

COMPANY: Lamont Doherty

WELL: ODP Leg 189, Site 1171D (STR-2A)

FIELD: Tasmanian Seaway, West Tasmania Site

COUNTRY: Offshore STATE: Indian Ocean

Phasor Induction
Gamma Ray
Schlumberger

COUNTY: Offshore
Field: Tasmanian Seaway, West Tasm
Location: ODP Leg 189, Site 1171D (STR-2
Company: Lamont Doherty

LOCATION		Elev.:	K.B.	11.2 m
Permanent Datum:	MSL		G.L.	-2148 m
Log Measured From:	RKB		D.F.	10.9 m
Drilling Measured From:	RKB	Elev.: 0 m		
				11.2 m above Perm. Datum
API Serial No.	LATITUDE: 48° 29.9975' S	LONGITUDE: 149° 6.7222' E	RIG:	JOIDES Resolution

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			
PH			
Source Of Sample			
RM @ Measured Temperature	@		
RMF @ Measured Temperature	@		
RMC @ Measured Temperature	@		
Source RMF			
RM @ MRT	@		
RMF @ MRT		@	
Maximum Recorded Temperatures			
Circulation Stopped			
Time			
Logger On Bottom			
Time			
Unit Number			
Location			
Recorded By			
Witnessed By			

Logging Date	21-APR-2000
Run Number	One
Depth Driller	3117.8 m
Schlumberger Depth	3118 m
Bottom Log Interval	3112 m
Top Log Interval	2310 m
Casing Driller Size @ Depth	0.000 in @ 2310 m
Casing Schlumberger	2310 m
Bit Size	9.875 in
Type Fluid In Hole	Salt Water Base
Density	8.51234 lbrn/gal
Fluid Loss	PH
Source Of Sample	Salt water
RM @ Measured Temperature	0.232 ohm.m @ 58 degF
RMF @ Measured Temperature	@ @
RMC @ Measured Temperature	@ @
Source RMF	RMC
RM @ MRT	0.127 @ 111 @ 111
RMF @ MRT	44.1 degC @ 111
Maximum Recorded Temperatures	
Circulation Stopped	21-APR-2000 0:00
Time	
Logger On Bottom	21-APR-2000 3:30
Time	
Unit Number	99 Houston OS
Location	
Recorded By	Kerry M. Swain
Witnessed By	Patrick Fothergill, Ulysses S. Nimmemann

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

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OTHER SERVICES1
 OS1: HLDS/APS/HNGS
 OS2:
 OS3:
 OS4:
 OS5:

OTHER SERVICES2
 OS1:
 OS2:
 OS3:
 OS4:
 OS5:

REMARKS: RUN NUMBER 1
 Hole cored with APC/XCB.
 Sea Floor at 2159 mbrf but could not be verified on log response.
 Log presented in meters below rig floor (mbrf).
 Lamont Temperature Tool, (TAP) , run on DITE/HLDS/APS/HNGS.
 Toolstring- DITE/HLDS/APS/HGNS.
 Wireline Heave Compensator was used on all descents.
 Wireline Heave compensator was off between: 3093-3075, 3040-3009, 2999-2972 mbrf due to high heave and or compensator system problems on the main pass.
 Sepiolite mud was used to displace the hole.
 Drillers TD-3117.8 mbrf.
 Loggers TD-3118 mbrf.
 Drill Pipe Driller - 2310 mbrf.
 Logger Drill Pipe - 2310 mbrf.
 The caliper was closed early to prevent problems while entering pipe.
 Depth offsets from the repeat to the main are due to the compensator being off.
 HNGS calibration tolerances are tight and do not affect the log response.
 SFL after check failed and the tool has SFL problems at 2453-2456, 2466 mbrf.

REMARKS: RUN NUMBER 2

RUN 1

SERVICE ORDER #: _____
 PROGRAM VERSION: 9C1-303
 FLUID LEVEL: _____

LOGGED INTERVAL	START	STOP

RUN 2

SERVICE ORDER #: _____
 PROGRAM VERSION: _____
 FLUID LEVEL: _____

LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION


RUN 1

SURFACE EQUIPMENT

SFT-281 24
 SFT-178 4722
 GSR-U 135
 WITM (DTS)-A

RUN 2

DOWNHOLE EQUIPMENT

LEH-QT  32.03
 LEH-QT
 DTC-H CTEM 30.86
 ECH-KC 8253 TelStatus 31.14
 ToolStatu 30.23
 HNGS-BA Upper_1 29.53
 HNGS-BA 27 Lower_2 29.32 30.23

HNSH-BA 27

ILE-D
ILE-D 25

27.73

APS-BA
APS-BA 22
APH-AC 22
MNTR-F 4185

Status
Minitron
Near TD
Near Arr
Near
Far Arr
Far
Far TD

25.29

22.85
22.77
22.64
22.54

NPLC-B
NPLC-B 82
NPH-B 82

Status

21.35

20.12

HLDS
GSR-Z 1846
HLDV-D 35
HLDS-D 35
HEH-H 35
HLDP-C 12

Caliper
SS LS Status

18.90

14.85

DTA-A
ECH-KE 8261

14.08

DIT-E RED
DIC-EB 171
MIH-ZA 174
DIS-HB 200

12.87

SP
Deep Ind
Aux Meas SFL
Med Ind

6.49
6.24
5.32
5.17

Status

3.34

AH-TAP
AH-TAP

3.34

DF
Tension HV

0.00

TOOL ZERO

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

Output DLIS Files

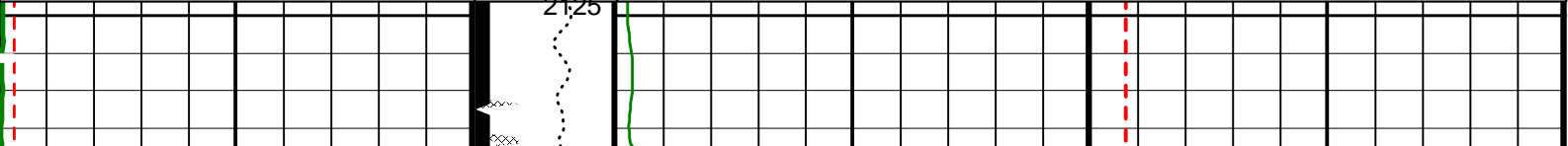
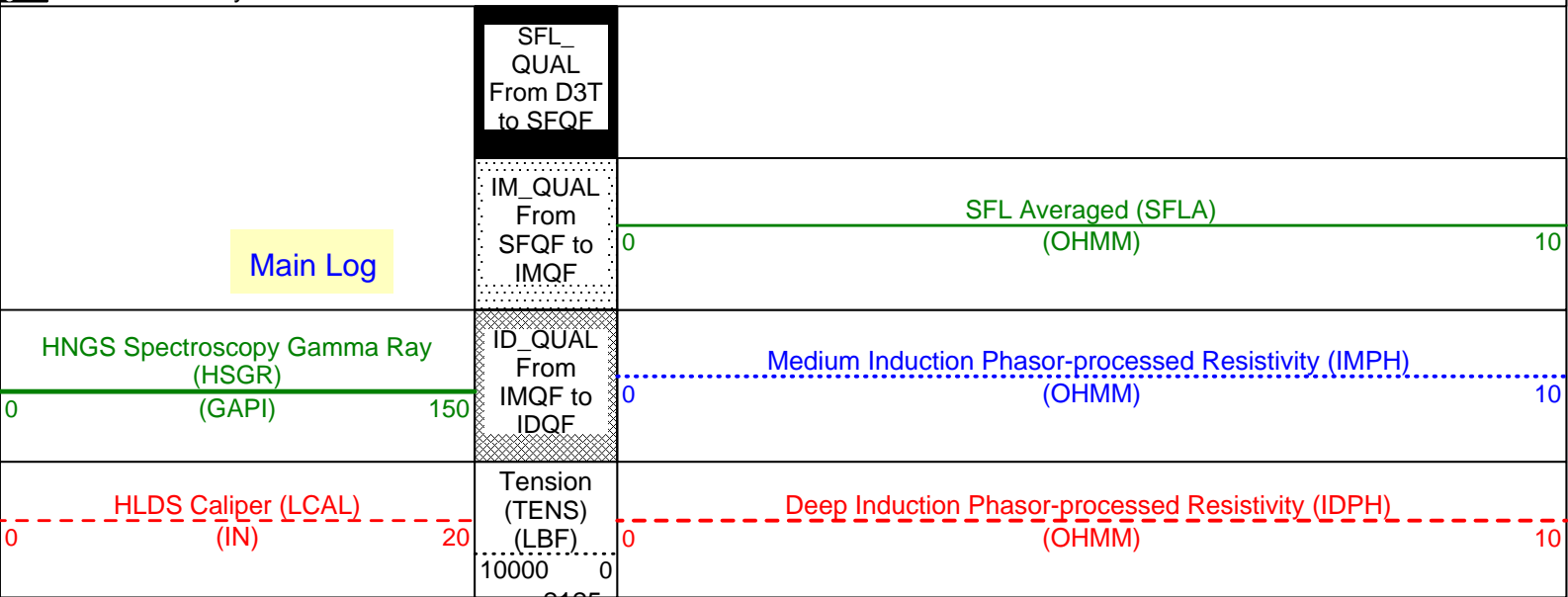
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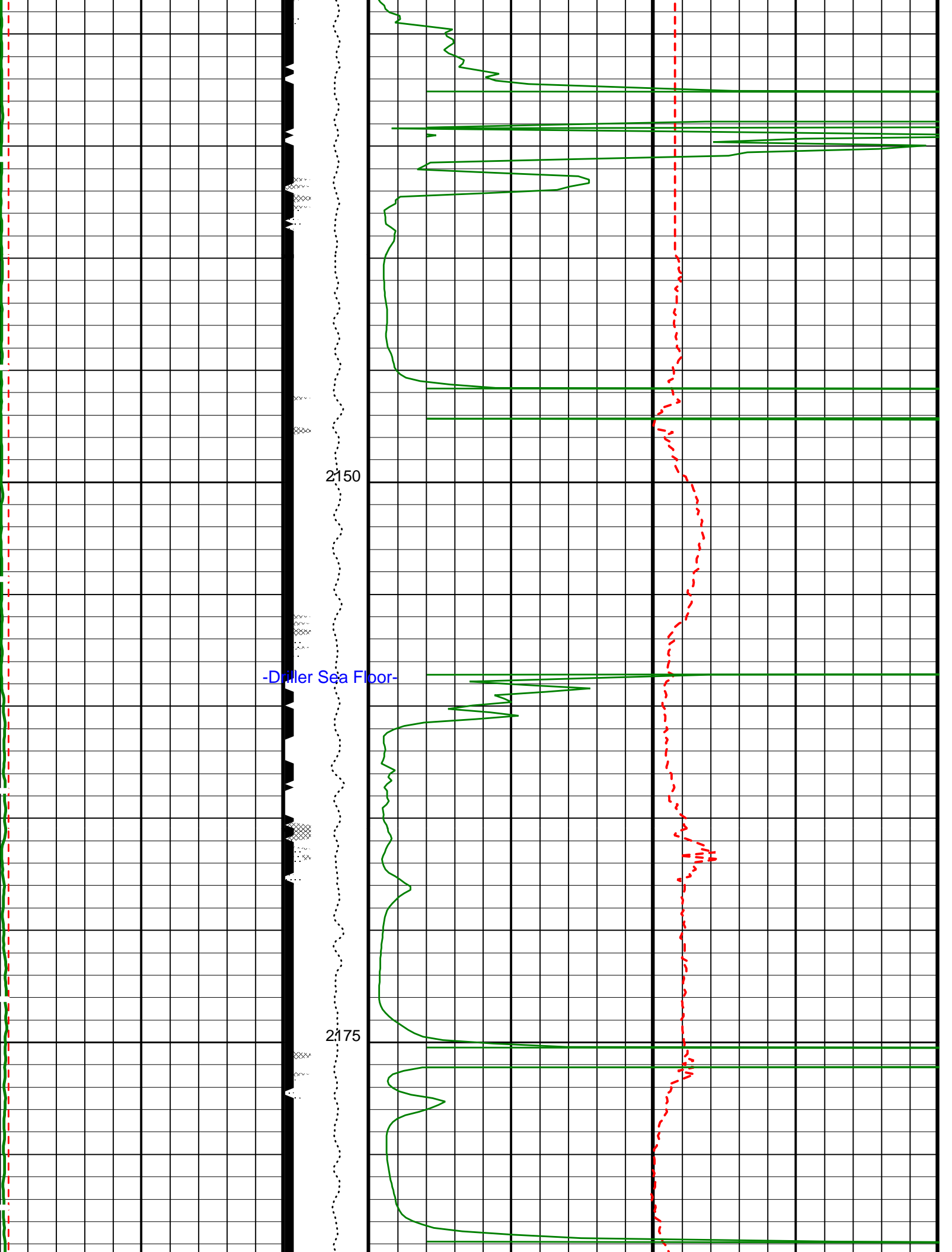
OP System Version: 9C1-303 MCM

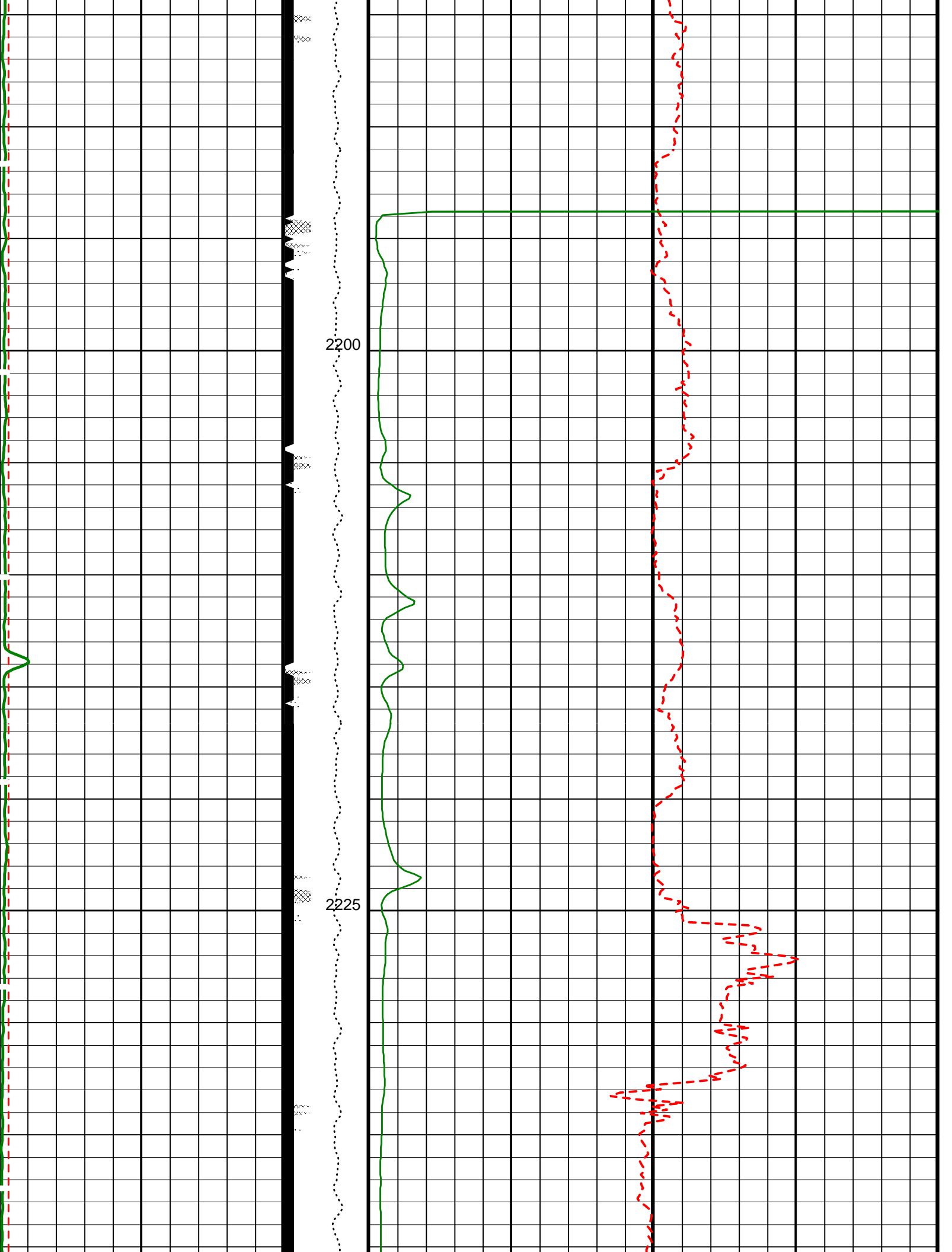
DIT-E	9C1-303	DTA-A	9C1-303
HLDS	9C1-303	NPLC-B	9C1-303
APS-BA	9C1-303	HNGS-BA	9C1-303
DTC-H	9C1-303		

