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

**REMARKS: RUN NUMBER 1**

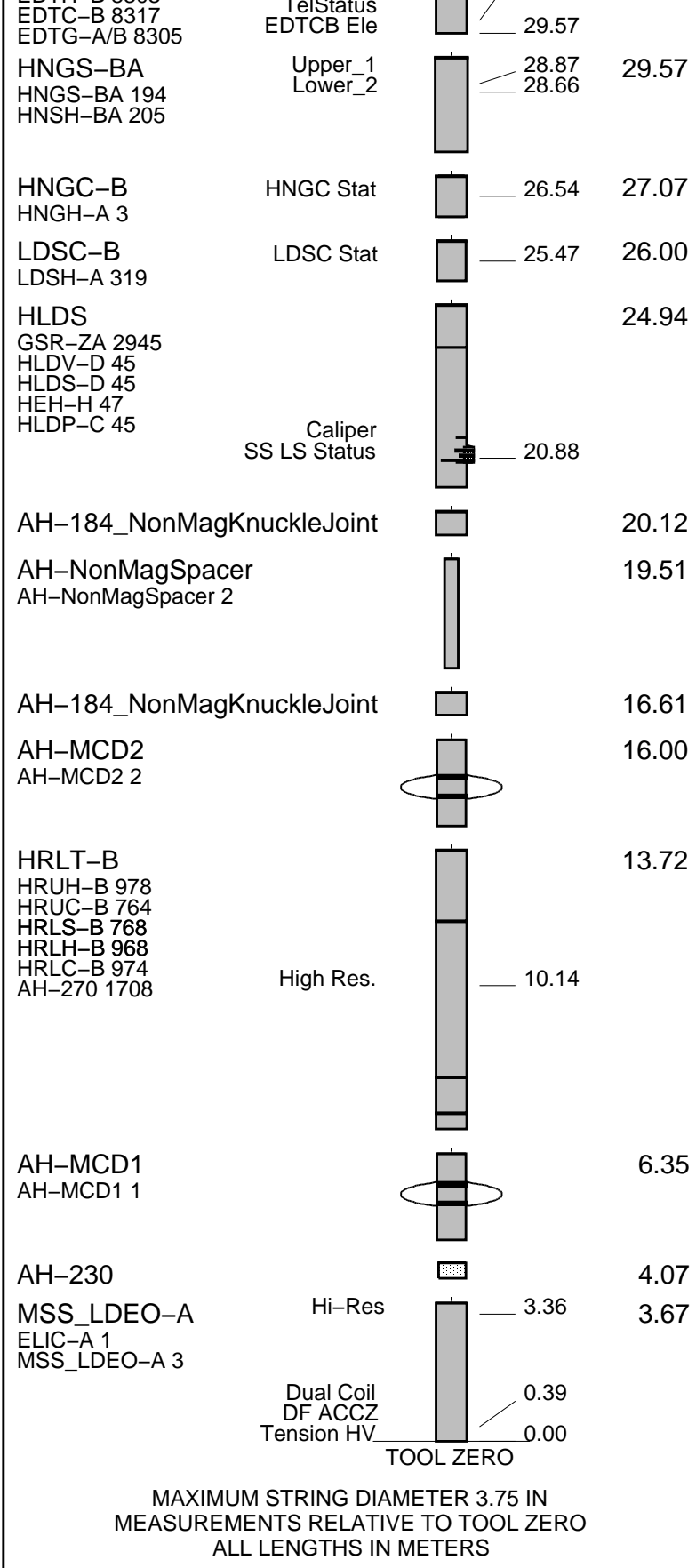
Hole drilled with RCB bottom hole assembly (BHA) at 9-7/8" BS  
 Bit dropped at bottom of hole using MBR; Driller's Sea Floor was 2856.7mbrf.  
 Drilled TD was 3501mbrf; tools only reached a maximum depth of 3156mbrf  
 Drill pipe set at 2971.8mbrf.  
 Triple-combo run with upper part eccentered using bowsprings and lower part centralized using MCDs.  
 Fluid type was sea water; no barite corrections applied.  
 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.  
 Hole size corrections made using caliper measurements for upward passes.  
 Tools encountered difficulty going down at approximately 3030mbrf and were unable to pass below 3156mbrf.  
 Upward log pass indicated a collapsed hole at a depth of approximately 3013mbrf on the caliper curve.  
 No further attempts to descend below that under-gauge spot were made for safety reasons.  
 Caliper closed on the fly at an approximate depth of 2933mbrf, a few meters inside pipe.  
 The AHC was NOT used for this run, as the prevailing heave was less than 0.2m p-p.

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

**EQUIPMENT DESCRIPTION**

RUN 1	RUN 2
<b>SURFACE EQUIPMENT</b>	
GSR-U 616008 WITM (EDTS)-A	

DOWNHOLE EQUIPMENT			
LEH-QT			32.87
LEH-QT 301	MDSB_EDTC		
AH-369	Mud Tempe		31.55
	CTEM		30.48
EDTC-B	Gamma Ray		31.55
EDTH-B 8303	EFTB DIAG		



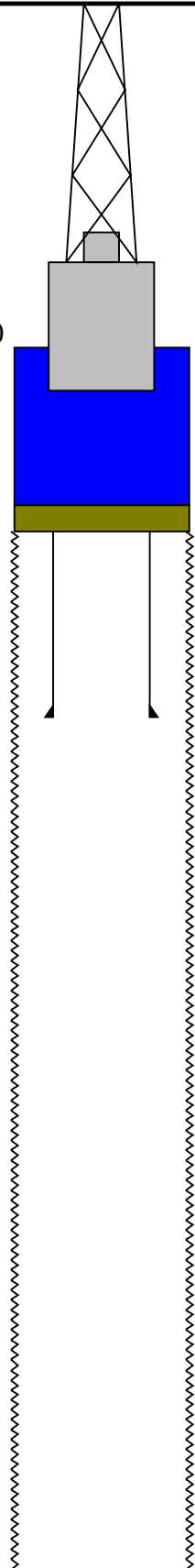
CD ID MD

MD CD ID

Kelly Bushing Elevation 0.0

Derrick Floor Elevation 0.0

Mean Sea Level 11.0



2856.875000 Sea Floor

2971.500000 Bit Depth

3501.875 Total Depth - Dri

**Schlumberger**

**Uplod  
1:200 Scale**

MAXIS Field Log

**Output DLIS Files**

DEFAULT MSS\_LDEO\_HRLA\_LDL\_010LUP FN:9 PRODUCER 24-Apr-2017 08:13 3154.7 M 2834.6 M

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

MSS_LDEO-A	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
HNGC-B	19C0-187	HNGS-BA	19C0-187
EDTC-B	SKK-5169-EDTCB		

**PIP SUMMARY**

Time Mark Every 60 S

**HNGS Spectroscopy Gamma Ray  
(HSGR)**

(GAPI)

100

HNGS Borehole Potassium (HBHK)

-0.05

(-----)

0.05

Area1  
From HCGR to HSGR

HNGS Computed Gamma Ray (HCGR)  
(GAPI)

0 100

Calibrated  
Downhole  
Force  
(CDF)  
(LBF)

3000 0

HNGS Uranium (HURA)  
(PPM)

-5 10

HLDS Caliper (LCAL)  
(IN)

0 20

Tension  
(TENS)  
(LBF)

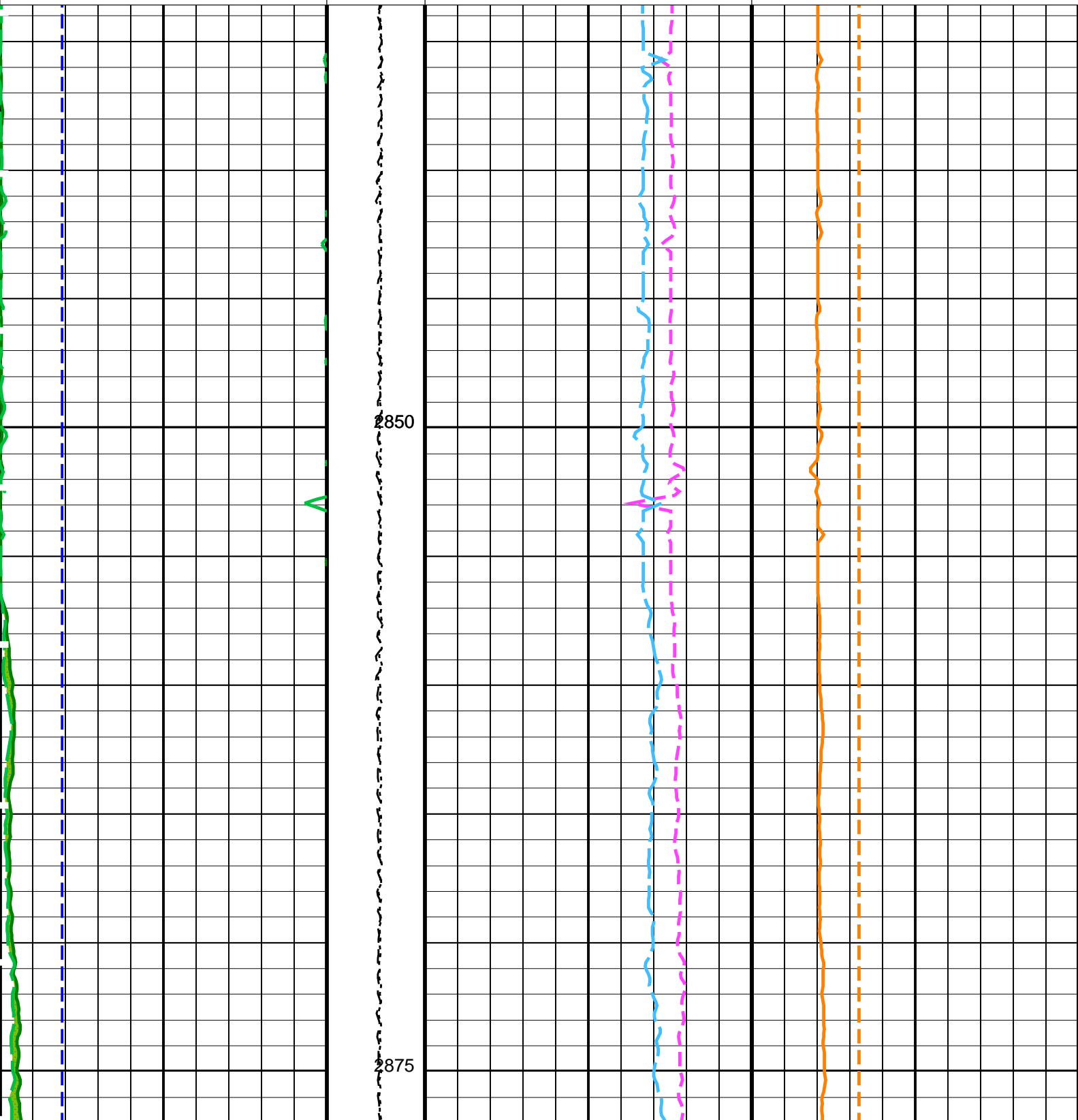
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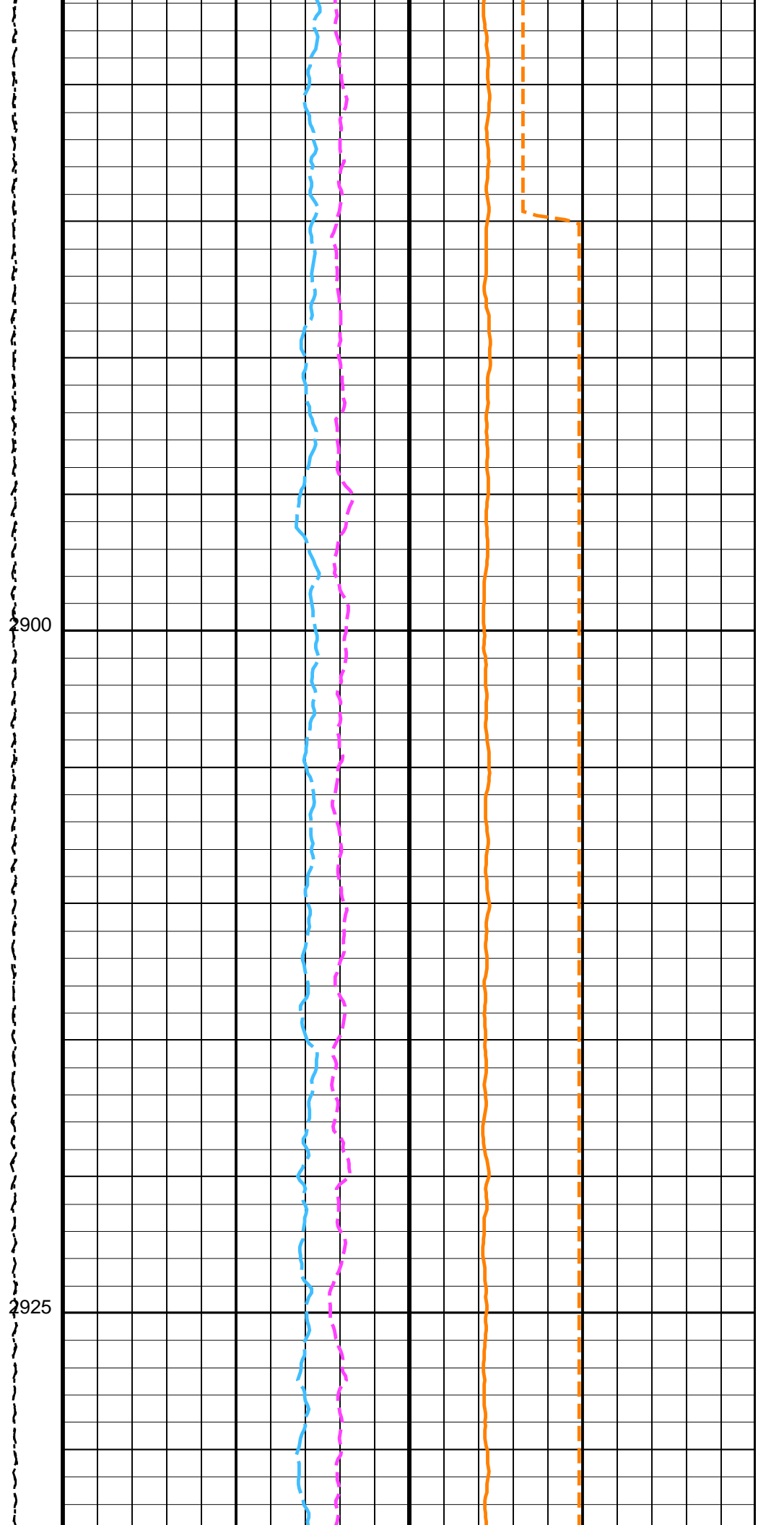
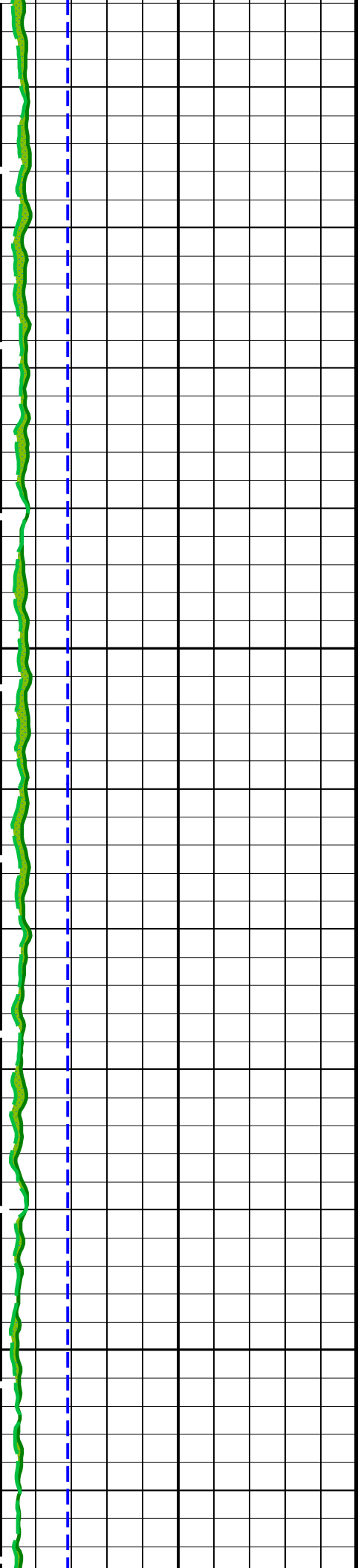
HNGS Thorium (HTHO)  
(PPM)

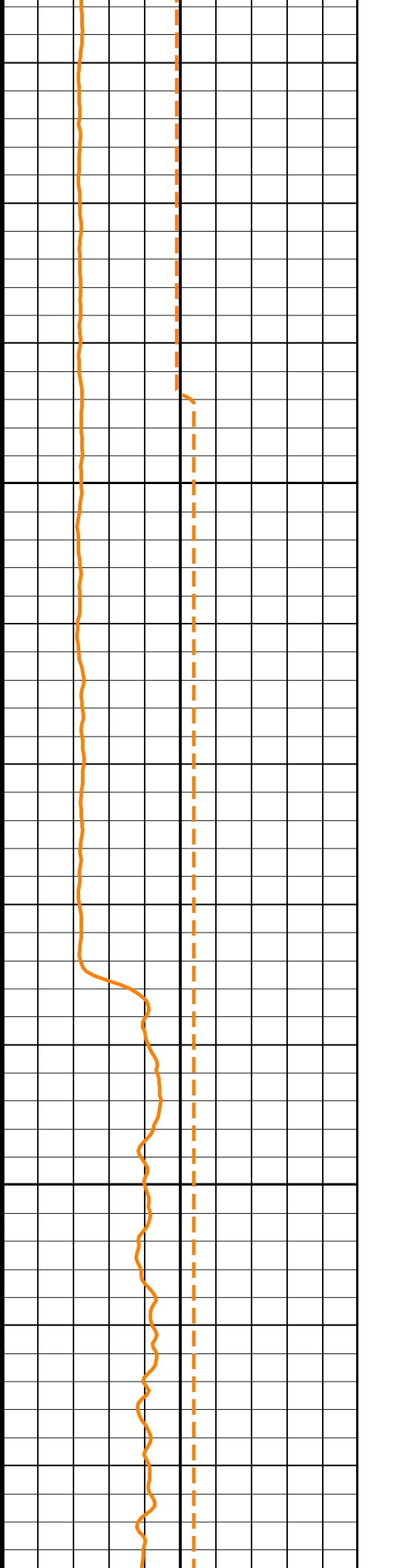
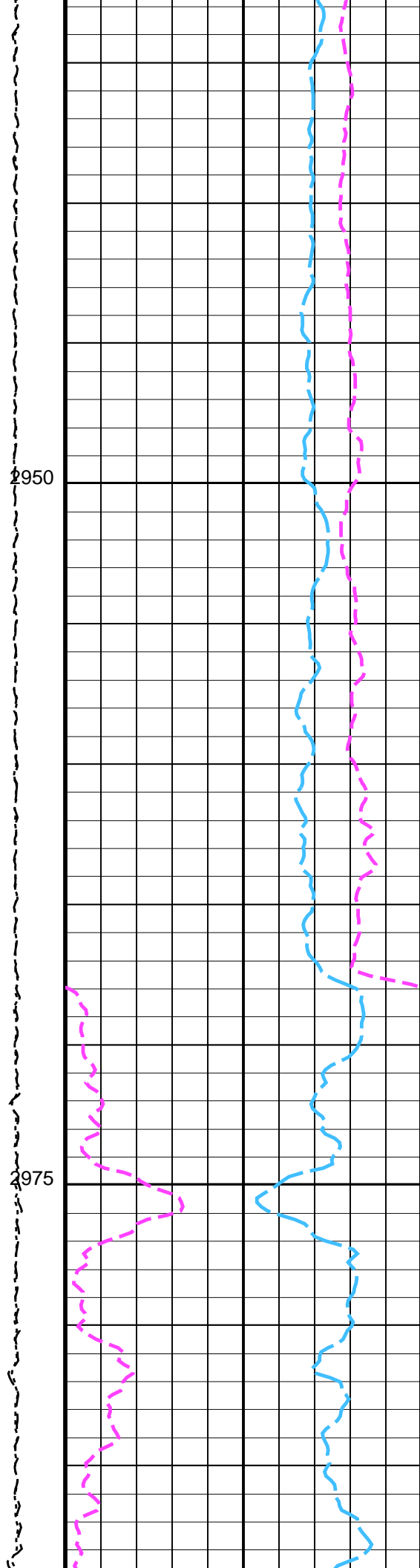
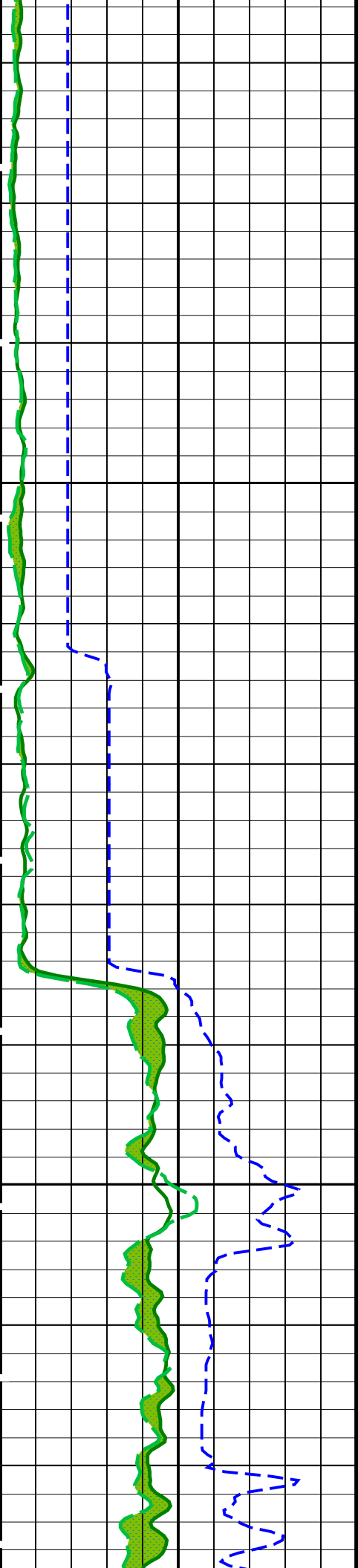
5 25

HNGS Potassium (HFK)

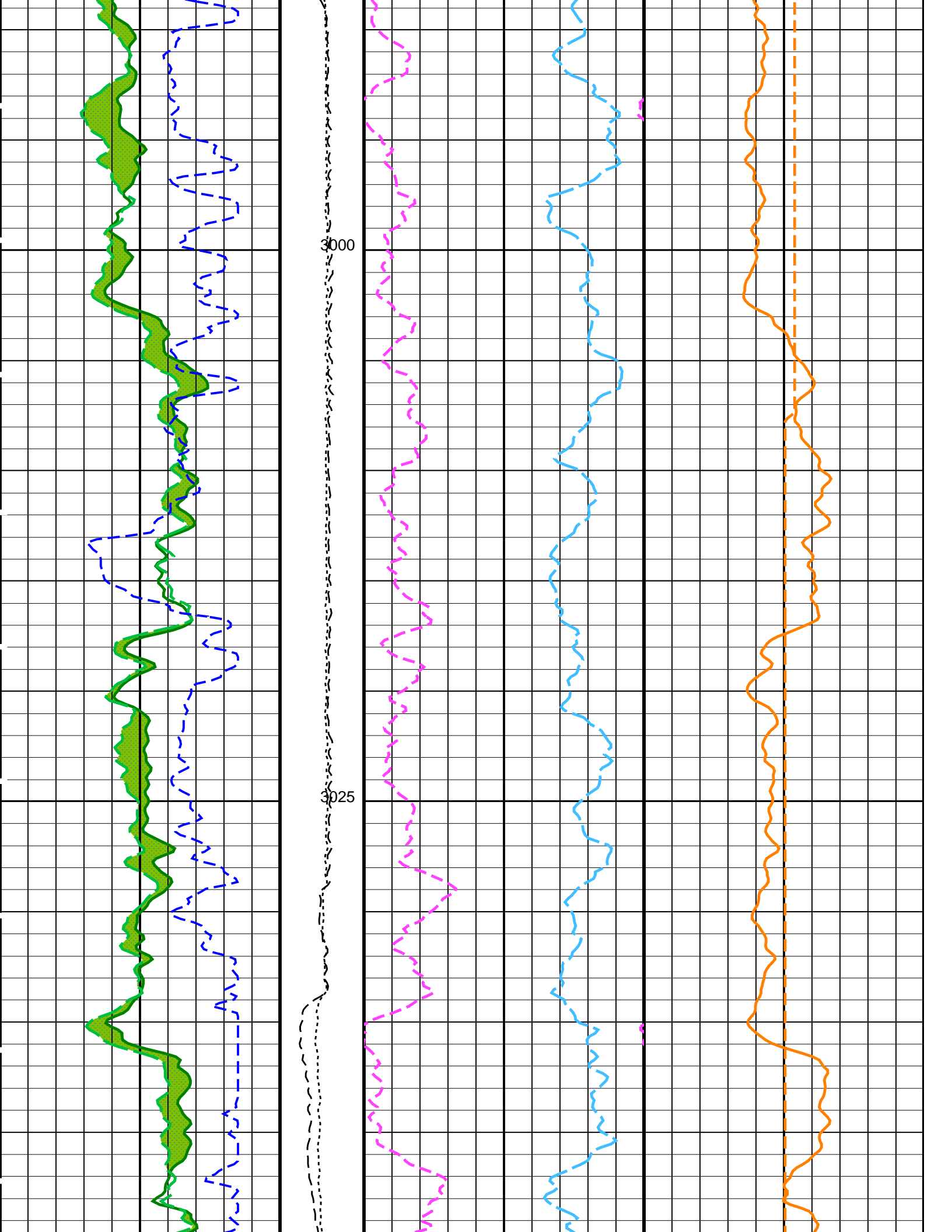
-0.01 0.04

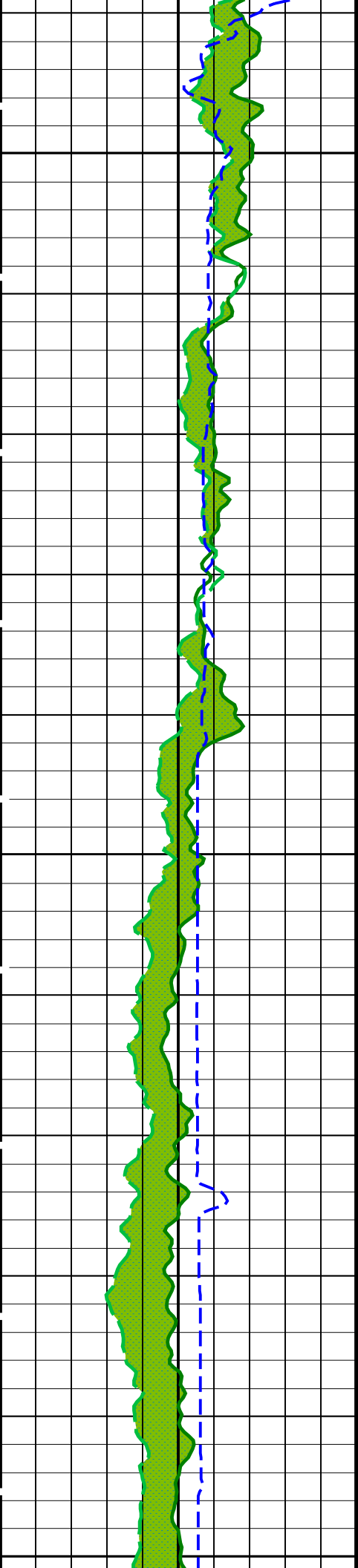




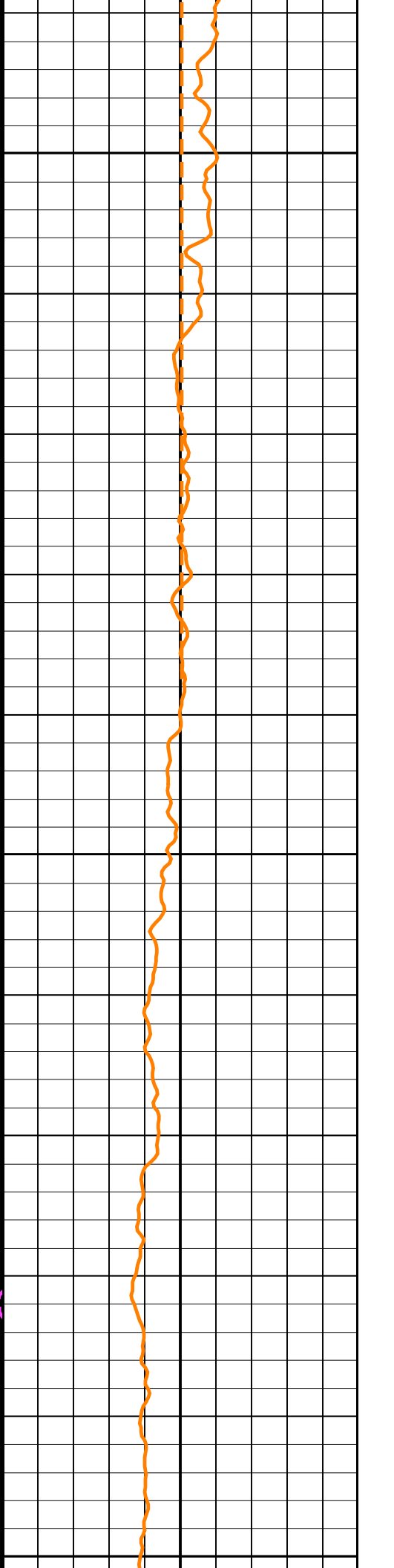
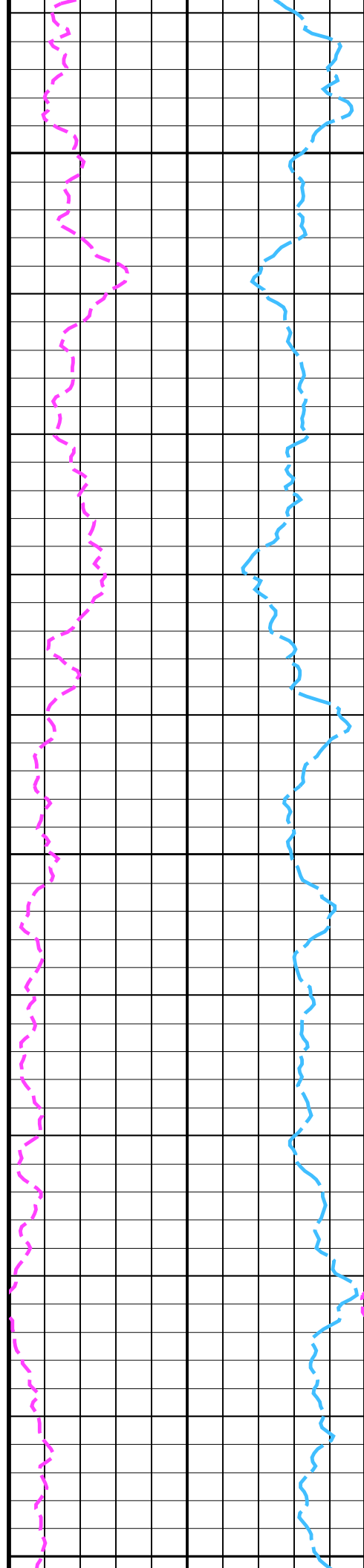


