



**Company: International Ocean Discovery Program**

Well: **Expedition 395C, Site U1562B**

Field: **North Atlantic Mantle Convection&Climate**Rig: **JOIDES Resolution**      Ocean: **Atlantic**

Rig: JOIDES Resolution Field: North Atlantic Mantle Convection Location: Latitude: N 60.1049 Well: Expedition 395C, Site U1562B Company: International Ocean Discovery Program	High Resolution Laterolog (HRLA) Litho Density (HLDS) / (APS) Porosity Natural Gamma / MSS (HNGS)				
	LOCATION	Latitude: N 60.1049 Longitude: W 26.5017		Elev.: K.B. 0.00 m G.L. -2014.50 m D.F. 0.00 m	
		Permanent Datum: Sea Floor		Elev.: -2014.50 m	
		Log Measured From: Rig Floor		2014.50 m above Perm. Datum	
		Drilling Measured From: Rig Floor			
API Serial No.		Max. Hole Devi. 5 deg	Longitude W 26.5017	Latitude N 60.1049	

Logging Date			19-Jul-2021					
Run Number			1					
Depth Driller			2576 m					
Schlumberger Depth			2573 m					
Bottom Log Interval			2573 m					
Top Log Interval			2014.5 m					
Casing Driller Size @ Depth			5.500 in @ 2103.1 m			@		
Casing Schlumberger			2101 m					
Bit Size			9.875 in					
Type Fluid In Hole			Sea Water					
MUD	Density	Viscosity	1.023 g/cm3					
	Fluid Loss	PH		8.07				
	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	19-Jul-2021		9:00			
Logger On Bottom		Time	19-Jul-2021		20:05			
Unit Number		Location	627314	Larose, LA				
Recorded By			K. Swain					
Witnessed By			Z. Mateo					

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








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## DISCLAIMER

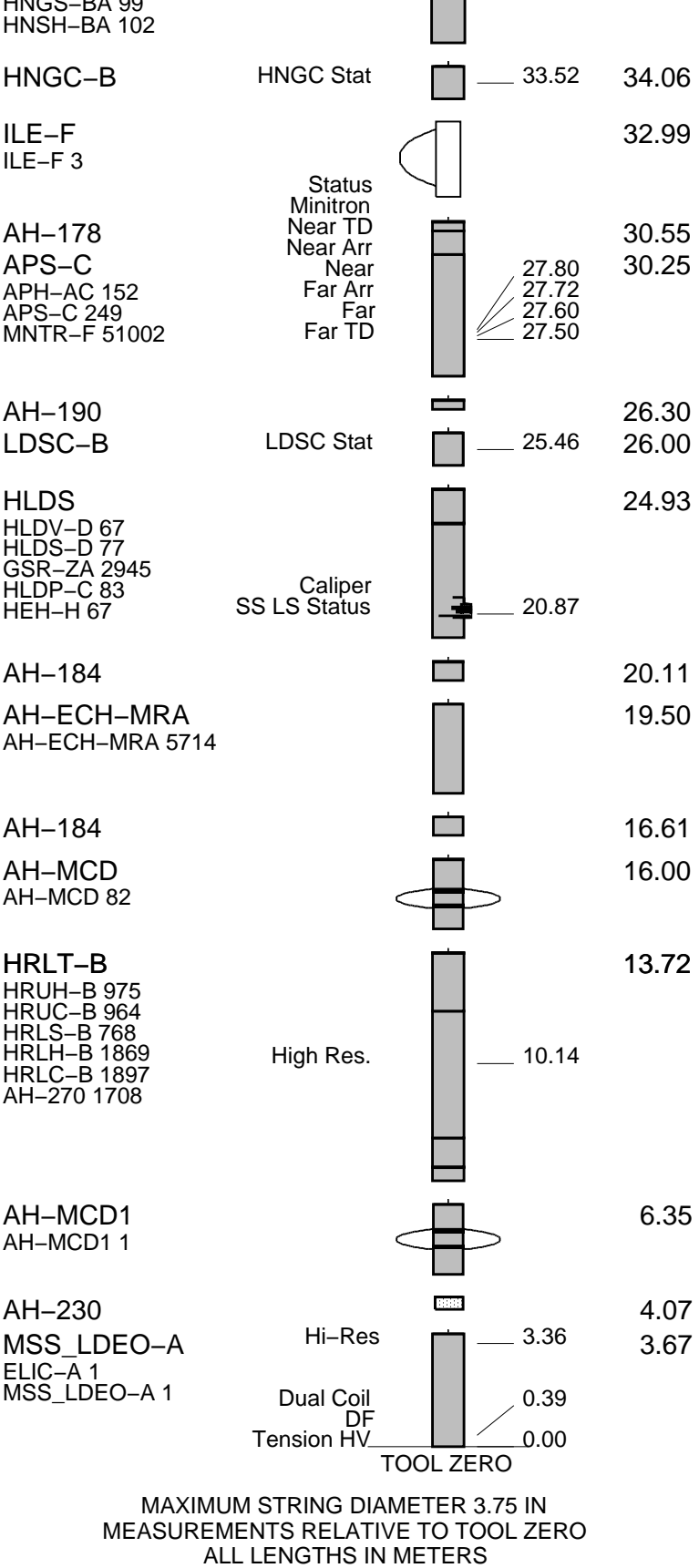
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OTHER SERVICES1			OTHER SERVICES2		
OS1: fms/dsi			OS1:		
OS2: ubi			OS2:		
OS3: VSI			OS3:		
OS4:			OS4:		
OS5:			OS5:		
REMARKS: RUN NUMBER 1			REMARKS: RUN NUMBER 2		
Hole drilled with RCB bottom hole assembly (BHA) at 9.875" BS					
Drill pipe set at 2103.1 mbrf.					
Fluid type was seawater 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 and entering pipe or casing.					
Caliper briefly closed at 2444mbrf to fix a cable wrap.					
Downlog flipped and note the caliper closed logging down.					
<div style="text-align: center;">RUN 1</div> <div> <div>SERVICE ORDER #:</div> <div>PROGRAM VERSION: 19C0-187</div> <div>FLUID LEVEL:</div> </div>			<div style="text-align: center;">RUN 2</div> <div> <div>SERVICE ORDER #:</div> <div>PROGRAM VERSION:</div> <div>FLUID LEVEL:</div> </div>		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

### EQUIPMENT DESCRIPTION

EQUIPMENT DESCRIPTION		RUN 1	RUN 2
SURFACE EQUIPMENT		SFT-281 1 SFT-178 1 GSR-U 6098 WITM (DTS)-A 1	
DOWNHOLE EQUIPMENT			
LEH-QT		38.79	
AH-369	CTEM 	37.19	37.91
DTC-H	TelStatus  ToolStatu	36.56	37.47
HNGS-BA	Upper_1 	35.86	
HNGS-BA-00	Lower_2 	35.64	36.56



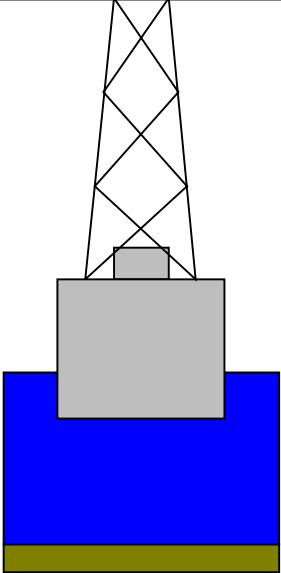


Production String	(in)	(M)	Well Schematic	(M)	(in)	Casing String
	OD	ID		MD	OD	



Kelly Bushing Elevation  
Derrick Floor Elevation  
  
Mean Sea Level

0  
0  
  
11



4.1



2014.5 4.1  
2103.1 9.875  
  
2576

Sea Floor  
Open Hole  
  
Total Depth

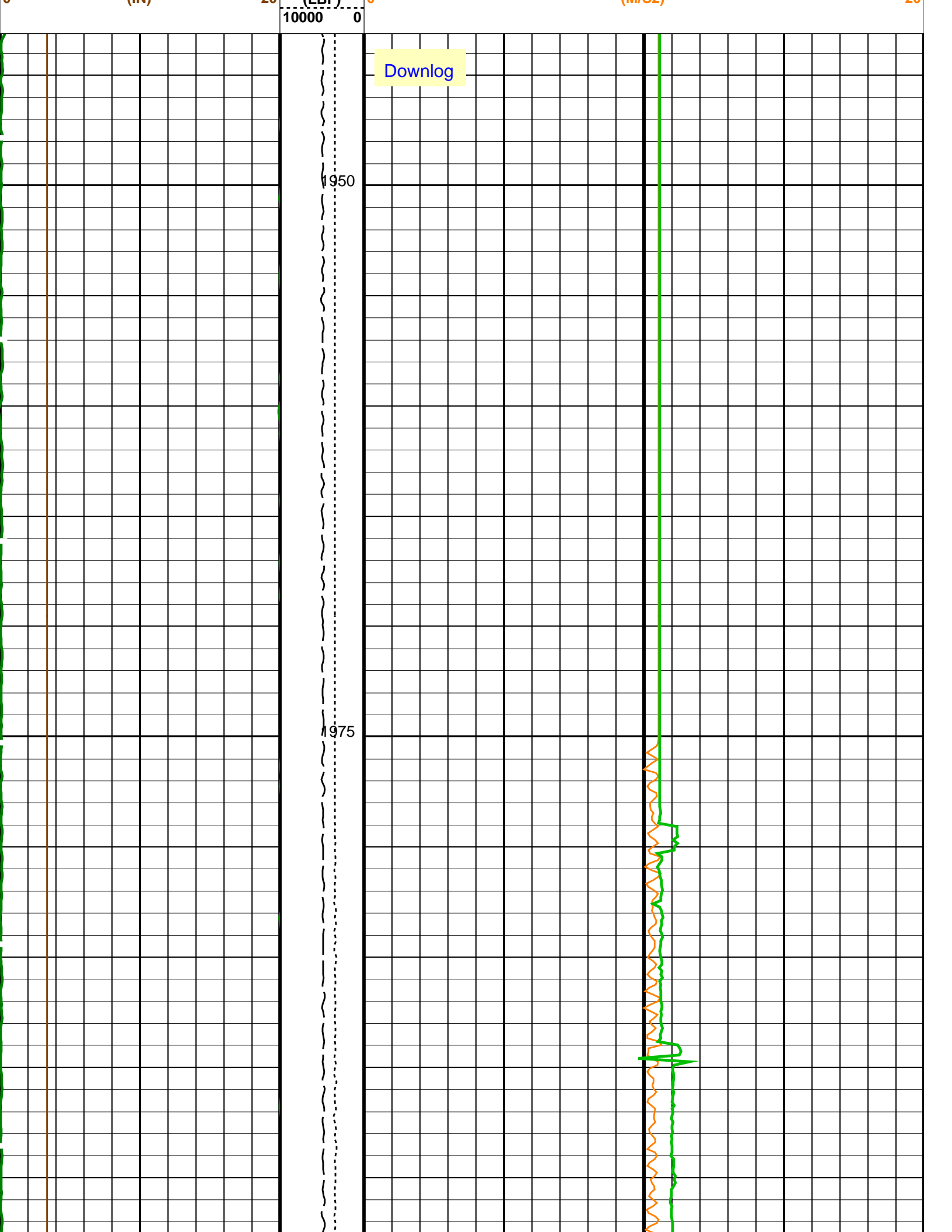


Input DLIS Files						
DEFAULT	Flip_MSS_LDEO_HRLA_012LUP	PRODUCER	19-Jul-2021 22:27	2575.1 M	1943.1 M	
Output DLIS Files						
DEFAULT	MSS_LDEO_HRLA_LDL_017PUP	FN:26	PRODUCER	19-Jul-2021 22:34	2500.0 M	1943.1 M
BACKUP	MSS_LDEO_HRLA_LDL_017PUP	FN:27	PRODUCER	19-Jul-2021 22:34	2500.0 M	1943.1 M

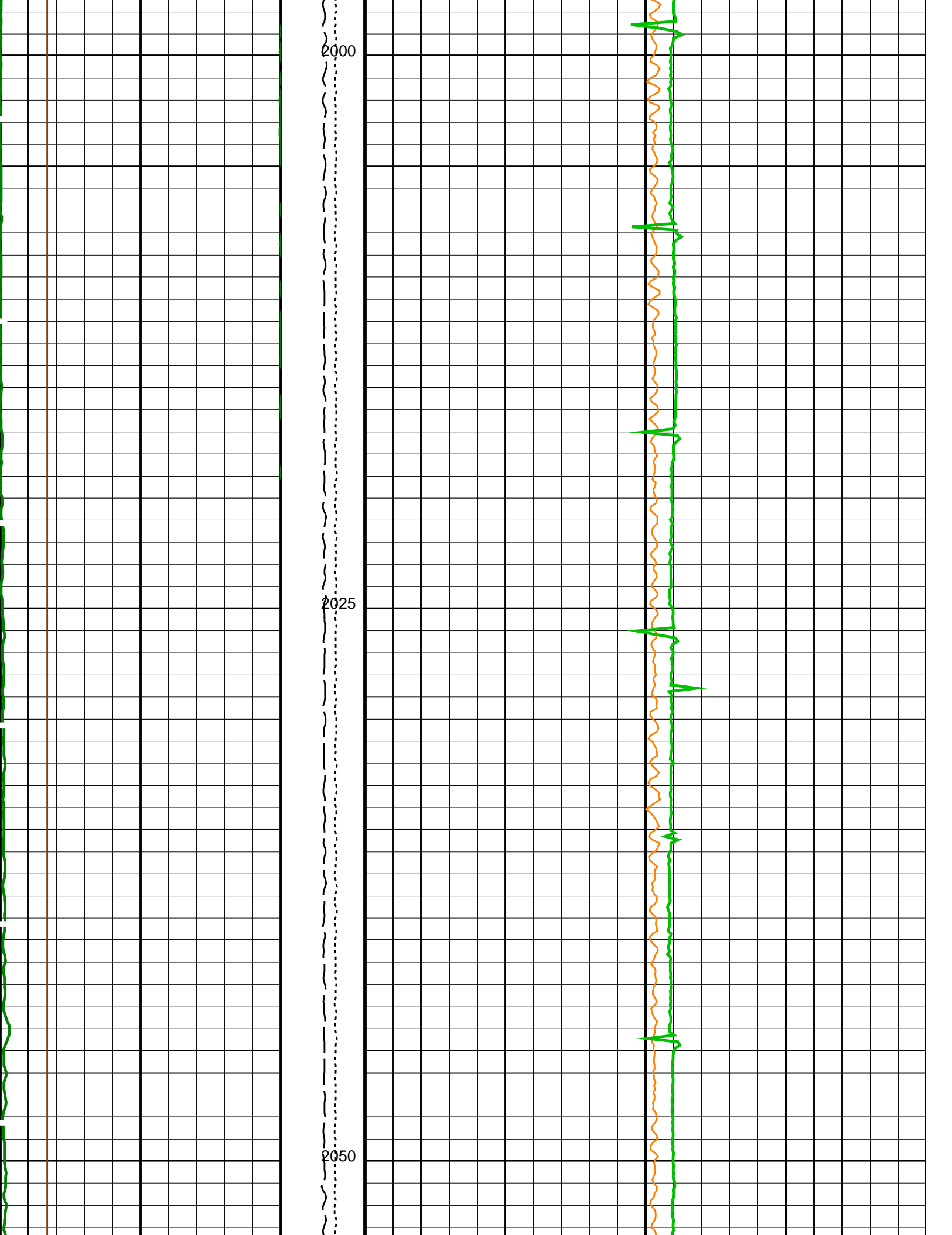
OP System Version: 19C0-187						
MSS_LDEO-A	19C0-187		HRLT-B	19C0-187		
HLDS	19C0-187		LDSC-B	19C0-187		
APS-C	19C0-187		HNGC-B	19C0-187		
HNGS-BA	19C0-187		DTC-H	19C0-187		

PIP SUMMARY						
Time Mark Every 60 S						
HNGS Spectroscopy Gamma Ray (HSGR)			Calibrated Downhole Force (CDF) (LBF)	Dual-Coil Susceptibility (MSSL SUS_LDEO)		
0 (GAPI) 100				-10000 (PPM) 10000		
			3000 0			
HLDS Caliper (LCAL)			Tension (TENS) (LBF)	Axial Acceleration (MSSZACC_LDEO)		
0 (IN) 20				0 (M/S2) 20		

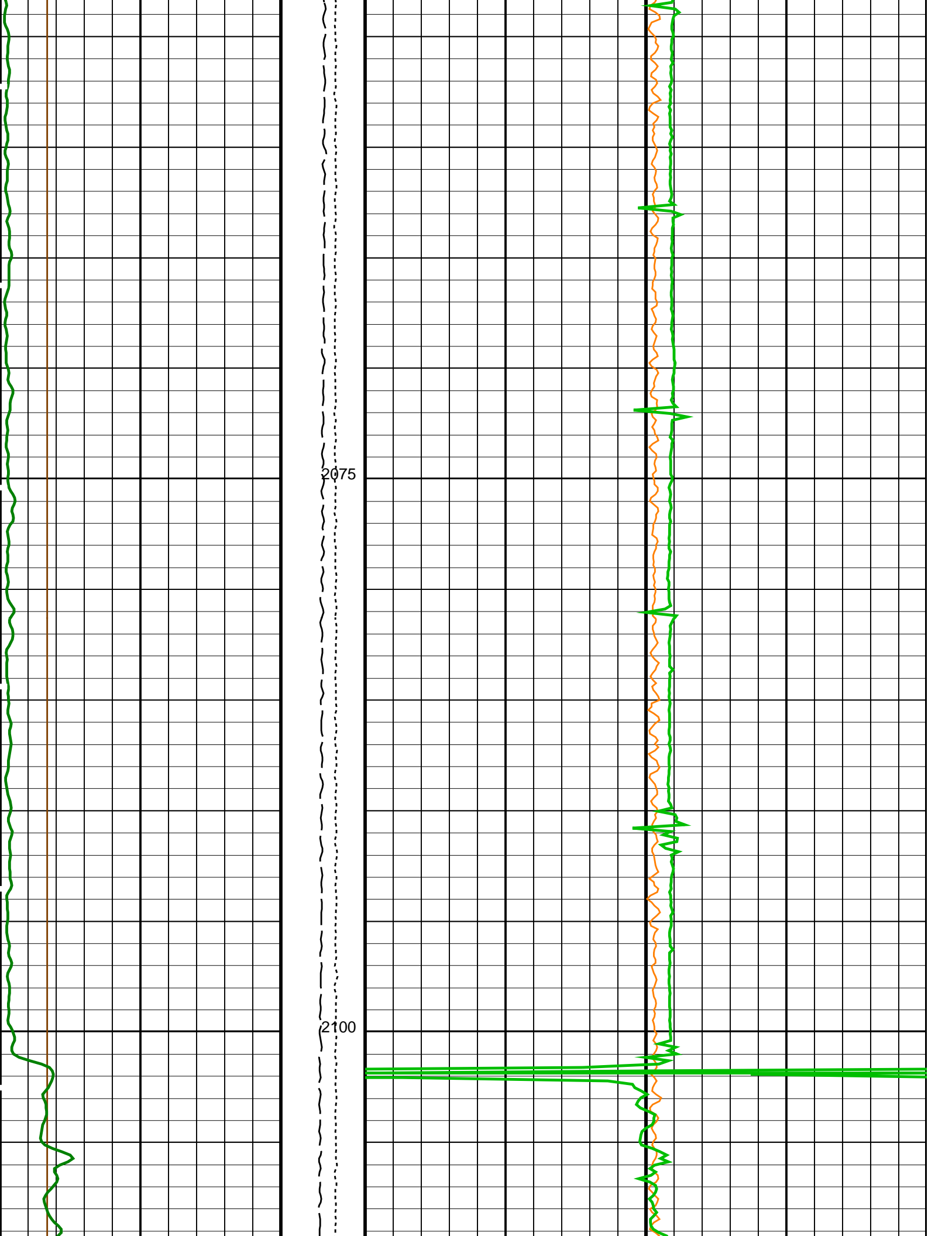




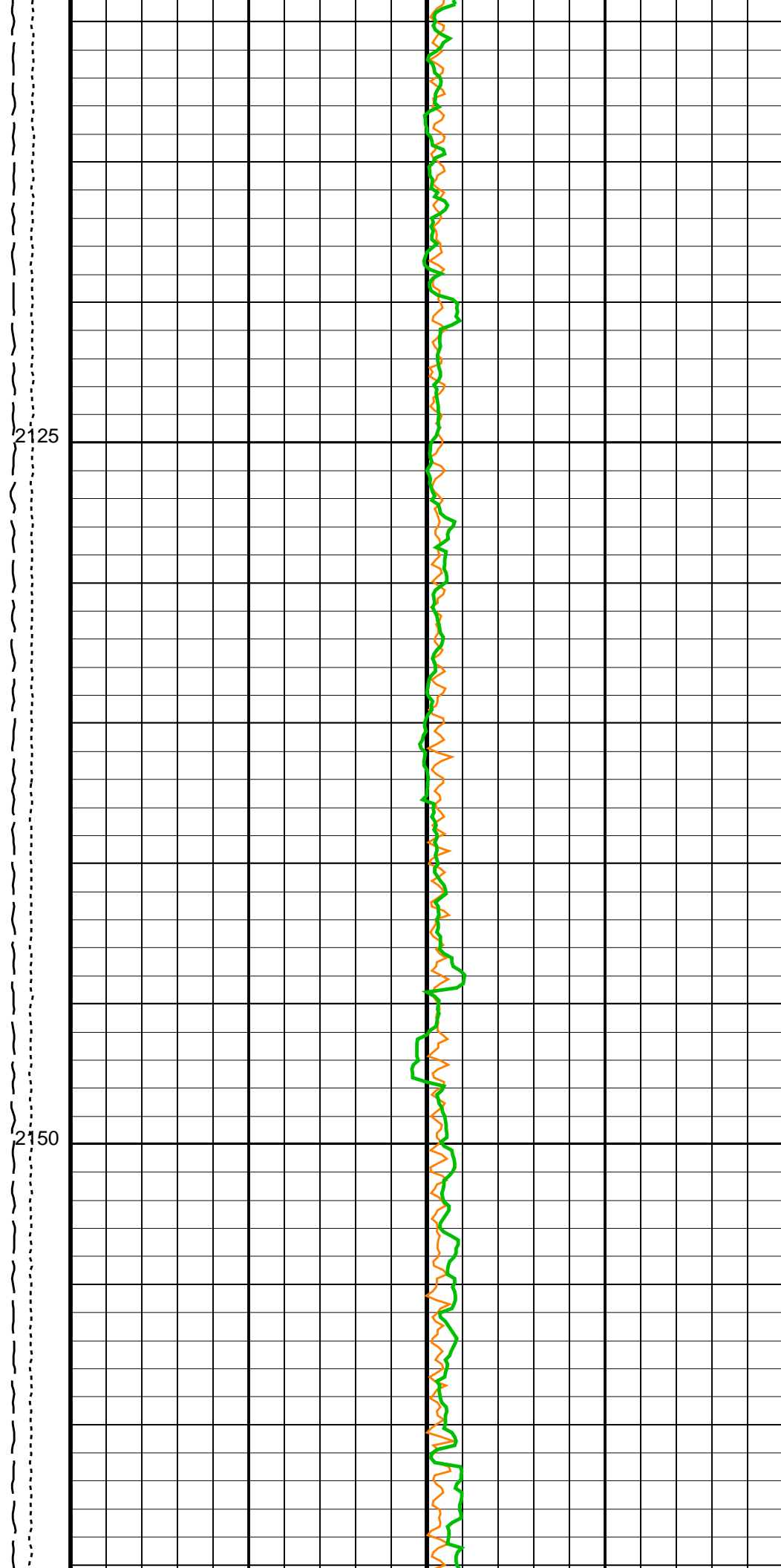
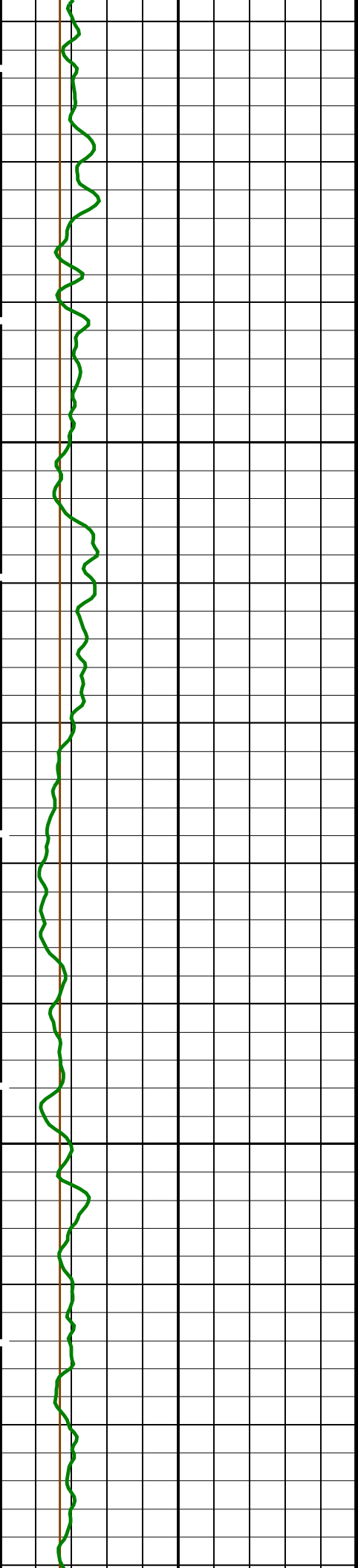




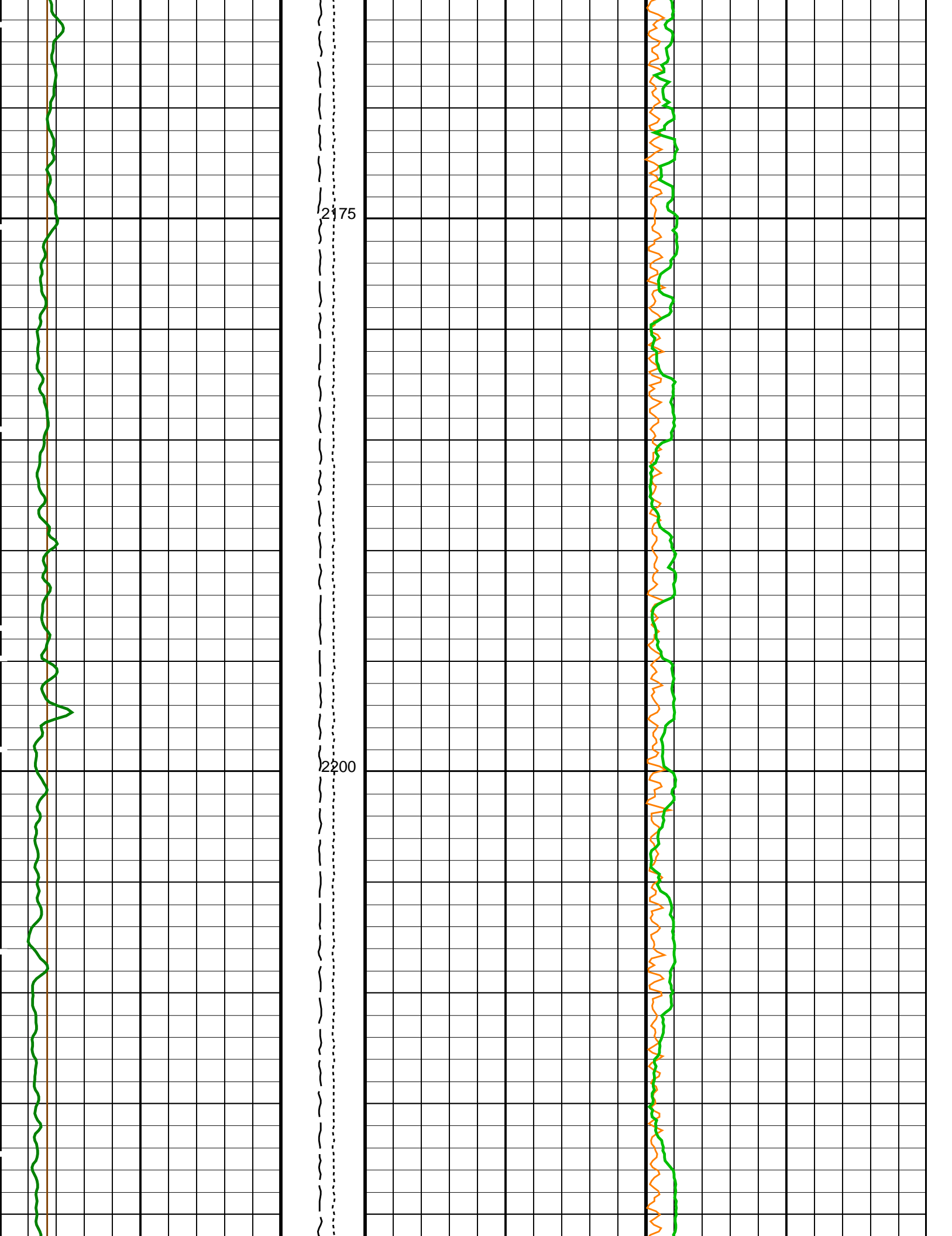




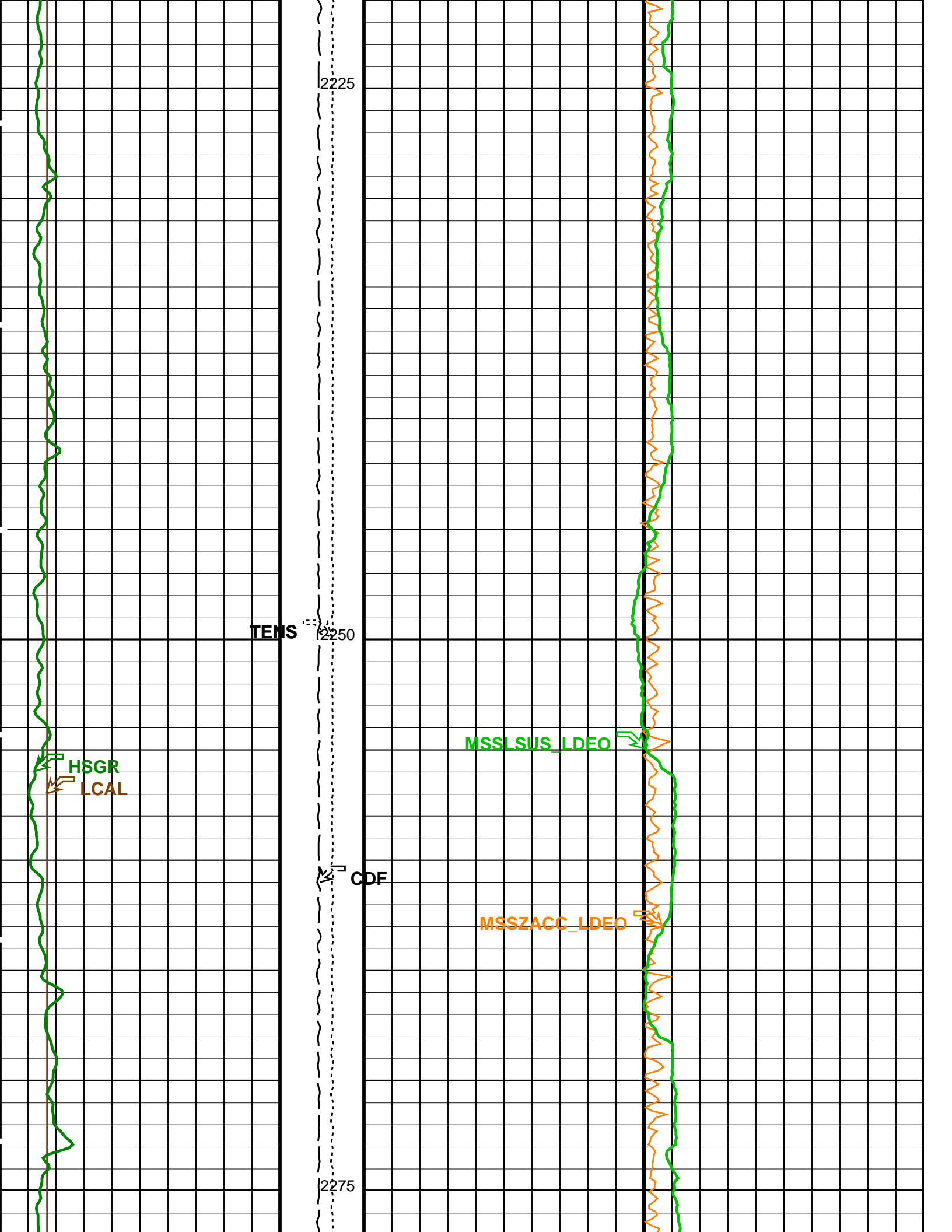




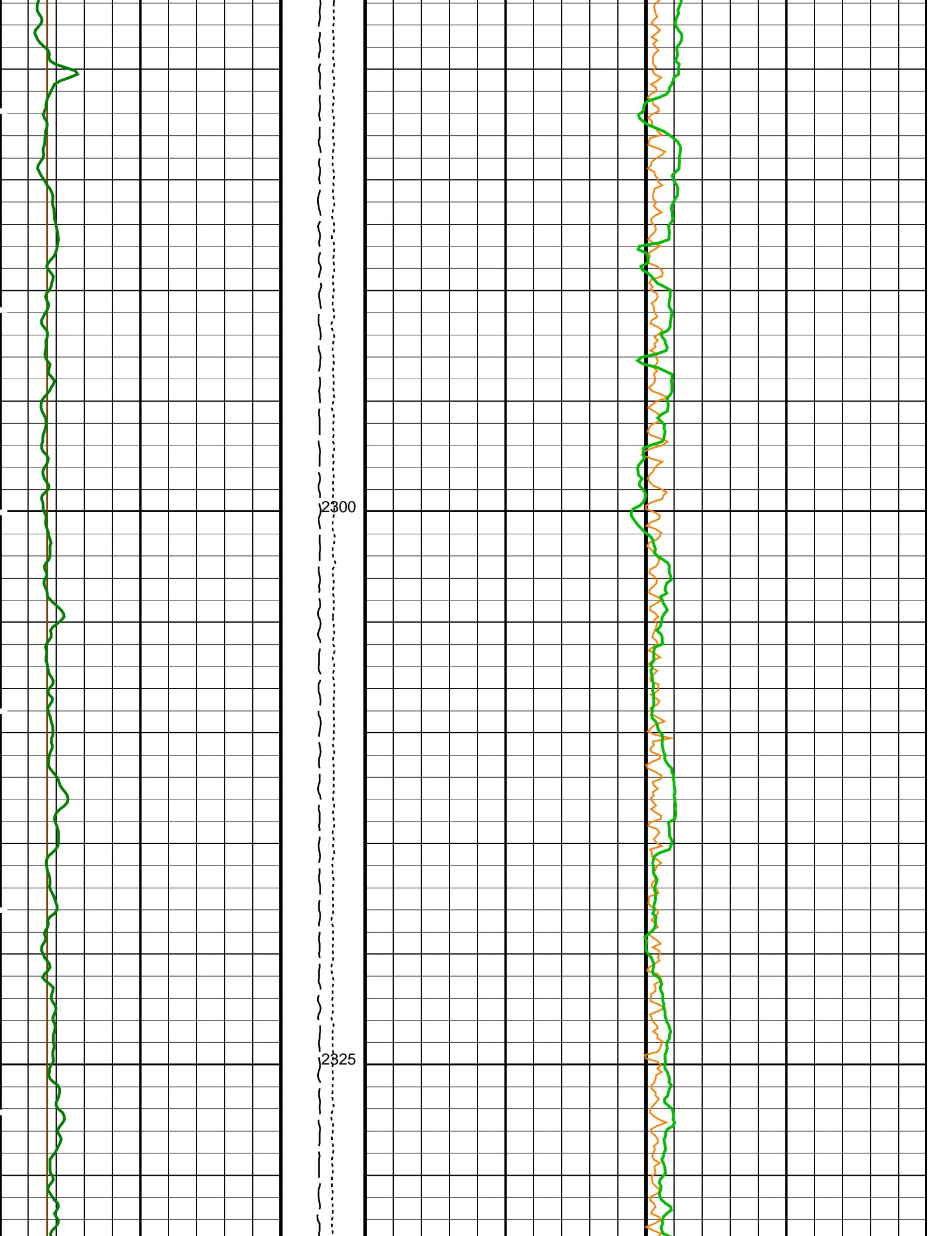




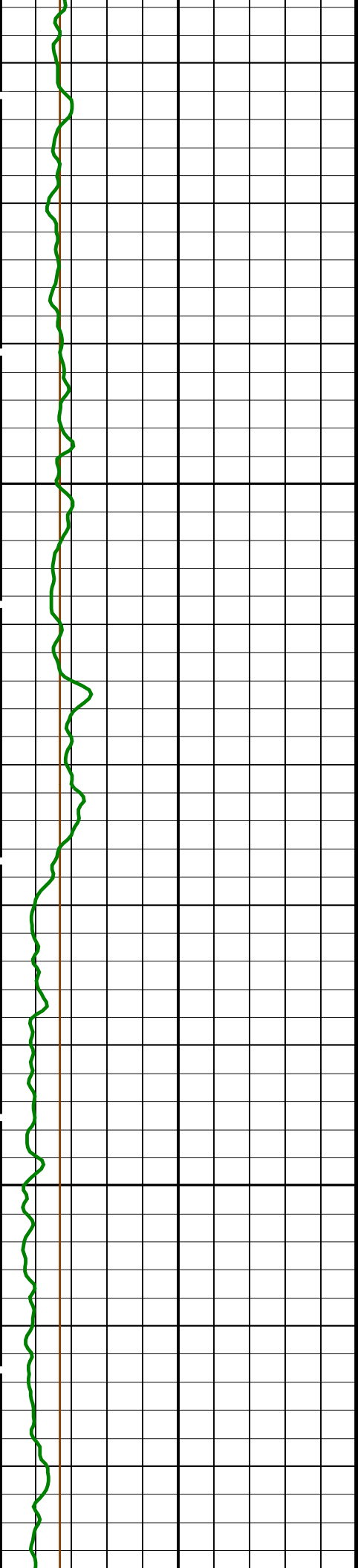




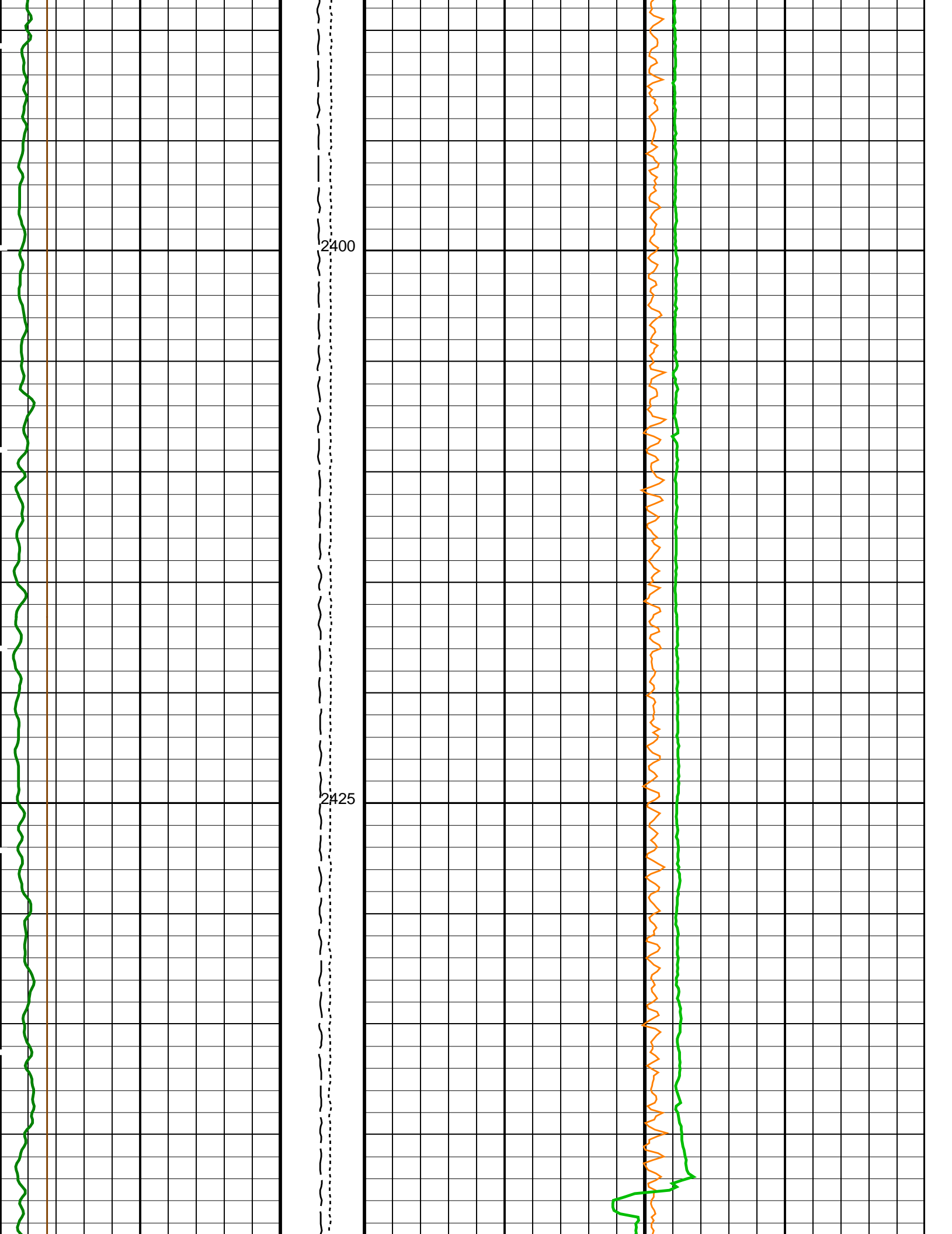




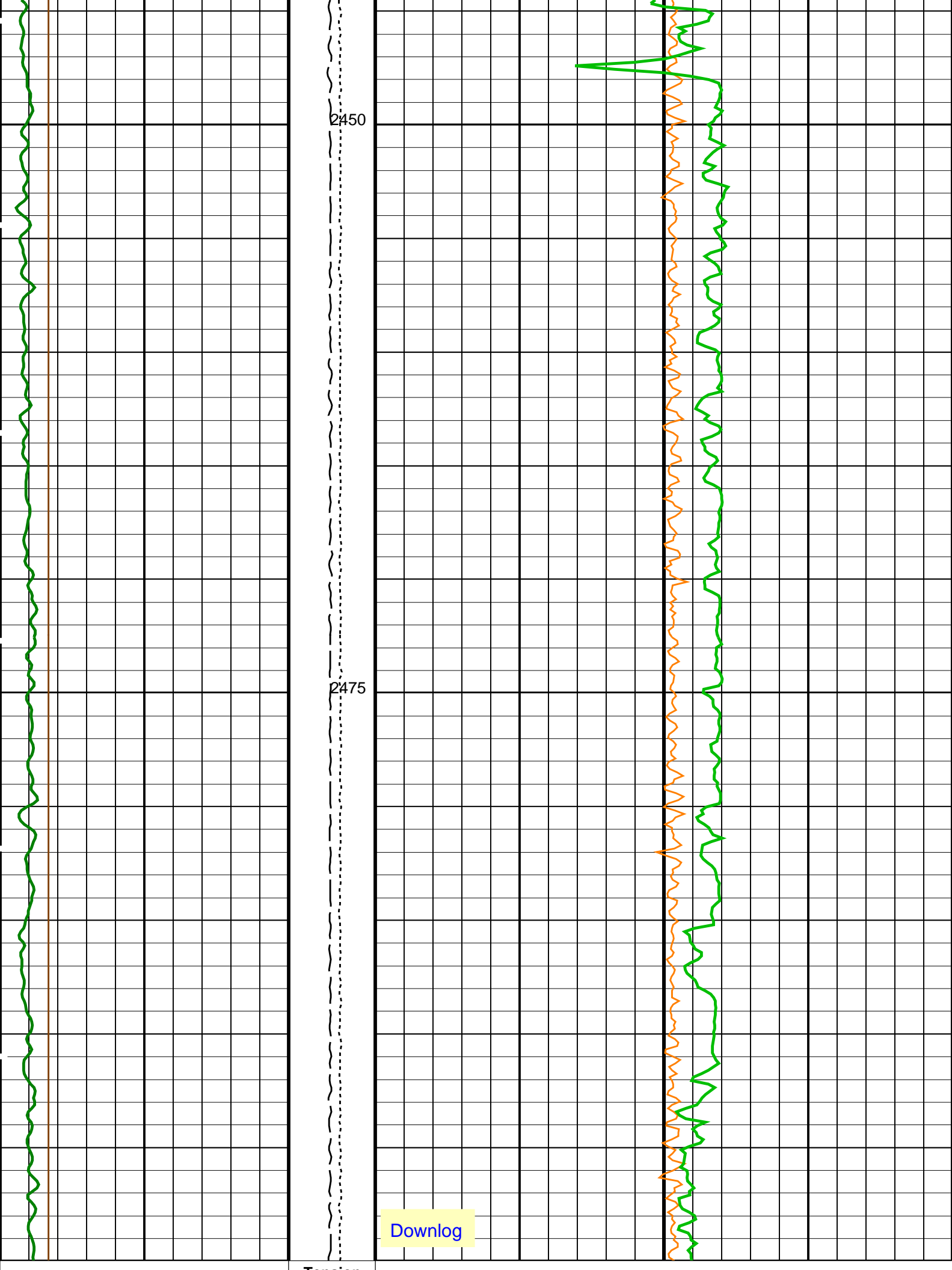












2450

2475

Downlog



HLDS Caliper (LCAL)			Tension (TENS)			Axial Acceleration (MSSZACC_LDEO)		
(IN)			(LBF)			(M/S2)		
0		20	10000		0			20
HNGS Spectroscopy Gamma Ray (HSGR)			Calibrated Downhole Force (CDF) (LBF)			Dual-Coil Susceptibility (MSSLSUS_LDEO)		
0		100	3000		0	-10000		10000
(GAPI)						(PPM)		

