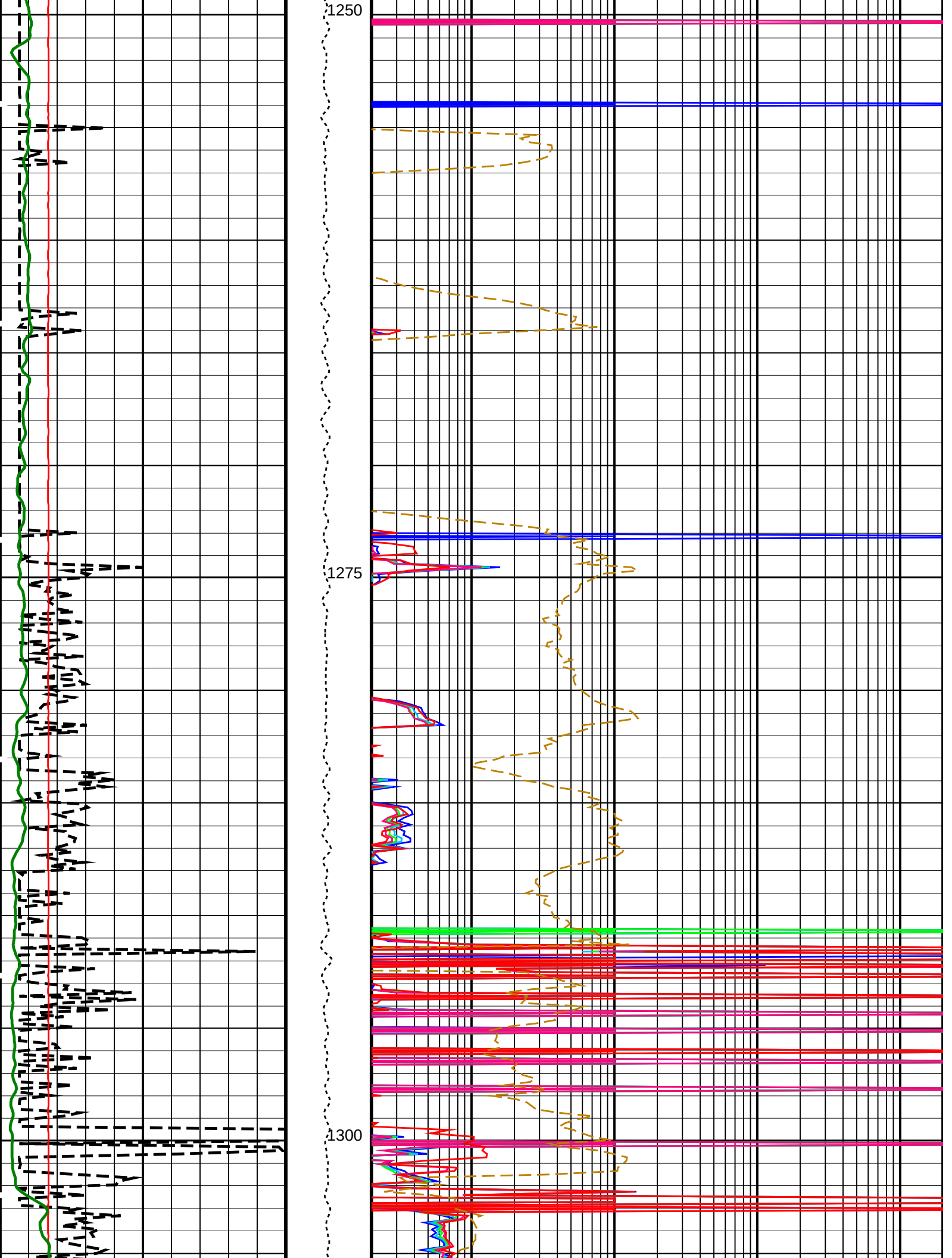
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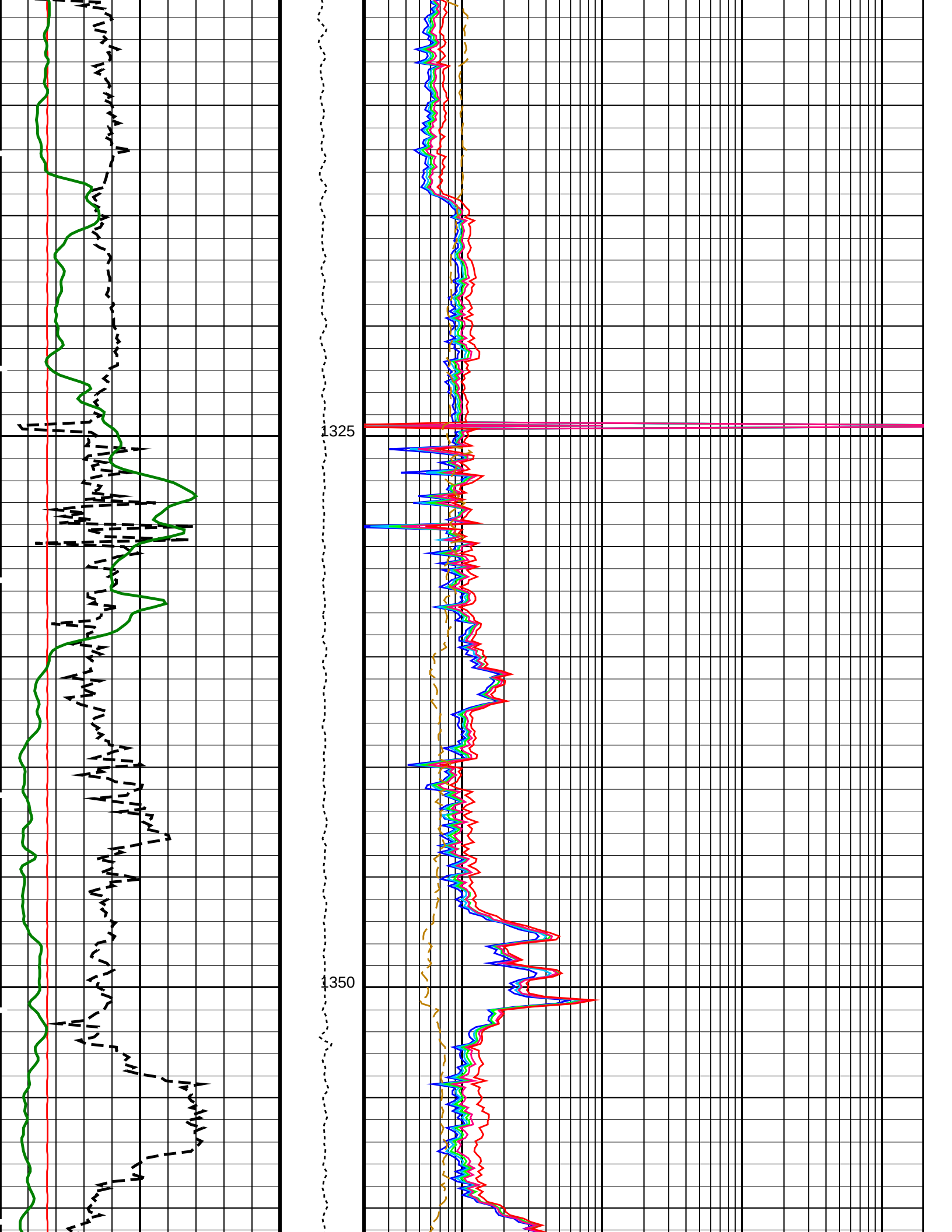
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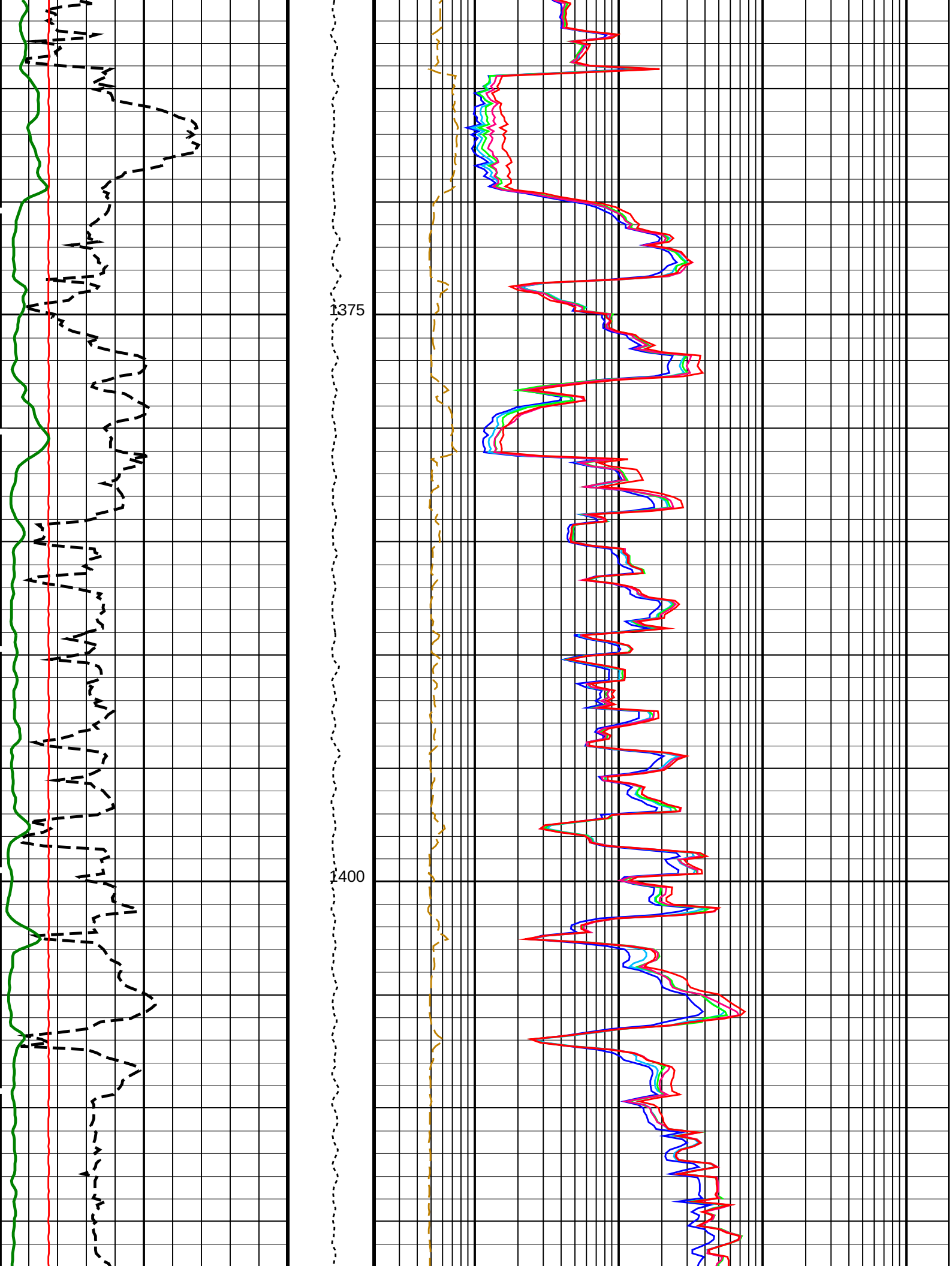
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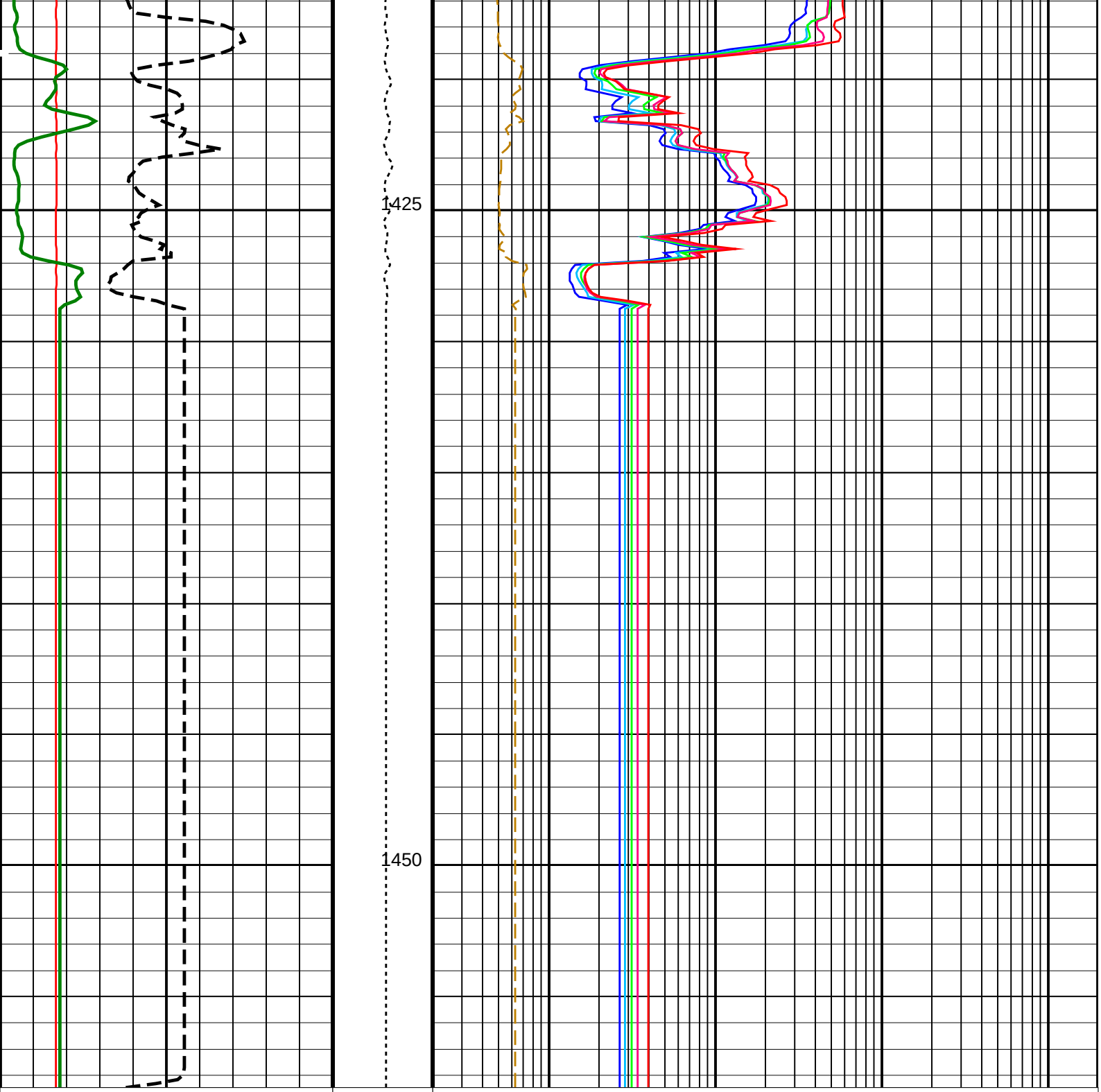

HLDS Caliper (LCAL)
0 (IN) 20

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	−0.00688793	
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	1.02076	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.03488	
	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
MST	Mud Sample Temperature	23.00	DEGC
PP	Playback Processing	NORMAL	
TD	Total Depth	2292	M

Format: HRLT Vertical Scale: 1:200 Graphics File Created: 09−Sep−2021 12:49

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_022PUP	PRODUCER	09−Sep−2021 12:48	1458.5 M	1181.9 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_023PUP	FN:26	PRODUCER	09−Sep−2021 12:49
RTB	MSS_LDEO_HRLA_LDL_023PUP	FN:27	PRODUCER	09−Sep−2021 12:49

Company: International Ocean Discovery Program | Well: Expedition 396, Site U1571A

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RTB	MSS_LDEO_HRLA_LDL_023PUP	FN:27	PRODUCER	09−Sep−2021 12:49	1458.5 M	1181.9 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

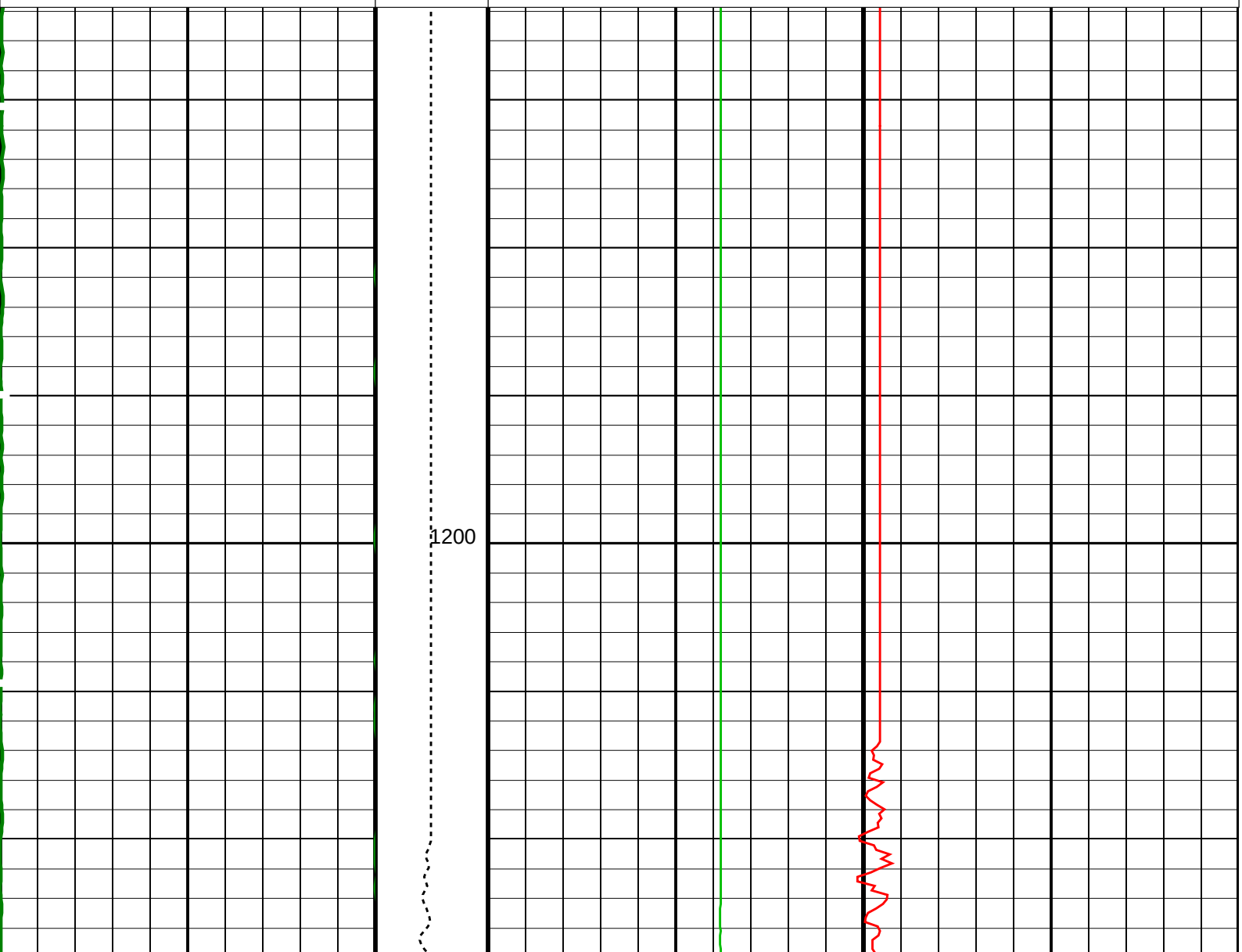
Time Mark Every 60 S

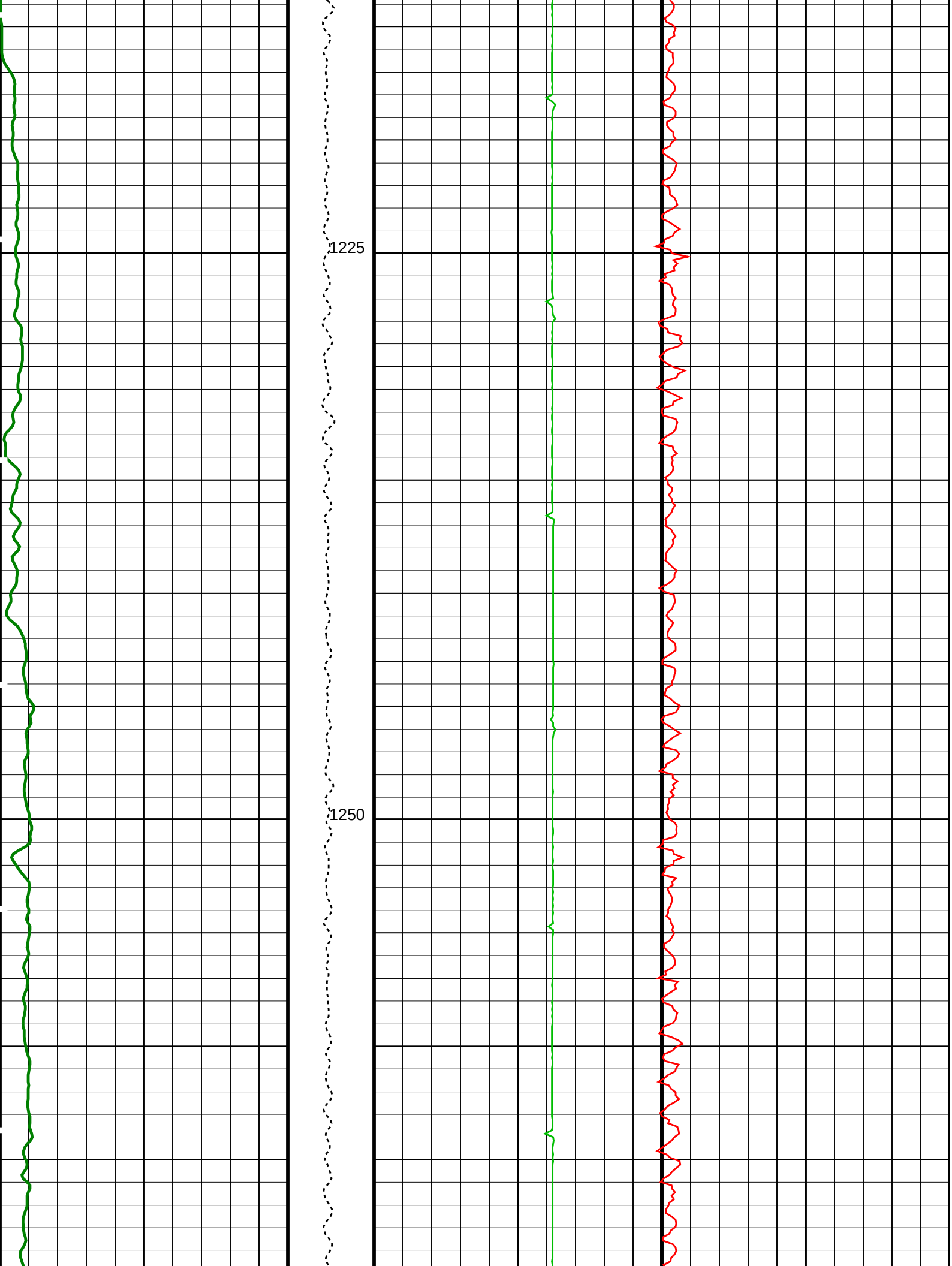
Dual−Coil Susceptibility (MSSLSUS_LDEO)
−10000 (PPM) 90000

