

COMPANY: Lamont Doherty

WELL: ODP Leg 189, Site 1172D (ETP-2A)

FIELD: East Tasmania

COUNTY: Offshore STATE: Pacific Ocean

**Schlumberger** Phasor Induction  
Natural Gamma Ray

COUNTY: Offshore  
Field: East Tasmania  
Location: ODP Leg 189, Site 1172D (ETP-2A)  
Company: Lamont Doherty

LOCATION		Elev.: K.B. 11.2 m	Elev.: 0 ft	RIG: JOIDES Resolution
Permanent Datum:	MSL	G.L. 2621.7 m		
Log Measured From:	RKB	D.F. 10.9 m		
Drilling Measured From:	RKB	11.2 m above Perm. Datum		
API Serial No.		LATITUDE: 43° 57.5545' S	LONGITUDE: 149° 55.7169' E	

Logging Date	2-MAY-2000
Run Number	One
Depth Driller	3399.85 m
Schlumberger Depth	3395 m
Bottom Log Interval	3389 m
Top Log Interval	2631 m
Casing Driller Size @ Depth	0.000 in @ 2783 m
Casing Schlumberger	2782 m
Bit Size	9.875 in
Type Fluid In Hole	Salt Water Base
Density	8.51234 lbm/gal
Fluid Loss	PH
MUD	Salt water
Source Of Sample	
RM @ Measured Temperature	0.220 ohm.m @ 58 degF
RMF @ Measured Temperature	@ @
RMC @ Measured Temperature	@ @
Source RMF	RMC
RM @ MRT	0.147 @ 90 @ 90
Maximum Recorded Temperatures	90 degF
Circulation Stopped	2-MAY-2000 10:00
Logger On Bottom	2-MAY-2000 16:15
Unit Number	99 Houston OS
Recorded By	Kerry M. Swain
Witnessed By	Patrick Fothergill, Ulysses S. Ninnemann

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				
MUD				
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				

ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS AND WE CANNOT, AND DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATIONS, AND WE SHALL NOT, EXCEPT IN THE CASE OF GROSS OR WILLFUL NEGLIGENCE ON OUR PART, BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COSTS, DAMAGES OR EXPENSES INCURRED OR SUSTAINED BY ANYONE RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR OFFICERS, AGENTS OR EMPLOYEES. THESE INTERPRETATIONS ARE ALSO SUBJECT TO CLAUSE 4 OF OUR GENERAL TERMS AND CONDITIONS AS SET OUT IN OUR CURRENT PRICE SCHEDULE.


OTHER SERVICES1 OS1: DITE/HNGS OS2: GHMT/DSI OS3: OS4: OS5:	OTHER SERVICES2 OS1: OS2: OS3: OS4: OS5:
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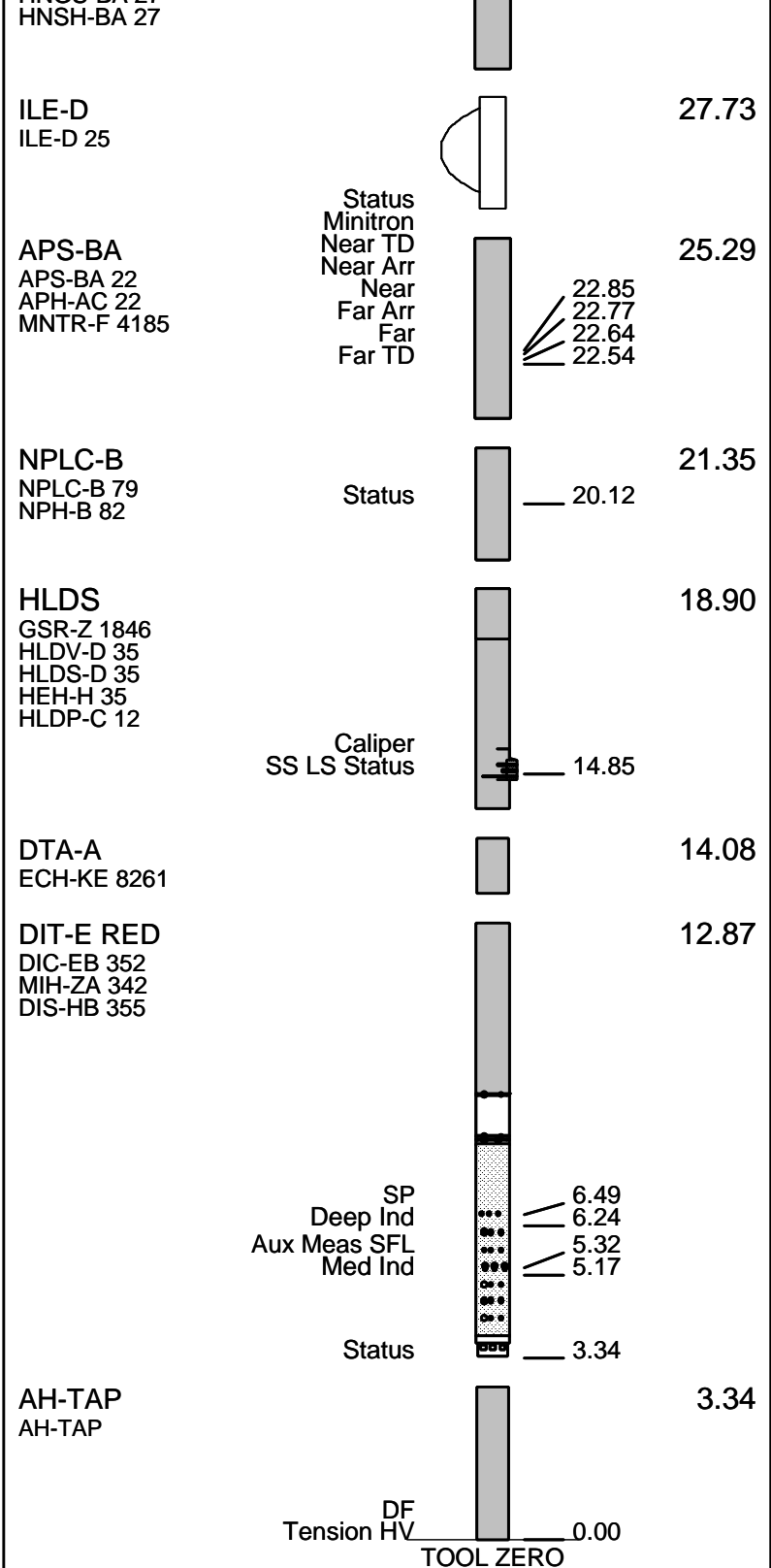
REMARKS: RUN NUMBER 1 Hole cored with RCB. Sea Floor at 2631 mbrf. Log presented in meters below rig floor. Lamont Temperature Tool (TAP) run on DITE/HLDS/APS/HNGS only. Wireline Heave Compensator used on all descents. Wireline heave compensator went out of range due to heavy heave conditions at 3339-3295, 3278-3257, 3066-2988, 2983-2965, 2918-2895, 2847-end of log. Sepiolite mud placed in the hole before logging. Drillers TD-3399.85 mbrf, Loggers TD-3395 mbrf, Drill Pipe Logger-2782 mbrf.  HNGS background low but does not affect calibration. The caliper wear plate broke while logging due to heavy heave conditions.	REMARKS: RUN NUMBER 2
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RUN 1			RUN 2		
SERVICE ORDER #:			SERVICE ORDER #:		
PROGRAM VERSION:		9C1-303	PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

### EQUIPMENT DESCRIPTION

RUN 1	RUN 2
<b>SURFACE EQUIPMENT</b> SFT-281 24 SFT-178 4722 GSR-U 135 WITM (DTS)-A	

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



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

## Output DLIS Files

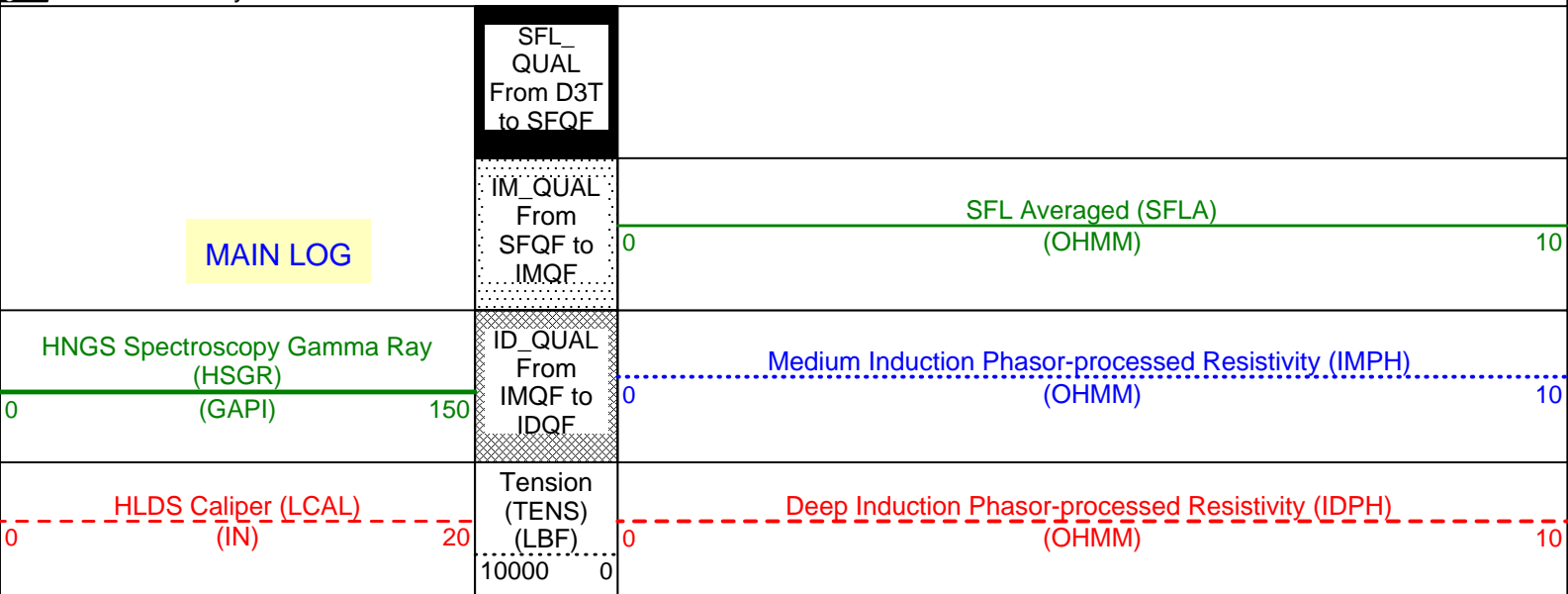
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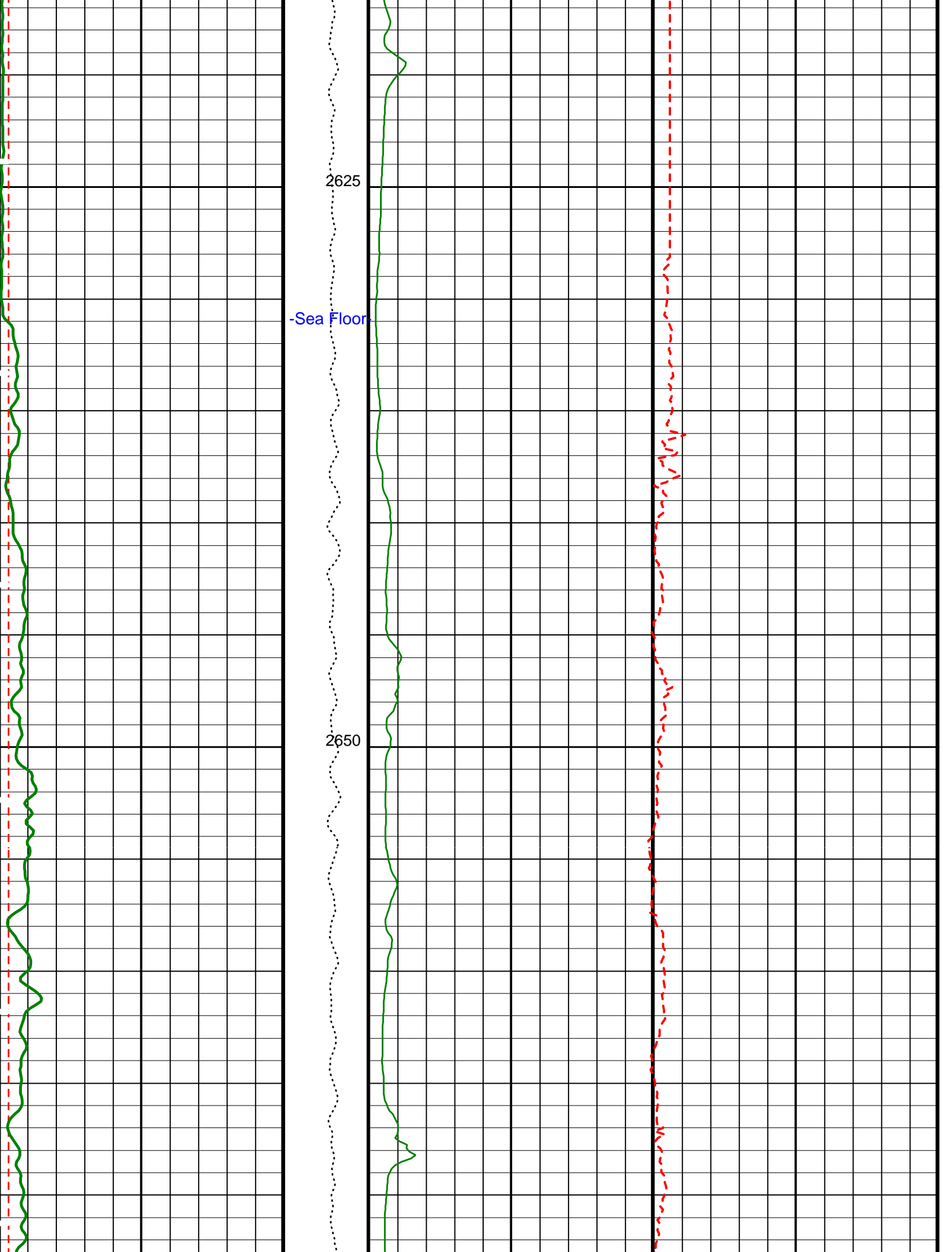
## OP System Version: 9C1-303 MCM

