

COMPANY: Lamont Doherty

WELL: ODP Leg 189, Site 1168 (WT-1A)

FIELD: Tasmanian Seaway, West Tasmania Site

COUNTRY: Offshore **STATE:** Indian Ocean



Phasor Induction Log

LOCATION		Elev.:	K.B.	11.2 M.
Permanent Datum:	MSL		G.L.	2474 M.
Log Measured From:	RKB		D.F.	10.9 M.
Drilling Measured From:	RKB	Elev.: 0 ft		
API Serial No.		Max. Hole Devi.		Longitude
		0 deg		Latitude

COUNTY: Offshore
 Field: Tasmanian Seaway, West Tasm
 Location: ODP Leg 189, Site 1168 (WT-1A)
 Well:
 Company: Lamont Doherty

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	23-MAR-2000		
Run Number	One		
Depth Driller	3357.7 M.		
Schlumberger Depth	3351 M.		
Bottom Log Interval	3346 M.		
Top Log Interval	2573 M.		
Casing Driller Size @ Depth	0.000 in	@	2573 M.
Casing Schlumberger	2573 M.		
Bit Size	9.875 in		
Type Fluid In Hole	Salt Water Base		
Density	8.51234 lbm/gal		
Fluid Loss	PH		
Source Of Sample	Salt water		
RM @ Measured Temperature	0.216 ohm.m	@	62 degF
RMF @ Measured Temperature		@	
RMC @ Measured Temperature		@	
Source RMF	RMC		
RM @ MRT	0.171 @ 80		@ 80
RMF @ MRT		@	
Maximum Recorded Temperatures	80 degF		
Circulation Stopped	23-MAR-2000		6:30
Time			
Logger On Bottom	23-MAR-2000		14:18
Time			
Unit Number	99		Houston OS
Location			
Recorded By	Kerry M. Swain		
Witnessed By	Patrick Fothergill, Ulysses S. Nimmemann		

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: GHMT
OS2: DITE/HLDS/APS
OS3:
OS4:
OS5:

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

REMARKS: RUN NUMBER 1
Hole cored with APC/XCB.
Sea Floor at 2475.5 MBRF.
Log presented in Meters below rig floww (MBRF).
Lamont Temperature Tool (TAP) run on DITE/HLDS/APS/HNGS only.
Toolstring- DITE/HLDS/APS/HNGS
Wireline Heave Compensator was used on all descents.
Sepiolite mud was used to displace the hole.
Drillers TD- 3357.7 MBRF.
Loggers TD- 3351 MBRF.
Drill Pipe Logger- 2573 MBRF.
The Caliper was closed @ 3216-3194MBRF & 2906-2895MBRF due to overpull.
These areas show decreased GR curves due to Borehole correction from Caliper.
GR spikes at 2464-2461 & 2495 MBRF are from magnetic Pipe collars.
SFL Failed @ 3069-3062 MBRF and 2987-2953 MBRF.

REMARKS: RUN NUMBER 2




RUN 1		
LOGGED INTERVAL	START	STOP

RUN 2		
LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1 SURFACE EQUIPMENT
SFT-281 24
SFT-178 4722
GSR-U 135
WITM (DTS)-A

RUN 1 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		30.23
			29.32

RUN 2

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

20.12

21.35

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

Caliper
SS LS Status

14.85

18.90

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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BACKUP	DITE .008	FN:8	PRODUCER	23-Mar-2000 14:13

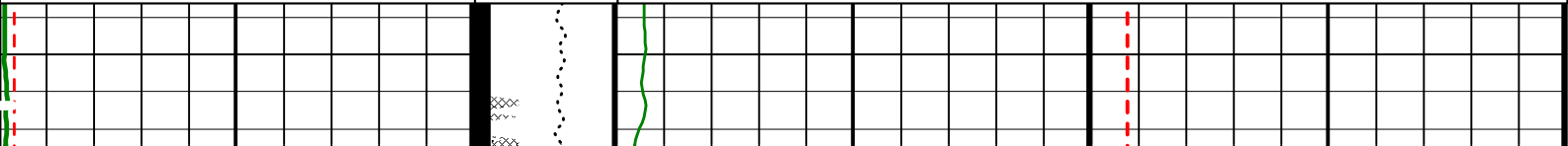
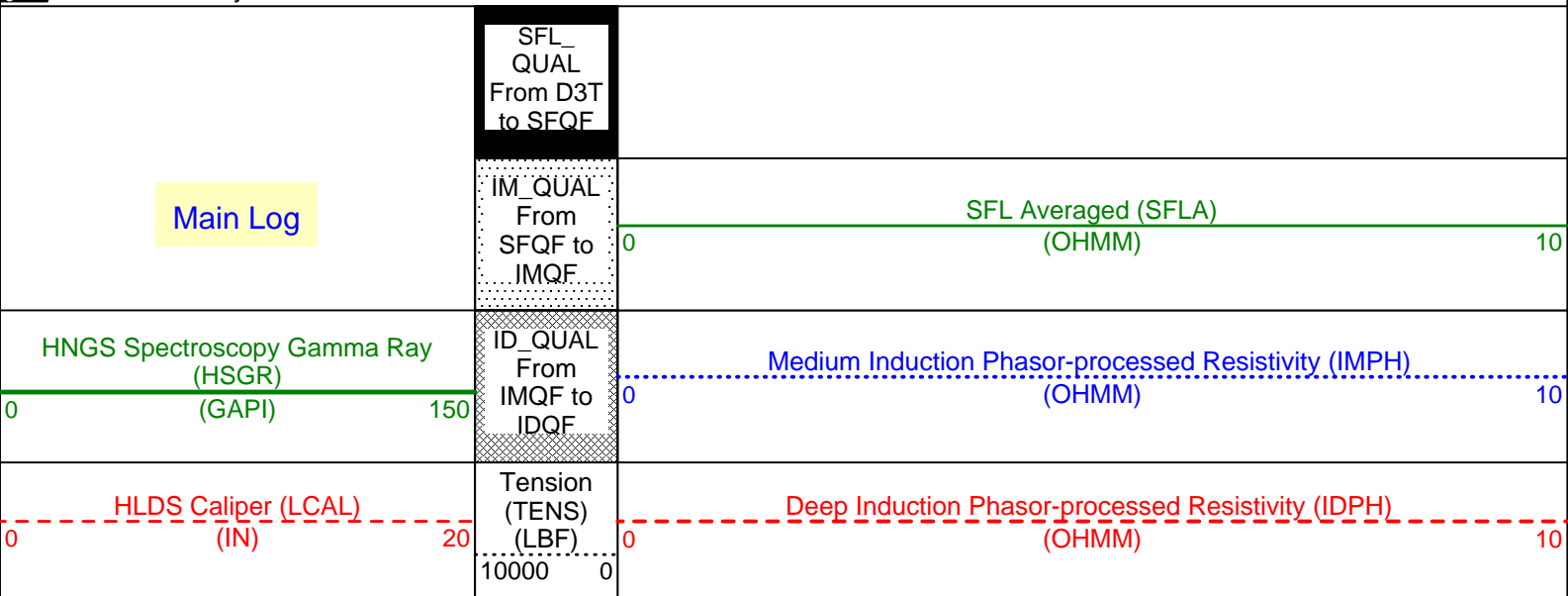
OP System Version: 9C1-303

