

DISCLAIMER

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OTHER SERVICES1
 OS1: FMS/DSI
 OS2: VSI
 OS3:
 OS4:
 OS5:

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

REMARKS: RUN NUMBER 1
 Hole drilled with RCB coring bit and bottom hole assembly (BHA). 9.875" BS
 Drill pipe set at 87m for wireline logging.
 Downlog run with corrections computed using bit size; uplogs corrected for actual hole size using caliper.
 Uplog was cut short due to tool getting stuck and fished out. No further logs available. Flipped downlog presented without open caliper.
 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 27.7 degC.

REMARKS: RUN NUMBER 2

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

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





EQUIPMENT DESCRIPTION

RUN 1

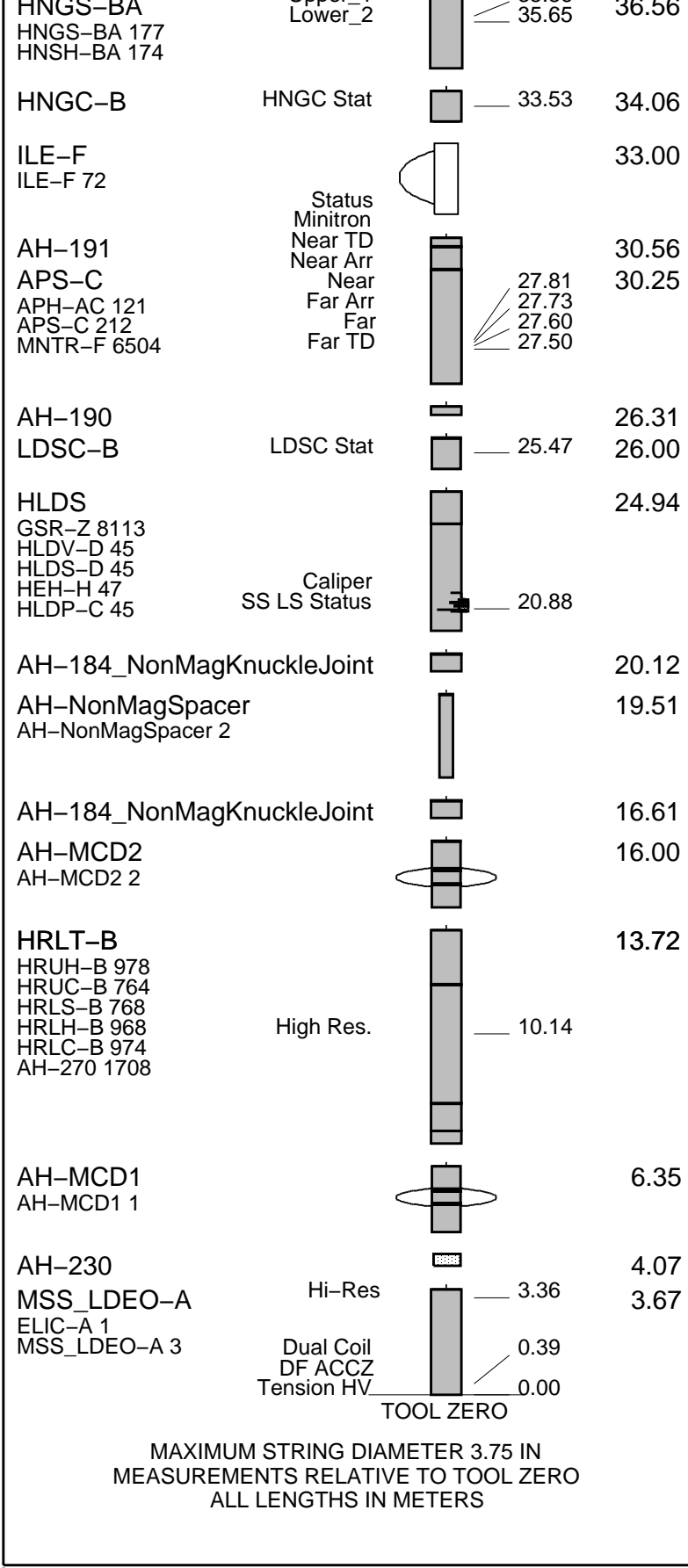
SURFACE EQUIPMENT

SFT-281 1
 SFT-178 1
 GSR-U 616008
 WITM (EDTS)-A

DOWNHOLE EQUIPMENT

LEH-QT	MDSB_EDTC		38.54	39.87
	Mud Tempe		37.48	
AH-369	CTEM		36.91	38.98
EDTC-B	Gamma Ray			
EDTH-B 8303	EFTB DIAG		36.56	38.54
EDTC-B 8317	TelStatus			
	EDTCB Ele		35.86	
	Upper 1		35.86	

RUN 2



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

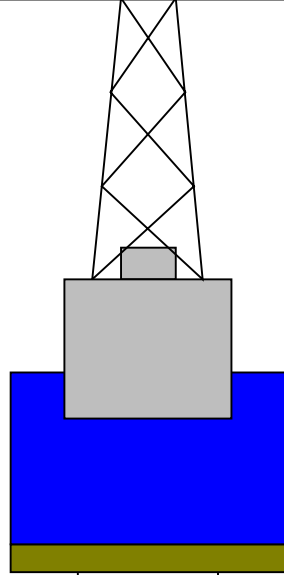
Kelly Bushing Elevation
Derrick Floor Elevation

Mean Sea Level

-275.3

-275.3

-264.3



4.1



0

87

840

4.1

9.875

Sea Floor

Open Hole

Total Depth

Input DLIS Files

DEFAULT MSS_LDEO_HRLA_LDL_008LUP FN:11 PRODUCER 23-Sep-2015 02:58 1058.4 M 891.5 M

Output DLIS Files

DEFAULT MSS_LDEO_HRLA_LDL_015PUP FN:17 PRODUCER 28-Sep-2015 11:44 782.6 M 614.3 M

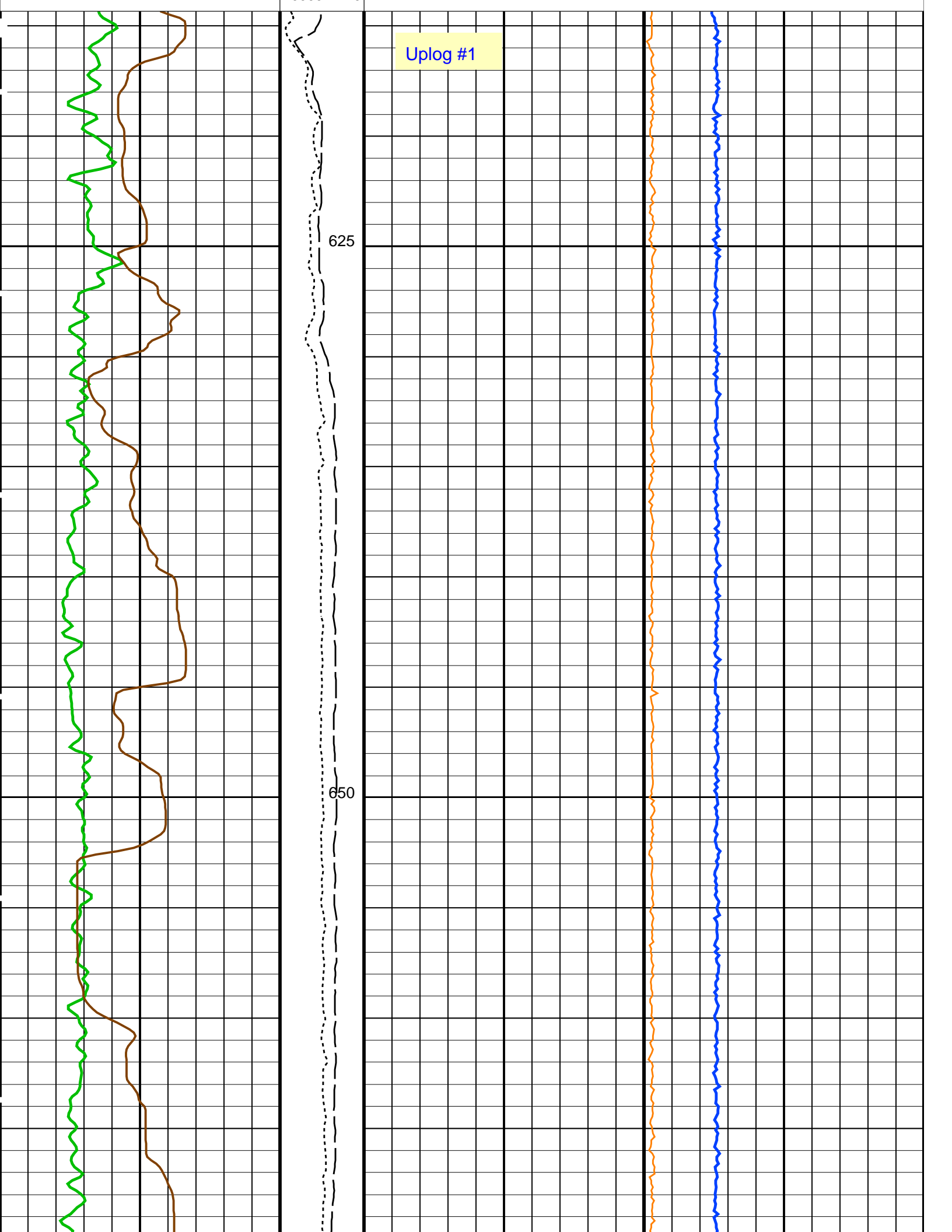
OP System Version: 19C0-187

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	EDTC-B	SKK-5169-EDTCB

PIP SUMMARY

Time Mark Every 60 S

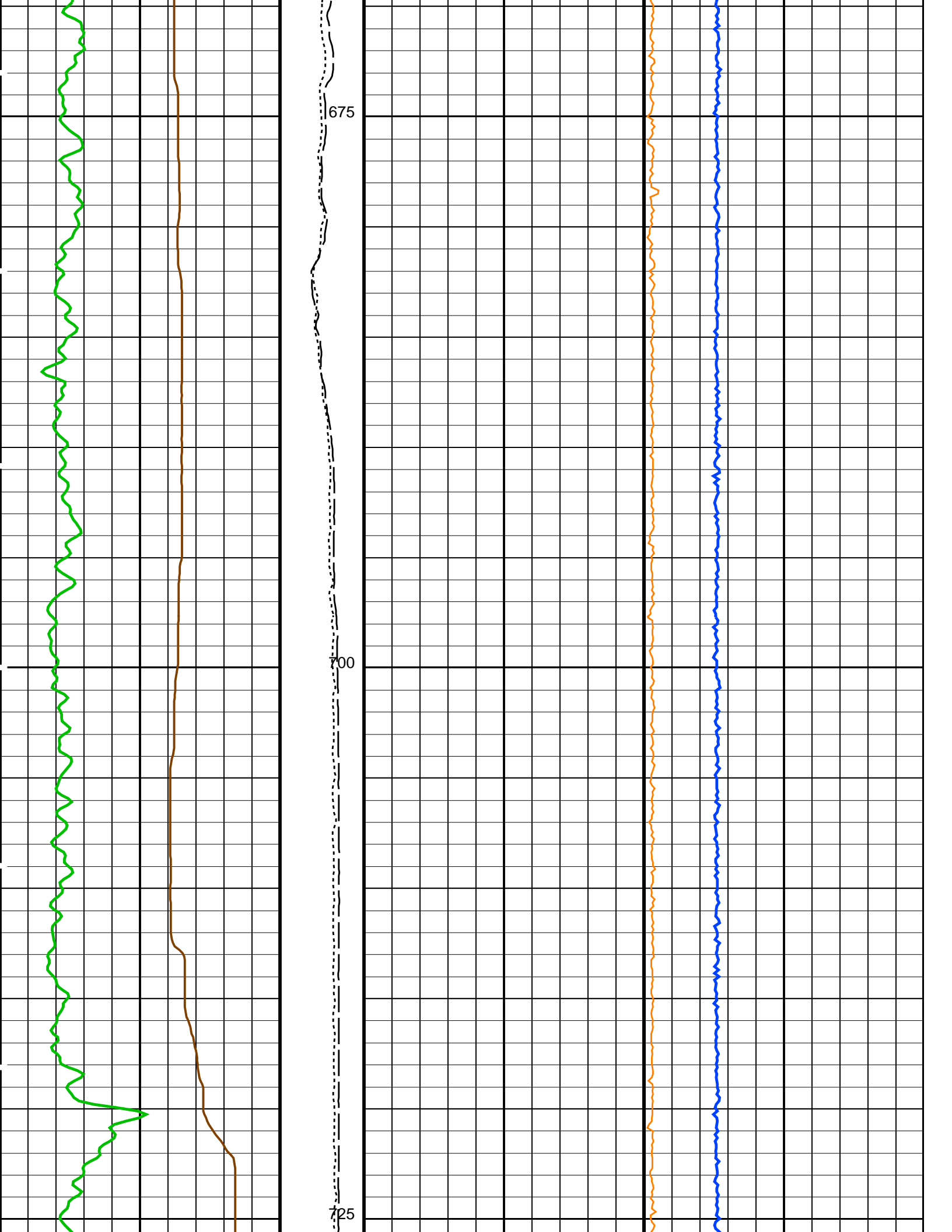
<p style="color: green; text-align: center;">Gamma Ray (GR_EDTC)</p> <p style="text-align: center;">0 (GAPI) 100</p>	<p>Calibrated Downhole Force (CDF) (LBF)</p> <p>5000 0</p>	<p style="color: blue; text-align: center;">Dual-Coil Susceptibility (MSSLSUS_LDEO)</p> <p style="text-align: center;">0 (PPM) 5000</p>
<p style="color: orange; text-align: center;">HLDS Caliper (LCAL)</p> <p style="text-align: center;">0 (IN) 20</p>	<p>Tension (TENS) (LBF)</p> <p>10000 0</p>	<p style="color: orange; text-align: center;">Axial Acceleration (MSSZACC_LDEO)</p> <p style="text-align: center;">0 (M/S2) 20</p>

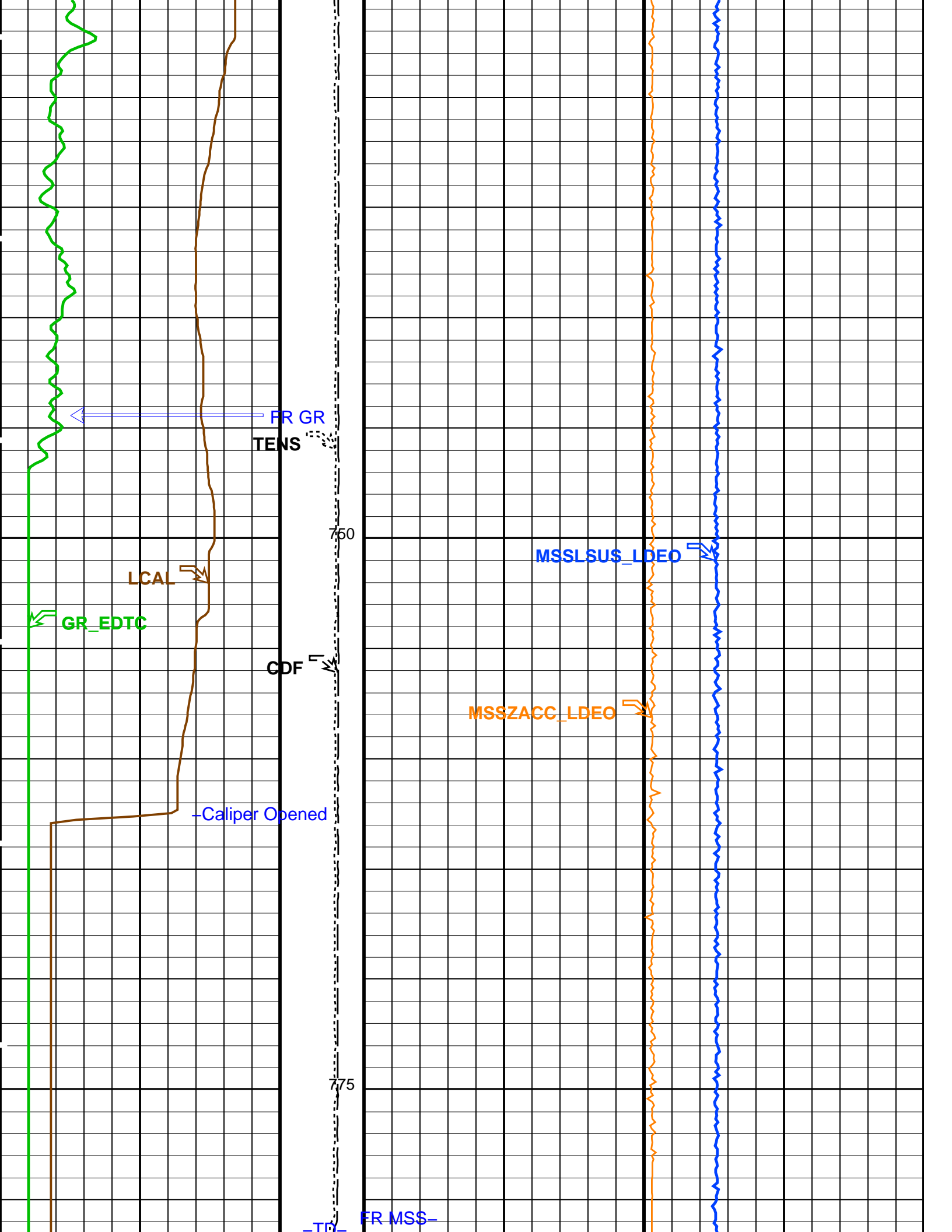


Uplog #1

625

650





HLDS Caliper (LCAL) 0 (IN) 20		Tension (TENS) (LBF) 10000 0	Axial Acceleration (MSSZACC_LDEO) 0 (M/S2) 20	
Gamma Ray (GR_EDTC) 0 (GAPI) 100		Calibrated Downhole Force (CDF) (LBF) 5000 0	Dual-Coil Susceptibility (MSSLSUS_LDEO) 0 (PPM) 5000	

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)	30	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	24.8518	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	AUTO	
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO	
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO	
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO	
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO	
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO	
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PROGINV	Inversion Selection	ON	
PROCMFL	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCSPO	Sonde Position	Centered	
SHT	Surface Hole Temperature	20	DEGC
HLDS: Hostile Litho-Density Sonde			
CLCL	HLDS LS Control Loop Controller Mode	AUTO_DEFAULT	
CLCS	HLDS SS Control Loop Controller Mode	AUTO_DEFAULT	
CLLS	HLDS Mode Loop Long Spacing	AUTO	
CLSS	HLDS Mode Loop Short Spacing	AUTO	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
FD	Fluid Density	1	G/C3
LATC	HLDS Activation Correction	ON	
LLDL	HLDS LS Low Level Discriminator DAC	14000	
LLDS	HLDS SS Low Level Discriminator DAC	14000	
LLML	HLDS LS Low Level Discriminator Mode	AUTO	
LLMS	HLDS SS Low Level Discriminator Mode	AUTO	
MDEN	Matrix Density	2.6	G/C3
PHVL	HLDS Long Spacing High Voltage Setting	1000	V
PHVS	HLDS Short Spacing High Voltage Setting	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	
APS-C: Accelerator-Porosity Tool			
AASD	APS Software Version	0	
ADSO	APS Thermal and Array Detectors High Voltage Setting	1938.41	V
AFSD	APS Array Detectors Data Source Switch	Both	
AHCS	APS Far Detector High Voltage Setting	2034.64	V
AHSC	APS Holesize Correction Source	GCSE	
AHSS	APS Holesize Correction Switch	ON	

AMTY	APS Environmental Correction Mud Type	WaterBaseBarite	
ANSD	APS Near Detector High Voltage Setting	1700.34	V
ASOS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	OFF	
BHFL_APS	APS TNPH Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	30	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	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO_APS	APS TNPH Mud Cake Correction Option	NO	
MCOR_APS	APS TNPH Mud Correction	BARI	
MWCO_APS	APS TNPH Mud Weight Correction Option	YES	
NARC	APS Near/Array Calibration Ratio	1.0863	
NFRC	APS Near/Far Calibration Ratio	0.97772	
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)	30	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	-0.0011779	
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	1.17045	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.977099	
EDTC-B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	30	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

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			
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	1.32	G/C3
DO	Depth Offset for Playback	-276.0	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	1120	M
TDD	Total Depth - Driller	1115.30	M
TDL	Total Depth - Logger	1120.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: MSS_Logging Vertical Scale: 1:200 Graphics File Created: 28-Sep-2015 11:44

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	EDTC-B	SKK-5169-EDTCB

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_008LUP	FN:11	PRODUCER	23-Sep-2015 02:58	1058.4 M	891.5 M
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Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_015PUP	FN:17	PRODUCER	28-Sep-2015 11:44		
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Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_008LUP	FN:11	PRODUCER	23-Sep-2015 02:58	1058.4 M	891.5 M
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Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_015PUP	FN:17	PRODUCER	28-Sep-2015 11:44	782.6 M	614.3 M
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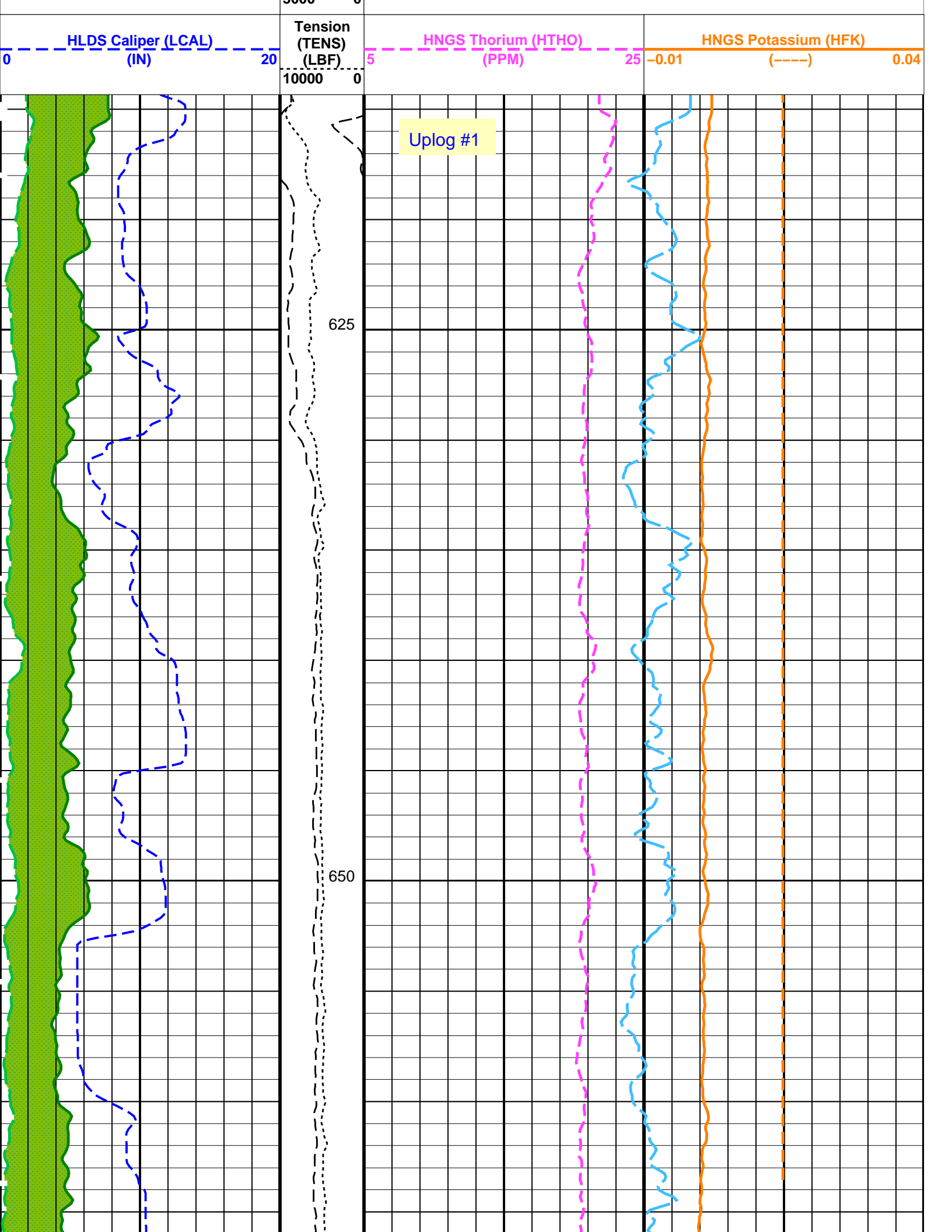
OP System Version: 19C0-187

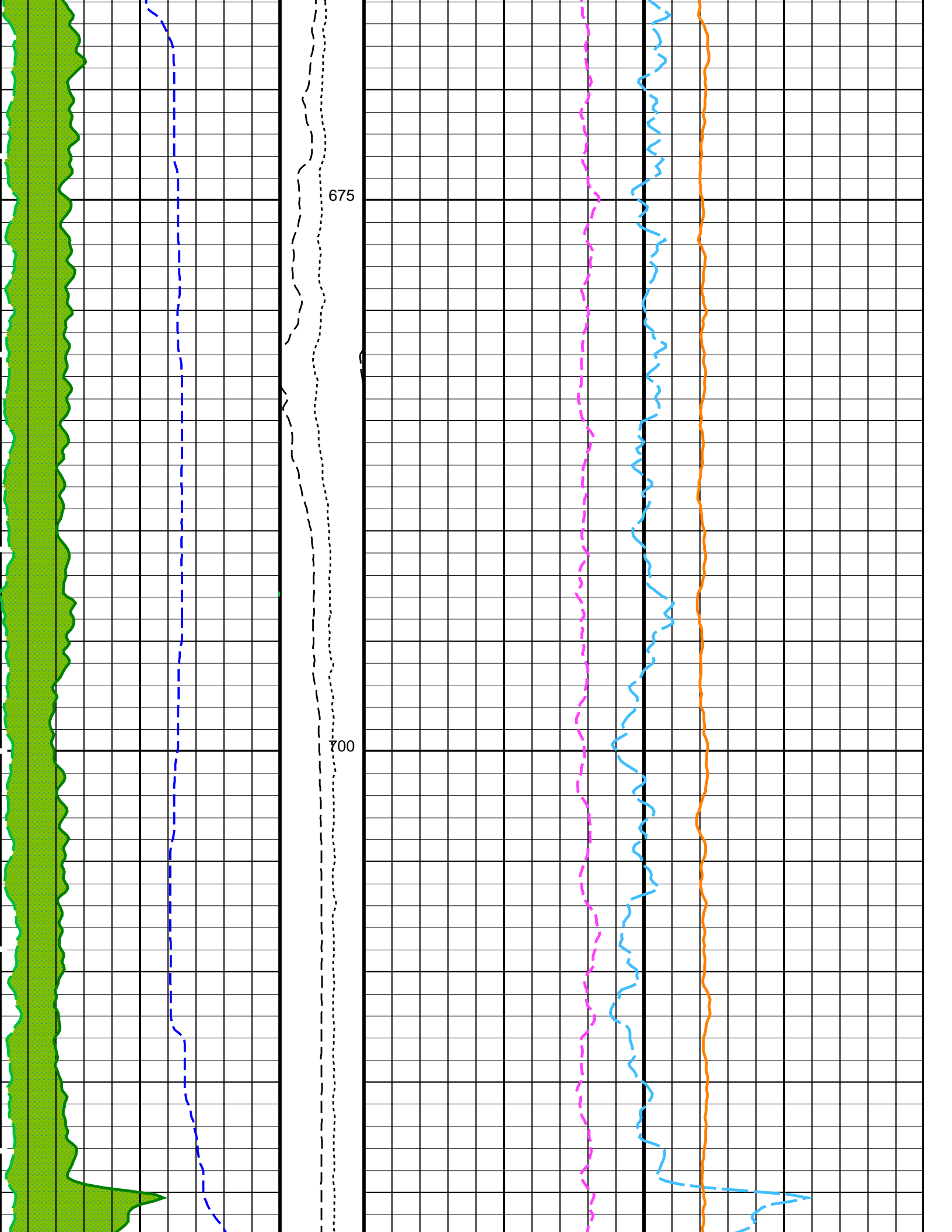
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HLDS	19C0-187	LDSC-B	19C0-187
APS-C	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	EDTC-B	SKK-5169-EDTCB

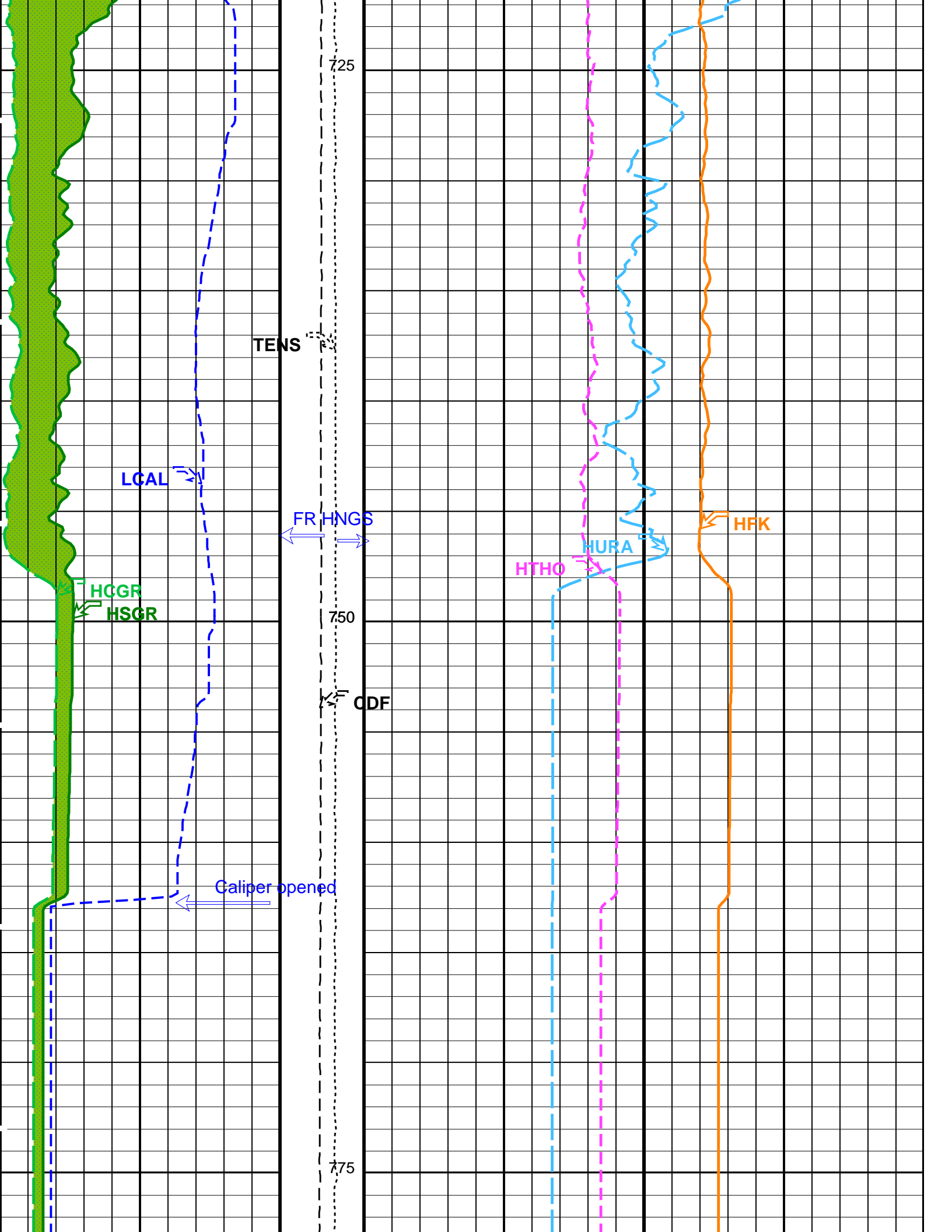
PIP SUMMARY

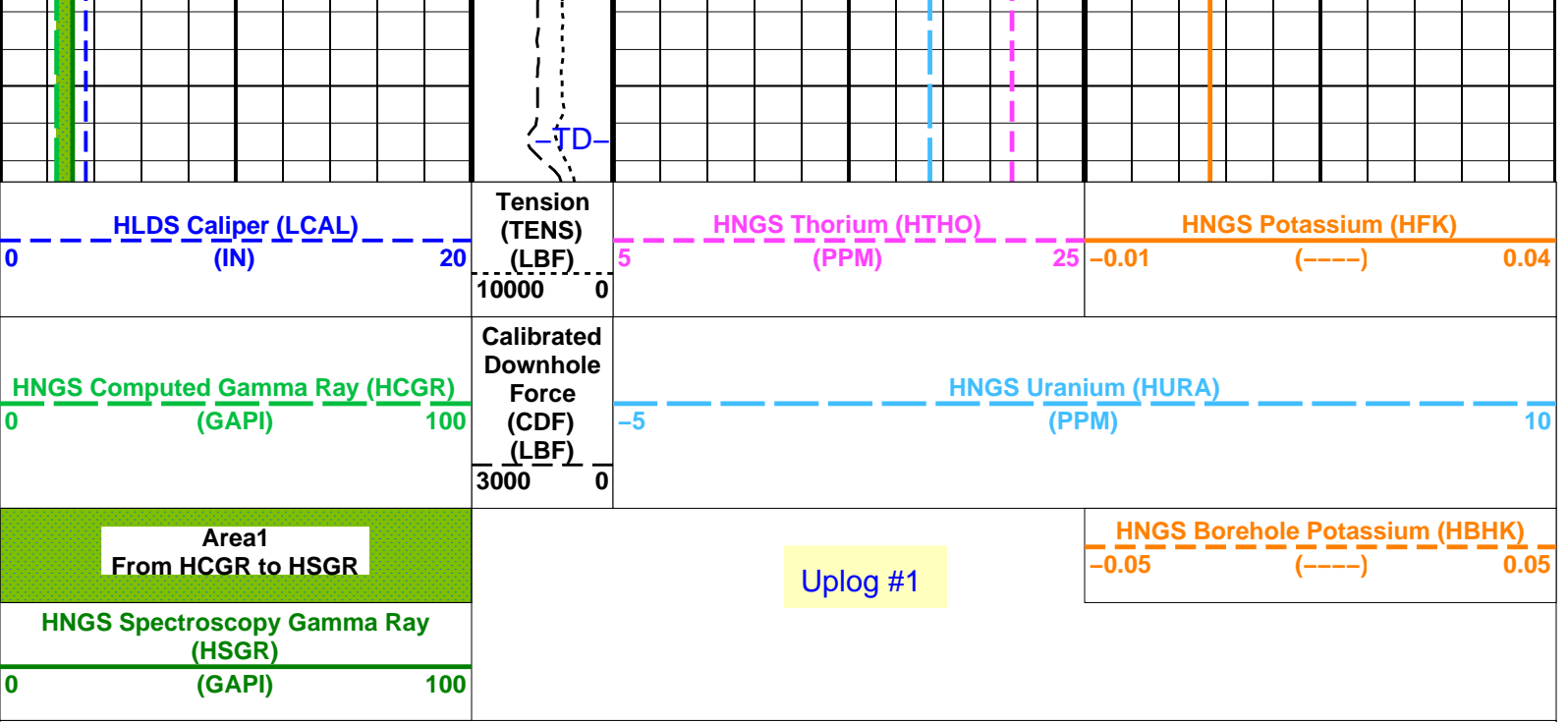
Time Mark Every 60 S











PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
HRLT-B: High Resolution Laterolog Array - B			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
APS-C: Accelerator-Porosity Tool			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
HNGS-BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.0011779	
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	1.17045	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.977099	
EDTC-B: Enhanced DTS Cartridge			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
System and Miscellaneous			
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.32	G/C3
DO	Depth Offset for Playback	-276.0	M
PP	Playback Processing	NORMAL	

