Schlumberger

Company: **International Ocean Discovery Program**

Well: **Expedition 396, Site U1574A**
Field: **Mid−Norwegian Cont. Margin Magmatism**
Rig: **JOIDES Resolution** Country: **Iceland**

Rig: JOIDES Resolution
Field: Mid−Norwegian Cont. Margin Ma
Location: Latitude: N 68.6002
Well: Expedition 396, Site U1574A
Company: International Ocean Discovery Pr

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

LOCATION

Latitude: N 68.6002
Longitude: E 4.6406

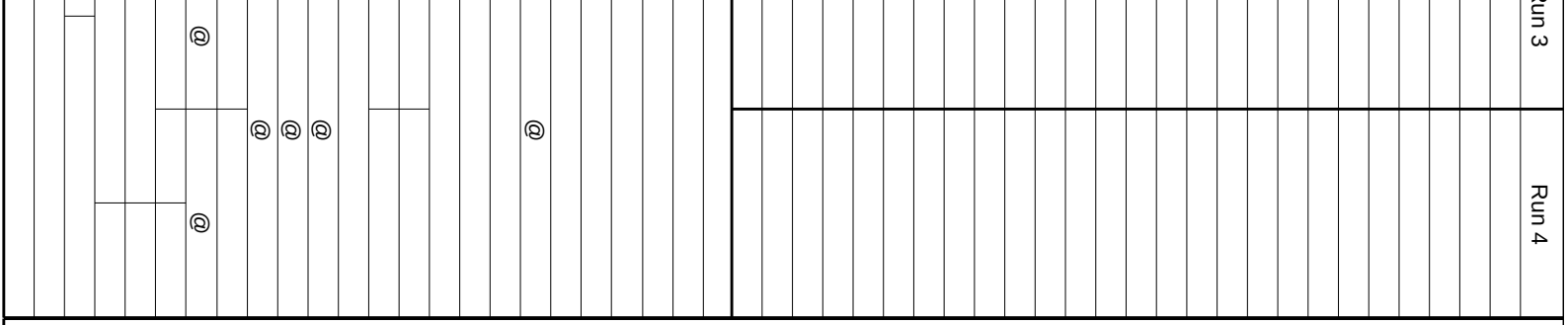
Elev.: K.B. 0.00 m
G.L. −2836.40 m
D.F. 0.00 m

Permanent Datum: Sea Floor — Elev.: −2836.40 m
Log Measured From: Rig Floor — 2836.40 m above Perm. Datum
Drilling Measured From: Rig Floor

Ocean: Atlantic	Max. Well Deviation 5 deg	Longitude E 4.6406	Latitude N 68.6002

	Run 1	Run 2	R
Logging Date	29−Sep−2021		
Run Number	1		
Depth Driller	3096.4 m		
Schlumberger Depth	3046 m		
Bottom Log Interval	3043 m		
Top Log Interval	2836.4 m		
Casing Driller Size @ Depth	5.500 in @ 2940 m	@	
Casing Schlumberger	2940 m		
Bit Size	9.875 in		
Type Fluid In Hole	Barite Weighted Mud		
MUD Density / Viscosity	1.26 g/cm3 /		
MUD Fluid Loss / PH	/ 8.07		
MUD Source Of Sample	Mudpit		
RM @ Measured Temperature	0.220 ohm.m @ 23 degC	@	
RMF @ Measured Temperature	@	@	
RMC @ Measured Temperature	@	@	
Source RMF / RMC	N/A / N/A		
RM @ MRT / RMF @ MRT	0.369 @ 5 / @ 5	@	@
Maximum Recorded Temperatures	5 degC		
Circulation Stopped Time	29−Sep−2021 5:00		
Logger On Bottom Time	29−Sep−2021 11:55		
Unit Number / Location	627314 Larose, LA		
Recorded By	C. Furman		
Witnessed By	S. Midgley		

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



DISCLAIMER

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OTHER SERVICES1

OS1: FMS

OS2: DSI

REMARKS: RUN NUMBER 1

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

Drill pipe set at 2940mbrf (104mbrf).

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

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

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

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

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

used for downlog corrections.

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

Caliper closed prior to shutting off compensator at 2975mbrf for pipe entry

Downlog flipped and note the caliper closed logging down.

RUN 1

SERVICE ORDER #:

PROGRAM VERSION: 19C0−187

FLUID LEVEL:

LOGGED INTERVAL	START	STOP

RUN 2

SERVICE ORDER #:

PROGRAM VERSION:

FLUID LEVEL:

LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1

SURFACE EQUIPMENT

GSR−U 6098

WITM (DTS)−A

DOWNHOLE EQUIPMENT

LEH−QT 31.80

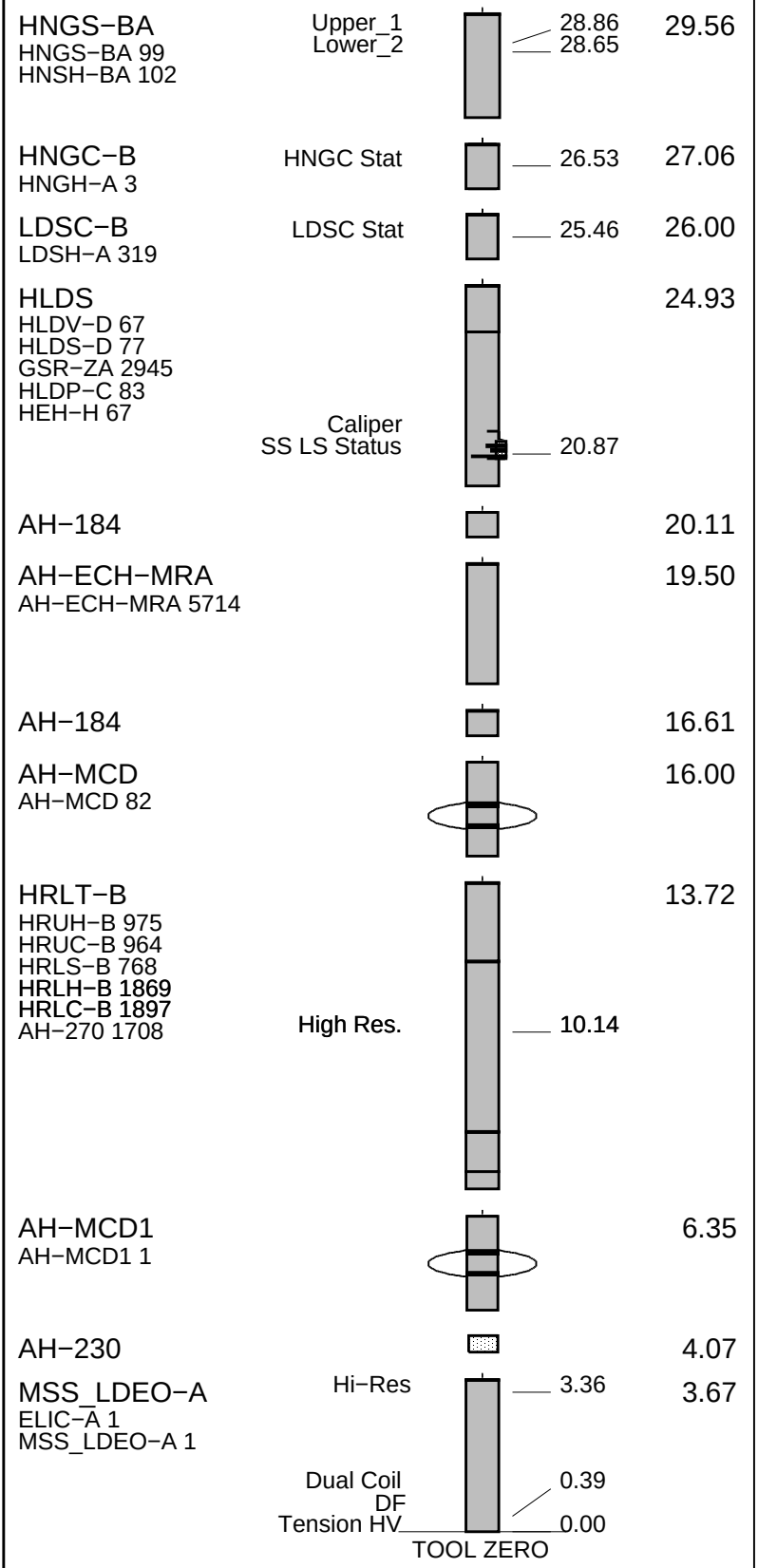
LEH−QT 301

AH−369 30.91

DTC−H 30.48

ECH−KC 9842

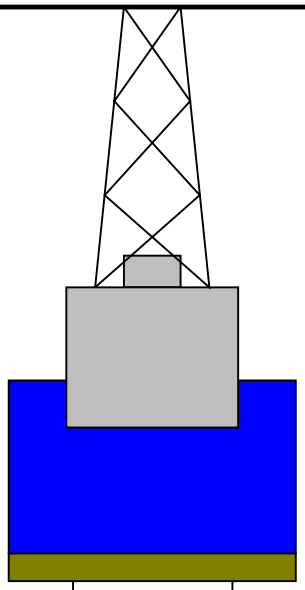
RUN 2



MAXIMUM STRING DIAMETER 3.75 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

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

	OD	ID	MD
Kelly Bushing Elevation			0.0
Derrick Floor Elevation			0.0



MD	OD	ID	
0.0	5.500	4.125	
2836.4	9.875		Sea Floor
2940.0	5.500	4.125	Pipe
3096.4	9.875		TD – Driller

Schlumberger

Downlog

MAXIS Field Log

Company: International Ocean Discovery Program **Well: Expedition 396, Site U1574A**

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_017LUP		PRODUCER	29−Sep−2021 11:28	3046.2 M	2795.8 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_018PUP	FN:18	PRODUCER	29−Sep−2021 11:29	3046.2 M	2795.8 M
RTB	MSS_LDEO_HRLA_LDL_018PUP	FN:19	PRODUCER	29−Sep−2021 11:29	3046.2 M	2795.8 M

OP System Version: 19C0−187

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

DTC−H 19C0−187

PIP SUMMARY

Time Mark Every 60 S

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

Area1
From HCGR to HSGR

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

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

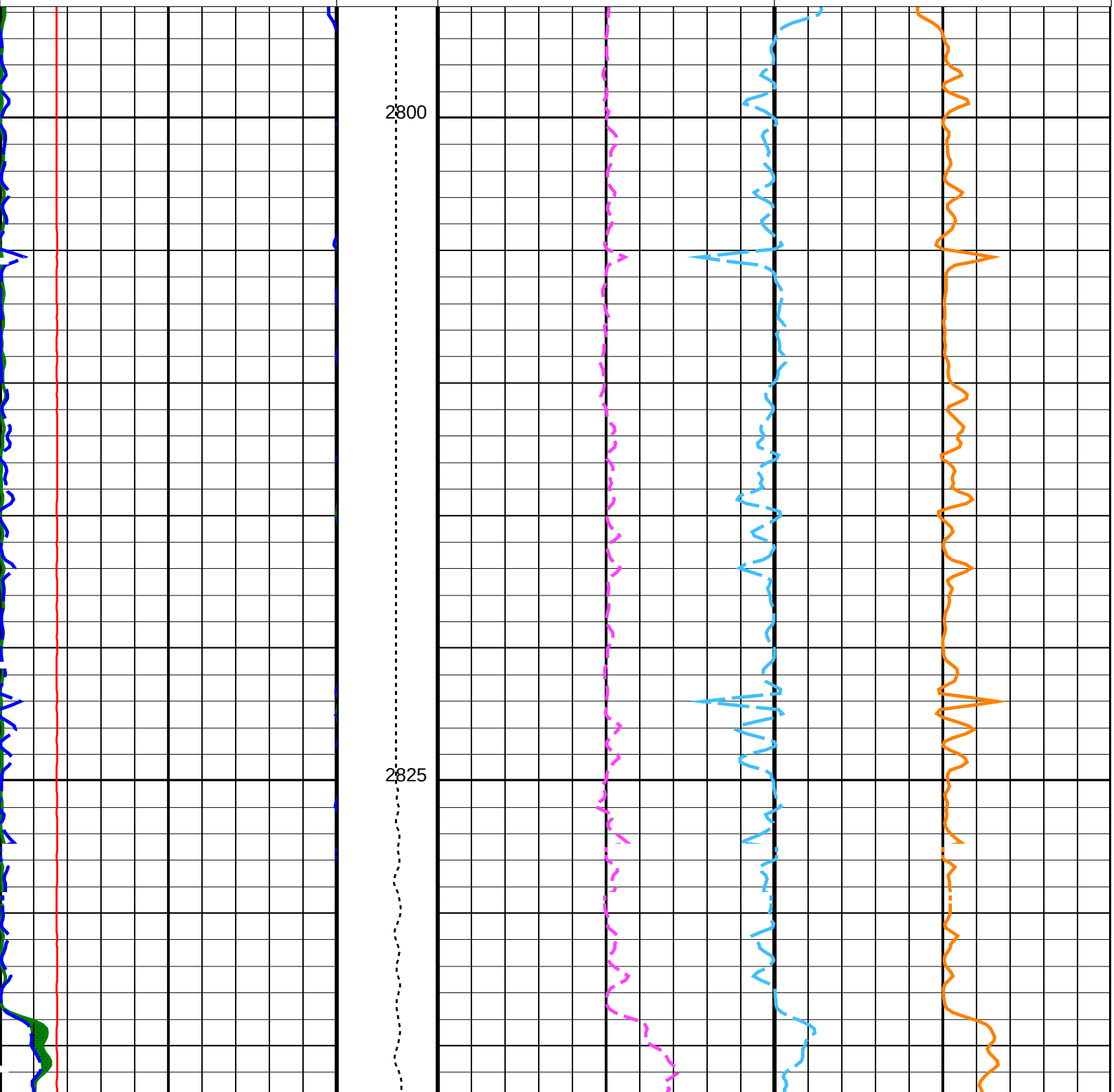
HNGS Uranium (HURA)
−5 (PPM) 5

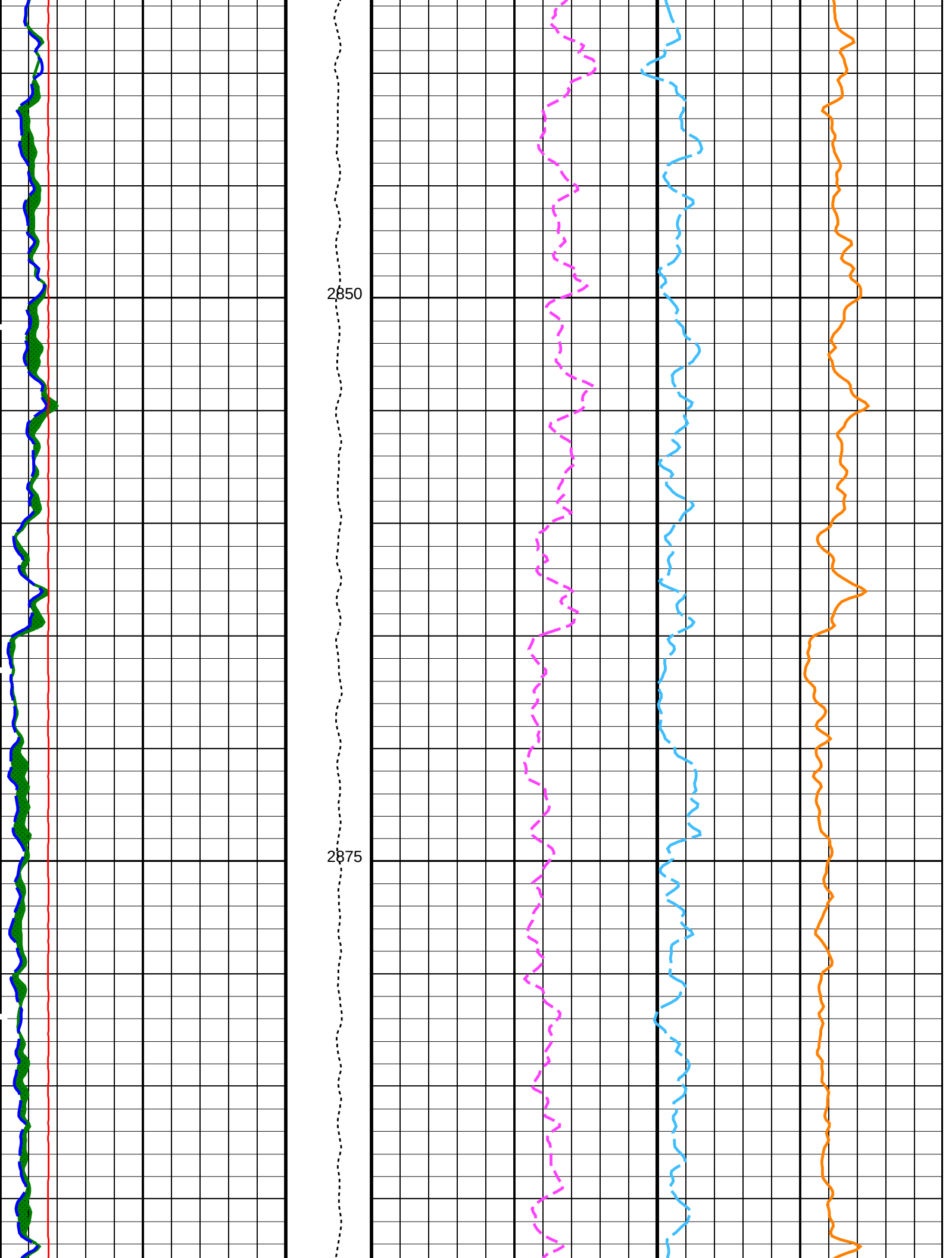
HLDS Caliper (LCAL)
0 (IN) 20

Tension (TENS) (LBF)
10000 0

HNGS Thorium (HTHO)
−5 (PPM) 5

HNGS Potassium (HFK)
−0.01 (V/V) 0.01

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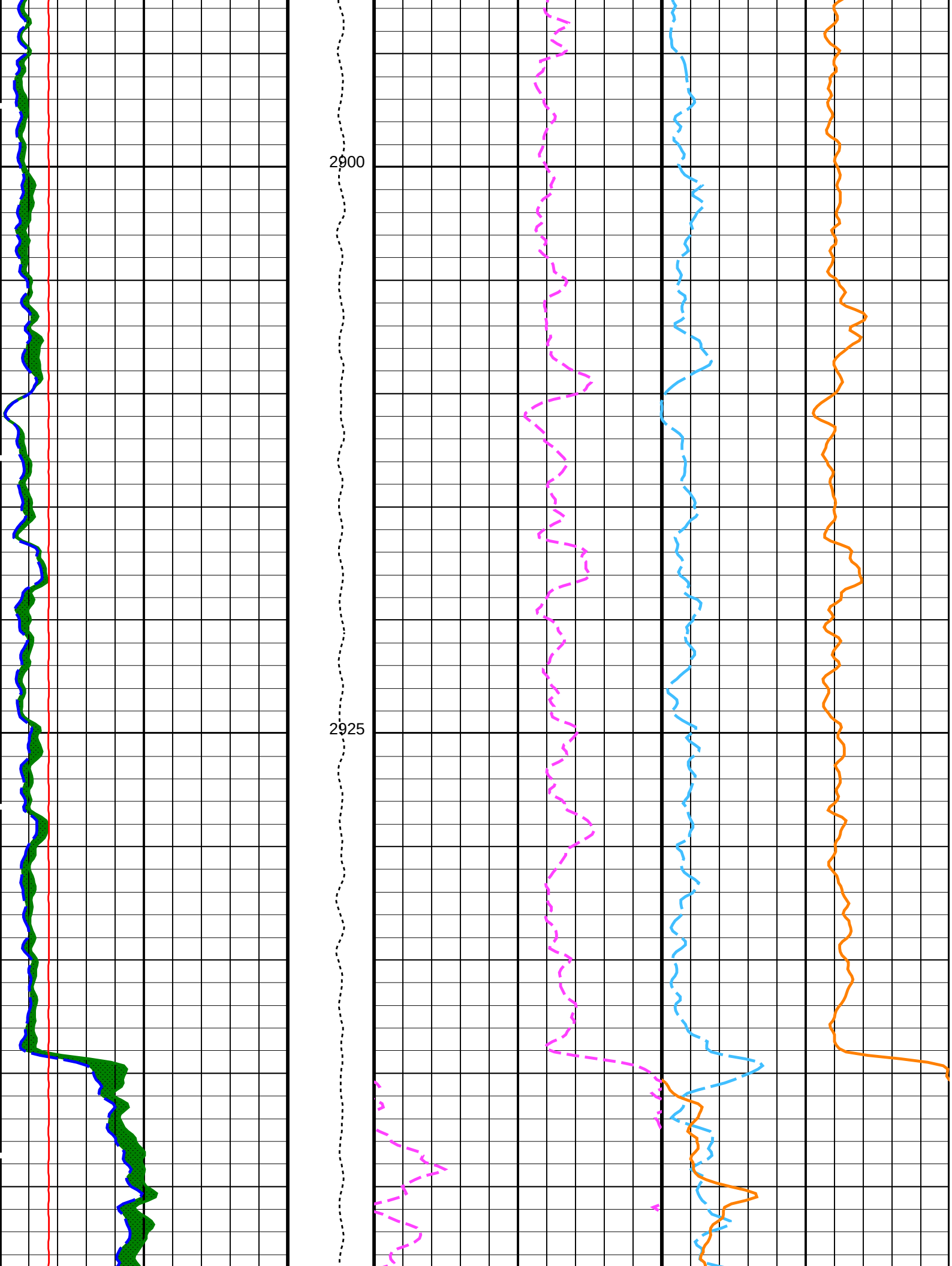
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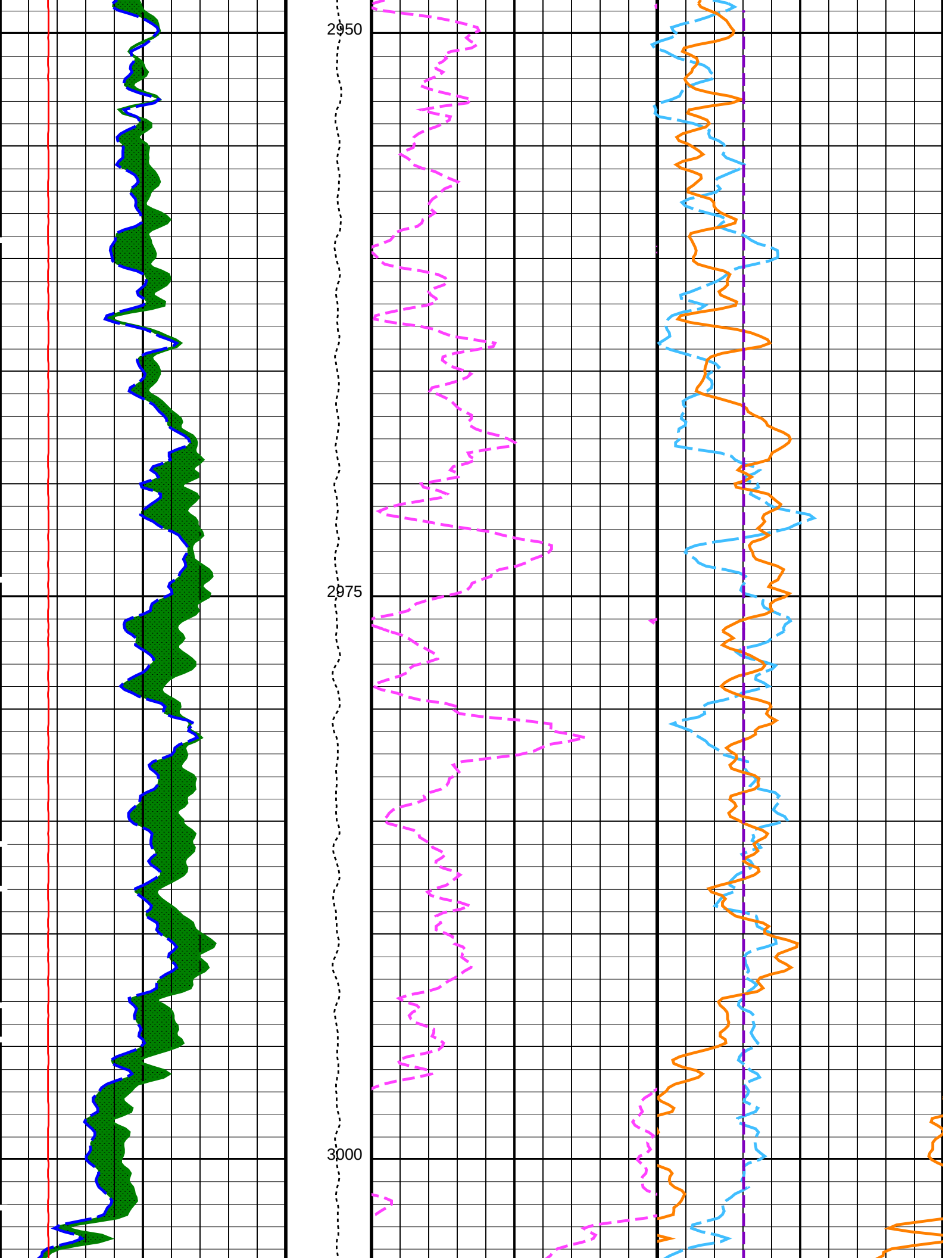
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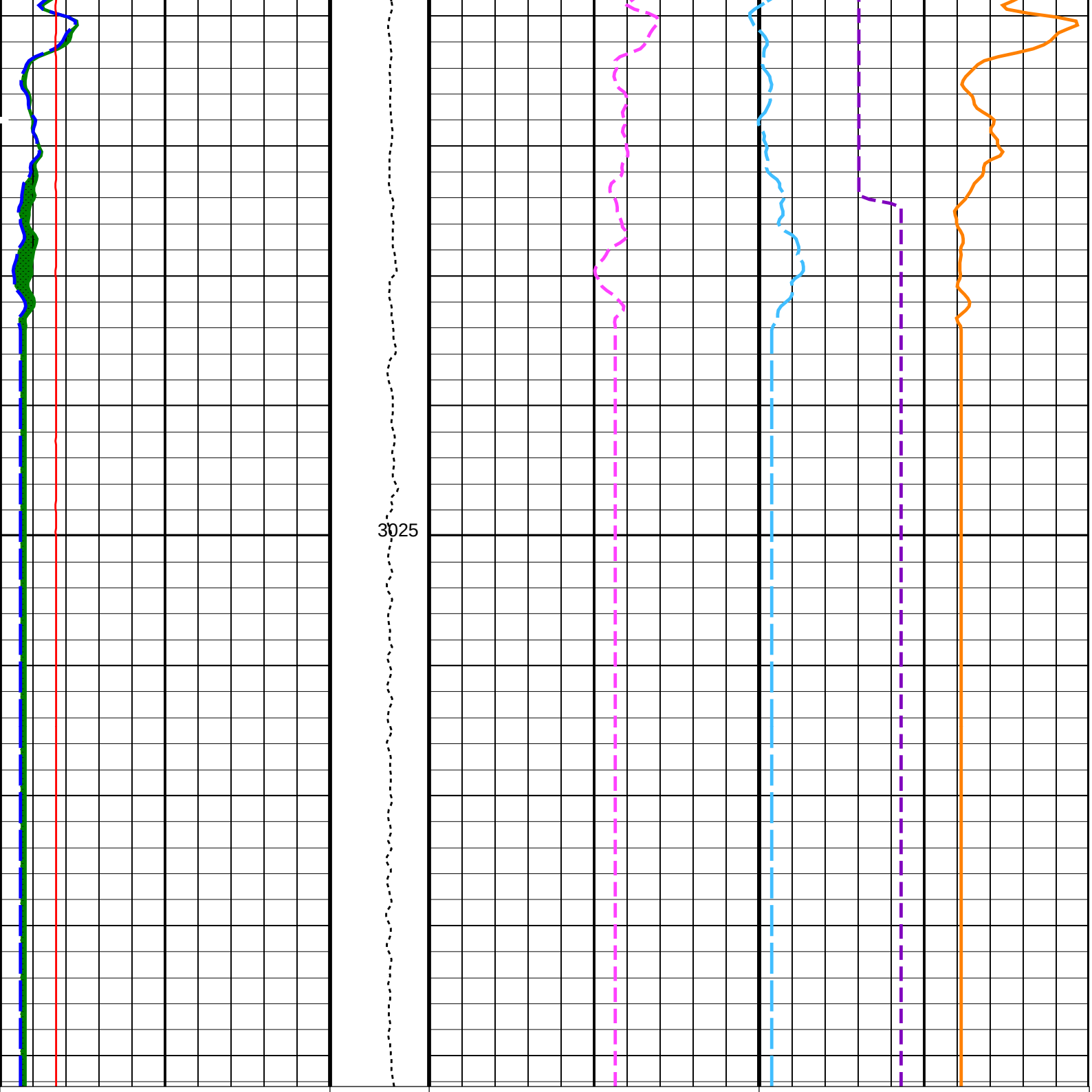