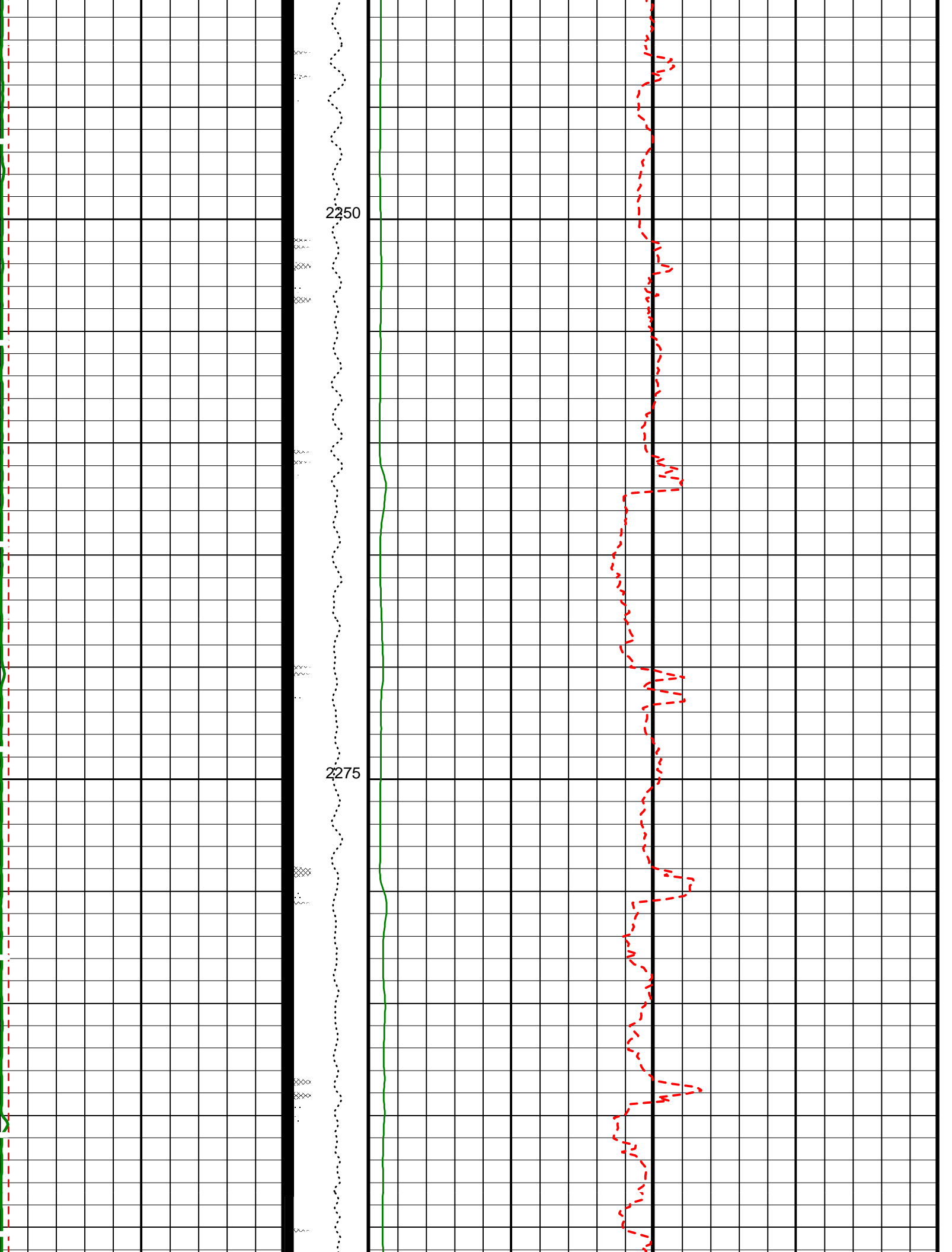
PIP SUMMARY

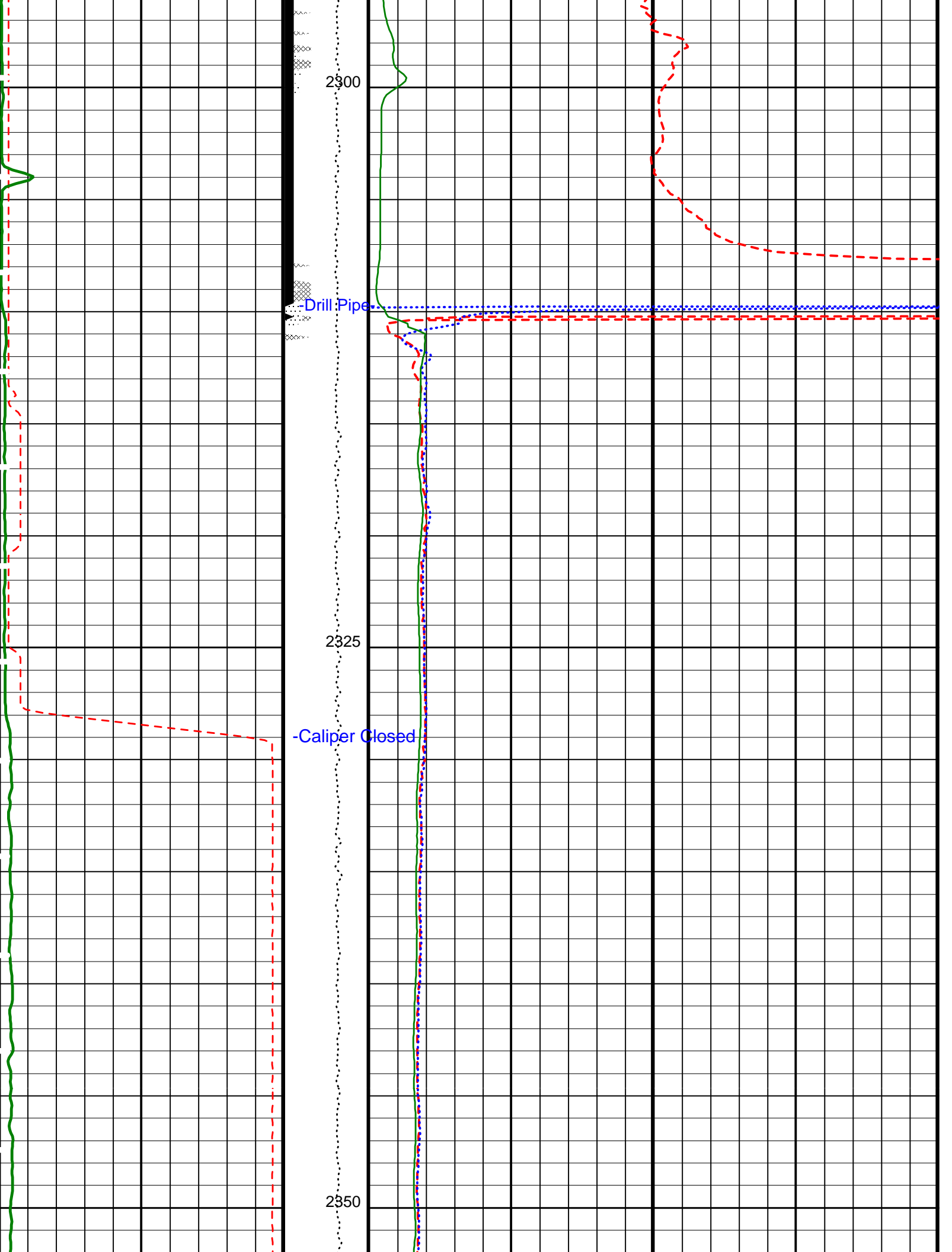
Time Mark Every 60 S

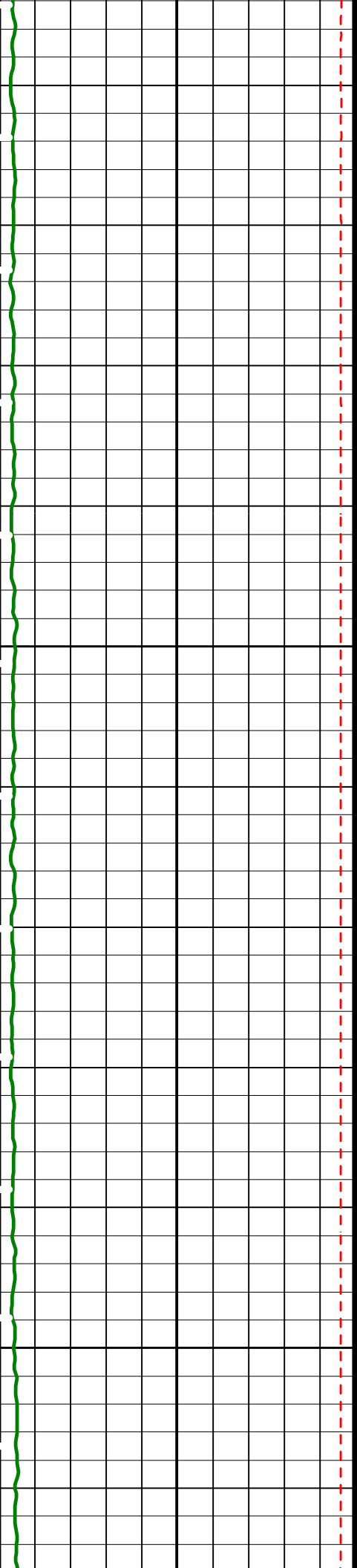






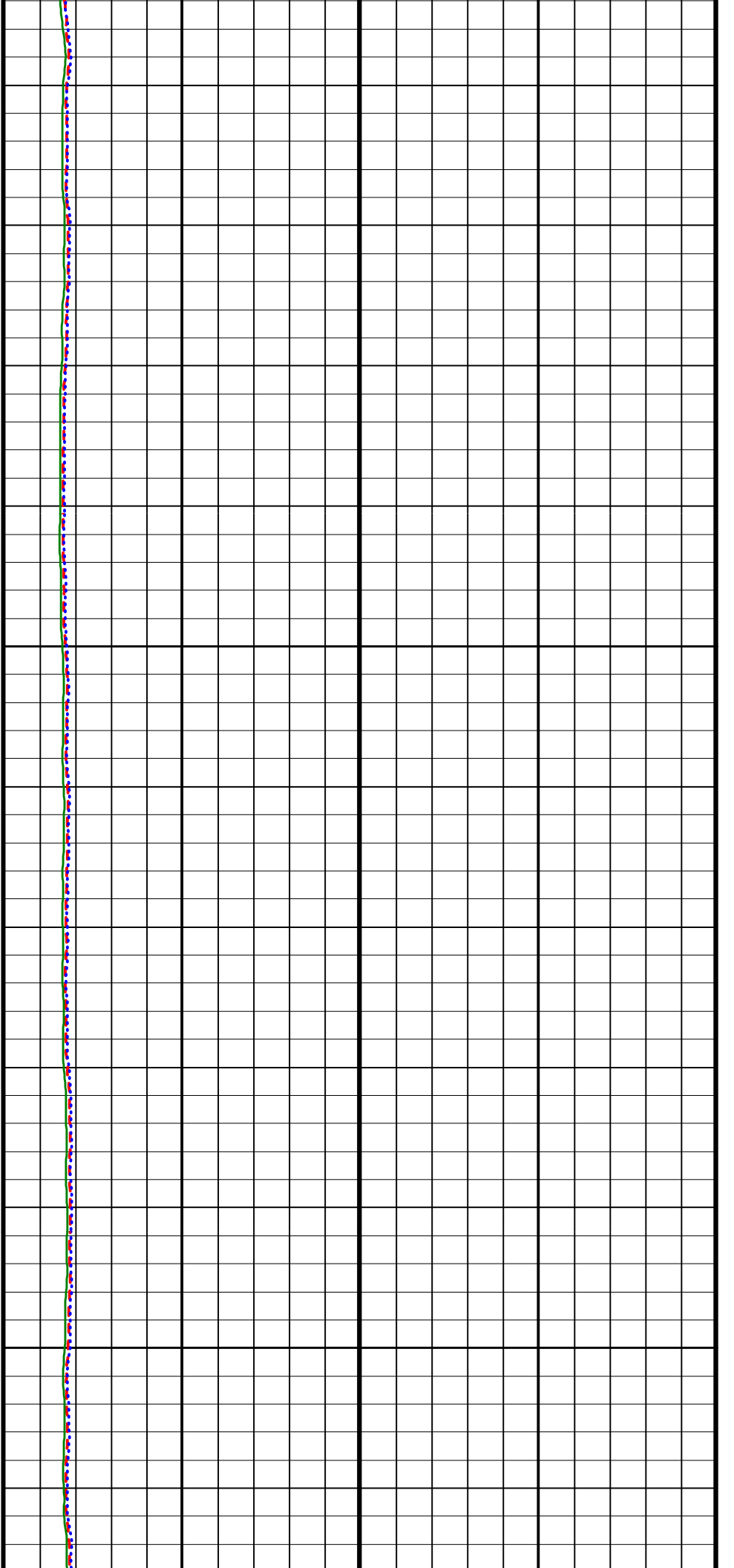


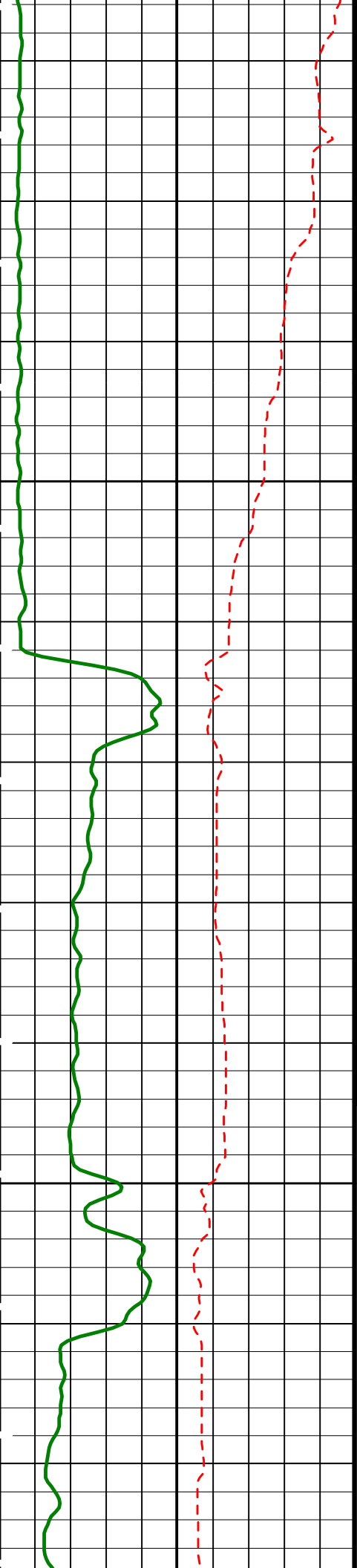




2375

2400

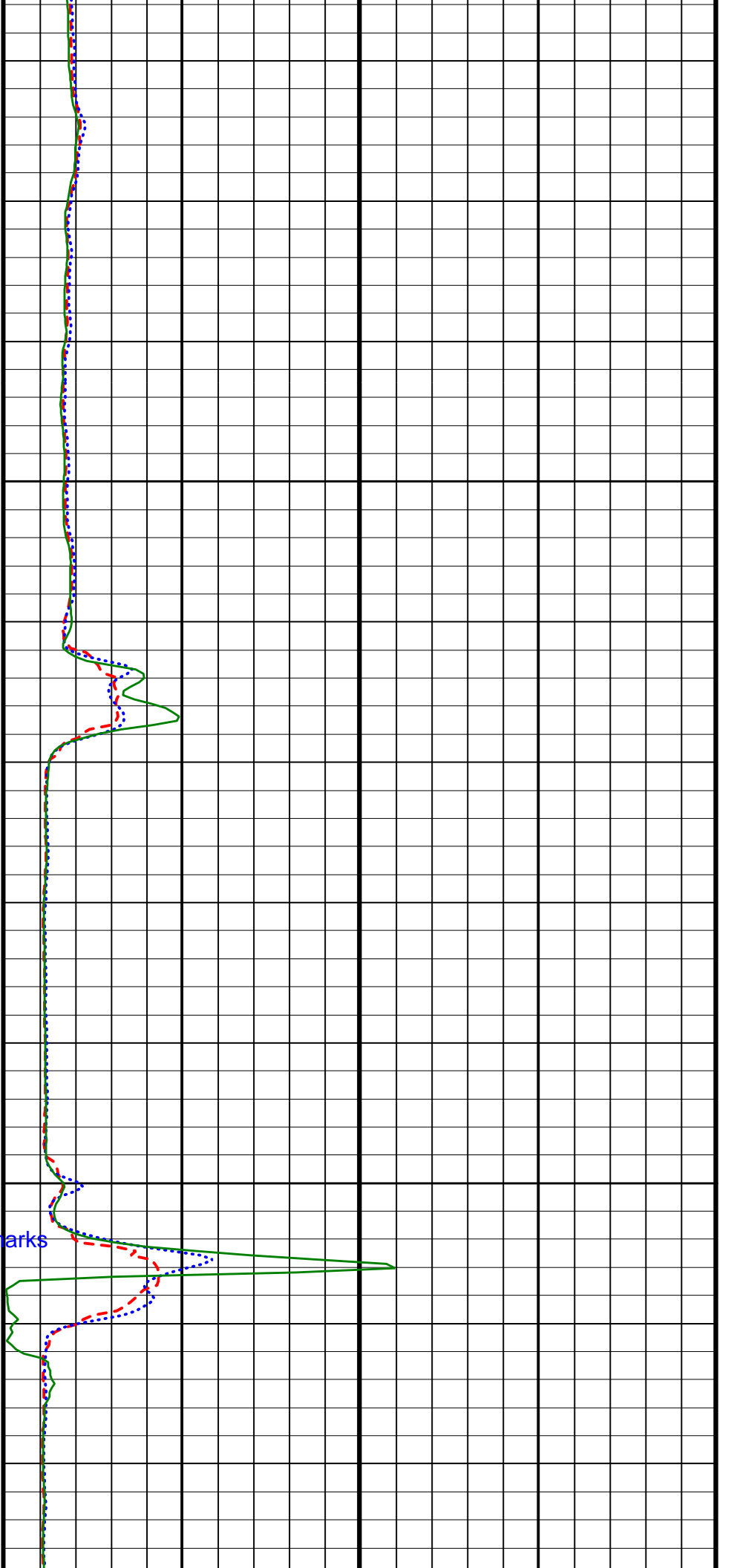


