Schlumberger

Company: **International Ocean Discovery Program**

Well: **Expedition 396, Site U1568A**
Field: **Mid−Norwegian Cont. Margin Magmatism**
Rig: **JOIDES Resolution** Country: **Iceland**

Rig: JOIDES Resolution
Field: Mid−Norwegian Cont. Margin Ma
Location: Latitude: N 65.3599
Well: Expedition 396, Site U1568A
Company: International Ocean Discovery Pr

Natural GR Spectroscopy (HNGS)
Litho−Density (HLDS)
Laterolog Resistivity (HRLA)

LOCATION

Latitude: N 65.3599
Longitude: E 3.051818

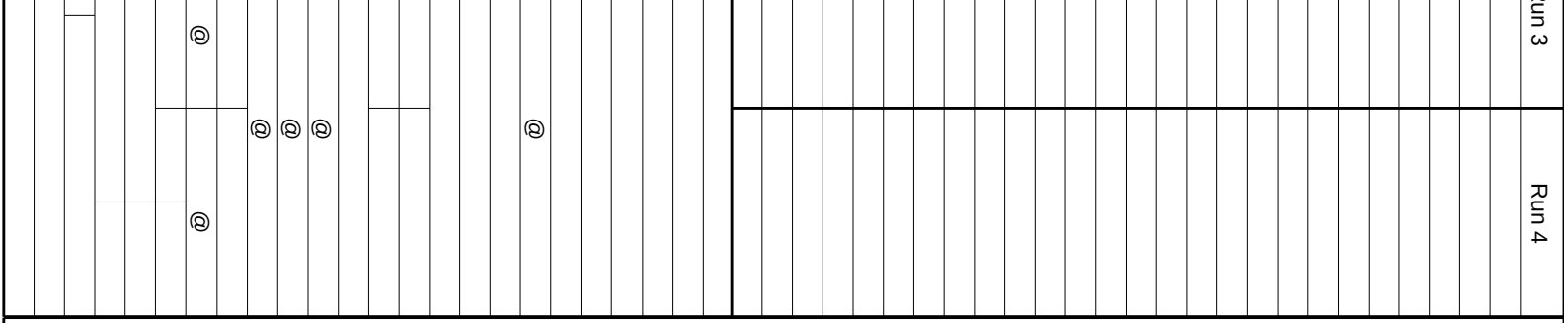
Elev.: K.B. 0.00 m
G.L. −1715.60 m
D.F. 0.00 m

Permanent Datum: Sea Floor — Elev.: 1715.60 m
Log Measured From: Rig Floor — −1715.60 m above Perm. Datum
Drilling Measured From: Rig Floor

Ocean:	Max. Well Deviation	Longitude	Latitude
Atlantic	5 deg	E 3.051818	N 65.3599

	Run 1	Run 2	Run 3
Logging Date	25−Aug−2021		
Run Number	2		
Depth Driller	1915.6 m		
Schlumberger Depth	1903 m		
Bottom Log Interval	1900 m		
Top Log Interval	1715.6 m		
Casing Driller Size @ Depth	5.500 in @ 1715.6 m	@	@
Casing Schlumberger	1715 m		
Bit Size	11.438 in		
Type Fluid In Hole	Sepeolite WBM		
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	25−Aug−2021 / 1:00		
Logger On Bottom / Time	25−Aug−2021 / 13:30		
Unit Number / Location	627314 / Larose, LA	/	/
Recorded By	C. Furman		
Witnessed By	S. Midgley		

	Run 1	Run 2	Run 3
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: DSI

OS2: FMA

OS3: Mag. Sus. (MSS)

REMARKS: RUN NUMBER 1

Hole drilled with APC/XCB bottom hole assembly (BHA) at 11.4375" BS

Drill pipe set at 1797mbrf (80mbsf) for logging.

Fluid type was weighted mud, 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 off at 1834mbrf; Caliper closed inside pipe.

First attempt (Run#1) with this string did not reach open−hole due to obstruction, so it was considered an aborted attempt.

Downlog flipped and note the caliper closed logging down.

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

EQUIPMENT DESCRIPTION

RUN 1 RUN 2

SURFACE EQUIPMENT

GSR−U 6098
WITM (DTS)−A

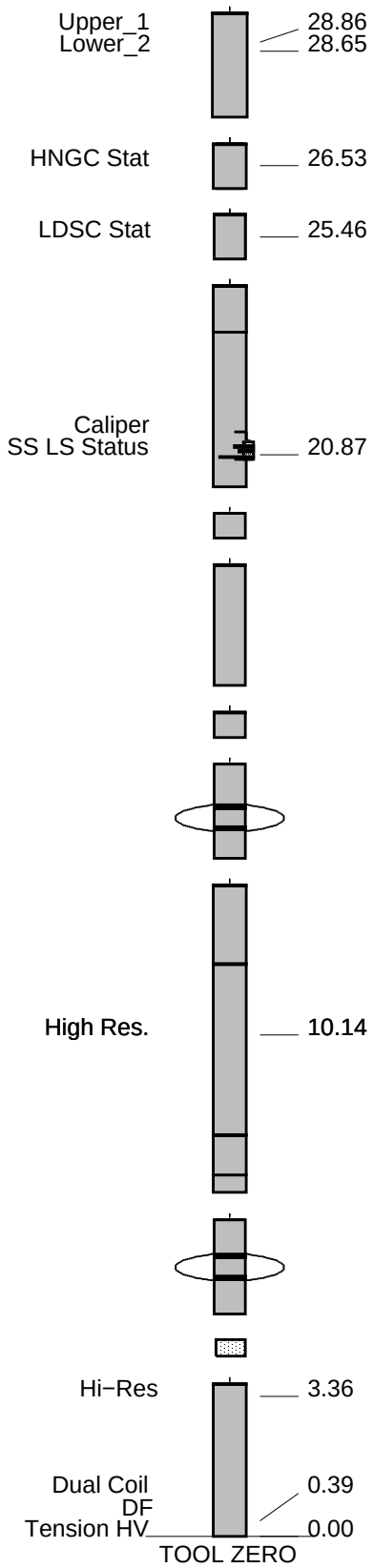
DOWNHOLE EQUIPMENT

LEH−QT 31.80
LEH−QT 301

AH−369 30.91

CTEM 30.20
TelStatus
ToolStatu 29.56

DTC−H 30.48
ECH−KC 9842



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

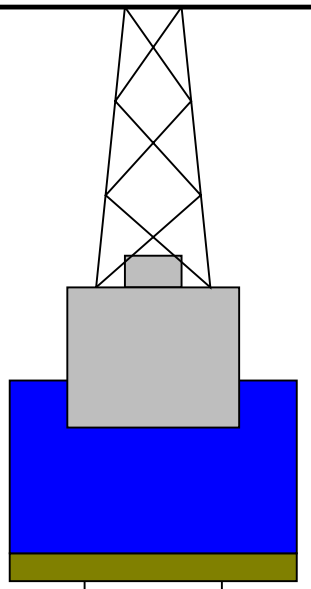
AH−MCD1 6.35
AH−MCD1 1

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	
					1715.6	11.438		Sea Floor
					1797.0	5.500	4.125	Pipe
					1915.6	11.438		Driller's TD

Schlumberger

Downlog

MAXIS Field Log

Company: International Ocean Discovery Program **Well: Expedition 396, Site U1568A**

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_021LUP		PRODUCER	25−Aug−2021 14:05	1903.9 M	1675.6 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_022PUP	FN:26	PRODUCER	25−Aug−2021 14:10	1903.9 M	1675.6 M
RTB	MSS_LDEO_HRLA_LDL_022PUP	FN:27	PRODUCER	25−Aug−2021 14:10	1903.9 M	1675.6 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) 50

Area1
From HCGR to HSGR

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

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

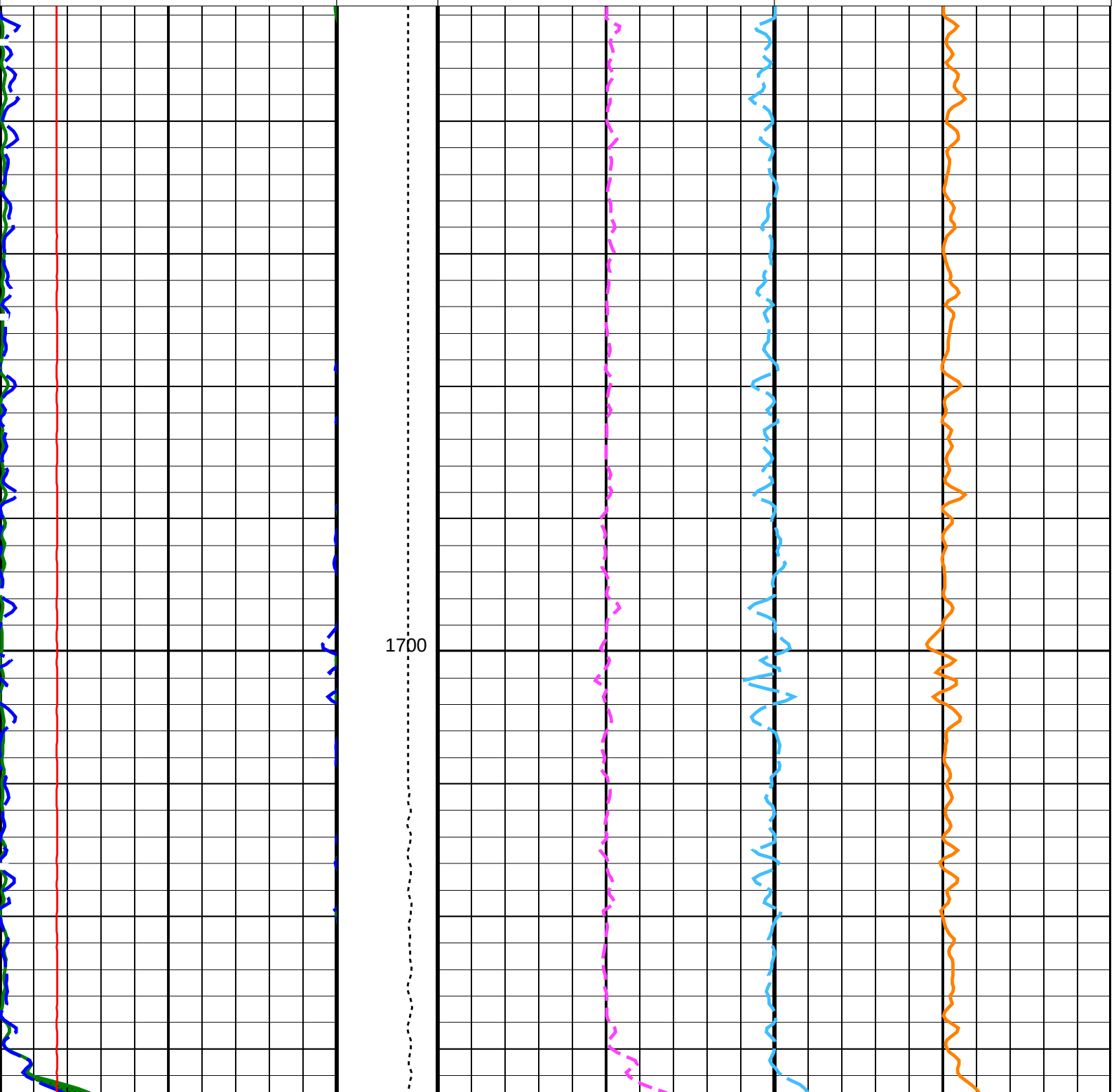
HNGS Uranium (HURA)
−5 (PPM) 5

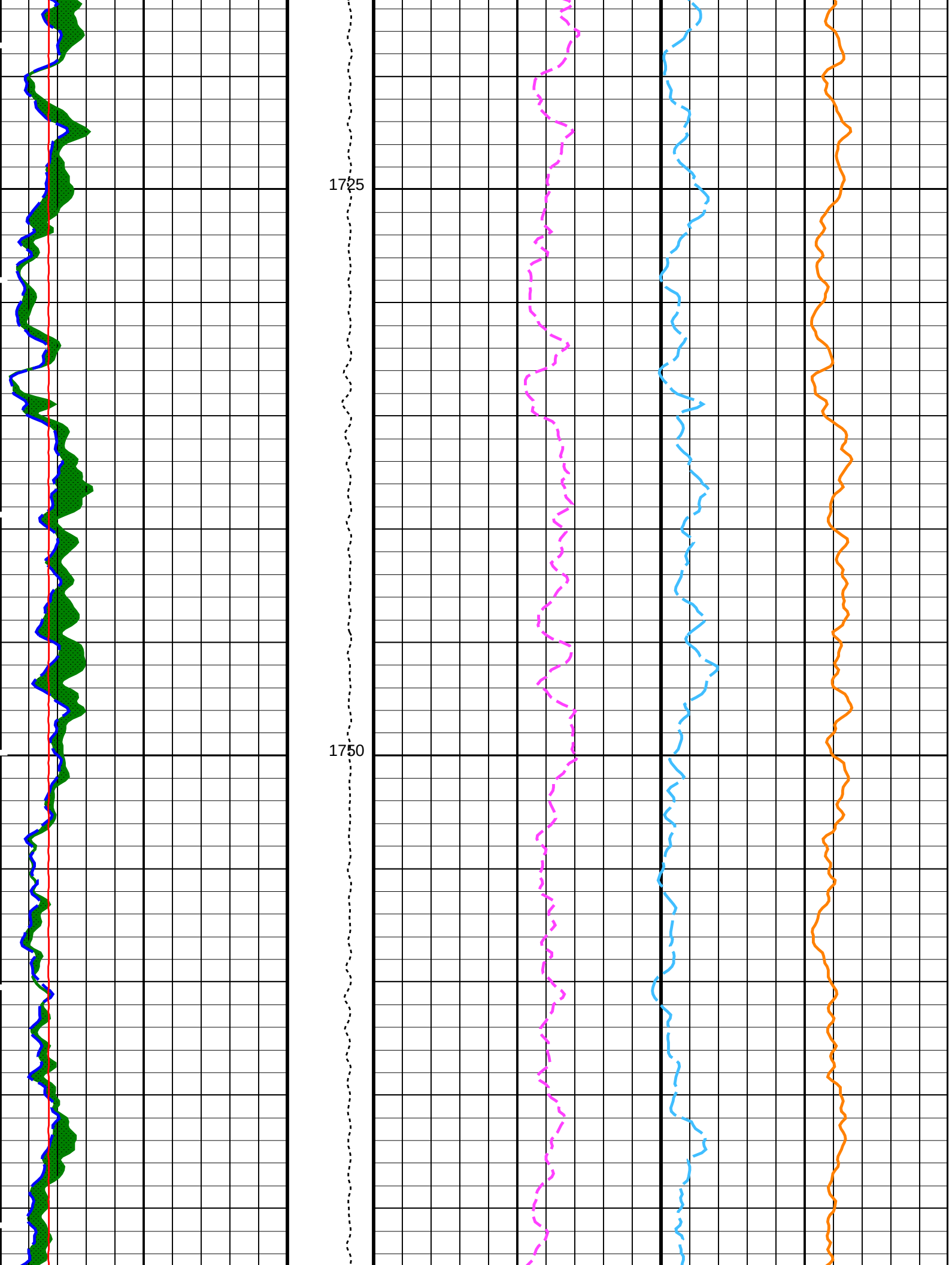
HLDS Caliper (LCAL)
0 (IN) 20

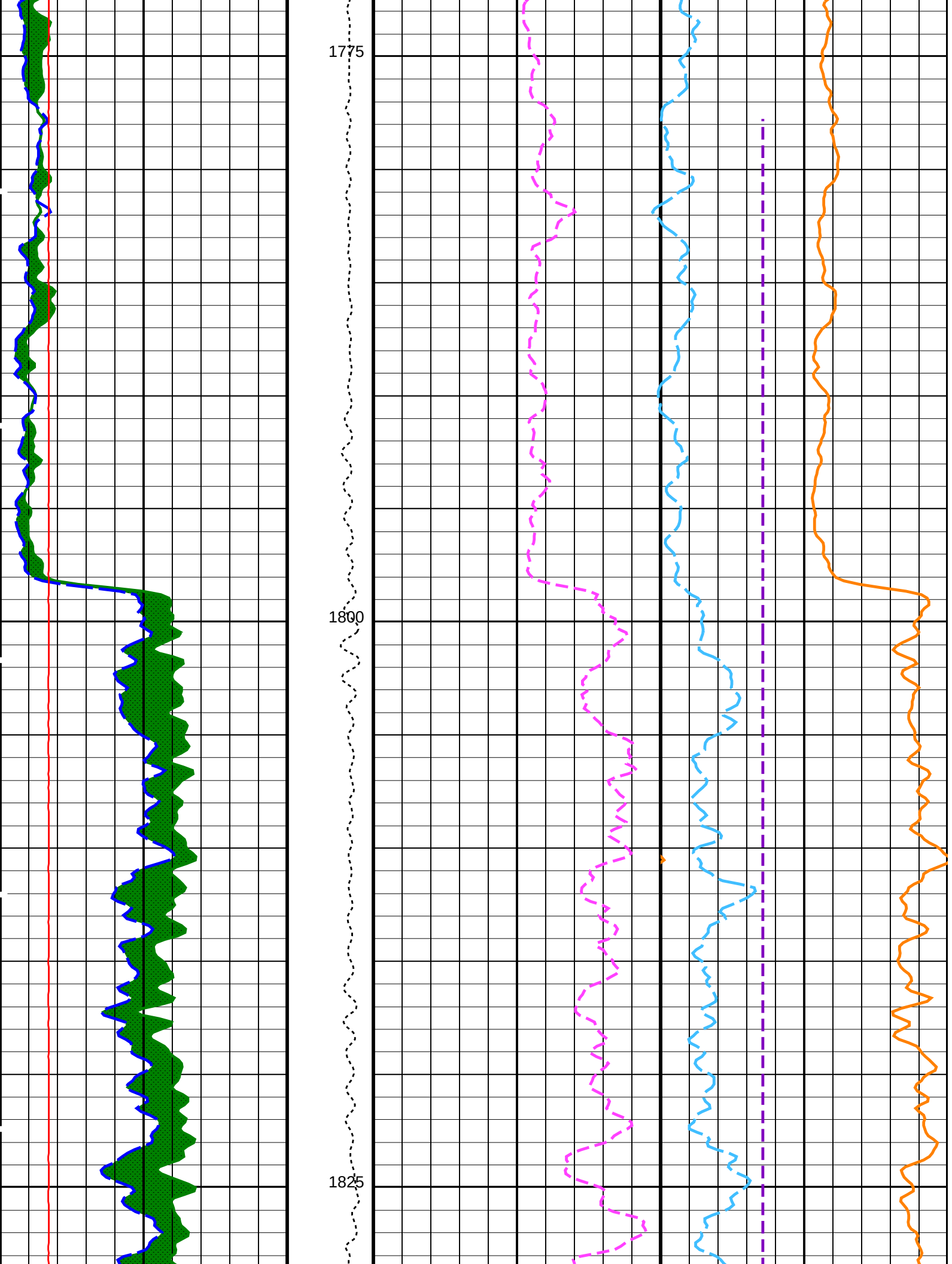
Tension (TENS) (LBF)
10000 0

HNGS Thorium (HTHO)
−5 (PPM) 5

HNGS Potassium (HFK)
−0.01 (V/V) 0.01




1725
1750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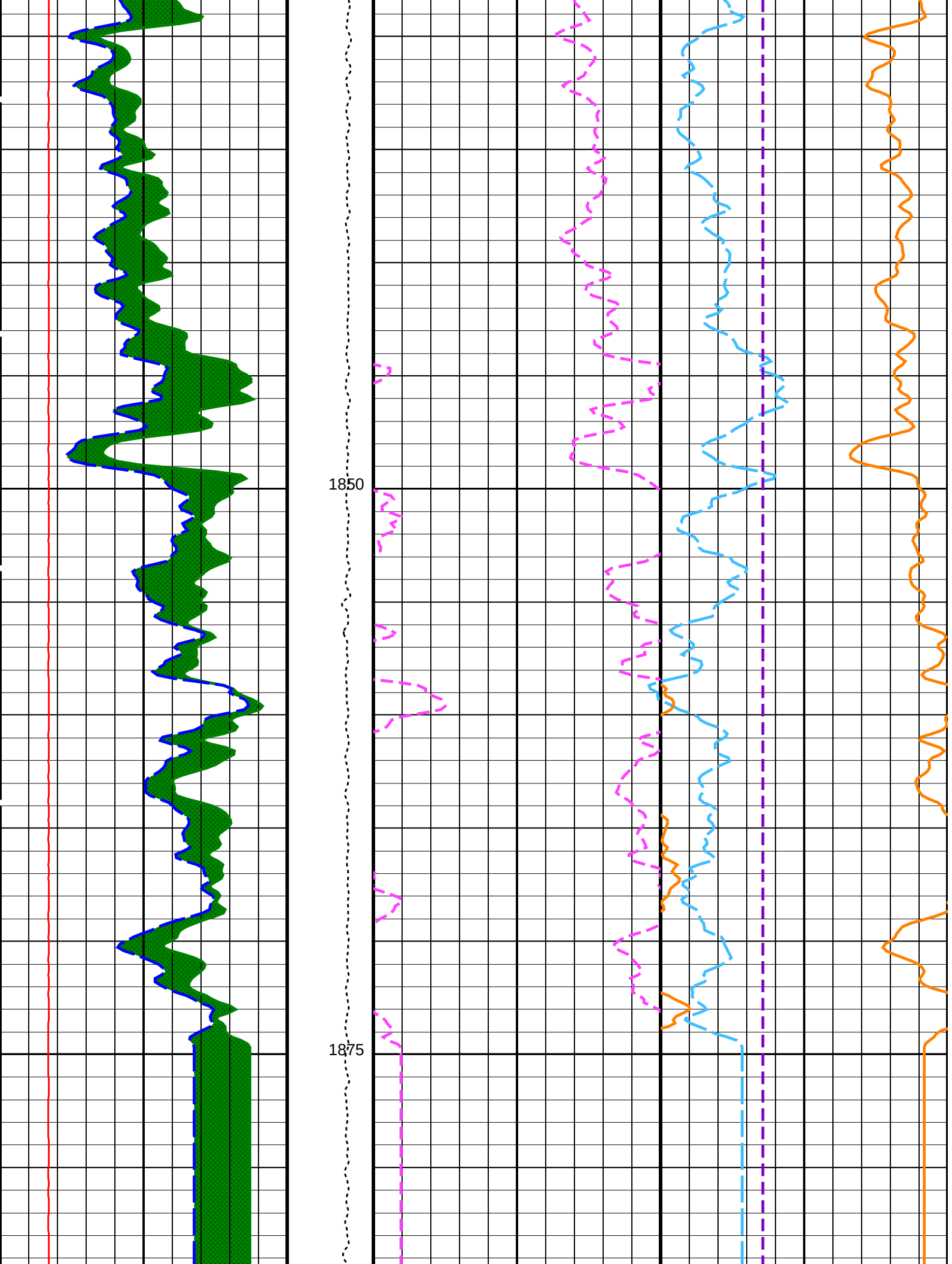
1800
1825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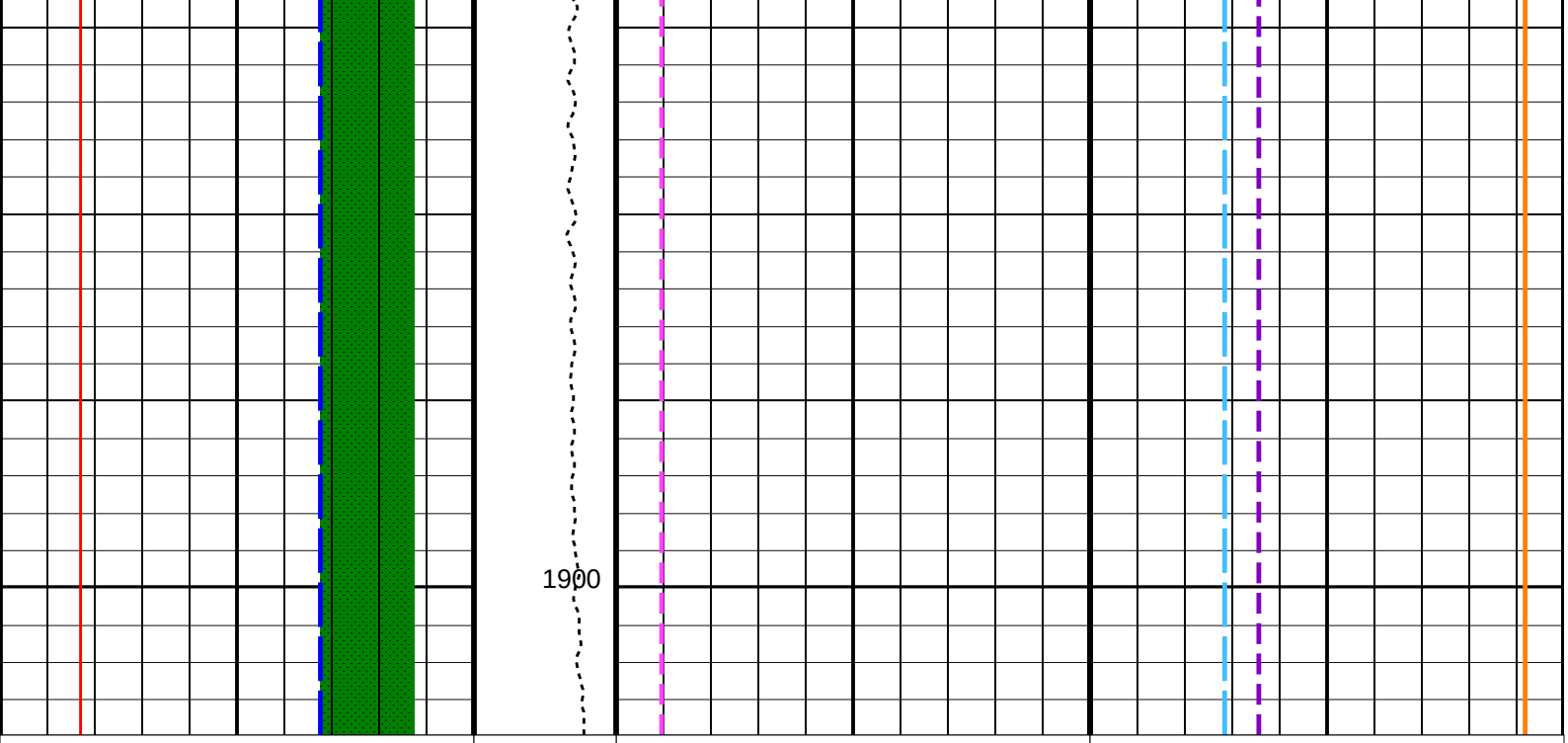