MCM

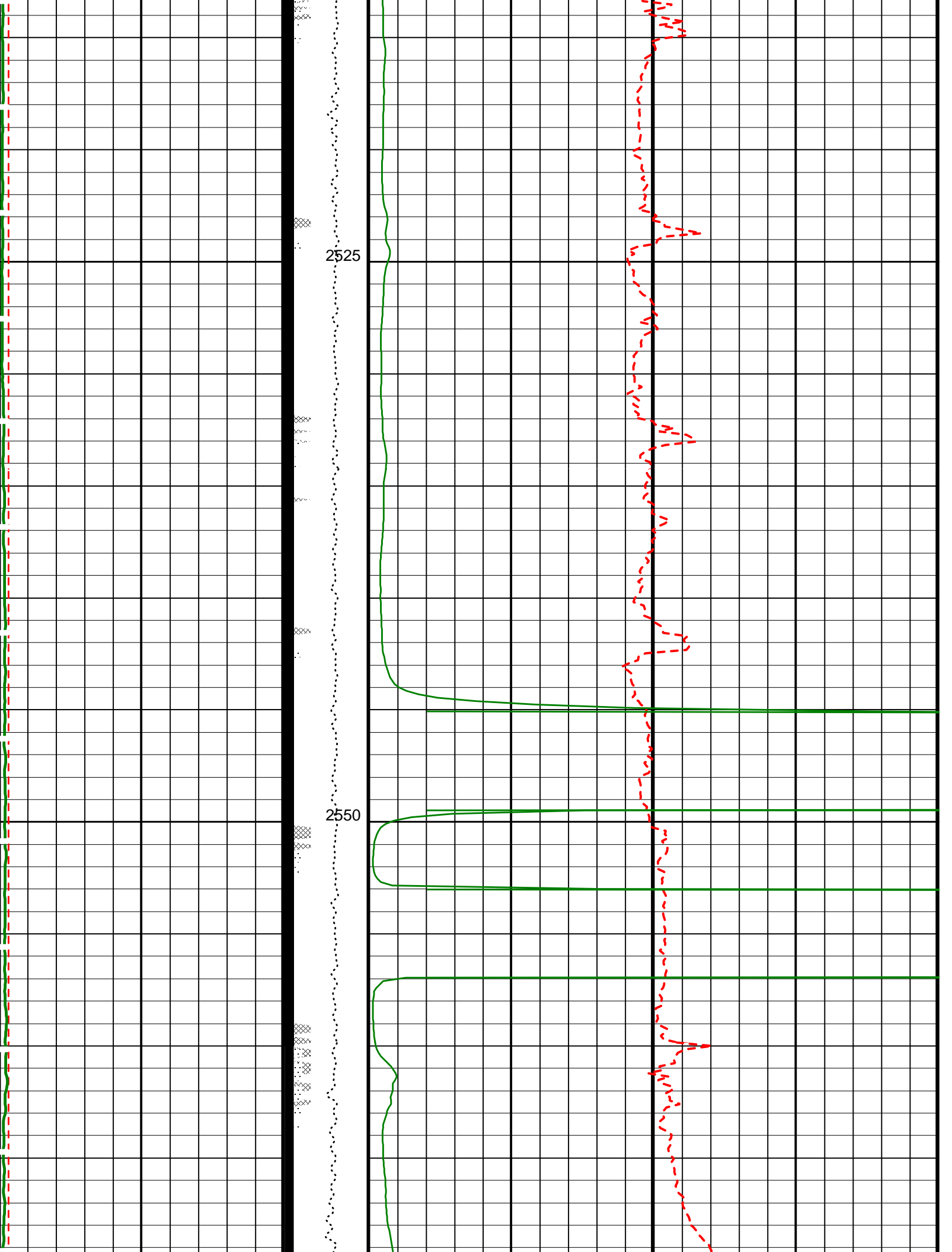
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HLDS	9C1-303	NPLC-B	9C1-303
APS-BA	9C1-303	HNGS-BA	9C1-303
DTC-H	9C1-303		

