



Company: International Ocean Discovery Program

Well: Expedition 396, Site U1569A
Field: Mid-Norwegian Cont. Margin Magmatism
Rig: JOIDES Resolution Country: Iceland

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

Table with columns for LOCATION (Latitude, Longitude, Elev., Datum, Log Measured From, Drilling Measured From) and Ocean details (Ocean: Atlantic, Max. Well Deviation, Longitude, Latitude).

JOIDES Resolution
Mid-Norwegian Cont. Margin Ma
Latitude: N 65.83129
Expedition 396, Site U1569A
International Ocean Discovery Pr

Main data table with columns for 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, Fluid Loss, PH, Source Of Sample), RM @ Measured Temperature, RMF @ Measured Temperature, RMC @ Measured Temperature, Source RMF, RMC, RM @ MRT, RMF @ MRT, Maximum Recorded Temperatures, Circulation Stopped, Logger On Bottom, Unit Number, Location, Recorded By, Witnessed By.

Table with columns for Run 1, Run 2, and Run 3, containing multiple empty rows for data entry.

**DISCLAIMER**

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

REMARKS: RUN NUMBER 1  
Hole drilled with RCB bottom hole assembly (BHA) at 9.875" BS

Drill pipe set at 2267 mbrf (85mbsf)

Fluid type was heavy 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 not opened during run due to insufficient depth below pipe.

Tool encountered hole obstruction at 2311mbrf and was unable to descend any further.  
A single log pass from that depth was recorded after the decision was made to abort the run.





Because caliper remained close; density data should not be regarded as valid.

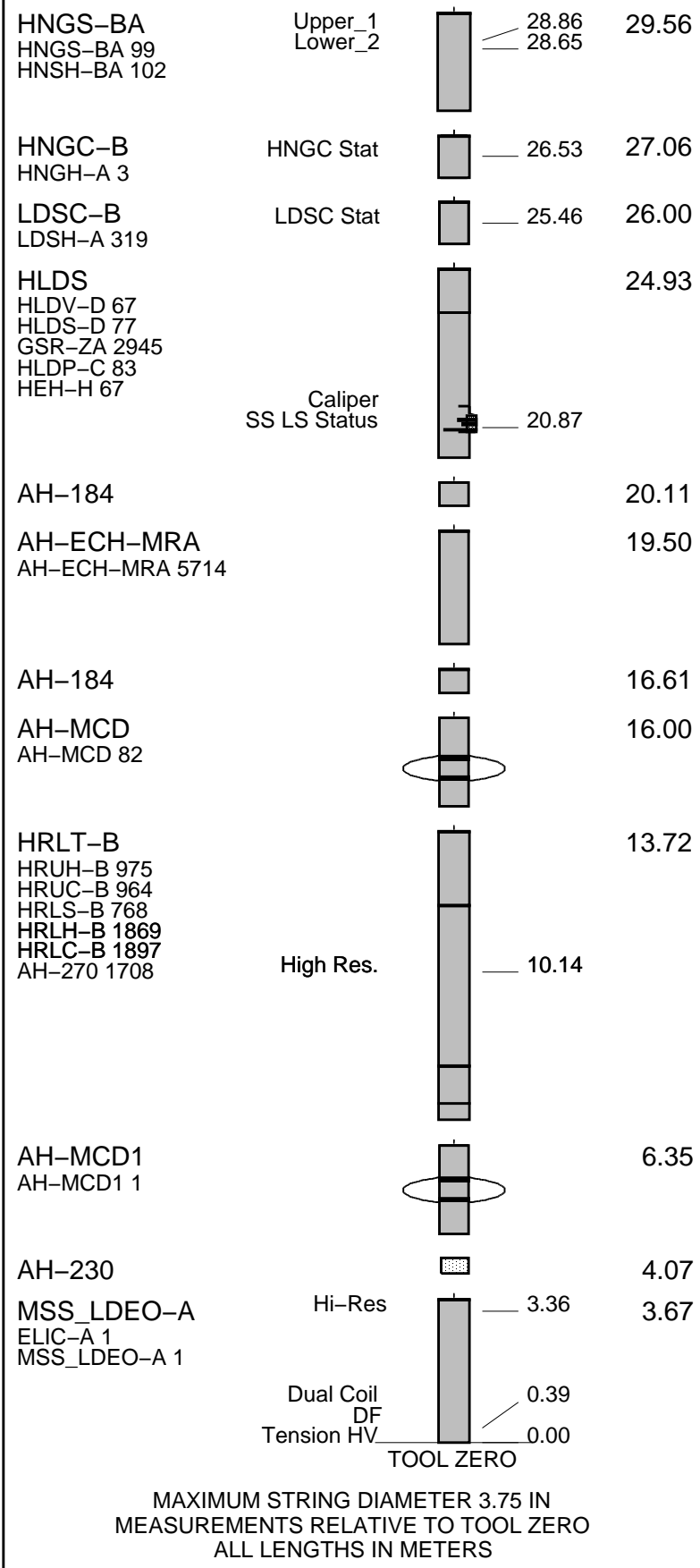
Downlog flipped and note the caliper closed logging down.

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
<b>SURFACE EQUIPMENT</b>	
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  29.56	
CTEM	30.20
TelStatus	
ToolStatu	



Production String	(in)	(m)	Well Schematic	(m)	(in)	Casing String
	OP	ID		MD	MD	

Kelly Bushing Elevation

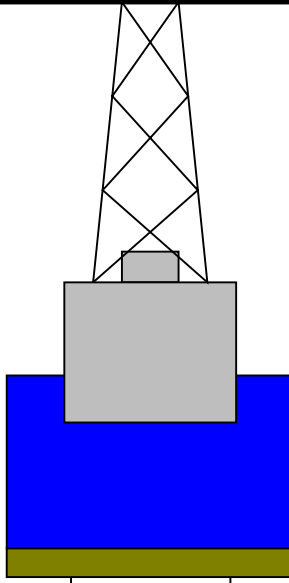
Derrick Floor Elevation

Mean Sea Level

0.0

0.0

11.1



0.0

5.500

4.125

2182.0

9.875

Sea Floor

2267.0

5.500

4.125

Pipe

2587.0

9.875

Driller's TD

**Schlumberger**

**Downlog**

MAXIS Field Log

Company: International Ocean Discovery Program

Well: Expedition 396, Site U1569A

**Input DLIS Files**

DEFAULT	Flip_MSS_LDEO_HRLA_018LUP	PRODUCER	30-Aug-2021 13:04	2312.8 M	2142.0 M
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**Output DLIS Files**

DEFAULT	MSS_LDEO_HRLA_LDL_019PUP	FN:19	PRODUCER	30-Aug-2021 13:05	2312.8 M	2142.0 M
RTB	MSS_LDEO_HRLA_LDL_019PUP	FN:20	PRODUCER	30-Aug-2021 13:05	2312.8 M	2142.0 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

PIP SUMMARY

Time Mark Every 60 S

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

Area1 From HCGR to HSGR

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

HLDS Caliper (LCAL) (IN) 0 20

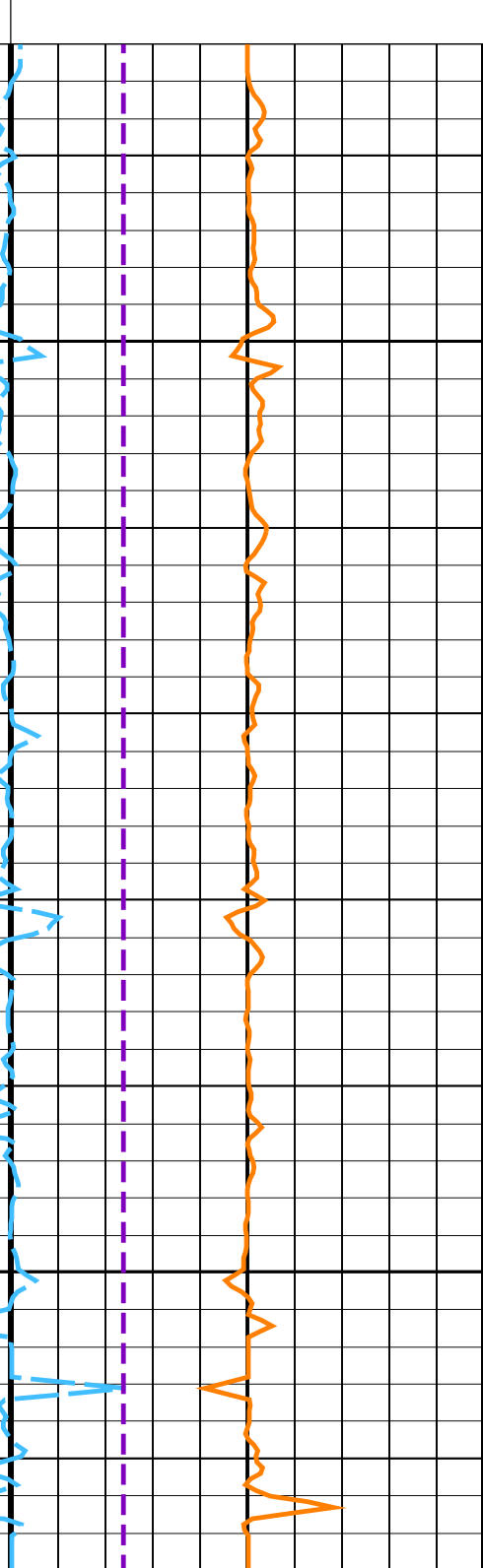
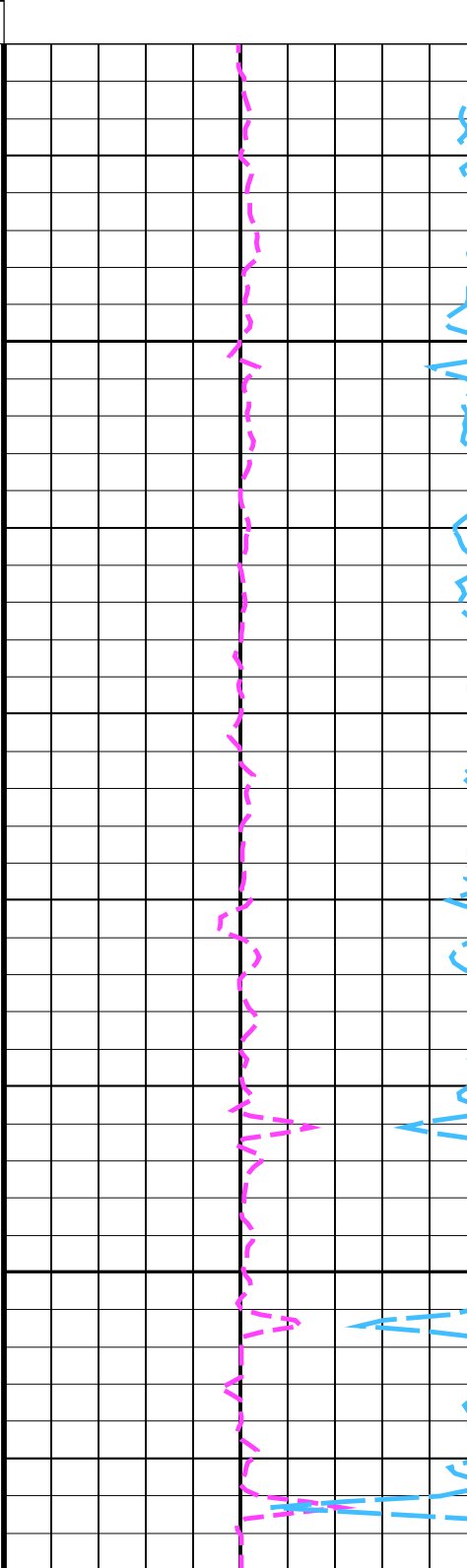
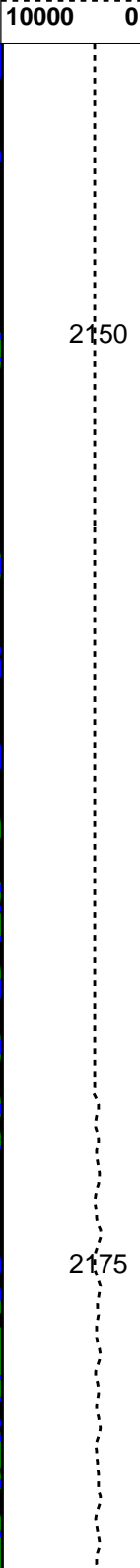
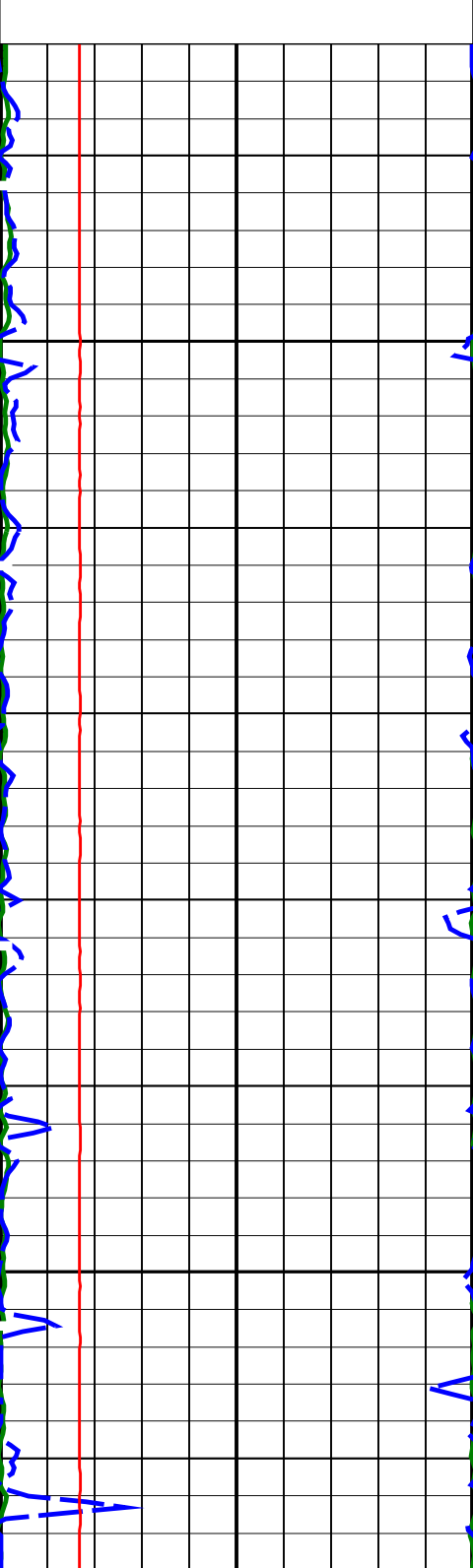
Tension (TENS) (LBF) 10000 0