Format: HNGSYields

Vertical Scale: 1:200

Graphics File Created: 28-Sep-2015 11:44

OP System Version: 19C0-187

MSS_LDEO-A 19C0-187
HLDS 19C0-187

HRLT-B 19C0-187
LDSC-B 19C0-187

Input DLIS Files						
DEFAULT	MSS_LDEO_HRLA_LDL_008LUP	FN:11	PRODUCER	23-Sep-2015 02:58	1058.4 M	891.5 M
Output DLIS Files						
DEFAULT	MSS_LDEO_HRLA_LDL_015PUP	FN:17	PRODUCER	28-Sep-2015 11:44		

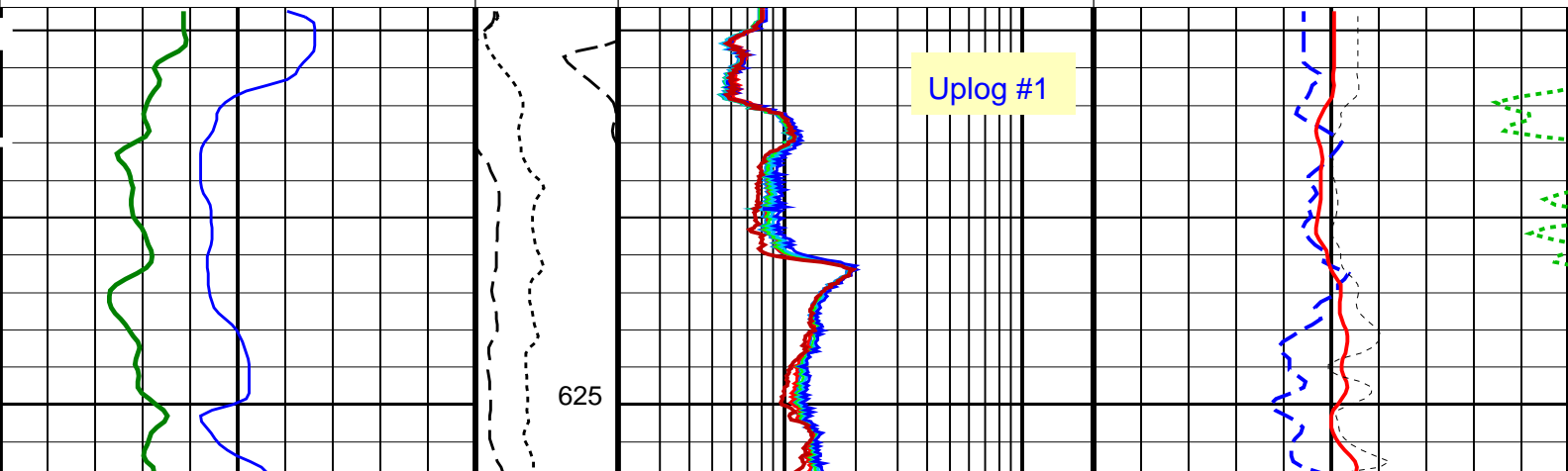
Input DLIS Files						
DEFAULT	MSS_LDEO_HRLA_LDL_008LUP	FN:11	PRODUCER	23-Sep-2015 02:58	1058.4 M	891.5 M
Output DLIS Files						
DEFAULT	MSS_LDEO_HRLA_LDL_015PUP	FN:17	PRODUCER	28-Sep-2015 11:44	782.6 M	614.3 M

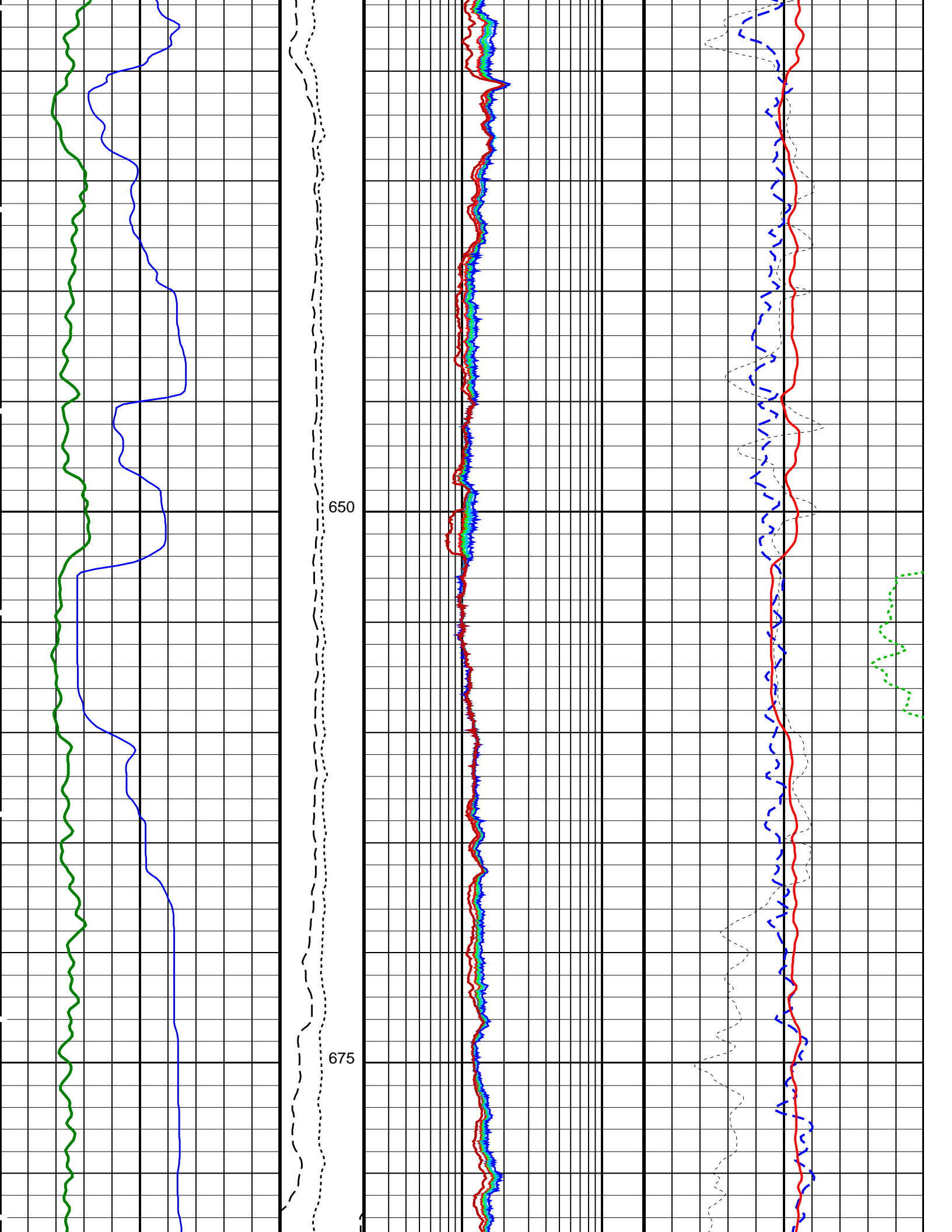
OP System Version: 19C0-187						
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187			
HLDS	19C0-187	LDSC-B	19C0-187			
APS-C	19C0-187	HNGC-B	19C0-187			
HNGS-BA	19C0-187	EDTC-B	SKK-5169-EDTCB			

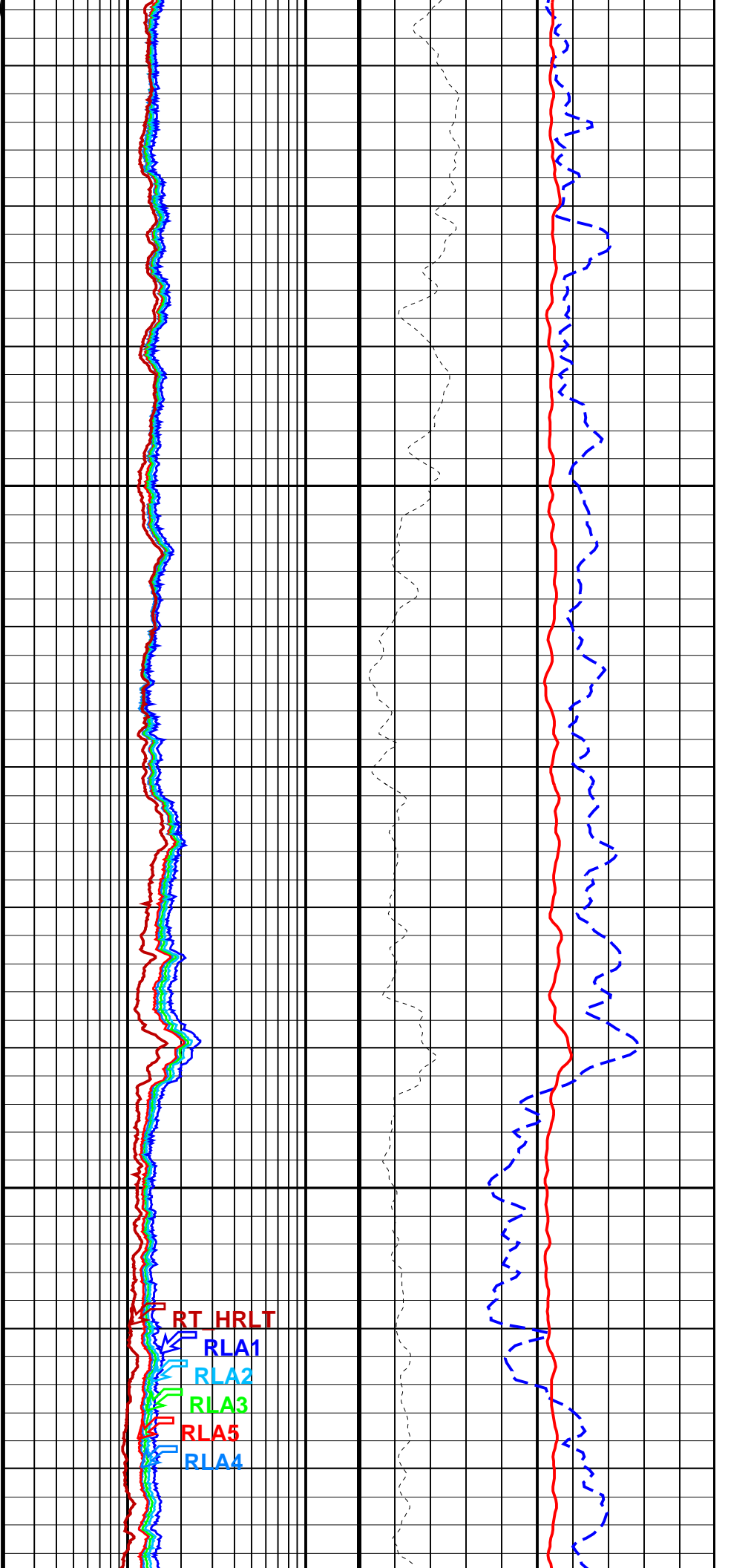
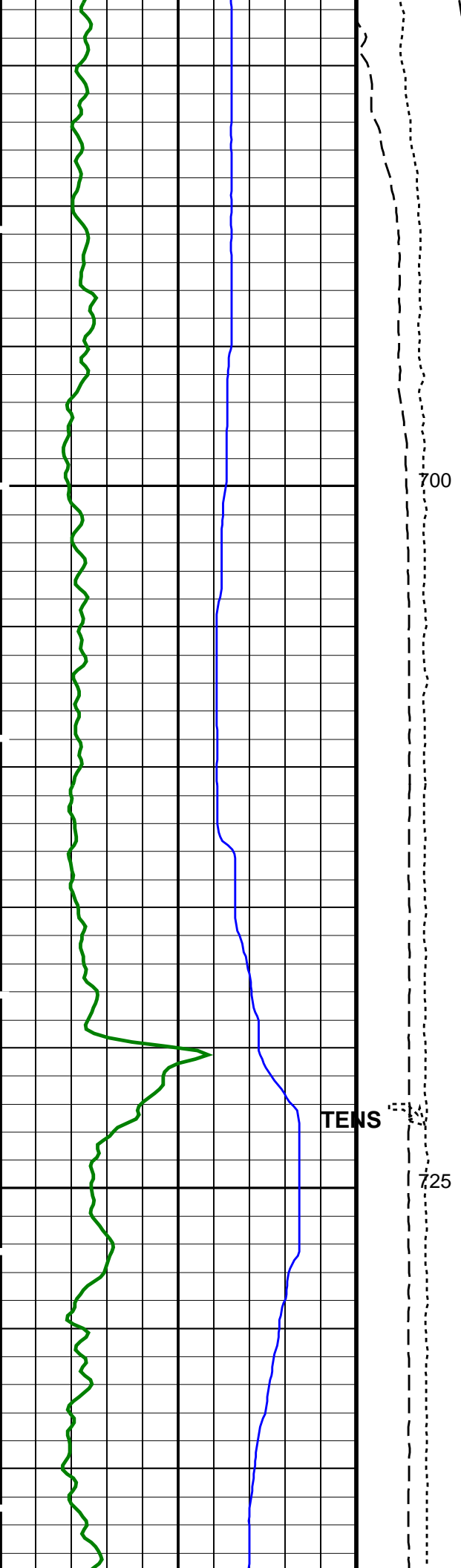
PIP SUMMARY

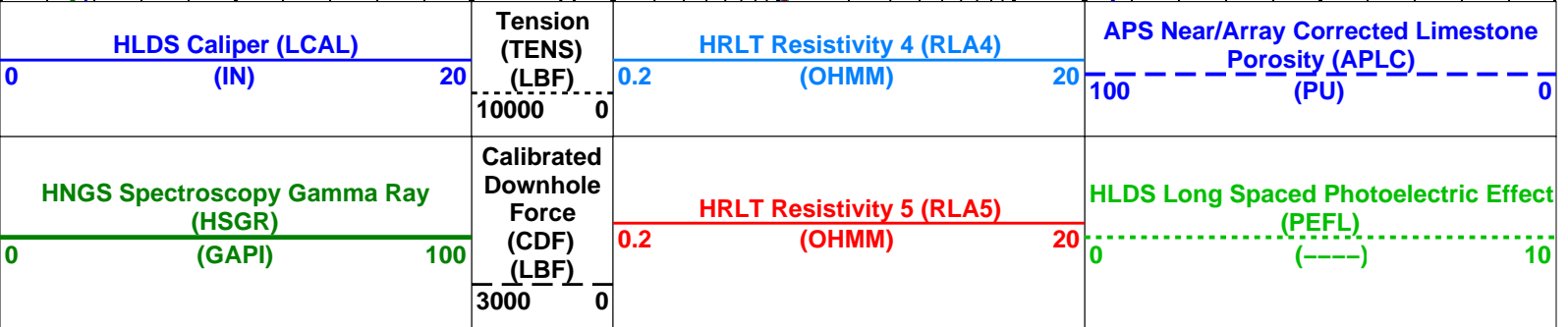
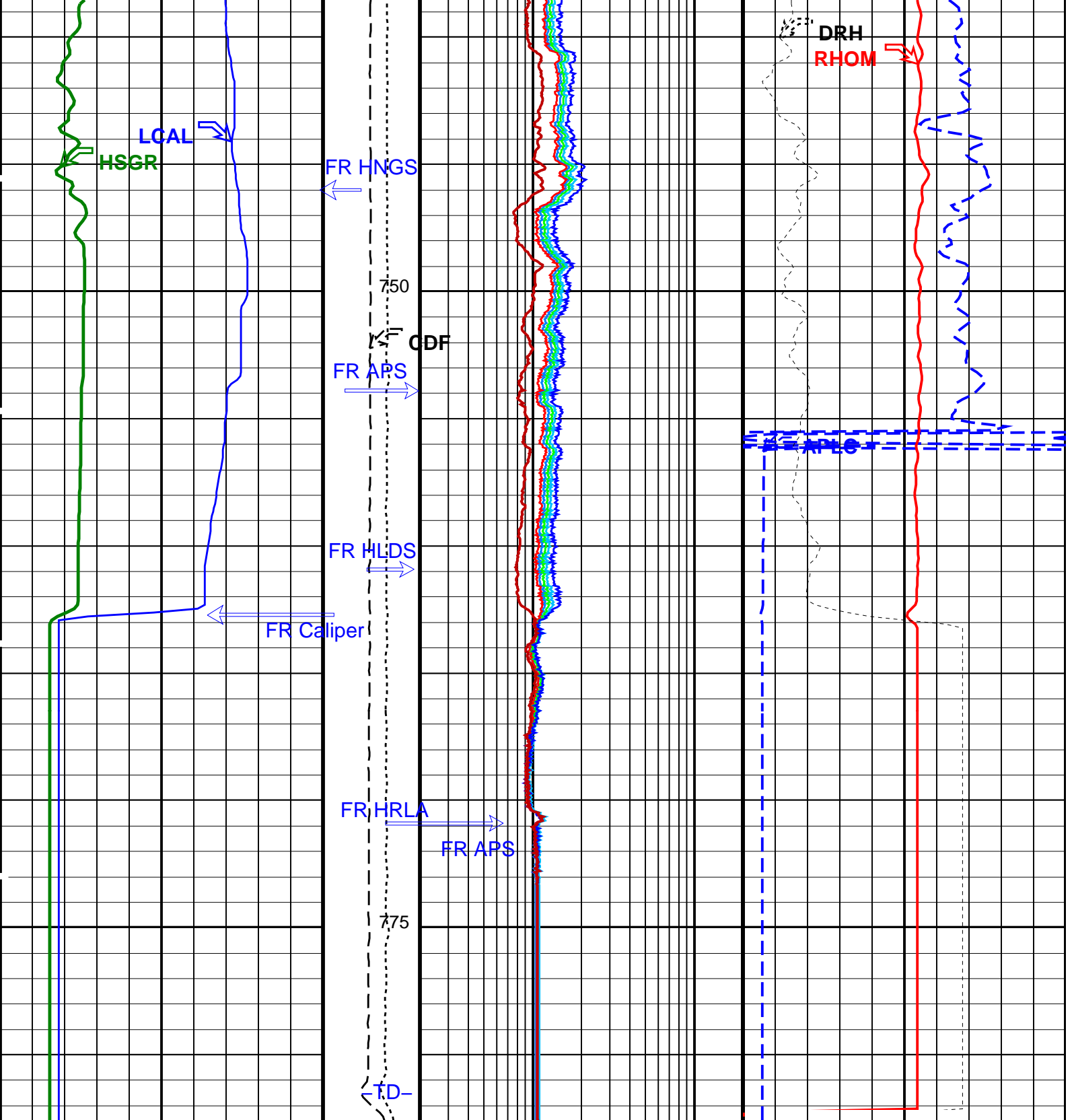
Time Mark Every 60 S

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

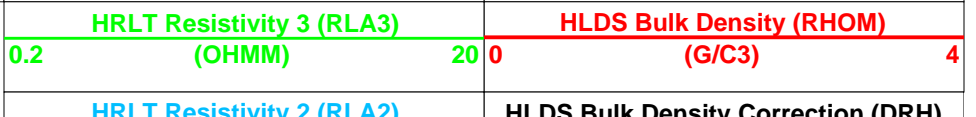








Uplog #1



0.2	(OHMM)	20	-0.25	(G/C3)	0.25
HRLT Resistivity 1 (RLA1)					
0.2	(OHMM)	20			
HRLT True Resistivity (RT_HRLT)					
0.2	(OHMM)	20			

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)	30	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	24.8518	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	AUTO	
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO	
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO	
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO	
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO	
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO	
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PROGINV	Inversion Selection	ON	
PROCMFL	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCSPO	Sonde Position	Centered	
SHT	Surface Hole Temperature	20	DEGC
HLDS: Hostile Litho-Density Sonde			
CLCL	HLDS LS Control Loop Controller Mode	AUTO_DEFAULT	
CLCS	HLDS SS Control Loop Controller Mode	AUTO_DEFAULT	
CLLS	HLDS Mode Loop Long Spacing	AUTO	
CLSS	HLDS Mode Loop Short Spacing	AUTO	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
FD	Fluid Density	1	G/C3
LATC	HLDS Activation Correction	ON	
LLDL	HLDS LS Low Level Discriminator DAC	14000	
LLDS	HLDS SS Low Level Discriminator DAC	14000	
LLML	HLDS LS Low Level Discriminator Mode	AUTO	
LLMS	HLDS SS Low Level Discriminator Mode	AUTO	
MDEN	Matrix Density	2.6	G/C3
PHVL	HLDS Long Spacing High Voltage Setting	1000	V
PHVS	HLDS Short Spacing High Voltage Setting	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	
APS-C: Accelerator-Porosity Tool			
AASD	APS Software Version	0	
ADSO	APS Thermal and Array Detectors High Voltage Setting	1938.41	V
AFSD	APS Array Detectors Data Source Switch	Both	
AHCS	APS Far Detector High Voltage Setting	2034.64	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	1700.34	V
ATSS	APS Standoff Correction Switch	ON	
BHFL_APS	APS Temperature-Pressure-Salinity Correction Switch	OFF	
	APS TNPH Borehole Fluid Type	WATER	

BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	30	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	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO_APS	APS TNPH Mud Cake Correction Option	NO	
MCOR_APS	APS TNPH Mud Correction	BARI	
MWCO_APS	APS TNPH Mud Weight Correction Option	YES	
NARC	APS Near/Array Calibration Ratio	1.0863	
NFRC	APS Near/Far Calibration Ratio	0.97772	
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

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)	30	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	-0.0011779	
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	1.17045	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.977099	

EDTC-B: Enhanced DTS Cartridge

BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	30	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

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	1.32	G/C3
DO	Depth Offset for Playback	-276.0	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	1120	M
TDD	Total Depth - Driller	1115.30	M
TDL	Total Depth - Logger	1120.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripleCombo Vertical Scale: 1:200 Graphics File Created: 28-Sep-2015 11:44

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	EDTC-B	SKK-5169-EDTCB

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_008LUP	FN:11	PRODUCER	23-Sep-2015 02:58	1058.4 M	891.5 M
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Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_015PUP	FN:17	PRODUCER	28-Sep-2015 11:44		
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Company: International Ocean Discovery Program Well: Expedition 356, Site U1464C

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_010LUP		PRODUCER	24-Sep-2015 16:55	1059.6 M	233.2 M
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Output DLIS Files

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OP System Version: 19C0-187

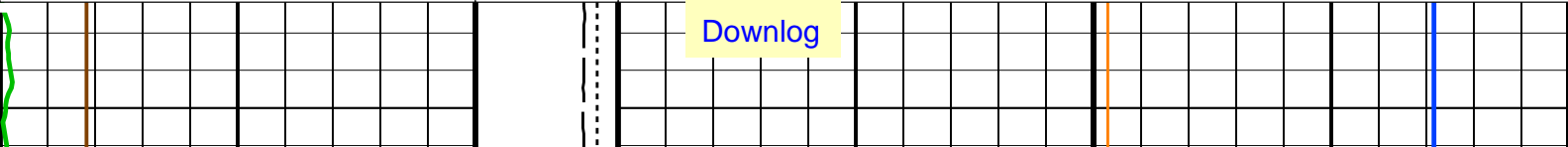
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HLDS	19C0-187	LDSC-B	19C0-187
APS-C	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	EDTC-B	SKK-5169-EDTCB

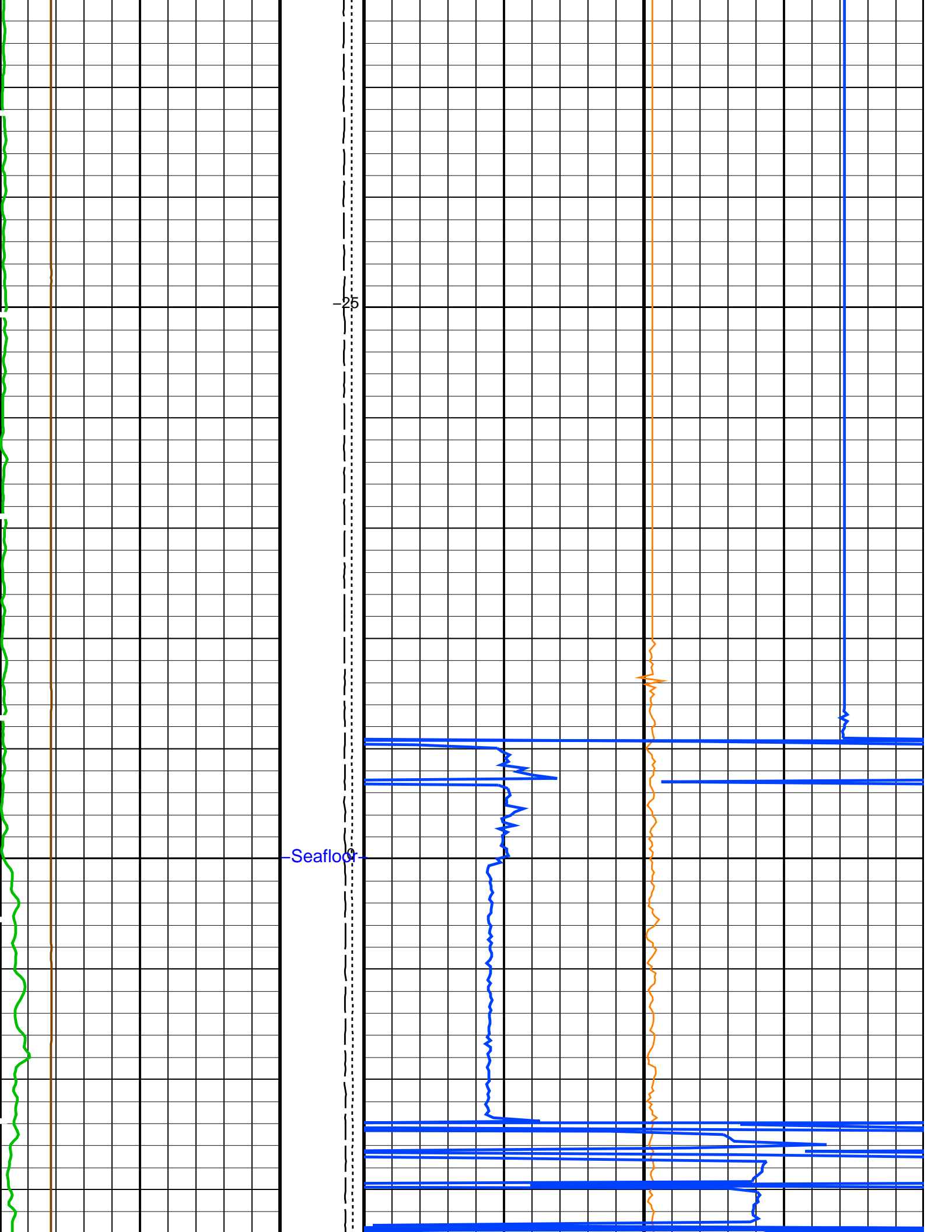
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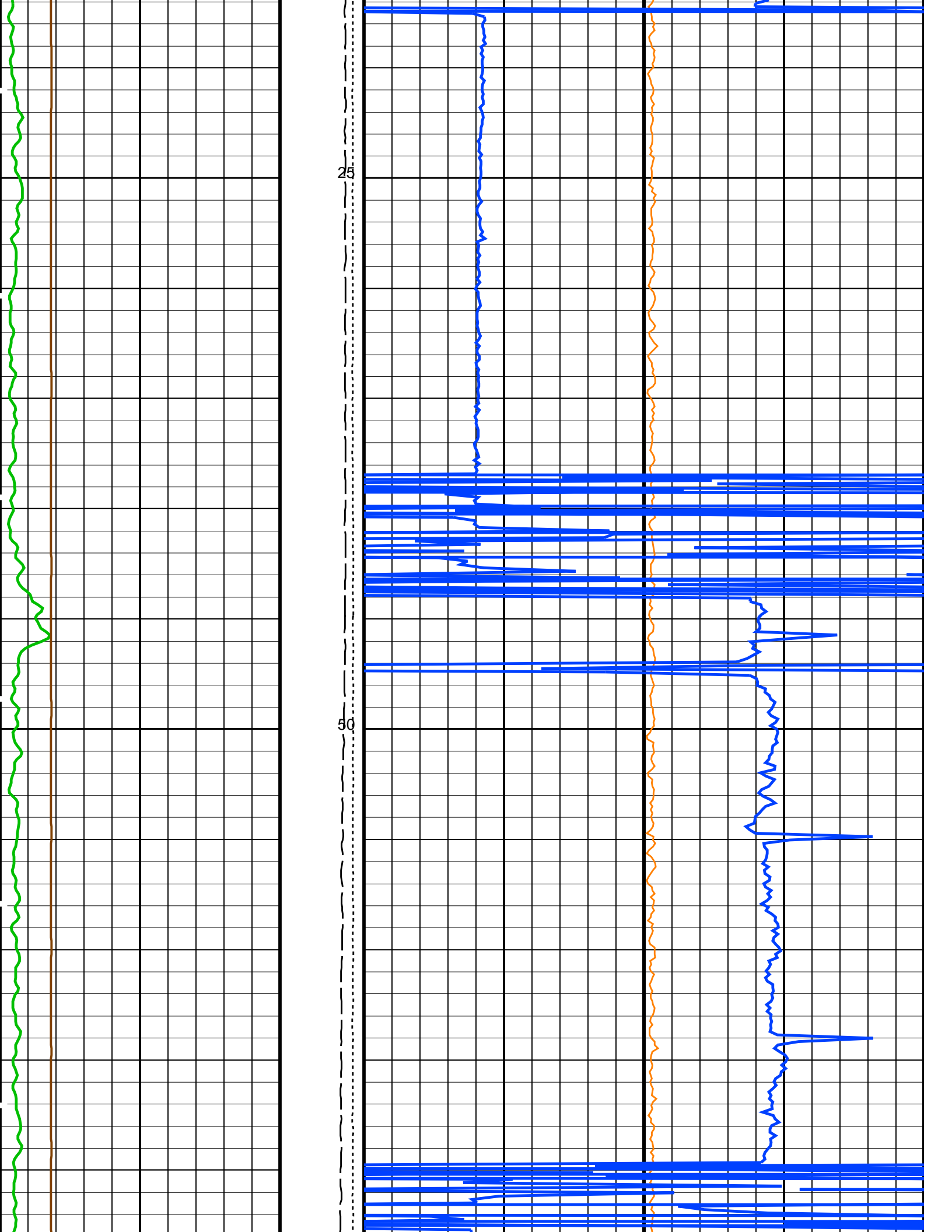
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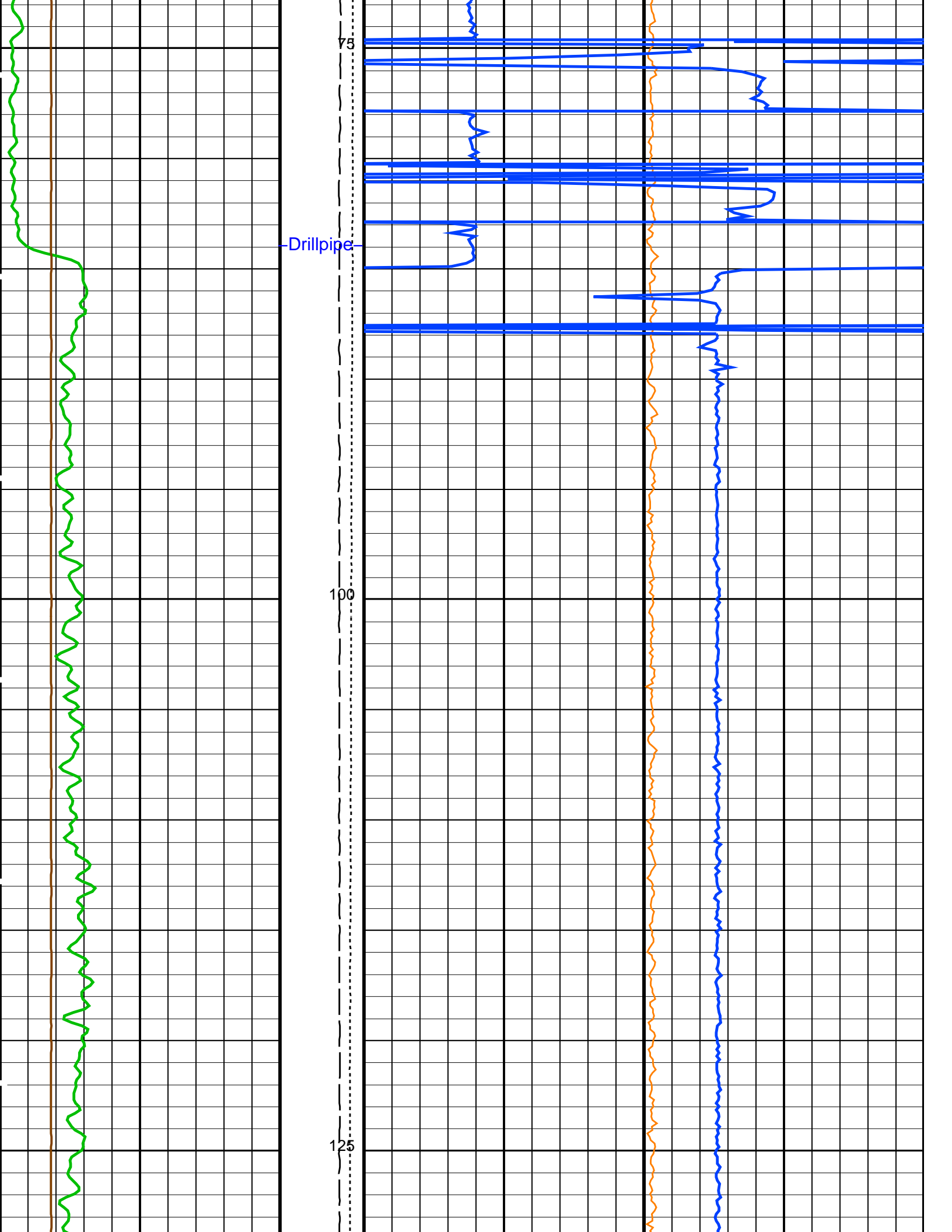
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<p>HLDS Caliper (LCAL)</p> <p>0 (IN) 20</p>	<p>Tension (TENS) (LBF)</p> <p>10000 0</p>	<p>Axial Acceleration (MSSZACC_LDEO)</p> <p>0 (M/S2) 20</p>