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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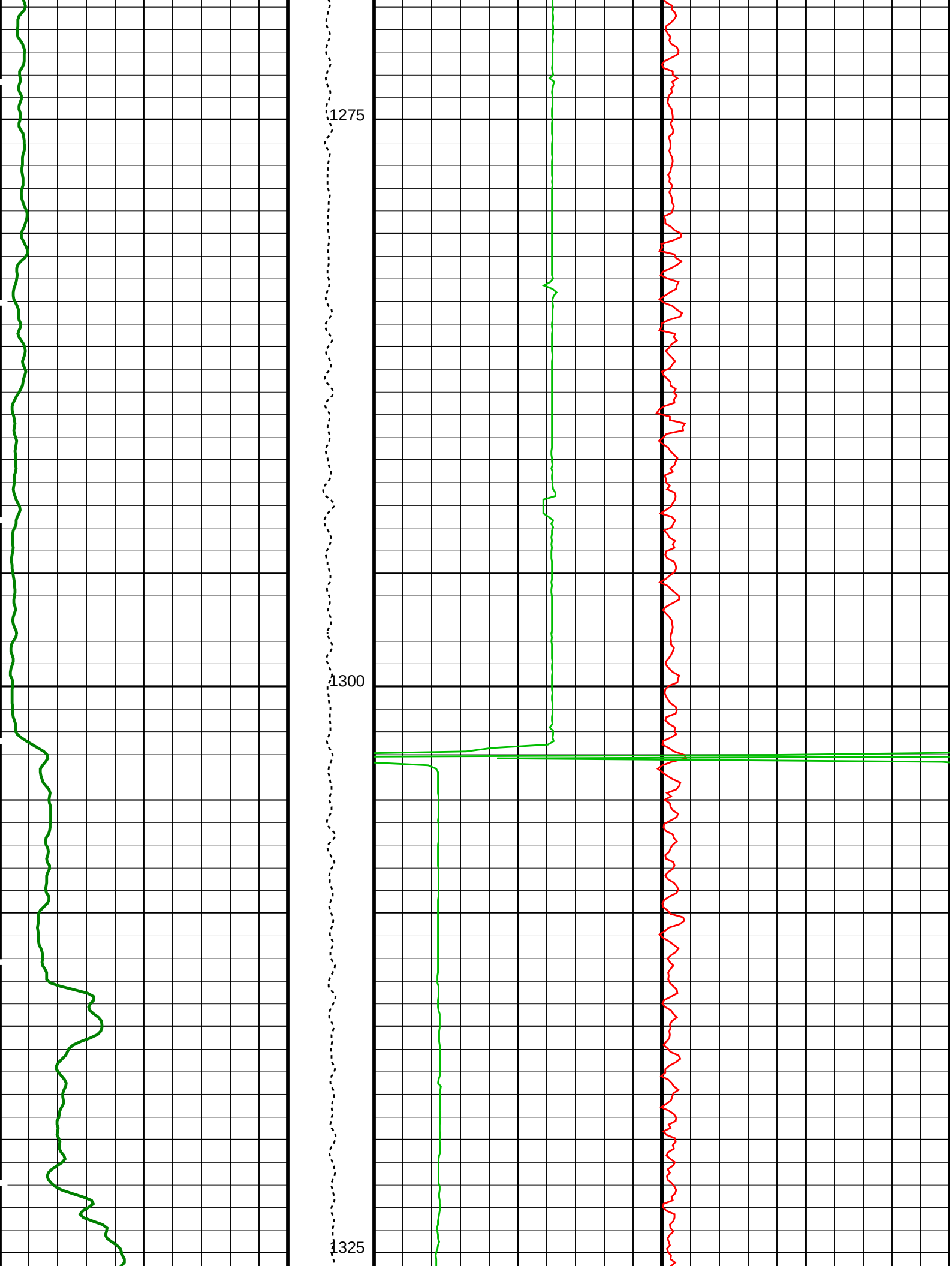
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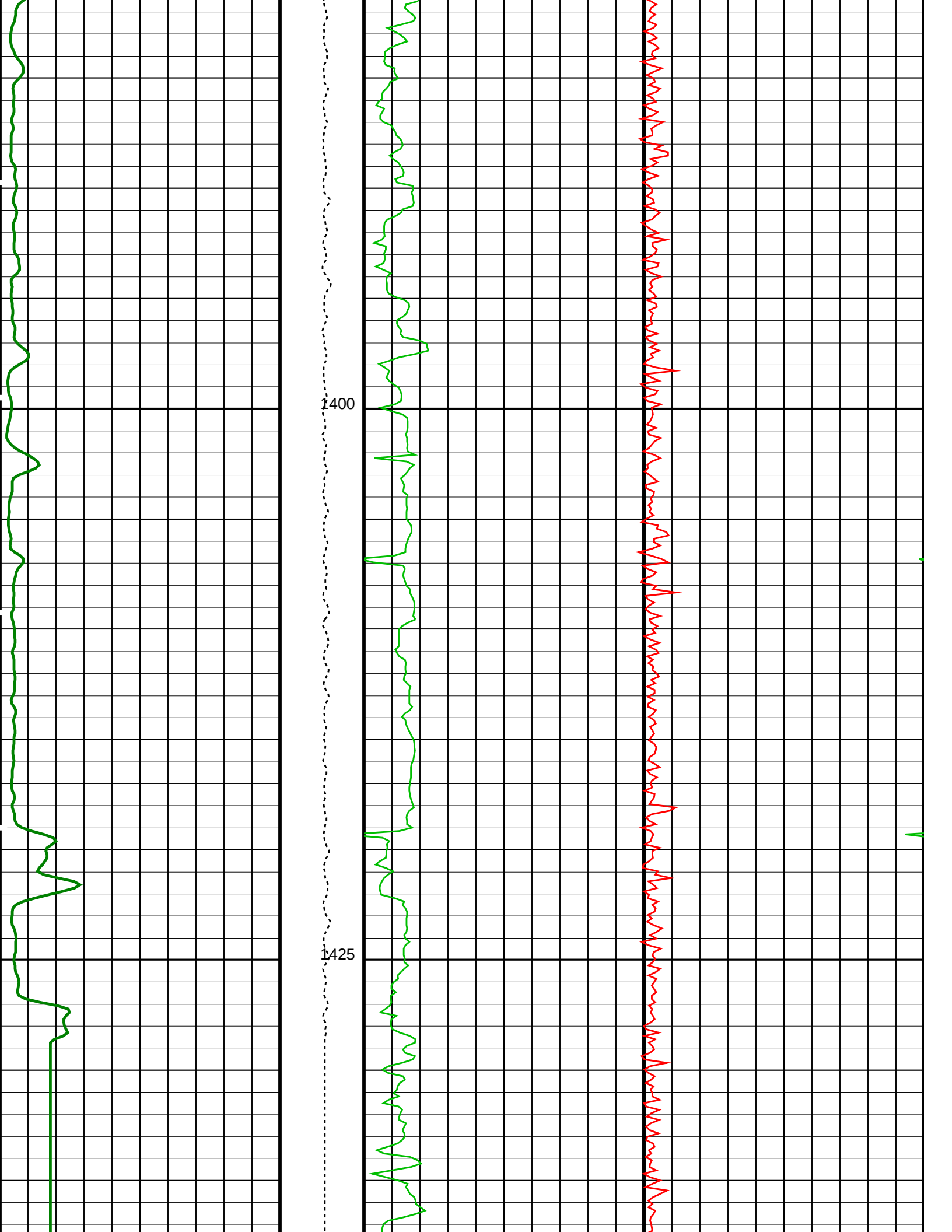
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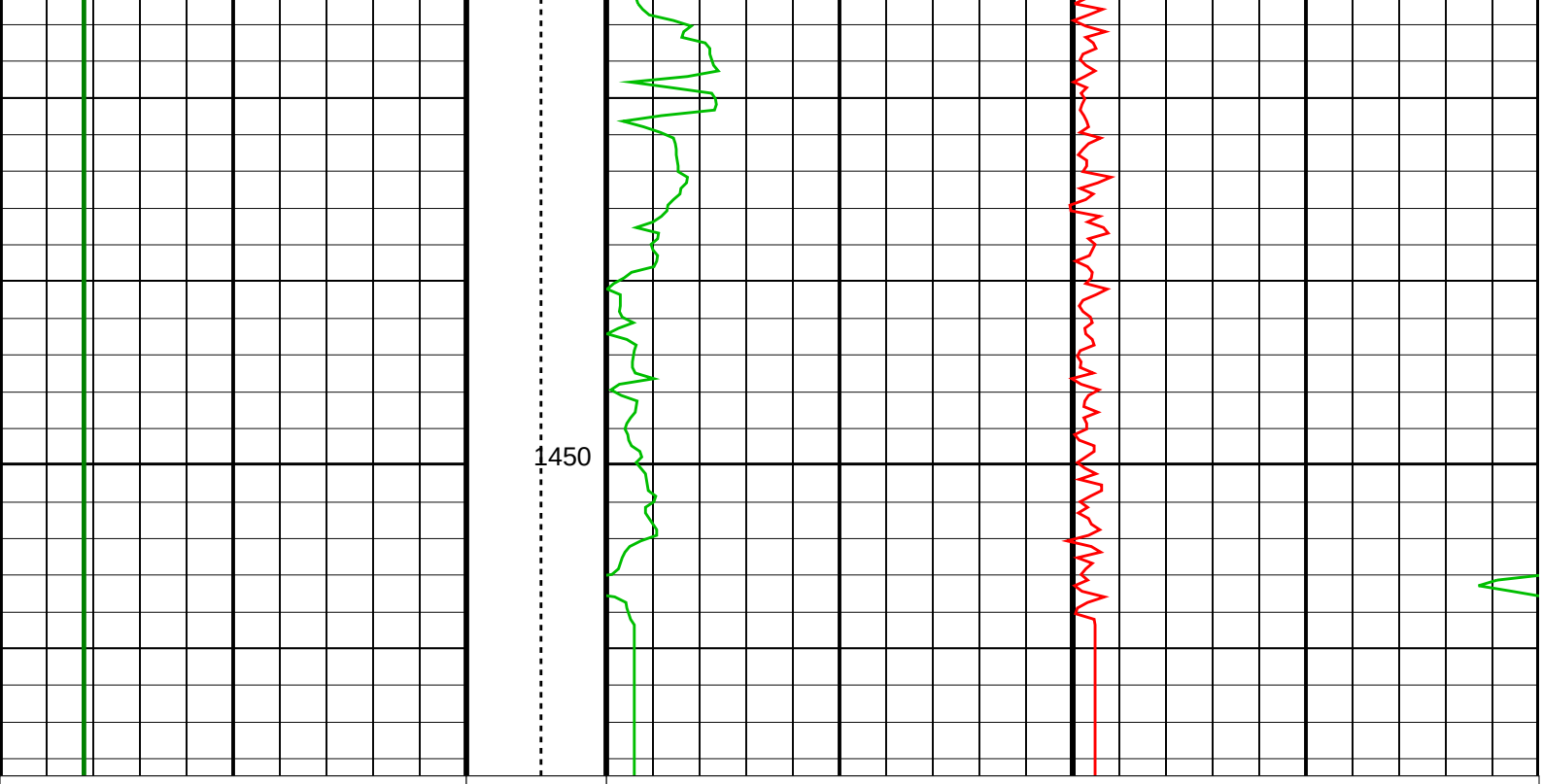


HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 150

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	−0.00688793	
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	1.02076	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.03488	
	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: 09−Sep−2021 12:49

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_022PUP	PRODUCER	09−Sep−2021 12:48	1458.5 M	1181.9 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_023PUP	FN:26	PRODUCER	09−Sep−2021 12:49	
RTB	MSS_LDEO_HRLA_LDL_023PUP	FN:27	PRODUCER	09−Sep−2021 12:49	

Schlumberger

First Pass

MAXIS Field Log

Company: International Ocean Discovery Program **Well: Expedition 396, Site U1571A**

Output DLIS Files

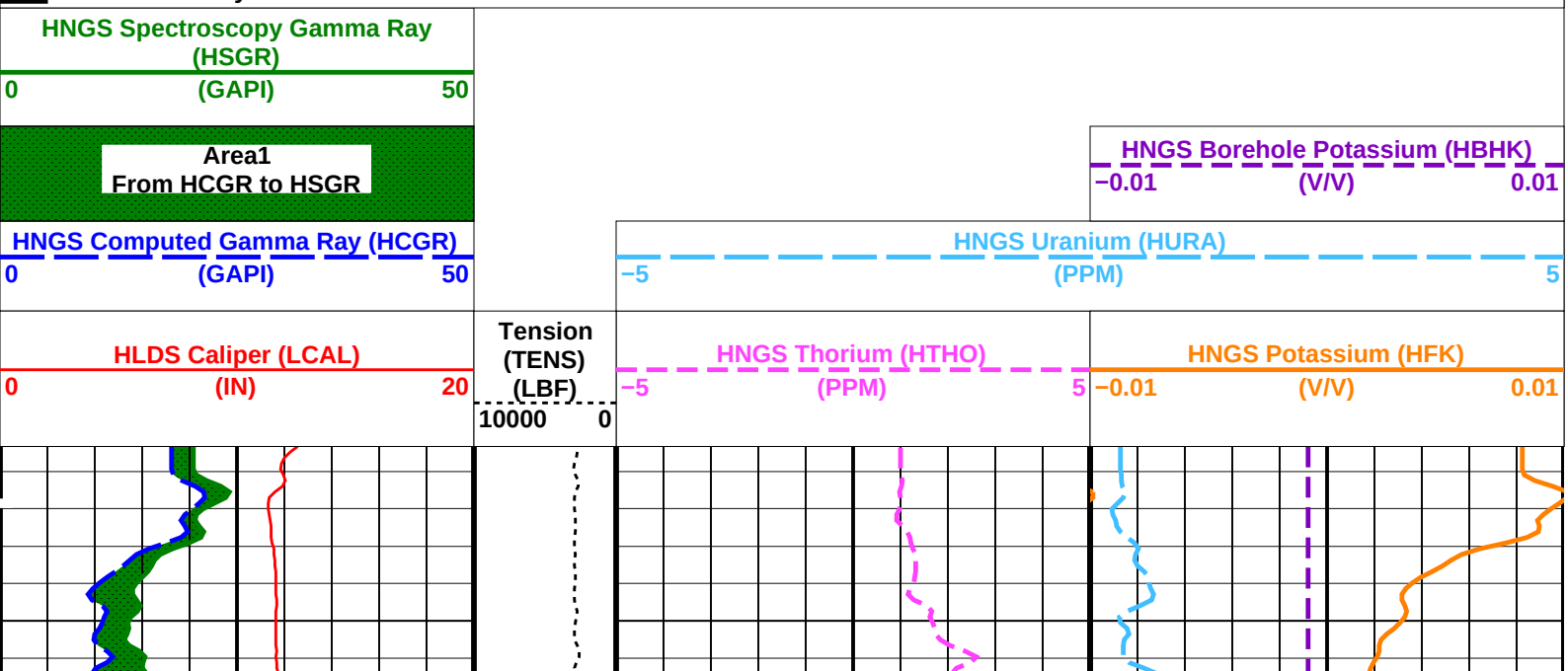
DEFAULT	MSS_LDEO_HRLA_LDL_015LUP	FN:15	PRODUCER	09−Sep−2021 11:26	1463.0 M	1337.3 M
RTB	MSS_LDEO_HRLA_LDL_015LUP	FN:16	PRODUCER	09−Sep−2021 11:26	1463.0 M	1337.3 M

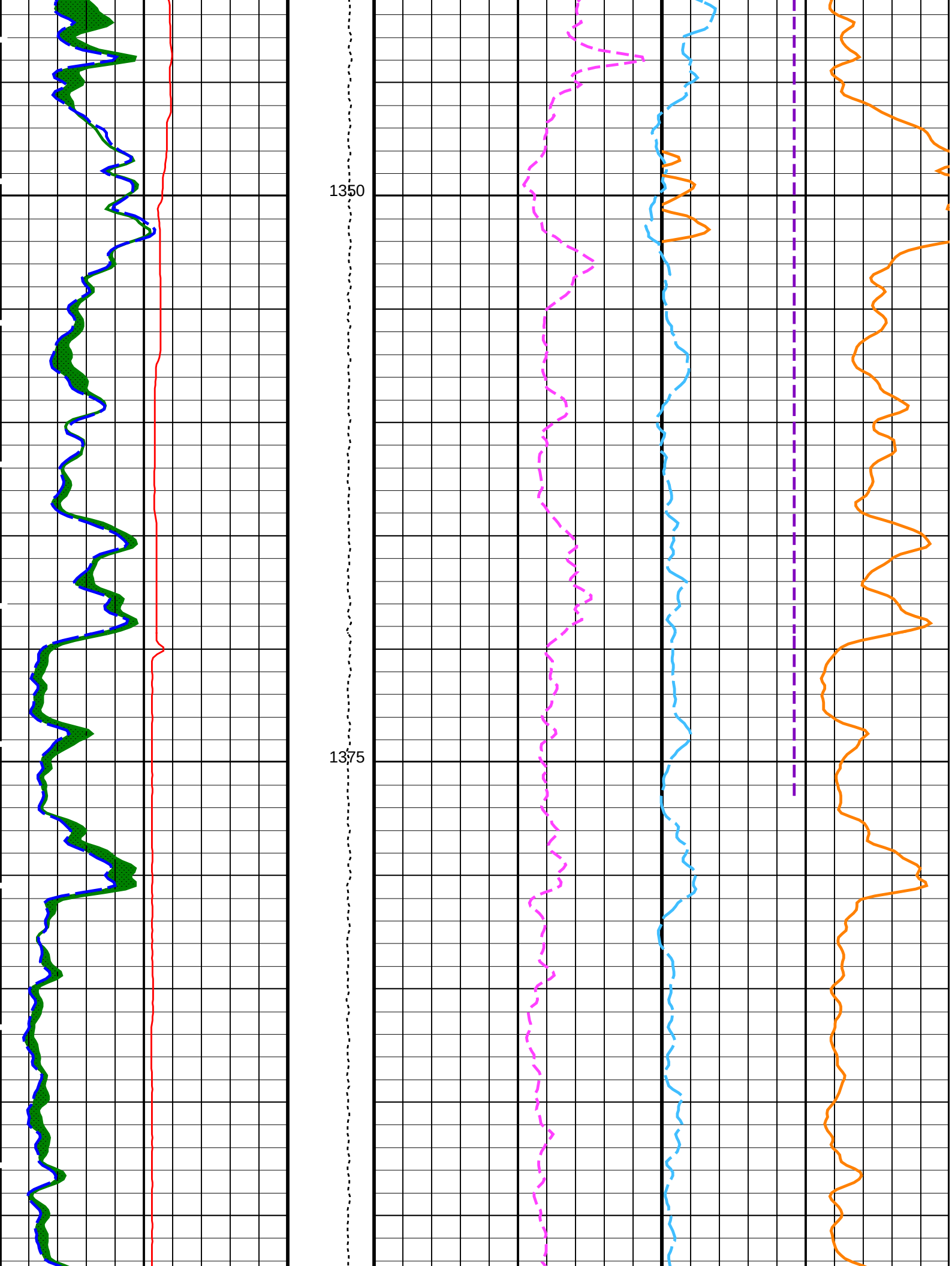
OP System Version: 19C0−187

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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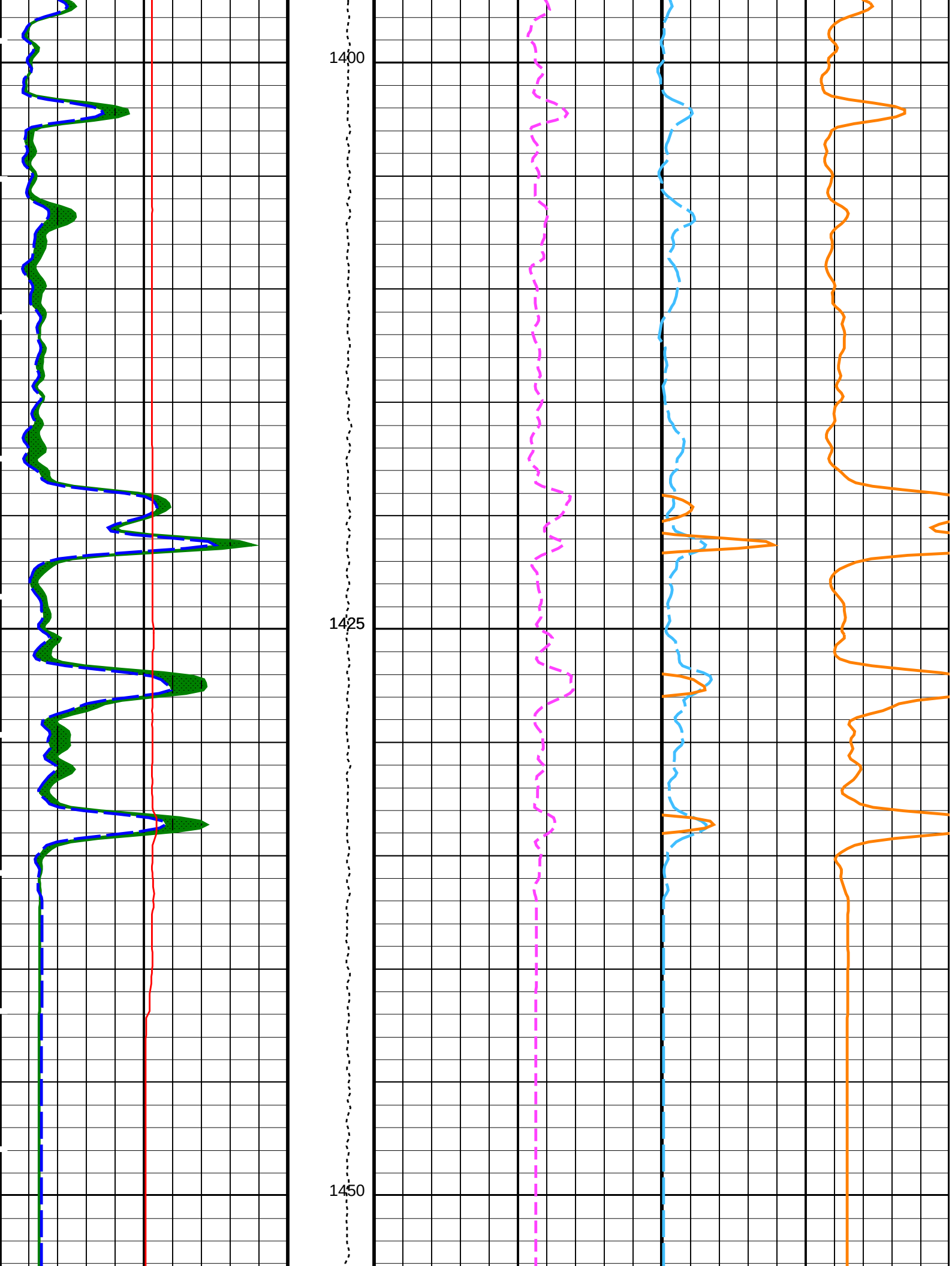
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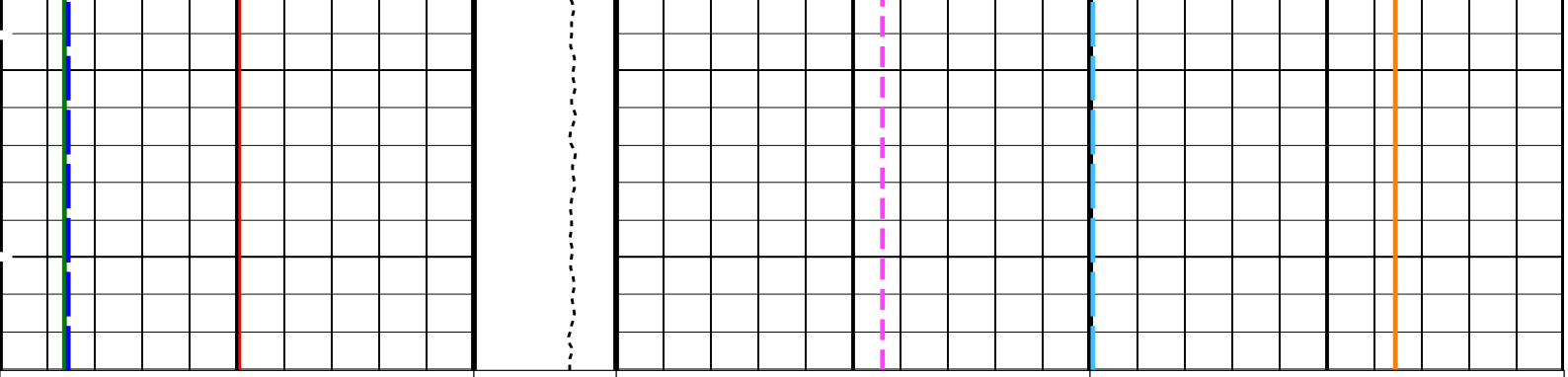


HLDS Caliper (LCAL)
0 (IN) 20

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) 50

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) 50

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	−0.00310944	
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	0.970374	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.969824	
	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: 09−Sep−2021 11:26

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

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_015LUP	FN:15	PRODUCER	09−Sep−2021 11:26		
RTB	MSS_LDEO_HRLA_LDL_015LUP	FN:16	PRODUCER	09−Sep−2021 11:26		

Company: International Ocean Discovery Program — Well: Expedition 396, Site U1571A