PIP SUMMARY

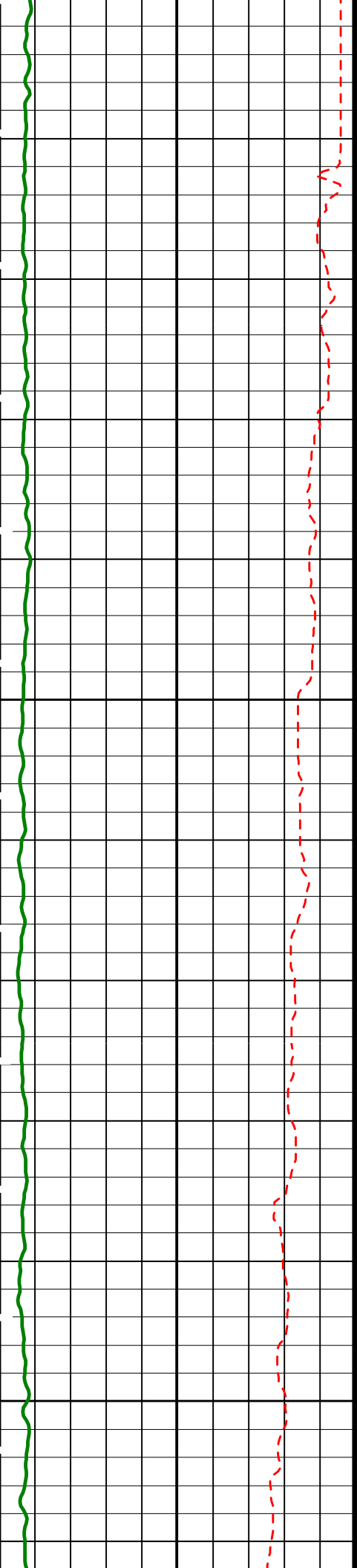
▶ Time Mark Every 60 S





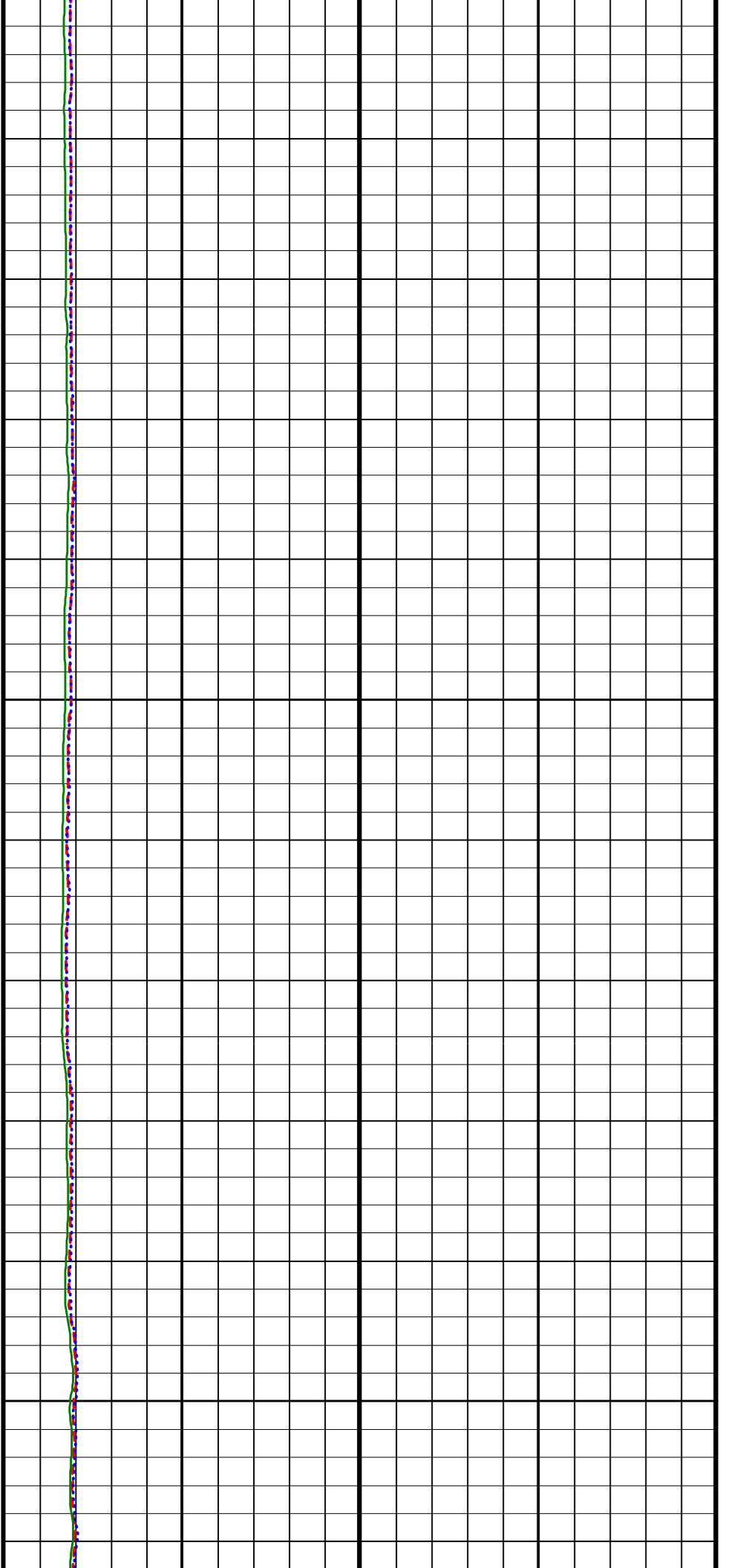


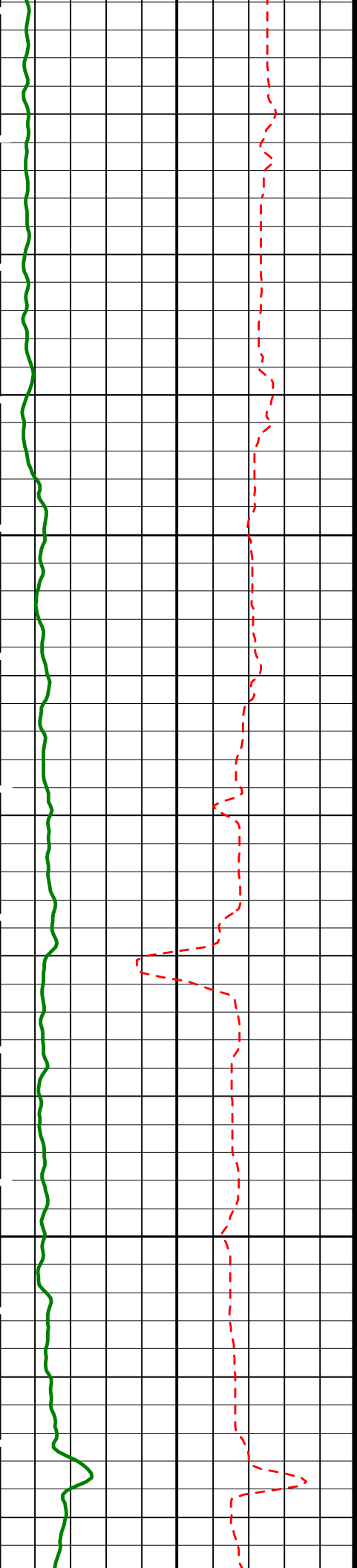




