



Company: Lamont Doherty Earth Observatory

Well: Expedition 346, Site U1427A

Field: Asian Monsoon

Rig: JOIDES Resolution Country: USA

		Run 1		Run 2		Run 3	
JOIDES Resolution Asian Monsoon Location: N 35° 1.9996' Expedition 346, Site U1427A Lamont Doherty Earth Observatory	HRLA Resistivity						
	LOCATION	Latitude: N 35° 1.9996'		Elev.: K.B. -337.10 m			
		Longitude: E 134° 47.999'		G.L. 0.00 m			
		Permanent Datum: Sea Floor		Elev.: 0.00 m			
		Log Measured From: Drill Floor		-337.10 m above Perm. Datum			
	Drilling Measured From: Drill Floor						
Rig:	Ocean:	Max. Well Deviation		Longitude	Latitude		
Field:	Pacific	0 deg		E 134.8°	N 35.033°		
Location:							
Well:							
Logging Date		8-Sep-2013		Logging Date			
Run Number		1		Run Number			
Depth Driller		548.6 m		Depth Driller			
Schlumberger Depth		547.1 m		Schlumberger Depth			
Bottom Log Interval		521.5 m		Bottom Log Interval			
Top Log Interval		82.2 m		Top Log Interval			
Casing Driller Size @ Depth		5.500 in @ 83 m		Casing Driller Size @ Depth		@	
Casing Schlumberger		82.2 m		Casing Schlumberger			
Bit Size		11.438 in		Bit Size			
Type Fluid In Hole		WBM		Type Fluid In Hole			
MUD	Density	Viscosity	1.26 g/cm3		MUD	Density	Viscosity
	Fluid Loss	PH				Fluid Loss	PH
	Source Of Sample		N/A			Source Of Sample	
RM @ Measured Temperature		@		RM @ Measured Temperature		@	
RMF @ Measured Temperature		@		RMF @ Measured Temperature		@	
RMC @ Measured Temperature		@		RMC @ Measured Temperature		@	
Source RMF	RMC	N/A N/A		Source RMF	RMC		
RM @ MRT	RMF @ MRT	@ 15 @ 15		RM @ MRT	RMF @ MRT	@ @	
Maximum Recorded Temperatures		15 degC		Maximum Recorded Temperatures			
Circulation Stopped	Time	8-Sep-2013 5:00		Circulation Stopped	Time		
Logger On Bottom	Time	8-Sep-2013 9:45		Logger On Bottom	Time		
Unit Number	Location	625003 Houston		Unit Number	Location		
Recorded By		C. Furman		Recorded By			
Witnessed By		J. Lofi		Witnessed By			

**DISCLAIMER**

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**OTHER SERVICES1**

- OS1: HLDS
- OS2: HNGS
- OS3: MSS
- OS4: DSI
- OS5: FMS

**REMARKS: RUN NUMBER 1**

Hole drilled and cored using APC/XCB coring system.  
 Modified MCD devices run above and below HRLA for centralization.  
 HLDS and MSS eccentralized by caliper and bowspring with knuckled to decouple from HRLA.  
 LFV Actuator (Go-Devil) run attached to bottom of MSS for LFV locking open / closed.  
 Logs recorded from drill floor (337.1m above permanent datum) then shifted to zero at sea floor.  
 Hole drilled with sea water and then displaced with weighted water-based mud having a density of 1.259 g/cc (10.5ppg).  
 Barite corrections applied to nuclear logs.  
 Caliper closed at 104.2mbsf to facilitate pipe entry; AHC not used due to very low heave.  
 MSS Hi-Res sensor cover found damaged when tools reached surface; not believed to have affected data quality.

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

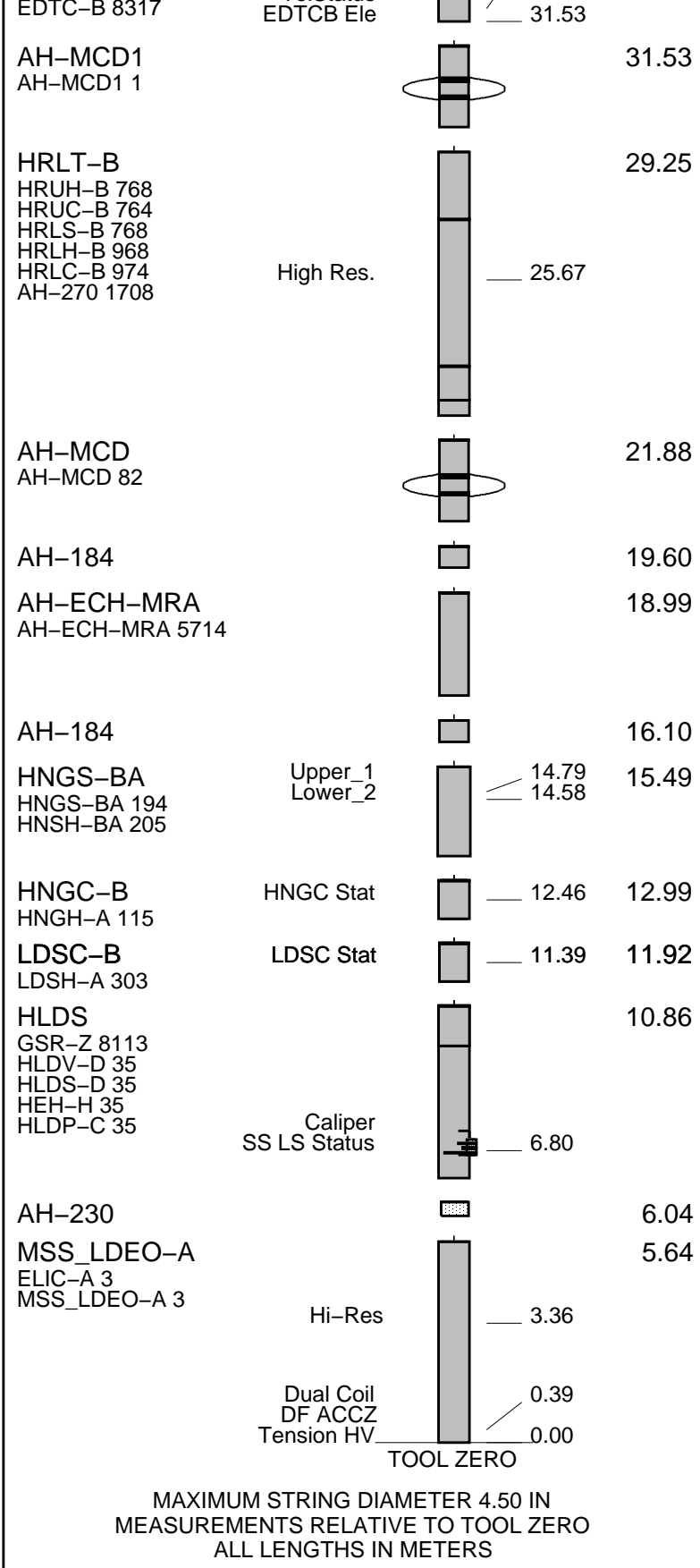
**EQUIPMENT DESCRIPTION**

RUN 1	RUN 2
<b>SURFACE EQUIPMENT</b>	
GSR-U 616008 WITM (EDTS)-A	

RUN 1	RUN 2
<b>DOWNHOLE EQUIPMENT</b>	
LEH-MT 101	34.91
LEH-MT 101 101	
AH-369	33.95
EDTC-B	33.51
EDTH-B 8303	

MDSB\_EDTC  
Mud Tempe  
CTEM  
Gamma Ray  
EFTB DIAG  
TelStatus

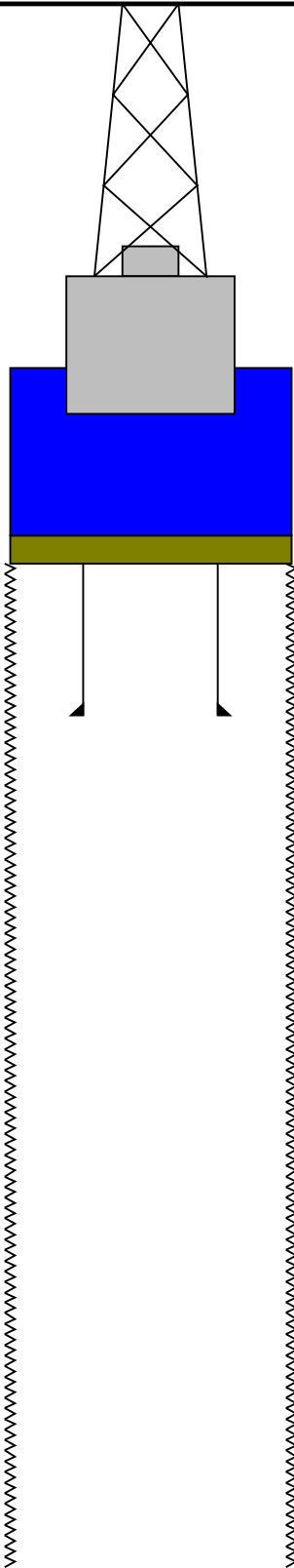
33.51  
32.45  
31.88



Production String	(in)	(m)	Well Schematic	(m)	(in)	Casing String

Kelly Bushing Elevation  
Derrick Floor Elevation  
  
Mean Sea Level

-348.1  
-348.1  
  
-337.1



0.0 11.438 4.000

83.0 5.500 4.000

547.1 11.438

Sea Floor

Bit

Total Depth - Driller



## Downlog 1:200 Scale

MAXIS Field Log

Company: Lamont Doherty Earth Observatory

Well: Expedition 346, Site U1427A

### Input DLIS Files

DEFAULT	Flip_MSS_LDEO_LDL_018LUP	PRODUCER	09-Sep-2013 11:28	854.0 M	292.6 M
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### Output DLIS Files

DEFAULT	MSS_LDEO_LDL_NGS_019PUP	FN:17	PRODUCER	09-Sep-2013 11:29	514.3 M	-14.3 M
CLIENT	MSS_LDEO_LDL_NGS_019PUC	FN:18	CUSTOMER	09-Sep-2013 11:29	514.3 M	-14.3 M

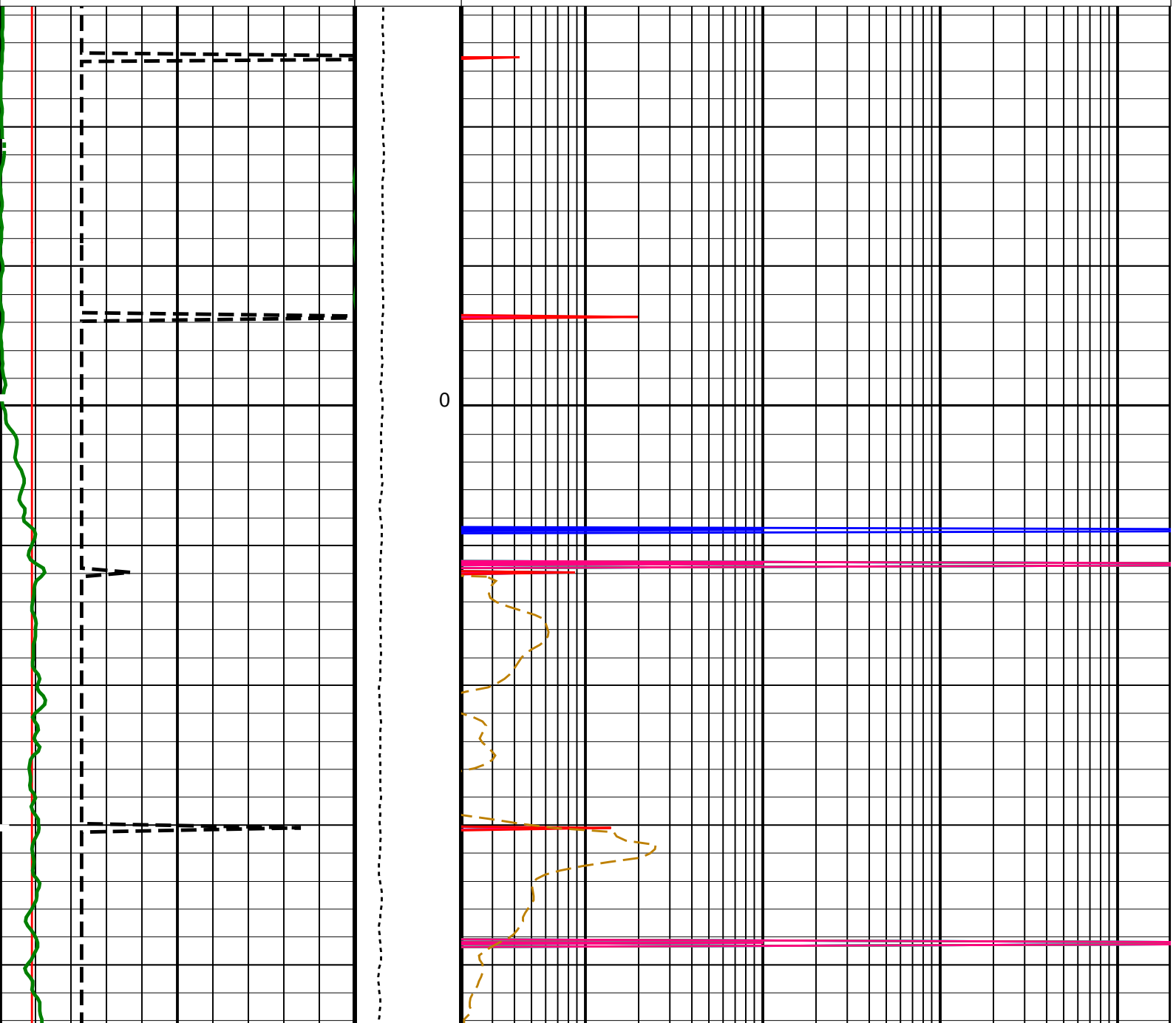
### OP System Version: 19C0-187

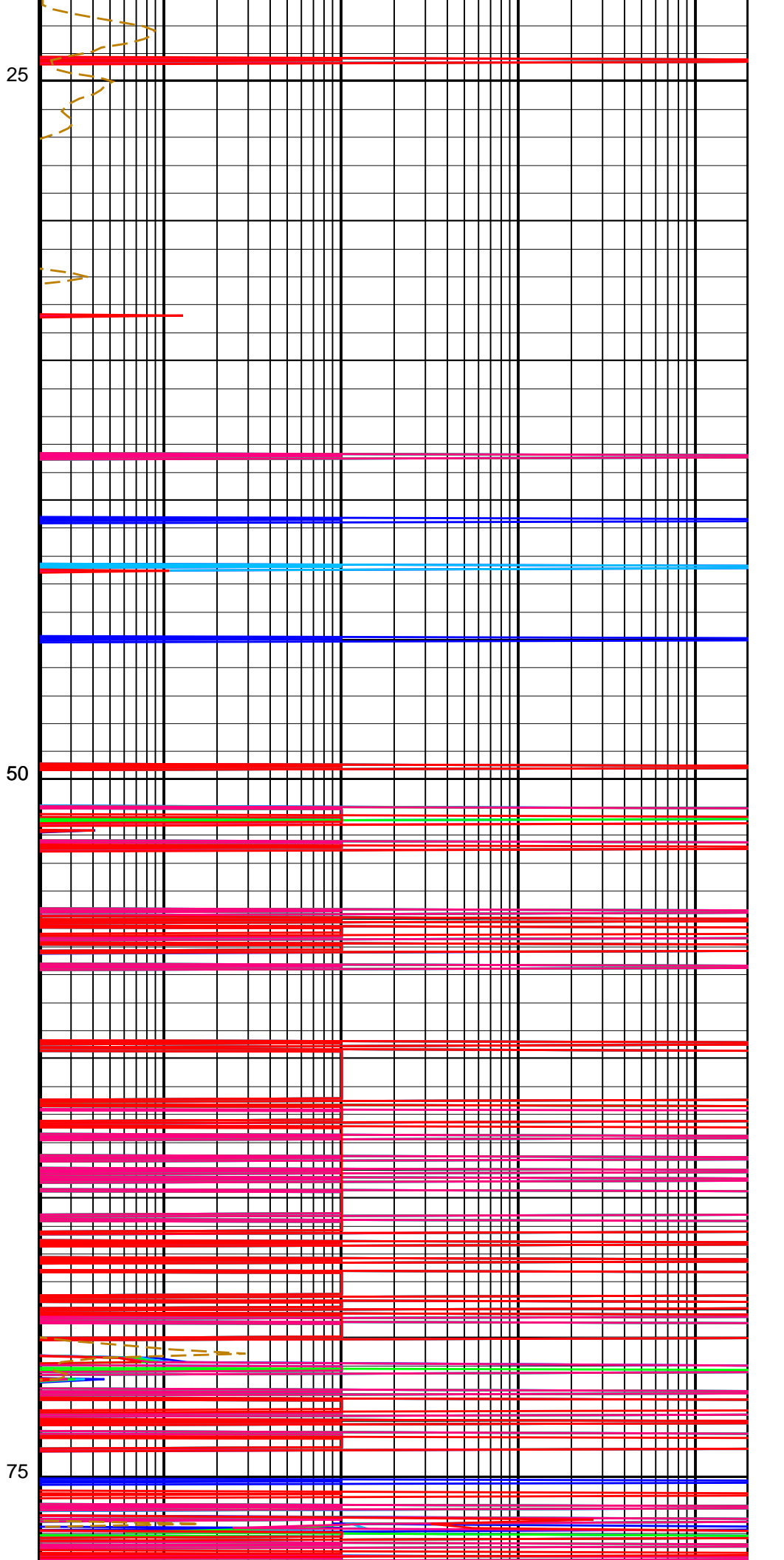
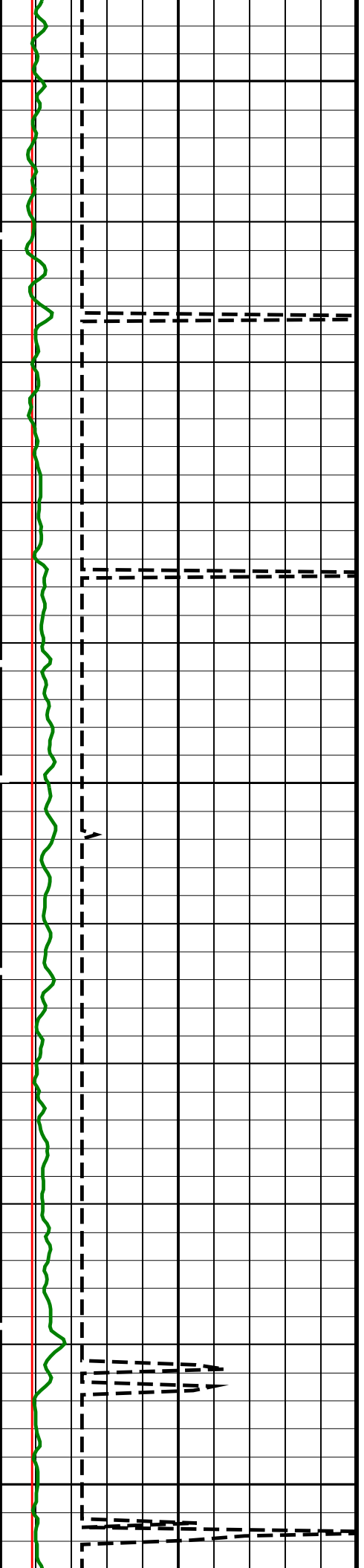
MSS_LDEO-A	19C0-187	HLDS	19C0-187
LDSC-B	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	HRLT-B	19C0-187

