Schlumberger

Company: **International Ocean Discovery Program**

Well: **Expedition 363, Site U1482C**
Field: **Western Pacific Warm Pool**
Rig: **JOIDES Resolution** Ocean: **Indian**

Rig: JOIDES Resolution
Field: Western Pacific Warm Pool
Location: Latitude: S 15* 3.3283'
Well: Expedition 363, Site U1482C
Company: International Ocean Discovery Pr

High Resolution Laterolog Array
Hostile Litho Density / APS Porosity
Natural Gamma Ray / MSS

LOCATION

Latitude: S 15* 3.3283'
Longitude: E 120* 26.1136'

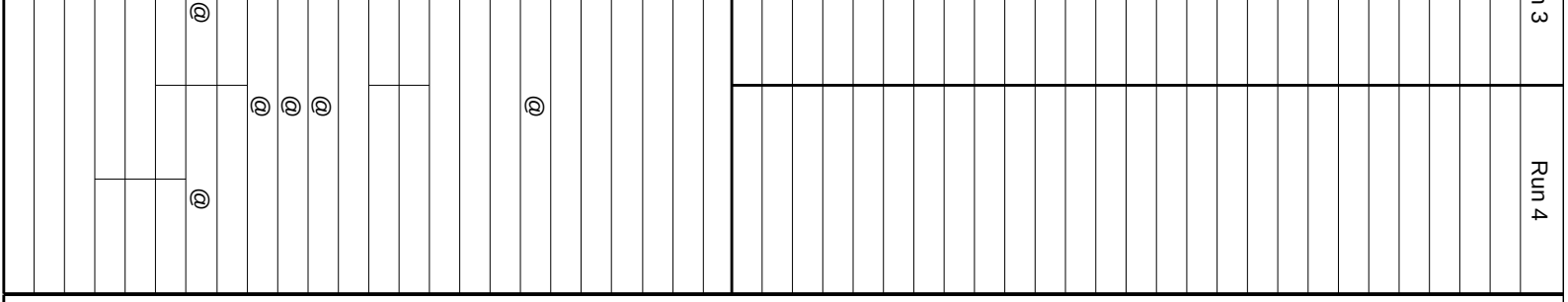
Elev.: K.B. 0.00 m
G.L. −1476.10 m
D.F. 0.00 m

Permanent Datum: Sea Floor — Elev.: −1476.00 m
Log Measured From: Rig Floor — 1476.00 m above Perm. Datum
Drilling Measured From: Rig Floor

API Serial No.	Max. Hole Devi. 0 deg	Longitude E 120.4352	Latitude S 15.0554

	Run 1	Run 2	Run 1	Run 2
Logging Date	24−Oct−2016			
Run Number	1			
Depth Driller	2010.2 m			
Schlumberger Depth	2008 m			
Bottom Log Interval	2008 m			
Top Log Interval	1475 m			
Casing Driller Size @ Depth	5.000 in @ 1561.7 m	@	@	
Casing Schlumberger	1559 m			
Bit Size	11.438 in			
Type Fluid In Hole	Seawater			
MUD Density / Viscosity	1.025 g/cm3			
MUD Fluid Loss / PH		8.07		
MUD Source Of Sample	Mudpit			
RM @ Measured Temperature	@ 23 degC		@	
RMF @ Measured Temperature	@		@	
RMC @ Measured Temperature	@		@	
Source RMF / RMC	N/A	N/A		
RM @ MRT / RMF @ MRT	@ 17	@ 17	@	@
Maximum Recorded Temperatures	17 degC			
Circulation Stopped / Time	23−Oct−2016	23:30		
Logger On Bottom / Time	24−Oct−2016	06:10		
Unit Number / Location	627314	Larose, LA		
Recorded By	K. Swain			
Witnessed By	G. Mountain, A. Schmitt, Z. Mateo			

	Run 1	Run 2	Run
Logging Date			
Run Number			
Depth Driller			
Schlumberger Depth			
Bottom Log Interval			
Top Log Interval			
Casing Driller Size @ Depth	@		
Casing Schlumberger			
Bit Size			
Type Fluid In Hole			
MUD Density / Viscosity			
MUD Fluid Loss / PH			
MUD Source Of Sample			
RM @ Measured Temperature	@		
RMF @ Measured Temperature	@		
RMC @ Measured Temperature	@		
Source RMF / RMC			
RM @ MRT / RMF @ MRT	@	@	
Maximum Recorded Temperatures			
Circulation Stopped / Time			
Logger On Bottom / Time			
Unit Number / Location			
Recorded By			
Witnessed By			



DISCLAIMER

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OTHER SERVICES1	OTHER SERVICES2
OS1: FMS/DSI	OS1:
OS2:	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:

REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Hole drilled with APC/XCB bottom hole assembly (BHA) at 11 7/16" BS	
Pipe positioned 85.6m below sea floor and logging tools lowered inside of pipe.	
Sea Floor: 1476.1 mbrf	
Entire string centralized using two modified MCD 3−arm spring centralizers as per toolsketch.	
Local tides up to 4m at this site.	
Caliper closed on main log to fix cable wraps on drum at	
1820−1819, 1818−1814 and 1736−1740 mbrf.	
Active Heave Compensation not used as heave was 0.5m p−p or less.	

RUN 1			RUN 2		
SERVICE ORDER #:			SERVICE ORDER #:		
PROGRAM VERSION:		19C0−187	PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

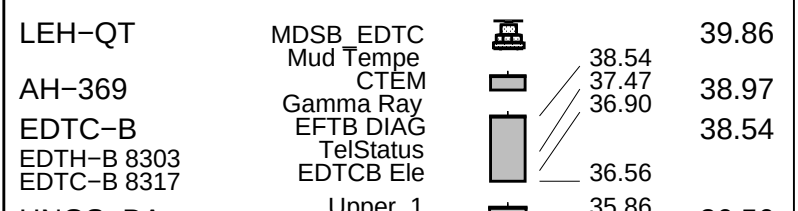
EQUIPMENT DESCRIPTION

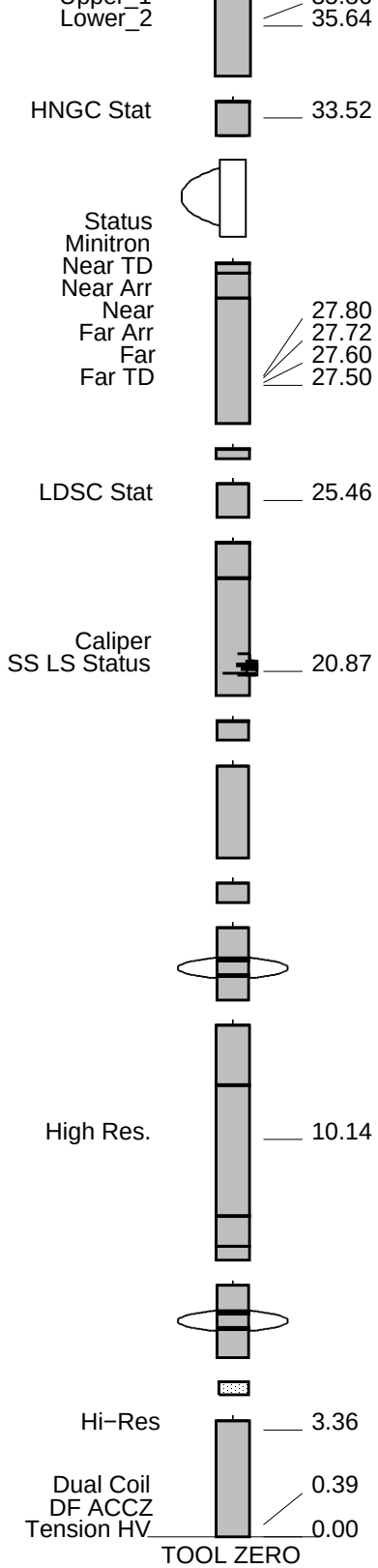
RUN 1 RUN 2

SURFACE EQUIPMENT

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

DOWNHOLE EQUIPMENT





HNGS−BA 36.56
HNGS−BA 177
HNSH−BA 174

HNGC−B 34.06

ILE−F 32.99
ILE−F 1

AH−191 30.55

APS−C 30.25
APH−AC 22
APS−C 22
MNTR−F 7341

AH−190 26.30

LDSC−B 26.00

HLDS 24.93
HLDV−D 35
HLDS−D 35
GSR−Z 2945
HLDP−C 35
HEH−H 35

AH−184 20.11

AH−ECH−MRA 19.50
AH−ECH−MRA 5714

AH−184 16.61

AH−MCD 16.00
AH−MCD 82

HRLT−B 13.72
HRUH−B 768
HRUC−B 764
HRLS−B 768
HRLH−B 968
HRLC−B 974
AH−270 1708

AH−MCD1 6.35
AH−MCD1 1

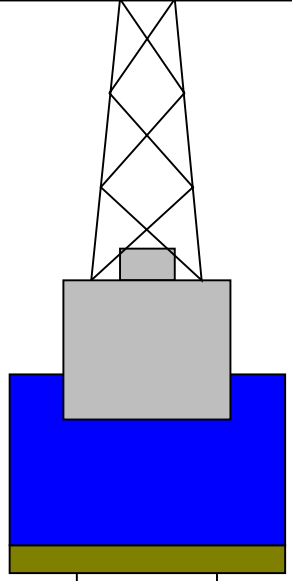
AH−230 4.07

MSS_LDEO−A 3.67
ELIC−A 1
MSS_LDEO−A 1

TOOL ZERO

MAXIMUM STRING DIAMETER 3.75 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

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

Kelly Bushing Elevation		0			
Derrick Floor Elevation		0			
Mean Sea Level		11			
				4.1	
				1476.1 4.1	Sea Floor
				1561.7 11.4375	Open Hole
				2010.2	Total Depth

Company: International Ocean Discovery Program | Well: Expedition 363, Site U1482C

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_013LUP	FN:21	PRODUCER	23−Oct−2016 22:50	2009.4 M	1452.5 M
BACKUP	MSS_LDEO_HRLA_LDL_013LUP	FN:22	PRODUCER	23−Oct−2016 22:50	2009.4 M	1452.5 M

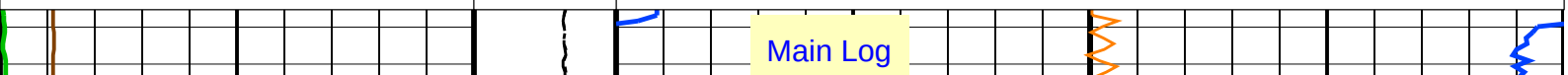
OP System Version: 19C0−187

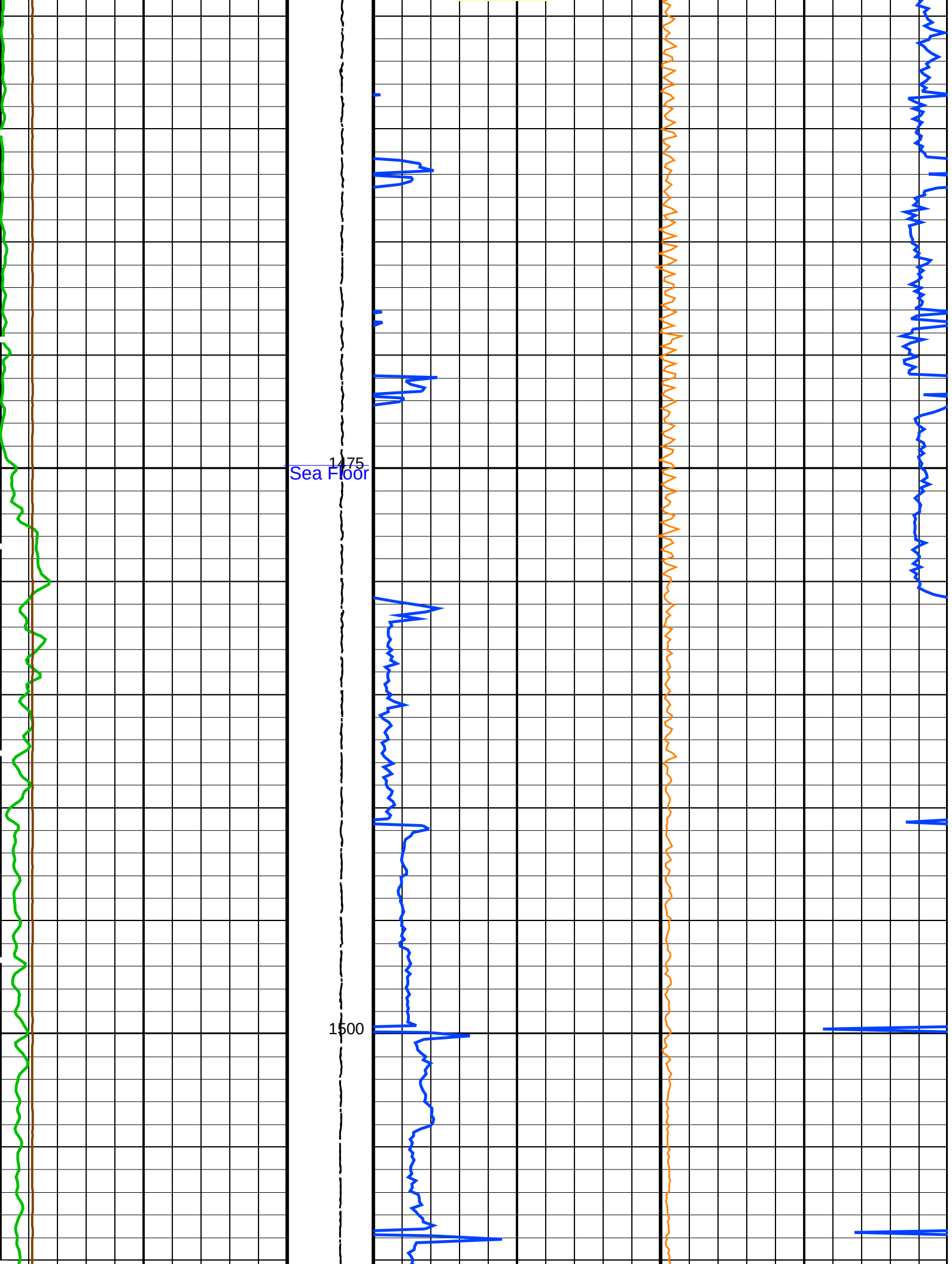
MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
APS−C	19C0−187	HNGC−B	19C0−187
HNGS−BA	19C0−187	EDTC−B	SKK−5169−EDTCB

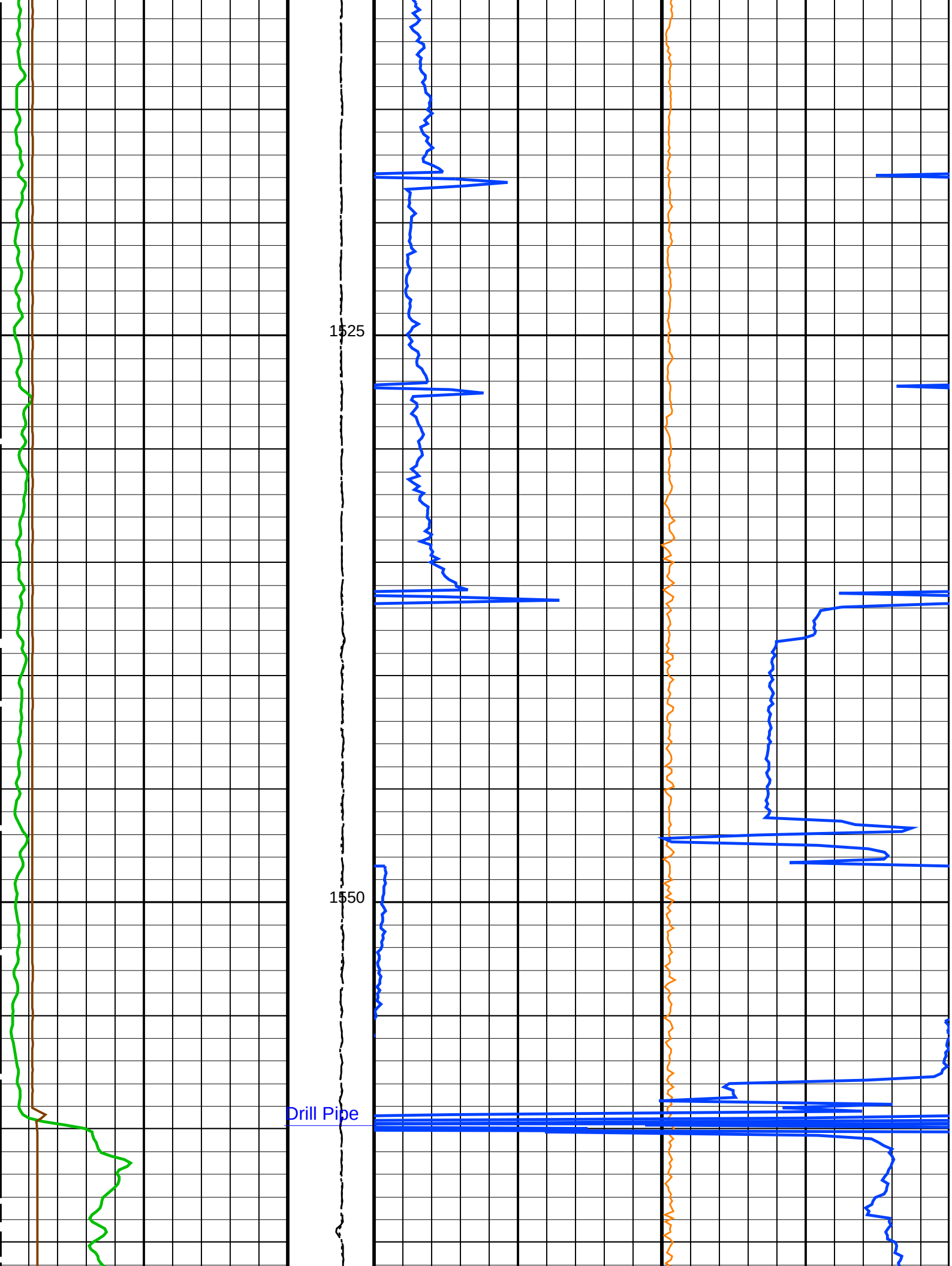
PIP SUMMARY

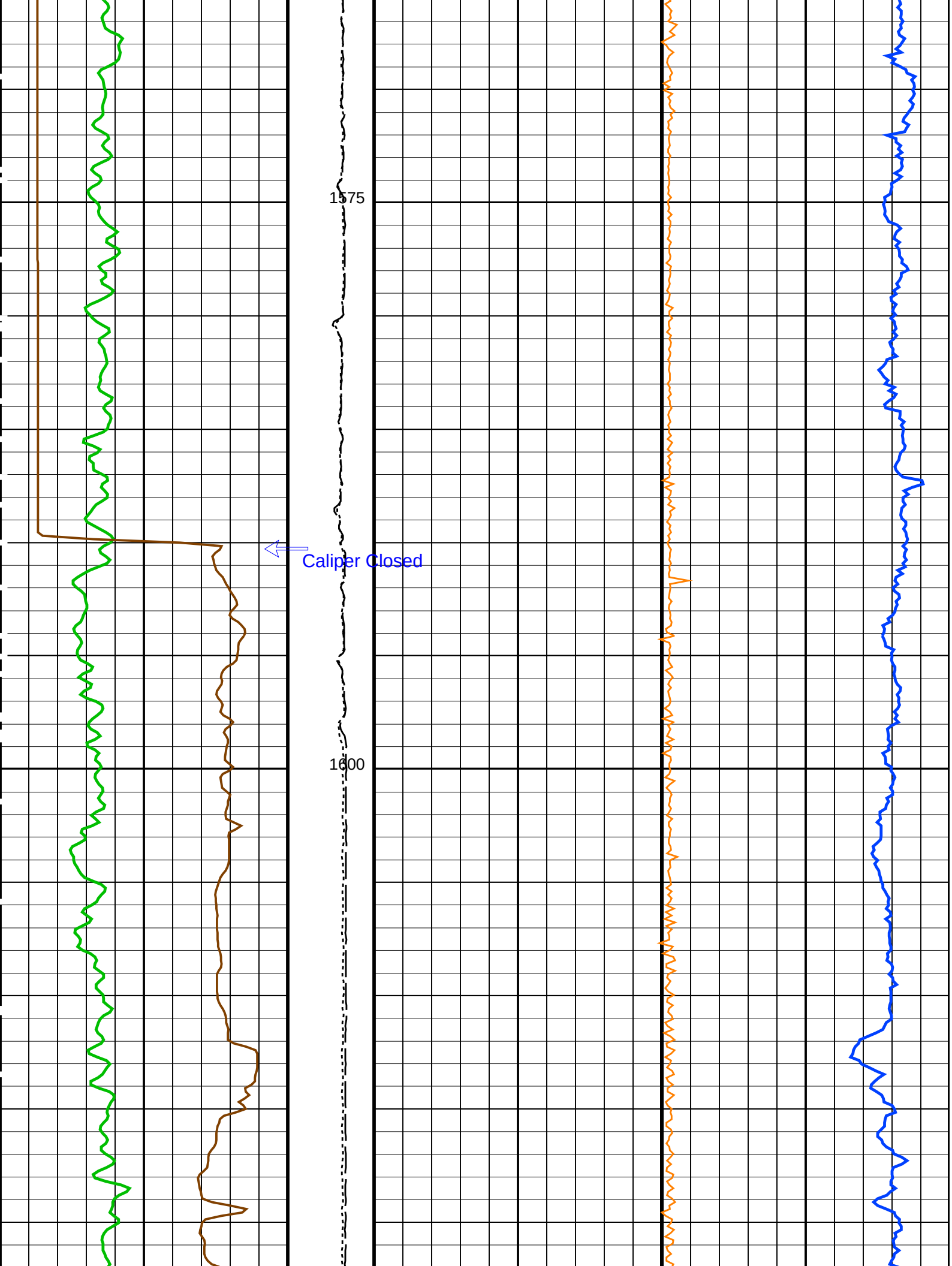
Time Mark Every 60 S

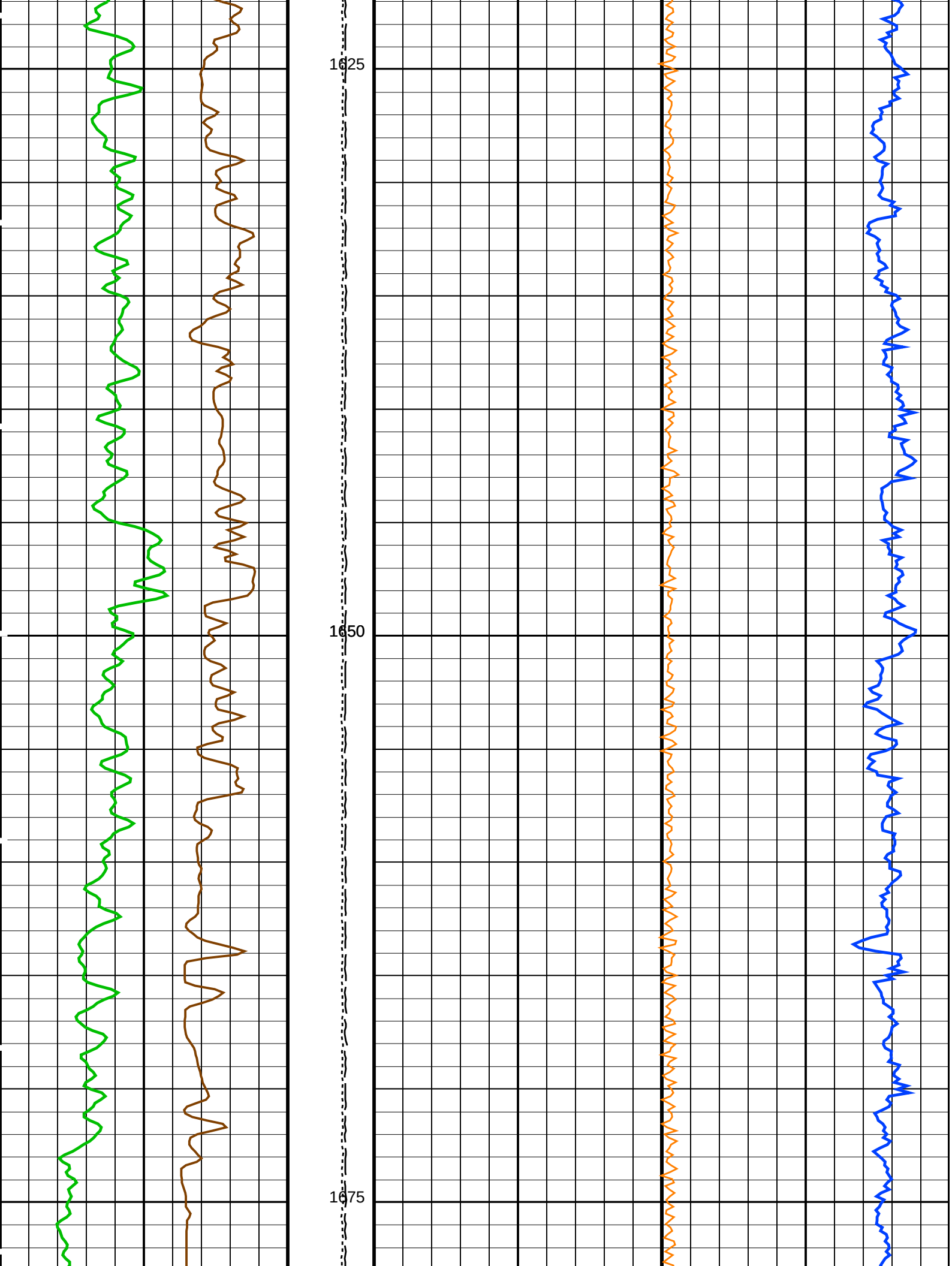
Gamma Ray (GR_EDTC)	Calibrated Downhole Force (CDF) (LBF)	Dual−Coil Susceptibility (MSSLSUS_LDEO)
0 (GAPI) 100	5000 0	0 (PPM) 5000
HLDS Caliper (LCAL)	**Tension (TENS) (LBF)**	**Axial Acceleration (MSSZACC_LDEO)**
0 (IN) 20	10000 0	0 (M/S2) 20