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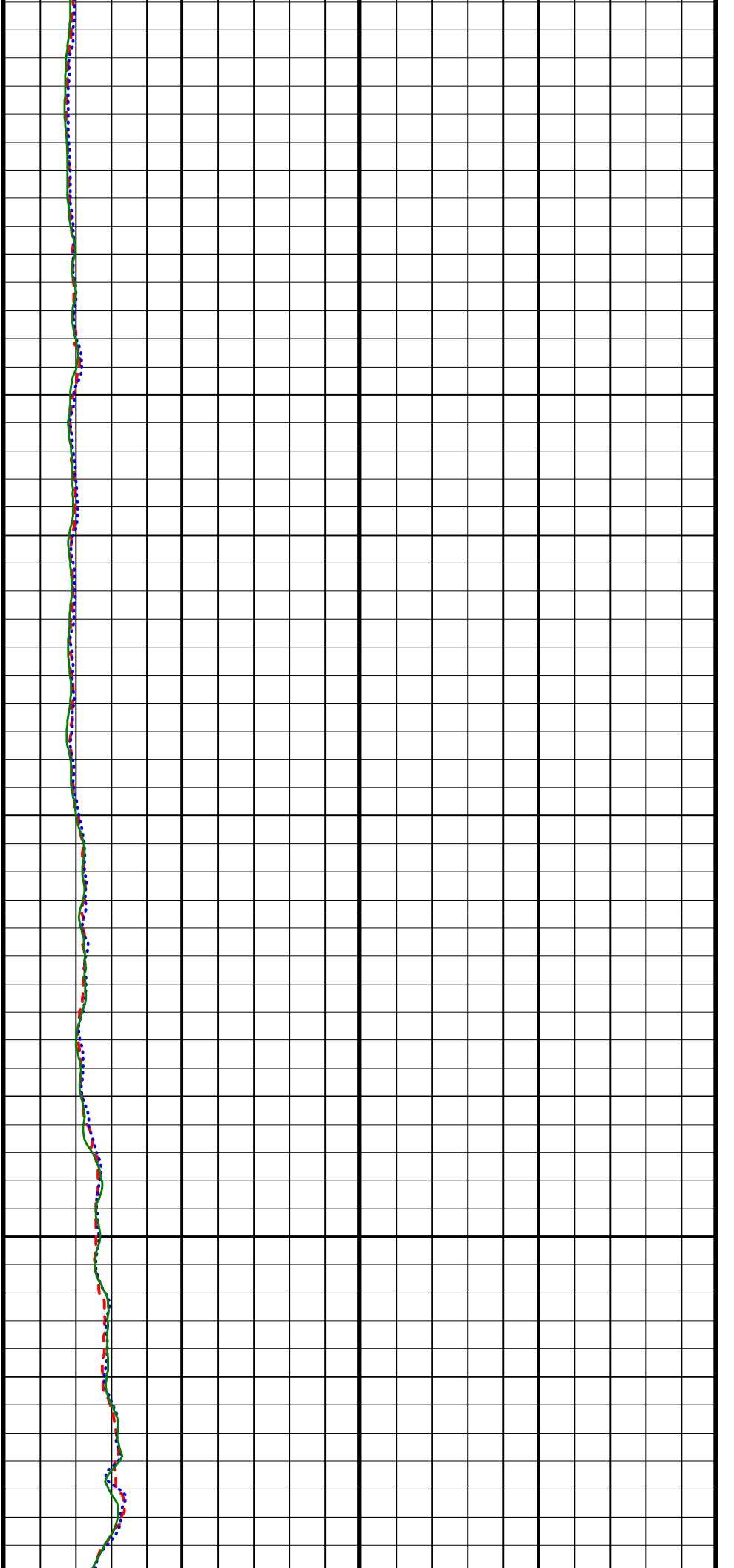
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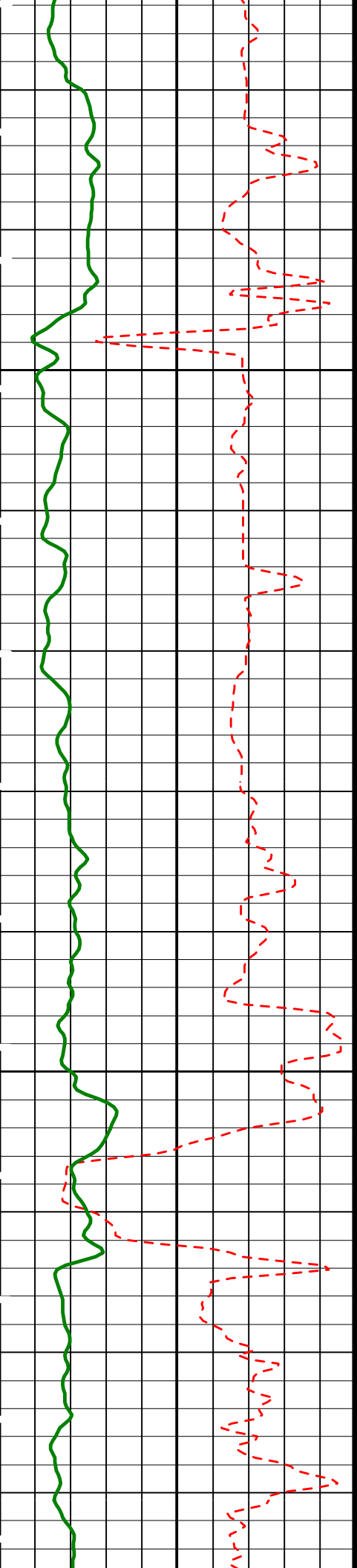