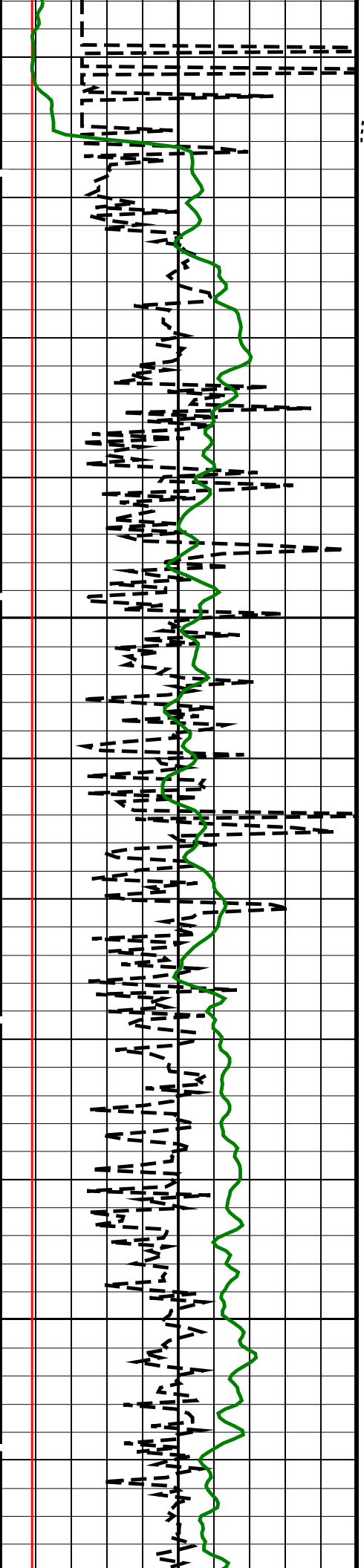
PIP SUMMARY

Time Mark Every 60 S

		<b>HRLT Mud Resistivity (RM_HRLT)</b>	
0.02	(OHMM)	200	
		<b>HRLT Resistivity 5 (RLA5)</b>	
0.2	(OHMM)	2000	
		<b>HRLT Resistivity 4 (RLA4)</b>	
0.2	(OHMM)	2000	
		<b>HRLT Resistivity 3 (RLA3)</b>	
0.2	(OHMM)	2000	
		<b>HRLT Resistivity 2 (RLA2)</b>	
0.2	(OHMM)	2000	
		<b>HRLT Resistivity 1 (RLA1)</b>	
0.2	(OHMM)	2000	
<b>HNGS Spectroscopy Gamma Ray (HSGR)</b>			
0	(GAPI)	100	
<b>Invasion Diameter (DI_HRLT)</b>			
0	(IN)	50	
<b>HLDS Caliper (LCAL)</b>			
0	(IN)	20	
<b>Tension (TENS) (LBF)</b>			
0	5000		

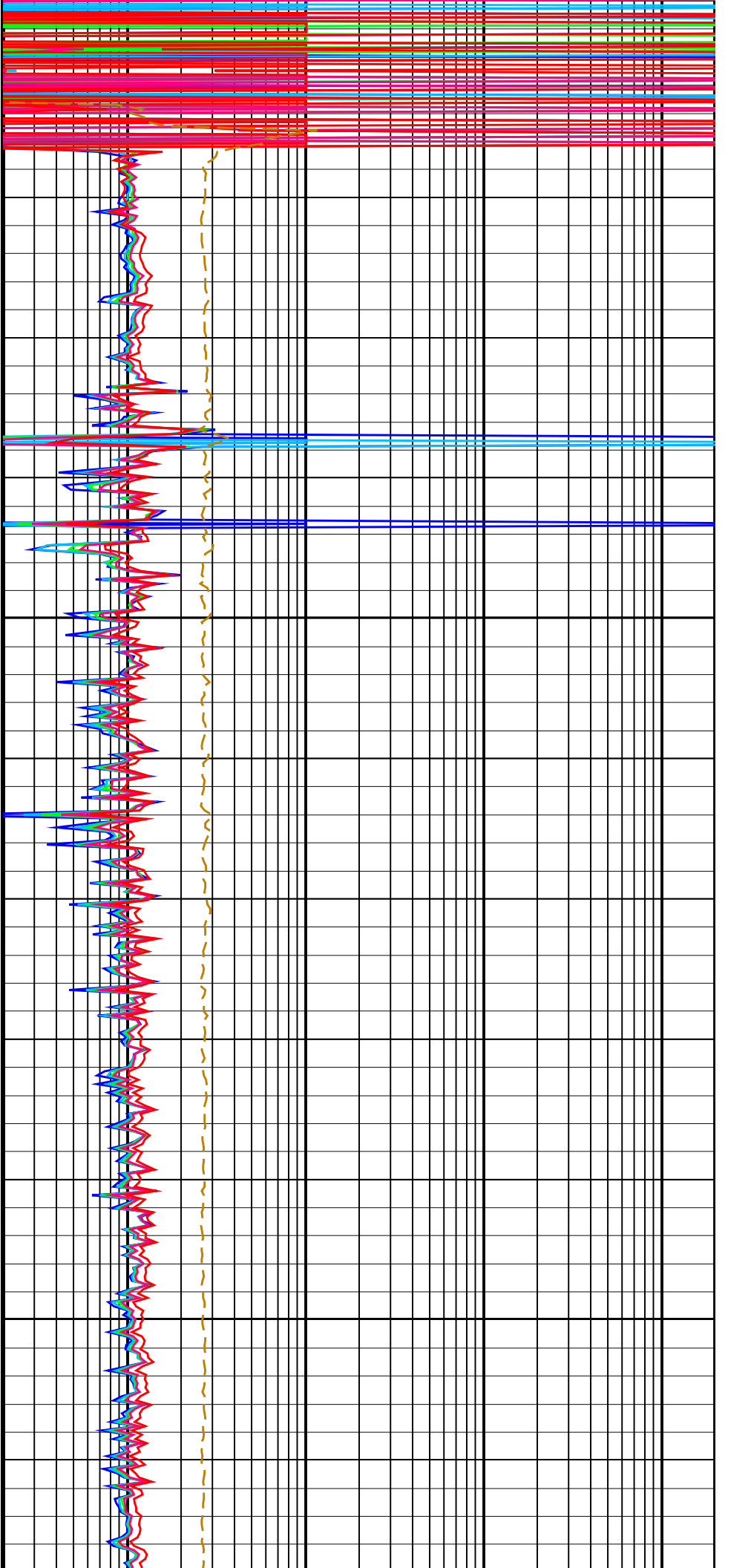




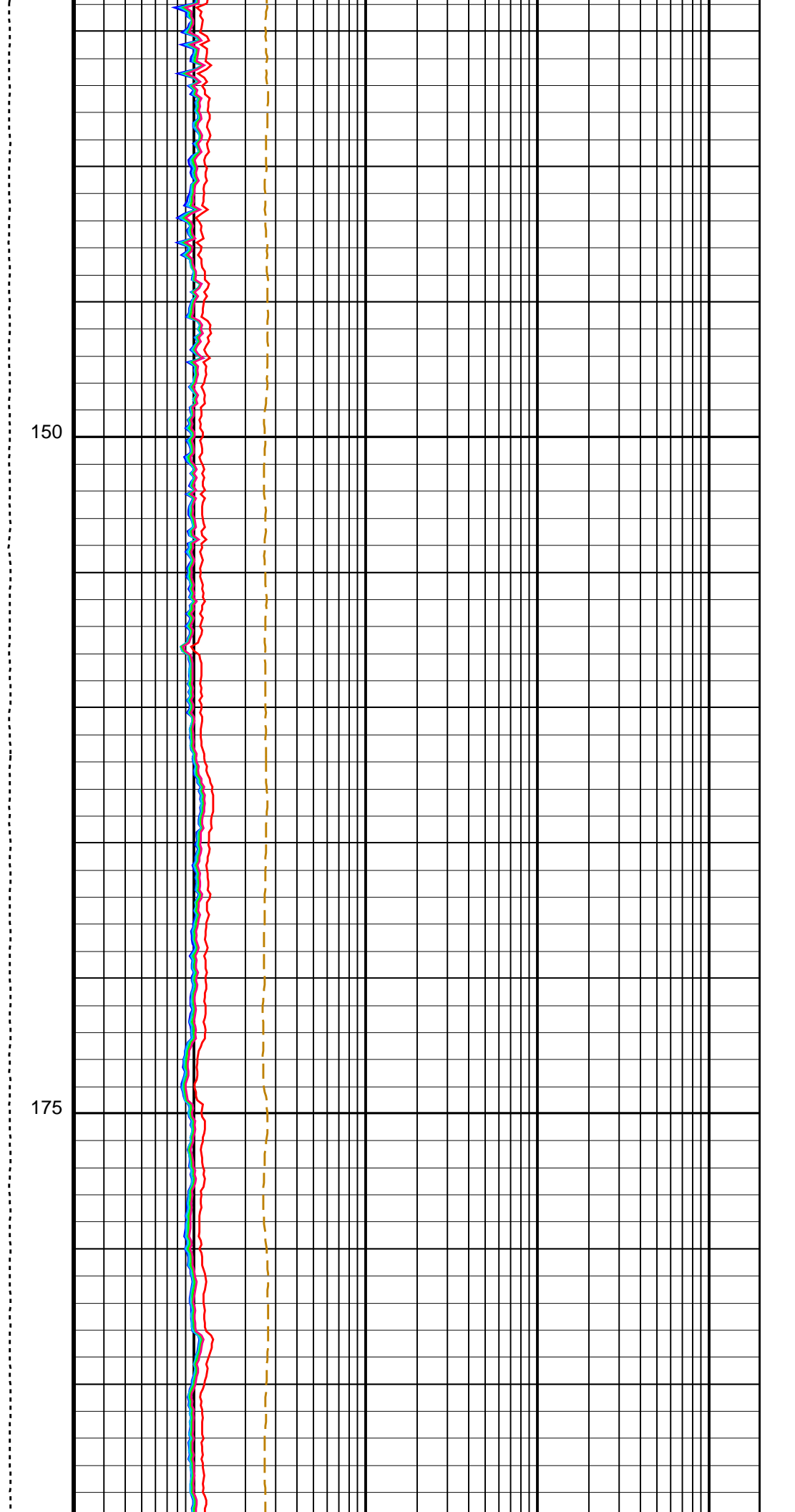
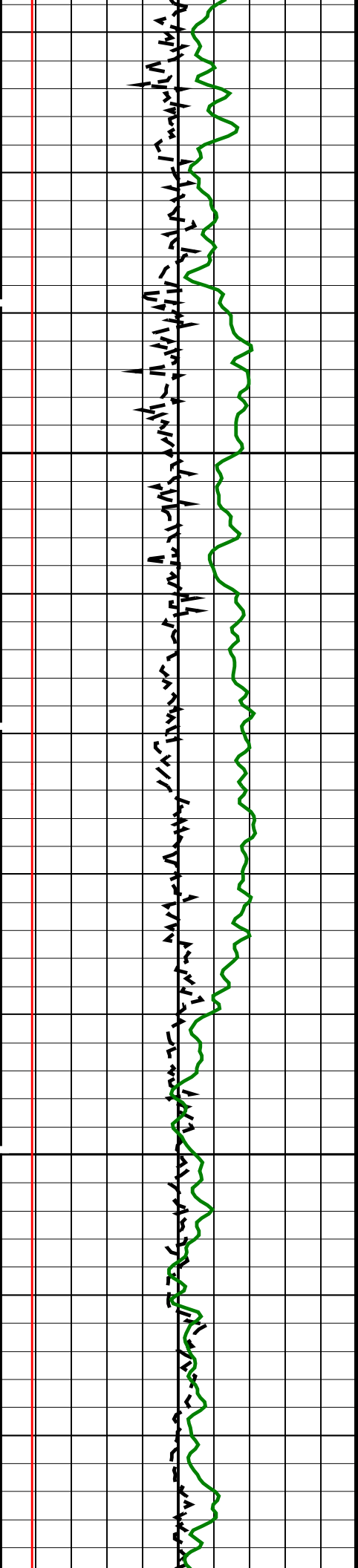


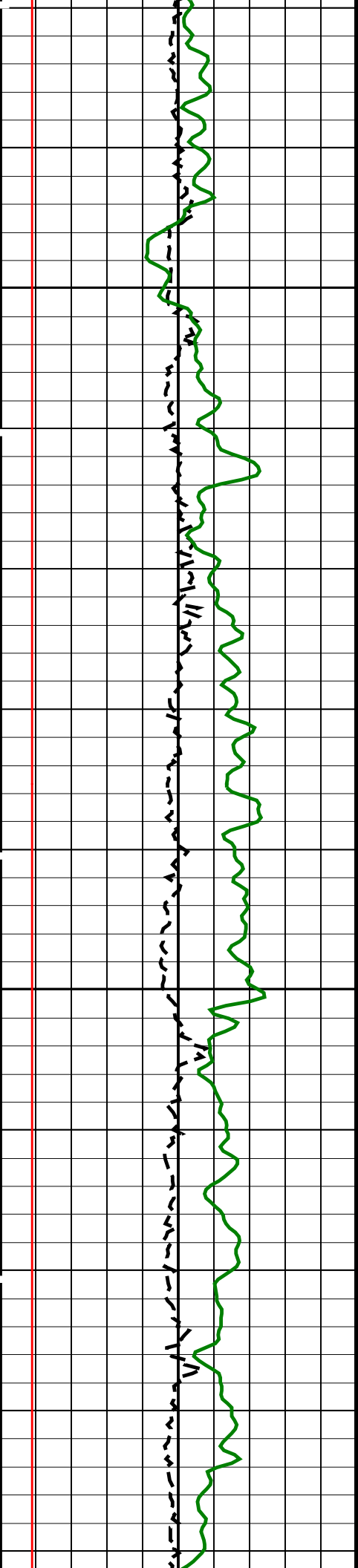
100

125



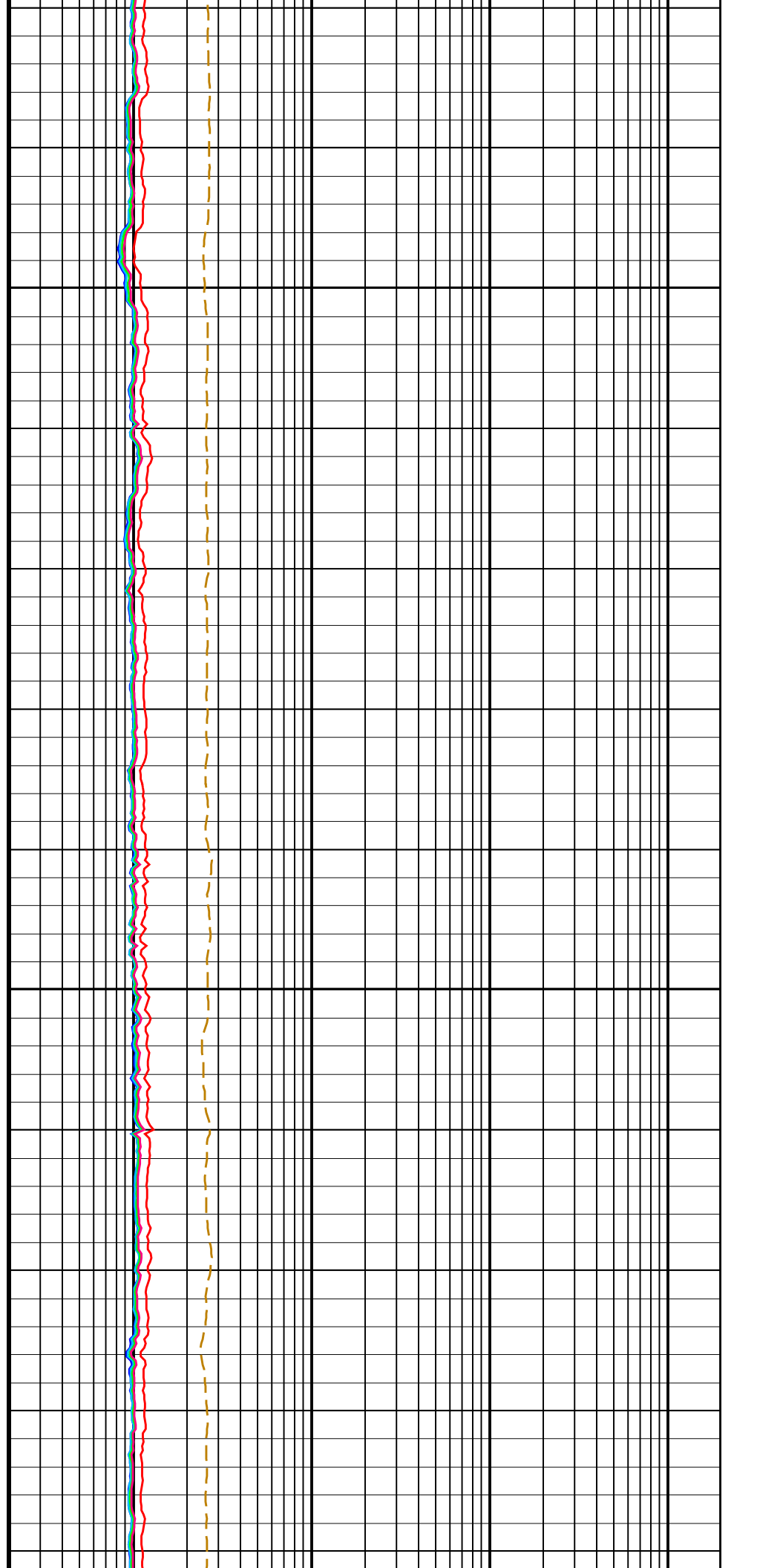


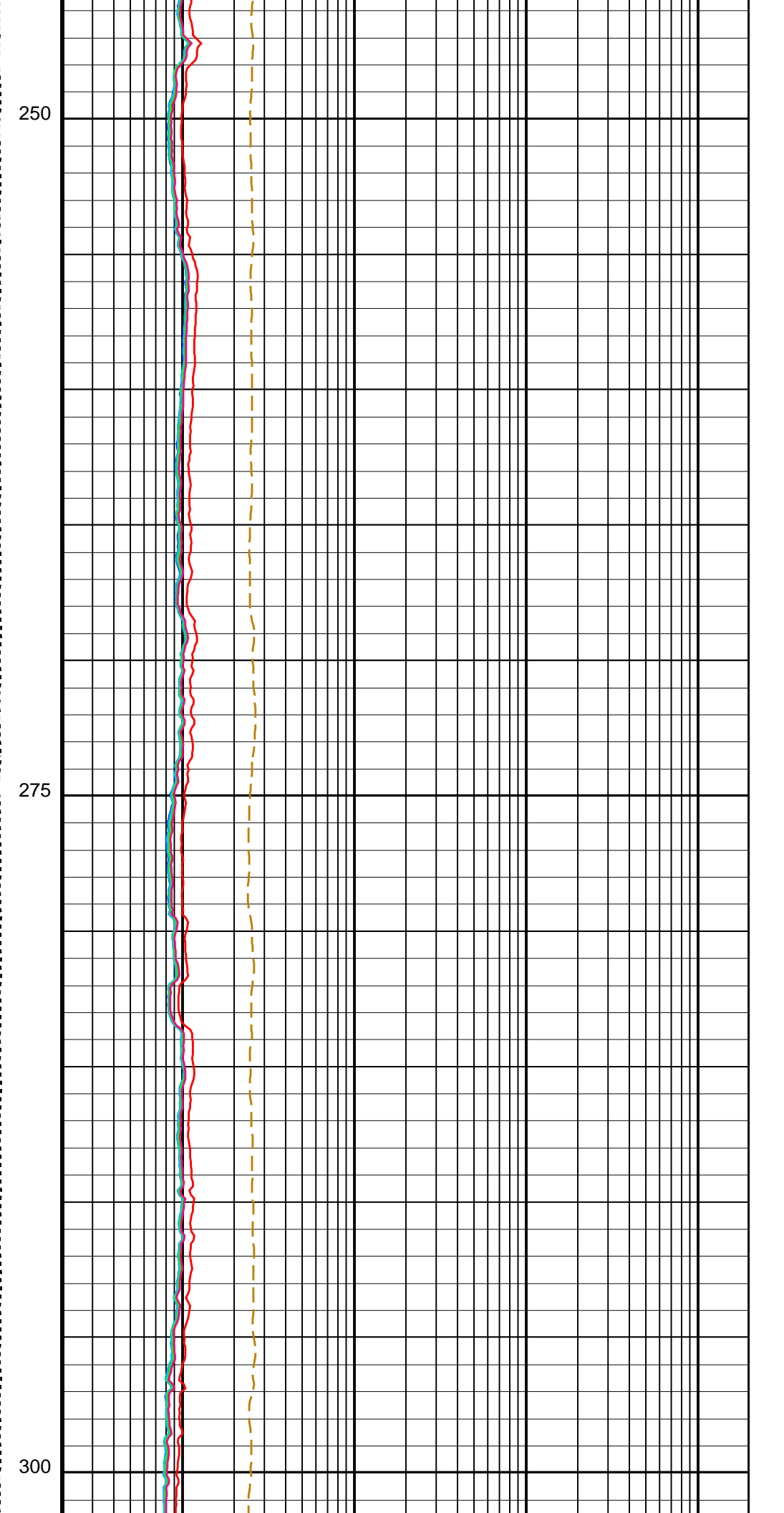
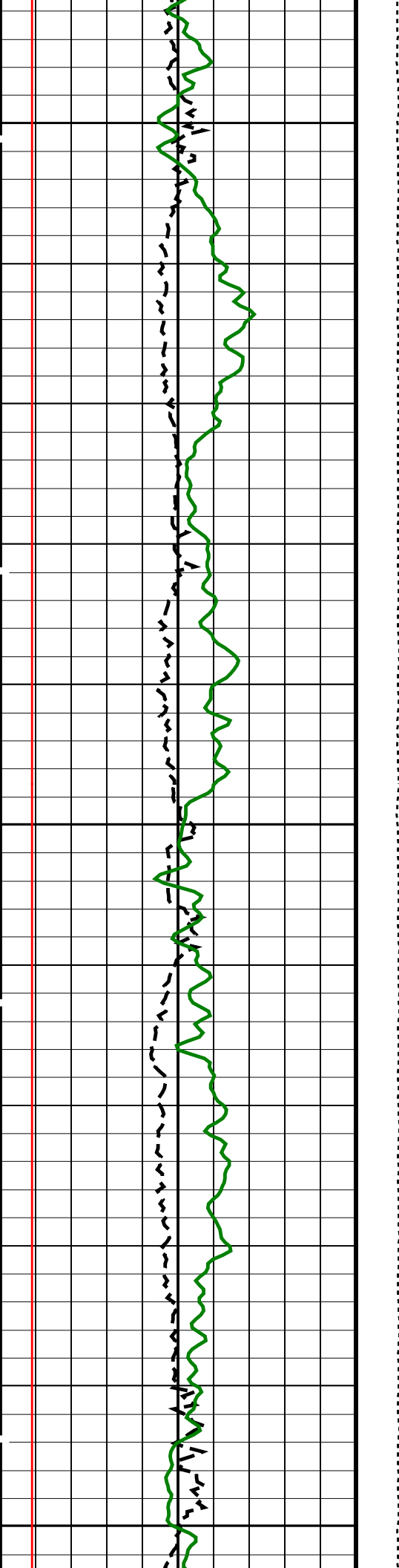


