Schlumberger

Company: **Lamont Doherty Earth Observatory**

Well: **Expedition 350, Site U1437D**
Field: **IBM−1 (Rear Arc)**
Rig: **JOIDES Resolution** Country:

Rig: JOIDES Resolution
Field: IBM−1 (Rear Arc)
Location: Latitude: N 31.7897*
Well: Expedition 350, Site U1437D
Company: Lamont Doherty Earth Observatory

MSS Magnetic Susceptibility

LOCATION

Latitude: N 31.7897*
Longitude: E 139.02631*

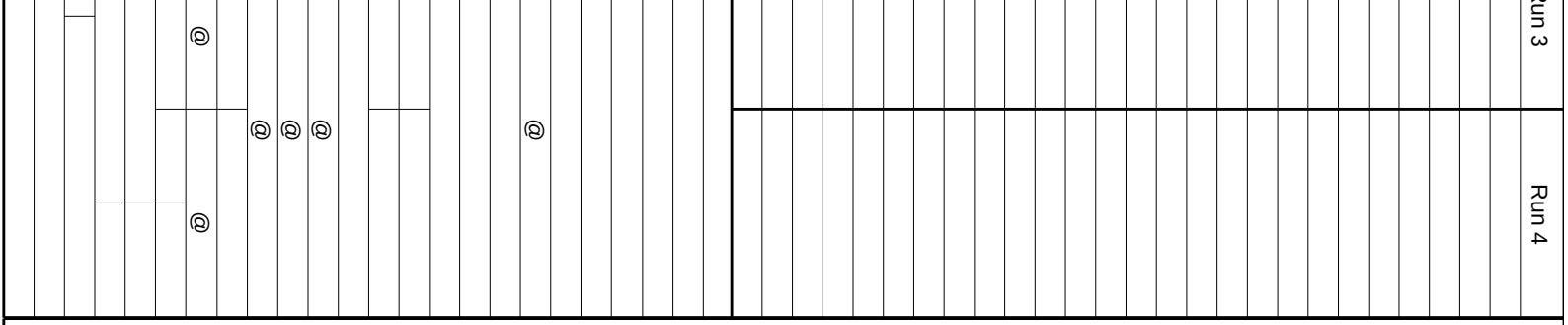
Elev.: K.B. −2127.30 m
G.L. 0.00 m
D.F. −2127.30 m

Permanent Datum: Mean Sea Level — Elev.: 0.00 m
Log Measured From: Drill Floor — 0.00 m above Perm. Datum
Drilling Measured From: Drill Floor

Ocean: Pacific	Max. Well Deviation 0 deg	Longitude E 139.02631	Latitude N 31.7897

	Run 1	Run 2	Run 3
Logging Date	22−Apr−2014		
Run Number	1		
Depth Driller	980.4 m		
Schlumberger Depth	960 m		
Bottom Log Interval	958.8 m		
Top Log Interval	92.3 m		
Casing Driller Size @ Depth	5.500 in @ 92.3 m	@	@
Casing Schlumberger	92.3 m		
Bit Size	9.875 in		
Type Fluid In Hole	Seawater		
MUD Density / Viscosity	1.03 g/cm3 /	/	/
MUD Fluid Loss / PH	/	/	/
MUD Source Of Sample	N/A		
RM @ Measured Temperature	@	@	@
RMF @ Measured Temperature	@	@	@
RMC @ Measured Temperature	@	@	@
Source RMF / RMC	N/A / N/A	/	/
RM @ MRT / RMF @ MRT	@ 60 / @ 60	@ / @	@ / @
Maximum Recorded Temperatures	60 degC		
Circulation Stopped Time	22−Apr−2014 14:00		
Logger On Bottom Time	22−Apr−2014 19:25		
Unit Number / Location	627314 Houston	/	/
Recorded By	C. Furman		
Witnessed By	G. Guerin		

	Run 1	Run 2	Run 3
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

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

OTHER SERVICES1

OS1: HNGS
OS2: HRLA
OS3: HLDS / APS
OS4: DSI
OS5: FMS

REMARKS: RUN NUMBER 1

Hole drilled with RCB coring bit and bottom hole assembly (BHA). 9 7/8 " BS
Coring concluded approximately 24 hours prior to logging.
Drill pipe set at a depth of 92.3mbsf with a logging bit installed to facilitate wireline logging.
Downlog run with corrections computed using bit size; uplogs corrected for actual hole size using caliper.
Lower part of toolstring (MSS and HRLA) centralized using modified MCD inline centralizers.
Upper part of toolstring (HLDS, APS, HNGS) eccentered using HLDS caliper and bowspring, as per toolsketch.
APS minitron remained off during downlog to avoid GR interference / formation activation.
Fluid type was sea water, as used to drill, so no barite corrections were required.
Depth originally recorded from drill floor; played back with sea floor as reference zero.
All logs presented in measured depth below sea floor (MDBSF).
Maximum observed temperature on the MSS internal temperature sensor at the bottom of the hole was 60 degC.

RUN 1

SERVICE ORDER #:
PROGRAM VERSION: 19C0−187
FLUID LEVEL:

LOGGED INTERVAL	START	STOP

RUN 2

SERVICE ORDER #:
PROGRAM VERSION:
FLUID LEVEL:

LOGGED INTERVAL	START	STOP

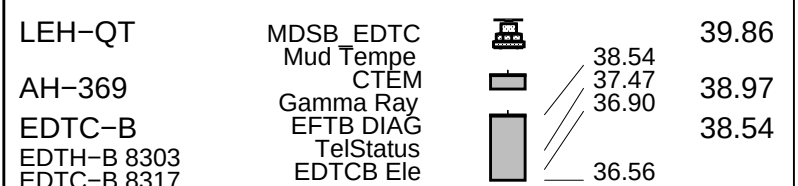
EQUIPMENT DESCRIPTION

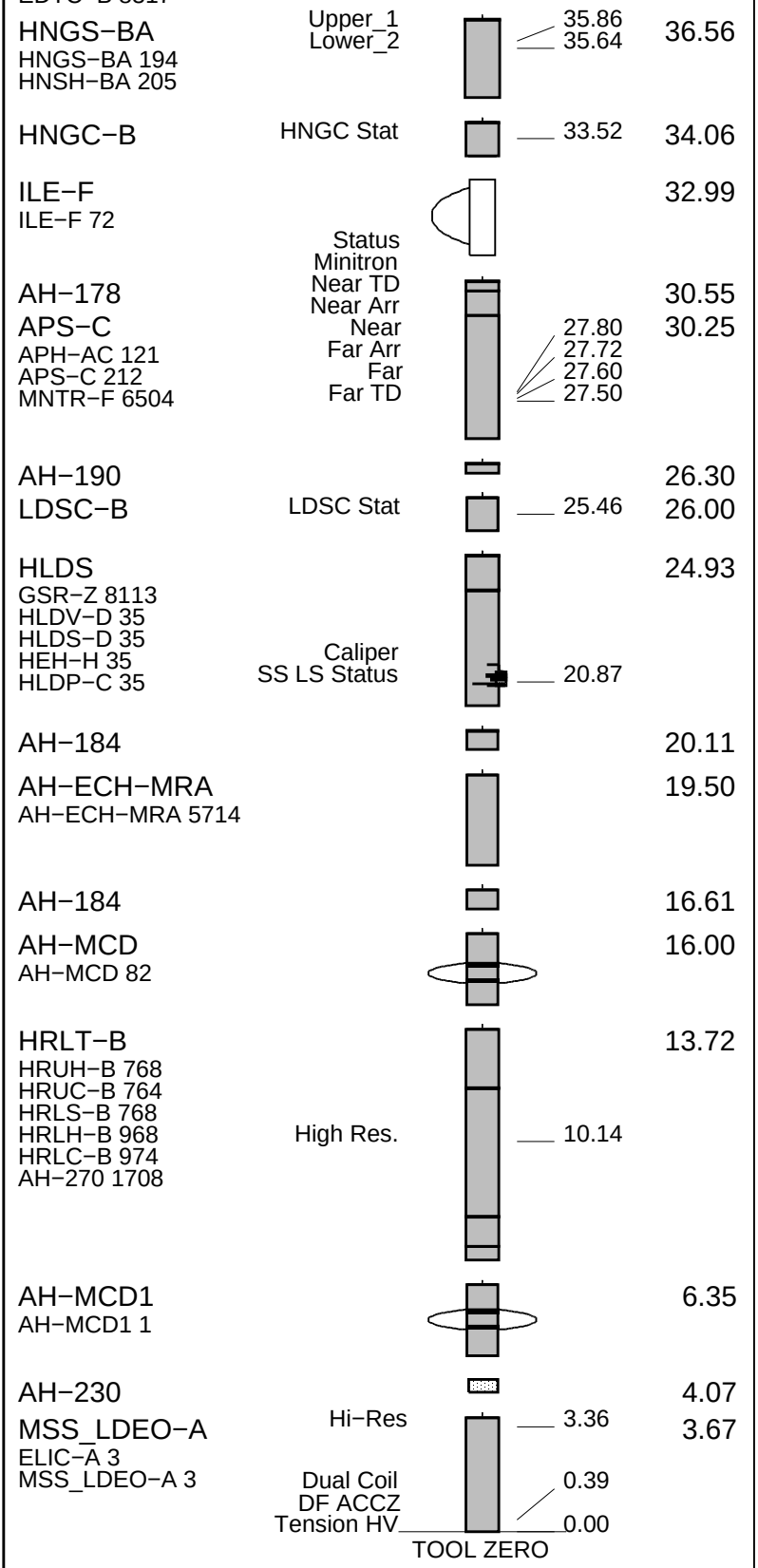
RUN 1 RUN 2

SURFACE EQUIPMENT

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

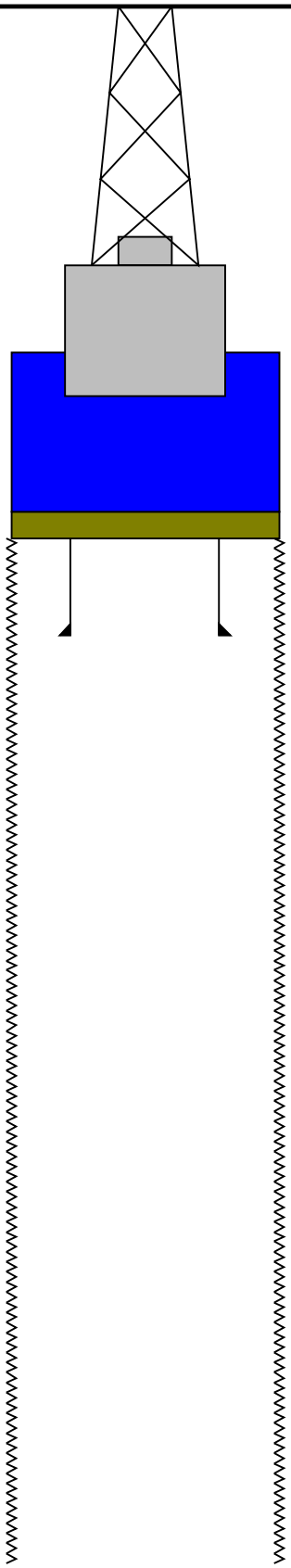
DOWNHOLE EQUIPMENT





MAXIMUM STRING DIAMETER 4.50 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

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

	OD	ID	MD		MD	OD	ID	
Kelly Bushing Elevation			−2127.3					
Derrick Floor Elevation			−2127.3					
Mean Sea Level			−2117.3					
					0.0			Sea Floor
					92.3	5.500		Bit Depth
					980.4	9.875		Total Depth − Driller

Schlumberger

Downlog
1:200 Scale

MAXIS Field Log

Company: Lamont Doherty Earth Observatory **Well: Expedition 350, Site U1437D**

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_033LUP		PRODUCER	25−Apr−2014 00:44	3091.3 M	2064.3 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_037PUP	FN:43	PRODUCER	25−Apr−2014 01:10	964.8 M	−25.0 M
CLIENT	MSS_LDEO_HRLA_LDL_037PUC	FN:44	CUSTOMER	25−Apr−2014 01:10	964.8 M	−25.0 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

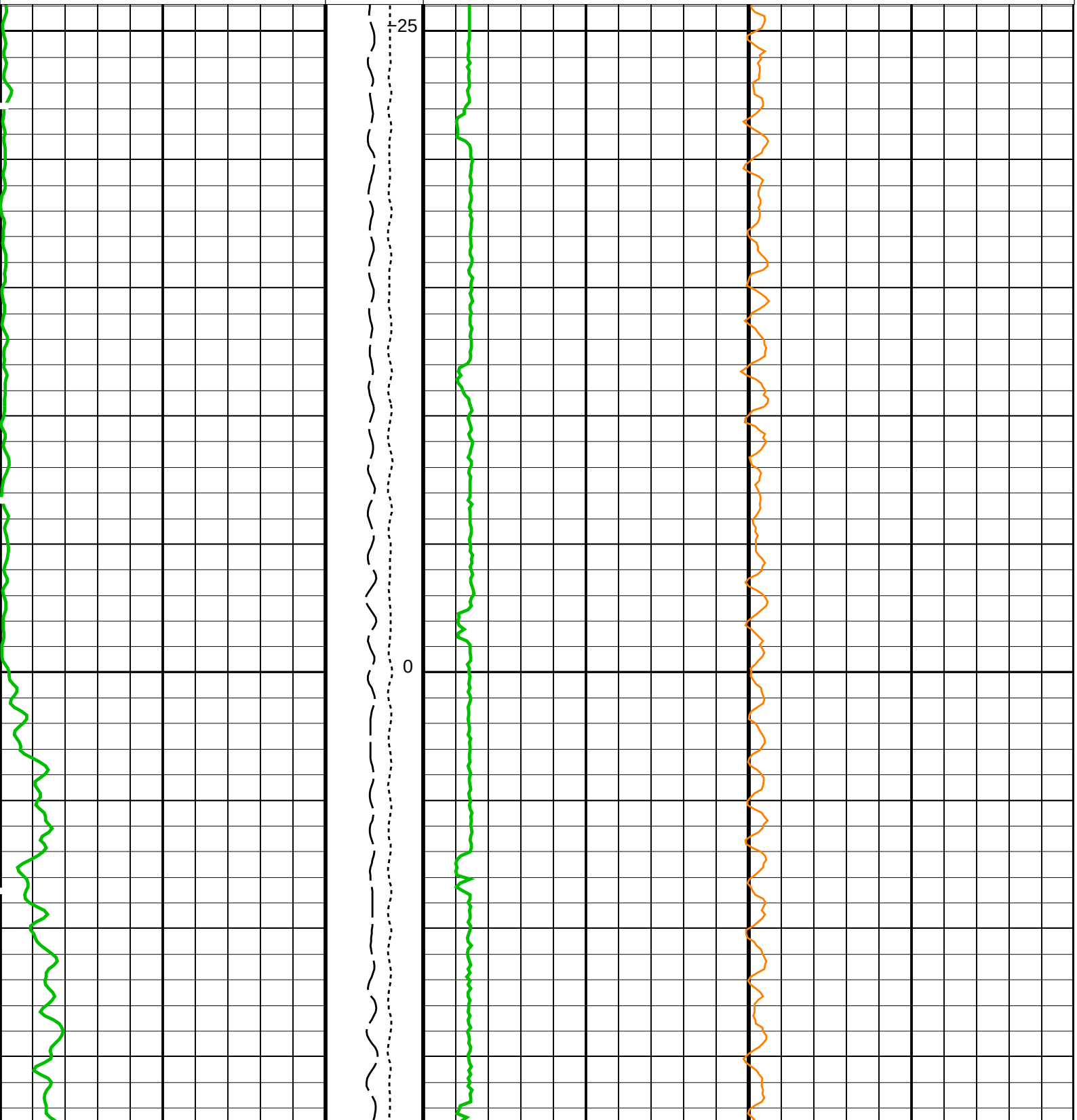
Calibrated Downhole Force (CDF) (LBF)
3000 0

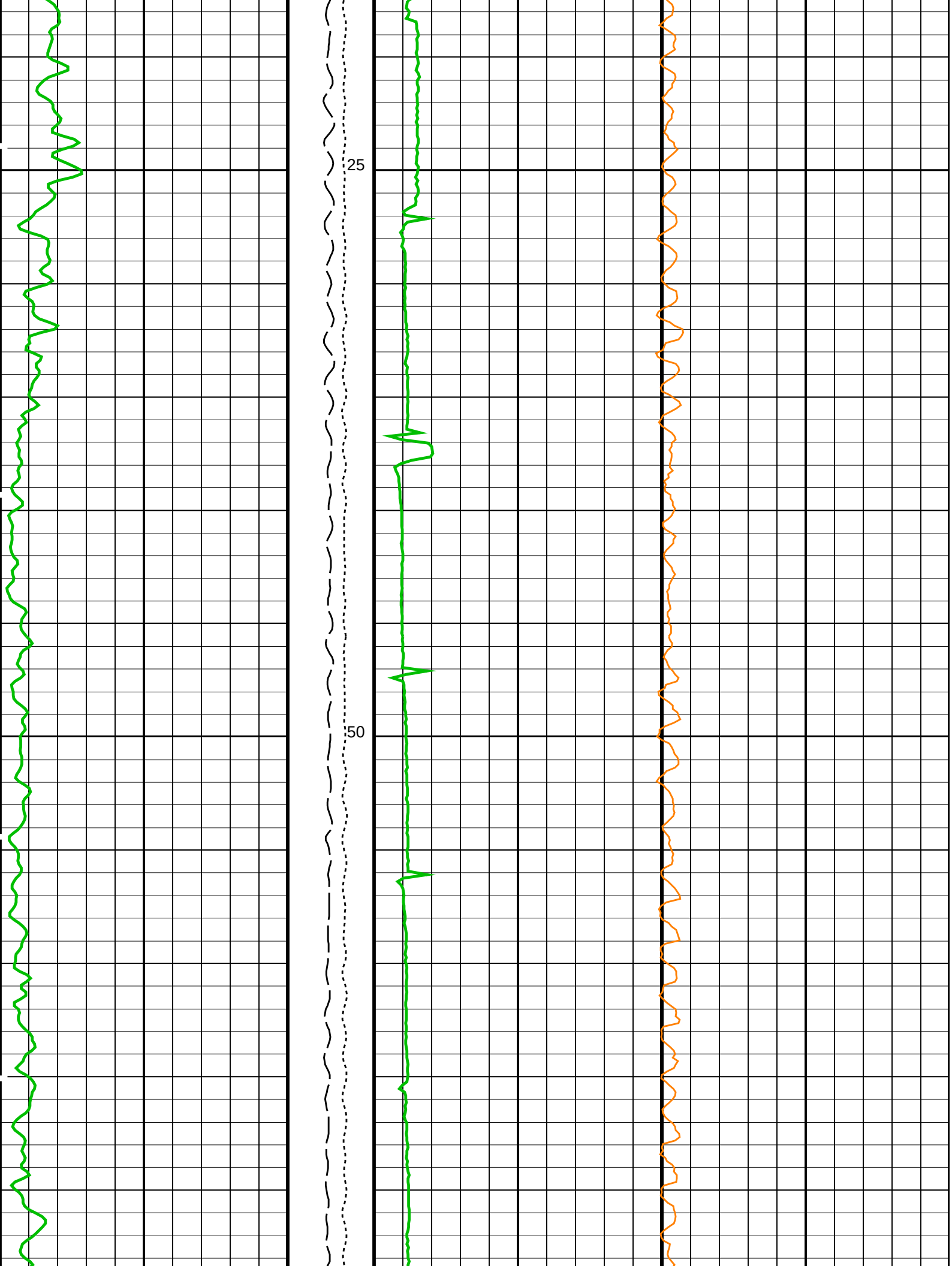
Dual−Coil Susceptibility (MSSLSUS_LDEO)
−20000 (PPM) 20000