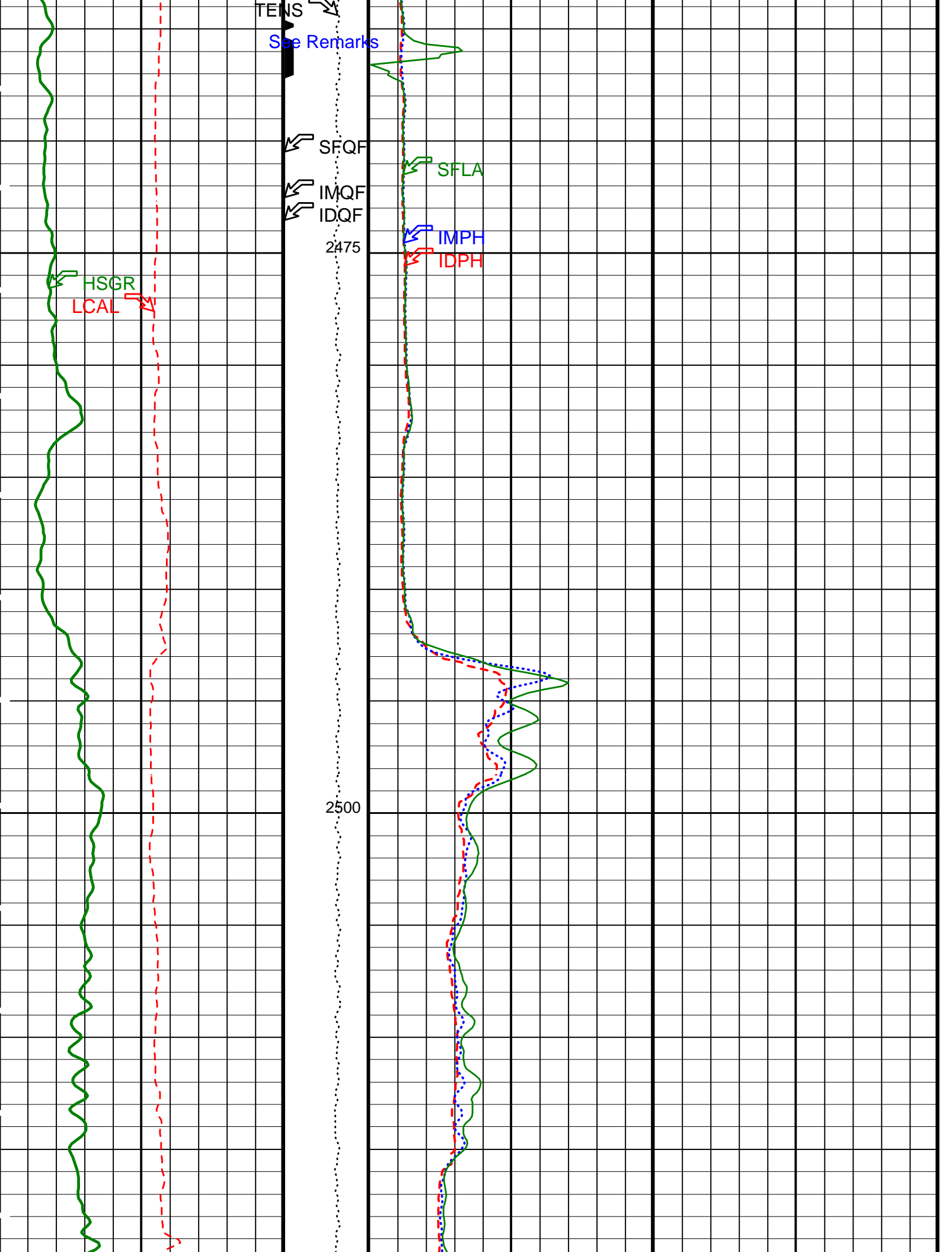


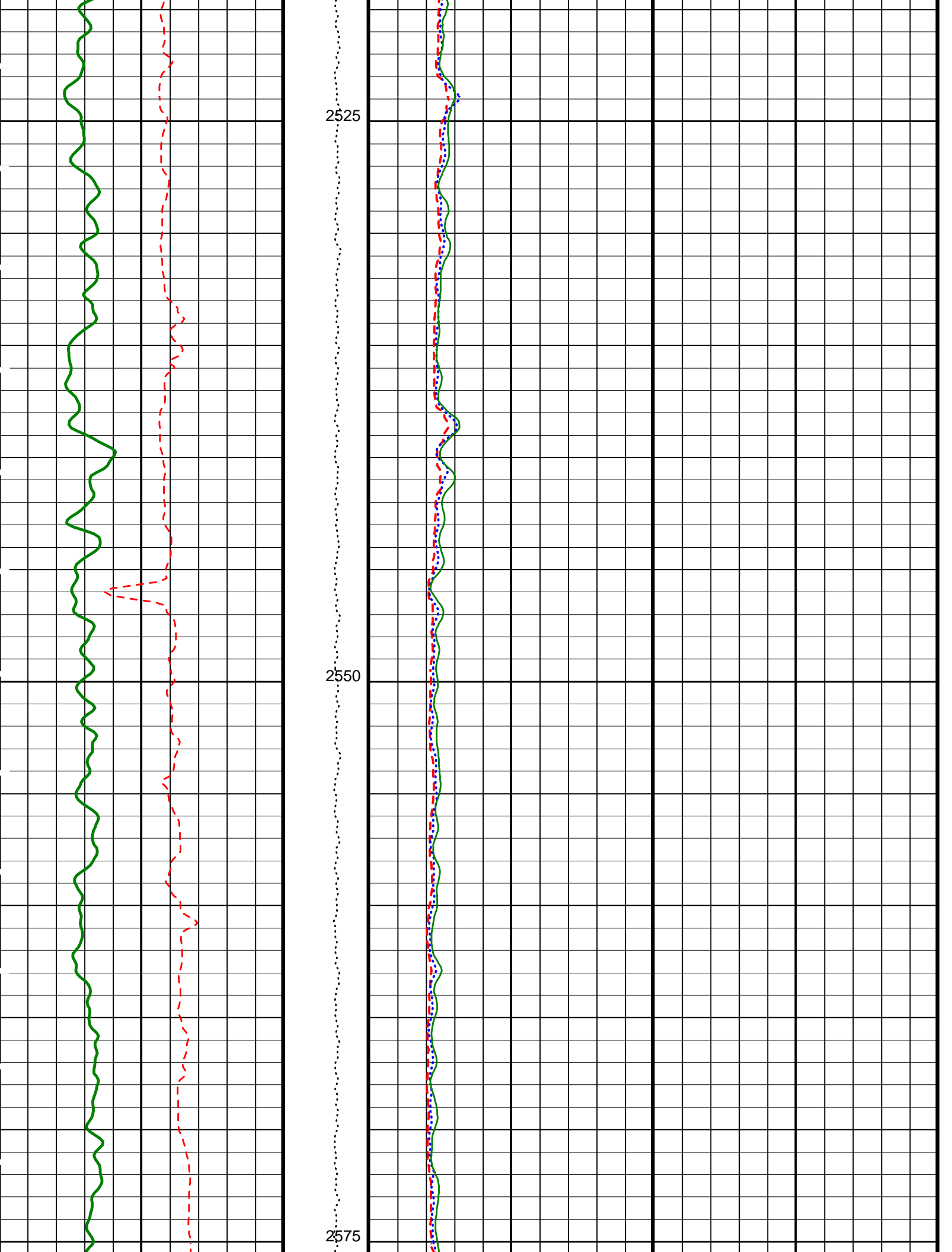
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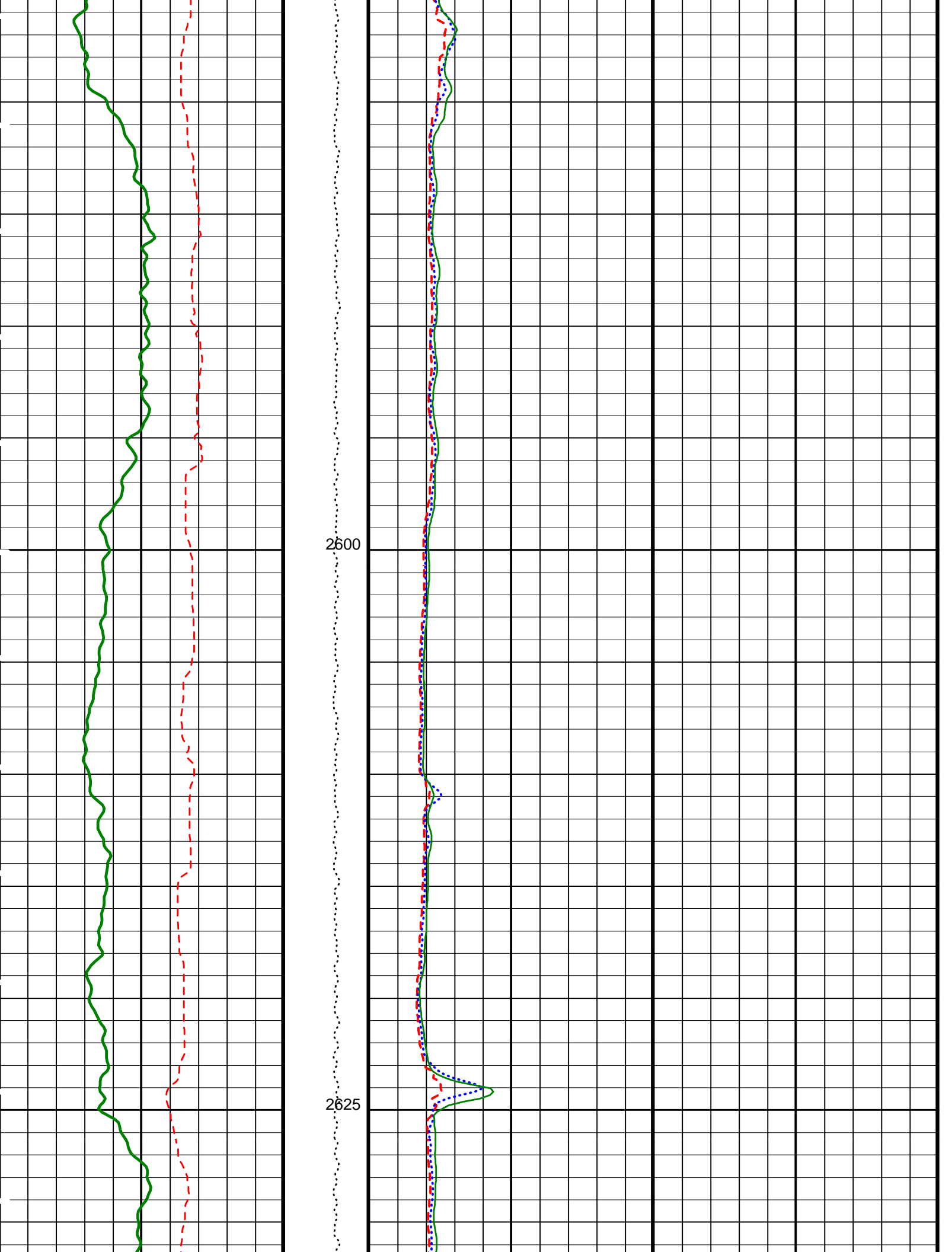
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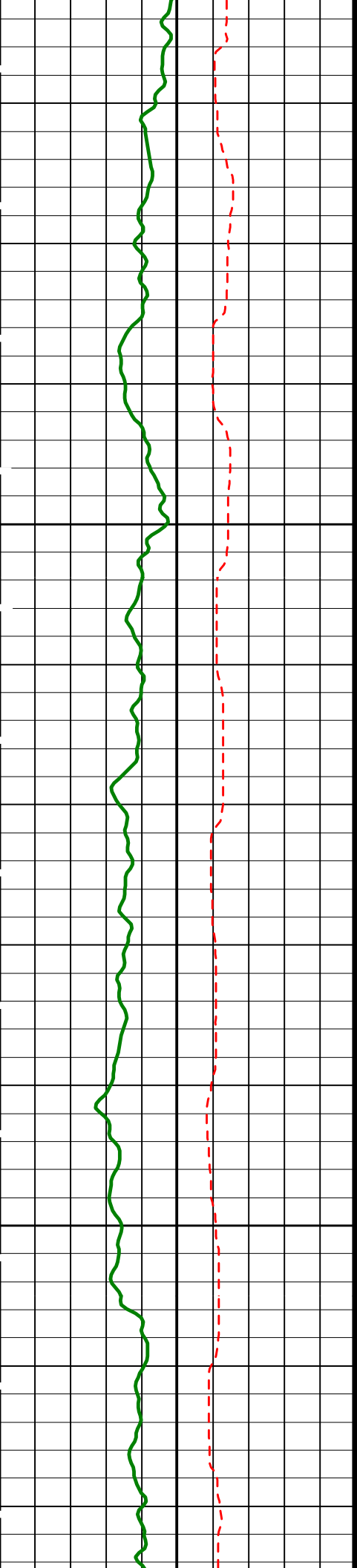
See Remarks





