



**Company: International Ocean Discovery Program**

Well: **Expedition 356, Site U1462 A**

Field: Indonesian Throughflow

Rig: **JOIDES Resolution** Ocean: **Indian**

Rig: JOIDES Resolution Field: Indonesian Throughflow Location: Latitude: S 19.821428 Deg Well: Expedition 356, Site U1462 A Company: International Ocean Discovery Program	High Resolution Laterolog Array (HRLA)				
	Caliper				
	Magnetic Susceptibility (MSS), (HNGS)				
	LOCATION	Latitude: S 19.821428 Deg Longitude: E 115.7099733 Deg	Elev.: K.B.      -98.00 m G.L.            0.00 m D.F.            -98.00 m		
		Permanent Datum:      Sea Floor Log Measured From:      Sea Floor Drilling Measured From:      Sea Floor	Elev.:      0.00 m 0.00 m      above Perm. Datum		
API Serial No.		Max. Hole Devi. 0 deg	Longitude E 115.7099733	Latitude S 19.821428	

Logging Date			3-Sep-2015					
Run Number			1					
Depth Driller			855 m					
Schlumberger Depth			799 m					
Bottom Log Interval			799 m					
Top Log Interval			0 m					
Casing Driller Size @ Depth			5.500 in @ 82 m			@		
Casing Schlumberger			81 m					
Bit Size			11.438 in					
Type Fluid In Hole			Sepiolite with Barite					
MUD	Density	Viscosity	1.318 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	0.169 @ 37	@ 37		@	@		
Maximum Recorded Temperatures			37 degC					
Circulation Stopped		Time	3-Sep-2015		13:30			
Logger On Bottom		Time	3-Sep-2015		6:15			
Unit Number		Location	627314	Houma, LA				
Recorded By			K. Swain					
Witnessed By			M. Gurnis, Z. Mateo, E. Garrett					

[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				




[illegible]

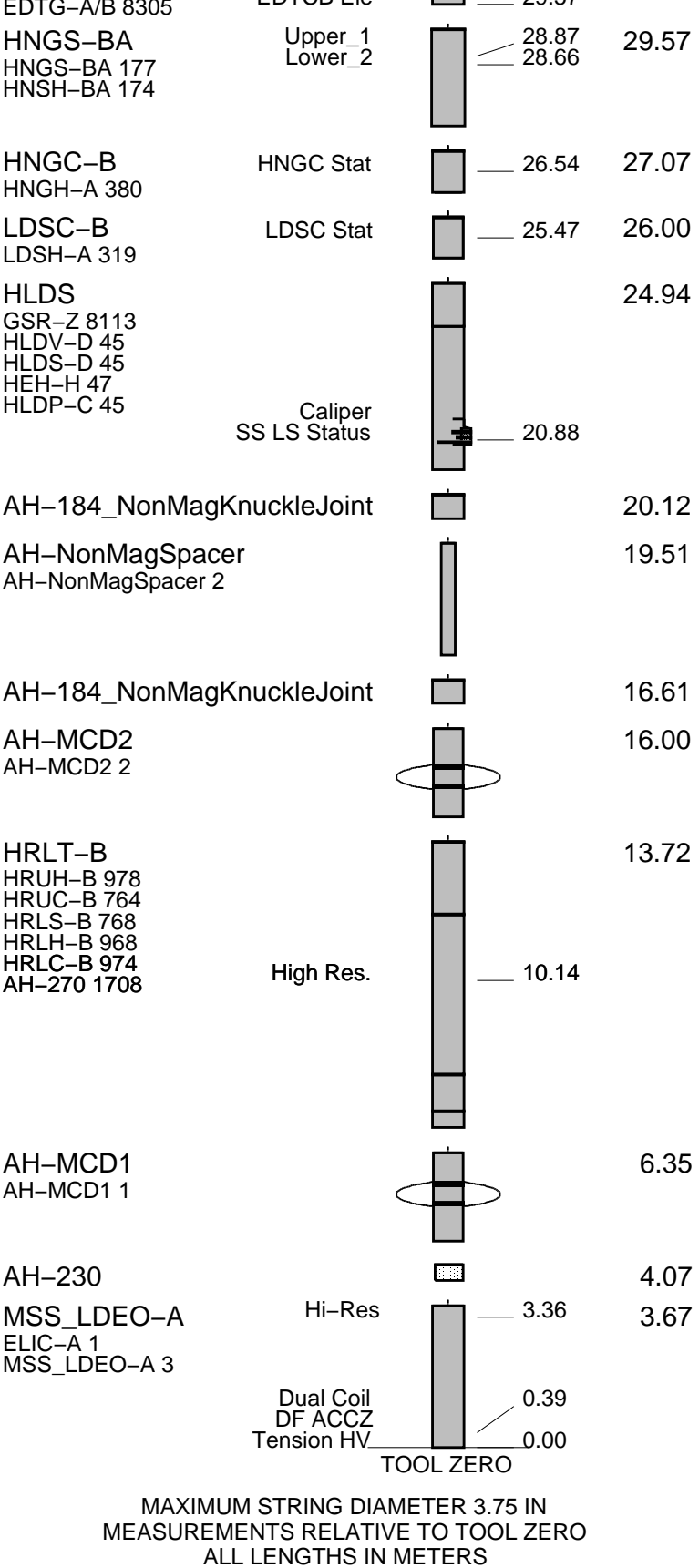
## DISCLAIMER

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

OTHER SERVICES1 OS1: FMS/DSI OS2: OS3: OS4: OS5:			OTHER SERVICES2 OS1: OS2: OS3: OS4: OS5:		
REMARKS: RUN NUMBER 1			REMARKS: RUN NUMBER 2		
Hole drilled with XCB coring bit and bottom hole assembly (BHA). 11 7/16" BS					
Drill pipe set at 82 mbsf for wireline logging.					
Downlog run with corrections computed using bit size; uplogs corrected for actual hole size using caliper.					
Callapsed hole above logging tools caused significant pull at surface for most of open hole interval.					
Fluid type was sepiolite+barite at 11 lbs/gal. Corrections for this applied.					
Depth originally recorded from drill floor; played back with sea floor as reference zero.					
All logs presented in measured depth below sea floor (MDBSF).					
Maximum observed temperature on the MSS temperature was 36.6degC.					
<div style="display: flex; justify-content: space-between;"> <span>RUN 1</span> <span>RUN 2</span> </div> <div style="display: flex; justify-content: space-between;"> <div>           SERVICE ORDER #:            PROGRAM VERSION:            FLUID LEVEL:         </div> <div>           19C0-187         </div> <div>           SERVICE ORDER #:            PROGRAM VERSION:            FLUID LEVEL:         </div> </div>					
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

## EQUIPMENT DESCRIPTION

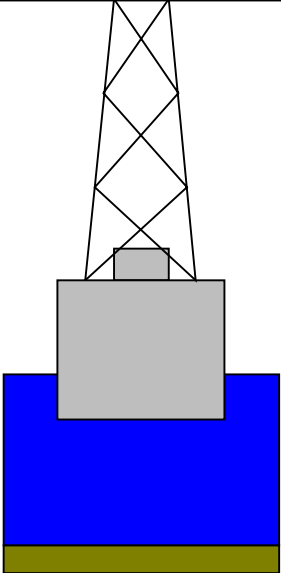
RUN 1		RUN 2	
SURFACE EQUIPMENT			
GSR-U 616008 WITM (EDTS)-A 1			
DOWNHOLE EQUIPMENT			
LEH-QT			32.87
LEH-QT 301	MDSB_EDTC		
AH-369	Mud Tempe		31.55
	CTEM		30.48
EDTC-B	Gamma Ray		29.91
EDTH-B 8303	EFTB DIAG		31.55
EDTC-B 8317	TelStatus		
	EDTCB File		29.57



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

Kelly Bushing Elevation  
Derrick Floor Elevation  
  
Mean Sea Level

---98  
-98  
  
-87



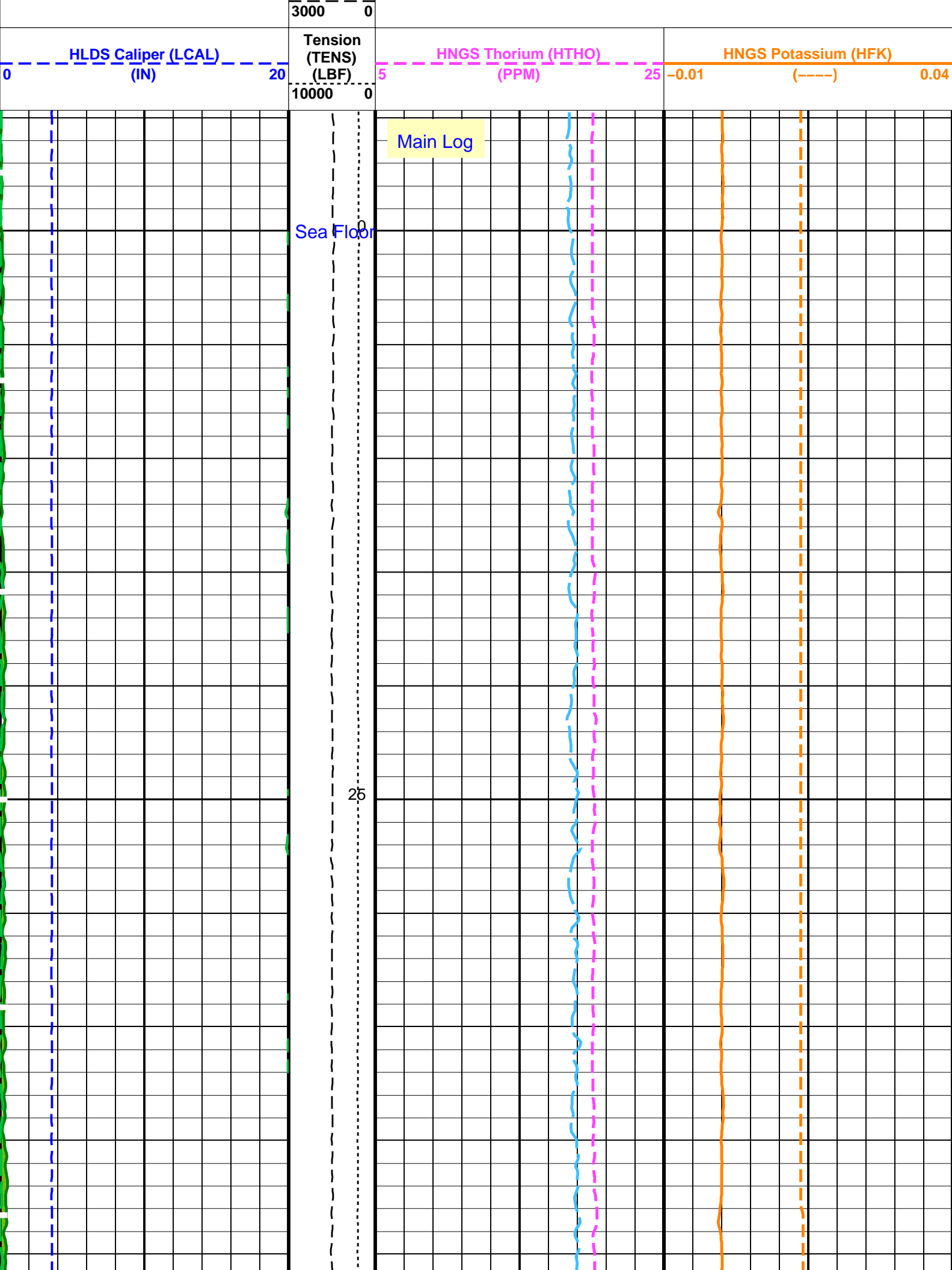
4.1

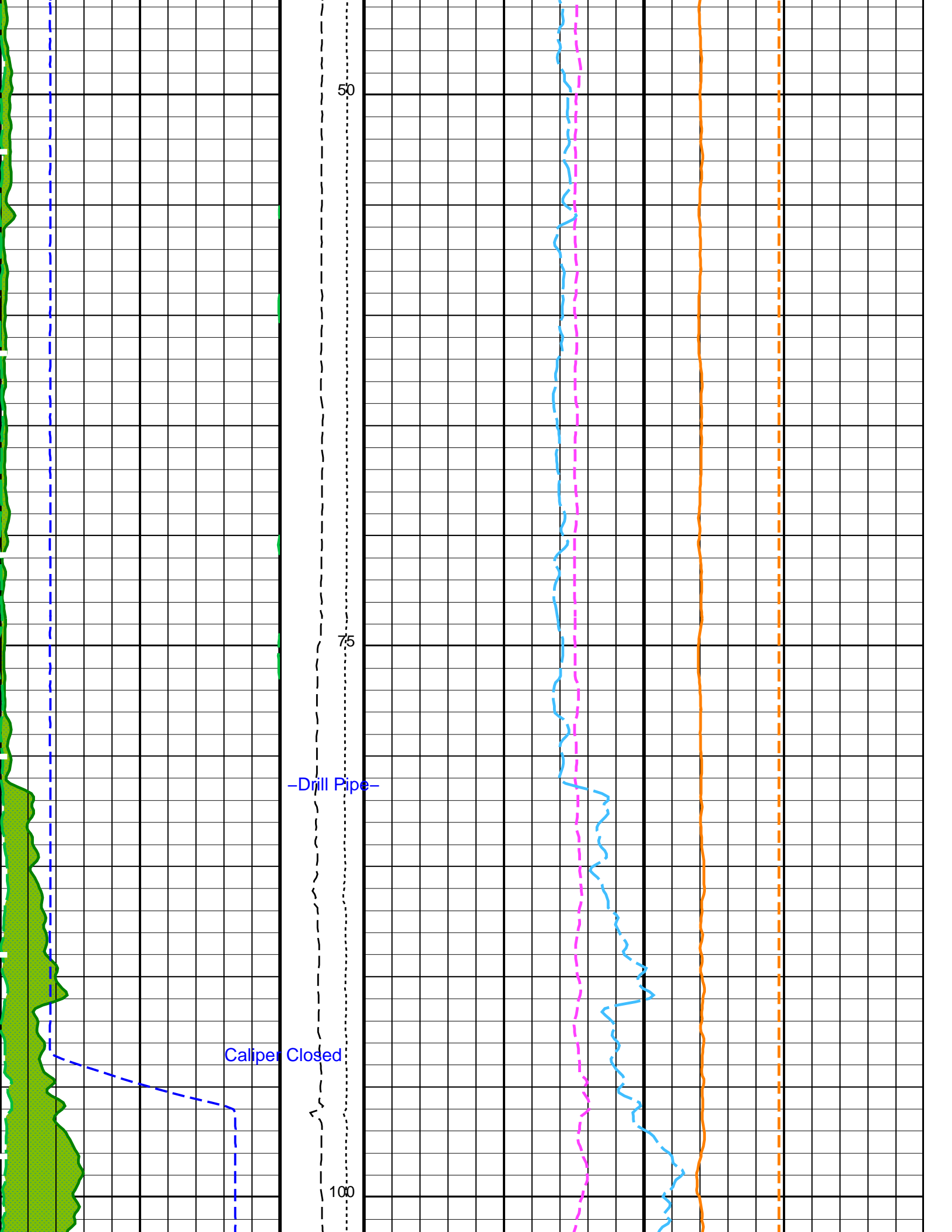
0  
82  
  
855

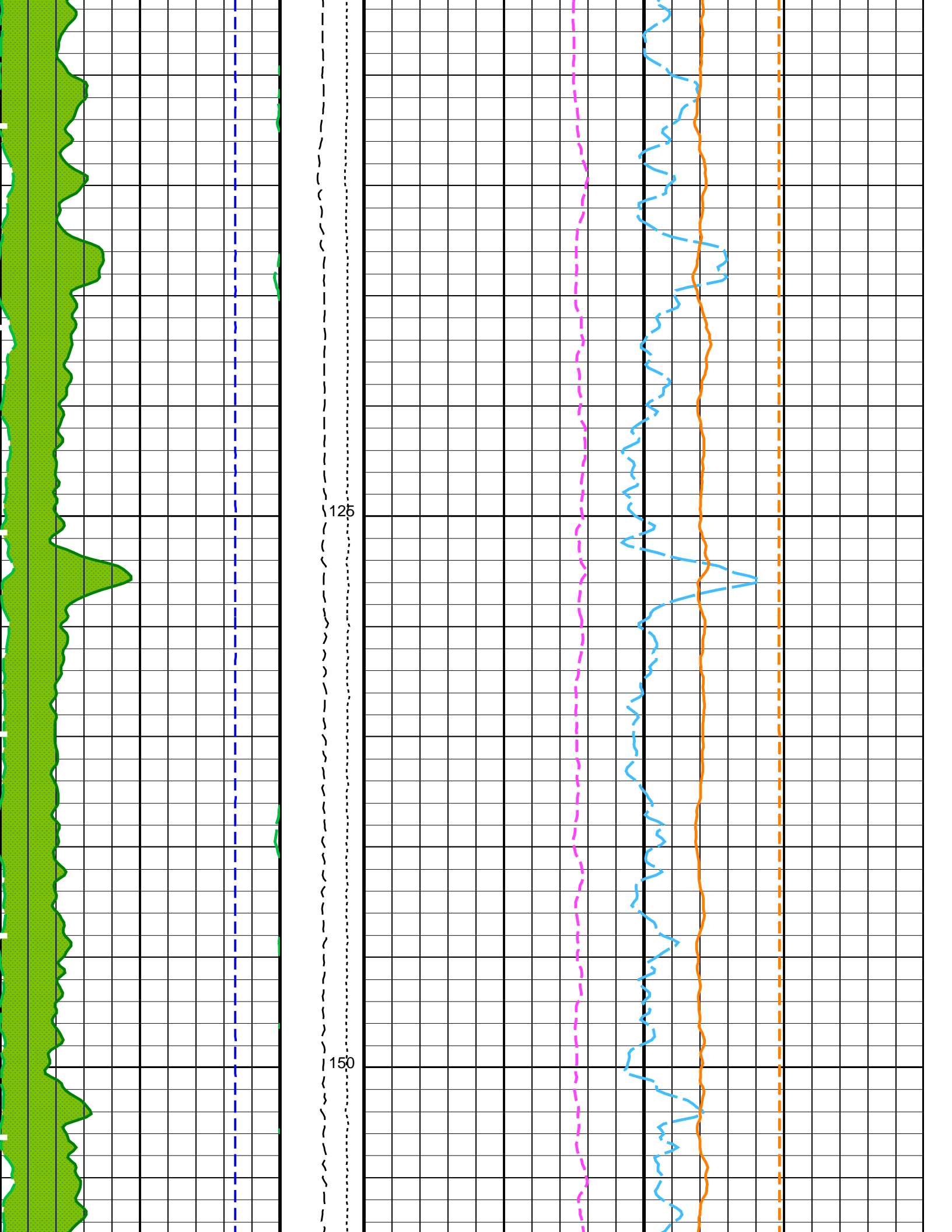
4.1  
9.875

Sea Floor  
Open Hole  
  
Total Depth

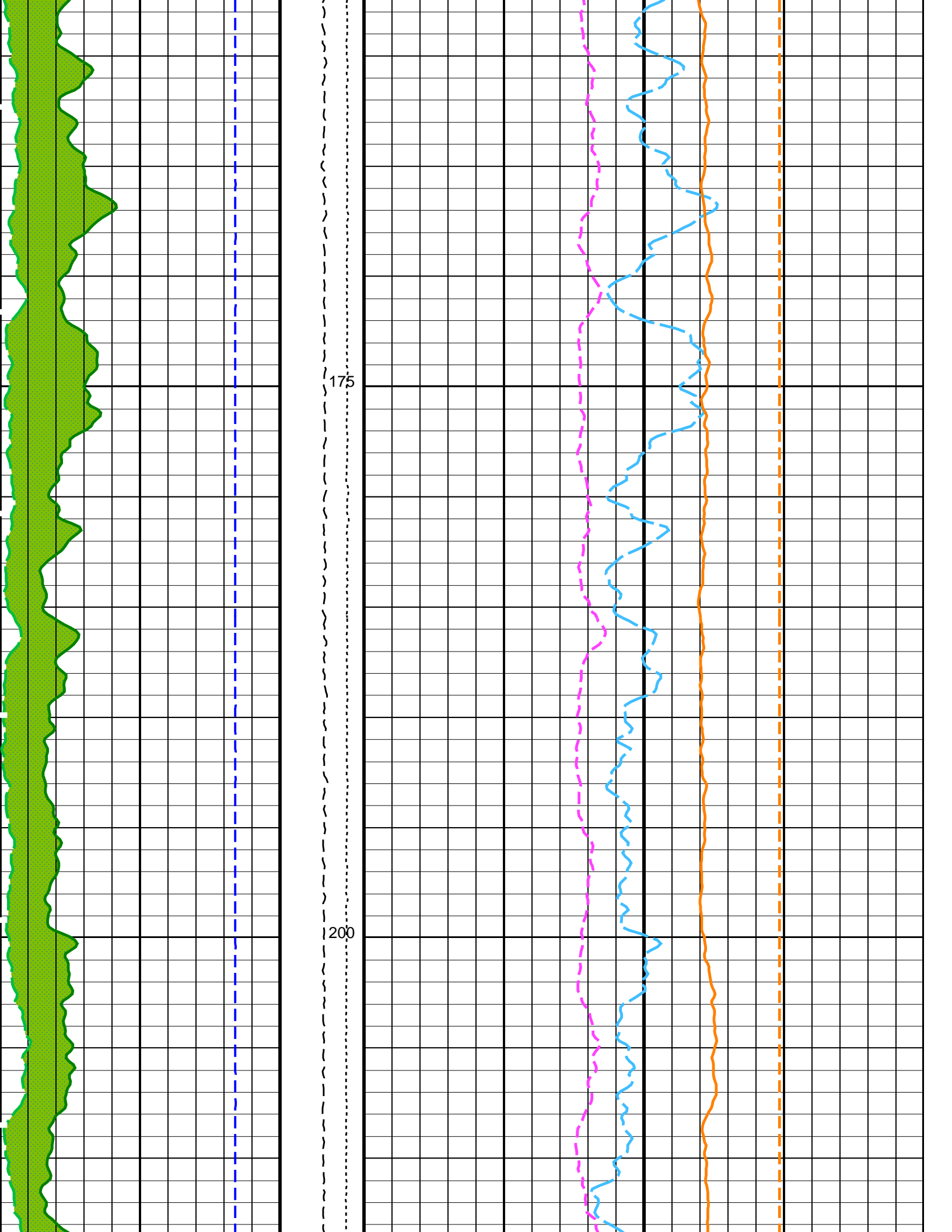
Input DLIS Files						
DEFAULT	MSS_LDEO_HRLA_LDL_013LUP	FN:22	PRODUCER	03-Sep-2015 17:22	896.1 M	91.6 M
Output DLIS Files						
DEFAULT	MSS_LDEO_HRLA_LDL_037PUP	FN:56	PRODUCER	10-Sep-2015 12:38	799.3 M	-5.3 M
OP System Version: 19C0-187						
MSS_LDEO-A	19C0-187		HRLT-B	19C0-187		
HLDS	19C0-187		LDSC-B	19C0-187		
HNGC-B	19C0-187		HNGS-BA	19C0-187		
EDTC-B	SKK-5169-EDTCB					
PIP SUMMARY						
<div><div></div>Time Mark Every 60 S</div>						
HNGS Spectroscopy Gamma Ray (HSGR)						
0	(GAPI)	100				
Area1 From HCGR to HSGR		<div>HNGS Borehole Potassium (HBHK)</div> <div>-0.05 (----) 0.05</div>				
HNGS Computed Gamma Ray (HCGR)		Calibrated Downhole Force (CDF) (LBF)	HNGS Uranium (HURA)			
0	(GAPI)	100	-5	(PPM)		10

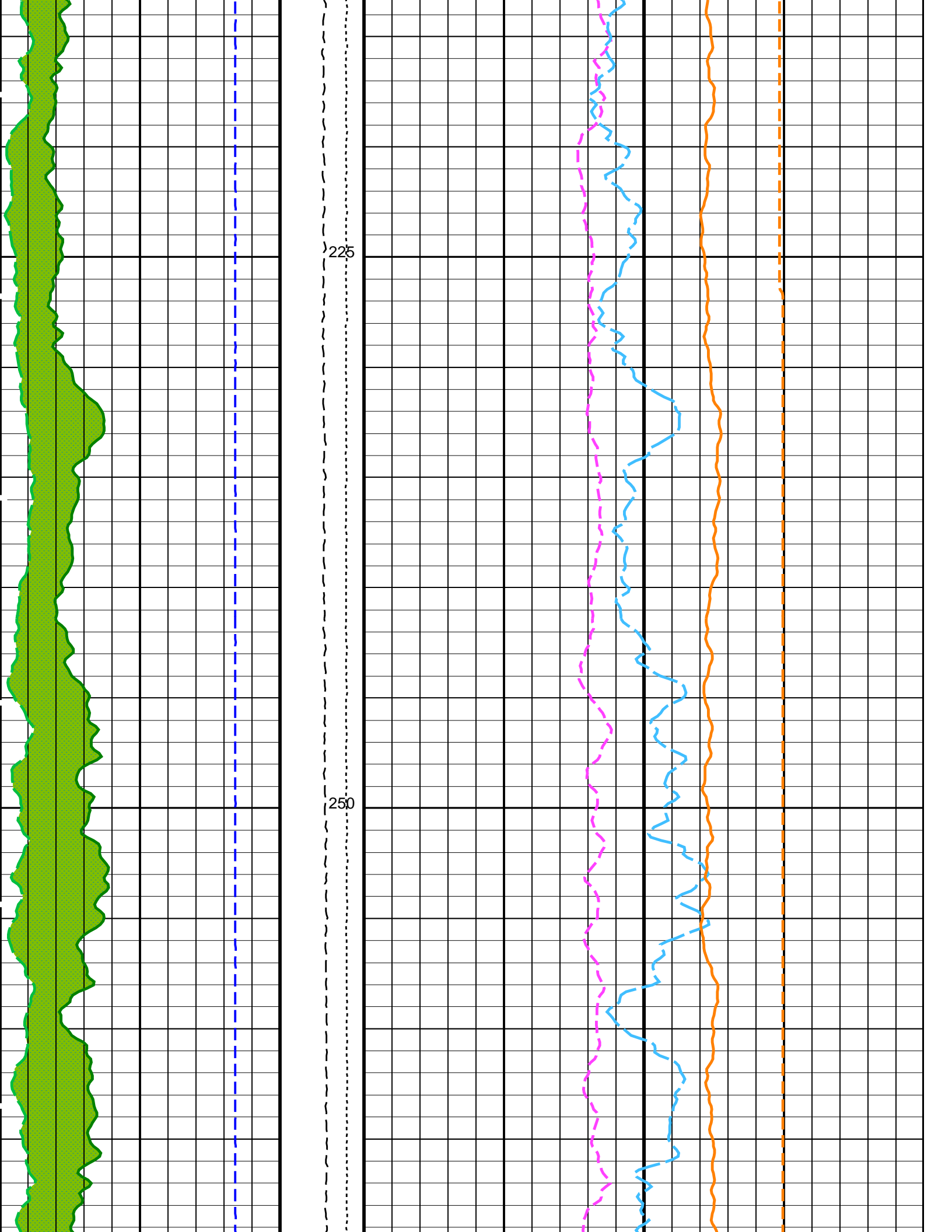


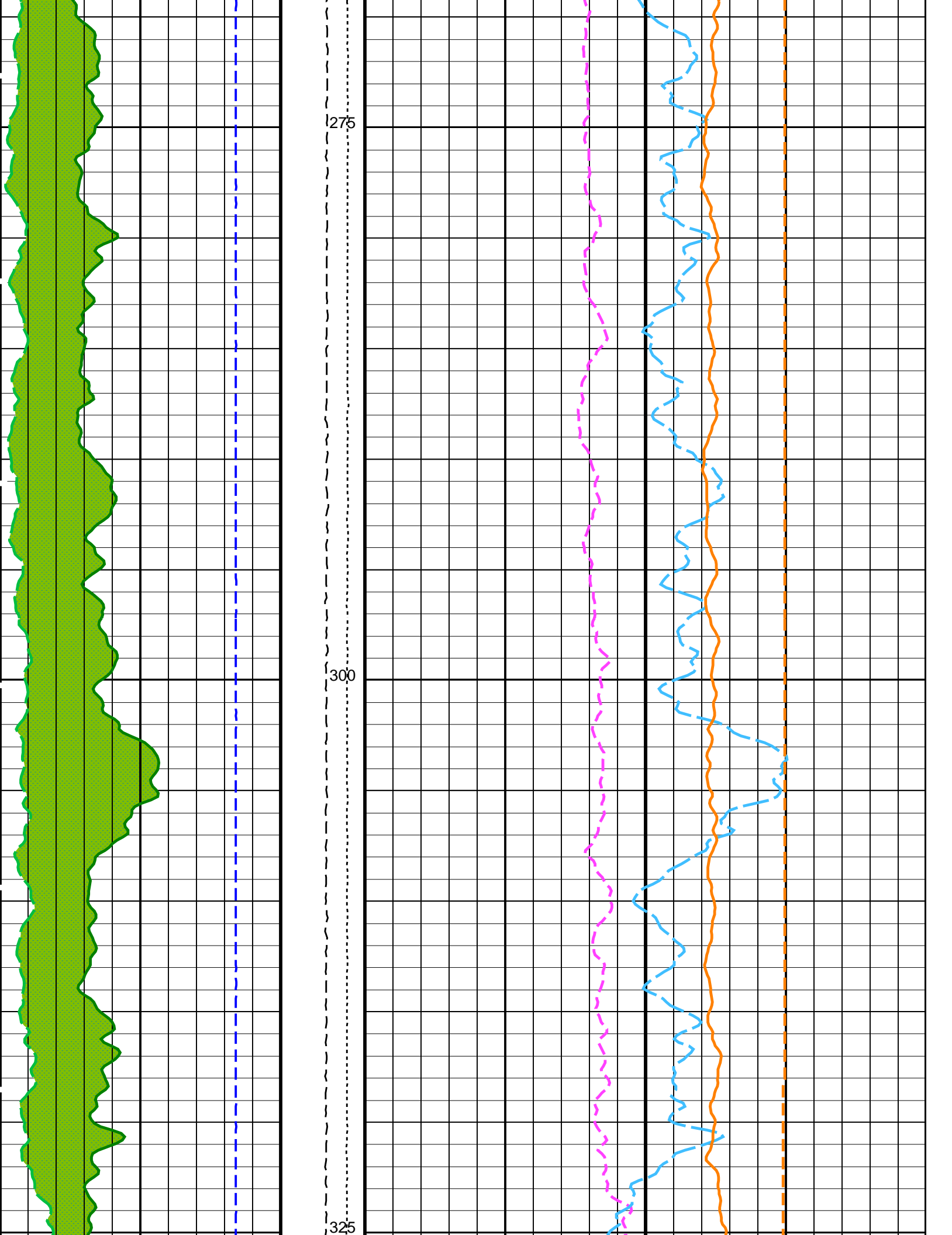


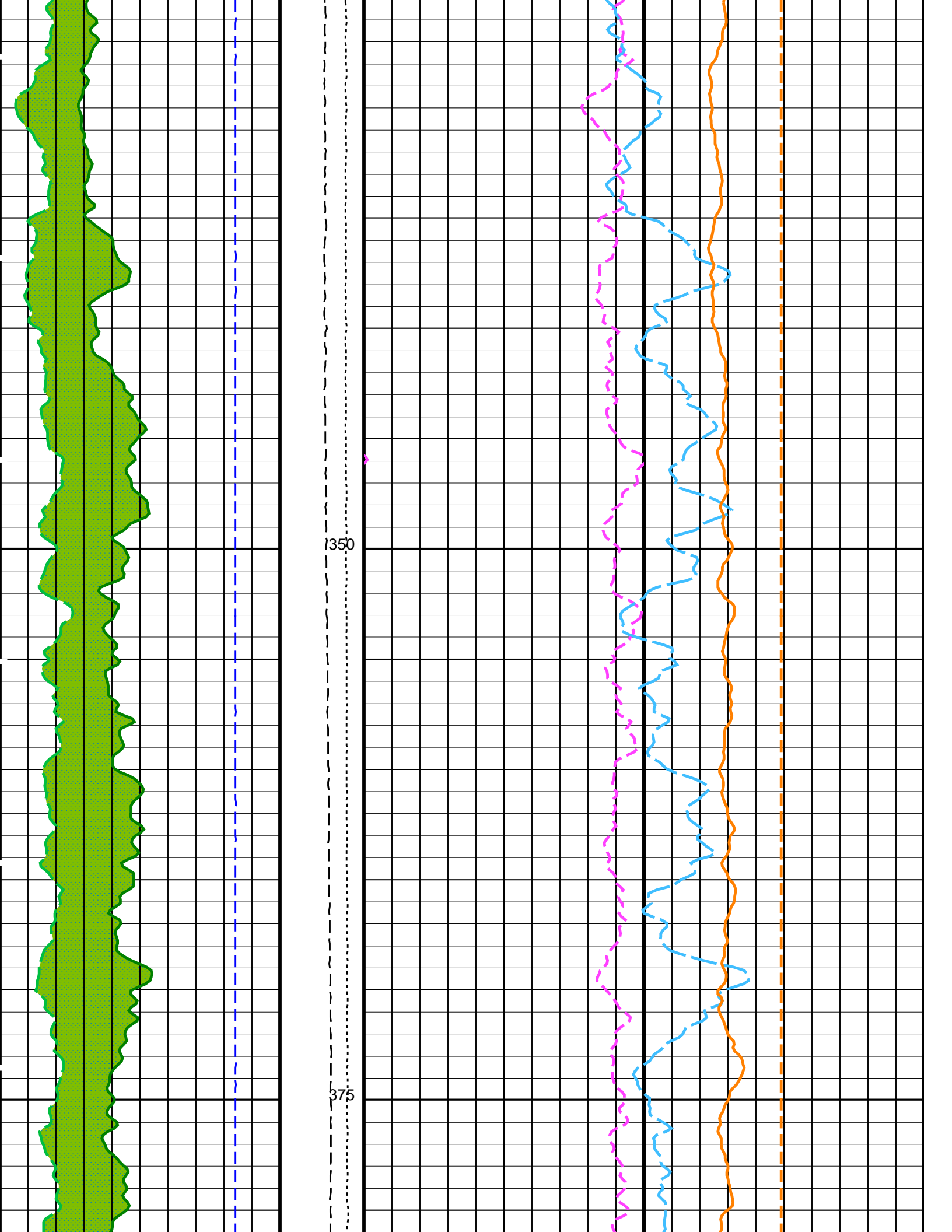


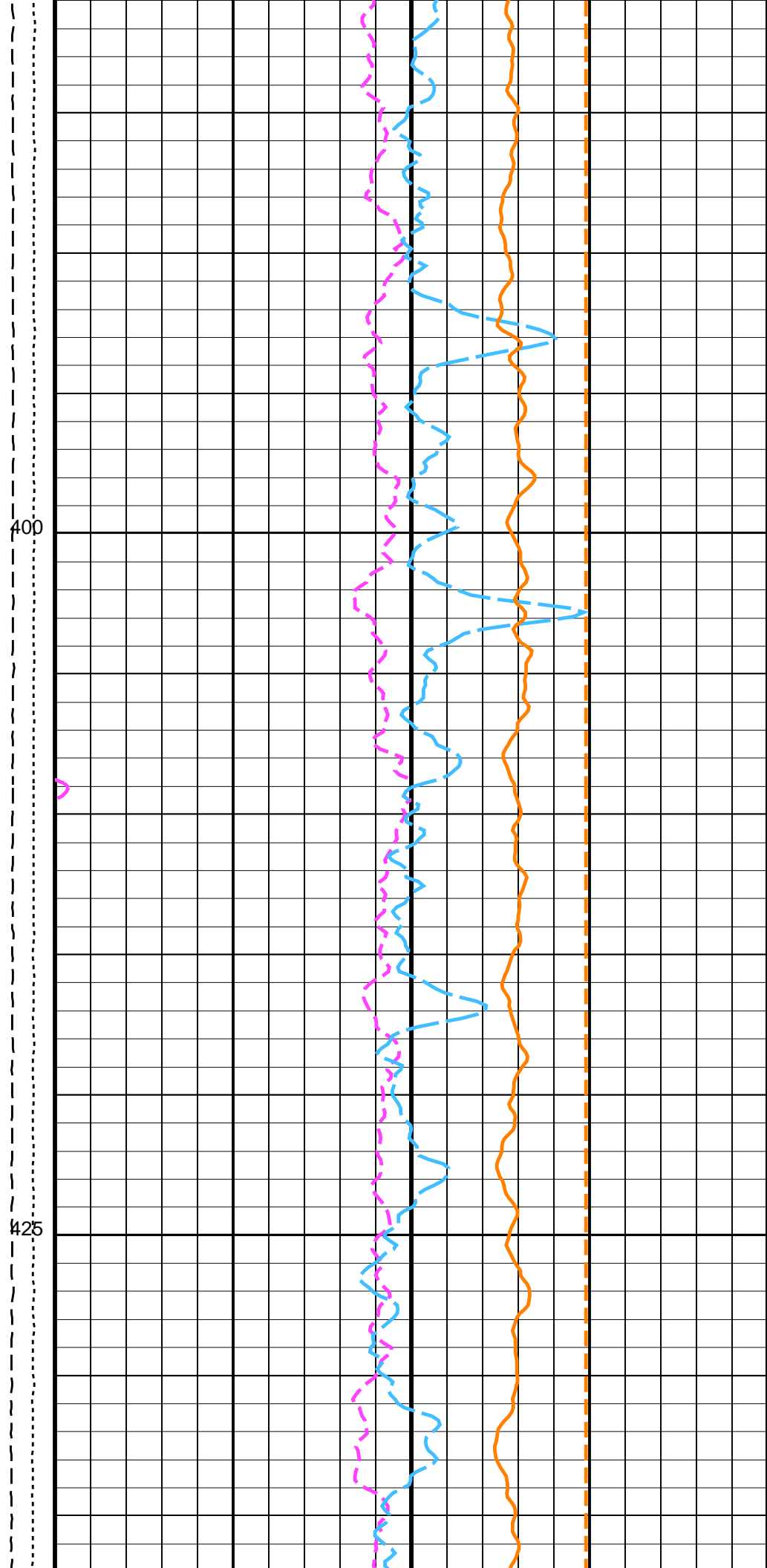
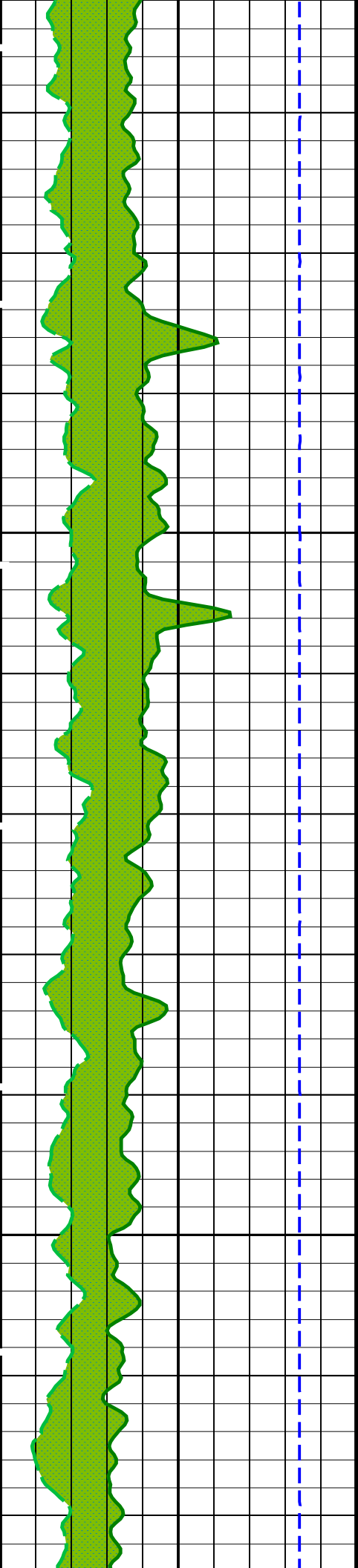