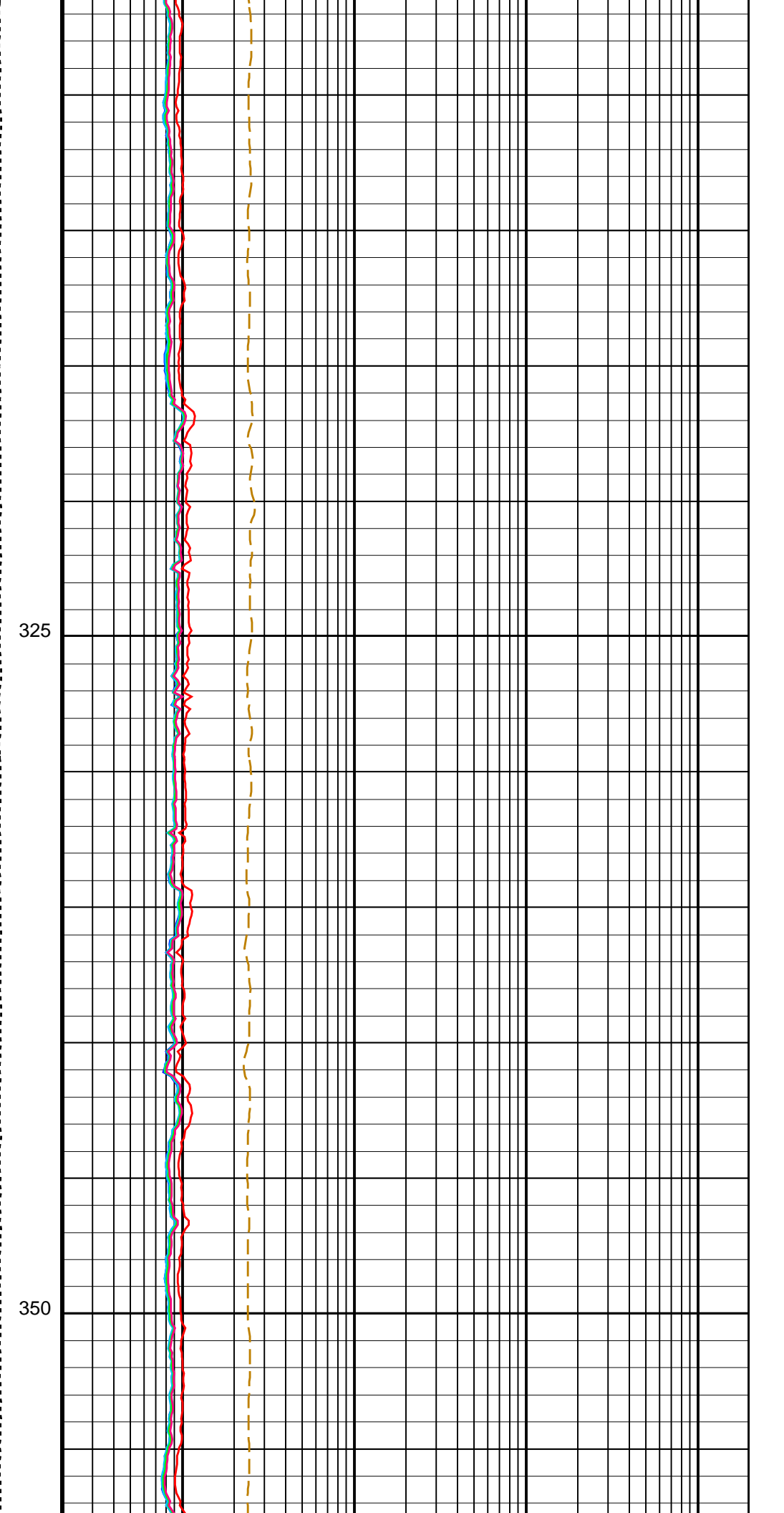
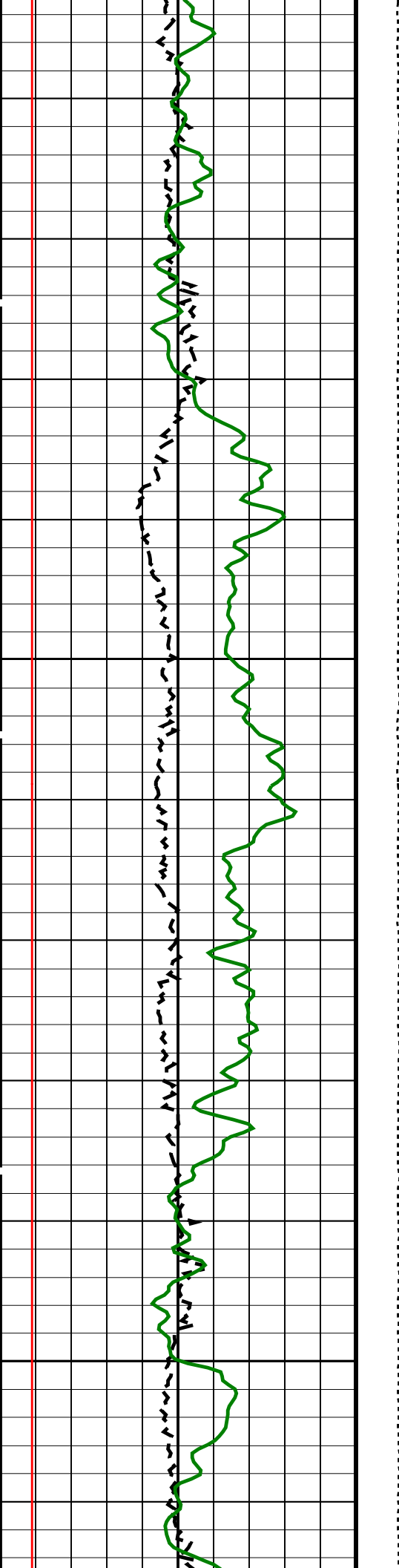


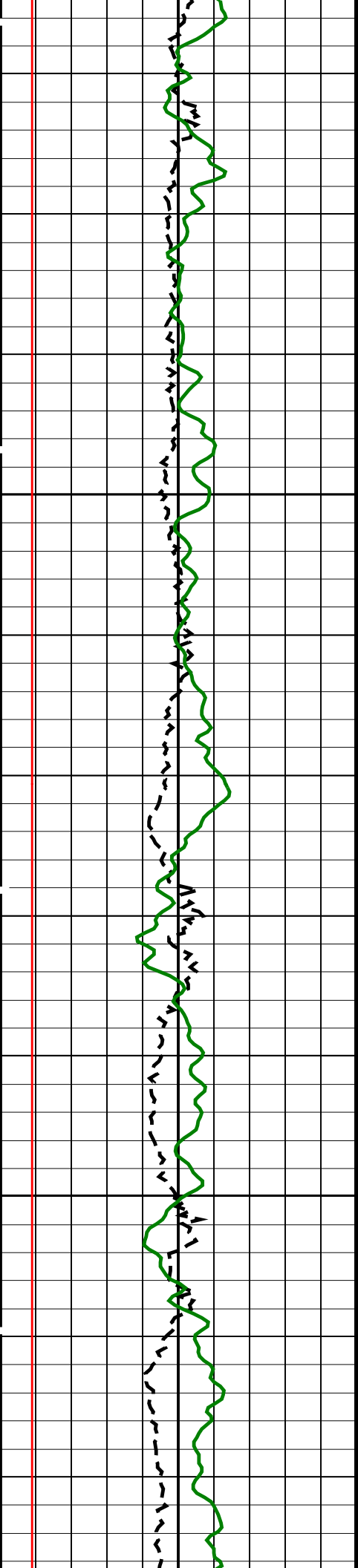
200

225



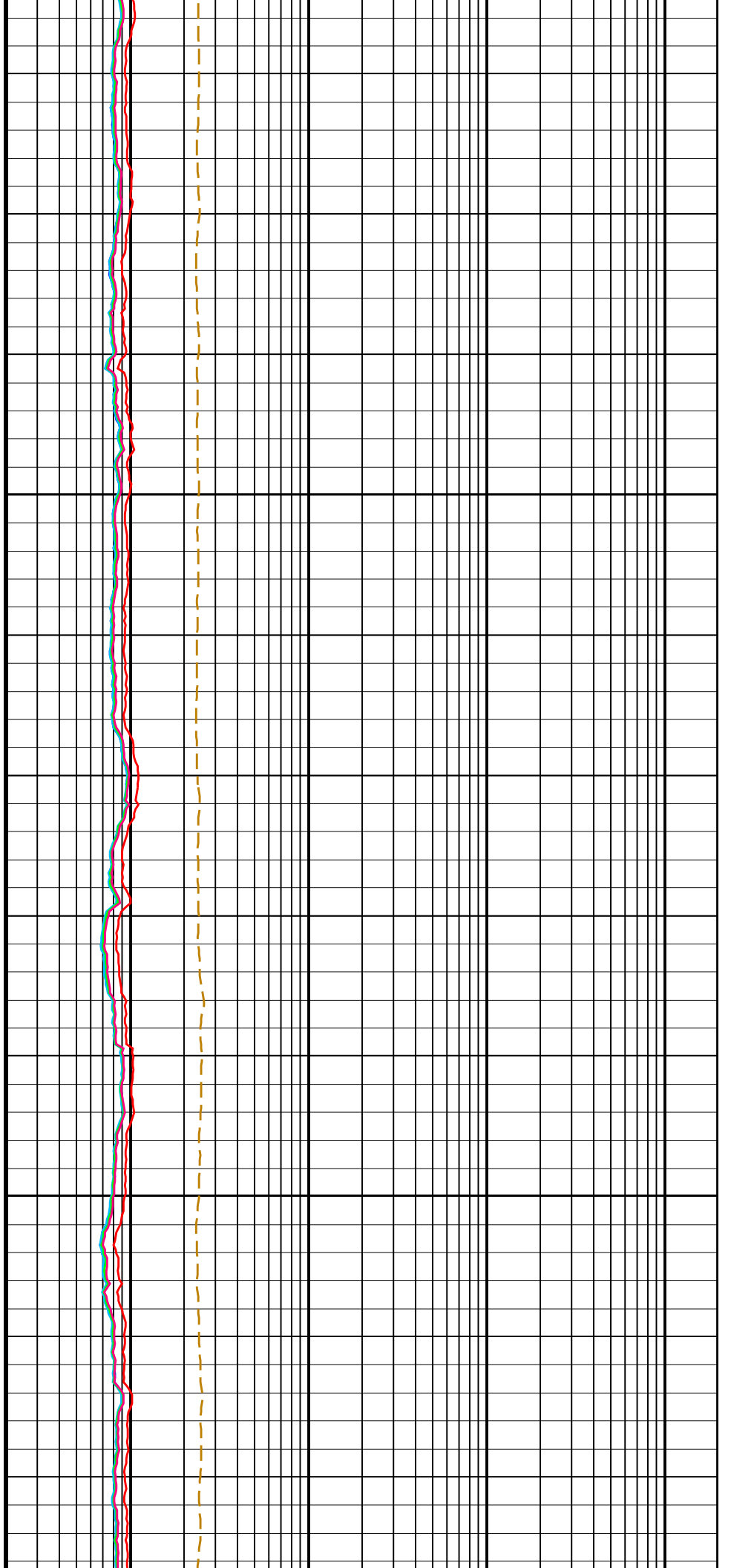


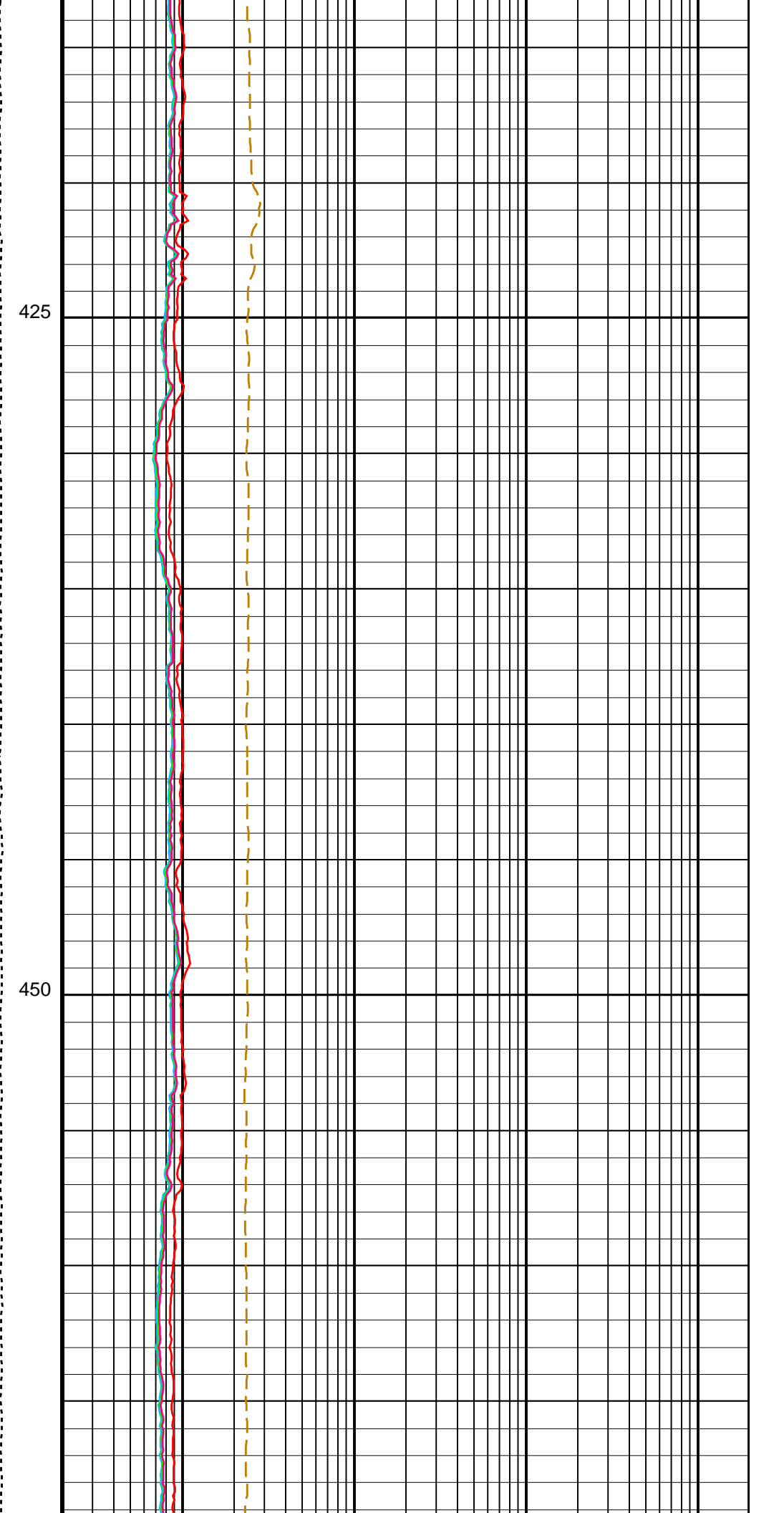
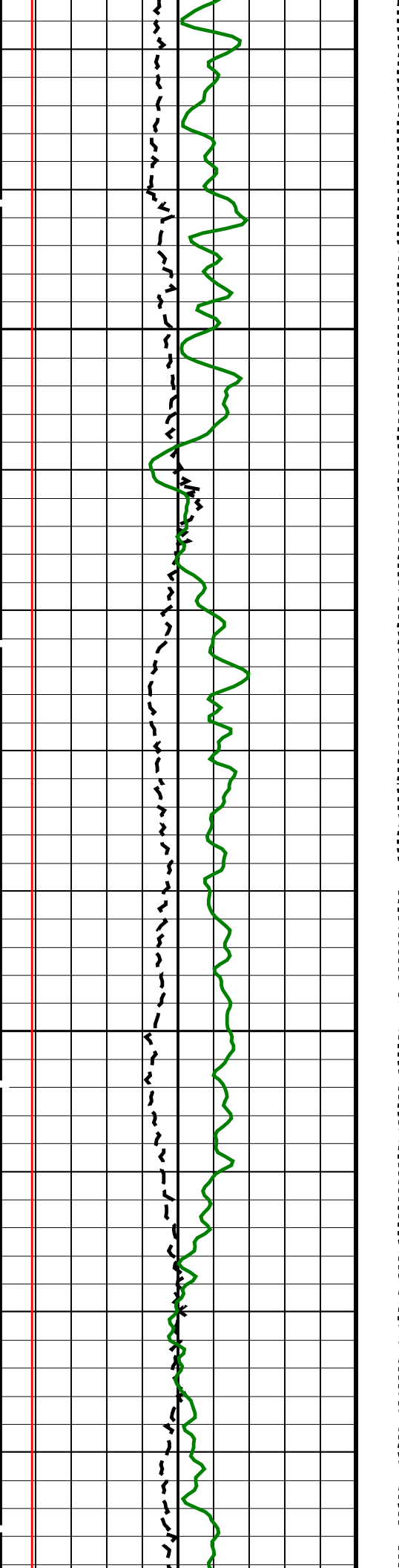


