

Company: Lamont Doherty

Well: ODP Leg 207 Site 1261B

Field: Demarara Rise

Country: Venezuela

Ocean: Atlantic

Phasor Induction Natural Gamma Ray

Country: Venezuela		Elev.: K.B. 11.3 m	
Field: Demarara Rise		G.L. -1911 m	
Location: 9.04866 Deg North, 54.3175 Deg West		D.F. 11 m	
Well: ODP Leg 207 Site 1261B		Elev.: 0 m	
Company: Lamont Doherty		11.3 m above Perm. Datum	
LOCATION			
Permanent Datum: MSL			
Log Measured From: DES			
Drilling Measured From: DES			
API Serial No.	Max. Hole Devi.	Longitude	Latitude

Logging Date	21-Feb-2003		
Run Number	1		
Depth Driller	2585 m		
Schlumberger Depth	2564 m		
Bottom Log Interval	2558 m		
Top Log Interval	1901 m		
Casing Driller Size @ Depth	0.000 in @ 2013 m		
Casing Schlumberger	2010 m		
Bit Size	9.875 in		
Type Fluid In Hole	Sepolite Salt Water		
Density	1.1 g/cm3		
Fluid Loss	PH		
Source Of Sample	Mudpit		
RM @ Measured Temperature	0.258 ohm.m @ 32 degC		
RMF @ Measured Temperature	@ @		
RMC @ Measured Temperature	@ @		
Source RMF	RMC		
RM @ MRT	0.349 @ 18 @ 18		
Maximum Recorded Temperatures	18 degC		
Circulation Stopped	Time		
Logger On Bottom	21-Feb-2003 Time 20:15		
Unit Number	99 Location Houston, TX ODP		
Recorded By	K. Swain		
Witnessed By	B. Rea, F. Heidersdorf		

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

Logging Date	21-Feb-2003		
Run Number	1		
Depth Driller	2585 m		
Schlumberger Depth	2564 m		
Bottom Log Interval	2558 m		
Top Log Interval	1901 m		
Casing Driller Size @ Depth	0.000 in @ 2013 m		
Casing Schlumberger	2010 m		
Bit Size	9.875 in		
Type Fluid In Hole	Sepolite Salt Water		
Density	1.1 g/cm3		
Fluid Loss	PH		
Source Of Sample	Mudpit		
RM @ Measured Temperature	0.258 ohm.m @ 32 degC		
RMF @ Measured Temperature	@ @		
RMC @ Measured Temperature	@ @		
Source RMF	RMC		
RM @ MRT	0.349 @ 18 @ 18		
Maximum Recorded Temperatures	18 degC		
Circulation Stopped	Time		
Logger On Bottom	21-Feb-2003 Time 20:15		
Unit Number	99 Location Houston, TX ODP		
Recorded By	K. Swain		
Witnessed By	B. Rea, F. Heidersdorf		

DISCLAIMER



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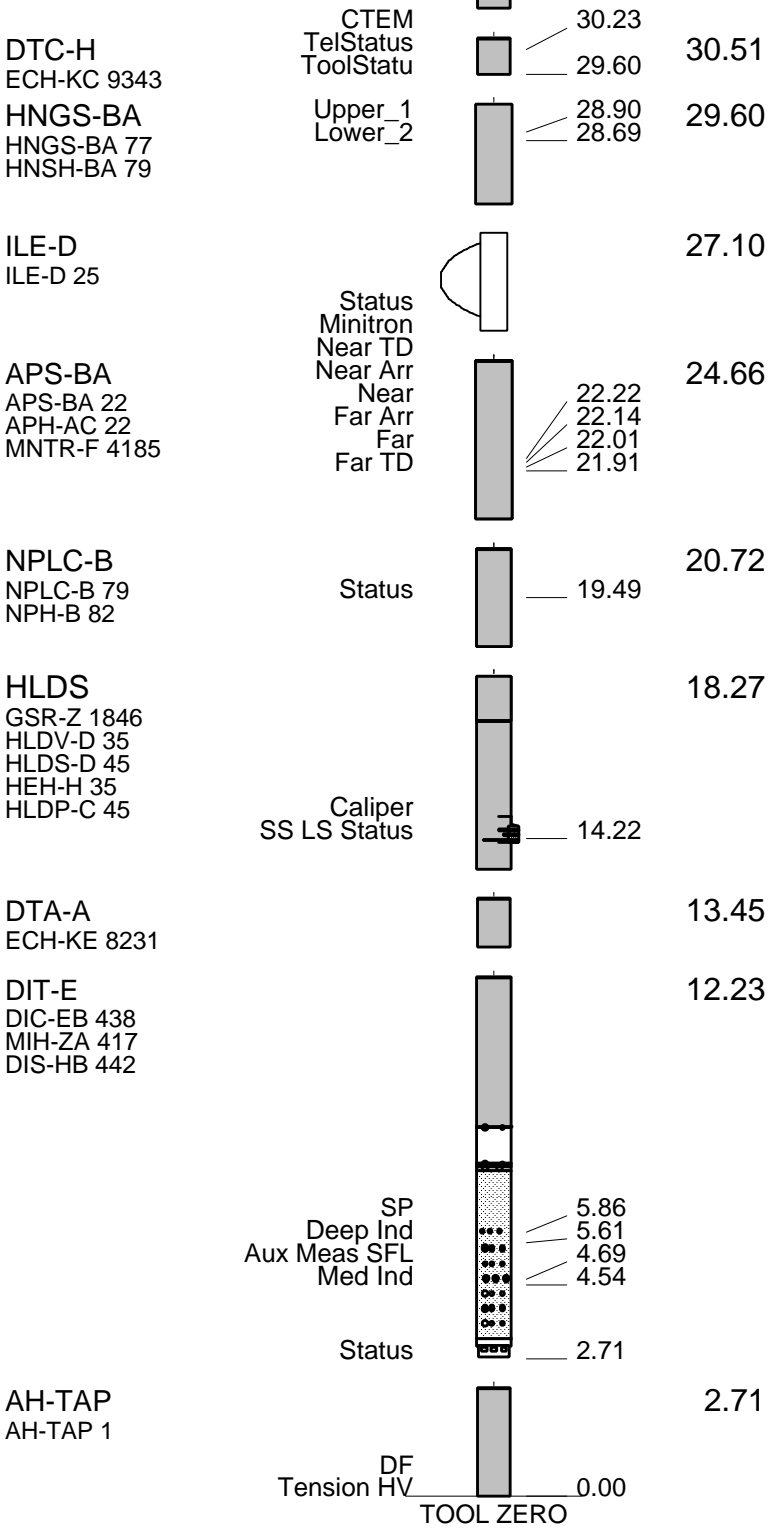
OTHER SERVICES1 OS1: DITE OS2: HLDS/APS/HNGS OS3: WST OS4: FMS OS5:	OTHER SERVICES2 OS1: OS2: OS3: OS4: OS5:
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REMARKS: RUN NUMBER 1 Hole cored with RCB, 9 7/8" bit. Driller Sea Floor at:1911 mbrf. Log measured in meters below rig floor.	REMARKS: RUN NUMBER 2
Wireline heave compensator used on all runs. Sepiolite mud was used to displace the hole. Driller TD= 2585mbrf. Schlumberger TD= 2564 mbrf. Drill pipe Schlumberger= 2010mbrf. See Lamont TAP tool for bottom hole temperature.	

RUN 1			RUN 2		
SERVICE ORDER #:	10C0-306		SERVICE ORDER #:		
PROGRAM VERSION:			PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1		RUN 2	
SURFACE EQUIPMENT			
SFT-281 24 SFT-178 4722 GSR-U 135 WITM (DTS)-A			
DOWNHOLE EQUIPMENT			
LEH-QT		37.04	
LEH-QT 1497			
AH-MGT		36.15	
AH-MGT			



TOOL ZERO

MAXIMUM STRING DIAMETER 3.88 IN
 MEASUREMENTS RELATIVE TO TOOL ZERO
 ALL LENGTHS IN METERS

Output DLIS Files

DEFAULT	PI_LDL_APS_NGS_008LUP	FN:12	PRODUCER	21-Feb-2003 21:50	2564.9 M	1881.7 M
REDUCE	PI_LDL_APS_NGS_008LUP	FN:13	PRODUCER	21-Feb-2003 21:50	2564.9 M	1881.7 M

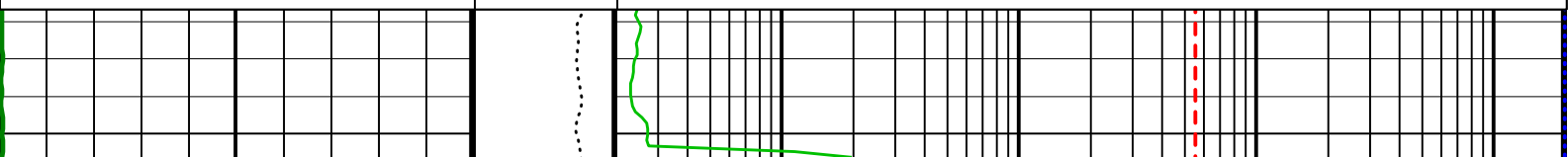
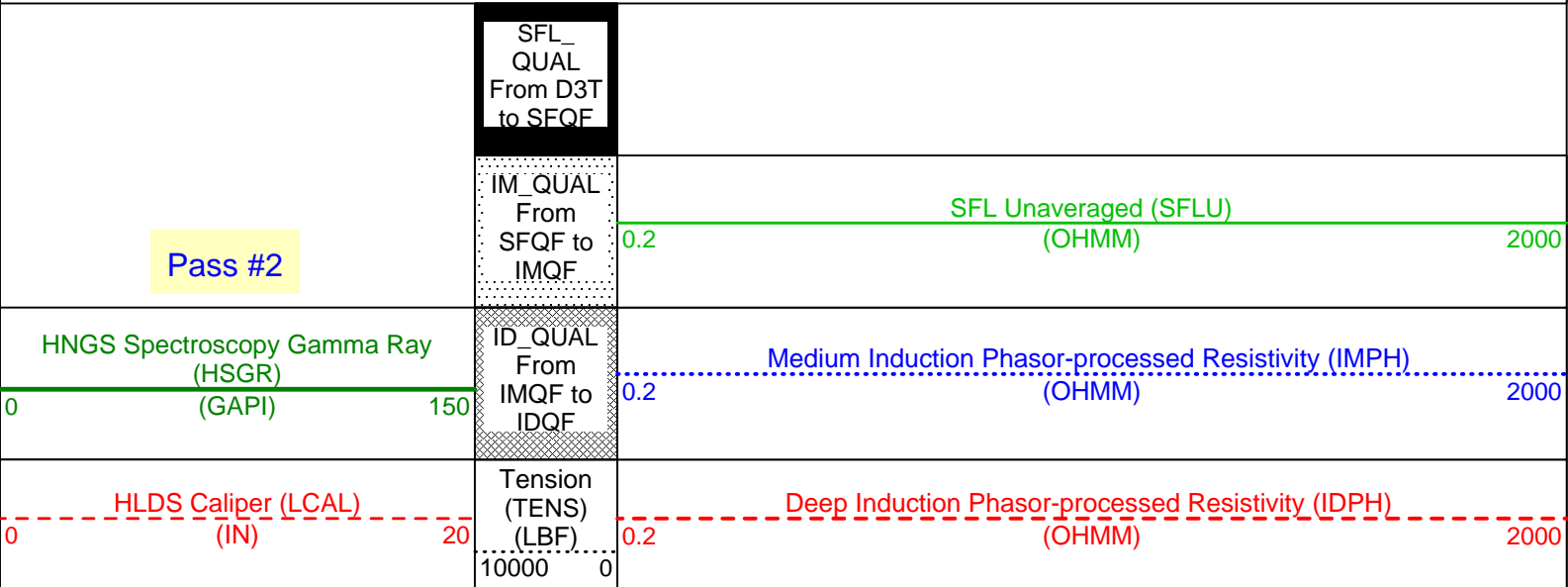
OP System Version: 10C0-306