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

HNGS Uranium (HURA) (PPM) -5 5

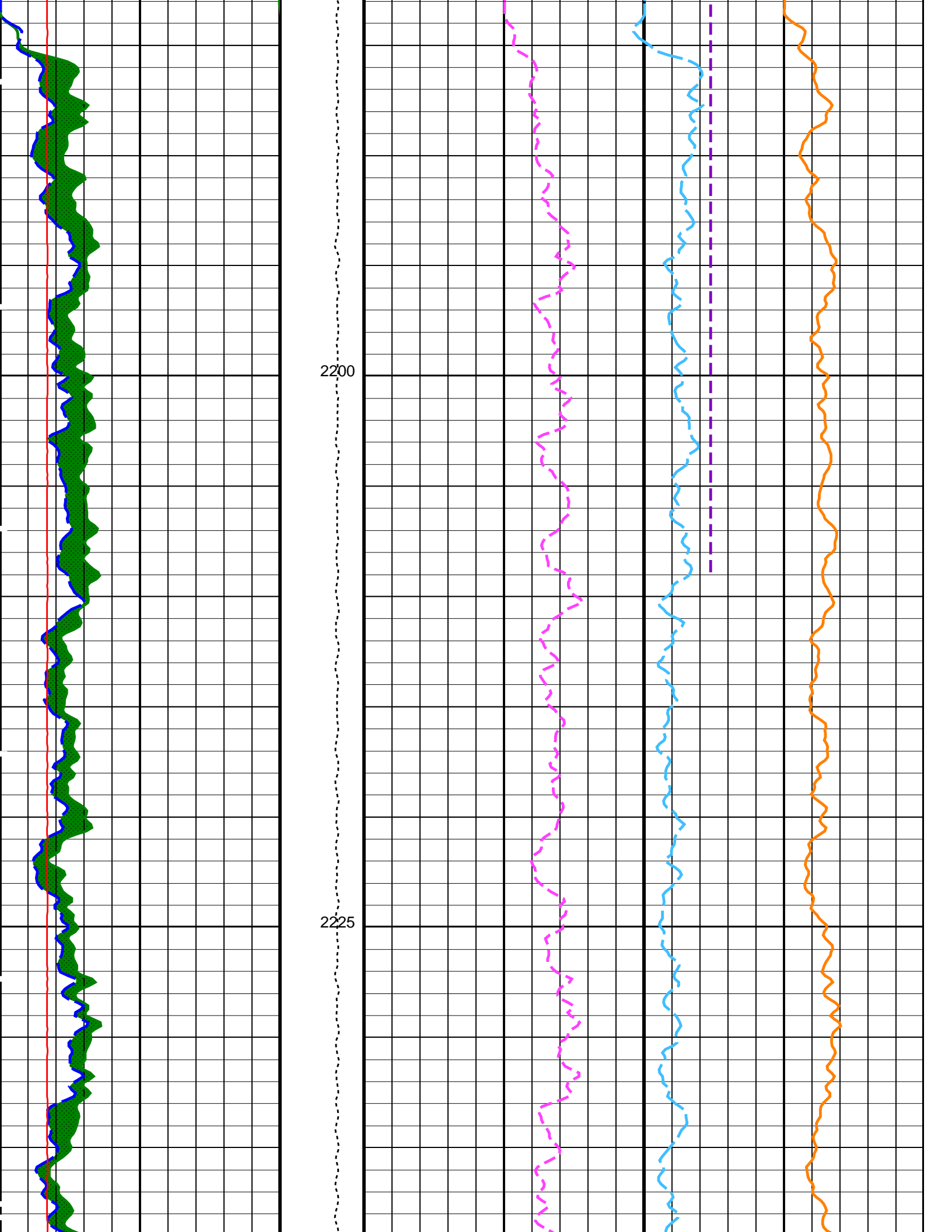
HNGS Thorium (HTHO) (PPM) -5 5

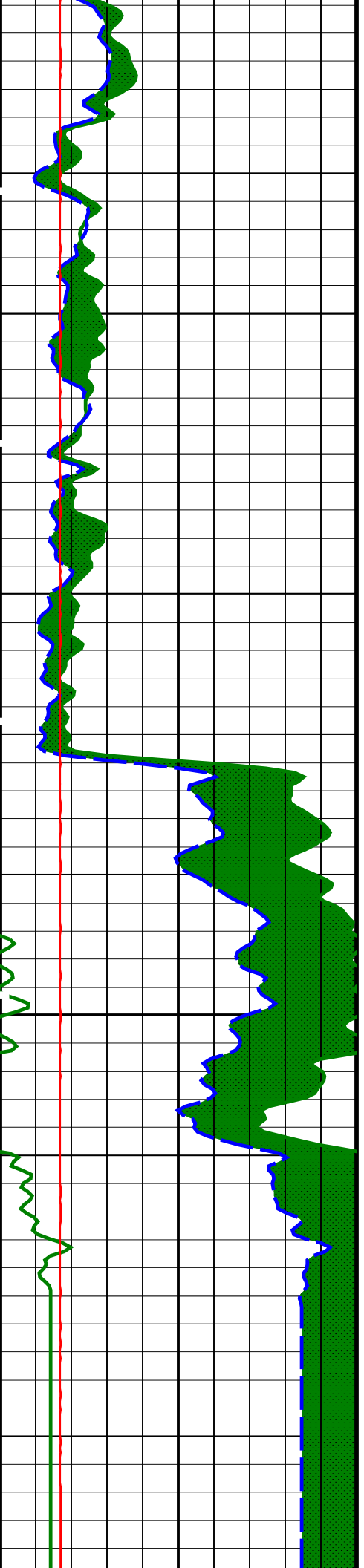
HNGS Potassium (HFK) (V/V) -0.01 0.01



2150

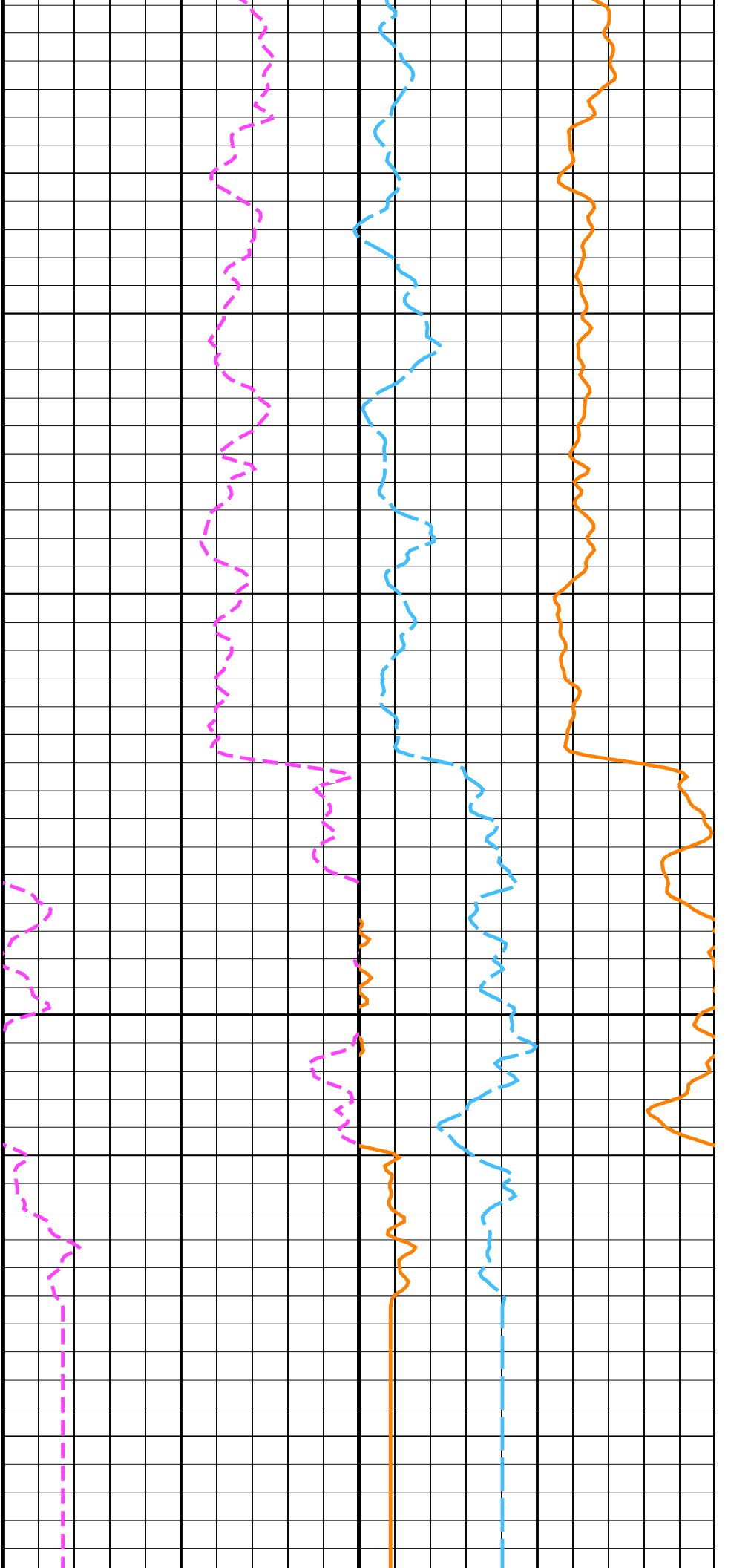
2175



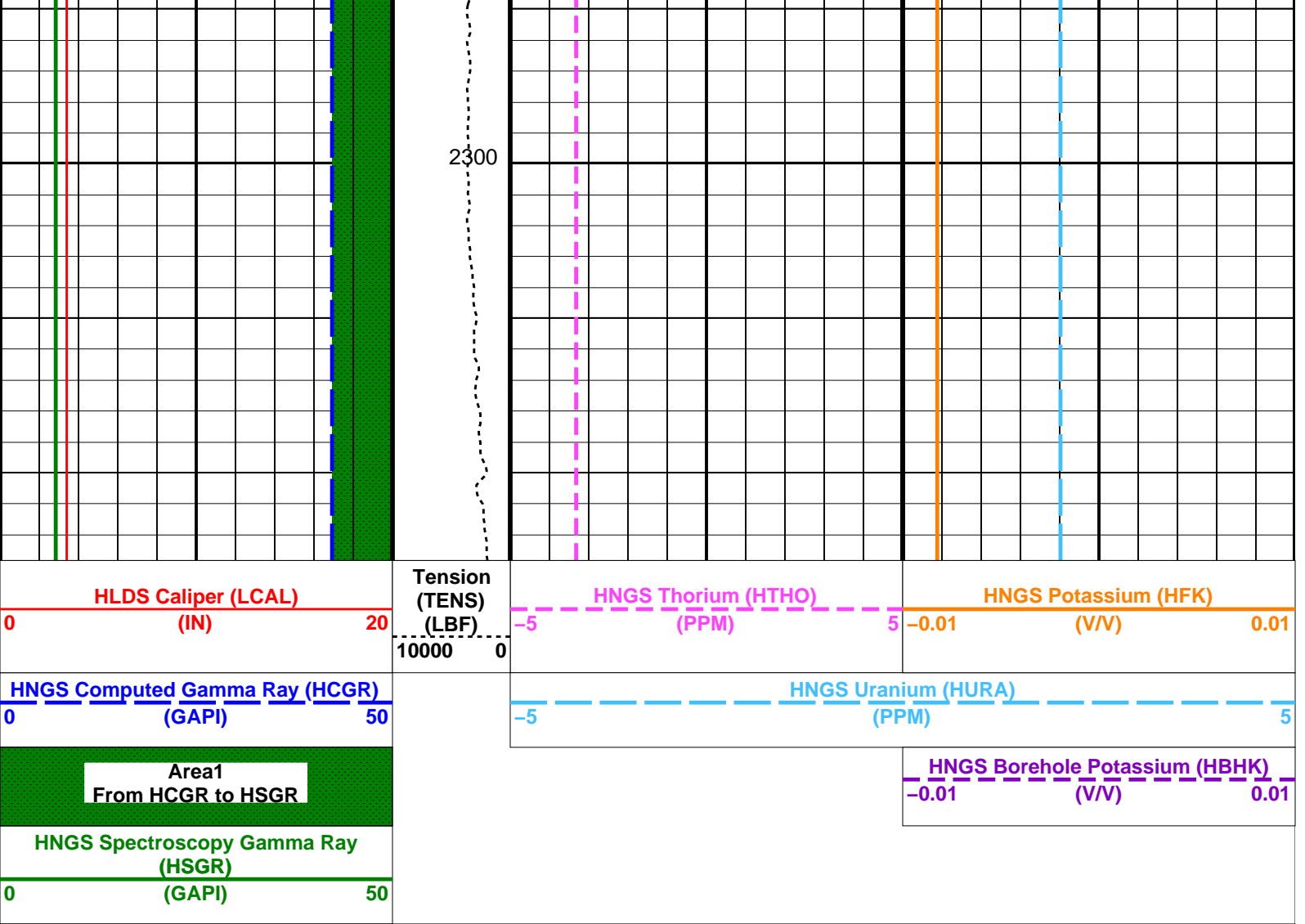


2250

2275







PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
<b>HRLT-B: High Resolution Laterolog Array - B</b>			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
<b>HNGS-BA: Hostile Natural Gamma Ray Sonde</b>			
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	BS	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.022314	
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	0.96649	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.964905	
<b>System and Miscellaneous</b>			
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3
DO	Depth Offset for Playback	0.0	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		

#### Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_018LUP	PRODUCER	30-Aug-2021 13:04	2312.8 M	2142.0 M
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#### Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_019PUP	FN:19	PRODUCER	30-Aug-2021 13:05	
RTB	MSS_LDEO_HRLA_LDL_019PUP	FN:20	PRODUCER	30-Aug-2021 13:05	

Company: International Ocean Discovery Program

Well: Expedition 396, Site U1569A

#### Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_018LUP	PRODUCER	30-Aug-2021 13:04	2312.8 M	2142.0 M
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#### Output DLIS Files

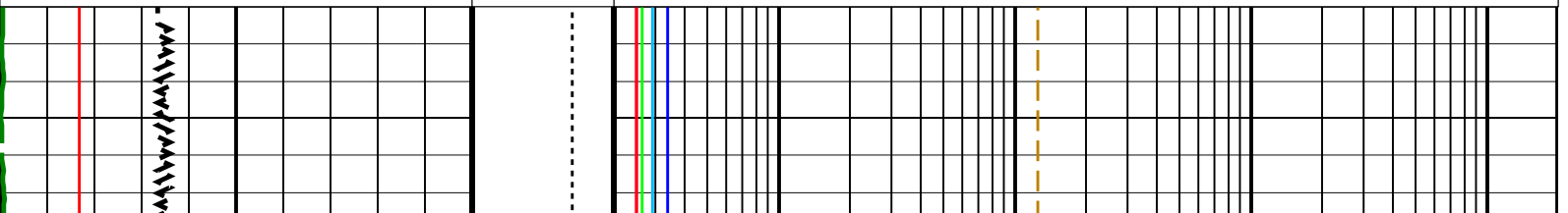
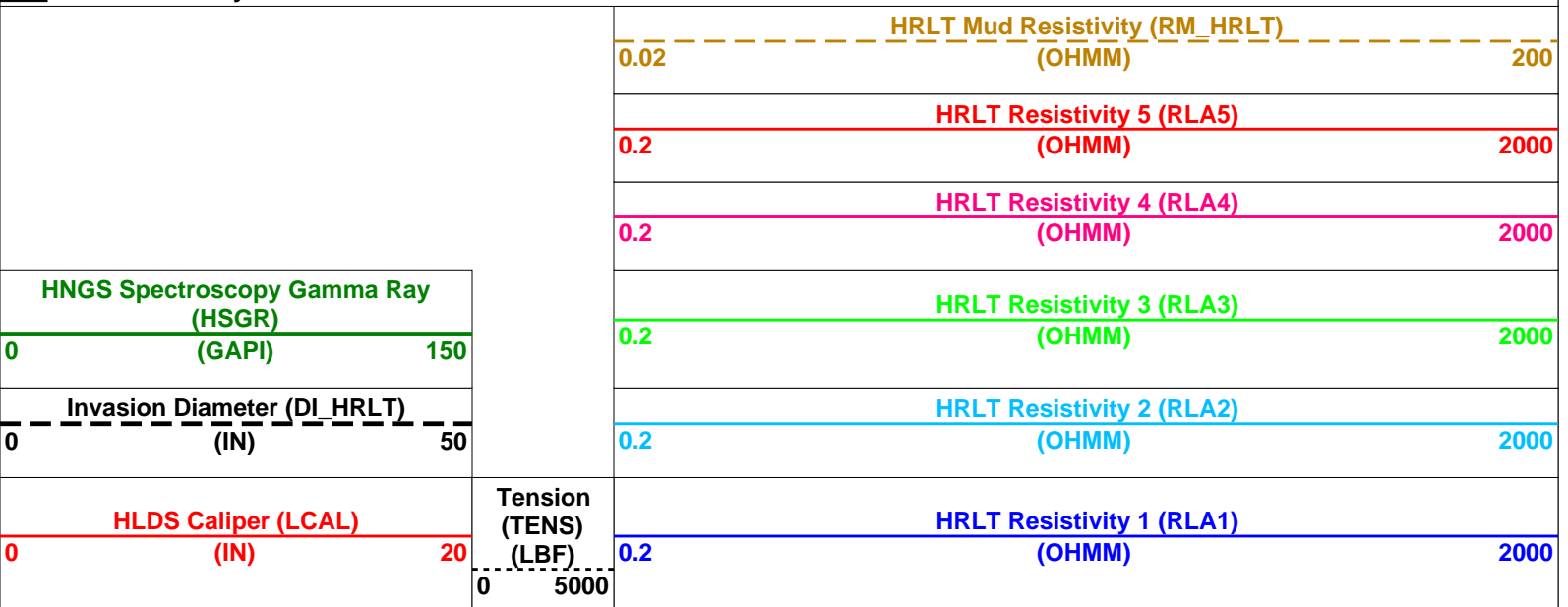
DEFAULT	MSS_LDEO_HRLA_LDL_019PUP	FN:19	PRODUCER	30-Aug-2021 13:05	2312.8 M	2142.0 M
RTB	MSS_LDEO_HRLA_LDL_019PUP	FN:20	PRODUCER	30-Aug-2021 13:05	2312.8 M	2142.0 M

