

Schlumberger

Company: International Ocean Discovery Program

Well: **Expedition 395C, Site U1563B**

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

Rig:	JOIDES Resolution				
Field:	North Atlantic Mantle Convection				
Location:	Latitude: N 60.1999				
Well:	Expedition 395C, Site U1563B				
Company:	International Ocean Discovery Program				
		High Resolution Laterolog (HRLA) Litho Density (HLDS) / (APS) Porosity Natural Gamma / MSS (HNGS)			
		Latitude: N 60.1999 Longitude: W 27.9999		Elev.: K.B. 0.00 m G.L. -1429.10 m D.F. 0.00 m	
		Permanent Datum: Sea Floor		Elev.: -1429.10 m	
		Log Measured From: Rig Floor		1429.10 m above Perm. Datum	
		Drilling Measured From: Rig Floor			
		API Serial No.		Max. Hole Devi. 2 deg	Longitude W 27.9999
				Latitude N 60.19991	

Logging Date			29-Jul-2021					
Run Number			1					
Depth Driller			1744 m					
Schlumberger Depth			1741 m					
Bottom Log Interval			1741 m					
Top Log Interval			1428 m					
Casing Driller Size @ Depth			5.500 in @ 1516.8 m			@		
Casing Schlumberger			1514 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	0.333 @ 8	@ 8		@	@		
Maximum Recorded Temperatures			8 degC					
Circulation Stopped		Time	28-Jul-2021		21:00			
Logger On Bottom		Time	29-Jul-2021		6:30			
Unit Number		Location	627314	Larose, LA				
Recorded By			K. Swain					
Witnessed By			Z. Mateo					

[illegible]

	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			

Run 4

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OTHER SERVICES1	
OS1:	fms/dsi
OS2:	
OS3:	VSI
OS4:	
OS5:	

OTHER SERVICES2	
OS1:	
OS2:	
OS3:	
OS4:	
OS5:	

REMARKS: RUN NUMBER 1
Hole drilled with RCB bottom hole assembly (BHA) at 9.875" BS
Hole originally drilled in to hardrock below 1744mbrf however drillstring became stuck and logging was only above basement at 1744mbrf
Drill pipe set at 1516.8 mbrf.
1703 mbrf GR spike due to APS activation from canceled uplog just before
Fluid type was seawater displaced in the hole prior to logging.
Depth recorded from drill floor; logs presented as--logged without depth cor
All logs presented in wireline measured depth below rig floor (MDBRF).
Caliper opened during upward passes; closed inside pipe and while logging
Hole size corrections made using caliper measurements for upward passes
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 difficult to open near TD due to clay on tool or mud in hole but
opened eventually.
Downlog flipped and note the caliper closed logging down.

[illegible]






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

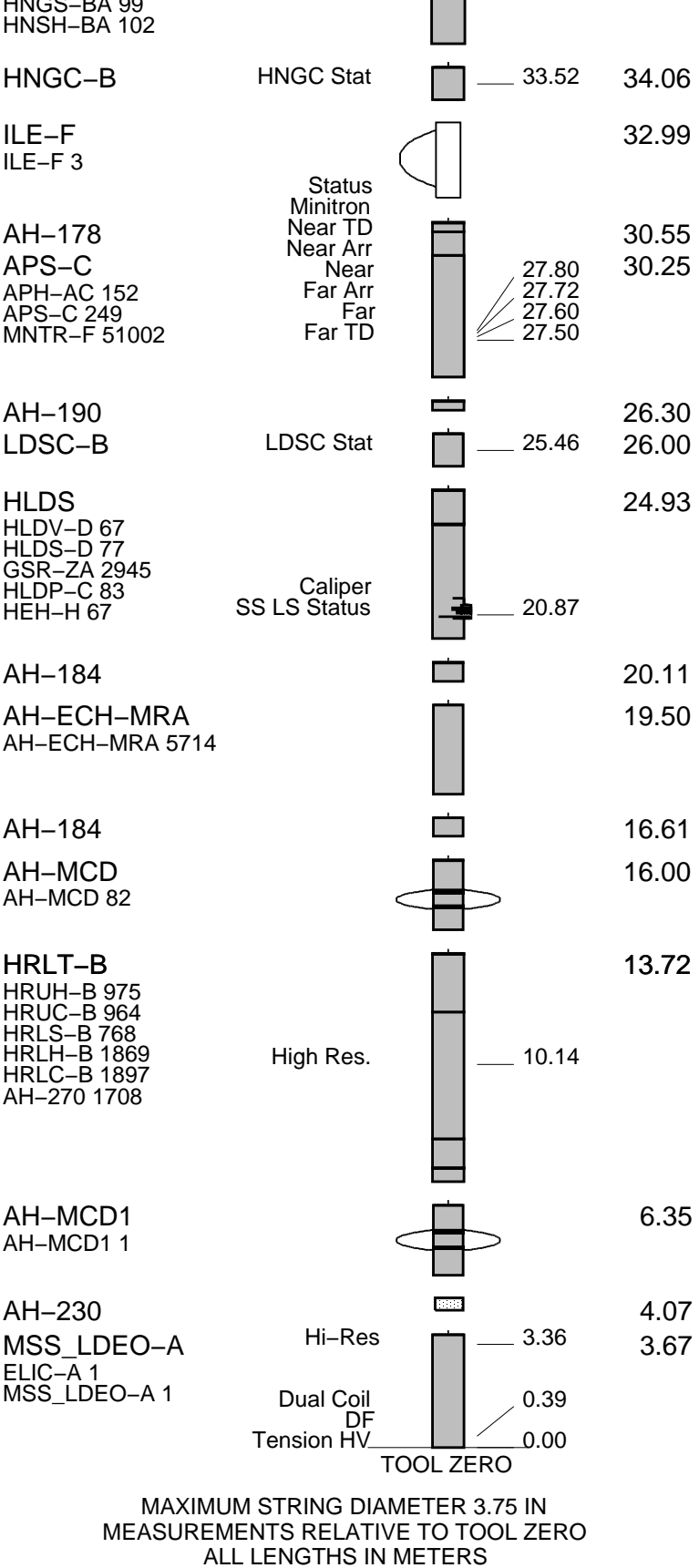
SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:	RUN 2
LOGGED INTERVAL	START

RUN 1

RUN 2

SURFACE EQUIPMENT	
SFT-281 1	
SFT-178 1	
GSR-U 6098	
WITM (DTS)-A	

DOWNHOLE EQUIPMENT				
LEH-QT				38.79
AH-369	CTEM		37.19	37.91
DTC-H	TelStatus		36.56	37.47
HNGS-BA	Upper_1		35.86	36.56
UNGS-BA-02	Lower_2		35.64	



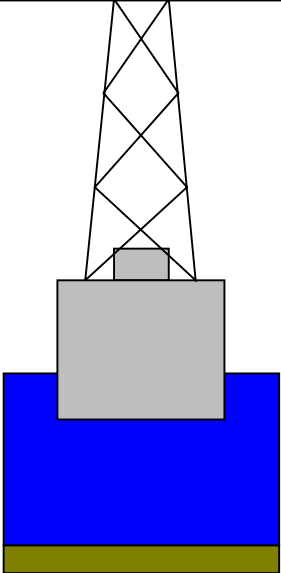
Production String	(in)	(M)	Well Schematic	(M)	(in)	Casing String
	OD	ID	MD	MD	OD	ID

Kelly Bushing Elevation
Derrick Floor Elevation

Mean Sea Level

0
0

11



4.1

1429.1 4.1
1516.8 9.875

1744

Sea Floor
Open Hole

Total Depth

Input DLIS Files					
30-Jul-2021 18:09					
Output DLIS Files					
DEFAULT	MSS_LDEO_HRLA_LDL_041PUP	FN:58	PRODUCER	30-Jul-2021 18:50	1705.4 M 1355.6 M

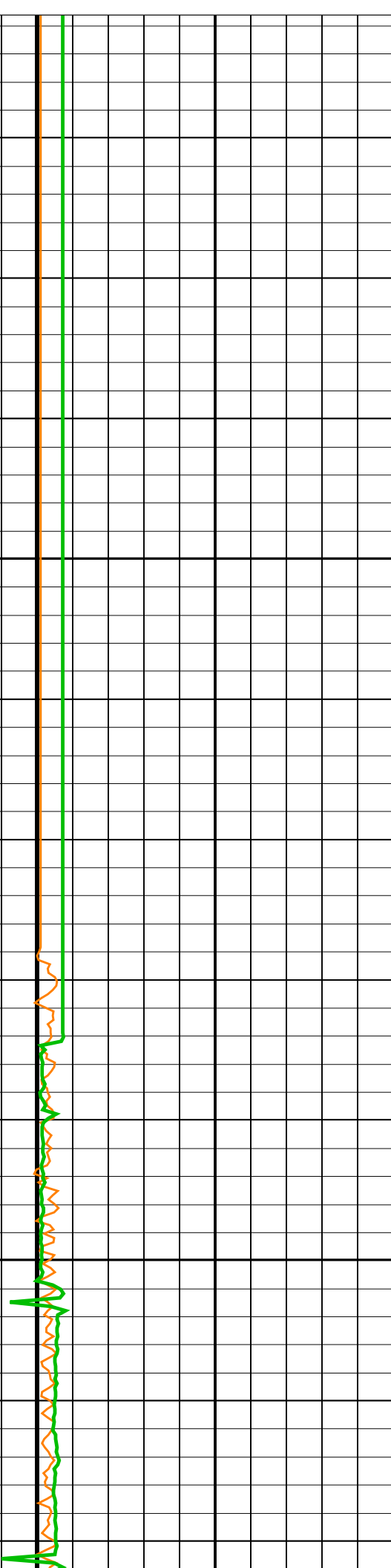
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MSS_LDEO-A	19C0-187	HRLT-B	19C0-187		
HLDS	19C0-187	LDSC-B	19C0-187		
APS-C	19C0-187	HNGC-B	19C0-187		
HNGS-BA	19C0-187	DTC-H	19C0-187		

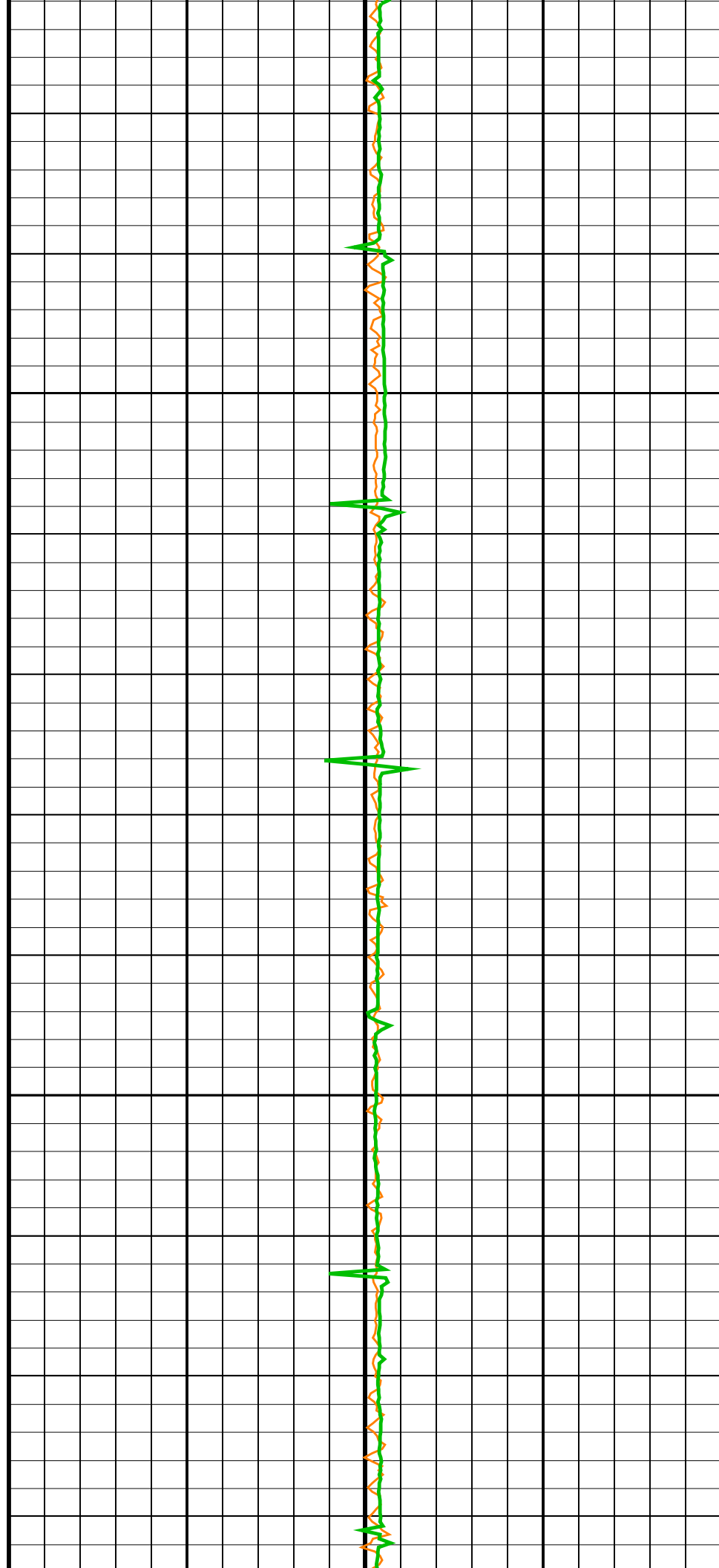
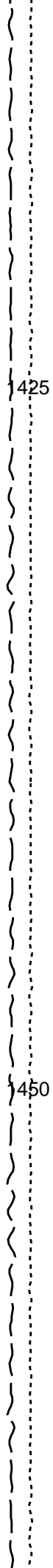
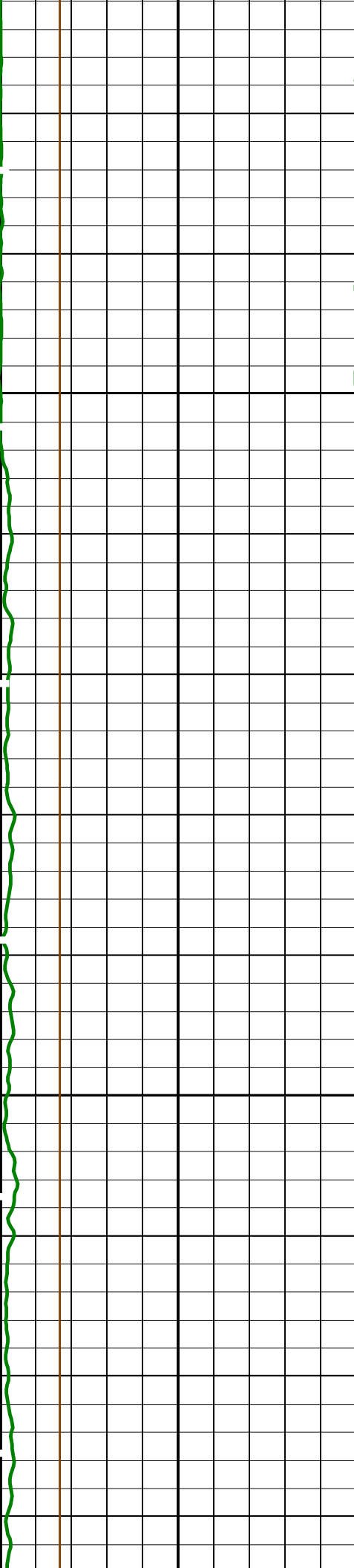
PIP SUMMARY					
Time Mark Every 60 S					
HNGS Spectroscopy Gamma Ray (HSGR) (GAPI)		Calibrated Downhole Force (CDF) (LBF)	Dual-Coil Susceptibility (MSSL SUS_LDEO) (PPM)		
0	100		-10000		10000
		3000 0			
HLDS Caliper (LCAL) (IN)		Tension (TENS) (LBF)	Axial Acceleration (MSSZACC_LDEO) (M/S2)		
0	20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

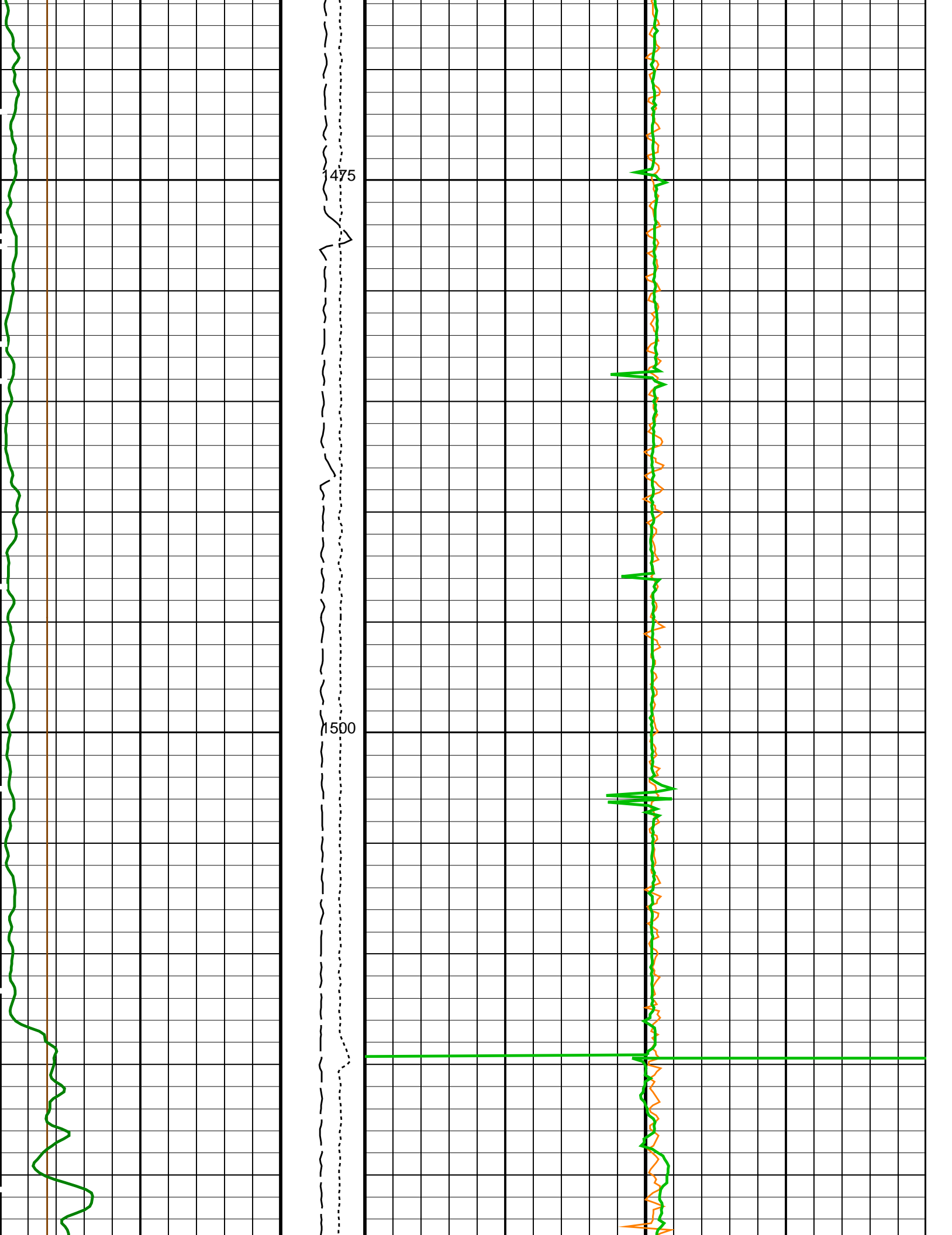
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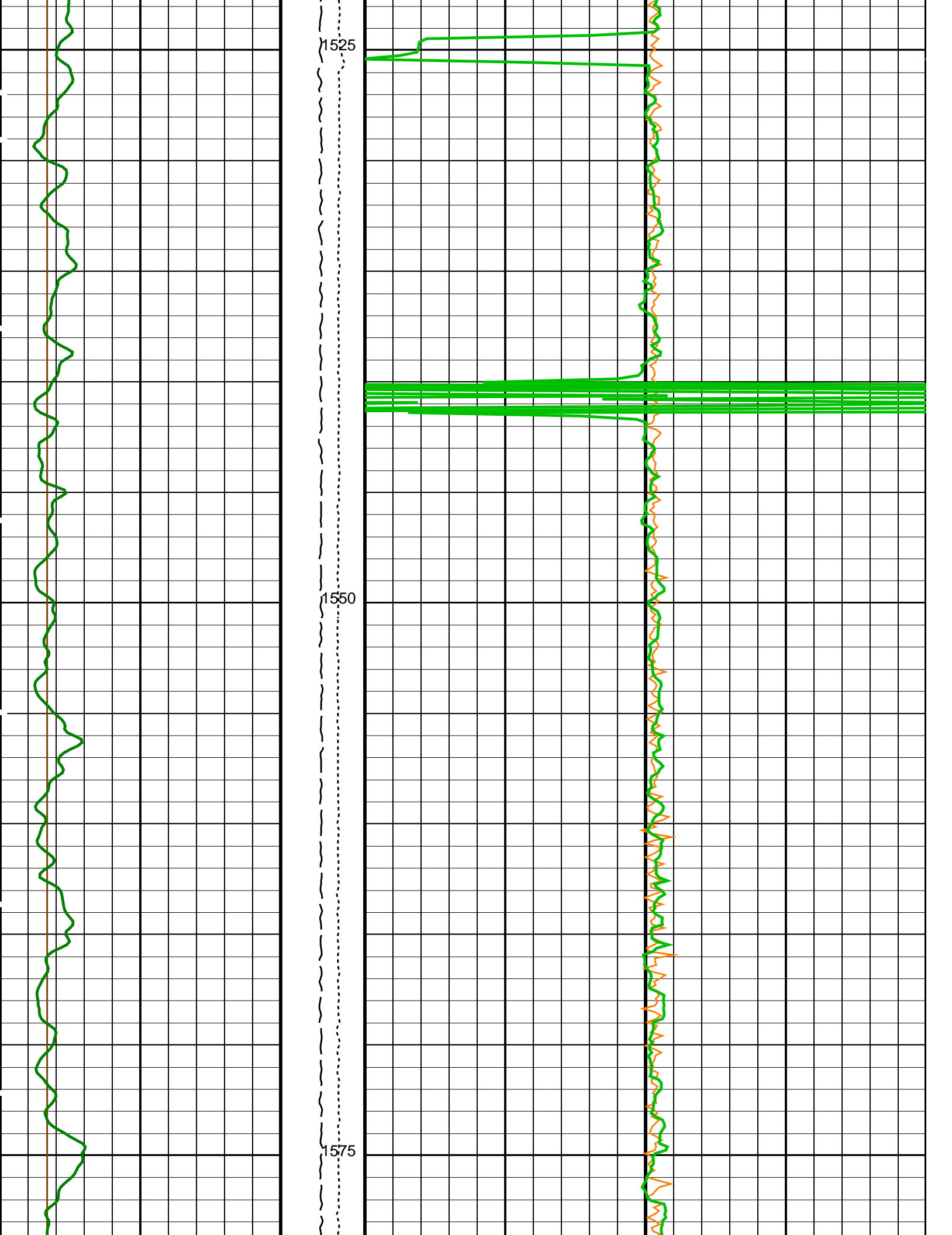
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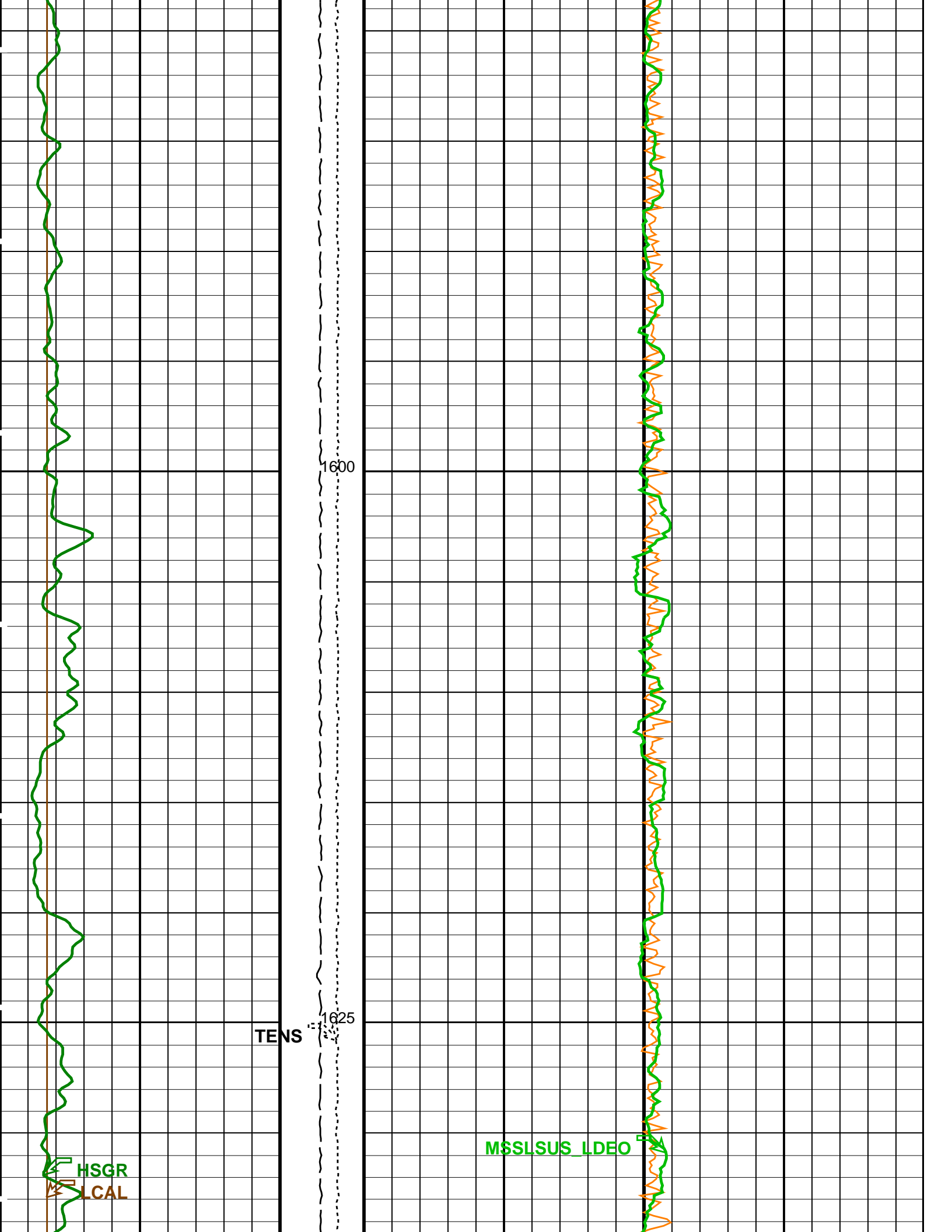
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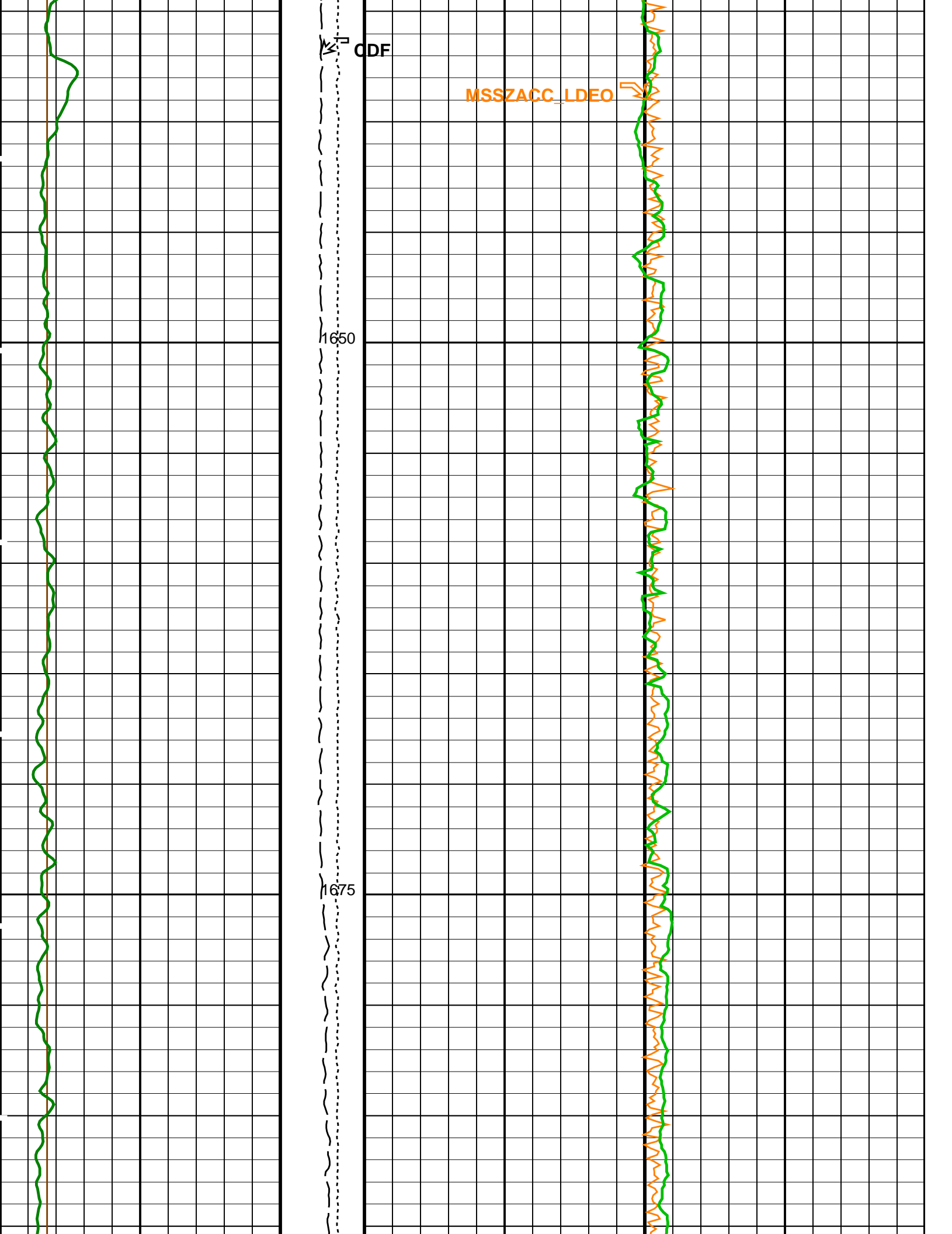


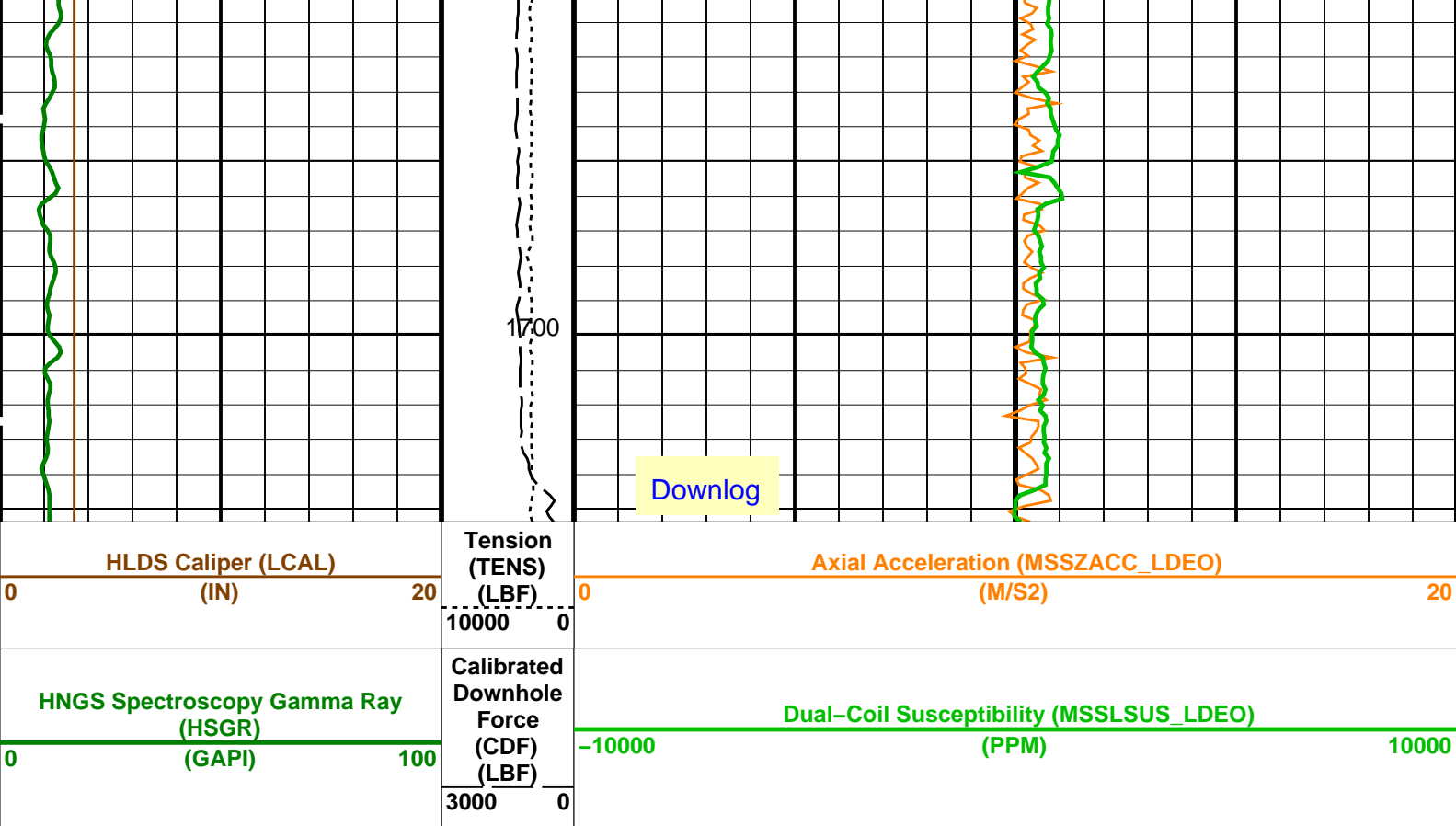












PIP SUMMARY

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	8.73849 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
PROCINV	Inversion Selection	ON
PROCML	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	0	
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	-0.00244743	
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	0.971528	
VBA2	HNGBS Detector 2 Variable Barite Factor Running Average	0.979934	
System and Miscellaneous			
ALTDCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	9.875	IN
FSAL	Borehole Salinity	30000.00	PPM