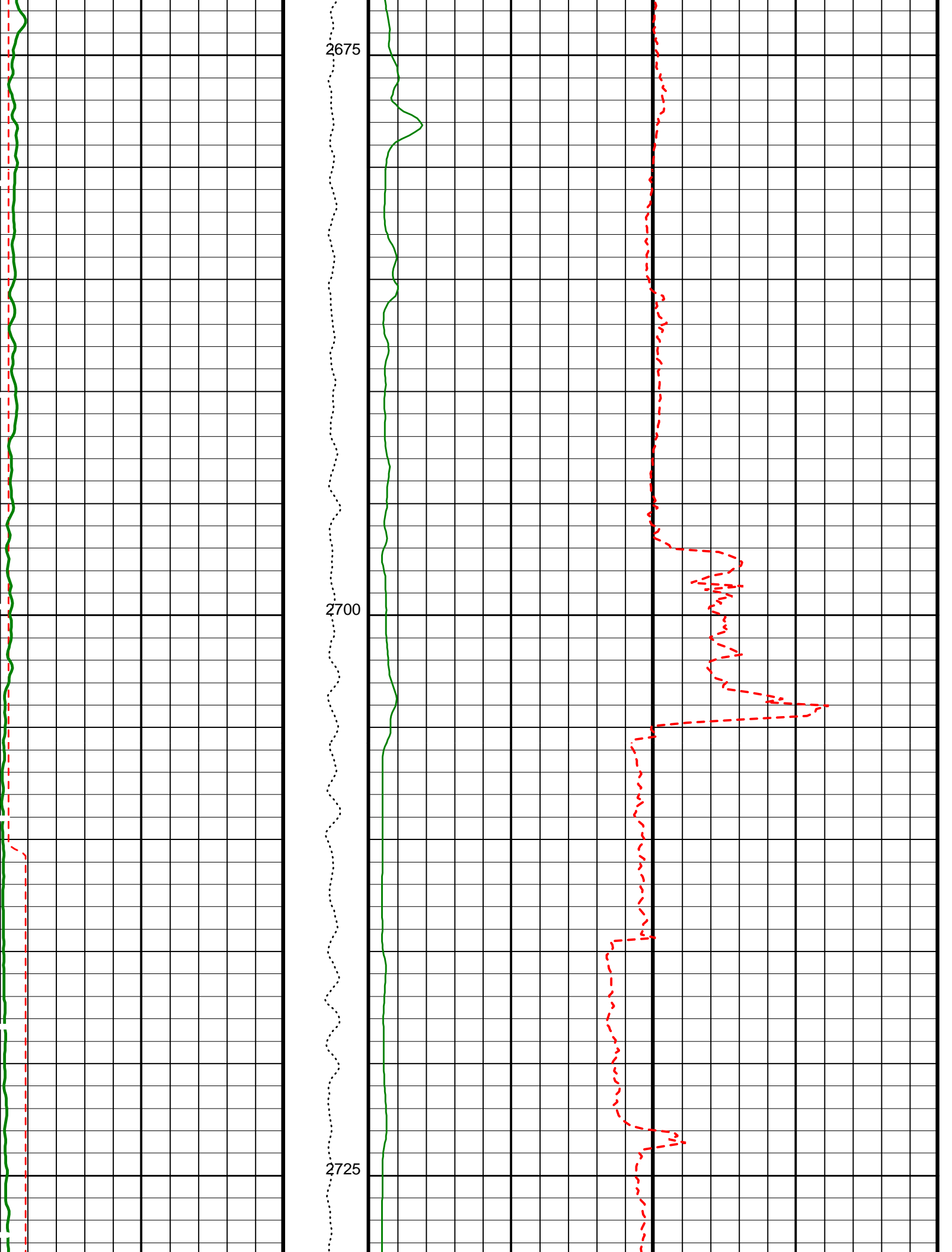
DIT-E	9C1-303	DTA-A	9C1-303
HLDS	9C1-303	NPLC-B	9C1-303
APS-BA	9C1-303	HNGS-BA	9C1-303
DTC-H	9C1-303		

