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OTHER SERVICES1
 OS1: HNGS
 OS2:
 OS3:
 OS4: DSI
 OS5: FMS

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

REMARKS: RUN NUMBER 1

REMARKS: RUN NUMBER 2

Hole drilled with APC/XCB coring bit and bottom hole assembly (BHA). 11 7/16 " BS

Drill pipe set at 84mbsf with a logging bit installed for wireline logging.

Downlog run with corrections computed using bit size; uplogs corrected for actual hole size using caliper.

Lower part of toolstring (MSS and HRLA) centralized using modified MCD inline centralizers.

Upper part of toolstring (HLDS, APS, HNGS) eccentered using HLDS caliper and bowspring, as per toolsketch.

APS minitron remained off during downlog to avoid formation activation.

Fluid type was sea water+barite at 10 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 13degC.

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

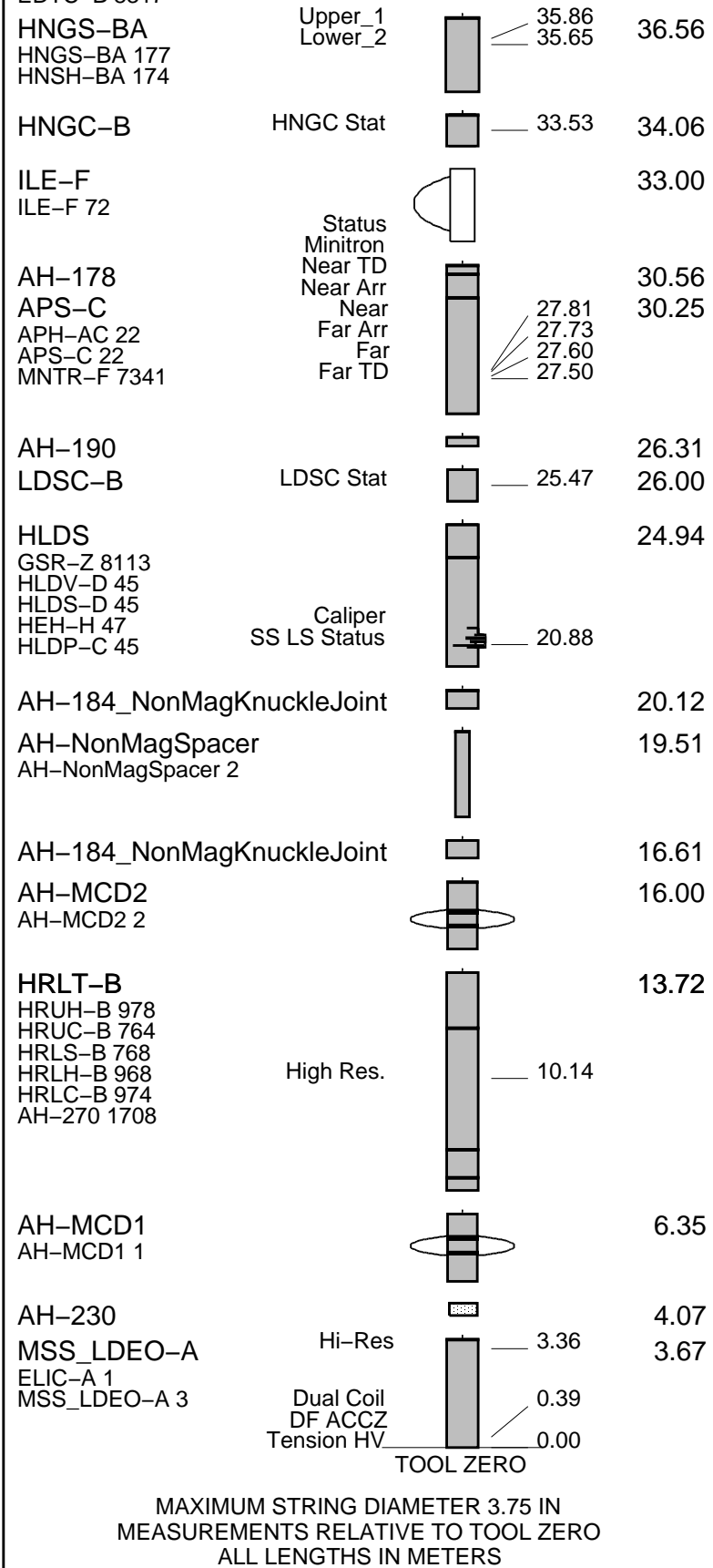
SURFACE EQUIPMENT

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

RUN 2

DOWNHOLE EQUIPMENT

BSP	SP SPARC		39.71	39.87
LEH-QT	MDSB_EDTC		38.54	39.87
	Mud Tempe		37.48	38.98
AH-369	CTEM		36.91	38.54
EDTC-B	Gamma Ray		36.56	
EDTH-B 8303	EFTB DIAG			
EDTC-B 8317	TelStatus			
	EDTCB Ele			

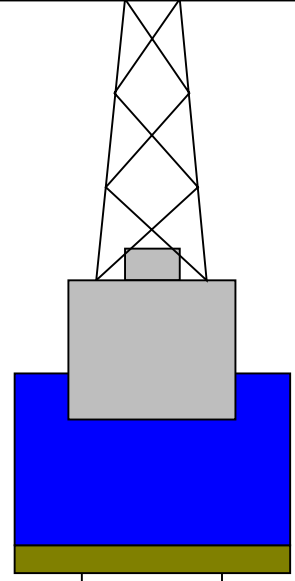


Production String	(in)	(M)	Well Schematic	(M)	(in)	Casing String
	OD	ID		MD	MD	

Kelly Bushing Elevation
Derrick Floor Elevation

Mean Sea Level

-2513
-2513
-2502



4.1



0 3.80
84.80 11.43
672.6

Sea Floor
Open Hole
Total Depth

Input DLIS Files

DEFAULT MSS_LDEO_HRLA_LDL_014LUP FN:23 PRODUCER 06-Jan-2015 10:02 2958.1 M 2488.5 M

Output DLIS Files

DEFAULT MSS_LDEO_HRLA_LDL_047PUP FN:67 PRODUCER 07-Jan-2015 05:20 449.6 M -8.4 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
BSP	19C0-187		

PIP SUMMARY

Time Mark Every 60 S

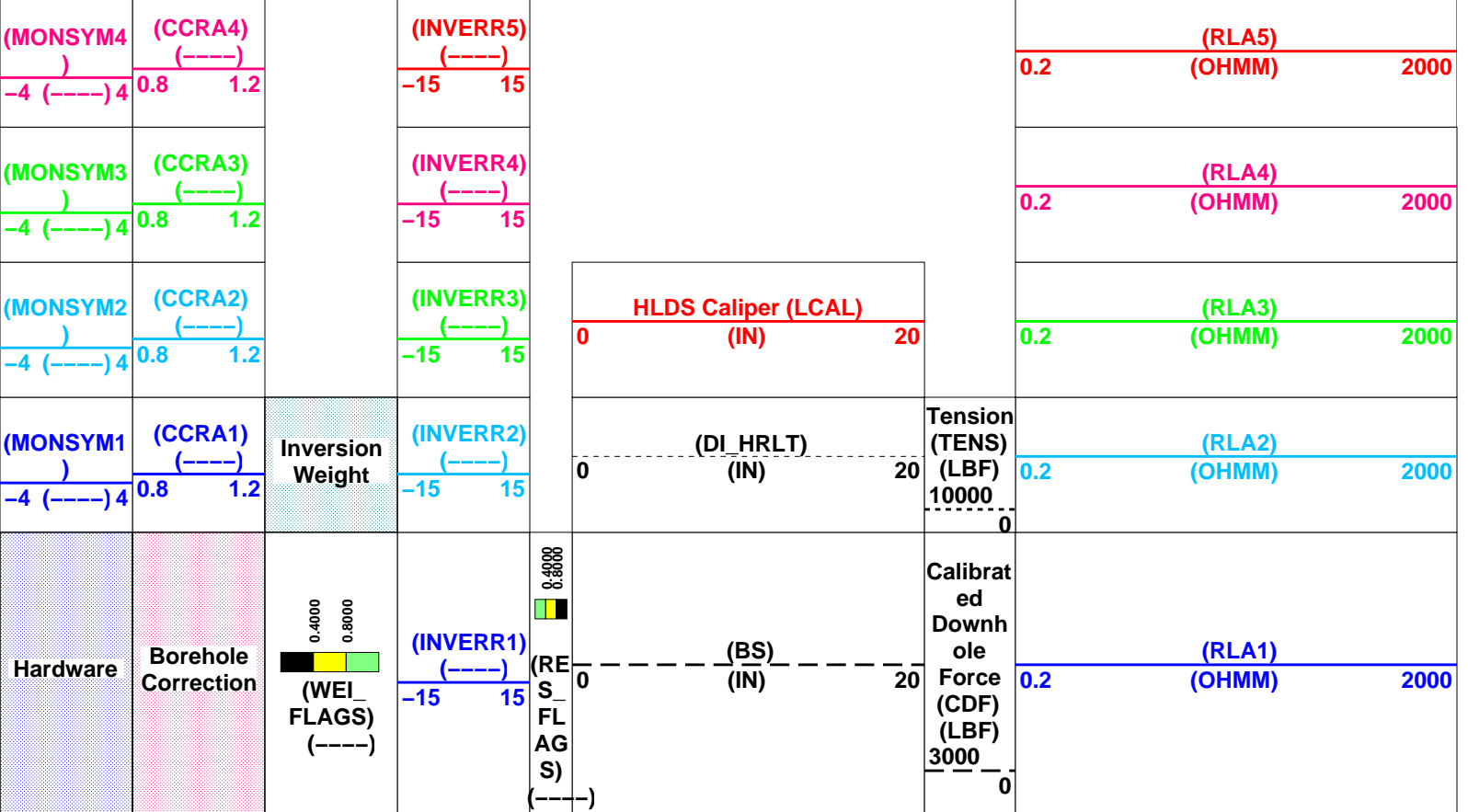
2nd Pass, Sea Floor Depth Reference

HRLA LQC

Inversion

(MONSYM5)	(CCRA5)
)	(-----)
-4 (-----) 4	0.8 1.2

(RT_HRLT)		
0.2	(OHMM)	2000
(RM_HRLT)		
0.02	(OHMM)	200
(RXO_HRLT)		
0.2	(OHMM)	2000



*** HRLT FLAG TRACKS ***

BLACK areas show that the corresponding error flag is set.

TRACK R3_LQC

INVERSION WEIGHT

Contribution from each hrlt channel in Inversion algorithm, and from left to right :

| Wei1 | Wei2 | Wei3 | Wei4 | Wei5 |

GREEN = OK

YELLOW = Contribution QUESTIONABLE

BLACK = Contribution UNRELIABLE

TRACK R5_LQC

RESISTIVITY QUALITY INDICATOR

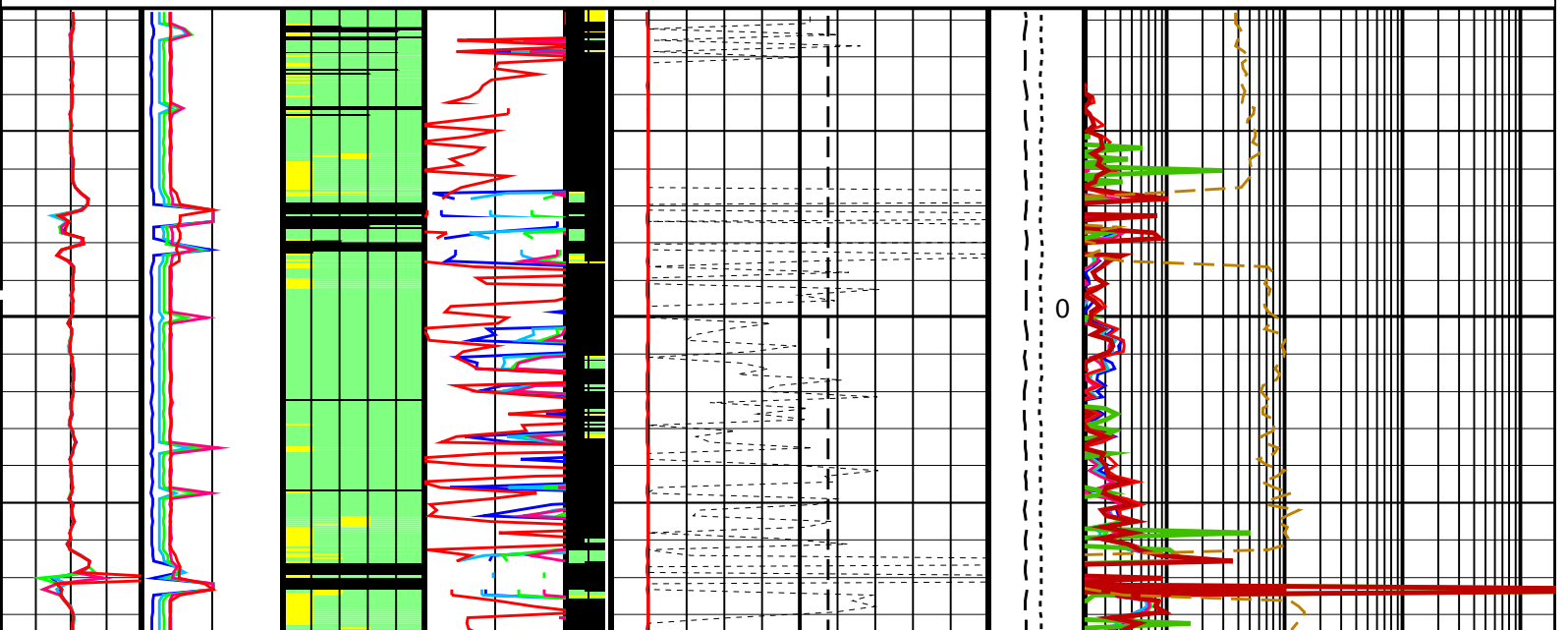
LQC flags on RXO_HRLT & RT_HRLT, and from left to right :

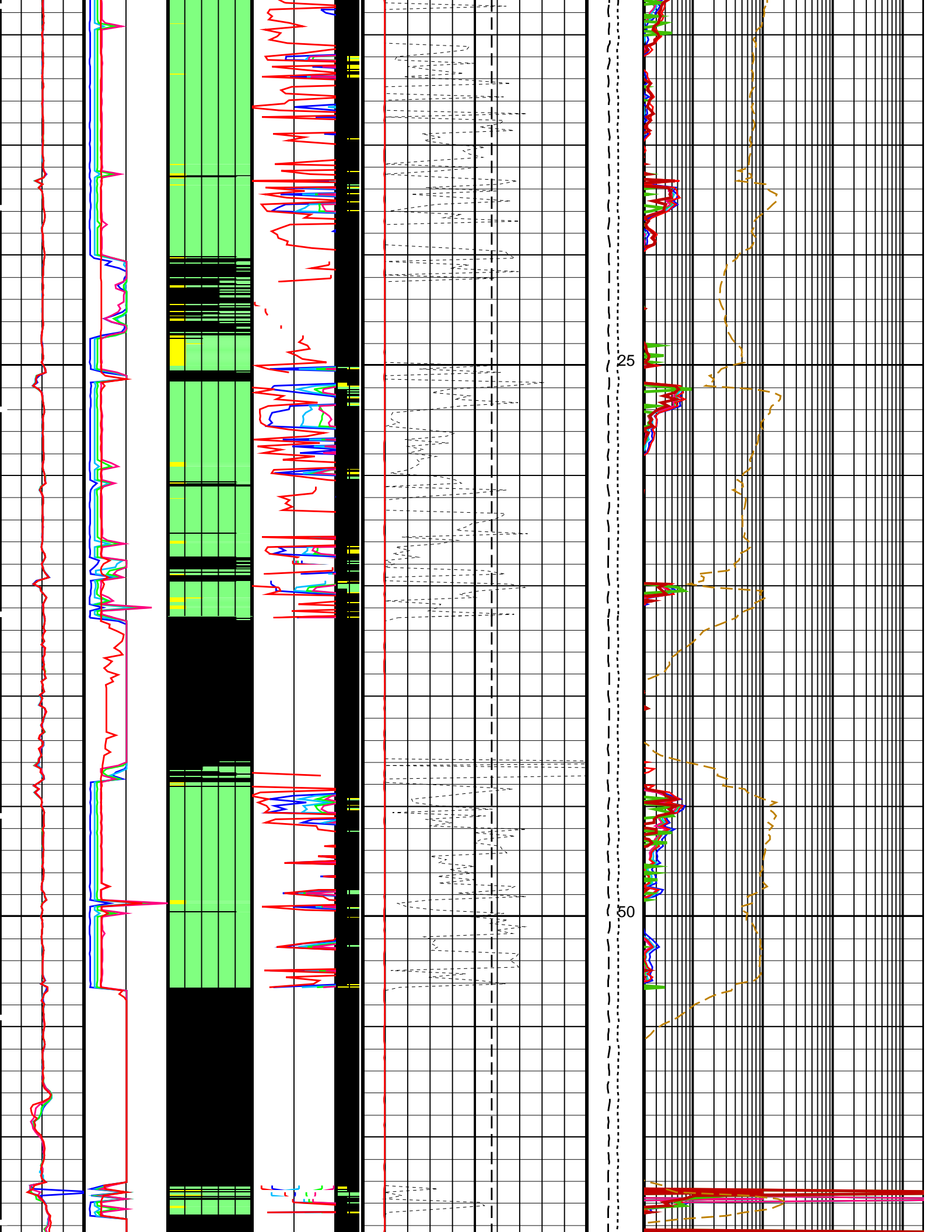
| RxoFlag | RTFlag |

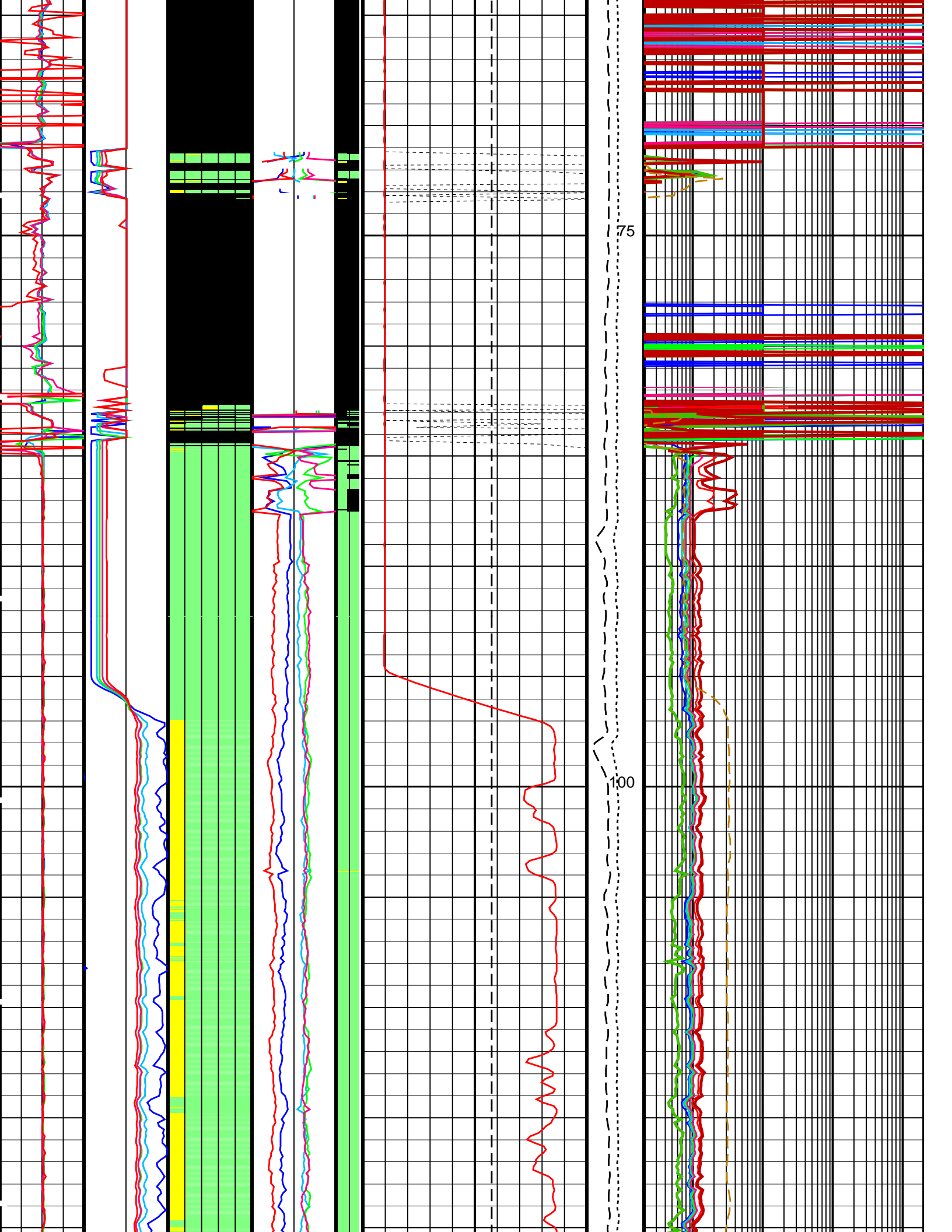
GREEN = OK

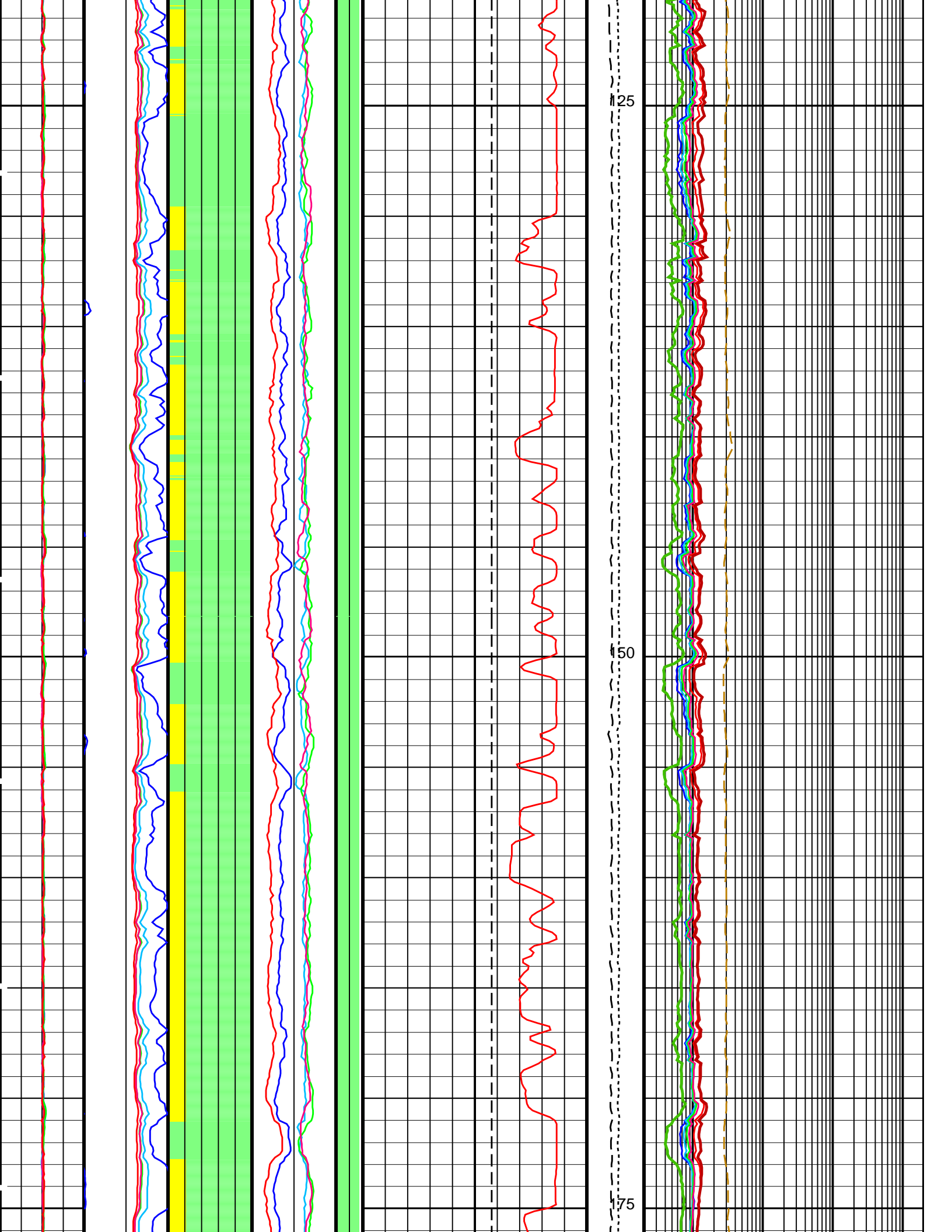
YELLOW = SHOULDER BED EFFECT

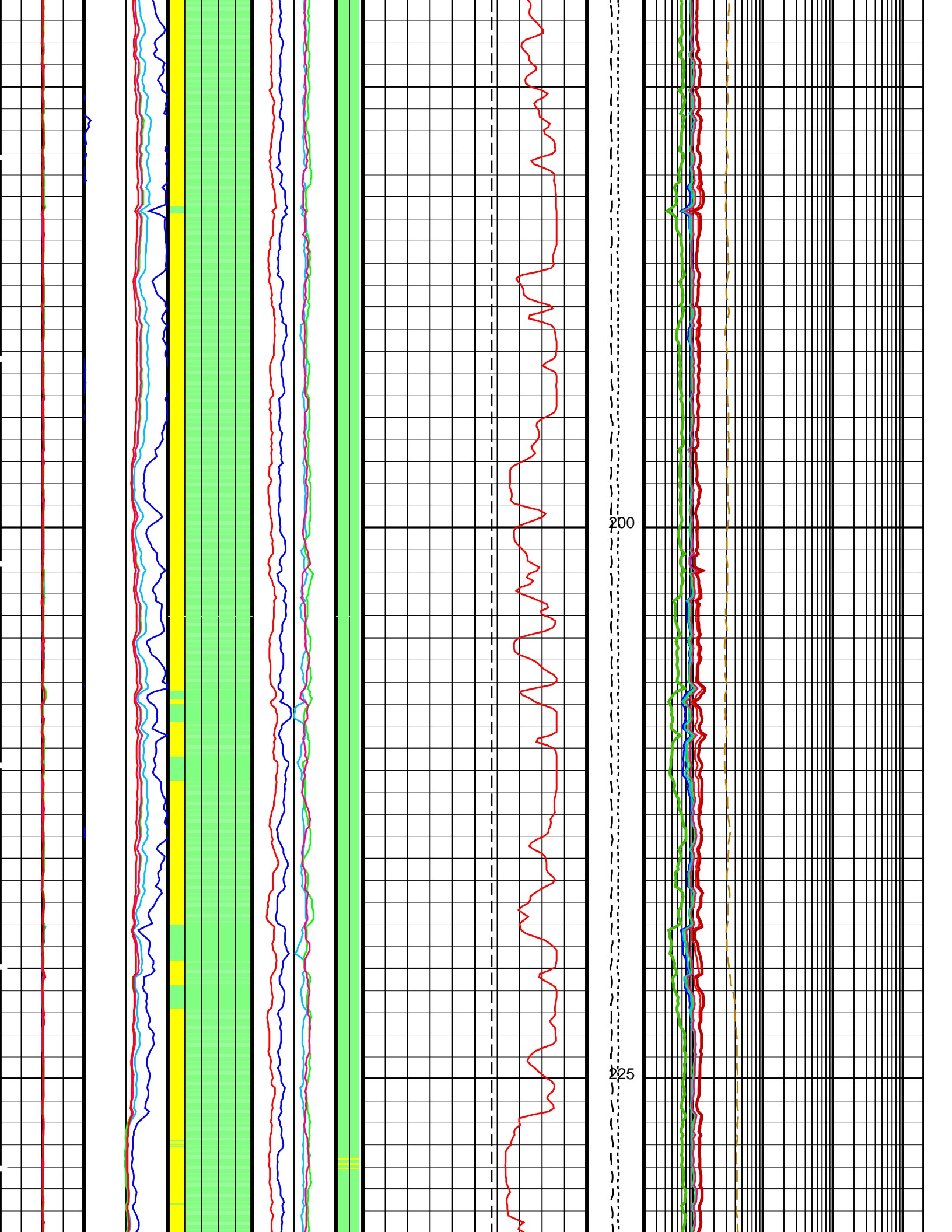
BLACK = NOK

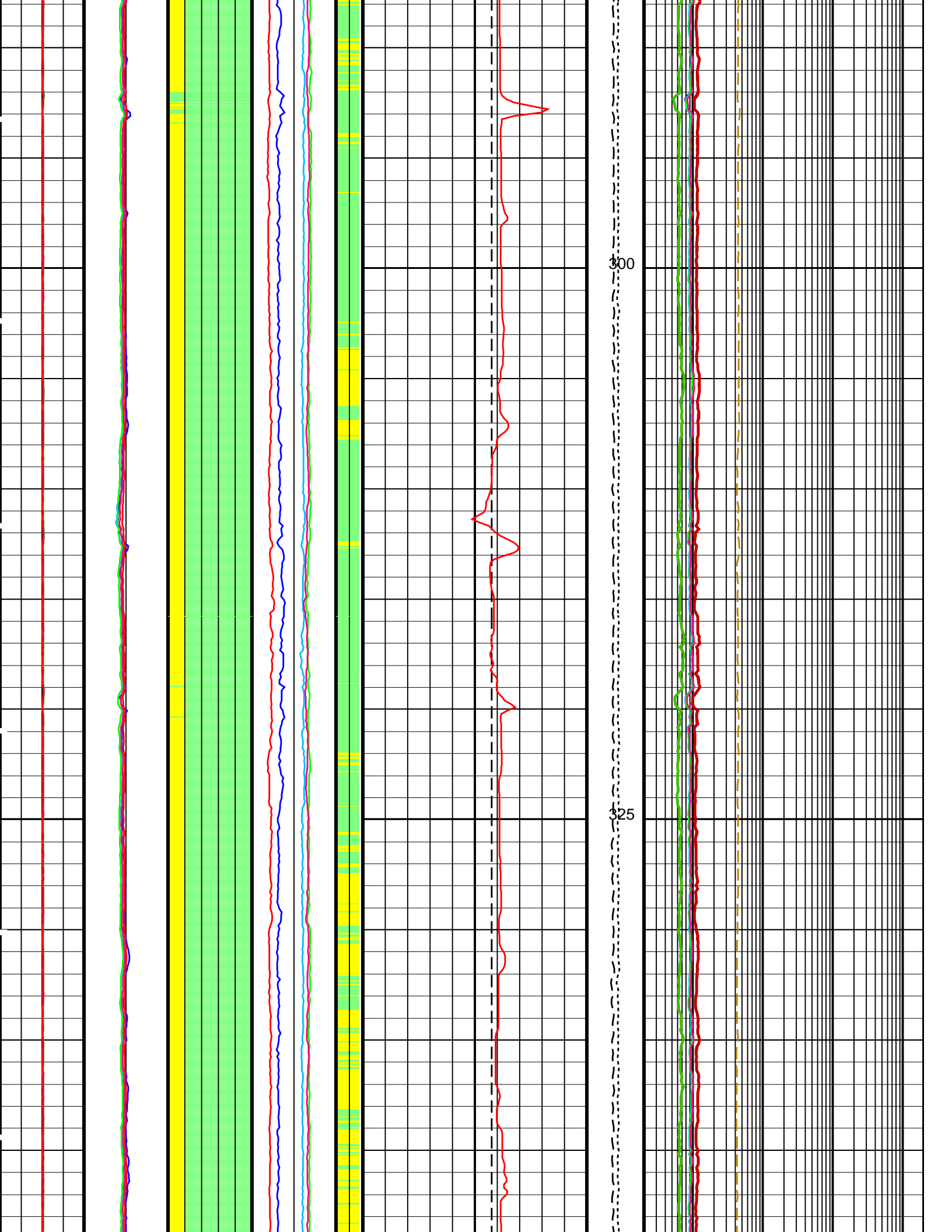


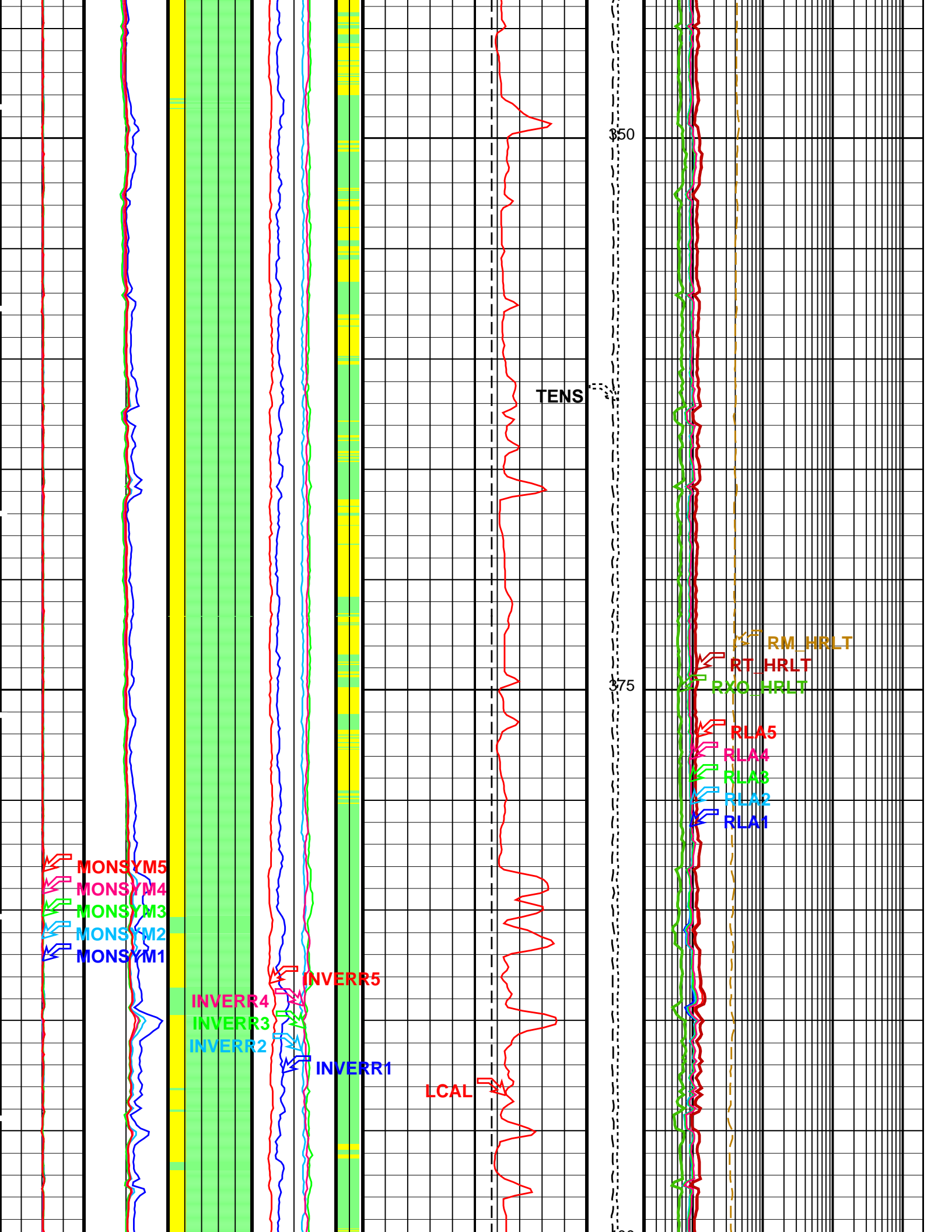


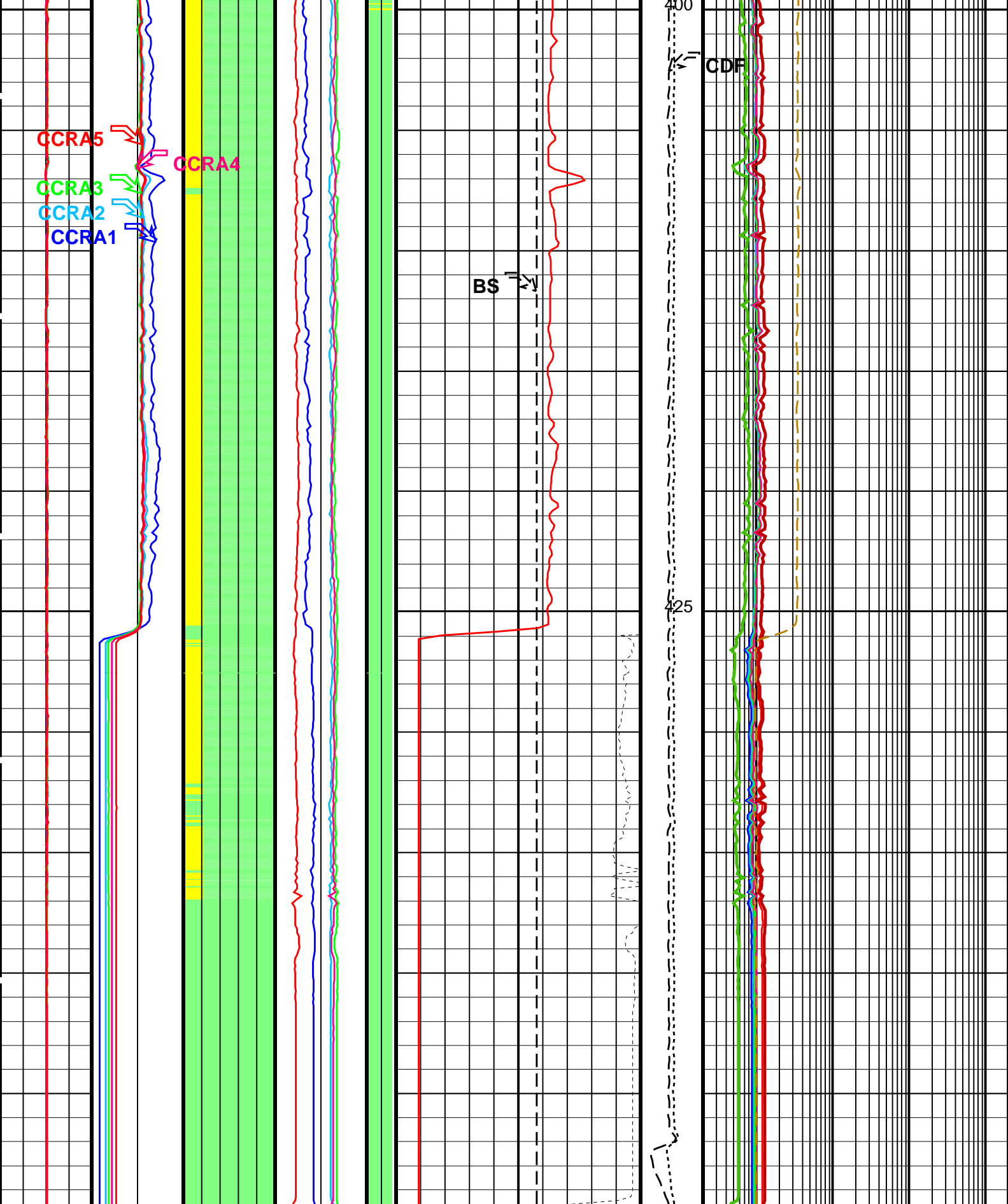












*** HRLT FLAG TRACKS ***

BLACK areas show that the corresponding error flag is set.

