



DISCLAIMER

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OTHER SERVICES1

- OS1: FMS
- OS2: DSI
- OS3: HNGS
- OS4: DEBIT

REMARKS: RUN NUMBER 1

Hole 1383C was drilled for the purpose of installing a CORK; logs run to determine packer positions.

Logs conducted to run experimental microbiology tool "DEBI-T" from JPL / USC.

Job consisted of two downward passes and two upward passes; caliper was closed for the down passes, as per standard practice.

The HLDS caliper sensor failed during the second up pass, so CALI is INVALID ABOVE 295M on the SECOND PASS only.

Caliper data is OK for the first up pass and was later confirmed by the FMS during the second run.

Tool run slick on the way down; caliper open and eccentering the density pad normally during both up passes.

DEBI-T primary data recorded to internal memory cards; real-time data recorded for time-depth matching only.

Sea bed picked at 4421.5m below rig floor from original Second Up Pass.

All depths presented have been adjusted to referece zero at the sea bed for consistency with core data, etc.

All other passes adjusted to be on depth with Up Pass #2, which was taken to be the reference pass for this job.

Hole was conditioned and flushed with sea water prior to logging for the benefit of the DEBI-T.

There was evidence of fluid contamination (possibly Sepialite drill mud or cement residue) in the bottom 50m of the hole.

Casing not identified by caliper due to inadequate space between casing shoe and bit on Pass #1 then cali failure on Pass #2.

TD tagged at 331.2mbsf, but not visible on logs due to truncation from playback processing.

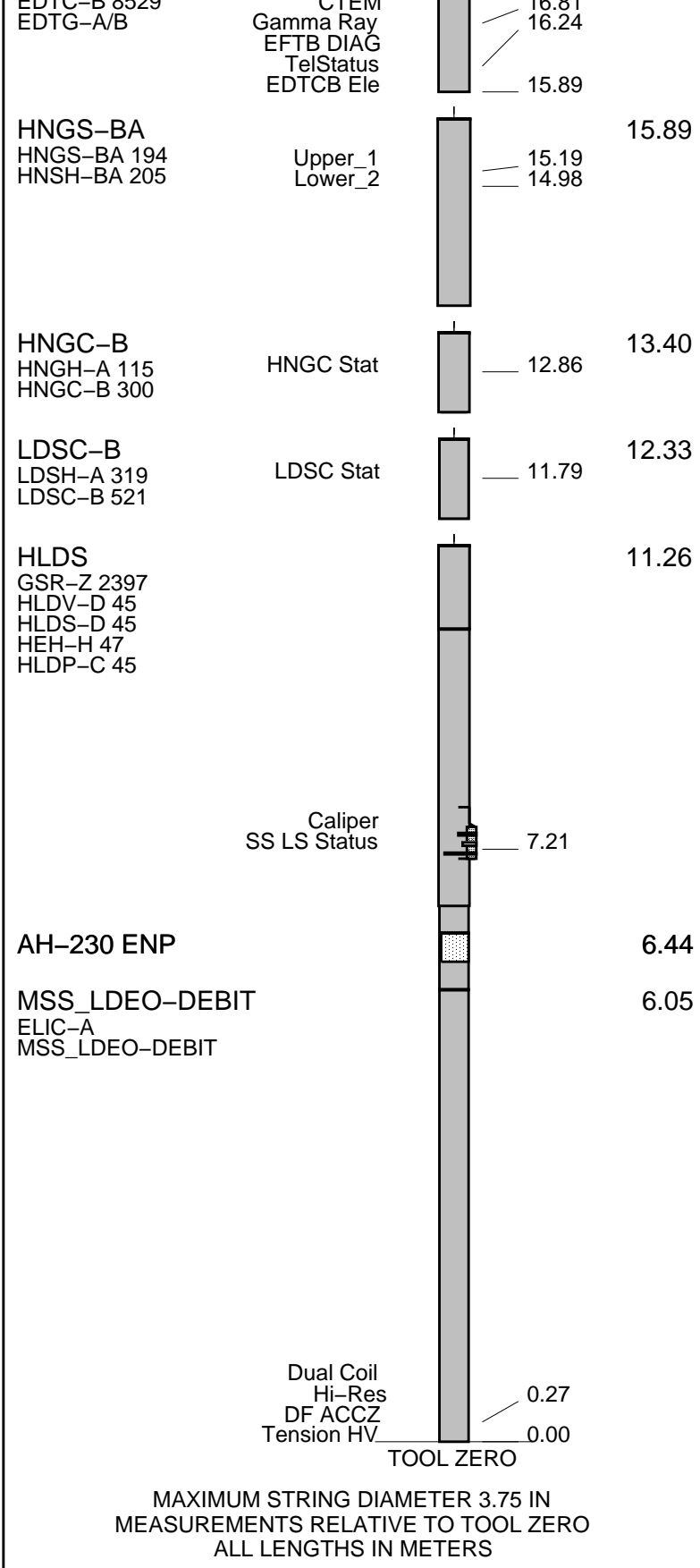
Spectral GR recorded from TD through sea bed for identification of sea bed and depth matching to core data.

RUN 1			RUN 2		
SERVICE ORDER #:			SERVICE ORDER #:		
PROGRAM VERSION:			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	

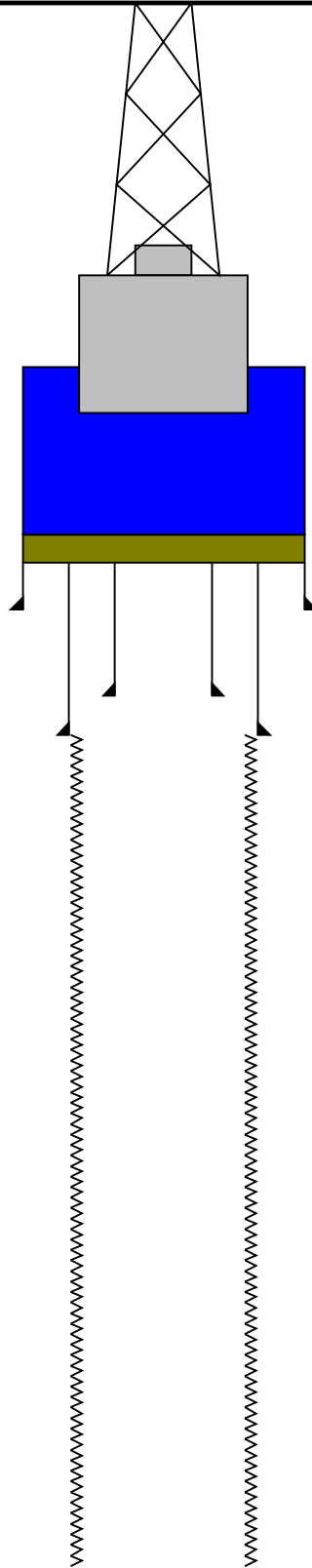
RUN 1	RUN 2
<b>DOWNHOLE EQUIPMENT</b>	
LEH-QT MP LEH-QT 301	18.76
MDSB_EDTC Mud Tempe	17.88
EDTC-B	17.88
EDTH-B 8528	
EDTC B 8528	
GTEM	16.84



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

Kelly Bushing Elevation  
Derrick Floor Elevation  
Mean Sea Level

-4421.5  
-4421.5  
-4410.5



0.0  
13.0  
55.0  
60.0

16.000  
5.500  
10.750

Sea Bed  
Casing Shoe  
Logging Bit  
Casing Shoe

332.0 9.875

Total Depth - Driller

**Schlumberger**

**Up Pass #2**

MAXIS Field Log

Company: Lamont Doherty

Well: Expedition 336, Site U1383C

**Input DLIS Files**

DEFAULT	MSS_LDEO_LDL_NGS_022LUP	FN:22	PRODUCER	03-Nov-2011 12:05	4750.3 M	4412.6 M
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**Output DLIS Files**

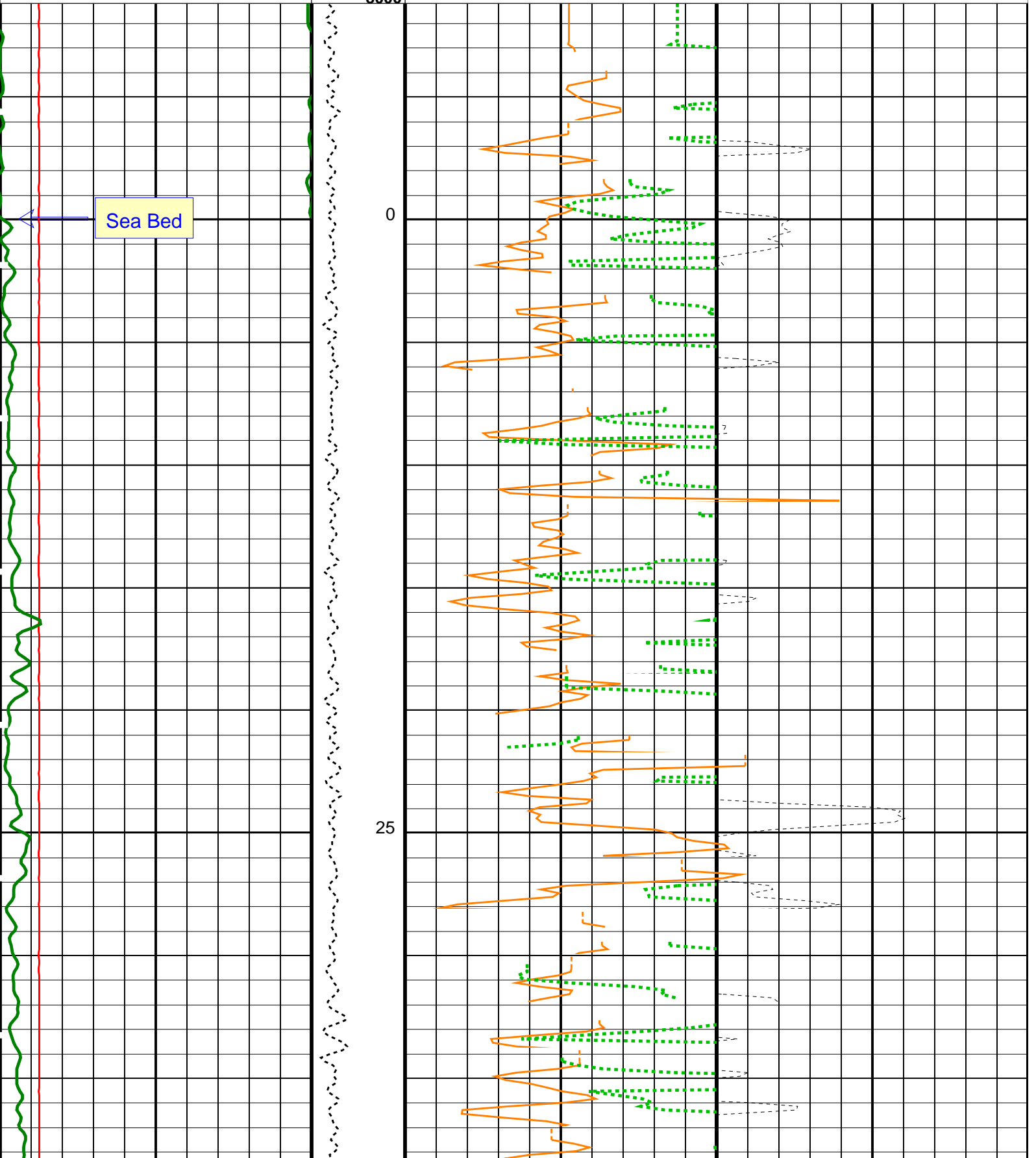
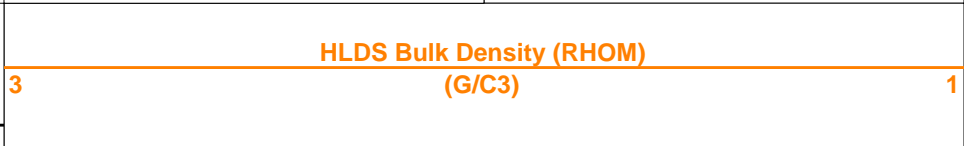
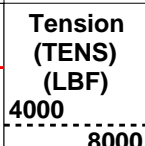
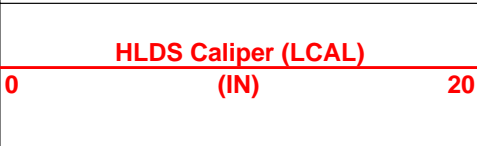
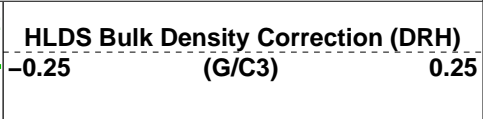
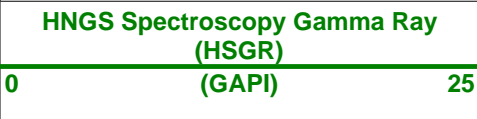
DEFAULT	MSS_LDEO_LDL_NGS_044PUP	FN:40	PRODUCER	10-Nov-2011 17:28	329.2 M	-8.8 M
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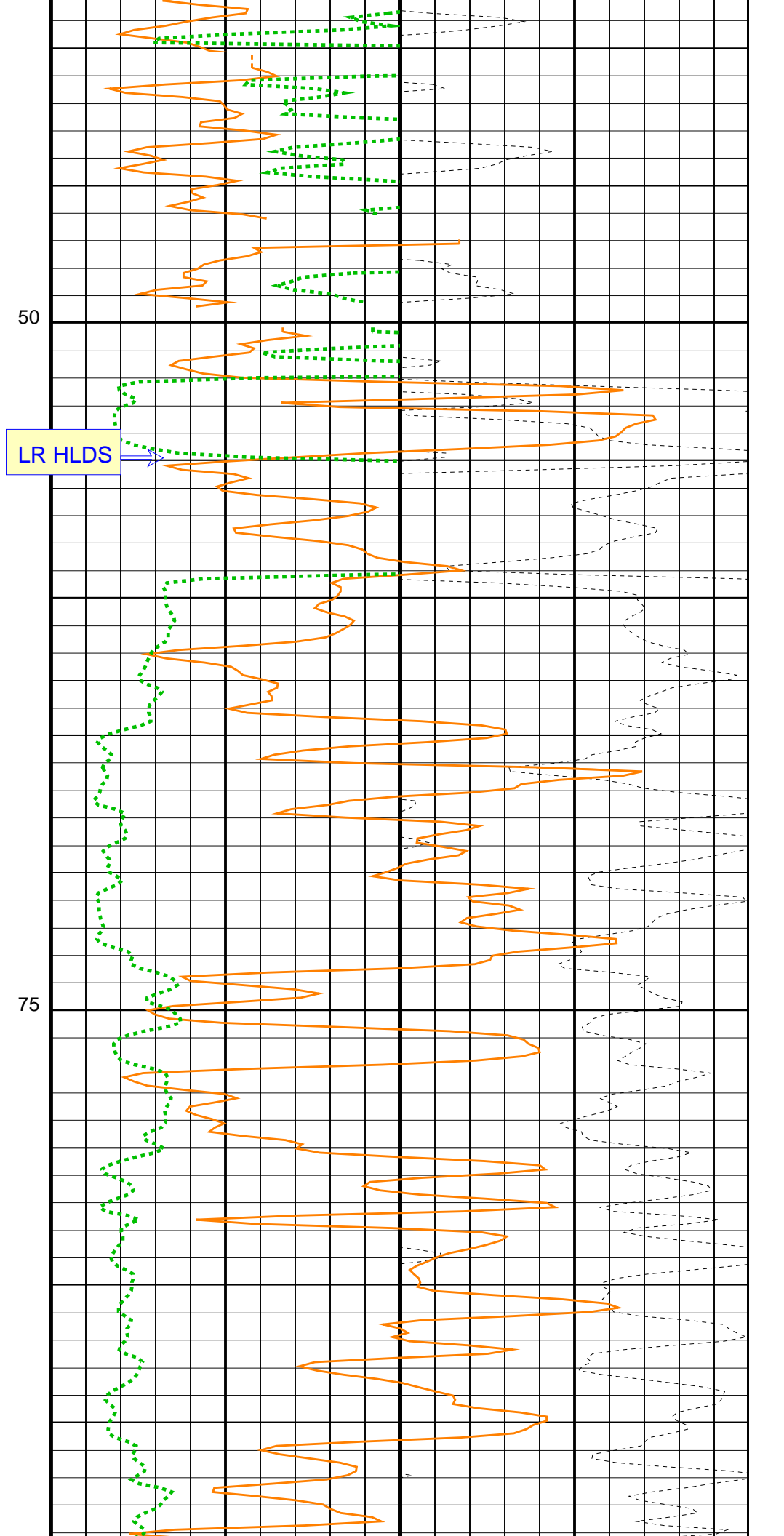
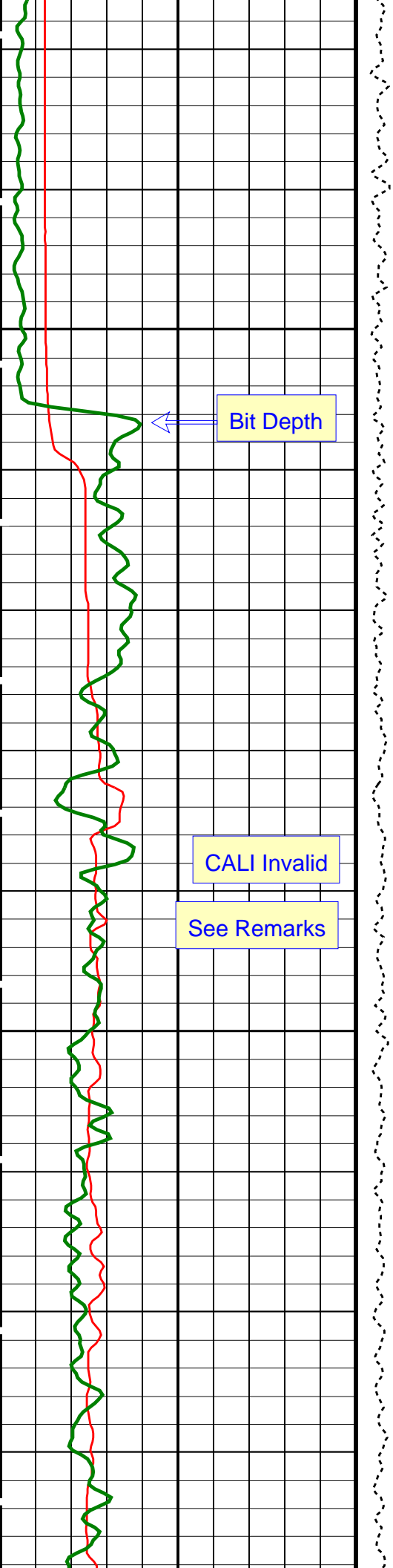
**OP System Version: 19C0-187**