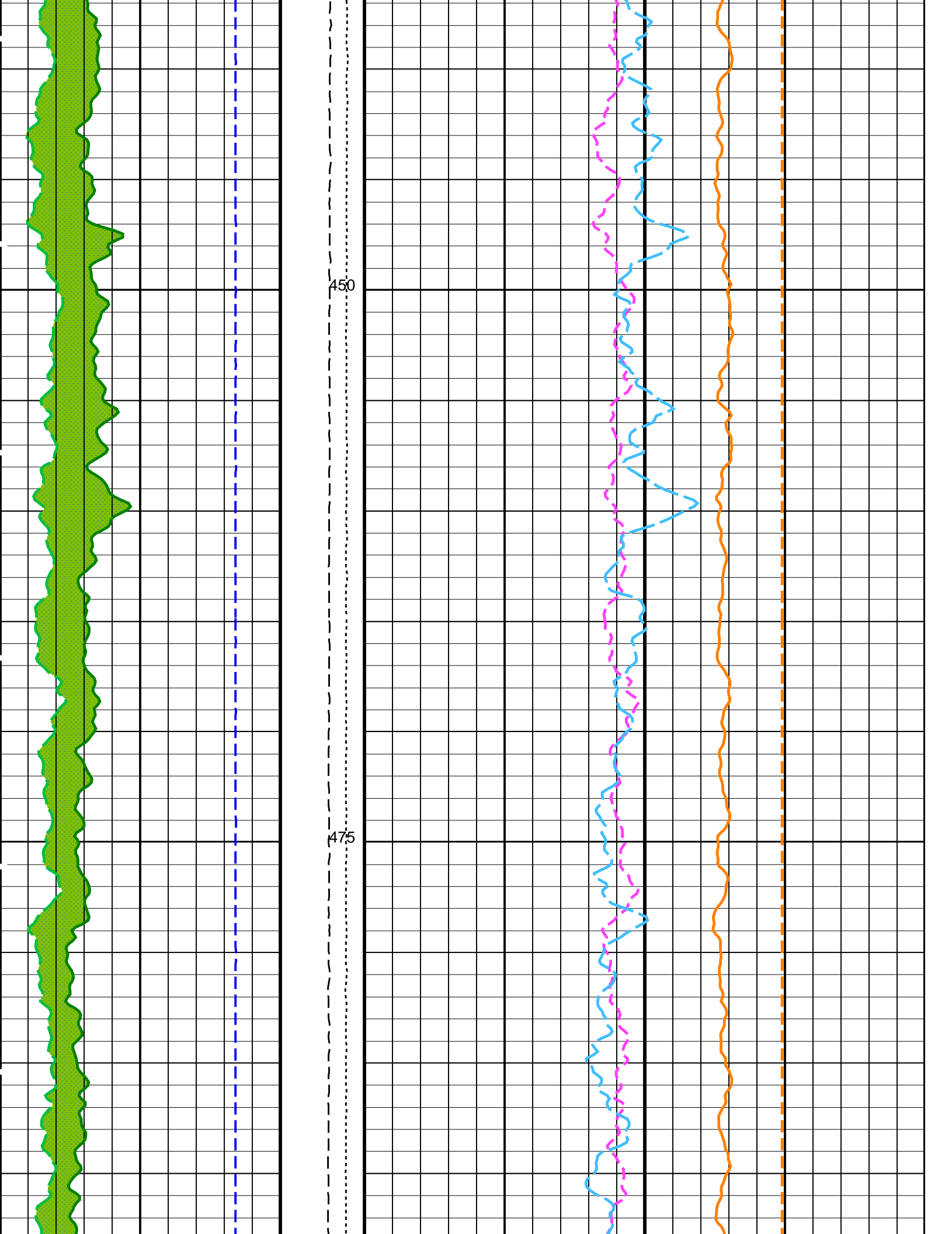


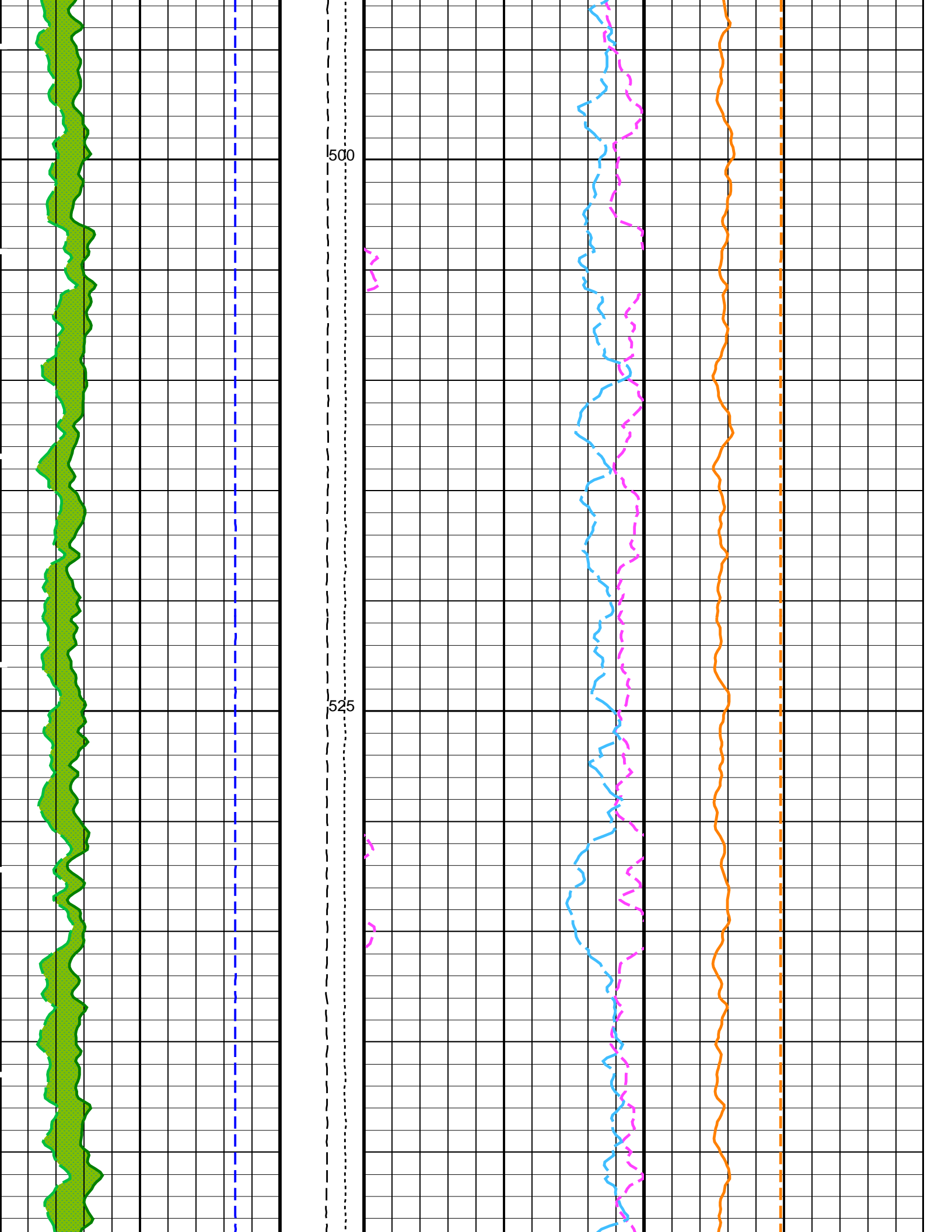


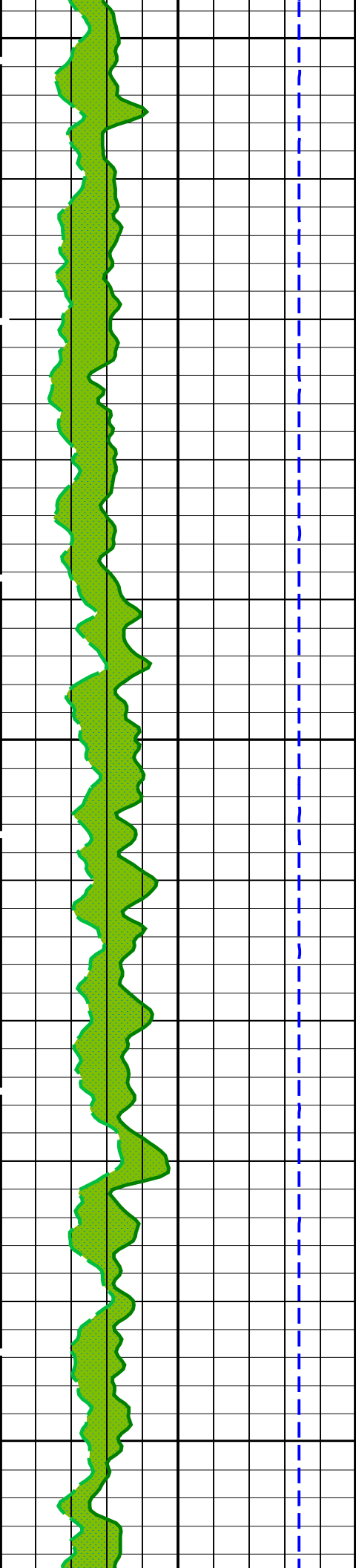








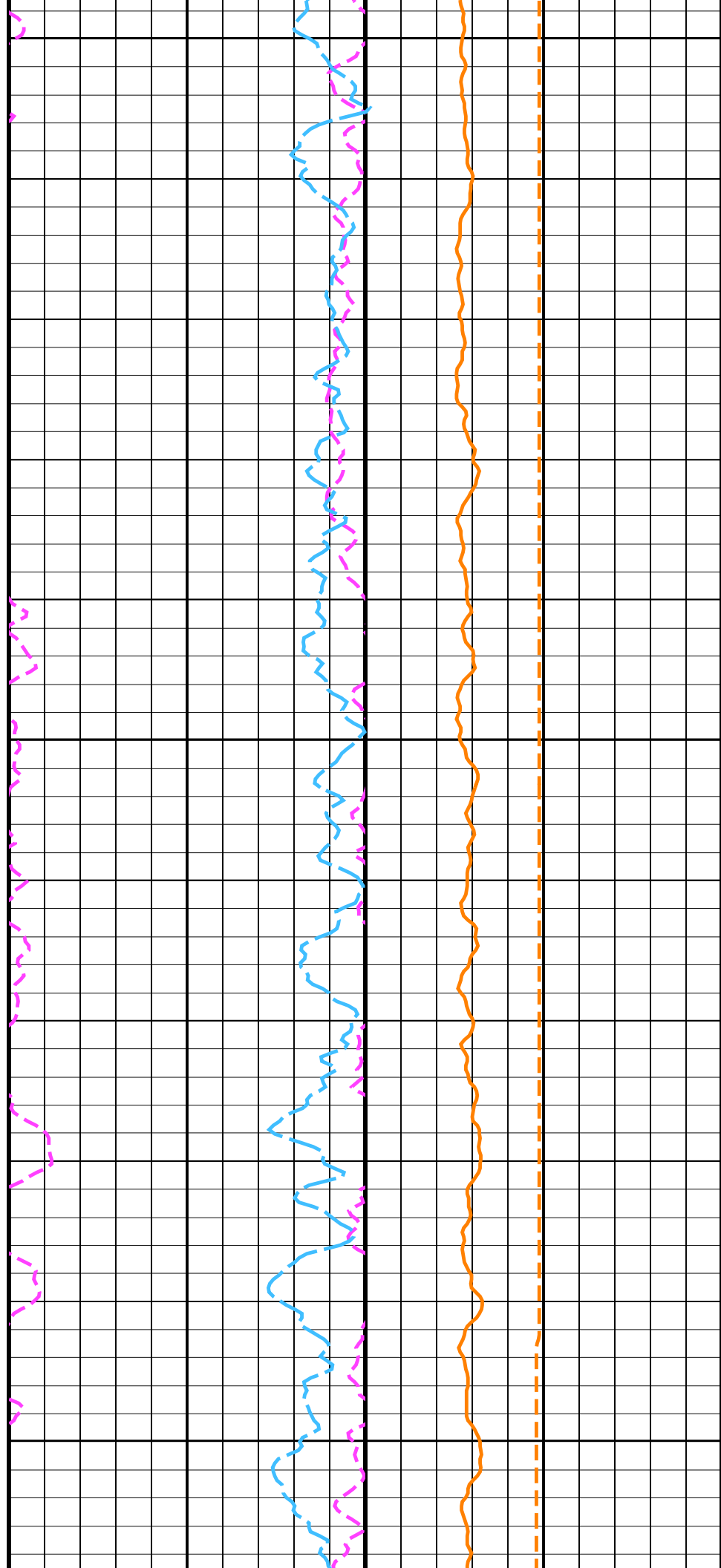




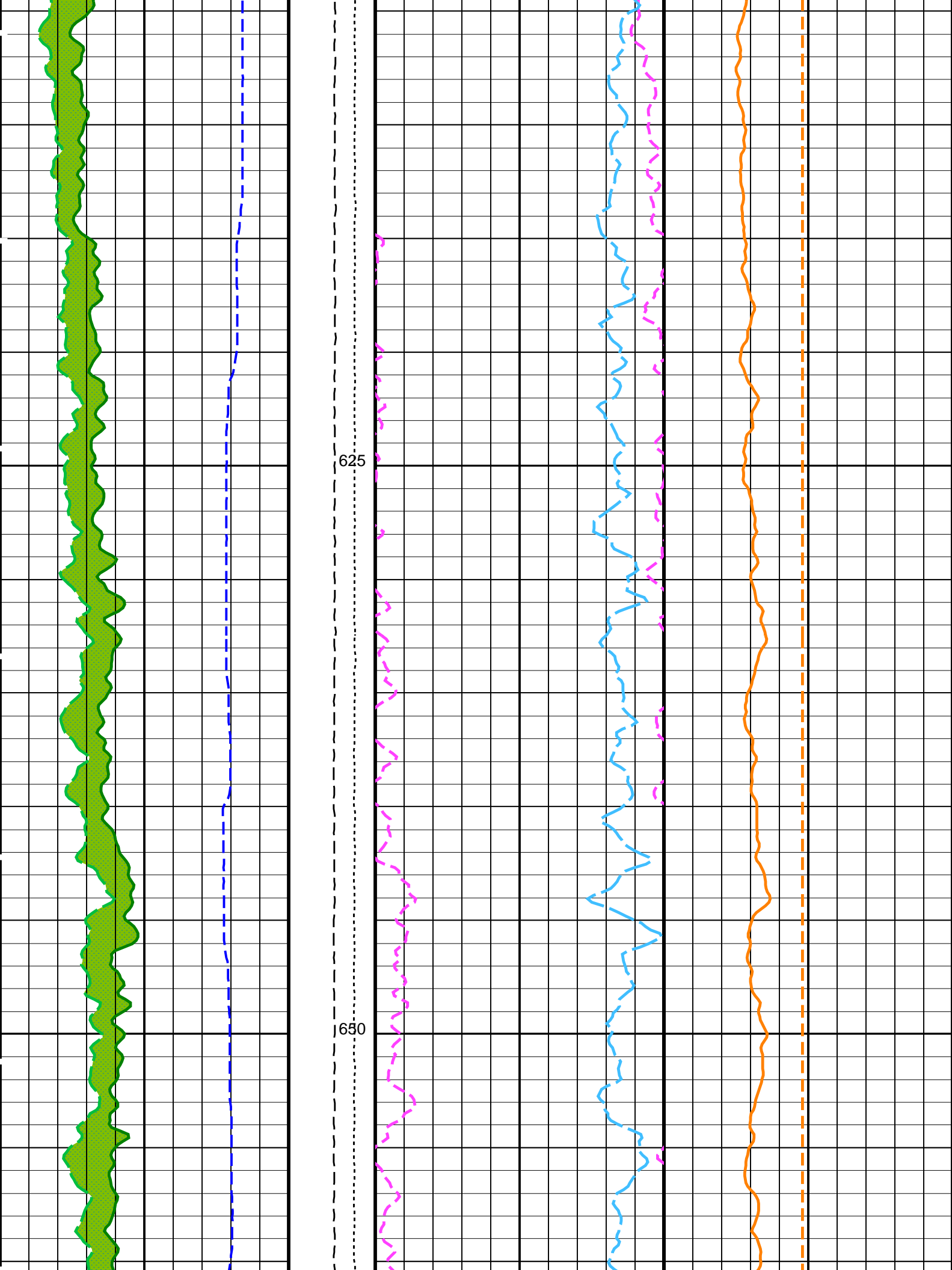
550

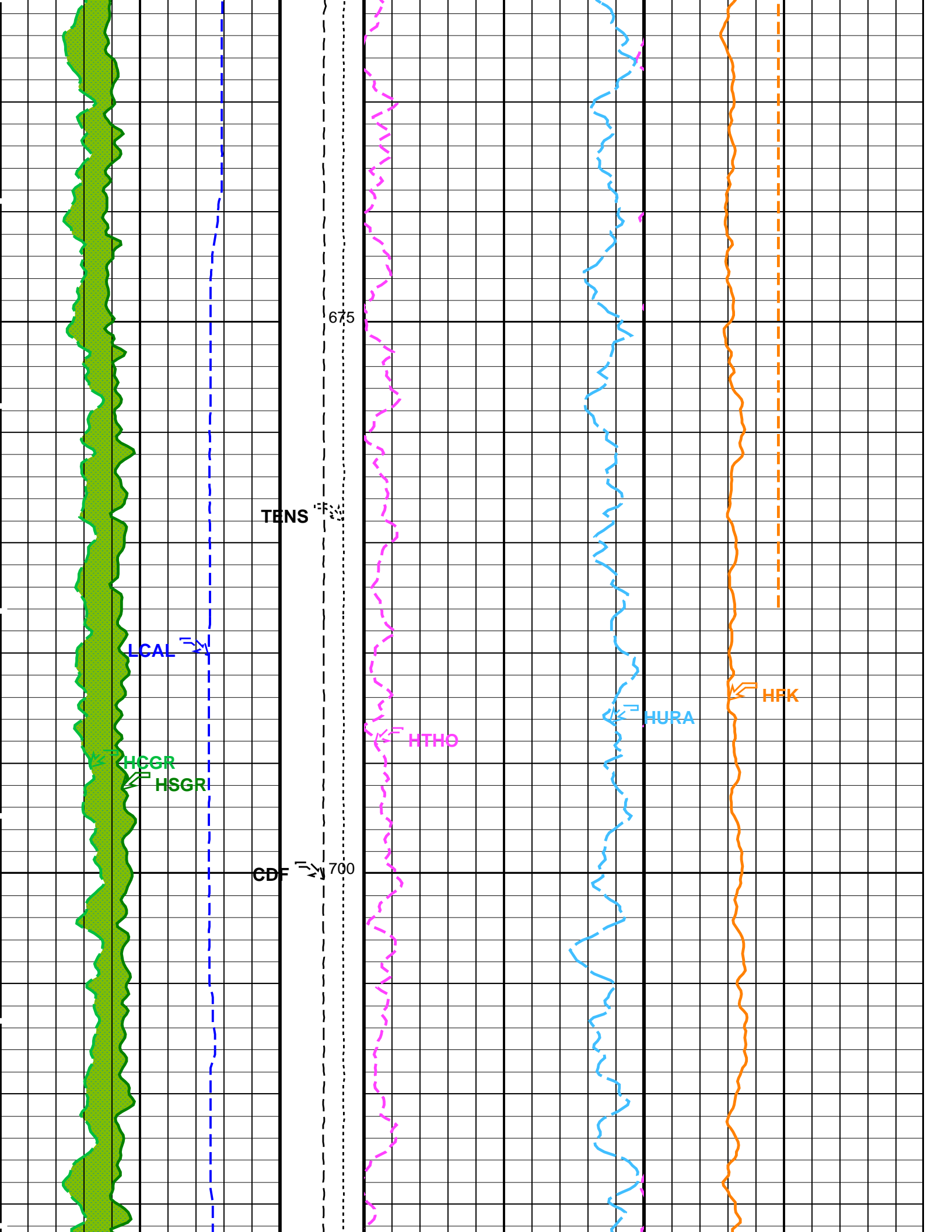
575

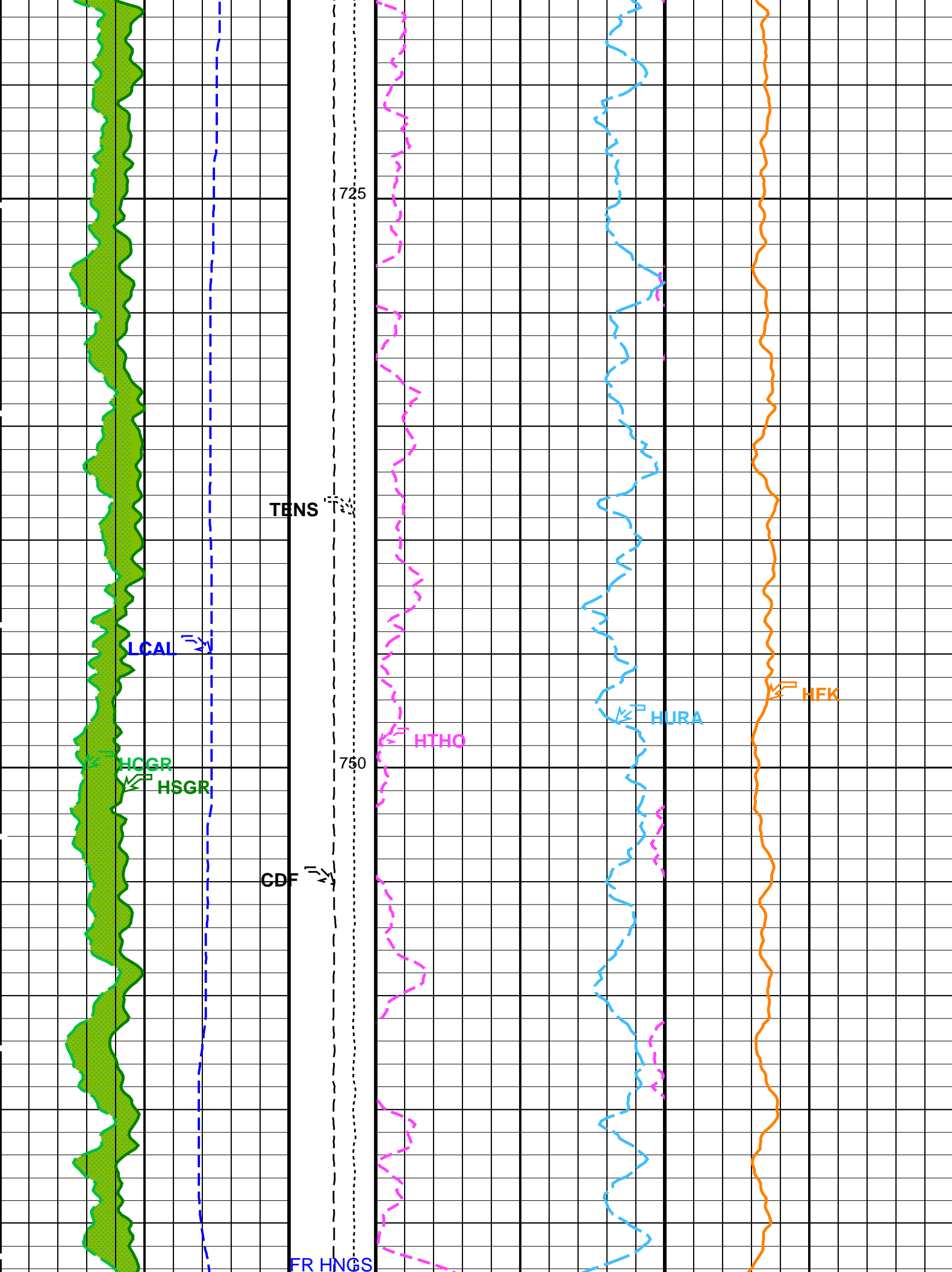
600

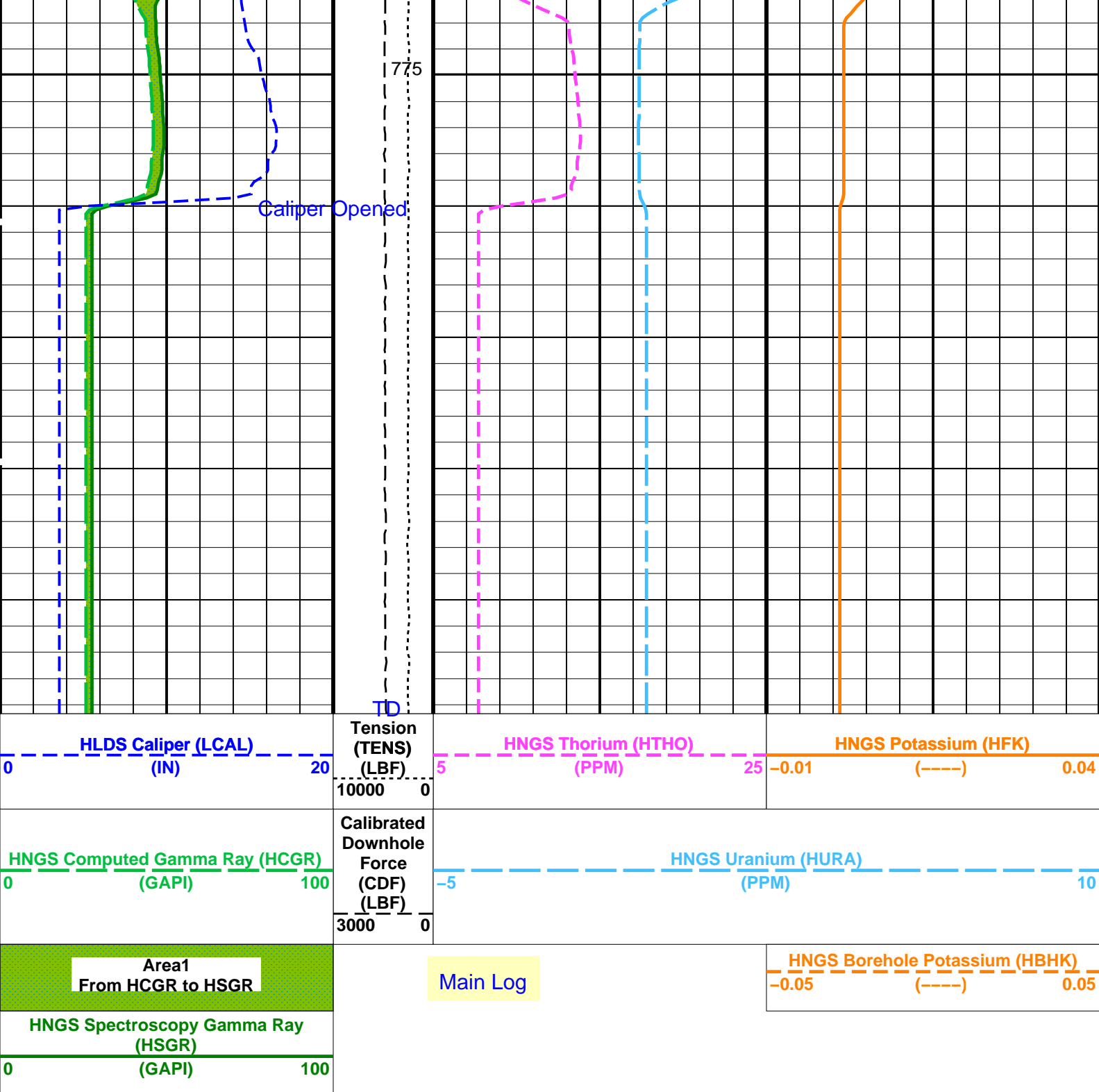












Time Mark Every 60 S

Parameters		
DLIS Name	Description	Value
BHS	HRLT-B: High Resolution Laterolog Array – B	
GCSE	Borehole Status	OPEN
	Generalized Caliper Selection	LCAL
	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	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H1P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Borehole Potassium Running Average	-0.00214312	
HABK	HNGS Alpha Filter Length	60	IN
HALF	HNGS Apply Borehole Potassium Correction	NONE	
HCRB	Mud Weighting Material	BARI	
HMWM	HNGS Processing Enable	YES	
HNPE	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S1BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Standard Gamma-Ray Correction Flag	YES	
SGRC	Tool Position	ECCE	
TPOS	HNGS Detector 1 Variable Barite Factor Running Average	1.09826	
VBA1	HNGS Detector 2 Variable Barite Factor Running Average	0.982945	
VBA2	EDTC-B: Enhanced DTS Cartridge		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
	System and Miscellaneous		
BS	Bit Size	11.438	IN
DO	Depth Offset for Playback	-97.0	M
PP	Playback Processing	NORMAL	

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 10-Sep-2015 12:38

## OP System Version: 19C0-187

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

## Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_013LUP	FN:22	PRODUCER	03-Sep-2015 17:22	896.1 M	91.6 M
---------	--------------------------	-------	----------	-------------------	---------	--------

## Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_037PUP	FN:56	PRODUCER	10-Sep-2015 12:38		
---------	--------------------------	-------	----------	-------------------	--	--

Company: International Ocean Discovery Program Well: Expedition 356, Site U1462 A

## Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_013LUP	FN:22	PRODUCER	03-Sep-2015 17:22	896.1 M	91.6 M
---------	--------------------------	-------	----------	-------------------	---------	--------

## Output DLIS Files

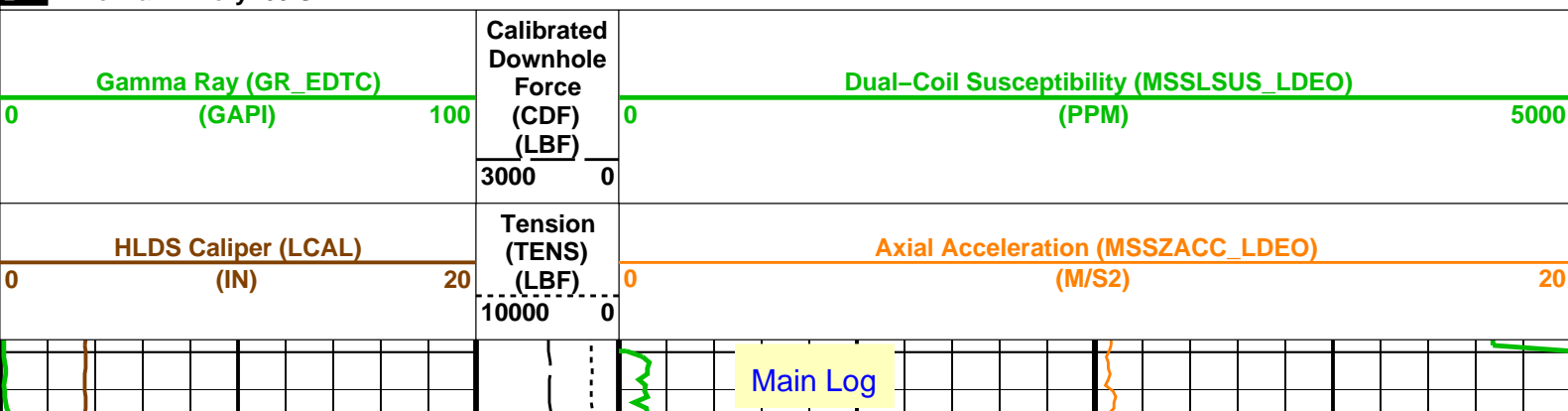
DEFAULT	MSS_LDEO_HRLA_LDL_037PUP	FN:56	PRODUCER	10-Sep-2015 12:38	799.3 M	-5.3 M
---------	--------------------------	-------	----------	-------------------	---------	--------