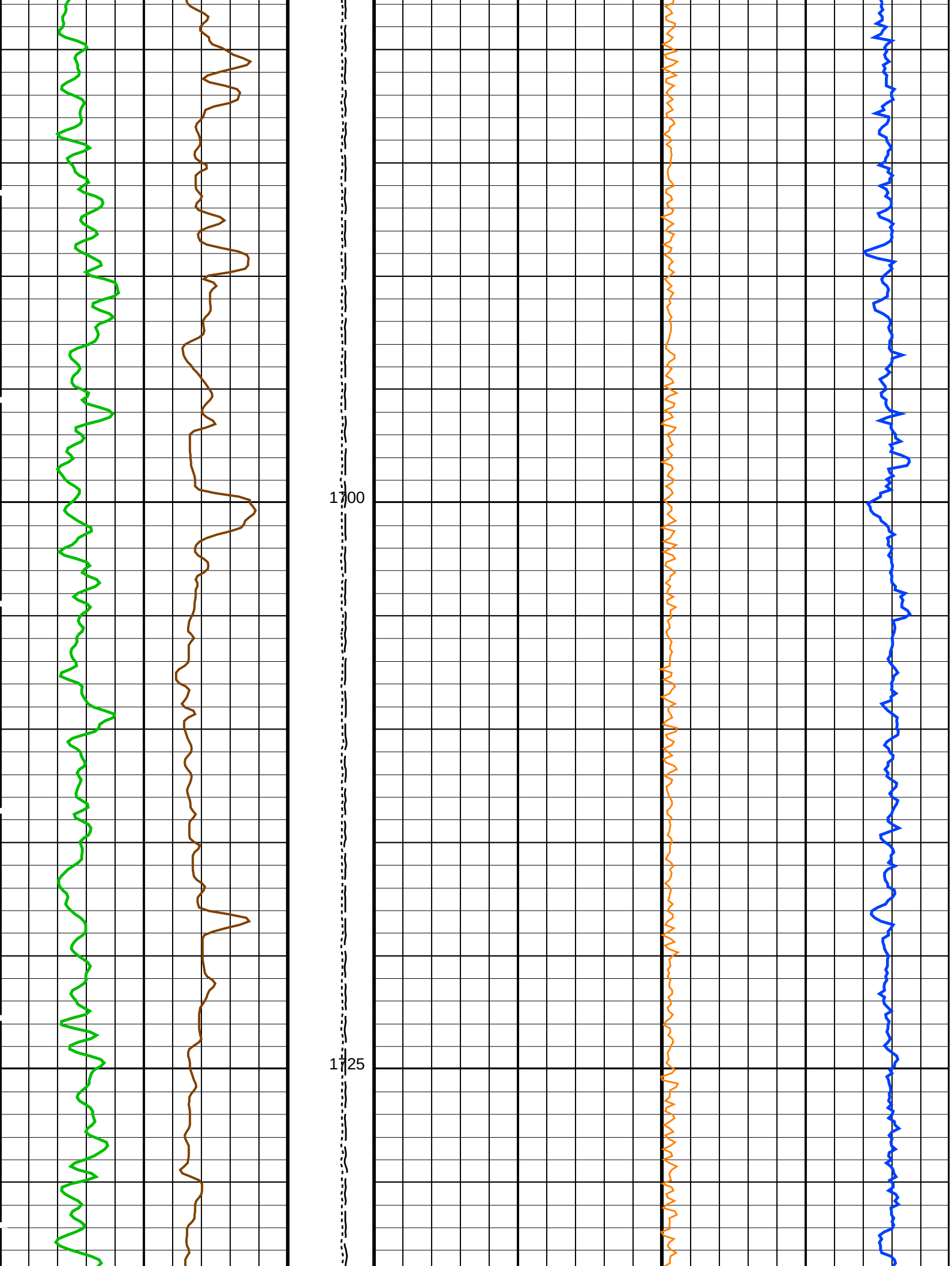


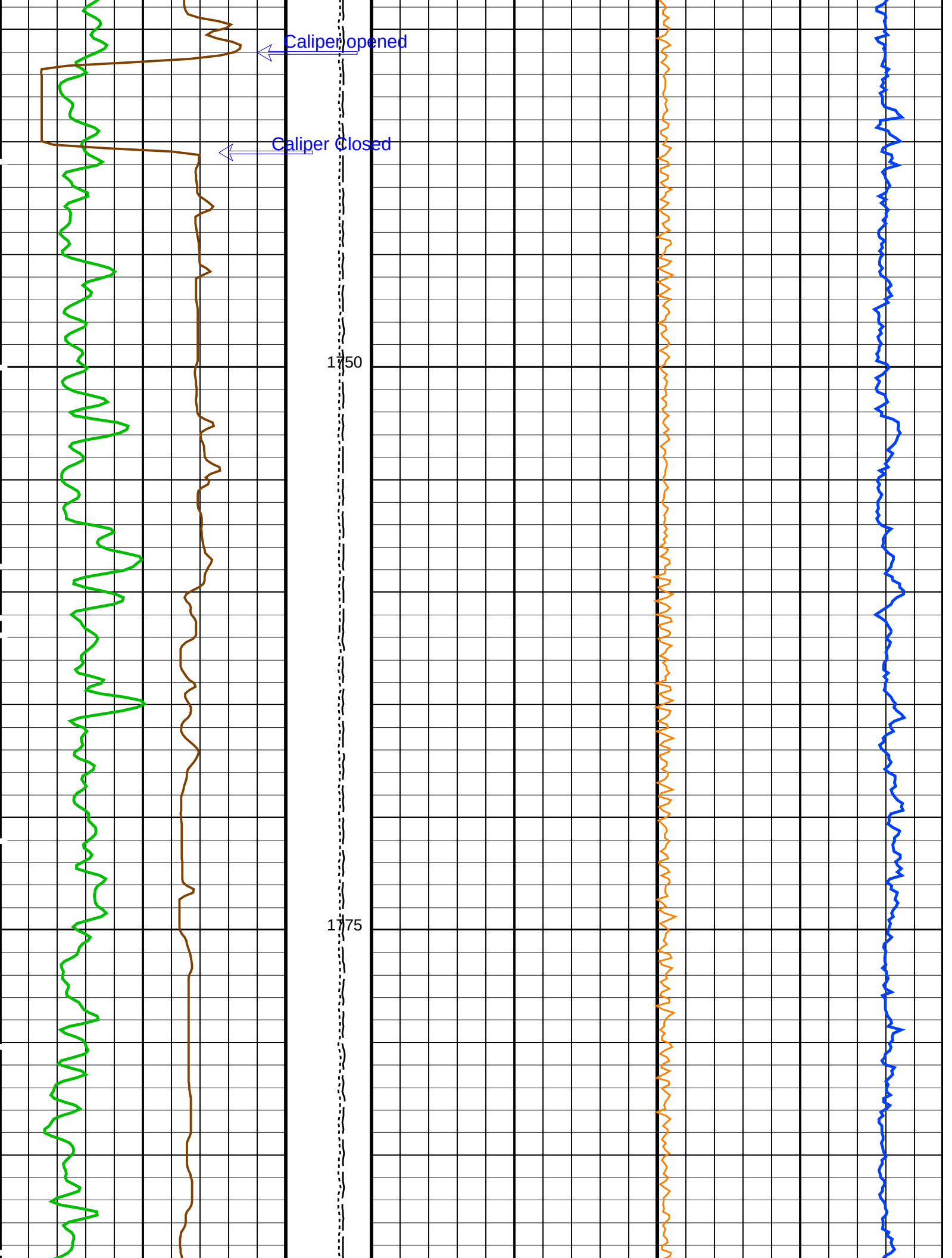

1475
Sea Floor
1500

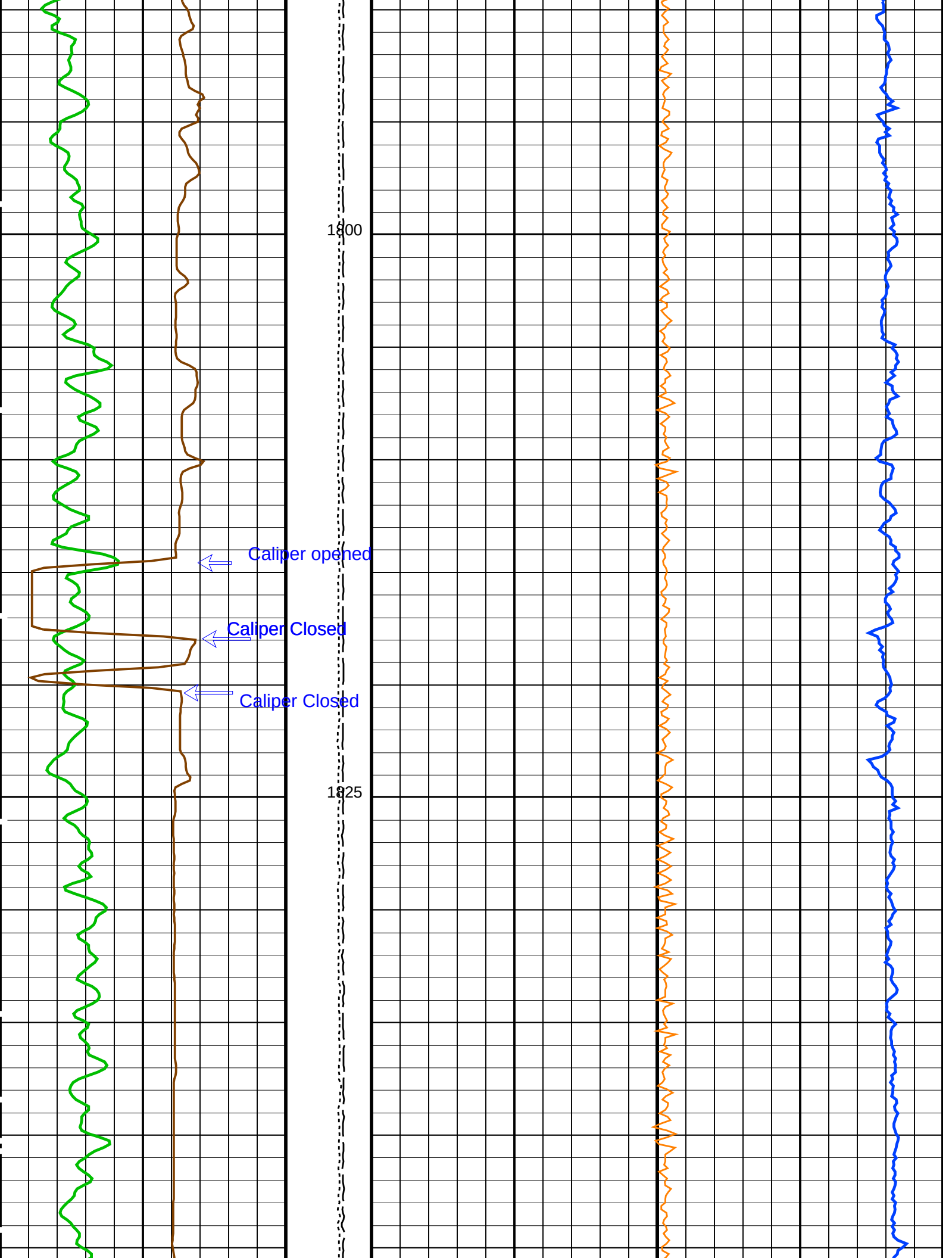

1525
1550
Drill Pipe

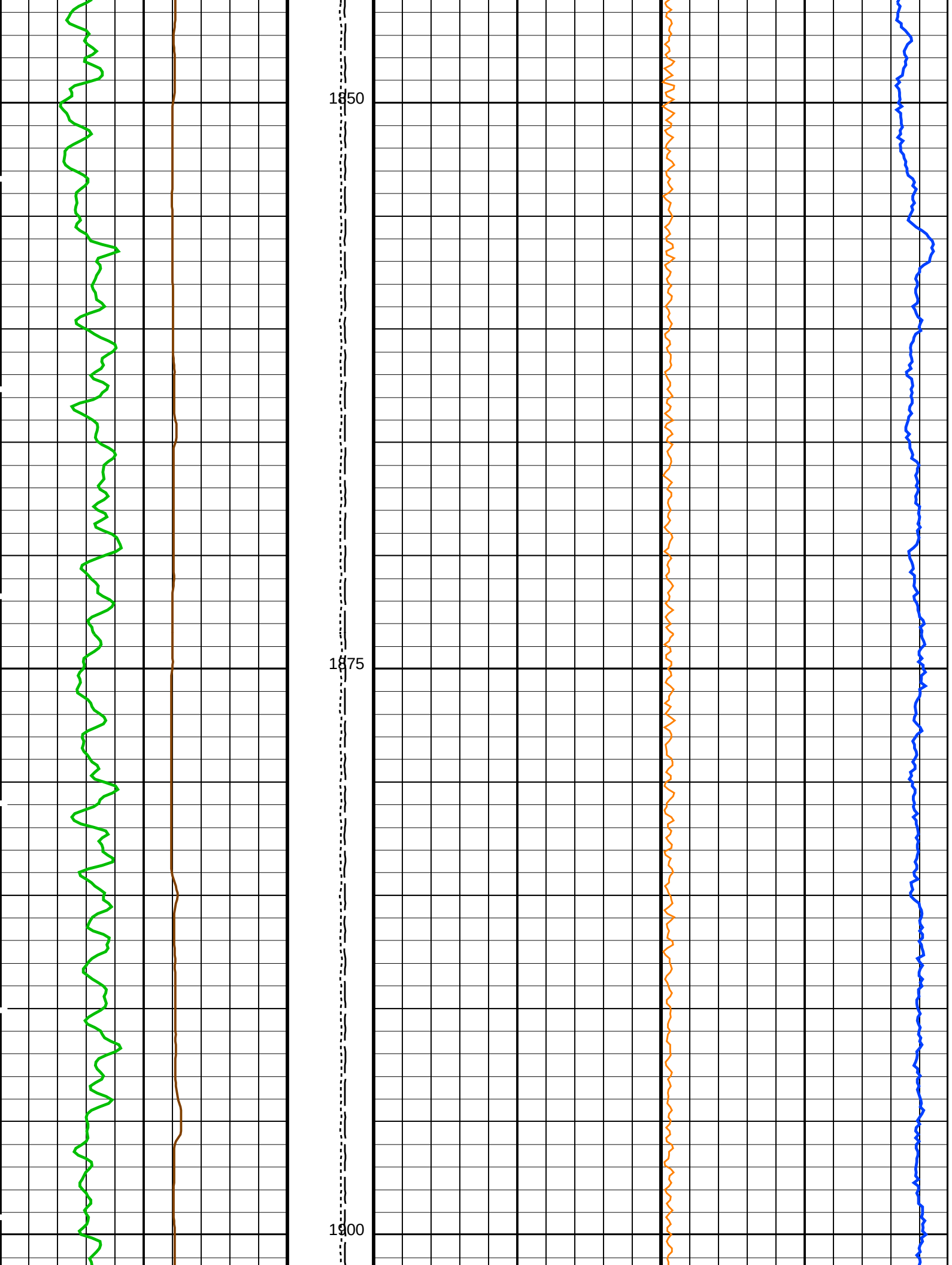

1575
Caliper Closed
1600

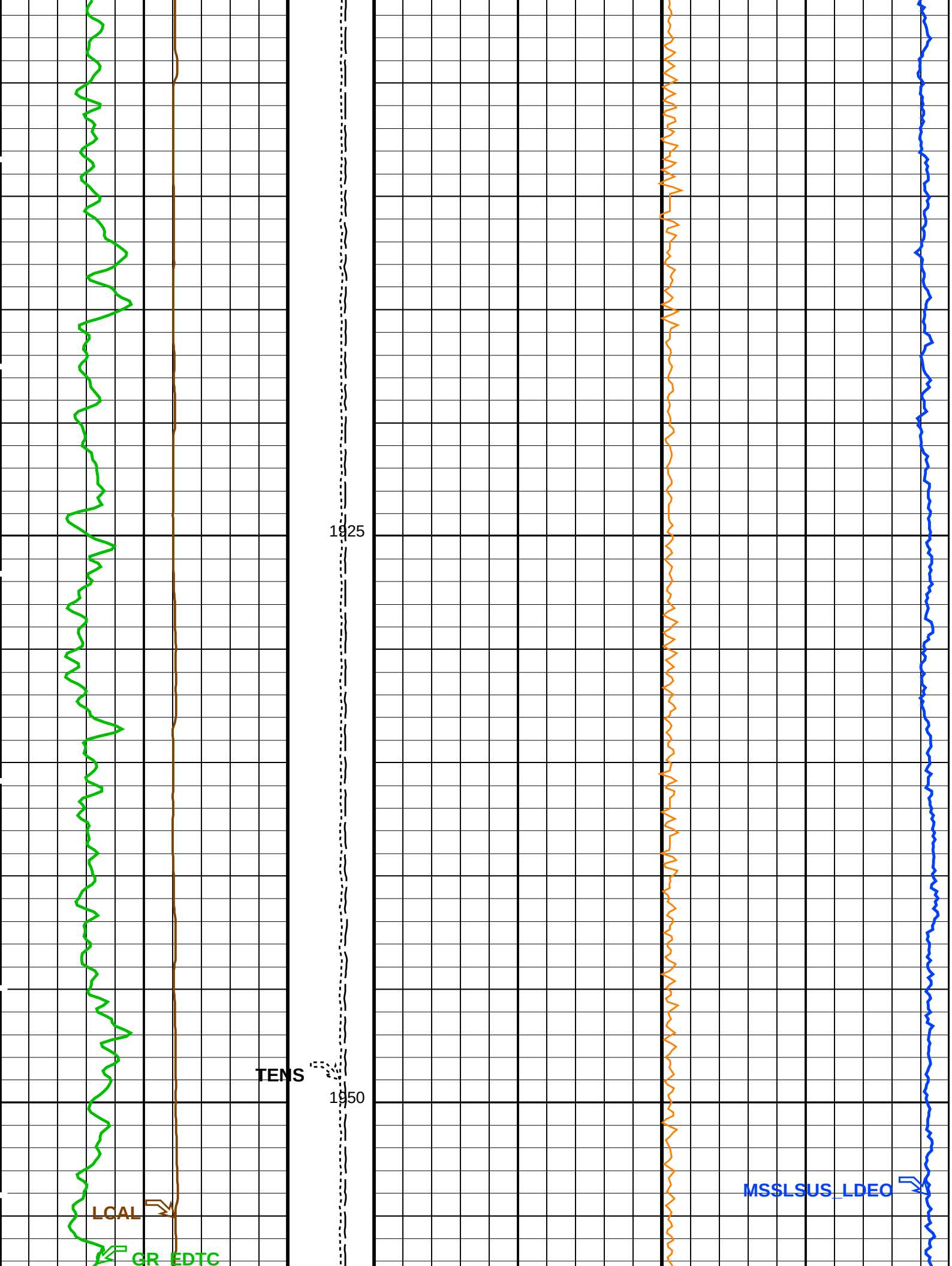

1625
1650
1675

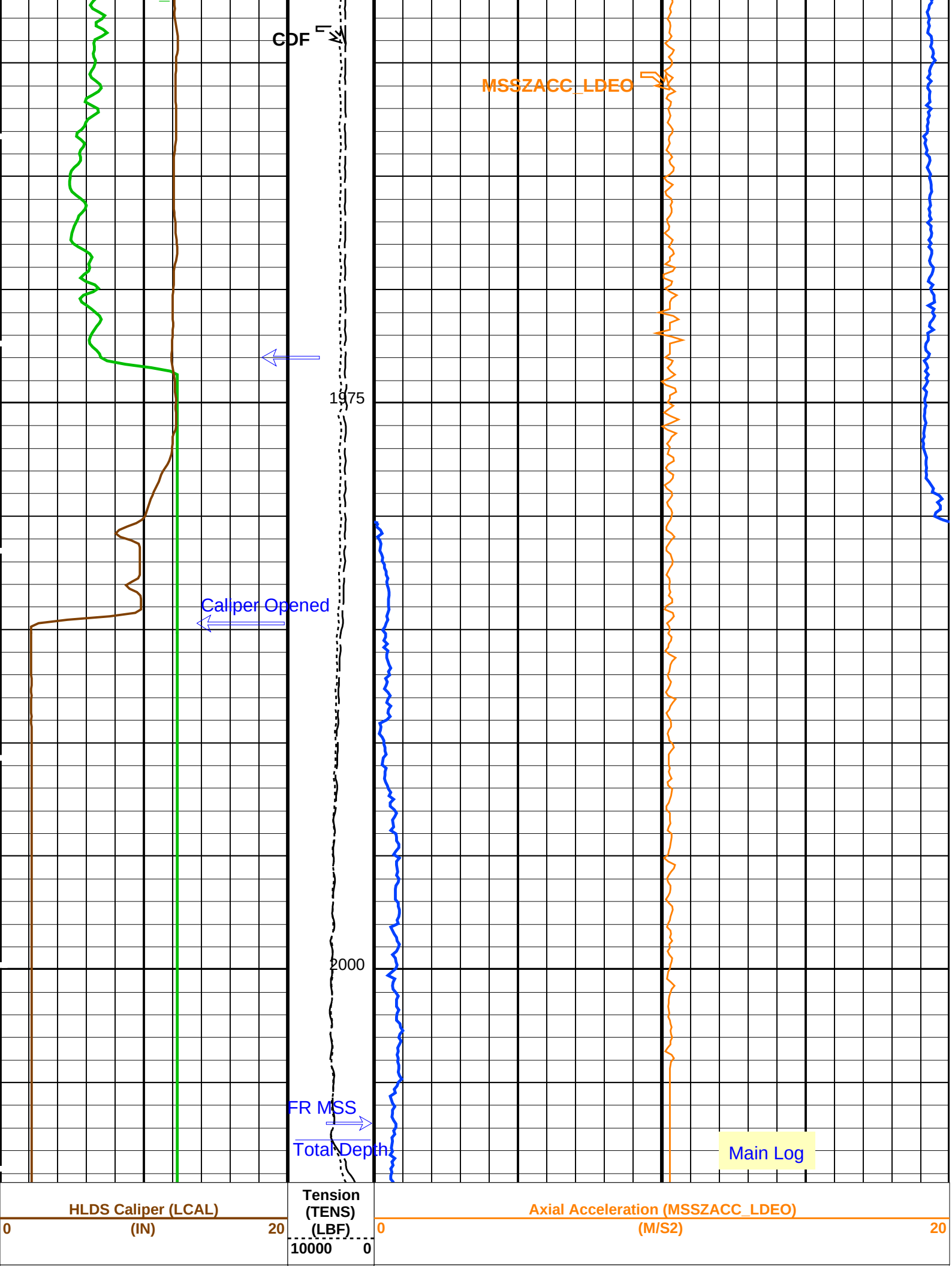

1700
1725

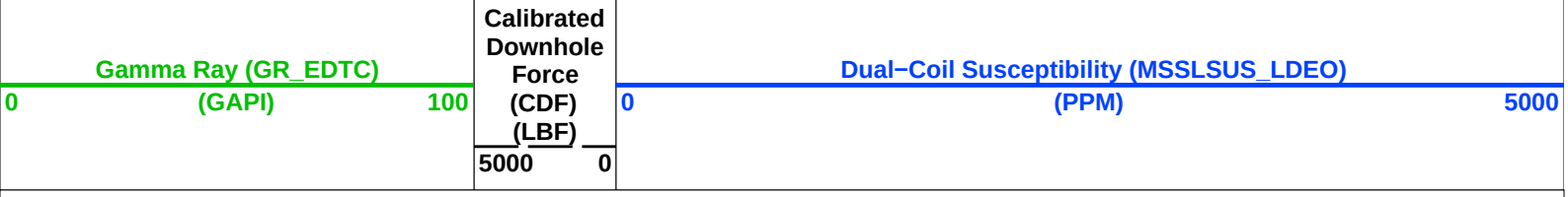

Caliper opened
Caliper Closed
1750
1775


1800
Caliper opened
Caliper Closed
Caliper Closed
1825


1850
1875
1900


1925
TENS
1950
LCAL
GR_EDTC
MSSLSUS_LDEO


CDF
MSSZACC_LDEO
1975
Caliper Opened
2000
FR MSS
Total Depth
Main Log
HLDS Caliper (LCAL)
0
(IN)
20
Tension
(TENS)
(LBF)
10000
0
Axial Acceleration (MSSZACC_LDEO)
0
(M/S2)
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	27.2932	DEGC
FREQ0	HRLT Frequency Index for Mode 0	32	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ6	HRLT Frequency Index for Mode 6	116	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	NOBARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	AUTO	
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO	
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO	
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO	
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO	
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO	
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PROCINV	Inversion Selection	ON	
PROCMFL	Inversion Micro−Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
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	1965.54	V
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2075.98	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	1729.06	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	NO	
DPPM	Density Porosity Processing Mode	HIRS	
DSCO_APS	APS TNPH Density Source Correction Option	MEASURED	
FSAL	Formation Salinity	−50000	PPM
FSCO_APS	APS TNPH Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO_APS	APS TNPH Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO_APS	APS TNPH Mud Cake Correction Option	NO	
MCOR_APS	APS TNPH Mud Correction	NATU	
MWCO_APS	APS TNPH Mud Weight Correction Option	NO	
NARC	APS Near/Array Calibration Ratio	1.06553	
NFRC	APS Near/Far Calibration Ratio	0.89014	
PTCO_APS	APS TNPH Pressure/Temperature Correction Option	NO	
SHT	Surface Hole Temperature	20	DEGC
TNCO_APS	APS TNPH Computation Option	YES	
HNGS−BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	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	−0.000607851	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
SHT	Surface Hole Temperature	20	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.03859	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.01909	
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	NOBARITE	
ISSBAR_EDTC	Nuclear Mud Type	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	NO	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U−ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U−TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	11.438	IN

BSAL	Borehole Salinity	35000.00	PPM
CSIZ	Current Casing Size	5.000	IN
CWEI	Casing Weight	168.00	LB/F
DFD	Drilling Fluid Density	1.02	G/C3
FLEV	Fluid Level	−50000.00	M
MST	Mud Sample Temperature	23.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
RMFS	Resistivity of Mud Filtrate Sample	−50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	2015	M
TDD	Total Depth − Driller	2010.20	M
TDL	Total Depth − Logger	2012.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: MSS_Logging Vertical Scale: 1:200 Graphics File Created: 23−Oct−2016 22:50

OP System Version: 19C0−187

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

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_013LUP	FN:21	PRODUCER	23−Oct−2016 22:50		
BACKUP	MSS_LDEO_HRLA_LDL_013LUP	FN:22	PRODUCER	23−Oct−2016 22:50		

Company: International Ocean Discovery Program Well: Expedition 363, Site U1482C

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_012LUP	FN:19	PRODUCER	23−Oct−2016 22:15	2009.4 M	1851.7 M
BACKUP	MSS_LDEO_HRLA_LDL_012LUP	FN:20	PRODUCER	23−Oct−2016 22:15	2009.4 M	1851.7 M

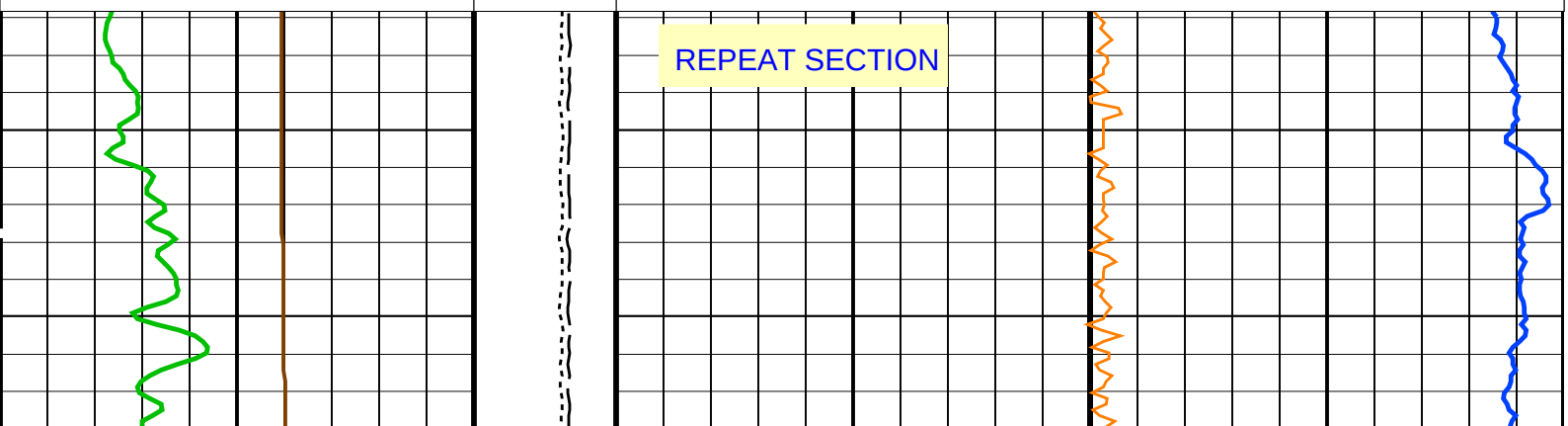
OP System Version: 19C0−187

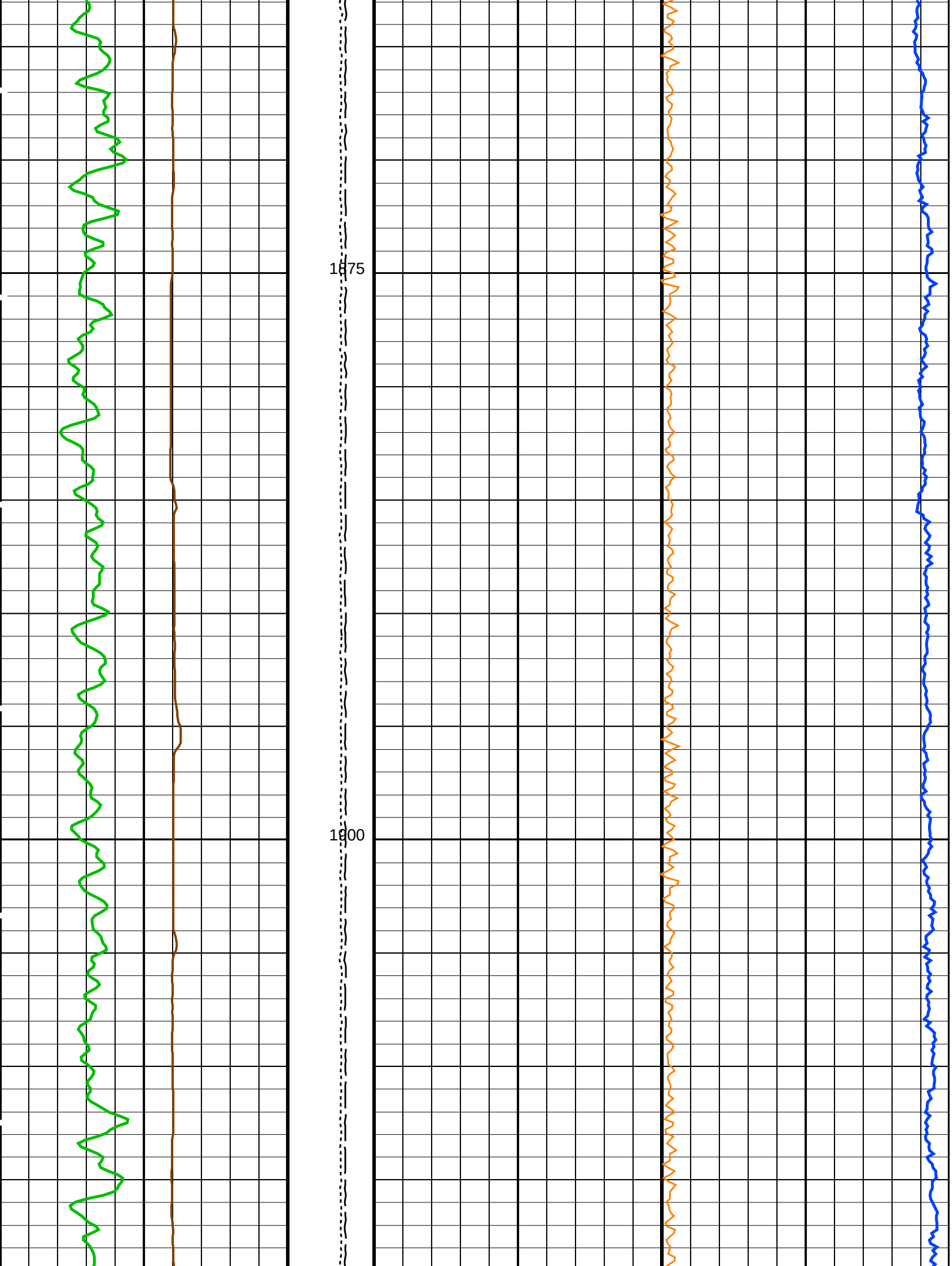
MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
APS−C	19C0−187	HNGC−B	19C0−187
HNGS−BA	19C0−187	EDTC−B	SKK−5169−EDTCB