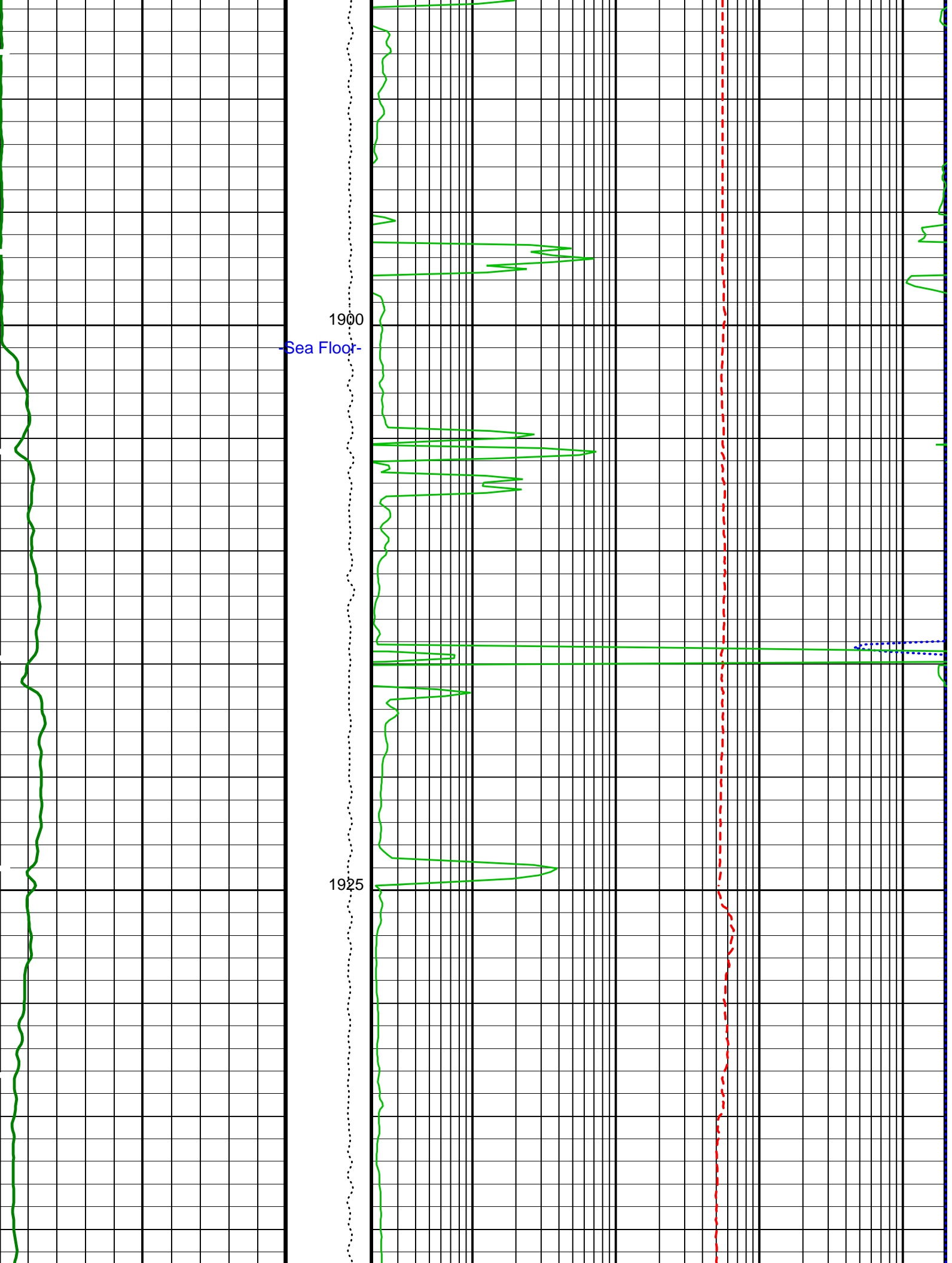
MCM

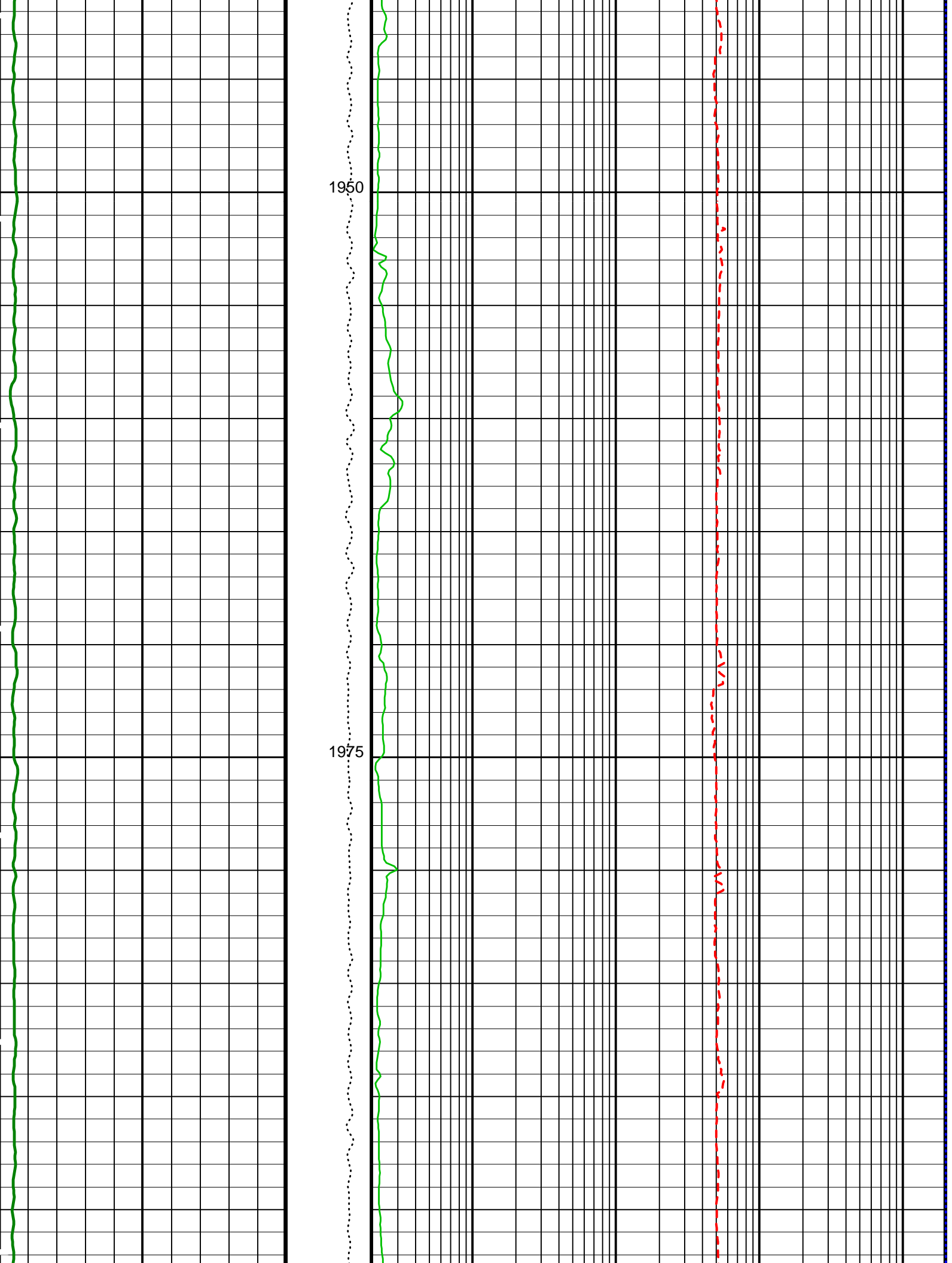
DIT-E	10C0-306	DTA-A	10C0-306
HLDS	SPC-2277-NUCL_b	NPLC-B	OP10-KP1
APS-BA	SPC-2277-NUCL_b	HNGS-BA	SPC-2277-NUCL_b
DTC-H	10C0-306		

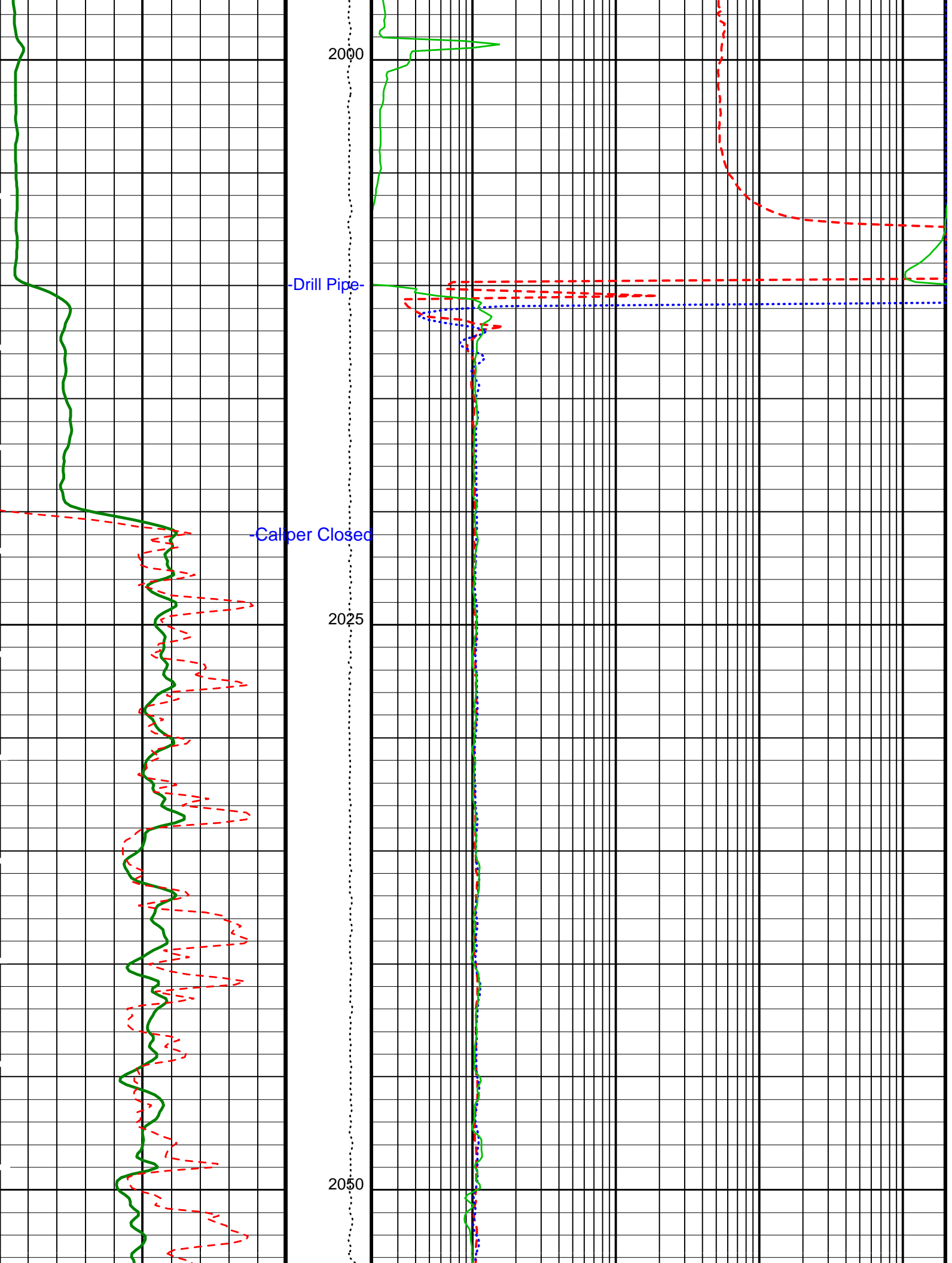
PIP SUMMARY

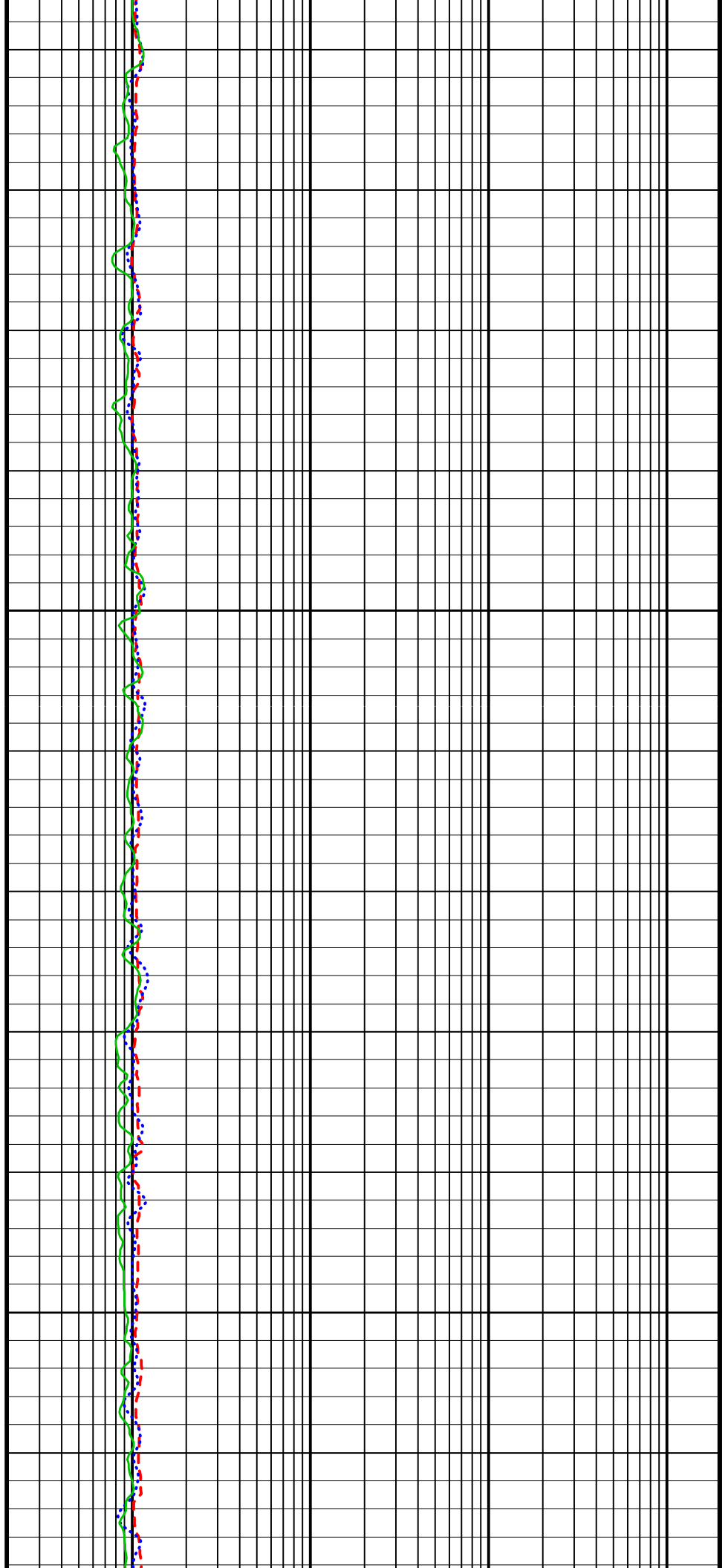
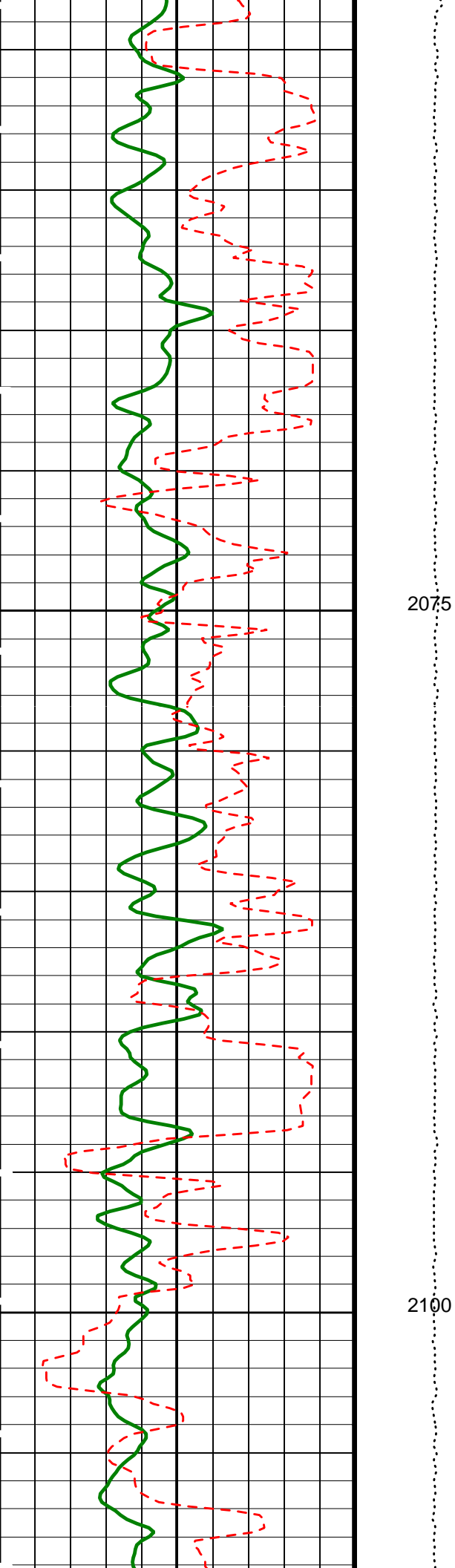
Time Mark Every 60 S