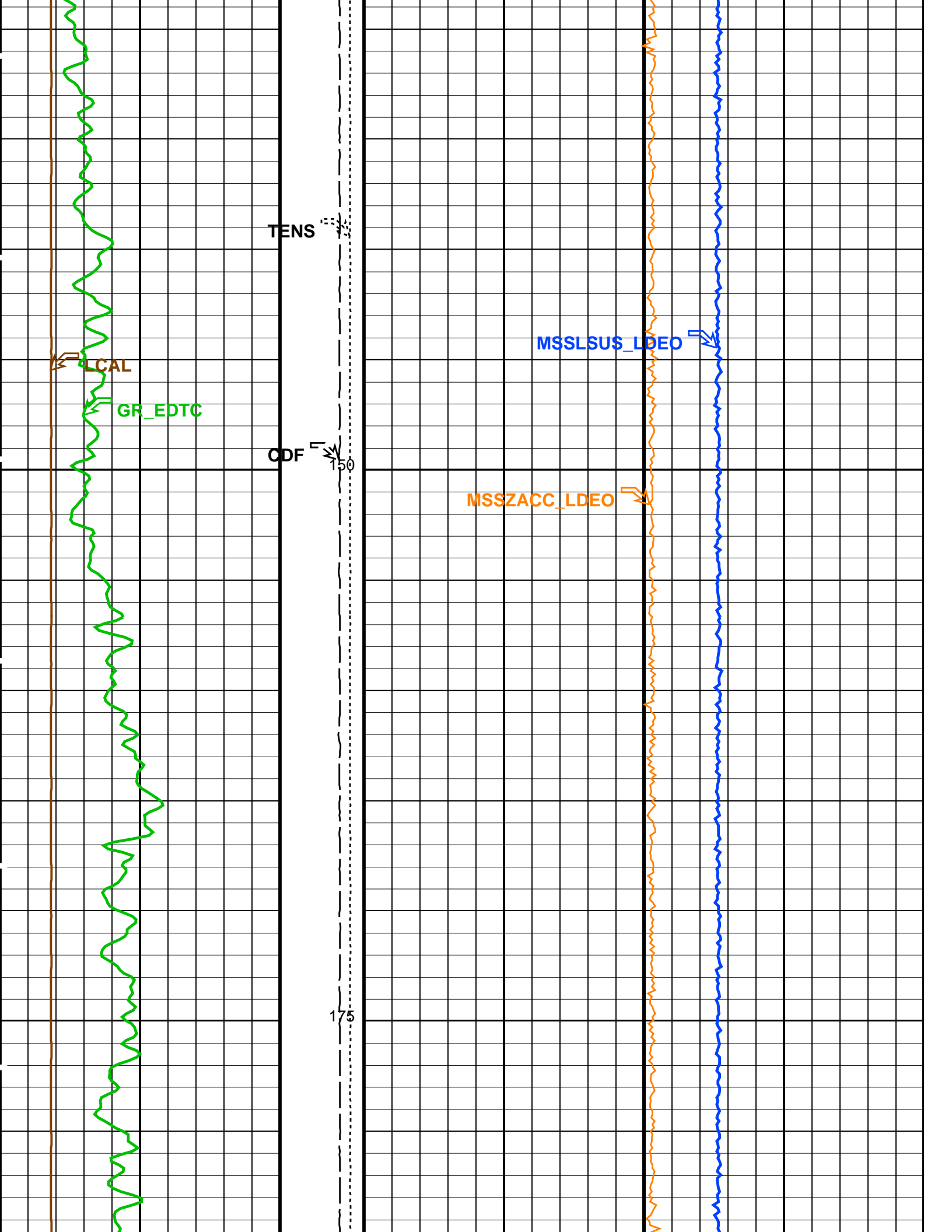
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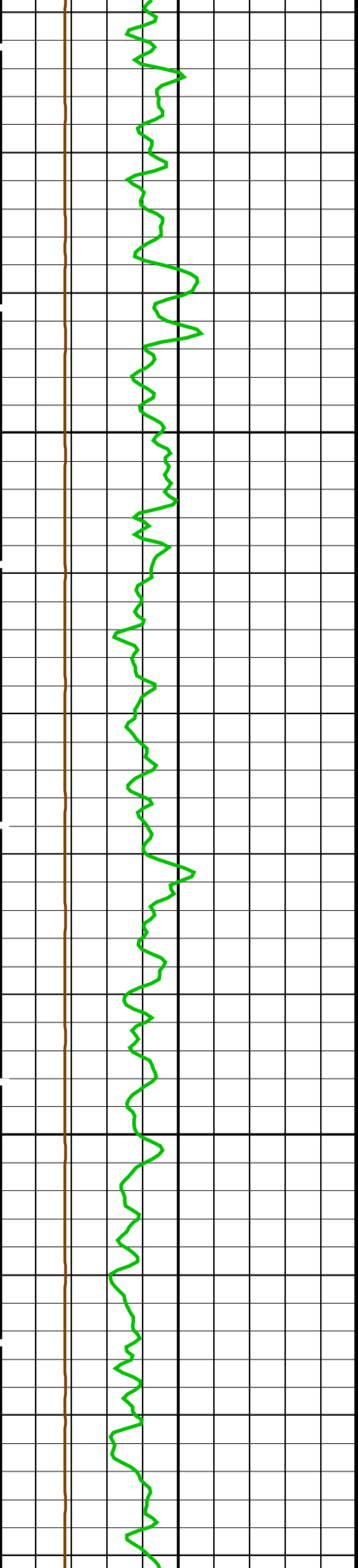






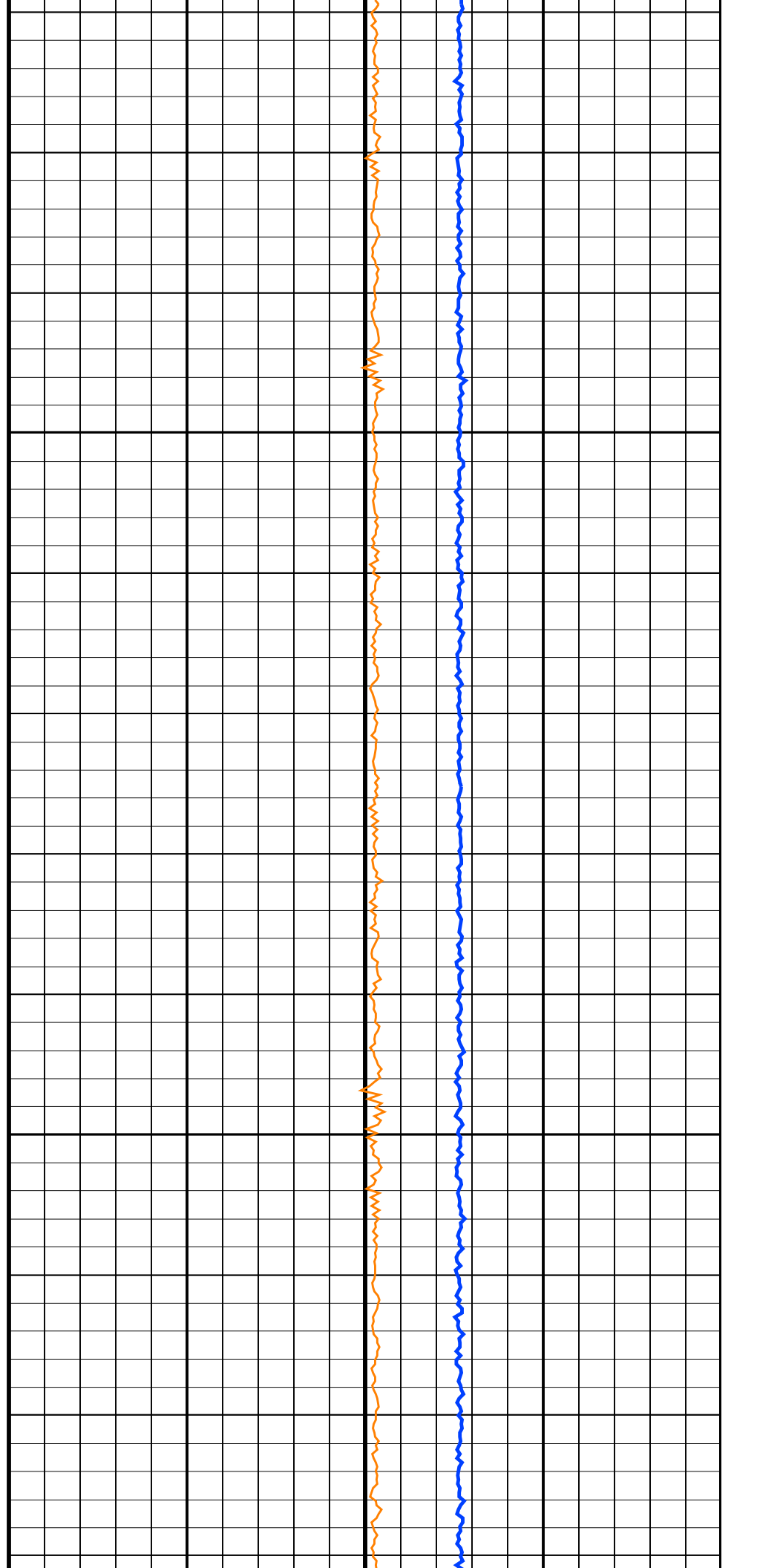


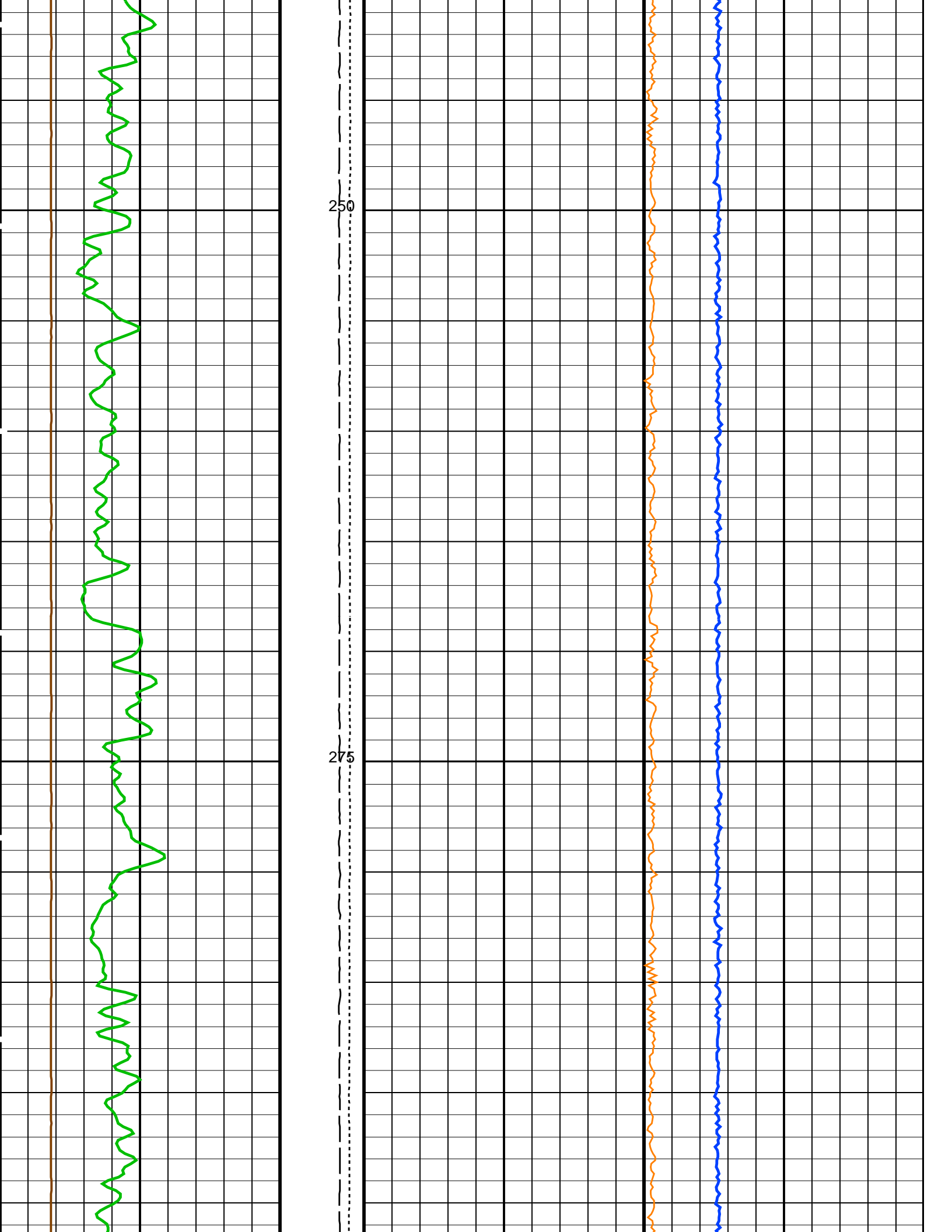


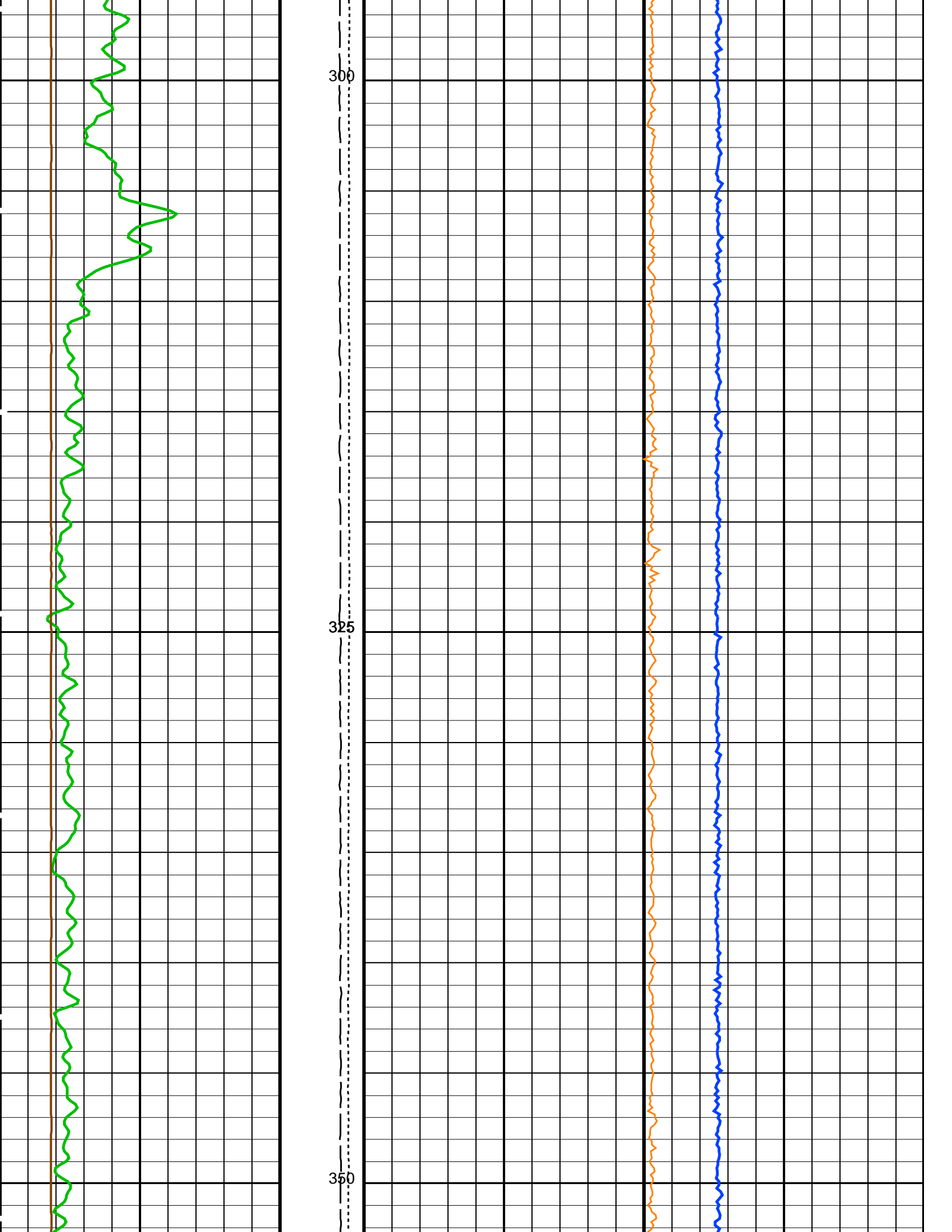


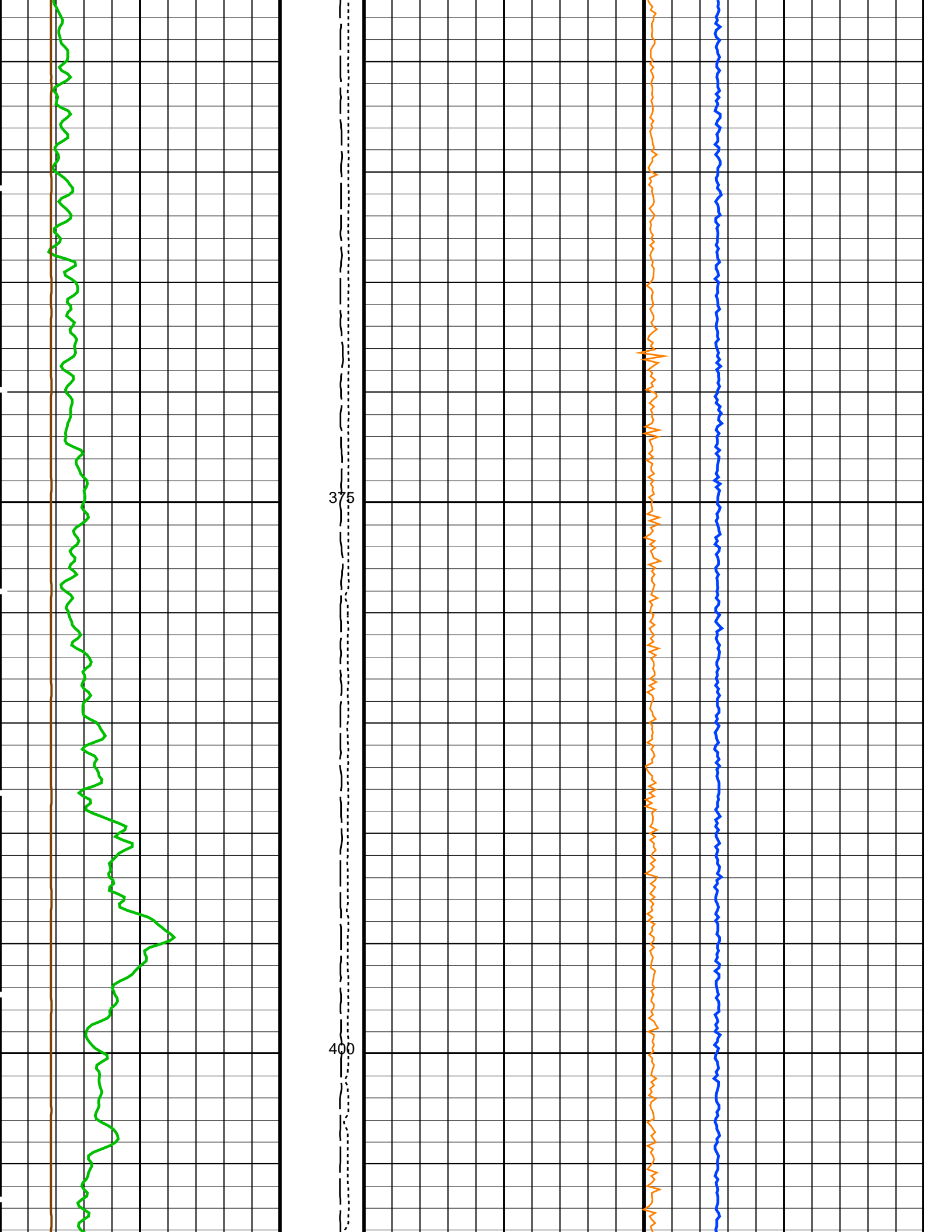
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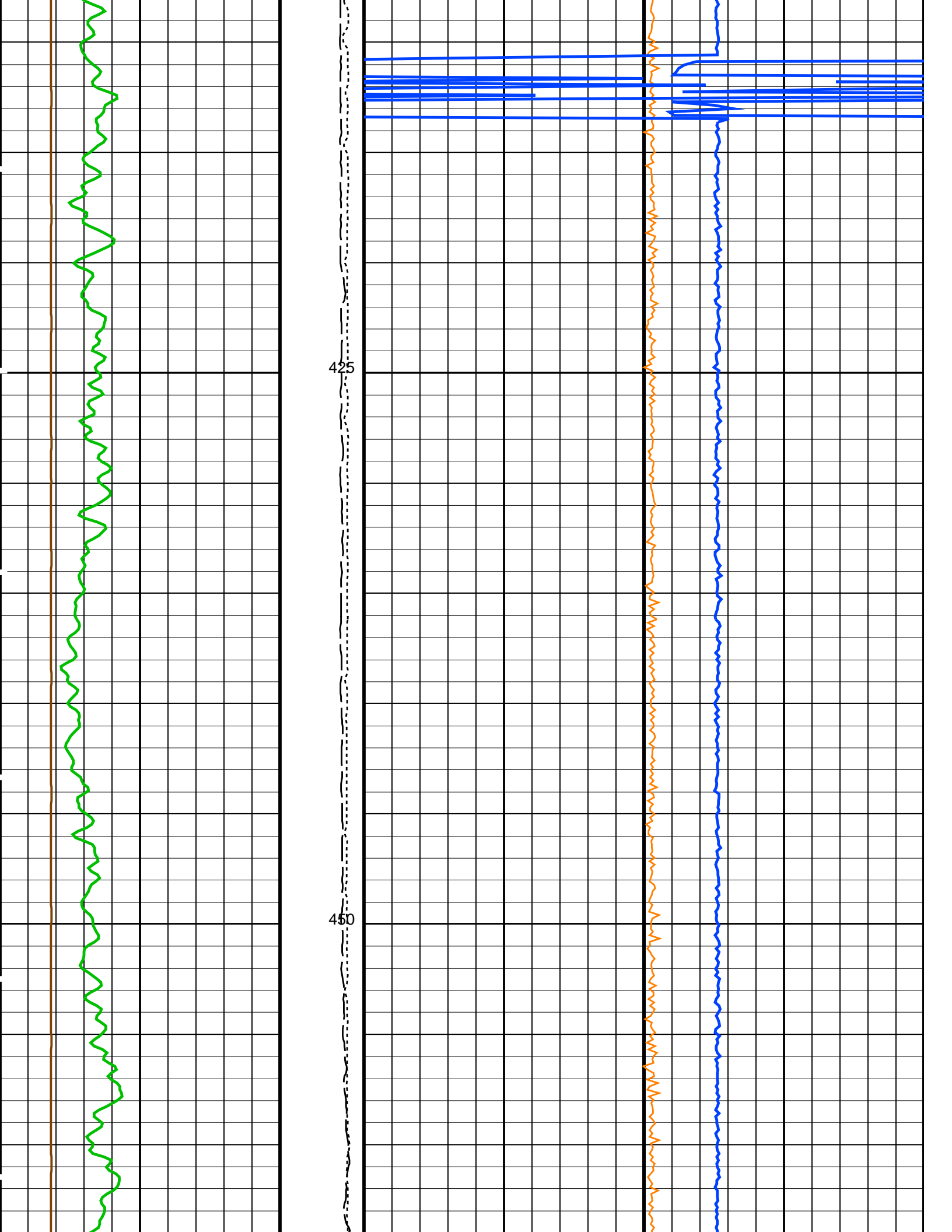
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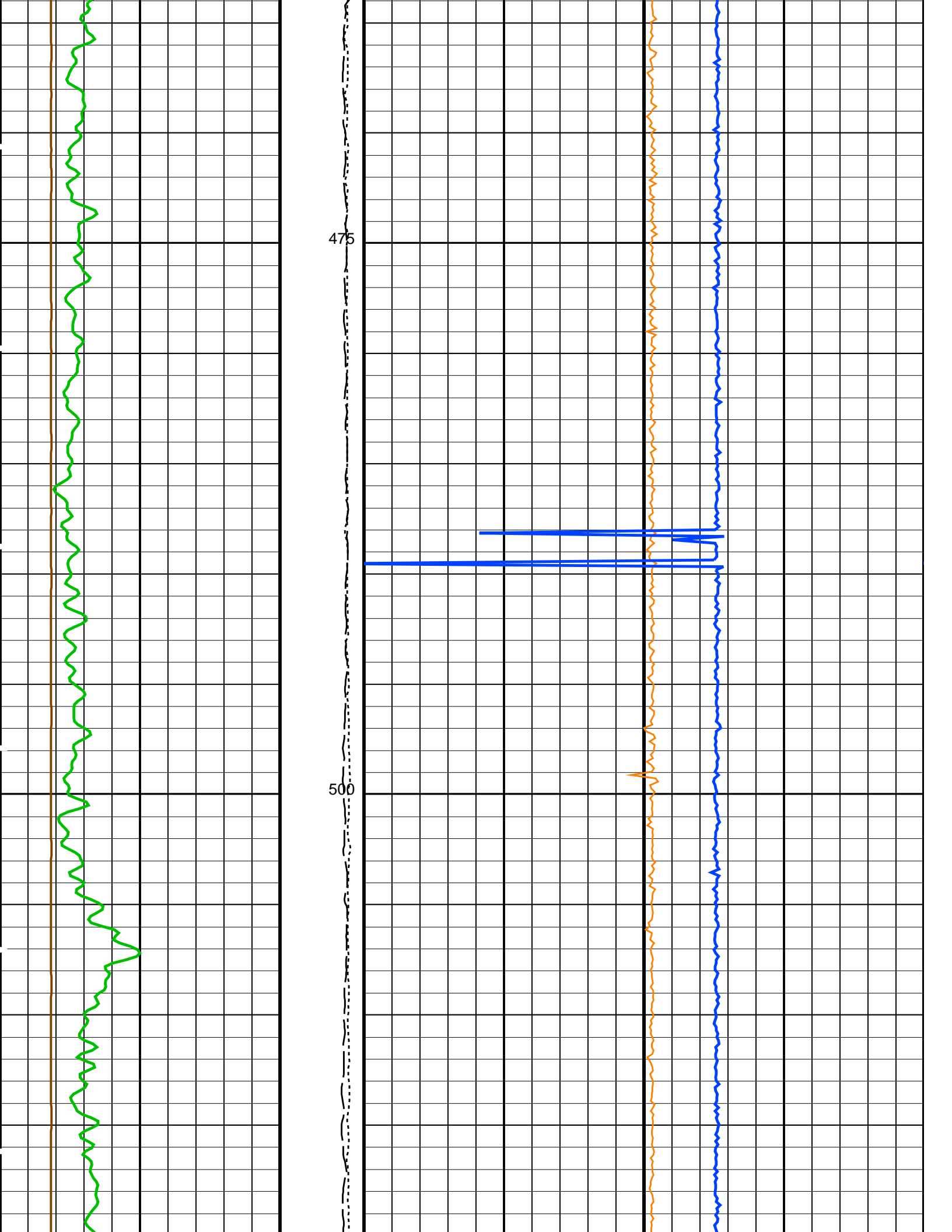