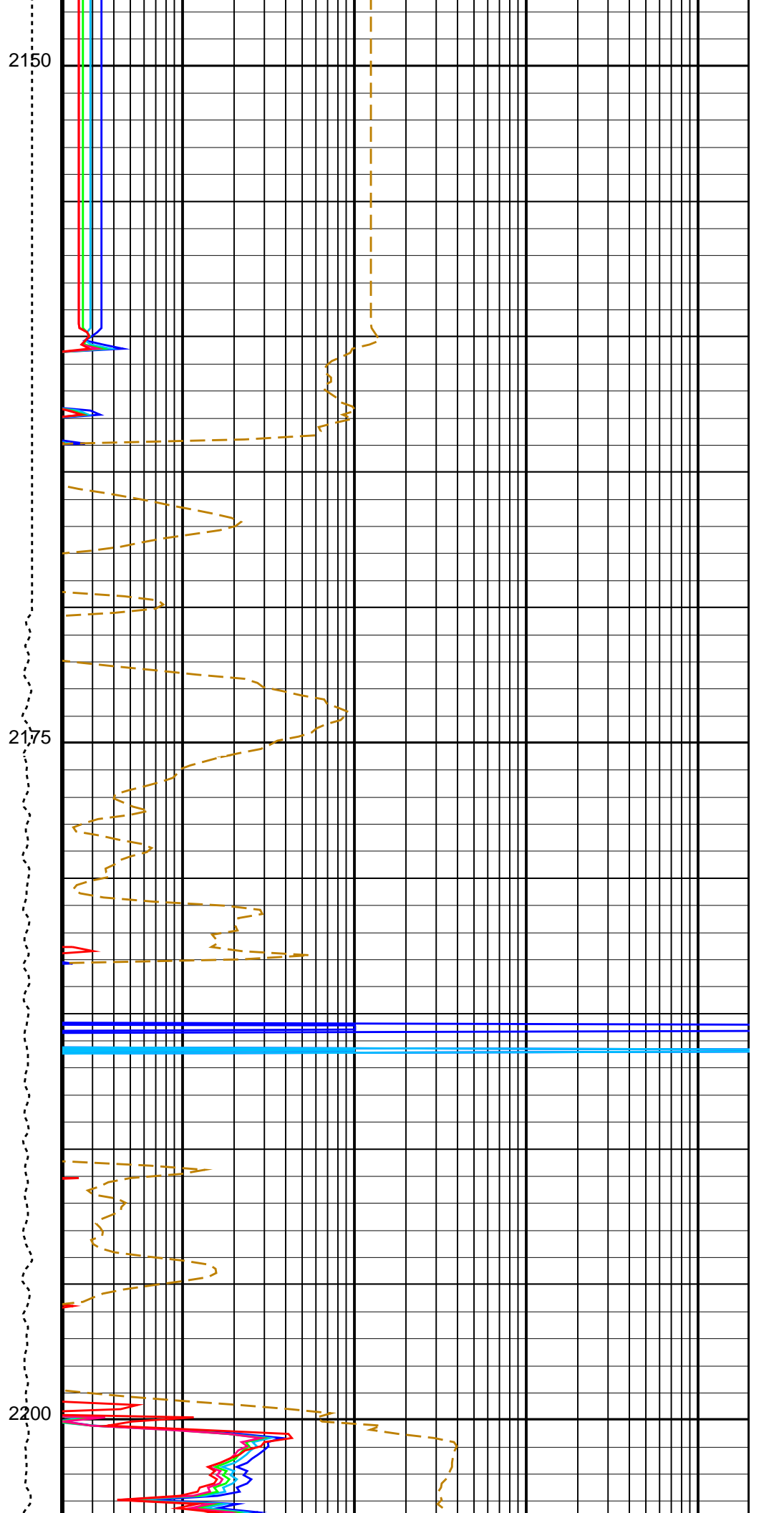
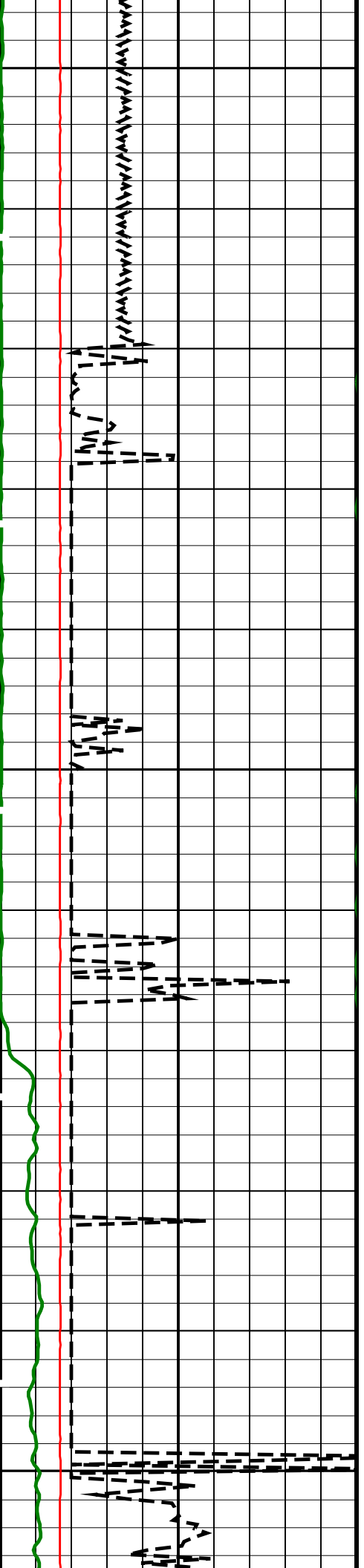
### OP System Version: 19C0-187

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

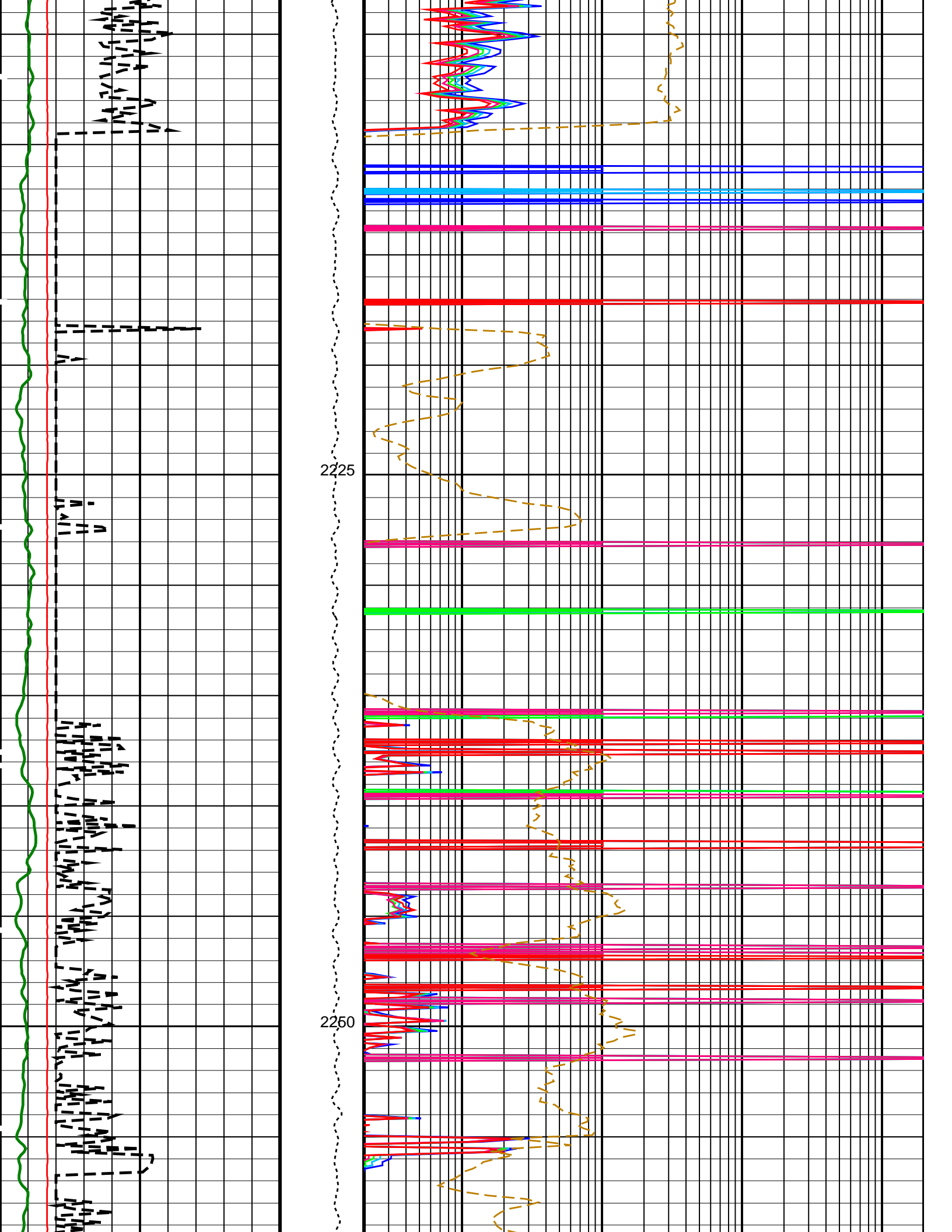


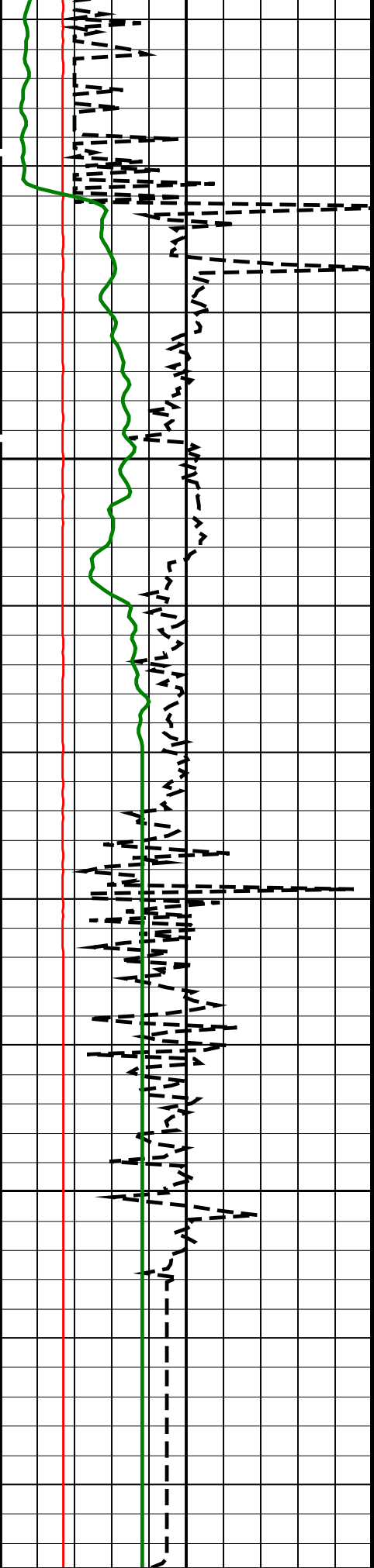


2150

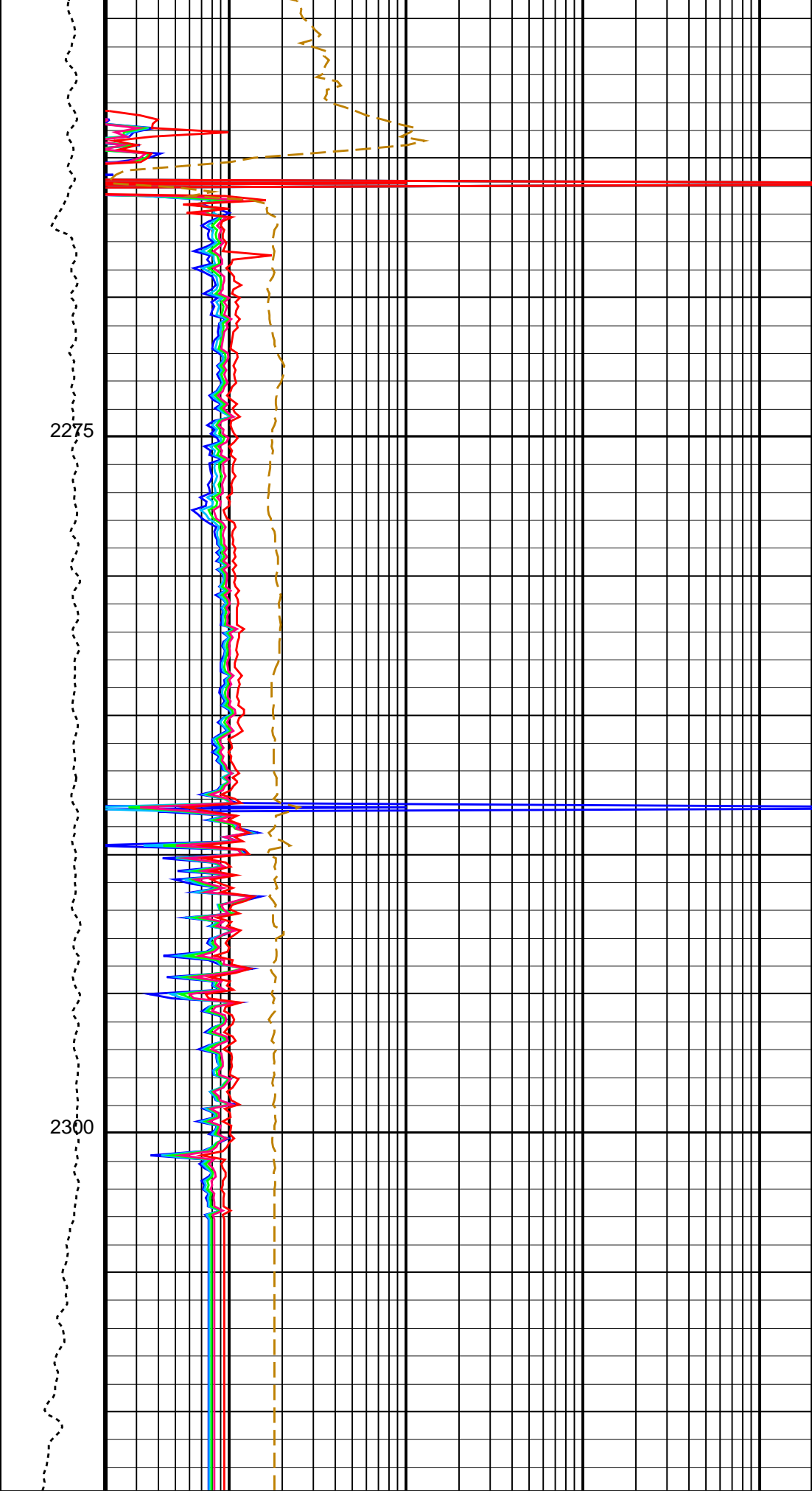
2175

2200





HLDS Caliper (LCAL)  
(IN) 0 20



HRLT Resistivity 1 (RLA1)  
(OHMM) 0.2 2000

Tension  
(TENS)  
(LBF)

Invasion Diameter (DI_HRLT)		0	5000	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	
<b>HRLT-B: High Resolution Laterolog Array - B</b>			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	7	DEGC
GCSE	Generalized Caliper Selection	BS	
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	
PROCINF	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCSP0	Sonde Position	Eccentered	
SHT	Surface Hole Temperature	20	DEGC
<b>HNGS-BA: Hostile Natural Gamma Ray Sonde</b>			
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	BS	
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	-0.022314	
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	0.96649	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.964905	
<b>System and Miscellaneous</b>			
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	RECOMPUTE	
TD	Total Depth	2587	M

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_018LUP	PRODUCER	30-Aug-2021 13:04	2312.8 M	2142.0 M
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**Output DLIS Files**

DEFAULT	MSS_LDEO_HRLA_LDL_019PUP	FN:19	PRODUCER	30-Aug-2021 13:05	
RTB	MSS_LDEO_HRLA_LDL_019PUP	FN:20	PRODUCER	30-Aug-2021 13:05	

Company: International Ocean Discovery Program Well: Expedition 396, Site U1569A

**Input DLIS Files**

DEFAULT	Flip_MSS_LDEO_HRLA_018LUP	PRODUCER	30-Aug-2021 13:04	2312.8 M	2142.0 M
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**Output DLIS Files**

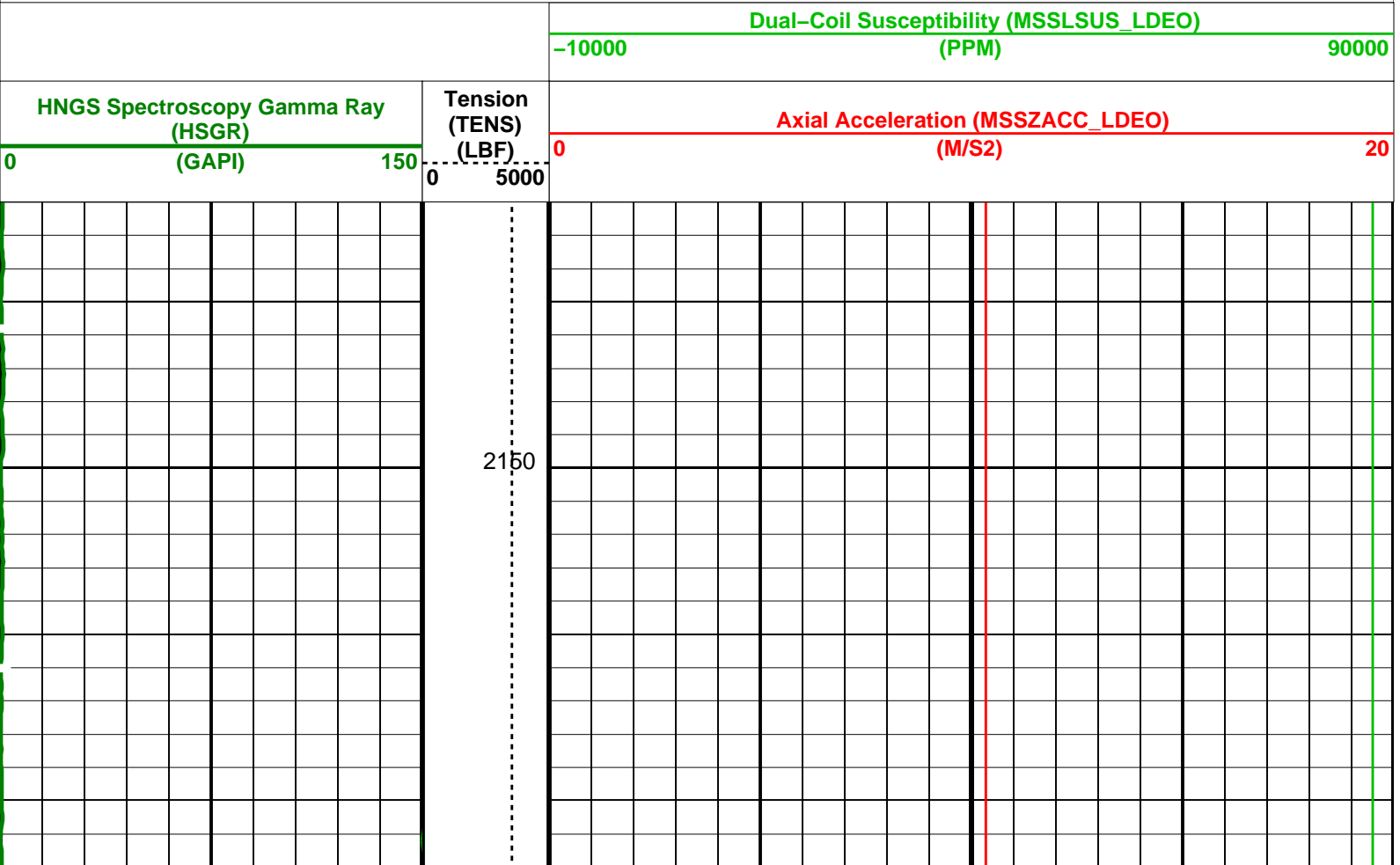
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RTB	MSS_LDEO_HRLA_LDL_019PUP	FN:20	PRODUCER	30-Aug-2021 13:05	2312.8 M	2142.0 M