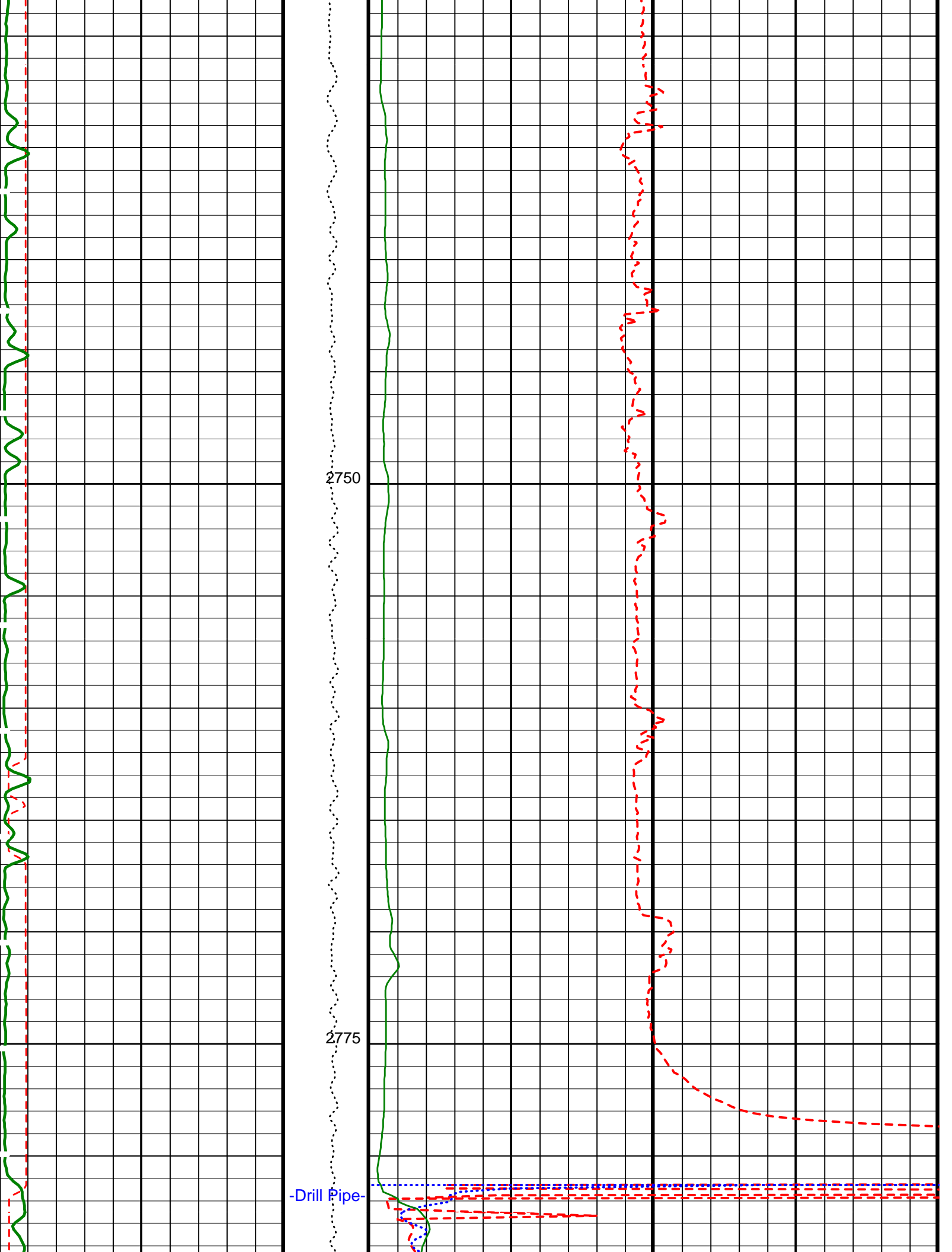
### PIP SUMMARY

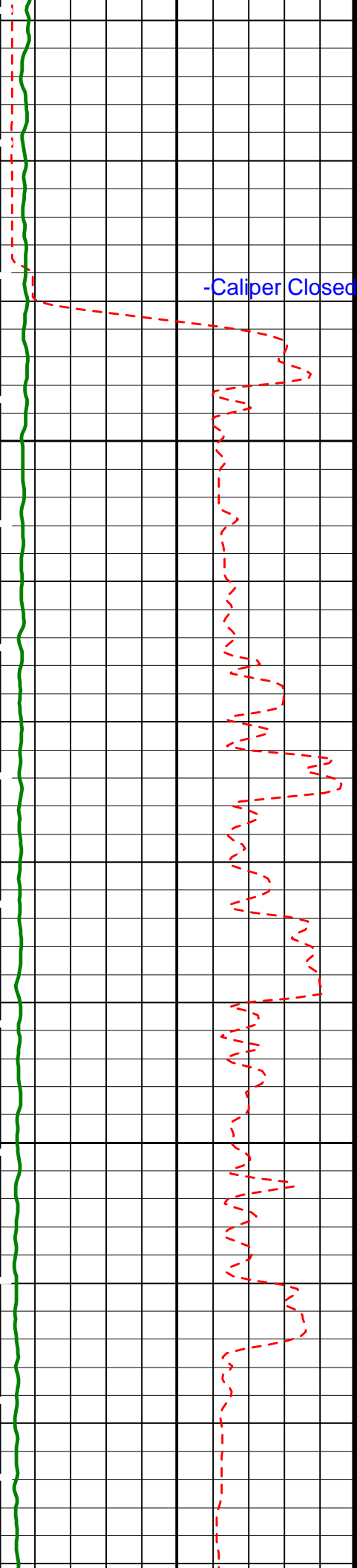
▶ Time Mark Every 60 S







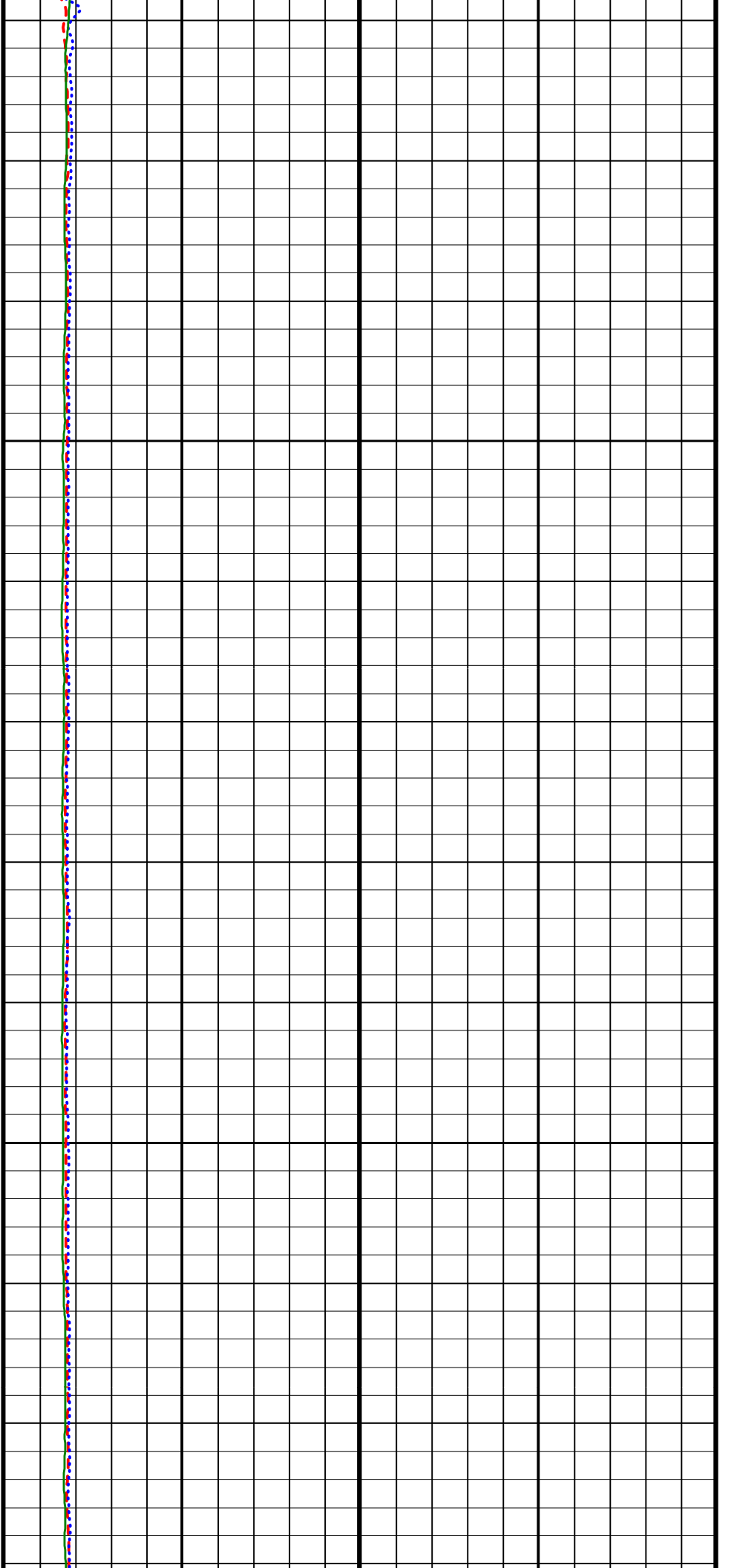




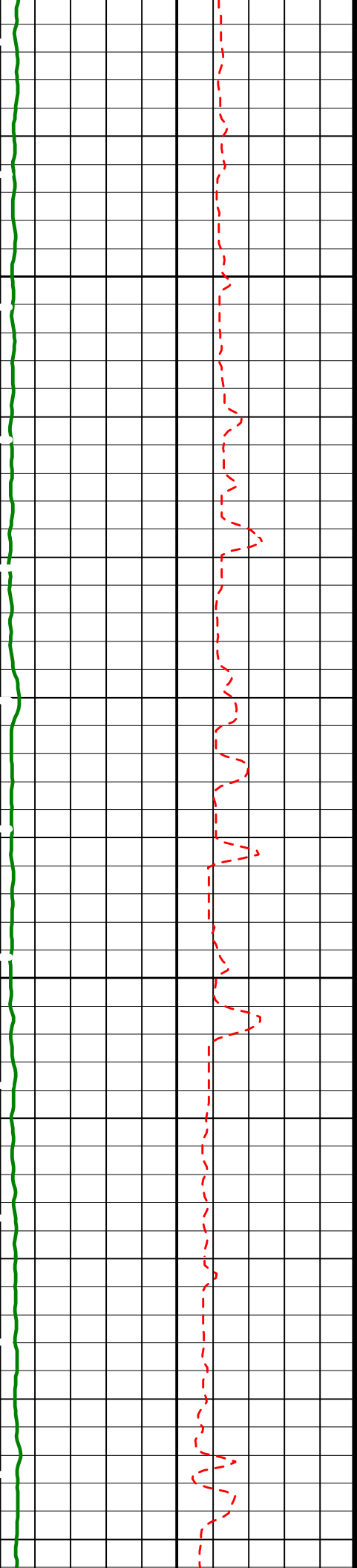
-Caliper Closed

2800

2825

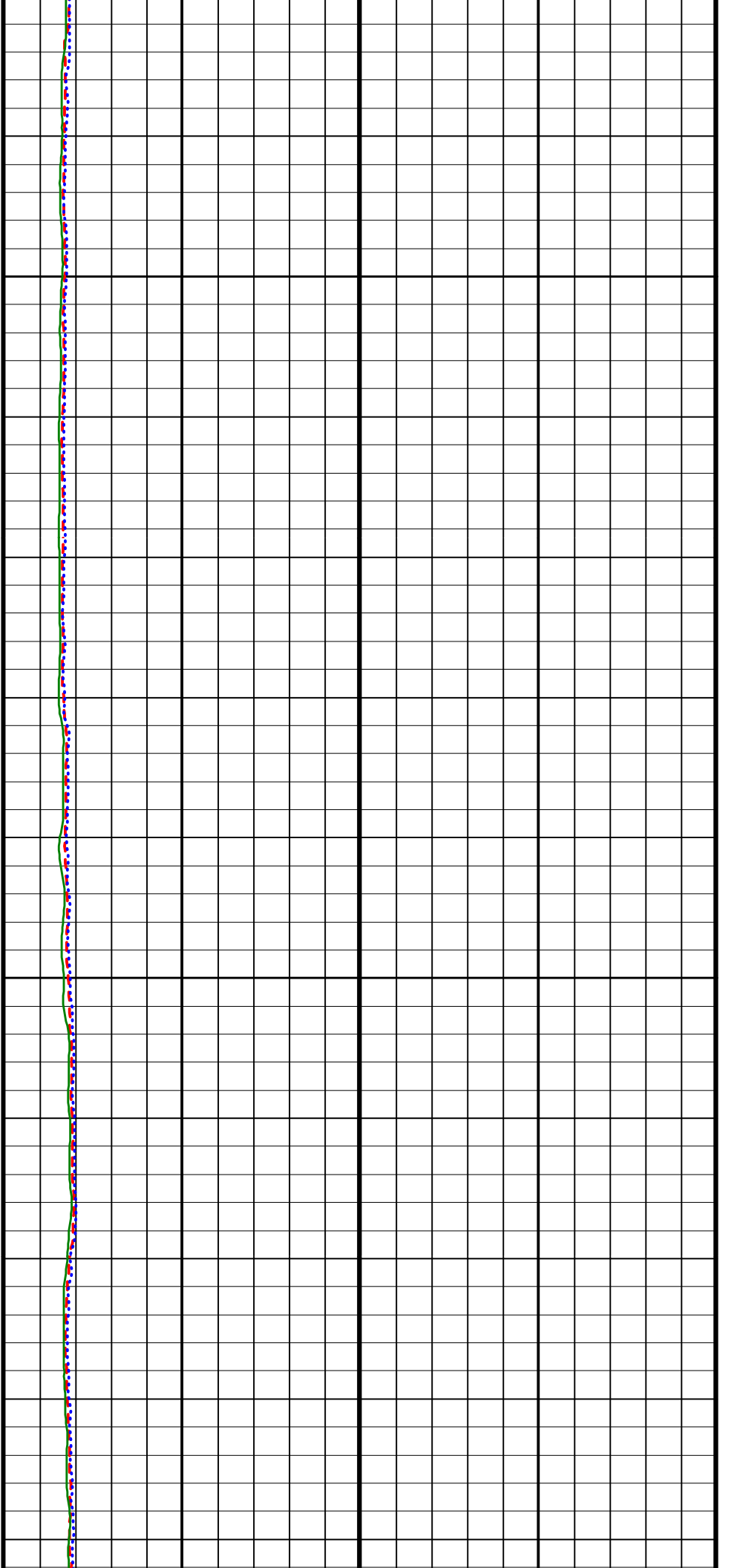


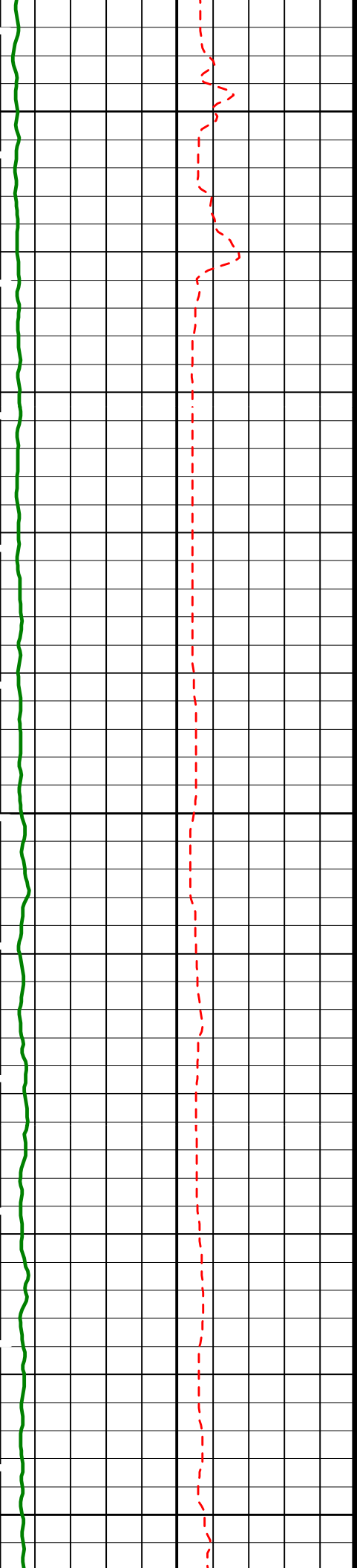




2850

2875

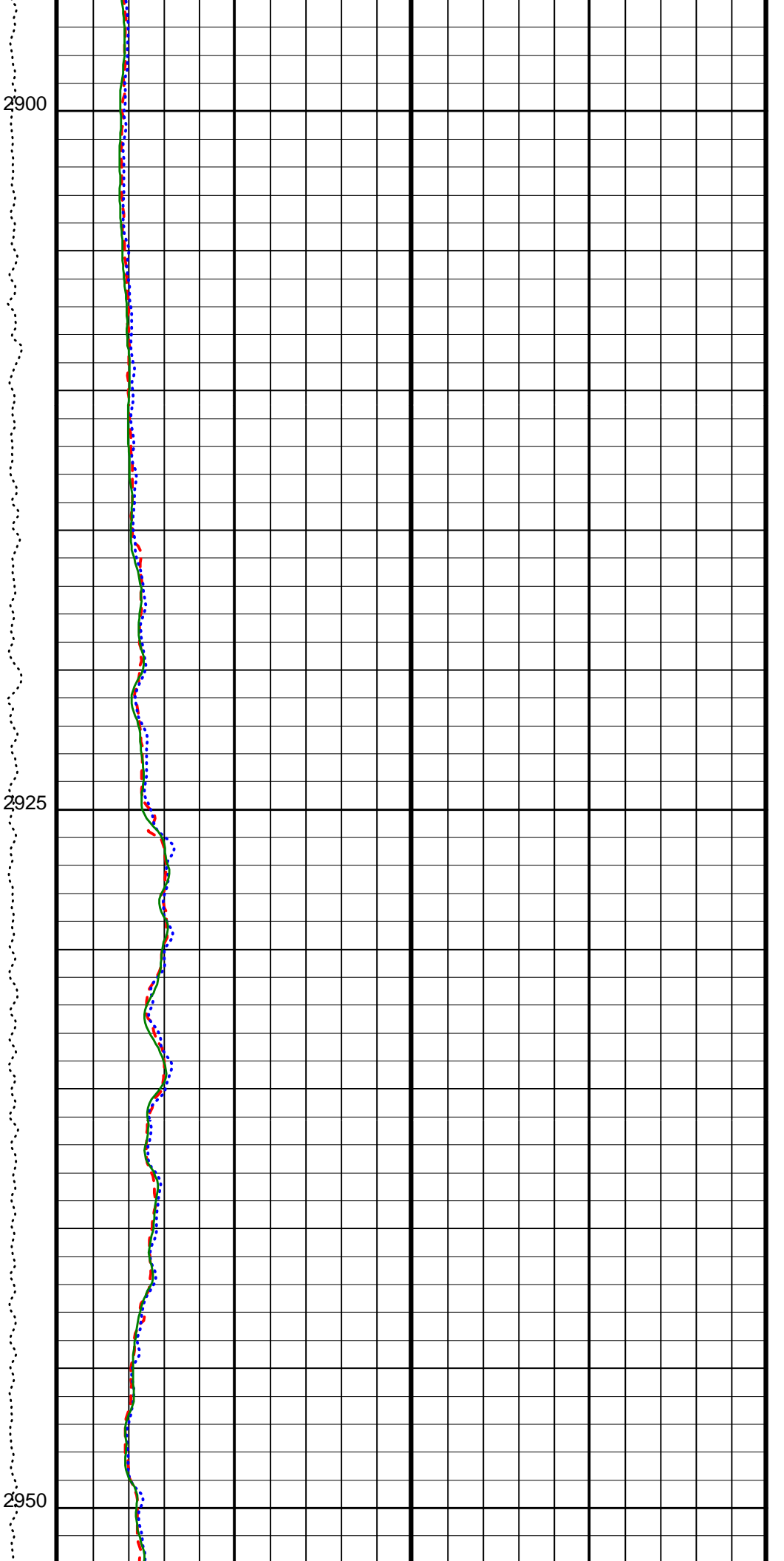