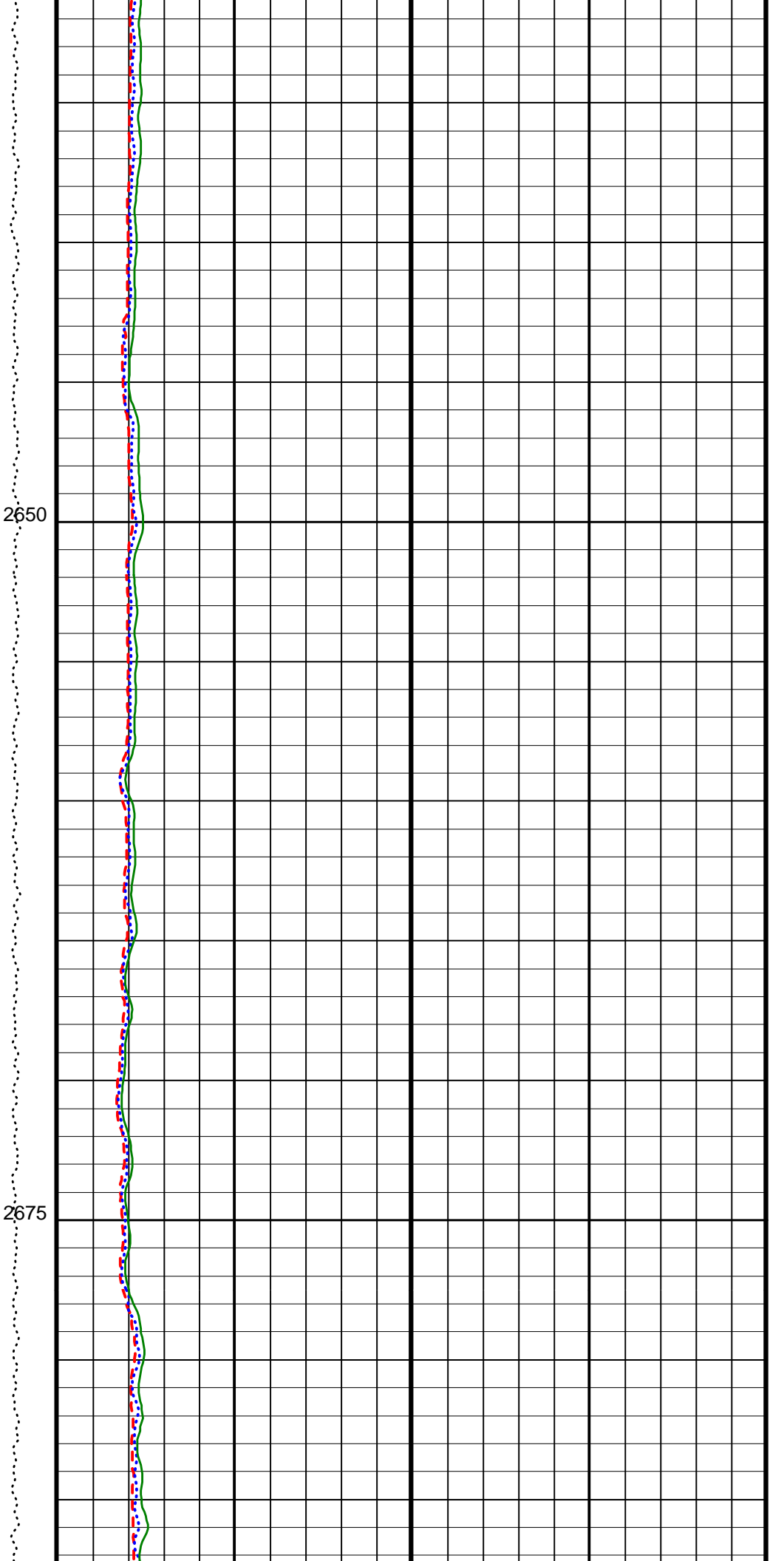


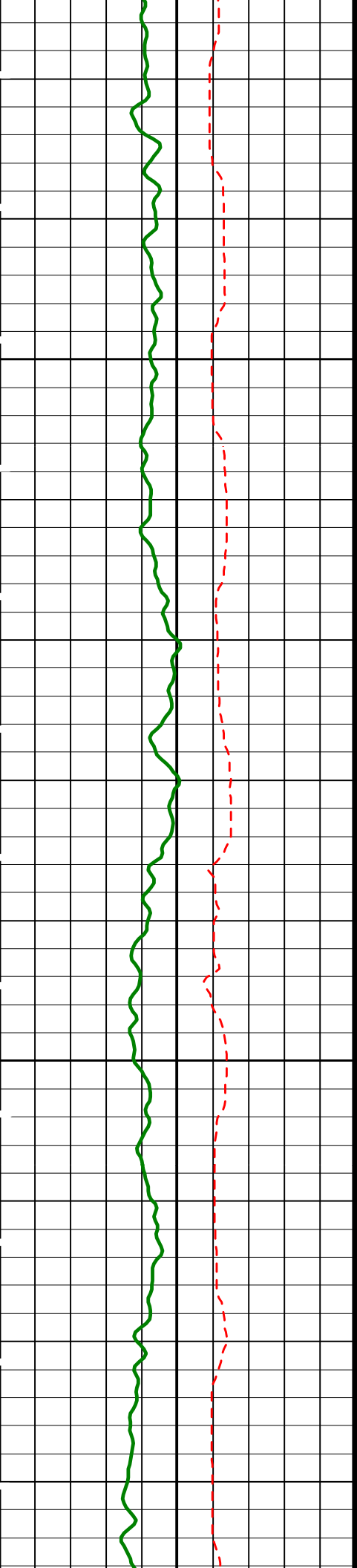




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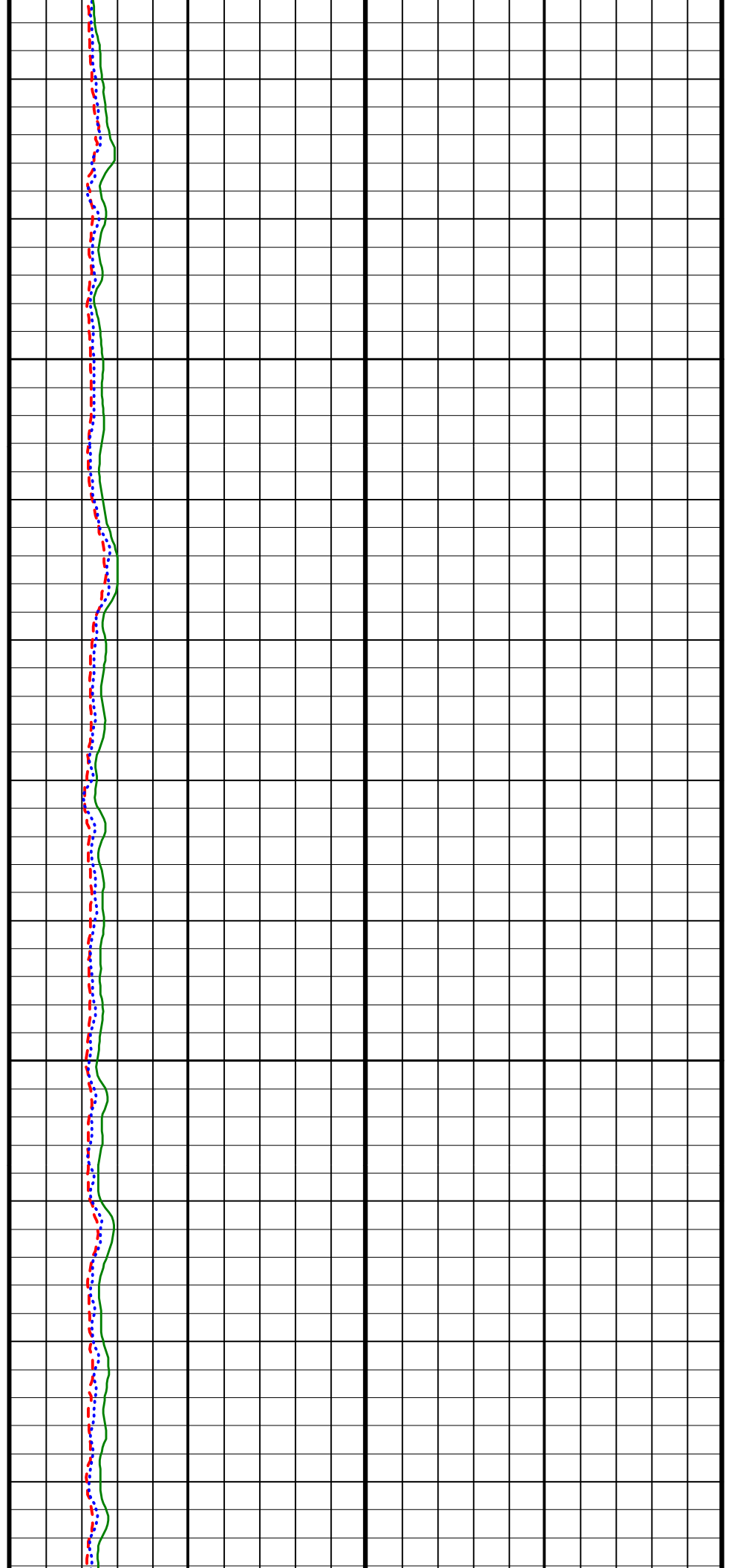
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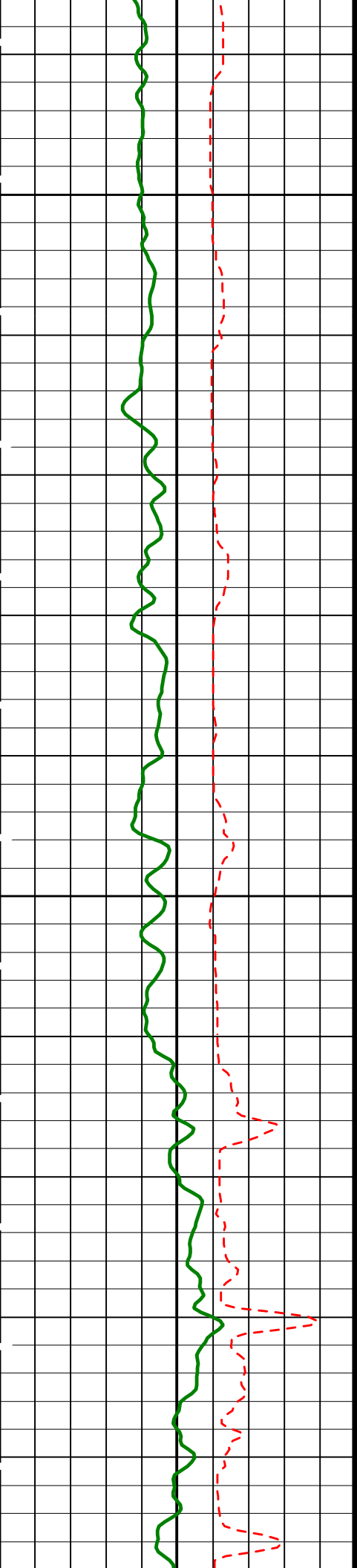




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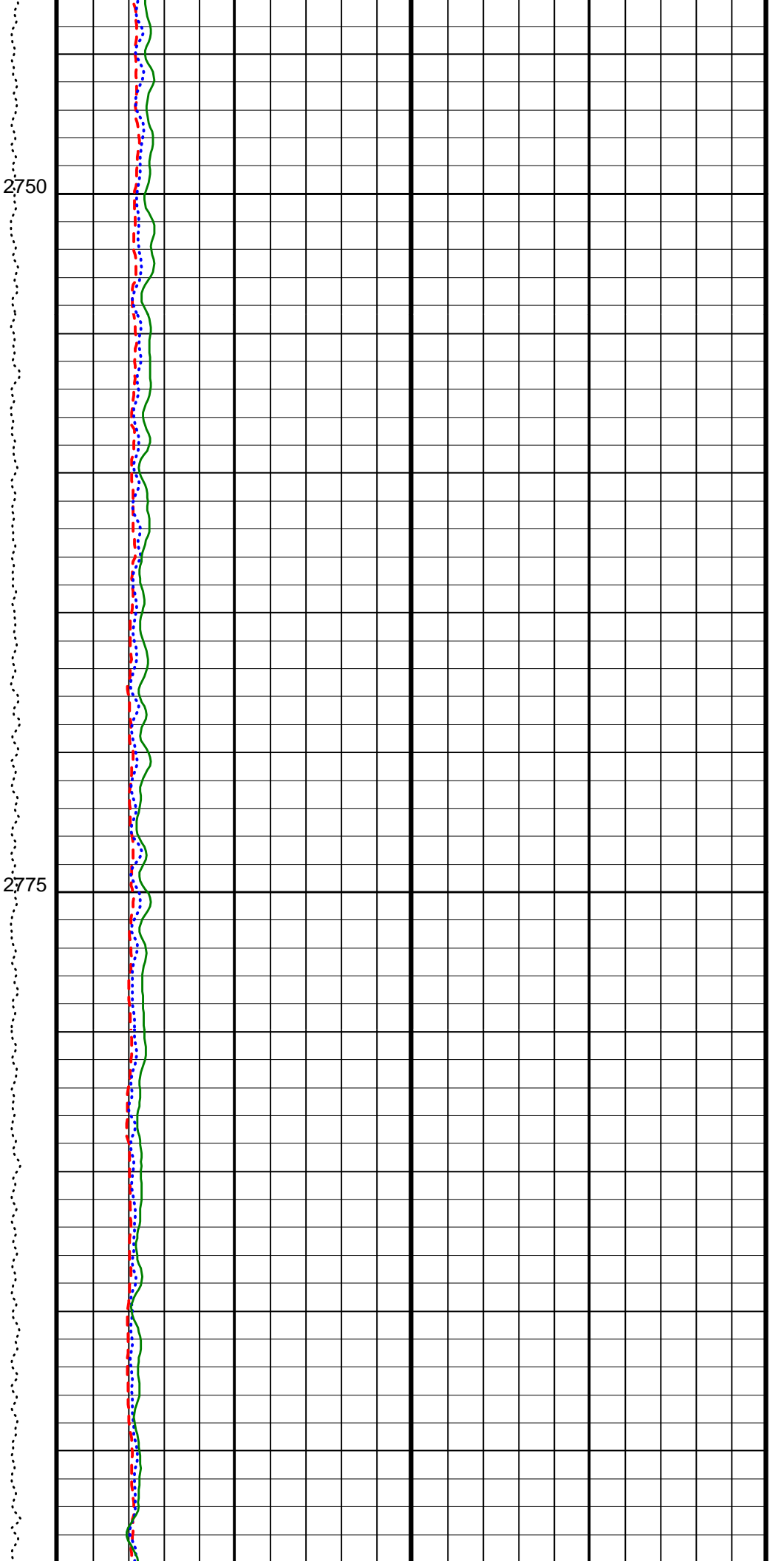
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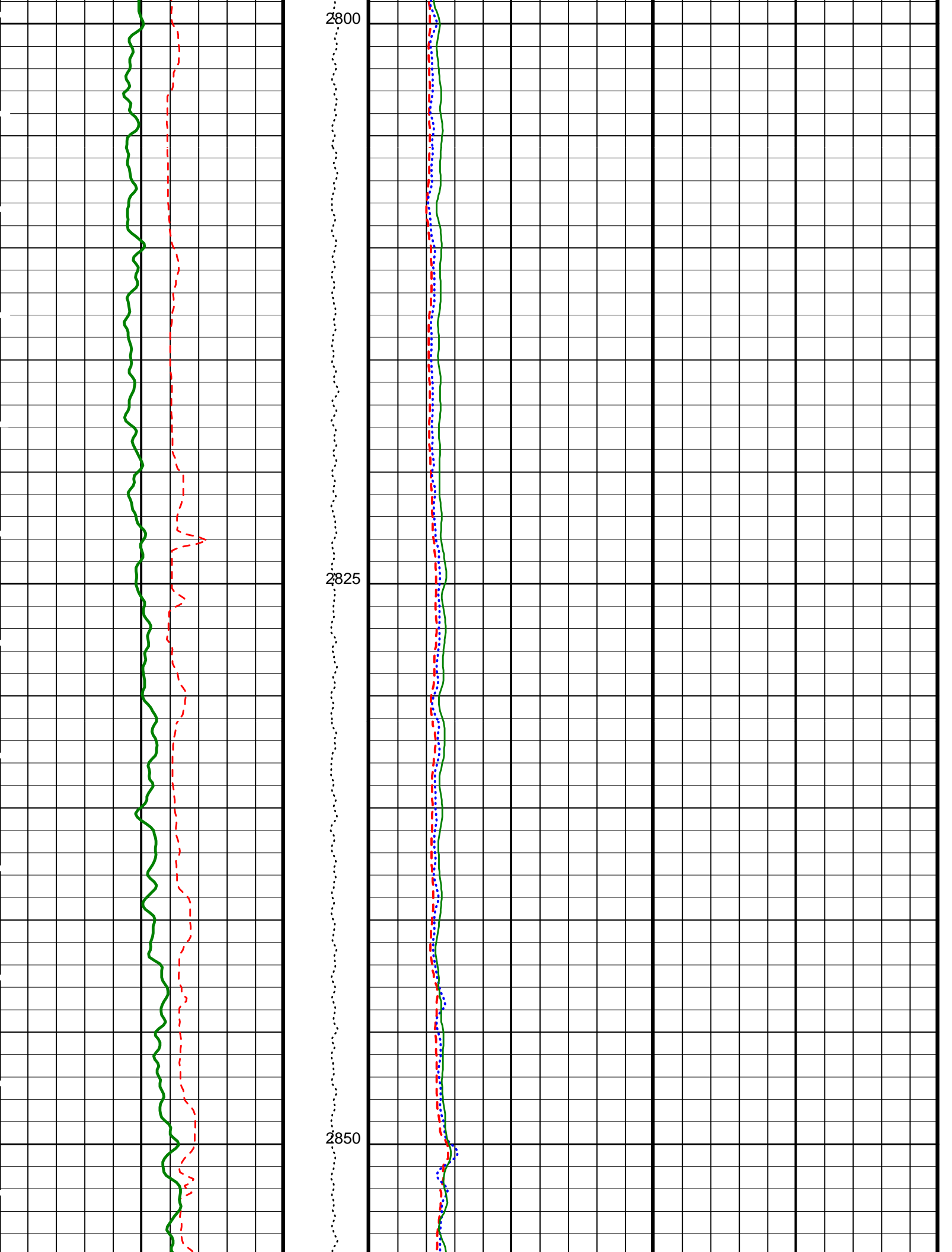