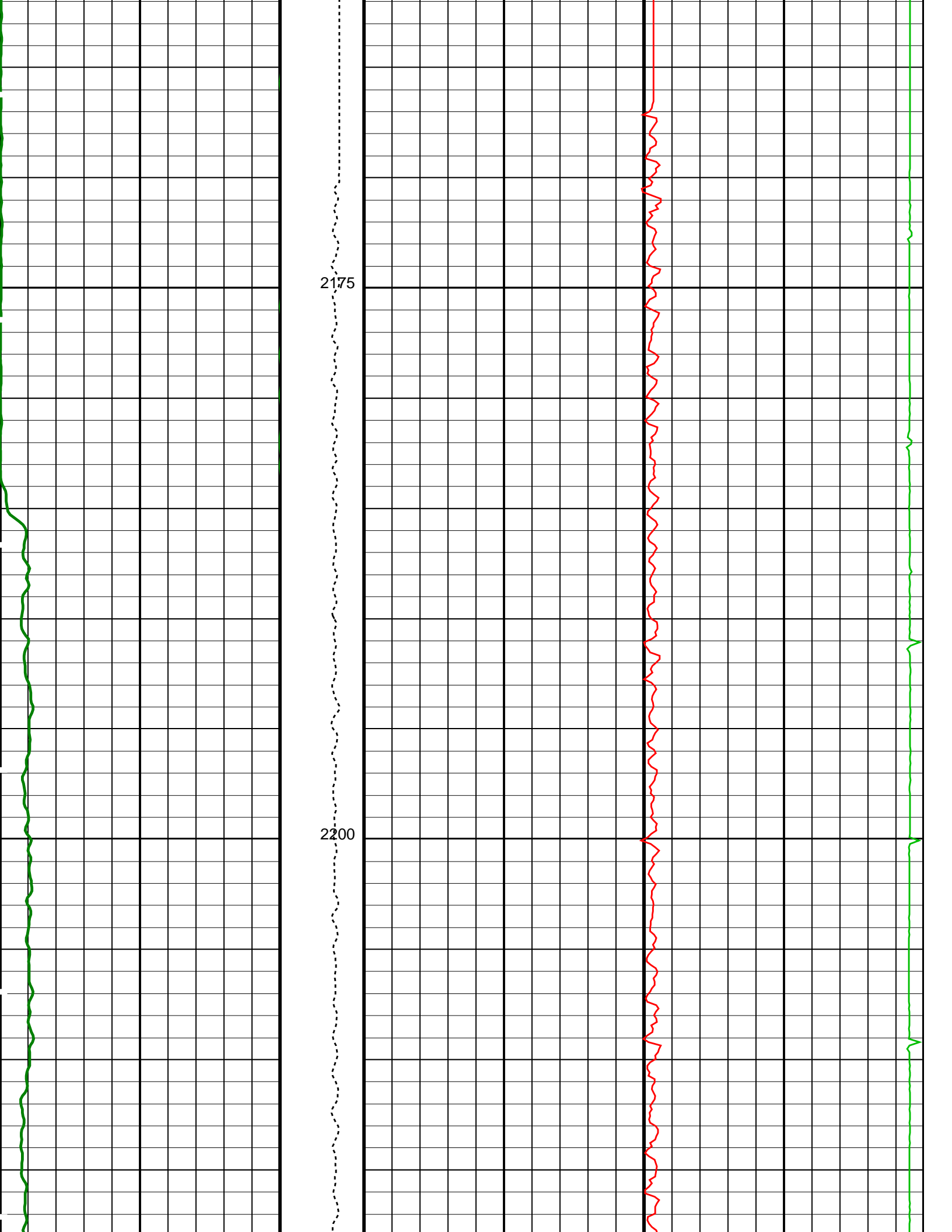
**OP System Version: 19C0-187**

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		

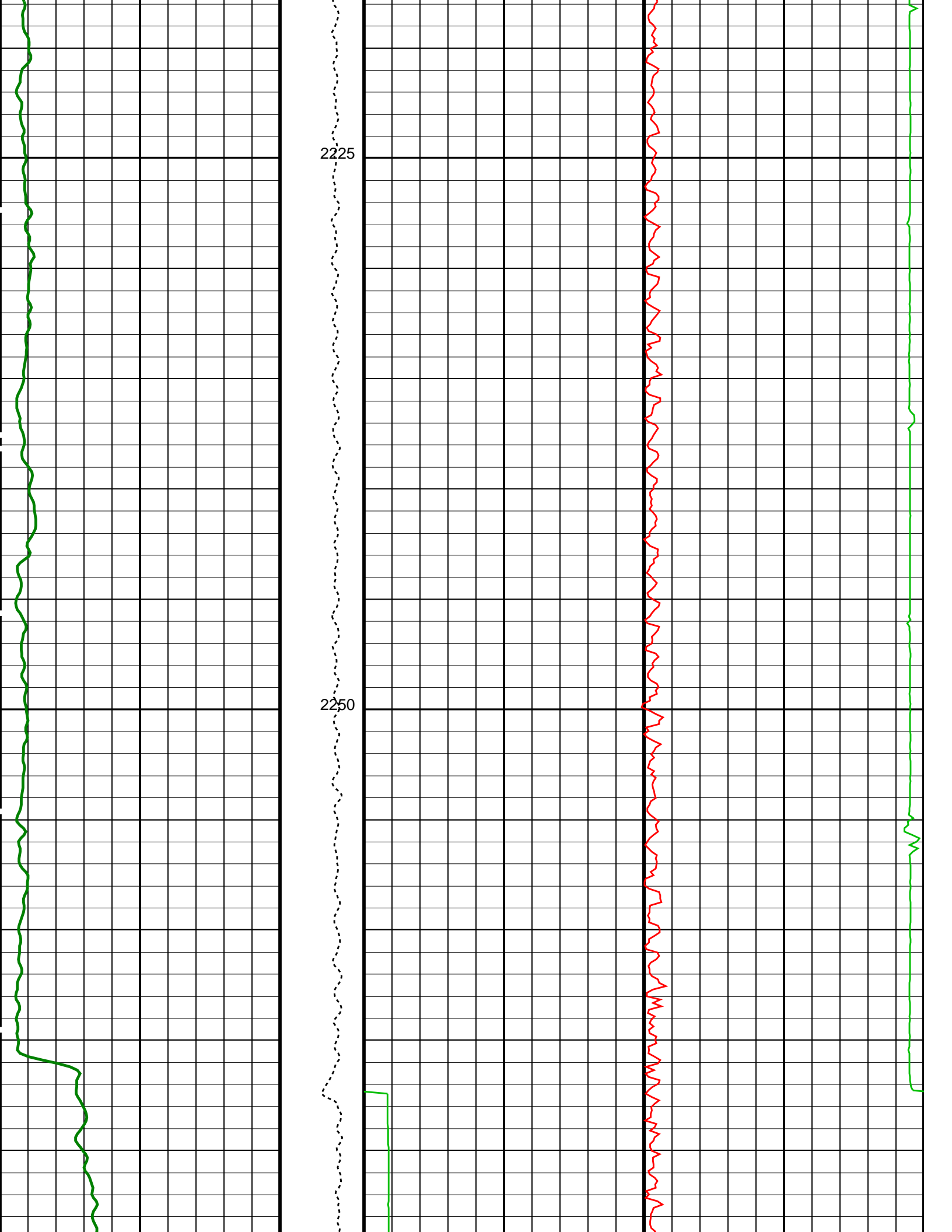
**PIP SUMMARY**

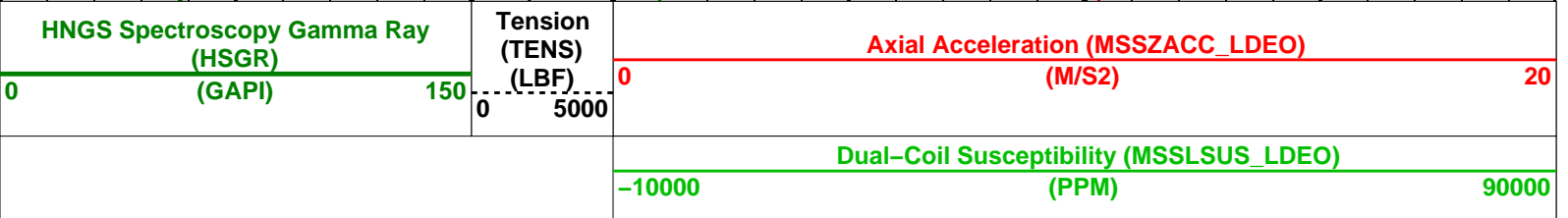
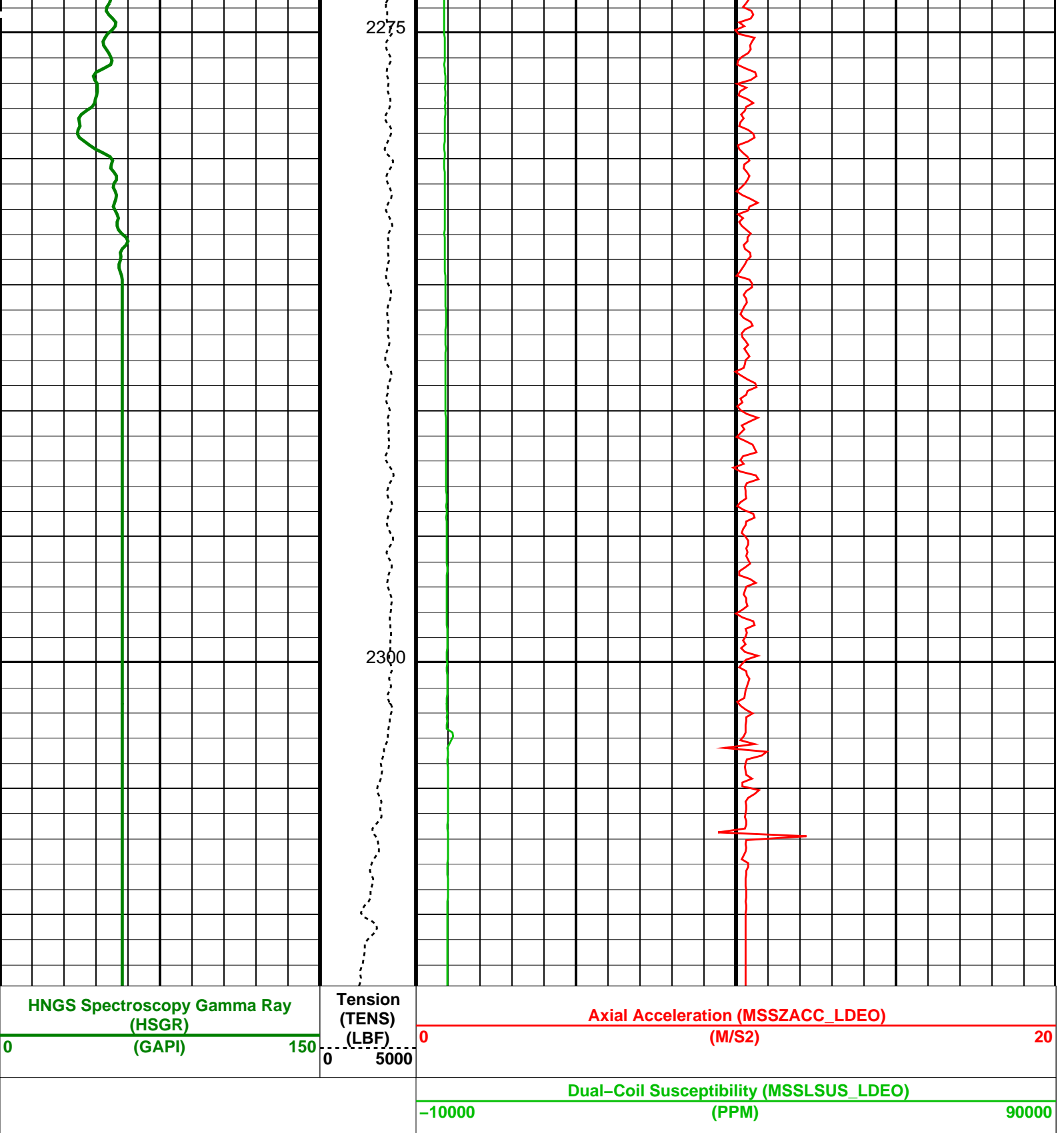
Time Mark Every 60 S











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	BS
HNGS-BA:	Hostile Natural Gamma Ray Sonde	
BAR1	HNGS Detector 1 Barite Constant	1
BAR2	HNGS Detector 2 Barite Constant	1
BHK	HNGS Borehole Potassium Correction Concentration	0
BHS	Borehole Status	OPEN

BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	BS	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.022314	
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	0.96649	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.964905	
<b>System and Miscellaneous</b>			
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	RECOMPUTE	

Format: MSS\_Logging    Vertical Scale: 1:200    Graphics File Created: 30-Aug-2021 13:05

### 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_018LUP	PRODUCER	30-Aug-2021 13:04	2312.8 M	2142.0 M
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### Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_019PUP	FN:19	PRODUCER	30-Aug-2021 13:05	
RTB	MSS_LDEO_HRLA_LDL_019PUP	FN:20	PRODUCER	30-Aug-2021 13:05	



MAXIS Field Log

Company: International Ocean Discovery Program    Well: Expedition 396, Site U1569A

### Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_016LUP	FN:16	PRODUCER	30-Aug-2021 12:23	2311.1 M	2170.0 M
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### Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_020PUP	FN:21	PRODUCER	30-Aug-2021 13:06	2311.1 M	2170.0 M
RTB	MSS_LDEO_HRLA_LDL_020PUP	FN:22	PRODUCER	30-Aug-2021 13:06	2311.1 M	2170.0 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