TRACK R3_LQC

INVERSION WEIGHT

Contribution from each hrlt channel in Inversion algorithm, and from left to right :

| Wei1 | Wei2 | Wei3 | Wei4 | Wei5 |

GREEN = OK

YELLOW = Contribution QUESTIONABLE

BLACK = Contribution UNRELIABLE

TRACK R5_LQC

RESISTIVITY QUALITY INDICATOR

LQC flags on RXO_HRLT & RT_HRLT, and from left to right :

| RxoFlag | RTFlag |

GREEN = OK

YELLOW = SHOULDER BED EFFECT

BLACK = NOK

Hardware	Borehole Correction		(INVERR1) (-----) -15 15	(BS) (IN)	Calibrated Downhole Force (CDF) (LBF) 3000	(RLA1) (OHMM)	2000
(MONSYM1) (-----) -4 (-----) 4	(CCRA1) (-----) 0.8 1.2	Inversion Weight	(INVERR2) (-----) -15 15	(DI_HRLT) (IN)	Tension (TENS) (LBF) 10000	(RLA2) (OHMM)	2000
(MONSYM2) (-----) -4 (-----) 4	(CCRA2) (-----) 0.8 1.2		(INVERR3) (-----) -15 15	HLDS Caliper (LCAL) (IN)		(RLA3) (OHMM)	2000
(MONSYM3) (-----) -4 (-----) 4	(CCRA3) (-----) 0.8 1.2		(INVERR4) (-----) -15 15			(RLA4) (OHMM)	2000
(MONSYM4) (-----) -4 (-----) 4	(CCRA4) (-----) 0.8 1.2		(INVERR5) (-----) -15 15			(RLA5) (OHMM)	2000
(MONSYM5) (-----) -4 (-----) 4	(CCRA5) (-----) 0.8 1.2	Inversion				(RXO_HRLT) (OHMM)	2000
				2nd Pass, Sea Floor Depth Reference		(RM_HRLT) (OHMM)	200
				HRLA LQC		(RT_HRLT) (OHMM)	2000

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)	21	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	19.969	DEGC
FREQ0	HRLT Frequency Index for Mode 0	32	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ6	HRLT Frequency Index for Mode 6	116	

GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	BARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	OFF	
LOOPMOD1	HRLT Mode 1 Loop Mode	OFF	
LOOPMOD2	HRLT Mode 2 Loop Mode	OFF	
LOOPMOD3	HRLT Mode 3 Loop Mode	OFF	
LOOPMOD4	HRLT Mode 4 Loop Mode	OFF	
LOOPMOD5	HRLT Mode 5 Loop Mode	OFF	
LOOPMOD6	HRLT Mode 6 Loop Mode	OFF	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
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			
	APS Software Version	5	
AASD	APS Thermal and Array Detectors High Voltage Setting	1961.18	V
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2076.53	V
AHCS	APS Holesize Correction Source	BS	
AHSS	APS Holesize Correction Switch	ON	
AMTY	APS Environmental Corrections Mud Type	WaterBaseBarite	
ANSD	APS Near Detector High Voltage Setting	1731.96	V
ASOS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	ON	
BHFL_APS	APS TNPH Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
BSCO_APS	APS TNPH Borehole Salinity Correction Option	YES	
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	YES	
MCOR_APS	APS TNPH Mud Correction	BARI	
MWCO_APS	APS TNPH Mud Weight Correction Option	YES	
NARC	APS Near/Array Calibration Ratio	1.06686	
NFRC	APS Near/Far Calibration Ratio	0.887429	
PTCO_APS	APS TNPH Pressure/Temperature Correction Option	YES	
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)	21	DEGC
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN

CSW1	Inner Casing Weight	0	IN
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	-0.00098051	
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	0.964598	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.972088	
EDTC-B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	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	NATU	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U-ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U-TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
BSP: Bridle SP			
SPNV	SP Next Value	0	MV
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	11.438	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	5.500	IN
CWEI	Casing Weight	168.00	LB/F
DFD	Drilling Fluid Density	1.20	G/C3
DO	Depth Offset for Playback	-2508.5	M
FLEV	Fluid Level	-50000.00	M
MST	Mud Sample Temperature	-50000.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	3190	M
TDD	Total Depth - Driller	3190.00	M
TDL	Total Depth - Logger	3189.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: HRLT_LQC Vertical Scale: 1:200

Graphics File Created: 07-Jan-2015 05:20

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
BSP	19C0-187		

Input DLIS Files

DEFAULT MSS_LDEO_HRLA_LDL_014LUP FN:23 PRODUCER 06-Jan-2015 10:02 2958.1 M 2488.5 M

Output DLIS Files

DEFAULT MSS_LDEO_HRLA_LDL_047PUP FN:67 PRODUCER 07-Jan-2015 05:20

Input DLIS Files

DEFAULT MSS_LDEO_HRLA_LDL_013LUP FN:21 PRODUCER 06-Jan-2015 09:00 2958.1 M 2647.2 M

Output DLIS Files

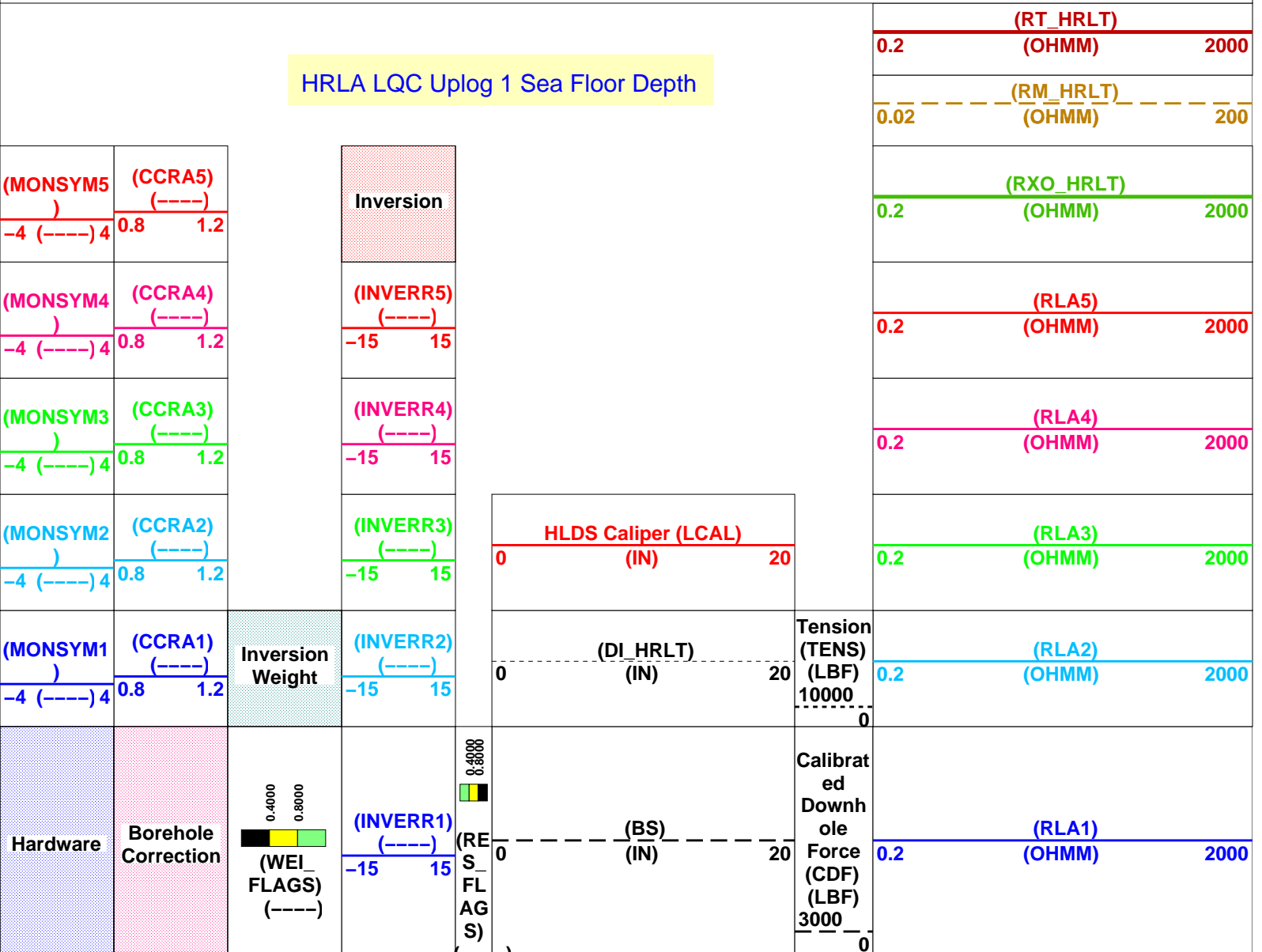
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OP System Version: 19C0-187

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

PIP SUMMARY

Time Mark Every 60 S



*** HRLT FLAG TRACKS ***

BLACK areas show that the corresponding error flag is set.

TRACK R3_LQC

INVERSION WEIGHT

Contribution from each hrlt channel in Inversion algorithm, and from left to right :

| Wei1 | Wei2 | Wei3 | Wei4 | Wei5 |

GREEN = OK

YELLOW = Contribution QUESTIONABLE

BLACK = Contribution UNRELIABLE

TRACK R5_LQC

RESISTIVITY QUALITY INDICATOR

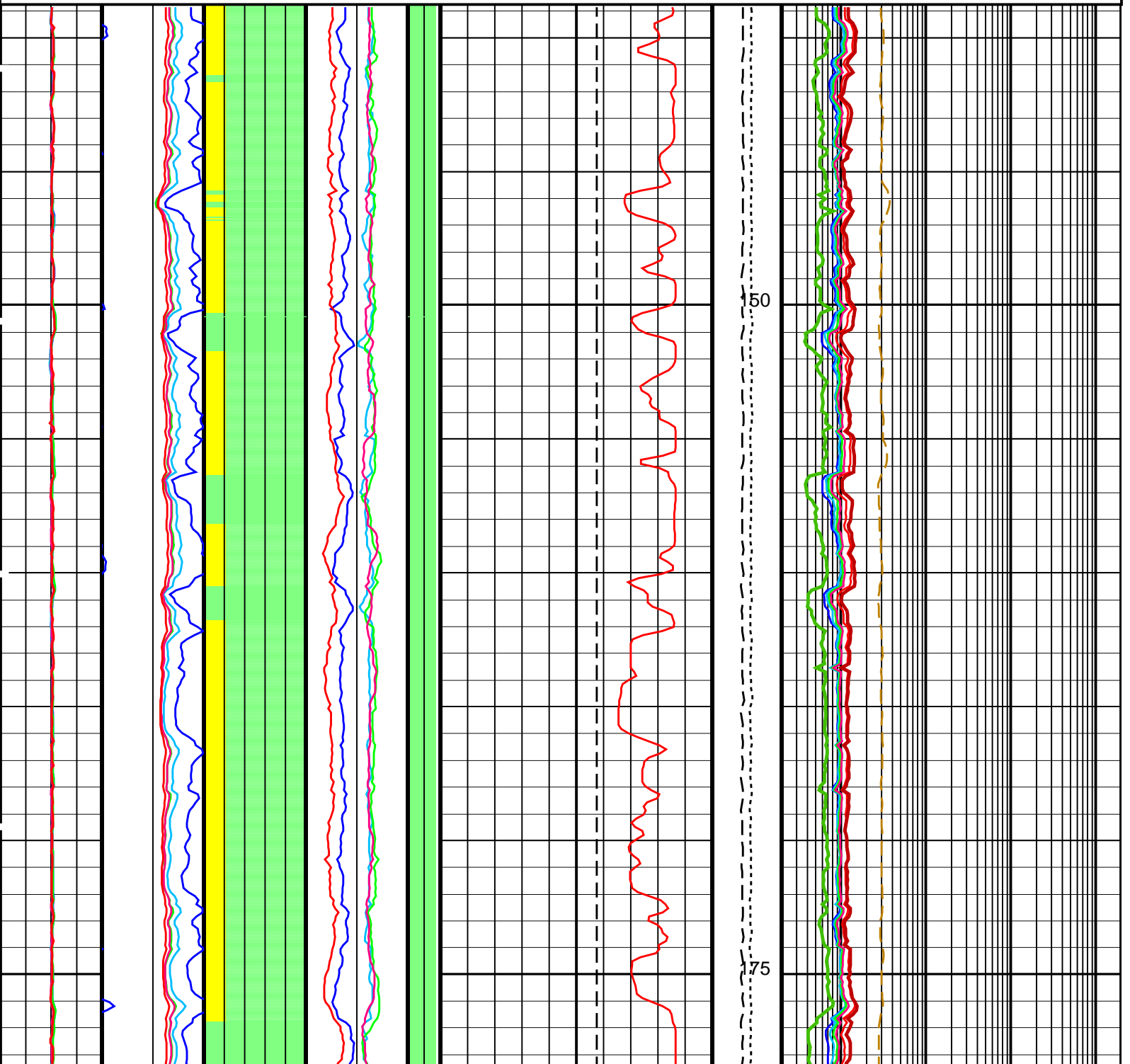
LQC flags on RXO_HRLT & RT_HRLT, and from left to right :

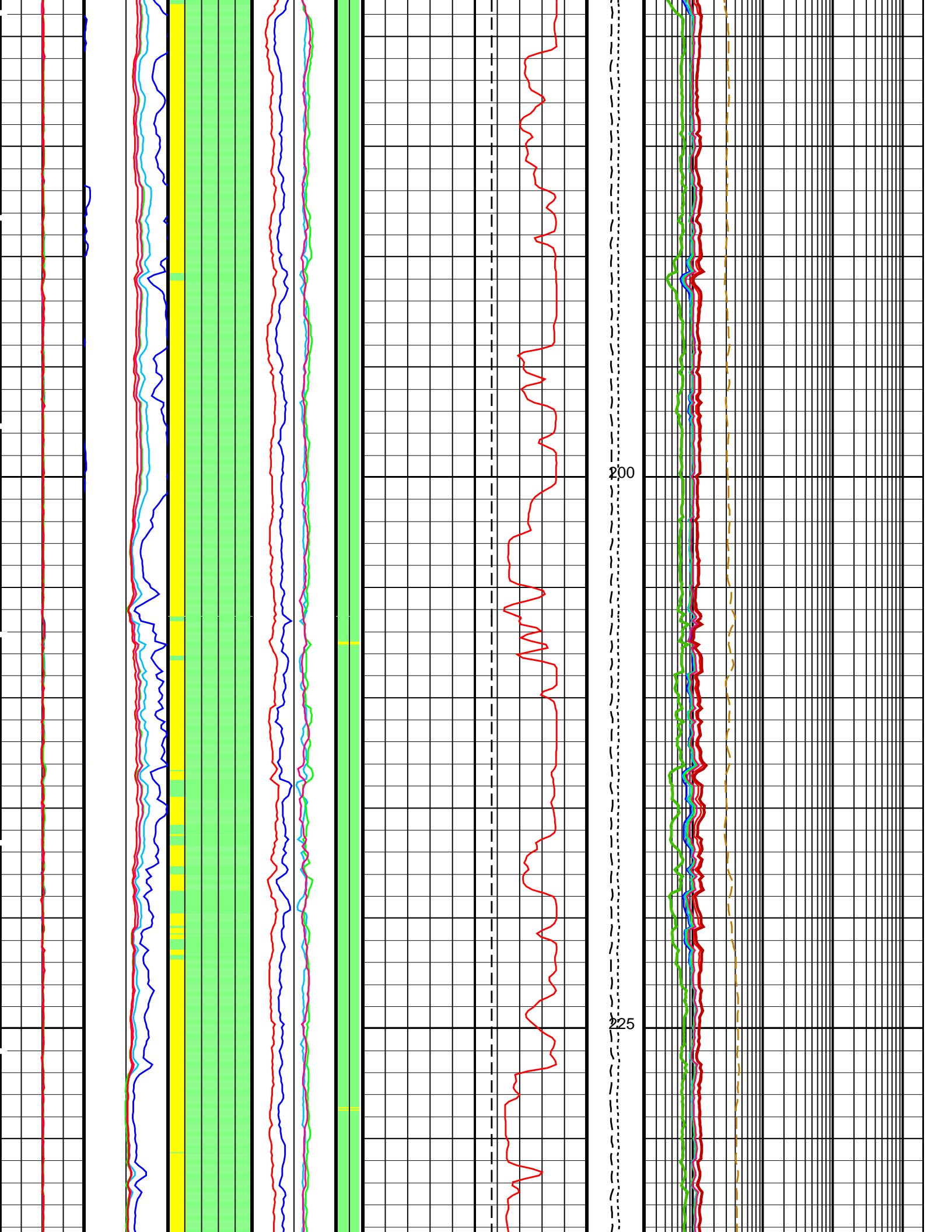
| RxoFlag | RTFlag |

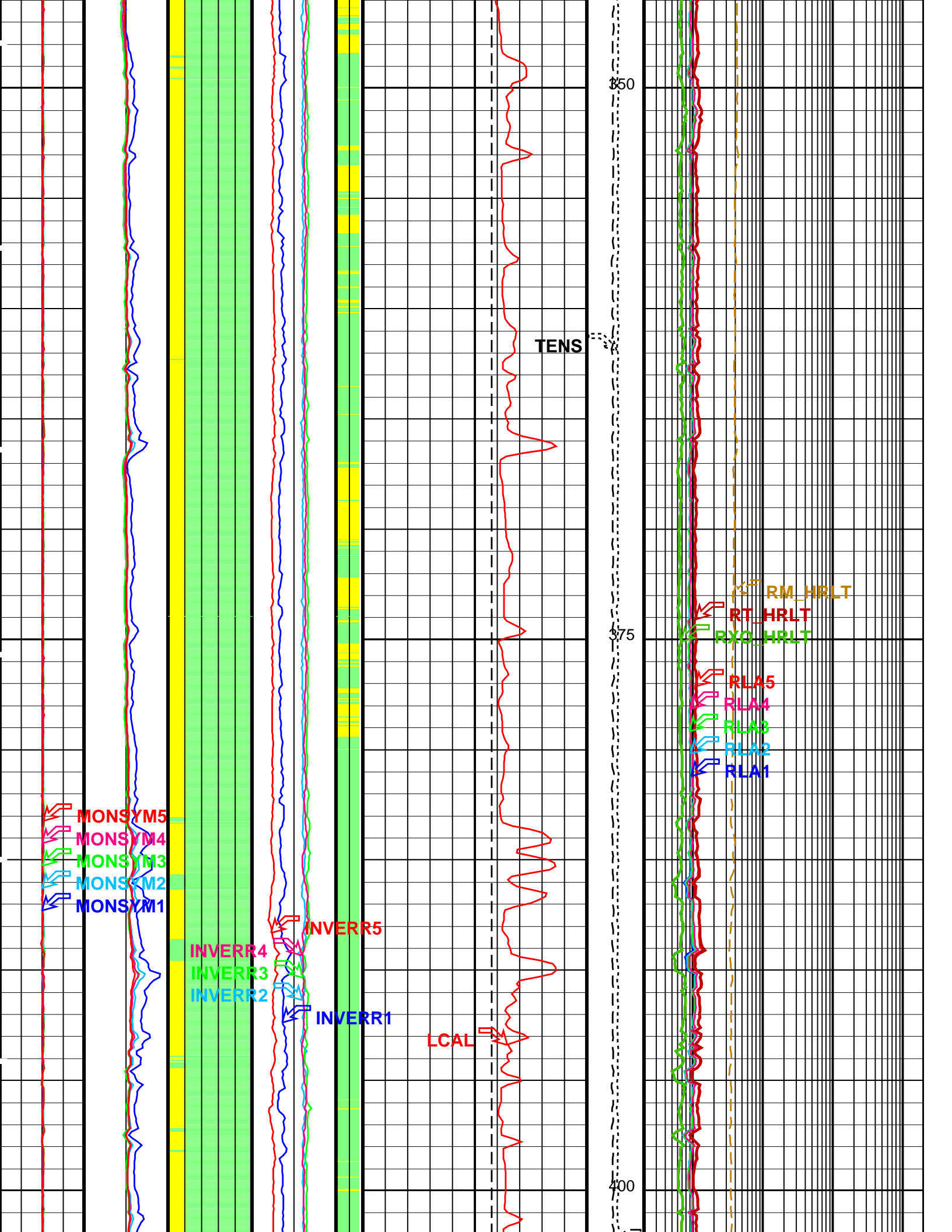
GREEN = OK

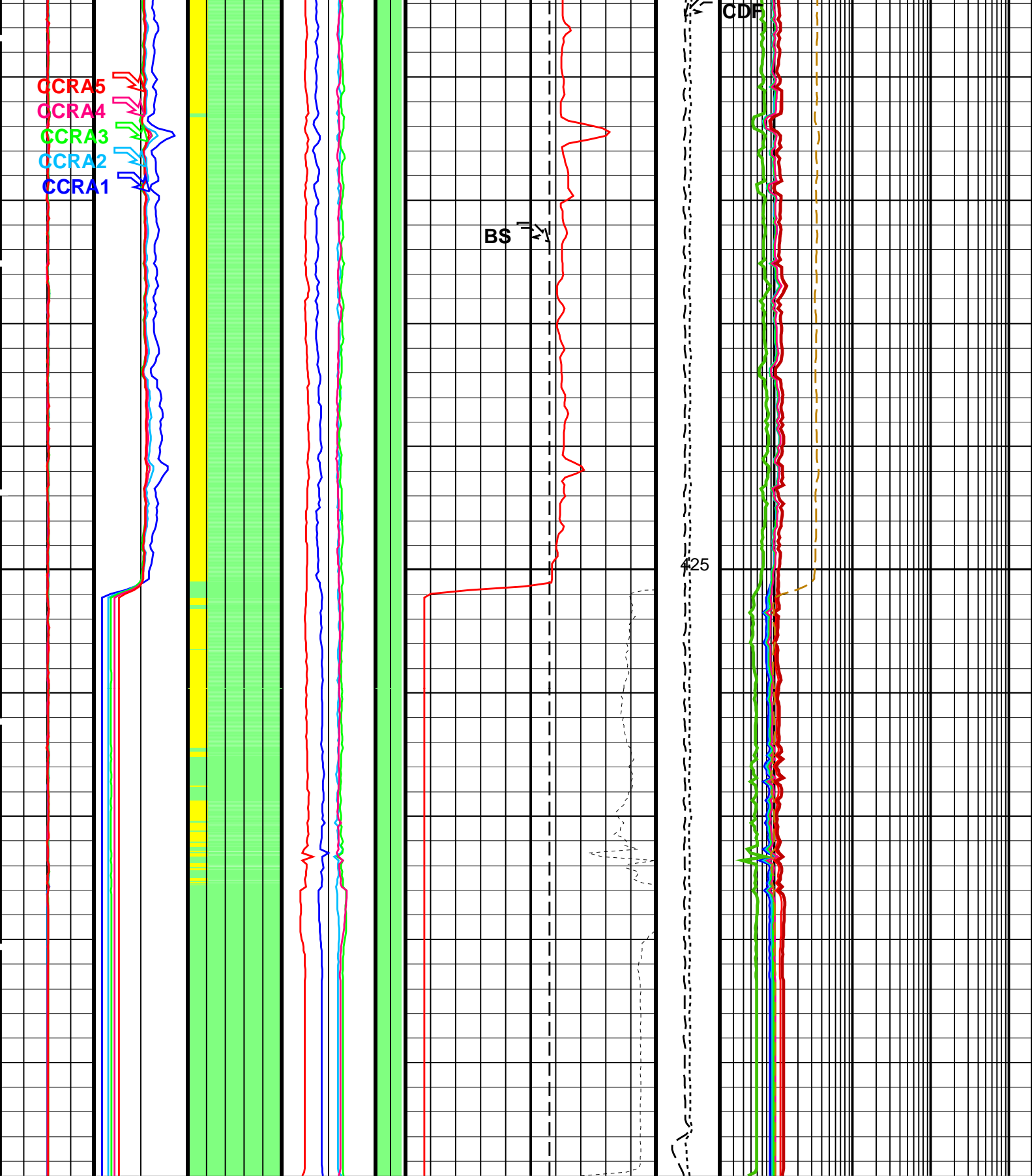
YELLOW = SHOULDER BED EFFECT

BLACK = NOK









***** HRLT FLAG TRACKS *****

BLACK areas show that the corresponding error flag is set.

TRACK R3_LQC

INVERSION WEIGHT

Contribution from each hrlt channel in Inversion algorithm, and from left to right :

| Wei1 | Wei2 | Wei3 | Wei4 | Wei5 |

GREEN = OK

YELLOW = Contribution QUESTIONABLE

BLACK = Contribution UNRELIABLE

LQC flags on RXO_HRLT & RT_HRLT, and from left to right :

| RxoFlag | RTFlag |

GREEN = OK

YELLOW = SHOULDER BED EFFECT

BLACK = NOK

Hardware	Borehole Correction	(WEI_FLAGS) (-) (0.4000 0.8000)	(INVERR1) (-) (-15 15)	(RES_FLAGS) (-) (0 20)	Calibrated Downhole Force (CDF) (LBF) (3000 0)	(RLA1) (OHMM) (0.2 2000)
(MONSYM1) (-) (-4 (-) 4)	(CCRA1) (-) (0.8 1.2)	Inversion Weight	(INVERR2) (-) (-15 15)	(DI_HRLT) (IN) (0 20)	Tension (TENS) (LBF) (10000 0)	(RLA2) (OHMM) (0.2 2000)
(MONSYM2) (-) (-4 (-) 4)	(CCRA2) (-) (0.8 1.2)		(INVERR3) (-) (-15 15)	HLDS Caliper (LCAL) (IN) (0 20)		(RLA3) (OHMM) (0.2 2000)
(MONSYM3) (-) (-4 (-) 4)	(CCRA3) (-) (0.8 1.2)		(INVERR4) (-) (-15 15)			(RLA4) (OHMM) (0.2 2000)
(MONSYM4) (-) (-4 (-) 4)	(CCRA4) (-) (0.8 1.2)		(INVERR5) (-) (-15 15)			(RLA5) (OHMM) (0.2 2000)
(MONSYM5) (-) (-4 (-) 4)	(CCRA5) (-) (0.8 1.2)	Inversion				(RXO_HRLT) (OHMM) (0.2 2000)
<div style="background-color: yellow; padding: 5px; display: inline-block;">HRLA LQC Uplog 1 Sea Floor Depth</div>						(RM_HRLT) (OHMM) (0.02 200)
						(RT_HRLT) (OHMM) (0.2 2000)

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)	21 DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE
CALTEMP	HRLTB Calibration Temperature	19.969 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_0

GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	BARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	OFF	
LOOPMOD1	HRLT Mode 1 Loop Mode	OFF	
LOOPMOD2	HRLT Mode 2 Loop Mode	OFF	
LOOPMOD3	HRLT Mode 3 Loop Mode	OFF	
LOOPMOD4	HRLT Mode 4 Loop Mode	OFF	
LOOPMOD5	HRLT Mode 5 Loop Mode	OFF	
LOOPMOD6	HRLT Mode 6 Loop Mode	OFF	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PROCINV	Inversion Selection	ON	
PROCNFL	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			
	APS Software Version	5	
AASD	APS Thermal and Array Detectors High Voltage Setting	1961.18	V
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2076.53	V
AHCS	APS Holesize Correction Source	BS	
AHSS	APS Holesize Correction Switch	ON	
AMTY	APS Environmental Corrections Mud Type	WaterBaseBarite	
ANSD	APS Near Detector High Voltage Setting	1731.96	V
ASOS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	ON	
BHFL_APS	APS TNPH Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
BSCO_APS	APS TNPH Borehole Salinity Correction Option	YES	
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	YES	
MCOR_APS	APS TNPH Mud Correction	BARI	
MWCO_APS	APS TNPH Mud Weight Correction Option	YES	
NARC	APS Near/Array Calibration Ratio	1.06686	
NFRC	APS Near/Far Calibration Ratio	0.887429	
PTCO_APS	APS TNPH Pressure/Temperature Correction Option	YES	
SHT	Surface Hole Temperature	20	DEGC
TNCO_APS	APS TNPH Computation Option	YES	
HNCS-BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNCS Detector 1 Barite Constant	1	
BAR2	HNCS Detector 2 Barite Constant	1	
BHK	HNCS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	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	HNCS Barite Constant Correction Flag	NONE	

GCSE	Generalized Caliper Selection	LCAL	0	DEG
GDEV	Average Angular Deviation of Borehole from Normal		0.018227	DC/M
GGRD	Geothermal Gradient			
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	-0.0010702		
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	0.962626		
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.973172		
EDTC-B: Enhanced DTS Cartridge				
BHFL	Borehole Fluid Type	WATER		
BHS	Borehole Status	OPEN		
BHT	Bottom Hole Temperature (used in calculations)	21		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	NATU		
MWCO	Mud Weight Correction Option	YES		
PTCO	Pressure/Temperature Correction Option	NO		
SDAT	Standoff Data Source	SOCN		
SHT	Surface Hole Temperature	20		DEGC
SOCN	Standoff Distance	0.5		IN
SOCO	Standoff Correction Option	NO		
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered		
U-ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS		
U-TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS		
BSP: Bridle SP				
SPNV	SP Next Value	0		MV
System and Miscellaneous				
ALTDPCCHAN	Name of alternate depth channel	SpeedCorrectedDepth		
BS	Bit Size	11.438		IN
BSAL	Borehole Salinity	-50000.00		PPM
CSIZ	Current Casing Size	5.500		IN
CWEI	Casing Weight	168.00		LB/F
DFD	Drilling Fluid Density	1.20		G/C3
DO	Depth Offset for Playback	-2508.5		M
FLEV	Fluid Level	-50000.00		M
MST	Mud Sample Temperature	-50000.00		DEGC
PBVSADP	Use alternate depth channel for playback	NO		
PP	Playback Processing	RECOMPUTE		
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000		OHMM
RW	Resistivity of Connate Water	1.0000		OHMM
TD	Total Depth	3190		M
TDD	Total Depth - Driller	3190.00		M
TDL	Total Depth - Logger	3189.00		M
TWS	Temperature of Connate Water Sample	37.78		DEGC

Format: HRLT_LQC Vertical Scale: 1:200 Graphics File Created: 07-Jan-2015 05:19

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
BSP	19C0-187		

Input DLIS Files

Output DLIS Files

Company: Integrated Ocean Discovery Program Well: Expedition 353, Site U1445A BB-5

Input DLIS Files

Output DLIS Files

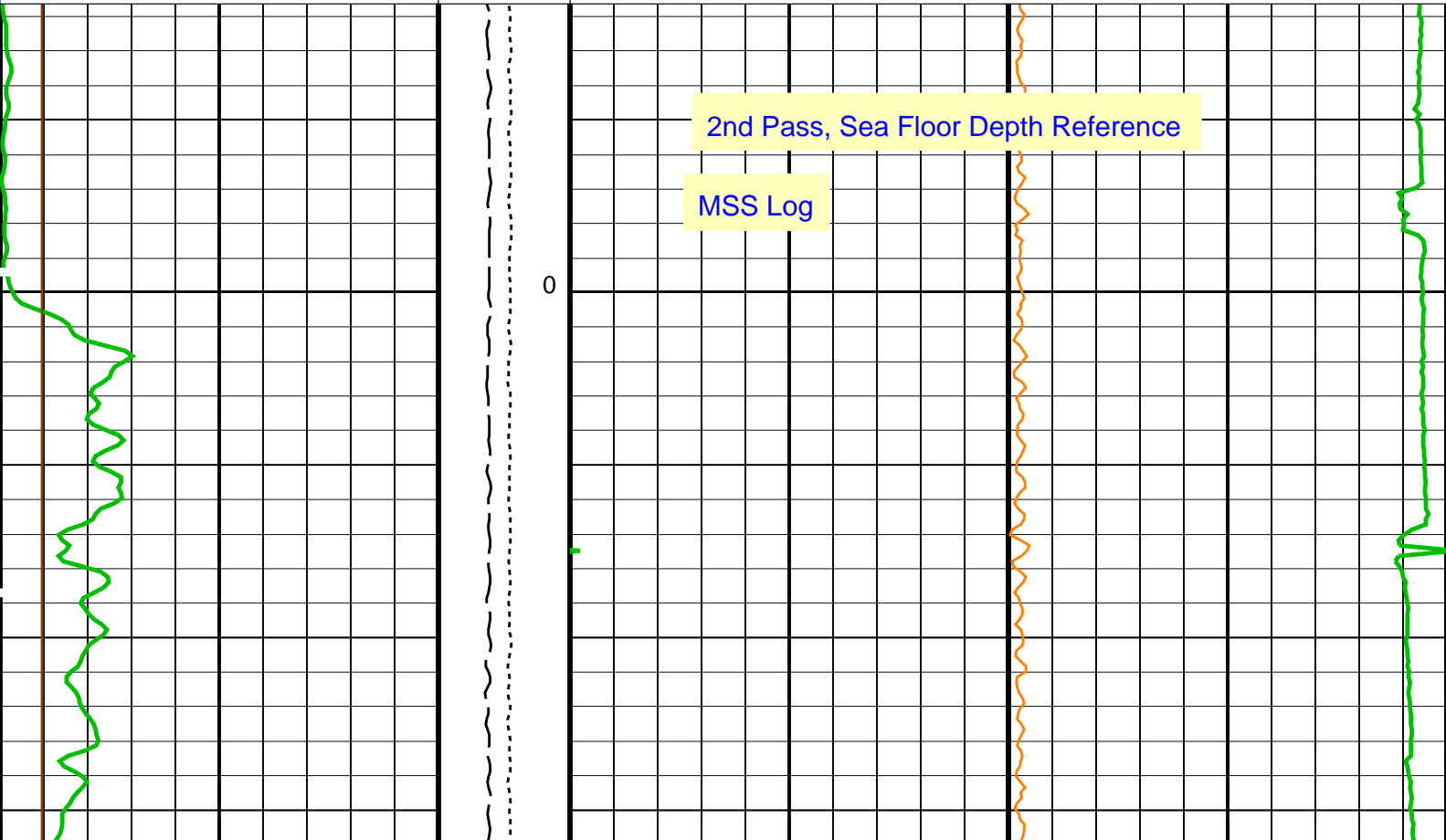
OP System Version: 19C0-187

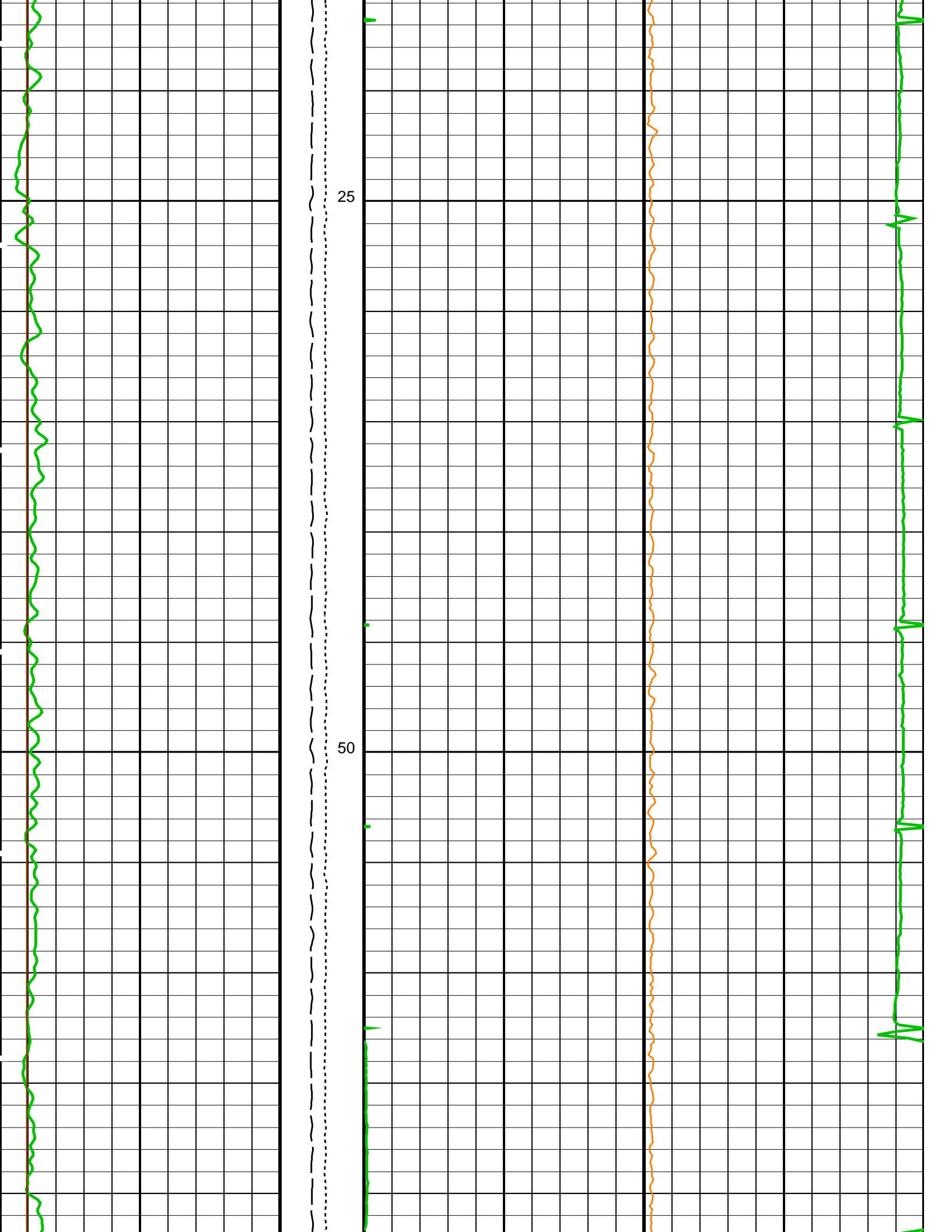
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HLDS	19C0-187	LDSC-B	19C0-187
APS-C	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	EDTC-B	SKK-5169-EDTCB
BSP	19C0-187		