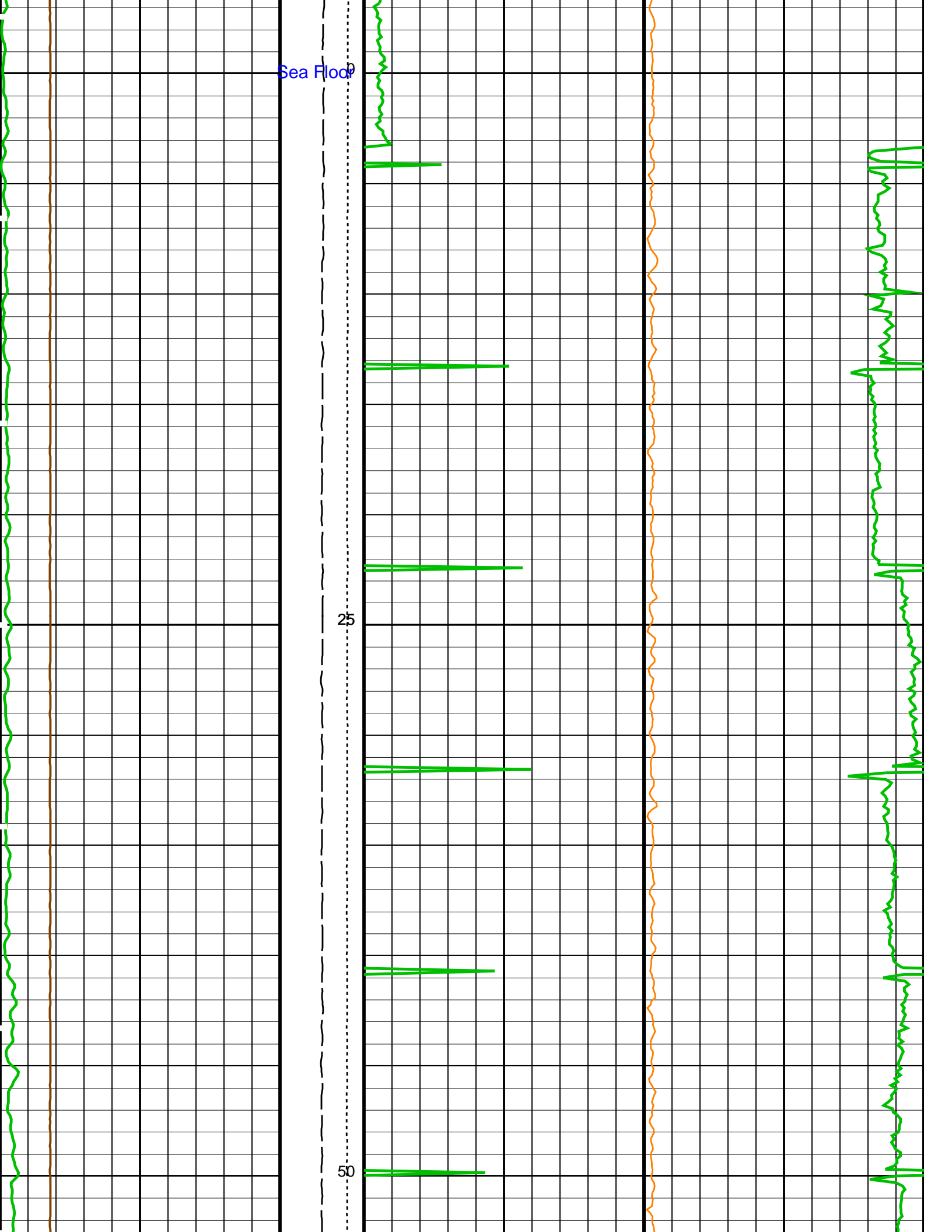
## OP System Version: 19C0-187

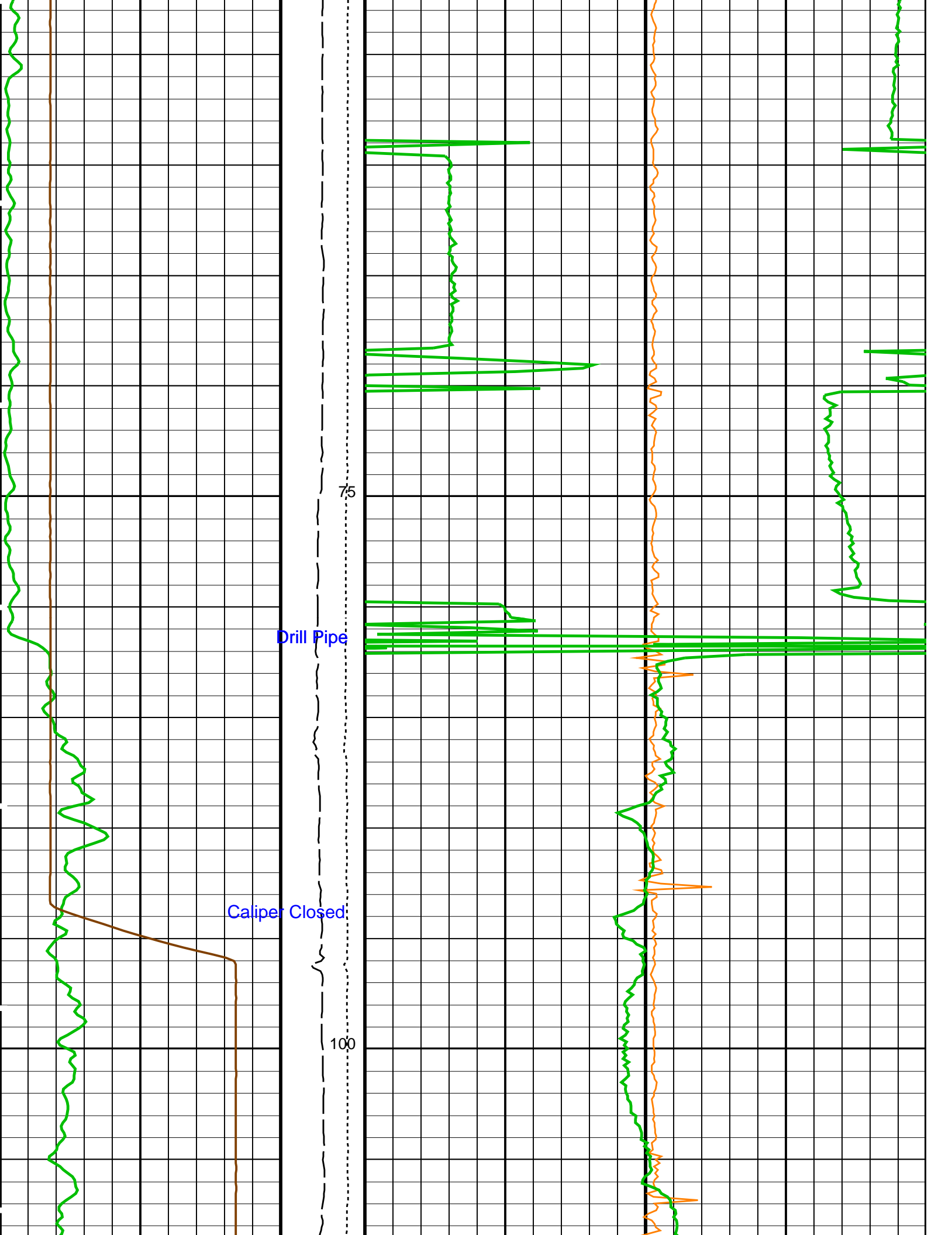
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
HNGC-B	19C0-187	HNGS-BA	19C0-187
EDTC-B	SKK-5169-EDTCB		

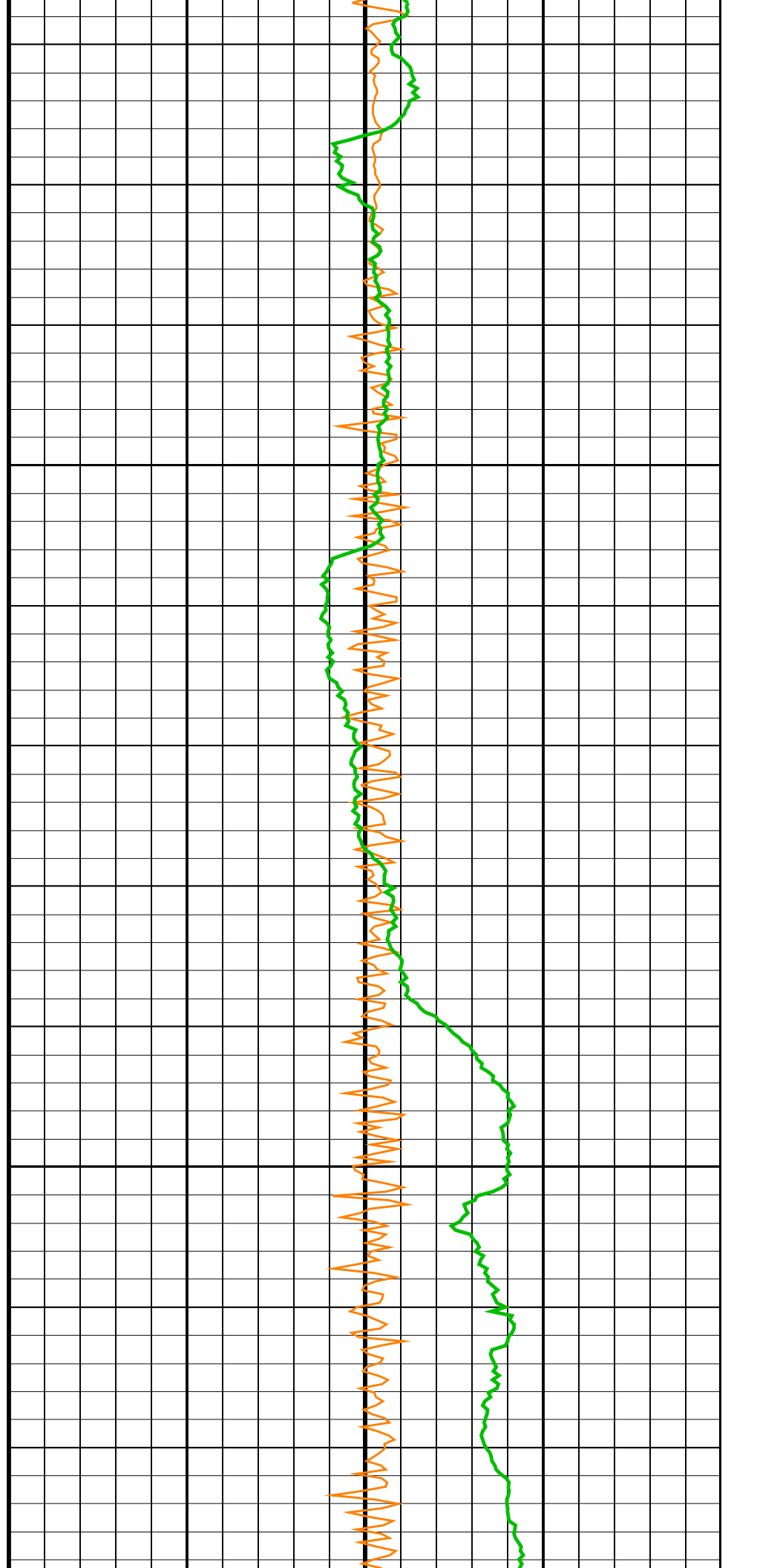
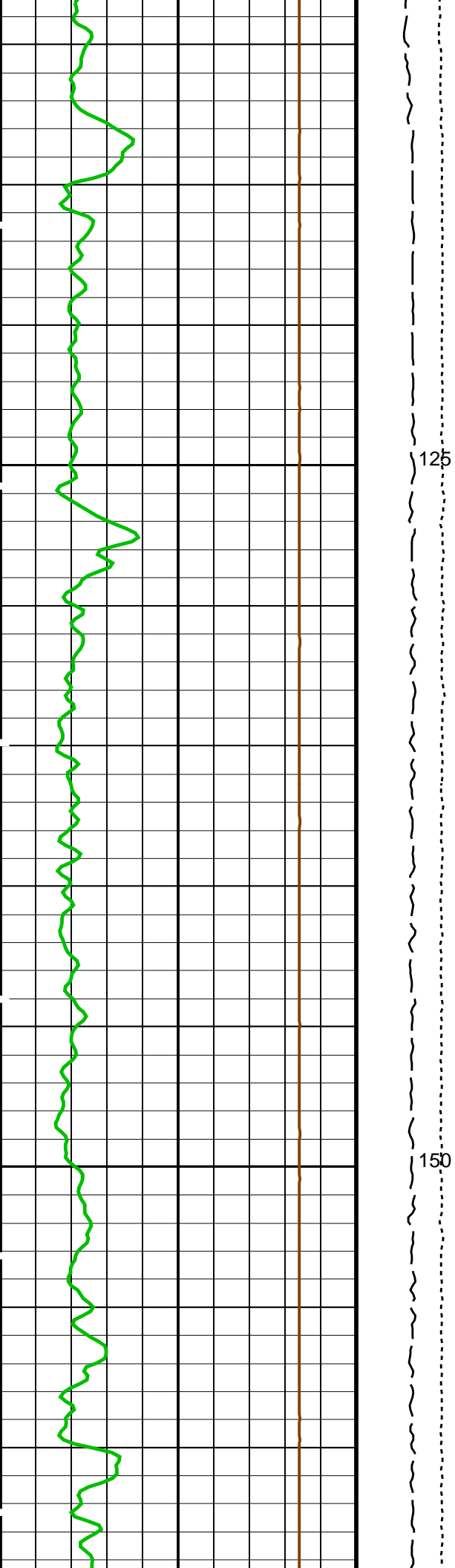
## PIP SUMMARY

Time Mark Every 60 S

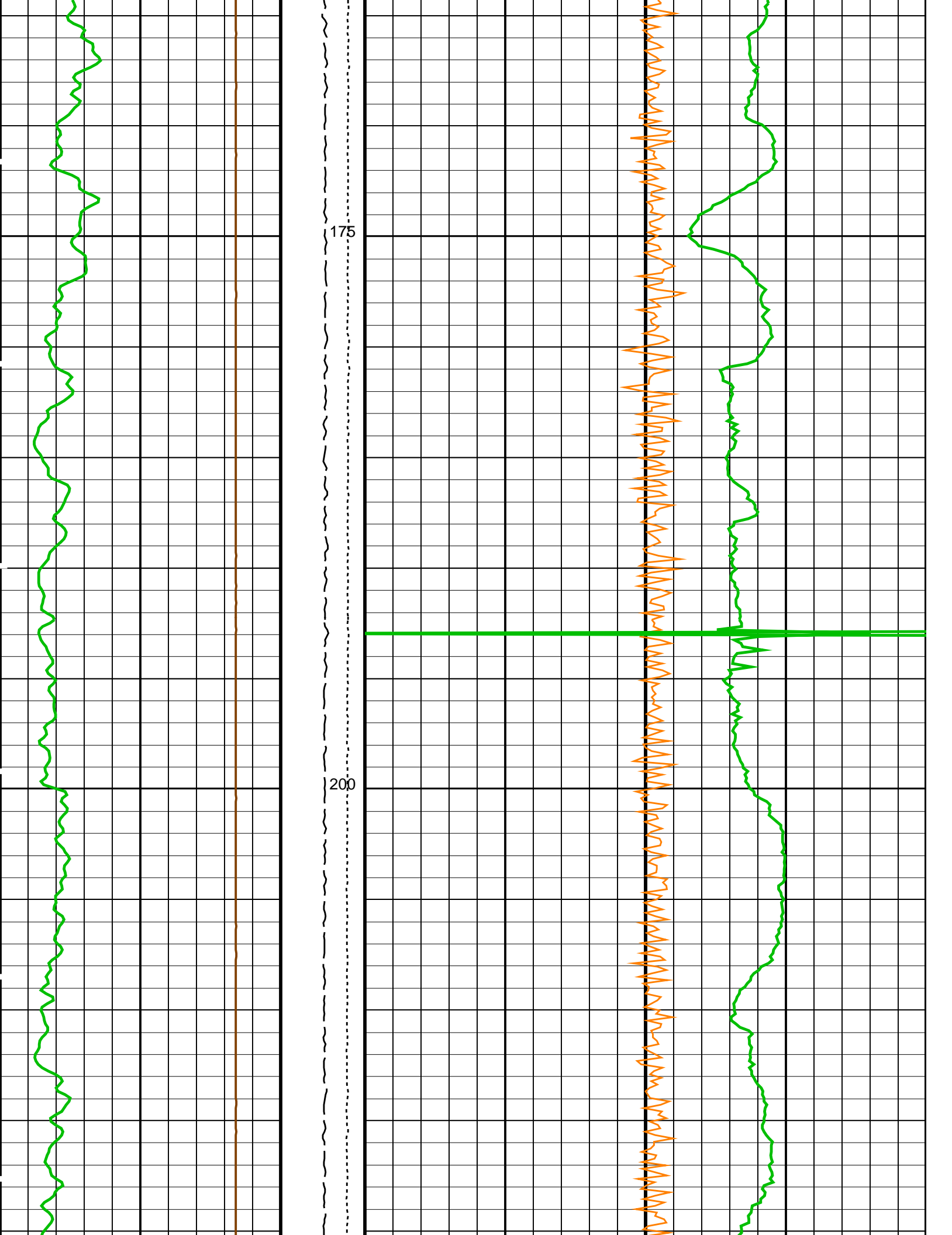


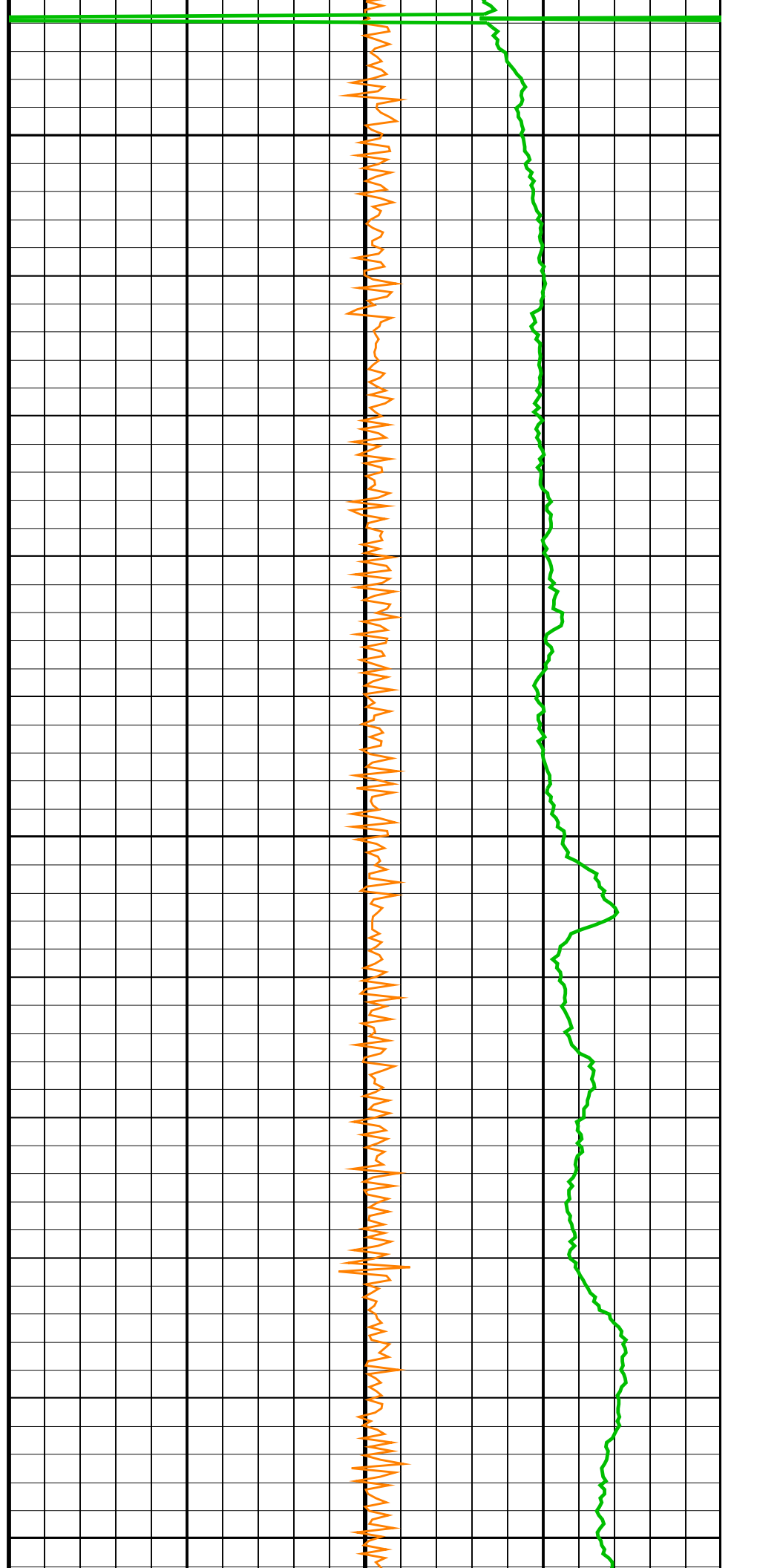
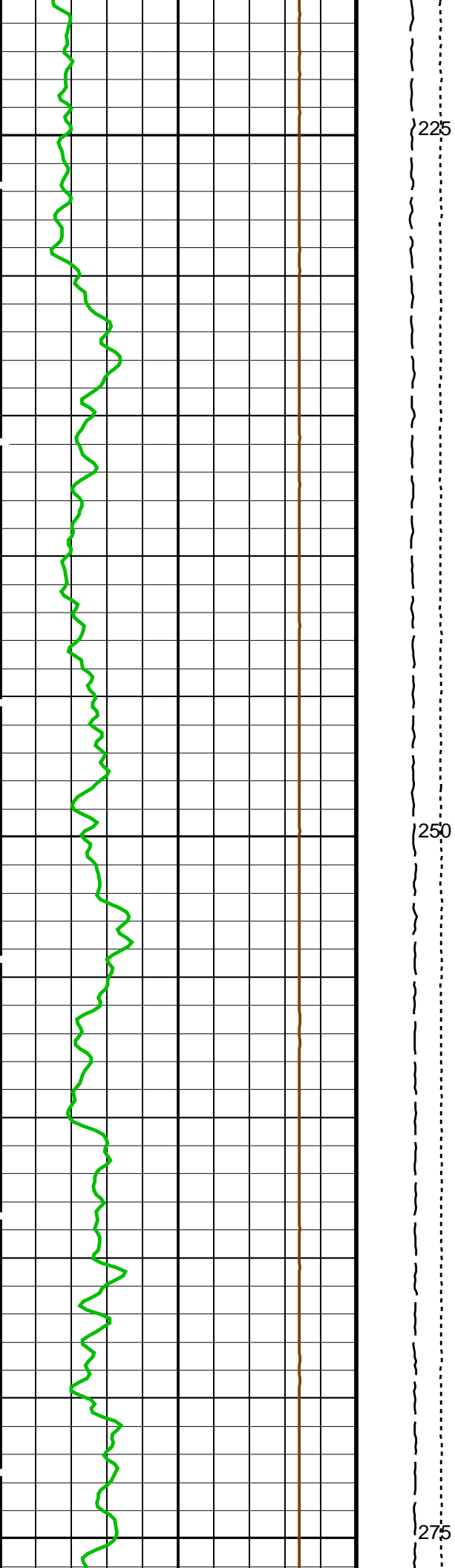


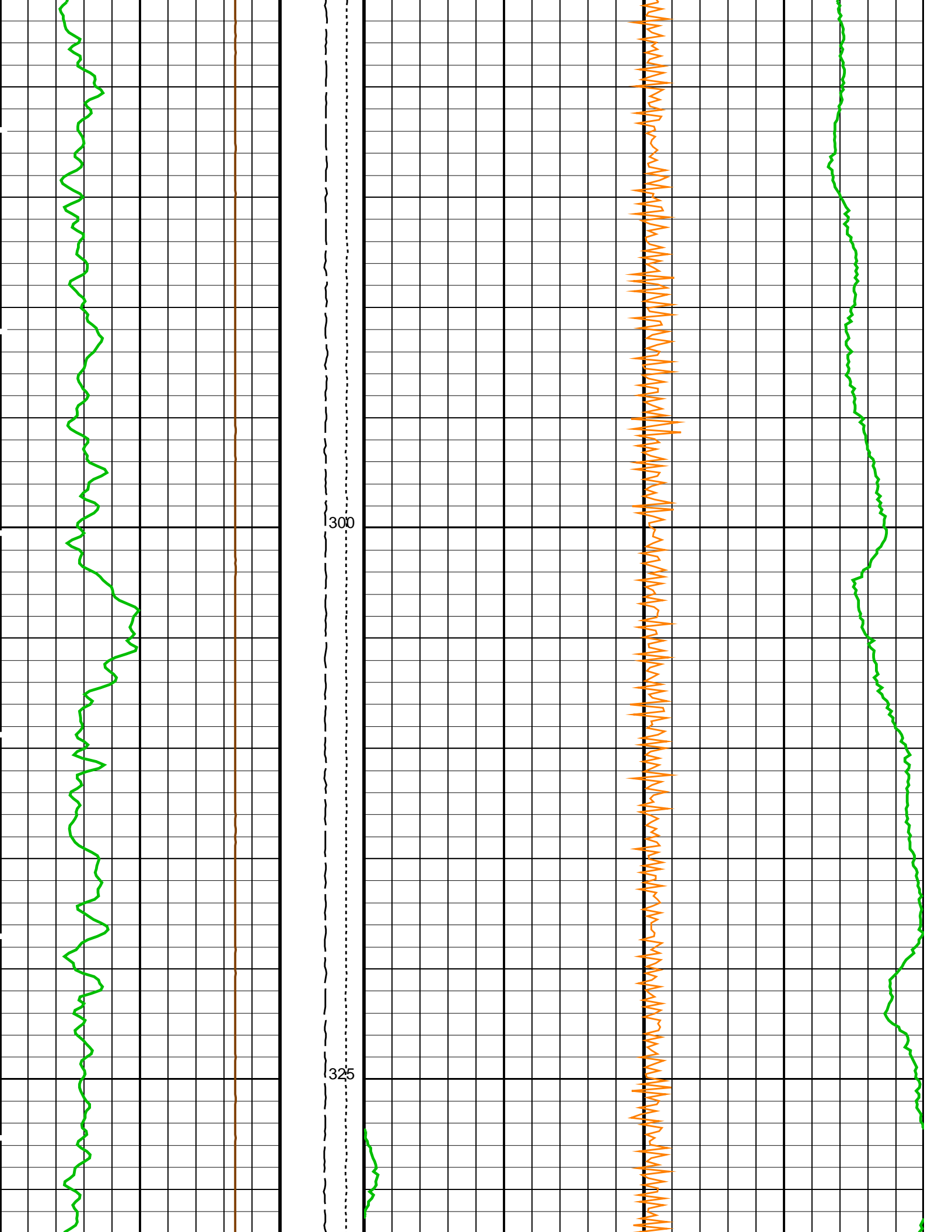


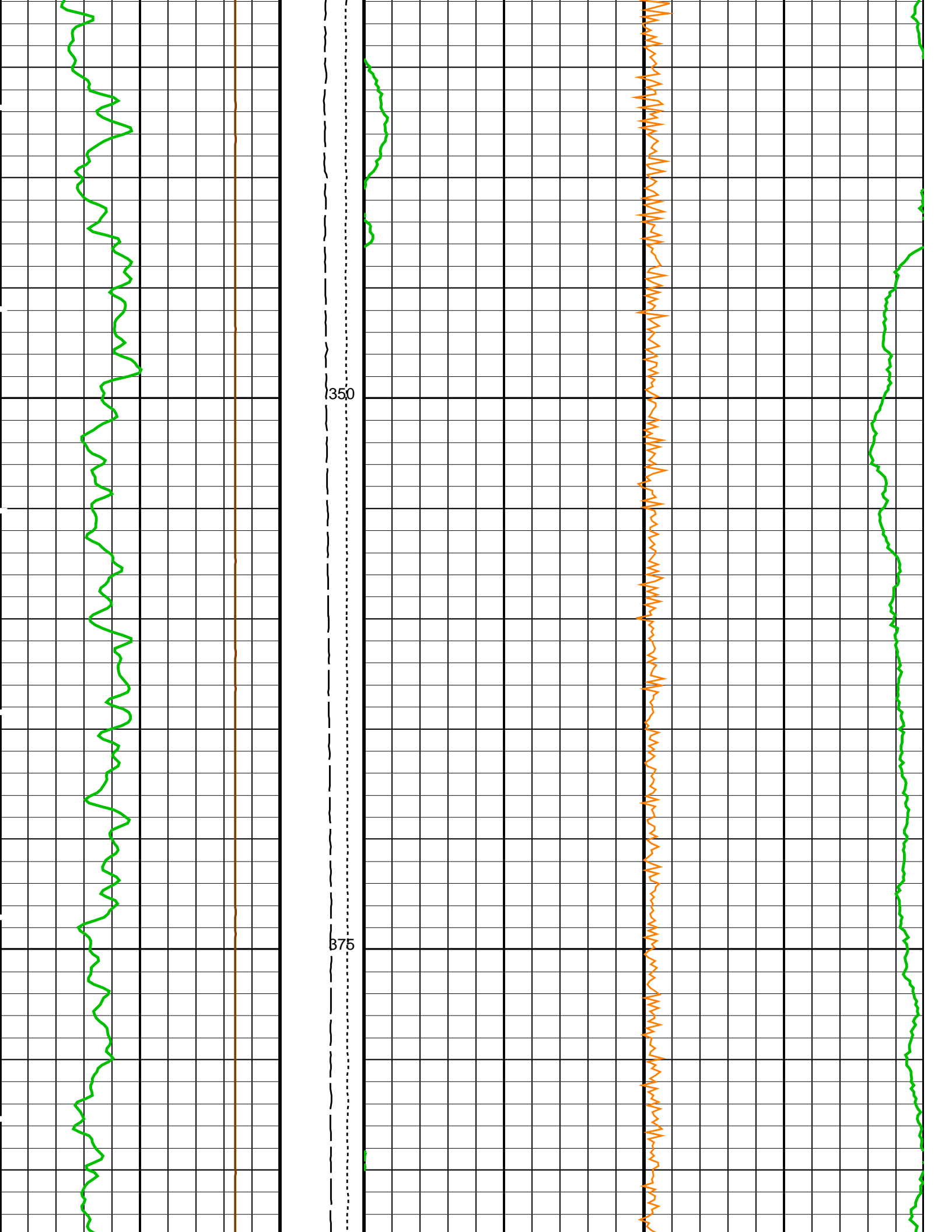


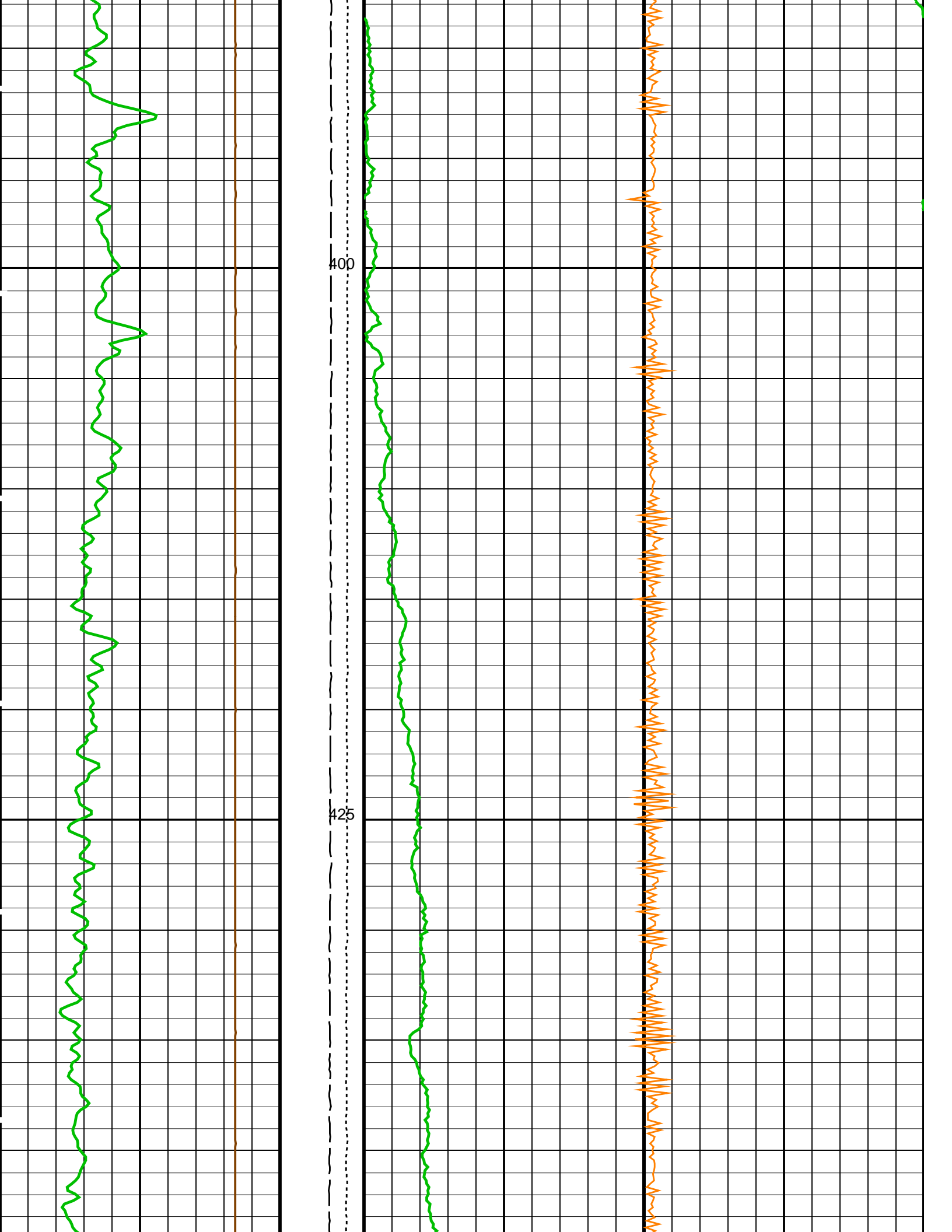


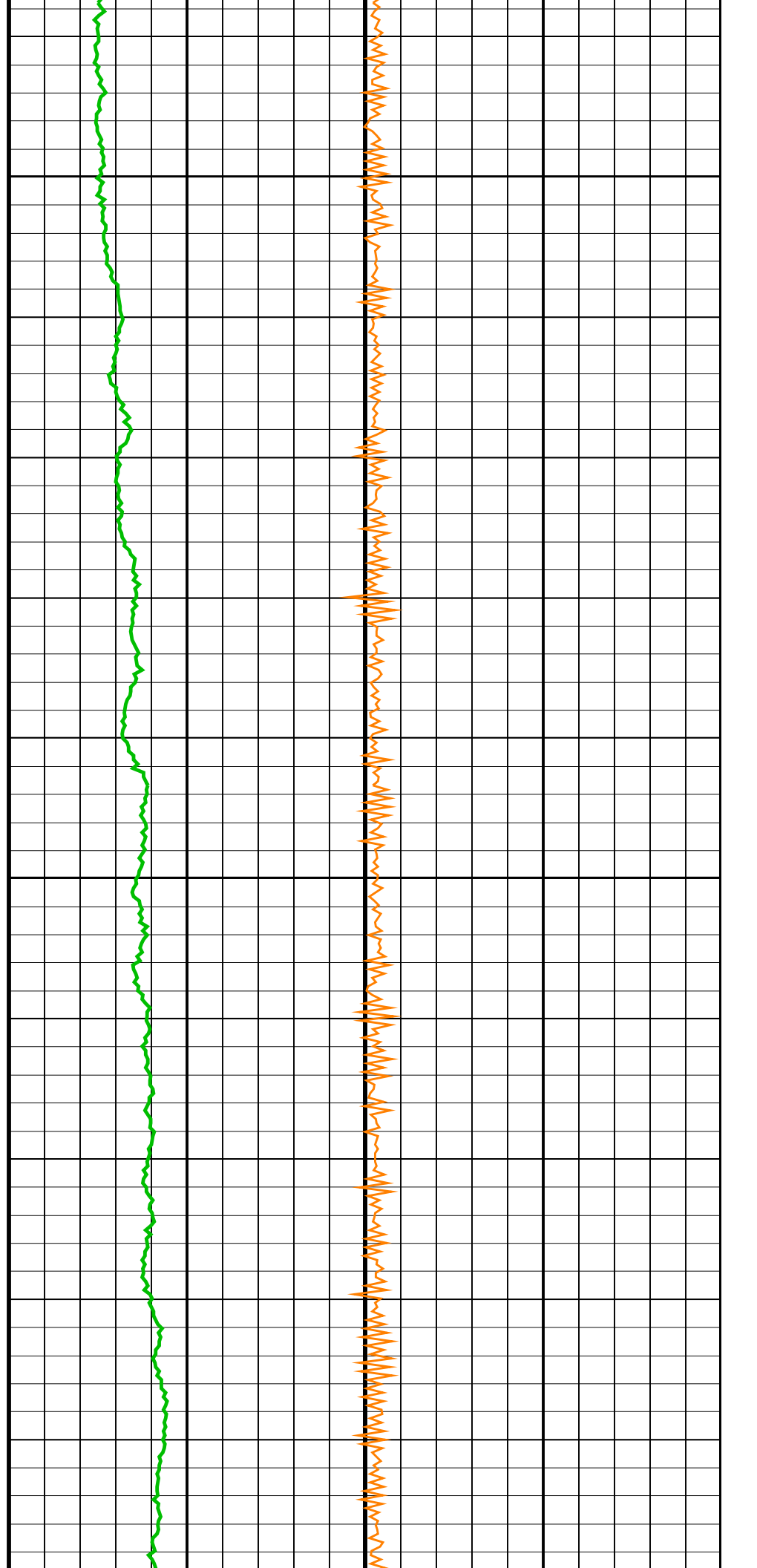
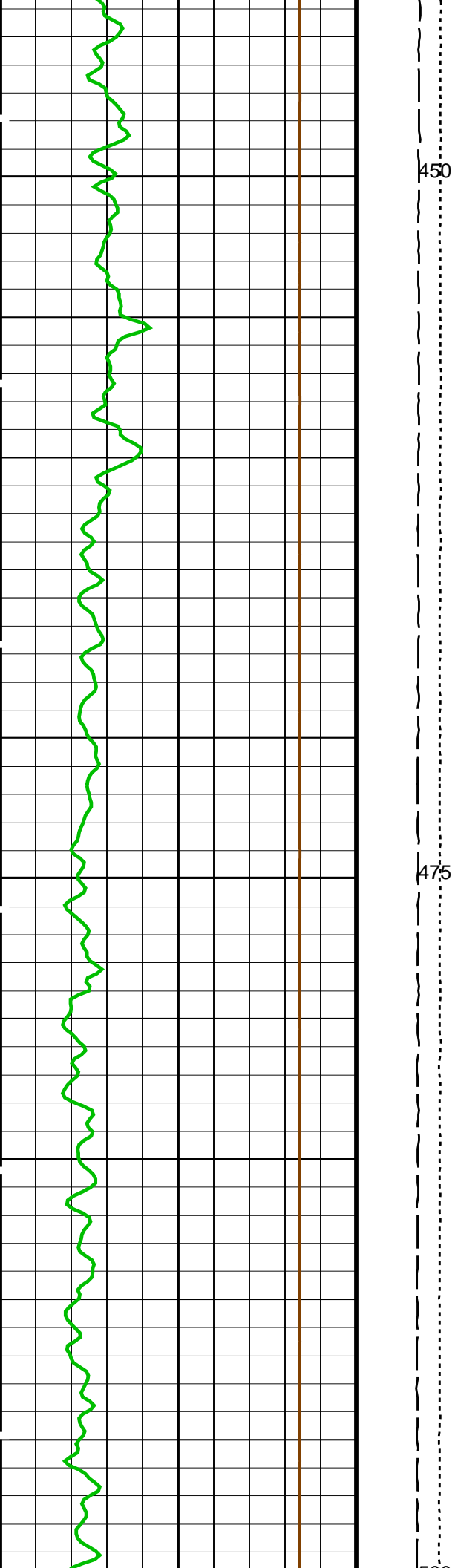