HLDS Caliper (LCAL)
0 (IN) 20

Tension (TENS) (LBF)
10000 0

HNGS Thorium (HTHO)
−5 (PPM) 5

HNGS Potassium (HFK)
−0.01 (V/V) 0.01

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

HNGS Uranium (HURA)
−5 (PPM) 5

Area1
From HCGR to HSGR

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

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

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	HRLT−B: High Resolution Laterolog Array − B		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	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	−0.0120301	
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	0.928871	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.942596	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	NORMAL	

Format: HNGSYields **Vertical Scale: 1:200** **Graphics File Created: 29−Sep−2021 11:29**

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_017LUP	PRODUCER	29−Sep−2021 11:28	3046.2 M	2795.8 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_018PUP	FN:18	PRODUCER	29−Sep−2021 11:29		
RTB	MSS_LDEO_HRLA_LDL_018PUP	FN:19	PRODUCER	29−Sep−2021 11:29		

Company: International Ocean Discovery Program **Well: Expedition 396, Site U1574A**

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_017LUP	PRODUCER	29−Sep−2021 11:28	3046.2 M	2795.8 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_018PUP	FN:18	PRODUCER	29−Sep−2021 11:29	3046.2 M	2795.8 M
RTB	MSS_LDEO_HRLA_LDL_018PUP	FN:19	PRODUCER	29−Sep−2021 11:29	3046.2 M	2795.8 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

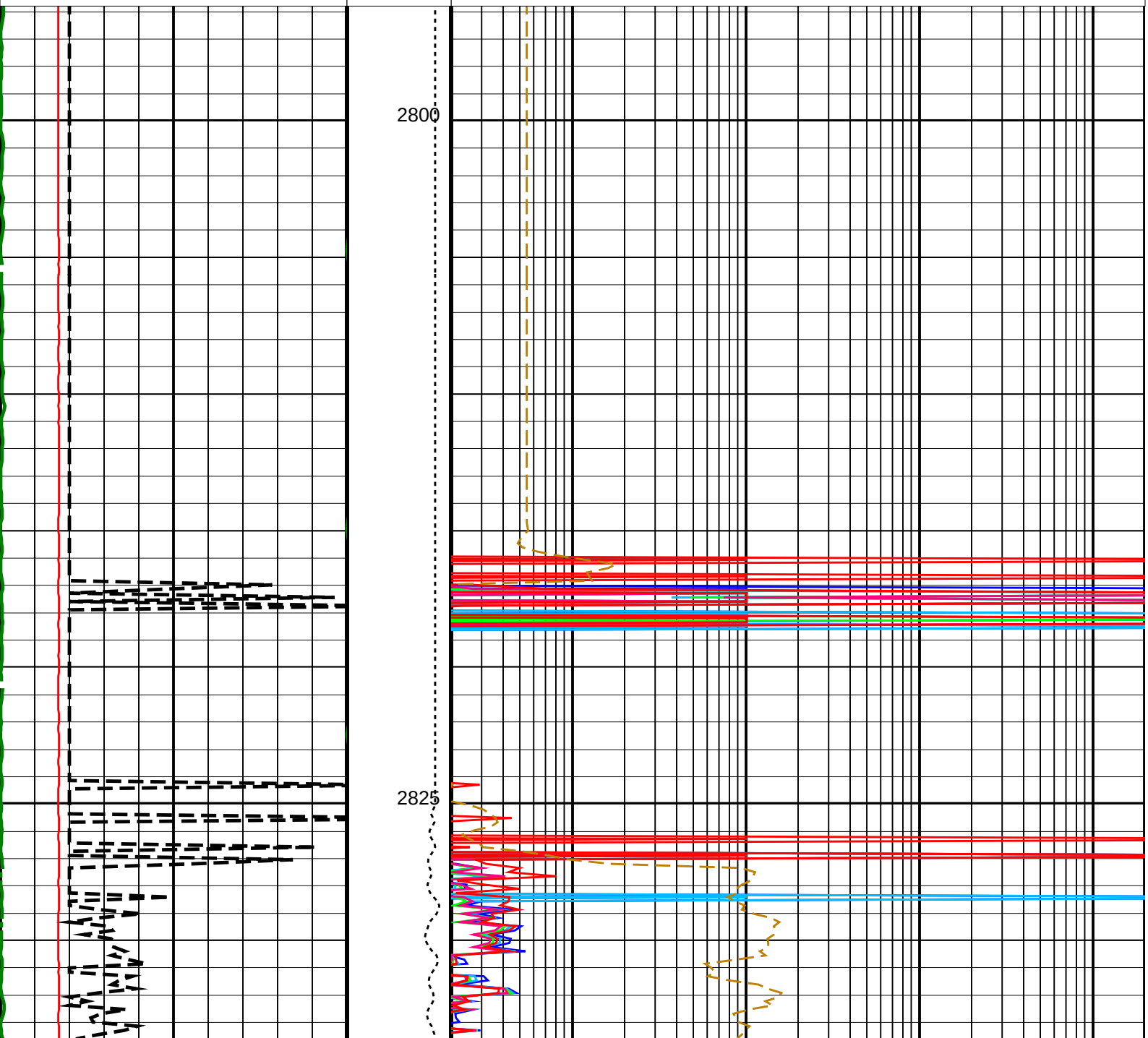
Invasion Diameter (DI_HRLT)
0 (IN) 50

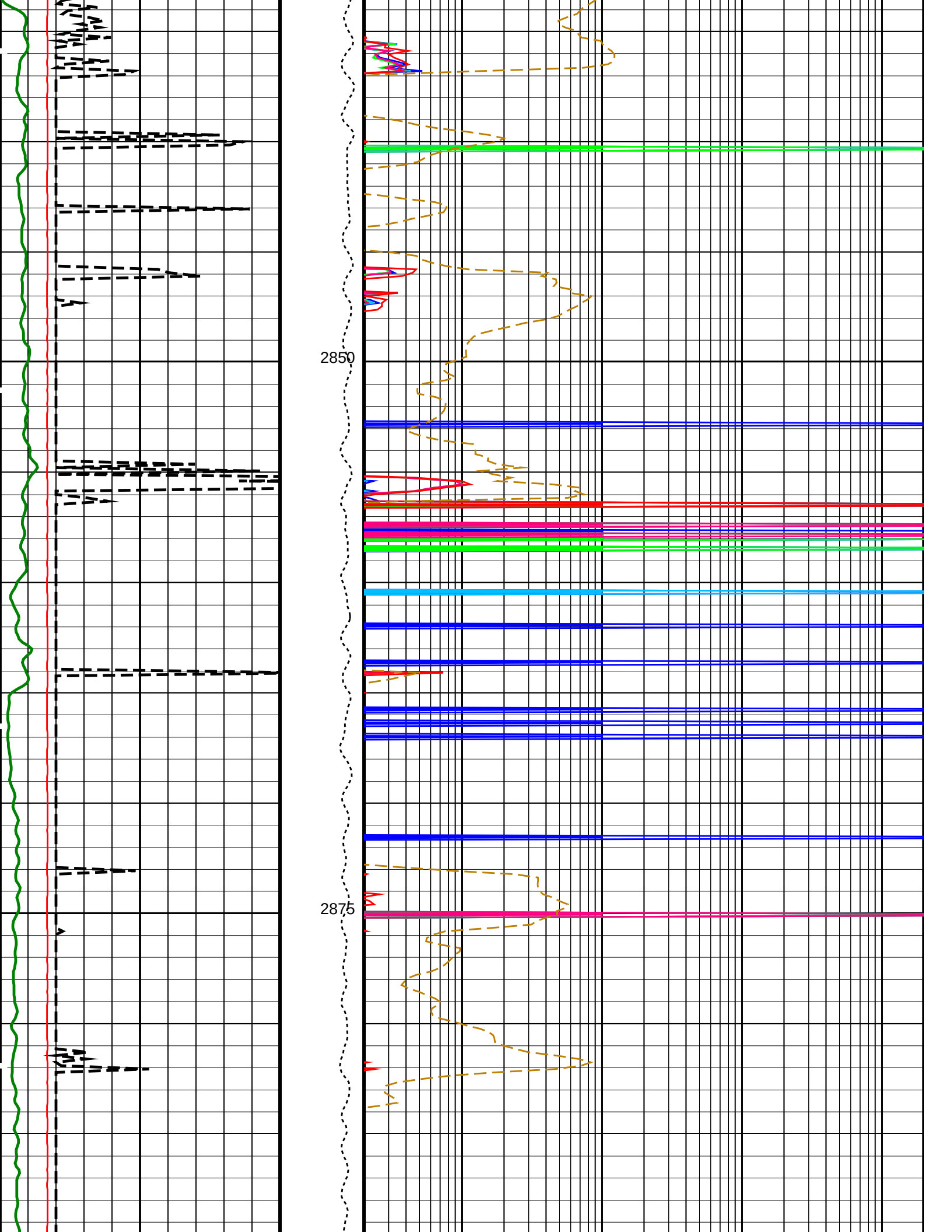
HRLT Resistivity 2 (RLA2)
0.2 (OHMM) 2000

HLDS Caliper (LCAL)
0 (IN) 20

Tension (TENS) (LBF)
0 5000

HRLT Resistivity 1 (RLA1)
0.2 (OHMM) 2000

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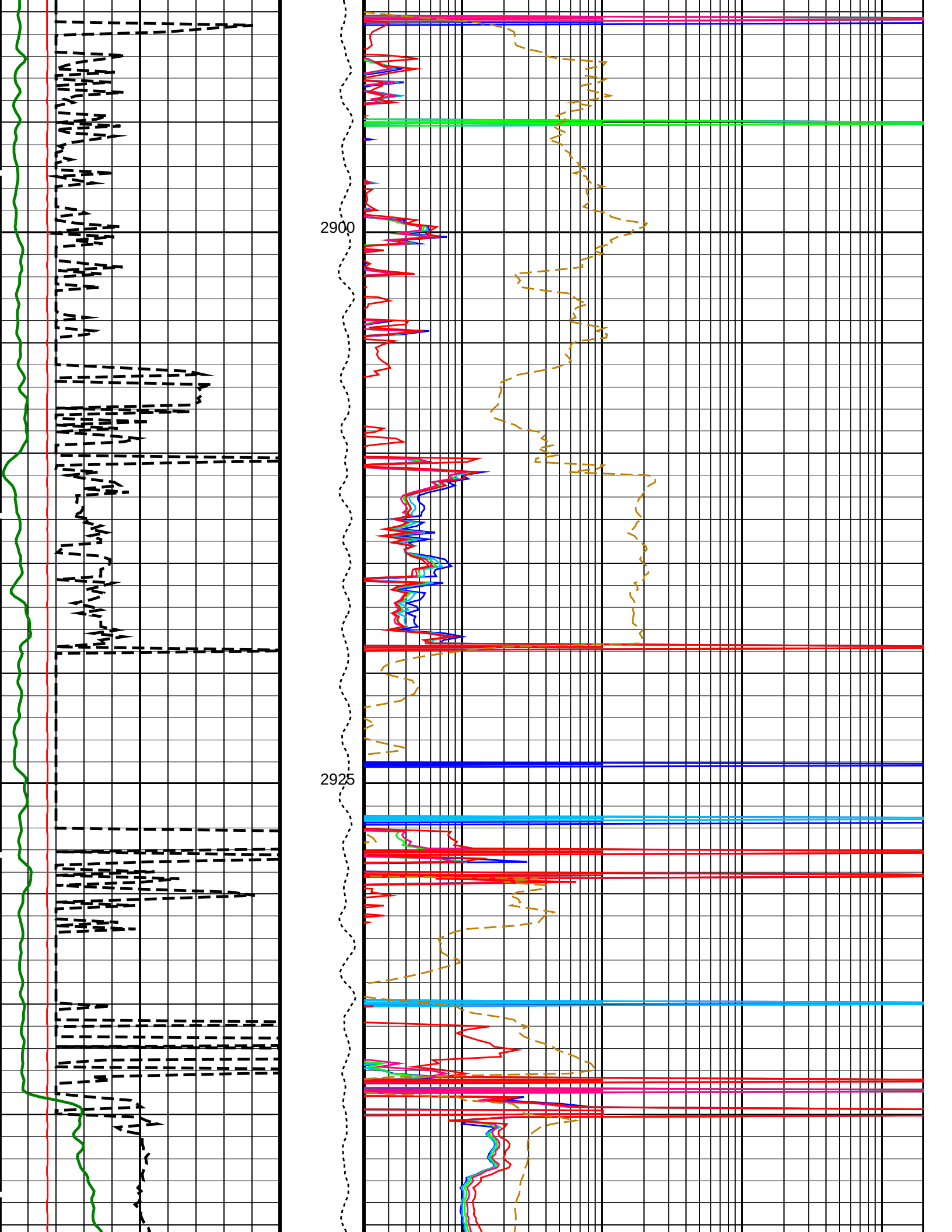
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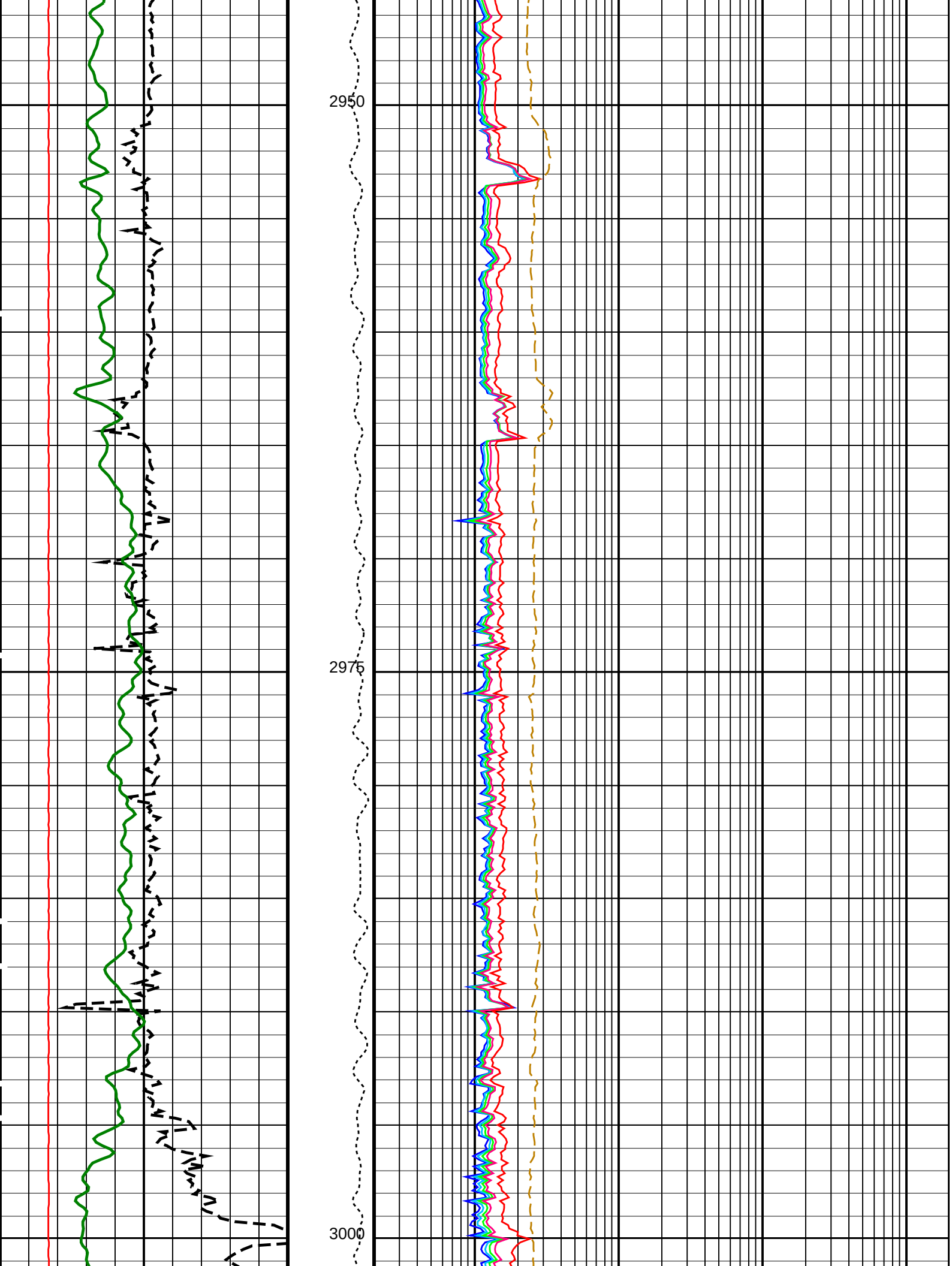
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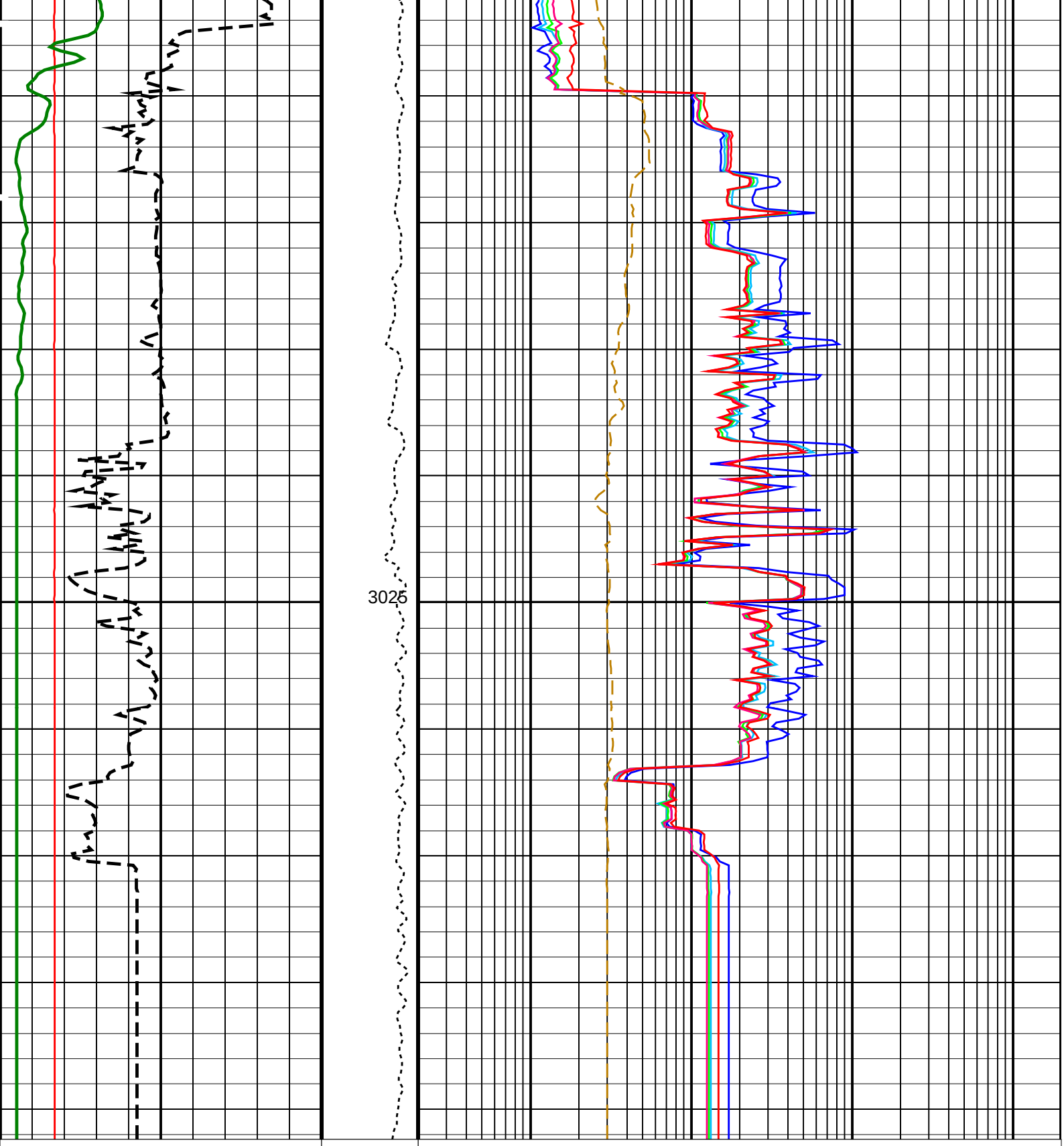


HLDS Caliper (LCAL)
0 (IN) 20

Invasion Diameter (DI_HRLT)
0 (IN) 50

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

Tension (TENS) (LBF)
0 5000

HRLT Resistivity 1 (RLA1)
0.2 (OHMM) 2000

HRLT Resistivity 2 (RLA2)
0.2 (OHMM) 2000

HRLT Resistivity 3 (RLA3)
0.2 (OHMM) 2000

HRLT Resistivity 4 (RLA4)
0.2 (OHMM) 2000

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

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	HRLT−B: High Resolution Laterolog Array − B		
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	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	
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	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	−0.0120301	
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	0.928871	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.942596	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	NORMAL	
TD	Total Depth	3096.4	M

Format: HRLT Vertical Scale: 1:200 Graphics File Created: 29−Sep−2021 11:29

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_017LUP	PRODUCER	29−Sep−2021 11:28	3046.2 M	2795.8 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_018PUP	FN:18	PRODUCER	29−Sep−2021 11:29	
RTB	MSS_LDEO_HRLA_LDL_018PUP	FN:19	PRODUCER	29−Sep−2021 11:29	

Company: International Ocean Discovery Program **Well: Expedition 396, Site U1574A**

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_017LUP	PRODUCER	29−Sep−2021 11:28	3046.2 M	2795.8 M