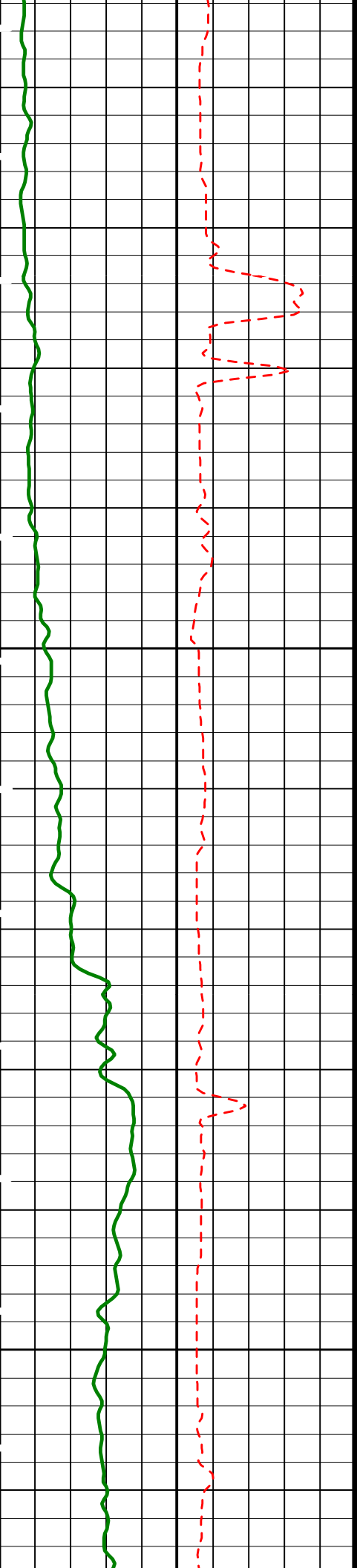


2900

2925

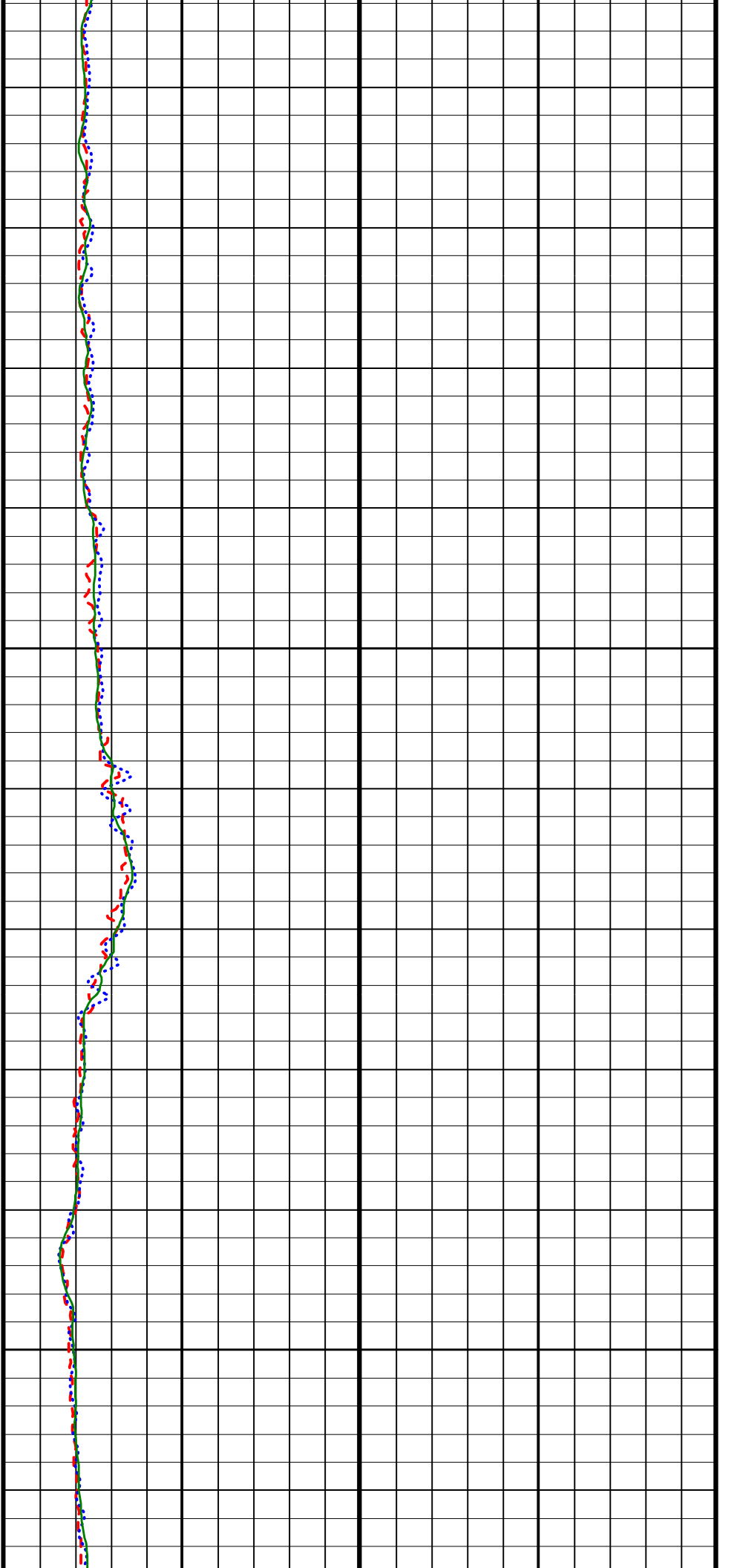
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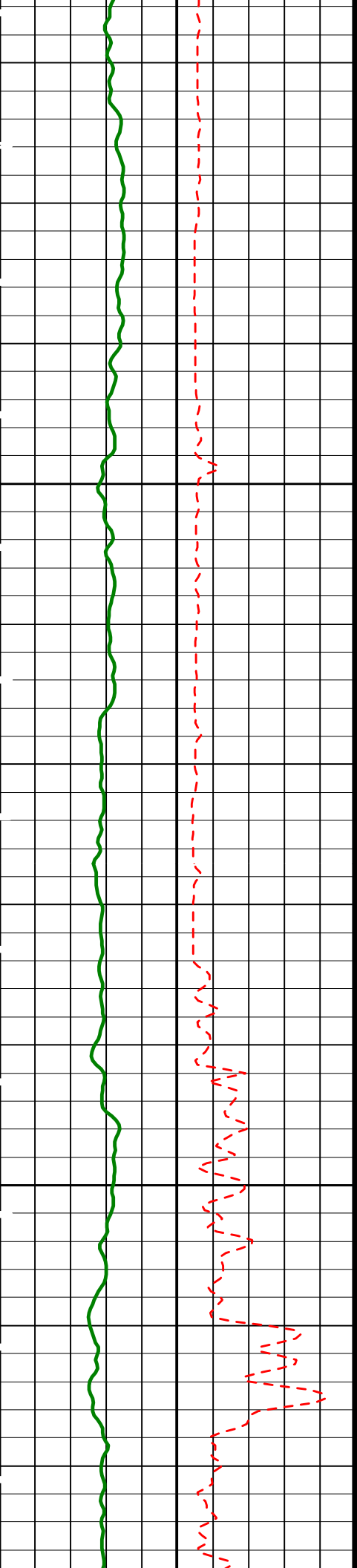




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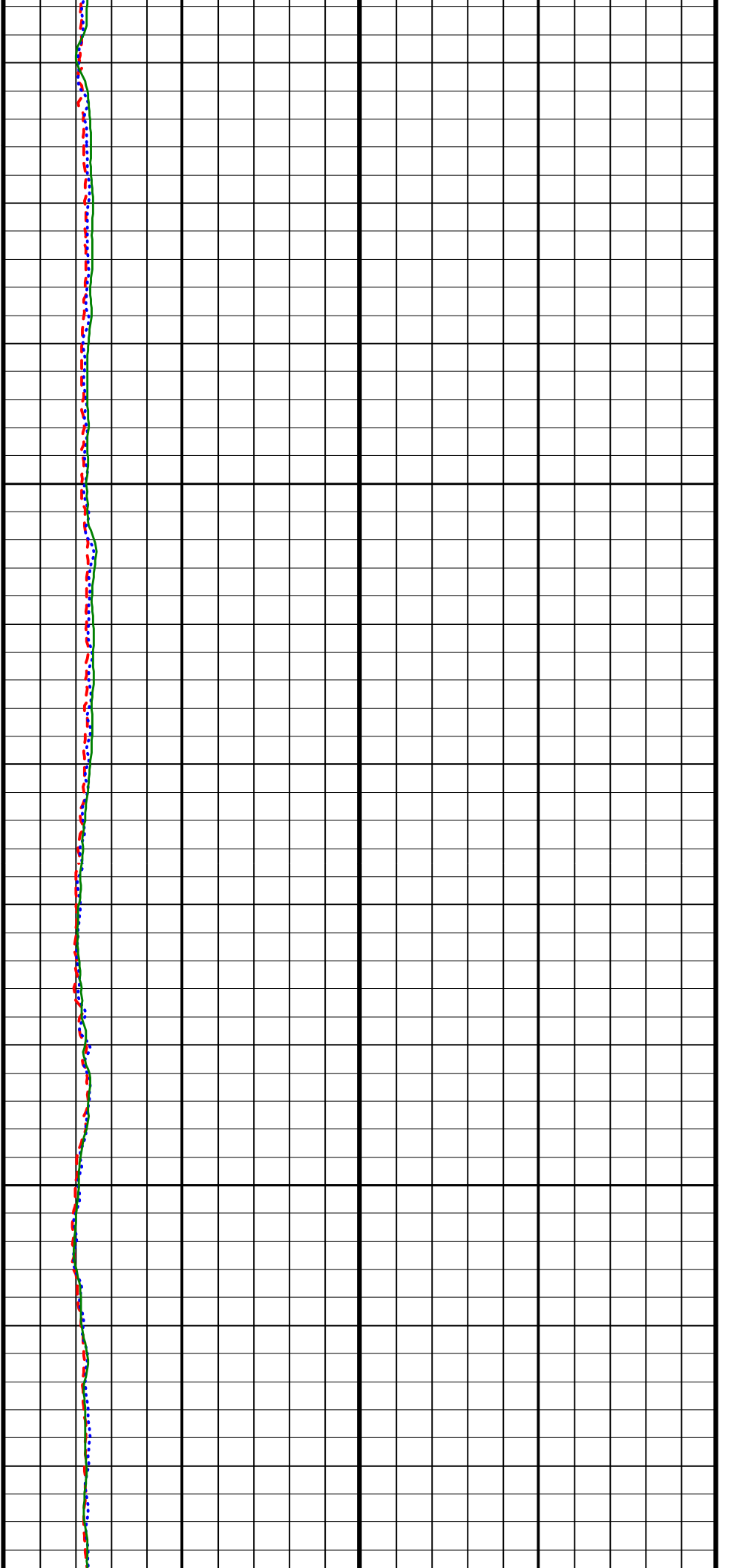
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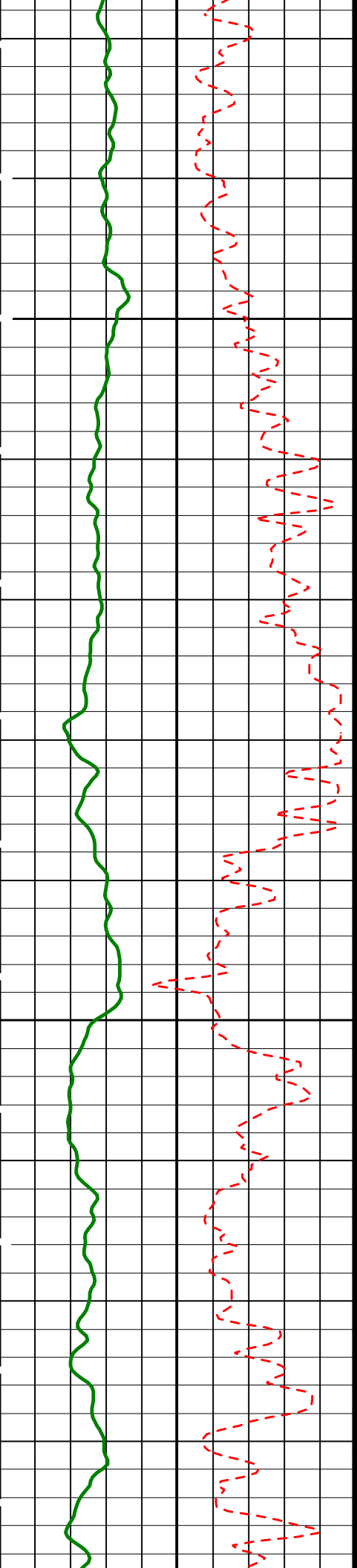