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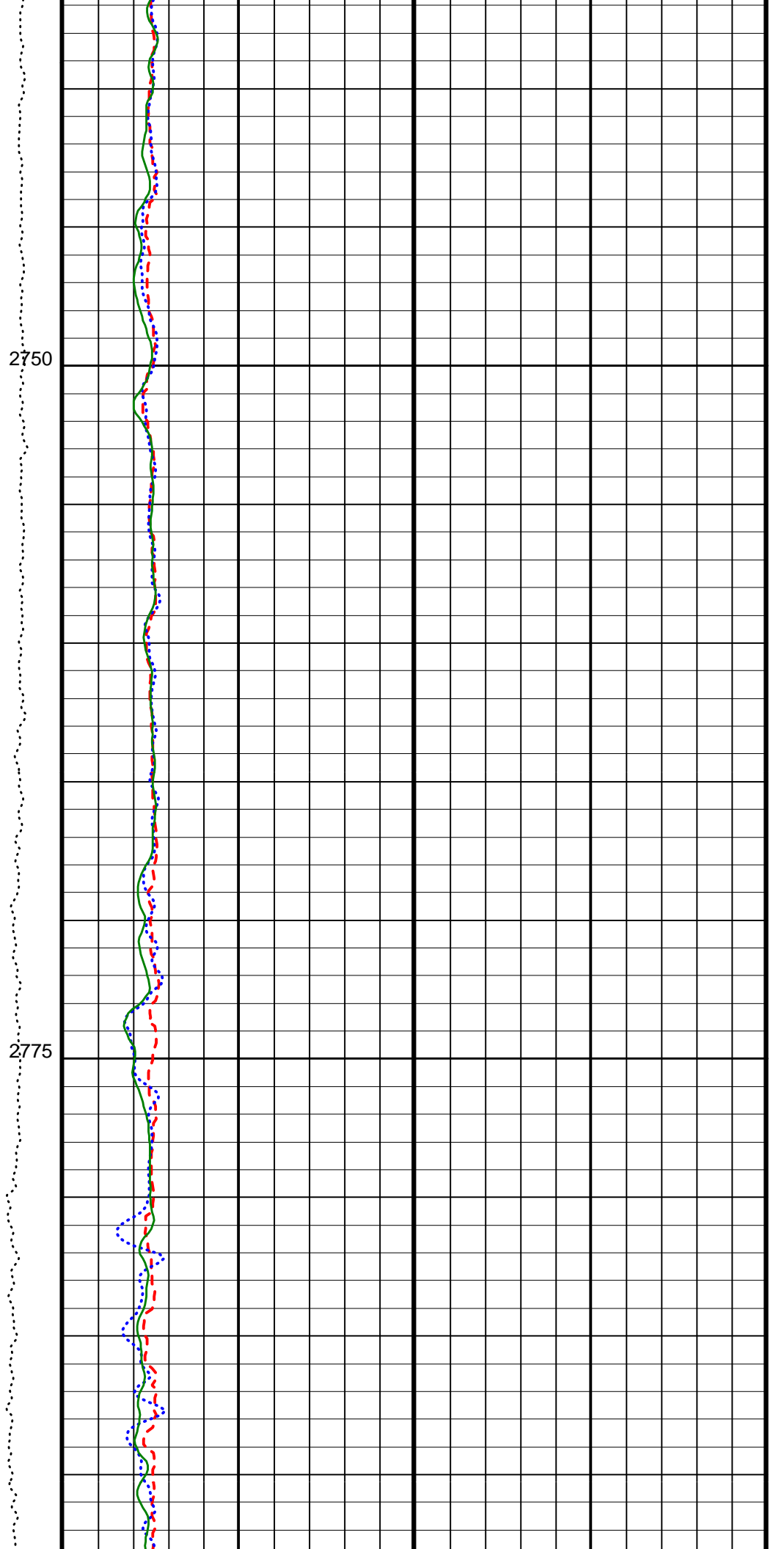
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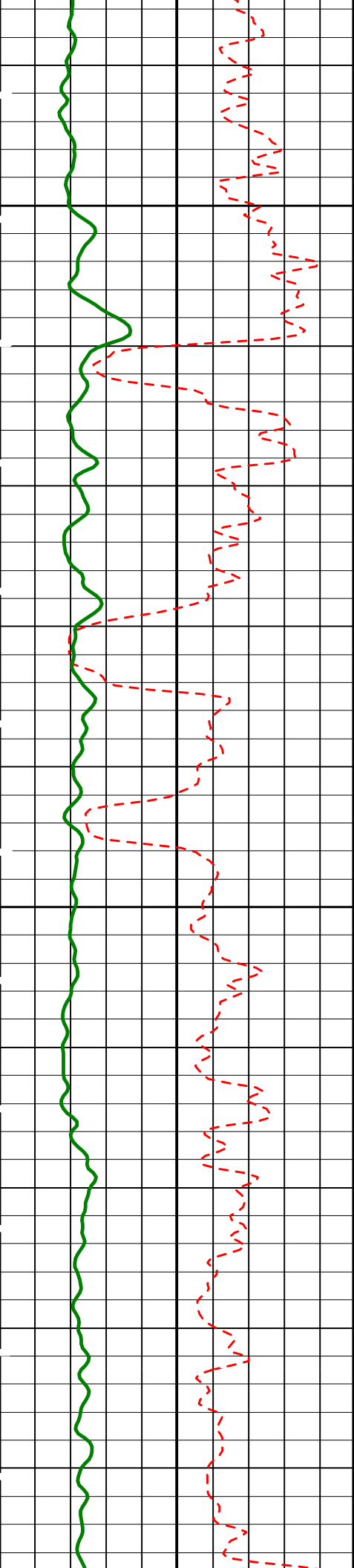