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	
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE		
CALTEMP	HRLTB Calibration Temperature	11.1799	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	BS		
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	OFF		
LOOPMOD1	HRLT Mode 1 Loop Mode	OFF		
LOOPMOD2	HRLT Mode 2 Loop Mode	OFF		
LOOPMOD3	HRLT Mode 3 Loop Mode	OFF		
LOOPMOD4	HRLT Mode 4 Loop Mode	OFF		
LOOPMOD5	HRLT Mode 5 Loop Mode	OFF		
LOOPMOD6	HRLT Mode 6 Loop Mode	OFF		
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE		
PROGINV	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		
PROCSP0	Sonde Position	Centered		
SHT	Surface Hole Temperature	20	DEGC	
HLDS: Hostile Litho-Density Sonde				
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	1500	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		
APS-C: Accelerator-Porosity Tool				
	APS Software Version	5		
AASD	APS Thermal and Array Detectors High Voltage Setting	1976.24	V	
ADSO	APS Array Detectors Data Source Switch	Both		
AFSD	APS Far Detector High Voltage Setting	2067.55	V	
AHCS	APS Holesize Correction Source	GCSE		
AHSS	APS Holesize Correction Switch	ON		
AMTY	APS Environmental Corrections Mud Type	WaterBaseBarite		
ANSD	APS Near Detector High Voltage Setting	1737.8	V	



ASOS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	ON	
BHFL_APS	APS TNPH Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	7	DEGC
BSCO_APS	APS TNPH Borehole Salinity Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
DSCO_APS	APS TNPH Density Source Correction Option	MEASURED	
FSAL	Formation Salinity	-50000	PPM
FSCO_APS	APS TNPH Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	BS	
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_APS	APS TNPH Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO_APS	APS TNPH Mud Cake Correction Option	YES	
MCOR_APS	APS TNPH Mud Correction	NATU	
MWCO_APS	APS TNPH Mud Weight Correction Option	YES	
NARC	APS Near/Array Calibration Ratio	1.08341	
NFRC	APS Near/Far Calibration Ratio	0.942369	
PTCO_APS	APS TNPH Pressure/Temperature Correction Option	NO	
SHT	Surface Hole Temperature	20	DEGC
TNCO_APS	APS TNPH Computation Option	YES	
HNGBS-BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGBS Detector 1 Barite Constant	1	
BAR2	HNGBS Detector 2 Barite Constant	1	
BHK	HNGBS 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	HNGBS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	BS	
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	HNGBS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGBS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGBS Borehole Potassium Running Average	-0.00317669	
HALF	HNGBS Alpha Filter Length	60	IN
HCRB	HNGBS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGBS Processing Enable	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
S1BI	HNGBS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGBS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGBS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	20	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGBS Detector 1 Variable Barite Factor Running Average	0.992073	
VBA2	HNGBS Detector 2 Variable Barite Factor Running Average	1.03151	
System and Miscellaneous			
ALTDPCCHAN	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	1.02	G/C3
DO	Depth Offset for Playback	0.0	M
FLEV	Fluid Level	-50000.00	M
MST	Mud Sample Temperature	23.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	NORMAL	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	8451.44	FT
TDD	Total Depth - Driller	2576.00	M
TDL	Total Depth - Logger	2573.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: MSS\_Logging    Vertical Scale: 1:200    Graphics File Created: 19-Jul-2021 22:34

## OP System Version: 19C0-187

MSS_LDEO-A	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
APR-C	19C0-187	UNCC-B	19C0-187

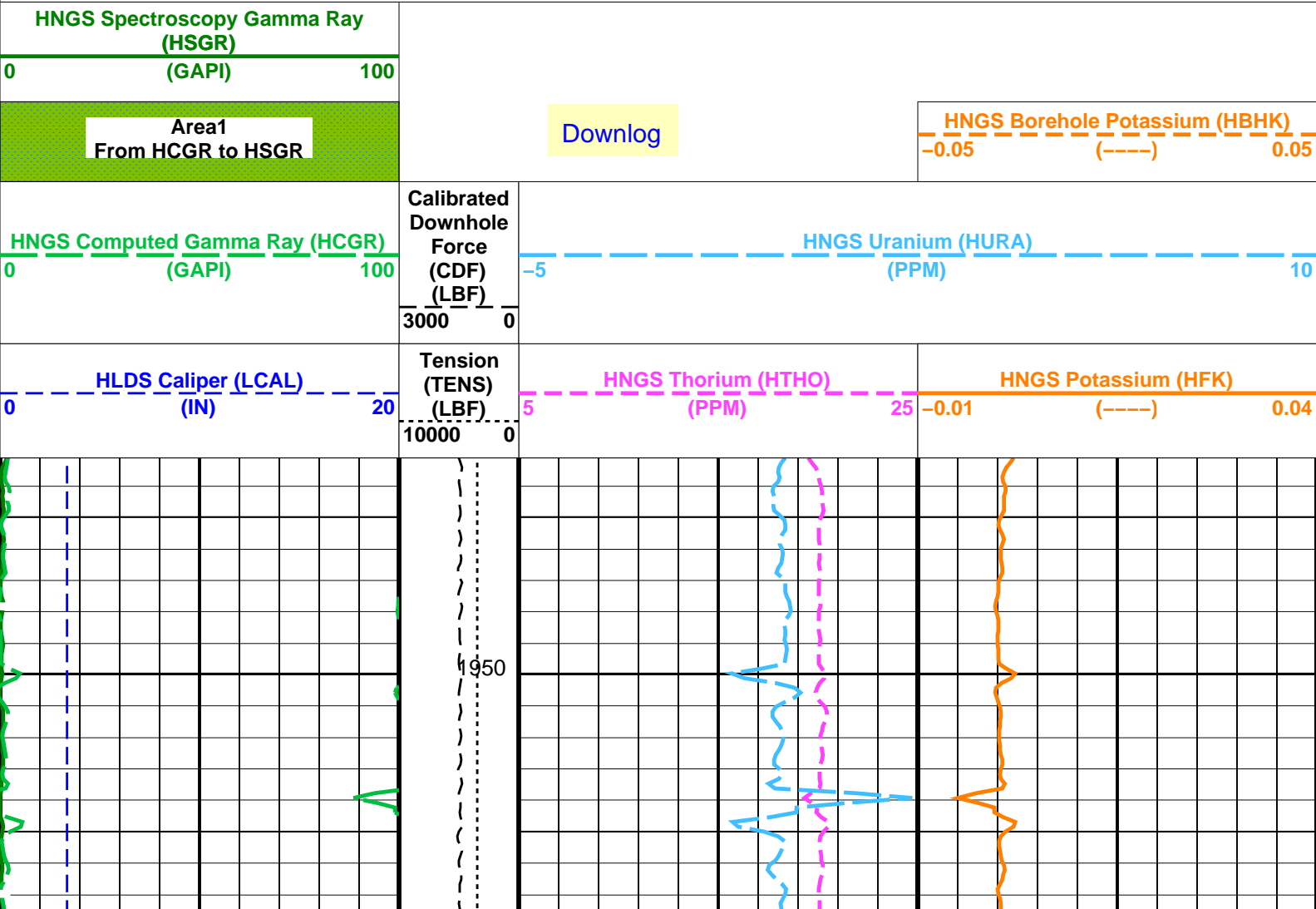


APS-C	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	DTC-H	19C0-187
Input DLIS Files			
DEFAULT	Flip_MSS_LDEO_HRLA_012LUP	PRODUCER	19-Jul-2021 22:27 2575.1 M 1943.1 M
Output DLIS Files			
DEFAULT	MSS_LDEO_HRLA_LDL_017PUP	FN:26	PRODUCER 19-Jul-2021 22:34
BACKUP	MSS_LDEO_HRLA_LDL_017PUP	FN:27	PRODUCER 19-Jul-2021 22:34

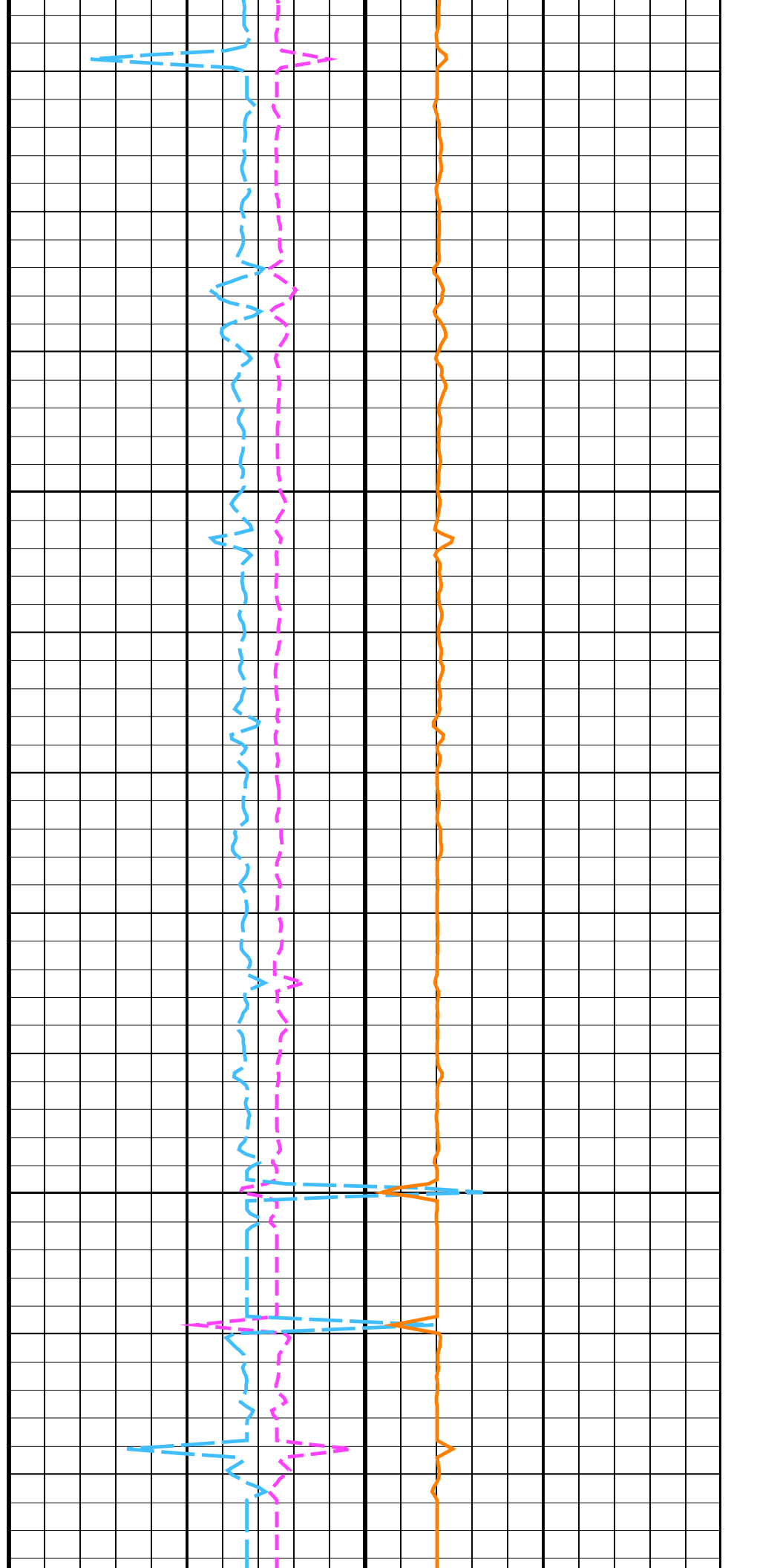
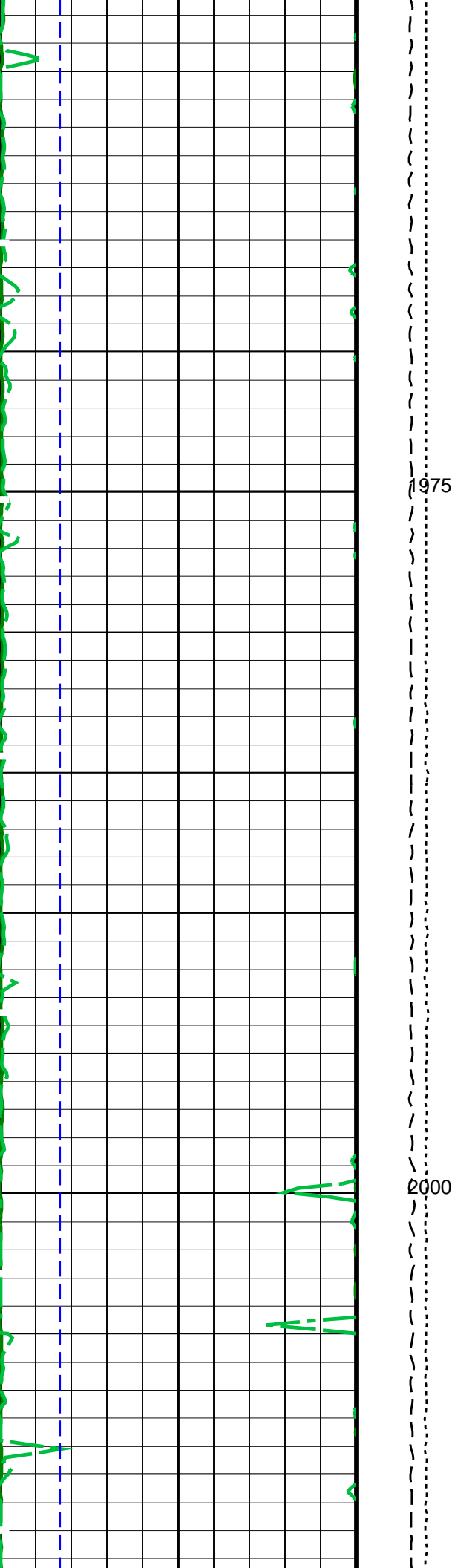
Input DLIS Files			
DEFAULT	Flip_MSS_LDEO_HRLA_012LUP	PRODUCER	19-Jul-2021 22:27 2575.1 M 1943.1 M
Output DLIS Files			
DEFAULT	MSS_LDEO_HRLA_LDL_017PUP	FN:26	PRODUCER 19-Jul-2021 22:34 2500.0 M 1943.1 M
BACKUP	MSS_LDEO_HRLA_LDL_017PUP	FN:27	PRODUCER 19-Jul-2021 22:34 2500.0 M 1943.1 M

OP System Version: 19C0-187			
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
APS-C	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	DTC-H	19C0-187

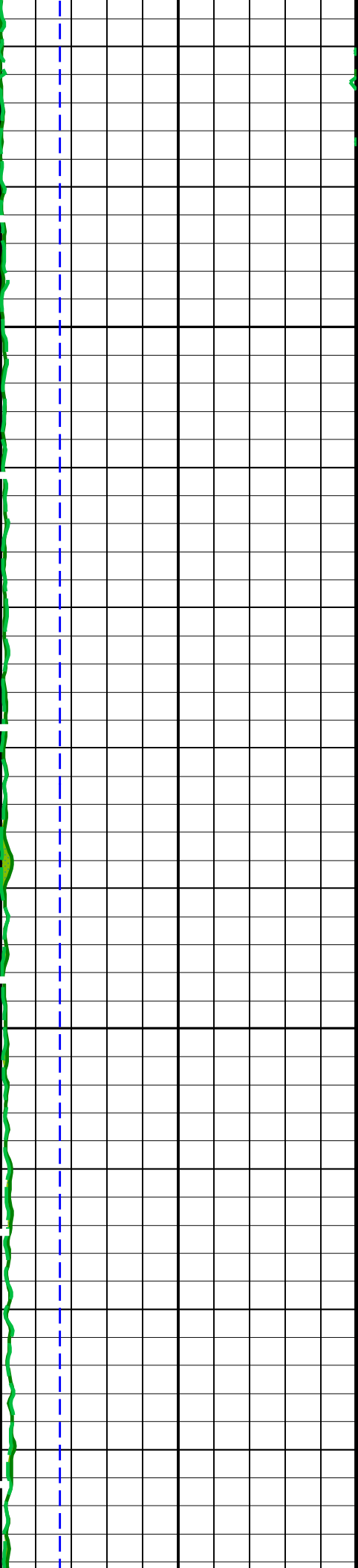
PIP SUMMARY			
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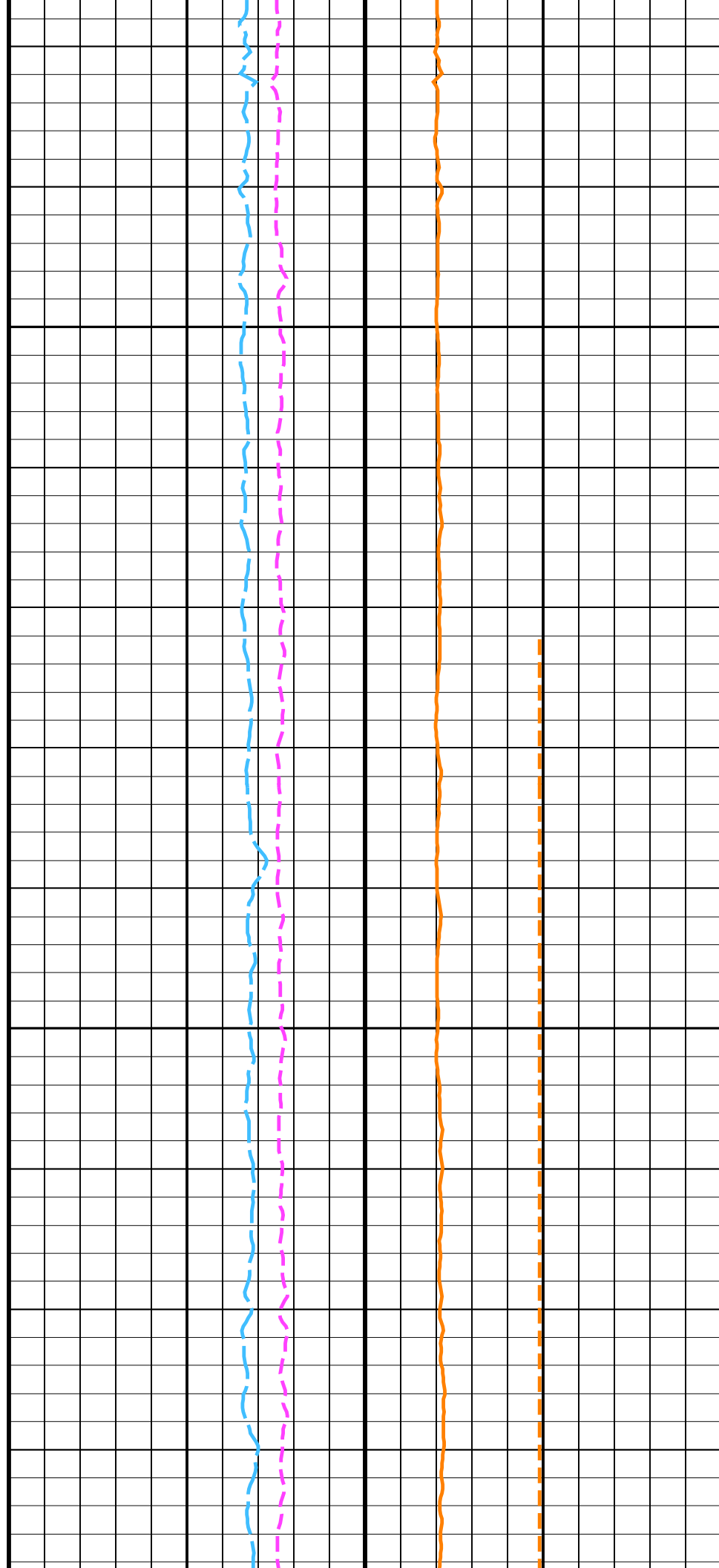




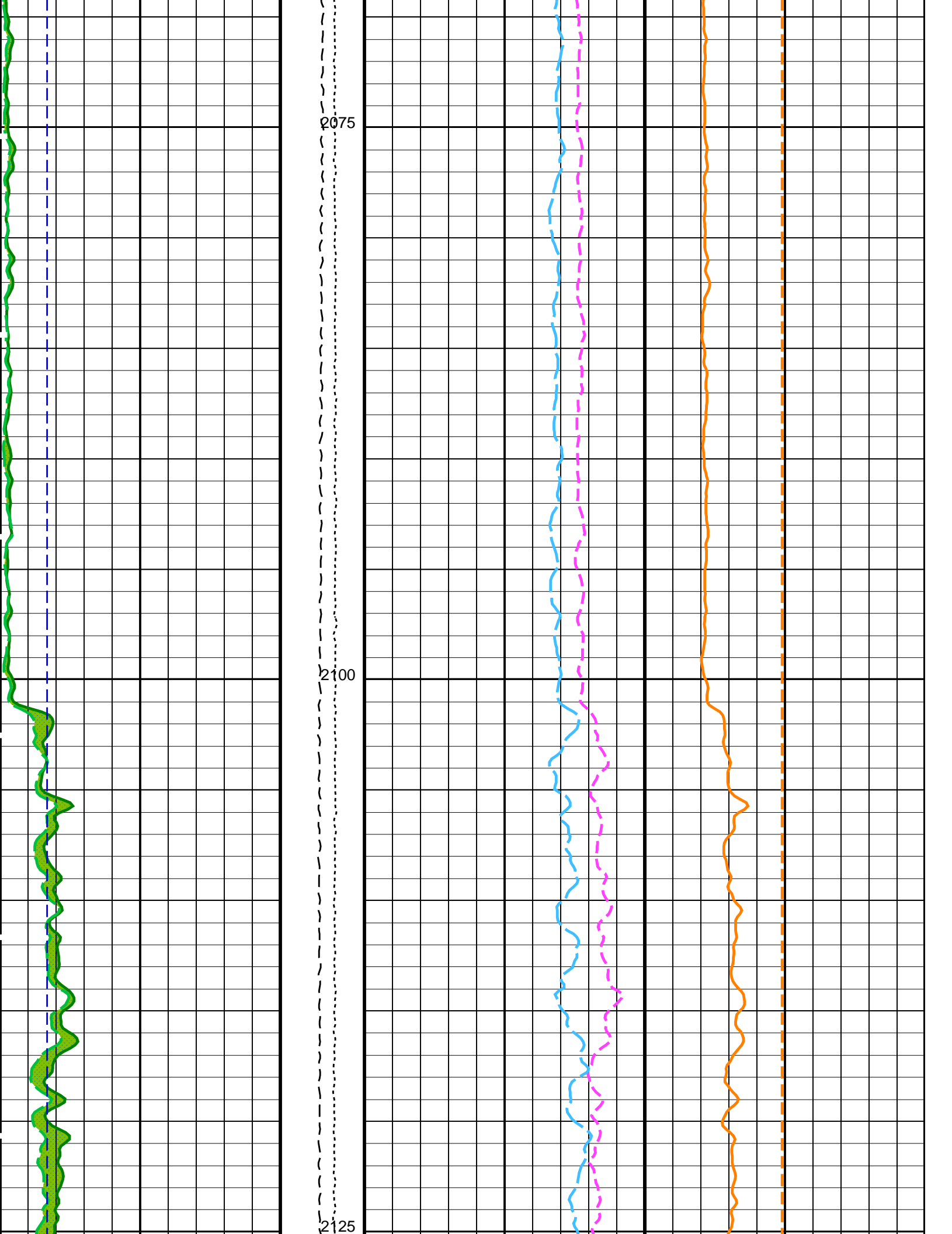


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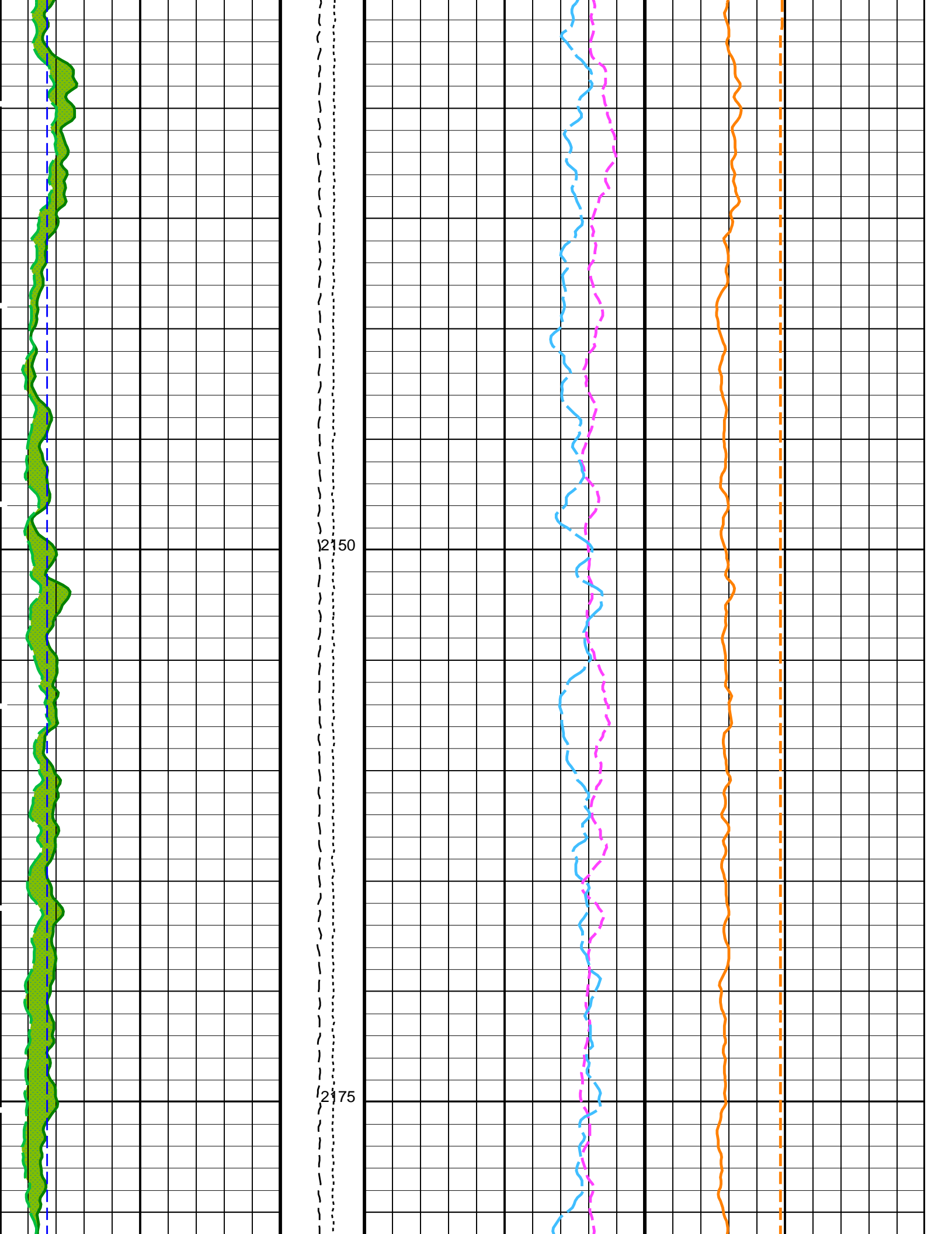
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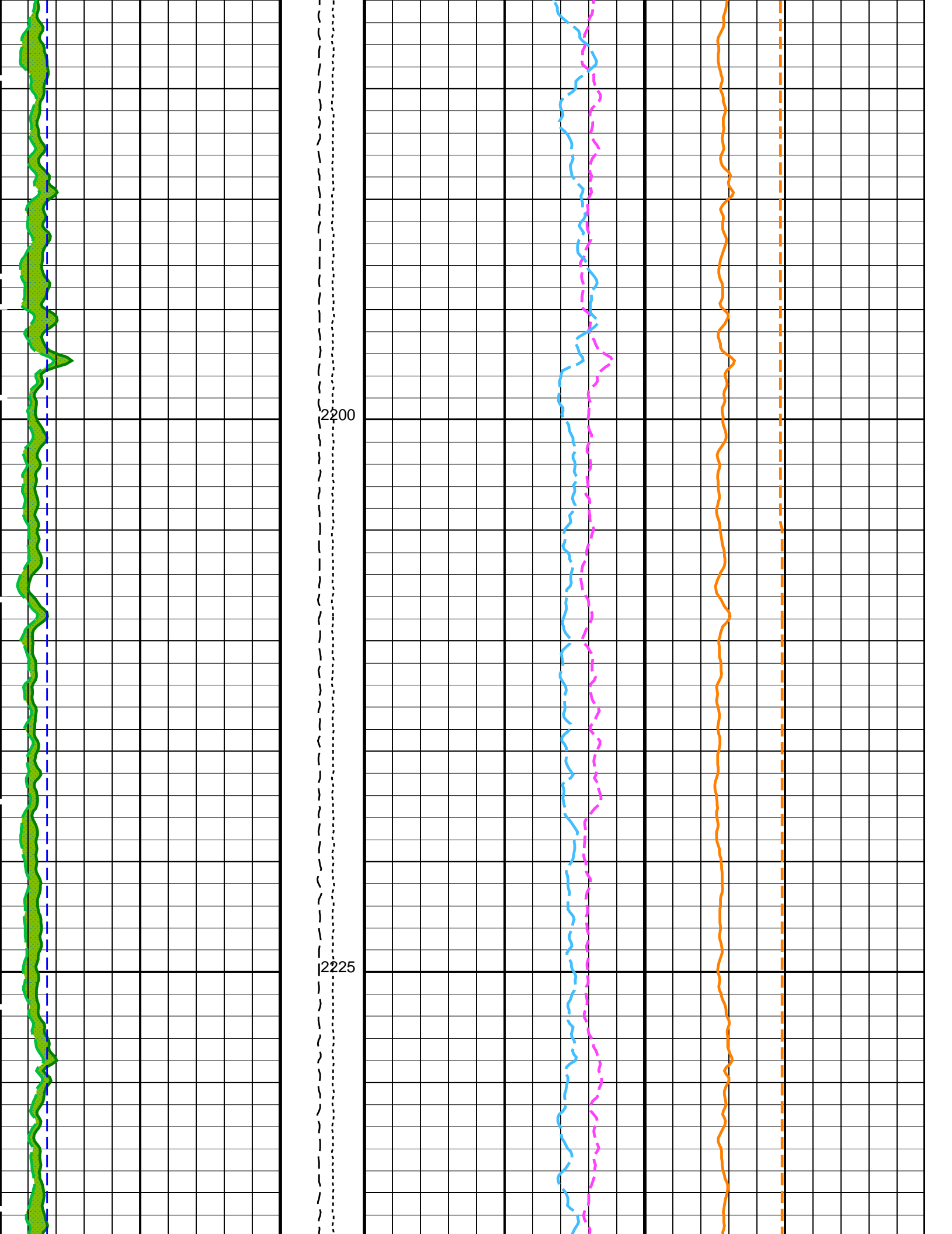




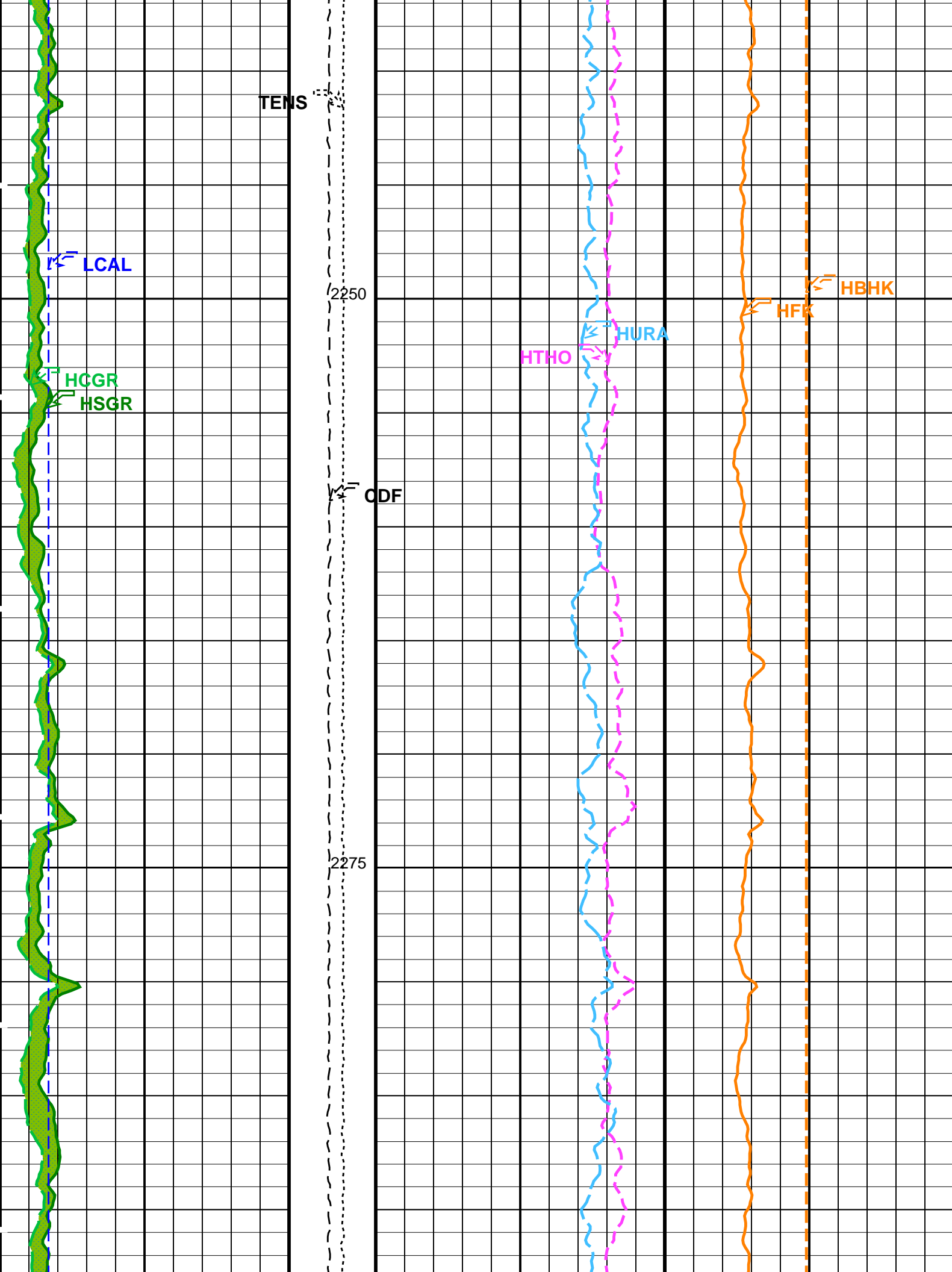




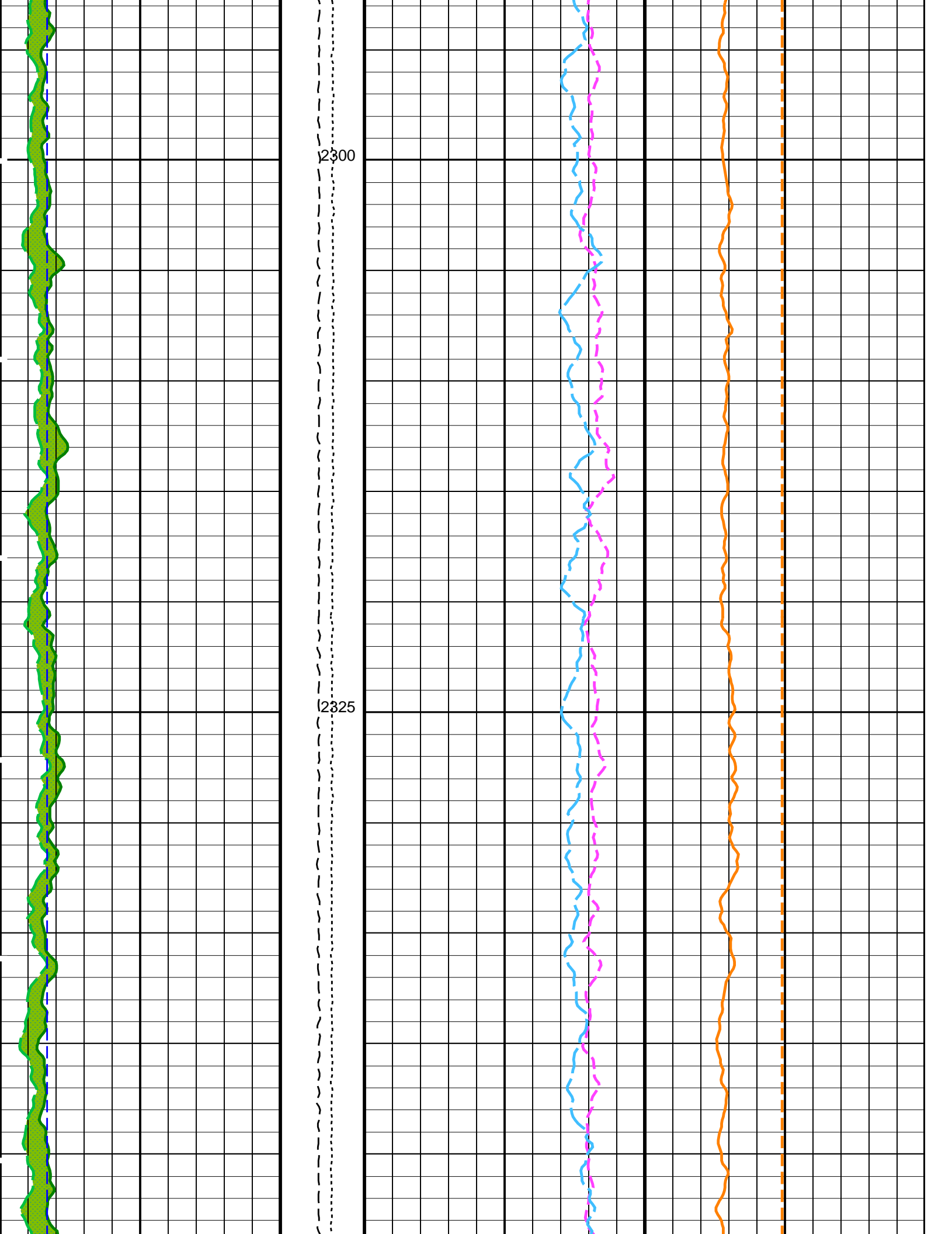




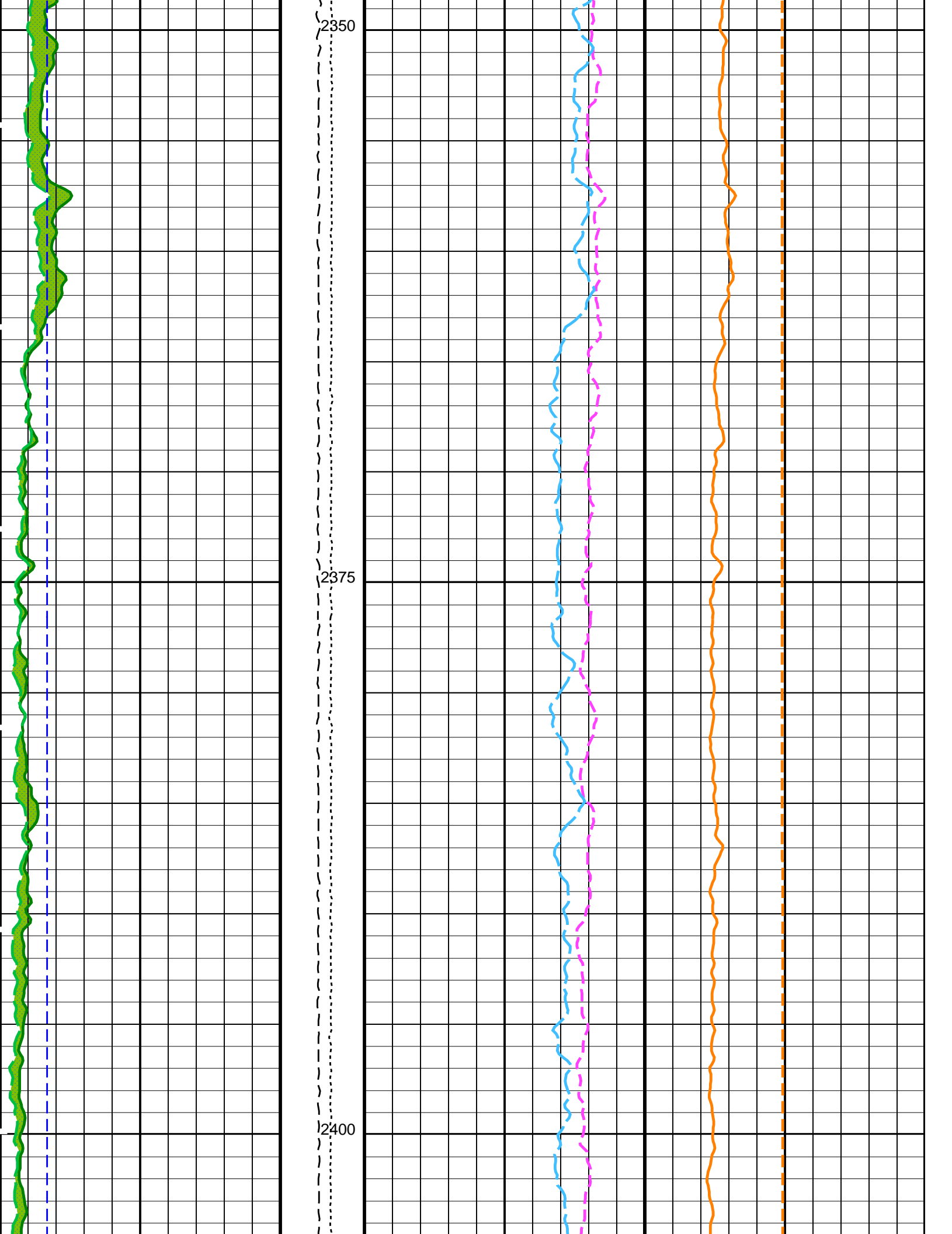




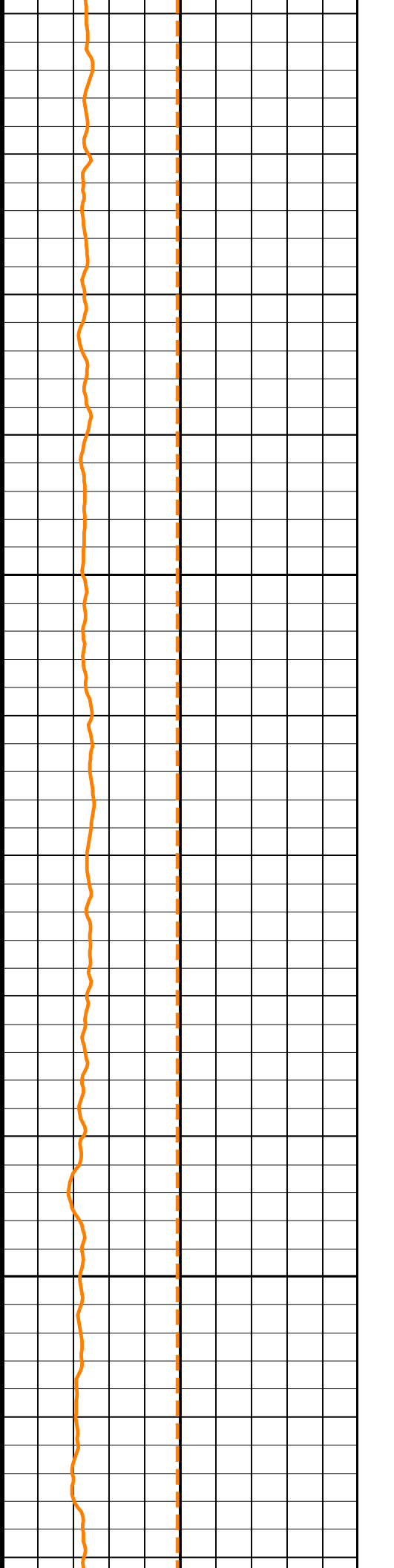
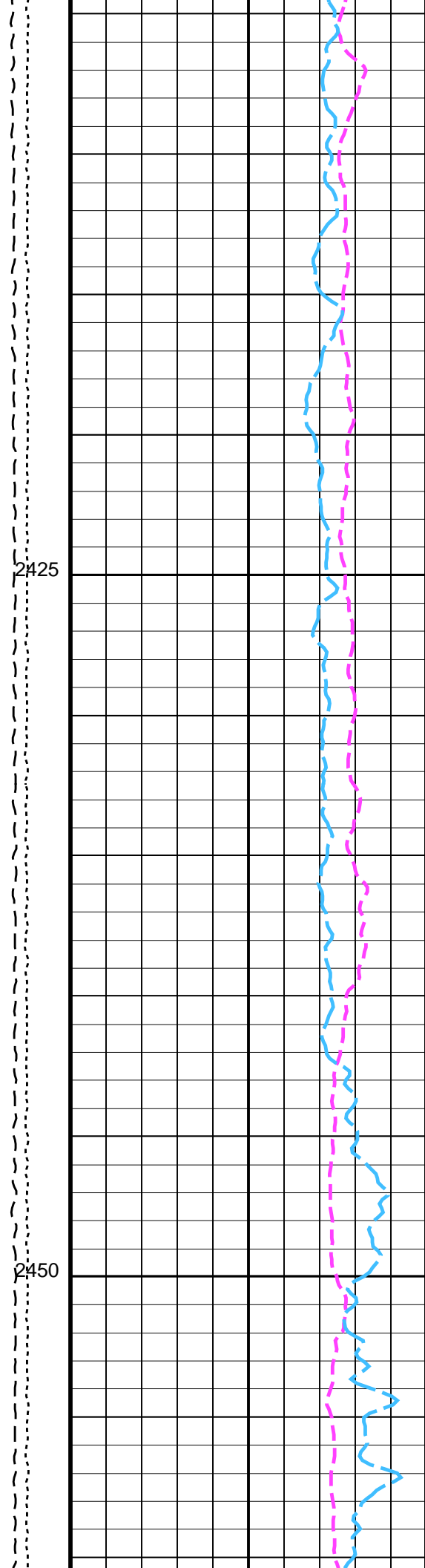
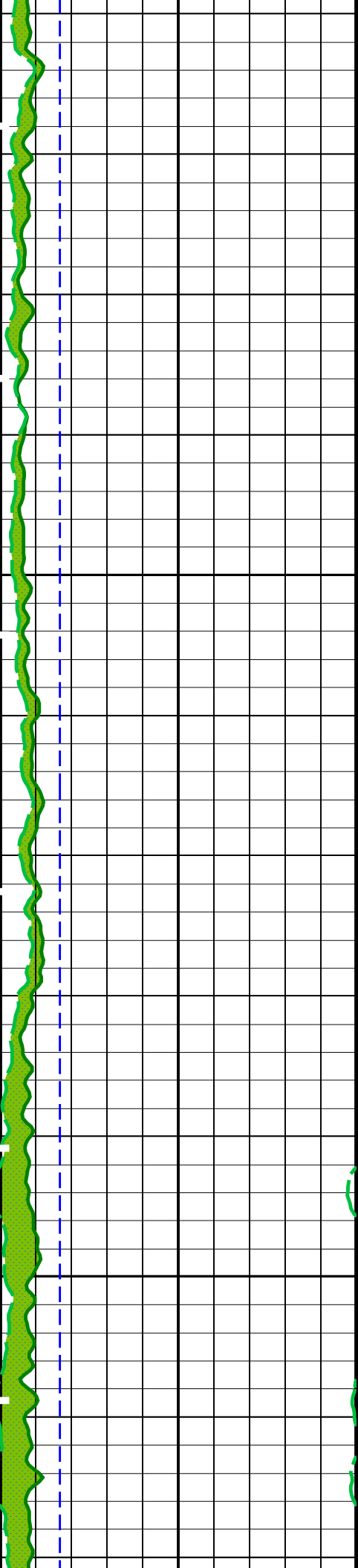


