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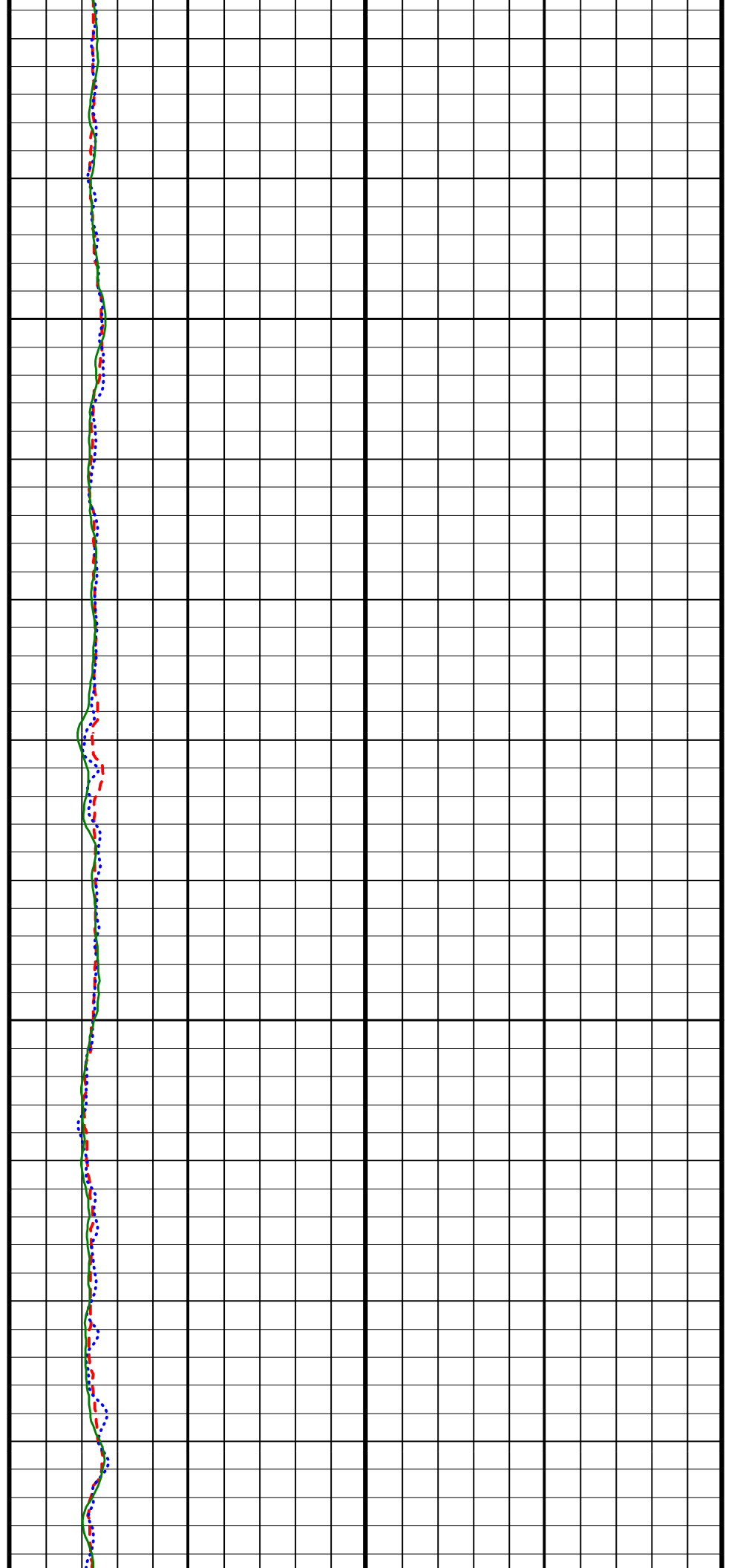
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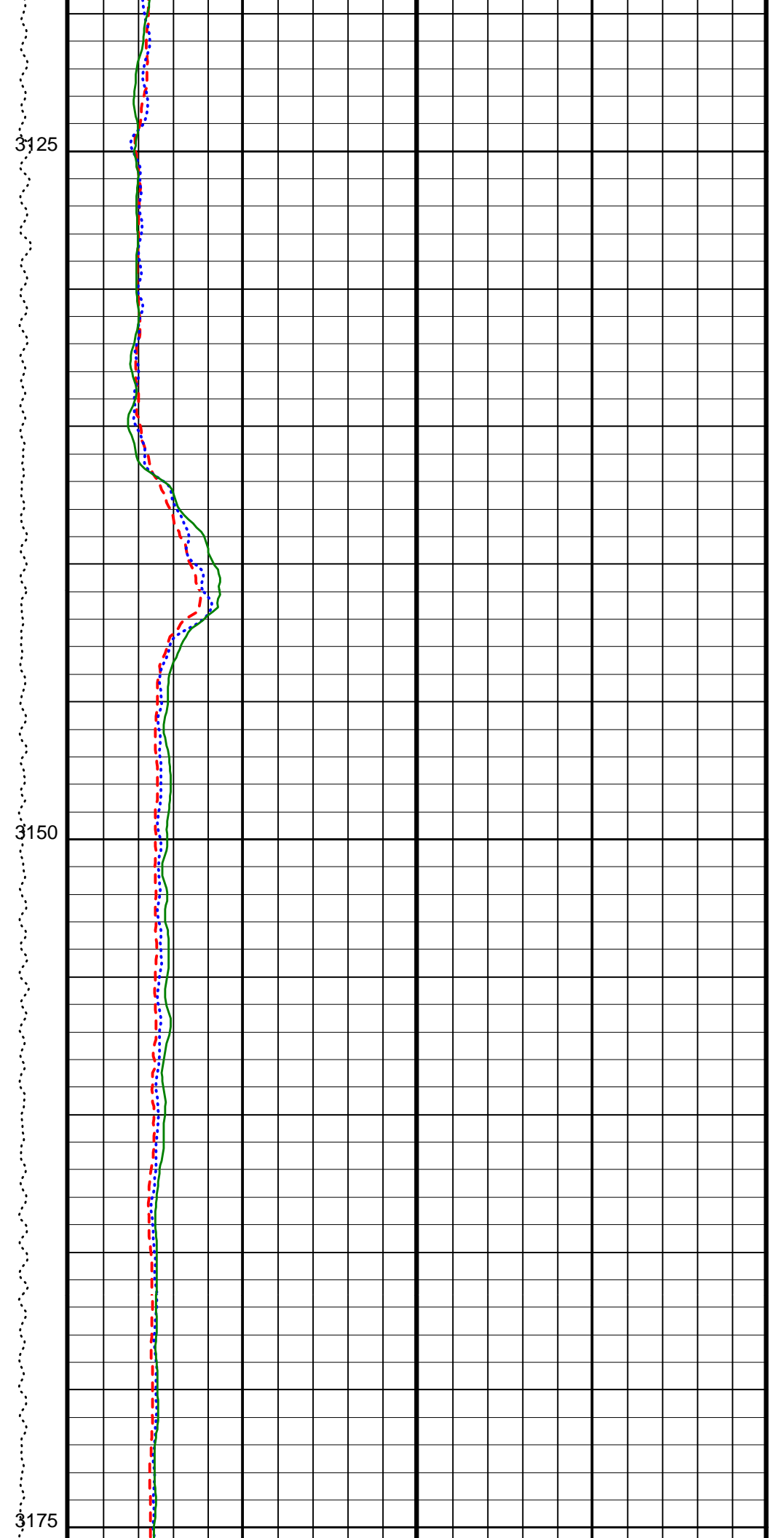
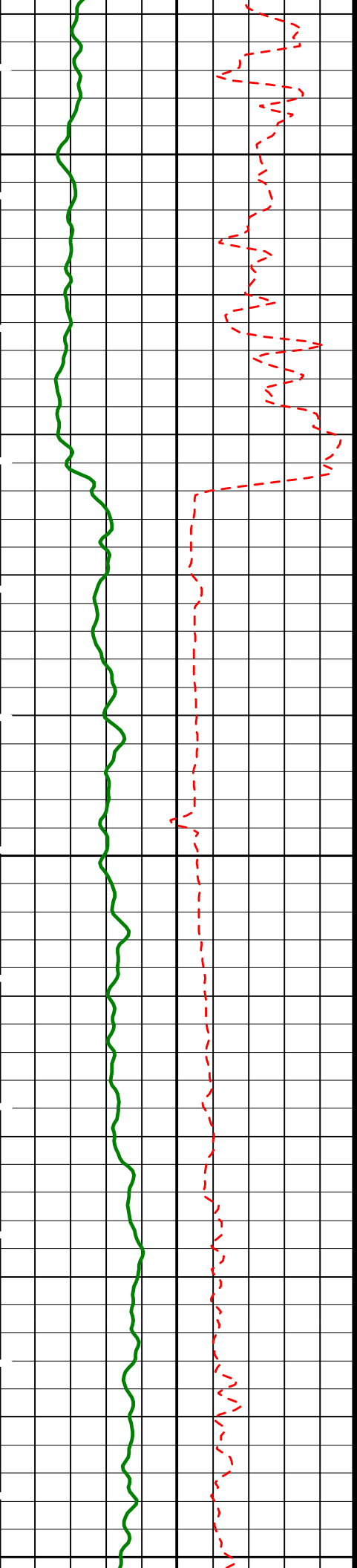


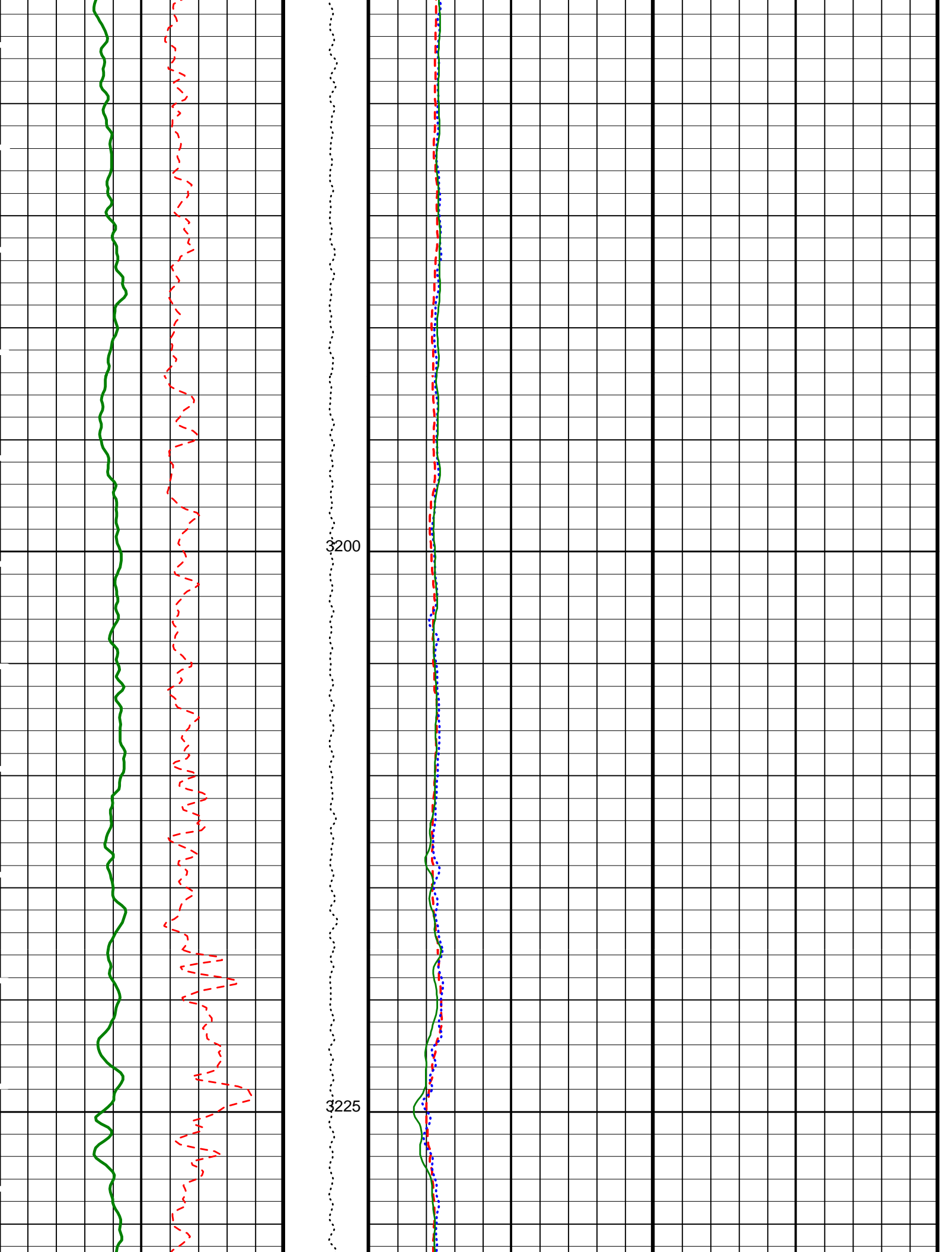


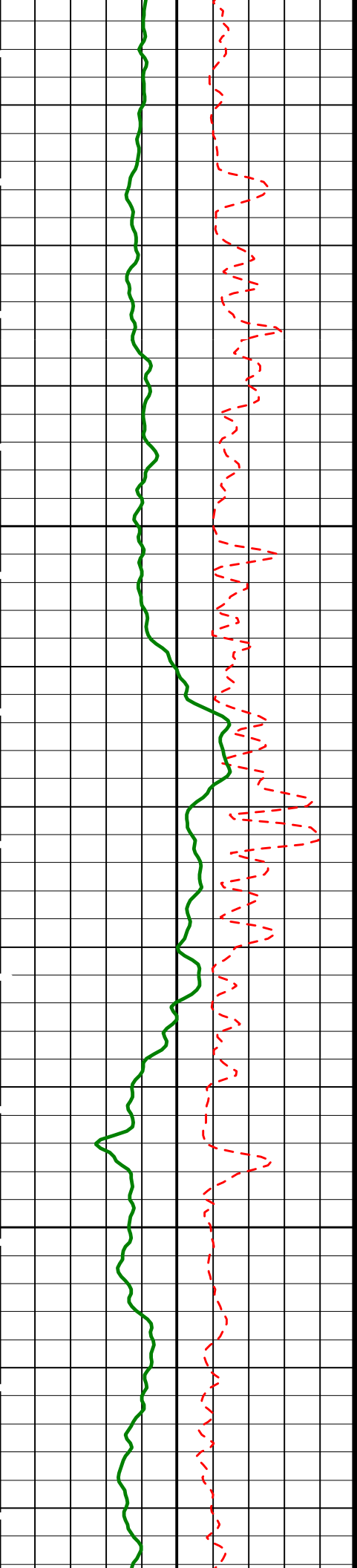
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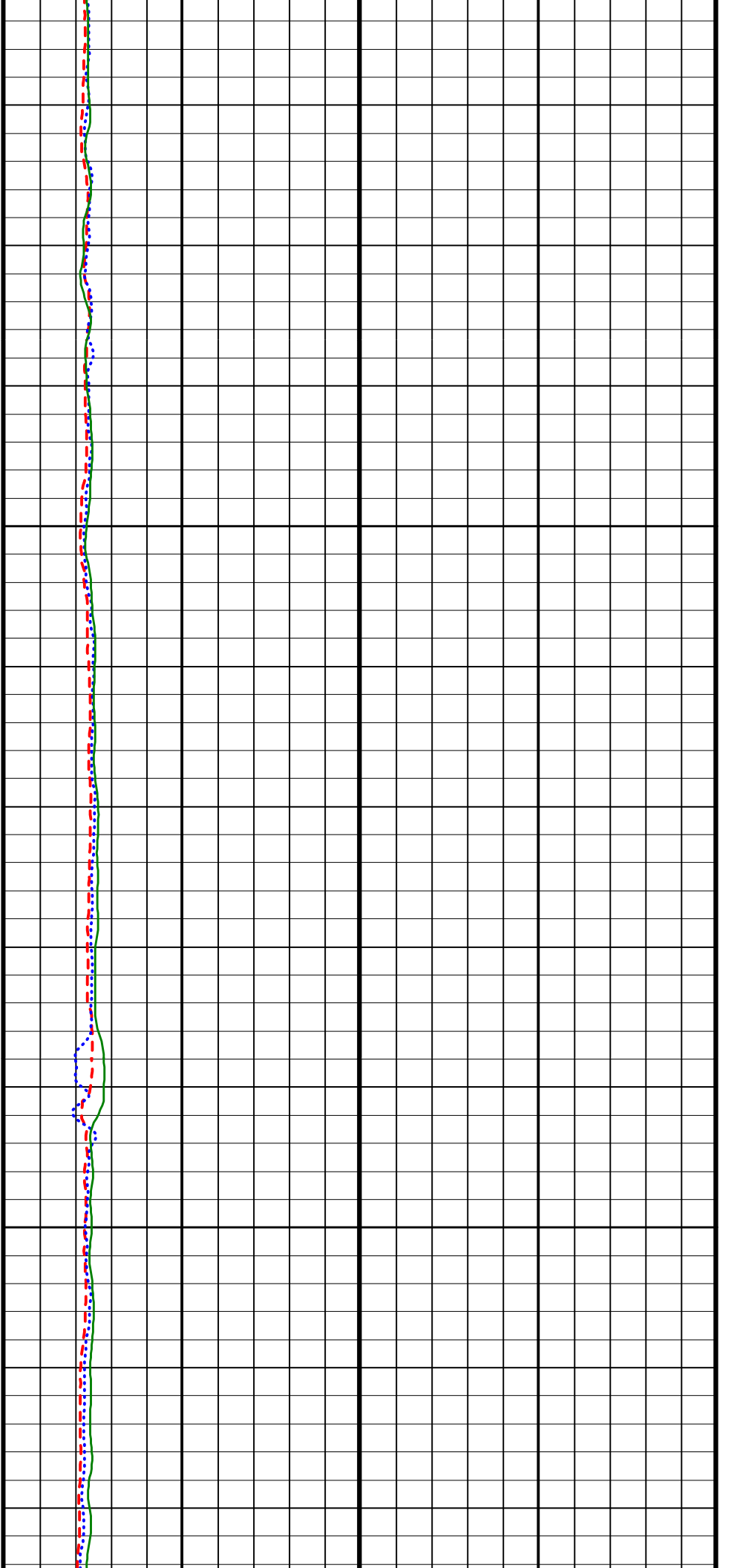