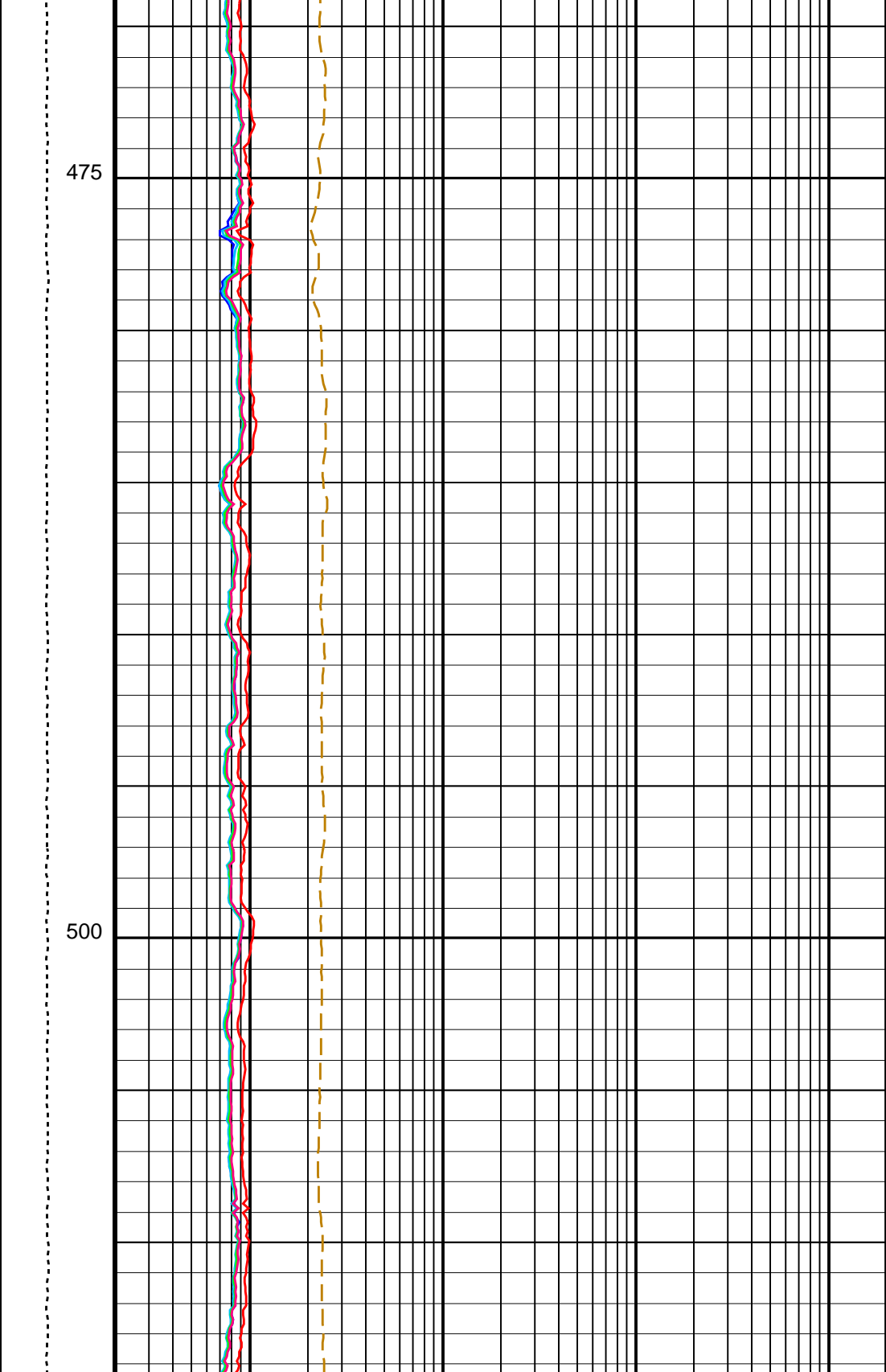
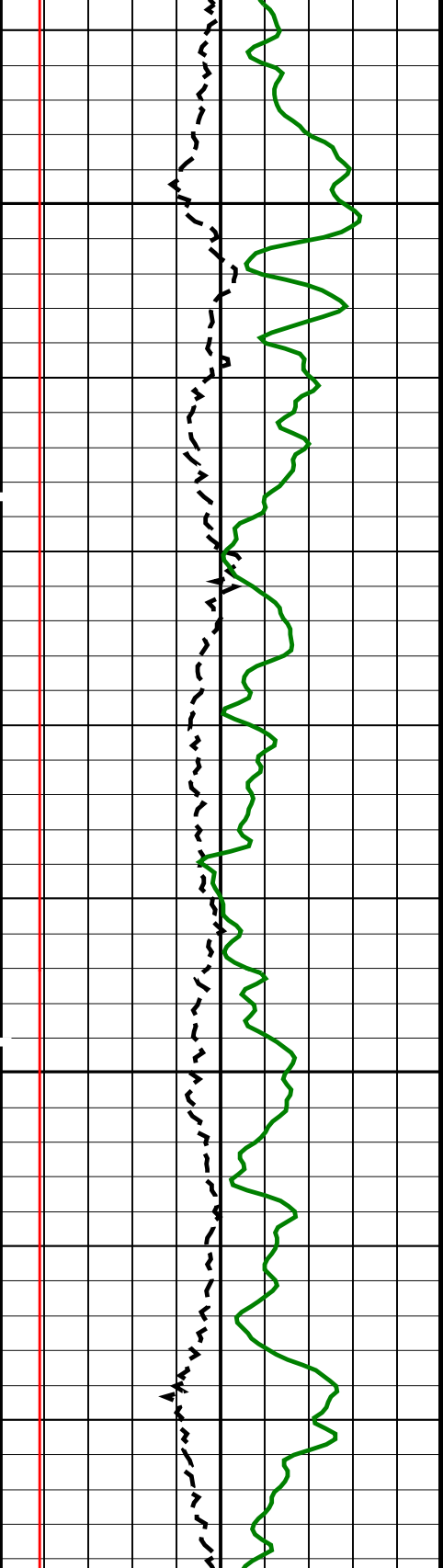


375

400







<p><b>HLDS Caliper (LCAL)</b> (IN)</p> <p>0 20</p>
<p><b>Invasion Diameter (DI_HRLT)</b> (IN)</p> <p>0 50</p>
<p><b>HNGS Spectroscopy Gamma Ray (HSGR)</b> (GAPI)</p> <p>0 100</p>

<p><b>Tension (TENS)</b> (LBF)</p> <p>0 5000</p>	<p><b>HRLT Resistivity 1 (RLA1)</b> (OHMM)</p> <p>0.2 2000</p>
	<p><b>HRLT Resistivity 2 (RLA2)</b> (OHMM)</p> <p>0.2 2000</p>
	<p><b>HRLT Resistivity 3 (RLA3)</b> (OHMM)</p> <p>0.2 2000</p>
	<p><b>HRLT Resistivity 4 (RLA4)</b> (OHMM)</p> <p>0.2 2000</p>

0.2	(OHMM)	2000
<b>HRLT Resistivity 5 (RLA5)</b>		
0.2	(OHMM)	2000
<b>HRLT Mud Resistivity (RM_HRLT)</b>		
0.02	(OHMM)	200

**PIP SUMMARY**

Time Mark Every 60 S

**Parameters**

DLIS Name	Description	Value	
<b>HNGS-BA: Hostile Natural Gamma Ray Sonde</b>			
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	BS	
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	-0.00762735	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	9	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.968028	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.969634	
<b>HRLT-B: High Resolution Laterolog Array - B</b>			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
GCSE	Generalized Caliper Selection	BS	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
PROGINV	Inversion Selection	ON	
PROCMFL	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RXO	
PROCMO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCSPO	Sonde Position	Centered	
SHT	Surface Hole Temperature	9	DEGC
<b>EDTC-B: Enhanced DTS Cartridge</b>			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
GCSE	Generalized Caliper Selection	BS	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
SHT	Surface Hole Temperature	9	DEGC
<b>System and Miscellaneous</b>			
BS	Bit Size	11.438	IN
DFD	Drilling Fluid Density	1.26	G/C3
DO	Depth Offset for Playback	-339.6	M
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	4627	M

Format: HRLT Vertical Scale: 1:200 Graphics File Created: 09-Sep-2013 11:29

**OP System Version: 19C0-187**

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



### Input DLIS Files

DEFAULT Flip\_MSS\_LDEO\_LDL\_018LUP PRODUCER 09-Sep-2013 11:28 854.0 M 292.6 M

### Output DLIS Files

DEFAULT MSS\_LDEO\_LDL\_NGS\_019PUP FN:17 PRODUCER 09-Sep-2013 11:29  
 CLIENT MSS\_LDEO\_LDL\_NGS\_019PUC FN:18 CUSTOMER 09-Sep-2013 11:29



**Repeat Pass  
1:200 Scale**

MAXIS Field Log

Company: Lamont Doherty Earth Observatory

Well: Expedition 346, Site U1427A

### Input DLIS Files

DEFAULT MSS\_LDEO\_LDL\_NGS\_007LUP FN:6 PRODUCER 08-Sep-2013 00:35 887.0 M 800.1 M

### Output DLIS Files

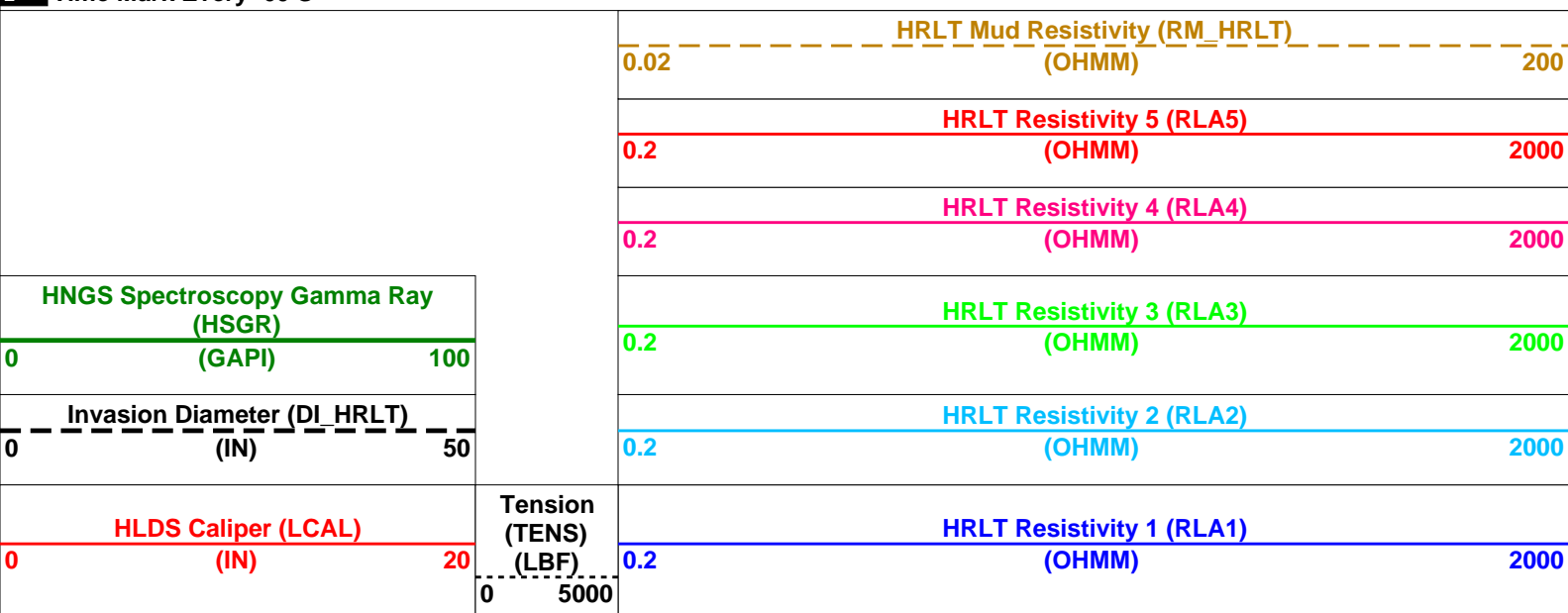
DEFAULT MSS\_LDEO\_LDL\_NGS\_020PUP FN:19 PRODUCER 09-Sep-2013 11:33 547.1 M 460.6 M  
 CLIENT MSS\_LDEO\_LDL\_NGS\_020PUC FN:20 CUSTOMER 09-Sep-2013 11:33 547.1 M 460.6 M

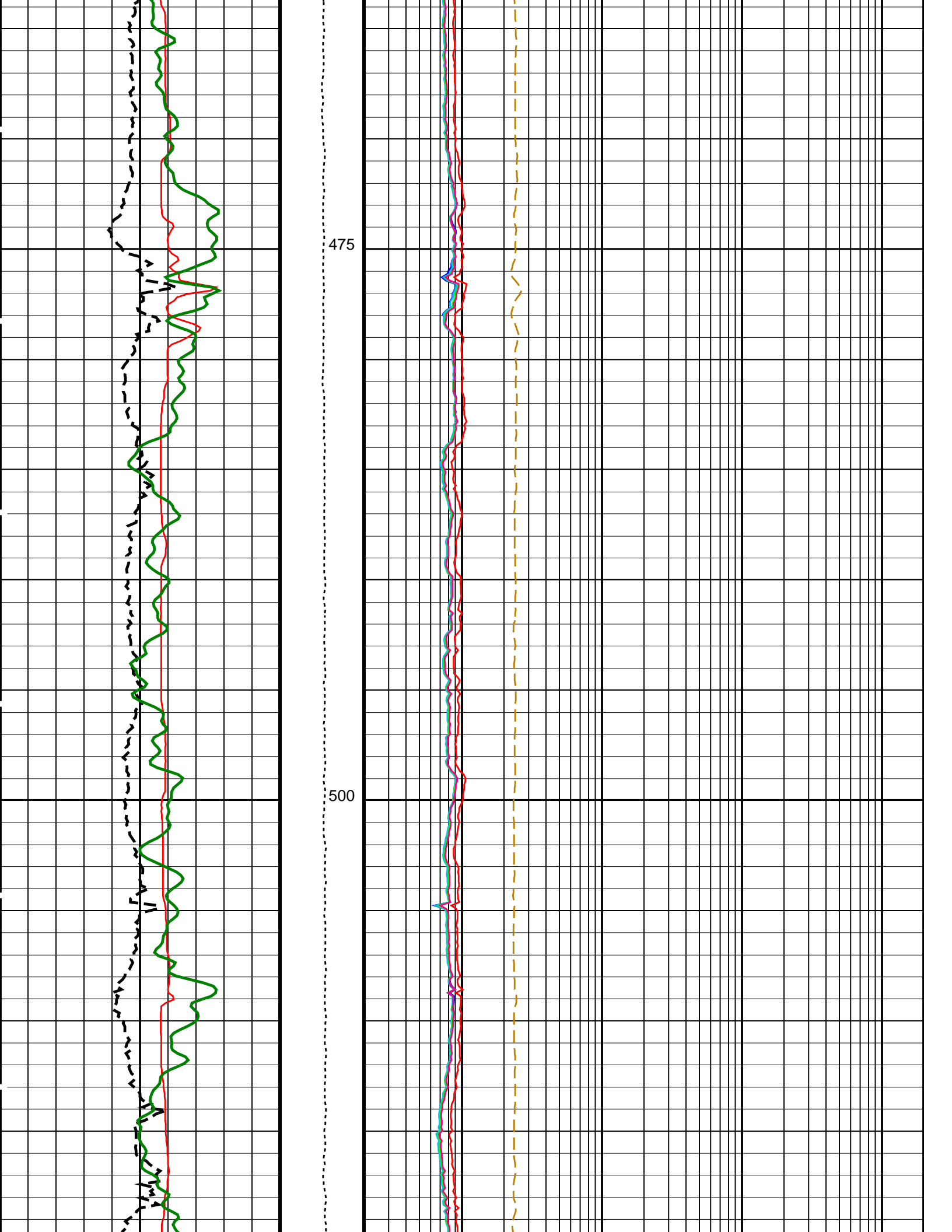
### OP System Version: 19C0-187

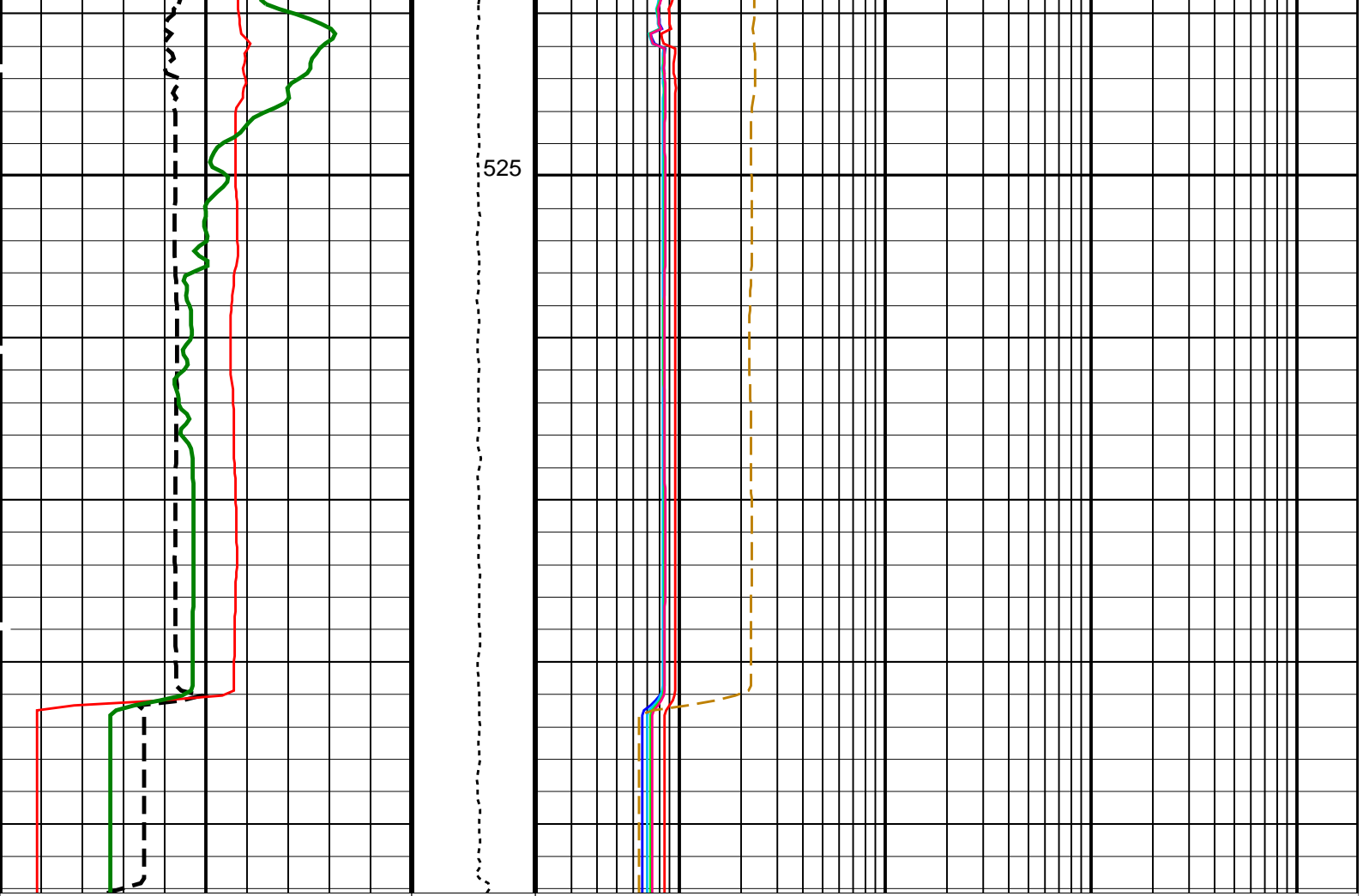
MSS_LDEO-A	19C0-187	HLDS	19C0-187
LDSC-B	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	HRLT-B	19C0-187
EDTC-B	SKK-5169-EDTCB		

### PIP SUMMARY

Time Mark Every 60 S







<b>HLDS Caliper (LCAL)</b> 0 (IN) 20	<b>Tension (TENS) (LBF)</b> 0 5000	<b>HRLT Resistivity 1 (RLA1)</b> 0.2 (OHMM) 2000
<b>Invasion Diameter (DI_HRLT)</b> 0 (IN) 50		<b>HRLT Resistivity 2 (RLA2)</b> 0.2 (OHMM) 2000
<b>HNGS Spectroscopy Gamma Ray (HSGR)</b> 0 (GAPI) 100		<b>HRLT Resistivity 3 (RLA3)</b> 0.2 (OHMM) 2000
		<b>HRLT Resistivity 4 (RLA4)</b> 0.2 (OHMM) 2000
		<b>HRLT Resistivity 5 (RLA5)</b> 0.2 (OHMM) 2000
		<b>HRLT Mud Resistivity (RM_HRLT)</b> 0.02 (OHMM) 200