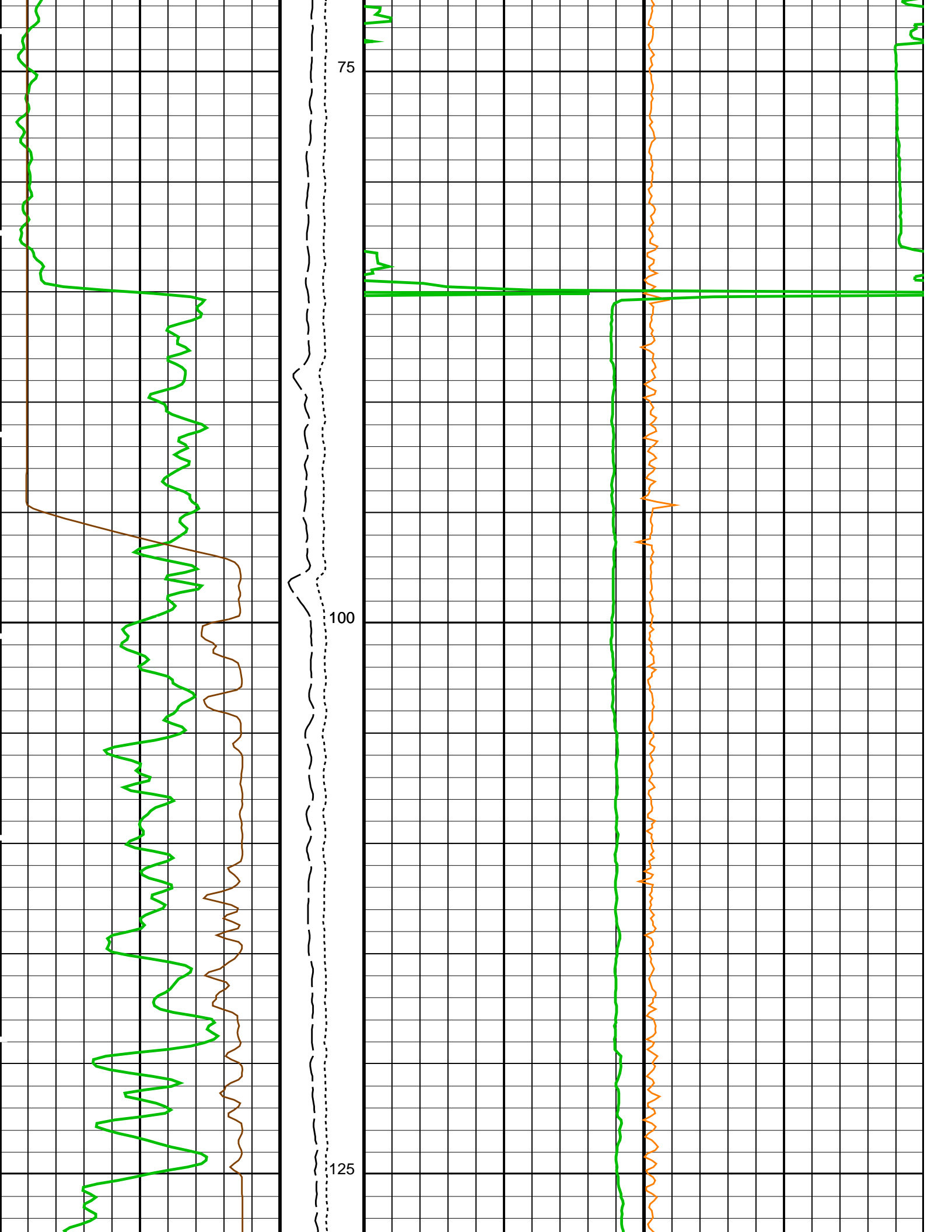
PIP SUMMARY

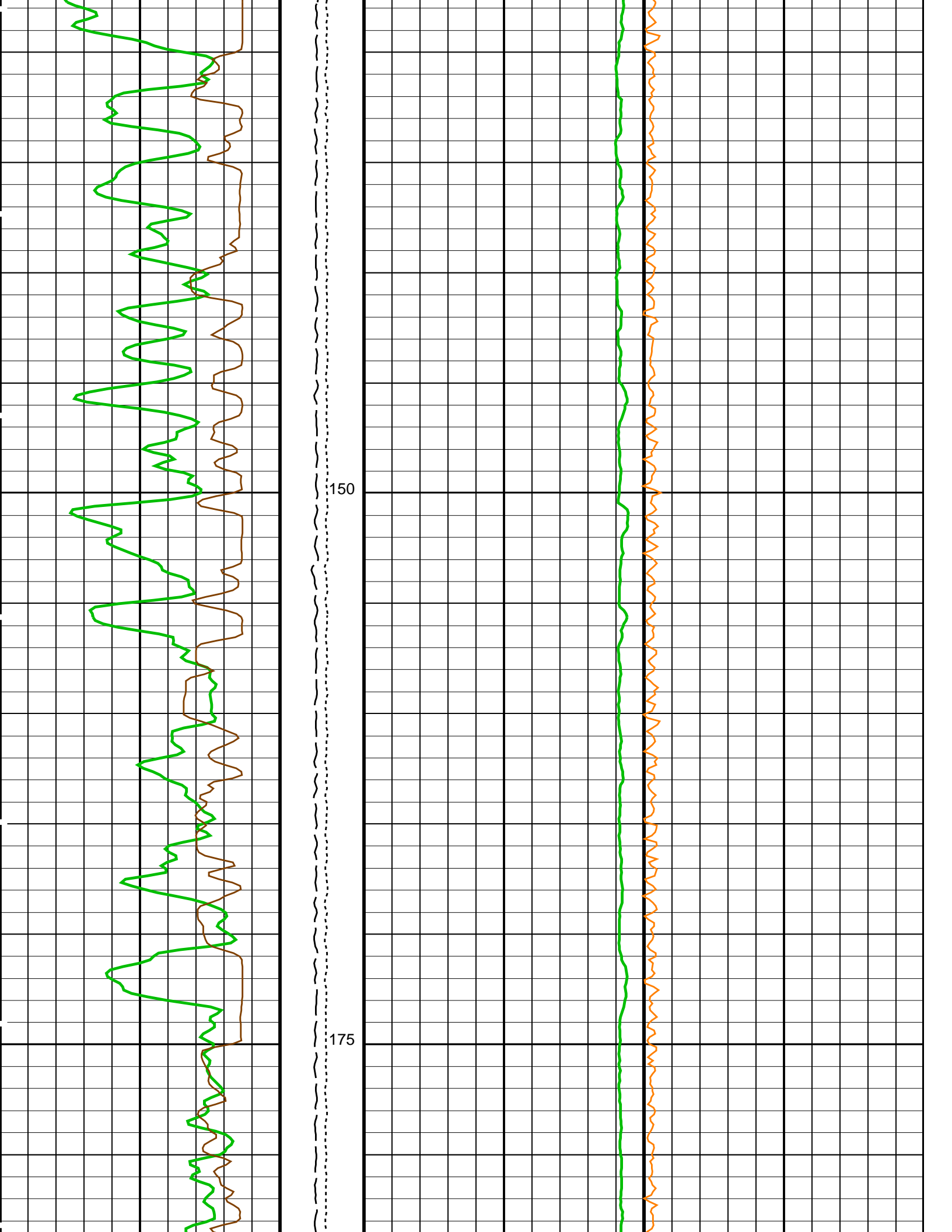
Time Mark Every 60 S

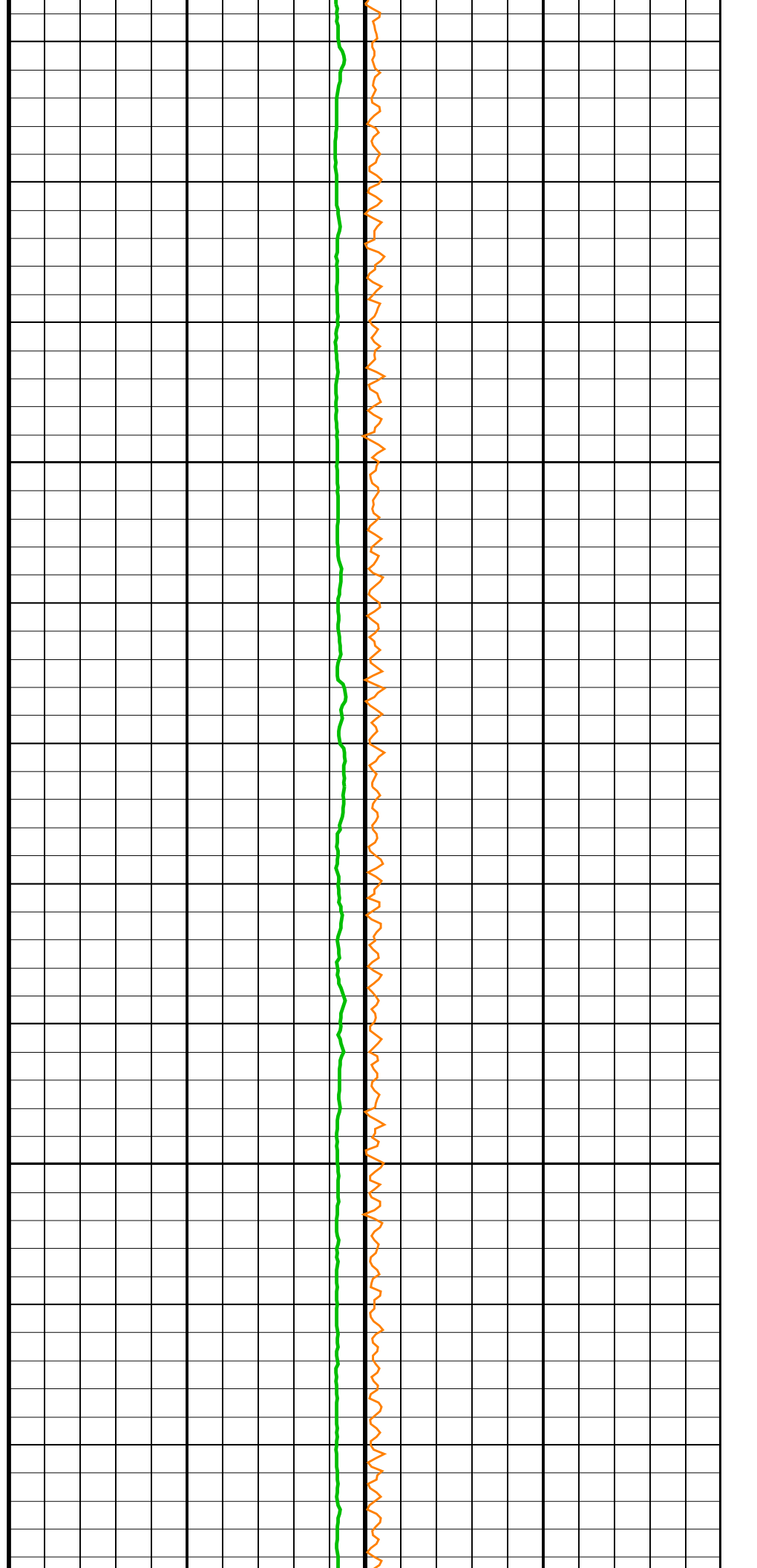
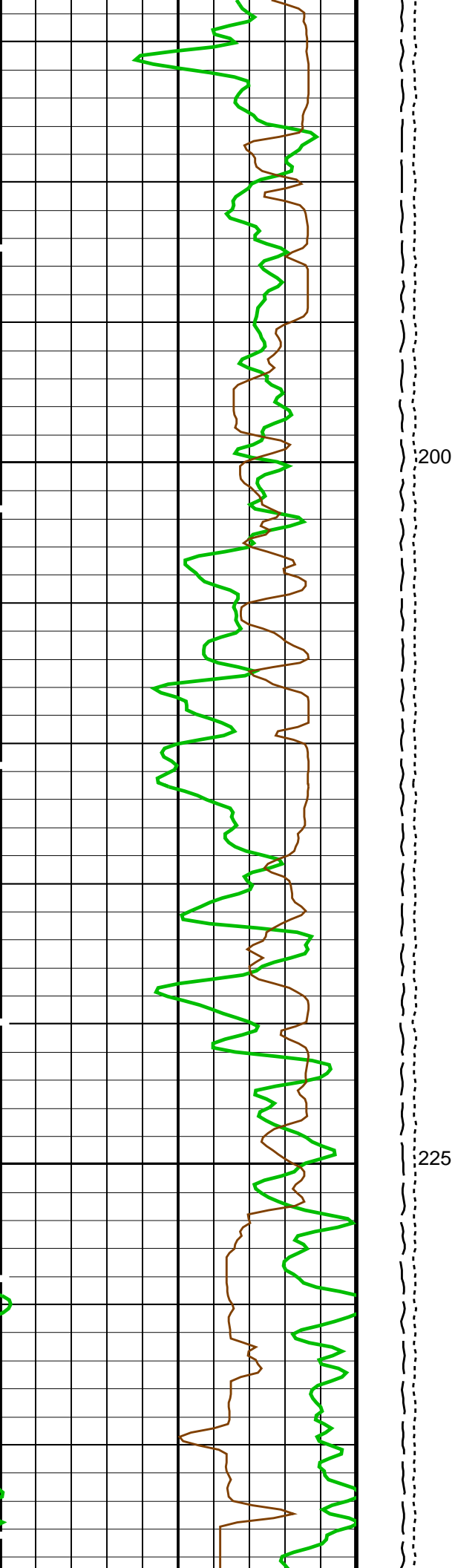
Gamma Ray (GR_EDTC) (GAPI)	0 100	Calibrated Downhole Force (CDF) (LBF)	Dual-Coil Susceptibility (MSSLUS_LDEO) (PPM)	-15000 15000
			3000 0	
HLDS Caliper (LCAL) (IN)	0 20	Tension (TENS) (LBF)	Axial Acceleration (MSSZACC_LDEO) (M/S2)	0 20
			10000 0	

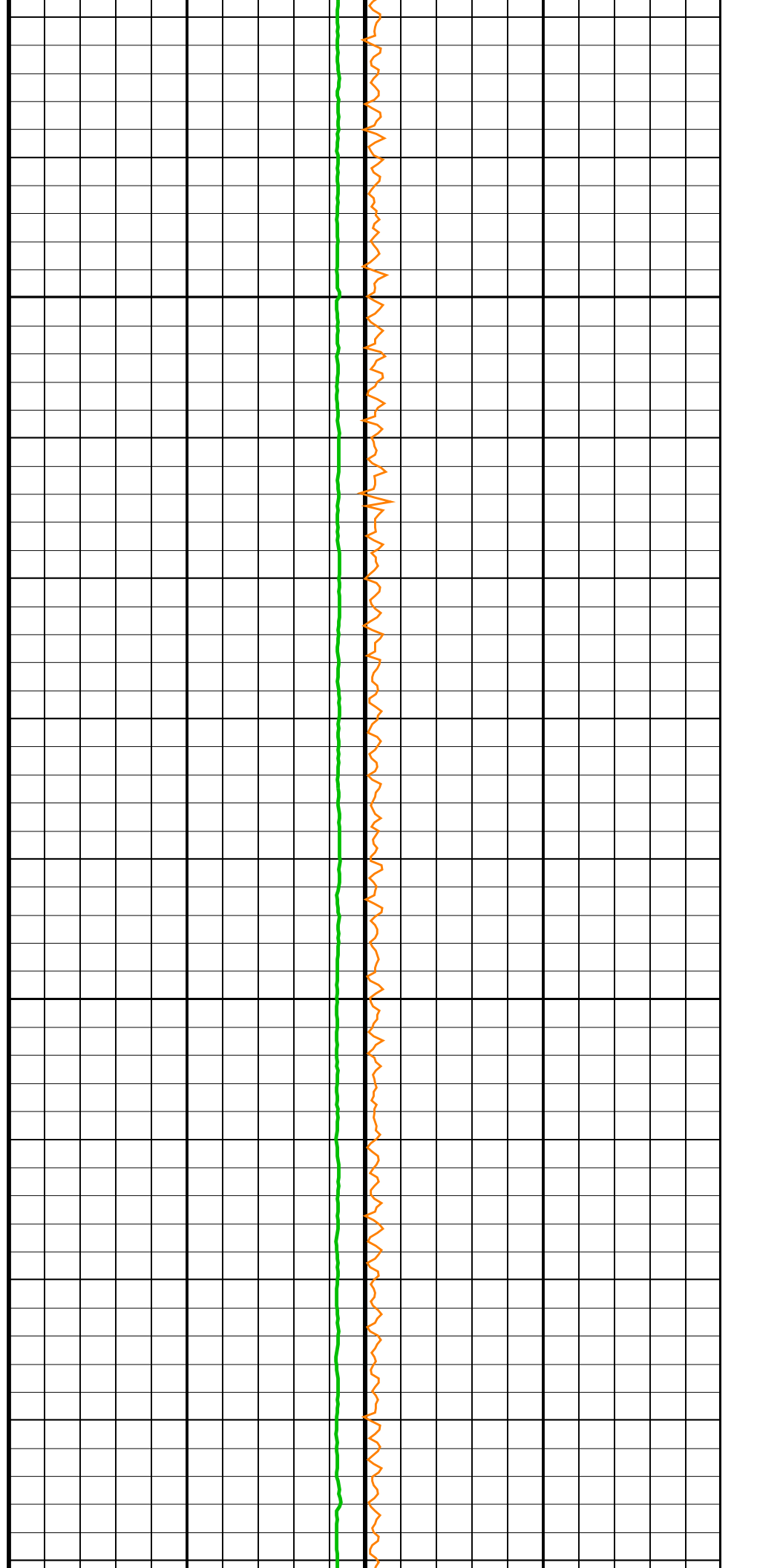
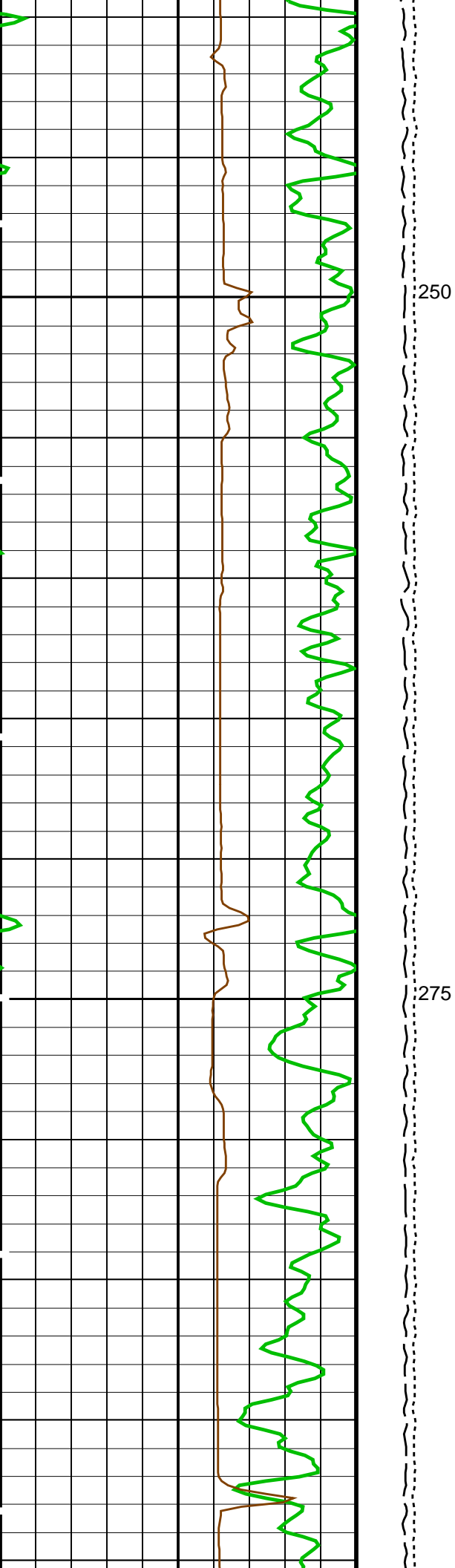


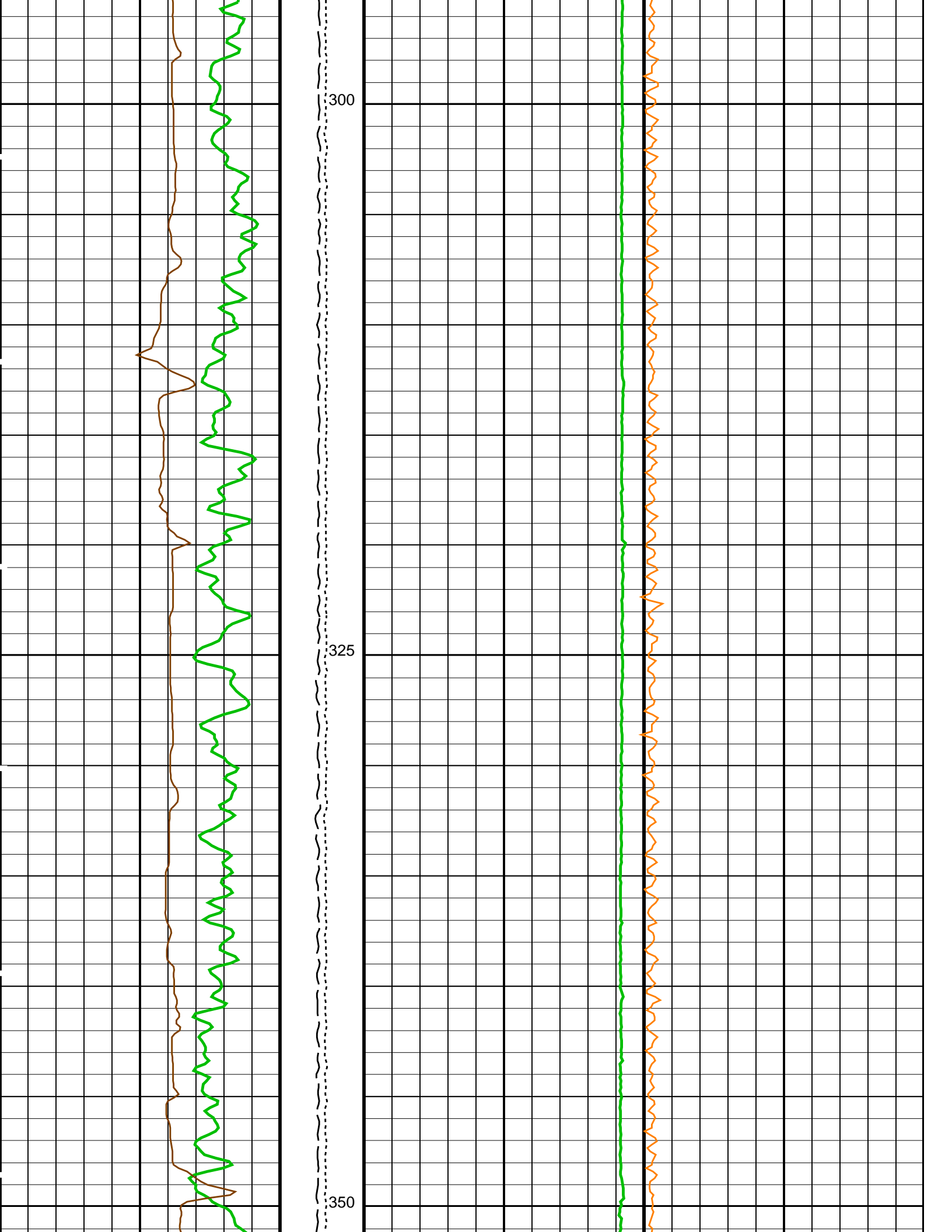


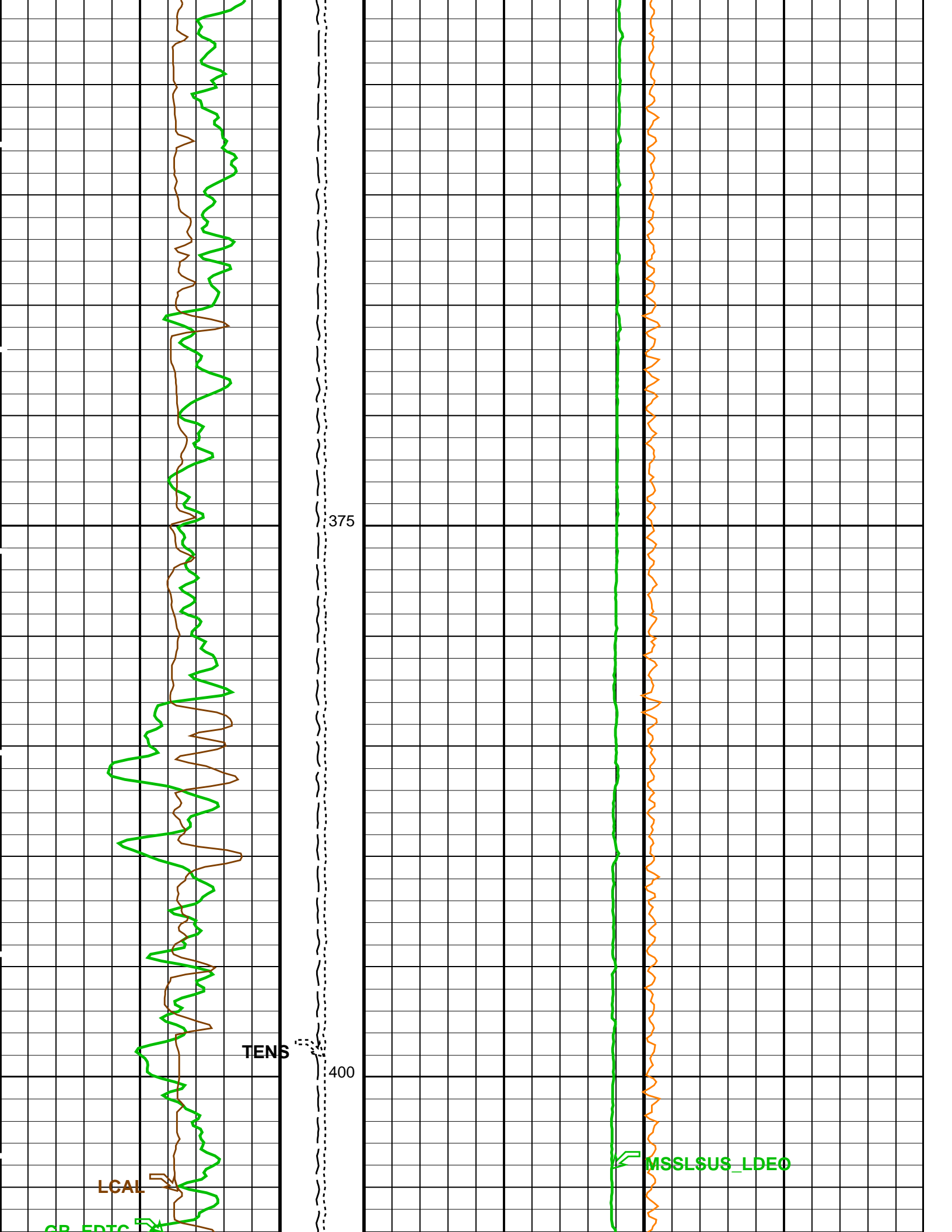


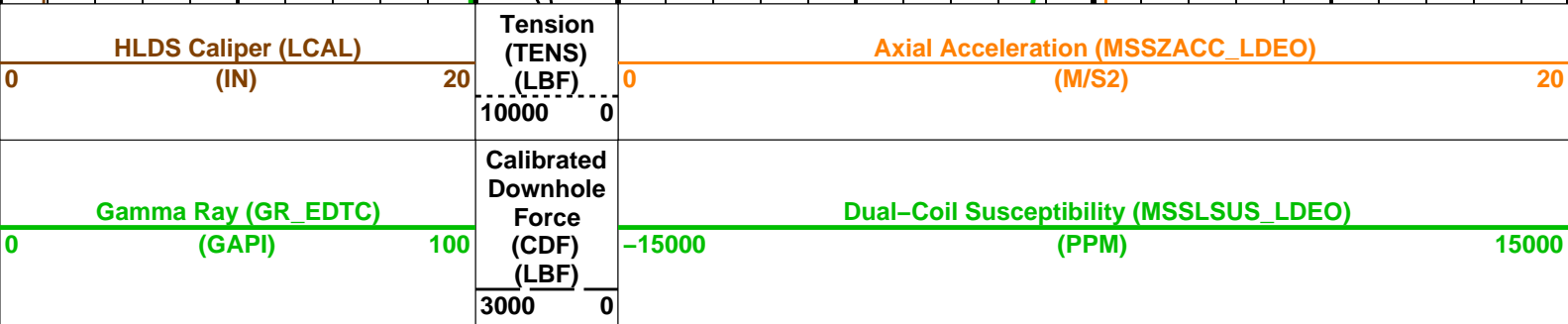
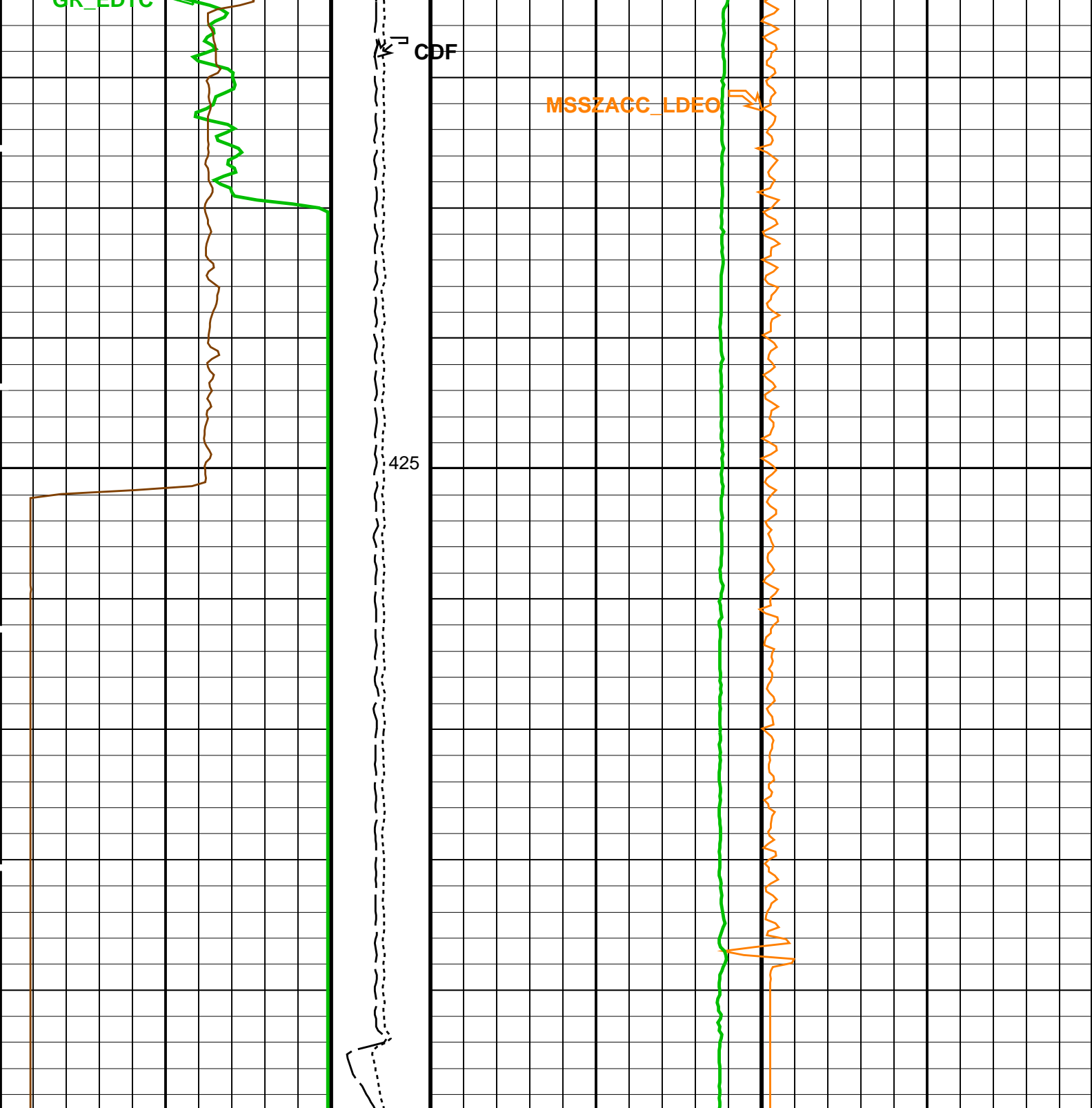












PIP SUMMARY

Time Mark Every 60 S

2nd Pass, Sea Floor Depth Reference

Parameters

MSS Log

DLIS Name	Description	Value	
HRLT-B: High Resolution Laterolog Array - B			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	19.969	DEGC
FREQ0	HRLT Frequency Index for Mode 0	32	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ6	HRLT Frequency Index for Mode 6	116	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	BARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	OFF	
LOOPMOD1	HRLT Mode 1 Loop Mode	OFF	
LOOPMOD2	HRLT Mode 2 Loop Mode	OFF	
LOOPMOD3	HRLT Mode 3 Loop Mode	OFF	
LOOPMOD4	HRLT Mode 4 Loop Mode	OFF	
LOOPMOD5	HRLT Mode 5 Loop Mode	OFF	
LOOPMOD6	HRLT Mode 6 Loop Mode	OFF	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
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	5	
ADSO	APS Thermal and Array Detectors High Voltage Setting	1961.18	V
AFSD	APS Array Detectors Data Source Switch	Both	
AHCS	APS Far Detector High Voltage Setting	2076.53	V
AHSS	APS Holesize Correction Source	BS	
AMTY	APS Holesize Correction Switch	ON	
ANSD	APS Environmental Corrections Mud Type	WaterBaseBarite	
ASOS	APS Near Detector High Voltage Setting	1731.96	V
ATSS	APS Standoff Correction Switch	ON	
BHFL_APS	APS Temperature-Pressure-Salinity Correction Switch	ON	
BHS	APS TNPH Borehole Fluid Type	WATER	
BHT	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
BSCO_APS	APS TNPH Borehole Salinity Correction Option	YES	
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	YES	
MCO_APS	APS TNPH Mud Correction	BARI	

MWCO_APS	APS TNPH Mud Weight Correction Option	YES	
NARC	APS Near/Array Calibration Ratio	1.06686	
NFRC	APS Near/Far Calibration Ratio	0.887429	
PTCO_APS	APS TNPH Pressure/Temperature Correction Option	YES	
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)	21	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	-0.00098051	
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	0.964598	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.972088	
EDTC--B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	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	NATU	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U-ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U-TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
BSP: Bridle SP			
SPNV	SP Next Value	0	MV
System and Miscellaneous			
ALTDPCCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	11.438	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	5.500	IN
CWEI	Casing Weight	168.00	LB/F
DFD	Drilling Fluid Density	1.20	G/C3
DO	Depth Offset for Playback	-2508.5	M
FLEV	Fluid Level	-50000.00	M
MST	Mud Sample Temperature	-50000.00	DEGC
PBVSDP	Use alternate depth channel for playback	NO	
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	3190	M
TDP	Total Depth Drilled	3190.00	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
BSP	19C0-187		

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_014LUP	FN:23	PRODUCER	06-Jan-2015 10:02	2958.1 M	2488.5 M
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Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_047PUP	FN:67	PRODUCER	07-Jan-2015 05:20		
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Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_013LUP	FN:21	PRODUCER	06-Jan-2015 09:00	2958.1 M	2647.2 M
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Output DLIS Files

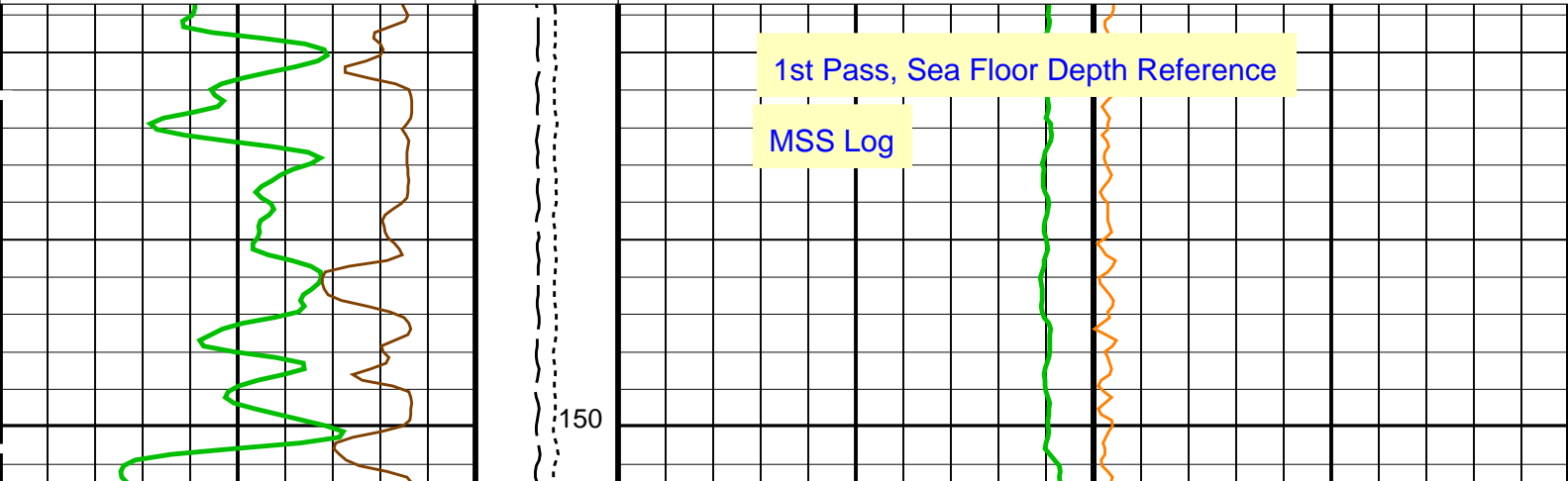
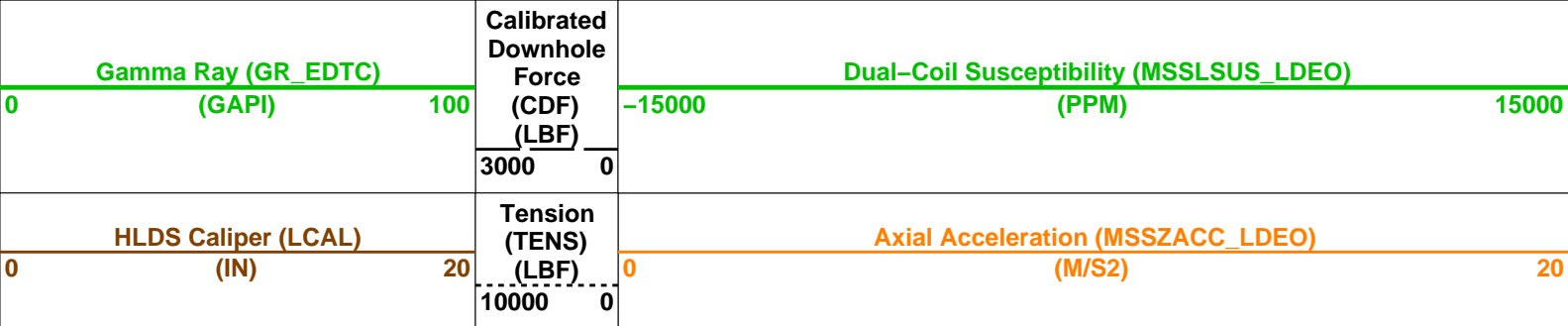
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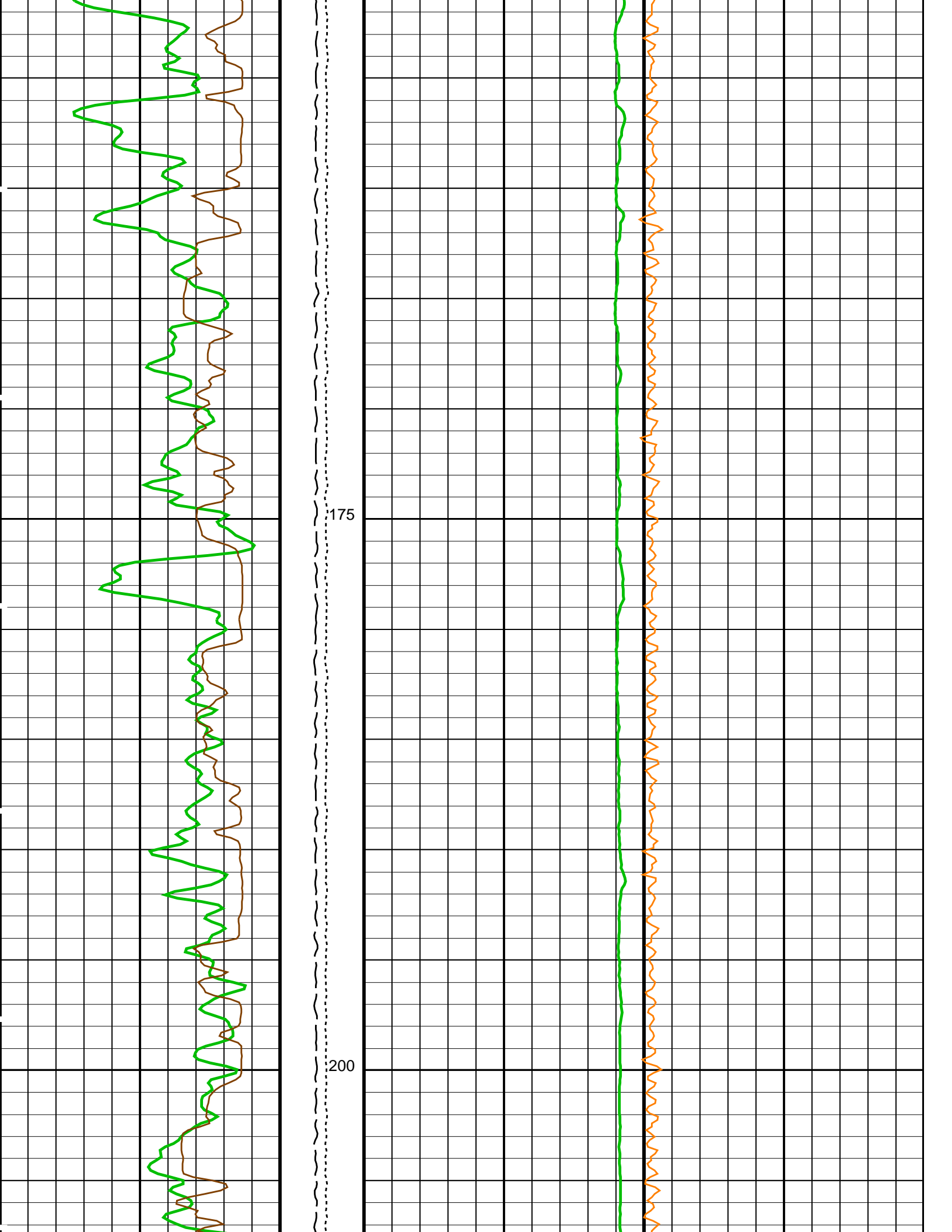
OP System Version: 19C0-187

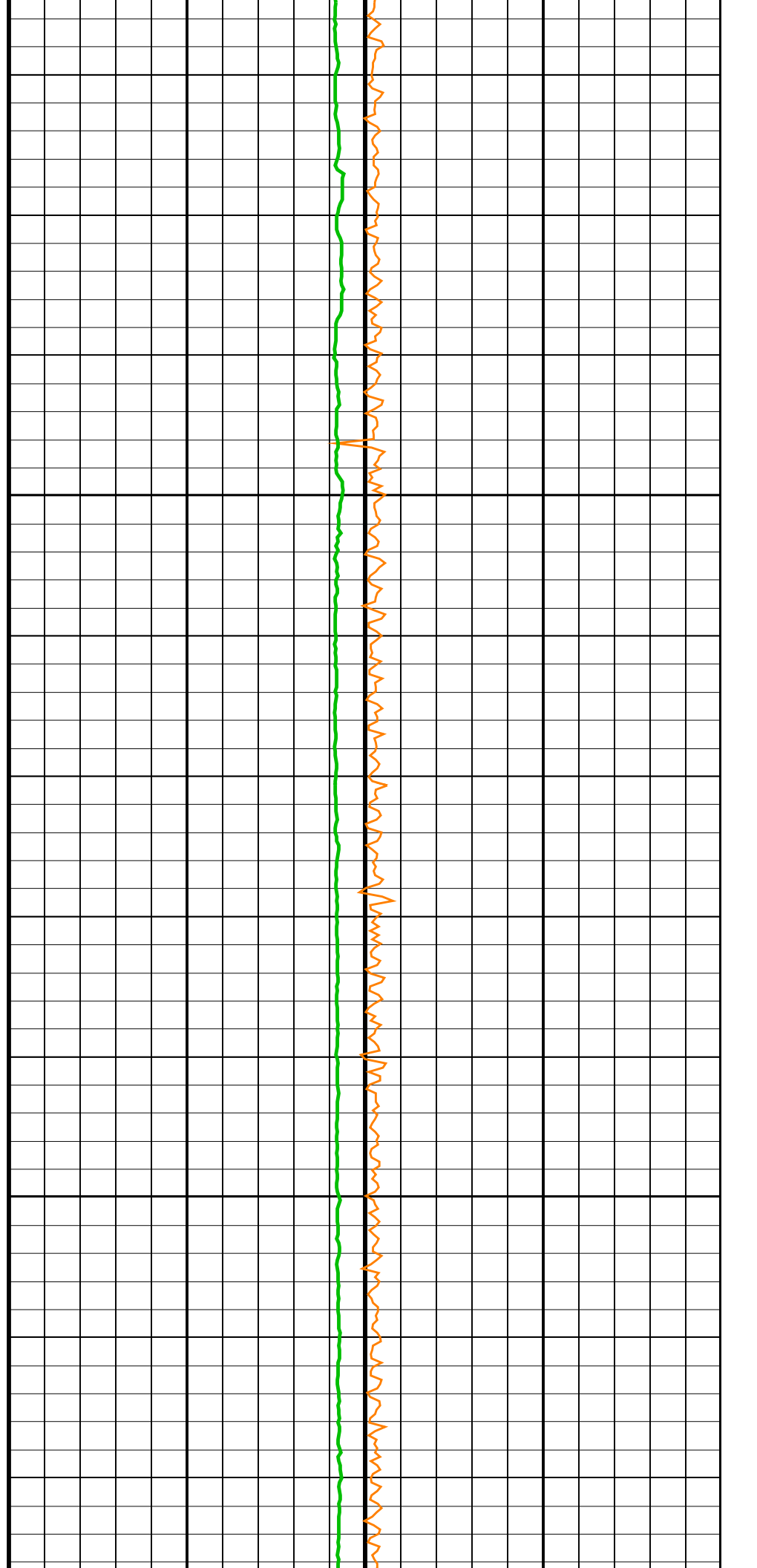
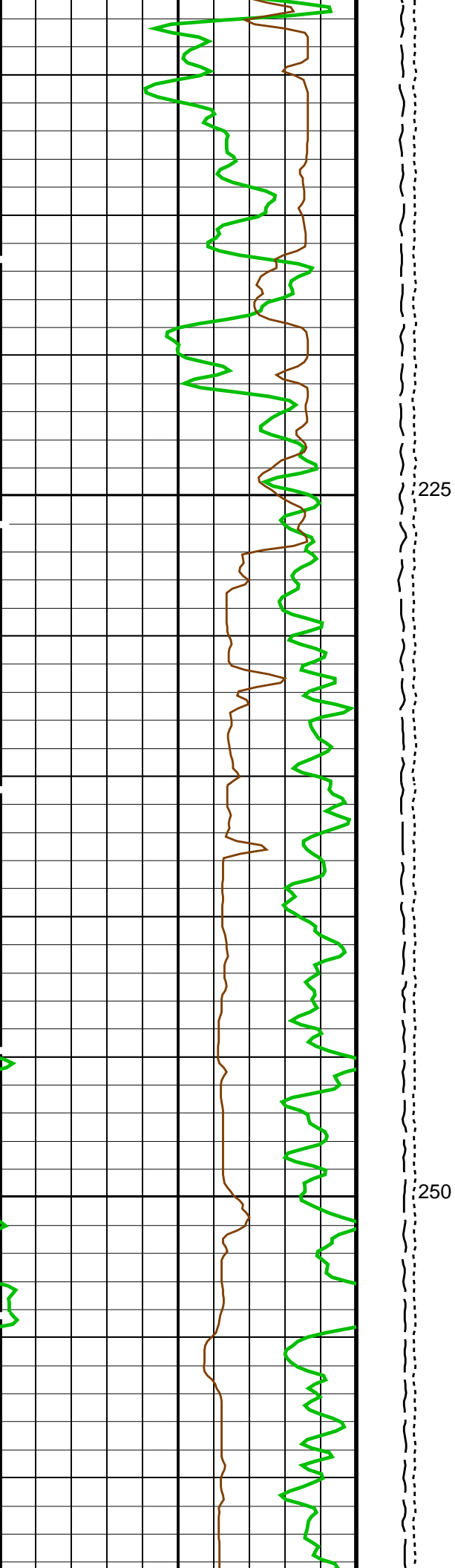
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HLDS	19C0-187	LDSC-B	19C0-187
APS-C	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	EDTC-B	SKK-5169-EDTCB
BSP	19C0-187		