Output DLIS Files

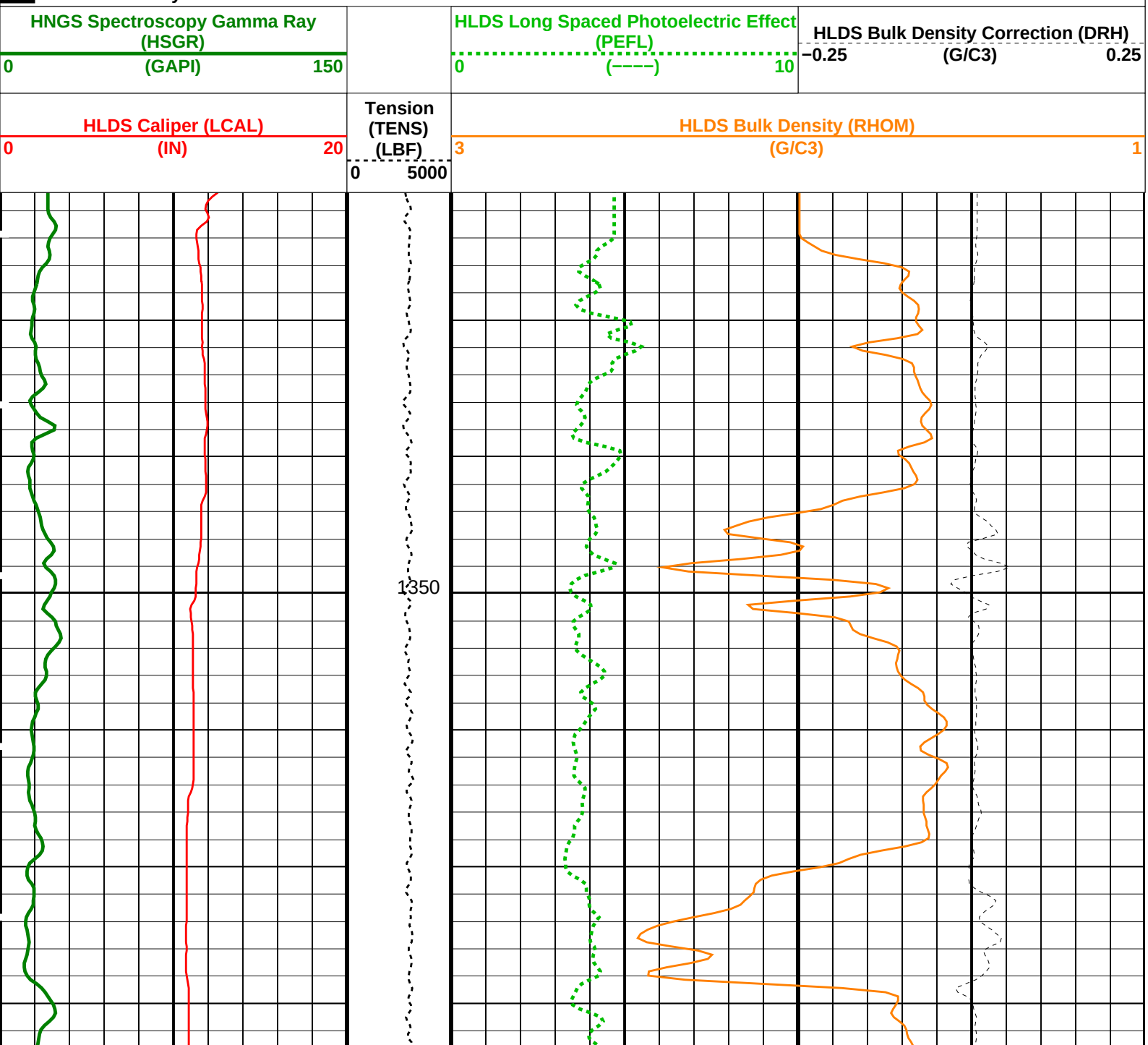
DEFAULT	MSS_LDEO_HRLA_LDL_015LUP	FN:15	PRODUCER	09−Sep−2021 11:26	1463.0 M	1337.3 M
RTB	MSS_LDEO_HRLA_LDL_015LUP	FN:16	PRODUCER	09−Sep−2021 11:26	1463.0 M	1337.3 M

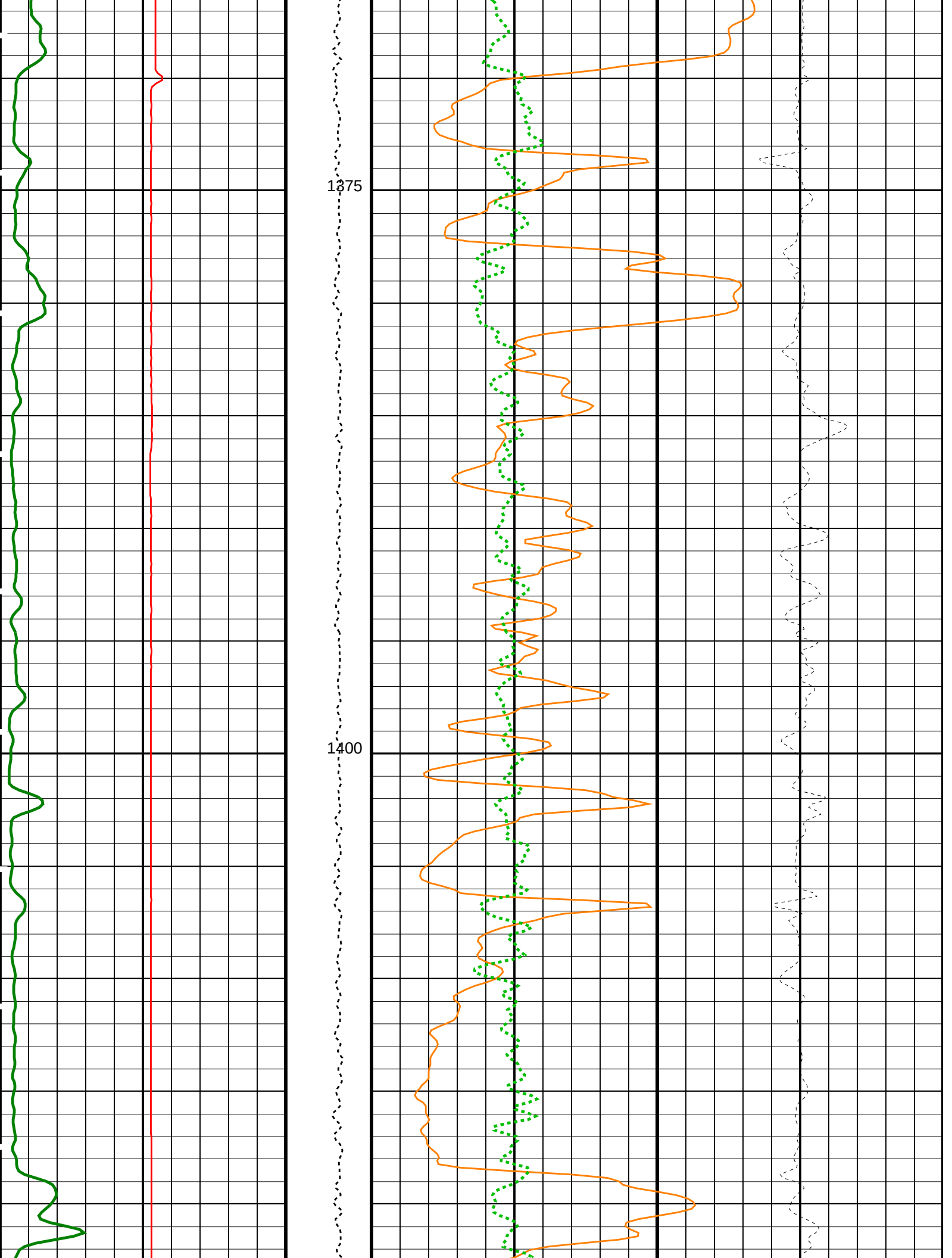
OP System Version: 19C0−187

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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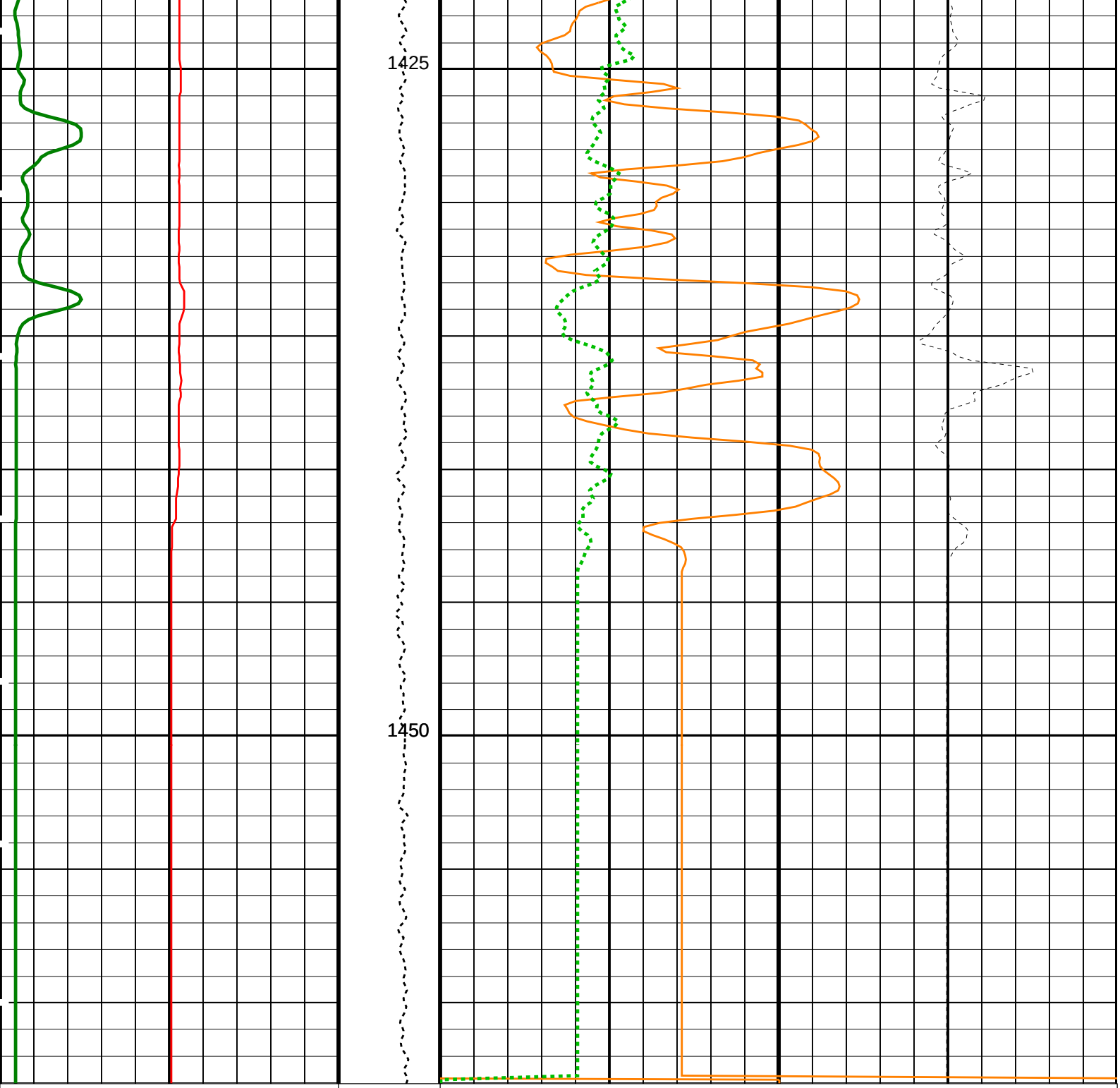


HLDS Caliper (LCAL)	Tension (TENS) (LBF)	HLDS Bulk Density (RHOM)
0 (IN) 20	0 5000	3 (G/C3) 1

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	−0.00310944	
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	0.970374	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.969824	
	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: 09−Sep−2021 11:26

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_015LUP	FN:15	PRODUCER	09−Sep−2021 11:26	
RTB	MSS_LDEO_HRLA_LDL_015LUP	FN:16	PRODUCER	09−Sep−2021 11:26	

Company: International Ocean Discovery Program Well: Expedition 396, Site U1571A

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_015LUP	FN:15	PRODUCER	09−Sep−2021 11:26	1463.0 M	1337.3 M
RTB	MSS_LDEO_HRLA_LDL_015LUP	FN:16	PRODUCER	09−Sep−2021 11:26	1463.0 M	1337.3 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

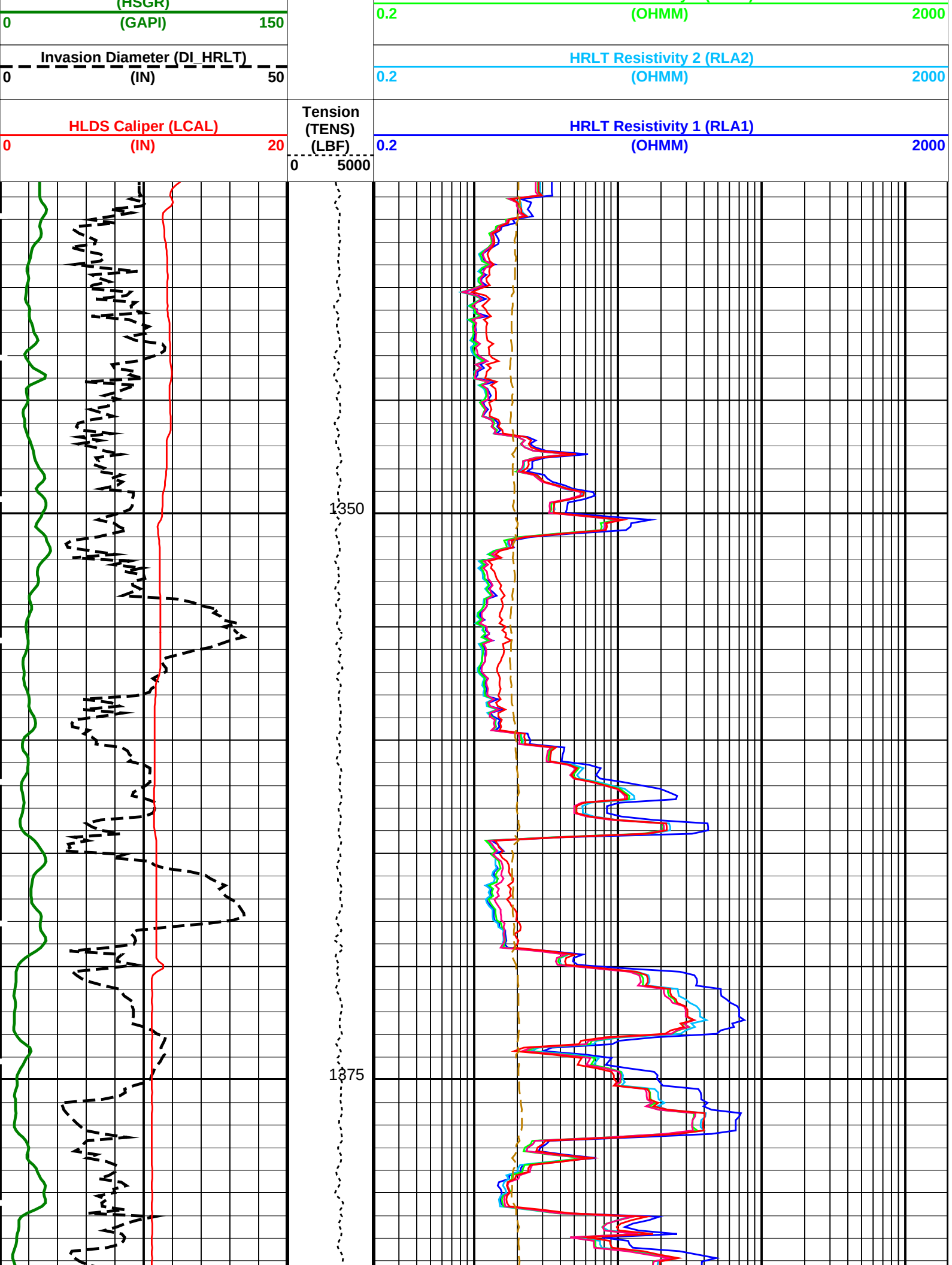
HRLT Mud Resistivity (RM_HRLT)
0.02 (OHMM) 200

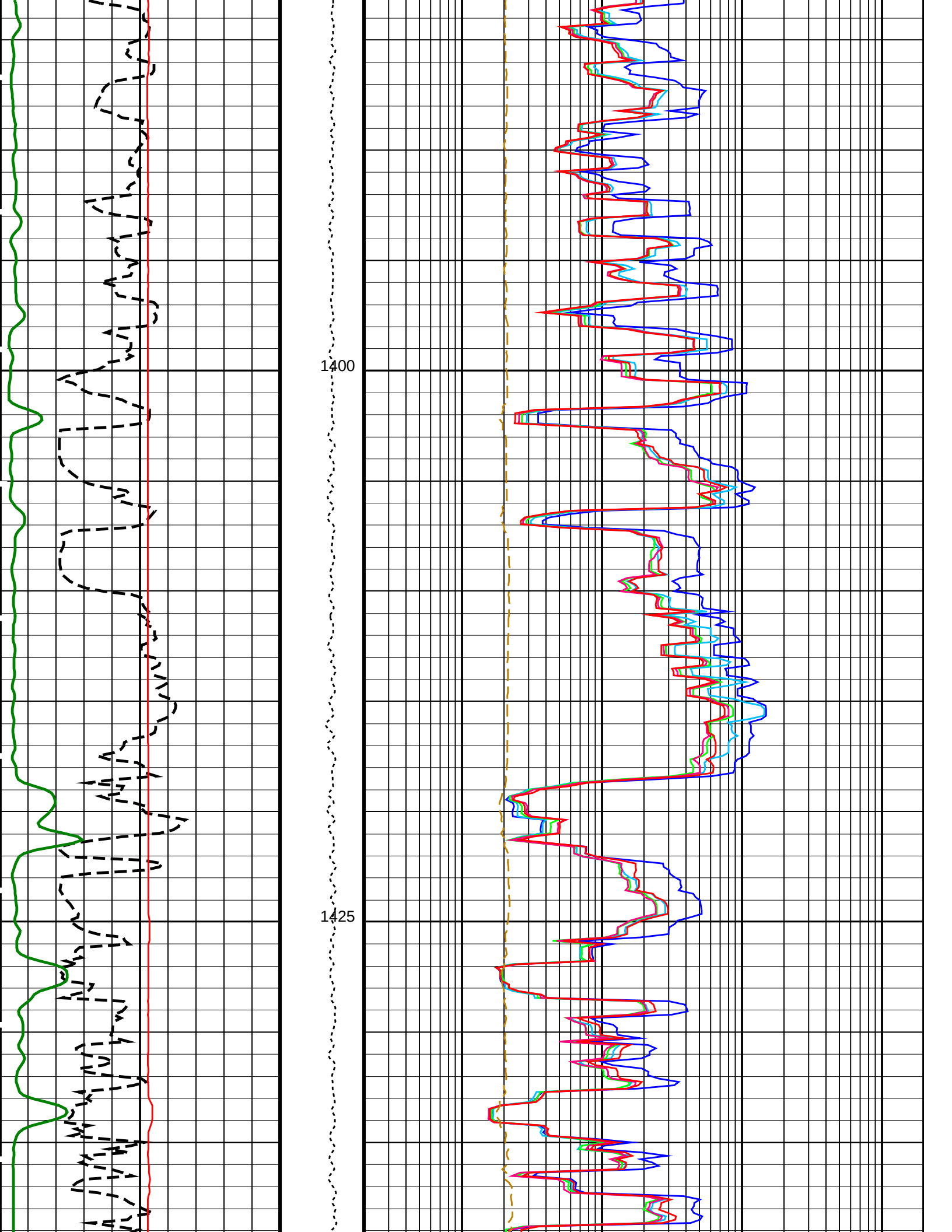
HRLT Resistivity 5 (RLA5)
0.2 (OHMM) 2000

HRLT Resistivity 4 (RLA4)
0.2 (OHMM) 2000

HNGS Spectroscopy Gamma Ray

HRLT Resistivity 3 (RLA3)


(HSGR)
0
(GAPI)
150
Invasion Diameter (DI_HRLT)
0
(IN)
50
HLDS Caliper (LCAL)
0
(IN)
20
Tension
(TENS)
(LBF)
0
5000
0.2
(OHMM)
2000
HRLT Resistivity 2 (RLA2)
0.2
(OHMM)
2000
HRLT Resistivity 1 (RLA1)
0.2
(OHMM)
2000
1350
1375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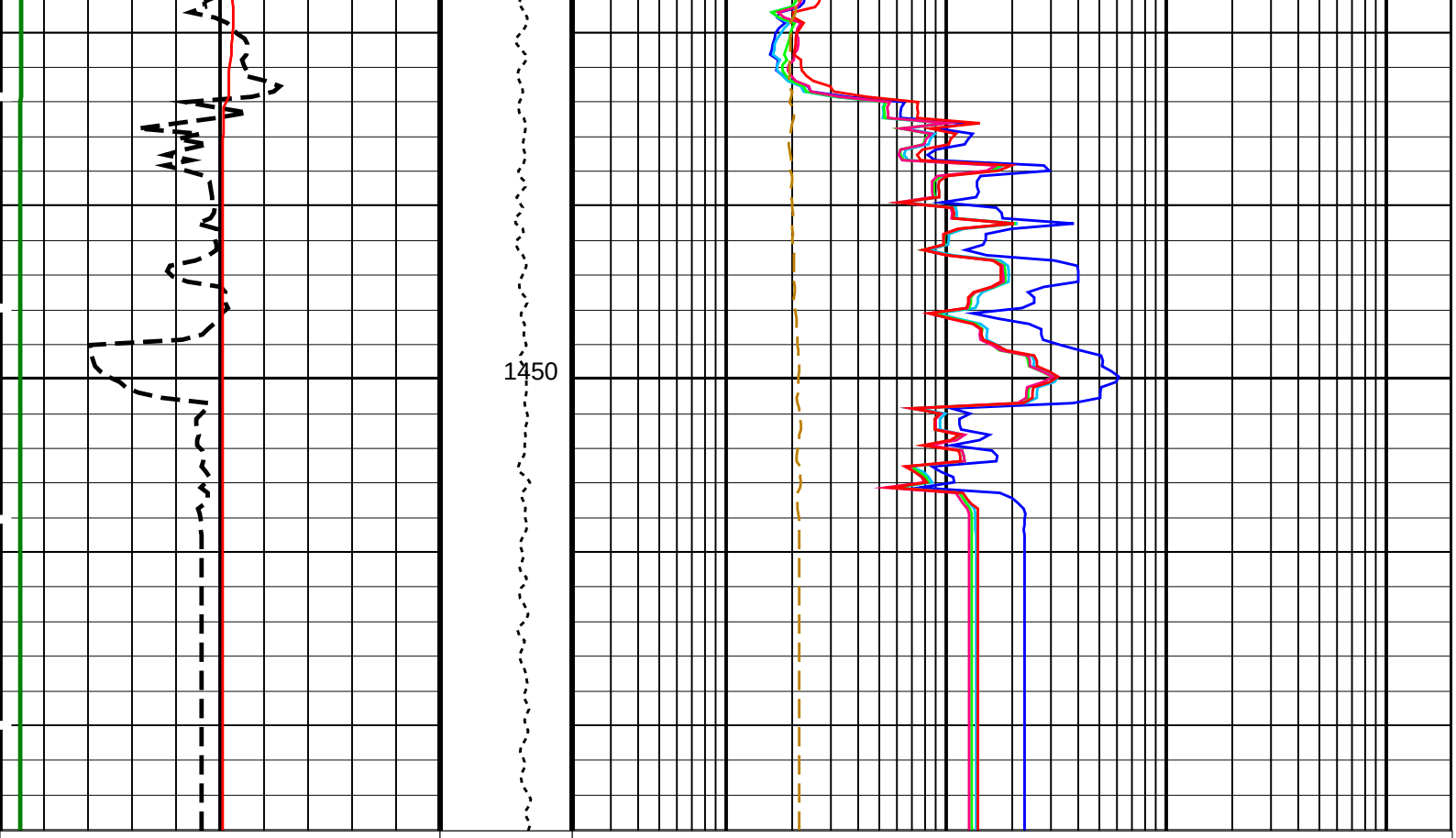


HLDS Caliper (LCAL)
0 (IN) 20

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)	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	−0.00310944	
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	0.970374	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.969824	
System and Miscellaneous			
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3
MST	Mud Sample Temperature	23.00	DEGC
TD	Total Depth	2292	M

Format: HRLT Vertical Scale: 1:200 Graphics File Created: 09−Sep−2021 11:26

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_015LUP	FN:15	PRODUCER	09−Sep−2021 11:26	
RTB	MSS_LDEO_HRLA_LDL_015LUP	FN:16	PRODUCER	09−Sep−2021 11:26	

Company: International Ocean Discovery Program Well: Expedition 396, Site U1571A

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_015LUP	FN:15	PRODUCER	09−Sep−2021 11:26	1463.0 M	1337.3 M
RTB	MSS_LDEO_HRLA_LDL_015LUP	FN:16	PRODUCER	09−Sep−2021 11:26	1463.0 M	1337.3 M