Parameters				
DLIS Name	Description	Value		
HRLT-B: High Resolution Laterolog Array – B				
BHS	Borehole Status	OPEN		
GCSE	Generalized Caliper Selection	BS		
APS-C: Accelerator-Porosity Tool				
BHS	Borehole Status	OPEN		
GCSE	Generalized Caliper Selection	BS		
HNGS-BA: Hostile Natural Gamma Ray Sonde				
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	-0.00317669		
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	0.992073		
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.03151		
System and Miscellaneous				
BS	Bit Size	9.875	IN	
DO	Depth Offset for Playback	0.0	M	
PP	Playback Processing	NORMAL		

Format: HNGSYields      Vertical Scale: 1:200      Graphics File Created: 19-Jul-2021 22:34

## OP System Version: 19C0-187

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

## Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_012LUP	PRODUCER	19-Jul-2021 22:27	2575.1 M	1943.1 M
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## Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_017PUP	FN:26	PRODUCER	19-Jul-2021 22:34
BACKUP	MSS_LDEO_HRLA_LDL_017PUP	FN:27	PRODUCER	19-Jul-2021 22:34

## Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_012LUP	PRODUCER	19-Jul-2021 22:27	2575.1 M	1943.1 M
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## Output DLIS Files

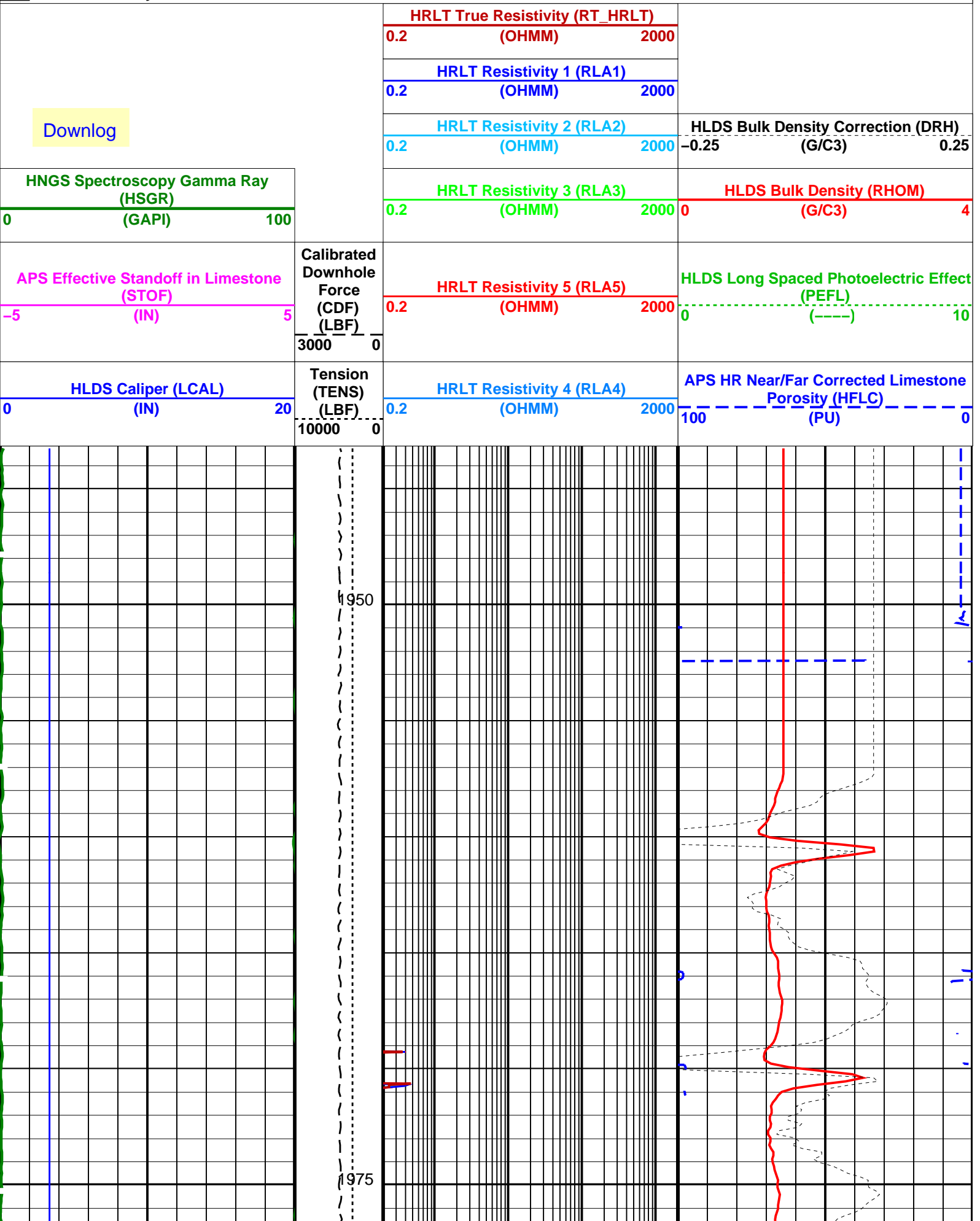
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BACKUP	MSS_LDEO_HRLA_LDL_017PUP	FN:27	PRODUCER	19-Jul-2021 22:34	2500.0 M	1943.1 M

## OP System Version: 19C0-187

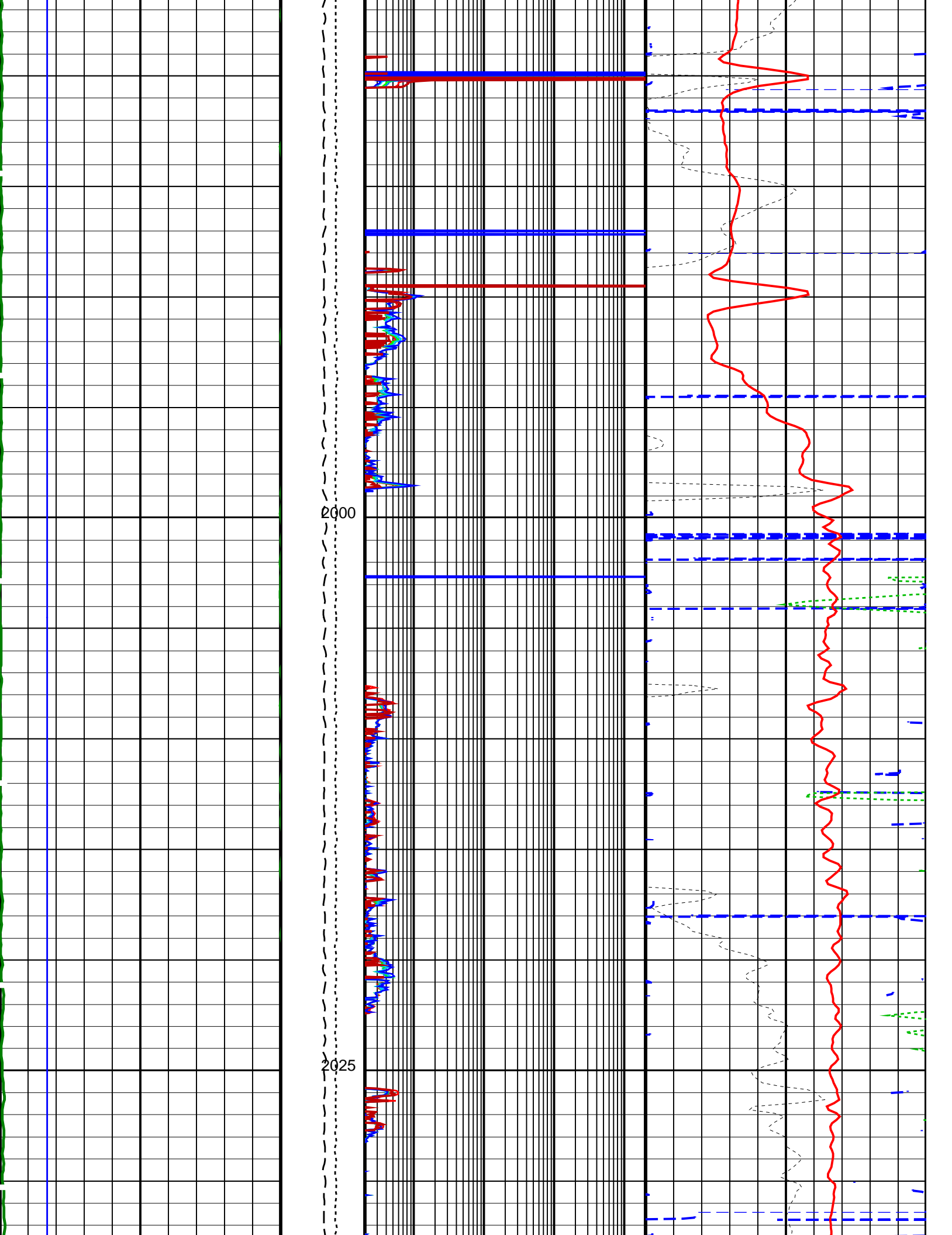
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HLDS	19C0-187	LDSC-B	19C0-187
APS-C	19C0-187	HNGC-B	19C0-187



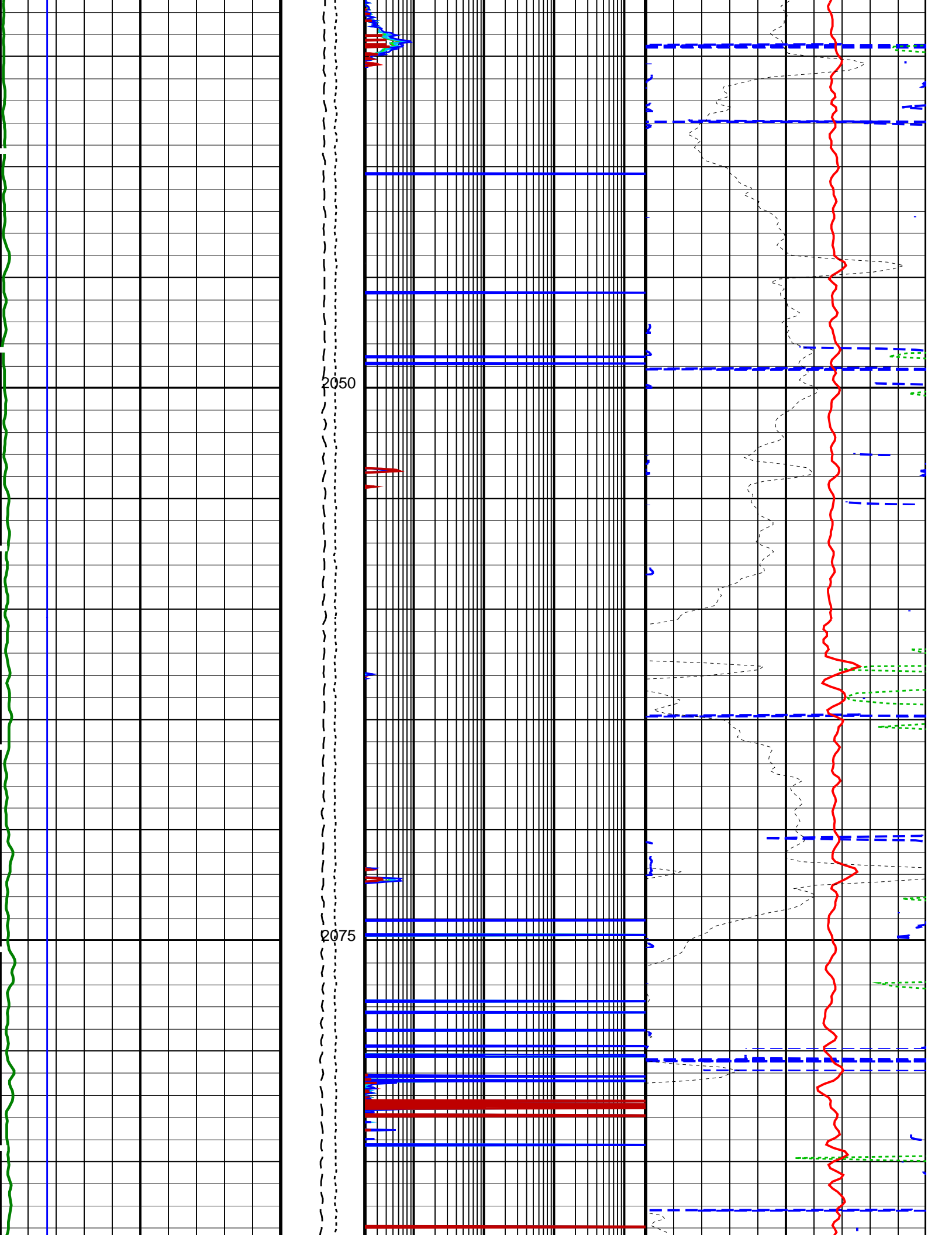
**Time Mark Every 60 S**



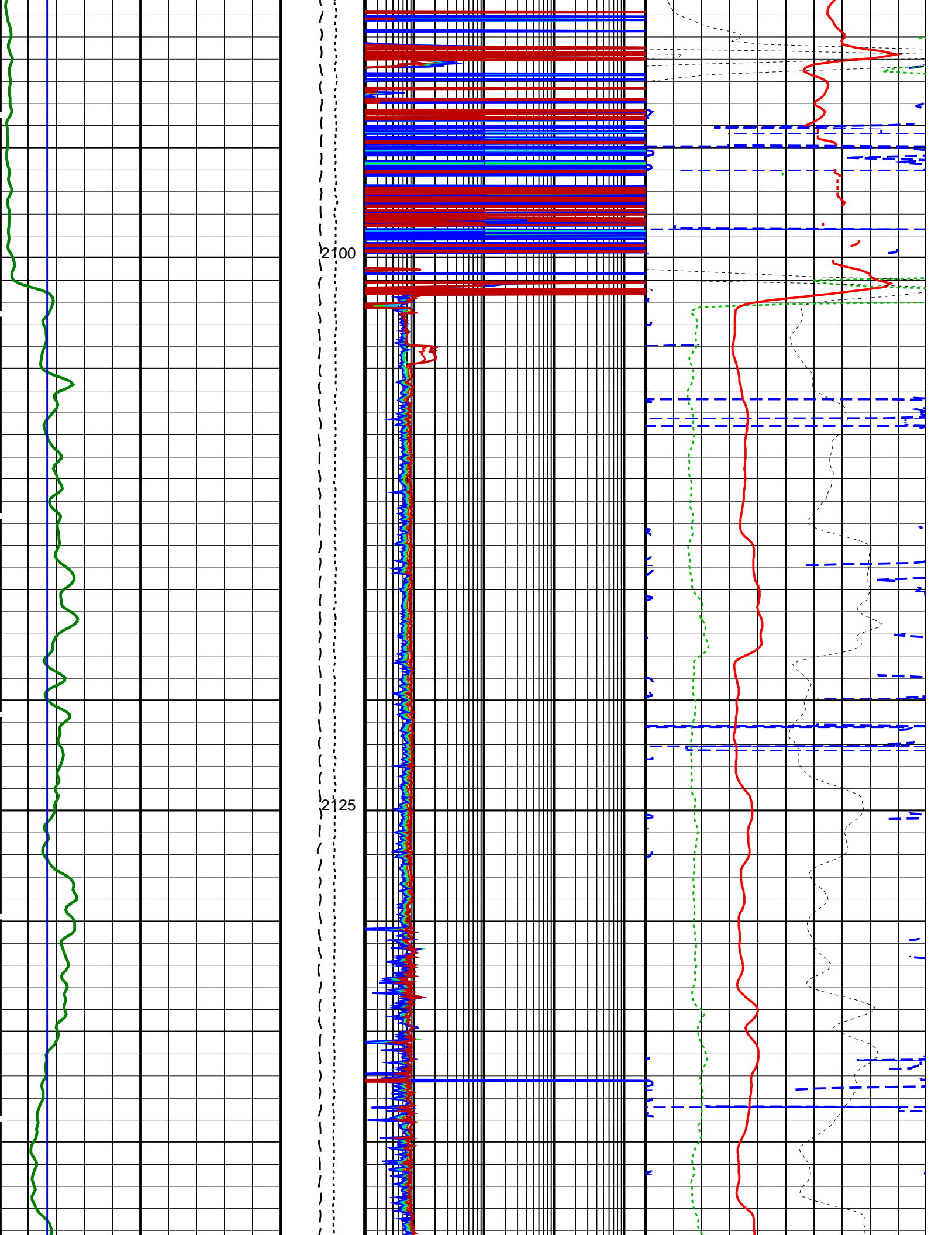




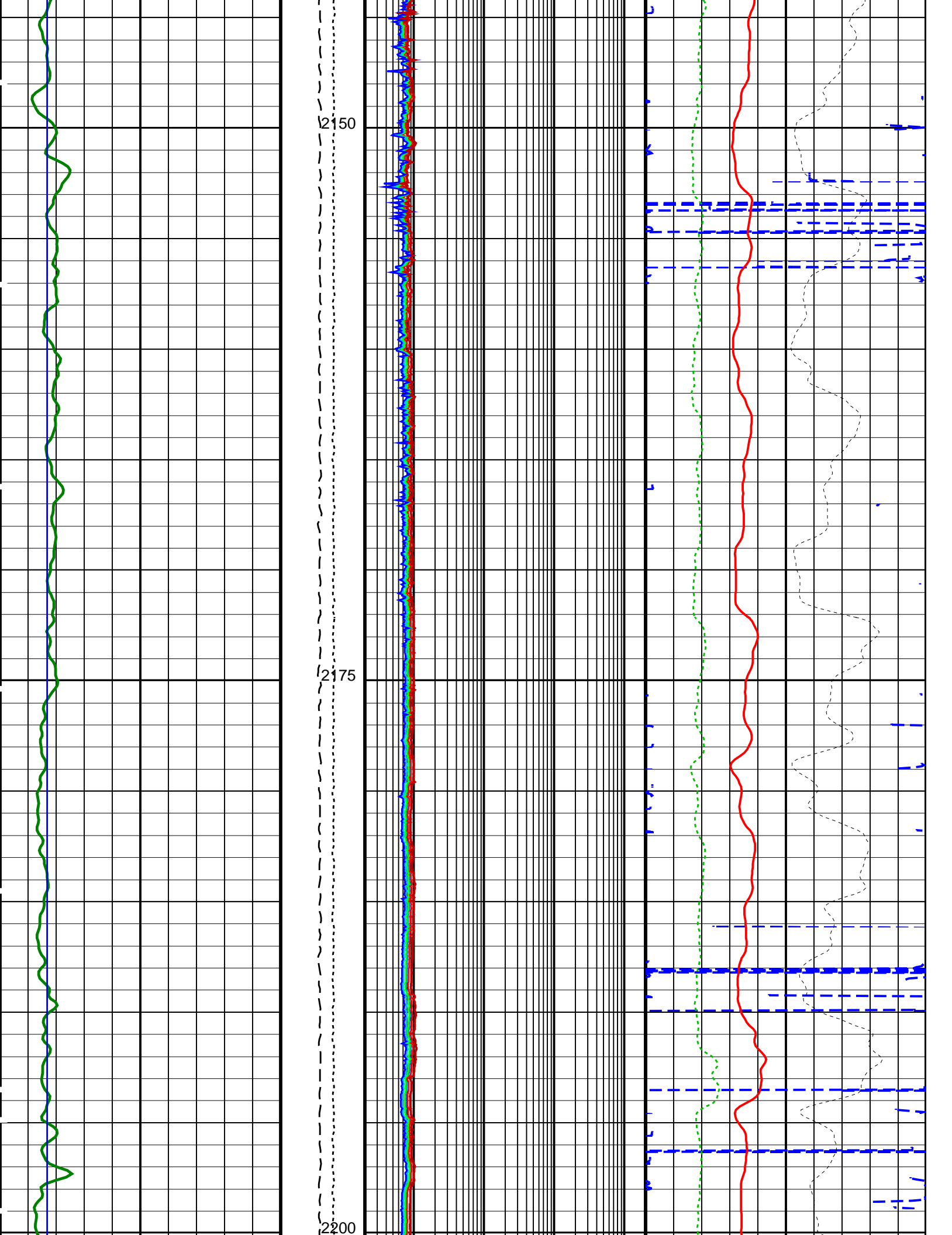




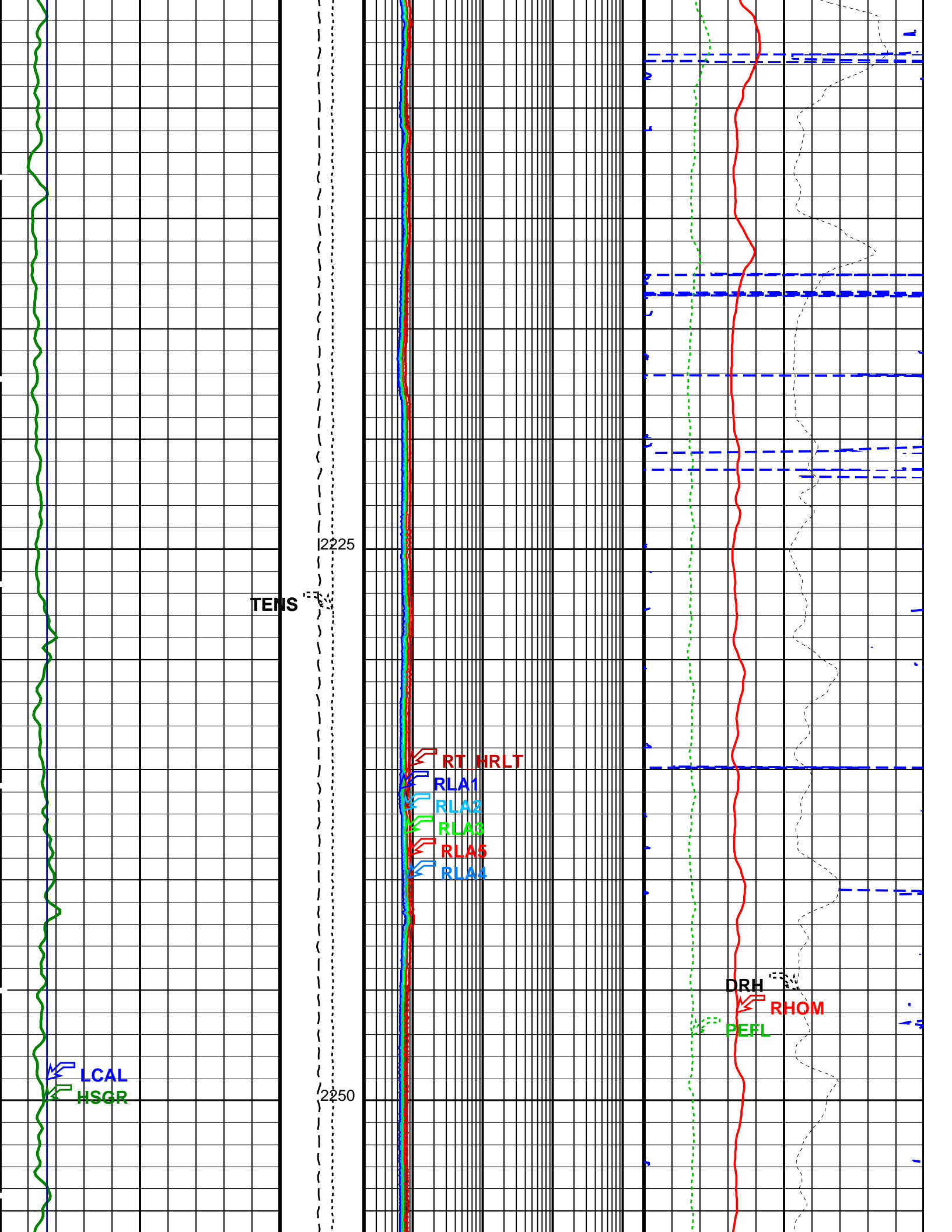




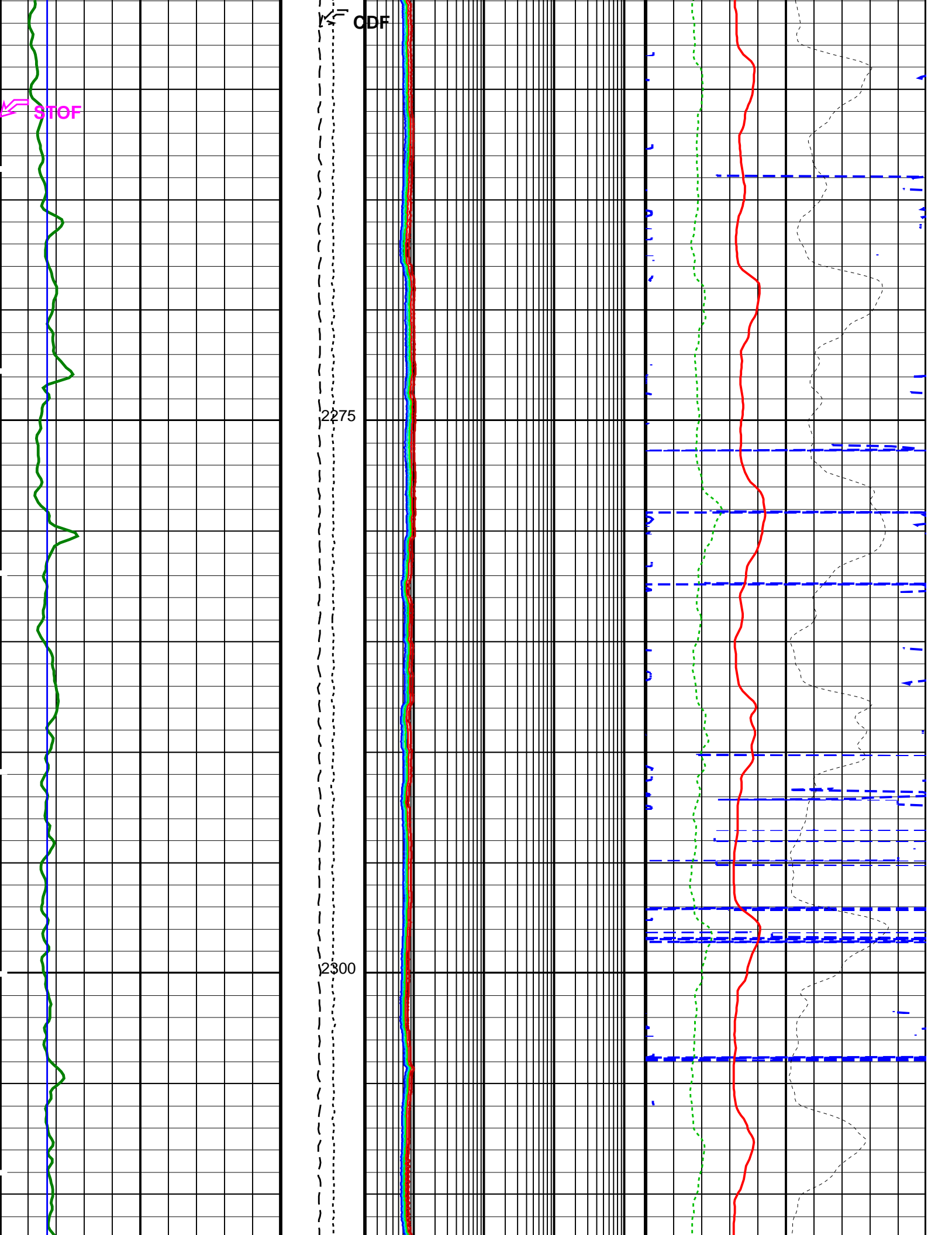




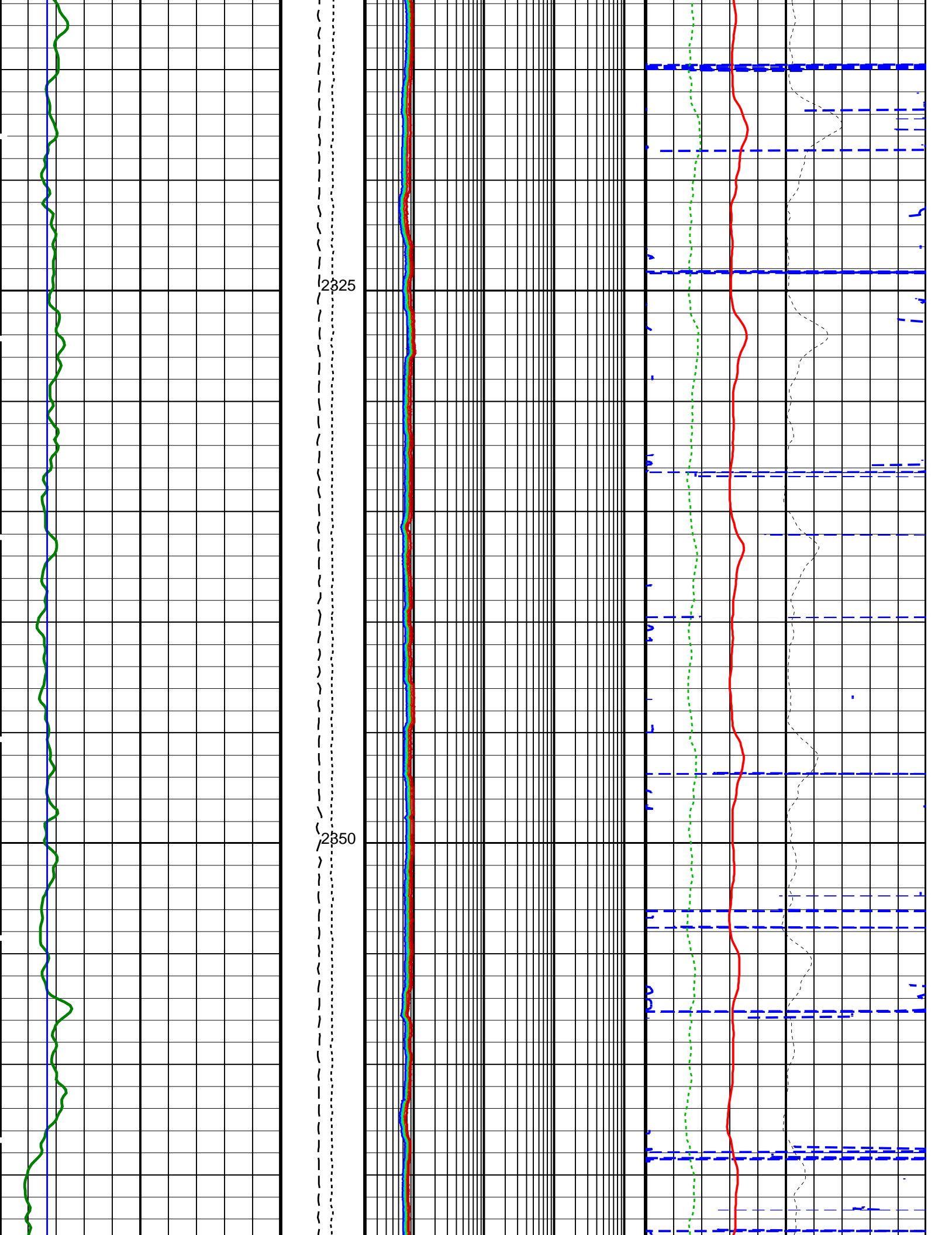




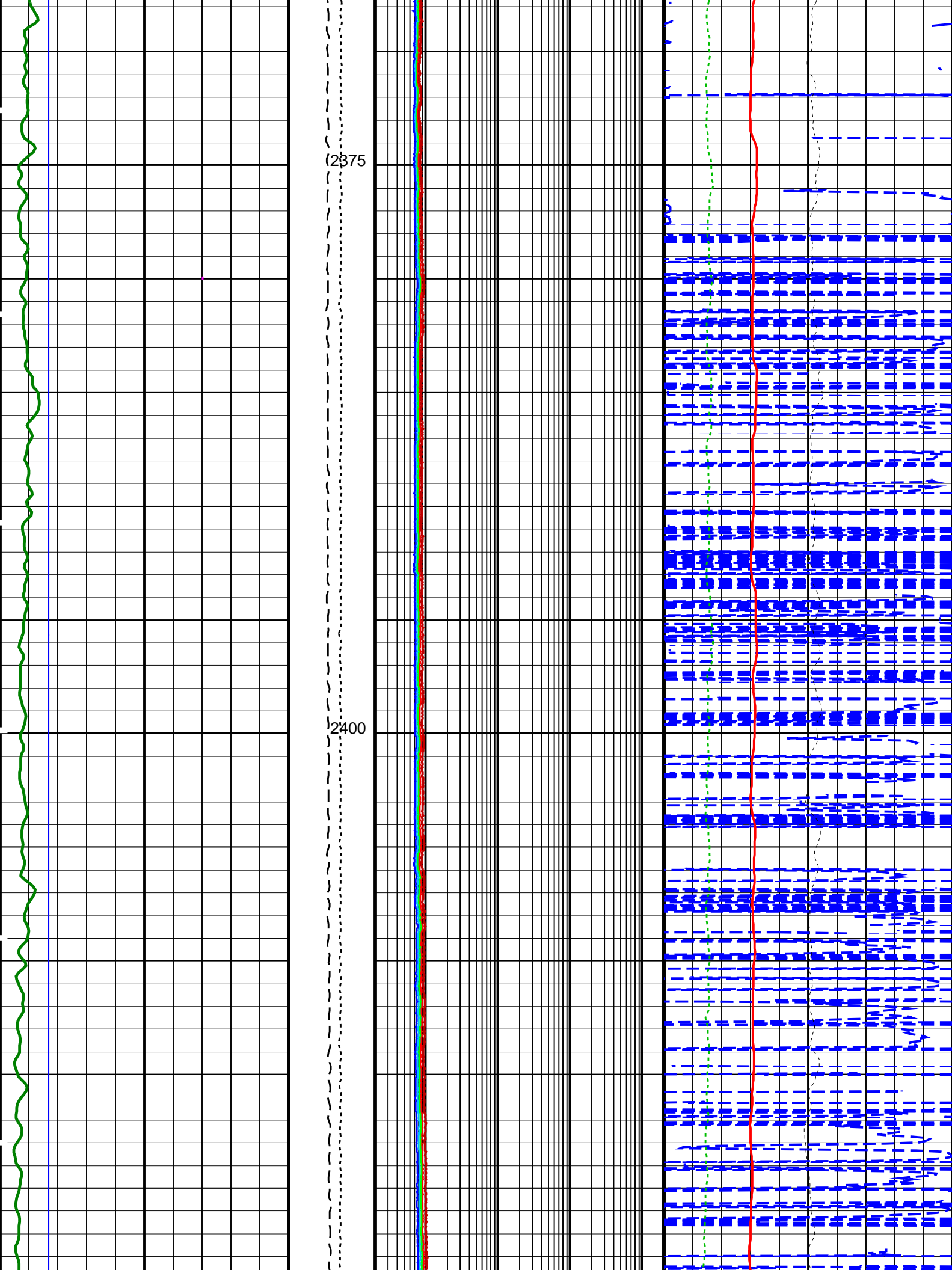




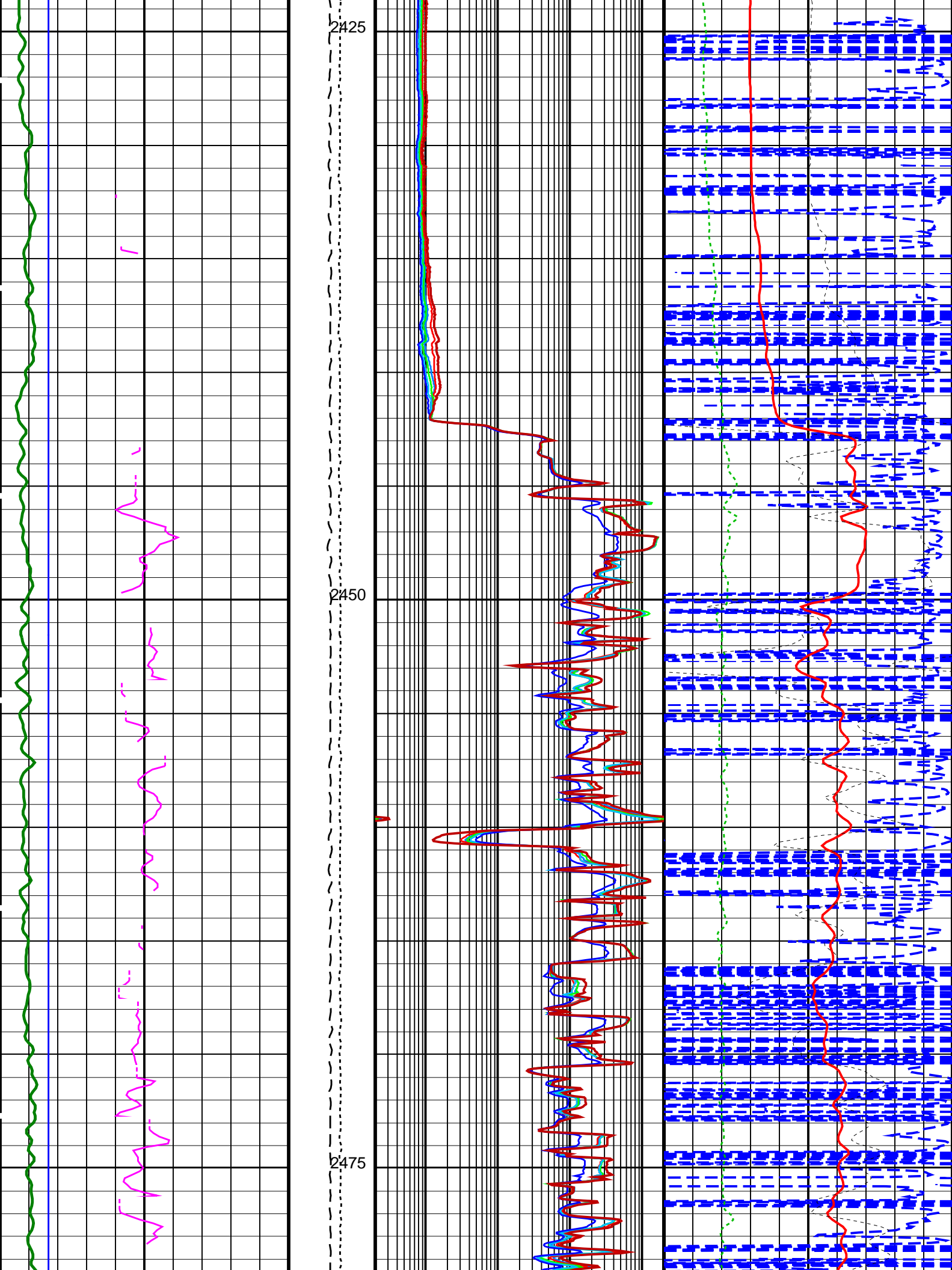




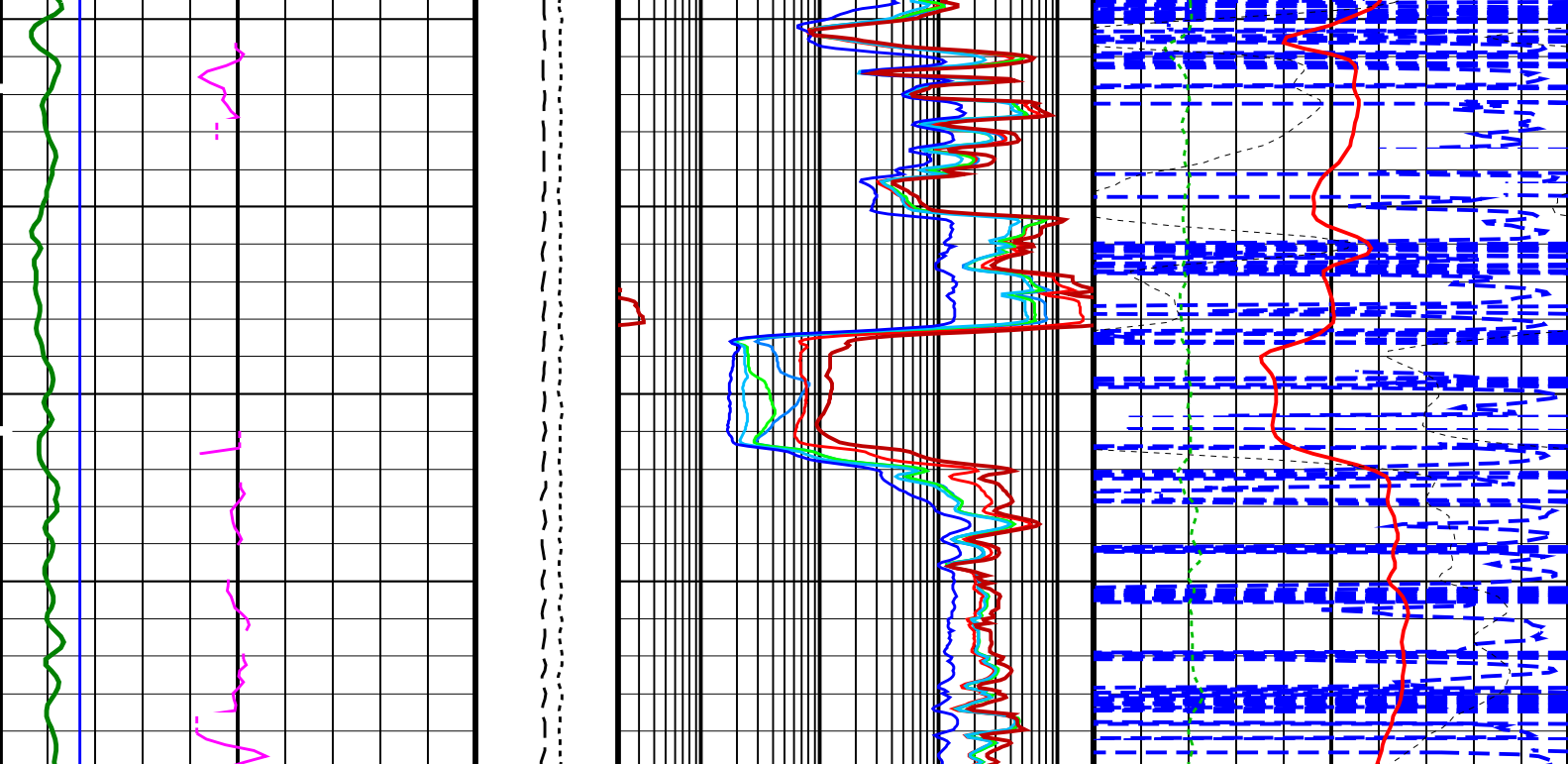












HLDS Caliper (LCAL) (IN)	Tension (TENS) (LBF)	HRLT Resistivity 4 (RLA4) (OHMM)	APS HR Near/Far Corrected Limestone Porosity (HFLC) (PU)
020	100000	0.22000	1000
APS Effective Standoff in Limestone (STOF) (IN)	Calibrated Downhole Force (CDF) (LBF)	HRLT Resistivity 5 (RLA5) (OHMM)	HLDS Long Spaced Photoelectric Effect (PEFL) (-----)
-55	30000	0.22000	010
HNGS Spectroscopy Gamma Ray (HSGR) (GAPI)		HRLT Resistivity 3 (RLA3) (OHMM)	HLDS Bulk Density (RHOM) (G/C3)
0100		0.22000	04
Downlog		HRLT Resistivity 2 (RLA2) (OHMM)	HLDS Bulk Density Correction (DRH) (G/C3)
		0.22000	-0.250.25
		HRLT Resistivity 1 (RLA1) (OHMM)	
		0.22000	
		HRLT True Resistivity (RT_HRLT) (OHMM)	
		0.22000	