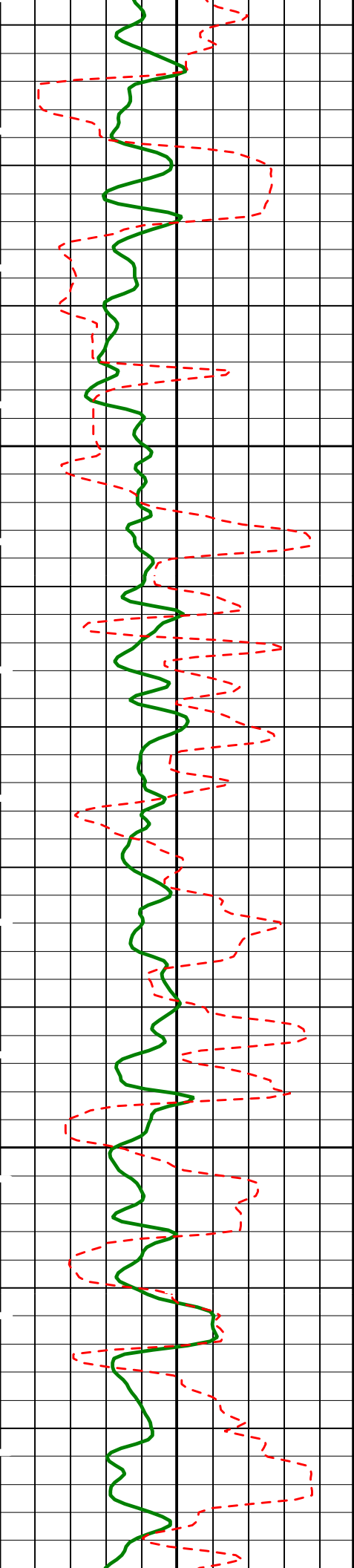






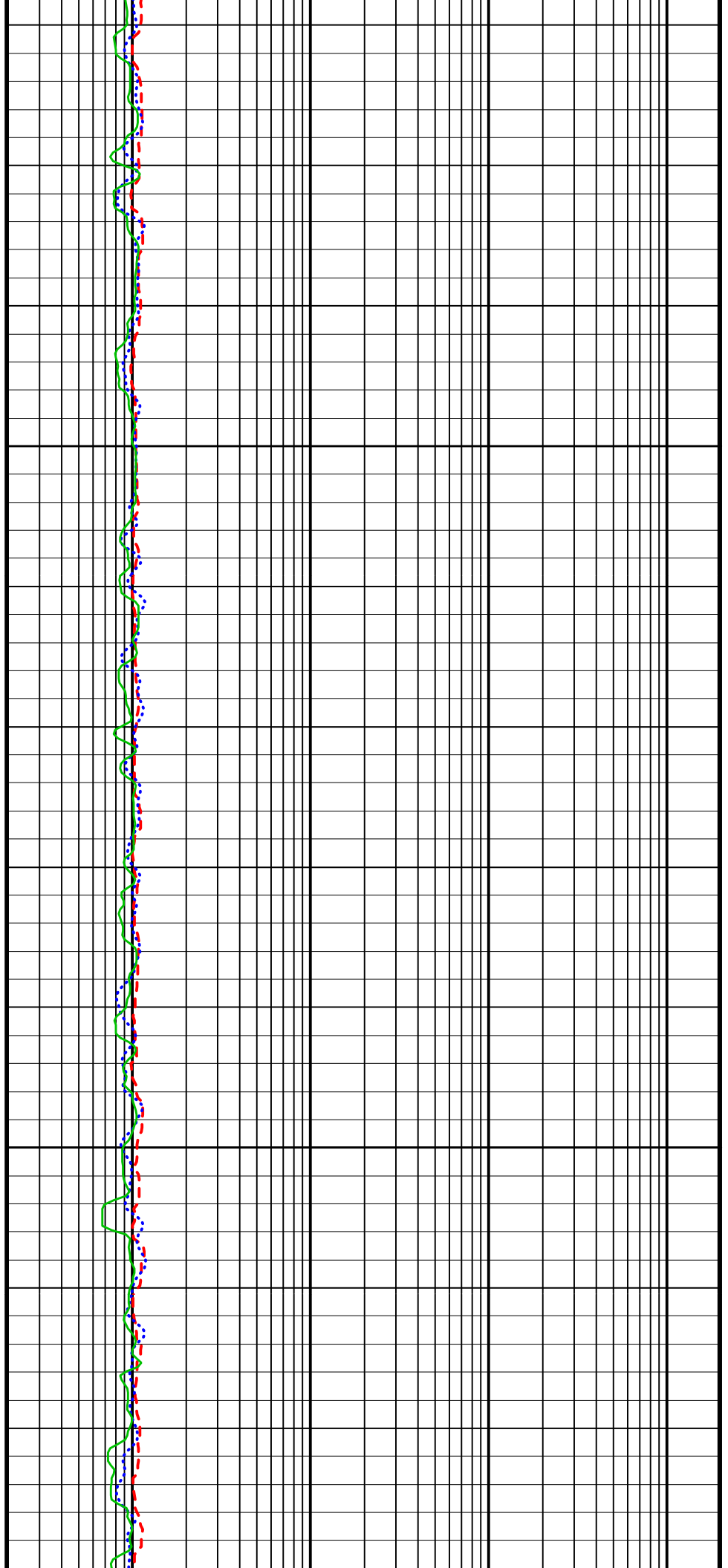


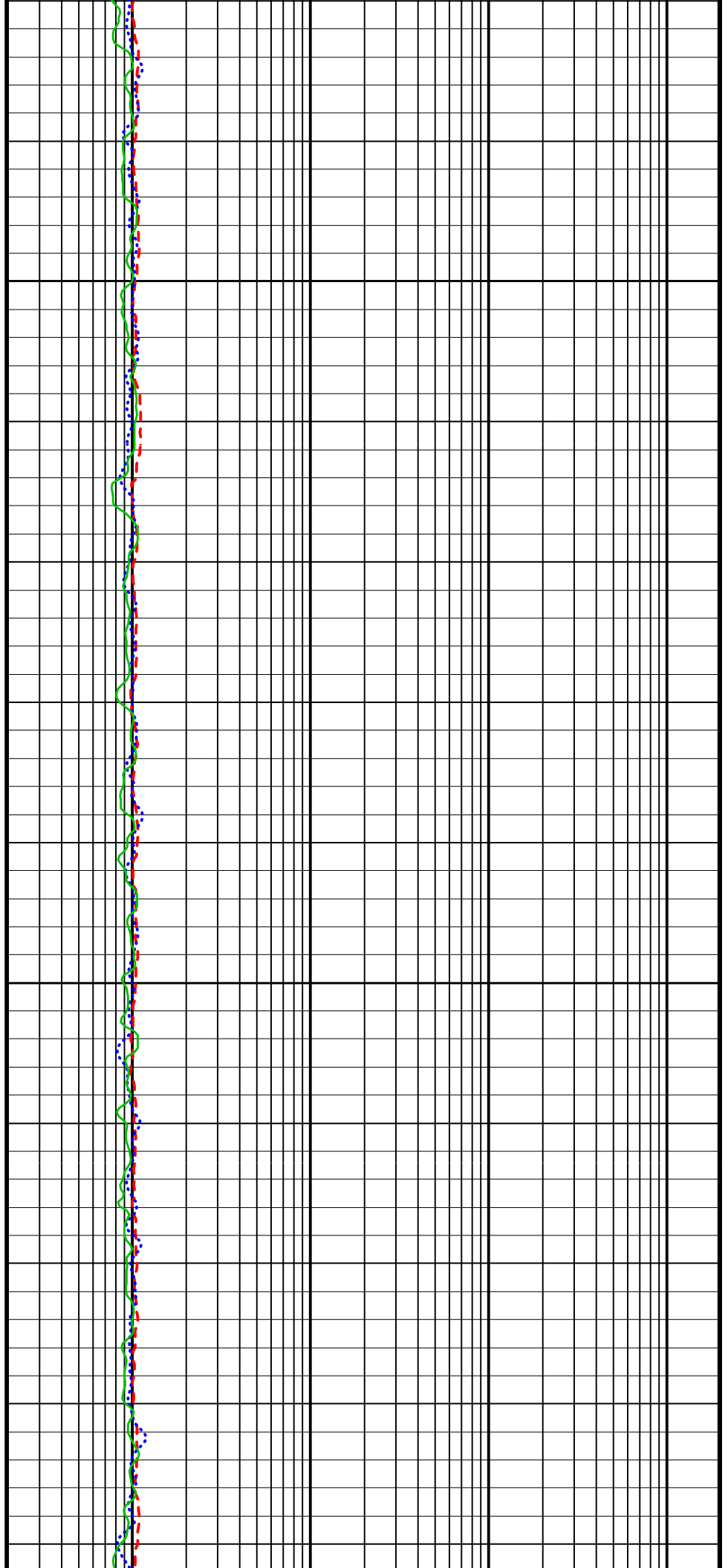
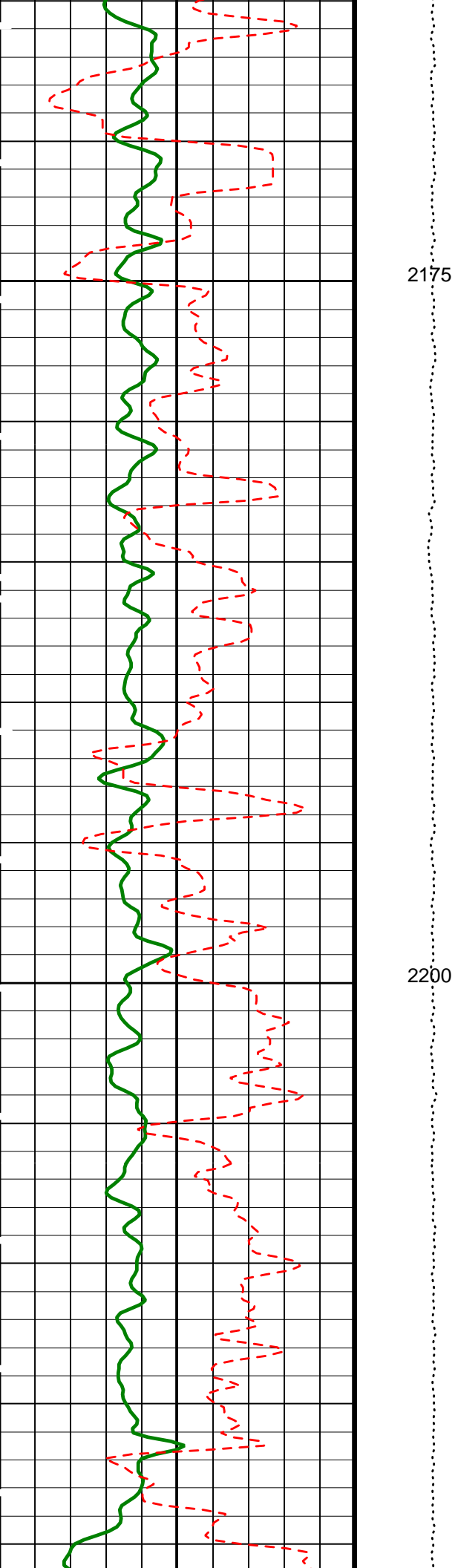


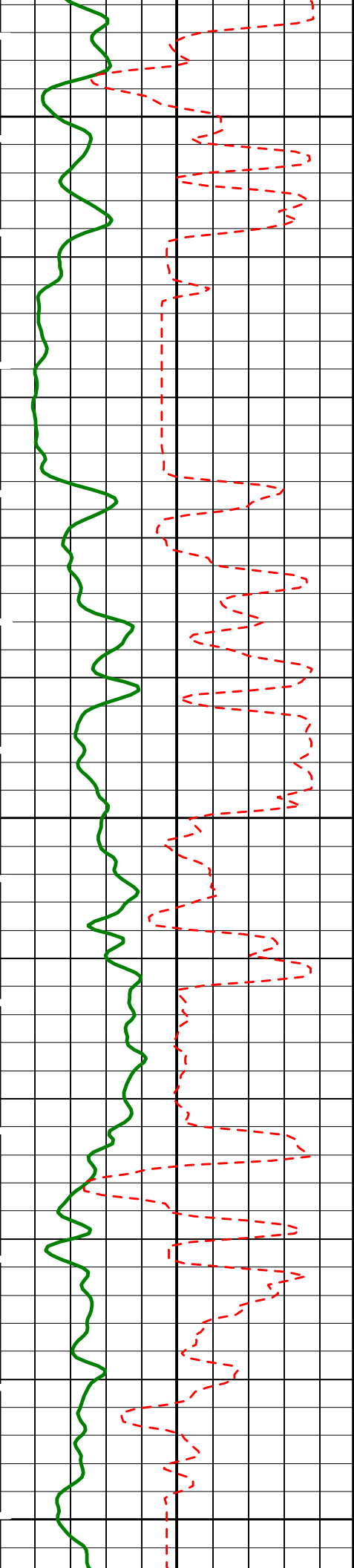


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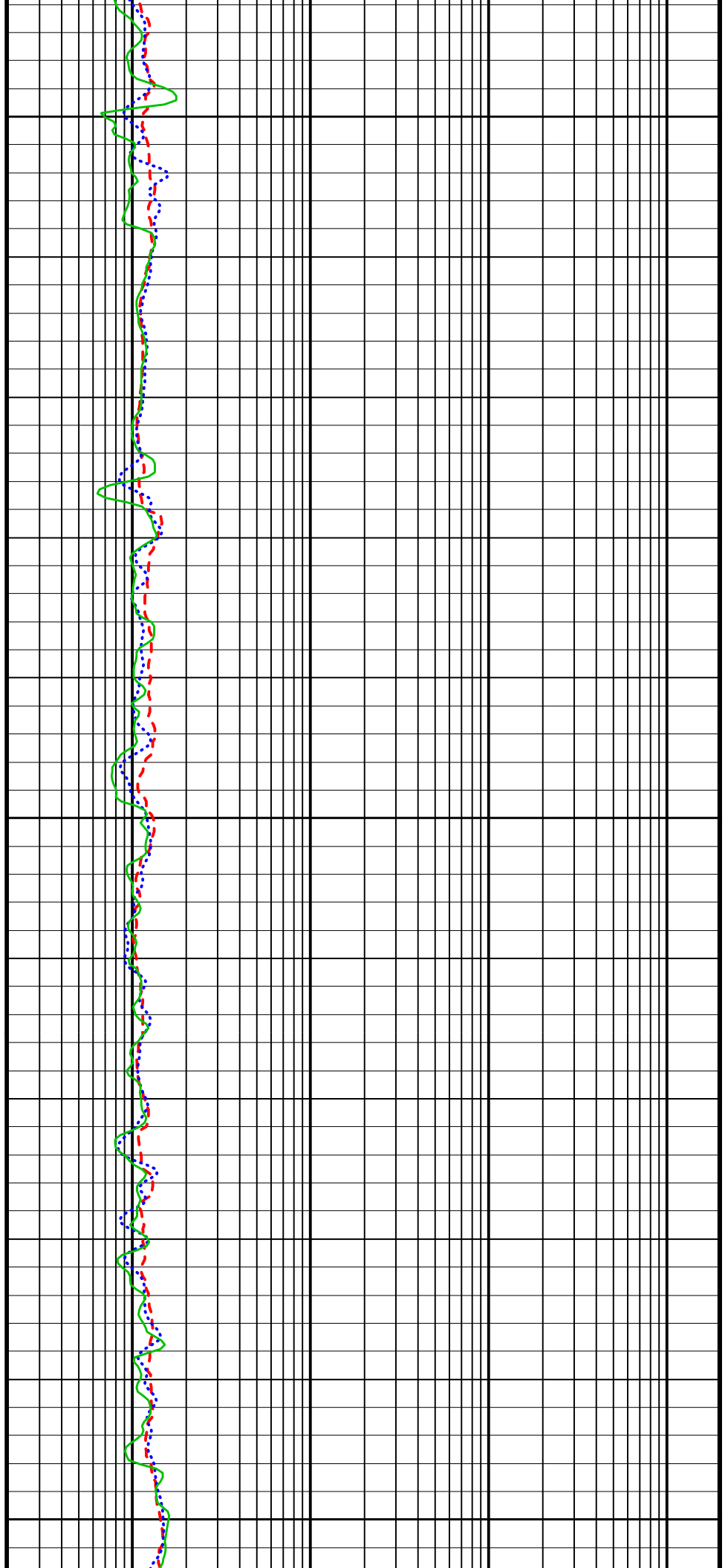


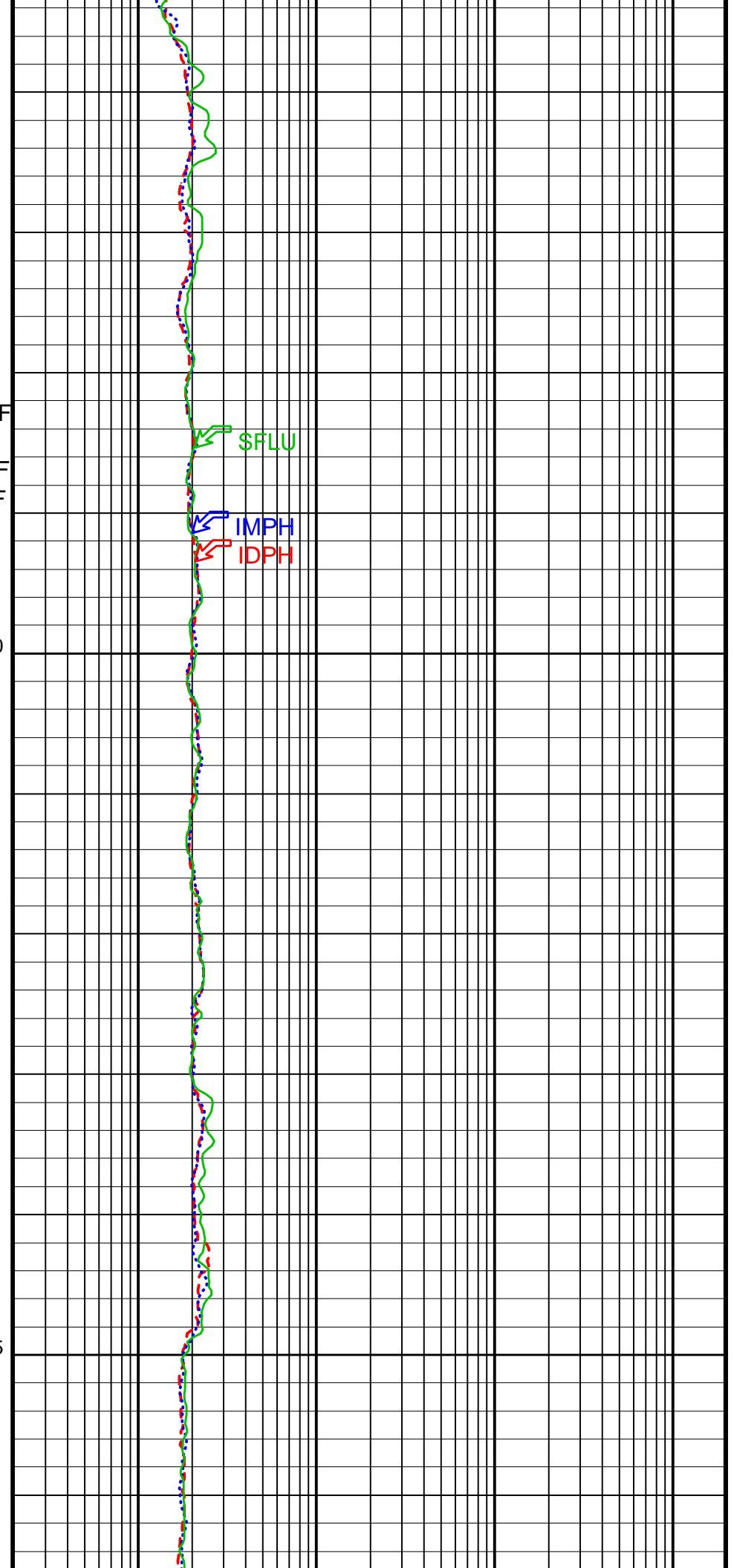
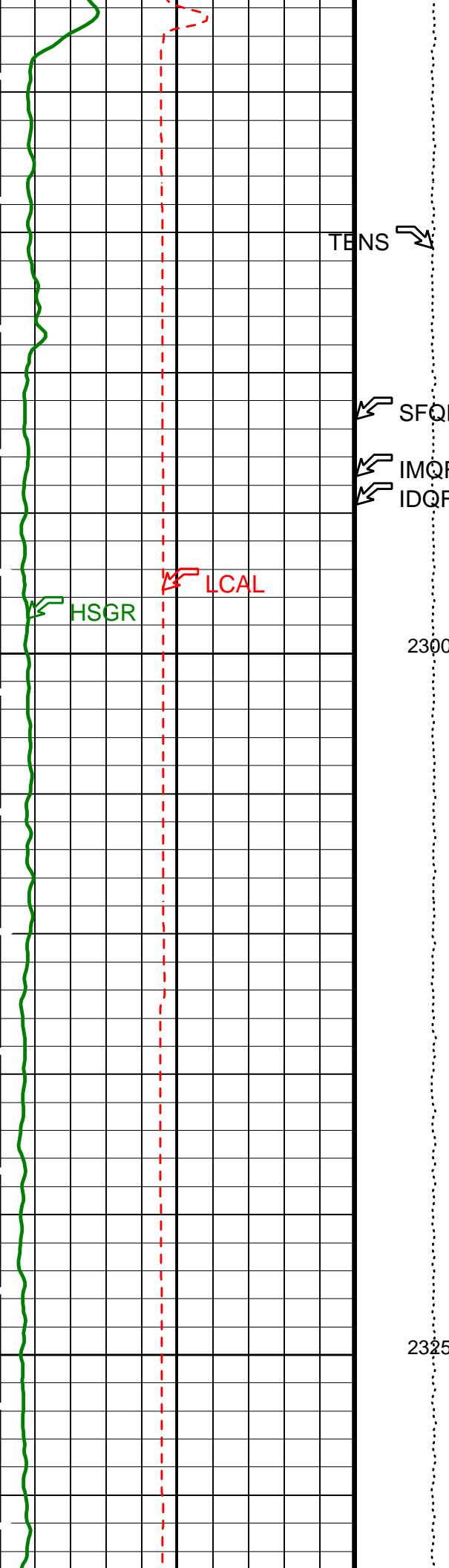