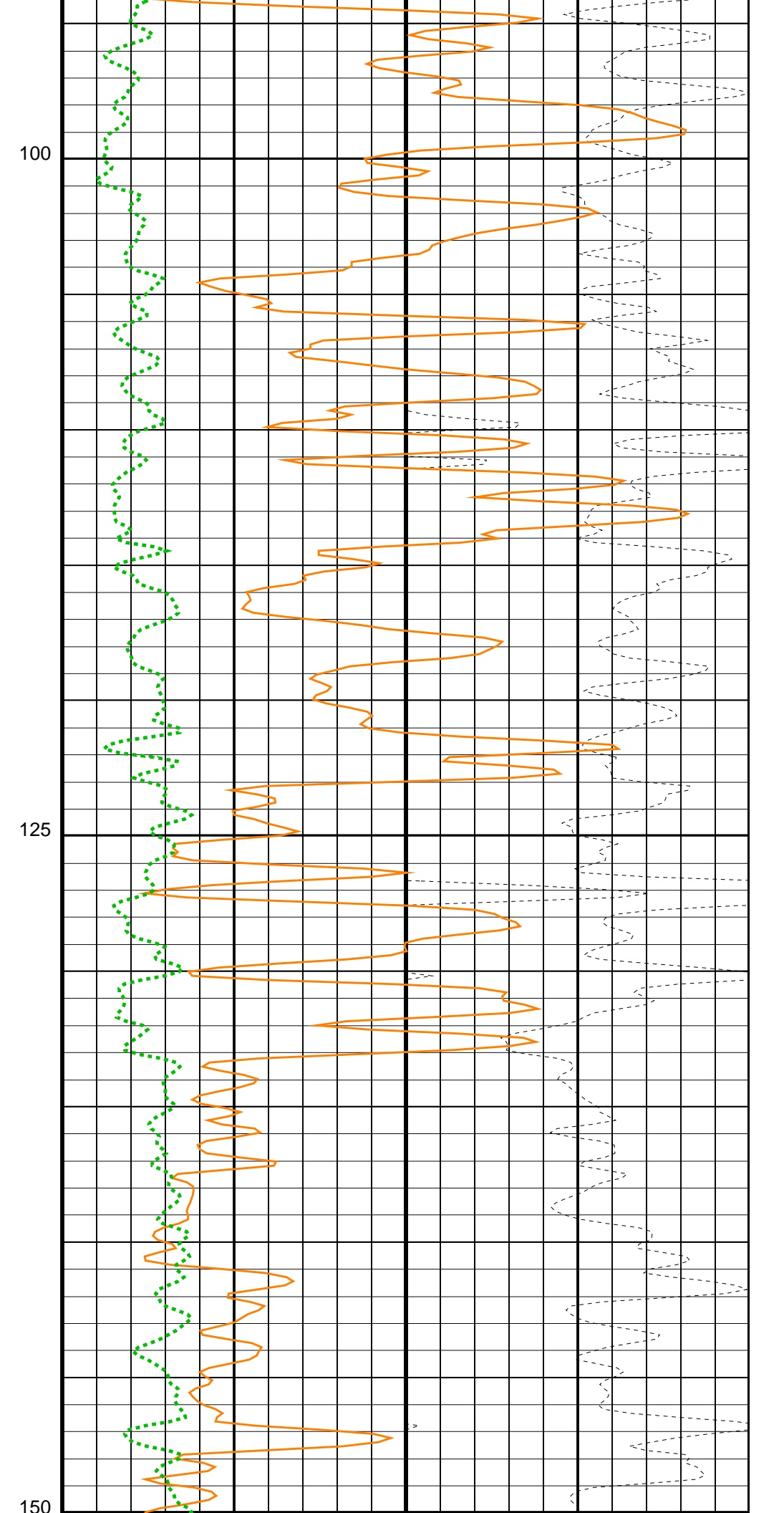
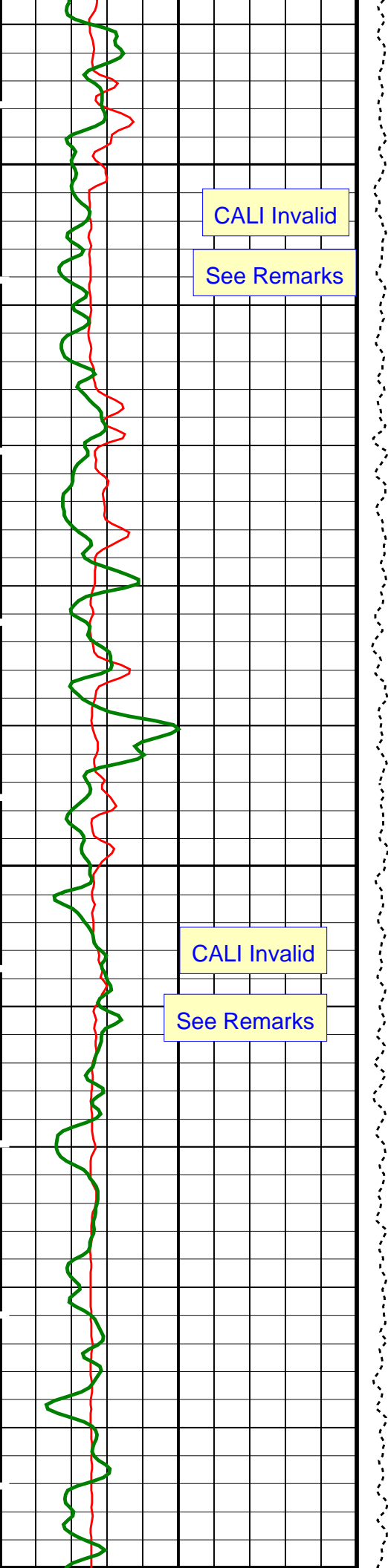
MSS_LDEO-DEBIT	19C0-187	HLDS	19C0-187
LDSC-B	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	EDTC-B	19C0-187

PIP SUMMARY

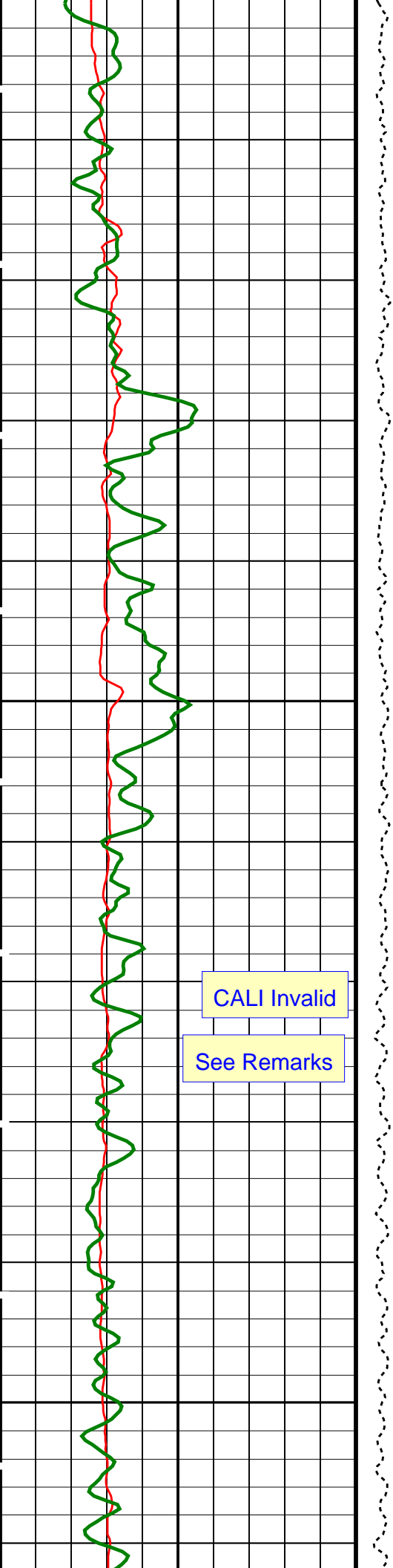
Time Mark Every 60 S





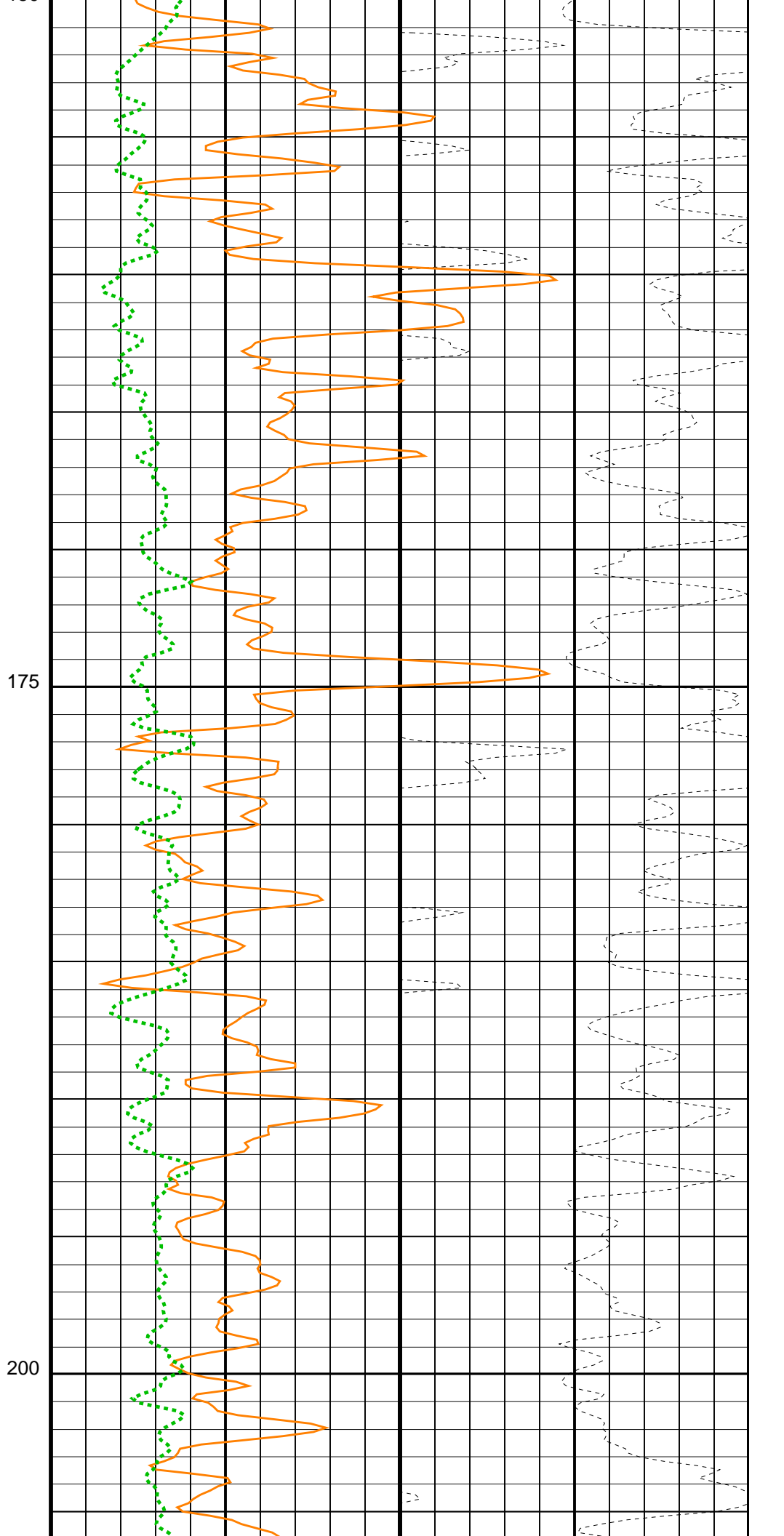


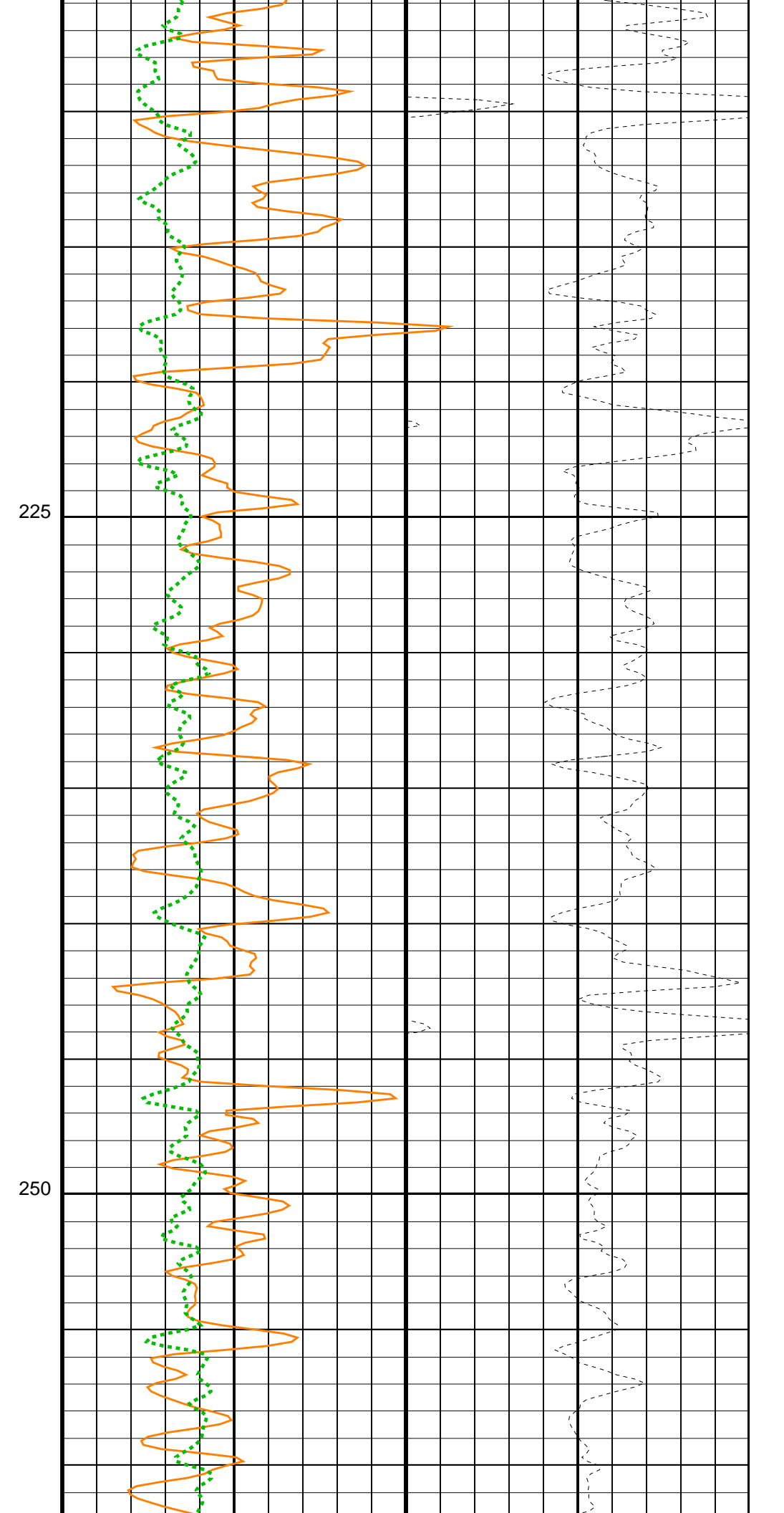
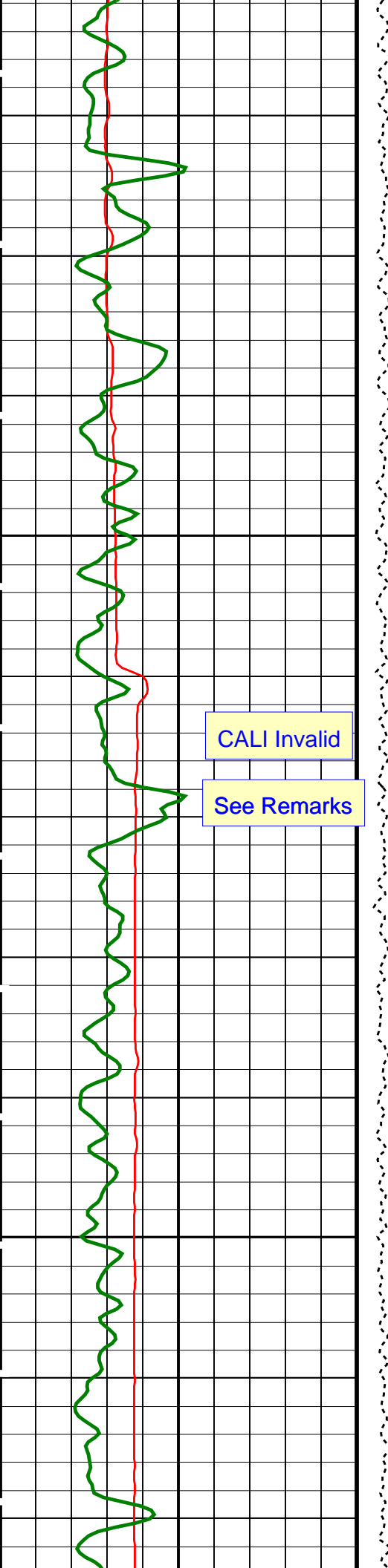