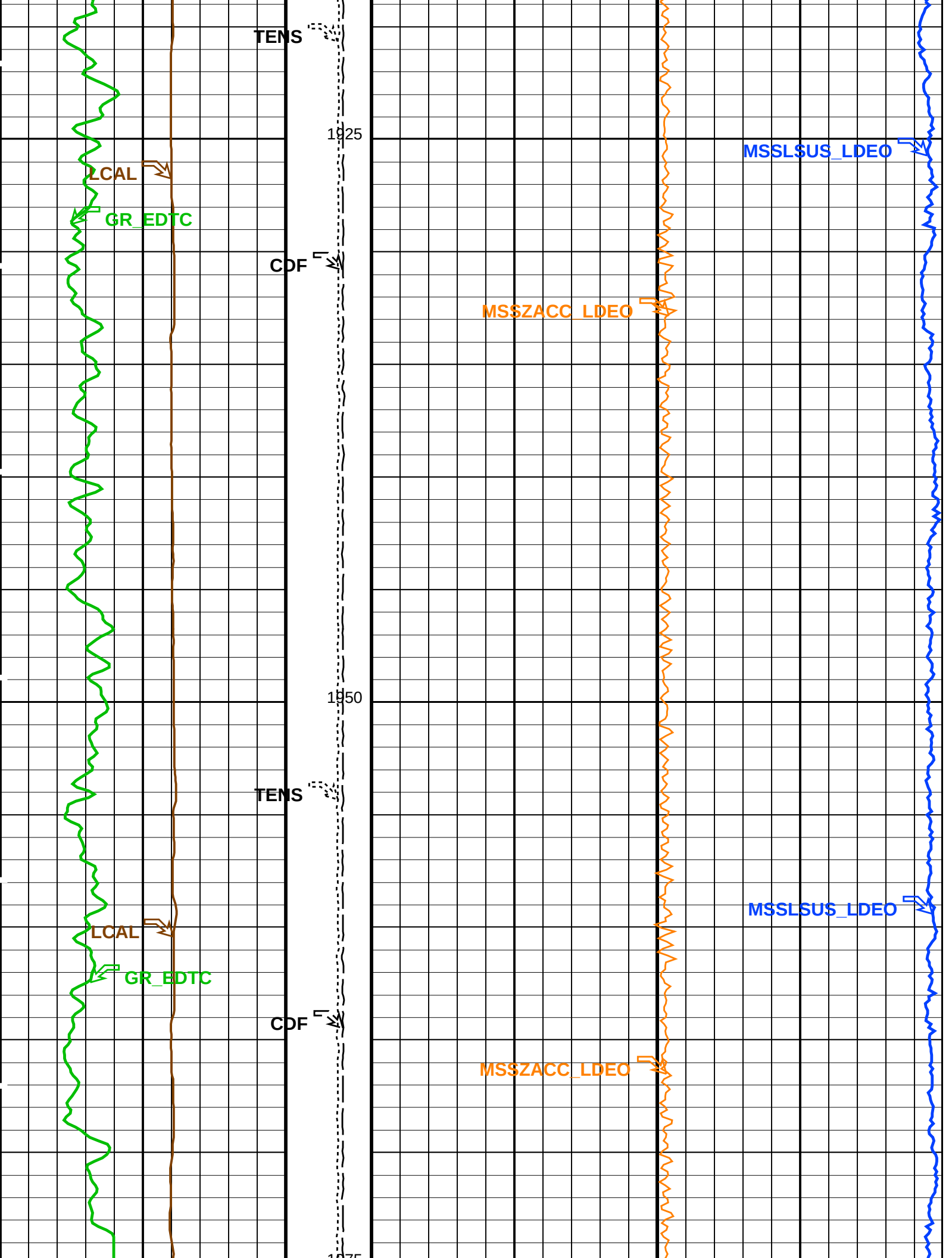
PIP SUMMARY

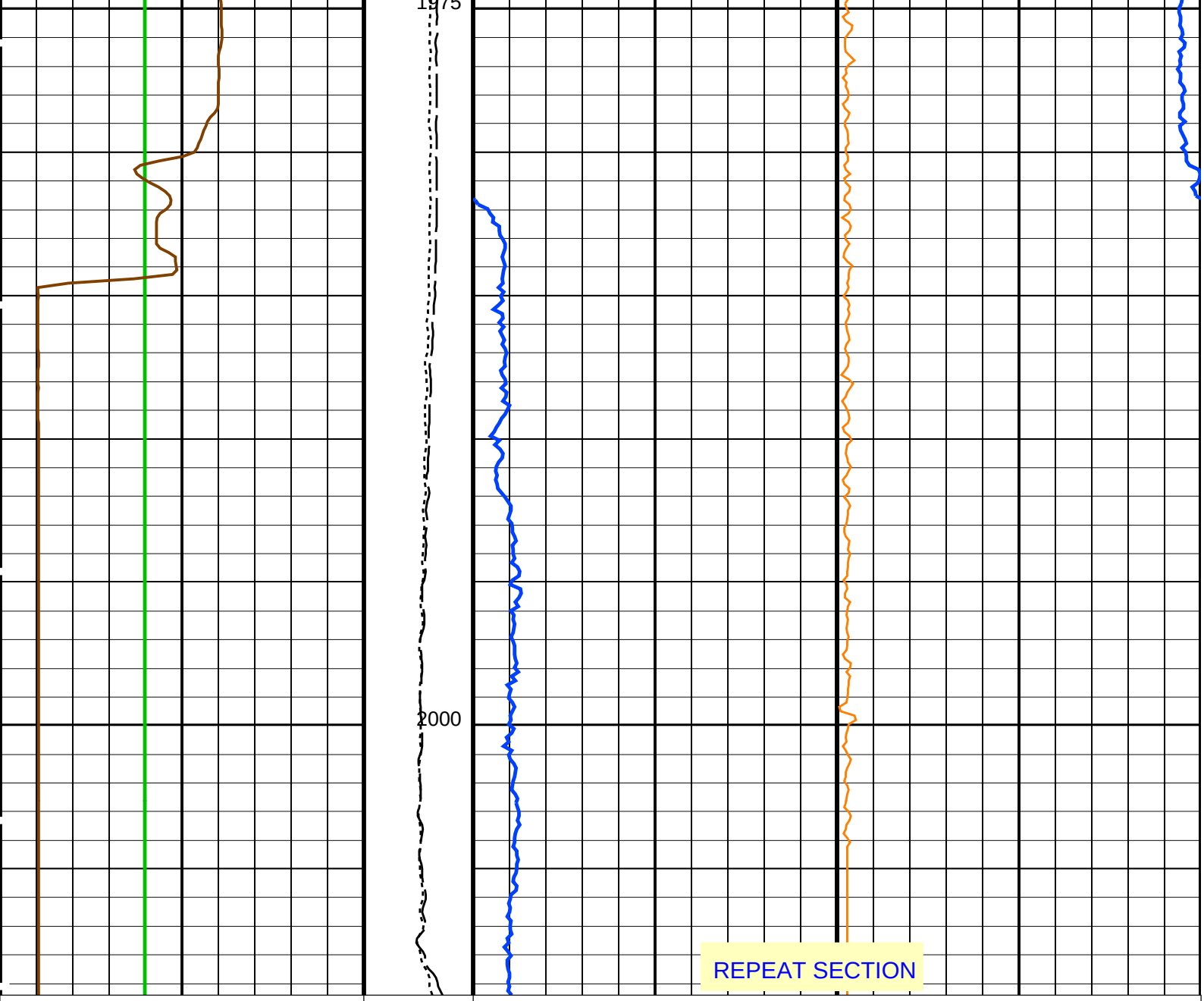
Time Mark Every 60 S

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




1875
1900


TENS
1925
MSSLSUS_LDEO
LCAL
GR_EDTC
CDF
MSSZACC_LDEO
1950
TENS
MSSLSUS_LDEO
LCAL
GR_EDTC
CDF
MSSZACC_LDEO



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

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	HRLT−B: High Resolution Laterolog Array − B		
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	27.2932	DEGC
FREQ0	HRLT Frequency Index for Mode 0	32	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	

FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ6	HRLT Frequency Index for Mode 6	116	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	NOBARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	AUTO	
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO	
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO	
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO	
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO	
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO	
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PROCINV	Inversion Selection	ON	
PROCMFL	Inversion Micro−Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
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	1965.54	V
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2075.98	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	1729.06	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	NO	
DPPM	Density Porosity Processing Mode	HIRS	
DSCO_APS	APS TNPH Density Source Correction Option	MEASURED	
FSAL	Formation Salinity	−50000	PPM
FSCO_APS	APS TNPH Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO_APS	APS TNPH Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO_APS	APS TNPH Mud Cake Correction Option	NO	
MCOR_APS	APS TNPH Mud Correction	NATU	
MWCO_APS	APS TNPH Mud Weight Correction Option	NO	
NARC	APS Near/Array Calibration Ratio	1.06553	
NFRC	APS Near/Far Calibration Ratio	0.89014	
PTCO_APS	APS TNPH Pressure/Temperature Correction Option	NO	
SHT	Surface Hole Temperature	20	DEGC
TNCO_APS	APS TNPH Computation Option	YES	
HNGS−BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC

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	−0.00136411	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
SHT	Surface Hole Temperature	20	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.02708	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.987754	
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	NOBARITE	
ISSBAR_EDTC	Nuclear Mud Type	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	NO	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U−ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U−TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	11.438	IN
BSAL	Borehole Salinity	35000.00	PPM
CSIZ	Current Casing Size	5.000	IN
CWEI	Casing Weight	168.00	LB/F
DFD	Drilling Fluid Density	1.02	G/C3
FLEV	Fluid Level	−50000.00	M
MST	Mud Sample Temperature	23.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
RMFS	Resistivity of Mud Filtrate Sample	−50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	2015	M
TDD	Total Depth − Driller	2010.20	M
TDL	Total Depth − Logger	2012.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: MSS_Logging Vertical Scale: 1:200 Graphics File Created: 23−Oct−2016 22:15

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

Output DLIS Files

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_012LUP	FN:19	PRODUCER	23−Oct−2016 22:15		
BACKUP	MSS_LDEO_HRLA_LDL_012LUP	FN:20	PRODUCER	23−Oct−2016 22:15		

Output DLIS Files

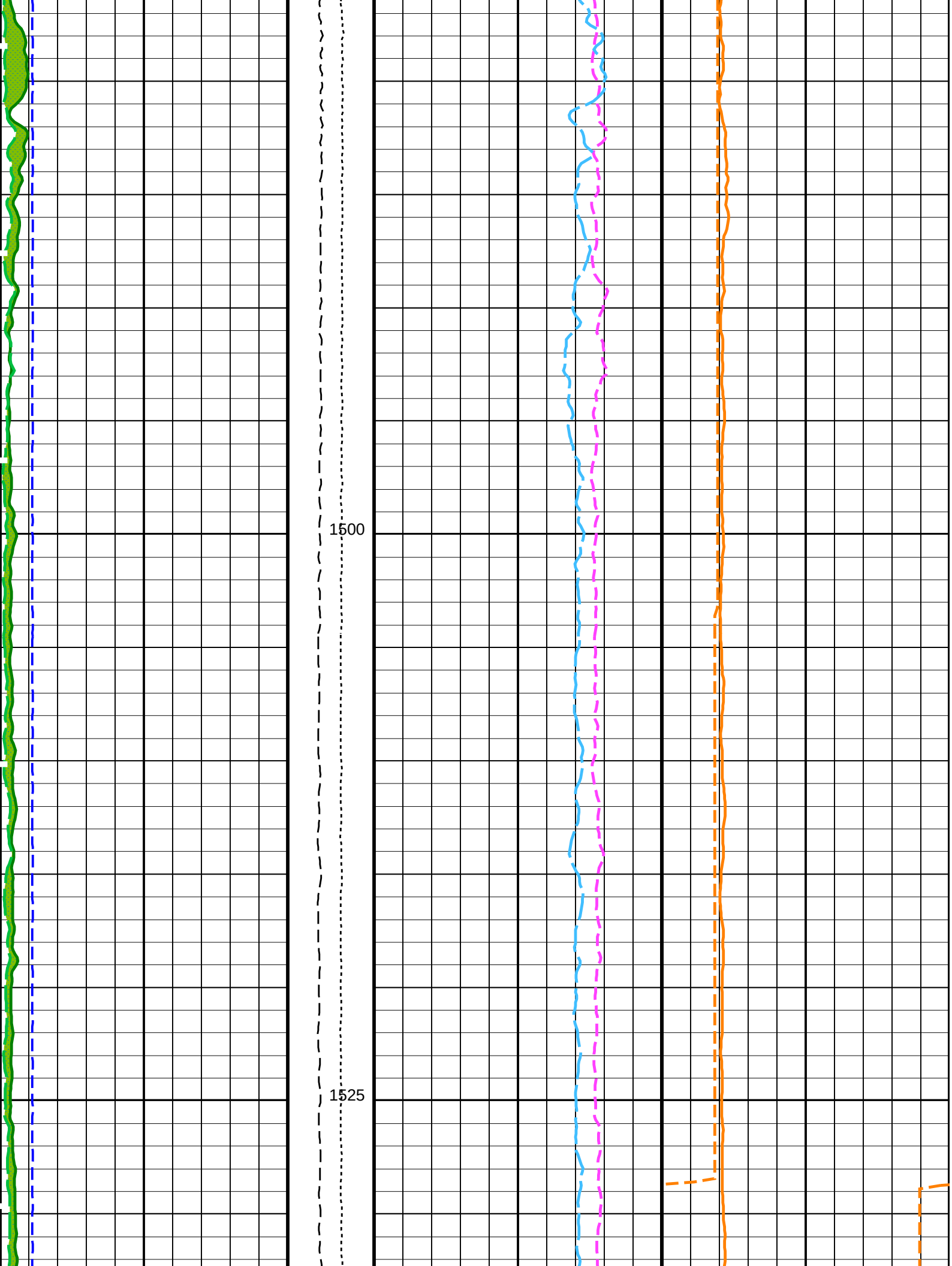
DEFAULT	MSS_LDEO_HRLA_LDL_013LUP	FN:21	PRODUCER	23−Oct−2016 22:50	2009.4 M	1452.5 M
BACKUP	MSS_LDEO_HRLA_LDL_013LUP	FN:22	PRODUCER	23−Oct−2016 22:50	2009.4 M	1452.5 M

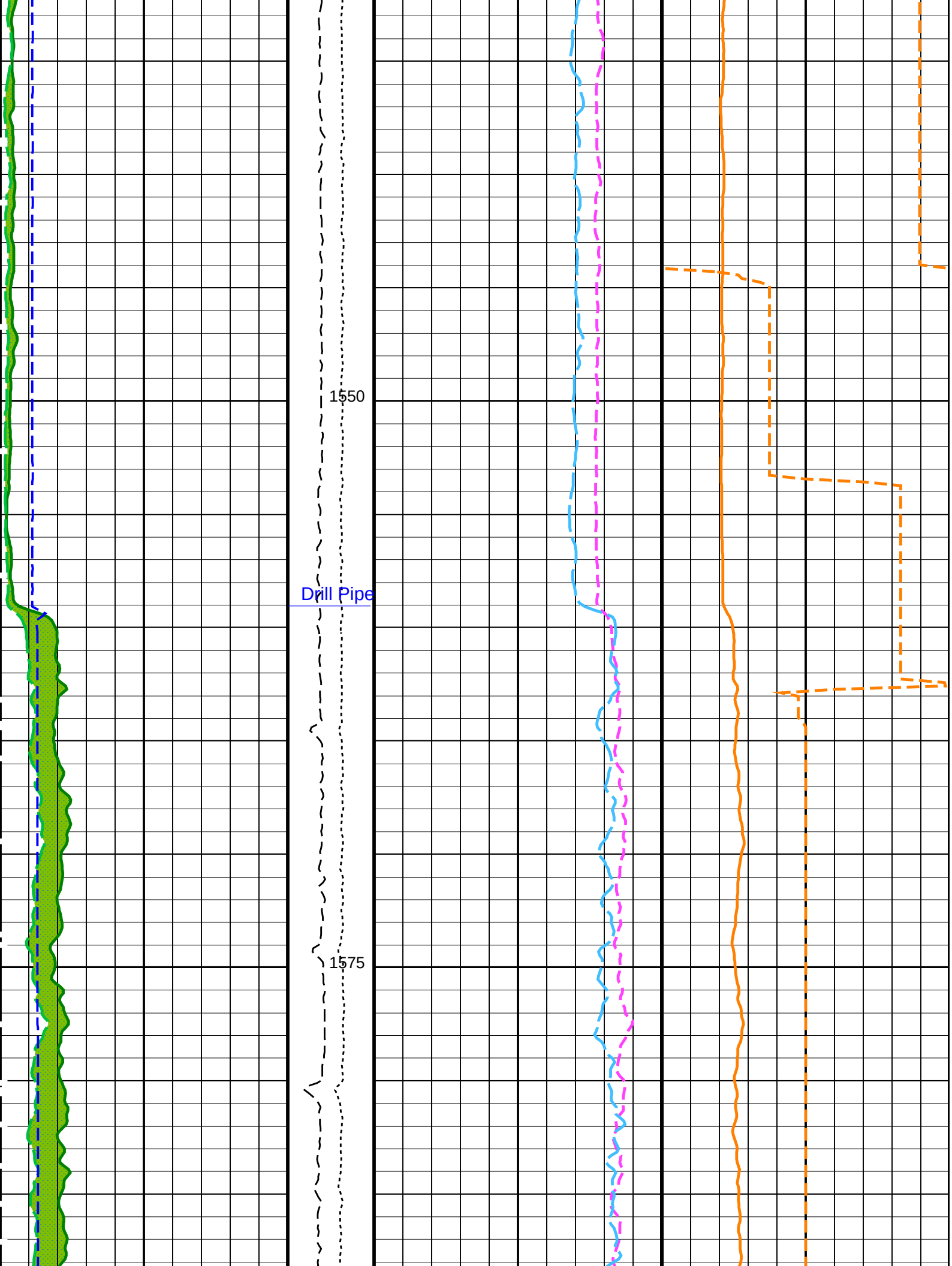
OP System Version: 19C0−187

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

PIP SUMMARY

Time Mark Every 60 S


1500
1525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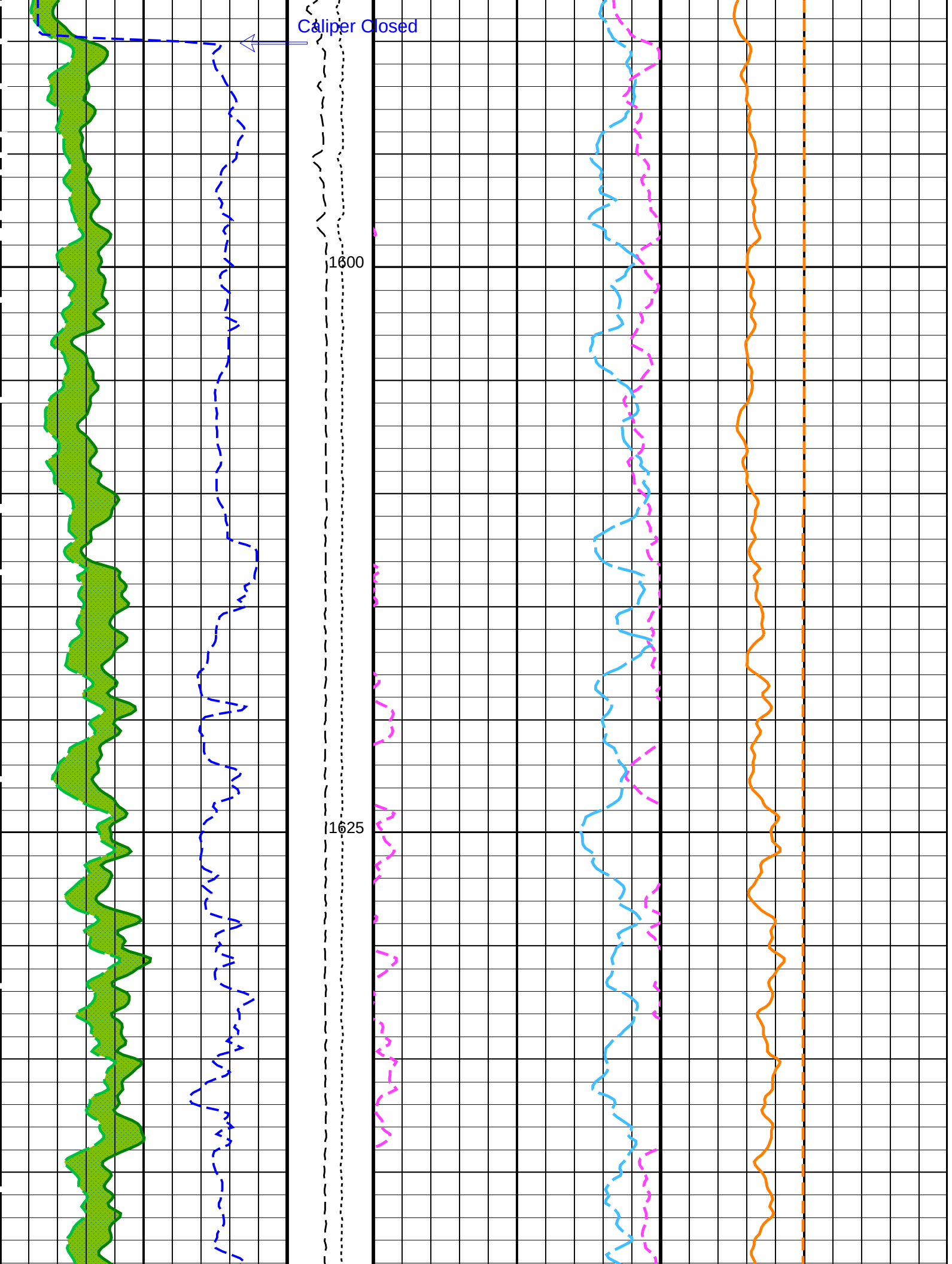
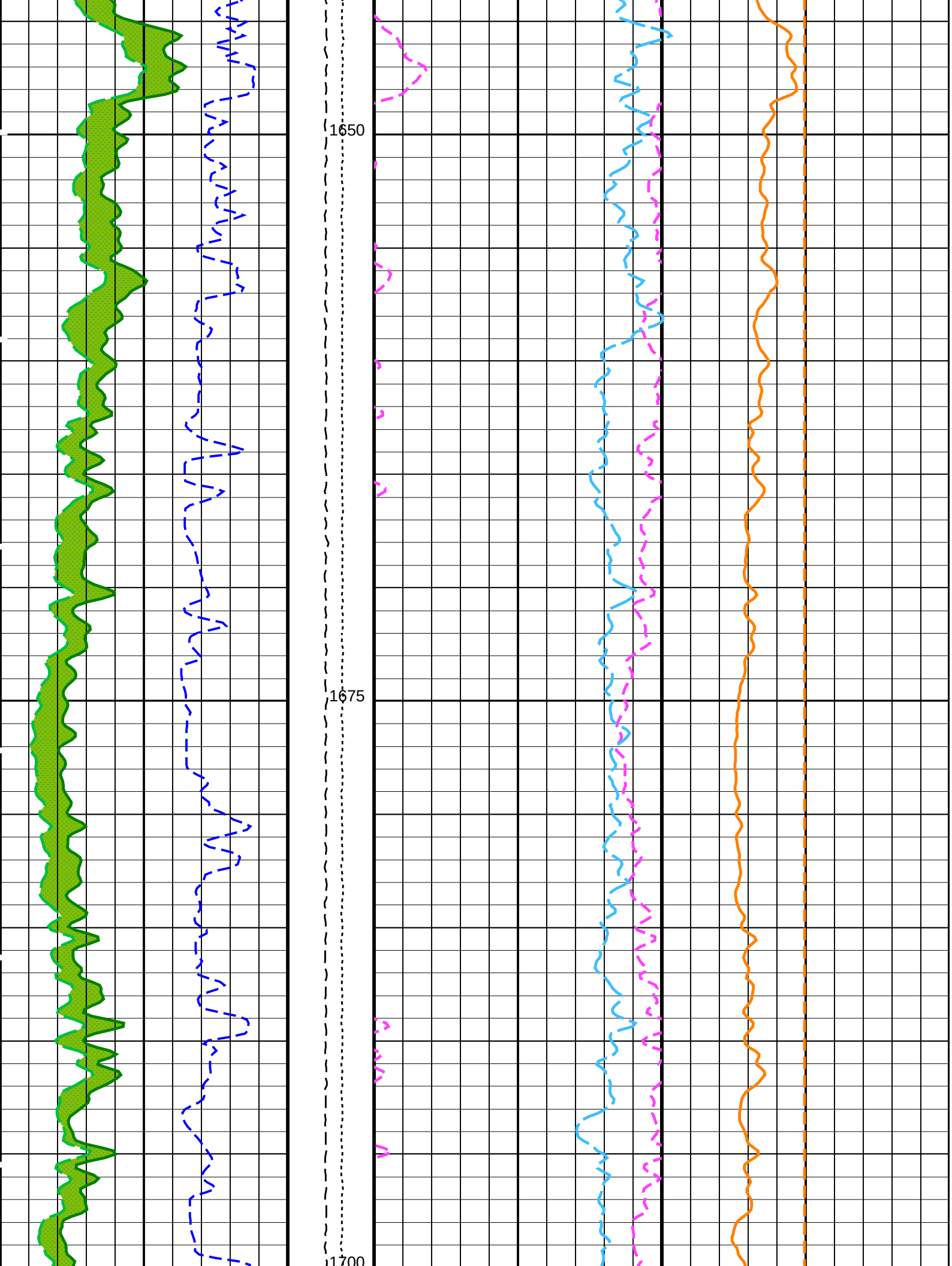
Drill Pipe
1575