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
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

CSWZ	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.00353669	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	9	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.936615	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	-0.988183	
<b>HRLT-B: High Resolution Laterolog Array - B</b>			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
GCSE	Generalized Caliper Selection	LCAL	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
PROGINV	Inversion Selection	ON	
PROCMFL	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCSPO	Sonde Position	Centered	
SHT	Surface Hole Temperature	9	DEGC
<b>EDTC-B: Enhanced DTS Cartridge</b>			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
GCSE	Generalized Caliper Selection	LCAL	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
SHT	Surface Hole Temperature	9	DEGC
<b>System and Miscellaneous</b>			
BS	Bit Size	11.438	IN
DFD	Drilling Fluid Density	1.26	G/C3
DO	Depth Offset for Playback	-339.6	M
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	885.7	M

Format: HRLT Vertical Scale: 1:200 Graphics File Created: 09-Sep-2013 11:33

## OP System Version: 19C0-187

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

### Input DLIS Files

DEFAULT	MSS_LDEO_LDL_NGS_007LUP	FN:6	PRODUCER	08-Sep-2013 00:35	887.0 M	800.1 M
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### Output DLIS Files

DEFAULT	MSS_LDEO_LDL_NGS_020PUP	FN:19	PRODUCER	09-Sep-2013 11:33		
CLIENT	MSS_LDEO_LDL_NGS_020PUC	FN:20	CUSTOMER	09-Sep-2013 11:33		

**Schlumberger**

**Main Pass  
1:200 Scale**

### Input DLIS Files

DEFAULT	MSS_LDEO_LDL_NGS_008LUP	FN:7	PRODUCER	08-Sep-2013 00:57	887.0 M	329.6 M
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### Output DLIS Files

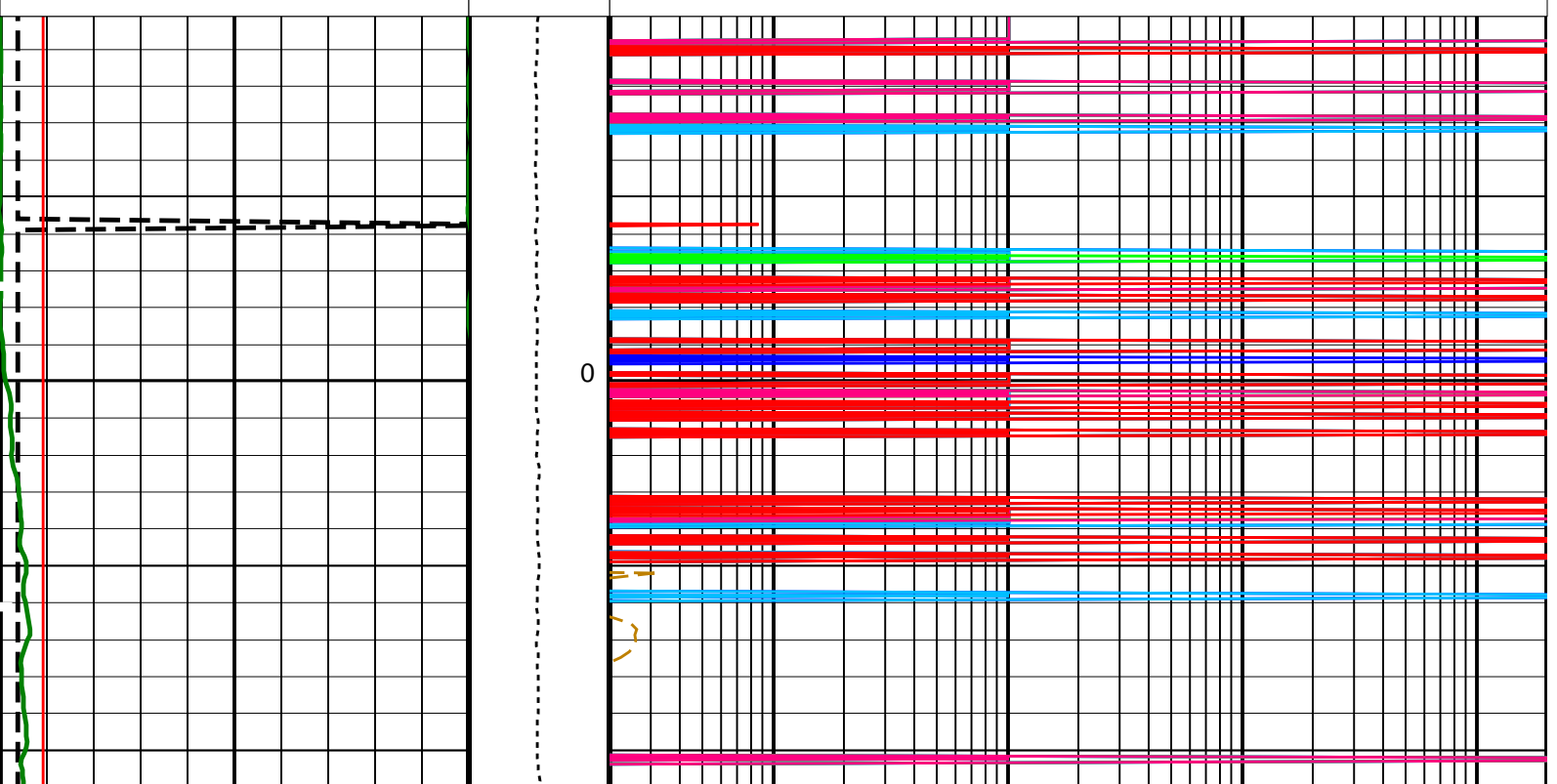
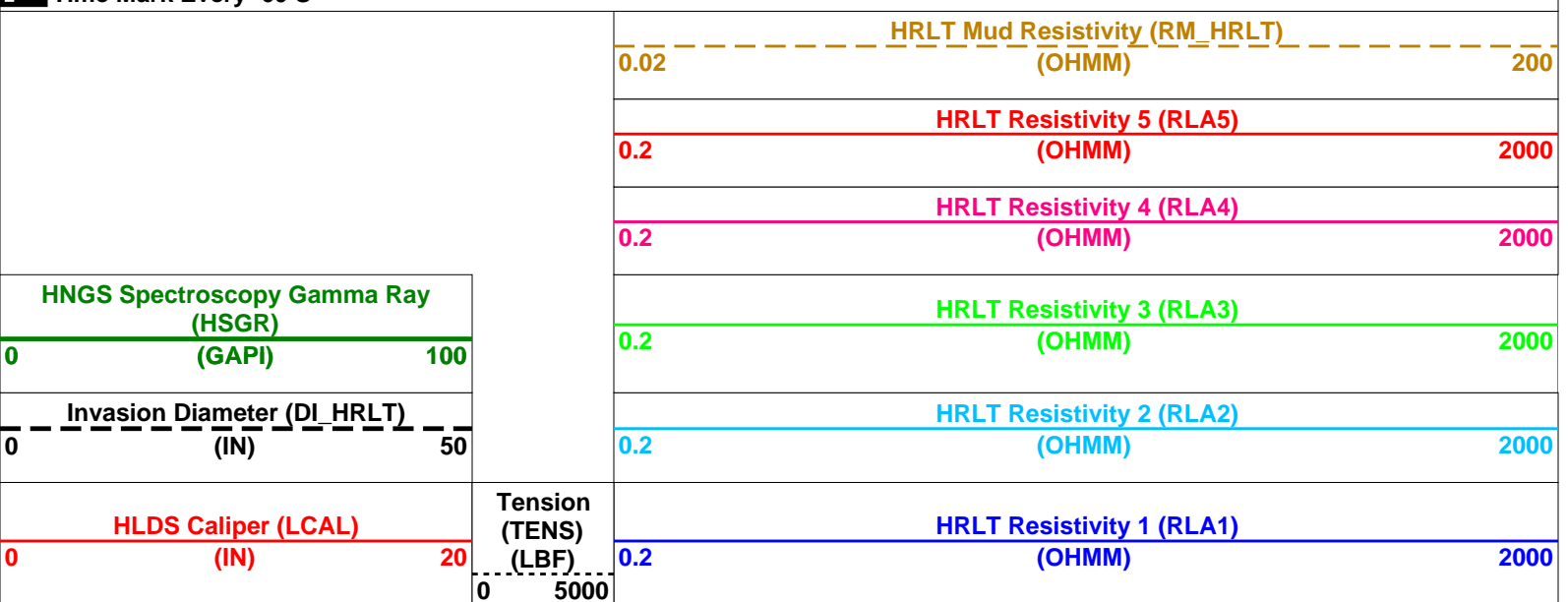
DEFAULT	MSS_LDEO_LDL_NGS_021PUP	FN:21	PRODUCER	09-Sep-2013 11:34	547.1 M	-9.9 M
CLIENT	MSS_LDEO_LDL_NGS_021PUC	FN:22	CUSTOMER	09-Sep-2013 11:34	547.1 M	-9.9 M

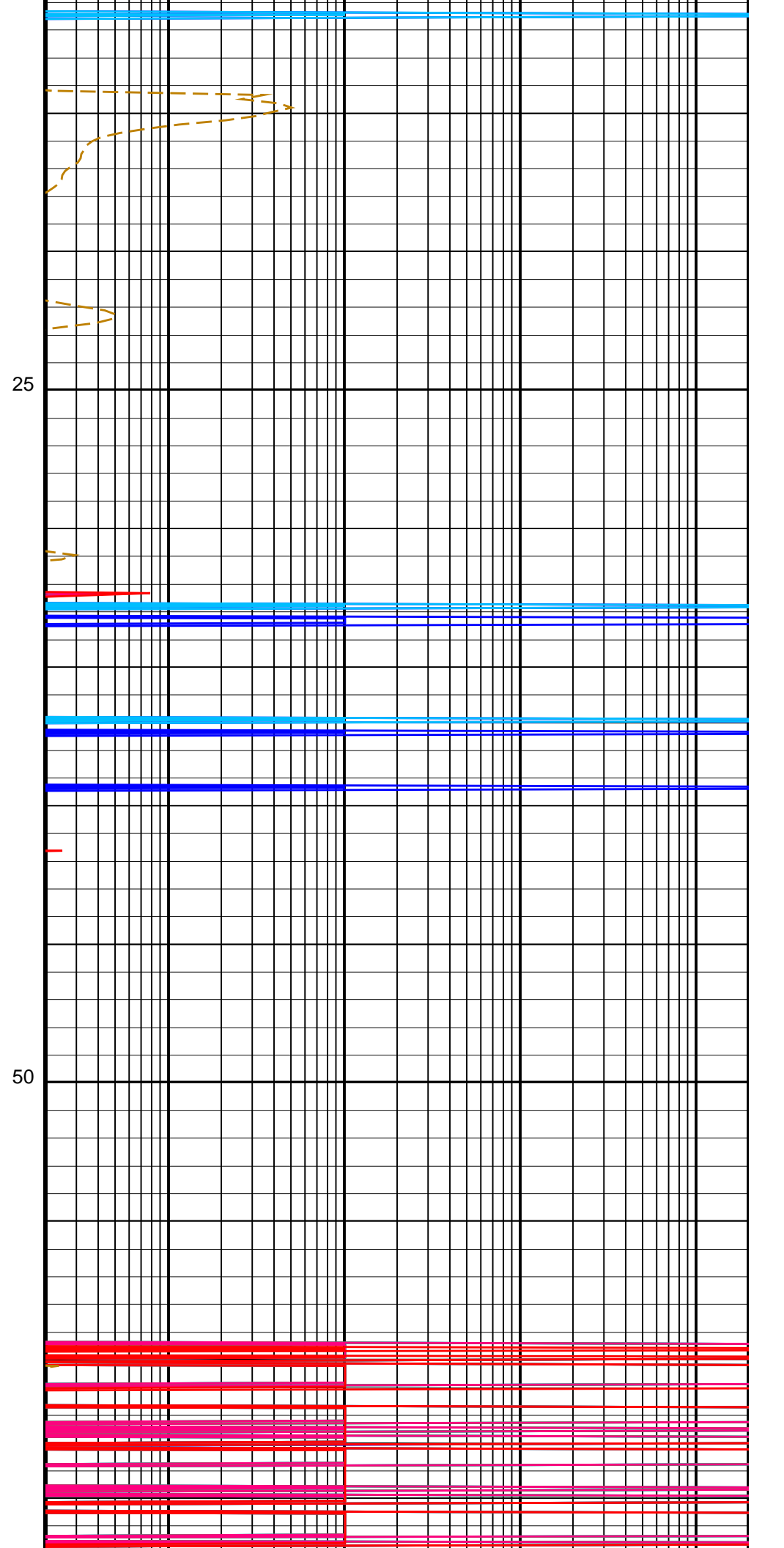
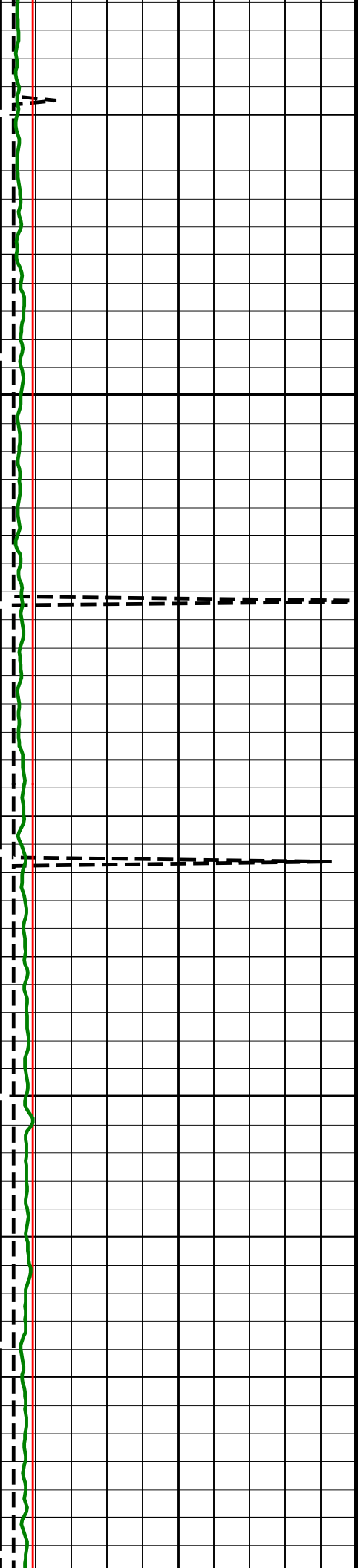
### OP System Version: 19C0-187