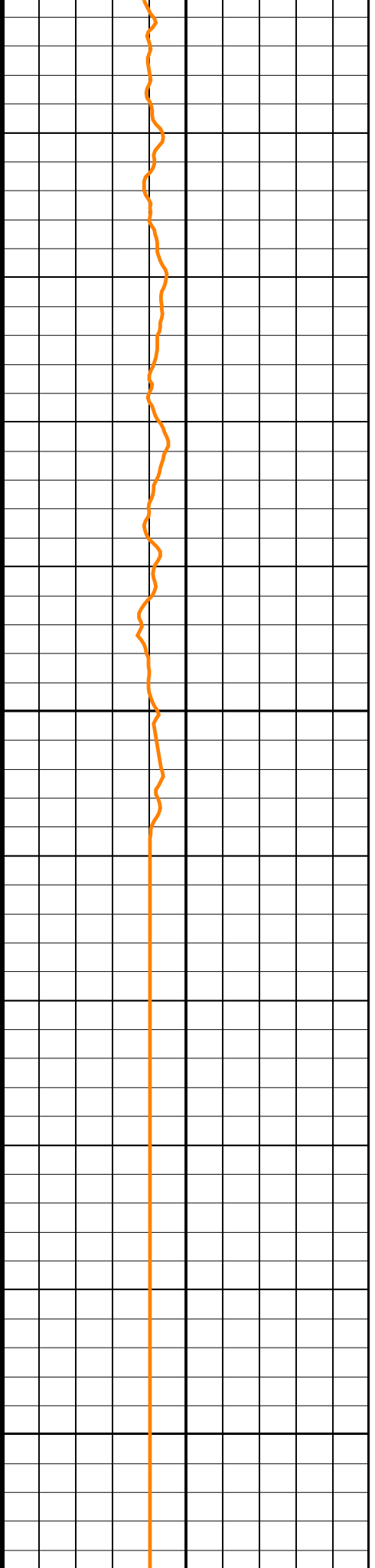
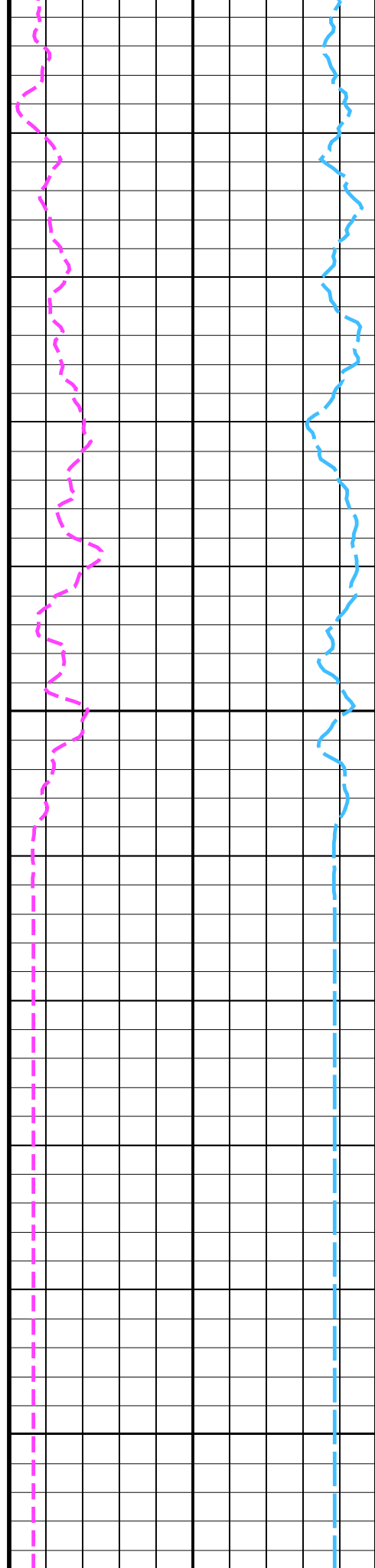
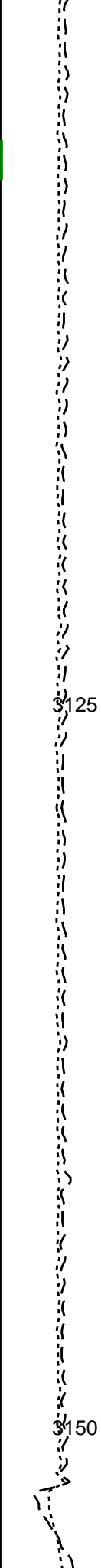
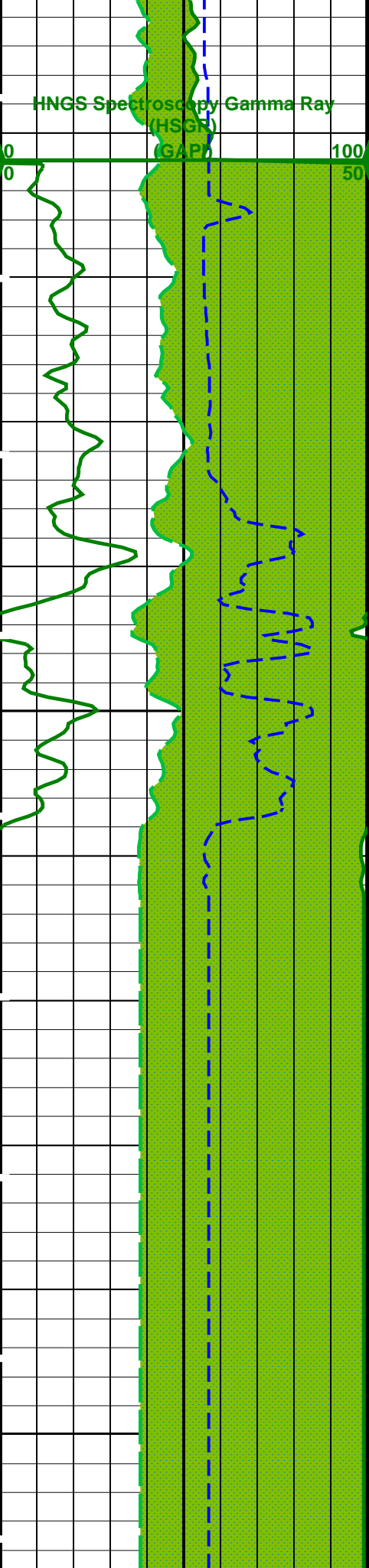






3050  
3075  
3100



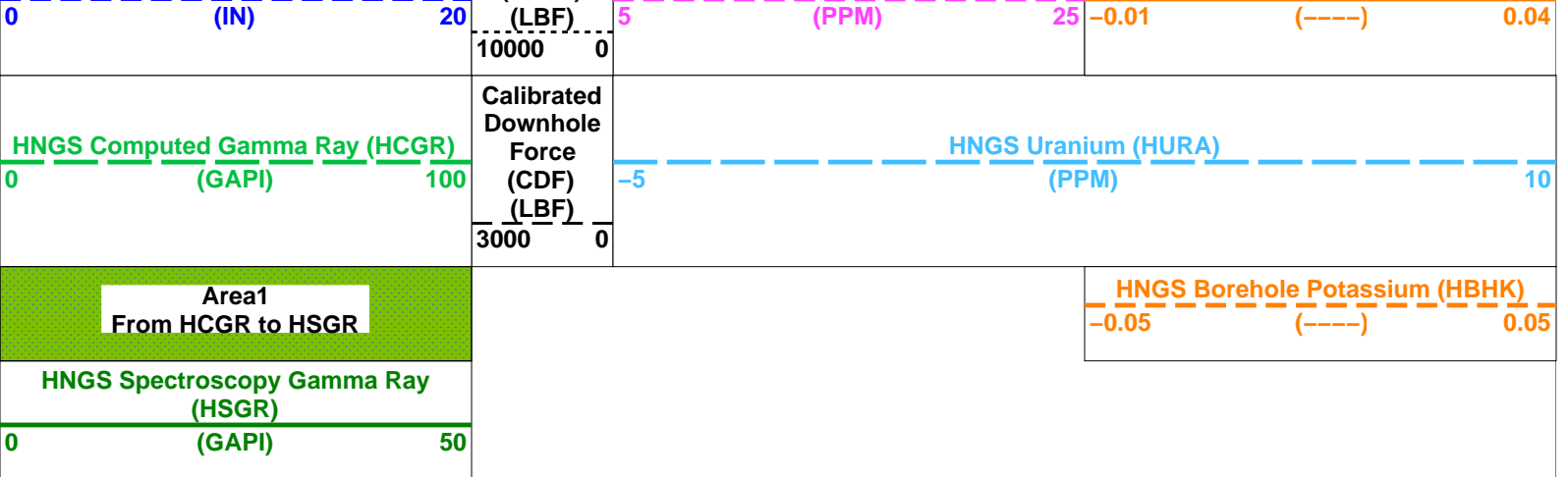


HLDS Caliper (LCAL)

Tension  
(TENS)

HNGS Thorium (HTHO)

HNGS Potassium (HFK)



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	-0.00381814
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	0.942613
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.998297
EDTC-B: Enhanced DTS Cartridge		
BHS	Borehole Status	OPEN
GCSE	Generalized Caliper Selection	LCAL
System and Miscellaneous		
BS	Bit Size	9.875 IN
DFD	Drilling Fluid Density	1.05 G/C3

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 24-Apr-2017 08:14

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
EDTC-B	SKK-5169-EDTCB		

Output DLIS Files

DEFAULT MSS\_LDEO\_HRLA\_LDL\_010LUP FN:9 PRODUCER 24-Apr-2017 08:13

Company: International Ocean Discovery Program Well: Expedition 368, Site U1501D

Output DLIS Files

DEFAULT MSS\_LDEO\_HRLA\_LDL\_010LUP FN:9 PRODUCER 24-Apr-2017 08:13 2154.7 M 2824.6 M

# OP System Version: 19C0-187

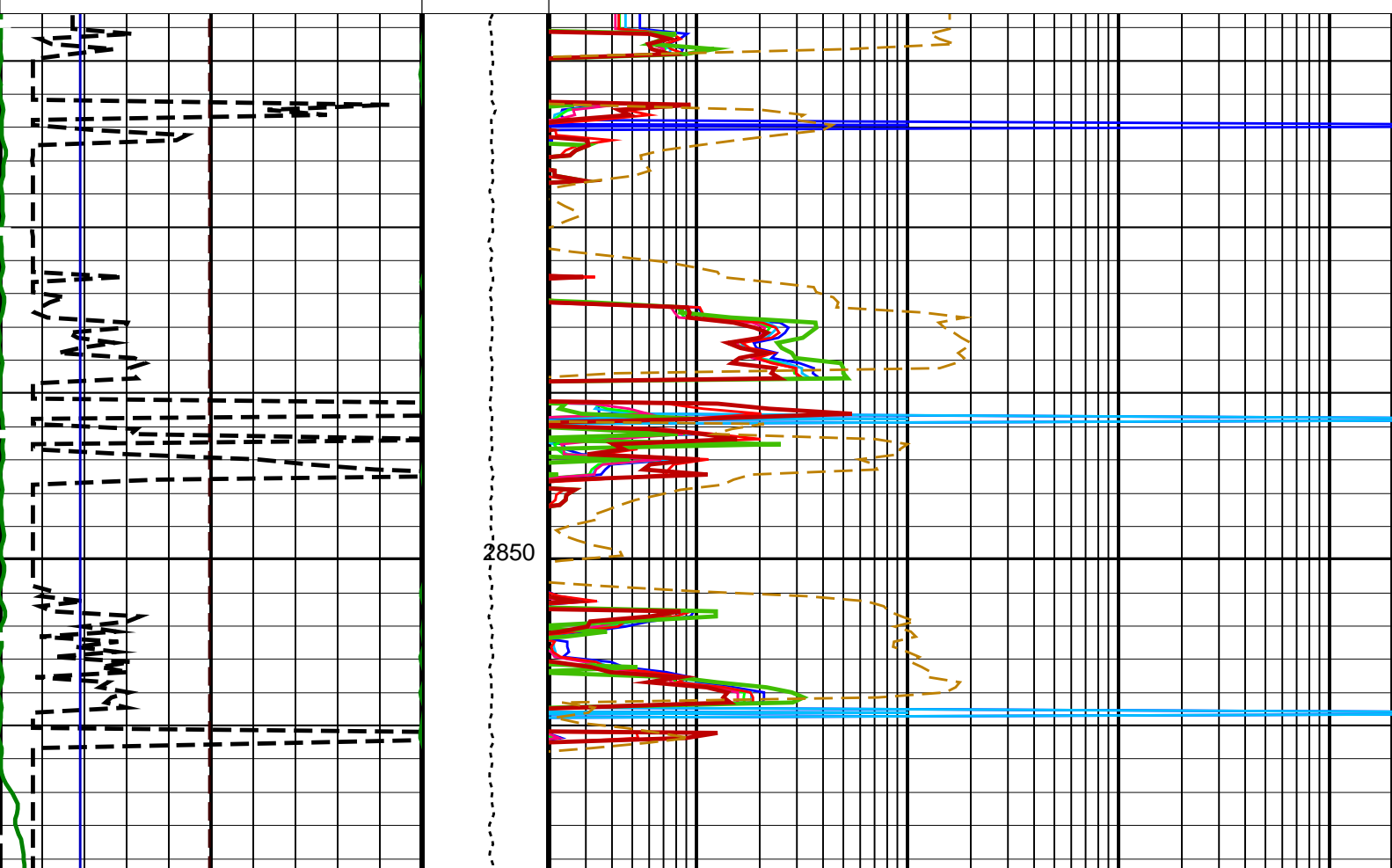
MSS\_LDEO-A 19C0-187  
 HLDS 19C0-187  
 HNGC-B 19C0-187  
 EDTC-B SKK-5169-EDTCB

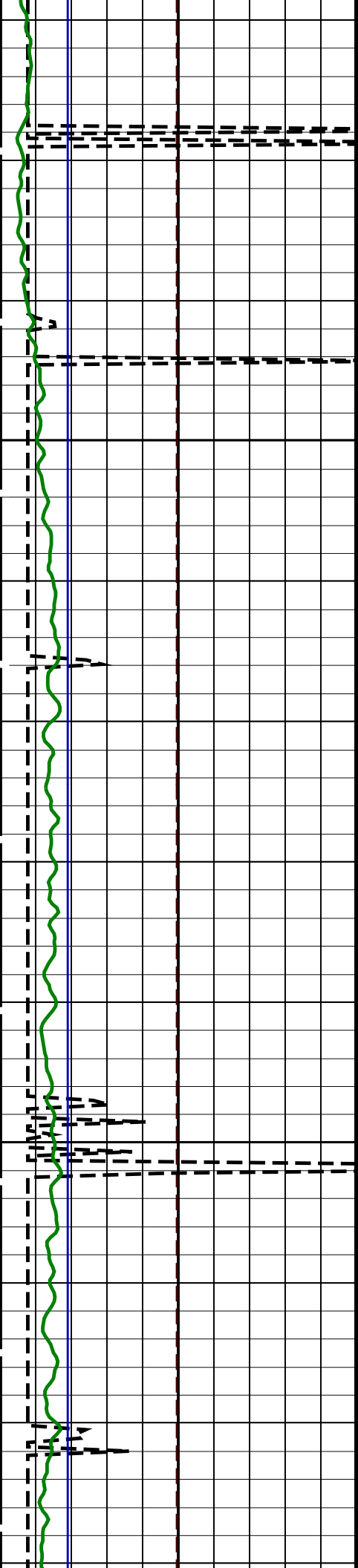
HRLT-B 19C0-187  
 LDSC-B 19C0-187  
 HNGS-BA 19C0-187

## PIP SUMMARY

Time Mark Every 60 S

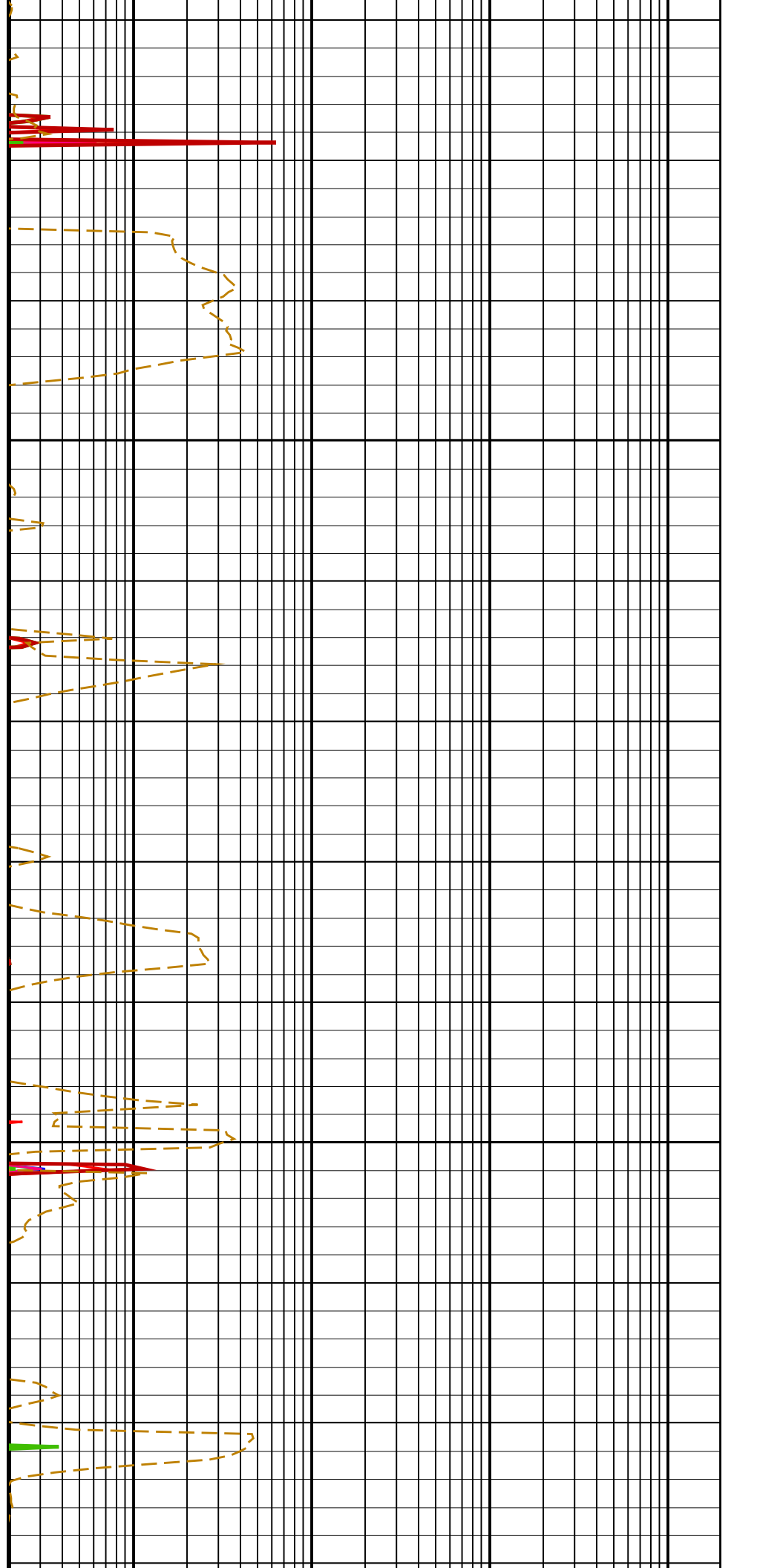
		<b>HRLT True Resistivity (RT_HRLT)</b>	
0.2	(OHMM)	2000	
		<b>Invaded Zone Resistivity (RXO_HRLT)</b>	
0.2	(OHMM)	2000	
		<b>HRLT Mud Resistivity (RM_HRLT)</b>	
0.02	(OHMM)	200	
		<b>HRLT Resistivity 5 (RLA5)</b>	
0.2	(OHMM)	2000	
<b>HNGS Spectroscopy Gamma Ray (HSGR)</b>		<b>HRLT Resistivity 4 (RLA4)</b>	
0	(GAPI)	0.2	(OHMM)
50		2000	
<b>Invasion Diameter (DI_HRLT)</b>		<b>HRLT Resistivity 3 (RLA3)</b>	
0	(IN)	0.2	(OHMM)
50		2000	
<b>Caliper (LCAL)</b>		<b>HRLT Resistivity 2 (RLA2)</b>	
0	(IN)	0.2	(OHMM)
20		2000	
<b>Bit Size (BS)</b>		<b>HRLT Resistivity 1 (RLA1)</b>	
0	(IN)	0.2	(OHMM)
20		2000	
<b>Tension (TENS) (LBF)</b>			
10000	0		

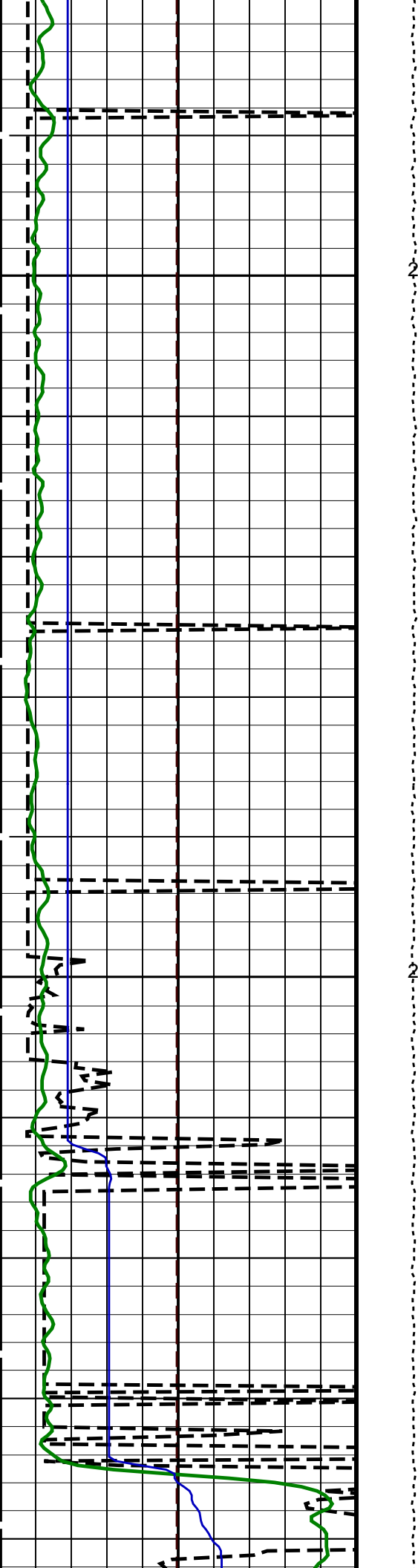




2875

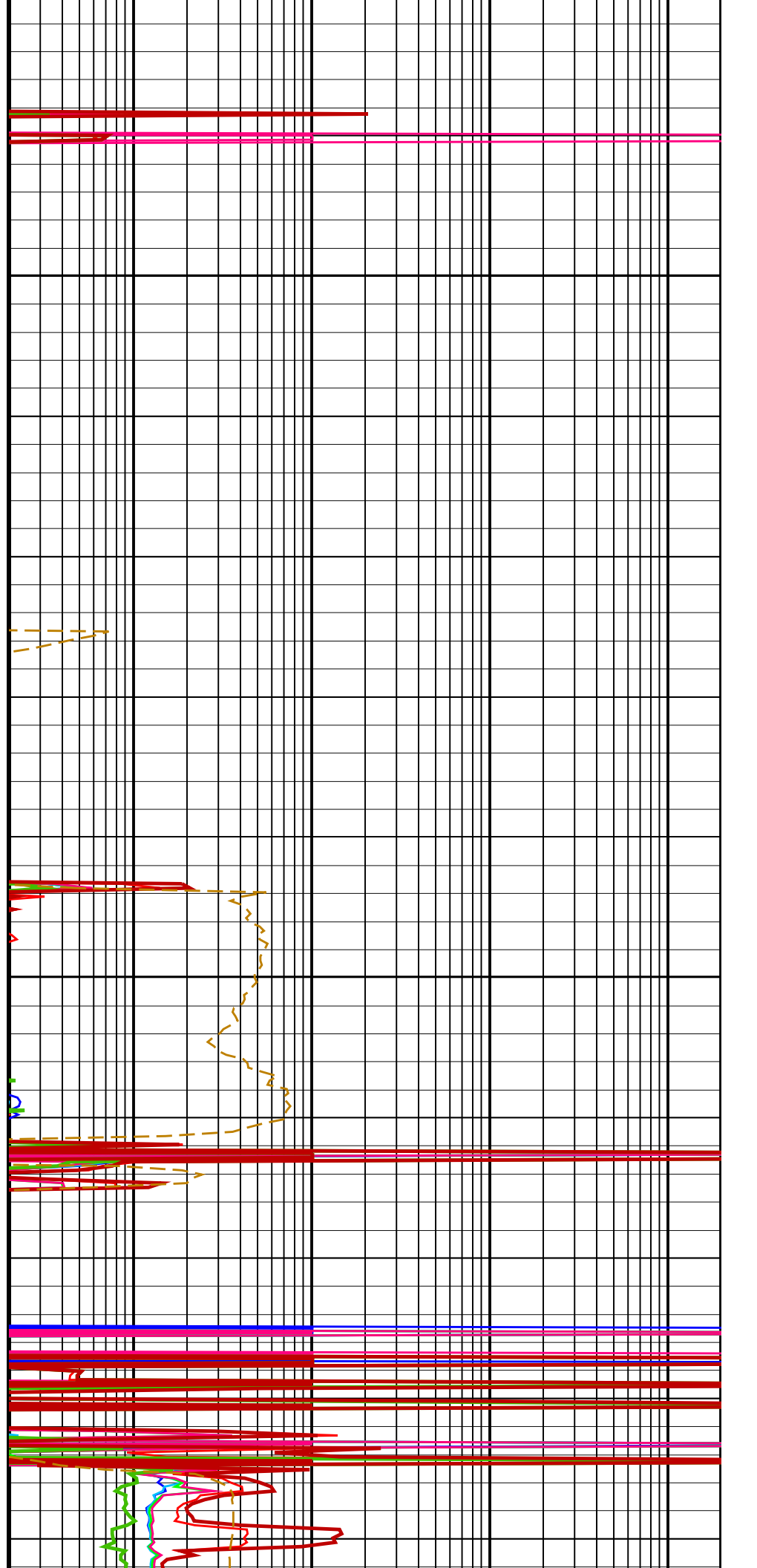
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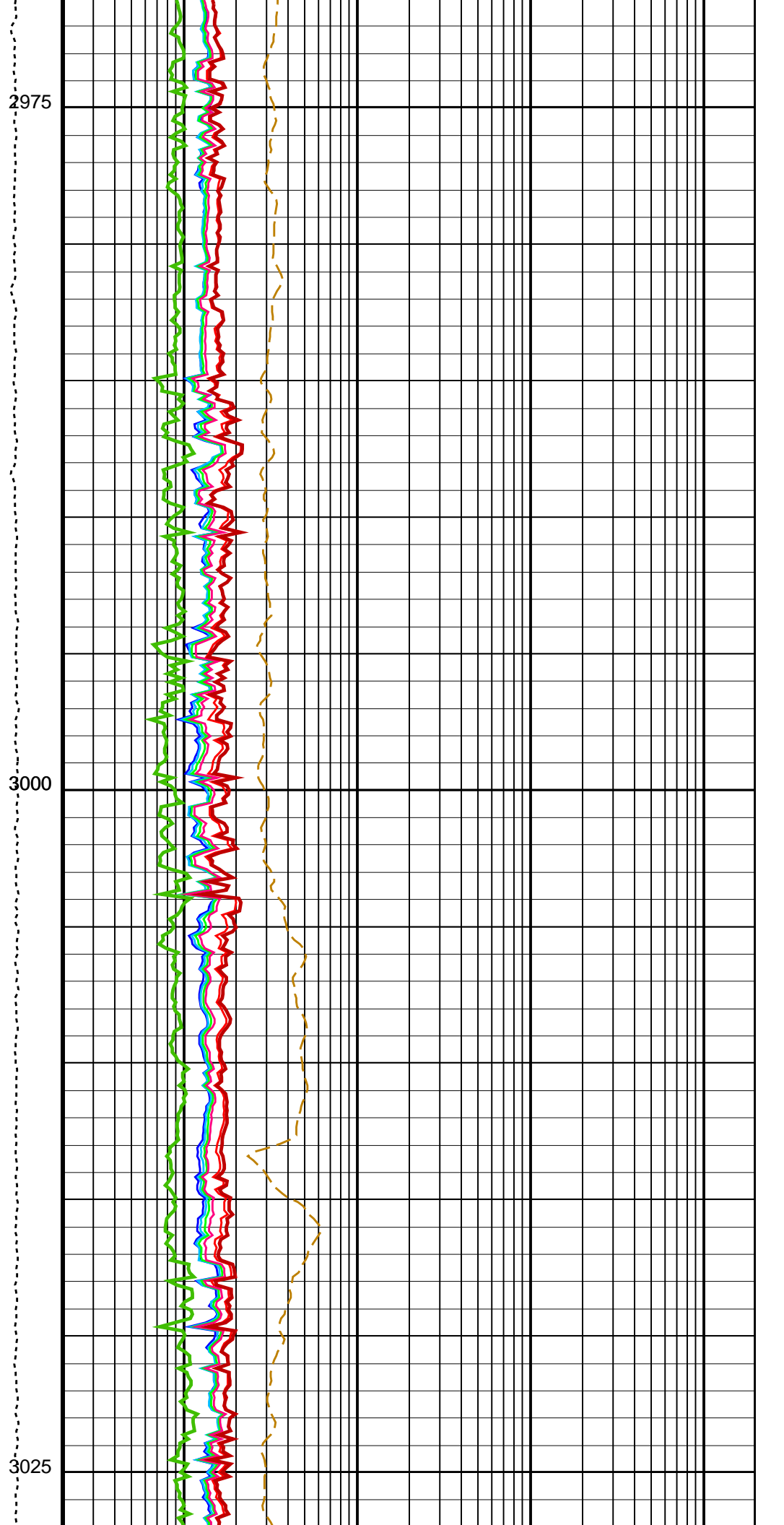
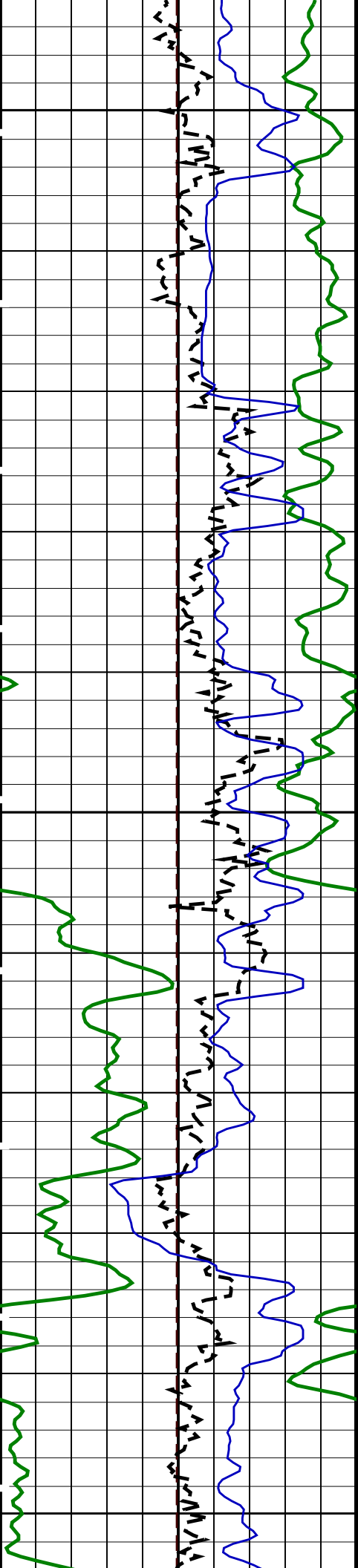