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	1744.00	M
TDL	Total Depth – Logger	1741.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: MSS_Logging Vertical Scale: 1:200 Graphics File Created: 30-Jul-2021 18:50

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_040LUP	PRODUCER	30-Jul-2021 18:09	1705.4 M	1355.6 M
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Output DLIS Files

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Input DLIS Files

30-Jul-2021 18:09

Output DLIS Files

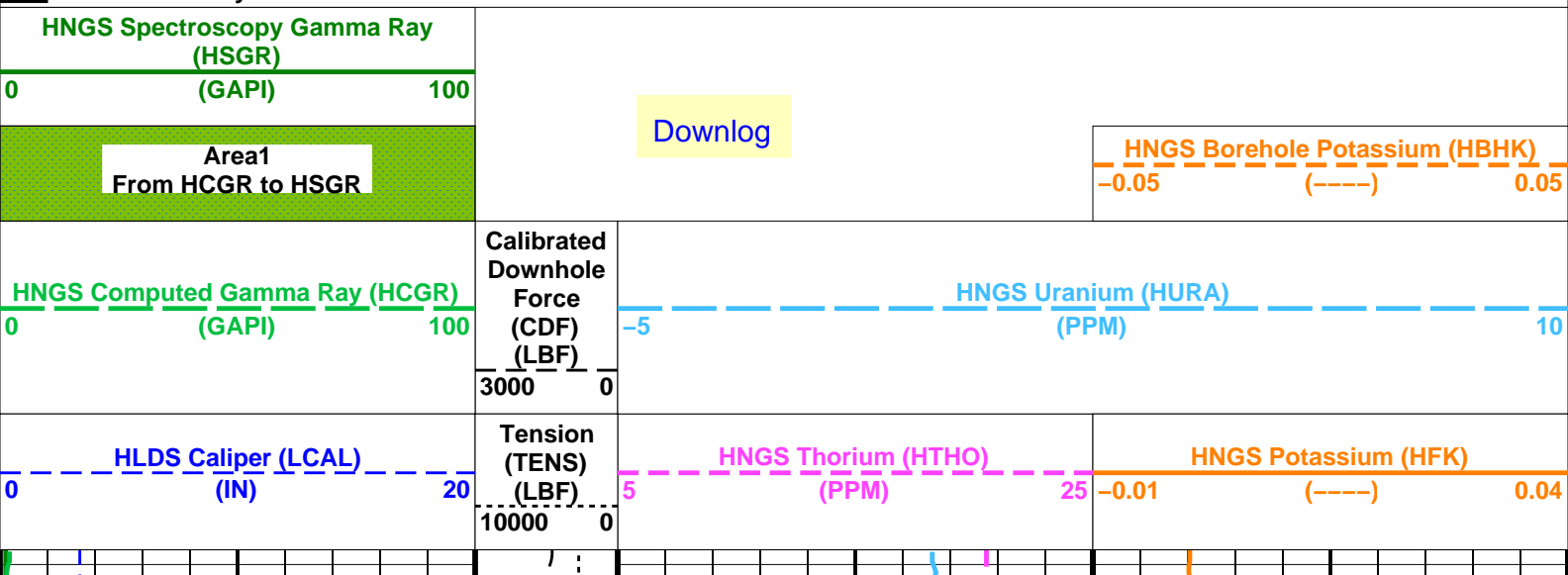
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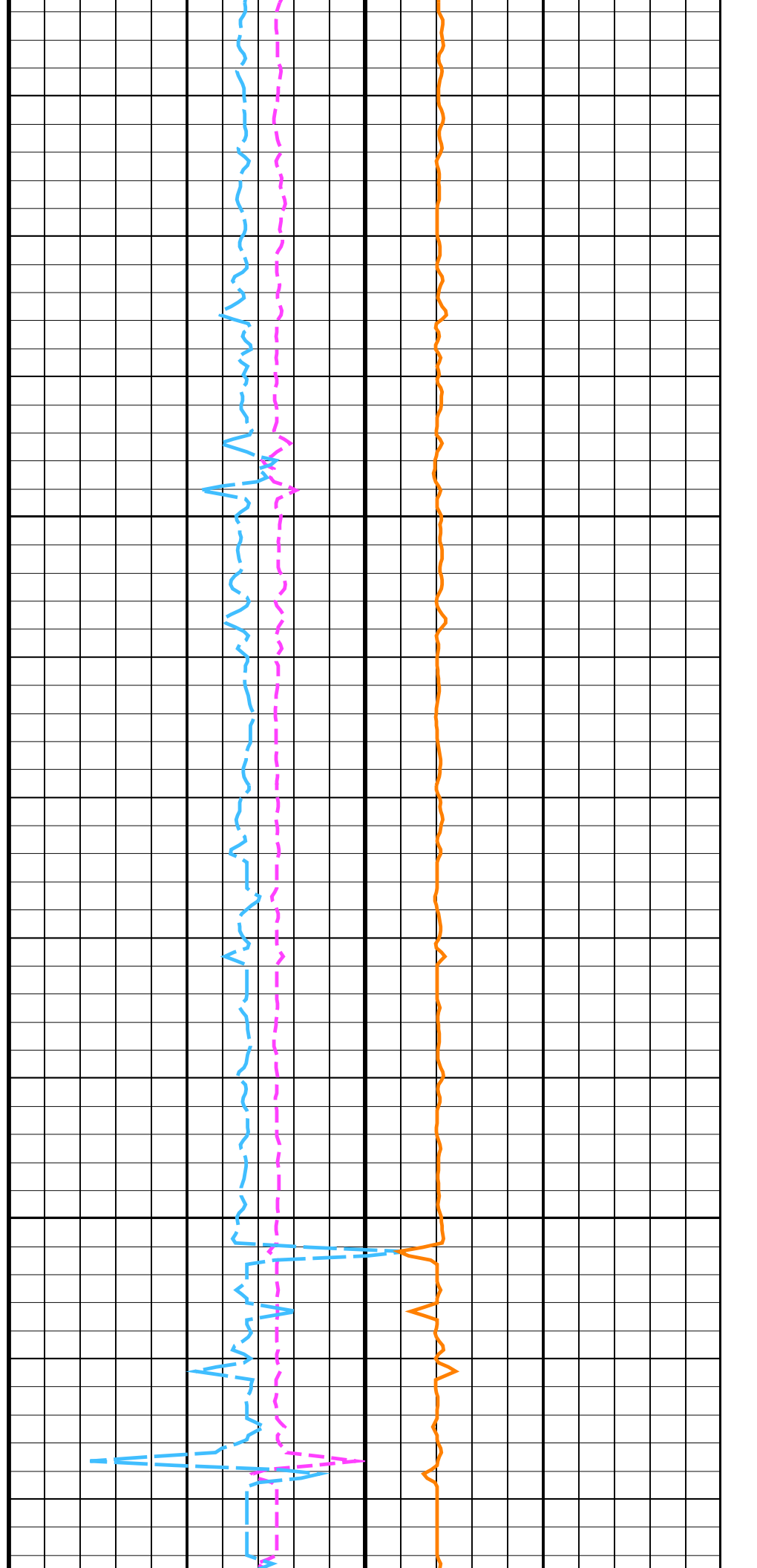
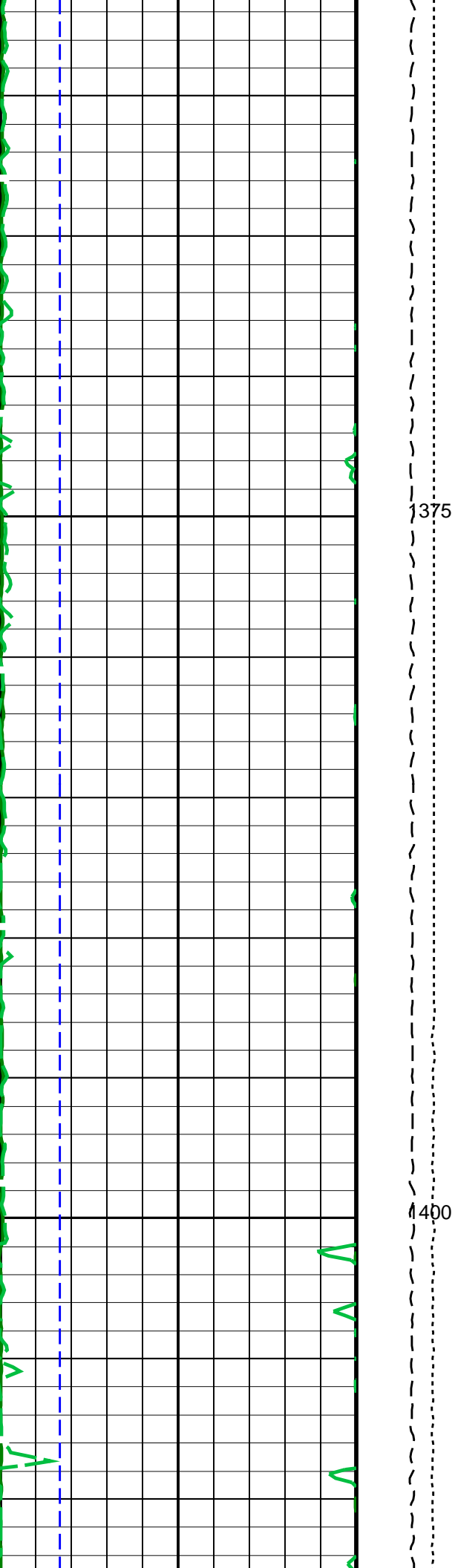
OP System Version: 19C0-187

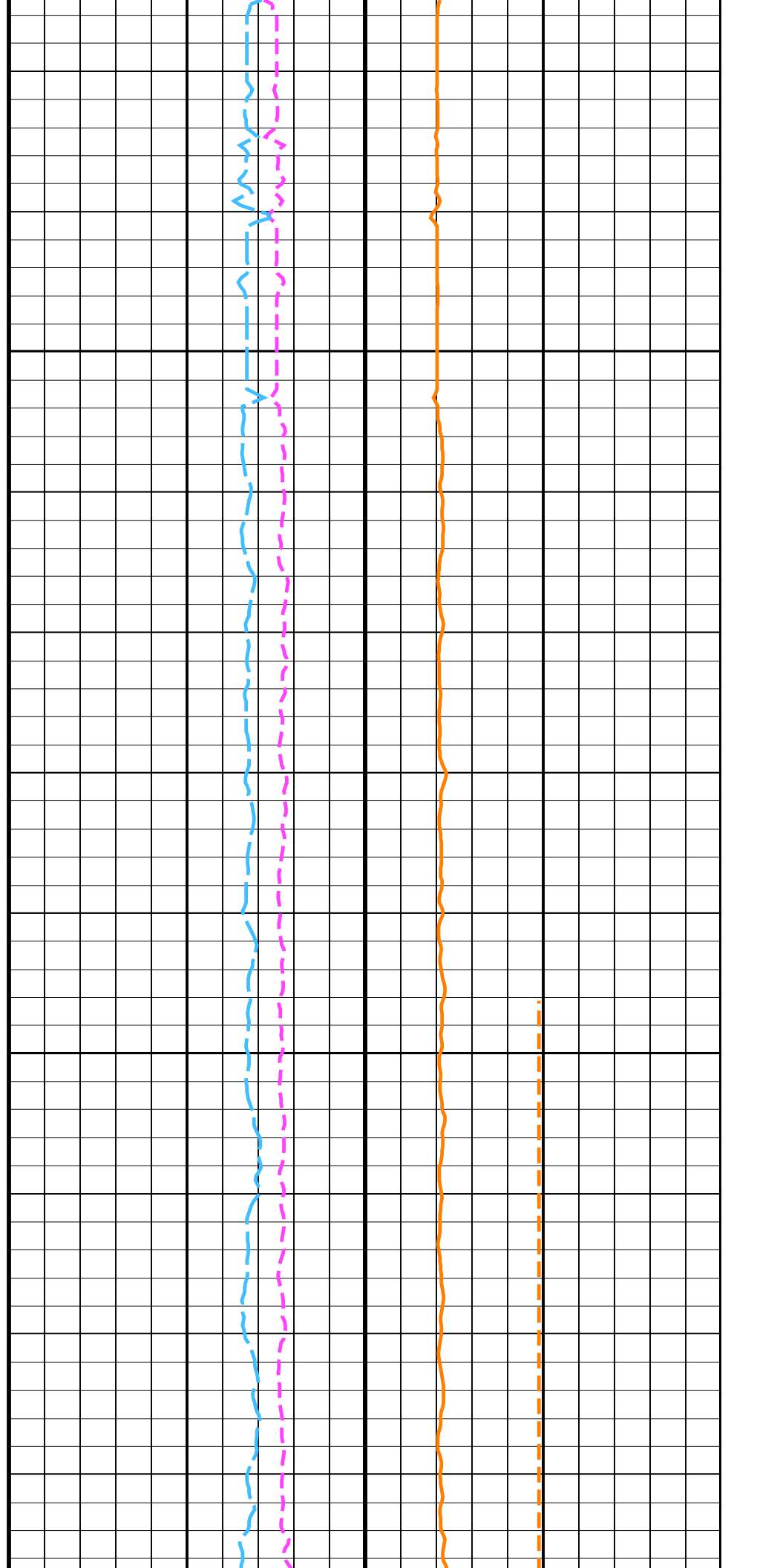
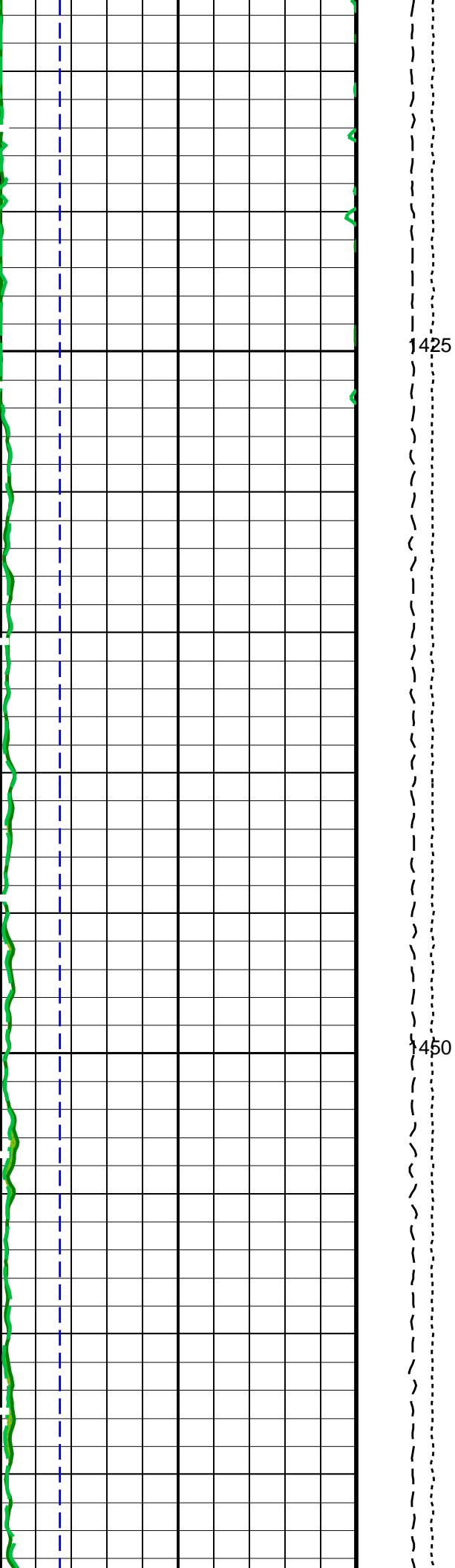
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HLDS	19C0-187	LDSC-B	19C0-187
APS-C	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	DTC-H	19C0-187

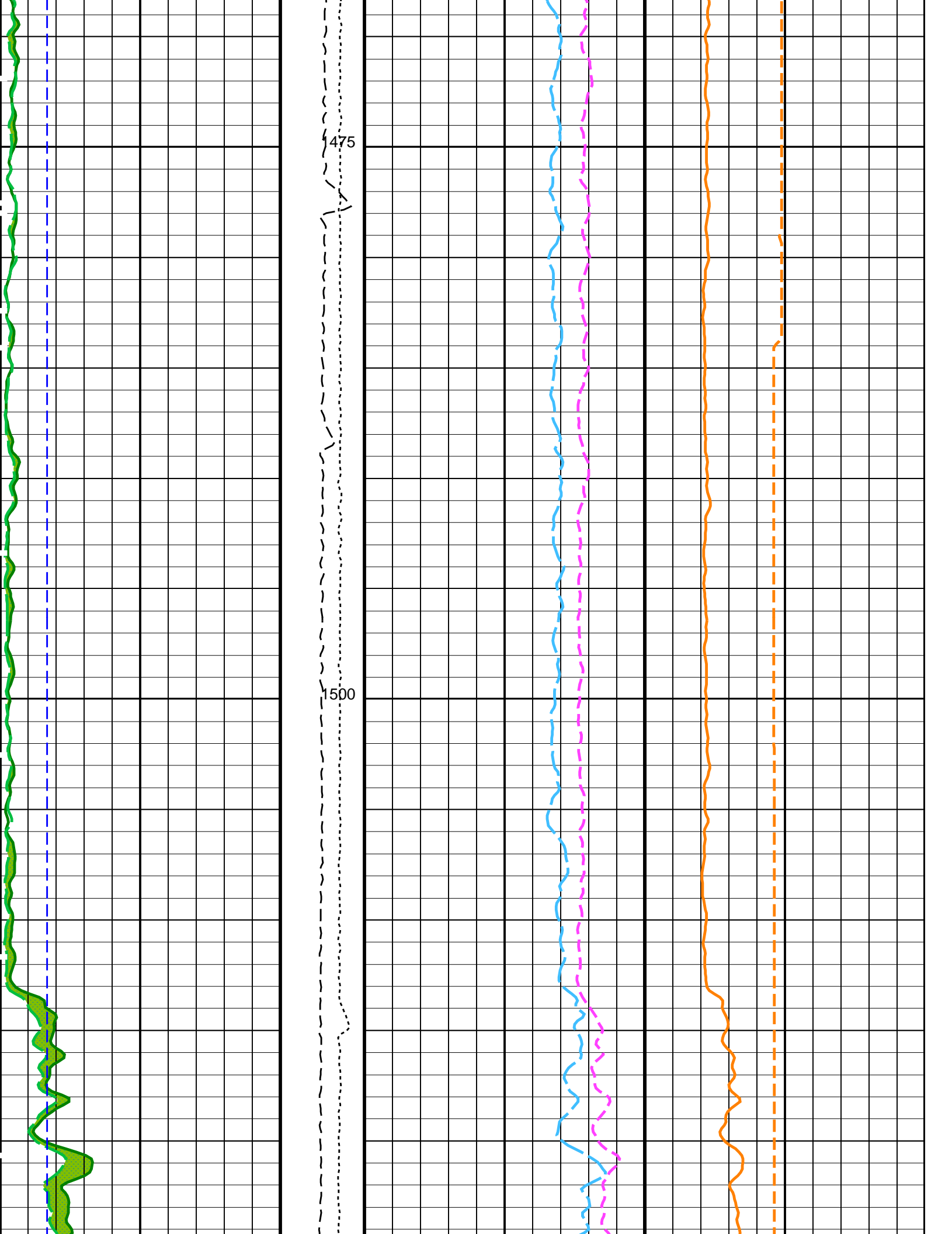
PIP SUMMARY

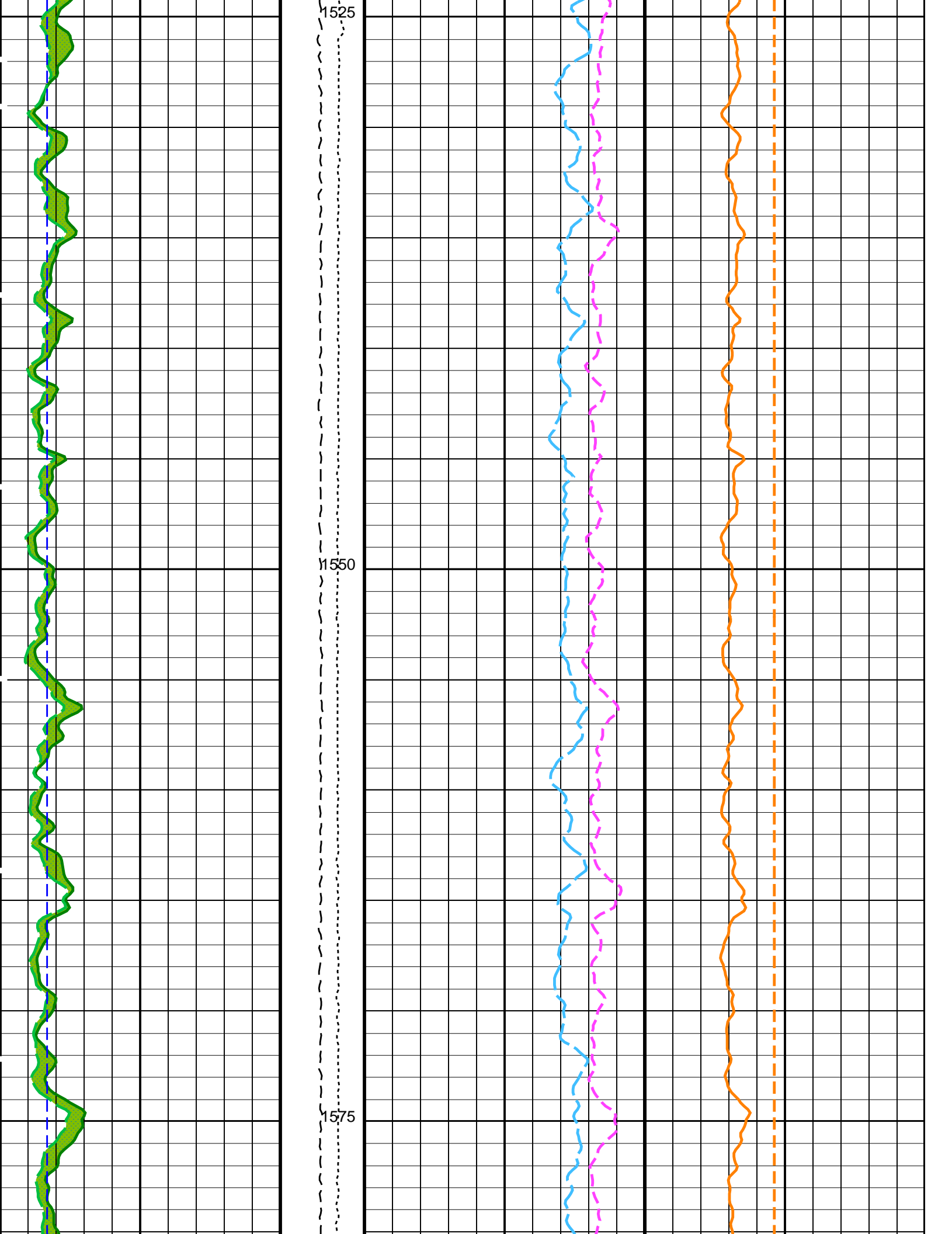
Time Mark Every 60 S

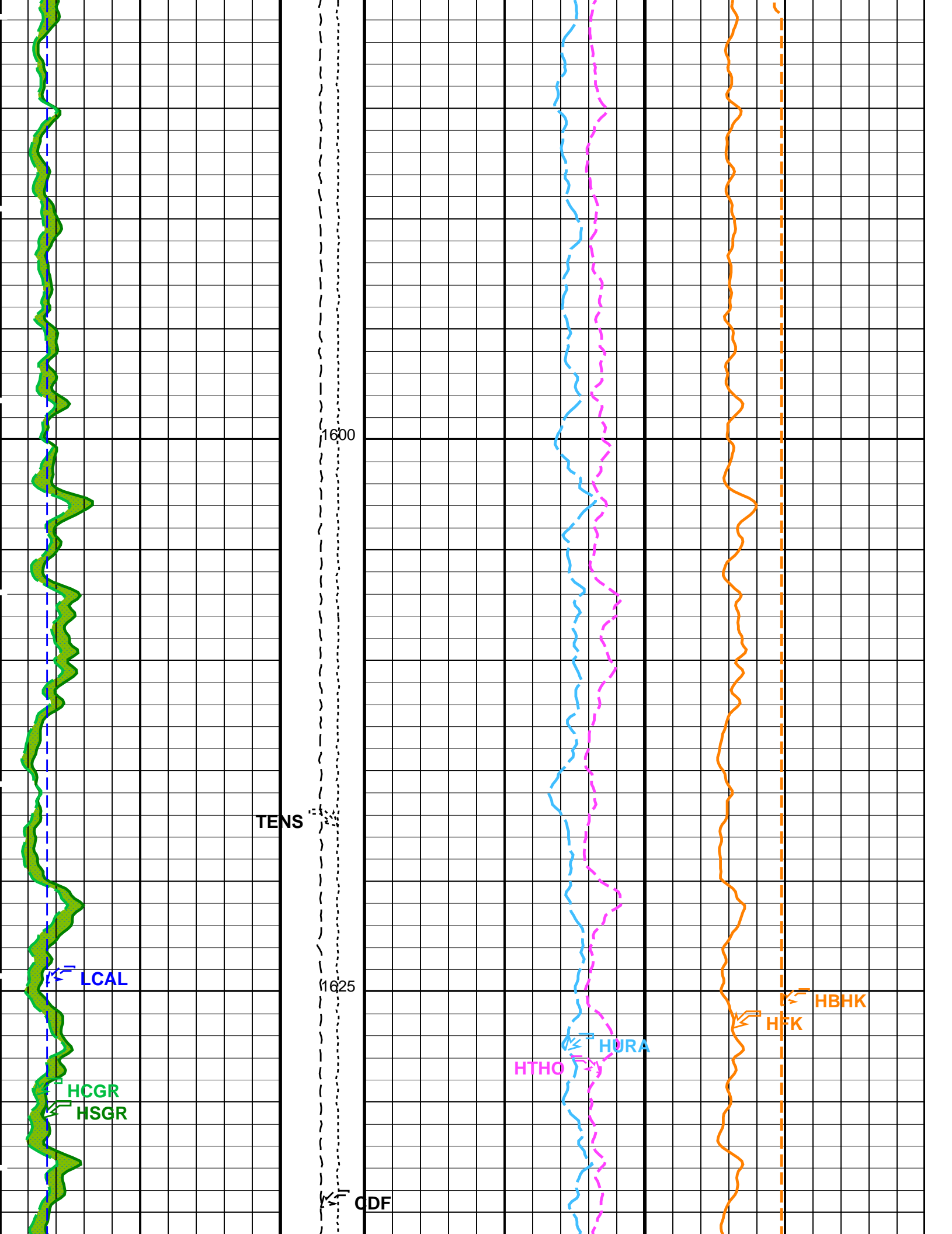


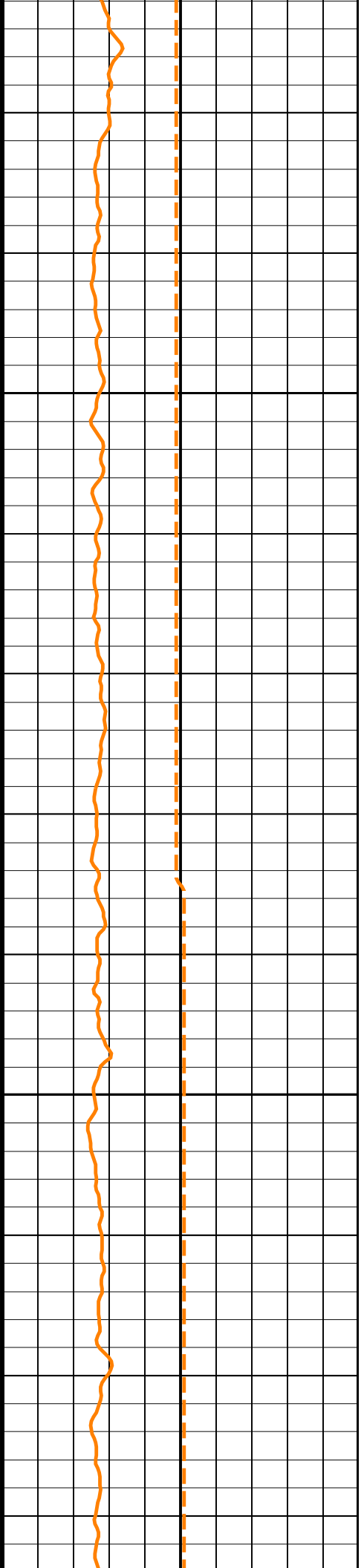
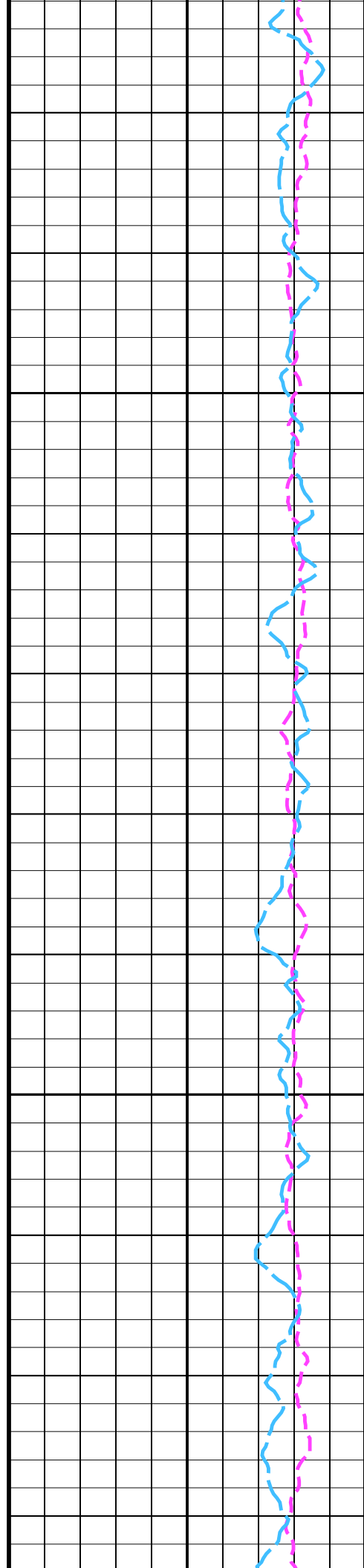
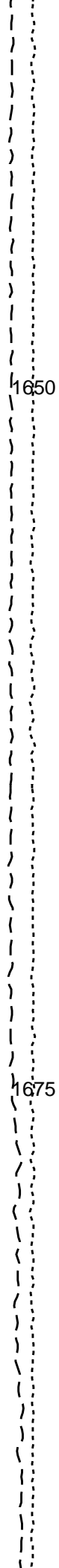
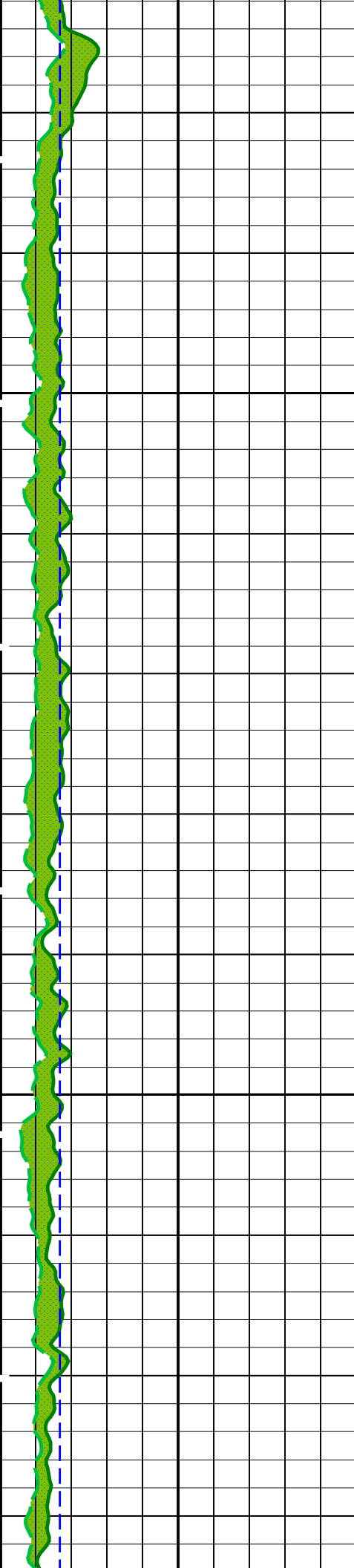