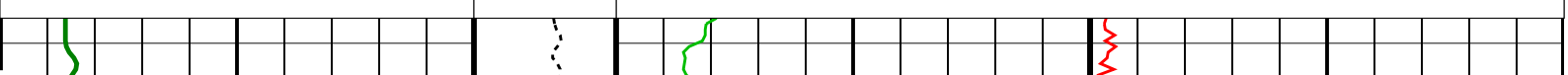
OP System Version: 19C0−187

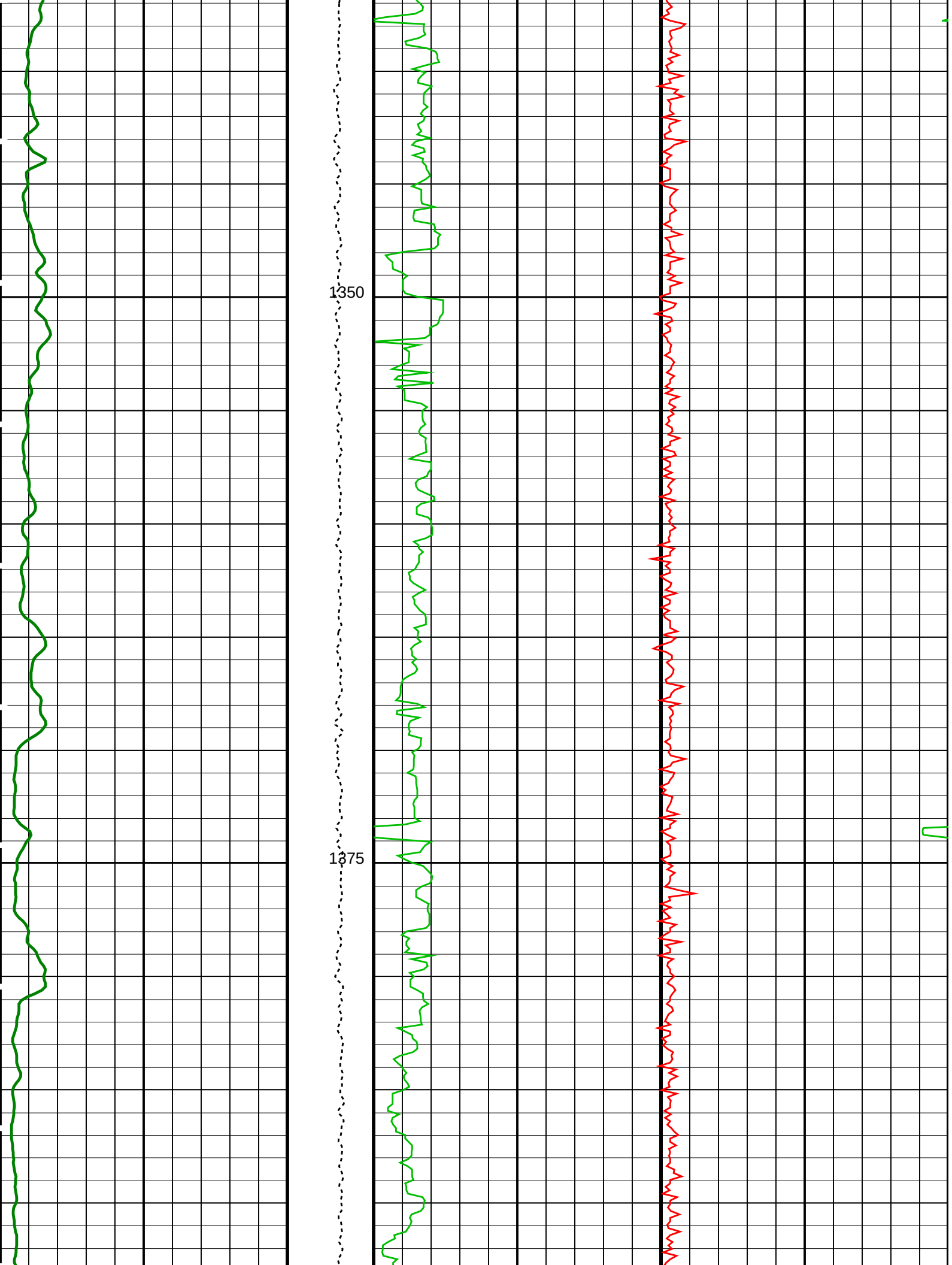
MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
DTC−H	19C0−187		

PIP SUMMARY

Time Mark Every 60 S

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

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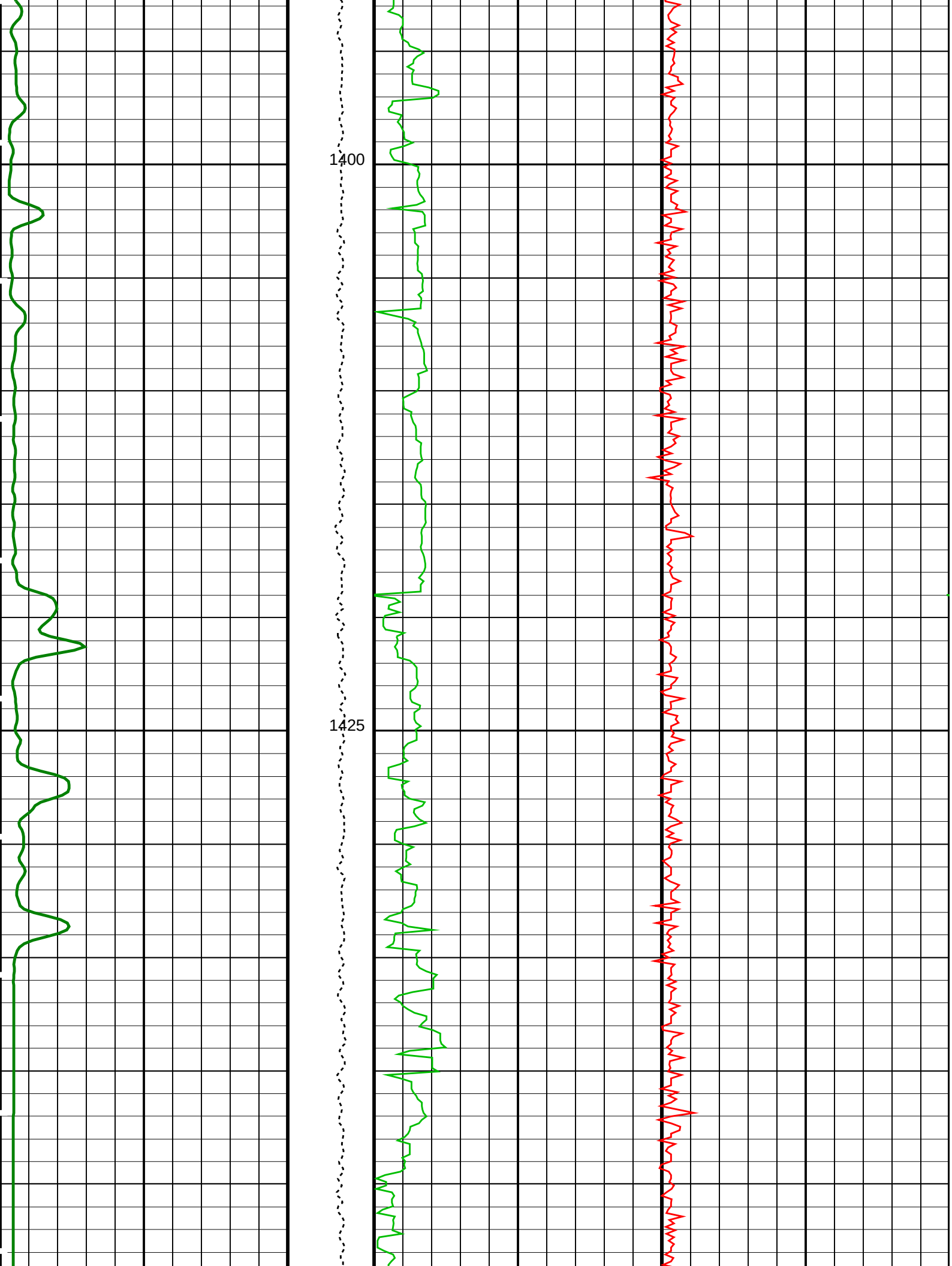
1375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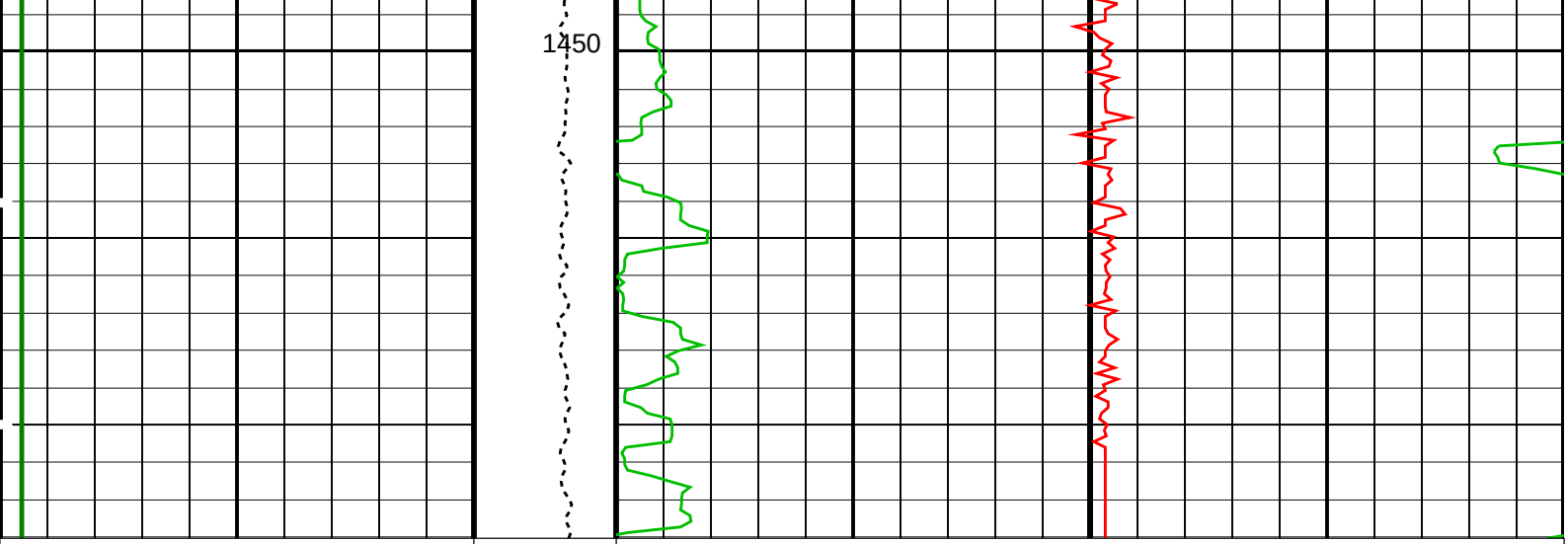


Parameters

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	−0.00310944	
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	0.970374	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.969824	
	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: 09−Sep−2021 11:26

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_015LUP FN:15 PRODUCER 09−Sep−2021 11:26

DEFAULT	MSS_LDEO_HRLA_LDL_015LUP	FN:15	PRODUCER	09−Sep−2021 11:26		
RTB	MSS_LDEO_HRLA_LDL_015LUP	FN:16	PRODUCER	09−Sep−2021 11:26		

Schlumberger

Second Pass

MAXIS Field Log

Company: International Ocean Discovery Program **Well: Expedition 396, Site U1571A**

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_016LUP	FN:17	PRODUCER	09−Sep−2021 11:58	1463.0 M	1209.3 M
RTB	MSS_LDEO_HRLA_LDL_016LUP	FN:18	PRODUCER	09−Sep−2021 11:58	1463.0 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

HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 50

Area1
From HCGR to HSGR

HNGS Computed Gamma Ray (HCGR)
0 (GAPI) 50

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

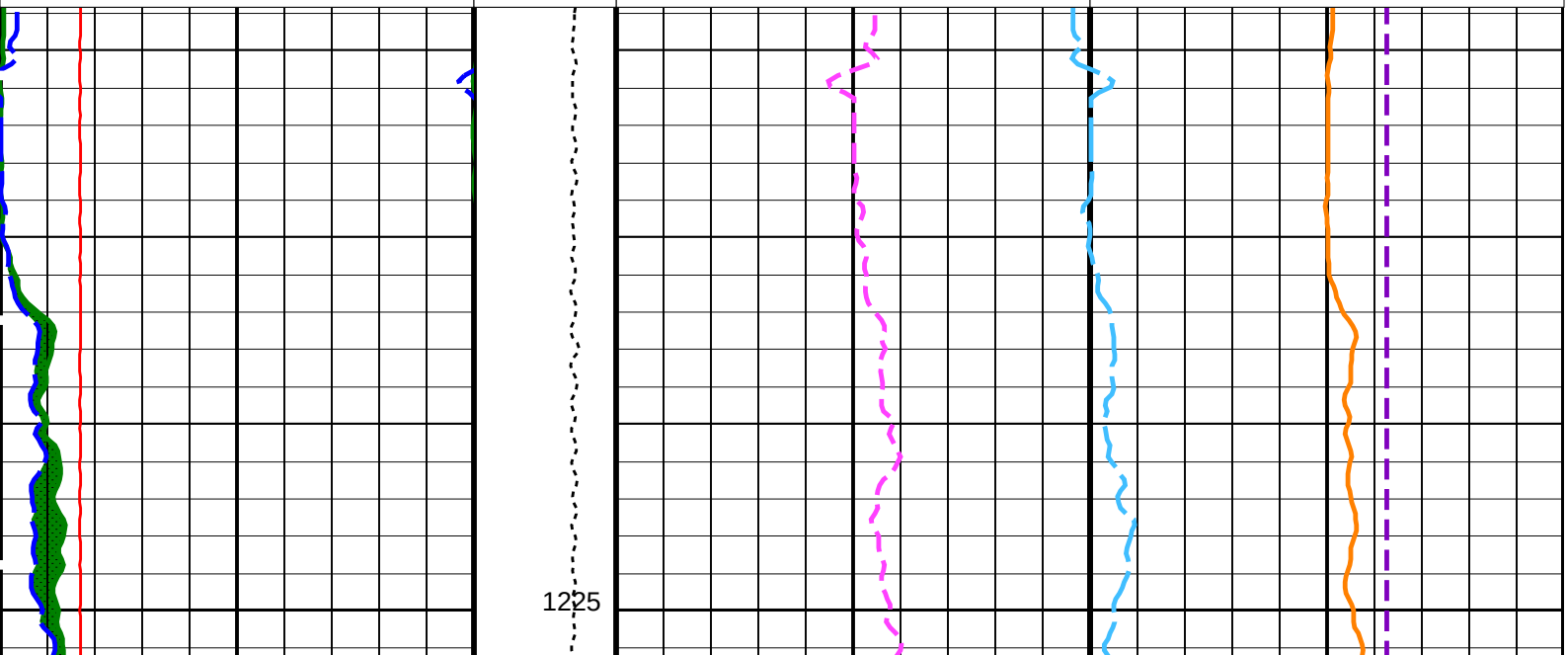
HNGS Uranium (HURA)
−5 (PPM) 5

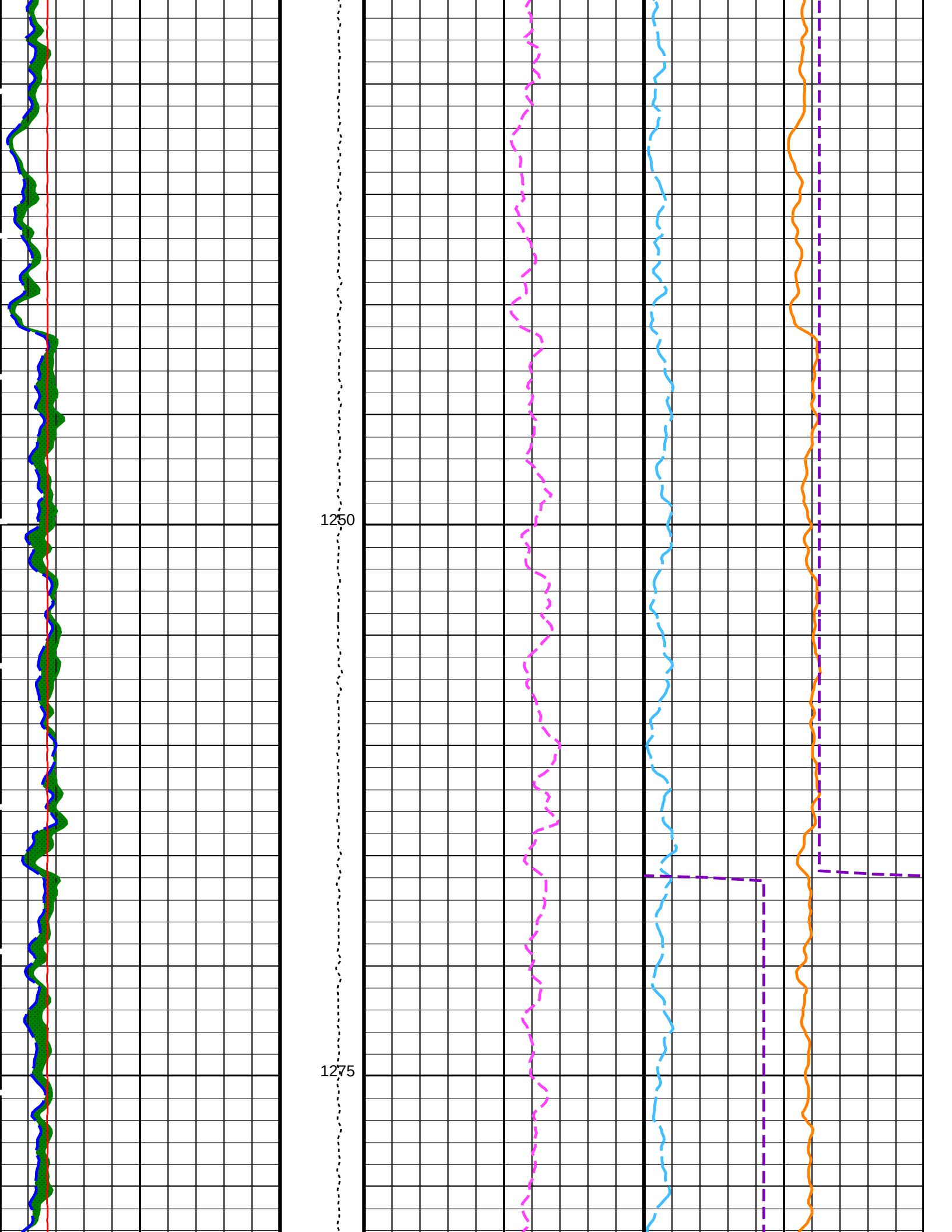
HLDS Caliper (LCAL)
0 (IN) 20

Tension (TENS) (LBF)
10000 0

HNGS Thorium (HTHO)
−5 (PPM) 5

HNGS Potassium (HFK)
−0.01 (V/V) 0.01

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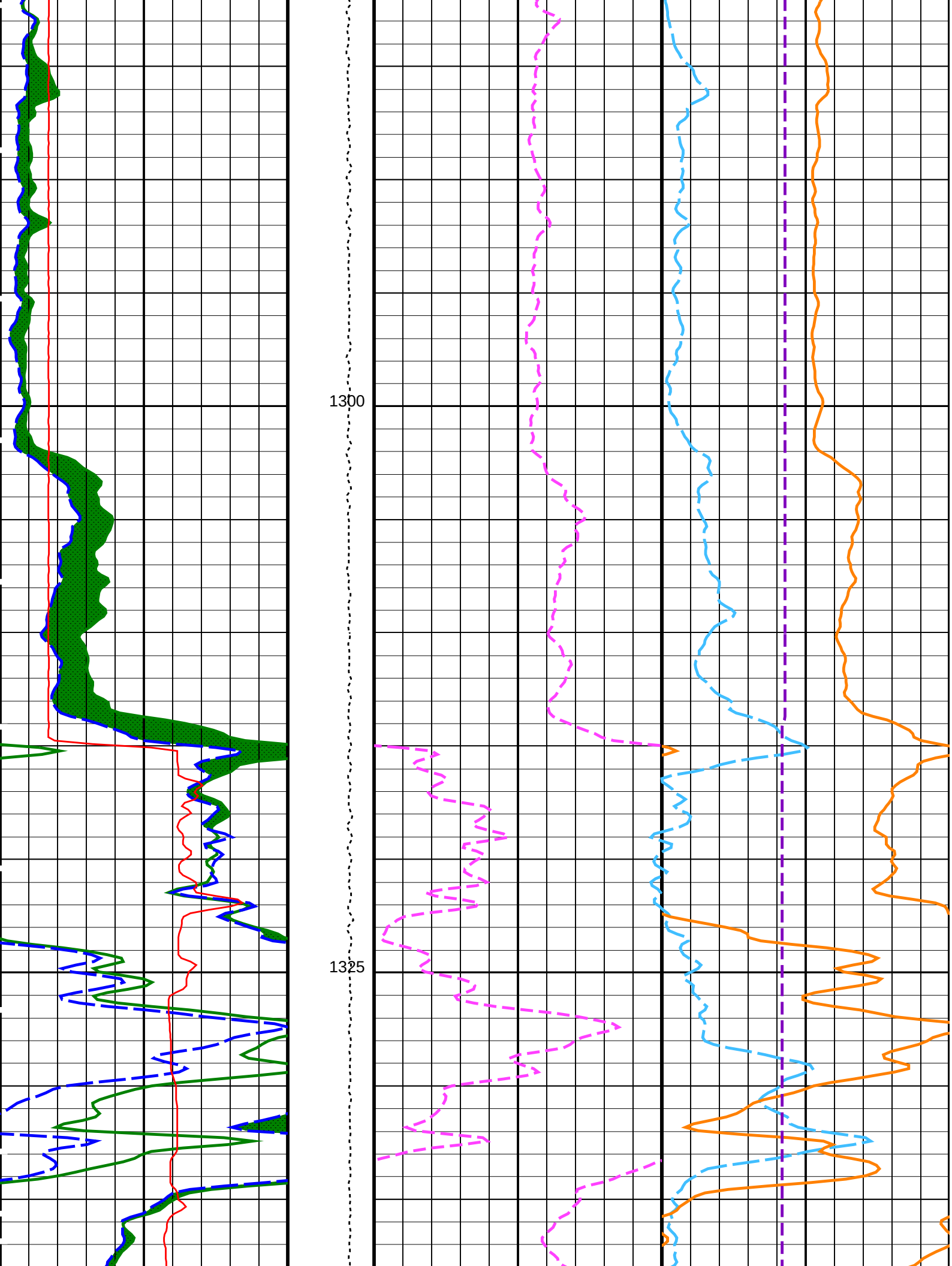
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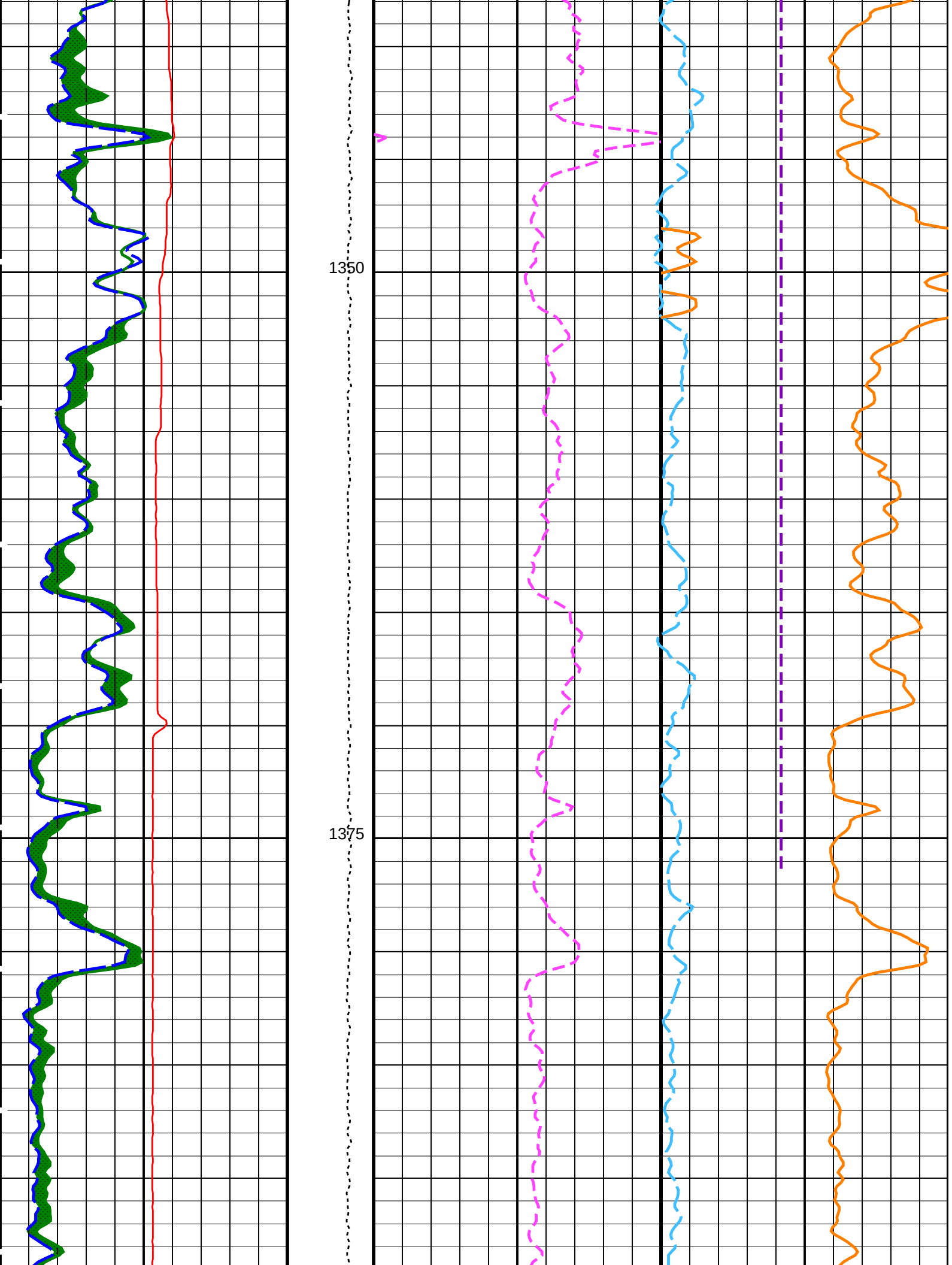
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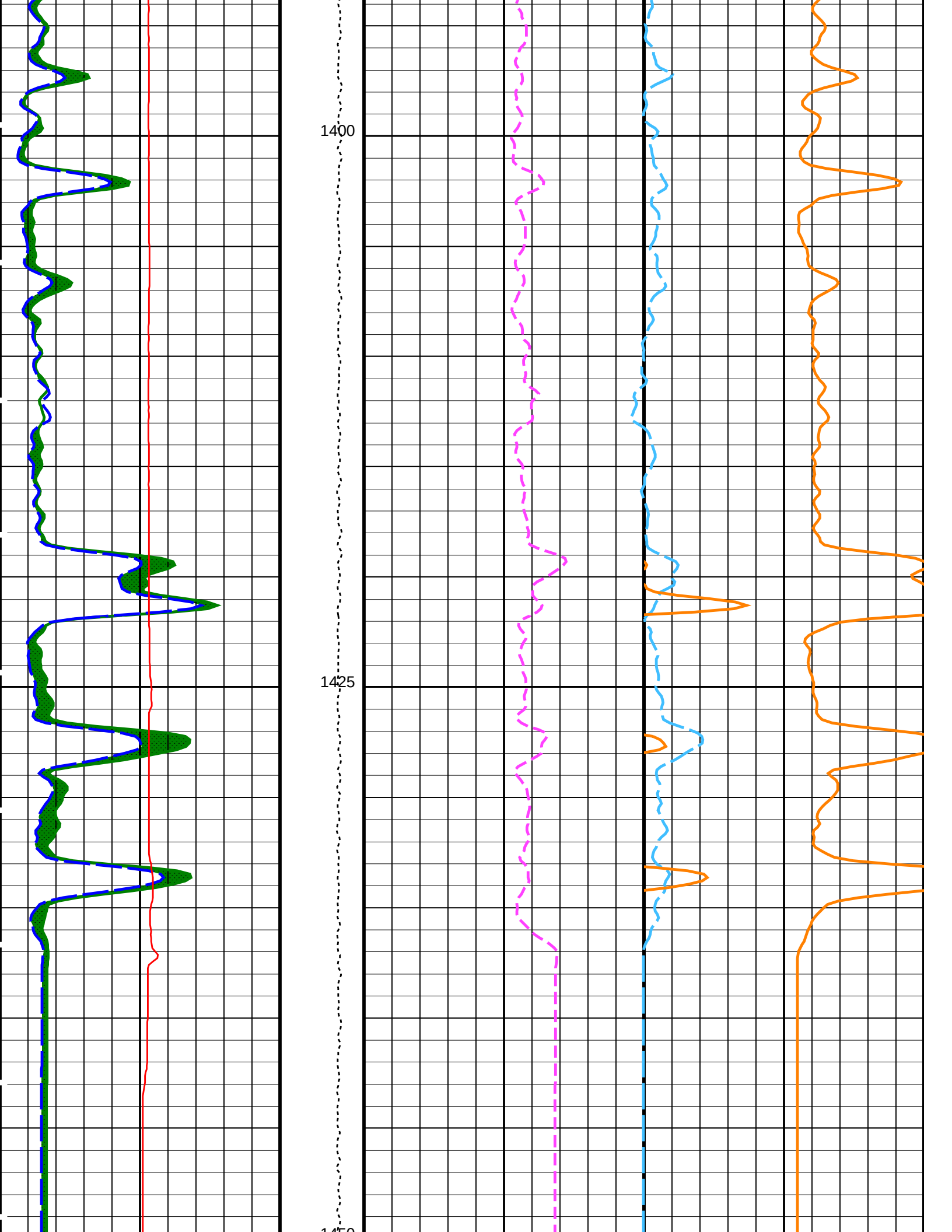
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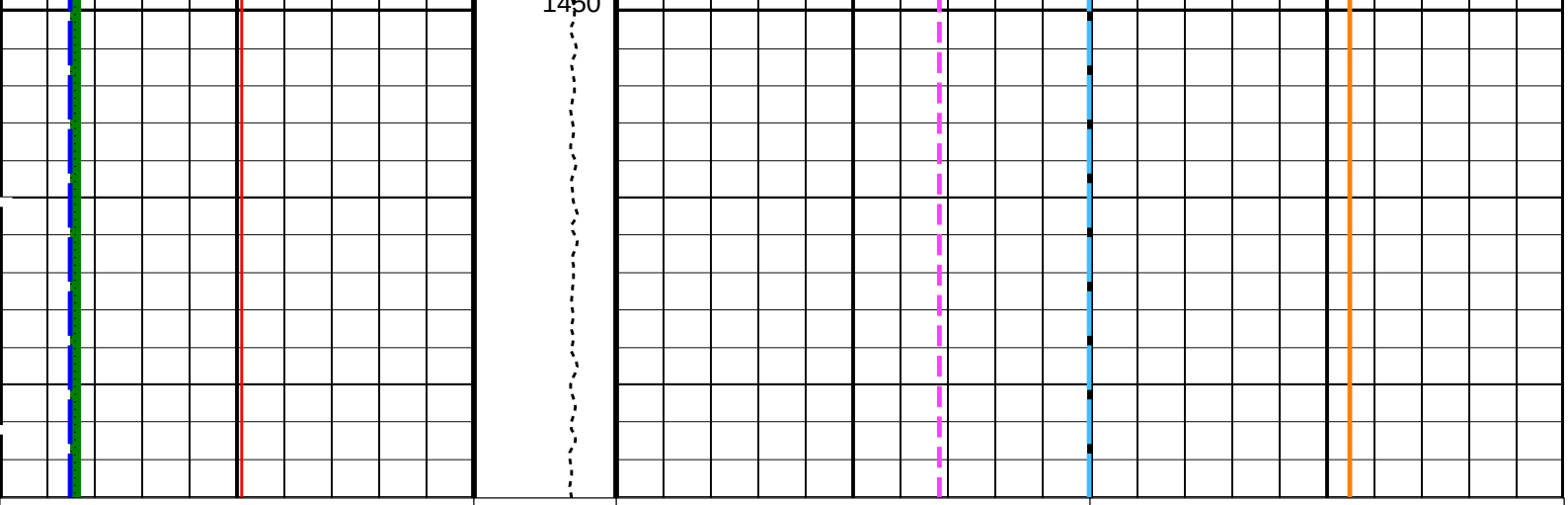