HLDS Caliper (LCAL)
0 (IN) 20

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	−0.010419	
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	0.954059	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.967493	
	System and Miscellaneous		

BS	Bit Size	11.438	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: 25−Aug−2021 14:10

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_021LUP	PRODUCER	25−Aug−2021 14:05	1903.9 M	1675.6 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_022PUP	FN:26	PRODUCER	25−Aug−2021 14:10	
RTB	MSS_LDEO_HRLA_LDL_022PUP	FN:27	PRODUCER	25−Aug−2021 14:10	

Company: International Ocean Discovery Program Well: Expedition 396, Site U1568A

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_021LUP	PRODUCER	25−Aug−2021 14:05	1903.9 M	1675.6 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_022PUP	FN:26	PRODUCER	25−Aug−2021 14:10	1903.9 M	1675.6 M
RTB	MSS_LDEO_HRLA_LDL_022PUP	FN:27	PRODUCER	25−Aug−2021 14:10	1903.9 M	1675.6 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

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

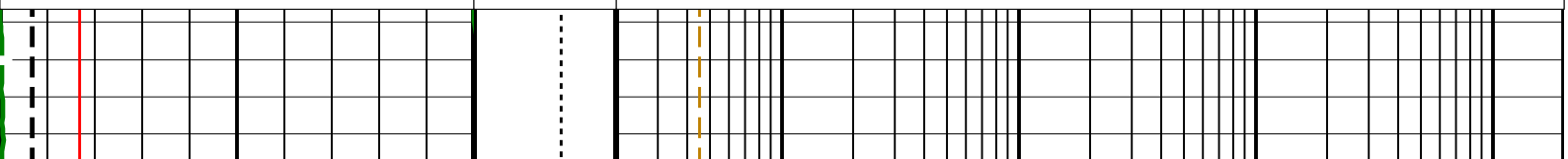
Invasion Diameter (DI_HRLT)
0 (IN) 50

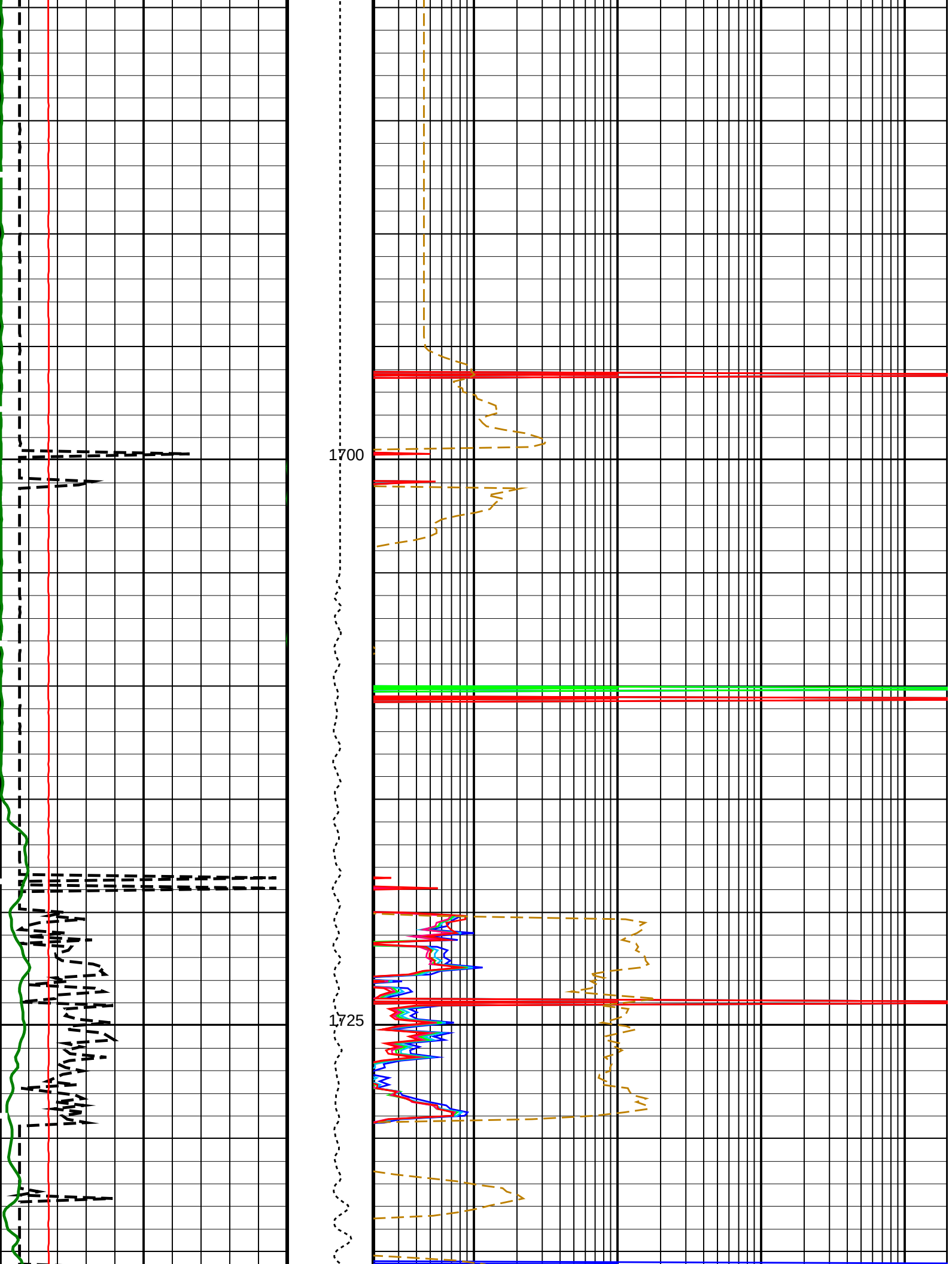
HRLT Resistivity 2 (RLA2)
0.2 (OHMM) 2000

HLDS Caliper (LCAL)
0 (IN) 20

Tension (TENS) (LBF)
0 5000

HRLT Resistivity 1 (RLA1)
0.2 (OHMM) 2000

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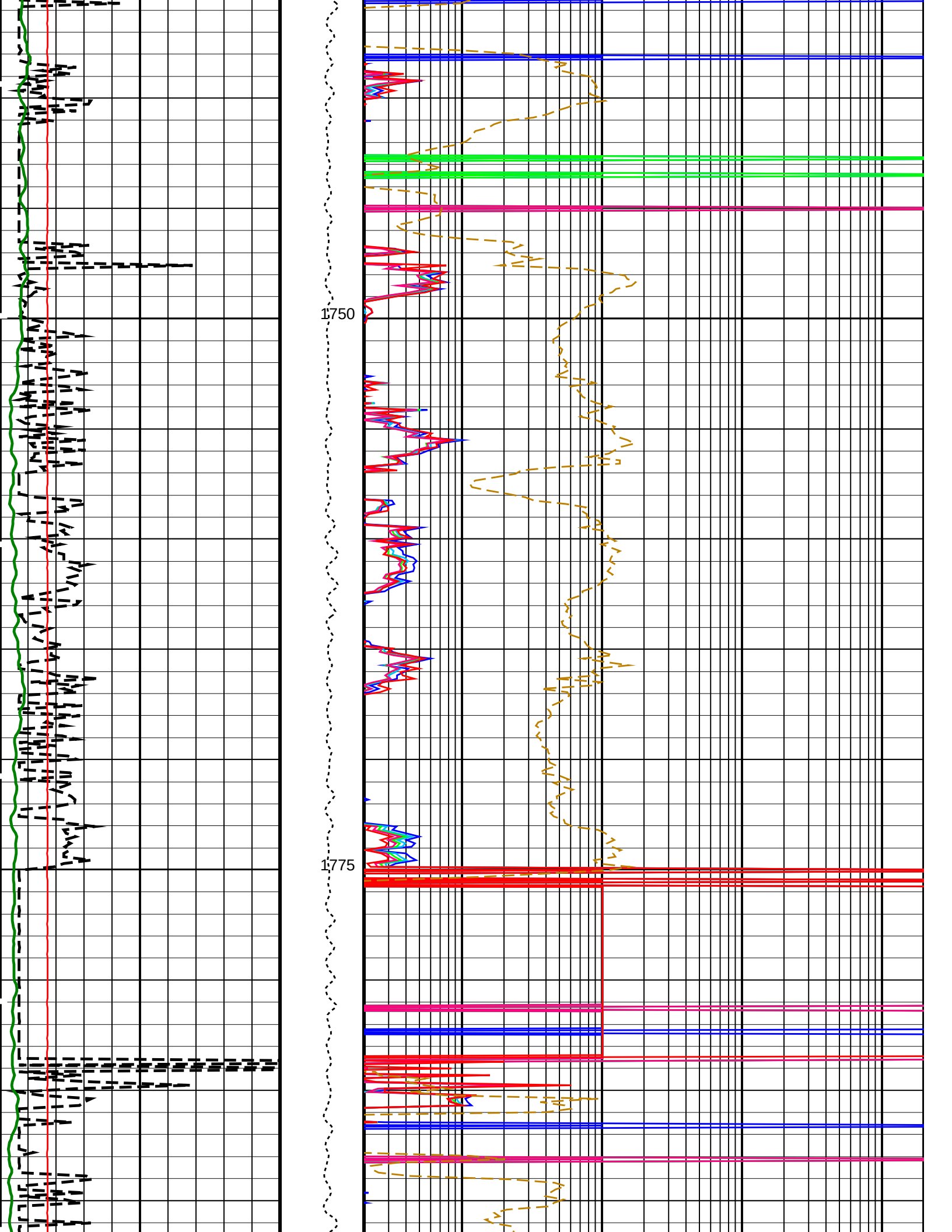
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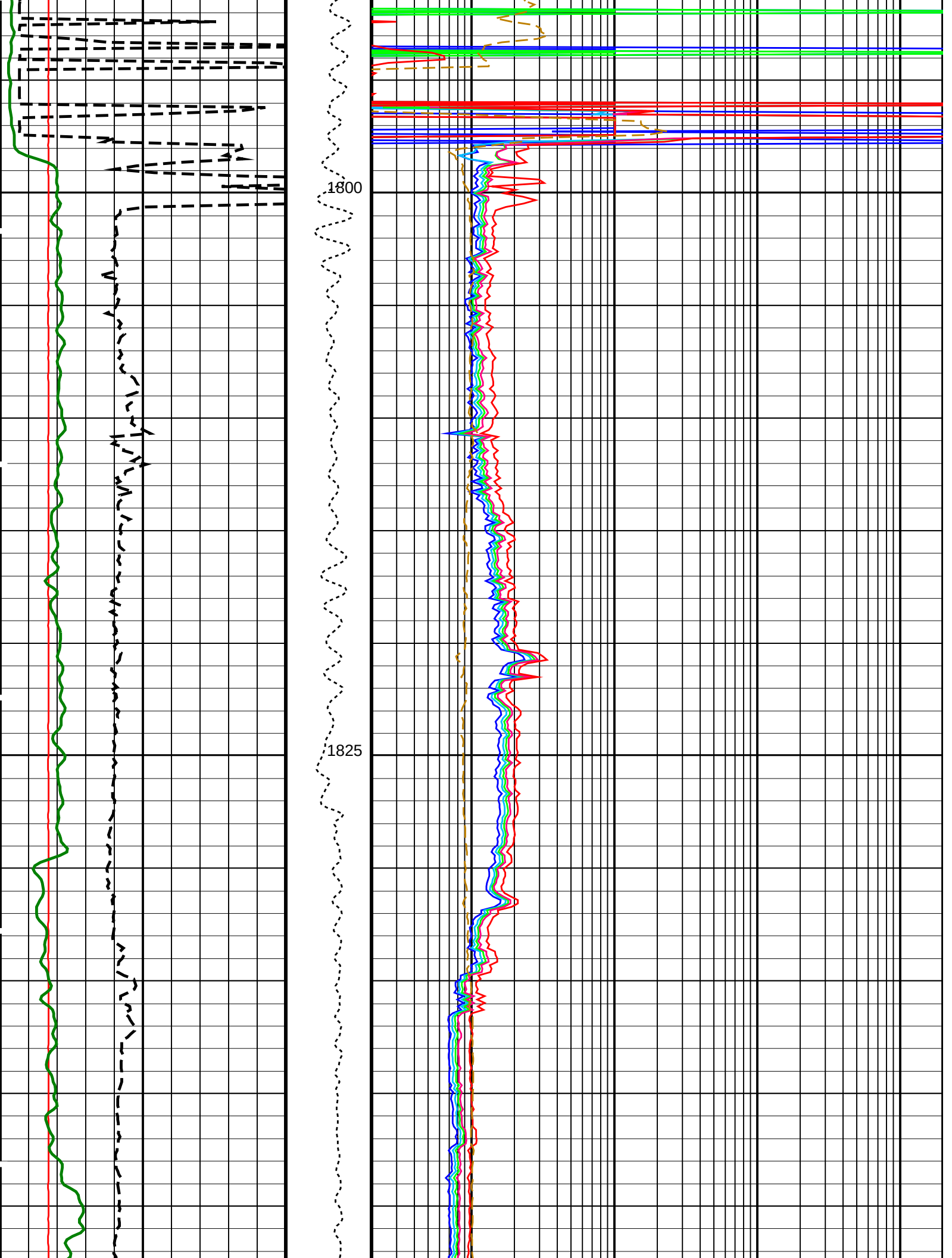
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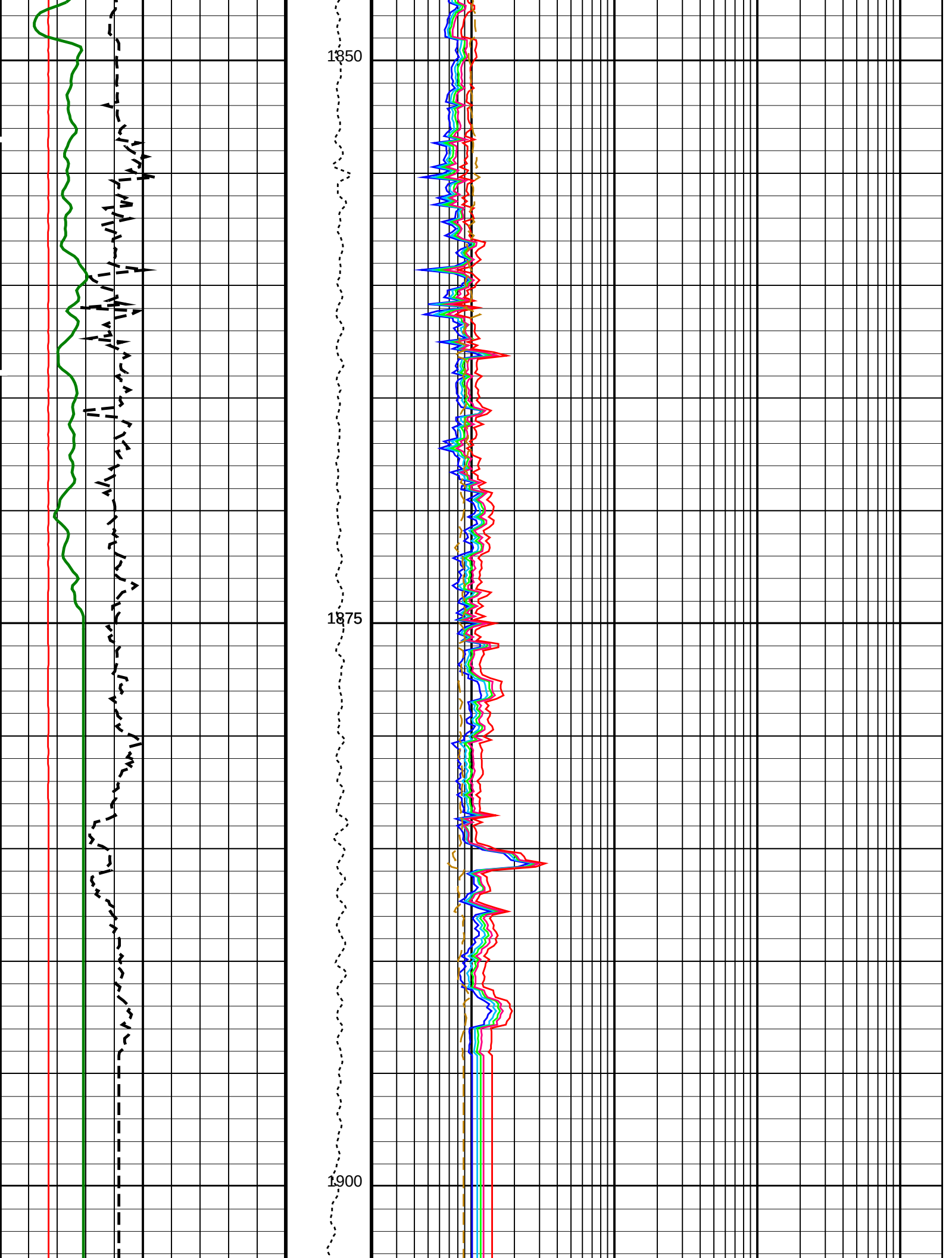
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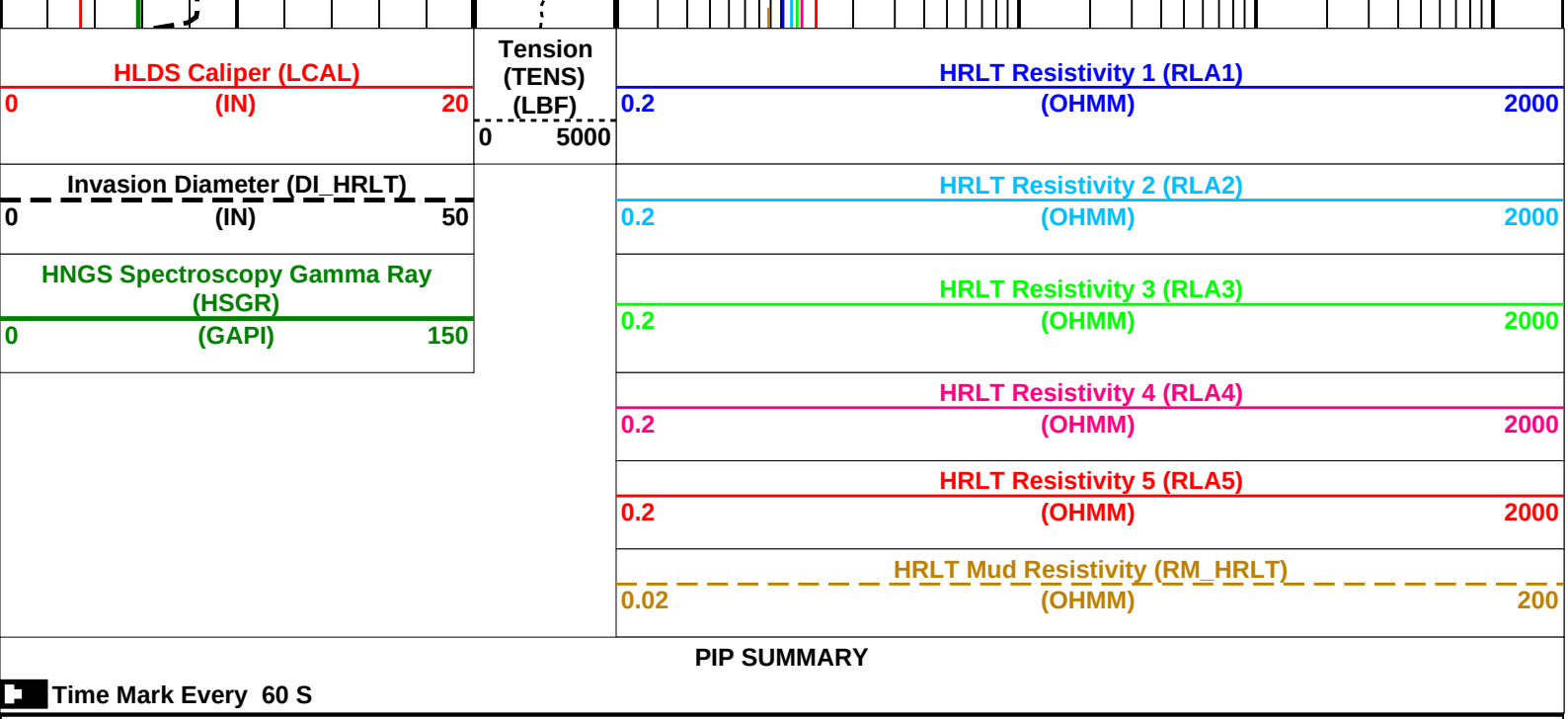

Parameters

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	−0.010419	
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	0.954059	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.967493	
	System and Miscellaneous		
BS	Bit Size	11.438	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: 25-Aug-2021 14:10

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_021LUP	PRODUCER	25-Aug-2021 14:05	1903.9 M	1675.6 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_022PUP	FN:26	PRODUCER	25-Aug-2021 14:10	
RTB	MSS_LDEO_HRLA_LDL_022PUP	FN:27	PRODUCER	25-Aug-2021 14:10	

Company: International Ocean Discovery Program Well: Expedition 396, Site U1568A

Input DLIS Files

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Output DLIS Files

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RTB	MSS_LDEO_HRLA_LDL_022PUP	FN:27	PRODUCER	25-Aug-2021 14:10	1903.9 M	1675.6 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