PIP SUMMARY

Time Mark Every 60 S

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

Area1  
From HCGR to HSGR

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

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

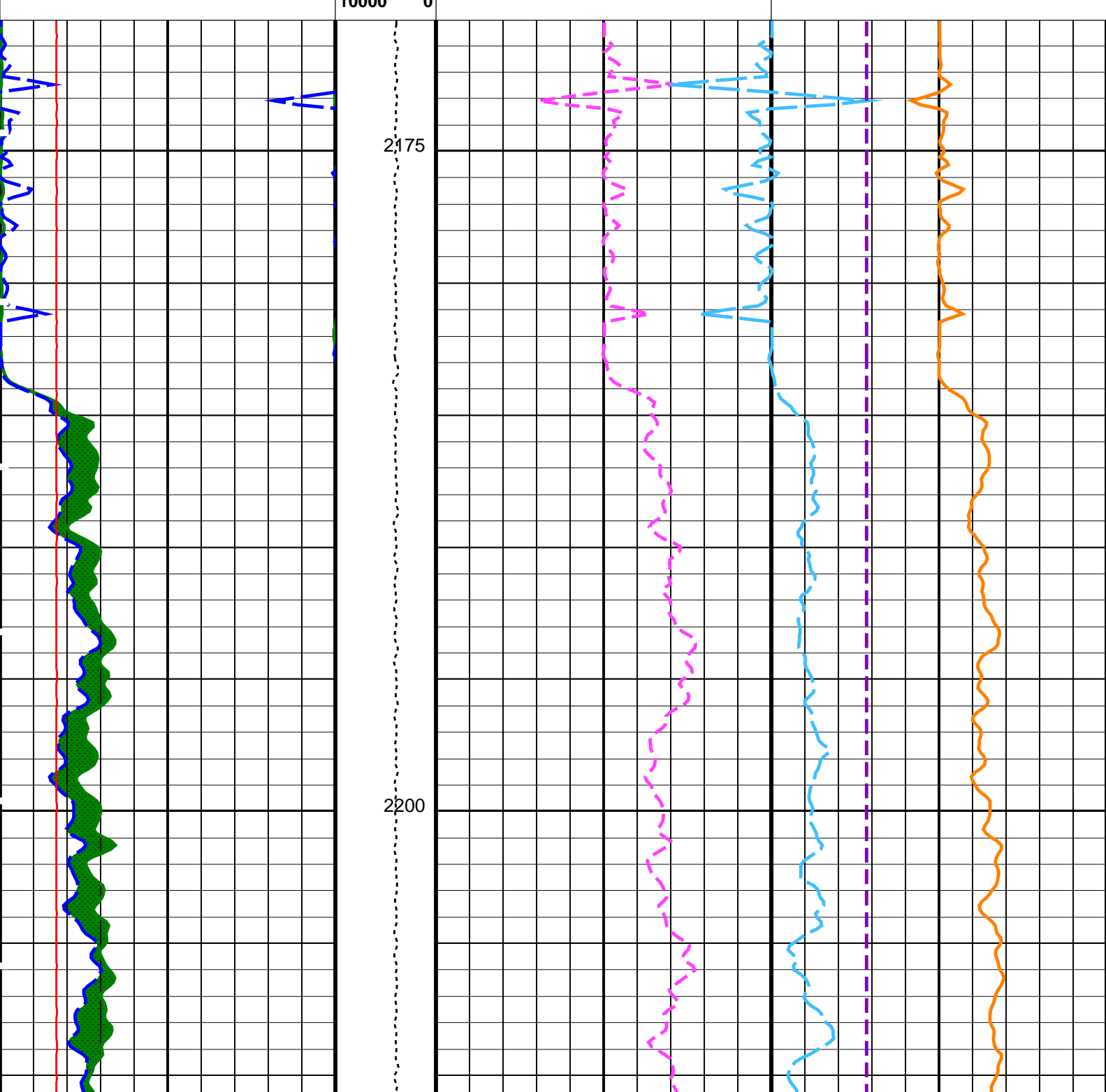
HNGS Uranium (HURA)  
(PPM) -5 5

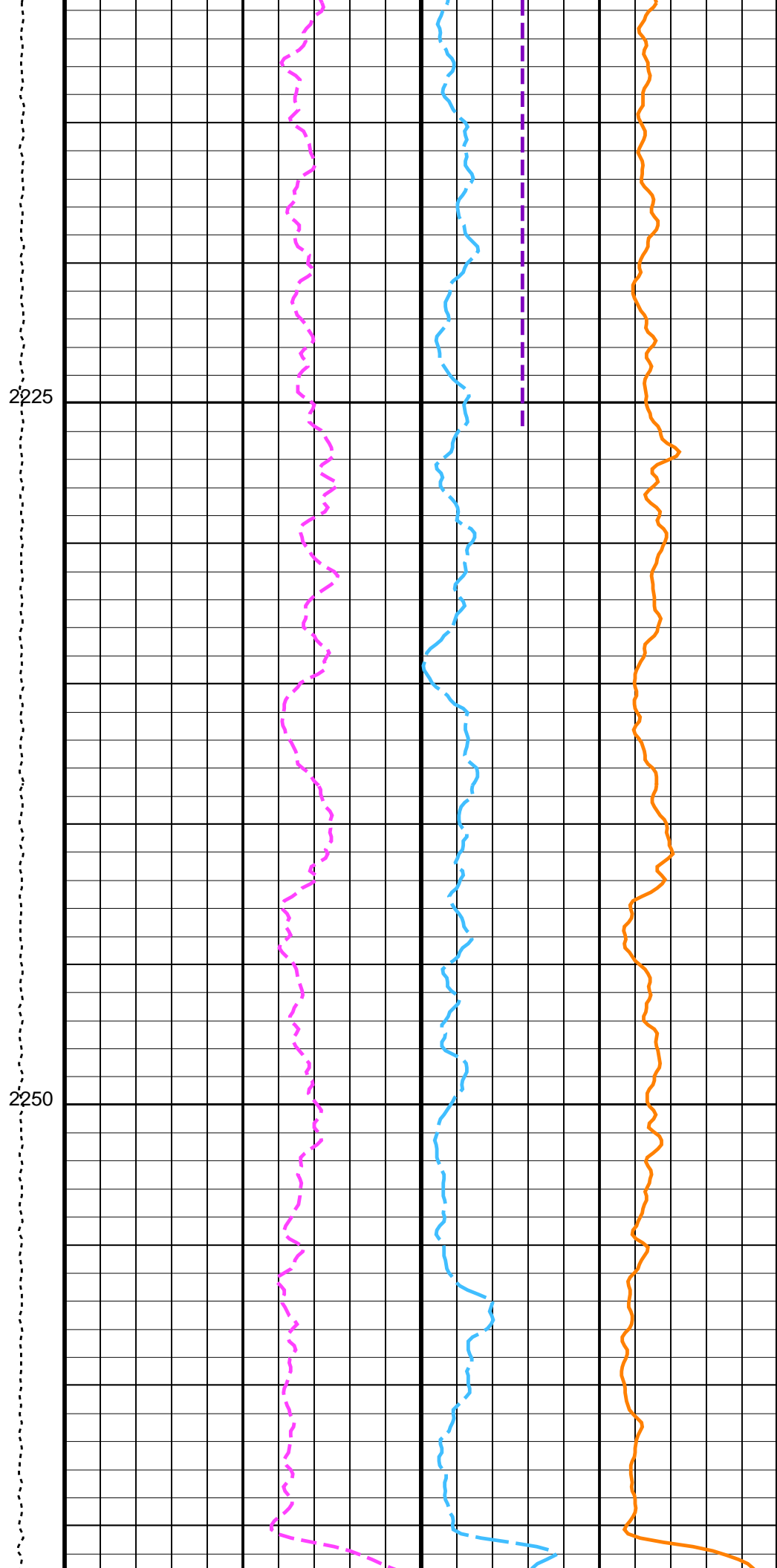
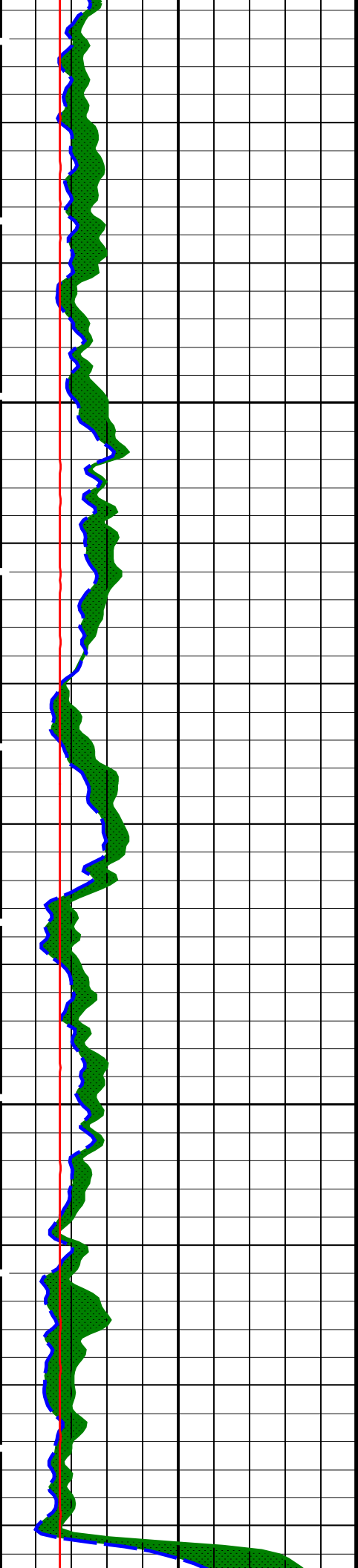
HLDS Caliper (LCAL)  
(IN) 0 20

Tension (TENS) (LBF)  
10000 0

HNGS Thorium (HTHO)  
(PPM) -5 5

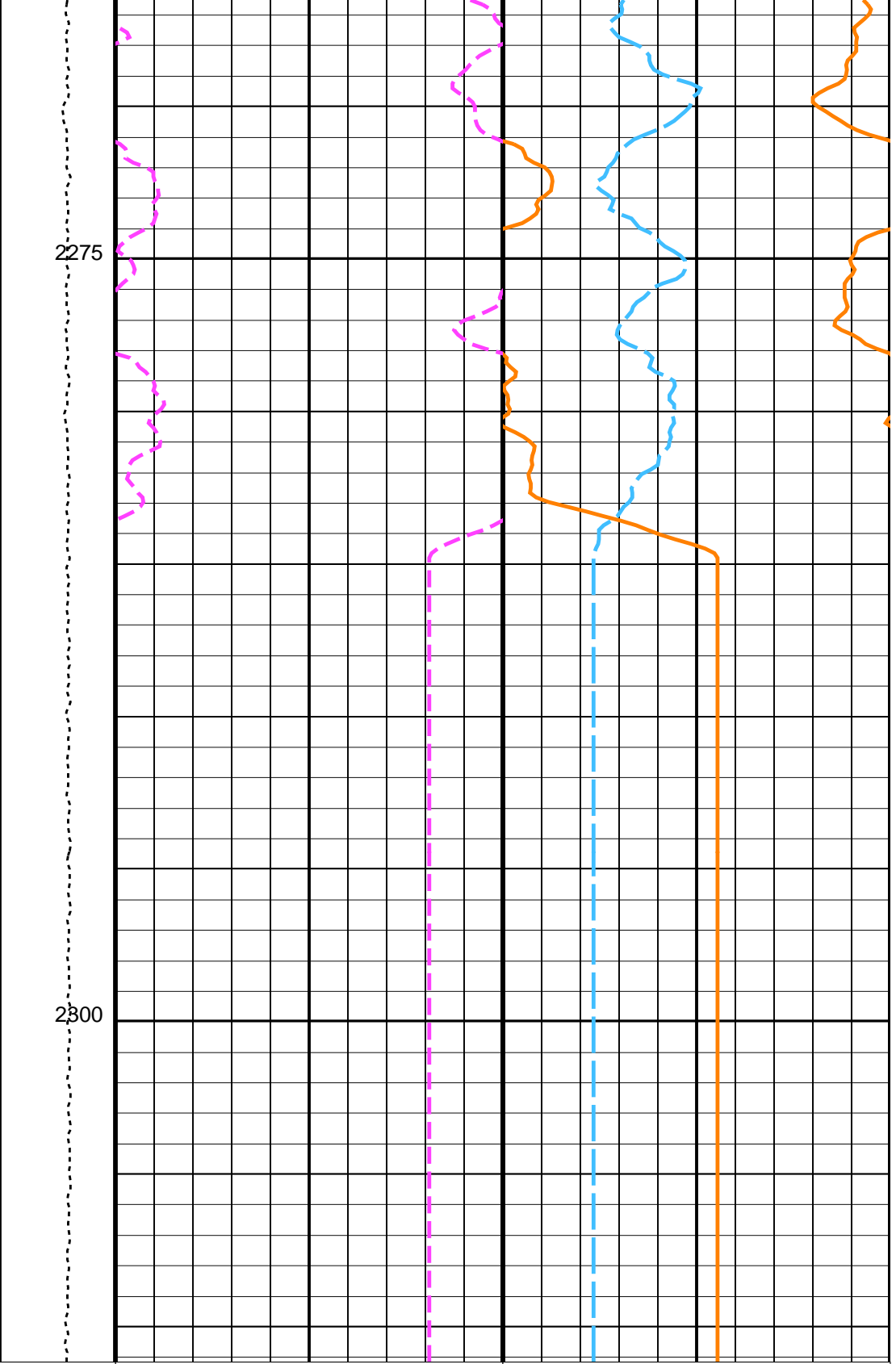
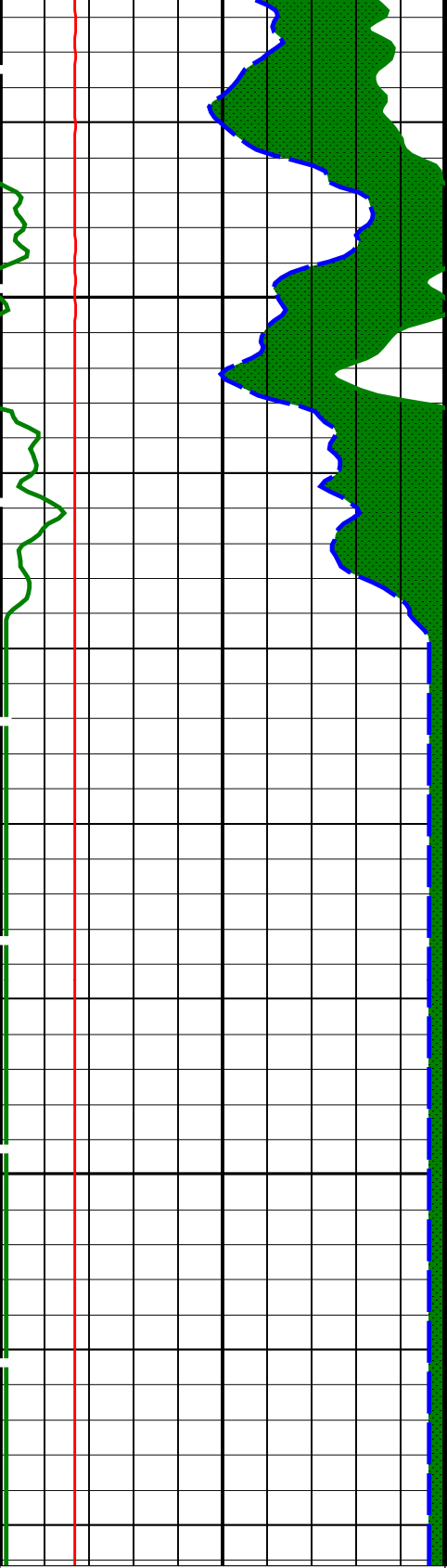
HNGS Potassium (HFK)  
(V/V) -0.01 0.01





2225

2250



2275

2300

HLDS Caliper (LCAL)  
(IN) 0 20

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

Area1  
From HCGR to HSGR

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

Tension  
(TENS)  
(LBF) 10000 0

HNGS Thorium (HTHO)  
(PPM) -5 5

HNGS Potassium (HFK)  
(V/V) -0.01 0.01

HNGS Uranium (HURA)  
(PPM) -5 5

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

Parameters

DLIS Name	Description	Value	
	HRLT-B: High Resolution Laterolog Array - B		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
	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	BS	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.00526429	
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	0.916408	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.938856	
	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	RECOMPUTE	

Format: HNGSYields

Vertical Scale: 1:200

Graphics File Created: 30-Aug-2021 13:06

OP System Version: 19C0-187

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

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_016LUP	FN:16	PRODUCER	30-Aug-2021 12:23	2311.1 M	2170.0 M
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Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_020PUP	FN:21	PRODUCER	30-Aug-2021 13:06		
RTB	MSS_LDEO_HRLA_LDL_020PUP	FN:22	PRODUCER	30-Aug-2021 13:06		

Company: International Ocean Discovery Program

Well: Expedition 396, Site U1569A

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_016LUP	FN:16	PRODUCER	30-Aug-2021 12:23	2311.1 M	2170.0 M
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Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_020PUP	FN:21	PRODUCER	30-Aug-2021 13:06	2311.1 M	2170.0 M
RTB	MSS_LDEO_HRLA_LDL_020PUP	FN:22	PRODUCER	30-Aug-2021 13:06	2311.1 M	2170.0 M