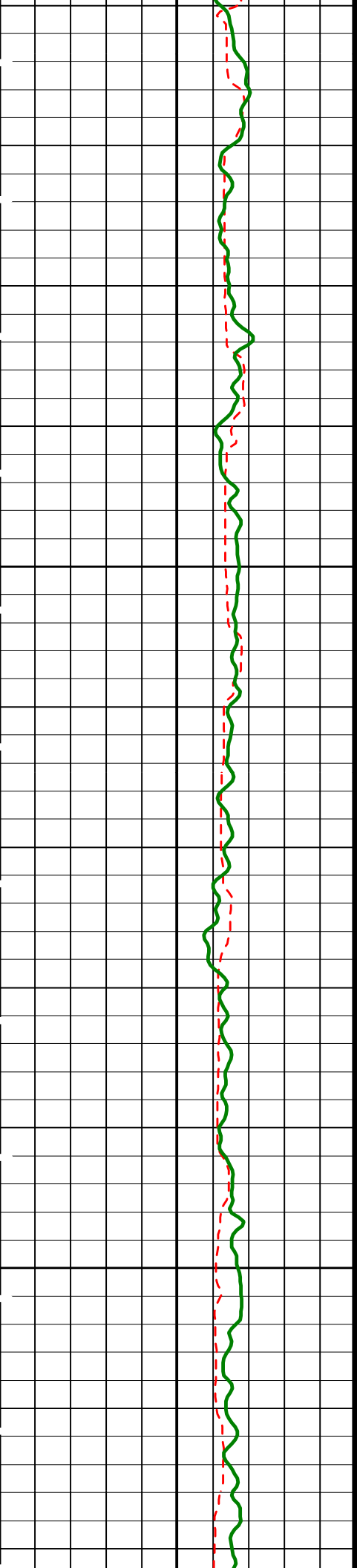


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2775

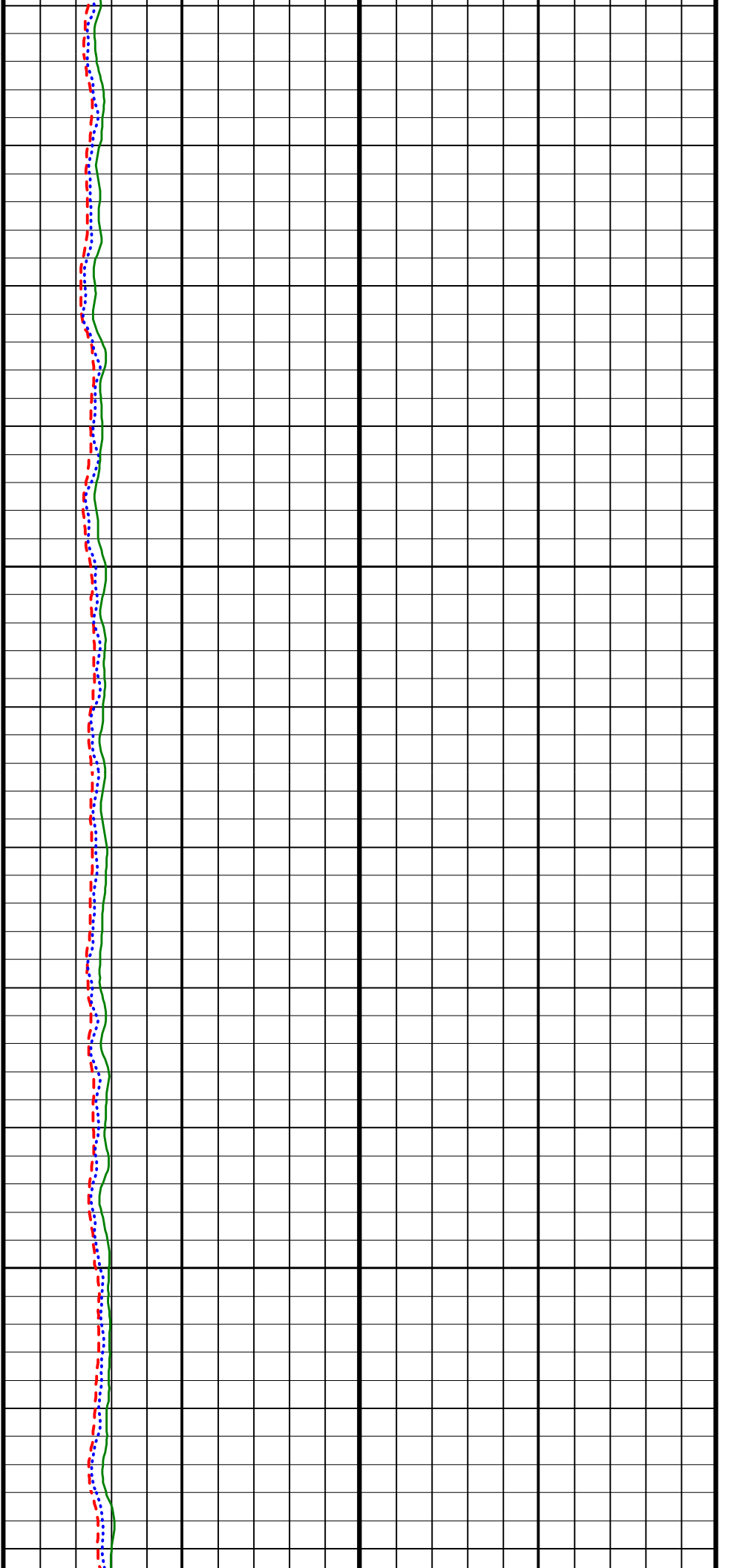


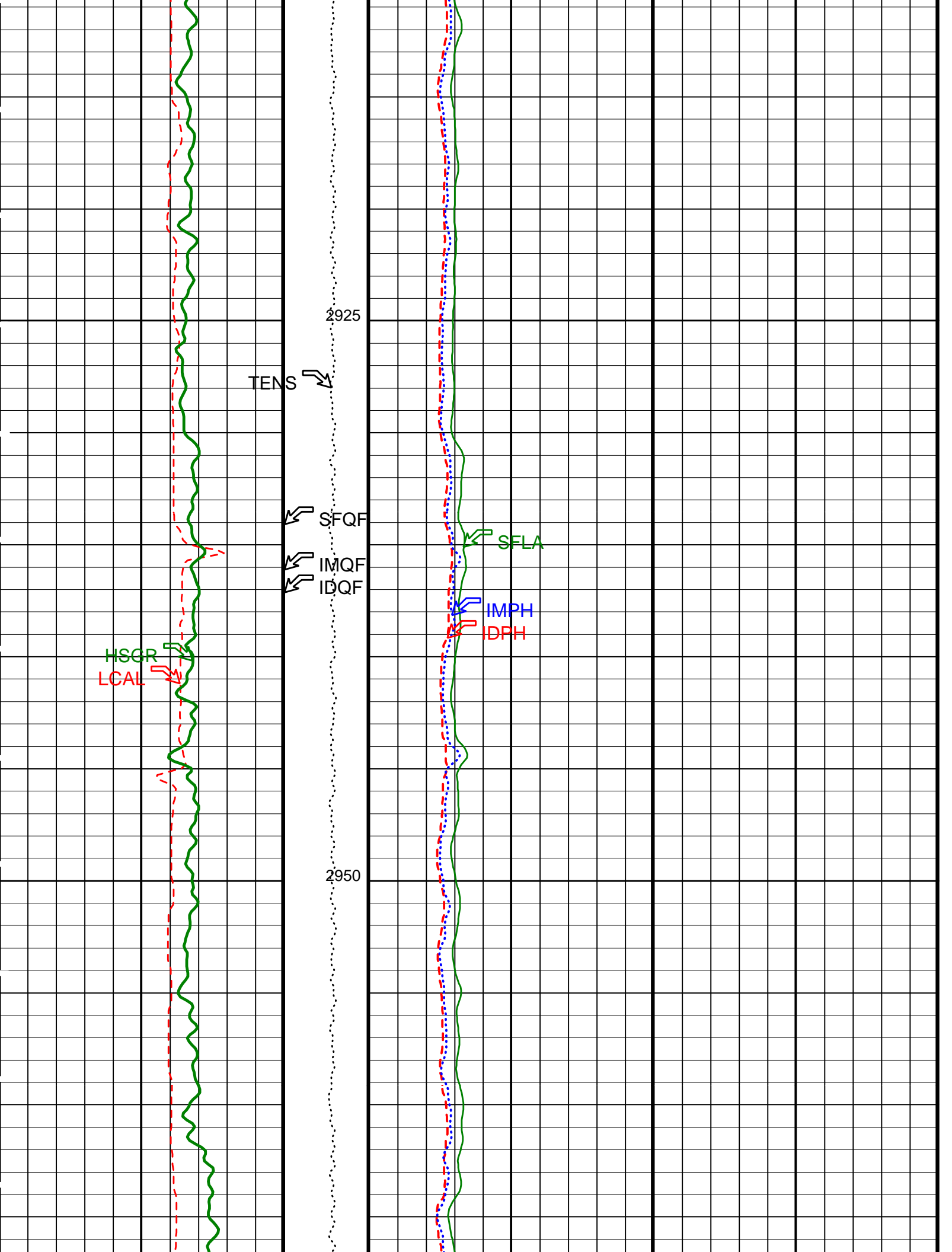


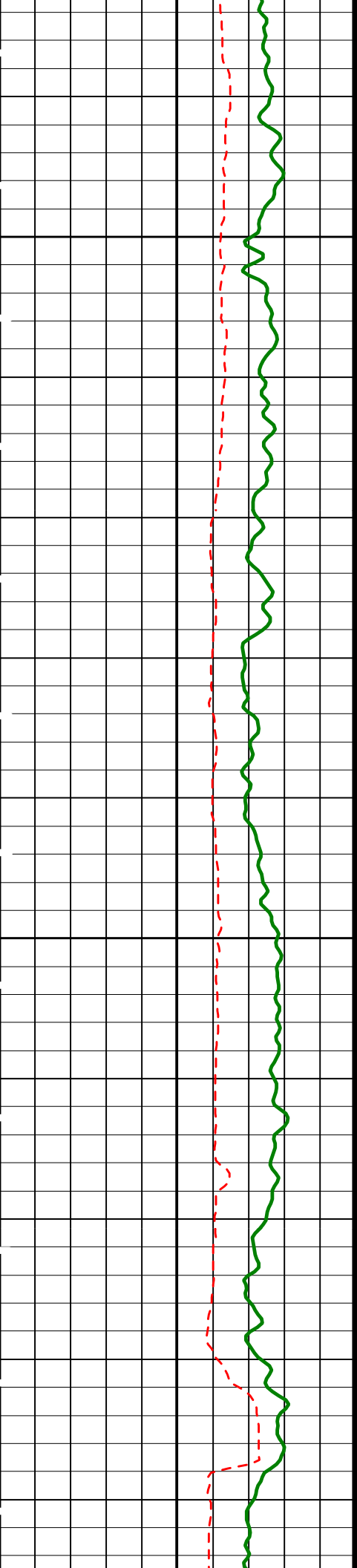


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2900

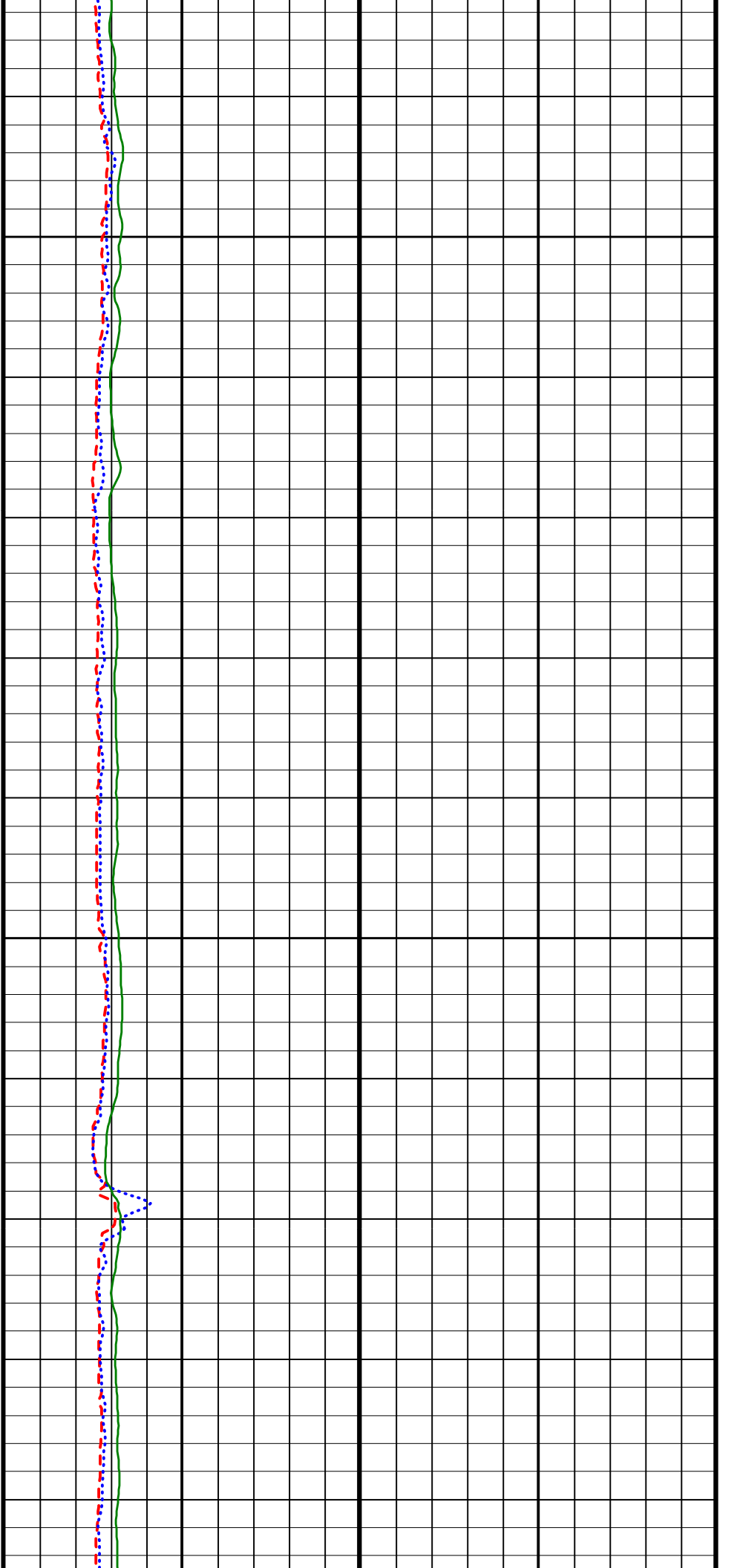


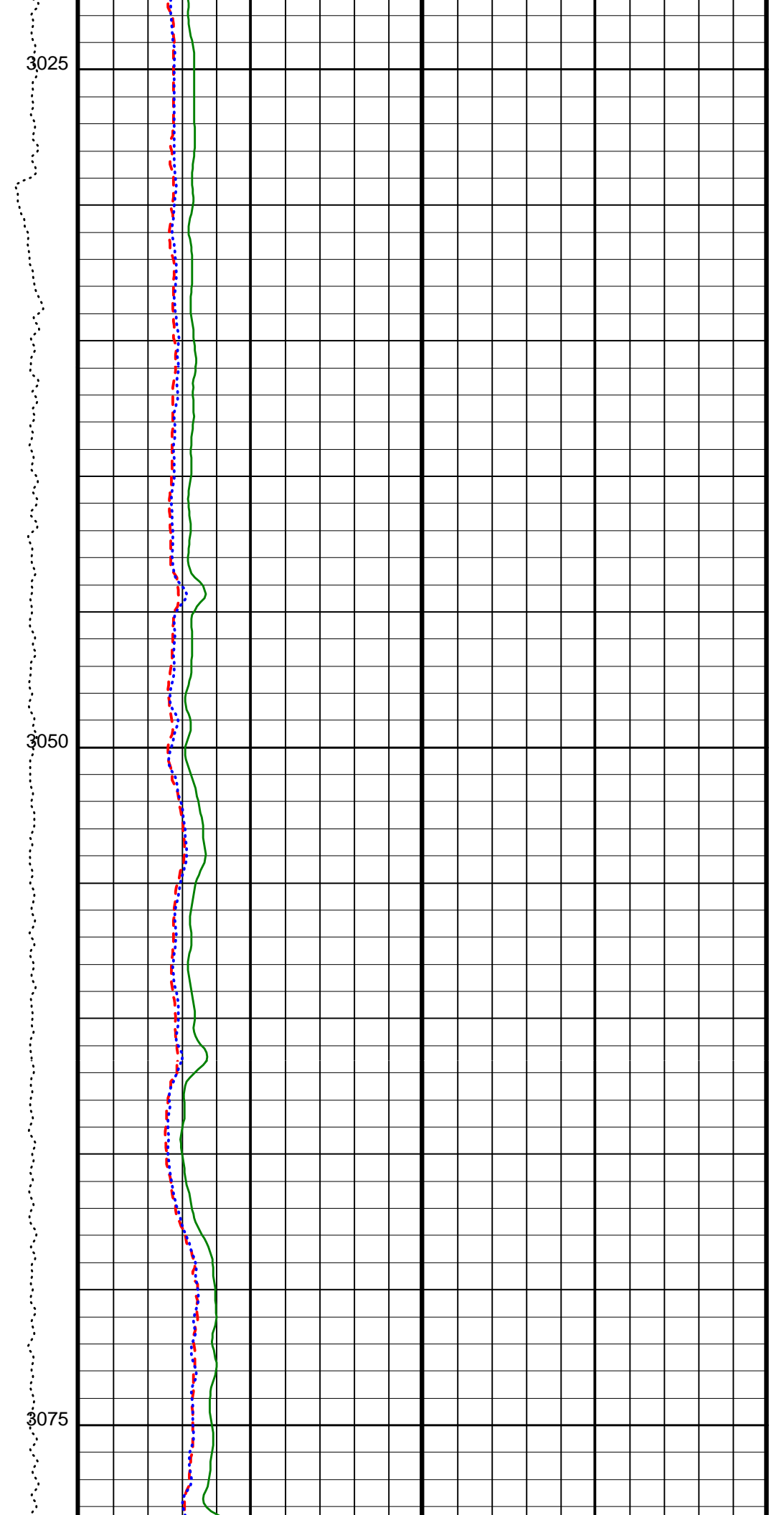
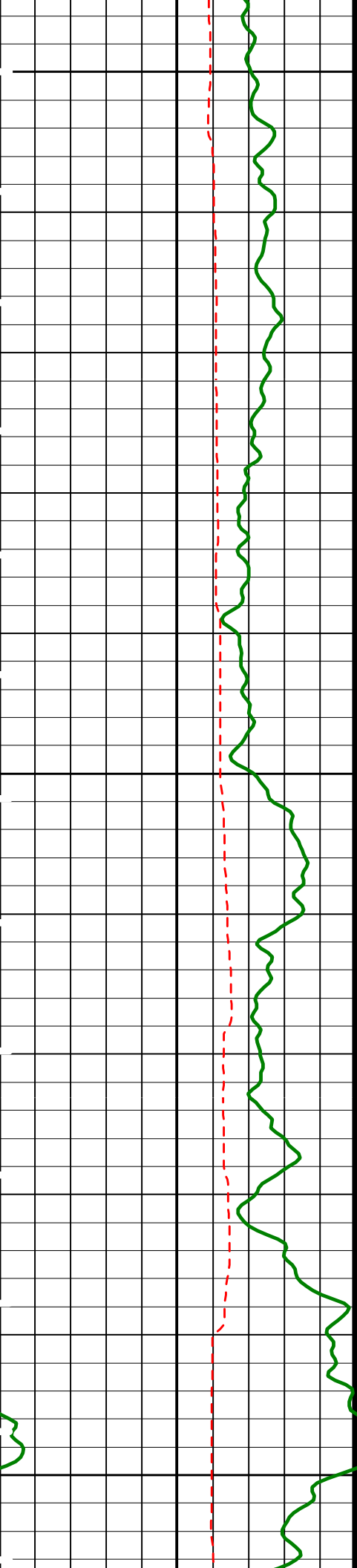


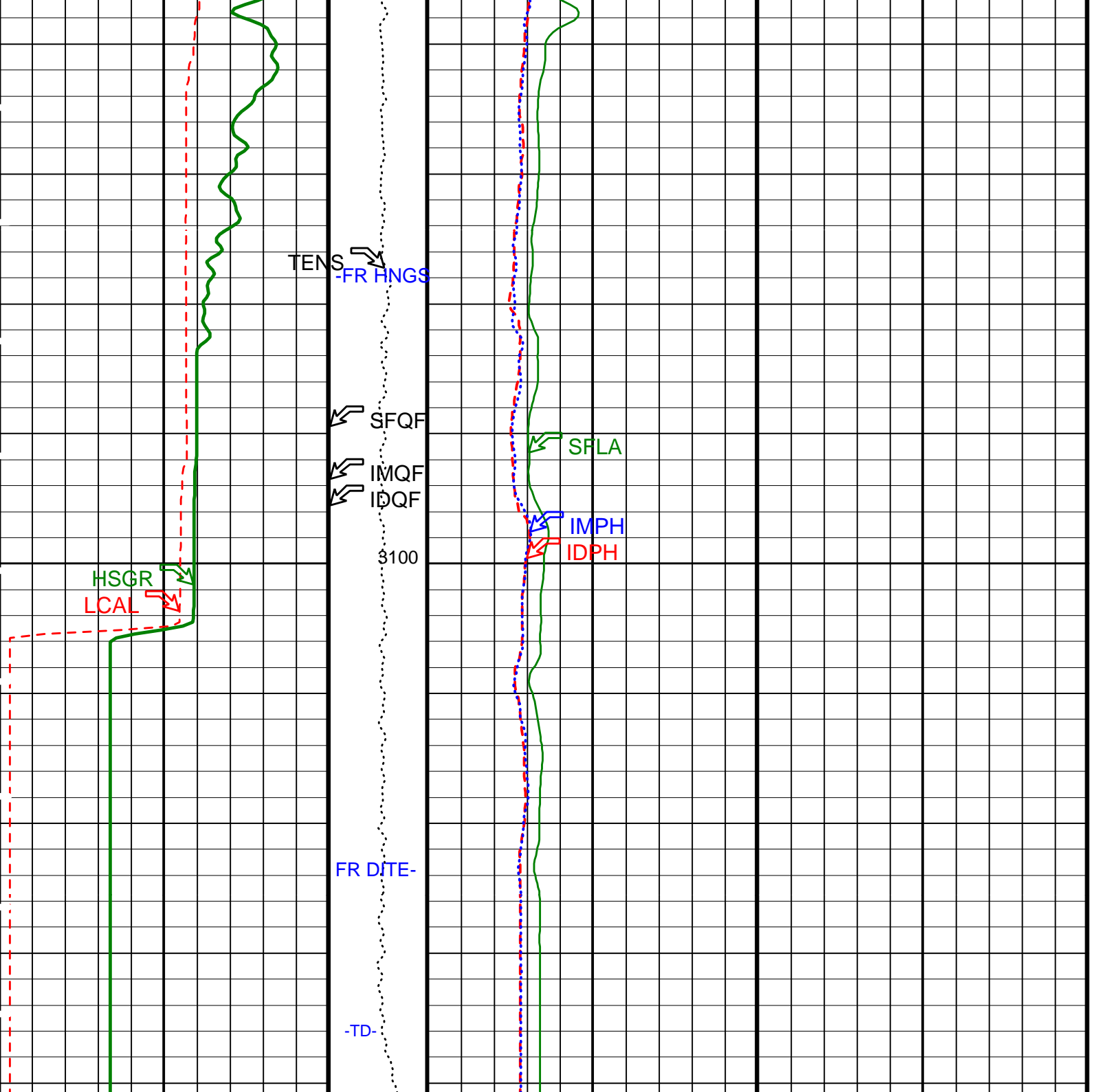


2975

3000







<p>HLDS Caliper (LCAL) (IN)</p> <p>0 20</p>	<p>Tension (TENS) (LBF)</p> <p>10000 0</p>	<p>Deep Induction Phasor-processed Resistivity (IDPH) (OHMM)</p> <p>0 10</p>
<p>HNGS Spectroscopy Gamma Ray (HSGR) (GAPI)</p> <p>0 150</p>	<p>ID_QUAL From IMQF to IDQF</p>	<p>Medium Induction Phasor-processed Resistivity (IMPH) (OHMM)</p> <p>0 10</p>
<p>Main Log</p>	<p>IM_QUAL From SFQF to IMQF</p>	<p>SFL Averaged (SFLA) (OHMM)</p> <p>0 10</p>
	<p>SFL_QUAL</p>	

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	HLDS Data Control	AcquiredData	
	HLDS SS NCB Mode	Density	
	HLDS LS Digital Integrator State	Normal	
	HLDS LS Tri-Ported Memory State	Enable	
	APS Cement Thickness Source	COMPUTED	
	HLDS SS Tri-Ported Memory State	Enable	
	HLDS LS NCB Mode	Density	
	HLDS Spec Message Rate	1	
	Apparent Thickness of Cement	0	IN
	APS Software Version	5	
	HLDS SS Digital Integrator State	Normal	
	HLDS Diag Message Rate	20	
AASD	APS Thermal and Array Detectors High Voltage Setting	1987.2	V
ABOS	APS Neutron Burst-Off Background Subtraction Switch	ON	
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2068.96	V
AHCS	APS Holesize Correction Source	GCSE	
AHSS	APS Holesize Correction Switch	ON	
ALTDPCCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
AMTY	APS Environmental Corrections Mud Type	WaterBaseBarite	
ANSD	APS Near Detector High Voltage Setting	1761.66	V
AOTS	APS Old Temperature Sensor Switch	NO	
ASOS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	OFF	
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)	80	DEGF
BKSF	HNGS Borehole Fluid Excluder Sleeve Algorithm Factor	1	
BKSH	HNGS Borehole Fluid Excluder Sleeve Algorithm High Channel	245	
BKSL	HNGS Borehole Fluid Excluder Sleeve Algorithm Low Channel	17	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	-50000.00	PPM
CLCL	HLDS LS Control Loop Controller Mode	AUTO_DEFAULT	
CLCS	HLDS SS Control Loop Controller Mode	AUTO_DEFAULT	
CLLS	HLDS Mode Loop Long Spacing	AUTO	
CLSS	HLDS Mode Loop Short Spacing	AUTO	
CONCTYP	Conveyance Type	Wireline	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSIZ	Current Casing Size	0.000	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
CWEI	Casing Weight	0.00	LB/F
D1PR	HNGS Detector 1 Calibration Thorium Peak Resolution	7.46561	%
D1TC	HNGS Detector 1 Calibration Temperature	46.8749	DEGF
D1TL	HNGS Detector 1 Calibration Thorium Peak Location	211.312	
D2PR	HNGS Detector 2 Calibration Thorium Peak Resolution	6.19449	%
D2TC	HNGS Detector 2 Calibration Temperature	44.9572	DEGF
D2TL	HNGS Detector 2 Calibration Thorium Peak Location	209.601	
DBCC	HNGS Barite Constant Correction Flag	NONE	
DEPREM1	Depth Remark 1		
DEPREM2	Depth Remark 2		
DEPREM3	Depth Remark 3		
DEPREM4	Depth Remark 4		
DEPREM5	Depth Remark 5		
DEPREM6	Depth Remark 6		
DFD	Drilling Fluid Density	8.51	LB/G
DGF1	Deep 10 kHz Gain Factor	0.984873	
DGF2	Deep 20 kHz Gain Factor	0.995065	
DGF4	Deep 40 kHz Gain Factor	1.01331	
DHC	Density Hole Correction	BS	
DPH1	Deep 10 kHz Phase Shift	0.21348	DEG
DPH2	Deep 20 kHz Phase Shift	0.0162086	DEG
DPH4	Deep 40 kHz Phase Shift	-1.03392	DEG
DPPM	Density Porosity Processing Mode	HIRS	
DRE1	Deep Real 10 kHz Sonde Error Correction	53.1201	MM/M
DRE2	Deep Real 20 kHz Sonde Error Correction	16.8047	MM/M
DRE4	Deep Real 40 kHz Sonde Error Correction	4.76511	MM/M
DRIM	DIT-E Radial Invasion Mode	Rxo>Rt	
DSR1	Deep Sigma Reference (10 kHz)	7637	MM/M
DSR2	Deep Sigma Reference (20 kHz)	1843	MM/M