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
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	11.1799	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	BS	
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	OFF	
LOOPMOD1	HRLT Mode 1 Loop Mode	OFF	
LOOPMOD2	HRLT Mode 2 Loop Mode	OFF	
LOOPMOD3	HRLT Mode 3 Loop Mode	OFF	
LOOPMOD4	HRLT Mode 4 Loop Mode	OFF	
LOOPMOD5	HRLT Mode 5 Loop Mode	OFF	
LOOPMOD6	HRLT Mode 6 Loop Mode	OFF	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PROGINV	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
HLDS: Hostile Litho-Density Sonde			
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	1500	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	
APS-C: Accelerator-Porosity Tool			
AASD	APS Software Version	5	
ADSO	APS Thermal and Array Detectors High Voltage Setting	1976.24	V
AFSD	APS Array Detectors Data Source Switch	Both	
AHCS	APS Far Detector High Voltage Setting	2067.55	V
AHSS	APS Holesize Correction Source	GCSE	
AMTY	APS Holesize Correction Switch	ON	
ANSD	APS Environmental Corrections Mud Type	WaterBaseBarite	
ASOS	APS Near Detector High Voltage Setting	1737.8	V
ATSS	APS Standoff Correction Switch	ON	
BHFL_APS	APS Temperature-Pressure-Salinity Correction Switch	ON	
BHS	APS TNPH Borehole Fluid Type	WATER	
BHT	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	7	DEGC
BSCO_APS	APS TNPH Borehole Salinity Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
DSCO_APS	APS TNPH Density Source Correction Option	MEASURED	
FSAL	Formation Salinity	-50000	PPM
FSCO_APS	APS TNPH Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	BS	
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_APS	APS TNPH Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO_APS	APS TNPH Mud Cake Correction Option	YES	
MCOR_APS	APS TNPH Mud Correction	NATU	
MWCO_APS	APS TNPH Mud Weight Correction Option	YES	
NARC	APS Near/Array Calibration Ratio	1.08341	
NFRC	APS Near/Far Calibration Ratio	0.942369	
PTCO_APS	APS TNPH Pressure/Temperature Correction Option	NO	
SHT	Surface Hole Temperature	20	DEGC
TNCO_APS	APS TNPH Computation Option	YES	
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	



GCSE	Generalized Camper Selection	BS	DEG
GDEV	Average Angular Deviation of Borehole from Normal	0	DC/M
GGRD	Geothermal Gradient	0.018227	
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	-0.00317669	
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	0.992073	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.03151	
System and Miscellaneous			
ALTDPCCHAN	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	1.02	G/C3
DO	Depth Offset for Playback	0.0	M
FLEV	Fluid Level	-50000.00	M
MST	Mud Sample Temperature	23.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	NORMAL	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	8451.44	FT
TDD	Total Depth - Driller	2576.00	M
TDL	Total Depth - Logger	2573.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripleCombo    Vertical Scale: 1:200    Graphics File Created: 19-Jul-2021 22:34

## OP System Version: 19C0-187

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

## Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_012LUP	PRODUCER	19-Jul-2021 22:27	2575.1 M	1943.1 M
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## Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_017PUP	FN:26	PRODUCER	19-Jul-2021 22:34
BACKUP	MSS_LDEO_HRLA_LDL_017PUP	FN:27	PRODUCER	19-Jul-2021 22:34

Company: International Ocean Discovery Program    Well: Expedition 395C, Site U1562B

## Output DLIS Files

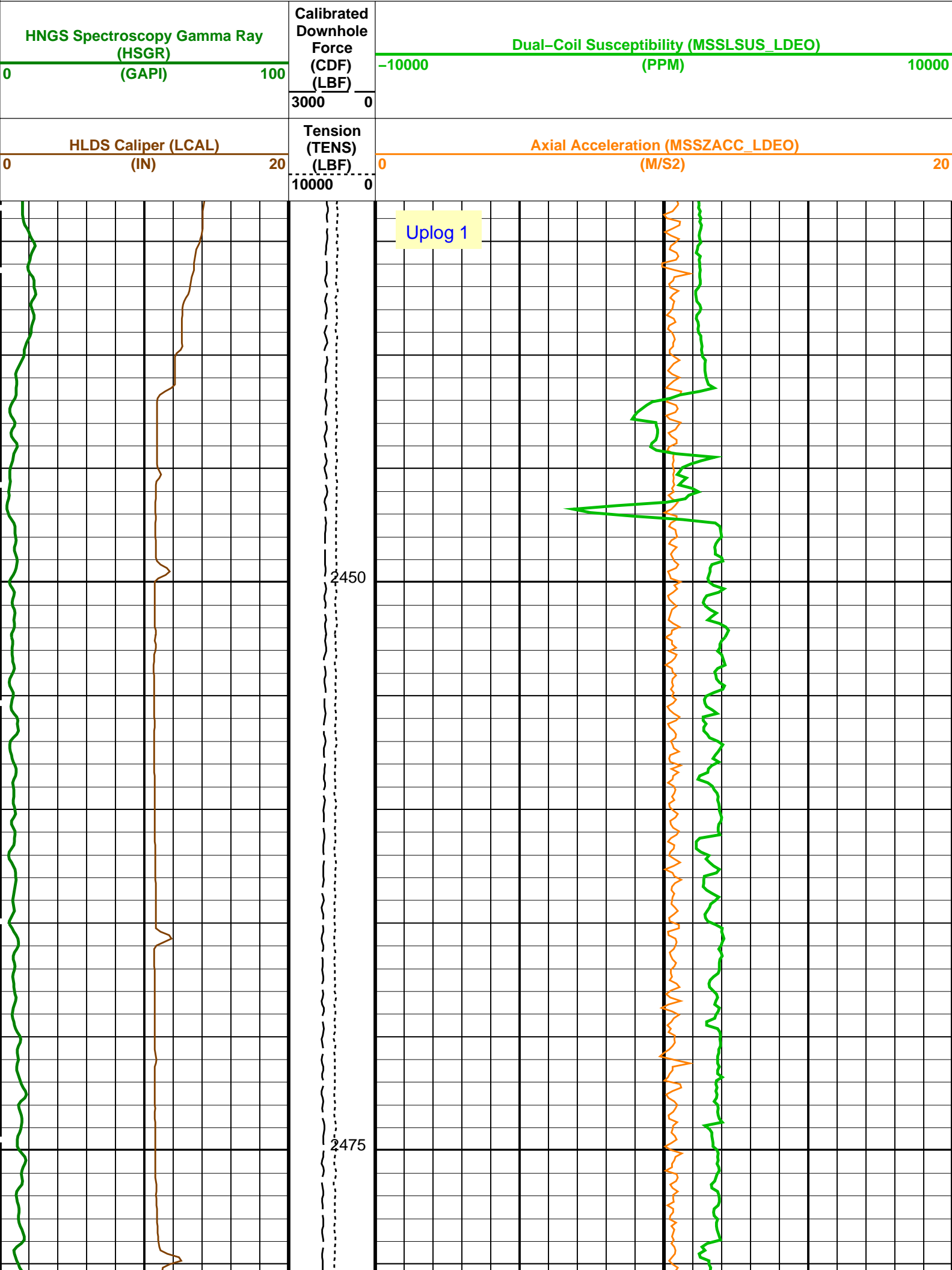
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BACKUP	MSS_LDEO_HRLA_LDL_010LUP	FN:16	PRODUCER	19-Jul-2021 20:08	2574.0 M	2434.6 M

## OP System Version: 19C0-187

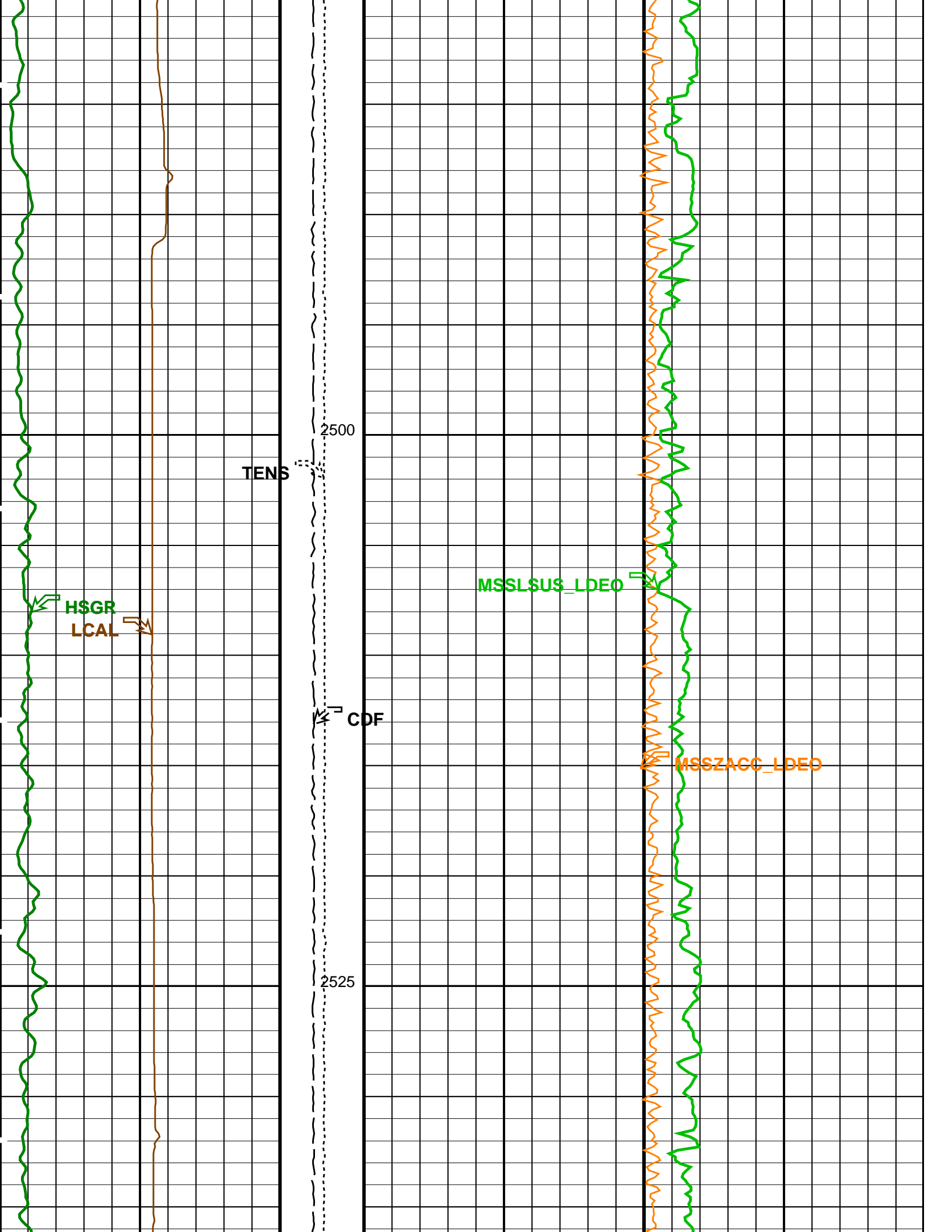
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
APS-C	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	DTC-H	19C0-187

## PIP SUMMARY

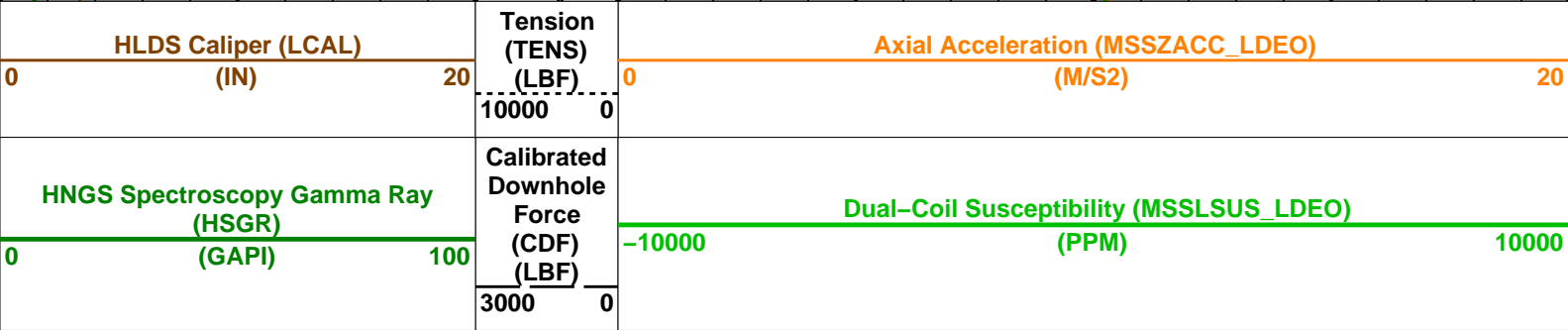
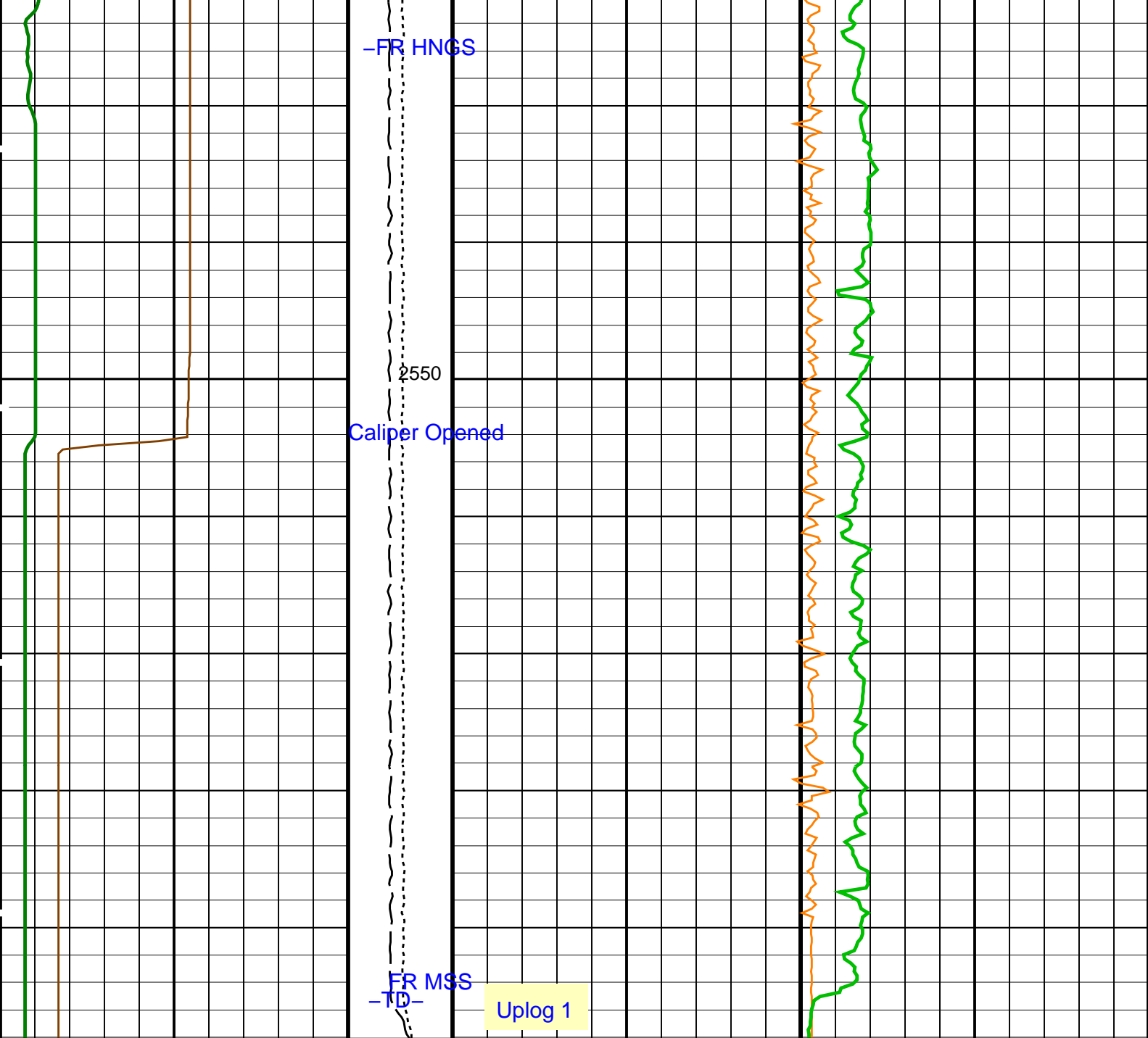












PIP SUMMARY			
Time Mark Every 60 S			

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
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	11.1799	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	
PROCINV	Inversion Selection	ON	
PROCNFL	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCSP0	Sonde Position	Centered	
SHT	Surface Hole Temperature	20	DEGC
HLDS: Hostile Litho-Density Sonde			
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	1500	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	
APS-C: Accelerator-Porosity Tool			
	APS Software Version	5	
AASD	APS Thermal and Array Detectors High Voltage Setting	1976.24	V
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2067.55	V
AHCS	APS Holesize Correction Source	GCSE	
AHSS	APS Holesize Correction Switch	ON	
AMTY	APS Environmental Corrections Mud Type	WaterBaseBarite	
ANSO	APS Near Detector High Voltage Setting	1737.8	V
ASOS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	ON	
BHFL_APS	APS TNPH Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	7	DEGC
BSCO_APS	APS TNPH Borehole Salinity Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
DSCO_APS	APS TNPH Density Source Correction Option	MEASURED	
FSAL	Formation Salinity	-50000	PPM
FSCO_APS	APS TNPH 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_APS	APS TNPH Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO_APS	APS TNPH Mud Cake Correction Option	YES	
MCOR_APS	APS TNPH Mud Correction	NATU	
MWCO_APS	APS TNPH Mud Weight Correction Option	YES	
NARC	APS Near/Array Calibration Ratio	1.08341	
NFRC	APS Near/Far Calibration Ratio	0.942369	
PTCO_APS	APS TNPH Pressure/Temperature Correction Option	NO	
SHT	Surface Hole Temperature	20	DEGC
TNCO_APS	APS TNPH Computation Option	YES	
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	
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	-0.000821827	
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	1.3227	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	-1.35095	
System and Miscellaneous			
ALTDPCCHAN	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	1.02	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	8451.44	FT
TDD	Total Depth - Driller	2576.00	M
TDL	Total Depth - Logger	2576.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: MSS\_Logging

Vertical Scale: 1:200

Graphics File Created: 19-Jul-2021 20:08

OP System Version: 19C0-187			
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
APS-C	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	DTC-H	19C0-187

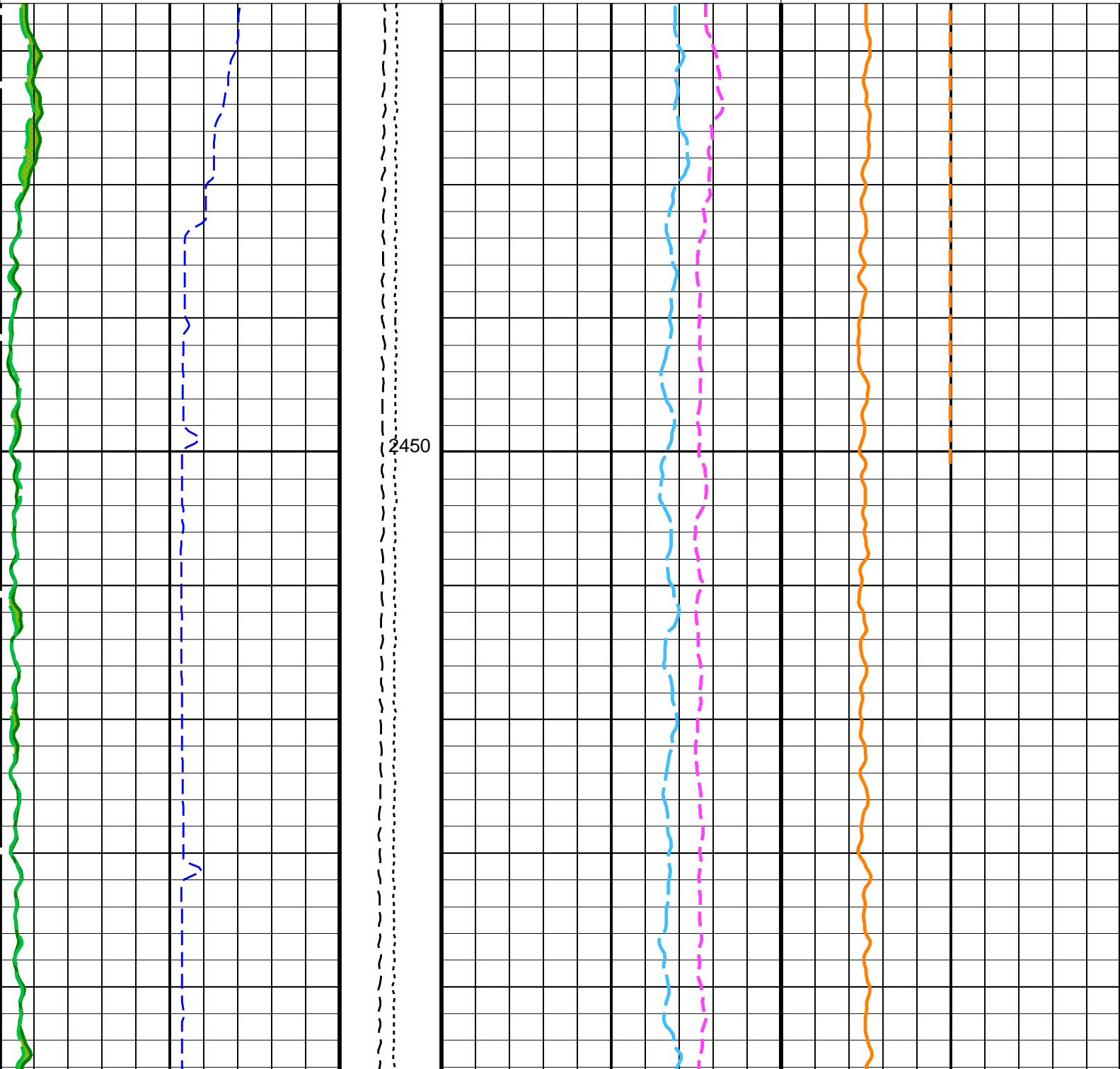
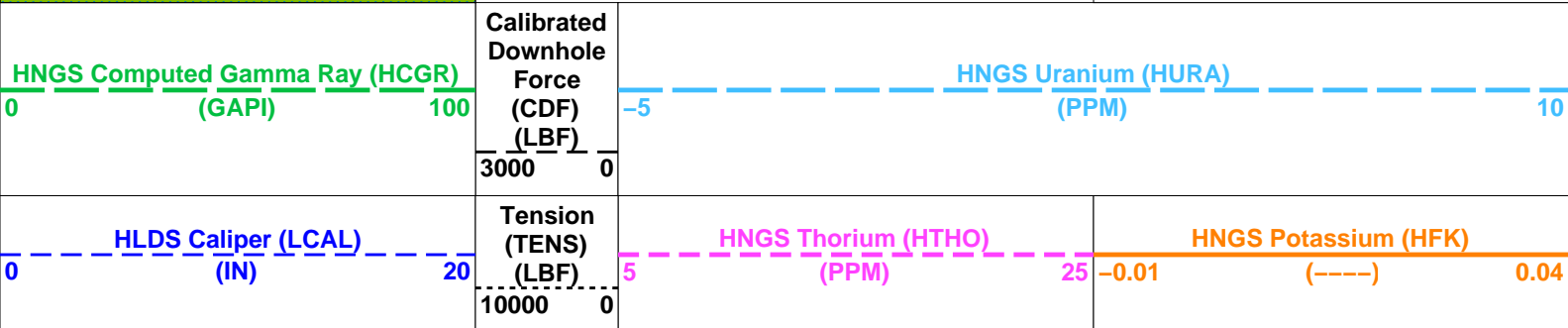
Output DLIS Files					
DEFAULT	MSS_LDEO_HRLA_LDL_010LUP	FN:15	PRODUCER	19-Jul-2021 20:08	
BACKUP	MSS_LDEO_HRLA_LDL_010LUP	FN:16	PRODUCER	19-Jul-2021 20:08	

Output DLIS Files					
DEFAULT	MSS_LDEO_HRLA_LDL_010LUP	FN:15	PRODUCER	19-Jul-2021 20:08	2574.0 M 2434.6 M
BACKUP	MSS_LDEO_HRLA_LDL_010LUP	FN:16	PRODUCER	19-Jul-2021 20:08	2574.0 M 2434.6 M

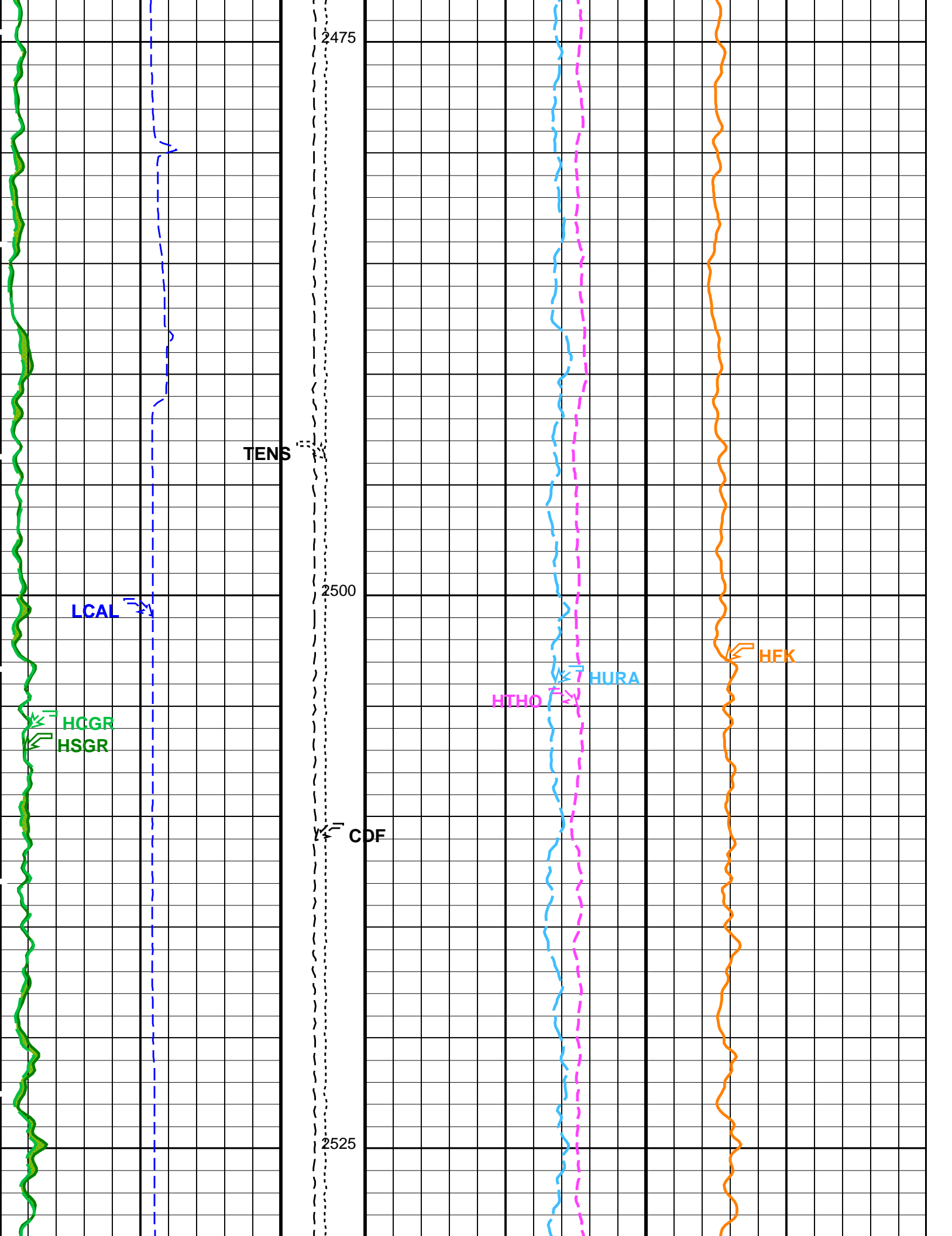
OP System Version: 19C0-187			
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
APS-C	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	DTC-H	19C0-187



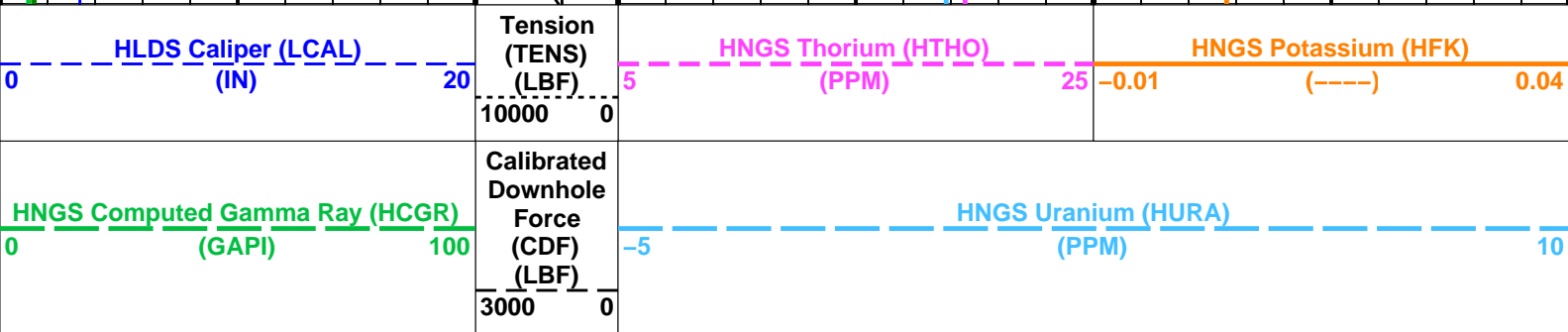
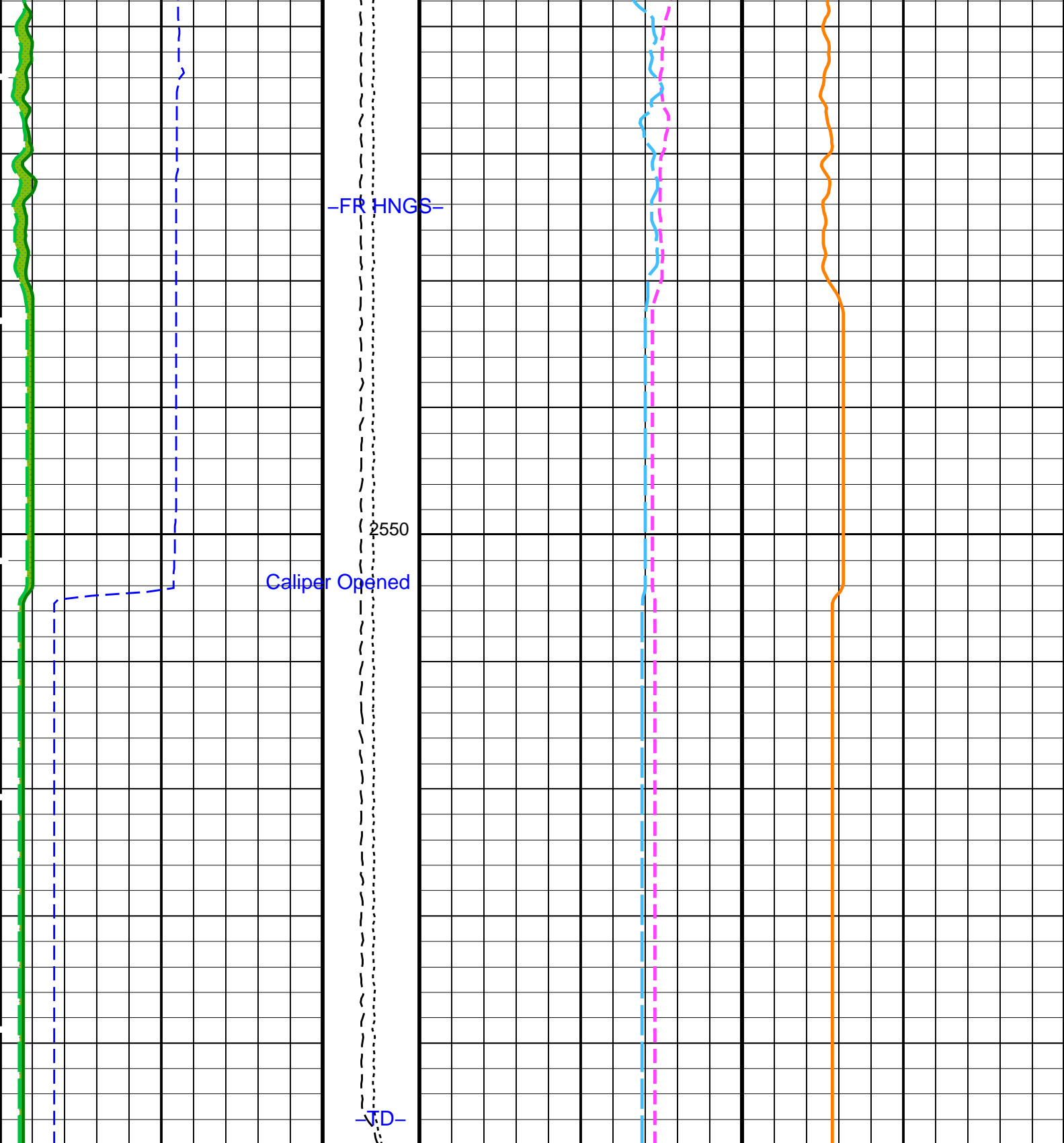
Time Mark Every 60 S













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	
APS-C: Accelerator-Porosity Tool			
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	-0.000821827	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.3227	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	-1.35095	
System and Miscellaneous			
BS	Bit Size	9.875	IN

Format: HNGSYields	Vertical Scale: 1:200	Graphics File Created: 19-Jul-2021 20:08
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OP System Version: 19C0-187			
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
APS-C	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	DTC-H	19C0-187

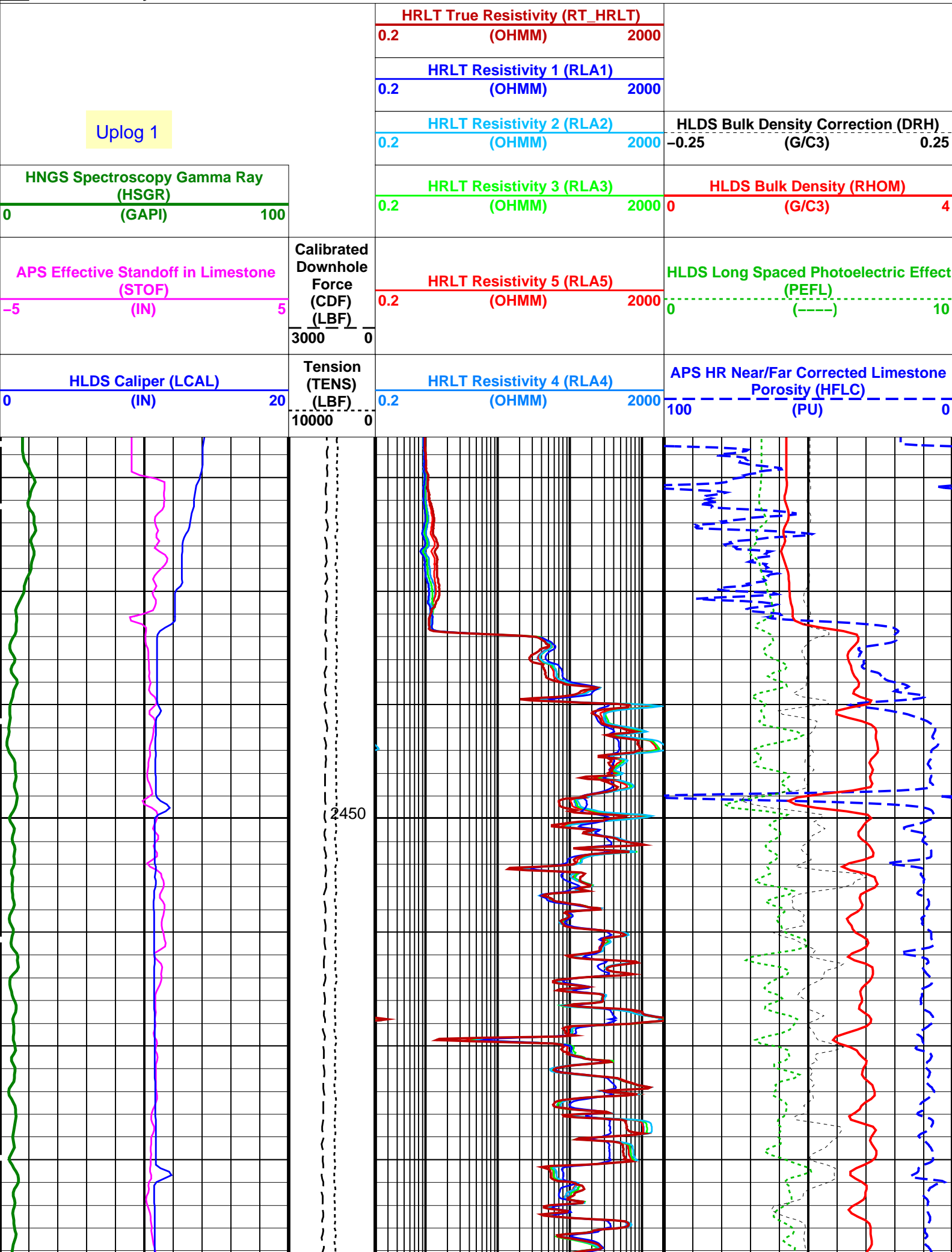
Output DLIS Files					
DEFAULT	MSS_LDEO_HRLA_LDL_010LUP	FN:15	PRODUCER	19-Jul-2021 20:08	
BACKUP	MSS_LDEO_HRLA_LDL_010LUP	FN:16	PRODUCER	19-Jul-2021 20:08	

Output DLIS Files						
DEFAULT	MSS_LDEO_HRLA_LDL_010LUP	FN:15	PRODUCER	19-Jul-2021 20:08	2574.0 M	2434.6 M
BACKUP	MSS_LDEO_HRLA_LDL_010LUP	FN:16	PRODUCER	19-Jul-2021 20:08	2574.0 M	2434.6 M

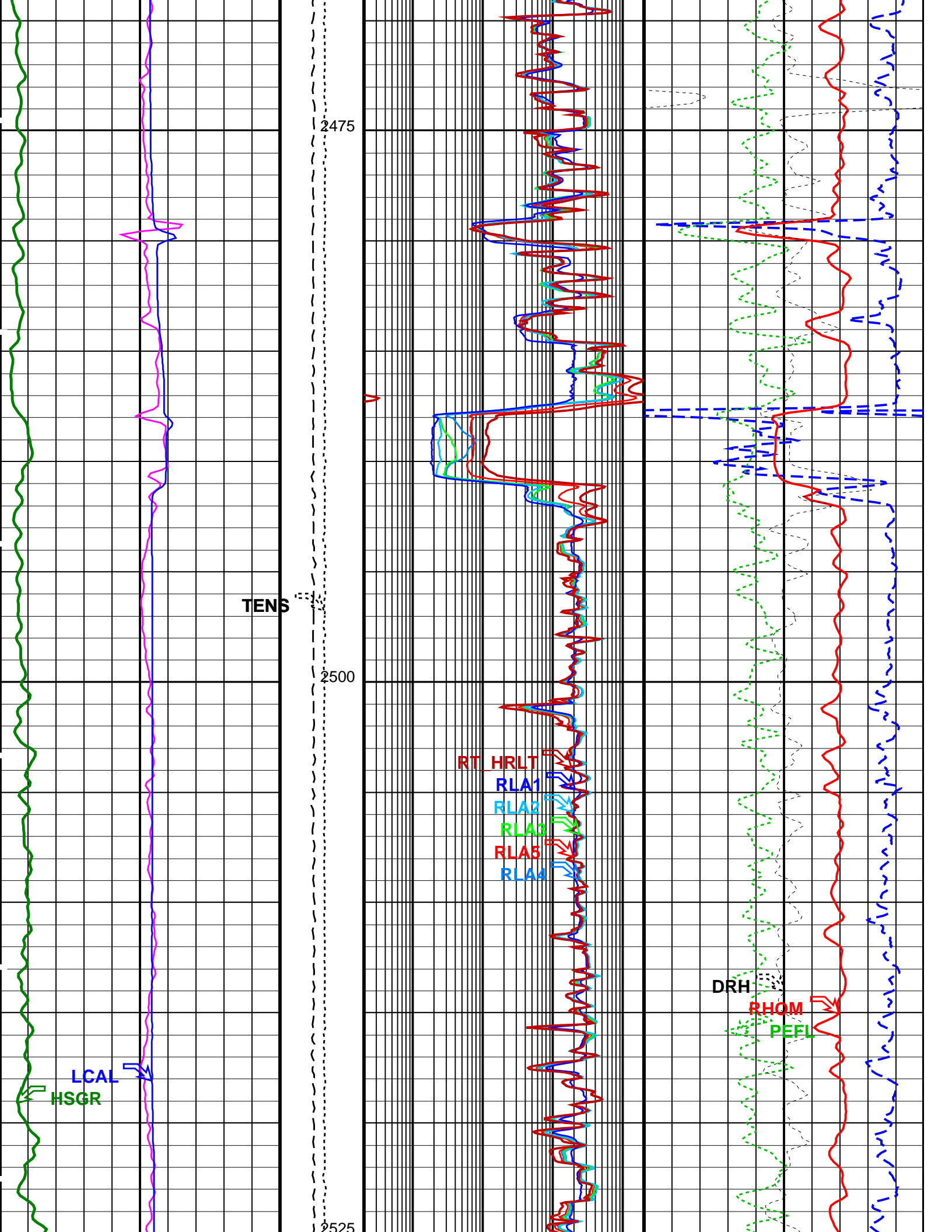
OP System Version: 19C0-187			
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
APS-C	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	DTC-H	19C0-187