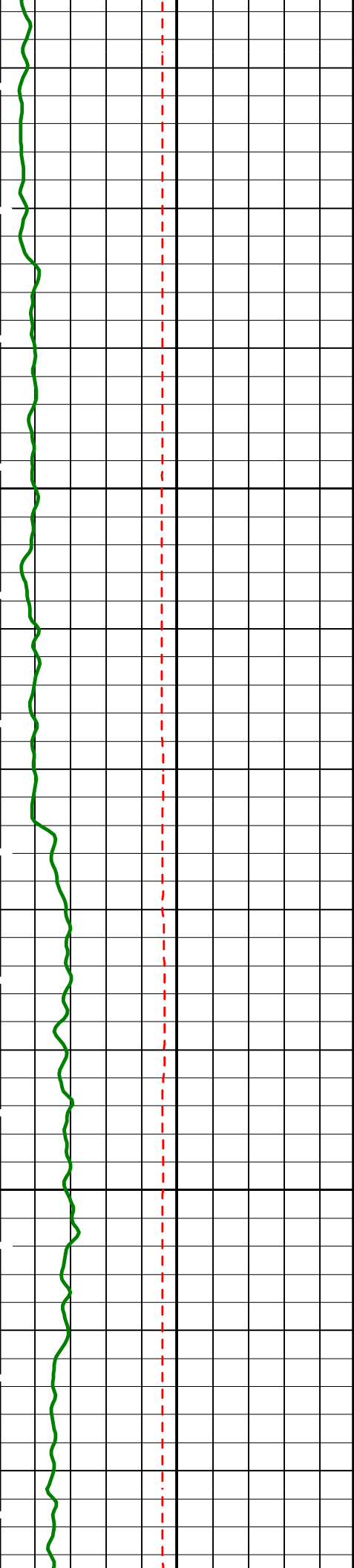
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2250

2275

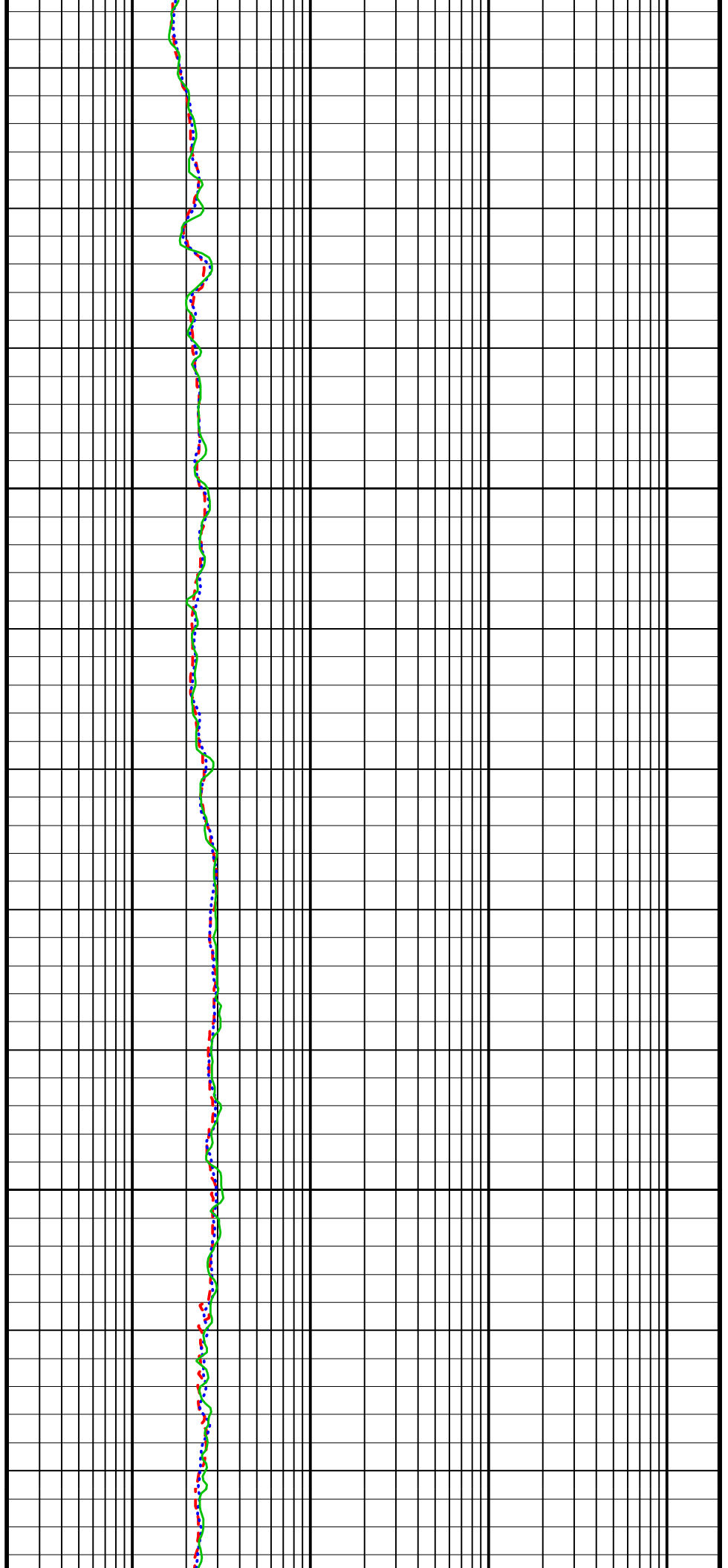


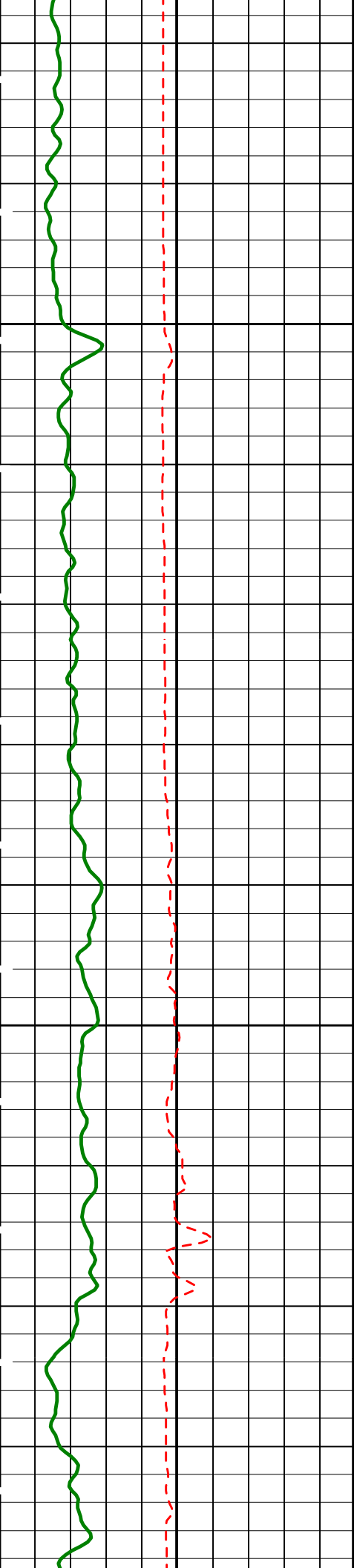




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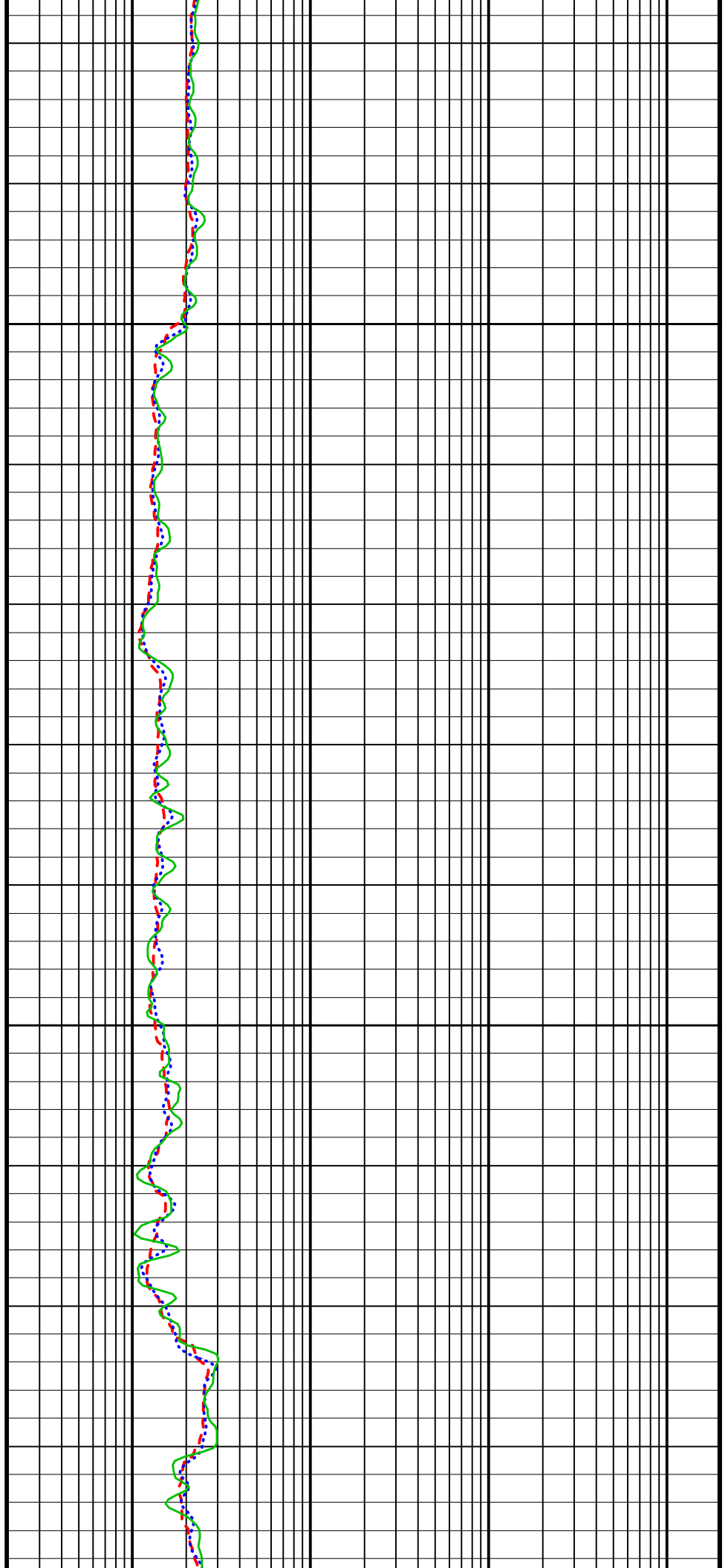
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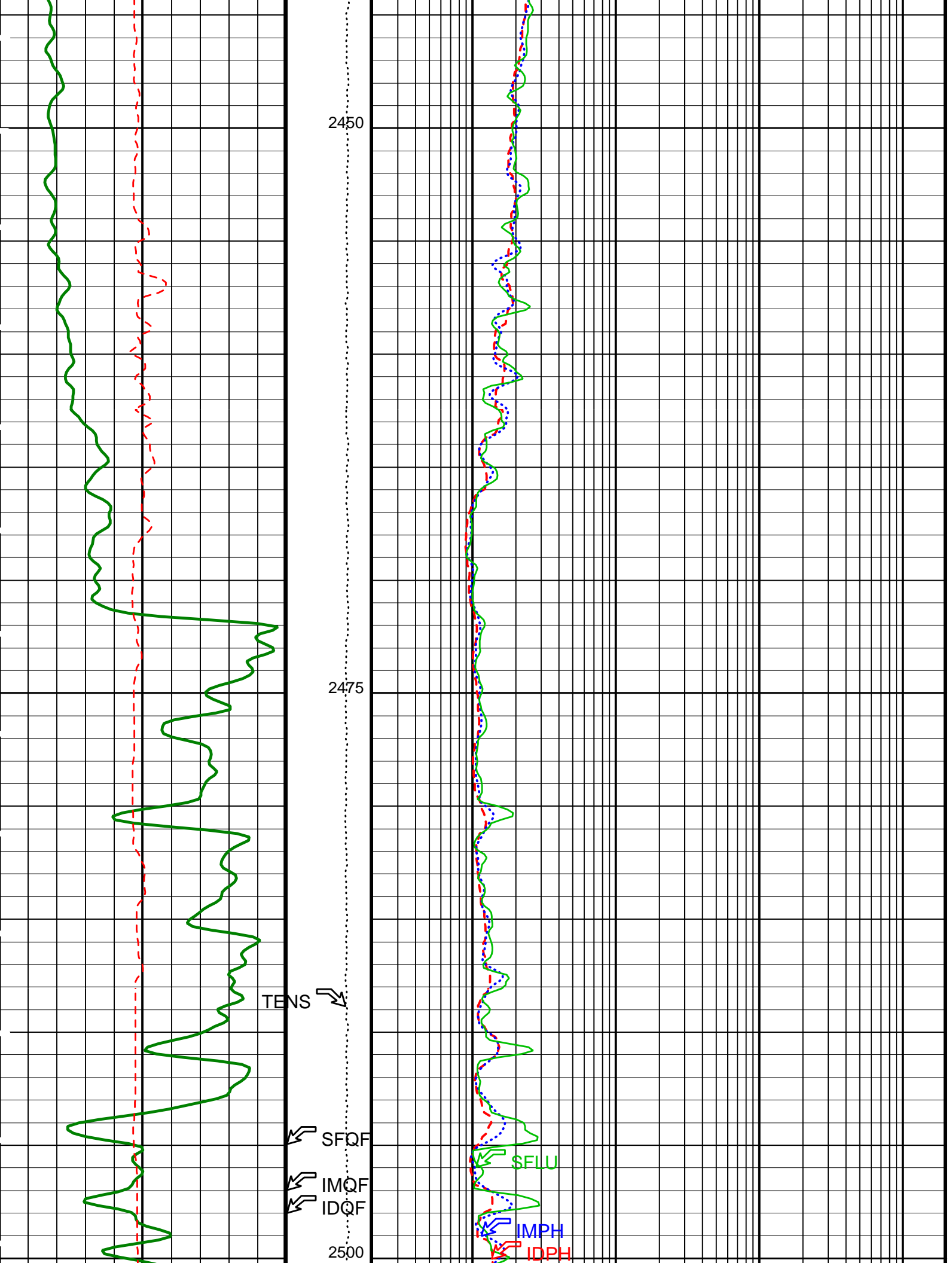