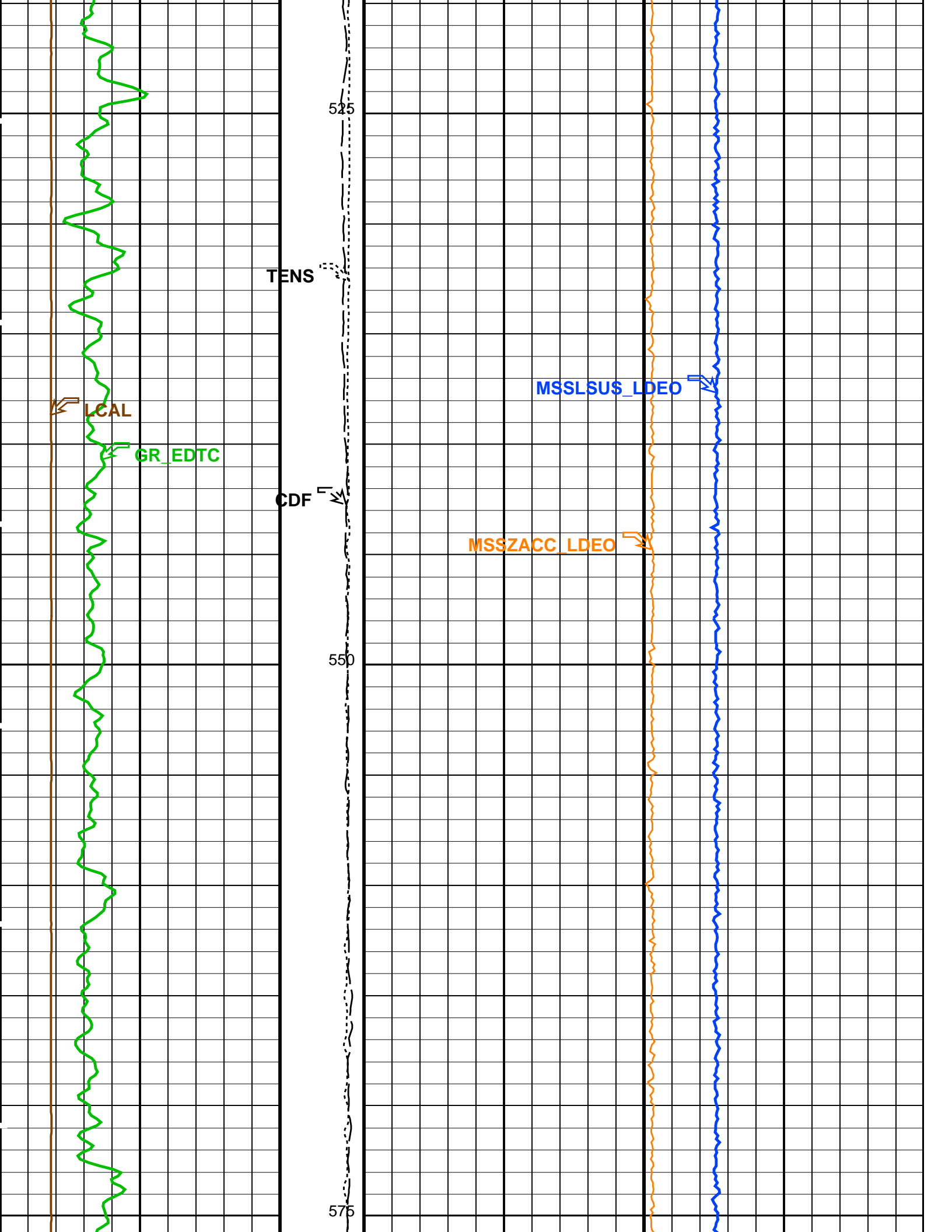


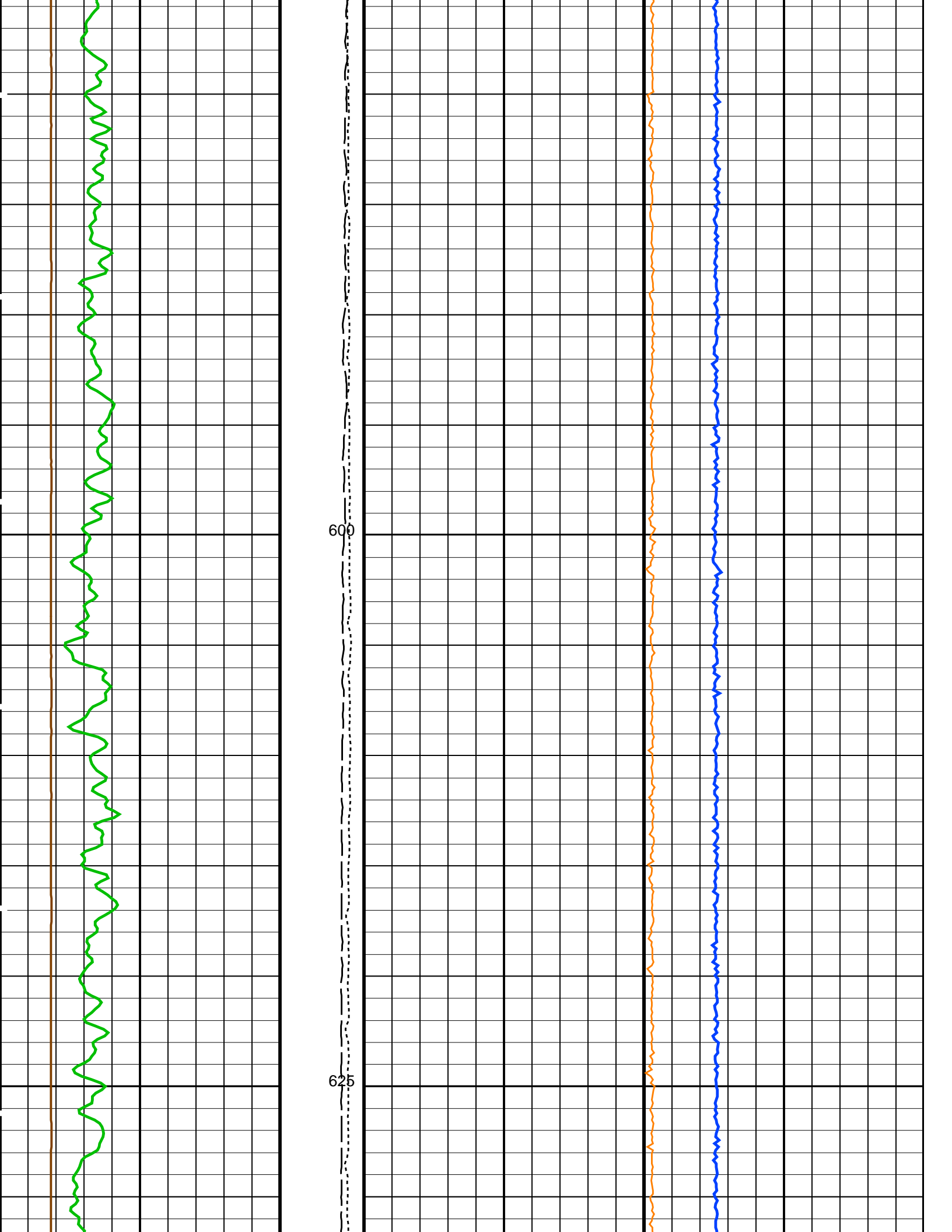


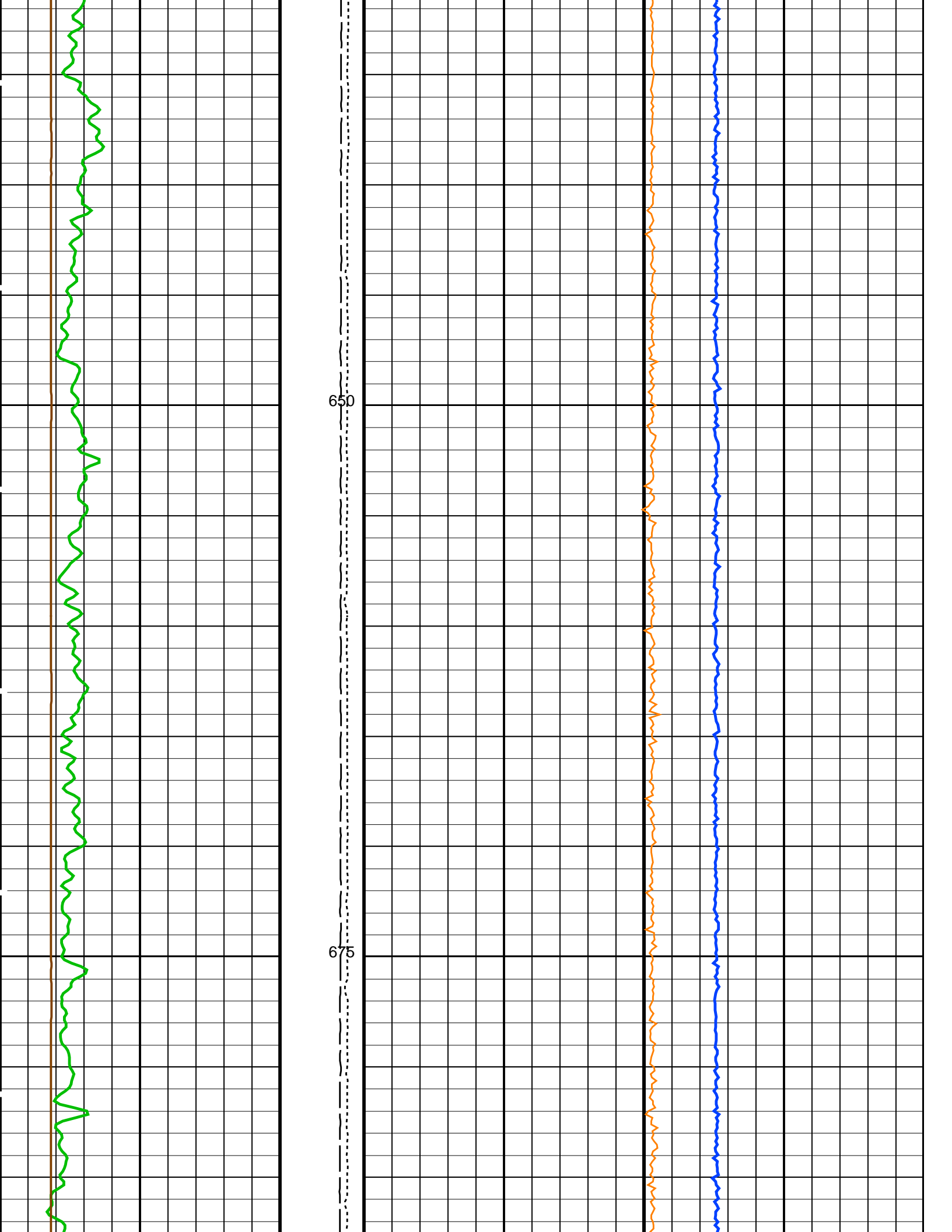


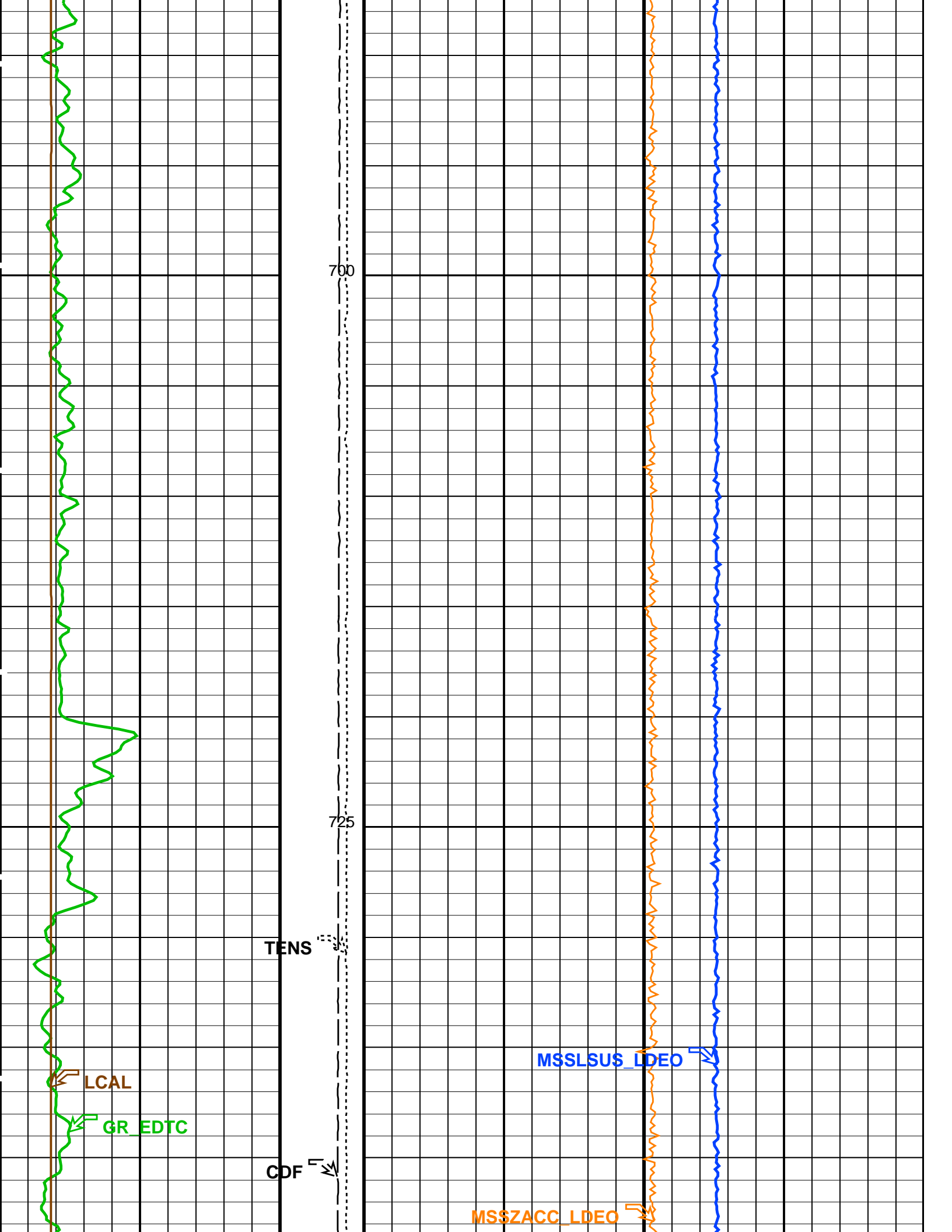


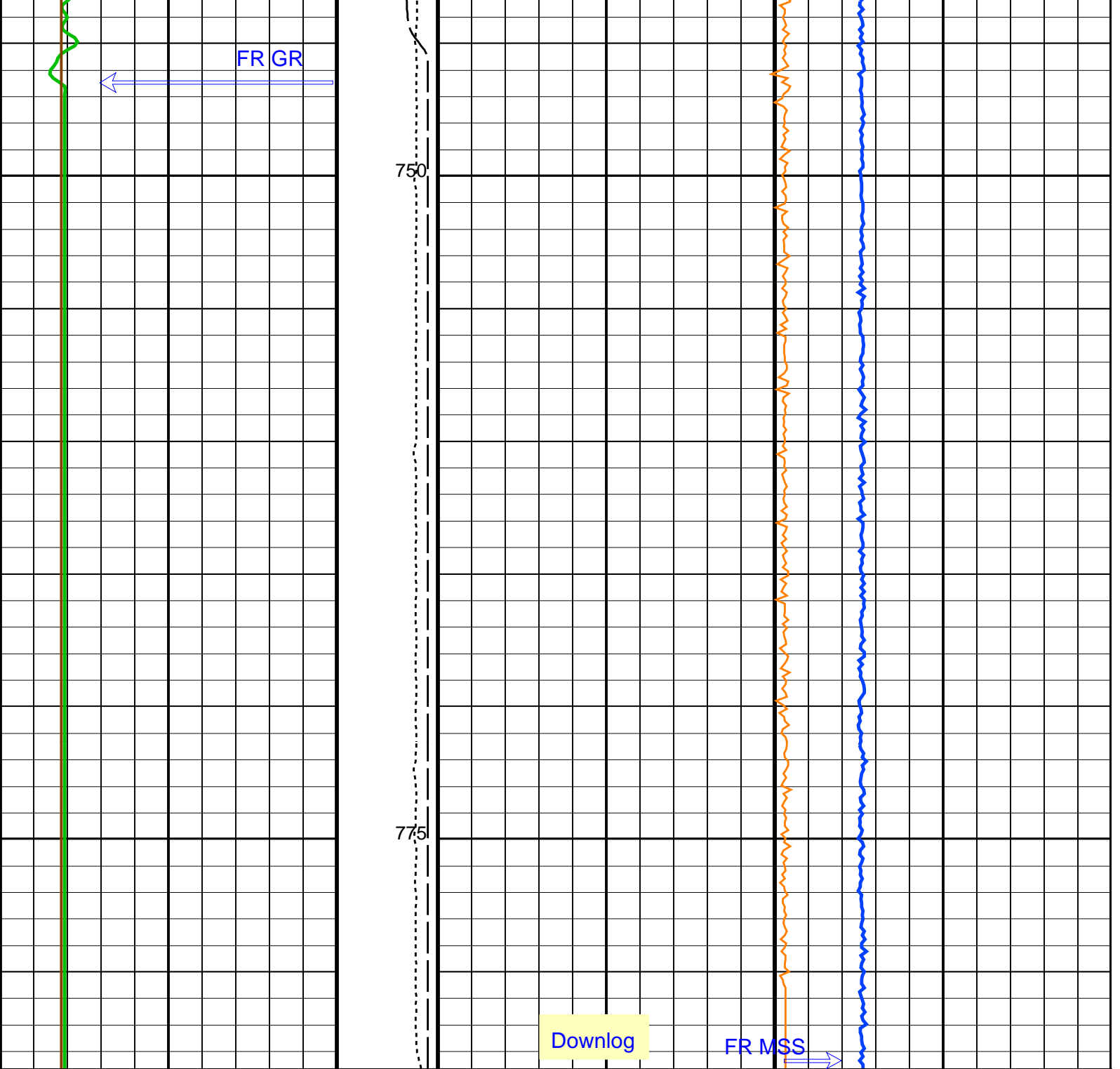












<p>HLDS Caliper (LCAL) (IN)</p> <p>0 20</p>	<p>Tension (TENS) (LBF)</p> <p>10000 0</p>	<p>Axial Acceleration (MSSZACC_LDEO) (M/S²)</p> <p>0 20</p>
<p>Gamma Ray (GR_EDTC) (GAPI)</p> <p>0 100</p>	<p>Calibrated Downhole Force (CDF) (LBF)</p> <p>5000 0</p>	<p>Dual-Coil Susceptibility (MSSLSUS_LDEO) (PPM)</p> <p>0 5000</p>

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
RHS	HRLT-B: High Resolution Laterolog Array - B Borehole Status	OPEN

BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	30	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	24.8518	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	BARITE	
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	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	
APS-C: Accelerator-Porosity Tool			
AASD	APS Software Version	0	
ADSO	APS Thermal and Array Detectors High Voltage Setting	1938.41	V
AFSD	APS Array Detectors Data Source Switch	Both	
AHCS	APS Far Detector High Voltage Setting	2034.64	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	1700.34	V
ATSS	APS Standoff Correction Switch	ON	
BHFL_APS	APS Temperature-Pressure-Salinity Correction Switch	OFF	
BHS	APS TNPH Borehole Fluid Type	WATER	
BHT	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	30	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	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO_APS	APS TNPH Mud Cake Correction Option	NO	
MCOR_APS	APS TNPH Mud Correction	BARI	
MWCO_APS	APS TNPH Mud Weight Correction Option	YES	
NARC	APS Near/Array Calibration Ratio	1.0863	
NFRC	APS Near/Far Calibration Ratio	0.97772	

PTCO_APS	APS TNPH Pressure/Temperature Correction Option		
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)	30	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	-0.0011779	
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	1.17045	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.977099	
EDTC-B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	30	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	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	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			
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	1.32	G/C3
DO	Depth Offset for Playback	-276.0	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	1120	M
TDD	Total Depth - Driller	1115.30	M
TDL	Total Depth - Logger	1120.00	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	EDTC-B	SKK-5169-EDTCB

Input DLIS Files

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Output DLIS Files

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Input DLIS Files

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Output DLIS Files

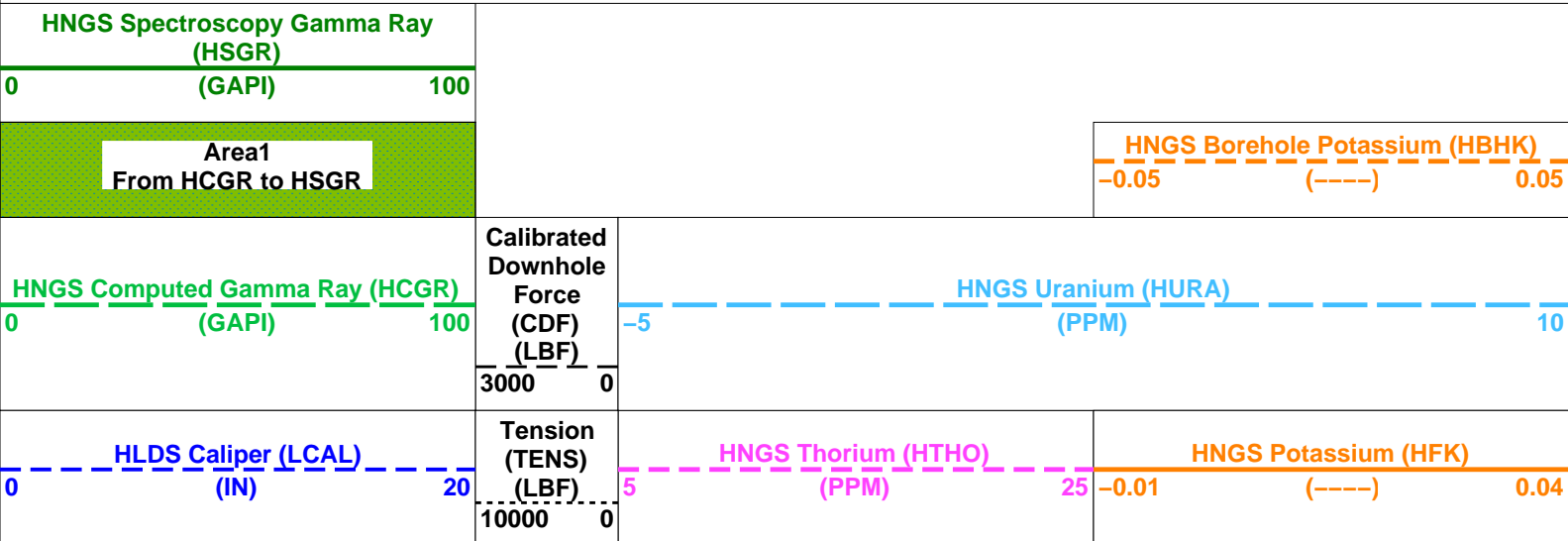
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OP System Version: 19C0-187

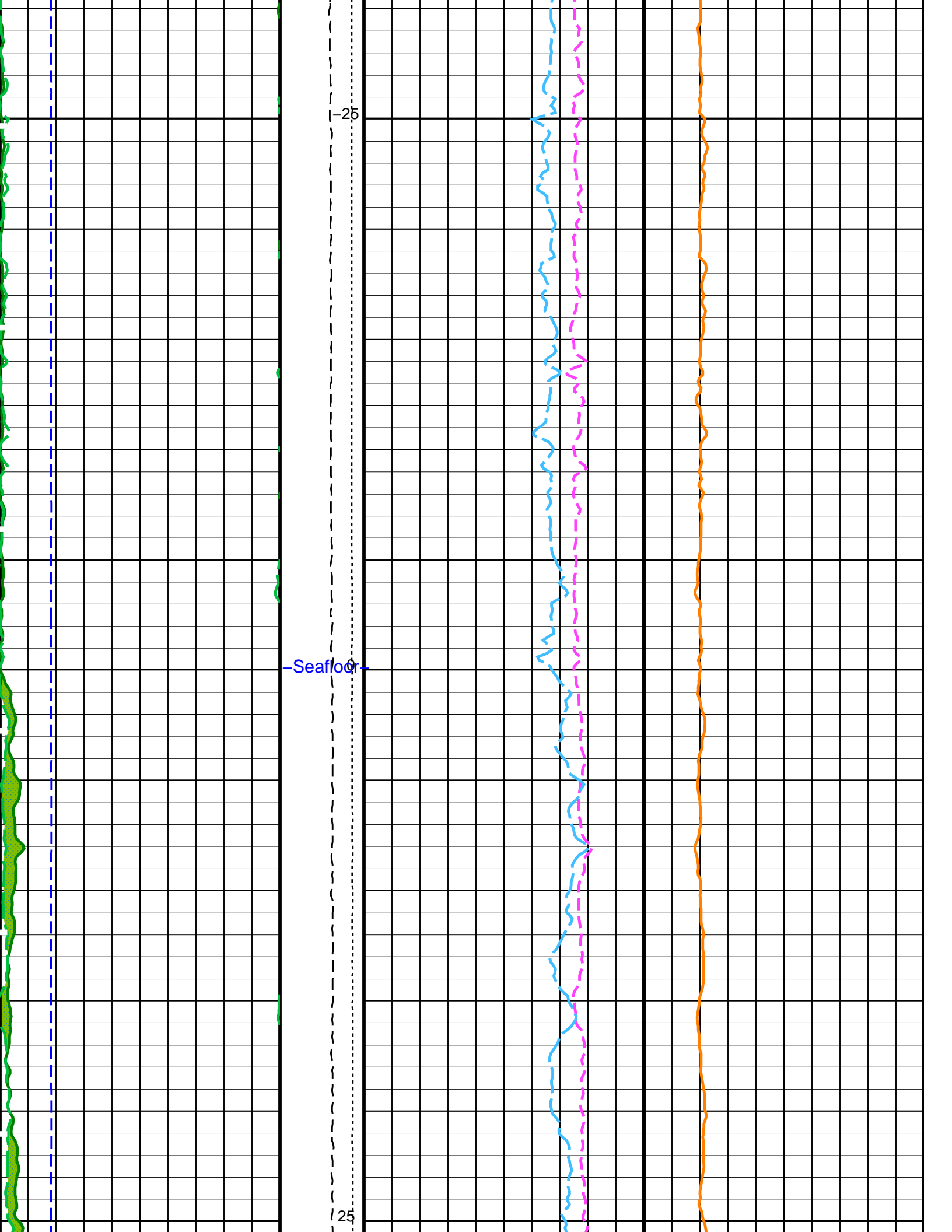
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APS-C	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	EDTC-B	SKK-5169-EDTCB