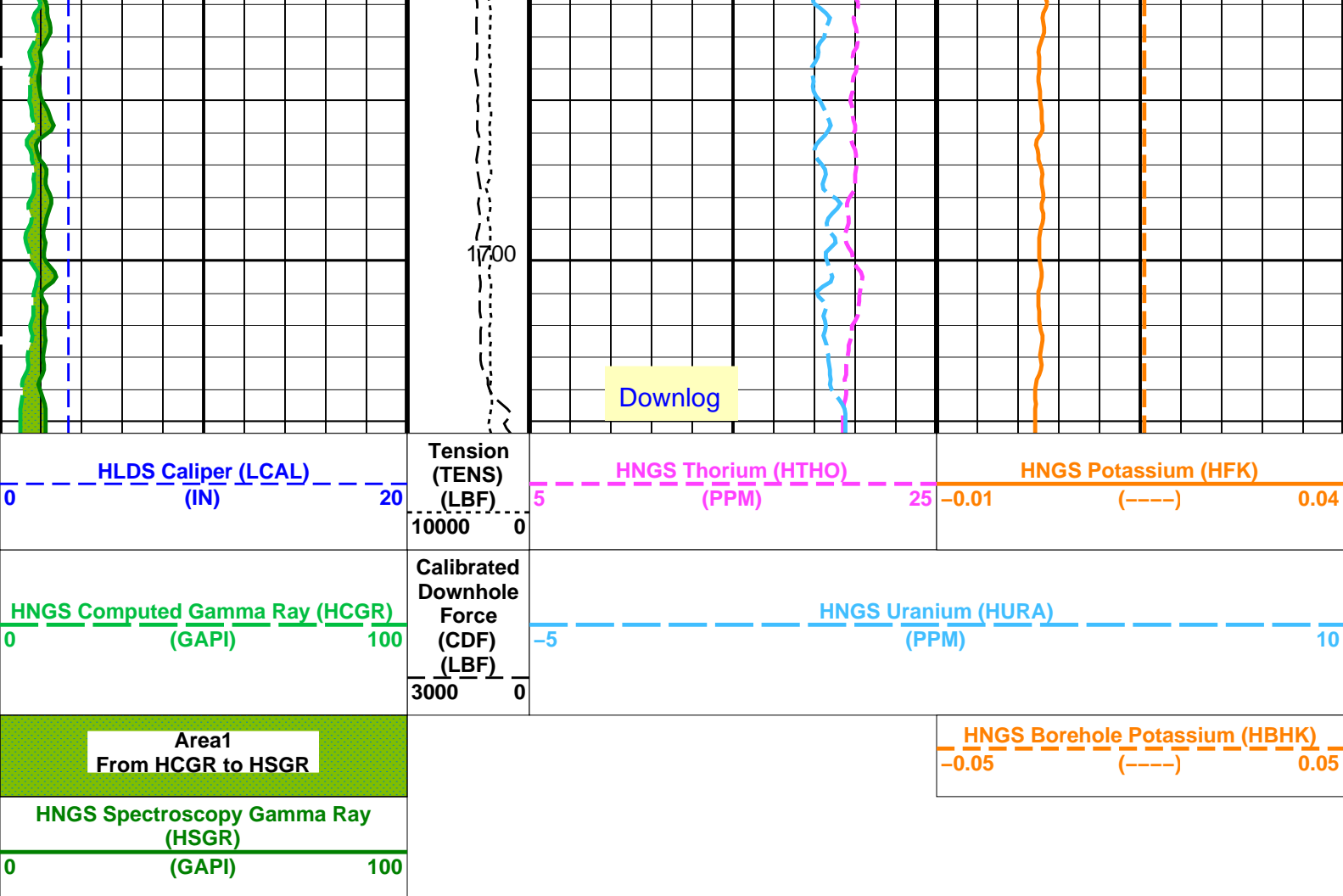












PIP SUMMARY

Time Mark Every 60 S

Parameters

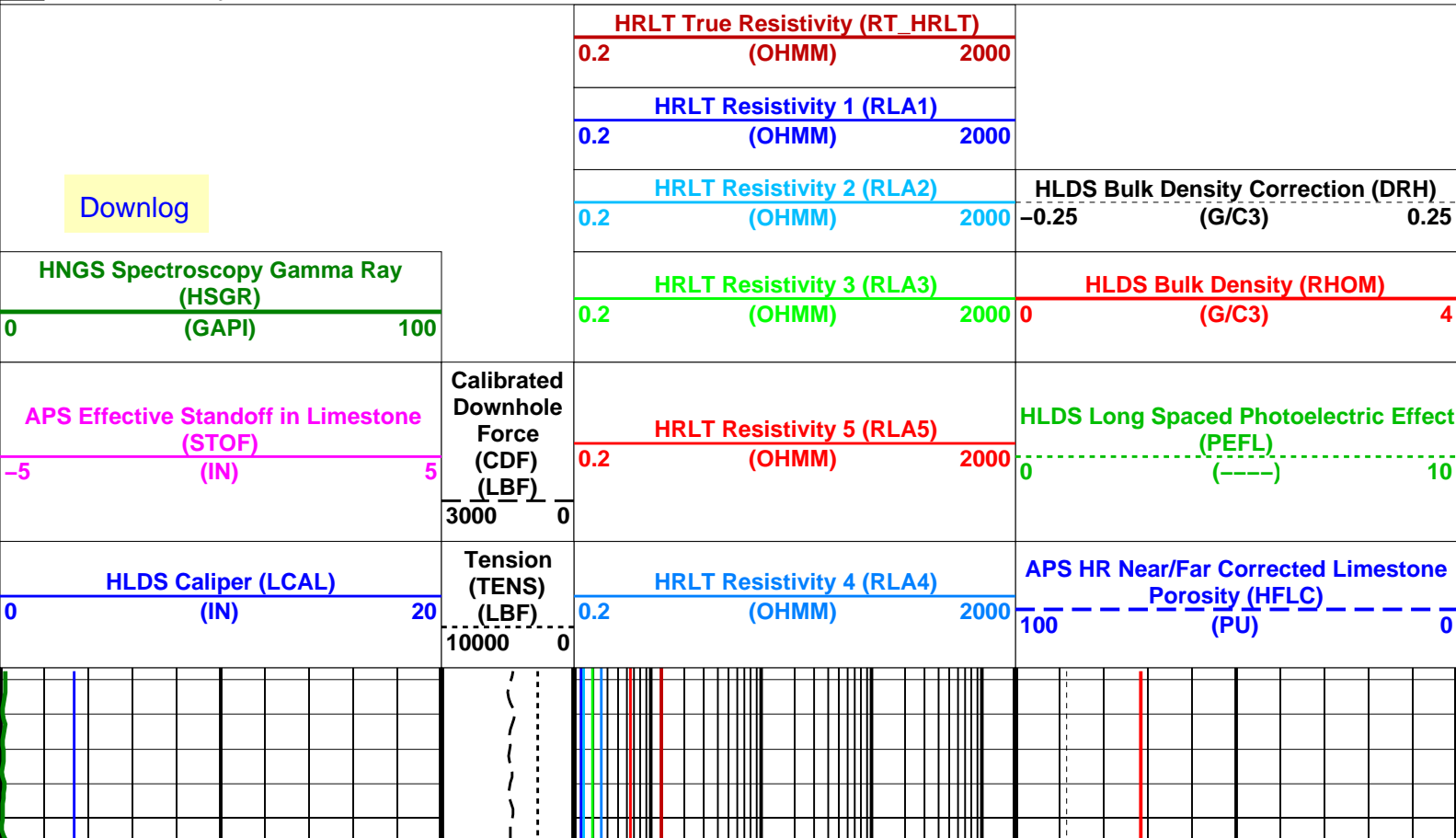
DLIS Name	Description	Value	
BHS	HRLT-B: High Resolution Laterolog Array – B		
GCSE	Borehole Status	OPEN	
	Generalized Caliper Selection	BS	
BHS	APS-C: Accelerator-Porosity Tool		
GCSE	Borehole Status	OPEN	
	Generalized Caliper Selection	BS	
BAR1	HNGS-BA: Hostile Natural Gamma Ray Sonde		
BAR2	HNGS Detector 1 Barite Constant	1	
BHK	HNGS Detector 2 Barite Constant	1	
BHS	HNGS Borehole Potassium Correction Concentration	0	
CSD1	Borehole Status	OPEN	
CSD2	Inner Casing Outer Diameter	0	IN
CSW1	Outer Casing Outer Diameter	0	IN
CSW2	Inner Casing Weight	0	LB/F
DBCC	Outer Casing Weight	0	LB/F
GCSE	HNGS Barite Constant Correction Flag	NONE	
H1P	Generalized Caliper Selection	BS	
H2P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HALF	HNGS Borehole Potassium Running Average	-0.00244743	
HCRB	HNGS Alpha Filter Length	60	IN
HMWM	HNGS Apply Borehole Potassium Correction	NONE	
HNPE	Mud Weighting Material	NATU	
S1BI	HNGS Processing Enable	YES	
S2BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
TPOS	HNGS Standard Gamma-Ray Correction Flag	YES	
VBA1	Tool Position	ECCE	
VBA2	HNGS Detector 1 Variable Barite Factor Running Average	0.971528	
	HNGS Detector 2 Variable Barite Factor Running Average	0.979934	
BS	System and Miscellaneous		
DFD	Bit Size	9.875	IN
PO	Drilling Fluid Density	1.02	G/C3
	Depth Offset for Playback	0.0	M

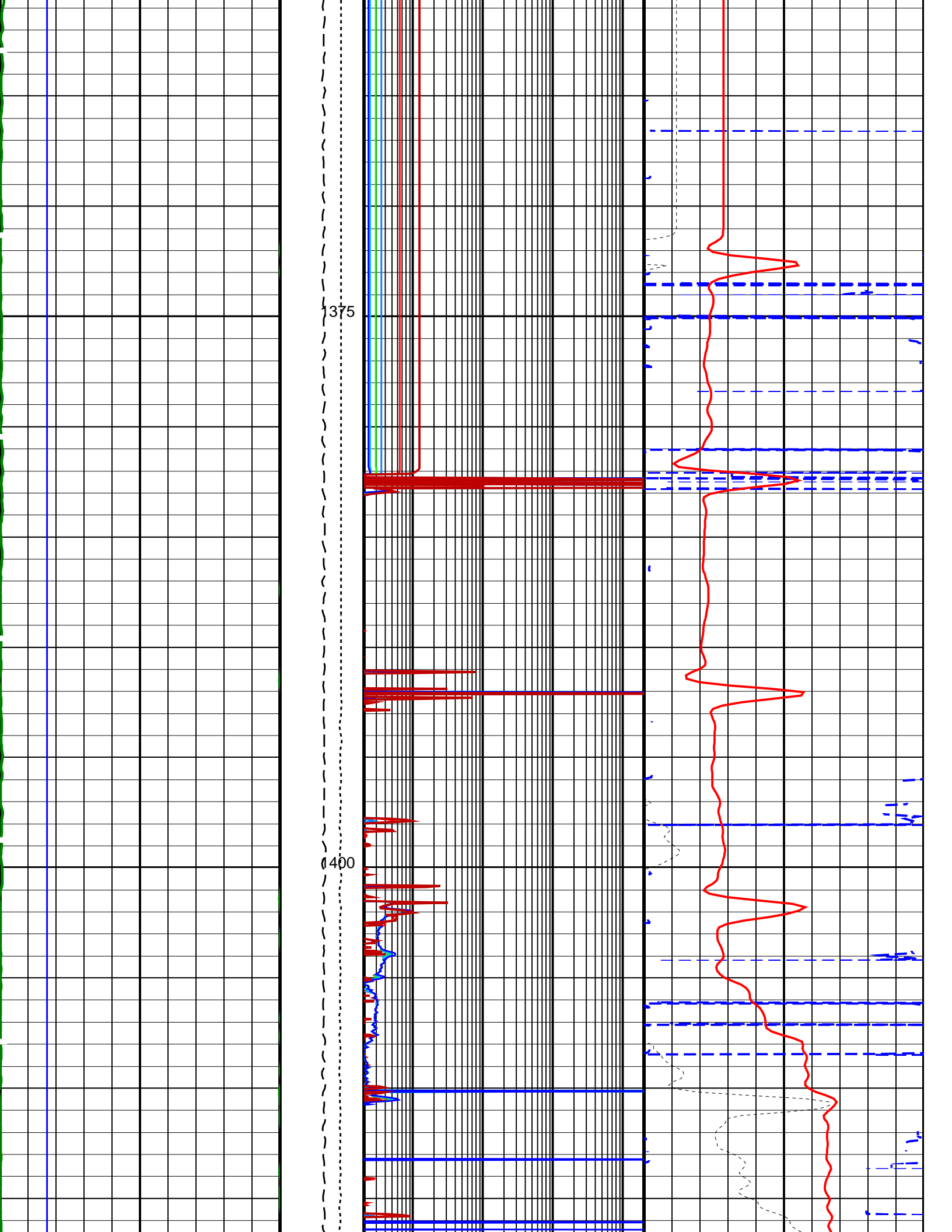
DO PP	Depth Onset for Playback Playback Processing	0.0 M	NORMAL
Format: HNGSYields	Vertical Scale: 1:200	Graphics File Created: 30-Jul-2021 18:50	
OP System Version: 19C0-187			
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
APS-C	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	DTC-H	19C0-187
Input DLIS Files			
DEFAULT	Flip_MSS_LDEO_HRLA_040LUP	PRODUCER	30-Jul-2021 18:09 1705.4 M 1355.6 M
Output DLIS Files			
DEFAULT	MSS_LDEO_HRLA_LDL_041PUP	FN:58	PRODUCER 30-Jul-2021 18:50

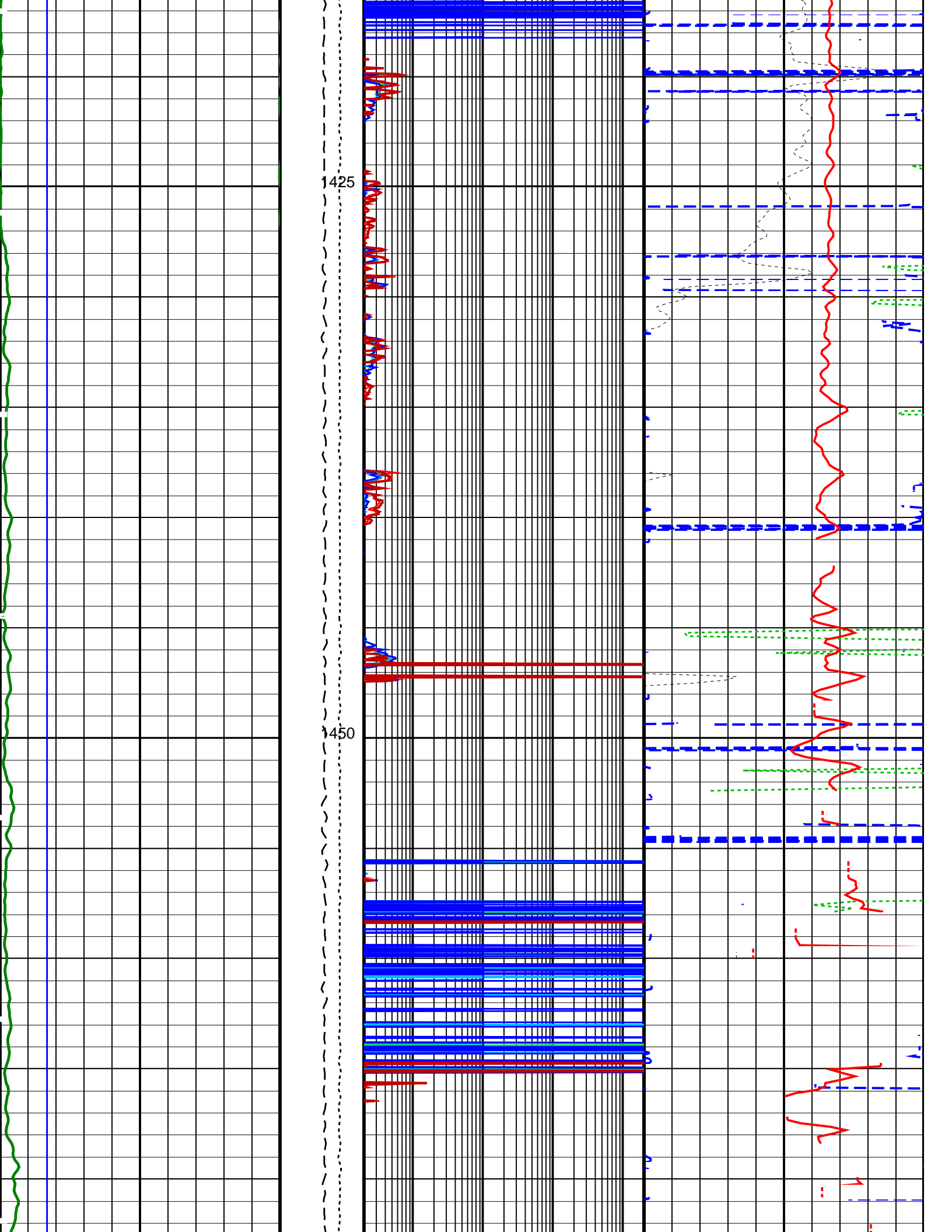
Input DLIS Files			
30-Jul-2021 18:09			
Output DLIS Files			
DEFAULT	MSS_LDEO_HRLA_LDL_041PUP	FN:58	PRODUCER 30-Jul-2021 18:50 1705.4 M 1355.6 M

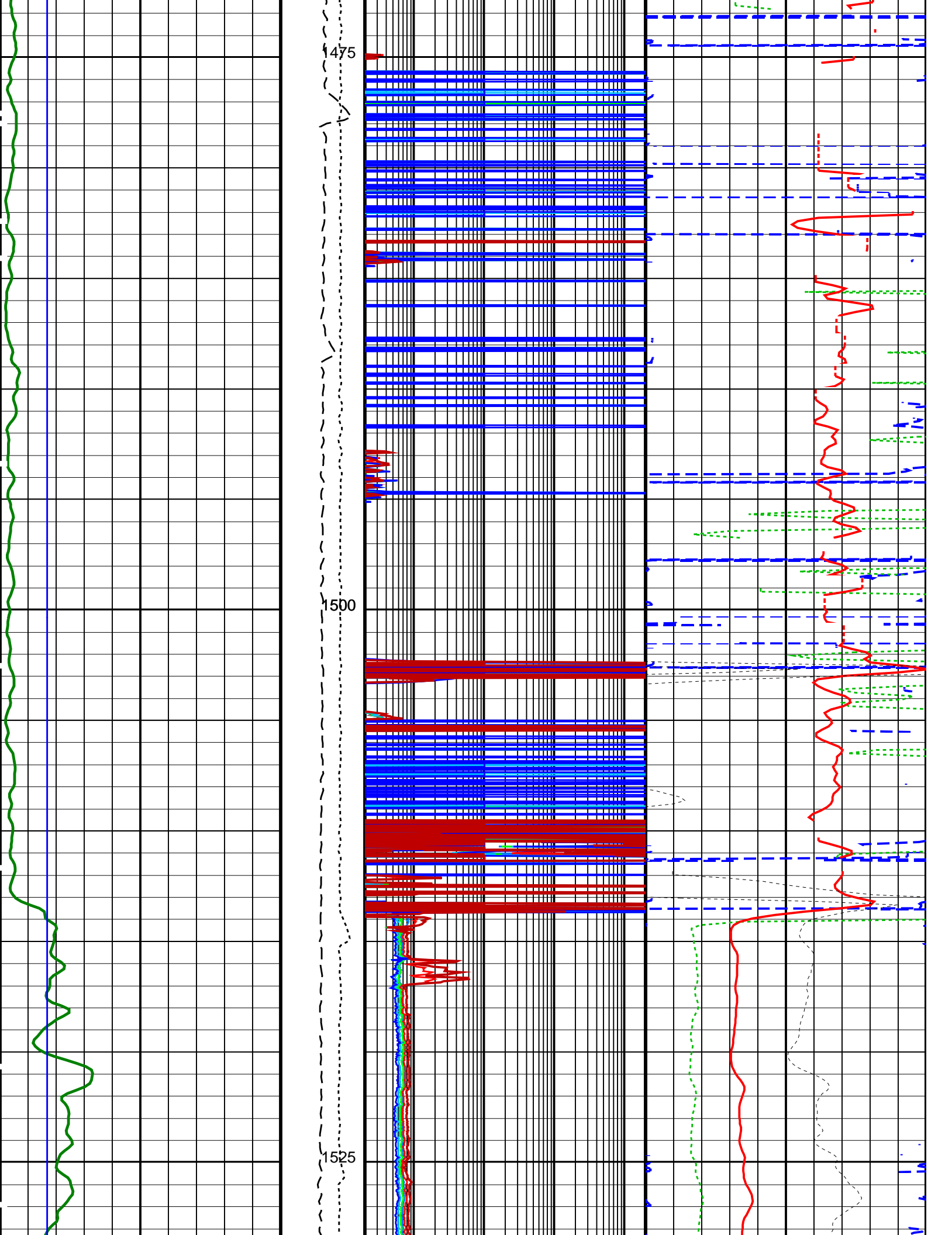
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HLDS	19C0-187	LDSC-B	19C0-187
APS-C	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	DTC-H	19C0-187

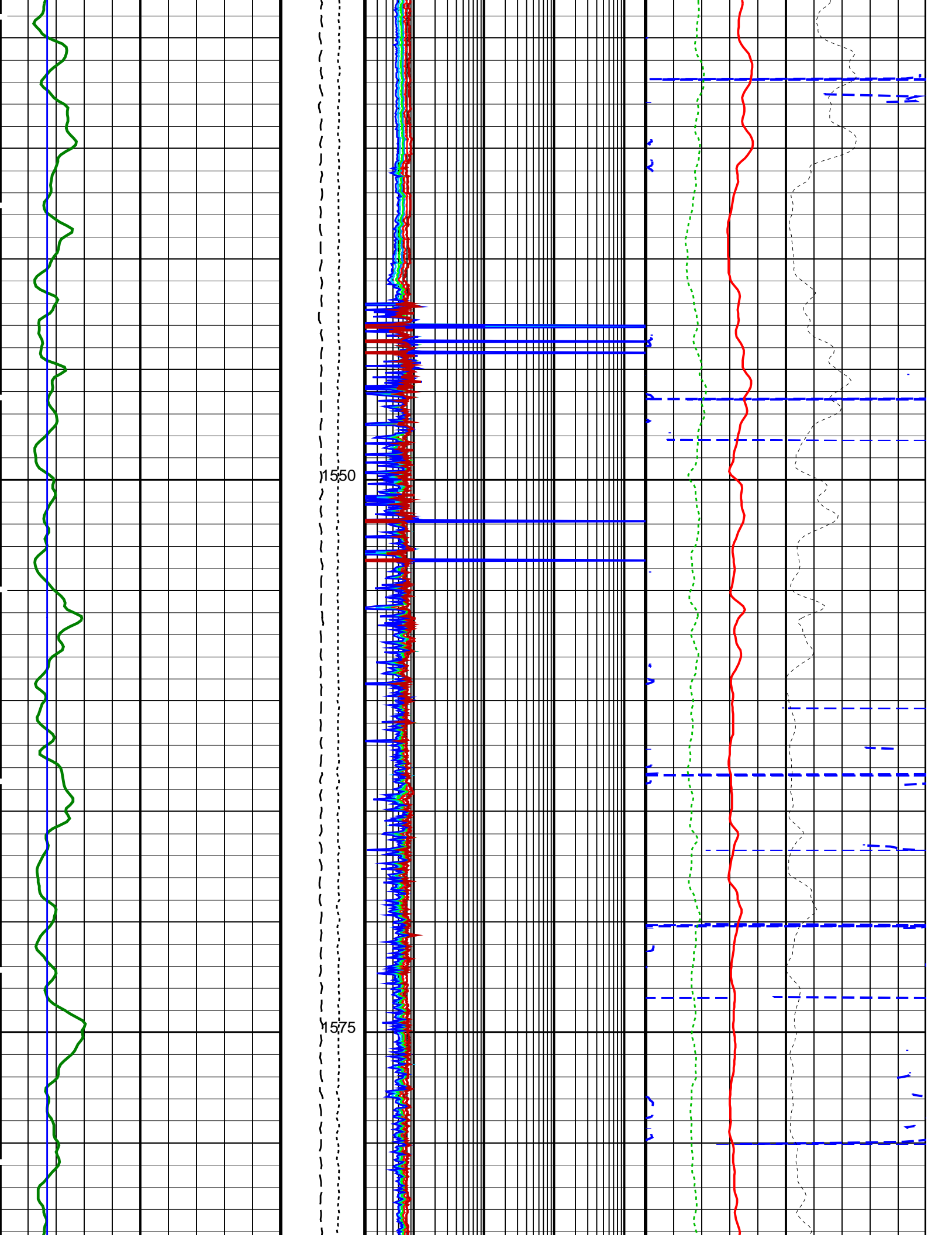
PIP SUMMARY			
Time Mark Every 60 S			

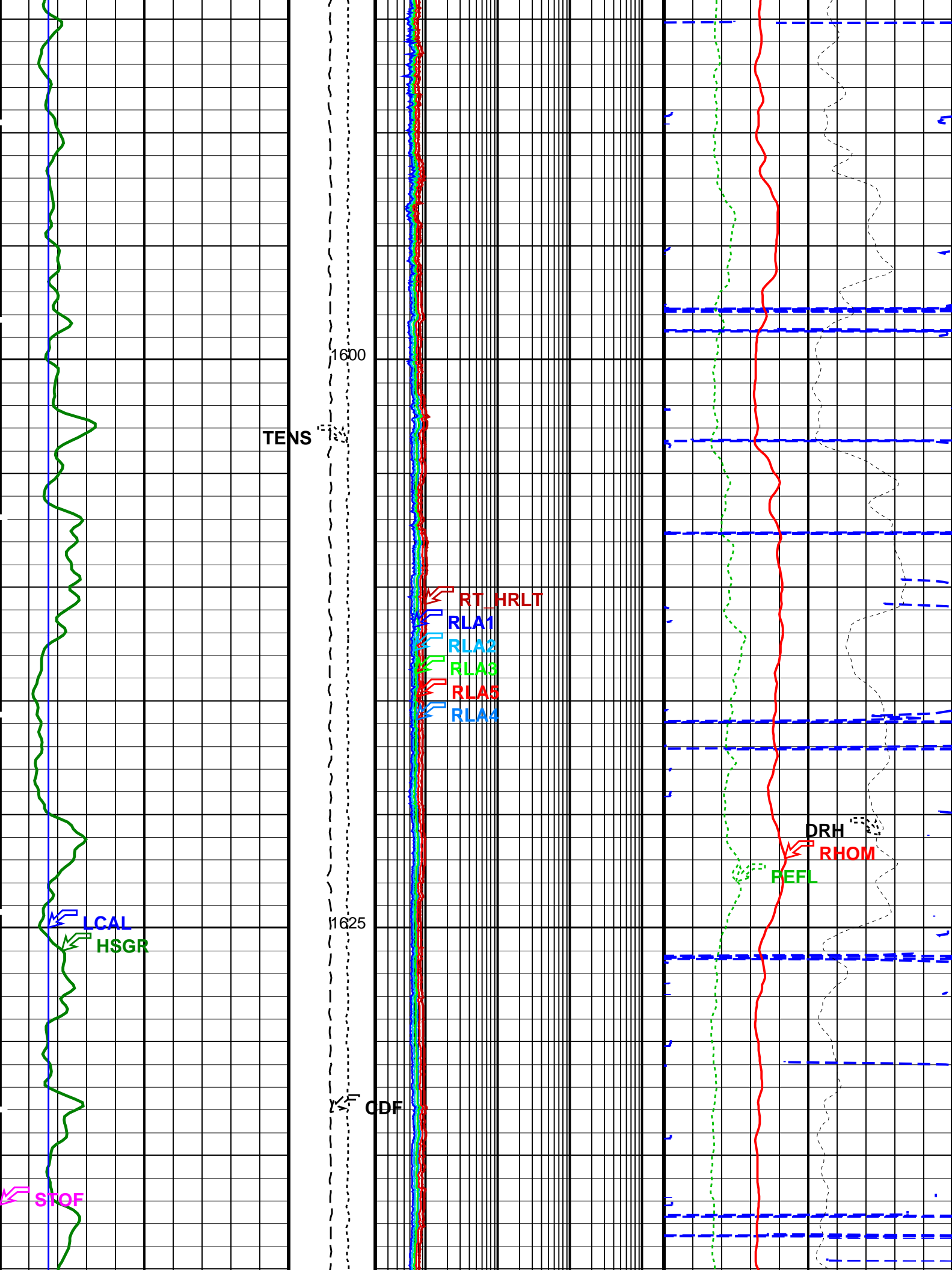


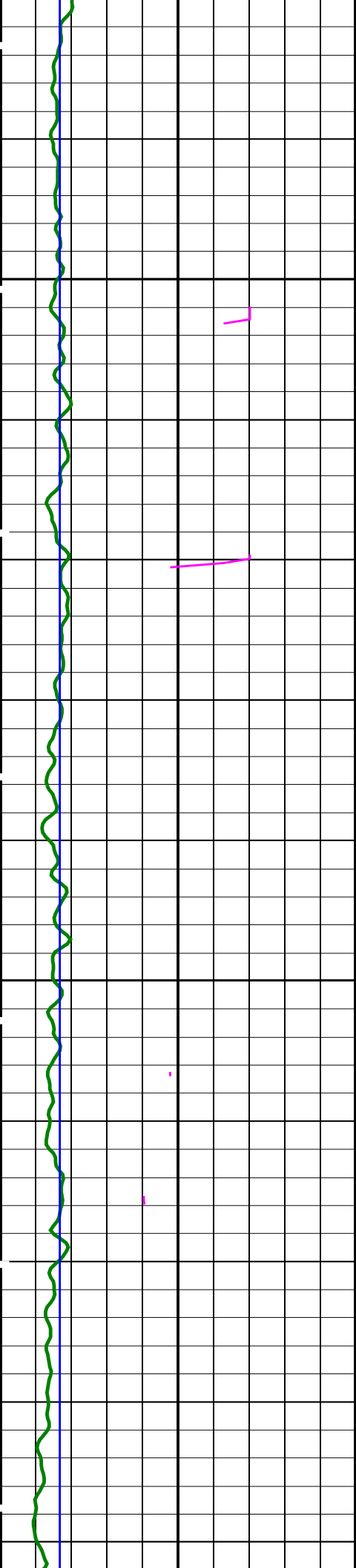




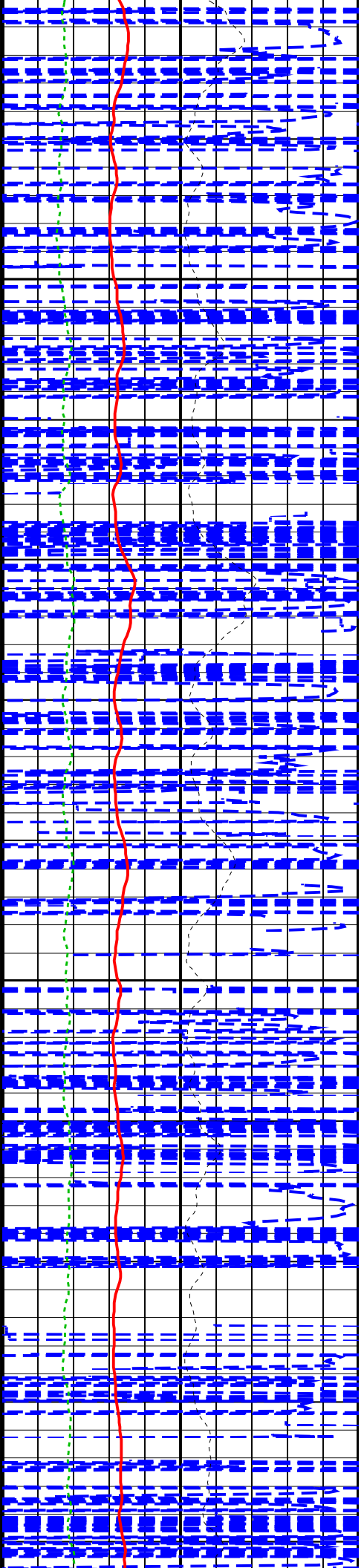
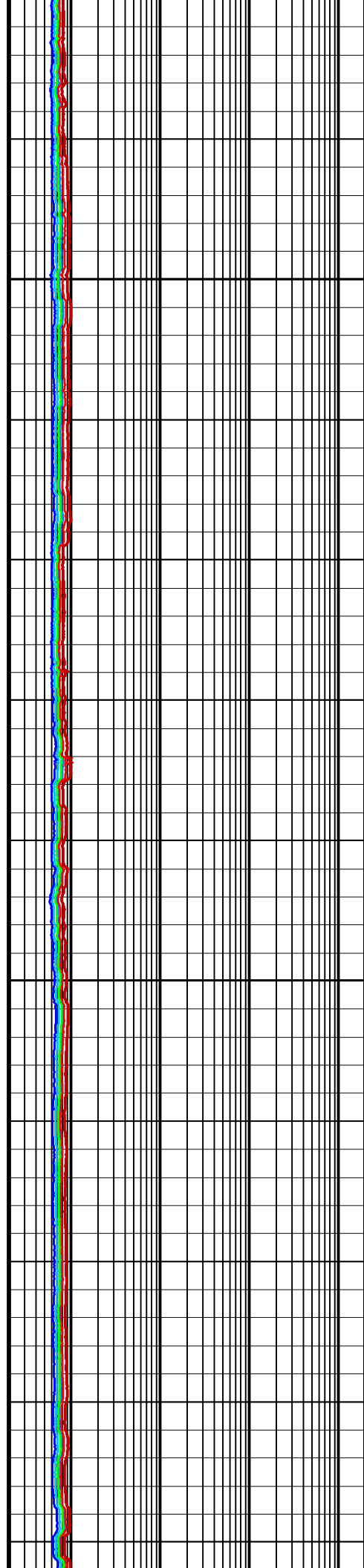