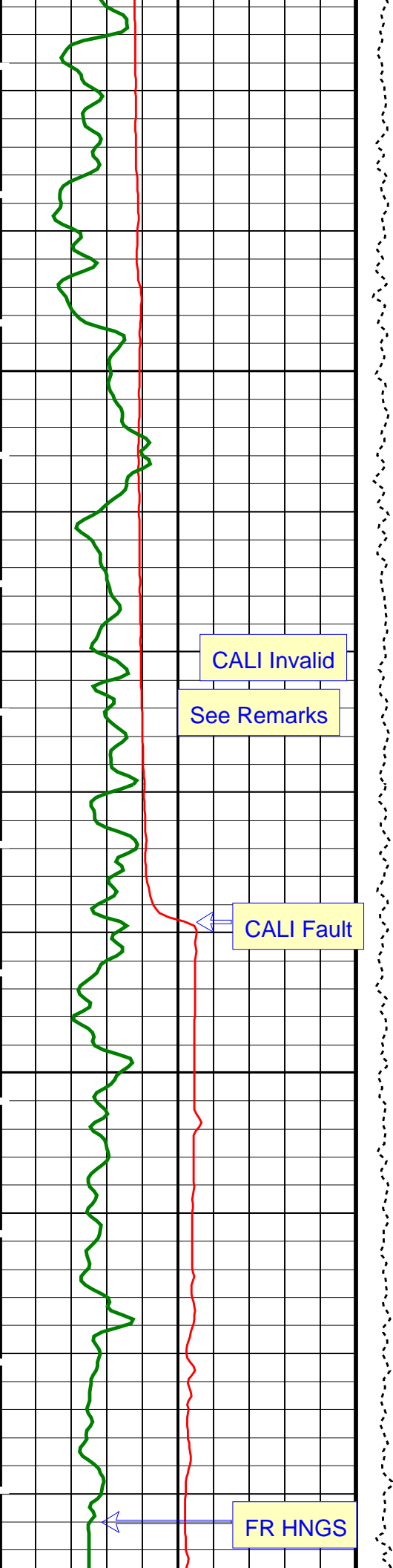


CALI Invalid

See Remarks

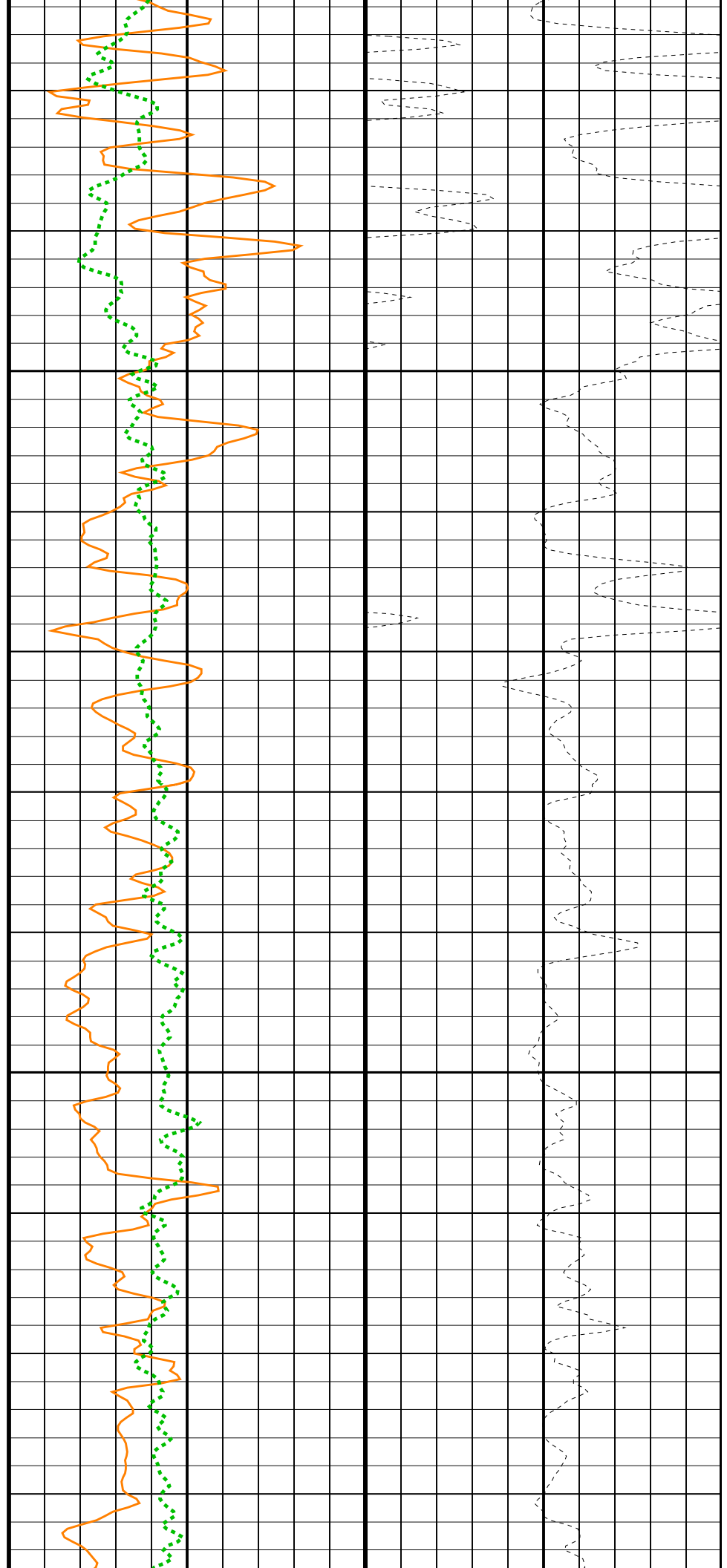


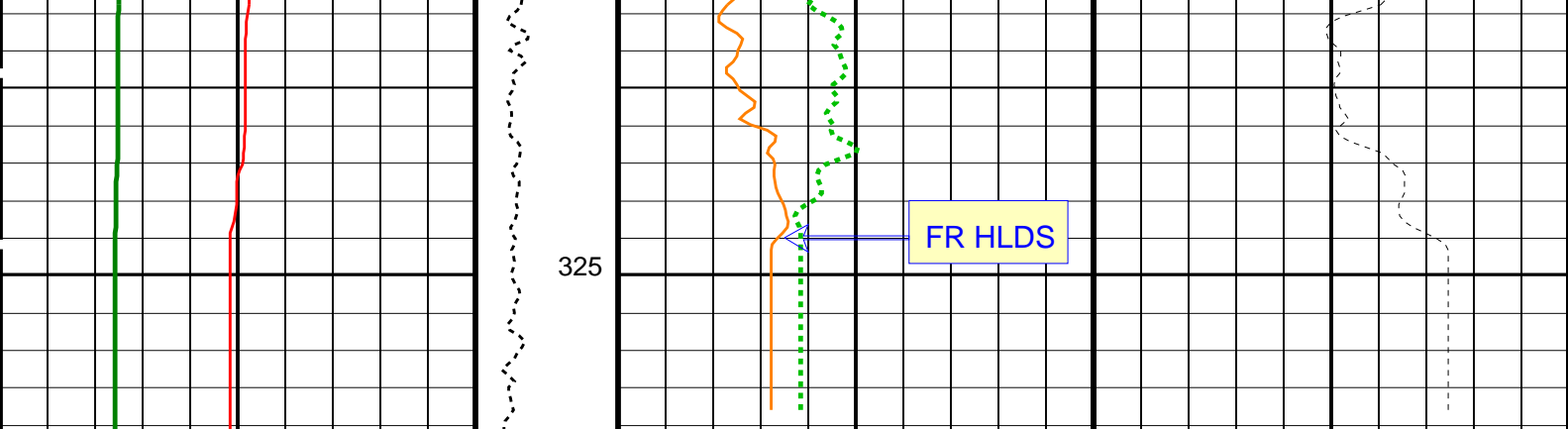




275

300





<b>HLDS Caliper (LCAL)</b> 0 (IN) 20		Tension (TENS) (LBF) 4000 8000	<b>HLDS Bulk Density (RHOM)</b> 3 (G/C3) 1	
<b>HNGS Spectroscopy Gamma Ray (HSGR)</b> 0 (GAPI) 25			<b>HLDS Long Spaced Photoelectric Effect (PEFL)</b> 0 (----) 10	
			<b>HLDS Bulk Density Correction (DRH)</b> -0.25 (G/C3) 0.25	

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
<b>HLDS: Hostile Litho-Density Sonde</b>		
DHC	Density Hole Correction	CALIPER
DPPM	Density Porosity Processing Mode	HIRS
FD	Fluid Density	1 G/C3
LATC	HLDS Activation Correction	ON
MDEN	Matrix Density	2.71 G/C3
<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
CSD1	Inner Casing Outer Diameter	0 IN
CSD2	Outer Casing Outer Diameter	0 IN
CSW1	Inner Casing Weight	0 LB/F
CSW2	Outer Casing Weight	0 LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE
GCSE	Generalized Caliper Selection	LCAL
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW
HABK	HNGS Borehole Potassium Running Average	0
HALF	HNGS Alpha Filter Length	60 IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE
HMWM	Mud Weighting Material	NATU
HNPE	HNGS Processing Enable	YES
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3 CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3 CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES
TPOS	Tool Position	ECCE
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0
<b>EDTC-B: Enhanced DTS Cartridge</b>		
BHS	Borehole Status	OPEN
DPPM	Density Porosity Processing Mode	HIRS
GCSE	Generalized Caliper Selection	LCAL
<b>System and Miscellaneous</b>		
BS	Bit Size	9.875 IN
DFD	Drilling Fluid Density	1.05 G/C3
DO	Depth Offset for Playback	-4421.5 M
PP	Playback Processing	NORMAL

Format: HLDSDensityPE

Vertical Scale: 1:200

Graphics File Created: 10-Nov-2011 17:28

OP System Version: 19C0-187

### Input DLIS Files

DEFAULT MSS\_LDEO\_LDL\_NGS\_022LUP FN:22 PRODUCER 03-Nov-2011 12:05 4750.3 M 4412.6 M

### Output DLIS Files

DEFAULT MSS\_LDEO\_LDL\_NGS\_044PUP FN:40 PRODUCER 10-Nov-2011 17:28



## Down Pass #2

MAXIS Field Log

Company: Lamont Doherty Well: Expedition 336, Site U1383C

### Input DLIS Files

DEFAULT Flip\_MSS\_LDEO\_LDL\_041LUP PRODUCER 10-Nov-2011 17:22 4752.1 M 4469.1 M

### Output DLIS Files

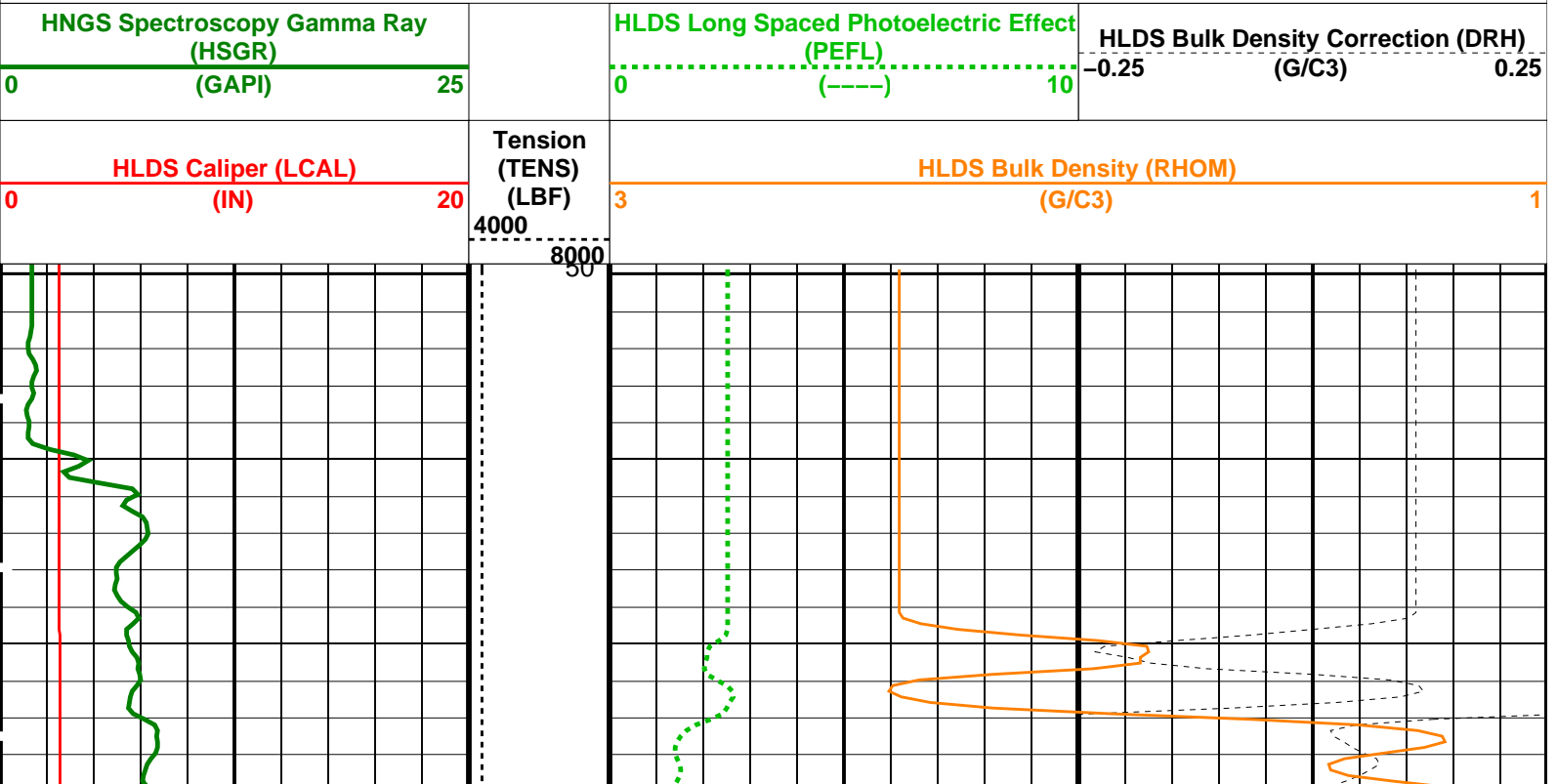
DEFAULT MSS\_LDEO\_LDL\_NGS\_047PUP FN:43 PRODUCER 10-Nov-2011 17:36 332.7 M 49.7 M

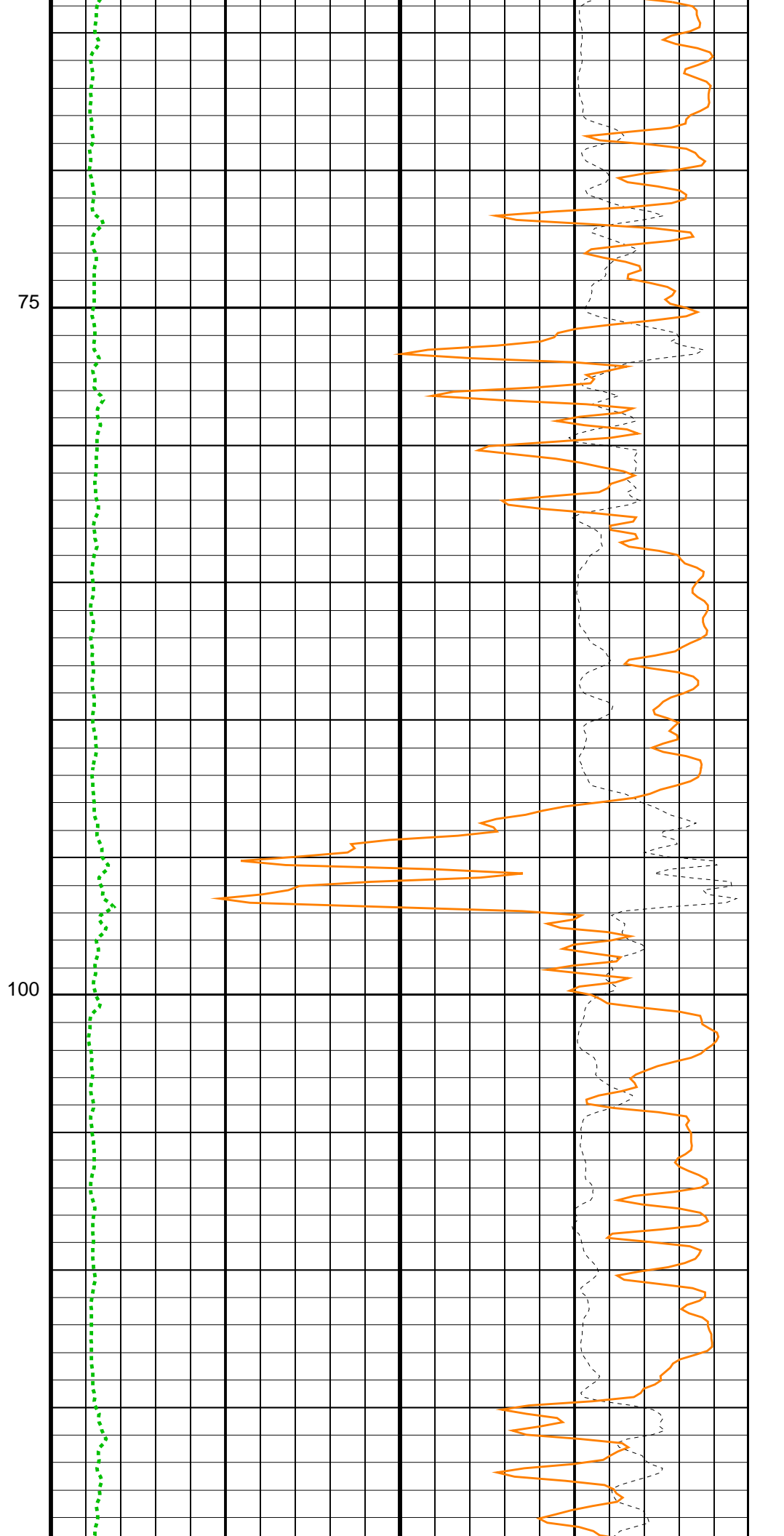
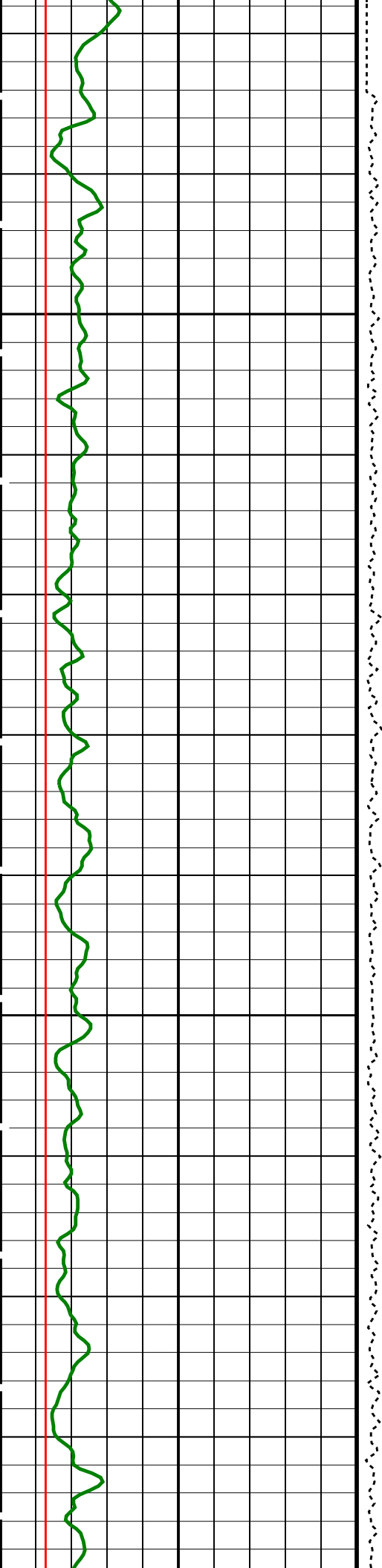
## OP System Version: 19C0-187

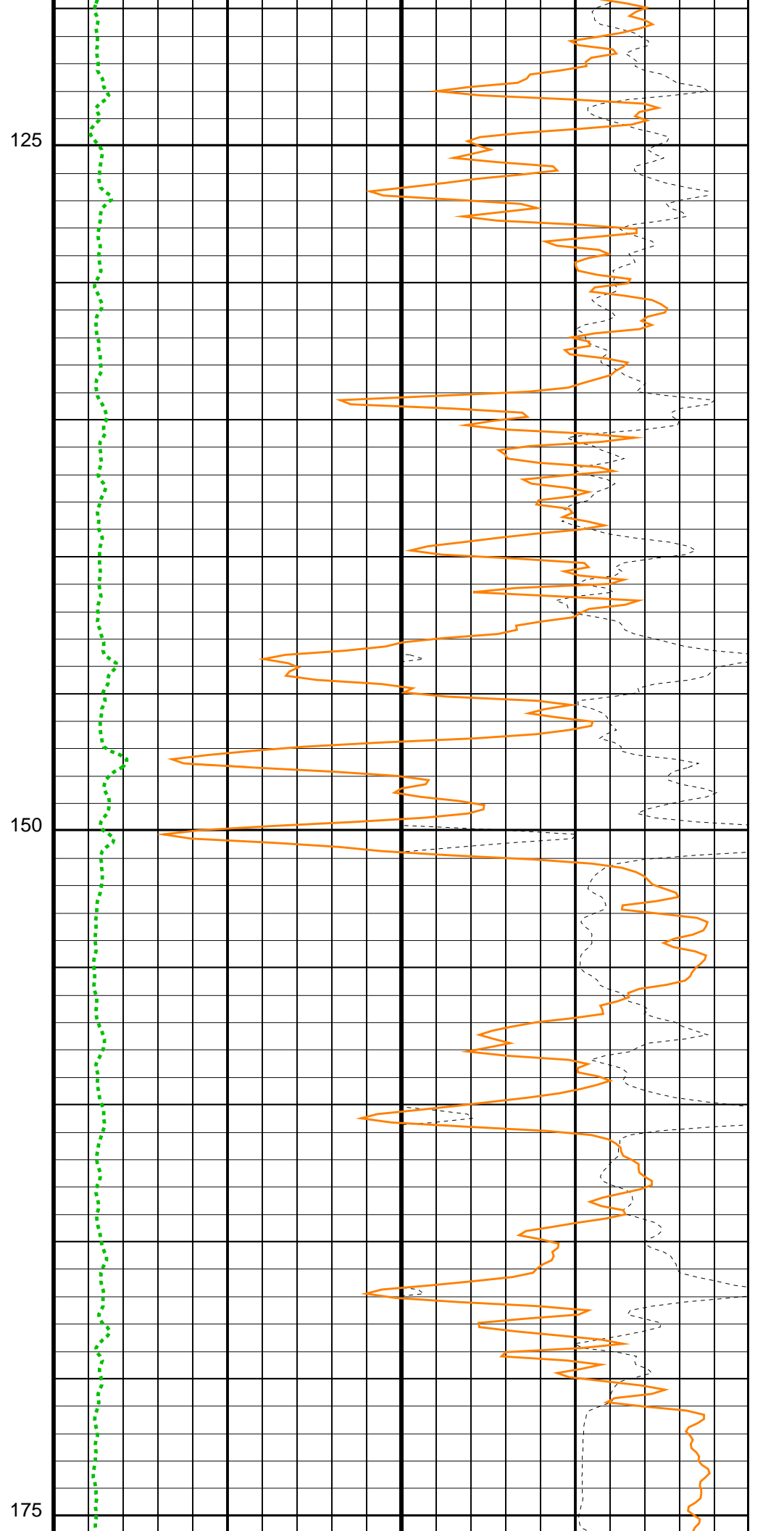
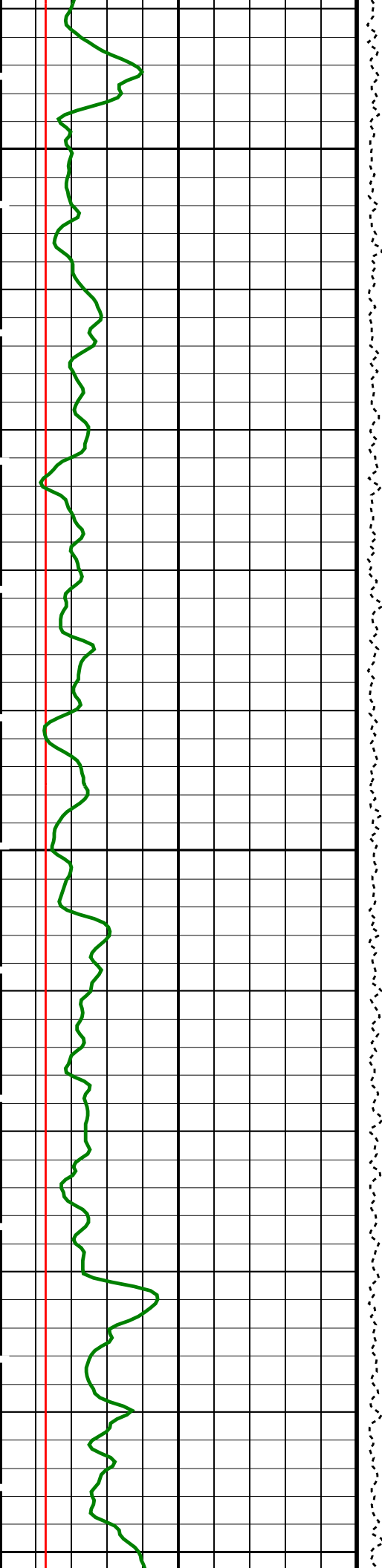
MSS_LDEO-DEBIT 19C0-187	HLDS 19C0-187
LDSC-B 19C0-187	HNGC-B 19C0-187
HNGS-BA 19C0-187	EDTC-B 19C0-187