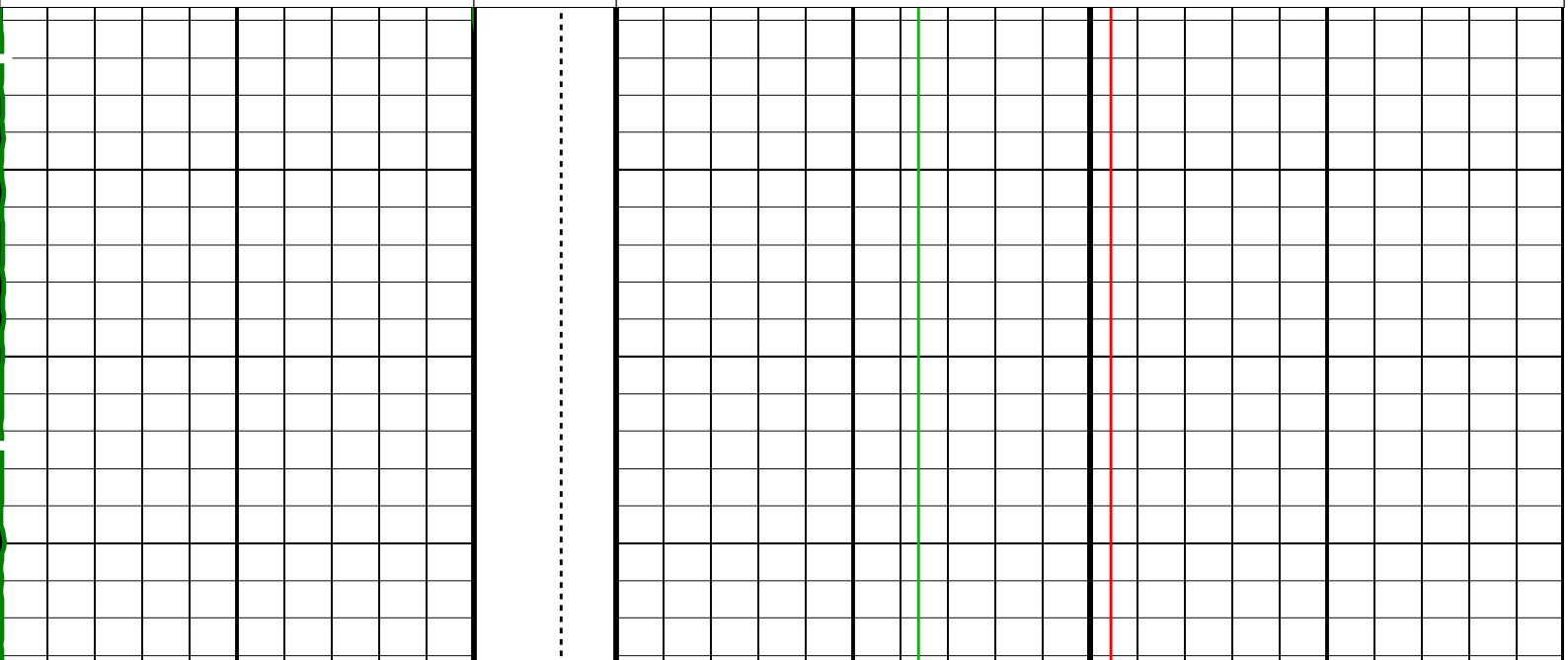
Time Mark Every 60 S

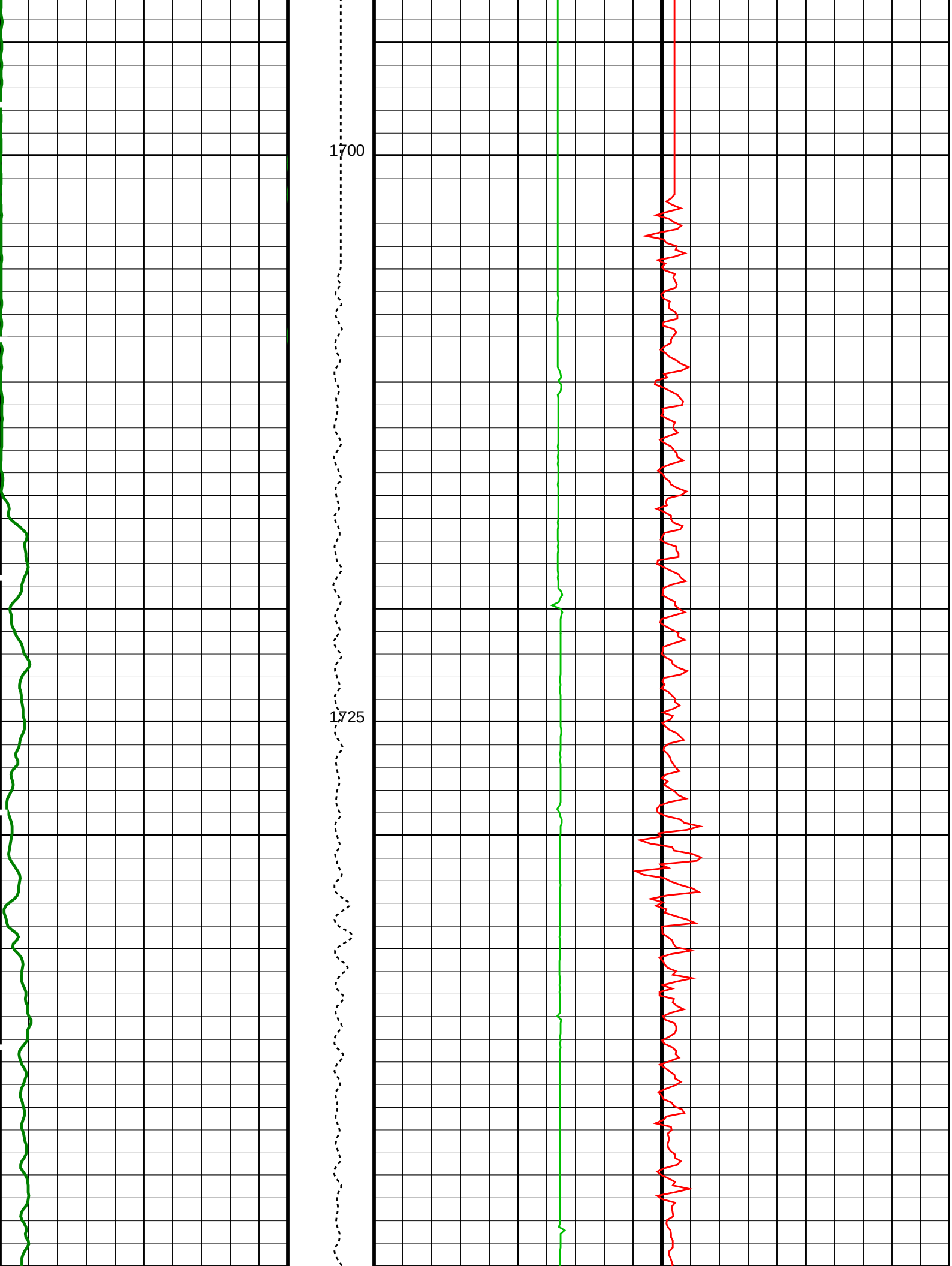
Dual-Coil Susceptibility (MSSLSUS_LDEO)
-10000 (PPM) 90000

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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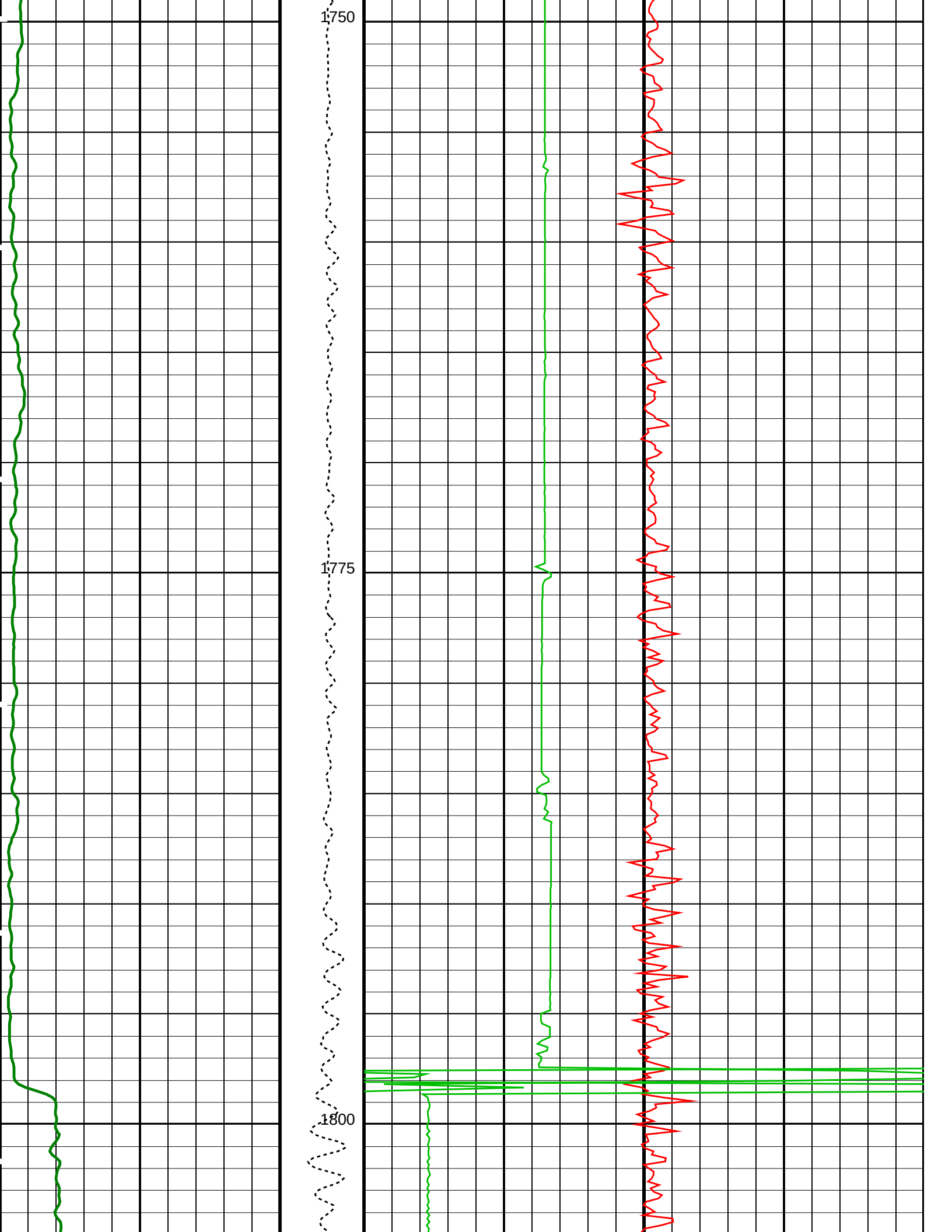
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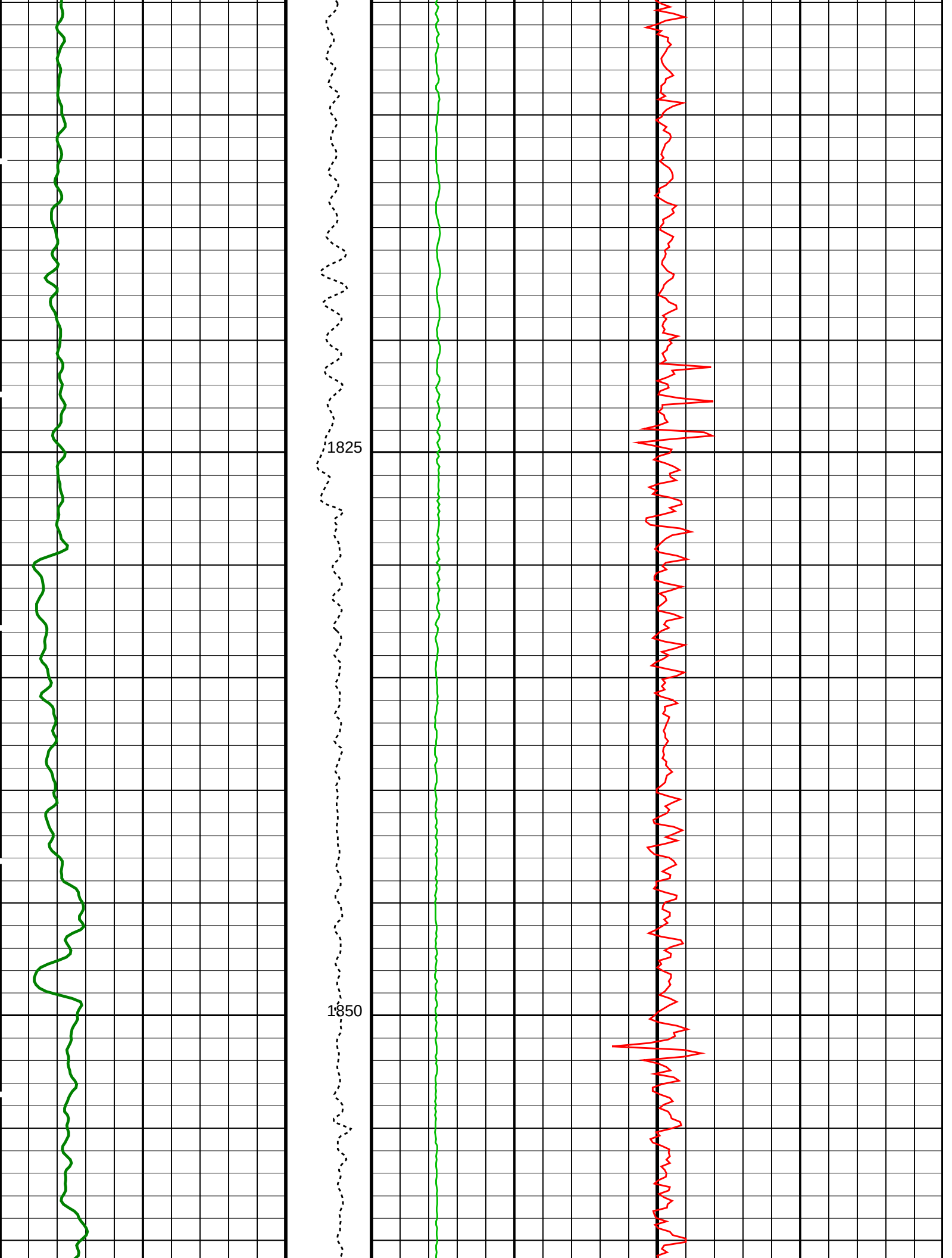
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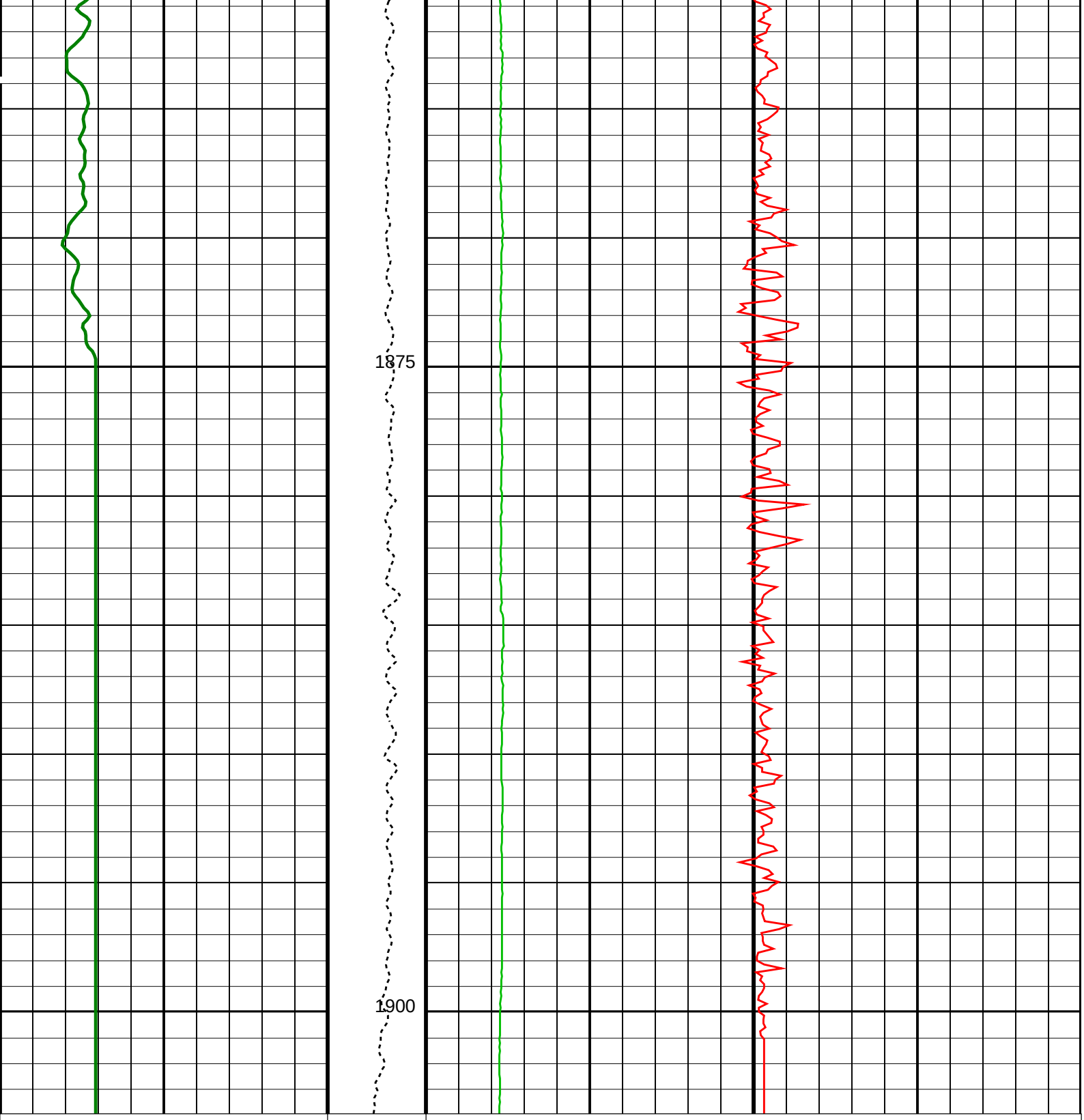


HNGS Spectroscopy Gamma Ray (HSGR)	Tension (TENS) (LBF)	Axial Acceleration (MSSZACC_LDEO)
0 (GAPI) 150	0 5000	0 (M/S2) 20
		Dual−Coil Susceptibility (MSSLSUS_LDEO)
		−10000 (PPM) 90000

PIP SUMMARY

Time Mark Every 60 S

Parameters

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

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	−0.010419	
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	0.954059	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.967493	
	System and Miscellaneous		
BS	Bit Size	11.438	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: 25−Aug−2021 14:10

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_021LUP	PRODUCER	25−Aug−2021 14:05	1903.9 M	1675.6 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_022PUP	FN:26	PRODUCER	25−Aug−2021 14:10	
RTB	MSS_LDEO_HRLA_LDL_022PUP	FN:27	PRODUCER	25−Aug−2021 14:10	

Schlumberger

First Pass

MAXIS Field Log

Company: International Ocean Discovery Program Well: Expedition 396, Site U1568A

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_016LUP	FN:18	PRODUCER	25−Aug−2021 13:13	1904.2 M	1835.0 M
RTB	MSS_LDEO_HRLA_LDL_016LUP	FN:19	PRODUCER	25−Aug−2021 13:13	1904.2 M	1835.0 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

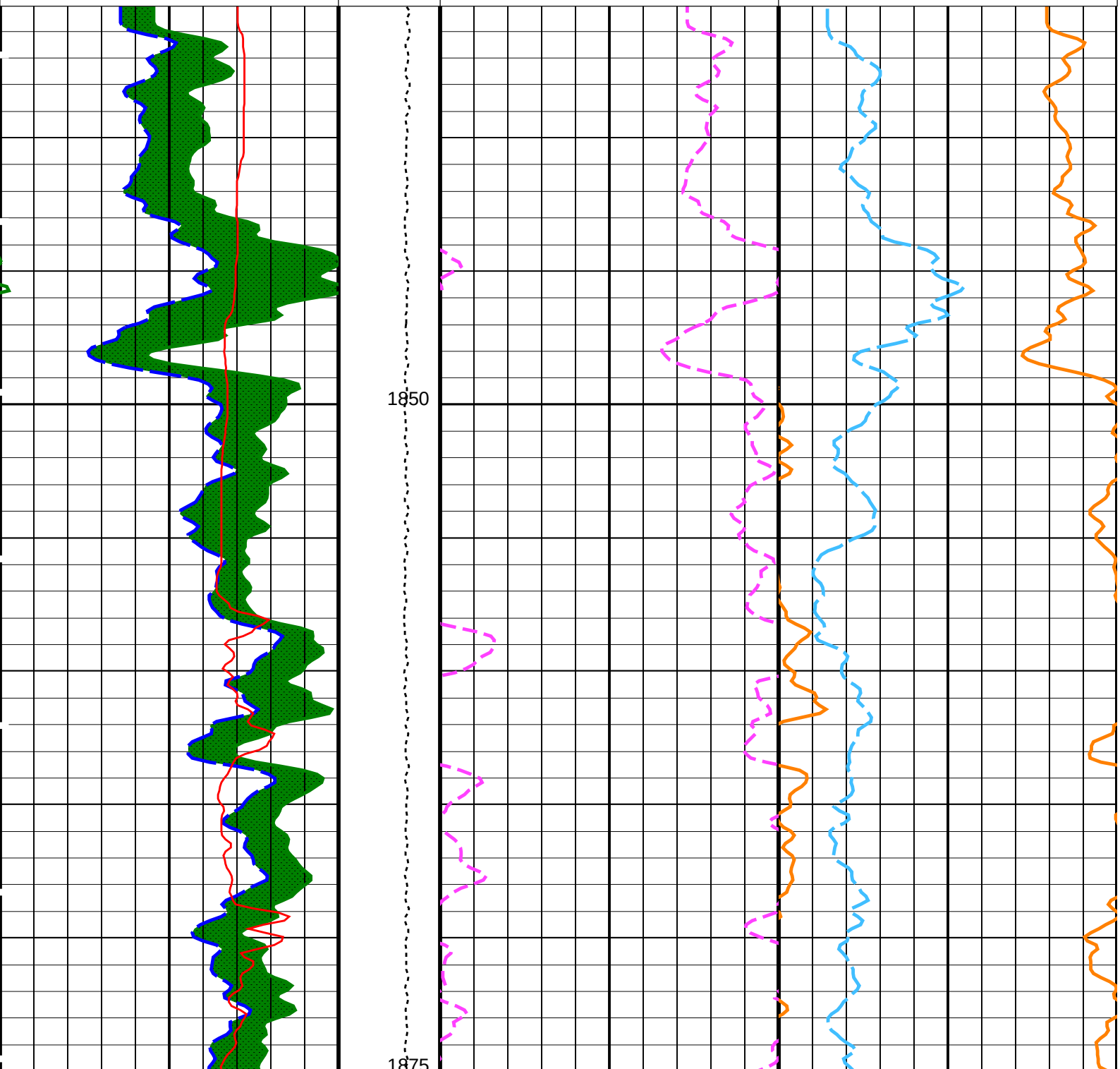
HNGS Uranium (HURA)
−5 (PPM) 5

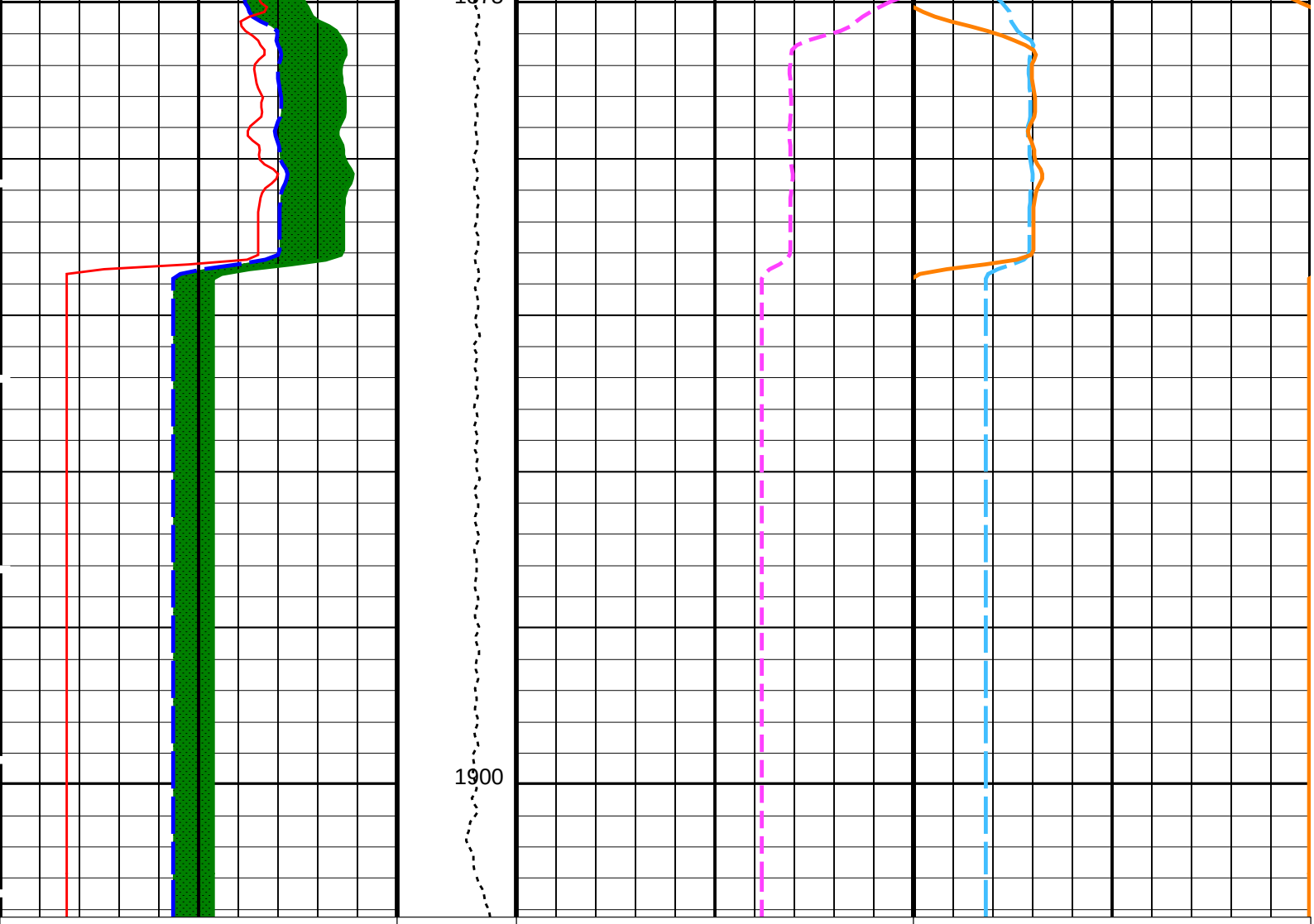
HLDS Caliper (LCAL)
0 (IN) 20

Tension (TENS) (LBF)
10000 0

HNGS Thorium (HTHO)
−5 (PPM) 5

HNGS Potassium (HFK)
−0.01 (V/V) 0.01





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	

GCSL	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	−0.0029256	
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	0.945323	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.992537	
System and Miscellaneous			
BS	Bit Size	11.438	IN
DFD	Drilling Fluid Density	1.26	G/C3