Output DLIS Files

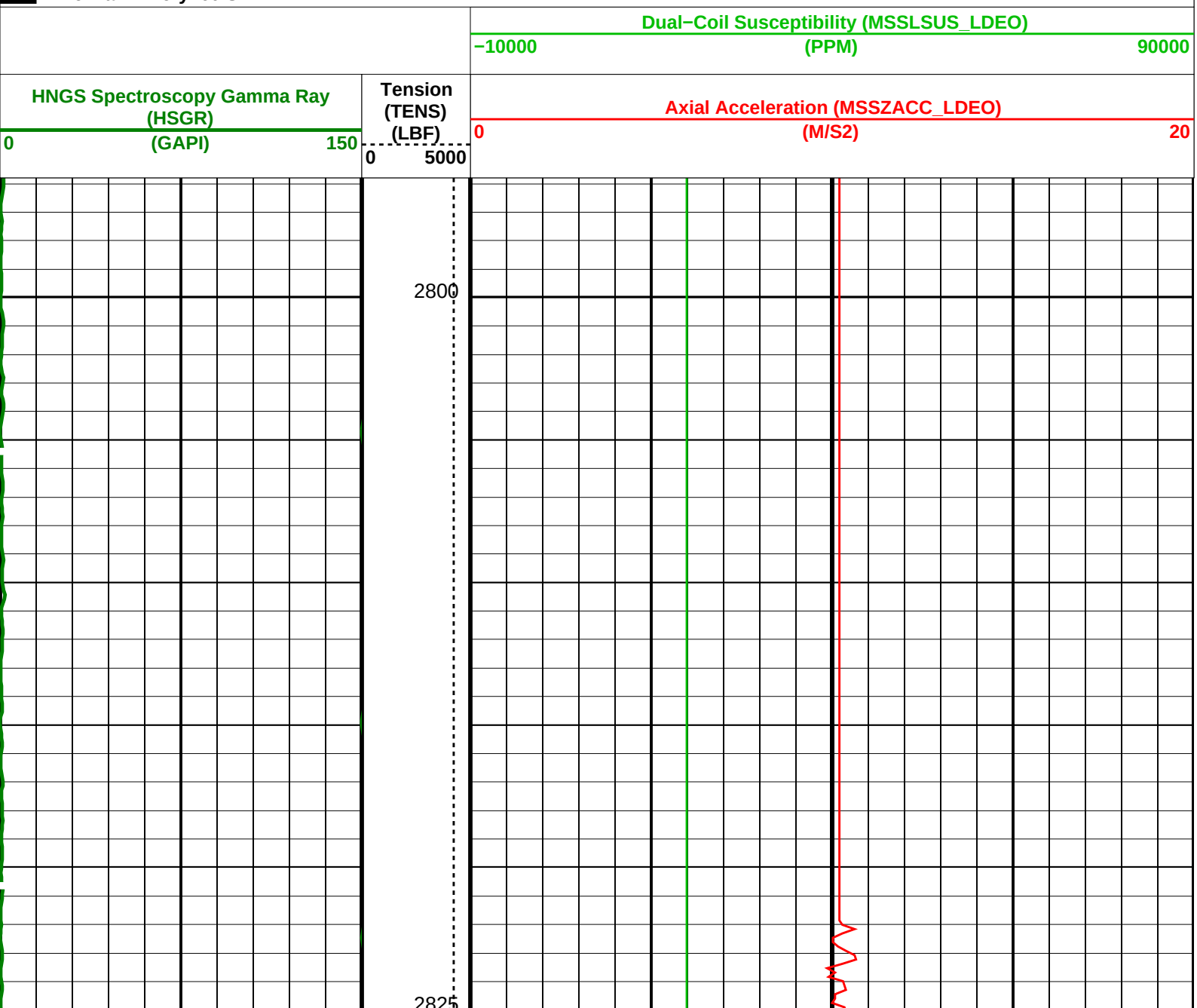
DEFAULT	MSS_LDEO_HRLA_LDL_018PUP	FN:18	PRODUCER	29−Sep−2021 11:29	3046.2 M	2795.8 M
RTB	MSS_LDEO_HRLA_LDL_018PUP	FN:19	PRODUCER	29−Sep−2021 11:29	3046.2 M	2795.8 M

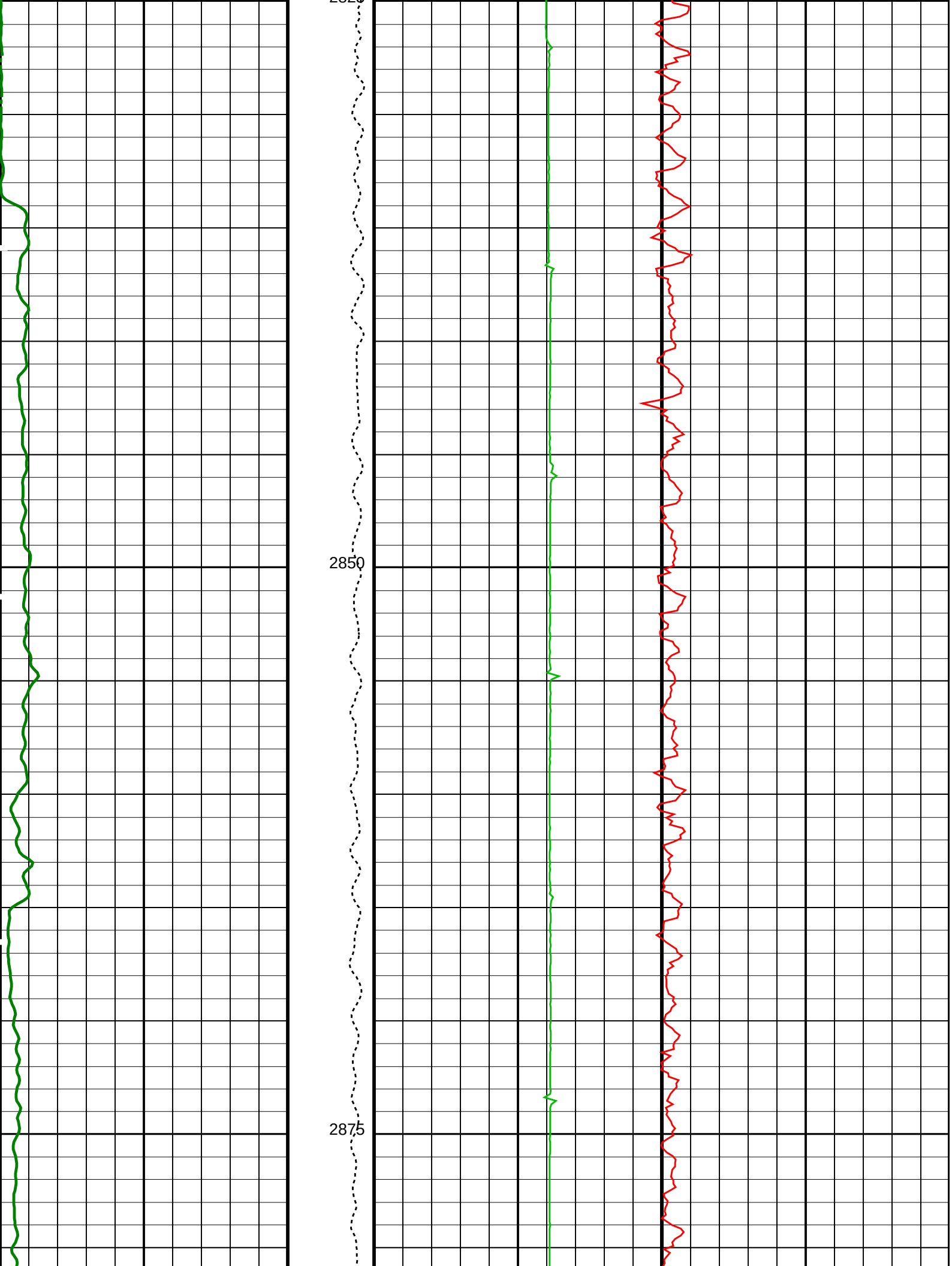
OP System Version: 19C0−187

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

PIP SUMMARY

Time Mark Every 60 S

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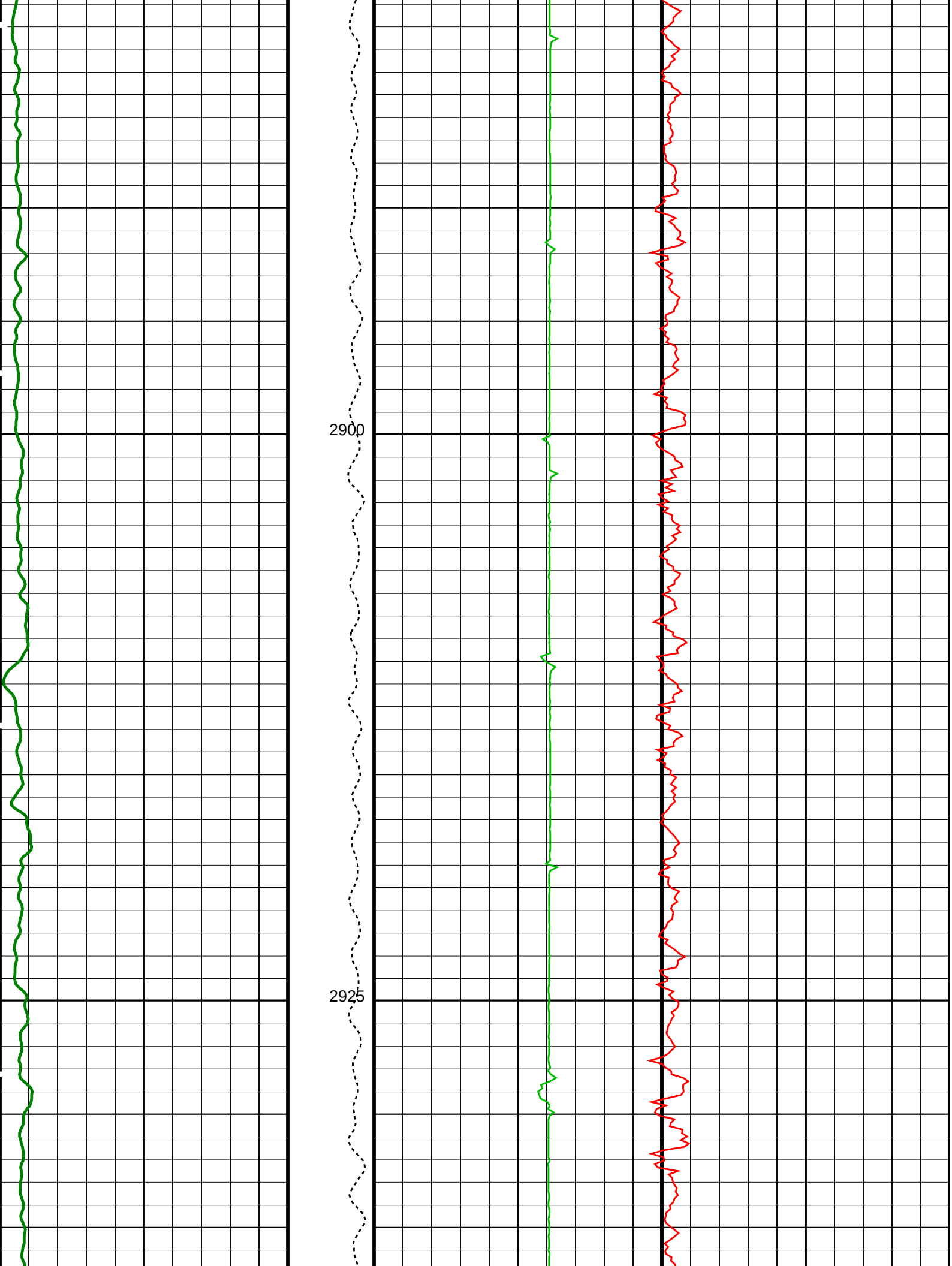
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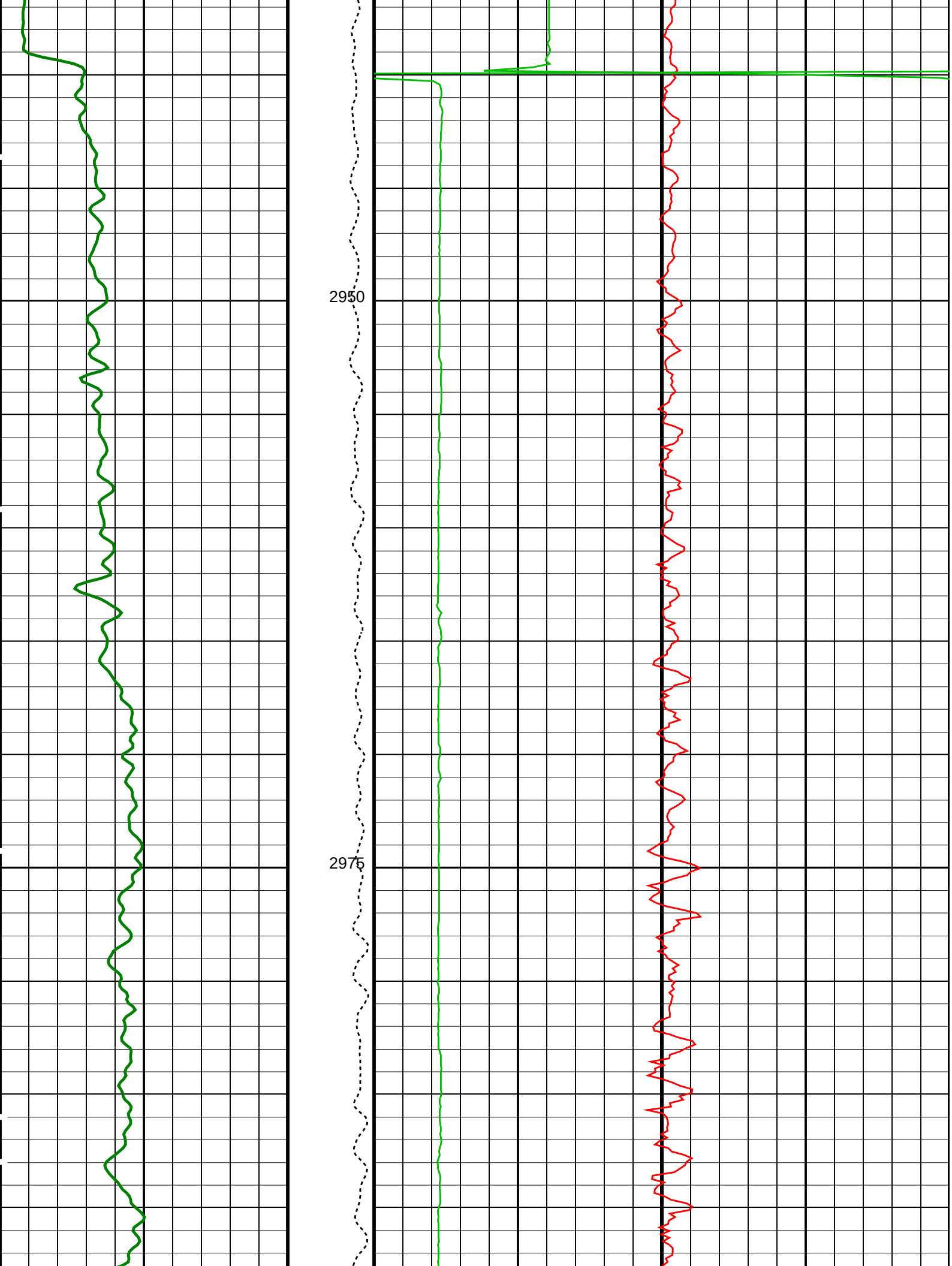
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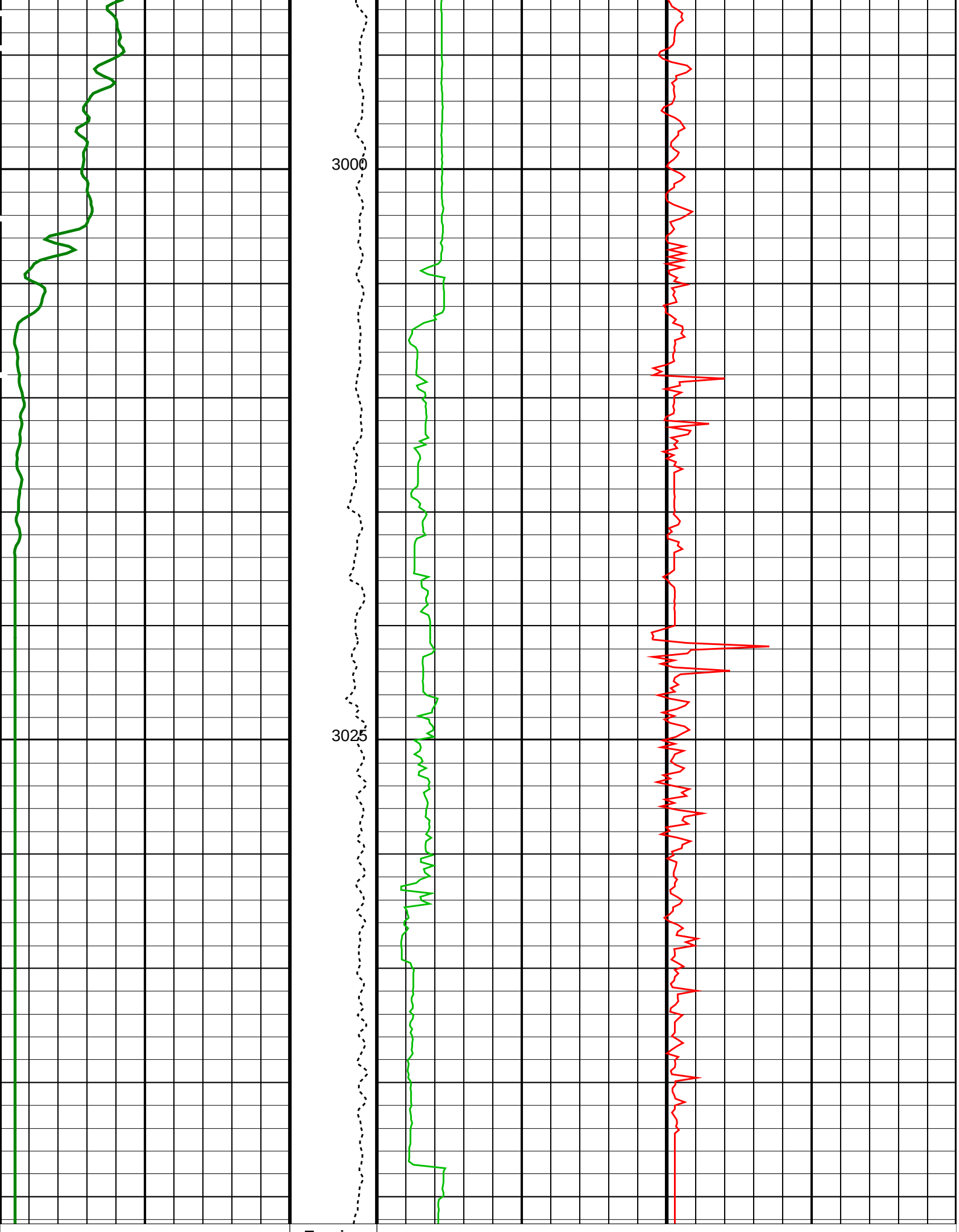


HNGS Spectroscopy Gamma Ray (HSGR)

Tension (TENS) (LBF)

Axial Acceleration (MSSZACC_LDEO)

0 (M/S2) 20

0	(GAPI)	150	0	5000

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	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	−0.0120301	
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	0.928871	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.942596	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	NORMAL	

Format: MSS_Logging Vertical Scale: 1:200 Graphics File Created: 29−Sep−2021 11:29

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_017LUP	PRODUCER	29−Sep−2021 11:28	3046.2 M	2795.8 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_018PUP	FN:18	PRODUCER	29−Sep−2021 11:29
RTB	MSS_LDEO_HRLA_LDL_018PUP	FN:19	PRODUCER	29−Sep−2021 11:29

Schlumberger

First Pass

Company: International Ocean Discovery Program | Well: Expedition 396, Site U1574A

Output DLIS Files

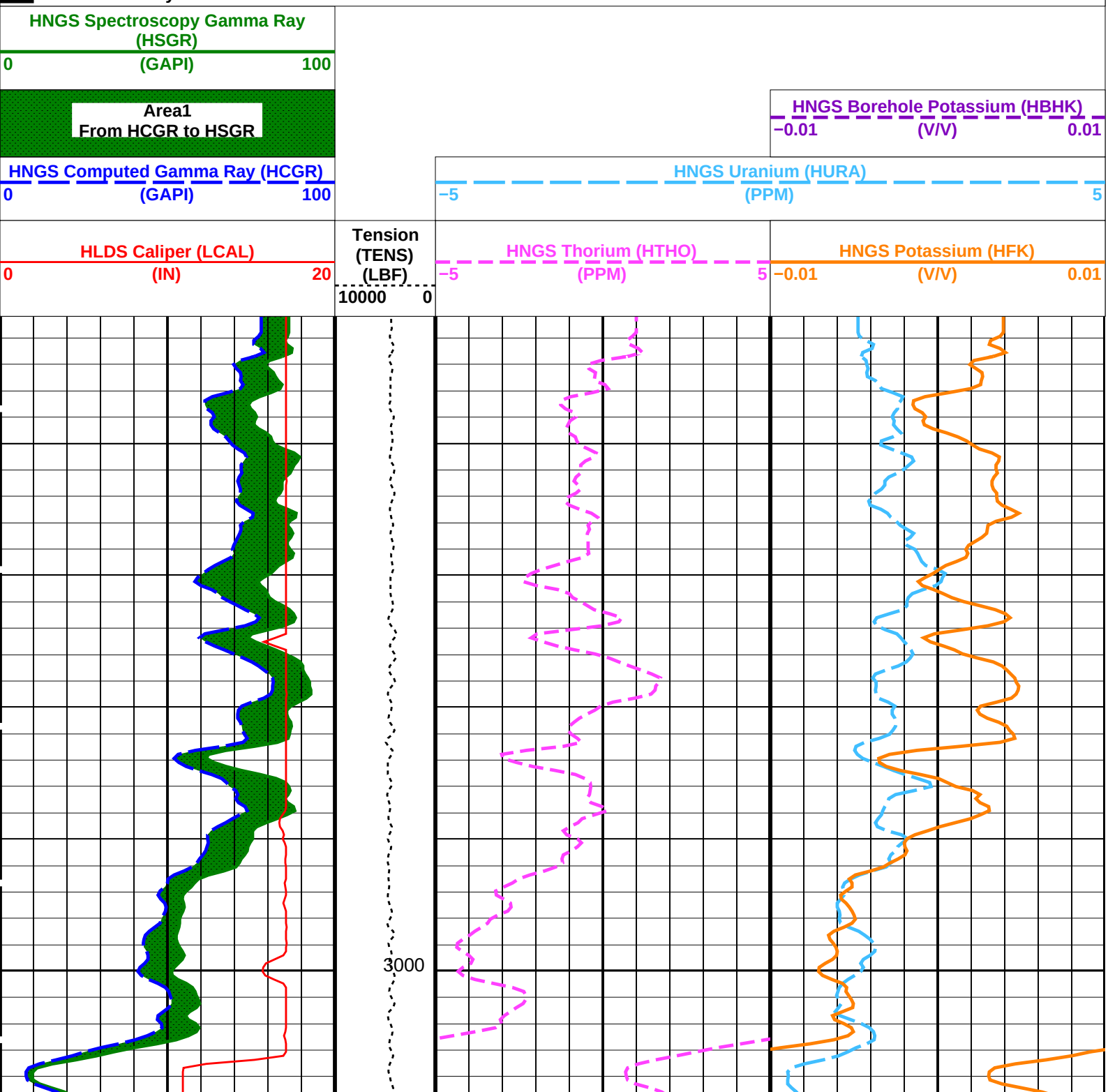
DEFAULT	MSS_LDEO_HRLA_LDL_011LUP	FN:10	PRODUCER	29−Sep−2021 10:12	3045.0 M	2976.4 M
RTB	MSS_LDEO_HRLA_LDL_011LUP	FN:11	PRODUCER	29−Sep−2021 10:12	3045.0 M	2976.4 M