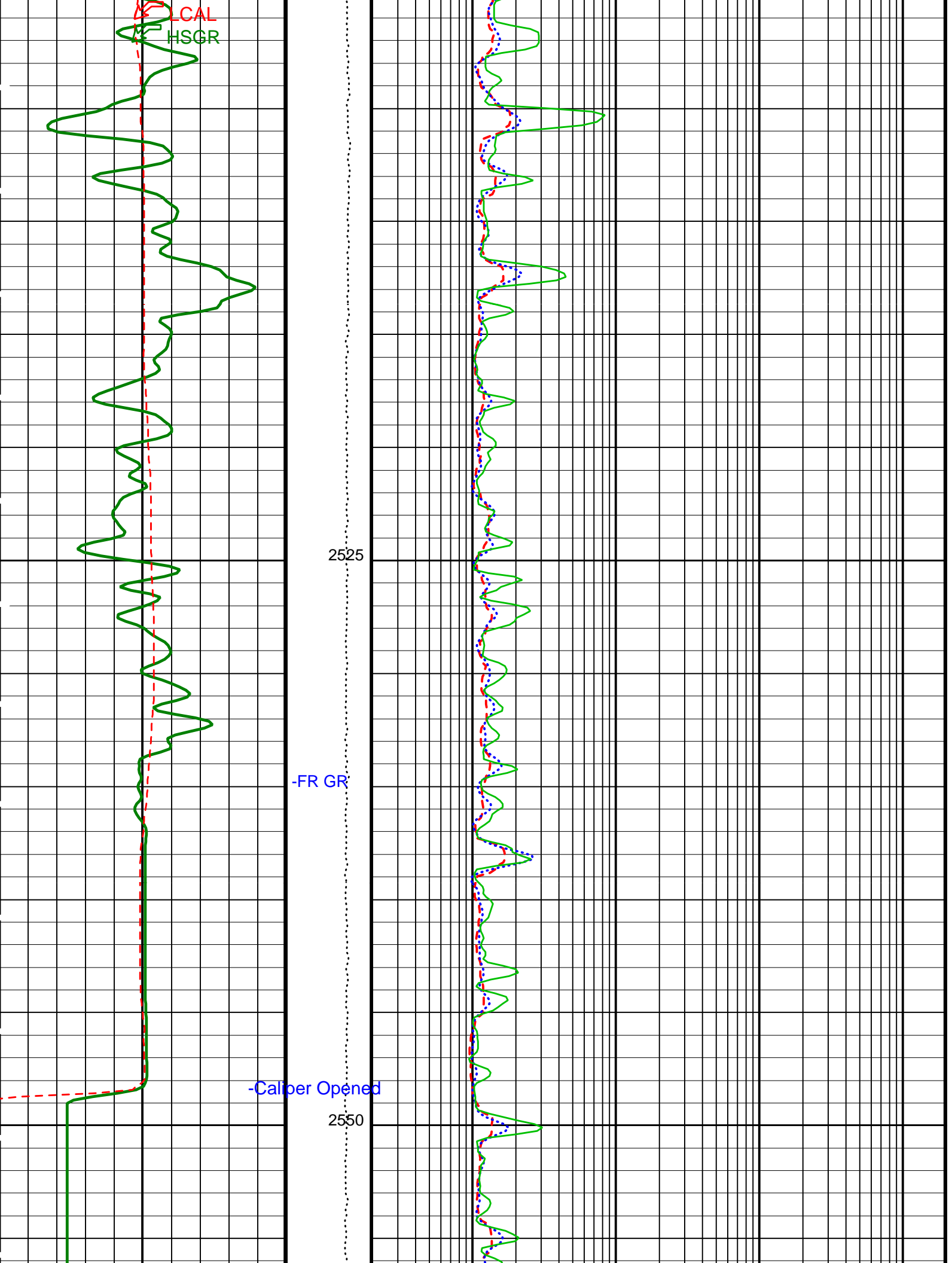


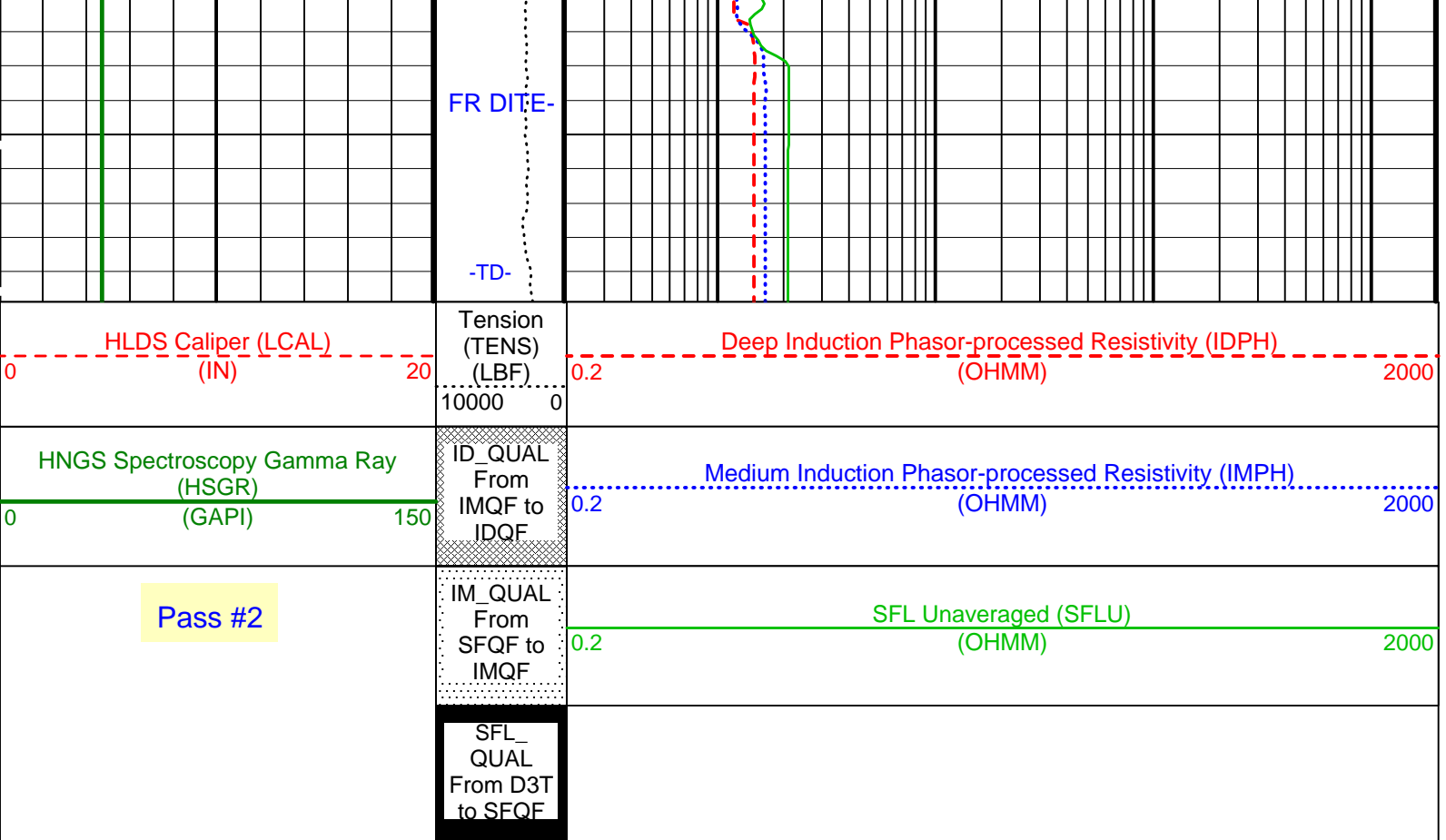
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2425









PIP SUMMARY

▶ Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
DIT-E: Dual Induction - E			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	12	DEGC
DGF2	Deep 20 kHz Gain Factor	1.00789	
DPH2	Deep 20 kHz Phase Shift	-0.152394	DEG
DRE2	Deep Real 20 kHz Sonde Error Correction	16.357	MM/M
DSR2	Deep Sigma Reference (20 kHz)	1843	MM/M
DXE2	Deep Quad 20 kHz Sonde Error Correction	64.6326	MM/M
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
IFRS	DIT-E Induction Frequency Selector	20	
IPHA	DIT-E Phasor Processing Mode	ALL	
IPRO	DIT-E Induction Processing Selector	PHASOR	
ITEN	DIT-E Temperature Enable	ENABLE	
MGF2	Medium 20 kHz Gain Factor	1.02964	
MPH2	Medium 20 kHz Phase Shift	-0.933067	DEG
MRE2	Medium Real 20 kHz Sonde Error Correction	-1.78642	MM/M
MSR2	Medium Sigma Reference (20 kHz)	3250	MM/M
MXE2	Medium Quad 20 kHz Sonde Error Correction	-34.2041	MM/M
SFCR	SFL Channel Ratio	1000	
SHT	Surface Hole Temperature	20	DEGC
APS-BA: Accelerator-Porosity Tool			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	12	DEGC
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
SHT	Surface Hole Temperature	20	DEGC
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)	12	DEGC
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN

CSW2	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
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	-0.0016781	
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	-999.25	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	-999.25	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	0.982356	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.991526	
System and Miscellaneous			
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.10	G/C3
TD	Total Depth	-50000	M

Format: DITE_LogPhasor Vertical Scale: 1:200 Graphics File Created: 21-Feb-2003 21:50

OP System Version: 10C0-306

MCM

DIT-E	10C0-306	DTA-A	10C0-306
HLDS	SPC-2277-NUCL_b	NPLC-B	OP10-KP1
APS-BA	SPC-2277-NUCL_b	HNGS-BA	SPC-2277-NUCL_b
DTC-H	10C0-306		

Output DLIS Files

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REDUCE	PI_LDL_APS_NGS_008LUP	FN:13	PRODUCER	21-Feb-2003 21:50

Output DLIS Files

DEFAULT	PI_LDL_APS_NGS_007LUP	FN:10	PRODUCER	21-Feb-2003 20:16	2564.9 M	2210.0 M
REDUCE	PI_LDL_APS_NGS_007LUP	FN:11	PRODUCER	21-Feb-2003 20:16	2564.9 M	2210.0 M

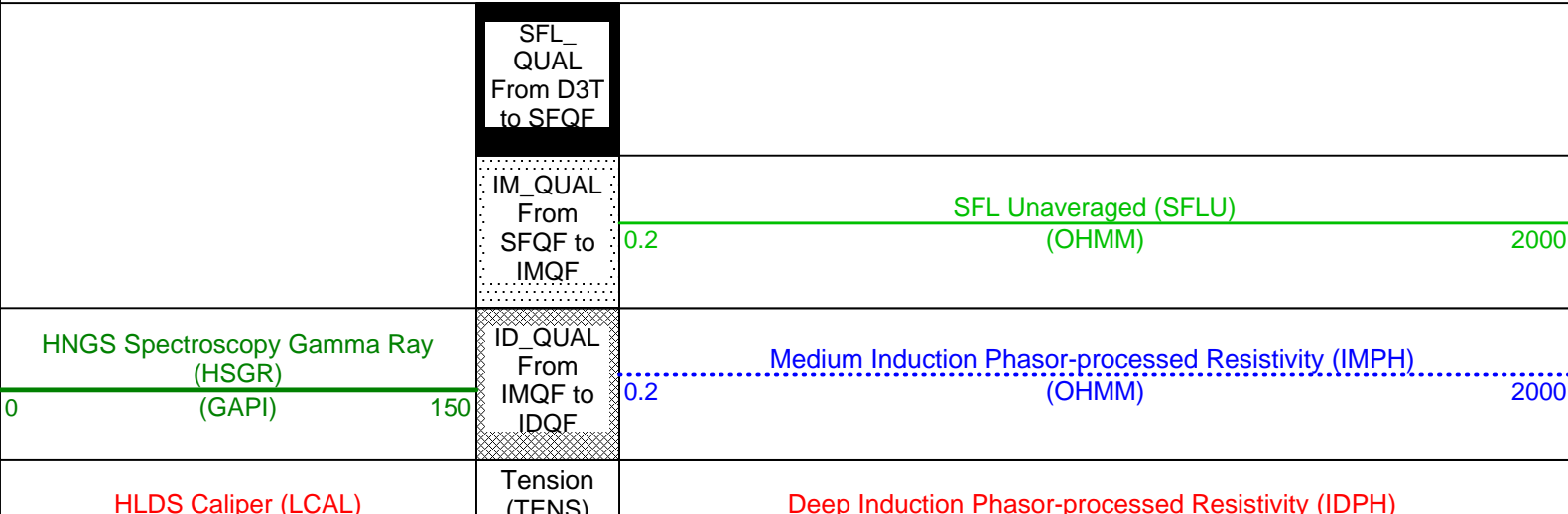
OP System Version: 10C0-306

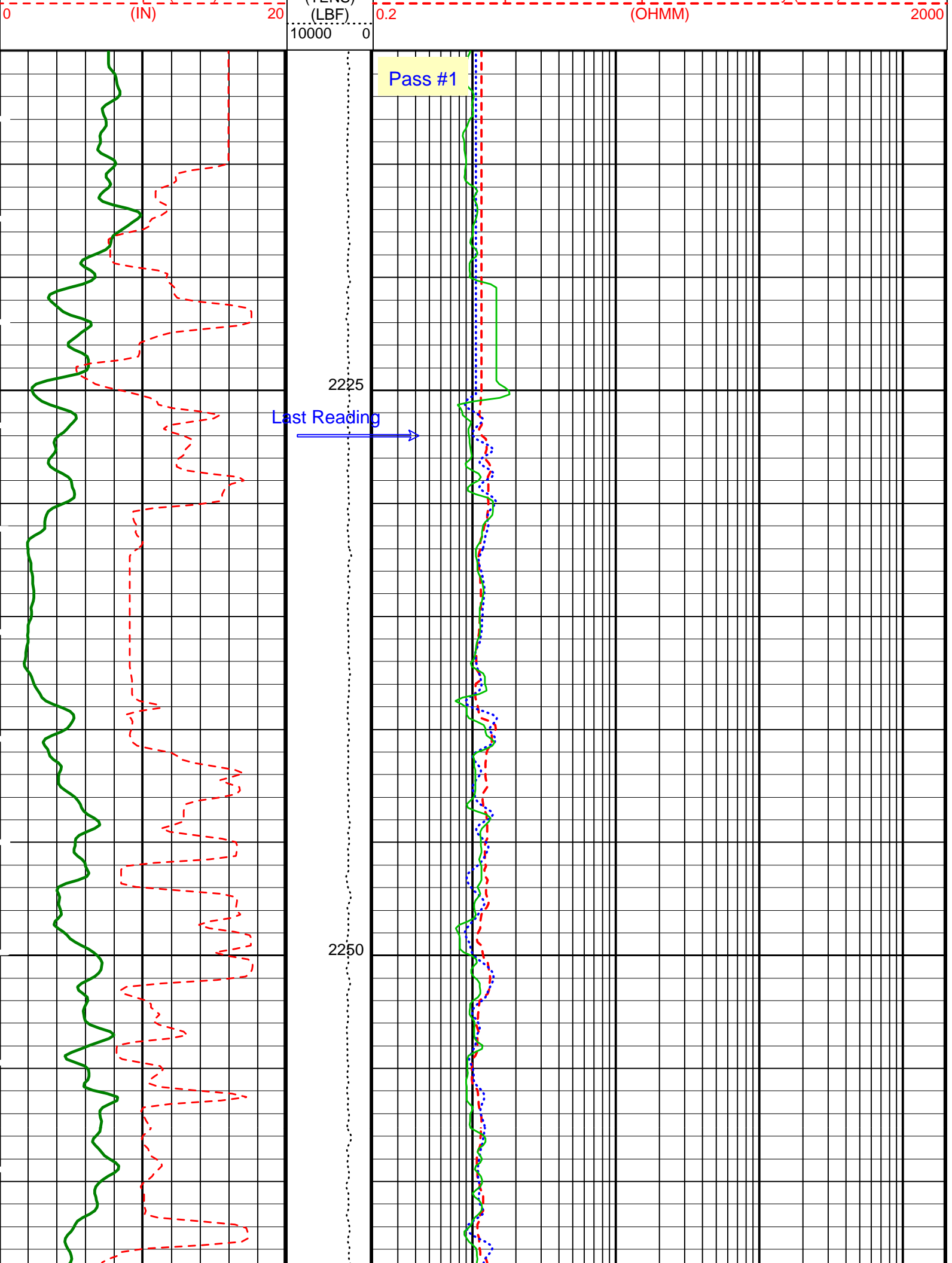
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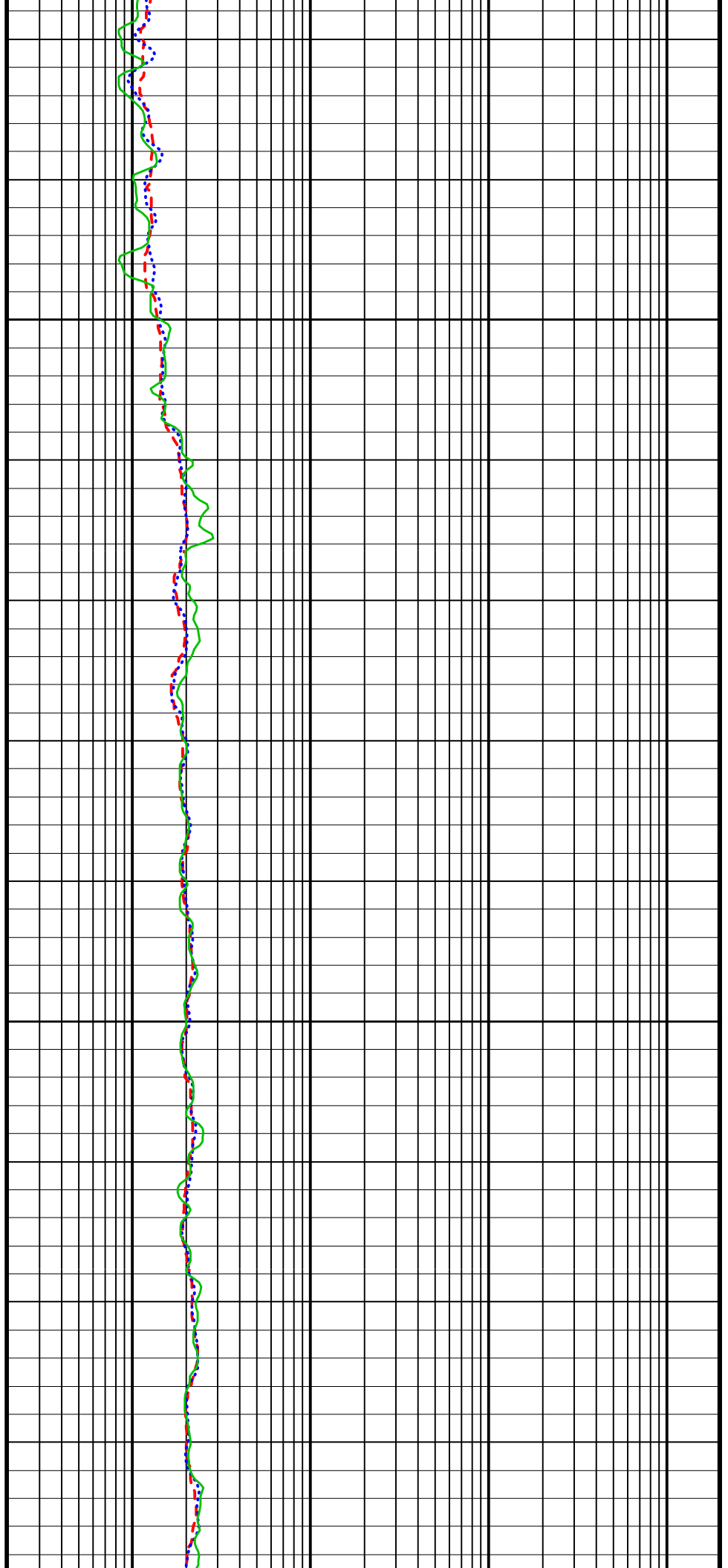
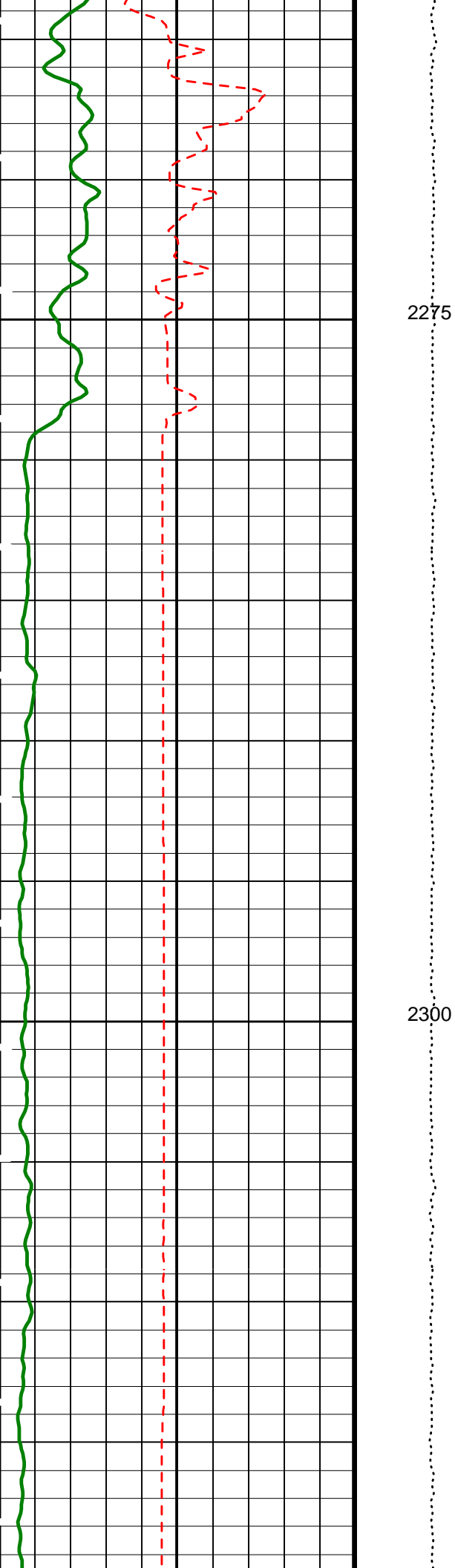
DIT-E	10C0-306	DTA-A	10C0-306
HLDS	SPC-2277-NUCL_b	NPLC-B	OP10-KP1
APS-BA	SPC-2277-NUCL_b	HNGS-BA	SPC-2277-NUCL_b
DTC-H	10C0-306		