Parameters

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	−0.000848683	
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	1.06071	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.08597	
	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: 09−Sep−2021 11:58

OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−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_016LUP	FN:17	PRODUCER	09−Sep−2021 11:58	
RTB	MSS_LDEO_HRLA_LDL_016LUP	FN:18	PRODUCER	09−Sep−2021 11:58	

Company: International Ocean Discovery Program — Well: Expedition 396, Site U1571A

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_016LUP	FN:17	PRODUCER	09−Sep−2021 11:58	1463.0 M	1209.3 M
RTB	MSS_LDEO_HRLA_LDL_016LUP	FN:18	PRODUCER	09−Sep−2021 11:58	1463.0 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

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

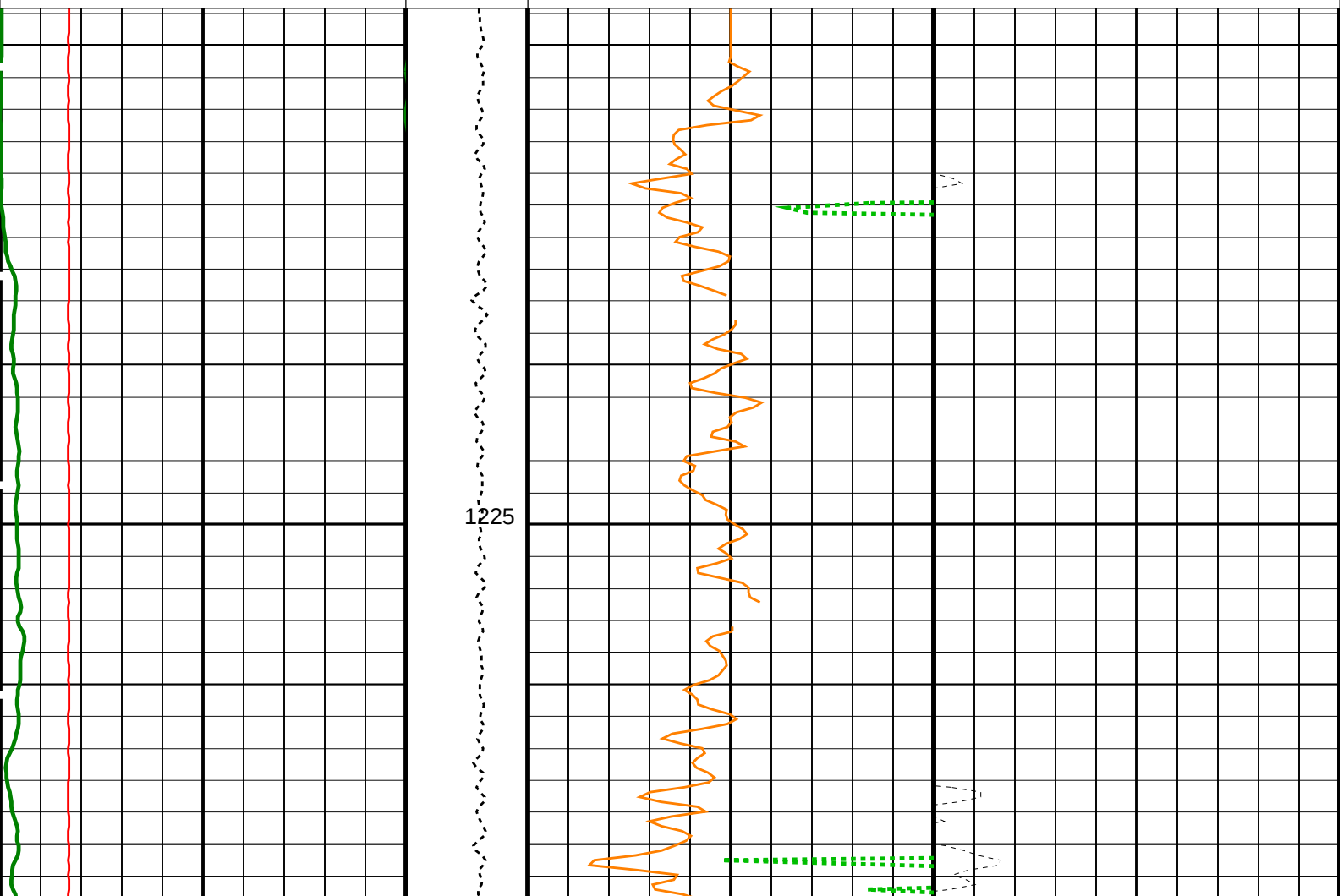
HLDS Long Spaced Photoelectric Effect (PEFL)
0 (−−−−) 10

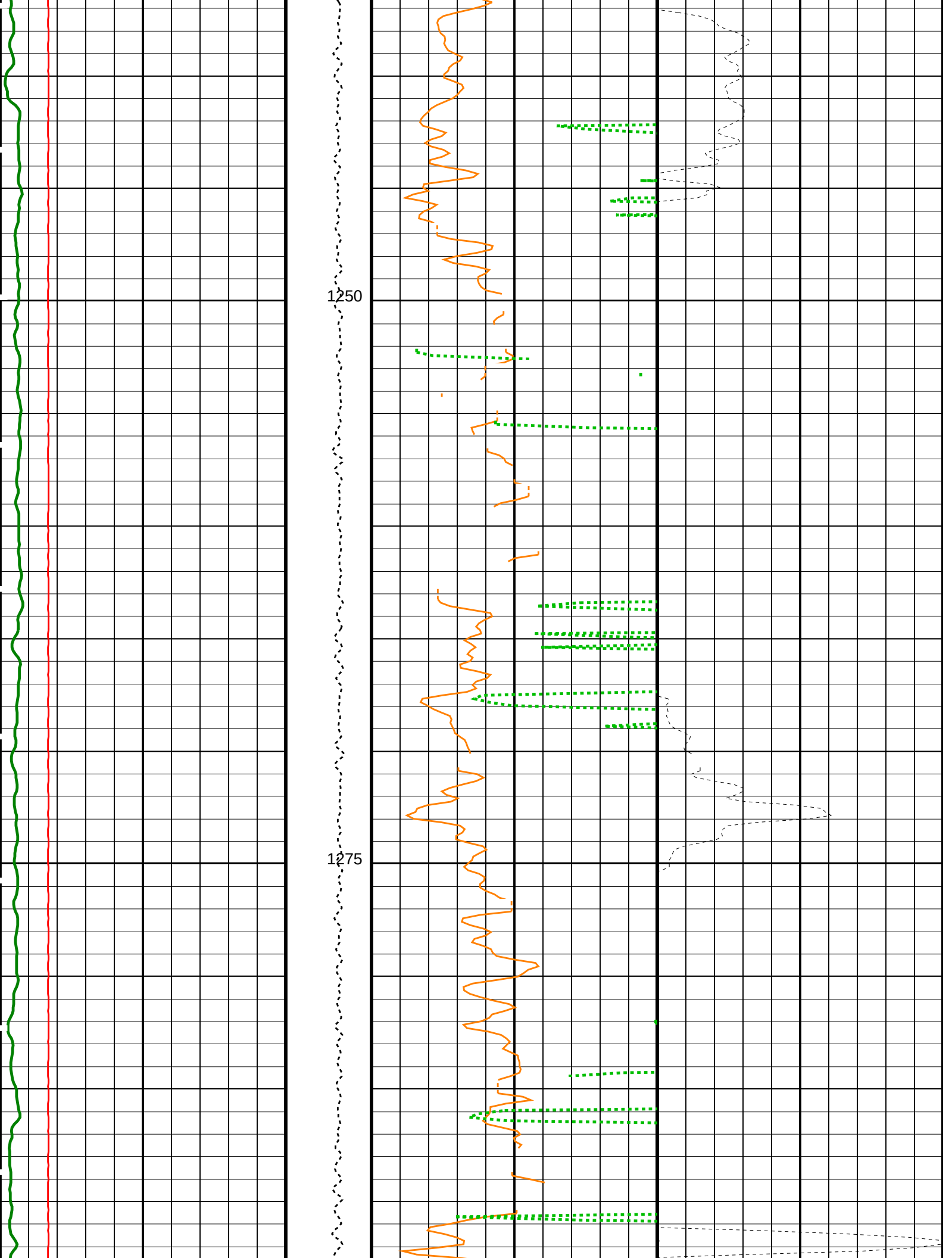
HLDS Bulk Density Correction (DRH)
−0.25 (G/C3) 0.25

HLDS Caliper (LCAL)
0 (IN) 20

Tension (TENS) (LBF)
0 5000

HLDS Bulk Density (RHOM)
3 (G/C3) 1

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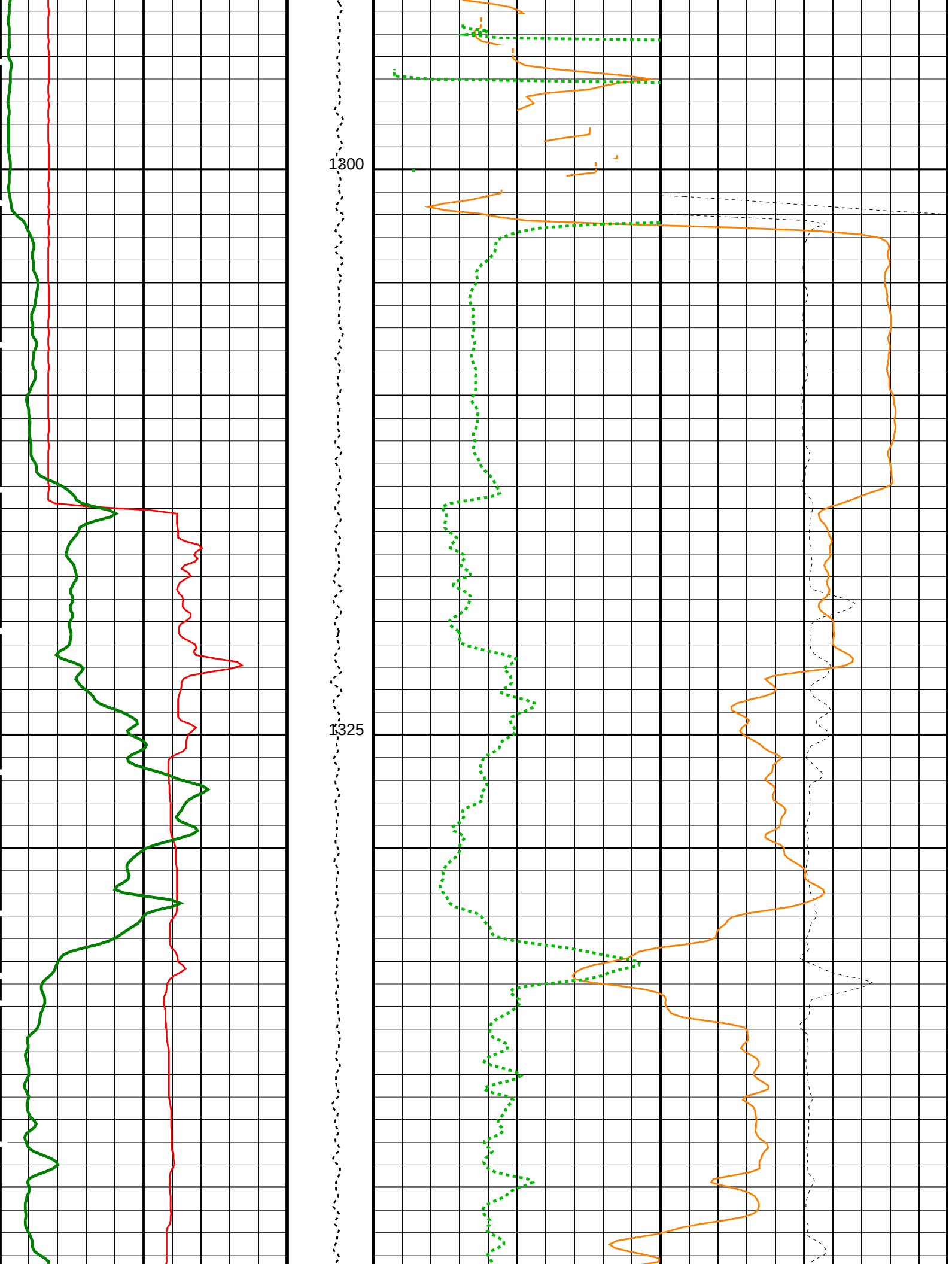
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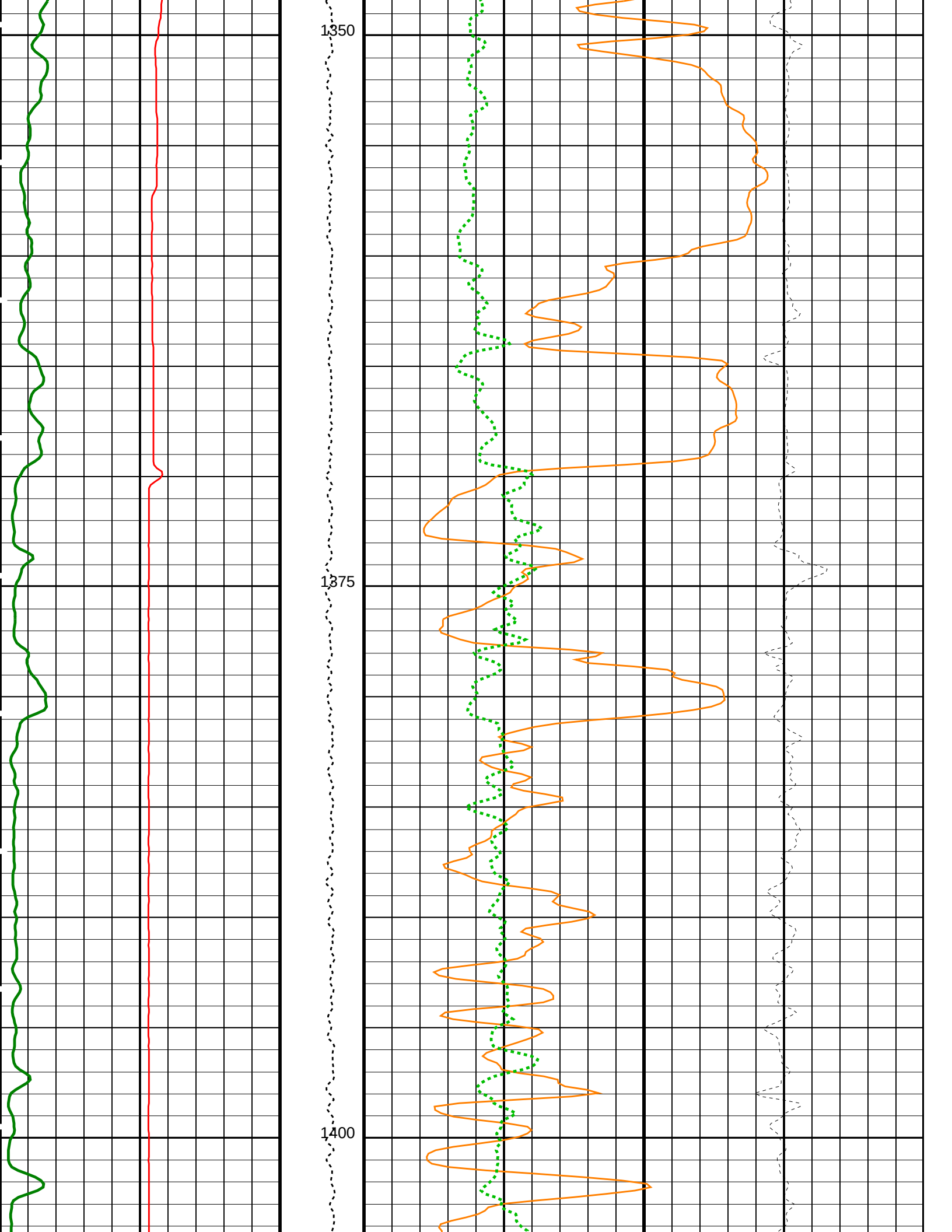
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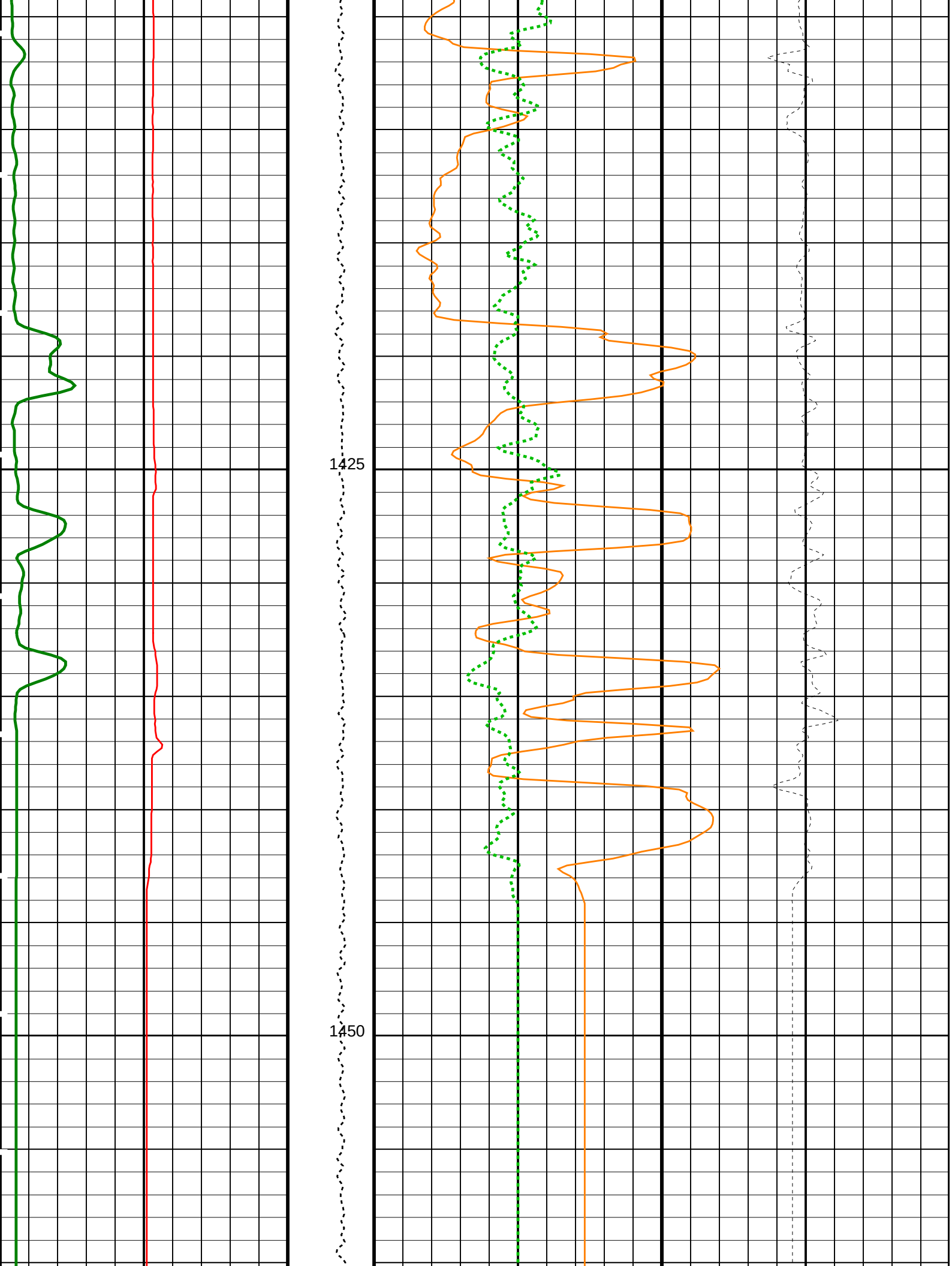
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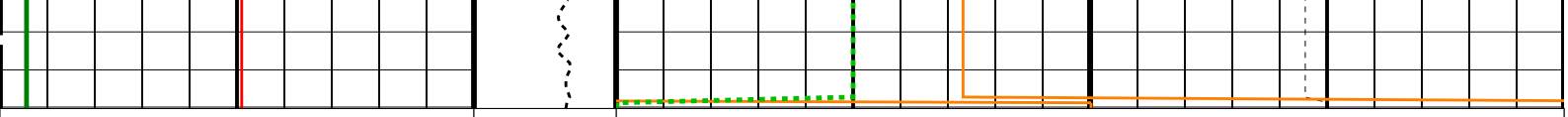