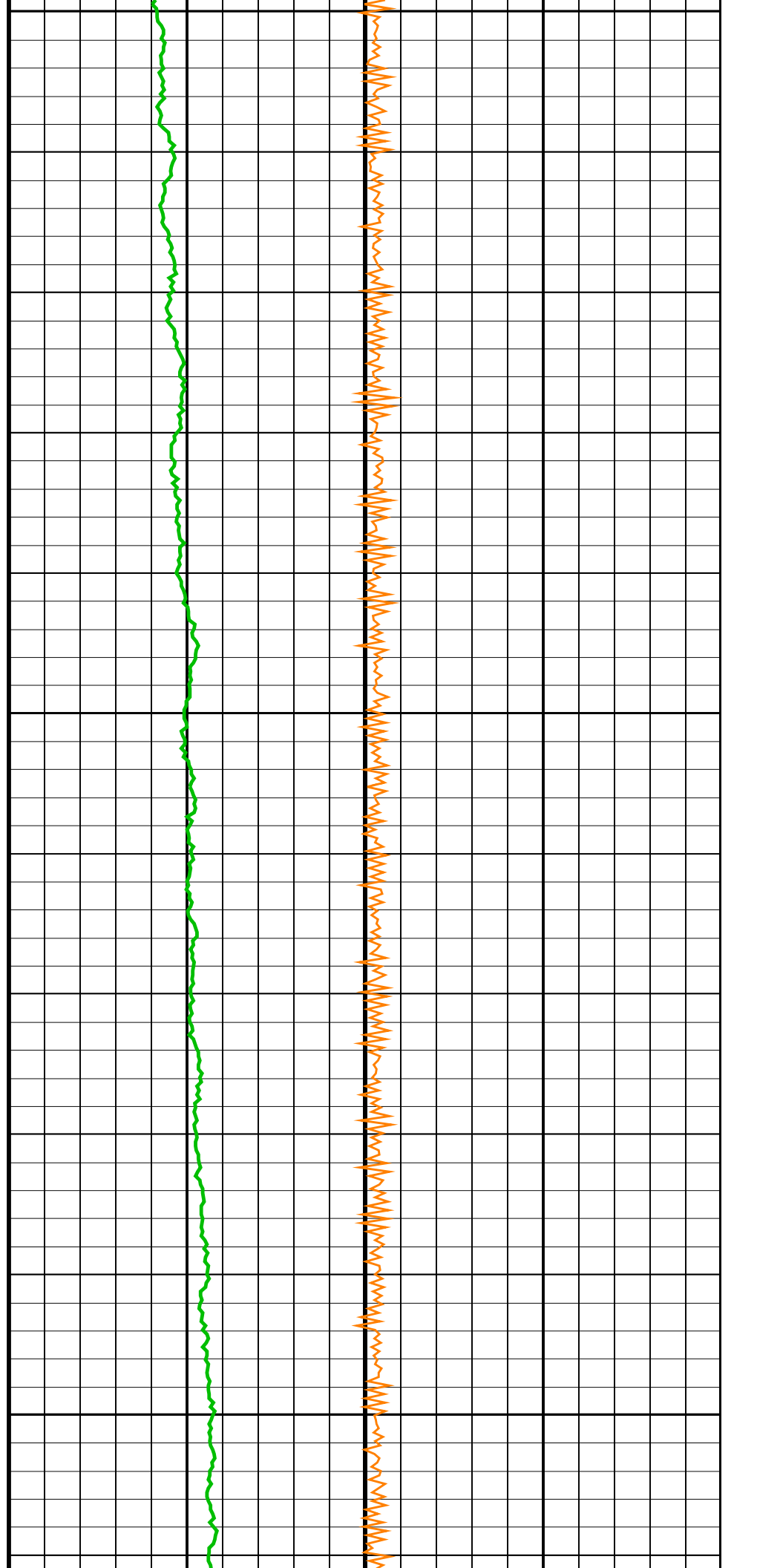
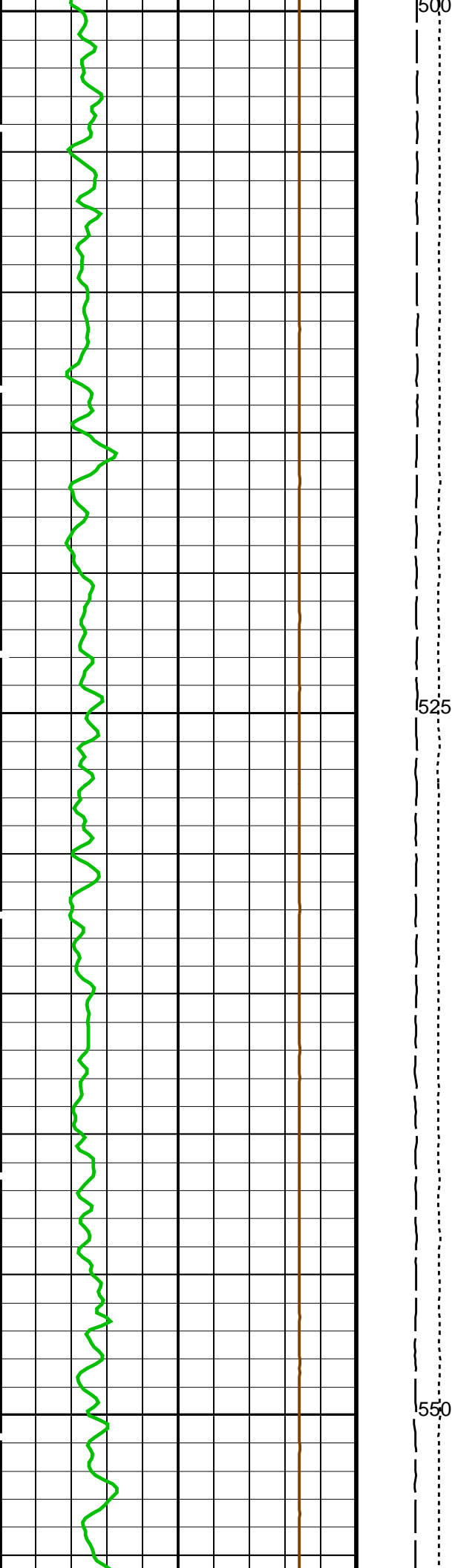


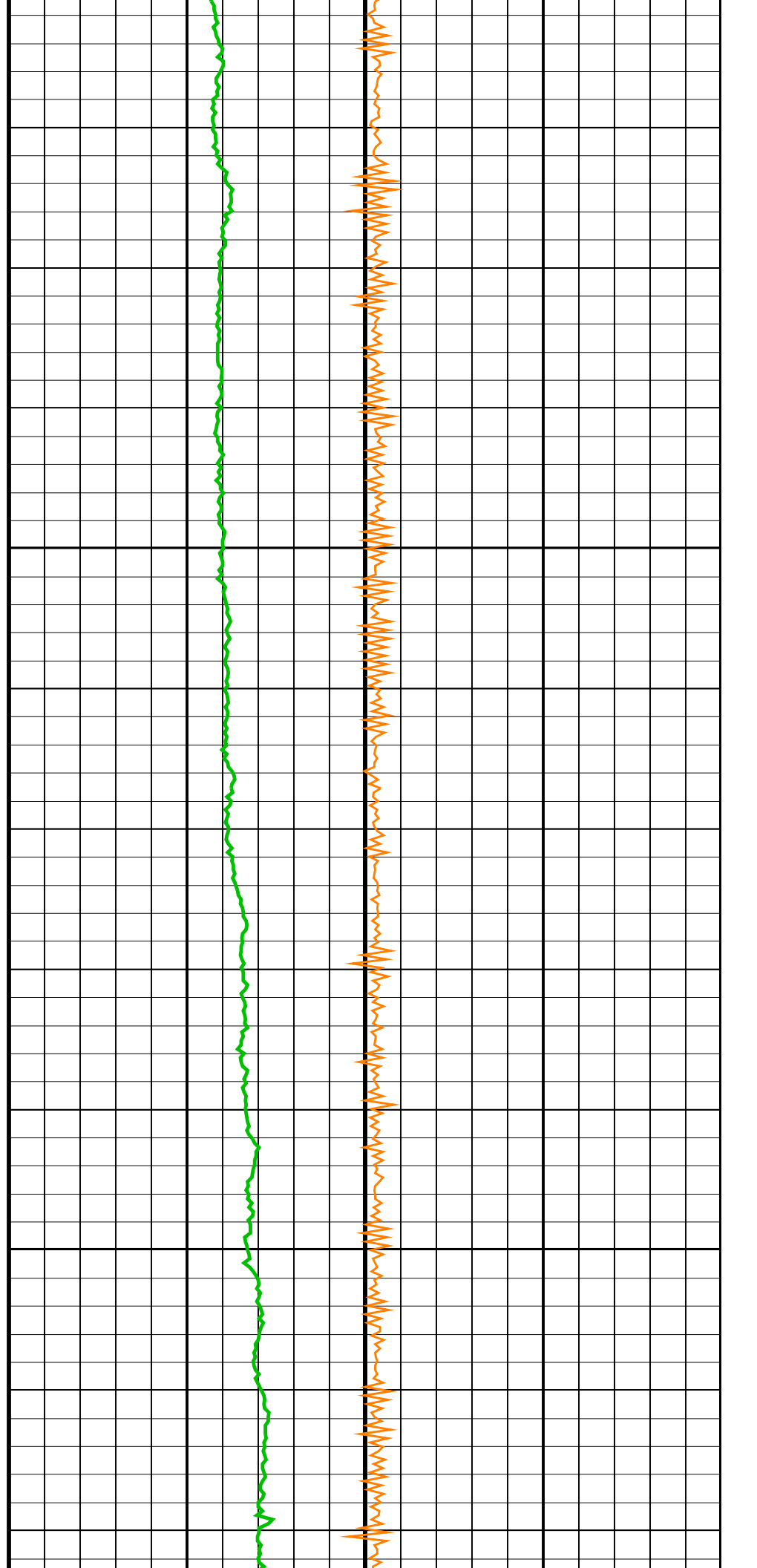
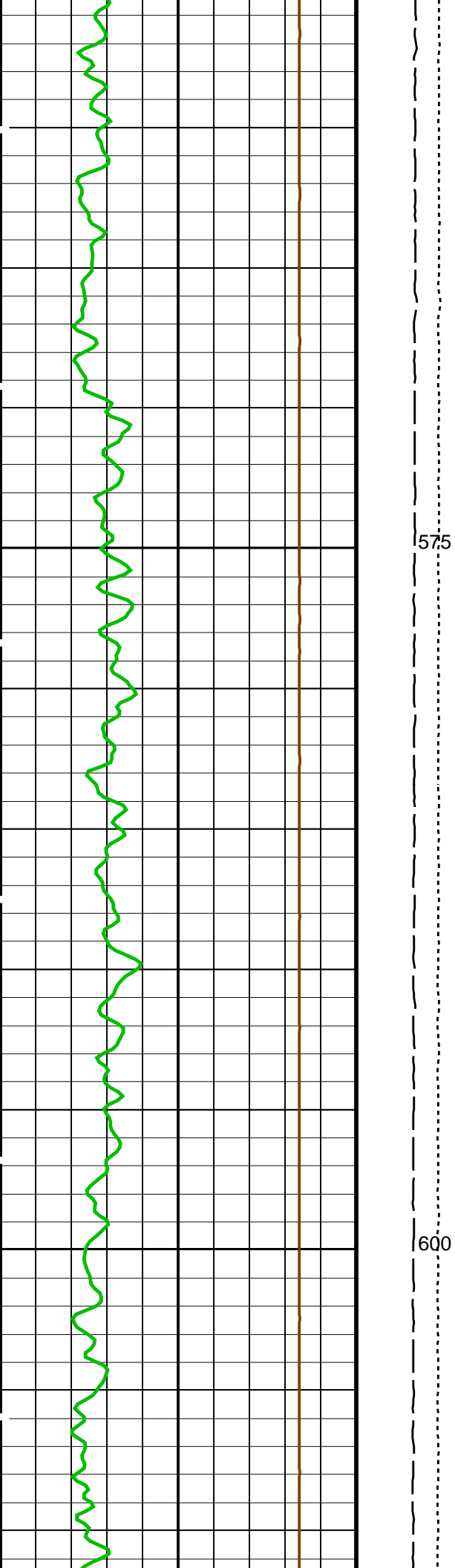




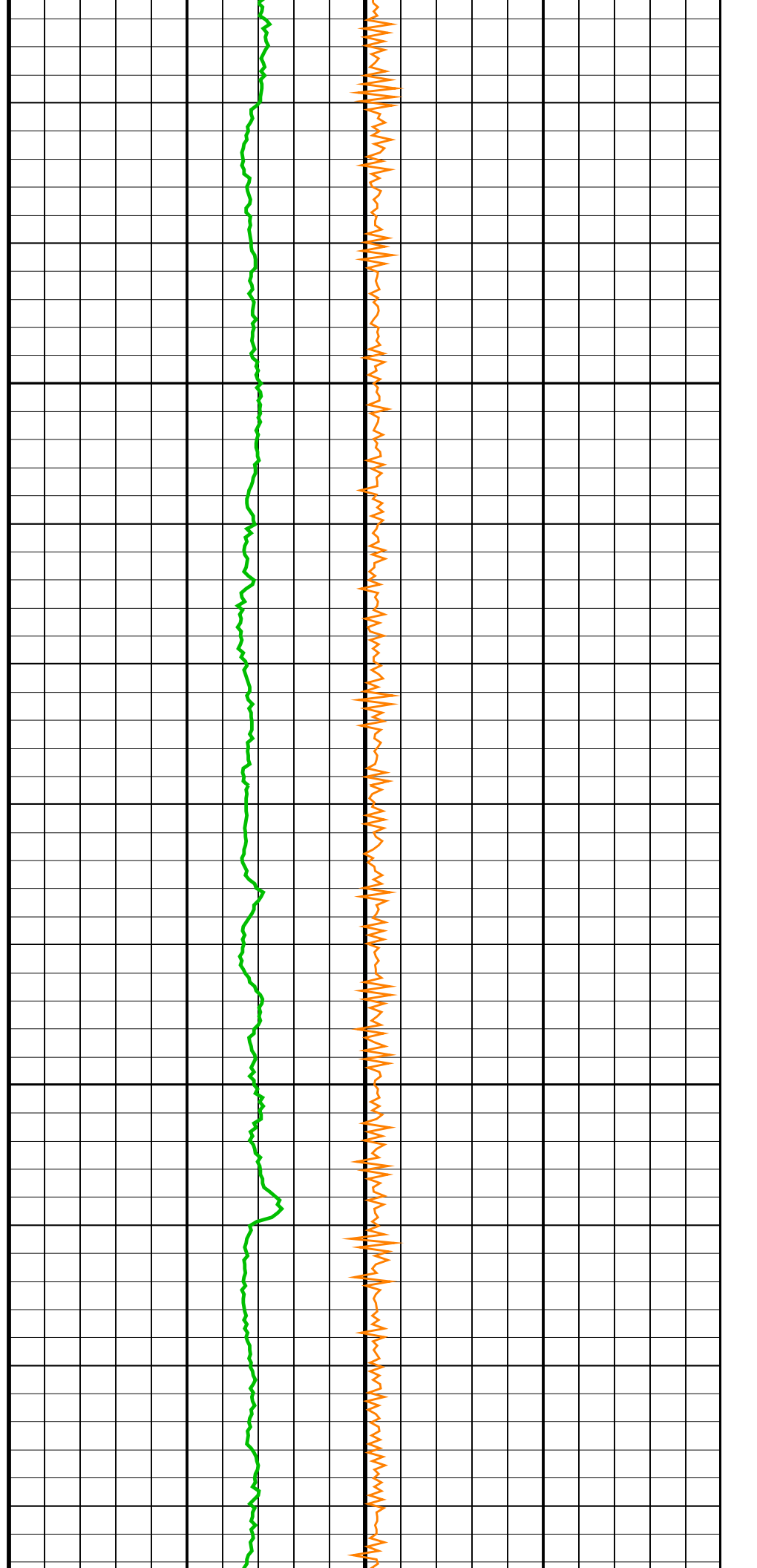
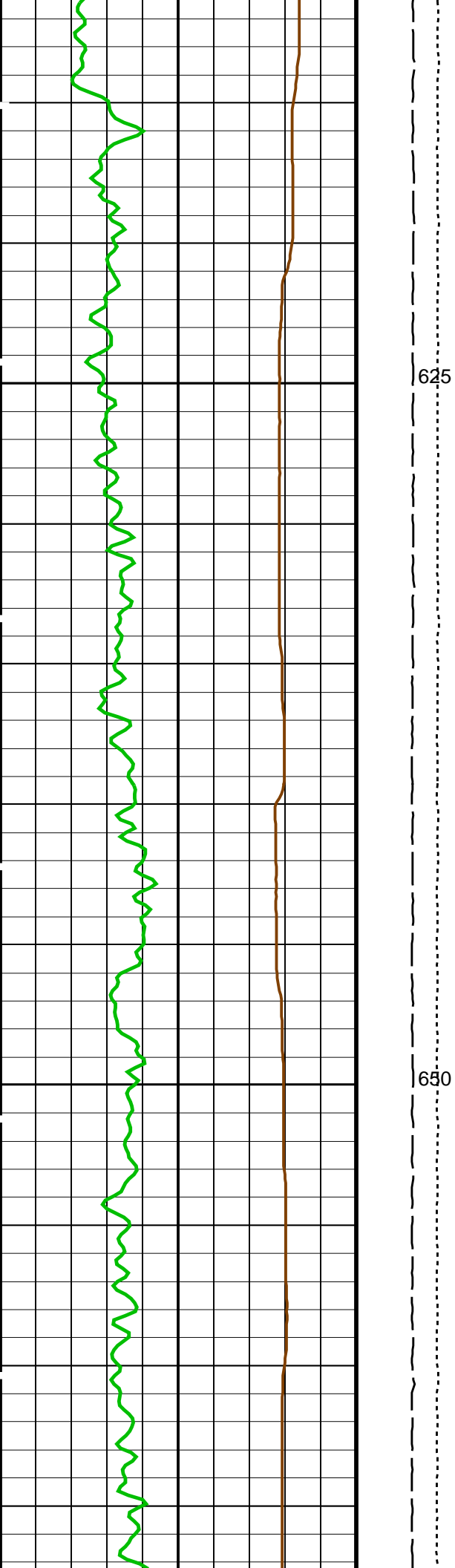