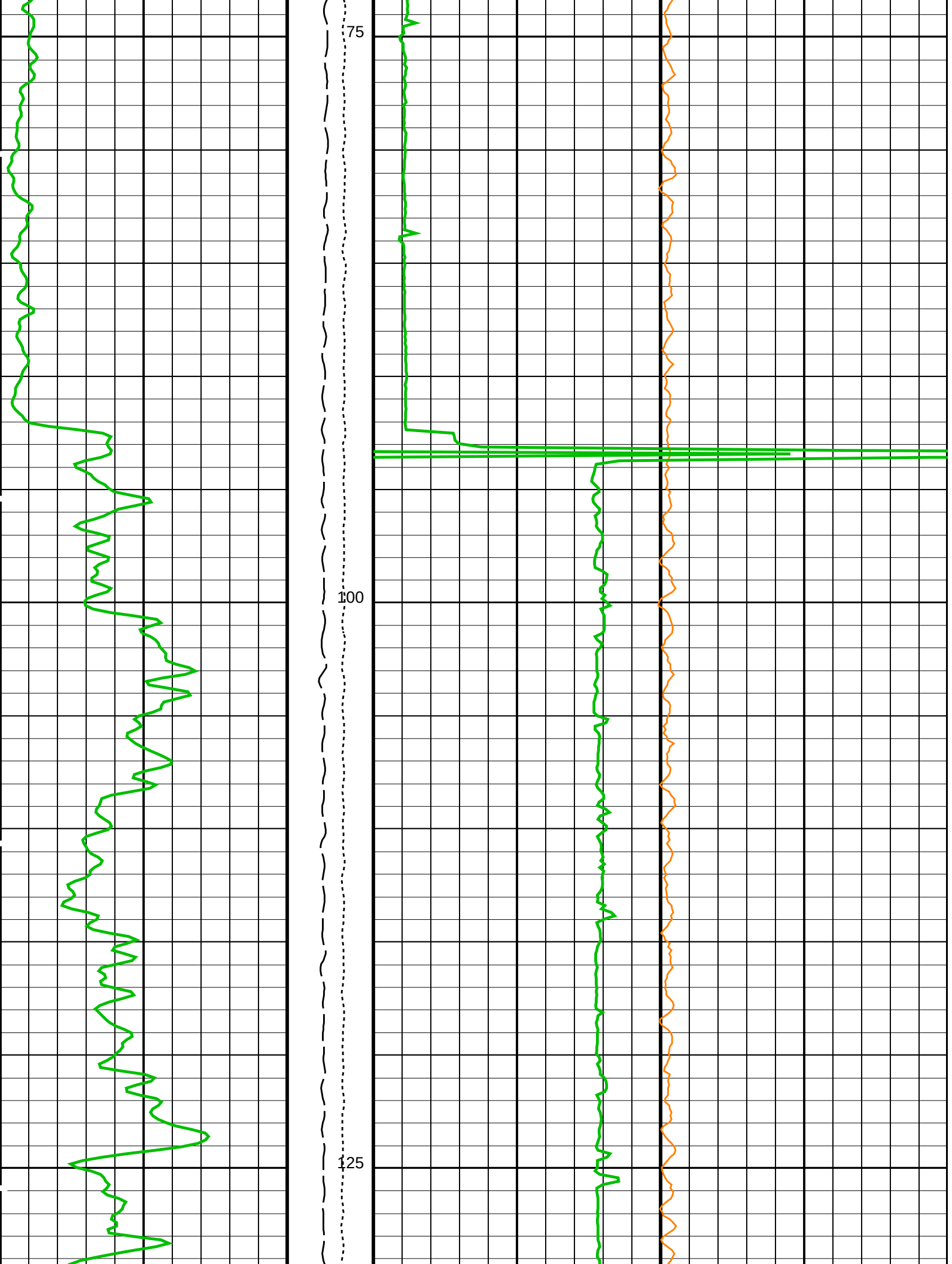
Gamma Ray (GR_EDTC)
0 (GAPI) 75

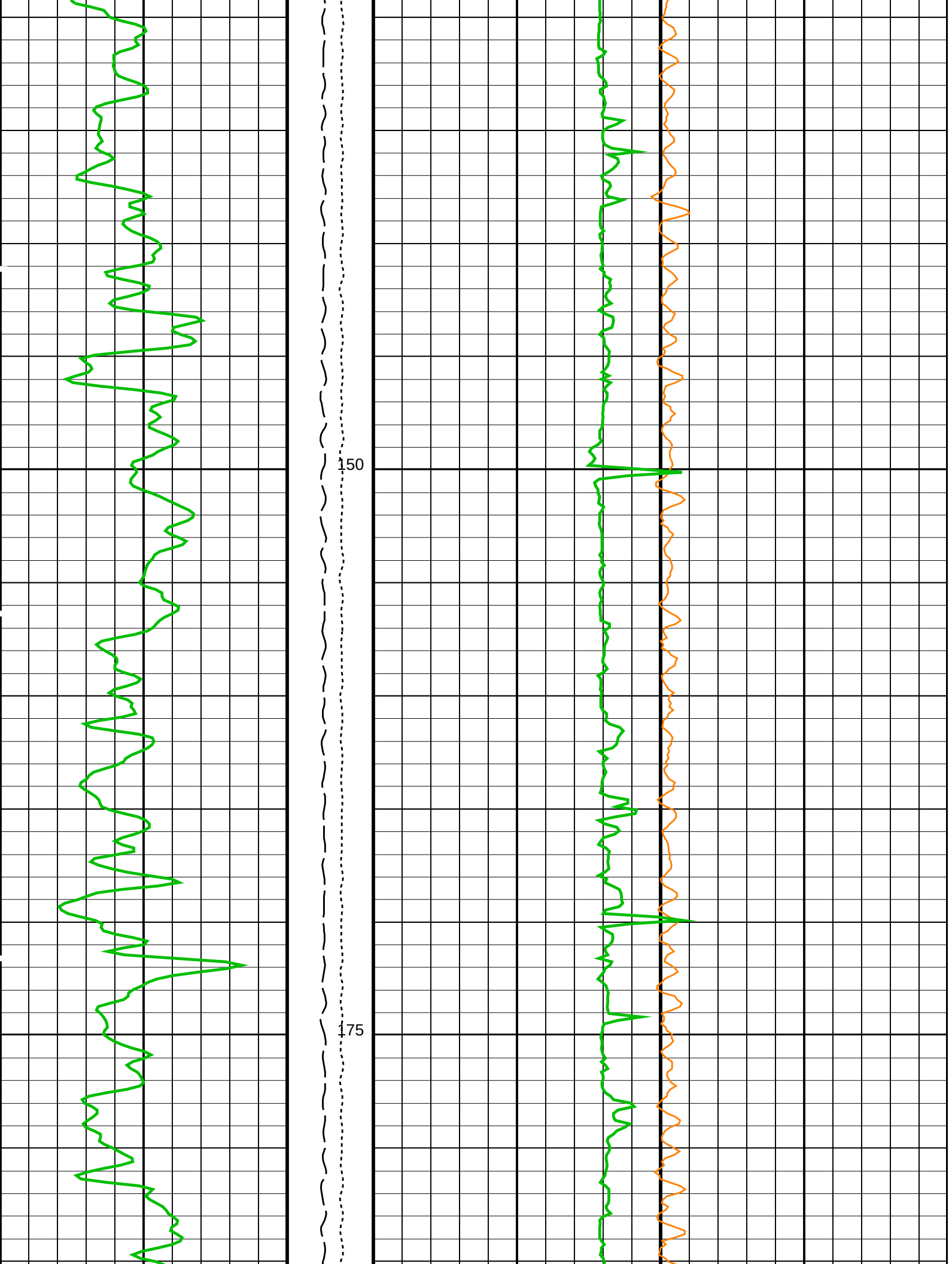
Tension (TENS) (LBF)
10000 0

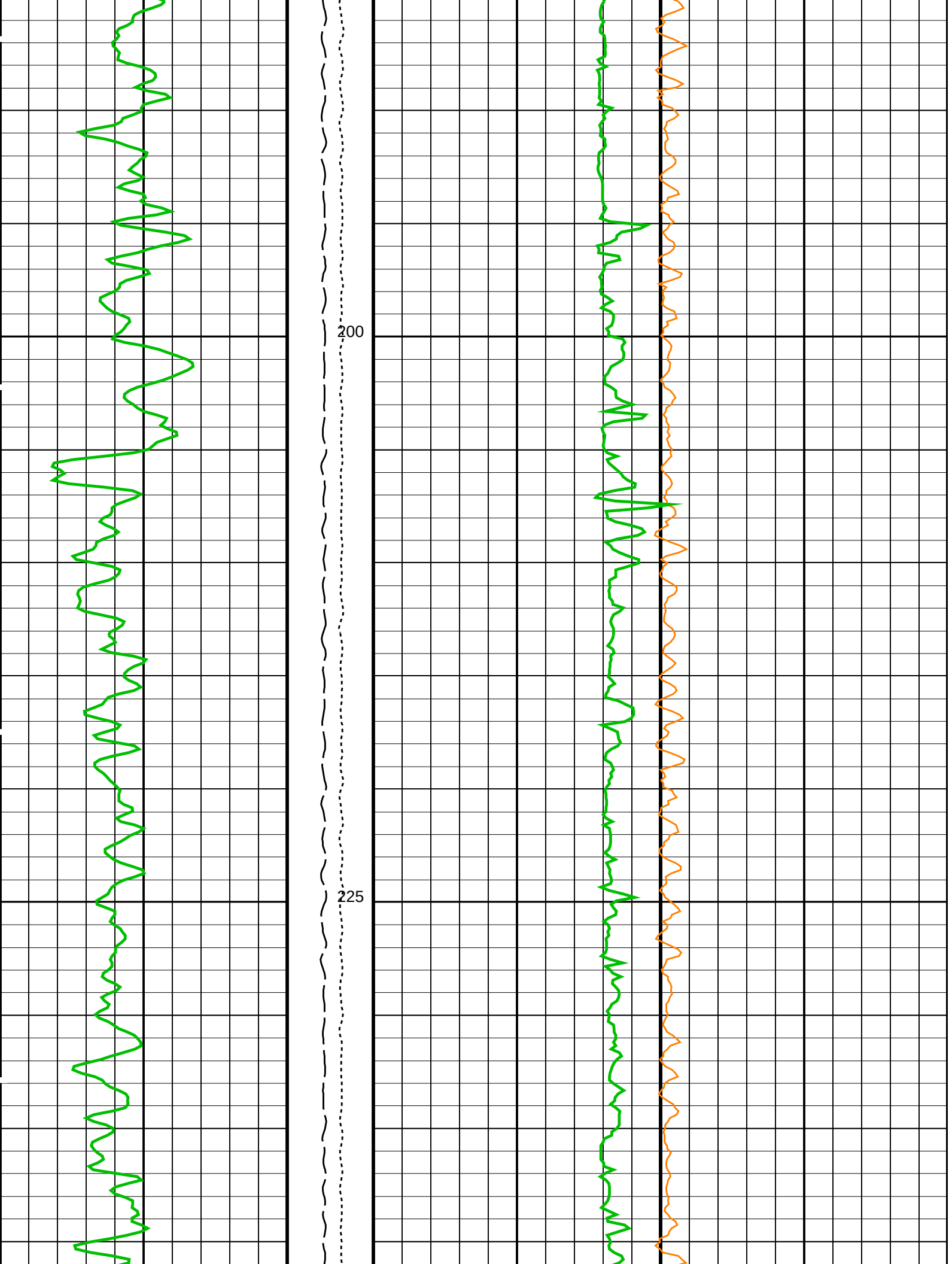
Axial Acceleration (MSSZACC_LDEO)
0 (M/S2) 20