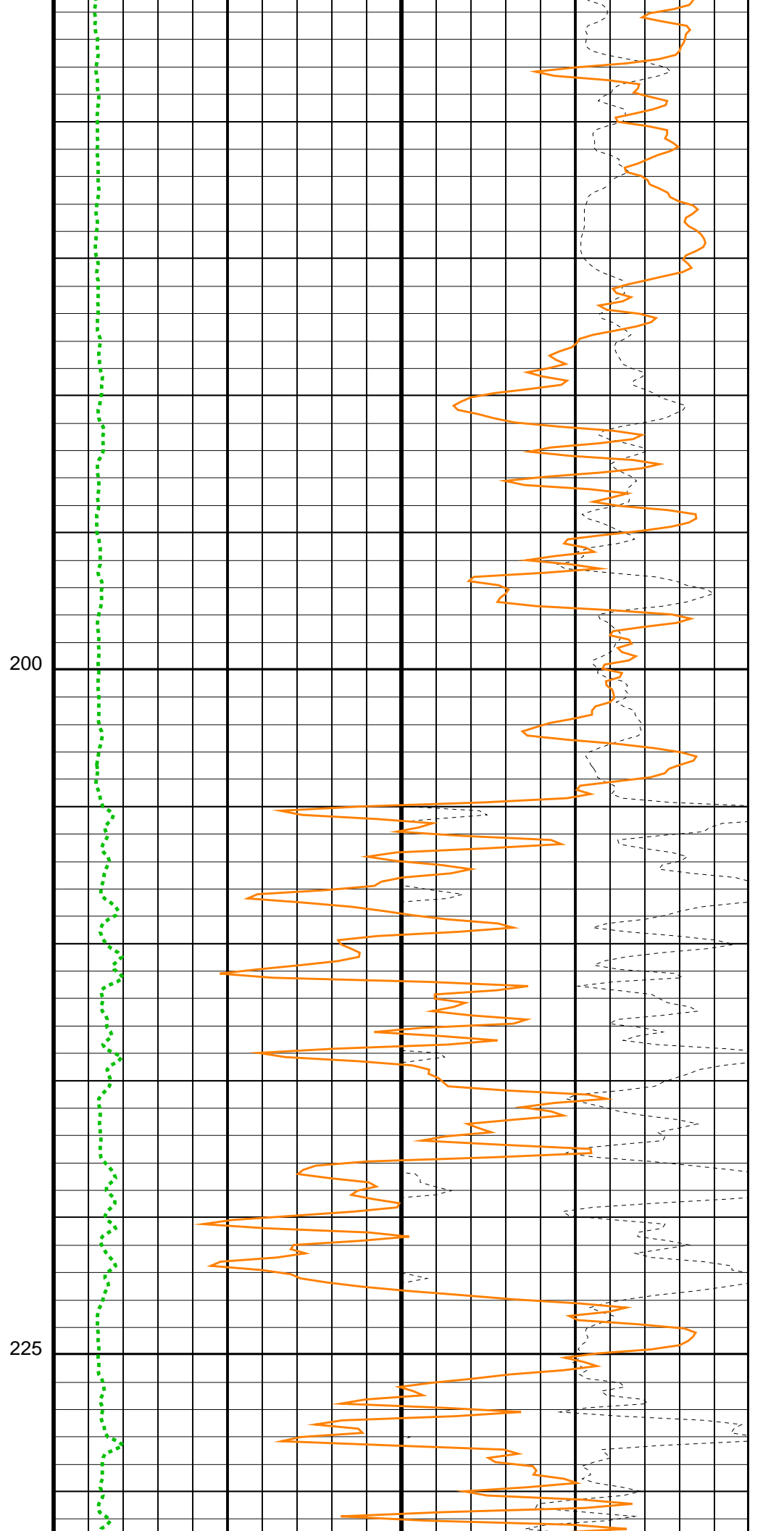
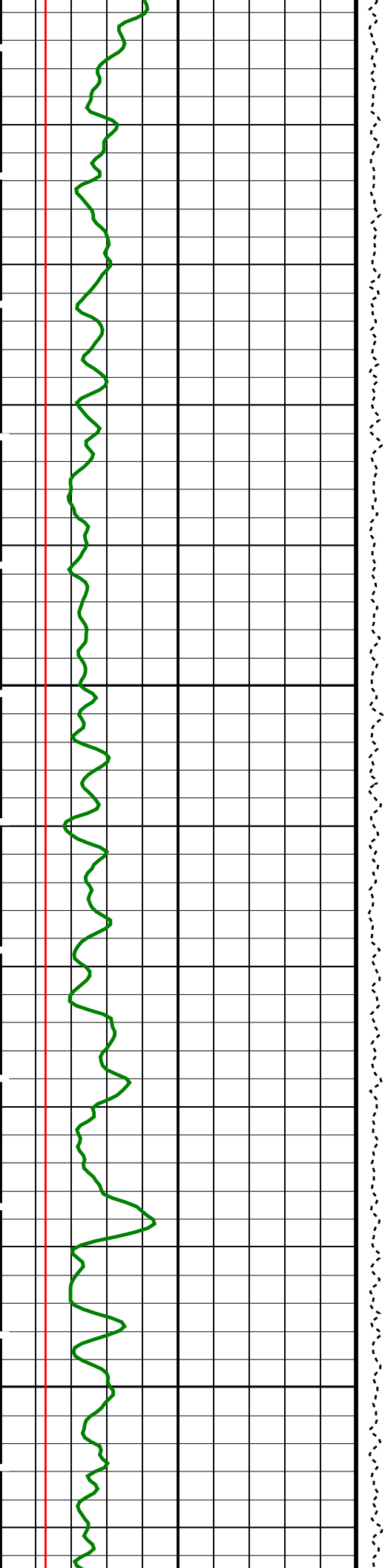
### PIP SUMMARY

Time Mark Every 60 S

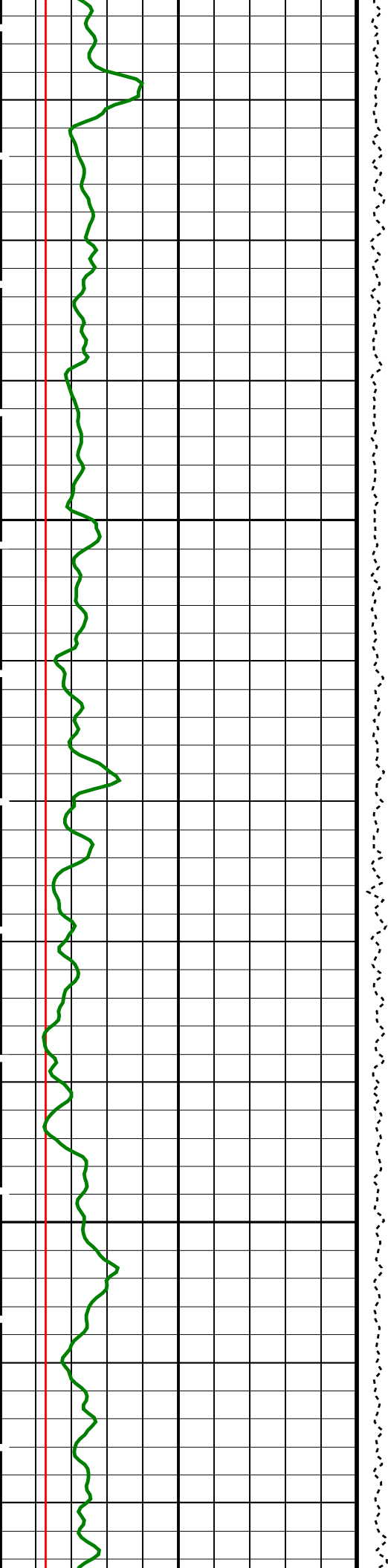






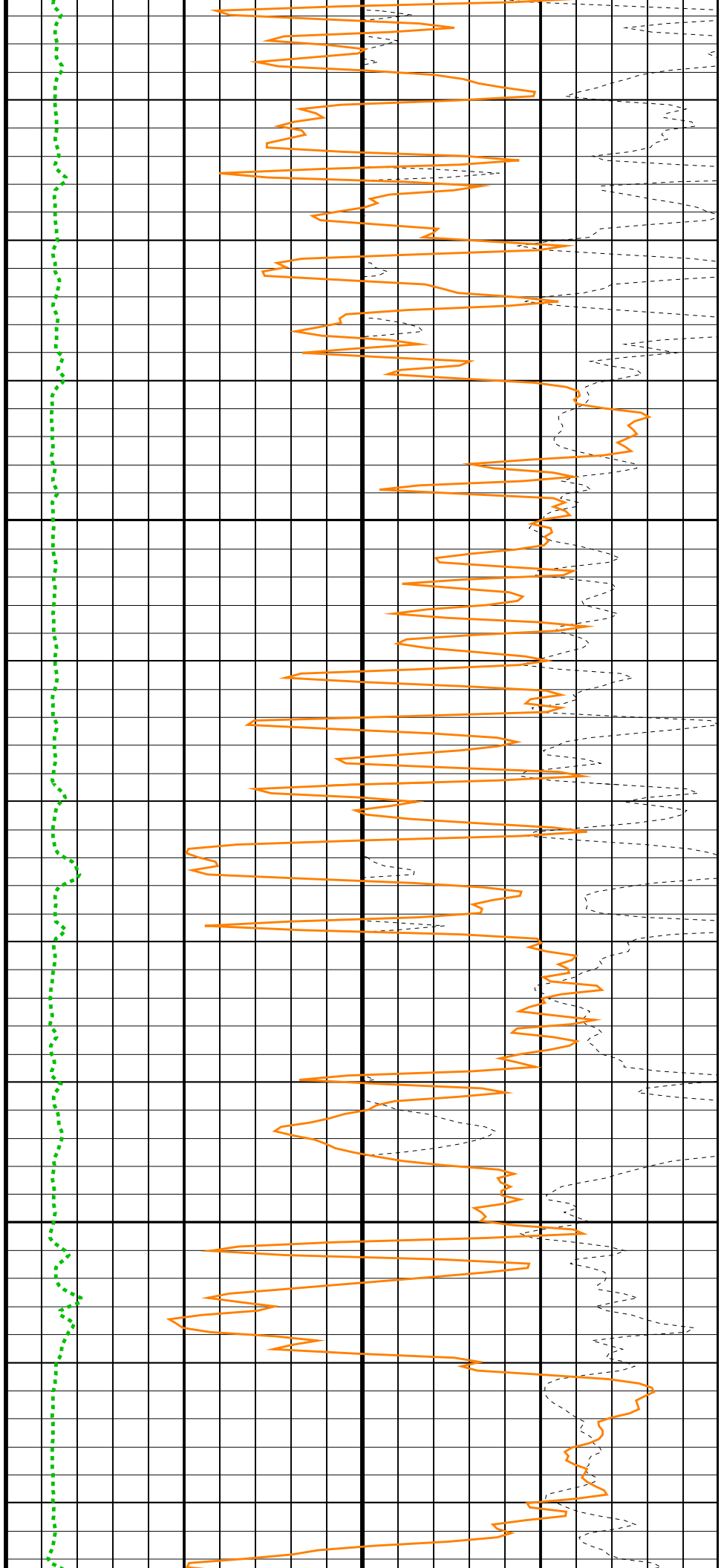


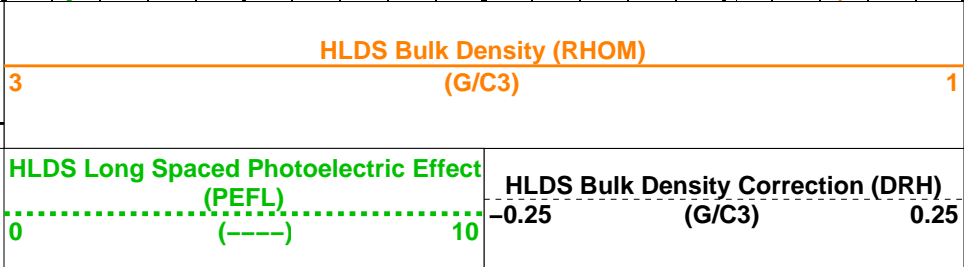
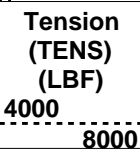
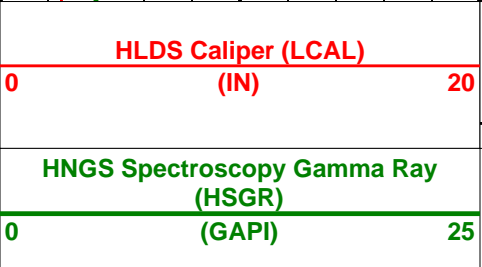
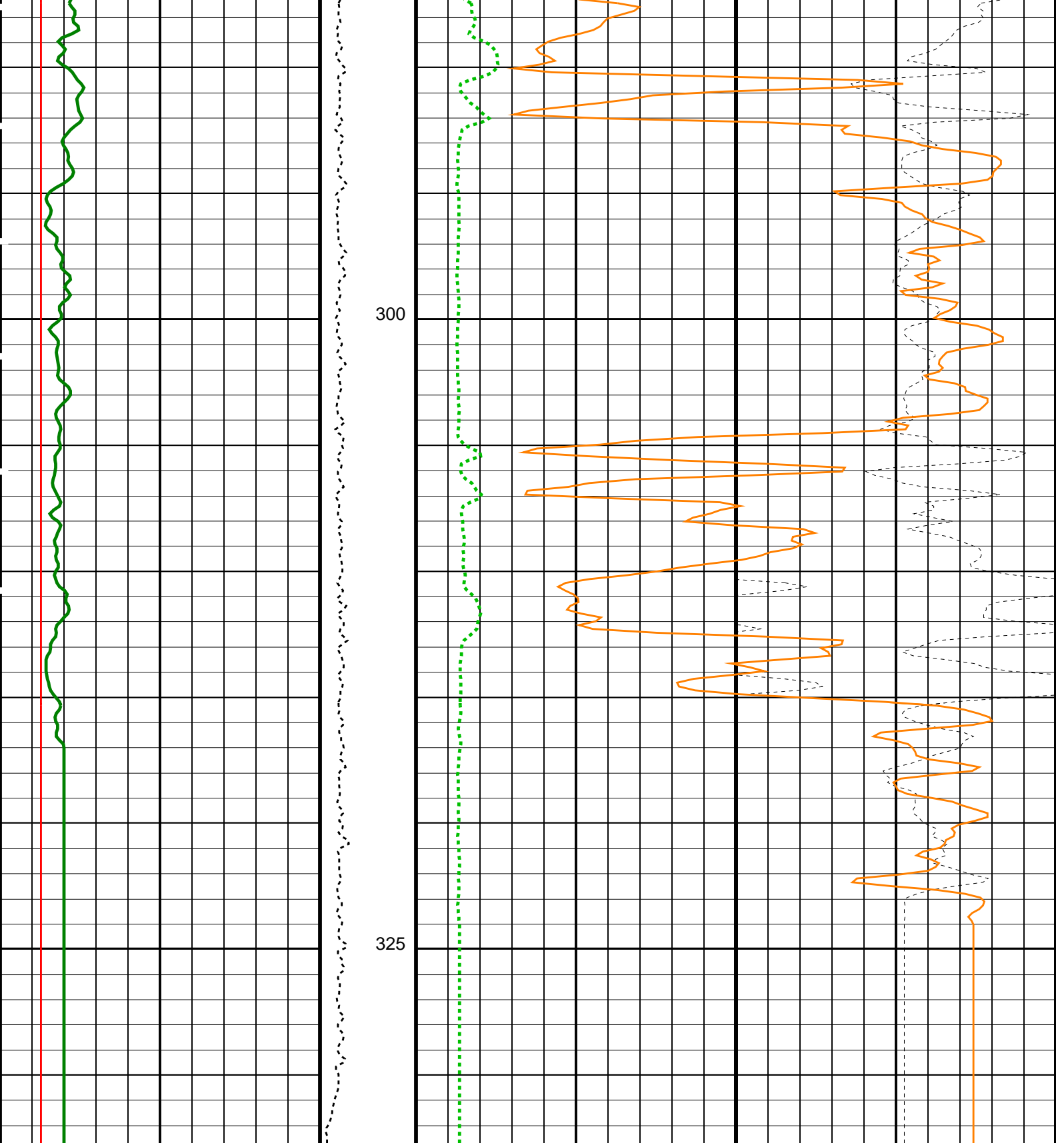




250

275





PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
<b>HLDS: Hostile Litho-Density Sonde</b>		
DHC	Density Hole Correction	CALIPER
DPPM	Density Porosity Processing Mode	HIRS
FD	Fluid Density	1 G/C3
LATC	HLDS Activation Correction	ON
MDEN	Matrix Density	2.71 G/C3
<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
CSD1	Inner Casing Outer Diameter	0 IN
CSD2	Outer Casing Outer Diameter	0 IN
CSW1	Inner Casing Weight	0 LB/F
CSW2	Outer Casing Weight	0 LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE
GCSE	Generalized Caliper Selection	LCAL
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW
HABK	HNGS Borehole Potassium Running Average	0
HALF	HNGS Alpha Filter Length	60 IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE
HMWM	Mud Weighting Material	NATU
HNPE	HNGS Processing Enable	YES
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3 CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3 CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES
TPOS	Tool Position	ECCE
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0
<b>EDTC-B: Enhanced DTS Cartridge</b>		
BHS	Borehole Status	OPEN
DPPM	Density Porosity Processing Mode	HIRS
GCSE	Generalized Caliper Selection	LCAL
<b>System and Miscellaneous</b>		
BS	Bit Size	9.875 IN
DFD	Drilling Fluid Density	1.05 G/C3
DO	Depth Offset for Playback	-4419.5 M
PP	Playback Processing	NORMAL