PIP SUMMARY		
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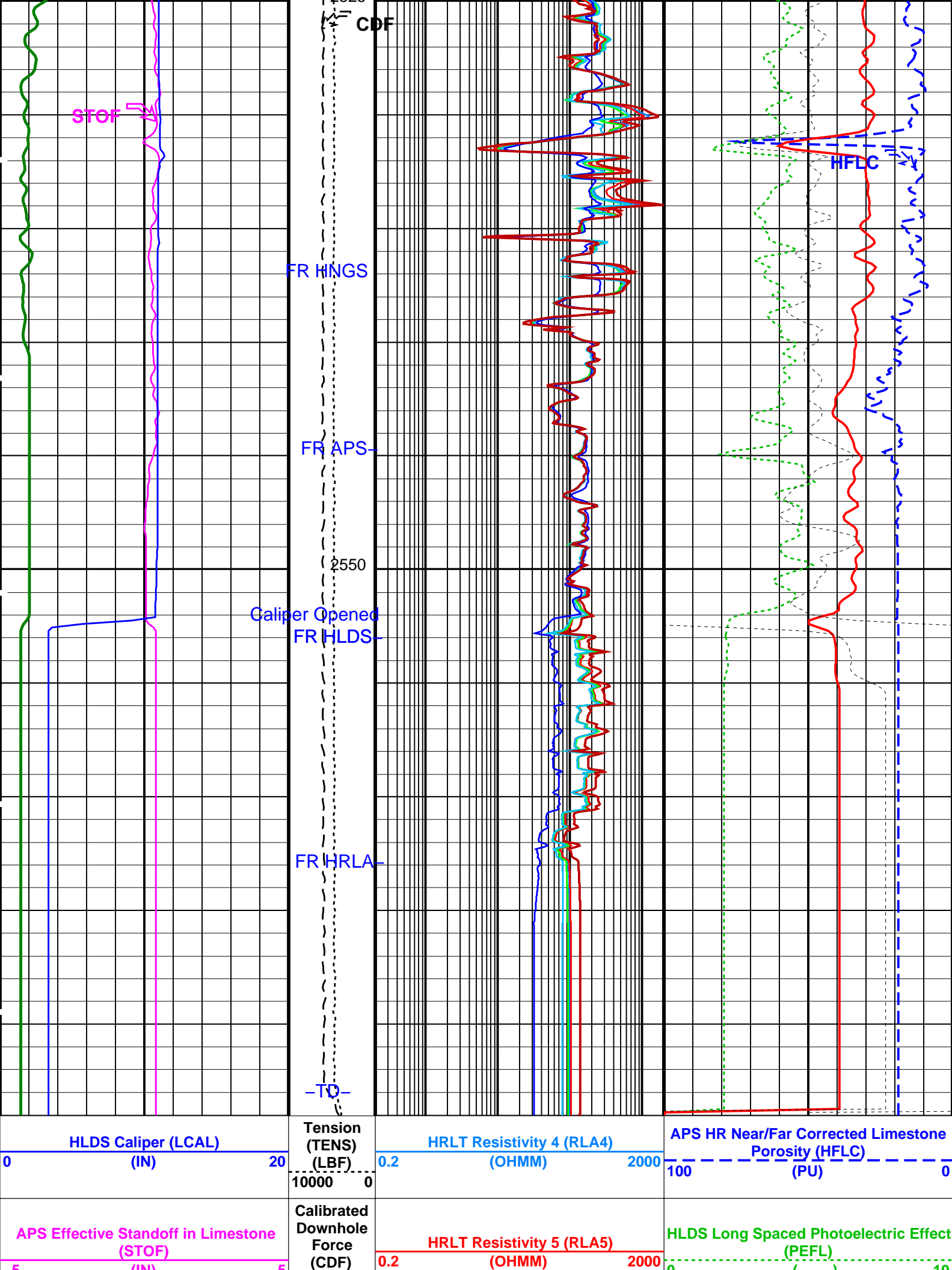














[illegible]

## PIP SUMMARY

## 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
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	11.1799	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	
PROCINV	Inversion Selection	ON	
PROCNFL	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCSP0	Sonde Position	Centered	
SHT	Surface Hole Temperature	20	DEGC
HLDS: Hostile Litho-Density Sonde			
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	1500	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	
APS-C: Accelerator-Porosity Tool			
AASD	APS Software Version	5	
AASD	APS Thermal and Array Detectors High Voltage Setting	1976.24	V



ADSO	APS Array Detectors Data Source Switch	2067.55	V
AFSD	APS Far Detector High Voltage Setting	GCSE	
AHCS	APS Holesize Correction Source	ON	
AHSS	APS Holesize Correction Switch	WaterBaseBarite	
AMTY	APS Environmental Corrections Mud Type	1737.8	V
ANSO	APS Near Detector High Voltage Setting	ON	
ASOS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	ON	
BHFL_APS	APS TNPH Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	7	DEGC
BSCO_APS	APS TNPH Borehole Salinity Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
DSCO_APS	APS TNPH Density Source Correction Option	MEASURED	
FSAL	Formation Salinity	-50000	PPM
FSCO_APS	APS TNPH 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_APS	APS TNPH Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO_APS	APS TNPH Mud Cake Correction Option	YES	
MCOR_APS	APS TNPH Mud Correction	NATU	
MWCO_APS	APS TNPH Mud Weight Correction Option	YES	
NARC	APS Near/Array Calibration Ratio	1.08341	
NFRC	APS Near/Far Calibration Ratio	0.942369	
PTCO_APS	APS TNPH Pressure/Temperature Correction Option	NO	
SHT	Surface Hole Temperature	20	DEGC
TNCO_APS	APS TNPH Computation Option	YES	
HNGBS-BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGBS Detector 1 Barite Constant	1	
BAR2	HNGBS Detector 2 Barite Constant	1	
BHK	HNGBS 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	HNGBS 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	HNGBS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGBS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGBS Borehole Potassium Running Average	-0.000821827	
HALF	HNGBS Alpha Filter Length	60	IN
HCRB	HNGBS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGBS Processing Enable	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
S1BI	HNGBS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGBS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGBS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	20	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGBS Detector 1 Variable Barite Factor Running Average	1.3227	
VBA2	HNGBS Detector 2 Variable Barite Factor Running Average	-1.35095	
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	1.02	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	8451.44	FT
TDD	Total Depth - Driller	2576.00	M
TDL	Total Depth - Logger	2576.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC



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

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_010LUP	FN:15	PRODUCER	19-Jul-2021 20:08
BACKUP	MSS_LDEO_HRLA_LDL_010LUP	FN:16	PRODUCER	19-Jul-2021 20:08

Company: International Ocean Discovery Program

Well: Expedition 395C, Site U1562B

Output DLIS Files

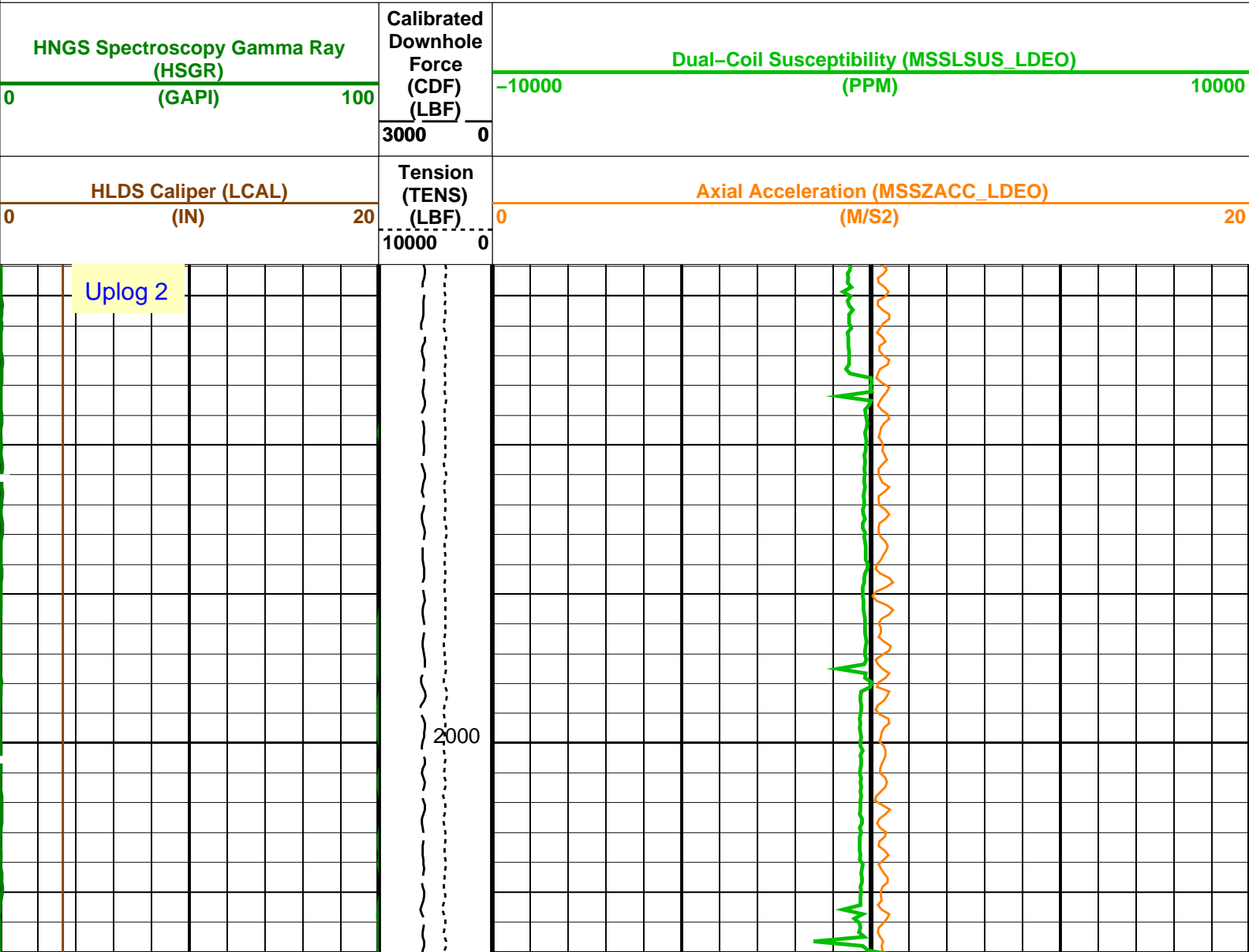
DEFAULT	MSS_LDEO_HRLA_LDL_011LUP	FN:17	PRODUCER	19-Jul-2021 20:42	2574.0 M	1984.2 M
BACKUP	MSS_LDEO_HRLA_LDL_011LUP	FN:18	PRODUCER	19-Jul-2021 20:42	2574.0 M	1984.2 M

OP System Version: 19C0-187

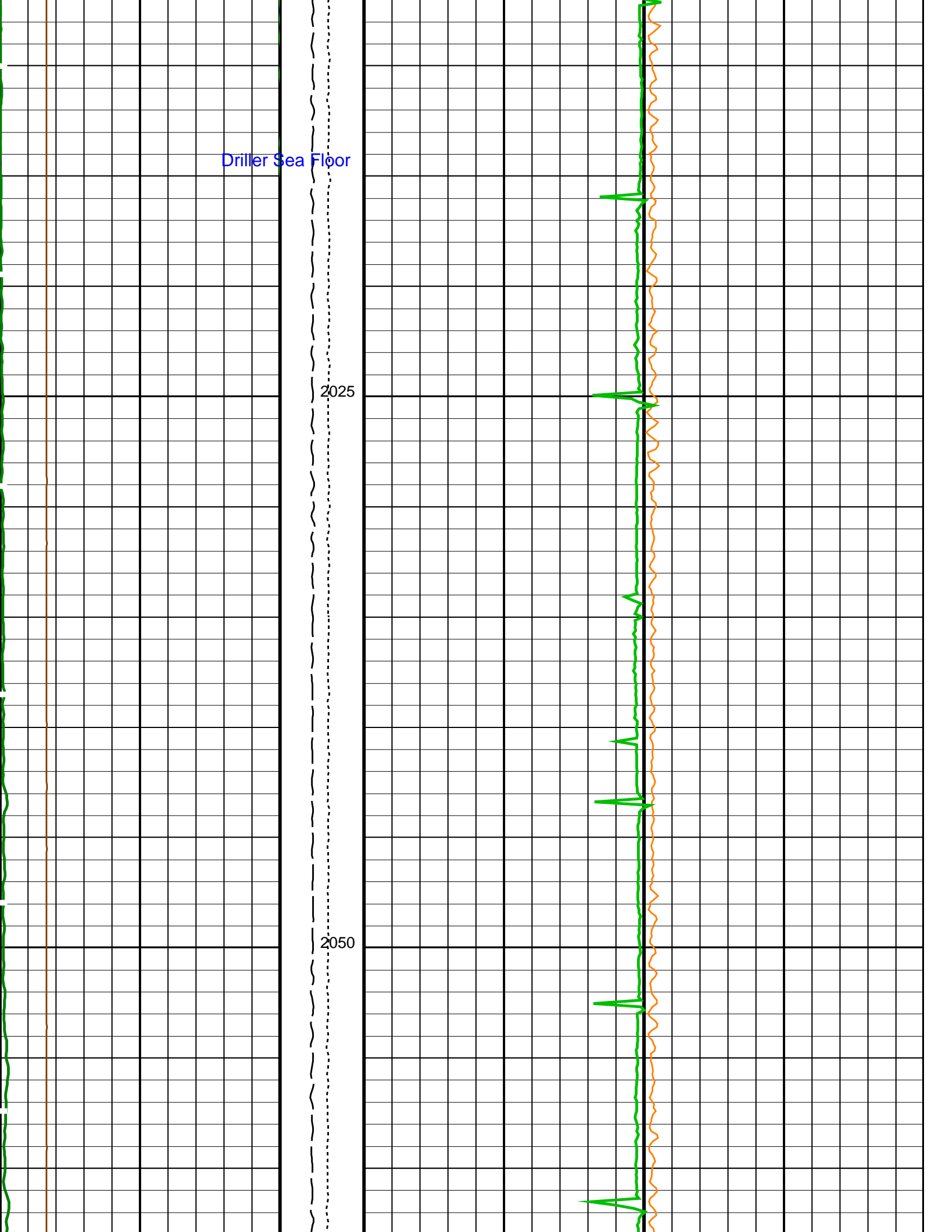
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
APS-C	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	DTC-H	19C0-187

PIP SUMMARY

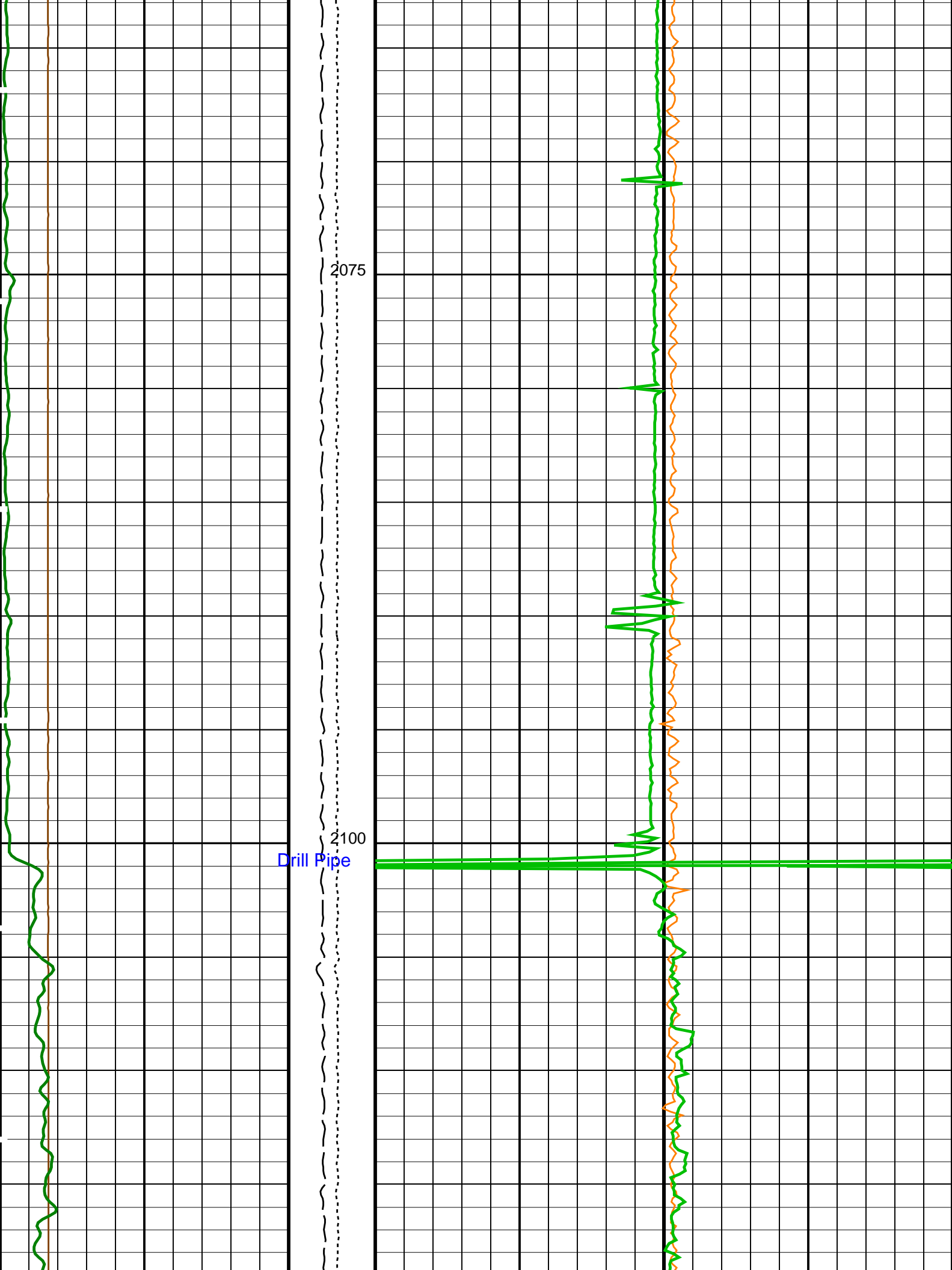
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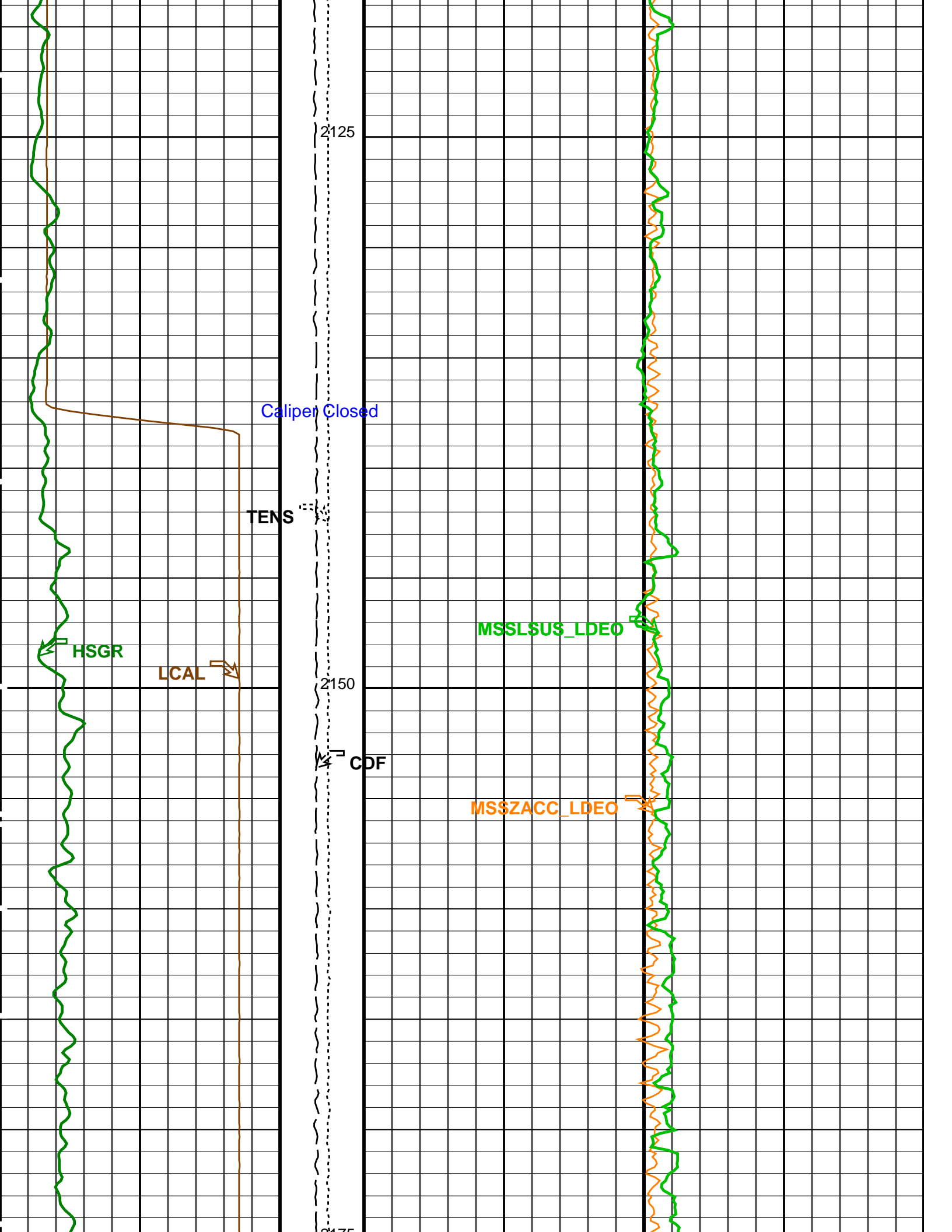




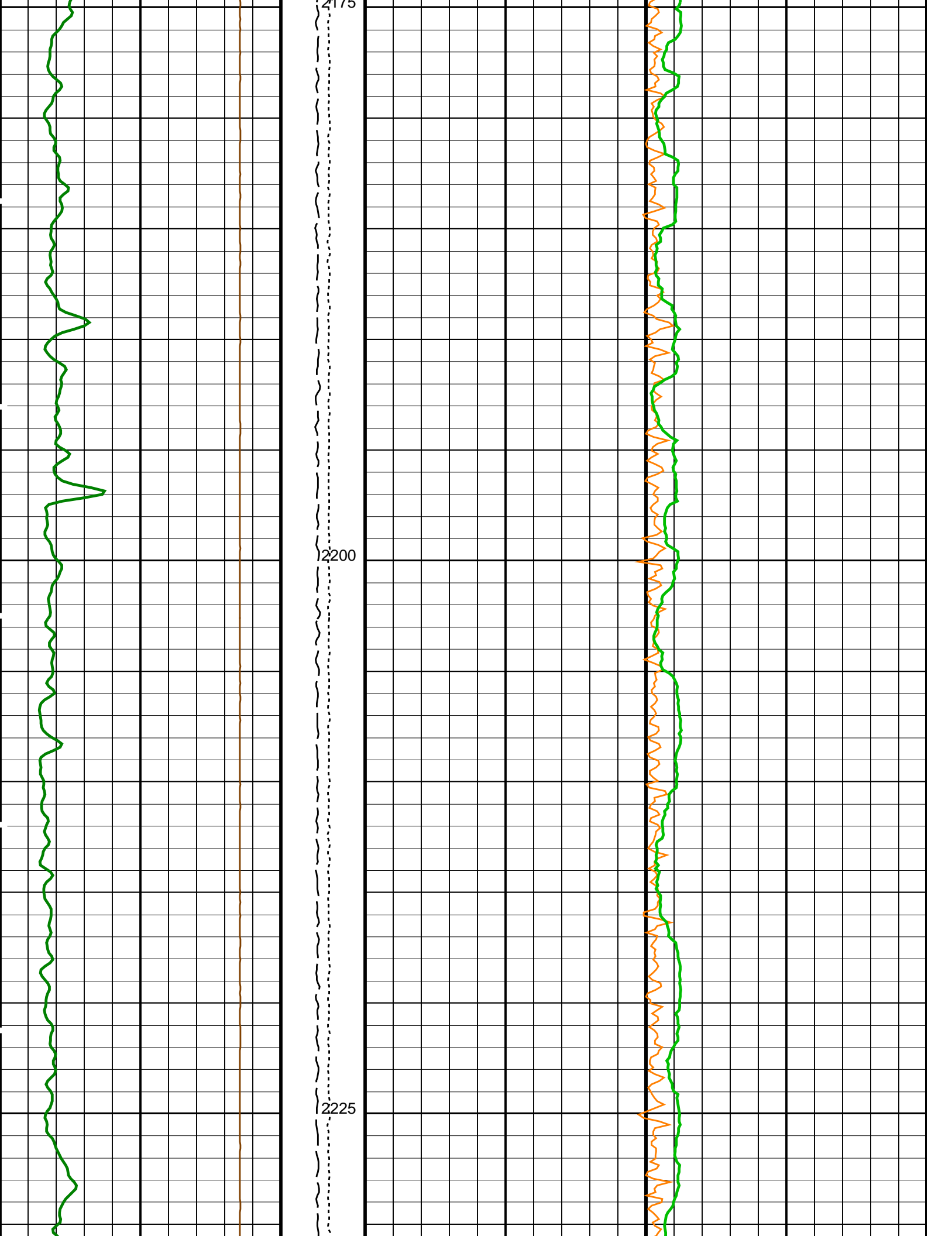




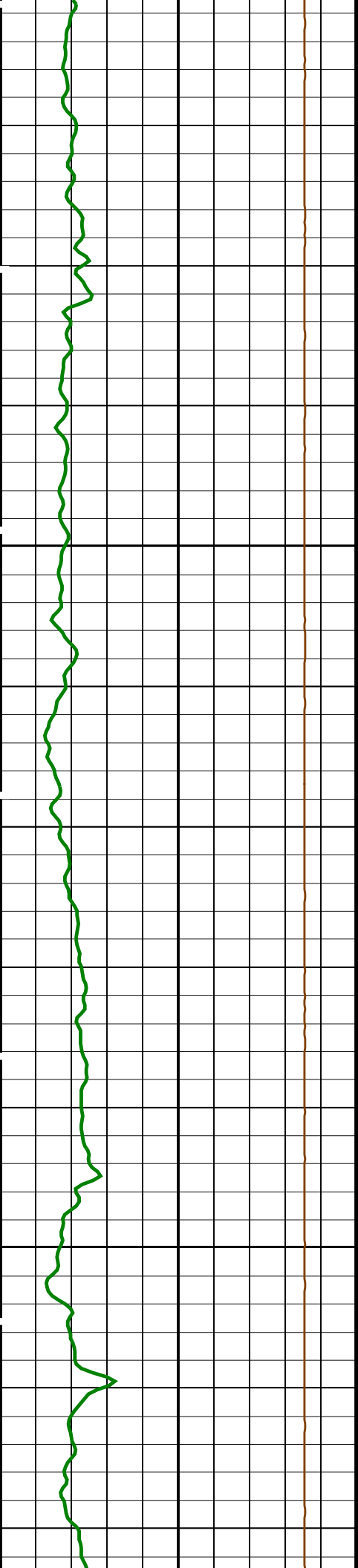






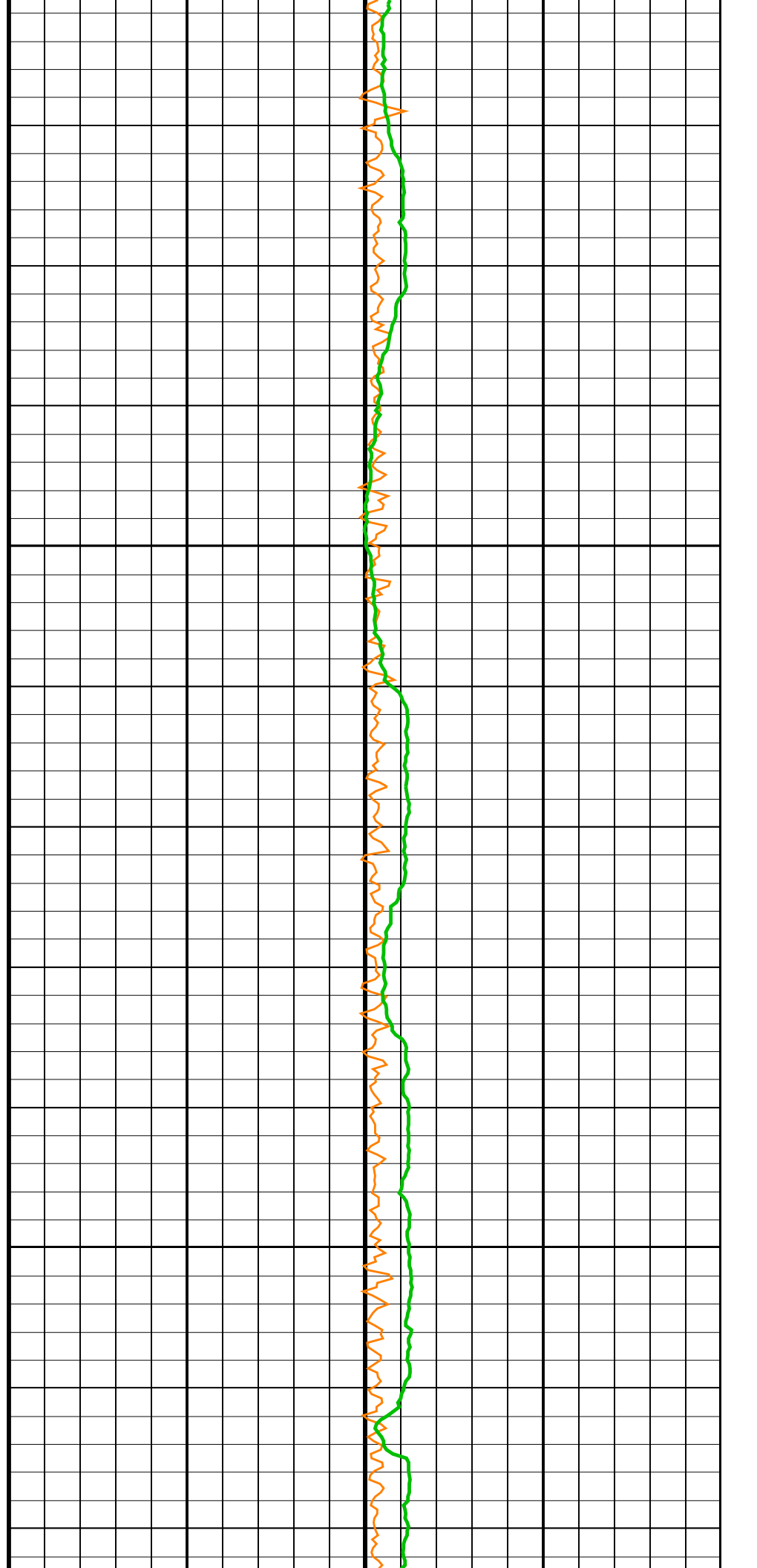




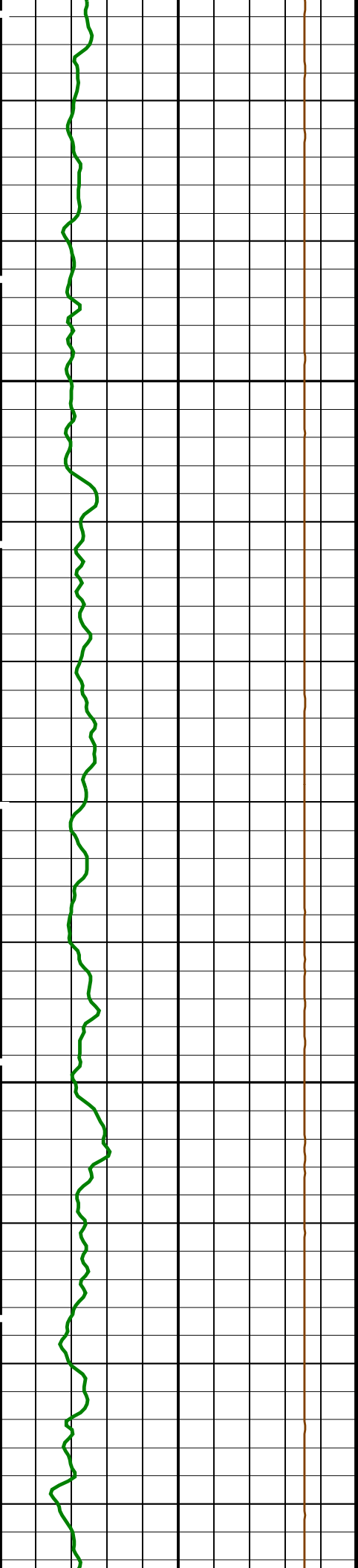


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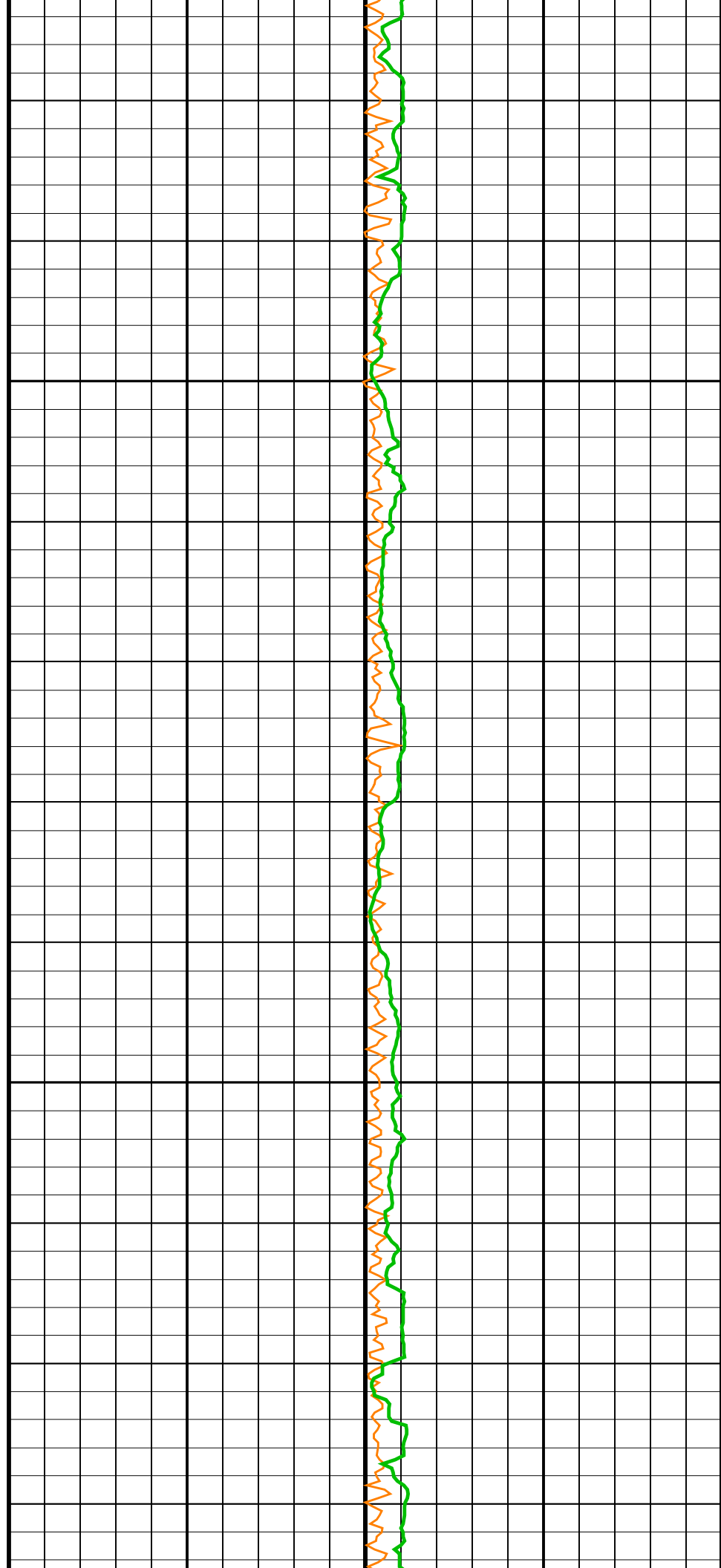




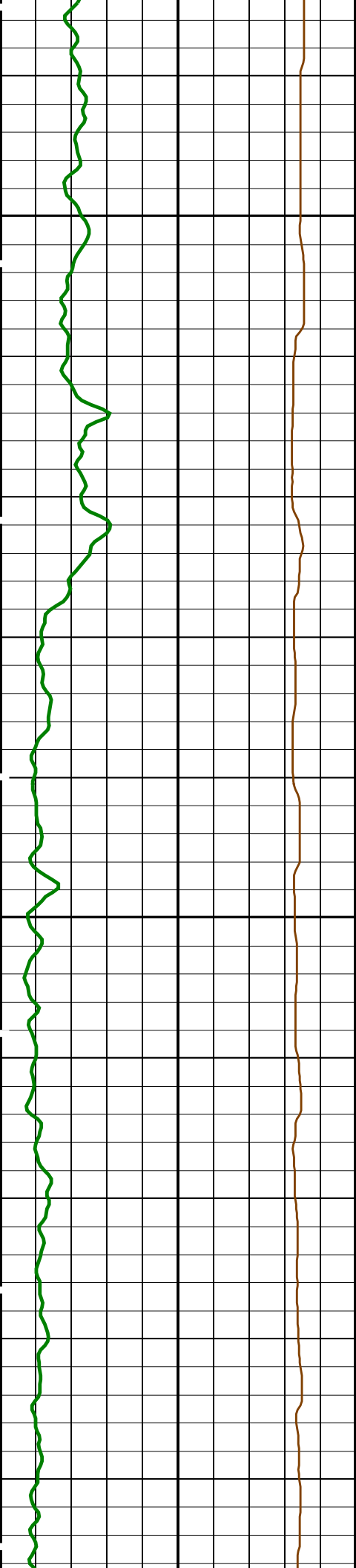


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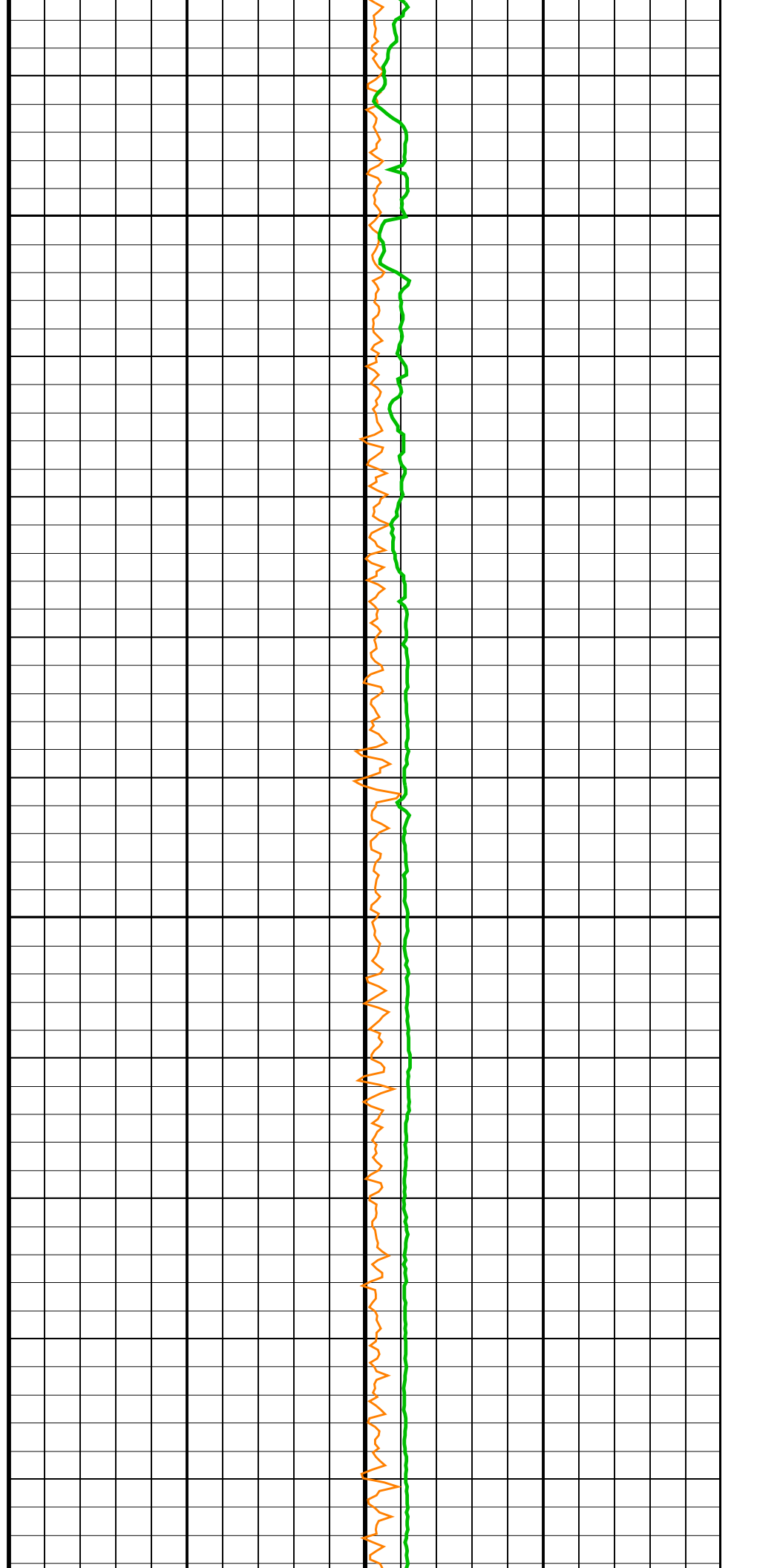