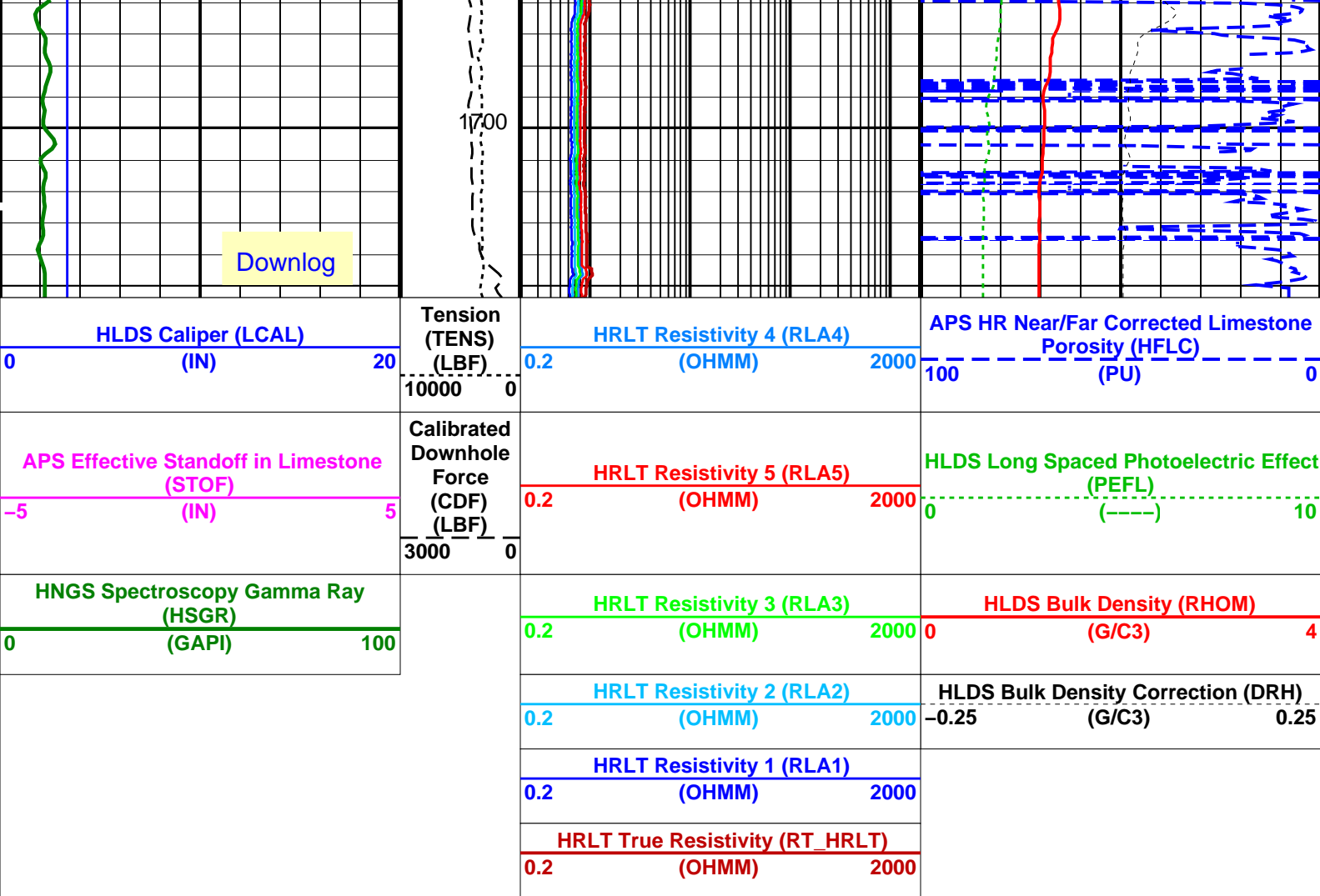






1650
1675





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	8.73849 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
PROCIINV	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

TRUSS_C	Surface Hole Temperature	20	DEGC
SHT	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	0	
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	
	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	
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	-0.00244743	
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	

SH1	Surface Hole Temperature	20	DEGC
TPOS	Tool Position		
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.971528	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.979934	
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	1744.00	M
TDL	Total Depth - Logger	1741.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripleCombo

Vertical Scale: 1:200

Graphics File Created: 30-Jul-2021 18:50

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

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Company: International Ocean Discovery Program

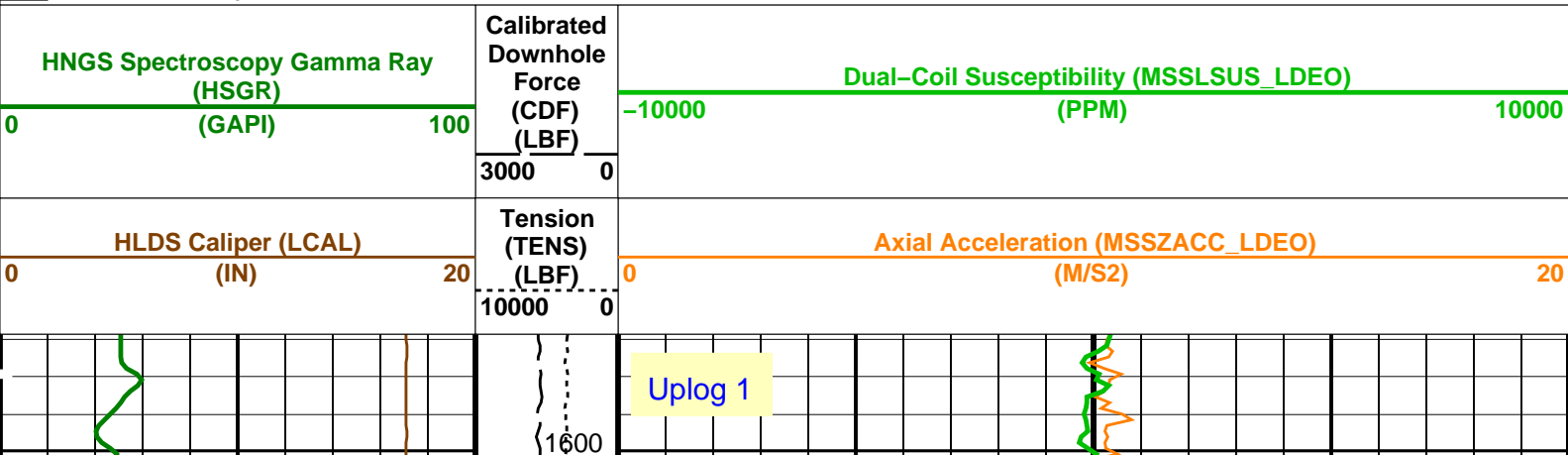
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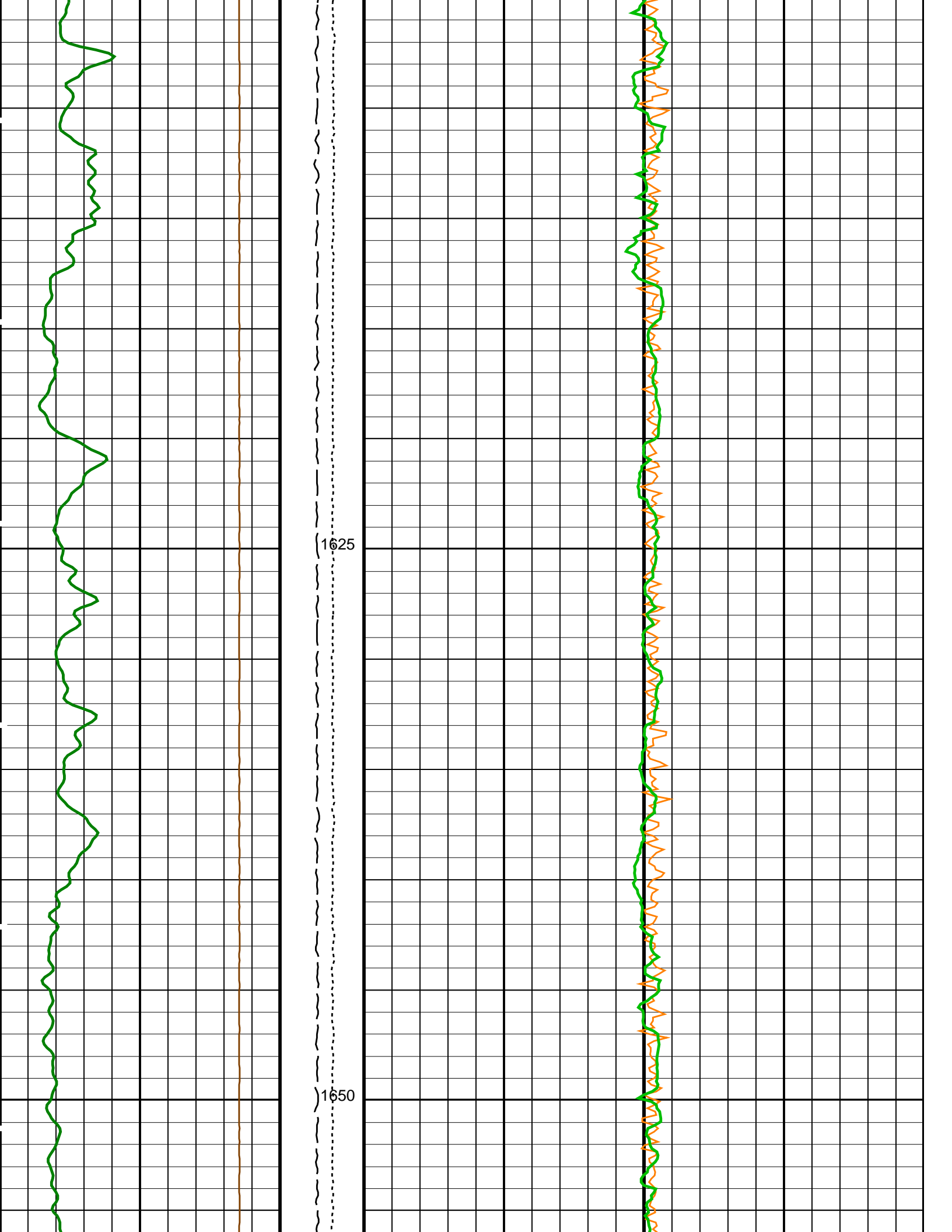
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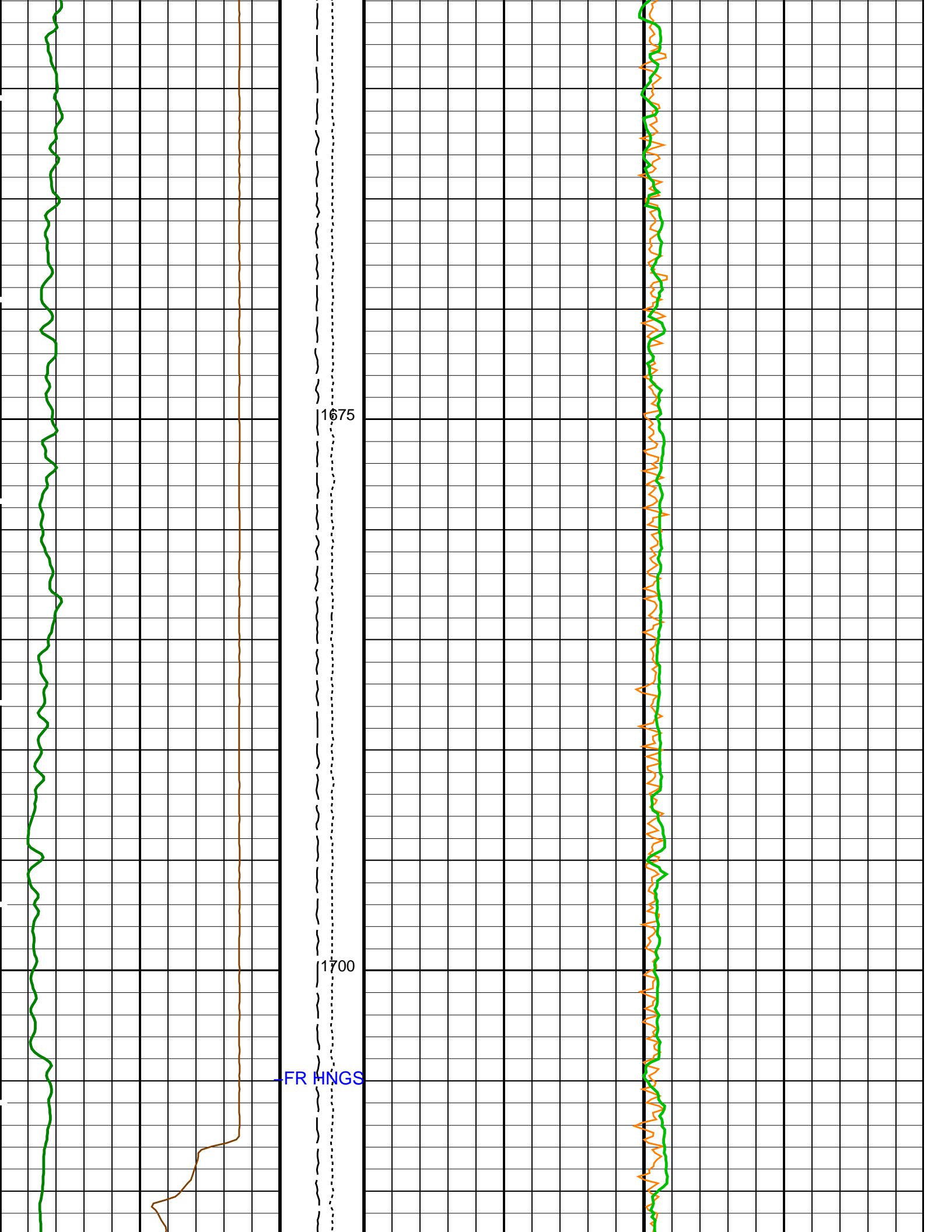
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HNGS-BA	19C0-187	DTC-H	19C0-187

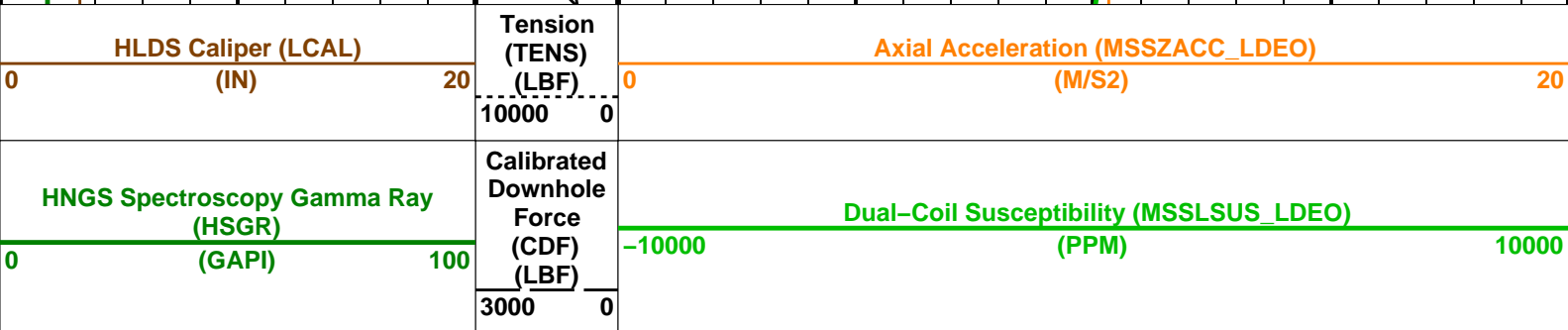
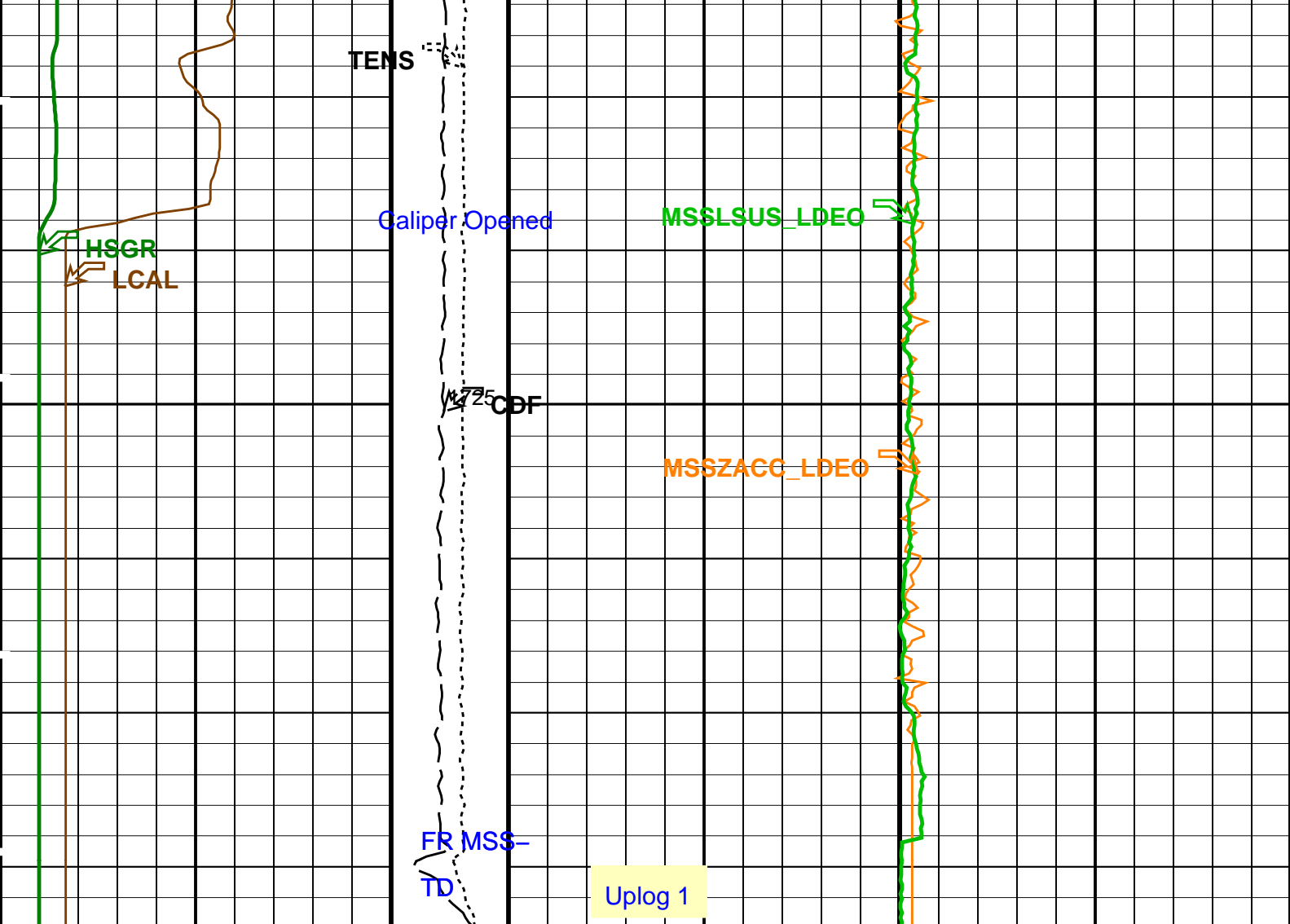
PIP SUMMARY

Time Mark Every 60 S









PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
HRLT-B: High Resolution Laterolog Array – B			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	7	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	7.76192	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	
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	
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

UDEV	Average Angular Deviation of Borehole from Normal	0.018227	DEG
GGRD	Geothermal Gradient	0	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	-0.00210898	
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	0.354924	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.40925	
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

Format: MSS_Logging Vertical Scale: 1:200 Graphics File Created: 29-Jul-2021 06:30

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

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BACKKUP	MSS_LDEO_HRLA_LDL_014LUP	FN:21	PRODUCER	29-Jul-2021 06:30

Output DLIS Files

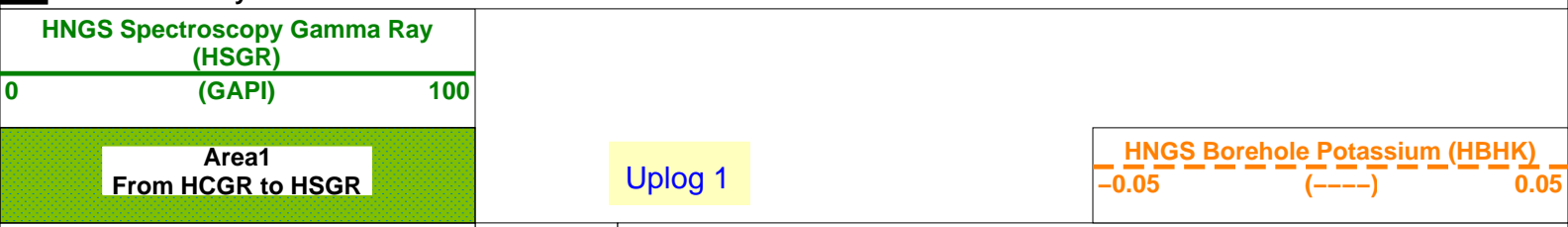
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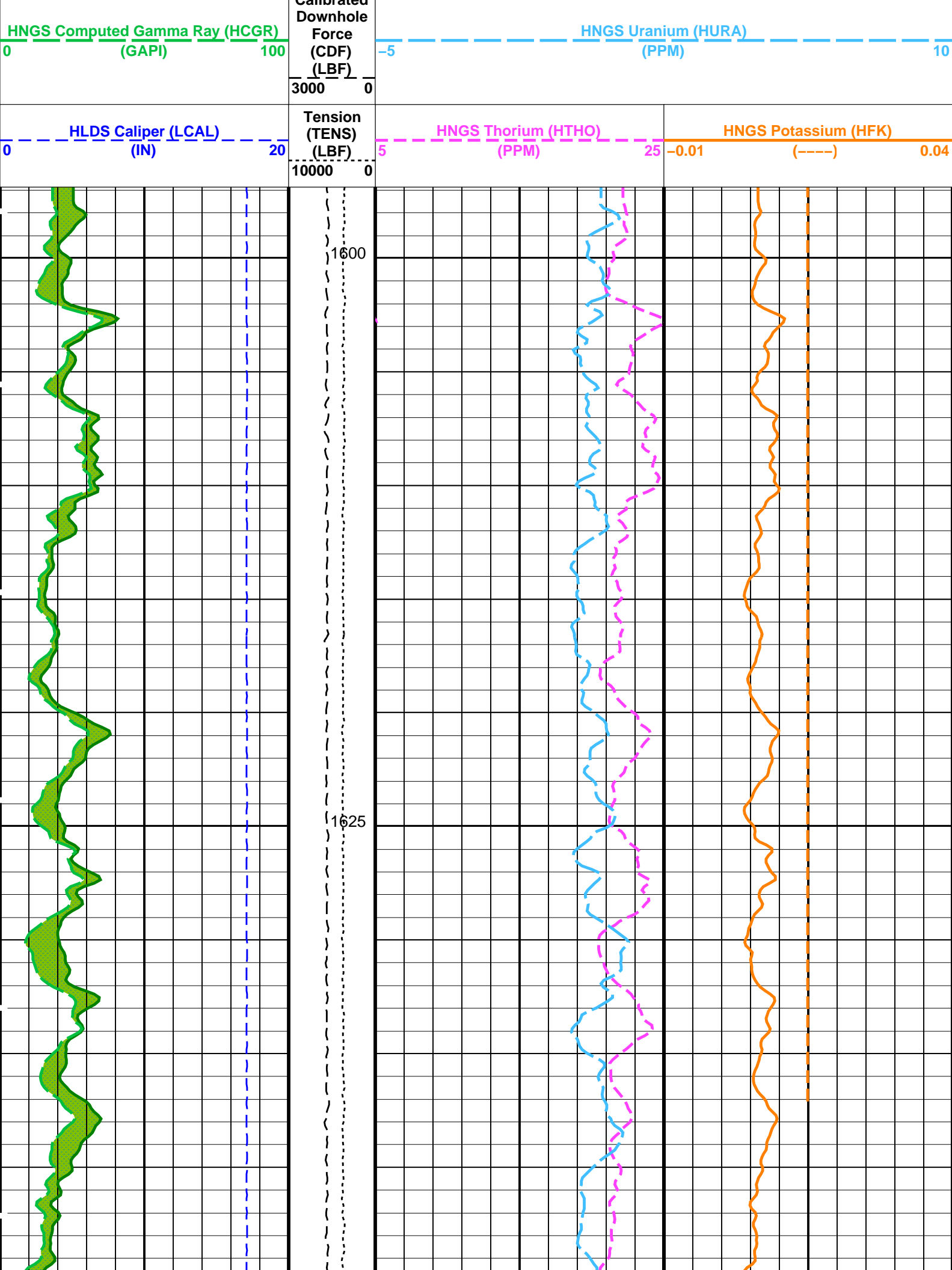
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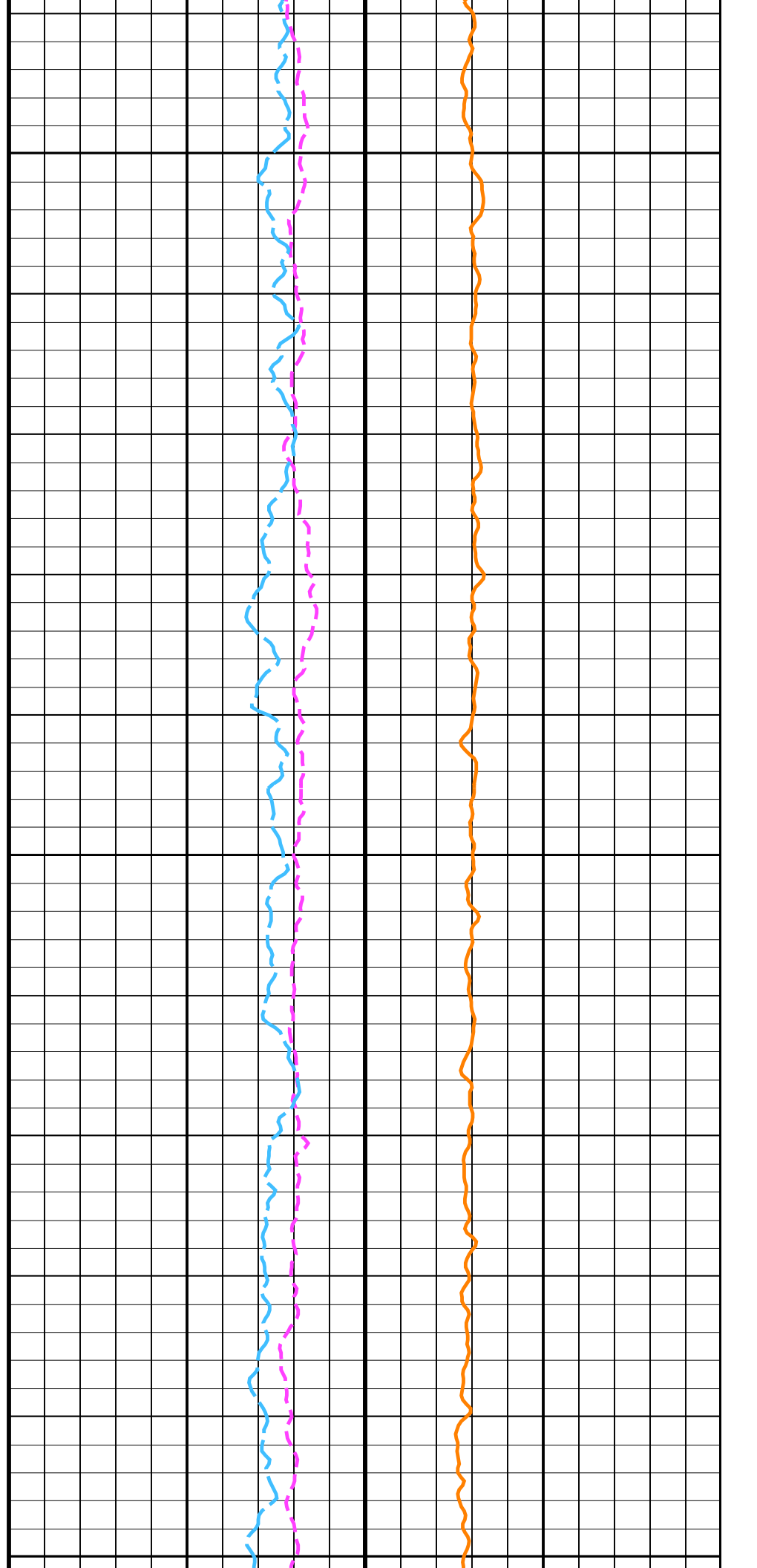
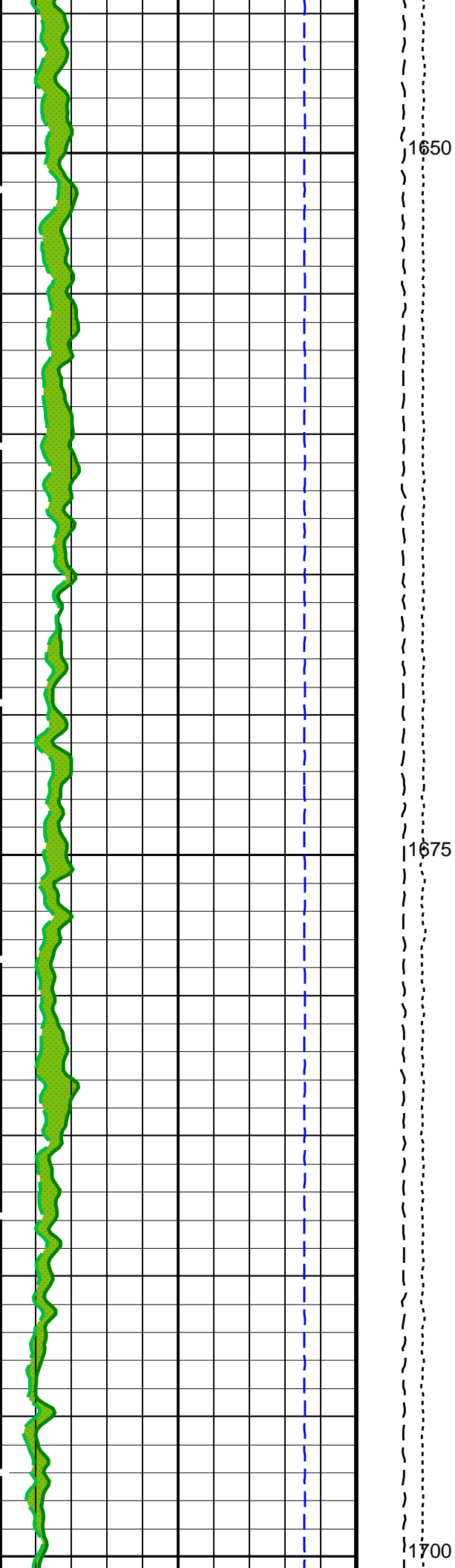
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HLDS	19C0-187	LDSC-B	19C0-187
APS-C	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	DTC-H	19C0-187