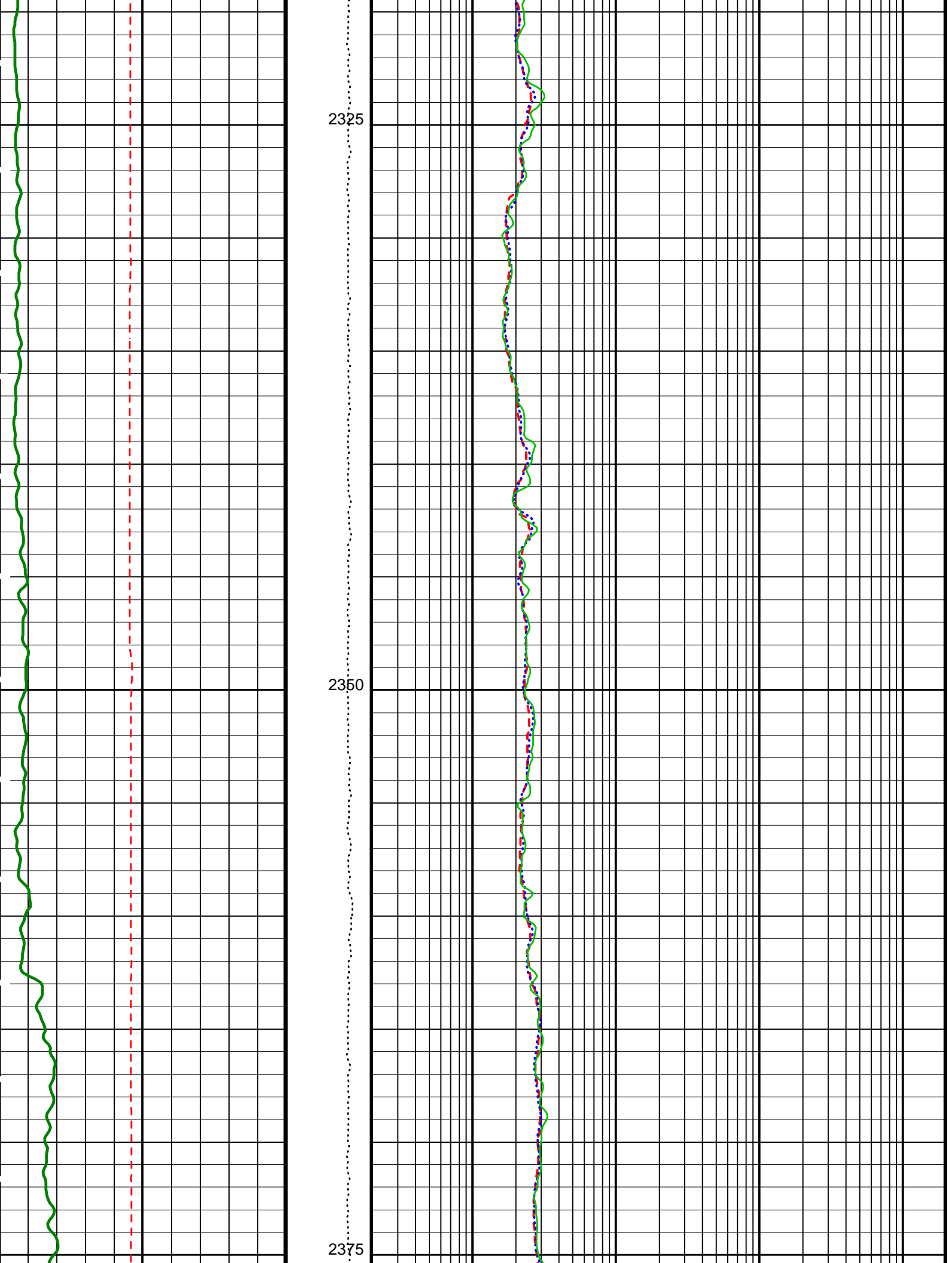
PIP SUMMARY

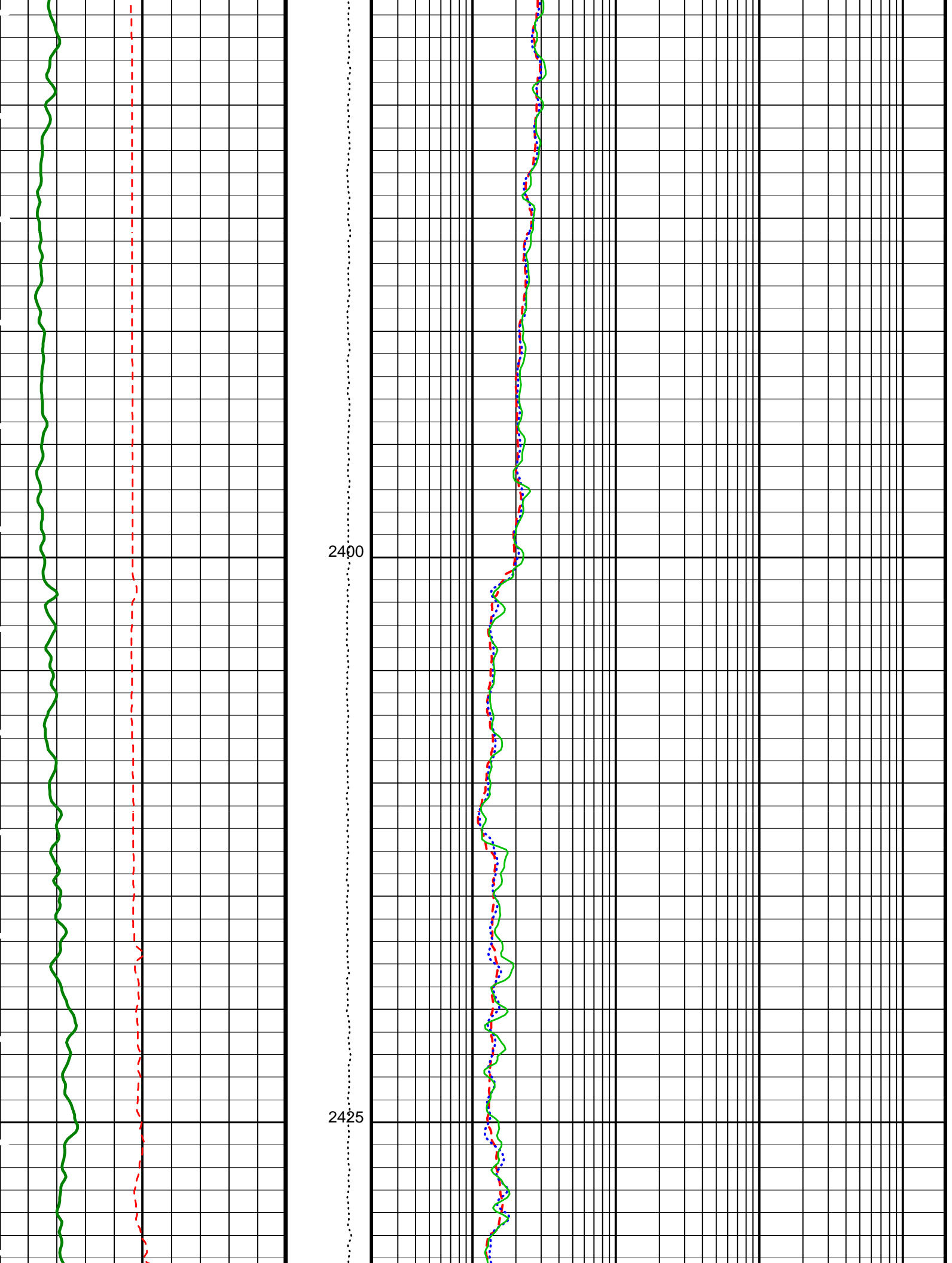
▶ Time Mark Every 60 S





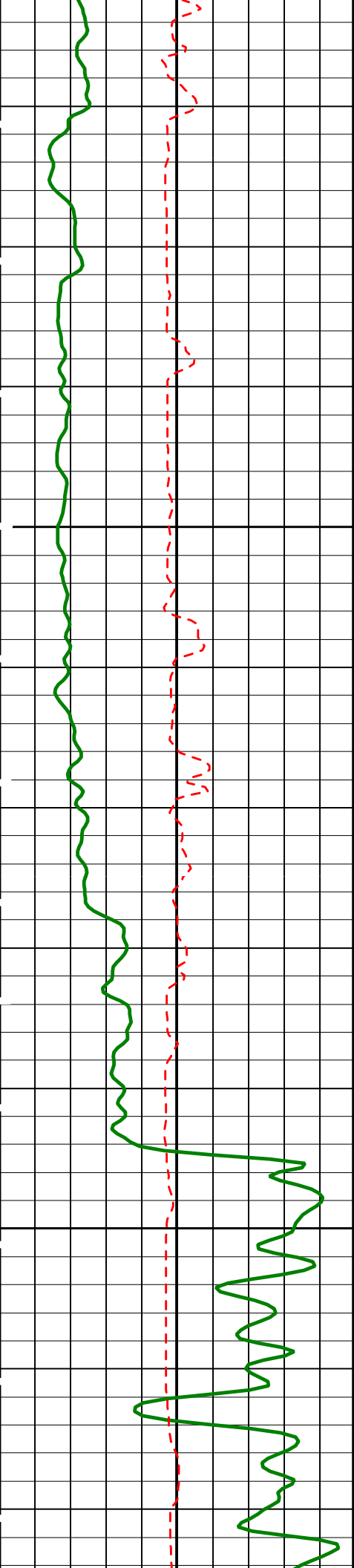






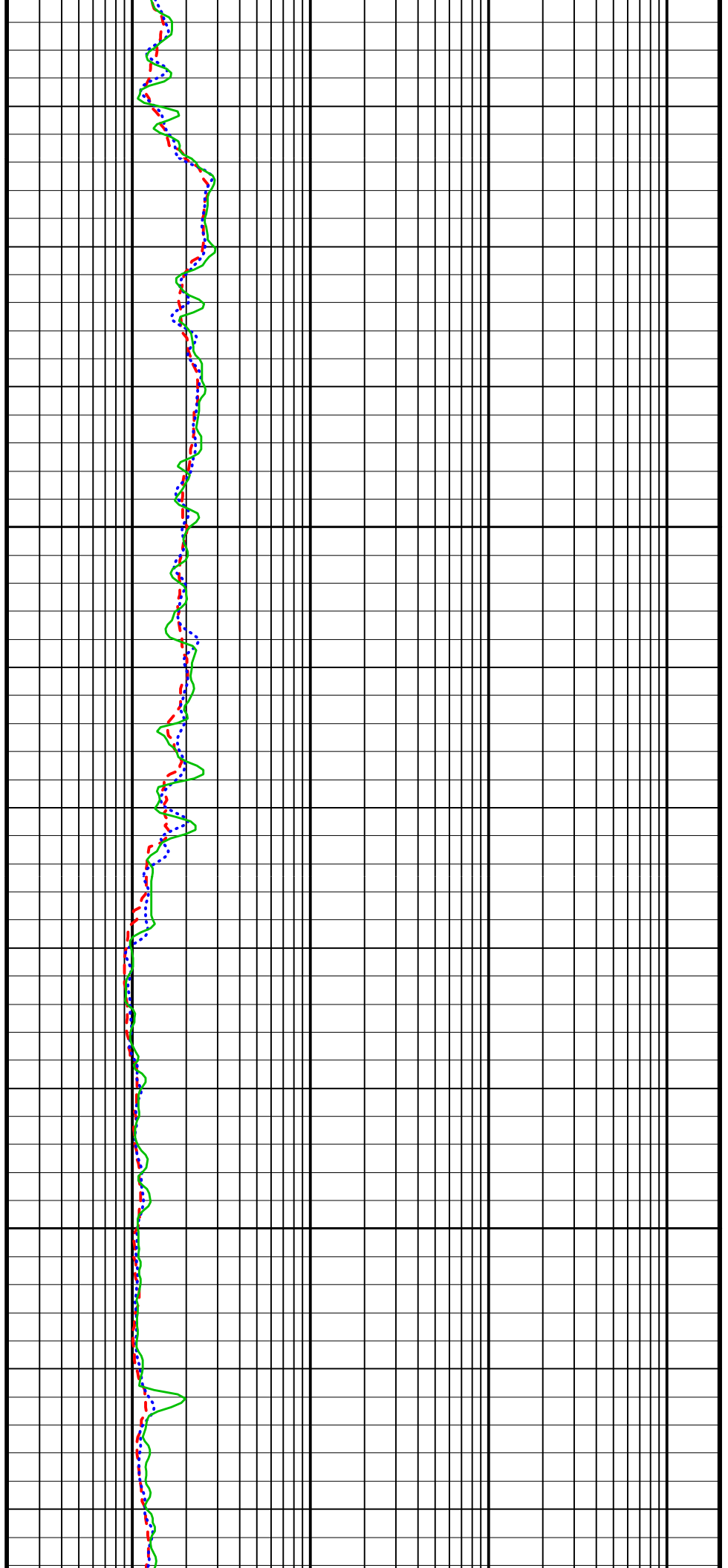
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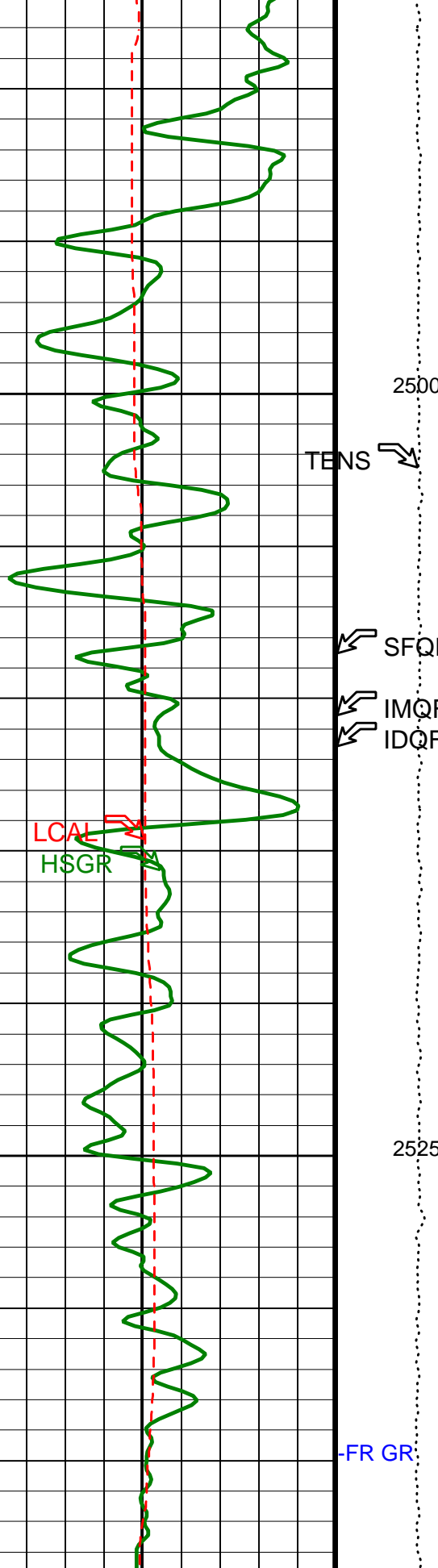
2425