HLDS Caliper (LCAL)	Tension (TENS)	HLDS Bulk Density (RHOM)
0 (IN) 20	(LBF) 0 5000	3 (G/C3) 1

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	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	−0.000848683	
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	1.06071	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.08597	
	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: 09−Sep−2021 11:58

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
DTC−H	19C0−187		

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_016LUP	FN:17	PRODUCER	09−Sep−2021 11:58
RTB	MSS_LDEO_HRLA_LDL_016LUP	FN:18	PRODUCER	09−Sep−2021 11:58

Company: International Ocean Discovery Program Well: Expedition 396, Site U1571A

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_016LUP	FN:17	PRODUCER	09−Sep−2021 11:58	1463.0 M	1209.3 M

RTB	MSS_LDEO_HRLA_LDL_016LUP	FN:18	PRODUCER	09−Sep−2021 11:58	1463.0 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

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

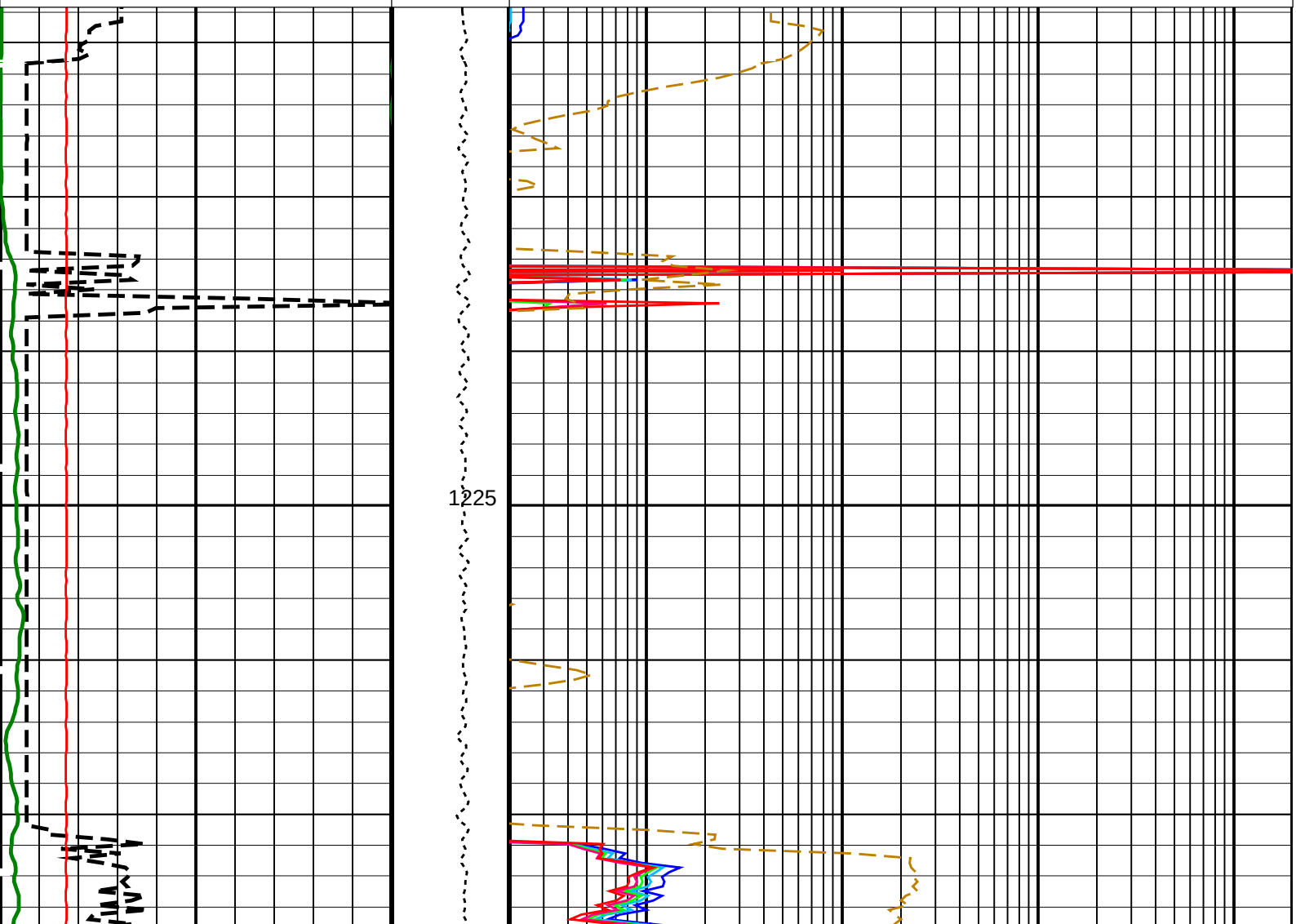
Invasion Diameter (DI_HRLT)
0 (IN) 50

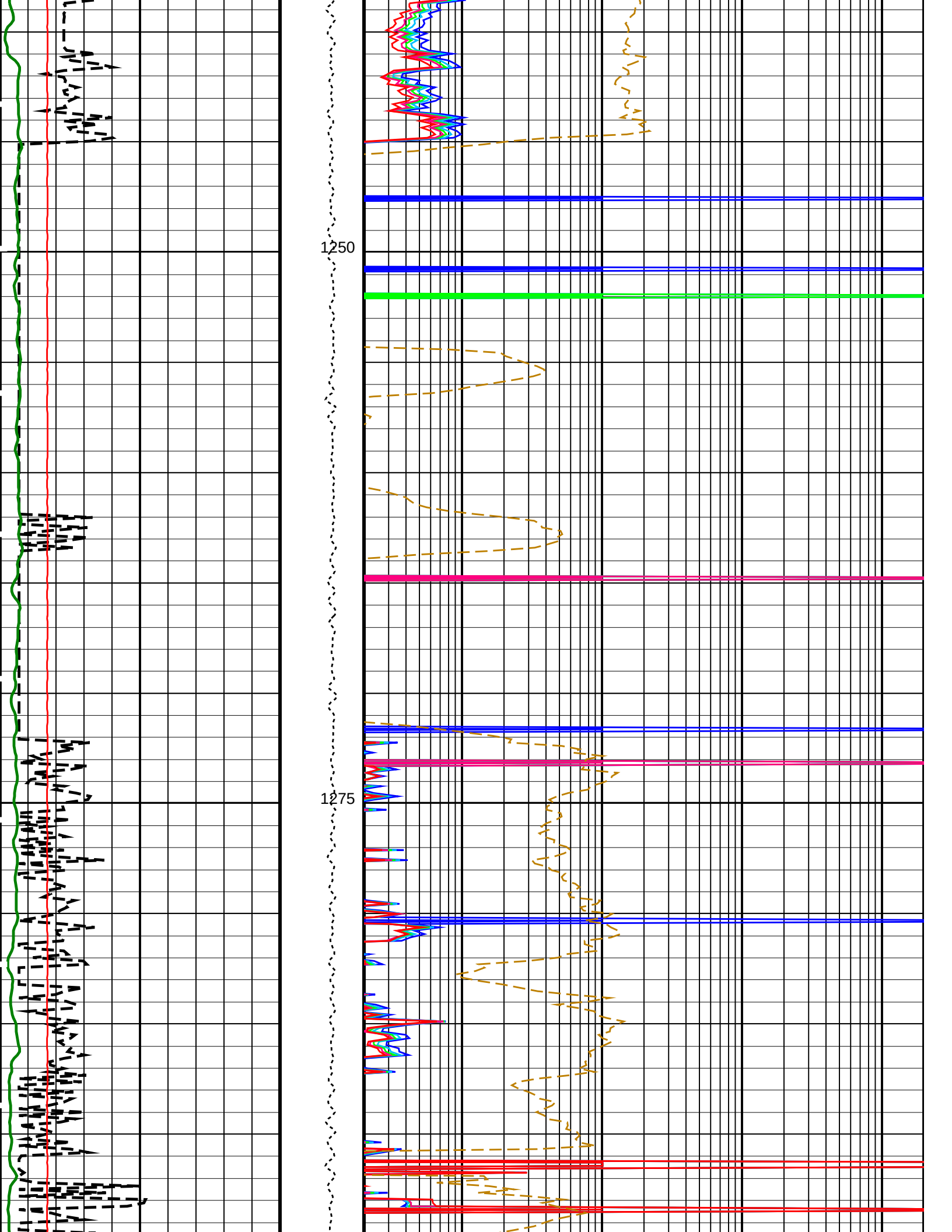
HRLT Resistivity 2 (RLA2)
0.2 (OHMM) 2000

HLDS Caliper (LCAL)
0 (IN) 20

Tension (TENS) (LBF)
0 5000

HRLT Resistivity 1 (RLA1)
0.2 (OHMM) 2000

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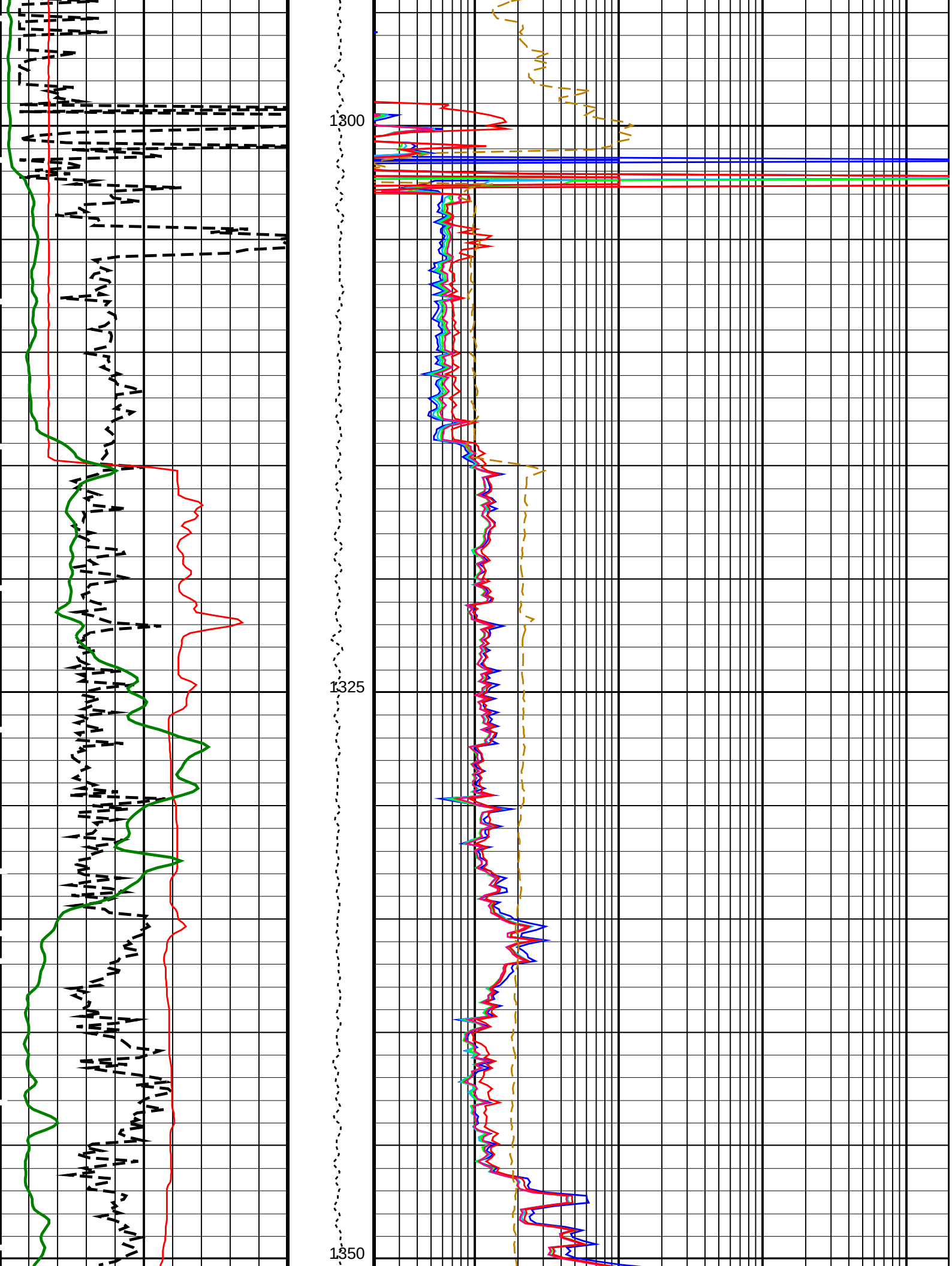
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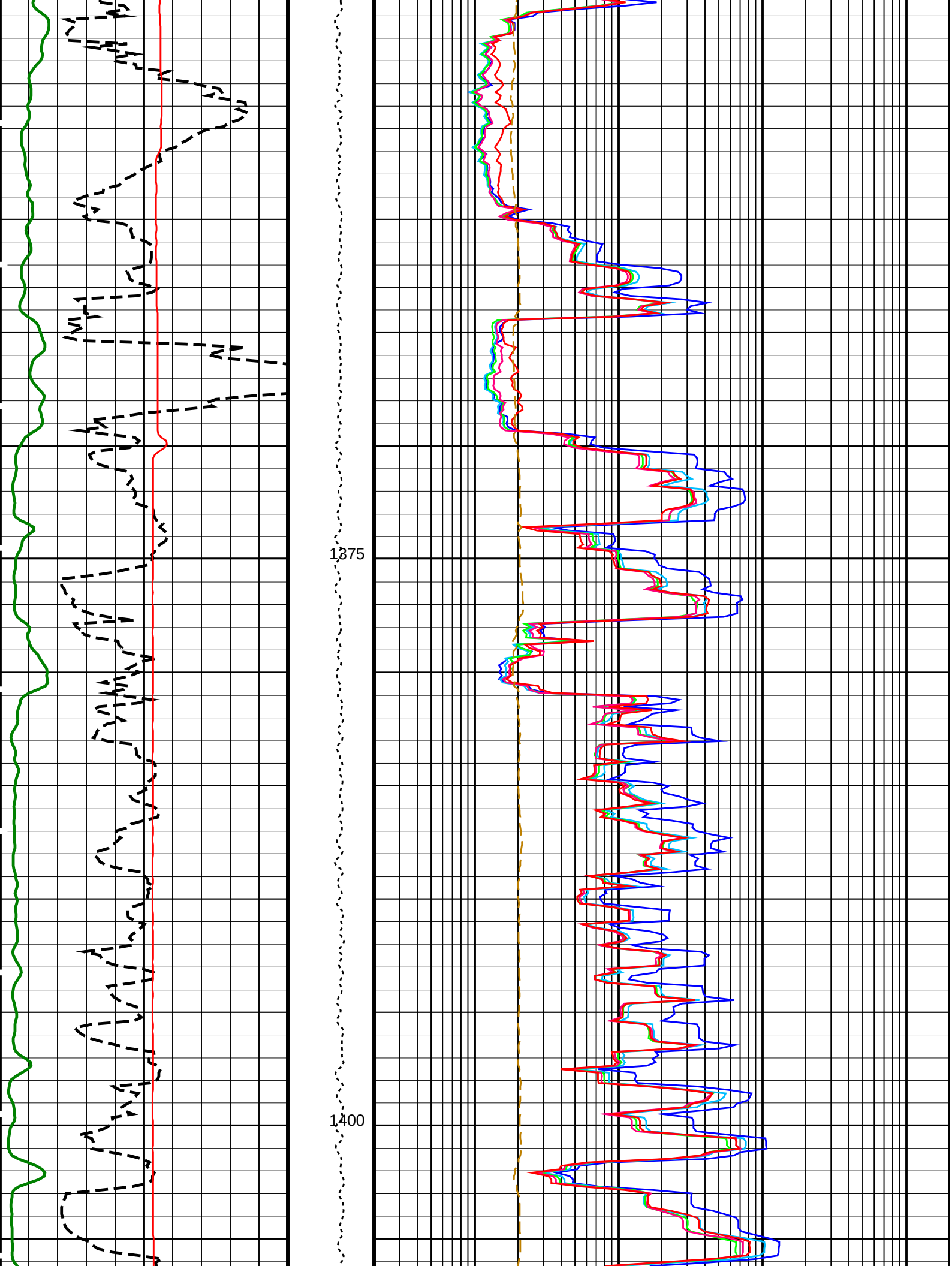
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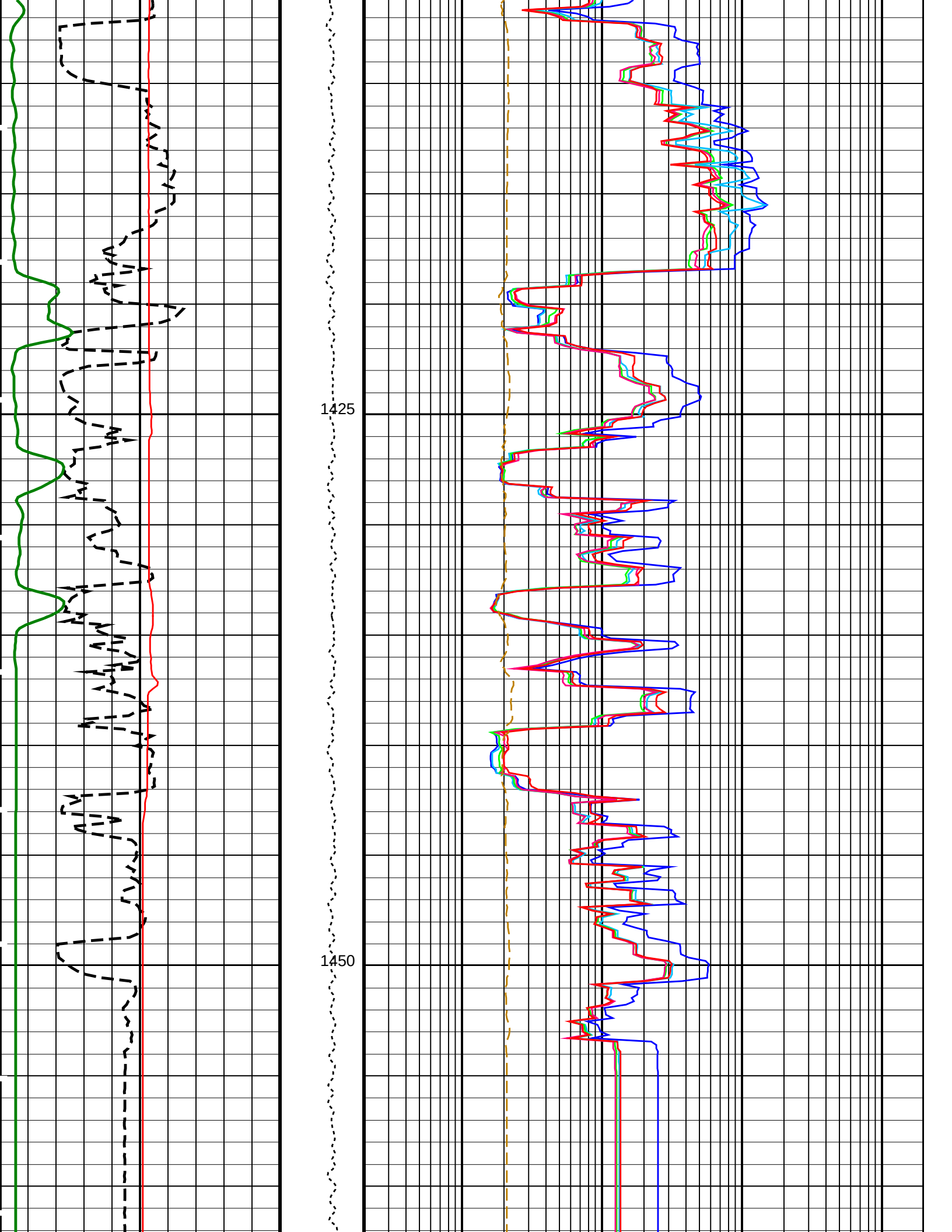
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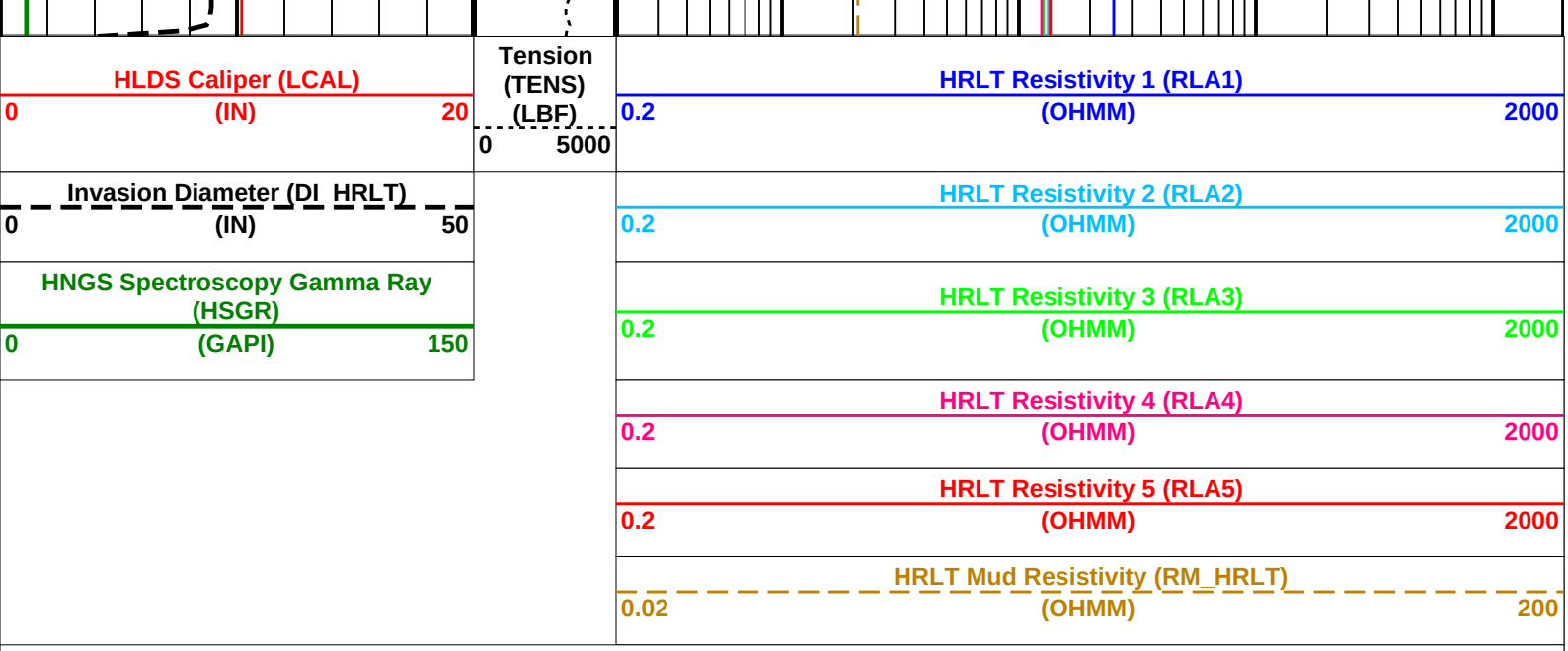