Caliper Closed
1600
1625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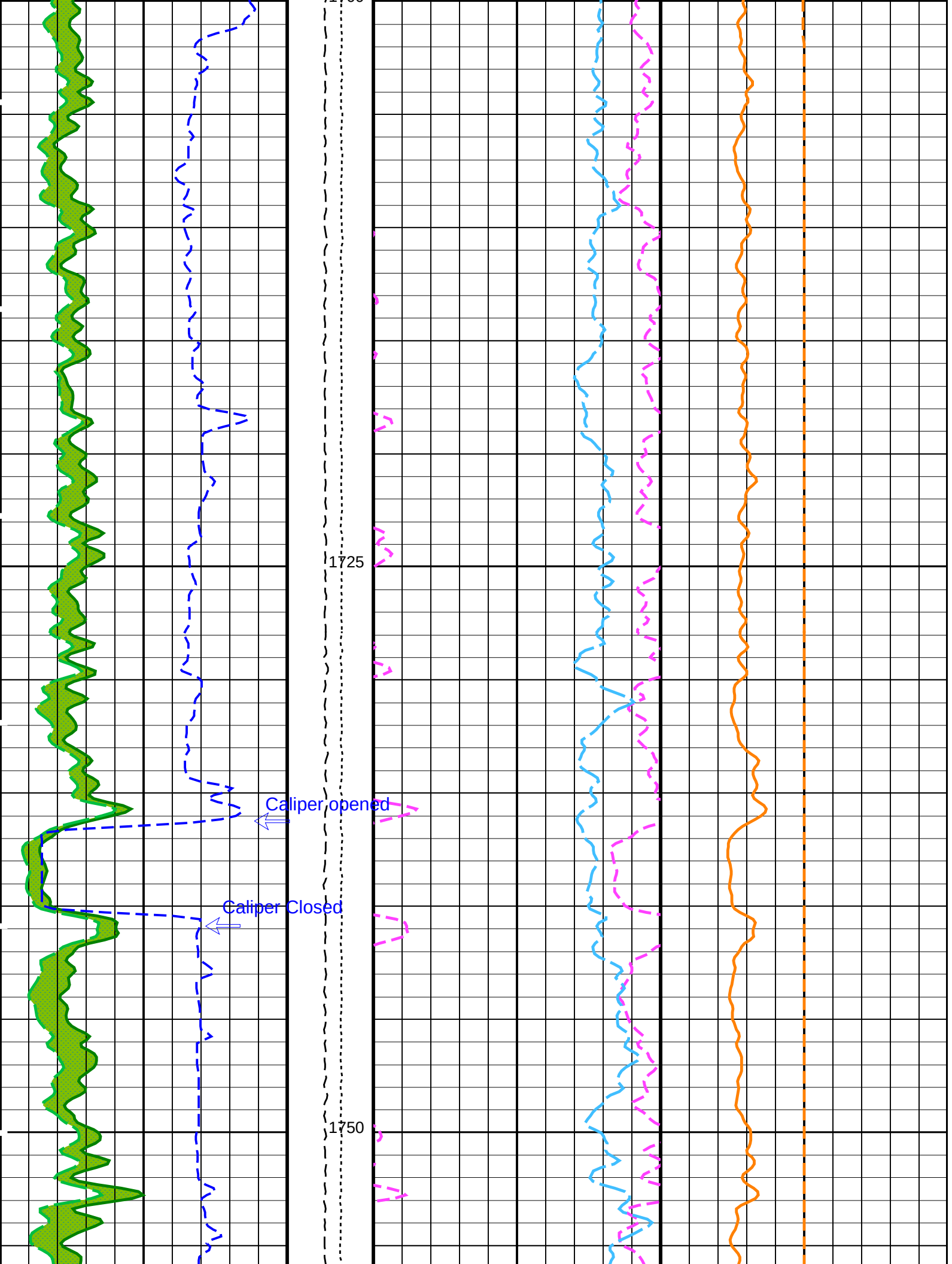
1675
1700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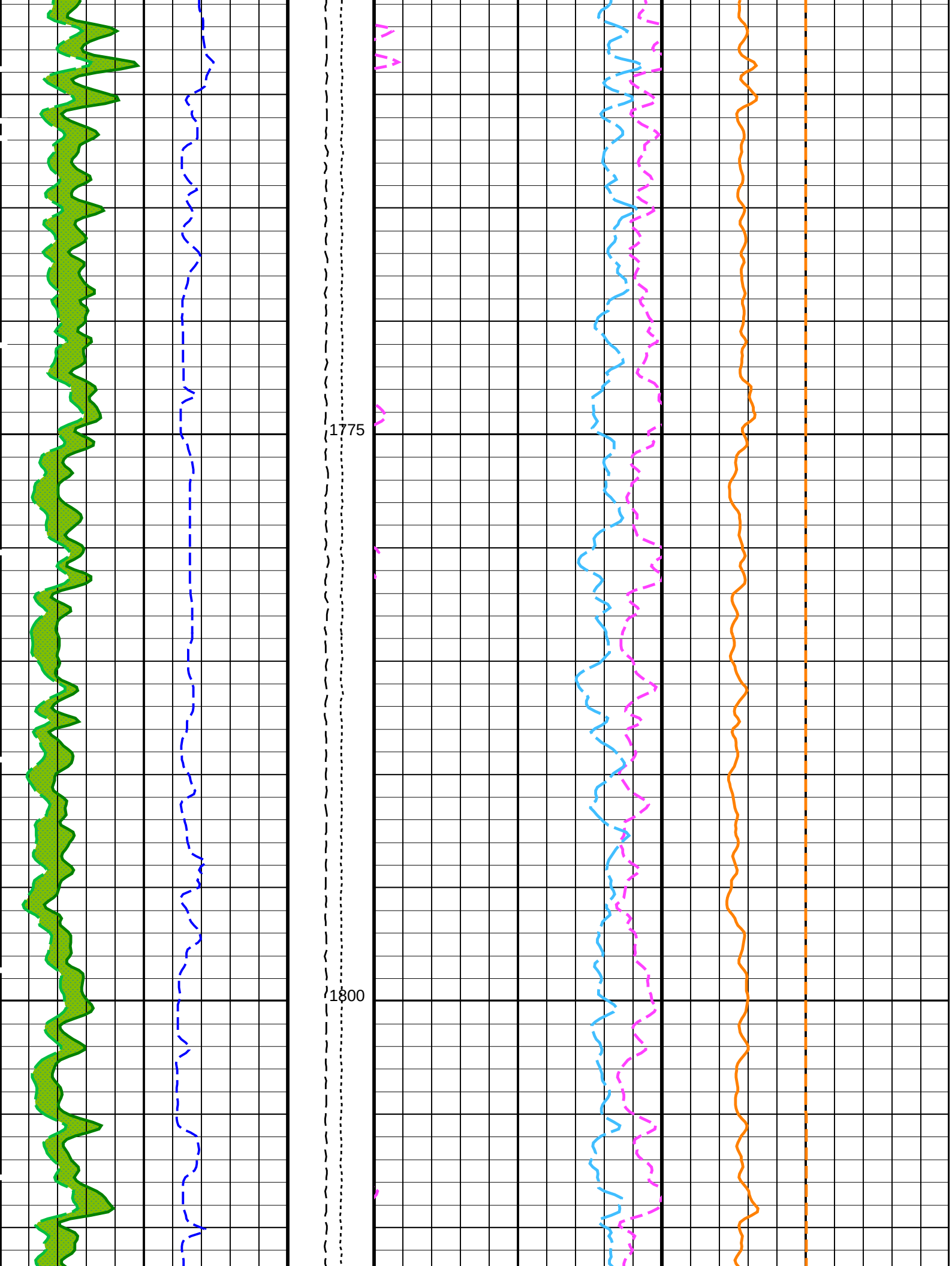
Caliper opened
Caliper Closed
1750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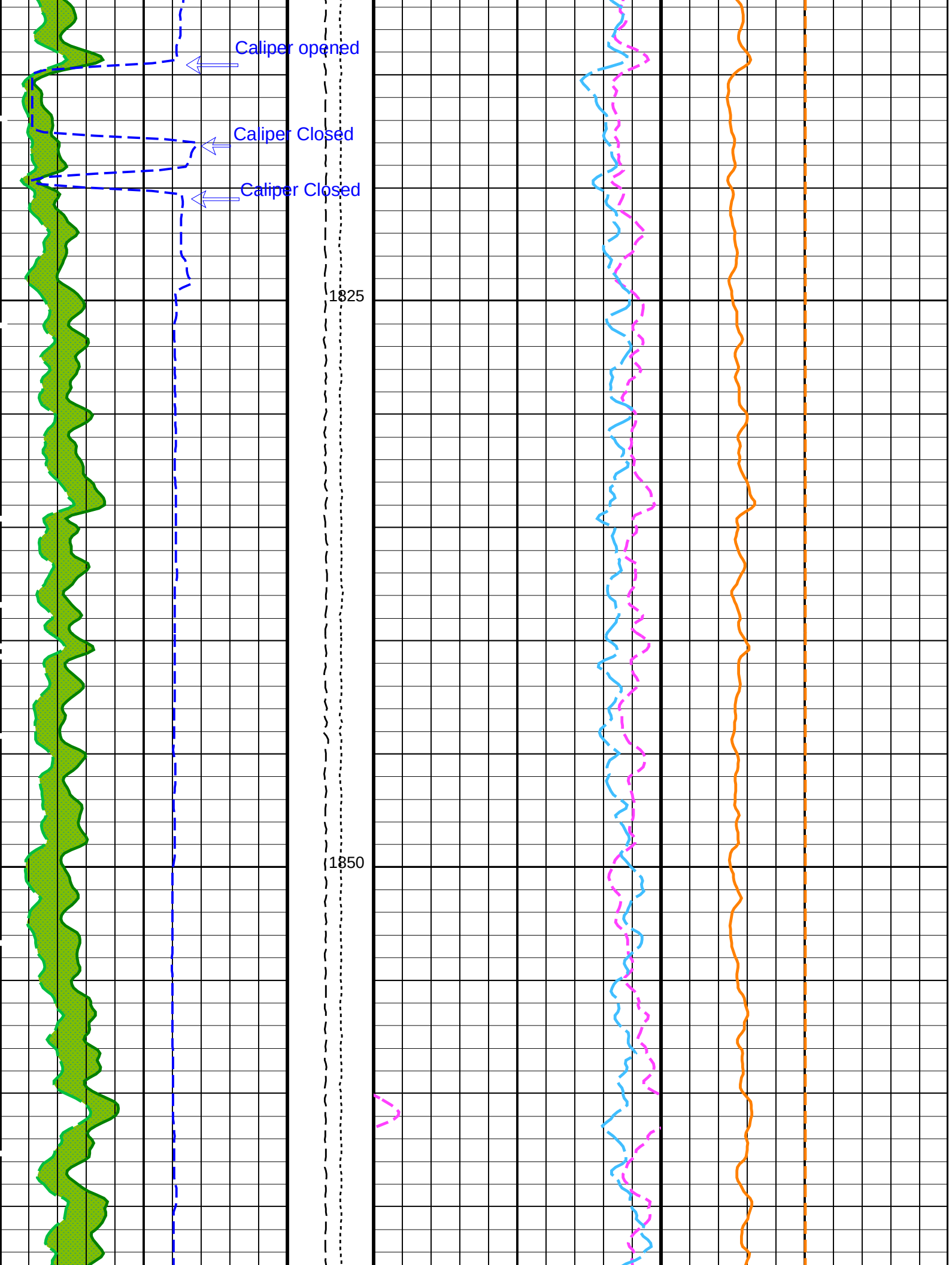
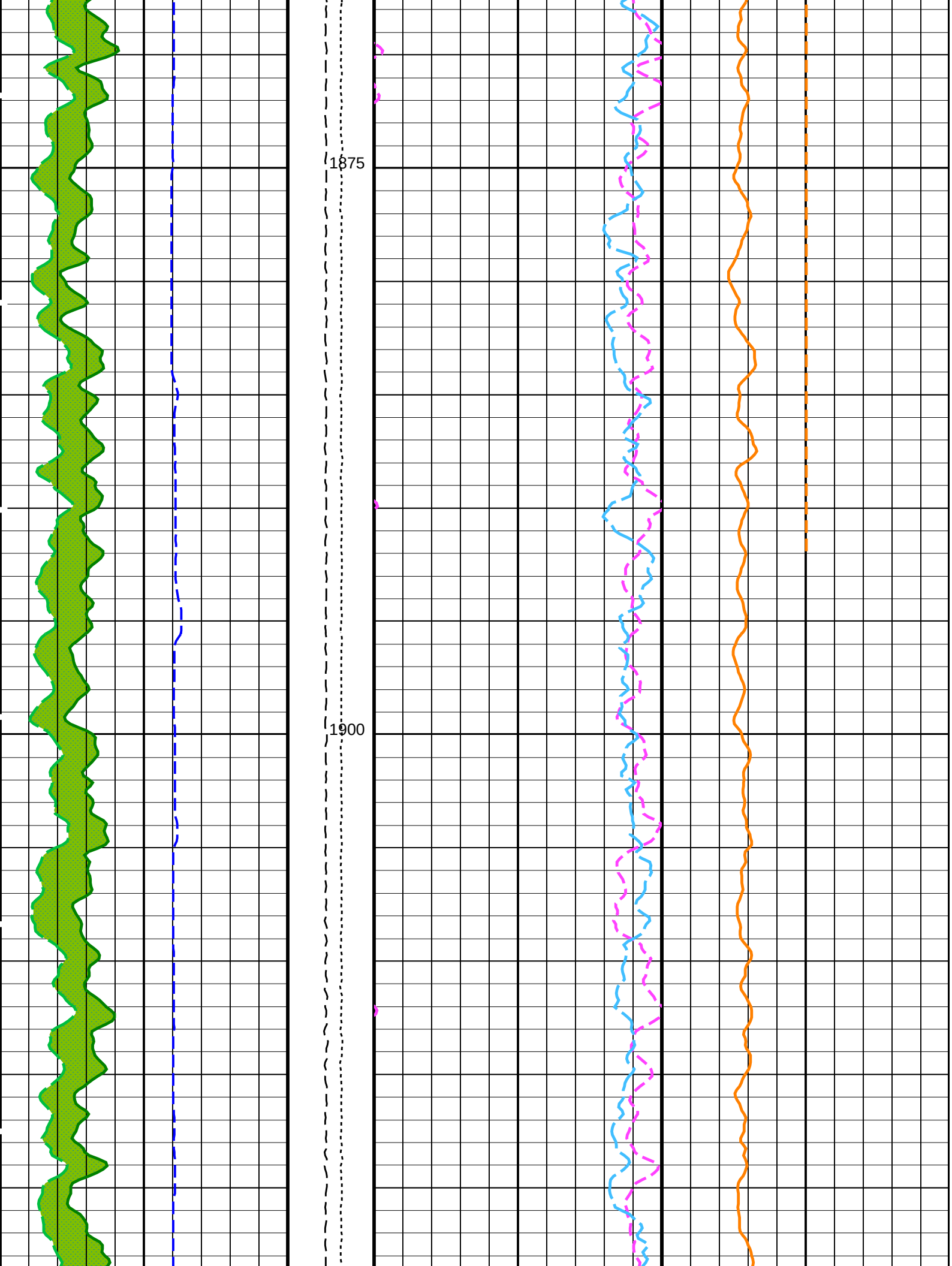
1800


Caliper opened
Caliper Closed
Caliper Closed
1825
1850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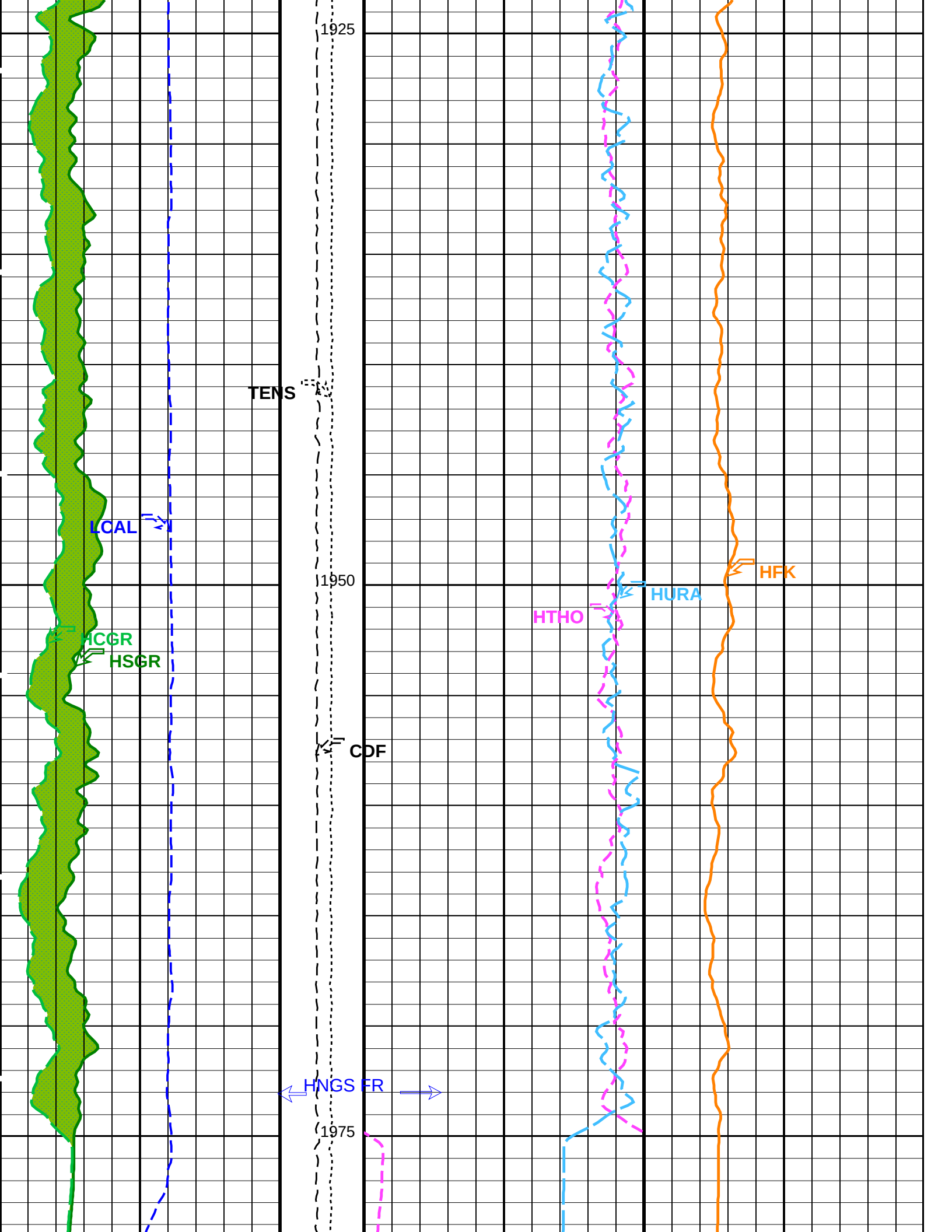
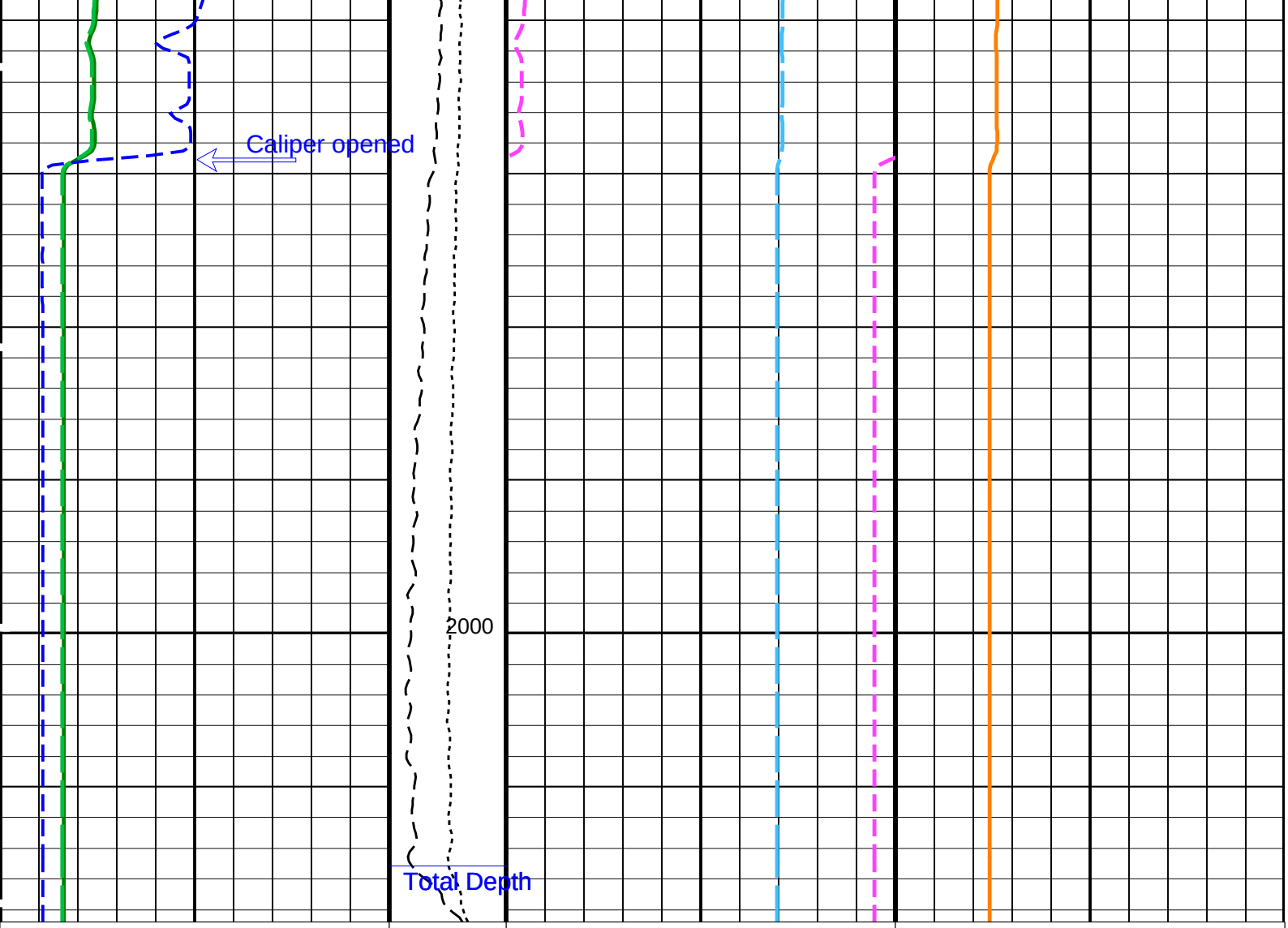

1925
TENS
LCAL
1950
HCGR
HSGR
CDF
HTHO
HURA
HFK
HNGS FR
1975



HLDS Caliper (LCAL)
0 (IN) 20

Tension (TENS) (LBF)
10000 0

HNGS Thorium (HTHO)
5 (PPM) 25

HNGS Potassium (HFK)
−0.01 (−−−−) 0.04

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

Calibrated Downhole Force (CDF) (LBF)
3000 0

HNGS Uranium (HURA)
−5 (PPM) 10

Area1
From HCGR to HSGR

Main Log

HNGS Borehole Potassium (HBHK)
−0.05 (−−−−) 0.05

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

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
	HRLT−B: High Resolution Laterolog Array − B	
BHS	Borehole Status	OPEN
GCSE	Generalized Caliper Selection	LCAL
	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	−0.000607851	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.03859	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.01909	
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	1.02	G/C3

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 23−Oct−2016 22:50

OP System Version: 19C0−187

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

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_013LUP	FN:21	PRODUCER	23−Oct−2016 22:50
BACKUP	MSS_LDEO_HRLA_LDL_013LUP	FN:22	PRODUCER	23−Oct−2016 22:50

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_012LUP	FN:19	PRODUCER	23−Oct−2016 22:15
BACKUP	MSS_LDEO_HRLA_LDL_012LUP	FN:20	PRODUCER	23−Oct−2016 22:15

OP System Version: 19C0−187

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

PIP SUMMARY

Time Mark Every 60 S

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

Area1
From HCGR to HSGR

REPEAT SECTION

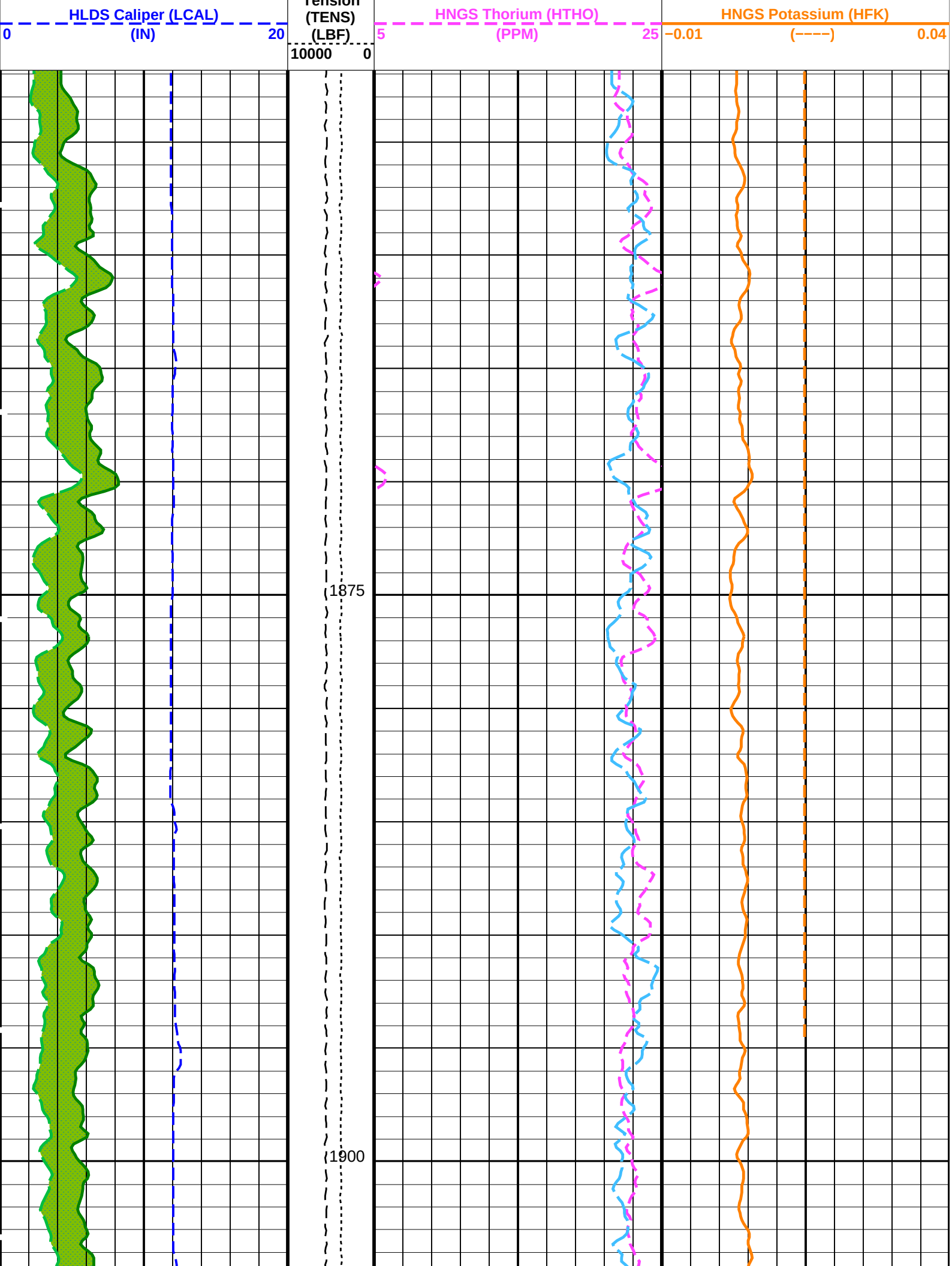
HNGS Borehole Potassium (HBHK)
−0.05 (−−−−) 0.05

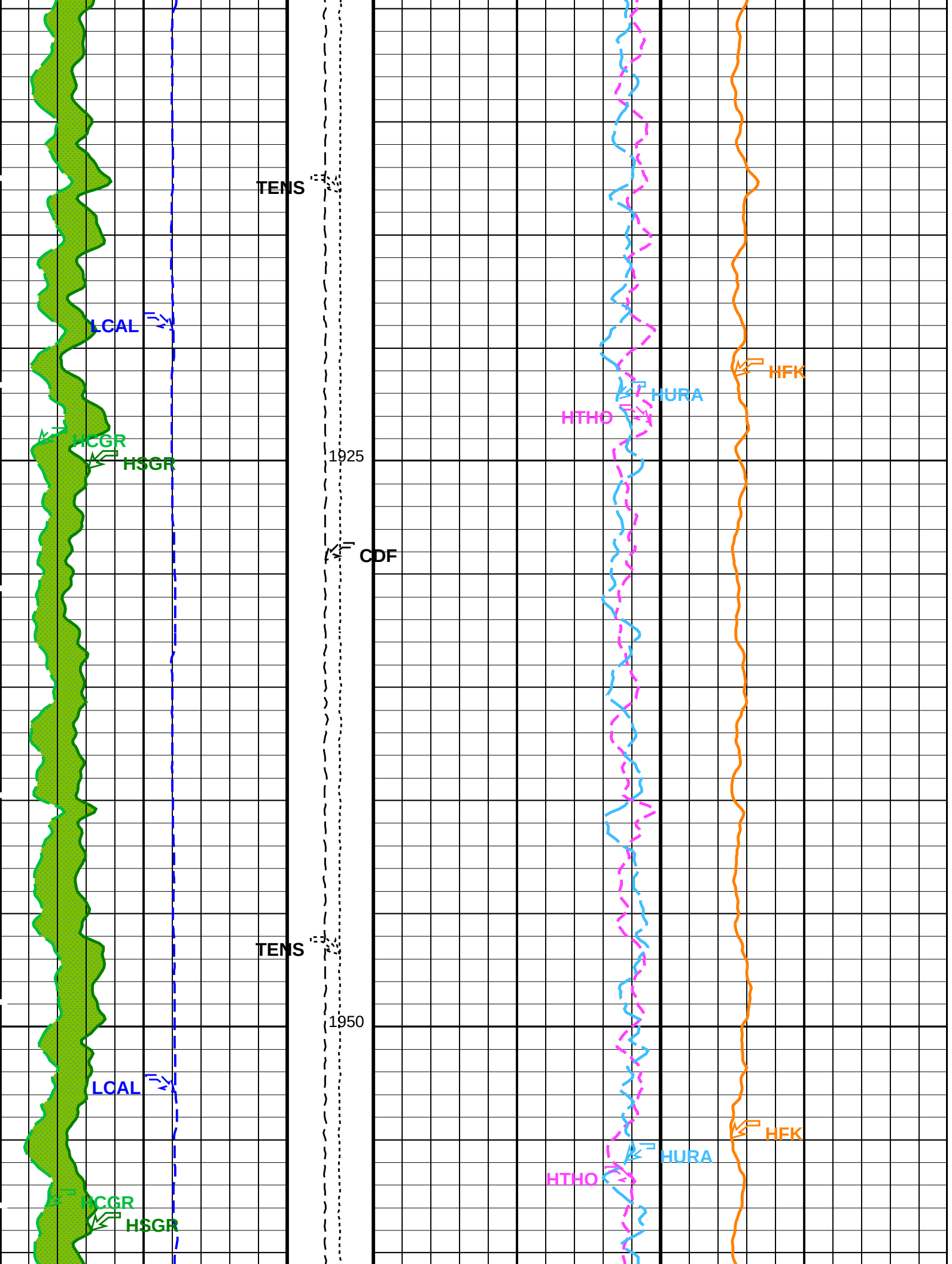
HNGS Computed Gamma Ray (HCGR)
0 (GAPI) 100