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 25−Aug−2021 13:13

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:18	PRODUCER	25−Aug−2021 13:13		
RTB	MSS_LDEO_HRLA_LDL_016LUP	FN:19	PRODUCER	25−Aug−2021 13:13		

Company: International Ocean Discovery Program Well: Expedition 396, Site U1568A

Output DLIS Files

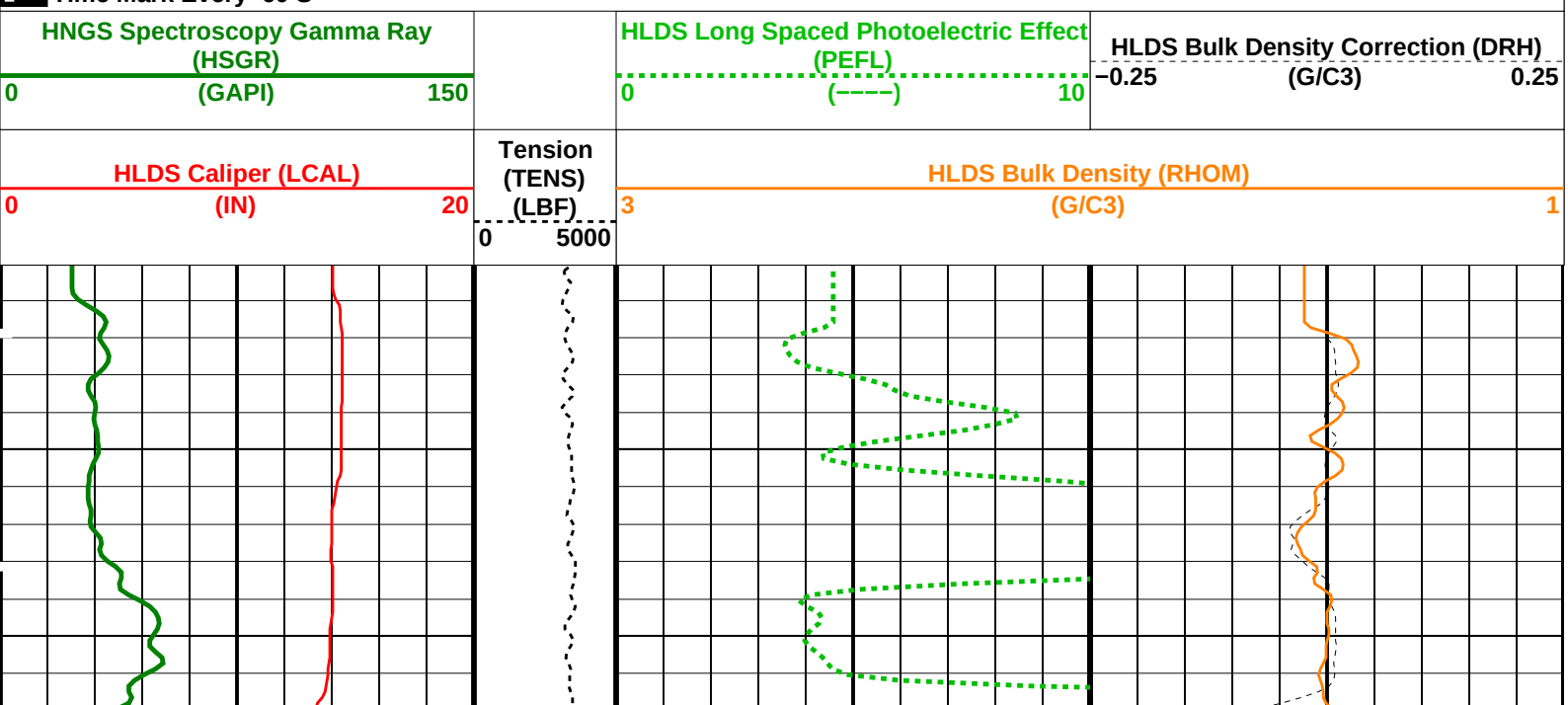
DEFAULT	MSS_LDEO_HRLA_LDL_016LUP	FN:18	PRODUCER	25−Aug−2021 13:13	1904.2 M	1835.0 M
RTB	MSS_LDEO_HRLA_LDL_016LUP	FN:19	PRODUCER	25−Aug−2021 13:13	1904.2 M	1835.0 M

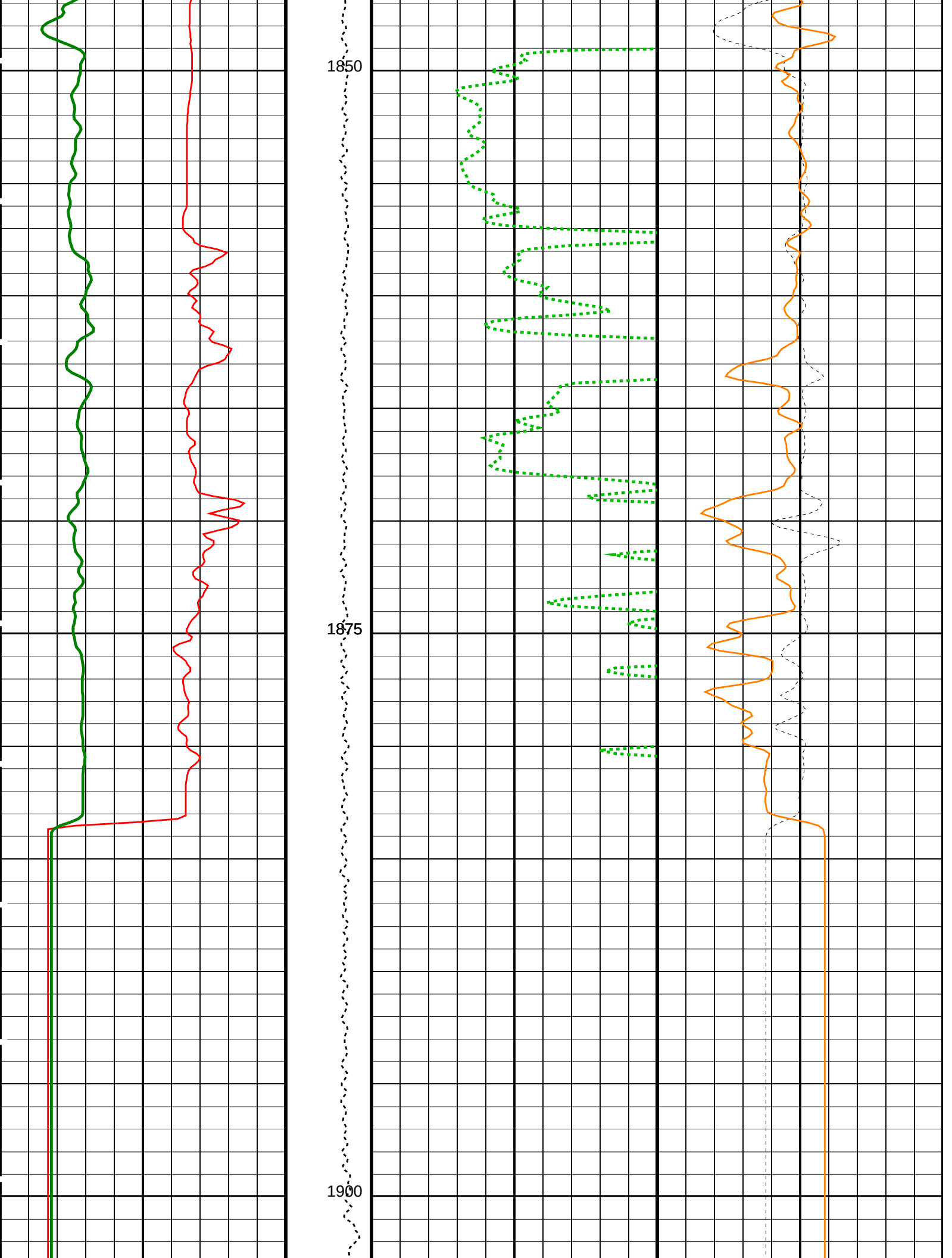
OP System Version: 19C0−187

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




1850
1875
1900

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	−0.0029256	
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	0.945323	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.992537	
	System and Miscellaneous		
BS	Bit Size	11.438	IN
DFD	Drilling Fluid Density	1.26	G/C3

Format: HLDSDensityPE Vertical Scale: 1:200 Graphics File Created: 25−Aug−2021 13:13

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:18	PRODUCER	25−Aug−2021 13:13		
RTB	MSS_LDEO_HRLA_LDL_016LUP	FN:19	PRODUCER	25−Aug−2021 13:13		

Company: International Ocean Discovery Program Well: Expedition 396, Site U1568A

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_016LUP	FN:18	PRODUCER	25−Aug−2021 13:13	1904.2 M	1835.0 M
RTB	MSS_LDEO_HRLA_LDL_016LUP	FN:19	PRODUCER	25−Aug−2021 13:13	1904.2 M	1835.0 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

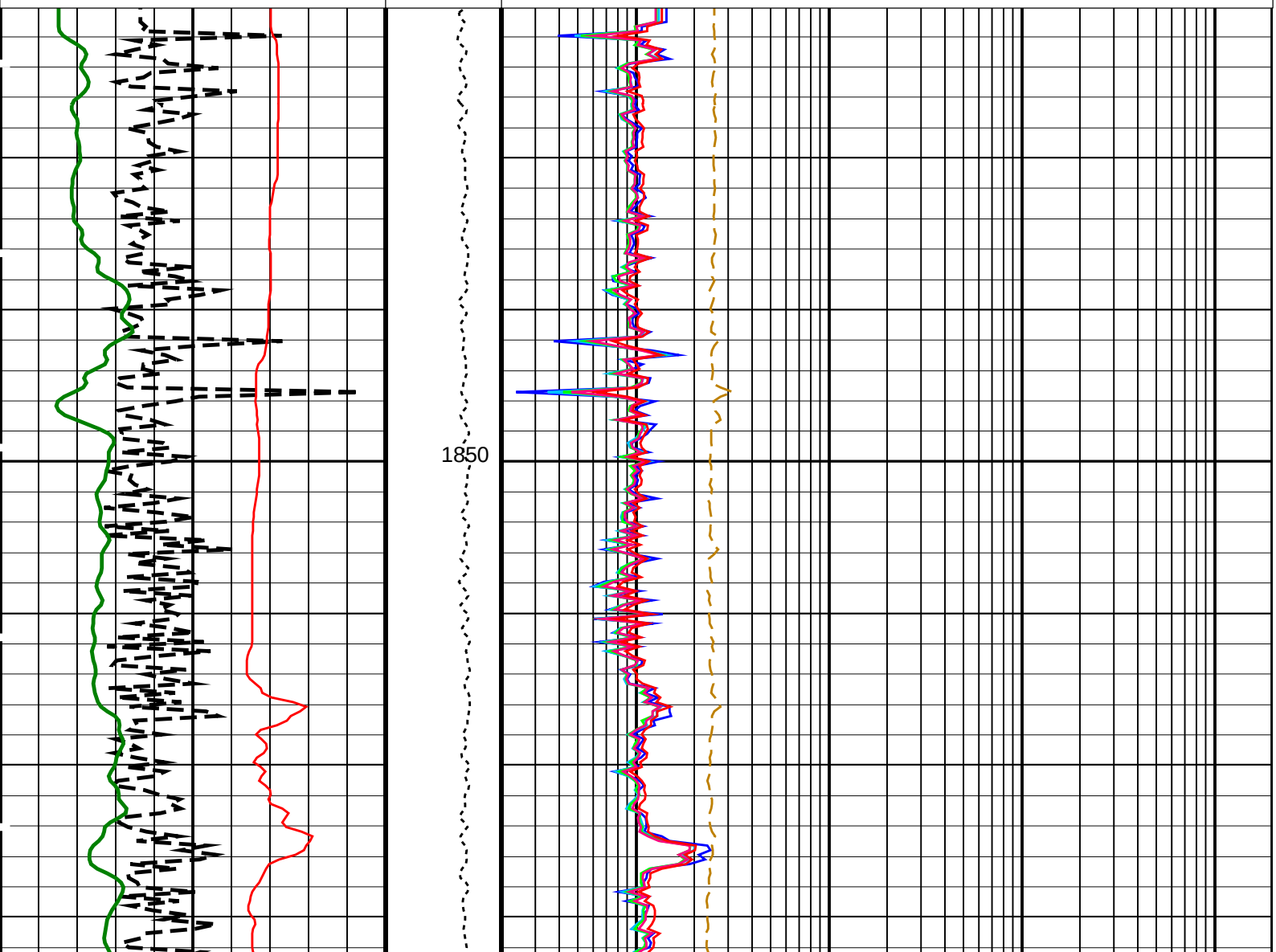
Invasion Diameter (DI_HRLT)
0 (IN) 50

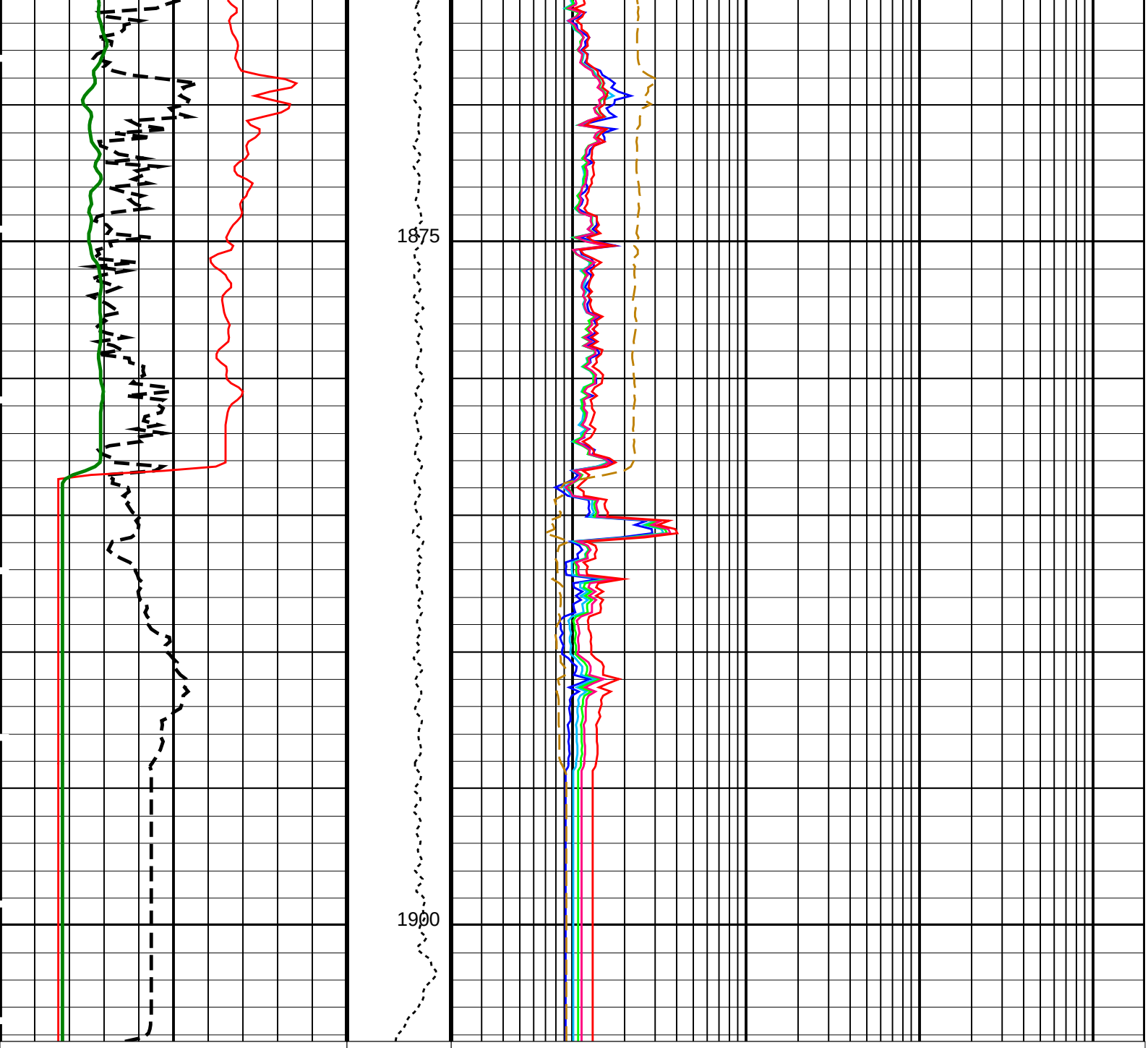
HRLT Resistivity 2 (RLA2)
0.2 (OHMM) 2000

HLDS Caliper (LCAL)
0 (IN) 20

Tension (TENS) (LBF)
0 5000

HRLT Resistivity 1 (RLA1)
0.2 (OHMM) 2000





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

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	−0.0029256	
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	0.945323	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.992537	
	System and Miscellaneous		
BS	Bit Size	11.438	IN
DFD	Drilling Fluid Density	1.26	G/C3
TD	Total Depth	2292	M

Format: HRLT Vertical Scale: 1:200 Graphics File Created: 25−Aug−2021 13:13

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:18	PRODUCER	25−Aug−2021 13:13	
RTB	MSS_LDEO_HRLA_LDL_016LUP	FN:19	PRODUCER	25−Aug−2021 13:13	

Company: International Ocean Discovery Program Well: Expedition 396, Site U1568A

Output DLIS Files

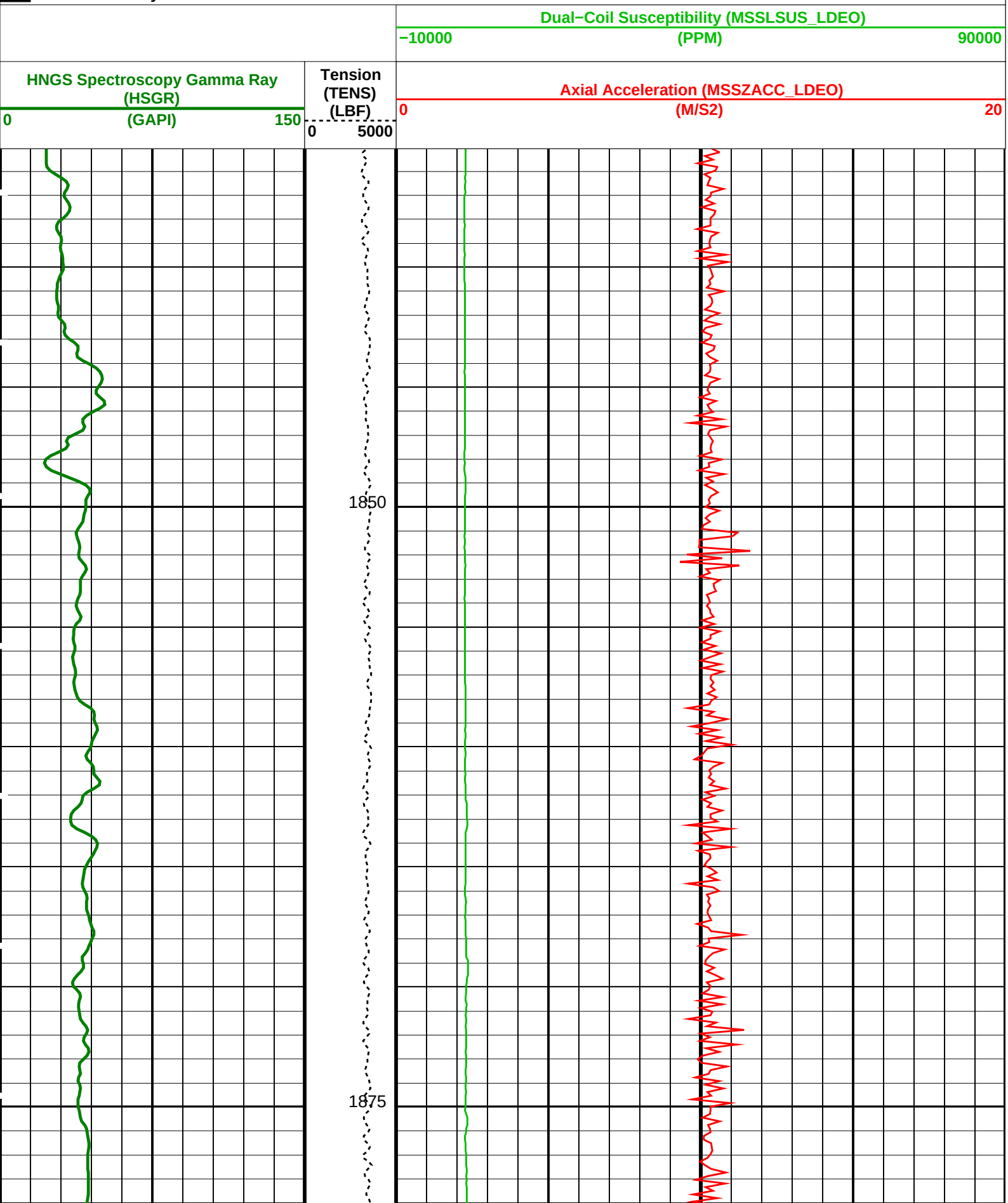
DEFAULT	MSS_LDEO_HRLA_LDL_016LUP	FN:18	PRODUCER	25−Aug−2021 13:13	1904.2 M	1835.0 M
RTB	MSS_LDEO_HRLA_LDL_016LUP	FN:19	PRODUCER	25−Aug−2021 13:13	1904.2 M	1835.0 M