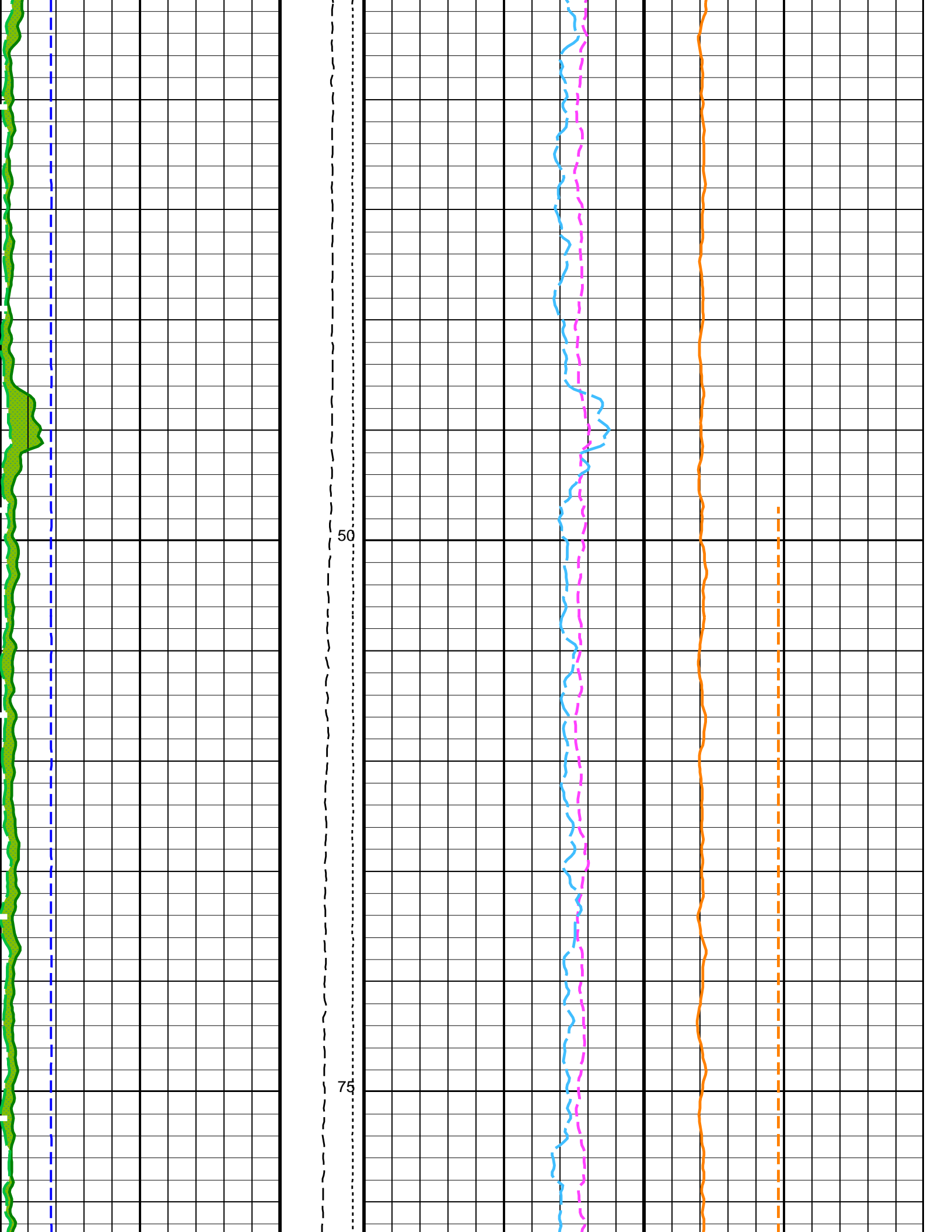
PIP SUMMARY

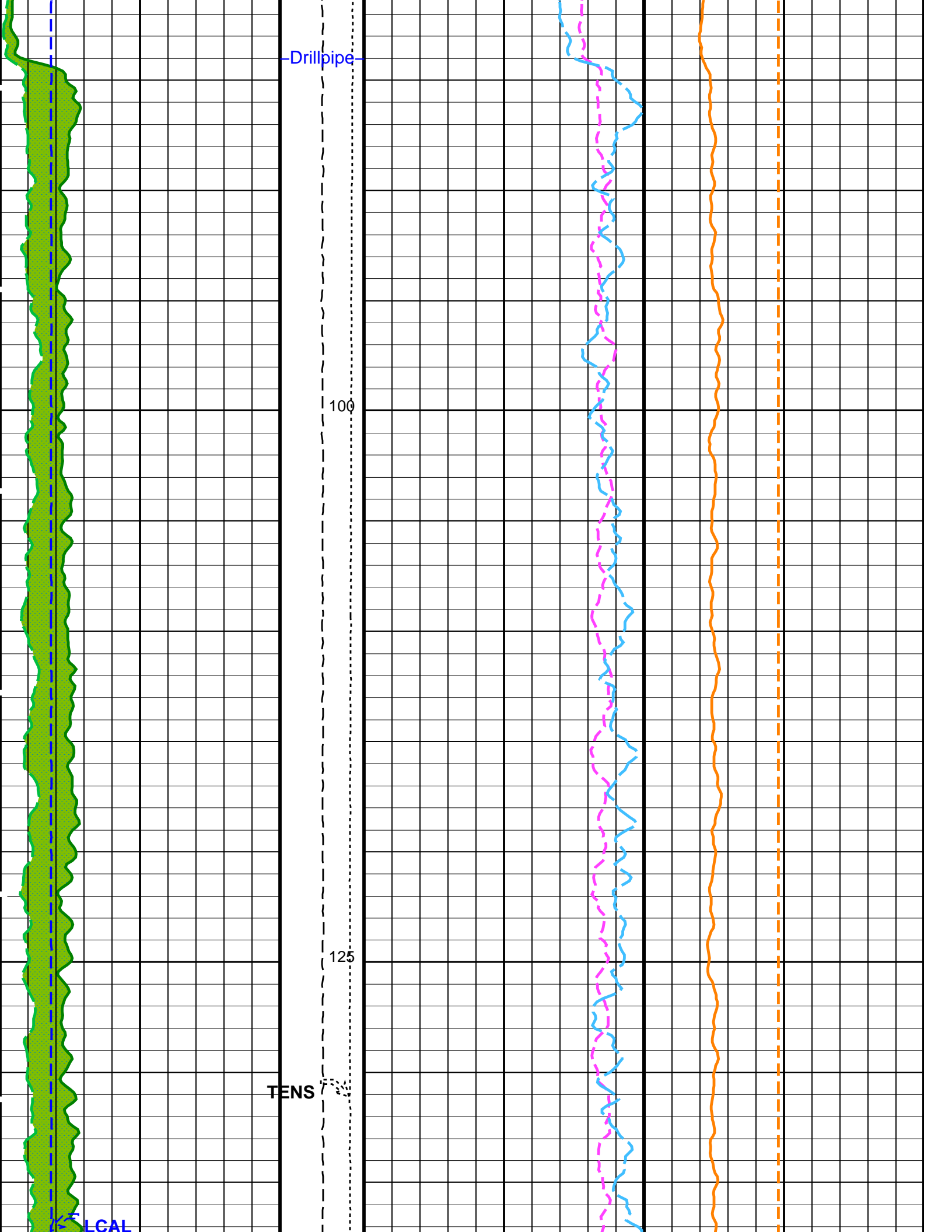
Time Mark Every 60 S

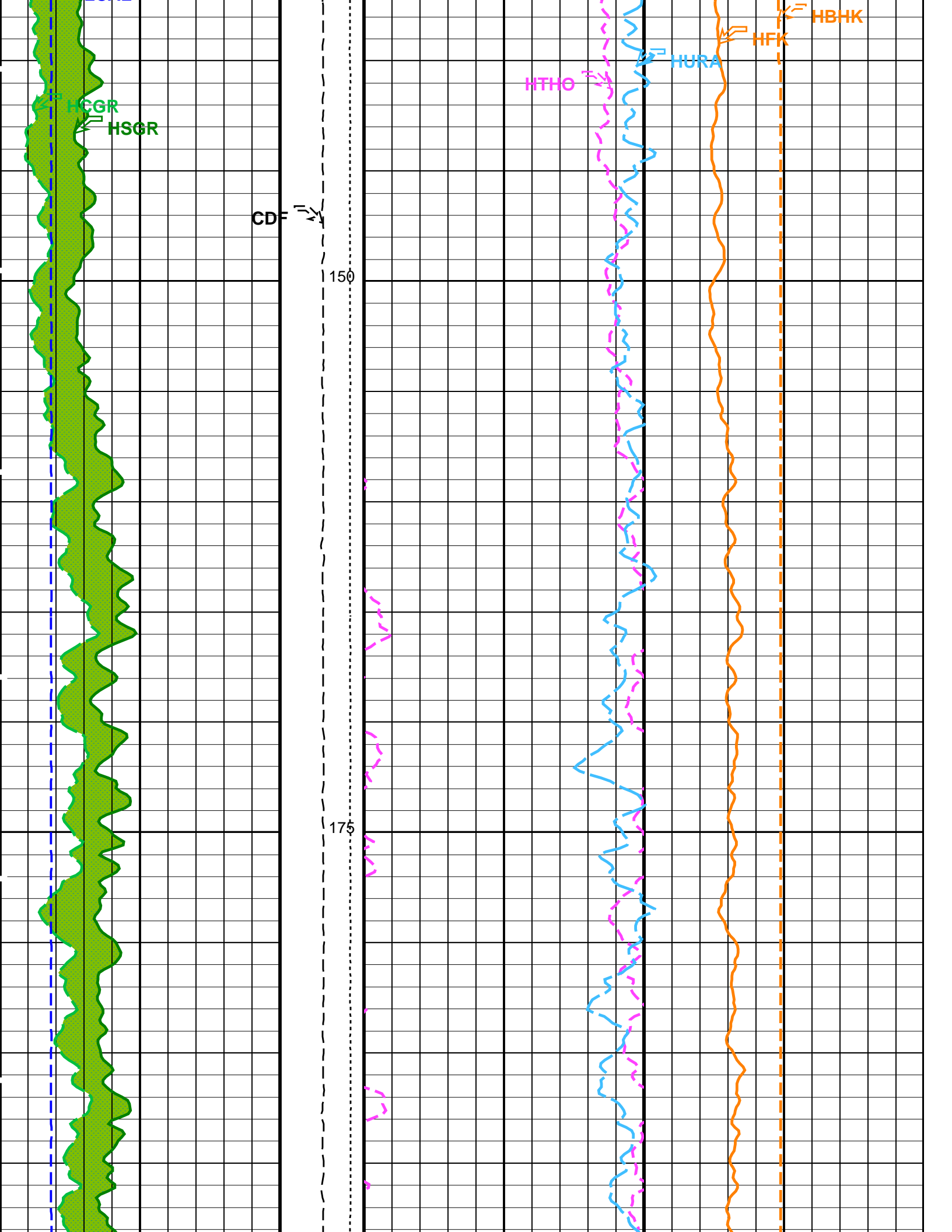


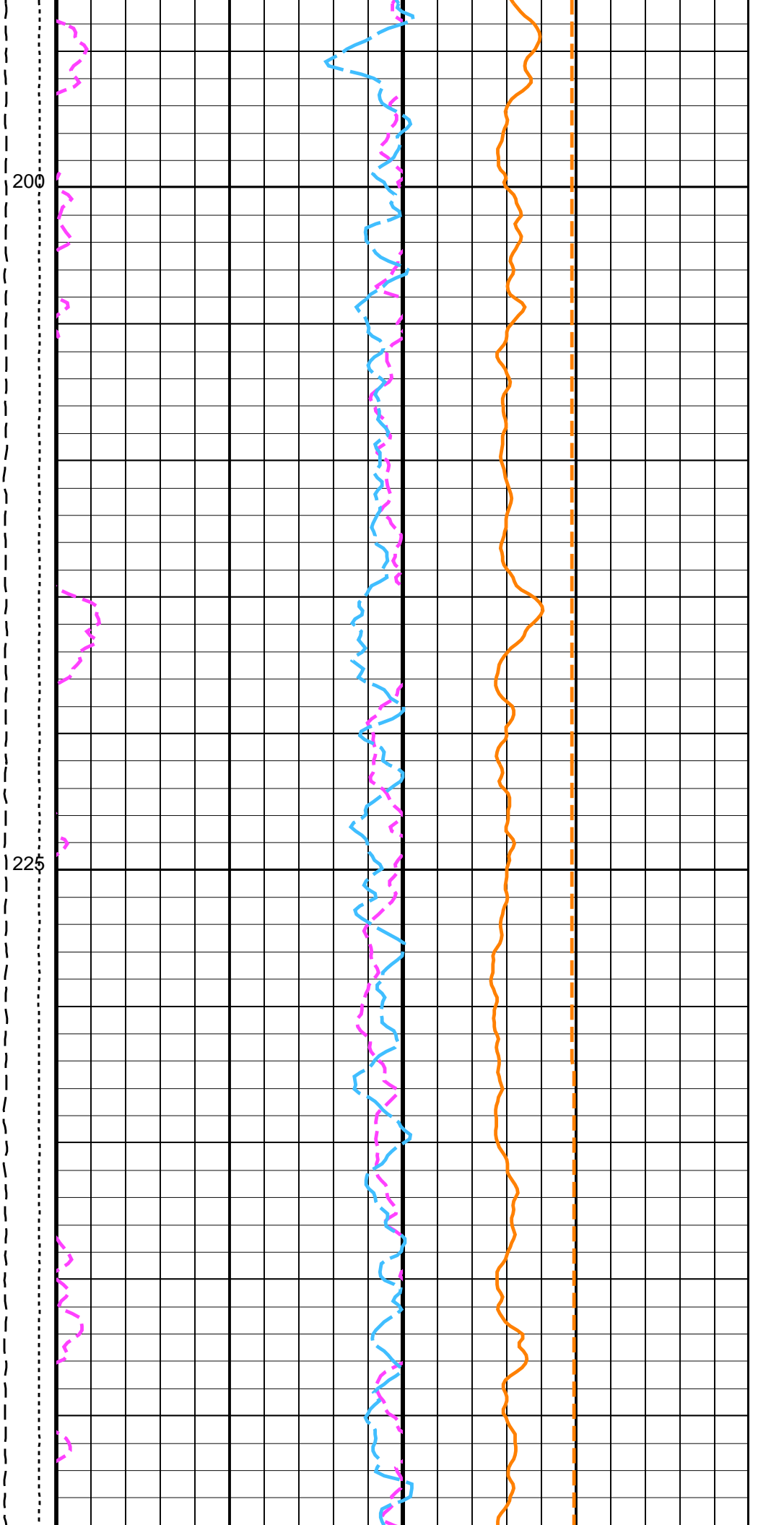
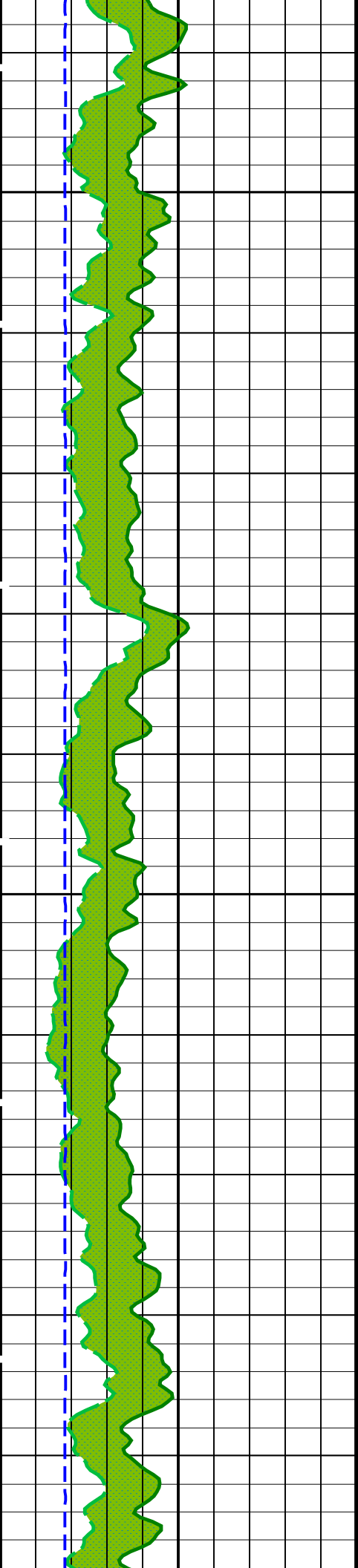
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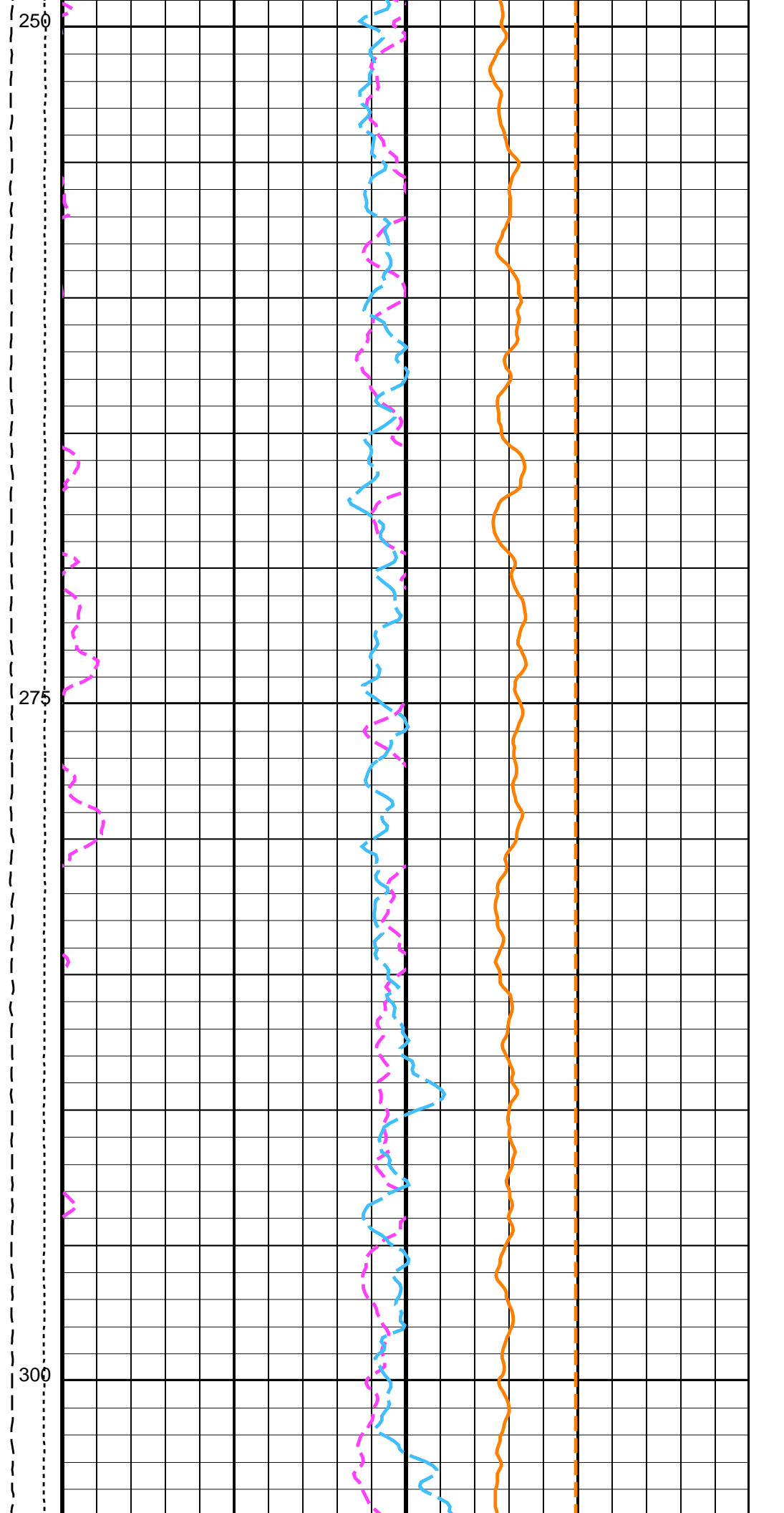
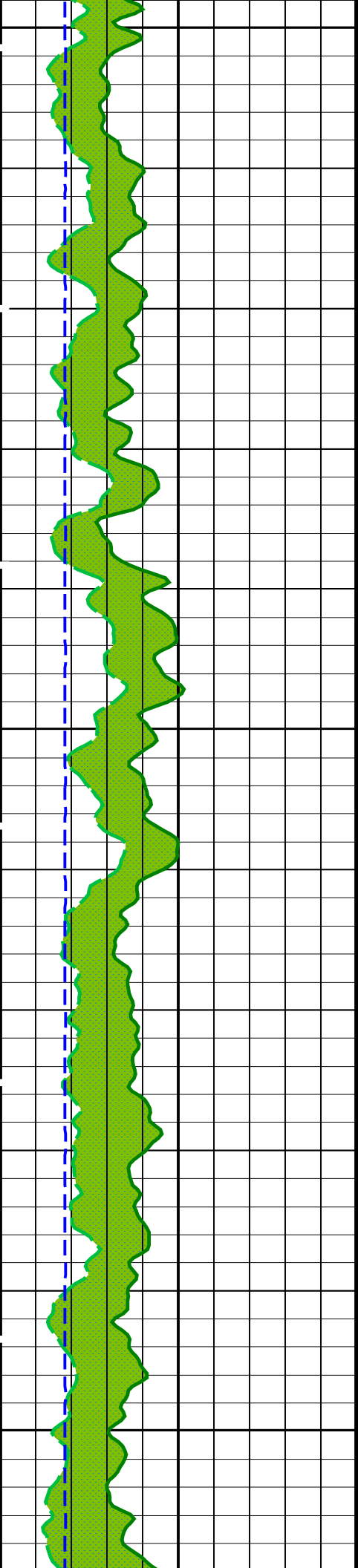


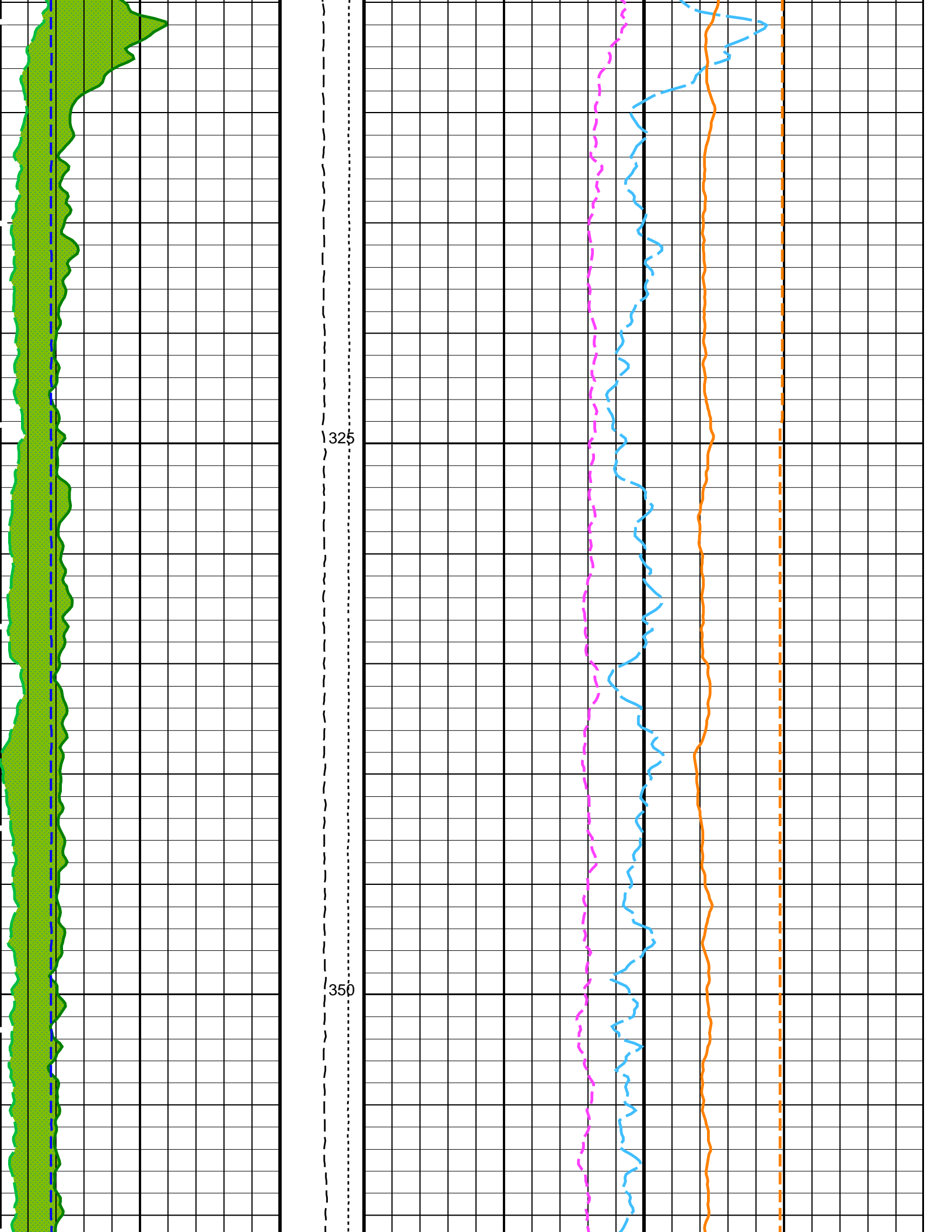


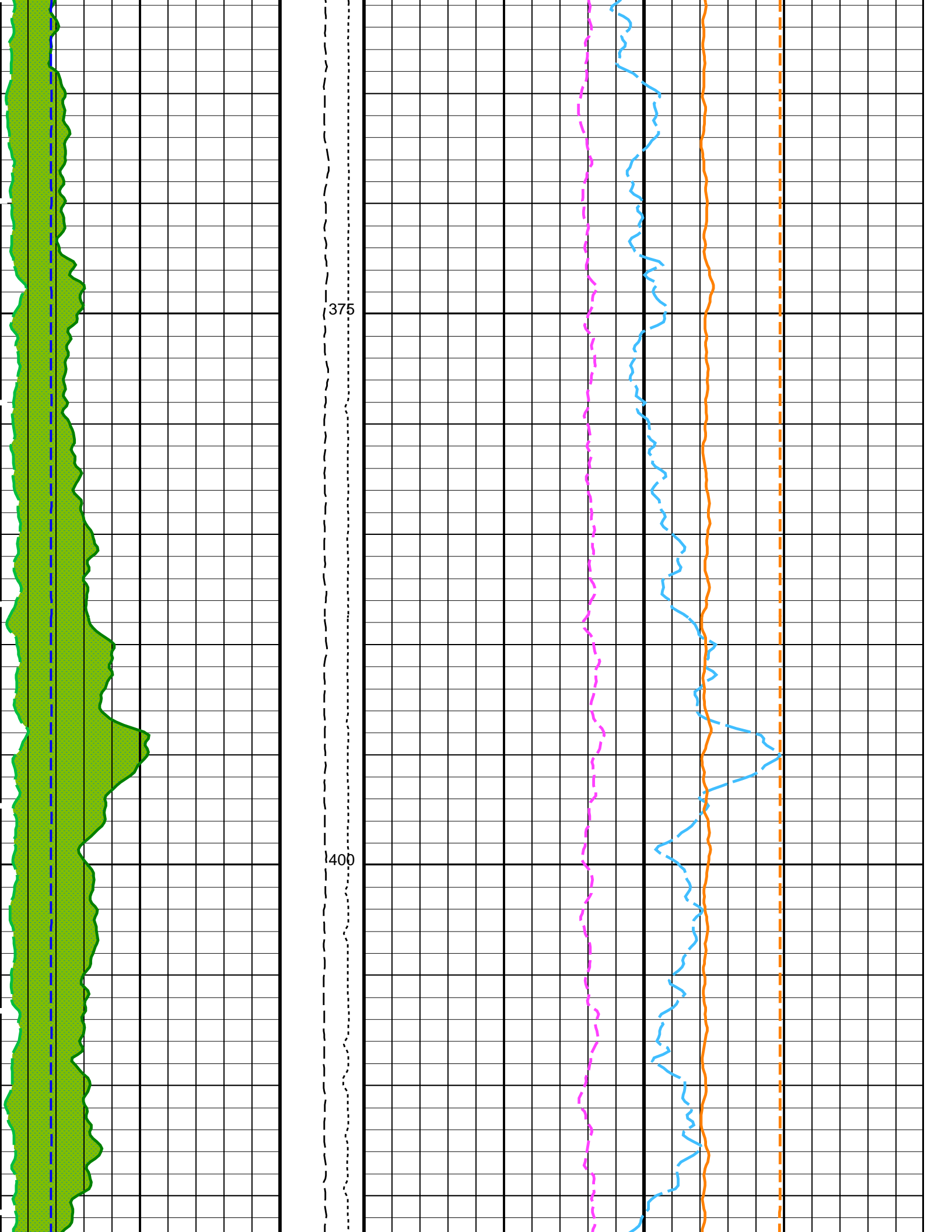


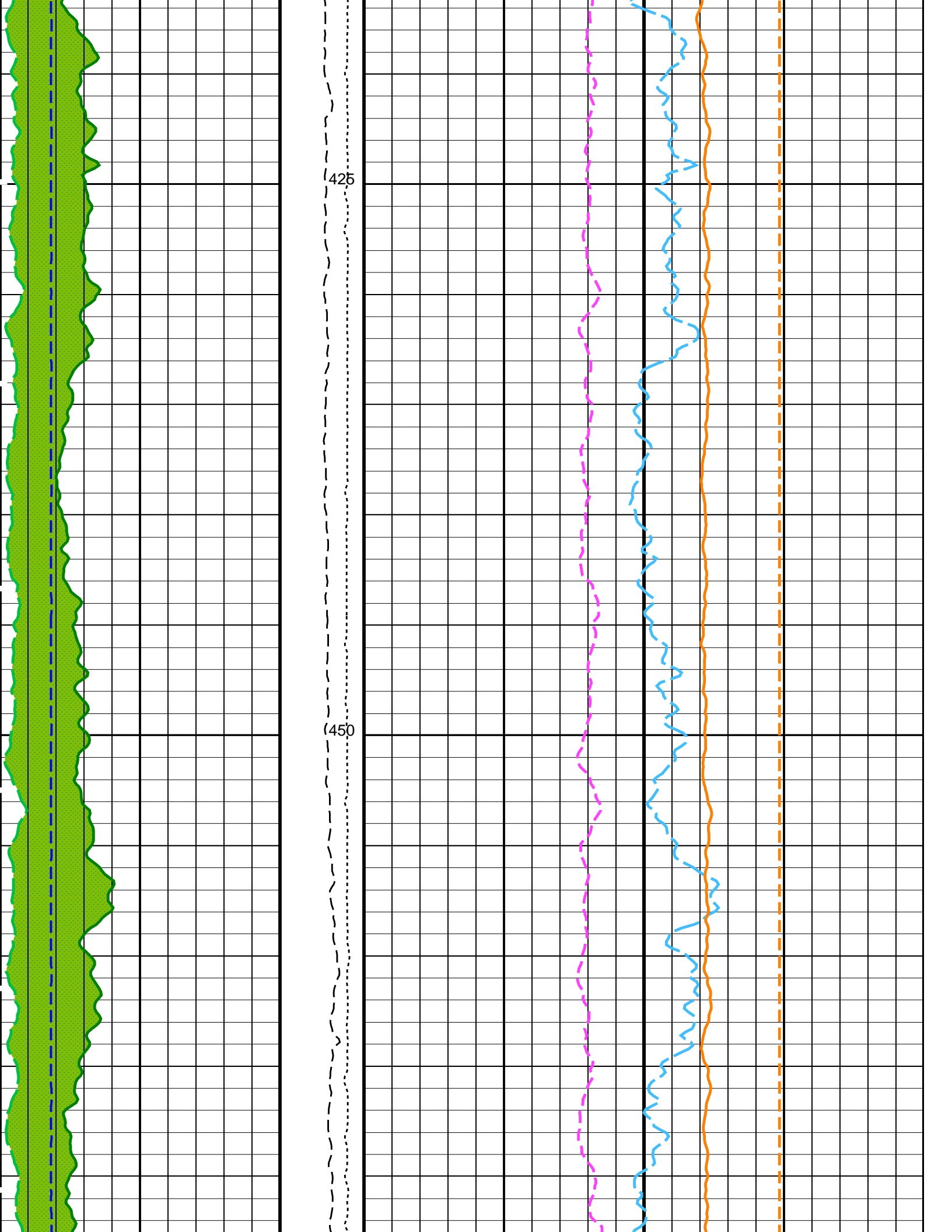


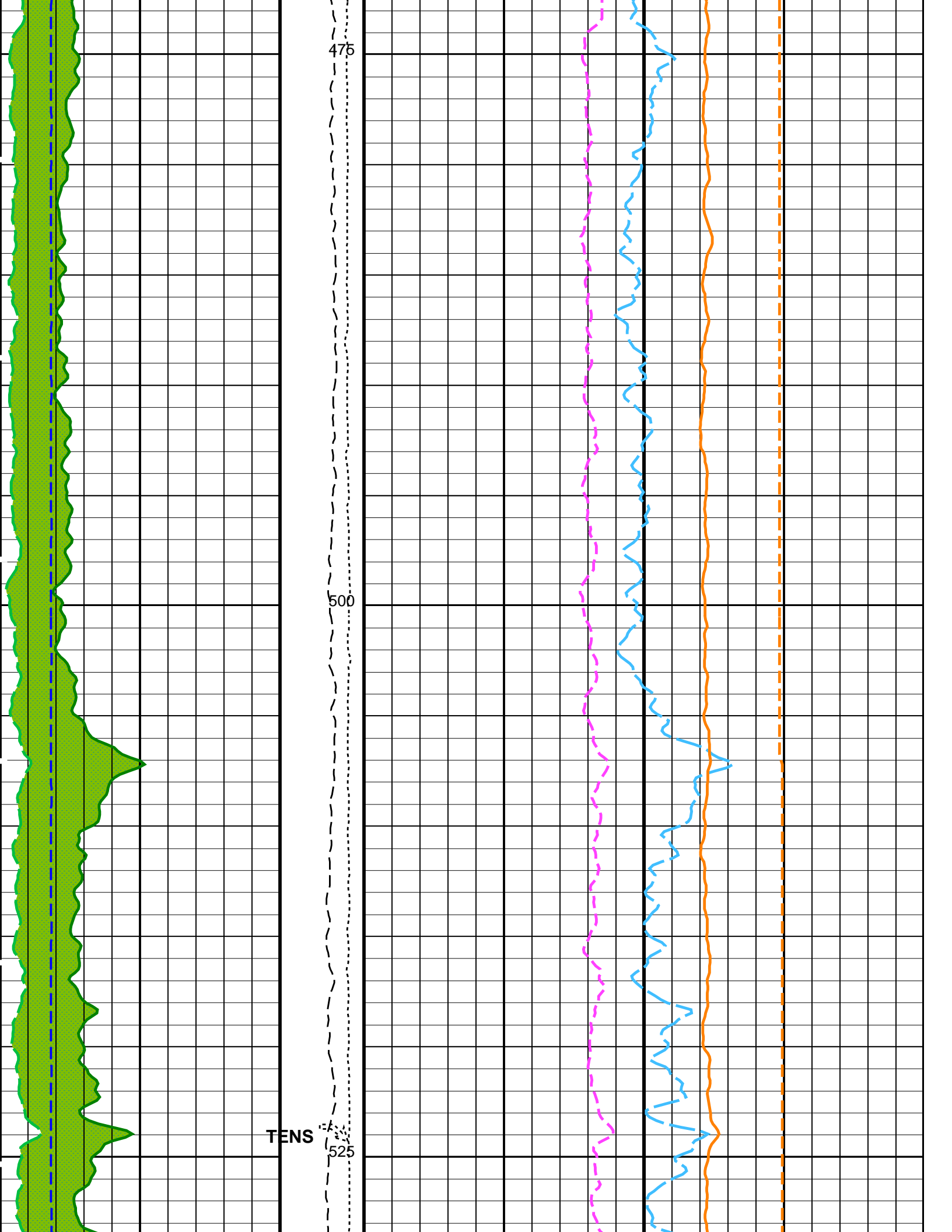


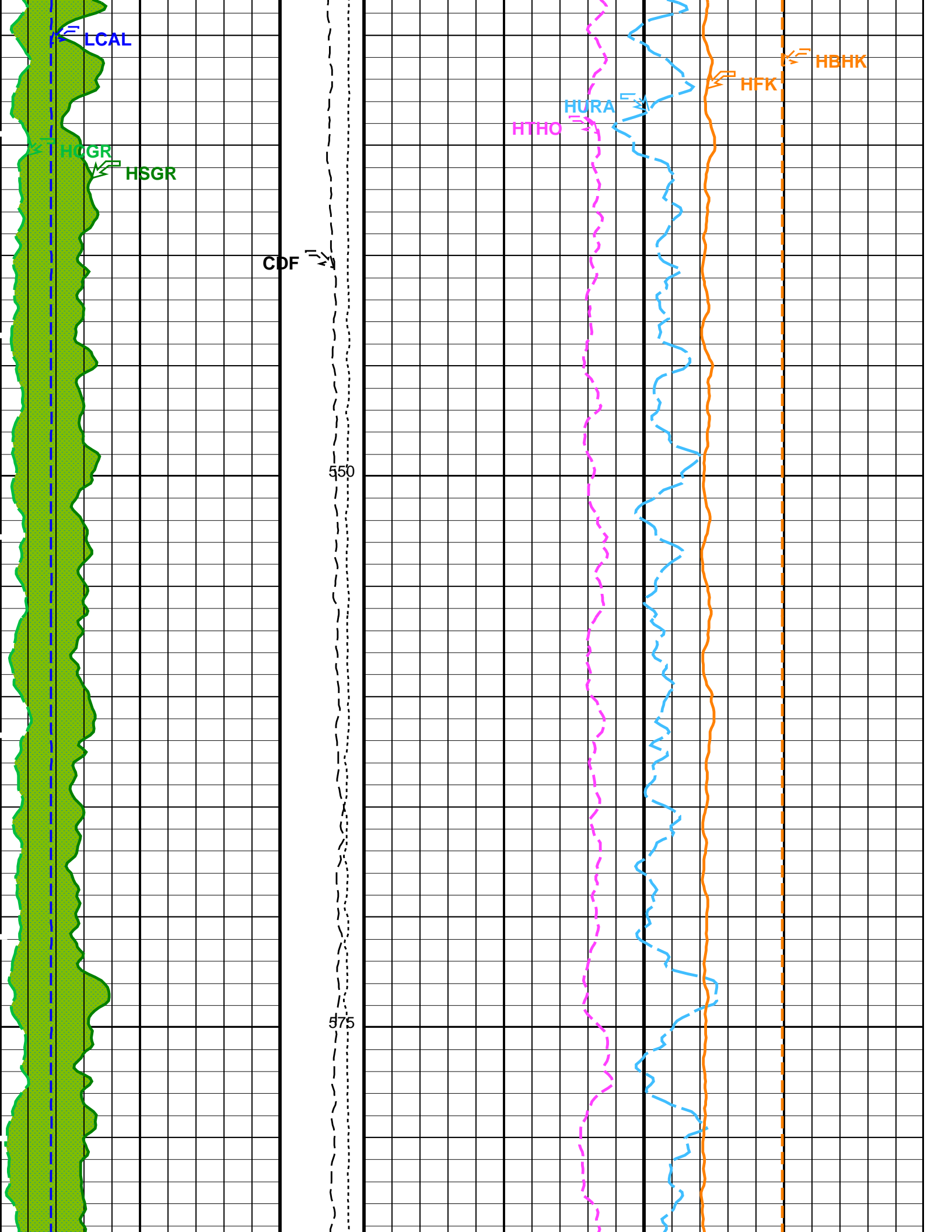


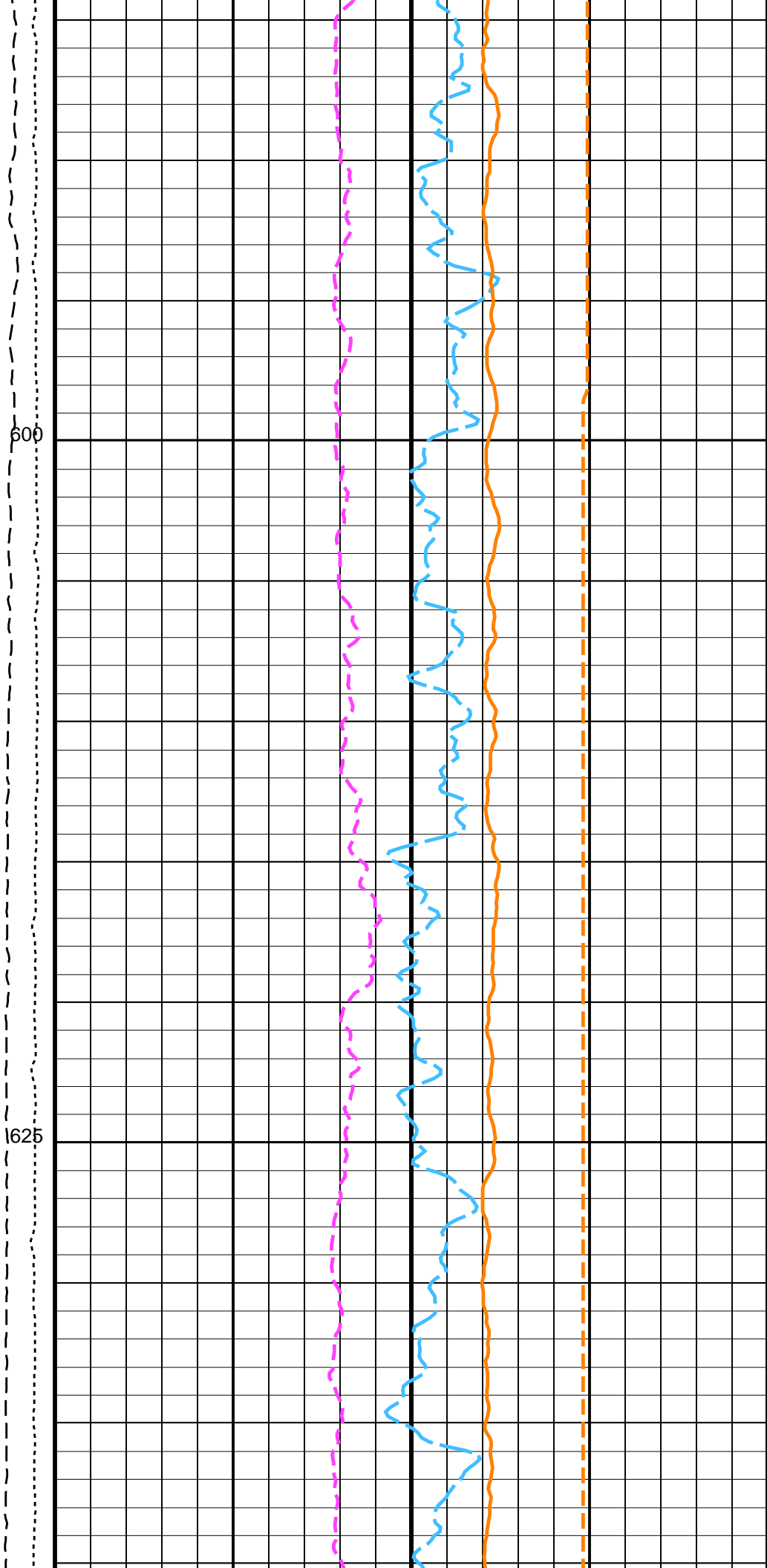
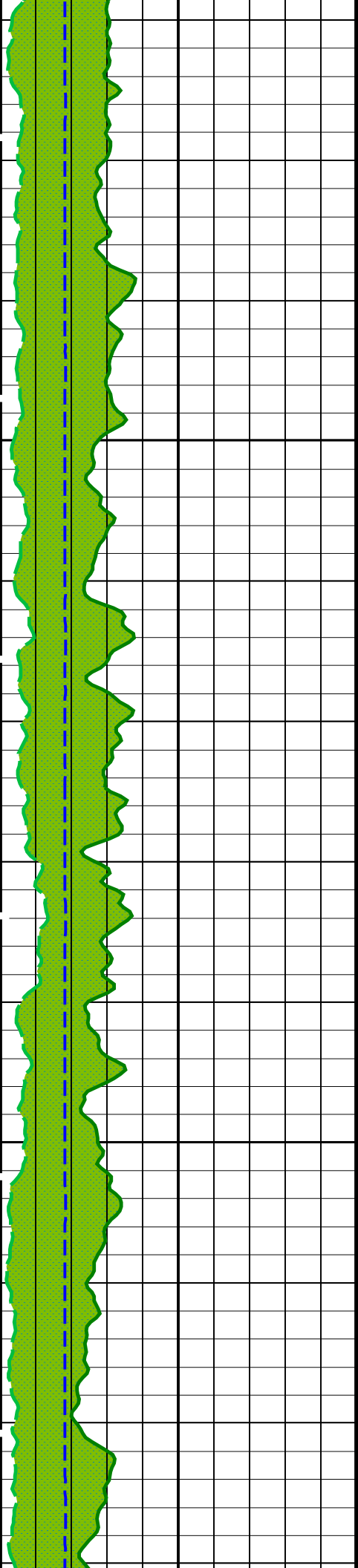