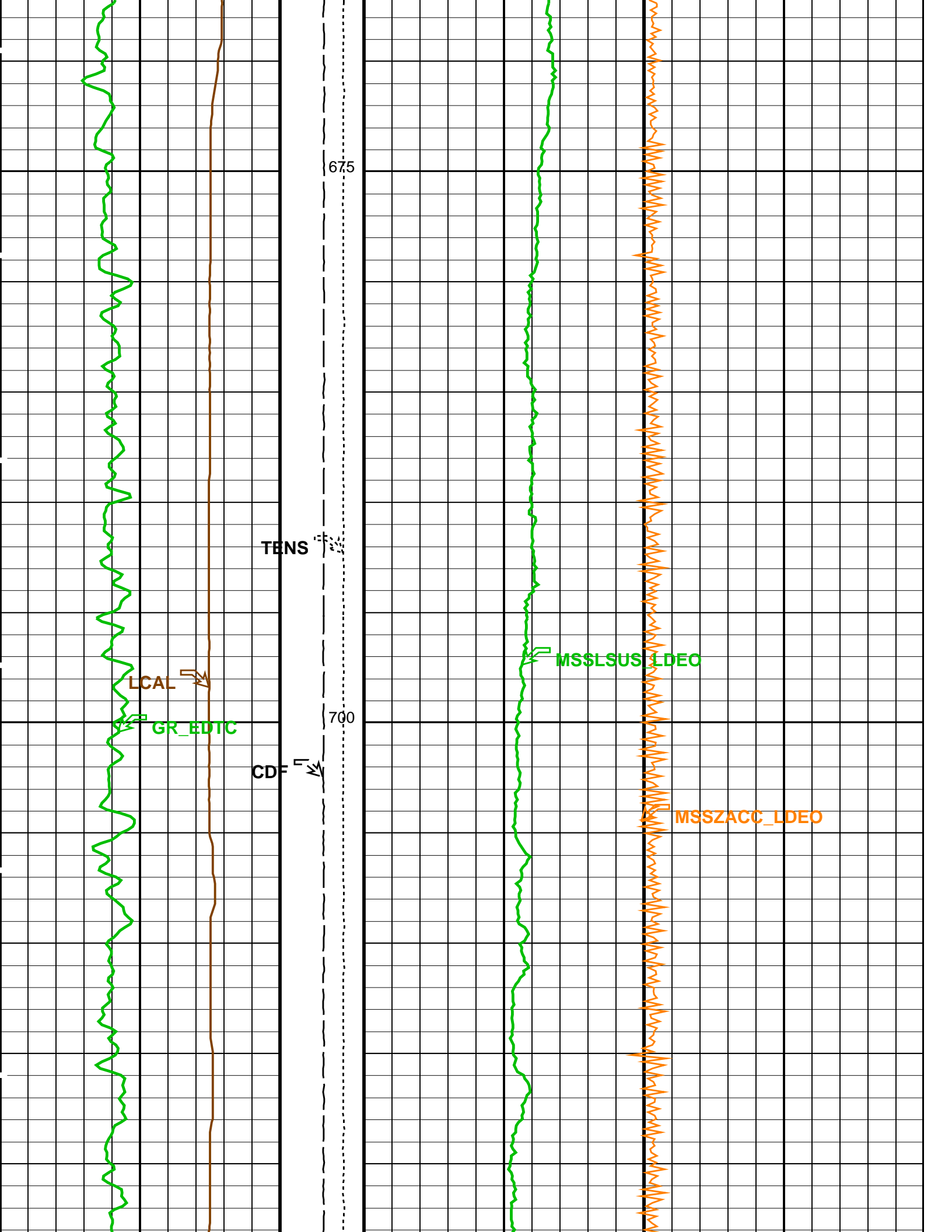


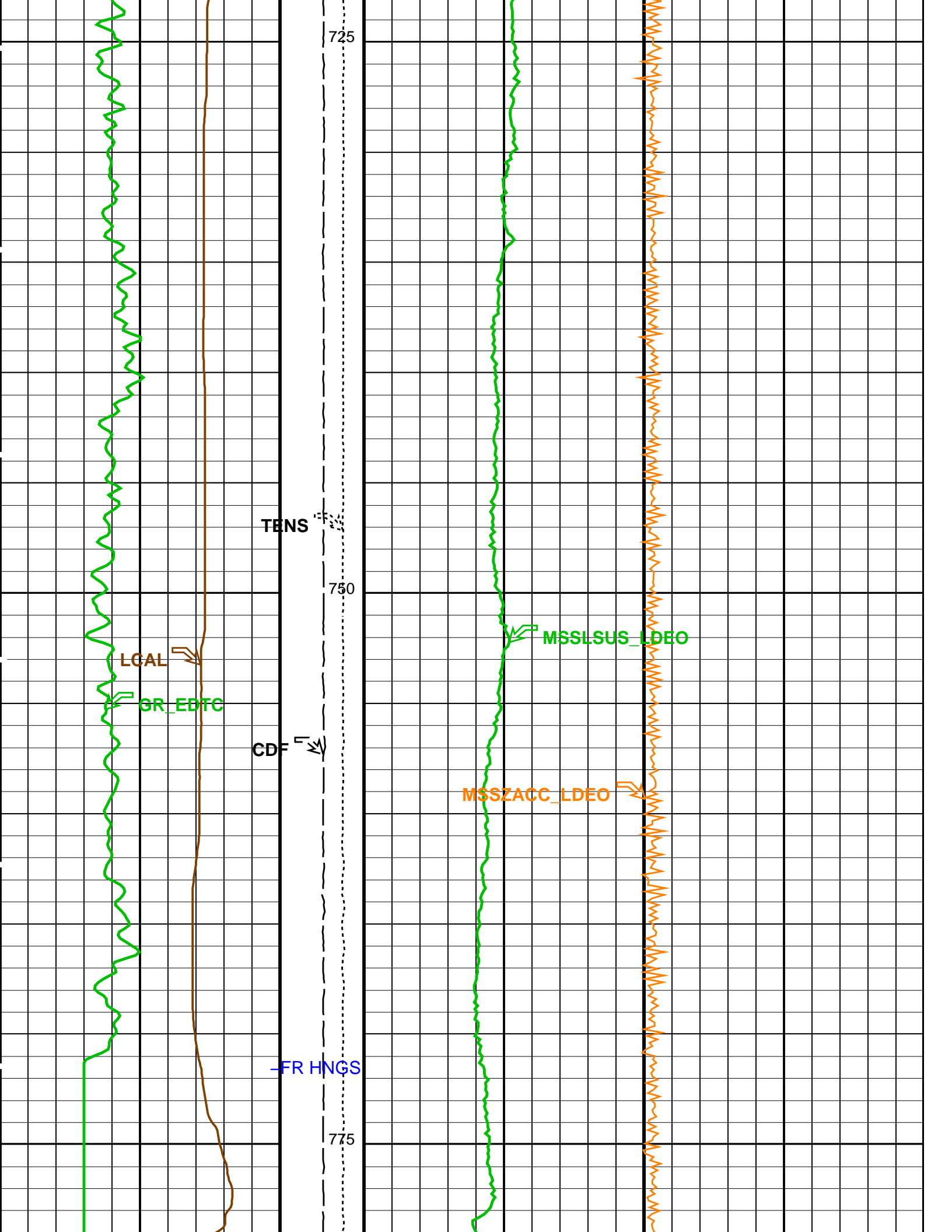


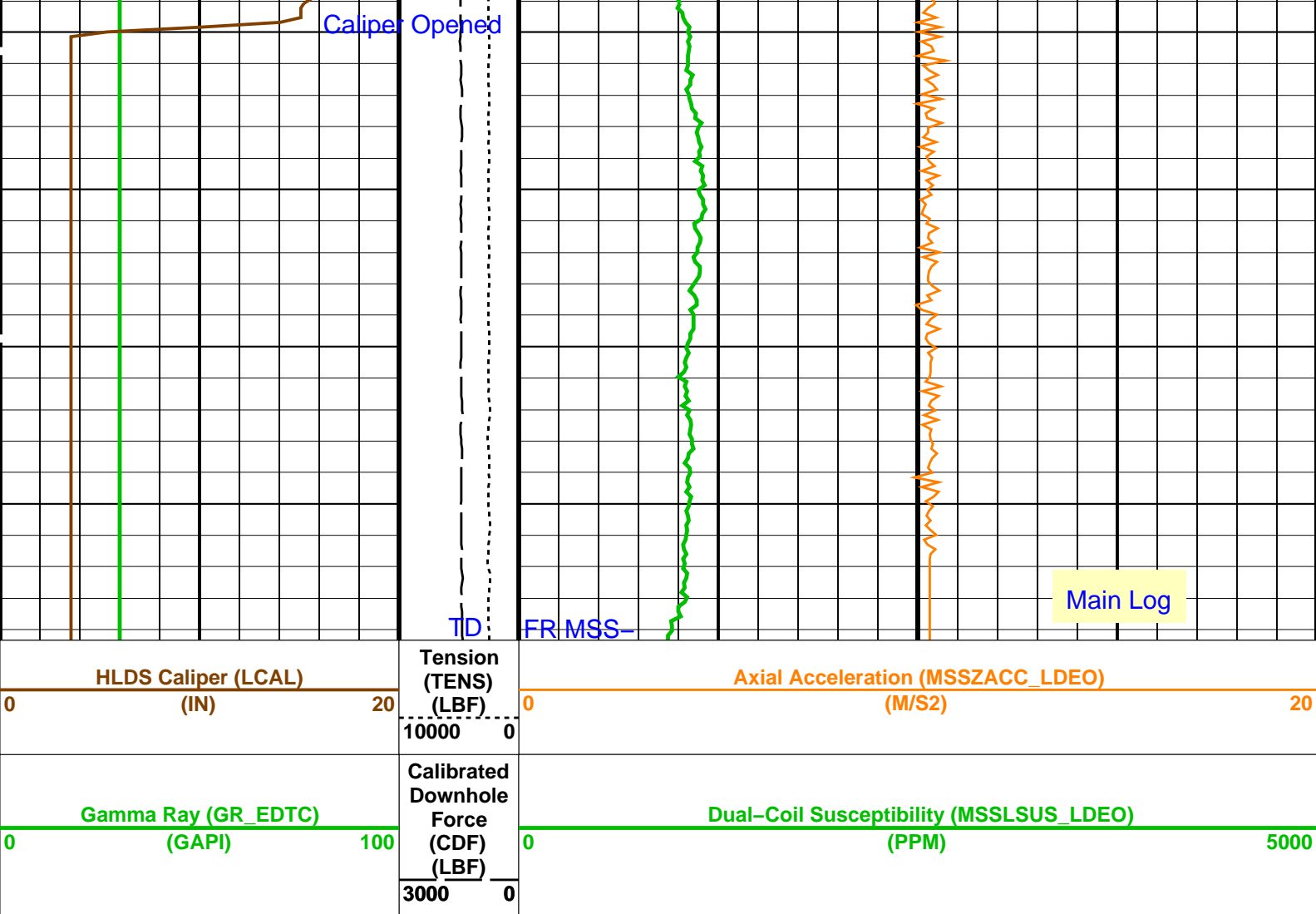












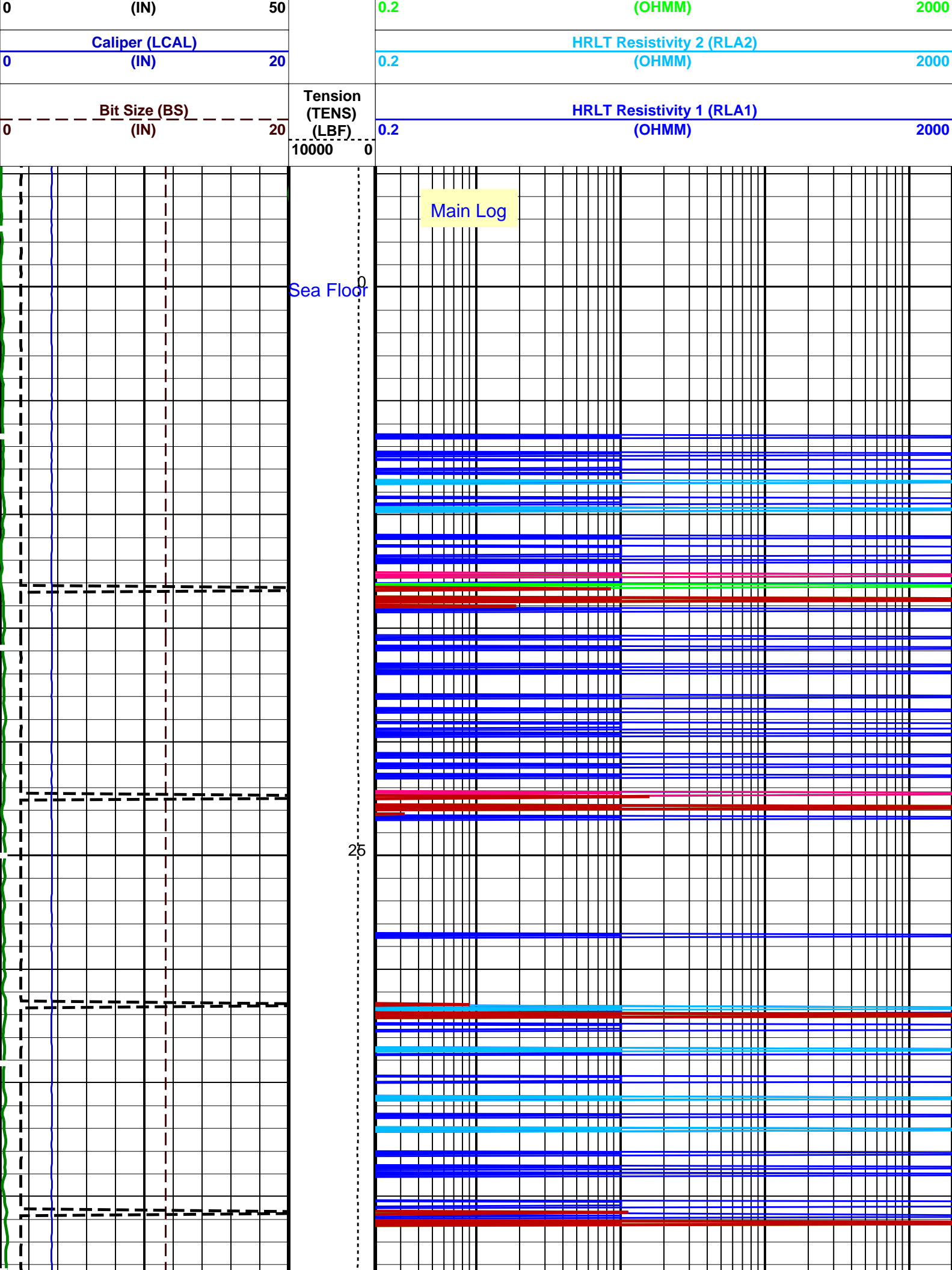
PIP SUMMARY

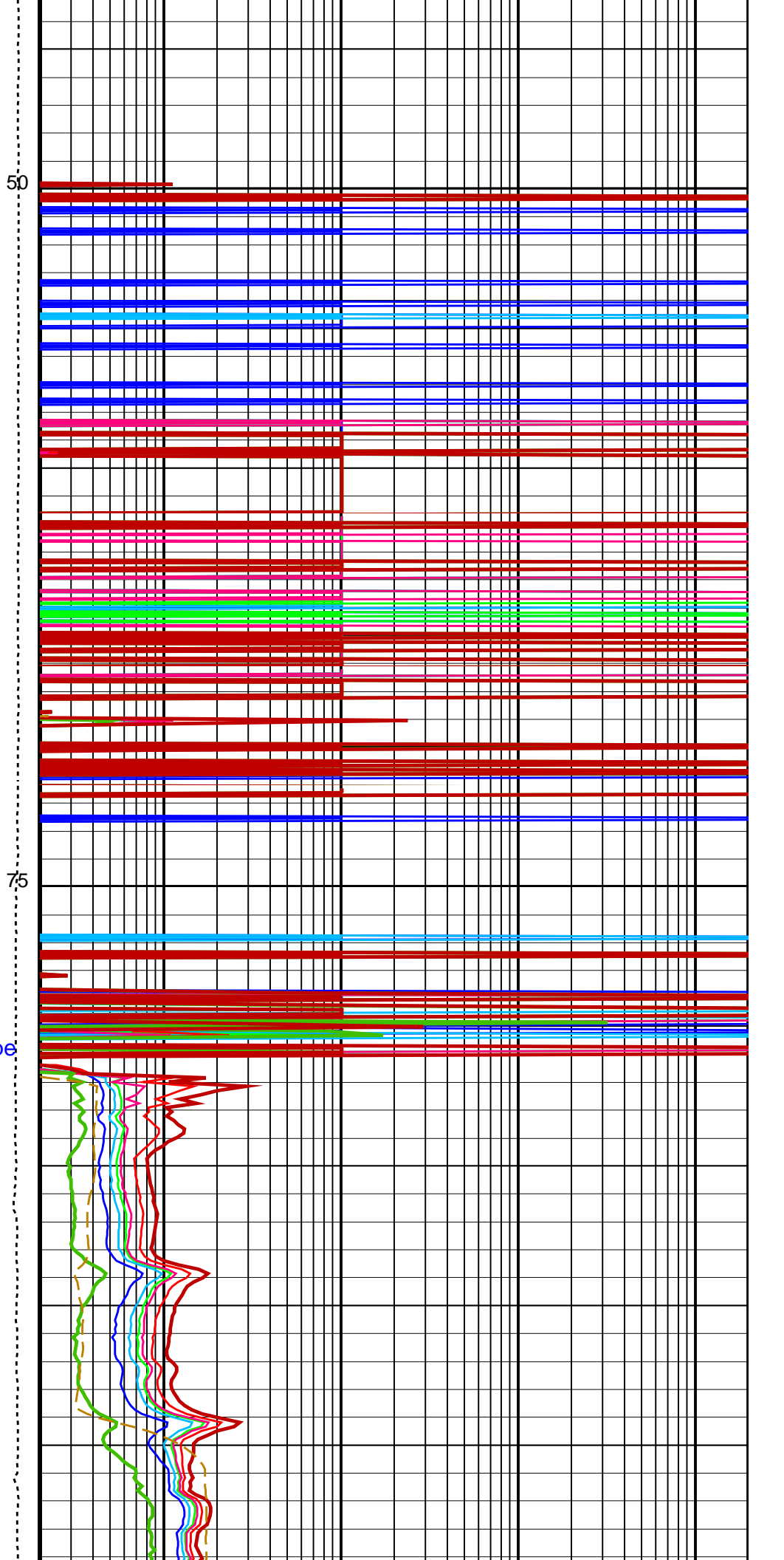
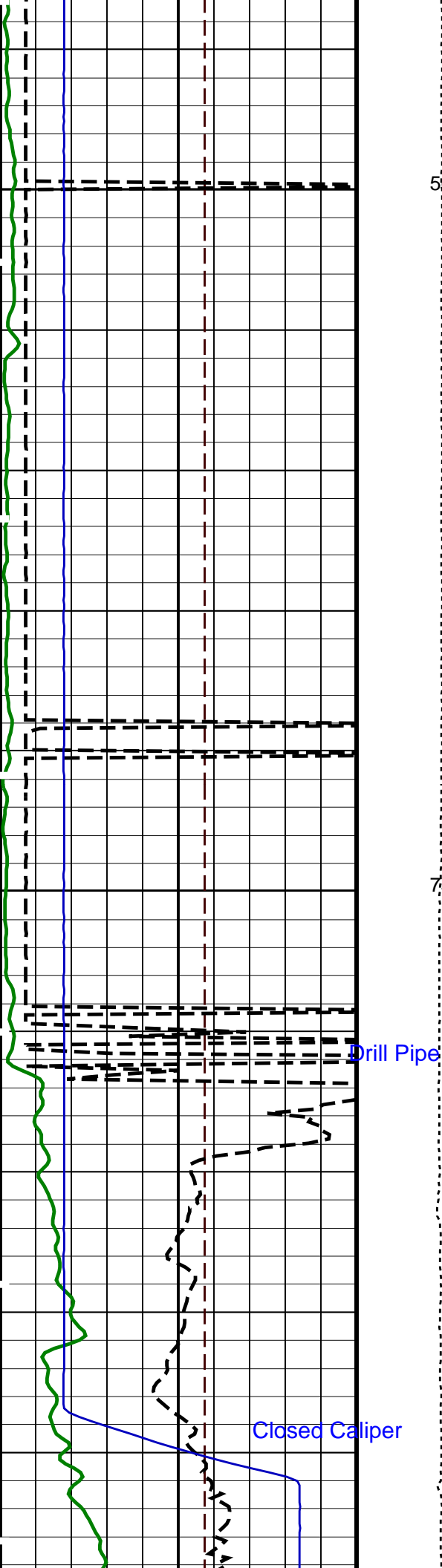
Time Mark Every 60 S

Parameters			
DLIS Name	Description	Value	
HRLT-B: High Resolution Laterolog Array – B			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	45	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	35.1057	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	BARITE	
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	
PROCVN	Inversion Selection	ON	
PROCMFL	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT Compute	

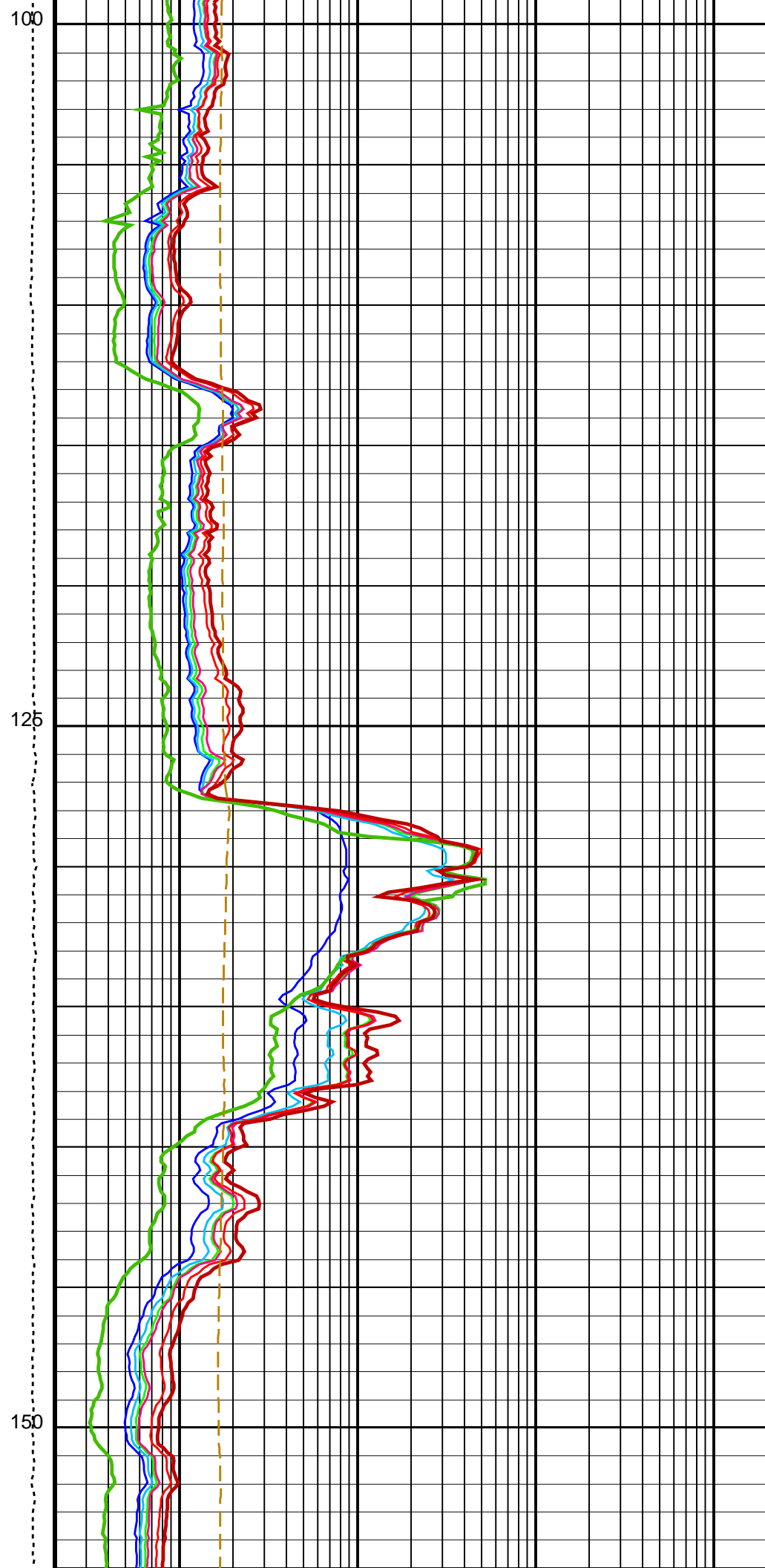
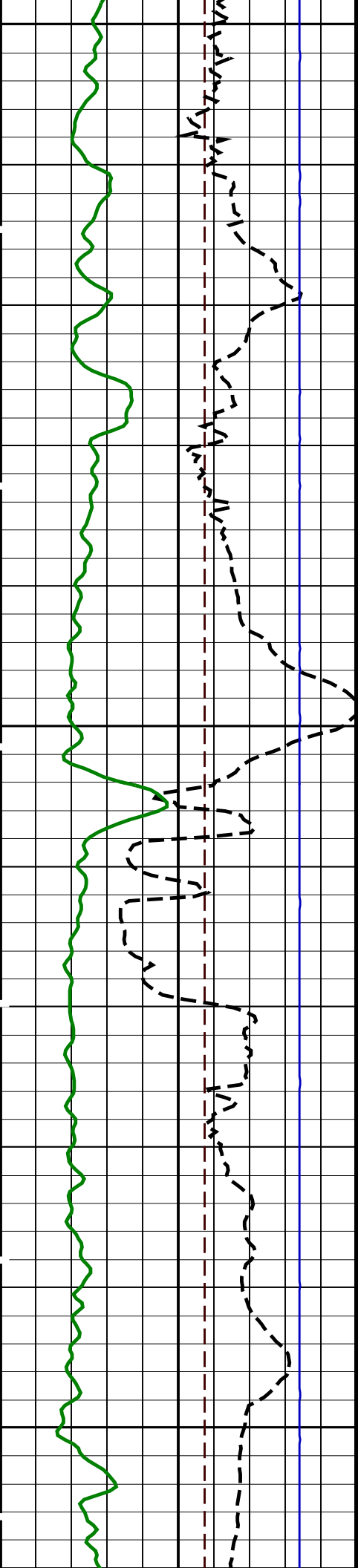
PROCSP0	Processing and Resistivity Select	Centered	
SHT	Surface Hole Temperature	20	DEGC
HLDS: Hostile Litho-Density Sonde			
CLCL	HLDS LS Control Loop Controller Mode	AUTO_DEFAULT	
CLCS	HLDS SS Control Loop Controller Mode	AUTO_DEFAULT	
CLLS	HLDS Mode Loop Long Spacing	AUTO	
CLSS	HLDS Mode Loop Short 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	1000	V
PSDL	HLDS LS Pulse Shape Compensation DAC	30000	
PSDS	HLDS SS Pulse Shape Compensation DAC	30000	
PSML	HLDS LS Pulse Shape Compensation Mode	AUTO	
PSMS	HLDS SS Pulse Shape Compensation Mode	AUTO	
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)	45	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	-0.00214312	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGS Processing Enable	YES	
ISSBAR	Barite Mud Switch	BARITE	
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	1.09826	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.982945	
EDTC-B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	45	DEGC
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO	Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	BARITE	
ISSBAR_EDTC	Nuclear Mud Type	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	BARI	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U-ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U-TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
System and Miscellaneous			
ALTDEPTH	Name of alternate depth channel		
ALTDEPTH	Name of alternate depth channel		

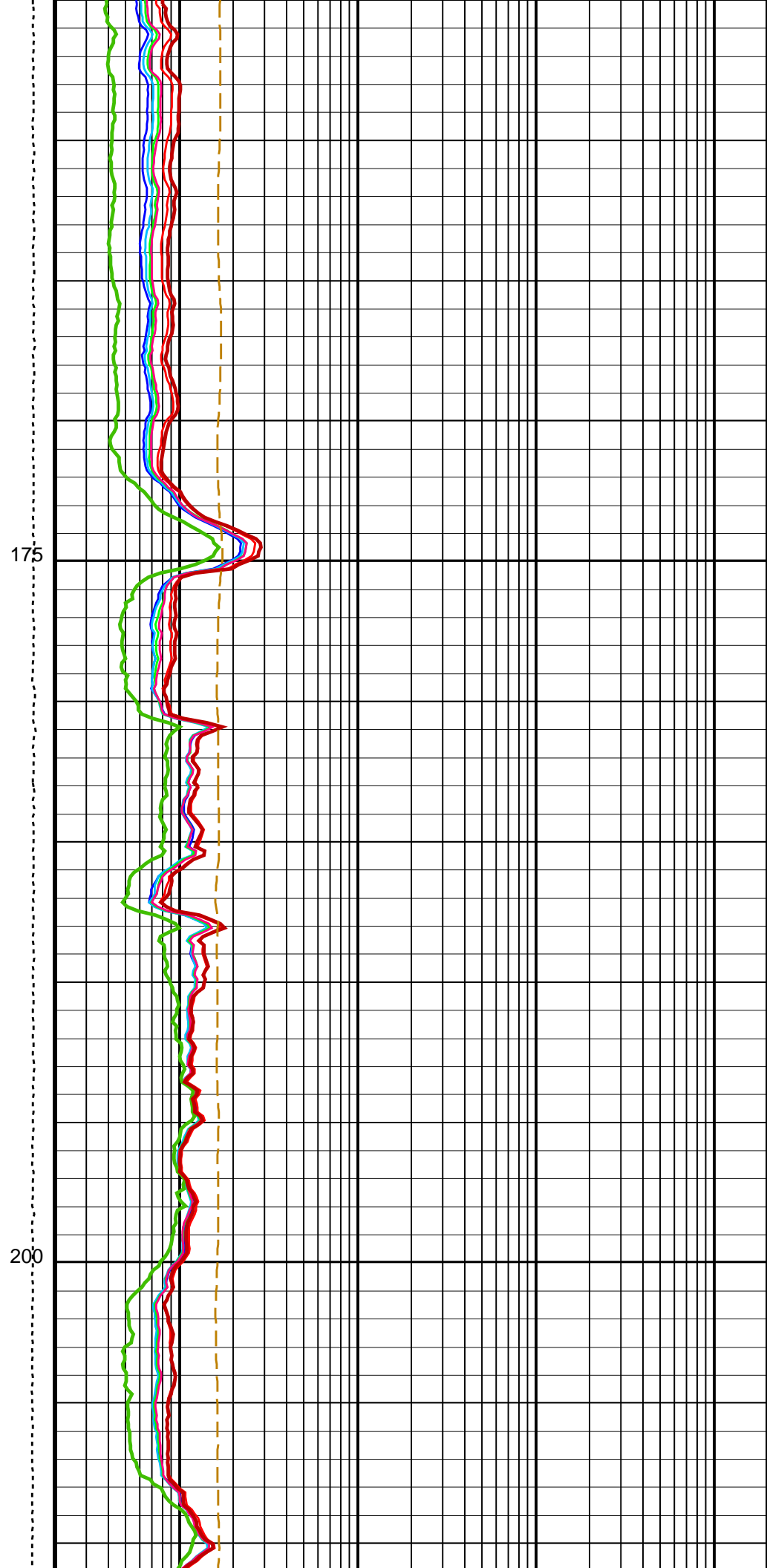
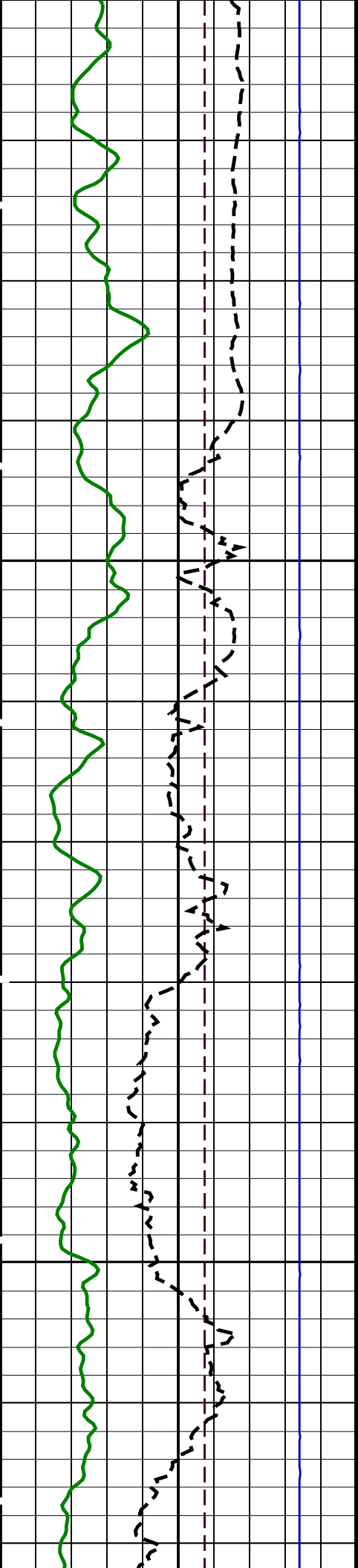
ALTDPC	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	11.438	IN
BSAL	Borehole Salinity	38000.00	PPM
CSIZ	Current Casing Size	5.500	IN
CWEI	Casing Weight	168.00	LB/F
DFD	Drilling Fluid Density	1.32	G/C3
DO	Depth Offset for Playback	-97.0	M
FLEV	Fluid Level	-50000.00	M
MST	Mud Sample 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	960	M
TDD	Total Depth - Driller	960.00	M
TDL	Total Depth - Logger	960.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

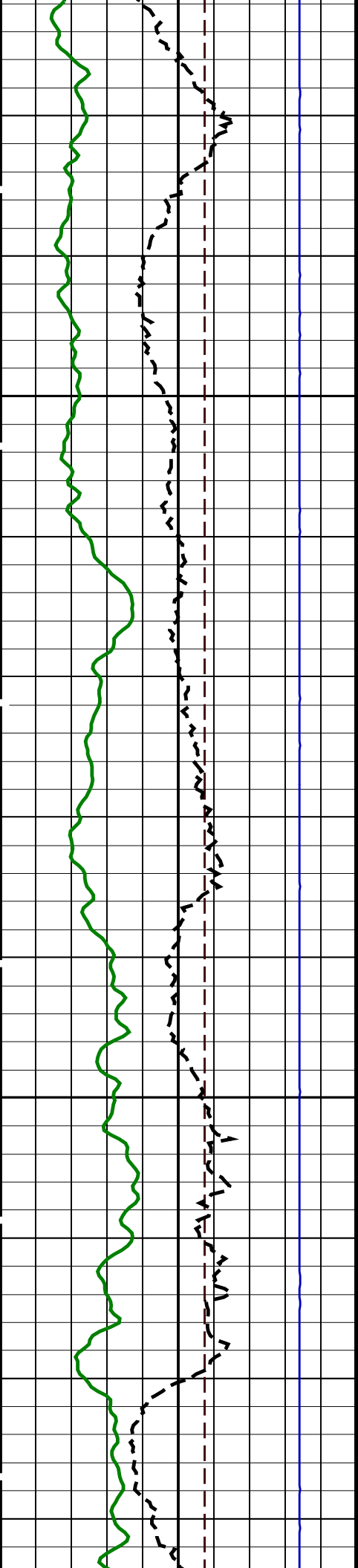






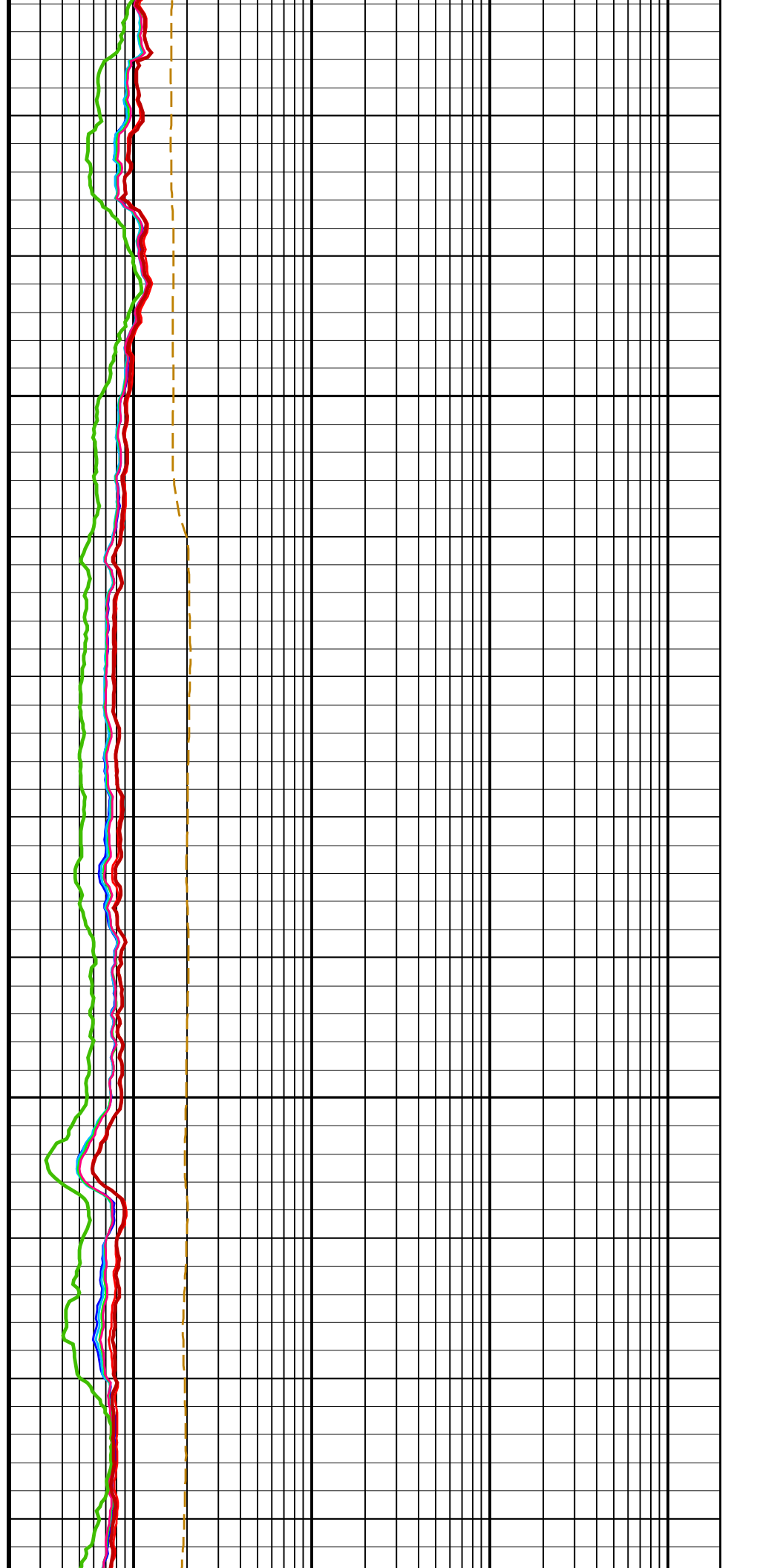


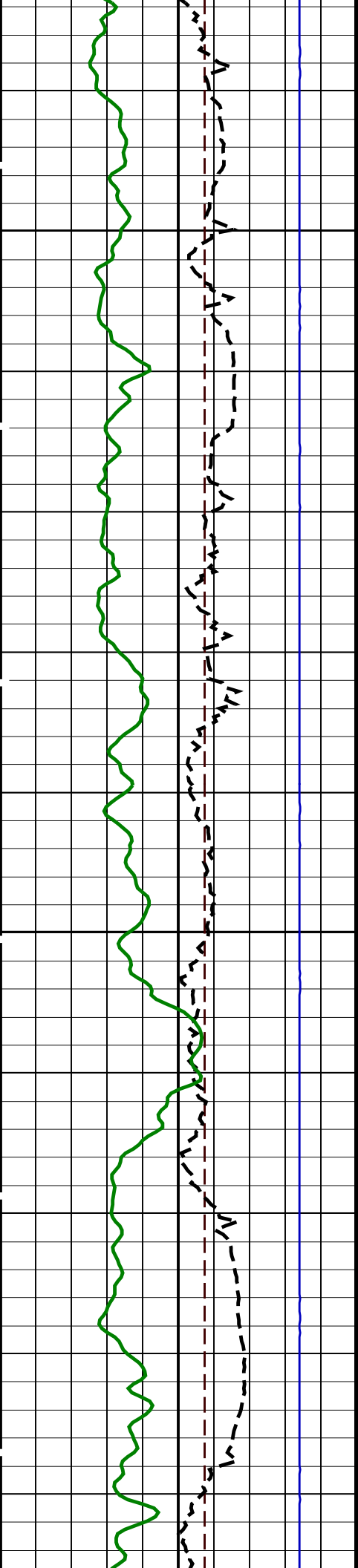




225

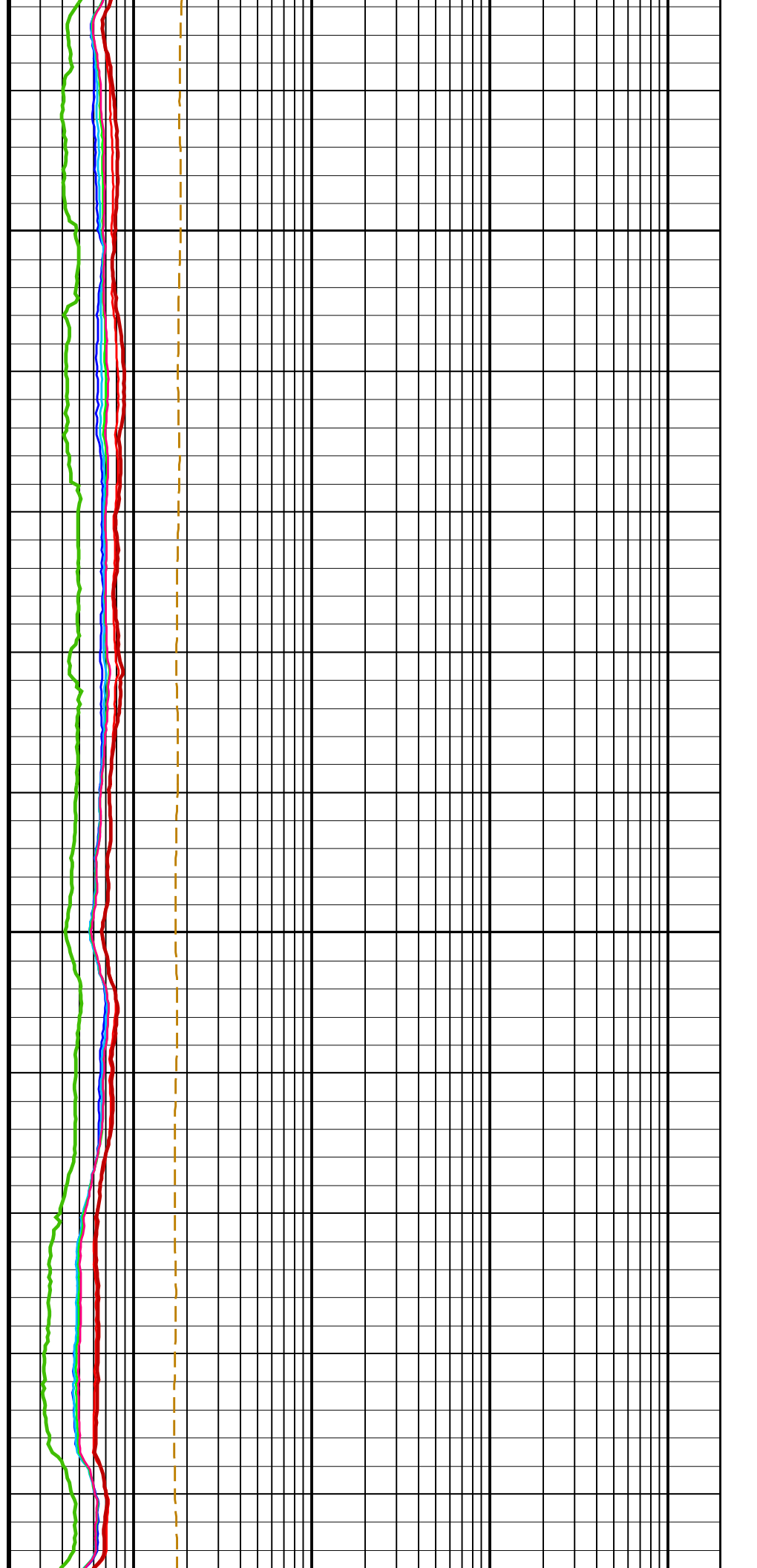
250

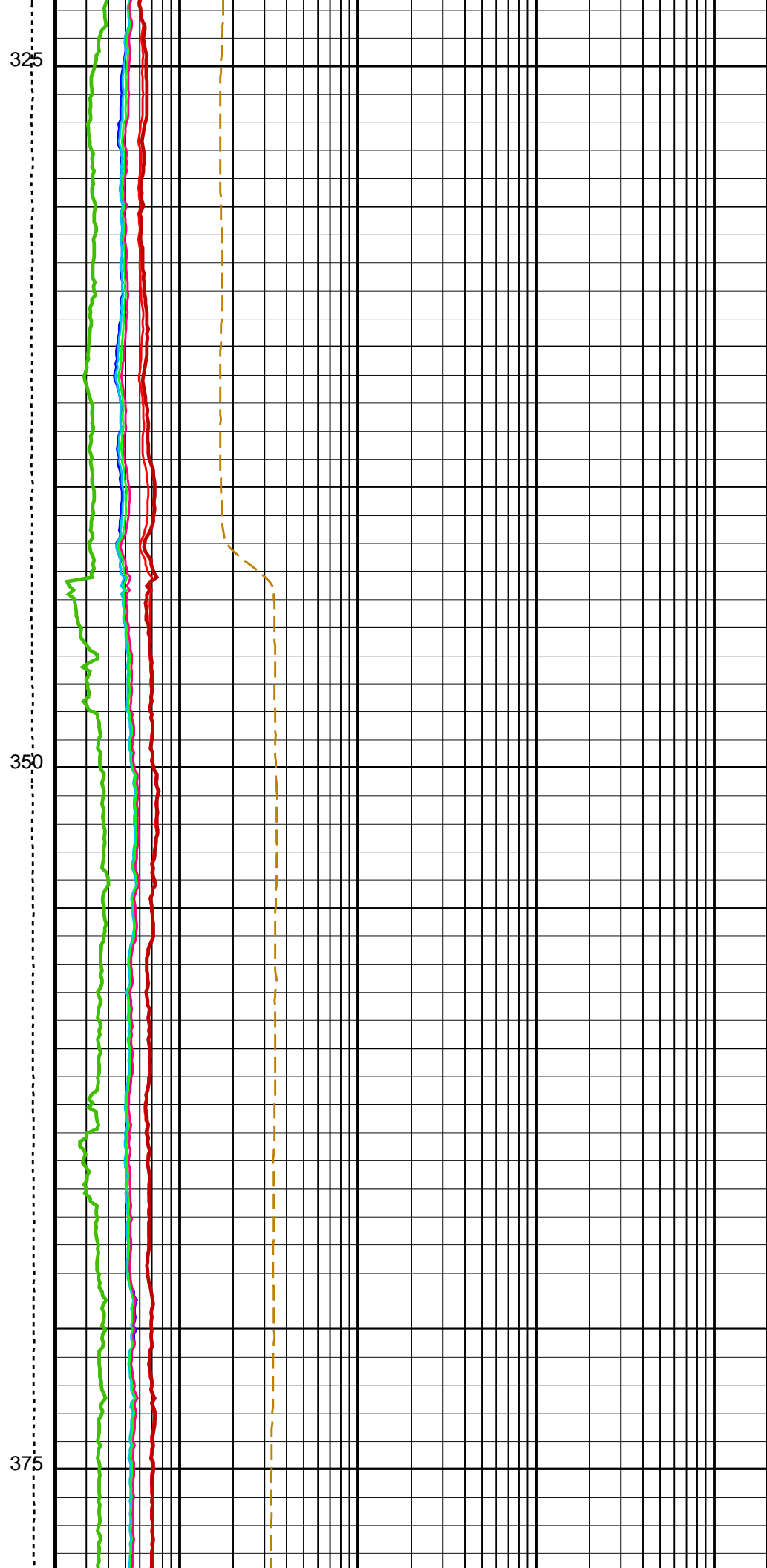
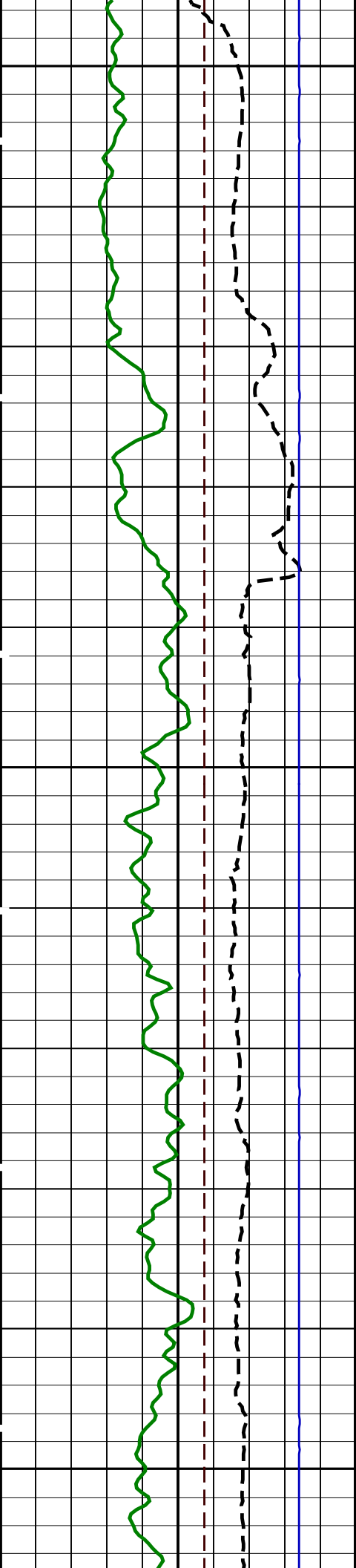