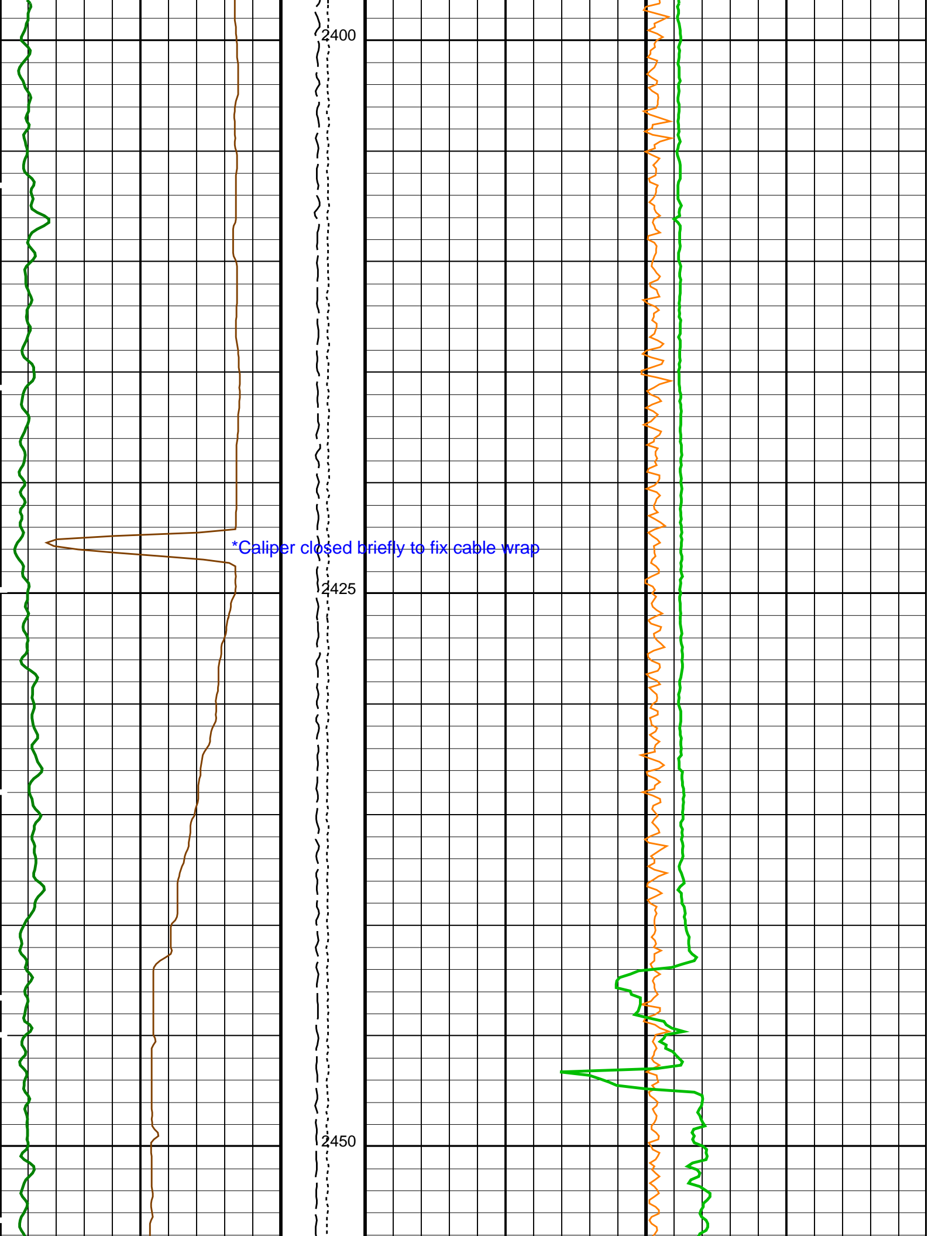


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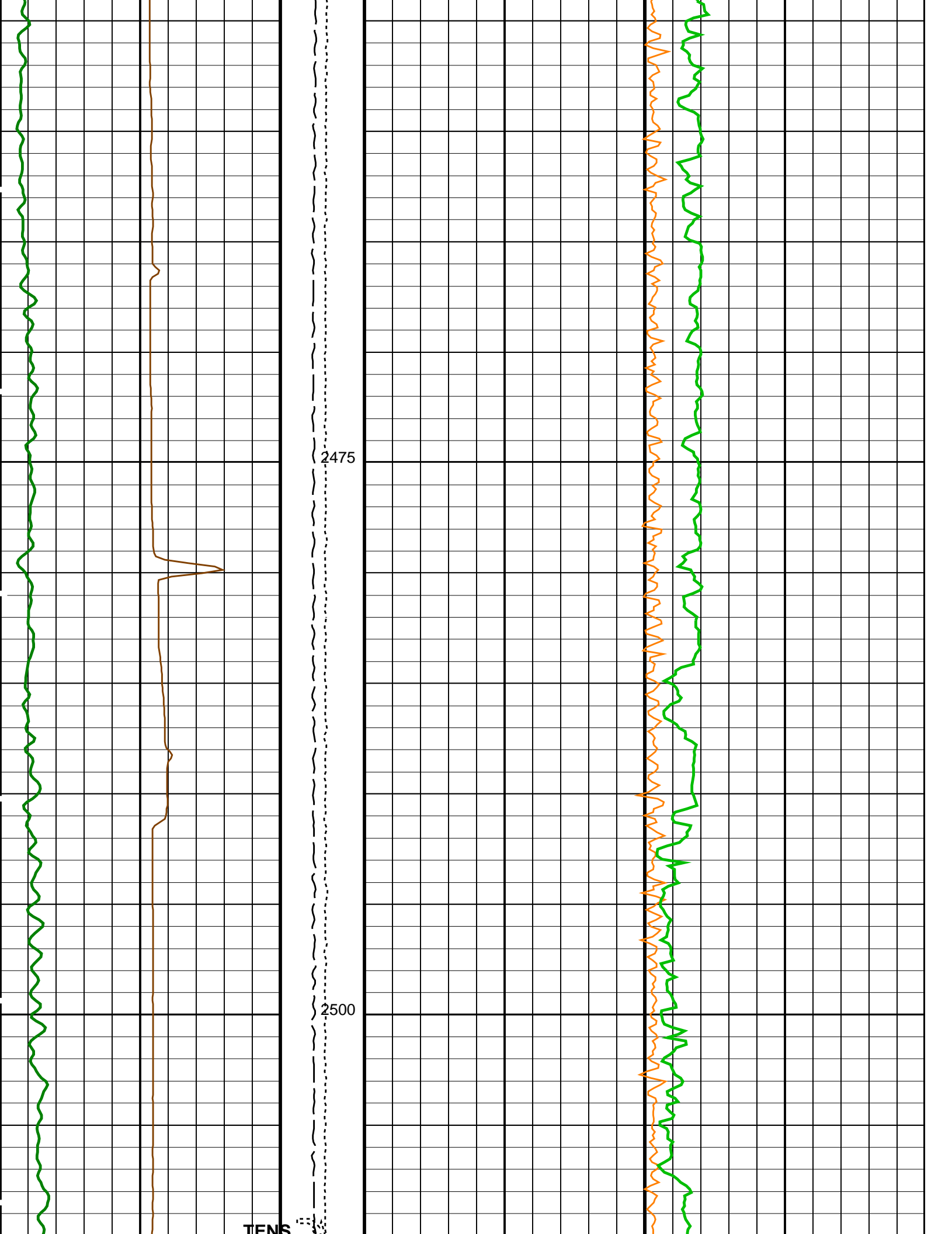
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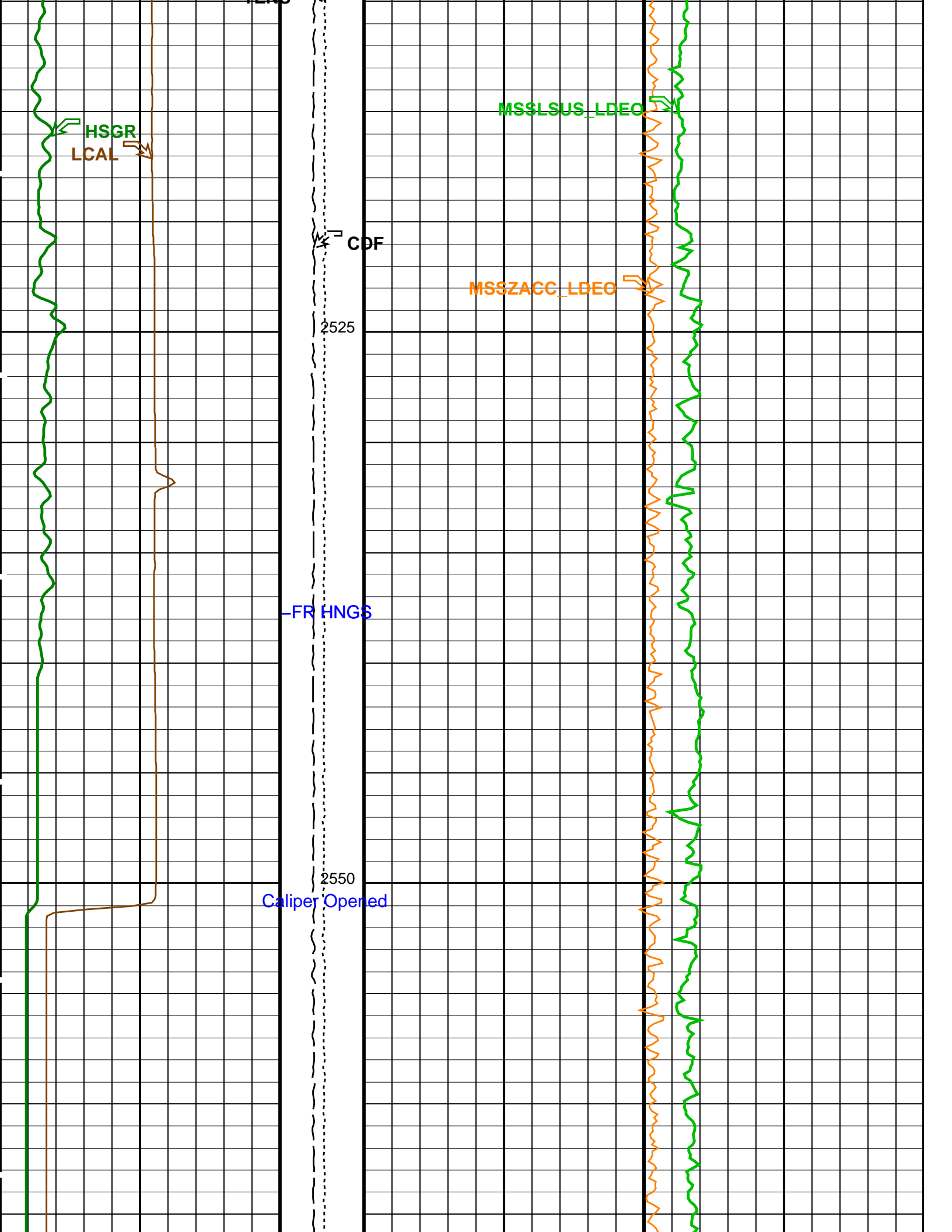




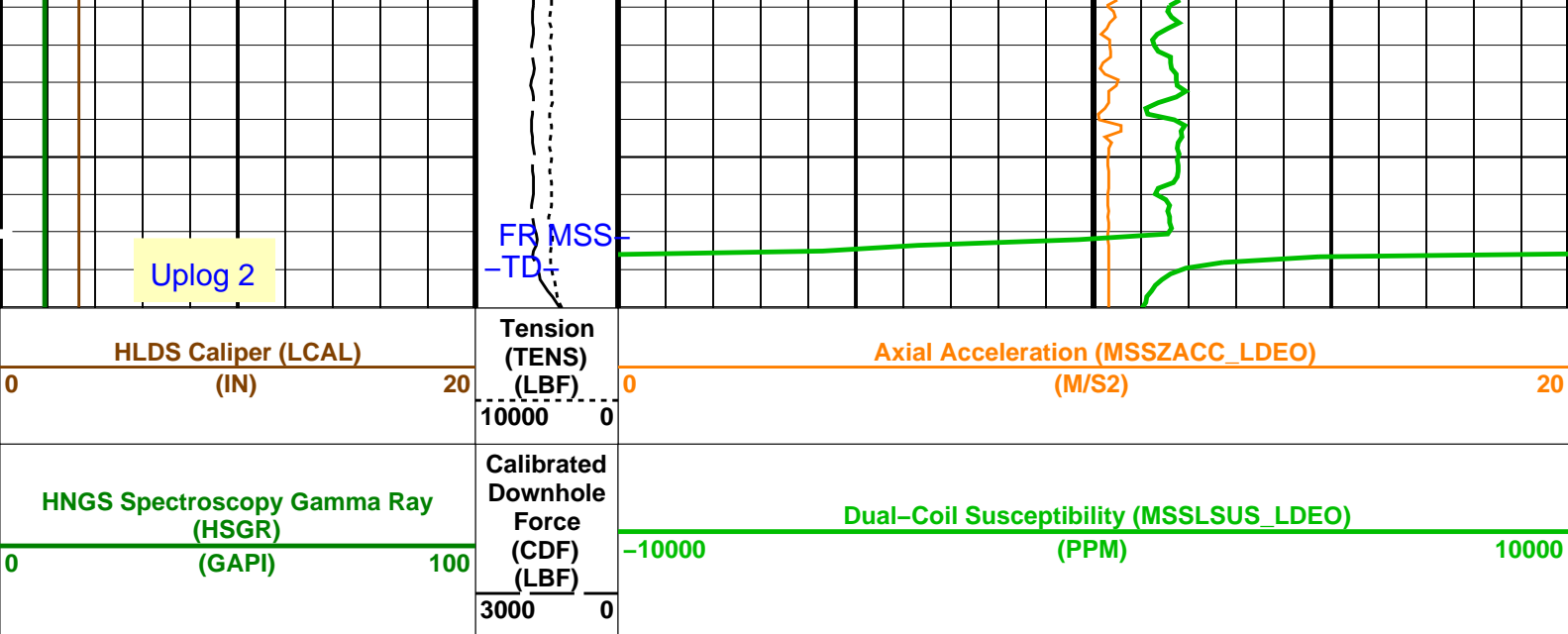












### PIP SUMMARY

Time Mark Every 60 S

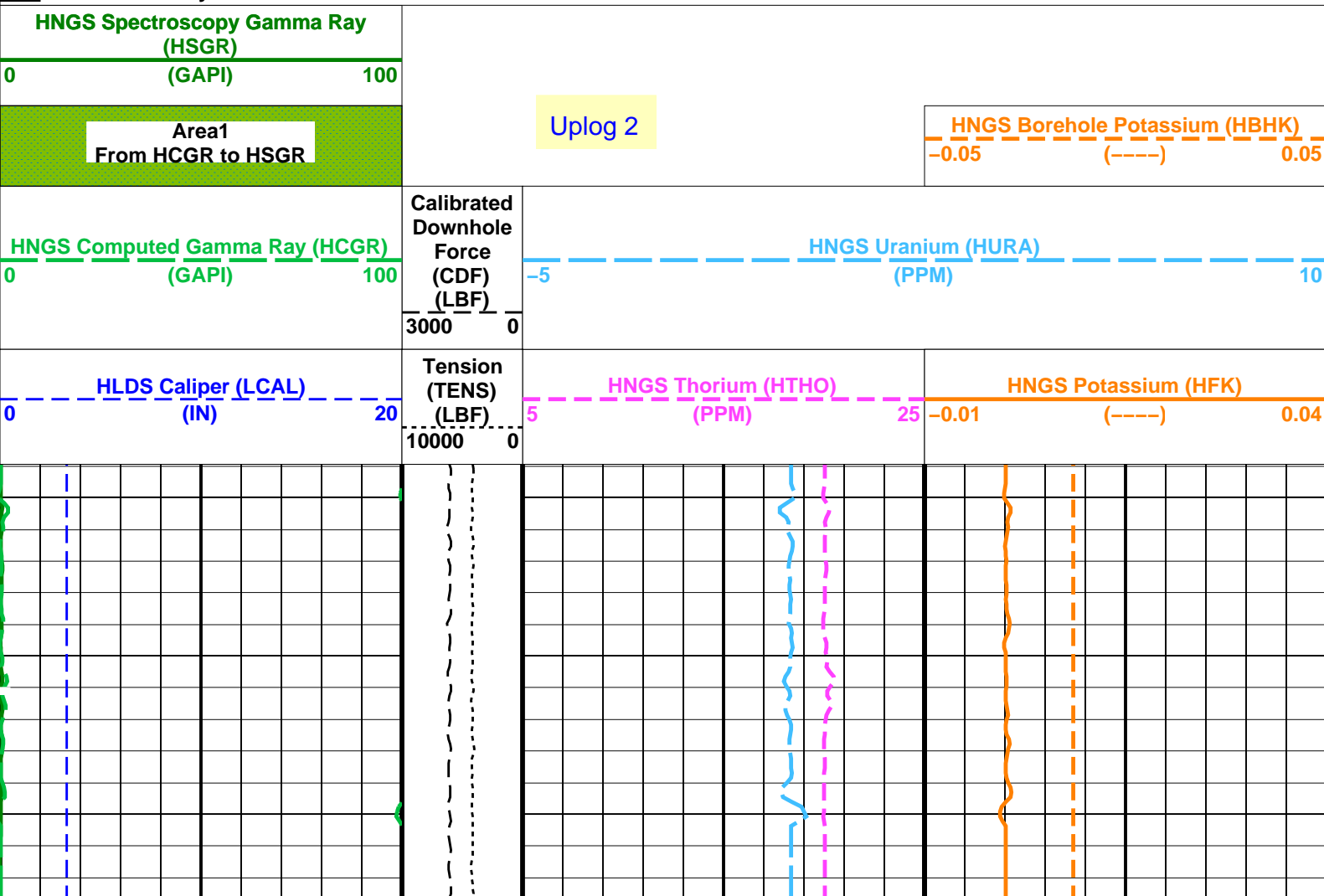
## Parameters

DLIS Name	Description	Value
HRLT-B: High Resolution Laterolog Array - B		
BHS	Borehole Status	OPEN
BHT	Bottom Hole Temperature (used in calculations)	7 DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE
CALTEMP	HRLTB Calibration Temperature	11.1799 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
PROCINV	Inversion Selection	ON
PROCMLF	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RXO
PROCMSO	Mechanical Standoff Fin Size	0 IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute
PROCSP0	Sonde Position	Centered
SHT	Surface Hole Temperature	20 DEGC
HLDS: Hostile Litho-Density Sonde		
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	1500 V

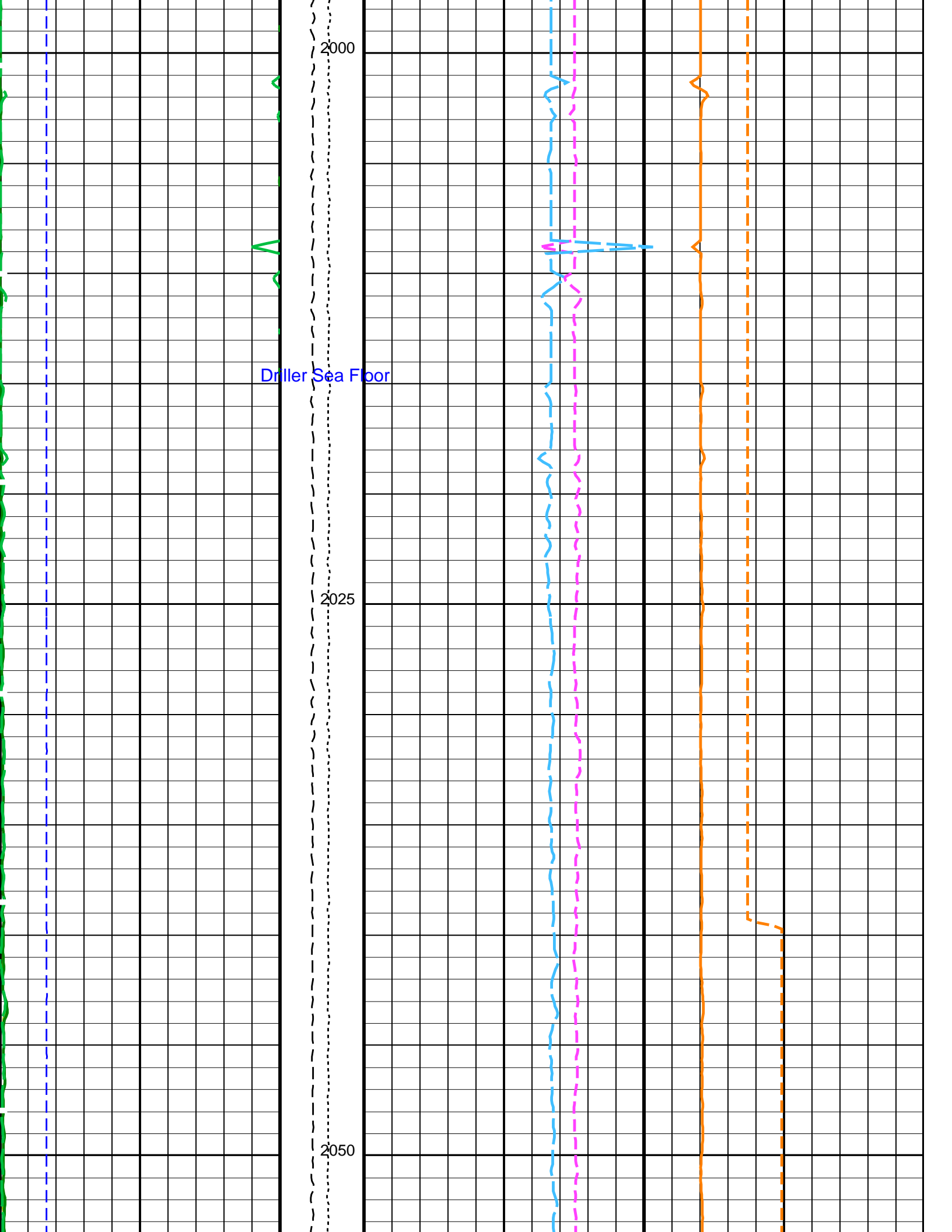


PSDL	HLDS LS Pulse Shape Compensation DAC	30000	
PSDS	HLDS SS Pulse Shape Compensation DAC	30000	
PSML	HLDS LS Pulse Shape Compensation Mode	AUTO	
PSMS	HLDS SS Pulse Shape Compensation Mode	AUTO	
APS-C: Accelerator-Porosity Tool			
	APS Software Version	5	
AASD	APS Thermal and Array Detectors High Voltage Setting	1976.24	V
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2067.55	V
AHCS	APS Holesize Correction Source	GCSE	
AHSS	APS Holesize Correction Switch	ON	
AMTY	APS Environmental Corrections Mud Type	WaterBaseBarite	
ANSD	APS Near Detector High Voltage Setting	1737.8	V
ASOS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	ON	
BHFL_APS	APS TNPH Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	7	DEGC
BSCO_APS	APS TNPH Borehole Salinity Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
DSCO_APS	APS TNPH Density Source Correction Option	MEASURED	
FSAL	Formation Salinity	-50000	PPM
FSCO_APS	APS TNPH 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_APS	APS TNPH Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO_APS	APS TNPH Mud Cake Correction Option	YES	
MCOR_APS	APS TNPH Mud Correction	NATU	
MWCO_APS	APS TNPH Mud Weight Correction Option	YES	
NARC	APS Near/Array Calibration Ratio	1.08341	
NFRC	APS Near/Far Calibration Ratio	0.942369	
PTCO_APS	APS TNPH Pressure/Temperature Correction Option	NO	
SHT	Surface Hole Temperature	20	DEGC
TNCO_APS	APS TNPH Computation Option	YES	
HNGBS-BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGBS Detector 1 Barite Constant	1	
BAR2	HNGBS Detector 2 Barite Constant	1	
BHK	HNGBS 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	HNGBS 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	HNGBS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGBS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGBS Borehole Potassium Running Average	-0.000306055	
HALF	HNGBS Alpha Filter Length	60	IN
HCRB	HNGBS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGBS Processing Enable	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
S1BI	HNGBS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGBS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGBS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	20	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGBS Detector 1 Variable Barite Factor Running Average	1.02619	
VBA2	HNGBS Detector 2 Variable Barite Factor Running Average	1.07873	
System and Miscellaneous			
ALTDPCCHAN	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	1.02	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	8451.44	FT
TDD	Total Depth - Driller	2576.00	M

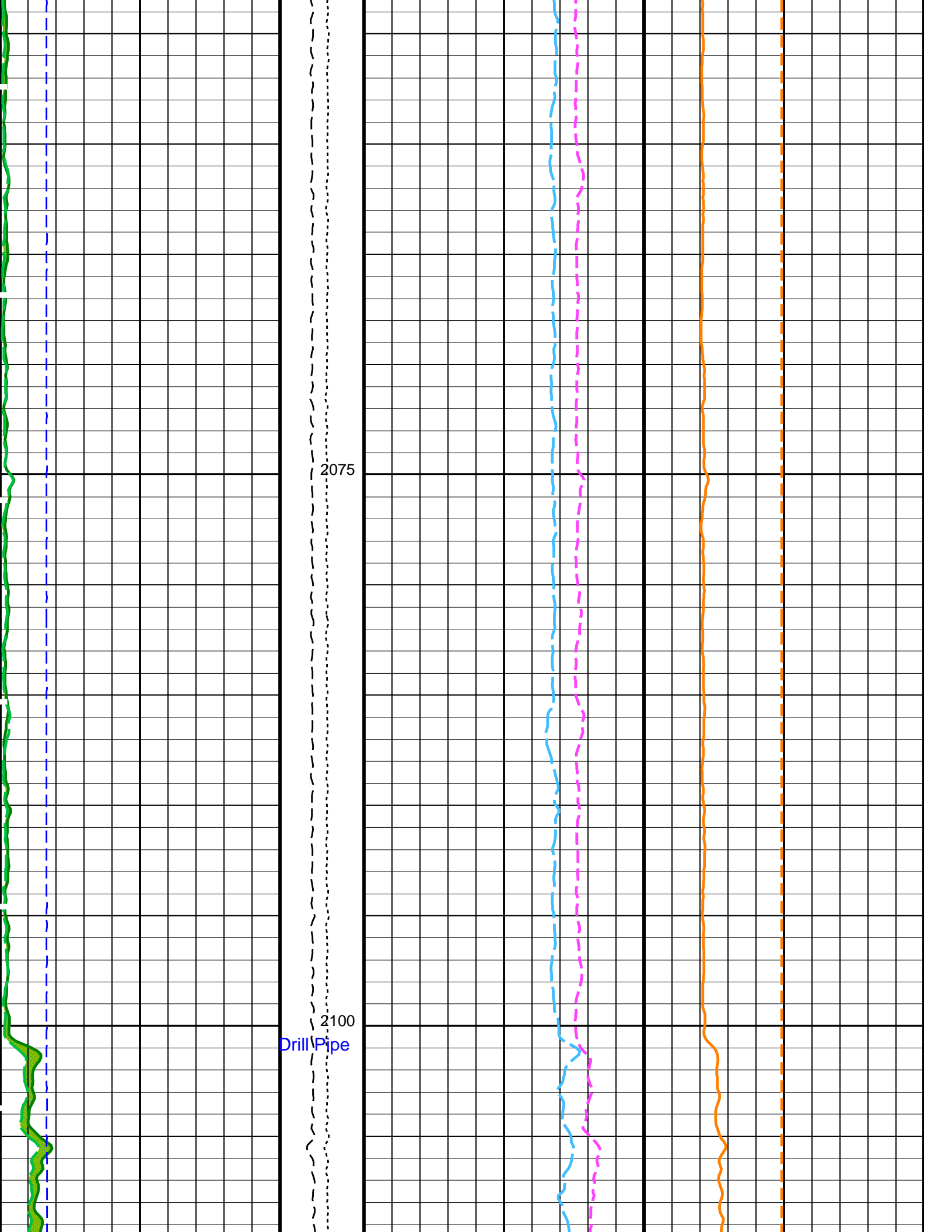




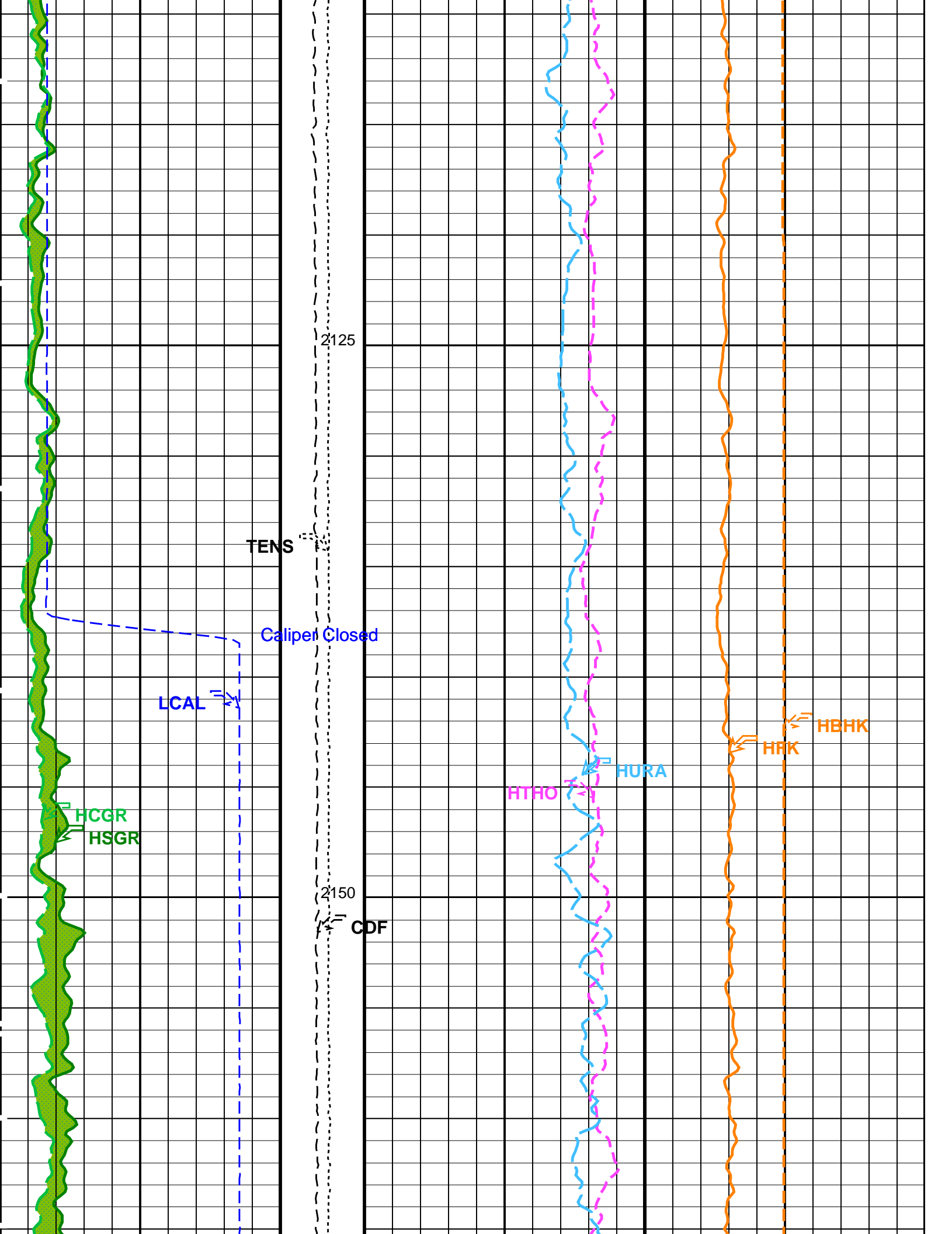




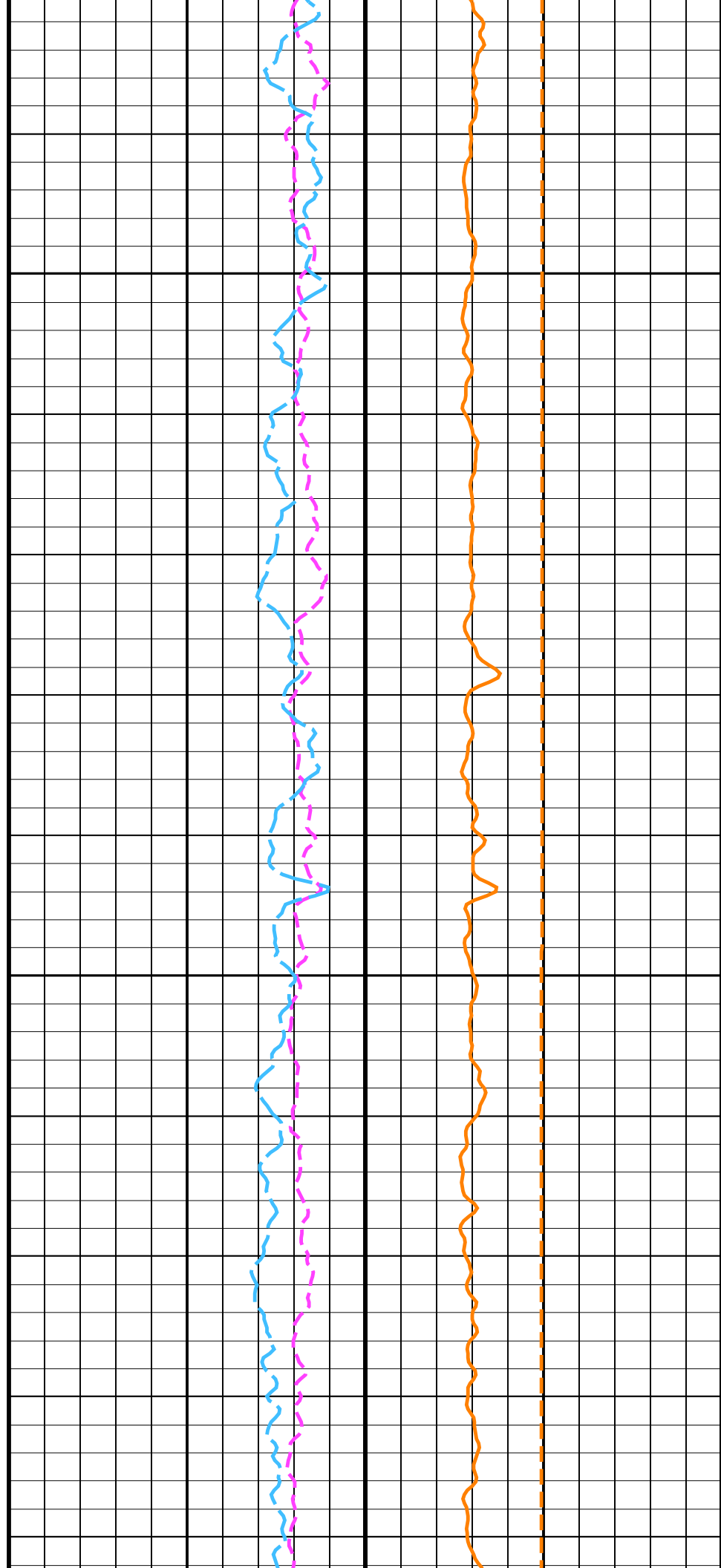
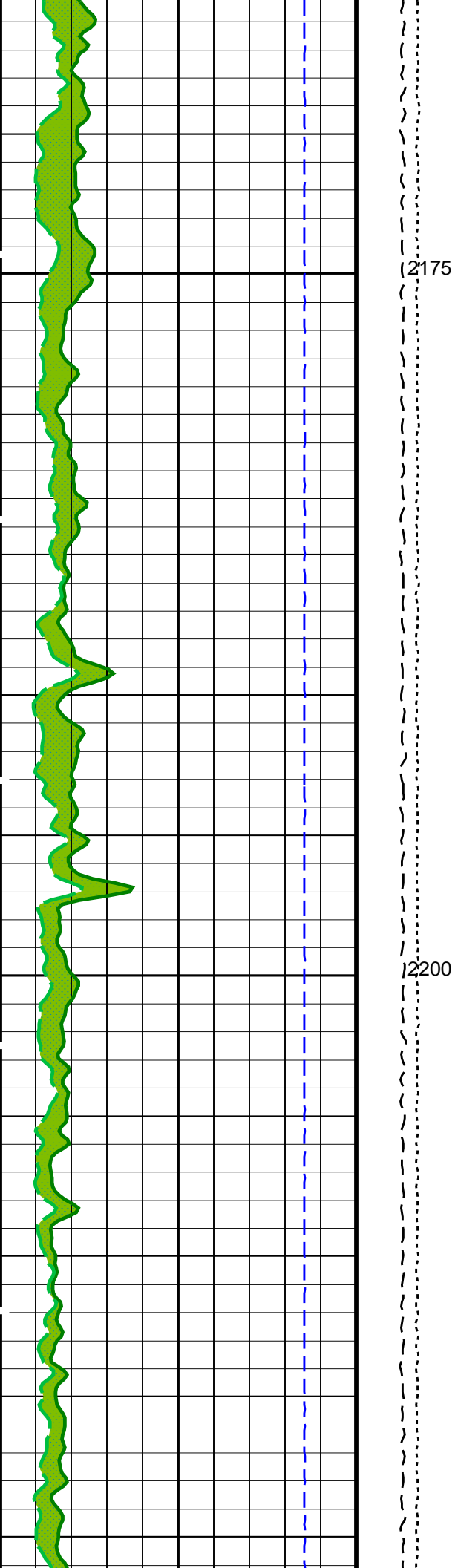




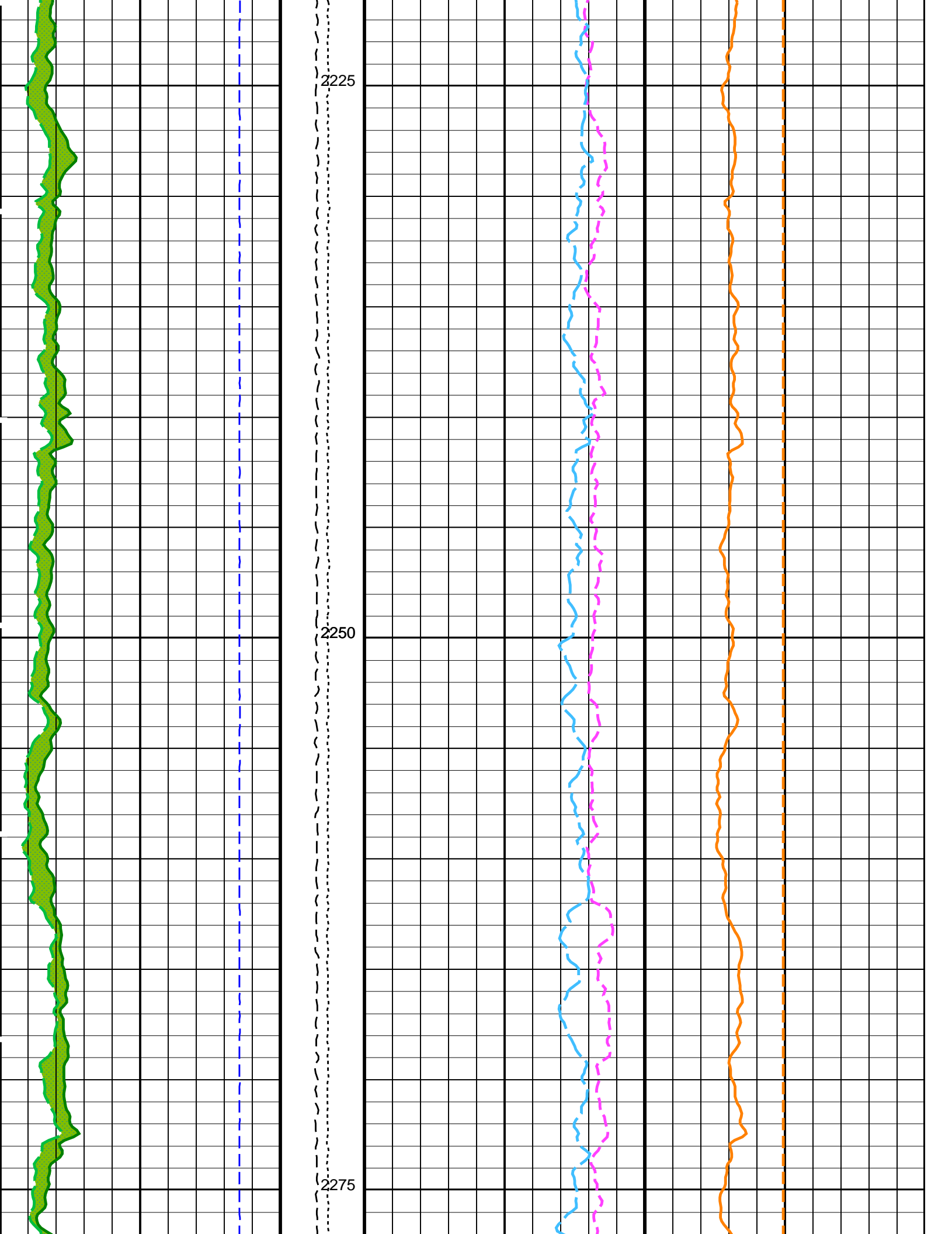




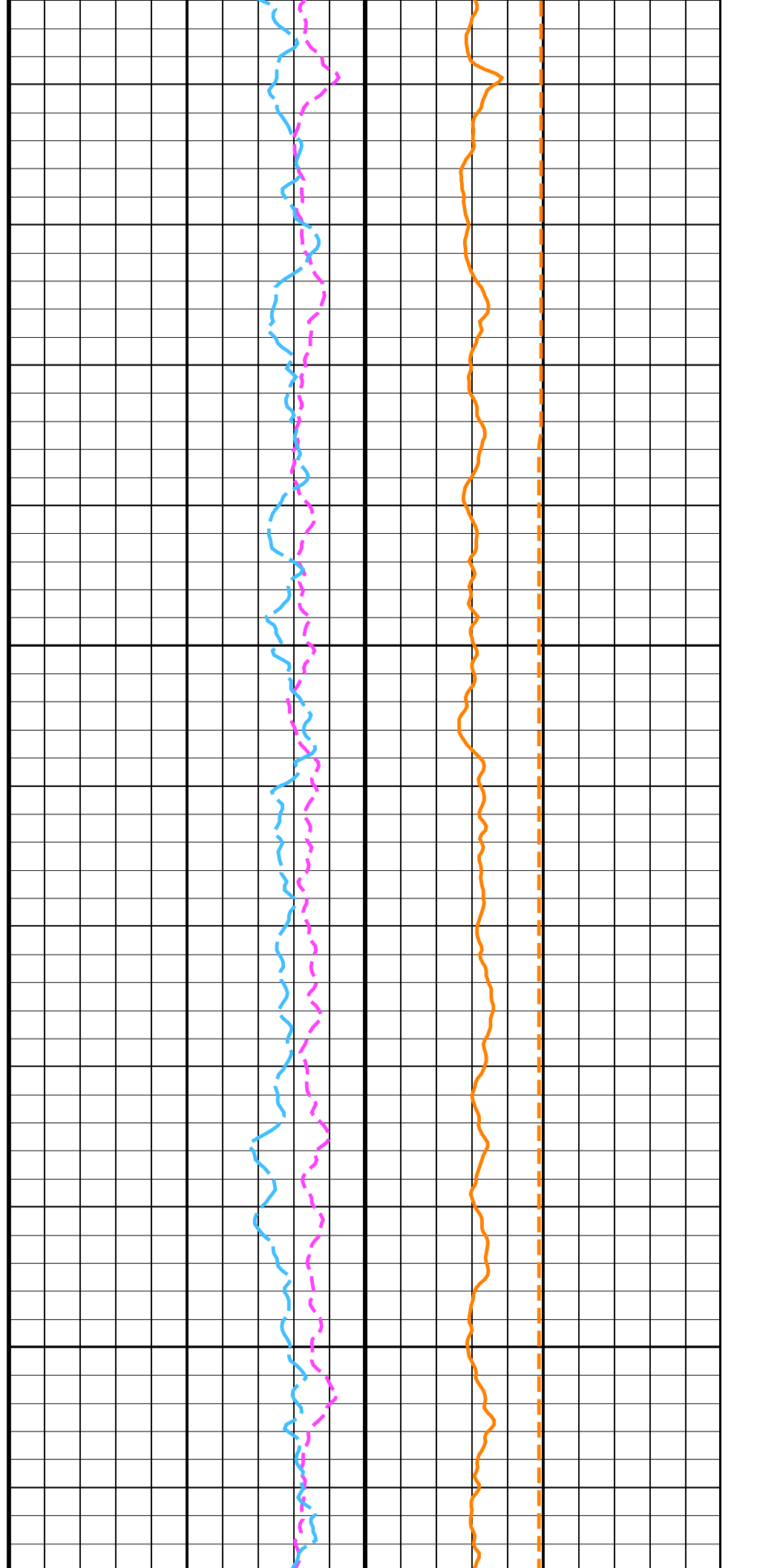
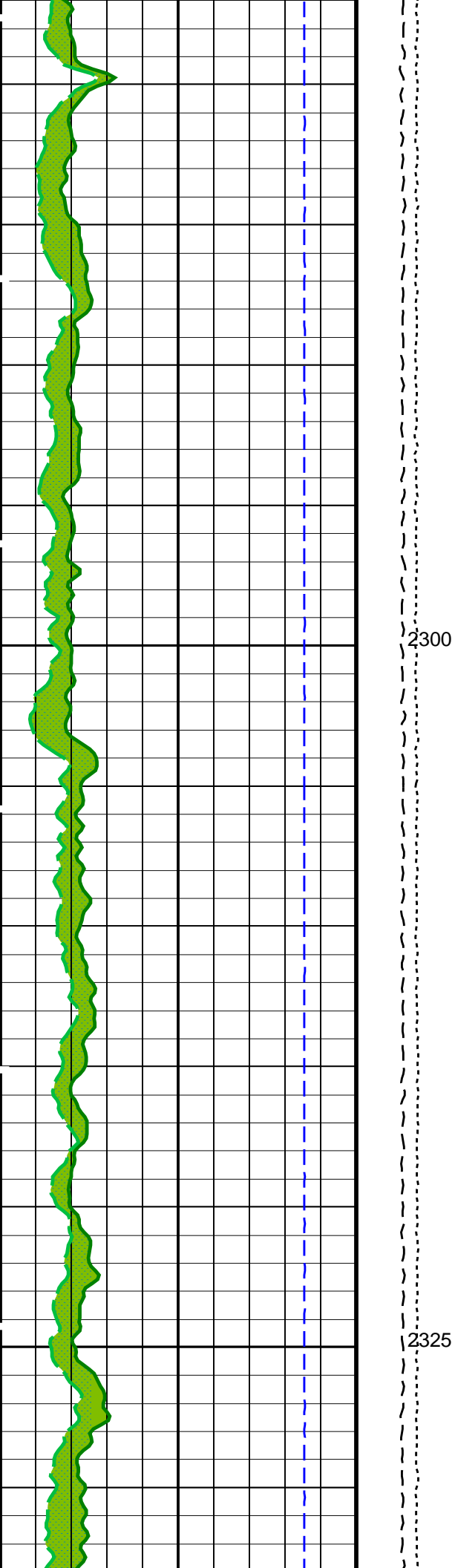