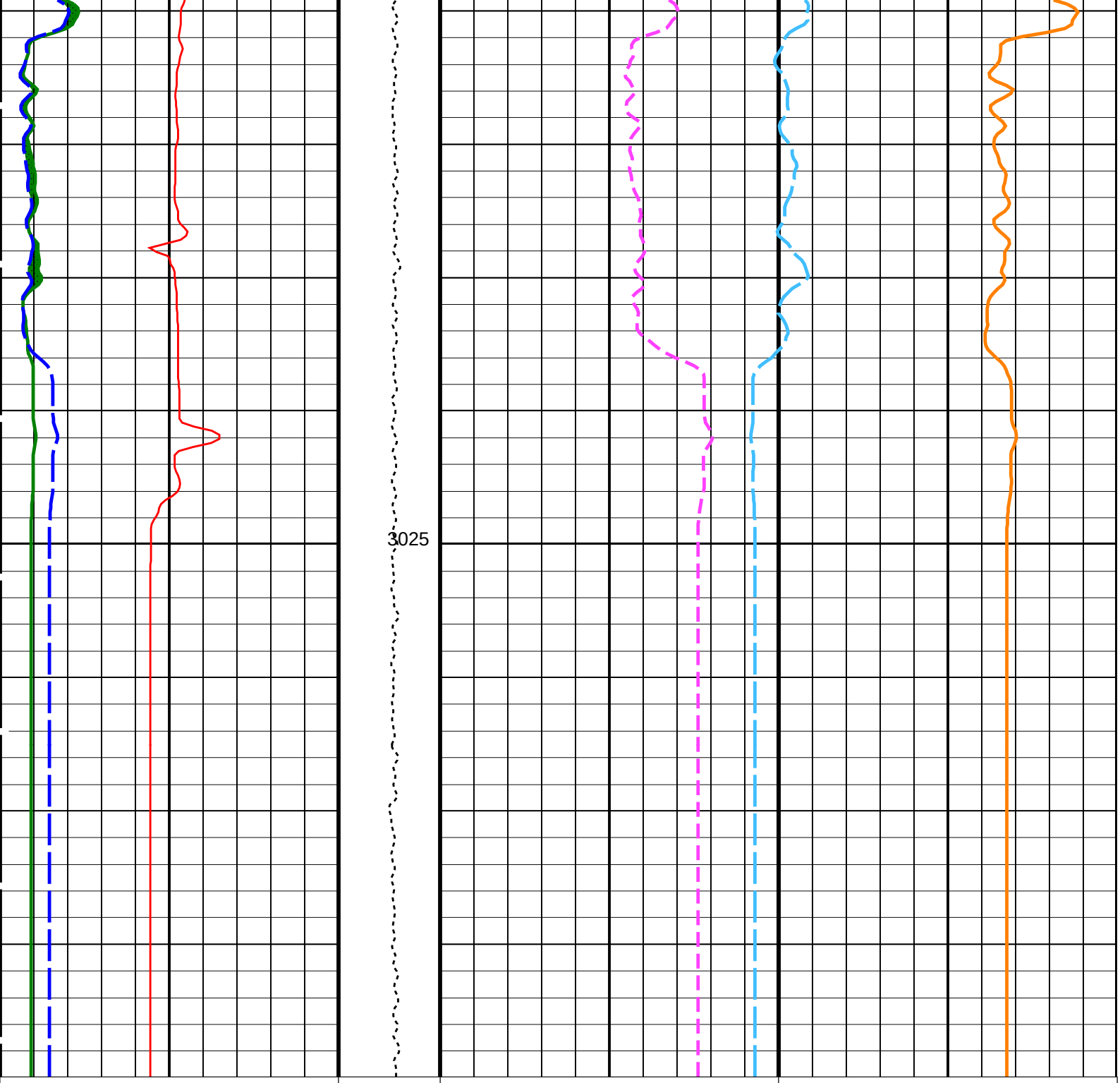
OP System Version: 19C0−187

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

PIP SUMMARY

Time Mark Every 60 S





HLDS Caliper (LCAL)
0 (IN) 20

Tension (TENS) (LBF)
10000 0

HNGS Thorium (HTHO)
−5 (PPM) 5

HNGS Potassium (HFK)
−0.01 (V/V) 0.01

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

HNGS Uranium (HURA)
−5 (PPM) 5

Area1
From HCGR to HSGR

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

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

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	HRLT−B: High Resolution Laterolog Array − B		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
	HNGS−BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	−0.00271942	
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	0.958338	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.970831	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 29−Sep−2021 10:12

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_011LUP	FN:10	PRODUCER	29−Sep−2021 10:12		
RTB	MSS_LDEO_HRLA_LDL_011LUP	FN:11	PRODUCER	29−Sep−2021 10:12		

Company: International Ocean Discovery Program Well: Expedition 396, Site U1574A

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_011LUP	FN:10	PRODUCER	29−Sep−2021 10:12	3045.0 M	2976.4 M
RTB	MSS_LDEO_HRLA_LDL_011LUP	FN:11	PRODUCER	29−Sep−2021 10:12	3045.0 M	2976.4 M

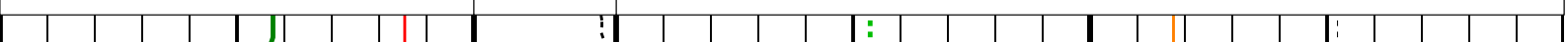
OP System Version: 19C0−187

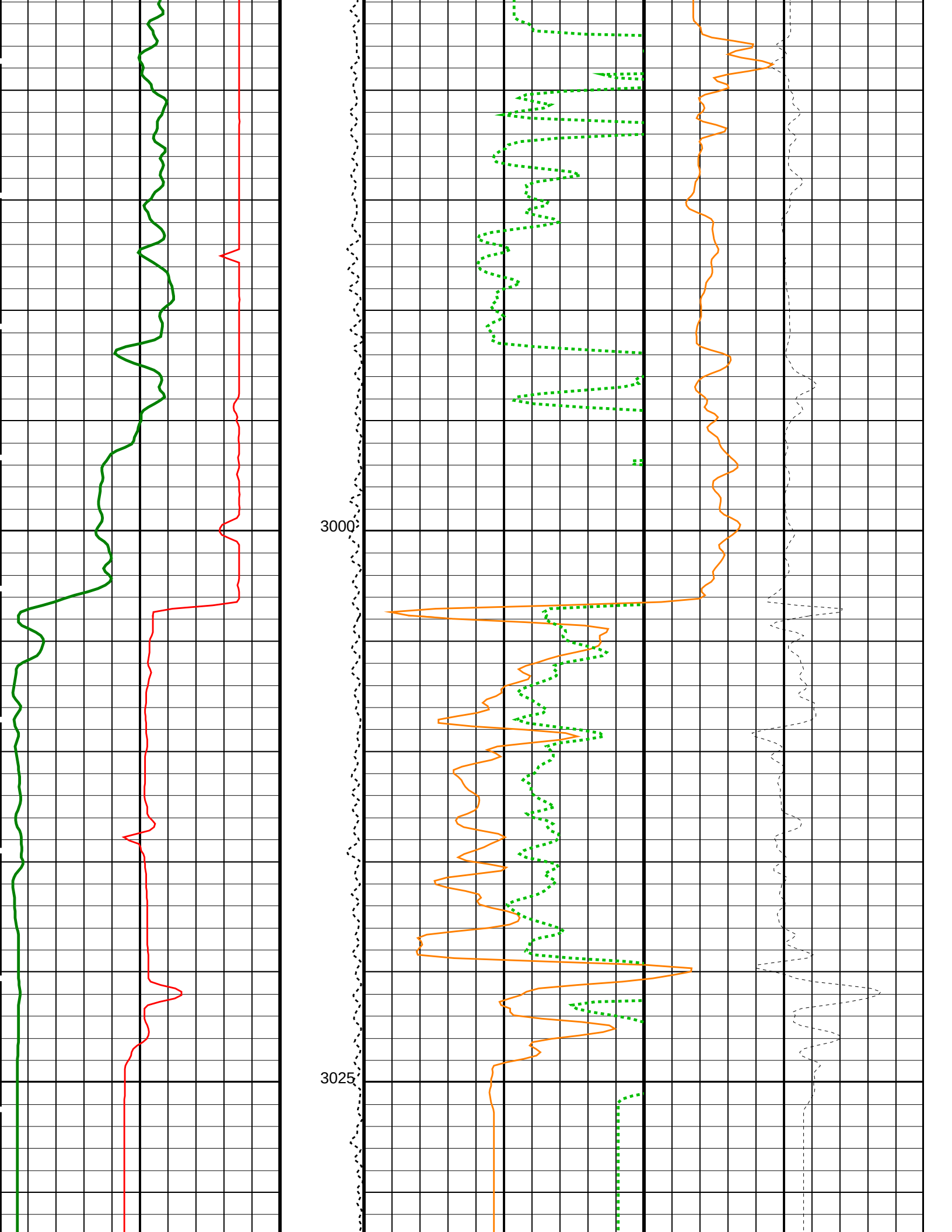
MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
DTC−H	19C0−187		

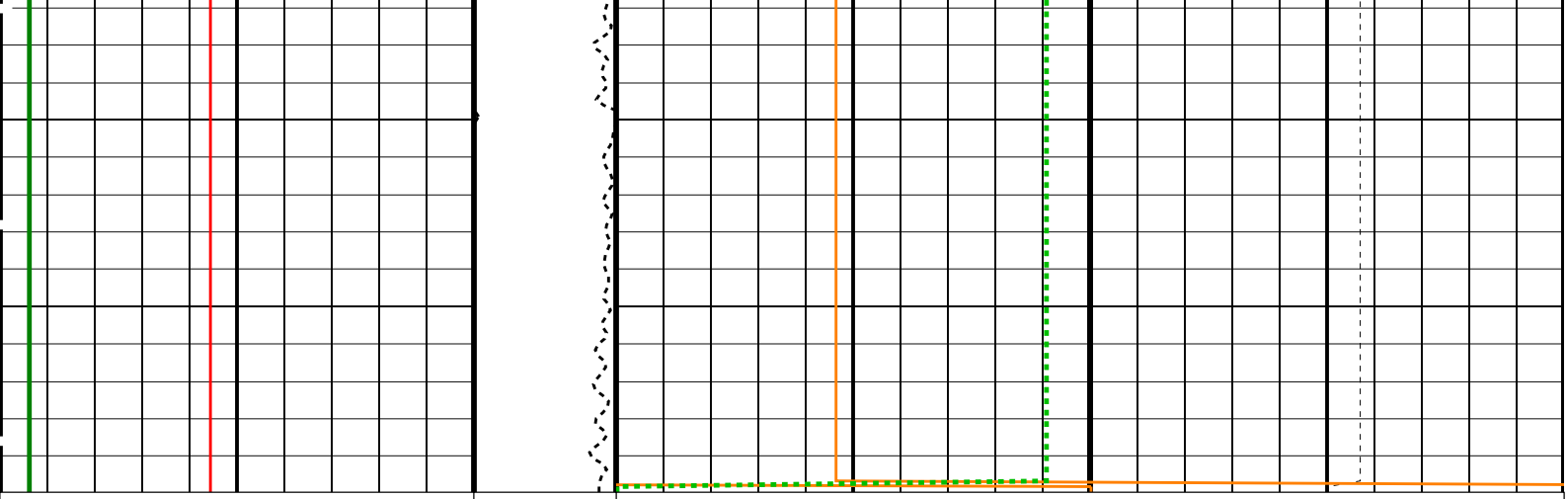
PIP SUMMARY

Time Mark Every 60 S

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




3000
3025



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	−0.00271942	
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	0.958338	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.970831	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3

Format: HLDSDensityPE Vertical Scale: 1:200 Graphics File Created: 29−Sep−2021 10:12

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_011LUP	FN:10	PRODUCER	29−Sep−2021 10:12	
RTB	MSS_LDEO_HRLA_LDL_011LUP	FN:11	PRODUCER	29−Sep−2021 10:12	

Company: International Ocean Discovery Program — Well: Expedition 396, Site U1574A

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_011LUP	FN:10	PRODUCER	29−Sep−2021 10:12	3045.0 M	2976.4 M
RTB	MSS_LDEO_HRLA_LDL_011LUP	FN:11	PRODUCER	29−Sep−2021 10:12	3045.0 M	2976.4 M

OP System Version: 19C0−187

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

PIP SUMMARY

Time Mark Every 60 S

HRLT Mud Resistivity (RM_HRLT)
0.02 (OHMM) 200

HRLT Resistivity 5 (RLA5)
0.2 (OHMM) 2000

HRLT Resistivity 4 (RLA4)
0.2 (OHMM) 2000

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

HRLT Resistivity 3 (RLA3)
0.2 (OHMM) 2000

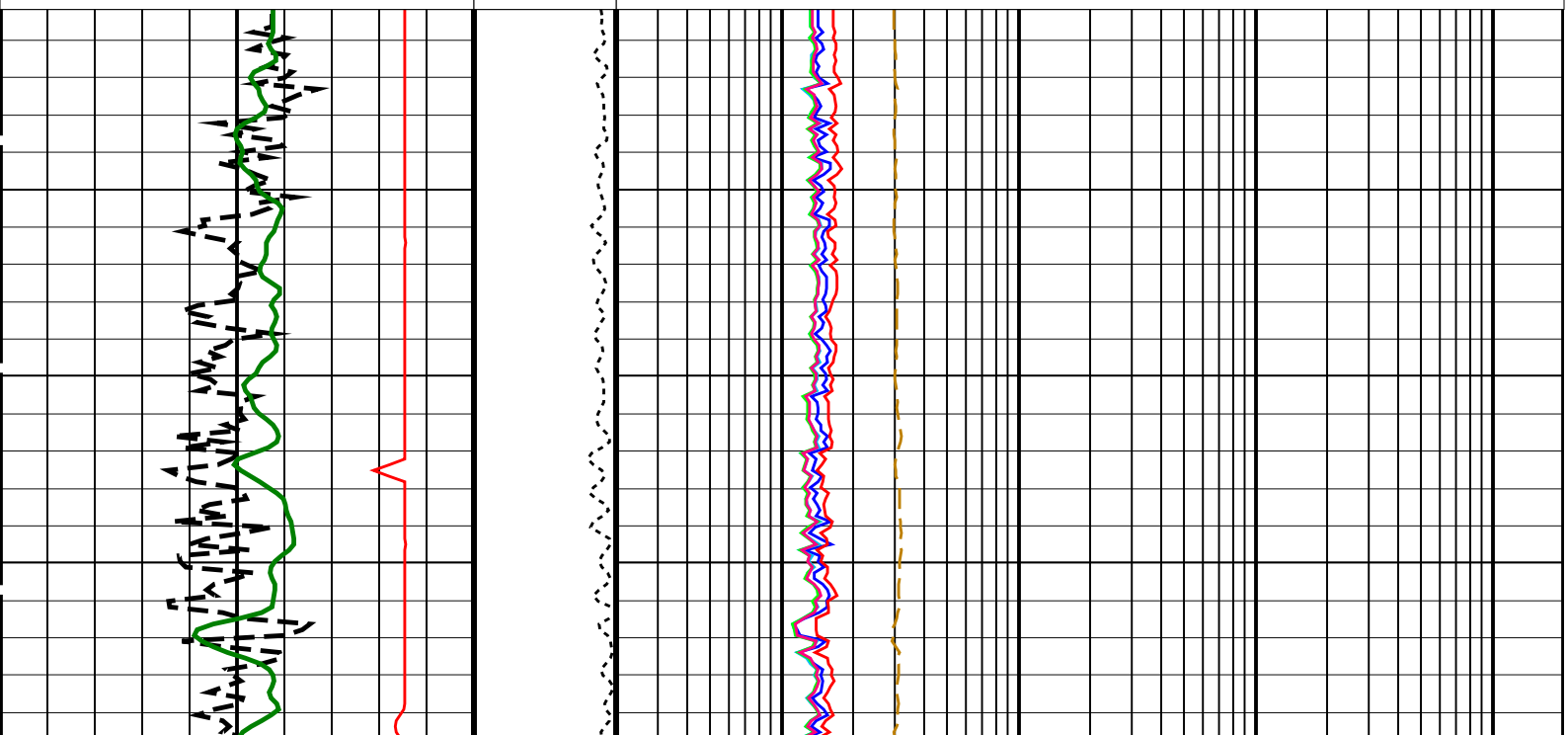
Invasion Diameter (DI_HRLT)
0 (IN) 50

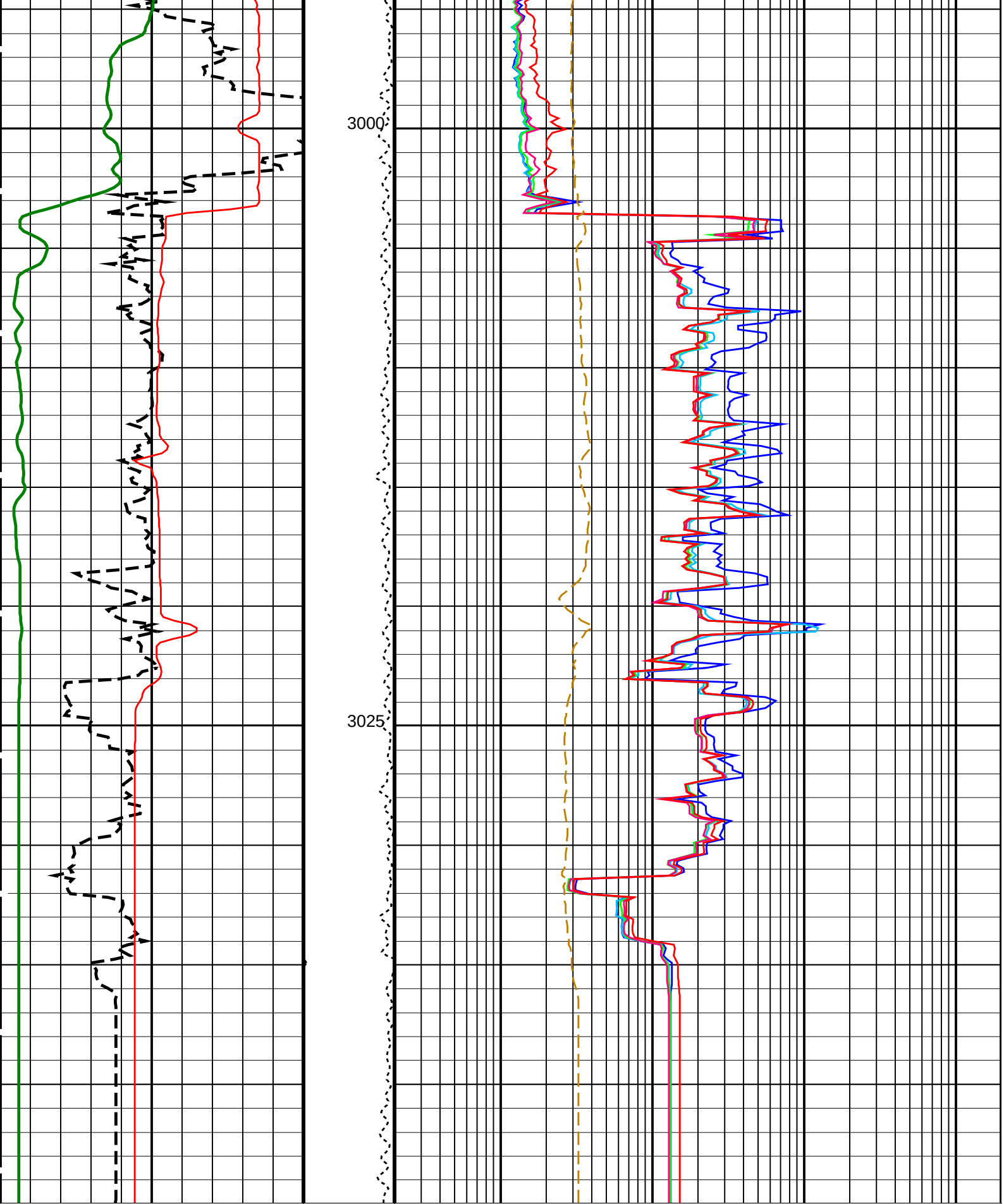
HRLT Resistivity 2 (RLA2)
0.2 (OHMM) 2000

HLDS Caliper (LCAL)
0 (IN) 20

Tension (TENS) (LBF)
0 5000

HRLT Resistivity 1 (RLA1)
0.2 (OHMM) 2000





HLDS Caliper (LCAL)
0 (IN) 20

Invasion Diameter (DI_HRLT)
0 (IN) 50

Tension (TENS) (LBF)
0 5000

HRLT Resistivity 1 (RLA1)
0.2 (OHMM) 2000

HRLT Resistivity 2 (RLA2)
0.2 (OHMM) 2000

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

HRLT Resistivity 3 (RLA3)		
0.2	(OHMM)	2000

HRLT Resistivity 4 (RLA4)		
0.2	(OHMM)	2000

HRLT Resistivity 5 (RLA5)		
0.2	(OHMM)	2000

HRLT Mud Resistivity (RM_HRLT)		
0.02	(OHMM)	200

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	HRLT−B: High Resolution Laterolog Array − B		
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	7	DEGC
GCSE	Generalized Caliper Selection	LCAL	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
PROCINV	Inversion Selection	ON	
PROCMFL	Inversion Micro−Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCSPO	Sonde Position	Eccentered	
SHT	Surface Hole Temperature	20	DEGC
	HNGS−BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	7	DEGC
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	−0.00271942	
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	0.958338	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.970831	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3
TD	Total Depth	3096.4	M

Format: HRLT Vertical Scale: 1:200 Graphics File Created: 29−Sep−2021 10:12

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 File

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_011LUP	FN:10	PRODUCER	29−Sep−2021 10:12
RTB	MSS_LDEO_HRLA_LDL_011LUP	FN:11	PRODUCER	29−Sep−2021 10:12

Company: International Ocean Discovery Program | Well: Expedition 396, Site U1574A

Output DLIS Files

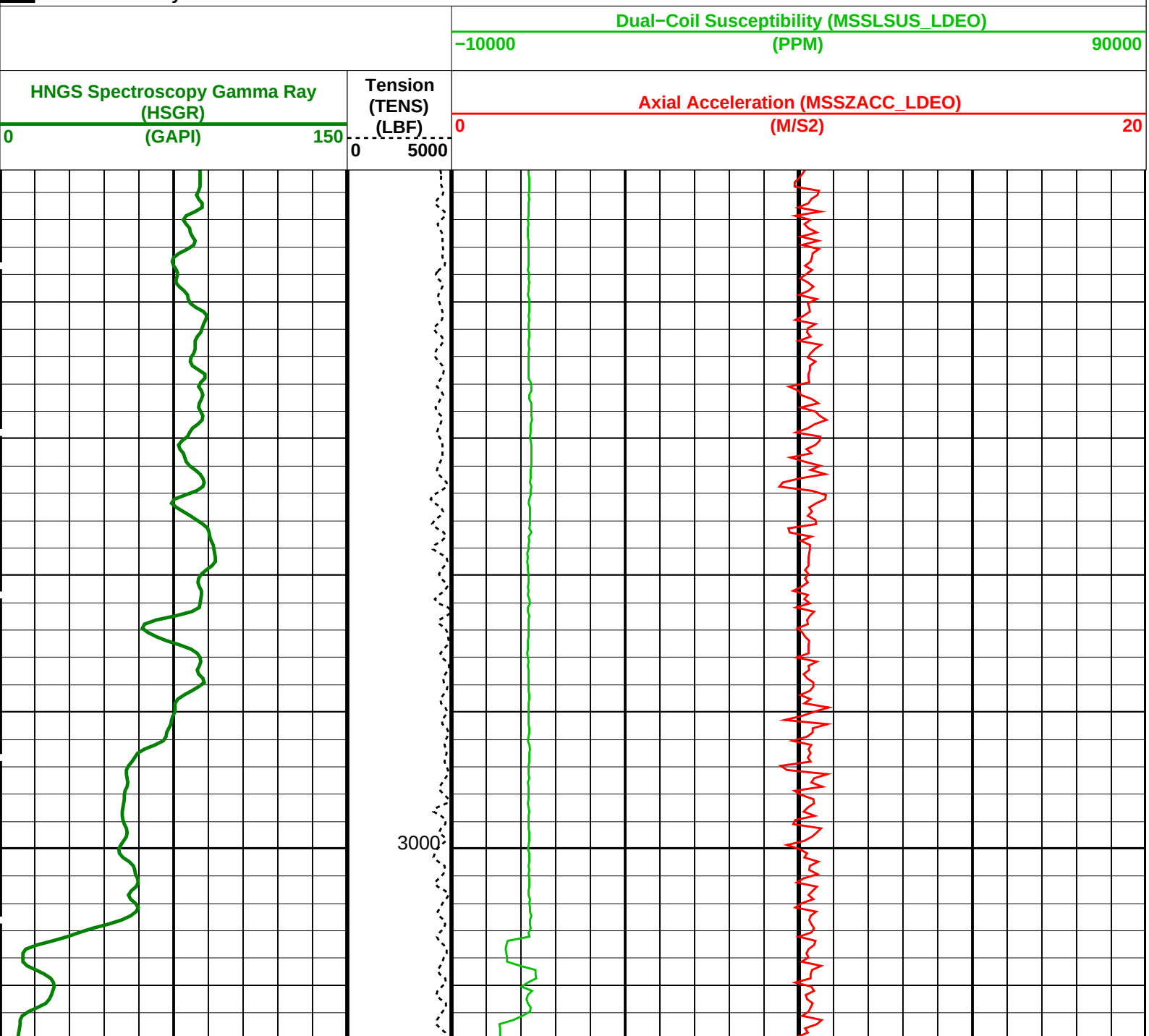
DEFAULT	MSS_LDEO_HRLA_LDL_011LUP	FN:10	PRODUCER	29−Sep−2021 10:12	3045.0 M	2976.4 M
RTB	MSS_LDEO_HRLA_LDL_011LUP	FN:11	PRODUCER	29−Sep−2021 10:12	3045.0 M	2976.4 M