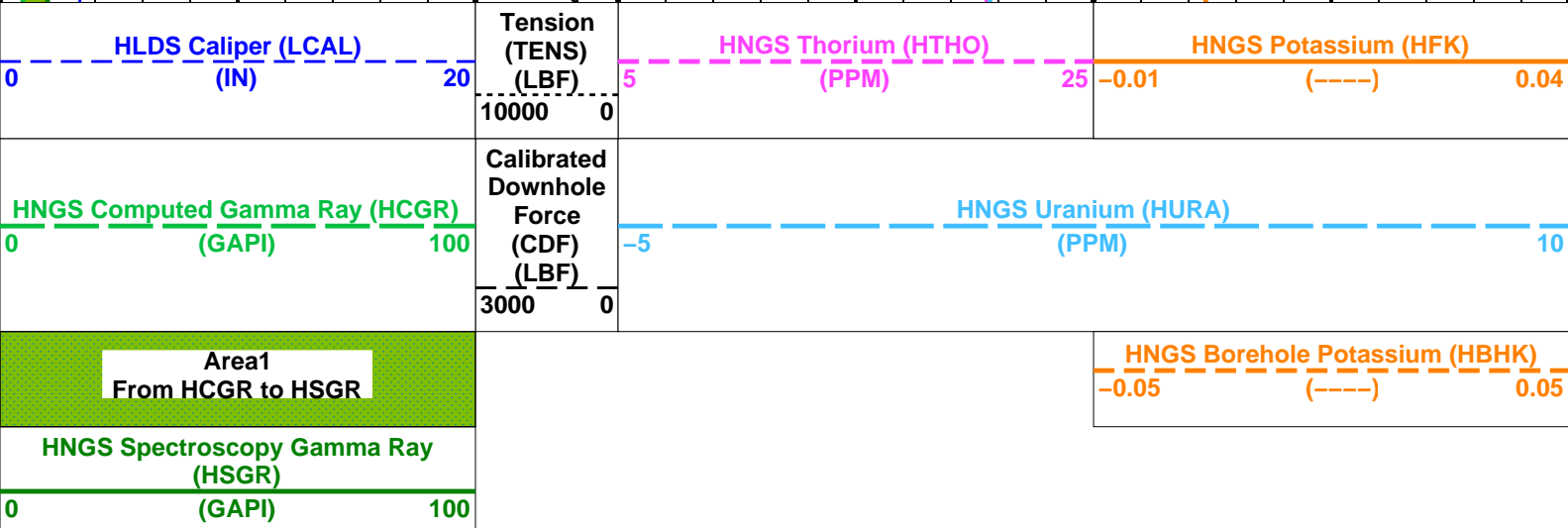
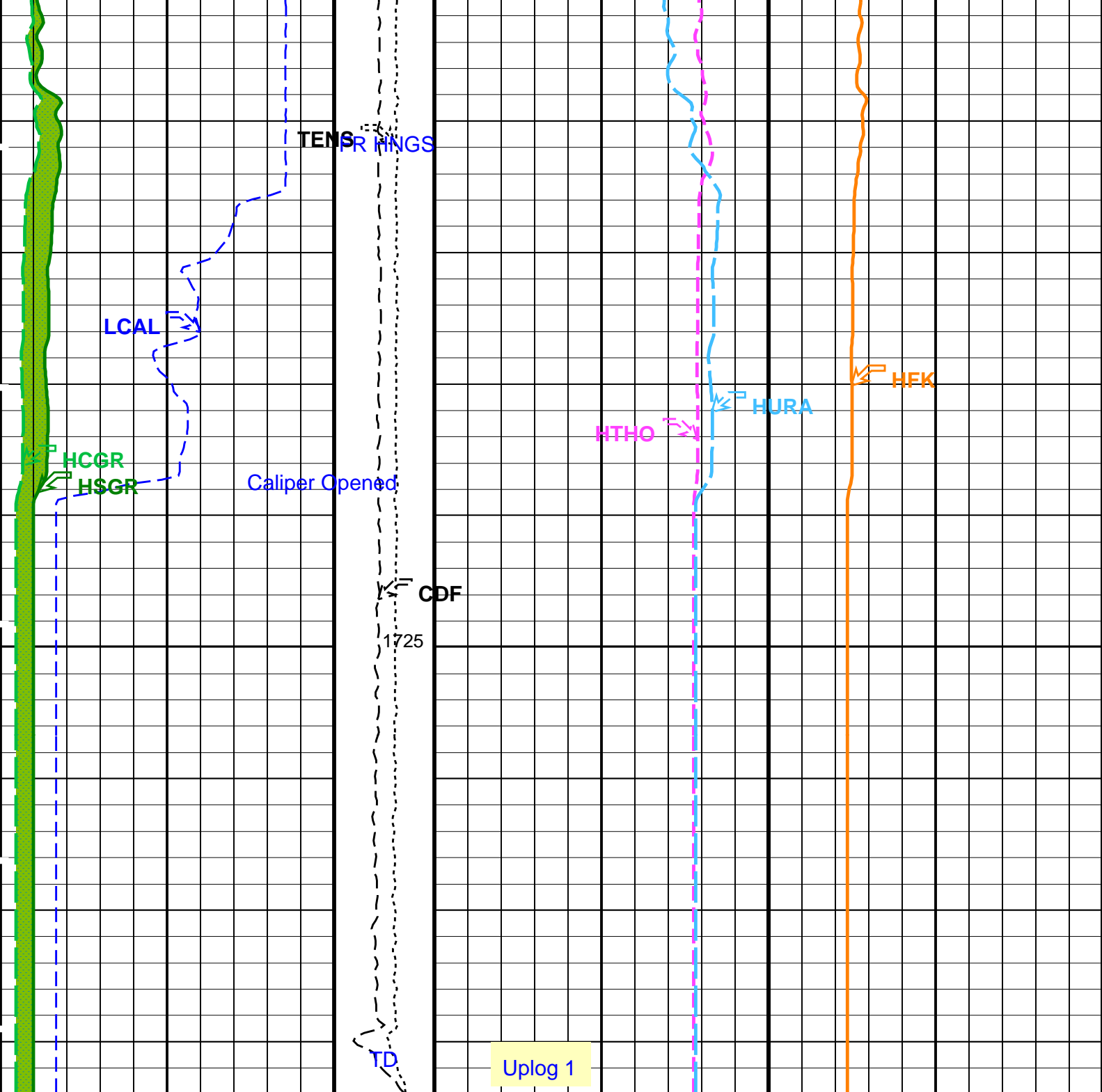
PIP SUMMARY

 Time Mark Every 60 S









Parameters

DLIS Name	Description	Value
BHS	HRLT-B: High Resolution Laterolog Array – B	
GCSE	Borehole Status	OPEN
	Generalized Caliper Selection	LCAL
BHS	APS-C: Accelerator-Porosity Tool	
GCSE	Borehole Status	OPEN
	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	-0.00210898
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	0.354924
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.40925
	System and Miscellaneous	
BS	Bit Size	9.875 IN
DFD	Drilling Fluid Density	1.02 G/C3

Format: HNGSYields Vertical Scale: 1:200

Graphics File Created: 29-Jul-2021 06:30

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_014LUP	FN:20	PRODUCER	29-Jul-2021 06:30
BACKKUP	MSS_LDEO_HRLA_LDL_014LUP	FN:21	PRODUCER	29-Jul-2021 06:30

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_014LUP	FN:20	PRODUCER	29-Jul-2021 06:30	1741.9 M	1596.9 M
BACKKUP	MSS_LDEO_HRLA_LDL_014LUP	FN:21	PRODUCER	29-Jul-2021 06:30	1741.9 M	1596.8 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

Uplink 1

HNGS Spectroscopy Gamma Ray (HSGR)

0 (GAPI) 100

APS Effective Standoff in Limestone (STOF)

–5 (IN) 5

**Calibrated
Downhole
Force
(CDF)
(LBF)**

3000 0

HLDS Caliper (LCAL)

0 (IN) 20

**Tension
(TENS)
(LBF)**

10000 0

HRLT Resistivity 1 (RLA1)

0.2	(OHMM)	2000
-----	--------	------

HRLT Resistivity 2 (RLA2)

0.2	(OHMM)	2000
-----	--------	------

HRLT Resistivity 3 (RLA3)

0.2	(OHMM)	2000
-----	--------	------

HLDS Bulk Density Correction (DRH)

-0.25 (G/C3) 0.25

HLDS Bulk Density (RHOM)

0 (G/C3) 4

HLDS Long Spaced Photoelectric Effect (PEFL)

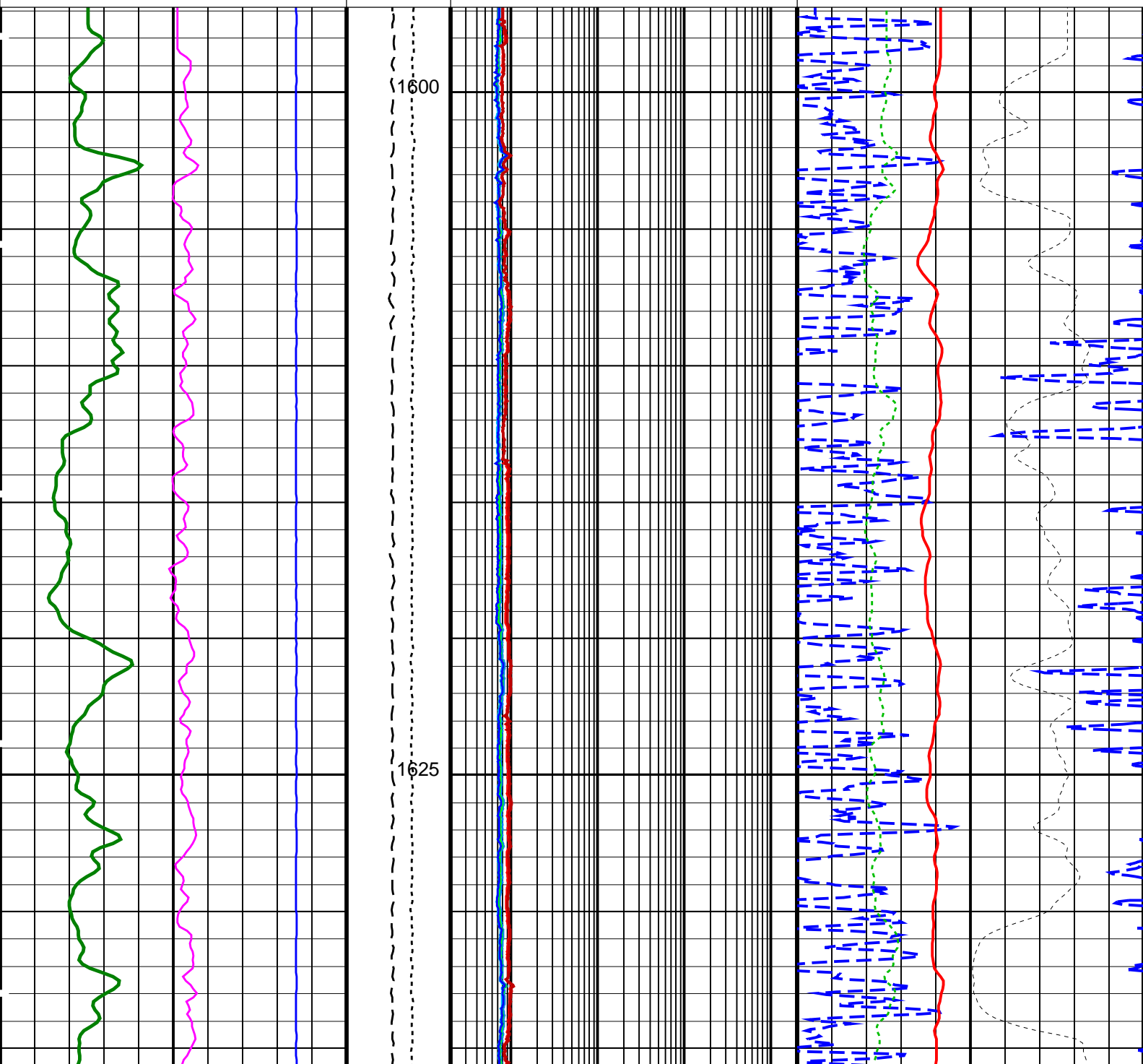
0 (---) 10

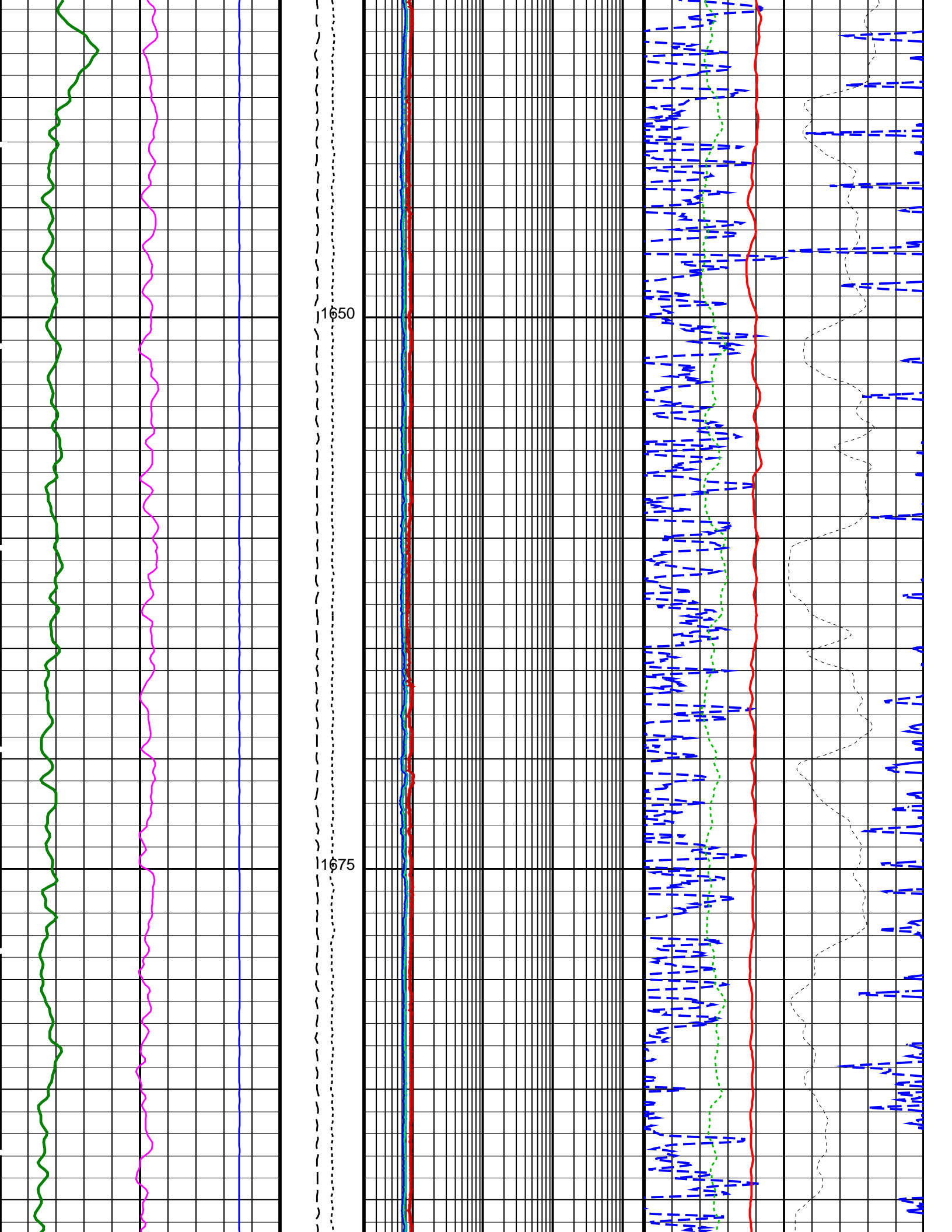
HRLT Resistivity 4 (RLA4)

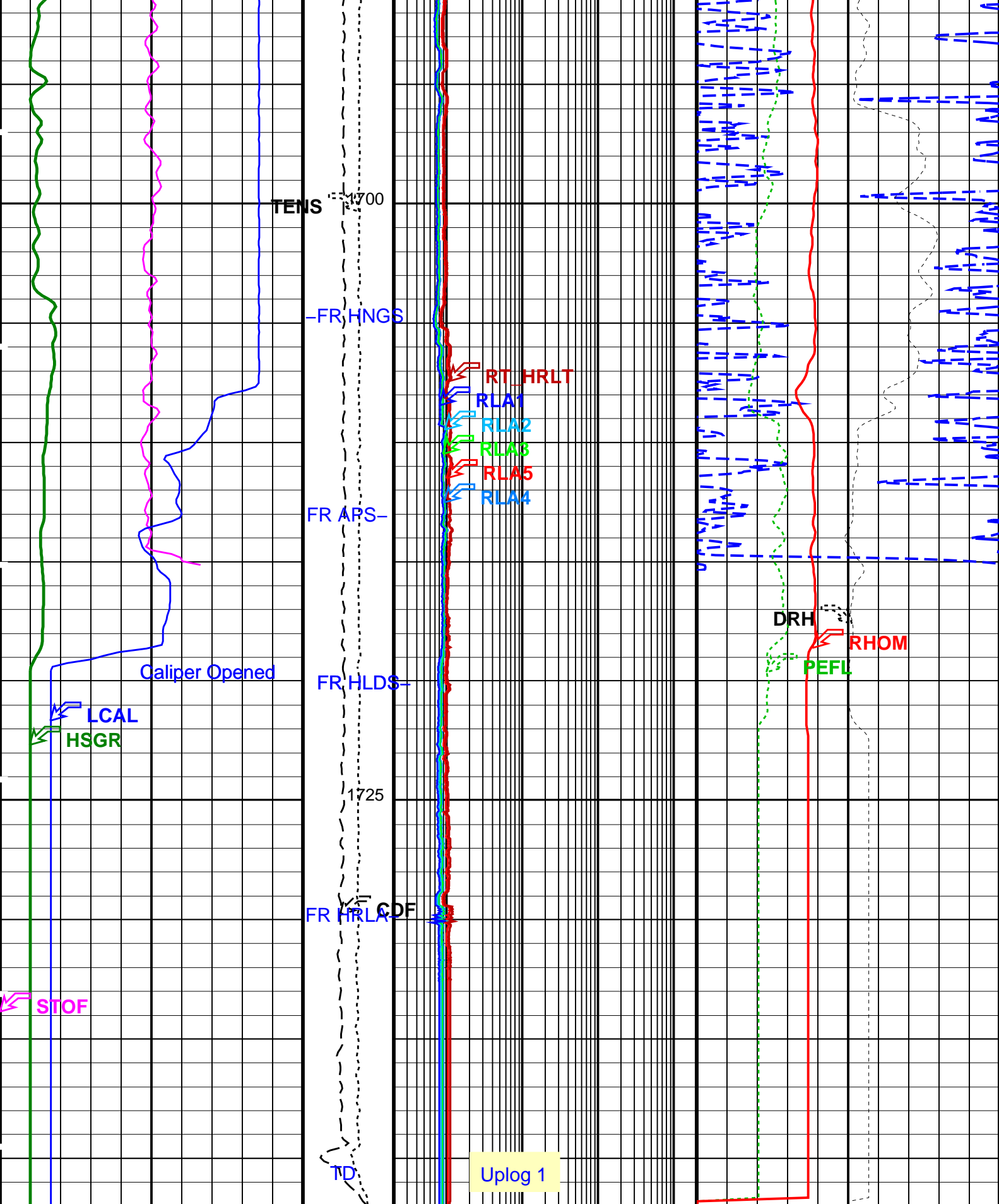
0.2 (OHMM) 2000

**APS HR Near/Far Corrected Limestone
Porosity (HFLC)**

100 (PU) 0







HLDS Caliper (LCAL) (IN)	Tension (TENS) (LBF)	HRLT Resistivity 4 (RLA4) (OHMM)	APS HR Near/Far Corrected Limestone Porosity (HFLC) (PU)
0 20	10000 0	0.2 2000	100 0
APS Effective Standoff in Limestone	Calibrated Downhole	Uplog 1	HLDS Long Spaced Photoelectric Effect

<div>(STOF)</div> <div>-5 (IN) 5</div>		Force (CDF) (LBF) <div>3000 0</div>	<div>HRLT Resistivity 5 (RLA5)</div> <div>0.2 (OHMM) 2000</div>		<div>HLDS Long Spacing (PEFL)</div> <div>0 (----) 10</div>	
HNGS Spectroscopy Gamma Ray (HSGR)			HRLT Resistivity 3 (RLA3)		HLDS Bulk Density (RHOM)	
<div>0 (GAPI) 100</div>			<div>0.2 (OHMM) 2000</div>		<div>0 (G/C3) 4</div>	
			<div>HRLT Resistivity 2 (RLA2)</div> <div>0.2 (OHMM) 2000</div>		<div>HLDS Bulk Density Correction (DRH)</div> <div>-0.25 (G/C3) 0.25</div>	
			<div>HRLT Resistivity 1 (RLA1)</div> <div>0.2 (OHMM) 2000</div>			
			<div>HRLT True Resistivity (RT_HRLT)</div> <div>0.2 (OHMM) 2000</div>			

Parameters

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	
BSCO_APS	Bottom Hole Temperature (used in calculations)	7	DEGC
DPPM	APS TNPH Borehole Salinity Correction Option	NO	
DSCO_APS	Density Porosity Processing Mode	HIRS	
FSAL	APS TNPH Density Source Correction Option	MEASURED	
FSCO_APS	Formation Salinity	-50000	PPM
GCSE	APS TNPH Formation Salinity Correction Option	NO	
GDEV	Generalized Caliper Selection	LCAL	
GGRD	Average Angular Deviation of Borehole from Normal	0	DEG
GRSE	Geothermal Gradient	0.018227	DC/M
GTSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
HSCO_APS	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	APS TNPH Hole Size Correction Option	YES	
MATR	Barite Mud Switch	NOBARITE	
MCCO_APS	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCOR_APS	APS TNPH Mud Cake Correction Option	YES	
MWCO_APS	APS TNPH Mud Correction	NATU	
NARC	APS TNPH Mud Weight Correction Option	YES	
NFRC	APS Near/Array Calibration Ratio	1.08341	
PTCO_APS	APS Near/Far Calibration Ratio	0.942369	
SHT	APS TNPH Pressure/Temperature Correction Option	NO	
TNCO_APS	Surface Hole Temperature	20	DEGC
	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	-0.00210898	
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	0.354924	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.40925	
	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

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_014LUP	FN:20	PRODUCER	29-Jul-2021 06:30	
BACKKUP	MSS_LDEO_HRLA_LDL_014LUP	FN:21	PRODUCER	29-Jul-2021 06:30	

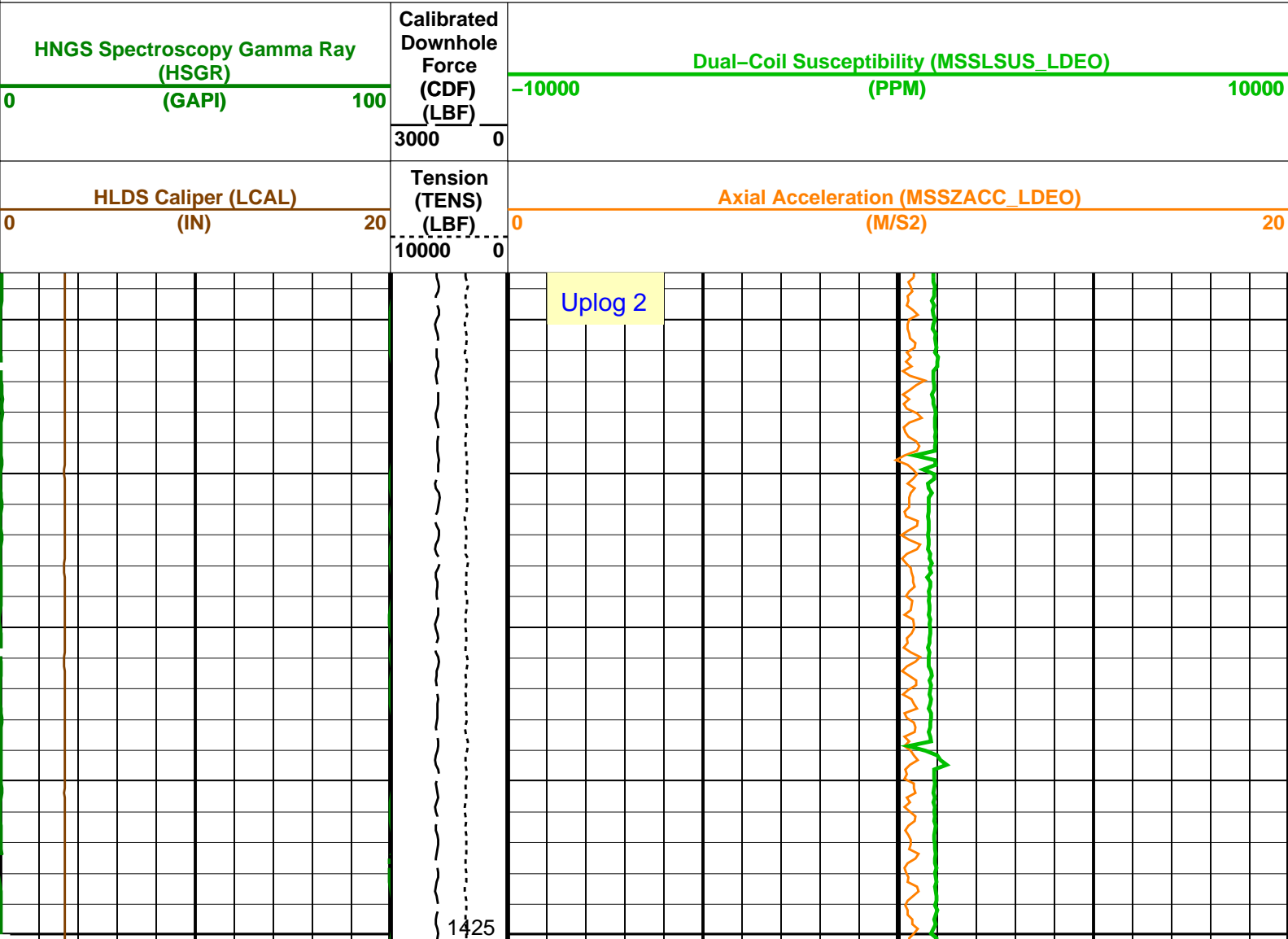
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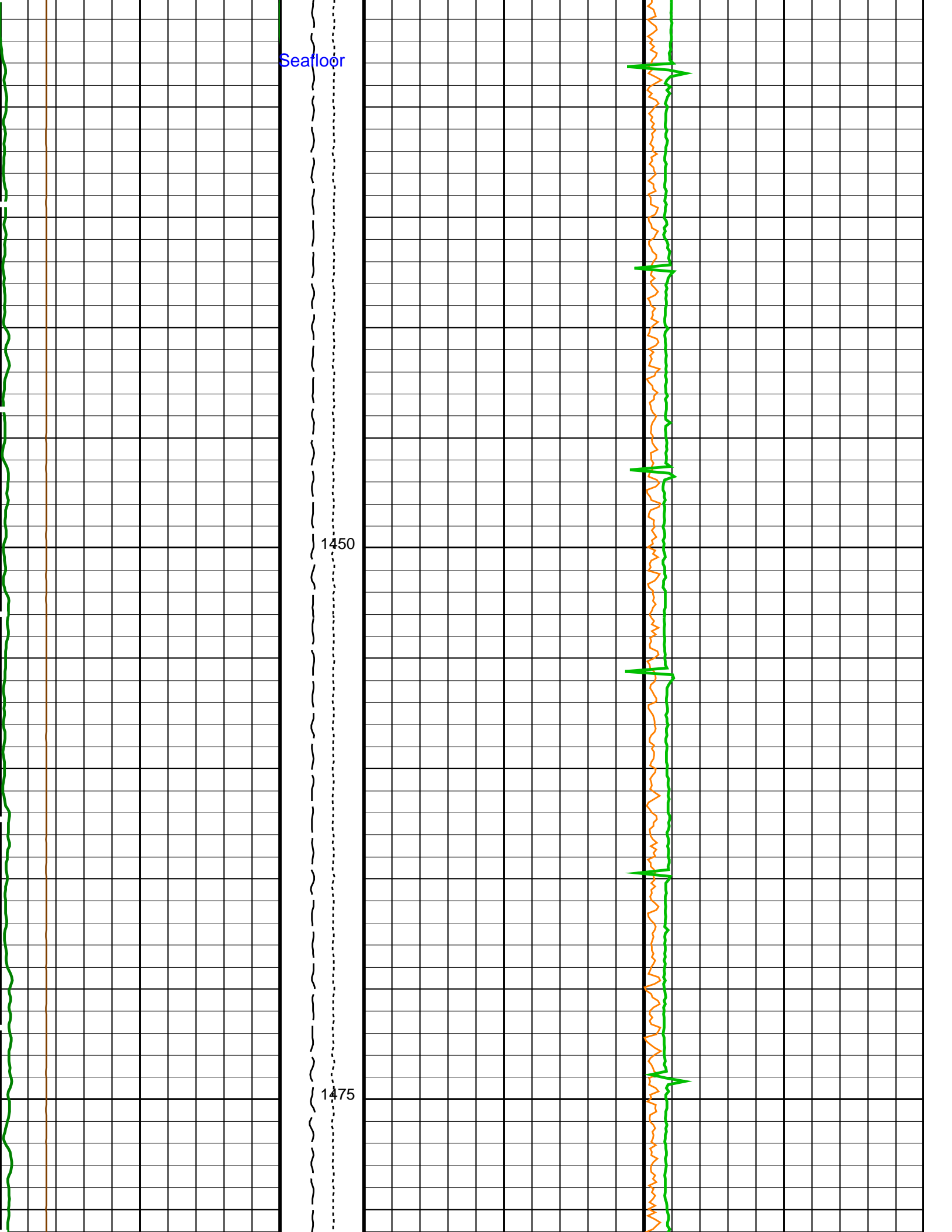
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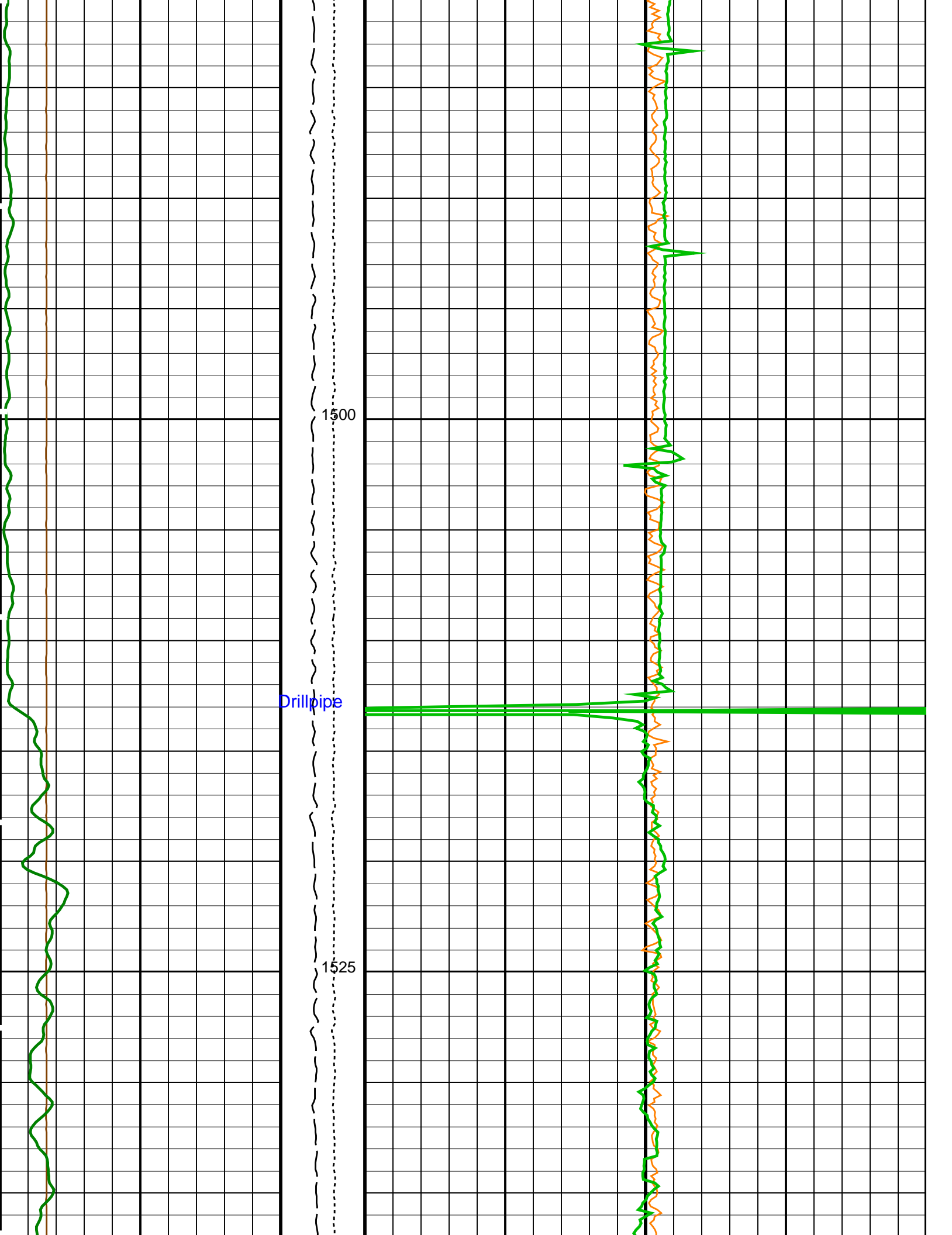
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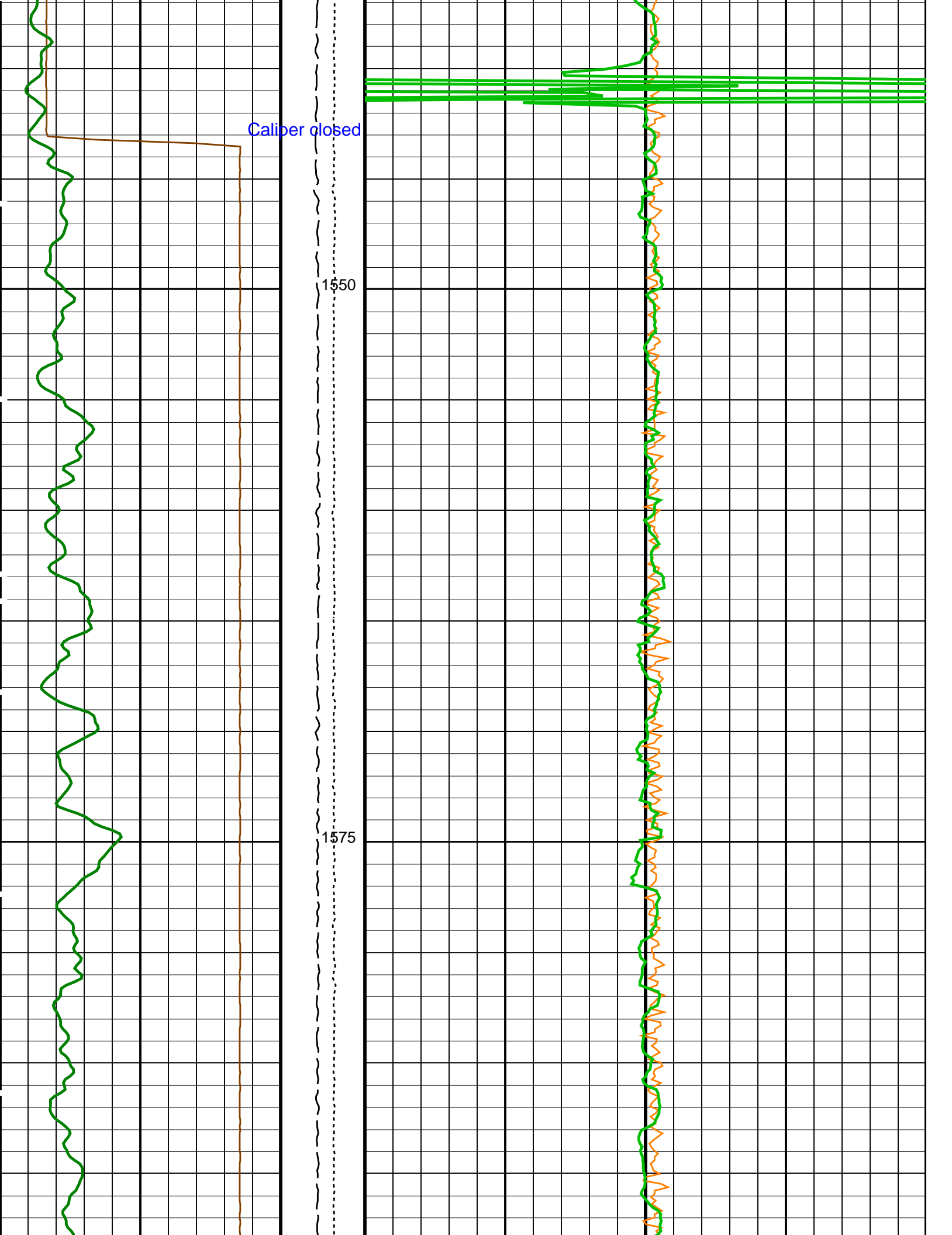
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HLDS	19C0-187		LDSC-B	19C0-187
APS-C	19C0-187		HNGC-B	19C0-187
HNGS-BA	19C0-187		DTC-H	19C0-187