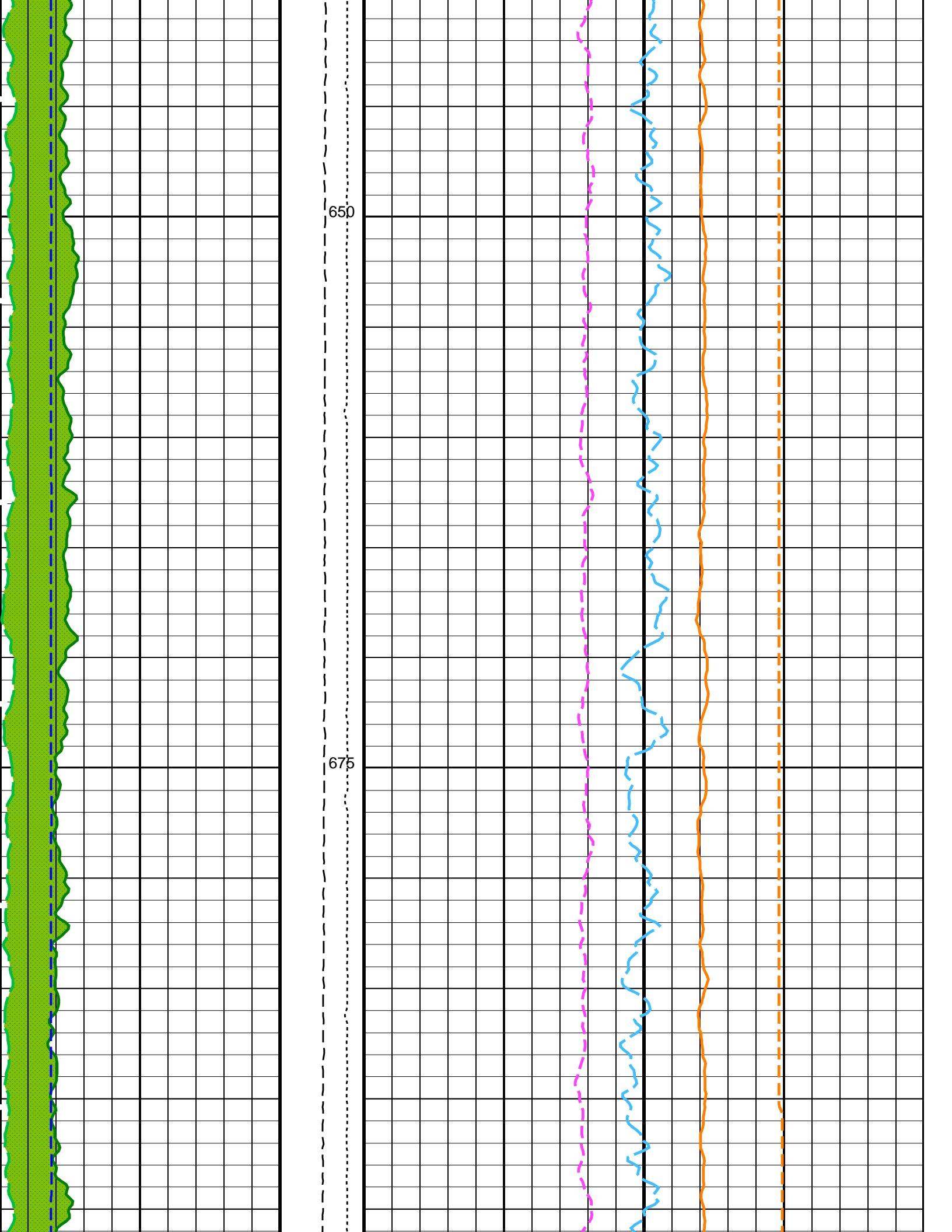


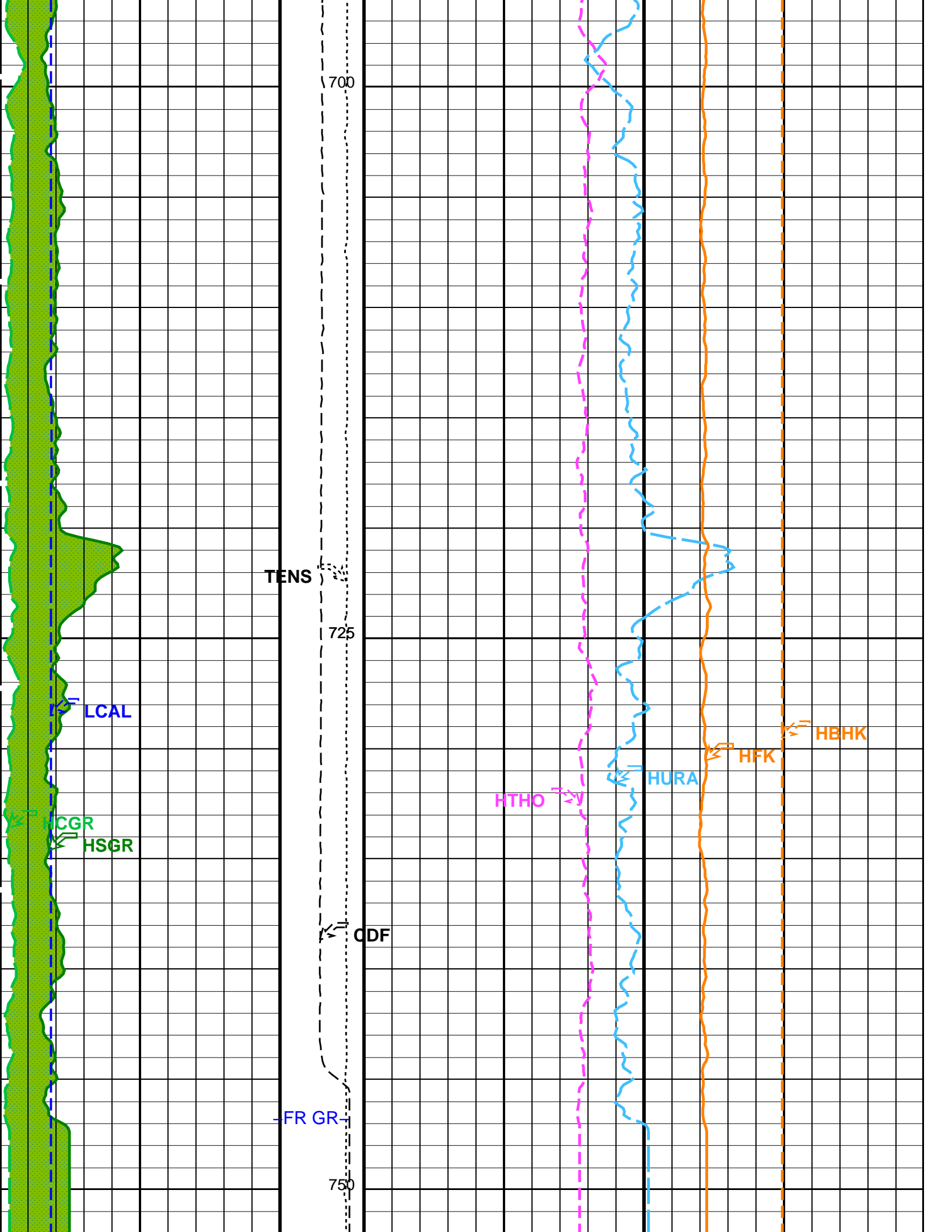


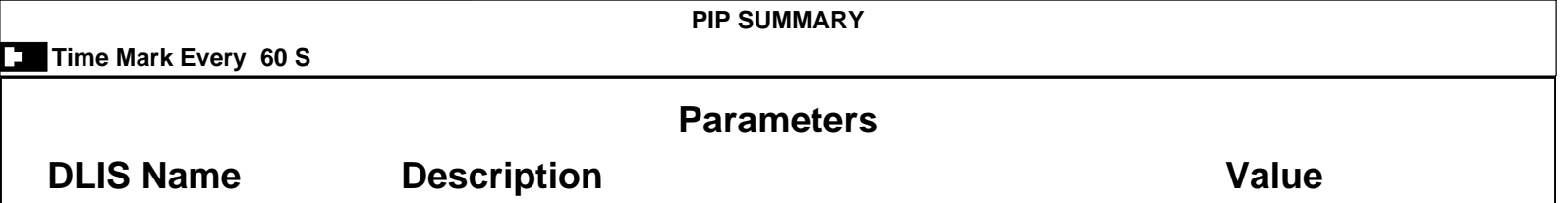
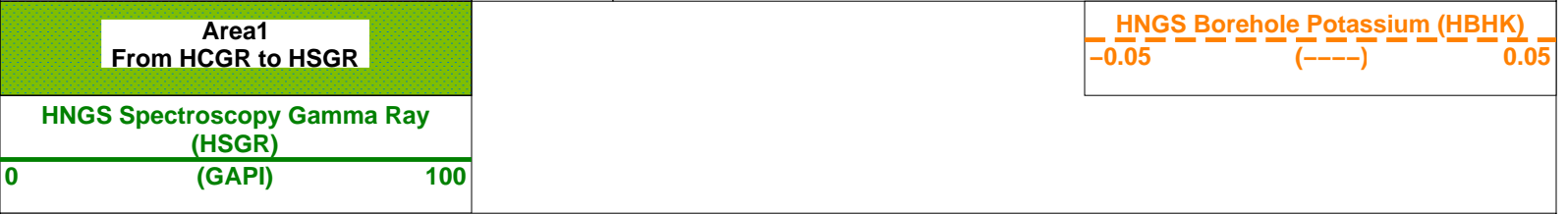
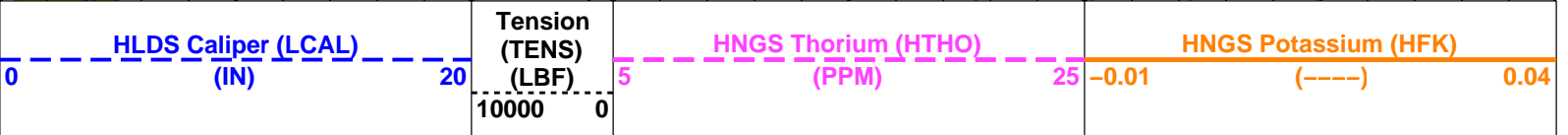
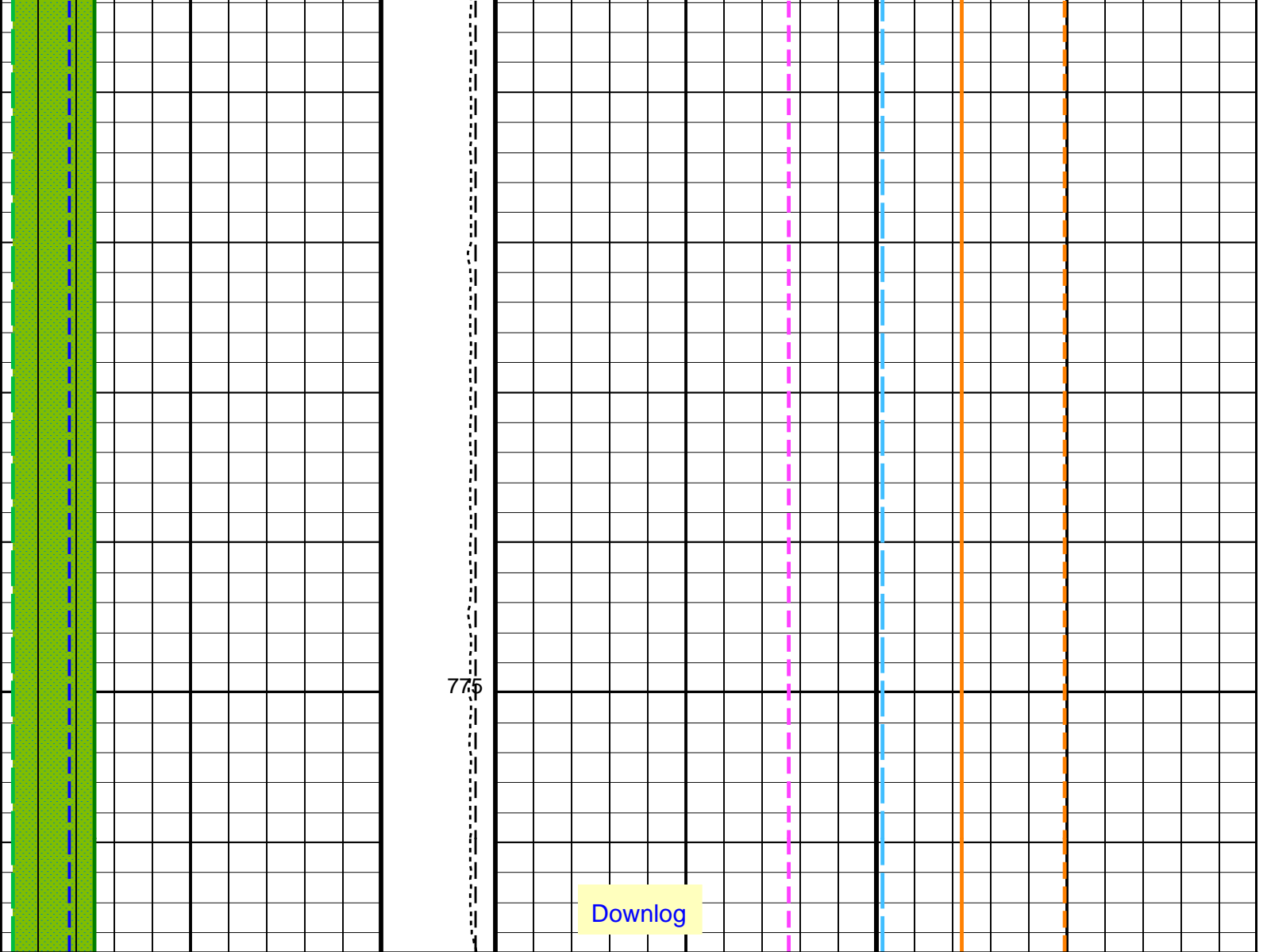












DLIS Name	Description	Value
BHS	HRLT-B: High Resolution Laterolog Array - B	OPEN
GCSE	Borehole Status	BS
BHS	APS-C: Accelerator-Porosity Tool	OPEN
GCSE	Borehole Status	BS
	Generalized Caliper Selection	BS

PIP SUMMARY

Time Mark Every 60 S

Parameters

HNGS-BA: Hostile Natural Gamma Ray Sonde

BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	BS	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.0011779	
HALF	HNGS Alpha Filter Length	60	IN
HC RB	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	1.17045	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.977099	
EDTC-B: Enhanced DTS Cartridge			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
System and Miscellaneous			
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.32	G/C3
DO	Depth Offset for Playback	-276.0	M
PP	Playback Processing	NORMAL	

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 28-Sep-2015 11:26

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	EDTC-B	SKK-5169-EDTCB

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_010LUP	PRODUCER	24-Sep-2015 16:55	1059.6 M	233.2 M
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Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_012PUP	FN:14	PRODUCER	28-Sep-2015 11:26	
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Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_010LUP	PRODUCER	24-Sep-2015 16:55	1059.6 M	233.2 M
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Output DLIS Files

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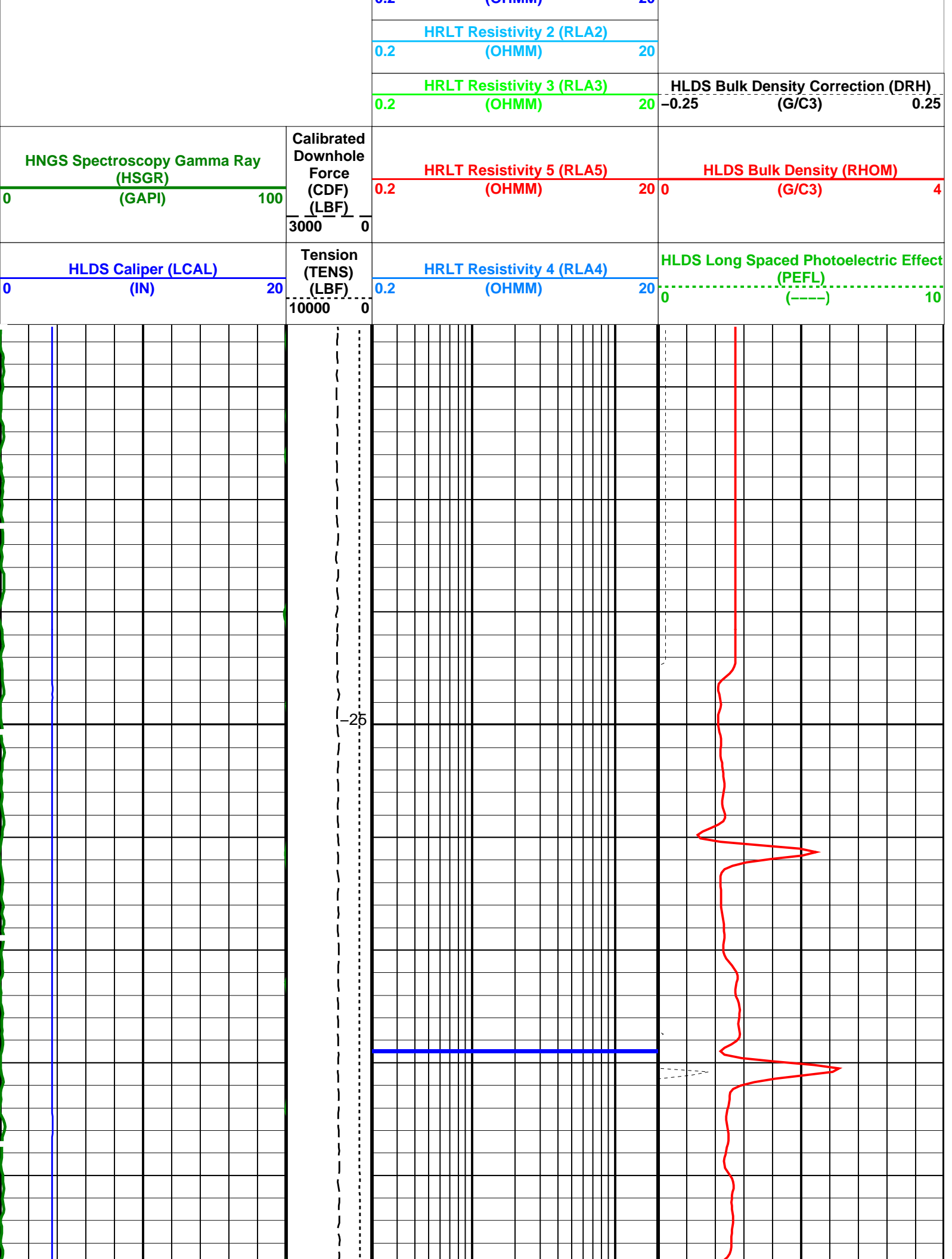
OP System Version: 19C0-187

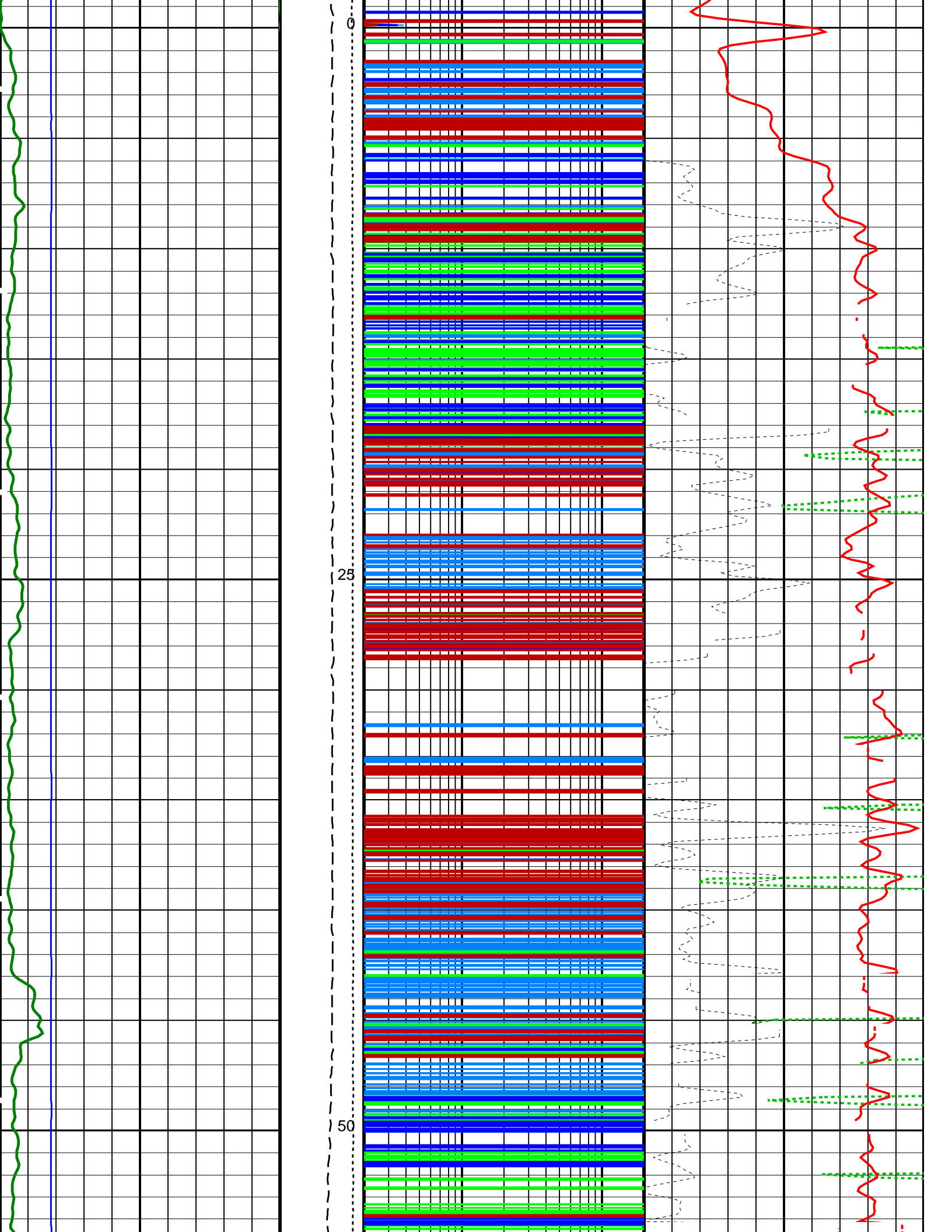
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HNGS-BA	19C0-187	EDTC-B	SKK-5169-EDTCB

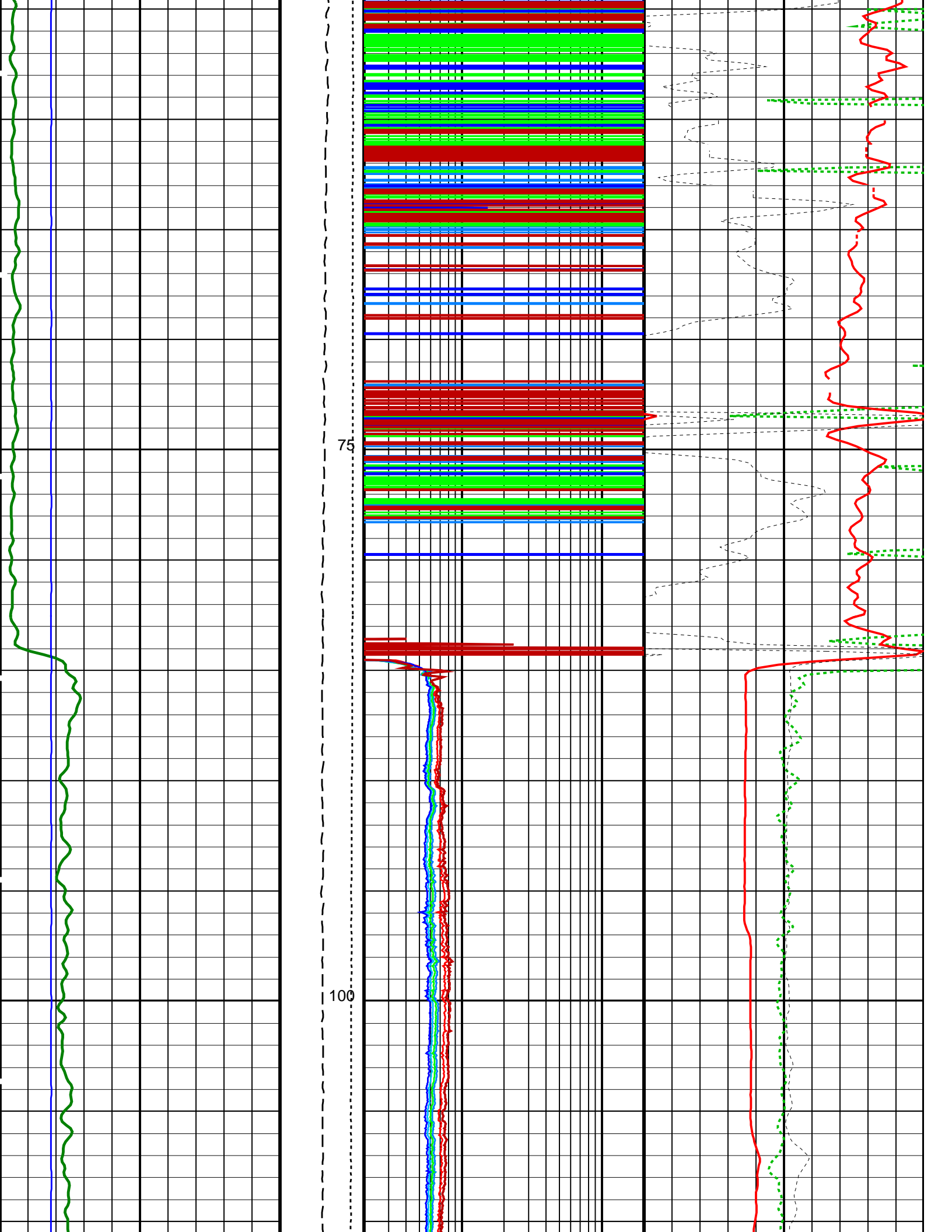
PIP SUMMARY

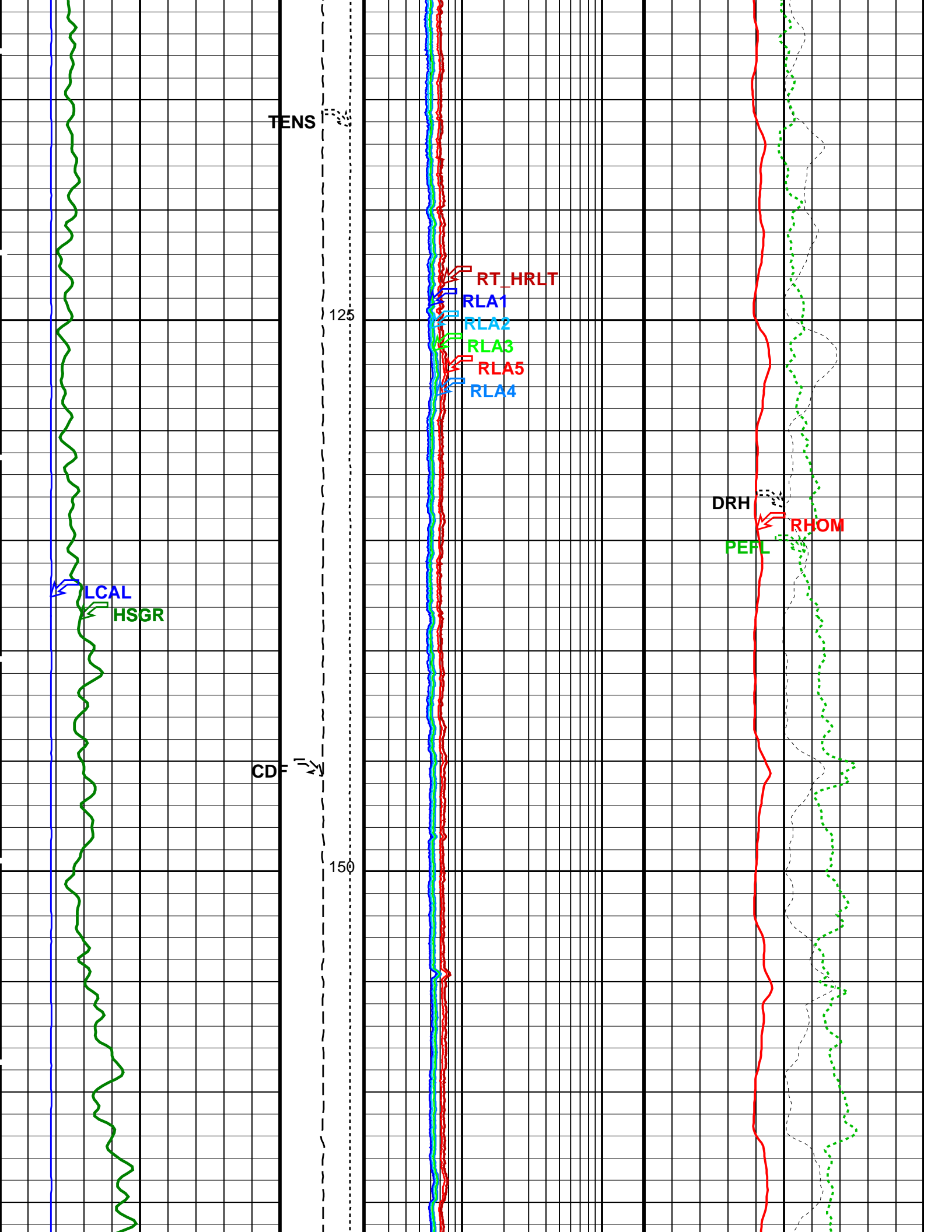
Time Mark Every 60 S

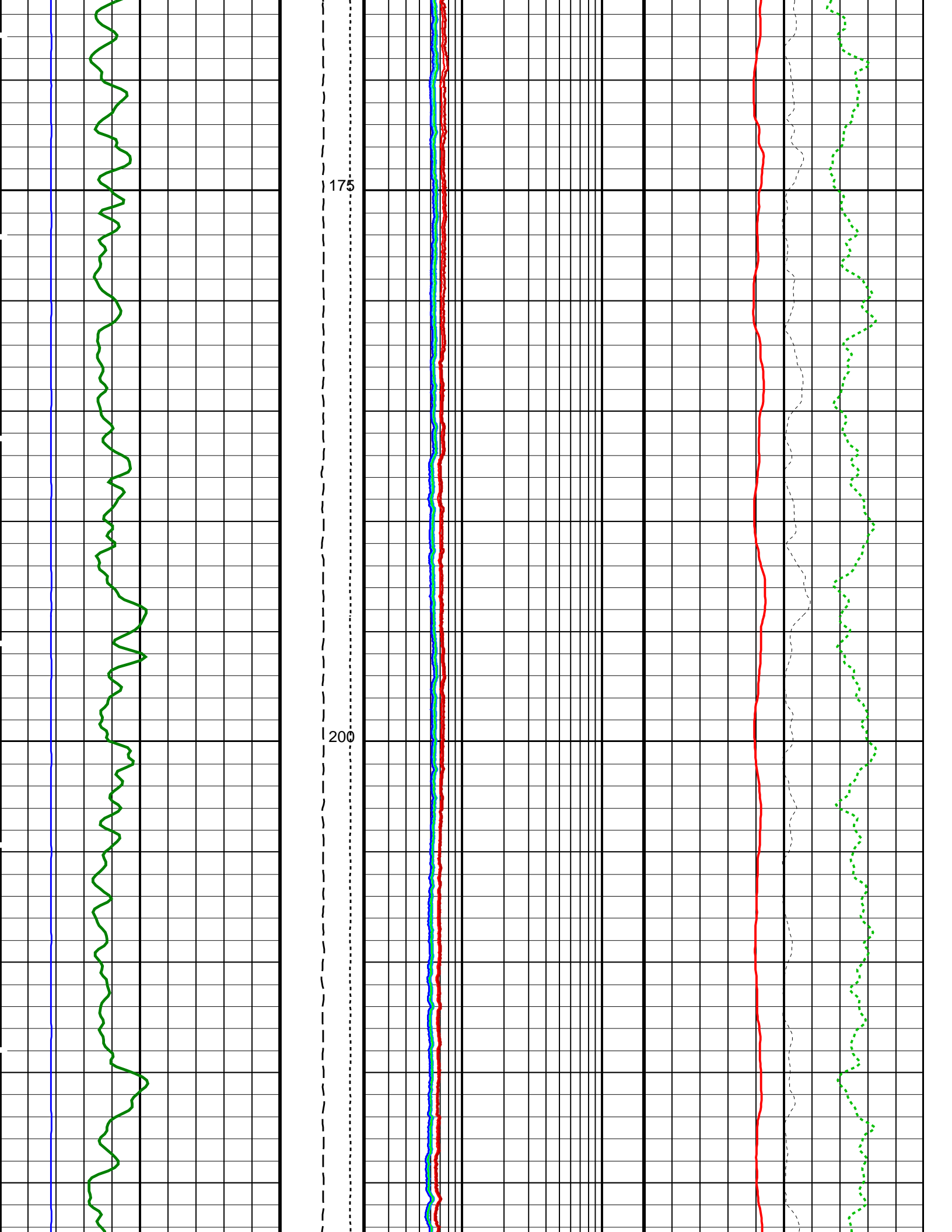
HRLT True Resistivity (RT_HRLT)		
0.2	(OHMM)	20
HRLT Resistivity 1 (RLA1)		
0.2	(OHMM)	20