Format: HLDSDensityPE Vertical Scale: 1:200 Graphics File Created: 10-Nov-2011 17:36

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

MSS_LDEO-DEBIT	19C0-187	HLDS	19C0-187
LDSC-B	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	EDTC-B	19C0-187

**Input DLIS Files**

DEFAULT	Flip_MSS_LDEO_LDL_041LUP	PRODUCER	10-Nov-2011 17:22	4752.1 M	4469.1 M
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**Output DLIS Files**

DEFAULT	MSS_LDEO_LDL_NGS_047PUP	FN:43	PRODUCER	10-Nov-2011 17:36
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**Up Pass #1**

MAXIS Field Log

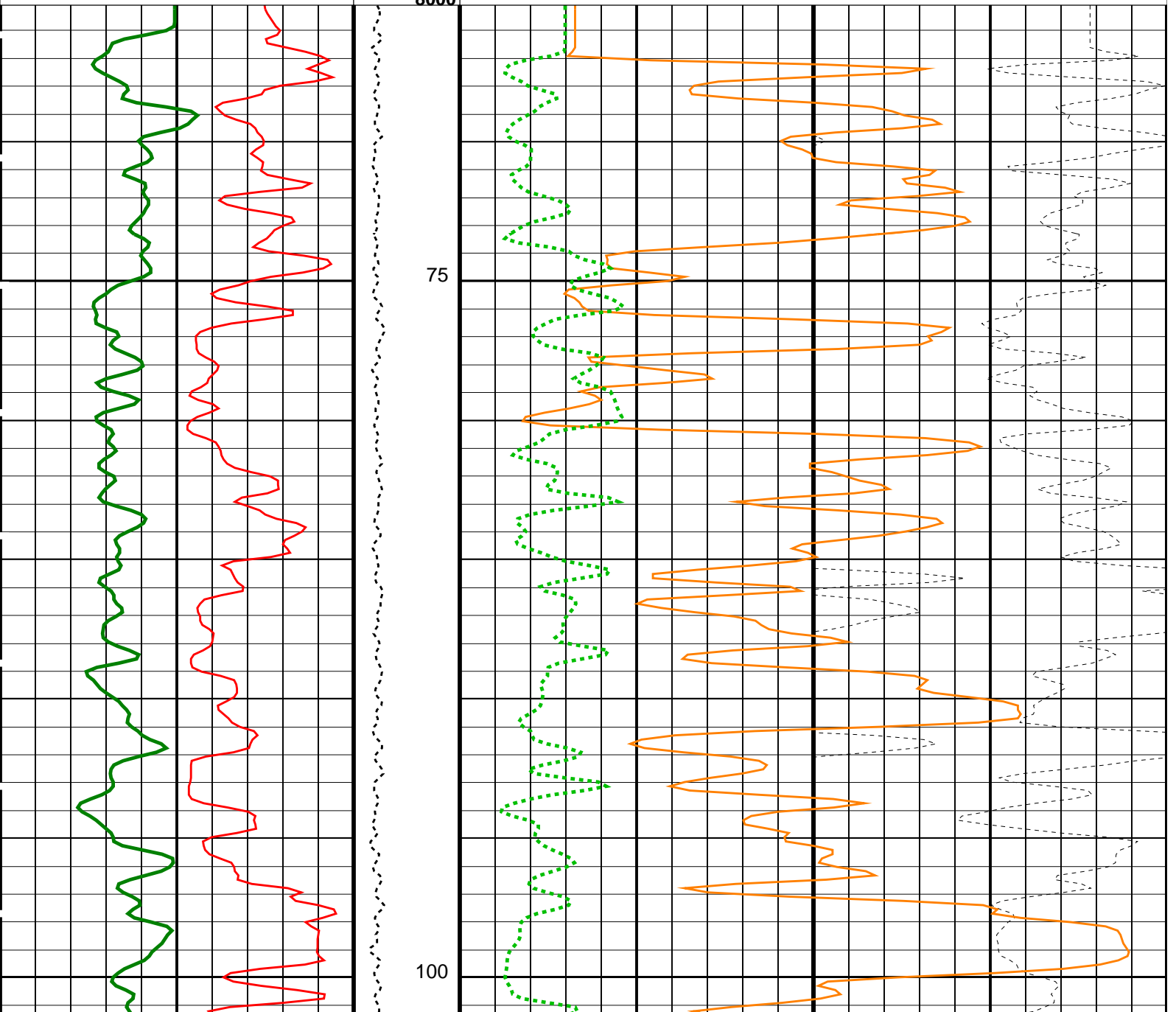
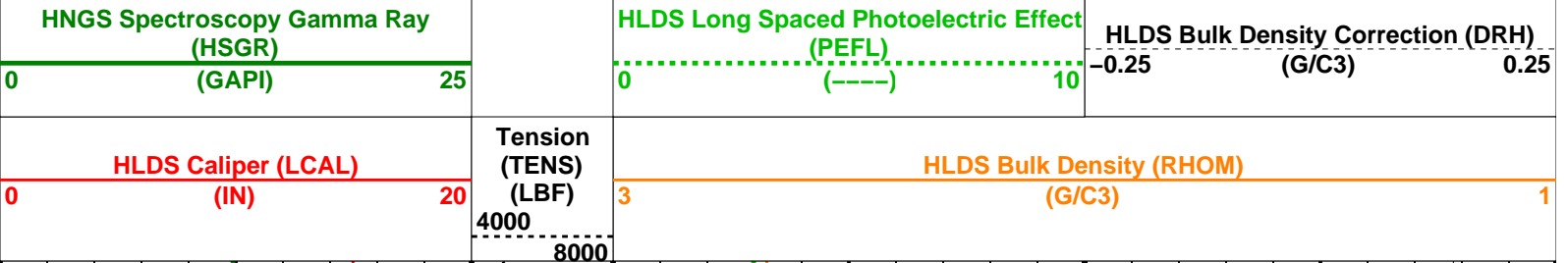
### Output DLIS Files

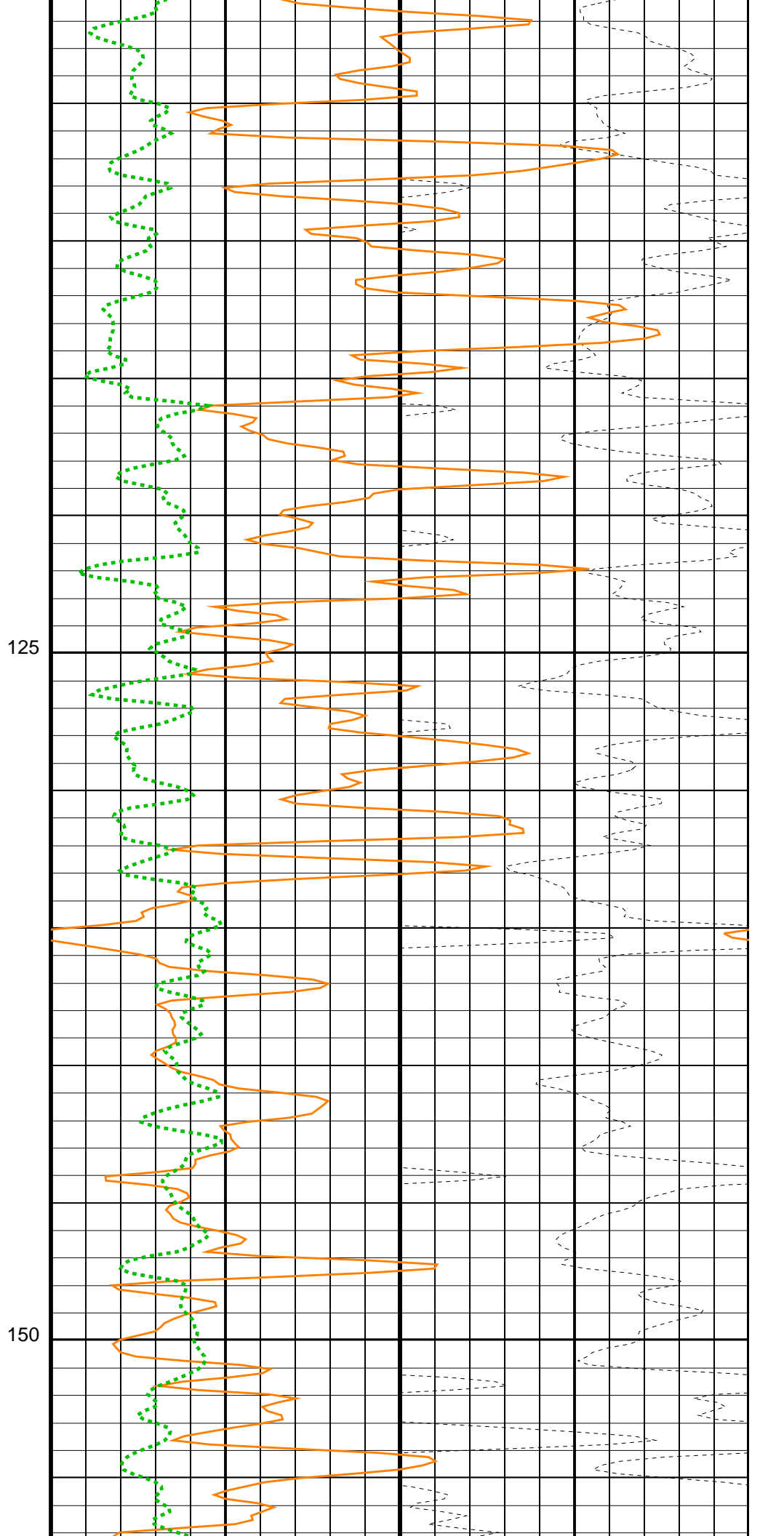
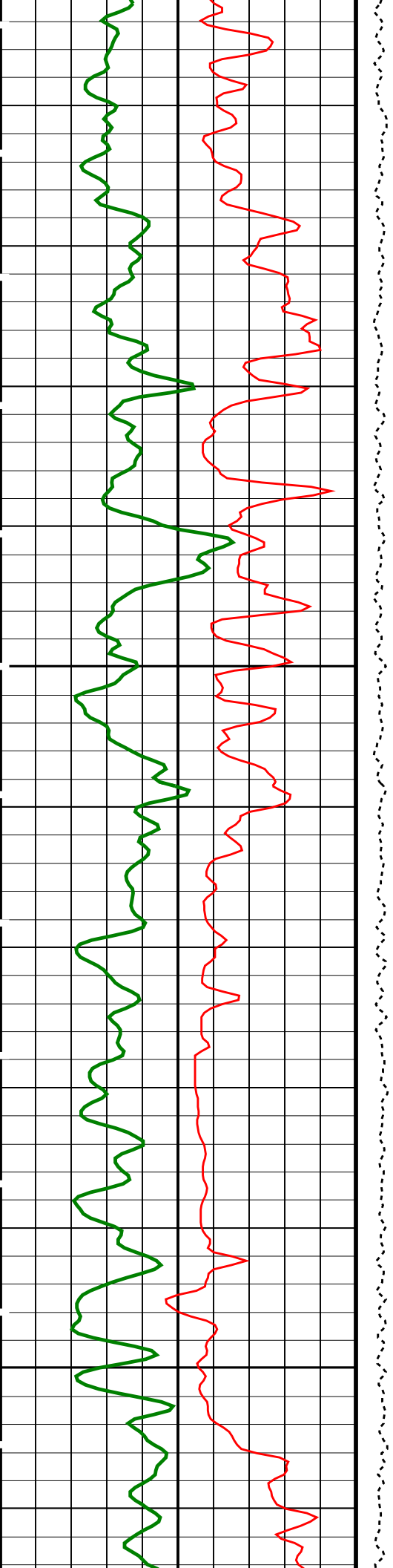
## OP System Version: 19C0-187

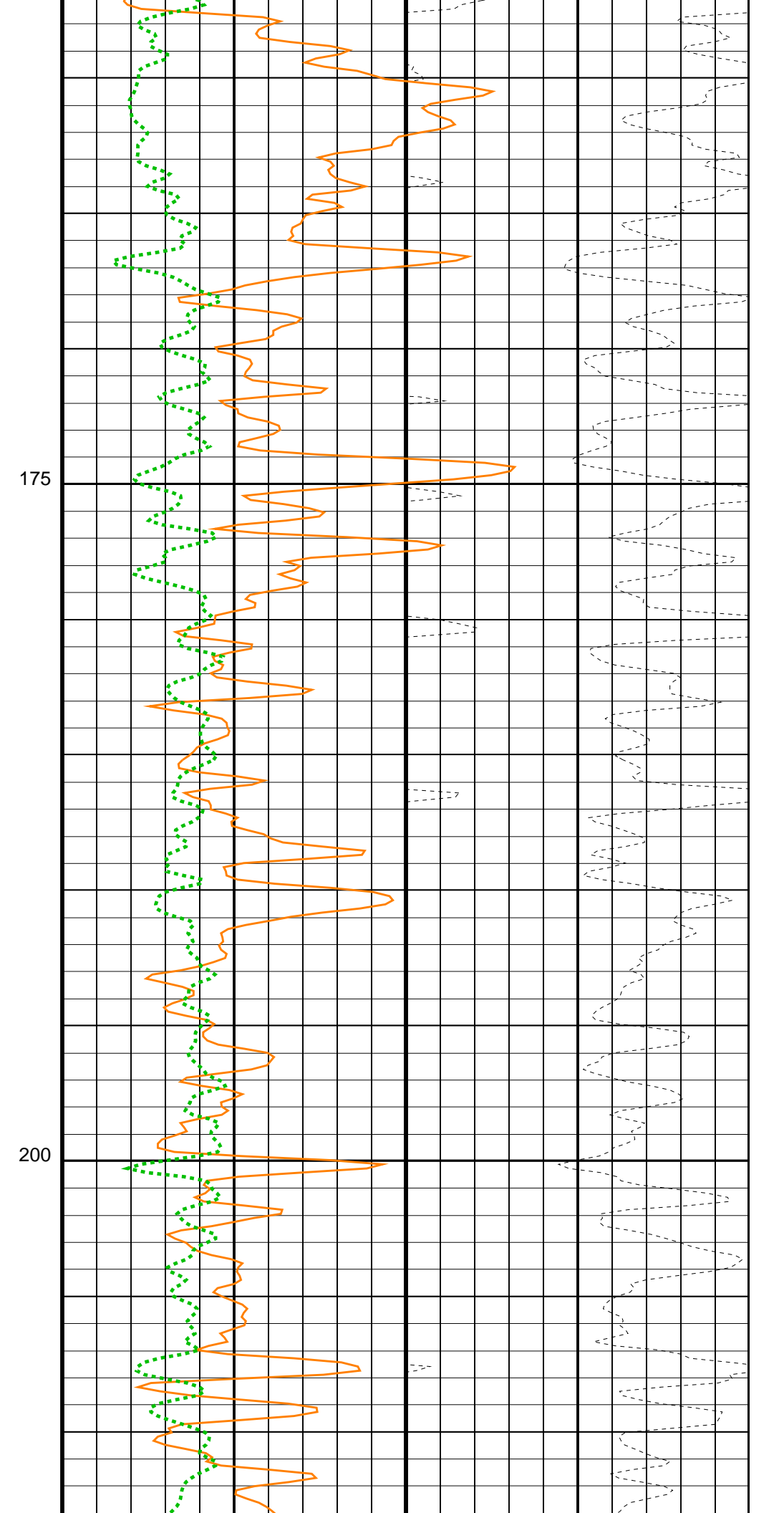
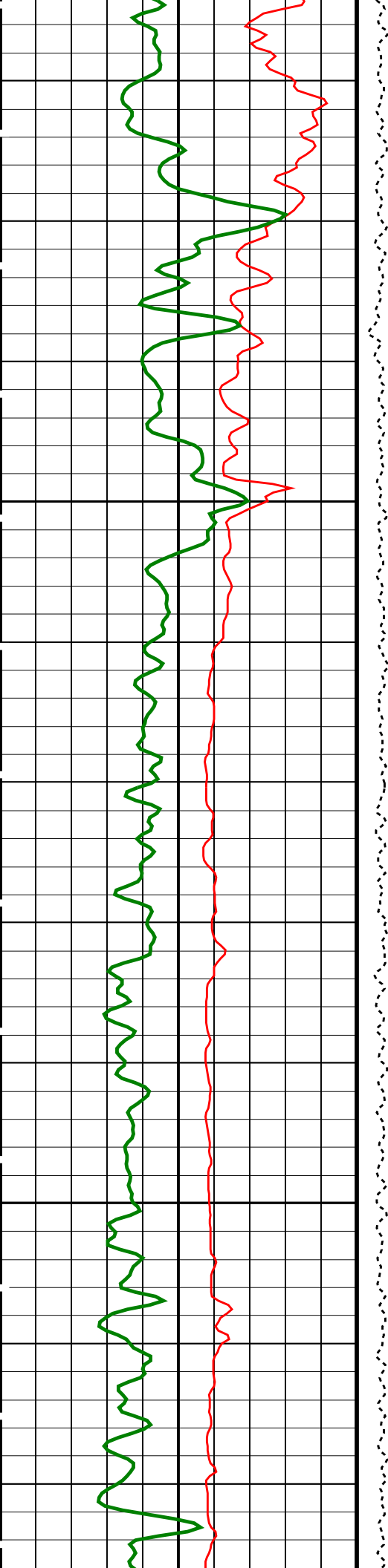
MSS_LDEO-DEBIT	19C0-187	HLDS	19C0-187
LDSC-B	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	EDTC-B	19C0-187