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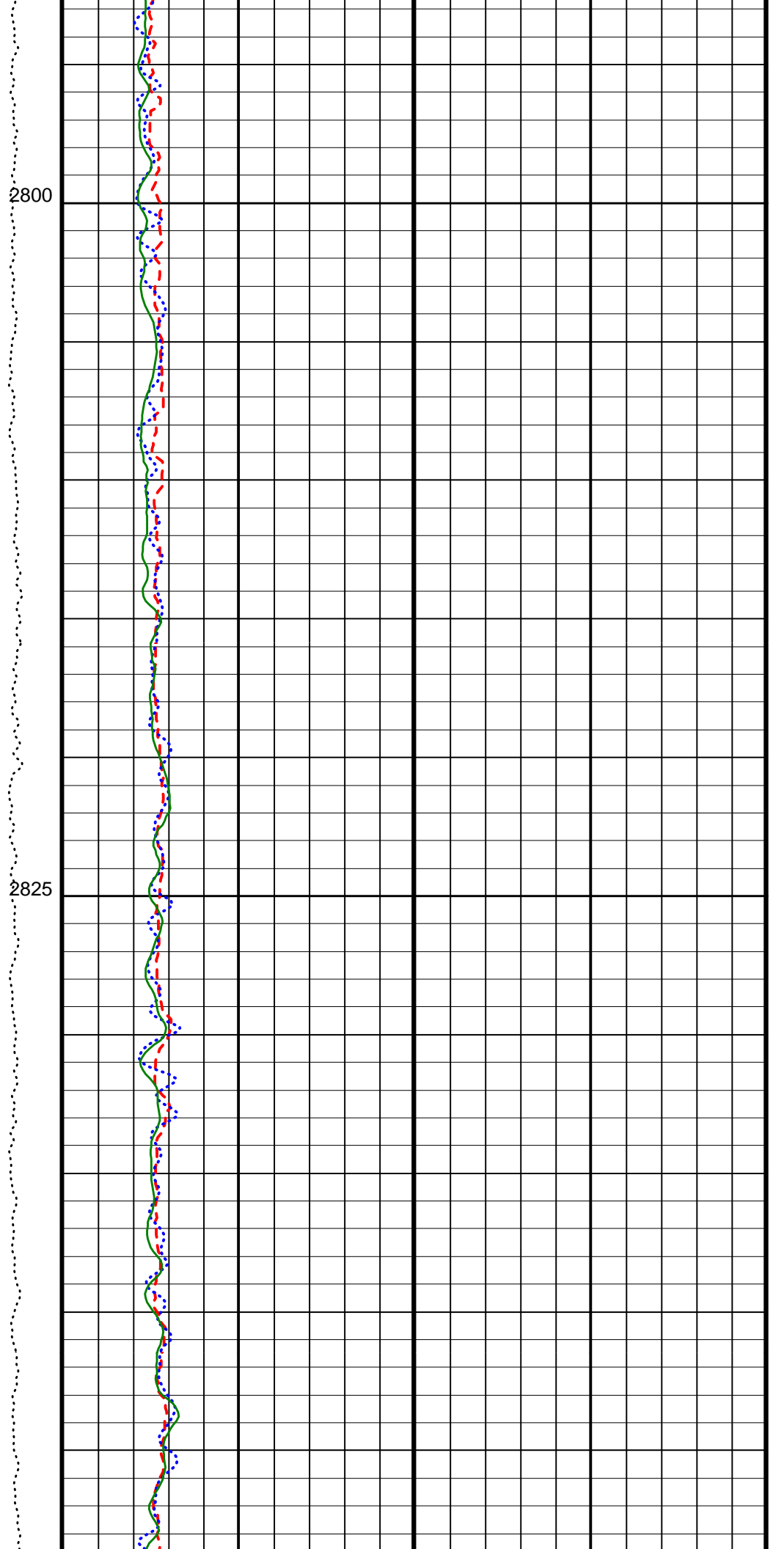
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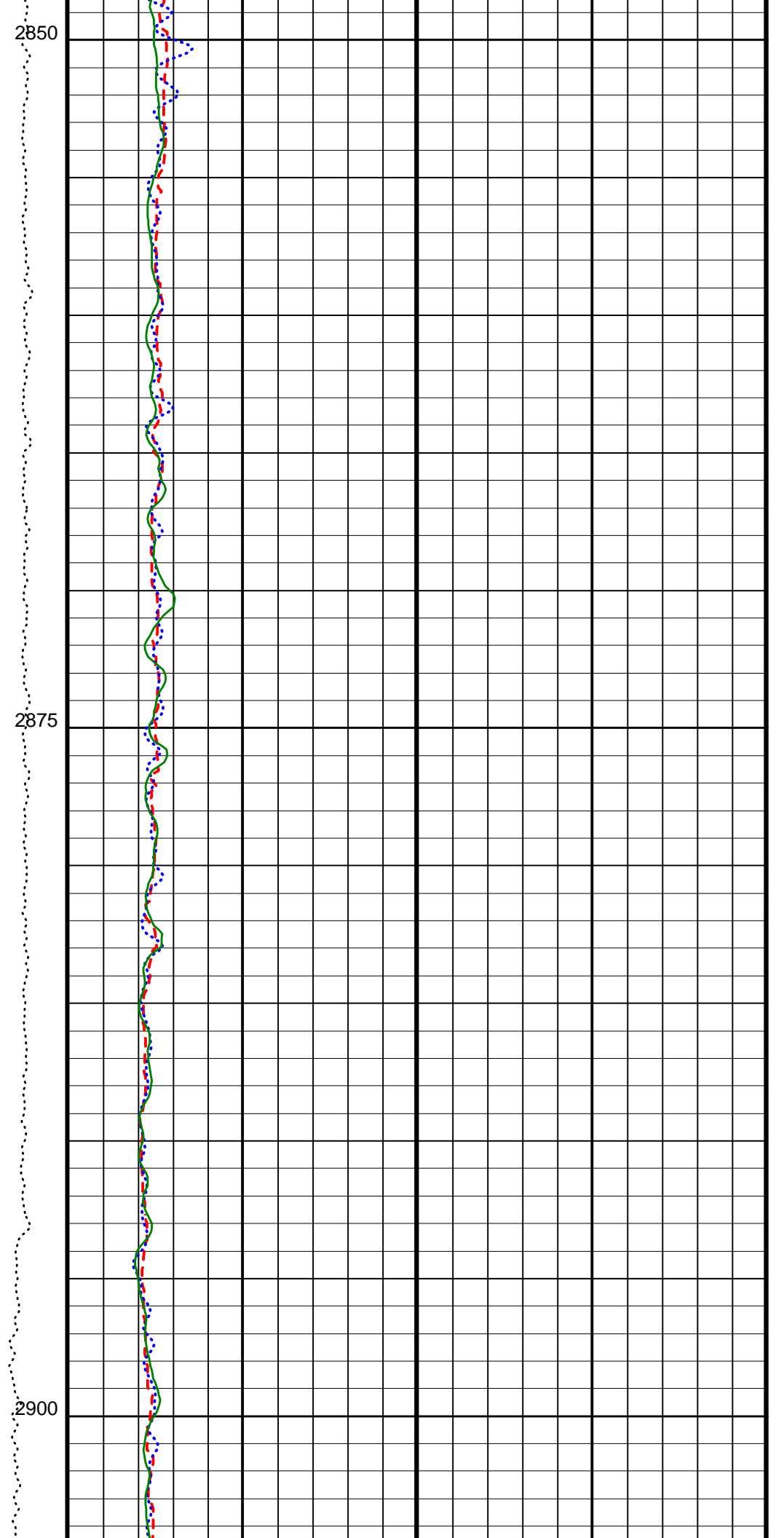
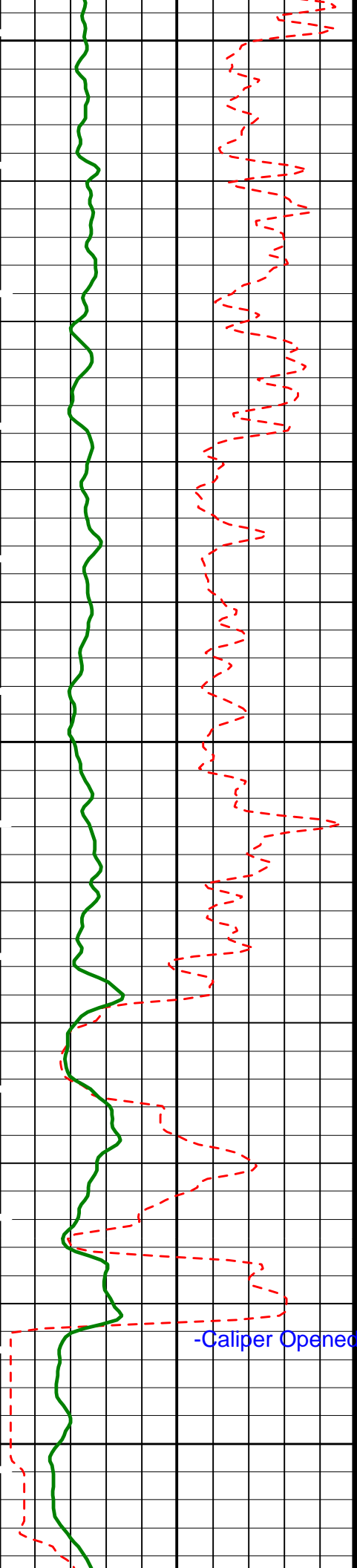