Parameters

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	−0.000848683	
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	1.06071	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.08597	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3
MST	Mud Sample Temperature	23.00	DEGC
TD	Total Depth	2292	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		

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_016LUP	FN:17	PRODUCER	09−Sep−2021 11:58	
RTB	MSS_LDEO_HRLA_LDL_016LUP	FN:18	PRODUCER	09−Sep−2021 11:58	

Company: International Ocean Discovery Program — Well: Expedition 396, Site U1571A

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_016LUP	FN:17	PRODUCER	09−Sep−2021 11:58	1463.0 M	1209.3 M
RTB	MSS_LDEO_HRLA_LDL_016LUP	FN:18	PRODUCER	09−Sep−2021 11:58	1463.0 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

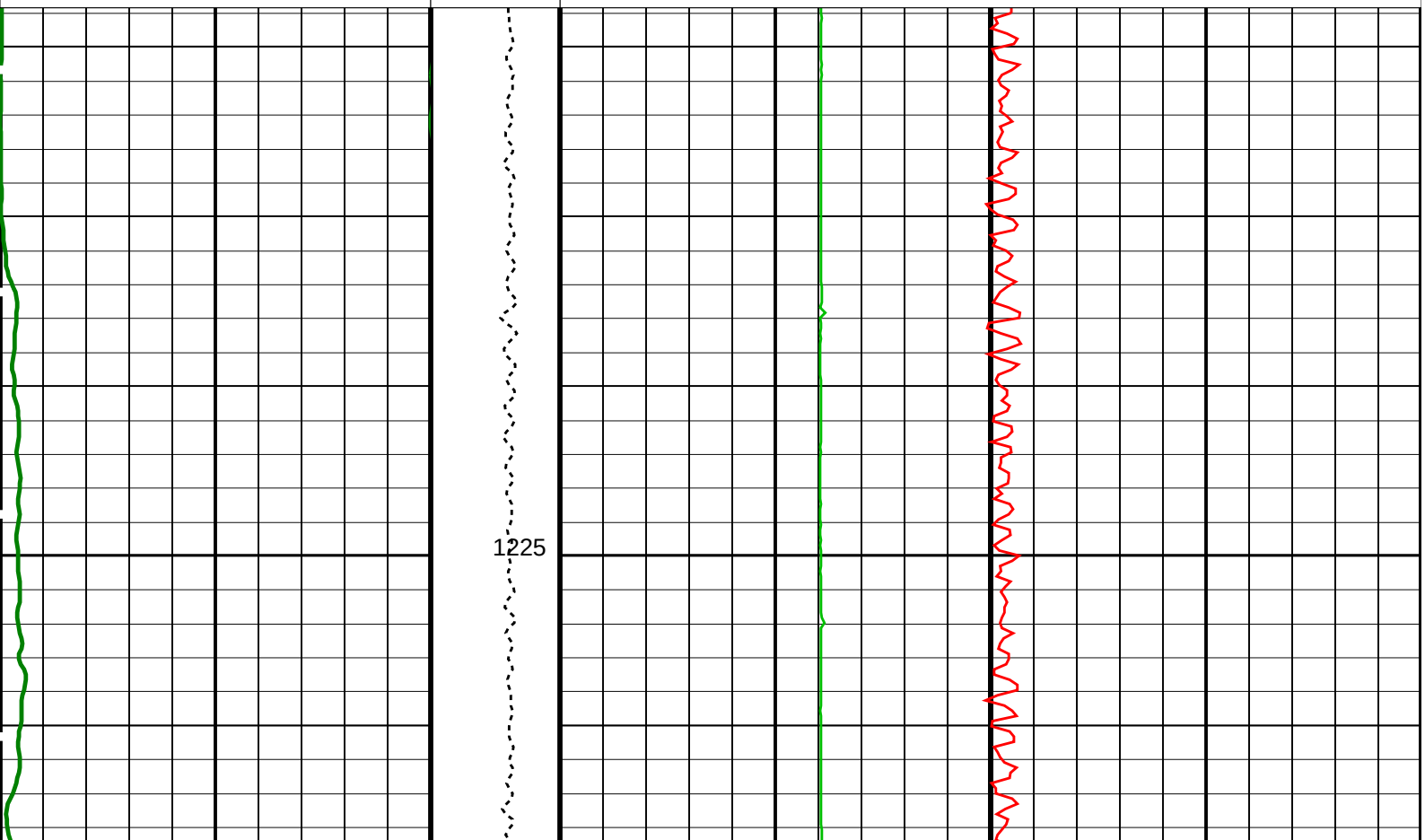
Time Mark Every 60 S

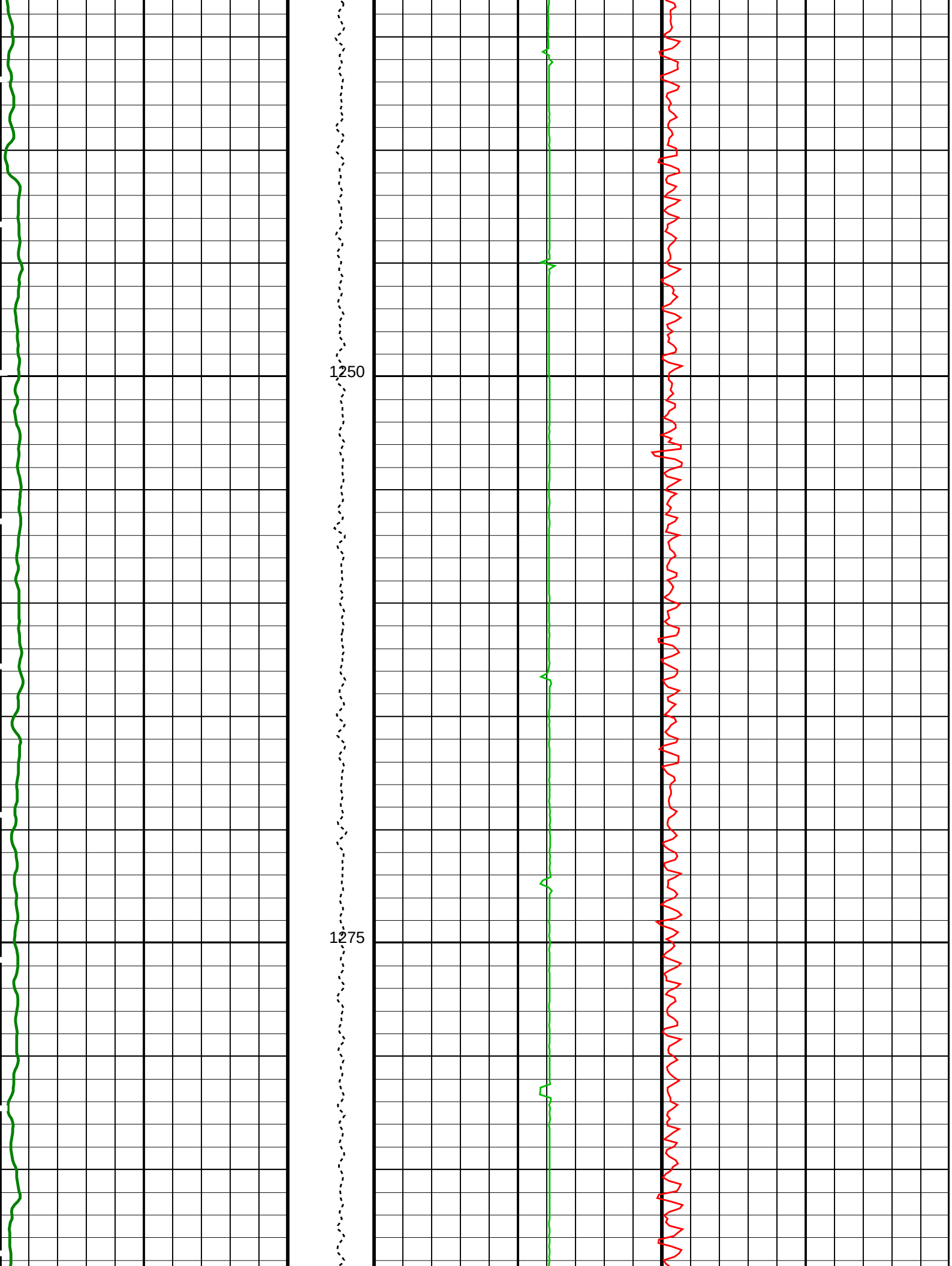
Dual−Coil Susceptibility (MSSLSUS_LDEO)
−10000 (PPM) 90000

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

Tension (TENS) (LBF)
0 5000

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

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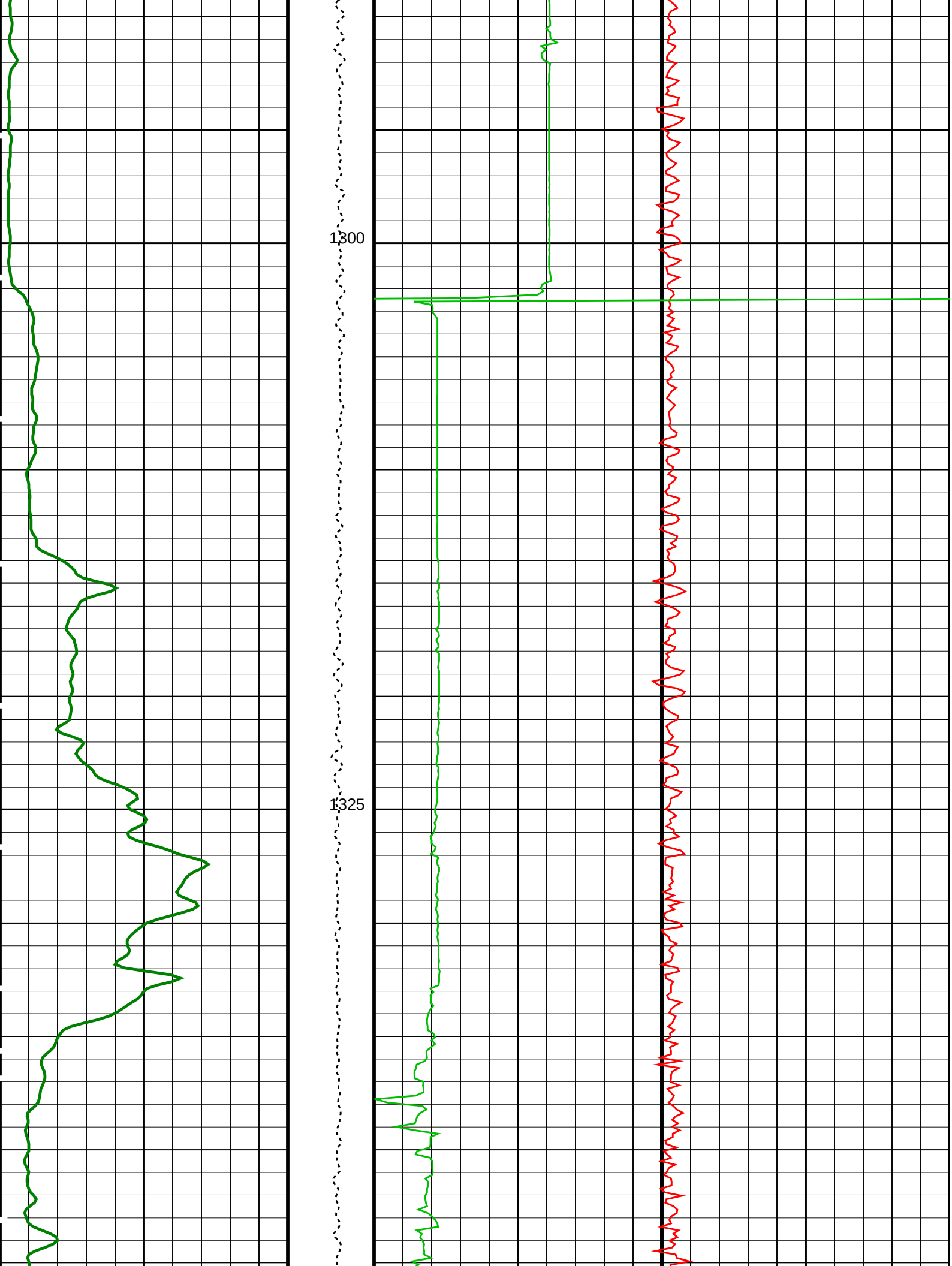
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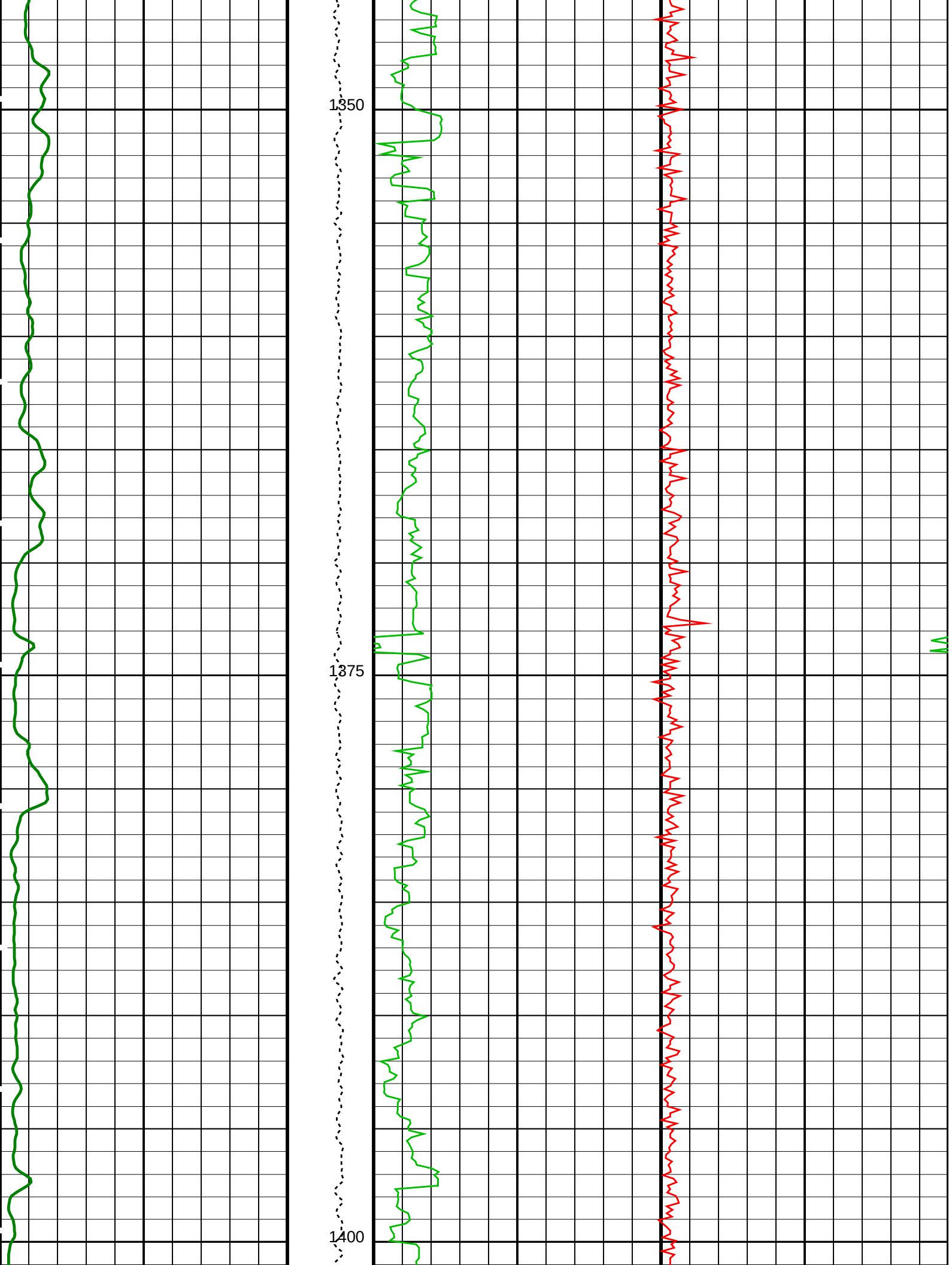
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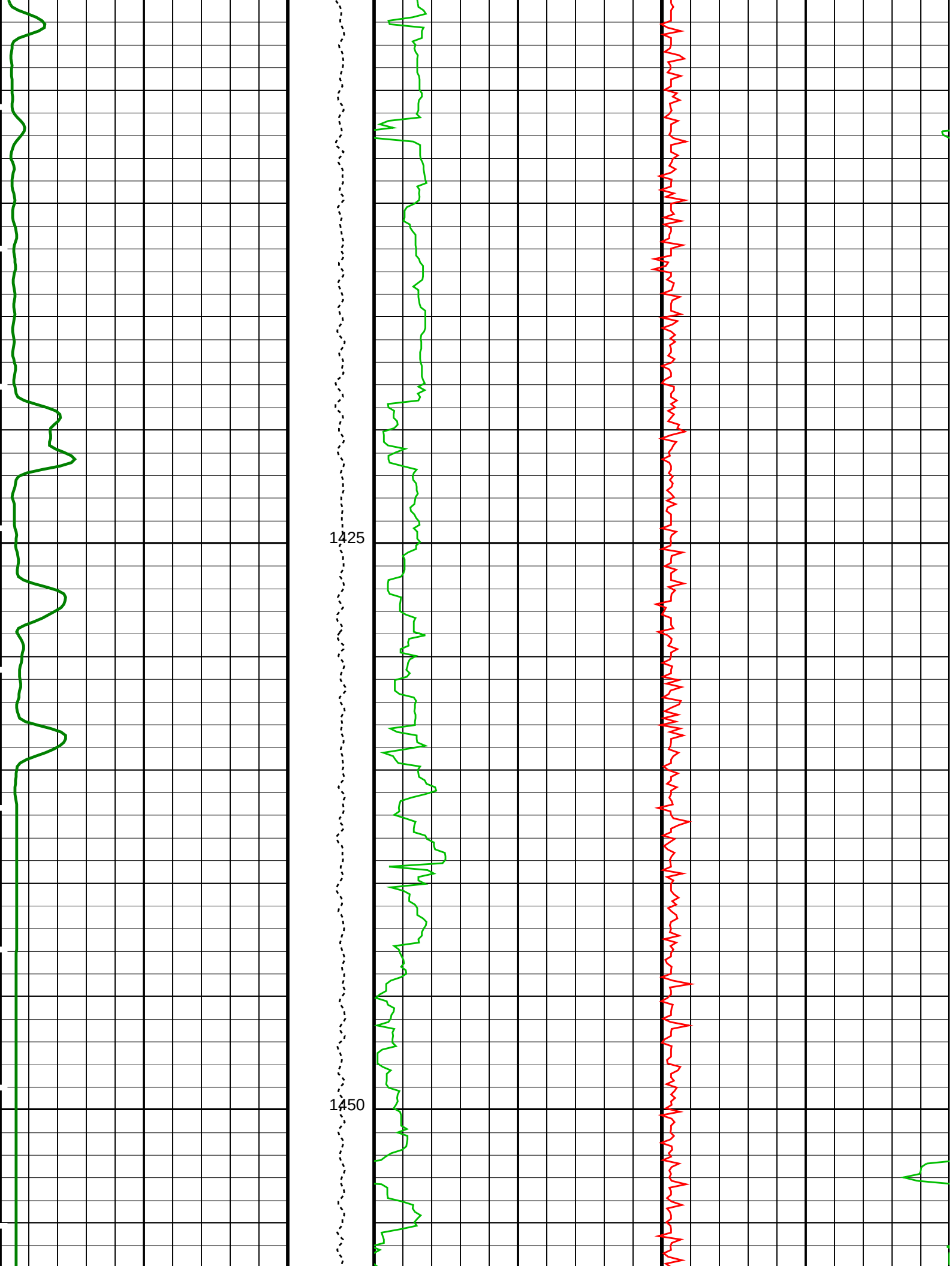
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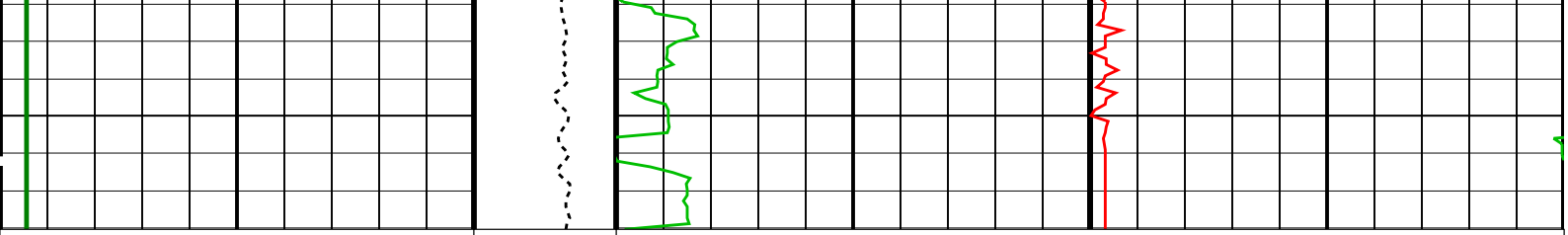


HNGS Spectroscopy Gamma Ray (HSGR)	Tension (TENS) (LBF)	Axial Acceleration (MSSZACC_LDEO)
0 (GAPI) 150	0 5000	0 (M/S2) 20
		Dual−Coil Susceptibility (MSSLSUS_LDEO)
		−10000 (PPM) 90000

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	−0.000848683	
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	1.06071	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.08597	
	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: 09−Sep−2021 11:58

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
DTC−H	19C0−187		

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_016LUP	FN:17	PRODUCER	09−Sep−2021 11:58
RTB	MSS_LDEO_HRLA_LDL_016LUP	FN:18	PRODUCER	09−Sep−2021 11:58

Schlumberger

Calibrations

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
High Resolution Laterolog Array − B Wellsite Calibration − HRLT M01							
Before: 9−Sep−2021 10:02 After: 9−Sep−2021 13:31							
HRLT M0−M1 Voltage Plus − 0	0	N/A	−318.6	−318.6	−0.005493	9.681	UV
HRLT M0−M1 Voltage Plus − 1	0	N/A	−329.7	−330.2	−0.4967	9.681	UV
HRLT M0−M1 Voltage Plus − 2	0	N/A	−337.4	−337.2	0.2227	9.681	UV
HRLT M0−M1 Voltage Plus − 3	0	N/A	−328.0	−328.4	−0.4185	9.681	UV
HRLT M0−M1 Voltage Plus − 4	0	N/A	−319.7	−319.9	−0.1586	9.681	UV
HRLT M0−M1 Voltage Plus − 5	0	N/A	−321.5	−321.6	−0.08450	9.681	UV
HRLT M0−M1 Voltage Plus − 6	0	N/A	318.9	319.2	0.3032	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: 9−Sep−2021 10:02 After: 9−Sep−2021 13:31							
HRLT M1−M2 Voltage Plus − 0	0	N/A	1738	1739	0.2095	53.42	UV
HRLT M1−M2 Voltage Plus − 1	0	N/A	1807	1809	2.321	53.42	UV
HRLT M1−M2 Voltage Plus − 2	0	N/A	1841	1840	−1.365	53.42	UV
HRLT M1−M2 Voltage Plus − 3	0	N/A	1788	1790	1.992	53.42	UV
HRLT M1−M2 Voltage Plus − 4	0	N/A	1742	1742	0.5934	53.42	UV
HRLT M1−M2 Voltage Plus − 5	0	N/A	1752	1752	0.3652	53.42	UV
HRLT M1−M2 Voltage Plus − 6	0	N/A	−1755	−1757	−1.553	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: 9−Sep−2021 10:02 After: 9−Sep−2021 13:31							
HRLT M2−M3 Voltage Plus − 0	0	N/A	1731	1731	0.4761	53.42	UV
HRLT M2−M3 Voltage Plus − 1	0	N/A	1808	1811	2.386	53.42	UV
HRLT M2−M3 Voltage Plus − 2	0	N/A	1845	1844	−1.342	53.42	UV
HRLT M2−M3 Voltage Plus − 3	0	N/A	1796	1798	2.499	53.42	UV
HRLT M2−M3 Voltage Plus − 4	0	N/A	1744	1745	0.8494	53.42	UV
HRLT M2−M3 Voltage Plus − 5	0	N/A	1755	1756	0.6368	53.42	UV
HRLT M2−M3 Voltage Plus − 6	0	N/A	−1746	−1748	−1.680	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: 9−Sep−2021 10:02 After: 9−Sep−2021 13:31							
HRLT A3−A4 Voltage Plus − 0	0	N/A	68590	68630	32.61	2100	UV
HRLT A3−A4 Voltage Plus − 1	0	N/A	71540	71650	114.3	2100	UV
HRLT A3−A4 Voltage Plus − 2	0	N/A	73260	73240	−25.46	2100	UV
HRLT A3−A4 Voltage Plus − 3	0	N/A	71560	71670	108.5	2100	UV
HRLT A3−A4 Voltage Plus − 4	0	N/A	69440	69490	46.80	2100	UV
HRLT A3−A4 Voltage Plus − 5	0	N/A	69900	69940	38.83	2100	UV
HRLT A3−A4 Voltage Plus − 6	0	N/A	−68110	−68170	−58.08	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: 9−Sep−2021 10:02 After: 9−Sep−2021 13:31							
HRLT A4−A5 Voltage Plus − 0	0	N/A	68690	68710	20.70	2100	UV
HRLT A4−A5 Voltage Plus − 1	0	N/A	71750	71870	116.1	2100	UV
HRLT A4−A5 Voltage Plus − 2	0	N/A	73450	73420	−27.93	2100	UV
HRLT A4−A5 Voltage Plus − 3	0	N/A	71720	71830	107.8	2100	UV
HRLT A4−A5 Voltage Plus − 4	0	N/A	69550	69590	36.77	2100	UV
HRLT A4−A5 Voltage Plus − 5	0	N/A	70000	70030	31.07	2100	UV
HRLT A4−A5 Voltage Plus − 6	0	N/A	−68310	−68370	−59.80	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: 9−Sep−2021 10:02 After: 9−Sep−2021 13:31							
HRLT A5−A6 Voltage Plus − 0	0	N/A	68540	68560	16.94	2100	UV
HRLT A5−A6 Voltage Plus − 1	0	N/A	71600	71700	100.6	2100	UV
HRLT A5−A6 Voltage Plus − 2	0	N/A	73320	73260	−59.98	2100	UV
HRLT A5−A6 Voltage Plus − 3	0	N/A	71580	71670	92.60	2100	UV
HRLT A5−A6 Voltage Plus − 4	0	N/A	69410	69450	33.43	2100	UV
HRLT A5−A6 Voltage Plus − 5	0	N/A	69870	69900	23.94	2100	UV
HRLT A5−A6 Voltage Plus − 6	0	N/A	−68160	−68220	−63.27	2100	UV
HRLT A5−A6 Voltage Plus − 7	0	N/A	70000	70000	0	2100	UV
High Resolution Laterolog Array − B Wellsite Calibration − HRLT VTR							