#### PIP SUMMARY

Time Mark Every 60 S

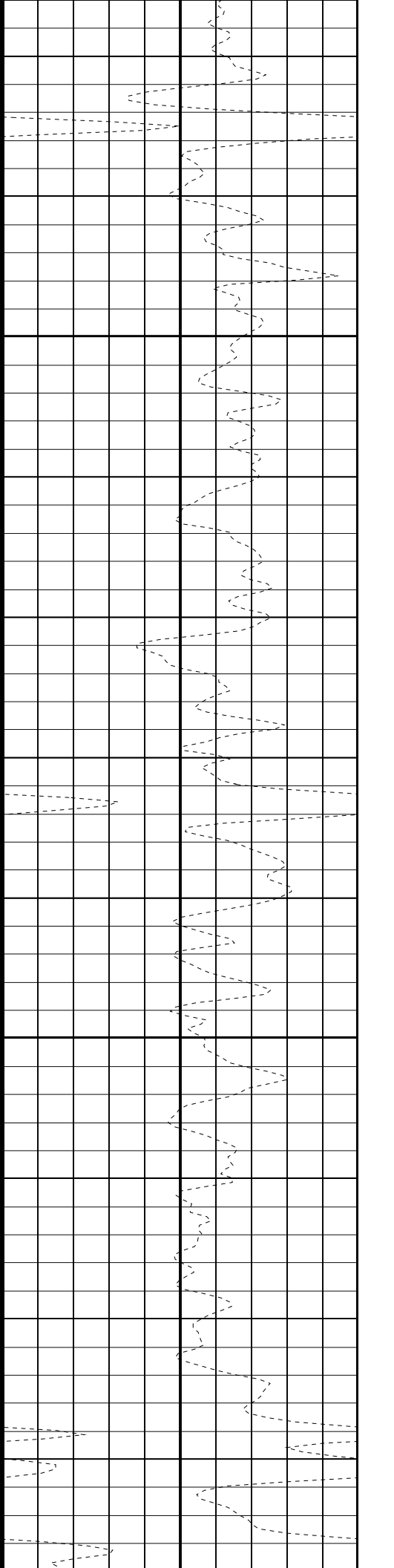
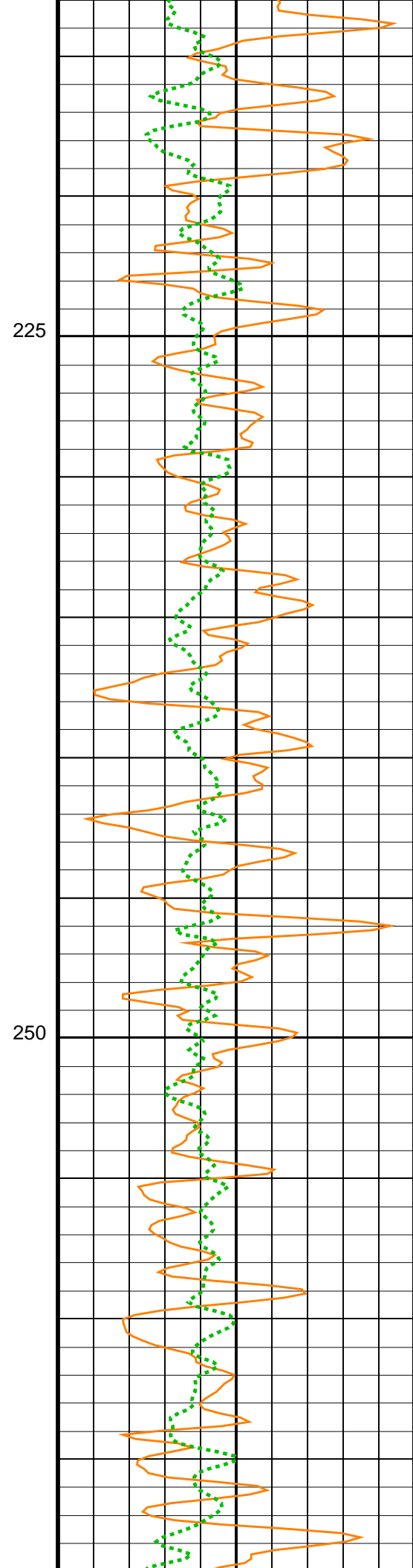
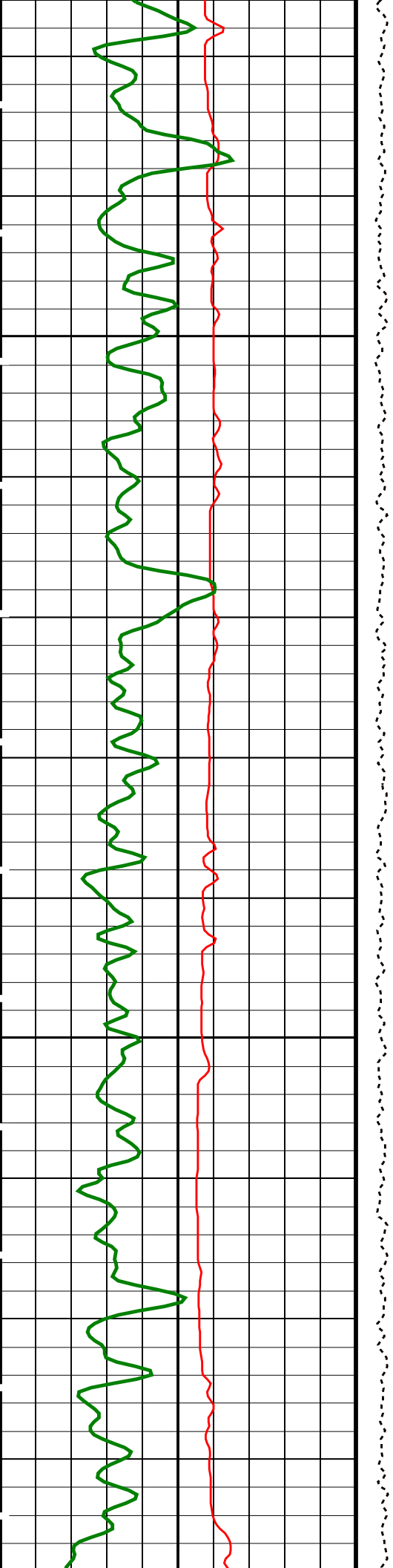


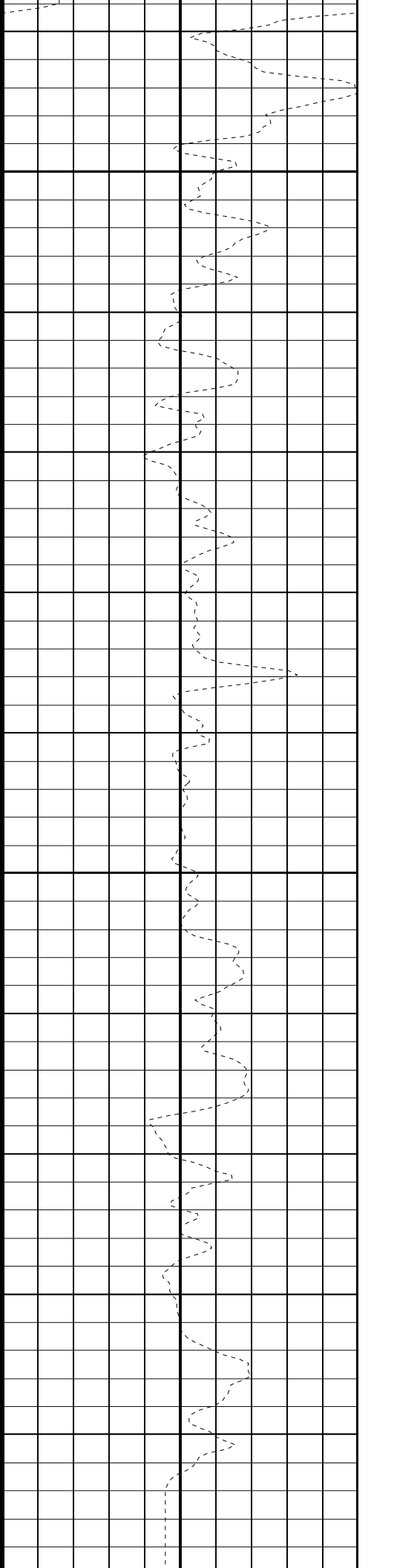
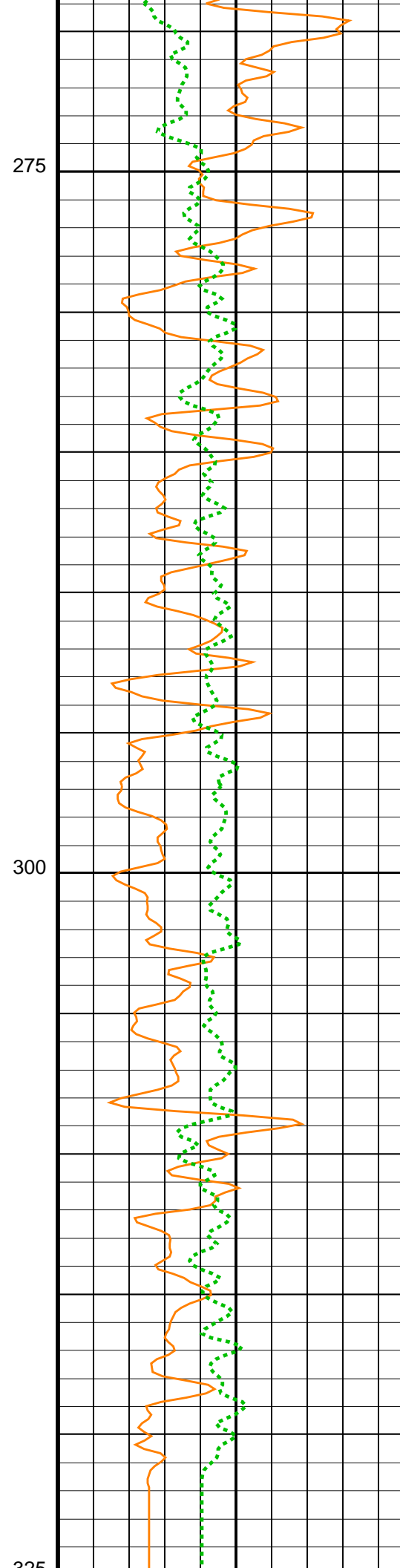
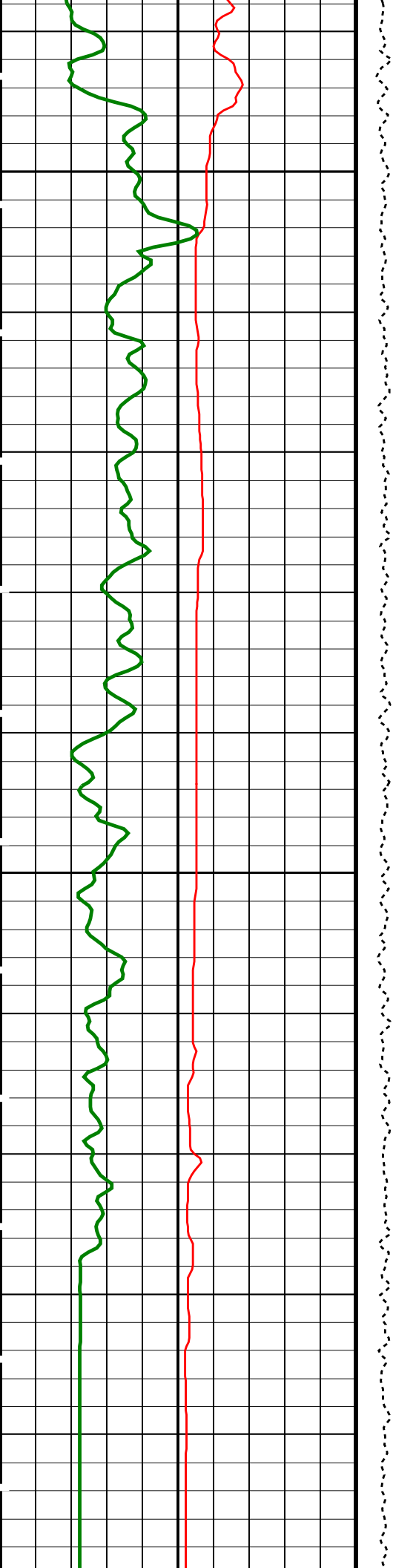




175

200







<b>HLDS Caliper (LCAL)</b> 0 (IN) 20		<b>Tension (TENS)</b> (LBF) 4000 8000	<b>HLDS Bulk Density (RHOM)</b> 3 (G/C3) 1	
<b>HNGS Spectroscopy Gamma Ray (HSGR)</b> 0 (GAPI) 25			<b>HLDS Long Spaced Photoelectric Effect (PEFL)</b> 0 (----) 10	<b>HLDS Bulk Density Correction (DRH)</b> -0.25 (G/C3) 0.25

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
<b>HLDS: Hostile Litho-Density Sonde</b>		
DHC	Density Hole Correction	CALIPER
DPPM	Density Porosity Processing Mode	HIRS
FD	Fluid Density	1 G/C3
LATC	HLDS Activation Correction	ON
MDEN	Matrix Density	2.71 G/C3
<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
CSD1	Inner Casing Outer Diameter	0 IN
CSD2	Outer Casing Outer Diameter	0 IN
CSW1	Inner Casing Weight	0 LB/F
CSW2	Outer Casing Weight	0 LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE
GCSE	Generalized Caliper Selection	LCAL
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW
HABK	HNGS Borehole Potassium Running Average	0
HALF	HNGS Alpha Filter Length	60 IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE
HMWM	Mud Weighting Material	NATU
HNPE	HNGS Processing Enable	YES
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3 CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3 CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES
TPOS	Tool Position	ECCE
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0
<b>EDTC-B: Enhanced DTS Cartridge</b>		
BHS	Borehole Status	OPEN
DPPM	Density Porosity Processing Mode	HIRS
GCSE	Generalized Caliper Selection	LCAL
<b>System and Miscellaneous</b>		
BS	Bit Size	9.875 IN
DFD	Drilling Fluid Density	1.05 G/C3
DO	Depth Offset for Playback	-4421.5 M
PP	Playback Processing	NORMAL

Format: HLDSDensityPE

Vertical Scale: 1:200

Graphics File Created: 10-Nov-2011 17:29

OP System Version: 19C0-187

MSS_LDEO-DEBIT	19C0-187	HLDS	19C0-187
LDSC-B	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	EDTC-B	19C0-187

Input DLIS Files

DEFAULT	MSS_LDEO_LDL_NGS_020LUP	FN:20	PRODUCER	03-Nov-2011 10:05	4748.0 M	4486.5 M
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Output DLIS Files

DEFAULT	MSS_LDEO_LDL_NGS_045PUP	FN:41	PRODUCER	10-Nov-2011 17:29
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Company: Lamont Doherty Well: Expedition 336, Site U1383C

Input DLIS Files

DEFAULT Flip\_MSS\_LDEO\_LDL\_040LUP PRODUCER 10-Nov-2011 17:22 4749.9 M 4384.5 M

Output DLIS Files

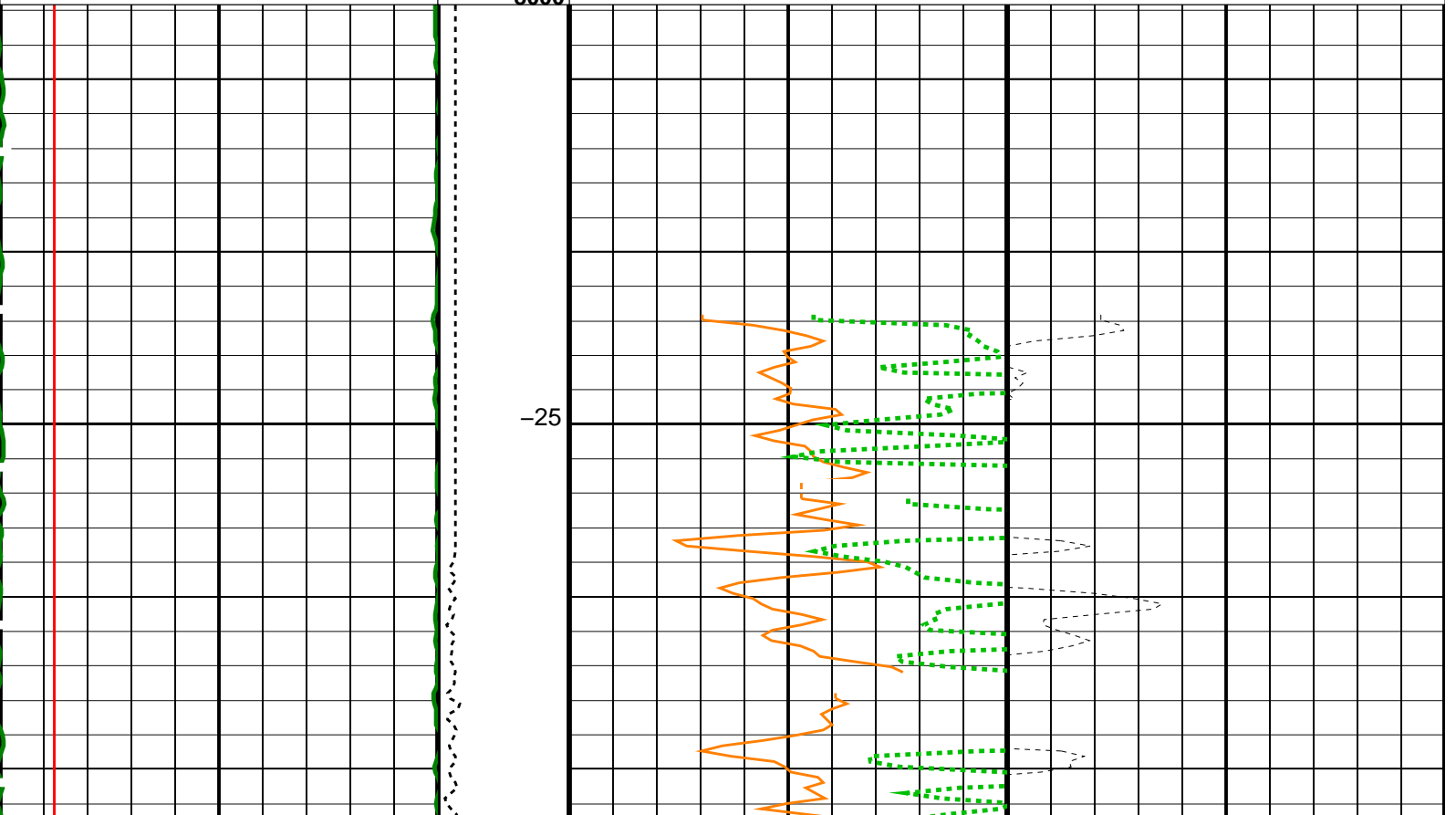
DEFAULT MSS\_LDEO\_LDL\_NGS\_046PUP FN:42 PRODUCER 10-Nov-2011 17:34 328.1 M -37.2 M