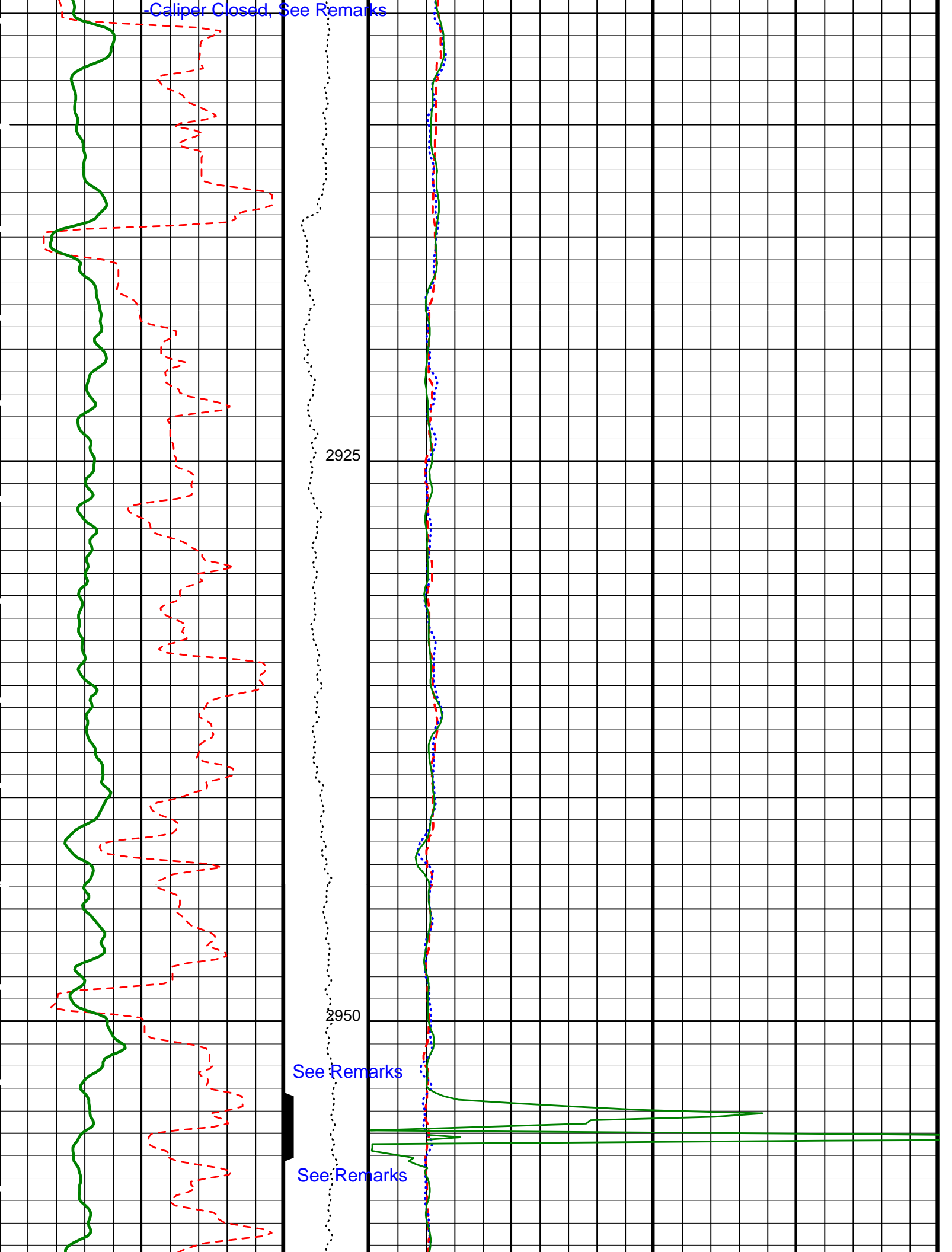
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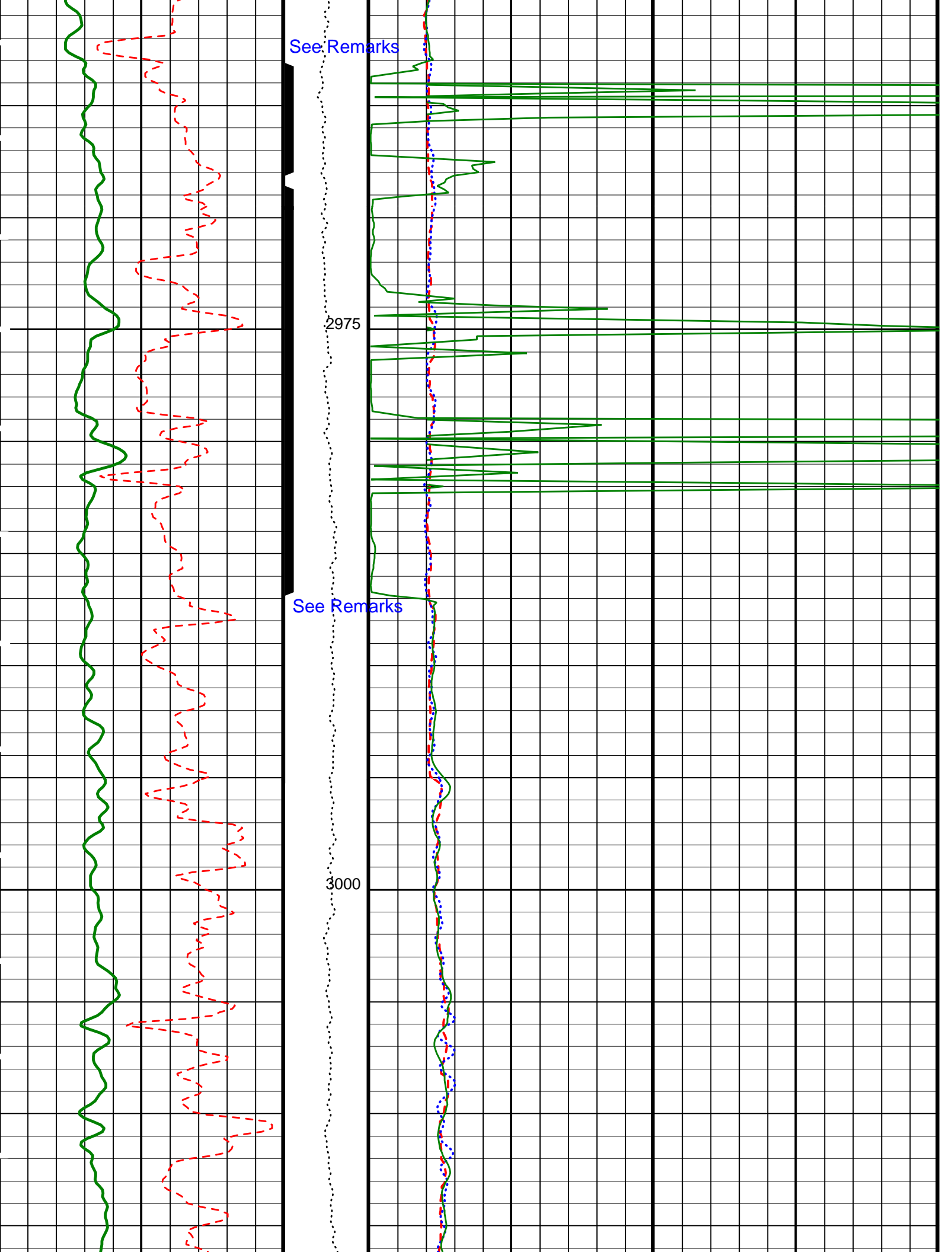