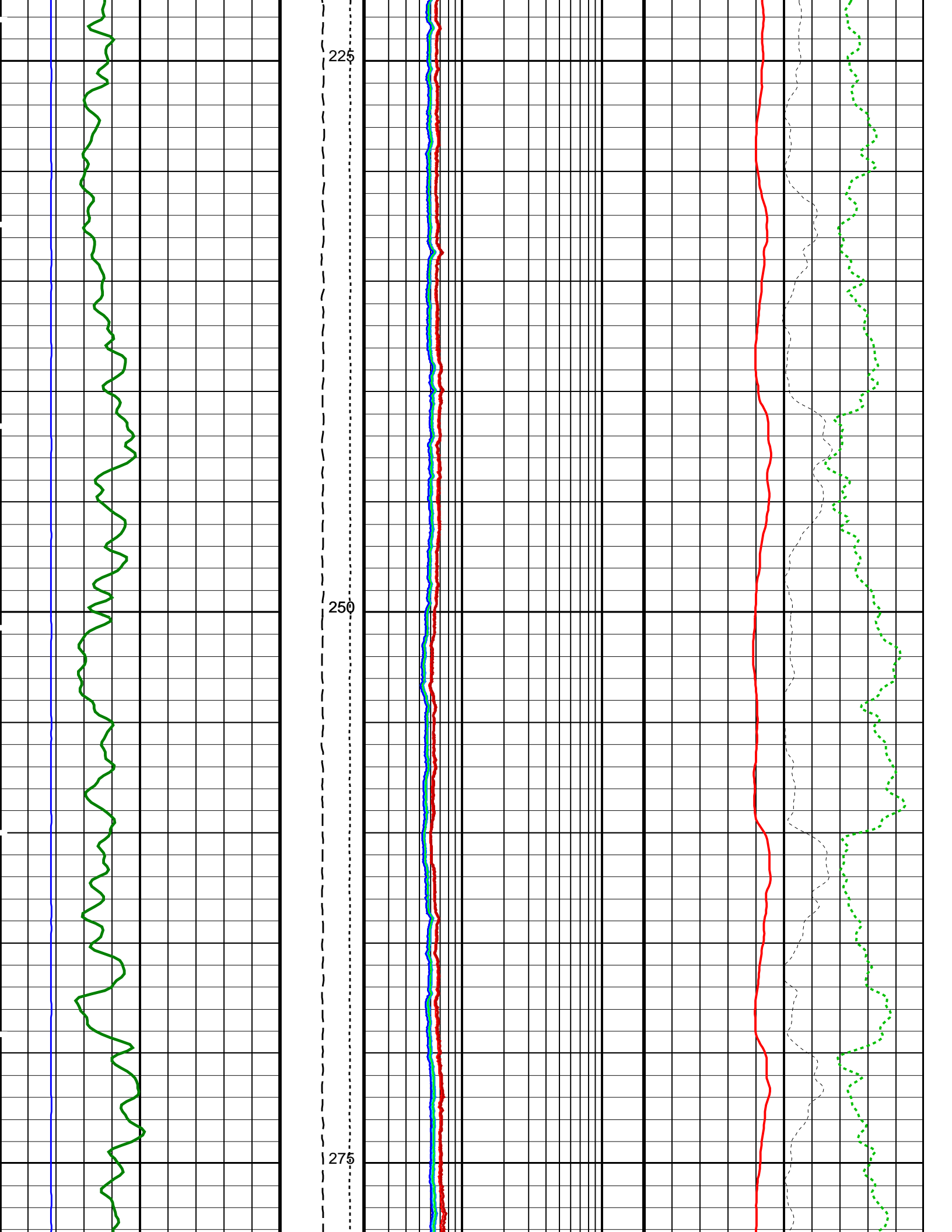


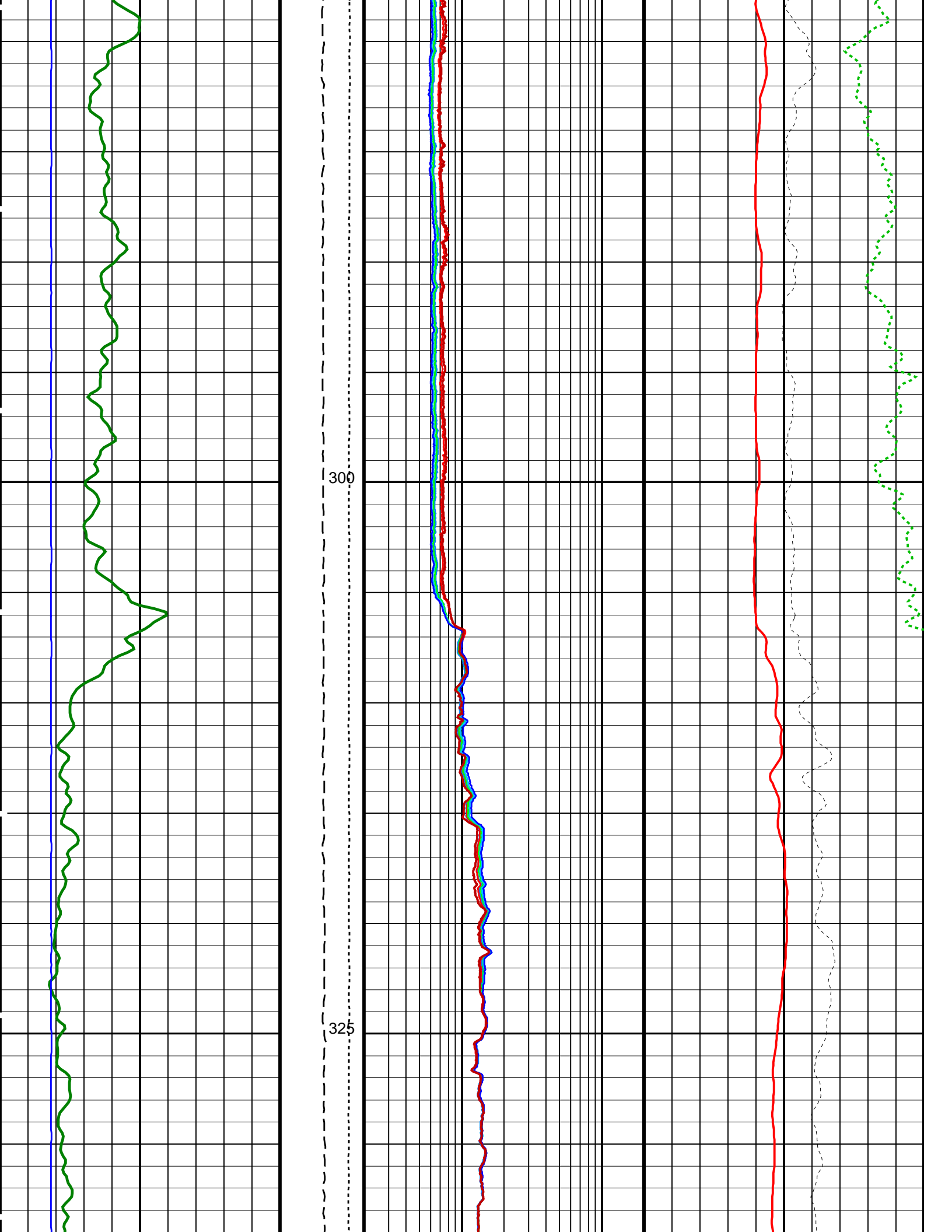


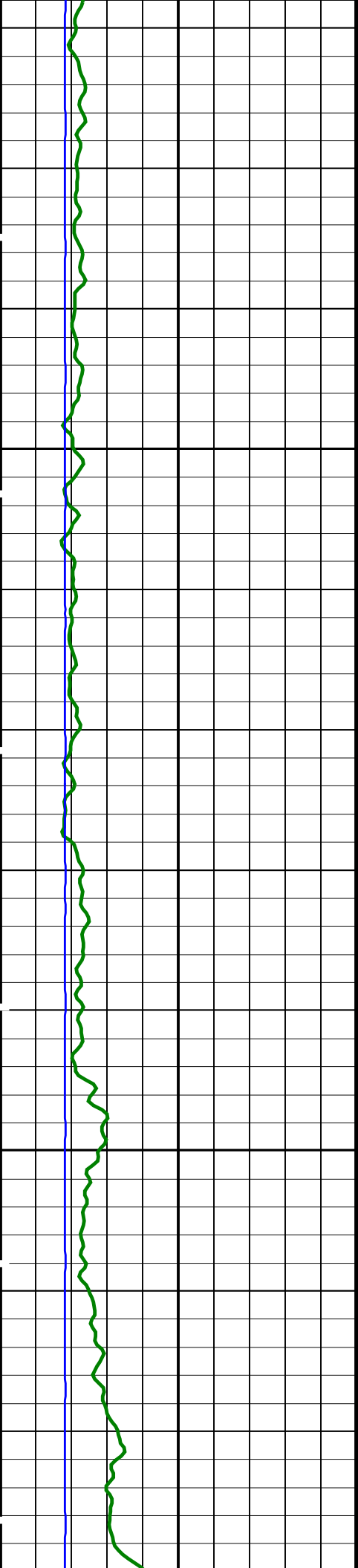






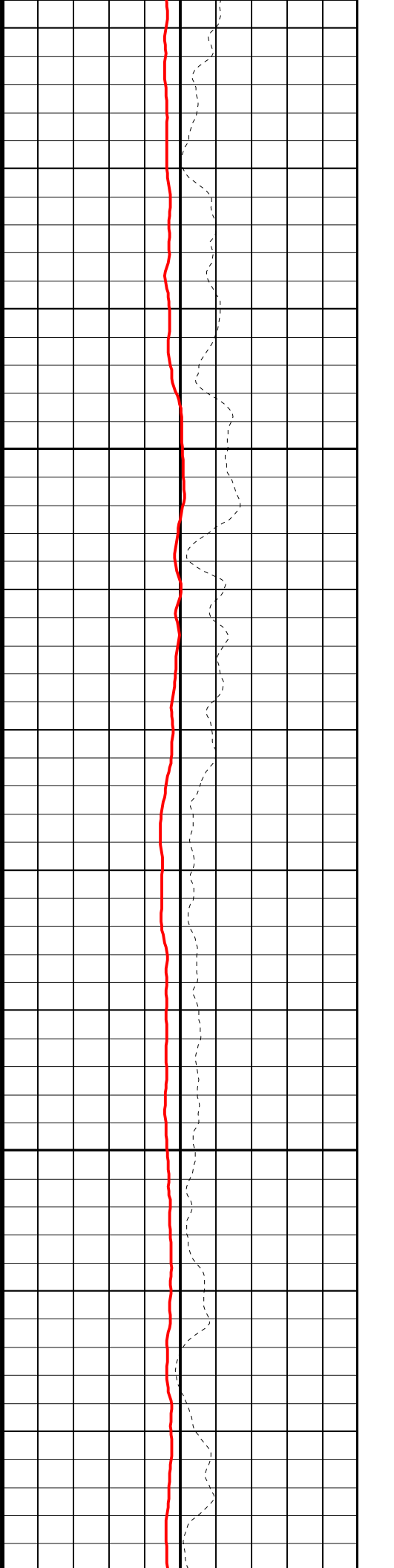
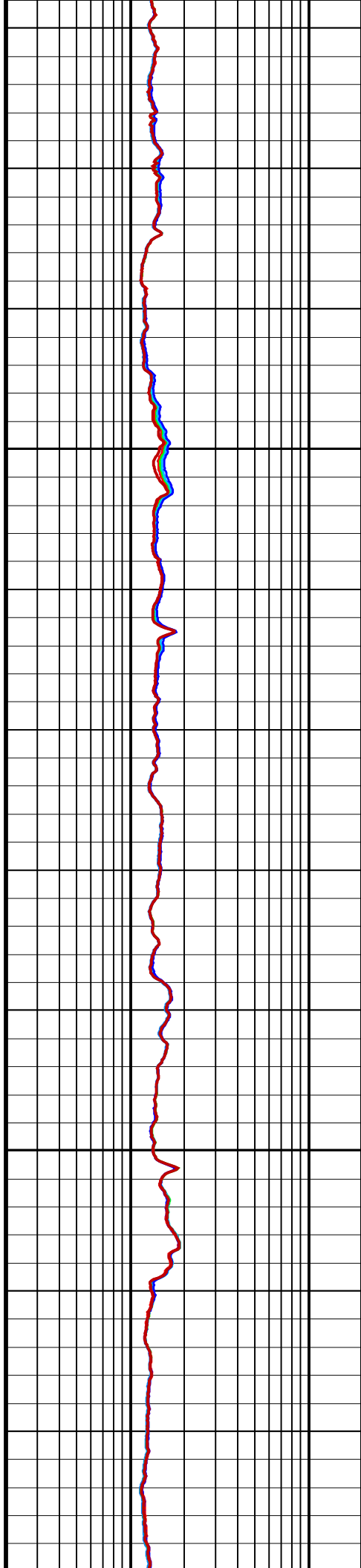


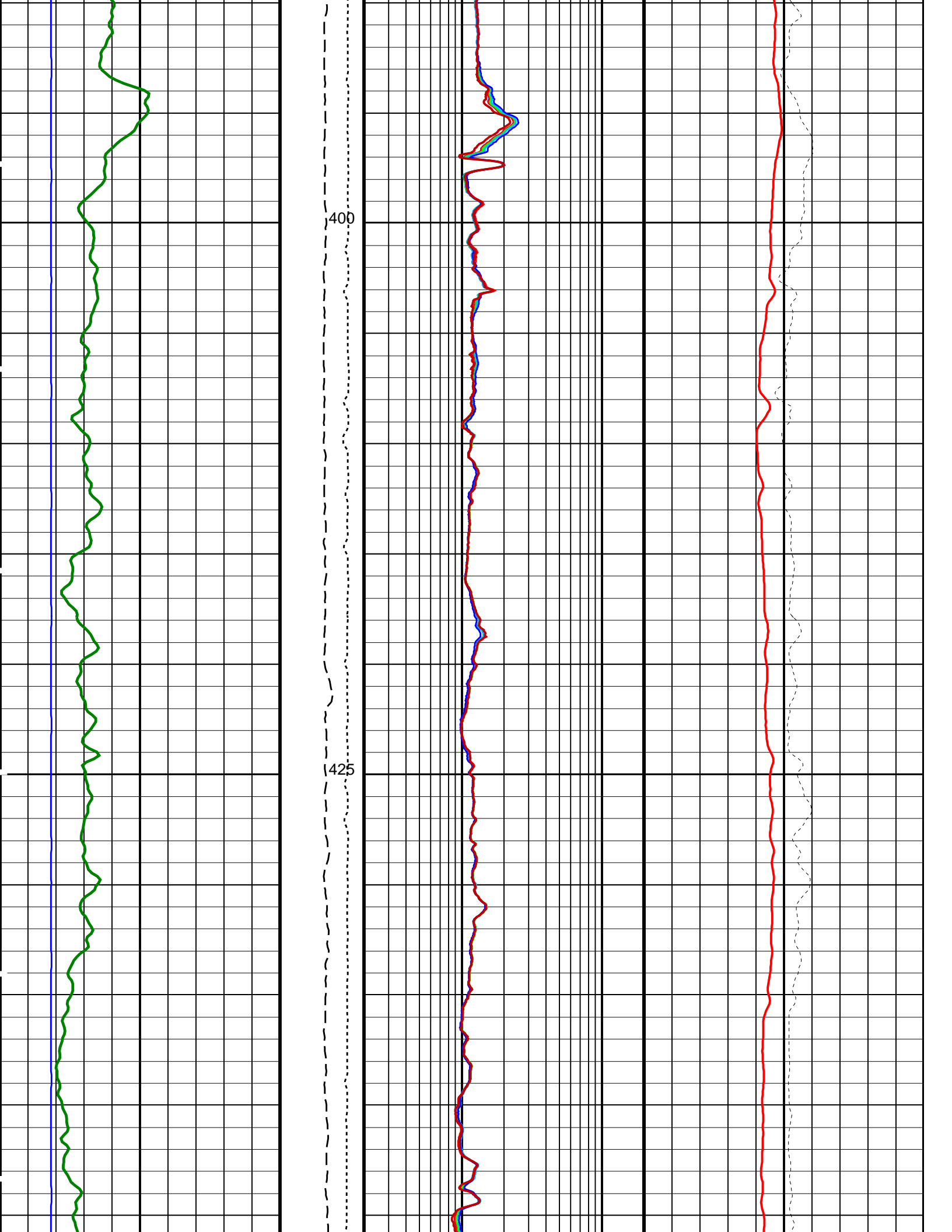


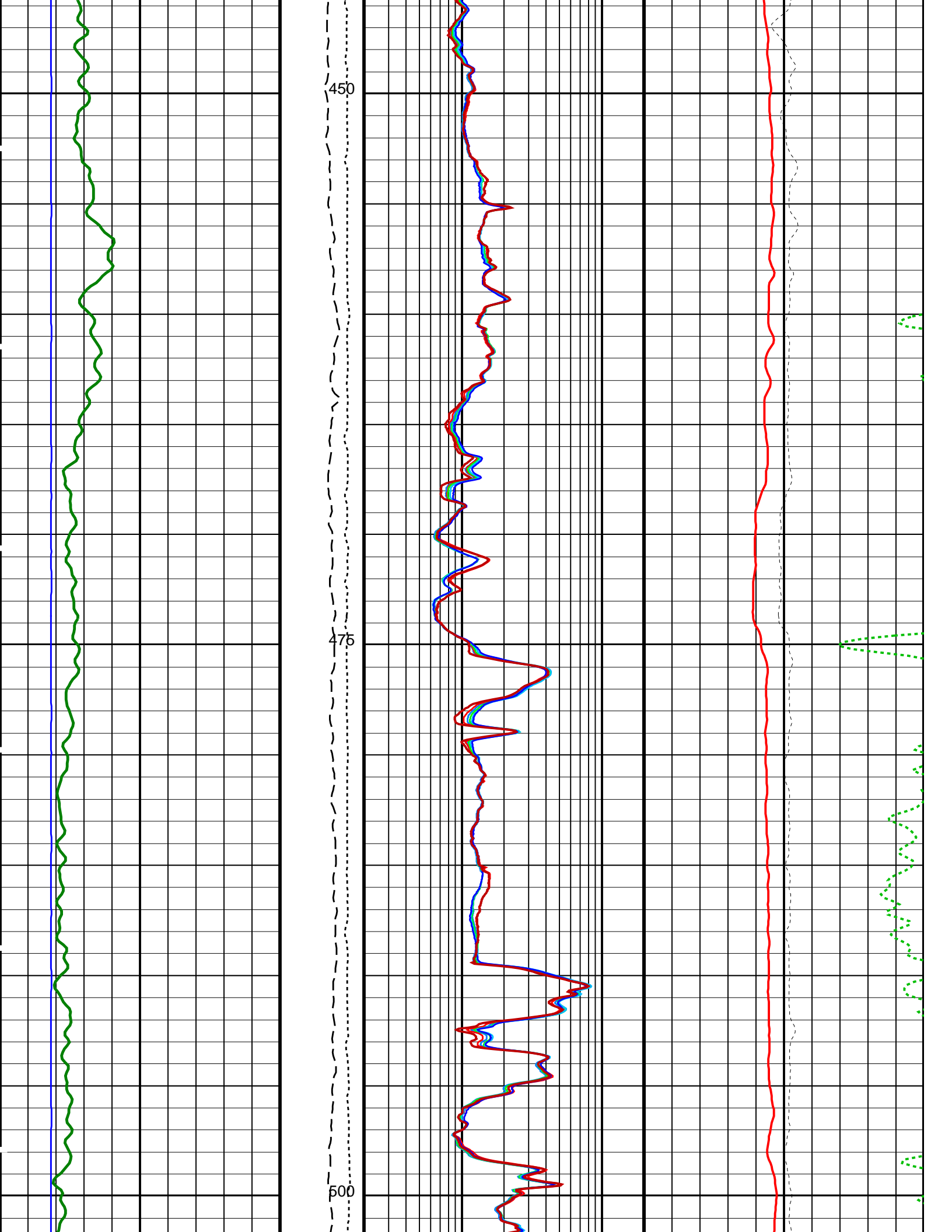


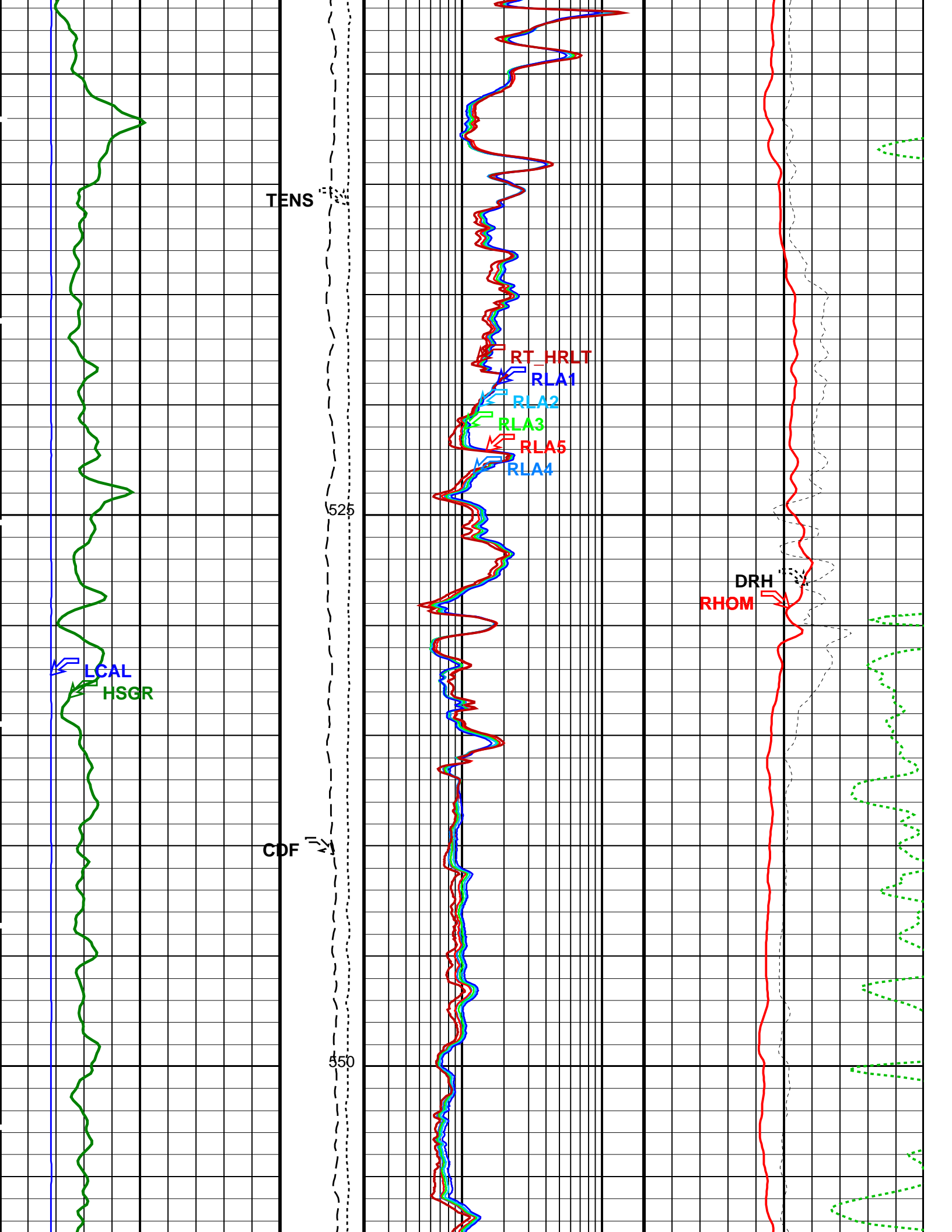
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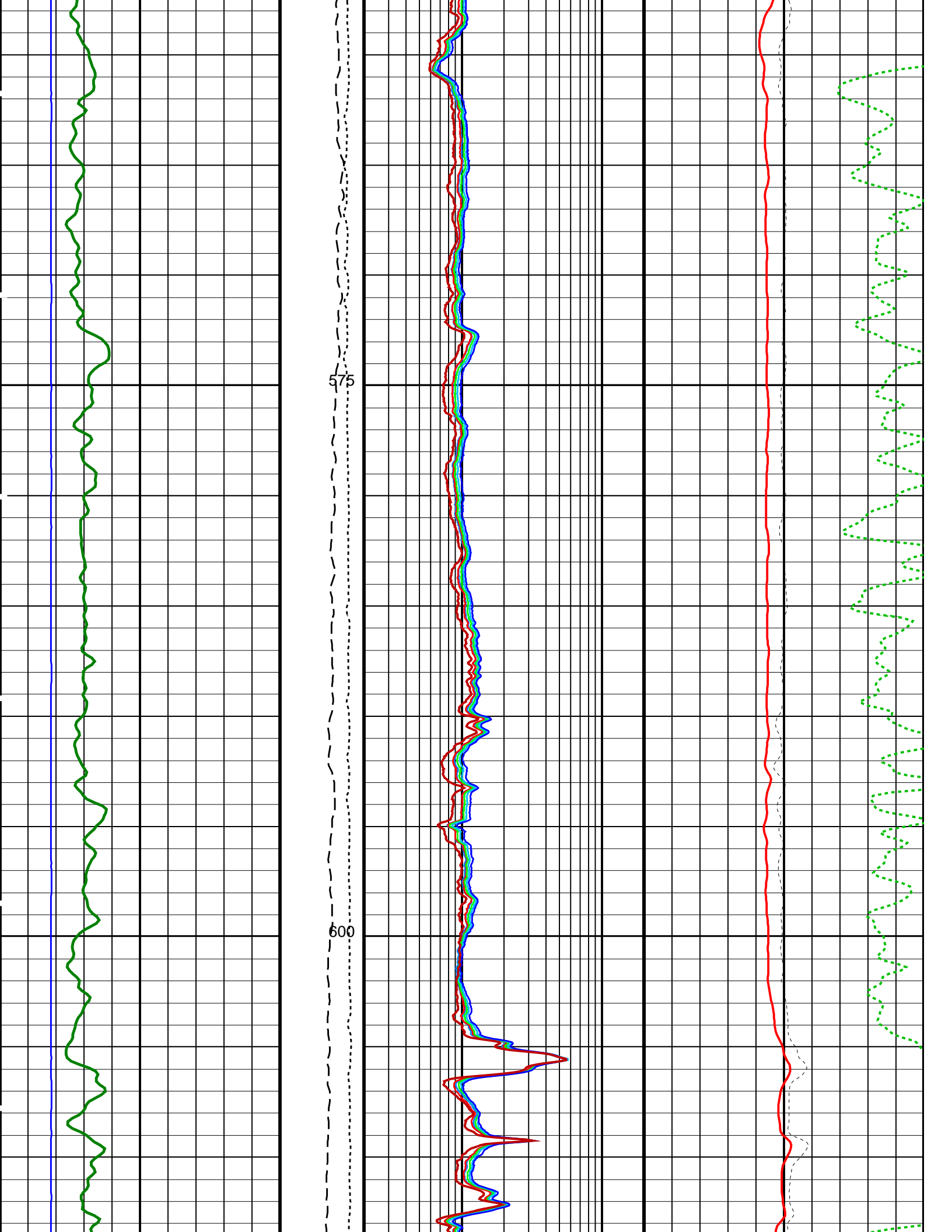
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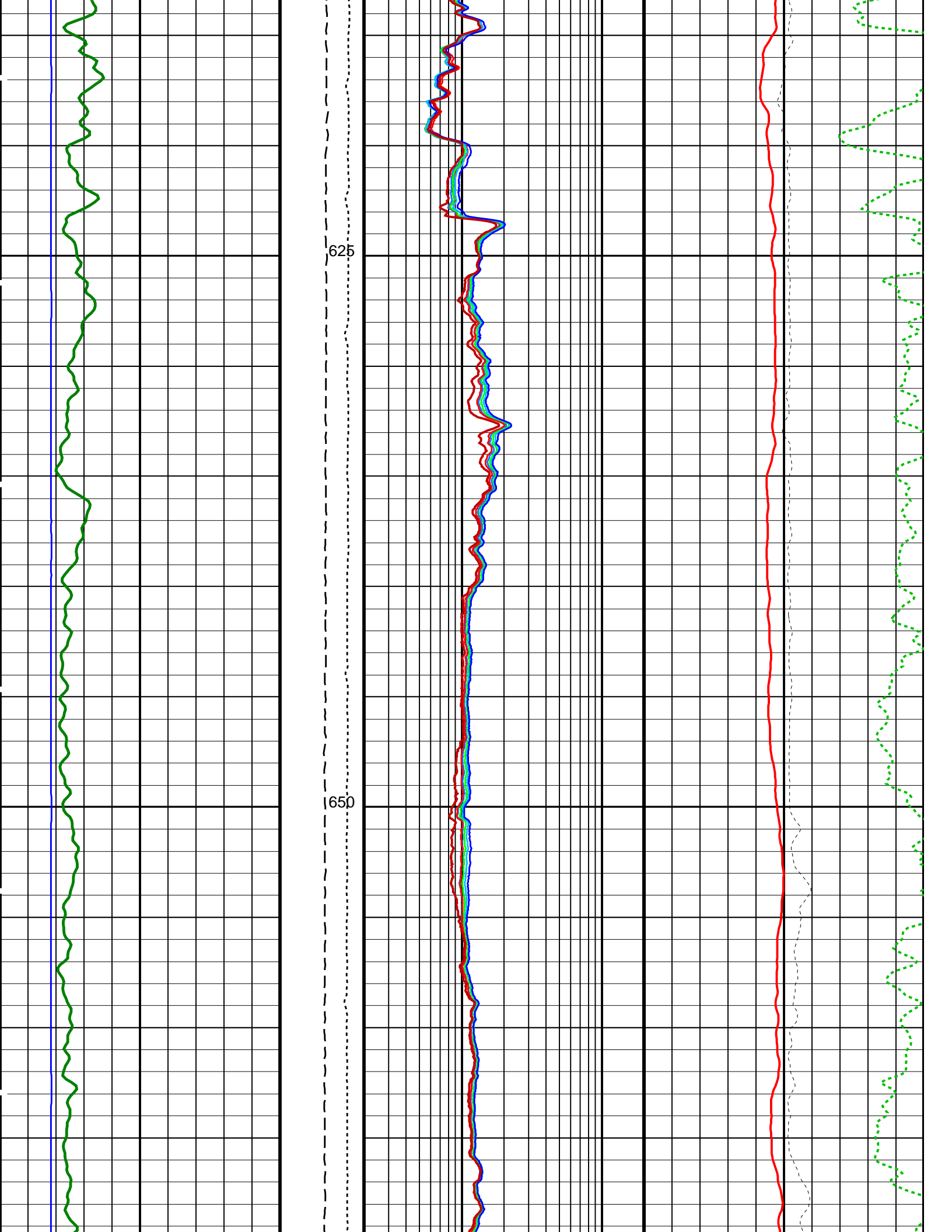


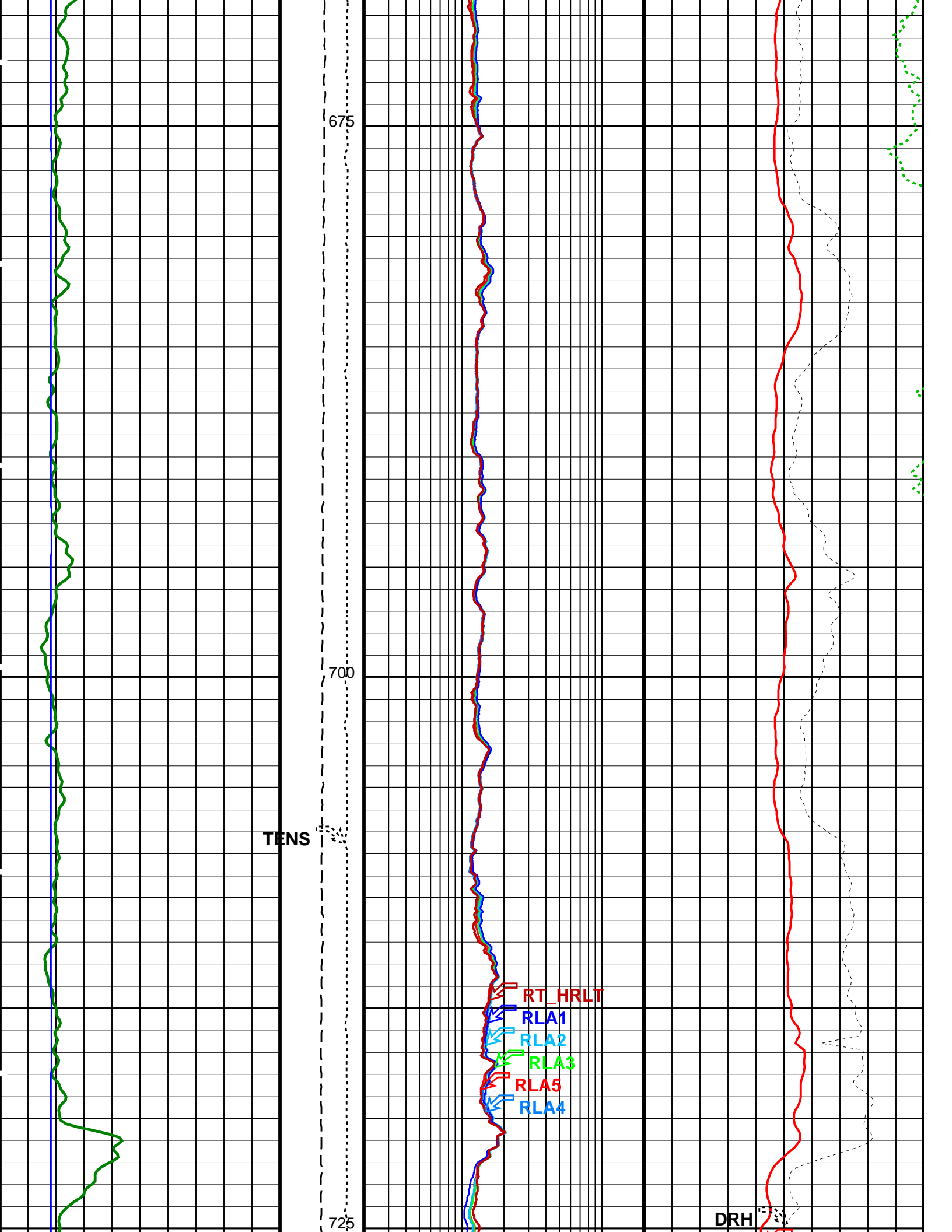


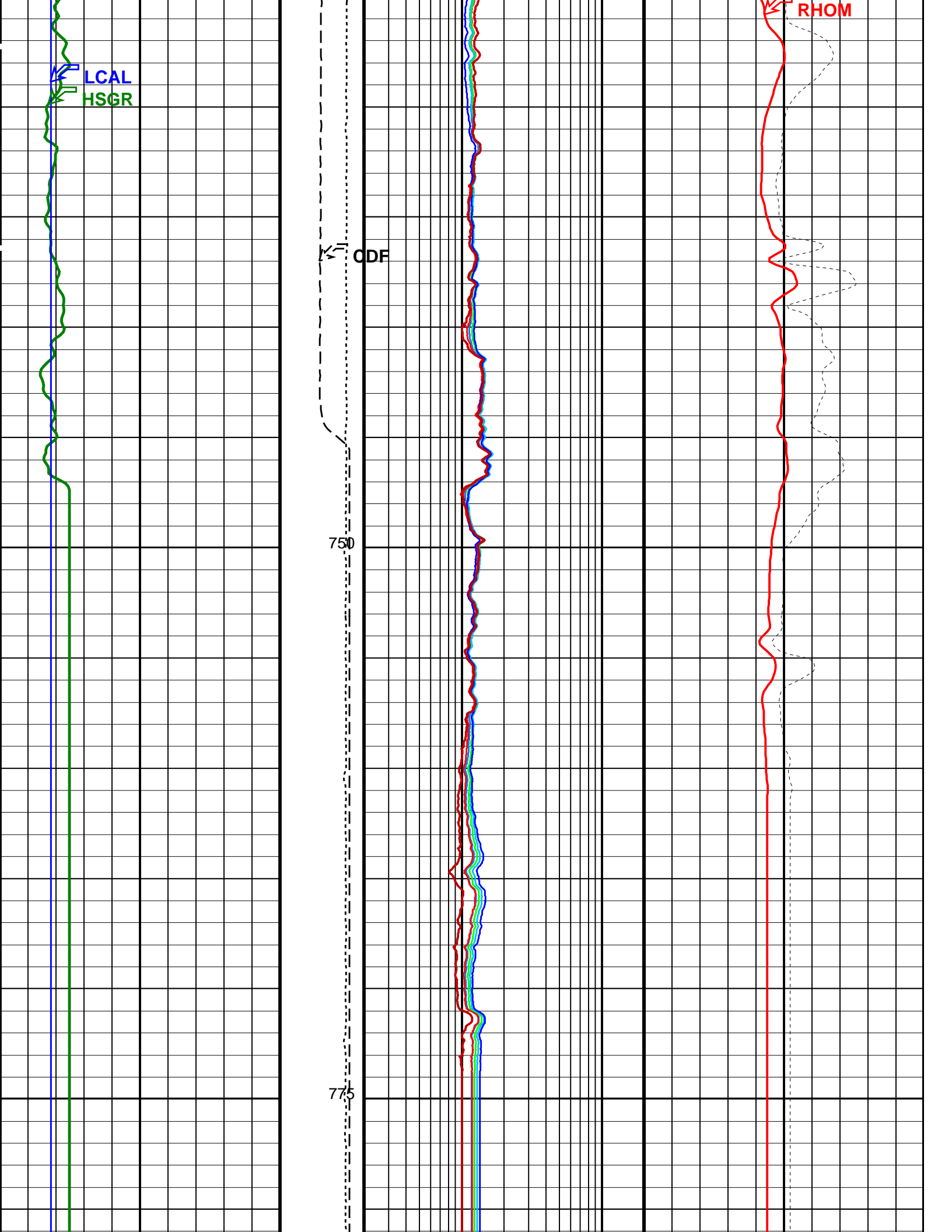












LCAL
HSGR

ODF

RHOM

750

775

HLDS Caliper (LCAL) 0 (IN) 20 10000 0	Tension (TENS) (LBF) 10000 0	HRLT Resistivity 4 (RLA4) 0.2 (OHMM) 20	HLDS Long Spaced Photoelectric Effect (PEFL) 0 (----) 10
HNGS Spectroscopy Gamma Ray (HSGR) (GAPI) 0 100	Calibrated Downhole Force (CDF) (LBF) 3000 0	HRLT Resistivity 5 (RLA5) 0.2 (OHMM) 20	HLDS Bulk Density (RHOM) 0 (G/C3) 4
		HRLT Resistivity 3 (RLA3) 0.2 (OHMM) 20	HLDS Bulk Density Correction (DRH) -0.25 (G/C3) 0.25
		HRLT Resistivity 2 (RLA2) 0.2 (OHMM) 20	
		HRLT Resistivity 1 (RLA1) 0.2 (OHMM) 20	
		HRLT True Resistivity (RT_HRLT) 0.2 (OHMM) 20	