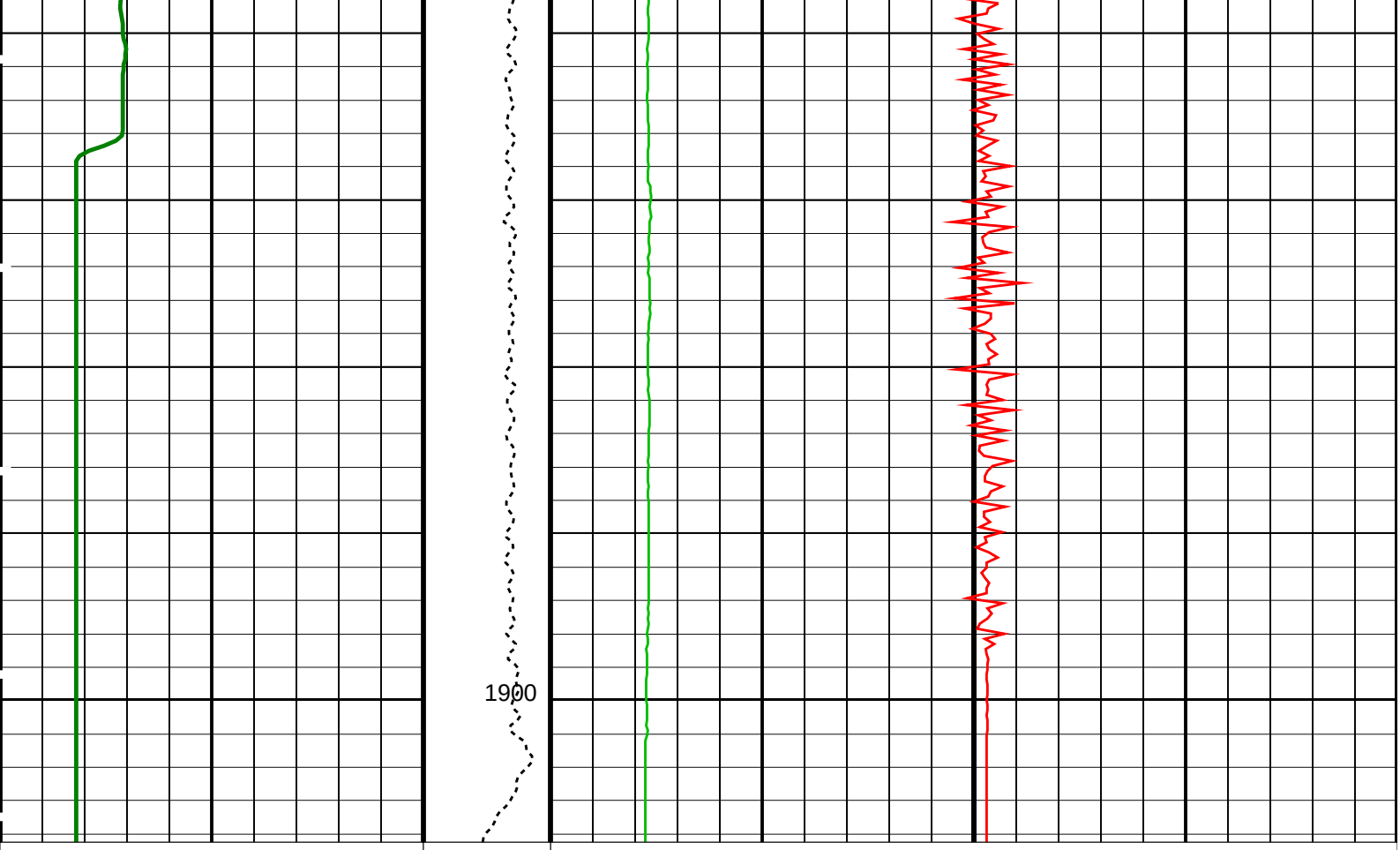
OP System Version: 19C0−187

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

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	−0.0029256	
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	0.945323	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.992537	
	System and Miscellaneous		
BS	Bit Size	11.438	IN

BS	Bit Size	11.438	IN
DFD	Drilling Fluid Density	1.26	G/C3

Format: MSS_Logging Vertical Scale: 1:200 Graphics File Created: 25−Aug−2021 13:13

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:18	PRODUCER	25−Aug−2021 13:13	
RTB	MSS_LDEO_HRLA_LDL_016LUP	FN:19	PRODUCER	25−Aug−2021 13:13	

Schlumberger

Second Pass

MAXIS Field Log

Company: International Ocean Discovery Program Well: Expedition 396, Site U1568A

Output DLIS Files

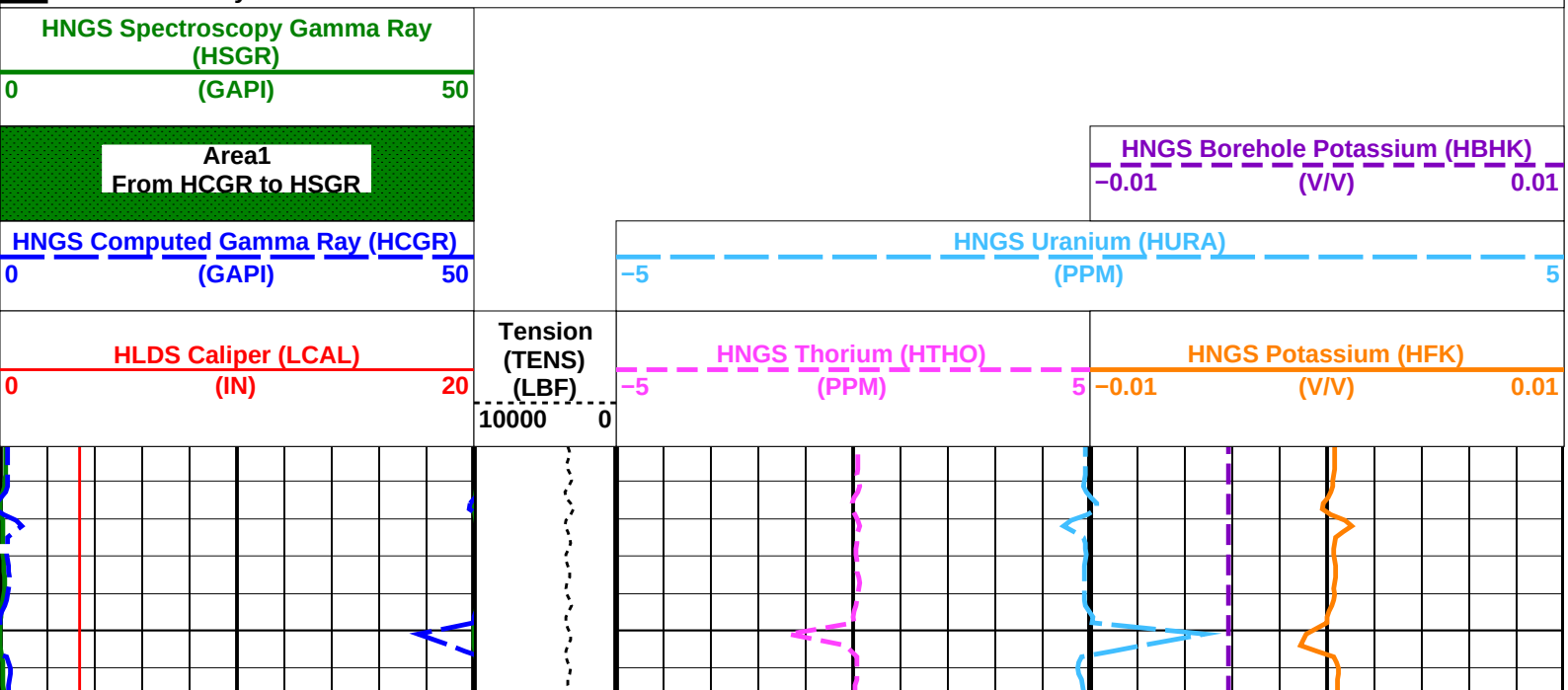
DEFAULT	MSS_LDEO_HRLA_LDL_019LUP	FN:23	PRODUCER	25−Aug−2021 13:32	1902.0 M	1705.1 M
RTB	MSS_LDEO_HRLA_LDL_019LUP	FN:24	PRODUCER	25−Aug−2021 13:32	1902.0 M	1705.1 M

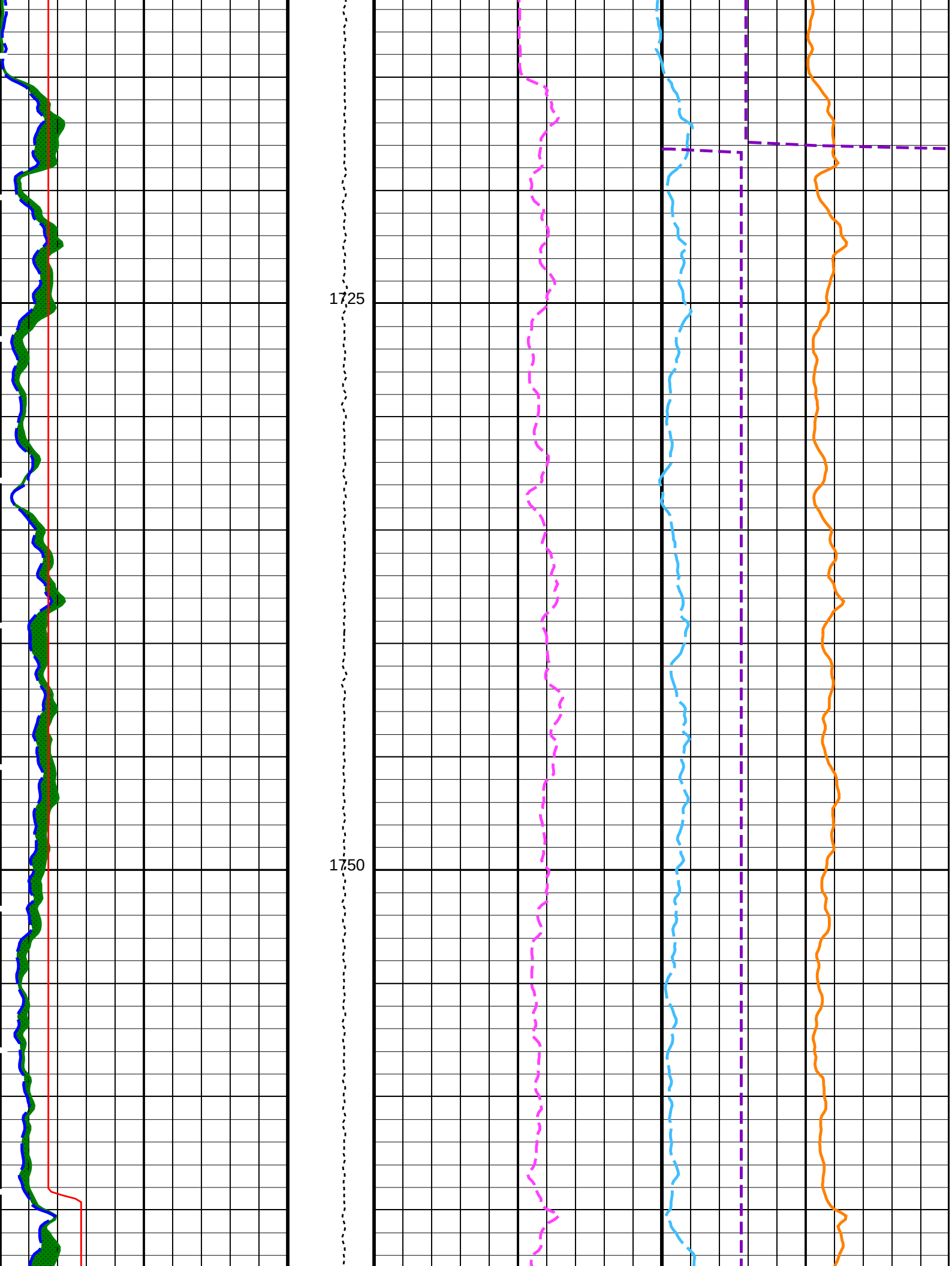
OP System Version: 19C0−187

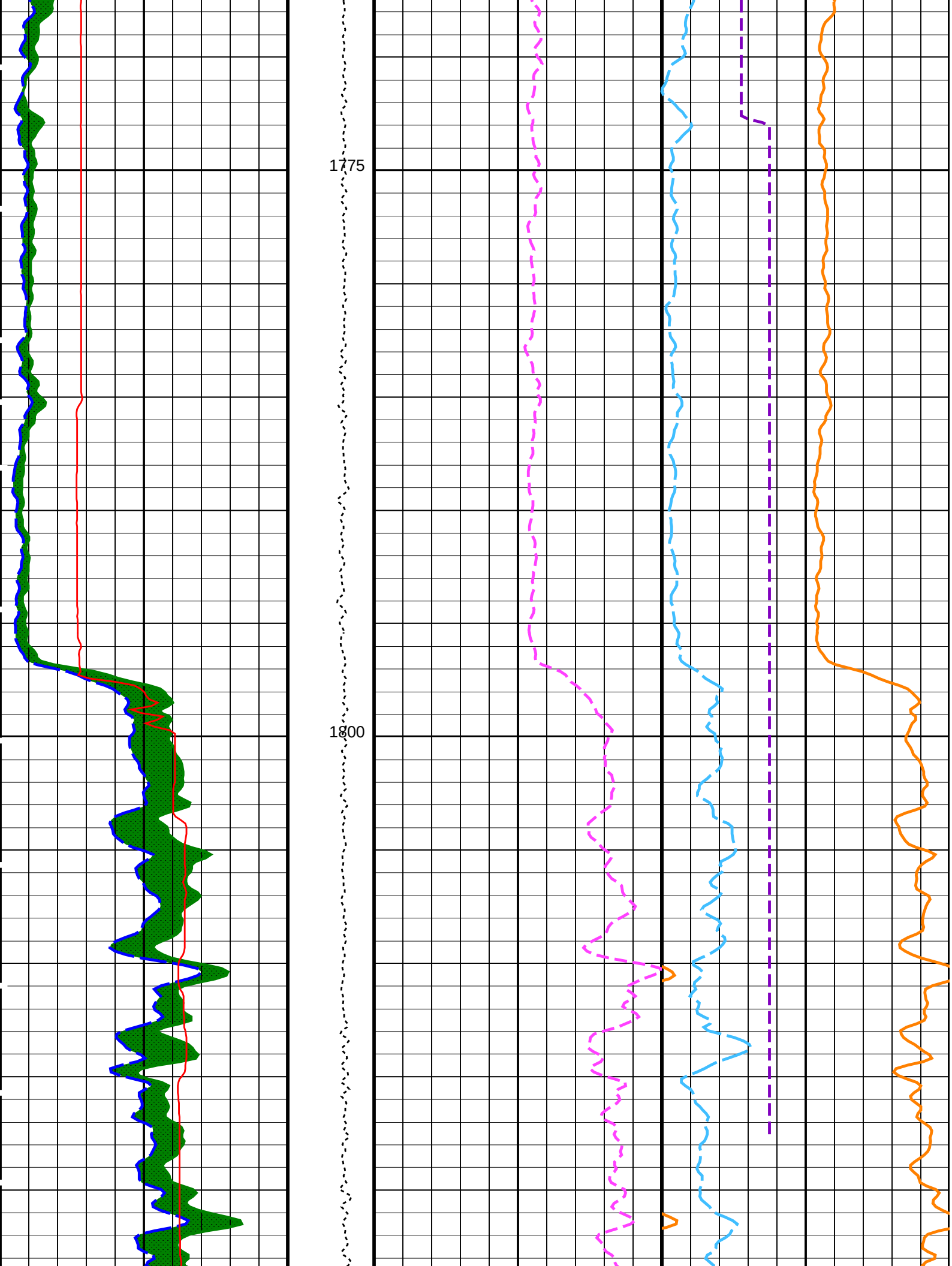
MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
DTC−H	19C0−187		

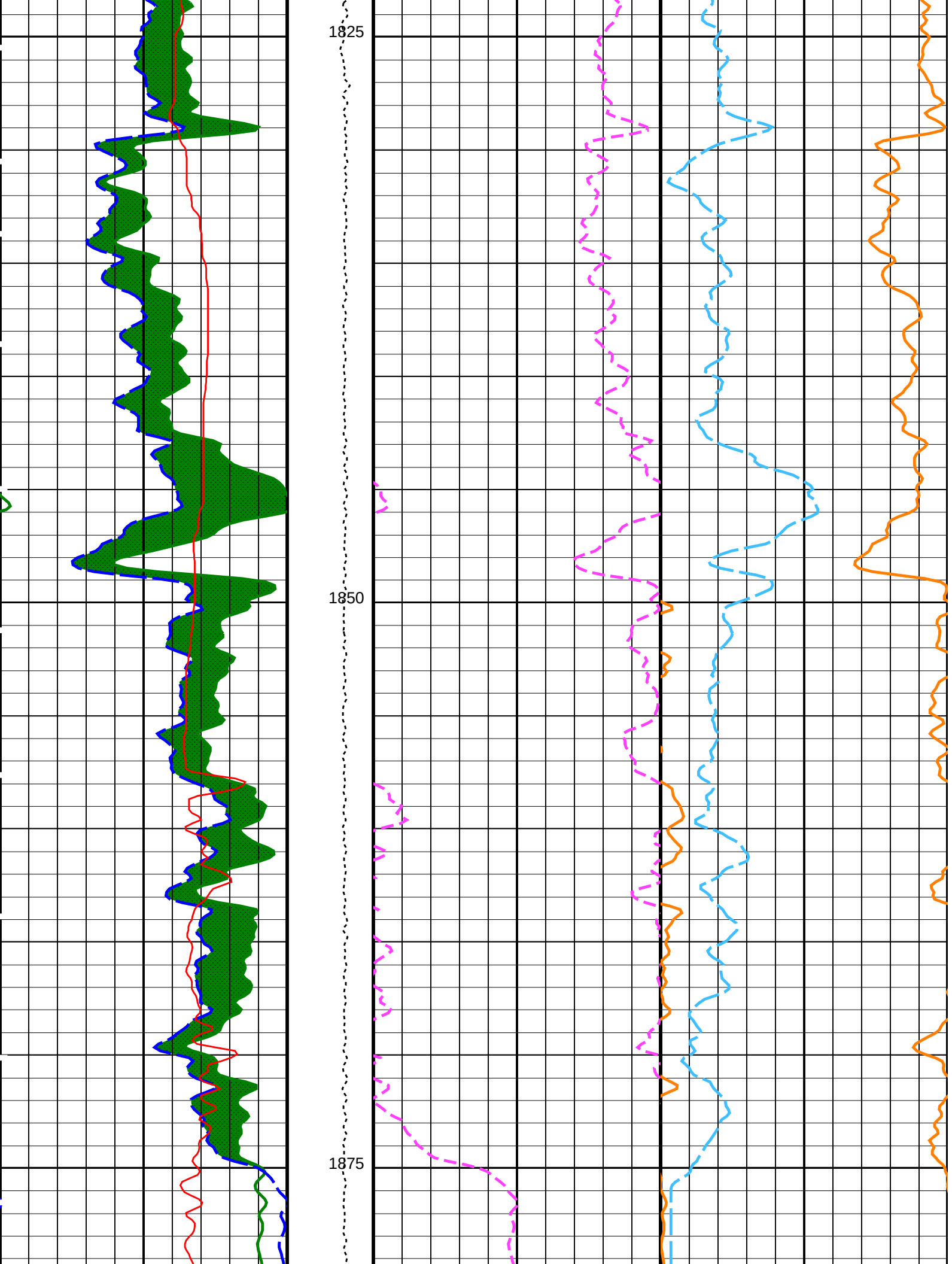
PIP SUMMARY

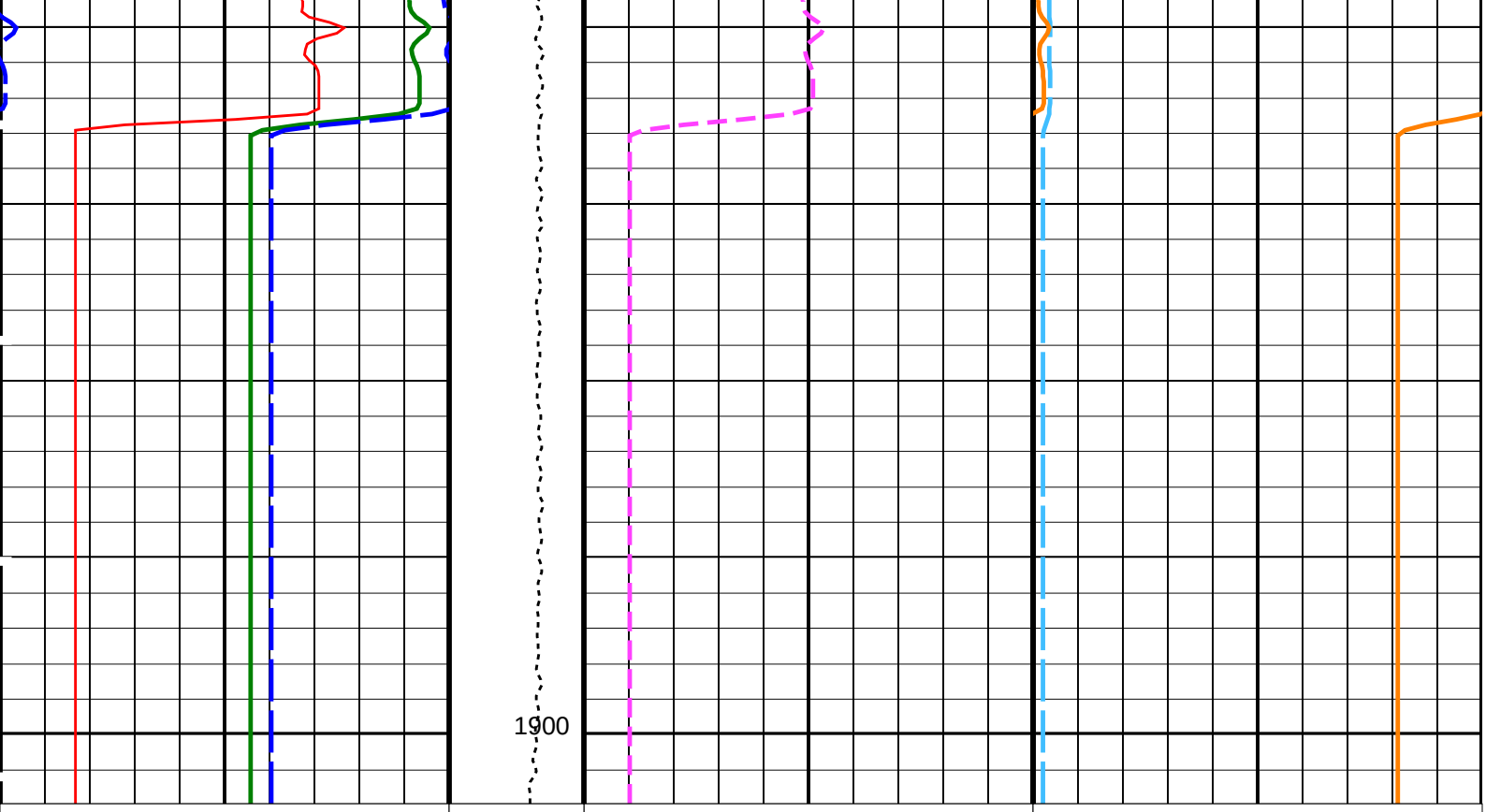
Time Mark Every 60 S




1725
1750


1775
1800


1825
1850
1875



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	−0.0029256	
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	

SSRC	HNGS Standard Gamma Ray Correction Flag	YES	
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.945323	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.992537	
	System and Miscellaneous		
BS	Bit Size	11.438	IN
DFD	Drilling Fluid Density	1.26	G/C3

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 25−Aug−2021 13:32

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_019LUP	FN:23	PRODUCER	25−Aug−2021 13:32		
RTB	MSS_LDEO_HRLA_LDL_019LUP	FN:24	PRODUCER	25−Aug−2021 13:32		

Company: International Ocean Discovery Program Well: Expedition 396, Site U1568A

Output DLIS Files

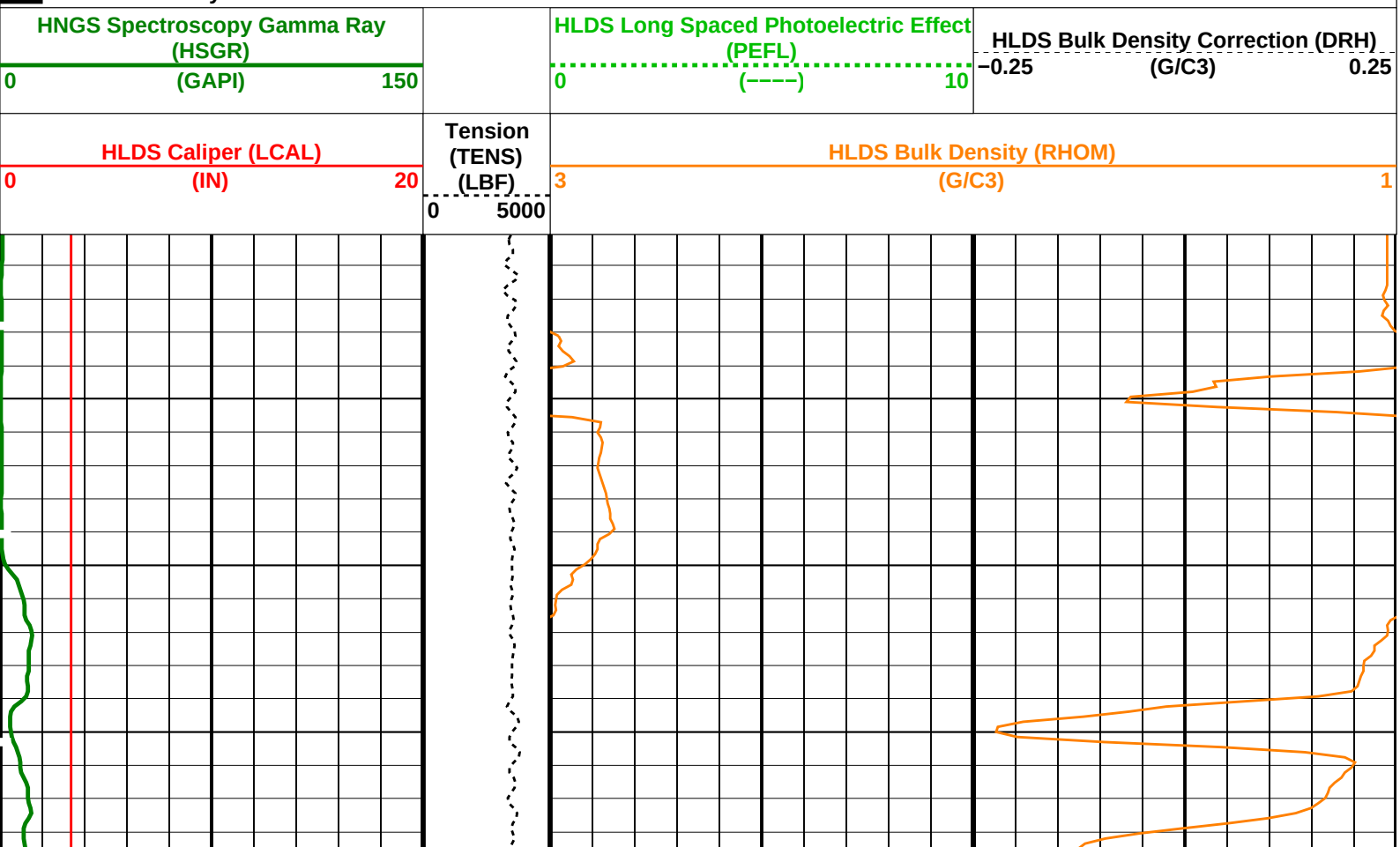
DEFAULT	MSS_LDEO_HRLA_LDL_019LUP	FN:23	PRODUCER	25−Aug−2021 13:32	1902.0 M	1705.1 M
RTB	MSS_LDEO_HRLA_LDL_019LUP	FN:24	PRODUCER	25−Aug−2021 13:32	1902.0 M	1705.1 M