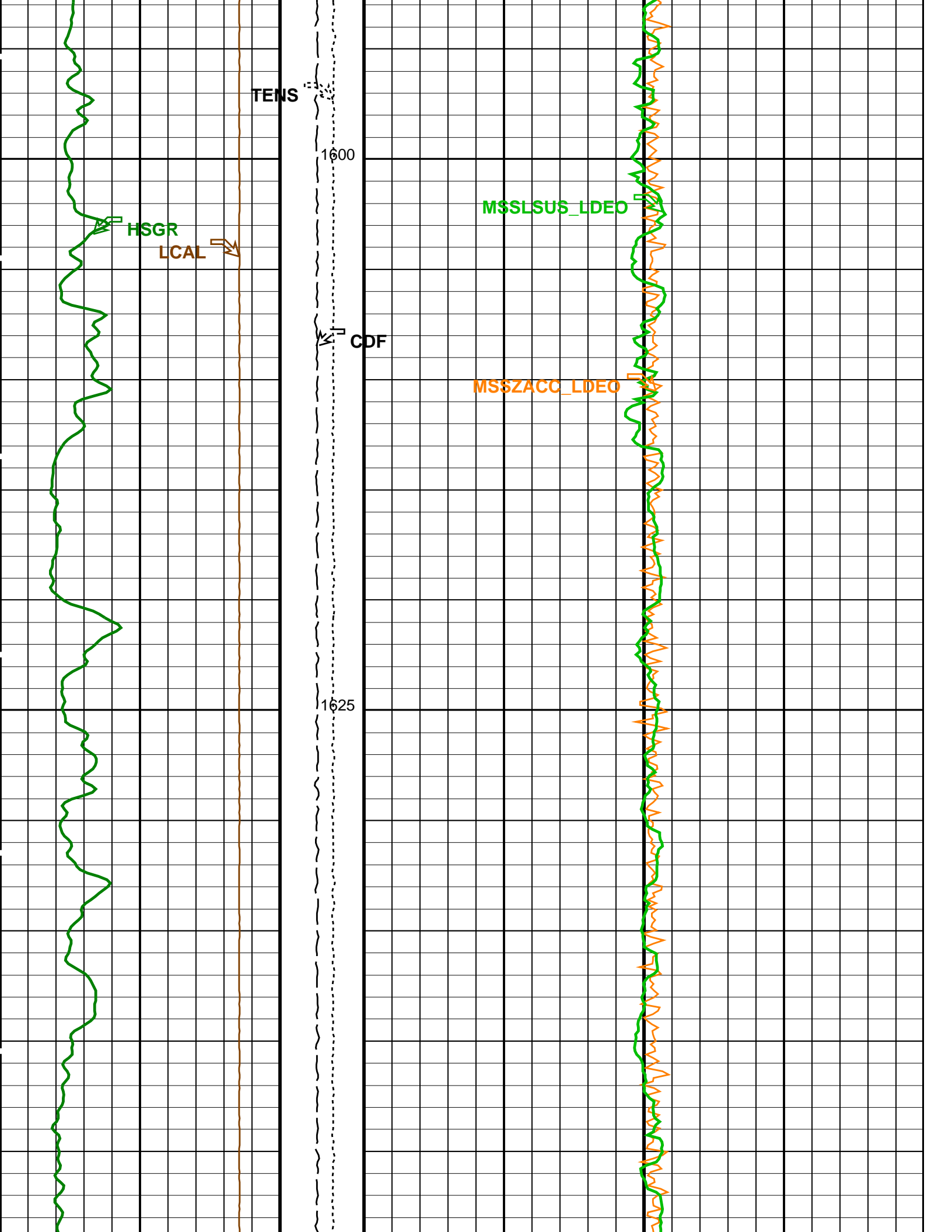
PIP SUMMARYTime Mark Every 60 S

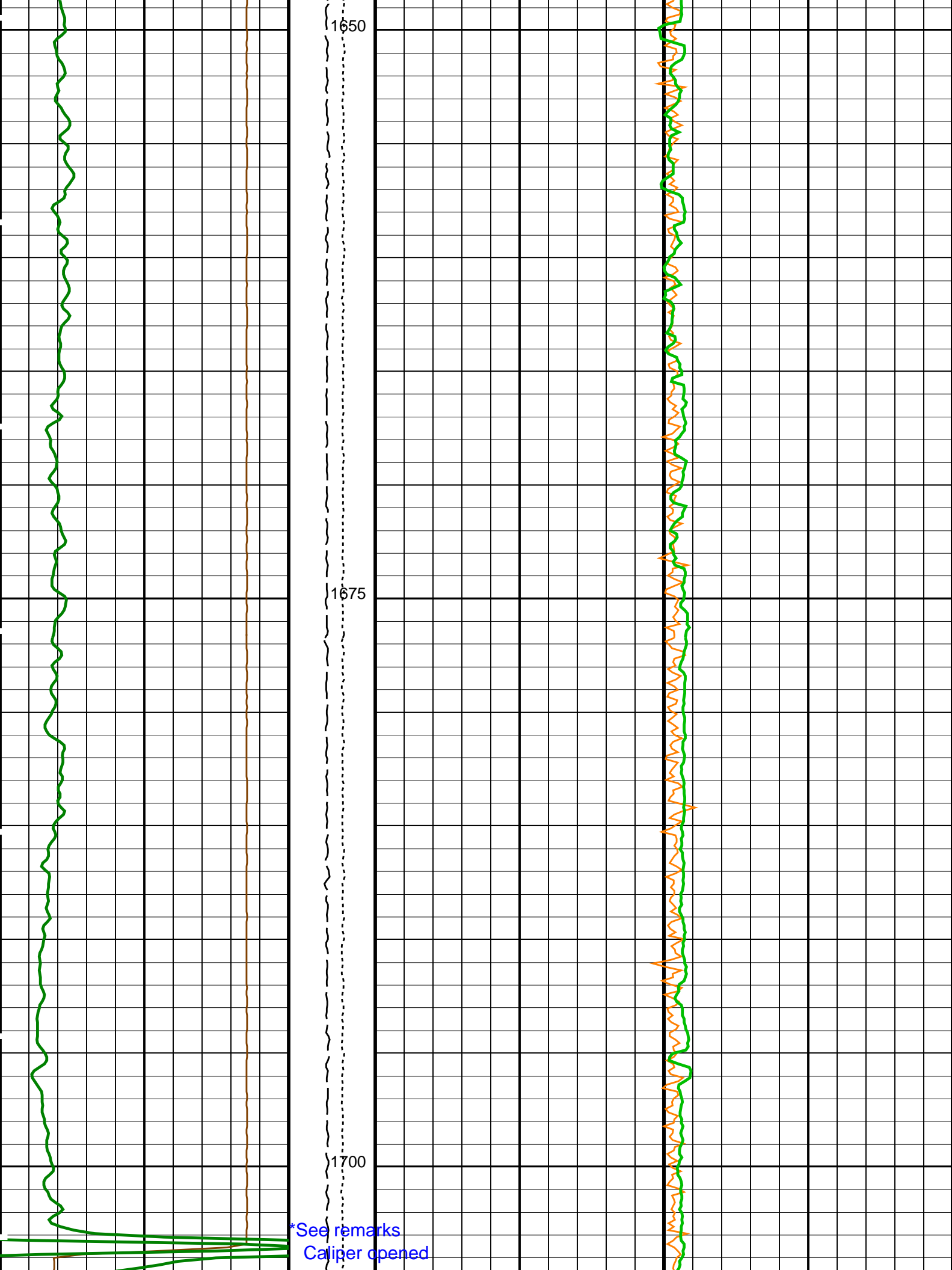




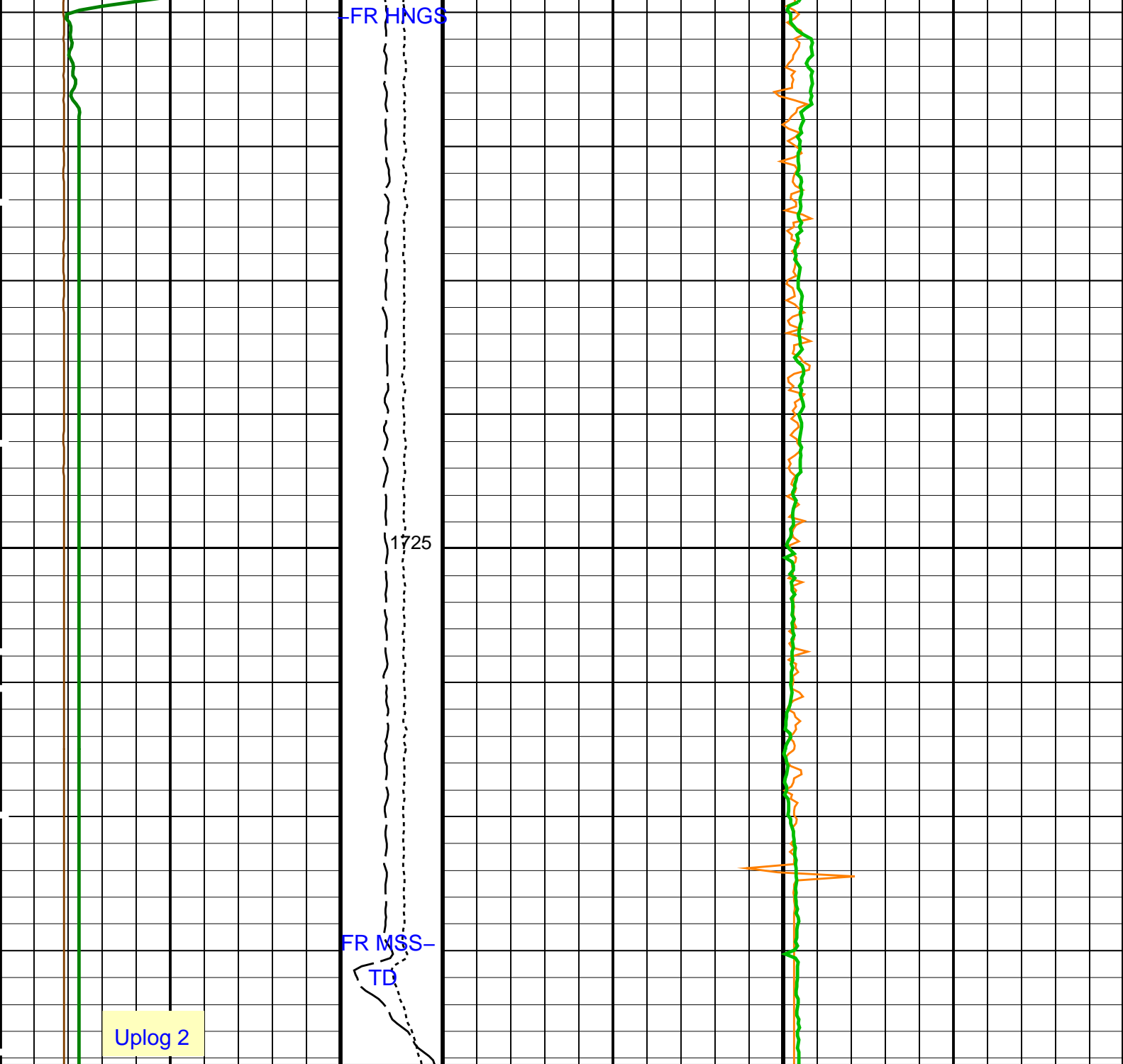








*See remarks
Caliper opened



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

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
BHS HRLT-B: High Resolution Laterolog Array - B	Borehole Status	OPEN
PUT Bottom Hole Temperature (used in calculations)		7 DECC

BHT	Bottom Hole Temperature (used in calculations)	7	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW	
CALTEMP	HRLTB Calibration Temperature	7.76192	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	
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			
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	
ANSO	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	
BSCO_APS	Bottom Hole Temperature (used in calculations)	7	DEGC
DPPM	APS TNPH Borehole Salinity Correction Option	NO	
DSCO_APS	Density Porosity Processing Mode	HIRS	
FSAL	APS TNPH Density Source Correction Option	MEASURED	
FSCO_APS	Formation Salinity	-50000	PPM
GCSE	APS TNPH Formation Salinity Correction Option	NO	
GDEV	Generalized Caliper Selection	LCAL	
GGRD	Average Angular Deviation of Borehole from Normal	0	DEG
GRSE	Geothermal Gradient	0.018227	DC/M
GTSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
HSCO_APS	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	APS TNPH Hole Size Correction Option	YES	
MATR	Barite Mud Switch	NOBARITE	
MCCO_APS	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCOR_APS	APS TNPH Mud Cake Correction Option	YES	
MWCO_APS	APS TNPH Mud Correction	NATU	
NARC	APS TNPH Mud Weight Correction Option	YES	
NFRC	APS Near/Array Calibration Ratio	1.08341	
PTCO_APS	APS Near/Far Calibration Ratio	0.942369	
	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	-0.000301758	
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	1.03937	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.0755	
	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

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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

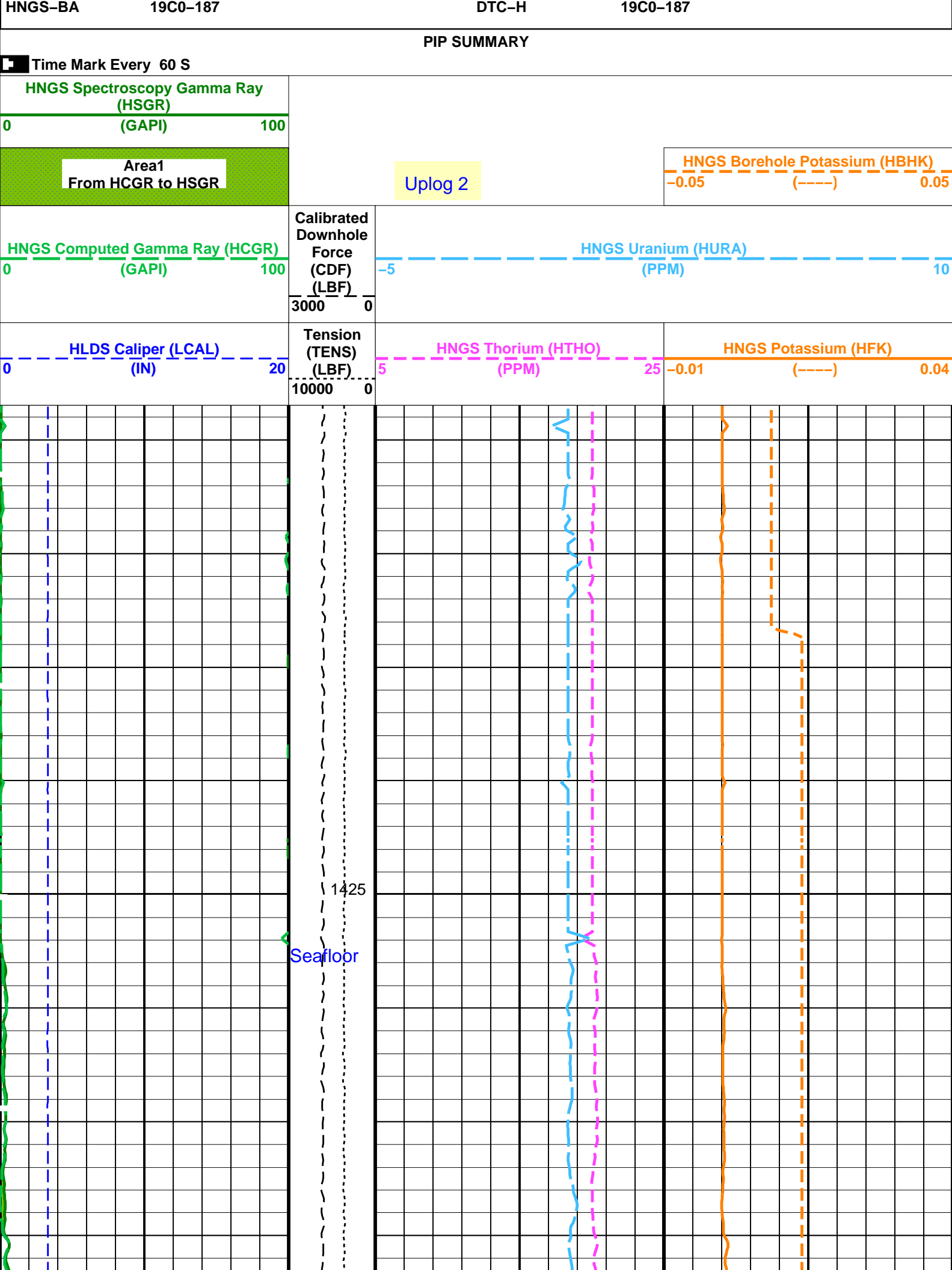
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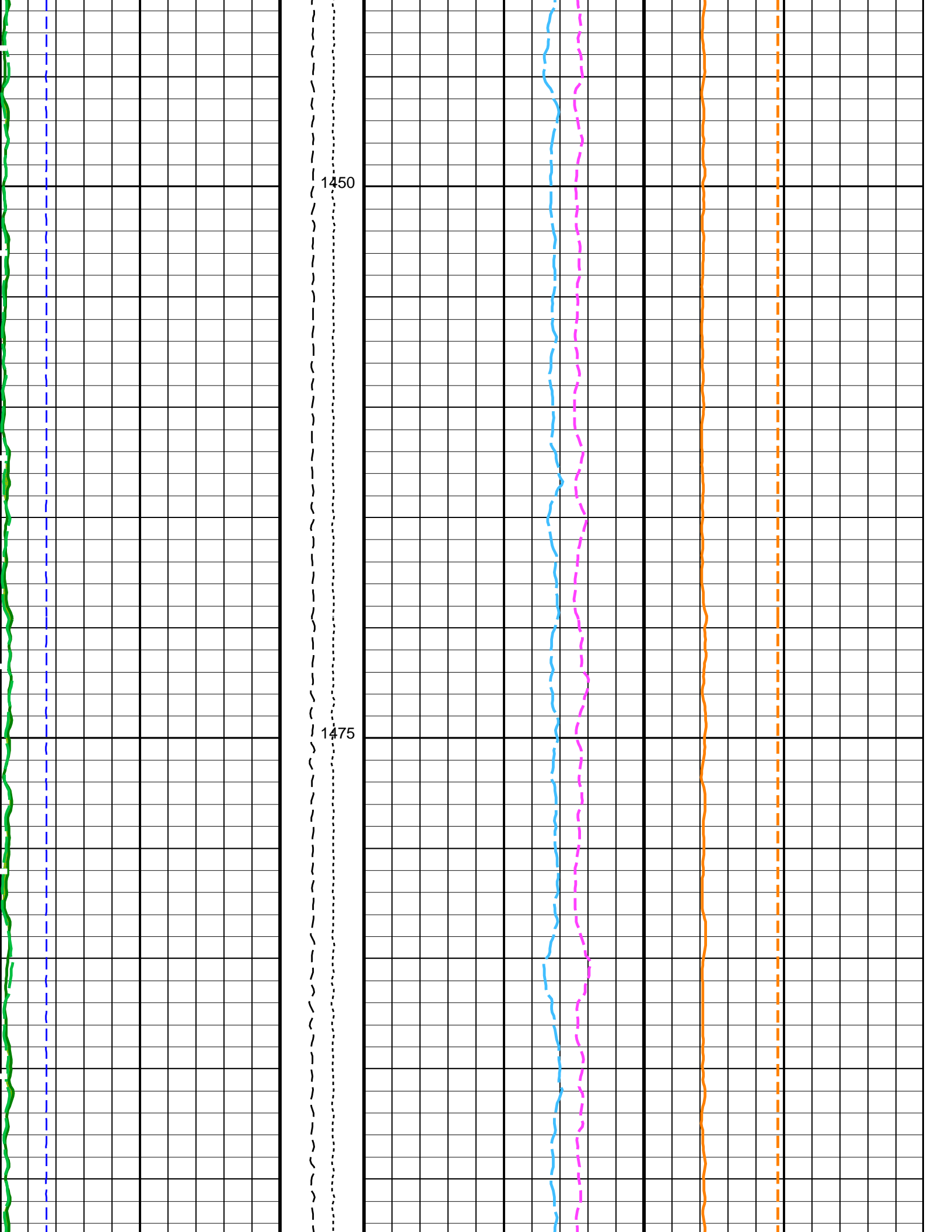
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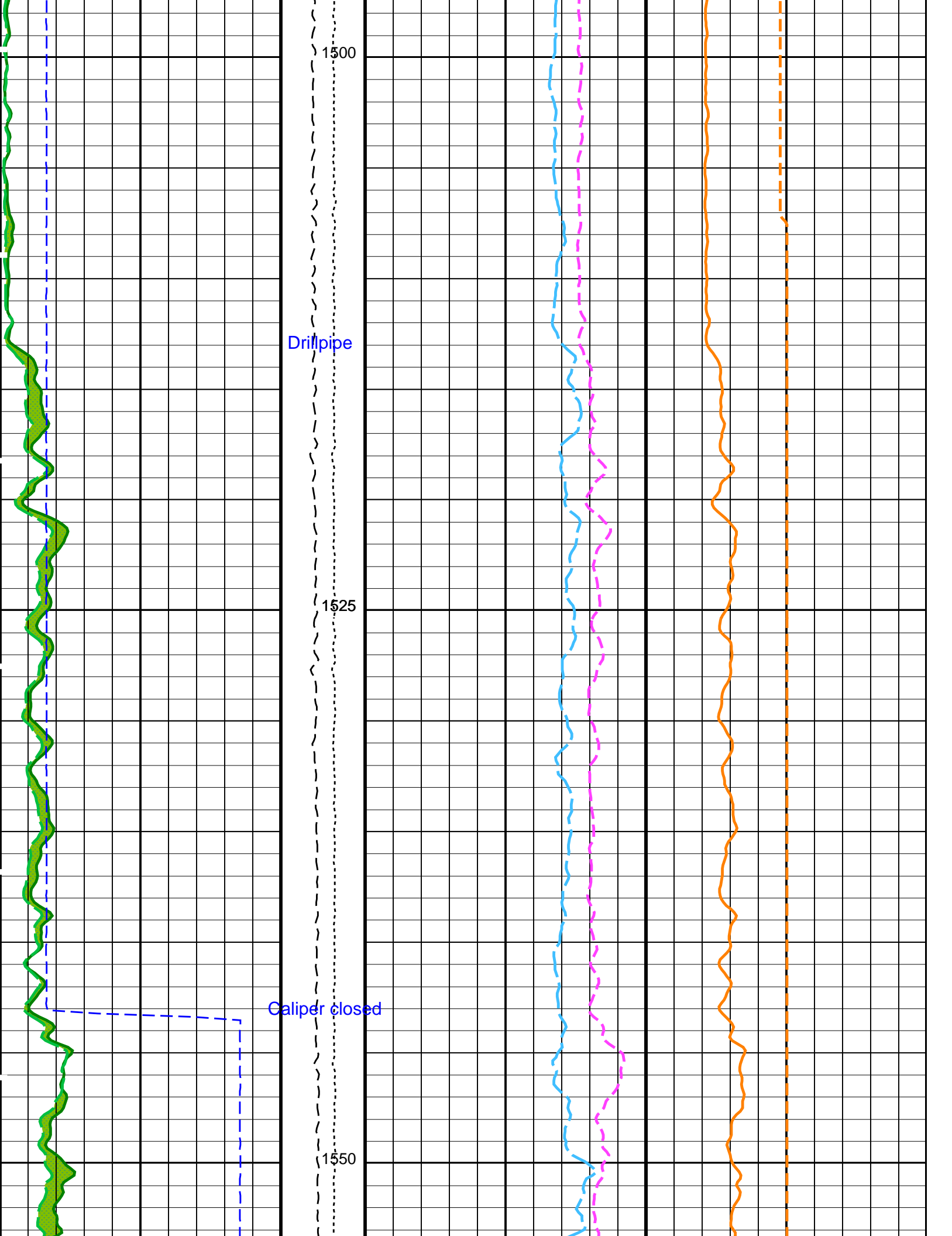
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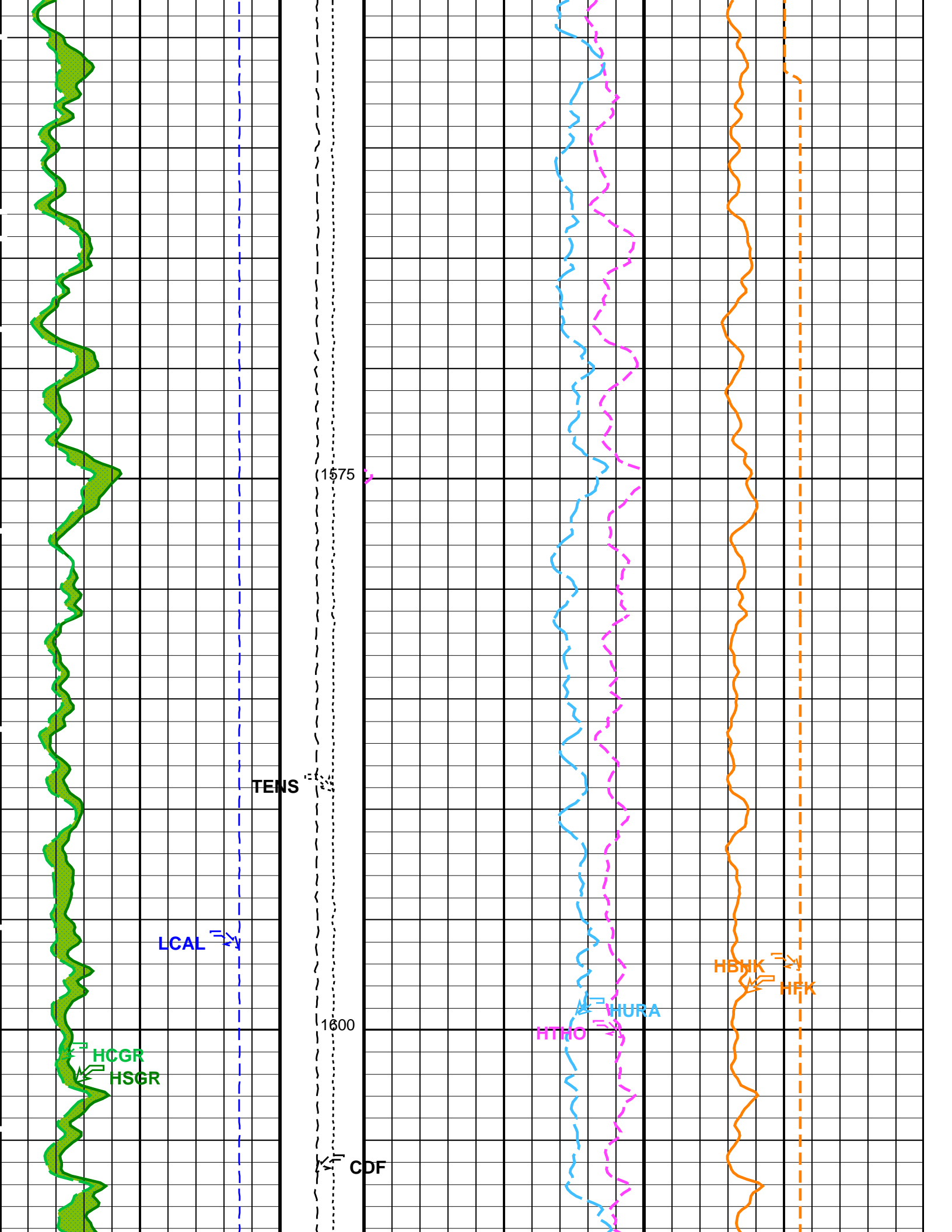
OP System Version: 19C0-187

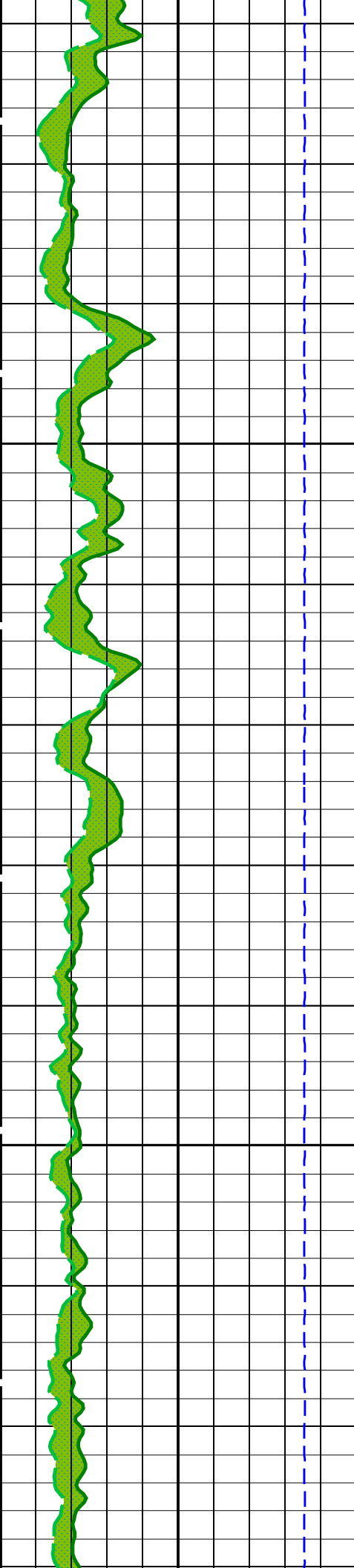
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HLDS	19C0-187	LDSC-B	19C0-187
APS-C	19C0-187	HNGC-B	19C0-187