2450

2475





2500

TENS ↗

↗ SFQF

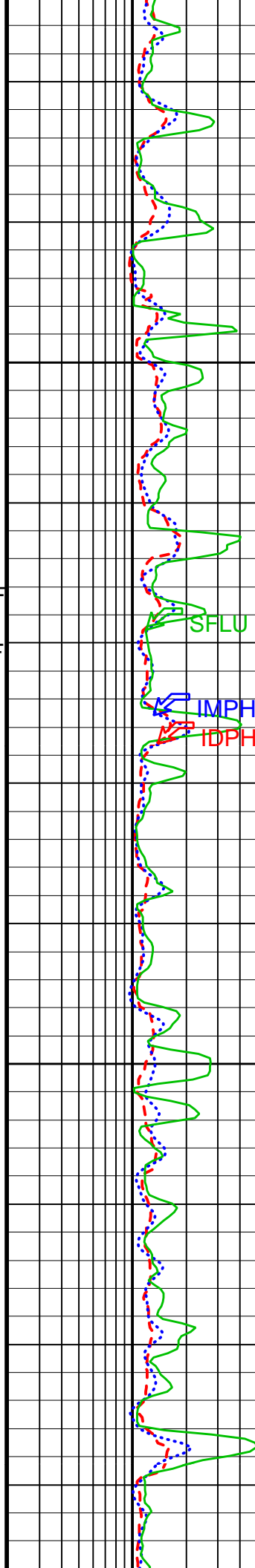
↗ IMQF

↗ IDQF

LCAL ↗
HSGR ↗

2525

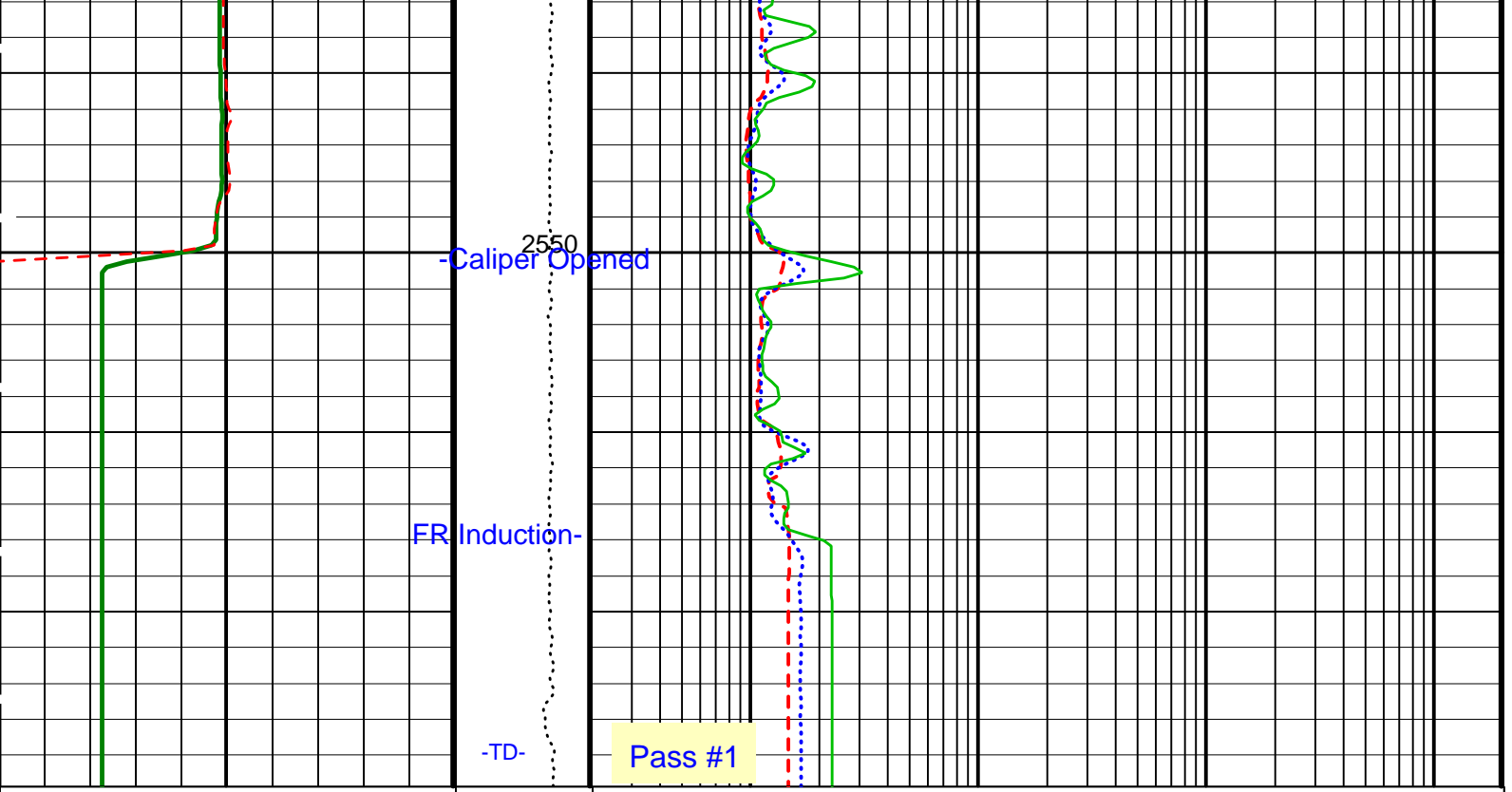
-FR GR



SFLU ↗

IMPH ↗

IDPH ↗



HLDS Caliper (LCAL) (IN)	Tension (TENS) (LBF)	Deep Induction Phasor-processed Resistivity (IDPH) (OHMM)
0 20	10000 0	0.2 2000
HNGS Spectroscopy Gamma Ray (HSGR) (GAPI)	ID_QUAL From IMQF to IDQF	Medium Induction Phasor-processed Resistivity (IMPH) (OHMM)
0 150		0.2 2000
	IM_QUAL From SFQF to IMQF	SFL Unaveraged (SFLU) (OHMM)
		0.2 2000
	SFL_QUAL From D3T to SFQF	

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
DIT-E: Dual Induction - E		
BHS	Borehole Status	OPEN
BHT	Bottom Hole Temperature (used in calculations)	12 DEG
DGF2	Deep 20 kHz Gain Factor	1.00789
DPH2	Deep 20 kHz Phase Shift	-0.152394 DEG
DRE2	Deep Real 20 kHz Sonde Error Correction	16.357 MM/M
DSR2	Deep Sigma Reference (20 kHz)	1843 MM/M
DXE2	Deep Quad 20 kHz Sonde Error Correction	64.6326 MM/M
GCSE	Generalized Caliper Selection	LCAL
GDEV	Average Angular Deviation of Borehole from Normal	0 DEG
GGRD	Geothermal Gradient	0.018227 DC/M
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE
IFRS	DIT-E Induction Frequency Selector	20
IPHA	DIT-E Phasor Processing Mode	ALL
IPRO	DIT-E Induction Processing Selector	PHASOR
ITEN	DIT-E Temperature Enable	ENABLE
MGF2	Medium 20 kHz Gain Factor	1.02964
MPH2	Medium 20 kHz Phase Shift	-0.933067 DEG
MRE2	Medium Real 20 kHz Sonde Error Correction	-1.78642 MM/M

MSR2	Medium Sigma Reference (20 kHz)	3250	MM/M
MXE2	Medium Quad 20 kHz Sonde Error Correction	-34.2041	MM/M
SFCR	SFL Channel Ratio	1000	
SHT	Surface Hole Temperature	20	DEGC
APS-BA: Accelerator-Porosity Tool			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	12	DEGC
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
SHT	Surface Hole Temperature	20	DEGC
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)	12	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
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	-0.0363765	
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	-999.25	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	-999.25	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	0.989291	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.986123	
System and Miscellaneous			
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.10	G/C3
TD	Total Depth	-50000	M

Format: DITE_LogPhasor Vertical Scale: 1:200 Graphics File Created: 21-Feb-2003 20:16

OP System Version: 10C0-306

MCM

DIT-E	10C0-306	DTA-A	10C0-306
HLDS	SPC-2277-NUCL_b	NPLC-B	OP10-KP1
APS-BA	SPC-2277-NUCL_b	HNGS-BA	SPC-2277-NUCL_b
DTC-H	10C0-306		

Output DLIS Files

DEFAULT	PI_LDL_APS_NGS_007LUP	FN:10	PRODUCER	21-Feb-2003 20:16
REDUCE	PI_LDL_APS_NGS_007LUP	FN:11	PRODUCER	21-Feb-2003 20:16

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Hostile Litho-Density Sonde Wellsite Calibration - Background Measurement							
Master: 13-Dec-2002 14:00 Before: 15-Jan-2003 11:10 After: 31-Jan-2003 17:05							
SS Cs Resolution Bkg	9.000	8.065	8.135	8.015	-0.1196	1.800	%
LS Cs Resolution Bkg	9.000	8.249	8.108	8.087	-0.02139	1.800	%
LSW1 Background	100.0	86.88	86.46	87.40	0.9397	0.03000	CPS
LSW2 Background	100.0	82.90	80.84	82.04	1.202	0.03000	CPS
LSW3 Background	200.0	182.1	179.4	182.1	2.733	0.03000	CPS
LSW4 Background	250.0	221.9	216.6	221.3	4.695	0.03000	CPS
LSW5 Background	600.0	510.1	505.1	504.3	-0.8560	0.03000	CPS
SSW1 Background	100.0	96.14	98.01	97.37	-0.6340	0.03000	CPS
SSW2 Background	200.0	176.7	177.3	174.6	-2.675	0.03000	CPS

SSW3 Background	500.0	478.2	477.6	476.6	-0.9975	0.03000	CPS
SSW4 Background	270.0	244.1	244.0	243.2	-0.8002	0.03000	CPS
SSW5 Background	200.0	177.5	175.7	176.8	1.146	0.03000	CPS
Hostile Litho-Density Sonde Wellsite Calibration - Aluminum Measurement							
Master: 13-Dec-2002 15:15							
LSW1 Aluminum	600.0	580.8	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	822.1	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	985.4	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	489.2	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	453.3	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2597	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	7087	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	9849	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	4127	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	537.2	N/A	N/A	N/A	N/A	CPS
Hostile Litho-Density Sonde Wellsite Calibration - Lithology Measurement							
Master: 13-Dec-2002 15:11							
LSW1 Iron	400.0	401.7	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	683.6	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	900.2	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	465.6	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	434.8	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1961	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	6103	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	9305	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3921	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	502.8	N/A	N/A	N/A	N/A	CPS
Hostile Litho-Density Sonde Wellsite Calibration - Caliper Calibration							
Before: 15-Jan-2003 11:25							
HLDS Caliper Small Ring	15.00	N/A	18.20	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	17.50	N/A	20.31	N/A	N/A	N/A	IN
Accelerator-Porosity Tool Wellsite Calibration - Detector Background							
Master: 28-Nov-2002 19:52 Before: 21-Feb-2003 17:27 After: 22-Feb-2003 4:27							
Near Det Bkg Cntrate	30.00	32.65	31.99	30.78	-1.202	N/A	CPS
Far Det Bkg Cntrate	30.00	31.56	34.38	32.17	-2.210	N/A	CPS
Array-1 Det Bkg Cntrate	30.00	29.11	28.81	27.45	-1.365	N/A	CPS
Array-2 Det Bkg Cntrate	30.00	29.96	30.42	29.06	-1.358	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	32.97	32.24	33.57	1.331	N/A	CPS
Accelerator-Porosity Tool Wellsite Calibration - Calibration Ratios							
Master: 28-Nov-2002 19:53							
Near/Far Calibration Ratio	0.9250	0.8869	N/A	N/A	N/A	N/A	
Near/Array Calibration Ratio	1.030	1.051	N/A	N/A	N/A	N/A	
Near/Array Cal Ratio Up/Down	1.000	1.002	N/A	N/A	N/A	N/A	
Accelerator-Porosity Tool Wellsite Calibration - Tank Check							
Master: 28-Nov-2002 19:54							
Array-1 Standoff Porosity	11.75	11.90	N/A	N/A	N/A	N/A	PU
Array-2 Standoff Porosity	11.75	11.44	N/A	N/A	N/A	N/A	PU
Average Slowing Down Time	6.000	5.850	N/A	N/A	N/A	N/A	US
Array-1 SDT Ratio Up/Down	1.000	0.9966	N/A	N/A	N/A	N/A	
Array-2 SDT Ratio Up/Down	1.000	0.9889	N/A	N/A	N/A	N/A	
Sigma Formation	27.50	27.81	N/A	N/A	N/A	N/A	CU
Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 1 Check							
Master: 15-Jan-2003 16:08 Before: 15-Jan-2003 16:17 After: 31-Jan-2003 17:06							
Na 511 Peak Loc	40.00	40.59	40.72	40.59	-0.1351	1.000	
Na 511 Peak Res	15.50	17.05	17.42	16.56	-0.8642	2.000	%
High Voltage	1150	1212	1212	1214	1.855	30.00	V
Na 1785 Peak Loc	142.6	145.6	145.3	145.7	0.3604	7.000	
Na 1785 Peak Res	8.500	9.037	9.666	8.507	-1.159	2.000	%
Temperature	15.50	32.69	32.84	29.39	-3.458	N/A	DEGC
Na Count Rate	45.00	44.80	43.98	42.72	-1.260	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 2 Check							
Master: 15-Jan-2003 16:08 Before: 15-Jan-2003 16:17 After: 31-Jan-2003 17:06							
Na 511 Peak Loc	40.00	40.55	40.57	40.60	0.02974	1.000	
Na 511 Peak Res	15.50	16.60	16.91	16.65	-0.2540	2.000	%
High Voltage	1150	1239	1239	1242	2.482	30.00	V
Na 1785 Peak Loc	142.6	144.7	144.4	144.6	0.2119	7.000	
Na 1785 Peak Res	8.500	9.925	9.708	9.652	-0.05593	2.000	%
Temperature	15.50	32.80	32.89	29.19	-3.703	N/A	DEGC
Na Count Rate	45.00	44.45	43.98	42.38	-1.601	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration - Ratio Of Detector 1 To Detector 2							
Master: 15-Jan-2003 16:08 Before: 15-Jan-2003 16:17 After: 31-Jan-2003 17:06							
Coincidence Count Rate Ratio	1.000	1.008	1.0000	1.006	0.006140	0.05000	