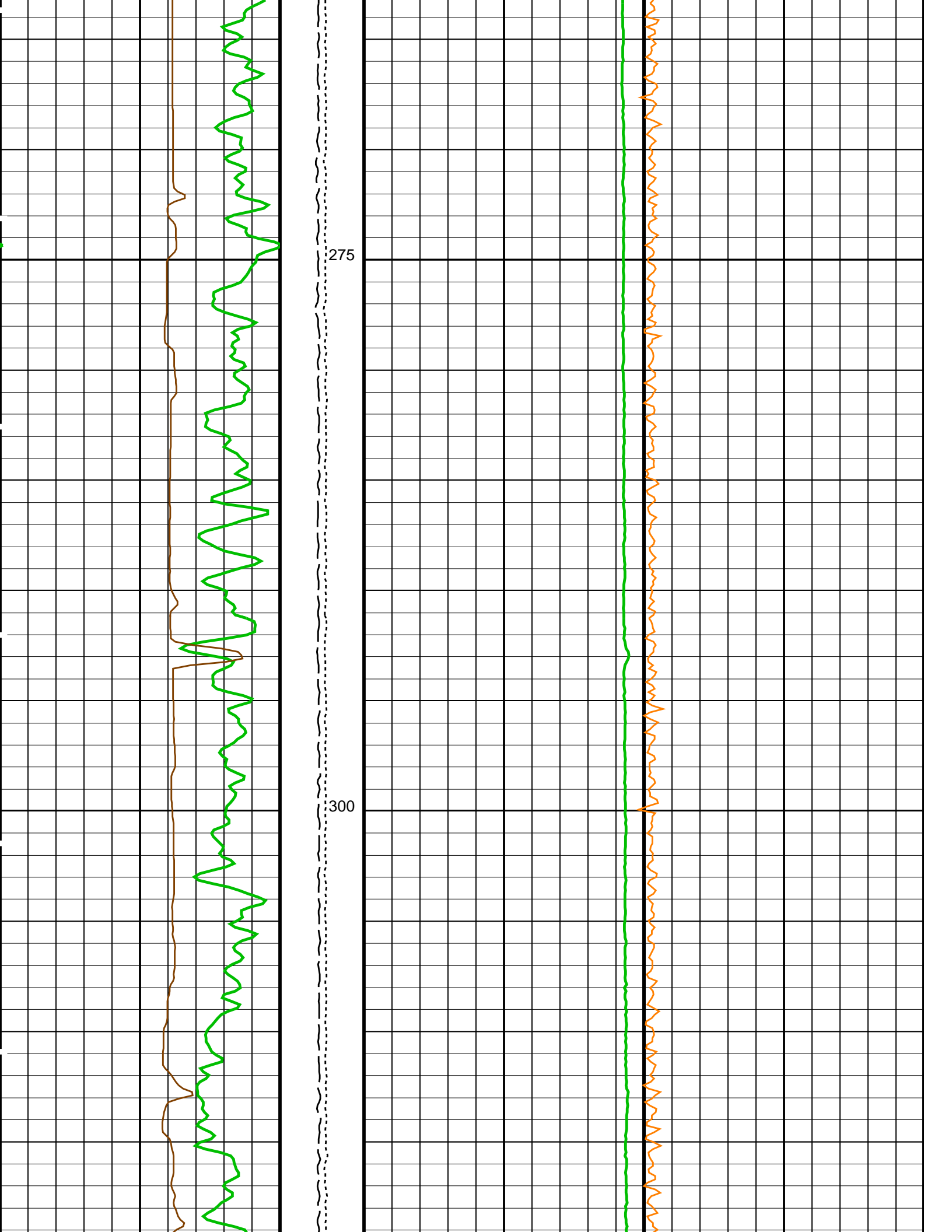
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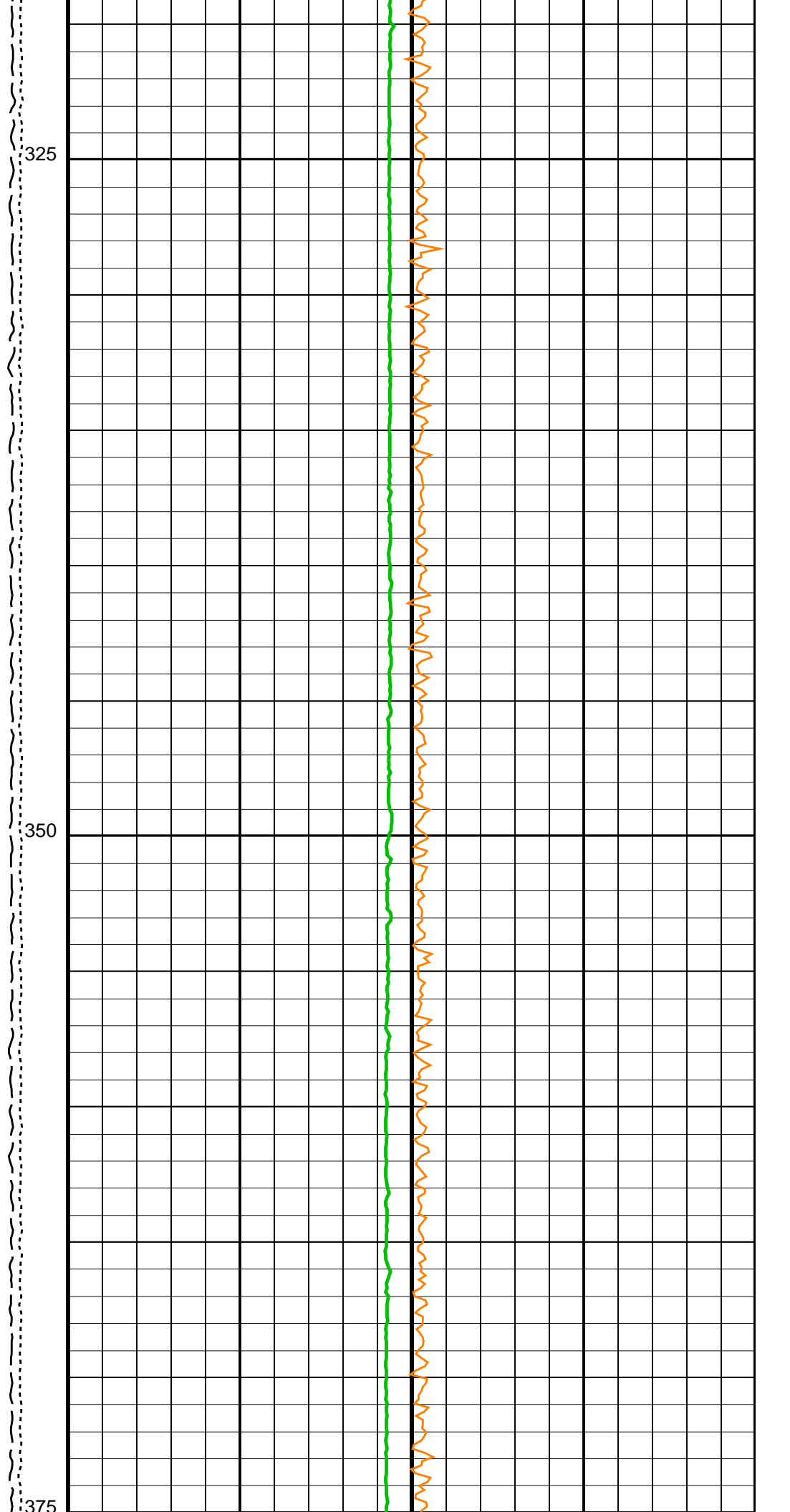
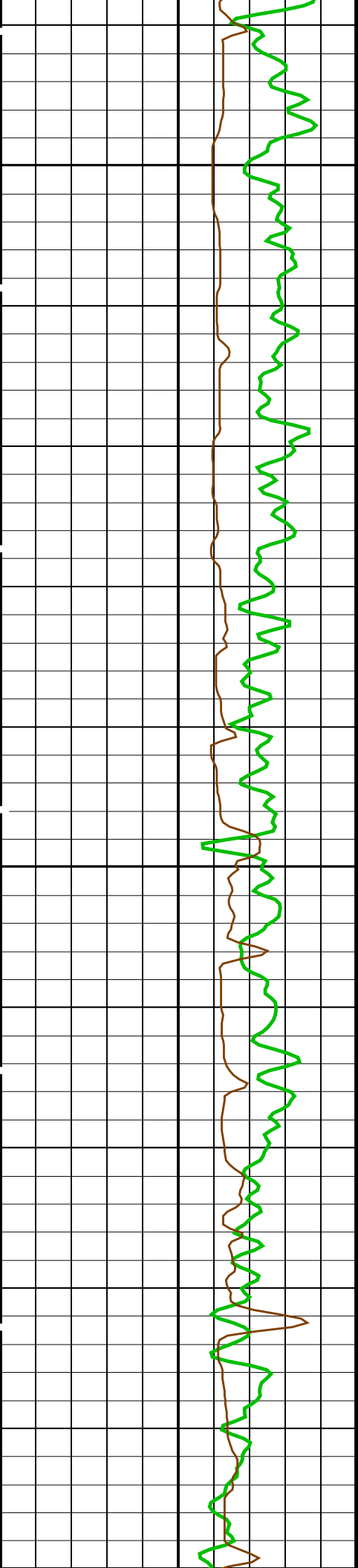
Time Mark Every 60 S

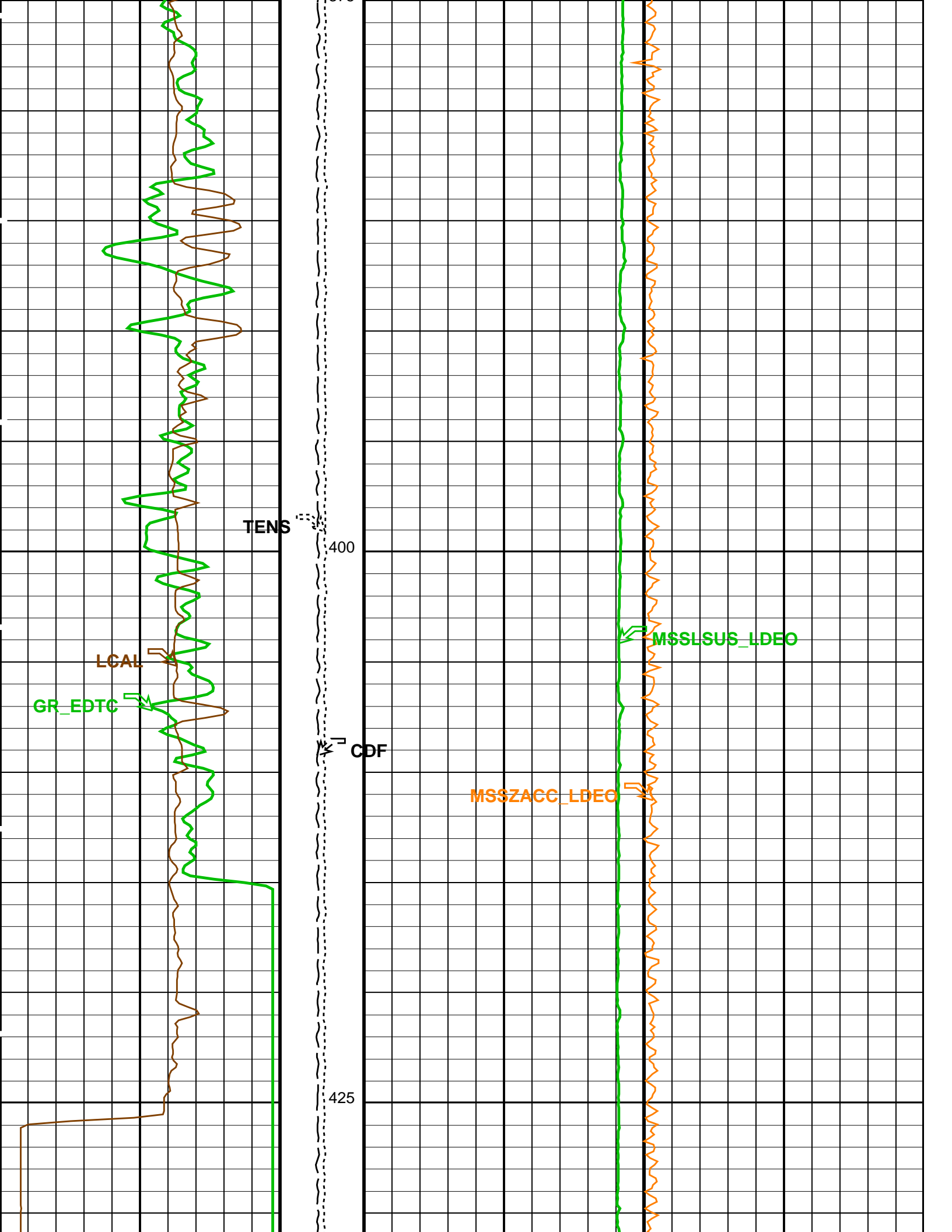


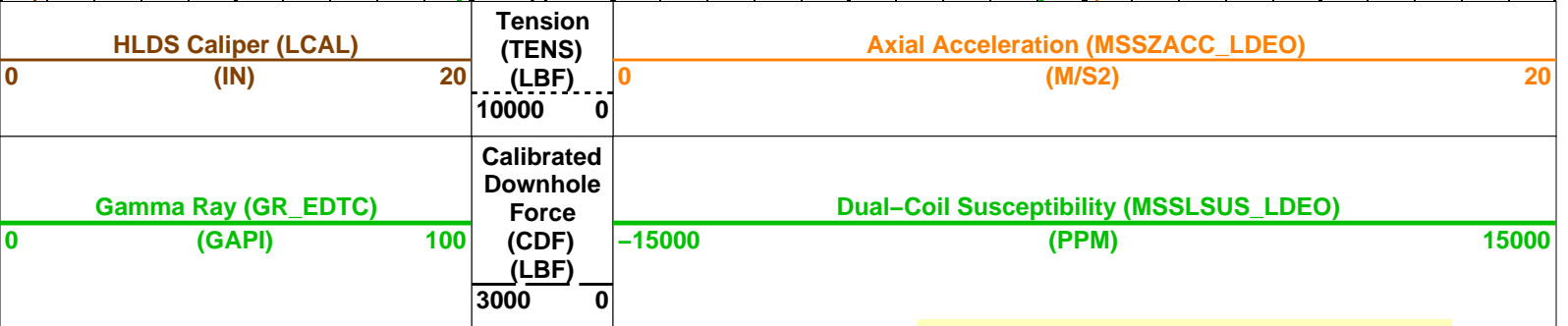
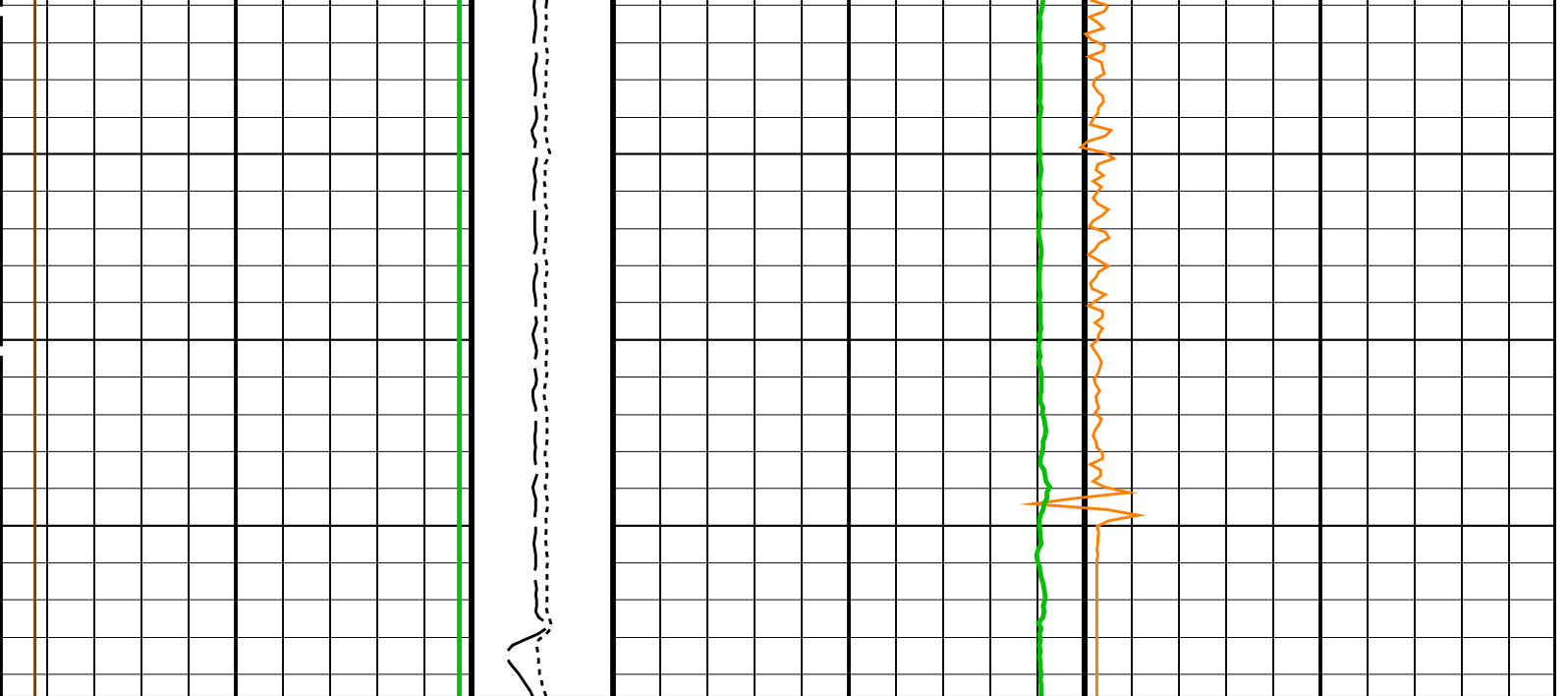












PIP SUMMARY

1st Pass, Sea Floor Depth Reference

Time Mark Every 60 S

Parameters

MSS Log

DLIS Name	Description	Value	
HRLT-B: High Resolution Laterolog Array - B			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	19.969	DEGC
FREQ0	HRLT Frequency Index for Mode 0	32	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ6	HRLT Frequency Index for Mode 6	116	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	BARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	OFF	
LOOPMOD1	HRLT Mode 1 Loop Mode	OFF	
LOOPMOD2	HRLT Mode 2 Loop Mode	OFF	
LOOPMOD3	HRLT Mode 3 Loop Mode	OFF	
LOOPMOD4	HRLT Mode 4 Loop Mode	OFF	
LOOPMOD5	HRLT Mode 5 Loop Mode	OFF	
LOOPMOD6	HRLT Mode 6 Loop Mode	OFF	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PROCVN	Inversion Selection	ON	
PROCMFL	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RXO	
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

	APS Software Version	5	
AASD	APS Thermal and Array Detectors High Voltage Setting	1961.18	V
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2076.53	V
AHCS	APS Holesize Correction Source	BS	
AHSS	APS Holesize Correction Switch	ON	
AMTY	APS Environmental Corrections Mud Type	WaterBaseBarite	
ANSD	APS Near Detector High Voltage Setting	1731.96	V
ASOS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	ON	
BHFL_APS	APS TNPH Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
BSCO_APS	APS TNPH Borehole Salinity Correction Option	YES	
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	YES	
MCOR_APS	APS TNPH Mud Correction	BARI	
MWCO_APS	APS TNPH Mud Weight Correction Option	YES	
NARC	APS Near/Array Calibration Ratio	1.06686	
NFRC	APS Near/Far Calibration Ratio	0.887429	
PTCO_APS	APS TNPH Pressure/Temperature Correction Option	YES	
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)	21	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	-0.0010702	
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	0.962626	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.973172	
EDTC-B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	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	NATU	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U-ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U-TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
BSP: Bridle SP			
SPNV	SP Next Value	0	MV
System and Miscellaneous			
ALTDPCCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	11.438	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	5.500	IN
CWEI	Casing Weight	168.00	LB/F
DFD	Drilling Fluid Density	1.20	G/C3
DO	Depth Offset for Playback	-2508.5	M
FLEV	Fluid Level	-50000.00	M
MST	Mud Sample Temperature	-50000.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	3190	M
TDD	Total Depth - Driller	3190.00	M
TDL	Total Depth - Logger	3189.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: MSS_Logging Vertical Scale: 1:200 Graphics File Created: 07-Jan-2015 05:19

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
BSP	19C0-187		

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_013LUP	FN:21	PRODUCER	06-Jan-2015 09:00	2958.1 M	2647.2 M
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Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_046PUP	FN:66	PRODUCER	07-Jan-2015 05:19		
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Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_014LUP	FN:23	PRODUCER	06-Jan-2015 10:02	2958.1 M	2488.5 M
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Output DLIS Files

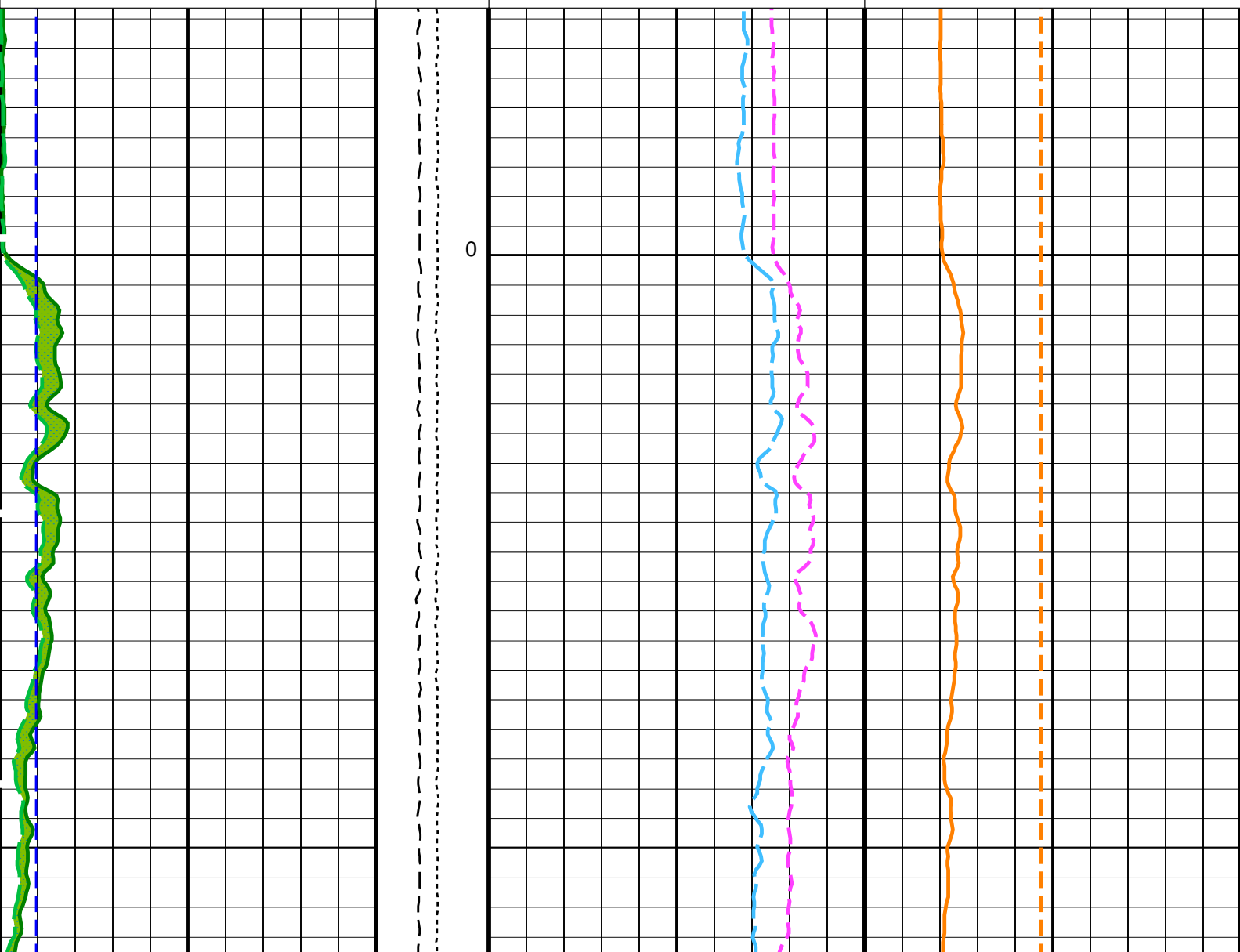
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OP System Version: 19C0-187

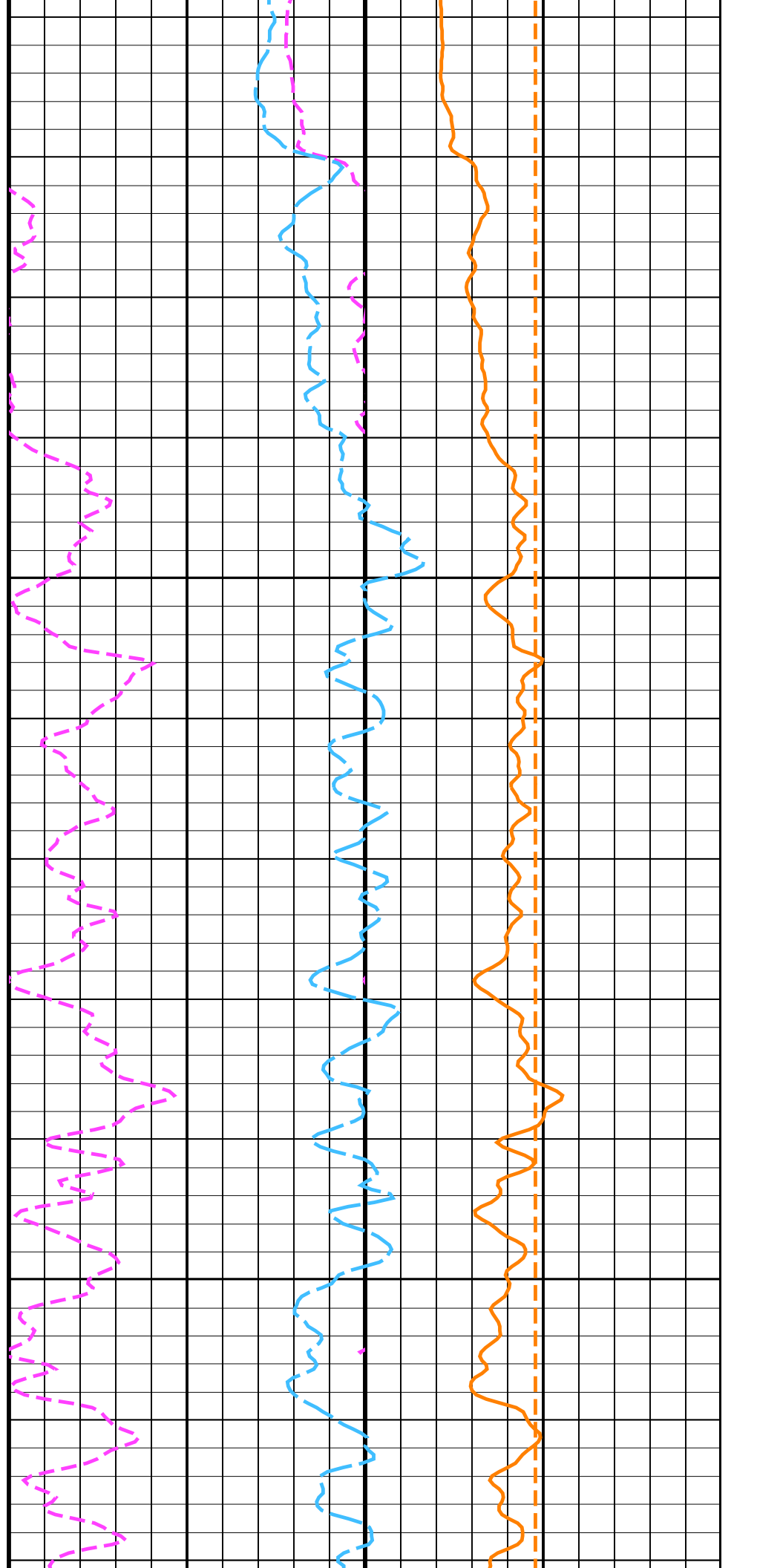
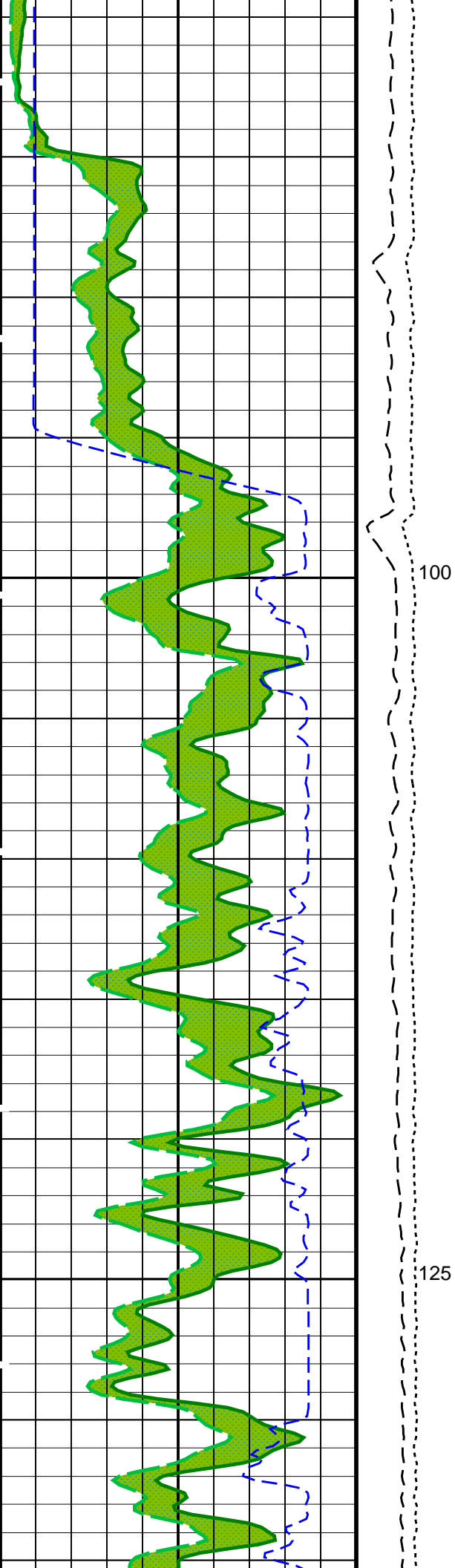
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APS-C	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	EDTC-B	SKK-5169-EDTCB
BSP	19C0-187		

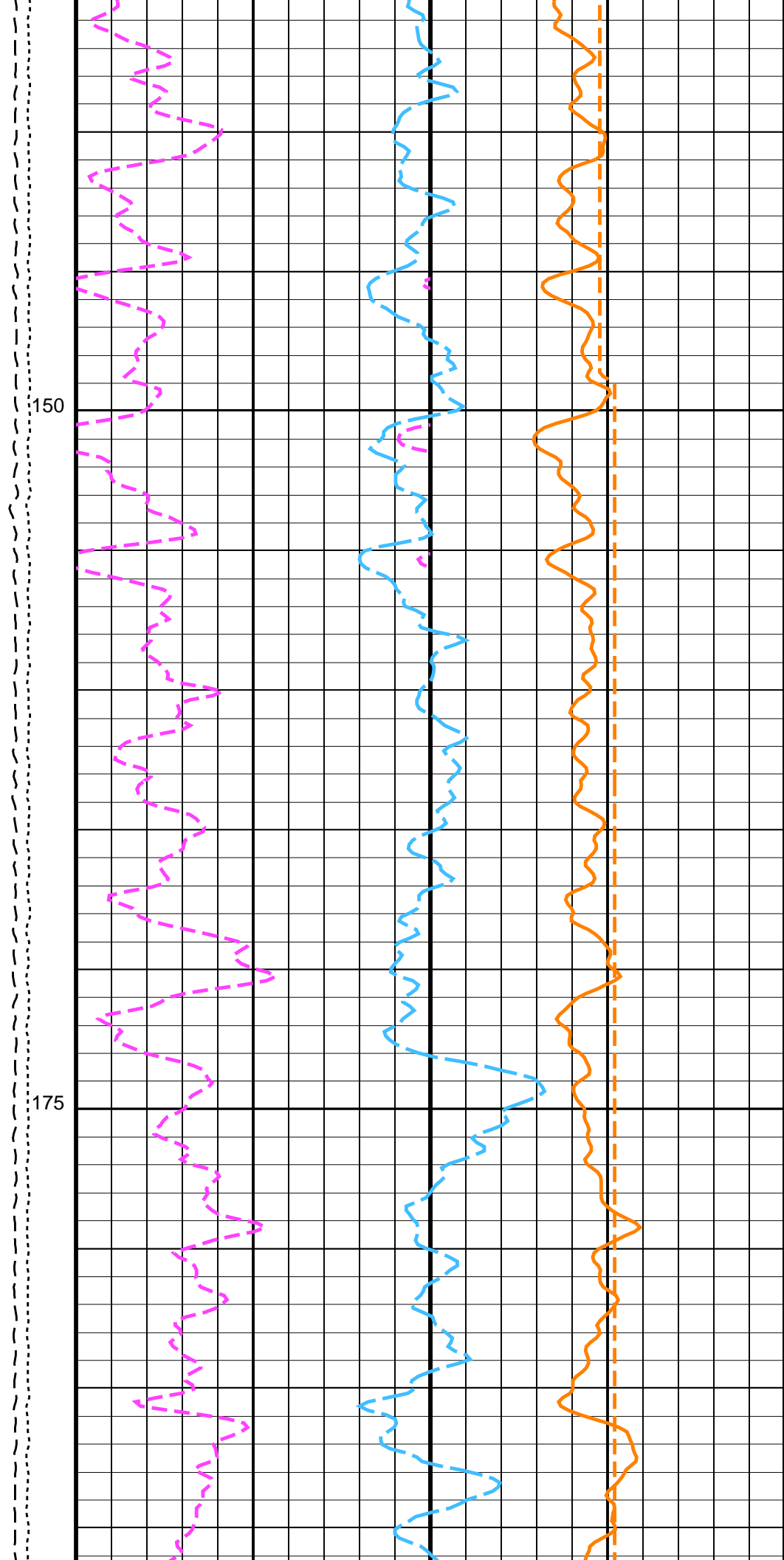
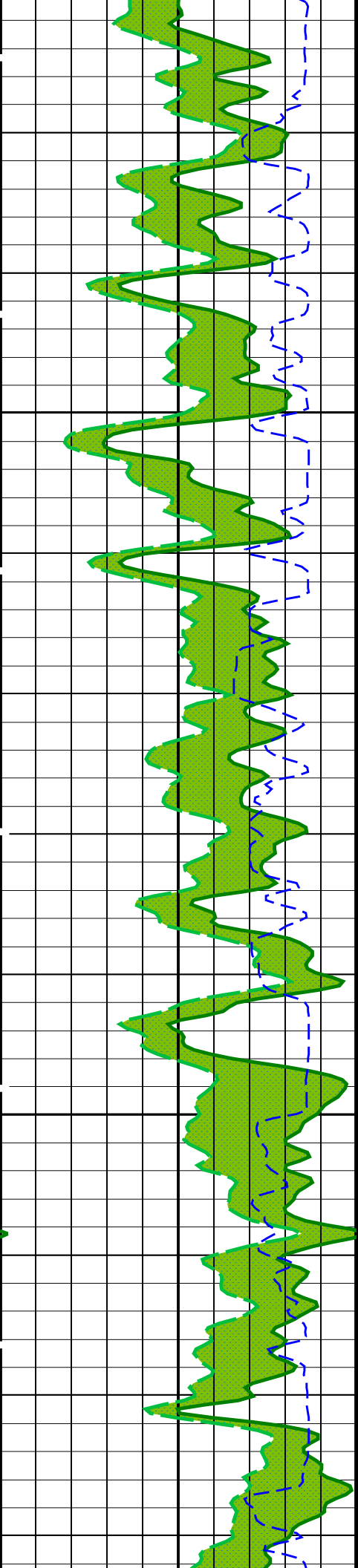
PIP SUMMARY

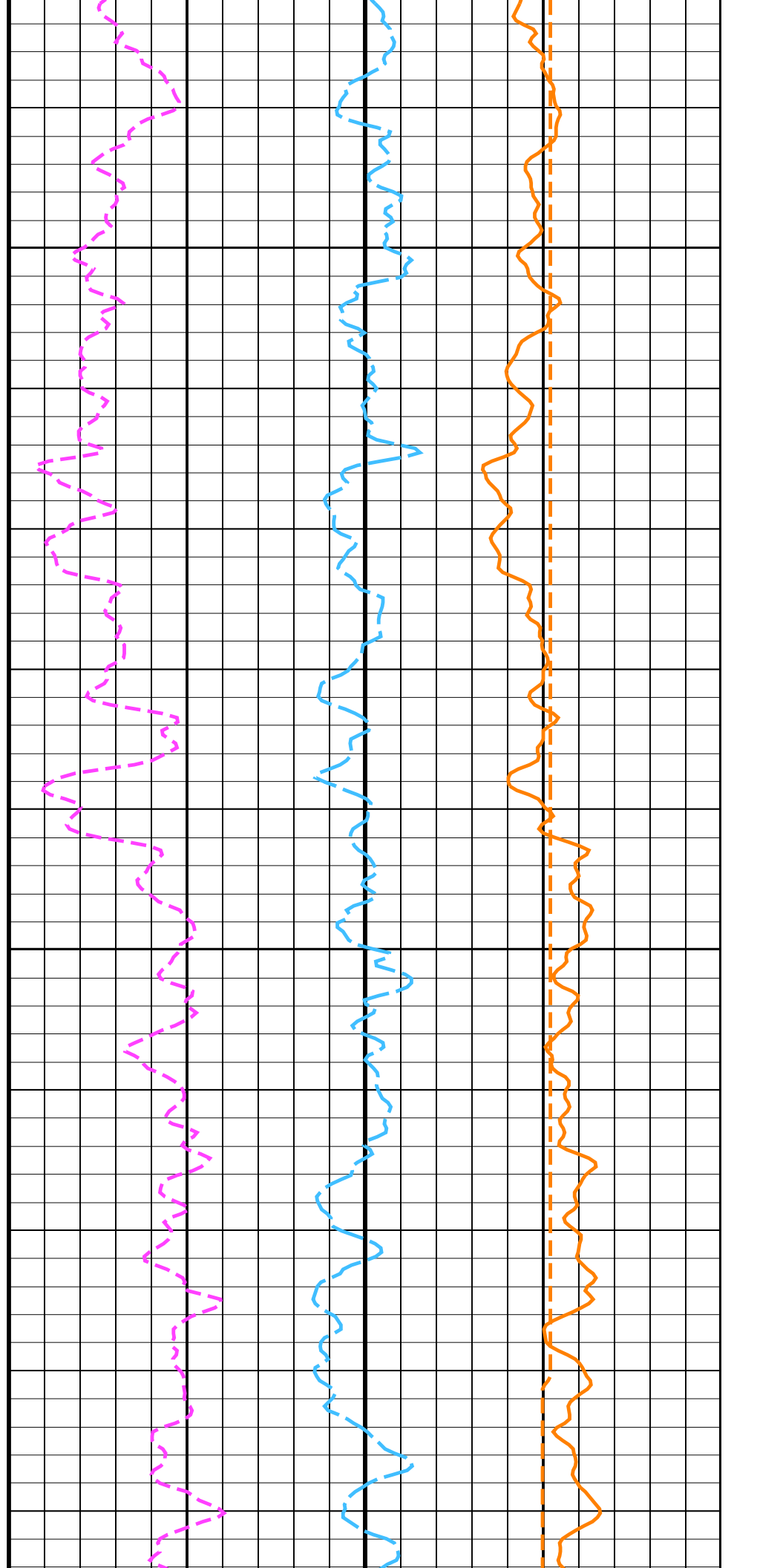
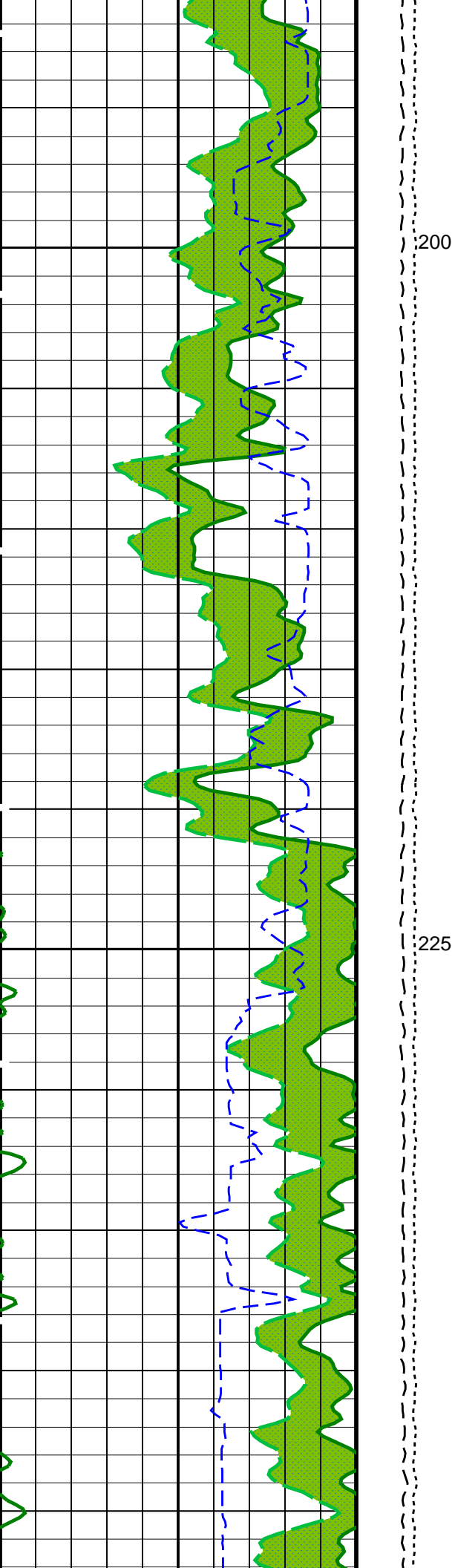
Time Mark Every 60 S