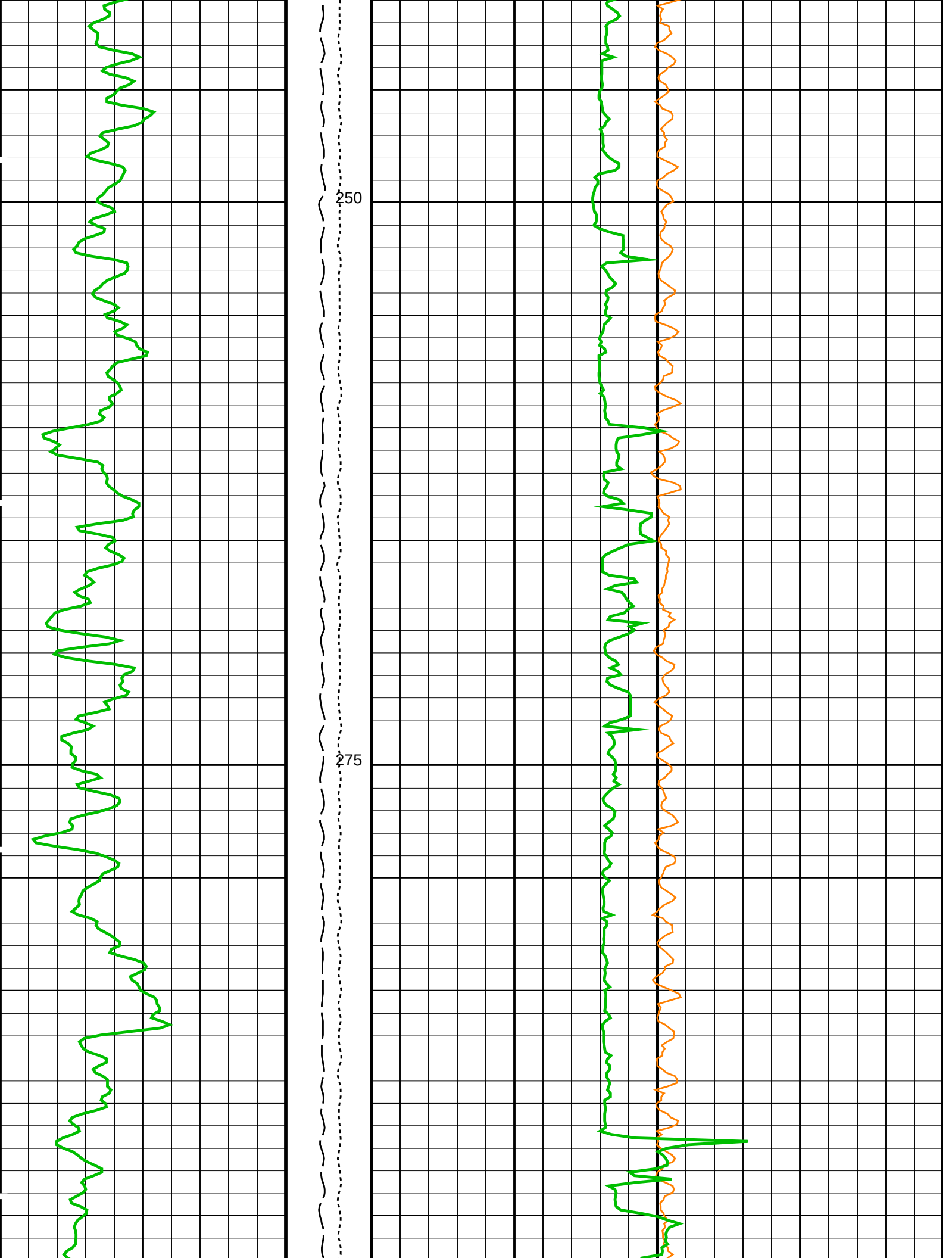


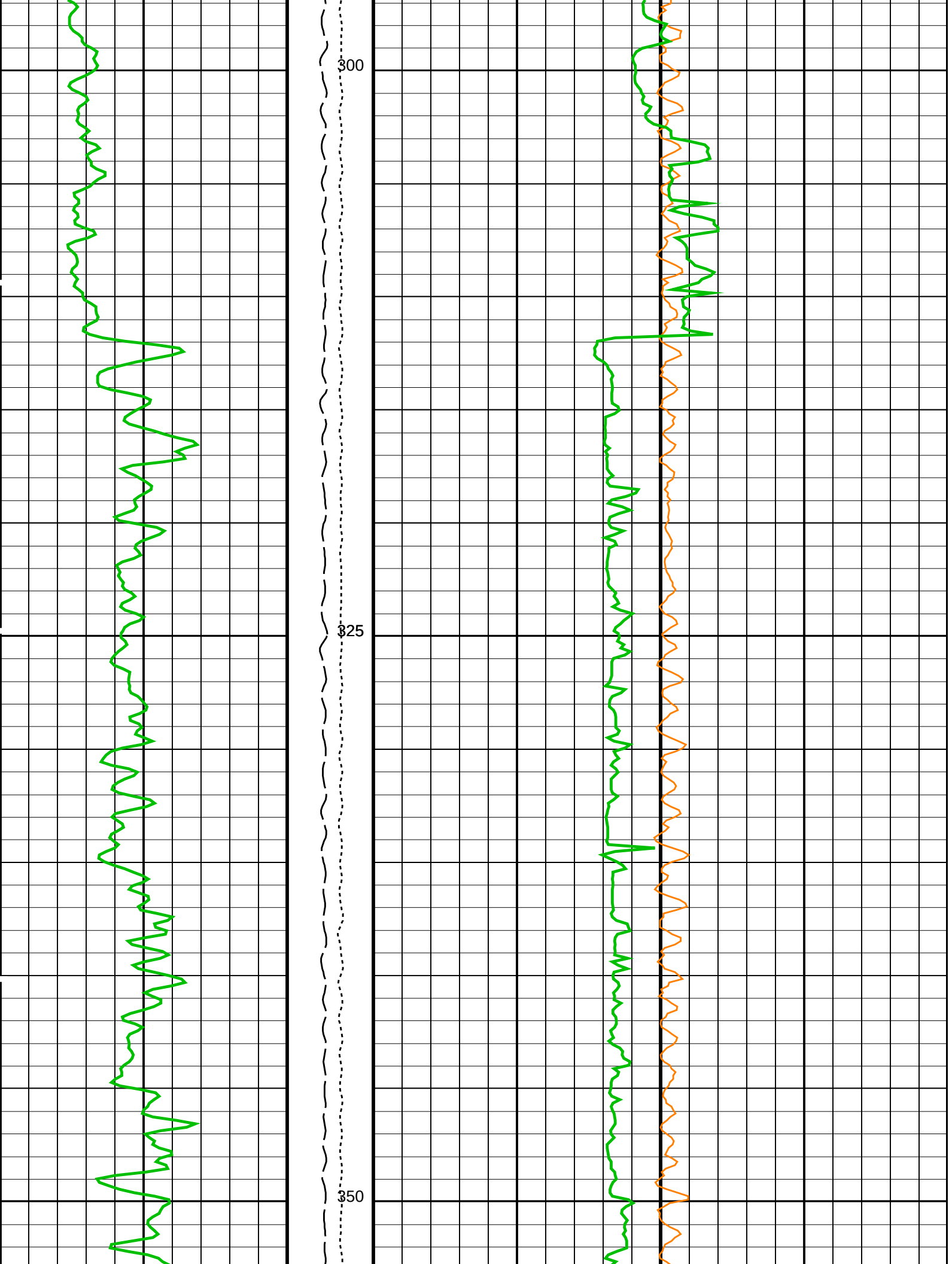

25
50

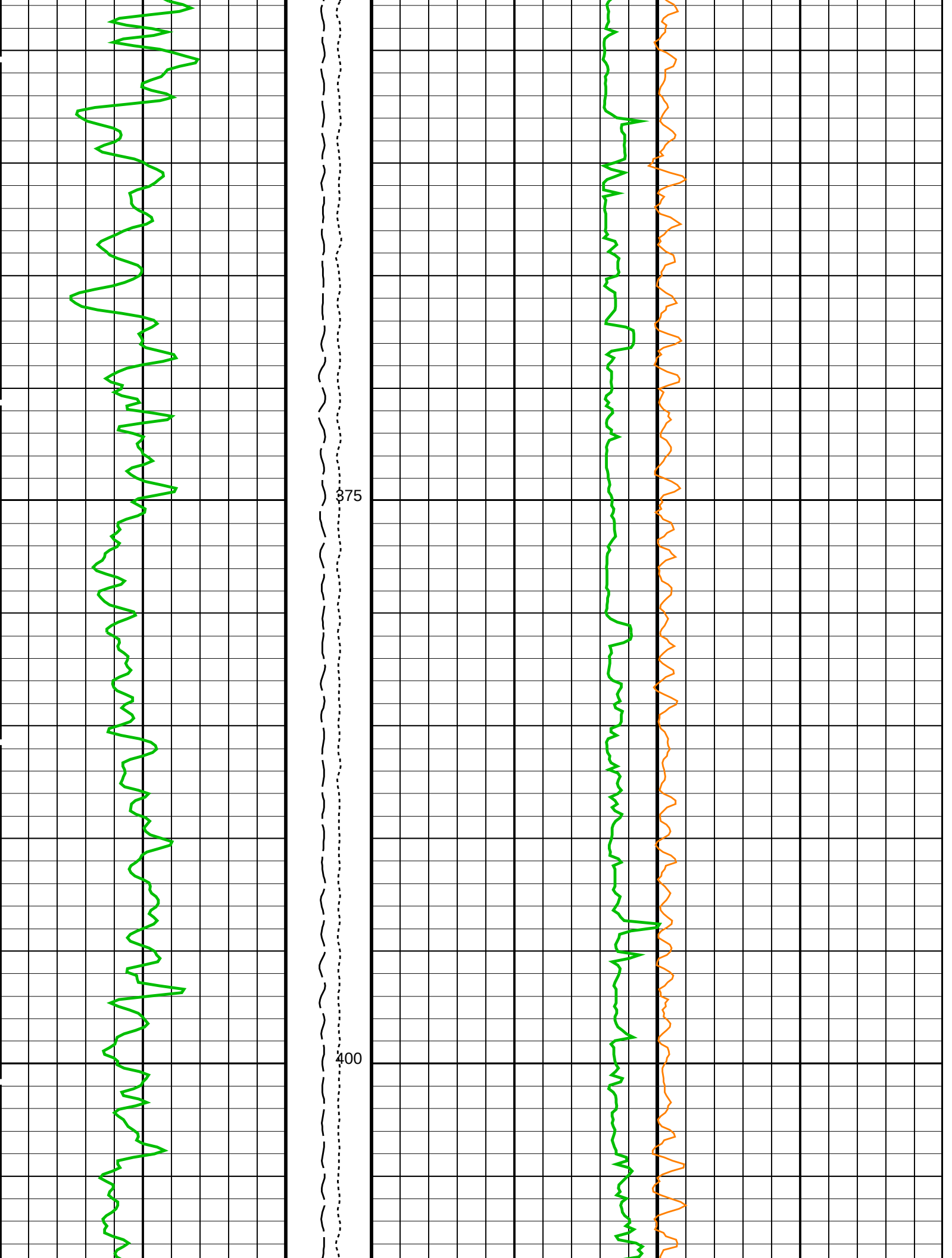

75
100
125

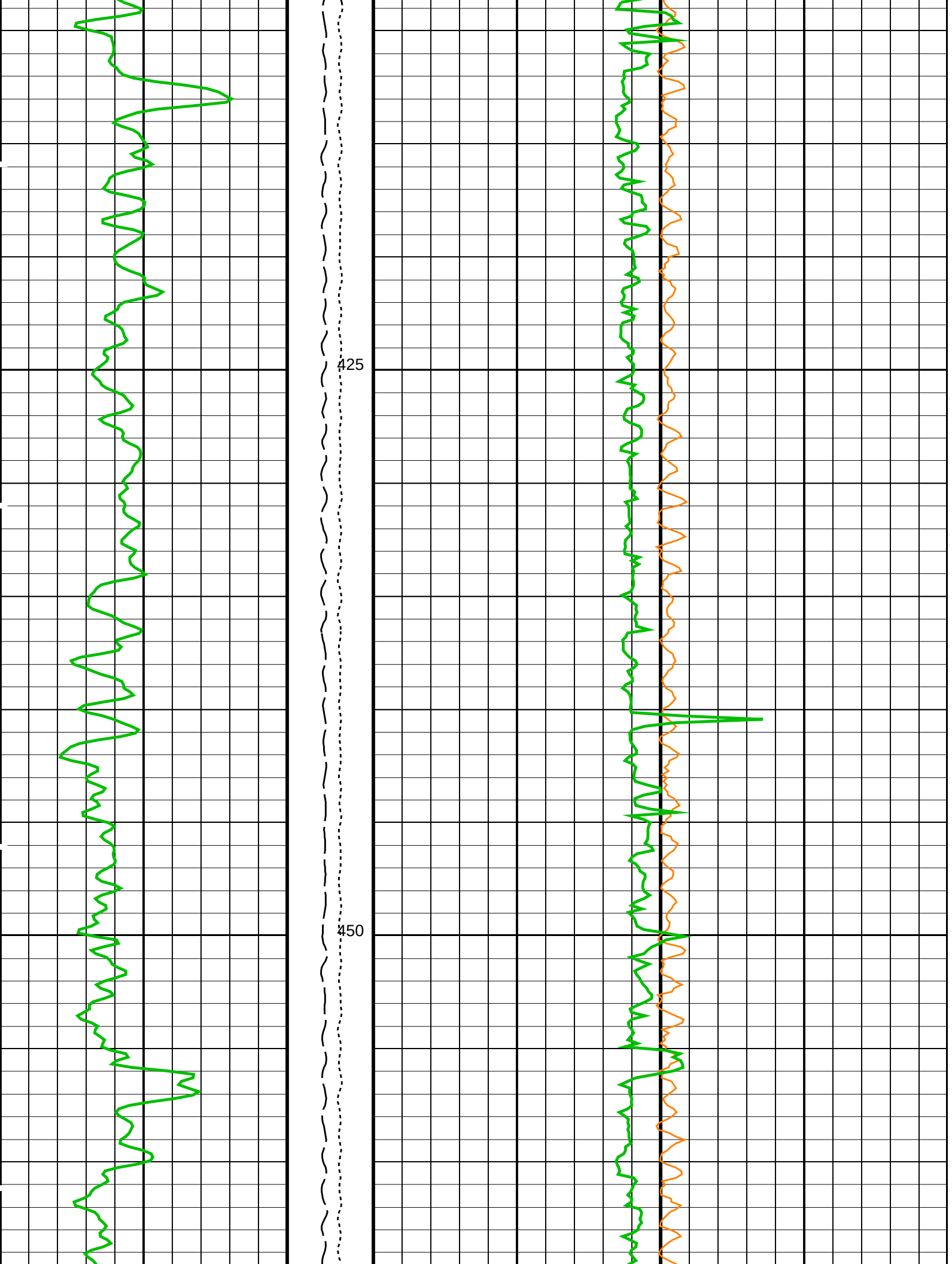

150
175

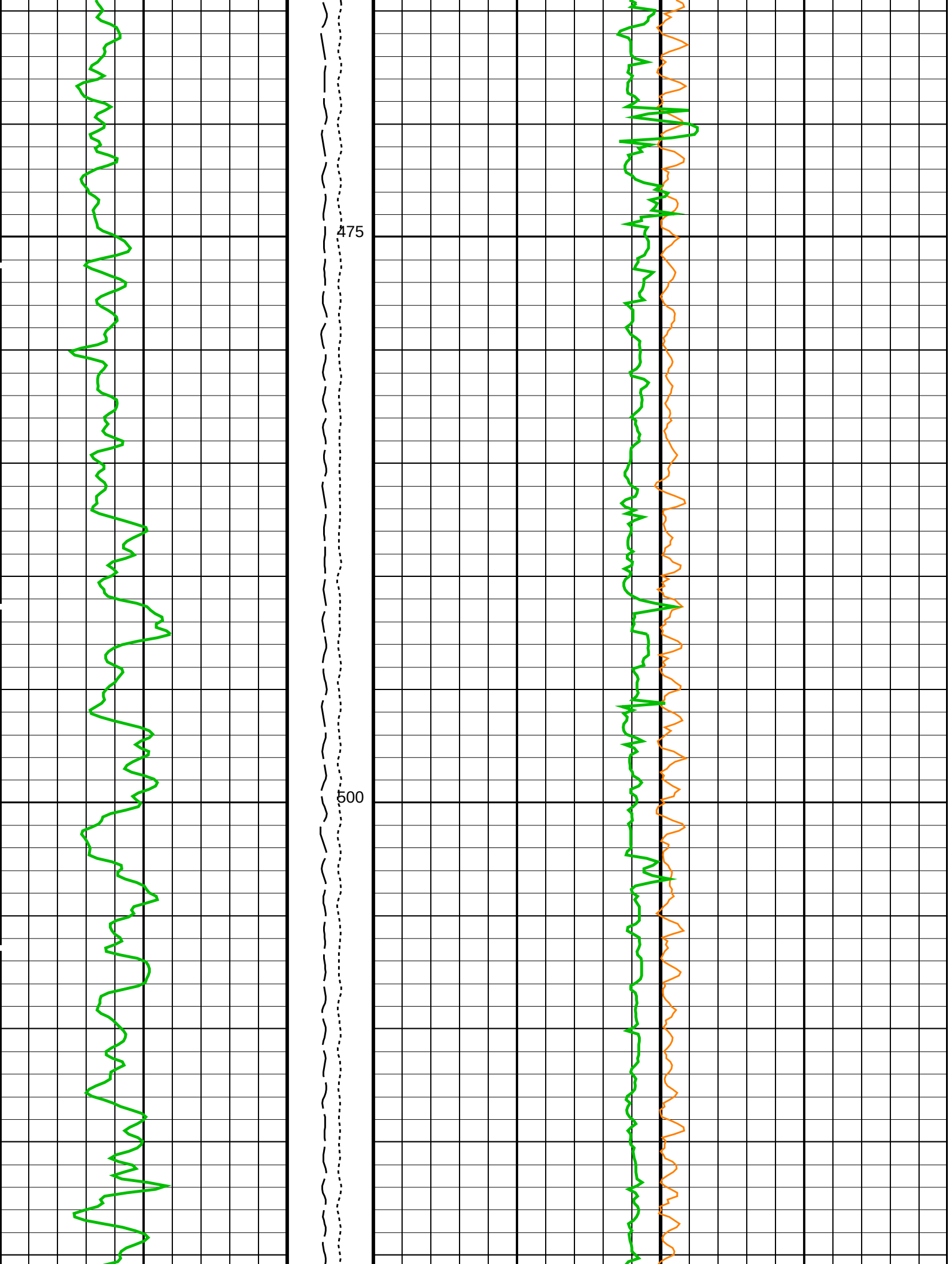

200
225

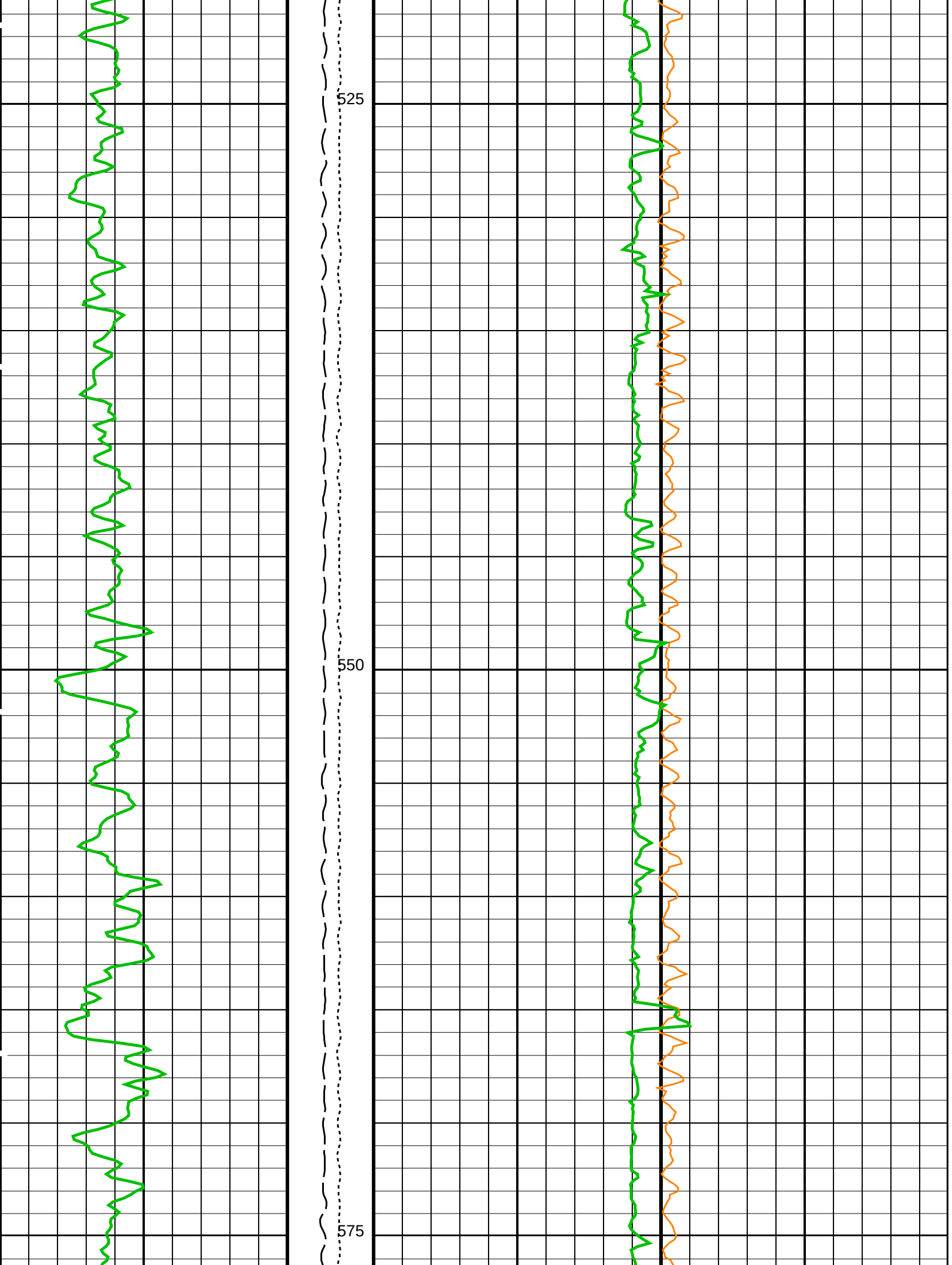

250
275

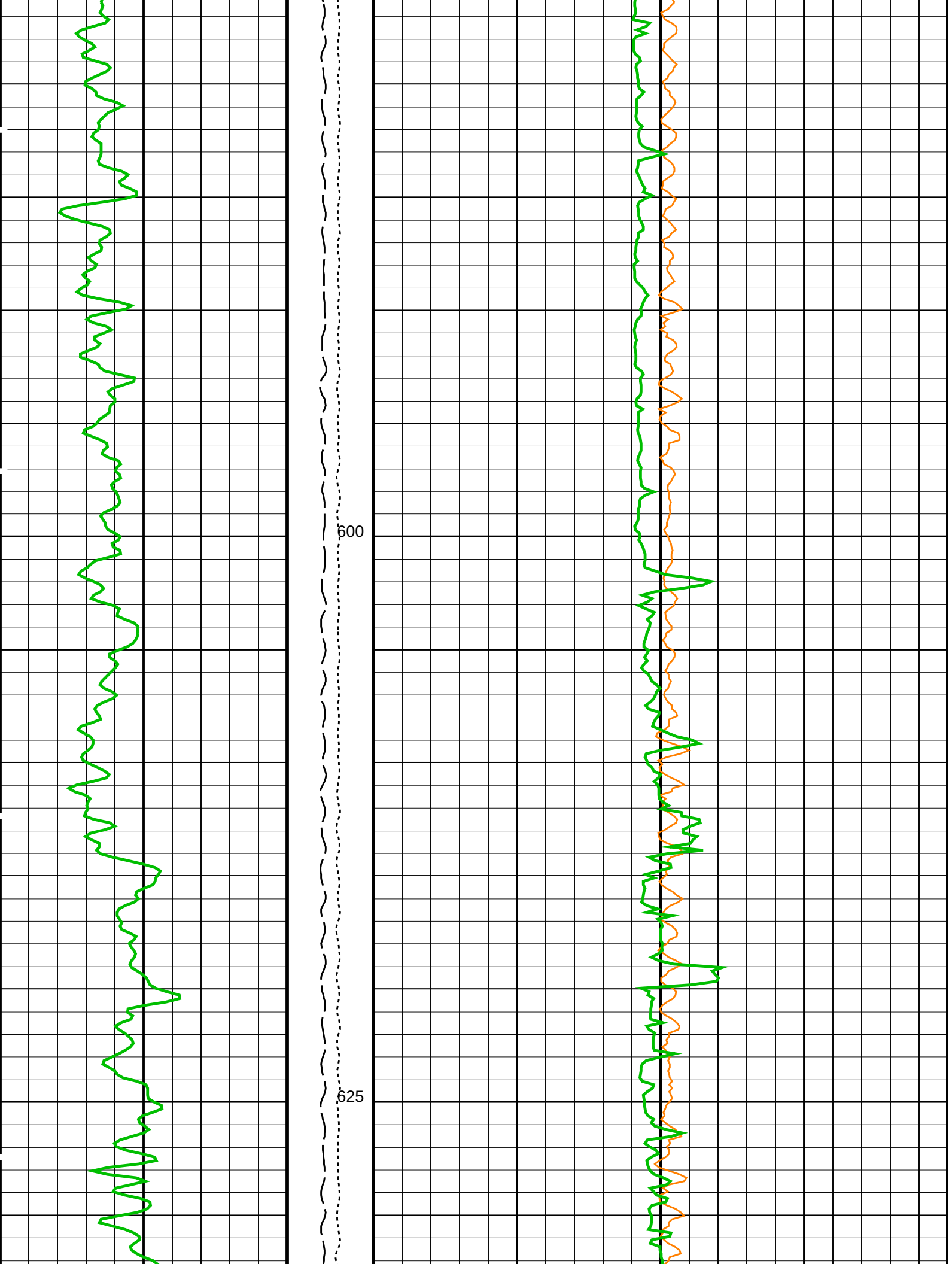

300
325
350

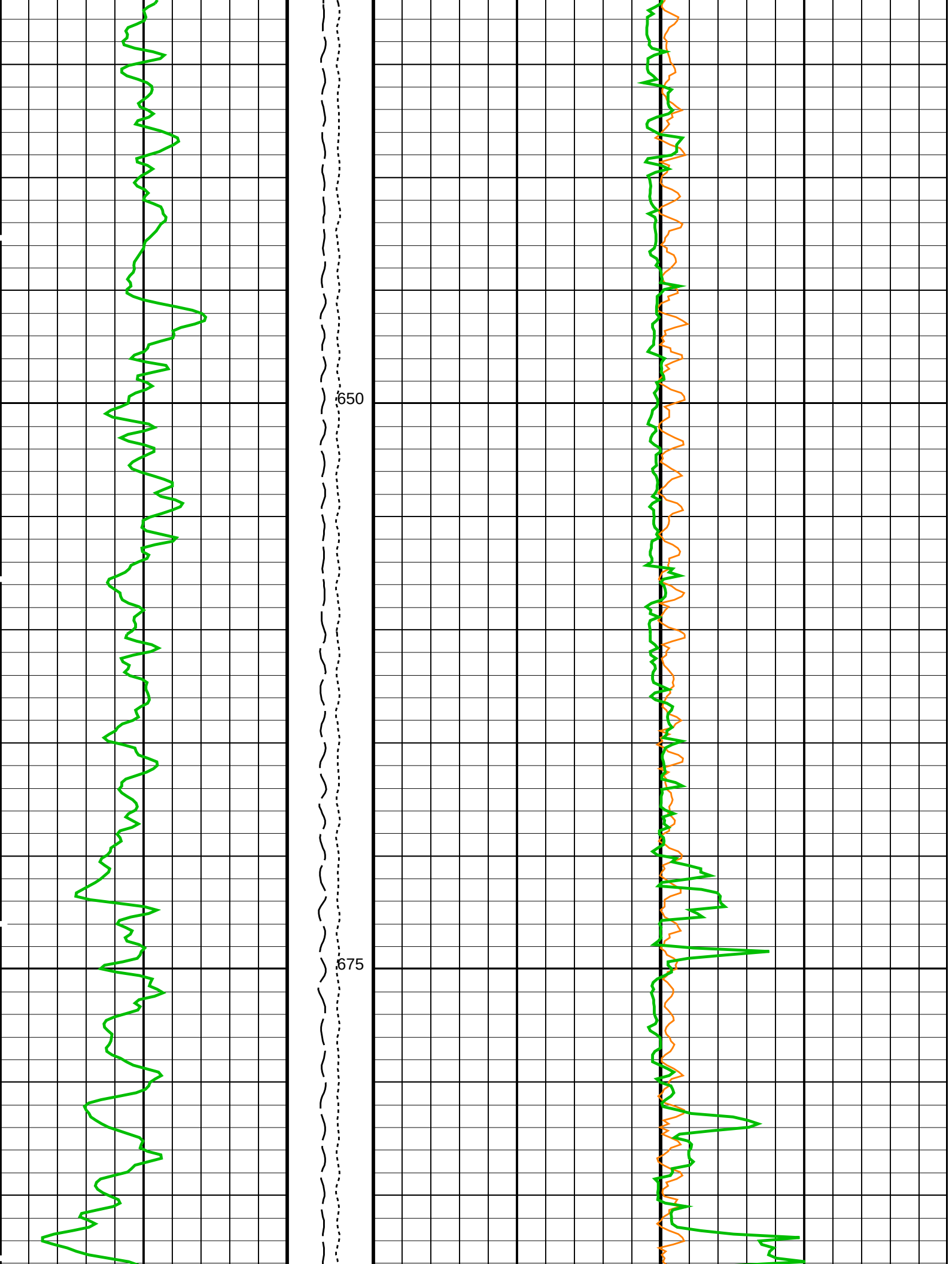

375
400

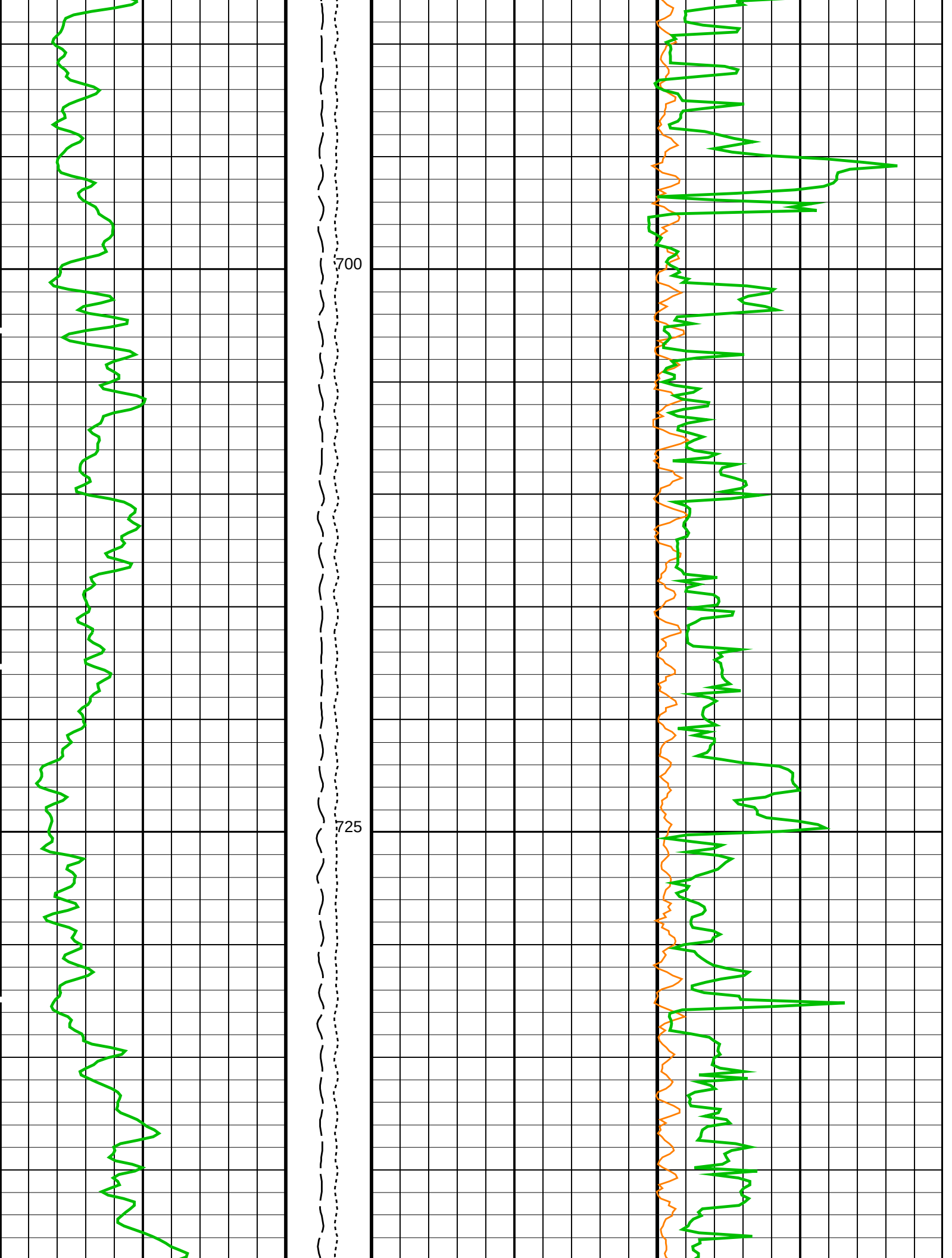

425
450

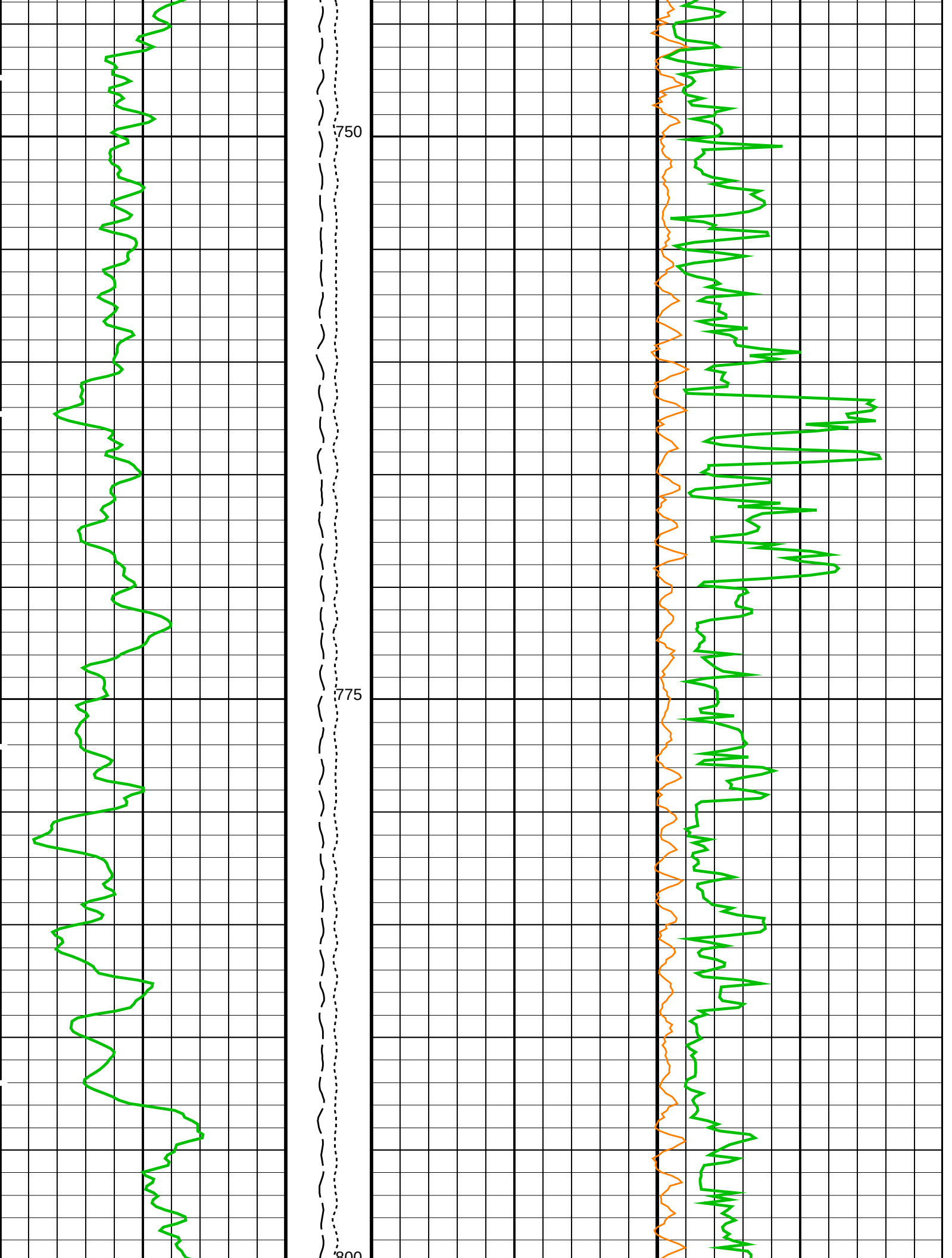

475
500

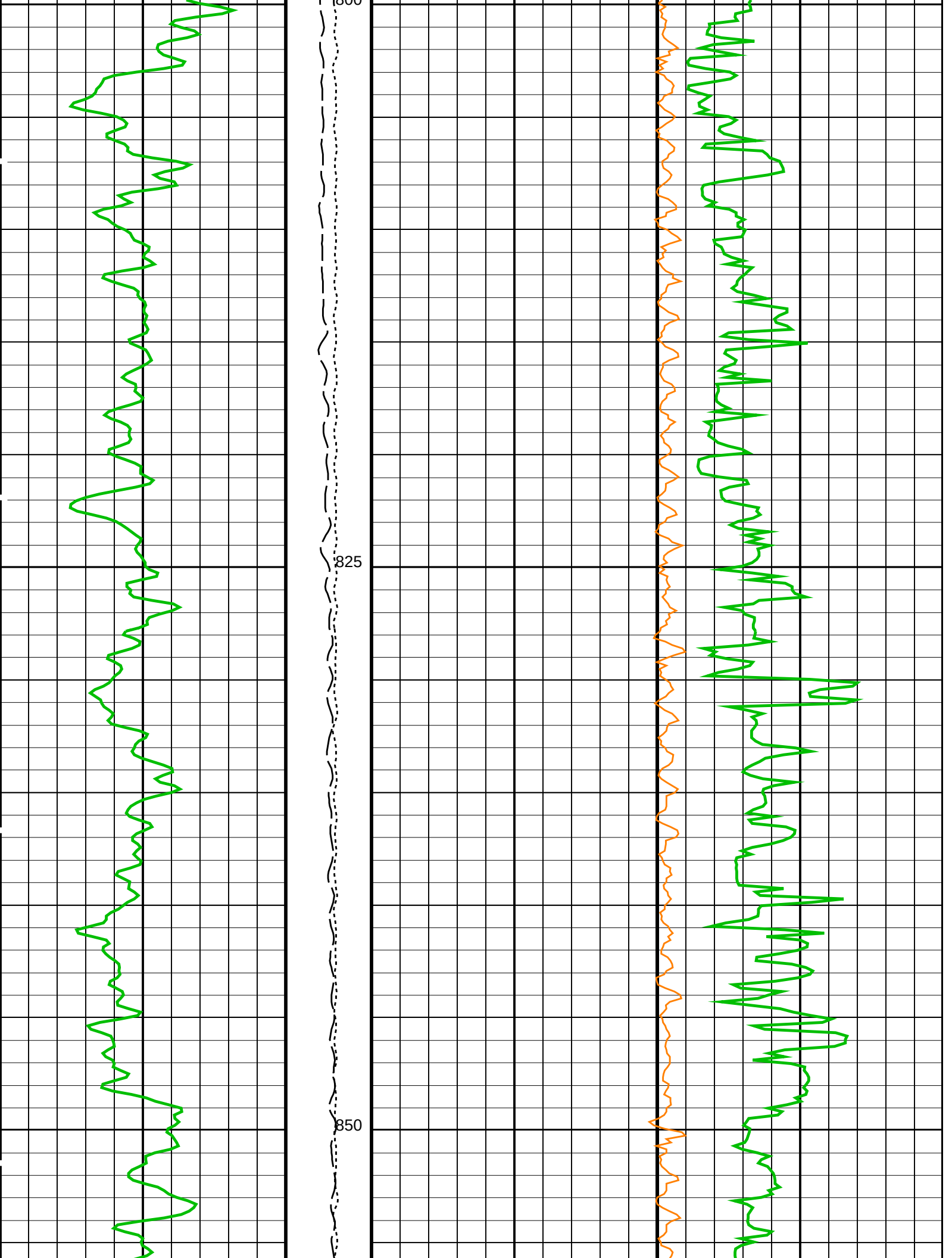

525
550
575

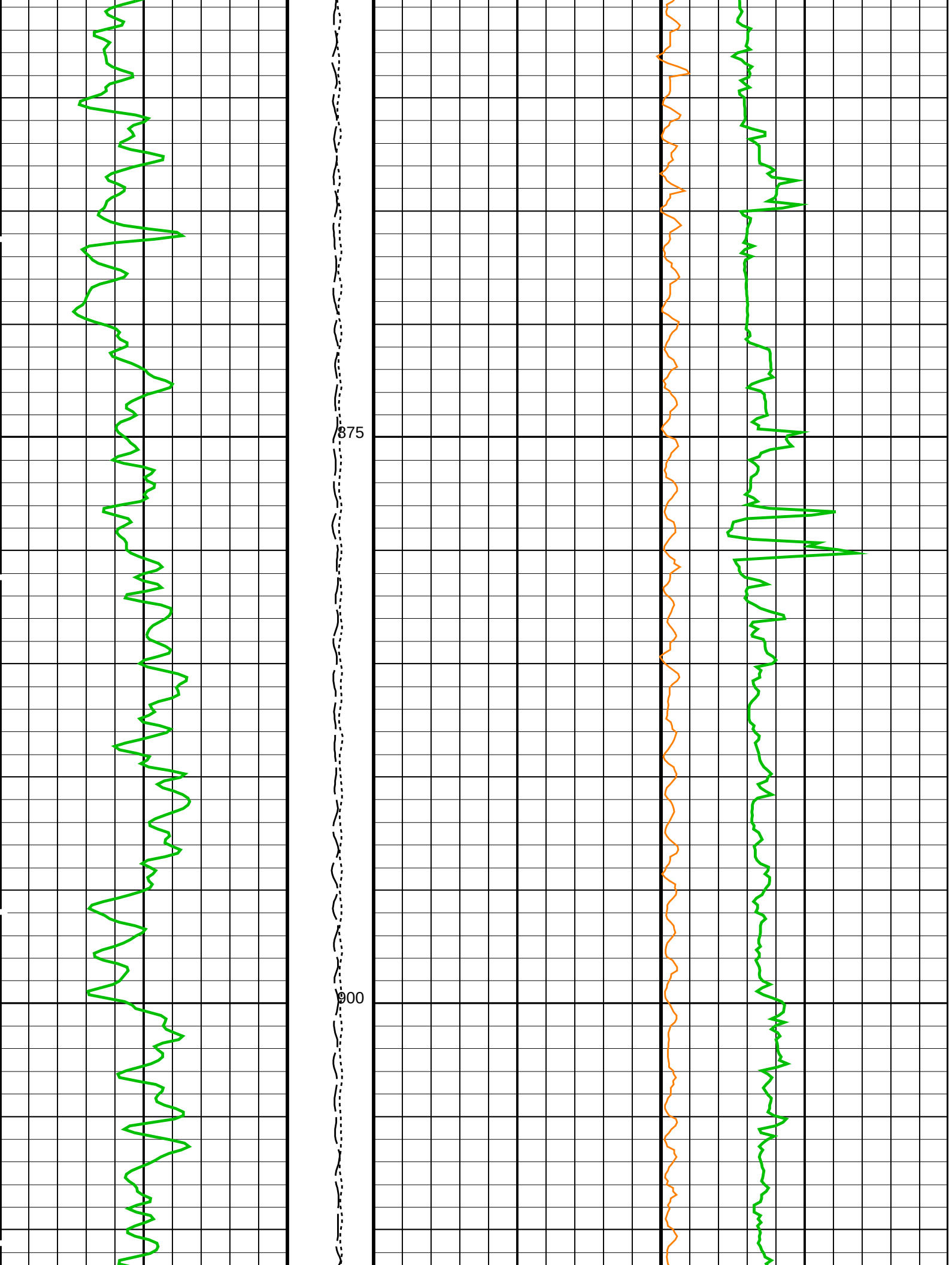

600
625

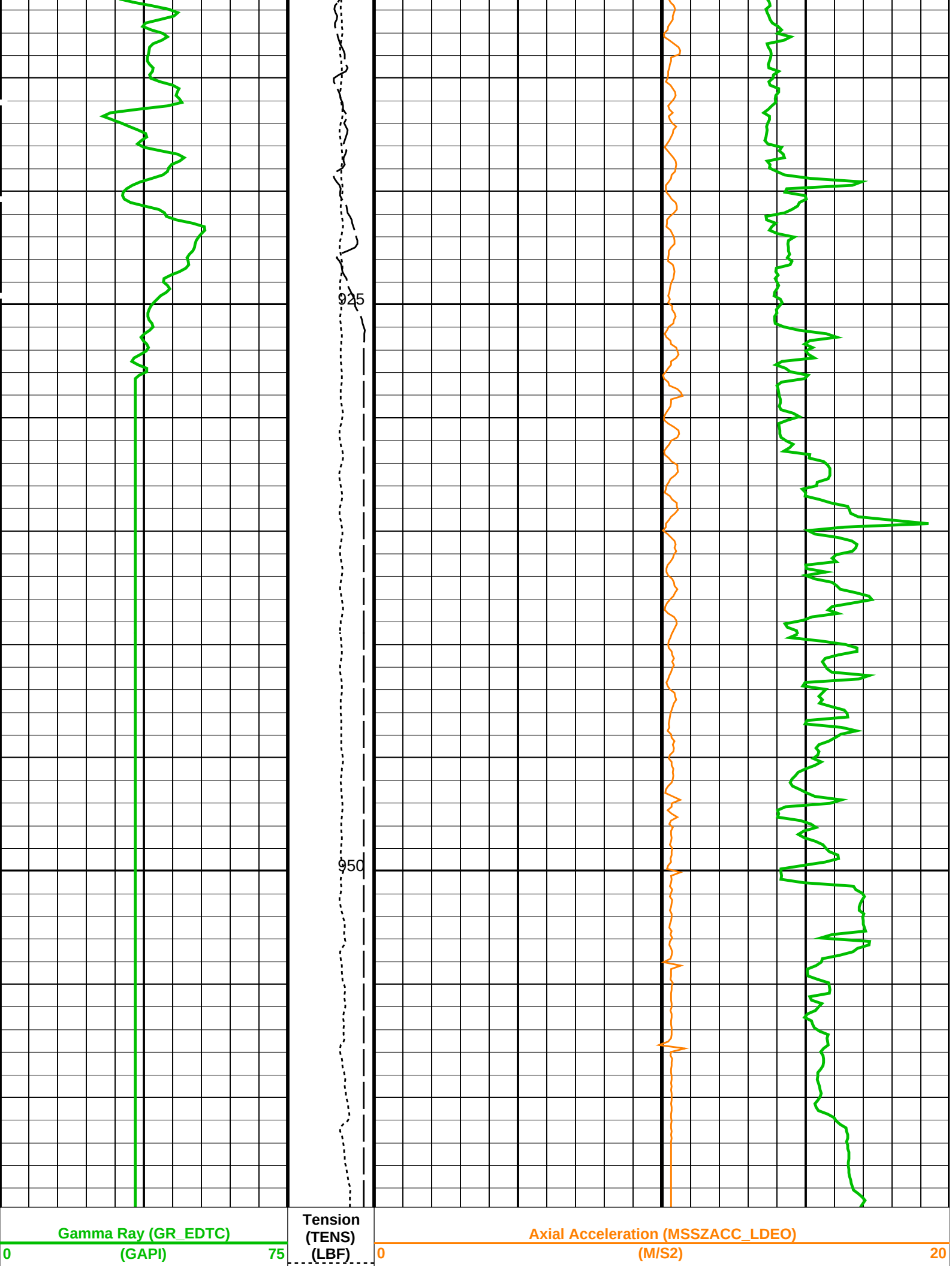

650
675


700
725


750
775
800


800
825
850


875
900


925
950
Gamma Ray (GR_EDTC)
0
(GAPI)
75
Tension
(TENS)
(LBF)
Axial Acceleration (MSSZACC_LDEO)
0
(M/S2)
20

	10000 0	
	Calibrated Downhole Force (CDF) (LBF)	Dual−Coil Susceptibility (MSSLSUS_LDEO)
	3000 0	−20000 (PPM) 20000

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)	60	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	14.1096	DEGC
FREQ0	HRLT Frequency Index for Mode 0	32	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ6	HRLT Frequency Index for Mode 6	116	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	NOBARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	OFF	
LOOPMOD1	HRLT Mode 1 Loop Mode	OFF	
LOOPMOD2	HRLT Mode 2 Loop Mode	OFF	
LOOPMOD3	HRLT Mode 3 Loop Mode	OFF	
LOOPMOD4	HRLT Mode 4 Loop Mode	OFF	
LOOPMOD5	HRLT Mode 5 Loop Mode	OFF	
LOOPMOD6	HRLT Mode 6 Loop Mode	OFF	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PROCINV	Inversion Selection	ON	
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	Eccentered	
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	2.71	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	0	
AASD	APS Thermal and Array Detectors High Voltage Setting	1936.81	V
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2036.2	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	1698.62	V
ASOS	APS Standoff Correction Switch	OFF	
ATSS	APS Temperature−Pressure−Salinity Correction Switch	OFF	
BHFL_APS	APS TNPH Borehole Fluid Type	WATER	

BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	60	DEGC
BSCO_APS	APS TNPH Borehole Salinity Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
DSCO_APS	APS TNPH Density Source Correction Option	MEASURED	
FSAL	Formation Salinity	−50000	PPM
FSCO_APS	APS TNPH Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO_APS	APS TNPH Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO_APS	APS TNPH Mud Cake Correction Option	NO	
MCOR_APS	APS TNPH Mud Correction	NATU	
MWCO_APS	APS TNPH Mud Weight Correction Option	NO	
NARC	APS Near/Array Calibration Ratio	1.08331	
NFRC	APS Near/Far Calibration Ratio	0.973741	
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)	60	DEGC
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	0.00598841	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
SHT	Surface Hole Temperature	20	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.984674	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.55611	
EDTC−B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	60	DEGC
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
FSAL	Formation Salinity	−50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO	Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
ISSBAR_EDTC	Nuclear Mud Type	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	BARI	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U−ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U−TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
System and Miscellaneous			

ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	−50000.00	PPM
CSIZ	Current Casing Size	5.500	IN