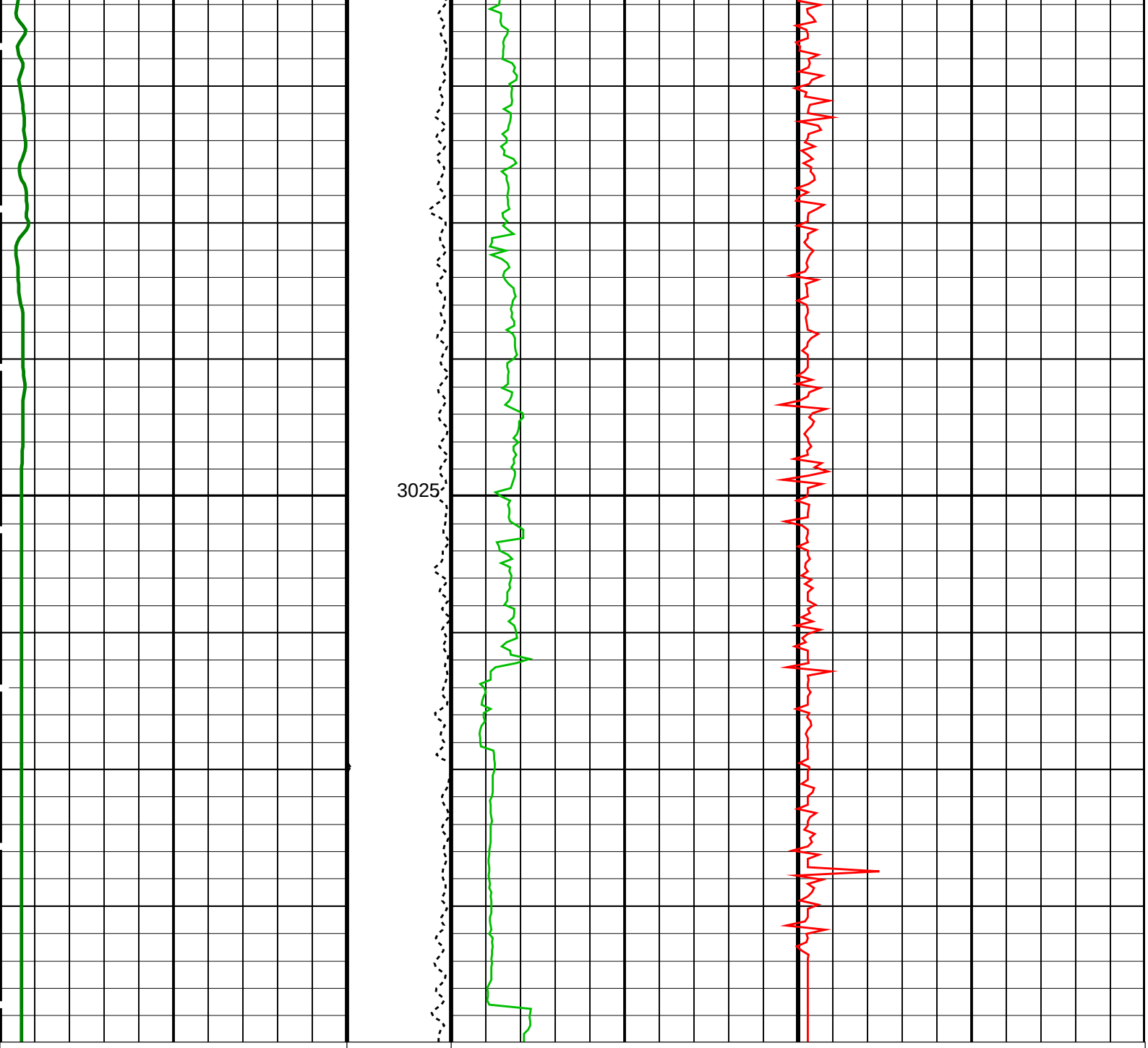
OP System Version: 19C0−187

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

PIP SUMMARY

Time Mark Every 60 S





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	−0.00271942	
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	0.958338	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.970831	
System and Miscellaneous			
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3

Format: MSS_Logging Vertical Scale: 1:200 Graphics File Created: 29−Sep−2021 10:12

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_011LUP	FN:10	PRODUCER	29−Sep−2021 10:12	
RTB	MSS_LDEO_HRLA_LDL_011LUP	FN:11	PRODUCER	29−Sep−2021 10:12	

Schlumberger

Second Pass

MAXIS Field Log

Company: International Ocean Discovery Program Well: Expedition 396, Site U1574A

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_012LUP	FN:12	PRODUCER	29−Sep−2021 10:34	3045.0 M	2823.2 M
RTB	MSS_LDEO_HRLA_LDL_012LUP	FN:13	PRODUCER	29−Sep−2021 10:34	3045.0 M	2823.2 M

OP System Version: 19C0−187

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

PIP SUMMARY

Time Mark Every 60 S

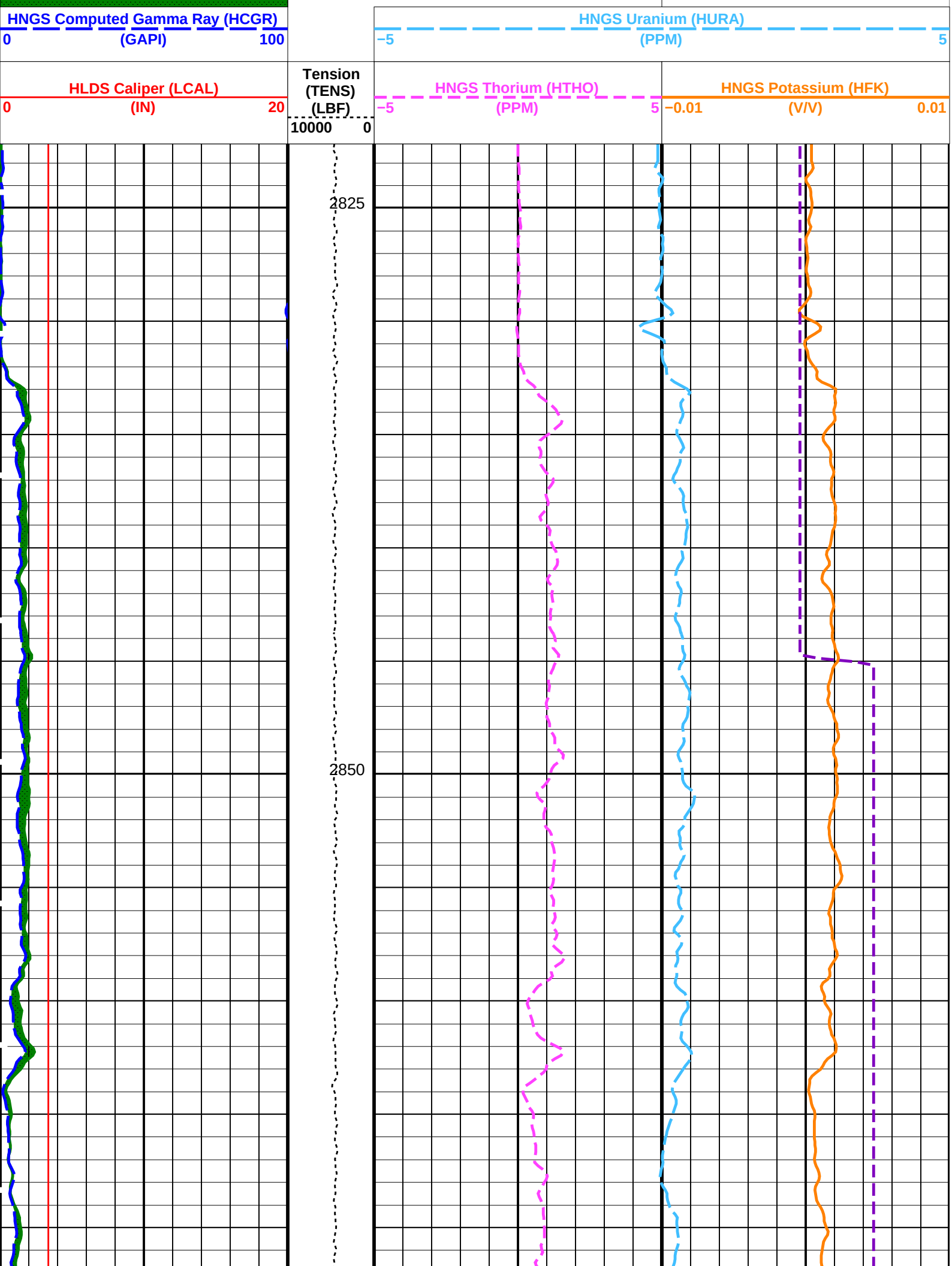
HNGS Spectroscopy Gamma Ray (HSGR)

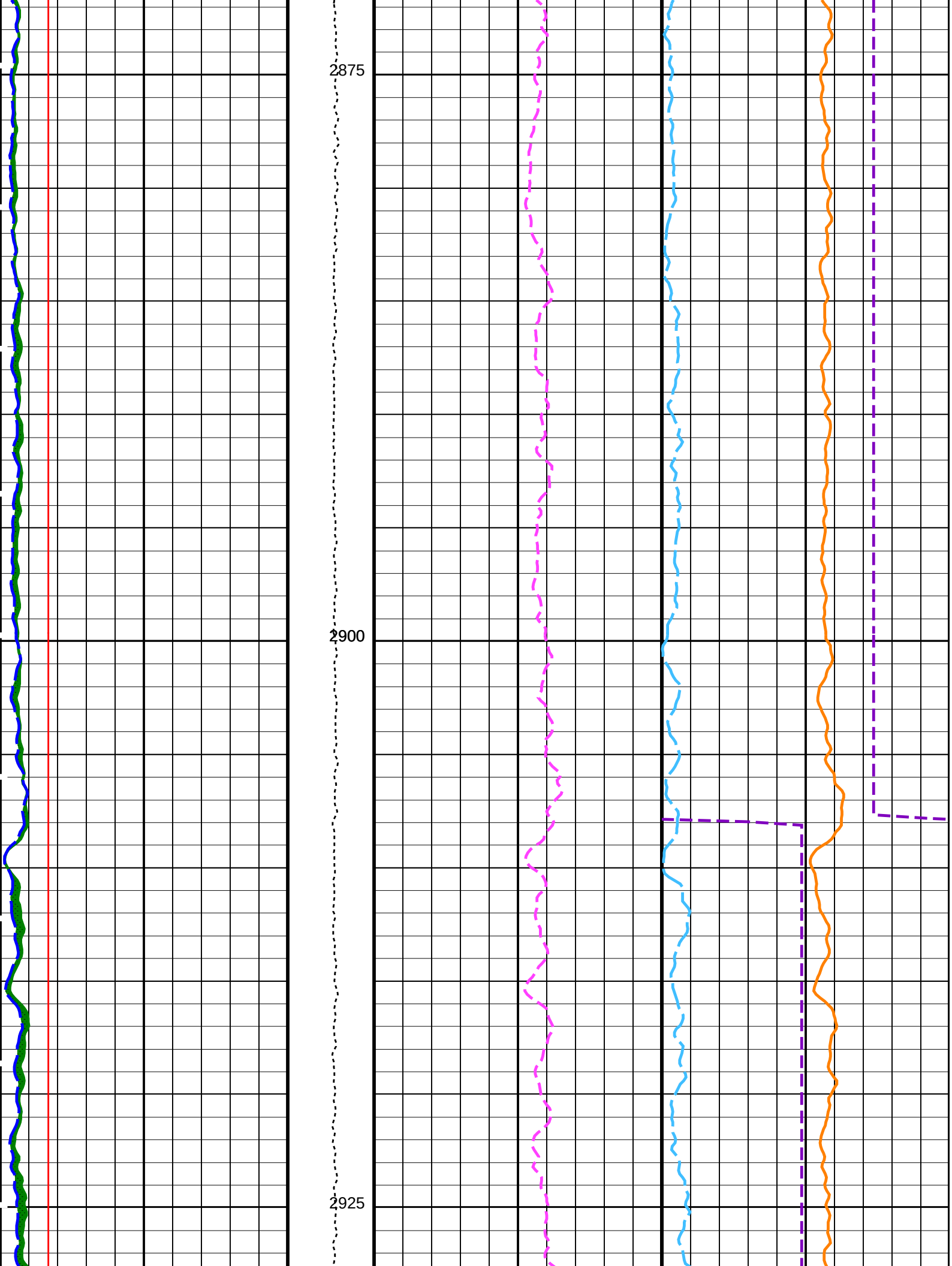
0 (GAPI) 100

Area1
From HCGR to HSGR

HNGS Borehole Potassium (HBHK)

−0.01 (V/V) 0.01


HNGS Computed Gamma Ray (HCGR)
0
(GAPI)
100
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
2825
2850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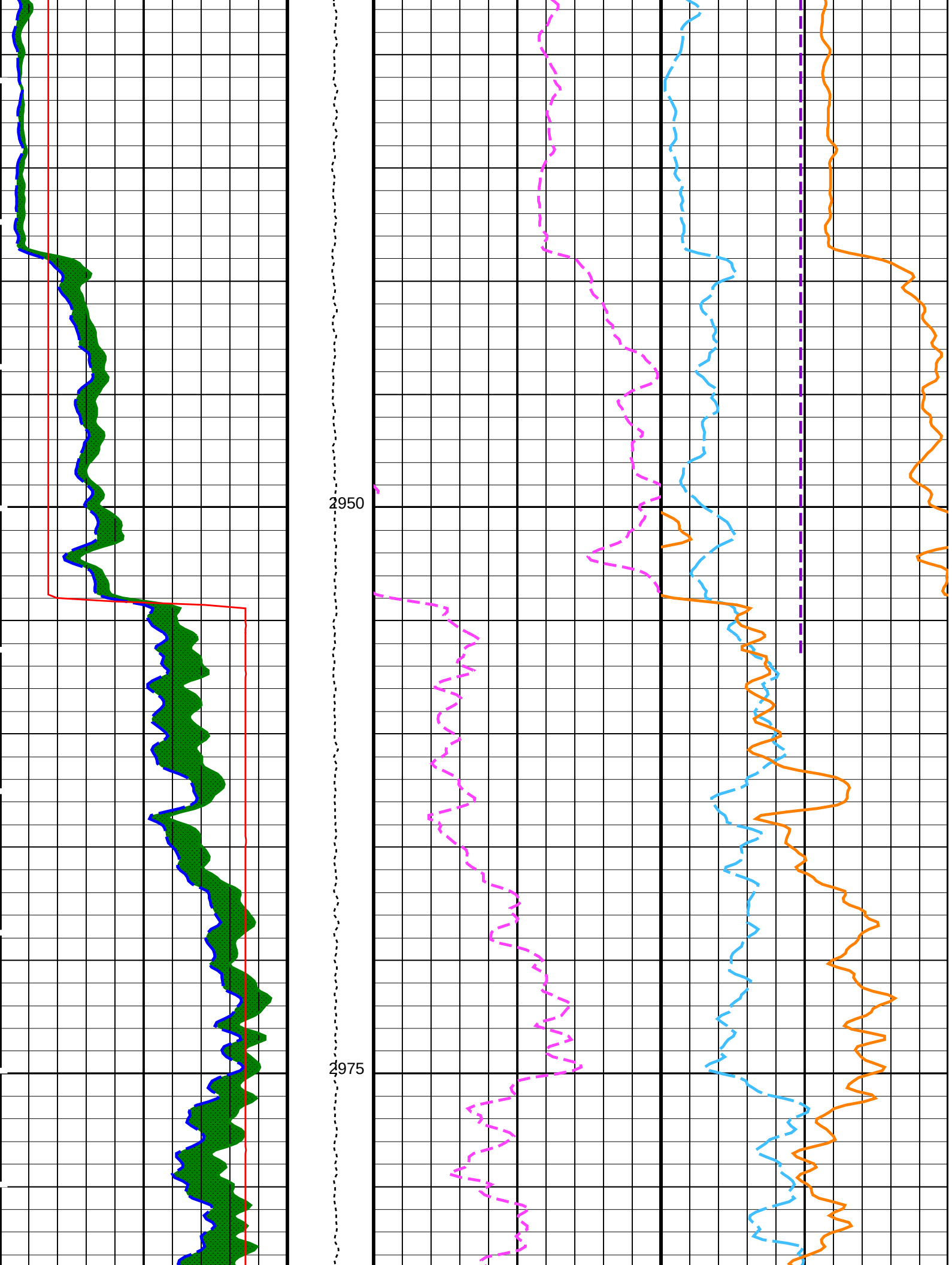
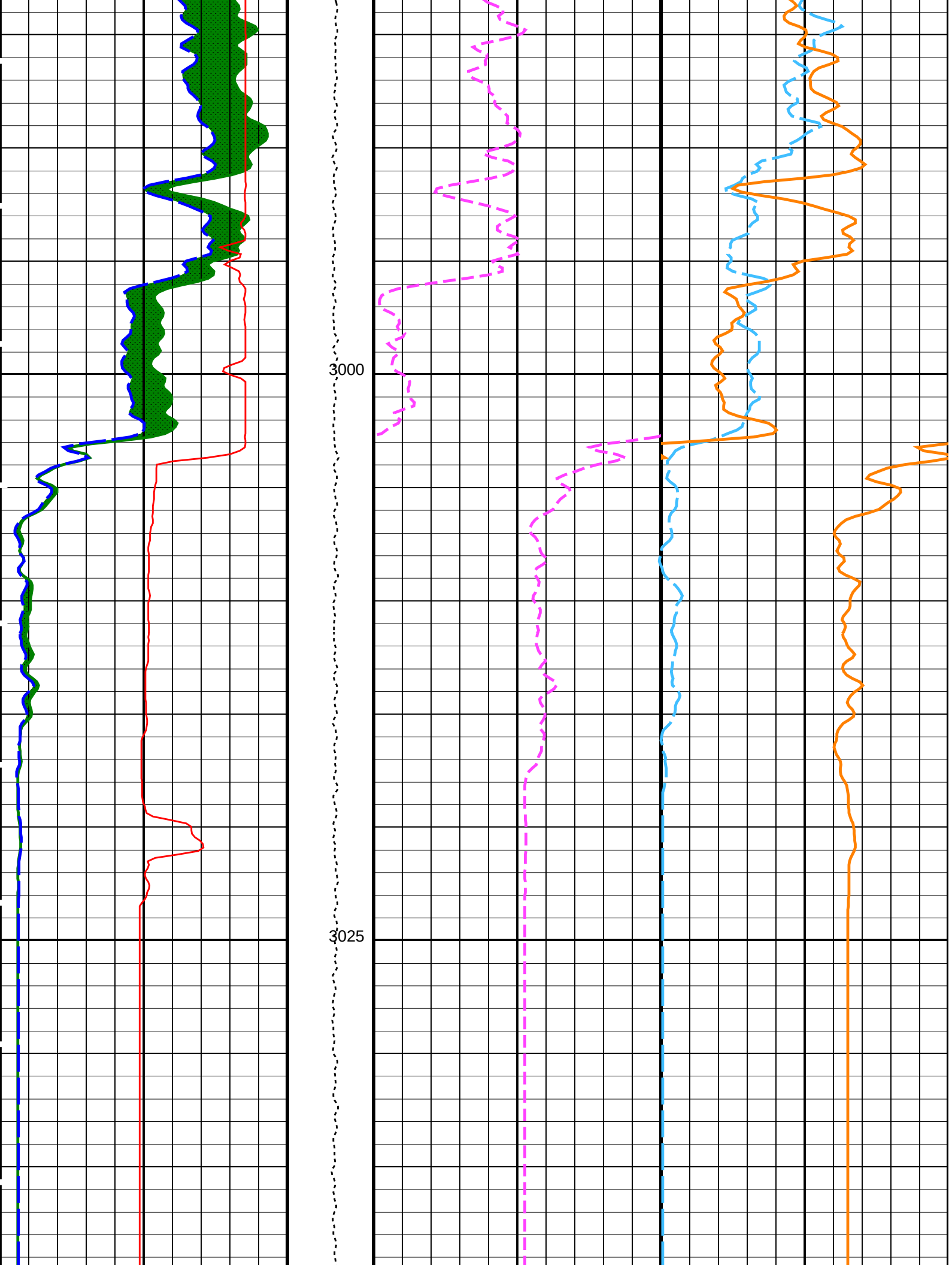

2950
2975


3000
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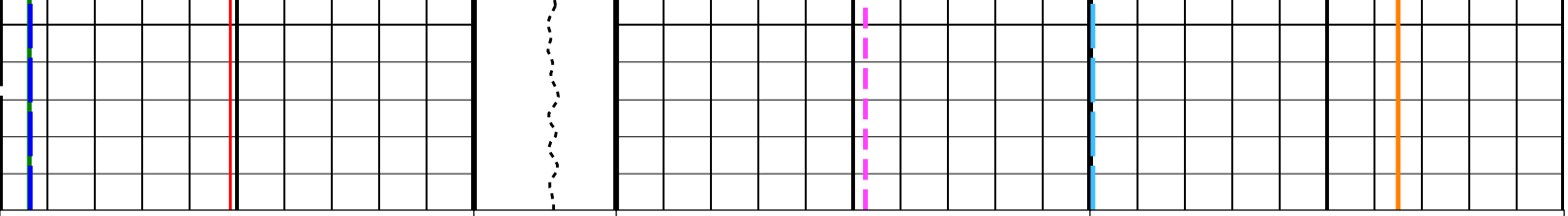


PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	HRLT−B: High Resolution Laterolog Array − B		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
	HNGS−BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	−0.00271942	
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	0.958338	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.970831	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 29−Sep−2021 10:34

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_012LUP	FN:12	PRODUCER	29−Sep−2021 10:34
RTB	MSS_LDEO_HRLA_LDL_012LUP	FN:13	PRODUCER	29−Sep−2021 10:34

Company: International Ocean Discovery Program | Well: Expedition 396, Site U1574A

Output DLIS Files

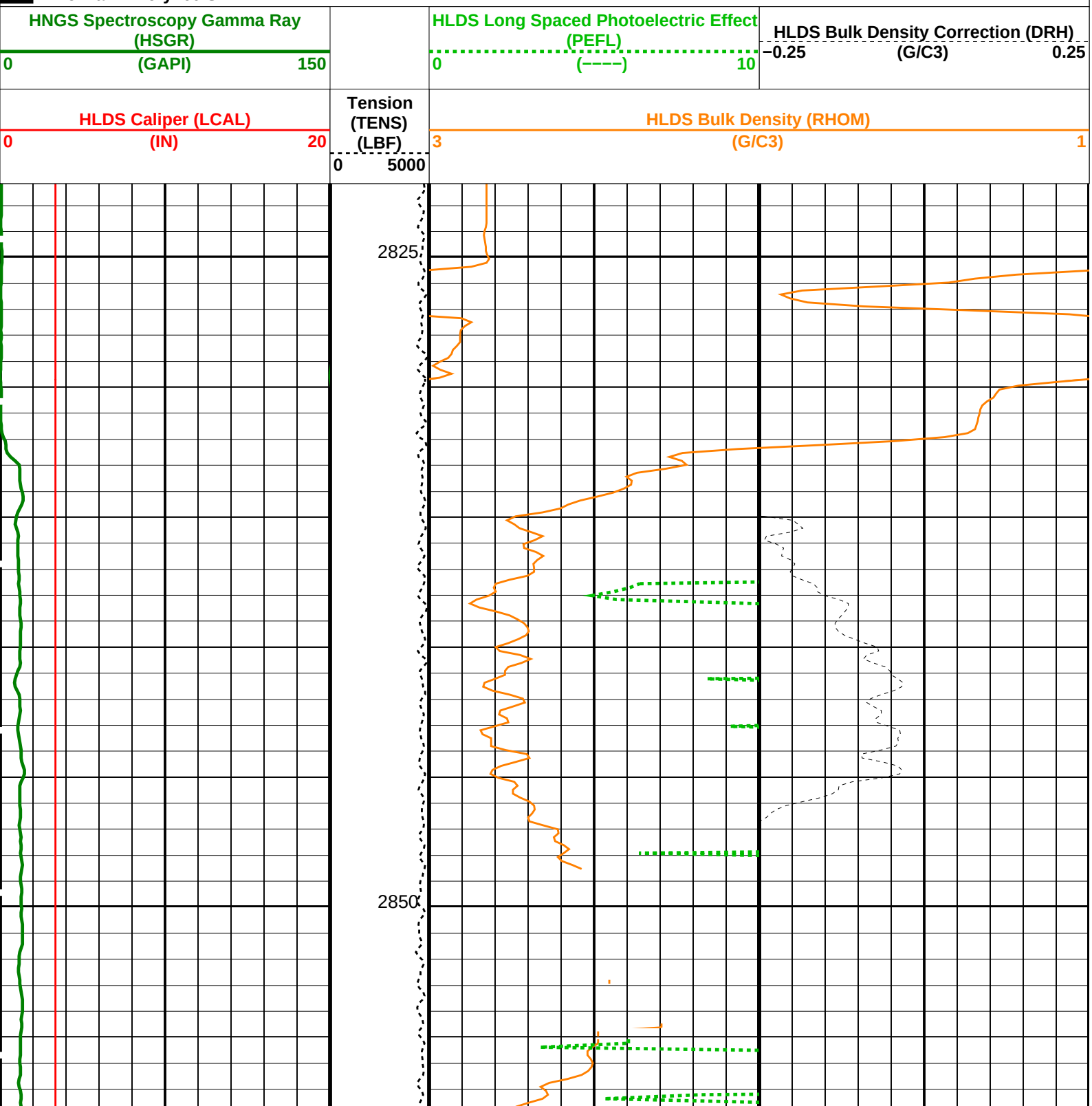
DEFAULT	MSS_LDEO_HRLA_LDL_012LUP	FN:12	PRODUCER	29−Sep−2021 10:34	3045.0 M	2823.2 M
RTB	MSS_LDEO_HRLA_LDL_012LUP	FN:13	PRODUCER	29−Sep−2021 10:34	3045.0 M	2823.2 M