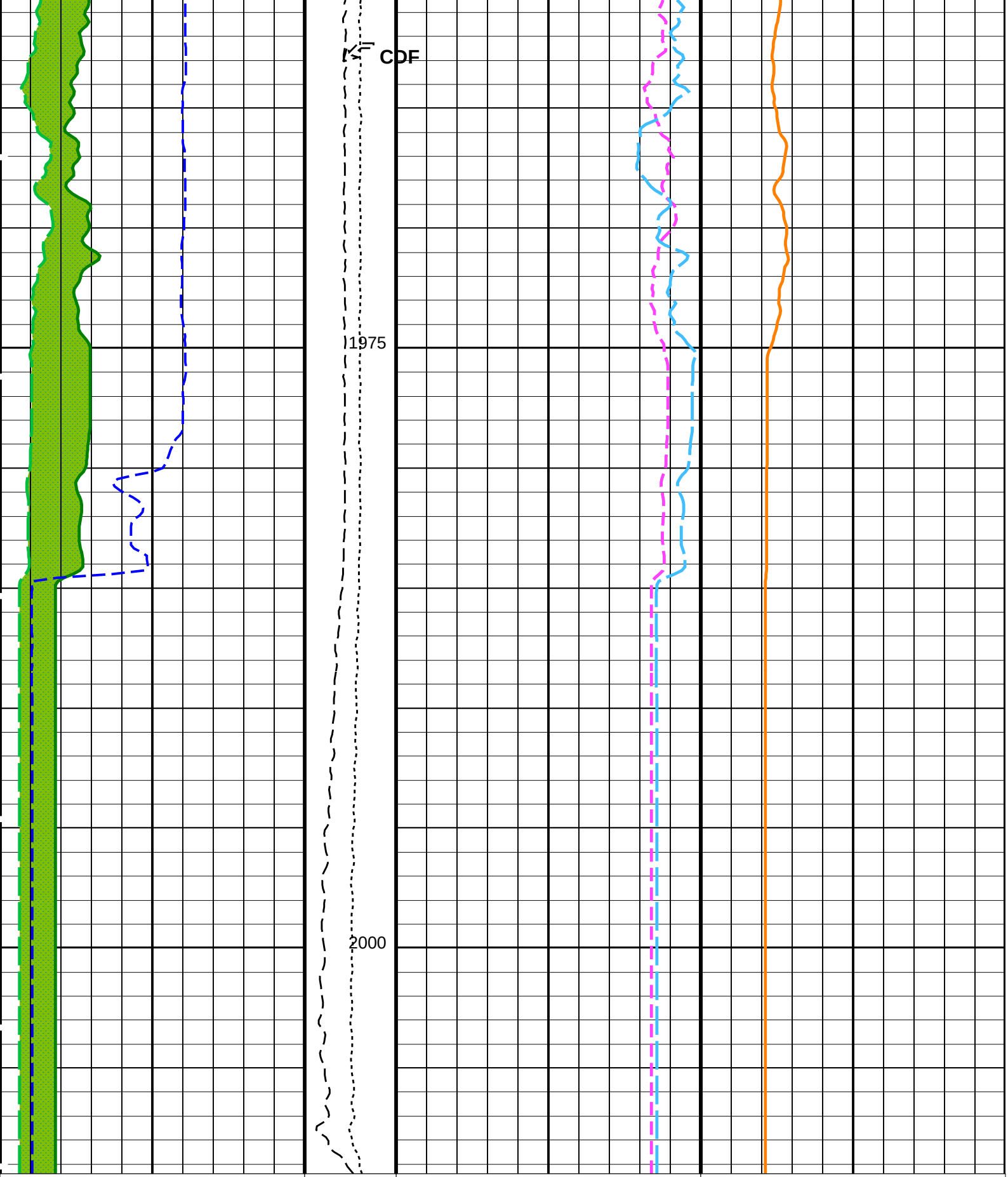
Calibrated Downhole Force (CDF) (LBF)
3000 0

HNGS Uranium (HURA)
−5 (PPM) 10

Tension


HLDS Caliper (LCAL)
0
(IN)
20
Tension
(TENS)
(LBF)
10000
0
HNGS Thorium (HTHO)
5
(PPM)
25
HNGS Potassium (HFK)
−0.01
(−−−−)
0.04
1875
1900


TENS
LCAL
HCGR
HSGR
1925
CDF
HFK
HURA
HTHO
TENS
1950
LCAL
HFK
HURA
HTHO
HCGR
HSGR



HLDS Caliper (LCAL)	Tension (TENS)	HNGS Thorium (HTHO)	HNGS Potassium (HFK)
0 (IN) 20	(LBF) 10000 0	5 (PPM) 25	−0.01 (----) 0.04

HNGS Computed Gamma Ray (HCGR)	Calibrated Downhole Force (CDF)	HNGS Uranium (HURA)
0 (GAPI) 100		−5 (PPM) 10

(LBF)
3000 0

Area1
From HCGR to HSGR

REPEAT SECTION

HNGS Borehole Potassium (HBHK)
−0.05 (−−−−) 0.05

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

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	HRLT−B: High Resolution Laterolog Array − B		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
	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	−0.00136411	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.02708	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.987754	
	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	1.02	G/C3

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 23−Oct−2016 22:15

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

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_012LUP	FN:19	PRODUCER	23−Oct−2016 22:15		
BACKUP	MSS_LDEO_HRLA_LDL_012LUP	FN:20	PRODUCER	23−Oct−2016 22:15		

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_013LUP	FN:21	PRODUCER	23−Oct−2016 22:50	2009.4 M	1452.5 M
BACKUP	MSS_LDEO_HRLA_LDL_013LUP	FN:22	PRODUCER	23−Oct−2016 22:50	2009.4 M	1452.5 M

OP System Version: 19C0−187

OP System Version: 19C0-187

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

PIP SUMMARY

Time Mark Every 60 S

Main Log

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

HRLT Resistivity 3 (RLA3)
0.2 (OHMM) 20

HLDS Bulk Density Correction (DRH)
-0.25 (G/C3) 0.25

HLDS Bulk Density (RHOM)
0 (G/C3) 4

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

Calibrated Downhole Force (CDF) (LBF)
3000 0

HRLT Resistivity 5 (RLA5)
0.2 (OHMM) 20

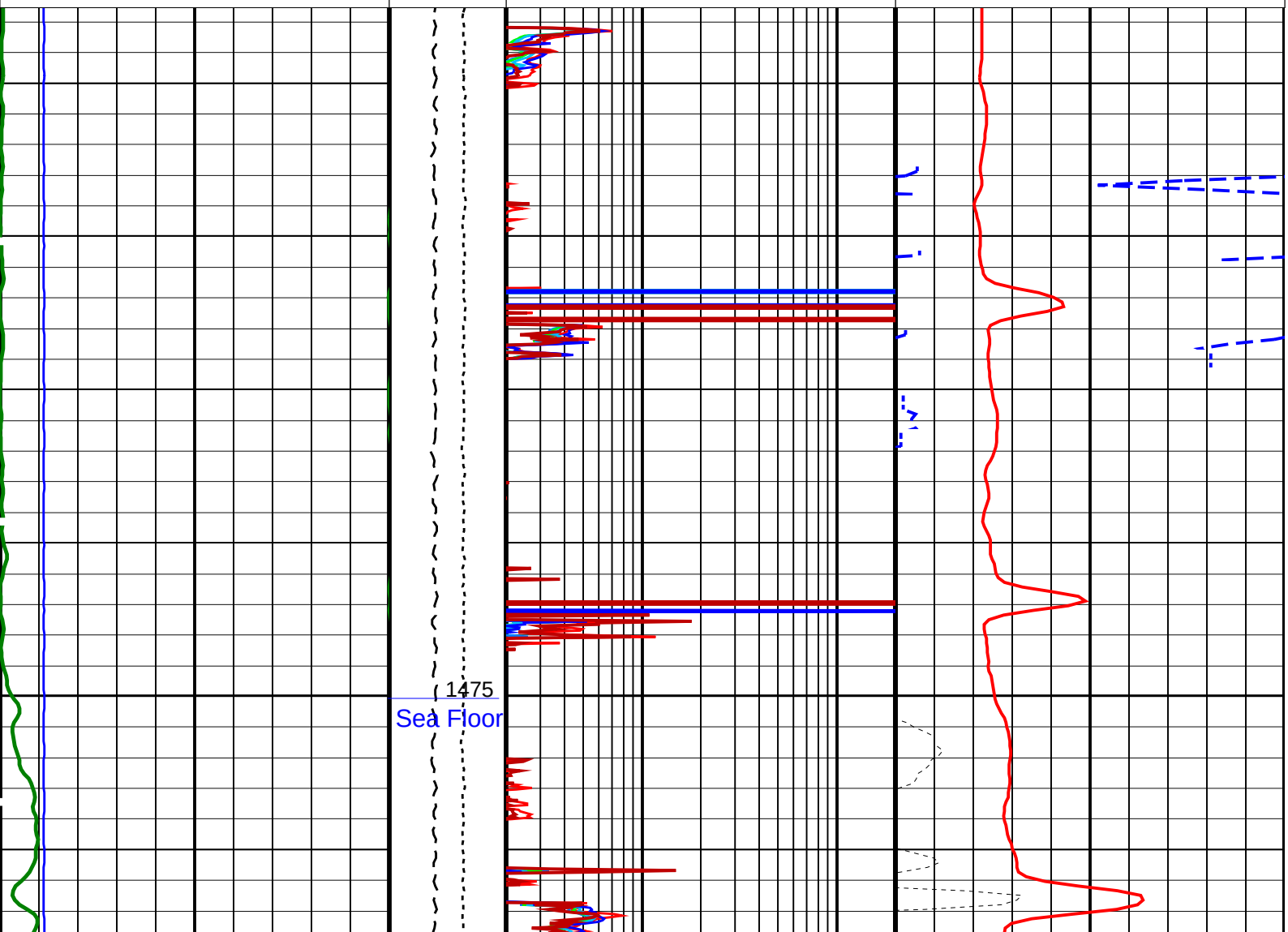
HLDS Long Spaced Photoelectric Effect (PEFL)
0 (----) 10

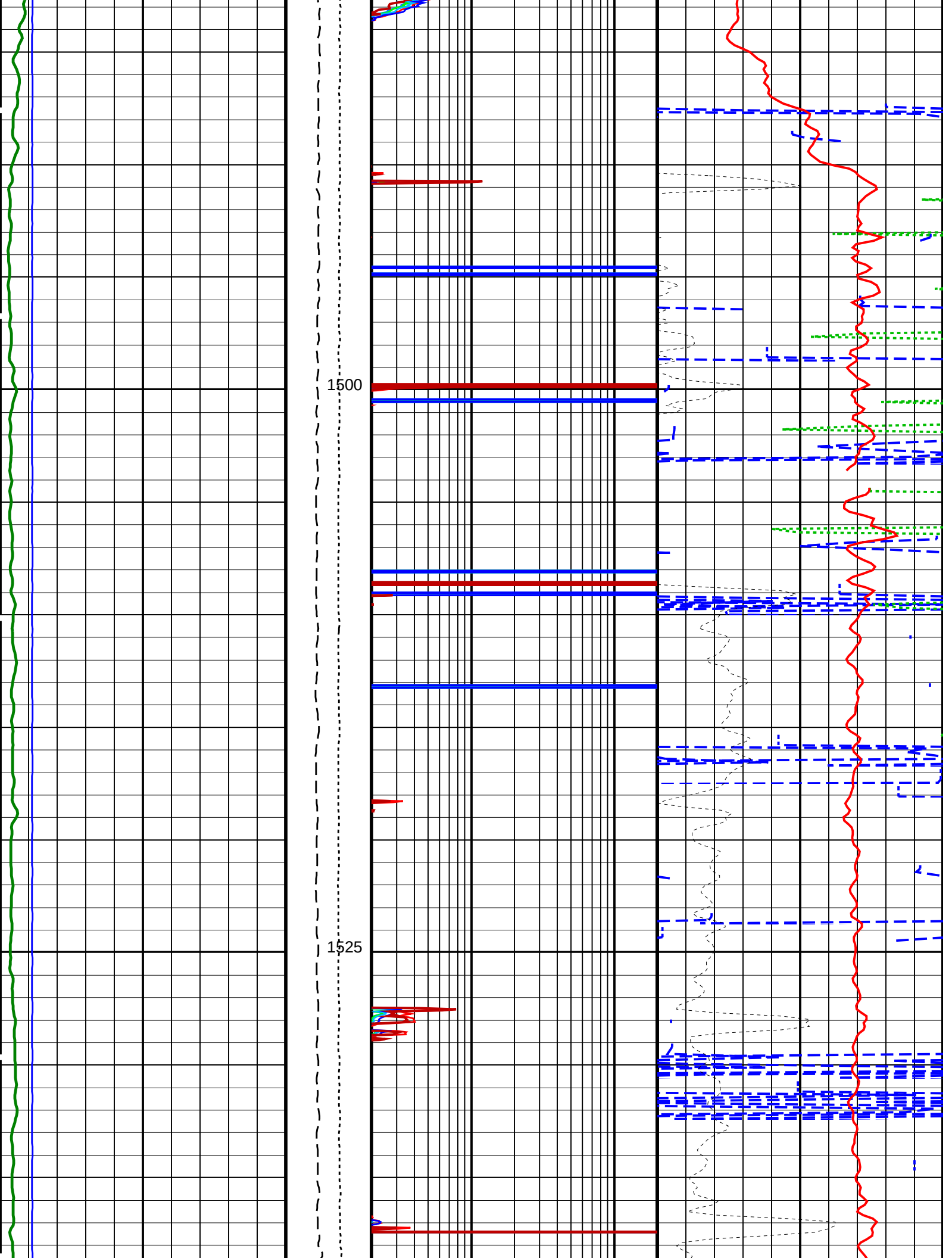
HLDS Caliper (LCAL)
0 (IN) 20

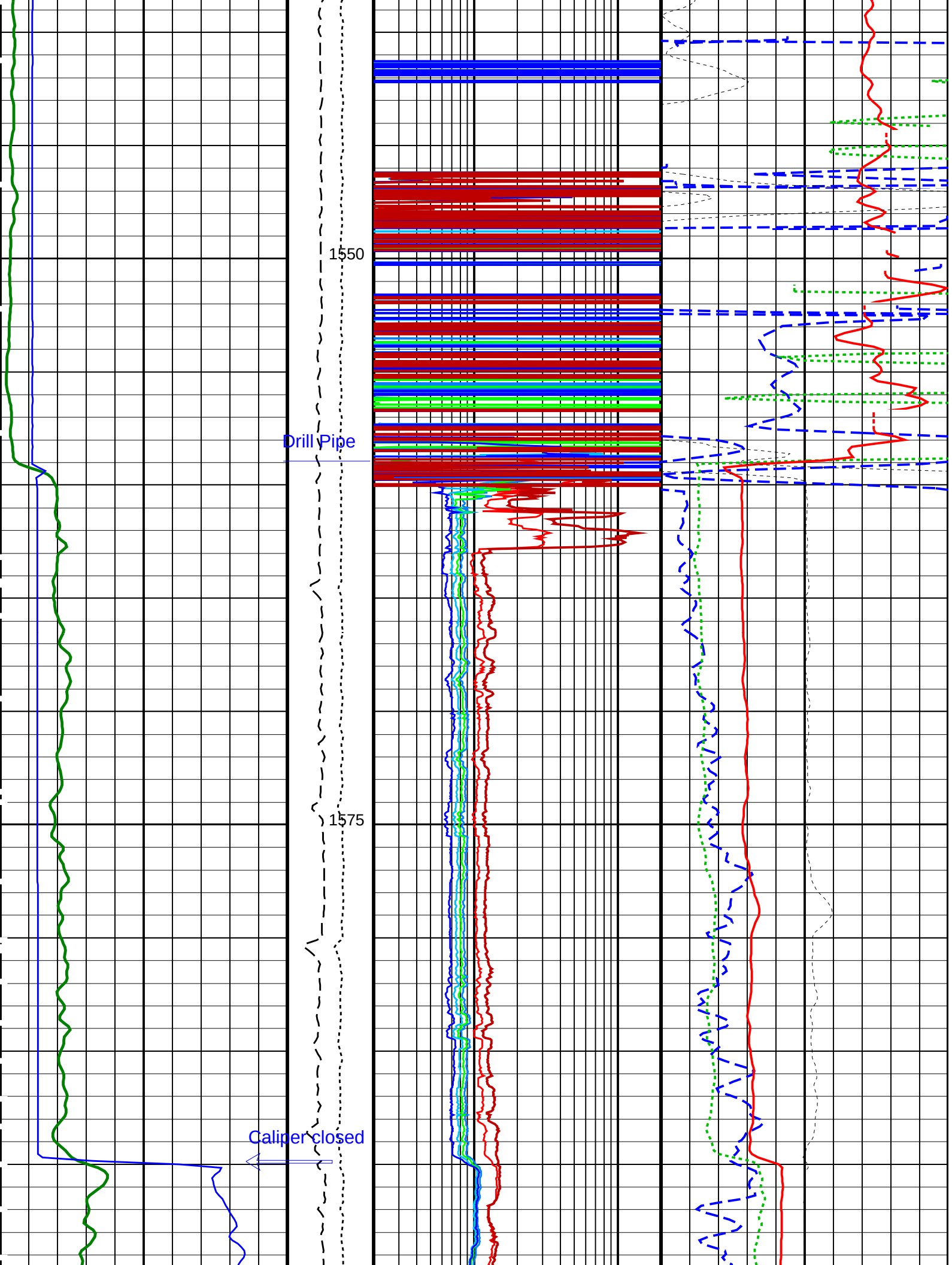
Tension (TENS) (LBF)
10000 0

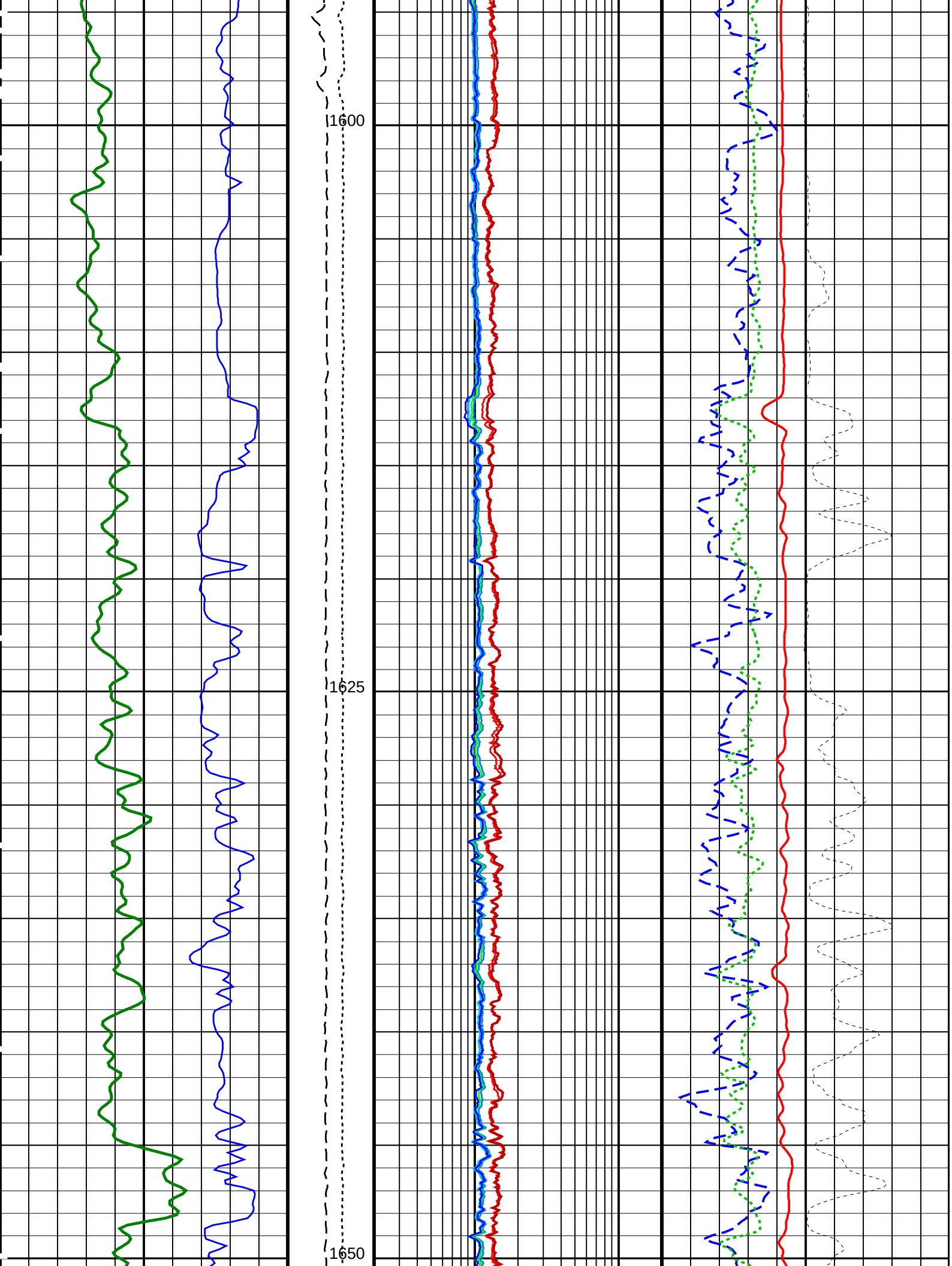
HRLT Resistivity 4 (RLA4)
0.2 (OHMM) 20

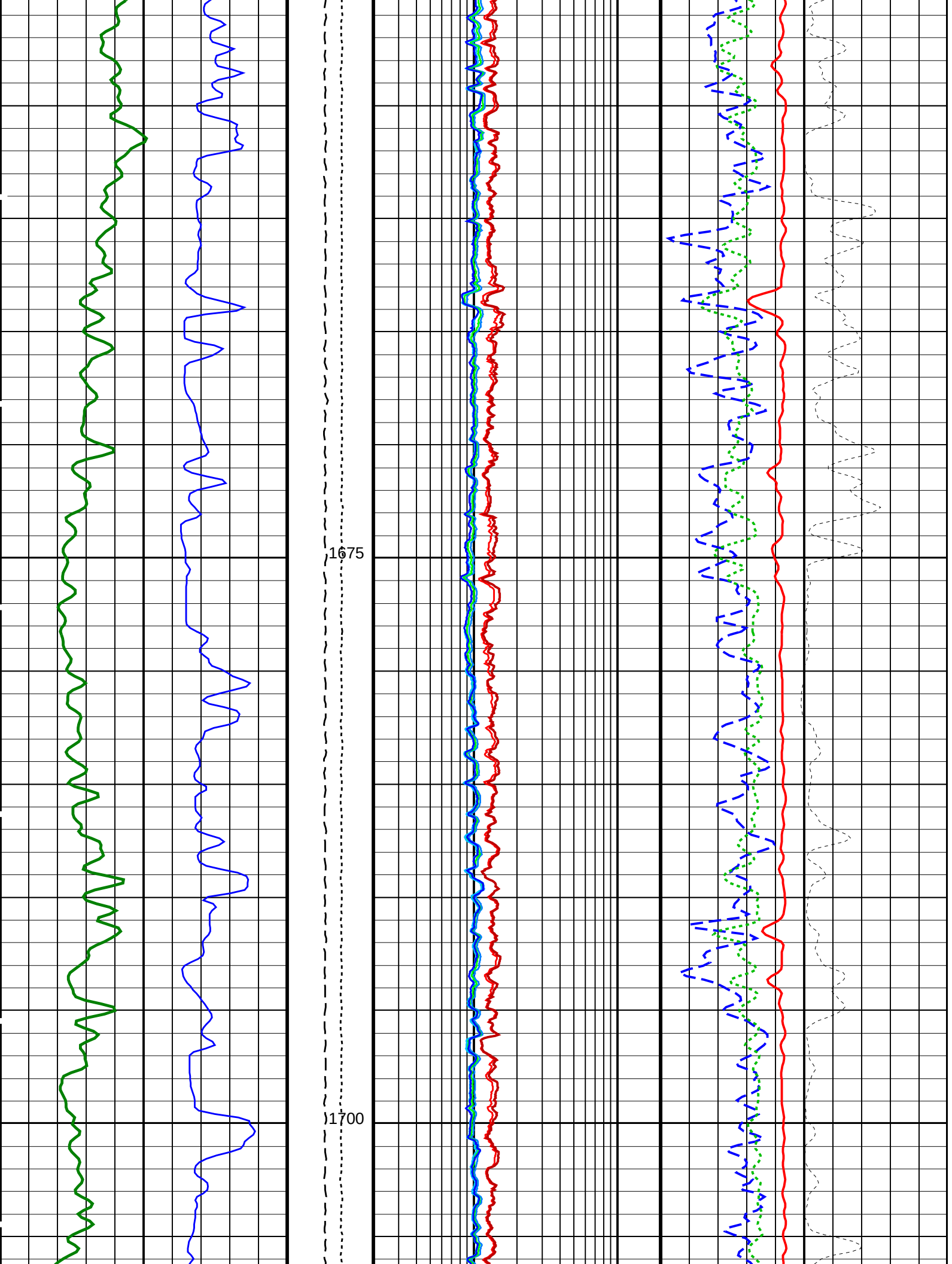
APS Near/Array Corrected Limestone Porosity (APLC)
100 (PU) 0