DSR4	Deep Sigma Reference (40 kHz)	40	MM/M
DSTA	DIT-E Transversal Standoff	0	IN
DXE1	Deep Quad 10 kHz Sonde Error Correction	127.409	MM/M
DXE2	Deep Quad 20 kHz Sonde Error Correction	75.7555	MM/M
DXE4	Deep Quad 40 kHz Sonde Error Correction	53.4402	MM/M
FD	Fluid Density	1.02	G/C3
FSAL	Formation Salinity	32000	PPM
GCF1_START	HNGS Detector 1 GCF Constant	1	
GCF2_START	HNGS Detector 2 GCF Constant	1	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
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	
HALF	HNGS Alpha Filter Length	60	IN
HATIM	HNGS Marquardt Accumulation Time	600	S
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
HSLV	HNGS Borehole Fluid Excluder Sleeve Status	NO	
HSVN	HNGS Spectral Standards Version Number	1.03041e-029	
IDWCD	IDW Calibration Date (dd-MMM-yyyy)	dd-MMM-yyyy	
IDWCSN	IDW Calibrator Serial Number	-999	
IDWLGN	IDW Calibration Cable Type	7-46P	
IDWSN	IDW Serial Number	-999	
IDWTYP	IDW Type	IDW-B	
IDWWC1	IDW Wheel Correction 1	-999	
IDWWC2	IDW Wheel Correction 2	-999	
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	
LATC	HLDS Activation Correction	ON	
LCSN	Logging Cable Serial Number	-999	
LLDL	HLDS LS Low Level Discriminator DAC	14000	
LLDS	HLDS SS Low Level Discriminator DAC	14000	
LLML	HLDS LS Low Level Discriminator Mode	AUTO	
LLMS	HLDS SS Low Level Discriminator Mode	AUTO	
LOGSEQ	Log Sequence	First_Log_In_Well	
MARQ_START	HNGS Marquardt Start-up Mode	INTERNAL	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MDEN	Matrix Density	2.71	G/C3
MGF1	Medium 10 kHz Gain Factor	0.99208	
MGF2	Medium 20 kHz Gain Factor	0.997244	
MGF4	Medium 40 kHz Gain Factor	1.02195	
MPH1	Medium 10 kHz Phase Shift	-0.285807	DEG
MPH2	Medium 20 kHz Phase Shift	-0.99866	DEG
MPH4	Medium 40 kHz Phase Shift	-2.32124	DEG
MRE1	Medium Real 10 kHz Sonde Error Correction	67.7885	MM/M
MRE2	Medium Real 20 kHz Sonde Error Correction	18.6856	MM/M
MRE4	Medium Real 40 kHz Sonde Error Correction	3.18485	MM/M
MSR1	Medium Sigma Reference (10 kHz)	13520	MM/M
MSR2	Medium Sigma Reference (20 kHz)	3250	MM/M
MSR4	Medium Sigma Reference (40 kHz)	685	MM/M
MST	Mud Sample Temperature	60.00	DEGF
MXE1	Medium Quad 10 kHz Sonde Error Correction	191.985	MM/M
MXE2	Medium Quad 20 kHz Sonde Error Correction	113.021	MM/M
MXE4	Medium Quad 40 kHz Sonde Error Correction	84.3196	MM/M
NARC	APS Near/Array Calibration Ratio	1.06801	
NFRC	APS Near/Far Calibration Ratio	0.903124	
NOTS	NPLC Old Temperature Sensor	NO	
NRBM	NPLC Reduced Telemetry Bandwidth Mode	OFF	
PBVADP	Use alternate depth channel for playback	NO	
PHVL	HLDS Long Spacing High Voltage Setting	1000	V
PHVS	HLDS Short Spacing High Voltage Setting	1000	V
PSDL	HLDS LS Pulse Shape Compensation DAC	16000	
PSDS	HLDS SS Pulse Shape Compensation DAC	16000	
PSML	HLDS LS Pulse Shape Compensation Mode	AUTO	
PSMS	HLDS SS Pulse Shape Compensation Mode	AUTO	
RDF1_START	HNGS Detector 1 RDF Constant	0	
RDF2_START	HNGS Detector 2 RDF Constant	0	
RIGTYP	Rig Type	Offshore_Floater_with_WMC	
RLDT	Reference Log Date (dd-MMM-yyyy)	dd-MMM-yyyy	
RLNM	Reference Log Name		
RLRN	Reference Log Run Number		
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RULB	Rig Up Length at Bottom	0	FT
RULS	Rig Up Length at Surface	0	FT
RW	Resistivity of Connate Water	1.0000	OHMM
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S1NA	HNGS Detector 1 Calibration Sodium Count Rate	28.899	CPS
S1NC	HNGS Detector 1 Calibration End-On / Side-On Gain Ratio	0.992858	

STNG	HNGS Detector 1 Calibration End-On / Side-On Gain Ratio	0.992258	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S2NA	HNGS Detector 2 Calibration Sodium Count Rate	29.4941	CPS
S2NG	HNGS Detector 2 Calibration End-On / Side-On Gain Ratio	0.981545	
SABK	HNGS Statistical Uncertainty in Borehole Potassium Running Average	-999.25	
SBR	Shoulder Bed Resistivity Factor	1	OHMM
SCORR	Stretch Correction	-50000	FT
SFCR	SFL Channel Ratio	1000	
SFLE	SFL Enable	ENABLE	
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	68	DEGF
SPAE	DIT-E SPARC Processing Enable	ENABLE	
SPNV	SP Next Value	0	MV
STDLC	Subsequent Trip Down Log Correction	-50000	FT
TD	Total Depth	11469.8	FT
TDD	Total Depth - Driller	11469.80	FT
TDL	Total Depth - Logger	11469.00	FT
TNDCD	Tension Device Calibration Date (dd-MMM-yyyy)	dd-MMM-yyyy	
TNDCSN	Tension Device Calibrator Serial Number	-999	
TNDGN	Tension Device GAIN	1	
TNDOFF	Tension Device Offset	0	
TNDSN	Tension Device Serial Number	-999	
TNDTYP	Tension Device	CMTD-B/A	
TPOS	Tool Position	ECCE	
TWS	Temperature of Connate Water Sample	100.00	DEGF
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0	
ZRCS	Tool Zero Reference Check at Surface	-50000	FT

Format: DITE_LinPhasor Vertical Scale: 1:200 Graphics File Created: 21-Apr-2000 03:08

OP System Version: 9C1-303
MCM

DIT-E	9C1-303	DTA-A	9C1-303
HLDS	9C1-303	NPLC-B	9C1-303
APS-BA	9C1-303	HNGS-BA	9C1-303
DTC-H	9C1-303		

Output DLIS Files

DEFAULT	DITE .008	FN:11 PRODUCER	21-Apr-2000 03:08
DITE_CUST	DITE .008	FN:12 PRODUCER	21-Apr-2000 03:08

Output DLIS Files

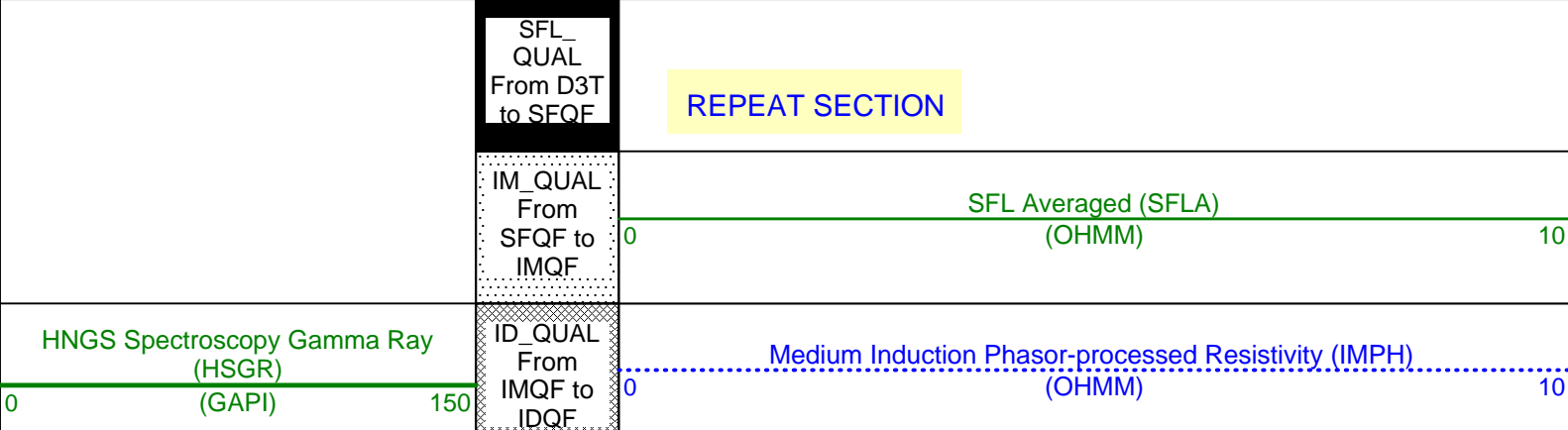
DEFAULT	DITE .011	FN:17 PRODUCER	21-Apr-2000 07:24	3118.1 M	2920.1 M
DITE_CUST	DITE .011	FN:18 PRODUCER	21-Apr-2000 07:24	3118.1 M	2920.1 M

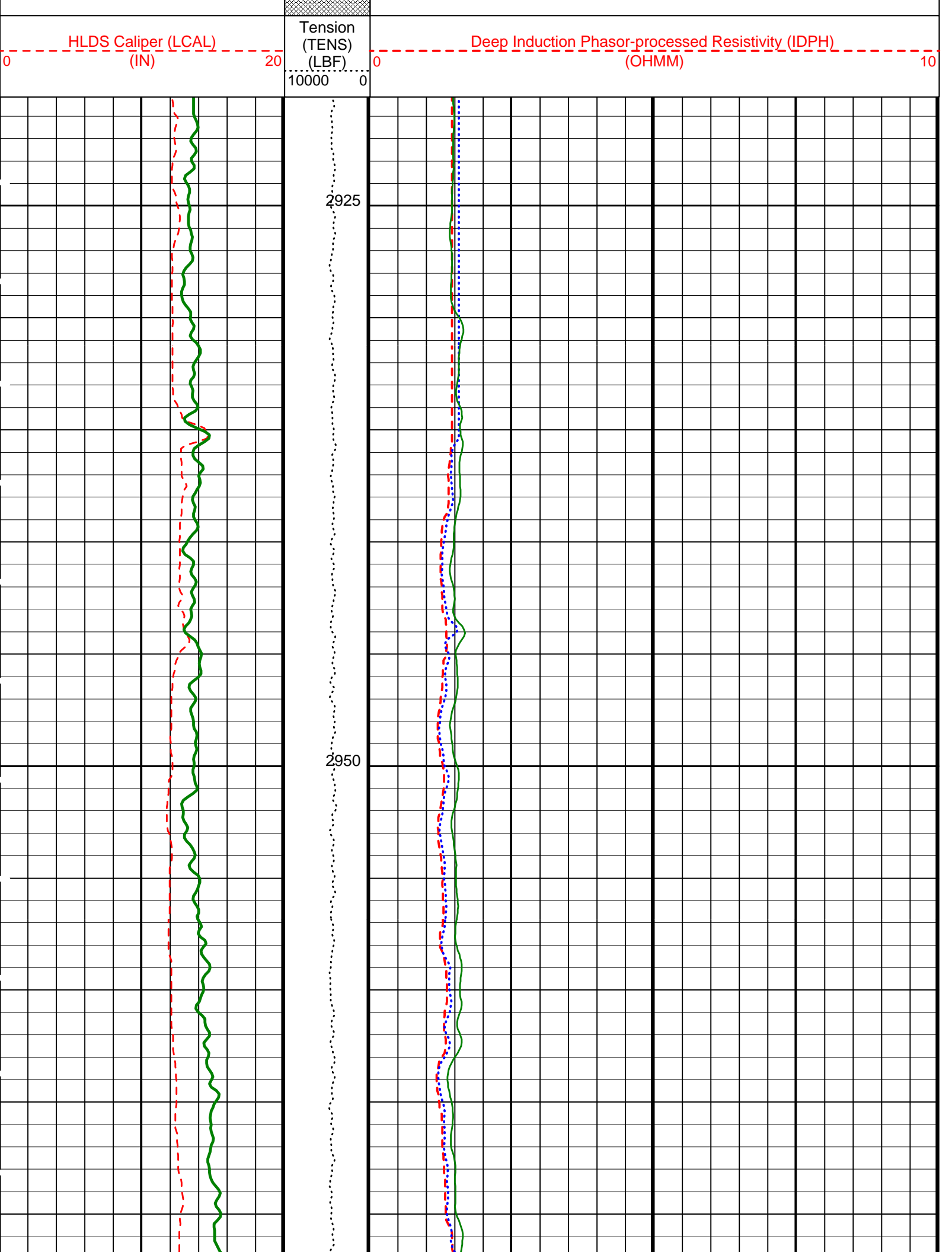
OP System Version: 9C1-303
MCM

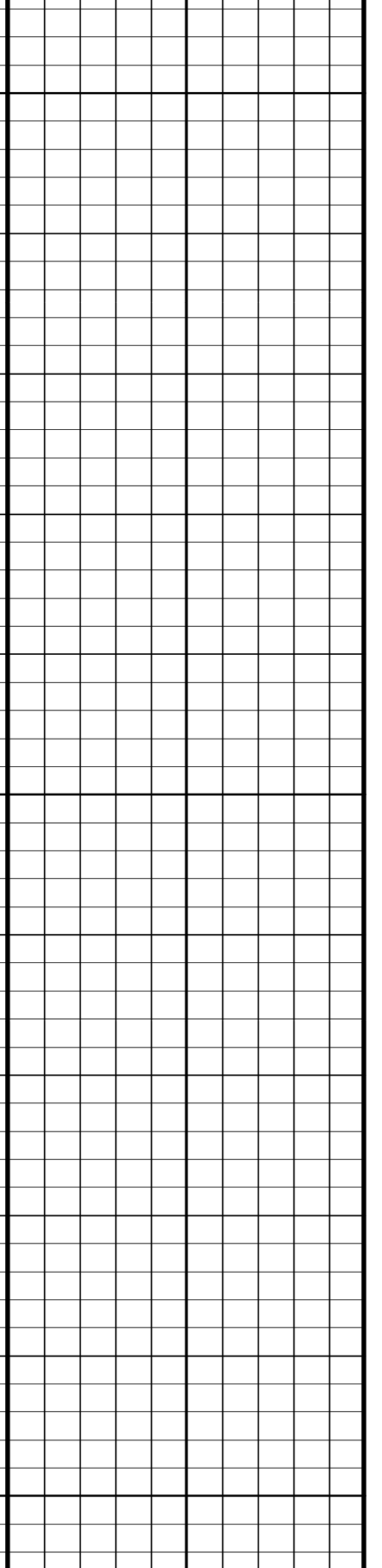
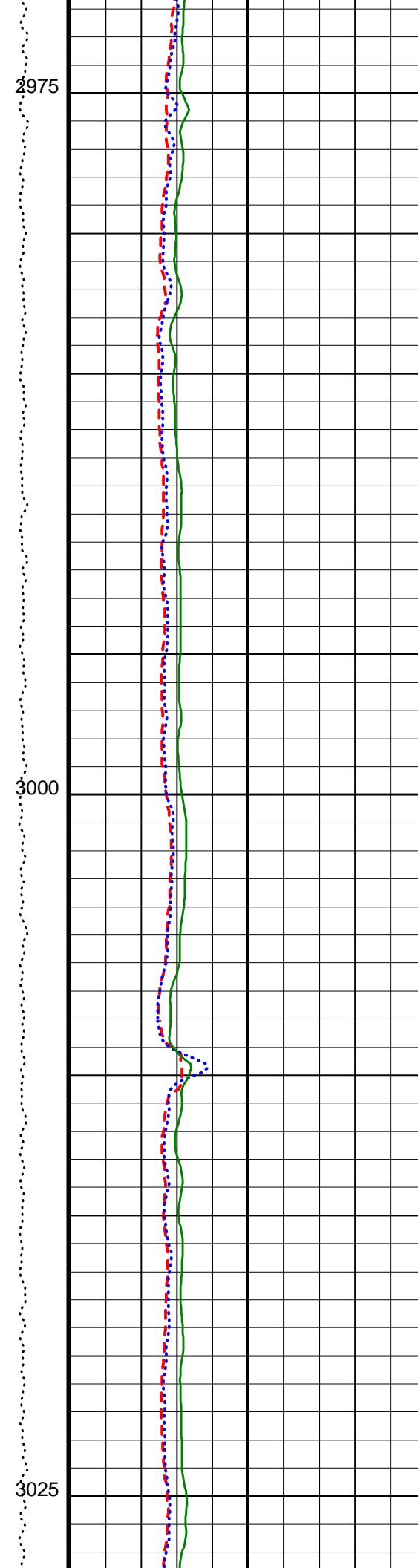
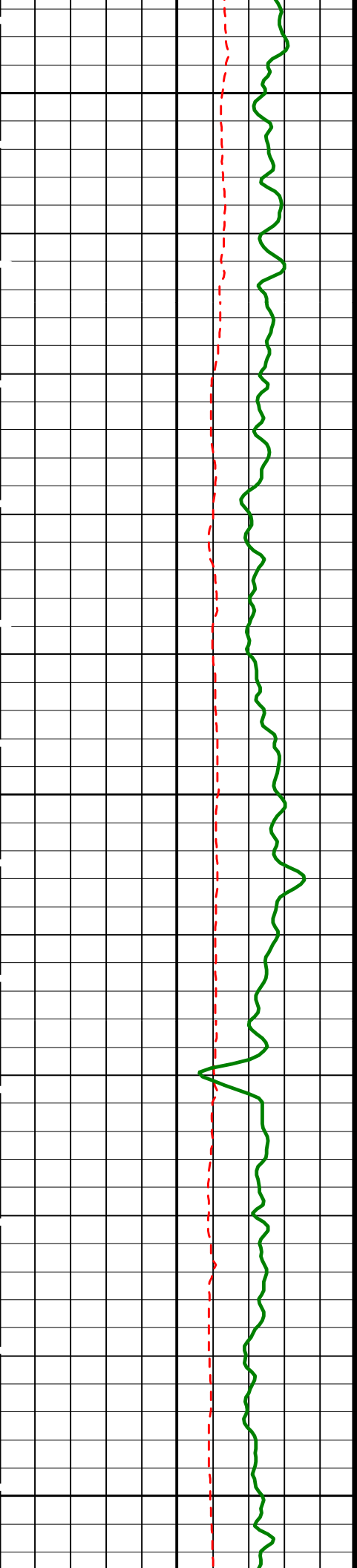
DIT-E	9C1-303	DTA-A	9C1-303
HLDS	9C1-303	NPLC-B	9C1-303
APS-BA	9C1-303	HNGS-BA	9C1-303
DTC-H	9C1-303		