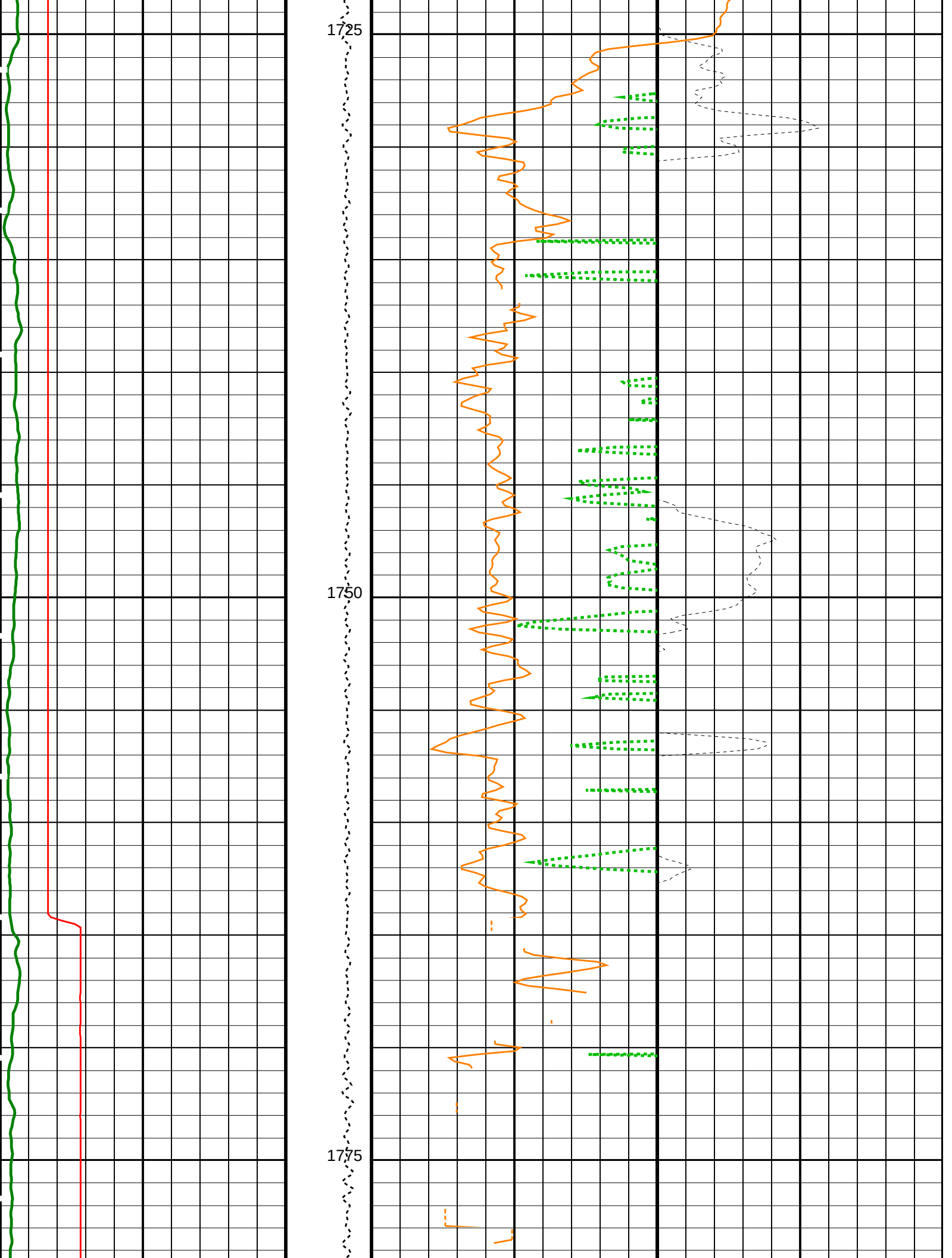
OP System Version: 19C0−187

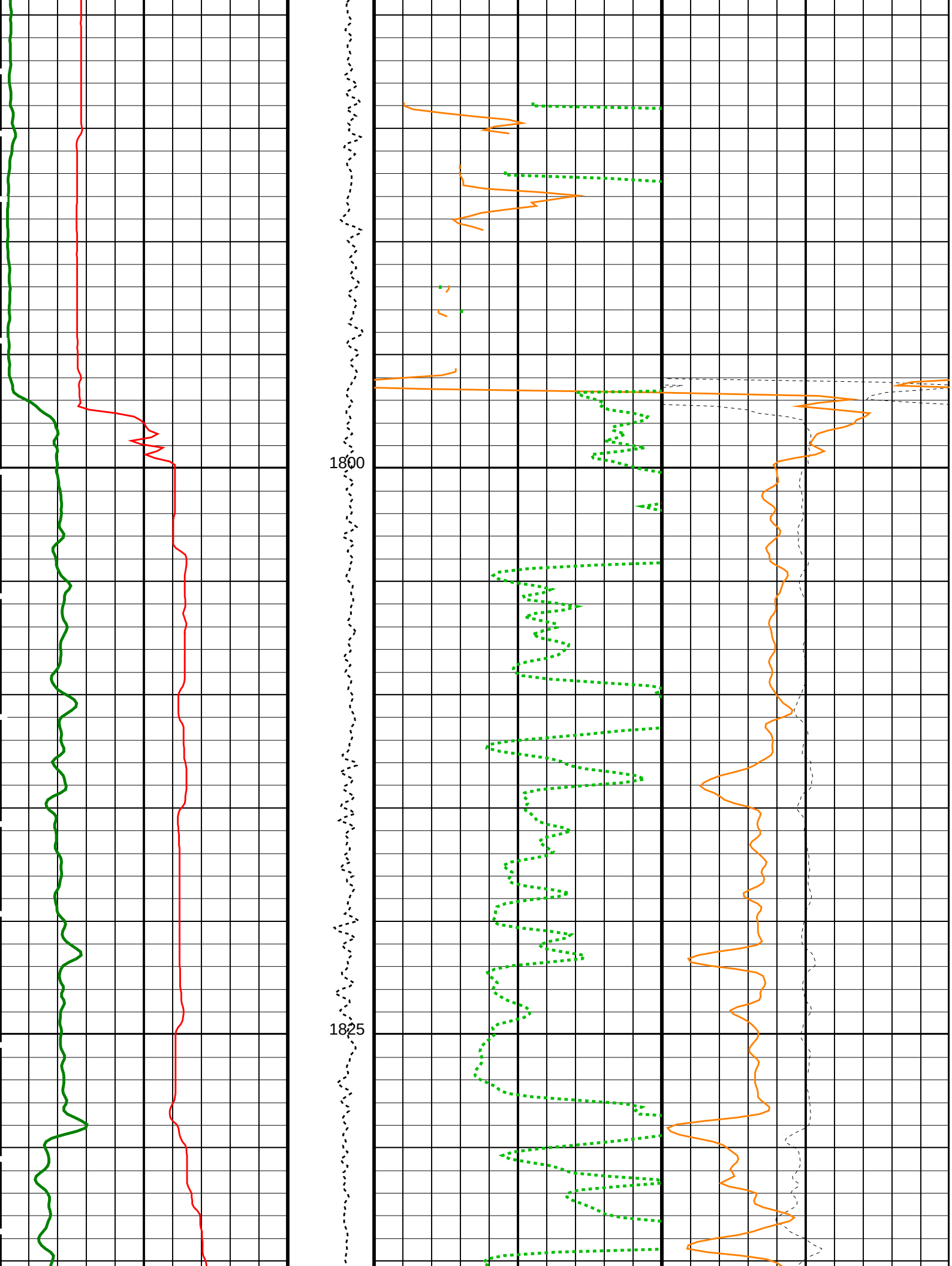
MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
DTC−H	19C0−187		

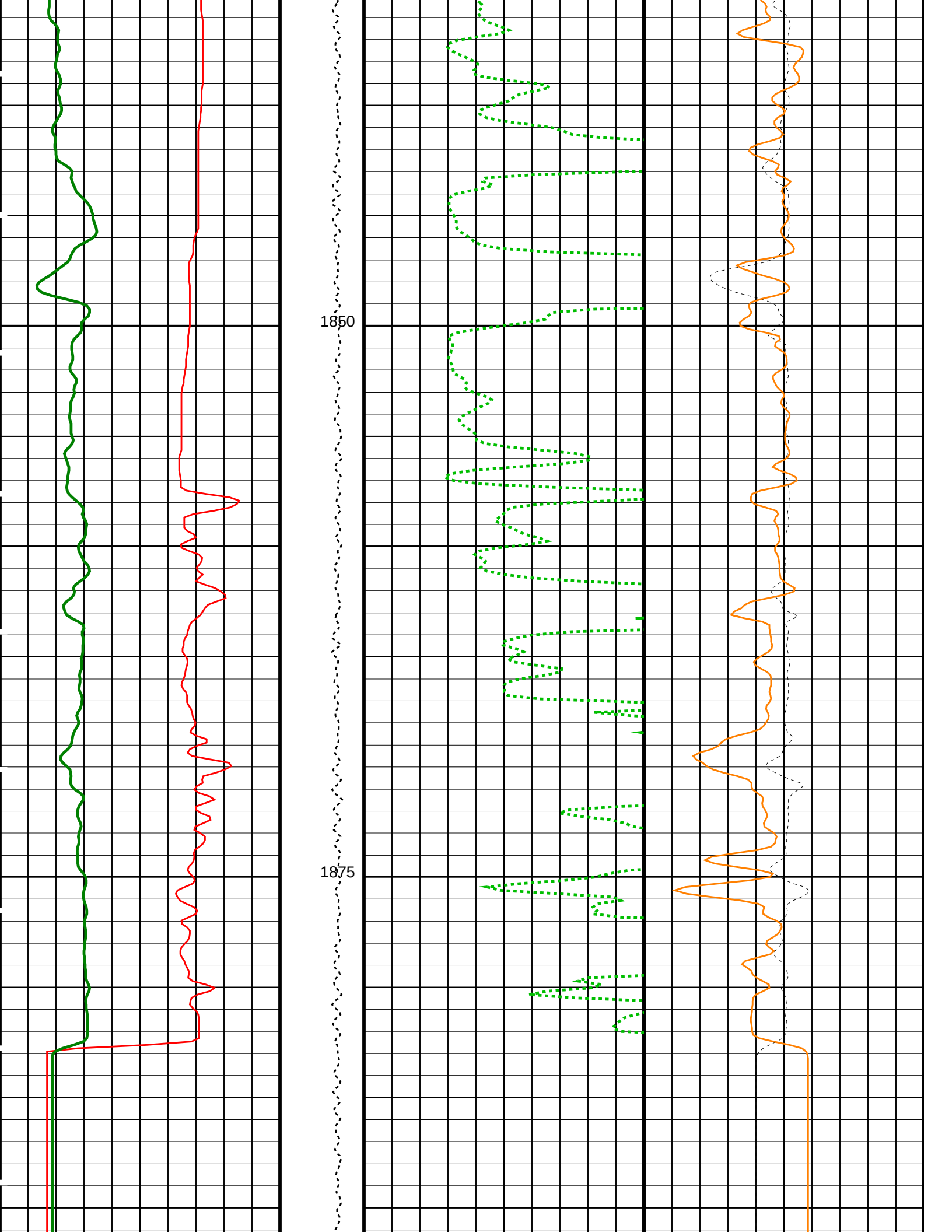
PIP SUMMARY

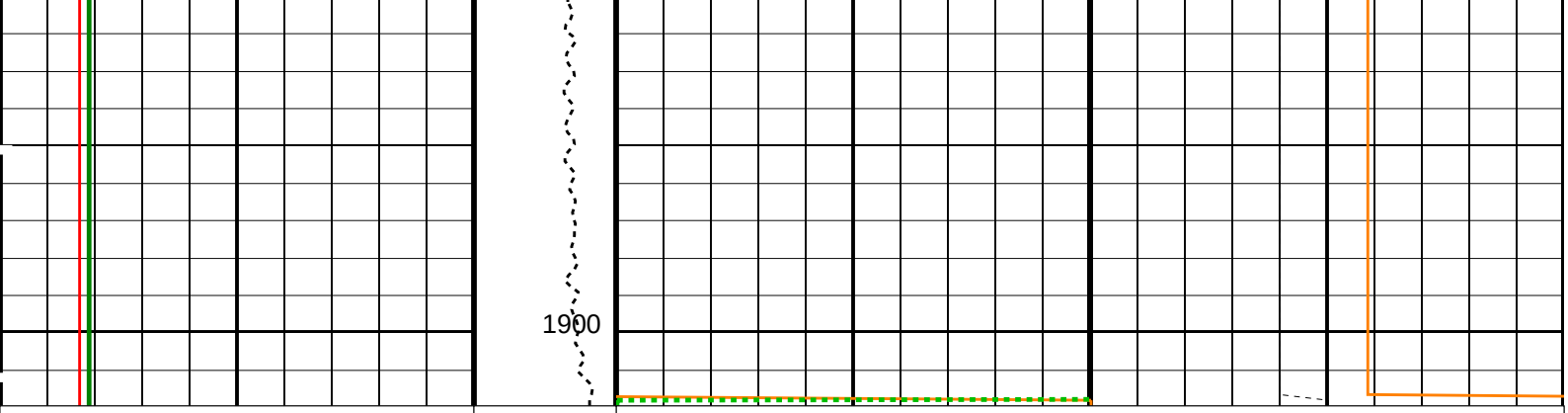
Time Mark Every 60 S




1725
1750
1775


1800
1825


1850
1875



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	−0.0029256	
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	0.945323	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.992537	
	System and Miscellaneous		
BS	Bit Size	11.438	IN
DFD	Drilling Fluid Density	1.26	G/C3

Format: HLDSDensityPE Vertical Scale: 1:200 Graphics File Created: 25−Aug−2021 13:32

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_019LUP	FN:23	PRODUCER	25−Aug−2021 13:32	
RTB	MSS_LDEO_HRLA_LDL_019LUP	FN:24	PRODUCER	25−Aug−2021 13:32	

Company: International Ocean Discovery Program | Well: Expedition 396, Site U1568A

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_019LUP	FN:23	PRODUCER	25−Aug−2021 13:32	1902.0 M	1705.1 M
RTB	MSS_LDEO_HRLA_LDL_019LUP	FN:24	PRODUCER	25−Aug−2021 13:32	1902.0 M	1705.1 M

OP System Version: 19C0−187

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

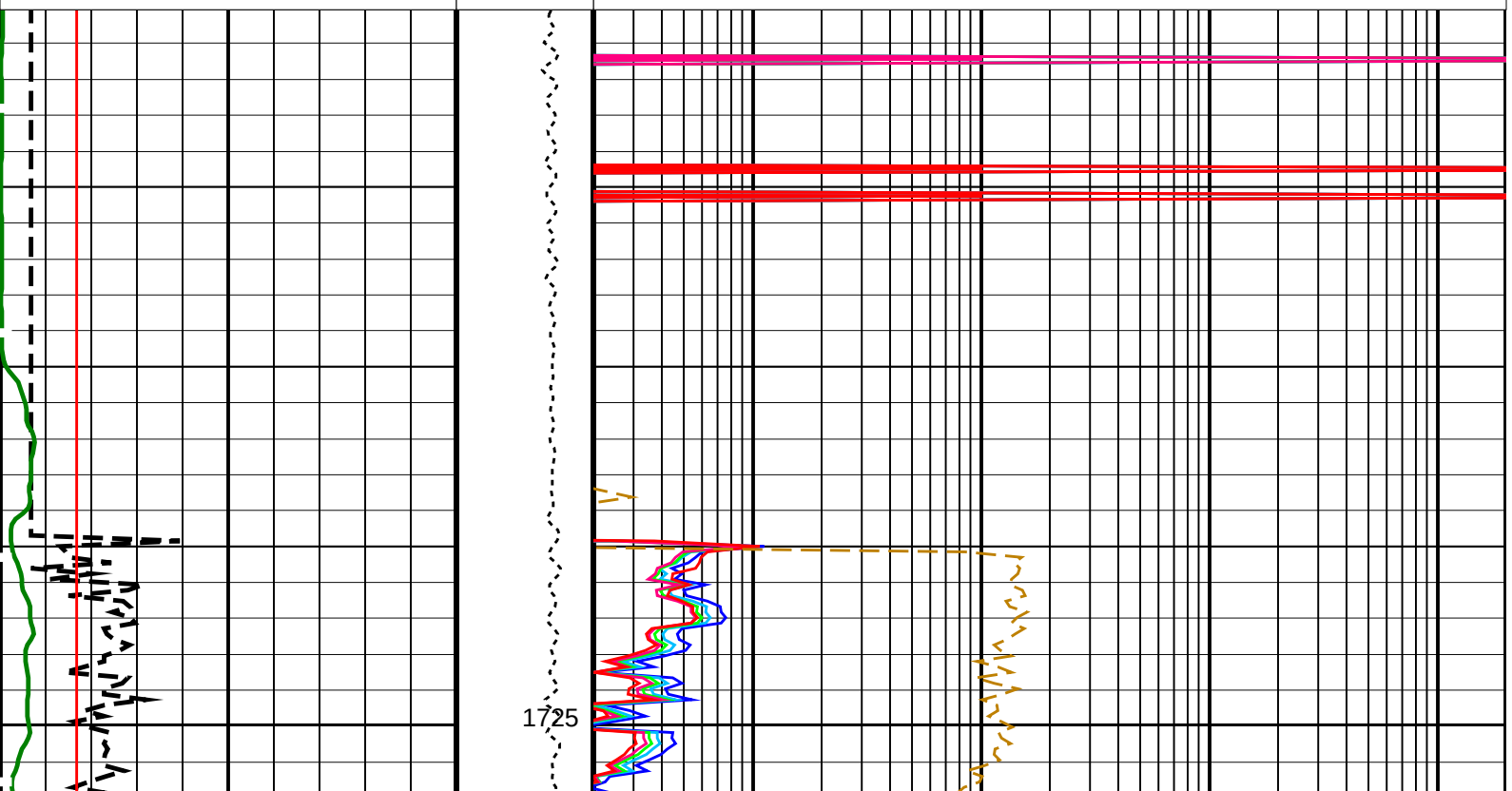
Invasion Diameter (DI_HRLT)
0 (IN) 50

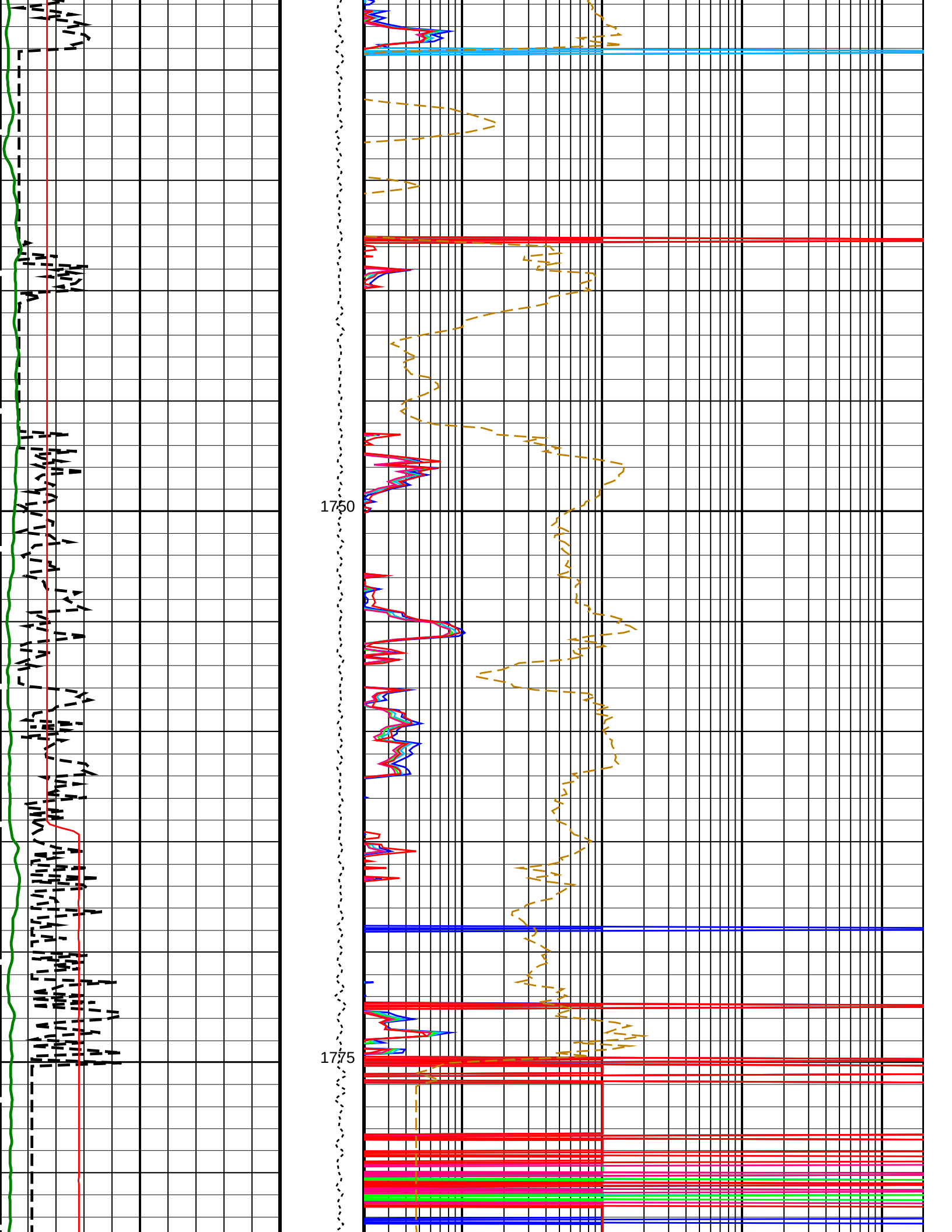
HRLT Resistivity 2 (RLA2)
0.2 (OHMM) 2000