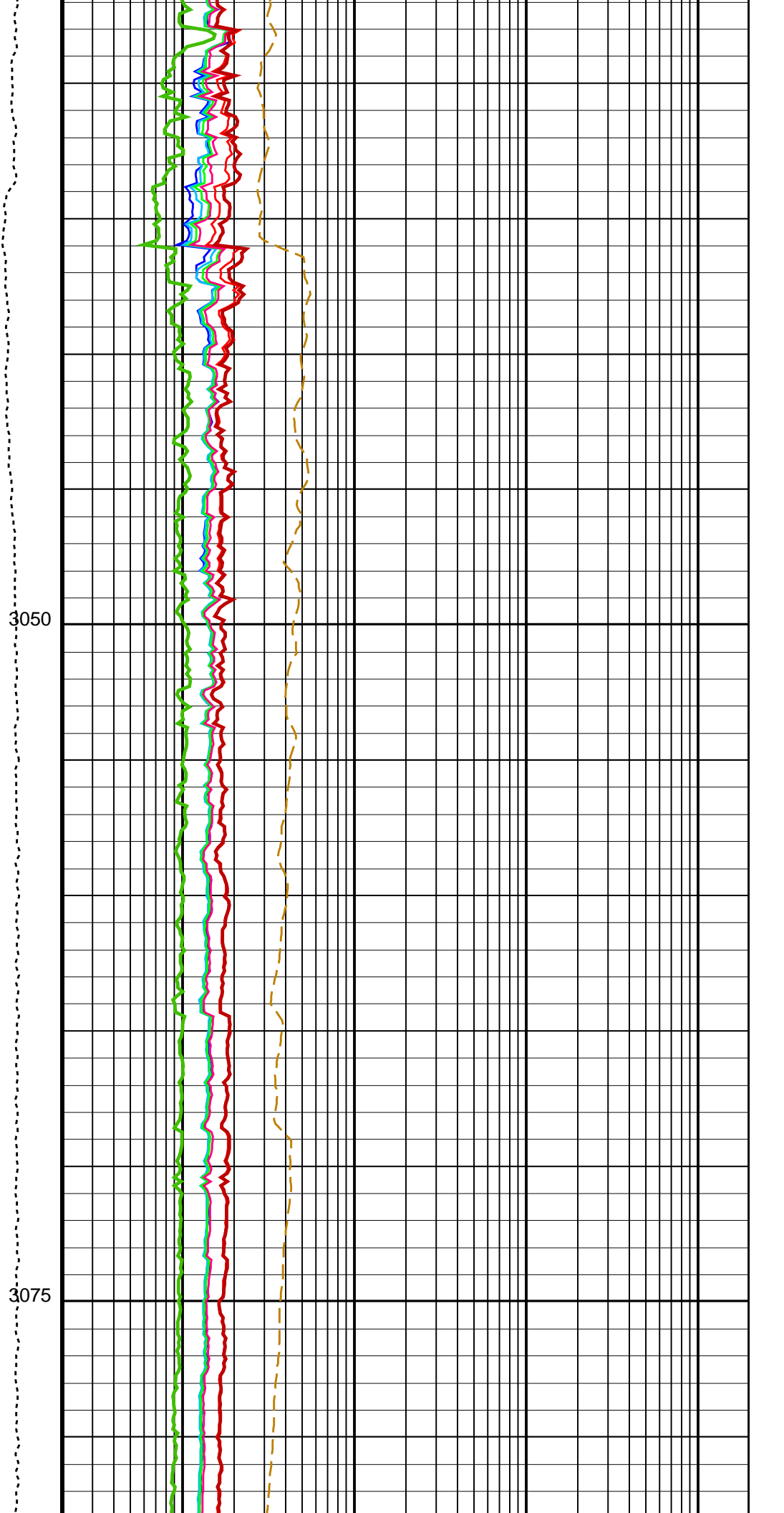
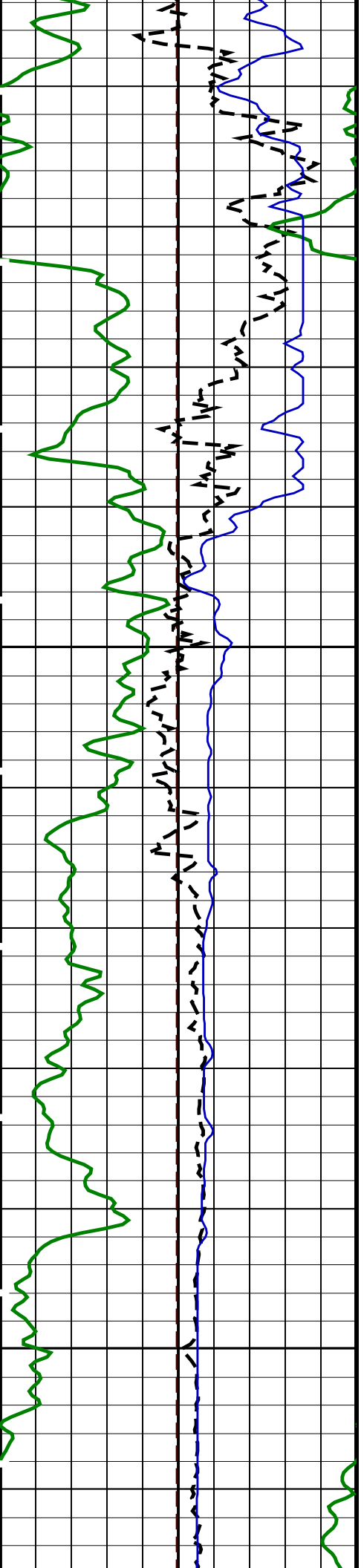
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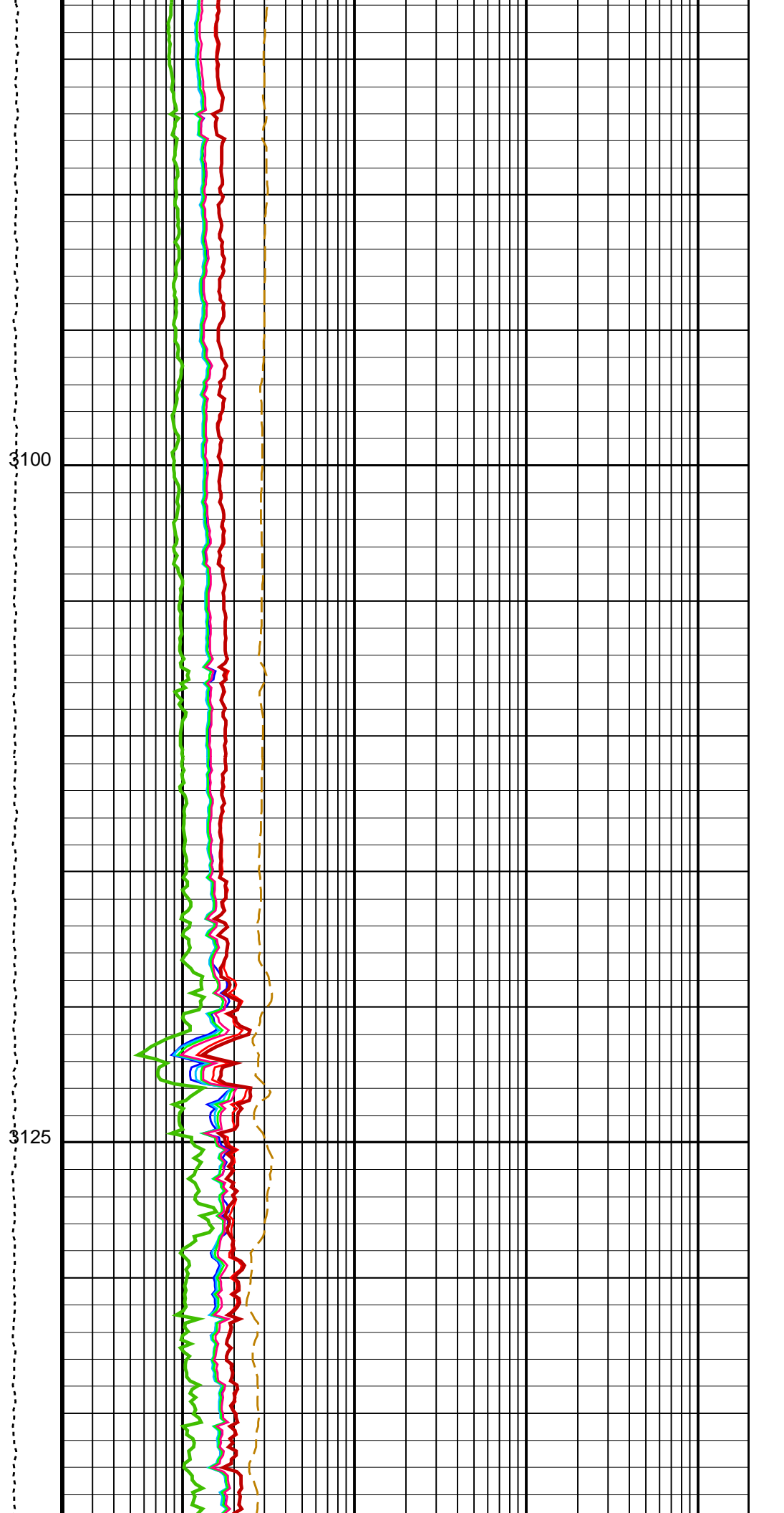
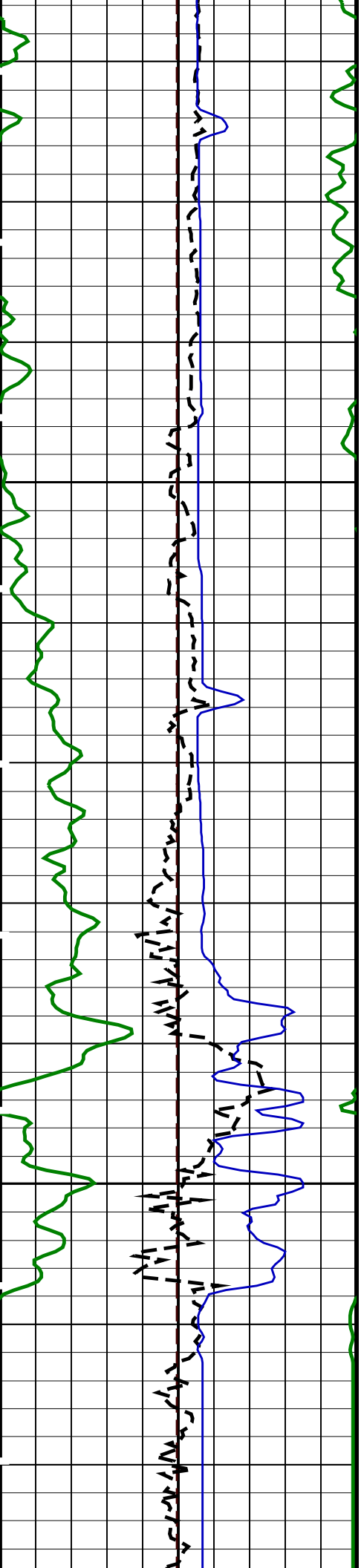
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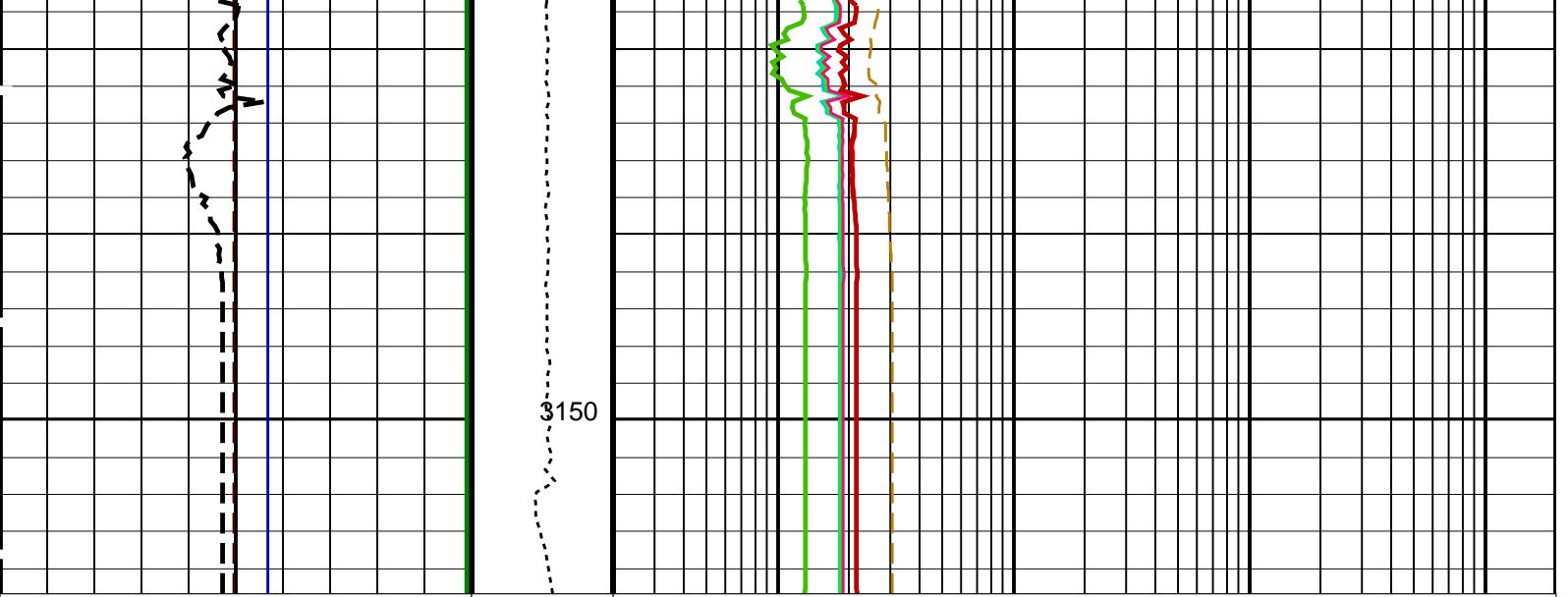












Bit Size (BS) (IN)	Tension (TENS) (LBF)	HRLT Resistivity 1 (RLA1) (OHMM)	0.2	2000
Caliper (LCAL) (IN)		HRLT Resistivity 2 (RLA2) (OHMM)	0.2	2000
Invasion Diameter (DI_HRLT) (IN)		HRLT Resistivity 3 (RLA3) (OHMM)	0.2	2000
HNGS Spectroscopy Gamma Ray (HSGR) (GAPI)		HRLT Resistivity 4 (RLA4) (OHMM)	0.2	2000
		HRLT Resistivity 5 (RLA5) (OHMM)	0.2	2000
		HRLT Mud Resistivity (RM_HRLT) (OHMM)	0.02	200
		Invaded Zone Resistivity (RXO_HRLT) (OHMM)	0.2	2000
		HRLT True Resistivity (RT_HRLT) (OHMM)	0.2	2000

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)	40 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
PROCVN	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	Centered
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)	40 DEGC

DHT	Bottom Hole Temperature (used in calculations)	40	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	-0.00381814	
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	0.942613	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.998297	
EDTC-B: Enhanced DTS Cartridge			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	40	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	
SHT	Surface Hole Temperature	20	DEGC
System and Miscellaneous			
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.05	G/C3
MST	Mud Sample Temperature	23.00	DEGC
TD	Total Depth	1212.2	M

Format: HRLT Vertical Scale: 1:200 Graphics File Created: 24-Apr-2017 08:14

### 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
EDTC-B	SKK-5169-EDTCB		

### Output DLIS Files

DEFAULT MSS\_LDEO\_HRLA\_LDL\_010LUP FN:9 PRODUCER 24-Apr-2017 08:13

DEFAULT MSS\_LDEO\_HRLA\_LDL\_009LDP FN:8 PRODUCER 24-Apr-2017 07:03 2795.8 M 3125.0 M

### Output DLIS Files

EDTC-B	SKK-5169-EDTCB		
HNGC-B	19C0-187	HNGS-BA	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187

### OP System Version: 19C0-187

Time Mark Every 00.3

### PIP SUMMARY

0.2 (OHMM) 20

~~HRLT True Resistivity (RT\_HRLT)~~

0.2 (OHMM) 20

~~HRLT Resistivity 1 (RLA1)~~

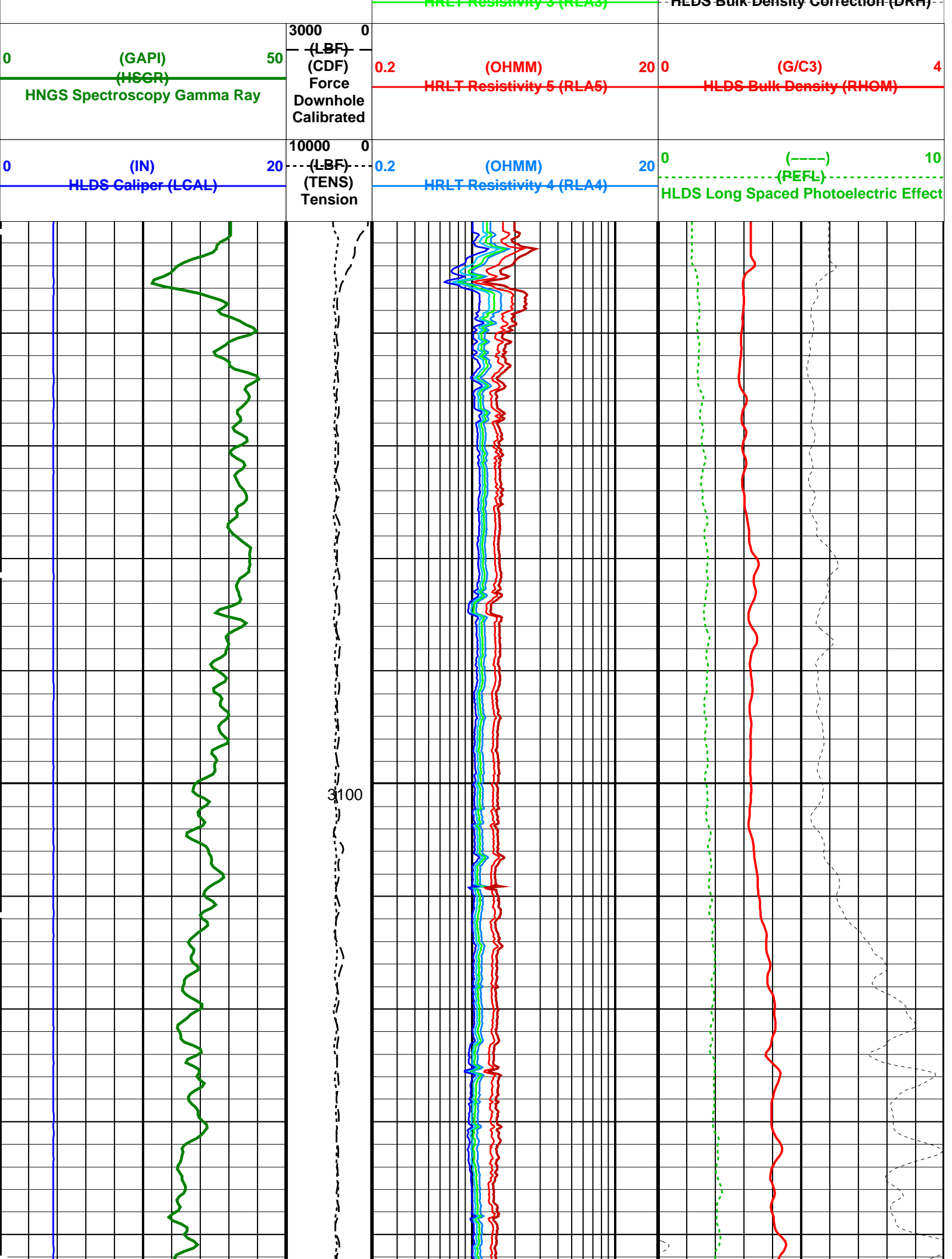
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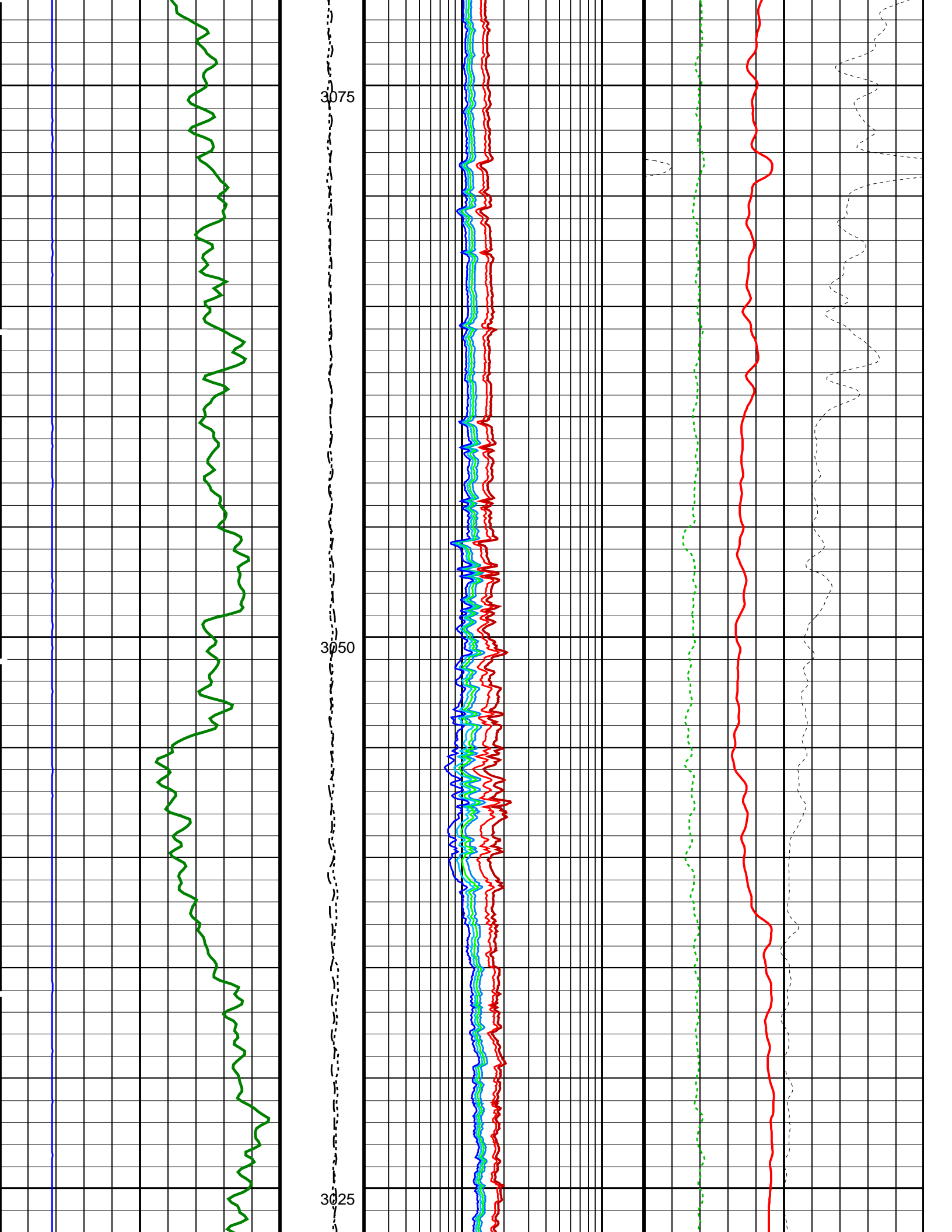
~~HRLT Resistivity 2 (RLA2)~~