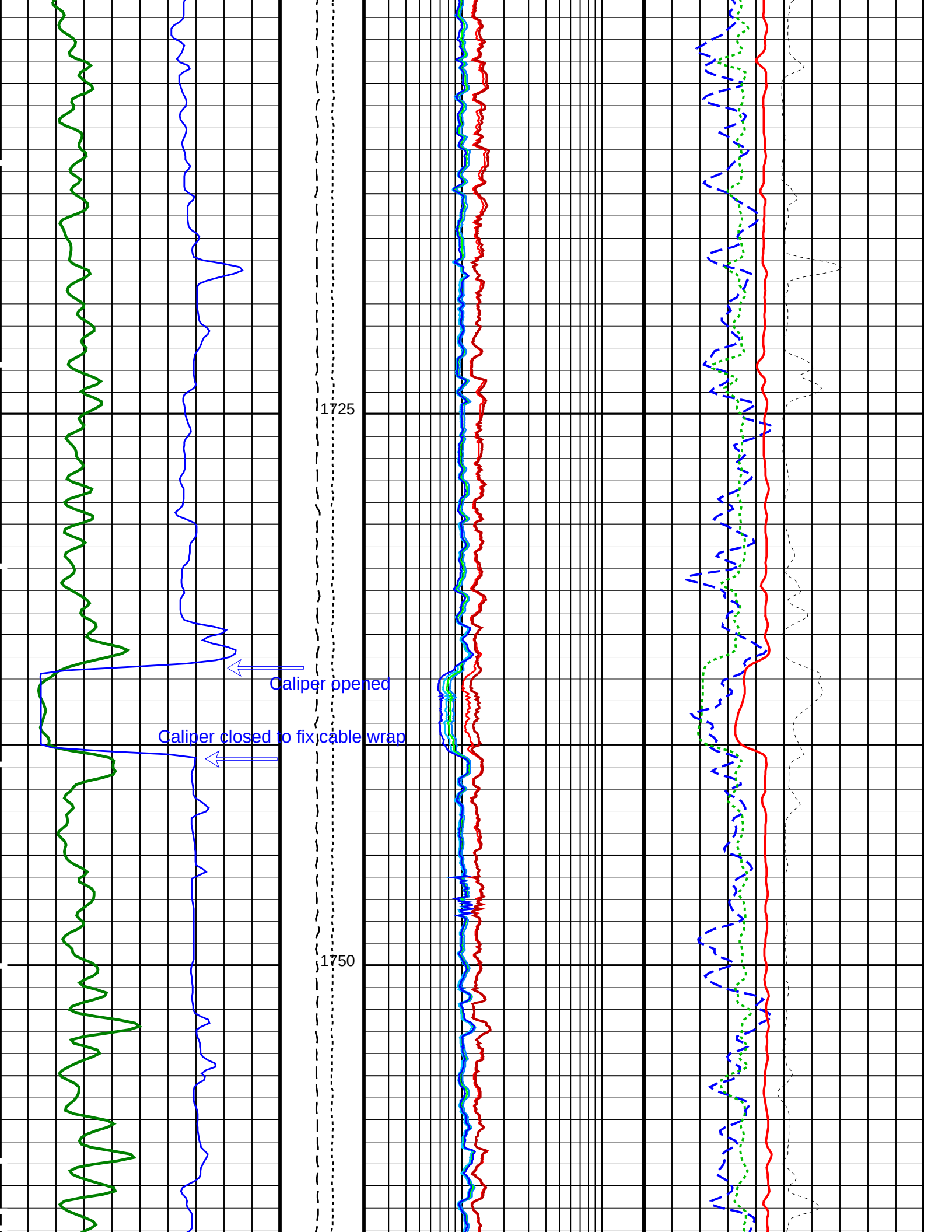


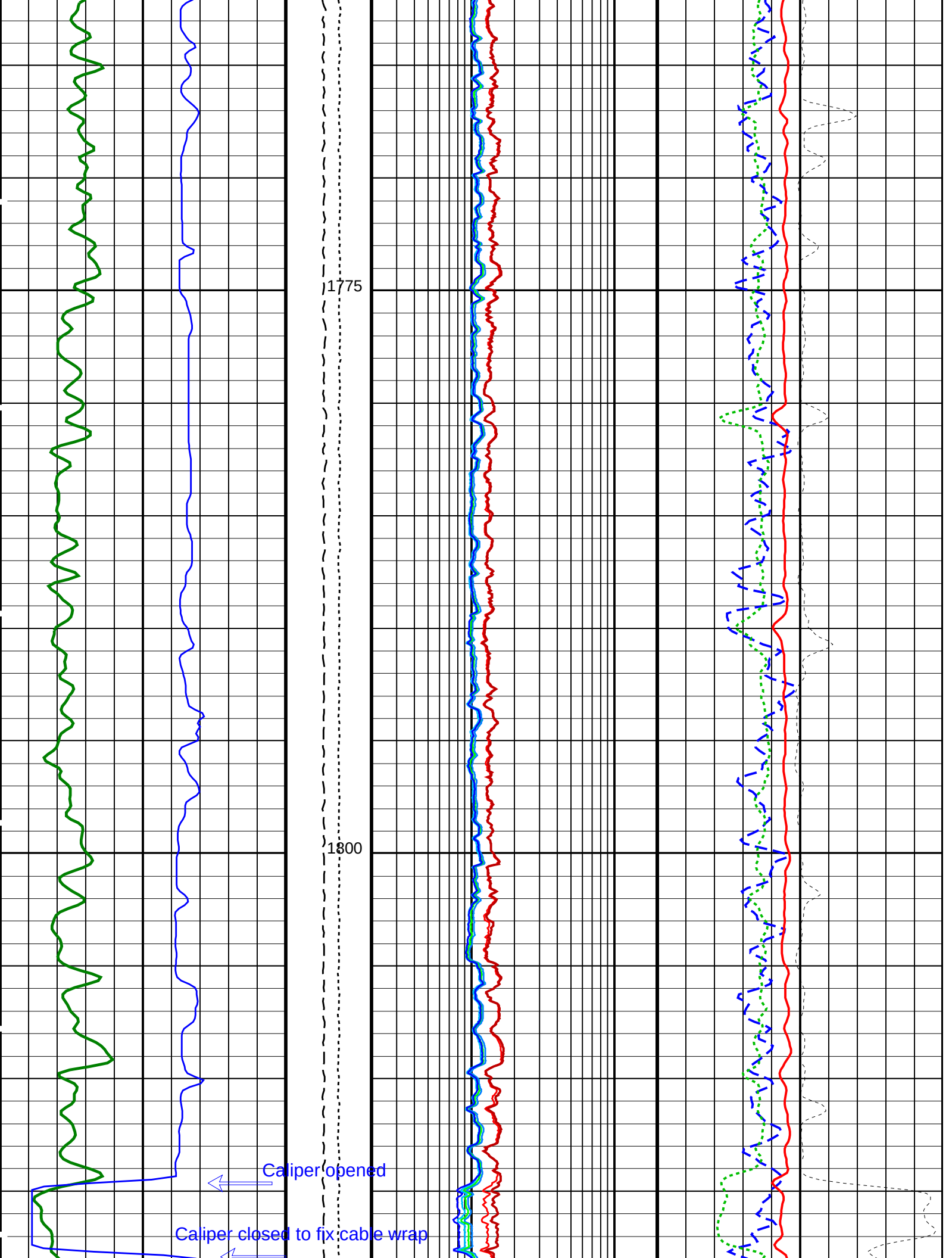

1500
1525

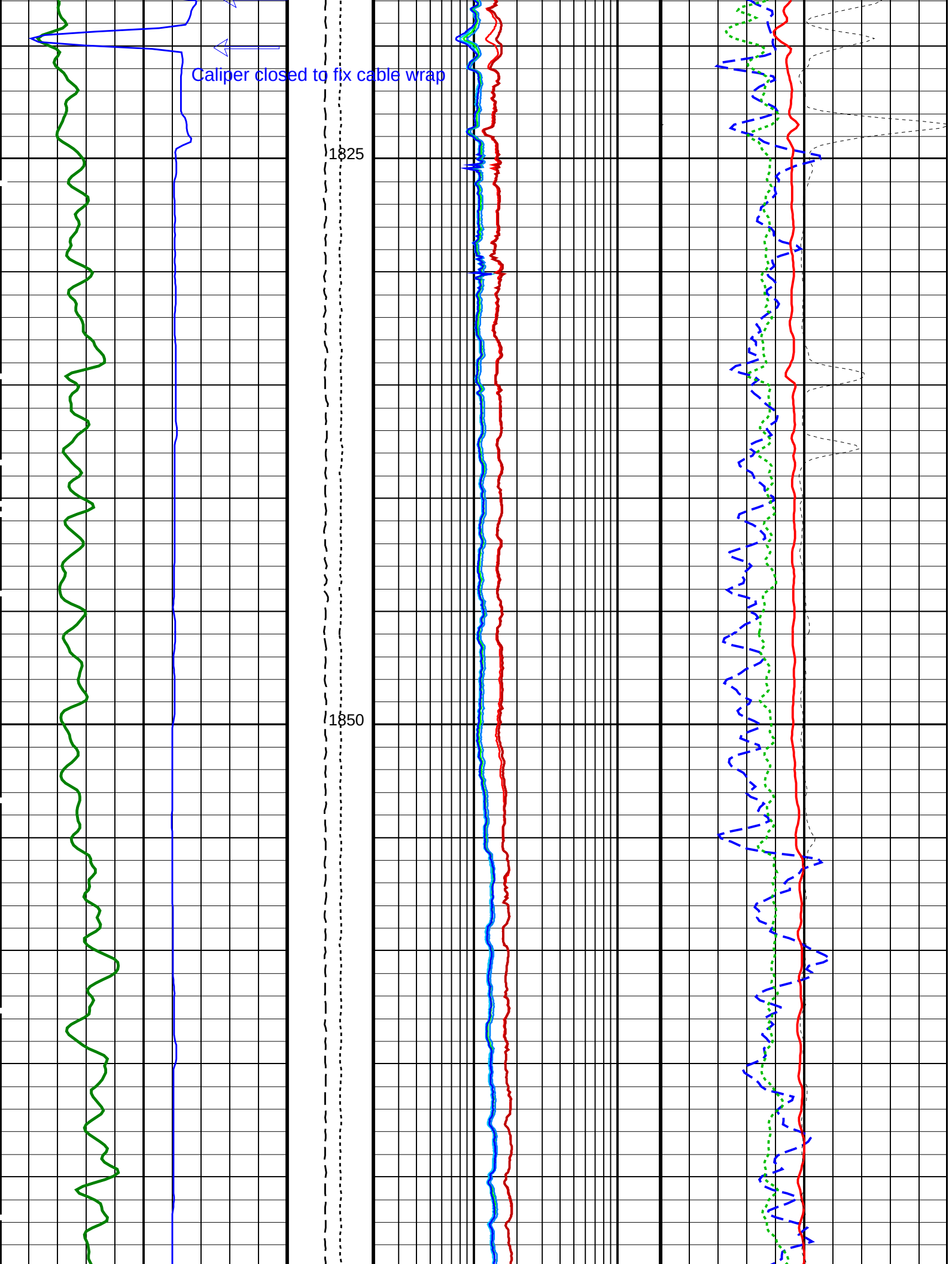

1550
Drill Pipe
1575
Caliper closed

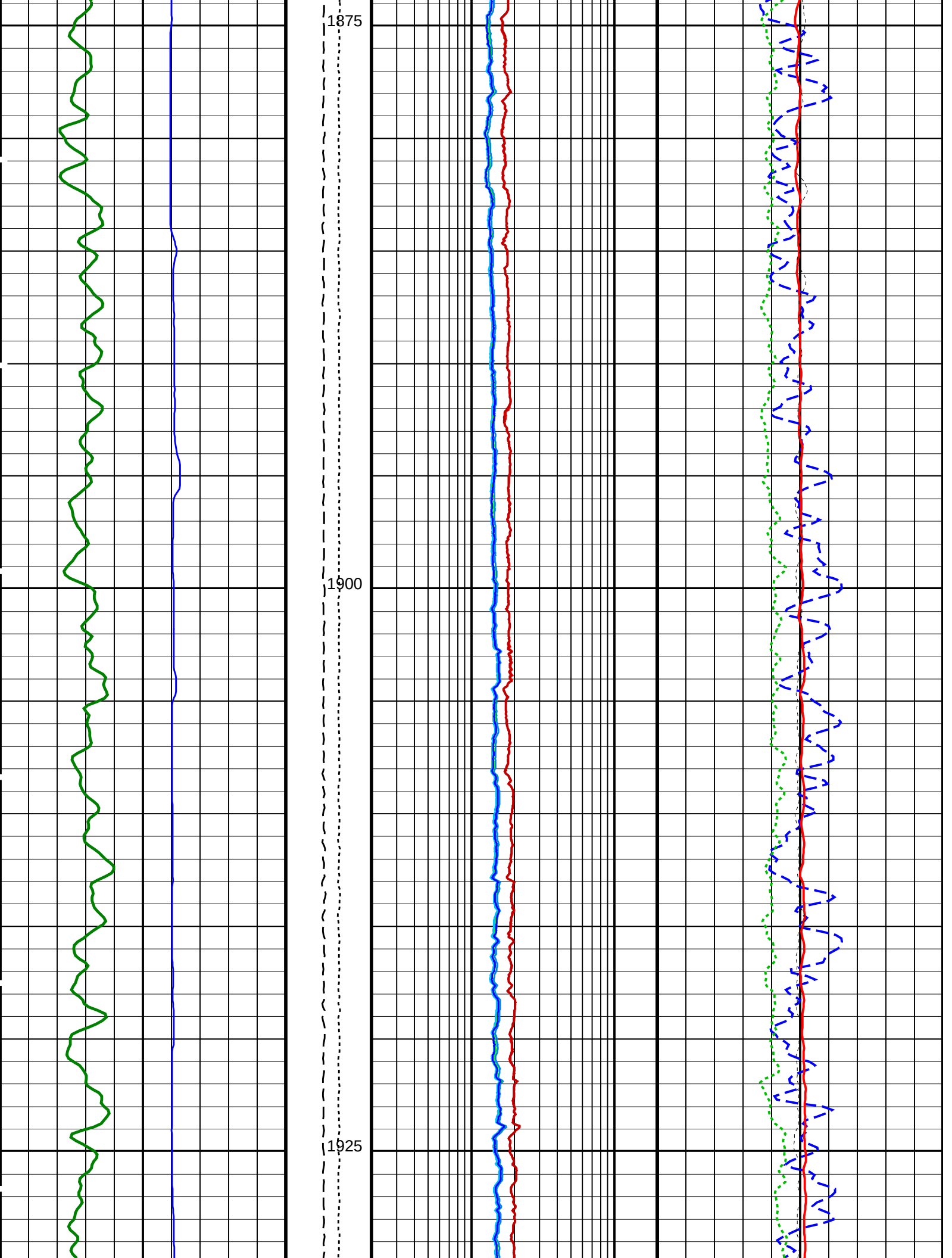

1600
1625
1650


1675
1700


1725
Caliper opened
Caliper closed to fix cable wrap
1750


1775
1800
Caliper opened
Caliper closed to fix cable wrap


Caliper closed to fix cable wrap
1825
1850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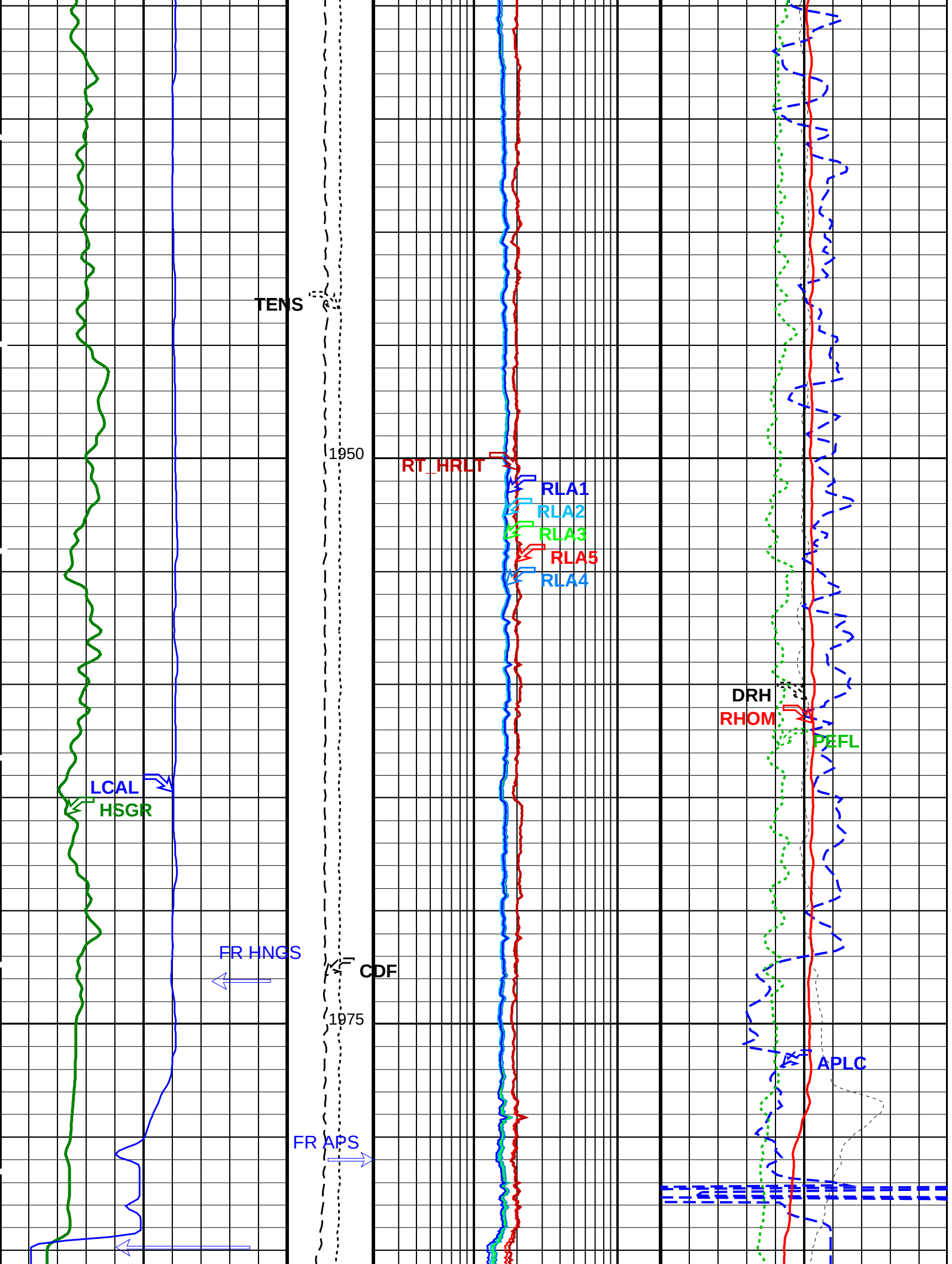
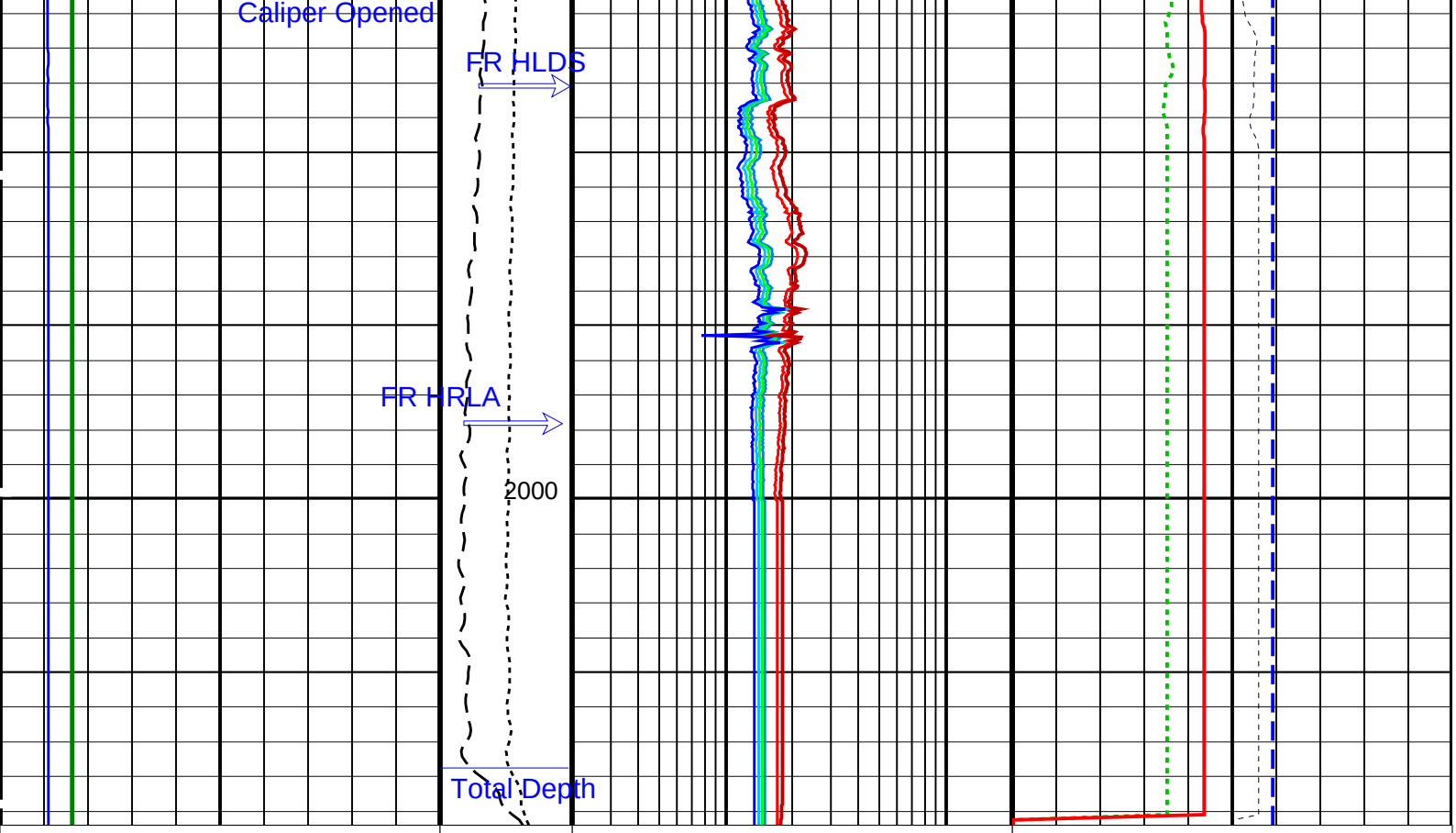
1900
1925


TENS
1950
RT_HRLT
RLA1
RLA2
RLA3
RLA5
RLA4
DRH
RHOM
PEFL
LCAL
HSGR
FR HNGS
CDF
1975
APLC
FR APS



HLDS Caliper (LCAL) 0 (IN) 20	Tension (TENS) (LBF) 10000 0	HRLT Resistivity 4 (RLA4) 0.2 (OHMM) 20
HNGS Spectroscopy Gamma Ray (HSGR) 0 (GAPI) 100	Calibrated Downhole Force (CDF) (LBF) 3000 0	HRLT Resistivity 5 (RLA5) 0.2 (OHMM) 20
Main Log		HRLT Resistivity 3 (RLA3) 0.2 (OHMM) 20
		HRLT Resistivity 2 (RLA2) 0.2 (OHMM) 20
		HRLT Resistivity 1 (RLA1) 0.2 (OHMM) 20
		HRLT True Resistivity (RT_HRLT) 0.2 (OHMM) 20

APS Near/Array Corrected Limestone Porosity (APLC) 100 (PU) 0	
HLDS Long Spaced Photoelectric Effect (PEFL) 0 (----) 10	
HLDS Bulk Density (RHOM) 0 (G/C3) 4	
HLDS Bulk Density Correction (DRH) −0.25 (G/C3) 0.25	

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	27.2932	DEGC
FREQ0	HRLT Frequency Index for Mode 0	32	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ6	HRLT Frequency Index for Mode 6	116	

GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	NOBARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	AUTO	
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO	
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO	
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO	
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO	
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO	
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PROCINV	Inversion Selection	ON	
PROCMFL	Inversion Micro−Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
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	1965.54	V
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2075.98	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	1729.06	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	NO	
DPPM	Density Porosity Processing Mode	HIRS	
DSCO_APS	APS TNPH Density Source Correction Option	MEASURED	
FSAL	Formation Salinity	−50000	PPM
FSCO_APS	APS TNPH Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO_APS	APS TNPH Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO_APS	APS TNPH Mud Cake Correction Option	NO	
MCOR_APS	APS TNPH Mud Correction	NATU	
MWCO_APS	APS TNPH Mud Weight Correction Option	NO	
NARC	APS Near/Array Calibration Ratio	1.06553	
NFRC	APS Near/Far Calibration Ratio	0.89014	
PTCO_APS	APS TNPH Pressure/Temperature Correction Option	NO	
SHT	Surface Hole Temperature	20	DEGC
TNCO_APS	APS TNPH Computation Option	YES	
HNGS−BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	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	−0.000607851	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
SHT	Surface Hole Temperature	20	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.03859	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.01909	
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	NOBARITE	
ISSBAR_EDTC	Nuclear Mud Type	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	NO	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U−ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U−TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	11.438	IN
BSAL	Borehole Salinity	35000.00	PPM
CSIZ	Current Casing Size	5.000	IN
CWEI	Casing Weight	168.00	LB/F
DFD	Drilling Fluid Density	1.02	G/C3
FLEV	Fluid Level	−50000.00	M
MST	Mud Sample Temperature	23.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
RMFS	Resistivity of Mud Filtrate Sample	−50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	2015	M
TDD	Total Depth − Driller	2010.20	M
TDL	Total Depth − Logger	2012.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripleCombo Vertical Scale: 1:200 Graphics File Created: 23−Oct−2016 22:50

OP System Version: 19C0−187

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

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_013LUP	FN:21	PRODUCER	23−Oct−2016 22:50		
BACKUP	MSS_LDEO_HRLA_LDL_013LUP	FN:22	PRODUCER	23−Oct−2016 22:50		

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_012LUP	FN:19	PRODUCER	23−Oct−2016 22:15	2009.4 M	1851.7 M
BACKUP	MSS_LDEO_HRLA_LDL_012LUP	FN:20	PRODUCER	23−Oct−2016 22:15	2009.4 M	1851.7 M

OP System Version: 19C0−187

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

PIP SUMMARY

Time Mark Every 60 S

HRLT True Resistivity (RT_HRLT)
0.2 (OHMM) 20

HRLT Resistivity 1 (RLA1)
0.2 (OHMM) 20

HRLT Resistivity 2 (RLA2)
0.2 (OHMM) 20

HLDS Bulk Density Correction (DRH)
−0.25 (G/C3) 0.25

HRLT Resistivity 3 (RLA3)
0.2 (OHMM) 20

HLDS Bulk Density (RHOM)
0 (G/C3) 4

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

Calibrated Downhole Force (CDF) (LBF)
3000 0

HRLT Resistivity 5 (RLA5)
0.2 (OHMM) 20

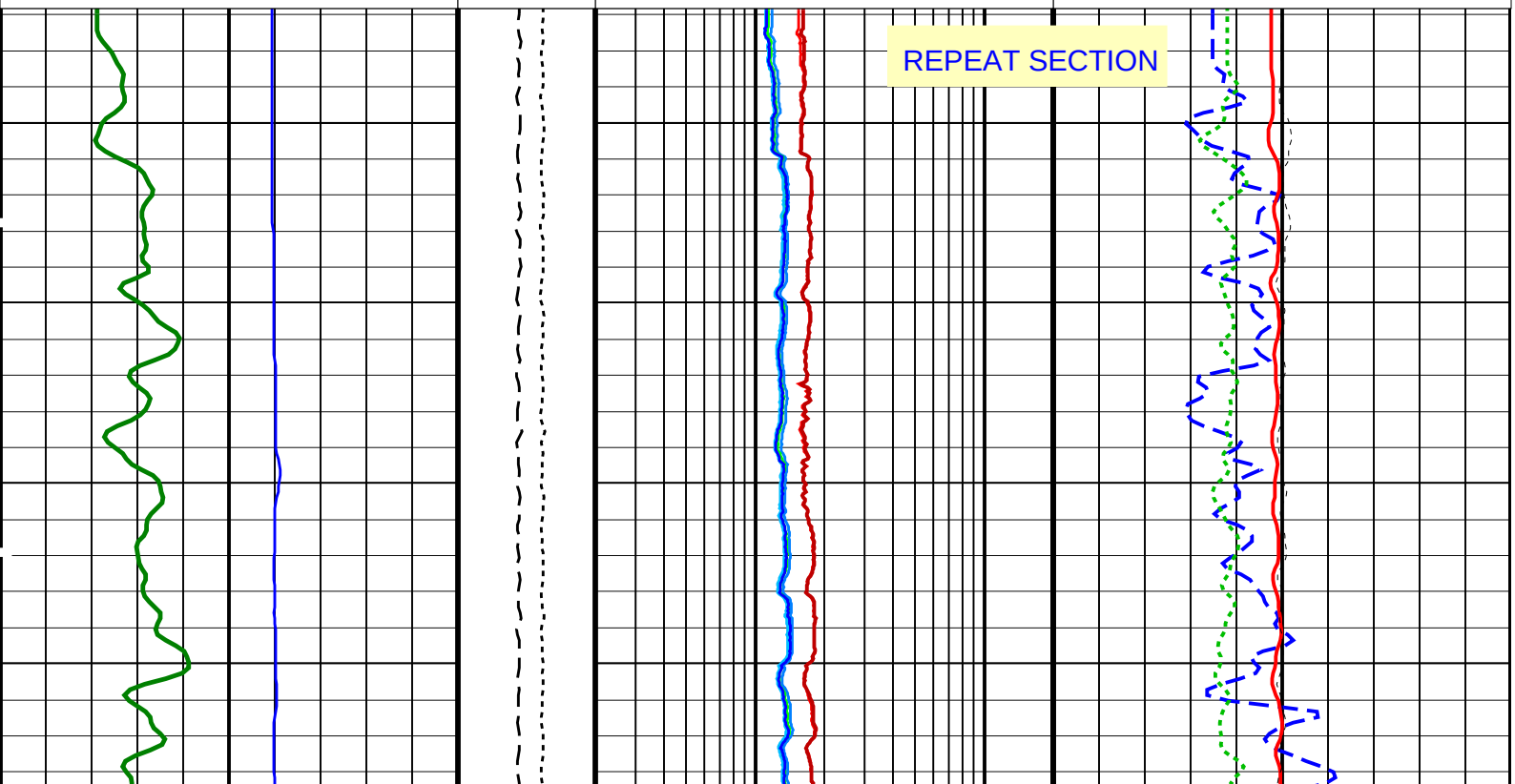
HLDS Long Spaced Photoelectric Effect (PEFL)
0 (−−−−) 10