CWEI	Casing Weight	168.00	LB/F
DFD	Drilling Fluid Density	1.03	G/C3
DO	Depth Offset for Playback	−2126.5	M
FLEV	Fluid Level	−50000.00	M
MST	Mud Sample Temperature	−50000.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	NORMAL	
RMFS	Resistivity of Mud Filtrate Sample	−50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	471	M
TDD	Total Depth − Driller	980.40	M
TDL	Total Depth − Logger	960.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: MSS_Logging **Vertical Scale: 1:200** **Graphics File Created: 25−Apr−2014 01:10**

OP System Version: 19C0−187

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

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_033LUP	PRODUCER	25−Apr−2014 00:44	3091.3 M	2064.3 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_037PUP	FN:43	PRODUCER	25−Apr−2014 01:10		
CLIENT	MSS_LDEO_HRLA_LDL_037PUC	FN:44	CUSTOMER	25−Apr−2014 01:10		

Schlumberger

Repeat Pass
1:200 Scale

MAXIS Field Log

Company: Lamont Doherty Earth Observatory **Well: Expedition 350, Site U1437D**

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_017LUP	FN:17	PRODUCER	22−Apr−2014 10:49	3086.1 M	2901.1 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_039PUP	FN:47	PRODUCER	25−Apr−2014 01:24	960.9 M	775.6 M
CLIENT	MSS_LDEO_HRLA_LDL_039PUC	FN:48	CUSTOMER	25−Apr−2014 01:24	960.9 M	775.6 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

	Calibrated

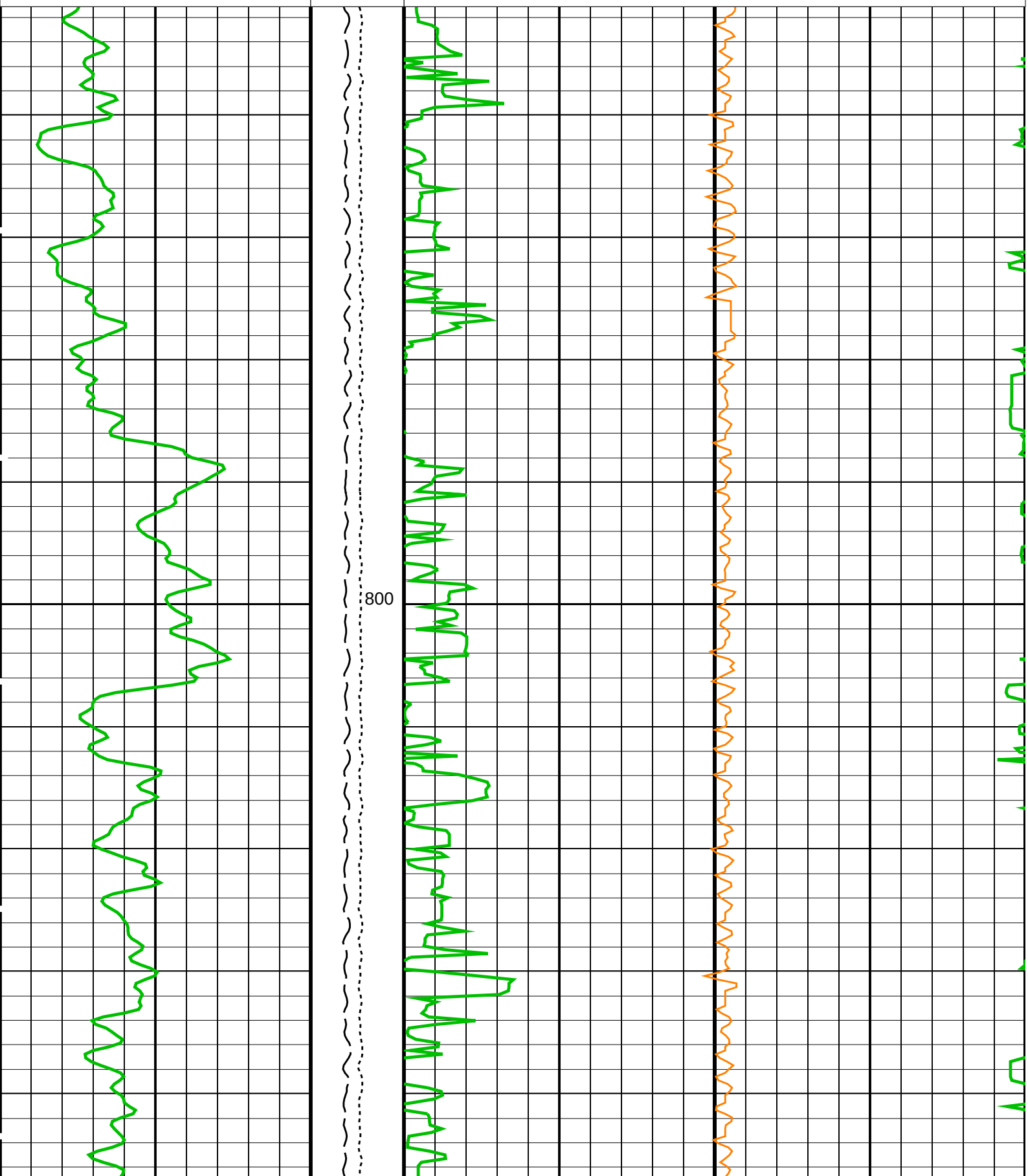
Calibrated Downhole Force (CDF) (LBF)
3000 0

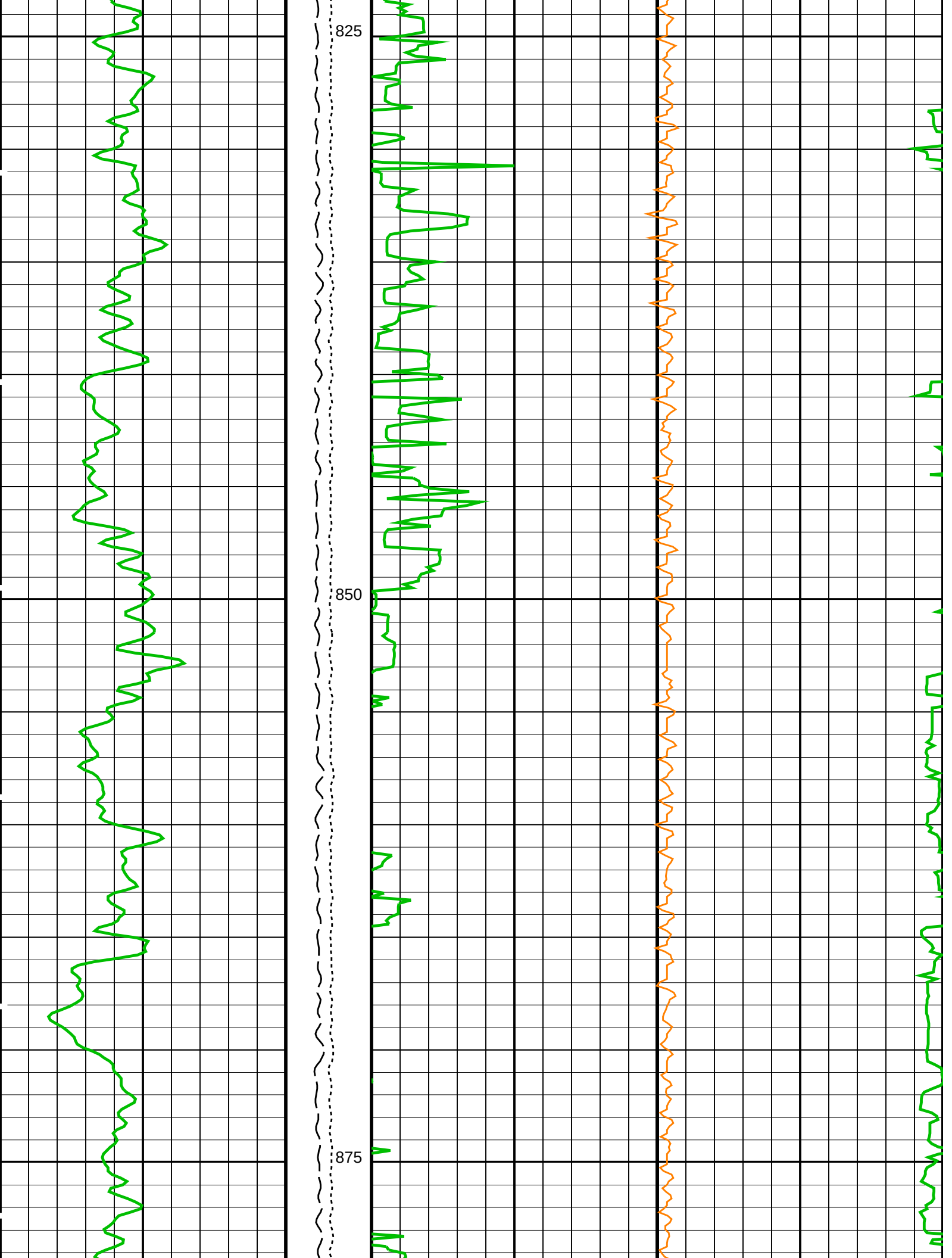
Dual−Coil Susceptibility (MSSLSUS_LDEO)
−20000 (PPM) 20000

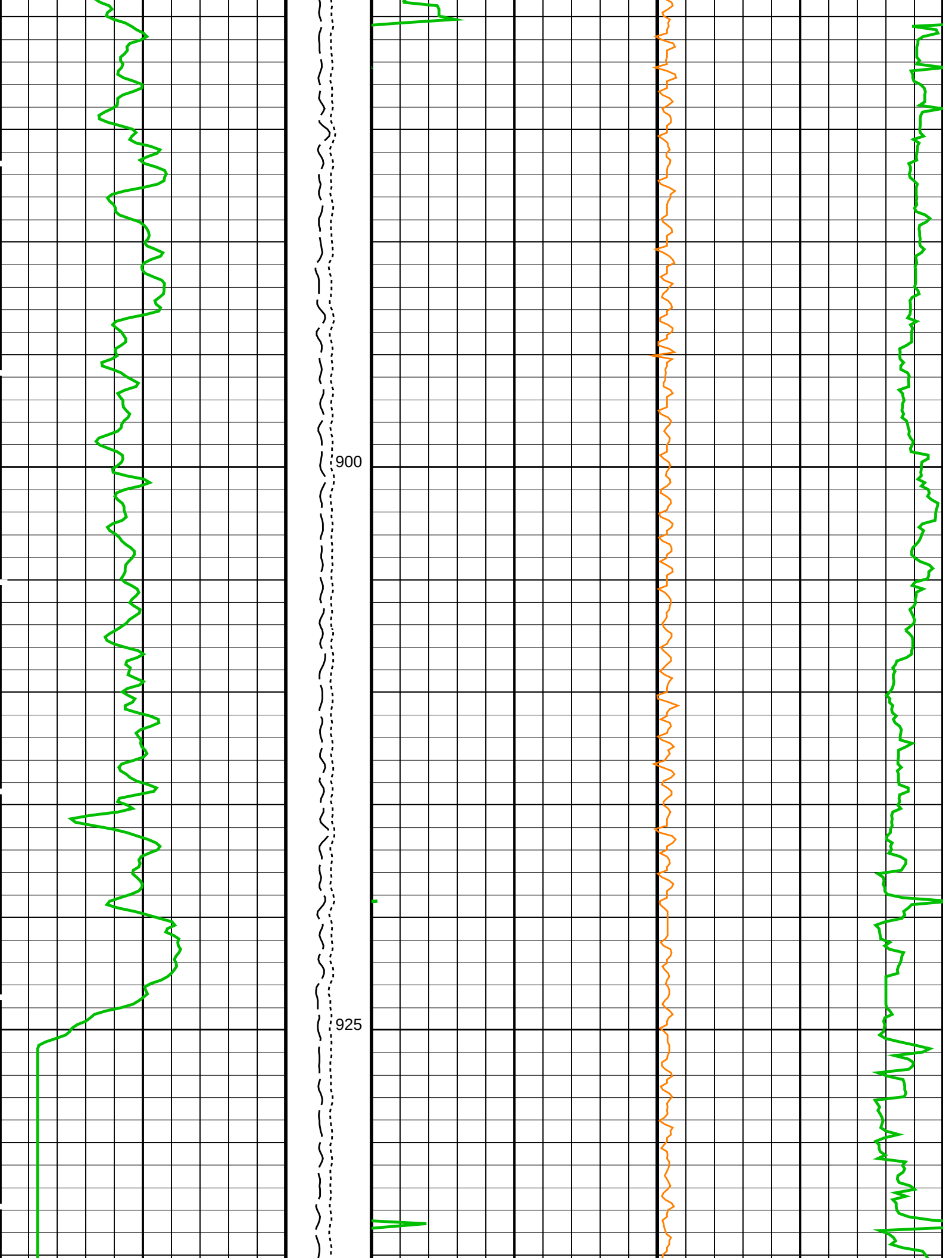
Gamma Ray (GR_EDTC)
0 (GAPI) 75

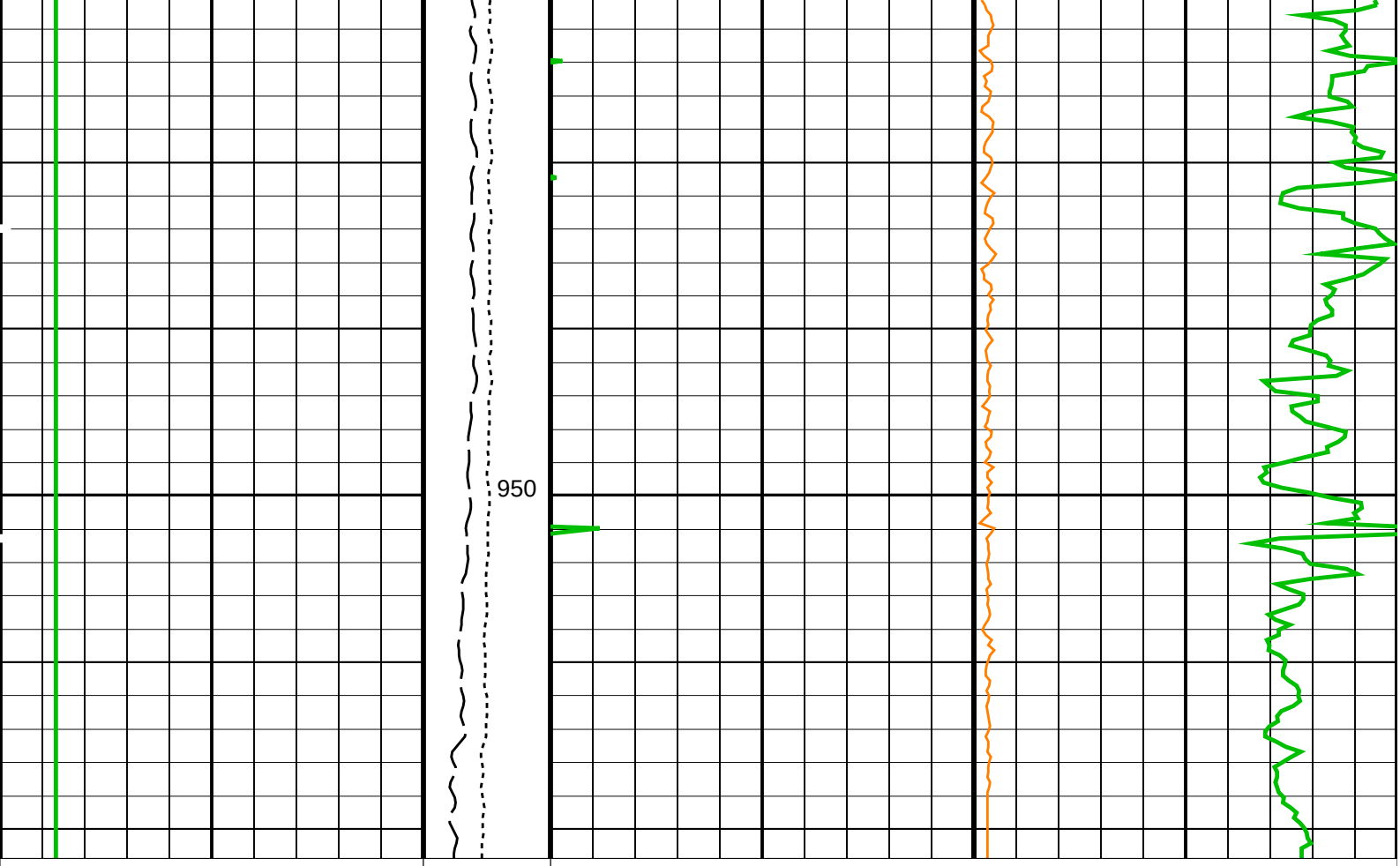
Tension (TENS) (LBF)
10000 0

Axial Acceleration (MSSZACC_LDEO)
0 (M/S2) 20




825
850
875


900
925



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)	6.5	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	11.1799	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	

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	Eccentered	
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	2.71	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	0	
AASD	APS Thermal and Array Detectors High Voltage Setting	1936.81	V
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2036.2	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	1698.62	V
ASOS	APS Standoff Correction Switch	OFF	
ATSS	APS Temperature−Pressure−Salinity Correction Switch	OFF	
BHFL_APS	APS TNPH Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	6.5	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	1.08331	
NFRC	APS Near/Far Calibration Ratio	0.973741	
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)	6.5	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	−0.000199897	

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	1.00407	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.01069	
EDTC−B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	6.5	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	BARI	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U−ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U−TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	−50000.00	PPM
CSIZ	Current Casing Size	13.375	IN
CWEI	Casing Weight	168.00	LB/F
DFD	Drilling Fluid Density	1.03	G/C3
DO	Depth Offset for Playback	−2125.5	M
FLEV	Fluid Level	−50000.00	M
MST	Mud Sample Temperature	−50000.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	NORMAL	
RMFS	Resistivity of Mud Filtrate Sample	−50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	471	M
TDD	Total Depth − Driller	900.00	M
TDL	Total Depth − Logger	900.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: MSS_Logging Vertical Scale: 1:200 Graphics File Created: 25−Apr−2014 01:24