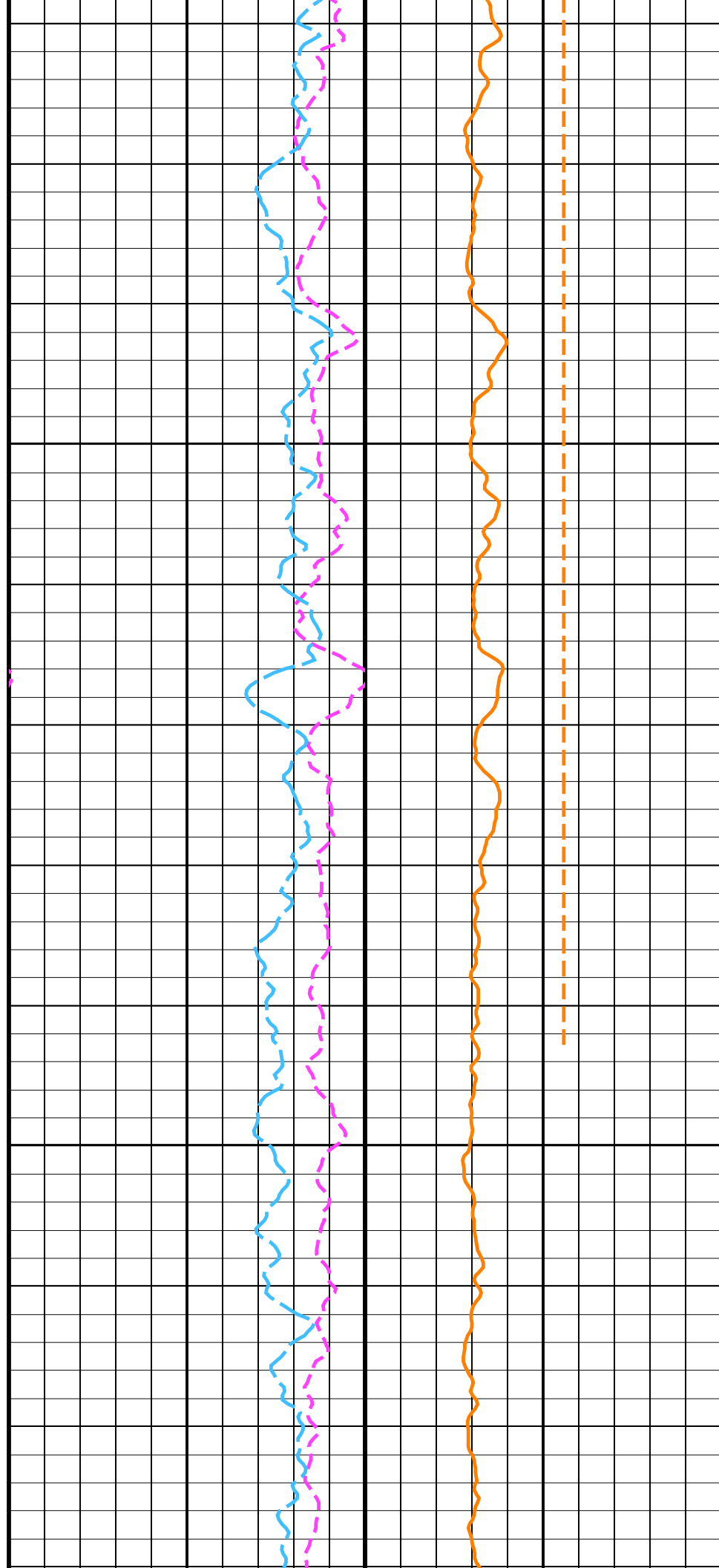


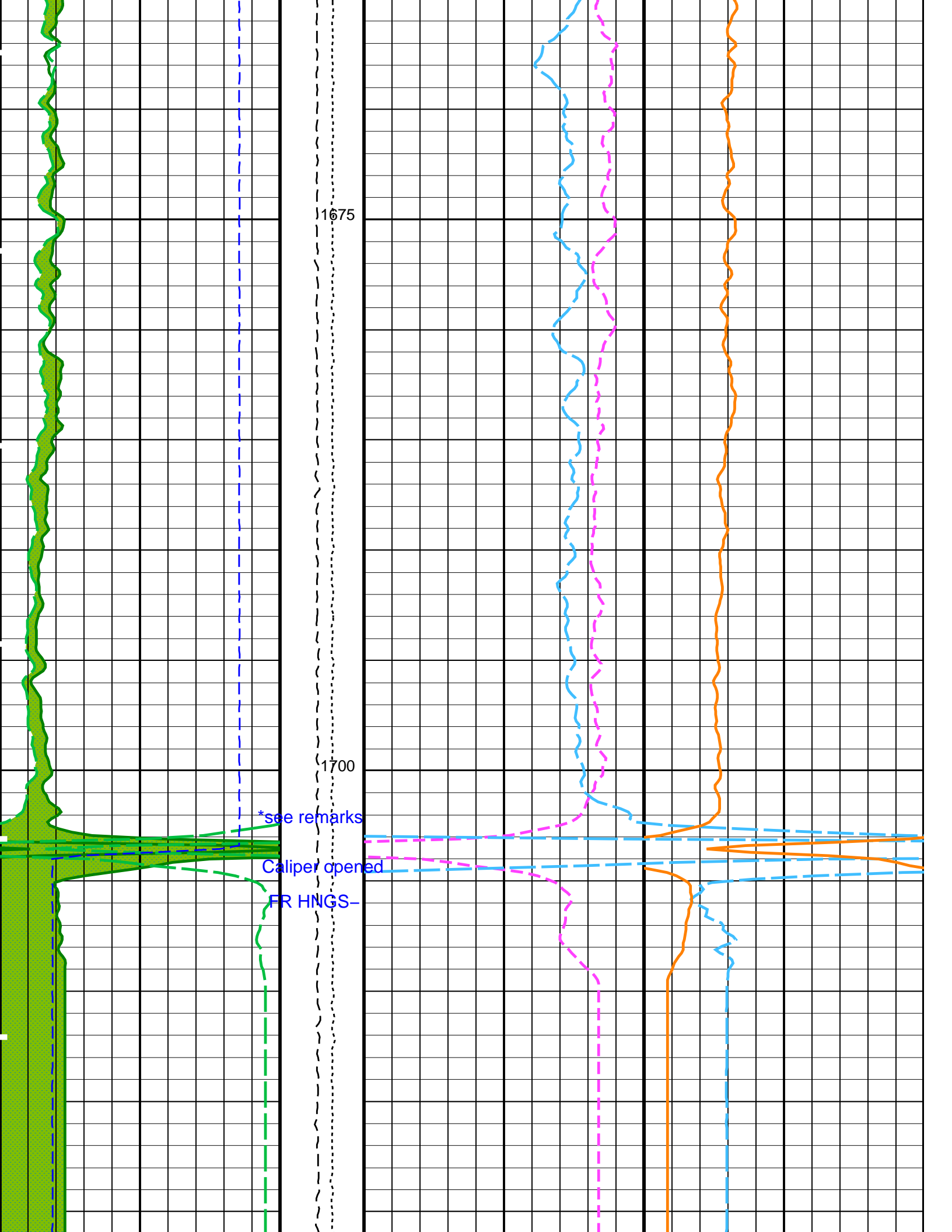


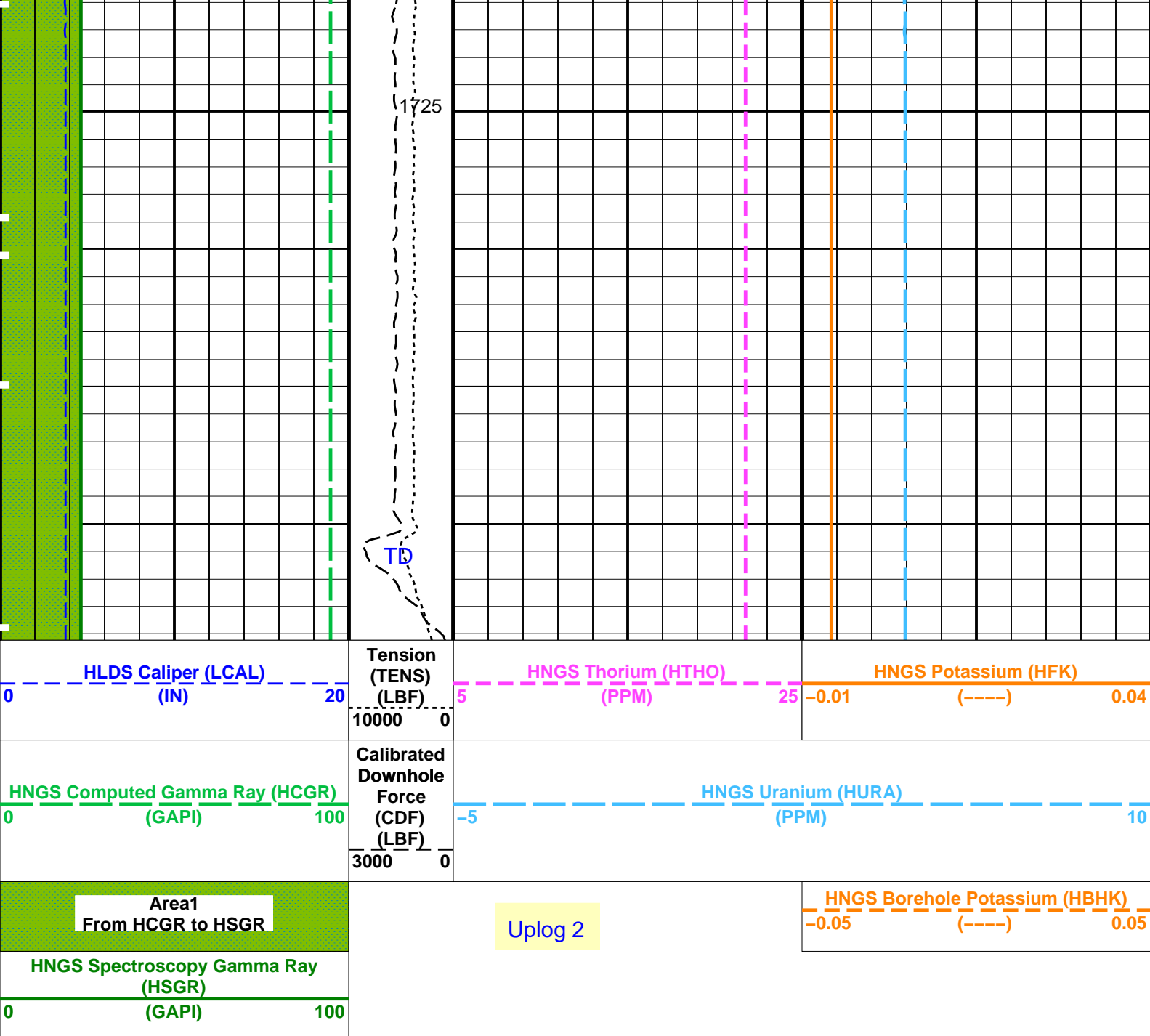


1625

1650







Time Mark Every 60 S

Parameters		
DLIS Name	Description	Value
BHS	HRLT-B: High Resolution Laterolog Array – B	
GCSE	Borehole Status	OPEN
	Generalized Caliper Selection	LCAL
BHS	APS-C: Accelerator-Porosity Tool	
GCSE	Borehole Status	OPEN
	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 Detector 2 Allow/Disallow in Processing	-0.000301758	
HALF	HNGS Borehole Potassium Running Average	60	IN
HCRB	HNGS Alpha Filter Length	NONE	
HMWM	HNGS Apply Borehole Potassium Correction	NATU	
HNPE	Mud Weighting Material	YES	
S1BI	HNGS Processing Enable	1.3	CPS
S2BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Detector 2 Calibration Bismuth Count Rate	YES	
TPOS	HNGS Standard Gamma-Ray Correction Flag	ECCE	
VBA1	Tool Position	1.03937	
VBA2	HNGS Detector 1 Variable Barite Factor Running Average	1.0755	
	HNGS Detector 2 Variable Barite Factor Running Average		
BS	System and Miscellaneous	9.875	IN
DFD	Bit Size	1.02	G/C3
	Drilling Fluid Density		

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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

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BACKUP	MSS_LDEO_HRLA_LDL_016LUP	FN:25	PRODUCER	29-Jul-2021 07:14

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_016LUP	FN:24	PRODUCER	29-Jul-2021 07:14	1744.2 M	1403.5 M
BACKUP	MSS_LDEO_HRLA_LDL_016LUP	FN:25	PRODUCER	29-Jul-2021 07:14	1744.2 M	1403.5 M

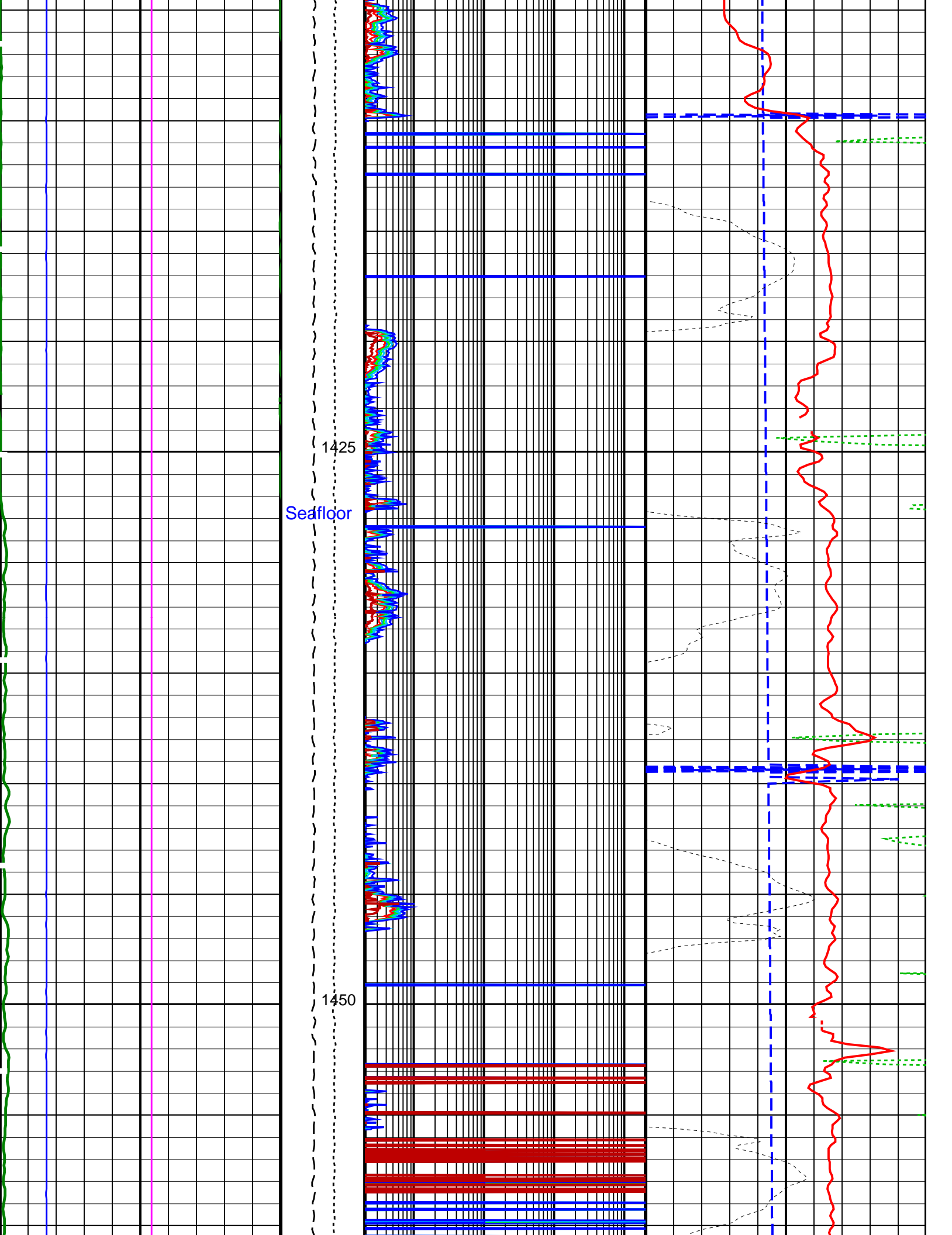
OP System Version: 19C0-187

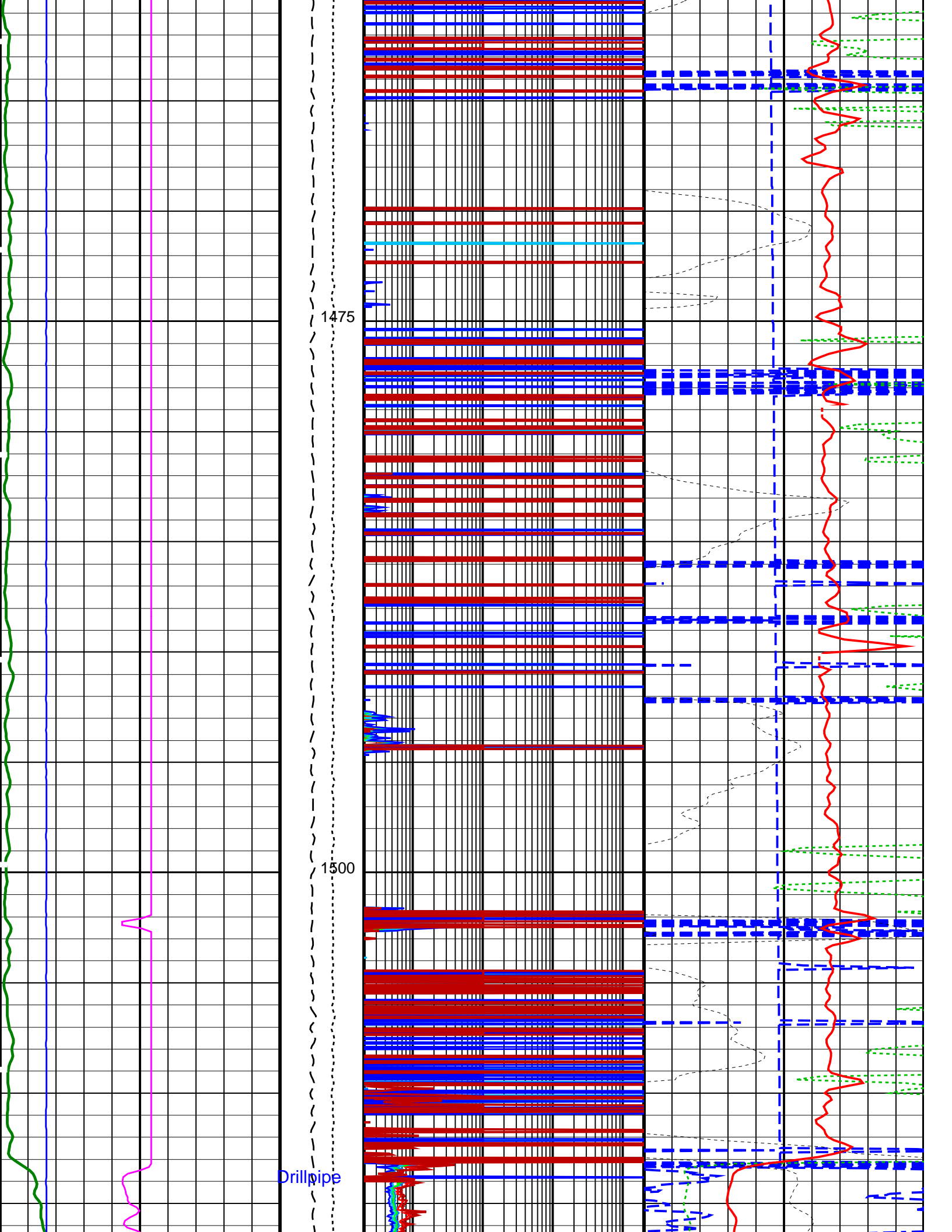
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
APS-C	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	DTC-H	19C0-187

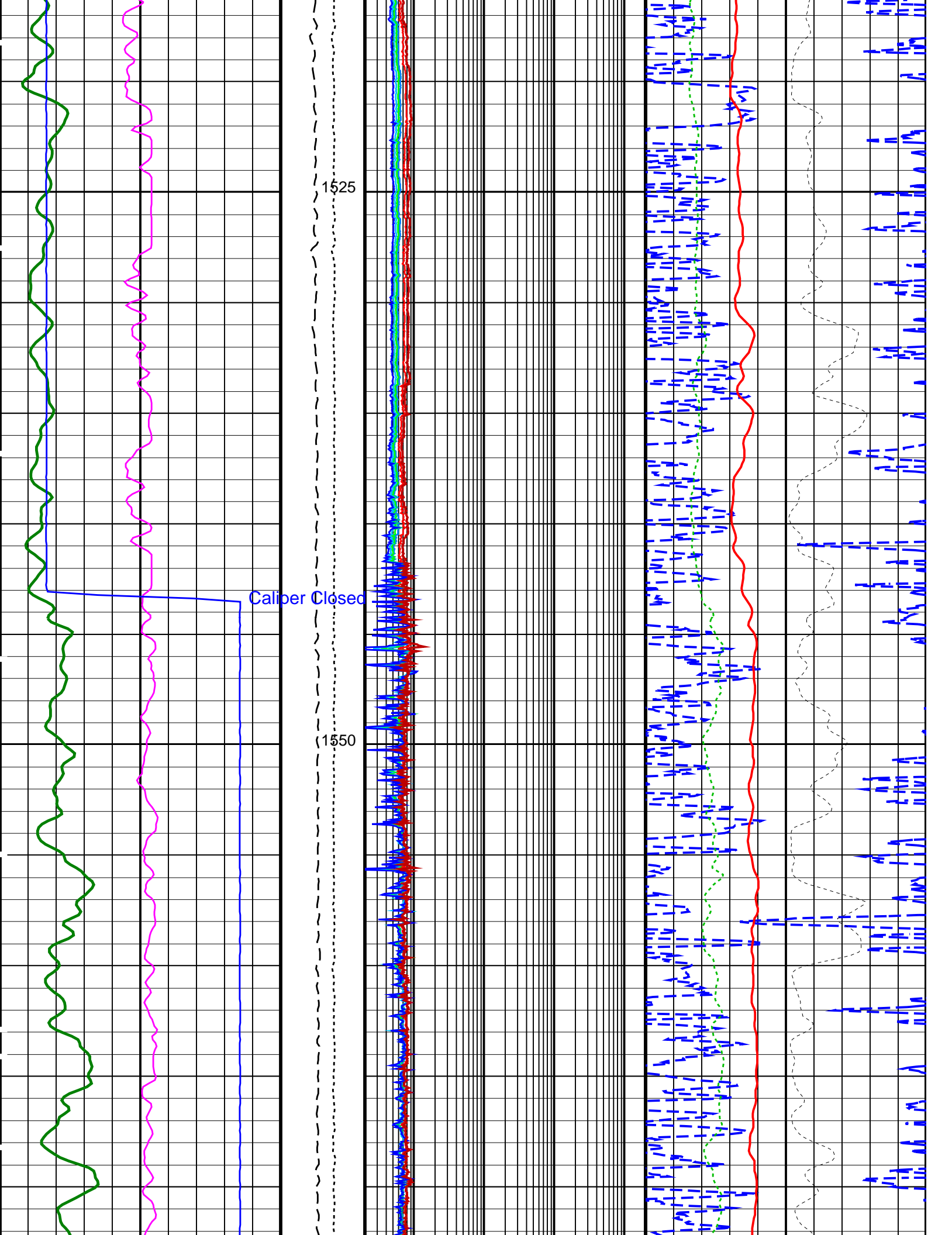
PIP SUMMARY

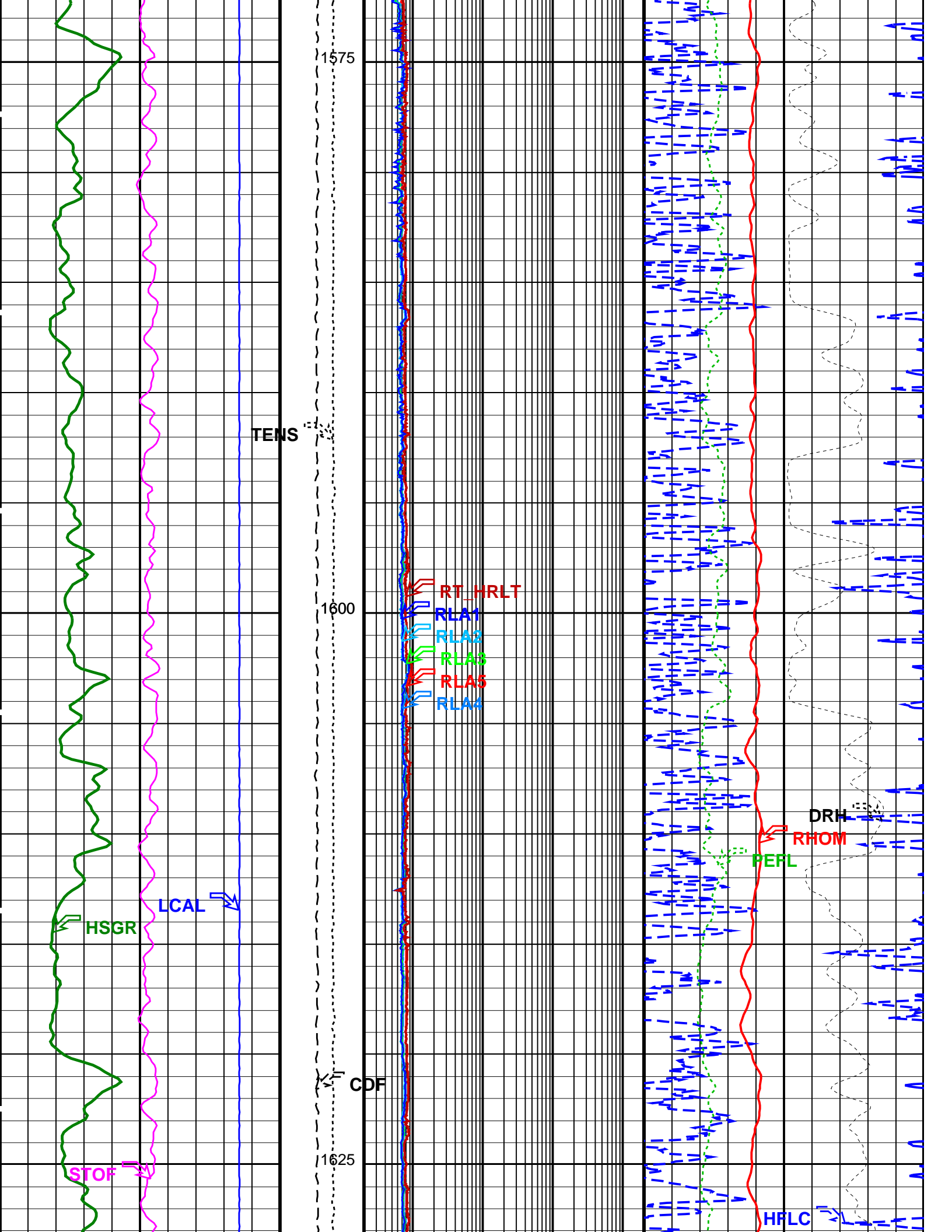
Time Mark Every 60 S

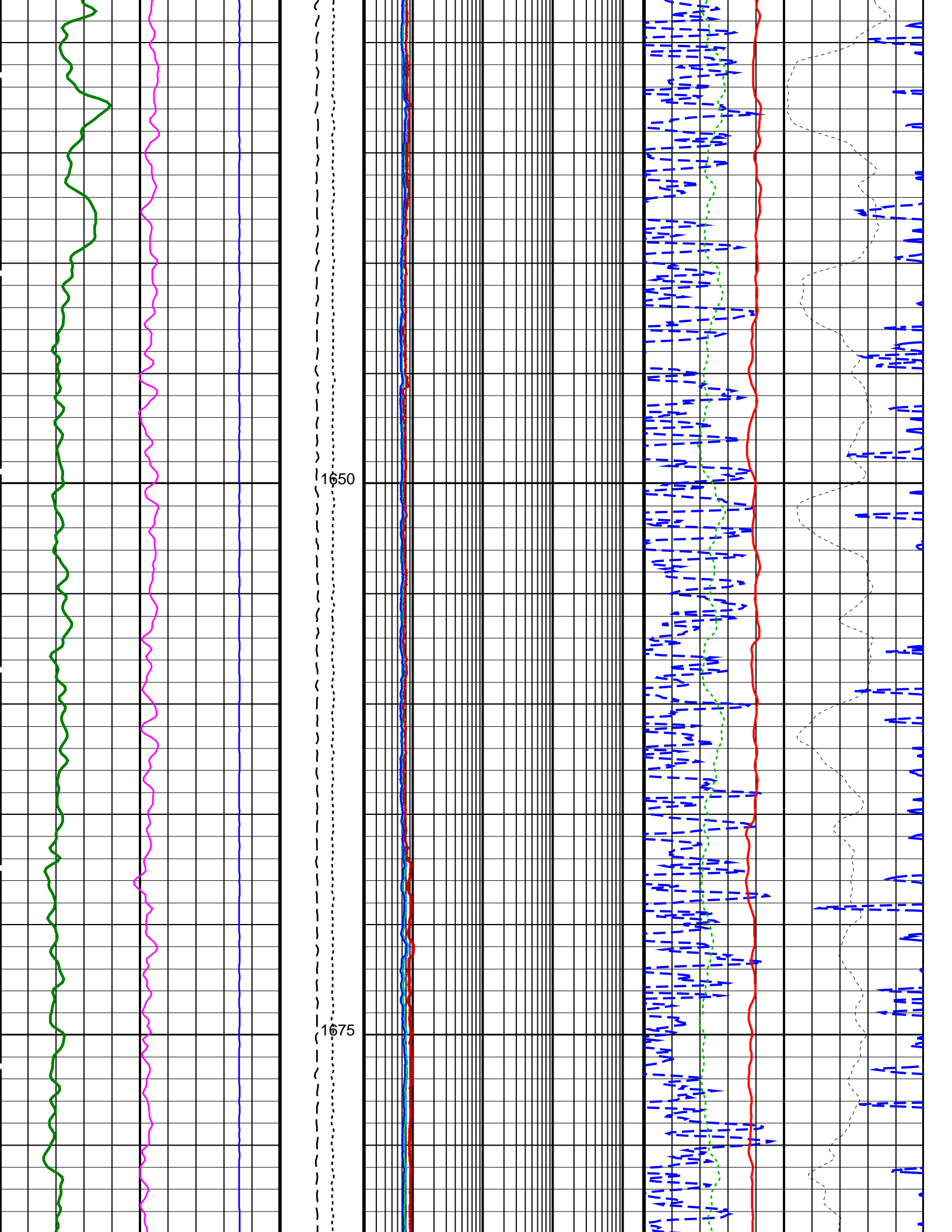
Uplong 2			HRLT True Resistivity (RT_HRLT)		
			0.2 (OHMM) 2000		
			HRLT Resistivity 1 (RLA1)		
			0.2 (OHMM) 2000		
			HRLT Resistivity 2 (RLA2)	HLDS Bulk Density Correction (DRH)	
			0.2 (OHMM) 2000	-0.25 (G/C3) 0.25	
HNGS Spectroscopy Gamma Ray (HSGR)			HRLT Resistivity 3 (RLA3)	HLDS Bulk Density (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		10000 0	0.2 (OHMM) 2000	100 (PU) 0	

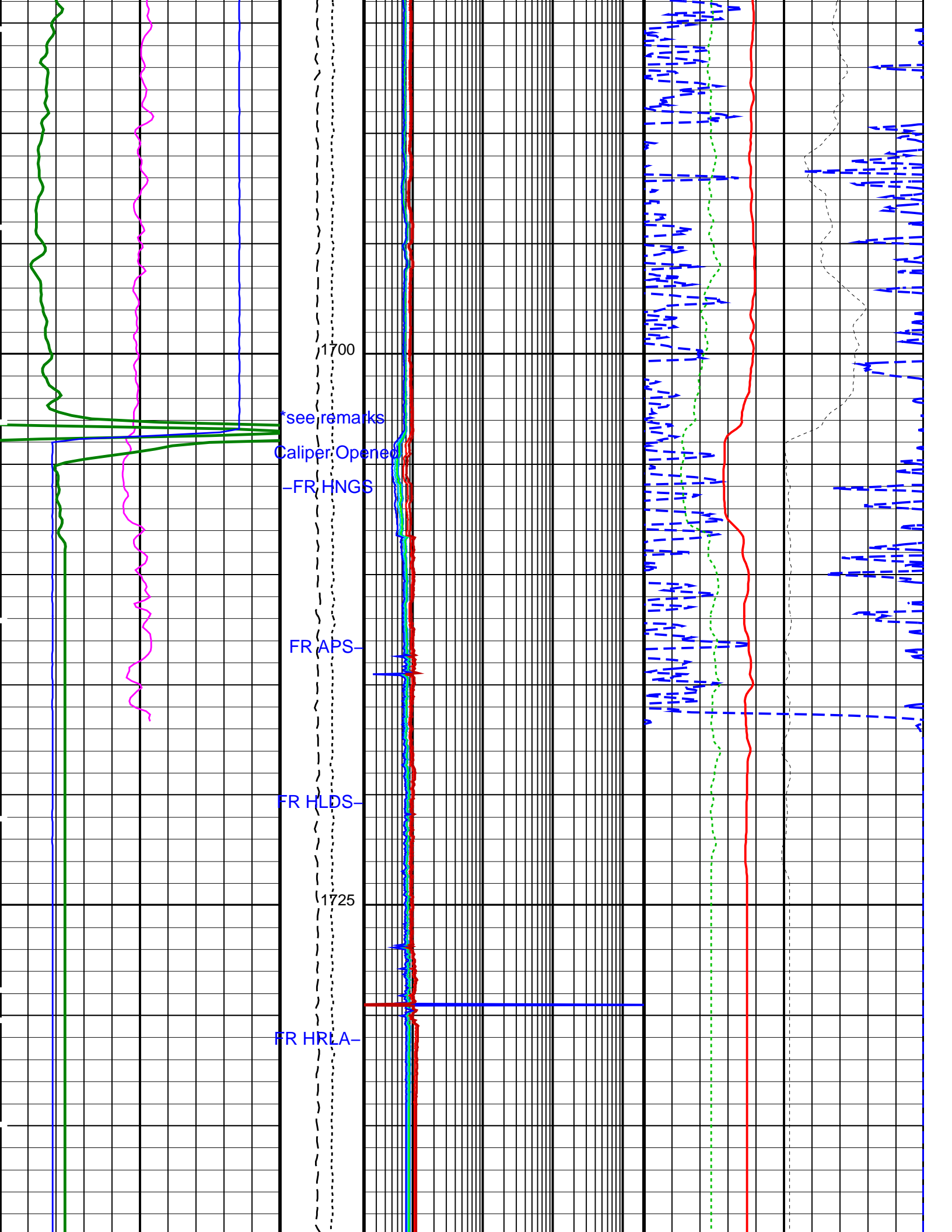


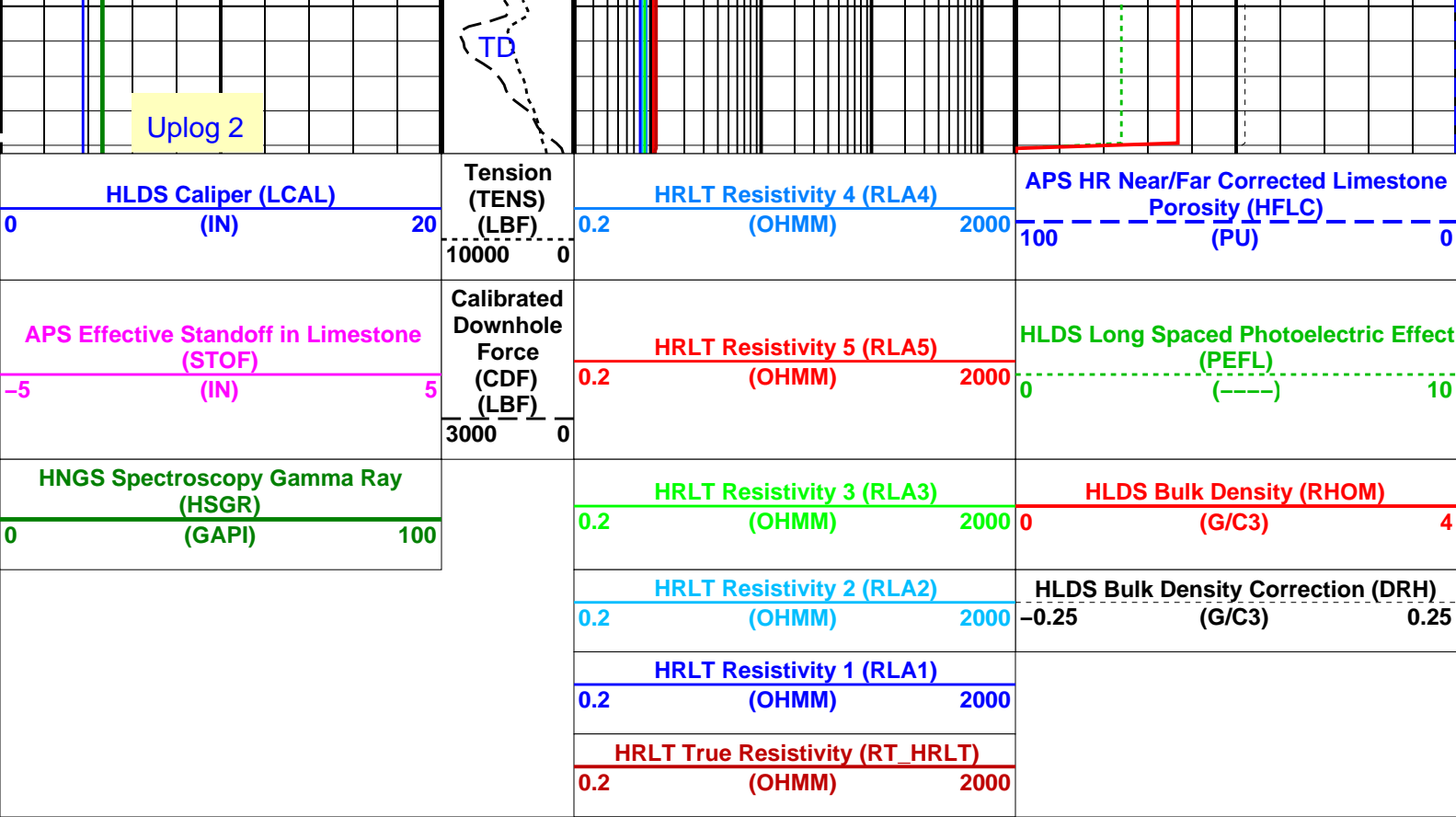












PIP SUMMARY

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	7.76192	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	
DRM	Density Readout Mode	HLDS	