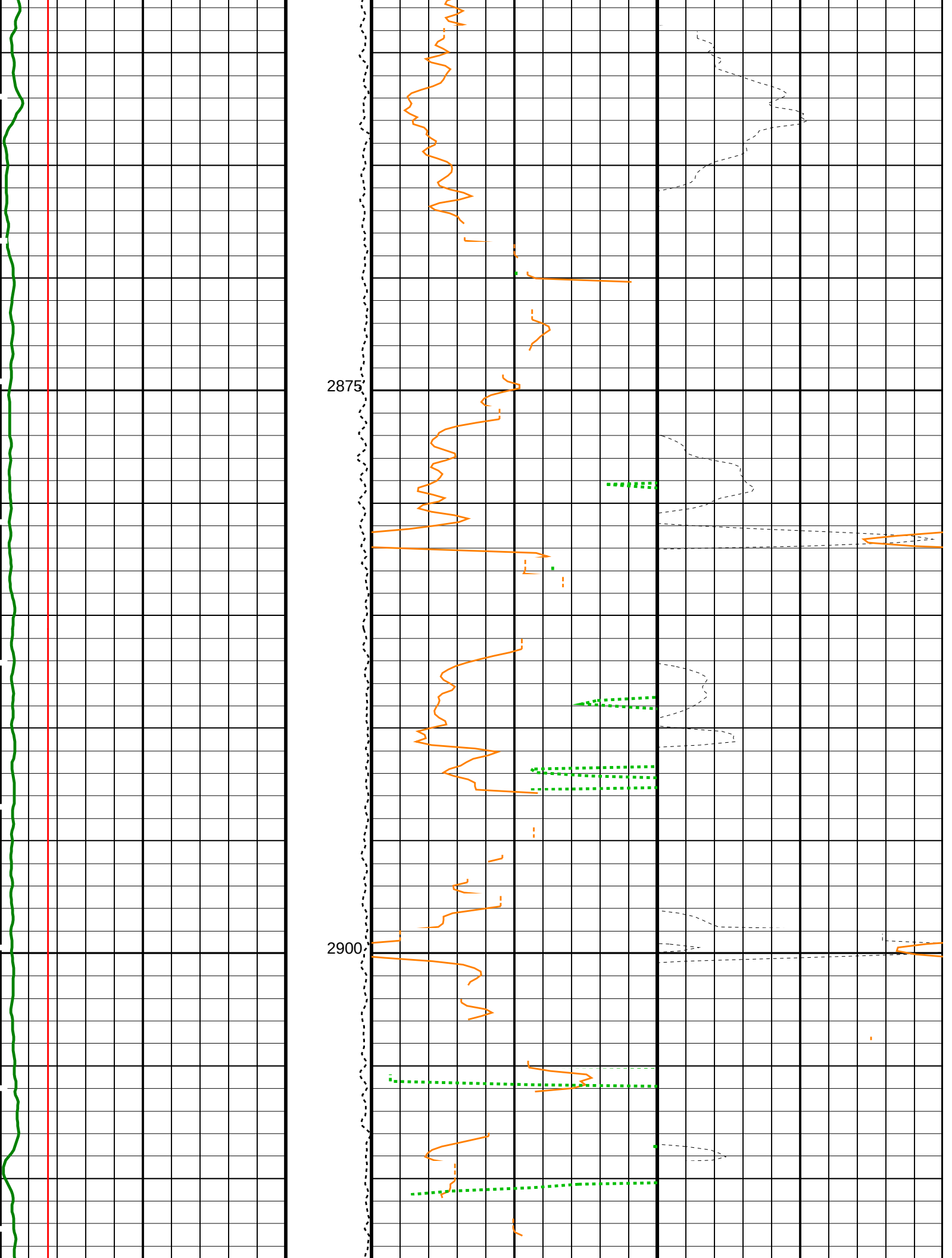
OP System Version: 19C0−187

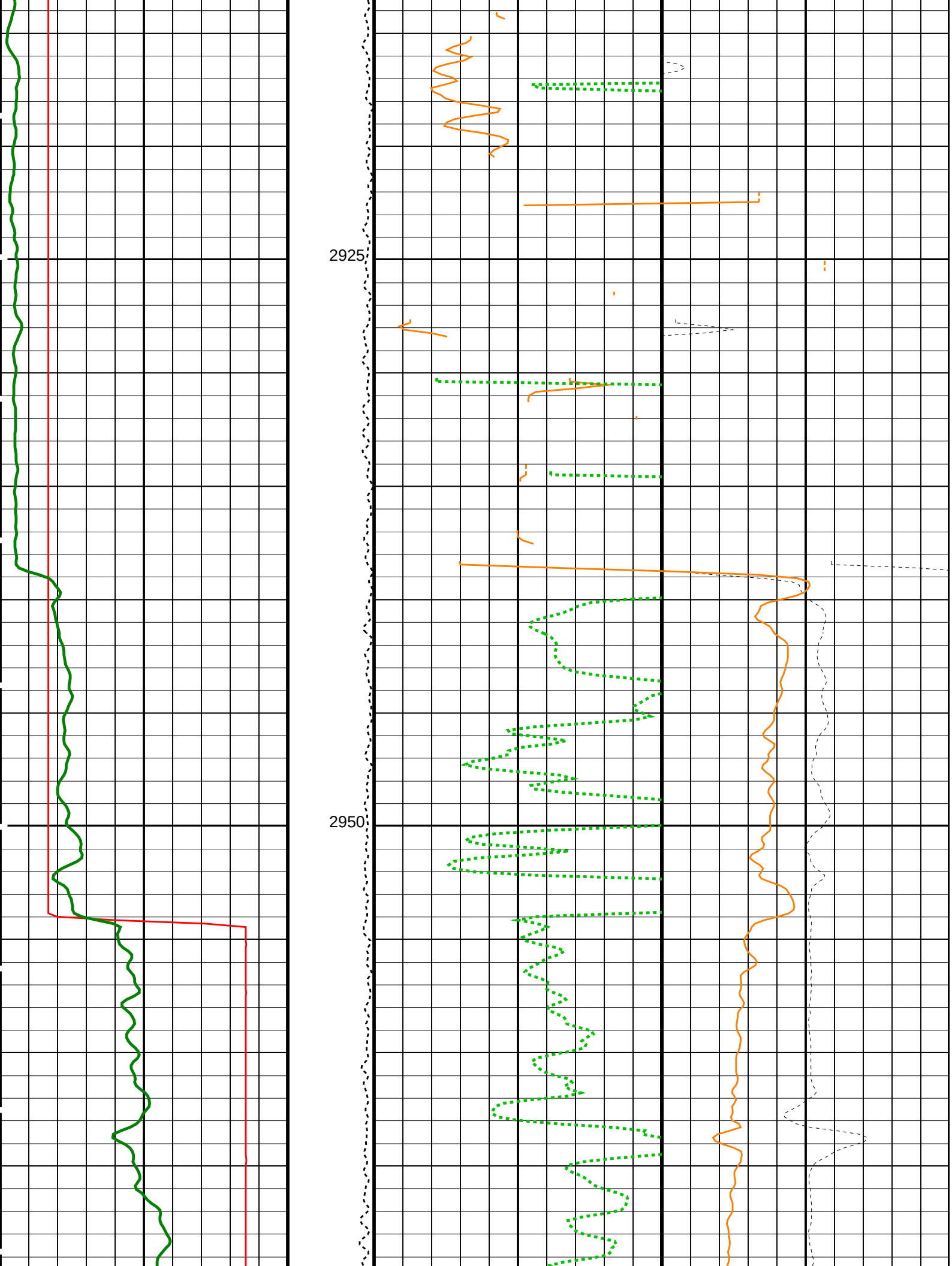
MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
DTC−H	19C0−187		

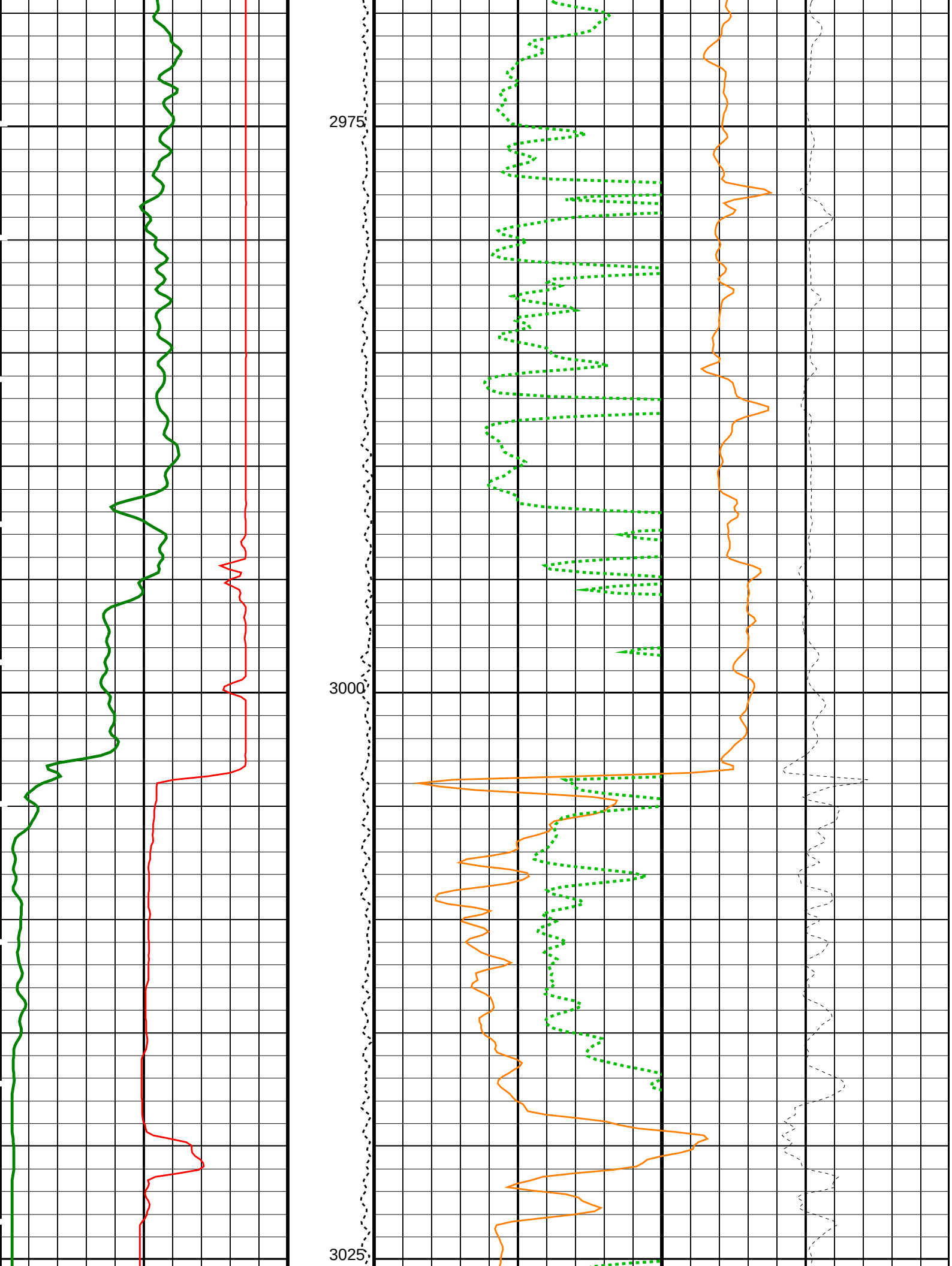
PIP SUMMARY

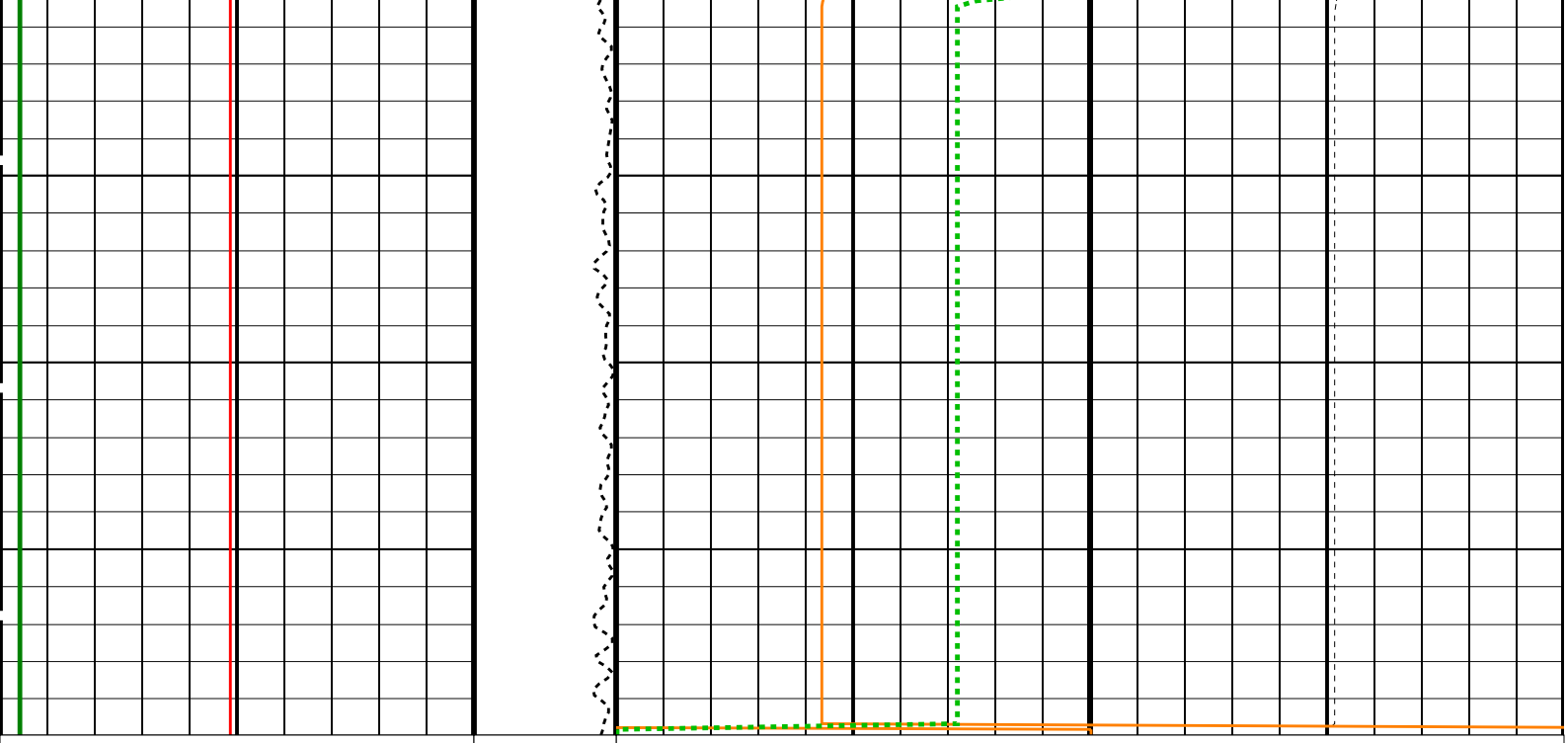
Time Mark Every 60 S




2875
2900


2925
2950


2975
3000
3025



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	−0.00271942	
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	0.958338	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.970831	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3

Format: HLDSDensityPE Vertical Scale: 1:200 Graphics File Created: 29−Sep−2021 10:34

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_012LUP	FN:12	PRODUCER	29−Sep−2021 10:34	
RTB	MSS_LDEO_HRLA_LDL_012LUP	FN:13	PRODUCER	29−Sep−2021 10:34	

Company: International Ocean Discovery Program Well: Expedition 396, Site U1574A

Output DLIS Files

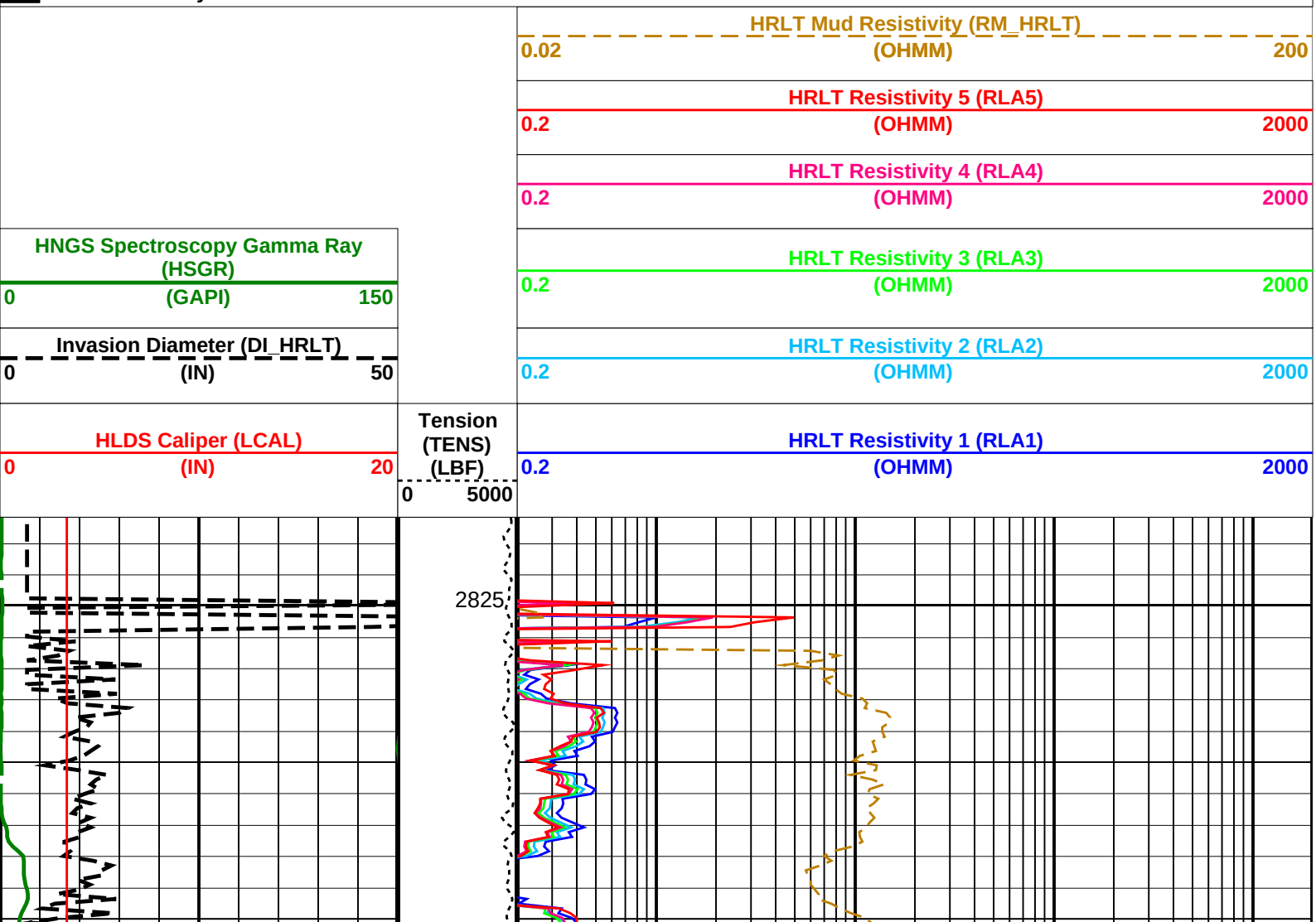
DEFAULT	MSS_LDEO_HRLA_LDL_012LUP	FN:12	PRODUCER	29−Sep−2021 10:34	3045.0 M	2823.2 M
RTB	MSS_LDEO_HRLA_LDL_012LUP	FN:13	PRODUCER	29−Sep−2021 10:34	3045.0 M	2823.2 M

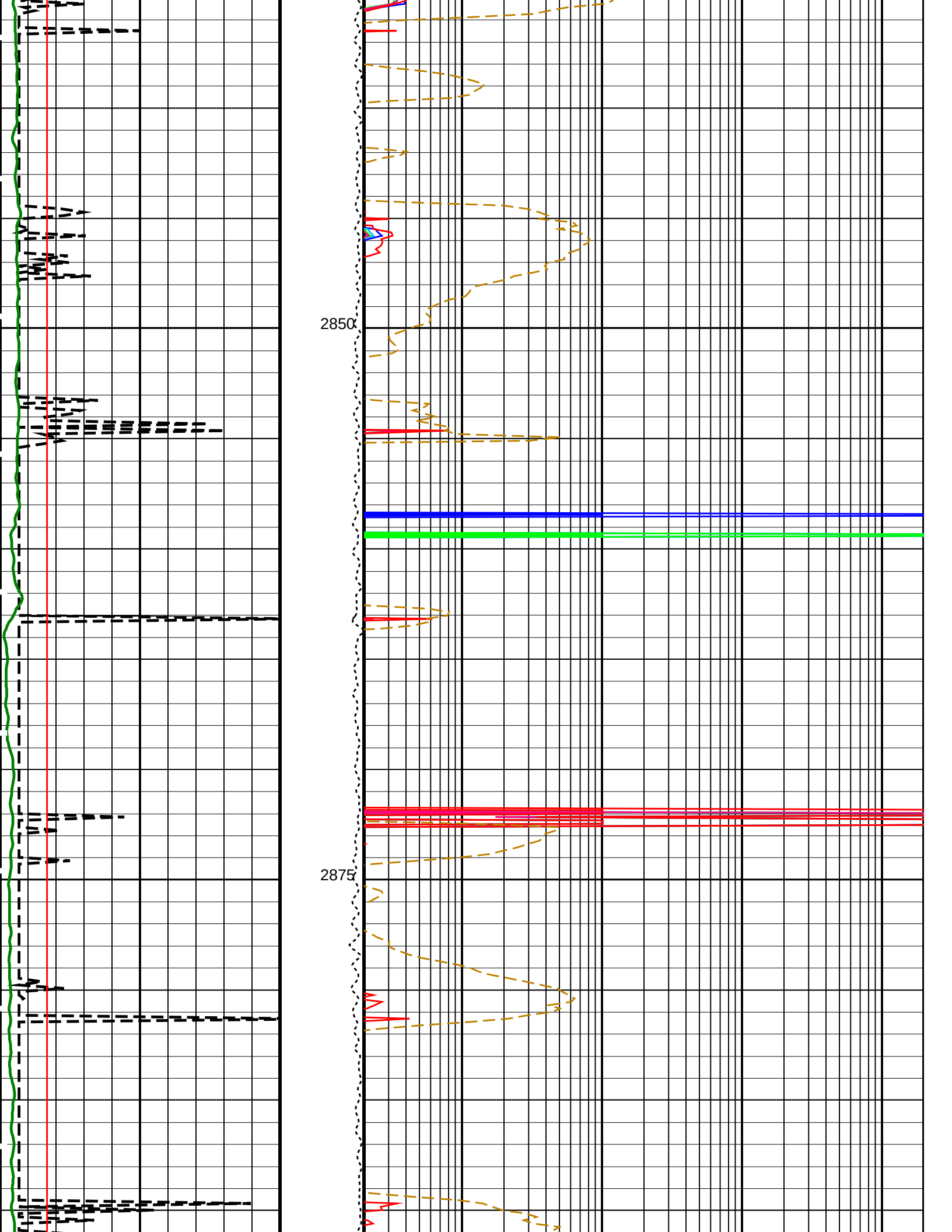
OP System Version: 19C0−187

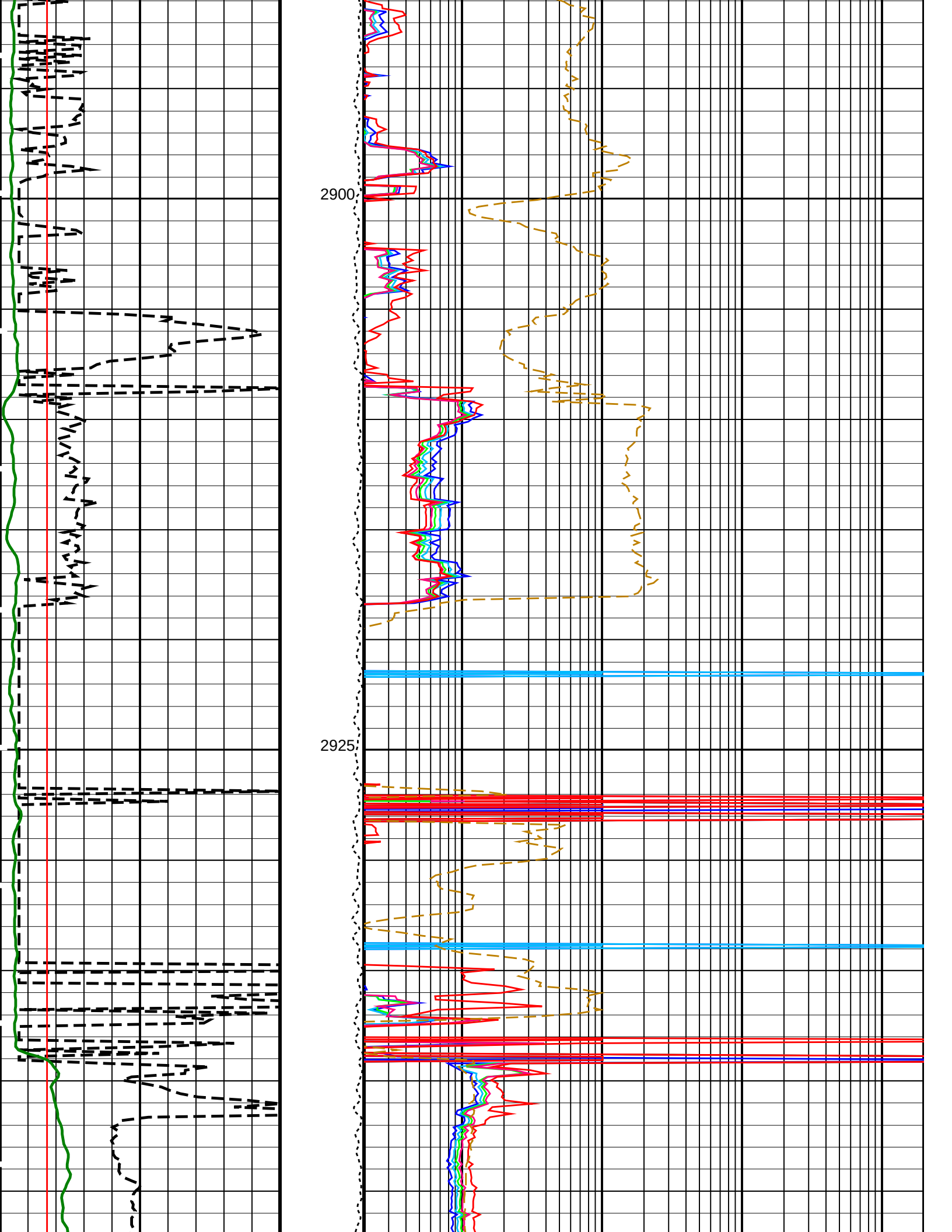
MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
DTC−H	19C0−187		