OP System Version: 19C0−187

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

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_017LUP	FN:17	PRODUCER	22−Apr−2014 10:49	3086.1 M	2901.1 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_039PUP	FN:47	PRODUCER	25−Apr−2014 01:24
CLIENT	MSS_LDEO_HRLA_LDL_039PUC	FN:48	CUSTOMER	25−Apr−2014 01:24

Schlumberger

Main Pass
1:200 Scale

MAXIS Field Log

Company: Lamont Doherty Earth Observatory | **Well: Expedition 350, Site U1437D**

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_019LUP	FN:20	PRODUCER	22−Apr−2014 11:26	3088.4 M	2114.6 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_038PUP	FN:45	PRODUCER	25−Apr−2014 01:15	963.2 M	−7.1 M
CLIENT	MSS_LDEO_HRLA_LDL_038PUC	FN:46	CUSTOMER	25−Apr−2014 01:15	963.2 M	−7.1 M

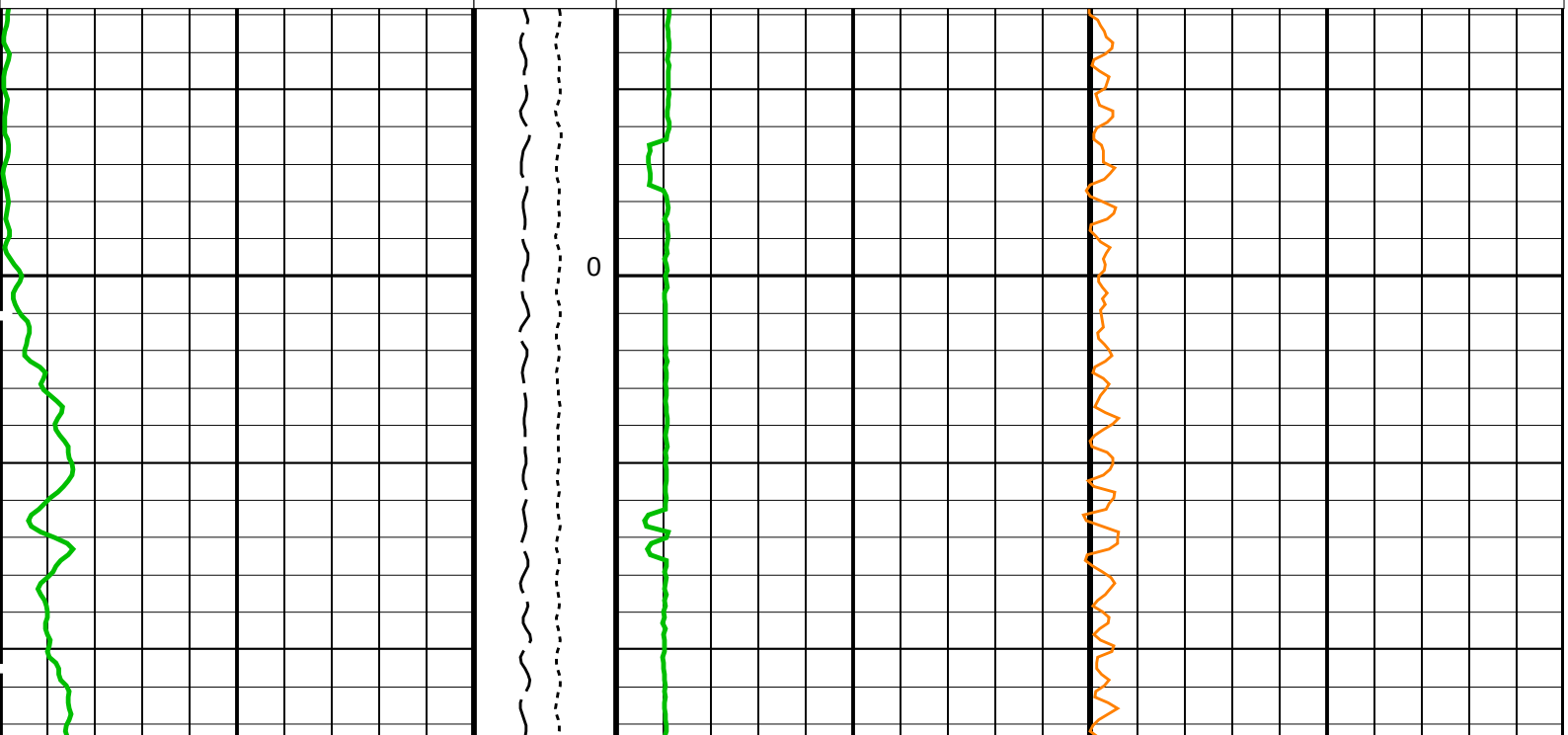
OP System Version: 19C0−187

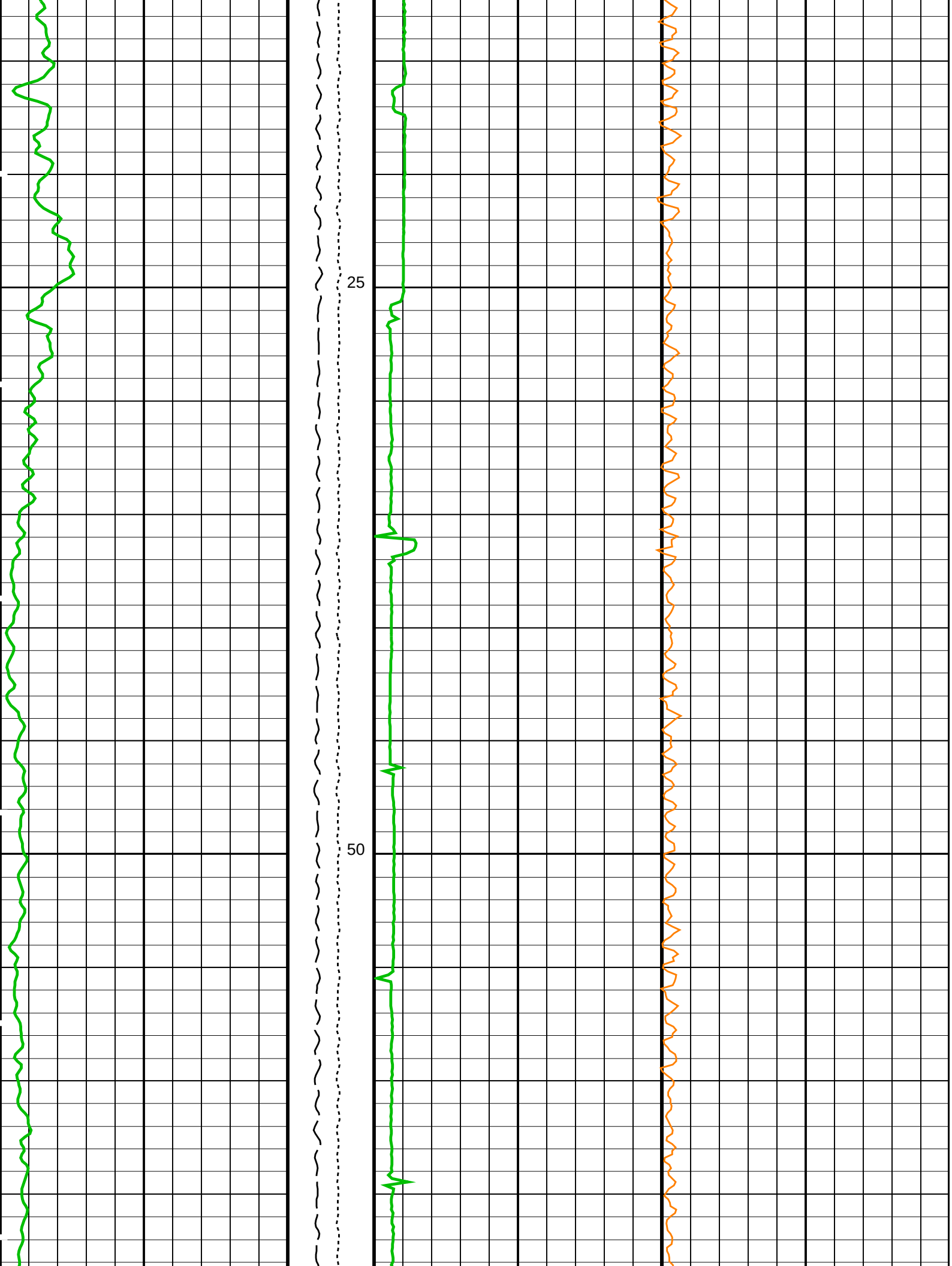
MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
APS−C	19C0−187	HNGC−B	19C0−187
HNGS−BA	19C0−187	EDTC−B	SKK−5169−EDTCB

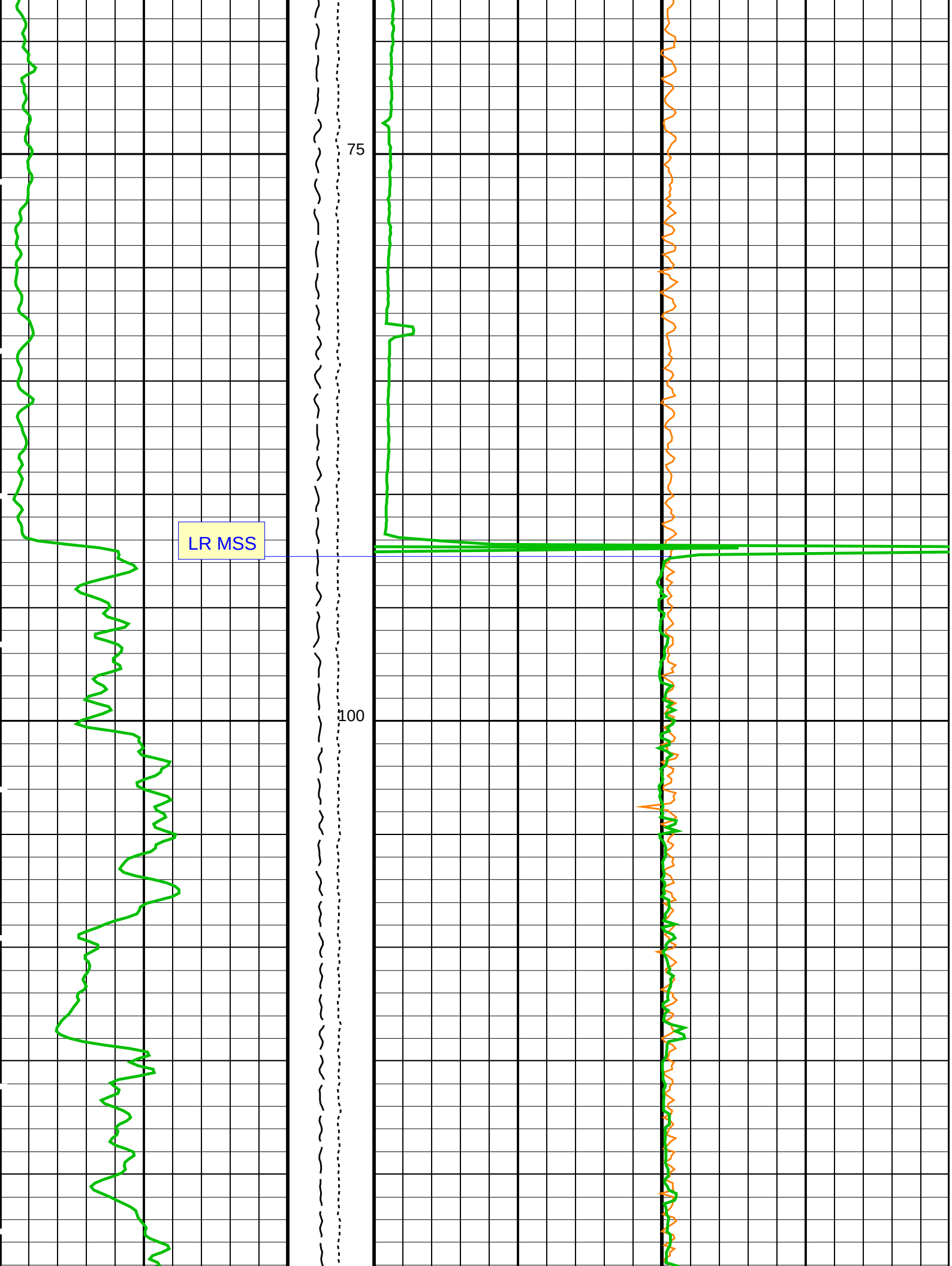
PIP SUMMARY

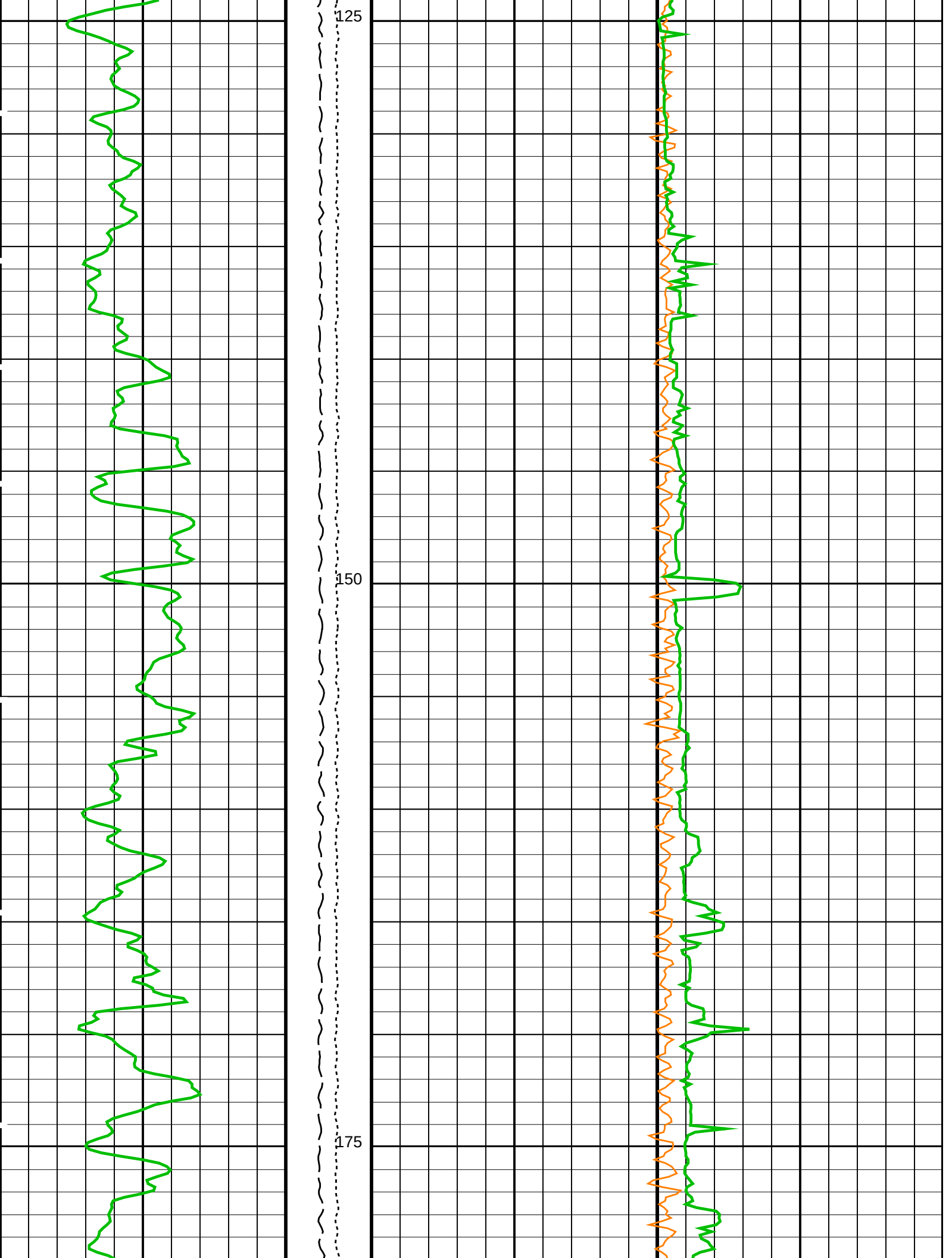
Time Mark Every 60 S

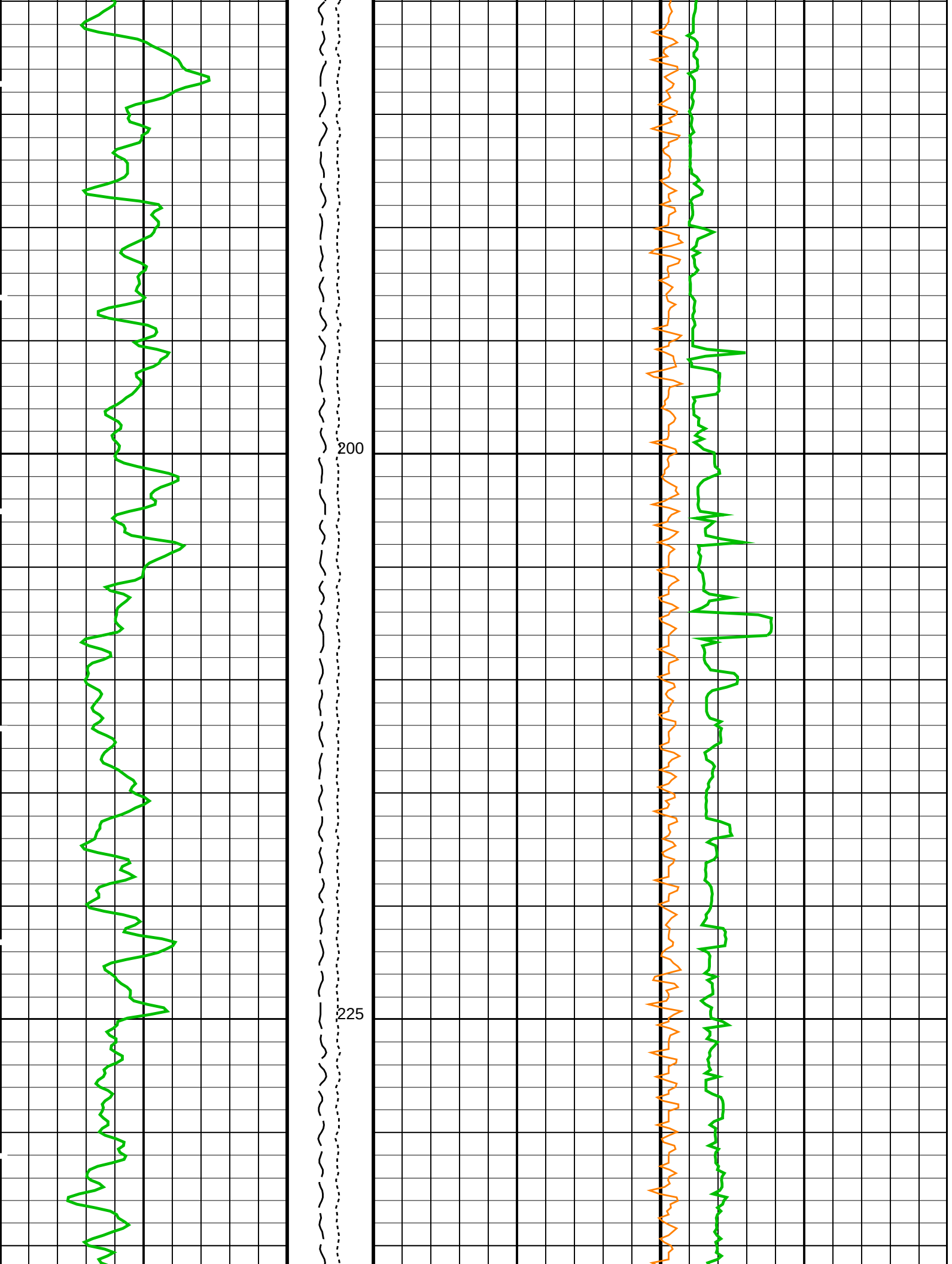
Gamma Ray (GR_EDTC)	Calibrated Downhole Force (CDF) (LBF)	Dual−Coil Susceptibility (MSSLSUS_LDEO)
0 (GAPI) 75	3000 0	−20000 (PPM) 20000
Tension (TENS) (LBF)		**Axial Acceleration (MSSZACC_LDEO)**
10000 0		0 (M/S2) 20