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

#### PIP SUMMARY

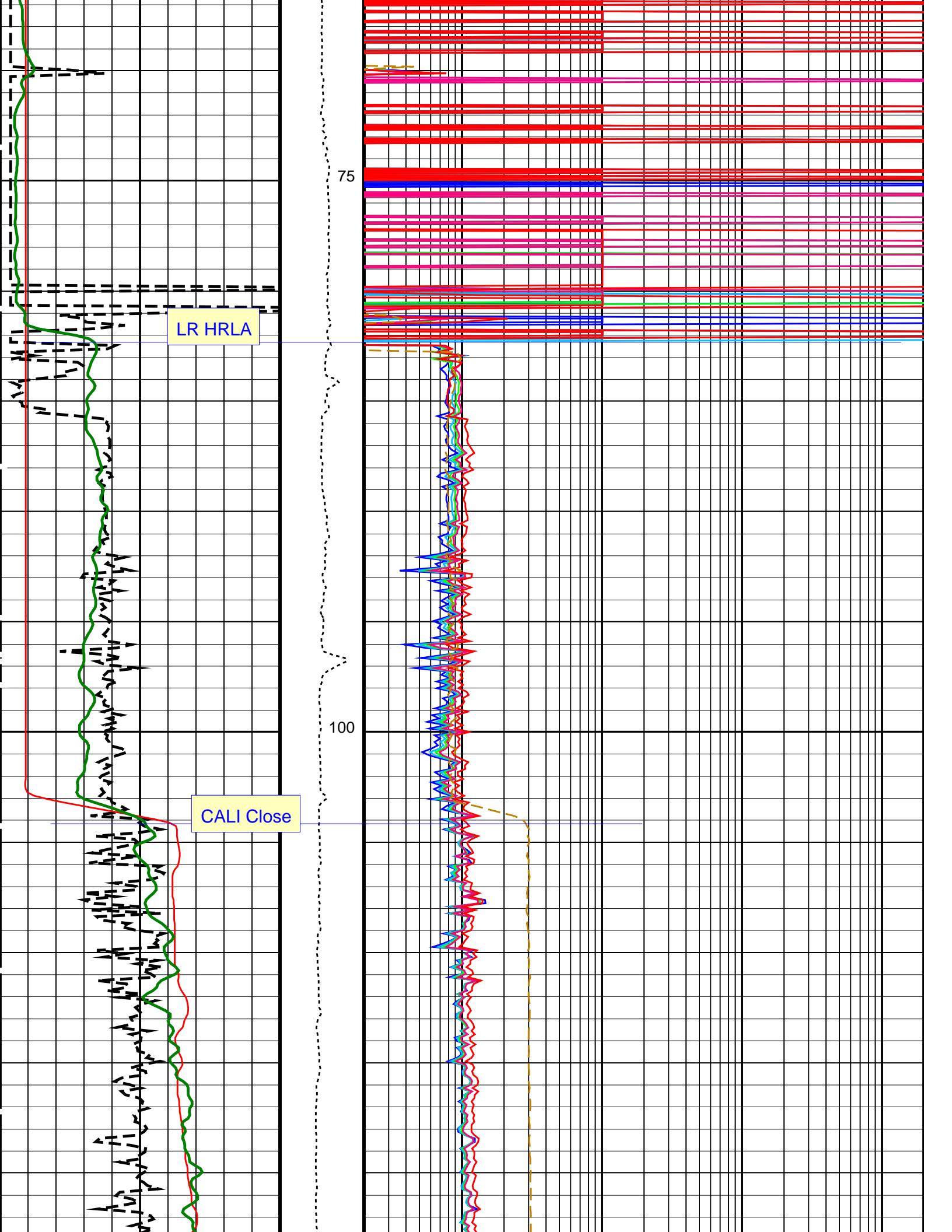
Time Mark Every 60 S

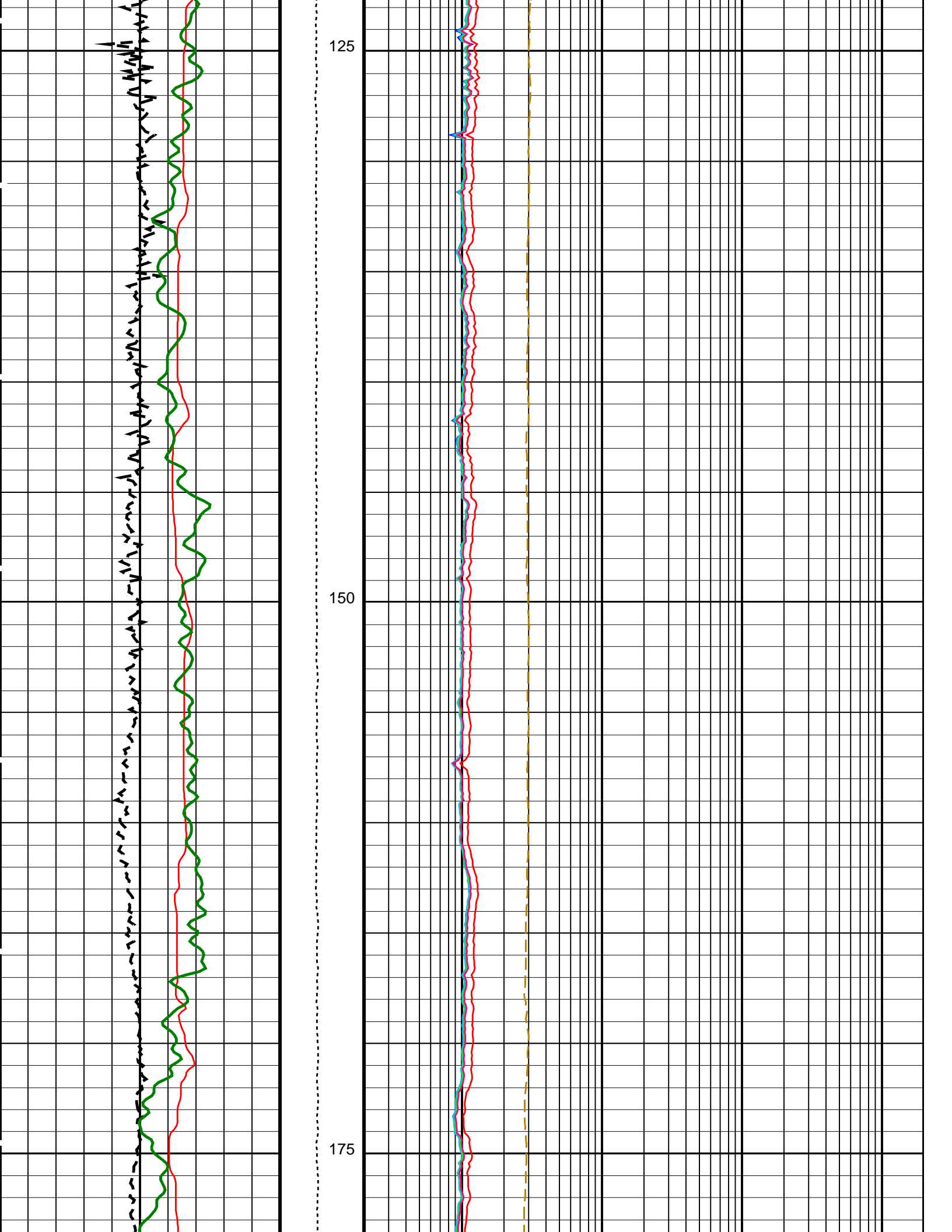




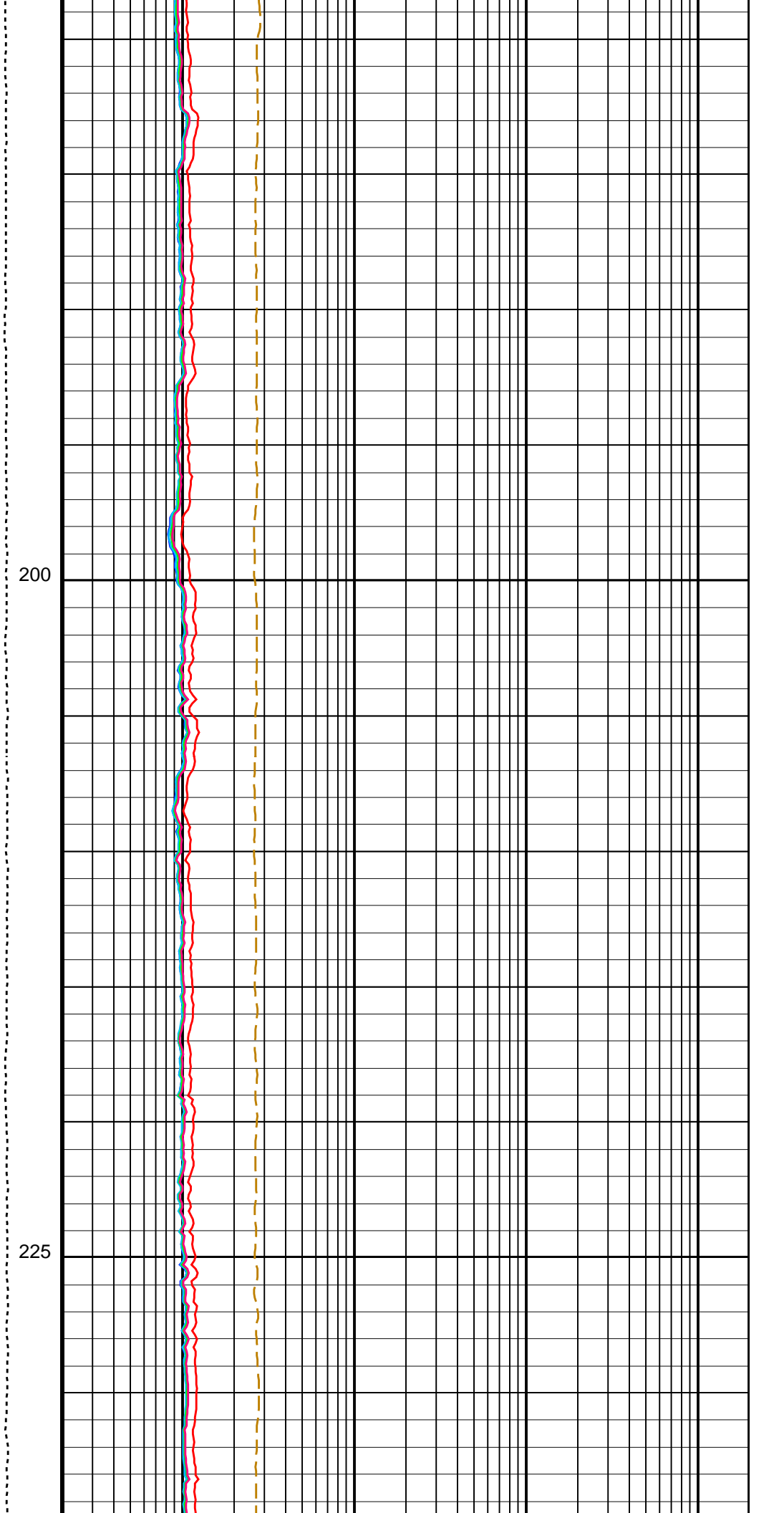
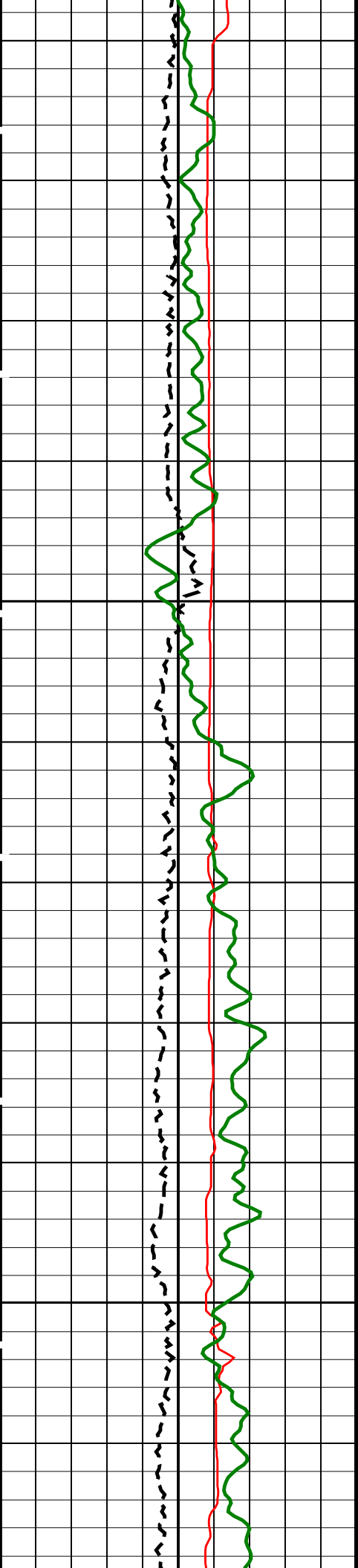
25

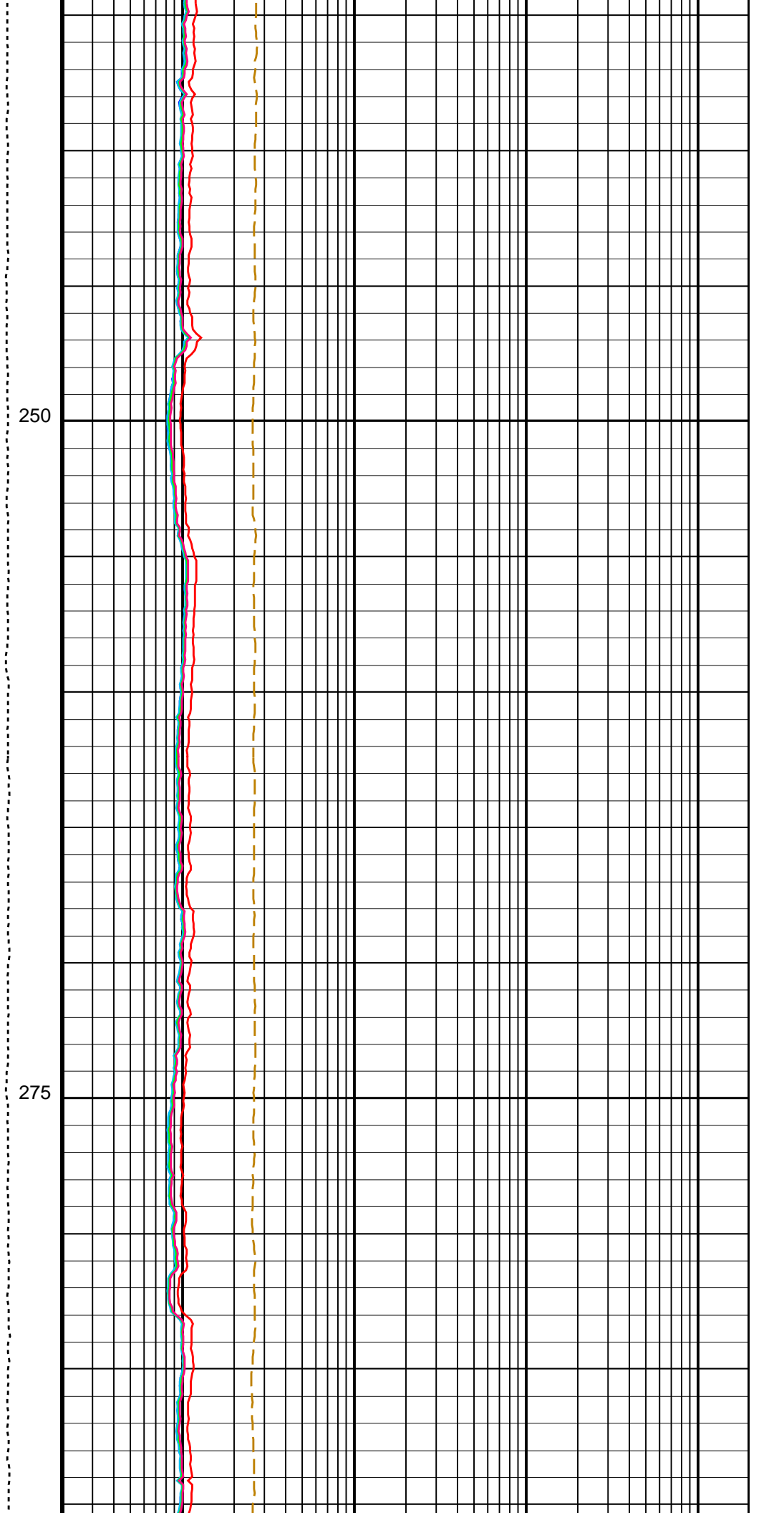
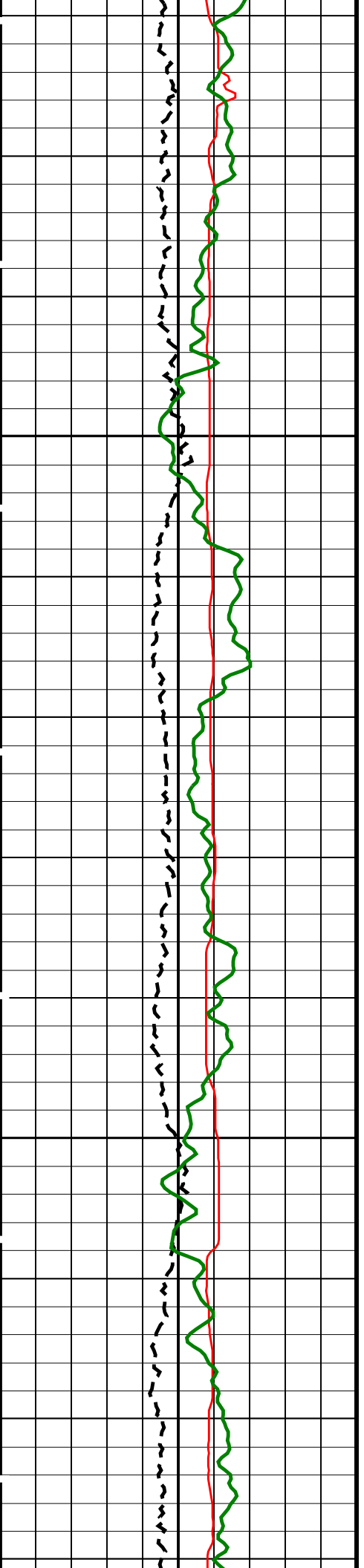
50

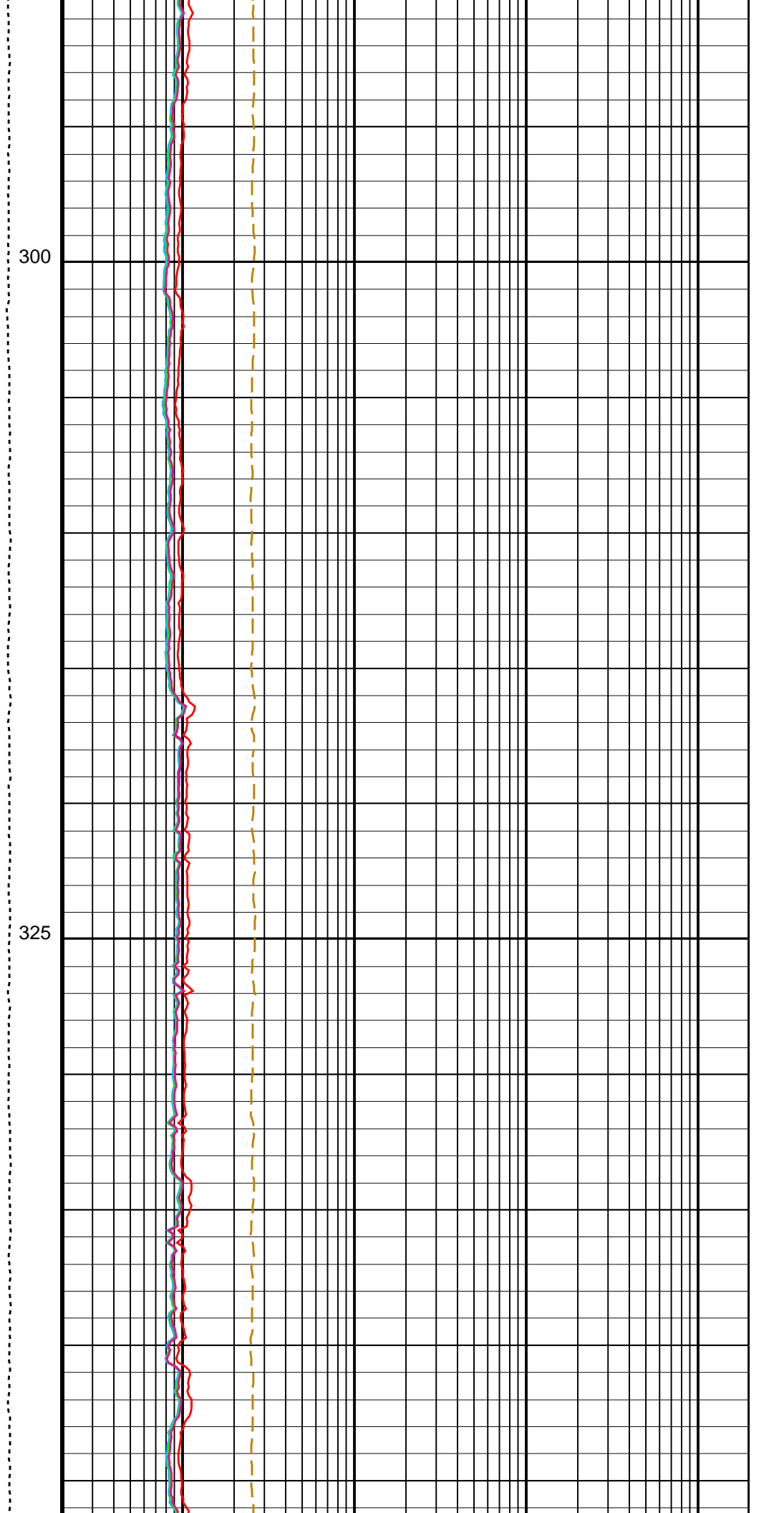
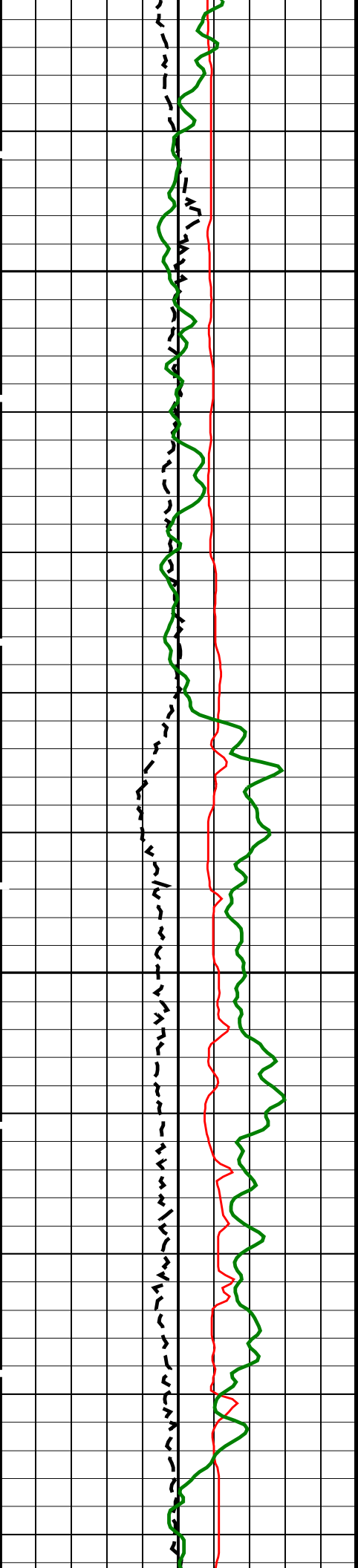