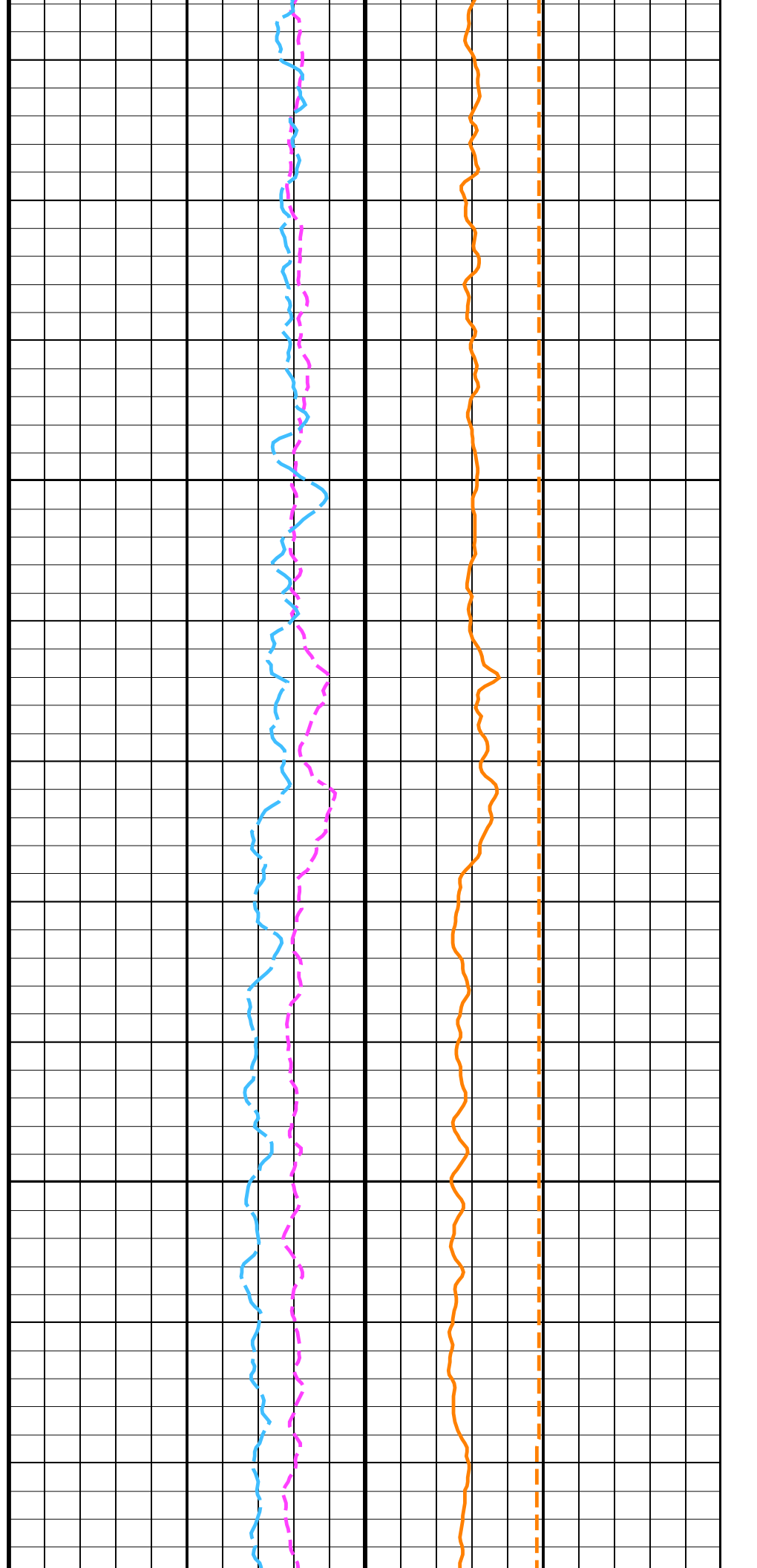
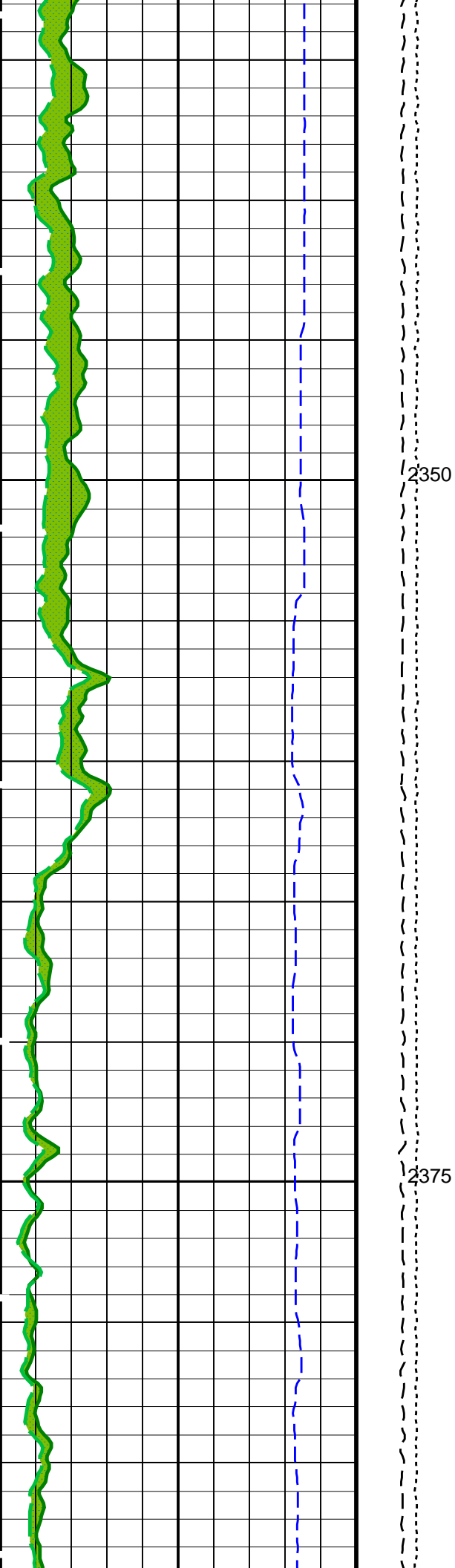




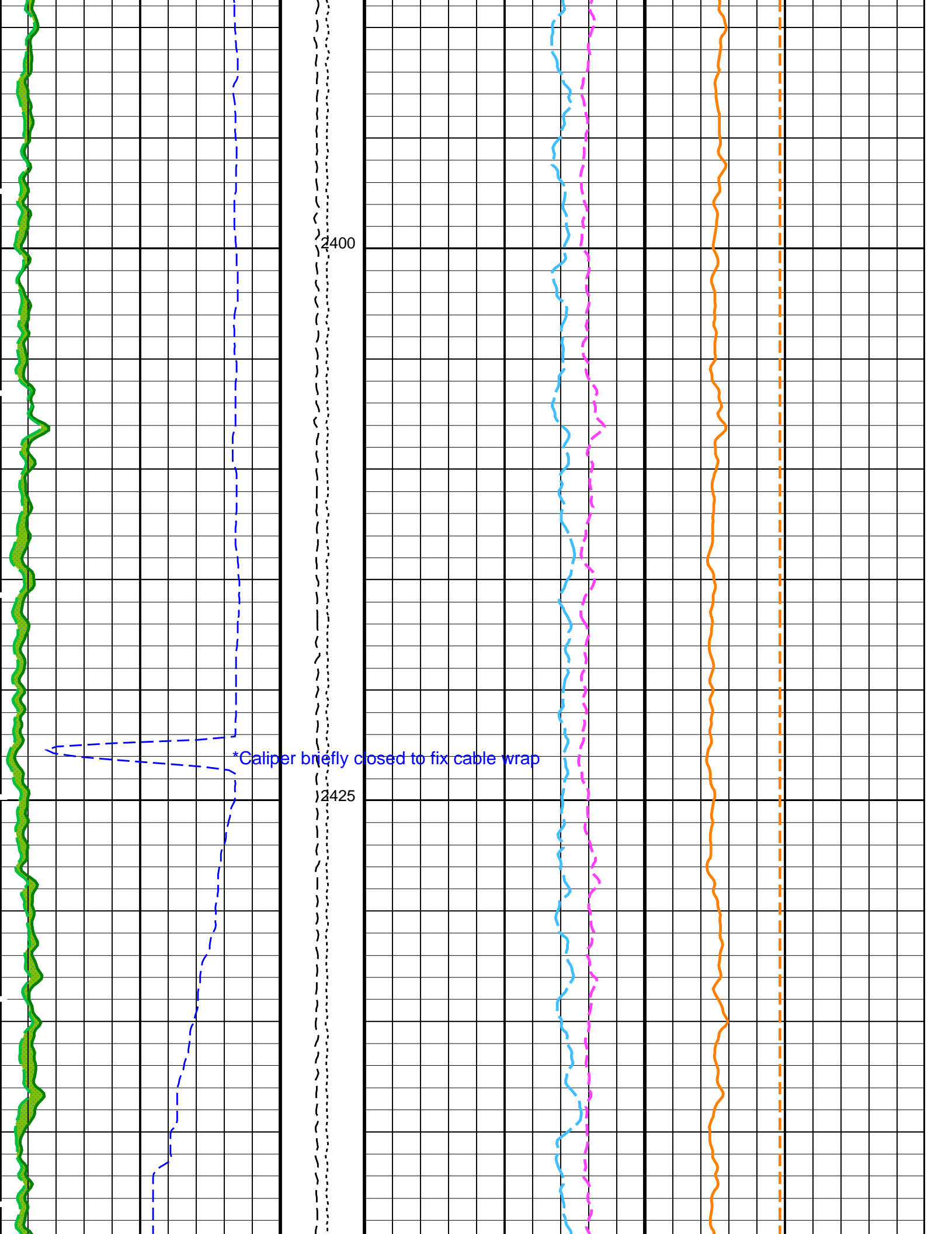




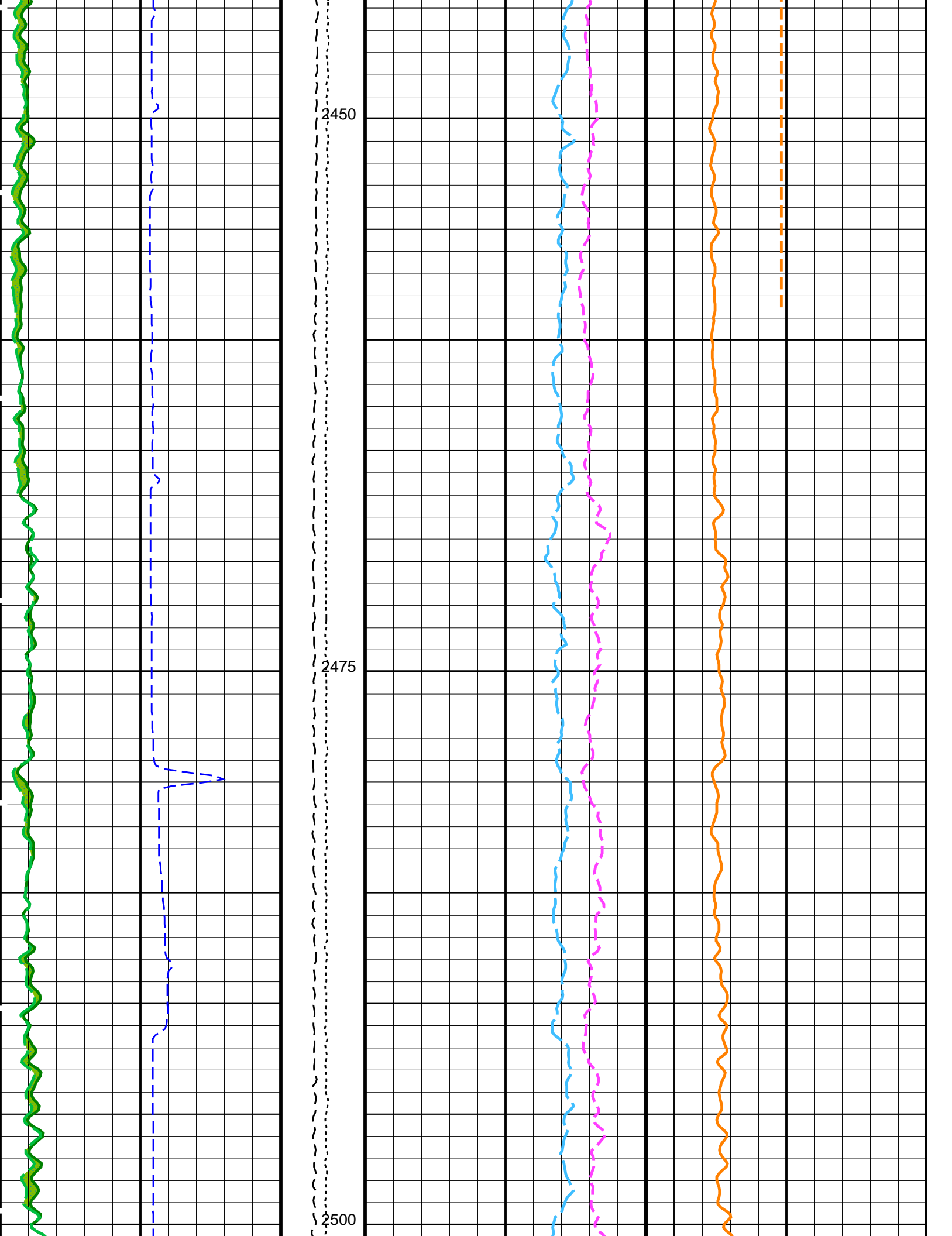




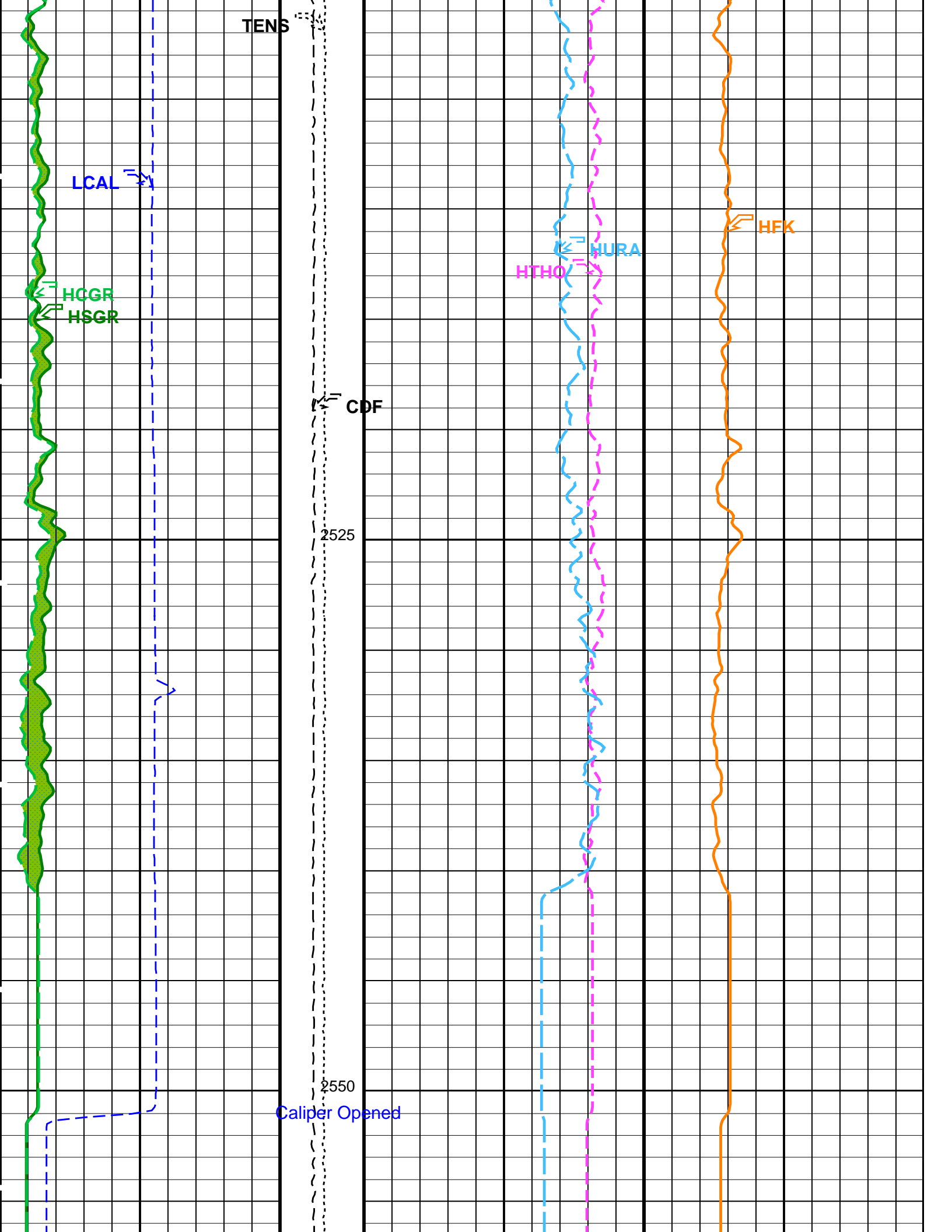


















TPOS	Tool Position	ECCE
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.02619
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.07873
BS	System and Miscellaneous Bit Size	9.875 IN

Format: HNGSYields
Vertical Scale: 1:200
Graphics File Created: 19-Jul-2021 20:42

OP System Version: 19C0-187			
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
APS-C	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	DTC-H	19C0-187

Output DLIS Files			
DEFAULT	MSS_LDEO_HRLA_LDL_011LUP	FN:17	PRODUCER 19-Jul-2021 20:42
BACKUP	MSS_LDEO_HRLA_LDL_011LUP	FN:18	PRODUCER 19-Jul-2021 20:42

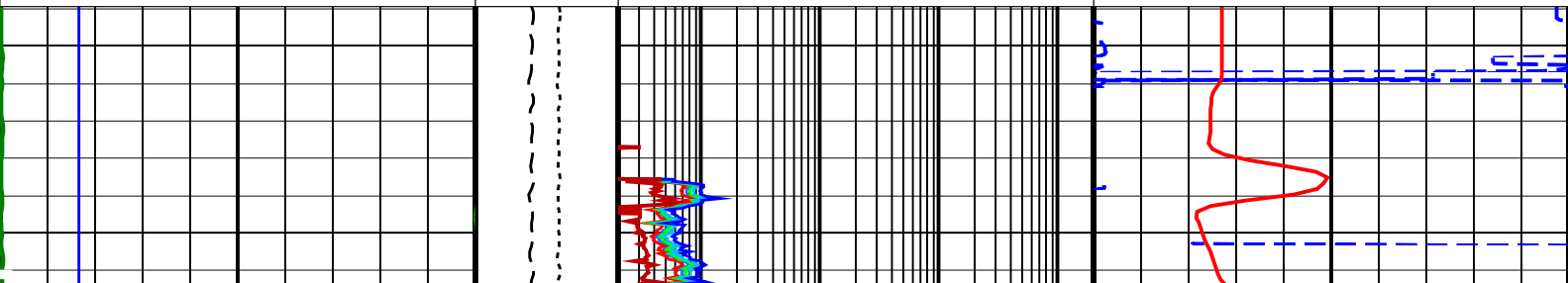
Output DLIS Files			
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BACKUP	MSS_LDEO_HRLA_LDL_011LUP	FN:18	PRODUCER 19-Jul-2021 20:42 2574.0 M 1984.2 M

OP System Version: 19C0-187			
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
APS-C	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	DTC-H	19C0-187

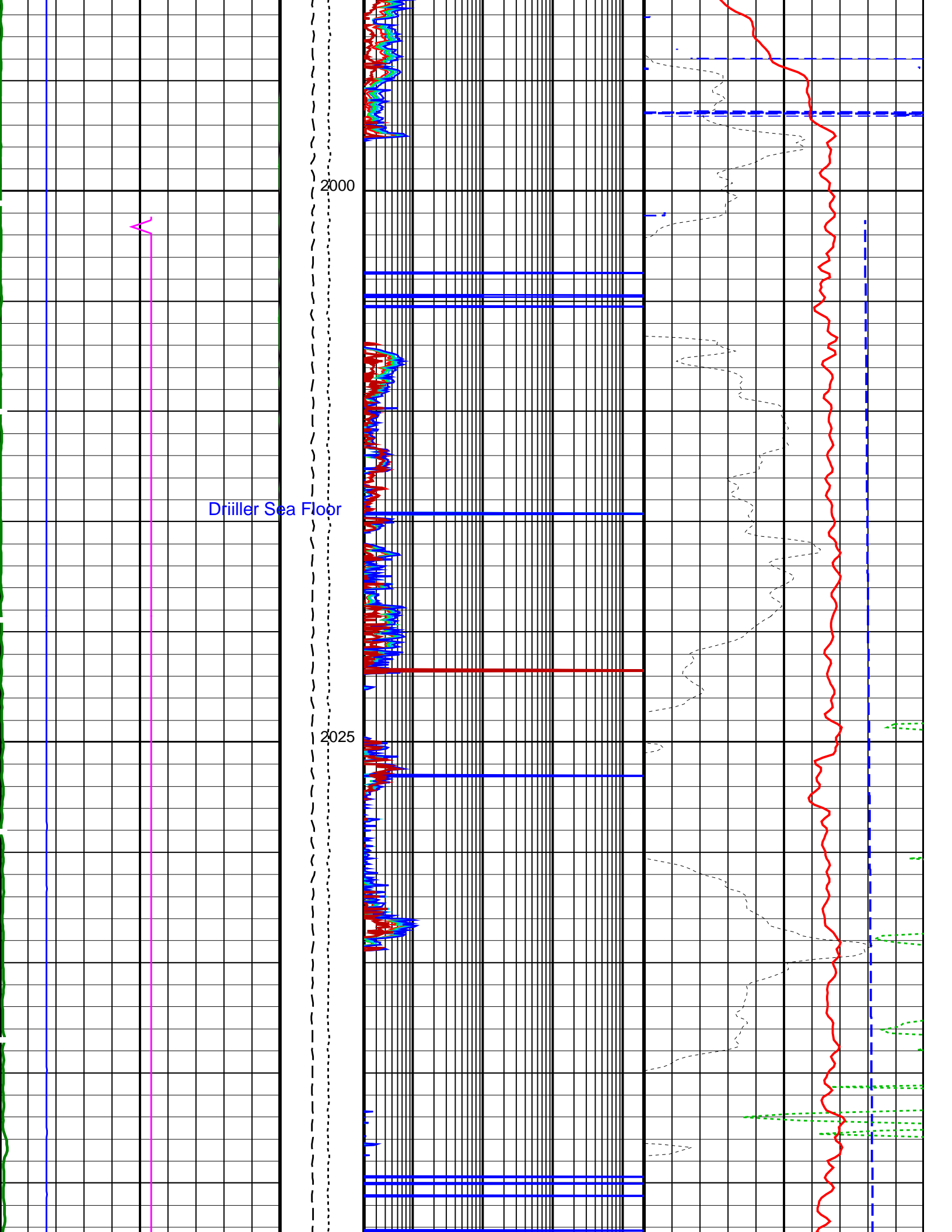
PIP SUMMARY			
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Time Mark Every 60 S

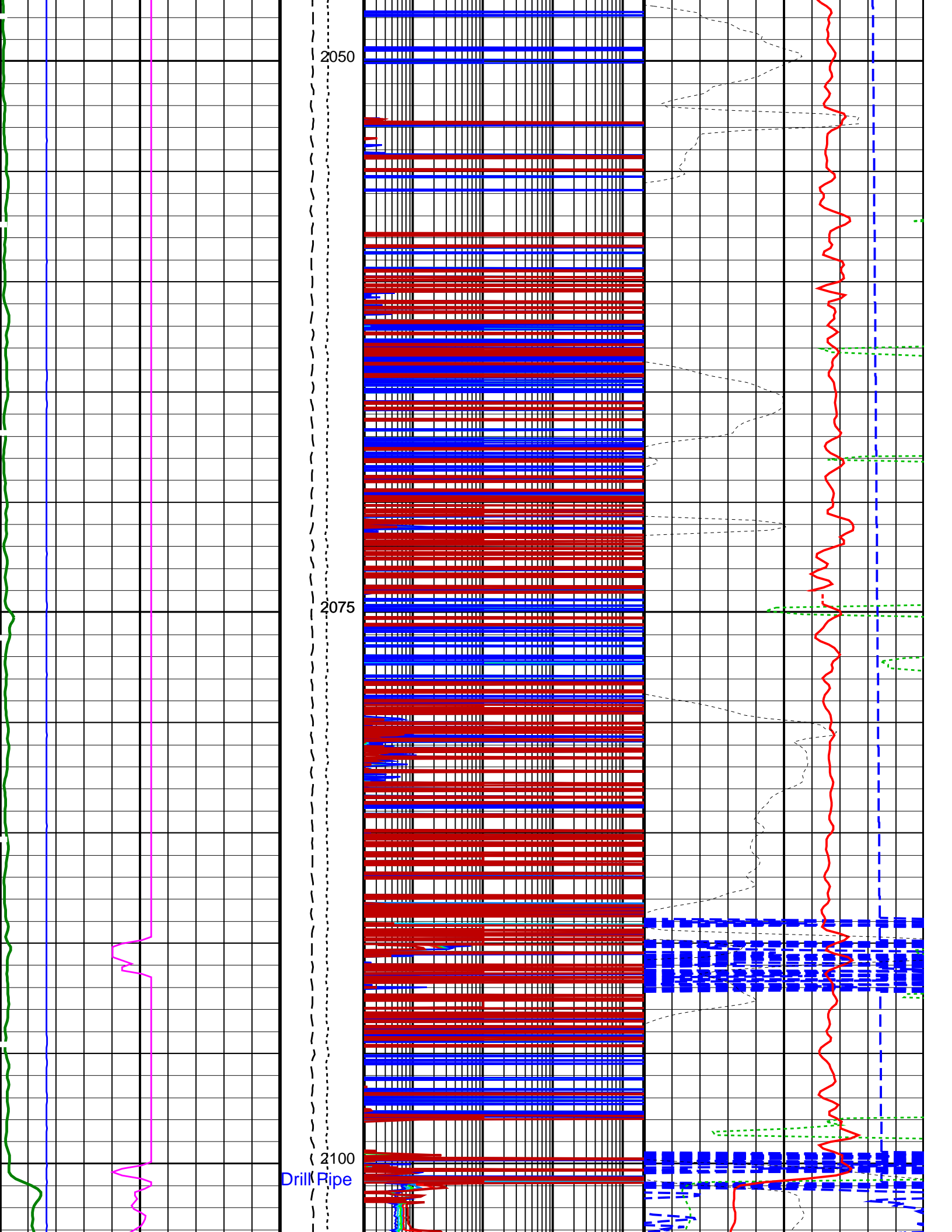
Uplug 2			HRLT True Resistivity (RT_HRLT)				
			0.2	(OHMM)	2000		
			HRLT Resistivity 1 (RLA1)				
			0.2	(OHMM)	2000		
				HRLT Resistivity 2 (RLA2)		HLDS Bulk Density Correction (DRH)	
				0.2	(OHMM)	2000	-0.25 (G/C3) 0.25
HNGS Spectroscopy Gamma Ray (HSGR)				HRLT Resistivity 3 (RLA3)		HLDS Bulk Density (RHOM)	
0 (GAPI) 100				0.2	(OHMM)	2000	0 (G/C3) 4
APS Effective Standoff in Limestone (STOF)		Calibrated Downhole Force (CDF) (LBF)	HRLT Resistivity 5 (RLA5)		HLDS Long Spaced Photoelectric Effect (PEFL)		
-5 (IN) 5			0.2	(OHMM)	2000	0 (----) 10	
		3000 0					
HLDS Caliper (LCAL)		Tension (TENS) (LBF)	HRLT Resistivity 4 (RLA4)		APS HR Near/Far Corrected Limestone Porosity (HFLC)		
0 (IN) 20			0.2	(OHMM)	2000	100 (PU) 0	
		10000 0					



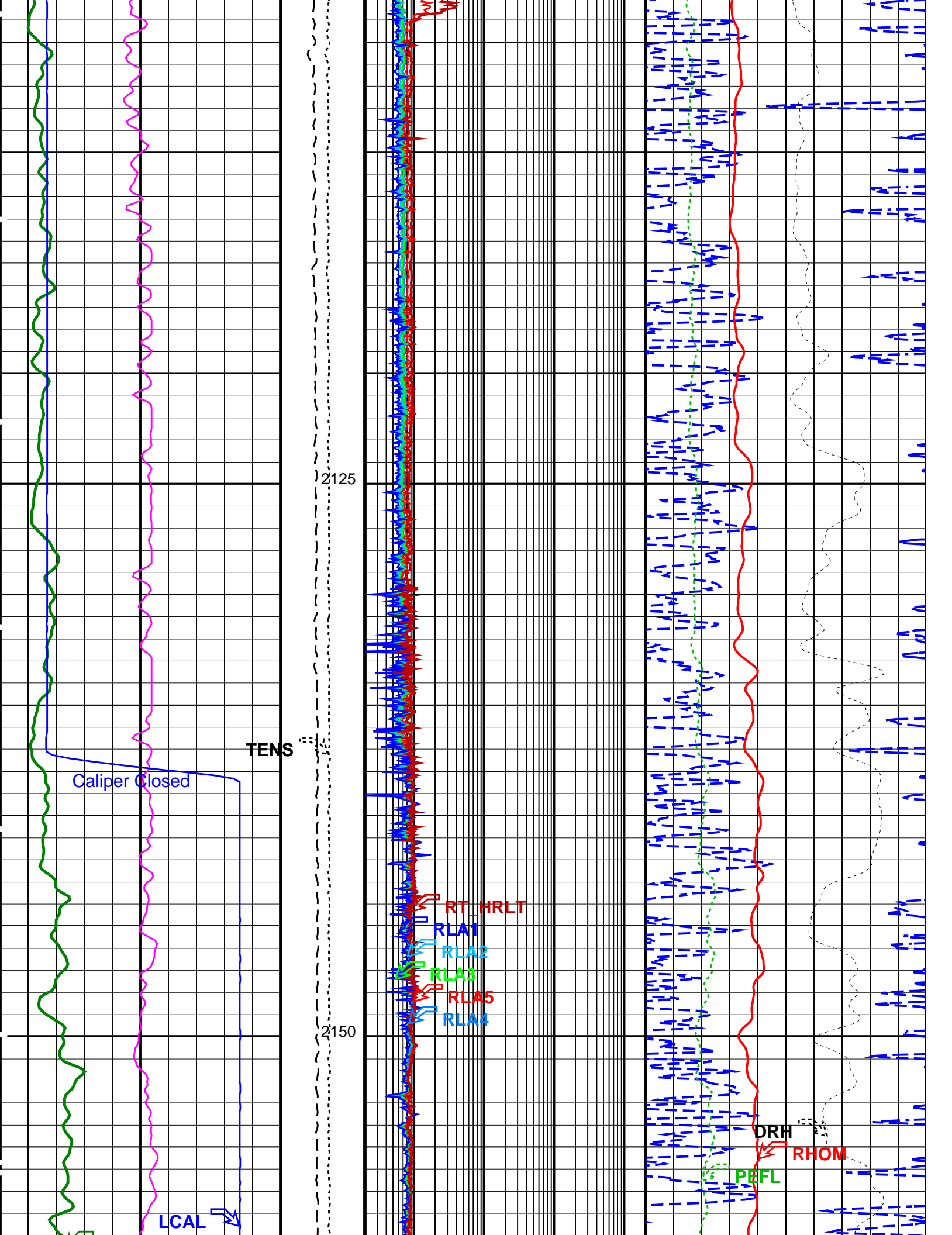




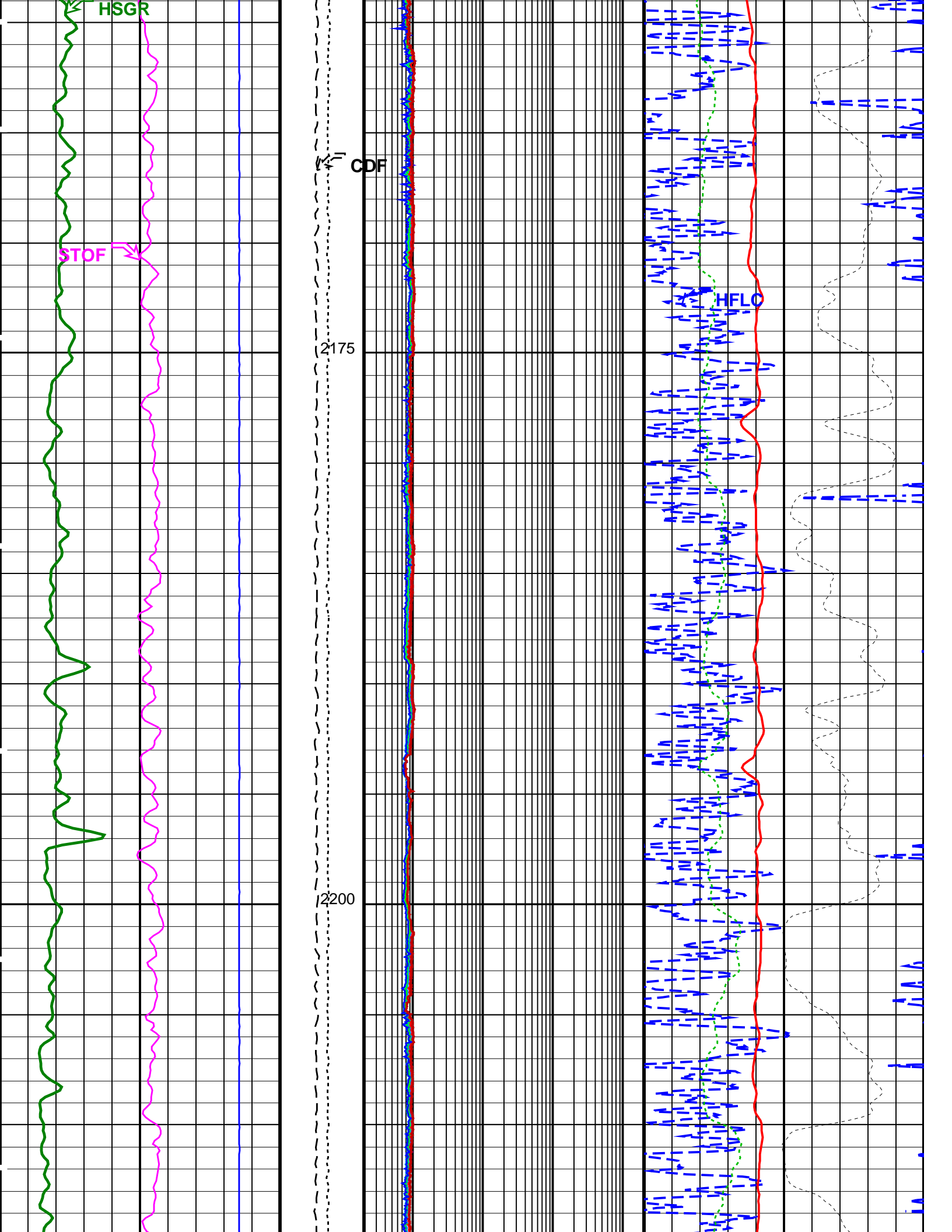




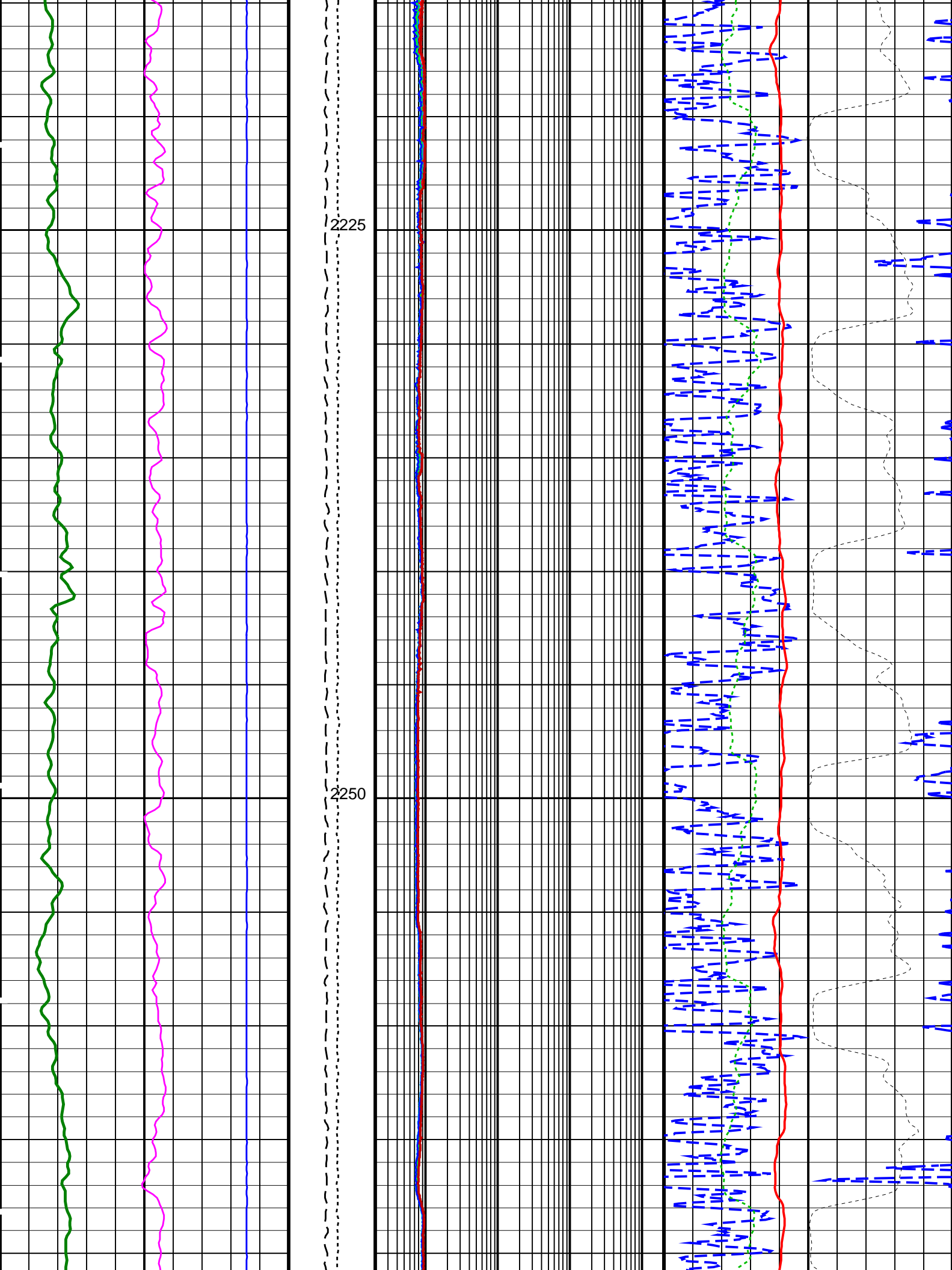




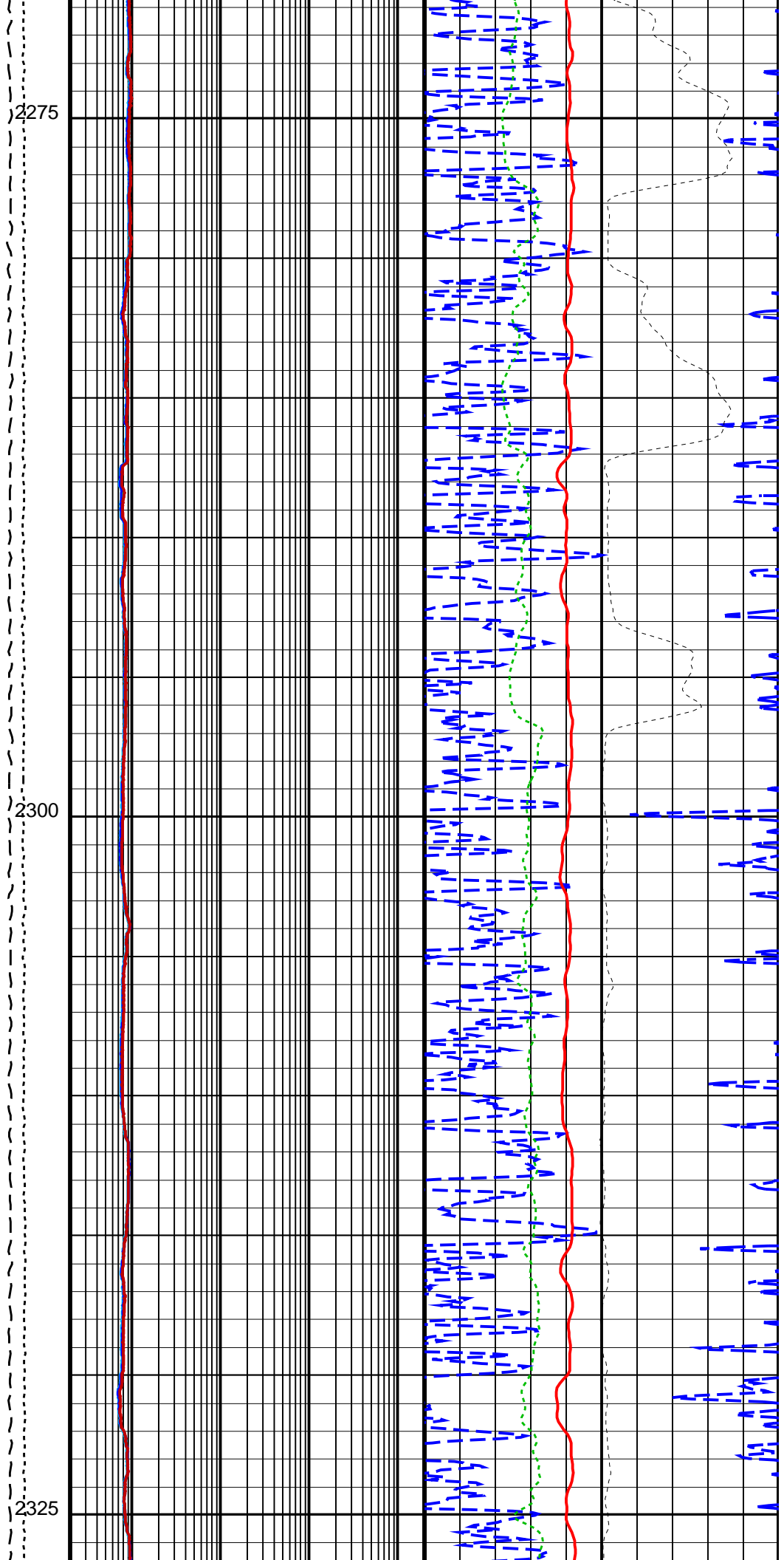
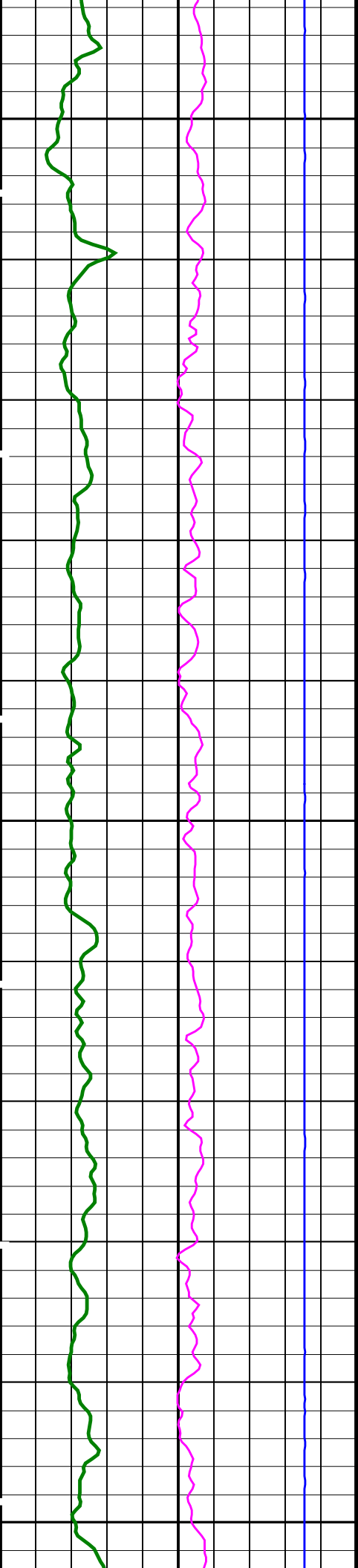