OP System Version: 19C0-187

MSS_LDEO-A	19C0-187	HRLT-B	19C0-187
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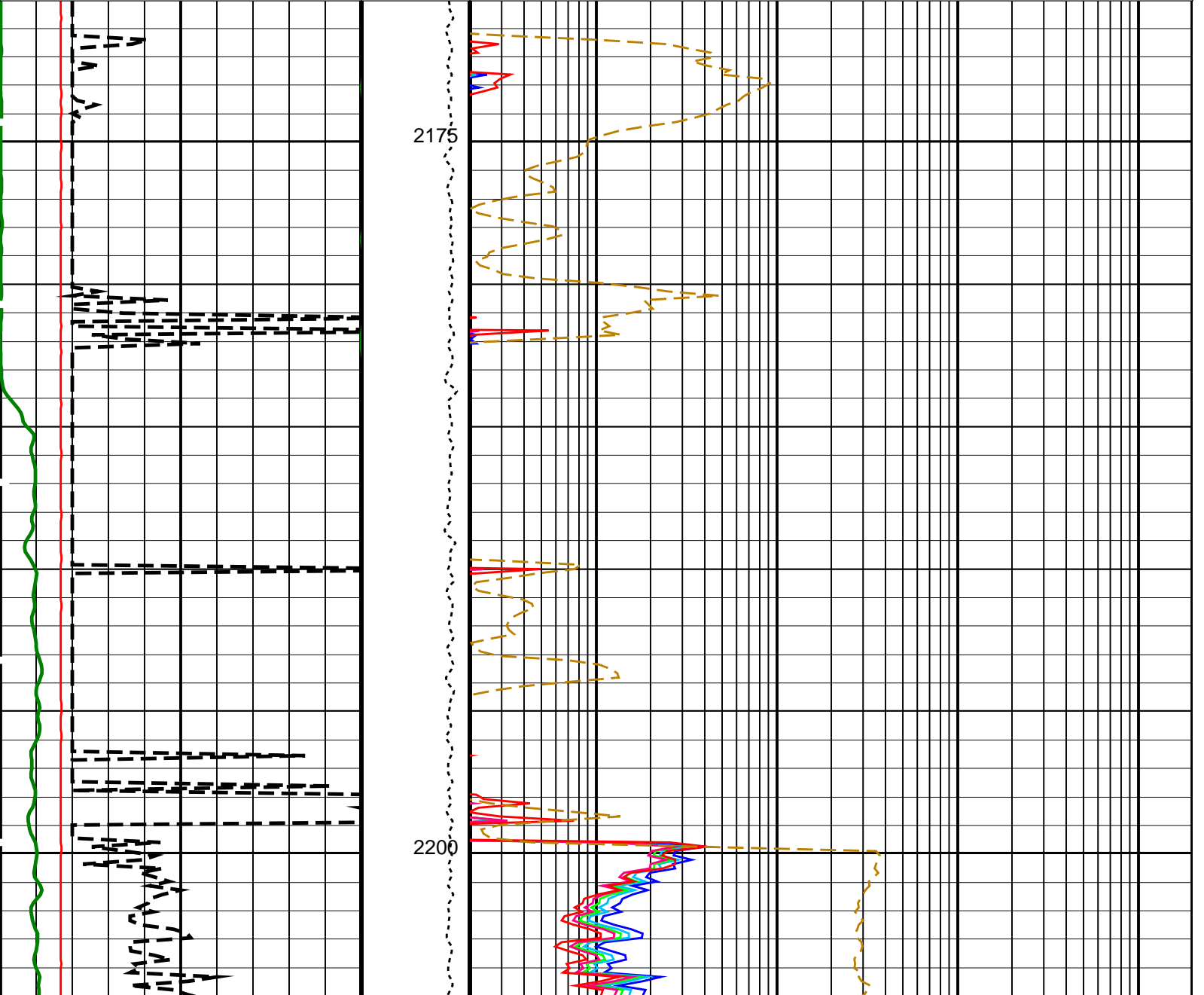
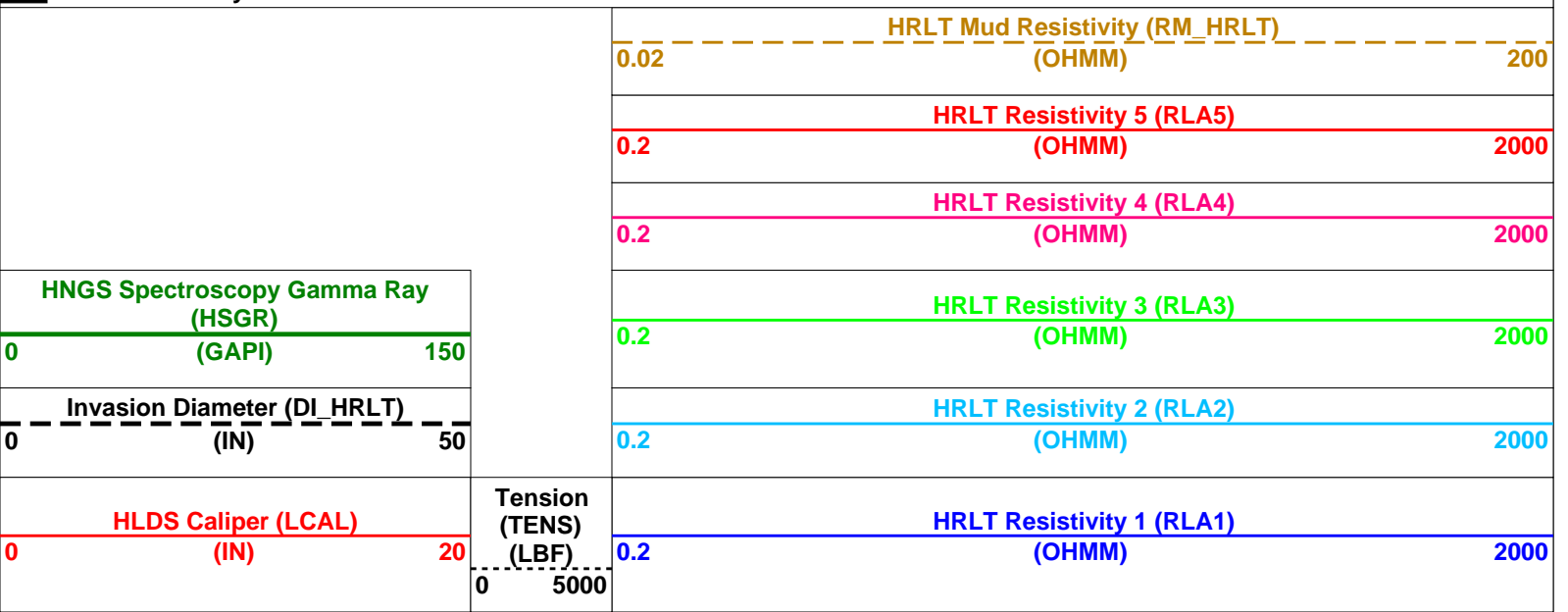
HLDS 19C0-187  
HNGC-B 19C0-187  
DTC-H 19C0-187

LDSC-B  
HNGS-BA

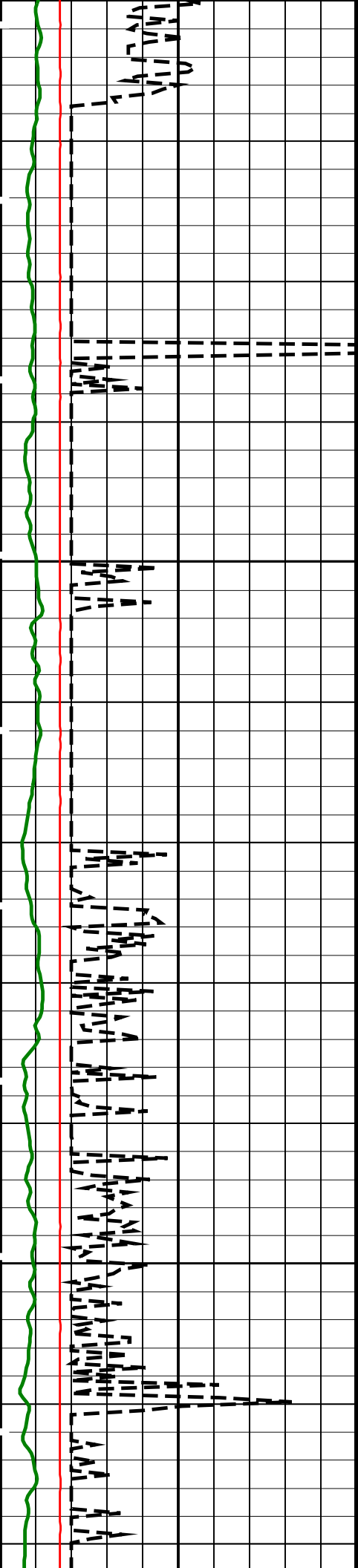
19C0-187  
19C0-187

### PIP SUMMARY

Time Mark Every 60 S

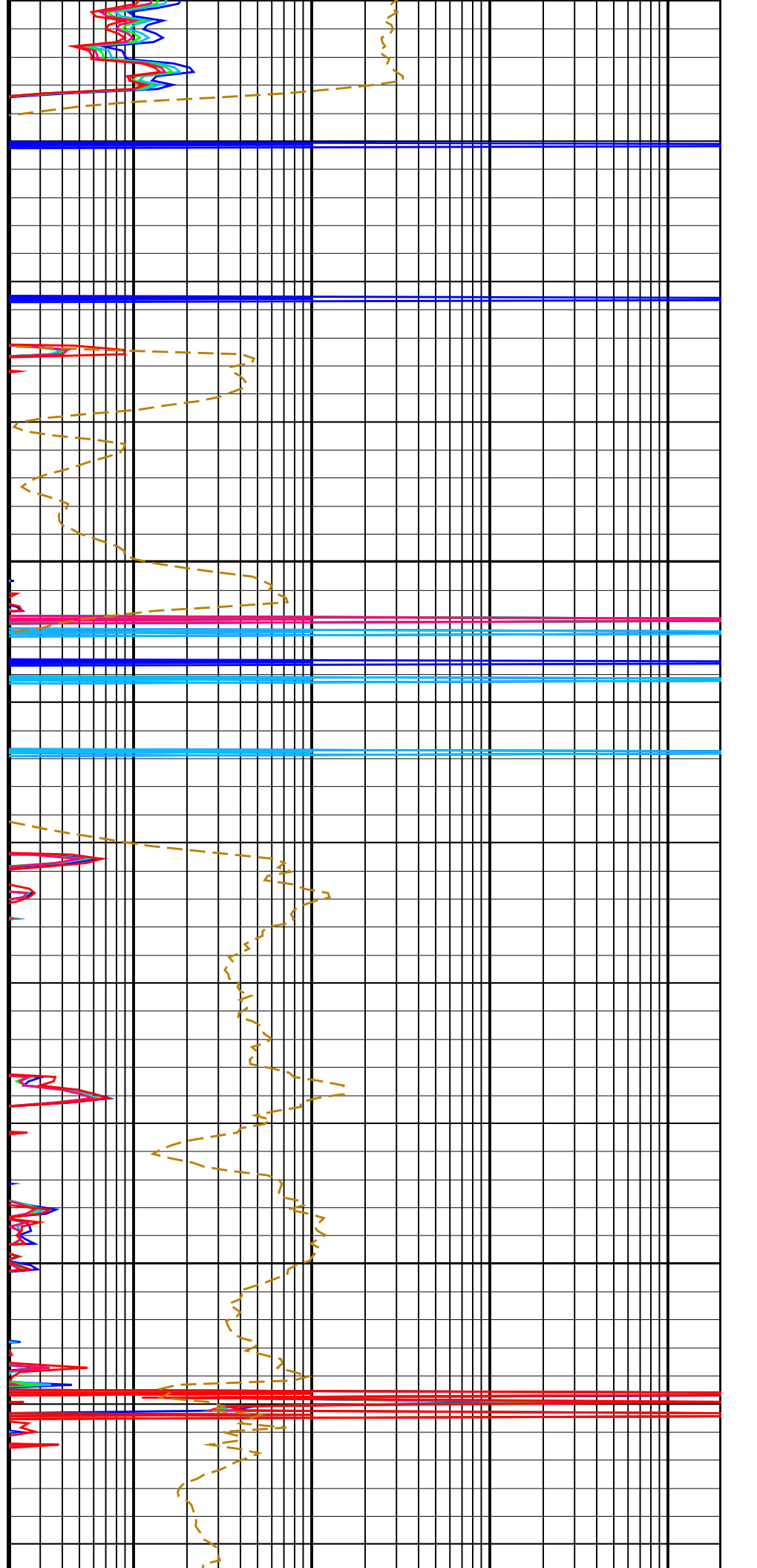


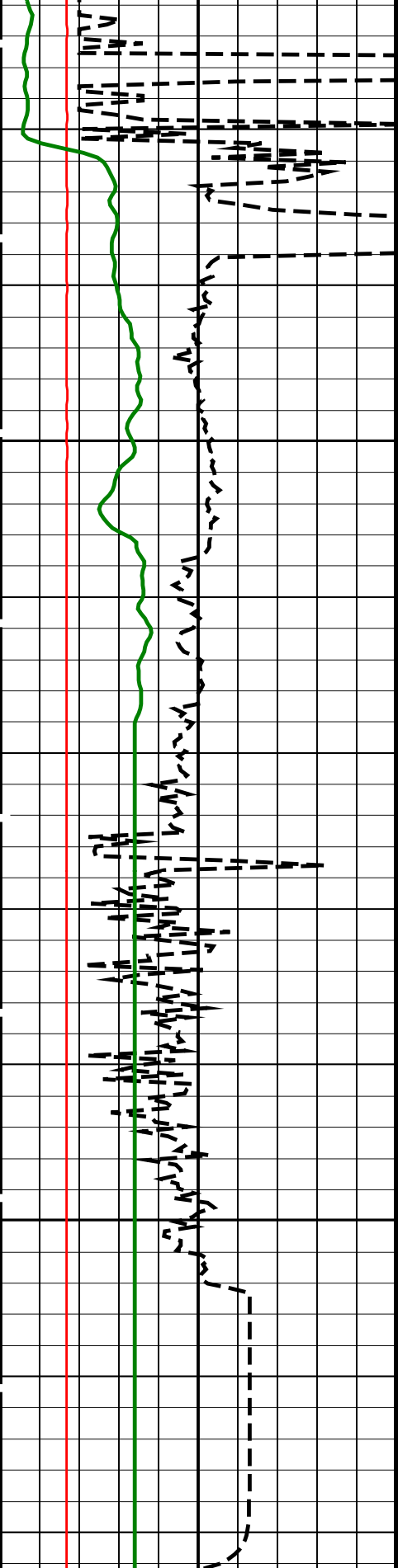




2225

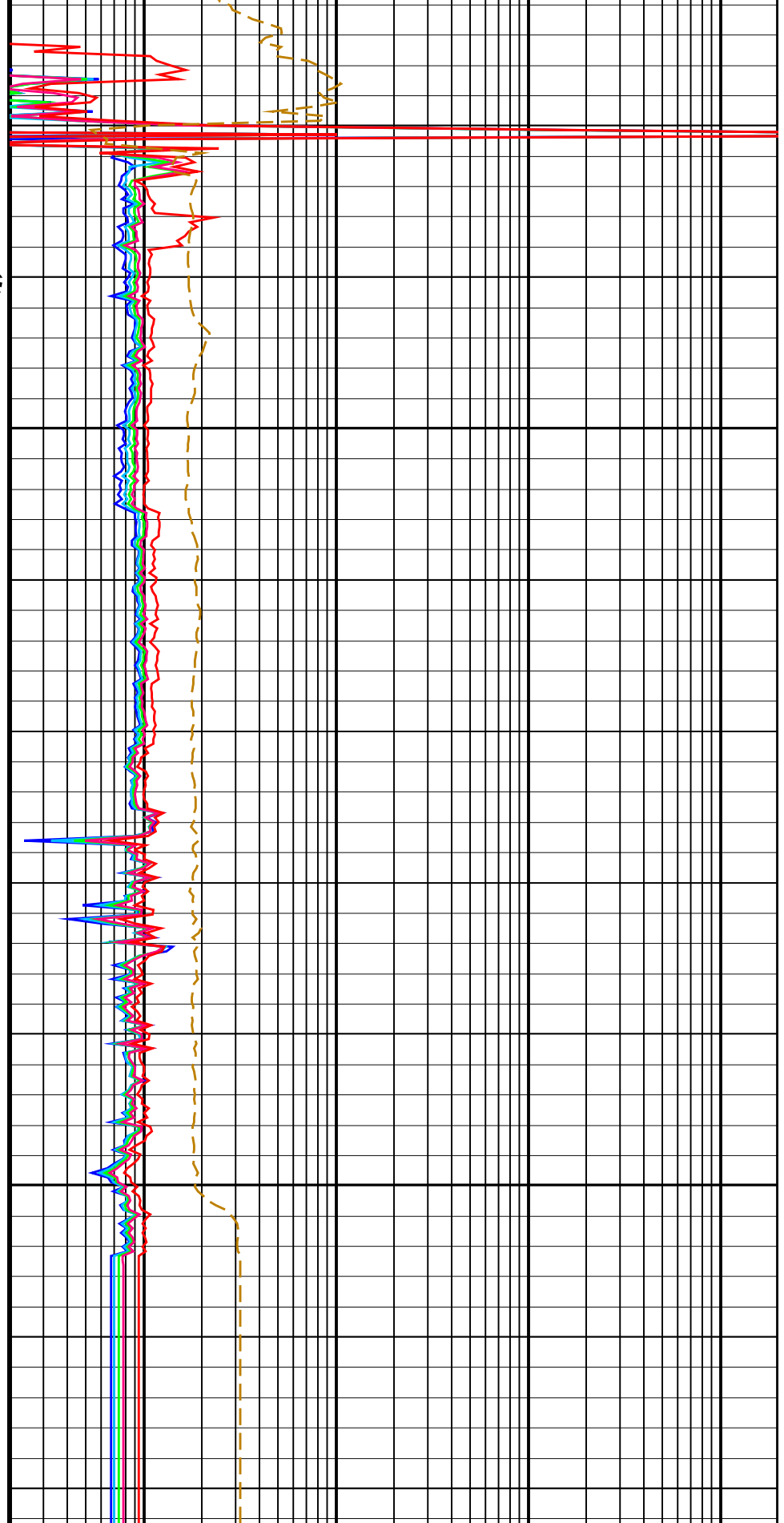
2250





2275

2300



**HLDS Caliper (LCAL)**  
 (IN) 0 20

**Invasion Diameter (DI\_HRLT)**  
 (IN) 0 50

**Tension (TENS)**  
 (LBF) 0 5000

**HRLT Resistivity 1 (RLA1)**  
 (OHMM) 0.2 2000

**HRLT Resistivity 2 (RLA2)**  
 (OHMM) 0.2 2000

HNGS Spectroscopy Gamma Ray (HSGR)		HRLT Resistivity 3 (RLA3)	
0	(GAPI)	150	2000
		HRLT Resistivity 4 (RLA4)	
		0.2	2000
		HRLT Resistivity 5 (RLA5)	
		0.2	2000
		HRLT Mud Resistivity (RM_HRLT)	
		0.02	200

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
<b>HRLT-B: High Resolution Laterolog Array - B</b>			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	7	DEGC
GCSE	Generalized Caliper Selection	BS	
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	
PROCM50	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCSPO	Sonde Position	Eccentered	
SHT	Surface Hole Temperature	20	DEGC
<b>HNGS-BA: Hostile Natural Gamma Ray Sonde</b>			
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	BS	
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	-0.00526429	
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	0.916408	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.938856	
<b>System and Miscellaneous</b>			
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	RECOMPUTE	
TD	Total Depth	2587	M

Format: HRLT Vertical Scale: 1:200 Graphics File Created: 30-Aug-2021 13:06

OP System Version: 19C0-187

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

### Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_016LUP	FN:16	PRODUCER	30-Aug-2021 12:23	2311.1 M	2170.0 M
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### Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_020PUP	FN:21	PRODUCER	30-Aug-2021 13:06		
RTB	MSS_LDEO_HRLA_LDL_020PUP	FN:22	PRODUCER	30-Aug-2021 13:06		

Company: International Ocean Discovery Program Well: Expedition 396, Site U1569A

### Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_016LUP	FN:16	PRODUCER	30-Aug-2021 12:23	2311.1 M	2170.0 M
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### Output DLIS Files