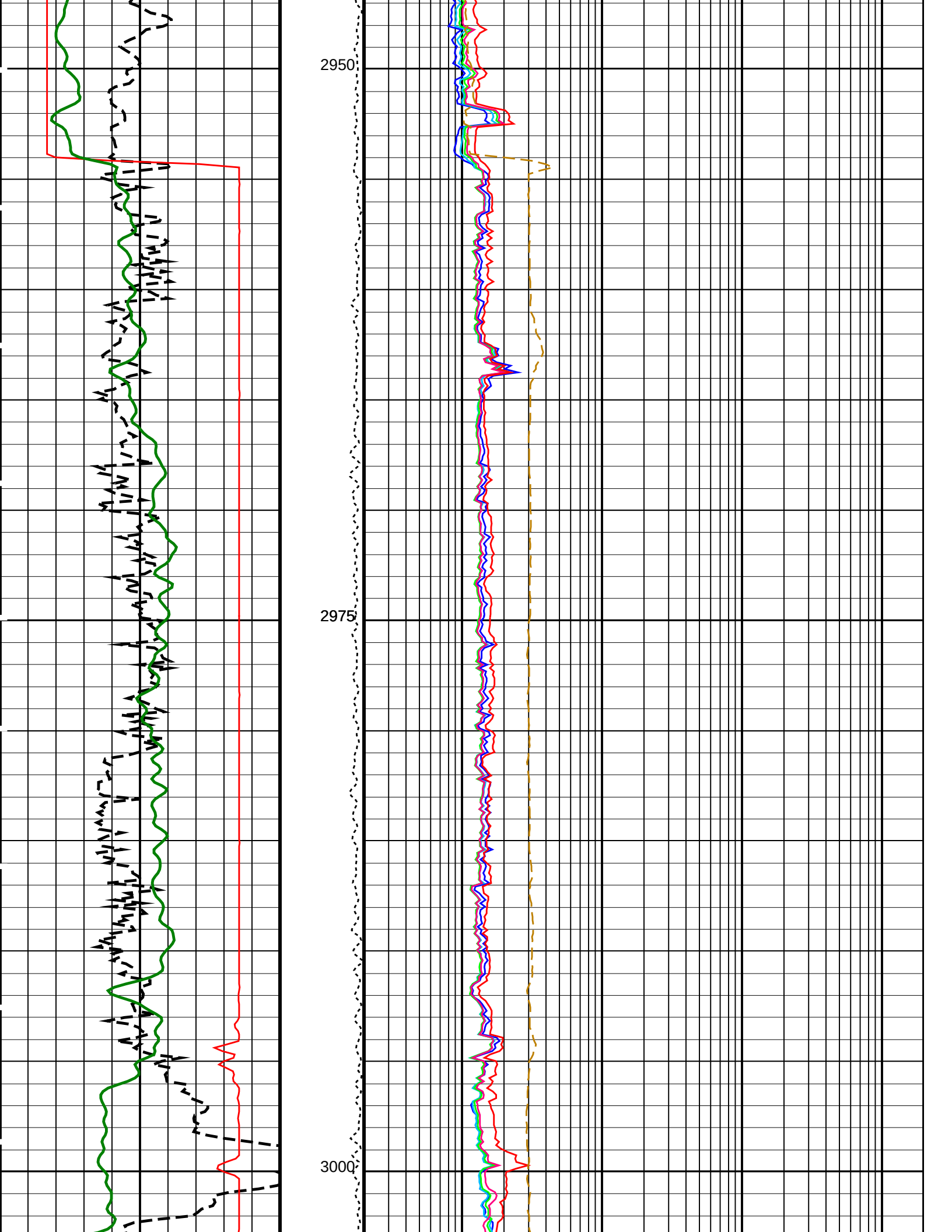
PIP SUMMARY

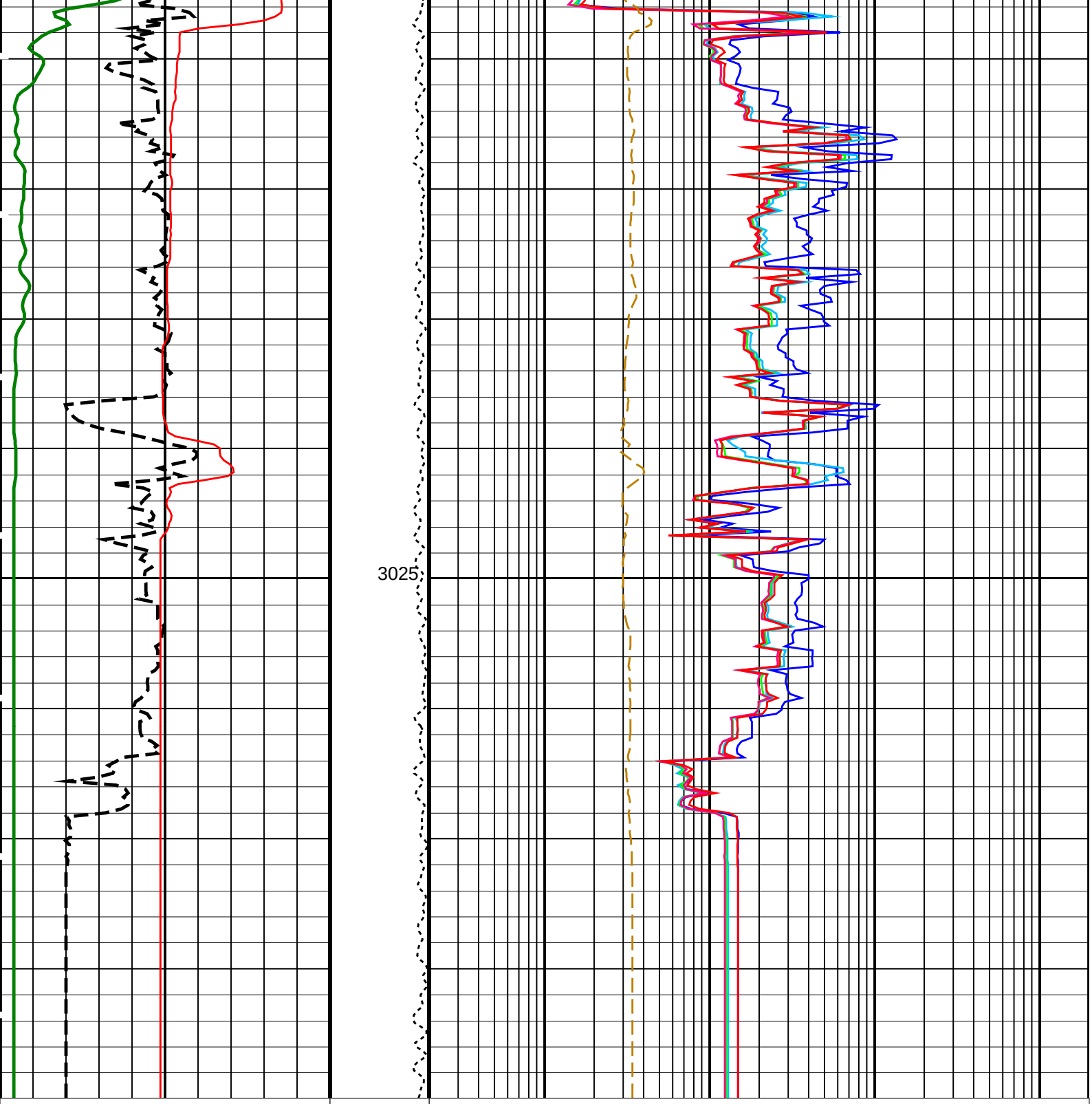
Time Mark Every 60 S




2850
2875


2900
2925


2950
2975
3000



HLDS Caliper (LCAL)
0 (IN) 20

Invasion Diameter (DI_HRLT)
0 (IN) 50

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

Tension (TENS) (LBF)
0 5000

HRLT Resistivity 1 (RLA1)
0.2 (OHMM) 2000

HRLT Resistivity 2 (RLA2)
0.2 (OHMM) 2000

HRLT Resistivity 3 (RLA3)
0.2 (OHMM) 2000

HRLT Resistivity 4 (RLA4)
0.2 (OHMM) 2000

HRLT Resistivity 5 (RLA5)
0.2 (OHMM) 2000

HRLT Mud Resistivity (RM_HRLT)
0.02 (OHMM) 200

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	HRLT−B: High Resolution Laterolog Array − B		
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	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	−0.00271942	
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	0.958338	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.970831	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3
TD	Total Depth	3096.4	M

Format: HRLT Vertical Scale: 1:200 Graphics File Created: 29−Sep−2021 10:34

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_012LUP	FN:12	PRODUCER	29−Sep−2021 10:34
RTB	MSS_LDEO_HRLA_LDL_012LUP	FN:13	PRODUCER	29−Sep−2021 10:34

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_012LUP	FN:12	PRODUCER	29−Sep−2021 10:34	3045.0 M	2823.2 M
RTB	MSS_LDEO_HRLA_LDL_012LUP	FN:13	PRODUCER	29−Sep−2021 10:34	3045.0 M	2823.2 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

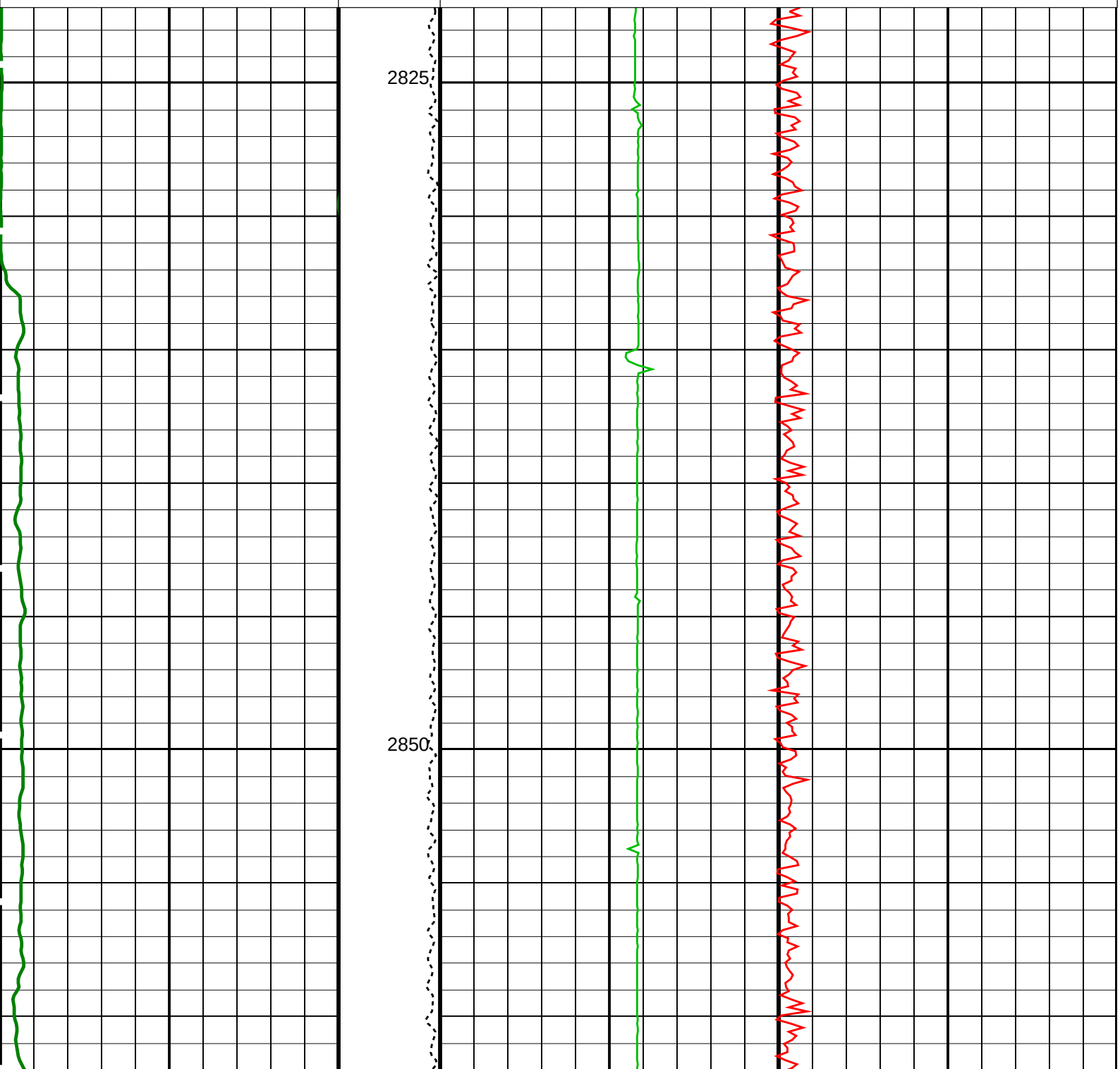
Time Mark Every 60 S

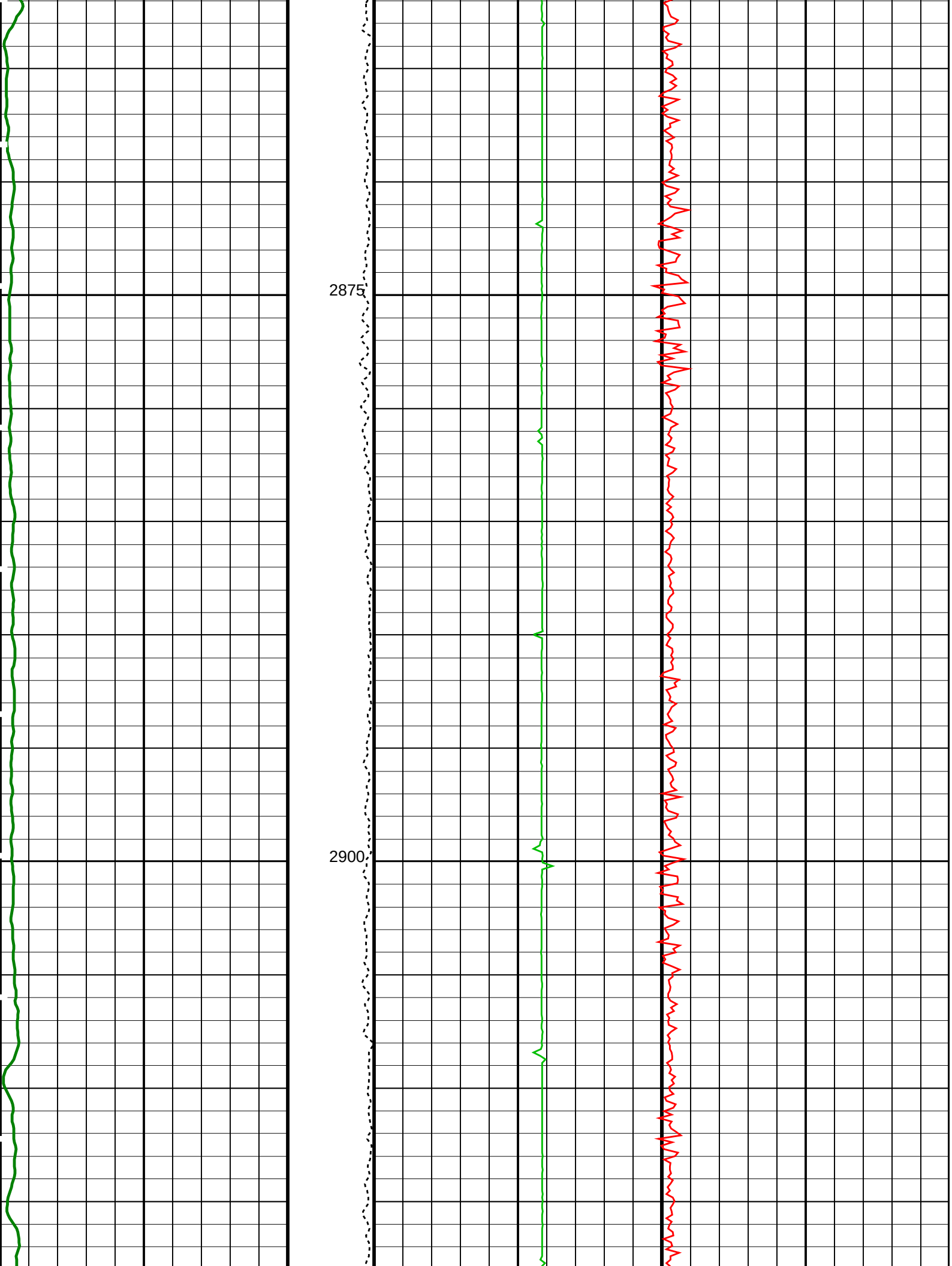
Dual−Coil Susceptibility (MSSLSUS_LDEO)
−10000 (PPM) 90000

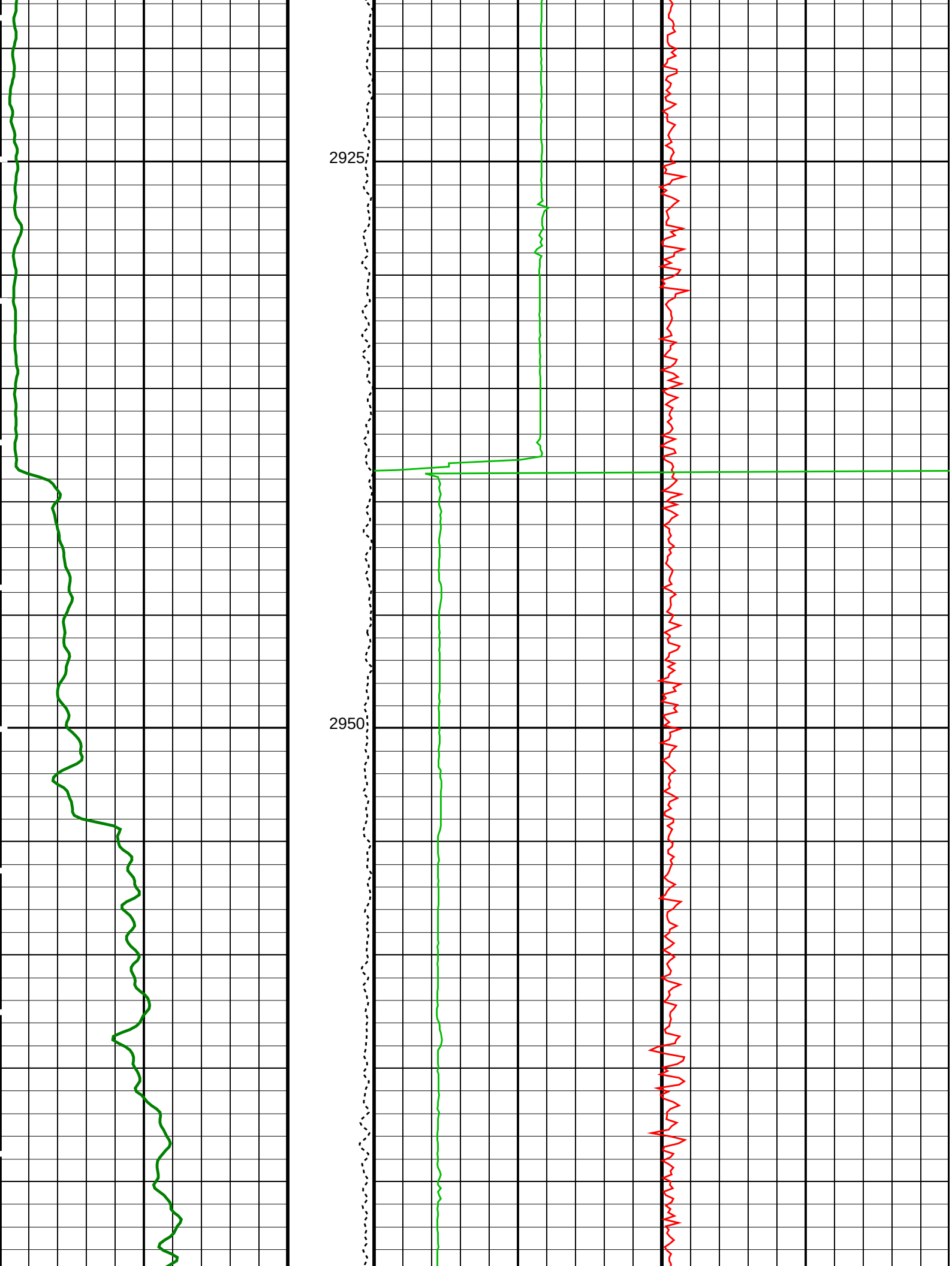
HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 150

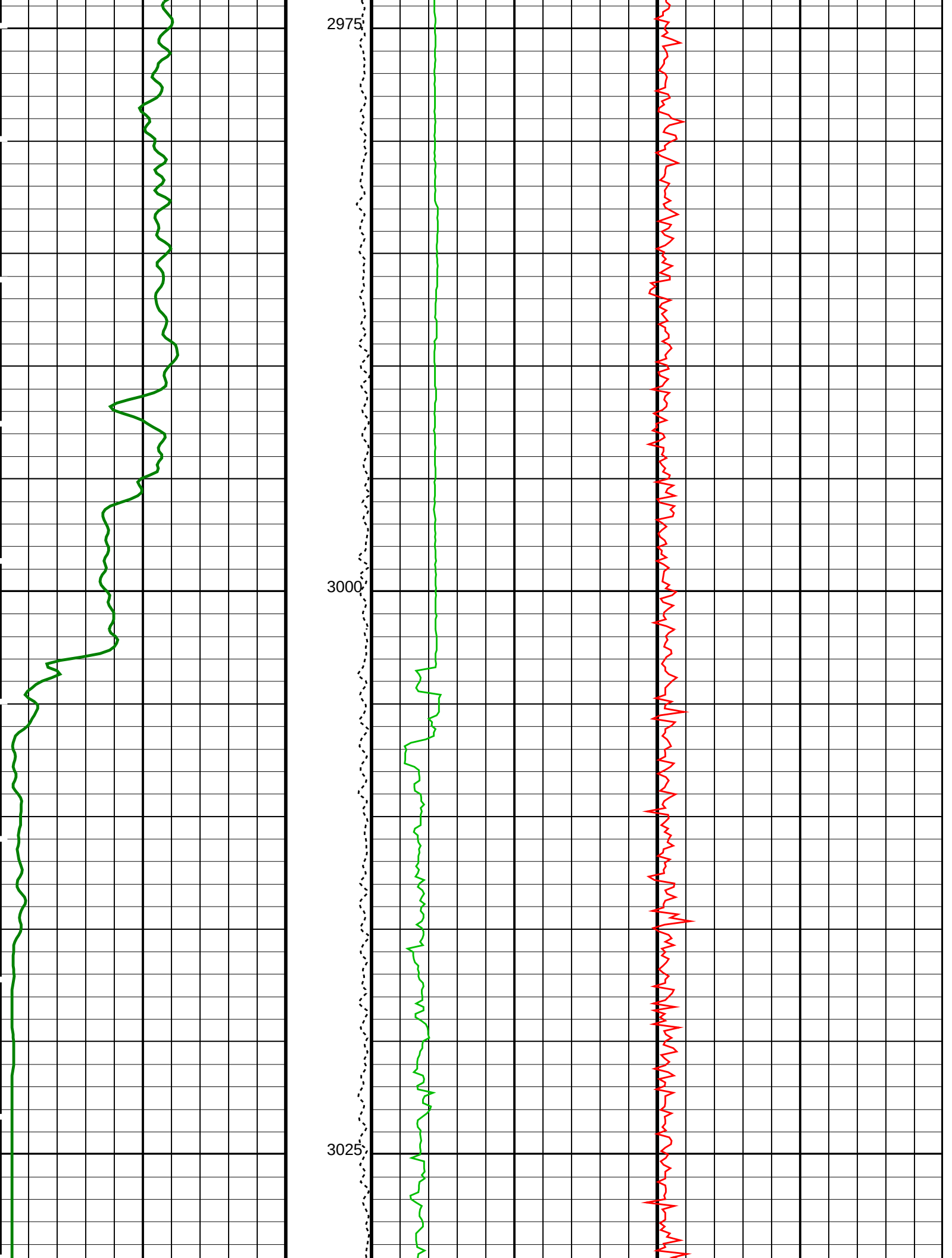
Tension (TENS) (LBF)
0 5000

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




2875
2900


2925
2950


2975
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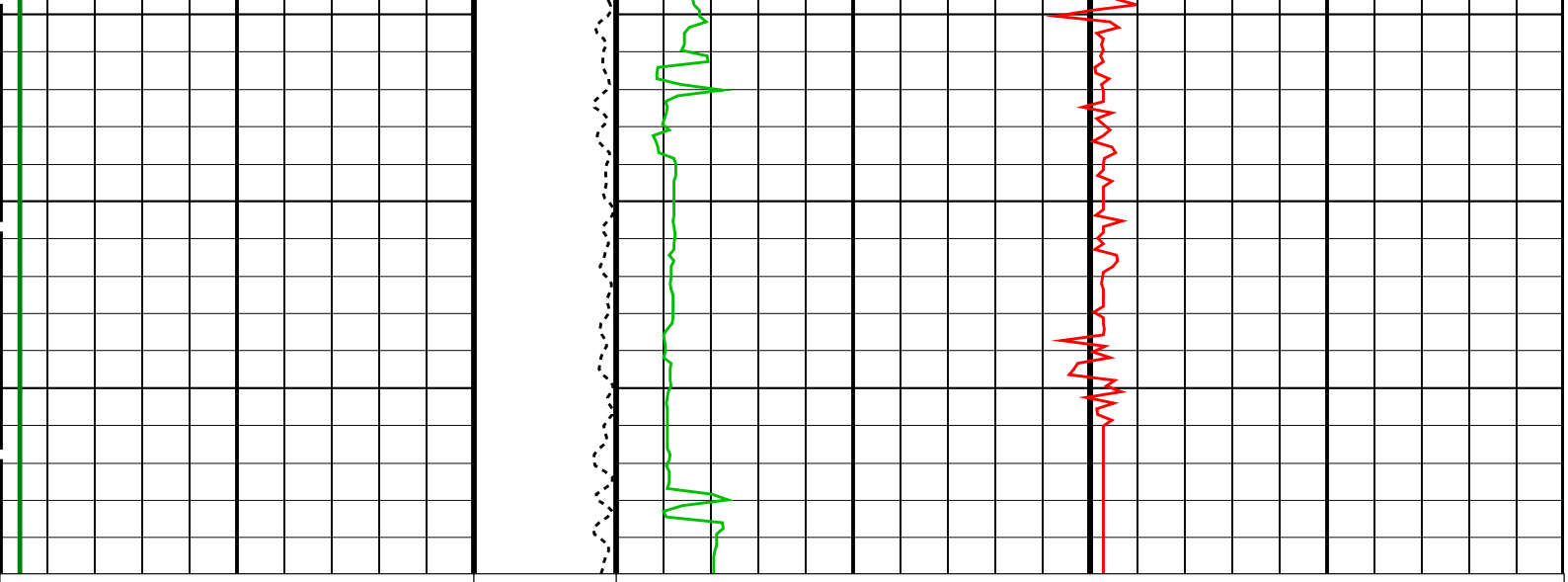
3025