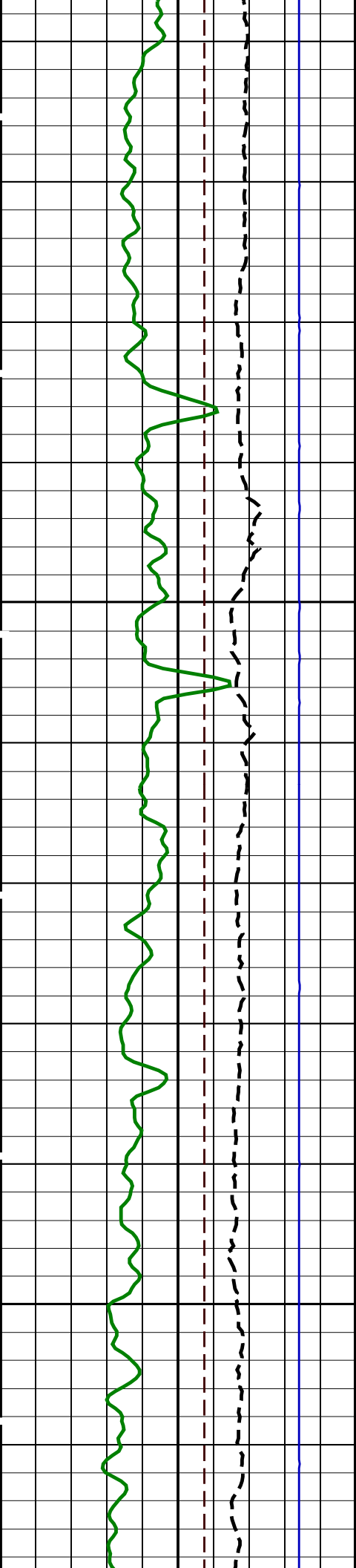


275

300

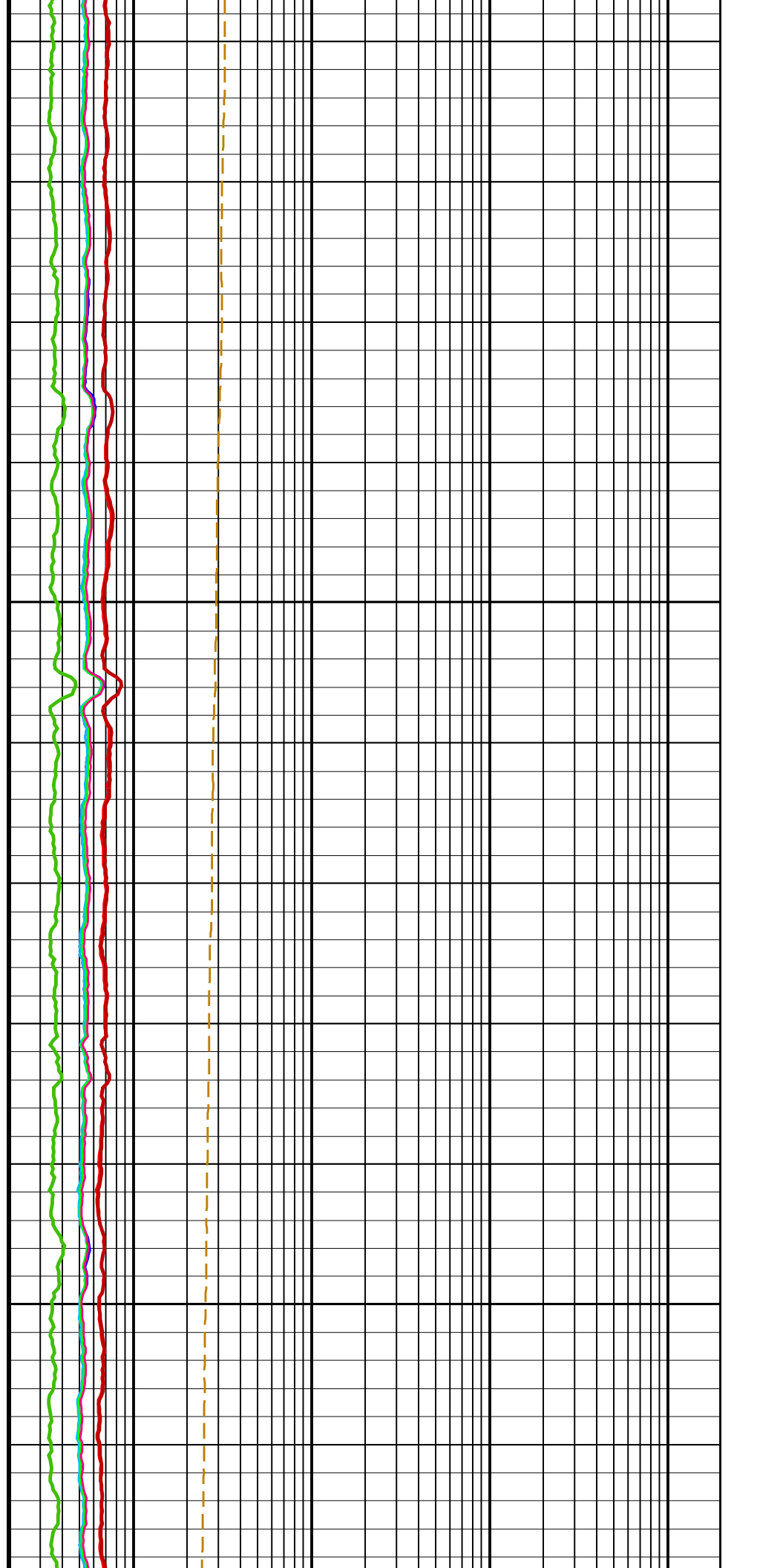


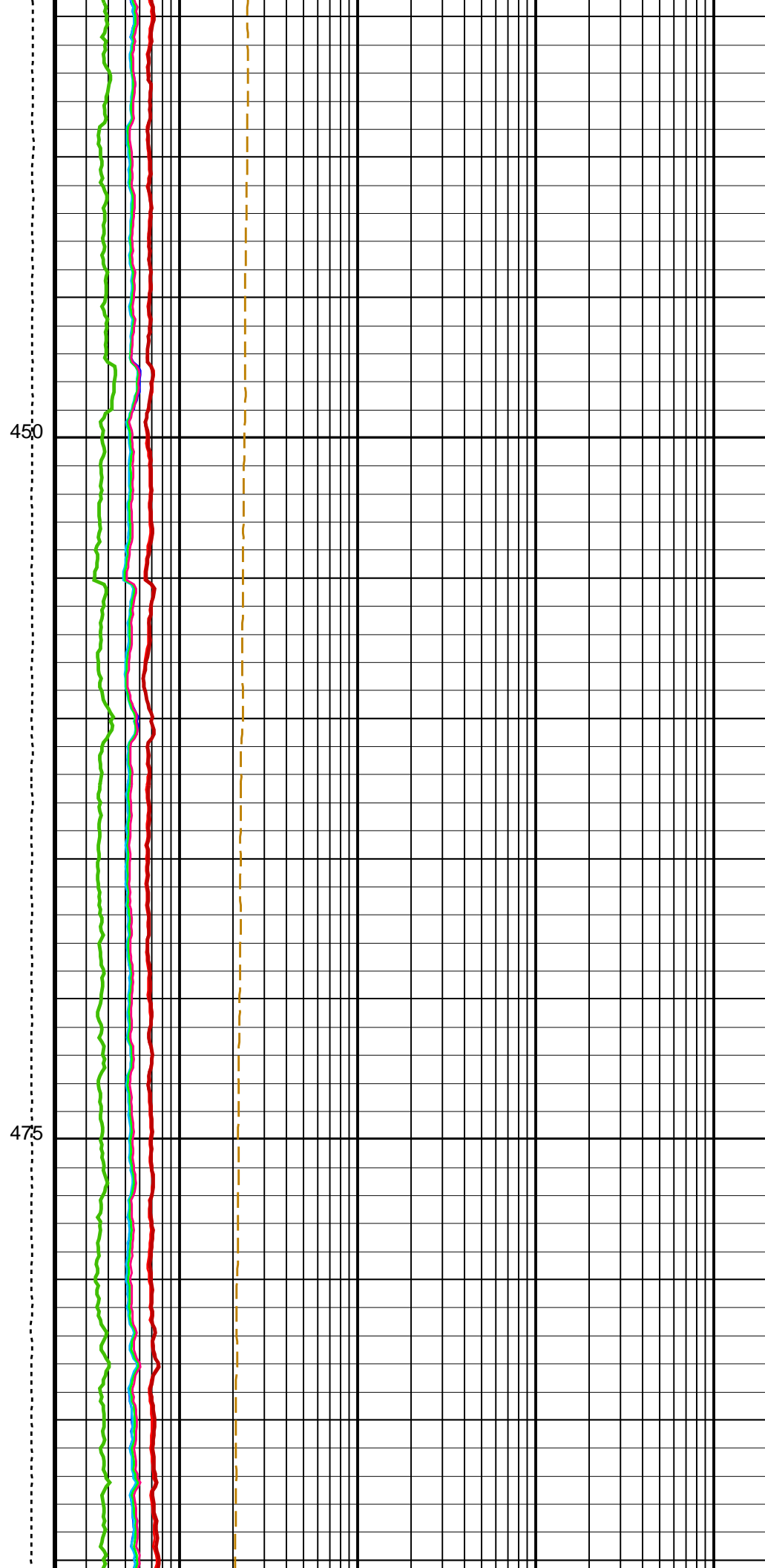
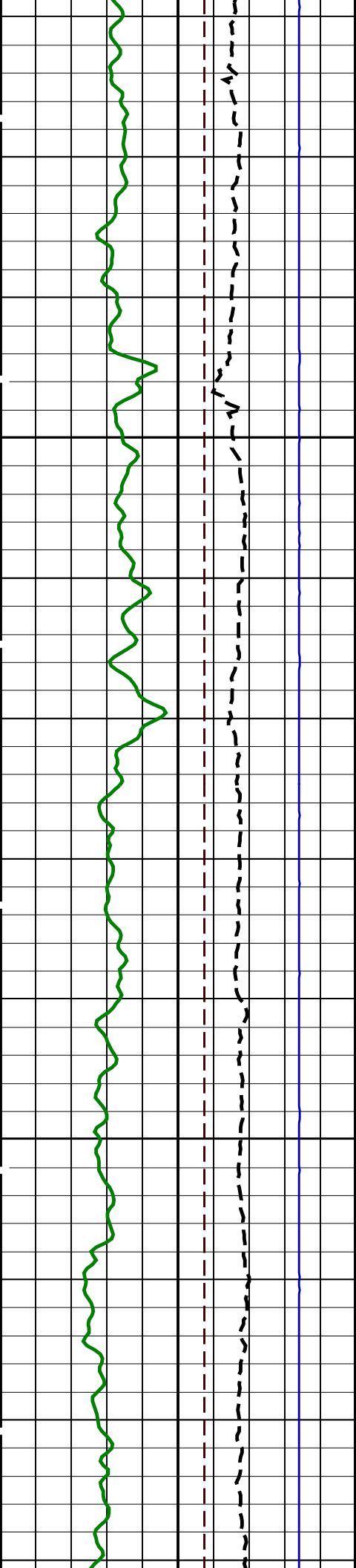


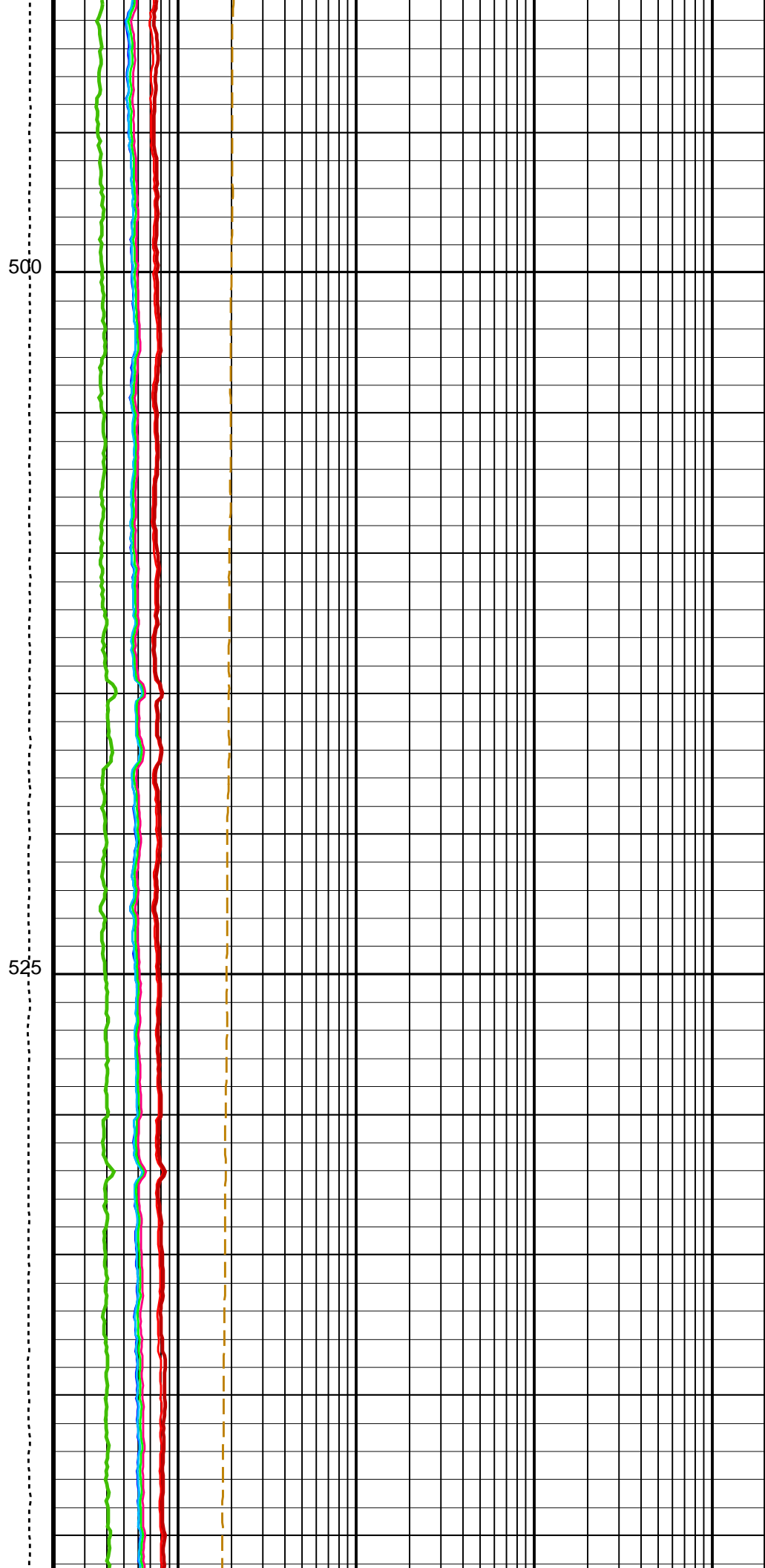
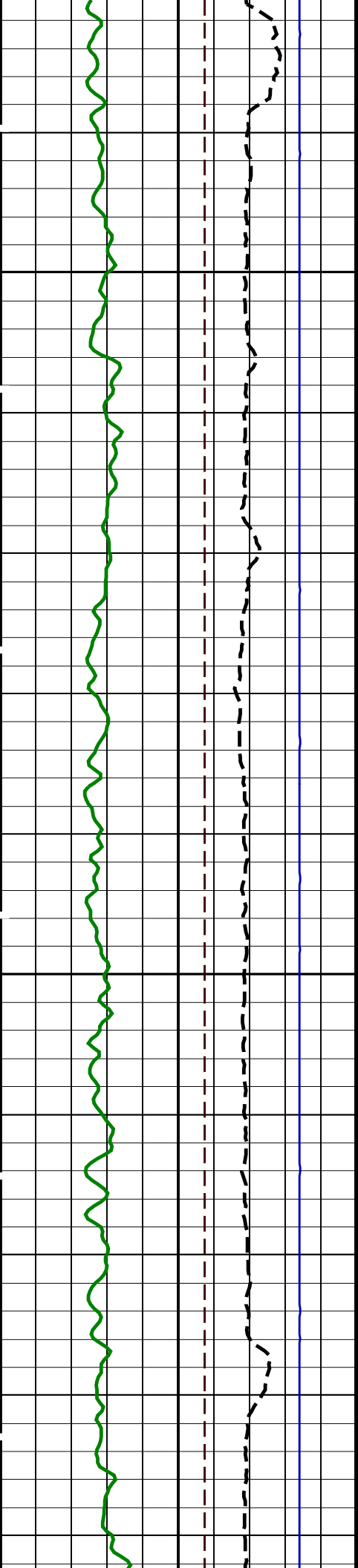


400

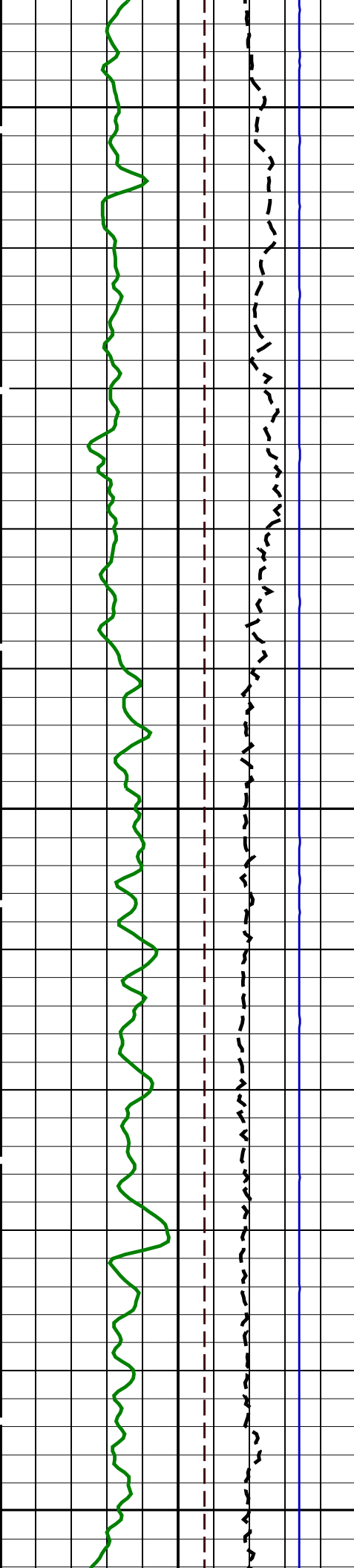
425







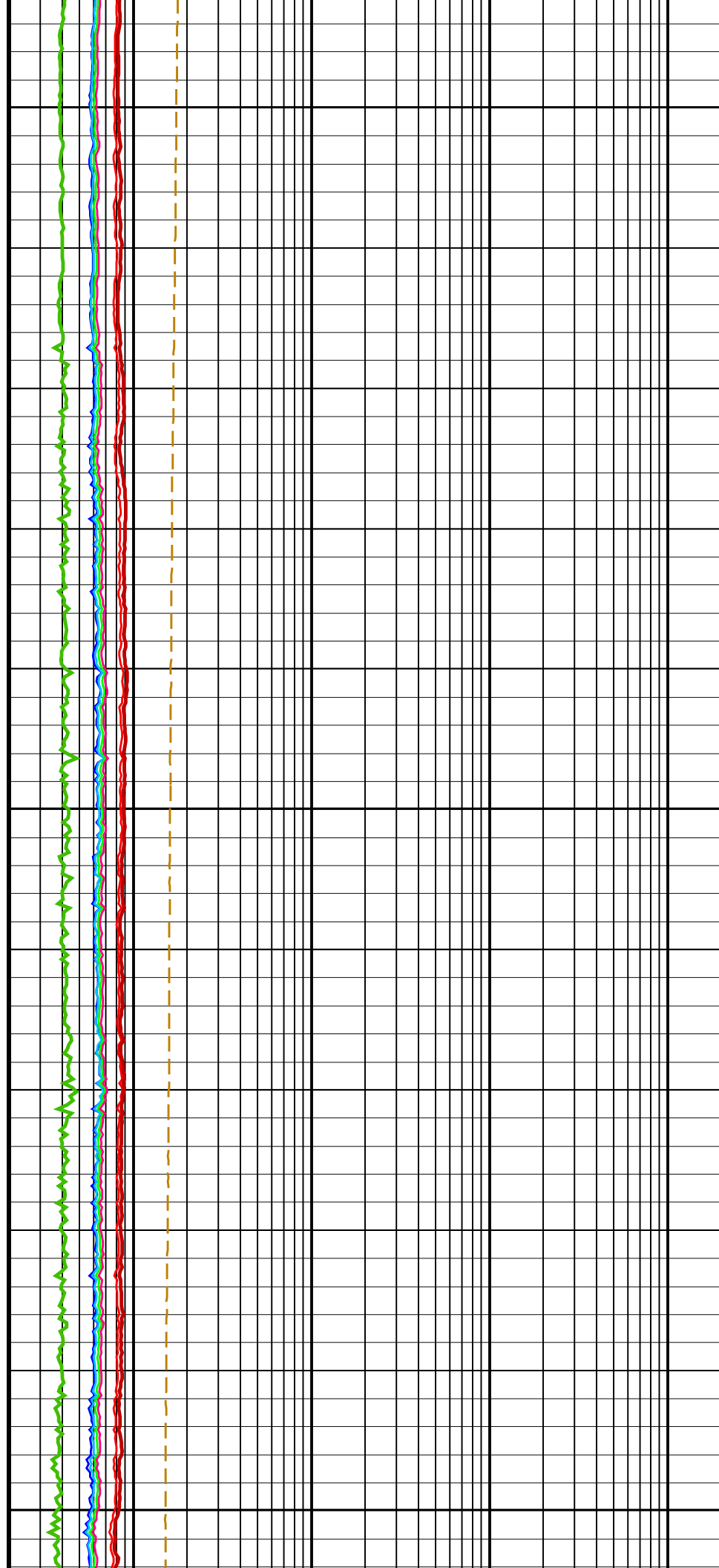


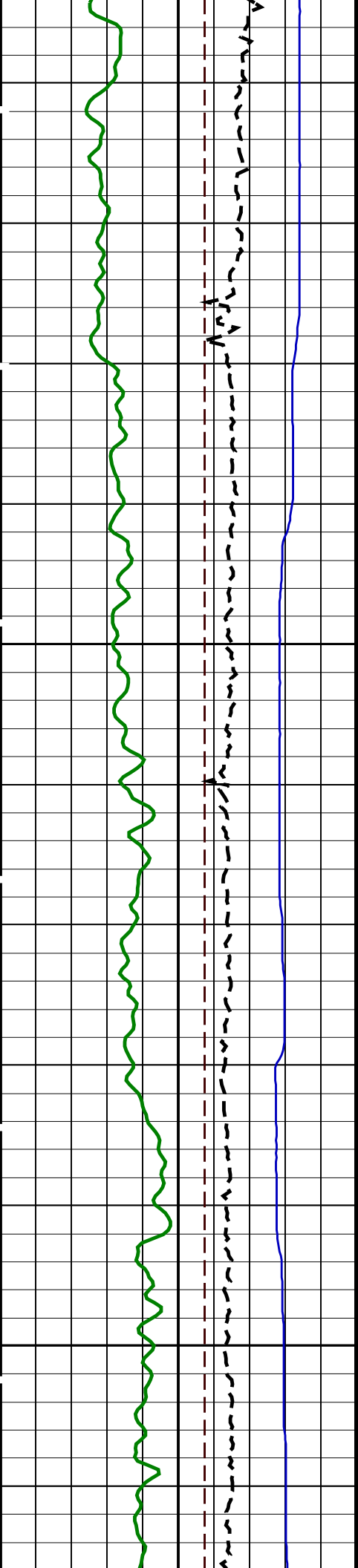


550

575

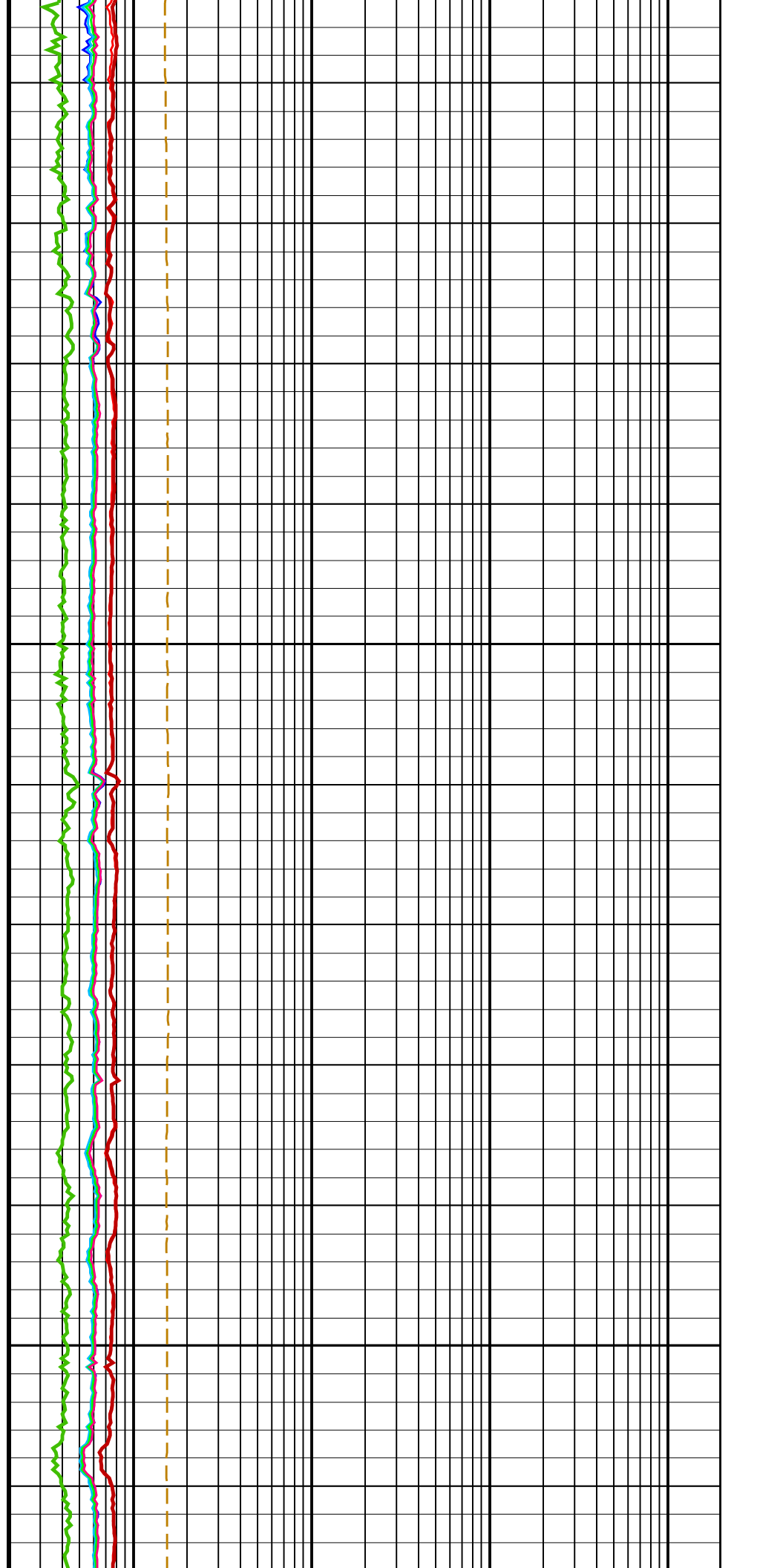
600

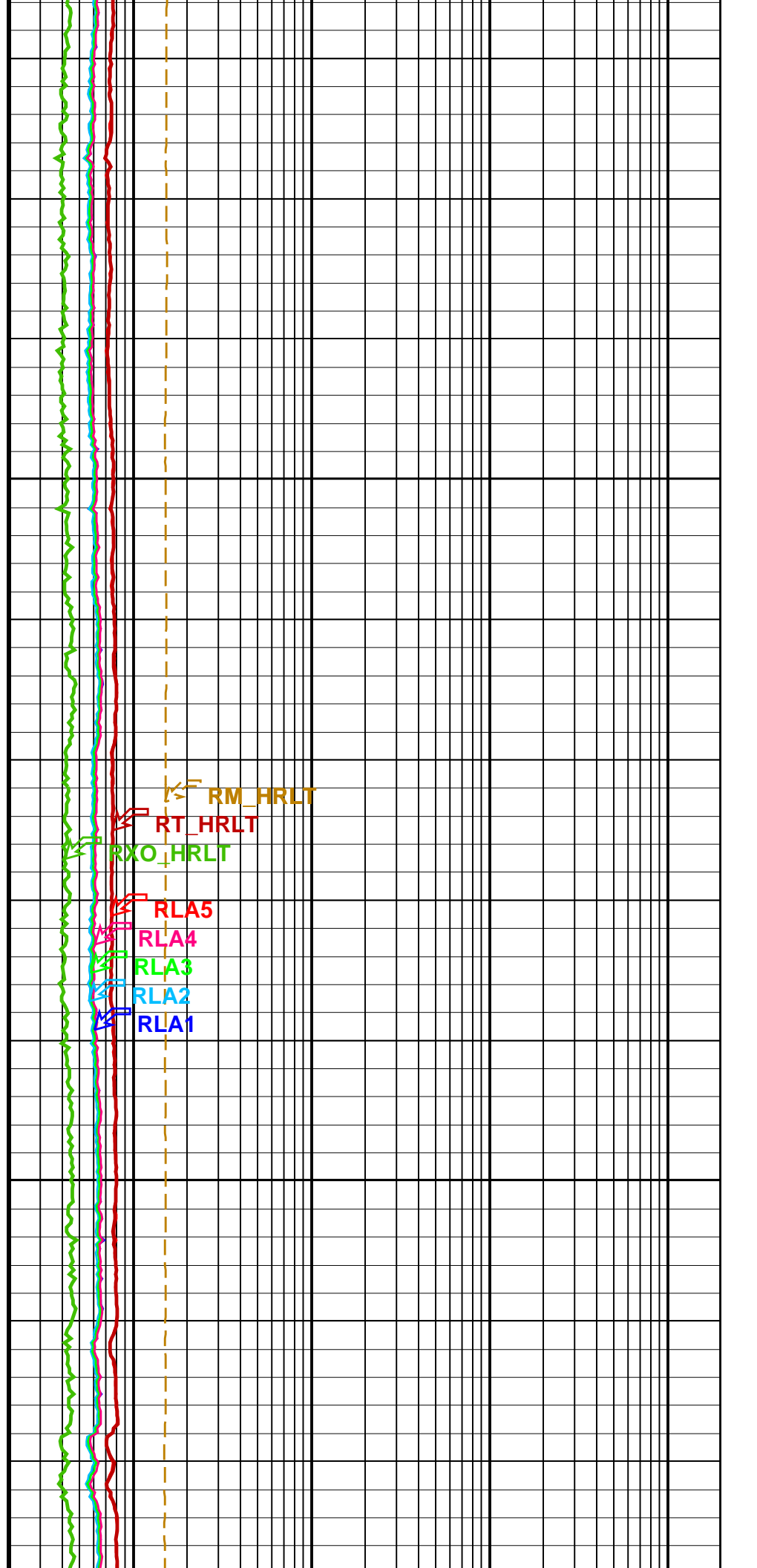
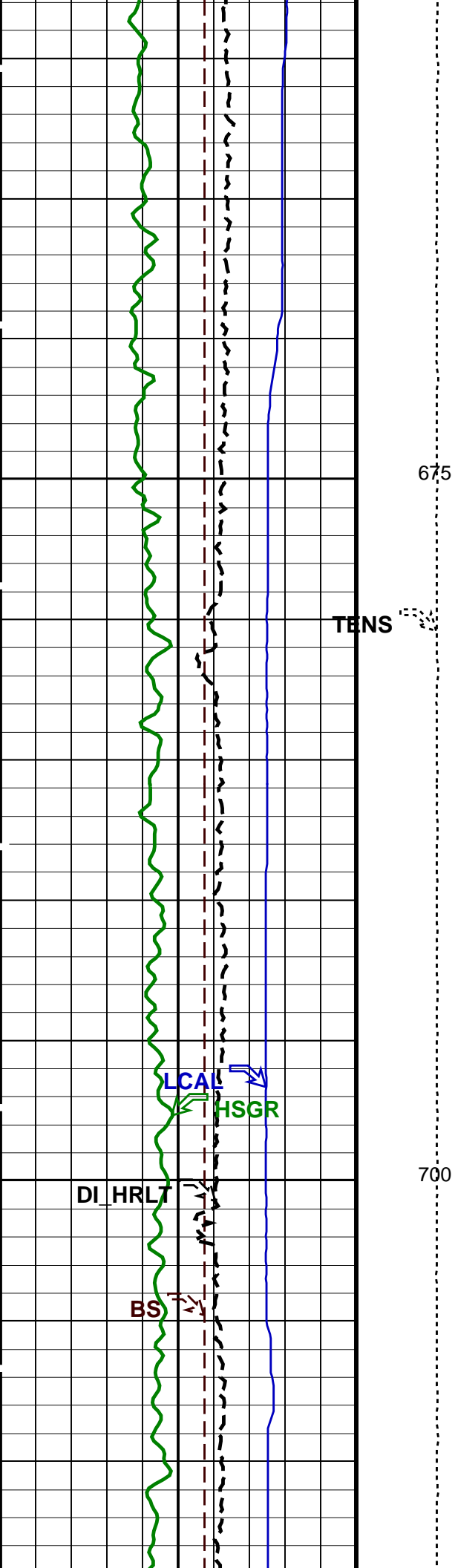