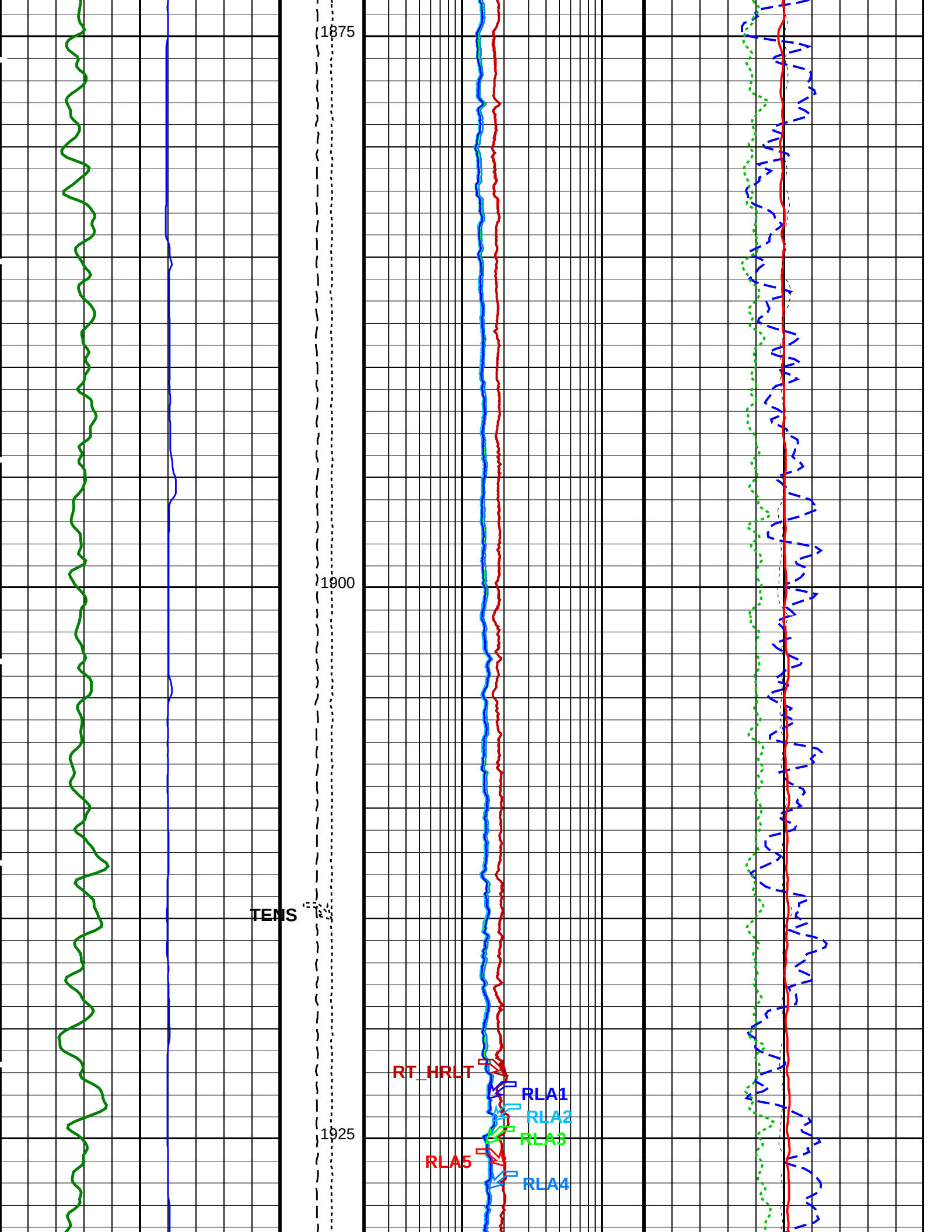
HLDS Caliper (LCAL)
0 (IN) 20

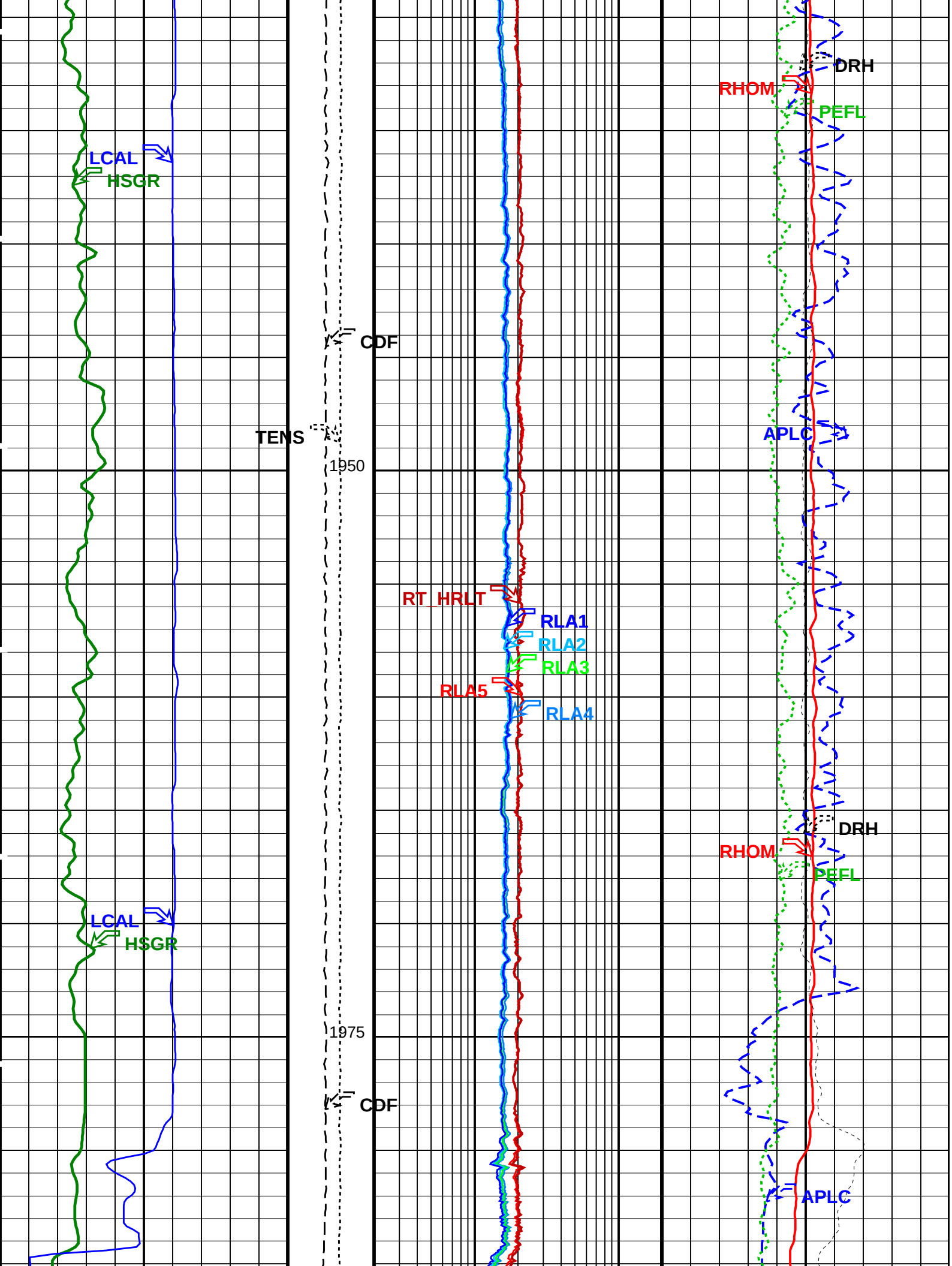
Tension (TENS) (LBF)
10000 0

HRLT Resistivity 4 (RLA4)
0.2 (OHMM) 20

APS Near/Array Corrected Limestone Porosity (APLC)
100 (PU) 0




1875
1900
TENS
1925
RT_HRLT
RLA1
RLA2
RLA3
RLA5
RLA4


LCAL
HSGR
CDF
TENS
1950
RT_HRLT
RLA1
RLA2
RLA3
RLA5
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DRH
RHOM
PEFL
APLC
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HSGR
1975
CDF
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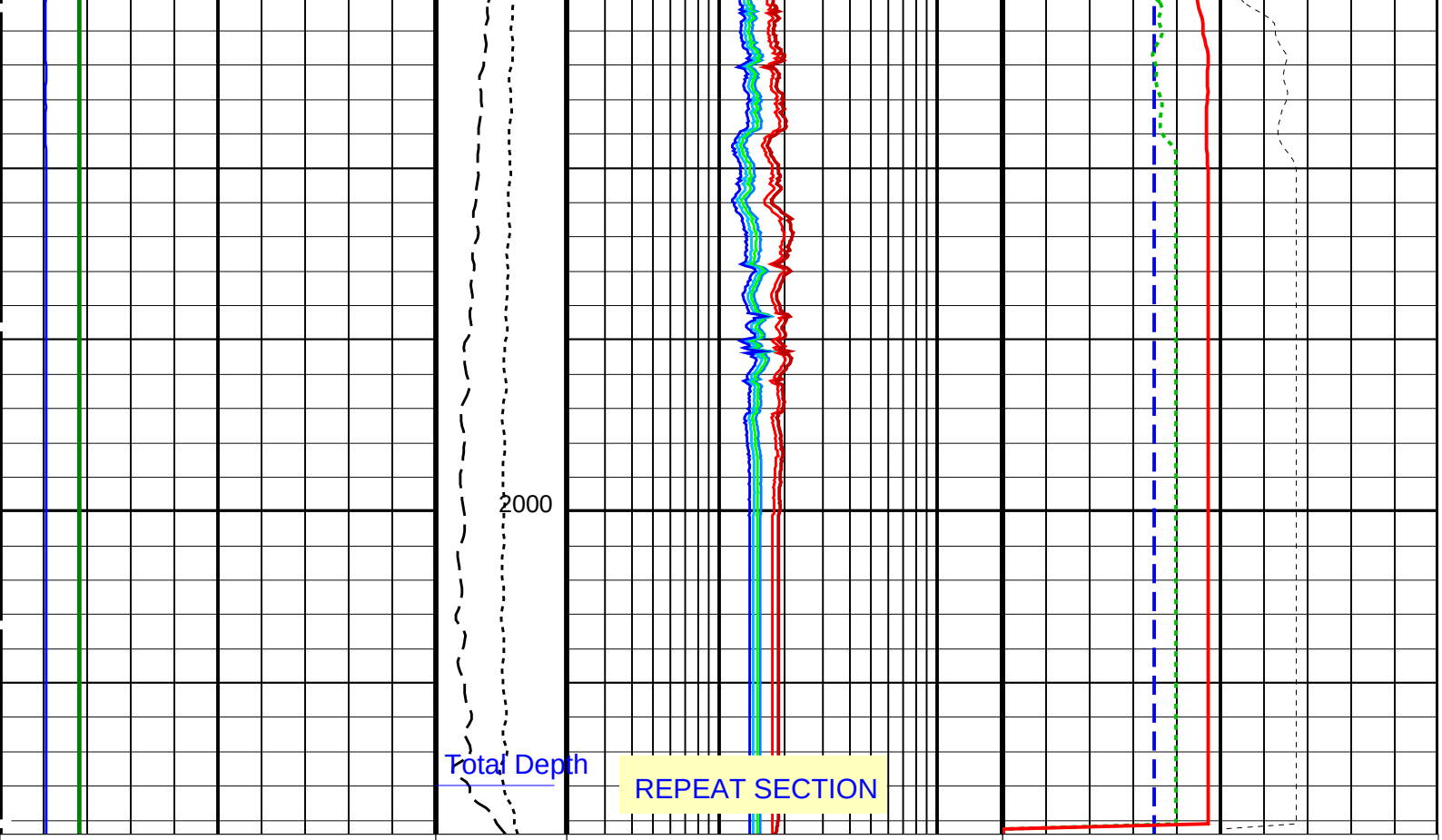
PEFL
APLC



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

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	HRLT−B: High Resolution Laterolog Array − B		
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	27.2932	DEGC
FREQ0	HRLT Frequency Index for Mode 0	32	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ5	HRLT Frequency Index for Mode 5	44	

FREQ6	HRLT Frequency Index for Mode 6	116	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	NOBARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	AUTO	
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO	
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO	
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO	
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO	
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO	
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PROCINV	Inversion Selection	ON	
PROCMFL	Inversion Micro−Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
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	1965.54	V
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2075.98	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	1729.06	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	NO	
DPPM	Density Porosity Processing Mode	HIRS	
DSCO_APS	APS TNPH Density Source Correction Option	MEASURED	
FSAL	Formation Salinity	−50000	PPM
FSCO_APS	APS TNPH Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO_APS	APS TNPH Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO_APS	APS TNPH Mud Cake Correction Option	NO	
MCOR_APS	APS TNPH Mud Correction	NATU	
MWCO_APS	APS TNPH Mud Weight Correction Option	NO	
NARC	APS Near/Array Calibration Ratio	1.06553	
NFRC	APS Near/Far Calibration Ratio	0.89014	
PTCO_APS	APS TNPH Pressure/Temperature Correction Option	NO	
SHT	Surface Hole Temperature	20	DEGC
TNCO_APS	APS TNPH Computation Option	YES	
HNGS−BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	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	−0.00136411	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
SHT	Surface Hole Temperature	20	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.02708	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.987754	
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	NOBARITE	
ISSBAR_EDTC	Nuclear Mud Type	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	NO	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U−ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U−TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	11.438	IN
BSAL	Borehole Salinity	35000.00	PPM
CSIZ	Current Casing Size	5.000	IN
CWEI	Casing Weight	168.00	LB/F
DFD	Drilling Fluid Density	1.02	G/C3
FLEV	Fluid Level	−50000.00	M
MST	Mud Sample Temperature	23.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
RMFS	Resistivity of Mud Filtrate Sample	−50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	2015	M
TDD	Total Depth − Driller	2010.20	M
TDL	Total Depth − Logger	2012.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripleCombo Vertical Scale: 1:200 Graphics File Created: 23−Oct−2016 22:15

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

Output DLIS Files

DEFAULT	**MSS_LDEO_HRLA_LDL_012LUP**	**FN:19**	**PRODUCER**	**23−Oct−2016 22:15**
BACKUP	**MSS_LDEO_HRLA_LDL_012LUP**	**FN:20**	**PRODUCER**	**23−Oct−2016 22:15**

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
High Resolution Laterolog Array − B Wellsite Calibration − HRLT M01							
Before: 23−Oct−2016 19:57 After: 24−Oct−2016 1:56							
HRLT M0−M1 Voltage Plus − 0	0	N/A	−318.5	−318.0	0.5103	9.681	UV
HRLT M0−M1 Voltage Plus − 1	0	N/A	−332.9	−327.6	5.265	9.681	UV
HRLT M0−M1 Voltage Plus − 2	0	N/A	−340.5	−335.9	4.587	9.681	UV
HRLT M0−M1 Voltage Plus − 3	0	N/A	−330.4	−326.9	3.520	9.681	UV
HRLT M0−M1 Voltage Plus − 4	0	N/A	−320.2	−318.9	1.260	9.681	UV
HRLT M0−M1 Voltage Plus − 5	0	N/A	−322.1	−320.9	1.189	9.681	UV
HRLT M0−M1 Voltage Plus − 6	0	N/A	322.8	317.4	−5.369	9.681	UV
HRLT M0−M1 Voltage Plus − 7	0	N/A	−322.7	−322.7	0	9.681	UV
High Resolution Laterolog Array − B Wellsite Calibration − HRLT M12							
Before: 23−Oct−2016 19:57 After: 24−Oct−2016 1:56							
HRLT M1−M2 Voltage Plus − 0	0	N/A	1741	1735	−6.528	53.42	UV
HRLT M1−M2 Voltage Plus − 1	0	N/A	1827	1794	−32.66	53.42	UV
HRLT M1−M2 Voltage Plus − 2	0	N/A	1862	1832	−29.31	53.42	UV
HRLT M1−M2 Voltage Plus − 3	0	N/A	1805	1782	−23.26	53.42	UV
HRLT M1−M2 Voltage Plus − 4	0	N/A	1748	1737	−10.80	53.42	UV
HRLT M1−M2 Voltage Plus − 5	0	N/A	1759	1749	−10.37	53.42	UV
HRLT M1−M2 Voltage Plus − 6	0	N/A	−1780	−1746	33.43	53.42	UV
HRLT M1−M2 Voltage Plus − 7	0	N/A	1781	1781	0	53.42	UV
High Resolution Laterolog Array − B Wellsite Calibration − HRLT M23							
Before: 23−Oct−2016 19:57 After: 24−Oct−2016 1:56							
HRLT M2−M3 Voltage Plus − 0	0	N/A	1733	1727	−5.726	53.42	UV
HRLT M2−M3 Voltage Plus − 1	0	N/A	1827	1796	−31.95	53.42	UV
HRLT M2−M3 Voltage Plus − 2	0	N/A	1865	1836	−29.11	53.42	UV
HRLT M2−M3 Voltage Plus − 3	0	N/A	1813	1790	−23.81	53.42	UV
HRLT M2−M3 Voltage Plus − 4	0	N/A	1750	1739	−10.49	53.42	UV
HRLT M2−M3 Voltage Plus − 5	0	N/A	1761	1752	−9.607	53.42	UV
HRLT M2−M3 Voltage Plus − 6	0	N/A	−1771	−1737	33.82	53.42	UV
HRLT M2−M3 Voltage Plus − 7	0	N/A	1781	1781	0	53.42	UV
High Resolution Laterolog Array − B Wellsite Calibration − HRLT V34							
Before: 23−Oct−2016 19:57 After: 24−Oct−2016 1:56							
HRLT A3−A4 Voltage Plus − 0	0	N/A	68650	68460	−191.3	2100	UV
HRLT A3−A4 Voltage Plus − 1	0	N/A	72270	71030	−1245	2100	UV
HRLT A3−A4 Voltage Plus − 2	0	N/A	74000	72950	−1057	2100	UV
HRLT A3−A4 Voltage Plus − 3	0	N/A	72180	71330	−850.9	2100	UV
HRLT A3−A4 Voltage Plus − 4	0	N/A	69630	69270	−359.6	2100	UV
HRLT A3−A4 Voltage Plus − 5	0	N/A	70130	69790	−345.0	2100	UV
HRLT A3−A4 Voltage Plus − 6	0	N/A	−68970	−67740	1233	2100	UV
HRLT A3−A4 Voltage Plus − 7	0	N/A	70000	70000	0	2100	UV
High Resolution Laterolog Array − B Wellsite Calibration − HRLT V45							
Before: 23−Oct−2016 19:57 After: 24−Oct−2016 1:56							
HRLT A4−A5 Voltage Plus − 0	0	N/A	68740	68550	−189.4	2100	UV
HRLT A4−A5 Voltage Plus − 1	0	N/A	72480	71240	−1236	2100	UV
HRLT A4−A5 Voltage Plus − 2	0	N/A	74190	73140	−1053	2100	UV
HRLT A4−A5 Voltage Plus − 3	0	N/A	72340	71490	−850.1	2100	UV
HRLT A4−A5 Voltage Plus − 4	0	N/A	69740	69380	−357.6	2100	UV
HRLT A4−A5 Voltage Plus − 5	0	N/A	70230	69890	−339.1	2100	UV
HRLT A4−A5 Voltage Plus − 6	0	N/A	−69180	−67940	1233	2100	UV
HRLT A4−A5 Voltage Plus − 7	0	N/A	70000	70000	0	2100	UV
High Resolution Laterolog Array − B Wellsite Calibration − HRLT V56							
Before: 23−Oct−2016 19:57 After: 24−Oct−2016 1:56							
HRLT A5−A6 Voltage Plus − 0	0	N/A	68590	68400	−190.1	2100	UV
HRLT A5−A6 Voltage Plus − 1	0	N/A	72340	71090	−1246	2100	UV
HRLT A5−A6 Voltage Plus − 2	0	N/A	74060	72960	−1107	2100	UV
HRLT A5−A6 Voltage Plus − 3	0	N/A	72180	71330	−853.9	2100	UV
HRLT A5−A6 Voltage Plus − 4	0	N/A	69600	69240	−363.0	2100	UV
HRLT A5−A6 Voltage Plus − 5	0	N/A	70090	69750	−337.8	2100	UV
HRLT A5−A6 Voltage Plus − 6	0	N/A	−69020	−67790	1232	2100	UV
HRLT A5−A6 Voltage Plus − 7	0	N/A	70000	70000	0	2100	UV
High Resolution Laterolog Array − B Wellsite Calibration − HRLT VTP							
Before: 23−Oct−2016 19:57 After: 24−Oct−2016 1:56							

HRLT Torpedo−M0 Voltage − 0	0	N/A	−68100	−67930	165.9	2100	UV
HRLT Torpedo−M0 Voltage − 1	0	N/A	−72120	−70910	1208	2100	UV
HRLT Torpedo−M0 Voltage − 2	0	N/A	−73880	−72820	1058	2100	UV
HRLT Torpedo−M0 Voltage − 3	0	N/A	−72080	−71240	843.4	2100	UV
HRLT Torpedo−M0 Voltage − 4	0	N/A	−69540	−69200	333.2	2100	UV
HRLT Torpedo−M0 Voltage − 5	0	N/A	−70020	−69710	313.4	2100	UV
HRLT Torpedo−M0 Voltage − 6	0	N/A	68780	67560	−1215	2100	UV
HRLT Torpedo−M0 Voltage − 7	0	N/A	−70000	−70000	0	2100	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT VBD
Before: 23−Oct−2016 19:57 After: 24−Oct−2016 1:56

HRLT Bridle#9−M0 Voltage − 0	0	N/A	−68140	−67980	163.5	2100	UV
HRLT Bridle#9−M0 Voltage − 1	0	N/A	−72220	−70990	1227	2100	UV
HRLT Bridle#9−M0 Voltage − 2	0	N/A	−73970	−72910	1060	2100	UV
HRLT Bridle#9−M0 Voltage − 3	0	N/A	−72150	−71320	828.2	2100	UV
HRLT Bridle#9−M0 Voltage − 4	0	N/A	−69590	−69250	334.5	2100	UV
HRLT Bridle#9−M0 Voltage − 5	0	N/A	−70060	−69750	314.7	2100	UV
HRLT Bridle#9−M0 Voltage − 6	0	N/A	68880	67660	−1220	2100	UV
HRLT Bridle#9−M0 Voltage − 7	0	N/A	−70000	−70000	0	2100	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT ISO
Before: 23−Oct−2016 19:57 After: 24−Oct−2016 1:56

HRLT Source Current Plus − 0	0	N/A	284.2	283.7	−0.4961	8.520	UA
HRLT Source Current Plus − 1	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus − 2	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus − 3	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus − 4	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus − 5	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus − 6	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus − 7	0	N/A	281.1	281.1	0	8.520	UA

High Resolution Laterolog Array − B Wellsite Calibration − HRLT MV
Before: 23−Oct−2016 19:57 After: 24−Oct−2016 1:56

HRLT Vertical Voltage Pl − 0	0	N/A	−320.1	−319.6	0.4885	9.681	UV
HRLT Vertical Voltage Pl − 1	0	N/A	−327.4	−322.3	5.126	9.681	UV
HRLT Vertical Voltage Pl − 2	0	N/A	−333.8	−329.2	4.593	9.681	UV
HRLT Vertical Voltage Pl − 3	0	N/A	−322.0	−318.6	3.415	9.681	UV
HRLT Vertical Voltage Pl − 4	0	N/A	−309.1	−307.8	1.258	9.681	UV
HRLT Vertical Voltage Pl − 5	0	N/A	−325.9	−324.7	1.152	9.681	UV
HRLT Vertical Voltage Pl − 6	0	N/A	330.3	324.8	−5.533	9.681	UV
HRLT Vertical Voltage Pl − 7	0	N/A	−322.7	−322.7	0	9.681	UV

Hostile Litho−Density Sonde Wellsite Calibration − Background Measurement
Master: 5−Oct−2016 18:34 Before: 16−Oct−2016 15:28 After: 24−Oct−2016 3:01

SS Cs Resolution Bkg	9.000	7.807	7.787	7.751	−0.03657	1.800	%
LS Cs Resolution Bkg	9.000	8.092	8.049	8.023	−0.02669	1.800	%
LSW1 Background	100.0	79.69	78.96	77.75	−1.212	3.000	CPS
LSW2 Background	100.0	71.79	70.86	71.70	0.8497	3.000	CPS
LSW3 Background	200.0	163.6	163.2	161.0	−2.147	6.000	CPS
LSW4 Background	250.0	199.9	201.1	200.1	−1.010	7.500	CPS
LSW5 Background	600.0	469.2	467.8	467.2	−0.6429	18.00	CPS
SSW1 Background	100.0	76.16	76.65	76.59	−0.05301	3.000	CPS
SSW2 Background	200.0	131.2	132.8	131.3	−1.571	6.000	CPS
SSW3 Background	500.0	367.3	369.4	366.5	−2.892	15.00	CPS
SSW4 Background	270.0	198.9	197.0	195.5	−1.509	8.100	CPS
SSW5 Background	200.0	142.3	140.8	141.3	0.5102	6.000	CPS

Hostile Litho−Density Sonde Wellsite Calibration − Aluminum Measurement
Master: 5−Oct−2016 19:02

LSW1 Aluminum	600.0	499.7	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	724.8	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	869.3	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	439.9	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	406.2	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2239	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	6160	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	8683	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	3606	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	439.6	N/A	N/A	N/A	N/A	CPS

Hostile Litho−Density Sonde Wellsite Calibration − Lithology Measurement
Master: 5−Oct−2016 18:57

LSW1 Iron	400.0	343.0	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	589.2	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	771.3	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	401.3	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	368.5	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1649	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	5147	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	7898	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3286	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	390.6	N/A	N/A	N/A	N/A	CPS

Hostile Litho−Density Sonde Wellsite Calibration − Caliper Calibration
Before: 17−Oct−2016 14:36

HLDS Caliper Small Ring	12.00	N/A	14.06	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	15.19	N/A	17.52	N/A	N/A	N/A	IN

Accelerator−Porosity Tool Wellsite Calibration − Detector Background
Master: 6−Oct−2016 13:48 Before: 16−Oct−2016 15:07 After: 24−Oct−2016 2:58

Near Det Bkg Cntrate	30.00	32.05	31.69	32.04	0.3505	N/A	CPS
Far Det Bkg Cntrate	30.00	32.21	33.66	32.09	−1.569	N/A	CPS
Array−1 Det Bkg Cntrate	30.00	28.16	29.15	28.05	−1.101	N/A	CPS
Array−2 Det Bkg Cntrate	30.00	29.58	30.51	28.18	−2.335	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	31.65	30.07	31.65	1.585	N/A	CPS

Accelerator−Porosity Tool Wellsite Calibration − Calibration Ratios
Master: 6−Oct−2016 13:48

Near/Far Calibration Ratio	0.9250	0.8901	N/A	N/A	N/A	N/A	
Near/Array Calibration Ratio	1.030	1.066	N/A	N/A	N/A	N/A	
Near/Array Cal Ratio Up/Down	1.000	1.017	N/A	N/A	N/A	N/A	

Accelerator−Porosity Tool Wellsite Calibration − Tank Check
Master: 6−Oct−2016 13:48

Array−1 Standoff Porosity	11.75	10.50	N/A	N/A	N/A	N/A	PU
Array−2 Standoff Porosity	11.75	10.17	N/A	N/A	N/A	N/A	PU
Average Slowing Down Time	6.000	6.077	N/A	N/A	N/A	N/A	US
Array−1 SDT Ratio Up/Down	1.000	0.9782	N/A	N/A	N/A	N/A	
Array−2 SDT Ratio Up/Down	1.000	0.9678	N/A	N/A	N/A	N/A	
Sigma Formation	27.50	33.77	N/A	N/A	N/A	N/A	CU

Accelerator−Porosity Tool Wellsite Calibration − CCR7 signal boxes
Master: 6−Oct−2016 13:00

Near Detector Plateau Setting	1650	1729	N/A	N/A	N/A	N/A	V
Far Detector Plateau Setting	2000	2076	N/A	N/A	N/A	N/A	V
Array Detector Plateau Setting	2000	1966	N/A	N/A	N/A	N/A	V

Hostile Natural Gamma Ray Sonde Wellsite Calibration − Detector 1 Check
Master: 4−Oct−2016 17:52 Before: 16−Oct−2016 15:05 After: 4−Oct−2016 18:07

Na 511 Peak Loc	40.00	38.68	38.56	38.65	0.08279	1.000	
Na 511 Peak Res	15.50	17.78	16.92	17.52	0.5949	2.000	%
High Voltage	1150	1238	1239	1239	0.1299	N/A	V
Na 1785 Peak Loc	142.6	139.7	140.3	140.7	0.3819	7.000	
Na 1785 Peak Res	8.500	9.609	9.404	8.156	−1.249	2.000	%
Temperature	15.50	36.36	36.72	36.42	−0.2991	N/A	DEGC
Na Count Rate	45.00	32.02	31.97	32.78	0.8180	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration − Detector 2 Check
Master: 4−Oct−2016 17:52 Before: 16−Oct−2016 15:05 After: 4−Oct−2016 18:07

Na 511 Peak Loc	40.00	39.49	39.63	39.78	0.1521	1.000	
Na 511 Peak Res	15.50	16.83	17.09	16.11	−0.9804	2.000	%
High Voltage	1150	1115	1116	1116	−0.4059	N/A	V
Na 1785 Peak Loc	142.6	143.2	143.6	143.5	−0.1311	7.000	
Na 1785 Peak Res	8.500	8.724	9.768	9.387	−0.3803	2.000	%
Temperature	15.50	35.80	36.48	35.80	−0.6812	N/A	DEGC
Na Count Rate	45.00	32.17	32.24	32.93	0.6914	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration − Ratio Of Detector 1 To Detector 2
Master: 4−Oct−2016 17:52 Before: 16−Oct−2016 15:05 After: 4−Oct−2016 18:07