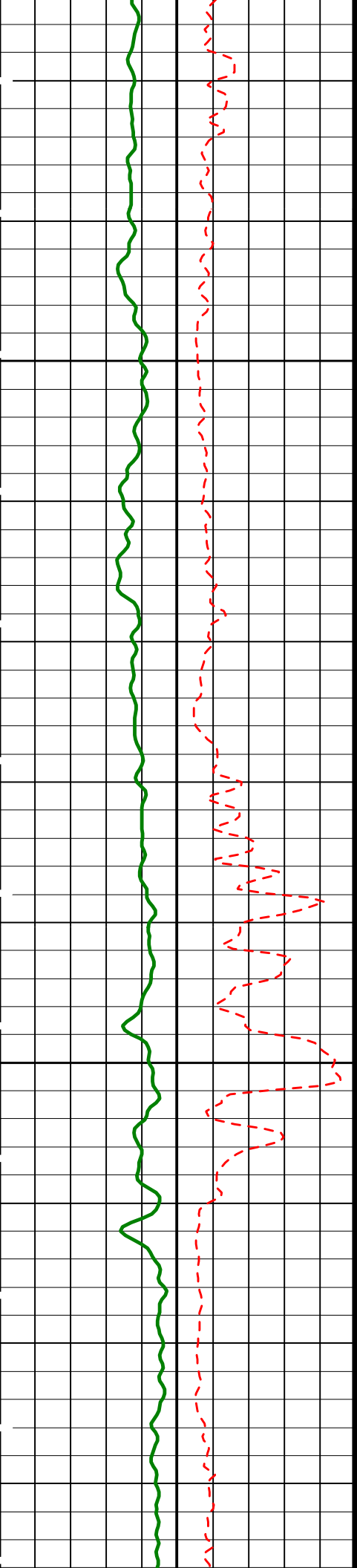


3250

3275

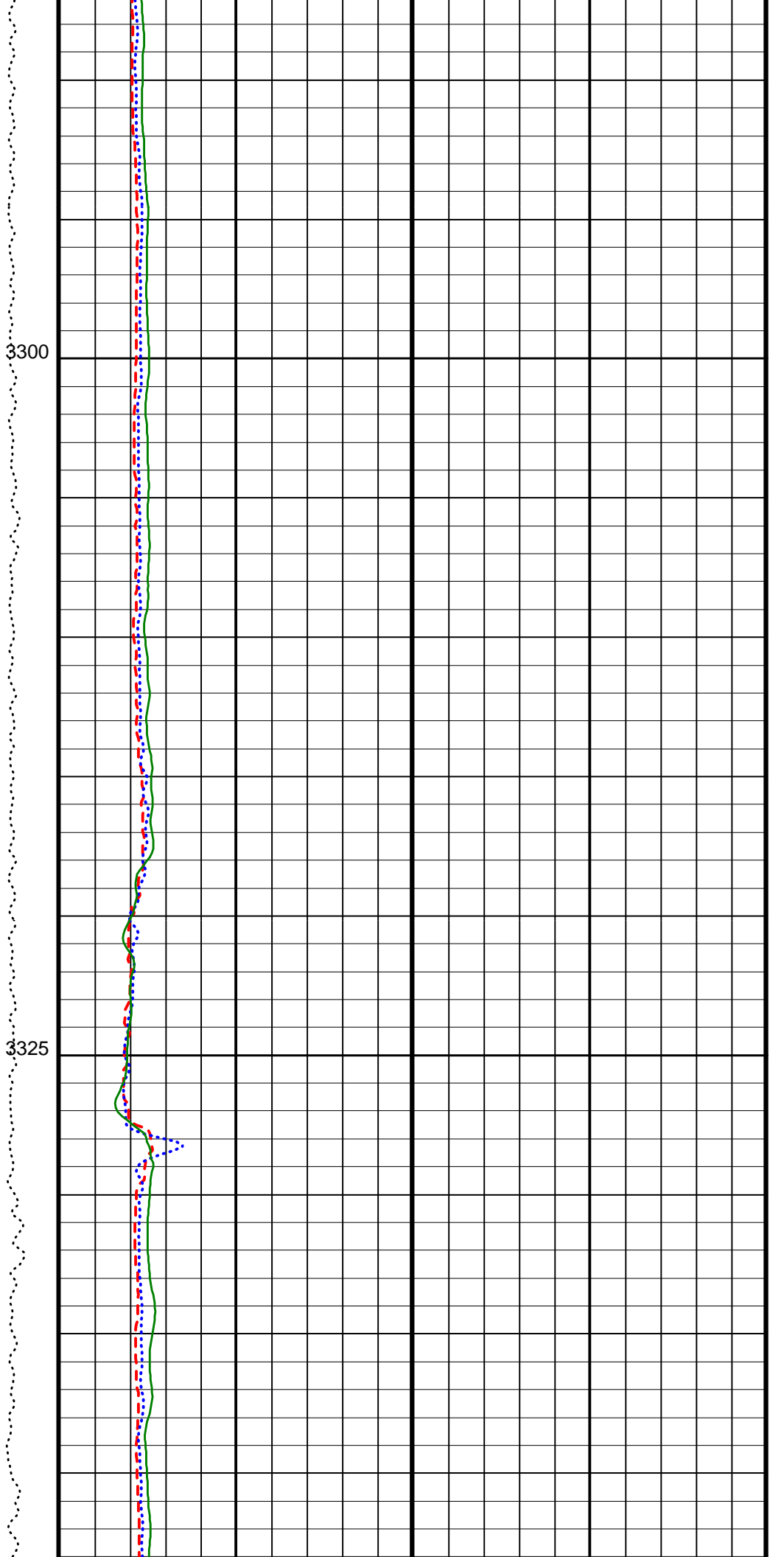


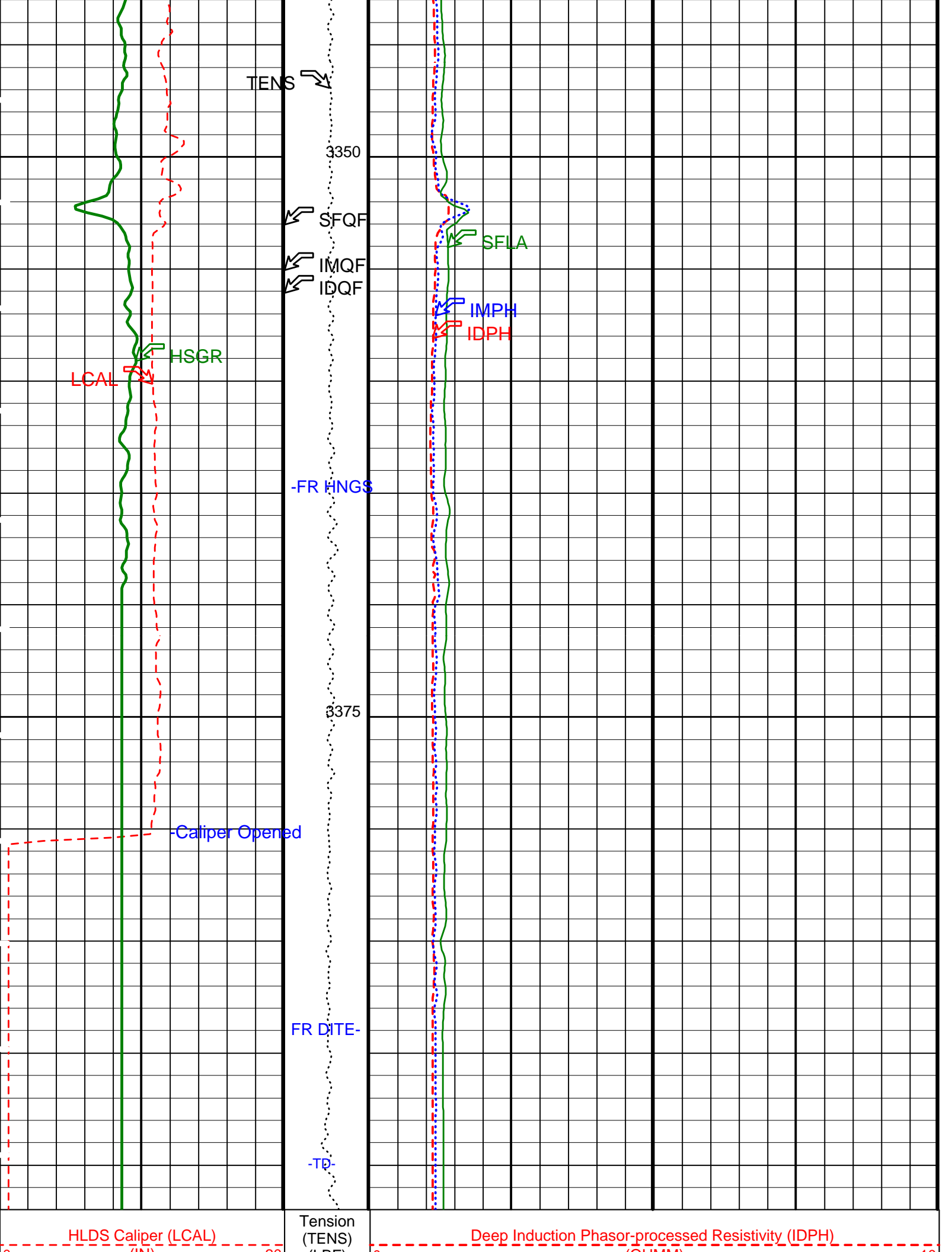




3300

3325





(IN)	20	(LBF)	10000	0	(OHMM)	10
HNGS Spectroscopy Gamma Ray (HSGR)	(GAPI)	150	ID_QUAL From IMQF to IDQF	0	Medium Induction Phasor-processed Resistivity (IMPH) (OHMM)	10
MAIN LOG			IM_QUAL From SFQF to IMQF	0	SFL Averaged (SFLA) (OHMM)	10
			SFL_QUAL From D3T to SFQF			

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
	APS Software Version	5
	HLDS Spec Message Rate	1
	HLDS Diag Message Rate	20
	HLDS Data Control	AcquiredData
	HLDS SS NCB Mode	Density
	HLDS LS NCB Mode	Density
	HLDS SS Tri-Ported Memory State	Enable
	HLDS LS Tri-Ported Memory State	Enable
	APS Cement Thickness Source	COMPUTED
	Apparent Thickness of Cement	0 IN
	HLDS SS Digital Integrator State	Normal
	HLDS LS Digital Integrator State	Normal
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)	212 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	7.03834 %
D1TC	HNGS Detector 1 Calibration Temperature	59.2921 DEGF
D1TL	HNGS Detector 1 Calibration Thorium Peak Location	210.324
D2PR	HNGS Detector 2 Calibration Thorium Peak Resolution	7.10236 %
D2TC	HNGS Detector 2 Calibration Temperature	57.3948 DEGF
D2TL	HNGS Detector 2 Calibration Thorium Peak Location	209.925
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
DGF2	Deep 20 kHz Gain Factor	1.0235	
DHC	Density Hole Correction	BS	
DPH2	Deep 20 kHz Phase Shift	-0.230754	DEG
DPPM	Density Porosity Processing Mode	HIRS	
DRE2	Deep Real 20 kHz Sonde Error Correction	18.3624	MM/M
DSR2	Deep Sigma Reference (20 kHz)	1843	MM/M
DXE2	Deep Quad 20 kHz Sonde Error Correction	-42.2018	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	BS	
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	0.00122299	
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	7.06002e-029	
IDWCD	IDW Calibration Date (dd-MMM-yyyy)	dd-MMM-yyyy	
IDWCNS	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
MGF2	Medium 20 kHz Gain Factor	1.02156	
MPH2	Medium 20 kHz Phase Shift	-1.08578	DEG
MRE2	Medium Real 20 kHz Sonde Error Correction	8.9436	MM/M
MSR2	Medium Sigma Reference (20 kHz)	3250	MM/M
MST	Mud Sample Temperature	58.00	DEGF
MXE2	Medium Quad 20 kHz Sonde Error Correction	-46.3369	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	
PBVSDP	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	M
RULS	Rig Up Length at Surface	0	M
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	26.8307	CPS
S1NG	HNGS Detector 1 Calibration End-On / Side-On Gain Ratio	0.986846	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S2NA	HNGS Detector 2 Calibration Sodium Count Rate	27.2589	CPS
S2NG	HNGS Detector 2 Calibration End-On / Side-On Gain Ratio	0.984706	