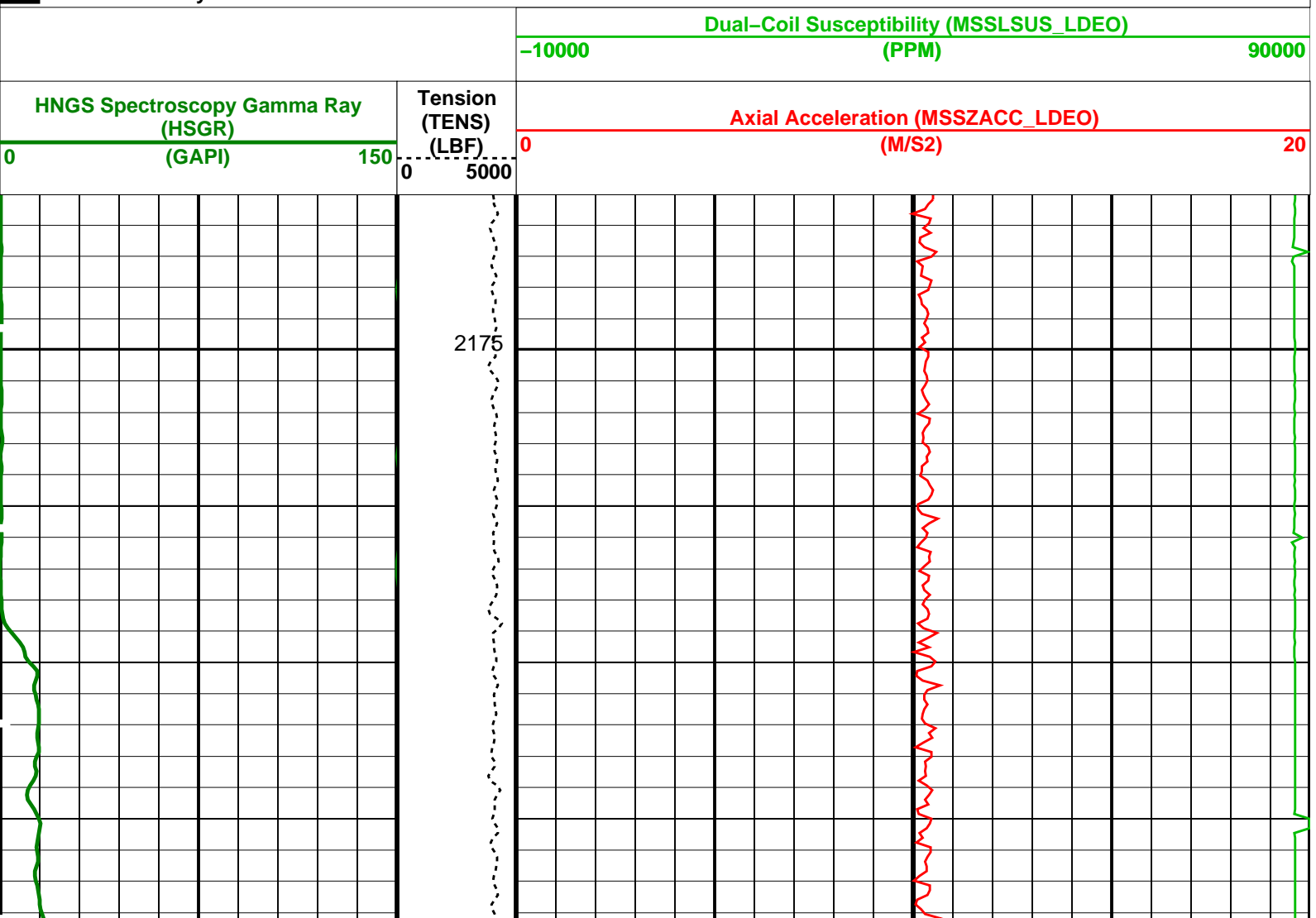
DEFAULT	MSS_LDEO_HRLA_LDL_020PUP	FN:21	PRODUCER	30-Aug-2021 13:06	2311.1 M	2170.0 M
RTB	MSS_LDEO_HRLA_LDL_020PUP	FN:22	PRODUCER	30-Aug-2021 13:06	2311.1 M	2170.0 M

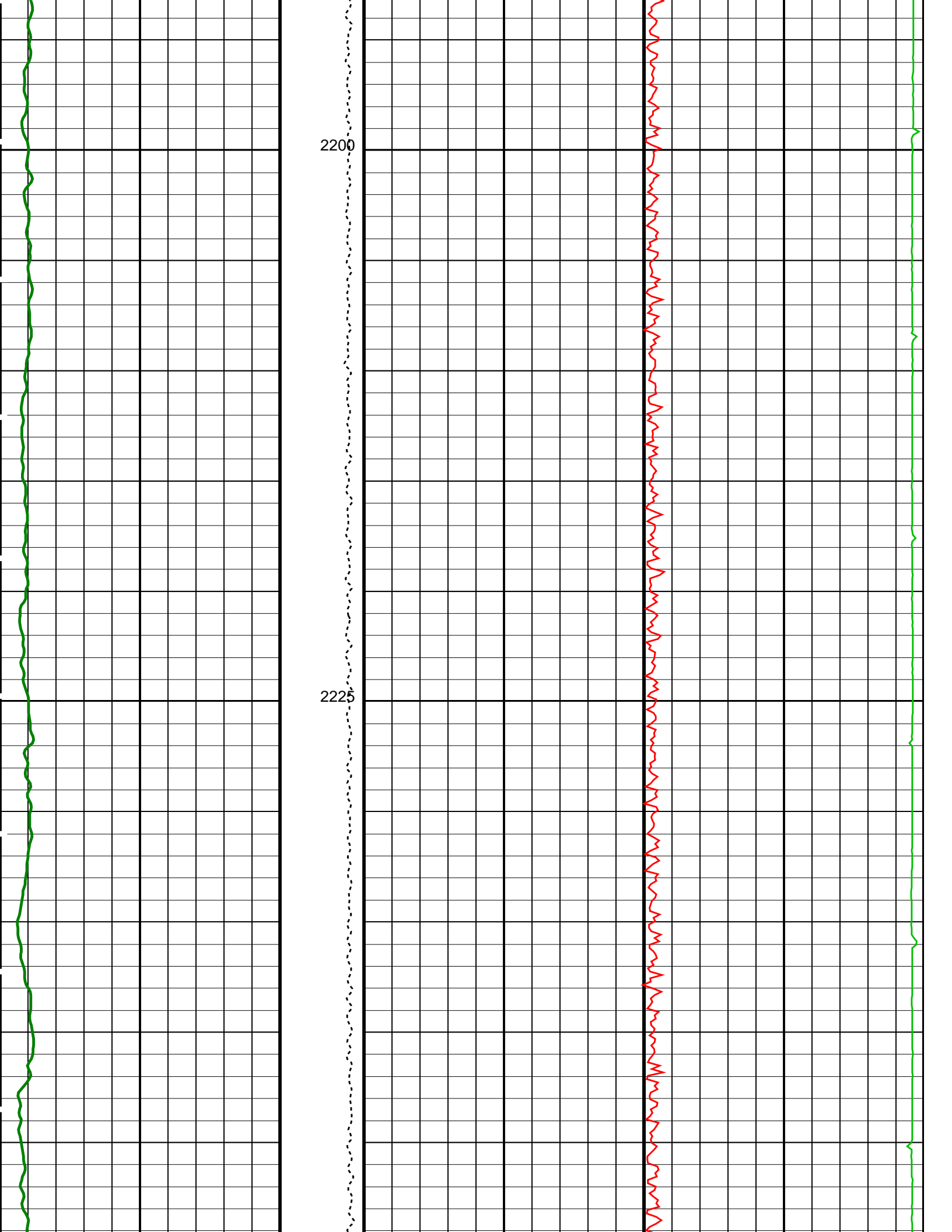
## OP System Version: 19C0-187

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

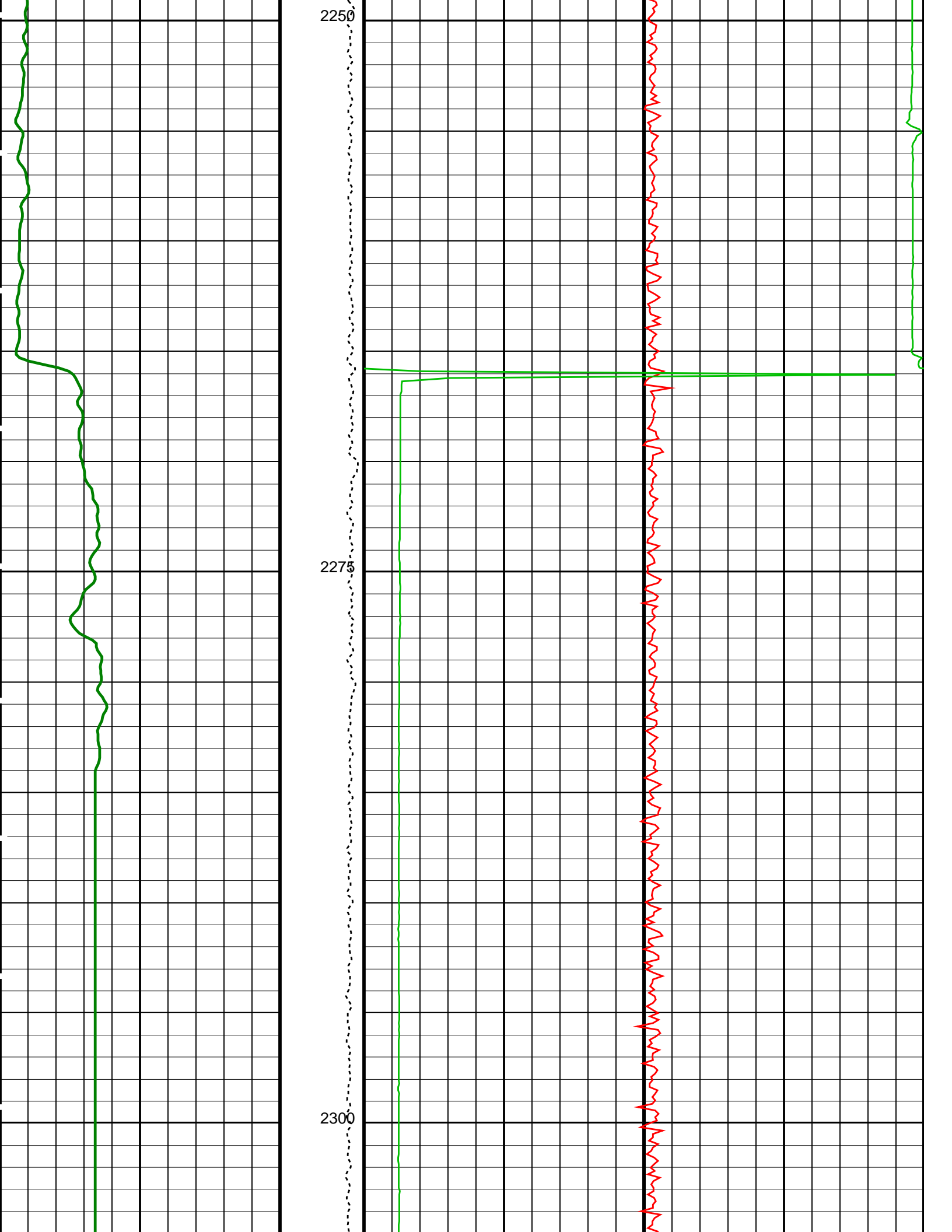
Time Mark Every 60 S

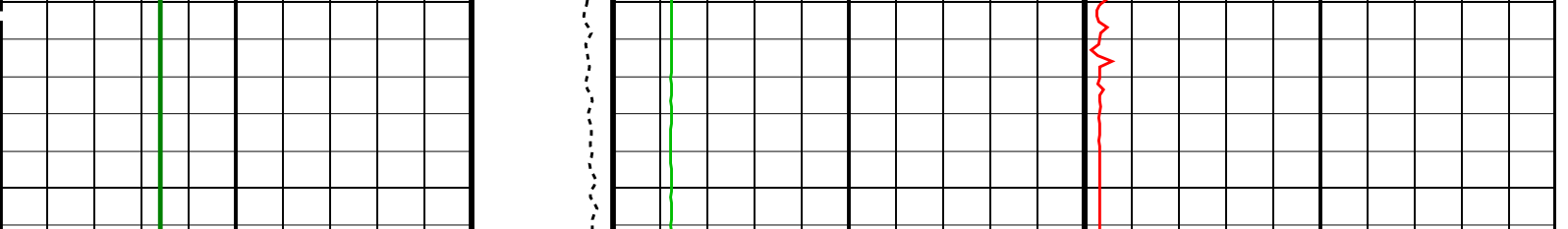




2200

2225





<b>HNGS Spectroscopy Gamma Ray (HSGR)</b>	<b>Tension (TENS)</b>	<b>Axial Acceleration (MSSZACC_LDEO)</b>	
(GAPI)	(LBF)	(M/S <sup>2</sup> )	
0 150	0 5000	0 20	
		<b>Dual-Coil Susceptibility (MSSLSUS_LDEO)</b>	
		(PPM)	
		-10000	90000

**PIP SUMMARY**

**Time Mark Every 60 S**

**Parameters**

DLIS Name	Description	Value	
<b>HRLT-B: High Resolution Laterolog Array - B</b>			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
<b>HNGS-BA: Hostile Natural Gamma Ray Sonde</b>			
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	BS	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.00526429	
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	0.916408	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.938856	
<b>System and Miscellaneous</b>			
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	RECOMPUTE	

Format: MSS\_Logging    Vertical Scale: 1:200    Graphics File Created: 30-Aug-2021 13:06

**OP System Version: 19C0-187**

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

**Input DLIS Files**

DEFAULT	MSS_LDEO_HRLA_LDL_016LUP	FN:16	PRODUCER	30-Aug-2021 12:23	2311.1 M	2170.0 M
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**Output DLIS Files**

DEFAULT	MSS_LDEO_HRLA_LDL_020PUP	FN:21	PRODUCER	30-Aug-2021 13:06
RTB	MSS_LDEO_HRLA_LDL_020PUP	FN:22	PRODUCER	30-Aug-2021 13:06

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
<b>High Resolution Laterolog Array – B Wellsite Calibration – HRLT M01</b>							
Before: 30–Aug–2021 9:44 After: 30–Aug–2021 14:08							
HRLT M0–M1 Voltage Plus – 0	0	N/A	-318.6	-318.6	0.04688	9.681	UV
HRLT M0–M1 Voltage Plus – 1	0	N/A	-330.0	-330.2	-0.1840	9.681	UV
HRLT M0–M1 Voltage Plus – 2	0	N/A	-337.3	-337.8	-0.4793	9.681	UV
HRLT M0–M1 Voltage Plus – 3	0	N/A	-328.3	-328.2	0.1078	9.681	UV
HRLT M0–M1 Voltage Plus – 4	0	N/A	-319.8	-319.7	0.07208	9.681	UV
HRLT M0–M1 Voltage Plus – 5	0	N/A	-321.6	-321.5	0.09015	9.681	UV
HRLT M0–M1 Voltage Plus – 6	0	N/A	319.3	319.2	-0.1375	9.681	UV
HRLT M0–M1 Voltage Plus – 7	0	N/A	-322.7	-322.7	0	9.681	UV
<b>High Resolution Laterolog Array – B Wellsite Calibration – HRLT M12</b>							
Before: 30–Aug–2021 9:44 After: 30–Aug–2021 14:08							
HRLT M1–M2 Voltage Plus – 0	0	N/A	1739	1738	-1.022	53.42	UV
HRLT M1–M2 Voltage Plus – 1	0	N/A	1809	1809	-0.2155	53.42	UV
HRLT M1–M2 Voltage Plus – 2	0	N/A	1841	1843	1.956	53.42	UV
HRLT M1–M2 Voltage Plus – 3	0	N/A	1790	1789	-1.551	53.42	UV
HRLT M1–M2 Voltage Plus – 4	0	N/A	1743	1741	-1.316	53.42	UV
HRLT M1–M2 Voltage Plus – 5	0	N/A	1753	1752	-1.146	53.42	UV
HRLT M1–M2 Voltage Plus – 6	0	N/A	-1758	-1757	1.617	53.42	UV
HRLT M1–M2 Voltage Plus – 7	0	N/A	1781	1781	0	53.42	UV
<b>High Resolution Laterolog Array – B Wellsite Calibration – HRLT M23</b>							
Before: 30–Aug–2021 9:44 After: 30–Aug–2021 14:08							
HRLT M2–M3 Voltage Plus – 0	0	N/A	1731	1731	-0.1287	53.42	UV
HRLT M2–M3 Voltage Plus – 1	0	N/A	1811	1812	0.5404	53.42	UV
HRLT M2–M3 Voltage Plus – 2	0	N/A	1845	1848	2.550	53.42	UV
HRLT M2–M3 Voltage Plus – 3	0	N/A	1798	1797	-0.3881	53.42	UV
HRLT M2–M3 Voltage Plus – 4	0	N/A	1744	1744	-0.5068	53.42	UV
HRLT M2–M3 Voltage Plus – 5	0	N/A	1756	1755	-0.7827	53.42	UV
HRLT M2–M3 Voltage Plus – 6	0	N/A	-1749	-1748	0.4951	53.42	UV
HRLT M2–M3 Voltage Plus – 7	0	N/A	1781	1781	0	53.42	UV
<b>High Resolution Laterolog Array – B Wellsite Calibration – HRLT V34</b>							
Before: 30–Aug–2021 9:44 After: 30–Aug–2021 14:08							
HRLT A3–A4 Voltage Plus – 0	0	N/A	68630	68600	-27.59	2100	UV
HRLT A3–A4 Voltage Plus – 1	0	N/A	71610	71640	27.43	2100	UV
HRLT A3–A4 Voltage Plus – 2	0	N/A	73280	73380	104.3	2100	UV
HRLT A3–A4 Voltage Plus – 3	0	N/A	71660	71610	-44.02	2100	UV
HRLT A3–A4 Voltage Plus – 4	0	N/A	69480	69440	-35.44	2100	UV
HRLT A3–A4 Voltage Plus – 5	0	N/A	69940	69900	-42.72	2100	UV
HRLT A3–A4 Voltage Plus – 6	0	N/A	-68200	-68170	30.34	2100	UV
HRLT A3–A4 Voltage Plus – 7	0	N/A	70000	70000	0	2100	UV
<b>High Resolution Laterolog Array – B Wellsite Calibration – HRLT V45</b>							
Before: 30–Aug–2021 9:44 After: 30–Aug–2021 14:08							
HRLT A4–A5 Voltage Plus – 0	0	N/A	68720	68690	-31.99	2100	UV
HRLT A4–A5 Voltage Plus – 1	0	N/A	71830	71850	19.20	2100	UV
HRLT A4–A5 Voltage Plus – 2	0	N/A	73470	73570	101.1	2100	UV
HRLT A4–A5 Voltage Plus – 3	0	N/A	71790	71780	-4.555	2100	UV
HRLT A4–A5 Voltage Plus – 4	0	N/A	69590	69550	-37.43	2100	UV
HRLT A4–A5 Voltage Plus – 5	0	N/A	70040	70000	-47.25	2100	UV
HRLT A4–A5 Voltage Plus – 6	0	N/A	-68410	-68380	27.74	2100	UV
HRLT A4–A5 Voltage Plus – 7	0	N/A	70000	70000	0	2100	UV
<b>High Resolution Laterolog Array – B Wellsite Calibration – HRLT V56</b>							
Before: 30–Aug–2021 9:44 After: 30–Aug–2021 14:08							
HRLT A5–A6 Voltage Plus – 0	0	N/A	68560	68540	-16.31	2100	UV
HRLT A5–A6 Voltage Plus – 1	0	N/A	71670	71710	33.84	2100	UV
HRLT A5–A6 Voltage Plus – 2	0	N/A	73290	73390	97.76	2100	UV
HRLT A5–A6 Voltage Plus – 3	0	N/A	71670	71610	-53.13	2100	UV
HRLT A5–A6 Voltage Plus – 4	0	N/A	69440	69420	-25.41	2100	UV
HRLT A5–A6 Voltage Plus – 5	0	N/A	69900	69870	-31.71	2100	UV
HRLT A5–A6 Voltage Plus – 6	0	N/A	-68260	-68230	29.47	2100	UV
HRLT A5–A6 Voltage Plus – 7	0	N/A	70000	70000	0	2100	UV
<b>High Resolution Laterolog Array – B Wellsite Calibration – HRLT VTP</b>							
Before: 30–Aug–2021 9:44 After: 30–Aug–2021 14:08							
HRLT Torpedo–M0 Voltage – 0	0	N/A	-68090	-68080	17.38	2100	UV
HRLT Torpedo–M0 Voltage – 1	0	N/A	-71480	-71500	-17.38	2100	UV
HRLT Torpedo–M0 Voltage – 2	0	N/A	-73140	-73240	-106.4	2100	UV
HRLT Torpedo–M0 Voltage – 3	0	N/A	-71550	-71540	13.02	2100	UV
HRLT Torpedo–M0 Voltage – 4	0	N/A	-69410	-69380	26.81	2100	UV
HRLT Torpedo–M0 Voltage – 5	0	N/A	-69860	-69830	22.88	2100	UV
HRLT Torpedo–M0 Voltage – 6	0	N/A	68010	67990	-25.56	2100	UV
HRLT Torpedo–M0 Voltage – 7	0	N/A	68010	67990	-25.56	2100	UV