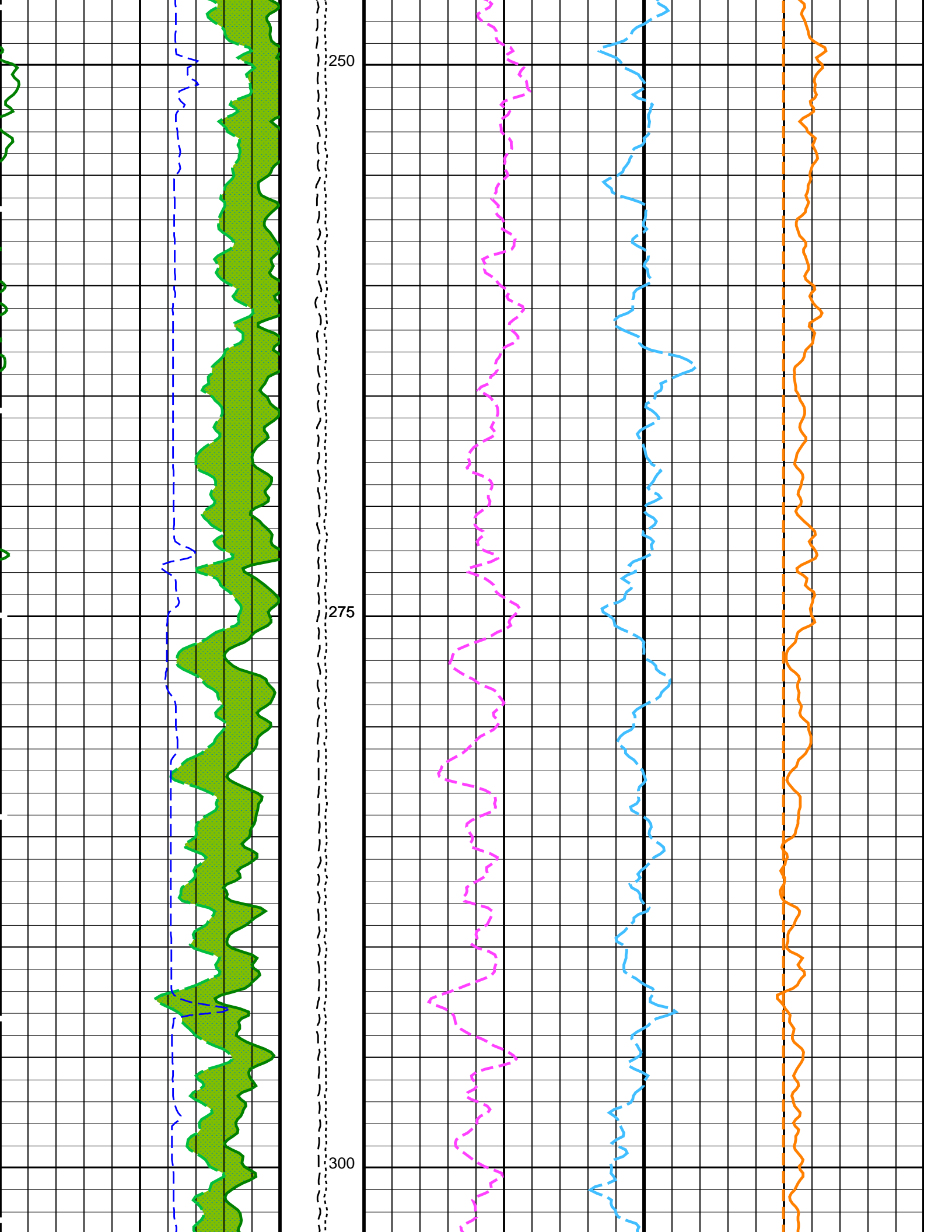


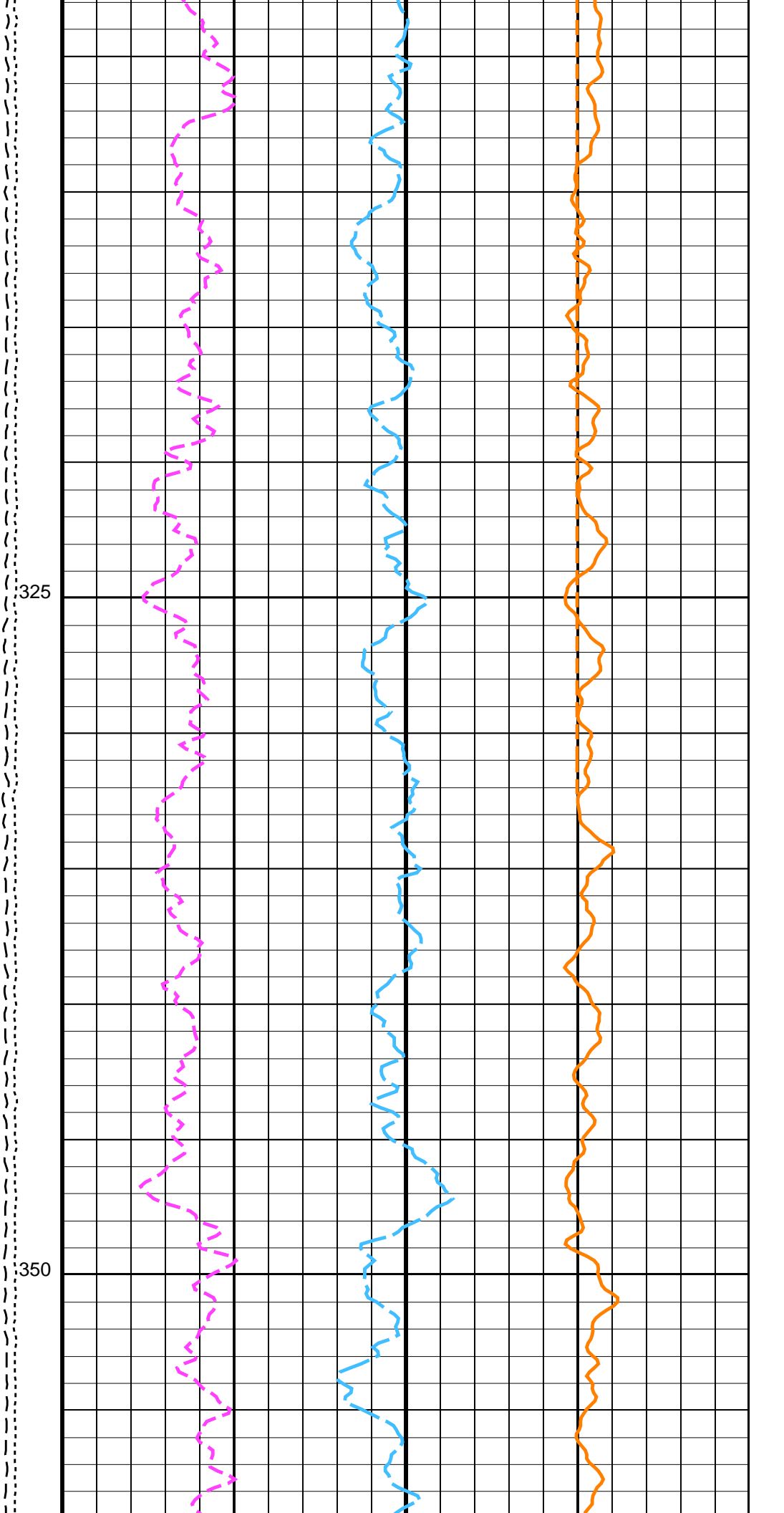
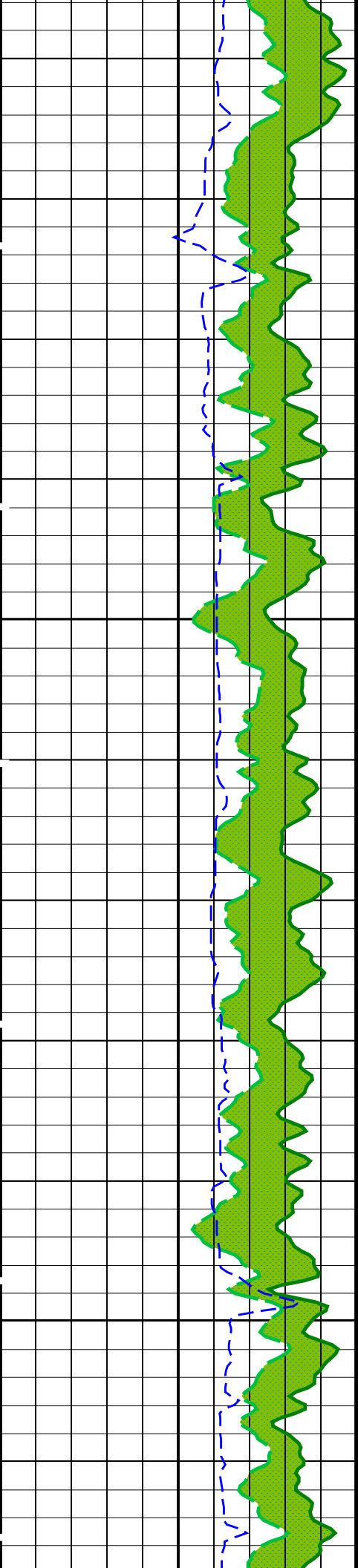


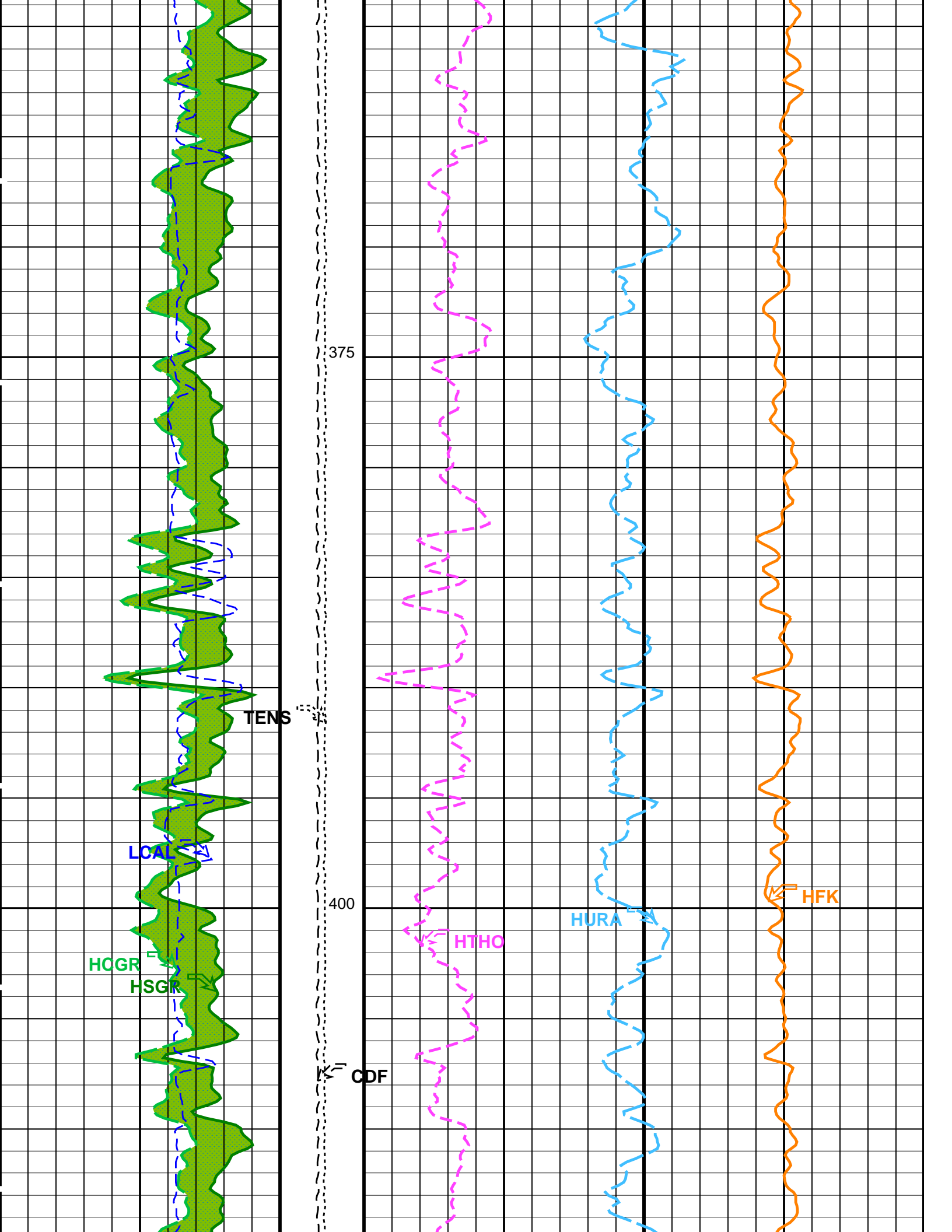


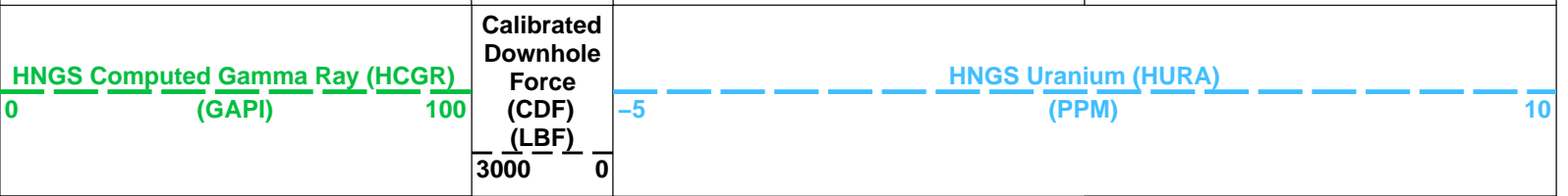
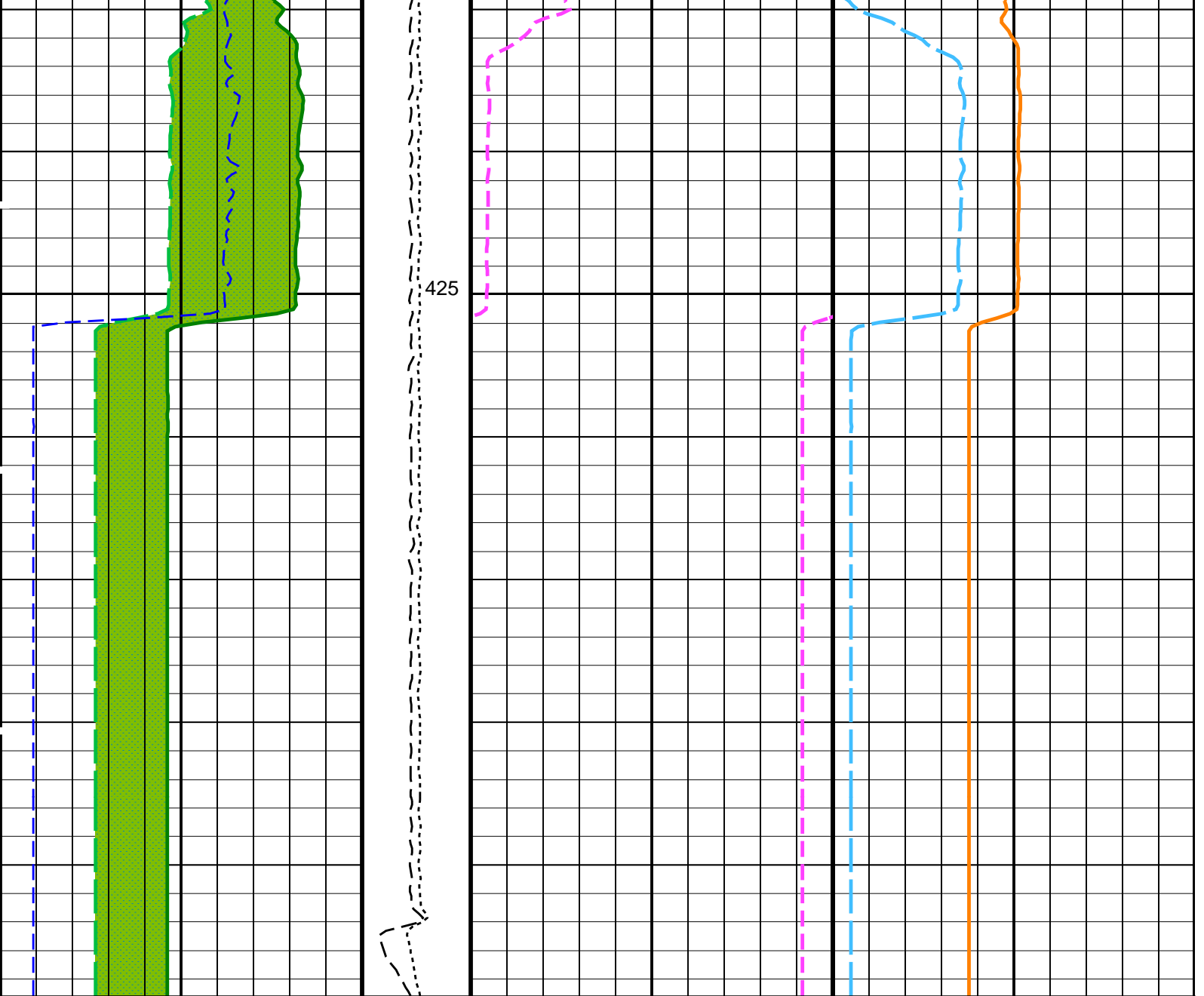












PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
HRLT-B:	High Resolution Laterolog Array - B	

BHS	Borehole Status	OPEN	
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	-0.00098051	
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	0.964598	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.972088	
EDTC-B: Enhanced DTS Cartridge			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
System and Miscellaneous			
BS	Bit Size	11.438	IN
DFD	Drilling Fluid Density	1.20	G/C3
DO	Depth Offset for Playback	-2508.5	M
PP	Playback Processing	RECOMPUTE	

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 07-Jan-2015 05:20

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
BSP	19C0-187		

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_014LUP	FN:23	PRODUCER	06-Jan-2015 10:02	2958.1 M	2488.5 M
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Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_047PUP	FN:67	PRODUCER	07-Jan-2015 05:20		
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Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_013LUP	FN:21	PRODUCER	06-Jan-2015 09:00	2958.1 M	2647.2 M
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Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_046PUP	FN:66	PRODUCER	07-Jan-2015 05:19	449.6 M	139.4 M
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OP System Version: 19C0-187

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

PIP SUMMARY

HNGS Spectroscopy Gamma Ray (HSGR)
(GAPI) 0 100

Area1
From HCGR to HSGR

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

HNGS Computed Gamma Ray (HCGR)
(GAPI) 0 100

Calibrated
Downhole
Force
(CDF)
(LBF)
3000 0

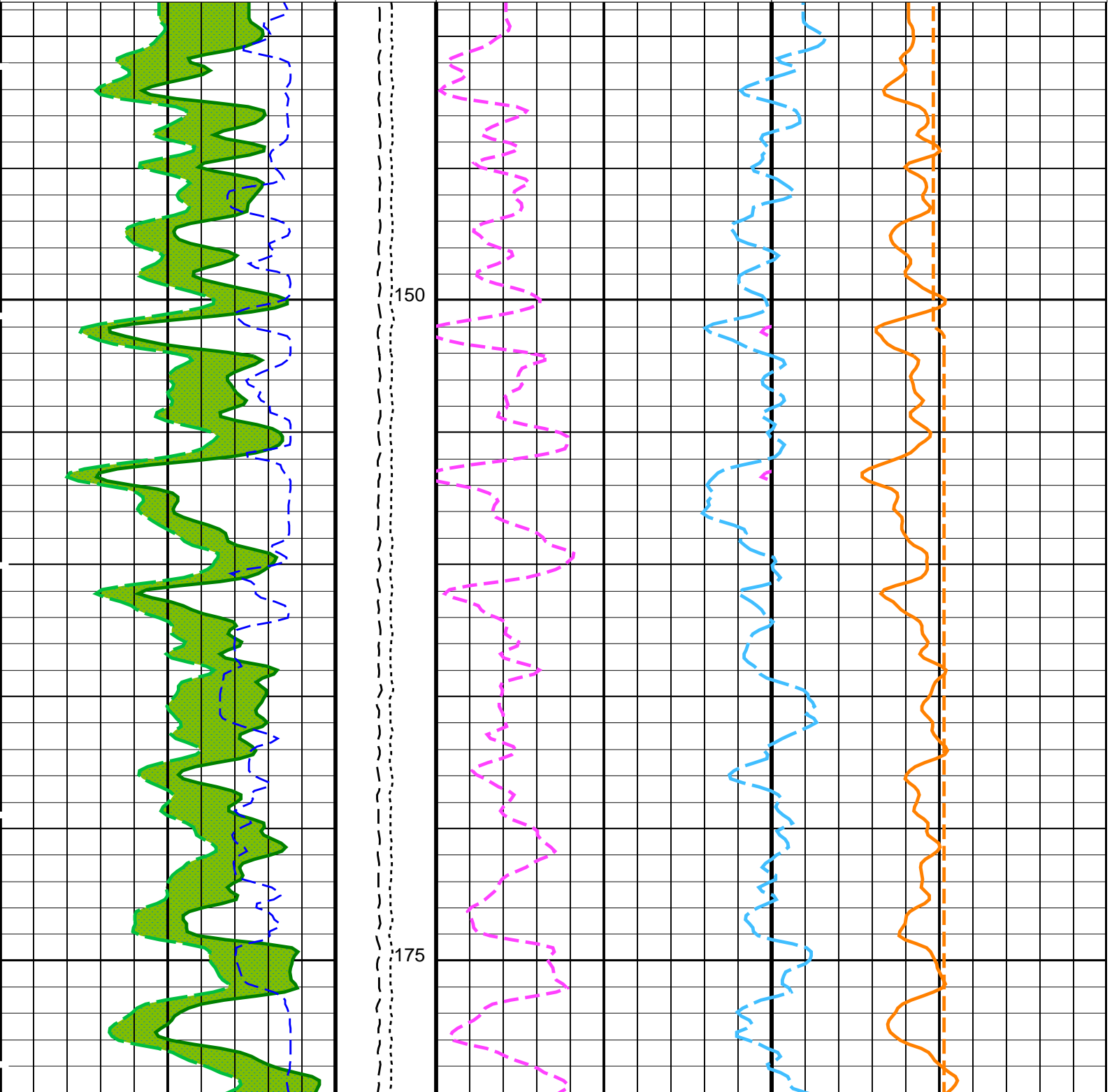
HNGS Uranium (HURA)
-5 (PPM) 10

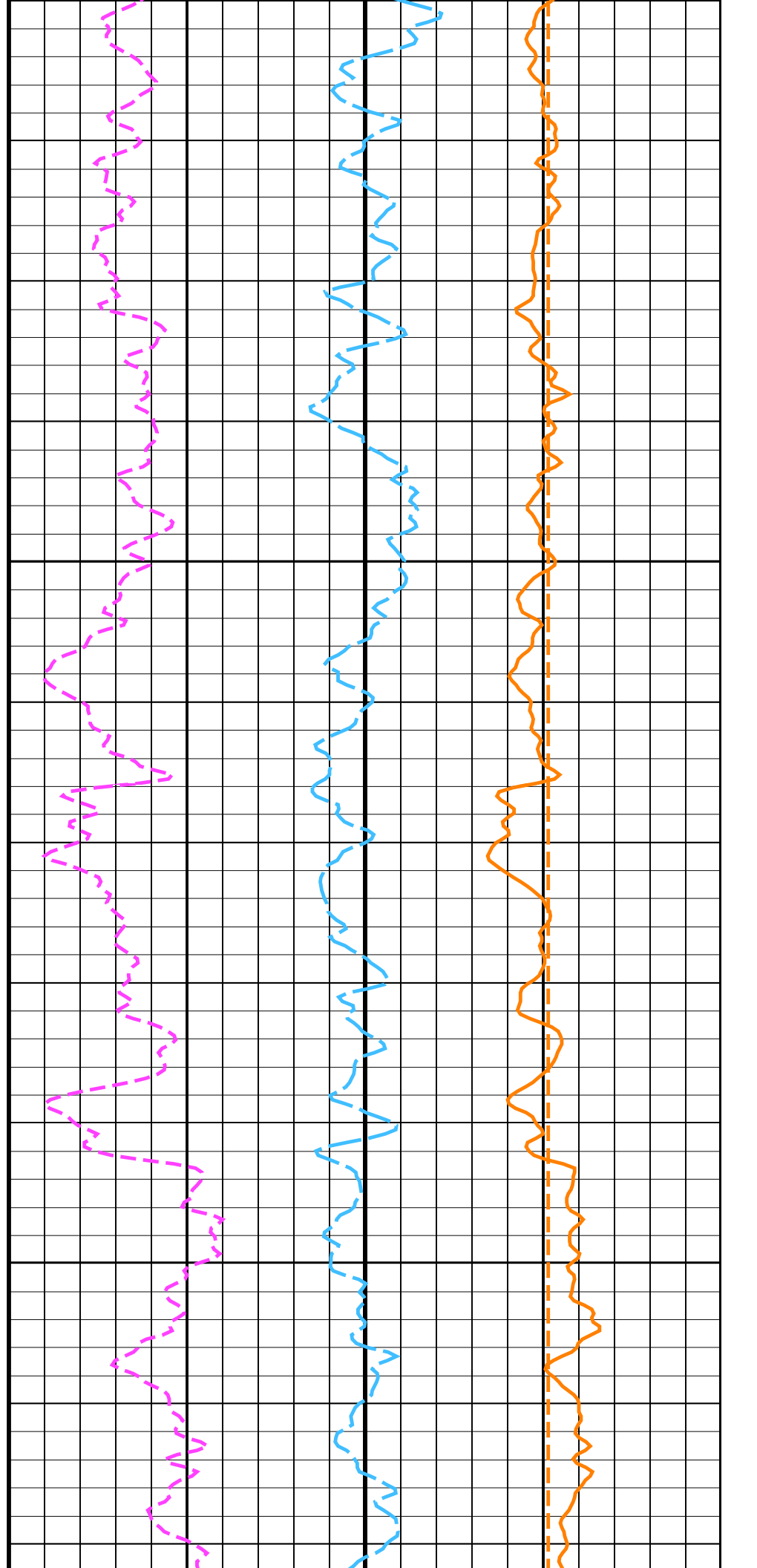
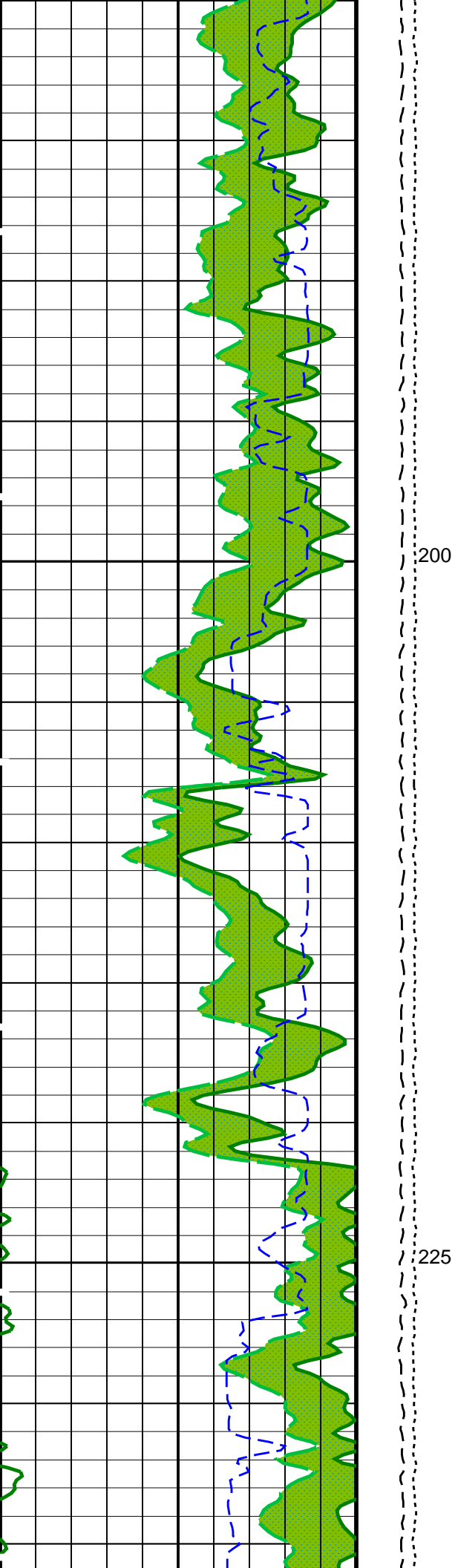
HLDS Caliper (LCAL)
(IN) 0 20

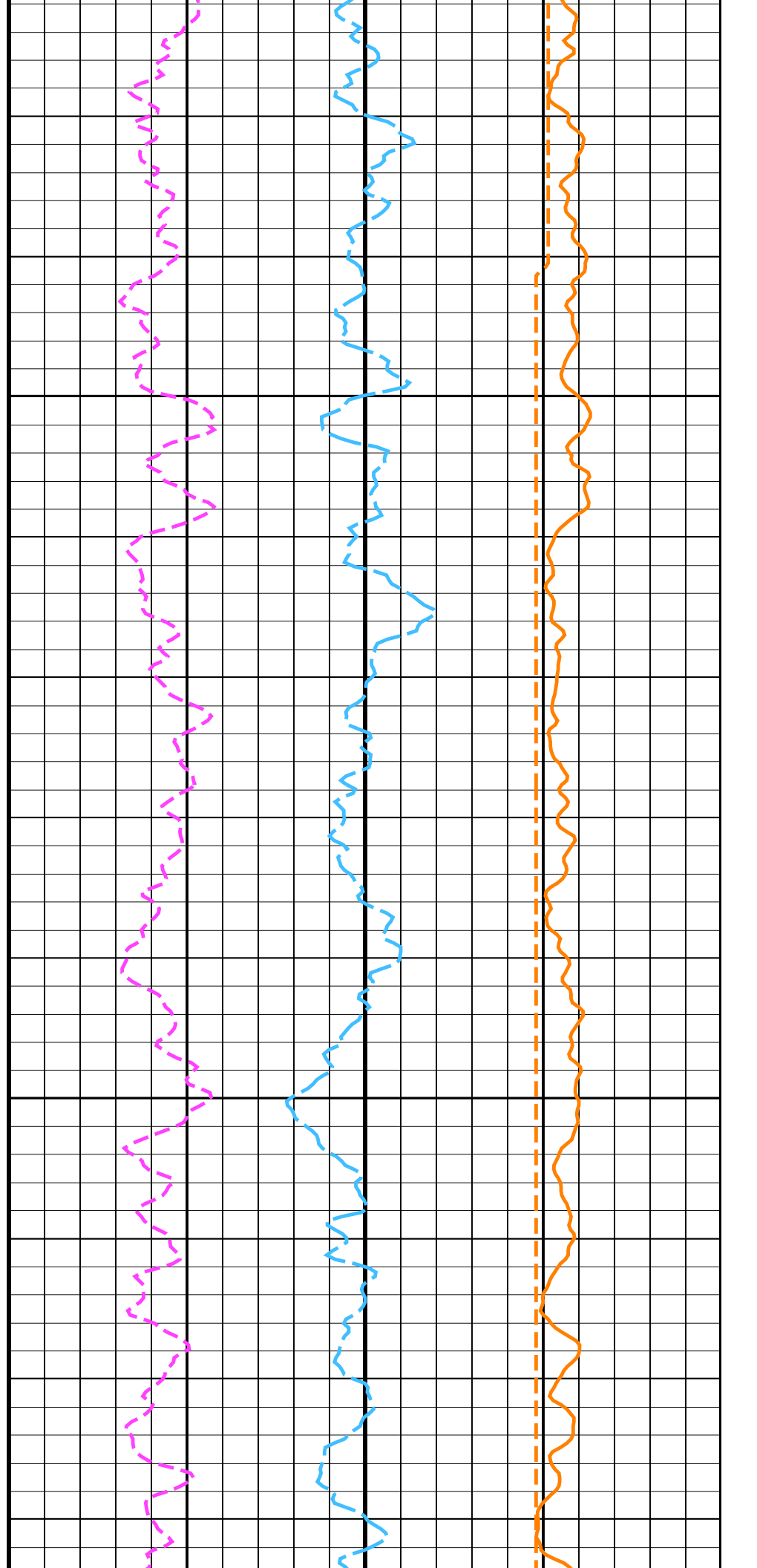
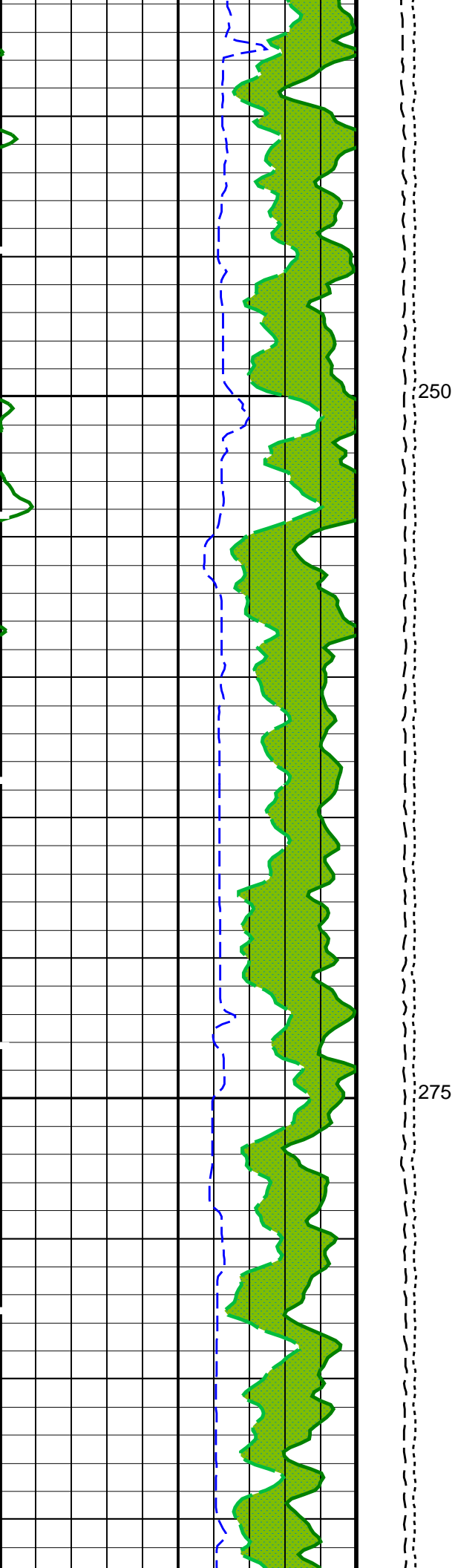
Tension
(TENS)
(LBF)
10000 0

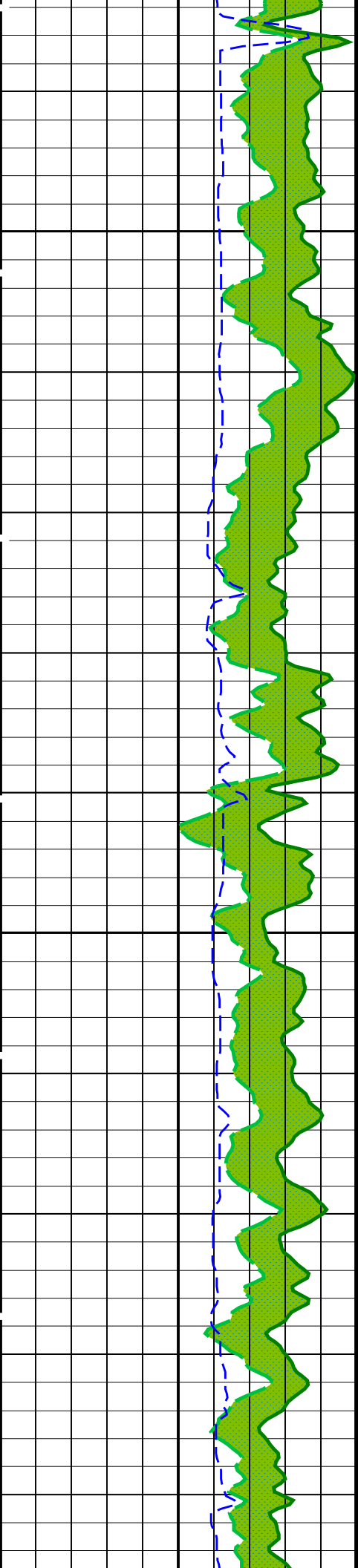
HNGS Thorium (HTHO)
5 (PPM) 25

HNGS Potassium (HFK)
-0.01 (----) 0.04

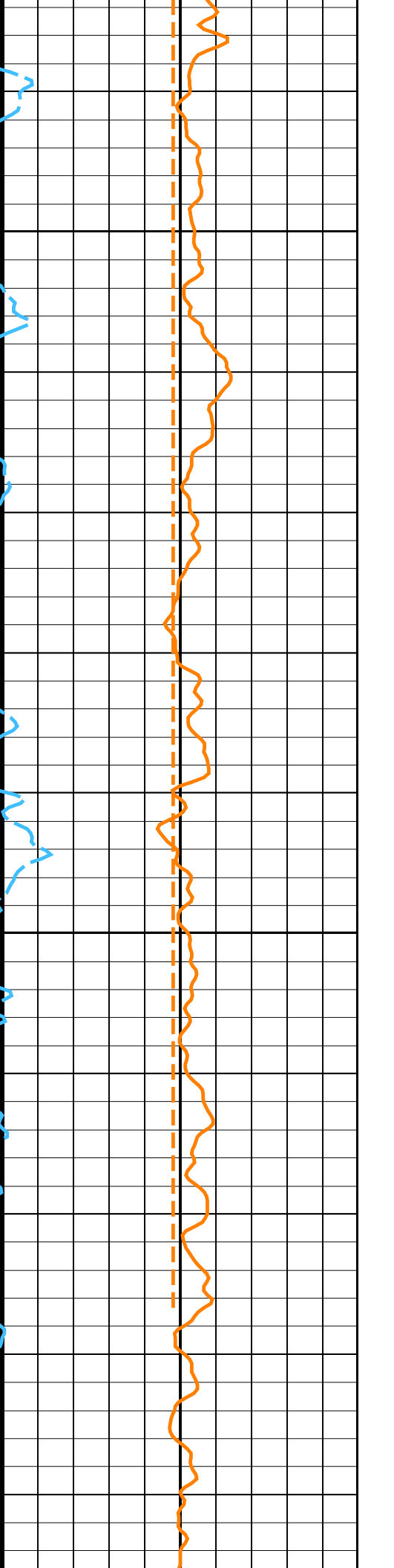
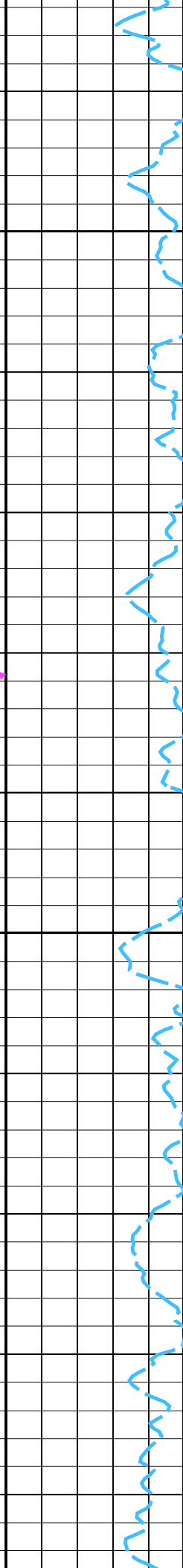
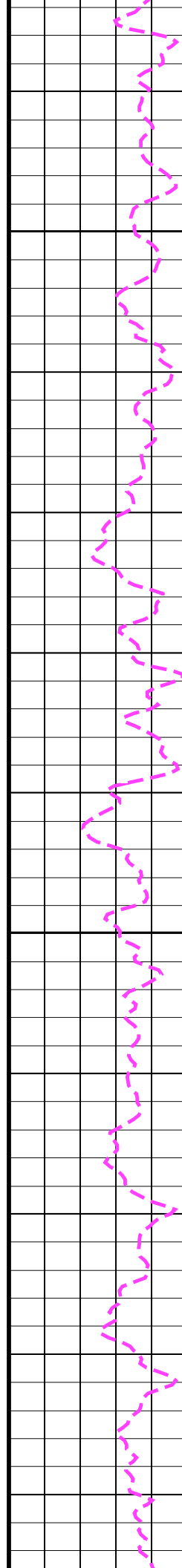