SABK	HNGS Statistical Uncertainty in Borehole Potassium Running Average	0.000400444	
SBR	Shoulder Bed Resistivity Factor	1	OHMM
SCORR	Stretch Correction	-50000	M
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	M
TD	Total Depth	32768	FT
TDD	Total Depth - Driller	11154.00	FT
TDL	Total Depth - Logger	11154.00	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	1.0224	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.915815	
ZRCS	Tool Zero Reference Check at Surface	-50000	M

Format: DITE\_LinPhasor    Vertical Scale: 1:200    Graphics File Created: 02-May-2000 15:53

<b>OP System Version: 9C1-303</b>			
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		

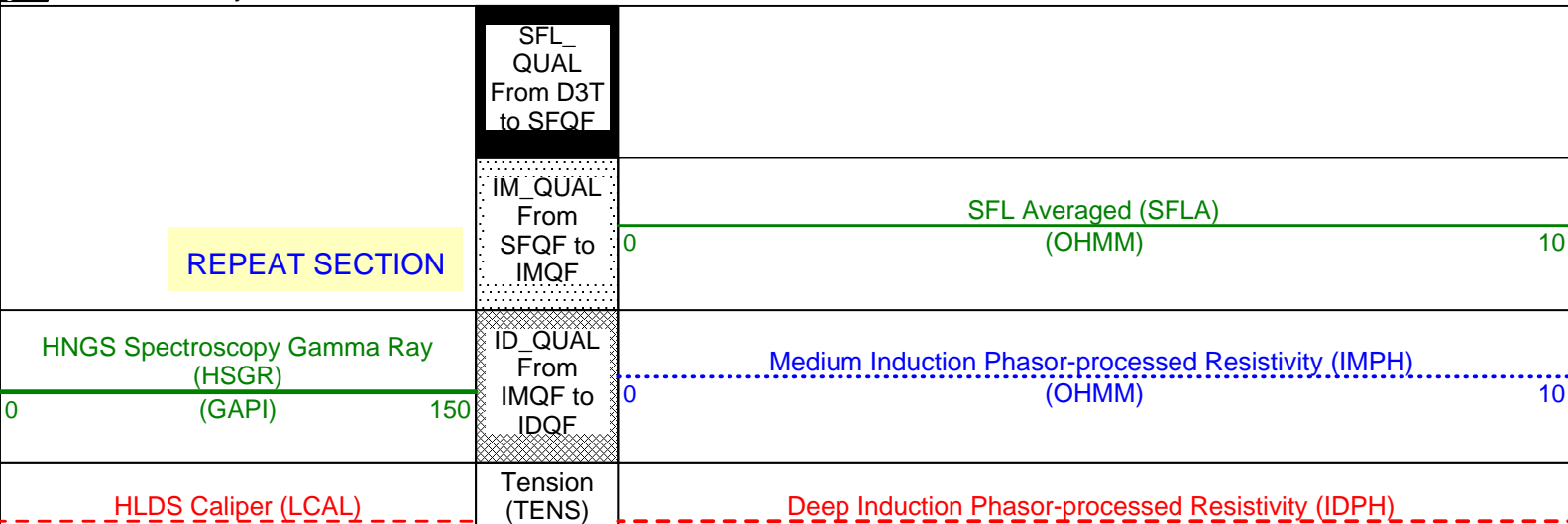
<b>Output DLIS Files</b>			
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<b>Output DLIS Files</b>					
DEFAULT	DITE .011	FN:16 PRODUCER	02-May-2000 15:20	2964.9 M	2861.2 M
DITE_CUST	DITE .011	FN:17 PRODUCER	02-May-2000 15:20	2964.9 M	2861.2 M

<b>OP System Version: 9C1-303</b>			
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



(IN)

20

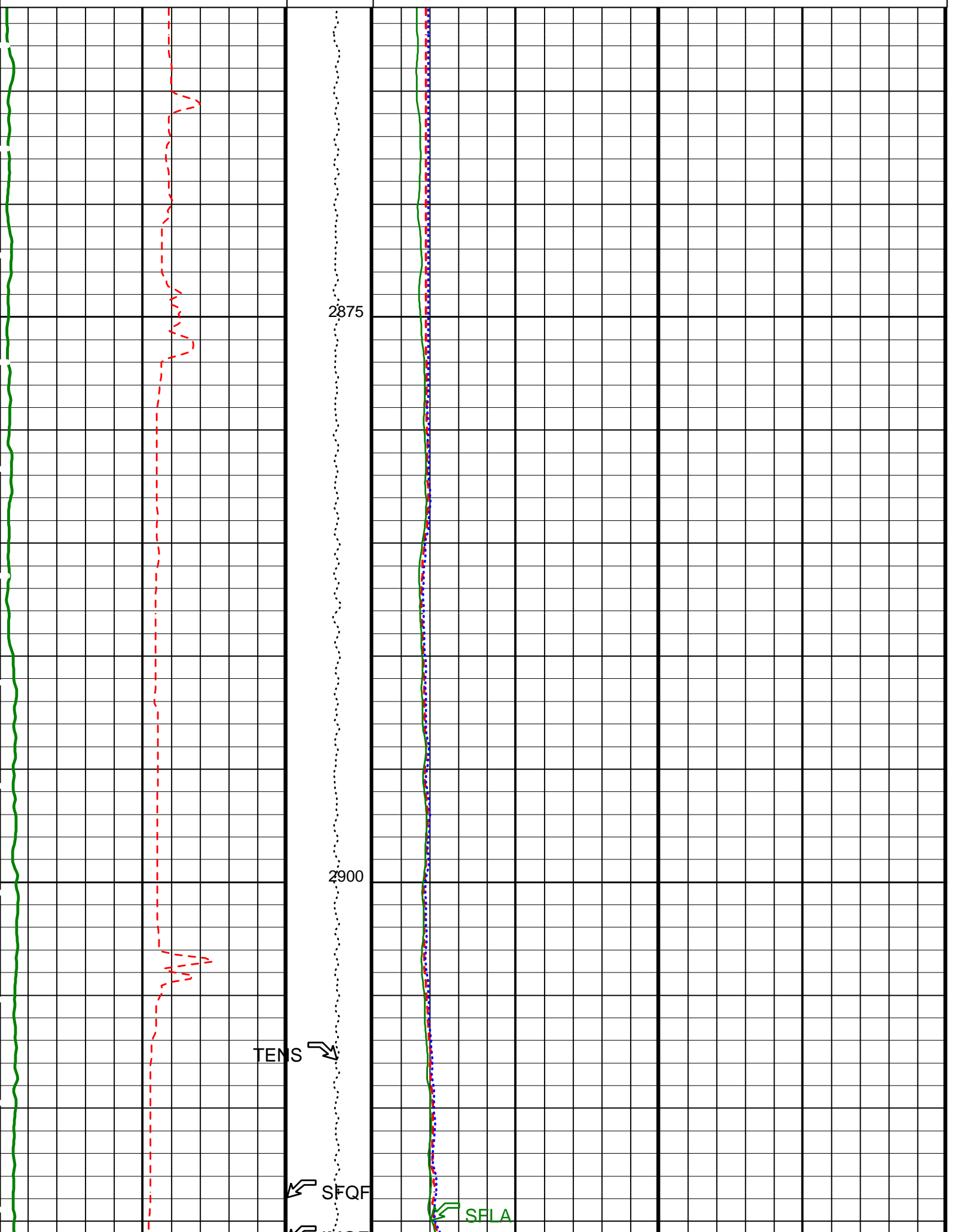
(LBF)

0

(OHMM)

10

10000 0



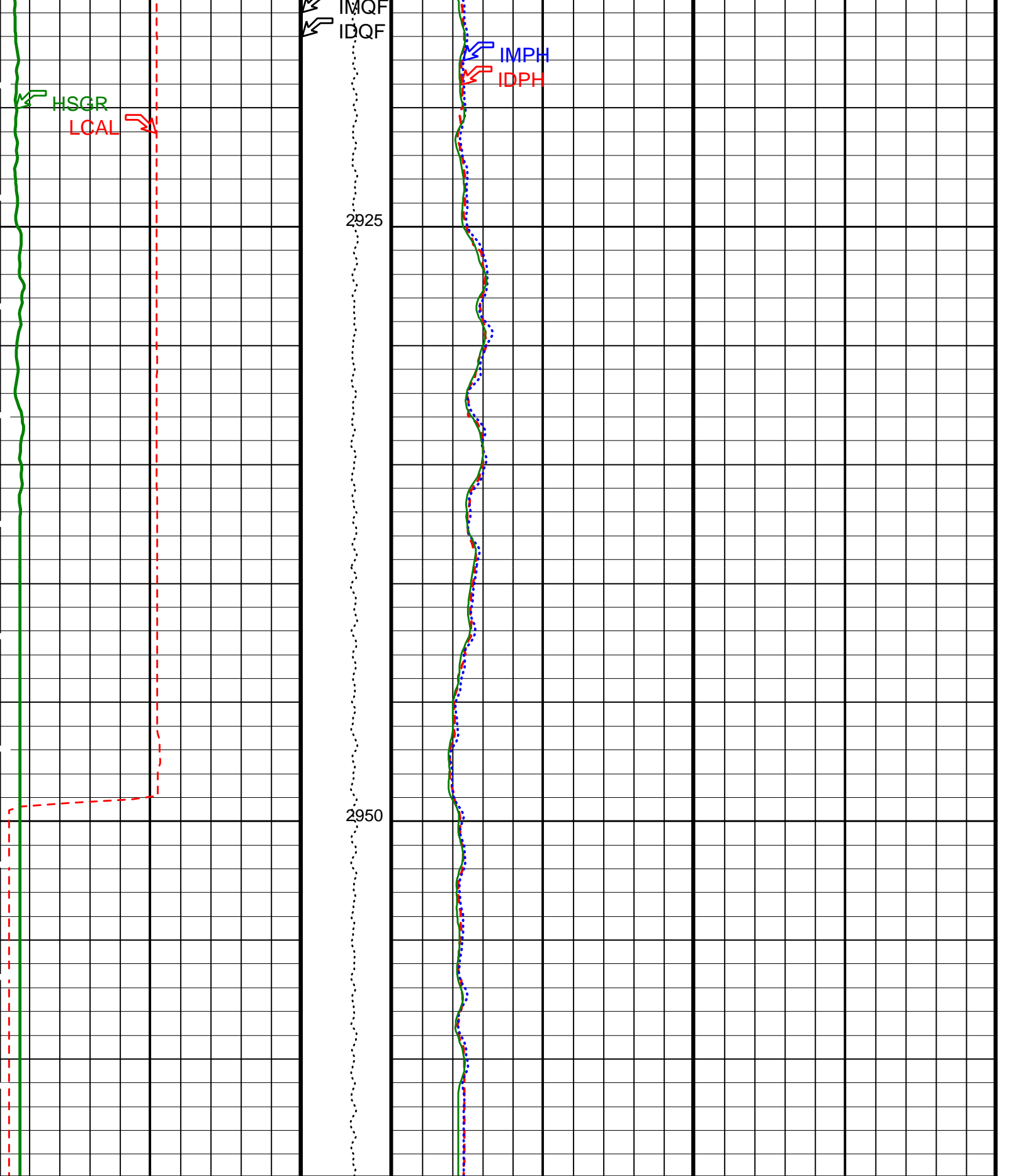
2875

2900

TENS ↘

SFQF ↘

SFLA ↘



<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</p>	<p>Medium Induction Phasor-processed Resistivity (IMPH) (OHMM)</p> <p>0 10</p>

REPEAT SECTION

IDQF  
From  
SFQF to  
IMQF

SFL Averaged (SFLA)  
(OHMM)

0

10

SFL  
QUAL  
From D3T  
to SEQF

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
	APS Software Version	5
	HLDS Spec Message Rate	1
	HLDS Diag Message Rate	20
	HLDS Data Control	AcquiredData
	HLDS SS NCB Mode	Density
	HLDS LS NCB Mode	Density
	HLDS SS Tri-Ported Memory State	Enable
	HLDS LS Tri-Ported Memory State	Enable
	APS Cement Thickness Source	COMPUTED
	Apparent Thickness of Cement	0
	HLDS SS Digital Integrator State	Normal
	HLDS LS Digital Integrator State	Normal
AASD	APS Thermal and Array Detectors High Voltage Setting	1987.2
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
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
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)	212
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
BSAL	Borehole Salinity	-50000.00
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
CONTYP	Conveyance Type	Wireline
CSD1	Inner Casing Outer Diameter	0
CSD2	Outer Casing Outer Diameter	0
CSIZ	Current Casing Size	0.000
CSW1	Inner Casing Weight	0
CSW2	Outer Casing Weight	0
CWEI	Casing Weight	0.00
D1PR	HNGS Detector 1 Calibration Thorium Peak Resolution	7.03834
D1TC	HNGS Detector 1 Calibration Temperature	59.2921
D1TL	HNGS Detector 1 Calibration Thorium Peak Location	210.324
D2PR	HNGS Detector 2 Calibration Thorium Peak Resolution	7.10236
D2TC	HNGS Detector 2 Calibration Temperature	57.3948
D2TL	HNGS Detector 2 Calibration Thorium Peak Location	209.925
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
DGF2	Deep 20 kHz Gain Factor	1.0235
DHC	Density Hole Correction	BS
DPH2	Deep 20 kHz Phase Shift	-0.230754