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
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	-0.000301758	
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	1.03937	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.0755	
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: 29-Jul-2021 07:14

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_016LUP	FN:24	PRODUCER	29-Jul-2021 07:14
BACKKUP	MSS_LDEO_HRLA_LDL_016LUP	FN:25	PRODUCER	29-Jul-2021 07:14

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
High Resolution Laterolog Array – B Wellsite Calibration – HRLT M01							
Before: 29-Jul-2021 3:44 After: 29-Jul-2021 8:26							
HRLT M0-M1 Voltage Plus – 0	0	N/A	-318.6	-318.6	0.03586	9.681	UV
HRLT M0-M1 Voltage Plus – 1	0	N/A	-329.8	-330.3	-0.4194	9.681	UV
HRLT M0-M1 Voltage Plus – 2	0	N/A	-337.6	-337.7	-0.1215	9.681	UV
HRLT M0-M1 Voltage Plus – 3	0	N/A	-328.1	-328.3	-0.1712	9.681	UV
HRLT M0-M1 Voltage Plus – 4	0	N/A	-319.7	-319.8	-0.1759	9.681	UV
HRLT M0-M1 Voltage Plus – 5	0	N/A	-321.3	-321.5	-0.2394	9.681	UV
HRLT M0-M1 Voltage Plus – 6	0	N/A	319.0	319.2	0.2433	9.681	UV
HRLT M0-M1 Voltage Plus – 7	0	N/A	-322.7	-322.7	0	9.681	UV
High Resolution Laterolog Array – B Wellsite Calibration – HRLT M12							
Before: 29-Jul-2021 3:44 After: 29-Jul-2021 8:26							
HRLT M1-M2 Voltage Plus – 0	0	N/A	1739	1738	-0.7759	53.42	UV
HRLT M1-M2 Voltage Plus – 1	0	N/A	1808	1808	0.8955	53.42	UV
HRLT M1-M2 Voltage Plus – 2	0	N/A	1842	1842	0.1971	53.42	UV
HRLT M1-M2 Voltage Plus – 3	0	N/A	1789	1789	0.3842	53.42	UV
HRLT M1-M2 Voltage Plus – 4	0	N/A	1741	1742	0.5160	53.42	UV
HRLT M1-M2 Voltage Plus – 5	0	N/A	1751	1752	0.6675	53.42	UV
HRLT M1-M2 Voltage Plus – 6	0	N/A	-1756	-1756	-0.7925	53.42	UV
HRLT M1-M2 Voltage Plus – 7	0	N/A	1781	1781	0	53.42	UV
High Resolution Laterolog Array – B Wellsite Calibration – HRLT M23							
Before: 29-Jul-2021 3:44 After: 29-Jul-2021 8:26							
HRLT M2-M3 Voltage Plus – 0	0	N/A	1732	1731	-0.4375	53.42	UV
HRLT M2-M3 Voltage Plus – 1	0	N/A	1810	1811	1.678	53.42	UV
HRLT M2-M3 Voltage Plus – 2	0	N/A	1847	1847	0.1342	53.42	UV
HRLT M2-M3 Voltage Plus – 3	0	N/A	1797	1798	0.4502	53.42	UV
HRLT M2-M3 Voltage Plus – 4	0	N/A	1744	1745	0.4384	53.42	UV
HRLT M2-M3 Voltage Plus – 5	0	N/A	1755	1756	0.8491	53.42	UV
HRLT M2-M3 Voltage Plus – 6	0	N/A	-1747	-1748	-0.7074	53.42	UV
HRLT M2-M3 Voltage Plus – 7	0	N/A	1781	1781	0	53.42	UV
High Resolution Laterolog Array – B Wellsite Calibration – HRLT V34							
Before: 29-Jul-2021 3:44 After: 29-Jul-2021 8:26							
HRLT A3-A4 Voltage Plus – 0	0	N/A	68590	68590	-3.766	2100	UV
HRLT A3-A4 Voltage Plus – 1	0	N/A	71550	71610	64.01	2100	UV
HRLT A3-A4 Voltage Plus – 2	0	N/A	73300	73330	27.11	2100	UV
HRLT A3-A4 Voltage Plus – 3	0	N/A	71570	71610	42.51	2100	UV
HRLT A3-A4 Voltage Plus – 4	0	N/A	69420	69450	33.42	2100	UV
HRLT A3-A4 Voltage Plus – 5	0	N/A	69860	69900	44.01	2100	UV
HRLT A3-A4 Voltage Plus – 6	0	N/A	-68120	-68140	-21.66	2100	UV
HRLT A3-A4 Voltage Plus – 7	0	N/A	70000	70000	0	2100	UV

High Resolution Laterolog Array – B Wellsite Calibration – HRLT V45								
Before: 29-Jul-2021 3:44 After: 29-Jul-2021 8:26								
HRLT A4-A5 Voltage Plus – 0	0	N/A	68680	68680	-1.250	2100	UV	
HRLT A4-A5 Voltage Plus – 1	0	N/A	71760	71830	72.23	2100	UV	
HRLT A4-A5 Voltage Plus – 2	0	N/A	73490	73520	28.75	2100	UV	
HRLT A4-A5 Voltage Plus – 3	0	N/A	71730	71780	53.13	2100	UV	
HRLT A4-A5 Voltage Plus – 4	0	N/A	69540	69570	37.44	2100	UV	
HRLT A4-A5 Voltage Plus – 5	0	N/A	69950	70000	45.95	2100	UV	
HRLT A4-A5 Voltage Plus – 6	0	N/A	-68320	-68340	-24.27	2100	UV	
HRLT A4-A5 Voltage Plus – 7	0	N/A	70000	70000	0	2100	UV	

High Resolution Laterolog Array – B Wellsite Calibration – HRLT V56								
Before: 29-Jul-2021 3:44 After: 29-Jul-2021 8:26								
HRLT A5-A6 Voltage Plus – 0	0	N/A	68540	68530	-3.758	2100	UV	
HRLT A5-A6 Voltage Plus – 1	0	N/A	71610	71670	64.01	2100	UV	
HRLT A5-A6 Voltage Plus – 2	0	N/A	73320	73340	22.18	2100	UV	
HRLT A5-A6 Voltage Plus – 3	0	N/A	71580	71620	40.23	2100	UV	
HRLT A5-A6 Voltage Plus – 4	0	N/A	69390	69440	46.12	2100	UV	
HRLT A5-A6 Voltage Plus – 5	0	N/A	69840	69880	36.89	2100	UV	
HRLT A5-A6 Voltage Plus – 6	0	N/A	-68160	-68190	-27.74	2100	UV	
HRLT A5-A6 Voltage Plus – 7	0	N/A	70000	70000	0	2100	UV	

High Resolution Laterolog Array – B Wellsite Calibration – HRLT VTP								
Before: 29-Jul-2021 3:44 After: 29-Jul-2021 8:26								
HRLT Torpedo-M0 Voltage – 0	0	N/A	-68070	-68060	8.383	2100	UV	
HRLT Torpedo-M0 Voltage – 1	0	N/A	-71420	-71470	-52.16	2100	UV	
HRLT Torpedo-M0 Voltage – 2	0	N/A	-73170	-73190	-24.24	2100	UV	
HRLT Torpedo-M0 Voltage – 3	0	N/A	-71500	-71540	-43.40	2100	UV	
HRLT Torpedo-M0 Voltage – 4	0	N/A	-69360	-69400	-33.82	2100	UV	
HRLT Torpedo-M0 Voltage – 5	0	N/A	-69800	-69840	-36.47	2100	UV	
HRLT Torpedo-M0 Voltage – 6	0	N/A	67920	67940	22.26	2100	UV	
HRLT Torpedo-M0 Voltage – 7	0	N/A	-70000	-70000	0	2100	UV	

High Resolution Laterolog Array – B Wellsite Calibration – HRLT VBD								
Before: 29-Jul-2021 3:44 After: 29-Jul-2021 8:26								
HRLT Bridle#9-M0 Voltage – 0	0	N/A	-68110	-68100	11.98	2100	UV	
HRLT Bridle#9-M0 Voltage – 1	0	N/A	-71490	-71560	-66.93	2100	UV	
HRLT Bridle#9-M0 Voltage – 2	0	N/A	-73260	-73280	-21.90	2100	UV	
HRLT Bridle#9-M0 Voltage – 3	0	N/A	-71570	-71610	-34.71	2100	UV	
HRLT Bridle#9-M0 Voltage – 4	0	N/A	-69420	-69450	-31.27	2100	UV	
HRLT Bridle#9-M0 Voltage – 5	0	N/A	-69840	-69870	-35.85	2100	UV	
HRLT Bridle#9-M0 Voltage – 6	0	N/A	68010	68040	23.91	2100	UV	
HRLT Bridle#9-M0 Voltage – 7	0	N/A	-70000	-70000	0	2100	UV	

High Resolution Laterolog Array – B Wellsite Calibration – HRLT ISO								
Before: 29-Jul-2021 3:44 After: 29-Jul-2021 8:26								
HRLT Source Current Plus – 0	0	N/A	284.1	284.1	-0.02887	8.520	UA	
HRLT Source Current Plus – 1	0	N/A	281.1	281.1	0	8.520	UA	
HRLT Source Current Plus – 2	0	N/A	281.1	281.1	0	8.520	UA	
HRLT Source Current Plus – 3	0	N/A	281.1	281.1	0	8.520	UA	
HRLT Source Current Plus – 4	0	N/A	281.1	281.1	0	8.520	UA	
HRLT Source Current Plus – 5	0	N/A	281.1	281.1	0	8.520	UA	
HRLT Source Current Plus – 6	0	N/A	281.1	281.1	0	8.520	UA	
HRLT Source Current Plus – 7	0	N/A	281.1	281.1	0	8.520	UA	

High Resolution Laterolog Array – B Wellsite Calibration – HRLT MV								
Before: 29-Jul-2021 3:44 After: 29-Jul-2021 8:26								
HRLT Vertical Voltage PI – 0	0	N/A	-320.5	-320.5	0.03705	9.681	UV	
HRLT Vertical Voltage PI – 1	0	N/A	-324.8	-325.1	-0.3101	9.681	UV	
HRLT Vertical Voltage PI – 2	0	N/A	-331.1	-331.2	-0.1098	9.681	UV	
HRLT Vertical Voltage PI – 3	0	N/A	-320.0	-320.2	-0.1842	9.681	UV	
HRLT Vertical Voltage PI – 4	0	N/A	-308.8	-309.0	-0.1547	9.681	UV	
HRLT Vertical Voltage PI – 5	0	N/A	-325.4	-325.6	-0.2423	9.681	UV	
HRLT Vertical Voltage PI – 6	0	N/A	326.6	326.8	0.2282	9.681	UV	
HRLT Vertical Voltage PI – 7	0	N/A	-322.7	-322.7	0	9.681	UV	

Hostile Litho–Density Sonde Wellsite Calibration – Background Measurement								
Master: 2-May-2021 7:20 Before: 29-Jul-2021 3:54 After: 2-May-2021 8:19								
SS Cs Resolution Bkg	9.000	7.698	7.750	7.652	-0.09720	1.800	%	
LS Cs Resolution Bkg	9.000	7.989	7.966	7.948	-0.01831	1.800	%	
LSW1 Background	100.0	71.96	69.31	71.93	2.625	3.000	CPS	
LSW2 Background	100.0	65.02	64.30	63.44	-0.8556	3.000	CPS	
LSW3 Background	200.0	146.1	145.3	146.0	0.6409	6.000	CPS	
LSW4 Background	250.0	183.2	181.1	181.4	0.2539	7.500	CPS	
LSW5 Background	600.0	424.9	425.0	426.6	1.619	18.00	CPS	
SSW1 Background	100.0	68.97	68.41	69.07	0.6625	3.000	CPS	
SSW2 Background	200.0	118.2	117.9	120.1	2.177	6.000	CPS	
SSW3 Background	500.0	331.3	330.5	333.0	2.467	15.00	CPS	
SSW4 Background	270.0	178.4	175.0	177.3	2.313	8.100	CPS	
SSW5 Background	200.0	127.4	126.7	127.8	1.067	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: 29-Jul-2021 3:54 After: 3-May-2021 6:40

Near Det Bkg Cntrate	30.00	25.16	24.89	25.09	0.1957	N/A	CPS
Far Det Bkg Cntrate	30.00	24.05	25.16	24.43	-0.7359	N/A	CPS
Array-1 Det Bkg Cntrate	30.00	23.15	23.78	23.41	-0.3645	N/A	CPS
Array-2 Det Bkg Cntrate	30.00	23.93	25.54	24.97	-0.5711	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	26.33	23.62	24.71	1.093	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 After: 2-May-2021 10:16

Na 511 Peak Loc	40.00	39.25	39.64	39.73	0.09286	1.000	
Na 511 Peak Res	15.50	16.53	14.84	15.11	0.2734	2.000	%
High Voltage	1150	1197	1168	1198	30.38	N/A	V
Na 1785 Peak Loc	142.6	141.8	143.3	141.2	-2.089	7.000	
Na 1785 Peak Res	8.500	8.905	7.709	9.136	1.427	2.000	%
Temperature	15.50	26.59	11.69	26.63	14.94	N/A	DEGC
Na Count Rate	45.00	12.01	12.89	12.67	-0.2204	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 After: 2-May-2021 10:16

Na 511 Peak Loc	40.00	39.88	39.51	39.79	0.2834	1.000	
Na 511 Peak Res	15.50	15.29	15.27	15.32	0.05639	2.000	%
High Voltage	1150	1122	1090	1121	30.63	N/A	V
Na 1785 Peak Loc	142.6	142.6	140.8	142.5	1.645	7.000	
Na 1785 Peak Res	8.500	8.040	9.507	10.27	0.7659	2.000	%
Temperature	15.50	27.21	12.30	27.24	14.94	N/A	DEGC
Na Count Rate	45.00	12.32	13.60	12.95	-0.6521	8.000	CPS

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

Coincidence Count Rate Ratio	1.000	0.9728	0.9527	0.9769	0.02428	0.05000
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









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	--	--	--	--
Gain Ratio	1.000	1.015	--	--	--	--

















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	--	--	--	--	

Near Detector Plateau Setting	1738 V
Far Detector Plateau Setting	2068 V
Array Detector Plateau Setting	1976 V

















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

















Before: 29-Jul-2021 3:44
After: 29-Jul-2021 8:26



High Resolution Laterolog Array – B Wellsite Calibration						
HRLT M12						
Idx	Phase	HRLT M1–M2 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1739	1781	2095	1549
	After		1738			
1	Before		1808	1781	2095	1549
	After		1808			
2	Before		1842	1781	2095	1549
	After		1842			
3	Before		1789	1781	2095	1549
	After		1789			
4	Before		1741	1781	2095	1549
	After		1742			
5	Before		1751	1781	2095	1549
	After		1752			
6	Before		–1756	–1781	–1549	–2095
	After		–1756			
7	Before		1781	1781	2095	1549
	After		1781			
(Minimum) (Nominal) (Maximum)						
Before: 29–Jul–2021 3:44						
After: 29–Jul–2021 8:26						















High Resolution Laterolog Array – B Wellsite Calibration						
HRLT M23						
Idx	Phase	HRLT M2–M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1732	1781	2095	1549
	After		1731			
1	Before		1810	1781	2095	1549
	After		1811			
2	Before		1847	1781	2095	1549
	After		1847			
3	Before		1797	1781	2095	1549
	After		1798			
4	Before		1744	1781	2095	1549
	After		1745			
5	Before		1755	1781	2095	1549
	After		1756			
6	Before		–1747	–1781	–1549	–2095
	After		–1748			
7	Before		1781	1781	2095	1549
	After		1781			
(Minimum) (Nominal) (Maximum)						
Before: 29–Jul–2021 3:44						
After: 29–Jul–2021 8:26						

















High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V34						
Idx	Phase	HRLT M2–M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum





Idx	Phase	HRLT A3–A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68590	70000	82360	60900
	After		68590			
1	Before		71550	70000	82360	60900
	After		71610			
2	Before		73300	70000	82360	60900
	After		73330			
3	Before		71570	70000	82360	60900
	After		71610			
4	Before		69420	70000	82360	60900
	After		69450			
5	Before		69860	70000	82360	60900
	After		69900			
6	Before		–68120	–70000	–60900	–82360
	After		–68140			
7	Before		70000	70000	82360	60900
	After		70000			
(Minimum) (Nominal) (Maximum)						
Before: 29–Jul–2021 3:44						
After: 29–Jul–2021 8:26						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V45						
Idx	Phase	HRLT A4–A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68680	70000	82360	60900
	After		68680			
1	Before		71760	70000	82360	60900
	After		71830			
2	Before		73490	70000	82360	60900
	After		73520			
3	Before		71730	70000	82360	60900
	After		71780			
4	Before		69540	70000	82360	60900
	After		69570			
5	Before		69950	70000	82360	60900
	After		70000			
6	Before		–68320	–70000	–60900	–82360
	After		–68340			
7	Before		70000	70000	82360	60900
	After		70000			
(Minimum) (Nominal) (Maximum)						
Before: 29–Jul–2021 3:44						
After: 29–Jul–2021 8:26						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V56						
Idx	Phase	HRLT A5–A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68540	70000	82360	60900
	After		68520			

1	Before		71610	70000	82360	60900
	After		71670			
2	Before		73320	70000	82360	60900
	After		73340			
3	Before		71580	70000	82360	60900
	After		71620			
4	Before		69390	70000	82360	60900
	After		69440			
5	Before		69840	70000	82360	60900
	After		69880			
6	Before		-68160	-70000	-60900	-82360
	After		-68190			
7	Before		70000	70000	82360	60900
	After		70000			
(Minimum) (Nominal) (Maximum)						
Before: 29-Jul-2021 3:44						
After: 29-Jul-2021 8:26						











High Resolution Laterolog Array – B Wellsite Calibration						
HRLT VTP						
Idx	Phase	HRLT Torpedo-M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-68070	-70000	-60900	-82360
	After		-68060			
1	Before		-71420	-70000	-60900	-82360
	After		-71470			
2	Before		-73170	-70000	-60900	-82360
	After		-73190			
3	Before		-71500	-70000	-60900	-82360
	After		-71540			
4	Before		-69360	-70000	-60900	-82360
	After		-69400			
5	Before		-69800	-70000	-60900	-82360
	After		-69840			
6	Before		67920	70000	82360	60900
	After		67940			
7	Before		-70000	-70000	-60900	-82360
	After		-70000			
(Minimum) (Nominal) (Maximum)						
Before: 29-Jul-2021 3:44						
After: 29-Jul-2021 8:26						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT VBD						
Idx	Phase	HRLT Bridle#9-M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-68110	-70000	-60900	-82360
	After		-68100			
1	Before		-71490	-70000	-60900	-82360
	After		-71500			

After			-71560			
2	Before		-73260	-70000	-60900	-82360
	After		-73280			
3	Before		-71570	-70000	-60900	-82360
	After		-71610			
4	Before		-69420	-70000	-60900	-82360
	After		-69450			
5	Before		-69840	-70000	-60900	-82360
	After		-69870			
6	Before		68010	70000	82360	60900
	After		68040			
7	Before		-70000	-70000	-60900	-82360
	After		-70000			
(Minimum) (Nominal) (Maximum)						
Before: 29-Jul-2021 3:44						
After: 29-Jul-2021 8:26						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT ISO						
Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum
0	Before		284.1	284.0	334.1	247.0
	After		284.1			
1	Before		281.1	281.1	330.7	244.4
	After		281.1			
2	Before		281.1	281.1	330.7	244.4
	After		281.1			
3	Before		281.1	281.1	330.7	244.4
	After		281.1			
4	Before		281.1	281.1	330.7	244.4
	After		281.1			
5	Before		281.1	281.1	330.7	244.4
	After		281.1			
6	Before		281.1	281.1	330.7	244.4
	After		281.1			
7	Before		281.1	281.1	330.7	244.4
	After		281.1			
(Minimum) (Nominal) (Maximum)						
Before: 29-Jul-2021 3:44						
After: 29-Jul-2021 8:26						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT MV						
Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-320.5	-322.7	-280.7	-379.7
	After		-320.5			
1	Before		-324.8	-322.7	-280.7	-379.7
	After		-325.1			
2	Before		-331.1	-322.7	-280.7	-379.7
	After		-331.1			

3	After		-331.2	-322.7	-280.7	-379.7
	Before		-320.0			
4	After		-309.0	-322.7	-280.7	-379.7
	Before		-308.8			
5	After		-325.6	-322.7	-280.7	-379.7
	Before		-325.4			
6	After		326.8	322.7	379.7	280.7
	Before		326.6			
7	After		-322.7	-322.7	-280.7	-379.7
	Before		-322.7			
(Minimum) (Nominal) (Maximum)						
Before: 29-Jul-2021 3:44						
After: 29-Jul-2021 8:26						

Hostile Litho-Density Sonde / Equipment Identification

Primary Equipment:





































Gamma Source Radioactive
Hostile Litho Density Sonde
Hostile Litho Density High Voltage

GSR – ZA 2945
HLDS – D 77
HLDV – D 67

Auxiliary Equipment:

Hostile Litho Density High Voltage Housi
Hostile Litho Density Pad

HEH – H 67
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		7.750	Before		7.966	Before		69.31	
After		7.652	After		7.948	After		71.93	
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		65.02	Master		146.1	Master		183.2	
Before		64.30	Before		145.3	Before		181.1	
After		63.44	After		146.0	After		181.4	
50.00 (Minimum)		100.0 (Nominal)	140.0 (Maximum)			140.0 (Minimum)		250.0 (Nominal)	360.0 (Maximum)
Phase	LSW5 Background CPS	Value	Phase	SSW1 Background CPS	Value	Phase	SSW2 Background CPS	Value	
Master		424.9	Master		68.97	Master		118.2	
Before		425.0	Before		68.41	Before		117.9	
After		426.6	After		69.07	After		120.1	
330.0 (Minimum)		600.0 (Nominal)	830.0 (Maximum)			100.0 (Minimum)		200.0 (Nominal)	260.0 (Maximum)
Phase	SSW3 Background CPS	Value	Phase	SSW4 Background CPS	Value	Phase	SSW5 Background CPS	Value	
Master		331.3	Master		178.4	Master		127.4	
Before		330.5	Before		175.0	Before		126.7	
After		333.0	After		177.3	After		127.8	
280.0 (Minimum)		500.0 (Nominal)	700.0 (Maximum)			110.0 (Minimum)		200.0 (Nominal)	270.0 (Maximum)
Master: 2-May-2021 7:20			Before: 29-Jul-2021 3:54			After: 2-May-2021 8:19			

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			71.96	Master			65.02	Master			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			183.2	Master			424.9	Master			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			68.97	Master			118.2	Master			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			178.4	Master			127.4	Master			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





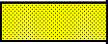
Hostile Litho-Density Sonde Master Calibration											
Detector Aluminum Measurement (bkgd-subtracted)											
Phase	LSW1 Aluminum CPS		Value	Phase	LSW2 Aluminum CPS		Value	Phase	LSW3 Aluminum CPS		Value
Master			437.4	Master			651.2	Master	<div>EXCEEDS LIMIT</div>		787.2
	420.0 (Minimum)	600.0 (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								
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	<div>EXCEEDS LIMIT</div>		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
Master	<div>EXCEEDS LIMIT</div>		360.1	Master	<div>EXCEEDS LIMIT</div>		333.9	Master			1520
	370.0 (Minimum)	520.0 (Nominal)	700.0 (Maximum)		340.0 (Minimum)	470.0 (Nominal)	750.0 (Maximum)		1500 (Minimum)	2100 (Nominal)	2400 (Maximum)
Phase	SSW2 Iron CPS		Value	Phase	SSW3 Iron CPS		Value	Phase	SSW4 Iron CPS		Value
Master	<div>EXCEEDS LIMIT</div>		4870	Master	<div>EXCEEDS LIMIT</div>		7479	Master	<div>EXCEEDS LIMIT</div>		3030
	4900 (Minimum)	6800 (Nominal)	7900 (Maximum)		7800 (Minimum)	10800 (Nominal)	12600 (Maximum)		3300 (Minimum)	4600 (Nominal)	5400 (Maximum)
Phase	SSW5 Iron CPS		Value								
Master	<div>EXCEEDS LIMIT</div>		343.3								
	420.0 (Minimum)	580.0 (Nominal)	680.0 (Maximum)								

Master: 2-May-2021 7:41

Hostile Litho-Density Sonde Master Calibration											
Quality Ratios											
Phase	AL CALIBRATION RATIO 1		Value	Phase	AL CALIBRATION RATIO 2		Value	Phase	AL CALIBRATION RATIO 3		Value
Master			1.035	Master			2.210	Master			0.5748
	0.9000 (Minimum)	1.000 (Nominal)	1.100 (Maximum)		1.900 (Minimum)	2.100 (Nominal)	2.300 (Maximum)		0.4500 (Minimum)	0.5500 (Nominal)	0.6500 (Maximum)
Phase	AL CALIBRATION RATIO 4		Value	Phase	Rad. Wear SS Ratio		Value	Phase	Rad. Wear LS Ratio		Value

Phase	AL CALIBRATION RATIO 4			Value	Phase	Pad-wear SS Ratio			Value	Phase	Pad-wear LS Ratio			Value
Master				0.5585	Master				0.9916	Master				0.9894
	0.4000 (Minimum)	0.5500 (Nominal)	0.6500 (Maximum)			0.9800 (Minimum)	0.9880 (Nominal)	0.9960 (Maximum)			0.9800 (Minimum)	0.9880 (Nominal)	0.9960 (Maximum)	
Phase	Pad-Position SS Ratio			Value	Phase	Pad-Position LS Ratio			Value					
Master				1.006	Master				0.9871					
	0.9900 (Minimum)	0.9940 (Nominal)	1.015 (Maximum)			0.9850 (Minimum)	0.9940 (Nominal)	1.010 (Maximum)						
Master: 2-May-2021 7:36														

Litho-Density Spectroscopy Cartridge – B / Equipment Identification
















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

Accelerator-Porosity Tool / Equipment Identification

Primary Equipment:		
Accelerator-Porosity Sonde	APS – C	249
APS Minitron	MNTR – F	51002
Auxiliary Equipment:		
Accelerator-Porosity Housing	APH – AC	152
APS Calibration Water Tank	SFT – 178	1
APS Aluminum Calibrator Sleeve	SFT – 281	1




Accelerator-Porosity Tool Wellsite Calibration

Detector Background

Phase	Near Det Bkg Cntrate CPS			Value	Phase	Far Det Bkg Cntrate CPS			Value	Phase	Array-1 Det Bkg Cntrate CPS			Value
Master				25.16	Master				24.05	Master				23.15
Before				24.89	Before				25.16	Before				23.78
After				25.09	After				24.43	After				23.41
	1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)			1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)			1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)	
Phase	Array-2 Det Bkg Cntrate CPS			Value	Phase	Array Therm Det Bkg Cntrate CPS			Value					
Master				23.93	Master				26.33					
Before				25.54	Before				23.62					
After				24.97	After				24.71					
	1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)			1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)						
Master: 3-May-2021 6:13					Before: 29-Jul-2021 3:54					After: 3-May-2021 6:40				







Accelerator-Porosity Tool Wellsite Calibration




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)	1.050 (Maximum)			0.9000 (Minimum)	1.030 (Nominal)	1.170 (Maximum)			0.9700 (Minimum)	1.000 (Nominal)	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				11.04	Master				10.88	Master				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				0.9943	Master				0.9896	Master				27.71
	0.9500	1.000	1.050			0.9500	1.000	1.050			20.00	27.50	35.00	

(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(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)	1.050 (Maximum)		0.9000 (Minimum)	1.030 (Nominal)	1.170 (Maximum)		0.9700 (Minimum)	1.000 (Nominal)	1.030 (Maximum)
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)	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				0.9943	Master				0.9896	Master				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														

Hostile Natural Gamma Ray Cartridge – B / Equipment Identification

Primary Equipment:
HNGC Cartridge

HNGC – B 304

Auxiliary Equipment:
HNGC Housing

HNGH – A 3

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:
HNGS Sonde



















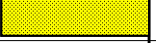


HNGS – BA 99

Auxiliary Equipment:
HNGS Sonde Housing


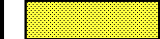

HNSH – BA 102

Gamma Source Radioactive

GSR – U 6098

Hostile Natural Gamma Ray Sonde Wellsite Calibration													
Detector 1 Check													
Phase	Na 511 Peak Loc			Value	Phase	Na 511 Peak Res %			Value	Phase	High Voltage V		Value
Master				39.25	Master				16.53	Master			1197
Before				39.64	Before				14.84	Before			1168
After				39.73	After				15.11	After			1198
	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
After				141.2	After				9.136	After			26.63
	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									
After				12.67									
	10.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)										
Master: 2-May-2021 10:04				Before: 13-Jun-2021 9:44				After: 2-May-2021 10:16					

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		
After			39.79	After			15.32	After			1121		
37.50 (Minimum)			40.00 (Nominal)	43.50 (Maximum)	12.00 (Minimum)			15.50 (Nominal)	19.00 (Maximum)	900.0 (Minimum)		1150 (Nominal)	1600 (Maximum)
Phase	Na 1785 Peak Loc		Value	Phase	Na 1785 Peak Res %		Value	Phase	Temperature DEGC		Value		
Master			142.6	Master			8.040	Master			27.21		
Before			140.8	Before			9.507	Before			12.30		
After			142.5	After			10.27	After			27.24		
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										
After			12.95										
10.00 (Minimum)			45.00 (Nominal)										100.0 (Maximum)
Master: 2-May-2021 10:04				Before: 13-Jun-2021 9:44				After: 2-May-2021 10:16					

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	
After		0.9769	
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)
Master: 2-May-2021 10:04			
Before: 13-Jun-2021 9:44			
After: 2-May-2021 10:16			

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 (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>		16.78	Master	<div><div></div></div>		0.9961				
	10.00 (Minimum)	142.5 (Nominal)	265.0 (Maximum)		0.9400 (Minimum)	1.000 (Nominal)	1.060 (Maximum)				
Master: 2-May-2021 10:00											

Primary Equipment:

DTC-H Auxiliary Cartridge
DTC-H Telemetry Cartridge

DTCH – A
DTCH – A

8799
8799

Auxiliary Equipment:

DTCH Telemetry Cartridge Housing

ECH – KC

9842

Company: **International Ocean Discovery Program**

Schlumberger

Well: **Expedition 395C, Site U1563B**

Field: **North Atlantic Mantle Convection&Climate**

Rig: **JOIDES Resolution**

Ocean: **Atlantic**

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