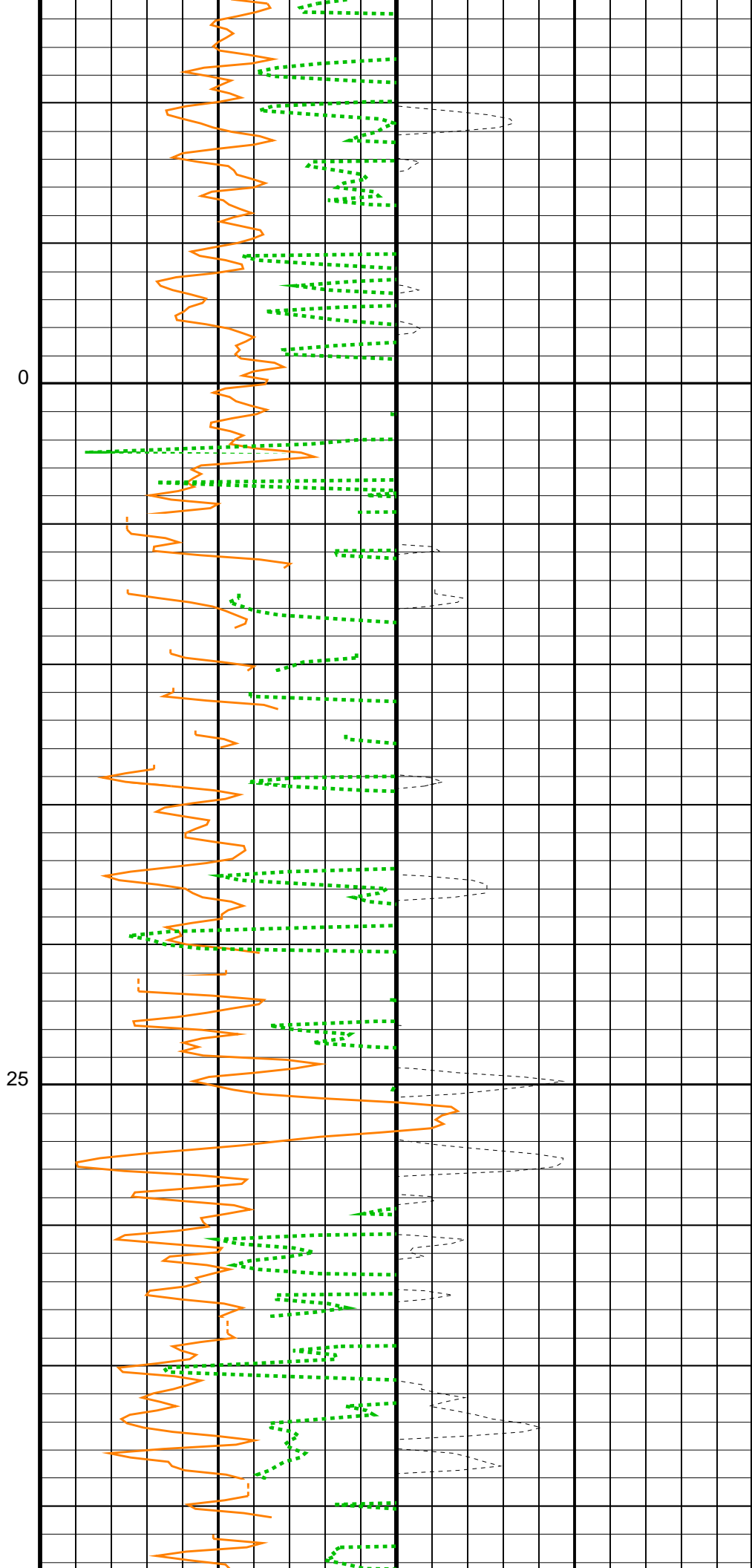
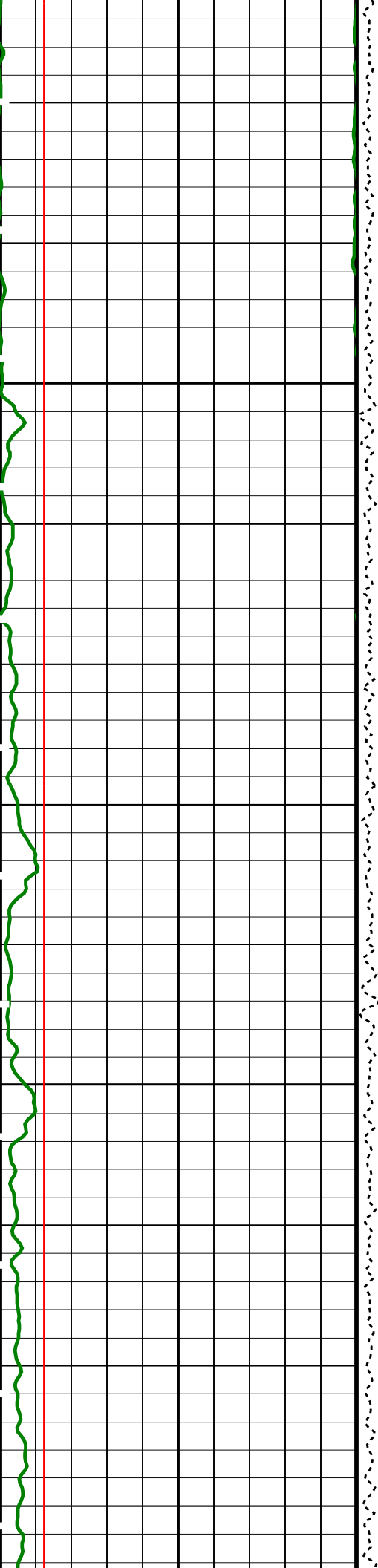
OP System Version: 19C0-187

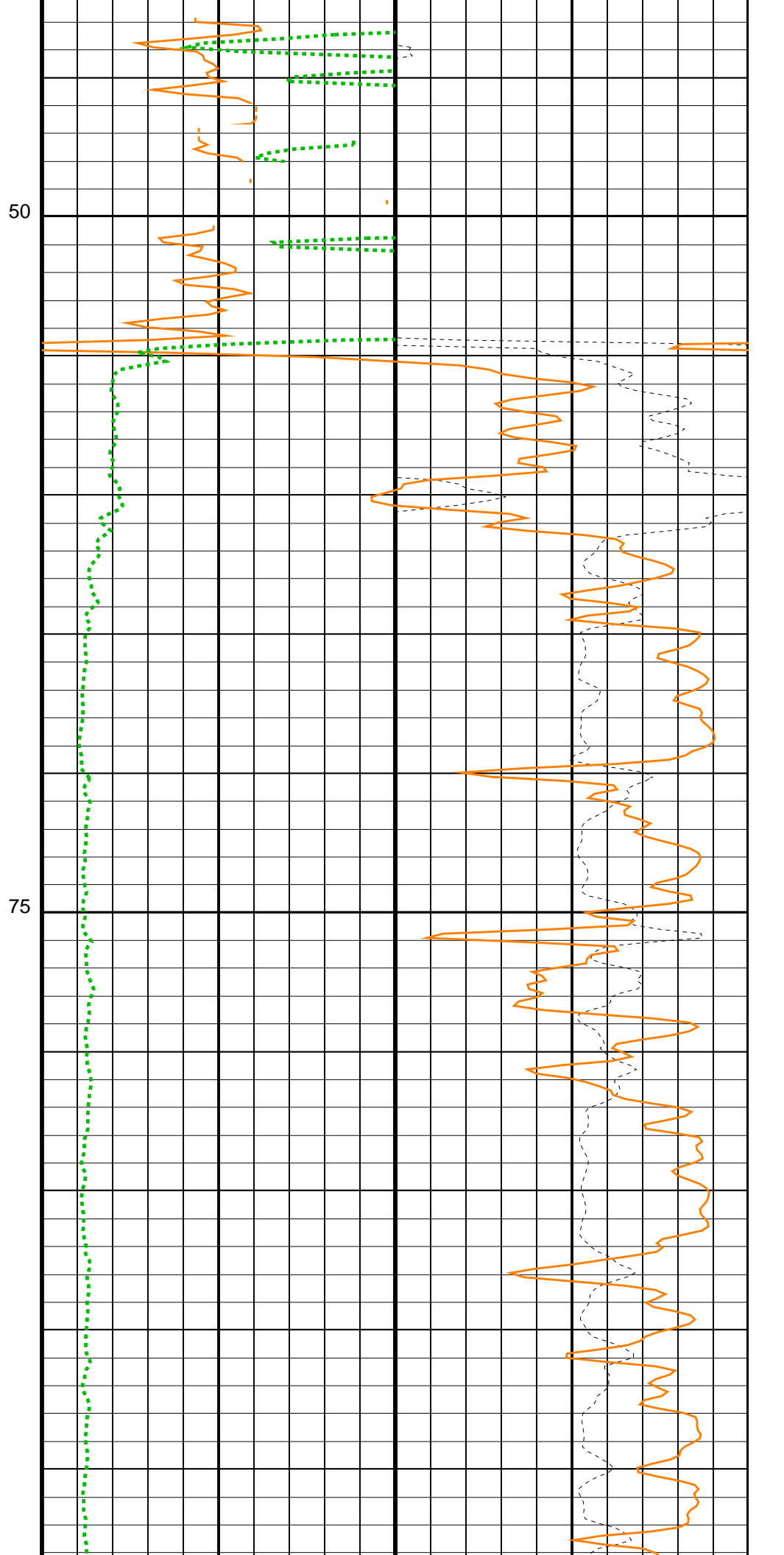
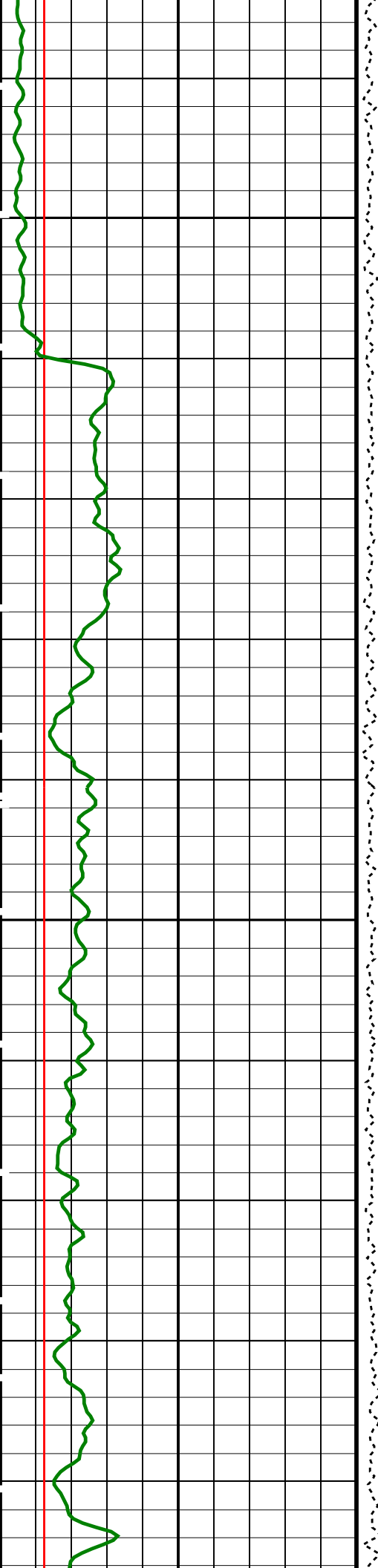
MSS\_LDEO-DEBIT 19C0-187 HLDS 19C0-187  
 LDSC-B 19C0-187 HNGC-B 19C0-187  
 HNGS-BA 19C0-187 EDTC-B 19C0-187

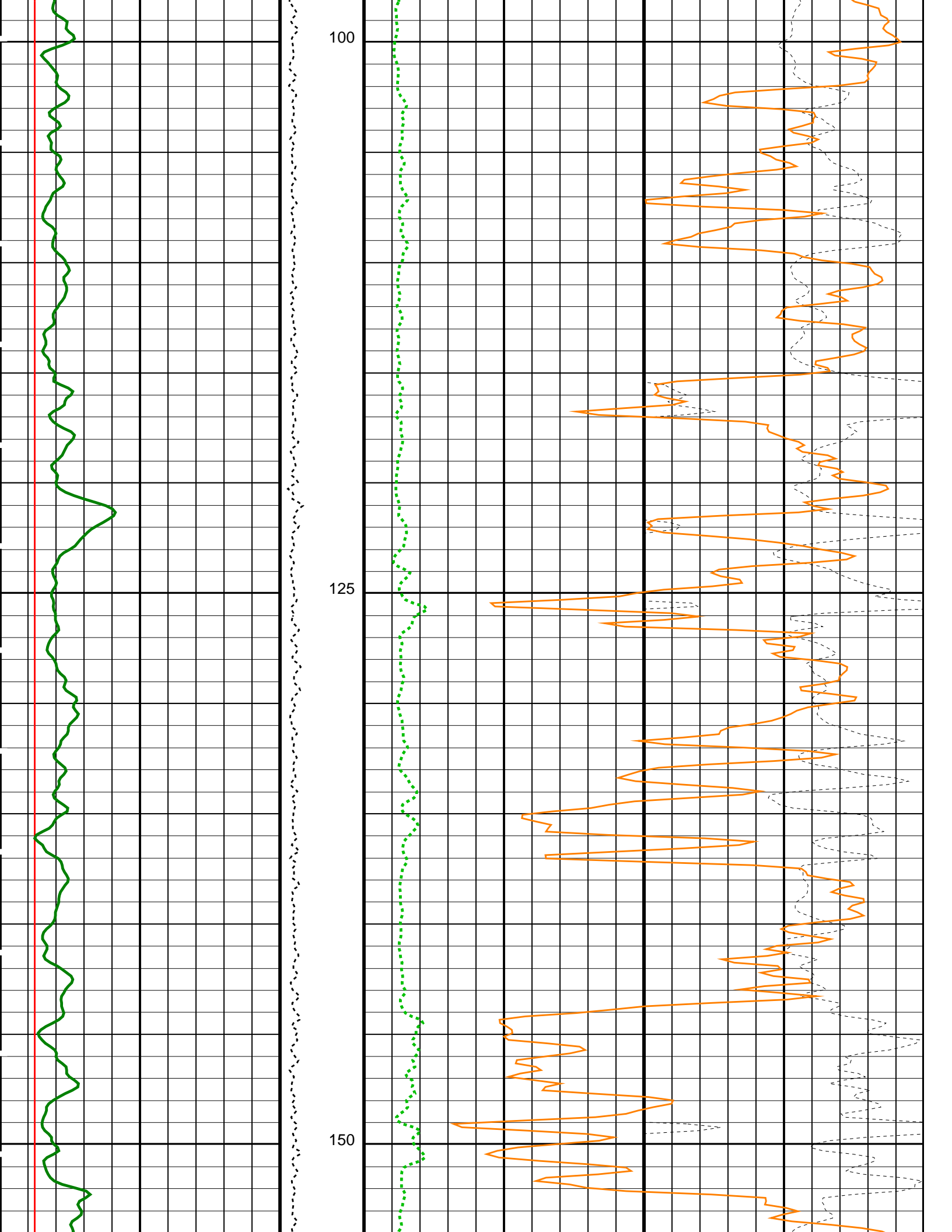
PIP SUMMARY

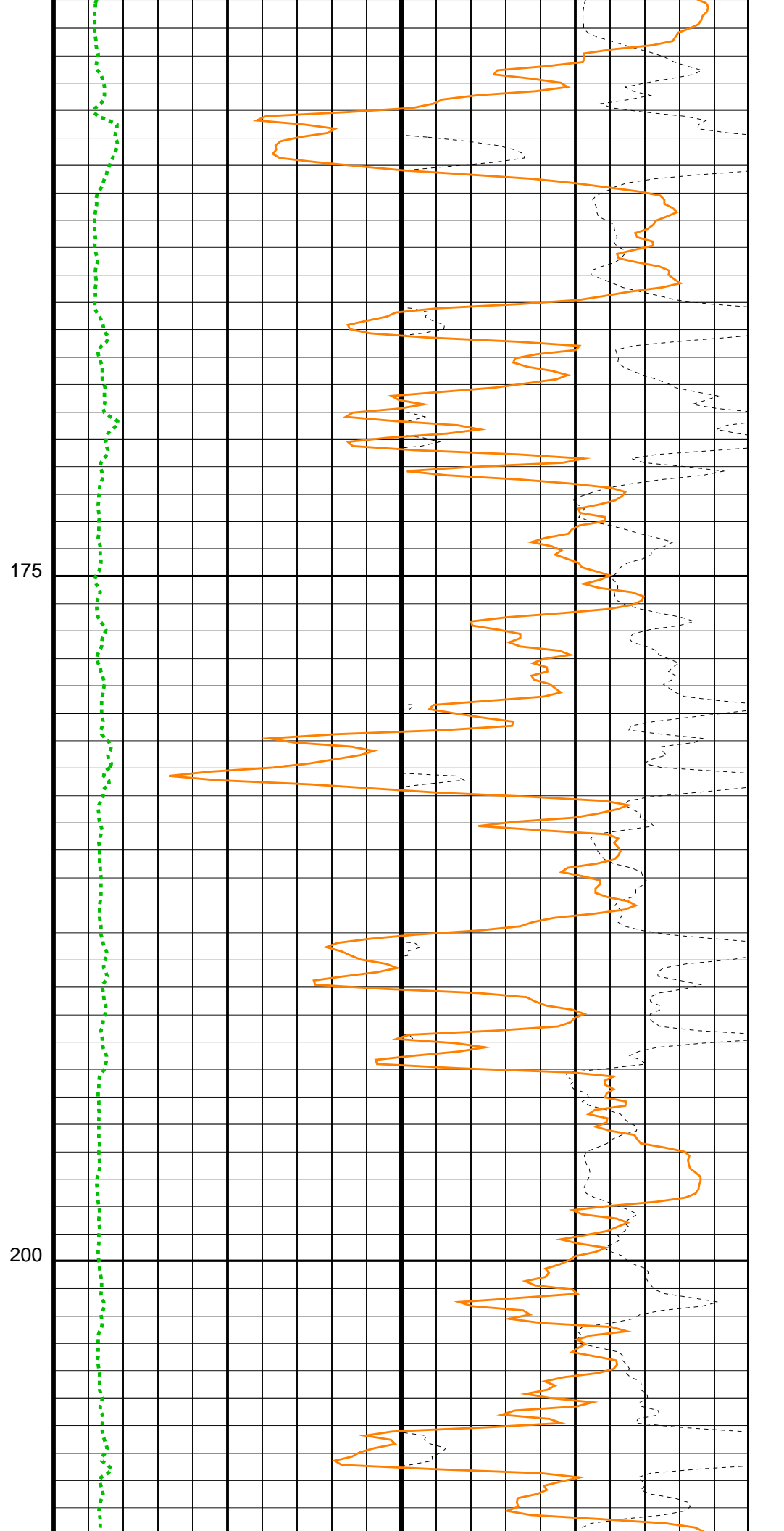
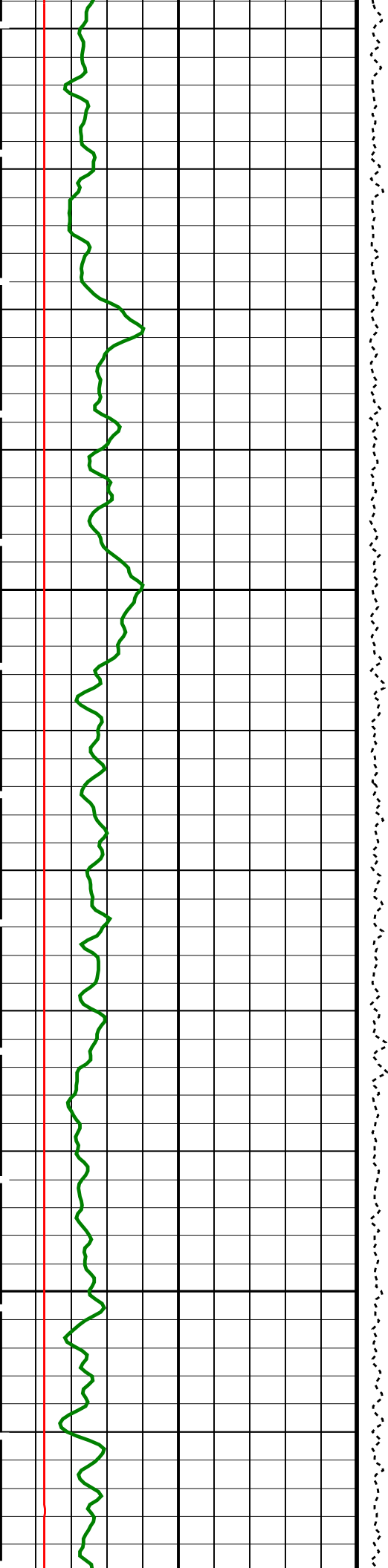
Time Mark Every 60 S