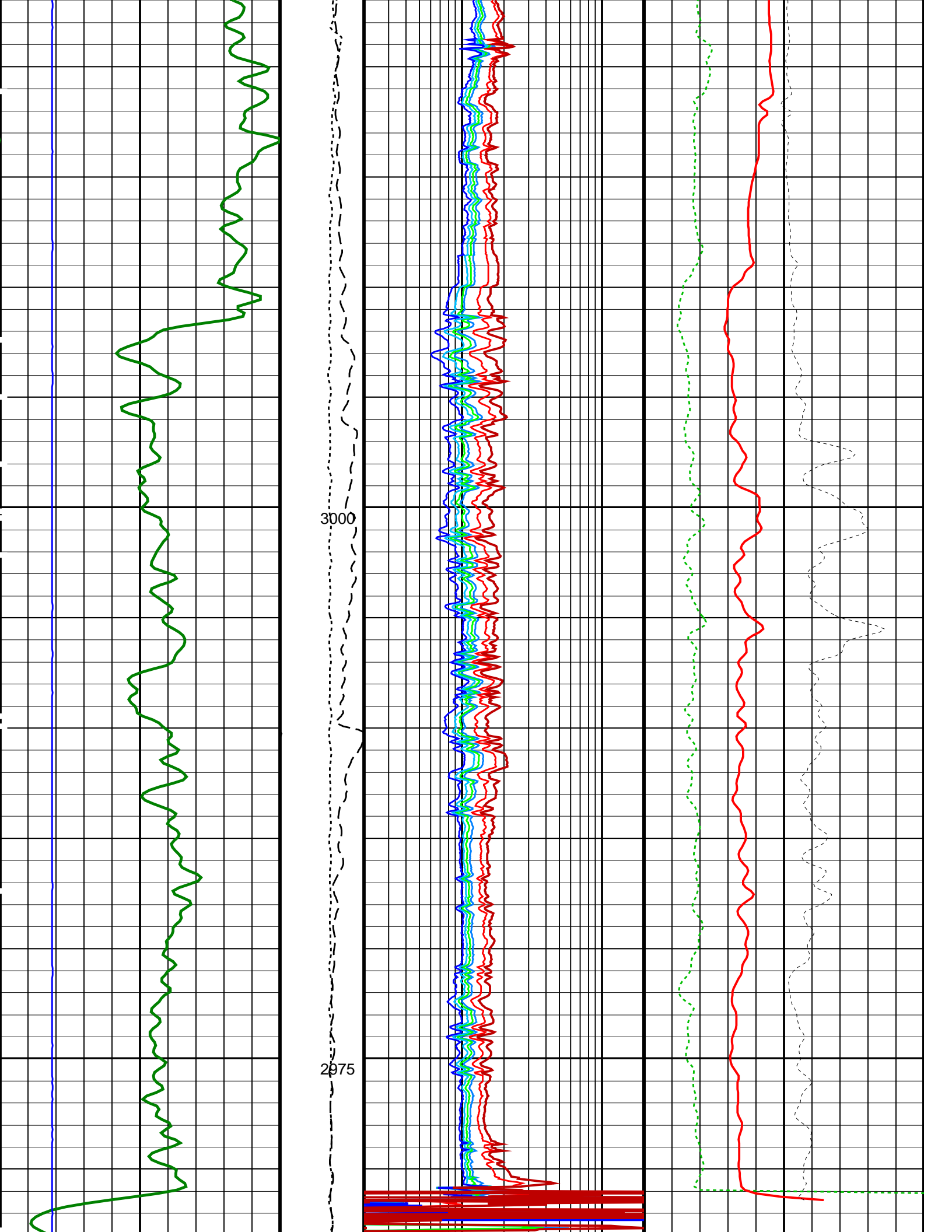
0.2 (OHMM) 20

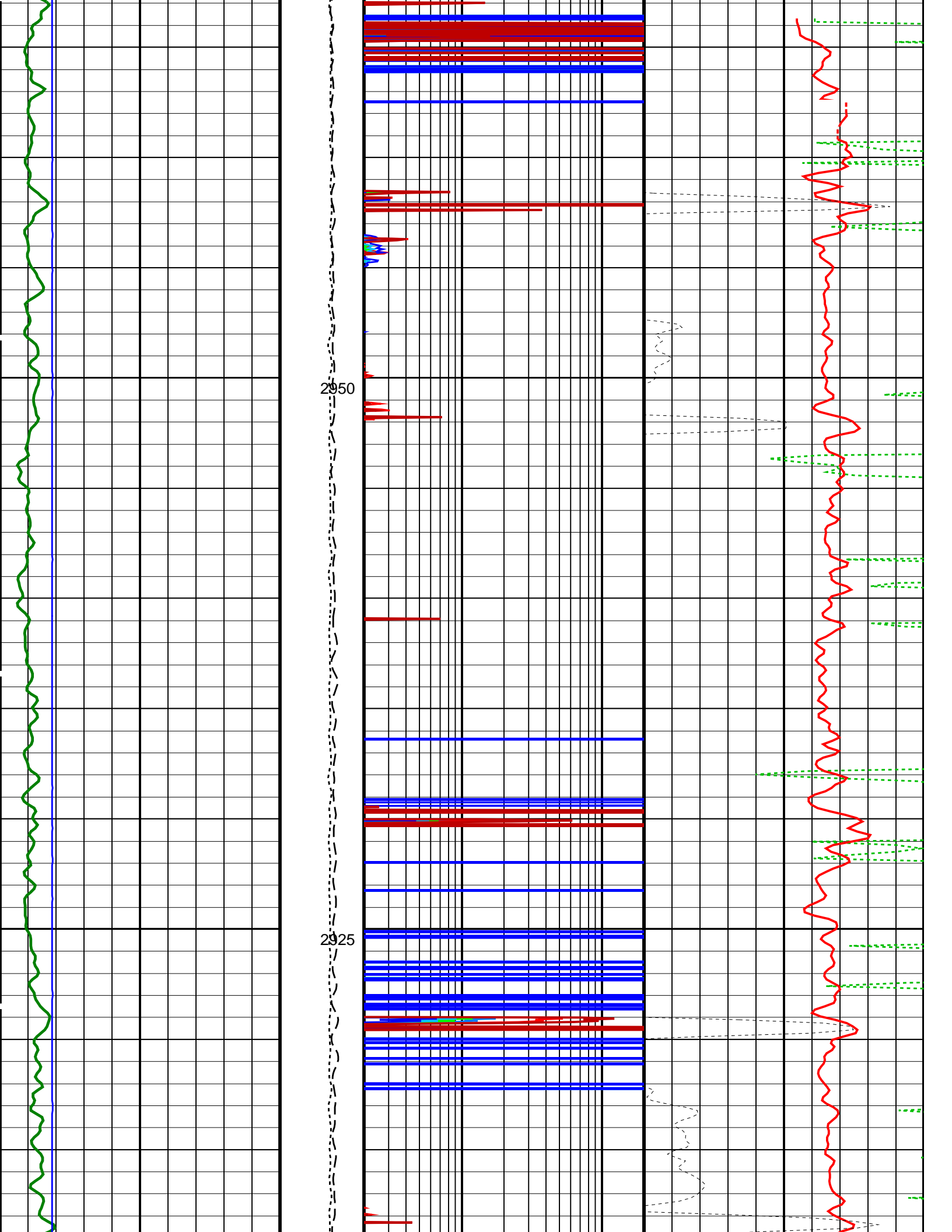
-0.25 (G/C3) 0.25

~~HRLT Bulk Density Correction (DBH)~~

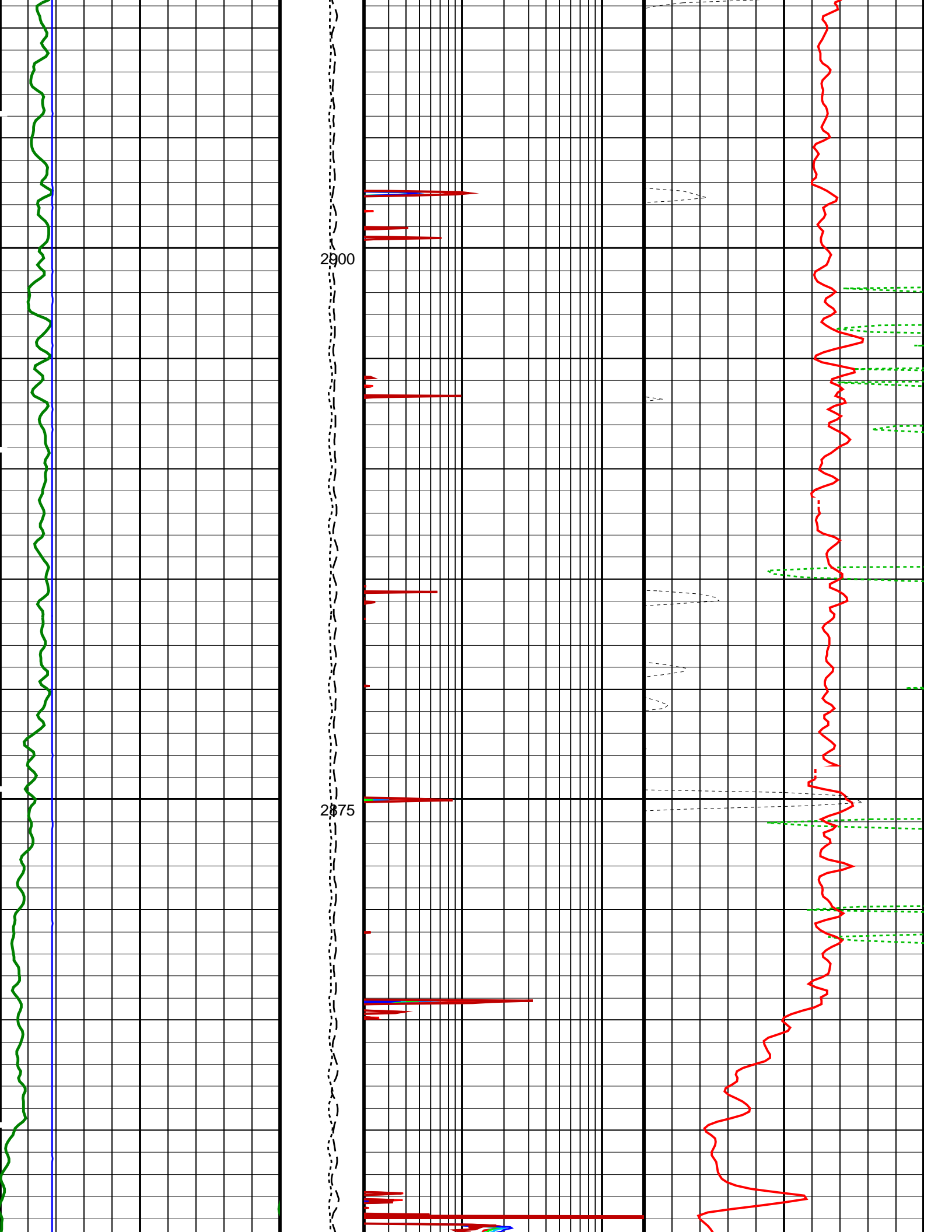


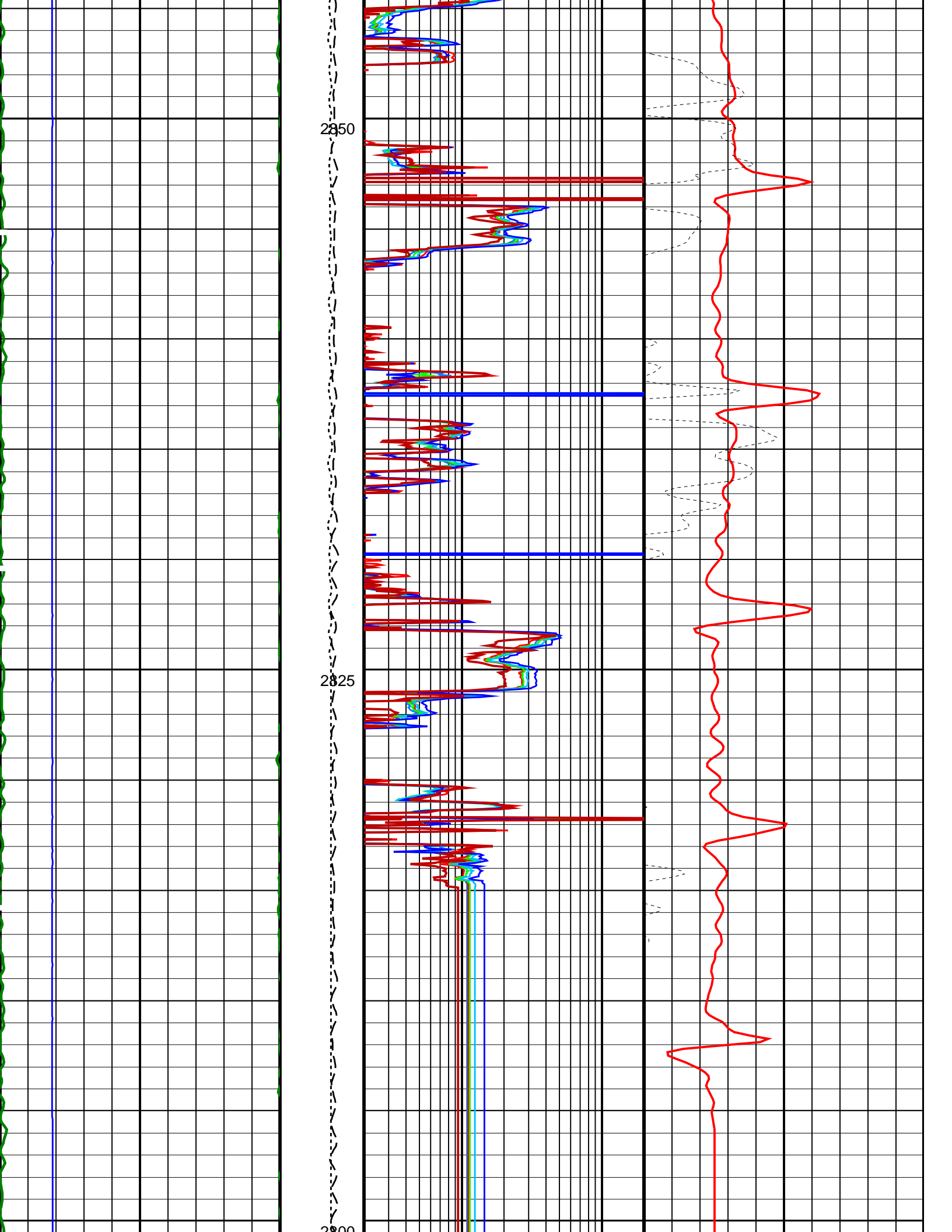


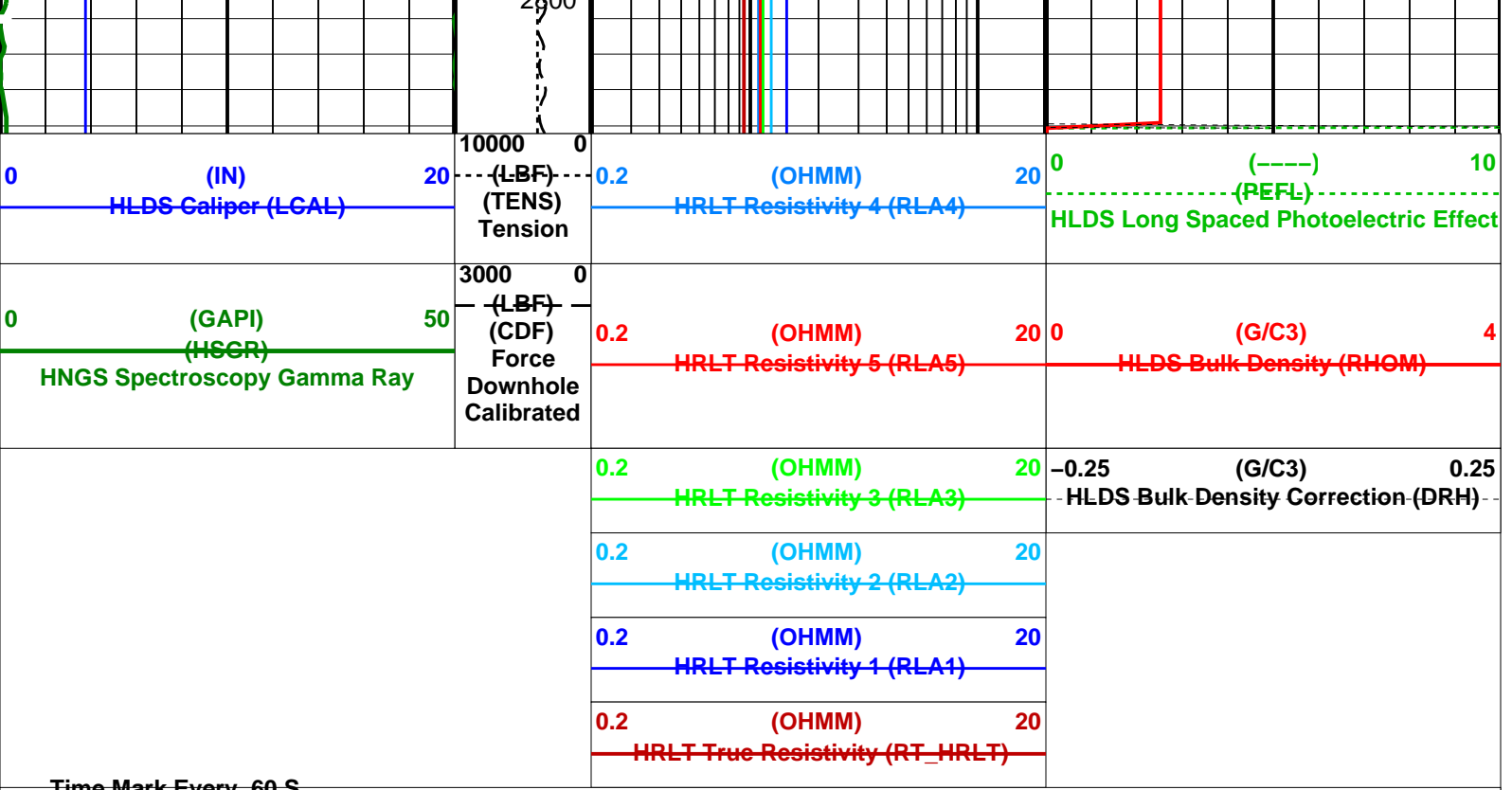












Time Mark Every 60 S

### PIP SUMMARY

TDL	Total Depth - Logger	1434.00	M
TDD	Total Depth - Driller	1434.00	M
TD	Total Depth	1212.2	M
RW	Resistivity of Connate Water	1.0000	OHMM
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
PBVSADP	Use alternate depth channel for playback	NO	
MST	Mud Sample Temperature	23.00	DEGC
FLEV	Fluid Level	-50000.00	M
DFD	Drilling Fluid Density	1.05	G/C3
CWEI	Casing Weight	168.00	LB/F
CSIZ	Current Casing Size	5.500	IN
BSAL	Borehole Salinity	38000.00	PPM
BS	Bit Size	9.875	IN
ALTDPCAN	Name of alternate depth channel	SpeedCorrectedDepth	
System and Miscellaneous			
U-TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
U-EATELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
SOCO	Standoff Correction Option	NO	
SOCN	Standoff Distance	0.5	IN
SHT	Surface Hole Temperature	20	DEGC
SDAT	Standoff Data Source	SOCN	
PTCO	Pressure/Temperature Correction Option	NO	
MWCO	Mud Weight Correction Option	YES	
MCOR	Mud Correction	NATU	
MCCO	Mud Cake Correction Option	NO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
ISSBAR_EDTC	Nuclear Mud Type	NOBARITE	
ISSBAR	Barite Mud Switch	NOBARITE	
HSCO	Hole Size Correction Option	YES	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GGRD	Geothermal Gradient	0.018227	DC/M
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GCSE	Generalized Caliper Selection	LCAL	
FSCO	Formation Salinity Correction Option	NO	
FSAL	Formation Salinity	-50000	PPM
DPPM	Density Porosity Processing Mode	HIRS	
CCCO	Casing & Cement Thickness Correction Option	NO	
BSCO	Borehole Salinity Correction Option	NO	
BHT	Bottom Hole Temperature (used in calculations)	40	DEGC
BHS	Borehole Status	OPEN	
BHFL	Borehole Fluid Type	WATER	
EDTC-B: Enhanced DTS Cartridge			
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.991021	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.01937	
TPOS	Tool Position	ECCE	
SHT	Surface Hole Temperature	20	DEGC

SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
ISSBAR	Barite Mud Switch	NOBARITE	
HNPE	HNGS Processing Enable	YES	
HMWM	Mud Weighting Material	NATU	
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HALF	HNGS Alpha Filter Length	60	IN
HABK	HNGS Borehole Potassium Running Average	-0.00341773	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GGRD	Geothermal Gradient	0.018227	DC/M
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GCSE	Generalized Caliper Selection	LCAL	
DBCC	HNGS Barite Constant Correction Flag	NONE	
CSW2	Outer Casing Weight	0	LB/F
CSW1	Inner Casing Weight	0	LB/F
CSD2	Outer Casing Outer Diameter	0	IN
CSD1	Inner Casing Outer Diameter	0	IN
BHT	Bottom Hole Temperature (used in calculations)	40	DEGC
BHS	Borehole Status	OPEN	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BAR2	HNGS Detector 2 Barite Constant	1	
BAR1	HNGS Detector 1 Barite Constant	1	
HNGS-BA: Hostile Natural Gamma Ray Sonde			
PSMS	HLDS SS Pulse Shape Compensation Mode	AUTO	
PSML	HLDS LS Pulse Shape Compensation Mode	AUTO	
PSDS	HLDS SS Pulse Shape Compensation DAC	30000	
PSDL	HLDS LS Pulse Shape Compensation DAC	30000	
PHVS	HLDS Short Spacing High Voltage Setting	1000	V
PHVL	HLDS Long Spacing High Voltage Setting	1000	V
MDEN	Matrix Density	2.6	G/C3
LLMS	HLDS SS Low Level Discriminator Mode	AUTO	
LLML	HLDS LS Low Level Discriminator Mode	AUTO	
LLDS	HLDS SS Low Level Discriminator DAC	14000	
LLDL	HLDS LS Low Level Discriminator DAC	14000	
LATC	HLDS Activation Correction	ON	
FD	Fluid Density	1	G/C3
DPPM	Density Porosity Processing Mode	HIRS	
DHC	Density Hole Correction	BS	
CLSS	HLDS Mode Loop Short Spacing	AUTO	
CLLS	HLDS Mode Loop Long Spacing	AUTO	
CLCS	HLDS SS Control Loop Controller Mode	AUTO_DEFAULT	
CLCL	HLDS LS Control Loop Controller Mode	AUTO_DEFAULT	
HLDS: Hostile Litho-Density Sonde			
SHT	Surface Hole Temperature	20	DEGC
PROCSP0	Sonde Position	Centered	
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCMS0	Mechanical Standoff Fin Size	0	IN
PROCMFL	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RXO	
PROCVN	Inversion Selection	ON	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO	
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO	
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO	
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO	
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO	
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO	
LOOPMOD0	HRLT Mode 0 Loop Mode	AUTO	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
KFAC_HRLT	HRLT K Factor Option	SONDE	
ISSBAR	Barite Mud Switch	NOBARITE	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GGRD	Geothermal Gradient	0.018227	DC/M
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GCSE	Generalized Caliper Selection	LCAL	
FREQ6	HRLT Frequency Index for Mode 6	116	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ0	HRLT Frequency Index for Mode 0	32	
CALTEMP	HRLTB Calibration Temperature	25.8283	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
BHT	Bottom Hole Temperature (used in calculations)	40	DEGC
BHS	Borehole Status	OPEN	
HRLT-B: High Resolution Laterolog Array - B			

DLIS Name

Description

Value

# Parameters

Format: Triple Combo Vertical Scale: 1:200 Graphics File Created: 24-Apr-2017 07:03

EDTC-B	SKK-5169-EDTCB		
HNGC-B	19C0-187	HNGS-BA	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187

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

DEFAULT MSS\_LDEO\_HRLA\_LDL\_009LDP FN:8 PRODUCER 24-Apr-2017 07:03

**Output DLIS Files**

**Schlumberger**

**Downlog  
1:200 Scale**

MAXIS Field Log

DEFAULT MSS\_LDEO\_HRLA\_LDL\_009LDP FN:8 PRODUCER 24-Apr-2017 07:03 2795.8 M 3125.0 M

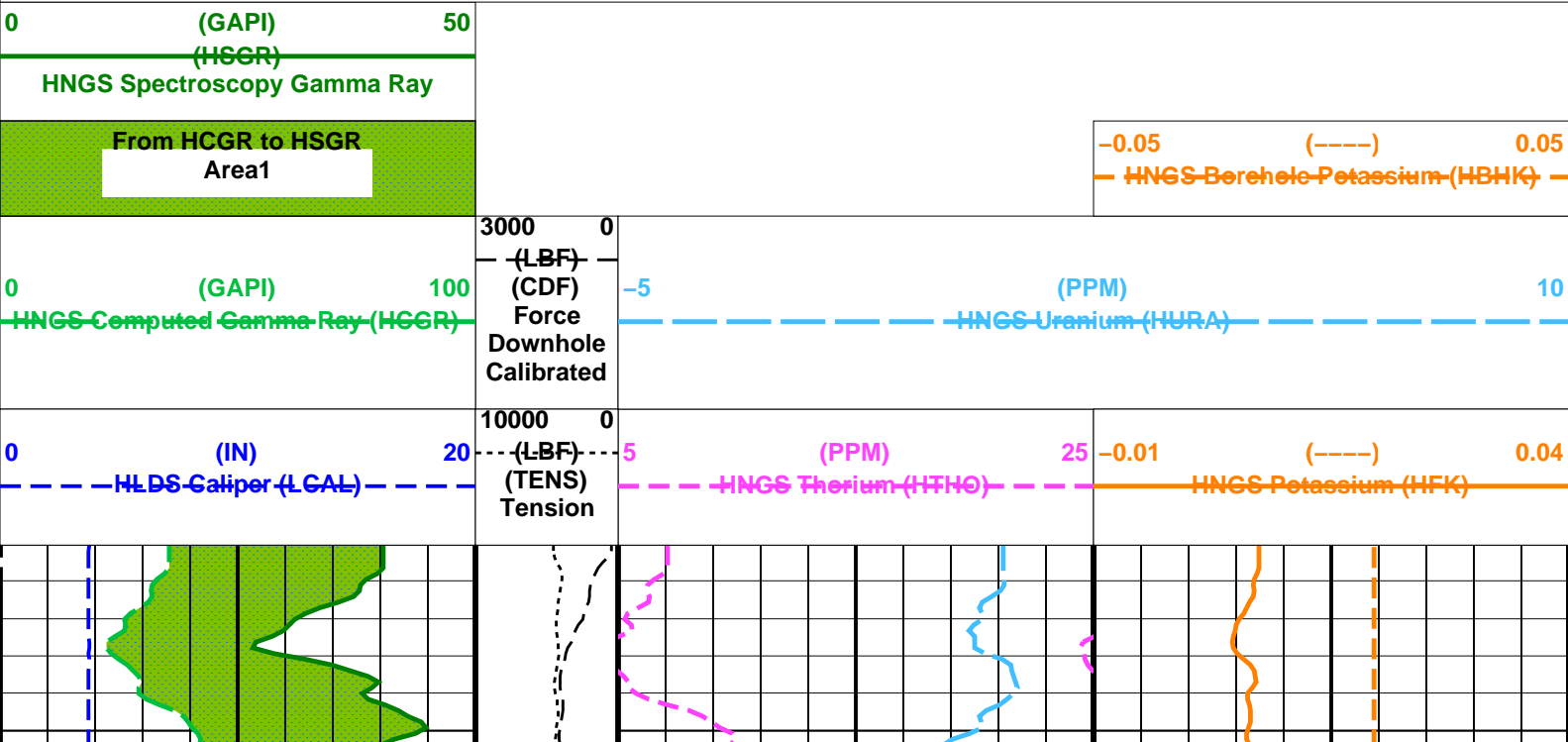
**Output DLIS Files**

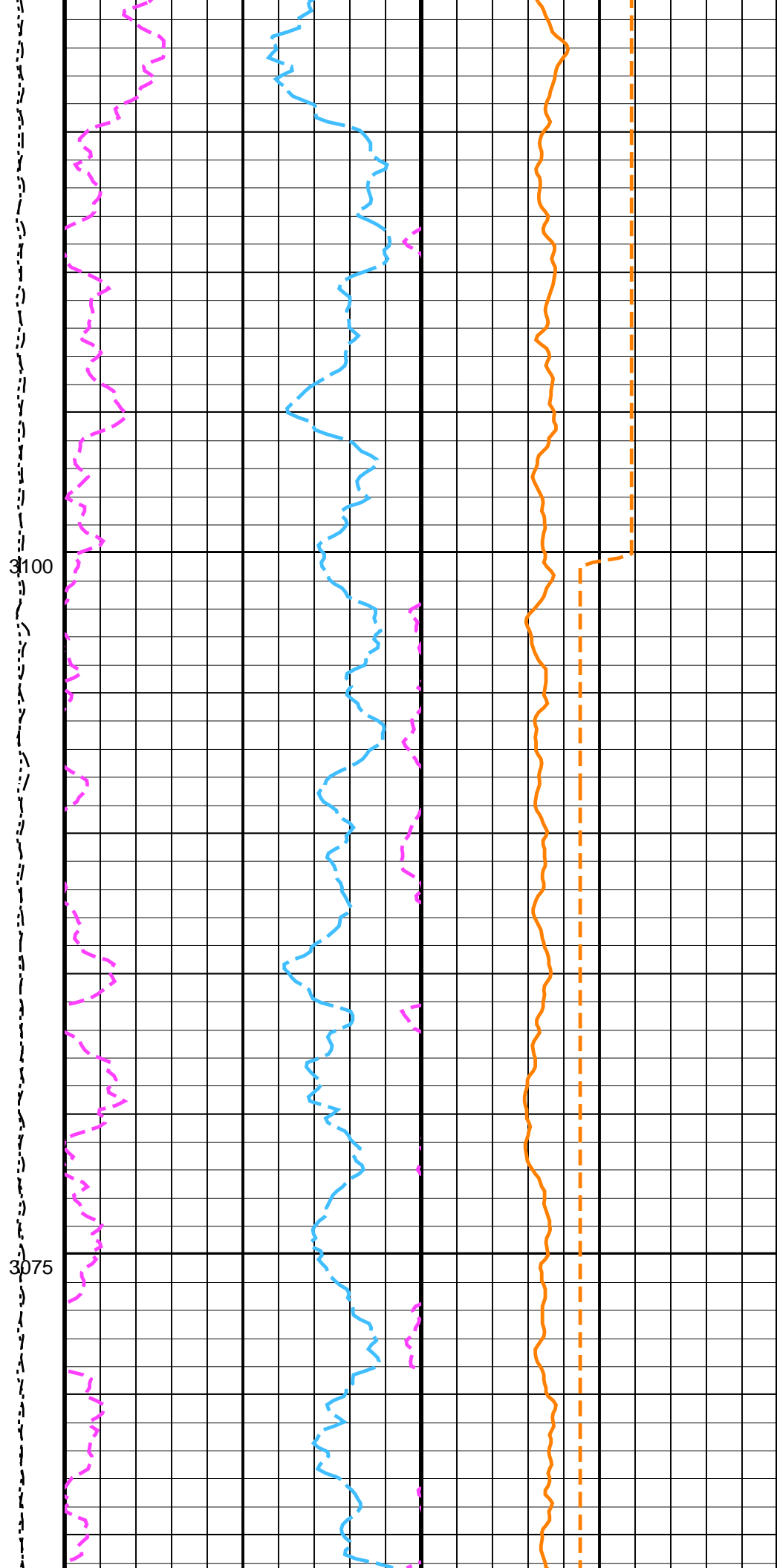
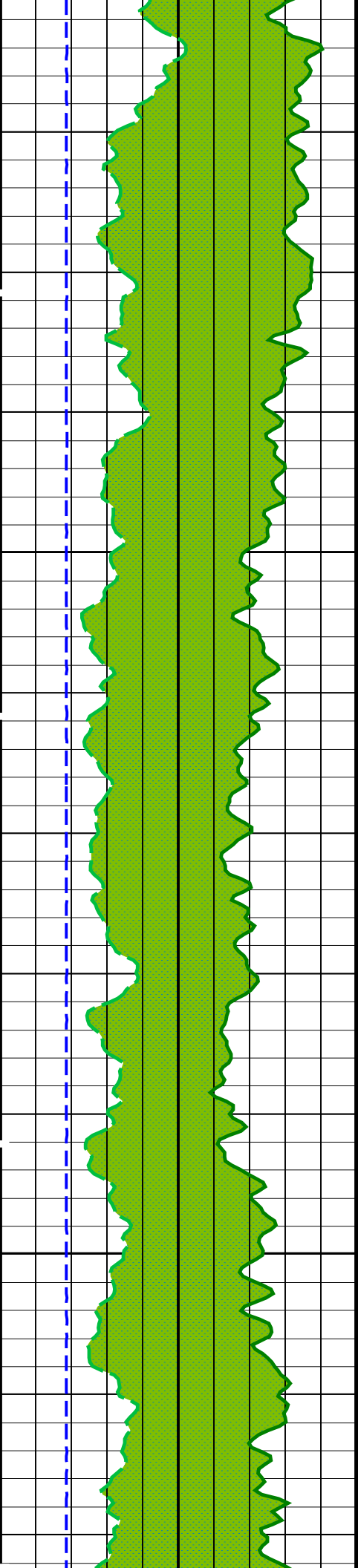
EDTC-B	SKK-5169-EDTCB		
HNGC-B	19C0-187	HNGS-BA	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187

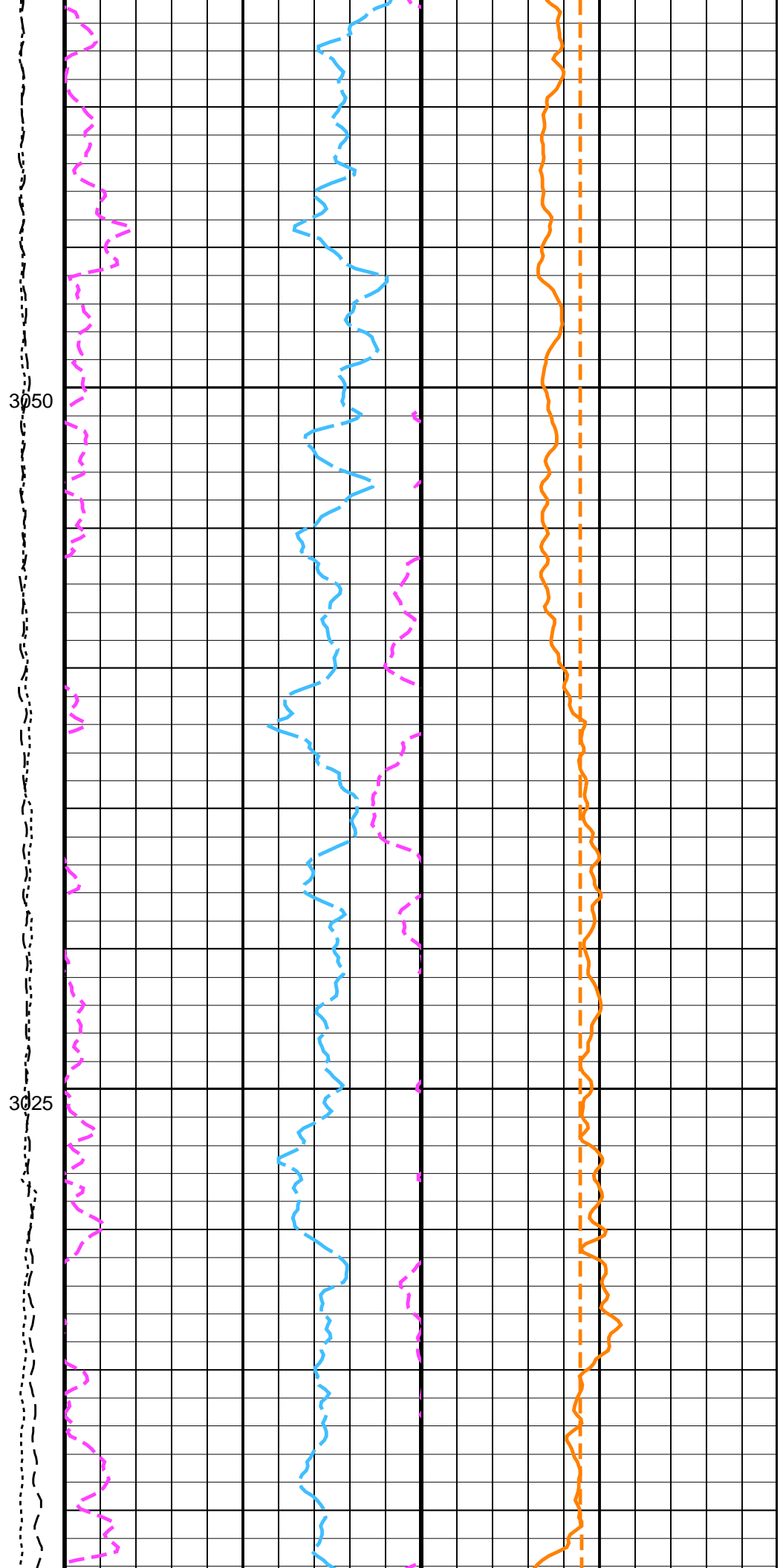
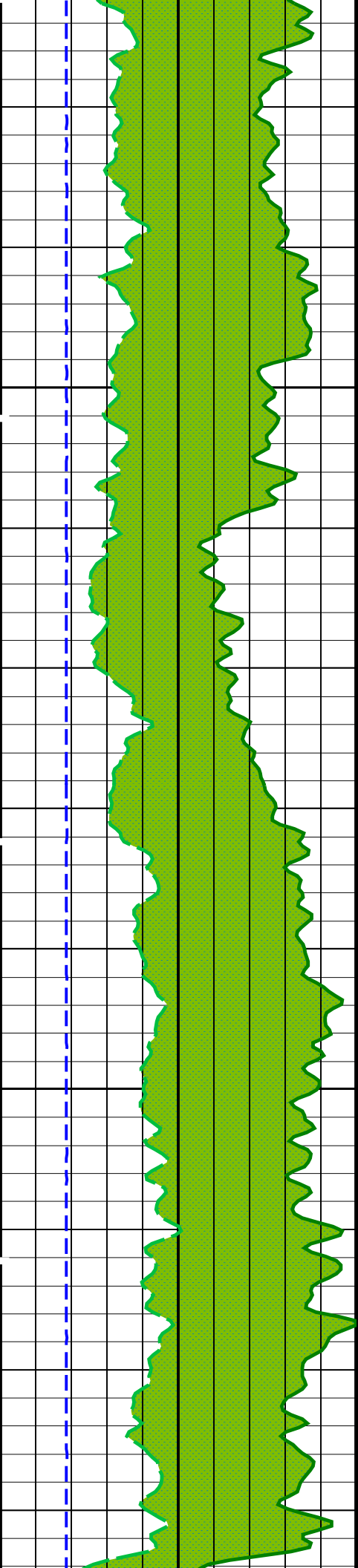
**OP System Version: 19C0-187**