High Resolution Laterolog Array − B Wellsite Calibration − HRLT VTP
Before: 9−Sep−2021 10:02 After: 9−Sep−2021 13:31

HRLT Torpedo−M0 Voltage − 0	0	N/A	−68080	−68100	−19.77	2100	UV
HRLT Torpedo−M0 Voltage − 1	0	N/A	−71410	−71490	−87.80	2100	UV
HRLT Torpedo−M0 Voltage − 2	0	N/A	−73150	−73100	47.71	2100	UV
HRLT Torpedo−M0 Voltage − 3	0	N/A	−71500	−71590	−91.14	2100	UV
HRLT Torpedo−M0 Voltage − 4	0	N/A	−69390	−69420	−31.27	2100	UV
HRLT Torpedo−M0 Voltage − 5	0	N/A	−69840	−69860	−24.72	2100	UV
HRLT Torpedo−M0 Voltage − 6	0	N/A	67920	67980	60.20	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: 9−Sep−2021 10:02 After: 9−Sep−2021 13:31

HRLT Bridle#9−M0 Voltage − 0	0	N/A	−68110	−68130	−21.56	2100	UV
HRLT Bridle#9−M0 Voltage − 1	0	N/A	−71490	−71590	−104.3	2100	UV
HRLT Bridle#9−M0 Voltage − 2	0	N/A	−73250	−73200	48.49	2100	UV
HRLT Bridle#9−M0 Voltage − 3	0	N/A	−71570	−71670	−91.86	2100	UV
HRLT Bridle#9−M0 Voltage − 4	0	N/A	−69440	−69470	−31.28	2100	UV
HRLT Bridle#9−M0 Voltage − 5	0	N/A	−69870	−69900	−29.06	2100	UV
HRLT Bridle#9−M0 Voltage − 6	0	N/A	68010	68070	65.13	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: 9−Sep−2021 10:02 After: 9−Sep−2021 13:31

HRLT Source Current Plus − 0	0	N/A	284.2	284.2	0.03940	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: 9−Sep−2021 10:02 After: 9−Sep−2021 13:31

HRLT Vertical Voltage Pl − 0	0	N/A	−320.6	−320.3	0.2594	9.681	UV
HRLT Vertical Voltage Pl − 1	0	N/A	−324.7	−324.9	−0.2177	9.681	UV
HRLT Vertical Voltage Pl − 2	0	N/A	−331.0	−330.5	0.5528	9.681	UV
HRLT Vertical Voltage Pl − 3	0	N/A	−320.0	−320.1	−0.08060	9.681	UV
HRLT Vertical Voltage Pl − 4	0	N/A	−309.0	−308.9	0.1237	9.681	UV
HRLT Vertical Voltage Pl − 5	0	N/A	−325.6	−325.4	0.1791	9.681	UV
HRLT Vertical Voltage Pl − 6	0	N/A	326.6	326.8	0.1860	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: 9−Sep−2021 10:05 After: 9−Sep−2021 13:35

SS Cs Resolution Bkg	9.000	7.698	7.703	7.690	−0.01328	1.800	%
LS Cs Resolution Bkg	9.000	7.989	7.978	8.019	0.04087	1.800	%
LSW1 Background	100.0	71.96	70.38	70.47	0.09118	3.000	CPS
LSW2 Background	100.0	65.02	64.58	63.52	−1.057	3.000	CPS
LSW3 Background	200.0	146.1	144.8	144.3	−0.4597	6.000	CPS
LSW4 Background	250.0	183.2	180.8	180.4	−0.4252	7.500	CPS
LSW5 Background	600.0	424.9	420.1	421.2	1.040	18.00	CPS
SSW1 Background	100.0	68.97	69.08	68.56	−0.5165	3.000	CPS
SSW2 Background	200.0	118.2	117.7	117.8	0.1302	6.000	CPS
SSW3 Background	500.0	331.3	330.1	328.9	−1.180	15.00	CPS
SSW4 Background	270.0	178.4	177.3	177.1	−0.1587	8.100	CPS
SSW5 Background	200.0	127.4	127.0	127.1	0.1198	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: 9−Sep−2021 10:06 After: 9−Sep−2021 13:35

Na 511 Peak Loc	40.00	39.25	39.63	39.78	0.1486	1.000	
Na 511 Peak Res	15.50	16.53	14.91	16.74	1.837	2.000	%
High Voltage	1150	1197	1172	1174	1.904	N/A	V
Na 1785 Peak Loc	142.6	141.8	142.7	142.7	0.004044	7.000	
Na 1785 Peak Res	8.500	8.905	9.365	8.178	−1.187	2.000	%
Temperature	15.50	26.59	13.81	13.78	−0.02595	N/A	DEGC
Na Count Rate	45.00	12.01	9.905	10.91	1.009	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration − Detector 2 Check
Master: Calibration out of date 2−May−2021 10:04 Before: 9−Sep−2021 10:06 After: 9−Sep−2021 13:35

Na 511 Peak Loc	40.00	39.88	39.64	39.70	0.05802	1.000	
Na 511 Peak Res	15.50	15.29	15.01	15.60	0.5940	2.000	%
High Voltage	1150	1122	1099	1100	0.4370	N/A	V
Na 1785 Peak Loc	142.6	142.6	142.9	143.5	0.5947	7.000	
Na 1785 Peak Res	8.500	8.040	9.948	8.474	−1.474	2.000	%
Temperature	15.50	27.21	14.41	15.08	0.6698	N/A	DEGC
Na Count Rate	45.00	12.32	10.14	10.96	0.8186	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: 9−Sep−2021 10:06 After: 9−Sep−2021 13:35

Coincidence Count Rate Ratio	1.000	0.9728	0.9813	0.9994	0.01810	0.05000

High Resolution Laterolog Array − B / Equipment Identification

Primary Equipment:

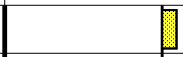
HRLT Sonde	HRLS − B	768

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		−318.6	−322.7	−280.7	−379.7
	After		−318.6			
1	Before		−329.7	−322.7	−280.7	−379.7
	After		−330.2			
2	Before		−337.4	−322.7	−280.7	−379.7
	After		−337.2			
3	Before		−328.0	−322.7	−280.7	−379.7
	After		−328.4			
4	Before		−319.7	−322.7	−280.7	−379.7
	After		−319.9			
5	Before		−321.5	−322.7	−280.7	−379.7
	After		−321.6			
6	Before		318.9	322.7	379.7	280.7
	After		319.2			
7	Before		−322.7	−322.7	−280.7	−379.7
	After		−322.7			

		(Minimum) (Nominal) (Maximum)				

Before: 9−Sep−2021 10:02
After: 9−Sep−2021 13:31

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		1739			
1	Before		1807	1781	2095	1549
	After		1809			
2	Before		1841	1781	2095	1549
	After		1840			
3	Before		1788	1781	2095	1549
	After		1790			
4	Before		1742	1781	2095	1549
	After		1742			
5	Before		1752	1781	2095	1549
	After		1752			
6	Before		−1755	−1781	−1549	−2095
	After		−1757			
7	Before		1781	1781	2095	1549
	After		1781			
		(Minimum) (Nominal) (Maximum)				

Before: 9−Sep−2021 10:02
After: 9−Sep−2021 13:31

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M23

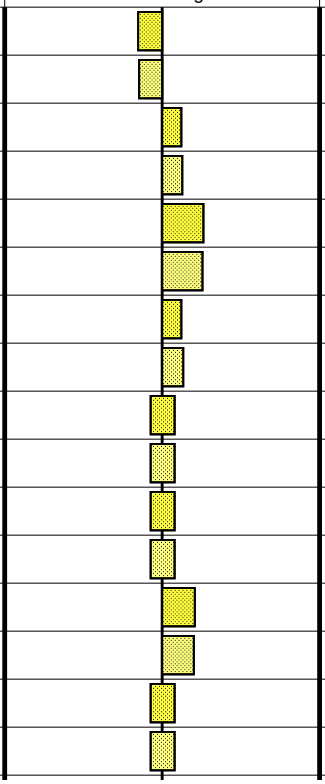
Idx	Phase	HRLT M2−M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1731	1781	2095	1549
	After		1731			
1	Before		1808	1781	2095	1549
	After		1811			
2	Before		1845	1781	2095	1549
	After		1844			
3	Before		1796	1781	2095	1549
	After		1798			
4	Before		1744	1781	2095	1549
	After		1745			
5	Before		1755	1781	2095	1549
	After		1756			
6	Before		−1746	−1781	−1549	−2095
	After		−1748			
7	Before		1781	1781	2095	1549
	After		1781			
		(Minimum) (Nominal) (Maximum)				

Before: 9−Sep−2021 10:02
After: 9−Sep−2021 13:31

After: 9−Sep−2021 13:31

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V34

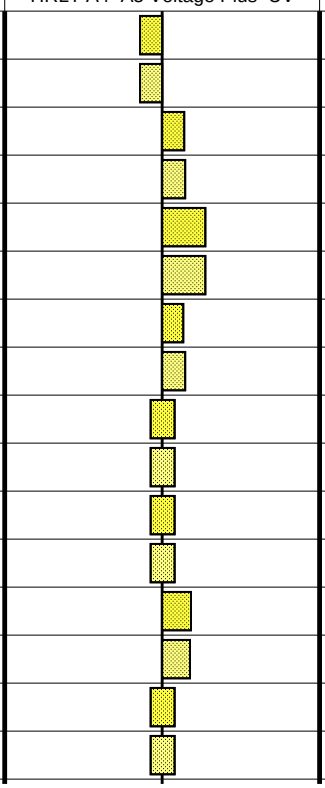
Idx	Phase	HRLT A3−A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68590	70000	82360	60900
	After		68630			
1	Before		71540	70000	82360	60900
	After		71650			
2	Before		73260	70000	82360	60900
	After		73240			
3	Before		71560	70000	82360	60900
	After		71670			
4	Before		69440	70000	82360	60900
	After		69490			
5	Before		69900	70000	82360	60900
	After		69940			
6	Before		−68110	−70000	−60900	−82360
	After		−68170			
7	Before		70000	70000	82360	60900
	After		70000			
	(Minimum) (Nominal) (Maximum)					

Before: 9−Sep−2021 10:02

After: 9−Sep−2021 13:31

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V45

Idx	Phase	HRLT A4−A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68690	70000	82360	60900
	After		68710			
1	Before		71750	70000	82360	60900
	After		71870			
2	Before		73450	70000	82360	60900
	After		73420			
3	Before		71720	70000	82360	60900
	After		71830			
4	Before		69550	70000	82360	60900
	After		69590			
5	Before		70000	70000	82360	60900
	After		70030			
6	Before		−68310	−70000	−60900	−82360
	After		−68370			
7	Before		70000	70000	82360	60900
	After		70000			
	(Minimum) (Nominal) (Maximum)					

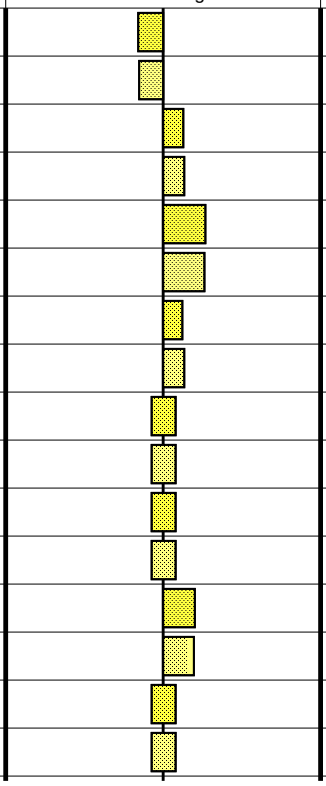
Before: 9−Sep−2021 10:02

After: 9−Sep−2021 13:31

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V56

HRLT V50

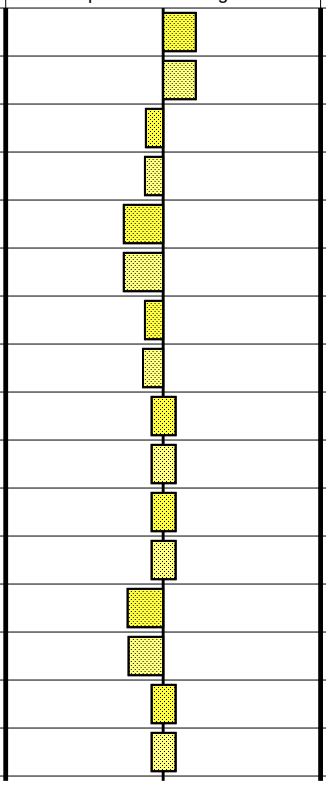
Idx	Phase	HRLT A5−A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68540	70000	82360	60900
	After		68560			
1	Before		71600	70000	82360	60900
	After		71700			
2	Before		73320	70000	82360	60900
	After		73260			
3	Before		71580	70000	82360	60900
	After		71670			
4	Before		69410	70000	82360	60900
	After		69450			
5	Before		69870	70000	82360	60900
	After		69900			
6	Before		−68160	−70000	−60900	−82360
	After		−68220			
7	Before		70000	70000	82360	60900
	After		70000			
		(Minimum) (Nominal) (Maximum)				

Before: 9−Sep−2021 10:02

After: 9−Sep−2021 13:31

High Resolution Laterolog Array − B Wellsite Calibration

HRLT VTP

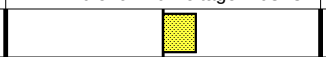
Idx	Phase	HRLT Torpedo−M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−68080	−70000	−60900	−82360
	After		−68100			
1	Before		−71410	−70000	−60900	−82360
	After		−71490			
2	Before		−73150	−70000	−60900	−82360
	After		−73100			
3	Before		−71500	−70000	−60900	−82360
	After		−71590			
4	Before		−69390	−70000	−60900	−82360
	After		−69420			
5	Before		−69840	−70000	−60900	−82360
	After		−69860			
6	Before		67920	70000	82360	60900
	After		67980			
7	Before		−70000	−70000	−60900	−82360
	After		−70000			
		(Minimum) (Nominal) (Maximum)				

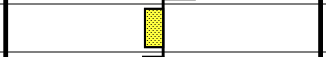
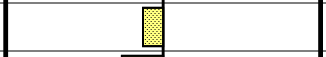
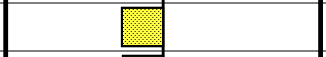
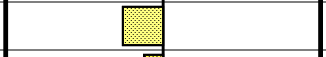
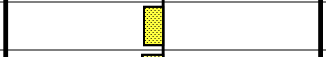
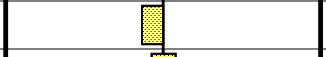
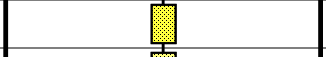
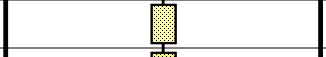
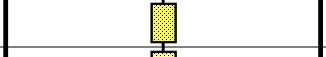
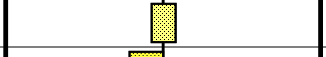
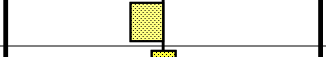
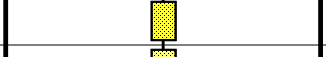
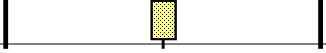
Before: 9−Sep−2021 10:02

After: 9−Sep−2021 13:31

High Resolution Laterolog Array − B Wellsite Calibration

HRLT VBD

Idx	Phase	HRLT Bridle#9−M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
	Before		−68110			

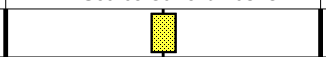
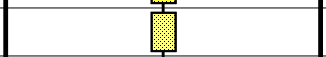
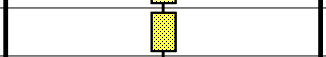
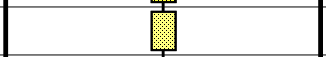
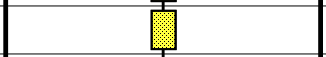
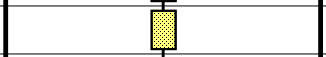
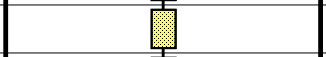
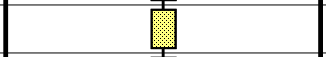
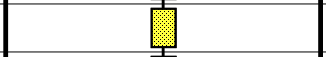
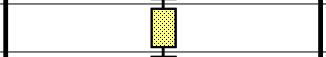
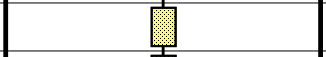
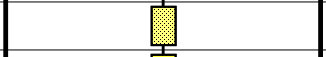
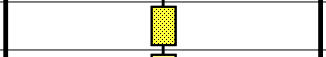
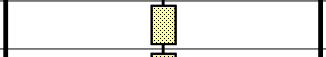
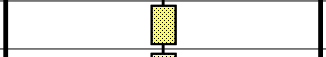
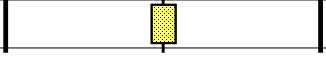
Idx	Phase		Value	Nominal	Maximum	Minimum
0	After		−68130	−70000	−60900	−82360
1	Before		−71490	−70000	−60900	−82360
	After		−71590			
2	Before		−73250	−70000	−60900	−82360
	After		−73200			
3	Before		−71570	−70000	−60900	−82360
	After		−71670			
4	Before		−69440	−70000	−60900	−82360
	After		−69470			
5	Before		−69870	−70000	−60900	−82360
	After		−69900			
6	Before		68010	70000	82360	60900
	After		68070			
7	Before		−70000	−70000	−60900	−82360
	After		−70000			
		(Minimum) (Nominal) (Maximum)				

Before: 9−Sep−2021 10:02

After: 9−Sep−2021 13:31

High Resolution Laterolog Array − B Wellsite Calibration

HRLT ISO

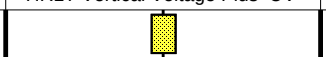
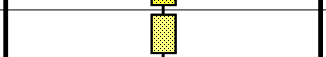
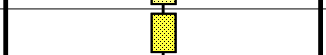
Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum
0	Before		284.2	284.0	334.1	247.0
	After		284.2			
1	Before		281.1	281.1	330.7	244.4
	After		281.1			
2	Before		281.1	281.1	330.7	244.4
	After		281.1			
3	Before		281.1	281.1	330.7	244.4
	After		281.1			
4	Before		281.1	281.1	330.7	244.4
	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)				

Before: 9−Sep−2021 10:02

After: 9−Sep−2021 13:31

High Resolution Laterolog Array − B Wellsite Calibration

HRLT MV

Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−320.6	−322.7	−280.7	−379.7
	After		−320.3			
	Before		−324.7			

1	After	−324.9	−322.7	−280.7	−379.7
2	Before	−331.0	−322.7	−280.7	−379.7
	After	−330.5			
3	Before	−320.0	−322.7	−280.7	−379.7
	After	−320.1			
4	Before	−309.0	−322.7	−280.7	−379.7
	After	−308.9			
5	Before	−325.6	−322.7	−280.7	−379.7
	After	−325.4			
6	Before	326.6	322.7	379.7	280.7
	After	326.8			
7	Before	−322.7	−322.7	−280.7	−379.7
	After	−322.7			
	(Minimum) (Nominal) (Maximum)				

Before: 9−Sep−2021 10:02

After: 9−Sep−2021 13:31

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		7.703
After		7.690
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)	

Phase	LS Cs Resolution Bkg %	Value
Master		7.989
Before		7.978
After		8.019
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)	

Phase	LSW1 Background CPS	Value
Master		71.96
Before		70.38
After		70.47
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)	

Phase	LSW2 Background CPS	Value
Master		65.02
Before		64.58
After		63.52
	50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)	

Phase	LSW3 Background CPS	Value
Master		146.1
Before		144.8
After		144.3
	110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)	

Phase	LSW4 Background CPS	Value
Master		183.2
Before		180.8
After		180.4
	140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)	

Phase	LSW5 Background CPS	Value
Master		424.9
Before		420.1
After		421.2
	330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)	

Phase	SSW1 Background CPS	Value
Master		68.97
Before		69.08
After		68.56
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)	

Phase	SSW2 Background CPS	Value
Master		118.2
Before		117.7
After		117.8
	100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)	

Phase	SSW3 Background CPS	Value
Master		331.3
Before		330.1
After		328.9
	280.0 (Minimum) 500.0 (Nominal) 700.0 (Maximum)	

Phase	SSW4 Background CPS	Value
Master		178.4
Before		177.3
After		177.1
	150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum)	

Phase	SSW5 Background CPS	Value
Master		127.4
Before		127.0
After		127.1
	110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum)	

Master: Calibration out of date 2−May−2021 7:20 Before: 9−Sep−2021 10:05 After: 9−Sep−2021 13:35

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		39.63
After		39.78

37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)

Phase	Na 511 Peak Res %	Value
Master		16.53
Before		14.91
After		16.74

12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)

Phase	High Voltage V	Value
Master		1197
Before		1172
After		1174

900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)

Phase	Na 1785 Peak Loc	Value
Master		141.8
Before		142.7
After		142.7

135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)

Phase	Na 1785 Peak Res %	Value
Master		8.905
Before		9.365
After		8.178

7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)

Phase	Temperature DEGC	Value
Master		26.59
Before		13.81
After		13.78

−28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)

Phase	Na Count Rate CPS	Value
Master		12.01
Before	EXCEEDS LIMIT	9.905
After		10.91

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

Master: Calibration out of date 2−May−2021 10:04 Before: 9−Sep−2021 10:06 After: 9−Sep−2021 13:35

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 2 Check

Phase	Na 511 Peak Loc	Value
Master		39.88
Before		39.64
After		39.70

37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)

Phase	Na 511 Peak Res %	Value
Master		15.29
Before		15.01
After		15.60

12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)

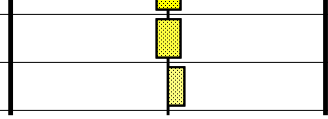
Phase	High Voltage V	Value
Master		1122
Before		1099
After		1100

900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)

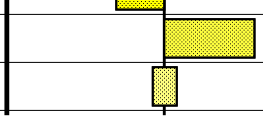
Phase	Na 1785 Peak Loc	Value
Master		142.6

Phase	Na 1785 Peak Res %	Value
Master		8.040

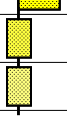
Phase	Temperature DEGC	Value
Master		27.21

Before		142.9
After		143.5

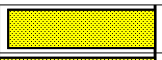
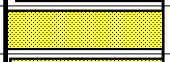
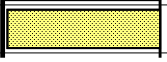
135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)

Before		9.948
After		8.474

7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)

Before		14.41
After		15.08

−28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)

Phase	Na Count Rate CPS	Value
Master		12.32
Before		10.14
After		10.96

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

Master: Calibration out of date 2−May−2021 10:04 Before: 9−Sep−2021 10:06 After: 9−Sep−2021 13:35

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Ratio Of Detector 1 To Detector 2

Phase	Coincidence Count Rate Ratio	Value
Master		0.9728
Before		0.9813
After		0.9994

0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)

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

Before: 9−Sep−2021 10:06

After: 9−Sep−2021 13:35

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 U1571A**

Field: **Mid−Norwegian Cont. Margin Magmatism**

Rig: **JOIDES Resolution**

Country: **Iceland**

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