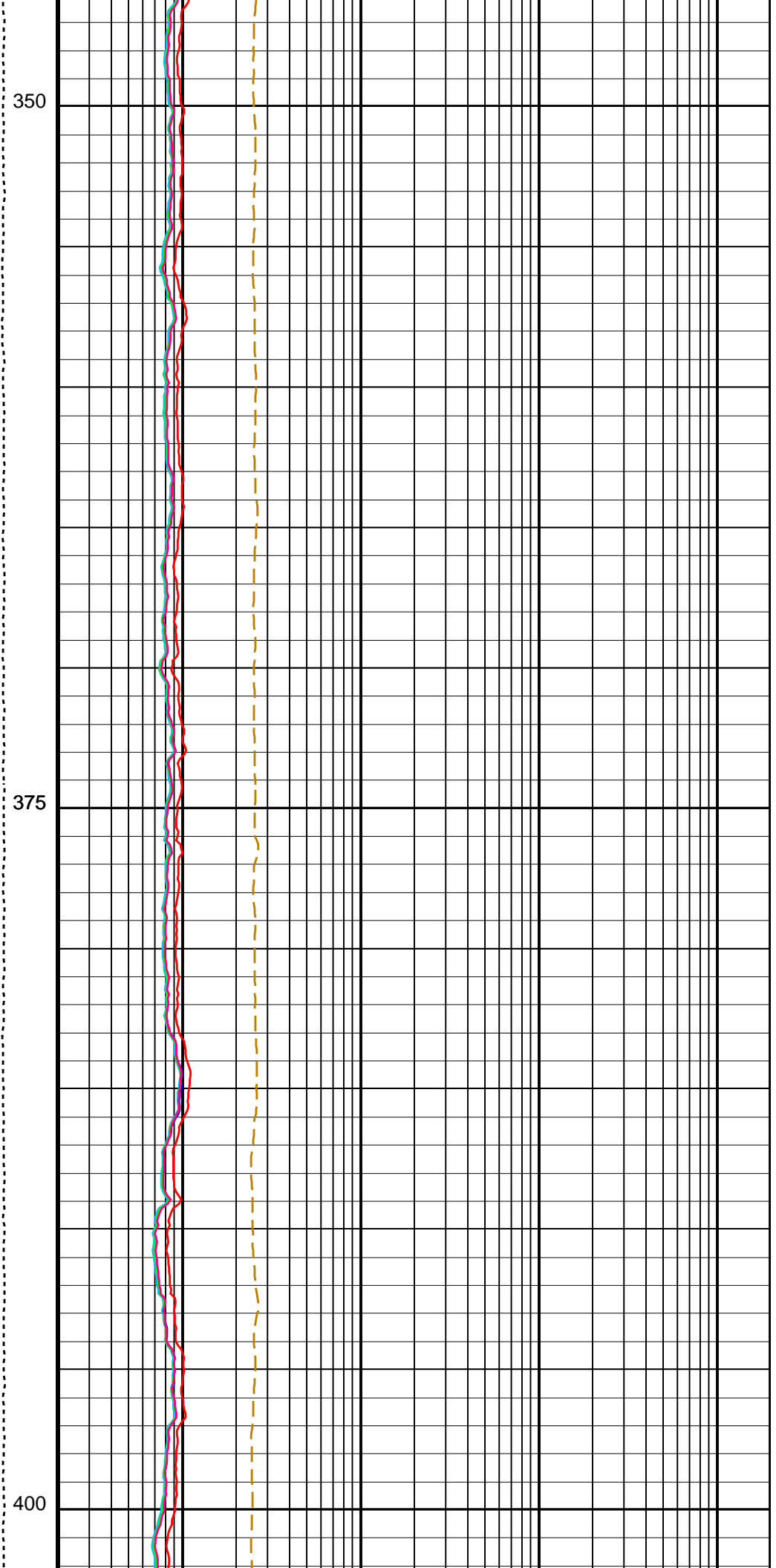
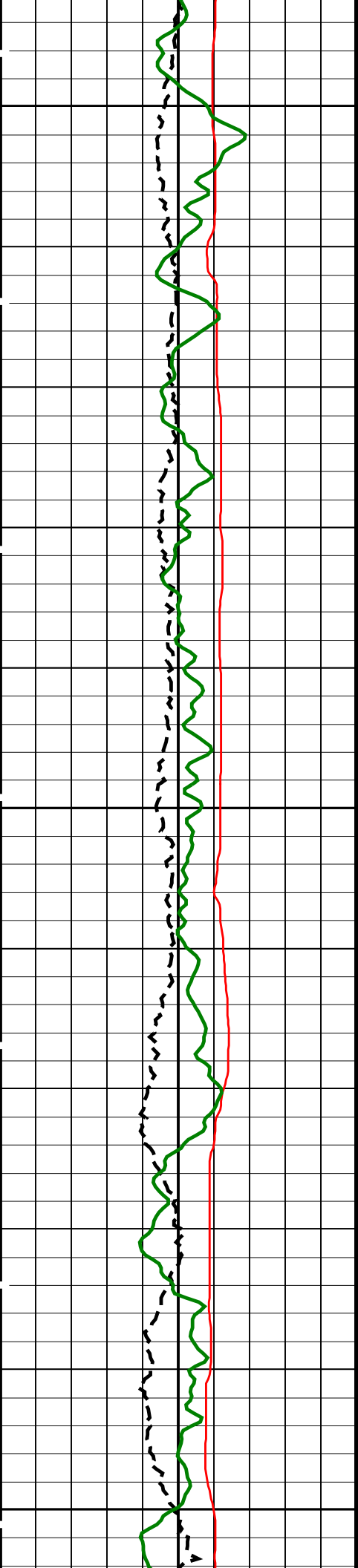


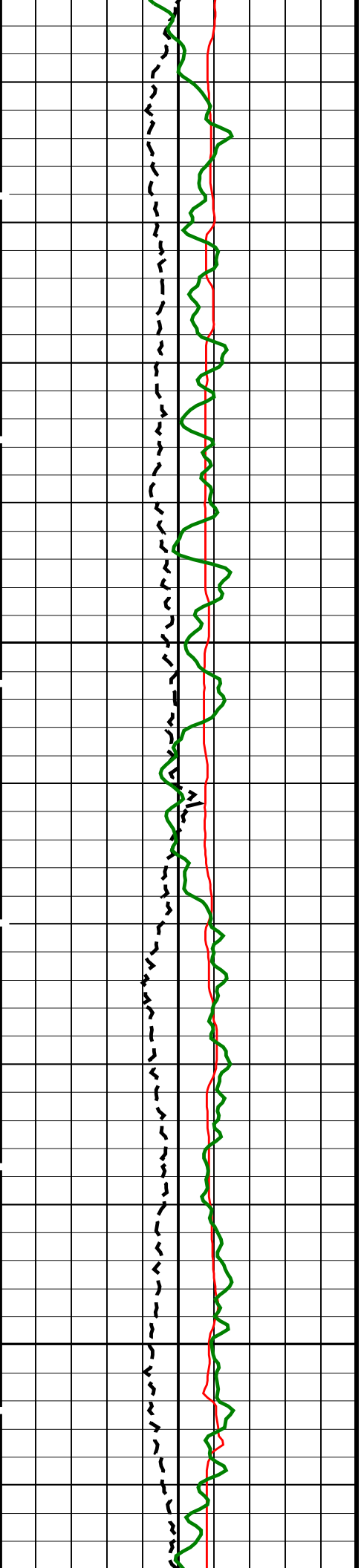






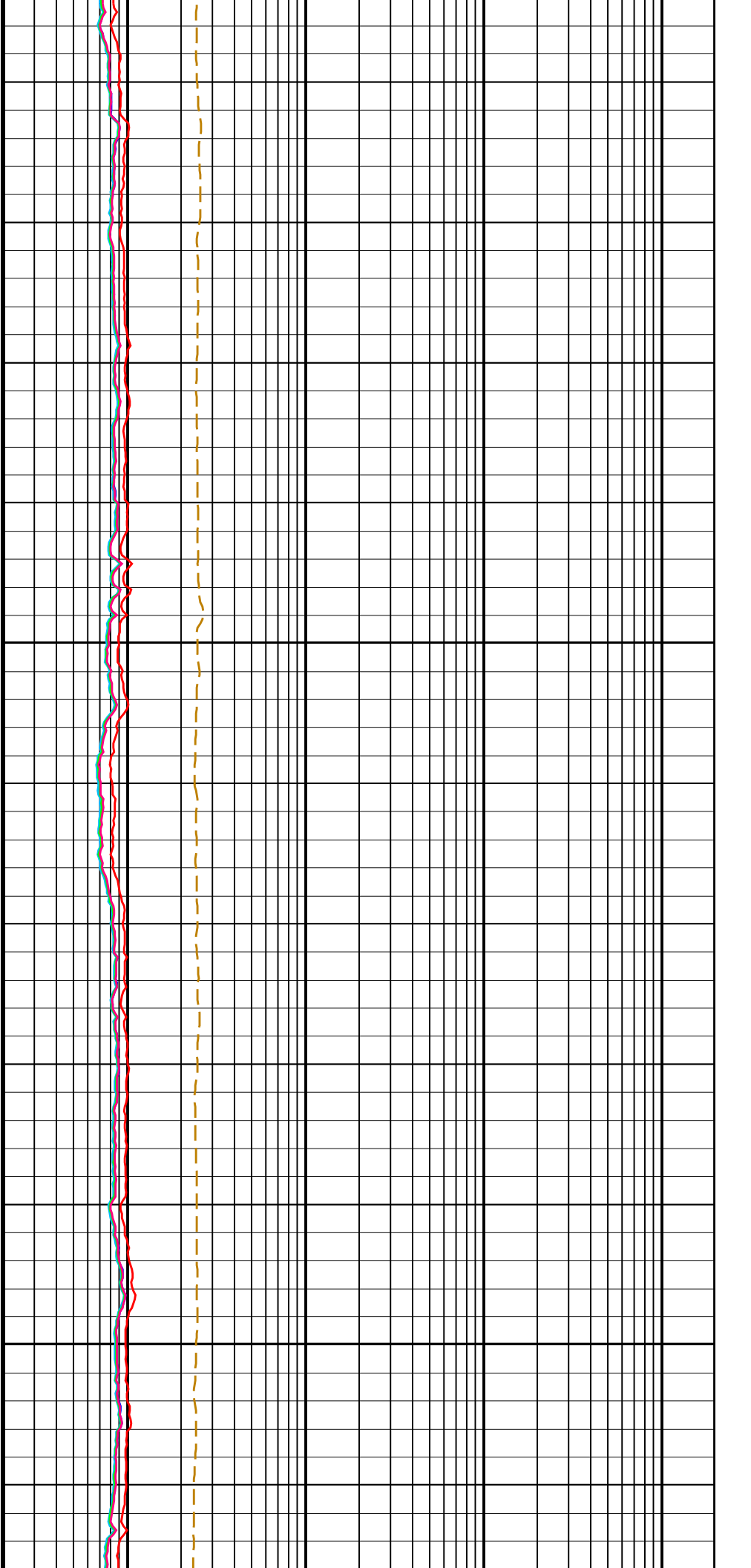


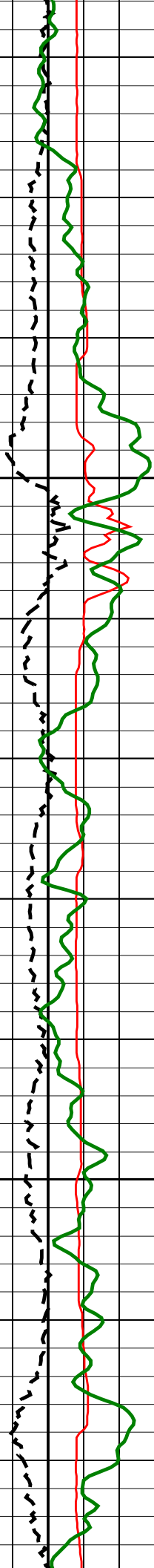




425

450

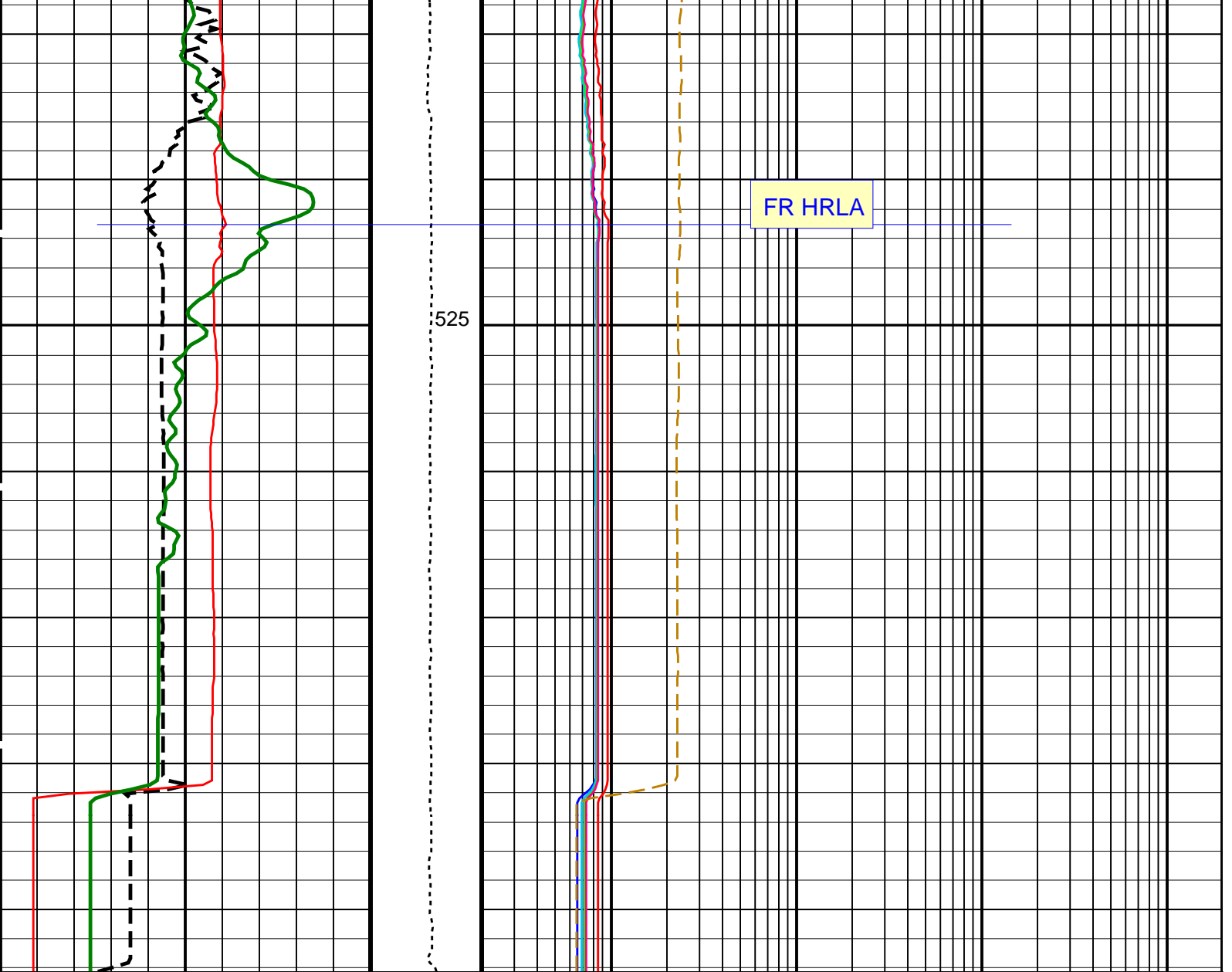




475

500





<p><b>HLDS Caliper (LCAL)</b> (IN) 0 20</p>	<p>Tension (TENS) (LBF) 0 5000</p>	<p><b>HRLT Resistivity 1 (RLA1)</b> (OHMM) 0.2 2000</p>
<p><b>Invasion Diameter (DI_HRLT)</b> (IN) 0 50</p>		<p><b>HRLT Resistivity 2 (RLA2)</b> (OHMM) 0.2 2000</p>
<p><b>HNGS Spectroscopy Gamma Ray (HSGR)</b> (GAPI) 0 100</p>		<p><b>HRLT Resistivity 3 (RLA3)</b> (OHMM) 0.2 2000</p>
		<p><b>HRLT Resistivity 4 (RLA4)</b> (OHMM) 0.2 2000</p>
		<p><b>HRLT Resistivity 5 (RLA5)</b> (OHMM) 0.2 2000</p>
		<p><b>HRLT Mud Resistivity (RM_HRLT)</b> (OHMM) 0.02 200</p>

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
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HNGS-BA:	Hostile Natural Gamma Ray Sonde	
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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	
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	-0.00353669	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	9	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.936615	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	-0.988183	
<b>HRLT-B: High Resolution Laterolog Array - B</b>			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
GCSE	Generalized Caliper Selection	LCAL	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
PROCINV	Inversion Selection	ON	
PROCMFL	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RXO	
PROCMO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCSP	Sonde Position	Centered	
SHT	Surface Hole Temperature	9	DEGC
<b>EDTC-B: Enhanced DTS Cartridge</b>			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
GCSE	Generalized Caliper Selection	LCAL	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
SHT	Surface Hole Temperature	9	DEGC
<b>System and Miscellaneous</b>			
BS	Bit Size	11.438	IN
DFD	Drilling Fluid Density	1.26	G/C3
DO	Depth Offset for Playback	-339.6	M
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	885.7	M

Format: HRLT    Vertical Scale: 1:200    Graphics File Created: 09-Sep-2013 11:34

### OP System Version: 19C0-187

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

### Input DLIS Files

DEFAULT	MSS_LDEO_LDL_NGS_008LUP	FN:7	PRODUCER	08-Sep-2013 00:57	887.0 M	329.6 M
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### Output DLIS Files

DEFAULT	MSS_LDEO_LDL_NGS_021PUP	FN:21	PRODUCER	09-Sep-2013 11:34		
CLIENT	MSS_LDEO_LDL_NGS_021PUC	FN:22	CUSTOMER	09-Sep-2013 11:34		



## MAXIS Field Log

## Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Hostile Litho-Density Sonde Wellsite Calibration – Background Measurement							
Master: 29-Jul-2013 0:00 Before: 30-Aug-2013 3:41 After: 30-Aug-2013 9:51							
SS Cs Resolution Bkg	9.000	7.700	7.783	7.764	-0.01816	1.800	%
LS Cs Resolution Bkg	9.000	7.970	7.975	8.029	0.05400	1.800	%
LSW1 Background	100.0	84.57	83.11	83.96	0.8545	3.000	CPS
LSW2 Background	100.0	75.61	77.52	76.63	-0.8845	3.000	CPS
LSW3 Background	200.0	173.3	175.9	175.3	-0.5827	6.000	CPS
LSW4 Background	250.0	214.7	215.5	214.7	-0.7667	7.500	CPS
LSW5 Background	600.0	499.6	502.4	499.4	-3.075	18.00	CPS
SSW1 Background	100.0	82.62	82.00	81.38	-0.6195	3.000	CPS
SSW2 Background	200.0	142.8	140.6	140.8	0.1943	6.000	CPS
SSW3 Background	500.0	395.0	396.4	390.7	-5.691	15.00	CPS
SSW4 Background	270.0	213.9	212.3	213.3	1.054	8.100	CPS
SSW5 Background	200.0	151.4	153.3	152.2	-1.028	6.000	CPS
Hostile Litho-Density Sonde Wellsite Calibration – Aluminum Measurement							
Master: 29-Jul-2013 3:09							
LSW1 Aluminum	600.0	491.6	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	715.0	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	869.1	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	437.9	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	399.4	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2277	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	6290	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	8825	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	3653	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	439.8	N/A	N/A	N/A	N/A	CPS
Hostile Litho-Density Sonde Wellsite Calibration – Lithology Measurement							
Master: 29-Jul-2013 3:02							
LSW1 Iron	400.0	337.2	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	576.3	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	764.7	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	394.4	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	366.6	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1667	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	5226	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	8022	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3308	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	389.3	N/A	N/A	N/A	N/A	CPS
Hostile Litho-Density Sonde Wellsite Calibration – Caliper Calibration							
Before: 29-Jul-2013 5:20							
HLDS Caliper Small Ring	12.00	N/A	14.88	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	15.19	N/A	18.44	N/A	N/A	N/A	IN
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 1 Check							
Master: 29-Jul-2013 20:46 Before: 30-Aug-2013 3:43 After: 30-Aug-2013 9:52							
Na 511 Peak Loc	40.00	39.74	39.66	39.66	-0.001842	1.000	
Na 511 Peak Res	15.50	15.31	14.99	15.59	0.6071	2.000	%
High Voltage	1150	1168	1175	1177	1.875	N/A	V
Na 1785 Peak Loc	142.6	142.6	141.1	143.1	1.995	7.000	
Na 1785 Peak Res	8.500	9.002	8.739	8.350	-0.3891	2.000	%
Temperature	15.50	21.46	30.66	29.21	-1.452	N/A	DEGC
Na Count Rate	45.00	15.10	12.22	12.96	0.7358	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 2 Check							
Master: 29-Jul-2013 20:46 Before: 30-Aug-2013 3:43 After: 30-Aug-2013 9:52							
Na 511 Peak Loc	40.00	39.58	39.50	39.79	0.2864	1.000	
Na 511 Peak Res	15.50	16.04	16.51	15.30	-1.204	2.000	%
High Voltage	1150	1093	1109	1110	1.251	N/A	V
Na 1785 Peak Loc	142.6	141.7	143.1	142.4	-0.7710	7.000	
Na 1785 Peak Res	8.500	9.400	8.731	8.377	-0.6464	2.000	%

Na 1765 Peak Res	8.500	9.499	8.731	9.377	0.8404	2.000	%
Temperature	15.50	21.65	30.81	30.84	0.03577	N/A	DEGC
Na Count Rate	45.00	14.93	12.29	12.87	0.5788	8.000	CPS

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

Master: 29-Jul-2013 20:46 Before: 30-Aug-2013 3:43 After: 30-Aug-2013 9:52

Coincidence Count Rate Ratio	1.000	1.015	0.9928	1.007	0.01398	0.05000
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High Resolution Laterolog Array – B Wellsite Calibration – HRLT M01