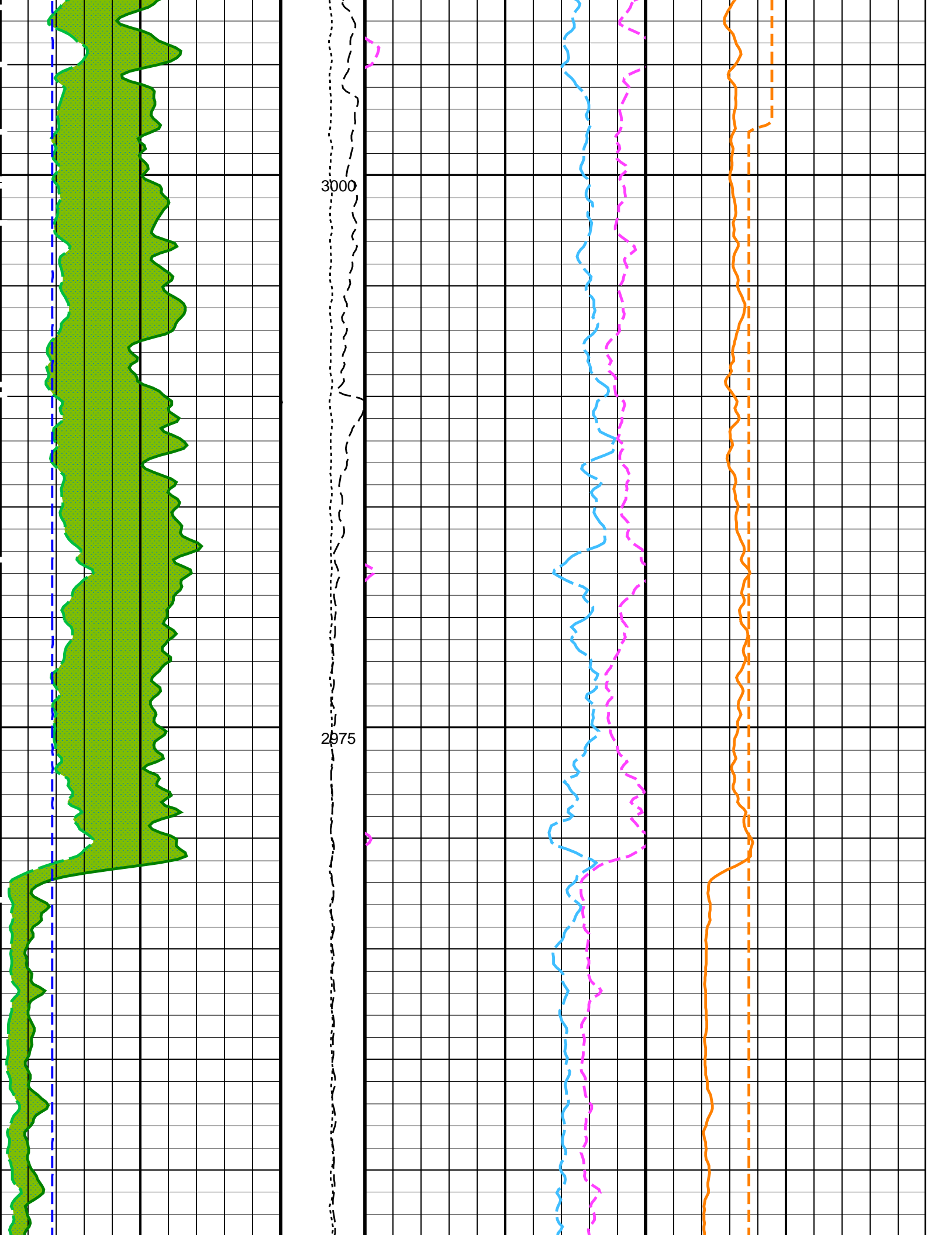
Time Mark Every 60 S

## PIP SUMMARY

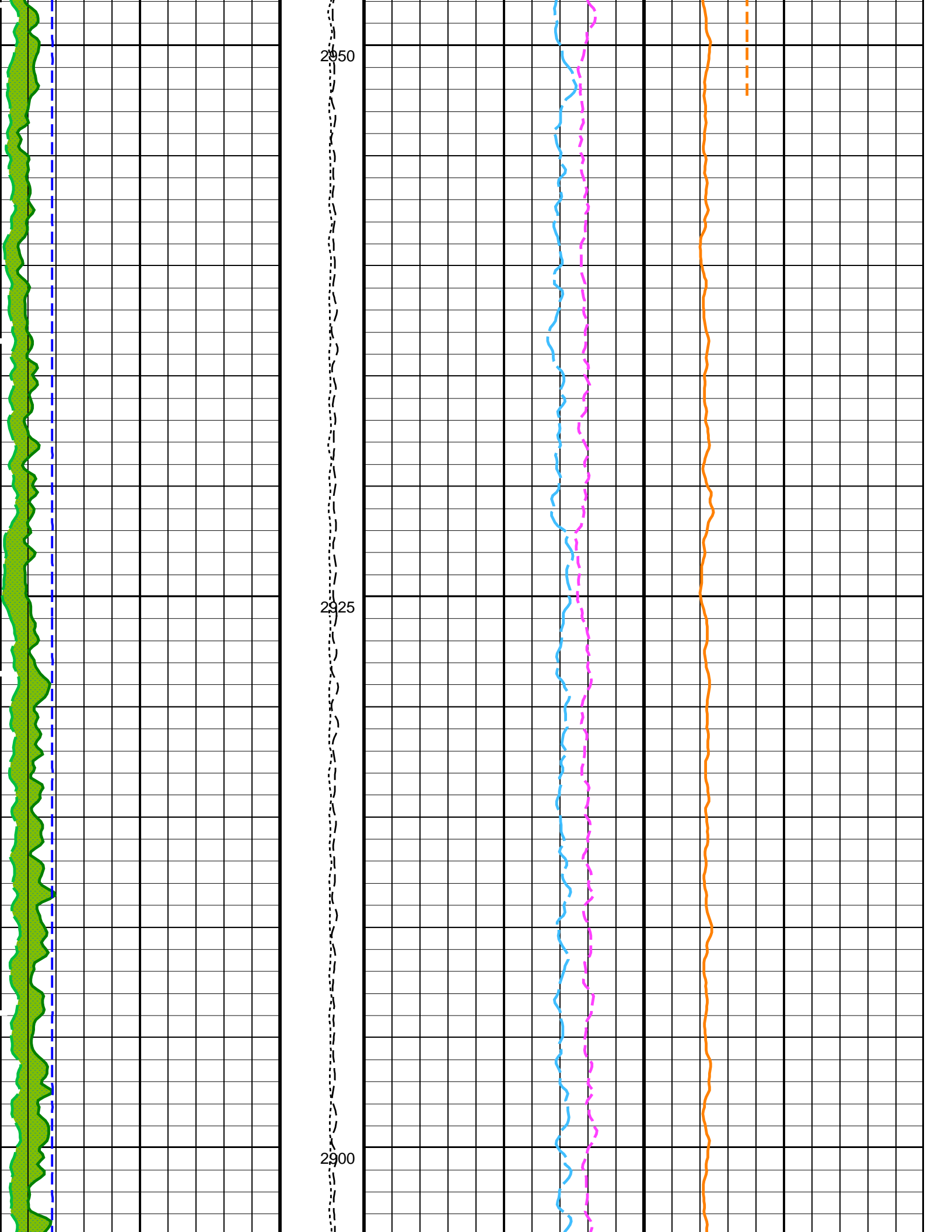


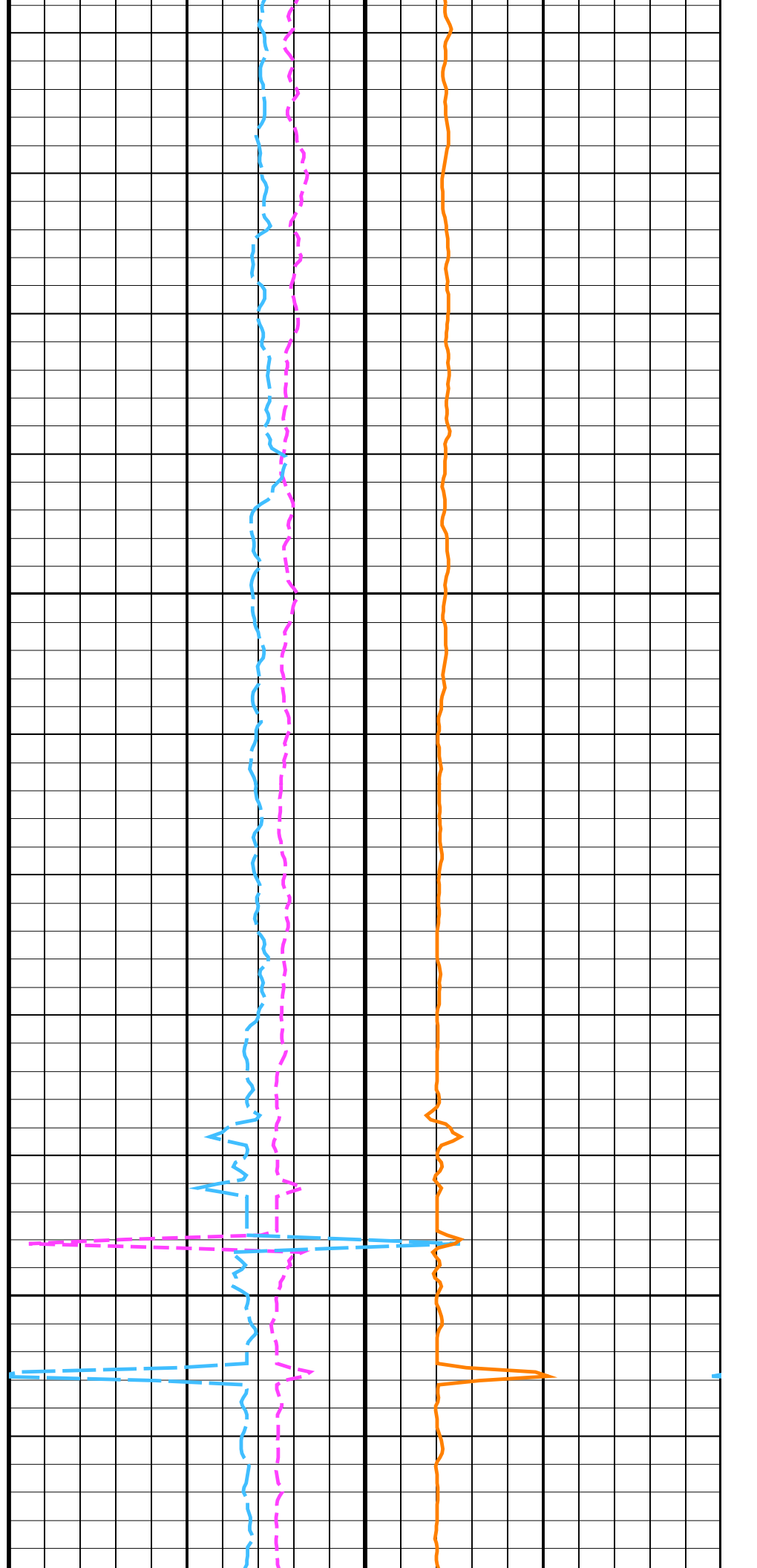
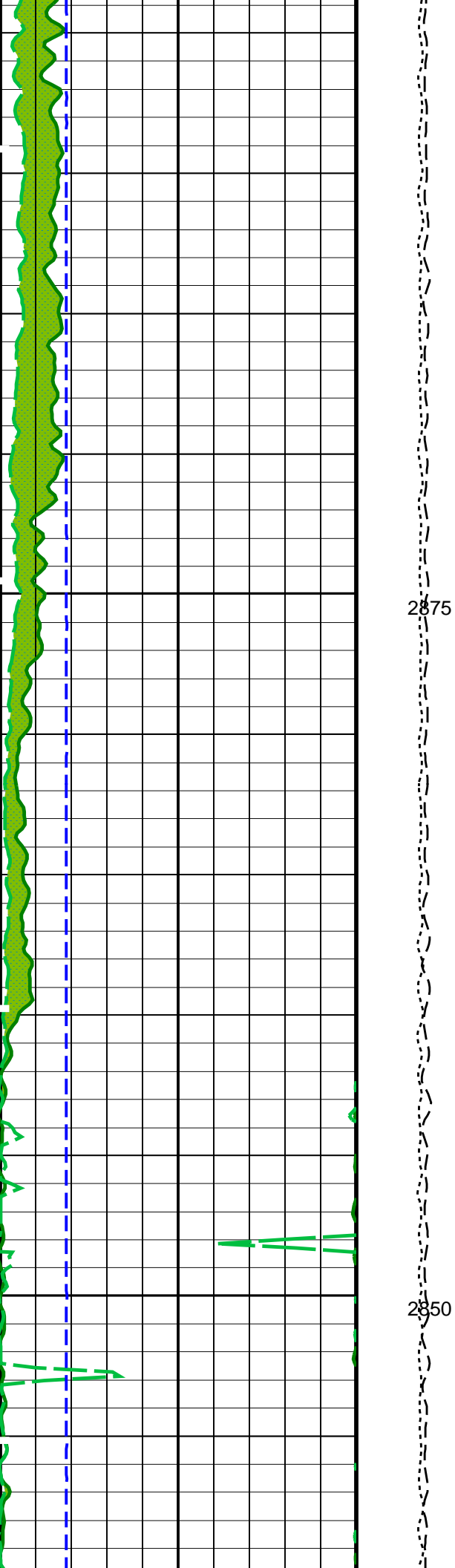


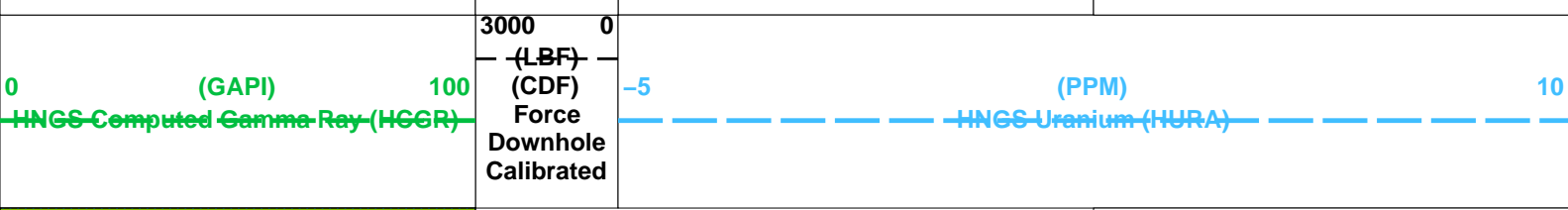
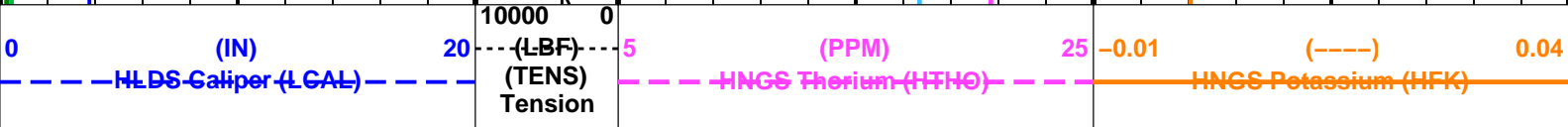
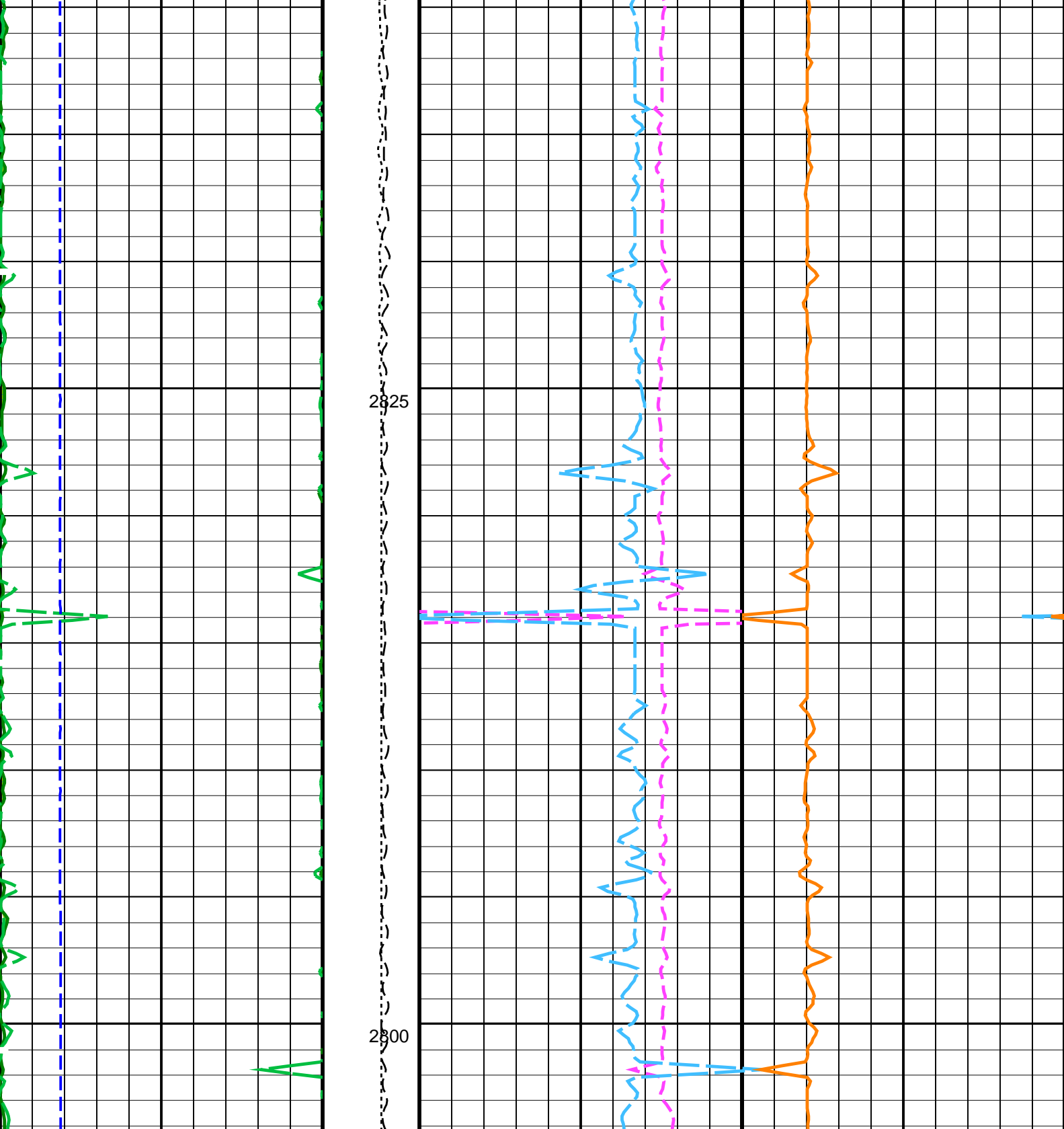












From HCGR to HSGR  
Area1

-0.05 (----) 0.05  
HNGS Borehole Potassium (HBHK)

PIP SUMMARY

BS	System and Miscellaneous	Bit Size	9.875	IN
GCSE		Generalized Caliper Selection	LCAL	
BHS		Borehole Status	OPEN	
EDTC-B: Enhanced DTS Cartridge				
VBA2		HNGS Detector 2 Variable Barite Factor Running Average	0.991021	
VBA1		HNGS Detector 1 Variable Barite Factor Running Average	1.01937	
TPOS		Tool Position	ECCE	
SGRC		HNGS Standard Gamma-Ray Correction Flag	YES	
S2BI		HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S1BI		HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
HNPE		HNGS Processing Enable	YES	
HMWM		Mud Weighting Material	NATU	
HCRB		HNGS Apply Borehole Potassium Correction	NONE	
HALF		HNGS Alpha Filter Length	60	IN
HABK		HNGS Borehole Potassium Running Average	-0.00341773	
H2P		HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
H1P		HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
GCSE		Generalized Caliper Selection	LCAL	
DBCC		HNGS Barite Constant Correction Flag	NONE	
CSW2		Outer Casing Weight	0	LB/F
CSW1		Inner Casing Weight	0	LB/F
CSD2		Outer Casing Outer Diameter	0	IN
CSD1		Inner Casing Outer Diameter	0	IN
BHS		Borehole Status	OPEN	
BHK		HNGS Borehole Potassium Correction Concentration	0	
BAR2		HNGS Detector 2 Barite Constant	1	
BAR1		HNGS Detector 1 Barite Constant	1	
HNGS-BA: Hostile Natural Gamma Ray Sonde				
GCSE		Generalized Caliper Selection	LCAL	
BHS		Borehole Status	OPEN	
HRLT-B: High Resolution Laterolog Array - B				

**DLIS Name**                      **Description**    **Value**

**Parameters**

Format: HNGSYields    Vertical Scale: 1.200    Graphics File Created: 24-Apr-2017 07:03

EDTC-B	SKK-5169-EDTCB		
HNGC-B	19C0-187	HNGS-BA	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187

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

DEFAULT    MSS\_LDEO\_HRLA\_LDL\_009LDP    FN:8    PRODUCER    24-Apr-2017 07:03

**Output DLIS Files**

Company: International Ocean Discovery Program    Well: Expedition 368, Site U1501D

DEFAULT    MSS\_LDEO\_HRLA\_LDL\_009LDP    FN:8    PRODUCER    24-Apr-2017 07:03    2795.8 M    3125.0 M

**Output DLIS Files**

EDTC-B	SKK-5169-EDTCB		
HNGC-B	19C0-187	HNGS-BA	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187

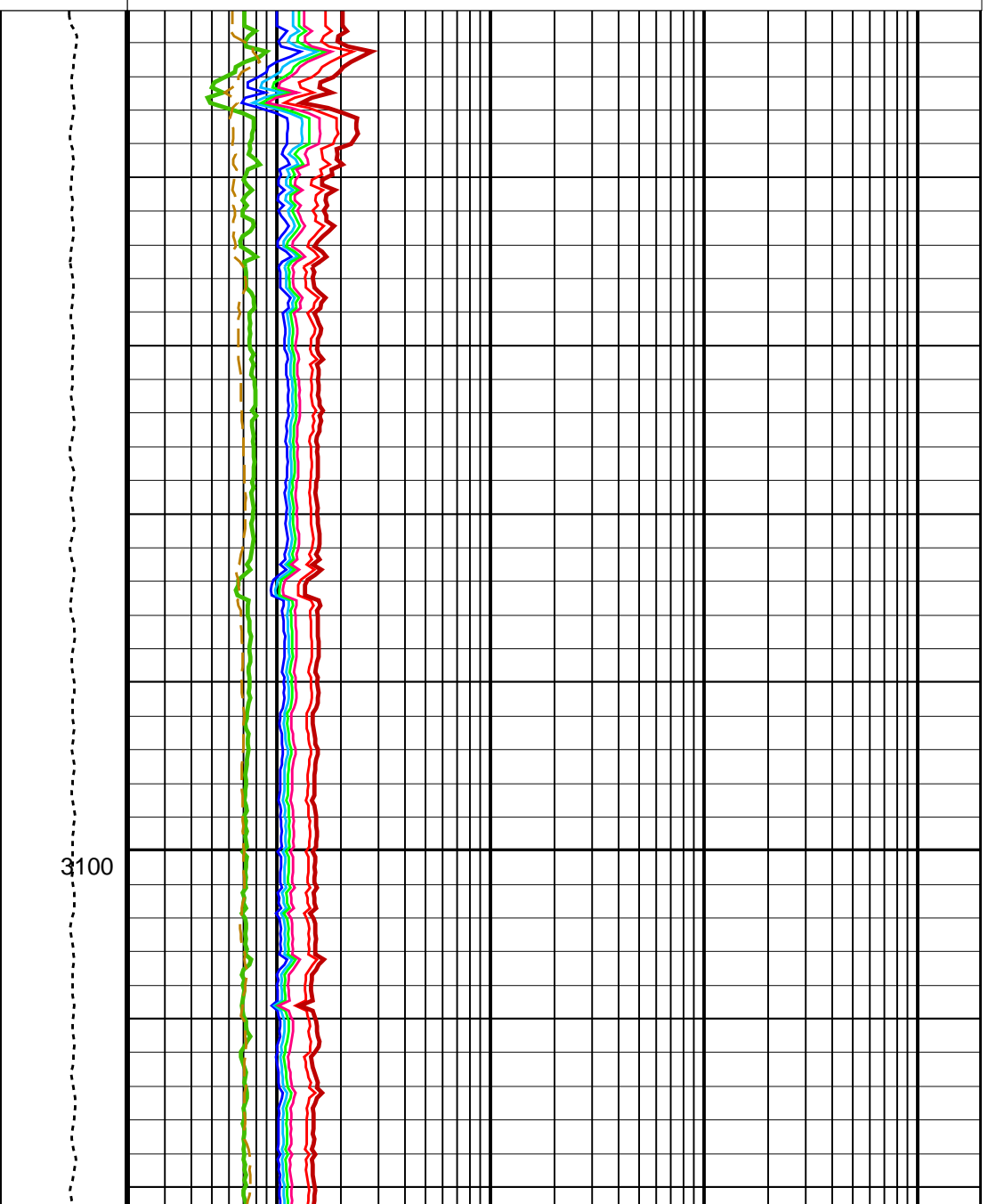
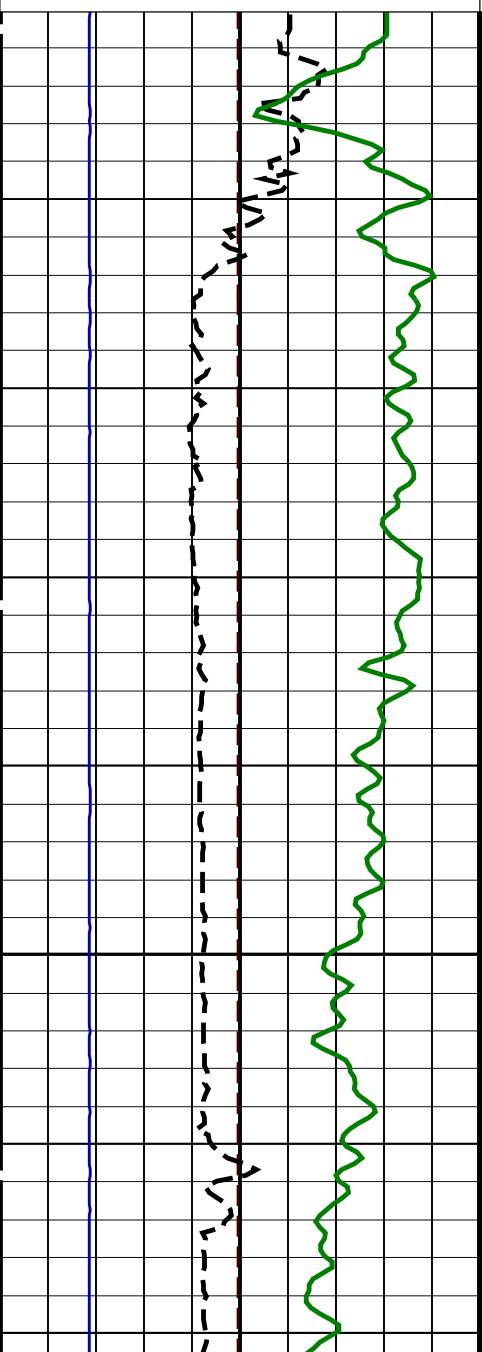
**OP System Version: 19C0-187**