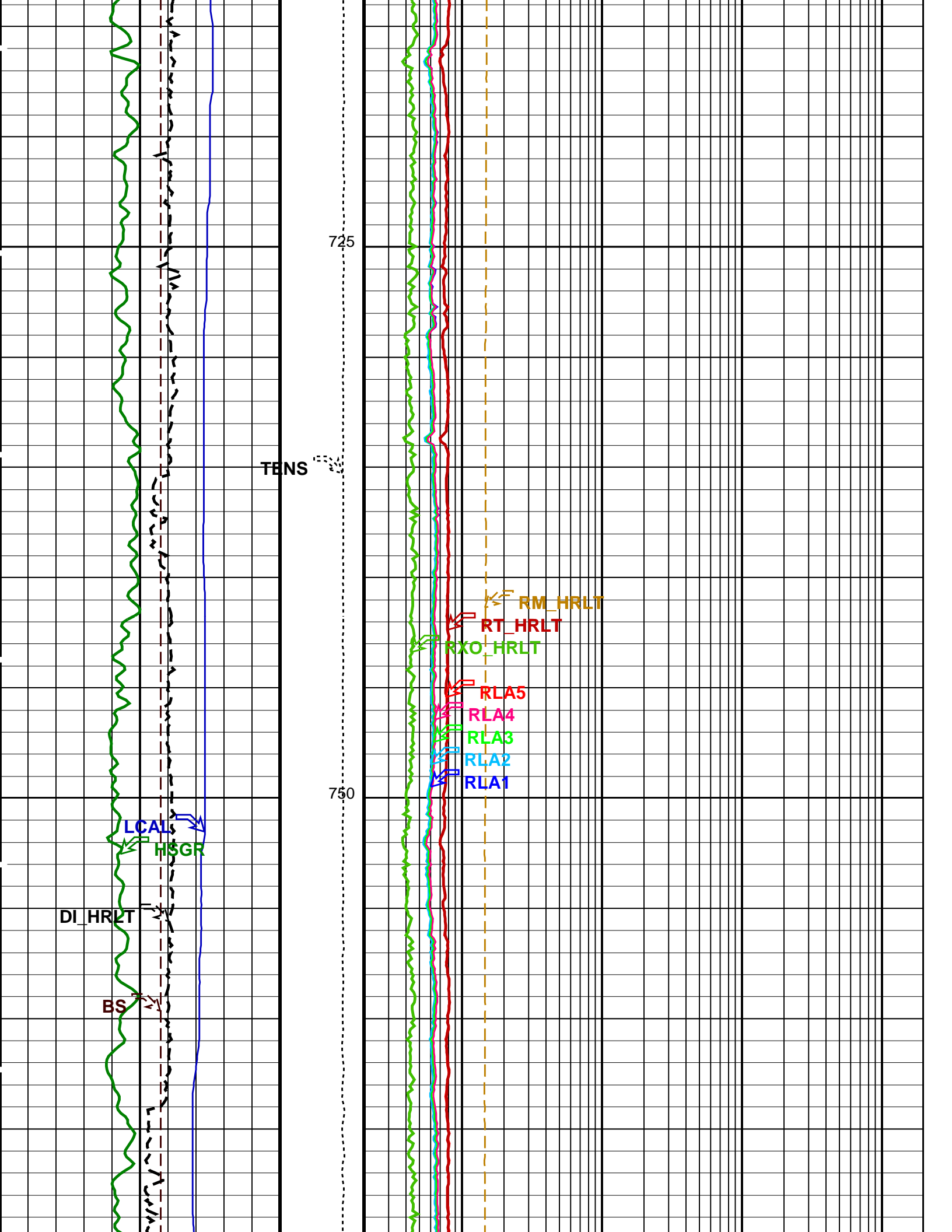


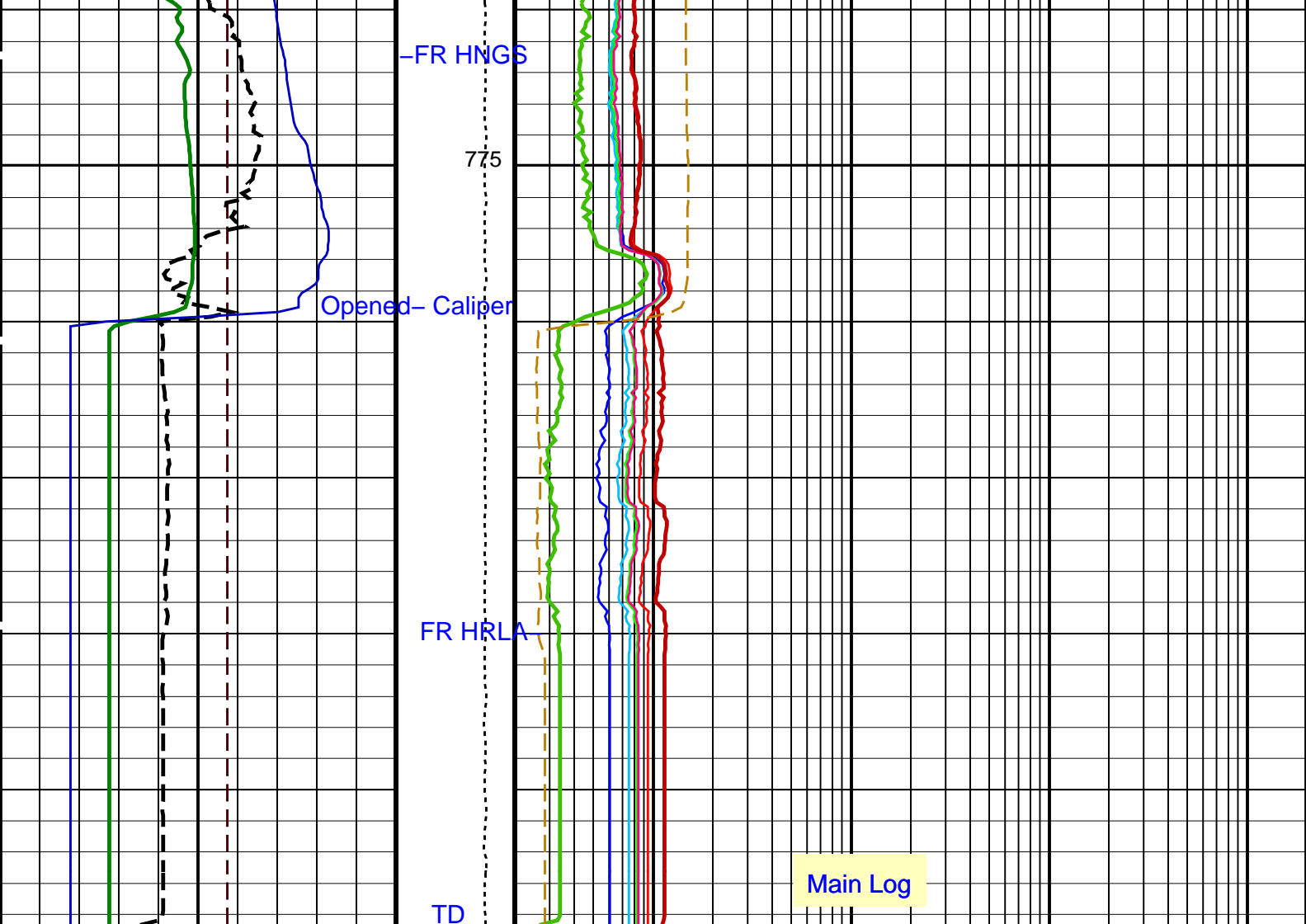
625

650









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

PIP SUMMARY

Time Mark Every 60 S

Parameters		
DLIS Name	Description	Value



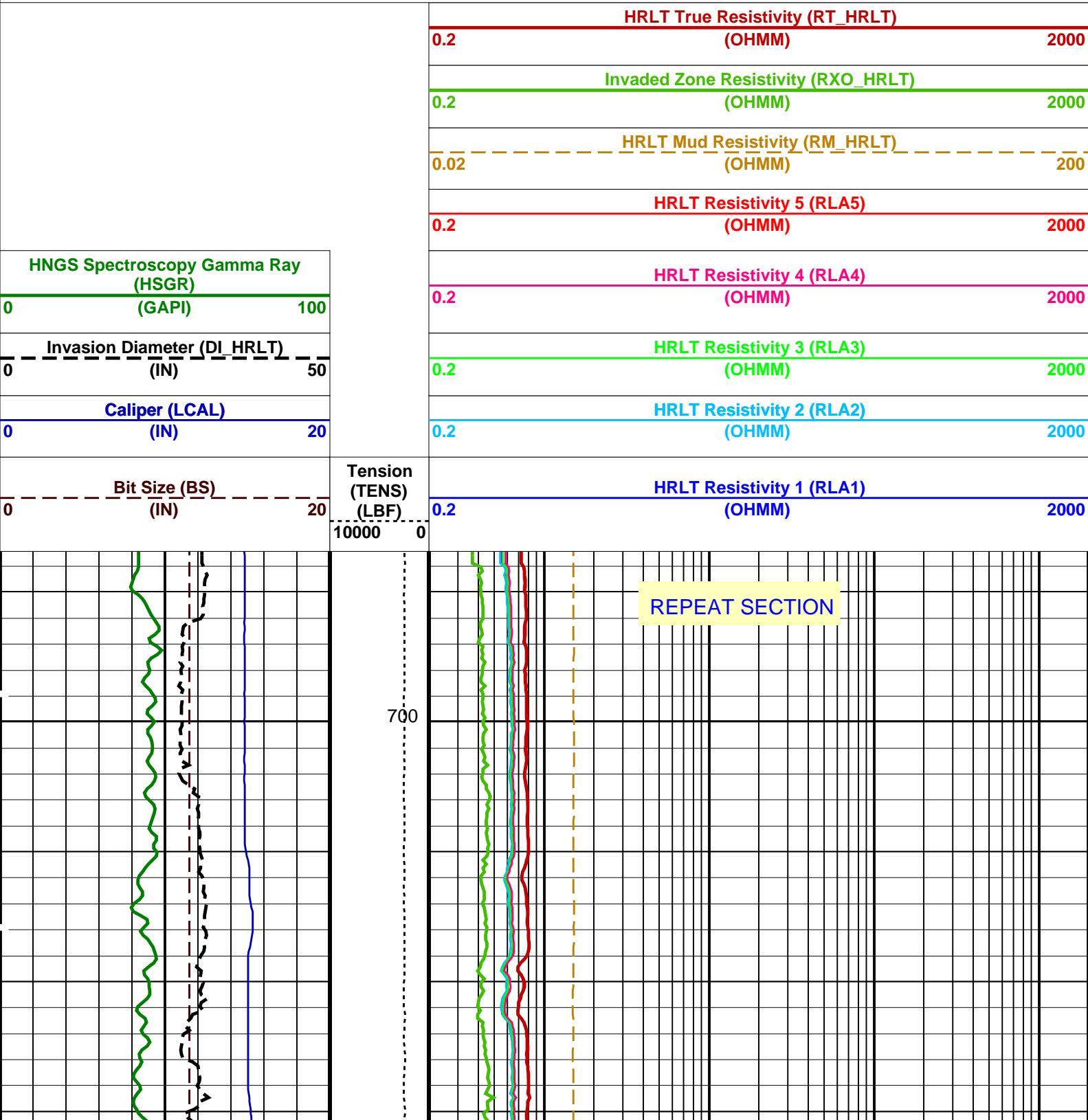
Output DLIS Files

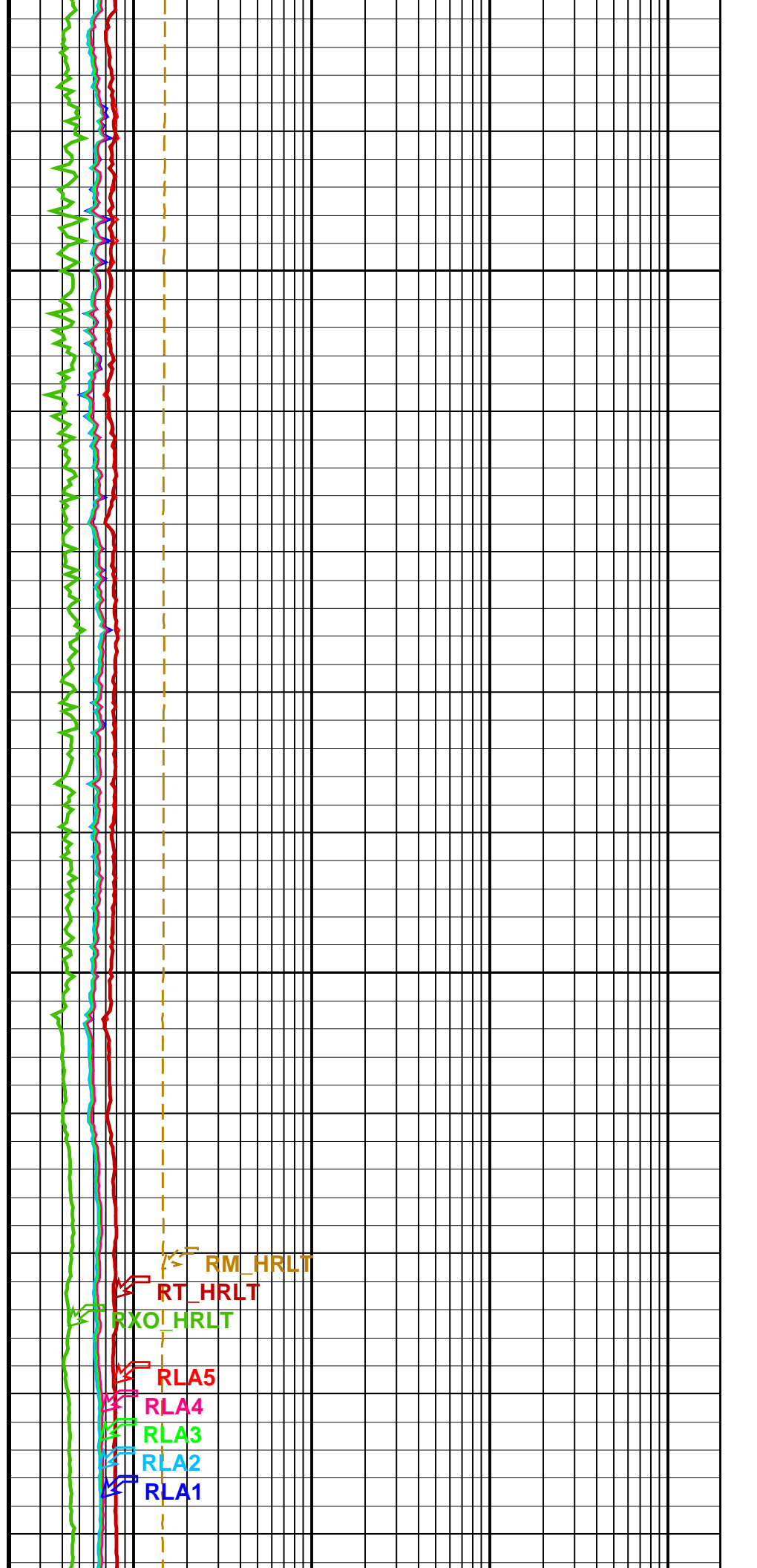
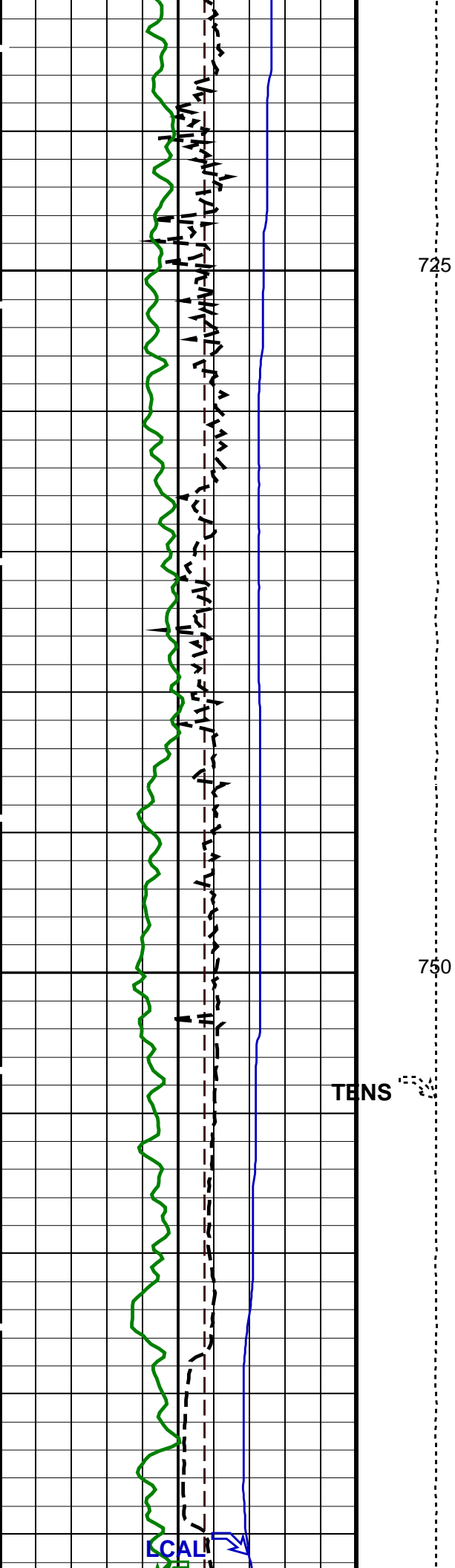
OP System Version: 19C0-187

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

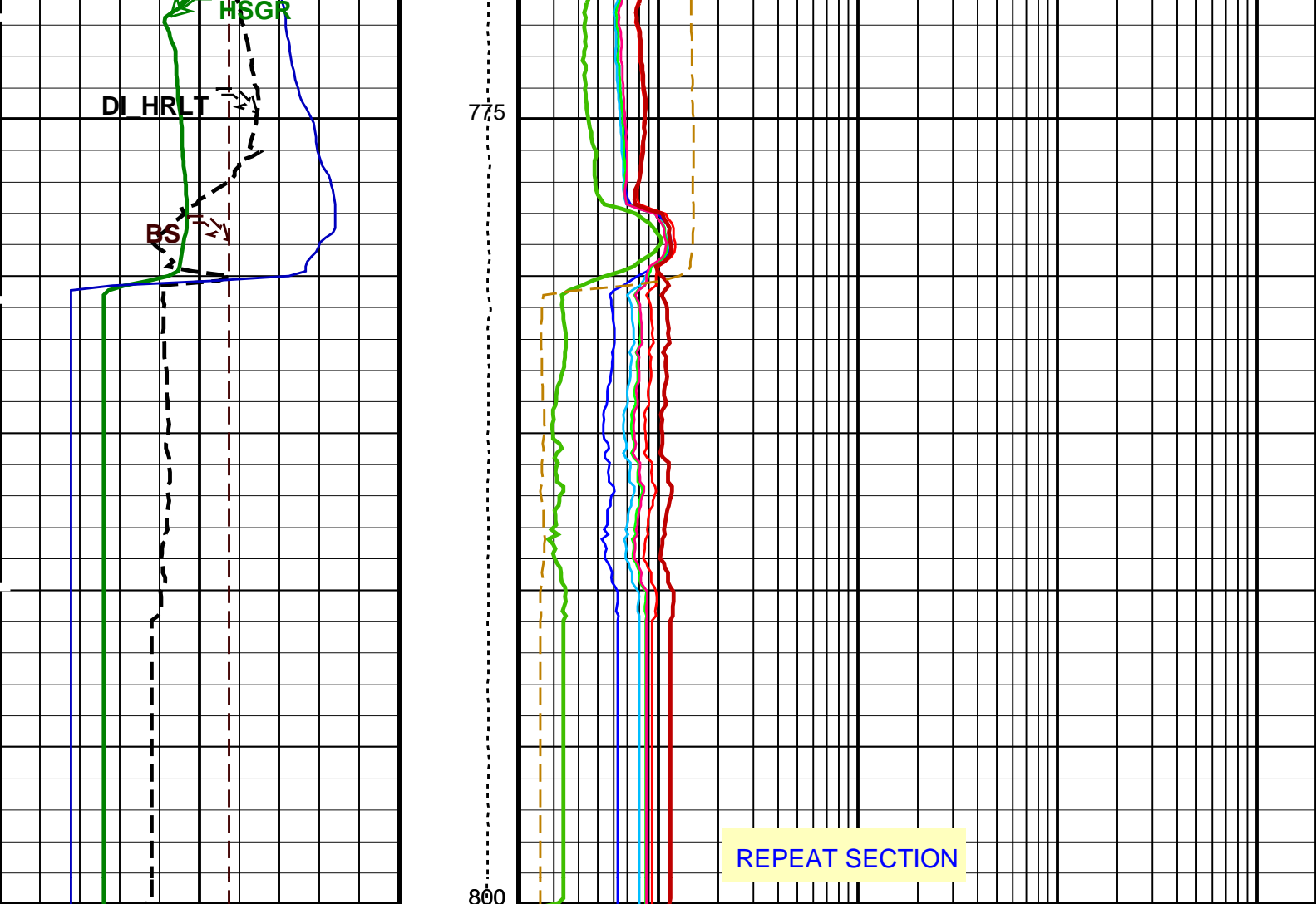
PIP SUMMARY

Time Mark Every 60 S









<div> <div>Bit Size (BS)</div> <div>(IN)</div> <div>020</div> </div> <div> <div>Caliper (LCAL)</div> <div>(IN)</div> <div>020</div> </div> <div> <div>Invasion Diameter (DI_HRLT)</div> <div>(IN)</div> <div>050</div> </div> <div> <div>HNGS Spectroscopy Gamma Ray (HSGR)</div> <div>(GAPI)</div> <div>0100</div> </div>	<div> <div>Tension (TENS)</div> <div>(LBF)</div> <div>100000</div> </div>	<div> <div>HRLT Resistivity 1 (RLA1)</div> <div>(OHMM)</div> <div>0.22000</div> </div> <div> <div>HRLT Resistivity 2 (RLA2)</div> <div>(OHMM)</div> <div>0.22000</div> </div> <div> <div>HRLT Resistivity 3 (RLA3)</div> <div>(OHMM)</div> <div>0.22000</div> </div> <div> <div>HRLT Resistivity 4 (RLA4)</div> <div>(OHMM)</div> <div>0.22000</div> </div> <div> <div>HRLT Resistivity 5 (RLA5)</div> <div>(OHMM)</div> <div>0.22000</div> </div> <div> <div>HRLT Mud Resistivity (RM_HRLT)</div> <div>(OHMM)</div> <div>0.02200</div> </div> <div> <div>Invaded Zone Resistivity (RXO_HRLT)</div> <div>(OHMM)</div> <div>0.22000</div> </div> <div> <div>HRLT True Resistivity (RT_HRLT)</div> <div>(OHMM)</div> <div>0.22000</div> </div>
--	---	--

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)	45	DEGC
GCSE	Generalized Caliper Selection	LCAL	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
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
HNGBA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGB Detector 1 Barite Constant	1	
BAR2	HNGB Detector 2 Barite Constant	1	
BHK	HNGB Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	45	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	HNGB Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGB Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGB Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGB Borehole Potassium Running Average	-0.00214312	
HALF	HNGB Alpha Filter Length	60	IN
HCRB	HNGB Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGB Processing Enable	YES	
S1BI	HNGB Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGB Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGB Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	20	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGB Detector 1 Variable Barite Factor Running Average	1.09826	
VBA2	HNGB Detector 2 Variable Barite Factor Running Average	0.982945	
EDTCB: Enhanced DTS Cartridge			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	45	DEGC
GCSE	Generalized Caliper Selection	LCAL	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
SHT	Surface Hole Temperature	20	DEGC
System and Miscellaneous			
BS	Bit Size	11.438	IN
DO	Depth Offset for Playback	-97.0	M
PP	Playback Processing	NORMAL	
TD	Total Depth	960	M

Format: HRLT		Vertical Scale: 1:200		Graphics File Created: 10-Sep-2015 12:33		
OP System Version: 19C0-187						
MSS_LDEO-A	19C0-187		HRLT-B	19C0-187		
HLDS	19C0-187		LDSC-B	19C0-187		
HNGC-B	19C0-187		HNGS-BA	19C0-187		
EDTC-B	SKK-5169-EDTCB					
Input DLIS Files						
DEFAULT	MSS_LDEO_HRLA_LDL_012PUP	FN:20	PRODUCER	03-Sep-2015 17:17	896.1 M	790.3 M
Output DLIS Files						
DEFAULT	MSS_LDEO_HRLA_LDL_036PUP	FN:55	PRODUCER	10-Sep-2015 12:33		

Company: International Ocean Discovery Program	Well: Expedition 356, Site U1462 A
--	------------------------------------

Input DLIS Files					
DEFAULT	MSS_LDEO_HRLA_LDL_012PUP	FN:20	PRODUCER	03-Sep-2015 17:17	896.1 M 790.3 M

# Output DLIS Files

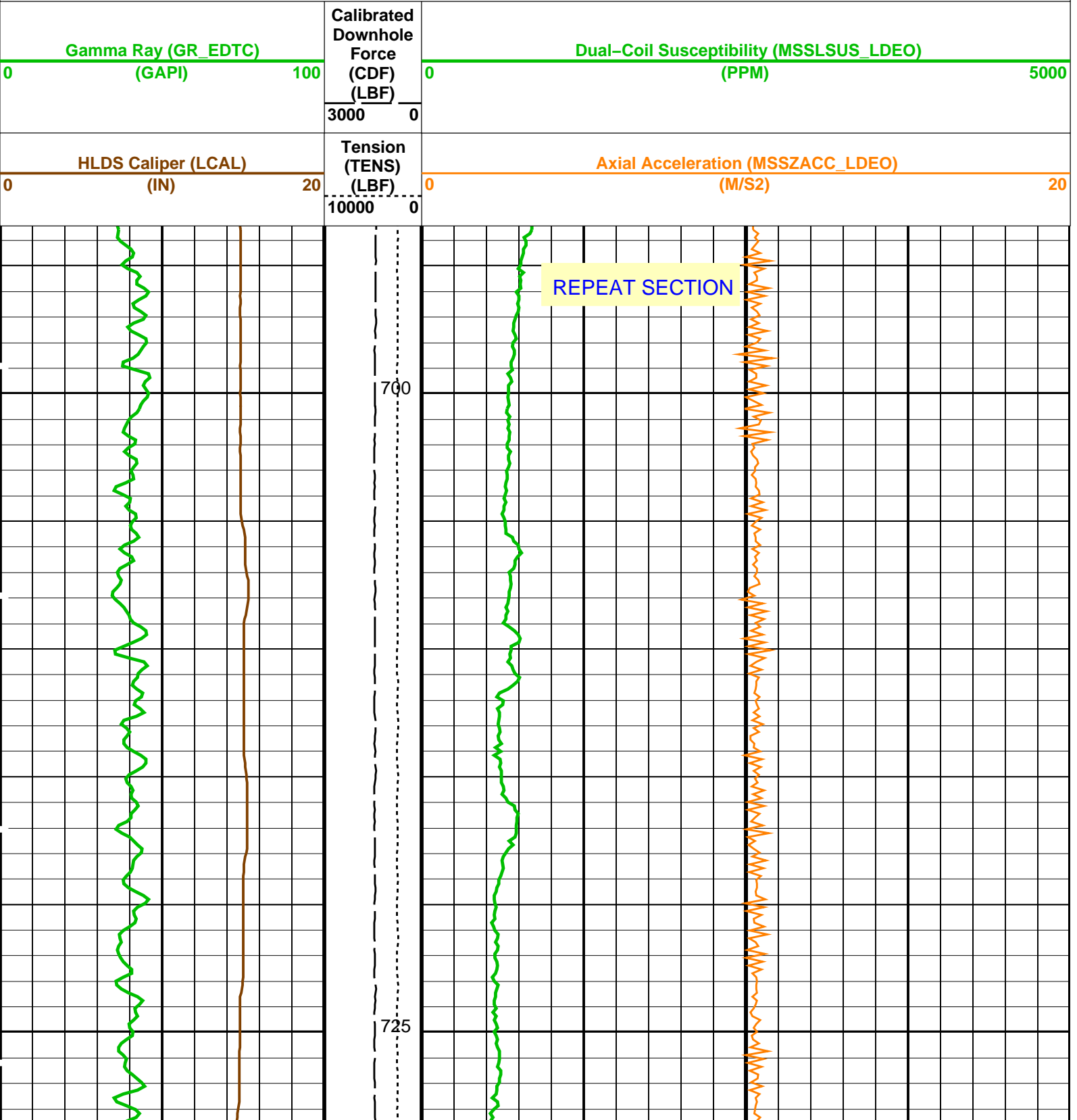
DEFAULT MSS\_LDEO\_HRLA\_LDL\_036PUP FN:55 PRODUCER 10-Sep-2015 12:33 800.1 M 693.4 M

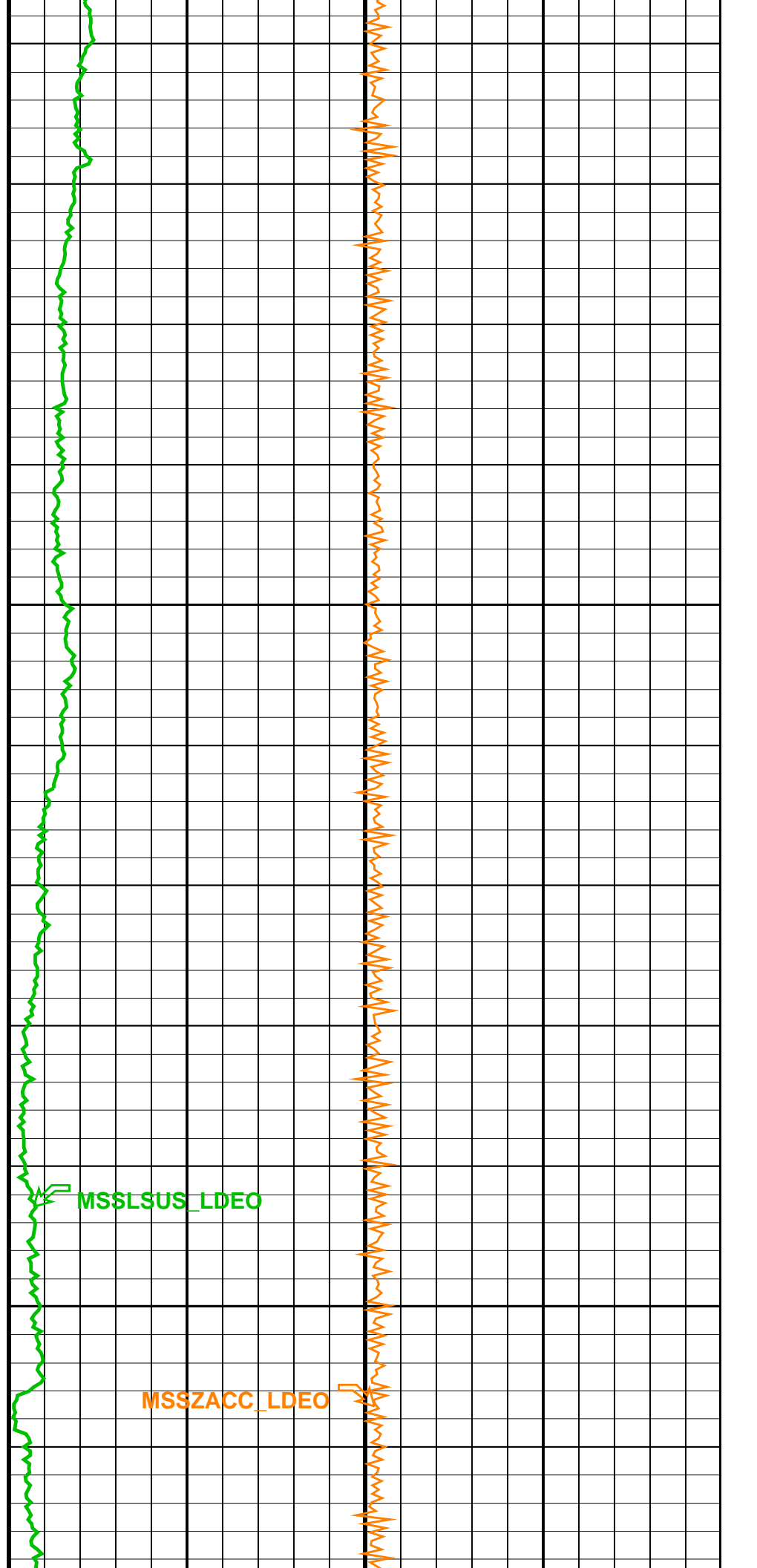
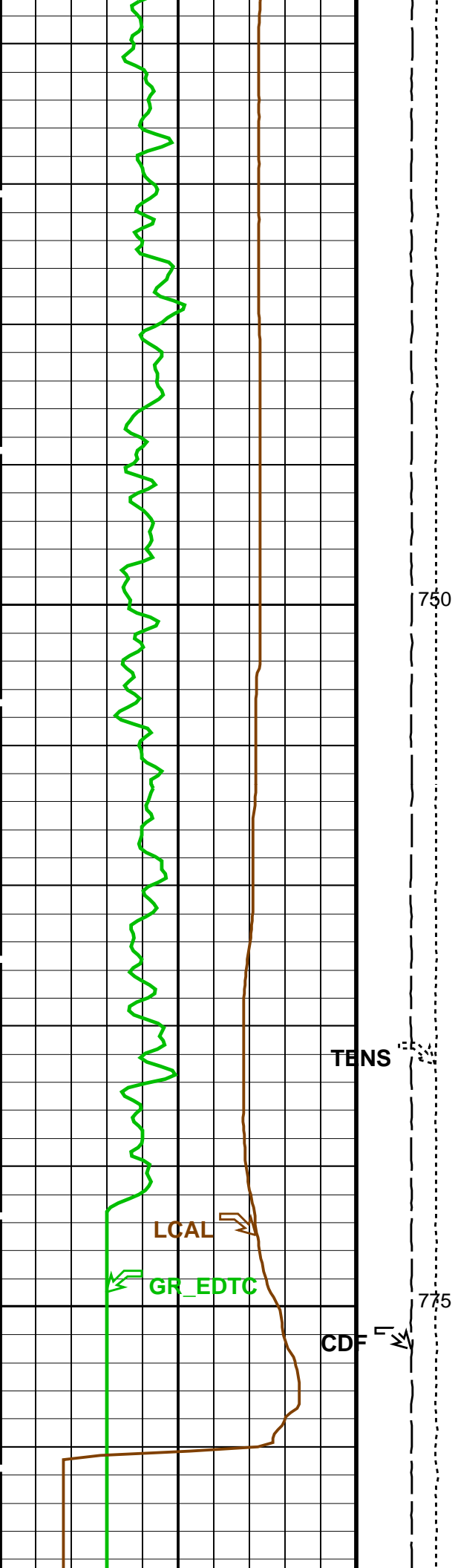
## OP System Version: 19C0-187

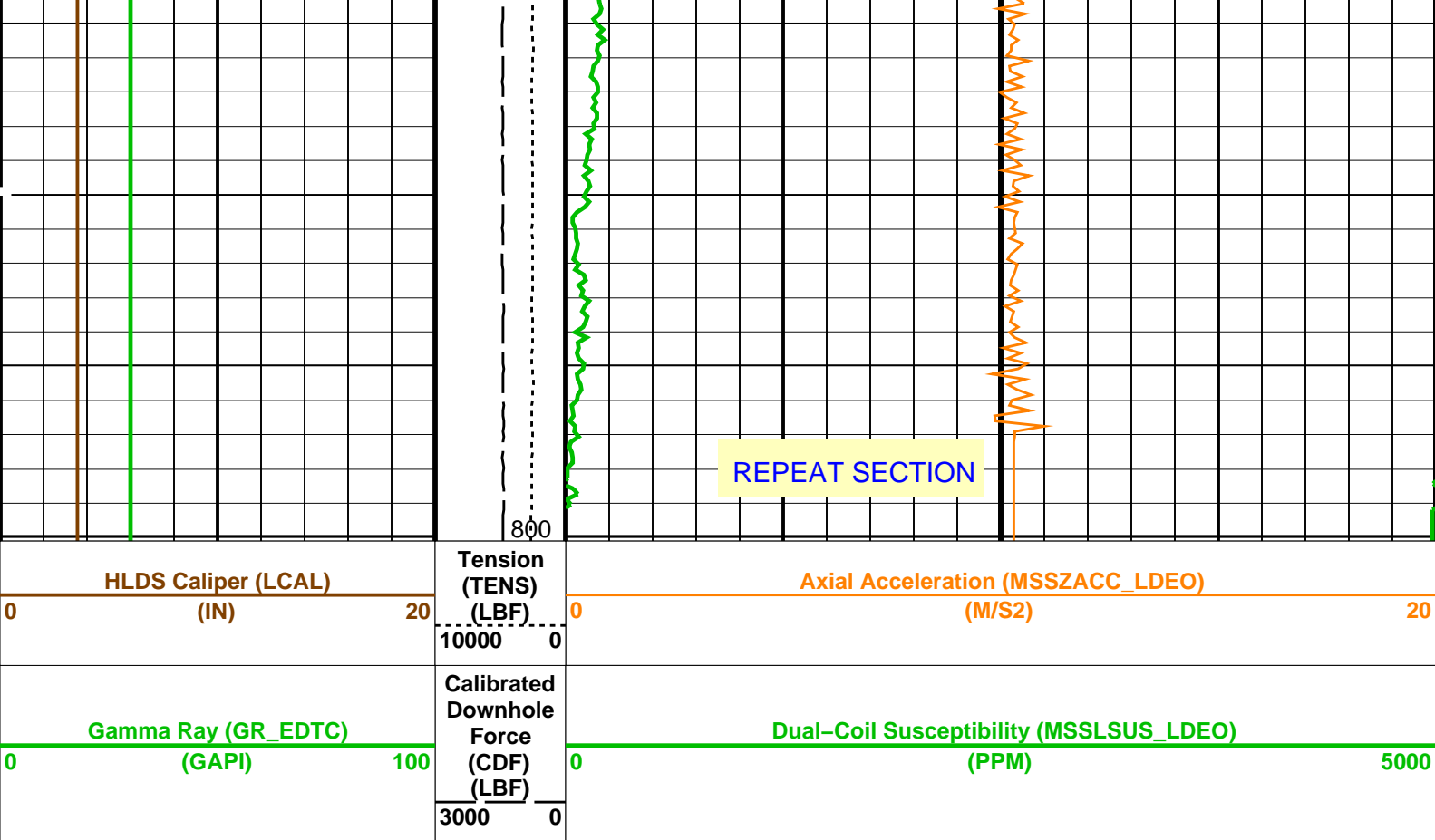
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
HNGC-B	19C0-187	HNGS-BA	19C0-187
EDTC-B	SKK-5169-EDTCB		