Coincidence Count Rate Ratio	1.000	0.9926	0.9880	0.9927	0.004669	0.05000	

Hostile Natural Gamma Ray Sonde Master Calibration − Detector 1 Calibration
Master: 4−Oct−2016 17:46

Na 511 Peak Set Point	40.00	40.00	−−	−−	−−	−−	
Th Peak Loc	209.6	211.7	−−	−−	−−	−−	
Th Peak Res	7.000	8.229	−−	−−	−−	−−	%
Background Count Rate	142.5	27.89	−−	−−	−−	−−	CPS
Gain Ratio	1.000	1.041	−−	−−	−−	−−	

Hostile Natural Gamma Ray Sonde Master Calibration − Detector 2 Calibration
Master: 4−Oct−2016 17:46

Na 511 Peak Set Point	40.00	41.00	−−	−−	−−	−−	
Th Peak Loc	209.6	211.6	−−	−−	−−	−−	
Th Peak Res	7.000	7.475	−−	−−	−−	−−	%
Background Count Rate	142.5	28.59	−−	−−	−−	−−	CPS
Gain Ratio	1.000	1.019	−−	−−	−−	−−	

Enhanced DTS Cartridge Wellsite Calibration − EDTC Accelerometer Calibration
Before: 23−Oct−2016 19:56

EDTC Z−Axis Acceleration	9.810	N/A	9.747	N/A	N/A	N/A	M/S2

Enhanced DTS Cartridge Wellsite Calibration − Detector Calibration
Before: 4−Oct−2016 17:55 After: 4−Oct−2016 18:05

Gamma Ray (Air or Blo)	150.0	N/A	150.0	147.0	−3.500	10.71	GAPI

Gamma Ray (Jig − Bkg)	150.8	N/A	150.8	147.3	−3.503	13.71	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	161.2	−3.832	15.00	GAPI

Accelerator−Porosity Tool − Detector Plateau Settings :

Near Detector Plateau Setting 1729 V
Far Detector Plateau Setting 2076 V
Array Detector Plateau Setting 1966 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	768
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		−318.0			
1	Before		−332.9	−322.7	−280.7	−379.7
	After		−327.6			
2	Before		−340.5	−322.7	−280.7	−379.7
	After		−335.9			
3	Before		−330.4	−322.7	−280.7	−379.7
	After		−326.9			
4	Before		−320.2	−322.7	−280.7	−379.7
	After		−318.9			
5	Before		−322.1	−322.7	−280.7	−379.7
	After		−320.9			
6	Before		322.8	322.7	379.7	280.7
	After		317.4			
7	Before		−322.7	−322.7	−280.7	−379.7
	After		−322.7			
		(Minimum) (Nominal) (Maximum)				

Before: 23−Oct−2016 19:57
After: 24−Oct−2016 1:56

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M12

Idx	Phase	HRLT M1−M2 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1741	1781	2095	1549
	After		1735			
1	Before		1827	1781	2095	1549
	After		1794			
2	Before		1862	1781	2095	1549
	After		1832			
	Before		1805			

3	Before	1781	1781	2095	1549
	After	1782			
4	Before	1748	1781	2095	1549
	After	1737			
5	Before	1759	1781	2095	1549
	After	1749			
6	Before	−1780	−1781	−1549	−2095
	After	−1746			
7	Before	1781	1781	2095	1549
	After	1781			
	(Minimum) (Nominal) (Maximum)				

Before: 23−Oct−2016 19:57
After: 24−Oct−2016 1:56

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M23

Idx	Phase	HRLT M2−M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1733	1781	2095	1549
	After		1727			
1	Before		1827	1781	2095	1549
	After		1796			
2	Before		1865	1781	2095	1549
	After		1836			
3	Before		1813	1781	2095	1549
	After		1790			
4	Before		1750	1781	2095	1549
	After		1739			
5	Before		1761	1781	2095	1549
	After		1752			
6	Before		−1771	−1781	−1549	−2095
	After		−1737			
7	Before		1781	1781	2095	1549
	After		1781			
	(Minimum) (Nominal) (Maximum)					

Before: 23−Oct−2016 19:57
After: 24−Oct−2016 1:56

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V34

Idx	Phase	HRLT A3−A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68650	70000	82360	60900
	After		68460			
1	Before		72270	70000	82360	60900
	After		71030			
2	Before		74000	70000	82360	60900
	After		72950			
3	Before		72180	70000	82360	60900
	After		71330			
	Before		69630			

4	After	69270	70000	82360	60900
5	Before	70130	70000	82360	60900
	After	69790			
6	Before	−68970	−70000	−60900	−82360
	After	−67740			
7	Before	70000	70000	82360	60900
	After	70000			
	(Minimum) (Nominal) (Maximum)				

Before: 23−Oct−2016 19:57

After: 24−Oct−2016 1:56

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V45

Idx	Phase	HRLT A4−A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68740	70000	82360	60900
	After		68550			
1	Before		72480	70000	82360	60900
	After		71240			
2	Before		74190	70000	82360	60900
	After		73140			
3	Before		72340	70000	82360	60900
	After		71490			
4	Before		69740	70000	82360	60900
	After		69380			
5	Before		70230	70000	82360	60900
	After		69890			
6	Before		−69180	−70000	−60900	−82360
	After		−67940			
7	Before		70000	70000	82360	60900
	After		70000			
	(Minimum) (Nominal) (Maximum)					

Before: 23−Oct−2016 19:57

After: 24−Oct−2016 1:56

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V56

Idx	Phase	HRLT A5−A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68590	70000	82360	60900
	After		68400			
1	Before		72340	70000	82360	60900
	After		71090			
2	Before		74060	70000	82360	60900
	After		72960			
3	Before		72180	70000	82360	60900
	After		71330			
4	Before		69600	70000	82360	60900
	After		69240			
	Before		70000			

Idx	Phase	HRLT Torpedo−M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
5	Before		70090	70000	82360	60900
	After		69750			
6	Before		−69020	−70000	−60900	−82360
	After		−67790			
7	Before		70000	70000	82360	60900
	After		70000			
		(Minimum) (Nominal) (Maximum)				

Before: 23−Oct−2016 19:57
After: 24−Oct−2016 1:56

High Resolution Laterolog Array − B Wellsite Calibration

HRLT VTP

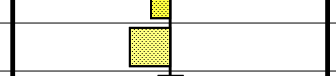
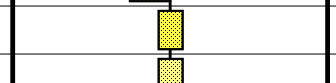
Idx	Phase	HRLT Torpedo−M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−68100	−70000	−60900	−82360
	After		−67930			
1	Before		−72120	−70000	−60900	−82360
	After		−70910			
2	Before		−73880	−70000	−60900	−82360
	After		−72820			
3	Before		−72080	−70000	−60900	−82360
	After		−71240			
4	Before		−69540	−70000	−60900	−82360
	After		−69200			
5	Before		−70020	−70000	−60900	−82360
	After		−69710			
6	Before		68780	70000	82360	60900
	After		67560			
7	Before		−70000	−70000	−60900	−82360
	After		−70000			
		(Minimum) (Nominal) (Maximum)				

Before: 23−Oct−2016 19:57
After: 24−Oct−2016 1:56

High Resolution Laterolog Array − B Wellsite Calibration

HRLT VBD

Idx	Phase	HRLT Bridle#9−M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−68140	−70000	−60900	−82360
	After		−67980			
1	Before		−72220	−70000	−60900	−82360
	After		−70990			
2	Before		−73970	−70000	−60900	−82360
	After		−72910			
3	Before		−72150	−70000	−60900	−82360
	After		−71320			
4	Before		−69590	−70000	−60900	−82360
	After		−69250			
5	Before		−70060	−70000	−60900	−82360
	After		−69750			

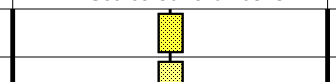
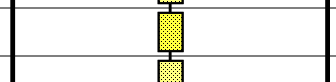
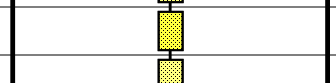
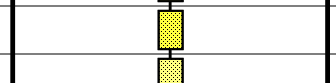
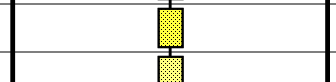
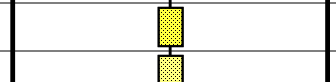
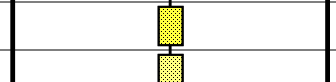
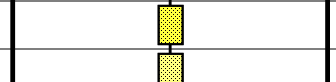
6	Before		68880	70000	82360	60900
	After		67660			
7	Before		−70000	−70000	−60900	−82360
	After		−70000			
	(Minimum) (Nominal) (Maximum)					

Before: 23−Oct−2016 19:57

After: 24−Oct−2016 1:56

High Resolution Laterolog Array − B Wellsite Calibration

HRLT ISO

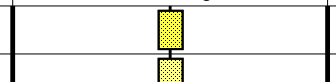
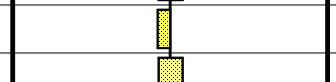
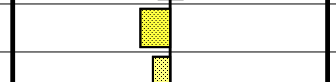
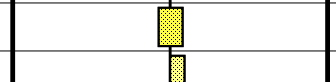
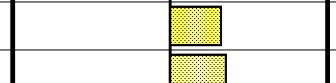
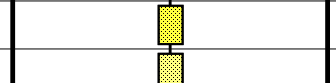
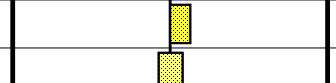
Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum
0	Before		284.2	284.0	334.1	247.0
	After		283.7			
1	Before		281.1	281.1	330.7	244.4
	After		281.1			
2	Before		281.1	281.1	330.7	244.4
	After		281.1			
3	Before		281.1	281.1	330.7	244.4
	After		281.1			
4	Before		281.1	281.1	330.7	244.4
	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: 23−Oct−2016 19:57

After: 24−Oct−2016 1:56

High Resolution Laterolog Array − B Wellsite Calibration

HRLT MV

Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−320.1	−322.7	−280.7	−379.7
	After		−319.6			
1	Before		−327.4	−322.7	−280.7	−379.7
	After		−322.3			
2	Before		−333.8	−322.7	−280.7	−379.7
	After		−329.2			
3	Before		−322.0	−322.7	−280.7	−379.7
	After		−318.6			
4	Before		−309.1	−322.7	−280.7	−379.7
	After		−307.8			
5	Before		−325.9	−322.7	−280.7	−379.7
	After		−324.7			
6	Before		330.3	322.7	379.7	280.7
	After		324.8			

	Before	−322.7			
7	After	−322.7	−322.7	−280.7	−379.7
	(Minimum) (Nominal) (Maximum)				

Before: 23−Oct−2016 19:57

After: 24−Oct−2016 1:56

Hostile Litho−Density Sonde / Equipment Identification

Primary Equipment:		
Gamma Source Radioactive	GSR − Z	2945
Hostile Litho Density Sonde	HLDS − D	35
Hostile Litho Density High Voltage	HLDV − D	35
Auxiliary Equipment:		
Hostile Litho Density High Voltage Housi	HEH − H	35
Hostile Litho Density Pad	HLDP − C	35

Hostile Litho−Density Sonde Wellsite Calibration

Background Measurement

Phase	SS Cs Resolution Bkg %	Value
Master		7.807
Before		7.787
After		7.751
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)	

Phase	LS Cs Resolution Bkg %	Value
Master		8.092
Before		8.049
After		8.023
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)	

Phase	LSW1 Background CPS	Value
Master		79.69
Before		78.96
After		77.75
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)	

Phase	LSW2 Background CPS	Value
Master		71.79
Before		70.86
After		71.70
	50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)	

Phase	LSW3 Background CPS	Value
Master		163.6
Before		163.2
After		161.0
	110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)	

Phase	LSW4 Background CPS	Value
Master		199.9
Before		201.1
After		200.1
	140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)	

Phase	LSW5 Background CPS	Value
Master		469.2
Before		467.8
After		467.2
	330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)	

Phase	SSW1 Background CPS	Value
Master		76.16
Before		76.65
After		76.59
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)	

Phase	SSW2 Background CPS	Value
Master		131.2
Before		132.8
After		131.3
	100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)	

Phase	SSW3 Background CPS	Value
Master		367.3
Before		369.4
After		366.5
	280.0 (Minimum) 500.0 (Nominal) 700.0 (Maximum)	

Phase	SSW4 Background CPS	Value
Master		198.9
Before		197.0
After		195.5
	150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum)	

Phase	SSW5 Background CPS	Value
Master		142.3
Before		140.8
After		141.3
	110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum)	

Master: 5−Oct−2016 18:34 Before: 16−Oct−2016 15:28 After: 24−Oct−2016 3:01

Hostile Litho−Density Sonde Master Calibration

Detector Background Measurement

Phase	LSW1 Background CPS	Value
Master		79.69
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)	

Phase	LSW2 Background CPS	Value
Master		71.79
	50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)	

Phase	LSW3 Background CPS	Value
Master		163.6
	110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)	

Phase	LSW4 Background CPS	Value
Master		199.9
	140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)	

Phase	LSW5 Background CPS	Value
Master		469.2
	330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)	

Phase	LS Cs Resolution Bkg %	Value
Master		8.092
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)	

Phase	SSW1 Background CPS	Value
Master		76.16
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)	

Phase	SSW2 Background CPS	Value
Master		131.2
	100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)	

Phase	SSW3 Background CPS	Value
Master		367.3
	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

Phase		Value
Master		198.9
	150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum)	

Phase		Value
Master		142.3
	110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum)	

Phase		Value
Master		7.807
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)	

Master: 5−Oct−2016 18:34

Hostile Litho−Density Sonde Master Calibration

Detector Aluminum Measurement (bkgd−subtracted)

Phase	LSW1 Aluminum CPS	Value
Master		499.7
	420.0 (Minimum) 600.0 (Nominal) 770.0 (Maximum)	

Phase	LSW2 Aluminum CPS	Value
Master		724.8
	650.0 (Minimum) 900.0 (Nominal) 1150 (Maximum)	

Phase	LSW3 Aluminum CPS	Value
Master		869.3
	800.0 (Minimum) 1100 (Nominal) 1450 (Maximum)	

Phase	LSW4 Aluminum CPS	Value
Master		439.9
	410.0 (Minimum) 580.0 (Nominal) 740.0 (Maximum)	

Phase	LSW5 Aluminum CPS	Value
Master	EXCEEDS LIMIT	406.2
	410.0 (Minimum) 570.0 (Nominal) 740.0 (Maximum)	

Phase	SSW1 Aluminum CPS	Value
Master		2239
	2000 (Minimum) 2800 (Nominal) 3200 (Maximum)	

Phase	SSW2 Aluminum CPS	Value
Master		6160
	5800 (Minimum) 8000 (Nominal) 9300 (Maximum)	

Phase	SSW3 Aluminum CPS	Value
Master		8683
	8300 (Minimum) 11600 (Nominal) 13500 (Maximum)	

Phase	SSW4 Aluminum CPS	Value
Master		3606
	3500 (Minimum) 5000 (Nominal) 5800 (Maximum)	

Phase	SSW5 Aluminum CPS	Value
Master		439.6
	430.0 (Minimum) 660.0 (Nominal) 770.0 (Maximum)	

Master: 5−Oct−2016 19:02

Hostile Litho−Density Sonde Master Calibration

Detector Litholog Measurement (bkgd−subtracted)

Phase	LSW1 Iron CPS	Value
Master		343.0
	290.0 (Minimum) 400.0 (Nominal) 560.0 (Maximum)	

Phase	LSW2 Iron CPS	Value
Master		589.2
	520.0 (Minimum) 730.0 (Nominal) 950.0 (Maximum)	

Phase	LSW3 Iron CPS	Value
Master		771.3
	720.0 (Minimum) 1000 (Nominal) 1350 (Maximum)	

Phase	LSW4 Iron CPS	Value
Master		**401.3**
	370.0 (Minimum) 520.0 (Nominal) 700.0 (Maximum)	

Phase	LSW5 Iron CPS	Value
Master		**368.5**
	340.0 (Minimum) 470.0 (Nominal) 750.0 (Maximum)	

Phase	SSW1 Iron CPS	Value
Master		**1649**
	1500 (Minimum) 2100 (Nominal) 2400 (Maximum)	

Phase	SSW2 Iron CPS	Value
Master		5147
	4900 (Minimum) 6800 (Nominal) 7900 (Maximum)	

Phase	SSW3 Iron CPS	Value
Master		7898
	7800 (Minimum) 10800 (Nominal) 12600 (Maximum)	

Phase	SSW4 Iron CPS	Value
Master	EXCEEDS LIMIT	3286
	3300 (Minimum) 4600 (Nominal) 5400 (Maximum)	

Phase	SSW5 Iron CPS	Value
Master	EXCEEDS LIMIT	390.6
	420.0 (Minimum) 580.0 (Nominal) 680.0 (Maximum)	

Master: 5−Oct−2016 18:57

Hostile Litho−Density Sonde Master Calibration

Quality Ratios

Phase	AL CALIBRATION RATIO 1	Value
Master		1.027
	0.9000 (Minimum) 1.000 (Nominal) 1.100 (Maximum)	

Phase	AL CALIBRATION RATIO 2	Value
Master		2.146
	1.900 (Minimum) 2.100 (Nominal) 2.300 (Maximum)	

Phase	AL CALIBRATION RATIO 3	Value
Master		0.5907
	0.4500 (Minimum) 0.5500 (Nominal) 0.6500 (Maximum)	

Phase	AL CALIBRATION RATIO 4	Value
Master		0.5534
	0.4000 (Minimum) 0.5500 (Nominal) 0.6500 (Maximum)	

Phase	Pad−Wear SS Ratio	Value
Master		0.9932
	0.9800 (Minimum) 0.9880 (Nominal) 0.9960 (Maximum)	

Phase	Pad−Wear LS Ratio	Value
Master		0.9866
	0.9800 (Minimum) 0.9880 (Nominal) 0.9960 (Maximum)	

Phase	Pad−Position SS Ratio	Value
Master		1.006
	0.9900 (Minimum) 0.9940 (Nominal) 1.015 (Maximum)	

Phase	Pad−Position LS Ratio	Value
Master		0.9864
	0.9850 (Minimum) 0.9940 (Nominal) 1.010 (Maximum)	

Master: 5−Oct−2016 18:52

Litho−Density Spectroscopy Cartridge − B / Equipment Identification

Primary Equipment:

LDSC Cartridge	LDSC − B	326
Auxiliary Equipment:		
LDSC Housing	LDSH − A	303

Accelerator−Porosity Tool / Equipment Identification

Primary Equipment:		
Accelerator−Porosity Sonde	APS − C	22
APS Minitron	MNTR − F	7341
Auxiliary Equipment:		
Accelerator−Porosity Housing	APH − AC	22
APS Calibration Water Tank	SFT − 178	1
APS Aluminum Calibrator Sleeve	SFT − 281	1

Accelerator−Porosity Tool Wellsite Calibration

Detector Background

Phase	Near Det Bkg Cntrate CPS	Value
Master		32.05
Before		31.69
After		32.04

1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum)

Phase	Far Det Bkg Cntrate CPS	Value
Master		32.21
Before		33.66
After		32.09

1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum)

Phase	Array−1 Det Bkg Cntrate CPS	Value
Master		28.16
Before		29.15
After		28.05

1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum)

Phase	Array−2 Det Bkg Cntrate CPS	Value
Master		29.58
Before		30.51
After		28.18

1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum)

Phase	Array Therm Det Bkg Cntrate CPS	Value
Master		31.65
Before		30.07
After		31.65

1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum)

Master: 6−Oct−2016 13:48 Before: 16−Oct−2016 15:07 After: 24−Oct−2016 2:58

Accelerator−Porosity Tool Wellsite Calibration

Calibration Ratios

Phase	Near/Far Calibration Ratio	Value
Master		0.8901

0.8000 (Minimum) 0.9250 (Nominal) 1.050 (Maximum)

Phase	Near/Array Calibration Ratio	Value
Master		1.066

0.9000 (Minimum) 1.030 (Nominal) 1.170 (Maximum)

Phase	Near/Array Cal Ratio Up/Down	Value
Master		1.017

0.9700 (Minimum) 1.000 (Nominal) 1.030 (Maximum)

Master: 6−Oct−2016 13:48

Accelerator−Porosity Tool Wellsite Calibration

Tank Check

Phase	Array−1 Standoff Porosity PU	Value
Master		10.50

9.900 (Minimum) 11.75 (Nominal) 13.60 (Maximum)

Phase	Array−2 Standoff Porosity PU	Value
Master		10.17

9.900 (Minimum) 11.75 (Nominal) 13.60 (Maximum)

Phase	Average Slowing Down Time US	Value
Master		6.077

5.500 (Minimum) 6.000 (Nominal) 6.250 (Maximum)

Phase	Array−1 SDT Ratio Up/Down	Value
Master		0.9782

0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)

Phase	Array−2 SDT Ratio Up/Down	Value
Master		0.9678

0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)

Phase	Sigma Formation CU	Value
Master		33.77

20.00 (Minimum) 27.50 (Nominal) 35.00 (Maximum)

Master: 6−Oct−2016 13:48

Accelerator−Porosity Tool Master Calibration

Detector Calibration

Phase	Near/Far Calibration Ratio	Value
Master		0.8901

0.8000 (Minimum) 0.9250 (Nominal) 1.050 (Maximum)

Phase	Near/Array Calibration Ratio	Value
Master		1.066

0.9000 (Minimum) 1.030 (Nominal) 1.170 (Maximum)

Phase	Near/Array Cal Ratio Up/Down	Value
Master		1.017

0.9700 (Minimum) 1.000 (Nominal) 1.030 (Maximum)

Master: 6−Oct−2016 13:48

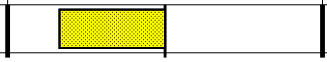
Accelerator−Porosity Tool Master Calibration

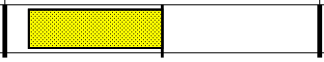
Tank Check

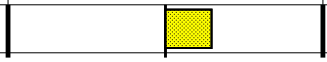
Phase	Array−1 Standoff Porosity PU	Value

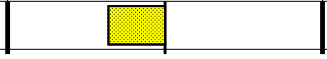
Phase	Array−2 Standoff Porosity PU	Value

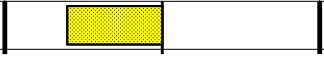
Phase	Average Slowing Down Time US	Value

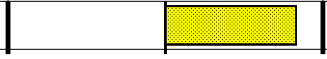
Phase		Value
Master		10.50
	9.900 (Minimum) 11.75 (Nominal) 13.60 (Maximum)	

Phase		Value
Master		10.17
	9.900 (Minimum) 11.75 (Nominal) 13.60 (Maximum)	

Phase		Value
Master		6.077
	5.500 (Minimum) 6.000 (Nominal) 6.250 (Maximum)	

Phase	Array−1 SDT Ratio Up/Down	Value
Master		0.9782
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)	

Phase	Array−2 SDT Ratio Up/Down	Value
Master		0.9678
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)	

Phase	Sigma Formation CU	Value
Master		33.77
	20.00 (Minimum) 27.50 (Nominal) 35.00 (Maximum)	

Master: 6−Oct−2016 13:48

Hostile Natural Gamma Ray Cartridge − B / Equipment Identification

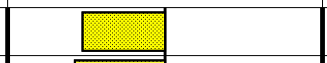
Primary Equipment:		
HNGC Cartridge	HNGC − B	439
Auxiliary Equipment:		
HNGC Housing	HNGH − A	380

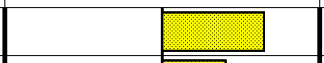
Hostile Natural Gamma Ray Sonde / Equipment Identification

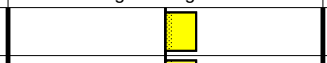
Primary Equipment:		
HNGS Sonde	HNGS − BA	177
Auxiliary Equipment:		
HNGS Sonde Housing	HNSH − BA	174
Gamma Source Radioactive	GSR − U	616008

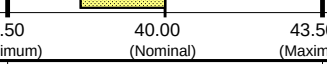
Hostile Natural Gamma Ray Sonde Wellsite Calibration

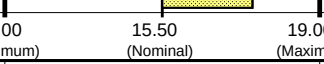
Detector 1 Check

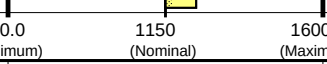
Phase	Na 511 Peak Loc	Value
Master		38.68
Before		38.56
After		38.65
	37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)	

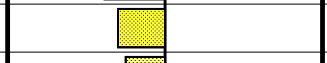
Phase	Na 511 Peak Res %	Value
Master		17.78
Before		16.92
After		17.52
	12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)	

Phase	High Voltage V	Value
Master		1238
Before		1239
After		1239
	900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	

Phase	Na 1785 Peak Loc	Value
Master		139.7
Before		140.3
After		140.7
	135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)	

Phase	Na 1785 Peak Res %	Value
Master		9.609
Before		9.404
After		8.156
	7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)	

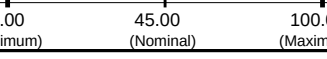
Phase	Temperature DEGC	Value
Master		36.36
Before		36.72
After		36.42
	−28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)	

Phase	Na Count Rate CPS	Value
Master		32.02
Before		31.97
After		32.78
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)	

Master: 4−Oct−2016 17:52 Before: 16−Oct−2016 15:05 After: 4−Oct−2016 18:07

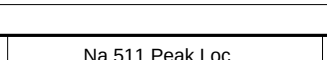
Hostile Natural Gamma Ray Sonde Wellsite Calibration

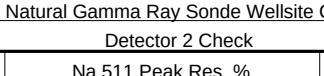
Detector 2 Check

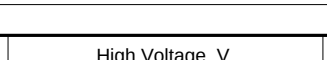
Phase	Na 511 Peak Loc	Value
Master		39.49
Before		39.63
After		39.78
	37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)	

Phase	Na 511 Peak Res %	Value
Master		16.83
Before		17.09
After		16.11
	12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)	

Phase	High Voltage V	Value
Master		1115
Before		1116
After		1116
	900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	

Phase	Na 1785 Peak Loc	Value
Master		143.2
Before		143.6
	135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)	

Phase	Na 1785 Peak Res %	Value
Master		8.724
Before		9.768
	7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)	

Phase	Temperature DEGC	Value
Master		35.80
Before		36.48
	−28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)	

After		143.5	After		9.387	After		35.80
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		32.17
Before		32.24
After		32.93
10.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)

Master: 4−Oct−2016 17:52 Before: 16−Oct−2016 15:05 After: 4−Oct−2016 18:07

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Ratio Of Detector 1 To Detector 2

Phase	Coincidence Count Rate Ratio	Value
Master		0.9926
Before		0.9880
After		0.9927
0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)

Master: 4−Oct−2016 17:52
Before: 16−Oct−2016 15:05
After: 4−Oct−2016 18:07

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		211.7	Master		8.229
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		27.89	Master		1.041
10.00 (Minimum)	142.5 (Nominal)	265.0 (Maximum)	0.9400 (Minimum)	1.000 (Nominal)	1.060 (Maximum)

Master: 4−Oct−2016 17:46

Hostile Natural Gamma Ray Sonde Master Calibration

Detector 2 Calibration

Phase	Na 511 Peak Set Point	Value	Phase	Th Peak Loc	Value	Phase	Th Peak Res %	Value
Master		41.00	Master		211.6	Master		7.475
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		28.59	Master		1.019
10.00 (Minimum)	142.5 (Nominal)	265.0 (Maximum)	0.9400 (Minimum)	1.000 (Nominal)	1.060 (Maximum)

Master: 4−Oct−2016 17:46

Enhanced DTS Cartridge / Equipment Identification

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

Enhanced DTS Cartridge Wellsite Calibration

EDTC Accelerometer Calibration

Phase	EDTC Z−Axis Acceleration M/S2	Value
Before		9.747
9.610 (Minimum)	9.810 (Nominal)	10.01 (Maximum)

Before: 23−Oct−2016 19:56

Enhanced DTS Cartridge Wellsite Calibration

Detector Calibration

Phase	Gamma Ray Background GAPI	Value
Before		6.947
After		6.837
0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)

Phase	Gamma Ray (Jig − Bkg) GAPI	Value
Before		150.8
After		147.3
137.1 (Minimum)	150.8 (Nominal)	164.5 (Maximum)

Phase	Gamma Ray (Calibrated) GAPI	Value
Before		165.0
After		161.2
150.0 (Minimum)	165.0 (Nominal)	180.0 (Maximum)

Before: 4−Oct−2016 17:55 After: 4−Oct−2016 18:05

Company: **International Ocean Discovery Program**

Schlumberger

Well: **Expedition 363, Site U1482C**
Field: **Western Pacific Warm Pool**
Rig: **JOIDES Resolution**
Ocean: **Indian**

High Resolution Laterolog Array
Hostile Litho Density / APS Porosity
Natural Gamma Ray / MSS