DPT2	Deep 20 kHz Phase Shift	-0.230754	DEG
DPPM	Density Porosity Processing Mode	HIRS	
DRE2	Deep Real 20 kHz Sonde Error Correction	18.3624	MM/M
DSR2	Deep Sigma Reference (20 kHz)	1843	MM/M
DXE2	Deep Quad 20 kHz Sonde Error Correction	-42.2018	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	BS	
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	7.36453e-031	
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
MGF2	Medium 20 kHz Gain Factor	1.02156	
MPH2	Medium 20 kHz Phase Shift	-1.08578	DEG
MRE2	Medium Real 20 kHz Sonde Error Correction	8.9436	MM/M
MSR2	Medium Sigma Reference (20 kHz)	3250	MM/M
MST	Mud Sample Temperature	58.00	DEGF
MXE2	Medium Quad 20 kHz Sonde Error Correction	-46.3369	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	M
RULS	Rig Up Length at Surface	0	M
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	26.8307	CPS
S1NG	HNGS Detector 1 Calibration End-On / Side-On Gain Ratio	0.986846	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S2NA	HNGS Detector 2 Calibration Sodium Count Rate	27.2589	CPS
S2NG	HNGS Detector 2 Calibration End-On / Side-On Gain Ratio	0.984706	
SABK	HNGS Statistical Uncertainty in Borehole Potassium Running Average	0	
SBR	Shoulder Bed Resistivity Factor	1	OHMM
SCORR	Stretch Correction	-50000	M
SFCR	SFL Channel Ratio	1000	
SFLE	SFL Enable	ENABLE	
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	68	DEGF

SPAEE	DIT-E SPARC Processing Enable	ENABLE	0	MV
SPNV	SP Next Value			M
STDLC	Subsequent Trip Down Log Correction		-50000	M
TD	Total Depth		32768	FT
TDD	Total Depth - Driller		11154.00	FT
TDL	Total Depth - Logger		11154.00	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	M

Format: DITE\_LinPhasor    Vertical Scale: 1:200    Graphics File Created: 02-May-2000 15:20

## 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:16 PRODUCER	02-May-2000 15:20
DITE_CUST	DITE .011	FN:17 PRODUCER	02-May-2000 15:20

### Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
<b>Hostile Litho-Density Sonde Wellsite Calibration - Background Measurement</b>							
Master: 10-MAR-2000 10:06    Before: 17-MAR-2000 18:41    After: 2-MAY-2000 21:22							
SS Total Countrate Bkg	1645	1446	1441	1449	7.680	80.00	CPS
SS HV Measured Bkg	1100	1077	1070	1071	1.491	80.00	V
SS Cs Centroid Bkg	661.0	661.3	661.0	661.5	0.4500	1.500	KEV
SS Cs Resolution Bkg	9.000	8.490	8.564	8.477	-0.08757	1.800	%
LS Total Countrate Bkg	1645	1468	1467	1464	-3.521	80.00	CPS
LS HV Measured Bkg	1100	1195	1190	1189	-1.123	80.00	V
LS Cs Centroid Bkg	661.0	661.3	661.2	661.2	0.05493	1.500	KEV
LS Cs Resolution Bkg	9.000	8.744	8.772	8.785	0.01332	1.800	%
<b>Hostile Litho-Density Sonde Wellsite Calibration - Caliper Calibration</b>							
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
<b>Accelerator-Porosity Tool Wellsite Calibration - Detector Background</b>							
Master: Calibration out of date    2-FEB-2000 21:50    Before: 2-MAY-2000 15:25    After: 2-MAY-2000 19:56							
Near Det Bkg Cntrate	30.00	32.07	55.87	32.30	-23.57	N/A	CPS
Far Det Bkg Cntrate	30.00	32.19	35.23	33.46	-1.769	N/A	CPS
Array-1 Det Bkg Cntrate	30.00	28.58	37.52	29.53	-7.992	N/A	CPS
Array-2 Det Bkg Cntrate	30.00	30.06	39.47	29.76	-9.711	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	33.94	38.87	32.33	-6.539	N/A	CPS
<b>Accelerator-Porosity Tool Wellsite Calibration - Detector Plateau Settings</b>							
Master: Calibration out of date    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
<b>Accelerator-Porosity Tool Wellsite Calibration - Calibration Ratios</b>							
Master: Calibration out of date    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	
<b>Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 1 Check</b>							
Master: 17-APR-2000 13:39    Before: 27-APR-2000 19:51    After: 2-MAY-2000 21:22							
Na 511 Peak Loc	40.00	40.54	40.61	40.50	-0.1129	1.000	
Na 511 Peak Res	15.50	16.04	14.56	15.67	1.115	2.000	%

Na 511 Peak Res	10.00	10.04	14.00	13.07	1.110	2.819	2.000	%
High Voltage	1150	1110	1109	1111	2.819	2.819	30.00	V
Na 1785 Peak Loc	142.6	146.3	145.4	144.9	-0.4233	7.000		
Na 1785 Peak Res	8.500	8.987	9.047	8.984	-0.06378	2.000	%	
Temperature	15.50	15.16	18.69	17.76	-0.9264	N/A	DEGC	
Na Count Rate	45.00	26.83	26.57	26.24	-0.3233	8.000	CPS	

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 2 Check

Master: 17-APR-2000 13:39 Before: 27-APR-2000 19:51 After: 2-MAY-2000 21:22

Na 511 Peak Loc	40.00	40.57	40.68	40.66	-0.02054	1.000		
Na 511 Peak Res	15.50	13.85	14.11	14.49	0.3854	2.000	%	
High Voltage	1150	1196	1195	1198	2.932	30.00	V	
Na 1785 Peak Loc	142.6	144.4	145.4	144.7	-0.7429	7.000		
Na 1785 Peak Res	8.500	8.601	7.729	8.203	0.4745	2.000	%	
Temperature	15.50	14.11	17.59	17.86	0.2786	N/A	DEGC	
Na Count Rate	45.00	27.26	27.00	26.51	-0.4854	8.000	CPS	

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

Master: 17-APR-2000 13:39 Before: 27-APR-2000 19:51 After: 2-MAY-2000 21:22

Coincidence Count Rate Ratio	1.000	0.9852	0.9847	0.9914	0.006714	0.05000		
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Hostile Natural Gamma Ray Sonde Master Calibration - Detector 1 Calibration

Master: 17-APR-2000 13:34

Na 511 Peak Set Point	40.00	41.00	--	--	--	--		
Th Peak Loc	209.6	210.3	--	--	--	--		
Th Peak Res	7.000	7.038	--	--	--	--	%	
Background Count Rate	142.5	17.08	--	--	--	--	CPS	
Gain Ratio	1.000	0.9868	--	--	--	--		

Hostile Natural Gamma Ray Sonde Master Calibration - Detector 2 Calibration

Master: 17-APR-2000 13:34

Na 511 Peak Set Point	40.00	41.00	--	--	--	--		
Th Peak Loc	209.6	209.9	--	--	--	--		
Th Peak Res	7.000	7.102	--	--	--	--	%	
Background Count Rate	142.5	17.73	--	--	--	--	CPS	
Gain Ratio	1.000	0.9847	--	--	--	--		

Dual Induction - E / Equipment Identification

Primary Equipment:

Dual Induction Sonde	DIS - HB	355
Dual Induction Cartridge	DIC - EB	352

Auxiliary Equipment:

Mass Isolated Housing	MIH - ZA	342
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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		33.65	Before		0.9714	Before		8.928
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		24.56	Before		0.9803	Before		8.718
Phase	IM Elect Real Offset 10 kHz MM/M	Value	Phase	IM Elect Real Gain 10 kHz	Value			
Before		81.36	Before		0.9372			
Phase	IM Elect Quad Offset 10 kHz MM/M	Value	Phase	IM Elect Quad Gain 10 kHz	Value			
Before		42.85	Before		0.9214			

Before: 27-APR-2000 18:01

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		13.24	Before		0.9923	Before		7.602

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			9.944	Before		1.004	Before			7.153	
	-116.7 (Minimum)	13.30 (Nominal)	138.3 (Maximum)		0.8456 (Minimum)	0.9956 (Nominal)	1.194 (Maximum)		-7.217 (Minimum)	7.783 (Nominal)	22.78 (Maximum)
Phase	IM Elect Real Offset 20 kHz	MM/M	Value	Phase	IM Elect Real Gain 20 kHz	Value					
Before			32.38	Before		0.9566					
	-192.0 (Minimum)	32.95 (Nominal)	258.0 (Maximum)		0.8169 (Minimum)	0.9669 (Nominal)	1.153 (Maximum)				
Phase	IM Elect Quad Offset 20 kHz	MM/M	Value	Phase	IM Elect Quad Gain 20 kHz	Value					
Before			17.21	Before		0.9403					
	-207.5 (Minimum)	17.51 (Nominal)	242.5 (Maximum)		0.8037 (Minimum)	0.9537 (Nominal)	1.135 (Maximum)				

Before: 27-APR-2000 18:02

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			8.752	Before		0.9859	Before			23.65	
	-76.21 (Minimum)	8.795 (Nominal)	93.79 (Maximum)		0.8403 (Minimum)	0.9903 (Nominal)	1.186 (Maximum)		3.750 (Minimum)	23.75 (Nominal)	43.75 (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			6.674	Before		1.007	Before			23.23	
	-79.47 (Minimum)	5.533 (Nominal)	90.53 (Maximum)		0.8595 (Minimum)	1.009 (Nominal)	1.213 (Maximum)		3.199 (Minimum)	23.20 (Nominal)	43.20 (Maximum)
Phase	IM Elect Real Offset 40 kHz	MM/M	Value	Phase	IM Elect Real Gain 40 kHz	Value					
Before			20.67	Before		0.9491					
	-109.0 (Minimum)	21.03 (Nominal)	151.0 (Maximum)		0.8111 (Minimum)	0.9611 (Nominal)	1.145 (Maximum)				
Phase	IM Elect Quad Offset 40 kHz	MM/M	Value	Phase	IM Elect Quad Gain 40 kHz	Value					
Before			11.03	Before		0.9324					
	-118.8 (Minimum)	11.24 (Nominal)	141.2 (Maximum)		0.7976 (Minimum)	0.9476 (Nominal)	1.126 (Maximum)				

Before: 27-APR-2000 18:03

Dual Induction - E Wellsite Calibration							
SFL Electronics							
Phase	SFL Voltage Offset	MV	Value	Phase	SFL Voltage Gain	Value	
Before			0.1592	Before		0.9993	
	-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			0.03745	Before		1.011	
	-0.6000 (Minimum)	0 (Nominal)	0.6000 (Maximum)		0.8500 (Minimum)	1.000 (Nominal)	1.200 (Maximum)

Before: 27-APR-2000 18:04

Dual Induction - E Wellsite Calibration											
Electronics Calibration Changes Files/Depth Intervals:											
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	After			0	
	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					
	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					
	0 (Minimum)	0 (Nominal)	0.7500 (Maximum)		0 (Minimum)	0 (Nominal)	2.000 (Maximum)				

After: 4-MAY-2000 17:39

Dual Induction - E Master Calibration										
Test Loop Calibration: Calibration of Internal Reference to Test Loop Standard										

**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		1.010	Master		1.023	Master		1.044
	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		1.017	Master		1.022	Master		1.042
	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		0.05099	Master		-0.2308	Master		-1.484
	-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		-0.3767	Master		-1.086	Master		-2.610
	-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 23-OCT-1998 18:57

**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		38.86	Master		18.36	Master		7.201
	-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		-112.2	Master		-42.20	Master		-2.651
	-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		43.35	Master		8.944	Master		-1.864
	-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		-125.2	Master		-46.34	Master		3.123
	-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 23-OCT-1998 19:07

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

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		40.54	Master		16.04	Master		1110
Before		40.61	Before		14.56	Before		1109
After		40.50	After		15.67	After		1111
	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		146.3	Master		8.987	Master		15.16
Before		145.4	Before		9.047	Before		18.69
After		144.9	After		8.984	After		17.76
	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		26.83						
Before		26.57						
After		26.24						
	15.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							
Master: 17-APR-2000 13:39			Before: 27-APR-2000 19:51			After: 2-MAY-2000 21:22		

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		40.57	Master		13.85	Master		1196
Before		40.68	Before		14.11	Before		1195
After		40.66	After		14.49	After		1198
	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		144.4	Master		8.601	Master		14.11
Before		145.4	Before		7.729	Before		17.59
After		144.7	After		8.203	After		17.86
	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		27.26						
Before		27.00						
After		26.51						
	15.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							
Master: 17-APR-2000 13:39			Before: 27-APR-2000 19:51			After: 2-MAY-2000 21:22		

Hostile Natural Gamma Ray Sonde vveisite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		0.9852
Before		0.9847
After		0.9914
	0.9500 (Minimum)      1.000 (Nominal)      1.050 (Maximum)	
Master: 17-APR-2000 13:39		
Before: 27-APR-2000 19:51		
After: 2-MAY-2000 21:22		

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		210.3	Master		7.038
	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	<b>See Remarks</b>		
Master	<b>EXCEEDS LIMIT</b>	17.08	Master		0.9868			
	20.00 (Minimum)      142.5 (Nominal)      265.0 (Maximum)			0.9400 (Minimum)      1.000 (Nominal)      1.060 (Maximum)				
Master: 17-APR-2000 13:34								

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		209.9	Master		7.102
	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	<b>See Remarks</b>		
Master	<b>EXCEEDS LIMIT</b>	17.73	Master		0.9847			
	20.00 (Minimum)      142.5 (Nominal)      265.0 (Maximum)			0.9400 (Minimum)      1.000 (Nominal)      1.060 (Maximum)				
Master: 17-APR-2000 13:34								

<b>COMPANY:</b> Lamont Doherty  <b>WELL:</b> ODP Leg 189, Site 1172D (ETP-2A) <b>FIELD:</b> East Tasmania <b>COUNTY:</b> Offshore <b>STATE:</b> Pacific Ocean	<b>BOTTOM LOG INTERVAL</b>	3389 m
	<b>SCHLUMBERGER DEPTH</b>	3395 m
	<b>DEPTH DRILLER</b>	3399.85 m
	<b>KELLY BUSHING</b>	11.2 m
	<b>DRILL FLOOR</b>	10.9 m
	<b>GROUND LEVEL</b>	2621.7 m



Phasor Induction  
Natural Gamma Ray