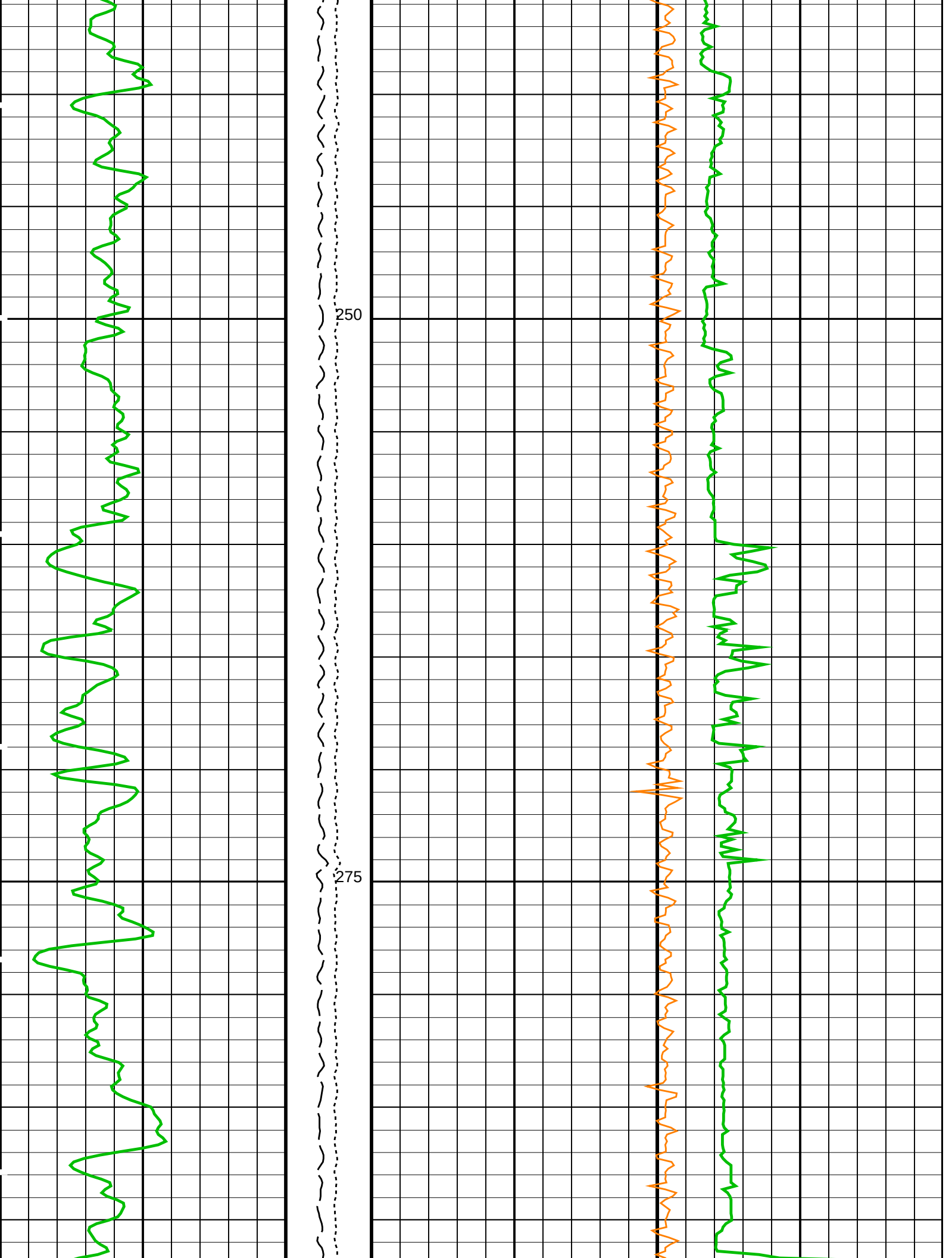


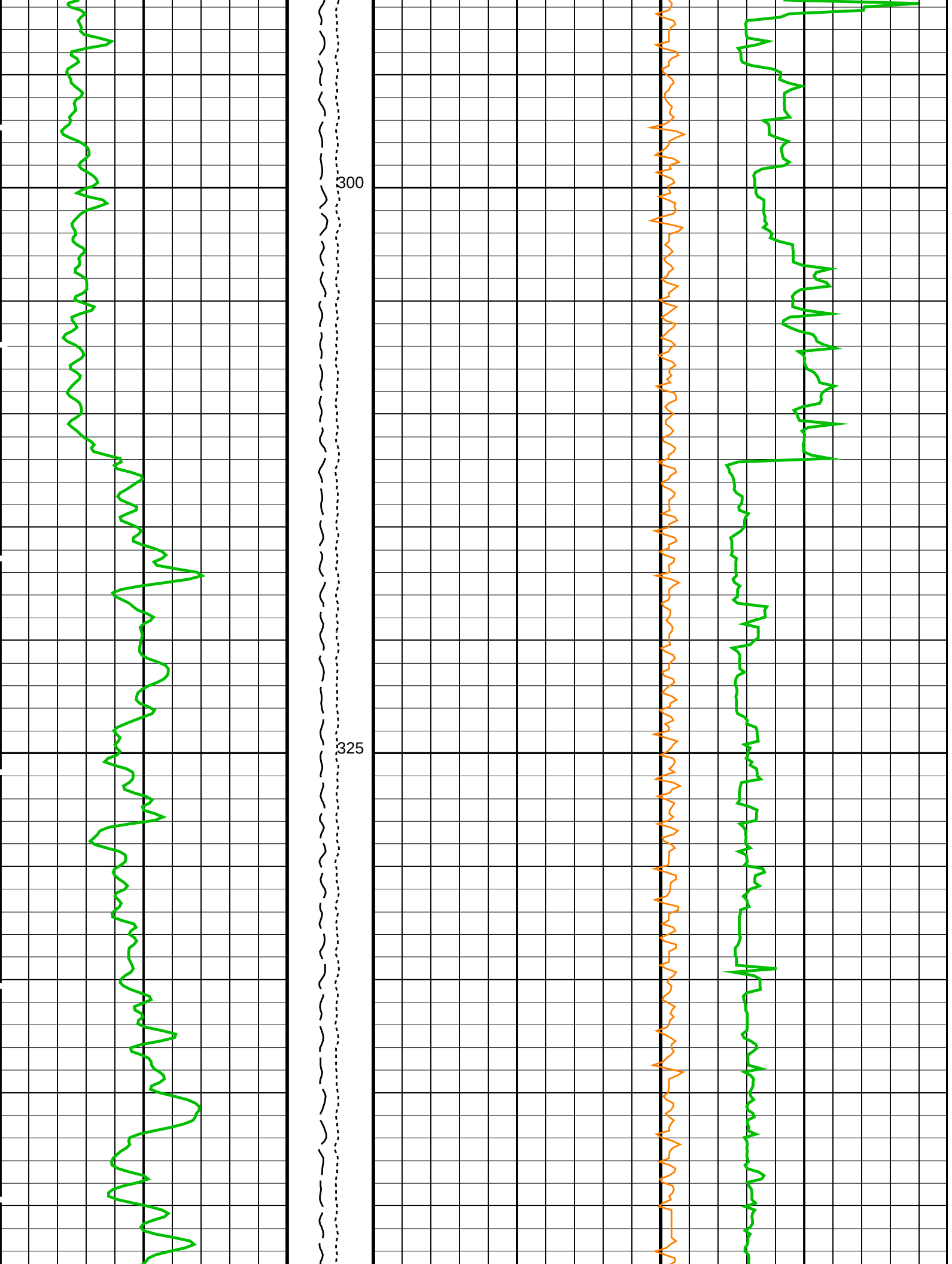

25
50

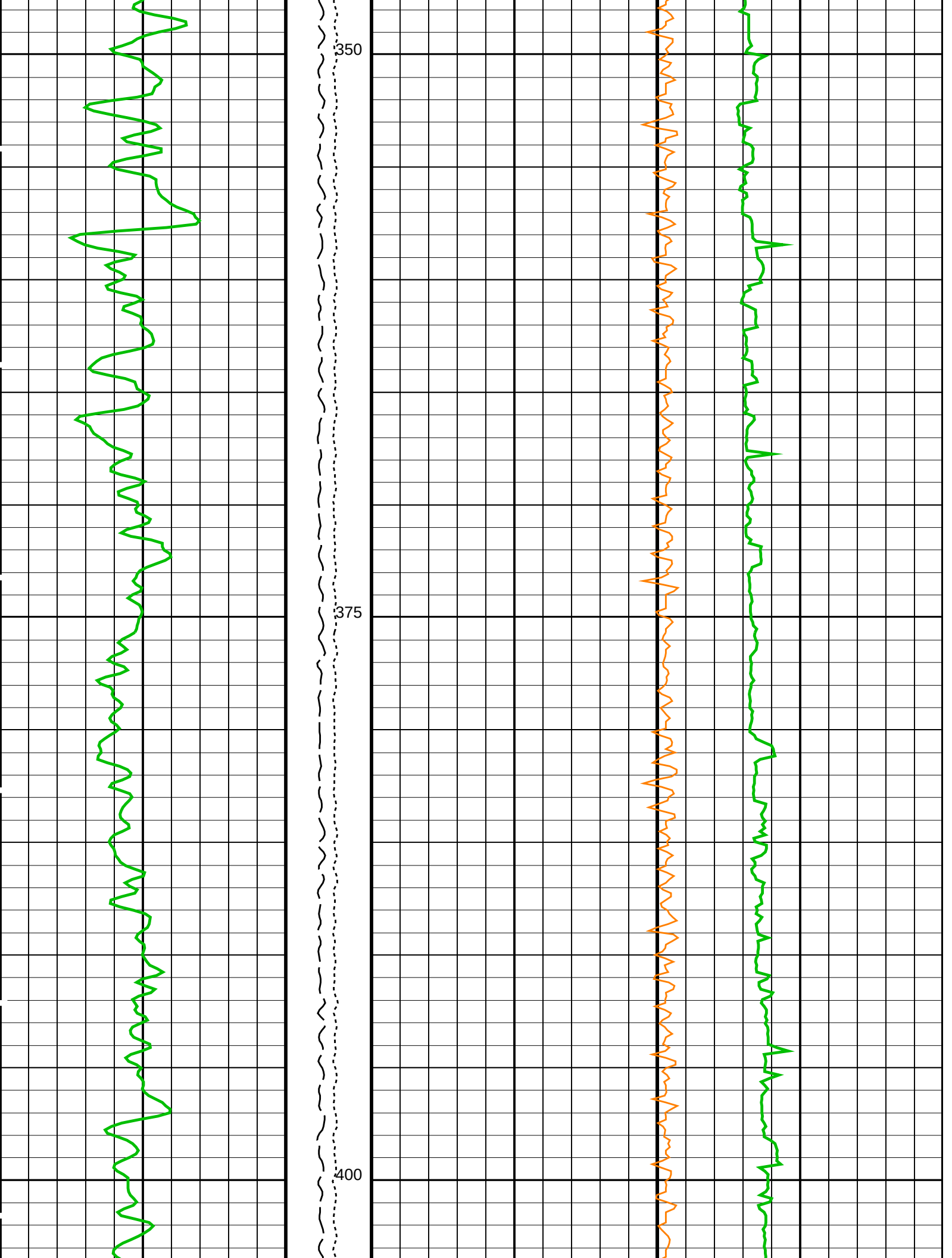

75
LR MSS
100

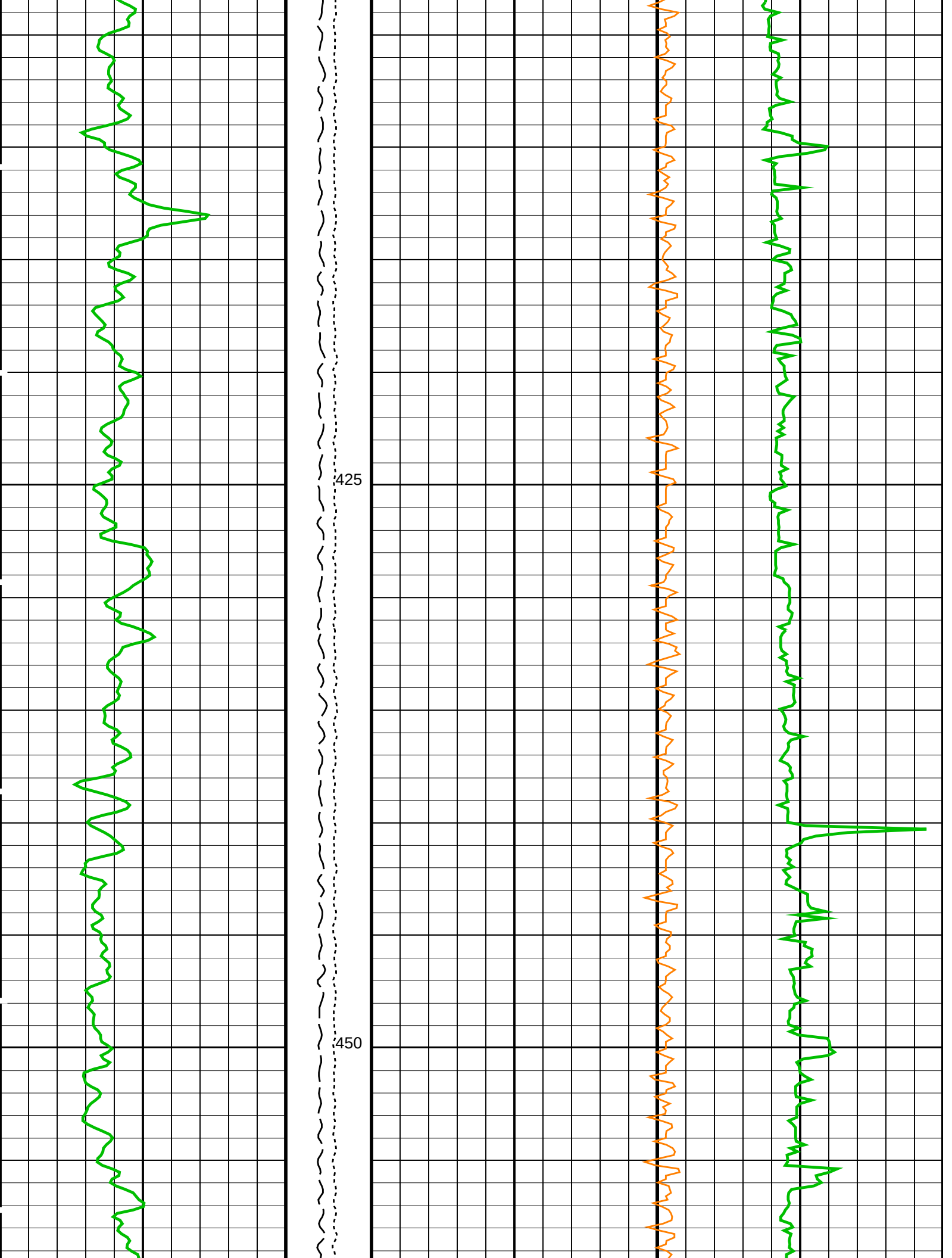

125
150
175

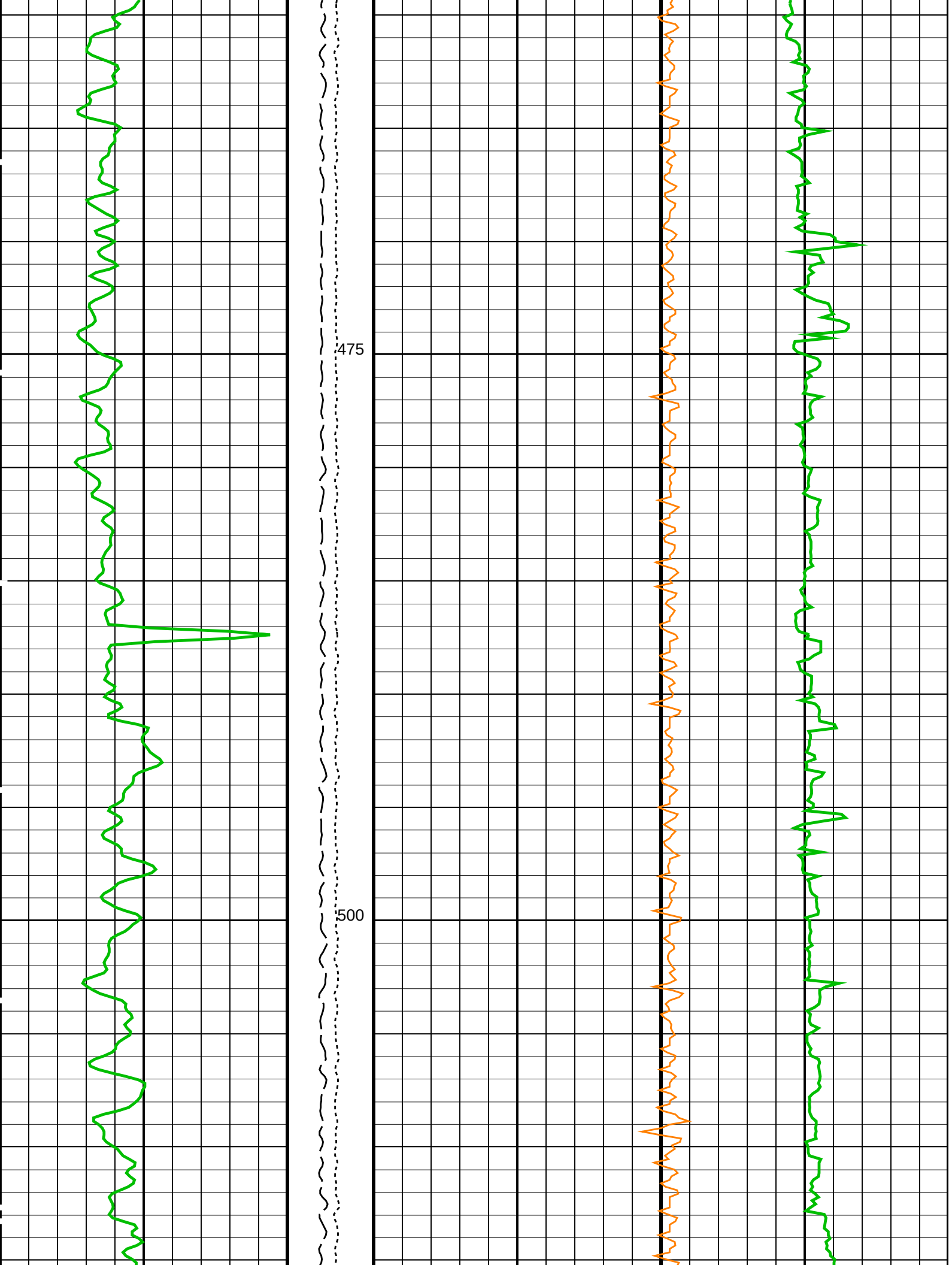

200
225

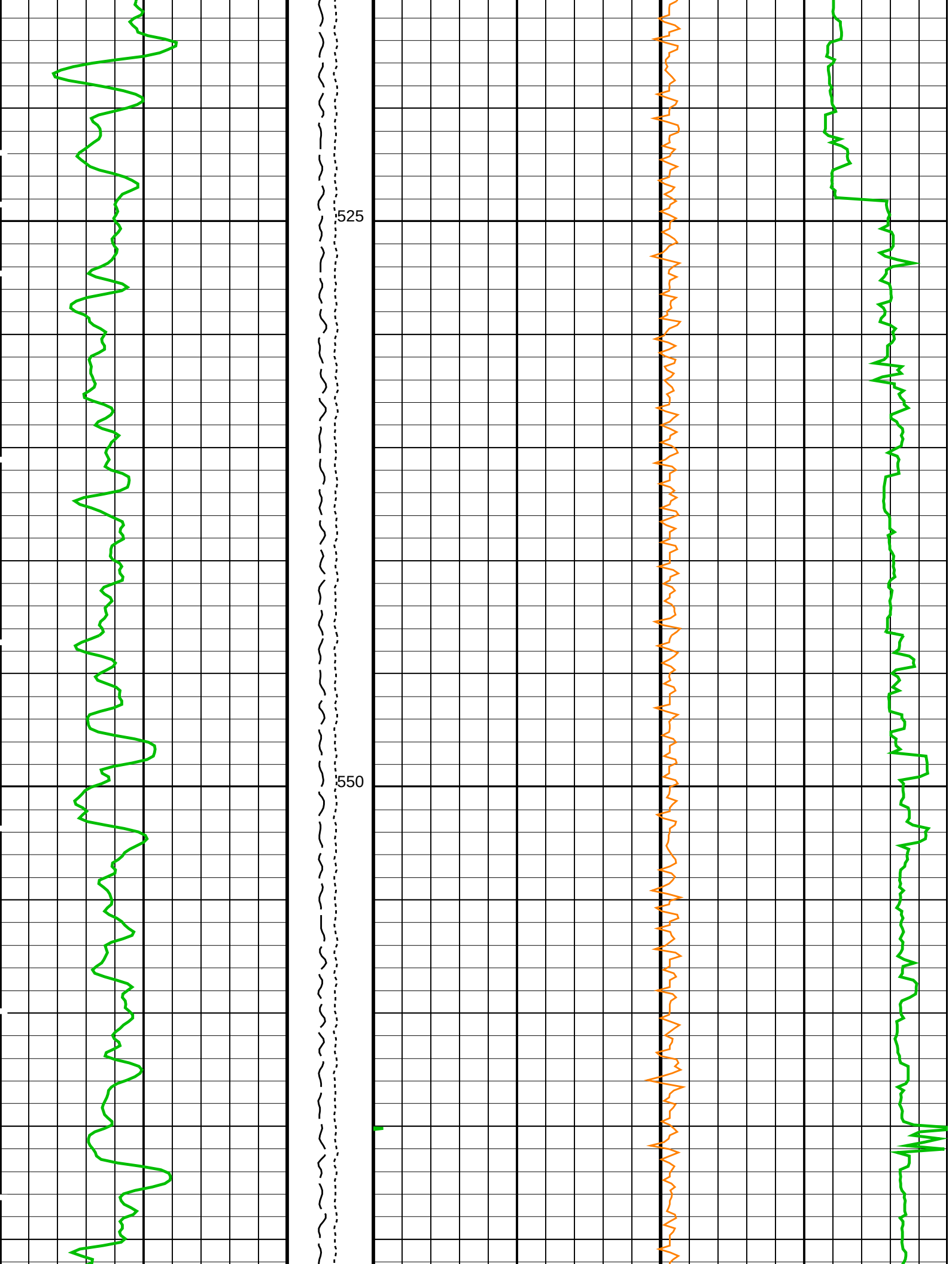

250
275

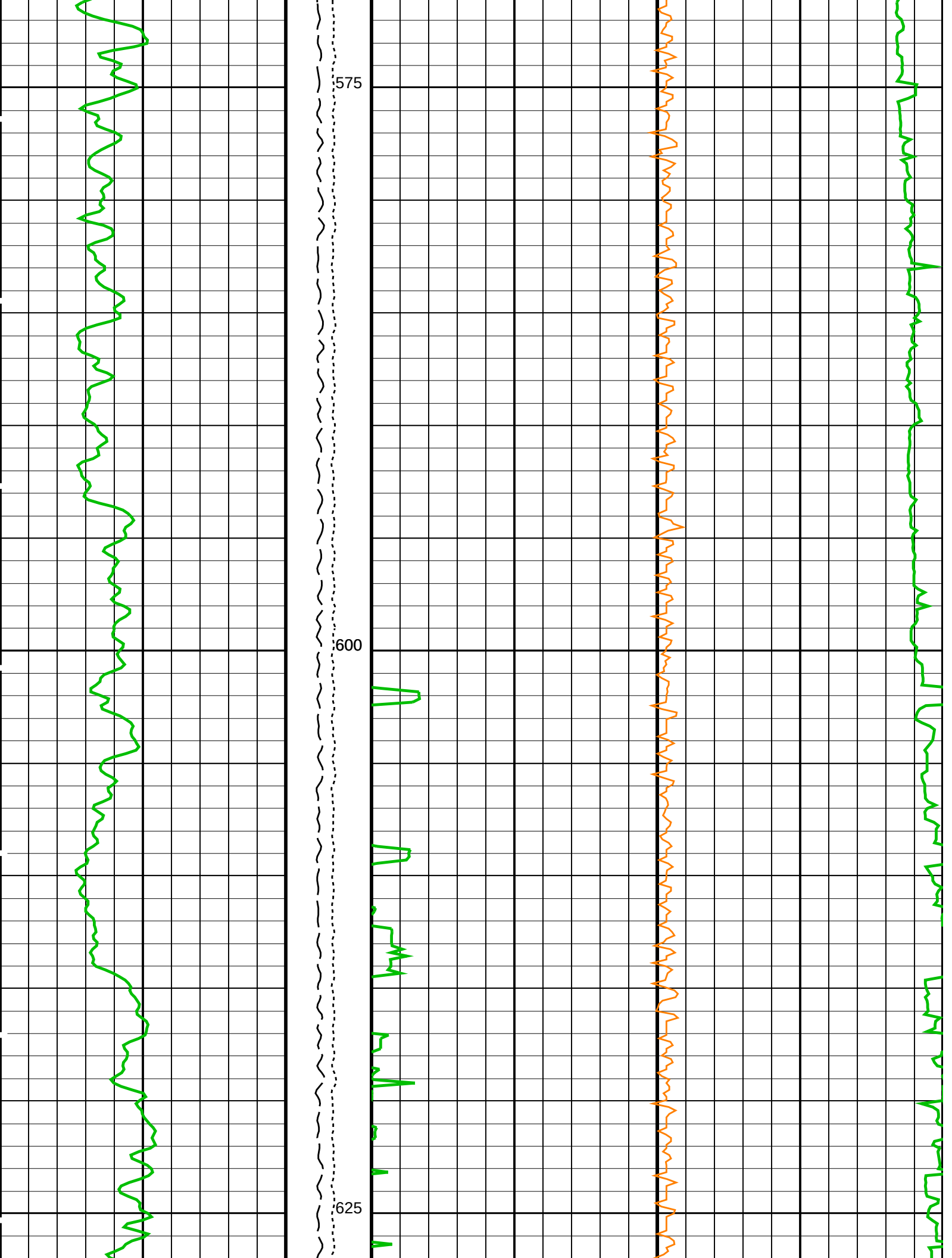

300
325

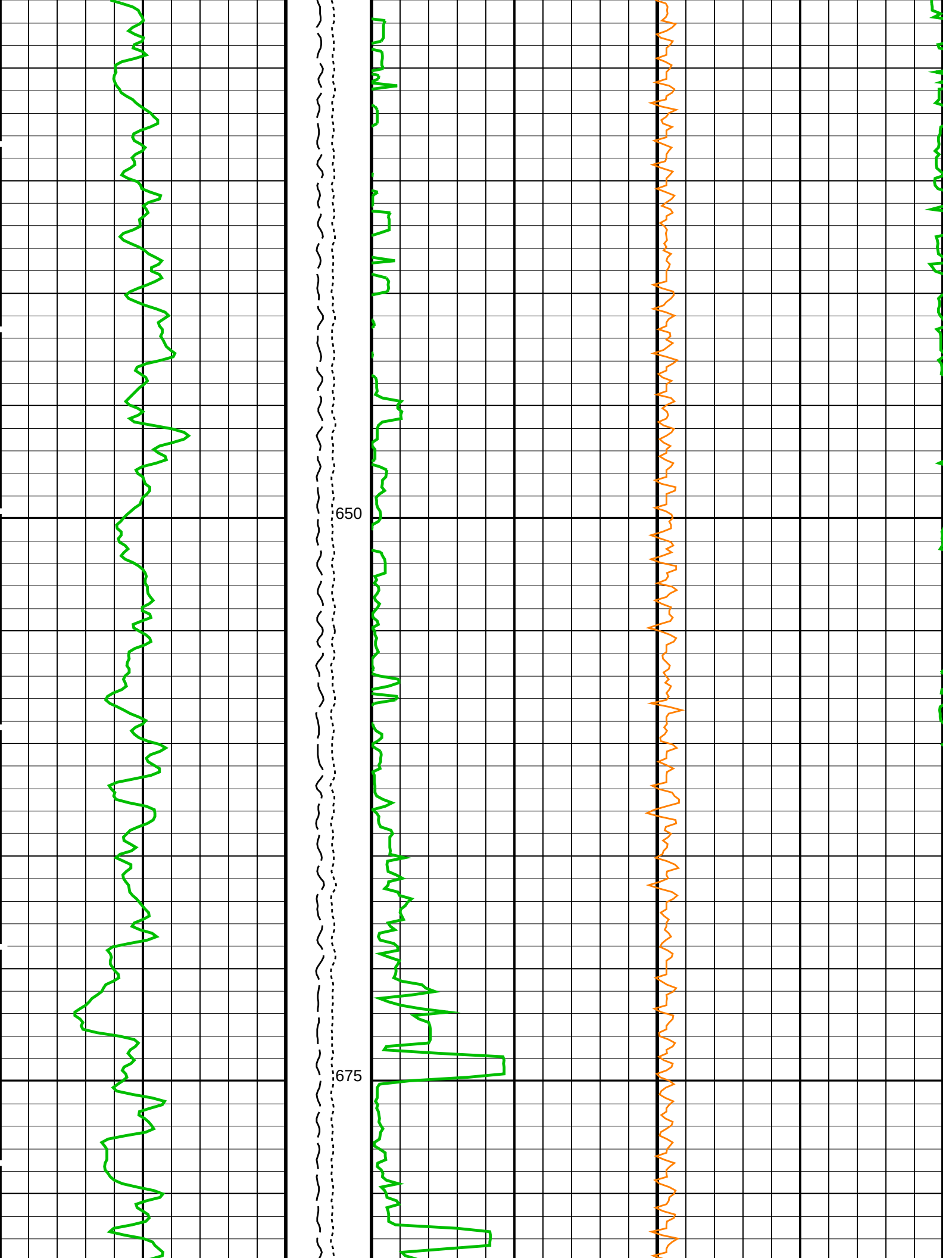

350
375
400

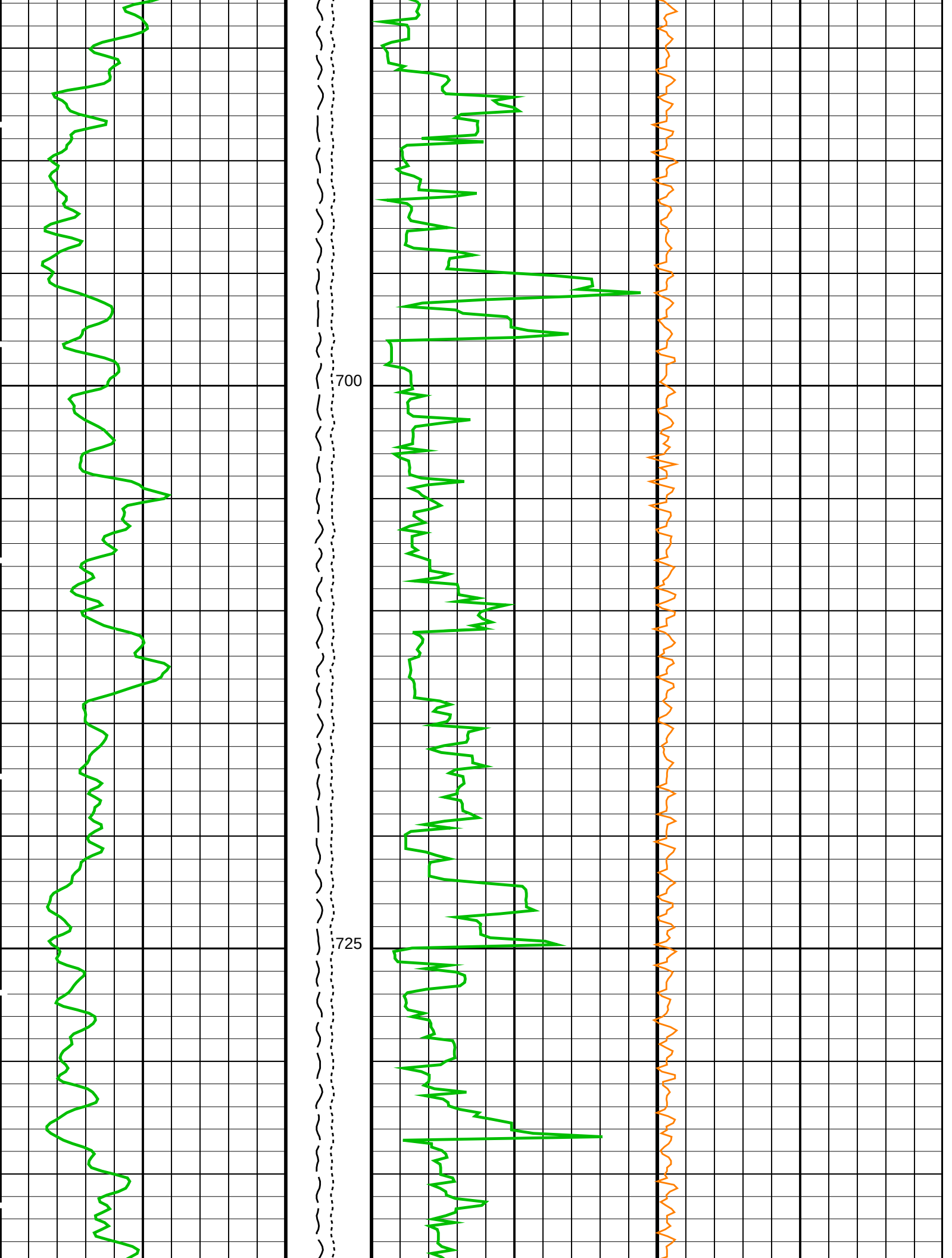

425
450

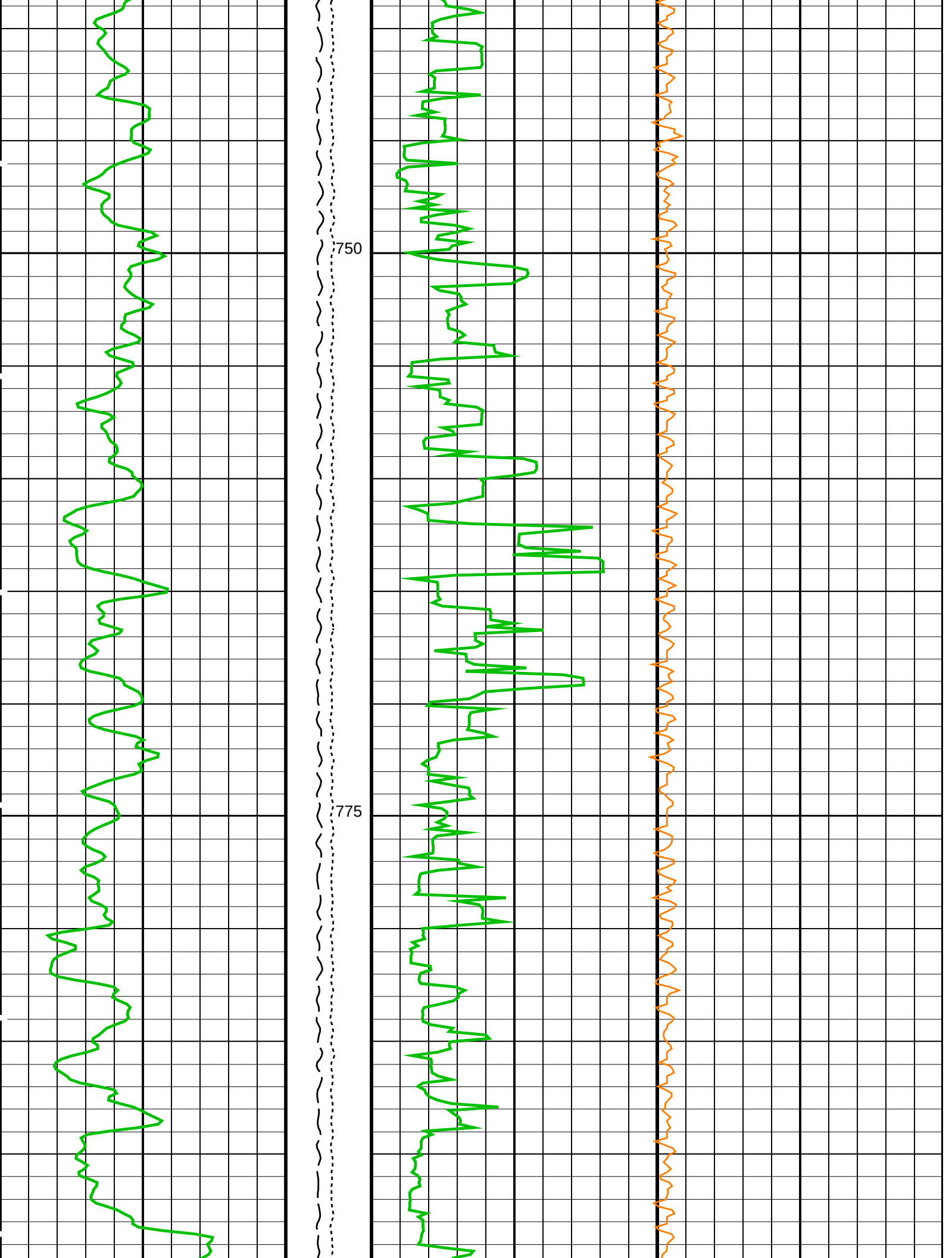

475
500

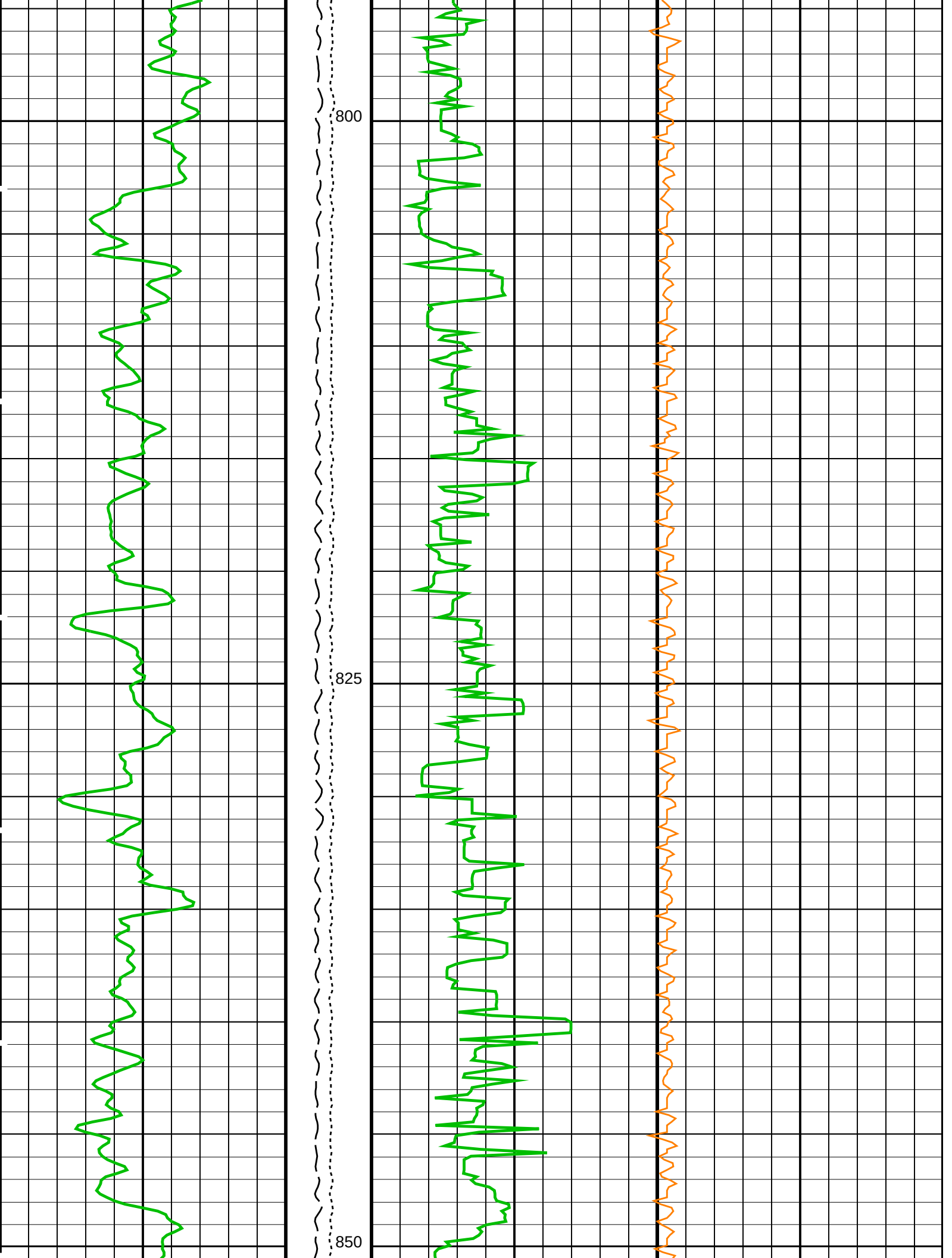

525
550

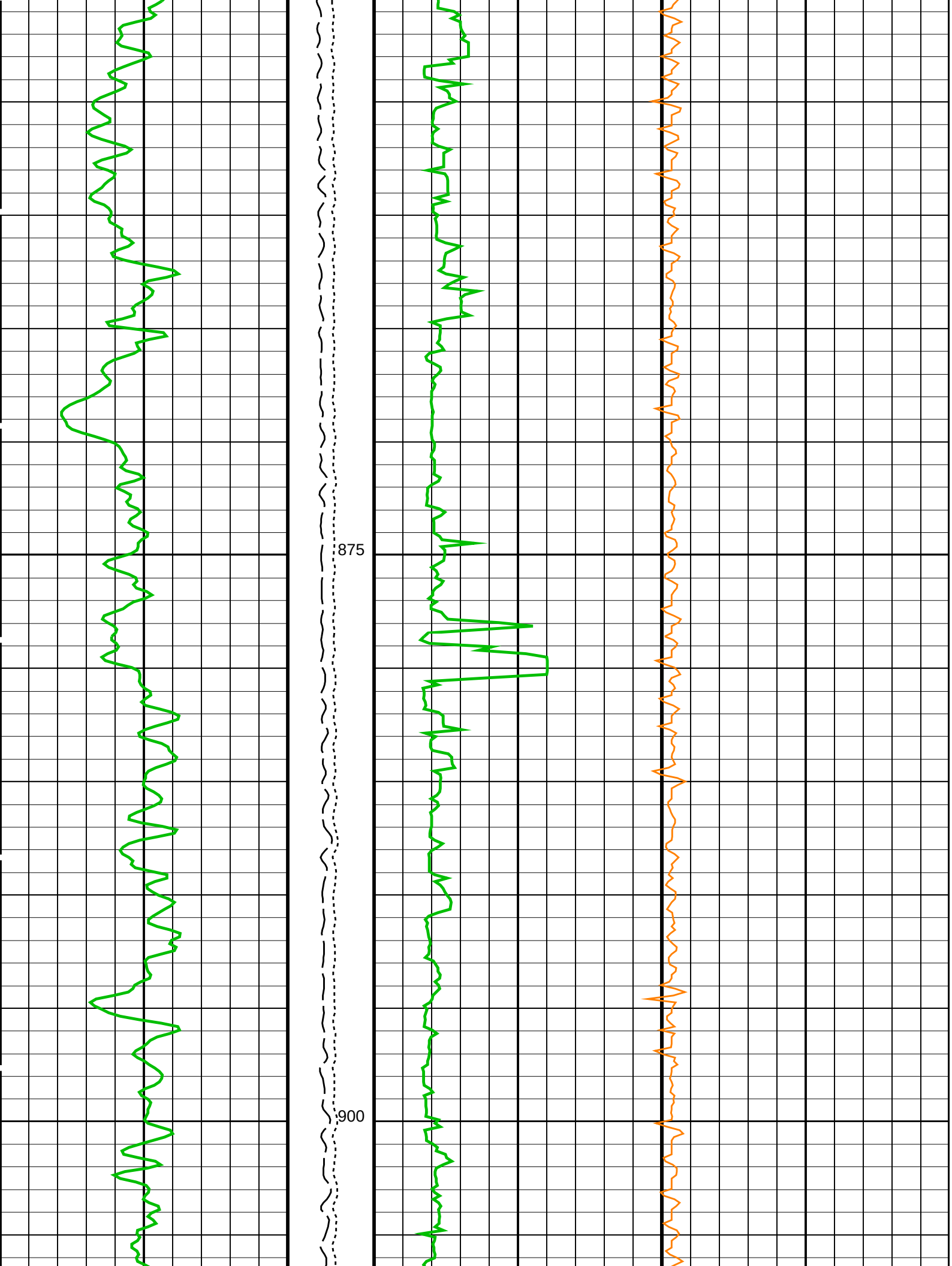

575
600
625

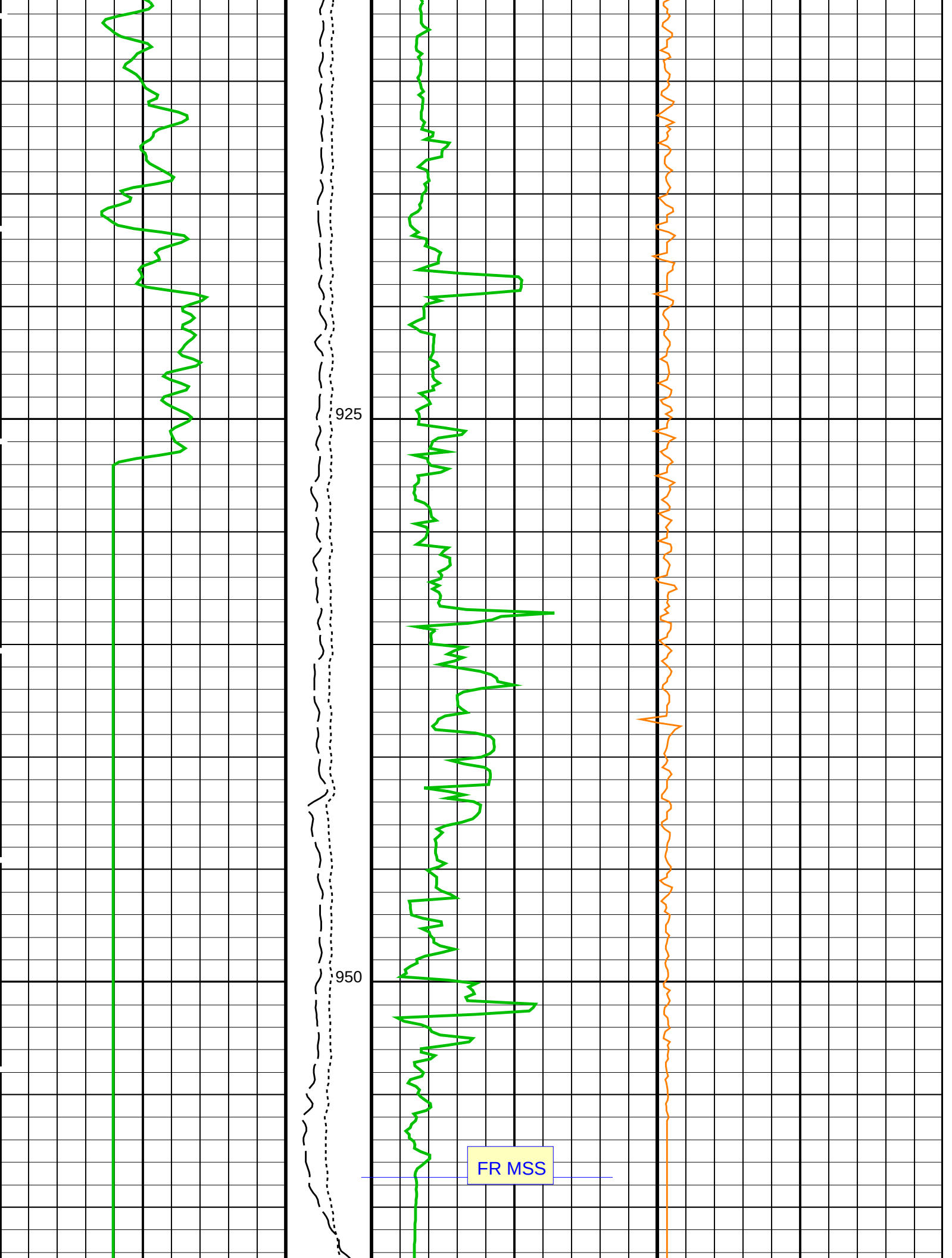

650
675

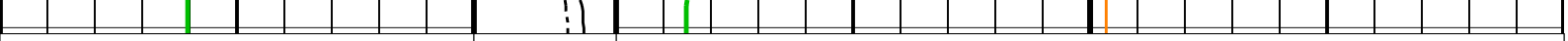

700
725


750
775


800
825
850


875
900


925
950
FR MSS



Gamma Ray (GR_EDTC)	Tension (TENS) (LBF)	Axial Acceleration (MSSZACC_LDEO)
0 (GAPI) 75	10000 0	0 (M/S2) 20
	Calibrated Downhole Force (CDF) (LBF)	Dual−Coil Susceptibility (MSSLSUS_LDEO)
	3000 0	−20000 (PPM) 20000

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)	6.5	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	11.1799	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	Eccentered	
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	2.71	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	0	
AASD	APS Thermal and Array Detectors High Voltage Setting	1936.81	V
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2036.2	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	1698.62	V
ASOS	APS Standoff Correction Switch	OFF	
ATSS	APS Temperature−Pressure−Salinity Correction Switch	OFF	
BHFL_APS	APS TNPH Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	6.5	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	1.08331	
NFRC	APS Near/Far Calibration Ratio	0.973741	
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)	6.5	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	−0.000199897	
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	1.00407	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.01069	
EDTC−B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	6.5	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	BARI	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0.5	IN

SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U−ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U−TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	−50000.00	PPM
CSIZ	Current Casing Size	13.375	IN
CWEI	Casing Weight	168.00	LB/F
DFD	Drilling Fluid Density	1.03	G/C3
DO	Depth Offset for Playback	−2125.5	M
FLEV	Fluid Level	−50000.00	M
MST	Mud Sample Temperature	−50000.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	NORMAL	
RMFS	Resistivity of Mud Filtrate Sample	−50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	471	M
TDD	Total Depth − Driller	900.00	M
TDL	Total Depth − Logger	900.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: MSS_Logging **Vertical Scale: 1:200** **Graphics File Created: 25−Apr−2014 01:15**

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