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	−0.00271942	
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	0.958338	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.970831	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3

Format: MSS_Logging **Vertical Scale: 1:200** **Graphics File Created: 29−Sep−2021 10:34**

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_012LUP**	**FN:12**	**PRODUCER**	**29−Sep−2021 10:34**
RTB	**MSS_LDEO_HRLA_LDL_012LUP**	**FN:13**	**PRODUCER**	**29−Sep−2021 10:34**

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: 29−Sep−2021 7:54 After: 29−Sep−2021 12:57							
HRLT M0−M1 Voltage Plus − 0	0	N/A	−318.6	−318.5	0.05521	9.681	UV
HRLT M0−M1 Voltage Plus − 1	0	N/A	−329.8	−330.4	−0.5850	9.681	UV
HRLT M0−M1 Voltage Plus − 2	0	N/A	−337.2	−337.3	−0.08099	9.681	UV
HRLT M0−M1 Voltage Plus − 3	0	N/A	−328.0	−328.4	−0.3425	9.681	UV
HRLT M0−M1 Voltage Plus − 4	0	N/A	−319.8	−319.8	−0.03748	9.681	UV
HRLT M0−M1 Voltage Plus − 5	0	N/A	−321.5	−321.5	−0.09573	9.681	UV
HRLT M0−M1 Voltage Plus − 6	0	N/A	318.9	319.4	0.5217	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: 29−Sep−2021 7:54 After: 29−Sep−2021 12:57							
HRLT M1−M2 Voltage Plus − 0	0	N/A	1738	1738	−0.1355	53.42	UV
HRLT M1−M2 Voltage Plus − 1	0	N/A	1807	1810	3.183	53.42	UV
HRLT M1−M2 Voltage Plus − 2	0	N/A	1840	1840	0.5913	53.42	UV
HRLT M1−M2 Voltage Plus − 3	0	N/A	1788	1790	1.964	53.42	UV
HRLT M1−M2 Voltage Plus − 4	0	N/A	1742	1742	0.2966	53.42	UV
HRLT M1−M2 Voltage Plus − 5	0	N/A	1752	1752	0.5416	53.42	UV
HRLT M1−M2 Voltage Plus − 6	0	N/A	−1756	−1758	−2.235	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: 29−Sep−2021 7:54 After: 29−Sep−2021 12:57							
HRLT M2−M3 Voltage Plus − 0	0	N/A	1731	1730	−0.6948	53.42	UV
HRLT M2−M3 Voltage Plus − 1	0	N/A	1809	1812	2.274	53.42	UV
HRLT M2−M3 Voltage Plus − 2	0	N/A	1845	1844	−0.3018	53.42	UV
HRLT M2−M3 Voltage Plus − 3	0	N/A	1797	1798	1.087	53.42	UV
HRLT M2−M3 Voltage Plus − 4	0	N/A	1745	1744	−0.6985	53.42	UV
HRLT M2−M3 Voltage Plus − 5	0	N/A	1755	1756	0.09290	53.42	UV
HRLT M2−M3 Voltage Plus − 6	0	N/A	−1747	−1749	−1.751	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: 29−Sep−2021 7:54 After: 29−Sep−2021 12:57							
HRLT A3−A4 Voltage Plus − 0	0	N/A	68590	68610	15.05	2100	UV
HRLT A3−A4 Voltage Plus − 1	0	N/A	71550	71690	137.1	2100	UV
HRLT A3−A4 Voltage Plus − 2	0	N/A	73230	73270	38.62	2100	UV
HRLT A3−A4 Voltage Plus − 3	0	N/A	71590	71670	76.65	2100	UV
HRLT A3−A4 Voltage Plus − 4	0	N/A	69450	69480	29.41	2100	UV
HRLT A3−A4 Voltage Plus − 5	0	N/A	69900	69940	44.66	2100	UV
HRLT A3−A4 Voltage Plus − 6	0	N/A	−68110	−68220	−108.4	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: 29−Sep−2021 7:54 After: 29−Sep−2021 12:57							
HRLT A4−A5 Voltage Plus − 0	0	N/A	68690	68690	6.906	2100	UV
HRLT A4−A5 Voltage Plus − 1	0	N/A	71770	71900	124.4	2100	UV
HRLT A4−A5 Voltage Plus − 2	0	N/A	73420	73460	44.36	2100	UV
HRLT A4−A5 Voltage Plus − 3	0	N/A	71730	71820	92.59	2100	UV
HRLT A4−A5 Voltage Plus − 4	0	N/A	69570	69590	21.39	2100	UV
HRLT A4−A5 Voltage Plus − 5	0	N/A	70000	70040	40.78	2100	UV
HRLT A4−A5 Voltage Plus − 6	0	N/A	−68310	−68420	−113.5	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: 29−Sep−2021 7:54 After: 29−Sep−2021 12:57

HRLT A5−A6 Voltage Plus − 0	0	N/A	68540	68540	−6.898	2100	UV
HRLT A5−A6 Voltage Plus − 1	0	N/A	71600	71750	146.3	2100	UV
HRLT A5−A6 Voltage Plus − 2	0	N/A	73260	73280	21.36	2100	UV
HRLT A5−A6 Voltage Plus − 3	0	N/A	71600	71670	78.94	2100	UV
HRLT A5−A6 Voltage Plus − 4	0	N/A	69440	69450	8.688	2100	UV
HRLT A5−A6 Voltage Plus − 5	0	N/A	69860	69900	43.36	2100	UV
HRLT A5−A6 Voltage Plus − 6	0	N/A	−68150	−68270	−113.5	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: 29−Sep−2021 7:54 After: 29−Sep−2021 12:57

HRLT Torpedo−M0 Voltage − 0	0	N/A	−68070	−68070	0.6016	2100	UV
HRLT Torpedo−M0 Voltage − 1	0	N/A	−71400	−71540	−137.3	2100	UV
HRLT Torpedo−M0 Voltage − 2	0	N/A	−73100	−73120	−19.55	2100	UV
HRLT Torpedo−M0 Voltage − 3	0	N/A	−71500	−71590	−83.19	2100	UV
HRLT Torpedo−M0 Voltage − 4	0	N/A	−69390	−69410	−14.04	2100	UV
HRLT Torpedo−M0 Voltage − 5	0	N/A	−69830	−69860	−33.99	2100	UV
HRLT Torpedo−M0 Voltage − 6	0	N/A	67910	68010	98.13	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: 29−Sep−2021 7:54 After: 29−Sep−2021 12:57

HRLT Bridle#9−M0 Voltage − 0	0	N/A	−68110	−68120	−7.195	2100	UV
HRLT Bridle#9−M0 Voltage − 1	0	N/A	−71500	−71640	−132.1	2100	UV
HRLT Bridle#9−M0 Voltage − 2	0	N/A	−73190	−73220	−29.73	2100	UV
HRLT Bridle#9−M0 Voltage − 3	0	N/A	−71580	−71660	−80.29	2100	UV
HRLT Bridle#9−M0 Voltage − 4	0	N/A	−69440	−69460	−22.97	2100	UV
HRLT Bridle#9−M0 Voltage − 5	0	N/A	−69870	−69900	−30.91	2100	UV
HRLT Bridle#9−M0 Voltage − 6	0	N/A	67990	68110	120.4	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: 29−Sep−2021 7:54 After: 29−Sep−2021 12:57

HRLT Source Current Plus − 0	0	N/A	284.1	284.2	0.08139	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: 29−Sep−2021 7:54 After: 29−Sep−2021 12:57

HRLT Vertical Voltage Pl − 0	0	N/A	−320.5	−320.3	0.2527	9.681	UV
HRLT Vertical Voltage Pl − 1	0	N/A	−324.9	−325.2	−0.3079	9.681	UV
HRLT Vertical Voltage Pl − 2	0	N/A	−330.8	−330.6	0.1666	9.681	UV
HRLT Vertical Voltage Pl − 3	0	N/A	−320.1	−320.1	−0.07672	9.681	UV
HRLT Vertical Voltage Pl − 4	0	N/A	−309.0	−308.8	0.1581	9.681	UV
HRLT Vertical Voltage Pl − 5	0	N/A	−325.6	−325.4	0.1862	9.681	UV
HRLT Vertical Voltage Pl − 6	0	N/A	326.7	326.9	0.2283	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: 29−Sep−2021 7:57 After: 29−Sep−2021 13:01

SS Cs Resolution Bkg	9.000	7.698	7.699	7.663	−0.03563	1.800	%
LS Cs Resolution Bkg	9.000	7.989	7.967	7.995	0.02742	1.800	%
LSW1 Background	100.0	71.96	70.62	70.34	−0.2751	3.000	CPS
LSW2 Background	100.0	65.02	63.16	64.65	1.493	3.000	CPS
LSW3 Background	200.0	146.1	145.4	146.3	0.8489	6.000	CPS
LSW4 Background	250.0	183.2	180.9	179.3	−1.521	7.500	CPS
LSW5 Background	600.0	424.9	420.4	421.2	0.8518	18.00	CPS
SSW1 Background	100.0	68.97	68.73	68.35	−0.3786	3.000	CPS
SSW2 Background	200.0	118.2	116.5	116.7	0.2213	6.000	CPS
SSW3 Background	500.0	331.3	328.6	326.4	−2.149	15.00	CPS
SSW4 Background	270.0	178.4	177.0	176.6	−0.4396	8.100	CPS
SSW5 Background	200.0	127.4	126.0	127.8	1.797	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

SSW3 Aluminum	11000	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: 29−Sep−2021 7:58 After: 29−Sep−2021 13:01

Na 511 Peak Loc	40.00	39.25	39.63	39.75	0.1101	1.000	
Na 511 Peak Res	15.50	16.53	15.54	14.52	−1.025	2.000	%
High Voltage	1150	1197	1177	1170	−7.449	N/A	V
Na 1785 Peak Loc	142.6	141.8	143.9	142.5	−1.400	7.000	
Na 1785 Peak Res	8.500	8.905	8.301	8.326	0.02518	2.000	%
Temperature	15.50	26.59	12.68	12.54	−0.1314	N/A	DEGC
Na Count Rate	45.00	12.01	10.35	11.07	0.7134	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration − Detector 2 Check
Master: Calibration out of date 2−May−2021 10:04 Before: 29−Sep−2021 7:58 After: 29−Sep−2021 13:01

Na 511 Peak Loc	40.00	39.88	39.68	39.62	−0.05562	1.000	
Na 511 Peak Res	15.50	15.29	16.81	14.80	−2.011	2.000	%
High Voltage	1150	1122	1098	1094	−3.807	N/A	V
Na 1785 Peak Loc	142.6	142.6	143.5	141.3	−2.258	7.000	
Na 1785 Peak Res	8.500	8.040	8.635	9.324	0.6886	2.000	%
Temperature	15.50	27.21	13.36	14.33	0.9698	N/A	DEGC
Na Count Rate	45.00	12.32	10.16	11.35	1.198	8.000	CPS

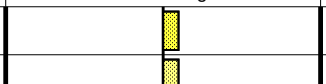
Hostile Natural Gamma Ray Sonde Wellsite Calibration − Ratio Of Detector 1 To Detector 2
Master: Calibration out of date 2−May−2021 10:04 Before: 29−Sep−2021 7:58 After: 29−Sep−2021 13:01

Coincidence Count Rate Ratio	1.000	0.9728	1.015	0.9870	−0.02823	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		−318.5			
1	Before		−329.8	−322.7	−280.7	−379.7
	After		−330.4			
2	Before		−337.2	−322.7	−280.7	−379.7
	After		−337.3			
3	Before		−328.0	−322.7	−280.7	−379.7
	After		−328.4			
	Before		−319.8			

4	After	−319.8	−322.7	−280.7	−379.7
5	Before	−321.5	−322.7	−280.7	−379.7
	After	−321.5			
6	Before	318.9	322.7	379.7	280.7
	After	319.4			
7	Before	−322.7	−322.7	−280.7	−379.7
	After	−322.7			
	(Minimum) (Nominal) (Maximum)				

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After: 29−Sep−2021 12:57

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M12

Idx	Phase	HRLT M1−M2 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1738	1781	2095	1549
	After		1738			
1	Before		1807	1781	2095	1549
	After		1810			
2	Before		1840	1781	2095	1549
	After		1840			
3	Before		1788	1781	2095	1549
	After		1790			
4	Before		1742	1781	2095	1549
	After		1742			
5	Before		1752	1781	2095	1549
	After		1752			
6	Before		−1756	−1781	−1549	−2095
	After		−1758			
7	Before		1781	1781	2095	1549
	After		1781			
	(Minimum) (Nominal) (Maximum)					

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After: 29−Sep−2021 12:57

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		1730			
1	Before		1809	1781	2095	1549
	After		1812			
2	Before		1845	1781	2095	1549
	After		1844			
3	Before		1797	1781	2095	1549
	After		1798			
4	Before		1745	1781	2095	1549
	After		1744			
	Before		1755			

5	After	1756	1781	2095	1549
6	Before	−1747	−1781	−1549	−2095
	After	−1749			
7	Before	1781	1781	2095	1549
	After	1781			
	(Minimum) (Nominal) (Maximum)				

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High Resolution Laterolog Array − B Wellsite Calibration

HRLT V34

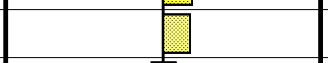
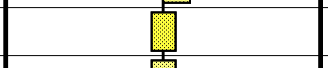
Idx	Phase	HRLT A3−A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68590	70000	82360	60900
	After		68610			
1	Before		71550	70000	82360	60900
	After		71690			
2	Before		73230	70000	82360	60900
	After		73270			
3	Before		71590	70000	82360	60900
	After		71670			
4	Before		69450	70000	82360	60900
	After		69480			
5	Before		69900	70000	82360	60900
	After		69940			
6	Before		−68110	−70000	−60900	−82360
	After		−68220			
7	Before		70000	70000	82360	60900
	After		70000			
	(Minimum) (Nominal) (Maximum)					

Before: 29−Sep−2021 7:54
After: 29−Sep−2021 12:57

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V45

Idx	Phase	HRLT A4−A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68690	70000	82360	60900
	After		68690			
1	Before		71770	70000	82360	60900
	After		71900			
2	Before		73420	70000	82360	60900
	After		73460			
3	Before		71730	70000	82360	60900
	After		71820			
4	Before		69570	70000	82360	60900
	After		69590			
5	Before		70000	70000	82360	60900
	After		70040			
	Before		−68310			

6	After		−68420	−70000	−60900	−82360
7	Before		70000	70000	82360	60900
	After		70000			
		(Minimum) (Nominal) (Maximum)				

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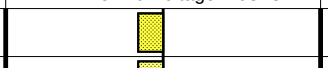
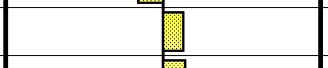
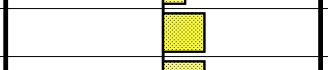
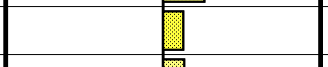
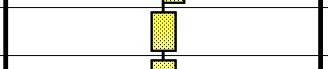
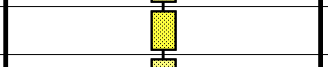
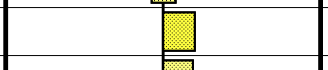
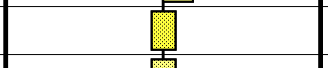
After: 29−Sep−2021 12:57

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V56

Idx	Phase	HRLT A5−A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68540	70000	82360	60900
	After		68540			
1	Before		71600	70000	82360	60900
	After		71750			
2	Before		73260	70000	82360	60900
	After		73280			
3	Before		71600	70000	82360	60900
	After		71670			
4	Before		69440	70000	82360	60900
	After		69450			
5	Before		69860	70000	82360	60900
	After		69900			
6	Before		−68150	−70000	−60900	−82360
	After		−68270			
7	Before		70000	70000	82360	60900
	After		70000			
		(Minimum) (Nominal) (Maximum)				

Before: 29−Sep−2021 7:54

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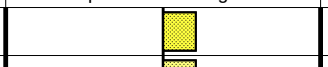
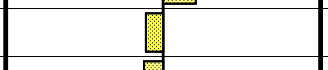
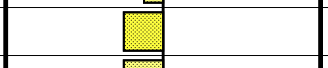
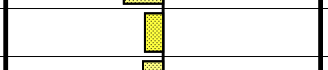
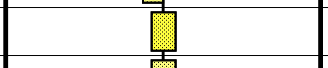
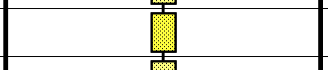
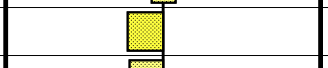
High Resolution Laterolog Array − B Wellsite Calibration

HRLT VTP

Idx	Phase	HRLT Torpedo−M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−68070	−70000	−60900	−82360
	After		−68070			
1	Before		−71400	−70000	−60900	−82360
	After		−71540			
2	Before		−73100	−70000	−60900	−82360
	After		−73120			
3	Before		−71500	−70000	−60900	−82360
	After		−71590			
4	Before		−69390	−70000	−60900	−82360
	After		−69410			
5	Before		−69830	−70000	−60900	−82360
	After		−69860			
6	Before		67910	70000	82360	60900
	After		68010			
	Before		−70000			

7	After	−70000	−70000	−60900	−82360
	(Minimum) (Nominal) (Maximum)				

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High Resolution Laterolog Array − B Wellsite Calibration

HRLT VBD

Idx	Phase	HRLT Bridle#9−M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−68110	−70000	−60900	−82360
	After		−68120			
1	Before		−71500	−70000	−60900	−82360
	After		−71640			
2	Before		−73190	−70000	−60900	−82360
	After		−73220			
3	Before		−71580	−70000	−60900	−82360
	After		−71660			
4	Before		−69440	−70000	−60900	−82360
	After		−69460			
5	Before		−69870	−70000	−60900	−82360
	After		−69900			
6	Before		67990	70000	82360	60900
	After		68110			
7	Before		−70000	−70000	−60900	−82360
	After		−70000			
	(Minimum) (Nominal) (Maximum)					

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High Resolution Laterolog Array − B Wellsite Calibration

HRLT ISO

Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum
0	Before		284.1	284.0	334.1	247.0
	After		284.2			
1	Before		281.1	281.1	330.7	244.4
	After		281.1			
2	Before		281.1	281.1	330.7	244.4
	After		281.1			
3	Before		281.1	281.1	330.7	244.4
	After		281.1			
4	Before		281.1	281.1	330.7	244.4
	After		281.1			
5	Before		281.1	281.1	330.7	244.4
	After		281.1			
6	Before		281.1	281.1	330.7	244.4
	After		281.1			
7	Before		281.1	281.1	330.7	244.4
	After		281.1			

	(Minimum)	(Nominal)	(Maximum)		

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High Resolution Laterolog Array − B Wellsite Calibration

HRLT MV

Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−320.5	−322.7	−280.7	−379.7
	After		−320.3			
1	Before		−324.9	−322.7	−280.7	−379.7
	After		−325.2			
2	Before		−330.8	−322.7	−280.7	−379.7
	After		−330.6			
3	Before		−320.1	−322.7	−280.7	−379.7
	After		−320.1			
4	Before		−309.0	−322.7	−280.7	−379.7
	After		−308.8			
5	Before		−325.6	−322.7	−280.7	−379.7
	After		−325.4			
6	Before		326.7	322.7	379.7	280.7
	After		326.9			
7	Before		−322.7	−322.7	−280.7	−379.7
	After		−322.7			
		(Minimum) (Nominal) (Maximum)				

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Hostile Litho−Density Sonde / Equipment Identification

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

Hostile Litho−Density Sonde Wellsite Calibration

Background Measurement

Phase	SS Cs Resolution Bkg %	Value
Master		7.698
Before		7.699
After		7.663
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)	

Phase	LS Cs Resolution Bkg %	Value
Master		7.989
Before		7.967
After		7.995
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)	

Phase	LSW1 Background CPS	Value
Master		71.96
Before		70.62
After		70.34
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)	

Phase	LSW2 Background CPS	Value
Master		65.02
Before		63.16
After		64.65
	50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)	

Phase	LSW3 Background CPS	Value
Master		146.1
Before		145.4
After		146.3
	110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)	

Phase	LSW4 Background CPS	Value
Master		183.2
Before		180.9
After		179.3
	140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)	

Phase	LSW5 Background CPS	Value
Master		424.9
Before		420.4

Phase	SSW1 Background CPS	Value
Master		68.97
Before		68.73

Phase	SSW2 Background CPS	Value
Master		118.2
Before		116.5

Before		420.4
After		421.2

330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)

Phase	SSW3 Background CPS	Value
Master		331.3
Before		328.6
After		326.4

280.0 (Minimum) 500.0 (Nominal) 700.0 (Maximum)

Before		68.73
After		68.35

55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)

Phase	SSW4 Background CPS	Value
Master		178.4
Before		177.0
After		176.6

150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum)

Before		116.3
After		116.7

100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)

Phase	SSW5 Background CPS	Value
Master		127.4
Before		126.0
After		127.8

110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum)

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Litho−Density Spectroscopy Cartridge − B / Equipment Identification

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

Hostile Natural Gamma Ray Cartridge − B / Equipment Identification

Primary Equipment:		
HNGC Cartridge	HNGC − B	304
Auxiliary Equipment:		
HNGC Housing	HNGH − A	3

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:		
HNGS Sonde	HNGS − BA	99
Auxiliary Equipment:		
HNGS Sonde Housing	HNSH − BA	102
Gamma Source Radioactive	GSR − U	6098

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 1 Check

Phase	Na 511 Peak Loc	Value
Master		39.25
Before		39.63
After		39.75

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

Phase	Na 511 Peak Res %	Value
Master		16.53
Before		15.54
After		14.52

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

Phase	High Voltage V	Value
Master		1197
Before		1177
After		1170

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

Phase	Na 1785 Peak Loc	Value
Master		141.8
Before		143.9
After		142.5

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

Phase	Na 1785 Peak Res %	Value
Master		8.905
Before		8.301
After		8.326

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

Phase	Temperature DEGC	Value
Master		26.59
Before		12.68
After		12.54

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

Phase	Na Count Rate CPS	Value
Master		12.01
Before		10.35
After		11.07

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

Master: Calibration out of date 2−May−2021 10:04 Before: 29−Sep−2021 7:58 After: 29−Sep−2021 13:01

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 2 Check

Phase	Na 511 Peak Loc	Value
Master		39.88
Before		39.68
After		39.62
	37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)	

Phase	Na 511 Peak Res %	Value
Master		15.29
Before	BEFORE−AFTER LIMIT	16.81
After		14.80
	12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)	

Phase	High Voltage V	Value
Master		1122
Before		1098
After		1094
	900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	

Phase	Na 1785 Peak Loc	Value
Master		142.6
Before		143.5
After		141.3
	135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)	

Phase	Na 1785 Peak Res %	Value
Master		8.040
Before		8.635
After		9.324
	7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)	

Phase	Temperature DEGC	Value
Master		27.21
Before		13.36
After		14.33
	−28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)	

Phase	Na Count Rate CPS	Value
Master		12.32
Before		10.16
After		11.35
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)	

Master: Calibration out of date 2−May−2021 10:04 Before: 29−Sep−2021 7:58 After: 29−Sep−2021 13:01

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Ratio Of Detector 1 To Detector 2

Phase	Coincidence Count Rate Ratio	Value
Master		0.9728
Before		1.015
After		0.9870
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)	

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

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DTS Telemetry Tool / Equipment Identification

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

Company: **International Ocean Discovery Program**

Schlumberger

Well: **Expedition 396, Site U1574A**

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

Rig: **JOIDES Resolution**

Country: **Iceland**

High Resolution Laterolog (HRLA)

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