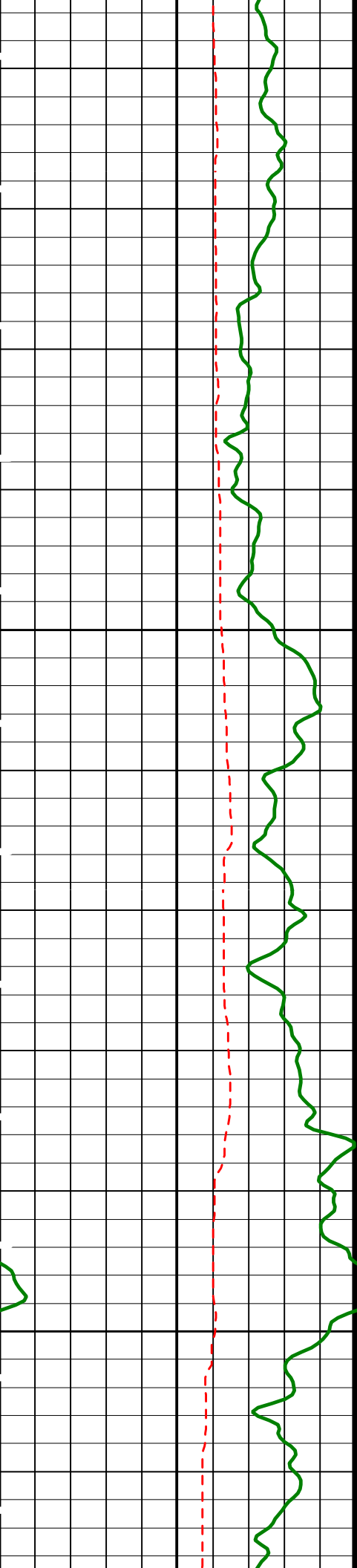
PIP SUMMARY

Time Mark Every 60 S



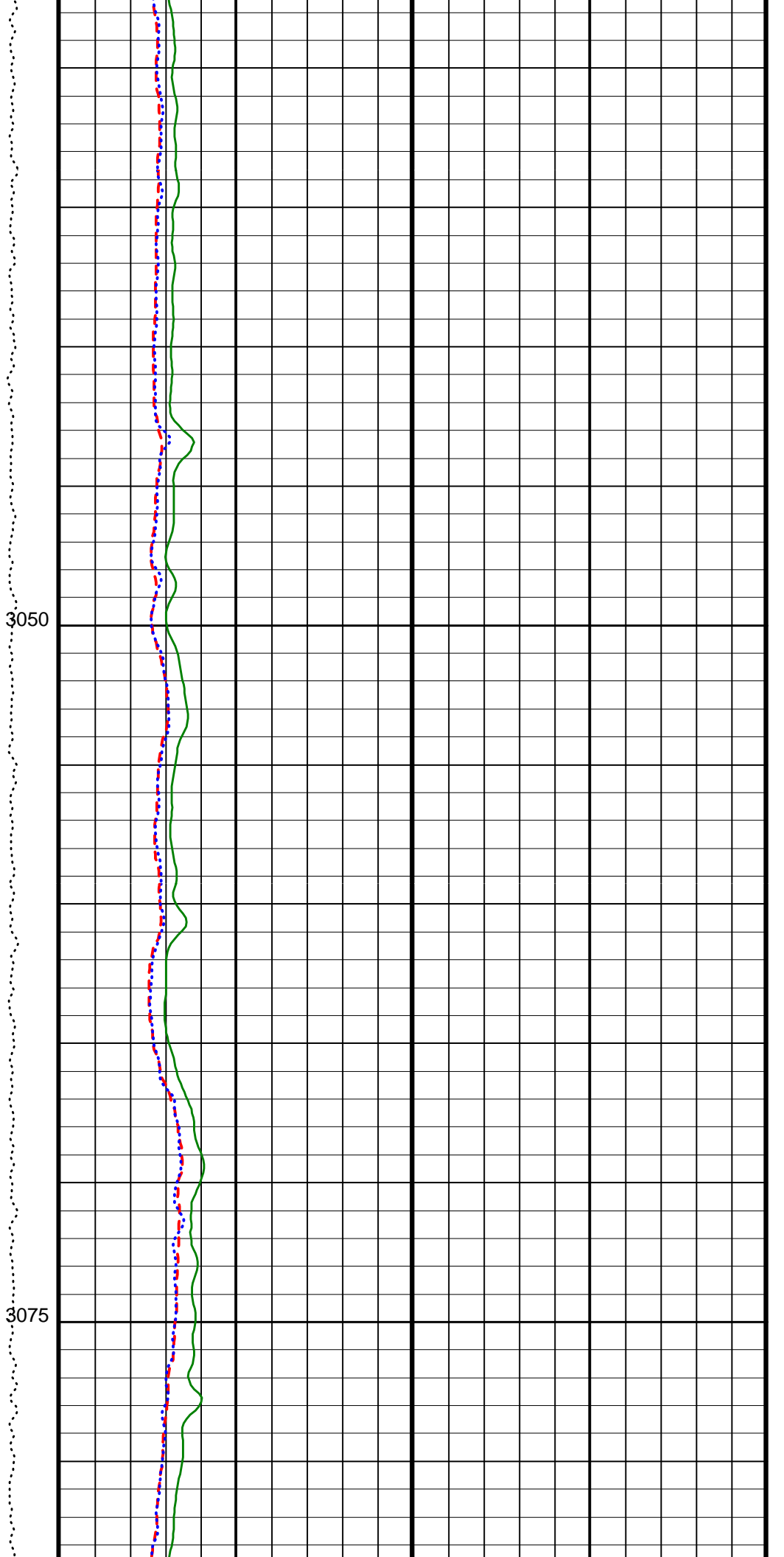


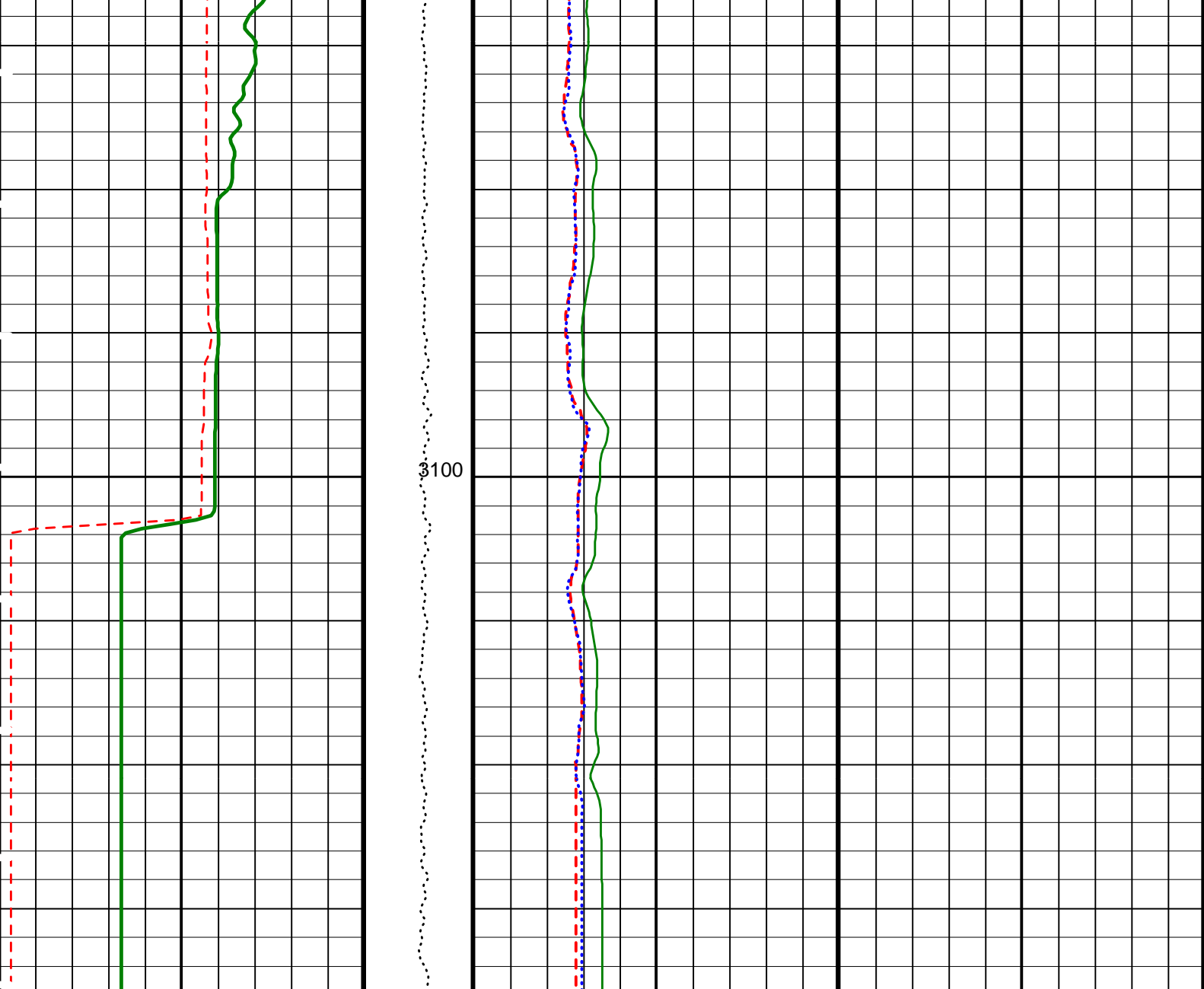




3050

3075





<p>HLDS Caliper (LCAL) (IN) 0 20</p>	<p>Tension (TENS) (LBF) 10000 0</p>	<p>Deep Induction Phasor-processed Resistivity (IDPH) (OHMM) 0 10</p>
<p>HNGS Spectroscopy Gamma Ray (HSGR) (GAPI) 0 150</p>	<p>ID_QUAL From IMQF to IDQF</p>	<p>Medium Induction Phasor-processed Resistivity (IMPH) (OHMM) 0 10</p>
	<p>IM_QUAL From SFQF to IMQF</p>	<p>SFL Averaged (SFLA) (OHMM) 0 10</p>
	<p>SFL_QUAL From D3T to SEQF</p>	<p>REPEAT SECTION</p>

Time Mark Every 60 S PIP SUMMARY

Parameters		
DLIS Name	Description	Value

	HLDS Data Control	AcquiredData	
	HLDS SS NCB Mode	Density	
	HLDS LS Digital Integrator State	Normal	
	HLDS LS Tri-Ported Memory State	Enable	
	APS Cement Thickness Source	COMPUTED	
	HLDS SS Tri-Ported Memory State	Enable	
	HLDS LS NCB Mode	Density	
	HLDS Spec Message Rate	1	
	Apparent Thickness of Cement	0	IN
	APS Software Version	5	
	HLDS SS Digital Integrator State	Normal	
	HLDS Diag Message Rate	20	
AASD	APS Thermal and Array Detectors High Voltage Setting	1987.2	V
ABOS	APS Neutron Burst-Off Background Subtraction Switch	ON	
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2068.96	V
AHCS	APS Holesize Correction Source	GCSE	
AHSS	APS Holesize Correction Switch	ON	
ALTDPCCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
AMTY	APS Environmental Corrections Mud Type	WaterBaseBarite	
ANSD	APS Near Detector High Voltage Setting	1761.66	V
AOTS	APS Old Temperature Sensor Switch	NO	
ASOS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	OFF	
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)	80	DEGF
BKSF	HNGS Borehole Fluid Excluder Sleeve Algorithm Factor	1	
BKSH	HNGS Borehole Fluid Excluder Sleeve Algorithm High Channel	245	
BKSL	HNGS Borehole Fluid Excluder Sleeve Algorithm Low Channel	17	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	-50000.00	PPM
CLCL	HLDS LS Control Loop Controller Mode	AUTO_DEFAULT	
CLCS	HLDS SS Control Loop Controller Mode	AUTO_DEFAULT	
CLLS	HLDS Mode Loop Long Spacing	AUTO	
CLSS	HLDS Mode Loop Short Spacing	AUTO	
CONCTYP	Conveyance Type	Wireline	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSIZ	Current Casing Size	0.000	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
CWEI	Casing Weight	0.00	LB/F
D1PR	HNGS Detector 1 Calibration Thorium Peak Resolution	7.46561	%
D1TC	HNGS Detector 1 Calibration Temperature	46.8749	DEGF
D1TL	HNGS Detector 1 Calibration Thorium Peak Location	211.312	
D2PR	HNGS Detector 2 Calibration Thorium Peak Resolution	6.19449	%
D2TC	HNGS Detector 2 Calibration Temperature	44.9572	DEGF
D2TL	HNGS Detector 2 Calibration Thorium Peak Location	209.601	
DBCC	HNGS Barite Constant Correction Flag	NONE	
DEPREM1	Depth Remark 1		
DEPREM2	Depth Remark 2		
DEPREM3	Depth Remark 3		
DEPREM4	Depth Remark 4		
DEPREM5	Depth Remark 5		
DEPREM6	Depth Remark 6		
DFD	Drilling Fluid Density	8.51	LB/G
DGF1	Deep 10 kHz Gain Factor	0.984873	
DGF2	Deep 20 kHz Gain Factor	0.995065	
DGF4	Deep 40 kHz Gain Factor	1.01331	
DHC	Density Hole Correction	BS	
DPH1	Deep 10 kHz Phase Shift	0.21348	DEG
DPH2	Deep 20 kHz Phase Shift	0.0162086	DEG
DPH4	Deep 40 kHz Phase Shift	-1.03392	DEG
DPPM	Density Porosity Processing Mode	HIRS	
DRE1	Deep Real 10 kHz Sonde Error Correction	53.1201	MM/M
DRE2	Deep Real 20 kHz Sonde Error Correction	16.8047	MM/M
DRE4	Deep Real 40 kHz Sonde Error Correction	4.76511	MM/M
DRIM	DIT-E Radial Invasion Mode	Rxo>Rt	
DSR1	Deep Sigma Reference (10 kHz)	7637	MM/M
DSR2	Deep Sigma Reference (20 kHz)	1843	MM/M
DSR4	Deep Sigma Reference (40 kHz)	405	MM/M
DSTA	DIT-E Transversal Standoff	0	IN
DXE1	Deep Quad 10 kHz Sonde Error Correction	127.409	MM/M
DXE2	Deep Quad 20 kHz Sonde Error Correction	75.7555	MM/M
DXE4	Deep Quad 40 kHz Sonde Error Correction	53.4402	MM/M
FD	Fluid Density	1.02	G/C3
FSAL	Formation Salinity	32000	PPM
GCF1_START	HNGS Detector 1 GCF Constant	1	
GCF2_START	HNGS Detector 2 GCF Constant	1	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG

GGRD	Geothermal Gradient	0.01	DF/F
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	-0.00262684	
HALF	HNGS Alpha Filter Length	60	IN
HATIM	HNGS Marquardt Accumulation Time	600	S
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
HSLV	HNGS Borehole Fluid Excluder Sleeve Status	NO	
HSVN	HNGS Spectral Standards Version Number	2.5113e-031	
IDWCD	IDW Calibration Date (dd-MMM-yyyy)	dd-MMM-yyyy	
IDWCSN	IDW Calibrator Serial Number	-999	
IDWLCN	IDW Calibration Cable Type	7-46P	
IDWSN	IDW Serial Number	-999	
IDWTYP	IDW Type	IDW-B	
IDWWC1	IDW Wheel Correction 1	-999	
IDWWC2	IDW Wheel Correction 2	-999	
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	
LATC	HLDS Activation Correction	ON	
LCSN	Logging Cable Serial Number	-999	
LLDL	HLDS LS Low Level Discriminator DAC	14000	
LLDS	HLDS SS Low Level Discriminator DAC	14000	
LLML	HLDS LS Low Level Discriminator Mode	AUTO	
LLMS	HLDS SS Low Level Discriminator Mode	AUTO	
LOGSEQ	Log Sequence	First_Log_In_Well	
MARQ_START	HNGS Marquardt Start-up Mode	INTERNAL	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MDEN	Matrix Density	2.71	G/C3
MGF1	Medium 10 kHz Gain Factor	0.99208	
MGF2	Medium 20 kHz Gain Factor	0.997244	
MGF4	Medium 40 kHz Gain Factor	1.02195	
MPH1	Medium 10 kHz Phase Shift	-0.285807	DEG
MPH2	Medium 20 kHz Phase Shift	-0.99866	DEG
MPH4	Medium 40 kHz Phase Shift	-2.32124	DEG
MRE1	Medium Real 10 kHz Sonde Error Correction	67.7885	MM/M
MRE2	Medium Real 20 kHz Sonde Error Correction	18.6856	MM/M
MRE4	Medium Real 40 kHz Sonde Error Correction	3.18485	MM/M
MSR1	Medium Sigma Reference (10 kHz)	13520	MM/M
MSR2	Medium Sigma Reference (20 kHz)	3250	MM/M
MSR4	Medium Sigma Reference (40 kHz)	685	MM/M
MST	Mud Sample Temperature	60.00	DEGF
MXE1	Medium Quad 10 kHz Sonde Error Correction	191.985	MM/M
MXE2	Medium Quad 20 kHz Sonde Error Correction	113.021	MM/M
MXE4	Medium Quad 40 kHz Sonde Error Correction	84.3196	MM/M
NARC	APS Near/Array Calibration Ratio	1.06801	
NFRC	APS Near/Far Calibration Ratio	0.903124	
NOTS	NPLC Old Temperature Sensor	NO	
NRBM	NPLC Reduced Telemetry Bandwidth Mode	OFF	
PBVSADP	Use alternate depth channel for playback	NO	
PHVL	HLDS Long Spacing High Voltage Setting	1000	V
PHVS	HLDS Short Spacing High Voltage Setting	1000	V
PSDL	HLDS LS Pulse Shape Compensation DAC	16000	
PSDS	HLDS SS Pulse Shape Compensation DAC	16000	
PSML	HLDS LS Pulse Shape Compensation Mode	AUTO	
PSMS	HLDS SS Pulse Shape Compensation Mode	AUTO	
RDF1_START	HNGS Detector 1 RDF Constant	0	
RDF2_START	HNGS Detector 2 RDF Constant	0	
RIGTYP	Rig Type	Offshore_Floater_with_WMC	
RLDT	Reference Log Date (dd-MMM-yyyy)	dd-MMM-yyyy	
RLNM	Reference Log Name		
RLRN	Reference Log Run Number		
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RULB	Rig Up Length at Bottom	0	FT
RULS	Rig Up Length at Surface	0	FT
RW	Resistivity of Connate Water	1.0000	OHMM
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S1NA	HNGS Detector 1 Calibration Sodium Count Rate	28.899	CPS
S1NG	HNGS Detector 1 Calibration End-On / Side-On Gain Ratio	0.992258	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S2NA	HNGS Detector 2 Calibration Sodium Count Rate	29.4941	CPS
S2NG	HNGS Detector 2 Calibration End-On / Side-On Gain Ratio	0.981545	
SABK	HNGS Statistical Uncertainty in Borehole Potassium Running Average	0.000366421	
SBR	Shoulder Bed Resistivity Factor	1	OHMM
SCORR	Stretch Correction	-50000	FT
SFCR	SFL Channel Ratio	1000	
SFLE	SFL Enable	ENABLE	
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	68	DEGF