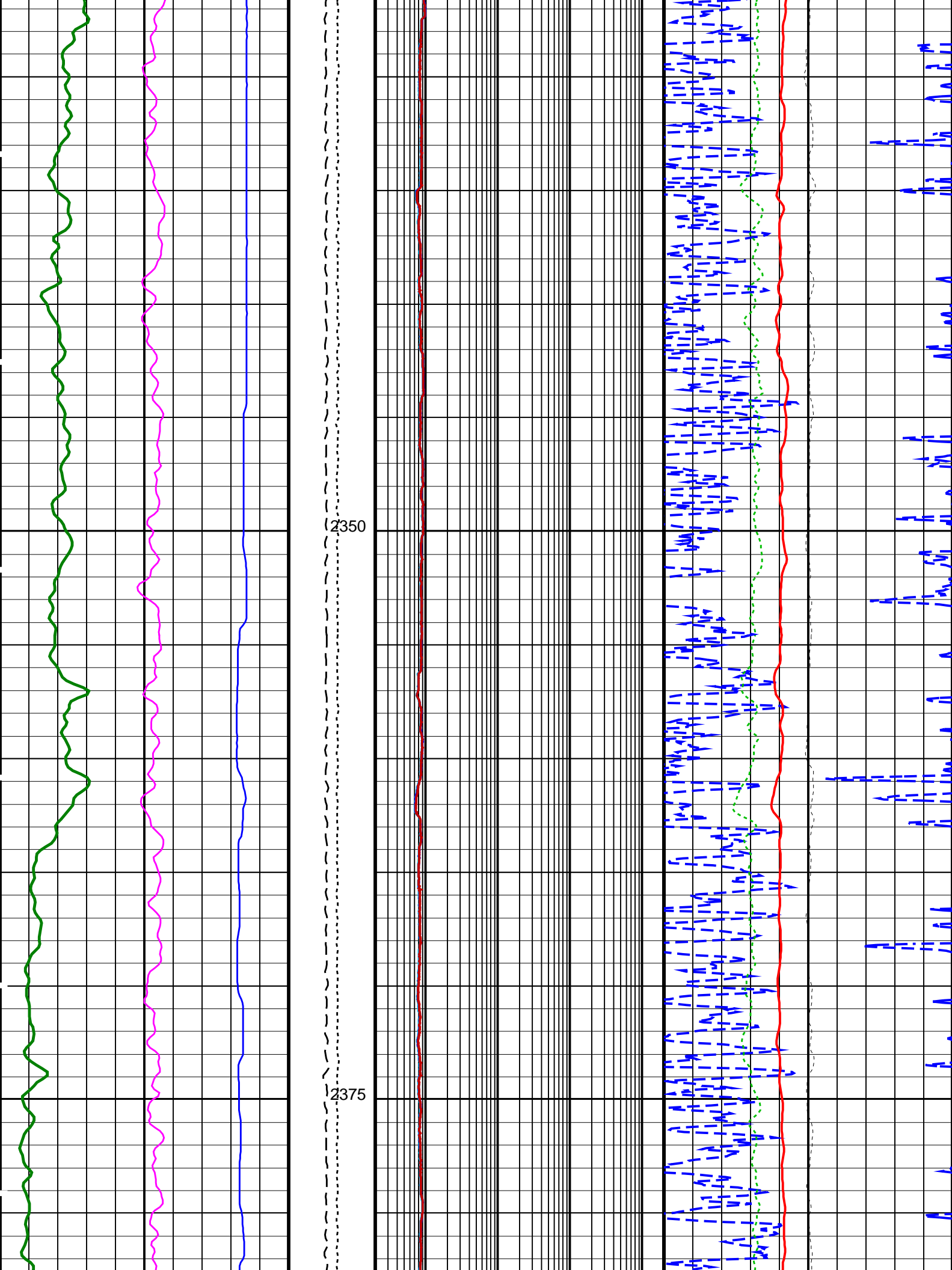




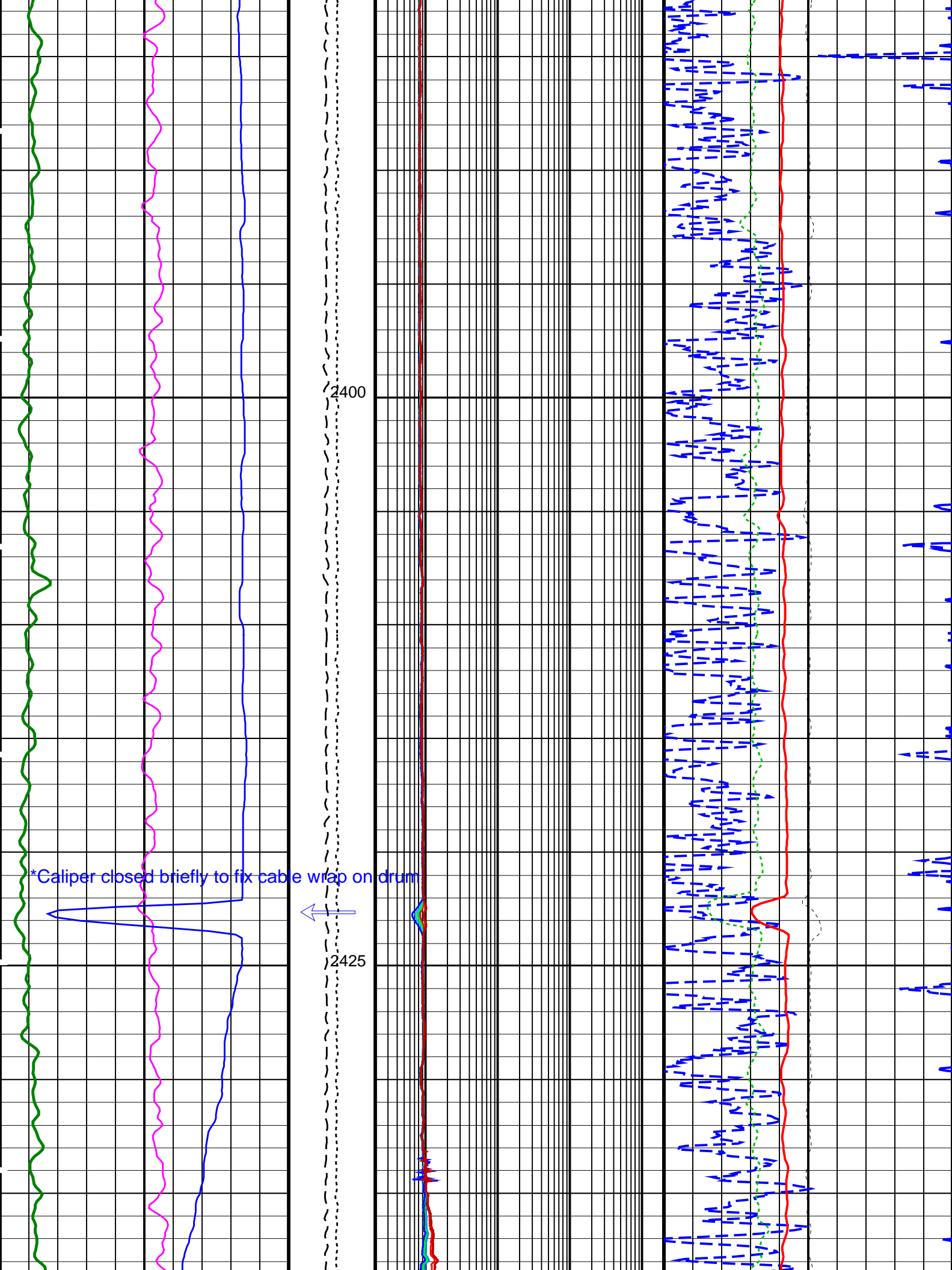




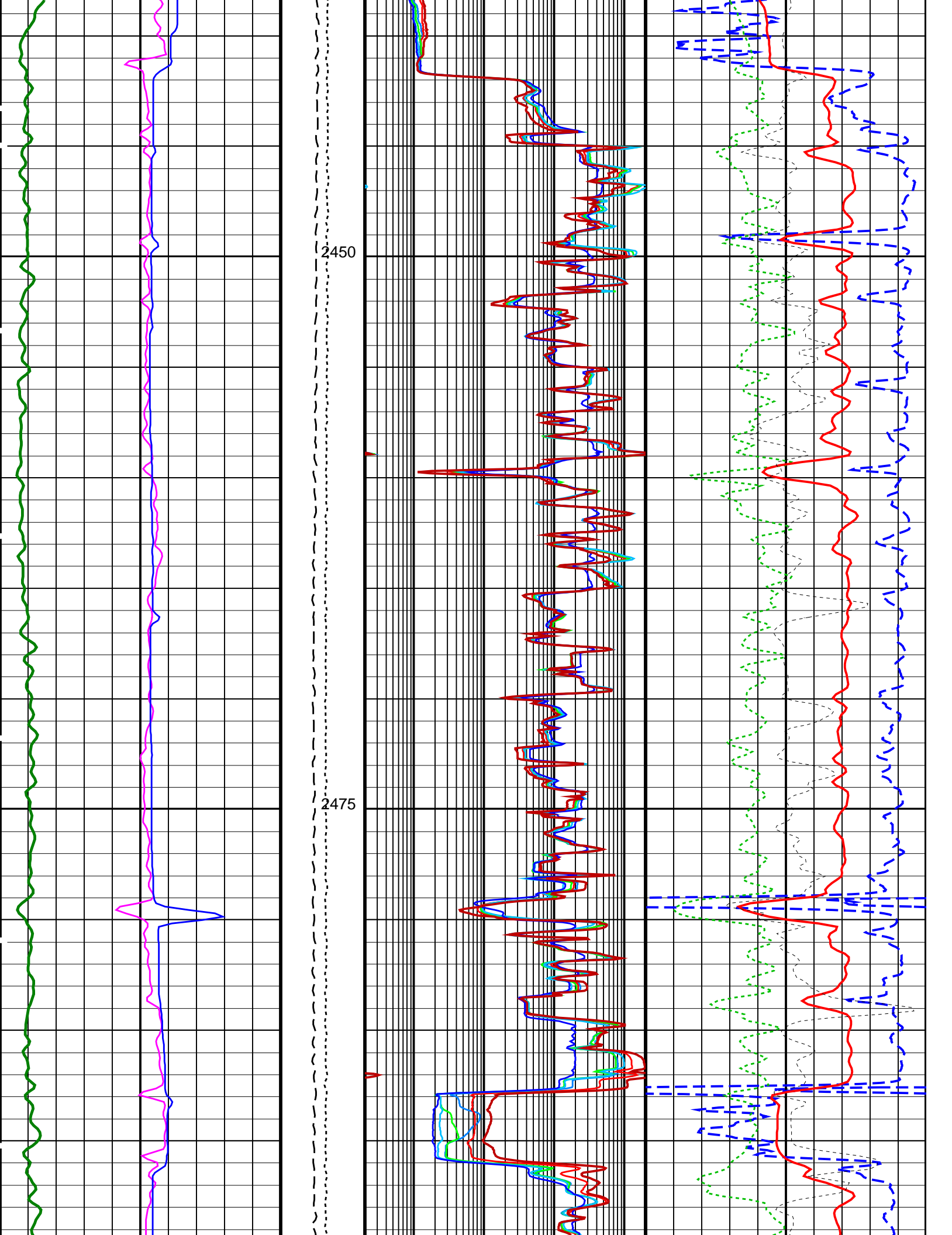




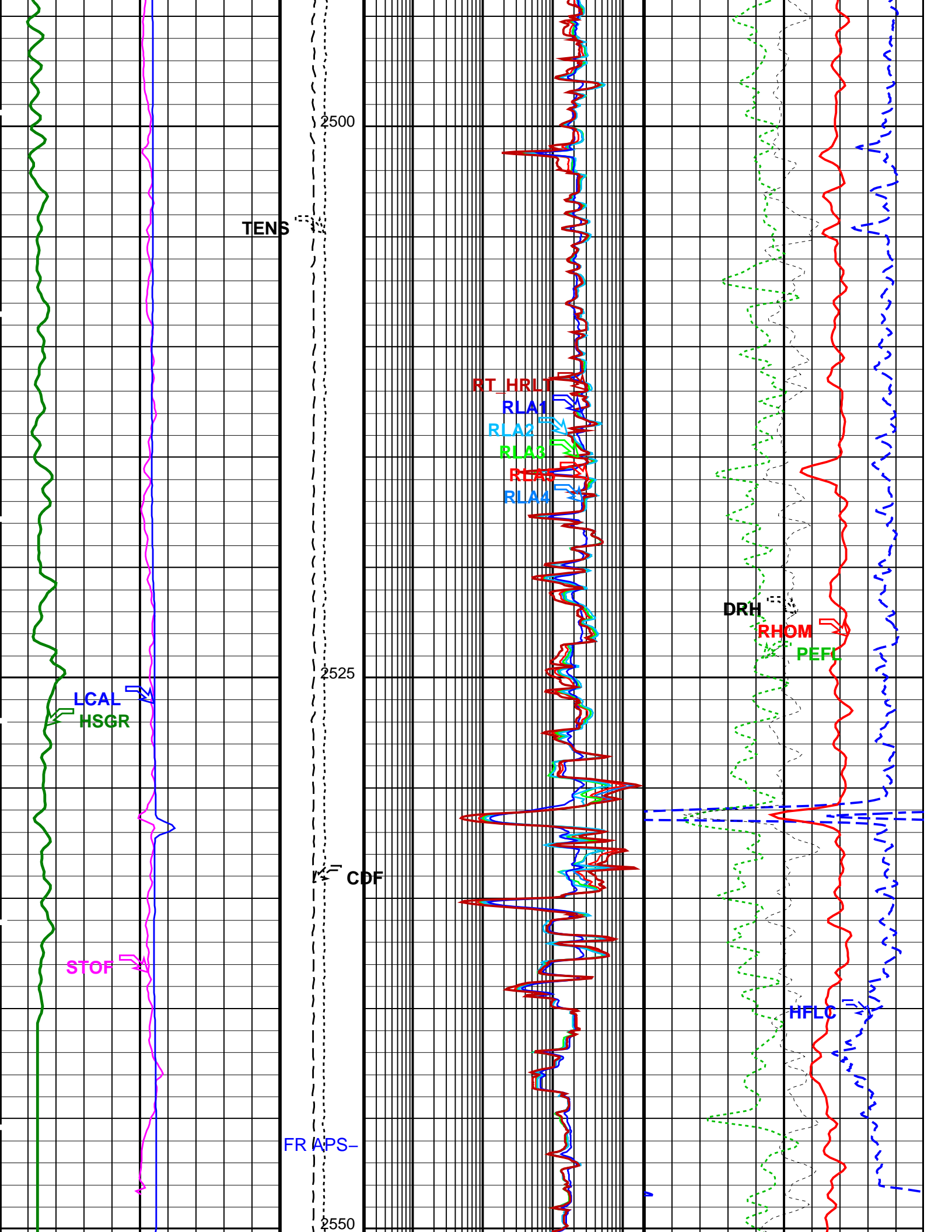




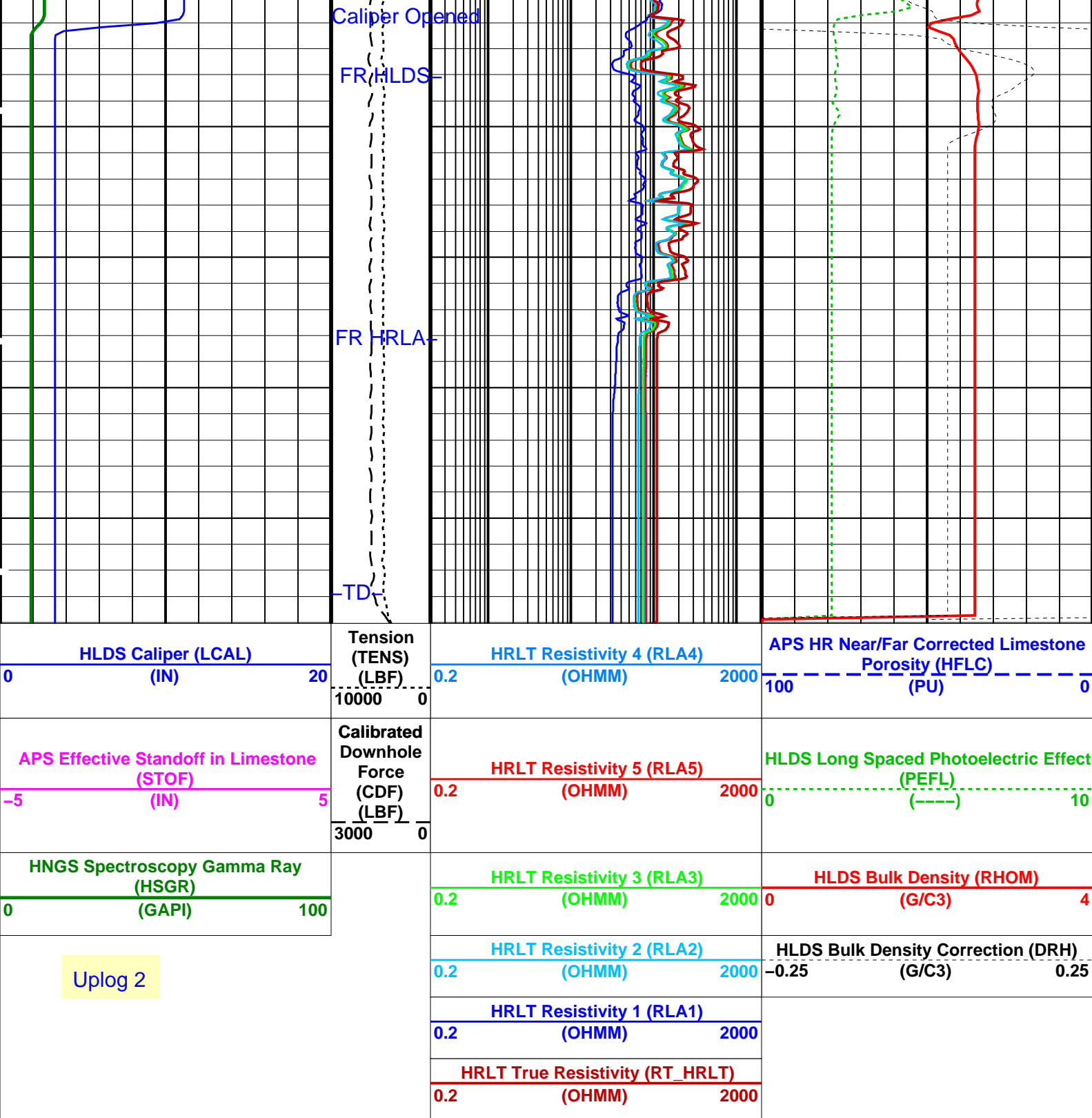












Time Mark Every 60 S

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
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE
CALTEMP	HRLTB Calibration Temperature	11.1799 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	
PROGINV	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
HLDS: Hostile Litho-Density Sonde			
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	1500	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	
APS-C: Accelerator-Porosity Tool			
	APS Software Version	5	
AASD	APS Thermal and Array Detectors High Voltage Setting	1976.24	V
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2067.55	V
AHCS	APS Holesize Correction Source	GCSE	
AHSS	APS Holesize Correction Switch	ON	
AMTY	APS Environmental Corrections Mud Type	WaterBaseBarite	
ANSD	APS Near Detector High Voltage Setting	1737.8	V
ASOS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	ON	
BHFL_APS	APS TNPH Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	7	DEGC
BSCO_APS	APS TNPH Borehole Salinity Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
DSCO_APS	APS TNPH Density Source Correction Option	MEASURED	
FSAL	Formation Salinity	-50000	PPM
FSCO_APS	APS TNPH 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_APS	APS TNPH Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO_APS	APS TNPH Mud Cake Correction Option	YES	
MCOR_APS	APS TNPH Mud Correction	NATU	
MWCO_APS	APS TNPH Mud Weight Correction Option	YES	
NARC	APS Near/Array Calibration Ratio	1.08341	
NFRC	APS Near/Far Calibration Ratio	0.942369	
PTCO_APS	APS TNPH Pressure/Temperature Correction Option	NO	
SHT	Surface Hole Temperature	20	DEGC
TNCO_APS	APS TNPH Computation Option	YES	
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
GGD1	Long Spacing Outer Diameter	0	



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	-0.000306055	
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	1.02619	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.07873	
System and Miscellaneous			
ALTDPCCHAN	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	1.02	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	8451.44	FT
TDD	Total Depth - Driller	2576.00	M
TDL	Total Depth - Logger	2576.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripleCombo Vertical Scale: 1:200 Graphics File Created: 19-Jul-2021 20:42

## OP System Version: 19C0-187

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

## Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_011LUP	FN:17	PRODUCER	19-Jul-2021 20:42
BACKUP	MSS_LDEO_HRLA_LDL_011LUP	FN:18	PRODUCER	19-Jul-2021 20:42

### Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
High Resolution Laterolog Array - B Wellsite Calibration - HRLT M01							
Before: 19-Jul-2021 17:28							
HRLT M0-M1 Voltage Plus - 0	0	N/A	-318.7	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus - 1	0	N/A	-330.3	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus - 2	0	N/A	-337.5	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus - 3	0	N/A	-328.4	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus - 4	0	N/A	-319.8	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus - 5	0	N/A	-321.4	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus - 6	0	N/A	319.4	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus - 7	0	N/A	-322.7	N/A	N/A	9.681	UV
High Resolution Laterolog Array - B Wellsite Calibration - HRLT M12							
Before: 19-Jul-2021 17:28							
HRLT M1-M2 Voltage Plus - 0	0	N/A	1739	N/A	N/A	53.42	UV



HRLT M1-M2 Voltage Plus - 1	0	N/A	1810	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus - 2	0	N/A	1842	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus - 3	0	N/A	1791	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus - 4	0	N/A	1743	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus - 5	0	N/A	1752	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus - 6	0	N/A	-1758	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus - 7	0	N/A	1781	N/A	N/A	53.42	UV

#### High Resolution Laterolog Array - B Wellsite Calibration - HRLT M23

Before: 19-Jul-2021 17:28

HRLT M2-M3 Voltage Plus - 0	0	N/A	1732	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 1	0	N/A	1813	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 2	0	N/A	1847	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 3	0	N/A	1799	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 4	0	N/A	1745	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 5	0	N/A	1756	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 6	0	N/A	-1750	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 7	0	N/A	1781	N/A	N/A	53.42	UV

#### High Resolution Laterolog Array - B Wellsite Calibration - HRLT V34

Before: 19-Jul-2021 17:28

HRLT A3-A4 Voltage Plus - 0	0	N/A	68620	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 1	0	N/A	71650	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 2	0	N/A	73300	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 3	0	N/A	71660	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 4	0	N/A	69460	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 5	0	N/A	69900	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 6	0	N/A	-68190	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 7	0	N/A	70000	N/A	N/A	2100	UV

#### High Resolution Laterolog Array - B Wellsite Calibration - HRLT V45

Before: 19-Jul-2021 17:28

HRLT A4-A5 Voltage Plus - 0	0	N/A	68710	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 1	0	N/A	71860	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 2	0	N/A	73490	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 3	0	N/A	71790	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 4	0	N/A	69570	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 5	0	N/A	69990	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 6	0	N/A	-68400	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 7	0	N/A	70000	N/A	N/A	2100	UV

#### High Resolution Laterolog Array - B Wellsite Calibration - HRLT V56

Before: 19-Jul-2021 17:28

HRLT A5-A6 Voltage Plus - 0	0	N/A	68550	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 1	0	N/A	71710	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 2	0	N/A	73320	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 3	0	N/A	71670	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 4	0	N/A	69440	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 5	0	N/A	69860	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 6	0	N/A	-68240	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 7	0	N/A	70000	N/A	N/A	2100	UV

#### High Resolution Laterolog Array - B Wellsite Calibration - HRLT VTP

Before: 19-Jul-2021 17:28

HRLT Torpedo-M0 Voltage - 0	0	N/A	-68090	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 1	0	N/A	-71520	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 2	0	N/A	-73180	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 3	0	N/A	-71570	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 4	0	N/A	-69400	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 5	0	N/A	-69830	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 6	0	N/A	68010	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 7	0	N/A	-70000	N/A	N/A	2100	UV

#### High Resolution Laterolog Array - B Wellsite Calibration - HRLT VBD

Before: 19-Jul-2021 17:28

HRLT Bridle#9-M0 Voltage - 0	0	N/A	-68130	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 1	0	N/A	-71610	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 2	0	N/A	-73250	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 3	0	N/A	-71650	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 4	0	N/A	-69450	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 5	0	N/A	-69860	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 6	0	N/A	68080	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 7	0	N/A	-70000	N/A	N/A	2100	UV

#### High Resolution Laterolog Array - B Wellsite Calibration - HRLT ISO

Before: 19-Jul-2021 17:28

HRLT Source Current Plus - 0	0	N/A	284.2	N/A	N/A	8.520	UA
HRLT Source Current Plus - 1	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 2	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 3	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 4	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 5	0	N/A	281.1	N/A	N/A	8.520	UA



HRLT Source Current Plus – 6	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus – 7	0	N/A	281.1	N/A	N/A	8.520	UA

#### High Resolution Laterolog Array – B Wellsite Calibration – HRLT MV

Before: 19-Jul-2021 17:28

HRLT Vertical Voltage PI – 0	0	N/A	-320.8	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI – 1	0	N/A	-325.4	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI – 2	0	N/A	-331.2	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI – 3	0	N/A	-320.5	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI – 4	0	N/A	-309.1	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI – 5	0	N/A	-325.6	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI – 6	0	N/A	327.3	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI – 7	0	N/A	-322.7	N/A	N/A	9.681	UV

#### Hostile Litho–Density Sonde Wellsite Calibration – Background Measurement

Master: 2-May-2021 7:20 Before: 19-Jul-2021 17:31

SS Cs Resolution Bkg	9.000	7.698	7.653	N/A	N/A	1.800	%
LS Cs Resolution Bkg	9.000	7.989	8.074	N/A	N/A	1.800	%
LSW1 Background	100.0	71.96	70.55	N/A	N/A	3.000	CPS
LSW2 Background	100.0	65.02	63.75	N/A	N/A	3.000	CPS
LSW3 Background	200.0	146.1	145.2	N/A	N/A	6.000	CPS
LSW4 Background	250.0	183.2	180.2	N/A	N/A	7.500	CPS
LSW5 Background	600.0	424.9	420.8	N/A	N/A	18.00	CPS
SSW1 Background	100.0	68.97	68.83	N/A	N/A	3.000	CPS
SSW2 Background	200.0	118.2	118.7	N/A	N/A	6.000	CPS
SSW3 Background	500.0	331.3	330.0	N/A	N/A	15.00	CPS
SSW4 Background	270.0	178.4	177.3	N/A	N/A	8.100	CPS
SSW5 Background	200.0	127.4	125.2	N/A	N/A	6.000	CPS

#### Hostile Litho–Density Sonde Wellsite Calibration – Aluminum Measurement

Master: 2-May-2021 7:46

LSW1 Aluminum	600.0	437.4	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	651.2	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	787.2	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	396.8	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	364.1	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2070	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	5832	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	8191	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	3322	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	384.2	N/A	N/A	N/A	N/A	CPS

#### Hostile Litho–Density Sonde Wellsite Calibration – Lithology Measurement

Master: 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: 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

#### Accelerator–Porosity Tool Wellsite Calibration – Detector Background

Master: 3-May-2021 6:13 Before: 19-Jul-2021 17:35

Near Det Bkg Cntrate	30.00	25.16	26.07	N/A	N/A	N/A	CPS
Far Det Bkg Cntrate	30.00	24.05	23.32	N/A	N/A	N/A	CPS
Array–1 Det Bkg Cntrate	30.00	23.15	23.91	N/A	N/A	N/A	CPS
Array–2 Det Bkg Cntrate	30.00	23.93	23.56	N/A	N/A	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	26.33	24.50	N/A	N/A	N/A	CPS

#### Accelerator–Porosity Tool Wellsite Calibration – Calibration Ratios

Master: 3-May-2021 6:15

Near/Far Calibration Ratio	0.9250	0.9424	N/A	N/A	N/A	N/A	
Near/Array Calibration Ratio	1.030	1.083	N/A	N/A	N/A	N/A	
Near/Array Cal Ratio Up/Down	1.000	1.016	N/A	N/A	N/A	N/A	

#### Accelerator–Porosity Tool Wellsite Calibration – Tank Check




Master: 3-May-2021 6:16

Array–1 Standoff Porosity	11.75	11.04	N/A	N/A	N/A	N/A	PU
Array–2 Standoff Porosity	11.75	10.88	N/A	N/A	N/A	N/A	PU
Average Slowing Down Time	6.000	5.997	N/A	N/A	N/A	N/A	US
Array–1 SDT Ratio Up/Down	1.000	0.9943	N/A	N/A	N/A	N/A	
Array–2 SDT Ratio Up/Down	1.000	0.9896	N/A	N/A	N/A	N/A	



Sigma Formation	27.50	27.71	N/A	N/A	N/A	N/A	CU
Accelerator–Porosity Tool Wellsite Calibration – CCR7 signal boxes							
Master: 3–May–2021 5:26							
Near Detector Plateau Setting	1650	1738	N/A	N/A	N/A	N/A	V
Far Detector Plateau Setting	2000	2068	N/A	N/A	N/A	N/A	V
Array Detector Plateau Setting	2000	1976	N/A	N/A	N/A	N/A	V
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 1 Check							
Master: 2–May–2021 10:04 Before: 13–Jun–2021 9:44							
Na 511 Peak Loc	40.00	39.25	39.64	N/A	N/A	1.000	
Na 511 Peak Res	15.50	16.53	14.84	N/A	N/A	2.000	%
High Voltage	1150	1197	1168	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	141.8	143.3	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	8.905	7.709	N/A	N/A	2.000	%
Temperature	15.50	26.59	11.69	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	12.01	12.89	N/A	N/A	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 2 Check							
Master: 2–May–2021 10:04 Before: 13–Jun–2021 9:44							
Na 511 Peak Loc	40.00	39.88	39.51	N/A	N/A	1.000	
Na 511 Peak Res	15.50	15.29	15.27	N/A	N/A	2.000	%
High Voltage	1150	1122	1090	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	142.6	140.8	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	8.040	9.507	N/A	N/A	2.000	%
Temperature	15.50	27.21	12.30	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	12.32	13.60	N/A	N/A	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Ratio Of Detector 1 To Detector 2							
Master: 2–May–2021 10:04 Before: 13–Jun–2021 9:44							
Coincidence Count Rate Ratio	1.000	0.9728	0.9527	N/A	N/A	0.05000	
Hostile Natural Gamma Ray Sonde Master Calibration – Detector 1 Calibration							
Master: 2–May–2021 10:00							
Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	209.6	--	--	--	--	
Th Peak Res	7.000	6.625	--	--	--	--	%
Background Count Rate	142.5	17.82	--	--	--	--	CPS
Gain Ratio	1.000	1.015	--	--	--	--	
Hostile Natural Gamma Ray Sonde Master Calibration – Detector 2 Calibration							
Master: 2–May–2021 10:00							
Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	208.8	--	--	--	--	
Th Peak Res	7.000	7.662	--	--	--	--	%
Background Count Rate	142.5	16.78	--	--	--	--	CPS
Gain Ratio	1.000	0.9961	--	--	--	--	
Accelerator–Porosity Tool – Detector Plateau Settings :							
Near Detector Plateau Setting	1738 V						
Far Detector Plateau Setting	2068 V						
Array Detector Plateau Setting	1976 V						









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		–318.7	–322.7	–280.7	–379.7
1	Before		–330.3	–322.7	–280.7	–379.7
2	Before		–337.5	–322.7	–280.7	–379.7




















High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V45						
Idx	Phase	HRLT A4–A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68710	70000	82360	60900
1	Before		71860	70000	82360	60900
2	Before		73490	70000	82360	60900
3	Before		71790	70000	82360	60900
4	Before		69570	70000	82360	60900
5	Before		69990	70000	82360	60900
6	Before		–68400	–70000	–60900	–82360
7	Before		70000	70000	82360	60900
(Minimum) (Nominal) (Maximum)						
Before: 19–Jul–2021 17:28						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V56						
Idx	Phase	HRLT A5–A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68550	70000	82360	60900
1	Before		71710	70000	82360	60900
2	Before		73320	70000	82360	60900
3	Before		71670	70000	82360	60900
4	Before		69440	70000	82360	60900
5	Before		69860	70000	82360	60900
6	Before		–68240	–70000	–60900	–82360
7	Before		70000	70000	82360	60900
(Minimum) (Nominal) (Maximum)						
Before: 19–Jul–2021 17:28						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT VTP						
Idx	Phase	HRLT Torpedo–M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		–68090	–70000	–60900	–82360
1	Before		–71520	–70000	–60900	–82360
2	Before		–73180	–70000	–60900	–82360
3	Before		–71570	–70000	–60900	–82360
4	Before		–69400	–70000	–60900	–82360
5	Before		–69830	–70000	–60900	–82360
6	Before		68010	70000	82360	60900
7	Before		–70000	–70000	–60900	–82360
(Minimum) (Nominal) (Maximum)						
Before: 19–Jul–2021 17:28						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT VBD						
Idx	Phase	HRLT Bridle#9–M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		–68130	–70000	–60900	–82360
1	Before		–71610	–70000	–60900	–82360
2	Before		–73250	–70000	–60900	–82360
3	Before		–71650	–70000	–60900	–82360
4	Before		–68150	–70000	–60900	–82360



4	Before		-69450	-70000	-60900	-82360
5	Before		-69860	-70000	-60900	-82360
6	Before		68080	70000	82360	60900
7	Before		-70000	-70000	-60900	-82360
			(Minimum)	(Nominal)	(Maximum)	

Before: 19-Jul-2021 17:28

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT ISO						
Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum
0	Before		284.2	284.0	334.1	247.0
1	Before		281.1	281.1	330.7	244.4
2	Before		281.1	281.1	330.7	244.4
3	Before		281.1	281.1	330.7	244.4
4	Before		281.1	281.1	330.7	244.4
5	Before		281.1	281.1	330.7	244.4
6	Before		281.1	281.1	330.7	244.4
7	Before		281.1	281.1	330.7	244.4
			(Minimum)	(Nominal)	(Maximum)	

Before: 19-Jul-2021 17:28

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT MV						
Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-320.8	-322.7	-280.7	-379.7
1	Before		-325.4	-322.7	-280.7	-379.7
2	Before		-331.2	-322.7	-280.7	-379.7
3	Before		-320.5	-322.7	-280.7	-379.7
4	Before		-309.1	-322.7	-280.7	-379.7
5	Before		-325.6	-322.7	-280.7	-379.7
6	Before		327.3	322.7	379.7	280.7
7	Before		-322.7	-322.7	-280.7	-379.7
			(Minimum)	(Nominal)	(Maximum)	

Before: 19-Jul-2021 17:28



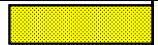

Hostile Litho-Density Sonde / Equipment Identification			
Primary Equipment:			
Gamma Source Radioactive	GSR – ZA	2945	
Hostile Litho Density Sonde	HLDS – D	77	
Hostile Litho Density High Voltage	HLDV – D	67	
Auxiliary Equipment:			
Hostile Litho Density High Voltage Housi	HEH – H	67	
Hostile Litho Density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



Hostile Litho-Density Sonde Wellsite Calibration											
Background Measurement											
Phase	SS Cs Resolution Bkg %		Value	Phase	LS Cs Resolution Bkg %		Value	Phase	LSW1 Background CPS		Value
Master			7.698	Master			7.989	Master			71.96
Before			7.653	Before			8.074	Before			70.55
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	<div><div></div></div>	65.02	Master	<div><div></div></div>	146.1	Master	<div><div></div></div>	183.2
Before	<div><div></div></div>	63.75	Before	<div><div></div></div>	145.2	Before	<div><div></div></div>	180.2
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	<div><div></div></div>	424.9	Master	<div><div></div></div>	68.97	Master	<div><div></div></div>	118.2
Before	<div><div></div></div>	420.8	Before	<div><div></div></div>	68.83	Before	<div><div></div></div>	118.7
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	<div><div></div></div>	331.3	Master	<div><div></div></div>	178.4	Master	<div><div></div></div>	127.4
Before	<div><div></div></div>	330.0	Before	<div><div></div></div>	177.3	Before	<div><div></div></div>	125.2
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: 2-May-2021 7:20 Before: 19-Jul-2021 17:31								

Hostile Litho-Density Sonde Master Calibration											
Detector Background Measurement											
Phase	LSW1 Background CPS		Value	Phase	LSW2 Background CPS		Value	Phase	LSW3 Background CPS		Value
Master	<div><div></div></div>		71.96	Master	<div><div></div></div>		65.02	Master	<div><div></div></div>		146.1
55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)				50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)				110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)			
Phase	LSW4 Background CPS		Value	Phase	LSW5 Background CPS		Value	Phase	LS Cs Resolution Bkg %		Value
Master	<div><div></div></div>		183.2	Master	<div><div></div></div>		424.9	Master	<div><div></div></div>		7.989
140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)				330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)				7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)			
Phase	SSW1 Background CPS		Value	Phase	SSW2 Background CPS		Value	Phase	SSW3 Background CPS		Value
Master	<div><div></div></div>		68.97	Master	<div><div></div></div>		118.2	Master	<div><div></div></div>		331.3
55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)				100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)				280.0 (Minimum) 500.0 (Nominal) 700.0 (Maximum)			
Phase	SSW4 Background CPS		Value	Phase	SSW5 Background CPS		Value	Phase	SS Cs Resolution Bkg %		Value
Master	<div><div></div></div>		178.4	Master	<div><div></div></div>		127.4	Master	<div><div></div></div>		7.698
150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum)				110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum)				7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)			
Master: 2-May-2021 7:20											

Hostile Litho–Density Sonde Master Calibration											
Detector Aluminum Measurement (bkgd–subtracted)											
Phase	LSW1 Aluminum CPS		Value	Phase	LSW2 Aluminum CPS		Value	Phase	LSW3 Aluminum CPS		Value
Master			437.4	Master			651.2	Master	<div>EXCEEDS LIMIT</div>		787.2
420.0 (Minimum) 600.0 (Nominal) 770.0 (Maximum)				650.0 (Minimum) 900.0 (Nominal) 1150 (Maximum)				800.0 (Minimum) 1100 (Nominal) 1450 (Maximum)			
Phase	LSW4 Aluminum CPS		Value	Phase	LSW5 Aluminum CPS		Value	Phase	SSW1 Aluminum CPS		Value
Master	<div>EXCEEDS LIMIT</div>		396.8	Master	<div>EXCEEDS LIMIT</div>		364.1	Master			2070
410.0 (Minimum) 580.0 (Nominal) 740.0 (Maximum)				410.0 (Minimum) 570.0 (Nominal) 740.0 (Maximum)				2000 (Minimum) 2800 (Nominal) 3200 (Maximum)			
Phase	SSW2 Aluminum CPS		Value	Phase	SSW3 Aluminum CPS		Value	Phase	SSW4 Aluminum CPS		Value
Master			5832	Master	<div>EXCEEDS LIMIT</div>		8191	Master	<div>EXCEEDS LIMIT</div>		3322
5800 (Minimum) 8000 (Nominal) 9300 (Maximum)				8300 (Minimum) 11600 (Nominal) 13500 (Maximum)				3500 (Minimum) 5000 (Nominal) 5800 (Maximum)			
Phase	SSW5 Aluminum CPS		Value	Low Count rates do not effect density measurement.							
Master	<div>EXCEEDS LIMIT</div>		384.2								
430.0 (Minimum) 660.0 (Nominal) 770.0 (Maximum)											
Master: 2–May–2021 7:46											




Hostile Litho-Density Sonde Master Calibration								
Detector Litholog Measurement (bkgd-subtracted)								
Phase	LSW1 Iron CPS	Value	Phase	LSW2 Iron CPS	Value	Phase	LSW3 Iron CPS	Value
Master		298.6	Master		524.2	Master	EXCEEDS LIMIT	699.6
290.0 (Minimum) 400.0 (Nominal) 560.0 (Maximum)			520.0 (Minimum) 730.0 (Nominal) 950.0 (Maximum)			720.0 (Minimum) 1000 (Nominal) 1350 (Maximum)		
Phase	LSW4 Iron CPS	Value	Phase	LSW5 Iron CPS	Value	Phase	SSW1 Iron CPS	Value



Accelerator-Porosity Tool Wellsite Calibration
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Calibration Ratios

Phase	Near/Far Calibration Ratio			Value	Phase	Near/Array Calibration Ratio			Value	Phase	Near/Array Cal Ratio Up/Down			Value
Master				0.9424	Master				1.083	Master				1.016
0.8000 (Minimum)				0.9250 (Nominal)	0.9000 (Minimum)				1.030 (Nominal)	0.9700 (Minimum)				1.030 (Maximum)







Master: 3-May-2021 6:15

Accelerator-Porosity Tool Wellsite Calibration														
Tank Check														
Phase	Array-1 Standoff Porosity PU			Value	Phase	Array-2 Standoff Porosity PU			Value	Phase	Average Slowing Down Time US			Value
Master	<div><div></div></div>			11.04	Master	<div><div></div></div>			10.88	Master	<div><div></div></div>			5.997
	9.900 (Minimum)	11.75 (Nominal)	13.60 (Maximum)			9.900 (Minimum)	11.75 (Nominal)	13.60 (Maximum)			5.500 (Minimum)	6.000 (Nominal)	6.250 (Maximum)	
Phase	Array-1 SDT Ratio Up/Down			Value	Phase	Array-2 SDT Ratio Up/Down			Value	Phase	Sigma Formation CU			Value
Master	<div><div></div></div>			0.9943	Master	<div><div></div></div>			0.9896	Master	<div><div></div></div>			27.71
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)			0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)			20.00 (Minimum)	27.50 (Nominal)	35.00 (Maximum)	

Master: 3-May-2021 6:16

Accelerator–Porosity Tool Master Calibration											
Detector Calibration											
Phase	Near/Far Calibration Ratio		Value	Phase	Near/Array Calibration Ratio		Value	Phase	Near/Array Cal Ratio Up/Down	Value	
Master			0.9424	Master			1.083	Master			1.016
0.8000 (Minimum)			0.9250 (Nominal)	0.9000 (Minimum)			1.030 (Nominal)	0.9700 (Minimum)			1.030 (Maximum)
Master: 3–May–2021 6:15											

Master: 3-May-2021 6:15

Accelerator-Porosity Tool Master Calibration															
Tank Check															
Phase	Array-1 Standoff Porosity PU			Value	Phase	Array-2 Standoff Porosity PU			Value	Phase	Average Slowing Down Time US			Value	
Master				11.04	Master				10.88	Master				5.997	
9.900 (Minimum)				11.75 (Nominal)	9.900 (Minimum)				13.60 (Maximum)	5.500 (Minimum)				6.000 (Nominal)	6.250 (Maximum)
Phase	Array-1 SDT Ratio Up/Down			Value	Phase	Array-2 SDT Ratio Up/Down			Value	Phase	Sigma Formation CU			Value	
Master				0.9943	Master				0.9896	Master				27.71	
0.9500 (Minimum)				1.000 (Nominal)	0.9500 (Minimum)				1.050 (Maximum)	20.00 (Minimum)				27.50 (Nominal)	35.00 (Maximum)
Master: 3-May-2021 6:16															

Master: 3-May-2021 6:16

Hostile Natural Gamma Ray Cartridge – B / Equipment Identification

Primary Equipment:  
HNGC Cartridge

HNGC – B 304

Auxiliary Equipment:  
HNGC Housing

HNGH – A 3







Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:  
HNGS Sonde

HNGS – BA 99

Auxiliary Equipment:  
HNGS Sonde Housing  
Gamma Source Radioactive

HNSH – BA 102  
GSR – U 6098

Hostile Natural Gamma Ray Sonde Wellsite Calibration																										
Detector 1 Check																										
Phase	Na 511 Peak Loc			Value	Phase	Na 511 Peak Res %			Value	Phase	High Voltage V			Value												
Master				39.25	Master				16.53	Master				1197												
Before				39.64	Before				14.84	Before				1168												
37.50 (Minimum)				40.00 (Nominal)	43.50 (Maximum)				12.00 (Minimum)				15.50 (Nominal)	19.00 (Maximum)				900.0 (Minimum)				1150 (Nominal)	1600 (Maximum)			



Phase	Na 1785 Peak Loc		Value	Phase	Na 1785 Peak Res %		Value	Phase	Temperature DEGC		Value		
Master			141.8	Master			8.905	Master			26.59		
Before			143.3	Before			7.709	Before			11.69		
135.0 (Minimum)			142.6 (Nominal)	150.3 (Maximum)			7.000 (Minimum)			8.500 (Nominal)	11.00 (Maximum)		
-28.89 (Minimum)			15.50 (Nominal)			60.00 (Maximum)							
Phase	Na Count Rate CPS		Value										
Master			12.01										
Before			12.89										
10.00 (Minimum)			45.00 (Nominal)									100.0 (Maximum)	
Master: 2-May-2021 10:04												Before: 13-Jun-2021 9:44	

Hostile Natural Gamma Ray Sonde Wellsite Calibration											
Detector 2 Check											
Phase	Na 511 Peak Loc		Value	Phase	Na 511 Peak Res %		Value	Phase	High Voltage V		Value
Master			39.88	Master			15.29	Master			1122
Before			39.51	Before			15.27	Before			1090
37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)				12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)				900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)			
Phase	Na 1785 Peak Loc		Value	Phase	Na 1785 Peak Res %		Value	Phase	Temperature DEGC		Value
Master			142.6	Master			8.040	Master			27.21
Before			140.8	Before			9.507	Before			12.30
135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)				7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)				-28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)			
Phase	Na Count Rate CPS		Value								
Master			12.32								
Before			13.60								
10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)											
Master: 2-May-2021 10:04 Before: 13-Jun-2021 9:44											

Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		0.9728
Before		0.9527
0.9500 (Minimum)		1.000 (Nominal)
		1.050 (Maximum)
Master: 2-May-2021 10:04		
Before: 13-Jun-2021 9:44		

Hostile Natural Gamma Ray Sonde Master Calibration																
Detector 1 Calibration																
Phase	Na 511 Peak Set Point			Value	Phase	Th Peak Loc			Value	Phase	Th Peak Res %			Value		
Master	<div><div></div></div>			41.00	Master	<div><div></div></div>			209.6	Master	<div><div></div></div>			6.625		
38.00 (Minimum)				40.00 (Nominal)	43.00 (Maximum)	201.0 (Minimum)				209.6 (Nominal)	218.3 (Maximum)	5.000 (Minimum)			7.000 (Nominal)	9.000 (Maximum)
Phase	Background Count Rate CPS			Value	Phase	Gain Ratio			Value							
Master	<div><div></div></div>			17.82	Master	<div><div></div></div>			1.015							
10.00 (Minimum)				142.5 (Nominal)	265.0 (Maximum)	0.9400 (Minimum)									1.000 (Nominal)	1.060 (Maximum)
Master: 2-May-2021 10:00																

Hostile Natural Gamma Ray Sonde Master Calibration														
Detector 2 Calibration														
Phase	Na 511 Peak Set Point			Value	Phase	Th Peak Loc			Value	Phase	Th Peak Res %			Value
Master	<div><div></div></div>			41.00	Master	<div><div></div></div>			208.8	Master	<div><div></div></div>			7.662
38.00      40.00      43.00					201.0      209.6      218.3					5.000      7.000      9.000				
(Minimum)      (Nominal)      (Maximum)					(Minimum)      (Nominal)      (Maximum)					(Minimum)      (Nominal)      (Maximum)				
Phase	Background Count Rate CPS			Value	Phase	Gain Ratio			Value					
Master	<div><div></div></div>			16.78	Master	<div><div></div></div>			0.9961					
10.00      142.5      265.0					0.9400      1.000      1.060									



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 395C, Site U1562B**  
Field: **North Atlantic Mantle Convection&Climate**  
Rig: **JOIDES Resolution**  
Ocean: **Atlantic**

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