HRLT Torpedo-M0 Voltage - 6	0	N/A	68010	67980	-25.56	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: 30-Aug-2021 9:44 After: 30-Aug-2021 14:08

HRLT Bridle#9-M0 Voltage - 0	0	N/A	-68130	-68110	19.17	2100	UV
HRLT Bridle#9-M0 Voltage - 1	0	N/A	-71580	-71580	-3.484	2100	UV
HRLT Bridle#9-M0 Voltage - 2	0	N/A	-73230	-73330	-100.9	2100	UV
HRLT Bridle#9-M0 Voltage - 3	0	N/A	-71640	-71610	28.94	2100	UV
HRLT Bridle#9-M0 Voltage - 4	0	N/A	-69450	-69420	33.20	2100	UV
HRLT Bridle#9-M0 Voltage - 5	0	N/A	-69900	-69870	28.44	2100	UV
HRLT Bridle#9-M0 Voltage - 6	0	N/A	68110	68060	-43.71	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: 30-Aug-2021 9:44 After: 30-Aug-2021 14:08

HRLT Source Current Plus - 0	0	N/A	284.2	284.2	-0.04202	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: 30-Aug-2021 9:44 After: 30-Aug-2021 14:08

HRLT Vertical Voltage PI - 0	0	N/A	-320.3	-320.6	-0.2661	9.681	UV
HRLT Vertical Voltage PI - 1	0	N/A	-324.9	-325.2	-0.3342	9.681	UV
HRLT Vertical Voltage PI - 2	0	N/A	-330.7	-331.4	-0.7195	9.681	UV
HRLT Vertical Voltage PI - 3	0	N/A	-320.0	-320.2	-0.1880	9.681	UV
HRLT Vertical Voltage PI - 4	0	N/A	-308.7	-308.9	-0.1547	9.681	UV
HRLT Vertical Voltage PI - 5	0	N/A	-325.4	-325.6	-0.1967	9.681	UV
HRLT Vertical Voltage PI - 6	0	N/A	326.8	326.9	0.1353	9.681	UV
HRLT Vertical Voltage PI - 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: 30-Aug-2021 9:49 After: 30-Aug-2021 14:12

SS Cs Resolution Bkg	9.000	7.698	7.709	7.648	-0.06052	1.800	%
LS Cs Resolution Bkg	9.000	7.989	8.030	7.985	-0.04437	1.800	%
LSW1 Background	100.0	71.96	70.94	70.91	-0.02924	3.000	CPS
LSW2 Background	100.0	65.02	63.76	63.62	-0.1370	3.000	CPS
LSW3 Background	200.0	146.1	144.7	144.9	0.1990	6.000	CPS
LSW4 Background	250.0	183.2	180.1	181.6	1.560	7.500	CPS
LSW5 Background	600.0	424.9	423.7	420.9	-2.755	18.00	CPS
SSW1 Background	100.0	68.97	68.68	68.89	0.2040	3.000	CPS
SSW2 Background	200.0	118.2	118.5	117.8	-0.7360	6.000	CPS
SSW3 Background	500.0	331.3	328.8	327.6	-1.203	15.00	CPS
SSW4 Background	270.0	178.4	177.7	176.9	-0.8555	8.100	CPS
SSW5 Background	200.0	127.4	126.8	127.7	0.9085	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: 30-Aug-2021 9:48 After: 30-Aug-2021 14:12

Na 511 Peak Loc	40.00	39.25	39.63	39.77	0.1438	1.000	
Na 511 Peak Res	15.50	16.53	14.18	15.59	1.410	2.000	%
High Voltage	1150	1197	1178	1179	1.520	N/A	V
Na 1785 Peak Loc	142.6	141.8	142.7	142.5	-0.2137	7.000	
Na 1785 Peak Res	8.500	8.905	9.750	7.694	-2.056	2.000	%
Temperature	15.50	26.59	16.42	16.21	-0.2060	N/A	DEGC
Na Count Rate	45.00	12.01	10.01	10.40	0.3906	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 2 Check

Master: Calibration out of date 2-May-2021 10:04 Before: 30-Aug-2021 9:48 After: 30-Aug-2021 14:12

Na 511 Peak Loc	40.00	39.88	39.49	39.73	0.2384	1.000	
Na 511 Peak Res	15.50	15.29	16.86	15.41	-1.455	2.000	%
High Voltage	1150	1122	1103	1104	0.06995	N/A	V
Na 1785 Peak Loc	142.6	142.6	141.7	142.2	0.5125	7.000	
Na 1785 Peak Res	8.500	8.040	9.563	8.344	-1.219	2.000	%
Temperature	15.50	27.21	16.89	17.61	0.7168	N/A	DEGC
Na Count Rate	45.00	12.32	9.873	10.17	0.2963	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: 30-Aug-2021 9:48 After: 30-Aug-2021 14:12

Coincidence Count Rate Ratio	1.000	0.9728	1.012	1.027	0.01555	0.05000	
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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		-330.0	-322.7	-280.7	-379.7
	After		-330.2			
2	Before		-337.3	-322.7	-280.7	-379.7
	After		-337.8			
3	Before		-328.3	-322.7	-280.7	-379.7
	After		-328.2			
4	Before		-319.8	-322.7	-280.7	-379.7
	After		-319.7			
5	Before		-321.6	-322.7	-280.7	-379.7
	After		-321.5			
6	Before		319.3	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: 30-Aug-2021 9:44

After: 30-Aug-2021 14:08

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		1738			
1	Before		1809	1781	2095	1549
	After		1809			
2	Before		1841	1781	2095	1549
	After		1843			
3	Before		1790	1781	2095	1549
	After		1789			
4	Before		1743	1781	2095	1549
	After		1741			
5	Before		1753	1781	2095	1549
	After		1752			
6	Before		-1758	-1781	-1549	-2095
	After		-1757			
7	Before		1781	1781	2095	1549
	After		1781			
		(Minimum) (Nominal) (Maximum)				
Before: 30-Aug-2021 9:44						
After: 30-Aug-2021 14:08						

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		1811	1781	2095	1549
	After		1812			
2	Before		1845	1781	2095	1549
	After		1848			
3	Before		1798	1781	2095	1549
	After		1797			
4	Before		1744	1781	2095	1549
	After		1744			
5	Before		1756	1781	2095	1549
	After		1755			
6	Before		-1749	-1781	-1549	-2095
	After		-1748			
7	Before		1781	1781	2095	1549
	After		1781			
		(Minimum) (Nominal) (Maximum)				
Before: 30-Aug-2021 9:44						
After: 30-Aug-2021 14:08						

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	After		68600	70000	82360	60900
	Before		71610			
2	After		73280	70000	82360	60900
	Before		73380			
3	After		71660	70000	82360	60900
	Before		71610			
4	After		69480	70000	82360	60900
	Before		69440			
5	After		69940	70000	82360	60900
	Before		69900			
6	After		-68200	-70000	-60900	-82360
	Before		-68170			
7	After		70000	70000	82360	60900
	Before		70000			
			(Minimum)	(Nominal)	(Maximum)	

Before: 30-Aug-2021 9:44  
 After: 30-Aug-2021 14:08

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V45						
Idx	Phase	HRLT A4–A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	After		68720	70000	82360	60900
	Before		68690			
1	After		71830	70000	82360	60900
	Before		71850			
2	After		73470	70000	82360	60900
	Before		73570			
3	After		71790	70000	82360	60900
	Before		71780			
4	After		69590	70000	82360	60900
	Before		69550			
5	After		70040	70000	82360	60900
	Before		70000			
6	After		-68410	-70000	-60900	-82360
	Before		-68380			
7	After		70000	70000	82360	60900
	Before		70000			
			(Minimum)	(Nominal)	(Maximum)	

Before: 30-Aug-2021 9:44  
 After: 30-Aug-2021 14:08

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V56						
Idx	Phase	HRLT A5–A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	After		68560	70000	82360	60900
	Before		68540			
1	After		71670	70000	82360	60900
	Before		71670			

2	After		71710	70000	82360	60900
	Before		73290			
3	After		71670	70000	82360	60900
	Before		71610			
4	After		69440	70000	82360	60900
	Before		69420			
5	After		69900	70000	82360	60900
	Before		69870			
6	After		-68260	-70000	-60900	-82360
	Before		-68230			
7	After		70000	70000	82360	60900
	Before		70000			
(Minimum) (Nominal) (Maximum)						
Before: 30-Aug-2021 9:44						
After: 30-Aug-2021 14:08						

High Resolution Laterolog Array – B Wellsite Calibration							
HRLT VTP							
Idx	Phase	HRLT Torpedo-M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum	
0	After		-68090	-70000	-60900	-82360	
	Before		-68080				
1	After		-71480	-70000	-60900	-82360	
	Before		-71500				
2	After		-73140	-70000	-60900	-82360	
	Before		-73240				
3	After		-71550	-70000	-60900	-82360	
	Before		-71540				
4	After		-69410	-70000	-60900	-82360	
	Before		-69380				
5	After		-69860	-70000	-60900	-82360	
	Before		-69830				
6	After		68010	70000	82360	60900	
	Before		67980				
7	After		-70000	-70000	-60900	-82360	
	Before		-70000				
(Minimum) (Nominal) (Maximum)							
Before: 30-Aug-2021 9:44							
After: 30-Aug-2021 14:08							

High Resolution Laterolog Array – B Wellsite Calibration							
HRLT VBD							
Idx	Phase	HRLT Bridle#9-M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum	
0	After		-68130	-70000	-60900	-82360	
	Before		-68110				
1	After		-71580	-70000	-60900	-82360	
	Before		-71580				
2	After		-73230	-70000	-60900	-82360	
	Before		-73230				

	After		-73330			
3	Before		-71640	-70000	-60900	-82360
	After		-71610			
4	Before		-69450	-70000	-60900	-82360
	After		-69420			
5	Before		-69900	-70000	-60900	-82360
	After		-69870			
6	Before		68110	70000	82360	60900
	After		68060			
7	Before		-70000	-70000	-60900	-82360
	After		-70000			
			(Minimum)	(Nominal)	(Maximum)	
Before: 30-Aug-2021 9:44						
After: 30-Aug-2021 14:08						

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: 30-Aug-2021 9:44						
After: 30-Aug-2021 14:08						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT MV						
Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-320.3	-322.7	-280.7	-379.7
	After		-320.6			
1	Before		-324.9	-322.7	-280.7	-379.7
	After		-325.2			
2	Before		-330.7	-322.7	-280.7	-379.7
	After		-331.4			
3	Before		-320.0	-322.7	-280.7	-379.7
	After		-320.0			

4	After		-320.2	-322.7	-280.7	-379.7
	Before		-308.7			
5	After		-325.6	-322.7	-280.7	-379.7
	Before		-325.4			
6	After		326.9	322.7	379.7	280.7
	Before		326.8			
7	After		-322.7	-322.7	-280.7	-379.7
	Before		-322.7			
			(Minimum)	(Nominal)	(Maximum)	
Before: 30-Aug-2021 9:44						
After: 30-Aug-2021 14:08						

**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	Phase	LS Cs Resolution Bkg %	Value	Phase	LSW1 Background CPS	Value
Master		7.698	Master		7.989	Master		71.96
Before		7.709	Before		8.030	Before		70.94
After		7.648	After		7.985	After		70.91
7.000 (Minimum) 9.000 (Nominal) 11.000 (Maximum)			7.000 (Minimum) 9.000 (Nominal) 11.000 (Maximum)			55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)		
Phase	LSW2 Background CPS	Value	Phase	LSW3 Background CPS	Value	Phase	LSW4 Background CPS	Value
Master		65.02	Master		146.1	Master		183.2
Before		63.76	Before		144.7	Before		180.1
After		63.62	After		144.9	After		181.6
50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)			110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)			140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)		
Phase	LSW5 Background CPS	Value	Phase	SSW1 Background CPS	Value	Phase	SSW2 Background CPS	Value
Master		424.9	Master		68.97	Master		118.2
Before		423.7	Before		68.68	Before		118.5
After		420.9	After		68.89	After		117.8
330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)			55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)			100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)		
Phase	SSW3 Background CPS	Value	Phase	SSW4 Background CPS	Value	Phase	SSW5 Background CPS	Value
Master		331.3	Master		178.4	Master		127.4
Before		328.8	Before		177.7	Before		126.8
After		327.6	After		176.9	After		127.7
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: 30-Aug-2021 9:49			After: 30-Aug-2021 14:12		

**Litho-Density Spectroscopy Cartridge - B / Equipment Identification**

**Primary Equipment:**

LDSC Cartridge	LDSC - B	521
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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  
Gamma Source Radioactive

HNSH - BA

102

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		16.53	Master		1197
Before		39.63	Before		14.18	Before		1178
After		39.77	After		15.59	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		142.7	Before		9.750	Before		16.42
After		142.5	After		7.694	After		16.21
	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		10.01						
After		10.40						
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							
Master: Calibration out of date 2-May-2021 10:04			Before: 30-Aug-2021 9:48			After: 30-Aug-2021 14:12		

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		16.86	Before		1103
After		39.73	After		15.41	After		1104
	37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)			12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)			900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	
Phase	Na 1785 Peak Loc	Value	Phase	Na 1785 Peak Res %	Value	Phase	Temperature DEGC	Value
Master		142.6	Master		8.040	Master		27.21
Before		141.7	Before		9.563	Before		16.89
After		142.2	After		8.344	After		17.61
	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		10.01						
After		10.40						
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							



Master		12.32
Before	EXCEEDS LIMIT	9.873
After		10.17
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)	

Master: Calibration out of date 2-May-2021 10:04 Before: 30-Aug-2021 9:48 After: 30-Aug-2021 14:12

Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		0.9728
Before		1.012
After		1.027
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)	

Master: Calibration out of date 2-May-2021 10:04  
 Before: 30-Aug-2021 9:48  
 After: 30-Aug-2021 14:12

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



Calibrations

MAXIS Field Log

Company: International Ocean Discovery Program



Well: Expedition 396, Site U1569A

Field: Mid-Norwegian Cont. Margin Magmatism

Rig: JOIDES Resolution

Country: Iceland

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