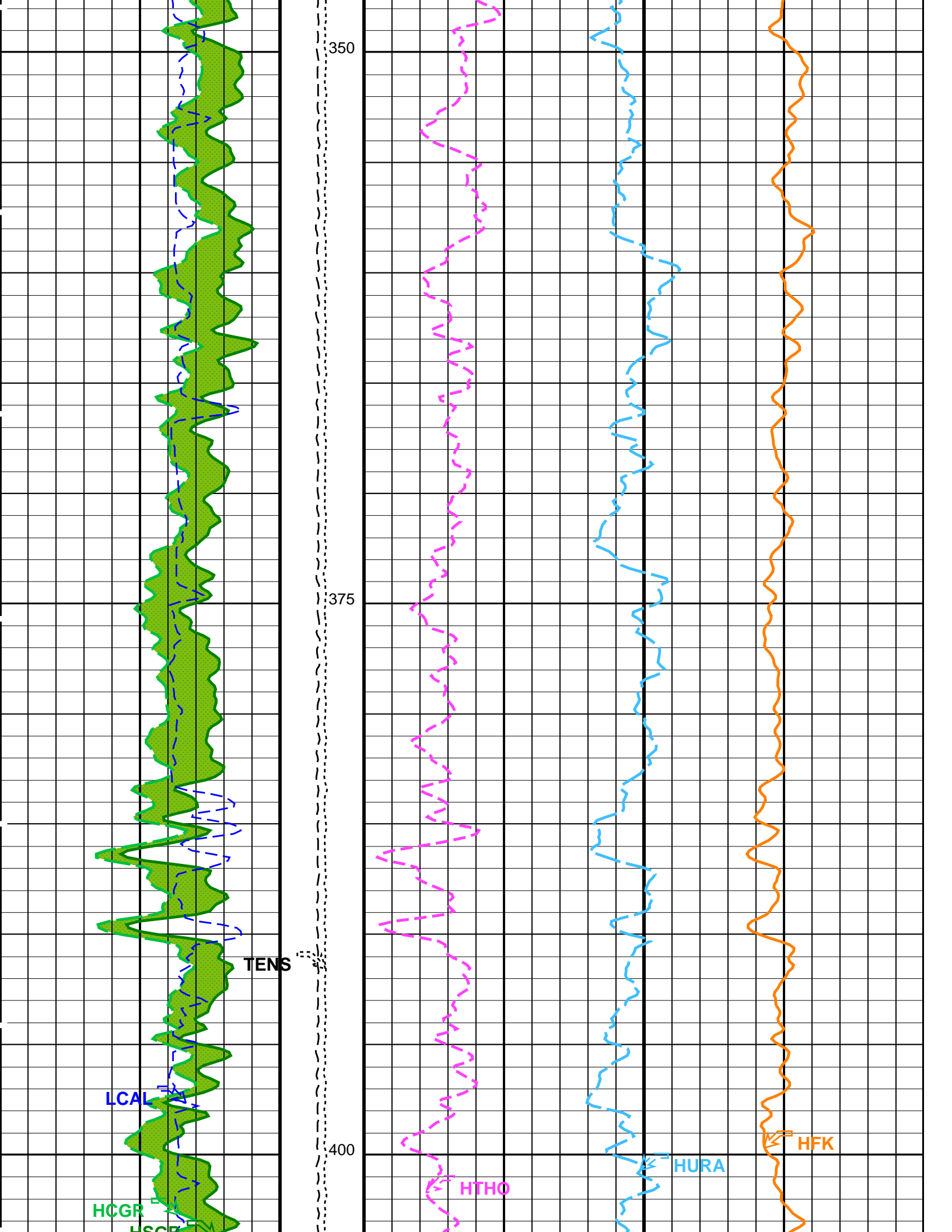


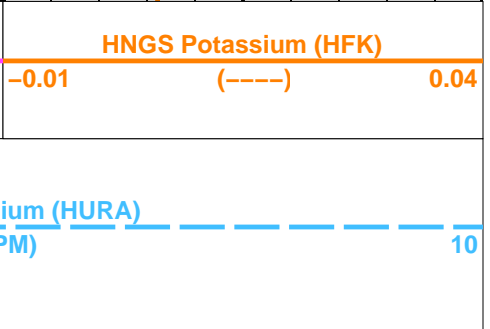
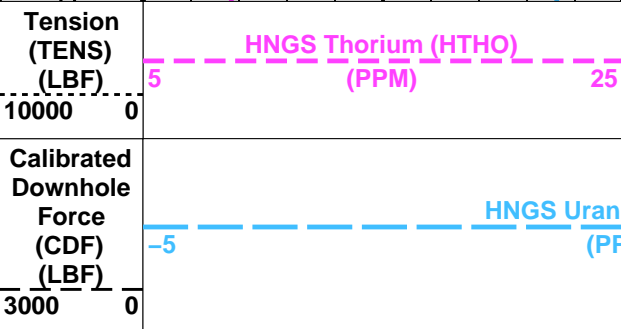
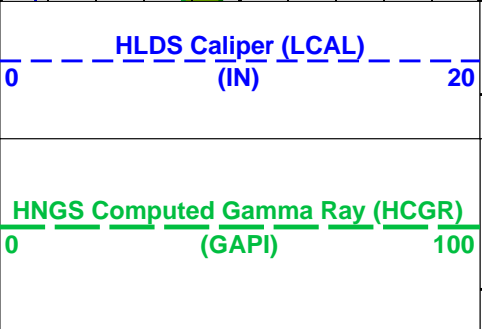
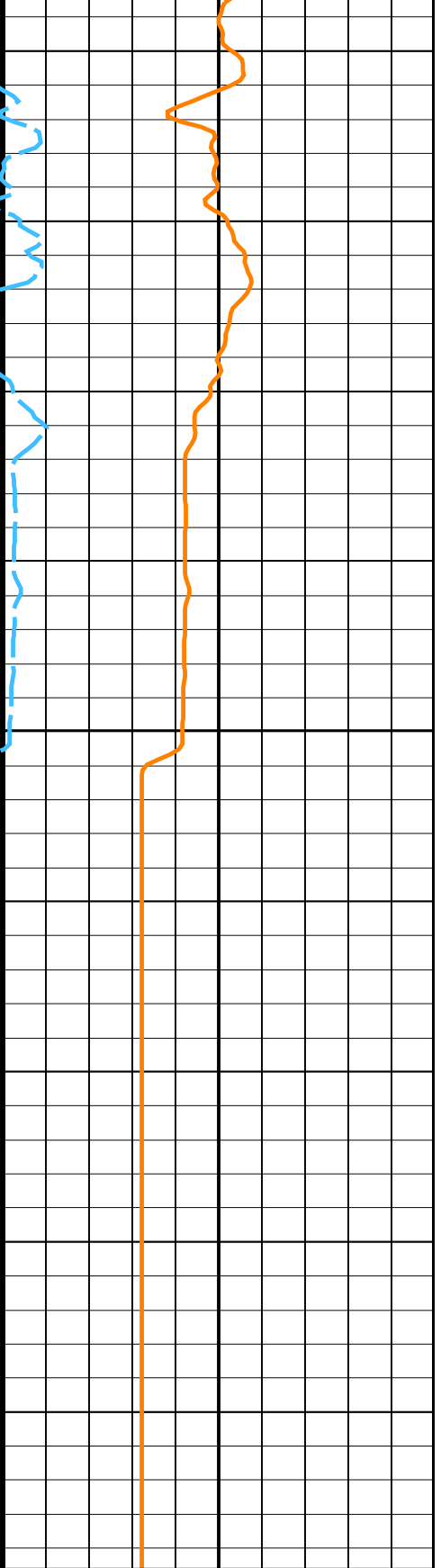
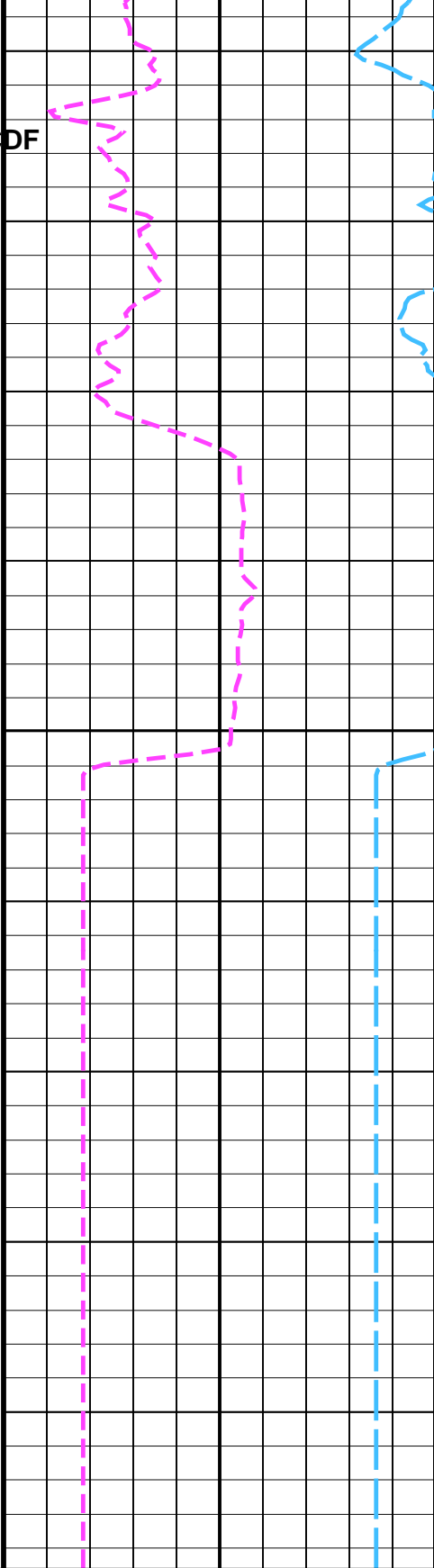
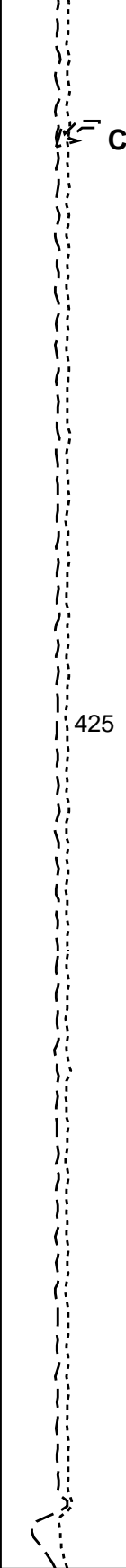
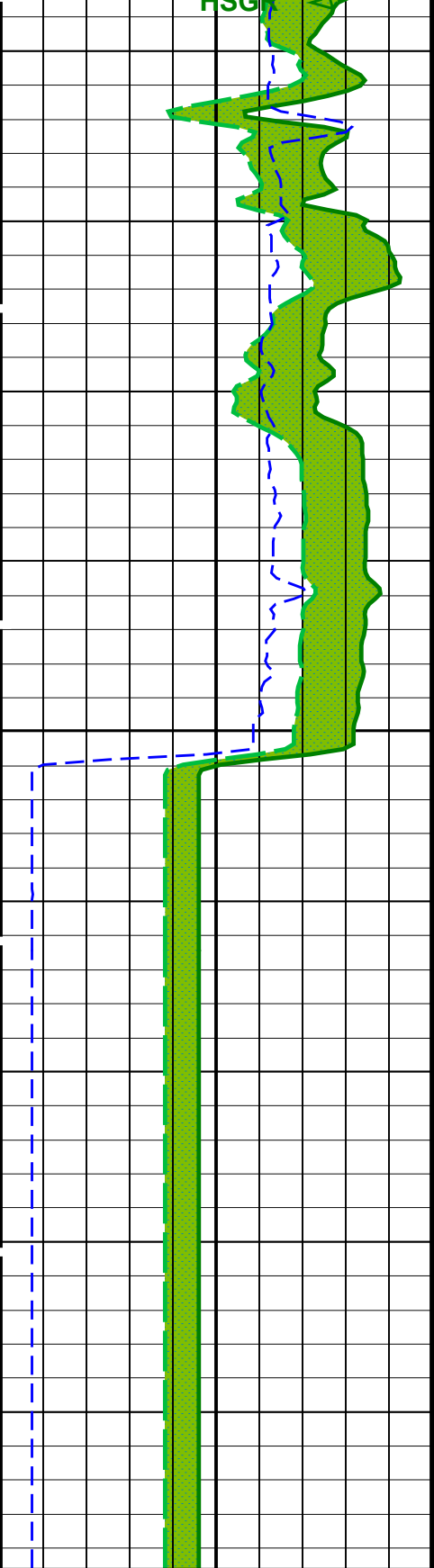




300
325







Area1

HNGS Spectroscopy Gamma Ray
(HSGR)

0 (GAPI) 100

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
HRLT-B: High Resolution Laterolog Array - B			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
APS-C: Accelerator-Porosity Tool			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
HNGS-BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.0010702	
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	0.962626	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.973172	
EDTC-B: Enhanced DTS Cartridge			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
System and Miscellaneous			
BS	Bit Size	11.438	IN
DFD	Drilling Fluid Density	1.20	G/C3
DO	Depth Offset for Playback	-2508.5	M
PP	Playback Processing	RECOMPUTE	

Format: HNGSYields

Vertical Scale: 1:200

Graphics File Created: 07-Jan-2015 05:19

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
BSP	19C0-187		

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_013LUP	FN:21	PRODUCER	06-Jan-2015 09:00	2958.1 M	2647.2 M
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Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_046PUP	FN:66	PRODUCER	07-Jan-2015 05:19		
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Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_014LUP	FN:23	PRODUCER	06-Jan-2015 10:02	2958.1 M	2488.5 M
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Output DLIS Files

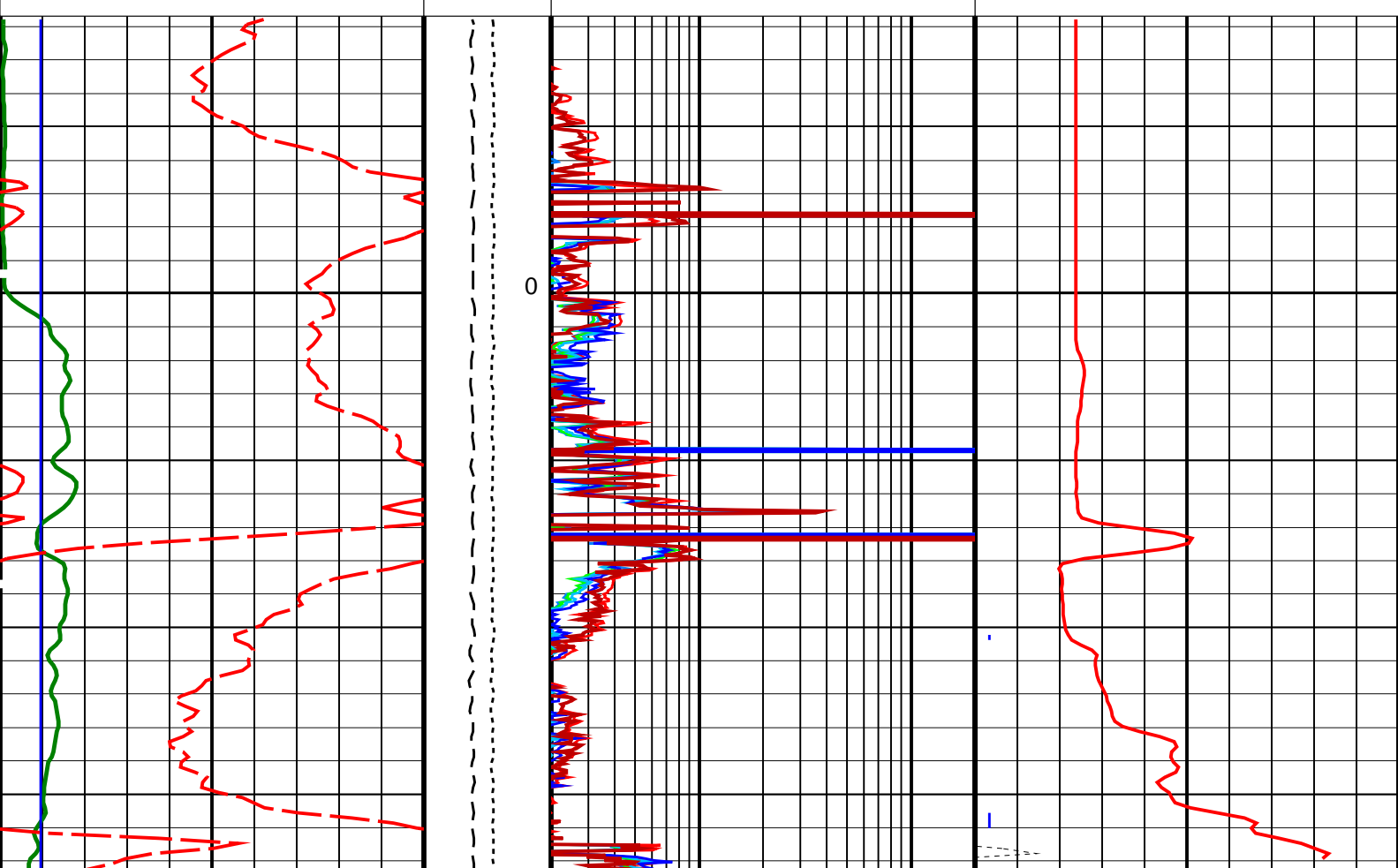
OP System Version: 19C0-187

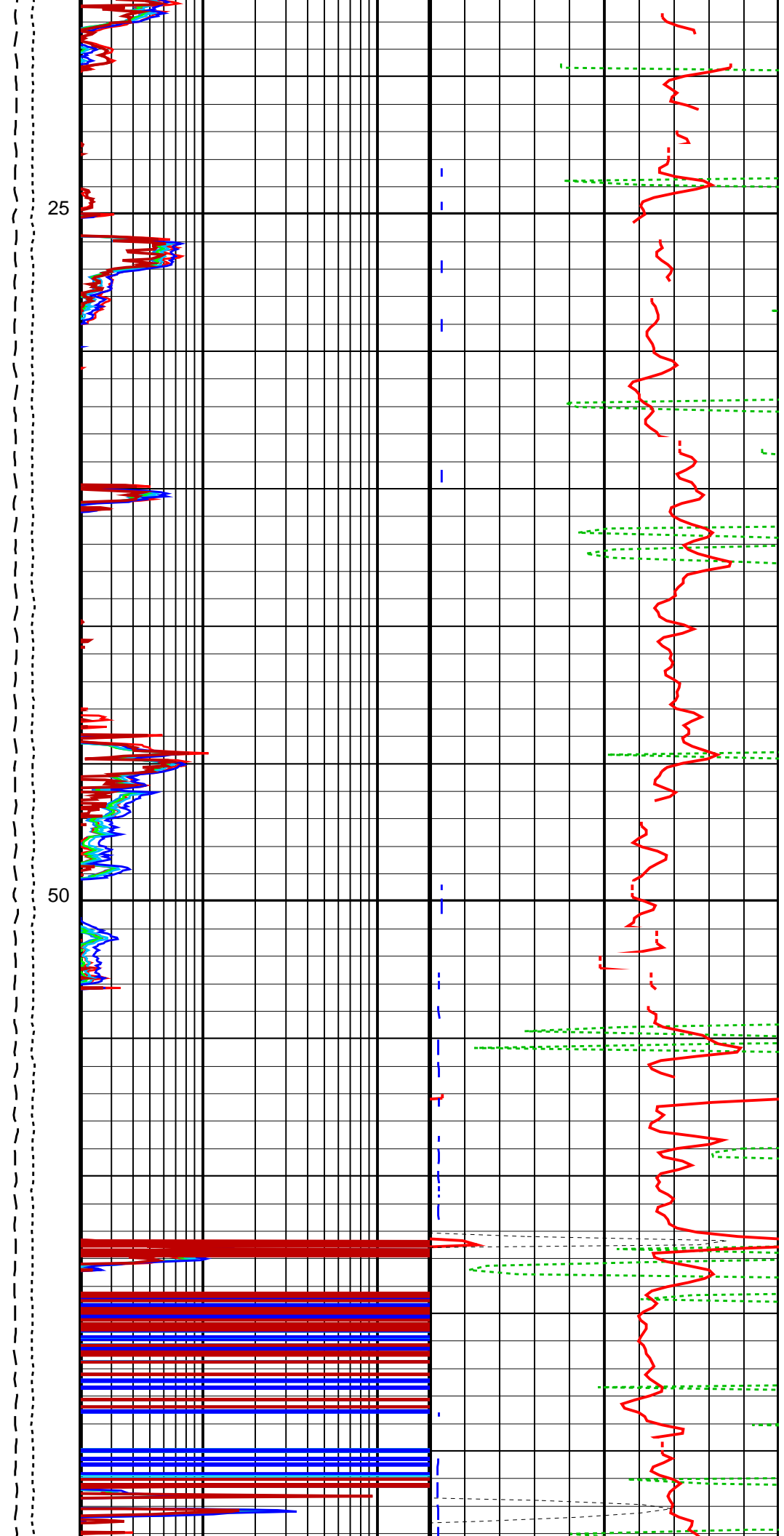
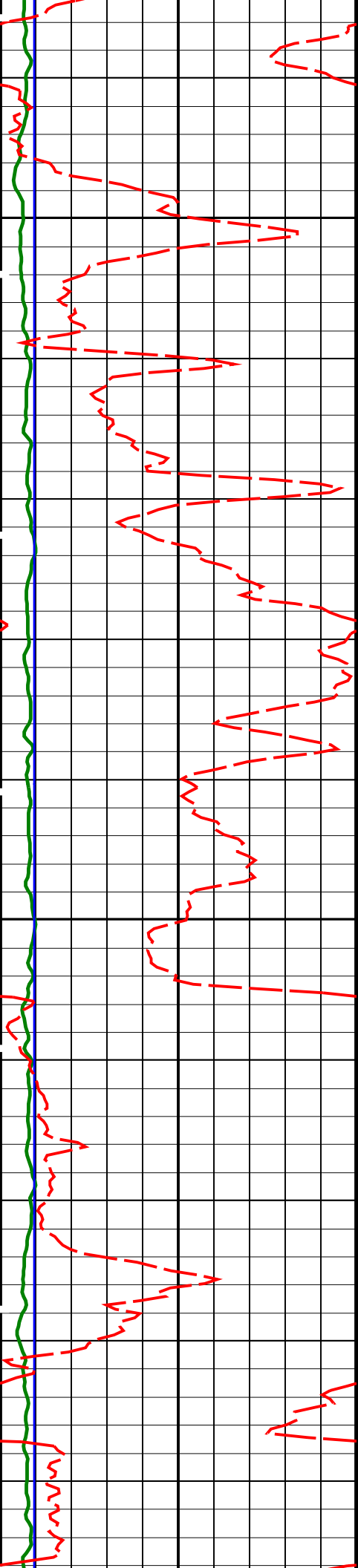
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HLDS	19C0-187	LDSC-B	19C0-187
APS-C	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	EDTC-B	SKK-5169-EDTCB
BSP	19C0-187		

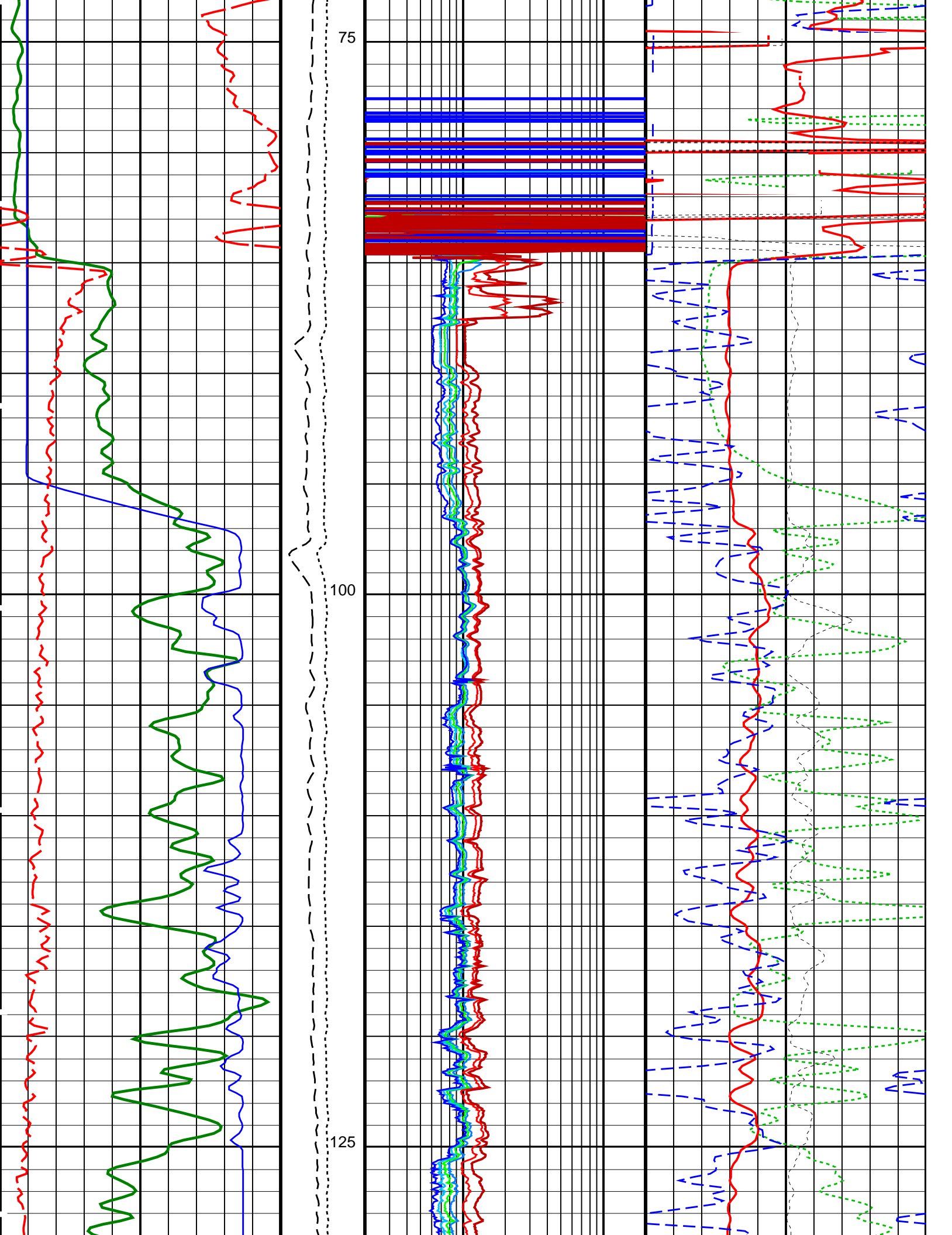
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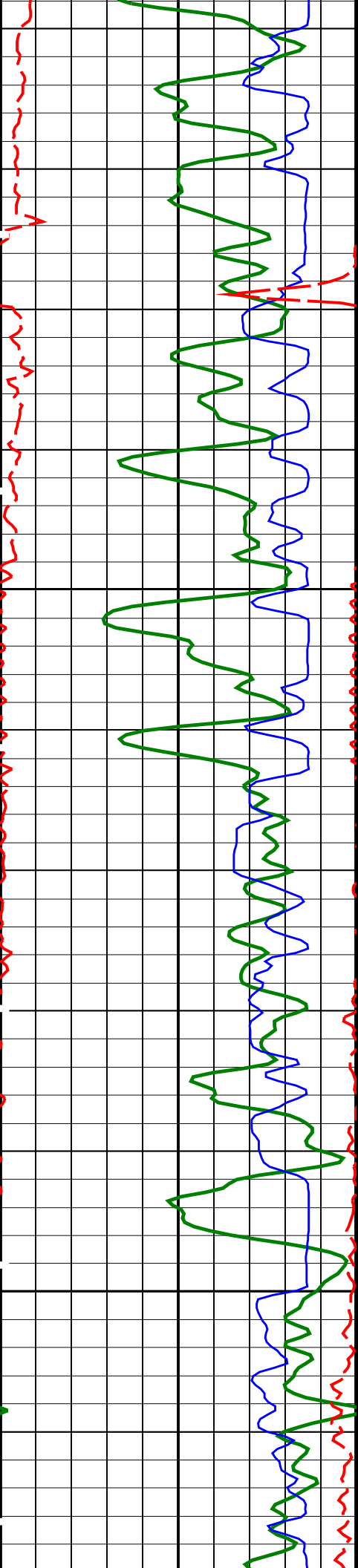
Time Mark Every 60 S

<p>2nd Pass, Sea Floor Depth Reference</p>		<p>HRLT True Resistivity (RT_HRLT) 0.2 (OHMM) 20</p>			
		<p>HRLT Resistivity 1 (RLA1) 0.2 (OHMM) 20</p>			
		<p>HRLT Resistivity 2 (RLA2) 0.2 (OHMM) 20</p>		<p>APS Thermal Porosity (TNPH_APS) 100 (PU) 0</p>	
<p>HNGS Spectroscopy Gamma Ray (HSGR) 0 (GAPI) 100</p>		<p>HRLT Resistivity 3 (RLA3) 0.2 (OHMM) 20</p>		<p>HLDS Bulk Density Correction (DRH) -0.25 (G/C3) 0.25</p>	
<p>SP (SP) -100 (MV) 0</p>		<p>HRLT Resistivity 5 (RLA5) 0.2 (OHMM) 20</p>		<p>HLDS Bulk Density (RHOM) 0 (G/C3) 4</p>	
<p>HLDS Caliper (LCAL) 0 (IN) 20</p>		<p>HRLT Resistivity 4 (RLA4) 0.2 (OHMM) 20</p>		<p>HLDS Long Spaced Photoelectric Effect (PEFL) 0 (----) 10</p>	
<p>Calibrated Downhole Force (CDF) (LBF) 3000 0</p>					
<p>Tension (TENS) (LBF) 10000 0</p>					



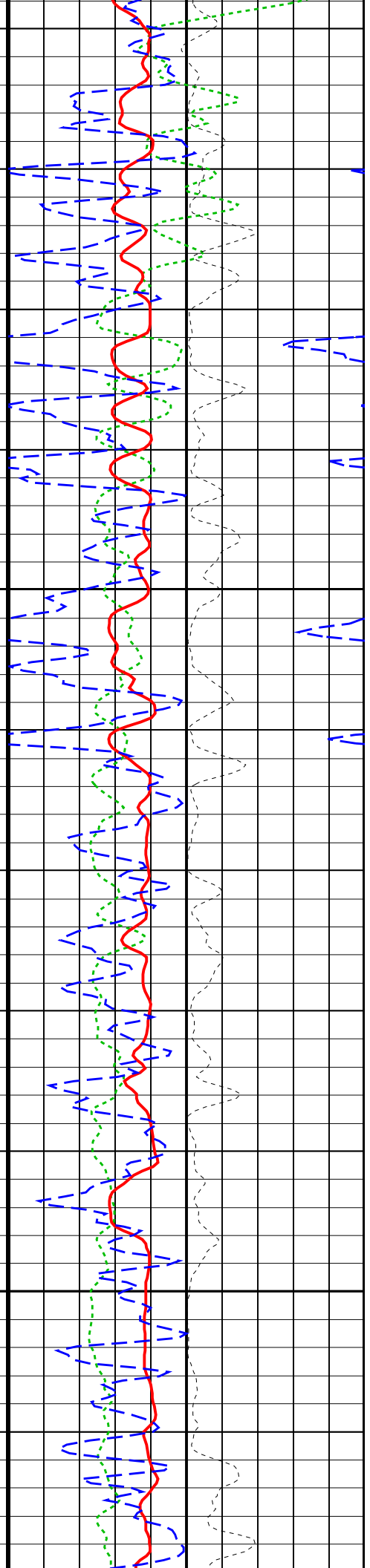
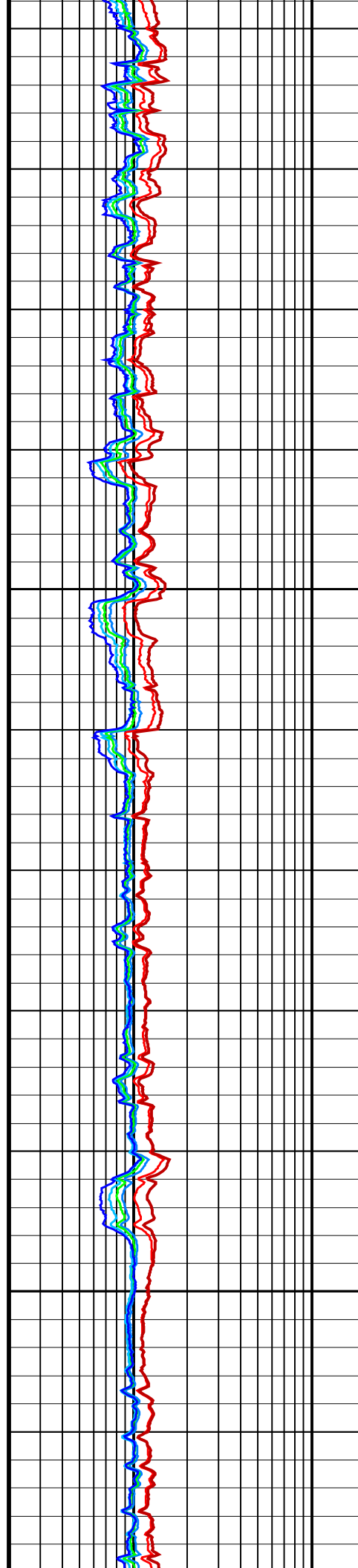


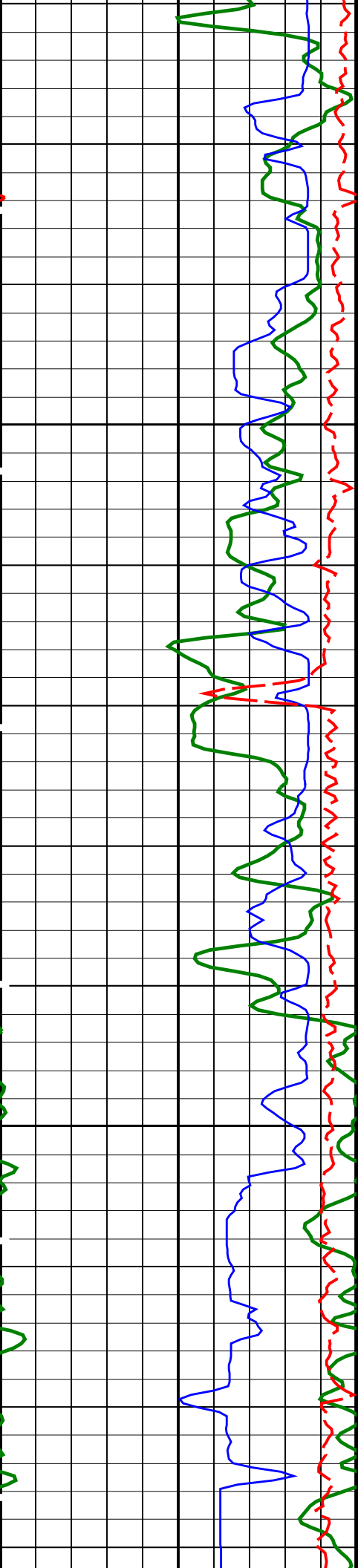




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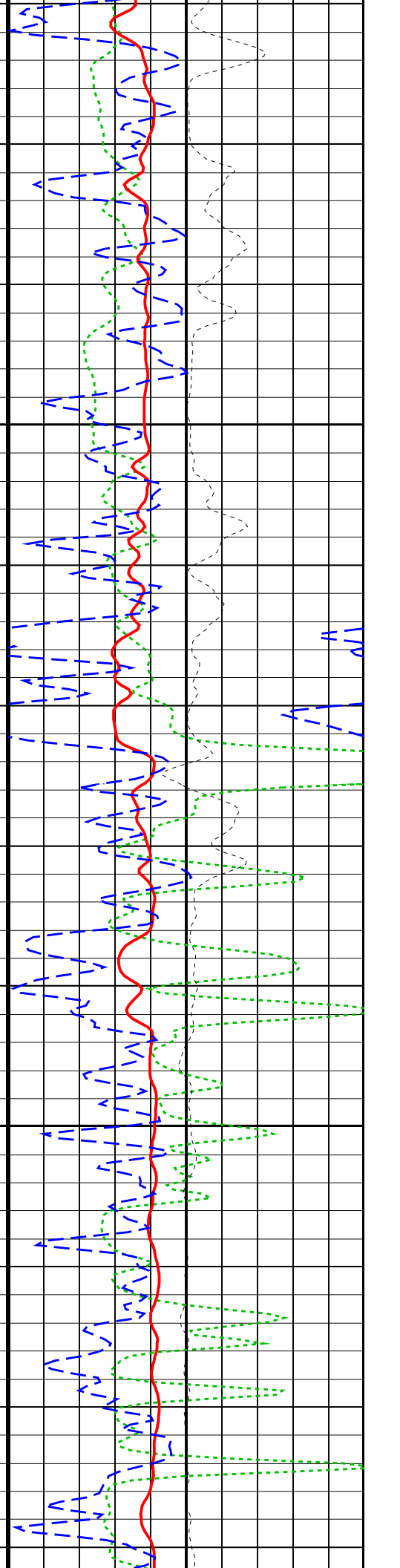
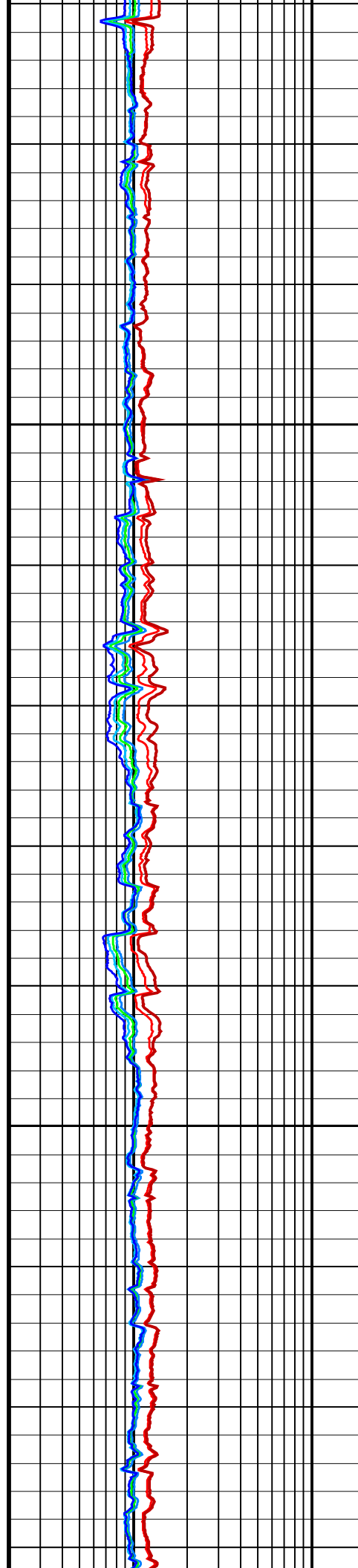
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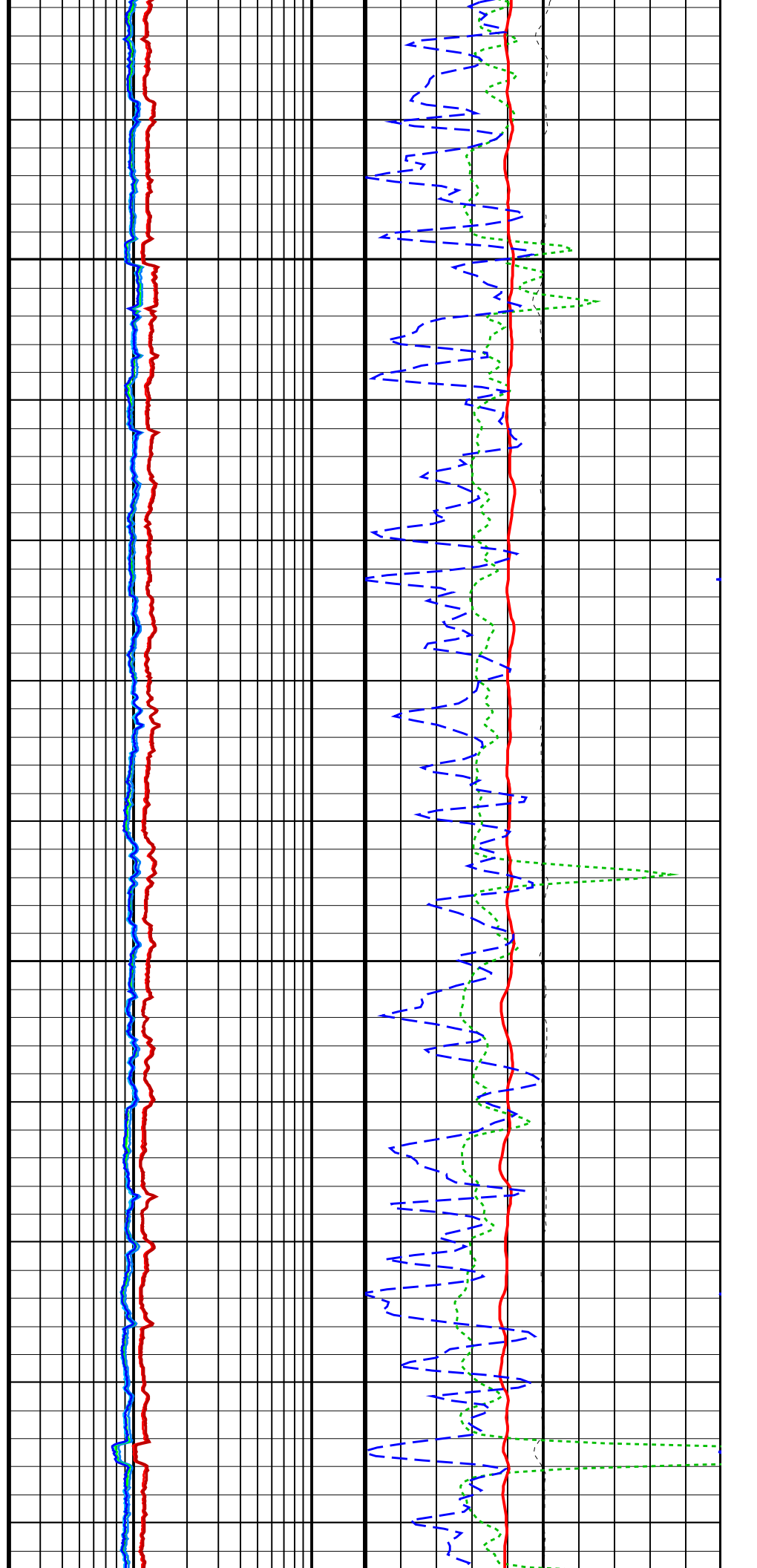
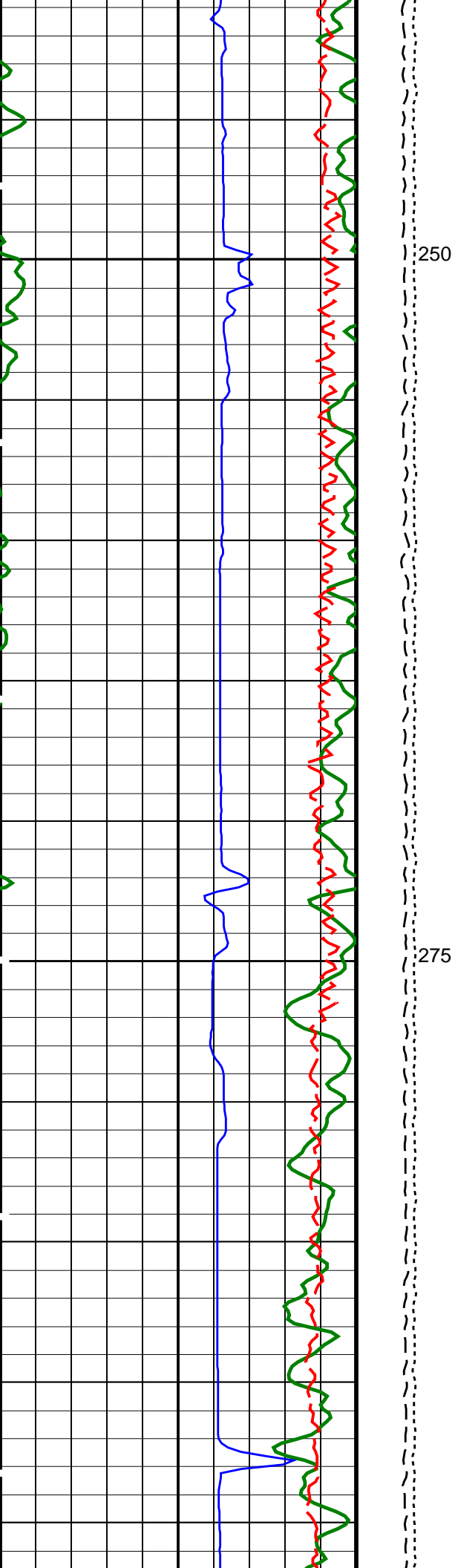