SPAE	Surface Hole Temperature	ENABLE	
SPNV	DIT-E SPARC Processing Enable	0	MV
STDLC	SP Next Value	-50000	FT
TD	Subsequent Trip Down Log Correction	11469.8	FT
TDD	Total Depth	11469.80	FT
TDL	Total Depth - Driller	11469.00	FT
TNDCD	Total Depth - Logger	dd-MMM-yyyy	
TNDCSN	Tension Device Calibration Date (dd-MMM-yyyy)	-999	
TNDGN	Tension Device Calibrator Serial Number	1	
TNDOFF	Tension Device GAIN	0	
TNDSN	Tension Device Offset	-999	
TNDTYP	Tension Device Serial Number	CMTD-B/A	
TPOS	Tension Device	ECCE	
TWS	Tool Position	100.00	DEGF
VBA1	Temperature of Connate Water Sample	1.08021	
VBA2	HNGS Detector 1 Variable Barite Factor Running Average	0.983989	
ZRCS	HNGS Detector 2 Variable Barite Factor Running Average	-50000	FT
	Tool Zero Reference Check at Surface		

Format: DITE_LinPhasor Vertical Scale: 1:200 Graphics File Created: 21-Apr-2000 07:24

OP System Version: 9C1-303

MCM

DIT-E	9C1-303	DTA-A	9C1-303
HLDS	9C1-303	NPLC-B	9C1-303
APS-BA	9C1-303	HNGS-BA	9C1-303
DTC-H	9C1-303		

Output DLIS Files

DEFAULT	DITE .011	FN:17 PRODUCER	21-Apr-2000 07:24
DITE_CUST	DITE .011	FN:18 PRODUCER	21-Apr-2000 07:24

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Hostile Litho-Density Sonde Wellsite Calibration - Background Measurement							
Master: 10-MAR-2000 10:06 Before: 17-MAR-2000 18:41 After: 21-APR-2000 10:34							
SS Total Countrate Bkg	1645	1446	1441	1438	-3.191	80.00	CPS
SS HV Measured Bkg	1100	1077	1070	1070	-0.08301	80.00	V
SS Cs Centroid Bkg	661.0	661.3	661.0	661.4	0.3835	1.500	KEV
SS Cs Resolution Bkg	9.000	8.490	8.564	8.498	-0.06644	1.800	%
LS Total Countrate Bkg	1645	1468	1467	1468	0.3845	80.00	CPS
LS HV Measured Bkg	1100	1195	1190	1188	-2.429	80.00	V
LS Cs Centroid Bkg	661.0	661.3	661.2	661.2	0.04645	1.500	KEV
LS Cs Resolution Bkg	9.000	8.744	8.772	8.837	0.06551	1.800	%
Hostile Litho-Density Sonde Wellsite Calibration - Caliper Calibration							
Before: 17-MAR-2000 19:48							
HLDS Caliper Small Ring	8.000	N/A	9.714	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	12.00	N/A	13.89	N/A	N/A	N/A	IN
Accelerator-Porosity Tool Wellsite Calibration - Detector Background							
Master: 2-FEB-2000 21:50 Before: 21-APR-2000 2:18 After: 21-APR-2000 7:05							
Near Det Bkg Cntrate	30.00	32.07	32.82	32.20	-0.6148	N/A	CPS
Far Det Bkg Cntrate	30.00	32.19	32.41	33.49	1.080	N/A	CPS
Array-1 Det Bkg Cntrate	30.00	28.58	29.01	29.69	0.6811	N/A	CPS
Array-2 Det Bkg Cntrate	30.00	30.06	29.14	30.01	0.8639	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	33.94	33.90	35.35	1.447	N/A	CPS
Accelerator-Porosity Tool Wellsite Calibration - Detector Plateau Settings							
Master: 2-FEB-2000 20:07							
Near Detector Plateau Setting	1650	1762	N/A	N/A	N/A	N/A	V
Far Detector Plateau Setting	2000	2069	N/A	N/A	N/A	N/A	V
Array Detector Plateau Setting	2000	1987	N/A	N/A	N/A	N/A	V
Accelerator-Porosity Tool Wellsite Calibration - Calibration Ratios							
Master: 2-FEB-2000 21:50							
Near/Far Calibration Ratio	0.9250	0.9031	N/A	N/A	N/A	N/A	
Near/Array Calibration Ratio	1.030	1.068	N/A	N/A	N/A	N/A	
Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 1 Check							
Master: 2-FEB-2000 11:55 Before: 17-MAR-2000 18:42 After: 21-APR-2000 10:35							
Na 511 Peak Loc	40.00	40.51	40.70	40.67	-0.03928	1.000	

Na 511 Peak Res	15.50	15.86	15.41	15.38	-0.02697	2.000	%
High Voltage	1150	1114	1112	1113	1.265	30.00	V
Na 1785 Peak Loc	142.6	145.5	145.3	145.2	-0.1492	7.000	
Na 1785 Peak Res	8.500	9.054	8.948	9.603	0.6542	2.000	%
Temperature	15.50	8.268	21.55	15.17	-6.379	N/A	DEGC
Na Count Rate	45.00	28.90	27.69	26.48	-1.208	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 2 Check

Master: 2-FEB-2000 11:55 Before: 17-MAR-2000 18:42 After: 21-APR-2000 10:35

Na 511 Peak Loc	40.00	40.64	40.50	40.68	0.1817	1.000	
Na 511 Peak Res	15.50	14.00	15.27	14.59	-0.6871	2.000	%
High Voltage	1150	1201	1200	1199	-1.425	30.00	V
Na 1785 Peak Loc	142.6	144.2	145.0	145.0	0.01640	7.000	
Na 1785 Peak Res	8.500	8.101	8.587	7.770	-0.8167	2.000	%
Temperature	15.50	7.197	20.53	15.41	-5.111	N/A	DEGC
Na Count Rate	45.00	29.49	28.21	26.74	-1.471	8.000	CPS

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

Master: 2-FEB-2000 11:55 Before: 17-MAR-2000 18:42 After: 21-APR-2000 10:35

Coincidence Count Rate Ratio	1.000	0.9809	0.9840	0.9869	0.002968	0.05000	
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Hostile Natural Gamma Ray Sonde Master Calibration - Detector 1 Calibration

Master: 2-FEB-2000 11:43

Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	211.3	--	--	--	--	
Th Peak Res	7.000	7.466	--	--	--	--	%
Background Count Rate	142.5	18.16	--	--	--	--	CPS
Gain Ratio	1.000	0.9923	--	--	--	--	

Hostile Natural Gamma Ray Sonde Master Calibration - Detector 2 Calibration

Master: 2-FEB-2000 11:43

Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	209.6	--	--	--	--	
Th Peak Res	7.000	6.194	--	--	--	--	%
Background Count Rate	142.5	20.51	--	--	--	--	CPS
Gain Ratio	1.000	0.9815	--	--	--	--	

Dual Induction - E / Equipment Identification

Primary Equipment:

Dual Induction Sonde	DIS - HB	200
Dual Induction Cartridge	DIC - EB	171

Auxiliary Equipment:

Mass Isolated Housing	MIH - ZA	174
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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		52.17	Before		1.037	Before		6.858
	-250.0 (Minimum) 49.96 (Nominal) 350.0 (Maximum)			0.8251 (Minimum) 0.9751 (Nominal) 1.165 (Maximum)			-2.687 (Minimum) 7.313 (Nominal) 17.31 (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		21.72	Before		1.026	Before		5.844
	-278.4 (Minimum) 21.63 (Nominal) 321.6 (Maximum)			0.8159 (Minimum) 0.9659 (Nominal) 1.152 (Maximum)			-3.526 (Minimum) 6.474 (Nominal) 16.47 (Maximum)	
Phase	IM Elect Real Offset 10 kHz MM/M	Value	Phase	IM Elect Real Gain 10 kHz	Value			
Before		59.04	Before		0.9596			
	-491.7 (Minimum) 58.28 (Nominal) 608.3 (Maximum)			0.8099 (Minimum) 0.9599 (Nominal) 1.143 (Maximum)				
Phase	IM Elect Quad Offset 10 kHz MM/M	Value	Phase	IM Elect Quad Gain 10 kHz	Value			
Before		40.97	Before		0.9589			
	-510.3 (Minimum) 39.69 (Nominal) 589.7 (Maximum)			0.8092 (Minimum) 0.9592 (Nominal) 1.142 (Maximum)				

Before: 21-APR-2000 2:56

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		19.73	Before		1.011	Before		5.014

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			8.223	Before		1.000	Before		5.909		
	-116.4 (Minimum)	8.628 (Nominal)	133.6 (Maximum)		0.8334 (Minimum)	0.9834 (Nominal)	1.177 (Maximum)		-8.271 (Minimum)	6.729 (Nominal)	21.73 (Maximum)
Phase	IM Elect Real Offset 20 kHz	MM/M	Value	Phase	IM Elect Real Gain 20 kHz	Value					
Before			23.97	Before		0.9971					
	-201.4 (Minimum)	23.64 (Nominal)	248.6 (Maximum)		0.8399 (Minimum)	0.9899 (Nominal)	1.186 (Maximum)				
Phase	IM Elect Quad Offset 20 kHz	MM/M	Value	Phase	IM Elect Quad Gain 20 kHz	Value					
Before			16.73	Before		0.9964					
	-208.8 (Minimum)	16.20 (Nominal)	241.2 (Maximum)		0.8391 (Minimum)	0.9891 (Nominal)	1.185 (Maximum)				

Before: 21-APR-2000 2:57

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			12.79	Before		0.9781	Before		18.19		
	-71.83 (Minimum)	13.17 (Nominal)	98.17 (Maximum)		0.8322 (Minimum)	0.9822 (Nominal)	1.175 (Maximum)		0.6405 (Minimum)	20.64 (Nominal)	40.64 (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			5.379	Before		0.9665	Before		19.55		
	-79.23 (Minimum)	5.768 (Nominal)	90.77 (Maximum)		0.8221 (Minimum)	0.9721 (Nominal)	1.161 (Maximum)		1.859 (Minimum)	21.86 (Nominal)	41.86 (Maximum)
Phase	IM Elect Real Offset 40 kHz	MM/M	Value	Phase	IM Elect Real Gain 40 kHz	Value					
Before			15.31	Before		0.9892					
	-114.7 (Minimum)	15.26 (Nominal)	145.3 (Maximum)		0.8417 (Minimum)	0.9917 (Nominal)	1.188 (Maximum)				
Phase	IM Elect Quad Offset 40 kHz	MM/M	Value	Phase	IM Elect Quad Gain 40 kHz	Value					
Before			10.75	Before		0.9880					
	-119.5 (Minimum)	10.52 (Nominal)	140.5 (Maximum)		0.8405 (Minimum)	0.9905 (Nominal)	1.187 (Maximum)				

Before: 21-APR-2000 2:58

Dual Induction - E Wellsite Calibration							
SFL Electronics							
Phase	SFL Voltage Offset MV	Value	Phase	SFL Voltage Gain	Value		
Before		1.145	Before		0.9969		
	-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		0.04972	Before		1.008		
	-0.6000 (Minimum)	0 (Nominal)	0.6000 (Maximum)		0.8500 (Minimum)	1.000 (Nominal)	1.200 (Maximum)

Before: 21-APR-2000 2:59

Dual Induction - E Wellsite Calibration											
Electronics Calibration Changes Files/Depth Intervals: 7: 0.0 - 0.0 8: 3120.4 - 2124.6 11: 3118.1 - 2920.1											
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			0.4767	After		0.001117	After		0.004297		
	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			0.2521	After		0.0002153					
	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			EXCEEDS LIMIT	469500000	After		EXCEEDS LIMIT	57990			
	0 (Minimum)	0 (Nominal)	0.7500 (Maximum)		0 (Minimum)	0 (Nominal)	2.000 (Maximum)				

After: 21-APR-2000 10:37

See Remarks

Dual Induction - E Master Calibration									
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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		0.9849	Master		0.9951	Master		1.013	
	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		0.9921	Master		0.9972	Master		1.022	
	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		0.2135	Master		0.01621	Master		-1.034	
	-1.500 (Minimum)	0 (Nominal)	1.500 (Maximum)	-2.000 (Minimum)	0 (Nominal)	2.000 (Maximum)	-4.000 (Minimum)	-1.000 (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		-0.2858	Master		-0.9987	Master		-2.321	
	-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 27-JUL-1996 20:15

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		53.12	Master		16.80	Master		4.765	
	-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		127.4	Master		75.76	Master		53.44	
	-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		67.79	Master		18.69	Master		3.185	
	-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		192.0	Master		113.0	Master		84.32	
	-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 27-JUL-1996 20:40

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	1846

Auxiliary Equipment:

Hostile Litho Density Pad	HLDP - C	12
Hostile Litho Density High Voltage Housi	HEH - H	35

Nuclear Porosity Lithology Cartridge - B / Equipment Identification

Primary Equipment:

NPLC Cartridge	NPLC - B	82
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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
 APS Calibration Water Tank
 APS Aluminium Calibrator Sleeve

APH - AC 22
 SFT - 178 4722
 SFT - 281 24

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:
 HNGS Sonde HNGS - BA 27

Auxiliary Equipment:
 HNGS Sonde Housing HNSH - BA 27
 Gamma Source Radioactive GSR - U 135

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		40.51	Master		15.86	Master		1114
Before		40.70	Before		15.41	Before		1112
After		40.67	After		15.38	After		1113
	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		145.5	Master		9.054	Master		8.268
Before		145.3	Before		8.948	Before		21.55
After		145.2	After		9.603	After		15.17
	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		28.90						
Before		27.69						
After		26.48						
	15.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							

Master: 2-FEB-2000 11:55 Before: 17-MAR-2000 18:42 After: 21-APR-2000 10:35

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		40.64	Master		14.00	Master		1201
Before		40.50	Before		15.27	Before		1200
After		40.68	After		14.59	After		1199
	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		144.2	Master		8.101	Master		7.197
Before		145.0	Before		8.587	Before		20.53
After		145.0	After		7.770	After		15.41
	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		29.49						
Before		28.21						
After		26.74						
	15.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							

Master: 2-FEB-2000 11:55 Before: 17-MAR-2000 18:42 After: 21-APR-2000 10:35

Hostile Natural Gamma Ray Sonde Master Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		0.9809
Before		0.9840
After		0.9869
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)	
Master: 2-FEB-2000 11:55		
Before: 17-MAR-2000 18:42		
After: 21-APR-2000 10:35		

Hostile Natural Gamma Ray Sonde Master Calibration									
Detector 1 Calibration									
Phase	Na 511 Peak Set Point			Value	Phase	Th Peak Loc			Value
Master				41.00	Master				211.3
	38.00 (Minimum)	40.00 (Nominal)	42.00 (Maximum)			201.0 (Minimum)	209.6 (Nominal)	218.3 (Maximum)	
Phase	Th Peak Res %			Value	Phase	Th Peak Res %			Value
Master				7.466	Master				7.466
	5.000 (Minimum)	7.000 (Nominal)	9.000 (Maximum)			5.000 (Minimum)	7.000 (Nominal)	9.000 (Maximum)	
Phase	Background Count Rate CPS			Value	Phase	Gain Ratio			Value
Master				18.16	Master				0.9923
	20.00 (Minimum)	142.5 (Nominal)	265.0 (Maximum)			0.9400 (Minimum)	1.000 (Nominal)	1.060 (Maximum)	
See Remarks									
Master: 2-FEB-2000 11:43									

Hostile Natural Gamma Ray Sonde Master Calibration									
Detector 2 Calibration									
Phase	Na 511 Peak Set Point			Value	Phase	Th Peak Loc			Value
Master				41.00	Master				209.6
	38.00 (Minimum)	40.00 (Nominal)	42.00 (Maximum)			201.0 (Minimum)	209.6 (Nominal)	218.3 (Maximum)	
Phase	Th Peak Res %			Value	Phase	Th Peak Res %			Value
Master				6.194	Master				6.194
	5.000 (Minimum)	7.000 (Nominal)	9.000 (Maximum)			5.000 (Minimum)	7.000 (Nominal)	9.000 (Maximum)	
Phase	Background Count Rate CPS			Value	Phase	Gain Ratio			Value
Master				20.51	Master				0.9815
	20.00 (Minimum)	142.5 (Nominal)	265.0 (Maximum)			0.9400 (Minimum)	1.000 (Nominal)	1.060 (Maximum)	
Master: 2-FEB-2000 11:43									

COMPANY: Lamont Doherty	BOTTOM LOG INTERVAL	3112 m
WELL: ODP Leg 189, Site 1171D (STR-2A)	SCHLUMBERGER DEPTH	3118 m
FIELD: Tasmanian Seaway, West Tasmania Site	DEPTH DRILLER	3117.8 m
COUNTY: Offshore	KELLY BUSHING	11.2 m
STATE: Indian Ocean	DRILL FLOOR	10.9 m
	GROUND LEVEL	-2148



Phasor Induction
Gamma Ray