### PIP SUMMARY

Time Mark Every 60 S







#### PIP SUMMARY

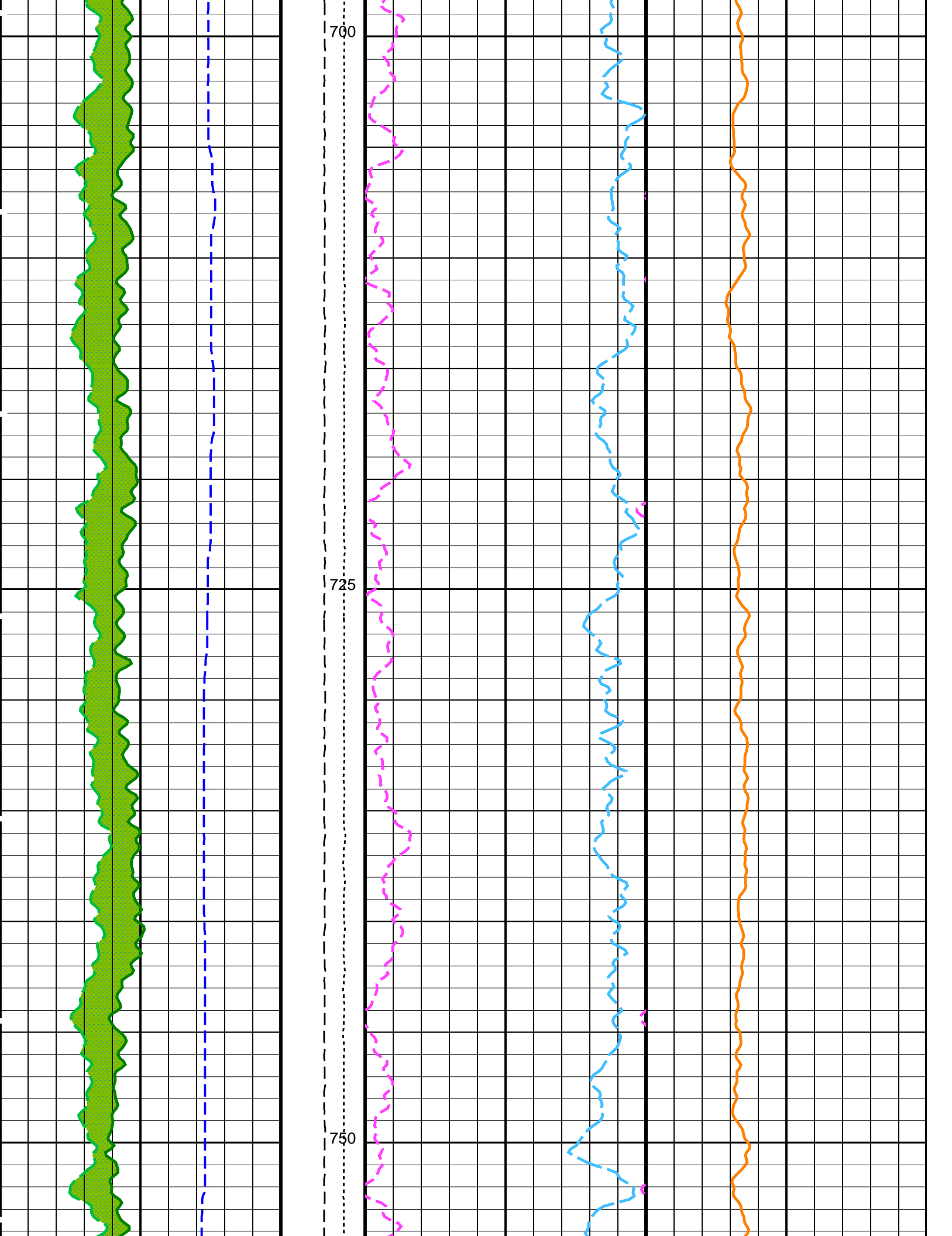
Time Mark Every 60 S

### Parameters

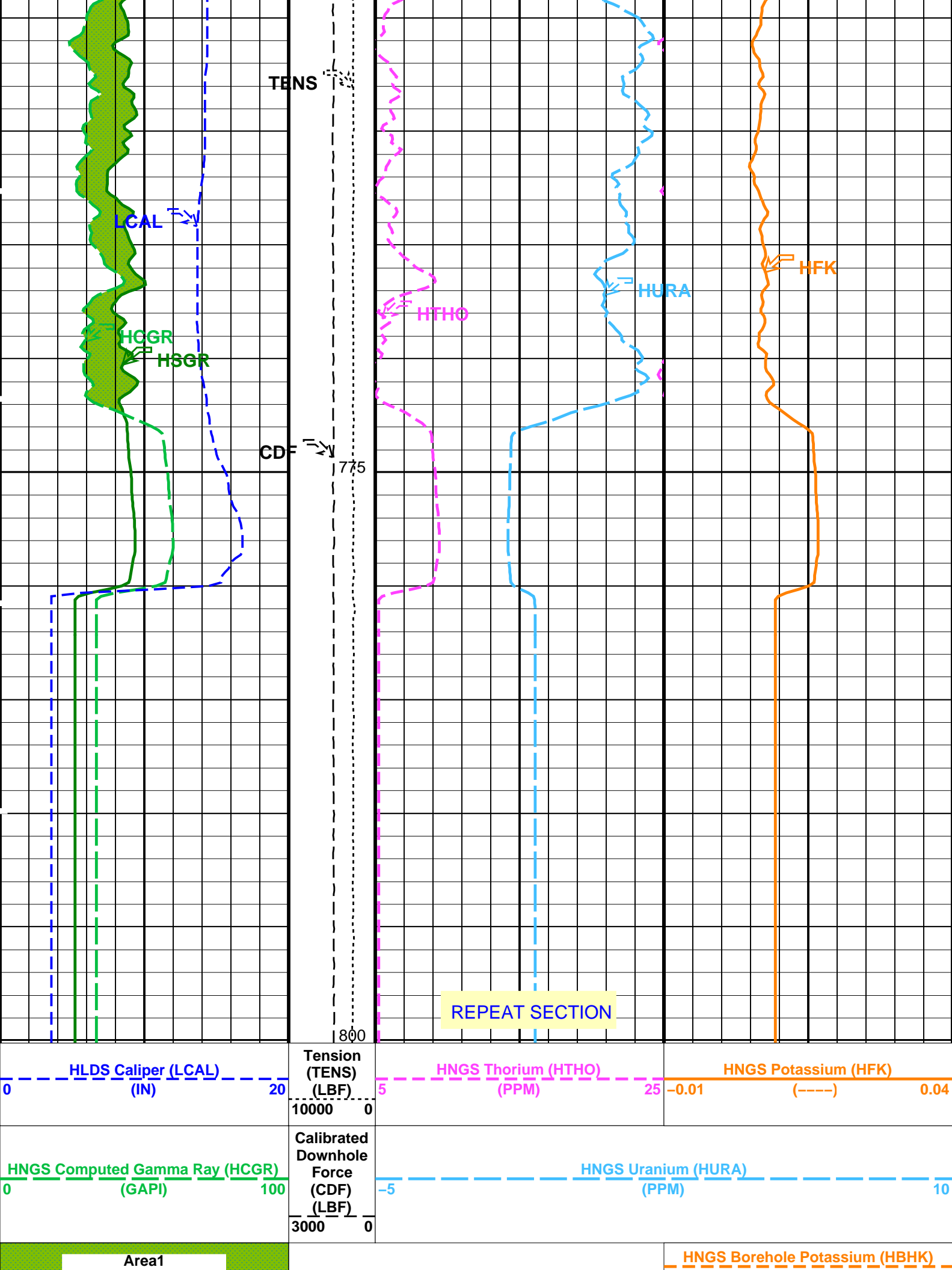
DLIS Name	Description	Value
HRLT-B: High Resolution Laterolog Array - B		
BHS	Borehole Status	OPEN
BHT	Bottom Hole Temperature (used in calculations)	45 DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE
CALTEMP	HRLTB Calibration Temperature	35.1057 DEGC
FREQ0	HRLT Frequency Index for Mode 0	32
FREQ1	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	BARITE
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
PROCMFL	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RXO
PROCMFO	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

CECO	HLDS Mode Loop Short Spacing	AUTO	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
FD	Fluid Density	1	G/C3
LATC	HLDS Activation Correction	ON	
LLDL	HLDS LS Low Level Discriminator DAC	14000	
LLDS	HLDS SS Low Level Discriminator DAC	14000	
LLML	HLDS LS Low Level Discriminator Mode	AUTO	
LLMS	HLDS SS Low Level Discriminator Mode	AUTO	
MDEN	Matrix Density	2.6	G/C3
PHVL	HLDS Long Spacing High Voltage Setting	1000	V
PHVS	HLDS Short Spacing High Voltage Setting	1000	V
PSDL	HLDS LS Pulse Shape Compensation DAC	30000	
PSDS	HLDS SS Pulse Shape Compensation DAC	30000	
PSML	HLDS LS Pulse Shape Compensation Mode	AUTO	
PSMS	HLDS SS Pulse Shape Compensation Mode	AUTO	
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)	45	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	-0.00214312	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGS Processing Enable	YES	
ISSBAR	Barite Mud Switch	BARITE	
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	1.09826	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.982945	
EDTC-B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	45	DEGC
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO	Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	BARITE	
ISSBAR_EDTC	Nuclear Mud Type	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	BARI	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U-ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U-TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
System and Miscellaneous			
ALTDCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	11.438	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	1.32	G/C3
DO	Depth Offset for Playback	-97.0	M









From HCGR to HSGR		-0.05 (-----) 0.05	
HNGS Spectroscopy Gamma Ray (HSGR)			
0	(GAPI)	100	
PIP SUMMARY			
Time Mark Every 60 S			
Parameters			
DLIS Name	Description	Value	
HRLT-B: High Resolution Laterolog Array – B			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
HNGS-BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.00214312	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.09826	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.982945	
EDTC-B: Enhanced DTS Cartridge			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
System and Miscellaneous			
BS	Bit Size	11.438	IN
DO	Depth Offset for Playback	-97.0	M
PP	Playback Processing	NORMAL	
Format: HNGSYields		Vertical Scale: 1:200	
		Graphics File Created: 10-Sep-2015 12:33	
OP System Version: 19C0-187			
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
HNGC-B	19C0-187	HNGS-BA	19C0-187
EDTC-B	SKK-5169-EDTCB		
Input DLIS Files			
DEFAULT	MSS_LDEO_HRLA_LDL_012PUP	FN:20	PRODUCER 03-Sep-2015 17:17 896.1 M 790.3 M
Output DLIS Files			
DEFAULT	MSS_LDEO_HRLA_LDL_036PUP	FN:55	PRODUCER 10-Sep-2015 12:33

Calibration and Check Summary							
Measurement	Nominal	Master	Before	After	Change	Limit	Units
High Resolution Laterolog Array – B Wellsite Calibration – HRLT M01							
Before: 3-Sep-2015 15:06 After: 3-Sep-2015 15:09							
HRLT M0-M1 Voltage Plus – 0	0	N/A	-318.8	-318.8	-0.03586	9.681	UV
HRLT M0-M1 Voltage Plus – 1	0	N/A	-334.3	-334.6	-0.3054	9.681	UV

HRLT M0-M1 Voltage Plus - 0	0	N/A	-341.5	-341.8	-0.2903	9.681	UV
HRLT M0-M1 Voltage Plus - 3	0	N/A	-331.3	-331.6	-0.3107	9.681	UV
HRLT M0-M1 Voltage Plus - 4	0	N/A	-320.4	-320.6	-0.1874	9.681	UV
HRLT M0-M1 Voltage Plus - 5	0	N/A	-322.4	-322.5	-0.08731	9.681	UV
HRLT M0-M1 Voltage Plus - 6	0	N/A	323.8	324.2	0.3701	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: 3-Sep-2015 15:06 After: 3-Sep-2015 15:09

HRLT M1-M2 Voltage Plus - 0	0	N/A	1744	1745	0.2587	53.42	UV
HRLT M1-M2 Voltage Plus - 1	0	N/A	1836	1838	1.741	53.42	UV
HRLT M1-M2 Voltage Plus - 2	0	N/A	1869	1870	1.365	53.42	UV
HRLT M1-M2 Voltage Plus - 3	0	N/A	1811	1812	1.309	53.42	UV
HRLT M1-M2 Voltage Plus - 4	0	N/A	1751	1752	0.9933	53.42	UV
HRLT M1-M2 Voltage Plus - 5	0	N/A	1762	1762	0.1261	53.42	UV
HRLT M1-M2 Voltage Plus - 6	0	N/A	-1787	-1789	-2.140	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: 3-Sep-2015 15:06 After: 3-Sep-2015 15:09

HRLT M2-M3 Voltage Plus - 0	0	N/A	1734	1734	0.3861	53.42	UV
HRLT M2-M3 Voltage Plus - 1	0	N/A	1836	1839	2.162	53.42	UV
HRLT M2-M3 Voltage Plus - 2	0	N/A	1871	1872	1.510	53.42	UV
HRLT M2-M3 Voltage Plus - 3	0	N/A	1817	1818	1.102	53.42	UV
HRLT M2-M3 Voltage Plus - 4	0	N/A	1751	1751	0.8494	53.42	UV
HRLT M2-M3 Voltage Plus - 5	0	N/A	1763	1763	0.1327	53.42	UV
HRLT M2-M3 Voltage Plus - 6	0	N/A	-1776	-1778	-2.459	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: 3-Sep-2015 15:06 After: 3-Sep-2015 15:09

HRLT A3-A4 Voltage Plus - 0	0	N/A	68730	68740	4.391	2100	UV
HRLT A3-A4 Voltage Plus - 1	0	N/A	72600	72680	79.54	2100	UV
HRLT A3-A4 Voltage Plus - 2	0	N/A	74250	74310	59.15	2100	UV
HRLT A3-A4 Voltage Plus - 3	0	N/A	72370	72420	46.30	2100	UV
HRLT A3-A4 Voltage Plus - 4	0	N/A	69700	69740	35.44	2100	UV
HRLT A3-A4 Voltage Plus - 5	0	N/A	70200	70210	7.125	2100	UV
HRLT A3-A4 Voltage Plus - 6	0	N/A	-69210	-69300	-84.95	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: 3-Sep-2015 15:06 After: 3-Sep-2015 15:09

HRLT A4-A5 Voltage Plus - 0	0	N/A	68830	68830	1.883	2100	UV
HRLT A4-A5 Voltage Plus - 1	0	N/A	72810	72890	83.20	2100	UV
HRLT A4-A5 Voltage Plus - 2	0	N/A	74430	74500	61.62	2100	UV
HRLT A4-A5 Voltage Plus - 3	0	N/A	72520	72580	52.37	2100	UV
HRLT A4-A5 Voltage Plus - 4	0	N/A	69810	69840	34.77	2100	UV
HRLT A4-A5 Voltage Plus - 5	0	N/A	70290	70310	17.48	2100	UV
HRLT A4-A5 Voltage Plus - 6	0	N/A	-69420	-69510	-84.95	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: 3-Sep-2015 15:06 After: 3-Sep-2015 15:09

HRLT A5-A6 Voltage Plus - 0	0	N/A	68690	68690	0	2100	UV
HRLT A5-A6 Voltage Plus - 1	0	N/A	72660	72740	79.55	2100	UV
HRLT A5-A6 Voltage Plus - 2	0	N/A	74300	74350	51.76	2100	UV
HRLT A5-A6 Voltage Plus - 3	0	N/A	72400	72440	41.75	2100	UV
HRLT A5-A6 Voltage Plus - 4	0	N/A	69680	69700	26.73	2100	UV
HRLT A5-A6 Voltage Plus - 5	0	N/A	70190	70190	1.945	2100	UV
HRLT A5-A6 Voltage Plus - 6	0	N/A	-69260	-69350	-89.28	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: 3-Sep-2015 15:06 After: 3-Sep-2015 15:09

HRLT Torpedo-M0 Voltage - 0	0	N/A	-68180	-68190	-9.586	2100	UV
HRLT Torpedo-M0 Voltage - 1	0	N/A	-72460	-72540	-73.02	2100	UV
HRLT Torpedo-M0 Voltage - 2	0	N/A	-74130	-74190	-57.88	2100	UV
HRLT Torpedo-M0 Voltage - 3	0	N/A	-72290	-72330	-41.23	2100	UV
HRLT Torpedo-M0 Voltage - 4	0	N/A	-69610	-69650	-42.77	2100	UV
HRLT Torpedo-M0 Voltage - 5	0	N/A	-70110	-70120	-8.648	2100	UV
HRLT Torpedo-M0 Voltage - 6	0	N/A	69020	69120	100.6	2100	UV
HRLT Torpedo-M0 Voltage - 7	0	N/A	-70000	-70000	0	2100	UV

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

Before: 3-Sep-2015 15:06 After: 3-Sep-2015 15:09

HRLT Bridle#9-M0 Voltage - 0	0	N/A	-68210	-68220	-6.594	2100	UV
HRLT Bridle#9-M0 Voltage - 1	0	N/A	-72540	-72630	-81.72	2100	UV
HRLT Bridle#9-M0 Voltage - 2	0	N/A	-74200	-74260	-57.87	2100	UV
HRLT Bridle#9-M0 Voltage - 3	0	N/A	-72360	-72400	-44.84	2100	UV
HRLT Bridle#9-M0 Voltage - 4	0	N/A	-69660	-69690	-32.55	2100	UV
HRLT Bridle#9-M0 Voltage - 5	0	N/A	-70150	-70150	-1.852	2100	UV



Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 1 Check								
Master: 31-Jul-2015 10:01	Before: 5-Aug-2015 7:59	After: 5-Aug-2015 9:23						
Na 511 Peak Loc	40.00	39.69	39.55	39.58	0.02773	1.000		
Na 511 Peak Res	15.50	15.27	16.42	15.01	-1.409	2.000	%	
High Voltage	1150	1084	1083	1085	2.161	N/A	V	
Na 1785 Peak Loc	142.6	143.4	143.2	142.7	-0.5449	7.000		
Na 1785 Peak Res	8.500	8.457	8.664	8.451	-0.2128	2.000	%	
Temperature	15.50	21.65	22.00	22.57	0.5625	N/A	DEGC	
Na Count Rate	45.00	44.18	43.52	42.99	-0.5368	8.000	CPS	
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Ratio Of Detector 1 To Detector 2								
Master: 31-Jul-2015 10:01	Before: 5-Aug-2015 7:59	After: 5-Aug-2015 9:23						
Coincidence Count Rate Ratio	1.000	0.9887	0.9903	0.9926	0.002269	0.05000		
Hostile Natural Gamma Ray Sonde Master Calibration – Detector 1 Calibration								
Master: 31-Jul-2015 9:56								
Na 511 Peak Set Point	40.00	39.00	--	--	--	--		
Th Peak Loc	209.6	206.7	--	--	--	--		
Th Peak Res	7.000	8.351	--	--	--	--	%	
Background Count Rate	142.5	37.67	--	--	--	--	CPS	
Gain Ratio	1.000	1.042	--	--	--	--		
Hostile Natural Gamma Ray Sonde Master Calibration – Detector 2 Calibration								
Master: 31-Jul-2015 9:56								
Na 511 Peak Set Point	40.00	41.00	--	--	--	--		
Th Peak Loc	209.6	211.5	--	--	--	--		
Th Peak Res	7.000	6.877	--	--	--	--	%	
Background Count Rate	142.5	39.84	--	--	--	--	CPS	
Gain Ratio	1.000	1.014	--	--	--	--		
Enhanced DTS Cartridge Wellsite Calibration – EDTC Accelerometer Calibration								
Before: 11-Aug-2015 17:26								
EDTC Z-Axis Acceleration	9.810	N/A	9.852	N/A	N/A	N/A	M/S2	
Enhanced DTS Cartridge Wellsite Calibration – Detector Calibration								
Before: 5-Aug-2015 7:56	After: 5-Aug-2015 9:33							
Gamma Ray (Jig – Bkg)	152.3	N/A	152.3	152.9	0.5175	13.85	GAPI	
Gamma Ray (Calibrated)	164.0	N/A	164.0	164.6	0.5571	15.00	GAPI	














#### High Resolution Laterolog Array – B / Equipment Identification




##### Primary Equipment:

















HRLT Sonde HRLS – B 768















##### Auxiliary Equipment:


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

















High Resolution Laterolog Array – B Wellsite Calibration							
HRLT M01							
Idx	Phase	HRLT M0-M1 Voltage Plus UV	Value	Nominal	Maximum	Minimum	
0	Before		-318.8	-322.7	-280.7	-379.7	
	After		-318.8				
1	Before		-334.3	-322.7	-280.7	-379.7	
	After		-334.6				
2	Before		-341.5	-322.7	-280.7	-379.7	
	After		-341.8				
3	Before		-331.3	-322.7	-280.7	-379.7	
	After		-331.6				
4	Before		-320.4	-322.7	-280.7	-379.7	
	After		-320.6				
5	Before		-322.4	-322.7	-280.7	-379.7	
	After		-322.5				
	Before		323.8				

















6	After		324.2	322.7	379.7	280.7
7	Before		-322.7	-322.7	-280.7	-379.7
	After		-322.7			
(Minimum) (Nominal) (Maximum)						
Before: 3-Sep-2015 15:06						
After: 3-Sep-2015 15:09						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT M12						
Idx	Phase	HRLT M1–M2 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1744	1781	2095	1549
	After		1745			
1	Before		1836	1781	2095	1549
	After		1838			
2	Before		1869	1781	2095	1549
	After		1870			
3	Before		1811	1781	2095	1549
	After		1812			
4	Before		1751	1781	2095	1549
	After		1752			
5	Before		1762	1781	2095	1549
	After		1762			
6	Before		-1787	-1781	-1549	-2095
	After		-1789			
7	Before		1781	1781	2095	1549
	After		1781			
(Minimum) (Nominal) (Maximum)						
Before: 3-Sep-2015 15:06						
After: 3-Sep-2015 15:09						

















High Resolution Laterolog Array – B Wellsite Calibration						
HRLT M23						
Idx	Phase	HRLT M2–M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1734	1781	2095	1549
	After		1734			
1	Before		1836	1781	2095	1549
	After		1839			
2	Before		1871	1781	2095	1549
	After		1872			
3	Before		1817	1781	2095	1549
	After		1818			
4	Before		1751	1781	2095	1549
	After		1751			
5	Before		1763	1781	2095	1549
	After		1763			
6	Before		-1776	-1781	-1549	-2095
	After		-1778			
	Before		1781			

7	After		1781	1781	2095	1549
(Minimum) (Nominal) (Maximum)						
Before: 3-Sep-2015 15:06						
After: 3-Sep-2015 15:09						

















High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V34						
Idx	Phase	HRLT A3–A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68730	70000	82360	60900
	After		68740			
1	Before		72600	70000	82360	60900
	After		72680			
2	Before		74250	70000	82360	60900
	After		74310			
3	Before		72370	70000	82360	60900
	After		72420			
4	Before		69700	70000	82360	60900
	After		69740			
5	Before		70200	70000	82360	60900
	After		70210			
6	Before		-69210	-70000	-60900	-82360
	After		-69300			
7	Before		70000	70000	82360	60900
	After		70000			
(Minimum) (Nominal) (Maximum)						
Before: 3-Sep-2015 15:06						
After: 3-Sep-2015 15:09						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V45						
Idx	Phase	HRLT A4–A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68830	70000	82360	60900
	After		68830			
1	Before		72810	70000	82360	60900
	After		72890			
2	Before		74430	70000	82360	60900
	After		74500			
3	Before		72520	70000	82360	60900
	After		72580			
4	Before		69810	70000	82360	60900
	After		69840			
5	Before		70290	70000	82360	60900
	After		70310			
6	Before		-69420	-70000	-60900	-82360
	After		-69510			
7	Before		70000	70000	82360	60900
	After		70000			
(Minimum) (Nominal) (Maximum)						

(Minimum)	(Nominal)	(Maximum)
Before: 3-Sep-2015 15:06		
After: 3-Sep-2015 15:09		

















High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V56						
Idx	Phase	HRLT A5–A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68690	70000	82360	60900
	After		68690			
1	Before		72660	70000	82360	60900
	After		72740			
2	Before		74300	70000	82360	60900
	After		74350			
3	Before		72400	70000	82360	60900
	After		72440			
4	Before		69680	70000	82360	60900
	After		69700			
5	Before		70190	70000	82360	60900
	After		70190			
6	Before		-69260	-70000	-60900	-82360
	After		-69350			
7	Before		70000	70000	82360	60900
	After		70000			
(Minimum) (Nominal) (Maximum)						

















Before: 3-Sep-2015 15:06		
After: 3-Sep-2015 15:09		

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT VTP						
Idx	Phase	HRLT Torpedo–M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-68180	-70000	-60900	-82360
	After		-68190			
1	Before		-72460	-70000	-60900	-82360
	After		-72540			
2	Before		-74130	-70000	-60900	-82360
	After		-74190			
3	Before		-72290	-70000	-60900	-82360
	After		-72330			
4	Before		-69610	-70000	-60900	-82360
	After		-69650			
5	Before		-70110	-70000	-60900	-82360
	After		-70120			
6	Before		69020	70000	82360	60900
	After		69120			
7	Before		-70000	-70000	-60900	-82360
	After		-70000			
(Minimum) (Nominal) (Maximum)						

Before: 3-Sep-2015 15:06		
After: 3-Sep-2015 15:09		



High Resolution Laterolog Array – B Wellsite Calibration							
HRLT VBD							
Idx	Phase	HRLT Bridge#9–M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum	
0	Before		–68210	–70000	–60900	–82360	
	After		–68220				
1	Before		–72540	–70000	–60900	–82360	
	After		–72630				
2	Before		–74200	–70000	–60900	–82360	
	After		–74260				
3	Before		–72360	–70000	–60900	–82360	
	After		–72400				
4	Before		–69660	–70000	–60900	–82360	
	After		–69690				
5	Before		–70150	–70000	–60900	–82360	
	After		–70150				
6	Before		69110	70000	82360	60900	
	After		69200				
7	Before		–70000	–70000	–60900	–82360	
	After		–70000				
(Minimum) (Nominal) (Maximum)							
Before: 3–Sep–2015 15:06							
After: 3–Sep–2015 15:09							

High Resolution Laterolog Array – B Wellsite Calibration							
HRLT ISO							
Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum	
0	Before		284.5	284.0	334.1	247.0	
	After		284.5				
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: 3–Sep–2015 15:06							
After: 3–Sep–2015 15:09							

High Resolution Laterolog Array – B Wellsite Calibration							
HRLT MV							
Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum	

dx	Phase	HRLI Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-320.7	-322.7	-280.7	-379.7
	After		-320.7			
1	Before		-329.1	-322.7	-280.7	-379.7
	After		-329.4			
2	Before		-335.0	-322.7	-280.7	-379.7
	After		-335.2			
3	Before		-323.1	-322.7	-280.7	-379.7
	After		-323.4			
4	Before		-309.6	-322.7	-280.7	-379.7
	After		-309.8			
5	Before		-326.5	-322.7	-280.7	-379.7
	After		-326.5			
6	Before		331.6	322.7	379.7	280.7
	After		331.9			
7	Before		-322.7	-322.7	-280.7	-379.7
	After		-322.7			
		(Minimum) (Nominal) (Maximum)				
Before: 3-Sep-2015 15:06						
After: 3-Sep-2015 15:09						

#### Hostile Litho-Density Sonde / Equipment Identification

##### Primary Equipment:

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

HLDS - D 45  
HLDV - D 45  
GSR - Z 8113

##### Auxiliary Equipment:

Hostile Litho Density Pad  
Hostile Litho Density High Voltage Housi

HLDP - C 45  
HEH - H 47

Hostile Litho-Density Sonde Wellsite Calibration																
Background Measurement																
Phase	SS Cs Resolution Bkg %		Value	Phase	LS Cs Resolution Bkg %		Value	Phase	LSW1 Background CPS		Value					
Master	<div><div></div></div>		8.017	Master	<div><div></div></div>		8.170	Master	<div><div></div></div>		68.33					
Before	<div><div></div></div>		8.041	Before	<div><div></div></div>		8.234	Before	<div><div></div></div>		66.79					
After	<div><div></div></div>		7.919	After	<div><div></div></div>		8.157	After	<div><div></div></div>		67.33					
7.000 (Minimum)			9.000 (Nominal)	11.00 (Maximum)			7.000 (Minimum)			9.000 (Nominal)	11.00 (Maximum)	55.00 (Minimum)			100.0 (Nominal)	150.0 (Maximum)
Phase	LSW2 Background CPS		Value	Phase	LSW3 Background CPS		Value	Phase	LSW4 Background CPS		Value					
Master	<div><div></div></div>		63.65	Master	<div><div></div></div>		137.7	Master	<div><div></div></div>		169.1					
Before	<div><div></div></div>		61.90	Before	<div><div></div></div>		137.8	Before	<div><div></div></div>		167.9					
After	<div><div></div></div>		61.96	After	<div><div></div></div>		137.2	After	<div><div></div></div>		168.5					
50.00 (Minimum)			100.0 (Nominal)	140.0 (Maximum)			110.0 (Minimum)			200.0 (Nominal)	290.0 (Maximum)	140.0 (Minimum)			250.0 (Nominal)	360.0 (Maximum)
Phase	LSW5 Background CPS		Value	Phase	SSW1 Background CPS		Value	Phase	SSW2 Background CPS		Value					
Master	<div><div></div></div>		386.6	Master	<div><div></div></div>		76.45	Master	<div><div></div></div>		136.4					
Before	<div><div></div></div>		382.9	Before	<div><div></div></div>		75.80	Before	<div><div></div></div>		135.3					
After	<div><div></div></div>		383.4	After	<div><div></div></div>		75.94	After	<div><div></div></div>		137.6					
330.0 (Minimum)			600.0 (Nominal)	830.0 (Maximum)			55.00 (Minimum)			100.0 (Nominal)	150.0 (Maximum)	100.0 (Minimum)			200.0 (Nominal)	260.0 (Maximum)
Phase	SSW3 Background CPS		Value	Phase	SSW4 Background CPS		Value	Phase	SSW5 Background CPS		Value					
Master	<div><div></div></div>		362.4	Master	<div><div></div></div>		190.8	Master	<div><div></div></div>		138.4					

Hostile Litho—Density Sonde Master Calibration																	
Detector Background Measurement																	
Phase	LSW1 Background CPS			Value	Phase	LSW2 Background CPS			Value	Phase	LSW3 Background CPS			Value			
Master	<div><div></div></div>			68.33	Master	<div><div></div></div>			63.65	Master	<div><div></div></div>			137.7			
55.00 (Minimum)				100.0 (Nominal)	150.0 (Maximum)	50.00 (Minimum)				100.0 (Nominal)	140.0 (Maximum)	110.0 (Minimum)				200.0 (Nominal)	290.0 (Maximum)
Phase	LSW4 Background CPS			Value	Phase	LSW5 Background CPS			Value	Phase	LS Cs Resolution Bkg %			Value			
Master	<div><div></div></div>			169.1	Master	<div><div></div></div>			386.6	Master	<div><div></div></div>			8.170			
140.0 (Minimum)				250.0 (Nominal)	360.0 (Maximum)	330.0 (Minimum)				600.0 (Nominal)	830.0 (Maximum)	7.000 (Minimum)				9.000 (Nominal)	11.00 (Maximum)
Phase	SSW1 Background CPS			Value	Phase	SSW2 Background CPS			Value	Phase	SSW3 Background CPS			Value			
Master	<div><div></div></div>			76.45	Master	<div><div></div></div>			136.4	Master	<div><div></div></div>			362.4			
55.00 (Minimum)				100.0 (Nominal)	150.0 (Maximum)	100.0 (Minimum)				200.0 (Nominal)	260.0 (Maximum)	280.0 (Minimum)				500.0 (Nominal)	700.0 (Maximum)
Phase	SSW4 Background CPS			Value	Phase	SSW5 Background CPS			Value	Phase	SS Cs Resolution Bkg %			Value			
Master	<div><div></div></div>			190.8	Master	<div><div></div></div>			138.4	Master	<div><div></div></div>			8.017			
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: 3—Aug—2015 21:03																	

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	<div><div></div></div>			344.5	Master	<div><div></div></div>			588.5	Master	<div><div></div></div>			781.6			
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><div></div></div>			405.5	Master	<div><div></div></div>			370.3	Master	<div><div></div></div>			1732			
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><div></div></div>			5346	Master	<div><div></div></div>			8101	Master	<div><div></div></div>			3320			
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><div>EXCEEDS LIMIT</div></div>			398.5													
420.0 (Minimum)				580.0 (Nominal)											680.0 (Maximum)		


Master: 3-Aug-2015 21:34






















LDSC Housing	LDSC - A	319
--------------	----------	-----




HNGC Housing	HNGH – A	380
--------------	----------	-----

Gamma Source Radioactive	GSR – U	616008
--------------------------	---------	--------

Before		43.37
--------	--	-------

After		42.72
10.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)
Master: 31-Jul-2015 10:01		
Before: 5-Aug-2015 7:59		
After: 5-Aug-2015 9:23		

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				39.69	Master				15.27	Master				1084
Before				39.55	Before				16.42	Before				1083
After				39.58	After				15.01	After				1085
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				143.4	Master				8.457	Master				21.65
Before				143.2	Before				8.664	Before				22.00
After				142.7	After				8.451	After				22.57
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				44.18										
Before				43.52										
After				42.99										
10.00 (Minimum)      45.00 (Nominal)      100.0 (Maximum)														
Master: 31-Jul-2015 10:01				Before: 5-Aug-2015 7:59				After: 5-Aug-2015 9:23						

Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		0.9887
Before		0.9903
After		0.9926
0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)
Master: 31-Jul-2015 10:01		
Before: 5-Aug-2015 7:59		
After: 5-Aug-2015 9:23		

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>			39.00	Master	<div><div></div></div>			206.7	Master	<div><div></div></div>			8.351
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>			37.67	Master	<div><div></div></div>			1.042					
10.00 (Minimum)      142.5 (Nominal)      265.0 (Maximum)					0.9400 (Minimum)      1.000 (Nominal)      1.060 (Maximum)									
Master: 31-Jul-2015 9:56														

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>		211.5	Master	<div><div></div></div>		6.877
	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>		39.84	Master	<div><div></div></div>		1.014				
	10.00 (Minimum)	142.5 (Nominal)	265.0 (Maximum)		0.9400 (Minimum)	1.000 (Nominal)	1.060 (Maximum)				

# Enhanced DTS Cartridge / Equipment Identification

## Primary Equipment:

EDTC Gamma Ray Detector  
Enhanced DTS Cartridge

EDTG – A/B 8305  
EDTC – B 8317


## Auxiliary Equipment:

EDTC Housing

EDTH – B 8303

## Enhanced DTS Cartridge Wellsite Calibration

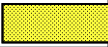


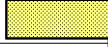


### EDTC Accelerometer Calibration

Phase	EDTC Z-Axis Acceleration M/S2	Value
Before		9.852
	9.610 (Minimum) 9.810 (Nominal) 10.01 (Maximum)	

Before: 11-Aug-2015 17:26

## Enhanced DTS Cartridge Wellsite Calibration

### Detector Calibration

Phase	Gamma Ray Background GAPI	Value	Phase	Gamma Ray (Jig – Bkg) GAPI	Value	Phase	Gamma Ray (Calibrated) GAPI	Value
Before		9.594	Before		152.3	Before		164.0
After		10.26	After		152.9	After		164.6
	0 (Minimum) 30.00 (Nominal) 120.0 (Maximum)			138.5 (Minimum) 152.3 (Nominal) 166.2 (Maximum)			149.0 (Minimum) 164.0 (Nominal) 179.0 (Maximum)	

Before: 5-Aug-2015 7:56

After: 5-Aug-2015 9:33

Company: **International Ocean Discovery Program**

**Schlumberger**

Well: **Expedition 356, Site U1462 A**

Field: **Indonesian Throughflow**

Rig: **JOIDES Resolution**

Ocean: **Indian**

High Resolution Laterolog Array (HRLA)

Caliper

Magnetic Susceptibility (MSS), (HNGS)