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_019LUP	FN:20	PRODUCER	22−Apr−2014 11:26	3088.4 M	2114.6 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_038PUP	FN:45	PRODUCER	25−Apr−2014 01:15
CLIENT	MSS_LDEO_HRLA_LDL_038PUC	FN:46	CUSTOMER	25−Apr−2014 01:15

Schlumberger

Calibrations

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
High Resolution Laterolog Array − B Wellsite Calibration − HRLT M01							
Before: 22−Apr−2014 11:12 After: 22−Apr−2014 15:20							
HRLT M0−M1 Voltage Plus − 0	0	N/A	−319.1	−318.8	0.3062	9.681	UV
HRLT M0−M1 Voltage Plus − 1	0	N/A	−331.1	−332.9	−1.821	9.681	UV
HRLT M0−M1 Voltage Plus − 2	0	N/A	−332.4	−334.2	−1.765	9.681	UV
HRLT M0−M1 Voltage Plus − 3	0	N/A	−336.5	−337.9	−1.335	9.681	UV
HRLT M0−M1 Voltage Plus − 4	0	N/A	−325.8	−326.3	−0.4844	9.681	UV
HRLT M0−M1 Voltage Plus − 5	0	N/A	−322.2	−322.4	−0.2563	9.681	UV
HRLT M0−M1 Voltage Plus − 6	0	N/A	320.1	324.2	4.174	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: 22−Apr−2014 11:12 After: 22−Apr−2014 15:20							

HRLT M1−M2 Voltage Plus − 0	0	N/A	1759	1753	−5.530	53.42	UV
HRLT M1−M2 Voltage Plus − 1	0	N/A	1826	1834	7.958	53.42	UV
HRLT M1−M2 Voltage Plus − 2	0	N/A	1828	1834	6.914	53.42	UV
HRLT M1−M2 Voltage Plus − 3	0	N/A	1850	1853	3.145	53.42	UV
HRLT M1−M2 Voltage Plus − 4	0	N/A	1791	1789	−2.477	53.42	UV
HRLT M1−M2 Voltage Plus − 5	0	N/A	1772	1768	−3.955	53.42	UV
HRLT M1−M2 Voltage Plus − 6	0	N/A	−1773	−1795	−22.06	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: 22−Apr−2014 11:12 After: 22−Apr−2014 15:20

HRLT M2−M3 Voltage Plus − 0	0	N/A	1744	1739	−5.546	53.42	UV
HRLT M2−M3 Voltage Plus − 1	0	N/A	1824	1831	6.561	53.42	UV
HRLT M2−M3 Voltage Plus − 2	0	N/A	1827	1833	5.856	53.42	UV
HRLT M2−M3 Voltage Plus − 3	0	N/A	1853	1856	2.514	53.42	UV
HRLT M2−M3 Voltage Plus − 4	0	N/A	1787	1784	−2.507	53.42	UV
HRLT M2−M3 Voltage Plus − 5	0	N/A	1769	1765	−3.755	53.42	UV
HRLT M2−M3 Voltage Plus − 6	0	N/A	−1762	−1782	−20.04	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: 22−Apr−2014 11:12 After: 22−Apr−2014 15:20

HRLT A3−A4 Voltage Plus − 0	0	N/A	68490	68380	−104.8	2100	UV
HRLT A3−A4 Voltage Plus − 1	0	N/A	71440	71810	365.7	2100	UV
HRLT A3−A4 Voltage Plus − 2	0	N/A	71830	72190	361.5	2100	UV
HRLT A3−A4 Voltage Plus − 3	0	N/A	73090	73320	228.5	2100	UV
HRLT A3−A4 Voltage Plus − 4	0	N/A	70460	70490	28.09	2100	UV
HRLT A3−A4 Voltage Plus − 5	0	N/A	69760	69740	−23.30	2100	UV
HRLT A3−A4 Voltage Plus − 6	0	N/A	−67950	−68850	−894.5	2100	UV
HRLT A3−A4 Voltage Plus − 7	0	N/A	70000	70000	0	2100	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT V45
Before: 22−Apr−2014 11:12 After: 22−Apr−2014 15:20

HRLT A4−A5 Voltage Plus − 0	0	N/A	68740	68660	−75.27	2100	UV
HRLT A4−A5 Voltage Plus − 1	0	N/A	71800	72210	406.9	2100	UV
HRLT A4−A5 Voltage Plus − 2	0	N/A	72170	72540	372.2	2100	UV
HRLT A4−A5 Voltage Plus − 3	0	N/A	73420	73660	239.9	2100	UV
HRLT A4−A5 Voltage Plus − 4	0	N/A	70750	70790	44.78	2100	UV
HRLT A4−A5 Voltage Plus − 5	0	N/A	70030	70000	−31.07	2100	UV
HRLT A4−A5 Voltage Plus − 6	0	N/A	−68330	−69240	−908.4	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: 22−Apr−2014 11:12 After: 22−Apr−2014 15:20