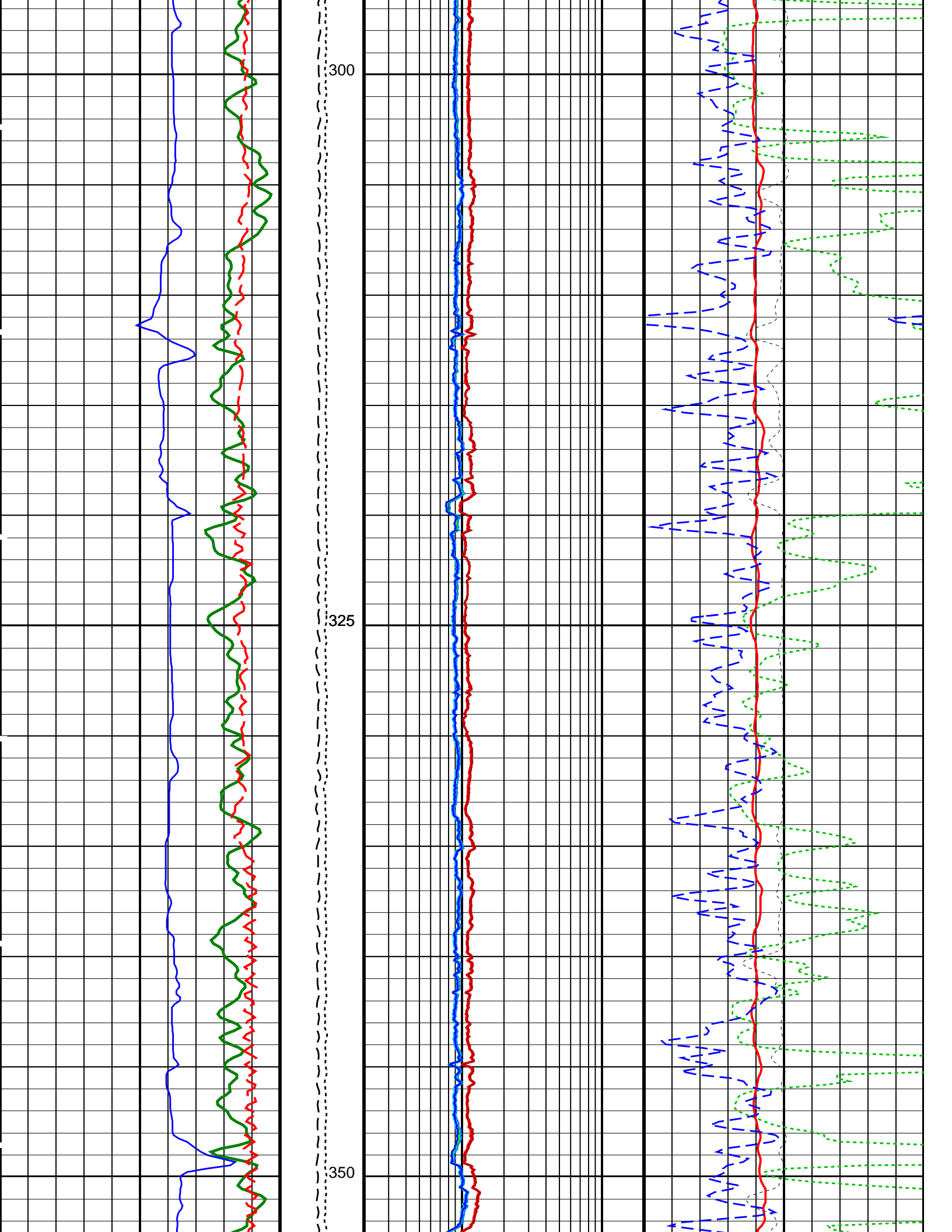


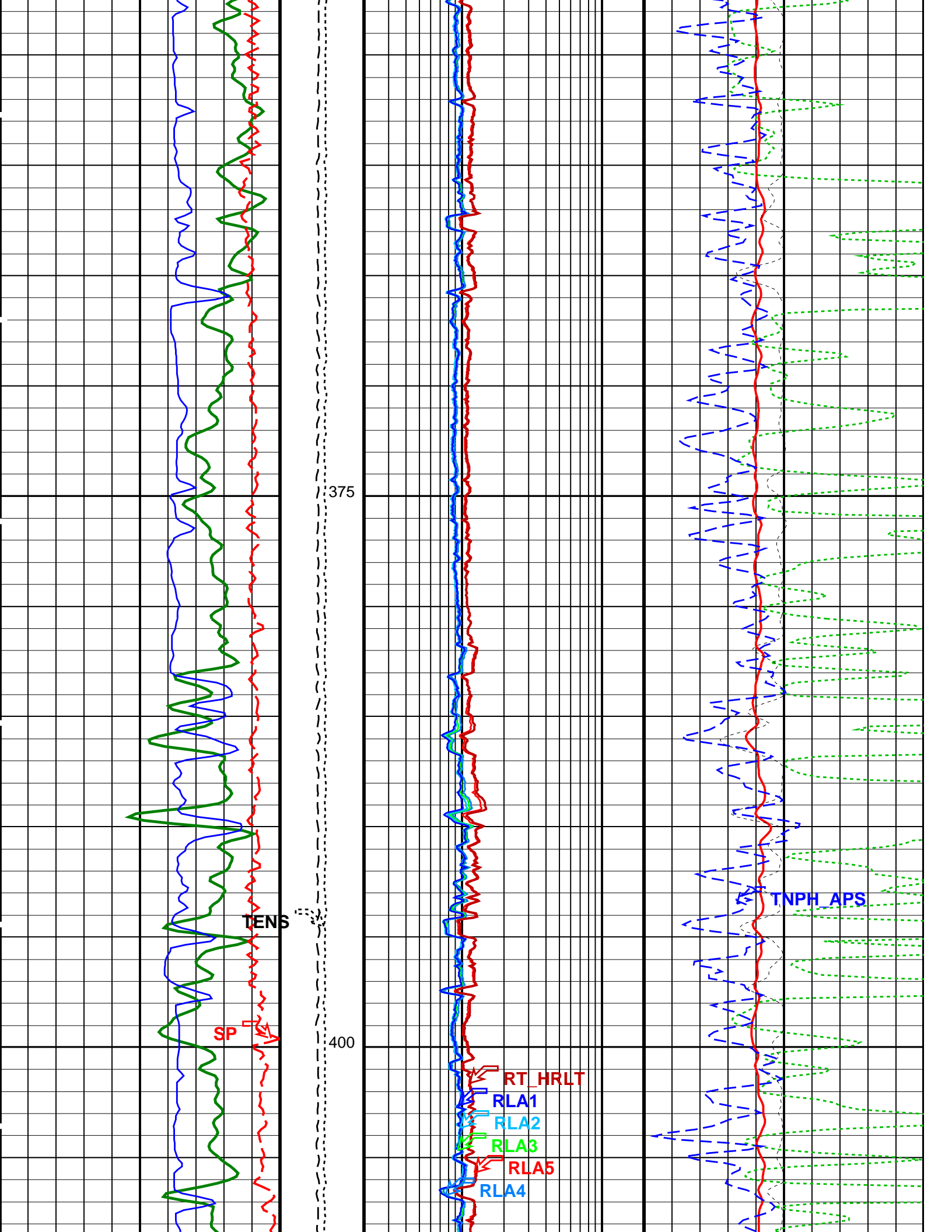
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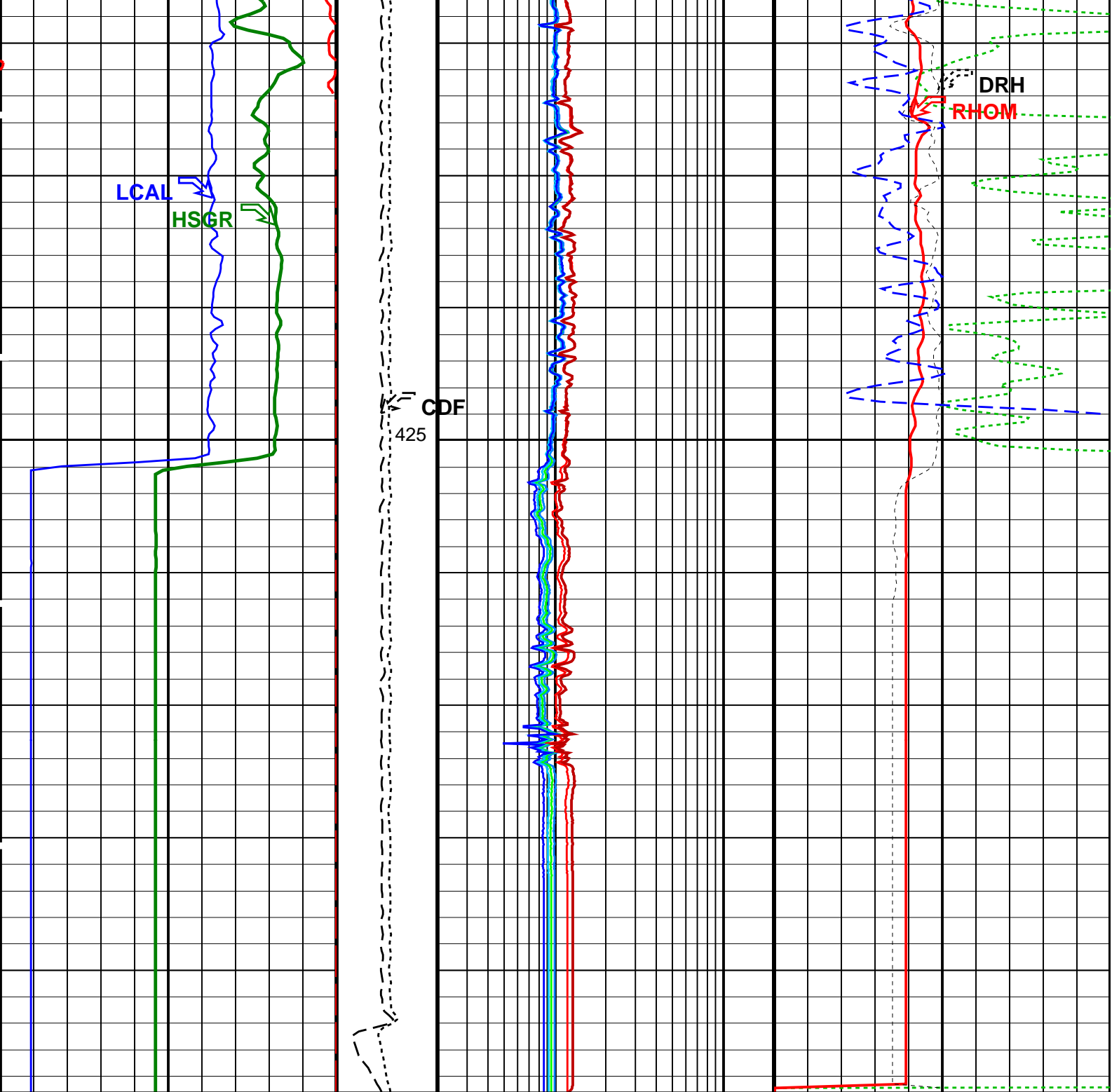
225











<p>HLDS Caliper (LCAL) (IN)</p> <p>0 20</p>	<p>Tension (TENS) (LBF)</p> <p>10000 0</p>	<p>HRLT Resistivity 4 (RLA4) (OHMM)</p> <p>0.2 20</p>	<p>HLDS Long Spaced Photoelectric Effect (PEFL) (----)</p> <p>0 10</p>
<p>SP (SP) (MV)</p> <p>-100 0</p>	<p>Calibrated Downhole Force (CDF) (LBF)</p> <p>3000 0</p>	<p>HRLT Resistivity 5 (RLA5) (OHMM)</p> <p>0.2 20</p>	<p>HLDS Bulk Density (RHOM) (G/C3)</p> <p>0 4</p>
<p>HNGS Spectroscopy Gamma Ray (HSGR) (GAPI)</p> <p>0 100</p>		<p>HRLT Resistivity 3 (RLA3) (OHMM)</p> <p>0.2 20</p>	<p>HLDS Bulk Density Correction (DRH) (G/C3)</p> <p>-0.25 0.25</p>
<p>2nd Pass Sea Floor Depth Reference</p>		<p>HRLT Resistivity 2 (RLA2) (OHMM)</p> <p>0.2 20</p>	<p>APS Thermal Porosity (TNPH_APS) (PU)</p> <p>100 0</p>

	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)	21	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	19.969	DEGC
FREQ0	HRLT Frequency Index for Mode 0	32	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ6	HRLT Frequency Index for Mode 6	116	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	BARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	OFF	
LOOPMOD1	HRLT Mode 1 Loop Mode	OFF	
LOOPMOD2	HRLT Mode 2 Loop Mode	OFF	
LOOPMOD3	HRLT Mode 3 Loop Mode	OFF	
LOOPMOD4	HRLT Mode 4 Loop Mode	OFF	
LOOPMOD5	HRLT Mode 5 Loop Mode	OFF	
LOOPMOD6	HRLT Mode 6 Loop Mode	OFF	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
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			
	APS Software Version	5	
AASD	APS Thermal and Array Detectors High Voltage Setting	1961.18	V
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2076.53	V
AHCS	APS Holesize Correction Source	BS	
AHSS	APS Holesize Correction Switch	ON	
AMTY	APS Environmental Corrections Mud Type	WaterBaseBarite	
ANSD	APS Near Detector High Voltage Setting	1731.96	V
ASOS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	ON	
BHFL_APS	APS TNPH Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
BSCO_APS	APS TNPH Borehole Salinity Correction Option	YES	

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	YES	
MCOR_APS	APS TNPH Mud Correction	BARI	
MWCO_APS	APS TNPH Mud Weight Correction Option	YES	
NARC	APS Near/Array Calibration Ratio	1.06686	
NFRC	APS Near/Far Calibration Ratio	0.887429	
PTCO_APS	APS TNPH Pressure/Temperature Correction Option	YES	
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)	21	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	-0.00098051	
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	0.964598	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.972088	
EDTC-B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	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	NATU	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U-ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U-TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
BSP: Bridle SP			
SPNV	SP Next Value	0	MV
System and Miscellaneous			
ALTDPCAN	Name of alternate depth channel	SpeedCorrectedDepth	

BS	Bit Size	11.438	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	5.500	IN
CWEI	Casing Weight	168.00	LB/F
DFD	Drilling Fluid Density	1.20	G/C3
DO	Depth Offset for Playback	-2508.5	M
FLEV	Fluid Level	-50000.00	M
MST	Mud Sample Temperature	-50000.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	3190	M
TDD	Total Depth - Driller	3190.00	M
TDL	Total Depth - Logger	3189.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripleCombo Vertical Scale: 1:200 Graphics File Created: 07-Jan-2015 05:20

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
BSP	19C0-187		

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_014LUP	FN:23	PRODUCER	06-Jan-2015 10:02	2958.1 M	2488.5 M
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Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_047PUP	FN:67	PRODUCER	07-Jan-2015 05:20		
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Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_013LUP	FN:21	PRODUCER	06-Jan-2015 09:00	2958.1 M	2647.2 M
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Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_046PUP	FN:66	PRODUCER	07-Jan-2015 05:19	449.6 M	138.7 M
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OP System Version: 19C0-187

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

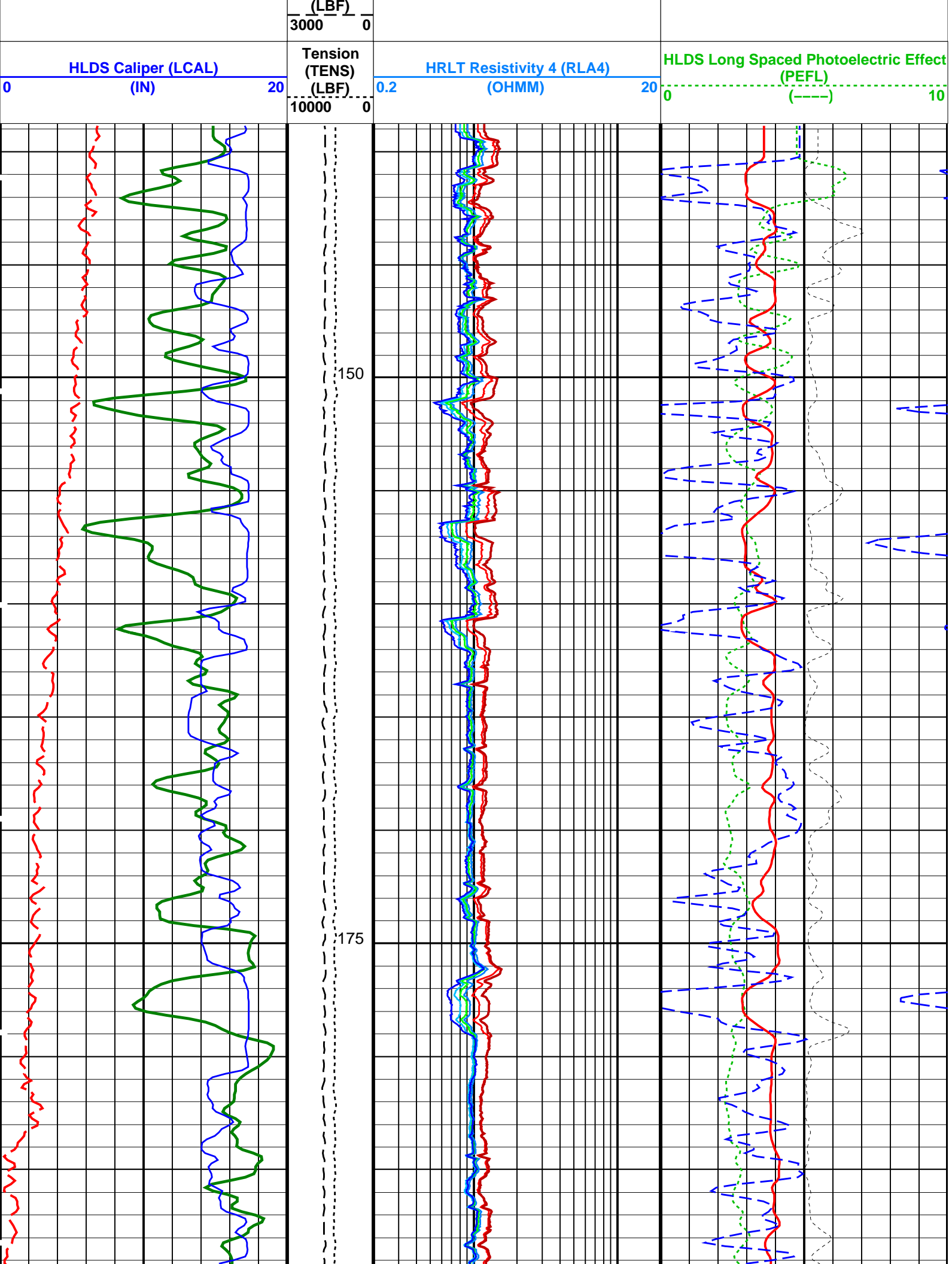
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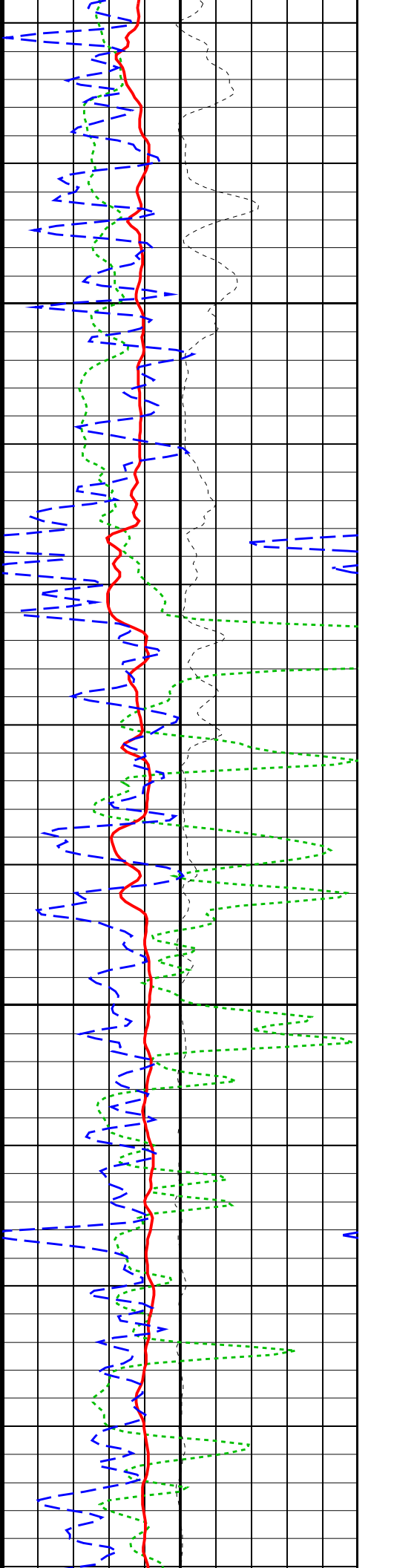
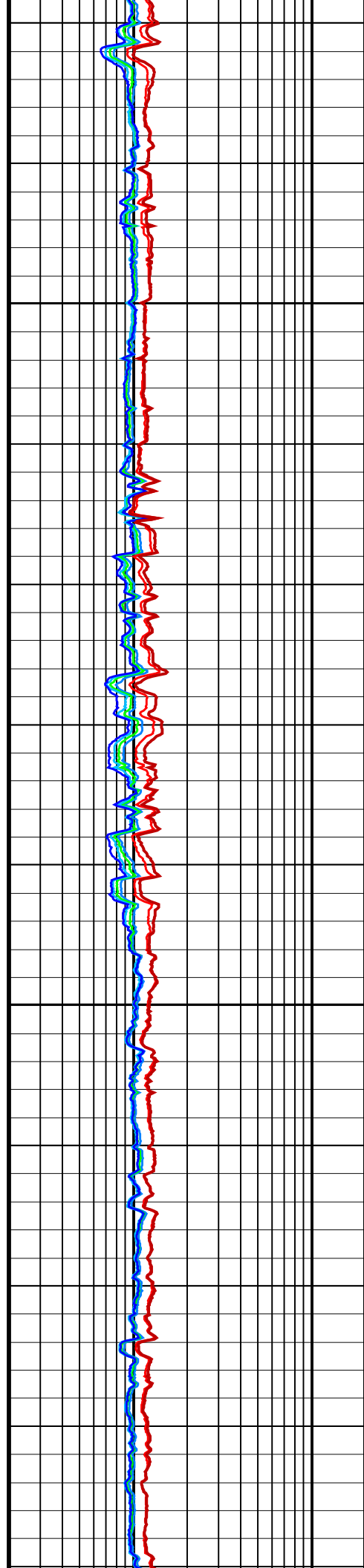
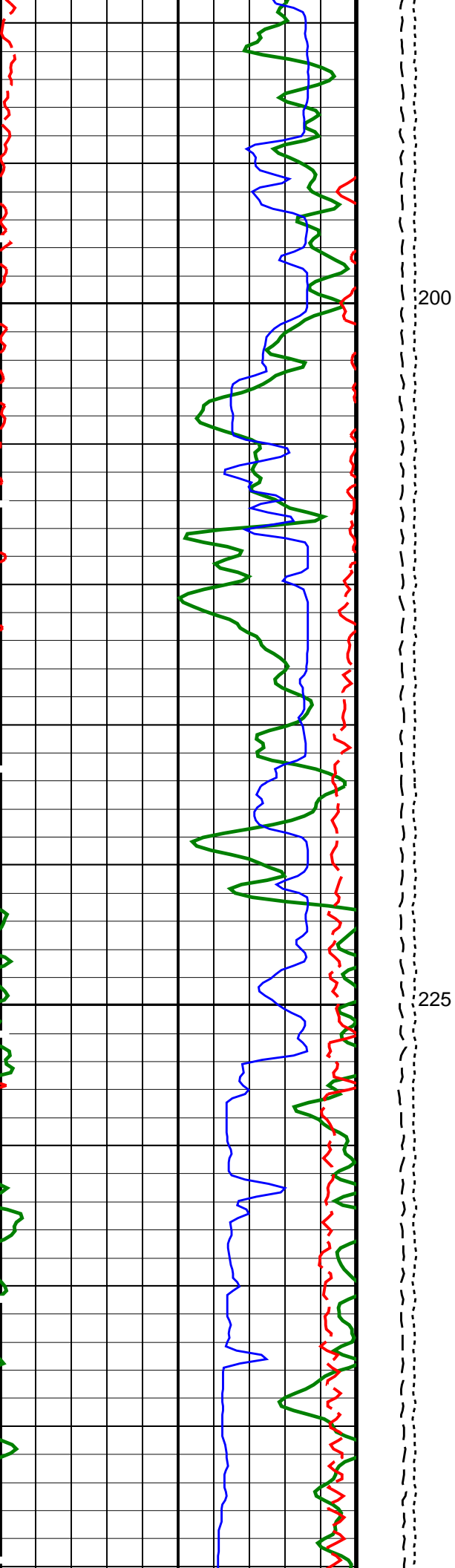
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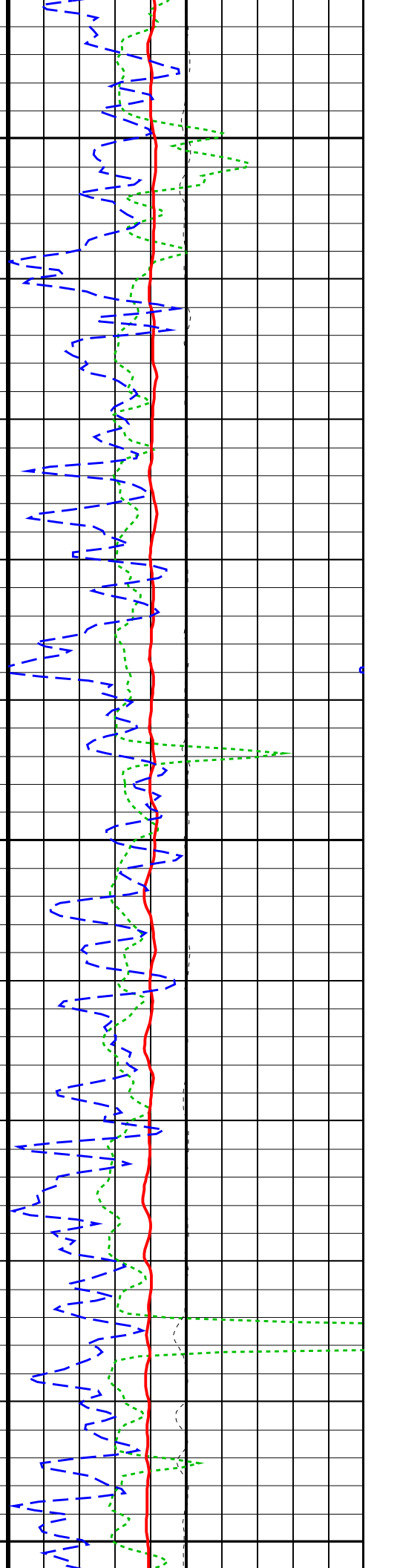
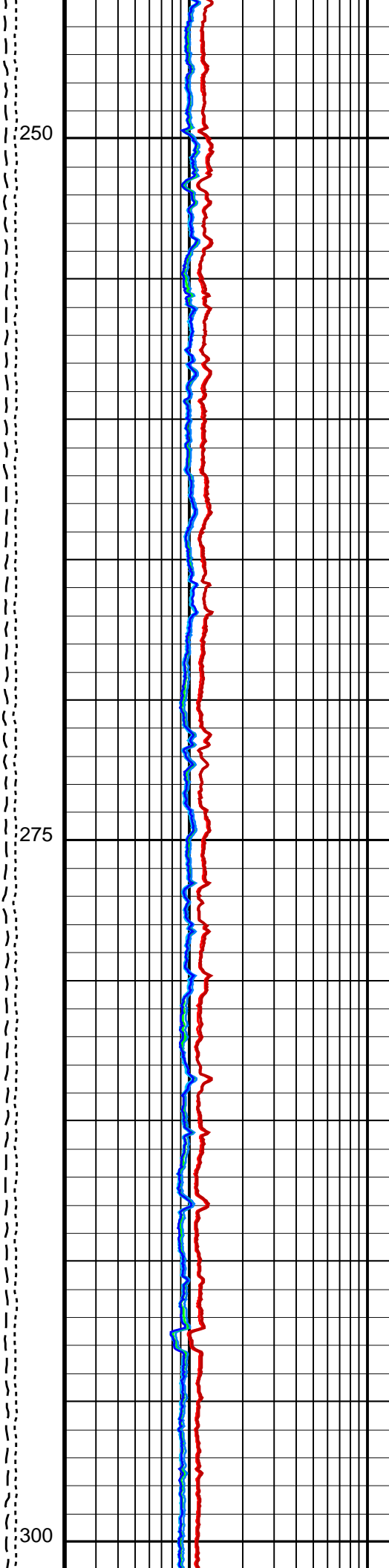
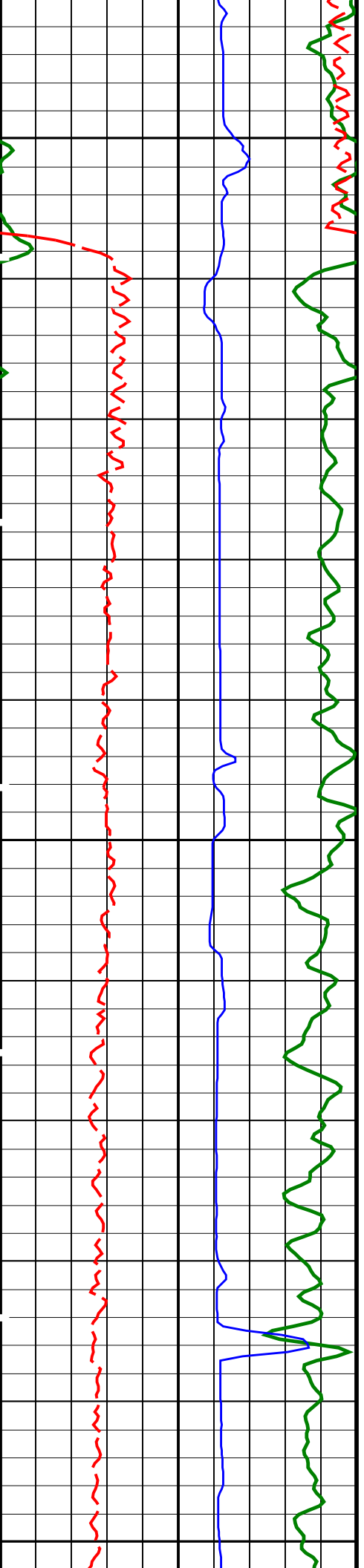
1st Pass, Sea Floor Depth Reference	HRLT True Resistivity (RT_HRLT)		
	0.2	(OHMM)	20
	HRLT Resistivity 1 (RLA1)		
	0.2	(OHMM)	20
	HRLT Resistivity 2 (RLA2)		
	0.2	(OHMM)	20
		APS Thermal Porosity (TNPH_APS)	
	100	(PU)	0
HNGS Spectroscopy Gamma Ray (HSGR)		HRLT Resistivity 3 (RLA3)	
0	(GAPI)	100	
		0.2	(OHMM)
		20	
		HLDS Bulk Density Correction (DRH)	
		-0.25	(G/C3)
		0.25	
		HRLT Resistivity 5 (RLA5)	
		0.2	(OHMM)
		20	
		HLDS Bulk Density (RHOM)	
		0	(G/C3)
		4	

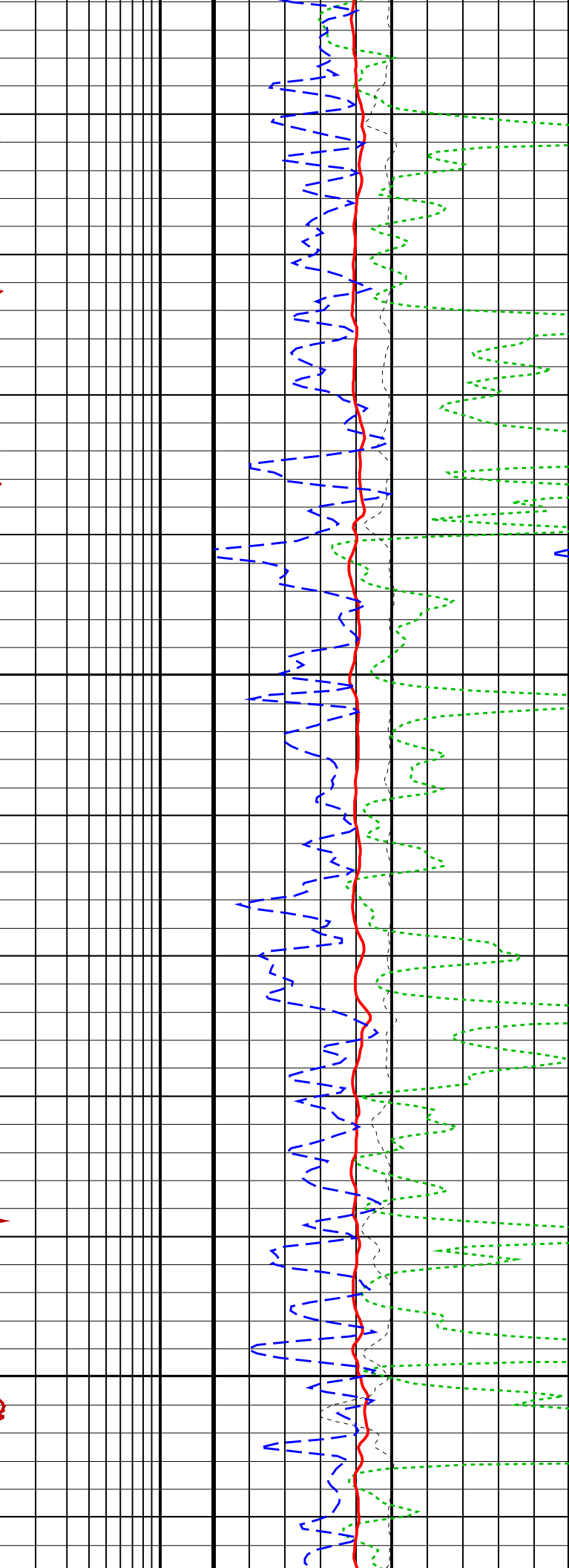
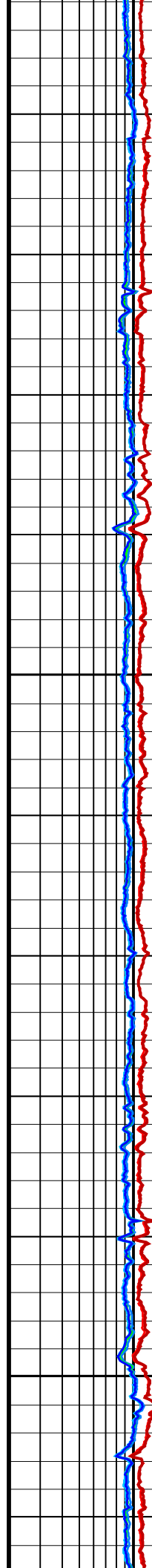
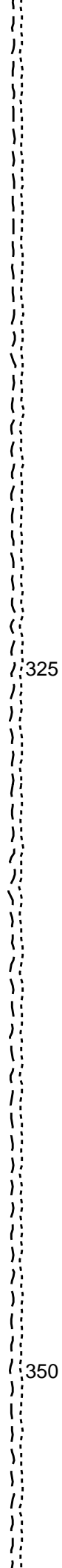
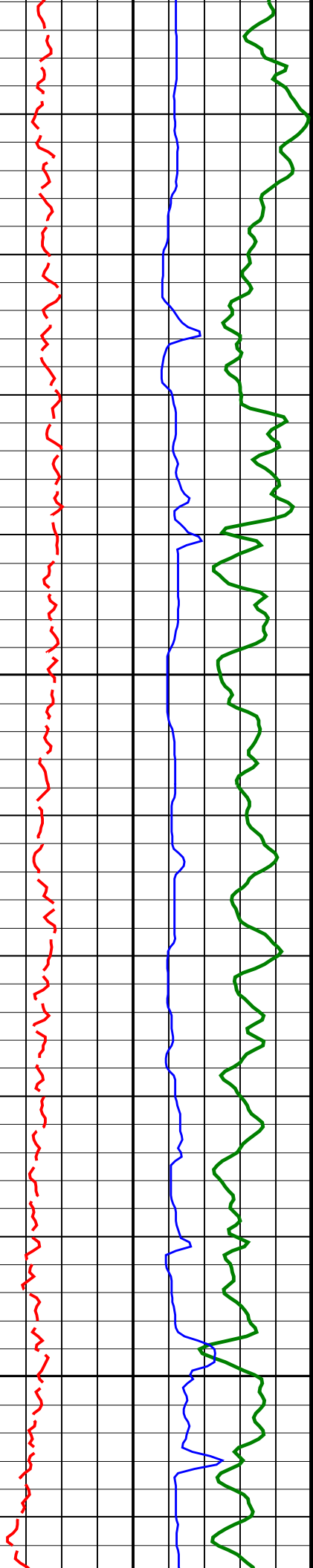
SP (SP)	
-100	(MV)
0	

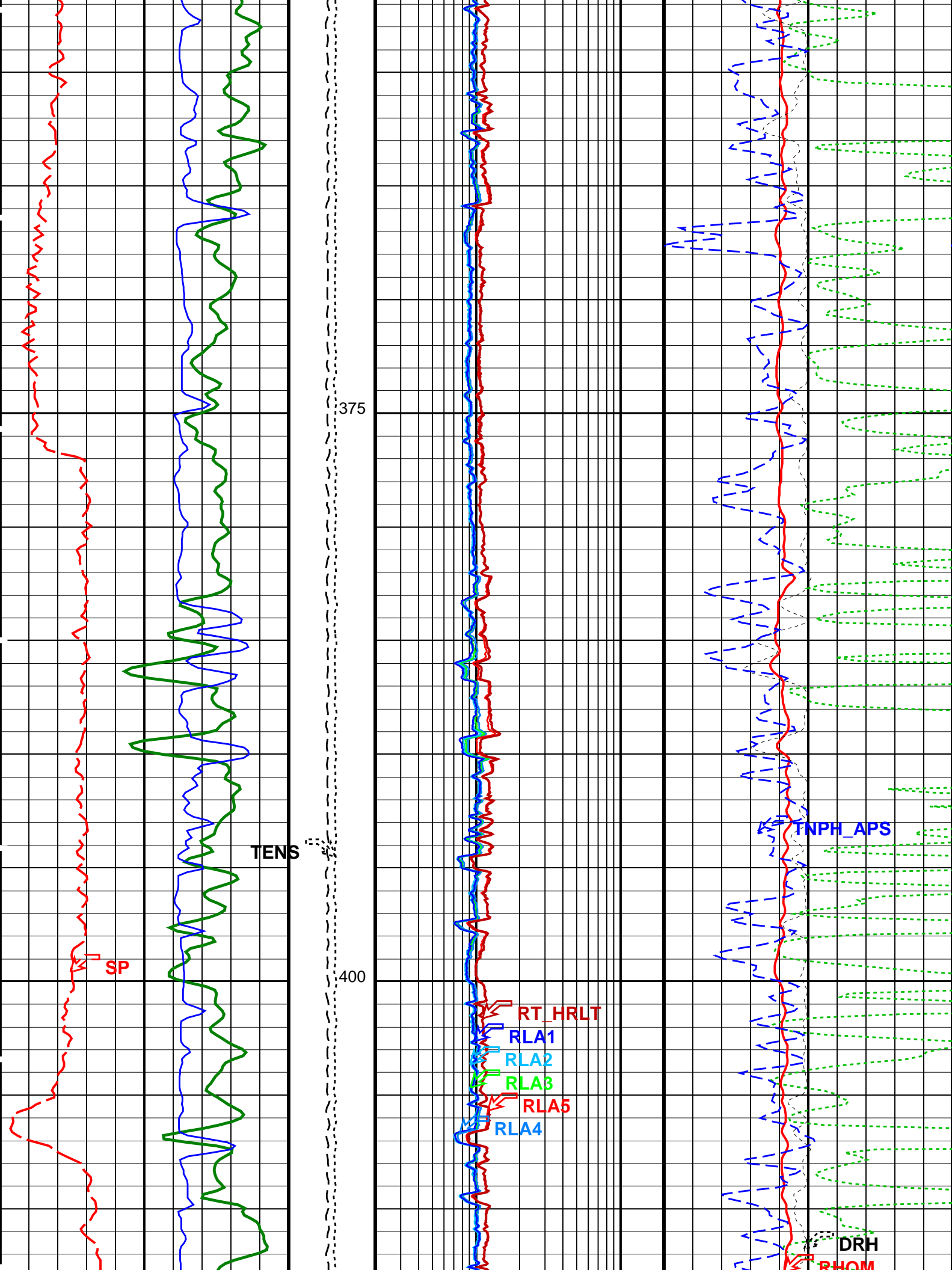
Calibrated Downhole Force (CDF)