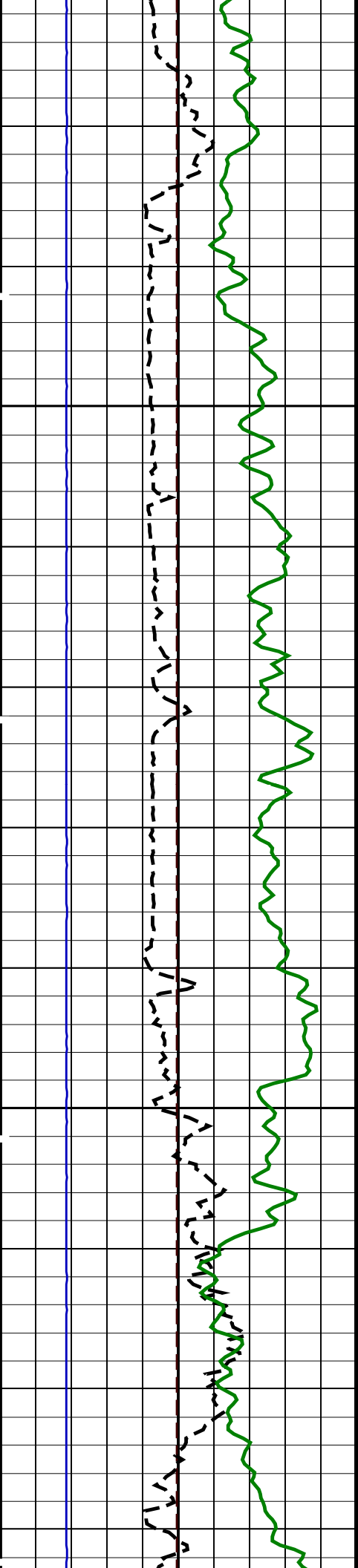
PIP SUMMARY

0	(GAPI)	50
<del>(HSCR)</del>		
HNGS Spectroscopy Gamma Ray		
0	(IN)	50
<del>Invasion Diameter (DI_HRLT)</del>		
0	(IN)	20
Caliper (LCAL)		
0	(IN)	20
<del>Bit Size (BS)</del>		

10000 0  
 (LBF)  
 (TENS)  
 Tension

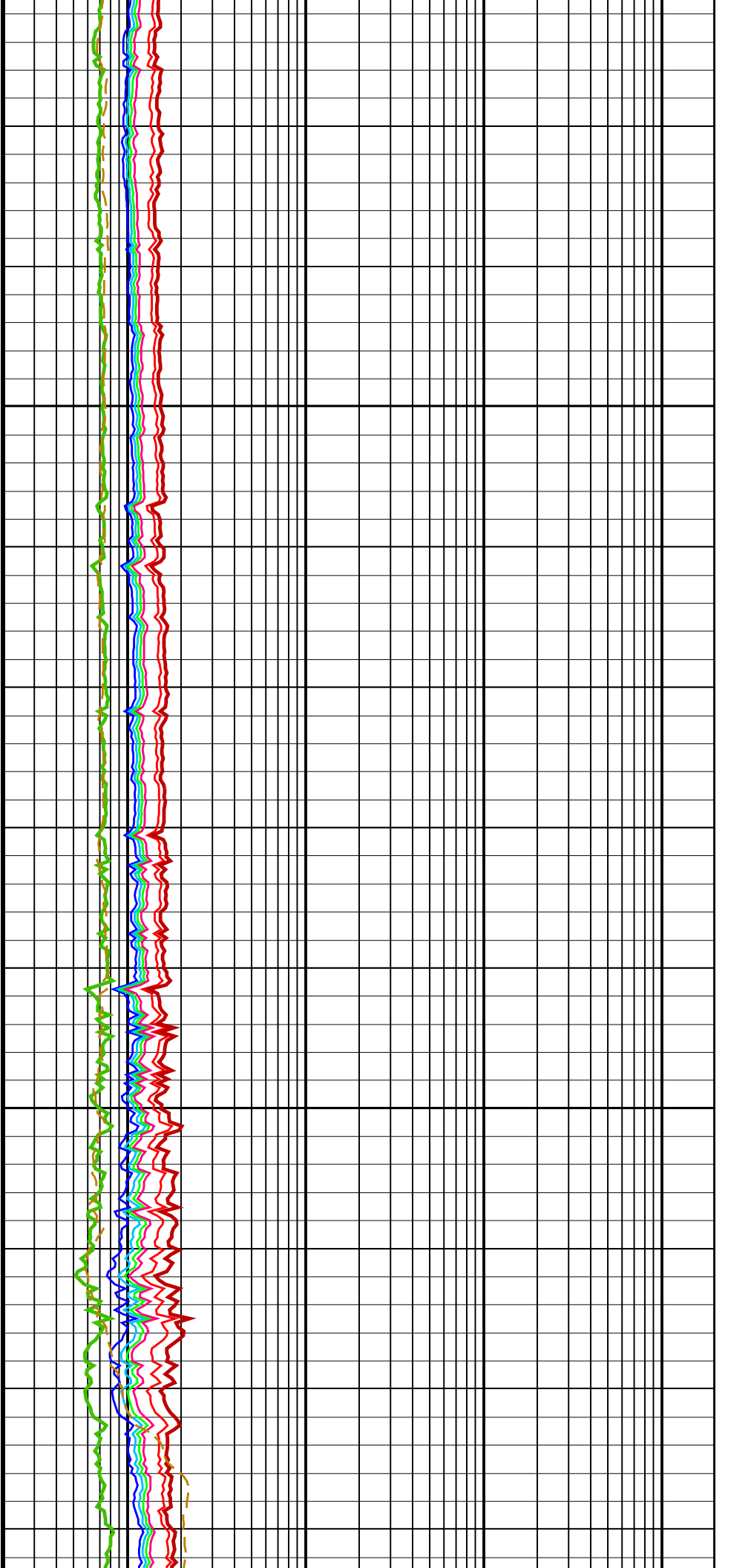
0.2	(OHMM)	2000
<del>HRLT True Resistivity (RT_HRLT)</del>		
0.2	(OHMM)	2000
<del>Invaded Zone Resistivity (RXO_HRLT)</del>		
0.02	(OHMM)	200
<del>HRLT Mud Resistivity (RM_HRLT)</del>		
0.2	(OHMM)	2000
<del>HRLT Resistivity 5 (RLA5)</del>		
0.2	(OHMM)	2000
<del>HRLT Resistivity 4 (RLA4)</del>		
0.2	(OHMM)	2000
<del>HRLT Resistivity 3 (RLA3)</del>		
0.2	(OHMM)	2000
<del>HRLT Resistivity 2 (RLA2)</del>		
0.2	(OHMM)	2000
<del>HRLT Resistivity 1 (RLA1)</del>		

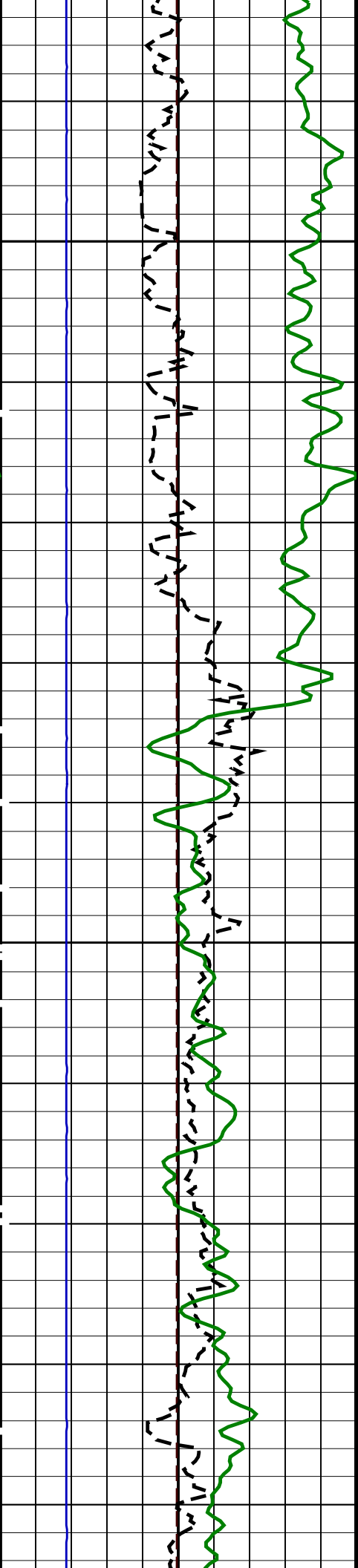




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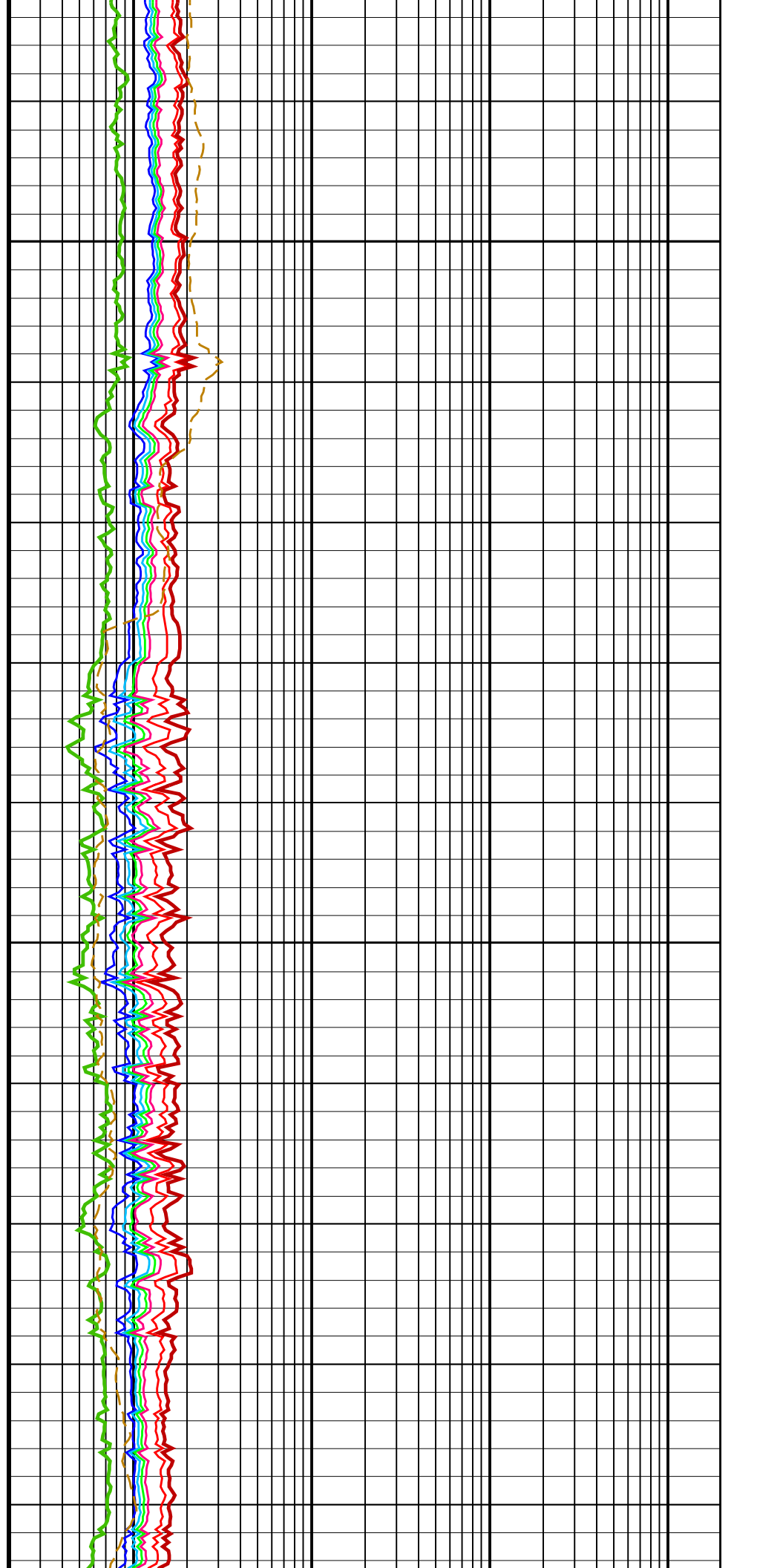
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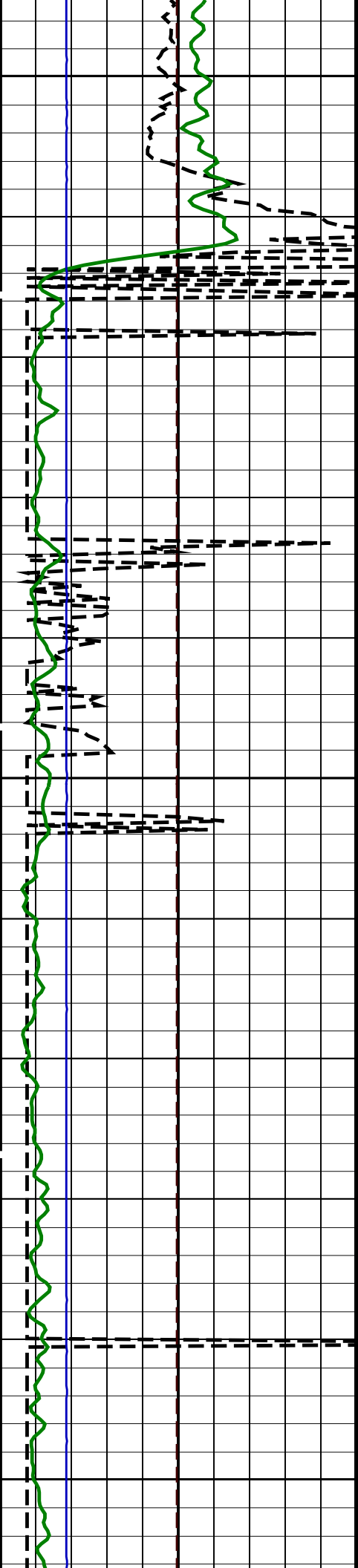




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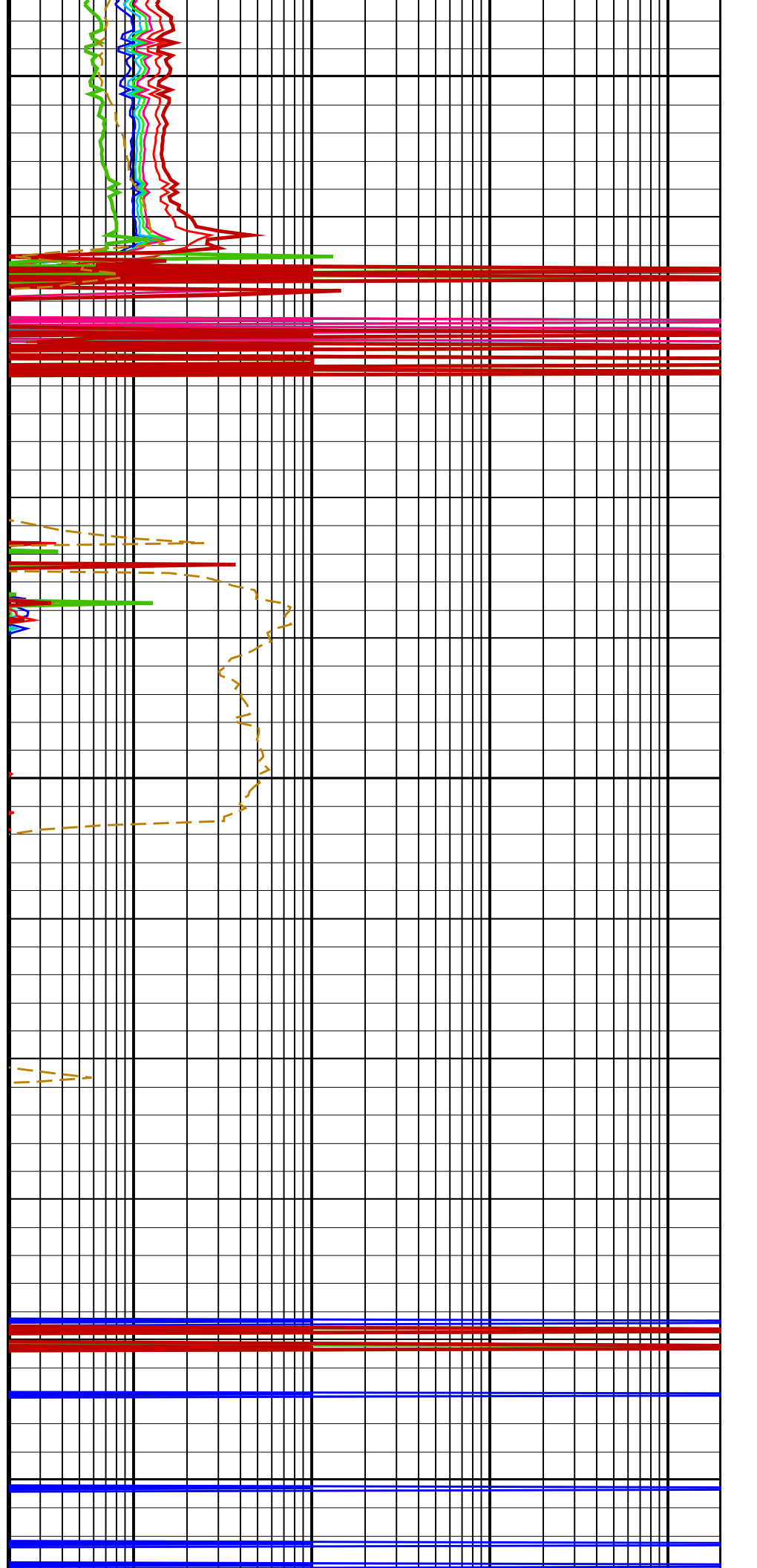




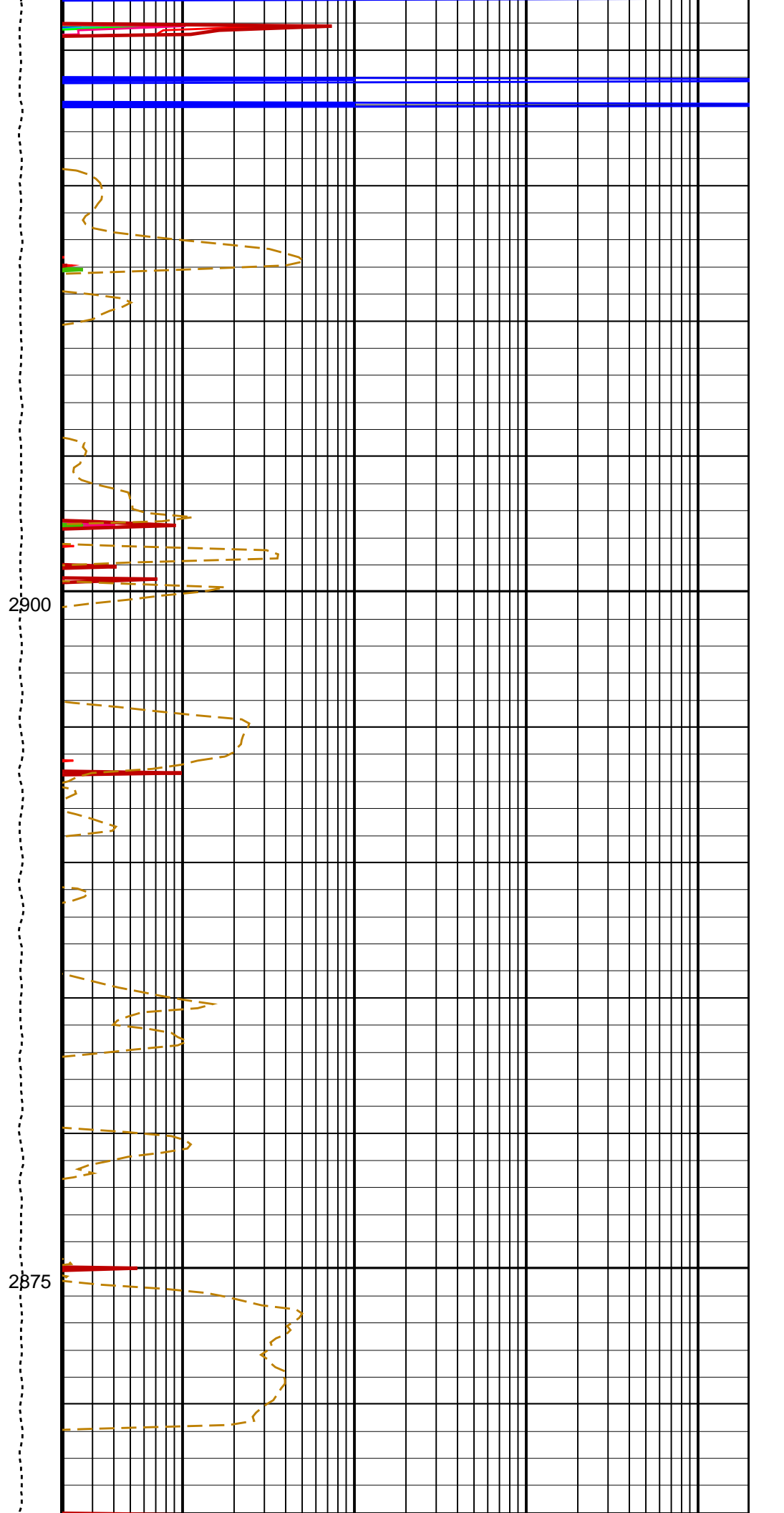
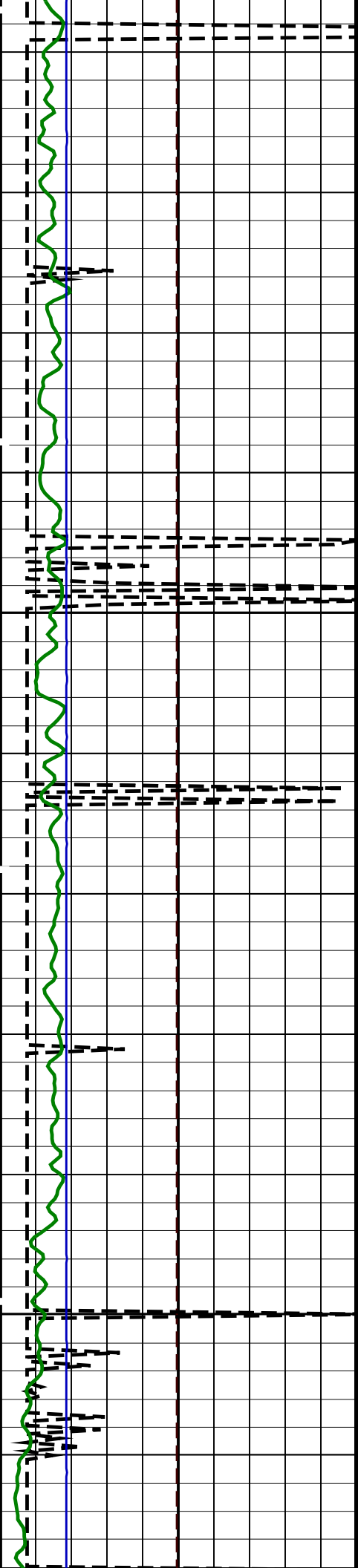
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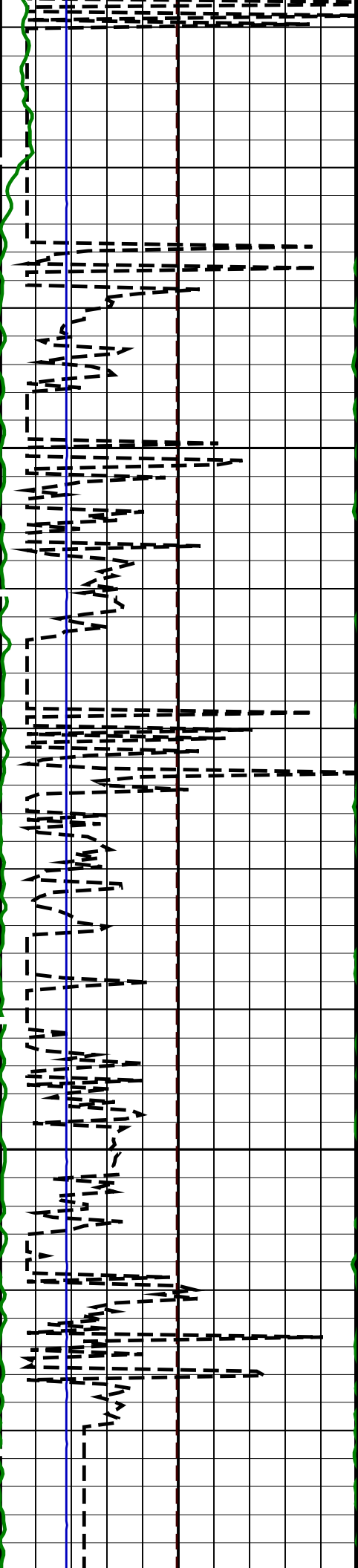
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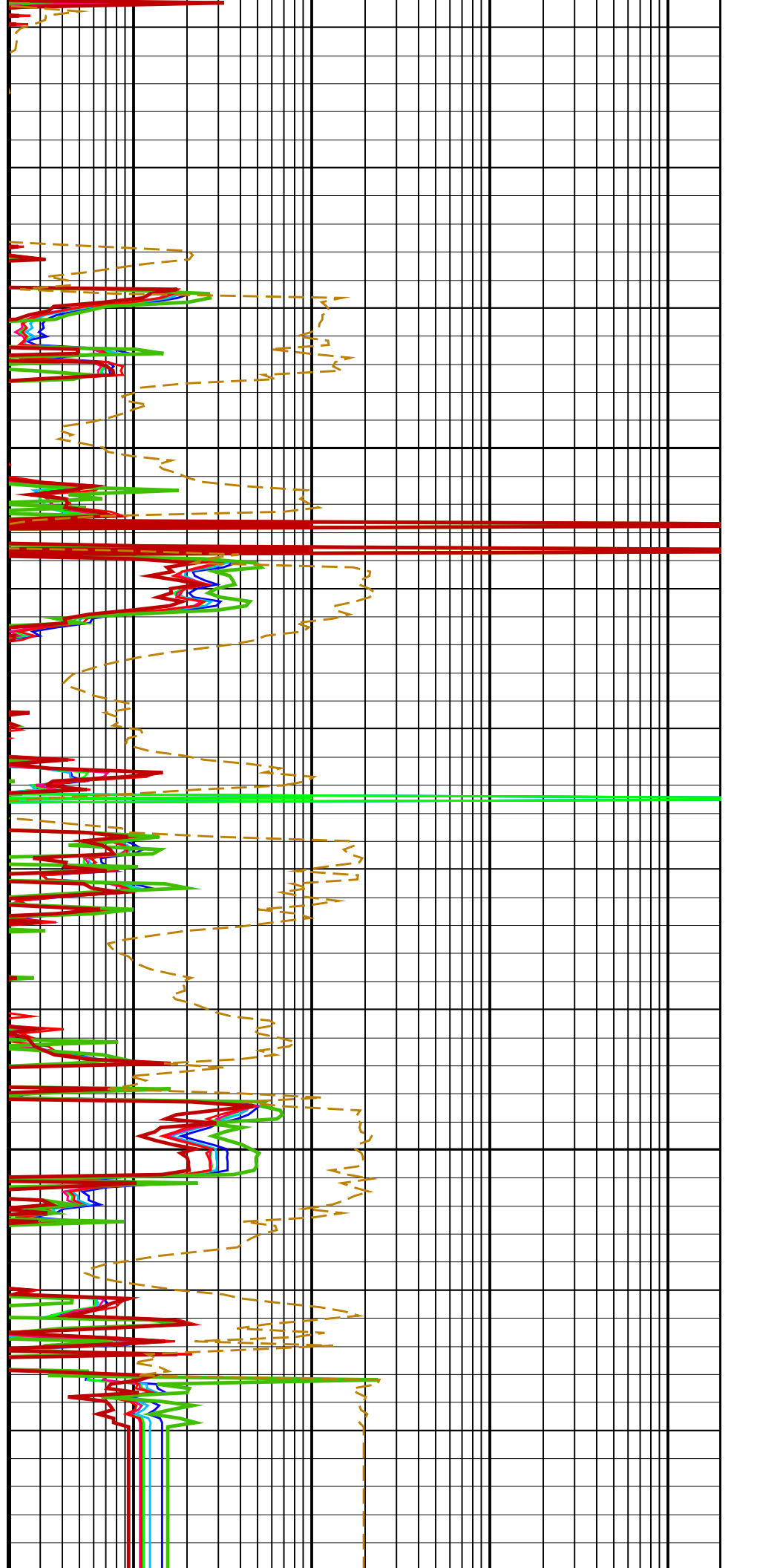


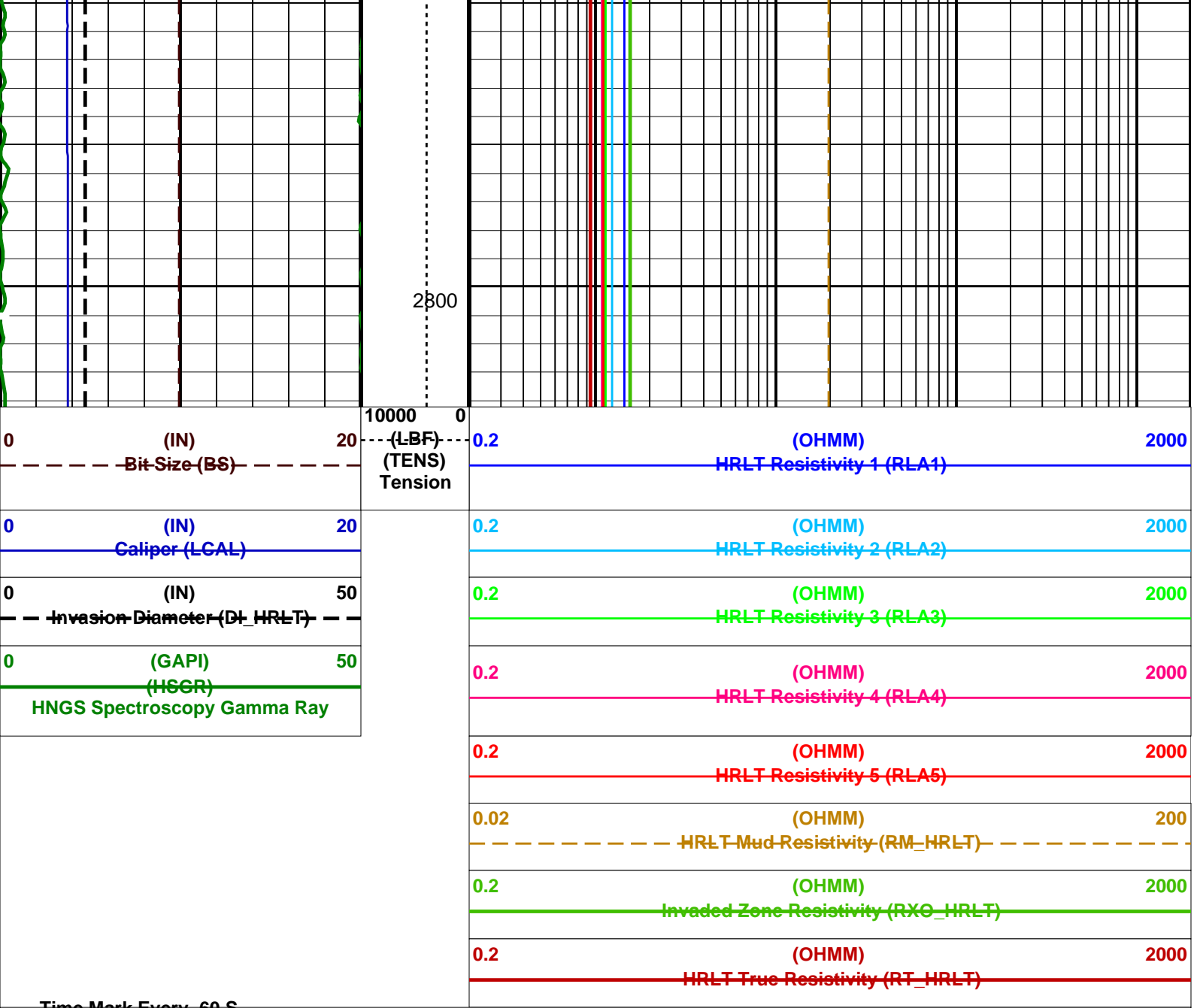




2850

2825





Time Mark Every 60 S

PIP SUMMARY

FD	Total Depth	23.00	M
MST	Mud Sample Temperature	23.00	DEGC
DFD	Drilling Fluid Density	1.05	G/C3
BS	Bit Size	9.875	IN
System and Miscellaneous			
SHT	Surface Hole Temperature	20	DEGC
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GGRD	Geothermal Gradient	0.018227	DC/M
GCSE	Generalized Caliper Selection	LCAL	
BHT	Bottom Hole Temperature (used in calculations)	40	DEGC
BHS	Borehole Status	OPEN	
EDTC-B: Enhanced DTS Cartridge			
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.991021	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.01937	
TPOS	Tool Position	ECCE	
SHT	Surface Hole Temperature	20	DEGC
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
HNPE	HNGS Processing Enable	YES	
HMWM	Mud Weighting Material	NATU	
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HALF	HNGS Alpha Filter Length	60	IN
HABK	HNGS Borehole Potassium Running Average	-0.00341773	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	

GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	0.018227	DC/M
GGRD	Geothermal Gradient	LCAL		
GCSE	Generalized Caliper Selection	NONE		
DBCC	HNGS Barite Constant Correction Flag			
CSW2	Outer Casing Weight	0		LB/F
CSW1	Inner Casing Weight	0		LB/F
CSD2	Outer Casing Outer Diameter	0		IN
CSD1	Inner Casing Outer Diameter	0		IN
BHT	Bottom Hole Temperature (used in calculations)	40		DEGC
BHS	Borehole Status	OPEN		
BHK	HNGS Borehole Potassium Correction Concentration	0		
BAR2	HNGS Detector 2 Barite Constant	1		
BAR1	HNGS Detector 1 Barite Constant	1		
HNGS-BA: Hostile Natural Gamma Ray Sonde				
SHT	Surface Hole Temperature	20		DEGC
PROCSP0	Sonde Position	Centered		
PROCRM	Processing Mud Resistivity Select	HRLT_Compute		
PROCMS0	Mechanical Standoff Fin Size	0		IN
PROCML	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RX0		
PROCINV	Inversion Selection	ON		
KFAC_HRLT	HRLT K Factor Option	SONDE		
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE		
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9		
GGRD	Geothermal Gradient	0.018227		DC/M
GCSE	Generalized Caliper Selection	LCAL		
BHT	Bottom Hole Temperature (used in calculations)	40		DEGC
BHS	Borehole Status	OPEN		
HRLT-B: High Resolution Laterolog Array - B				

**DLIS Name                      Description    Value**

**Parameters**

Format: HRLT    Vertical Scale: 1.200    Graphics File Created: 24-Apr-2017 07:03

EDTC-B	SKK-5169-EDTCB		
HNGC-B	19C0-187	HNGS-BA	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187

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

DEFAULT    MSS\_LDEO\_HRLA\_LDL\_009LDP    FN:8    PRODUCER    24-Apr-2017 07:03

**Output DLIS Files**

**Output DLIS Files**

DEFAULT    MSS\_LDEO\_HRLA\_LDL\_010LUP    FN:9    PRODUCER    24-Apr-2017 08:13    3154.7 M    2834.6 M

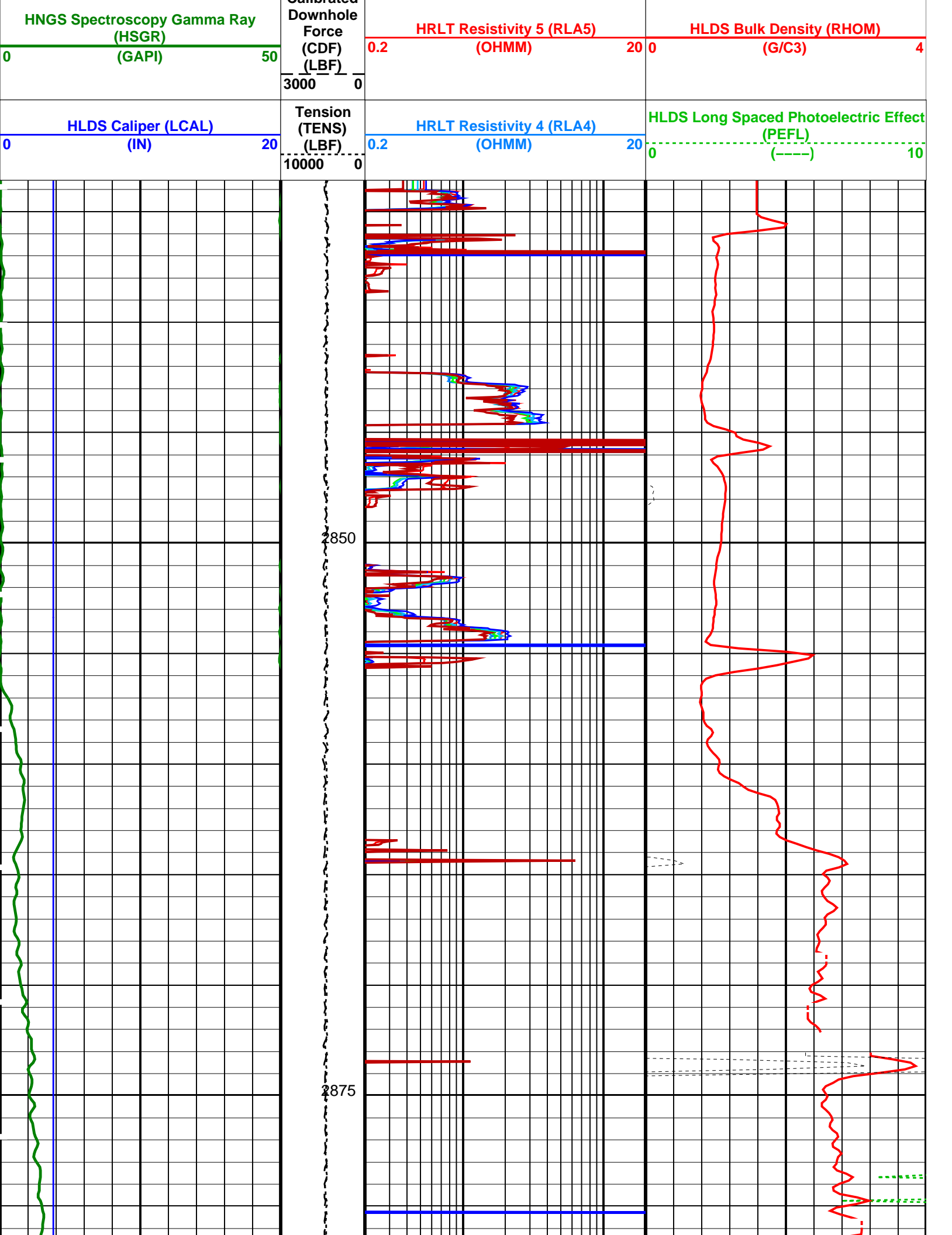
**OP System Version: 19C0-187**

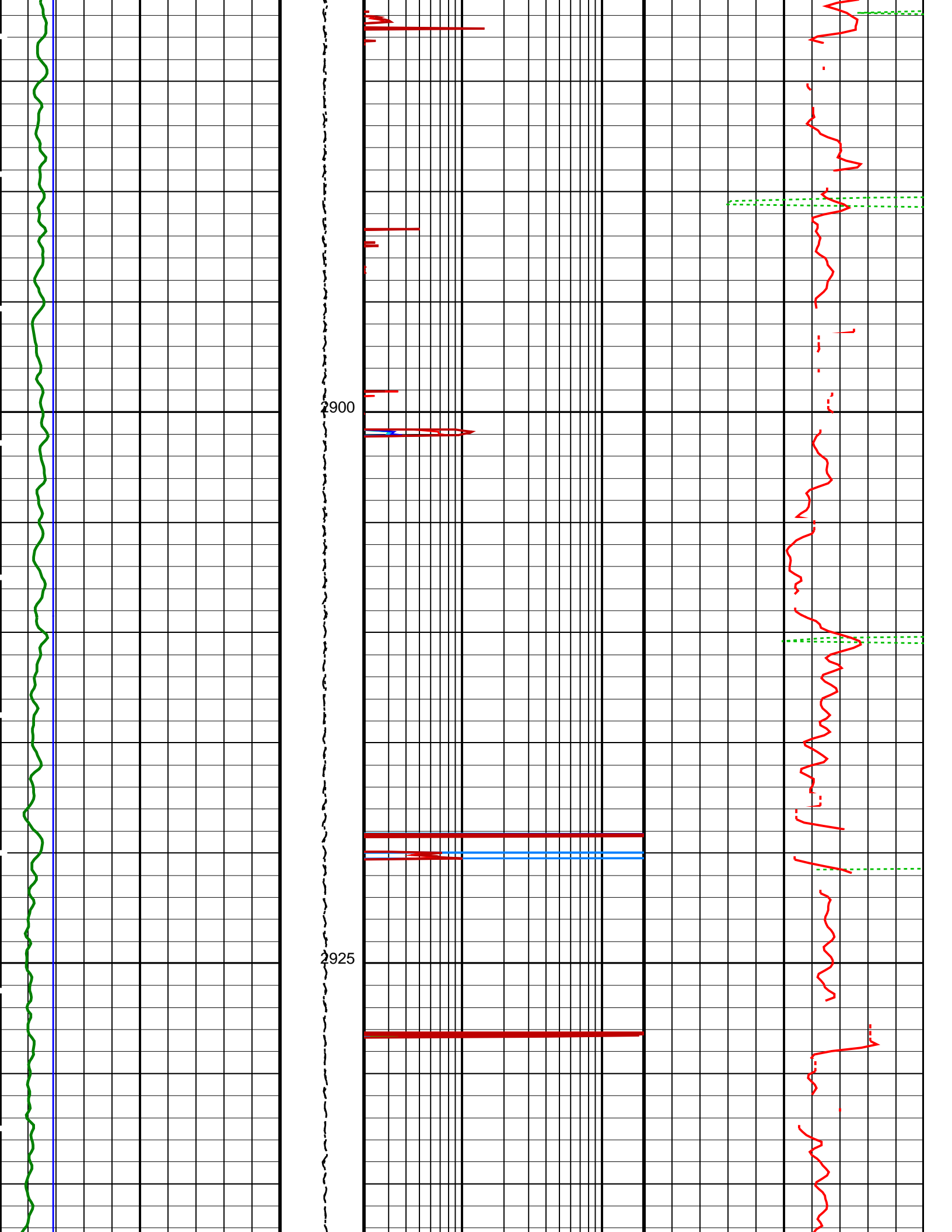
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HLDS	19C0-187	LDSC-B	19C0-187
HNGC-B	19C0-187	HNGS-BA	19C0-187
EDTC-B	SKK-5169-EDTCB		

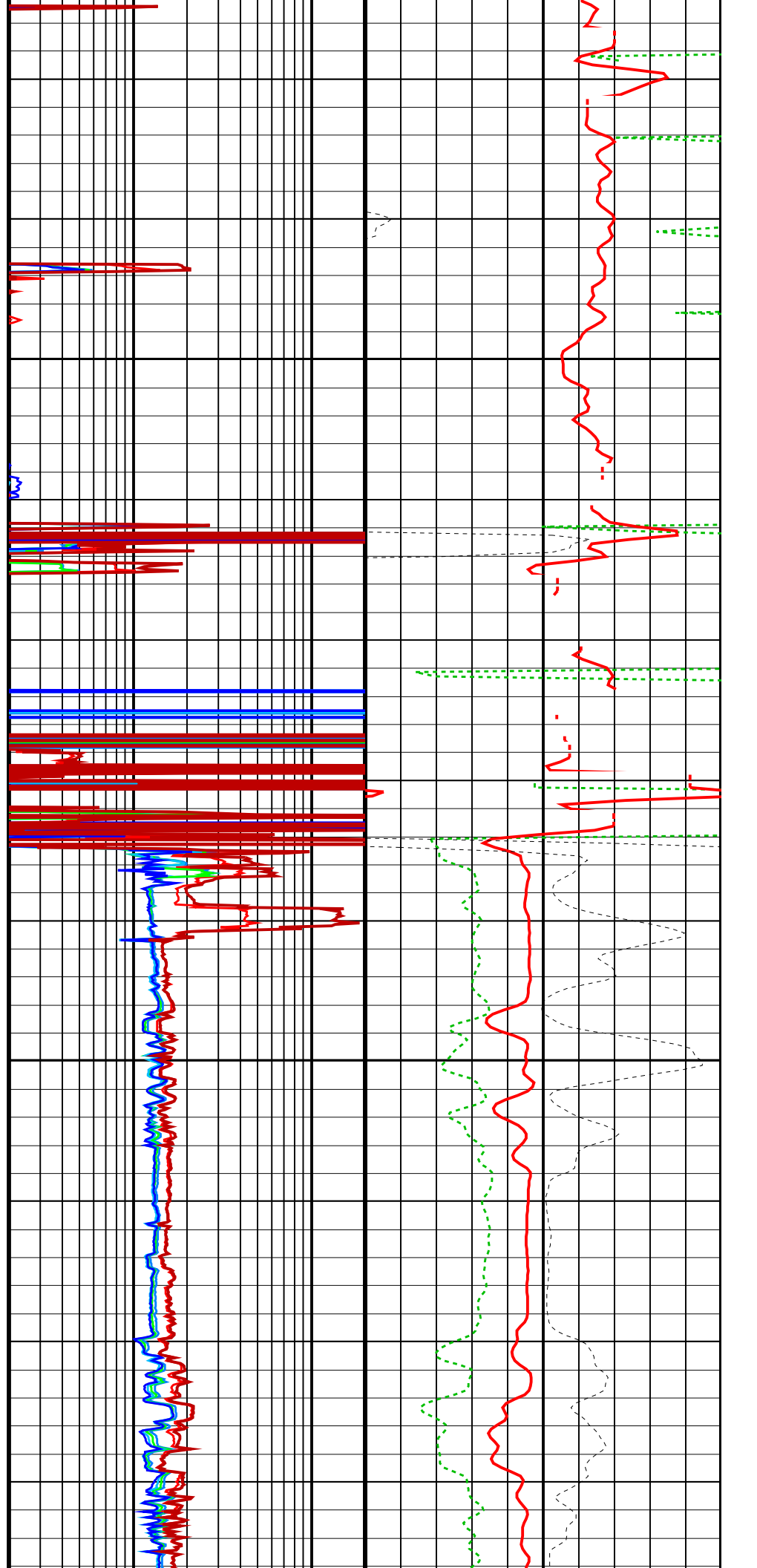
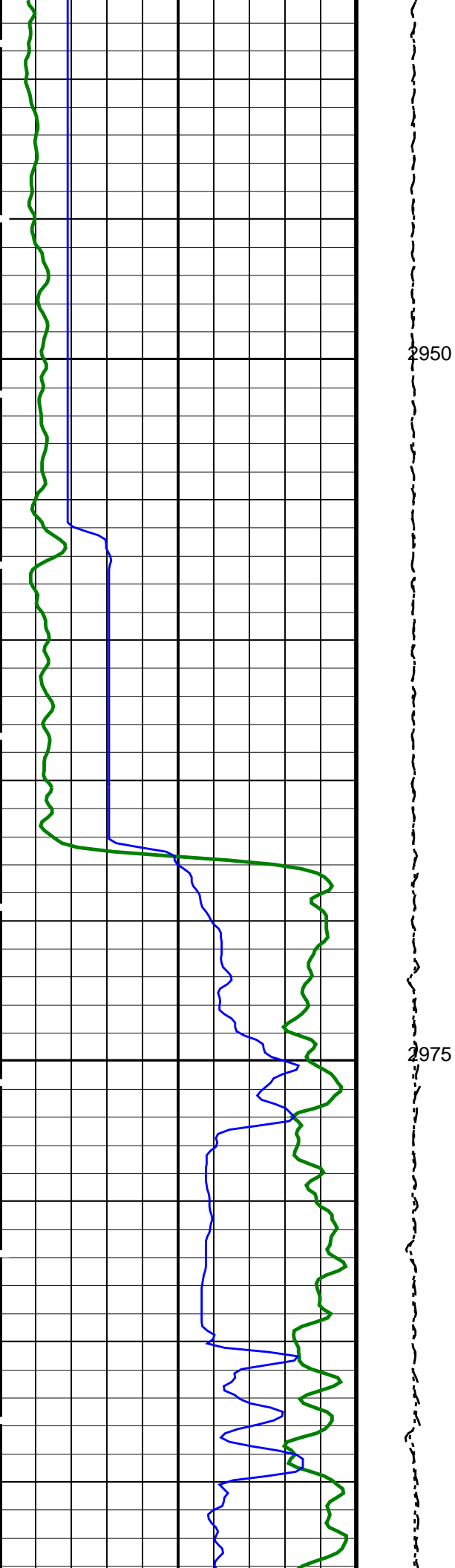
**PIP SUMMARY**

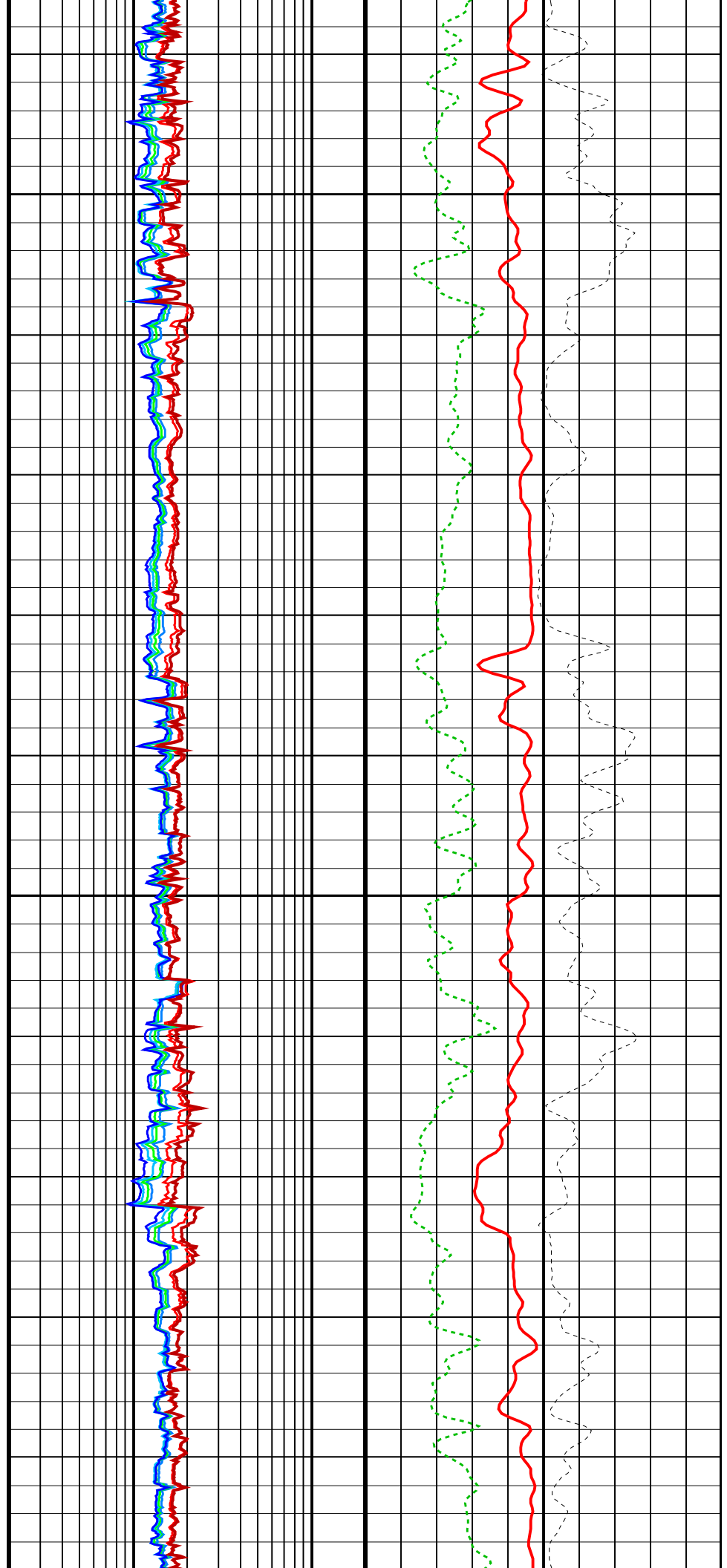
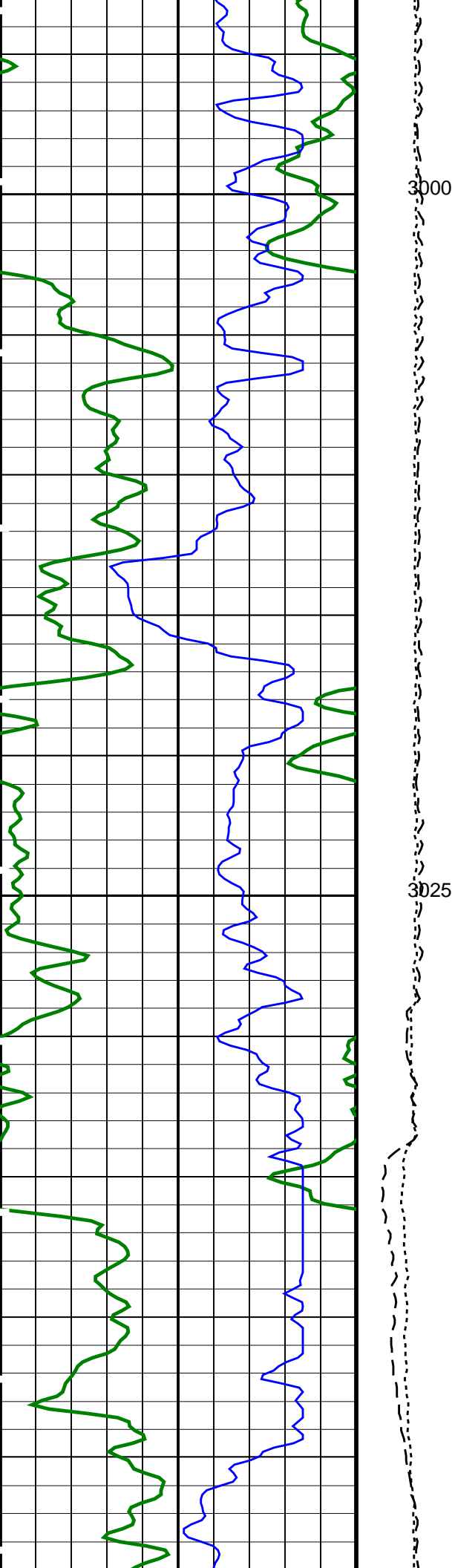
Time Mark Every 60 S

	<b>HRLT True Resistivity (RT_HRLT)</b>		
0.2	(OHMM)	20	
	<b>HRLT Resistivity 1 (RLA1)</b>		
0.2	(OHMM)	20	
	<b>HRLT Resistivity 2 (RLA2)</b>		
0.2	(OHMM)	20	
	<b>HRLT Resistivity 3 (RLA3)</b>		
0.2	(OHMM)	20	
			<b>HLDS Bulk Density Correction (DRH)</b>
			-0.25 (G/C3) 0.25
	Calibrated		

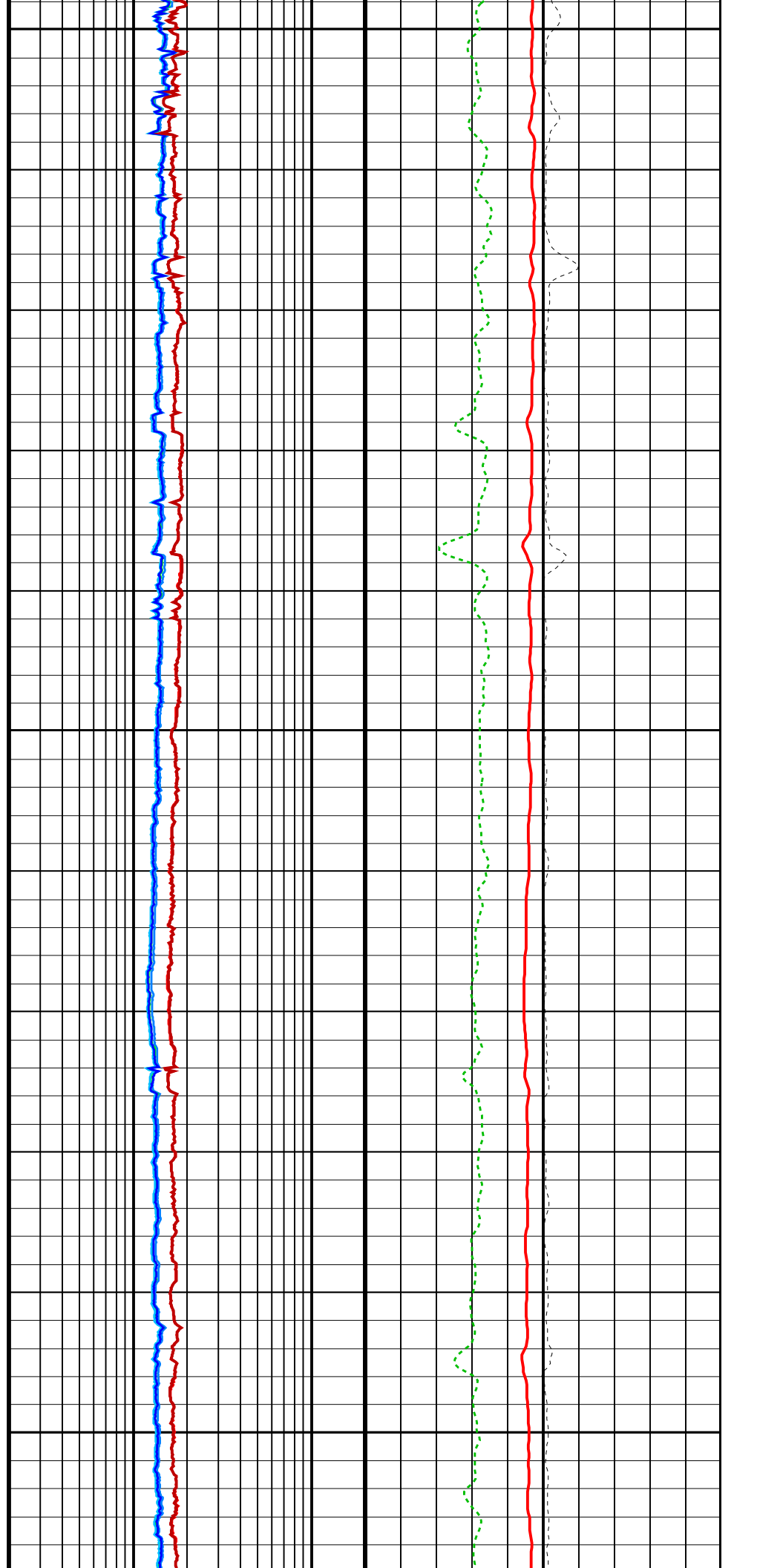
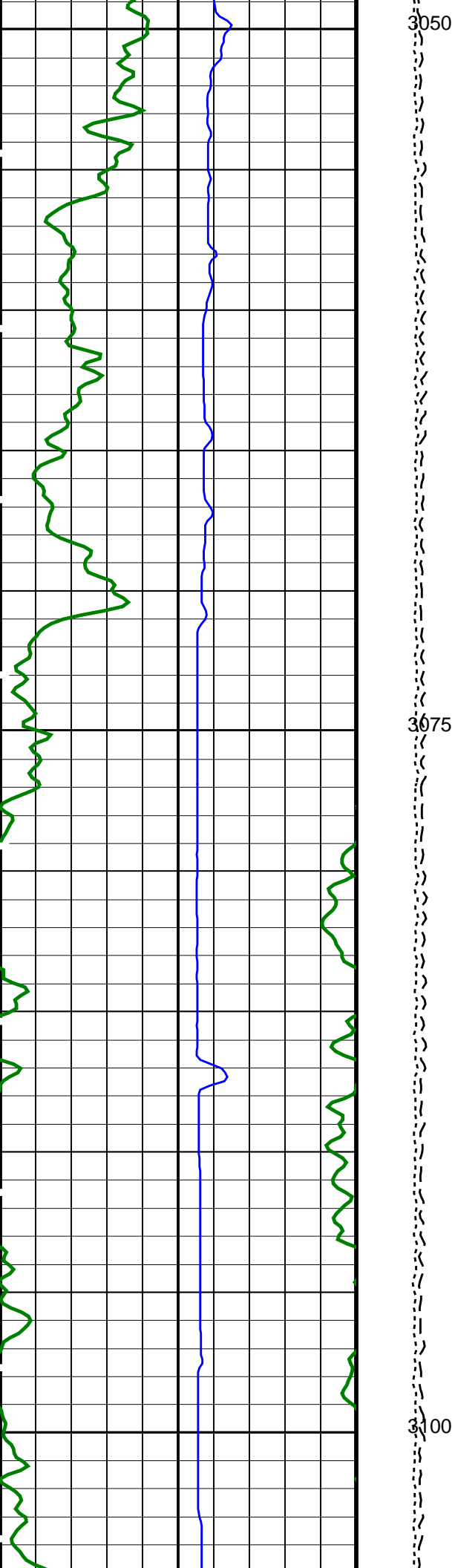