HRLT A5−A6 Voltage Plus − 0	0	N/A	68640	68560	−76.52	2100	UV
HRLT A5−A6 Voltage Plus − 1	0	N/A	71530	71930	396.8	2100	UV
HRLT A5−A6 Voltage Plus − 2	0	N/A	71930	72310	378.7	2100	UV
HRLT A5−A6 Voltage Plus − 3	0	N/A	73210	73460	252.0	2100	UV
HRLT A5−A6 Voltage Plus − 4	0	N/A	70600	70640	41.45	2100	UV
HRLT A5−A6 Voltage Plus − 5	0	N/A	69910	69900	−12.29	2100	UV
HRLT A5−A6 Voltage Plus − 6	0	N/A	−68070	−68970	−905.8	2100	UV
HRLT A5−A6 Voltage Plus − 7	0	N/A	70000	70000	0	2100	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT VTP
Before: 22−Apr−2014 11:12 After: 22−Apr−2014 15:20

HRLT Torpedo−M0 Voltage − 0	0	N/A	−68340	−68230	103.6	2100	UV
HRLT Torpedo−M0 Voltage − 1	0	N/A	−71860	−72250	−393.8	2100	UV
HRLT Torpedo−M0 Voltage − 2	0	N/A	−72240	−72610	−367.6	2100	UV
HRLT Torpedo−M0 Voltage − 3	0	N/A	−73520	−73760	−235.8	2100	UV
HRLT Torpedo−M0 Voltage − 4	0	N/A	−70820	−70840	−21.06	2100	UV
HRLT Torpedo−M0 Voltage − 5	0	N/A	−70090	−70050	41.42	2100	UV
HRLT Torpedo−M0 Voltage − 6	0	N/A	68330	69240	912.8	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: 22−Apr−2014 11:12 After: 22−Apr−2014 15:20

HRLT Bridle#9−M0 Voltage − 0	0	N/A	−68330	−68230	100.6	2100	UV
HRLT Bridle#9−M0 Voltage − 1	0	N/A	−71830	−72240	−412.0	2100	UV
HRLT Bridle#9−M0 Voltage − 2	0	N/A	−72220	−72590	−369.9	2100	UV
HRLT Bridle#9−M0 Voltage − 3	0	N/A	−73500	−73730	−227.9	2100	UV
HRLT Bridle#9−M0 Voltage − 4	0	N/A	−70820	−70840	−22.34	2100	UV
HRLT Bridle#9−M0 Voltage − 5	0	N/A	−70090	−70040	48.22	2100	UV
HRLT Bridle#9−M0 Voltage − 6	0	N/A	68300	69210	914.5	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: 22−Apr−2014 11:12 After: 22−Apr−2014 15:20

HRLT Source Current Plus − 0	0	N/A	285.0	284.6	−0.4069	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: 22−Apr−2014 11:12 After: 22−Apr−2014 15:20

HRLT Vertical Voltage Pl − 0	0	N/A	−321.8	−321.2	0.5255	9.681	UV
HRLT Vertical Voltage Pl − 1	0	N/A	−326.0	−327.9	−1.913	9.681	UV
HRLT Vertical Voltage Pl − 2	0	N/A	−326.3	−328.0	−1.707	9.681	UV
HRLT Vertical Voltage Pl − 3	0	N/A	−328.7	−329.8	−1.082	9.681	UV
HRLT Vertical Voltage Pl − 4	0	N/A	−315.3	−315.4	−0.03436	9.681	UV
HRLT Vertical Voltage Pl − 5	0	N/A	−326.9	−326.6	0.2318	9.681	UV
HRLT Vertical Voltage Pl − 6	0	N/A	328.0	332.6	4.506	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: 30−Mar−2014 17:31 Before: 22−Apr−2014 8:11 After: 22−Apr−2014 15:52

SS Cs Resolution Bkg	9.000	7.835	7.769	7.662	−0.1067	1.800	%
LS Cs Resolution Bkg	9.000	8.052	8.051	8.070	0.01894	1.800	%
LSW1 Background	100.0	85.40	81.87	83.71	1.840	3.000	CPS
LSW2 Background	100.0	75.91	75.44	75.85	0.4115	3.000	CPS
LSW3 Background	200.0	172.7	173.8	172.5	−1.346	6.000	CPS
LSW4 Background	250.0	211.3	210.9	212.1	1.252	7.500	CPS
LSW5 Background	600.0	495.5	492.0	493.1	1.094	18.00	CPS
SSW1 Background	100.0	82.18	80.25	81.59	1.343	3.000	CPS
SSW2 Background	200.0	140.5	140.8	140.4	−0.4067	6.000	CPS
SSW3 Background	500.0	389.3	390.9	391.2	0.2448	15.00	CPS
SSW4 Background	270.0	210.4	209.5	207.4	−2.117	8.100	CPS
SSW5 Background	200.0	149.3	148.9	150.1	1.210	6.000	CPS

Hostile Litho−Density Sonde Wellsite Calibration − Aluminum Measurement
Master: 30−Mar−2014 17:55

LSW1 Aluminum	600.0	474.9	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	698.9	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	843.5	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	422.2	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	388.1	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2208	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	6092	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	8590	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	3536	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	421.8	N/A	N/A	N/A	N/A	CPS

Hostile Litho−Density Sonde Wellsite Calibration − Lithology Measurement
Master: 30−Mar−2014 17:49

LSW1 Iron	400.0	324.7	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	565.3	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	741.4	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	383.6	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	349.9	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1623	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	5092	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	7826	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3213	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	372.1	N/A	N/A	N/A	N/A	CPS

Hostile Litho−Density Sonde Wellsite Calibration − Caliper Calibration
Before: 30−Mar−2014 20:42

HLDS Caliper Small Ring	12.00	N/A	14.54	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	15.19	N/A	18.12	N/A	N/A	N/A	IN

Accelerator−Porosity Tool Wellsite Calibration − Detector Background
Master: 30−Mar−2014 12:33 Before: 22−Apr−2014 8:10 After: 22−Apr−2014 15:23

Near Det Bkg Cntrate	30.00	27.13	26.65	25.40	−1.257	N/A	CPS
Far Det Bkg Cntrate	30.00	28.20	27.24	27.62	0.3806	N/A	CPS
Array−1 Det Bkg Cntrate	30.00	26.50	25.50	26.54	1.040	N/A	CPS
Array−2 Det Bkg Cntrate	30.00	27.19	26.35	26.51	0.1599	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	27.32	25.77	27.04	1.261	N/A	CPS

Accelerator−Porosity Tool Wellsite Calibration − Calibration Ratios
Master: 30−Mar−2014 12:33

Near/Far Calibration Ratio	0.9250	0.9737	N/A	N/A	N/A	N/A	
Near/Array Calibration Ratio	1.030	1.083	N/A	N/A	N/A	N/A	
Near/Array Cal Ratio Up/Down	1.000	1.018	N/A	N/A	N/A	N/A	

Accelerator−Porosity Tool Wellsite Calibration − Tank Check
Master: 30−Mar−2014 12:33

Array−1 Standoff Porosity	11.75	10.24	N/A	N/A	N/A	N/A	PU
Array−2 Standoff Porosity	11.75	10.46	N/A	N/A	N/A	N/A	PU
Average Slowing Down Time	6.000	6.082	N/A	N/A	N/A	N/A	US
Array−1 SDT Ratio Up/Down	1.000	0.9762	N/A	N/A	N/A	N/A	

Array−2 SDT Ratio Up/Down	1.000	0.9753	N/A	N/A	N/A	N/A	
Sigma Formation	27.50	34.48	N/A	N/A	N/A	N/A	CU

Accelerator−Porosity Tool Wellsite Calibration − CCR7 signal boxes
Master: 30−Mar−2014 11:56

Near Detector Plateau Setting	1650	1699	N/A	N/A	N/A	N/A	V
Far Detector Plateau Setting	2000	2036	N/A	N/A	N/A	N/A	V
Array Detector Plateau Setting	2000	1937	N/A	N/A	N/A	N/A	V

Hostile Natural Gamma Ray Sonde Wellsite Calibration − Detector 1 Check
Master: 27−Mar−2014 5:59 Before: 27−Mar−2014 6:07 After: 27−Mar−2014 6:13

Na 511 Peak Loc	40.00	39.78	39.67	39.66	−0.01299	1.000	
Na 511 Peak Res	15.50	16.03	15.21	17.13	1.922	2.000	%
High Voltage	1150	1197	1196	1198	1.049	N/A	V
Na 1785 Peak Loc	142.6	142.2	143.6	142.1	−1.514	7.000	
Na 1785 Peak Res	8.500	8.755	9.665	9.508	−0.1568	2.000	%
Temperature	15.50	33.07	33.06	33.03	−0.02276	N/A	DEGC
Na Count Rate	45.00	11.79	12.09	12.03	−0.06420	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration − Detector 2 Check
Master: 27−Mar−2014 5:59 Before: 27−Mar−2014 6:07 After: 27−Mar−2014 6:13

Na 511 Peak Loc	40.00	39.69	39.69	39.64	−0.04813	1.000	
Na 511 Peak Res	15.50	15.94	16.10	16.73	0.6302	2.000	%
High Voltage	1150	1120	1119	1119	−0.2911	N/A	V
Na 1785 Peak Loc	142.6	143.1	142.2	141.3	−0.9386	7.000	
Na 1785 Peak Res	8.500	9.947	8.813	9.218	0.4048	2.000	%
Temperature	15.50	33.86	33.85	33.87	0.01951	N/A	DEGC
Na Count Rate	45.00	12.27	12.51	12.48	−0.02532	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration − Ratio Of Detector 1 To Detector 2
Master: 27−Mar−2014 5:59 Before: 27−Mar−2014 6:07 After: 27−Mar−2014 6:13

Coincidence Count Rate Ratio	1.000	0.9619	0.9664	0.9652	−0.001153	0.05000	

Enhanced DTS Cartridge Wellsite Calibration − EDTC Accelerometer Calibration
Before: 22−Apr−2014 8:07

EDTC Z−Axis Acceleration	9.810	N/A	9.752	N/A	N/A	N/A	M/S2

Enhanced DTS Cartridge Wellsite Calibration − Detector Calibration
Before: 22−Apr−2014 8:17 After: 22−Apr−2014 15:50

Gamma Ray (Jig − Bkg)	156.4	N/A	156.4	158.2	1.813	14.22	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	166.9	1.913	15.00	GAPI

Accelerator−Porosity Tool − Detector Plateau Settings :

Near Detector Plateau Setting 1699 V
Far Detector Plateau Setting 2036 V
Array Detector Plateau Setting 1937 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		−319.1	−322.7	−280.7	−379.7
	After		−318.8			
1	Before		−331.1	−322.7	−280.7	−379.7
	After		−332.9			
2	Before		−332.4	−322.7	−280.7	−379.7
	After		−334.2			
	Before		−336.5			

3	Before	−336.5	−322.7	−280.7	−379.7
	After	−337.9			
4	Before	−325.8	−322.7	−280.7	−379.7
	After	−326.3			
5	Before	−322.2	−322.7	−280.7	−379.7
	After	−322.4			
6	Before	320.1	322.7	379.7	280.7
	After	324.2			
7	Before	−322.7	−322.7	−280.7	−379.7
	After	−322.7			
	(Minimum) (Nominal) (Maximum)				

Before: 22−Apr−2014 11:12

After: 22−Apr−2014 15:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M12

Idx	Phase	HRLT M1−M2 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1759	1781	2095	1549
	After		1753			
1	Before		1826	1781	2095	1549
	After		1834			
2	Before		1828	1781	2095	1549
	After		1834			
3	Before		1850	1781	2095	1549
	After		1853			
4	Before		1791	1781	2095	1549
	After		1789			
5	Before		1772	1781	2095	1549
	After		1768			
6	Before		−1773	−1781	−1549	−2095
	After		−1795			
7	Before		1781	1781	2095	1549
	After		1781			
	(Minimum) (Nominal) (Maximum)					

Before: 22−Apr−2014 11:12

After: 22−Apr−2014 15:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M23

Idx	Phase	HRLT M2−M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1744	1781	2095	1549
	After		1739			
1	Before		1824	1781	2095	1549
	After		1831			
2	Before		1827	1781	2095	1549
	After		1833			
3	Before		1853	1781	2095	1549
	After		1856			
	Before		1787			

4	Before	1787	1781	2095	1549
	After	1784			
5	Before	1769	1781	2095	1549
	After	1765			
6	Before	−1762	−1781	−1549	−2095
	After	−1782			
7	Before	1781	1781	2095	1549
	After	1781			
	(Minimum) (Nominal) (Maximum)				

Before: 22−Apr−2014 11:12
After: 22−Apr−2014 15:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT_V34

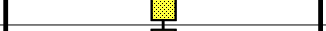
Idx	Phase	HRLT A3−A4 Voltage Plus_UV	Value	Nominal	Maximum	Minimum
0	Before		68490	70000	82360	60900
	After		68380			
1	Before		71440	70000	82360	60900
	After		71810			
2	Before		71830	70000	82360	60900
	After		72190			
3	Before		73090	70000	82360	60900
	After		73320			
4	Before		70460	70000	82360	60900
	After		70490			
5	Before		69760	70000	82360	60900
	After		69740			
6	Before		−67950	−70000	−60900	−82360
	After		−68850			
7	Before		70000	70000	82360	60900
	After		70000			
	(Minimum) (Nominal) (Maximum)					

Before: 22−Apr−2014 11:12
After: 22−Apr−2014 15:20

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		68660			
1	Before		71800	70000	82360	60900
	After		72210			
2	Before		72170	70000	82360	60900
	After		72540			
3	Before		73420	70000	82360	60900
	After		73660			
4	Before		70750	70000	82360	60900
	After		70790			

5	Before		70030	70000	82360	60900
	After		70000			
6	Before		−68330	−70000	−60900	−82360
	After		−69240			
7	Before		70000	70000	82360	60900
	After		70000			
	(Minimum) (Nominal) (Maximum)					

Before: 22−Apr−2014 11:12

After: 22−Apr−2014 15:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V56

Idx	Phase	HRLT A5−A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68640	70000	82360	60900
	After		68560			
1	Before		71530	70000	82360	60900
	After		71930			
2	Before		71930	70000	82360	60900
	After		72310			
3	Before		73210	70000	82360	60900
	After		73460			
4	Before		70600	70000	82360	60900
	After		70640			
5	Before		69910	70000	82360	60900
	After		**69900**			
6	Before		−68070	−70000	−60900	−82360
	After		−68970			
7	Before		70000	70000	82360	60900
	After		70000			
	(Minimum) (Nominal) (Maximum)					

Before: 22−Apr−2014 11:12

After: 22−Apr−2014 15:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT VTP

Idx	Phase	HRLT Torpedo−M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−68340	−70000	−60900	−82360
	After		−68230			
1	Before		−71860	−70000	−60900	−82360
	After		−72250			
2	Before		−72240	−70000	−60900	−82360
	After		−72610			
3	Before		−73520	−70000	−60900	−82360
	After		−73760			
4	Before		−70820	−70000	−60900	−82360
	After		−70840			
5	Before		−70090	−70000	−60900	−82360
	After		−70050			

Idx	Phase	HRLT Bridle#9−M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
6	Before		68330	70000	82360	60900
	After		69240			
7	Before		−70000	−70000	−60900	−82360
	After		−70000			
		(Minimum) (Nominal) (Maximum)				

Before: 22−Apr−2014 11:12
After: 22−Apr−2014 15:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT VBD

Idx	Phase	HRLT Bridle#9−M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−68330	−70000	−60900	−82360
	After		−68230			
1	Before		−71830	−70000	−60900	−82360
	After		−72240			
2	Before		−72220	−70000	−60900	−82360
	After		−72590			
3	Before		−73500	−70000	−60900	−82360
	After		−73730			
4	Before		−70820	−70000	−60900	−82360
	After		−70840			
5	Before		−70090	−70000	−60900	−82360
	After		−70040			
6	Before		68300	70000	82360	60900
	After		**69210**			
7	Before		−70000	−70000	−60900	−82360
	After		−70000			
		(Minimum) (Nominal) (Maximum)				

Before: 22−Apr−2014 11:12
After: 22−Apr−2014 15:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT ISO

Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum
0	Before		285.0	284.0	334.1	247.0
	After		284.6			
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			

Idx	Phase		Value	Nominal	Maximum	Minimum
7	Before		281.1	281.1	330.7	244.4
	After		281.1			
		(Minimum) (Nominal) (Maximum)				

Before: 22−Apr−2014 11:12
After: 22−Apr−2014 15:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT MV

Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−321.8	−322.7	−280.7	−379.7
	After		−321.2			
1	Before		−326.0	−322.7	−280.7	−379.7
	After		−327.9			
2	Before		−326.3	−322.7	−280.7	−379.7
	After		−328.0			
3	Before		−328.7	−322.7	−280.7	−379.7
	After		−329.8			
4	Before		−315.3	−322.7	−280.7	−379.7
	After		−315.4			
5	Before		−326.9	−322.7	−280.7	−379.7
	After		−326.6			
6	Before		328.0	322.7	379.7	280.7
	After		332.6			
7	Before		−322.7	−322.7	−280.7	−379.7
	After		**−322.7**			
		(Minimum) (Nominal) (Maximum)				

Before: 22−Apr−2014 11:12
After: 22−Apr−2014 15:20

Hostile Litho−Density Sonde / Equipment Identification

Primary Equipment:

Hostile Litho Density Sonde	HLDS − D	35
Hostile Litho Density High Voltage	HLDV − D	35
Gamma Source Radioactive	GSR − Z	8113

Auxiliary Equipment:

Hostile Litho Density Pad	HLDP − C	35
Hostile Litho Density High Voltage Housi	HEH − H	35

Hostile Litho−Density Sonde Wellsite Calibration

Background Measurement

Phase	SS Cs Resolution Bkg %	Value
Master		7.835
Before		7.769
After		7.662
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)	

Phase	LS Cs Resolution Bkg %	Value
Master		8.052
Before		8.051
After		8.070
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)	

Phase	LSW1 Background CPS	Value
Master	MASTER−BEFORE LIMIT	85.40
Before		81.87
After		83.71
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)	

Phase	LSW2 Background CPS	Value
Master		75.91
Before		75.44
After		75.85
	50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)	

Phase	LSW3 Background CPS	Value
Master		172.7
Before		173.8
After		172.5
	110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)	

Phase	LSW4 Background CPS	Value
Master		211.3
Before		210.9
After		212.1
	140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)	

Phase	LSW5 Background CPS	Value
Master		495.5
Before		492.0
After		493.1
330.0 (Minimum)	600.0 (Nominal)	830.0 (Maximum)

Phase	SSW1 Background CPS	Value
Master		82.18
Before		80.25
After		81.59
55.00 (Minimum)	100.0 (Nominal)	150.0 (Maximum)

Phase	SSW2 Background CPS	Value
Master		140.5
Before		140.8
After		140.4
100.0 (Minimum)	200.0 (Nominal)	260.0 (Maximum)

Phase	SSW3 Background CPS	Value
Master		389.3
Before		390.9
After		391.2
280.0 (Minimum)	500.0 (Nominal)	700.0 (Maximum)

Phase	SSW4 Background CPS	Value
Master		210.4
Before		209.5
After		207.4
150.0 (Minimum)	270.0 (Nominal)	380.0 (Maximum)

Phase	SSW5 Background CPS	Value
Master		149.3
Before		148.9
After		150.1
110.0 (Minimum)	200.0 (Nominal)	270.0 (Maximum)

Master: 30−Mar−2014 17:31 Before: 22−Apr−2014 8:11 After: 22−Apr−2014 15:52

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	212
APS Minitron	MNTR − F	6504
Auxiliary Equipment:		
Accelerator−Porosity Housing	APH − AC	121
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		27.13
Before		26.65
After		25.40
1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)

Phase	Far Det Bkg Cntrate CPS	Value
Master		28.20
Before		27.24
After		27.62
1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)

Phase	Array−1 Det Bkg Cntrate CPS	Value
Master		26.50
Before		25.50
After		26.54
1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)

Phase	Array−2 Det Bkg Cntrate CPS	Value
Master		27.19
Before		26.35
After		26.51
1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)

Phase	Array Therm Det Bkg Cntrate CPS	Value
Master		27.32
Before		25.77
After		27.04
1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)

Master: 30−Mar−2014 12:33 Before: 22−Apr−2014 8:10 After: 22−Apr−2014 15:23

Accelerator−Porosity Tool Wellsite Calibration

Calibration Ratios

Phase	Near/Far Calibration Ratio	Value
Master		0.9737
0.8000 (Minimum)	0.9250 (Nominal)	1.050 (Maximum)

Phase	Near/Array Calibration Ratio	Value
Master		1.083
0.9000 (Minimum)	1.030 (Nominal)	1.170 (Maximum)

Phase	Near/Array Cal Ratio Up/Down	Value
Master		1.018
0.9700 (Minimum)	1.000 (Nominal)	1.030 (Maximum)

Master: 30−Mar−2014 12:33

Accelerator−Porosity Tool Wellsite Calibration

Tank Check

Phase	Array−1 Standoff Porosity PU	Value

Phase	Array−2 Standoff Porosity PU	Value

Phase	Average Slowing Down Time US	Value

Phase		Value
Master		10.24
	9.900 (Minimum) 11.75 (Nominal) 13.60 (Maximum)	

Phase		Value
Master		10.46
	9.900 (Minimum) 11.75 (Nominal) 13.60 (Maximum)	

Phase		Value
Master		6.082
	5.500 (Minimum) 6.000 (Nominal) 6.250 (Maximum)	

Phase	Array−1 SDT Ratio Up/Down	Value
Master		0.9762
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)	

Phase	Array−2 SDT Ratio Up/Down	Value
Master		0.9753
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)	

Phase	Sigma Formation CU	Value
Master		34.48
	20.00 (Minimum) 27.50 (Nominal) 35.00 (Maximum)	

Master: 30−Mar−2014 12:33

Hostile Natural Gamma Ray Cartridge − B / Equipment Identification

Primary Equipment:		
HNGC Cartridge	HNGC − B	300
Auxiliary Equipment:		
HNGC Housing	HNGH − A	115

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:		
HNGS Sonde	HNGS − BA	194
Auxiliary Equipment:		
HNGS Sonde Housing	HNSH − BA	205
Gamma Source Radioactive	GSR − U	616008

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 1 Check

Phase	Na 511 Peak Loc	Value
Master		39.78
Before		39.67
After		39.66
	37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)	

Phase	Na 511 Peak Res %	Value
Master		16.03
Before		15.21
After		17.13
	12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)	

Phase	High Voltage V	Value
Master		1197
Before		1196
After		1198
	900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	

Phase	Na 1785 Peak Loc	Value
Master		142.2
Before		143.6
After		142.1
	135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)	

Phase	Na 1785 Peak Res %	Value
Master		8.755
Before		9.665
After		9.508
	7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)	

Phase	Temperature DEGC	Value
Master		33.07
Before		33.06
After		33.03
	−28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)	

Phase	Na Count Rate CPS	Value
Master		11.79
Before		12.09
After		12.03
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)	

Master: 27−Mar−2014 5:59 Before: 27−Mar−2014 6:07 After: 27−Mar−2014 6:13

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 2 Check

Phase	Na 511 Peak Loc	Value
Master		39.69
Before		39.69
After		39.64
	37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)	

Phase	Na 511 Peak Res %	Value
Master		15.94
Before		16.10
After		16.73
	12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)	

Phase	High Voltage V	Value
Master		1120
Before		1119
After		1119
	900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	

Phase	Na 1785 Peak Loc	Value
Master		143.1
Before		142.2

Phase	Na 1785 Peak Res %	Value
Master		9.947
Before		8.813

Phase	Temperature DEGC	Value
Master		33.86
Before		33.85

Phase	Value
After	141.3

135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)

Phase	Value
After	9.218

7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)

Phase	Value
After	33.87

−28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)

Phase	Na Count Rate CPS	Value
Master		12.27
Before		12.51
After		12.48

10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)

Master: 27−Mar−2014 5:59 Before: 27−Mar−2014 6:07 After: 27−Mar−2014 6:13

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Ratio Of Detector 1 To Detector 2

Phase	Coincidence Count Rate Ratio	Value
Master		0.9619
Before		0.9664
After		0.9652

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

Master: 27−Mar−2014 5:59

Before: 27−Mar−2014 6:07

After: 27−Mar−2014 6:13

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		9.752

9.610 (Minimum) 9.810 (Nominal) 10.01 (Maximum)

Before: 22−Apr−2014 8:07

Enhanced DTS Cartridge Wellsite Calibration

Detector Calibration

Phase	Gamma Ray Background GAPI	Value
Before		11.20
After		6.774

0 (Minimum) 30.00 (Nominal) 120.0 (Maximum)

Phase	Gamma Ray (Jig − Bkg) GAPI	Value
Before		156.4
After		158.2

142.2 (Minimum) 156.4 (Nominal) 170.7 (Maximum)

Phase	Gamma Ray (Calibrated) GAPI	Value
Before		165.0
After		166.9

150.0 (Minimum) 165.0 (Nominal) 180.0 (Maximum)

Before: 22−Apr−2014 8:17 After: 22−Apr−2014 15:50

Field: **IBM−1 (Rear Arc)**
Rig: **JOIDES Resolution**
Country:

MSS Magnetic Susceptibility