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)	30 DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE
CALTEMP	HRLTB Calibration Temperature	24.8518 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	BARITE
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
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
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	

APS-C: Accelerator-Porosity Tool

AASD	APS Software Version	0	
ADSO	APS Thermal and Array Detectors High Voltage Setting	1938.41	V
AFSD	APS Array Detectors Data Source Switch	Both	
AHCS	APS Far Detector High Voltage Setting	2034.64	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	1700.34	V
ATSS	APS Standoff Correction Switch	ON	
BHFL_APS	APS Temperature-Pressure-Salinity Correction Switch	OFF	
BHS	APS TNPH Borehole Fluid Type	WATER	
BHT	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	30	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	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO_APS	APS TNPH Mud Cake Correction Option	NO	
MCOR_APS	APS TNPH Mud Correction	BARI	
MWCO_APS	APS TNPH Mud Weight Correction Option	YES	
NARC	APS Near/Array Calibration Ratio	1.0863	
NFRC	APS Near/Far Calibration Ratio	0.97772	
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)	30	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	-0.0011779	
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	1.17045	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.977099	

EDTC-B: Enhanced DTS Cartridge

BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	30	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 Resistivity 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	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			
ALTDPCHAN	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	1.32	G/C3
DO	Depth Offset for Playback	-276.0	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	1120	M
TDD	Total Depth - Driller	1115.30	M
TDL	Total Depth - Logger	1120.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripleCombo Vertical Scale: 1:200 Graphics File Created: 28-Sep-2015 11:26

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	EDTC-B	SKK-5169-EDTCB

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_010LUP	PRODUCER	24-Sep-2015 16:55	1059.6 M	233.2 M
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Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_012PUP	FN:14	PRODUCER	28-Sep-2015 11:26
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Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
High Resolution Laterolog Array - B Wellsite Calibration - HRLT M01							
Before: 23-Sep-2015 0:55 After: 11-Sep-2015 3:09							
HRLT M0-M1 Voltage Plus - 0	0	N/A	-318.8	-318.5	0.2593	9.681	UV
HRLT M0-M1 Voltage Plus - 1	0	N/A	-331.7	-332.8	-1.082	9.681	UV
HRLT M0-M1 Voltage Plus - 2	0	N/A	-339.0	-340.2	-1.202	9.681	UV
HRLT M0-M1 Voltage Plus - 3	0	N/A	-329.2	-330.3	-1.173	9.681	UV
HRLT M0-M1 Voltage Plus - 4	0	N/A	-319.9	-320.2	-0.2451	9.681	UV
HRLT M0-M1 Voltage Plus - 5	0	N/A	-321.7	-322.1	-0.4873	9.681	UV
HRLT M0-M1 Voltage Plus - 6	0	N/A	320.4	322.9	2.531	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: 23-Sep-2015 0:55 After: 11-Sep-2015 3:09

HRLT M1-M2 Voltage Plus - 0	0	N/A	1743	1742	-0.9115	53.42	UV
HRLT M1-M2 Voltage Plus - 1	0	N/A	1820	1826	6.151	53.42	UV
HRLT M1-M2 Voltage Plus - 2	0	N/A	1853	1860	7.248	53.42	UV
HRLT M1-M2 Voltage Plus - 3	0	N/A	1798	1805	6.688	53.42	UV
HRLT M1-M2 Voltage Plus - 4	0	N/A	1746	1748	1.613	53.42	UV
HRLT M1-M2 Voltage Plus - 5	0	N/A	1756	1759	2.796	53.42	UV
HRLT M1-M2 Voltage Plus - 6	0	N/A	-1766	-1780	-14.44	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: 23-Sep-2015 0:55 After: 11-Sep-2015 3:09

HRLT M2-M3 Voltage Plus - 0	0	N/A	1733	1732	-1.042	53.42	UV
HRLT M2-M3 Voltage Plus - 1	0	N/A	1821	1828	6.561	53.42	UV
HRLT M2-M3 Voltage Plus - 2	0	N/A	1856	1864	7.249	53.42	UV
HRLT M2-M3 Voltage Plus - 3	0	N/A	1804	1811	6.689	53.42	UV
HRLT M2-M3 Voltage Plus - 4	0	N/A	1747	1748	1.548	53.42	UV
HRLT M2-M3 Voltage Plus - 5	0	N/A	1758	1761	2.561	53.42	UV
HRLT M2-M3 Voltage Plus - 6	0	N/A	-1756	-1770	-14.10	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: 23-Sep-2015 0:55 After: 11-Sep-2015 3:09

HRLT A3-A4 Voltage Plus - 0	0	N/A	68700	68660	-38.27	2100	UV
HRLT A3-A4 Voltage Plus - 1	0	N/A	72000	72260	259.7	2100	UV
HRLT A3-A4 Voltage Plus - 2	0	N/A	73690	73960	267.0	2100	UV
HRLT A3-A4 Voltage Plus - 3	0	N/A	71900	72150	250.5	2100	UV
HRLT A3-A4 Voltage Plus - 4	0	N/A	69550	69630	76.21	2100	UV
HRLT A3-A4 Voltage Plus - 5	0	N/A	70000	70130	132.7	2100	UV
HRLT A3-A4 Voltage Plus - 6	0	N/A	-68460	-69000	-536.5	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: 23-Sep-2015 0:55 After: 11-Sep-2015 3:09

HRLT A4-A5 Voltage Plus - 0	0	N/A	68780	68750	-36.38	2100	UV
HRLT A4-A5 Voltage Plus - 1	0	N/A	72210	72470	263.3	2100	UV
HRLT A4-A5 Voltage Plus - 2	0	N/A	73880	74140	258.0	2100	UV
HRLT A4-A5 Voltage Plus - 3	0	N/A	72050	72300	245.9	2100	UV
HRLT A4-A5 Voltage Plus - 4	0	N/A	69680	69730	59.50	2100	UV
HRLT A4-A5 Voltage Plus - 5	0	N/A	70100	70230	127.5	2100	UV
HRLT A4-A5 Voltage Plus - 6	0	N/A	-68670	-69200	-531.3	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: 23-Sep-2015 0:55 After: 11-Sep-2015 3:09

HRLT A5-A6 Voltage Plus - 0	0	N/A	68640	68600	-40.77	2100	UV
HRLT A5-A6 Voltage Plus - 1	0	N/A	72070	72300	234.1	2100	UV
HRLT A5-A6 Voltage Plus - 2	0	N/A	73710	74000	290.8	2100	UV
HRLT A5-A6 Voltage Plus - 3	0	N/A	71900	72180	274.8	2100	UV
HRLT A5-A6 Voltage Plus - 4	0	N/A	69530	69600	60.84	2100	UV
HRLT A5-A6 Voltage Plus - 5	0	N/A	69980	70090	112.6	2100	UV
HRLT A5-A6 Voltage Plus - 6	0	N/A	-68520	-69040	-525.3	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: 23-Sep-2015 0:55 After: 11-Sep-2015 3:09

HRLT Torpedo-M0 Voltage - 0	0	N/A	-68150	-68110	41.34	2100	UV
HRLT Torpedo-M0 Voltage - 1	0	N/A	-71850	-72110	-255.6	2100	UV
HRLT Torpedo-M0 Voltage - 2	0	N/A	-73560	-73840	-283.9	2100	UV
HRLT Torpedo-M0 Voltage - 3	0	N/A	-71820	-72060	-240.1	2100	UV
HRLT Torpedo-M0 Voltage - 4	0	N/A	-69490	-69540	-51.70	2100	UV
HRLT Torpedo-M0 Voltage - 5	0	N/A	-69920	-70030	-104.5	2100	UV
HRLT Torpedo-M0 Voltage - 6	0	N/A	68280	68810	535.1	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: 23-Sep-2015 0:55 After: 11-Sep-2015 3:09

HRLT Bridle#9-M0 Voltage - 0	0	N/A	-68190	-68150	39.54	2100	UV
HRLT Bridle#9-M0 Voltage - 1	0	N/A	-71960	-72200	-242.5	2100	UV
HRLT Bridle#9-M0 Voltage - 2	0	N/A	-73650	-73920	-267.5	2100	UV
HRLT Bridle#9-M0 Voltage - 3	0	N/A	-71880	-72150	-266.2	2100	UV
HRLT Bridle#9-M0 Voltage - 4	0	N/A	-69530	-69590	-65.74	2100	UV
HRLT Bridle#9-M0 Voltage - 5	0	N/A	-69960	-70060	-103.2	2100	UV
HRLT Bridle#9-M0 Voltage - 6	0	N/A	68360	68890	530.2	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: 23-Sep-2015 0:55 After: 11-Sep-2015 3:09

HRLT Source Current Plus - 0	0	N/A	284.5	284.3	-0.1785	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: 23-Sep-2015 0:55 After: 11-Sep-2015 3:09

HRLT Vertical Voltage PI – 0	0	N/A	-320.8	-320.2	0.5996	9.681	UV
HRLT Vertical Voltage PI – 1	0	N/A	-326.6	-327.3	-0.7565	9.681	UV
HRLT Vertical Voltage PI – 2	0	N/A	-332.6	-333.5	-0.8698	9.681	UV
HRLT Vertical Voltage PI – 3	0	N/A	-321.2	-322.0	-0.7713	9.681	UV
HRLT Vertical Voltage PI – 4	0	N/A	-309.1	-309.1	0.003448	9.681	UV
HRLT Vertical Voltage PI – 5	0	N/A	-325.7	-325.9	-0.2037	9.681	UV
HRLT Vertical Voltage PI – 6	0	N/A	328.1	330.4	2.371	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: 3-Aug-2015 21:03 Before: 10-Sep-2015 22:59 After: 5-Aug-2015 9:22

SS Cs Resolution Bkg	9.000	8.017	7.993	7.919	-0.07482	1.800	%
LS Cs Resolution Bkg	9.000	8.170	8.219	8.157	-0.06247	1.800	%
LSW1 Background	100.0	68.33	68.08	67.33	-0.7546	3.000	CPS
LSW2 Background	100.0	63.65	62.52	61.96	-0.5642	3.000	CPS
LSW3 Background	200.0	137.7	138.1	137.2	-0.8874	6.000	CPS
LSW4 Background	250.0	169.1	166.6	168.5	1.915	7.500	CPS
LSW5 Background	600.0	386.6	380.0	383.4	3.381	18.00	CPS
SSW1 Background	100.0	76.45	75.19	75.94	0.7417	3.000	CPS
SSW2 Background	200.0	136.4	134.9	137.6	2.702	6.000	CPS
SSW3 Background	500.0	362.4	363.9	365.1	1.139	15.00	CPS
SSW4 Background	270.0	190.8	190.0	189.5	-0.5672	8.100	CPS
SSW5 Background	200.0	138.4	136.5	138.7	2.256	6.000	CPS

Hostile Litho–Density Sonde Wellsite Calibration – Aluminum Measurement

Master: 3-Aug-2015 21:34

LSW1 Aluminum	600.0	504.7	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	726.8	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	878.5	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	443.6	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	408.1	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2360	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	6396	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	8862	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	3644	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	446.4	N/A	N/A	N/A	N/A	CPS

Hostile Litho–Density Sonde Wellsite Calibration – Lithology Measurement

Master: 3-Aug-2015 21:29

LSW1 Iron	400.0	344.5	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	588.5	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	781.6	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	405.5	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	370.3	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1732	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	5346	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	8101	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3320	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	398.5	N/A	N/A	N/A	N/A	CPS

Hostile Litho–Density Sonde Wellsite Calibration – Caliper Calibration

Before: 3-Aug-2015 21:46

HLDS Caliper Small Ring	12.00	N/A	16.20	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	15.19	N/A	20.40	N/A	N/A	N/A	IN

Accelerator–Porosity Tool Wellsite Calibration – Detector Background

Master: 4-Aug-2015 18:37 Before: 23-Sep-2015 0:58 After: 11-Sep-2015 3:12

Near Det Bkg Cntrate	30.00	25.87	27.28	26.50	-0.7841	N/A	CPS
Far Det Bkg Cntrate	30.00	28.00	27.32	28.02	0.7009	N/A	CPS
Array–1 Det Bkg Cntrate	30.00	26.10	26.94	26.14	-0.8007	N/A	CPS
Array–2 Det Bkg Cntrate	30.00	25.95	26.49	28.05	1.551	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	27.77	28.23	25.71	-2.521	N/A	CPS

Accelerator–Porosity Tool Wellsite Calibration – Calibration Ratios

Master: 4-Aug-2015 18:37

Near/Far Calibration Ratio	0.9250	0.9777	N/A	N/A	N/A	N/A
Near/Array Calibration Ratio	1.030	1.086	N/A	N/A	N/A	N/A
Near/Array Cal Ratio Up/Down	1.000	1.021	N/A	N/A	N/A	N/A

Accelerator–Porosity Tool Wellsite Calibration – Tank Check

Master: 4-Aug-2015 18:37

Array–1 Standoff Porosity	11.75	10.45	N/A	N/A	N/A	N/A	PU
Array–2 Standoff Porosity	11.75	10.61	N/A	N/A	N/A	N/A	PU
Average Slowing Down Time	6.000	6.032	N/A	N/A	N/A	N/A	US
Array–1 SDT Ratio Up/Down	1.000	0.9769	N/A	N/A	N/A	N/A	

Array-2 SDT Ratio Up/Down	1.000	0.9680	N/A	N/A	N/A	N/A	N/A	CU
Sigma Formation	27.50	34.31	N/A	N/A	N/A	N/A	N/A	

Accelerator-Porosity Tool Wellsite Calibration – CCR7 signal boxes

Master: 4-Aug-2015 18:00

Near Detector Plateau Setting	1650	1700	N/A	N/A	N/A	N/A	N/A	V
Far Detector Plateau Setting	2000	2035	N/A	N/A	N/A	N/A	N/A	V
Array Detector Plateau Setting	2000	1938	N/A	N/A	N/A	N/A	N/A	V

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	37.71	37.63	37.62	-0.01348	1.000		
Na 511 Peak Res	15.50	16.11	15.42	15.72	0.3043	2.000		%
High Voltage	1150	1211	1201	1204	2.856	N/A		V
Na 1785 Peak Loc	142.6	136.7	136.8	136.3	-0.4773	7.000		
Na 1785 Peak Res	8.500	10.13	8.646	8.654	0.007848	2.000		%
Temperature	15.50	22.16	22.65	22.78	0.1236	N/A		DEGC
Na Count Rate	45.00	43.96	43.37	42.72	-0.6500	8.000		CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 2 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		
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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: 23-Sep-2015 0:56

EDTC Z-Axis Acceleration	9.810	N/A	9.817	N/A	N/A	N/A	N/A	M/S2
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Enhanced DTS Cartridge Wellsite Calibration – Detector Calibration

Before: Calibration out of date 5-Aug-2015 7:56 After: Calibration out of date 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)	165.0	N/A	164.0	164.6	0.5571	15.00		GAPI

Accelerator-Porosity Tool – Detector Plateau Settings :

Near Detector Plateau Setting	1700 V
Far Detector Plateau Setting	2035 V
Array Detector Plateau Setting	1938 V

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		-318.5			
1	Before		-331.7	-322.7	-280.7	-379.7
	After		-332.8			
2	Before		-339.0	-322.7	-280.7	-379.7
	After		-340.2			
3	Before		-329.2	-322.7	-280.7	-379.7
	After		-330.3			
4	Before		-319.9	-322.7	-280.7	-379.7
	After		-320.2			
5	Before		-321.7	-322.7	-280.7	-379.7
	After		-322.1			
6	Before		320.4	322.7	379.7	280.7
	After		322.9			
7	Before		-322.7	-322.7	-280.7	-379.7
	After		-322.7			
			(Minimum)	(Nominal)	(Maximum)	

Before: 23-Sep-2015 0:55

After: 11-Sep-2015 3:09

High Resolution Laterolog Array – B Wellsite Calibration

HRLT M12

Idx	Phase	HRLT M1-M2 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1743	1781	2095	1549
	After		1742			
1	Before		1820	1781	2095	1549
	After		1826			
2	Before		1853	1781	2095	1549
	After		1860			
3	Before		1798	1781	2095	1549
	After		1805			
4	Before		1746	1781	2095	1549
	After		1748			
5	Before		1756	1781	2095	1549
	After		1759			
6	Before		-1766	-1781	-1549	-2095
	After		-1780			
7	Before		1781	1781	2095	1549
	After		1781			
			(Minimum)	(Nominal)	(Maximum)	

Before: 23-Sep-2015 0:55

After: 11-Sep-2015 3:09

High Resolution Laterolog Array – B Wellsite Calibration

HRLT M23

Idx	Phase	HRLT M2-M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum
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0	Before		1733	1781	2095	1549
	After		1732			
1	Before		1821	1781	2095	1549
	After		1828			
2	Before		1856	1781	2095	1549
	After		1864			
3	Before		1804	1781	2095	1549
	After		1811			
4	Before		1747	1781	2095	1549
	After		1748			
5	Before		1758	1781	2095	1549
	After		1761			
6	Before		-1756	-1781	-1549	-2095
	After		-1770			
7	Before		1781	1781	2095	1549
	After		1781			
			(Minimum)	(Nominal)	(Maximum)	

Before: 23-Sep-2015 0:55

After: 11-Sep-2015 3:09

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V34						
Idx	Phase	HRLT A3–A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68700	70000	82360	60900
	After		68660			
1	Before		72000	70000	82360	60900
	After		72260			
2	Before		73690	70000	82360	60900
	After		73960			
3	Before		71900	70000	82360	60900
	After		72150			
4	Before		69550	70000	82360	60900
	After		69630			
5	Before		70000	70000	82360	60900
	After		70130			
6	Before		-68460	-70000	-60900	-82360
	After		-69000			
7	Before		70000	70000	82360	60900
	After		70000			
			(Minimum)	(Nominal)	(Maximum)	

Before: 23-Sep-2015 0:55

After: 11-Sep-2015 3:09

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V45						
Idx	Phase	HRLT A4–A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68780	70000	82360	60900
	After		68750			

1	Before		72210	70000	82360	60900
	After		72470			
2	Before		73880	70000	82360	60900
	After		74140			
3	Before		72050	70000	82360	60900
	After		72300			
4	Before		69680	70000	82360	60900
	After		69730			
5	Before		70100	70000	82360	60900
	After		70230			
6	Before		-68670	-70000	-60900	-82360
	After		-69200			
7	Before		70000	70000	82360	60900
	After		70000			
(Minimum) (Nominal) (Maximum)						

Before: 23-Sep-2015 0:55
 After: 11-Sep-2015 3:09

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V56						
Idx	Phase	HRLT A5–A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68640	70000	82360	60900
	After		68600			
1	Before		72070	70000	82360	60900
	After		72300			
2	Before		73710	70000	82360	60900
	After		74000			
3	Before		71900	70000	82360	60900
	After		72180			
4	Before		69530	70000	82360	60900
	After		69600			
5	Before		69980	70000	82360	60900
	After		70090			
6	Before		-68520	-70000	-60900	-82360
	After		-69040			
7	Before		70000	70000	82360	60900
	After		70000			
(Minimum) (Nominal) (Maximum)						

Before: 23-Sep-2015 0:55
 After: 11-Sep-2015 3:09

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT VTP						
Idx	Phase	HRLT Torpedo–M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-68150	-70000	-60900	-82360
	After		-68110			
1	Before		-71850	-70000	-60900	-82360
	After		-72110			

2	Before		-73560	-70000	-60900	-82360
	After		-73840	-70000	-60900	-82360
3	Before		-71820	-70000	-60900	-82360
	After		-72060	-70000	-60900	-82360
4	Before		-69490	-70000	-60900	-82360
	After		-69540	-70000	-60900	-82360
5	Before		-69920	-70000	-60900	-82360
	After		-70030	-70000	-60900	-82360
6	Before		68280	70000	82360	60900
	After		68810	70000	82360	60900
7	Before		-70000	-70000	-60900	-82360
	After		-70000	-70000	-60900	-82360
			(Minimum)	(Nominal)	(Maximum)	
Before: 23-Sep-2015 0:55						
After: 11-Sep-2015 3:09						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT VBD						
Idx	Phase	HRLT Bridle#9-M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-68190	-70000	-60900	-82360
	After		-68150	-70000	-60900	-82360
1	Before		-71960	-70000	-60900	-82360
	After		-72200	-70000	-60900	-82360
2	Before		-73650	-70000	-60900	-82360
	After		-73920	-70000	-60900	-82360
3	Before		-71880	-70000	-60900	-82360
	After		-72150	-70000	-60900	-82360
4	Before		-69530	-70000	-60900	-82360
	After		-69590	-70000	-60900	-82360
5	Before		-69960	-70000	-60900	-82360
	After		-70060	-70000	-60900	-82360
6	Before		68360	70000	82360	60900
	After		68890	70000	82360	60900
7	Before		-70000	-70000	-60900	-82360
	After		-70000	-70000	-60900	-82360
			(Minimum)	(Nominal)	(Maximum)	
Before: 23-Sep-2015 0:55						
After: 11-Sep-2015 3:09						

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		284.3	284.0	334.1	247.0
1	Before		281.1	281.1	330.7	244.4
	After		281.1	281.1	330.7	244.4
2	Before		281.1	281.1	330.7	244.4
	After		281.1	281.1	330.7	244.4

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: 23-Sep-2015 0:55						
After: 11-Sep-2015 3:09						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT MV						
Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-320.8	-322.7	-280.7	-379.7
	After		-320.2			
1	Before		-326.6	-322.7	-280.7	-379.7
	After		-327.3			
2	Before		-332.6	-322.7	-280.7	-379.7
	After		-333.5			
3	Before		-321.2	-322.7	-280.7	-379.7
	After		-322.0			
4	Before		-309.1	-322.7	-280.7	-379.7
	After		-309.1			
5	Before		-325.7	-322.7	-280.7	-379.7
	After		-325.9			
6	Before		328.1	322.7	379.7	280.7
	After		330.4			
7	Before		-322.7	-322.7	-280.7	-379.7
	After		-322.7			
(Minimum) (Nominal) (Maximum)						
Before: 23-Sep-2015 0:55						
After: 11-Sep-2015 3:09						

Hostile Litho-Density Sonde / Equipment Identification

Primary Equipment:

Hostile Litho Density Sonde	HLDS – D	45
Hostile Litho Density High Voltage	HLDV – D	45
Gamma Source Radioactive	GSR – Z	8113

Auxiliary Equipment:

Hostile Litho Density Pad	HLDP – C	45
Hostile Litho Density High Voltage Housi	HEH – H	47

Hostile Litho-Density Sonde Wellsite Calibration

Background Measurement

Phase	SS Cs Resolution Bkg %	Value	Phase	LS Cs Resolution Bkg %	Value	Phase	LSW1 Background CPS	Value
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Master		8.017	Master		8.170	Master		68.33
Before		7.993	Before		8.219	Before		68.08
After		7.919	After		8.157	After		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)		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		63.65	Master		137.7	Master		169.1
Before		62.52	Before		138.1	Before		166.6
After		61.96	After		137.2	After		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)		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		386.6	Master		76.45	Master		136.4
Before		380.0	Before		75.19	Before		134.9
After		383.4	After		75.94	After		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)		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		362.4	Master		190.8	Master		138.4
Before		363.9	Before		190.0	Before		136.5
After		365.1	After		189.5	After		138.7
280.0 (Minimum)		500.0 (Nominal)	700.0 (Maximum)		150.0 (Minimum)	270.0 (Nominal)	380.0 (Maximum)	
110.0 (Minimum)		200.0 (Nominal)	270.0 (Maximum)		110.0 (Minimum)	200.0 (Nominal)	270.0 (Maximum)	
Master: 3-Aug-2015 21:03			Before: 10-Sep-2015 22:59			After: 5-Aug-2015 9:22		

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		68.33	Master		63.65	Master		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)		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		169.1	Master		386.6	Master		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)		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		76.45	Master		136.4	Master		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)		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		190.8	Master		138.4	Master		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)		7.000 (Minimum)	9.000 (Nominal)	11.00 (Maximum)	
Master: 3-Aug-2015 21:03								

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		504.7	Master		726.8	Master		878.5	
420.0 (Minimum)		600.0 (Nominal)	770.0 (Maximum)		650.0 (Minimum)	900.0 (Nominal)	1150 (Maximum)		
800.0 (Minimum)		1100 (Nominal)	1450 (Maximum)		800.0 (Minimum)	1100 (Nominal)	1450 (Maximum)		
Phase	LSW4 Aluminum CPS	Value	Phase	LSW5 Aluminum CPS	Value	Phase	SSW1 Aluminum CPS	Value	
Master		443.6	Master	EXCEEDS LIMIT	408.1	Master		2360	
410.0 (Minimum)		580.0 (Nominal)	740.0 (Maximum)		410.0 (Minimum)	570.0 (Nominal)	740.0 (Maximum)		
2000 (Minimum)		2800 (Nominal)	3200 (Maximum)		2000 (Minimum)	2800 (Nominal)	3200 (Maximum)		
Phase	SSW2 Aluminum CPS	Value	Phase	SSW3 Aluminum CPS	Value	Phase	SSW4 Aluminum CPS	Value	
Master		6396	Master		8862	Master		3644	
5800 (Minimum)		8000 (Nominal)	9300 (Maximum)		8300 (Minimum)	11600 (Nominal)	13500 (Maximum)		
3500 (Minimum)		5000 (Nominal)	5800 (Maximum)		3500 (Minimum)	5000 (Nominal)	5800 (Maximum)		
Phase	SSW5 Aluminum CPS	Value							
Master		446.4							

430.0 (Minimum)	660.0 (Nominal)	770.0 (Maximum)
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Master: 3-Aug-2015 21:34

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				344.5	Master				588.5	Master				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				405.5	Master				370.3	Master				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				5346	Master				8101	Master				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				398.5										
	420.0 (Minimum)	580.0 (Nominal)	680.0 (Maximum)											

Master: 3-Aug-2015 21:29

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				1.031	Master				2.166	Master				0.5926
	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	Pad-Wear SS Ratio			Value	Phase	Pad-Wear LS Ratio			Value
Master				0.5770	Master				0.9867	Master				0.9843
	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				0.9952					
	0.9900 (Minimum)	0.9940 (Nominal)	1.015 (Maximum)			0.9850 (Minimum)	0.9940 (Nominal)	1.010 (Maximum)						

Master: 3-Aug-2015 21:34

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 Minitron	APS - C MNTR - F	212 6504
Auxiliary Equipment: Accelerator-Porosity Housing APS Calibration Water Tank APS Aluminum Calibrator Sleeve	APH - AC SFT - 178 SFT - 281	121 1 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				25.87	Master				28.00	Master				26.10

Before		27.28	Before		27.32	Before		26.94
After		26.50	After		28.02	After		26.14
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		25.95	Master		27.77			
Before		26.49	Before		28.23			
After		28.05	After		25.71			
1.000 (Minimum)		30.00 (Nominal)	50.00 (Maximum)		1.000 (Minimum)		30.00 (Nominal)	50.00 (Maximum)
Master: 4-Aug-2015 18:37			Before: 23-Sep-2015 0:58			After: 11-Sep-2015 3:12		

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		0.9777	Master		1.086	Master		1.021
0.8000 (Minimum)		0.9250 (Nominal)	1.050 (Maximum)		0.9000 (Minimum)		1.030 (Nominal)	1.170 (Maximum)
Master: 4-Aug-2015 18:37								

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		10.45	Master		10.61	Master		6.032
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		0.9769	Master		0.9680	Master		34.31
0.9500 (Minimum)		1.000 (Nominal)	1.050 (Maximum)		20.00 (Minimum)		27.50 (Nominal)	35.00 (Maximum)
Master: 4-Aug-2015 18:37								

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		0.9777	Master		1.086	Master		1.021
0.8000 (Minimum)		0.9250 (Nominal)	1.050 (Maximum)		0.9000 (Minimum)		1.030 (Nominal)	1.170 (Maximum)
Master: 4-Aug-2015 18:37								

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		10.45	Master		10.61	Master		6.032
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		0.9769	Master		0.9680	Master		34.31
0.9500 (Minimum)		1.000 (Nominal)	1.050 (Maximum)		20.00 (Minimum)		27.50 (Nominal)	35.00 (Maximum)
Master: 4-Aug-2015 18:37								

Hostile Natural Gamma Ray Cartridge - B / Equipment Identification

Primary Equipment: HNGC Cartridge	HNGC - B	439
Auxiliary Equipment: HNGC Housing	HNGH - A	380

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:
 HNGS Sonde
 Auxiliary Equipment:
 HNGS Sonde Housing
 Gamma Source Radioactive

HNGS - BA 177
 HNSH - BA 174
 GSR - U 616008

Hostile Natural Gamma Ray Sonde Wellsite Calibration								
Detector 1 Check								
Phase	Na 511 Peak Loc	Value	Phase	Na 511 Peak Res %	Value	Phase	High Voltage V	Value
Master		37.71	Master		16.11	Master		1211
Before		37.63	Before		15.42	Before		1201
After		37.62	After		15.72	After		1204
	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		136.7	Master		10.13	Master		22.16
Before		136.8	Before		8.646	Before		22.65
After		136.3	After		8.654	After		22.78
	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		43.96						
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			39.00	Master			206.7	Master			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			37.67	Master			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			41.00	Master			211.5	Master			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			39.84	Master			1.014				
	10.00 (Minimum)	142.5 (Nominal)	265.0 (Maximum)		0.9400 (Minimum)	1.000 (Nominal)	1.060 (Maximum)				
Master: 31-Jul-2015 9:56											

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

Enhanced DTS Cartridge Wellsite Calibration			
EDTC Accelerometer Calibration			
Phase	EDTC Z-Axis Acceleration M/S2	Value	
Before		9.817	
	9.610 (Minimum)	9.810 (Nominal)	10.01 (Maximum)
Before: 23-Sep-2015 0:56			

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)		150.0 (Minimum)	165.0 (Nominal)	180.0 (Maximum)
Before: Calibration out of date 5-Aug-2015 7:56											
After: Calibration out of date 5-Aug-2015 9:33											

Well: Expedition 356, Site U1464C
Field: Indonesian Throughflow
Rig: JOIDES Resolution
Ocean: Indian

High Resolution Laterolog Array (HRLA)
Density/Porosity (HLDS) (APS)
Magnetic Susceptibility (MSS), (HNGS)