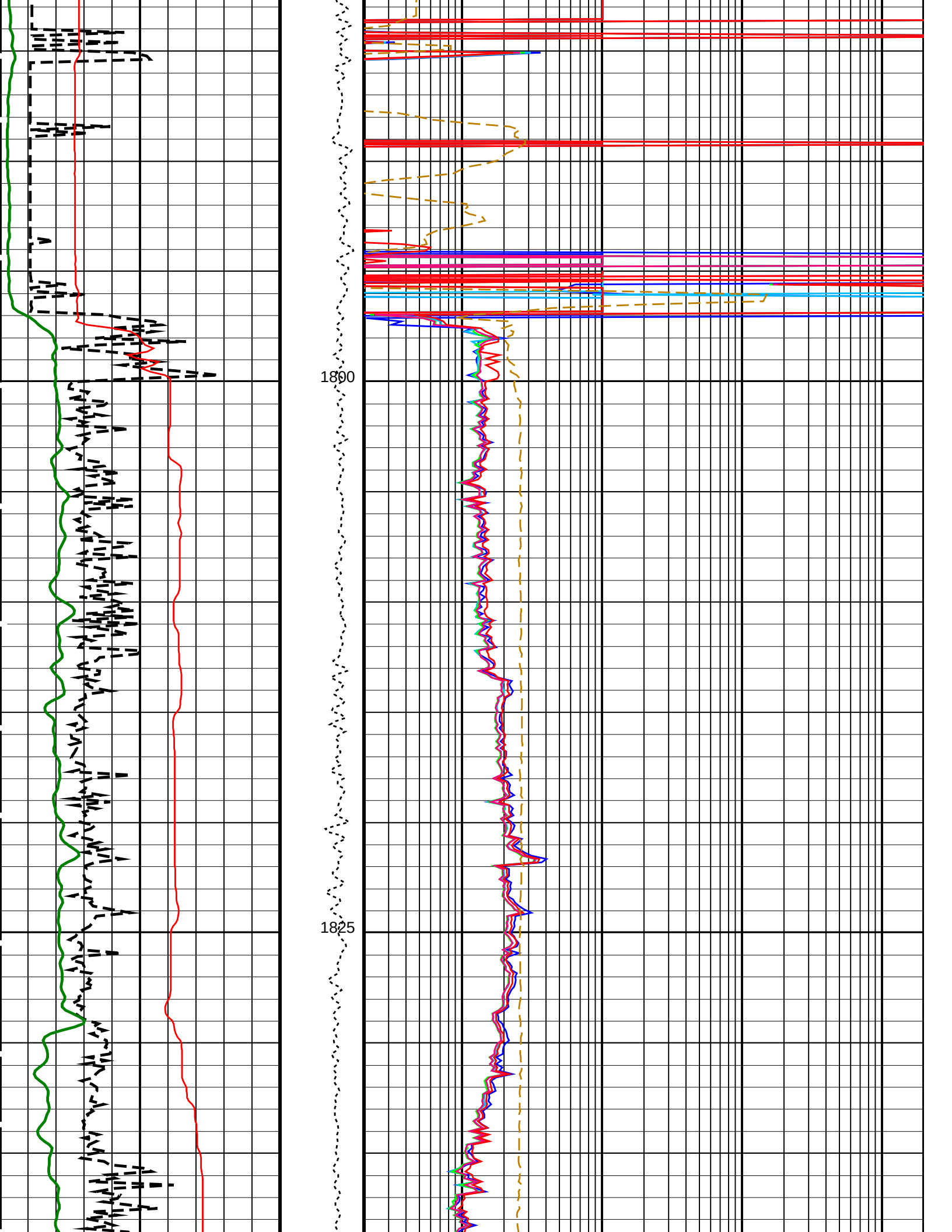
HLDS Caliper (LCAL)
0 (IN) 20

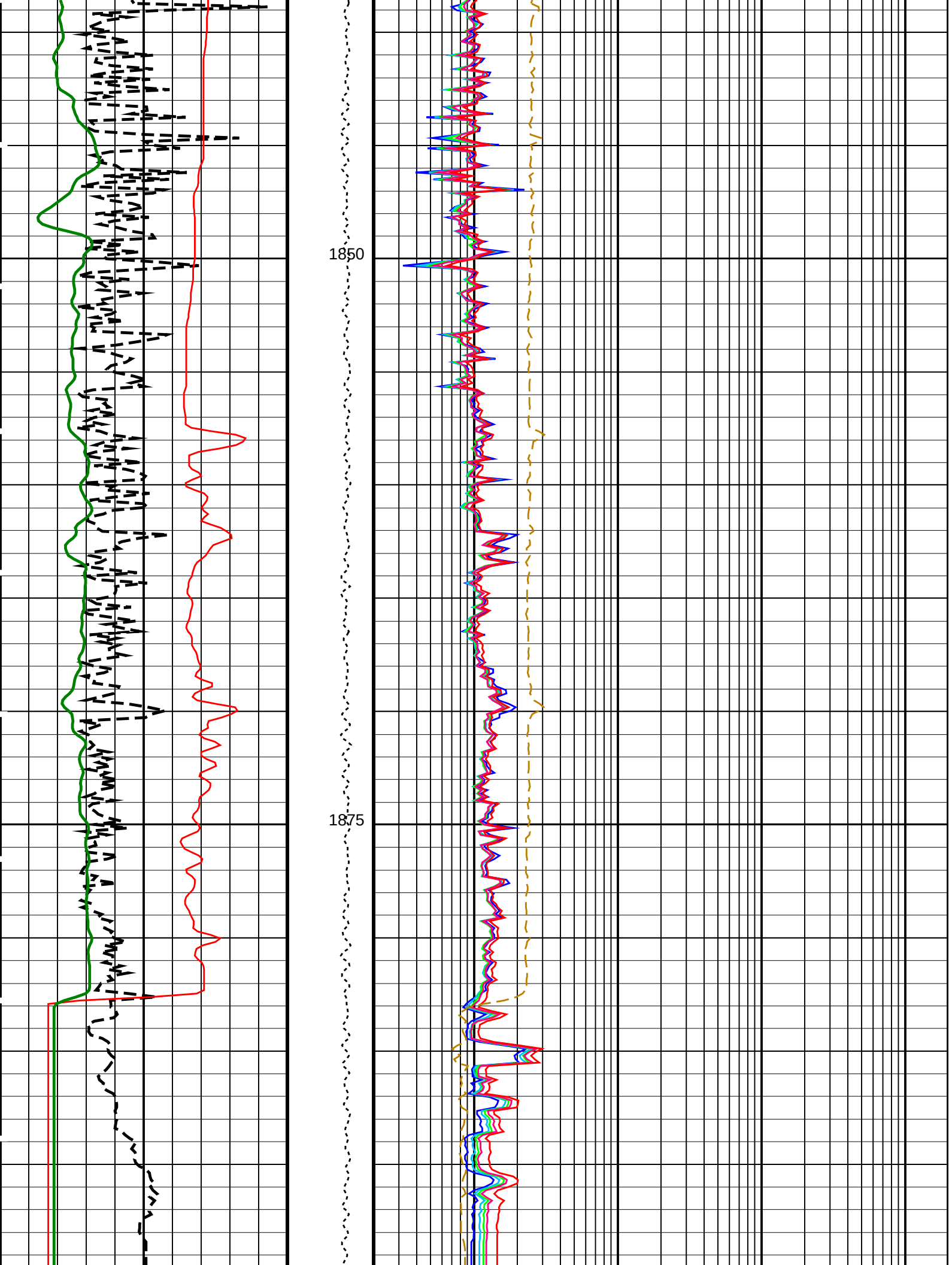
Tension (TENS) (LBF)
0 5000

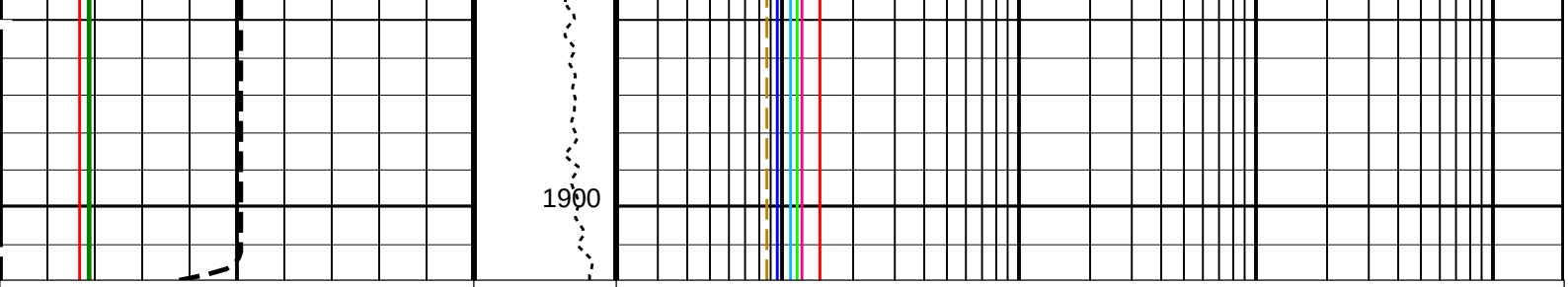
HRLT Resistivity 1 (RLA1)
0.2 (OHMM) 2000




1750
1775


1800
1825


1850
1875



HLDS Caliper (LCAL)	Tension (TENS)	HRLT Resistivity 1 (RLA1)
0 (IN) 20	(LBF) 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	−0.0029256	
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	0.945323	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.992537	
	System and Miscellaneous		
BS	Bit Size	11.438	IN
DFD	Drilling Fluid Density	1.26	G/C3
TD	Total Depth	2292	M

Format: HRLT Vertical Scale: 1:200 Graphics File Created: 25−Aug−2021 13:32

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_019LUP	FN:23	PRODUCER	25−Aug−2021 13:32	
RTB	MSS_LDEO_HRLA_LDL_019LUP	FN:24	PRODUCER	25−Aug−2021 13:32	

Company: International Ocean Discovery Program Well: Expedition 396, Site U1568A

Output DLIS Files

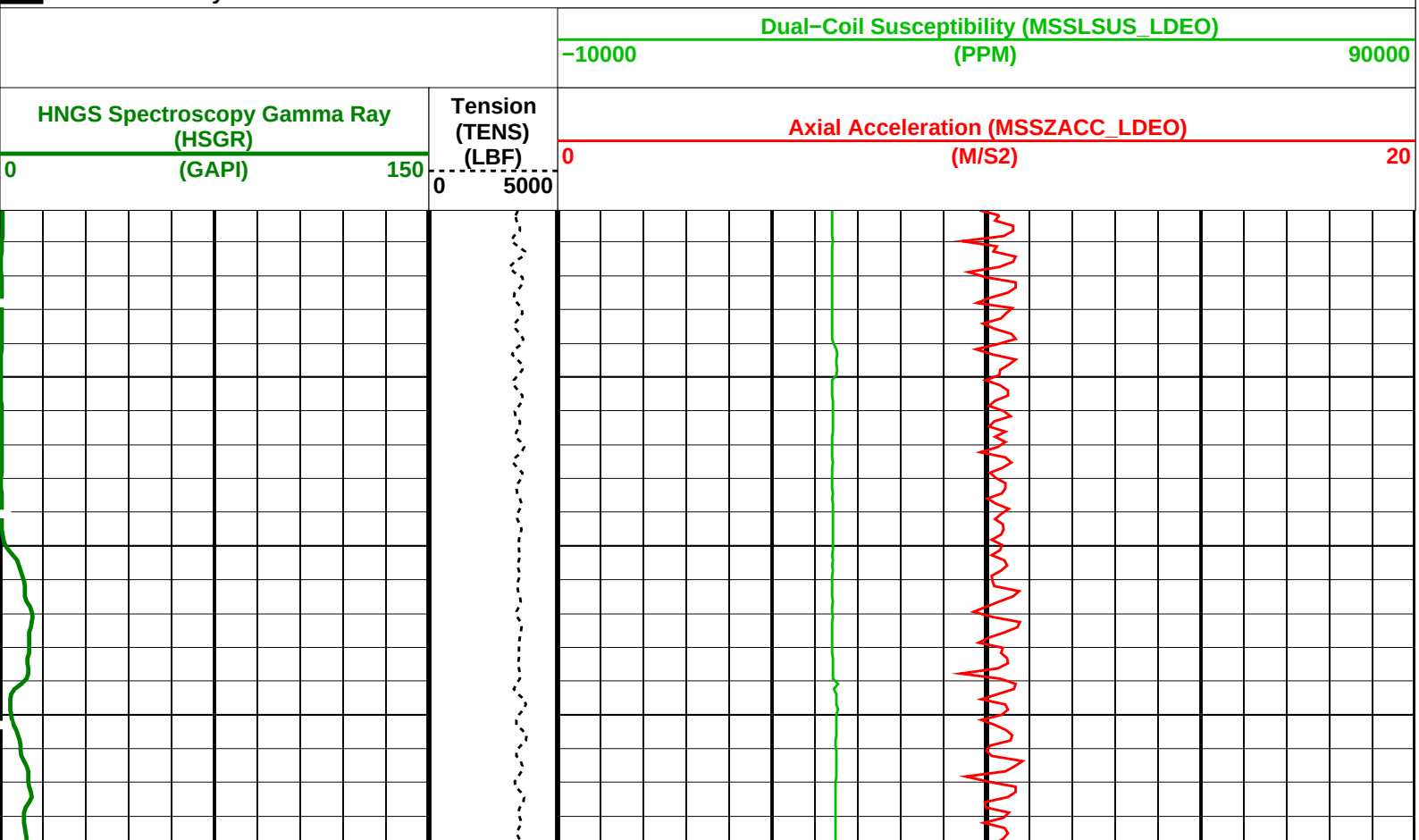
DEFAULT	MSS_LDEO_HRLA_LDL_019LUP	FN:23	PRODUCER	25−Aug−2021 13:32	1902.0 M	1705.1 M
RTB	MSS_LDEO_HRLA_LDL_019LUP	FN:24	PRODUCER	25−Aug−2021 13:32	1902.0 M	1705.1 M

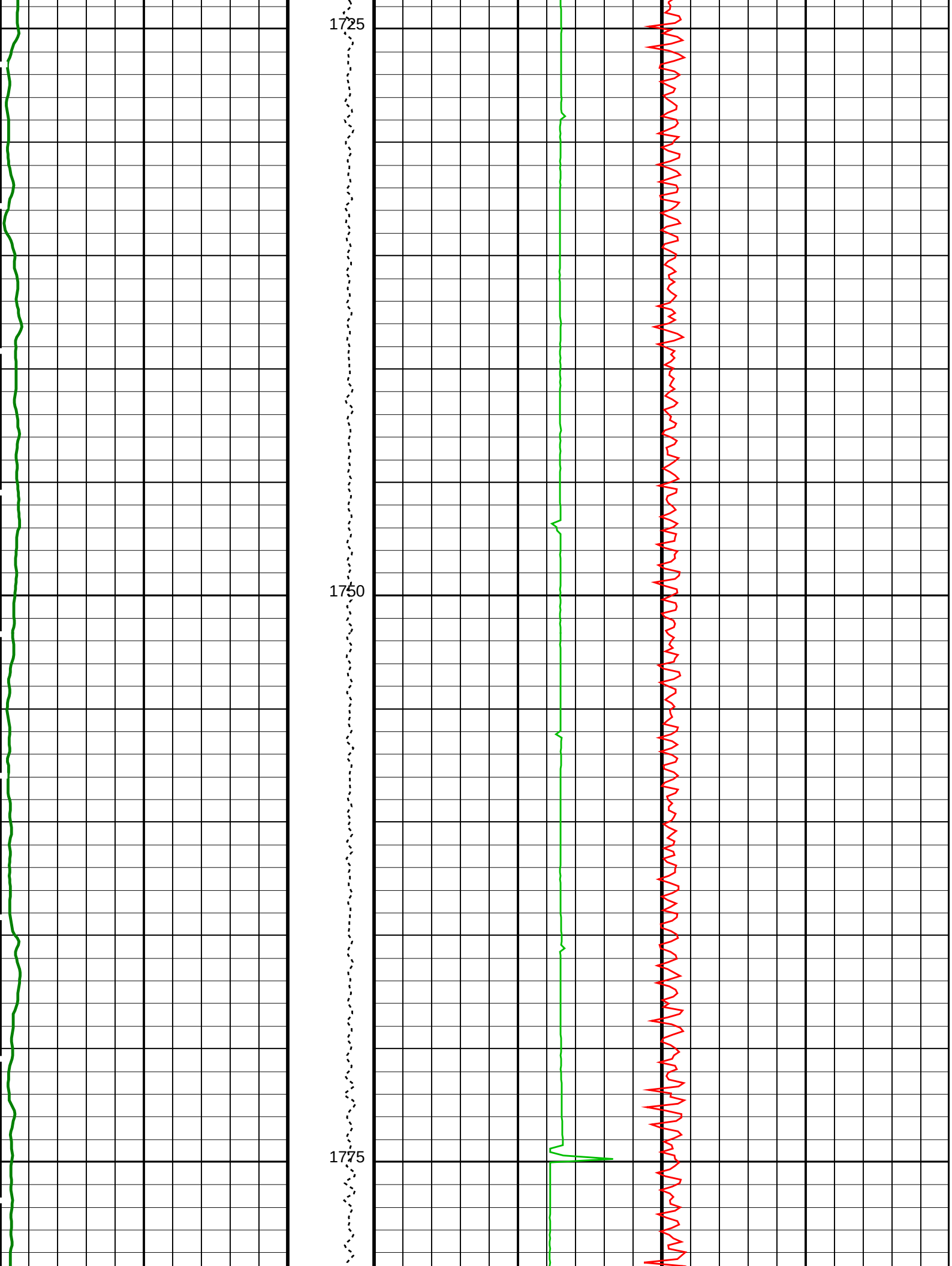
OP System Version: 19C0−187

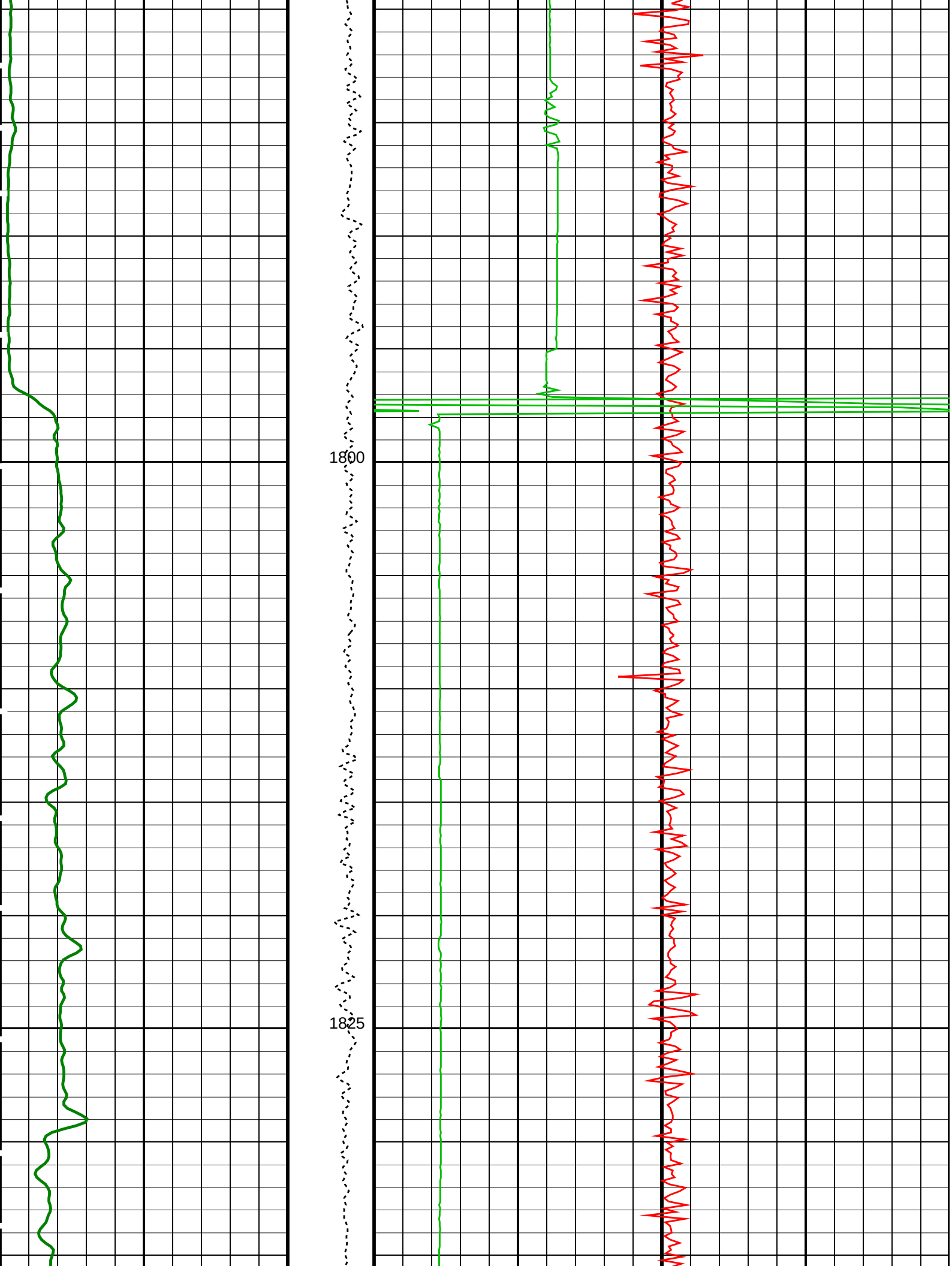
MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
DTC−H	19C0−187		

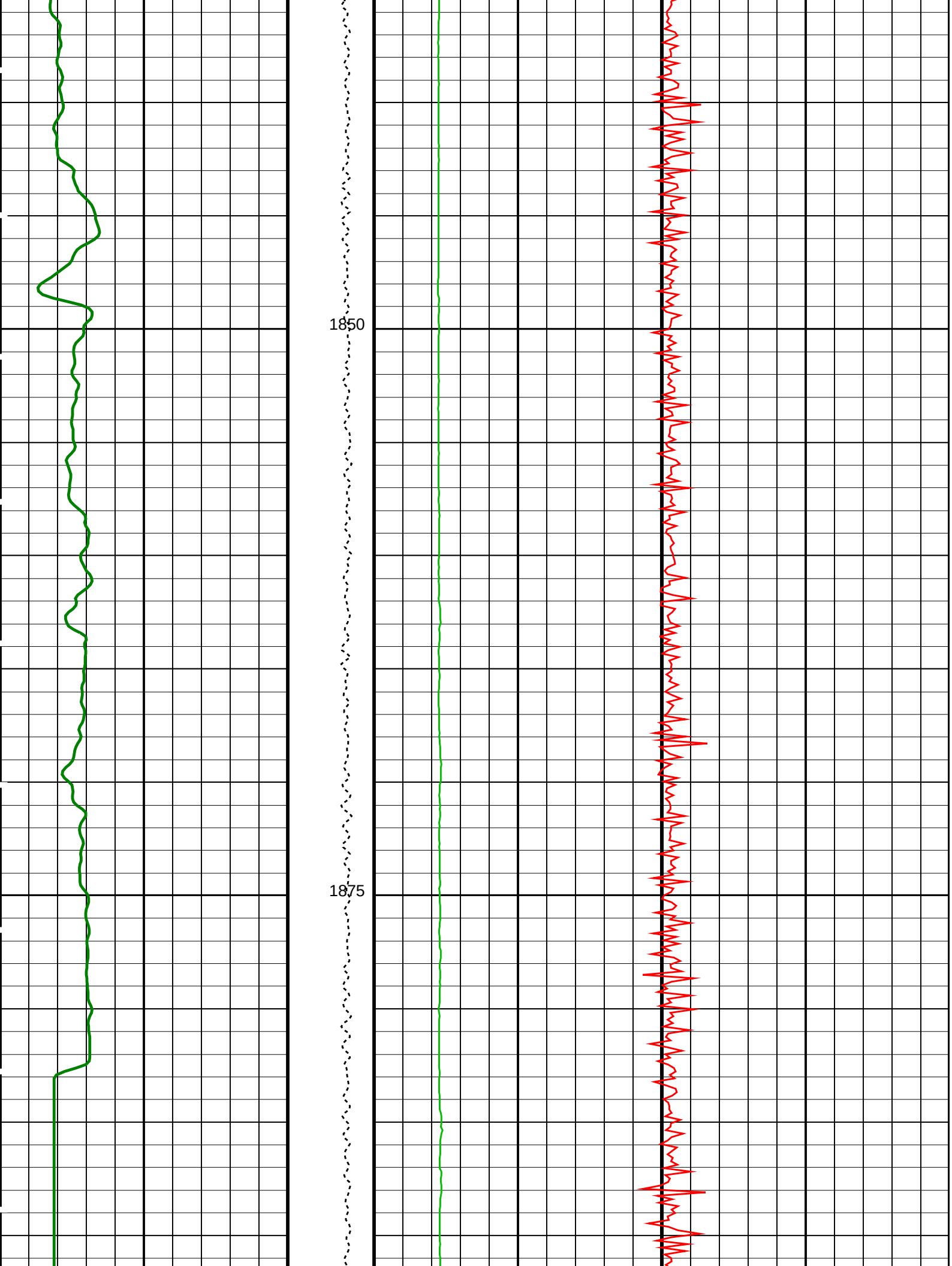
PIP SUMMARY

Time Mark Every 60 S




1725
1750
1775


1800
1825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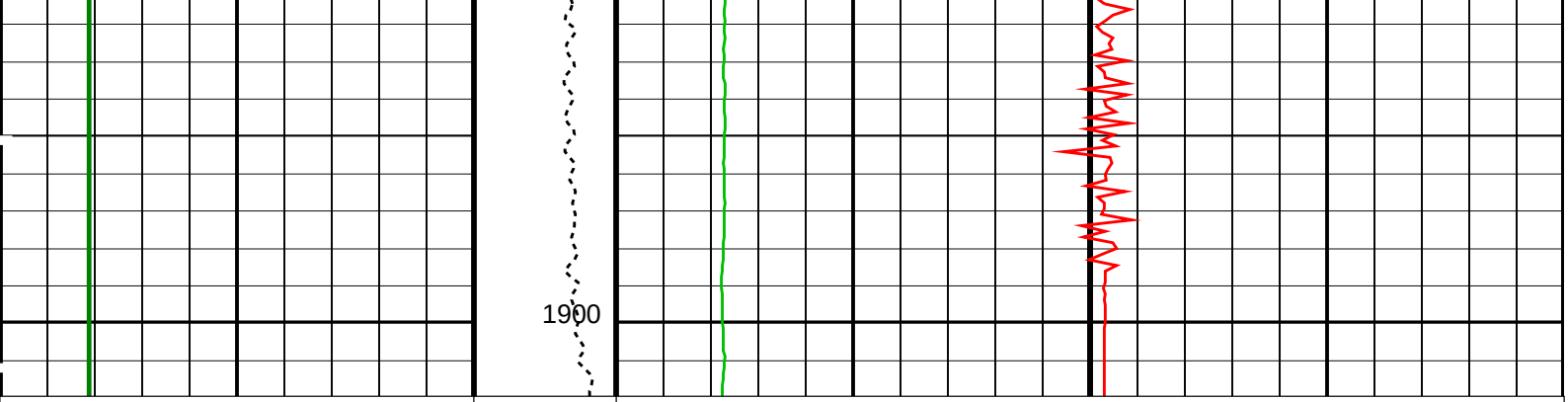
1875