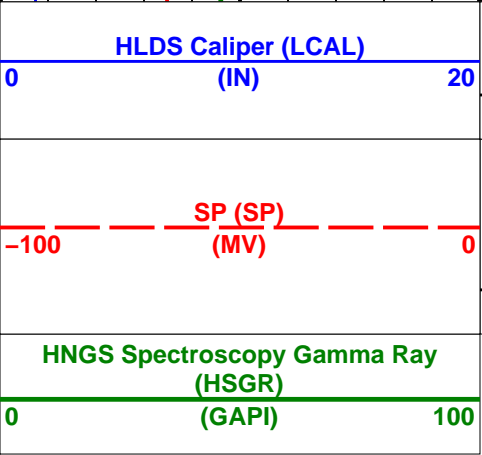
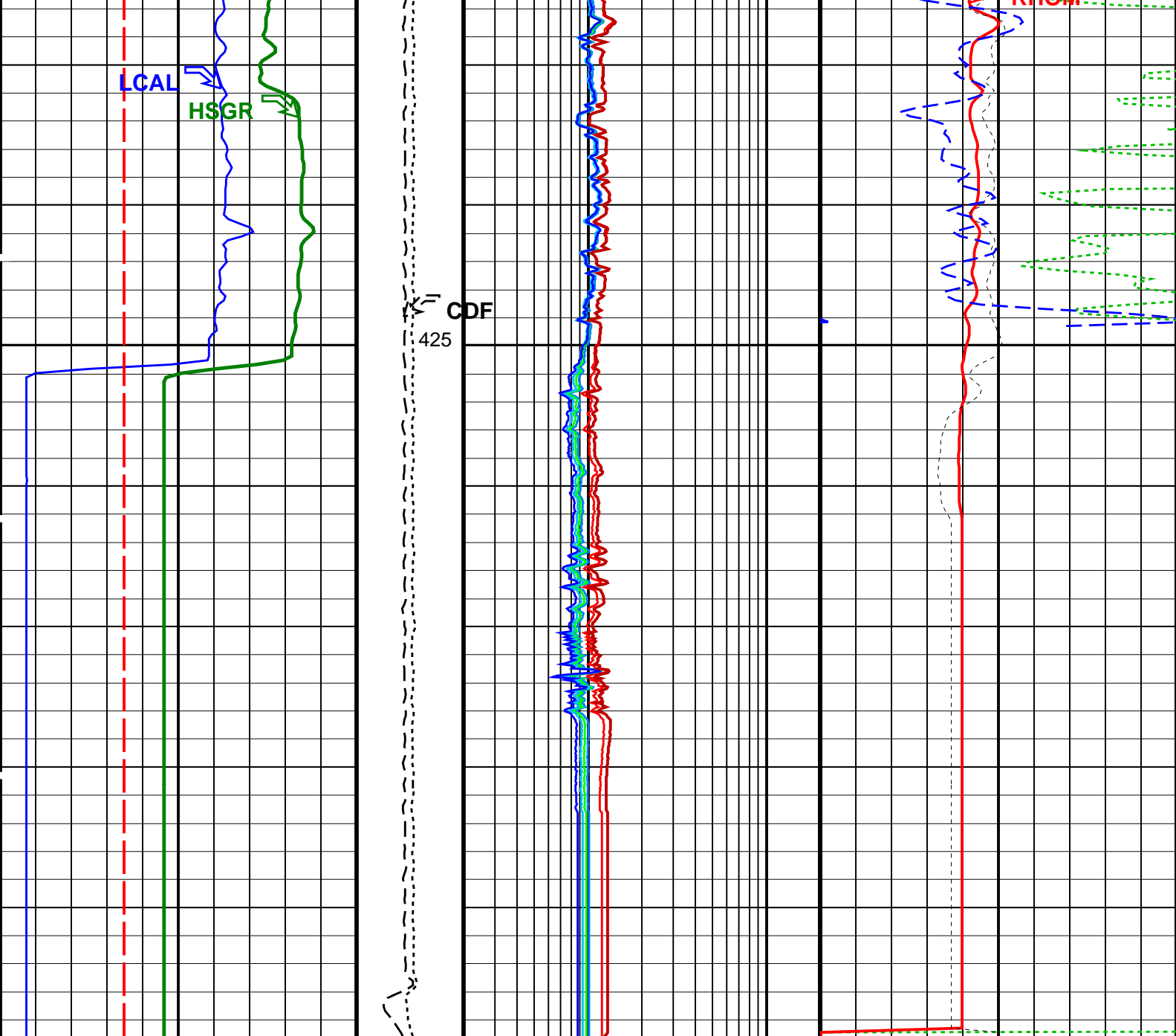










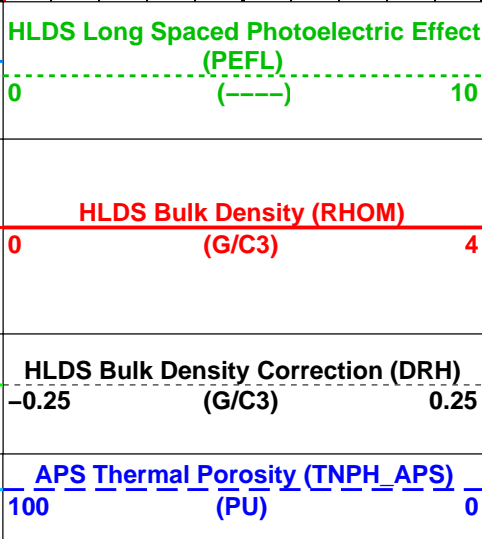
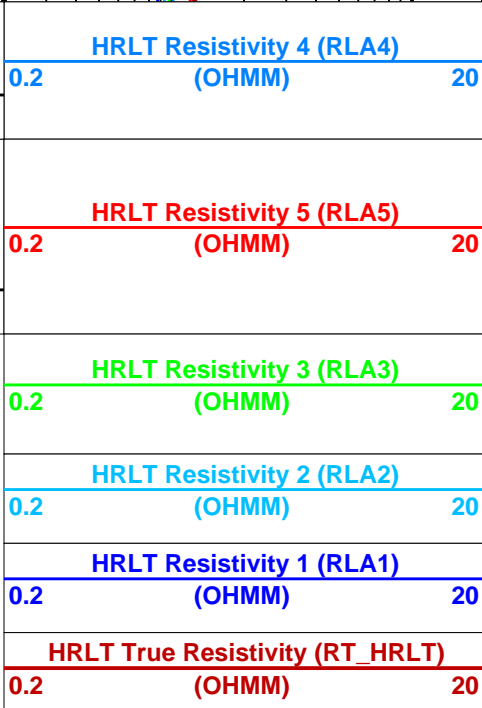


Tension (TENS) (LBF)

10000 0

Calibrated Downhole Force (CDF) (LBF)

3000 0



1st Pass, Sea Floor Depth Reference

Parameters

DLIS Name	Description	Value	
HRLT-B: High Resolution Laterolog Array - B			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	19.969	DEGC
FREQ0	HRLT Frequency Index for Mode 0	32	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ6	HRLT Frequency Index for Mode 6	116	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	BARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	OFF	
LOOPMOD1	HRLT Mode 1 Loop Mode	OFF	
LOOPMOD2	HRLT Mode 2 Loop Mode	OFF	
LOOPMOD3	HRLT Mode 3 Loop Mode	OFF	
LOOPMOD4	HRLT Mode 4 Loop Mode	OFF	
LOOPMOD5	HRLT Mode 5 Loop Mode	OFF	
LOOPMOD6	HRLT Mode 6 Loop Mode	OFF	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PROCINV	Inversion Selection	ON	
PROCMFL	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RXO	
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	5	
ADSO	APS Thermal and Array Detectors High Voltage Setting	1961.18	V
AFSD	APS Array Detectors Data Source Switch	Both	
AHCS	APS Far Detector High Voltage Setting	2076.53	V
AHCS	APS Holesize Correction Source	BS	
AHSS	APS Holesize Correction Switch	ON	
AMTY	APS Environmental Corrections Mud Type	WaterBaseBarite	
ANSD	APS Near Detector High Voltage Setting	1731.96	V
ASOS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	ON	
BHFL_APS	APS TNPH Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
BSCO_APS	APS TNPH Borehole Salinity Correction Option	YES	
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	YES	
MCOR_APS	APS TNPH Mud Correction	BARI	
MWCO_APS	APS TNPH Mud Weight Correction Option	YES	
NARC	APS Near/Array Calibration Ratio	1.06686	
NFRC	APS Near/Far Calibration Ratio	0.887429	
PTCO_APS	APS TNPH Pressure/Temperature Correction Option	YES	
SHT	Surface Hole Temperature	20	DEGC
TNCO_APS	APS TNPH Computation Option	YES	
HNGBS-BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGBS Detector 1 Barite Constant	1	
BAR2	HNGBS Detector 2 Barite Constant	1	
BHK	HNGBS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGBS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGBS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGBS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGBS Borehole Potassium Running Average	-0.0010702	
HALF	HNGBS Alpha Filter Length	60	IN
HCRB	HNGBS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGBS Processing Enable	YES	
ISSBAR	Barite Mud Switch	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
S1BI	HNGBS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGBS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGBS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	20	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGBS Detector 1 Variable Barite Factor Running Average	0.962626	
VBA2	HNGBS Detector 2 Variable Barite Factor Running Average	0.973172	
EDTC-B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	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	NATU	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U-ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U-TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
BSP: Bridle SP			
SPNV	SP Next Value	0	MV
System and Miscellaneous			
ALTDPCCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	11.438	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	5.500	IN
CWEI	Casing Weight	168.00	LB/F
DFD	Drilling Fluid Density	1.20	G/C3
DO	Depth Offset for Playback	-2508.5	M
FLV	Fluid Velocity	50000.00	M

FLEV	Fluid Level	-50000.00	M
MST	Mud Sample Temperature	-50000.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	3190	M
TDD	Total Depth - Driller	3190.00	M
TDL	Total Depth - Logger	3189.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripleCombo Vertical Scale: 1:200 Graphics File Created: 07-Jan-2015 05:19

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
BSP	19C0-187		

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_013LUP	FN:21	PRODUCER	06-Jan-2015 09:00	2958.1 M	2647.2 M
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Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_046PUP	FN:66	PRODUCER	07-Jan-2015 05:19
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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: 6-Jan-2015 8:51 After: 6-Jan-2015 12:10							
HRLT M0-M1 Voltage Plus - 0	0	N/A	-318.5	-318.3	0.1655	9.681	UV
HRLT M0-M1 Voltage Plus - 1	0	N/A	-329.6	-331.0	-1.398	9.681	UV
HRLT M0-M1 Voltage Plus - 2	0	N/A	-337.5	-338.6	-1.110	9.681	UV
HRLT M0-M1 Voltage Plus - 3	0	N/A	-328.2	-329.1	-0.9101	9.681	UV
HRLT M0-M1 Voltage Plus - 4	0	N/A	-319.5	-319.8	-0.3085	9.681	UV
HRLT M0-M1 Voltage Plus - 5	0	N/A	-321.3	-321.7	-0.4056	9.681	UV
HRLT M0-M1 Voltage Plus - 6	0	N/A	318.6	321.4	2.771	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: 6-Jan-2015 8:51 After: 6-Jan-2015 12:10							
HRLT M1-M2 Voltage Plus - 0	0	N/A	1738	1739	0.6775	53.42	UV
HRLT M1-M2 Voltage Plus - 1	0	N/A	1805	1815	10.63	53.42	UV
HRLT M1-M2 Voltage Plus - 2	0	N/A	1841	1850	8.961	53.42	UV
HRLT M1-M2 Voltage Plus - 3	0	N/A	1789	1796	7.015	53.42	UV
HRLT M1-M2 Voltage Plus - 4	0	N/A	1741	1744	3.483	53.42	UV
HRLT M1-M2 Voltage Plus - 5	0	N/A	1752	1755	3.817	53.42	UV
HRLT M1-M2 Voltage Plus - 6	0	N/A	-1752	-1770	-17.91	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: 6-Jan-2015 8:51 After: 6-Jan-2015 12:10							
HRLT M2-M3 Voltage Plus - 0	0	N/A	1730	1730	0.3088	53.42	UV
HRLT M2-M3 Voltage Plus - 1	0	N/A	1806	1816	10.25	53.42	UV
HRLT M2-M3 Voltage Plus - 2	0	N/A	1845	1853	8.390	53.42	UV
HRLT M2-M3 Voltage Plus - 3	0	N/A	1797	1804	6.674	53.42	UV
HRLT M2-M3 Voltage Plus - 4	0	N/A	1743	1745	2.918	53.42	UV
HRLT M2-M3 Voltage Plus - 5	0	N/A	1754	1758	3.277	53.42	UV
HRLT M2-M3 Voltage Plus - 6	0	N/A	-1743	-1761	-17.85	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: 6-Jan-2015 8:51 After: 6-Jan-2015 12:10							
HRLT A3-A4 Voltage Plus - 0	0	N/A	68590	68580	-3.133	2100	UV
HRLT A3-A4 Voltage Plus - 1	0	N/A	71460	71840	384.9	2100	UV
HRLT A3-A4 Voltage Plus - 2	0	N/A	73260	73570	314.7	2100	UV
HRLT A3-A4 Voltage Plus - 3	0	N/A	71610	71860	251.2	2100	UV
HRLT A3-A4 Voltage Plus - 4	0	N/A	69390	69510	115.0	2100	UV
HRLT A3-A4 Voltage Plus - 5	0	N/A	69890	70000	117.8	2100	UV

HRLT A3-A4 Voltage Plus - 6	0	N/A	-67960	-68650	-691.7	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: 6-Jan-2015 8:51 After: 6-Jan-2015 12:10

HRLT A4-A5 Voltage Plus - 0	0	N/A	68660	68670	3.758	2100	UV
HRLT A4-A5 Voltage Plus - 1	0	N/A	71660	72050	389.5	2100	UV
HRLT A4-A5 Voltage Plus - 2	0	N/A	73440	73760	316.3	2100	UV
HRLT A4-A5 Voltage Plus - 3	0	N/A	71760	72010	247.4	2100	UV
HRLT A4-A5 Voltage Plus - 4	0	N/A	69500	69620	124.3	2100	UV
HRLT A4-A5 Voltage Plus - 5	0	N/A	69980	70100	118.4	2100	UV
HRLT A4-A5 Voltage Plus - 6	0	N/A	-68170	-68860	-694.3	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: 6-Jan-2015 8:51 After: 6-Jan-2015 12:10

HRLT A5-A6 Voltage Plus - 0	0	N/A	68510	68520	15.05	2100	UV
HRLT A5-A6 Voltage Plus - 1	0	N/A	71500	71890	384.0	2100	UV
HRLT A5-A6 Voltage Plus - 2	0	N/A	73300	73620	325.3	2100	UV
HRLT A5-A6 Voltage Plus - 3	0	N/A	71610	71880	270.2	2100	UV
HRLT A5-A6 Voltage Plus - 4	0	N/A	69380	69490	110.3	2100	UV
HRLT A5-A6 Voltage Plus - 5	0	N/A	69850	69970	123.6	2100	UV
HRLT A5-A6 Voltage Plus - 6	0	N/A	-68010	-68700	-690.8	2100	UV
HRLT A5-A6 Voltage Plus - 7	0	N/A	70000	70000	0	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT VTP
 Before: 6-Jan-2015 8:51 After: 6-Jan-2015 12:10

HRLT Torpedo-M0 Voltage - 0	0	N/A	-68060	-68050	8.391	2100	UV
HRLT Torpedo-M0 Voltage - 1	0	N/A	-71320	-71690	-371.2	2100	UV
HRLT Torpedo-M0 Voltage - 2	0	N/A	-73150	-73450	-301.1	2100	UV
HRLT Torpedo-M0 Voltage - 3	0	N/A	-71550	-71780	-231.5	2100	UV
HRLT Torpedo-M0 Voltage - 4	0	N/A	-69340	-69440	-100.2	2100	UV
HRLT Torpedo-M0 Voltage - 5	0	N/A	-69810	-69930	-111.3	2100	UV
HRLT Torpedo-M0 Voltage - 6	0	N/A	67790	68460	674.5	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: 6-Jan-2015 8:51 After: 6-Jan-2015 12:10

HRLT Bridle#9-M0 Voltage - 0	0	N/A	-68090	-68090	5.398	2100	UV
HRLT Bridle#9-M0 Voltage - 1	0	N/A	-71400	-71780	-386.0	2100	UV
HRLT Bridle#9-M0 Voltage - 2	0	N/A	-73230	-73550	-315.2	2100	UV
HRLT Bridle#9-M0 Voltage - 3	0	N/A	-71610	-71860	-254.6	2100	UV
HRLT Bridle#9-M0 Voltage - 4	0	N/A	-69380	-69490	-104.7	2100	UV
HRLT Bridle#9-M0 Voltage - 5	0	N/A	-69840	-69970	-121.8	2100	UV
HRLT Bridle#9-M0 Voltage - 6	0	N/A	67870	68560	690.2	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: 6-Jan-2015 8:51 After: 6-Jan-2015 12:10

HRLT Source Current Plus - 0	0	N/A	284.1	284.1	-0.04724	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: 6-Jan-2015 8:51 After: 6-Jan-2015 12:10

HRLT Vertical Voltage PI - 0	0	N/A	-320.4	-320.0	0.4211	9.681	UV
HRLT Vertical Voltage PI - 1	0	N/A	-324.2	-325.6	-1.403	9.681	UV
HRLT Vertical Voltage PI - 2	0	N/A	-330.8	-332.0	-1.110	9.681	UV
HRLT Vertical Voltage PI - 3	0	N/A	-320.1	-320.8	-0.7407	9.681	UV
HRLT Vertical Voltage PI - 4	0	N/A	-308.6	-308.7	-0.1100	9.681	UV
HRLT Vertical Voltage PI - 5	0	N/A	-325.4	-325.5	-0.1826	9.681	UV
HRLT Vertical Voltage PI - 6	0	N/A	326.0	328.8	2.718	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: 27-Nov-2014 10:34 Before: 10-Dec-2014 16:11 After: 6-Jan-2015 12:13

SS Cs Resolution Bkg	9.000	8.034	7.994	7.965	-0.02907	1.800	%
LS Cs Resolution Bkg	9.000	8.056	8.139	8.052	-0.08640	1.800	%
LSW1 Background	100.0	67.18	68.13	69.86	1.724	3.000	CPS
LSW2 Background	100.0	63.66	62.96	62.54	-0.4246	3.000	CPS
LSW3 Background	200.0	141.2	138.4	137.7	-0.6645	6.000	CPS
LSW4 Background	250.0	169.1	168.7	169.4	0.7375	7.500	CPS
LSW5 Background	600.0	391.1	390.4	386.6	-3.764	18.00	CPS
SSW1 Background	100.0	78.05	77.34	76.19	-1.147	3.000	CPS
SSW2 Background	200.0	137.0	139.3	138.7	-0.6450	6.000	CPS
SSW3 Background	500.0	372.1	371.4	369.2	-2.174	15.00	CPS
SSW4 Background	270.0	192.9	193.0	191.7	-1.336	8.100	CPS

SSW4 Background	270.0	192.9	193.0	191.7	-1.330	8.100	CPS
SSW5 Background	200.0	139.2	139.5	138.7	-0.8185	6.000	CPS
Hostile Litho-Density Sonde Wellsite Calibration – Aluminum Measurement							
Master: 27-Nov-2014 10:56							
LSW1 Aluminum	600.0	519.5	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	745.2	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	894.7	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	454.6	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	412.1	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2387	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	6457	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	8971	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	3683	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	453.6	N/A	N/A	N/A	N/A	CPS

Hostile Litho-Density Sonde Wellsite Calibration – Lithology Measurement							
Master: 27-Nov-2014 10:51							
LSW1 Iron	400.0	355.4	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	602.3	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	797.2	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	410.3	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	374.5	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1740	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	5402	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	8204	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3376	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	403.6	N/A	N/A	N/A	N/A	CPS

Hostile Litho-Density Sonde Wellsite Calibration – Caliper Calibration							
Before: 10-Dec-2014 20:49							
HLDS Caliper Small Ring	12.00	N/A	14.82	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	15.19	N/A	18.16	N/A	N/A	N/A	IN

Accelerator-Porosity Tool Wellsite Calibration – Detector Background							
Master: 24-Nov-2014 14:17 Before: 6-Jan-2015 6:08 After: 6-Jan-2015 12:16							
Near Det Bkg Cntrate	30.00	32.62	31.38	31.77	0.3827	N/A	CPS
Far Det Bkg Cntrate	30.00	32.92	32.92	32.61	-0.3147	N/A	CPS
Array-1 Det Bkg Cntrate	30.00	29.71	29.10	28.53	-0.5650	N/A	CPS
Array-2 Det Bkg Cntrate	30.00	31.45	30.75	29.49	-1.262	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	32.21	31.99	31.57	-0.4240	N/A	CPS

Accelerator-Porosity Tool Wellsite Calibration – Calibration Ratios							
Master: 24-Nov-2014 14:17							
Near/Far Calibration Ratio	0.9250	0.8874	N/A	N/A	N/A	N/A	
Near/Array Calibration Ratio	1.030	1.067	N/A	N/A	N/A	N/A	
Near/Array Cal Ratio Up/Down	1.000	1.020	N/A	N/A	N/A	N/A	

Accelerator-Porosity Tool Wellsite Calibration – Tank Check							
Master: 24-Nov-2014 14:17							
Array-1 Standoff Porosity	11.75	10.47	N/A	N/A	N/A	N/A	PU
Array-2 Standoff Porosity	11.75	10.11	N/A	N/A	N/A	N/A	PU
Average Slowing Down Time	6.000	6.079	N/A	N/A	N/A	N/A	US
Array-1 SDT Ratio Up/Down	1.000	0.9806	N/A	N/A	N/A	N/A	
Array-2 SDT Ratio Up/Down	1.000	0.9602	N/A	N/A	N/A	N/A	
Sigma Formation	27.50	36.25	N/A	N/A	N/A	N/A	CU

Accelerator-Porosity Tool Wellsite Calibration – CCR7 signal boxes							
Master: 24-Nov-2014 13:32							
Near Detector Plateau Setting	1650	1732	N/A	N/A	N/A	N/A	V
Far Detector Plateau Setting	2000	2077	N/A	N/A	N/A	N/A	V
Array Detector Plateau Setting	2000	1961	N/A	N/A	N/A	N/A	V

Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 1 Check							
Master: 26-Nov-2014 7:50 Before: 10-Dec-2014 15:55 After: 6-Jan-2015 12:14							
Na 511 Peak Loc	40.00	38.60	38.65	38.66	0.01219	1.000	
Na 511 Peak Res	15.50	17.82	17.23	17.22	-0.006243	2.000	%
High Voltage	1150	1236	1226	1212	-14.63	N/A	V
Na 1785 Peak Loc	142.6	140.0	140.2	140.7	0.5771	7.000	
Na 1785 Peak Res	8.500	9.579	9.390	9.074	-0.3153	2.000	%
Temperature	15.50	39.03	35.73	27.87	-7.862	N/A	DEGC
Na Count Rate	45.00	23.07	22.60	22.08	-0.5244	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 2 Check							
Master: 26-Nov-2014 7:50 Before: 10-Dec-2014 15:55 After: 6-Jan-2015 12:14							
Na 511 Peak Loc	40.00	39.82	39.59	39.70	0.1076	1.000	
Na 511 Peak Res	15.50	15.45	17.13	16.09	-1.036	2.000	%
High Voltage	1150	1116	1107	1096	-11.06	N/A	V
Na 1785 Peak Loc	142.6	143.6	142.5	143.7	1.181	7.000	
Na 1785 Peak Res	8.500	9.367	8.711	8.871	0.1603	2.000	%
Temperature	15.50	38.84	35.37	28.64	-6.722	N/A	DEGC
Na Count Rate	45.00	23.01	22.57	21.87	-0.7028	8.000	CPS

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

Master: 26–Nov–2014 7:50 Before: 10–Dec–2014 15:55 After: 6–Jan–2015 12:14

Coincidence Count Rate Ratio	1.000	1.001	1.001	1.006	0.005219	0.05000
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Hostile Natural Gamma Ray Sonde Master Calibration – Detector 1 Calibration

Master: 26–Nov–2014 7:45

Na 511 Peak Set Point	40.00	40.00	--	--	--	--
Th Peak Loc	209.6	211.5	--	--	--	--
Th Peak Res	7.000	8.468	--	--	--	%
Background Count Rate	142.5	23.99	--	--	--	CPS
Gain Ratio	1.000	1.042	--	--	--	--

Hostile Natural Gamma Ray Sonde Master Calibration – Detector 2 Calibration

Master: 26–Nov–2014 7:45

Na 511 Peak Set Point	40.00	41.00	--	--	--	--
Th Peak Loc	209.6	209.9	--	--	--	--
Th Peak Res	7.000	7.524	--	--	--	%
Background Count Rate	142.5	23.17	--	--	--	CPS
Gain Ratio	1.000	1.003	--	--	--	--

Enhanced DTS Cartridge Wellsite Calibration – EDTC Accelerometer Calibration

Before: 6–Jan–2015 6:00

EDTC Z–Axis Acceleration	9.810	N/A	9.742	N/A	N/A	N/A	M/S2
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Enhanced DTS Cartridge Wellsite Calibration – Detector Calibration

Before: 10–Dec–2014 20:50

Gamma Ray (Jig – Bkg)	153.0	N/A	153.0	N/A	N/A	13.90	GAPI
Gamma Ray (Calibrated)	164.0	N/A	164.0	N/A	N/A	15.00	GAPI

Accelerator–Porosity Tool – Detector Plateau Settings :

Near Detector Plateau Setting	1732 V
Far Detector Plateau Setting	2077 V
Array Detector Plateau Setting	1961 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		-318.5	-322.7	-280.7	-379.7
	After		-318.3			
1	Before		-329.6	-322.7	-280.7	-379.7
	After		-331.0			
2	Before		-337.5	-322.7	-280.7	-379.7
	After		-338.6			
3	Before		-328.2	-322.7	-280.7	-379.7
	After		-329.1			
4	Before		-319.5	-322.7	-280.7	-379.7
	After		-319.8			
5	Before		-321.3	-322.7	-280.7	-379.7
	After		-321.7			
6	Before		318.6			

	After		321.4	322.7	379.7	280.7
7	Before		-322.7	-322.7	-280.7	-379.7
	After		-322.7			
		(Minimum) (Nominal) (Maximum)				
Before: 6-Jan-2015 8:51						
After: 6-Jan-2015 12:10						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT M12						
Idx	Phase	HRLT M1–M2 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1738	1781	2095	1549
	After		1739			
1	Before		1805	1781	2095	1549
	After		1815			
2	Before		1841	1781	2095	1549
	After		1850			
3	Before		1789	1781	2095	1549
	After		1796			
4	Before		1741	1781	2095	1549
	After		1744			
5	Before		1752	1781	2095	1549
	After		1755			
6	Before		-1752	-1781	-1549	-2095
	After		-1770			
7	Before		1781	1781	2095	1549
	After		1781			
		(Minimum) (Nominal) (Maximum)				
Before: 6-Jan-2015 8:51						
After: 6-Jan-2015 12:10						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT M23						
Idx	Phase	HRLT M2–M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1730	1781	2095	1549
	After		1730			
1	Before		1806	1781	2095	1549
	After		1816			
2	Before		1845	1781	2095	1549
	After		1853			
3	Before		1797	1781	2095	1549
	After		1804			
4	Before		1743	1781	2095	1549
	After		1745			
5	Before		1754	1781	2095	1549
	After		1758			
6	Before		-1743	-1781	-1549	-2095
	After		-1761			
	Before		1781			

After		1781	1781	2095	1549
	(Minimum) (Nominal) (Maximum)				

Before: 6-Jan-2015 8:51
 After: 6-Jan-2015 12:10

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V34						
Idx	Phase	HRLT A3–A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68590	70000	82360	60900
	After		68580			
1	Before		71460	70000	82360	60900
	After		71840			
2	Before		73260	70000	82360	60900
	After		73570			
3	Before		71610	70000	82360	60900
	After		71860			
4	Before		69390	70000	82360	60900
	After		69510			
5	Before		69890	70000	82360	60900
	After		70000			
6	Before		-67960	-70000	-60900	-82360
	After		-68650			
7	Before		70000	70000	82360	60900
	After		70000			
		(Minimum) (Nominal) (Maximum)				

Before: 6-Jan-2015 8:51
 After: 6-Jan-2015 12:10

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V45						
Idx	Phase	HRLT A4–A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68660	70000	82360	60900
	After		68670			
1	Before		71660	70000	82360	60900
	After		72050			
2	Before		73440	70000	82360	60900
	After		73760			
3	Before		71760	70000	82360	60900
	After		72010			
4	Before		69500	70000	82360	60900
	After		69620			
5	Before		69980	70000	82360	60900
	After		70100			
6	Before		-68170	-70000	-60900	-82360
	After		-68860			
7	Before		70000	70000	82360	60900
	After		70000			
		(Minimum) (Nominal) (Maximum)				

Before: 6-Jan-2015 8:51
 After: 6-Jan-2015 12:10

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V56						
Idx	Phase	HRLT A5–A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68510	70000	82360	60900
	After		68520			
1	Before		71500	70000	82360	60900
	After		71890			
2	Before		73300	70000	82360	60900
	After		73620			
3	Before		71610	70000	82360	60900
	After		71880			
4	Before		69380	70000	82360	60900
	After		69490			
5	Before		69850	70000	82360	60900
	After		69970			
6	Before		-68010	-70000	-60900	-82360
	After		-68700			
7	Before		70000	70000	82360	60900
	After		70000			
		(Minimum) (Nominal) (Maximum)				

Before: 6-Jan-2015 8:51
 After: 6-Jan-2015 12:10

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT VTP						
Idx	Phase	HRLT Torpedo–M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-68060	-70000	-60900	-82360
	After		-68050			
1	Before		-71320	-70000	-60900	-82360
	After		-71690			
2	Before		-73150	-70000	-60900	-82360
	After		-73450			
3	Before		-71550	-70000	-60900	-82360
	After		-71780			
4	Before		-69340	-70000	-60900	-82360
	After		-69440			
5	Before		-69810	-70000	-60900	-82360
	After		-69930			
6	Before		67790	70000	82360	60900
	After		68460			
7	Before		-70000	-70000	-60900	-82360
	After		-70000			
		(Minimum) (Nominal) (Maximum)				

Before: 6-Jan-2015 8:51
 After: 6-Jan-2015 12:10

High Resolution Laterolog Array – B Wellsite Calibration

HRLT VBD

Idx	Phase	HRLT Bridle#9-M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-68090	-70000	-60900	-82360
	After		-68090			
1	Before		-71400	-70000	-60900	-82360
	After		-71780			
2	Before		-73230	-70000	-60900	-82360
	After		-73550			
3	Before		-71610	-70000	-60900	-82360
	After		-71860			
4	Before		-69380	-70000	-60900	-82360
	After		-69490			
5	Before		-69840	-70000	-60900	-82360
	After		-69970			
6	Before		67870	70000	82360	60900
	After		68560			
7	Before		-70000	-70000	-60900	-82360
	After		-70000			
			(Minimum)	(Nominal)	(Maximum)	

Before: 6-Jan-2015 8:51

After: 6-Jan-2015 12:10

High Resolution Laterolog Array – B Wellsite Calibration

HRLT ISO

Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum
0	Before		284.1	284.0	334.1	247.0
	After		284.1			
1	Before		281.1	281.1	330.7	244.4
	After		281.1			
2	Before		281.1	281.1	330.7	244.4
	After		281.1			
3	Before		281.1	281.1	330.7	244.4
	After		281.1			
4	Before		281.1	281.1	330.7	244.4
	After		281.1			
5	Before		281.1	281.1	330.7	244.4
	After		281.1			
6	Before		281.1	281.1	330.7	244.4
	After		281.1			
7	Before		281.1	281.1	330.7	244.4
	After		281.1			
			(Minimum)	(Nominal)	(Maximum)	

Before: 6-Jan-2015 8:51

After: 6-Jan-2015 12:10

High Resolution Laterolog Array – B Wellsite Calibration

HRLT MV

Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
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Phase	MINET Vertical Stage Plus UV	Value	Nominal	Maximum	Minimum
0	Before	-320.4	-322.7	-280.7	-379.7
	After	-320.0			
1	Before	-324.2	-322.7	-280.7	-379.7
	After	-325.6			
2	Before	-330.8	-322.7	-280.7	-379.7
	After	-332.0			
3	Before	-320.1	-322.7	-280.7	-379.7
	After	-320.8			
4	Before	-308.6	-322.7	-280.7	-379.7
	After	-308.7			
5	Before	-325.4	-322.7	-280.7	-379.7
	After	-325.5			
6	Before	326.0	322.7	379.7	280.7
	After	328.8			
7	Before	-322.7	-322.7	-280.7	-379.7
	After	-322.7			
		(Minimum) (Nominal) (Maximum)			

Before: 6-Jan-2015 8:51

After: 6-Jan-2015 12:10

Hostile Litho-Density Sonde / Equipment Identification

Primary Equipment:

Hostile Litho Density Sonde

Hostile Litho Density High Voltage

Gamma Source Radioactive

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

Auxiliary Equipment:

Hostile Litho Density Pad

Hostile Litho Density High Voltage Housi

HLDP - C 45
HEH - H 47

Hostile Litho-Density Sonde Wellsite Calibration

Background Measurement

Phase	SS Cs Resolution Bkg %	Value	Phase	LS Cs Resolution Bkg %	Value	Phase	LSW1 Background CPS	Value
Master		8.034	Master		8.056	Master		67.18
Before		7.994	Before		8.139	Before		68.13
After		7.965	After		8.052	After		69.86
	7.000 (Minimum) 9.000 (Nominal) 11.000 (Maximum)			7.000 (Minimum) 9.000 (Nominal) 11.000 (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		63.66	Master		141.2	Master		169.1
Before		62.96	Before		138.4	Before		168.7
After		62.54	After		137.7	After		169.4
	50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)			110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)			140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)	
Phase	LSW5 Background CPS	Value	Phase	SSW1 Background CPS	Value	Phase	SSW2 Background CPS	Value
Master		391.1	Master		78.05	Master		137.0
Before		390.4	Before		77.34	Before		139.3
After		386.6	After		76.19	After		138.7
	330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)			55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)			100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)	
Phase	SSW3 Background CPS	Value	Phase	SSW4 Background CPS	Value	Phase	SSW5 Background CPS	Value
Master		372.1	Master		192.9	Master		139.2

Before		371.4	Before		193.0	Before		139.5
After		369.2	After		191.7	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)

Master: 27-Nov-2014 10:34 Before: 10-Dec-2014 16:11 After: 6-Jan-2015 12:13

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			67.18	Master			63.66	Master			141.2
55.00 (Minimum) 100.0 (Nominal)			150.0 (Maximum)	50.00 (Minimum) 100.0 (Nominal)			140.0 (Maximum)	110.0 (Minimum) 200.0 (Nominal)			290.0 (Maximum)
Phase	LSW4 Background CPS		Value	Phase	LSW5 Background CPS		Value	Phase	LS Cs Resolution Bkg %		Value
Master			169.1	Master			391.1	Master			8.056
140.0 (Minimum) 250.0 (Nominal)			360.0 (Maximum)	330.0 (Minimum) 600.0 (Nominal)			830.0 (Maximum)	7.000 (Minimum) 9.000 (Nominal)			11.00 (Maximum)
Phase	SSW1 Background CPS		Value	Phase	SSW2 Background CPS		Value	Phase	SSW3 Background CPS		Value
Master			78.05	Master			137.0	Master			372.1
55.00 (Minimum) 100.0 (Nominal)			150.0 (Maximum)	100.0 (Minimum) 200.0 (Nominal)			260.0 (Maximum)	280.0 (Minimum) 500.0 (Nominal)			700.0 (Maximum)
Phase	SSW4 Background CPS		Value	Phase	SSW5 Background CPS		Value	Phase	SS Cs Resolution Bkg %		Value
Master			192.9	Master			139.2	Master			8.034
150.0 (Minimum) 270.0 (Nominal)			380.0 (Maximum)	110.0 (Minimum) 200.0 (Nominal)			270.0 (Maximum)	7.000 (Minimum) 9.000 (Nominal)			11.00 (Maximum)

Master: 27-Nov-2014 10:34

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			519.5	Master			745.2	Master			894.7
420.0 (Minimum) 600.0 (Nominal)			770.0 (Maximum)	650.0 (Minimum) 900.0 (Nominal)			1150 (Maximum)	800.0 (Minimum) 1100 (Nominal)			1450 (Maximum)
Phase	LSW4 Aluminum CPS		Value	Phase	LSW5 Aluminum CPS		Value	Phase	SSW1 Aluminum CPS		Value
Master			454.6	Master			412.1	Master			2387
410.0 (Minimum) 580.0 (Nominal)			740.0 (Maximum)	410.0 (Minimum) 570.0 (Nominal)			740.0 (Maximum)	2000 (Minimum) 2800 (Nominal)			3200 (Maximum)
Phase	SSW2 Aluminum CPS		Value	Phase	SSW3 Aluminum CPS		Value	Phase	SSW4 Aluminum CPS		Value
Master			6457	Master			8971	Master			3683
5800 (Minimum) 8000 (Nominal)			9300 (Maximum)	8300 (Minimum) 11600 (Nominal)			13500 (Maximum)	3500 (Minimum) 5000 (Nominal)			5800 (Maximum)
Phase	SSW5 Aluminum CPS		Value								
Master			453.6								
430.0 (Minimum) 660.0 (Nominal)			770.0 (Maximum)								

Master: 27-Nov-2014 10:56

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			355.4	Master			602.3	Master			797.2
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			410.3	Master			374.5	Master			1740
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			5402	Master			8204	Master			3376
4900 (Minimum) 6800 (Nominal)			7900 (Maximum)	7800 (Minimum) 10800 (Nominal)			12600 (Maximum)	3300 (Minimum) 4600 (Nominal)			5400 (Maximum)
Phase	SSW5 Iron CPS		Value								
Master			EXCEEDS LIMIT								
420.0 (Minimum) 580.0 (Nominal)			680.0 (Maximum)								

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			1.032	Master			2.169	Master			0.5994
	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			0.9896	Master			0.9811
	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			0.9993	Master	EXCEEDS LIMIT		0.9827				
	0.9900 (Minimum)	0.9940 (Nominal)	1.015 (Maximum)		0.9850 (Minimum)	0.9940 (Nominal)	1.010 (Maximum)				

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	22 7341
Auxiliary Equipment: Accelerator-Porosity Housing APS Calibration Water Tank APS Aluminum Calibrator Sleeve	APH - AC SFT - 178 SFT - 281	22 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			32.62	Master			32.92	Master			29.71
Before			31.38	Before			32.92	Before			29.10
After			31.77	After			32.61	After			28.53
	1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)		1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)		1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)
Phase	Array-2 Det Bkg Cntrate CPS		Value	Phase	Array Therm Det Bkg Cntrate CPS		Value				
Master			31.45	Master			32.21				
Before			30.75	Before			31.99				
After			29.49	After			31.57				
	1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)		1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)				

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			0.8874	Master			1.067	Master			1.020
	0.8000 (Minimum)	0.9250 (Nominal)	1.050 (Maximum)		0.9000 (Minimum)	1.030 (Nominal)	1.170 (Maximum)		0.9700 (Minimum)	1.000 (Nominal)	1.030 (Maximum)

Accelerator-Porosity Tool Wellsite Calibration							
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Tank Check

Phase	Array-1 Standoff Porosity PU	Value	Phase	Array-2 Standoff Porosity PU	Value	Phase	Average Slowing Down Time US	Value
Master		10.47	Master		10.11	Master		6.079
	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		0.9806	Master		0.9602	Master	EXCEEDS LIMIT	36.25
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)			0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)			20.00 (Minimum) 27.50 (Nominal) 35.00 (Maximum)	

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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		0.8874	Master		1.067	Master		1.020
	0.8000 (Minimum) 0.9250 (Nominal) 1.050 (Maximum)			0.9000 (Minimum) 1.030 (Nominal) 1.170 (Maximum)			0.9700 (Minimum) 1.000 (Nominal) 1.030 (Maximum)	

Master: 24-Nov-2014 14:17

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		10.47	Master		10.11	Master		6.079
	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		0.9806	Master		0.9602	Master	EXCEEDS LIMIT	36.25
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)			0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)			20.00 (Minimum) 27.50 (Nominal) 35.00 (Maximum)	

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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	HNGS - BA	177
Auxiliary Equipment: HNGS Sonde Housing Gamma Source Radioactive	HNSH - BA GSR - U	174 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		38.60	Master		17.82	Master		1236
Before		38.65	Before		17.23	Before		1226
After		38.66	After		17.22	After		1212
	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		140.0	Master		9.579	Master		39.03
Before		140.2	Before		9.390	Before		35.73
After		140.7	After		9.074	After		27.87
	135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)			7.000 (Minimum) 8.500 (Nominal) 11.000 (Maximum)			-28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)	

Phase	Na Count Rate CPS	Value
Master		23.07
Before		22.60
After		22.08
10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)		
Master: 26-Nov-2014 7:50 Before: 10-Dec-2014 15:55 After: 6-Jan-2015 12:14		

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		39.82	Master		15.45	Master		1116
Before		39.59	Before		17.13	Before		1107
After		39.70	After		16.09	After		1096
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		143.6	Master		9.367	Master		38.84
Before		142.5	Before		8.711	Before		35.37
After		143.7	After		8.871	After		28.64
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		23.01						
Before		22.57						
After		21.87						
10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)								
Master: 26-Nov-2014 7:50 Before: 10-Dec-2014 15:55 After: 6-Jan-2015 12:14								

Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		1.001
Before		1.001
After		1.006
0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)		
Master: 26-Nov-2014 7:50		
Before: 10-Dec-2014 15:55		
After: 6-Jan-2015 12:14		

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		40.00	Master		211.5	Master		8.468
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		23.99	Master		1.042			
10.00 (Minimum) 142.5 (Nominal) 265.0 (Maximum)			0.9400 (Minimum) 1.000 (Nominal) 1.060 (Maximum)					
Master: 26-Nov-2014 7:45								

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		209.9	Master		7.524
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)		