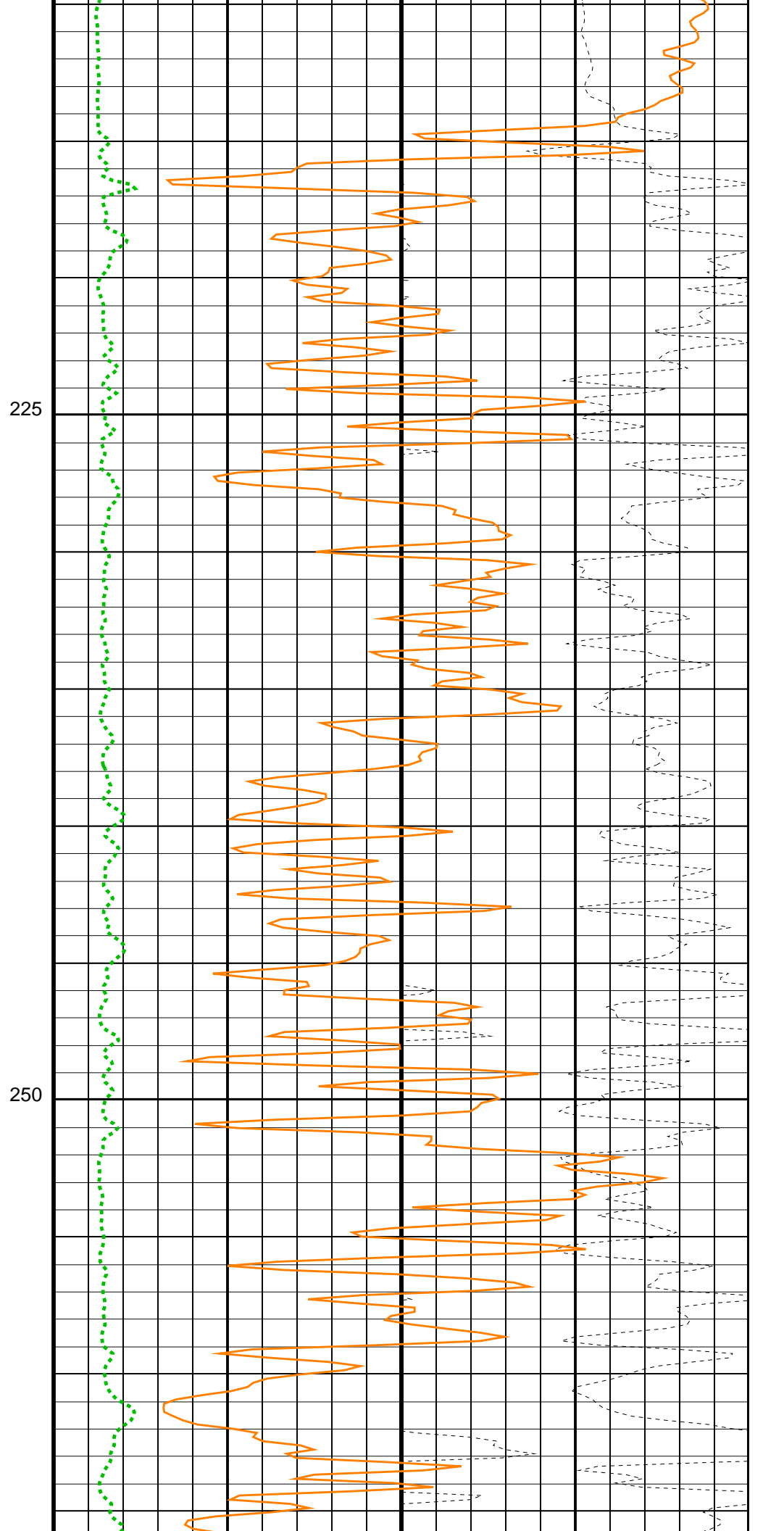
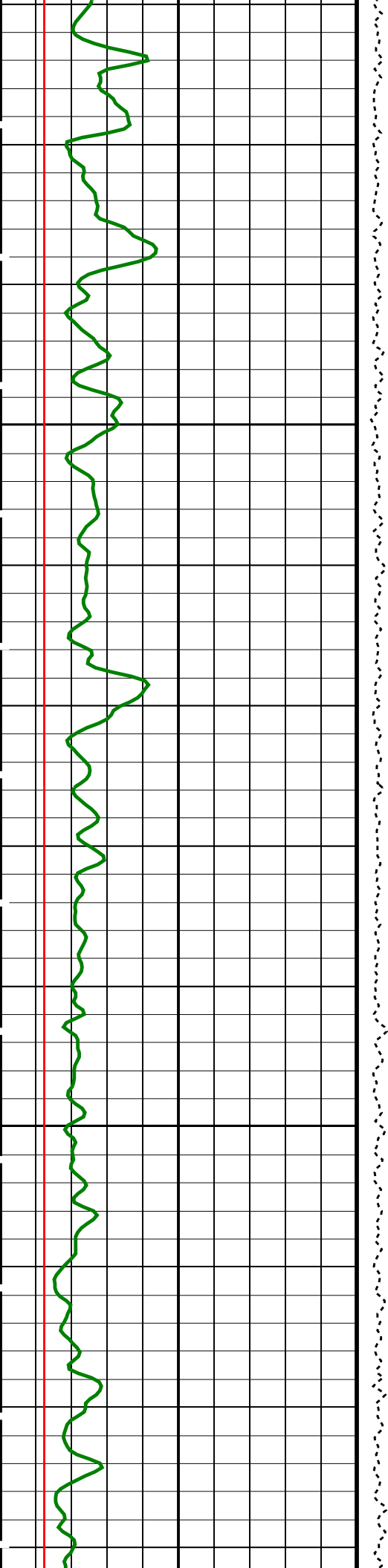


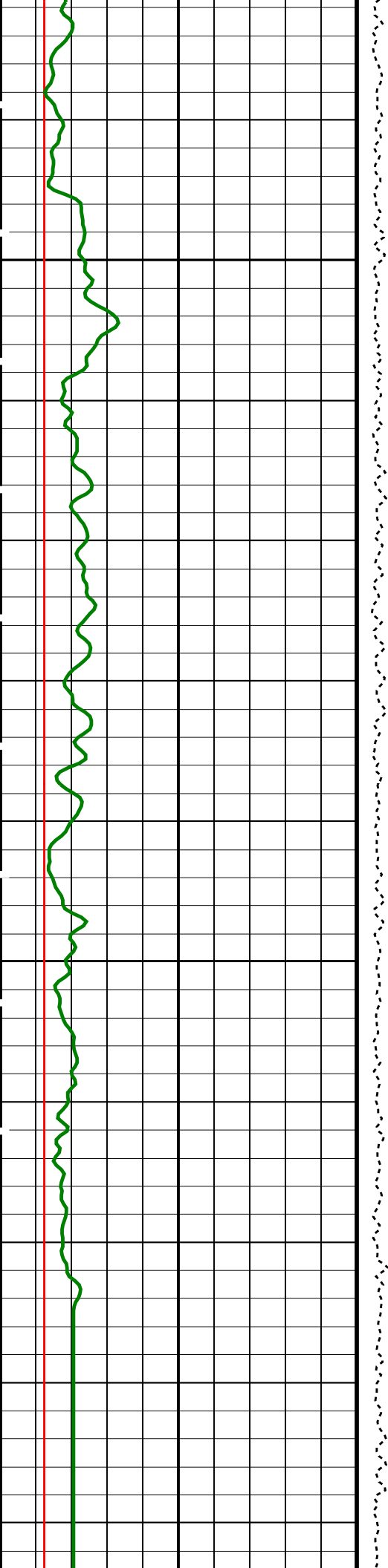






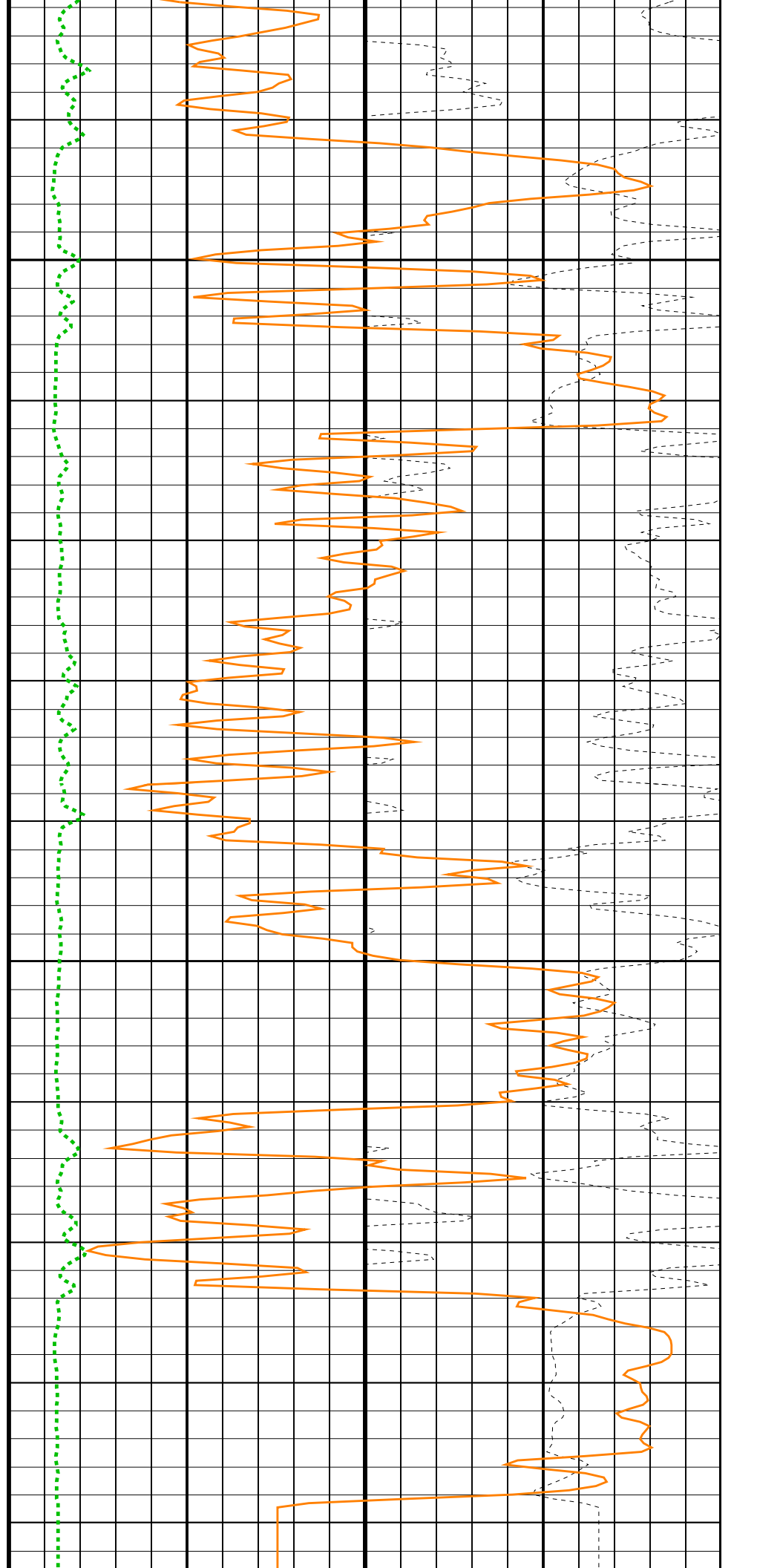






275

300





		325		
<b>HLDS Caliper (LCAL)</b>		<b>Tension (TENS) (LBF)</b>	<b>HLDS Bulk Density (RHOM)</b>	
0	(IN)	20	3	(G/C3)
		4000		
		8000		
<b>HNGS Spectroscopy Gamma Ray (HSGR)</b>			<b>HLDS Long Spaced Photoelectric Effect (PEFL)</b>	
0	(GAPI)	25	0	(G/C3)
			10	
			<b>HLDS Bulk Density Correction (DRH)</b>	
			-0.25	0.25

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
<b>HLDS: Hostile Litho-Density Sonde</b>		
DHC	Density Hole Correction	CALIPER
DPPM	Density Porosity Processing Mode	HIRS
FD	Fluid Density	1 G/C3
LATC	HLDS Activation Correction	ON
MDEN	Matrix Density	2.71 G/C3
<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
CSD1	Inner Casing Outer Diameter	0 IN
CSD2	Outer Casing Outer Diameter	0 IN
CSW1	Inner Casing Weight	0 LB/F
CSW2	Outer Casing Weight	0 LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE
GCSE	Generalized Caliper Selection	LCAL
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW
HABK	HNGS Borehole Potassium Running Average	0
HALF	HNGS Alpha Filter Length	60 IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE
HMWM	Mud Weighting Material	NATU
HNPE	HNGS Processing Enable	YES
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3 CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3 CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES
TPOS	Tool Position	ECCE
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0
<b>EDTC-B: Enhanced DTS Cartridge</b>		
BHS	Borehole Status	OPEN
DPPM	Density Porosity Processing Mode	HIRS
GCSE	Generalized Caliper Selection	LCAL
<b>System and Miscellaneous</b>		
BS	Bit Size	9.875 IN
DFD	Drilling Fluid Density	1.05 G/C3
DO	Depth Offset for Playback	-4421.8 M
PP	Playback Processing	NORMAL

Format: HLDSDensityPE

Vertical Scale: 1:200

Graphics File Created: 10-Nov-2011 17:34

OP System Version: 19C0-187

MSS_LDEO-DEBIT	19C0-187	HLDS	19C0-187
LDSC-B	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	EDTC-B	19C0-187

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_LDL_040LUP	PRODUCER	10-Nov-2011 17:22	4749.9 M	4384.5 M
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# Output DLIS Files

DEFAULT

MSS\_LDEO\_LDL\_NGS\_046PUP

FN:42

PRODUCER

10-Nov-2011 17:34



## Calibrations

### MAXIS Field Log

#### Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Hostile Litho-Density Sonde Wellsite Calibration – Background Measurement							
Master: 16-Sep-2011 9:31 Before: 3-Nov-2011 4:24 After: 3-Nov-2011 15:42							
SS Cs Resolution Bkg	9.000	7.738	7.723	7.659	-0.06371	1.800	%
LS Cs Resolution Bkg	9.000	8.115	8.129	7.999	-0.1296	1.800	%
LSW1 Background	100.0	90.00	87.35	87.82	0.4680	3.000	CPS
LSW2 Background	100.0	79.46	79.21	78.81	-0.3948	3.000	CPS
LSW3 Background	200.0	182.4	181.9	178.7	-3.169	6.000	CPS
LSW4 Background	250.0	223.0	225.9	223.4	-2.466	7.500	CPS
LSW5 Background	600.0	526.1	525.5	525.5	0.02631	18.00	CPS
SSW1 Background	100.0	84.99	84.63	85.34	0.7045	3.000	CPS
SSW2 Background	200.0	147.1	148.3	147.7	-0.5619	6.000	CPS
SSW3 Background	500.0	413.1	414.3	411.6	-2.690	15.00	CPS
SSW4 Background	270.0	220.0	221.6	222.5	0.9177	8.100	CPS
SSW5 Background	200.0	157.9	157.7	159.3	1.619	6.000	CPS
Hostile Litho-Density Sonde Wellsite Calibration – Aluminum Measurement							
Master: 16-Sep-2011 9:31							
LSW1 Aluminum	600.0	554.8	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	809.5	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	975.9	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	495.9	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	452.5	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2638	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	7210	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	10070	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	4124	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	502.8	N/A	N/A	N/A	N/A	CPS
Hostile Litho-Density Sonde Wellsite Calibration – Lithology Measurement							
Master: 16-Sep-2011 9:31							
LSW1 Iron	400.0	383.3	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	664.3	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	884.0	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	466.3	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	427.8	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1972	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	6170	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	9403	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3878	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	460.6	N/A	N/A	N/A	N/A	CPS
Hostile Litho-Density Sonde Wellsite Calibration – Caliper Calibration							
Before: 2-Oct-2011 12:06							
HLDS Caliper Small Ring	12.00	N/A	13.51	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	15.14	N/A	16.99	N/A	N/A	N/A	IN
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 1 Check							
Master: 15-Sep-2011 14:01 Before: 3-Nov-2011 4:25 After: 3-Nov-2011 15:43							
Na 511 Peak Loc	40.00	39.54	39.46	39.71	0.2449	1.000	
Na 511 Peak Res	15.50	16.51	15.68	15.44	-0.2399	2.000	%
High Voltage	1150	1190	1180	1182	2.306	N/A	V
Na 1785 Peak Loc	142.6	141.9	140.6	142.2	1.627	7.000	
Na 1785 Peak Res	8.500	8.871	8.450	9.053	0.6024	2.000	%

Temperature	15.50	35.19	32.51	29.99	-2.517	N/A	DEGC
Na Count Rate	45.00	22.03	20.00	20.60	0.6067	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 2 Check

Master: 15-Sep-2011 14:01 Before: 3-Nov-2011 4:25 After: 3-Nov-2011 15:43

Na 511 Peak Loc	40.00	39.52	39.51	39.49	-0.01595	1.000	
Na 511 Peak Res	15.50	16.45	16.27	16.41	0.1346	2.000	%
High Voltage	1150	1121	1113	1112	-0.9176	N/A	V
Na 1785 Peak Loc	142.6	142.5	141.9	142.9	0.9857	7.000	
Na 1785 Peak Res	8.500	8.764	8.757	8.333	-0.4236	2.000	%
Temperature	15.50	35.72	33.13	31.82	-1.305	N/A	DEGC
Na Count Rate	45.00	22.83	20.52	20.82	0.3000	8.000	CPS

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

Master: 15-Sep-2011 14:01 Before: 3-Nov-2011 4:25 After: 3-Nov-2011 15:43

Coincidence Count Rate Ratio	1.000	0.9670	0.9778	0.9907	0.01287	0.05000	
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Hostile Litho-Density Sonde / Equipment Identification

Primary Equipment:

Hostile Litho Density Sonde	HLDS – D	45
Hostile Litho Density High Voltage	HLDV – D	45
Gamma Source Radioactive	GSR – Z	2397

Auxiliary Equipment:

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

Hostile Litho-Density Sonde Wellsite Calibration

Background Measurement

Phase	SS Cs Resolution Bkg %	Value	Phase	LS Cs Resolution Bkg %	Value	Phase	LSW1 Background CPS	Value
Master		7.738	Master		8.115	Master		90.00
Before		7.723	Before		8.129	Before		87.35
After		7.659	After		7.999	After		87.82
	7.000 (Minimum) 9.000 (Nominal) 11.000 (Maximum)			7.000 (Minimum) 9.000 (Nominal) 11.000 (Maximum)			55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)	
Phase	LSW2 Background CPS	Value	Phase	LSW3 Background CPS	Value	Phase	LSW4 Background CPS	Value
Master		79.46	Master		182.4	Master		223.0
Before		79.21	Before		181.9	Before		225.9
After		78.81	After		178.7	After		223.4
	50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)			110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)			140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)	
Phase	LSW5 Background CPS	Value	Phase	SSW1 Background CPS	Value	Phase	SSW2 Background CPS	Value
Master		526.1	Master		84.99	Master		147.1
Before		525.5	Before		84.63	Before		148.3
After		525.5	After		85.34	After		147.7
	330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)			55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)			100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)	
Phase	SSW3 Background CPS	Value	Phase	SSW4 Background CPS	Value	Phase	SSW5 Background CPS	Value
Master		413.1	Master		220.0	Master		157.9
Before		414.3	Before		221.6	Before		157.7
After		411.6	After		222.5	After		159.3
	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: 16-Sep-2011 9:31			Before: 3-Nov-2011 4:24			After: 3-Nov-2011 15:42		

Litho-Density Spectroscopy Cartridge – B / Equipment Identification

Primary Equipment:

LDSC Cartridge	LDSC – B	521
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Auxiliary Equipment:

LDSC Housing	LDSH – A	319
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**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		39.54	Master		16.51	Master		1190	
Before		39.46	Before		15.68	Before		1180	
After		39.71	After		15.44	After		1182	
	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		141.9	Master		8.871	Master		35.19	
Before		140.6	Before		8.450	Before		32.51	
After		142.2	After		9.053	After		29.99	
	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		22.03							
Before		20.00							
After		20.60							
	10.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)						

Master: 15-Sep-2011 14:01

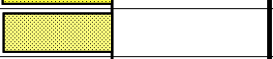
Before: 3-Nov-2011 4:25

After: 3-Nov-2011 15:43




**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		39.52	Master		16.45	Master		1121	
Before		39.51	Before		16.27	Before		1113	
After		39.49	After		16.41	After		1112	
	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		142.5	Master		8.764	Master		35.72	
Before		141.9	Before		8.757	Before		33.13	
After		142.9	After		8.333	After		31.82	
	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		22.83							
Before		20.52							

After		20.82
	10.00 (Minimum)	45.00 (Nominal)
		100.0 (Maximum)

Master: 15-Sep-2011 14:01      Before: 3-Nov-2011 4:25      After: 3-Nov-2011 15:43

Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		0.9670
Before		0.9778
After		0.9907
	0.9500 (Minimum)	1.000 (Nominal)
		1.050 (Maximum)
Master: 15-Sep-2011 14:01		
Before: 3-Nov-2011 4:25		
After: 3-Nov-2011 15:43		

Company: **Lamont Doherty**

**Schlumberger**

Well: **Expedition 336, Site U1383C**

Field: **North Pond**

Rig: **JOIDES Resolution**

Country: **USA**

HLDS Litho-Density