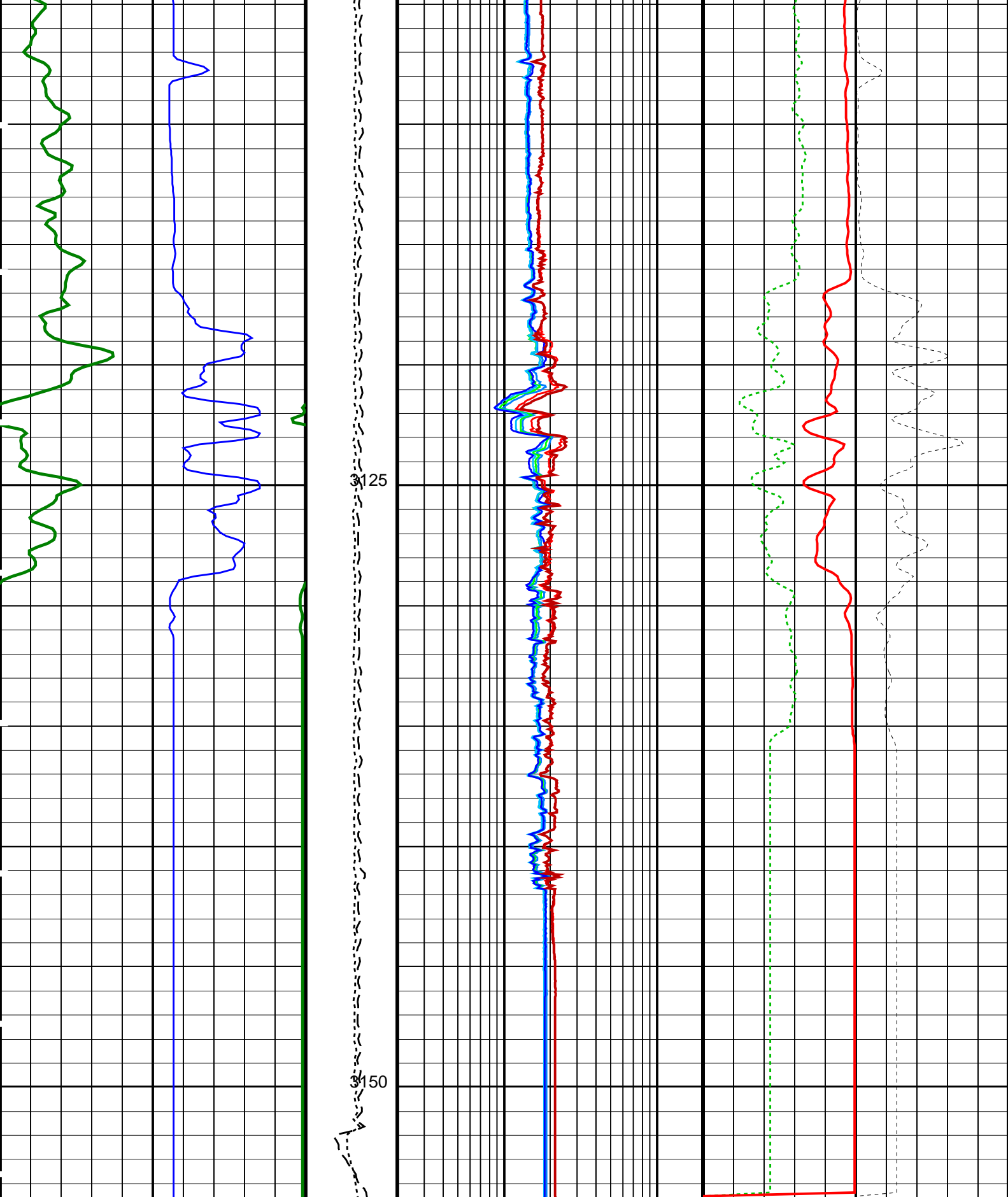












<p>HLDS Caliper (LCAL) (IN)</p> <p>0 20</p>	<p>Tension (TENS) (LBF)</p> <p>10000 0</p>	<p>HRLT Resistivity 4 (RLA4) (OHMM)</p> <p>0.2 20</p>	<p>HLDS Long Spaced Photoelectric Effect (PEFL) (----)</p> <p>0 10</p>
---	--	---	--

<p>HNGS Spectroscopy Gamma Ray (HSGR)</p>	<p>Calibrated Downhole Force</p>	<p>HRLT Resistivity 5 (RLA5)</p>	<p>HLDS Bulk Density (RHOM)</p>
---	----------------------------------	----------------------------------	---------------------------------

0	(HRR) (GAPI)	50	(CDF) (LBF)	0.2	(OHMM)	20	0	(G/C3)	4
		3000	0						
				<b>HRLT Resistivity 3 (RLA3)</b>			<b>HLDS Bulk Density Correction (DRH)</b>		
		0.2		(OHMM)	20		-0.25	(G/C3)	0.25
				<b>HRLT Resistivity 2 (RLA2)</b>					
		0.2		(OHMM)	20				
				<b>HRLT Resistivity 1 (RLA1)</b>					
		0.2		(OHMM)	20				
				<b>HRLT True Resistivity (RT_HRLT)</b>					
		0.2		(OHMM)	20				

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)	40	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	25.8283	DEGC
FREQ0	HRLT Frequency Index for Mode 0	32	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ6	HRLT Frequency Index for Mode 6	116	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	NOBARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	AUTO	
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO	
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO	
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO	
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO	
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO	
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PROCVN	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	Centered	
SHT	Surface Hole Temperature	20	DEGC
<b>HLDS: Hostile Litho-Density Sonde</b>			
CLCL	HLDS LS Control Loop Controller Mode	AUTO_DEFAULT	
CLCS	HLDS SS Control Loop Controller Mode	AUTO_DEFAULT	
CLLS	HLDS Mode Loop Long Spacing	AUTO	
CLSS	HLDS Mode Loop Short Spacing	AUTO	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
FD	Fluid Density	1	G/C3
LATC	HLDS Activation Correction	ON	
LLDL	HLDS LS Low Level Discriminator DAC	14000	
LLDS	HLDS SS Low Level Discriminator DAC	14000	
LLML	HLDS LS Low Level Discriminator Mode	AUTO	
LLMS	HLDS SS Low Level Discriminator Mode	AUTO	
MDEN	Matrix Density	2.6	G/C3
PHVL	HLDS Long Spacing High Voltage Setting	1000	V
PHVS	HLDS Short Spacing High Voltage Setting	1000	V
PSDL	HLDS LS Pulse Shape Compensation DAC	30000	
PSDS	HLDS SS Pulse Shape Compensation DAC	30000	
PSML	HLDS LS Pulse Shape Compensation Mode	AUTO	
PSMS	HLDS SS Pulse Shape Compensation Mode	AUTO	
<b>HNGS-BA: Hostile Natural Gamma Ray Sonde</b>			
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
CONC	HNGS Detector 1 Barite Concentration	0	

BHK	Borehole Status	OPEN	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	40	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	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
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	-0.00381814	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
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	0.942613	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.998297	
EDTC-B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	40	DEGC
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO	Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
ISSBAR_EDTC	Nuclear Mud Type	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U-ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U-TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
System and Miscellaneous			
ALTDCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	38000.00	PPM
CSIZ	Current Casing Size	5.500	IN
CWEI	Casing Weight	168.00	LB/F
DFD	Drilling Fluid Density	1.05	G/C3
FLEV	Fluid Level	-50000.00	M
MST	Mud Sample Temperature	23.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	1212.2	M
TDD	Total Depth - Driller	1434.00	M
TDL	Total Depth - Logger	1434.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripleCombo Vertical Scale: 1:200 Graphics File Created: 24-Apr-2017 08:14

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
EDTC-B	SKK-5169-EDTCB		

# Output DLIS Files

DEFAULT MSS\_LDEO\_HRLA\_LDL\_010LUP FN:9 PRODUCER 24-Apr-2017 08:13



## Calibrations

### MAXIS Field Log

#### Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
<b>High Resolution Laterolog Array – B Wellsite Calibration – HRLT M01</b>							
Before: 24-Apr-2017 5:05 After: 24-Apr-2017 10:45							
HRLT M0-M1 Voltage Plus – 0	0	N/A	-318.8	-318.1	0.6813	9.681	UV
HRLT M0-M1 Voltage Plus – 1	0	N/A	-332.0	-328.6	3.425	9.681	UV
HRLT M0-M1 Voltage Plus – 2	0	N/A	-339.5	-337.0	2.481	9.681	UV
HRLT M0-M1 Voltage Plus – 3	0	N/A	-329.9	-327.5	2.457	9.681	UV
HRLT M0-M1 Voltage Plus – 4	0	N/A	-320.2	-319.2	1.021	9.681	UV
HRLT M0-M1 Voltage Plus – 5	0	N/A	-322.0	-321.1	0.8506	9.681	UV
HRLT M0-M1 Voltage Plus – 6	0	N/A	322.3	318.1	-4.188	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: 24-Apr-2017 5:05 After: 24-Apr-2017 10:45							
HRLT M1-M2 Voltage Plus – 0	0	N/A	1743	1737	-5.986	53.42	UV
HRLT M1-M2 Voltage Plus – 1	0	N/A	1821	1801	-20.64	53.42	UV
HRLT M1-M2 Voltage Plus – 2	0	N/A	1856	1840	-15.98	53.42	UV
HRLT M1-M2 Voltage Plus – 3	0	N/A	1801	1786	-15.68	53.42	UV
HRLT M1-M2 Voltage Plus – 4	0	N/A	1747	1739	-7.843	53.42	UV
HRLT M1-M2 Voltage Plus – 5	0	N/A	1758	1751	-7.331	53.42	UV
HRLT M1-M2 Voltage Plus – 6	0	N/A	-1777	-1752	24.96	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: 24-Apr-2017 5:05 After: 24-Apr-2017 10:45							
HRLT M2-M3 Voltage Plus – 0	0	N/A	1734	1729	-5.481	53.42	UV
HRLT M2-M3 Voltage Plus – 1	0	N/A	1823	1802	-20.75	53.42	UV
HRLT M2-M3 Voltage Plus – 2	0	N/A	1860	1843	-16.38	53.42	UV
HRLT M2-M3 Voltage Plus – 3	0	N/A	1809	1794	-15.58	53.42	UV
HRLT M2-M3 Voltage Plus – 4	0	N/A	1749	1741	-7.726	53.42	UV
HRLT M2-M3 Voltage Plus – 5	0	N/A	1760	1753	-7.006	53.42	UV
HRLT M2-M3 Voltage Plus – 6	0	N/A	-1768	-1742	25.36	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: 24-Apr-2017 5:05 After: 24-Apr-2017 10:45							
HRLT A3-A4 Voltage Plus – 0	0	N/A	68700	68530	-168.1	2100	UV
HRLT A3-A4 Voltage Plus – 1	0	N/A	72060	71300	-755.3	2100	UV
HRLT A3-A4 Voltage Plus – 2	0	N/A	73770	73220	-543.1	2100	UV
HRLT A3-A4 Voltage Plus – 3	0	N/A	72020	71480	-542.7	2100	UV
HRLT A3-A4 Voltage Plus – 4	0	N/A	69590	69340	-250.7	2100	UV
HRLT A3-A4 Voltage Plus – 5	0	N/A	70090	69850	-235.6	2100	UV
HRLT A3-A4 Voltage Plus – 6	0	N/A	-68840	-67950	892.8	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: 24-Apr-2017 5:05 After: 24-Apr-2017 10:45							
HRLT A4-A5 Voltage Plus – 0	0	N/A	68780	68620	-167.5	2100	UV
HRLT A4-A5 Voltage Plus – 1	0	N/A	72270	71510	-758.0	2100	UV
HRLT A4-A5 Voltage Plus – 2	0	N/A	73970	73410	-561.1	2100	UV
HRLT A4-A5 Voltage Plus – 3	0	N/A	72180	71620	-560.2	2100	UV
HRLT A4-A5 Voltage Plus – 4	0	N/A	69700	69450	-254.7	2100	UV
HRLT A4-A5 Voltage Plus – 5	0	N/A	70190	69950	-238.8	2100	UV

HRLT A4-A5 Voltage Plus - 6	0	N/A	-69050	-68160	890.2	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: 24-Apr-2017 5:05 After: 24-Apr-2017 10:45

HRLT A5-A6 Voltage Plus - 0	0	N/A	68630	68460	-173.1	2100	UV
HRLT A5-A6 Voltage Plus - 1	0	N/A	72120	71350	-767.1	2100	UV
HRLT A5-A6 Voltage Plus - 2	0	N/A	73800	73240	-563.6	2100	UV
HRLT A5-A6 Voltage Plus - 3	0	N/A	72030	71500	-532.8	2100	UV
HRLT A5-A6 Voltage Plus - 4	0	N/A	69570	69320	-252.7	2100	UV
HRLT A5-A6 Voltage Plus - 5	0	N/A	70050	69820	-223.9	2100	UV
HRLT A5-A6 Voltage Plus - 6	0	N/A	-68900	-68000	892.8	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: 24-Apr-2017 5:05 After: 24-Apr-2017 10:45

HRLT Torpedo-M0 Voltage - 0	0	N/A	-68150	-67990	154.0	2100	UV
HRLT Torpedo-M0 Voltage - 1	0	N/A	-71910	-71160	745.9	2100	UV
HRLT Torpedo-M0 Voltage - 2	0	N/A	-73650	-73090	560.0	2100	UV
HRLT Torpedo-M0 Voltage - 3	0	N/A	-71940	-71400	542.5	2100	UV
HRLT Torpedo-M0 Voltage - 4	0	N/A	-69510	-69270	240.0	2100	UV
HRLT Torpedo-M0 Voltage - 5	0	N/A	-70000	-69780	218.2	2100	UV
HRLT Torpedo-M0 Voltage - 6	0	N/A	68660	67770	-890.6	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: 24-Apr-2017 5:05 After: 24-Apr-2017 10:45

HRLT Bridle#9-M0 Voltage - 0	0	N/A	-68180	-68040	145.0	2100	UV
HRLT Bridle#9-M0 Voltage - 1	0	N/A	-72000	-71250	754.6	2100	UV
HRLT Bridle#9-M0 Voltage - 2	0	N/A	-73720	-73180	542.0	2100	UV
HRLT Bridle#9-M0 Voltage - 3	0	N/A	-72010	-71480	534.5	2100	UV
HRLT Bridle#9-M0 Voltage - 4	0	N/A	-69560	-69320	245.1	2100	UV
HRLT Bridle#9-M0 Voltage - 5	0	N/A	-70030	-69820	208.3	2100	UV
HRLT Bridle#9-M0 Voltage - 6	0	N/A	68750	67860	-883.9	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: 24-Apr-2017 5:05 After: 24-Apr-2017 10:45

HRLT Source Current Plus - 0	0	N/A	284.4	283.8	-0.5854	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: 24-Apr-2017 5:05 After: 24-Apr-2017 10:45

HRLT Vertical Voltage PI - 0	0	N/A	-320.7	-319.8	0.8860	9.681	UV
HRLT Vertical Voltage PI - 1	0	N/A	-326.7	-323.3	3.424	9.681	UV
HRLT Vertical Voltage PI - 2	0	N/A	-333.0	-330.4	2.650	9.681	UV
HRLT Vertical Voltage PI - 3	0	N/A	-321.7	-319.2	2.533	9.681	UV
HRLT Vertical Voltage PI - 4	0	N/A	-309.3	-308.1	1.217	9.681	UV
HRLT Vertical Voltage PI - 5	0	N/A	-326.1	-325.0	1.113	9.681	UV
HRLT Vertical Voltage PI - 6	0	N/A	329.9	325.5	-4.460	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: 25-Mar-2017 1:50 Before: 24-Apr-2017 5:01 After: 24-Apr-2017 10:58

SS Cs Resolution Bkg	9.000	8.044	8.018	7.926	-0.09230	1.800	%
LS Cs Resolution Bkg	9.000	8.113	8.122	8.087	-0.03501	1.800	%
LSW1 Background	100.0	65.55	64.75	65.63	0.8783	3.000	CPS
LSW2 Background	100.0	61.47	60.00	60.00	0.001541	3.000	CPS
LSW3 Background	200.0	132.5	133.2	133.4	0.1519	6.000	CPS
LSW4 Background	250.0	160.5	161.9	161.1	-0.7606	7.500	CPS
LSW5 Background	600.0	371.0	367.1	370.3	3.170	18.00	CPS
SSW1 Background	100.0	73.37	73.38	73.46	0.07787	3.000	CPS
SSW2 Background	200.0	129.1	131.2	130.1	-1.178	6.000	CPS
SSW3 Background	500.0	350.2	351.3	350.5	-0.7318	15.00	CPS
SSW4 Background	270.0	183.5	180.5	182.3	1.826	8.100	CPS
SSW5 Background	200.0	132.8	131.8	131.1	-0.6528	6.000	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Aluminum Measurement

Master: 25-Mar-2017 2:22

LSW1 Aluminum	600.0	521.4	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	742.3	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	896.4	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	449.8	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	412.4	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2435	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	6542	N/A	N/A	N/A	N/A	CPS

SSW2 Aluminum	8000	8342	N/A	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	9006	N/A	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	3674	N/A	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	448.5	N/A	N/A	N/A	N/A	N/A	CPS

Hostile Litho-Density Sonde Wellsite Calibration – Lithology Measurement

Master: 25-Mar-2017 2:16

LSW1 Iron	400.0	355.4	N/A	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	603.3	N/A	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	790.5	N/A	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	409.3	N/A	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	373.1	N/A	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1770	N/A	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	5464	N/A	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	8215	N/A	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3351	N/A	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	402.0	N/A	N/A	N/A	N/A	N/A	CPS

Hostile Litho-Density Sonde Wellsite Calibration – Caliper Calibration

Before: 25-Mar-2017 4:35

HLDS Caliper Small Ring	12.00	N/A	15.97	N/A	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	15.19	N/A	20.15	N/A	N/A	N/A	N/A	IN

Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 1 Check

Master: 27-Mar-2017 2:51 Before: 24-Apr-2017 5:03 After: 24-Apr-2017 10:59

Na 511 Peak Loc	40.00	39.78	37.50	37.68	0.1760	1.000	
Na 511 Peak Res	15.50	15.89	16.45	16.25	-0.2056	2.000	%
High Voltage	1150	1194	1182	1183	0.8199	N/A	V
Na 1785 Peak Loc	142.6	141.8	135.2	135.8	0.6183	7.000	
Na 1785 Peak Res	8.500	8.607	9.036	9.707	0.6719	2.000	%
Temperature	15.50	34.40	33.95	32.59	-1.363	N/A	DEGC
Na Count Rate	45.00	29.68	29.01	28.23	-0.7815	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 2 Check

Master: 27-Mar-2017 2:51 Before: 24-Apr-2017 5:03 After: 24-Apr-2017 10:59

Na 511 Peak Loc	40.00	39.58	39.55	39.64	0.08944	1.000	
Na 511 Peak Res	15.50	16.44	16.93	16.42	-0.5169	2.000	%
High Voltage	1150	1124	1122	1121	-1.241	N/A	V
Na 1785 Peak Loc	142.6	142.3	142.4	141.4	-1.015	7.000	
Na 1785 Peak Res	8.500	8.332	8.234	8.767	0.5337	2.000	%
Temperature	15.50	35.13	34.73	34.36	-0.3737	N/A	DEGC
Na Count Rate	45.00	29.69	28.91	28.20	-0.7114	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration – Ratio Of Detector 1 To Detector 2

Master: 27-Mar-2017 2:51 Before: 24-Apr-2017 5:03 After: 24-Apr-2017 10:59

Coincidence Count Rate Ratio	1.000	0.9983	0.9975	0.9964	-0.001093	0.05000	
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Enhanced DTS Cartridge Wellsite Calibration – EDTC Accelerometer Calibration

Before: 24-Apr-2017 4:57

EDTC Z-Axis Acceleration	9.810	N/A	9.736	N/A	N/A	N/A	M/S2
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Enhanced DTS Cartridge Wellsite Calibration – Detector Calibration

Before: 24-Apr-2017 4:58 After: 24-Apr-2017 10:56

Gamma Ray (Jig – Bkg)	153.5	N/A	153.5	146.5	-7.049	13.96	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	157.4	-7.576	15.00	GAPI

High Resolution Laterolog Array – B / Equipment Identification

Primary Equipment:

HRLT Sonde HRLS – B 768

Auxiliary Equipment:

HRLT lower Housing HRLH – B 968  
HRLT Lower Cartridge HRLC – B 974  
HRLT upper Housing HRUH – B 978  
HRLT Upper Cartridge HRUC – B 764

High Resolution Laterolog Array – B Wellsite Calibration

HRLT M01











Idx	Phase	HRLT M0-M1 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-318.8	-322.7	-280.7	-379.7
	After		-318.1			
1	Before		-332.0	-322.7	-280.7	-379.7
	After		-332.0			

	After		-328.6			
2	Before		-339.5	-322.7	-280.7	-379.7
	After		-337.0			
3	Before		-329.9	-322.7	-280.7	-379.7
	After		-327.5			
4	Before		-320.2	-322.7	-280.7	-379.7
	After		-319.2			
5	Before		-322.0	-322.7	-280.7	-379.7
	After		-321.1			
6	Before		322.3	322.7	379.7	280.7
	After		318.1			
7	Before		-322.7	-322.7	-280.7	-379.7
	After		-322.7			
			(Minimum)	(Nominal)	(Maximum)	
Before: 24-Apr-2017 5:05						
After: 24-Apr-2017 10:45						

















High Resolution Laterolog Array – B Wellsite Calibration						
HRLT M12						
Idx	Phase	HRLT M1–M2 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1743	1781	2095	1549
	After		1737			
1	Before		1821	1781	2095	1549
	After		1801			
2	Before		1856	1781	2095	1549
	After		1840			
3	Before		1801	1781	2095	1549
	After		1786			
4	Before		1747	1781	2095	1549
	After		1739			
5	Before		1758	1781	2095	1549
	After		1751			
6	Before		-1777	-1781	-1549	-2095
	After		-1752			
7	Before		1781	1781	2095	1549
	After		1781			
			(Minimum)	(Nominal)	(Maximum)	
Before: 24-Apr-2017 5:05						
After: 24-Apr-2017 10:45						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT M23						
Idx	Phase	HRLT M2–M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1734	1781	2095	1549
	After		1729			
1	Before		1823	1781	2095	1549
	After		1802			
2	Before		1860	1781	2095	1549
	After		1840			











3	After		1843	1781	2095	1549
	Before		1809			
4	After		1794	1781	2095	1549
	Before		1749			
5	After		1741	1781	2095	1549
	Before		1760			
6	After		1753	-1781	-1549	-2095
	Before		-1768			
7	After		-1742	1781	2095	1549
	Before		1781			
		(Minimum) (Nominal) (Maximum)				

Before: 24-Apr-2017 5:05  
 After: 24-Apr-2017 10:45

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V34						
Idx	Phase	HRLT A3–A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	After		68700	70000	82360	60900
	Before		68530			
1	After		72060	70000	82360	60900
	Before		71300			
2	After		73770	70000	82360	60900
	Before		73220			
3	After		72020	70000	82360	60900
	Before		71480			
4	After		69590	70000	82360	60900
	Before		69340			
5	After		70090	70000	82360	60900
	Before		69850			
6	After		-68840	-70000	-60900	-82360
	Before		-67950			
7	After		70000	70000	82360	60900
	Before		70000			
		(Minimum) (Nominal) (Maximum)				

Before: 24-Apr-2017 5:05  
 After: 24-Apr-2017 10:45

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V45						
Idx	Phase	HRLT A4–A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	After		68780	70000	82360	60900
	Before		68620			
1	After		72270	70000	82360	60900
	Before		71510			
2	After		73970	70000	82360	60900
	Before		73410			
3	After		72180	70000	82360	60900
	Before		72180			

4	After		71620	70000	82360	60900
	Before		69700			
5	After		70190	70000	82360	60900
	Before		69950			
6	After		-69050	-70000	-60900	-82360
	Before		-68160			
7	After		70000	70000	82360	60900
	Before		70000			
			(Minimum)	(Nominal)	(Maximum)	

Before: 24-Apr-2017 5:05  
 After: 24-Apr-2017 10:45

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V56						
Idx	Phase	HRLT A5–A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	After		68630	70000	82360	60900
	Before		68460			
1	After		72120	70000	82360	60900
	Before		71350			
2	After		73800	70000	82360	60900
	Before		73240			
3	After		72030	70000	82360	60900
	Before		71500			
4	After		69570	70000	82360	60900
	Before		69320			
5	After		70050	70000	82360	60900
	Before		69820			
6	After		-68900	-70000	-60900	-82360
	Before		-68000			
7	After		70000	70000	82360	60900
	Before		70000			
			(Minimum)	(Nominal)	(Maximum)	

Before: 24-Apr-2017 5:05  
 After: 24-Apr-2017 10:45

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT VTP						
Idx	Phase	HRLT Torpedo–M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	After		-68150	-70000	-60900	-82360
	Before		-67990			
1	After		-71910	-70000	-60900	-82360
	Before		-71160			
2	After		-73650	-70000	-60900	-82360
	Before		-73090			
3	After		-71940	-70000	-60900	-82360
	Before		-71400			
4	After		-69510	-70000	-60900	-82360
	Before		-69510			

5	After		-69270	-70000	-60900	-82360
	Before		-70000			
6	After		68660	70000	82360	60900
	Before		67770			
7	After		-70000	-70000	-60900	-82360
	Before		-70000			
			(Minimum)	(Nominal)	(Maximum)	

Before: 24-Apr-2017 5:05  
After: 24-Apr-2017 10:45

High Resolution Laterolog Array – B Wellsite Calibration							
HRLT VBD							
Idx	Phase	HRLT Bridle#9-M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum	
0	After		-68180	-70000	-60900	-82360	
	Before		-68040				
1	After		-72000	-70000	-60900	-82360	
	Before		-71250				
2	After		-73720	-70000	-60900	-82360	
	Before		-73180				
3	After		-72010	-70000	-60900	-82360	
	Before		-71480				
4	After		-69560	-70000	-60900	-82360	
	Before		-69320				
5	After		-70030	-70000	-60900	-82360	
	Before		-69820				
6	After		68750	70000	82360	60900	
	Before		67860				
7	After		-70000	-70000	-60900	-82360	
	Before		-70000				
			(Minimum)	(Nominal)	(Maximum)		

Before: 24-Apr-2017 5:05  
After: 24-Apr-2017 10:45

High Resolution Laterolog Array – B Wellsite Calibration							
HRLT ISO							
Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum	
0	After		284.4	284.0	334.1	247.0	
	Before		283.8				
1	After		281.1	281.1	330.7	244.4	
	Before		281.1				
2	After		281.1	281.1	330.7	244.4	
	Before		281.1				
3	After		281.1	281.1	330.7	244.4	
	Before		281.1				
4	After		281.1	281.1	330.7	244.4	
	Before		281.1				
5	After		281.1	281.1	330.7	244.4	
	Before		281.1				

6	After		281.1	281.1	330.7	244.4
	Before		281.1			
7	After		281.1	281.1	330.7	244.4
	Before		281.1			
			(Minimum)	(Nominal)	(Maximum)	
Before: 24-Apr-2017 5:05						
After: 24-Apr-2017 10:45						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT MV						
Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-320.7	-322.7	-280.7	-379.7
	After		-319.8			
1	Before		-326.7	-322.7	-280.7	-379.7
	After		-323.3			
2	Before		-333.0	-322.7	-280.7	-379.7
	After		-330.4			
3	Before		-321.7	-322.7	-280.7	-379.7
	After		-319.2			
4	Before		-309.3	-322.7	-280.7	-379.7
	After		-308.1			
5	Before		-326.1	-322.7	-280.7	-379.7
	After		-325.0			
6	Before		329.9	322.7	379.7	280.7
	After		325.5			
7	Before		-322.7	-322.7	-280.7	-379.7
	After		-322.7			
			(Minimum)	(Nominal)	(Maximum)	
Before: 24-Apr-2017 5:05						
After: 24-Apr-2017 10:45						

Hostile Litho-Density Sonde / Equipment Identification			
Primary Equipment:			
Hostile Litho Density Sonde	HLDS – D	45	
Hostile Litho Density High Voltage	HLDV – D	45	
Gamma Source Radioactive	GSR – ZA	2945	
Auxiliary Equipment:			
Hostile Litho Density Pad	HLDP – C	45	
Hostile Litho Density High Voltage Housi	HEH – H	47	

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		8.044	Master		8.113	Master		65.55
Before		8.018	Before		8.122	Before		64.75
After		7.926	After		8.087	After		65.63
		7.000 (Minimum)			9.000 (Nominal)			11.00 (Maximum)
		7.000 (Minimum)			9.000 (Nominal)			11.00 (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		61.47	Master		132.5	Master		160.5

Before		60.00	Before		133.2	Before		161.9
After		60.00	After		133.4	After		161.1
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		371.0	Master		73.37	Master		129.1
Before		367.1	Before		73.38	Before		131.2
After		370.3	After		73.46	After		130.1
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		350.2	Master		183.5	Master		132.8
Before		351.3	Before		180.5	Before		131.8
After		350.5	After		182.3	After		131.1
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: 25-Mar-2017 1:50			Before: 24-Apr-2017 5:01			After: 24-Apr-2017 10:58		

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	194
Auxiliary Equipment: HNGS Sonde Housing Gamma Source Radioactive	HNSH - BA GSR - U	205 616008

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		39.78	Master		15.89	Master		1194
Before	EXCEEDS LIMIT	37.50	Before		16.45	Before		1182
After		37.68	After		16.25	After		1183
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		8.607	Master		34.40
Before		135.2	Before		9.036	Before		33.95
After		135.8	After		9.707	After		32.59
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		29.68
Before		29.01
After		28.23
10.00 (Minimum)      45.00 (Nominal)      100.0 (Maximum)		

Master: 27-Mar-2017 2:51      Before: 24-Apr-2017 5:03      After: 24-Apr-2017 10:59

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		39.58	Master		16.44	Master		1124
Before		39.55	Before		16.93	Before		1122
After		39.64	After		16.42	After		1121
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		142.3	Master		8.332	Master		35.13
Before		142.4	Before		8.234	Before		34.73
After		141.4	After		8.767	After		34.36
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		29.69						
Before		28.91						
After		28.20						
10.00 (Minimum)      45.00 (Nominal)      100.0 (Maximum)								







Master: 27-Mar-2017 2:51      Before: 24-Apr-2017 5:03      After: 24-Apr-2017 10:59

Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		0.9983
Before		0.9975
After		0.9964
0.9500 (Minimum)      1.000 (Nominal)      1.050 (Maximum)		
Master: 27-Mar-2017 2:51		
Before: 24-Apr-2017 5:03		
After: 24-Apr-2017 10:59		

Enhanced DTS Cartridge / Equipment Identification		
Primary Equipment:		
EDTC Gamma Ray Detector	EDTG - A/B	8305
Enhanced DTS Cartridge	EDTC - B	8317
Auxiliary Equipment:		
EDTC Housing	EDTH - B	8303

Enhanced DTS Cartridge Wellsite Calibration		
EDTC Accelerometer Calibration		
Phase	EDTC Z-Axis Acceleration M/S2	Value
Before		9.736
9.610 (Minimum)      9.810 (Nominal)      10.01 (Maximum)		
Before: 24-Apr-2017 4:57		

Enhanced DTS Cartridge Wellsite Calibration  
Detector Calibration

Phase	Gamma Ray Background GAPI	Value	Phase	Gamma Ray (Jig - Bkg) GAPI	Value	Phase	Gamma Ray (Calibrated) GAPI	Value
Before		1.233	Before		153.5	Before		165.0
After		5.702	After		146.5	After		157.4
	0 (Minimum)      30.00 (Nominal)      120.0 (Maximum)			139.6 (Minimum)      153.5 (Nominal)      167.5 (Maximum)			150.0 (Minimum)      165.0 (Nominal)      180.0 (Maximum)	
Before: 24-Apr-2017 4:58			After: 24-Apr-2017 10:56					

Company: **International Ocean Discovery Program**

**Schlumberger**

Well: **Expedition 368, Site U1501D**

Field: **South China Sea Rifted Margin**

Rig: **JOIDES Resolution**

Country:

High Resolution Laterolog Array (HRLA)

Nuclear (HNGS, HLDS)

Magnetic Susceptibility (MSS)