Hostile Natural Gamma Ray Sonde Master Calibration - Detector 1 Calibration

Master: 15-Jan-2003 16:01

Na 511 Peak Set Point	40.00	41.00	--	--	--	--
Th Peak Loc	209.6	209.3	--	--	--	--
Th Peak Res	7.000	8.207	--	--	--	--
Background Count Rate	142.5	23.15	--	--	--	--
Gain Ratio	1.000	0.9810	--	--	--	--

%
CPS

Hostile Natural Gamma Ray Sonde Master Calibration - Detector 2 Calibration

Master: 15-Jan-2003 16:01

Na 511 Peak Set Point	40.00	41.00	--	--	--	--
Th Peak Loc	209.6	209.3	--	--	--	--
Th Peak Res	7.000	7.848	--	--	--	--
Background Count Rate	142.5	21.80	--	--	--	--
Gain Ratio	1.000	0.9821	--	--	--	--

%
CPS

Accelerator-Porosity Tool - Detector Plateau Settings :

Near Detector Plateau Setting 1728 V
 Far Detector Plateau Setting 2073 V
 Array Detector Plateau Setting 1958 V

Dual Induction - E / Equipment Identification

Primary Equipment:		
Dual Induction Sonde	DIS - HB	442
Dual Induction Cartridge	DIC - EB	438
Auxiliary Equipment:		
Mass Isolated Housing	MIH - ZA	417

Dual Induction - E Wellsite Calibration

Induction Electronics (10 kHz)

Phase	ID Elect Real Offset 10 kHz MM/M	Value	Phase	ID Elect Real Gain 10 kHz	Value	Phase	ID Elect Phase 10 kHz DEG	Value
Before		37.75	Before		0.9757	Before	EXCEEDS LIMIT	10.92
	-300.0 (Minimum) 0 (Nominal) 300.0 (Maximum)			0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)			-10.00 (Minimum) 0 (Nominal) 10.00 (Maximum)	
Phase	ID Elect Quad Offset 10 kHz MM/M	Value	Phase	ID Elect Quad Gain 10 kHz	Value	Phase	IM Elect Phase 10 kHz DEG	Value
Before		23.35	Before		0.9643	Before	EXCEEDS LIMIT	13.55
	-300.0 (Minimum) 0 (Nominal) 300.0 (Maximum)			0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)			-10.00 (Minimum) 0 (Nominal) 10.00 (Maximum)	
Phase	IM Elect Real Offset 10 kHz MM/M	Value	Phase	IM Elect Real Gain 10 kHz	Value	10kHz not used		
Before		97.69	Before		0.9506			
	-550.0 (Minimum) 0 (Nominal) 550.0 (Maximum)			0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)				
Phase	IM Elect Quad Offset 10 kHz MM/M	Value	Phase	IM Elect Quad Gain 10 kHz	Value			
Before		96.41	Before		0.9483			
	-550.0 (Minimum) 0 (Nominal) 550.0 (Maximum)			0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)				

Before: 15-Jan-2003 15:40

Dual Induction - E Wellsite Calibration

Induction Electronics (20 kHz)

Phase	ID Elect Real Offset 20 kHz MM/M	Value	Phase	ID Elect Real Gain 20 kHz	Value	Phase	ID Elect Phase 20 kHz DEG	Value
Before		14.96	Before		1.007	Before		9.501
	-125.0 (Minimum) 0 (Nominal) 125.0 (Maximum)			0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)			-15.00 (Minimum) 0 (Nominal) 15.00 (Maximum)	
Phase	ID Elect Quad Offset 20 kHz MM/M	Value	Phase	ID Elect Quad Gain 20 kHz	Value	Phase	IM Elect Phase 20 kHz DEG	Value
Before		9.431	Before		0.9950	Before		12.55
	-125.0 (Minimum) 0 (Nominal) 125.0 (Maximum)			0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)			-15.00 (Minimum) 0 (Nominal) 15.00 (Maximum)	
Phase	IM Elect Real Offset 20 kHz MM/M	Value	Phase	IM Elect Real Gain 20 kHz	Value			
Before		40.85	Before		1.012			
	-225.0 (Minimum) 0 (Nominal) 225.0 (Maximum)			0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)				

Phase	IM Elect Quad Offset 20 kHz	MM/M	Value	Phase	IM Elect Quad Gain 20 kHz	Value	
Before			40.40	Before		1.009	
	-225.0 (Minimum)	0 (Nominal)	225.0 (Maximum)		0.8500 (Minimum)	1.000 (Nominal)	1.200 (Maximum)

Before: 15-Jan-2003 15:41

Dual Induction - E Wellsite Calibration											
Induction Electronics (40 kHz)											
Phase	ID Elect Real Offset 40 kHz	MM/M	Value	Phase	ID Elect Real Gain 40 kHz	Value	Phase	ID Elect Phase 40 kHz	DEG	Value	
Before			9.829	Before		0.9926	Before			29.37	
	-85.00 (Minimum)	0 (Nominal)	85.00 (Maximum)		0.8500 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		-20.00 (Minimum)	0 (Nominal)	20.00 (Maximum)
Phase	ID Elect Quad Offset 40 kHz	MM/M	Value	Phase	ID Elect Quad Gain 40 kHz	Value	Phase	IM Elect Phase 40 kHz	DEG	Value	
Before			6.156	Before		0.9797	Before			33.01	
	-85.00 (Minimum)	0 (Nominal)	85.00 (Maximum)		0.8500 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		-20.00 (Minimum)	0 (Nominal)	20.00 (Maximum)
Phase	IM Elect Real Offset 40 kHz	MM/M	Value	Phase	IM Elect Real Gain 40 kHz	Value	40kHz not used				
Before			26.65	Before		1.027					
	-130.0 (Minimum)	0 (Nominal)	130.0 (Maximum)		0.8500 (Minimum)	1.000 (Nominal)					1.200 (Maximum)
Phase	IM Elect Quad Offset 40 kHz	MM/M	Value	Phase	IM Elect Quad Gain 40 kHz	Value					
Before			26.47	Before		1.024					
	-130.0 (Minimum)	0 (Nominal)	130.0 (Maximum)		0.8500 (Minimum)	1.000 (Nominal)	1.200 (Maximum)				

Before: 15-Jan-2003 15:42

Dual Induction - E Wellsite Calibration							
SFL Electronics							
Phase	SFL Voltage Offset	MV	Value	Phase	SFL Voltage Gain	Value	
Before			1.294	Before		1.021	
	-15.00 (Minimum)	0 (Nominal)	15.00 (Maximum)		0.8500 (Minimum)	1.000 (Nominal)	1.200 (Maximum)
Phase	SFL Current Offset	MA	Value	Phase	SFL Current Gain	Value	
Before			0.004236	Before		0.9971	
	-0.6000 (Minimum)	0 (Nominal)	0.6000 (Maximum)		0.8500 (Minimum)	1.000 (Nominal)	1.200 (Maximum)

Before: 15-Jan-2003 15:43

Dual Induction - E Wellsite Calibration											
Electronics Calibration Changes Files/Depth Intervals: 5: 2196.8 - 2485.0 6: 2564.9 - 2446.2 7: 2564.9 - 2210.0 8: 2564.9 - 1881.7											
Phase	ID (R > 27 OHM-M)	MM/M	Value	Phase	ID (R < 27 OHM-M) %	Value	Phase	SFL (R < 1 OHM-M)	OHMM	Value	
After			0	After		0.0002066	After			0.0005879	
	0 (Minimum)	0 (Nominal)	0.7500 (Maximum)		0 (Minimum)	0 (Nominal)	2.000 (Maximum)		0 (Minimum)	0 (Nominal)	0.02000 (Maximum)
Phase	IM (R > 27 OHM-M)	MM/M	Value	Phase	IM (R < 27 OHM-M) %	Value					
After			0	After		0.0001724					
	0 (Minimum)	0 (Nominal)	0.7500 (Maximum)		0 (Minimum)	0 (Nominal)					2.000 (Maximum)
Phase	SFL (R > 27 OHM-M)	MM/M	Value	Phase	SFL (R < 27 OHM-M) %	Value					
After			0	After		0.0004595					
	0 (Minimum)	0 (Nominal)	0.7500 (Maximum)		0 (Minimum)	0 (Nominal)	2.000 (Maximum)				

After: 22-Feb-2003 0:25

Dual Induction - E Master Calibration											
Test Loop Calibration: Calibration of Internal Reference to Test Loop Standard											
Phase	Deep 10 kHz Gain Factor	Value	Phase	Deep 20 kHz Gain Factor	Value	Phase	Deep 40 kHz Gain Factor	Value			
Master		0.9956	Master		1.008	Master		1.026			
	0.9000 (Minimum)	1.000 (Nominal)	1.100 (Maximum)		0.9000 (Minimum)	1.000 (Nominal)	1.100 (Maximum)		0.9000 (Minimum)	1.000 (Nominal)	1.100 (Maximum)
Phase	Medium 10 kHz Gain Factor	Value	Phase	Medium 20 kHz Gain Factor	Value	Phase	Medium 40 kHz Gain Factor	Value			
Master		1.022	Master		1.030	Master		1.061			
	0.9000 (Minimum)	1.000 (Nominal)	1.100 (Maximum)		0.9000 (Minimum)	1.000 (Nominal)	1.100 (Maximum)		0.9000 (Minimum)	1.000 (Nominal)	1.100 (Maximum)
Phase	Deep 10 kHz Phase Shift	Value	Phase	Deep 20 kHz Phase Shift	Value	Phase	Deep 40 kHz Phase Shift	Value			

Master		0.1143	Master		-0.1524	Master		-1.426			
	-1.500 (Minimum)	0 (Nominal)	1.500 (Maximum)		-2.000 (Minimum)	0 (Nominal)	2.000 (Maximum)				
Phase	Medium 10 kHz Phase Shift		Value	Phase	Medium 20 kHz Phase Shift		Value	Phase	Medium 40 kHz Phase Shift		Value
Master		-0.2558	Master		-0.9331	Master		-2.461			
	-1.500 (Minimum)	0 (Nominal)	1.500 (Maximum)		-3.000 (Minimum)	-1.000 (Nominal)	1.000 (Maximum)		-5.000 (Minimum)	-2.000 (Nominal)	1.000 (Maximum)

Master: Calibration out of date 6-Oct-2001 0:50

Dual Induction - E Master Calibration											
Sonde Error Corrections: Correction for sonde response in zero conductivity environment. (Normalized to 25C).											
Phase	Real Deep 10 kHz S.E. Corr.		Value	Phase	Real Deep 20 kHz S.E. Corr.		Value	Phase	Real Deep 40 kHz S.E. Corr.		Value
Master		44.95	Master		16.36	Master		4.690			
	-50.00 (Minimum)	0 (Nominal)	125.0 (Maximum)		-30.00 (Minimum)	0 (Nominal)	30.00 (Maximum)		-15.00 (Minimum)	0 (Nominal)	15.00 (Maximum)
Phase	Quad Deep 10 kHz S.E. Corr.		Value	Phase	Quad Deep 20 kHz S.E. Corr.		Value	Phase	Quad Deep 40 kHz S.E. Corr.		Value
Master		108.9	Master		64.63	Master		46.10			
	-250.0 (Minimum)	0 (Nominal)	350.0 (Maximum)		-125.0 (Minimum)	0 (Nominal)	200.0 (Maximum)		-75.00 (Minimum)	0 (Nominal)	125.0 (Maximum)
Phase	Real Medium 10 kHz S.E. Corr.		Value	Phase	Real Medium 20 kHz S.E. Corr.		Value	Phase	Real Medium 40 kHz S.E. Corr.		Value
Master		20.73	Master		-1.786	Master		-10.46			
	-50.00 (Minimum)	0 (Nominal)	140.0 (Maximum)		-50.00 (Minimum)	0 (Nominal)	50.00 (Maximum)		-30.00 (Minimum)	0 (Nominal)	30.00 (Maximum)
Phase	Quad Medium 10 kHz S.E. Corr.		Value	Phase	Quad Medium 20 kHz S.E. Corr.		Value	Phase	Quad Medium 40 kHz S.E. Corr.		Value
Master		-105.8	Master		-34.20	Master		11.45			
	-1300 (Minimum)	0 (Nominal)	1300 (Maximum)		-650.0 (Minimum)	0 (Nominal)	650.0 (Maximum)		-350.0 (Minimum)	0 (Nominal)	350.0 (Maximum)

Master: Calibration out of date 6-Oct-2001 1:22

Hostile Litho-Density Sonde / Equipment Identification

Primary Equipment:

Hostile Litho Density Sonde	HLDS - D	45
Hostile Litho Density High Voltage	HLDV - D	35
Gamma Source Radioactive	GSR - Z	1846

Auxiliary Equipment:

Hostile Litho Density Pad	HLDP - C	45
Hostile Litho Density High Voltage Housi	HEH - H	35

Nuclear Porosity Lithology Cartridge - B / Equipment Identification

Primary Equipment:

NPLC Cartridge	NPLC - B	79
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Auxiliary Equipment:

NPLC Housing	NPH - B	82
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Accelerator-Porosity Tool / Equipment Identification

Primary Equipment:

Accelerator-Porosity Sonde	APS - BA	22
APS Minitron	MNTR - F	4185

Auxiliary Equipment:

Accelerator-Porosity Housing	APH - AC	22
APS Calibration Water Tank	SFT - 178	4722
APS Aluminium Calibrator Sleeve	SFT - 281	24

Hostile Natural Gamma Ray Sonde / Equipment Identification




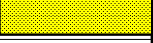

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




HNGS Sonde	HNGS - BA	77
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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			40.59	Master			17.05	Master			1212
Before			40.72	Before			17.42	Before			1212
After			40.59	After			16.56	After			1214
	37.50 (Minimum)	40.00 (Nominal)	42.50 (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			145.6	Master			9.037	Master			32.69
Before			145.3	Before			9.666	Before			32.84
After			145.7	After			8.507	After			29.39
	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			44.80								
Before			43.98								
After			42.72								
	10.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)								
Master: 15-Jan-2003 16:08			Before: 15-Jan-2003 16:17				After: 31-Jan-2003 17:06				

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			40.55	Master			16.60	Master			1239
Before			40.57	Before			16.91	Before			1239
After			40.60	After			16.65	After			1242
	37.50 (Minimum)	40.00 (Nominal)	42.50 (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			144.7	Master			9.925	Master			32.80
Before			144.4	Before			9.708	Before			32.89
After			144.6	After			9.652	After			29.19
	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			44.45								
Before			43.98								
After			42.38								
	10.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)								
Master: 15-Jan-2003 16:08			Before: 15-Jan-2003 16:17				After: 31-Jan-2003 17:06				

Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		1.008
Before		1.0000
After		1.006
	0.9500 (Minimum)	1.000 (Nominal)
		1.050 (Maximum)
Master: 15-Jan-2003 16:08		

Hostile Natural Gamma Ray Sonde Master Calibration									
Detector 1 Calibration									
Phase	Na 511 Peak Set Point	Value	Phase	Th Peak Loc	Value	Phase	Th Peak Res %	Value	
Master		41.00	Master		209.3	Master		8.207	
	38.00 (Minimum)	40.00 (Nominal)	42.00 (Maximum)	201.0 (Minimum)	209.6 (Nominal)	218.3 (Maximum)	5.000 (Minimum)	7.000 (Nominal)	9.000 (Maximum)
Phase	Background Count Rate CPS	Value	Phase	Gain Ratio	Value				
Master		23.15	Master		0.9810				
	20.00 (Minimum)	142.5 (Nominal)	265.0 (Maximum)	0.9400 (Minimum)	1.000 (Nominal)	1.060 (Maximum)			
Master: 15-Jan-2003 16:01									

Hostile Natural Gamma Ray Sonde Master Calibration									
Detector 2 Calibration									
Phase	Na 511 Peak Set Point	Value	Phase	Th Peak Loc	Value	Phase	Th Peak Res %	Value	
Master		41.00	Master		209.3	Master		7.848	
	38.00 (Minimum)	40.00 (Nominal)	42.00 (Maximum)	201.0 (Minimum)	209.6 (Nominal)	218.3 (Maximum)	5.000 (Minimum)	7.000 (Nominal)	9.000 (Maximum)
Phase	Background Count Rate CPS	Value	Phase	Gain Ratio	Value				
Master		21.80	Master		0.9821				
	20.00 (Minimum)	142.5 (Nominal)	265.0 (Maximum)	0.9400 (Minimum)	1.000 (Nominal)	1.060 (Maximum)			
Master: 15-Jan-2003 16:01									

Company: Lamont Doherty

Schlumberger

Well: ODP Leg 207 Site 1261B

Field: Demarara Rise

Country: Venezuela

Ocean: Atlantic

Phasor Induction
Natural Gamma Ray