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	−0.0029256	
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	0.945323	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.992537	
	System and Miscellaneous		
BS	Bit Size	11.438	IN
DFD	Drilling Fluid Density	1.26	G/C3

Format: MSS_Logging **Vertical Scale: 1:200** **Graphics File Created: 25−Aug−2021 13:32**

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_019LUP	FN:23	PRODUCER	25−Aug−2021 13:32
RTB	MSS_LDEO_HRLA_LDL_019LUP	FN:24	PRODUCER	25−Aug−2021 13:32

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: 25−Aug−2021 5:06 After: 25−Aug−2021 8:29							
HRLT M0−M1 Voltage Plus − 0	0	N/A	−318.6	−318.7	−0.01379	9.681	UV
HRLT M0−M1 Voltage Plus − 1	0	N/A	−330.0	−330.4	−0.3458	9.681	UV
HRLT M0−M1 Voltage Plus − 2	0	N/A	−337.6	−337.5	0.09451	9.681	UV
HRLT M0−M1 Voltage Plus − 3	0	N/A	−328.2	−328.3	−0.1712	9.681	UV
HRLT M0−M1 Voltage Plus − 4	0	N/A	−319.8	−319.9	−0.1038	9.681	UV
HRLT M0−M1 Voltage Plus − 5	0	N/A	−321.5	−321.6	−0.1014	9.681	UV
HRLT M0−M1 Voltage Plus − 6	0	N/A	319.1	319.3	0.1727	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: 25−Aug−2021 5:06 After: 25−Aug−2021 8:29							
HRLT M1−M2 Voltage Plus − 0	0	N/A	1739	1739	−0.2341	53.42	UV
HRLT M1−M2 Voltage Plus − 1	0	N/A	1809	1810	1.359	53.42	UV
HRLT M1−M2 Voltage Plus − 2	0	N/A	1842	1842	−0.5762	53.42	UV
HRLT M1−M2 Voltage Plus − 3	0	N/A	1789	1790	0.4554	53.42	UV
HRLT M1−M2 Voltage Plus − 4	0	N/A	1742	1742	0.1935	53.42	UV
HRLT M1−M2 Voltage Plus − 5	0	N/A	1752	1752	0.1006	53.42	UV
HRLT M1−M2 Voltage Plus − 6	0	N/A	−1757	−1758	−0.5071	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: 25−Aug−2021 5:06 After: 25−Aug−2021 8:29							
HRLT M2−M3 Voltage Plus − 0	0	N/A	1732	1732	−0.1029	53.42	UV
HRLT M2−M3 Voltage Plus − 1	0	N/A	1812	1813	1.510	53.42	UV
HRLT M2−M3 Voltage Plus − 2	0	N/A	1847	1846	−0.9396	53.42	UV
HRLT M2−M3 Voltage Plus − 3	0	N/A	1798	1799	0.6208	53.42	UV
HRLT M2−M3 Voltage Plus − 4	0	N/A	1745	1745	0.1781	53.42	UV
HRLT M2−M3 Voltage Plus − 5	0	N/A	1756	1757	0.1459	53.42	UV
HRLT M2−M3 Voltage Plus − 6	0	N/A	−1749	−1749	−0.3538	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: 25−Aug−2021 5:06 After: 25−Aug−2021 8:29							
HRLT A3−A4 Voltage Plus − 0	0	N/A	68630	68630	1.883	2100	UV
HRLT A3−A4 Voltage Plus − 1	0	N/A	71630	71680	55.77	2100	UV
HRLT A3−A4 Voltage Plus − 2	0	N/A	73340	73320	−24.65	2100	UV
HRLT A3−A4 Voltage Plus − 3	0	N/A	71610	71650	39.47	2100	UV
HRLT A3−A4 Voltage Plus − 4	0	N/A	69450	69480	22.06	2100	UV
HRLT A3−A4 Voltage Plus − 5	0	N/A	69910	69920	14.88	2100	UV
HRLT A3−A4 Voltage Plus − 6	0	N/A	−68170	−68190	−21.68	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: 25−Aug−2021 5:06 After: 25−Aug−2021 8:29							
HRLT A4−A5 Voltage Plus − 0	0	N/A	68700	68700	4.398	2100	UV
HRLT A4−A5 Voltage Plus − 1	0	N/A	71830	71890	60.35	2100	UV
HRLT A4−A5 Voltage Plus − 2	0	N/A	73530	73500	−23.83	2100	UV
HRLT A4−A5 Voltage Plus − 3	0	N/A	71780	71790	3.805	2100	UV
HRLT A4−A5 Voltage Plus − 4	0	N/A	69570	69580	15.38	2100	UV
HRLT A4−A5 Voltage Plus − 5	0	N/A	70000	70020	16.83	2100	UV
HRLT A4−A5 Voltage Plus − 6	0	N/A	−68370	−68400	−32.95	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: 25−Aug−2021 5:06 After: 25−Aug−2021 8:29							
HRLT A5−A6 Voltage Plus − 0	0	N/A	68550	68550	4.391	2100	UV
HRLT A5−A6 Voltage Plus − 1	0	N/A	71660	71730	65.84	2100	UV
HRLT A5−A6 Voltage Plus − 2	0	N/A	73350	73330	−28.76	2100	UV

HRLT A5−A6 Voltage Plus − 3	0	N/A	71620	71670	50.84	2100	UV
HRLT A5−A6 Voltage Plus − 4	0	N/A	69430	69440	7.359	2100	UV
HRLT A5−A6 Voltage Plus − 5	0	N/A	69890	69900	12.95	2100	UV
HRLT A5−A6 Voltage Plus − 6	0	N/A	−68210	−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: 25−Aug−2021 5:06 After: 25−Aug−2021 8:29

HRLT Torpedo−M0 Voltage − 0	0	N/A	−68090	−68090	−1.805	2100	UV
HRLT Torpedo−M0 Voltage − 1	0	N/A	−71460	−71530	−63.45	2100	UV
HRLT Torpedo−M0 Voltage − 2	0	N/A	−73210	−73180	23.47	2100	UV
HRLT Torpedo−M0 Voltage − 3	0	N/A	−71550	−71560	−15.19	2100	UV
HRLT Torpedo−M0 Voltage − 4	0	N/A	−69390	−69410	−13.40	2100	UV
HRLT Torpedo−M0 Voltage − 5	0	N/A	−69840	−69860	−16.07	2100	UV
HRLT Torpedo−M0 Voltage − 6	0	N/A	67970	68000	23.09	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: 25−Aug−2021 5:06 After: 25−Aug−2021 8:29

HRLT Bridle#9−M0 Voltage − 0	0	N/A	−68120	−68120	−3.000	2100	UV
HRLT Bridle#9−M0 Voltage − 1	0	N/A	−71560	−71620	−59.97	2100	UV
HRLT Bridle#9−M0 Voltage − 2	0	N/A	−73290	−73260	26.59	2100	UV
HRLT Bridle#9−M0 Voltage − 3	0	N/A	−71610	−71640	−30.38	2100	UV
HRLT Bridle#9−M0 Voltage − 4	0	N/A	−69440	−69460	−20.42	2100	UV
HRLT Bridle#9−M0 Voltage − 5	0	N/A	−69880	−69880	−4.328	2100	UV
HRLT Bridle#9−M0 Voltage − 6	0	N/A	68060	68080	22.27	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: 25−Aug−2021 5:06 After: 25−Aug−2021 8:29

HRLT Source Current Plus − 0	0	N/A	284.2	284.2	0.02103	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: 25−Aug−2021 5:06 After: 25−Aug−2021 8:29

HRLT Vertical Voltage Pl − 0	0	N/A	−320.6	−320.6	−0.07074	9.681	UV
HRLT Vertical Voltage Pl − 1	0	N/A	−325.0	−325.4	−0.3320	9.681	UV
HRLT Vertical Voltage Pl − 2	0	N/A	−331.2	−331.2	0.02032	9.681	UV
HRLT Vertical Voltage Pl − 3	0	N/A	−320.2	−320.3	−0.1190	9.681	UV
HRLT Vertical Voltage Pl − 4	0	N/A	−308.9	−309.0	−0.09970	9.681	UV
HRLT Vertical Voltage Pl − 5	0	N/A	−325.6	−325.6	−0.05270	9.681	UV
HRLT Vertical Voltage Pl − 6	0	N/A	326.9	327.1	0.1902	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: 25−Aug−2021 5:09 After: 25−Aug−2021 8:32

SS Cs Resolution Bkg	9.000	7.698	7.651	7.655	0.003805	1.800	%
LS Cs Resolution Bkg	9.000	7.989	8.009	7.997	−0.01117	1.800	%
LSW1 Background	100.0	71.96	70.37	70.17	−0.2028	3.000	CPS
LSW2 Background	100.0	65.02	63.58	64.73	1.152	3.000	CPS
LSW3 Background	200.0	146.1	145.5	144.1	−1.386	6.000	CPS
LSW4 Background	250.0	183.2	182.2	181.4	−0.8118	7.500	CPS
LSW5 Background	600.0	424.9	421.5	422.3	0.8641	18.00	CPS
SSW1 Background	100.0	68.97	68.98	68.01	−0.9705	3.000	CPS
SSW2 Background	200.0	118.2	116.8	117.6	0.7712	6.000	CPS
SSW3 Background	500.0	331.3	329.6	330.8	1.108	15.00	CPS
SSW4 Background	270.0	178.4	177.2	176.9	−0.3541	8.100	CPS
SSW5 Background	200.0	127.4	126.3	126.4	0.1107	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	720.0	534.2	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: 25−Aug−2021 5:10 After: 25−Aug−2021 8:33

Na 511 Peak Loc	40.00	39.25	39.71	39.55	−0.1544	1.000	
Na 511 Peak Res	15.50	16.53	14.17	16.04	1.871	2.000	%
High Voltage	1150	1197	1178	1179	1.459	N/A	V
Na 1785 Peak Loc	142.6	141.8	142.2	142.1	−0.1613	7.000	
Na 1785 Peak Res	8.500	8.905	8.257	9.126	0.8688	2.000	%
Temperature	15.50	26.59	16.40	16.19	−0.2060	N/A	DEGC
Na Count Rate	45.00	12.01	10.27	10.33	0.05869	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration − Detector 2 Check

Master: Calibration out of date 2−May−2021 10:04 Before: 25−Aug−2021 5:10 After: 25−Aug−2021 8:33

Na 511 Peak Loc	40.00	39.88	39.49	39.62	0.1329	1.000	
Na 511 Peak Res	15.50	15.29	13.94	15.04	1.097	2.000	%
High Voltage	1150	1122	1104	1103	−0.8081	N/A	V
Na 1785 Peak Loc	142.6	142.6	141.1	139.5	−1.618	7.000	
Na 1785 Peak Res	8.500	8.040	8.122	11.87	3.753	2.000	%
Temperature	15.50	27.21	16.95	17.60	0.6487	N/A	DEGC
Na Count Rate	45.00	12.32	10.12	10.38	0.2575	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: 25−Aug−2021 5:10 After: 25−Aug−2021 8:33

Coincidence Count Rate Ratio	1.000	0.9728	1.014	1.002	−0.01209	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		−318.7			
1	Before		−330.0	−322.7	−280.7	−379.7
	After		−330.4			
2	Before		−337.6	−322.7	−280.7	−379.7
	After		−337.5			
3	Before		−328.2	−322.7	−280.7	−379.7
	After		−328.3			
4	Before		−319.8	−322.7	−280.7	−379.7
	After		−319.9			
5	Before		−321.5	−322.7	−280.7	−379.7
	After		−321.6			
	Before		319.1			

6	Before	319.1	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: 25−Aug−2021 5:06
After: 25−Aug−2021 8:29

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		1810			
2	Before		1842	1781	2095	1549
	After		1842			
3	Before		1789	1781	2095	1549
	After		1790			
4	Before		1742	1781	2095	1549
	After		1742			
5	Before		1752	1781	2095	1549
	After		1752			
6	Before		−1757	−1781	−1549	−2095
	After		−1758			
7	Before		1781	1781	2095	1549
	After		1781			
	(Minimum) (Nominal) (Maximum)					

Before: 25−Aug−2021 5:06
After: 25−Aug−2021 8:29

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		1732			
1	Before		1812	1781	2095	1549
	After		1813			
2	Before		1847	1781	2095	1549
	After		1846			
3	Before		1798	1781	2095	1549
	After		1799			
4	Before		1745	1781	2095	1549
	After		1745			
5	Before		1756	1781	2095	1549
	After		1757			
6	Before		−1749	−1781	−1549	−2095
	After		−1749			
7	Before		1781			

	Before		1781			
7	After		1781	1781	2095	1549
	(Minimum)	(Nominal) (Maximum)				

Before: 25−Aug−2021 5:06
After: 25−Aug−2021 8:29

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		68630			
1	Before		71630	70000	82360	60900
	After		71680			
2	Before		73340	70000	82360	60900
	After		73320			
3	Before		71610	70000	82360	60900
	After		71650			
4	Before		69450	70000	82360	60900
	After		69480			
5	Before		69910	70000	82360	60900
	After		69920			
6	Before		−68170	−70000	−60900	−82360
	After		−68190			
7	Before		70000	70000	82360	60900
	After		70000			
	(Minimum)	(Nominal) (Maximum)				

Before: 25−Aug−2021 5:06
After: 25−Aug−2021 8:29

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V45

Idx	Phase	HRLT A4−A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68700	70000	82360	60900
	After		68700			
1	Before		71830	70000	82360	60900
	After		71890			
2	Before		73530	70000	82360	60900
	After		73500			
3	Before		71780	70000	82360	60900
	After		71790			
4	Before		69570	70000	82360	60900
	After		69580			
5	Before		70000	70000	82360	60900
	After		70020			
6	Before		−68370	−70000	−60900	−82360
	After		−68400			
7	Before		70000	70000	82360	60900
	After		70000			

		(Minimum) (Nominal) (Maximum)				

Before: 25−Aug−2021 5:06

After: 25−Aug−2021 8:29

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V56

Idx	Phase	HRLT A5−A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68550	70000	82360	60900
	After		68550			
1	Before		71660	70000	82360	60900
	After		71730			
2	Before		73350	70000	82360	60900
	After		73330			
3	Before		71620	70000	82360	60900
	After		71670			
4	Before		69430	70000	82360	60900
	After		69440			
5	Before		69890	70000	82360	60900
	After		69900			
6	Before		−68210	−70000	−60900	−82360
	After		−68240			
7	Before		70000	70000	82360	60900
	After		70000			
		(Minimum) (Nominal) (Maximum)				

Before: 25−Aug−2021 5:06

After: 25−Aug−2021 8:29

High Resolution Laterolog Array − B Wellsite Calibration

HRLT VTP

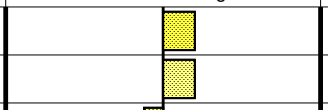
Idx	Phase	HRLT Torpedo−M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−68090	−70000	−60900	−82360
	After		−68090			
1	Before		−71460	−70000	−60900	−82360
	After		−71530			
2	Before		−73210	−70000	−60900	−82360
	After		−73180			
3	Before		−71550	−70000	−60900	−82360
	After		−71560			
4	Before		−69390	−70000	−60900	−82360
	After		−69410			
5	Before		−69840	−70000	−60900	−82360
	After		−69860			
6	Before		67970	70000	82360	60900
	After		68000			
7	Before		−70000	−70000	−60900	−82360
	After		−70000			
		(Minimum) (Nominal) (Maximum)				

Before: 25−Aug−2021 5:06

After: 25−Aug−2021 8:29

High Resolution Laterolog Array − B Wellsite Calibration

HRLT VBD

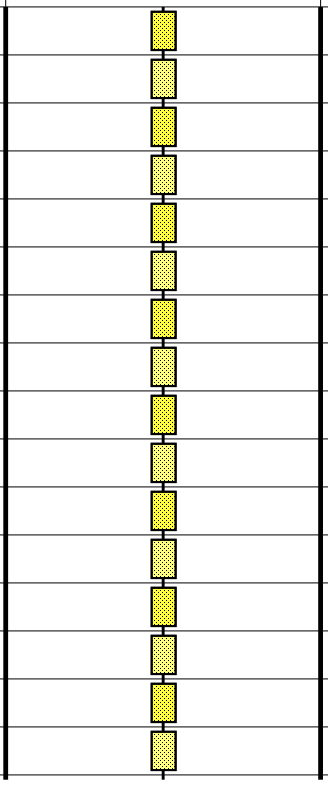
Idx	Phase	HRLT Bridle#9−M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−68120	−70000	−60900	−82360
	After		−68120			
1	Before		−71560	−70000	−60900	−82360
	After		−71620			
2	Before		−73290	−70000	−60900	−82360
	After		−73260			
3	Before		−71610	−70000	−60900	−82360
	After		−71640			
4	Before		−69440	−70000	−60900	−82360
	After		−69460			
5	Before		−69880	−70000	−60900	−82360
	After		−69880			
6	Before		68060	70000	82360	60900
	After		68080			
7	Before		−70000	−70000	−60900	−82360
	After		−70000			
		(Minimum) (Nominal) (Maximum)				

Before: 25−Aug−2021 5:06

After: 25−Aug−2021 8:29

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: 25−Aug−2021 5:06

After: 25−Aug−2021 8:29

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		−320.6			
1	Before		−325.0	−322.7	−280.7	−379.7
	After		−325.4			
2	Before		−331.2	−322.7	−280.7	−379.7
	After		−331.2			
3	Before		−320.2	−322.7	−280.7	−379.7
	After		−320.3			
4	Before		−308.9	−322.7	−280.7	−379.7
	After		−309.0			
5	Before		−325.6	−322.7	−280.7	−379.7
	After		−325.6			
6	Before		326.9	322.7	379.7	280.7
	After		327.1			
7	Before		−322.7	−322.7	−280.7	−379.7
	After		−322.7			
		(Minimum) (Nominal) (Maximum)				

Before: 25−Aug−2021 5:06

After: 25−Aug−2021 8:29

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		7.651
After		7.655
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)	

Phase	LS Cs Resolution Bkg %	Value
Master		7.989
Before		8.009
After		7.997
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)	

Phase	LSW1 Background CPS	Value
Master		71.96
Before		70.37
After		70.17
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)	

Phase	LSW2 Background CPS	Value
Master		65.02
Before		63.58
After		64.73
	50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)	

Phase	LSW3 Background CPS	Value
Master		146.1
Before		145.5
After		144.1
	110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)	

Phase	LSW4 Background CPS	Value
Master		183.2
Before		182.2
After		181.4
	140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)	

Phase	LSW5 Background CPS	Value
Master		424.9
Before		421.5
After		422.3
	330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)	

Phase	SSW1 Background CPS	Value
Master		68.97
Before		68.98
After		68.01
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)	

Phase	SSW2 Background CPS	Value
Master		118.2
Before		116.8
After		117.6
	100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)	

Phase	SSW3 Background CPS	Value
Master		331.3

Phase	SSW4 Background CPS	Value
Master		178.4

Phase	SSW5 Background CPS	Value
Master		127.4

Master		331.3	Master		178.4	Master		127.4
Before		329.6	Before		177.2	Before		126.3
After		330.8	After		176.9	After		126.4
	280.0 (Minimum) 500.0 (Nominal) 700.0 (Maximum)			150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum)			110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum)	

Master: Calibration out of date 2−May−2021 7:20 Before: 25−Aug−2021 5:09 After: 25−Aug−2021 8:32

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	Phase	Na 511 Peak Res %	Value	Phase	High Voltage V	Value
Master		39.25	Master	MASTER−BEFORE LIMIT	16.53	Master		1197
Before		39.71	Before		14.17	Before		1178
After		39.55	After		16.04	After		1179
	37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)			12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)			900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	

Phase	Na 1785 Peak Loc	Value	Phase	Na 1785 Peak Res %	Value	Phase	Temperature DEGC	Value
Master		141.8	Master		8.905	Master		26.59
Before		142.2	Before		8.257	Before		16.40
After		142.1	After		9.126	After		16.19
	135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)			7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)			−28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)	

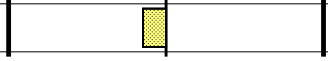
Phase	Na Count Rate CPS	Value
Master		12.01
Before		10.27
After		10.33
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)	

Master: Calibration out of date 2−May−2021 10:04 Before: 25−Aug−2021 5:10 After: 25−Aug−2021 8:33

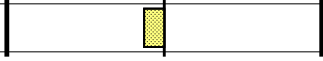
Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 2 Check

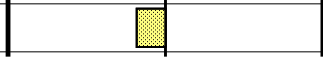
Phase	Na 511 Peak Loc	Value	Phase	Na 511 Peak Res %	Value	Phase	High Voltage V	Value
Master		39.88	Master		15.29	Master		1122
Before		39.49	Before		13.94	Before		1104

Phase		Value
After		39.62

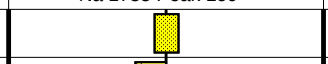
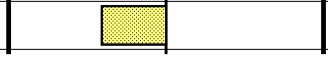
37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)

Phase		Value
After		15.04

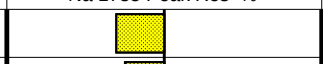
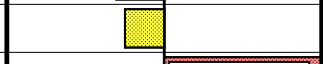
12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)

Phase		Value
After		1103

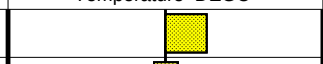
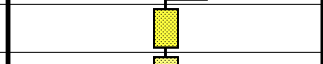
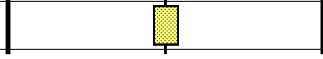
900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)

Phase	Na 1785 Peak Loc	Value
Master		142.6
Before		141.1
After		139.5

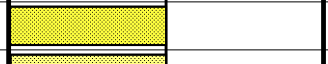
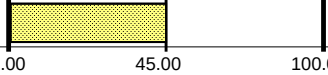
135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)

Phase	Na 1785 Peak Res %	Value
Master		8.040
Before		8.122
After	 EXCEEDS LIMIT	11.87

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

Phase	Temperature DEGC	Value
Master		27.21
Before		16.95
After		17.60

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

Phase	Na Count Rate CPS	Value
Master		12.32
Before		10.12
After		10.38

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

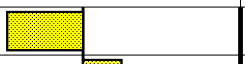
Master: Calibration out of date 2−May−2021 10:04

Before: 25−Aug−2021 5:10

After: 25−Aug−2021 8:33

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Ratio Of Detector 1 To Detector 2

Phase	Coincidence Count Rate Ratio	Value
Master		0.9728
Before		1.014
After		1.002

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

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

Before: 25−Aug−2021 5:10

After: 25−Aug−2021 8:33

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 U1568A**

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

Rig: **JOIDES Resolution**

Country: **Iceland**

Natural GR Spectroscopy (HNGS)
Litho−Density (HLDS)
Laterolog Resistivity (HRLA)