Before: 30-Aug-2013 7:33 After: 30-Aug-2013 9:47

HRLT M0-M1 Voltage Plus – 0	0	N/A	-319.0	-319.1	-0.07172	9.681	UV
HRLT M0-M1 Voltage Plus – 1	0	N/A	-331.5	-333.7	-2.138	9.681	UV
HRLT M0-M1 Voltage Plus – 2	0	N/A	-333.5	-334.4	-0.8674	9.681	UV
HRLT M0-M1 Voltage Plus – 3	0	N/A	-337.2	-338.2	-1.027	9.681	UV
HRLT M0-M1 Voltage Plus – 4	0	N/A	-325.8	-326.4	-0.5795	9.681	UV
HRLT M0-M1 Voltage Plus – 5	0	N/A	-322.1	-322.6	-0.4591	9.681	UV
HRLT M0-M1 Voltage Plus – 6	0	N/A	322.3	325.5	3.187	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: 30-Aug-2013 7:33 After: 30-Aug-2013 9:47

HRLT M1-M2 Voltage Plus – 0	0	N/A	1755	1755	0.3450	53.42	UV
HRLT M1-M2 Voltage Plus – 1	0	N/A	1826	1838	12.58	53.42	UV
HRLT M1-M2 Voltage Plus – 2	0	N/A	1830	1836	5.231	53.42	UV
HRLT M1-M2 Voltage Plus – 3	0	N/A	1849	1855	5.777	53.42	UV
HRLT M1-M2 Voltage Plus – 4	0	N/A	1787	1789	2.735	53.42	UV
HRLT M1-M2 Voltage Plus – 5	0	N/A	1767	1769	2.053	53.42	UV
HRLT M1-M2 Voltage Plus – 6	0	N/A	-1784	-1802	-18.73	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: 30-Aug-2013 7:33 After: 30-Aug-2013 9:47

HRLT M2-M3 Voltage Plus – 0	0	N/A	1740	1740	0.2959	53.42	UV
HRLT M2-M3 Voltage Plus – 1	0	N/A	1824	1836	12.62	53.42	UV
HRLT M2-M3 Voltage Plus – 2	0	N/A	1829	1835	5.386	53.42	UV
HRLT M2-M3 Voltage Plus – 3	0	N/A	1851	1857	5.774	53.42	UV
HRLT M2-M3 Voltage Plus – 4	0	N/A	1783	1785	2.794	53.42	UV
HRLT M2-M3 Voltage Plus – 5	0	N/A	1764	1766	2.189	53.42	UV
HRLT M2-M3 Voltage Plus – 6	0	N/A	-1770	-1789	-18.34	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: 30-Aug-2013 7:33 After: 30-Aug-2013 9:47

HRLT A3-A4 Voltage Plus – 0	0	N/A	68410	68450	42.02	2100	UV
HRLT A3-A4 Voltage Plus – 1	0	N/A	71490	71990	499.2	2100	UV
HRLT A3-A4 Voltage Plus – 2	0	N/A	72020	72220	198.0	2100	UV
HRLT A3-A4 Voltage Plus – 3	0	N/A	73160	73390	230.0	2100	UV
HRLT A3-A4 Voltage Plus – 4	0	N/A	70400	70520	126.3	2100	UV
HRLT A3-A4 Voltage Plus – 5	0	N/A	69660	69760	94.50	2100	UV
HRLT A3-A4 Voltage Plus – 6	0	N/A	-68410	-69140	-733.3	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: 30-Aug-2013 7:33 After: 30-Aug-2013 9:47

HRLT A4-A5 Voltage Plus – 0	0	N/A	68690	68730	43.28	2100	UV
HRLT A4-A5 Voltage Plus – 1	0	N/A	71870	72390	516.6	2100	UV
HRLT A4-A5 Voltage Plus – 2	0	N/A	72360	72590	225.9	2100	UV
HRLT A4-A5 Voltage Plus – 3	0	N/A	73510	73740	236.8	2100	UV
HRLT A4-A5 Voltage Plus – 4	0	N/A	70700	70830	121.7	2100	UV
HRLT A4-A5 Voltage Plus – 5	0	N/A	69940	70050	101.0	2100	UV
HRLT A4-A5 Voltage Plus – 6	0	N/A	-68800	-69510	-717.7	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: 30-Aug-2013 7:33 After: 30-Aug-2013 9:47

HRLT A5-A6 Voltage Plus – 0	0	N/A	68590	68630	38.88	2100	UV
HRLT A5-A6 Voltage Plus – 1	0	N/A	71600	72120	511.1	2100	UV
HRLT A5-A6 Voltage Plus – 2	0	N/A	72140	72340	203.8	2100	UV
HRLT A5-A6 Voltage Plus – 3	0	N/A	73310	73550	240.6	2100	UV
HRLT A5-A6 Voltage Plus – 4	0	N/A	70560	70690	125.7	2100	UV
HRLT A5-A6 Voltage Plus – 5	0	N/A	69840	69930	86.73	2100	UV
HRLT A5-A6 Voltage Plus – 6	0	N/A	-68510	-69240	-728.1	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: 30-Aug-2013 7:33 After: 30-Aug-2013 9:47

HRLT Torpedo-M0 Voltage – 0	0	N/A	-68280	-68300	-14.98	2100	UV
HRLT Torpedo-M0 Voltage – 1	0	N/A	-71920	-72430	-503.3	2100	UV
HRLT Torpedo-M0 Voltage – 2	0	N/A	-72430	-72650	-219.8	2100	UV
HRLT Torpedo-M0 Voltage – 3	0	N/A	-73590	-73840	-247.4	2100	UV
HRLT Torpedo-M0 Voltage – 4	0	N/A	-70760	-70880	-124.5	2100	UV
HRLT Torpedo-M0 Voltage – 5	0	N/A	-69990	-70080	-87.16	2100	UV

HRLT Torpedo-M0 Voltage - 6	0	N/A	68780	69520	744.6	2100	UV
HRLT Torpedo-M0 Voltage - 7	0	N/A	-70000	-70000	0	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT VBD  
 Before: 30-Aug-2013 7:33 After: 30-Aug-2013 9:47

HRLT Bridle#9-M0 Voltage - 0	0	N/A	-68270	-68290	-22.77	2100	UV
HRLT Bridle#9-M0 Voltage - 1	0	N/A	-71890	-72420	-523.3	2100	UV
HRLT Bridle#9-M0 Voltage - 2	0	N/A	-72400	-72630	-223.7	2100	UV
HRLT Bridle#9-M0 Voltage - 3	0	N/A	-73570	-73820	-249.5	2100	UV
HRLT Bridle#9-M0 Voltage - 4	0	N/A	-70760	-70880	-120.6	2100	UV
HRLT Bridle#9-M0 Voltage - 5	0	N/A	-69990	-70080	-95.20	2100	UV
HRLT Bridle#9-M0 Voltage - 6	0	N/A	68740	69510	764.4	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: 30-Aug-2013 7:33 After: 30-Aug-2013 9:47

HRLT Source Current Plus - 0	0	N/A	284.7	284.8	0.1392	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: 30-Aug-2013 7:33 After: 30-Aug-2013 9:47

HRLT Vertical Voltage PI - 0	0	N/A	-321.4	-321.5	-0.1179	9.681	UV
HRLT Vertical Voltage PI - 1	0	N/A	-326.5	-328.8	-2.307	9.681	UV
HRLT Vertical Voltage PI - 2	0	N/A	-327.4	-328.4	-0.9877	9.681	UV
HRLT Vertical Voltage PI - 3	0	N/A	-329.0	-330.1	-1.059	9.681	UV
HRLT Vertical Voltage PI - 4	0	N/A	-315.1	-315.6	-0.5397	9.681	UV
HRLT Vertical Voltage PI - 5	0	N/A	-326.3	-326.8	-0.4777	9.681	UV
HRLT Vertical Voltage PI - 6	0	N/A	330.3	333.8	3.475	9.681	UV
HRLT Vertical Voltage PI - 7	0	N/A	-322.7	-322.7	0	9.681	UV

Enhanced DTS Cartridge Wellsite Calibration - EDTC Accelerometer Calibration  
 Before: 30-Aug-2013 3:44

EDTC Z-Axis Acceleration	9.810	N/A	9.794	N/A	N/A	N/A	M/S2
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Enhanced DTS Cartridge Wellsite Calibration - Detector Calibration  
 Before: 30-Aug-2013 3:38

Gamma Ray (Jig - Bkg)	204.1	N/A	204.1	N/A	N/A	18.55	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

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	Phase	LS Cs Resolution Bkg %	Value	Phase	LSW1 Background CPS	Value	
Master		7.700	Master		7.970	Master		84.57	
Before		7.783	Before		7.975	Before		83.11	
After		7.764	After		8.029	After		83.96	
7.000 (Minimum)		9.000 (Nominal)	7.000 (Minimum)		9.000 (Nominal)	55.00 (Minimum)		100.0 (Nominal)	150.0 (Maximum)
Phase	LSW2 Background CPS	Value	Phase	LSW3 Background CPS	Value	Phase	LSW4 Background CPS	Value	
Master		75.61	Master		173.3	Master		214.7	
Before		77.52	Before		175.9	Before		215.5	
After		76.63	After		175.3	After		214.7	
50.00 (Minimum)		100.0 (Nominal)	110.0 (Minimum)		200.0 (Nominal)	140.0 (Minimum)		250.0 (Nominal)	360.0 (Maximum)

Phase	SSW3 Background CPS	Value	Phase	SSW1 Background CPS	Value	Phase	SSW2 Background CPS	Value
Master		499.6	Master		82.62	Master		142.8
Before		502.4	Before		82.00	Before		140.6
After		499.4	After		81.38	After		140.8
330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)			55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)			100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)		
Phase	SSW3 Background CPS	Value	Phase	SSW4 Background CPS	Value	Phase	SSW5 Background CPS	Value
Master		395.0	Master		213.9	Master		151.4
Before		396.4	Before		212.3	Before		153.3
After		390.7	After		213.3	After		152.2
280.0 (Minimum) 500.0 (Nominal) 700.0 (Maximum)			150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum)			110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum)		
Master: 29-Jul-2013 0:00			Before: 30-Aug-2013 3:41			After: 30-Aug-2013 9:51		

Litho-Density Spectroscopy Cartridge - B / Equipment Identification

Primary Equipment: LDSC Cartridge	LDSC - B	326
Auxiliary Equipment: LDSC Housing	LDSH - A	303

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 Gamma Source Radioactive	HNSH - BA GSR - U	205 616008

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 1 Check

Phase	Na 511 Peak Loc	Value	Phase	Na 511 Peak Res %	Value	Phase	High Voltage V	Value
Master		39.74	Master		15.31	Master		1168
Before		39.66	Before		14.99	Before		1175
After		39.66	After		15.59	After		1177
37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)			12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)			900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)		
Phase	Na 1785 Peak Loc	Value	Phase	Na 1785 Peak Res %	Value	Phase	Temperature DEGC	Value
Master		142.6	Master		9.002	Master		21.46
Before		141.1	Before		8.739	Before		30.66
After		143.1	After		8.350	After		29.21
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		15.10						
Before		12.22						
After		12.96						
10.00 45.00 100.0								

Hostile Natural Gamma Ray Sonde Wellsite Calibration								
Detector 2 Check								
Phase	Na 511 Peak Loc	Value	Phase	Na 511 Peak Res %	Value	Phase	High Voltage V	Value
Master		39.58	Master		16.04	Master		1093
Before		39.50	Before		16.51	Before		1109
After		39.79	After		15.30	After		1110
	37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)			12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)			900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	
Phase	Na 1785 Peak Loc	Value	Phase	Na 1785 Peak Res %	Value	Phase	Temperature DEGC	Value
Master		141.7	Master		9.499	Master		21.65
Before		143.1	Before		8.731	Before		30.81
After		142.4	After		9.377	After		30.84
	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		14.93						
Before		12.29						
After		12.87						
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							

Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		1.015
Before		0.9928
After		1.007
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)	

Master: 29-Jul-2013 20:46  
 Before: 30-Aug-2013 3:43  
 After: 30-Aug-2013 9:52

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		-319.0	-322.7	-280.7	-379.7	
	After		-319.1				
1	Before		-331.5	-322.7	-280.7	-379.7	
	After		-333.7				
2	Before		-333.5	-322.7	-280.7	-379.7	
	After		-334.4				
3	Before		-337.2	-322.7	-280.7	-379.7	
	After		-337.2				

	After		-338.2	322.7	280.7	379.7
4	Before		-325.8	-322.7	-280.7	-379.7
	After		-326.4			
5	Before		-322.1	-322.7	-280.7	-379.7
	After		-322.6			
6	Before		322.3	322.7	379.7	280.7
	After		325.5			
7	Before		-322.7	-322.7	-280.7	-379.7
	After		-322.7			
(Minimum) (Nominal) (Maximum)						
Before: 30-Aug-2013 7:33						
After: 30-Aug-2013 9:47						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT M12						
Idx	Phase	HRLT M1-M2 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1755	1781	2095	1549
	After		1755			
1	Before		1826	1781	2095	1549
	After		1838			
2	Before		1830	1781	2095	1549
	After		1836			
3	Before		1849	1781	2095	1549
	After		1855			
4	Before		1787	1781	2095	1549
	After		1789			
5	Before		1767	1781	2095	1549
	After		1769			
6	Before		-1784	-1781	-1549	-2095
	After		-1802			
7	Before		1781	1781	2095	1549
	After		1781			
(Minimum) (Nominal) (Maximum)						
Before: 30-Aug-2013 7:33						
After: 30-Aug-2013 9:47						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT M23						
Idx	Phase	HRLT M2-M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1740	1781	2095	1549
	After		1740			
1	Before		1824	1781	2095	1549
	After		1836			
2	Before		1829	1781	2095	1549
	After		1835			
3	Before		1851	1781	2095	1549
	After		1857			
4	Before		1783	1781	2095	1549

	After		1785	1781	2095	1549
5	Before		1764	1781	2095	1549
	After		1766			
6	Before		-1770	-1781	-1549	-2095
	After		-1789			
7	Before		1781	1781	2095	1549
	After		1781			
(Minimum) (Nominal) (Maximum)						

Before: 30-Aug-2013 7:33  
 After: 30-Aug-2013 9:47

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V34						
Idx	Phase	HRLT A3–A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68410	70000	82360	60900
	After		68450			
1	Before		71490	70000	82360	60900
	After		71990			
2	Before		72020	70000	82360	60900
	After		72220			
3	Before		73160	70000	82360	60900
	After		73390			
4	Before		70400	70000	82360	60900
	After		70520			
5	Before		69660	70000	82360	60900
	After		69760			
6	Before		-68410	-70000	-60900	-82360
	After		-69140			
7	Before		70000	70000	82360	60900
	After		70000			
(Minimum) (Nominal) (Maximum)						

Before: 30-Aug-2013 7:33  
 After: 30-Aug-2013 9:47

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V45						
Idx	Phase	HRLT A4–A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68690	70000	82360	60900
	After		68730			
1	Before		71870	70000	82360	60900
	After		72390			
2	Before		72360	70000	82360	60900
	After		72590			
3	Before		73510	70000	82360	60900
	After		73740			
4	Before		70700	70000	82360	60900
	After		70830			
5	Before		69940	70000	82360	60900

	After		70050	70000	82360	60900
6	Before		-68800	-70000	-60900	-82360
	After		-69510			
7	Before		70000	70000	82360	60900
	After		70000			
		(Minimum) (Nominal) (Maximum)				

Before: 30-Aug-2013 7:33  
 After: 30-Aug-2013 9:47

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		68630			
1	Before		71600	70000	82360	60900
	After		72120			
2	Before		72140	70000	82360	60900
	After		72340			
3	Before		73310	70000	82360	60900
	After		73550			
4	Before		70560	70000	82360	60900
	After		70690			
5	Before		69840	70000	82360	60900
	After		69930			
6	Before		-68510	-70000	-60900	-82360
	After		-69240			
7	Before		70000	70000	82360	60900
	After		70000			
		(Minimum) (Nominal) (Maximum)				

Before: 30-Aug-2013 7:33  
 After: 30-Aug-2013 9:47

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT VTP						
Idx	Phase	HRLT Torpedo–M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-68280	-70000	-60900	-82360
	After		-68300			
1	Before		-71920	-70000	-60900	-82360
	After		-72430			
2	Before		-72430	-70000	-60900	-82360
	After		-72650			
3	Before		-73590	-70000	-60900	-82360
	After		-73840			
4	Before		-70760	-70000	-60900	-82360
	After		-70880			
5	Before		-69990	-70000	-60900	-82360
	After		-70080			
6	Before		68780	70000	82360	60900




	After		69520	70000	82360	60900
7	Before		-70000	-70000	-60900	-82360
	After		-70000			
		(Minimum) (Nominal) (Maximum)				







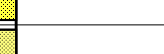
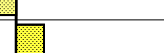







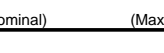
Before: 30-Aug-2013 7:33  
After: 30-Aug-2013 9:47

High Resolution Laterolog Array – B Wellsite Calibration							
HRLT VBD							
Idx	Phase	HRLT Bridle#9–M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum	
0	Before		-68270	-70000	-60900	-82360	
	After		-68290				
1	Before		-71890	-70000	-60900	-82360	
	After		-72420				
2	Before		-72400	-70000	-60900	-82360	
	After		-72630				
3	Before		-73570	-70000	-60900	-82360	
	After		-73820				
4	Before		-70760	-70000	-60900	-82360	
	After		-70880				
5	Before		-69990	-70000	-60900	-82360	
	After		-70080				
6	Before		68740	70000	82360	60900	
	After		69510				
7	Before		-70000	-70000	-60900	-82360	
	After		-70000				
		(Minimum) (Nominal) (Maximum)					


Before: 30-Aug-2013 7:33  
After: 30-Aug-2013 9:47

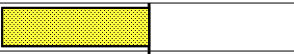

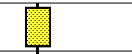
High Resolution Laterolog Array – B Wellsite Calibration							
HRLT ISO							
Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum	
0	Before		284.7	284.0	334.1	247.0	
	After		284.8				
1	Before		281.1	281.1	330.7	244.4	
	After		281.1				
2	Before		281.1	281.1	330.7	244.4	
	After		281.1				
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				

After		281.1	281.1	330.7	244.4
	(Minimum) (Nominal) (Maximum)				
Before: 30-Aug-2013 7:33					
After: 30-Aug-2013 9:47					

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT MV						
Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-321.4	-322.7	-280.7	-379.7
	After		-321.5			
1	Before		-326.5	-322.7	-280.7	-379.7
	After		-328.8			
2	Before		-327.4	-322.7	-280.7	-379.7
	After		-328.4			
3	Before		-329.0	-322.7	-280.7	-379.7
	After		-330.1			
4	Before		-315.1	-322.7	-280.7	-379.7
	After		-315.6			
5	Before		-326.3	-322.7	-280.7	-379.7
	After		-326.8			
6	Before		330.3	322.7	379.7	280.7
	After		333.8			
7	Before		-322.7	-322.7	-280.7	-379.7
	After		-322.7			
		(Minimum) (Nominal) (Maximum)				
Before: 30-Aug-2013 7:33						
After: 30-Aug-2013 9:47						

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		9.794
	9.610 (Minimum) 9.810 (Nominal) 10.01 (Maximum)	
Before: 30-Aug-2013 3:44		

Enhanced DTS Cartridge Wellsite Calibration									
Detector Calibration									
Phase	Gamma Ray Background GAPI	Value	Phase	Gamma Ray (Jig – Bkg) GAPI	Value	Phase	Gamma Ray (Calibrated) GAPI	Value	
Before		1.864	Before		204.1	Before		165.0	
0	30.00 (Minimum) 120.0 (Nominal)		185.5 (Minimum) 204.1 (Nominal) 222.7 (Maximum)			150.0 (Minimum) 165.0 (Nominal) 180.0 (Maximum)			
Before: 30-Aug-2013 3:38									

**Company: Lamont Doherty Earth Observatory**

**Schlumberger**

**Well: Expedition 346, Site U1427A**

**Field: Asian Monsoon**

**Rig: JOIDES Resolution**

**Country: USA**

HRLA Resistivity