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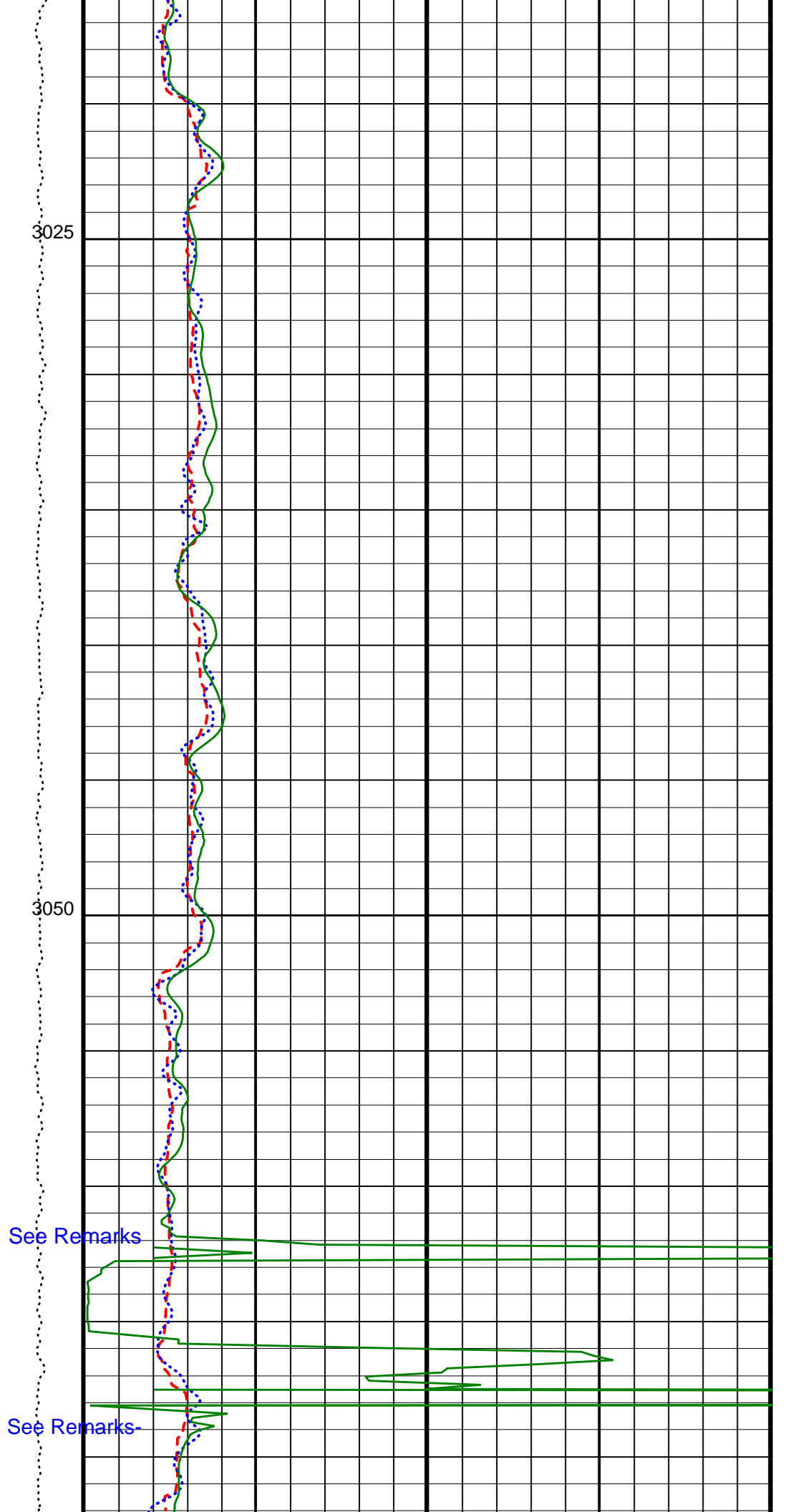
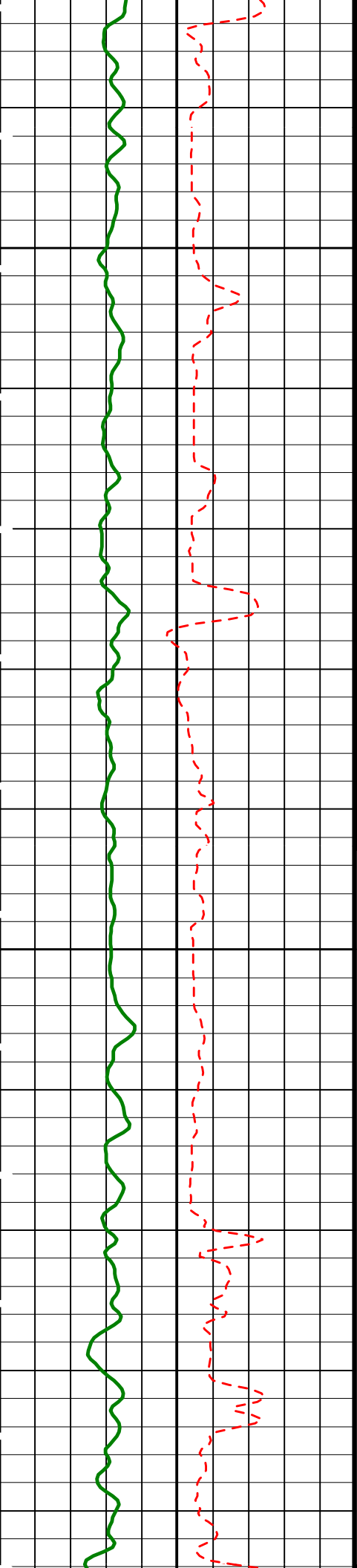


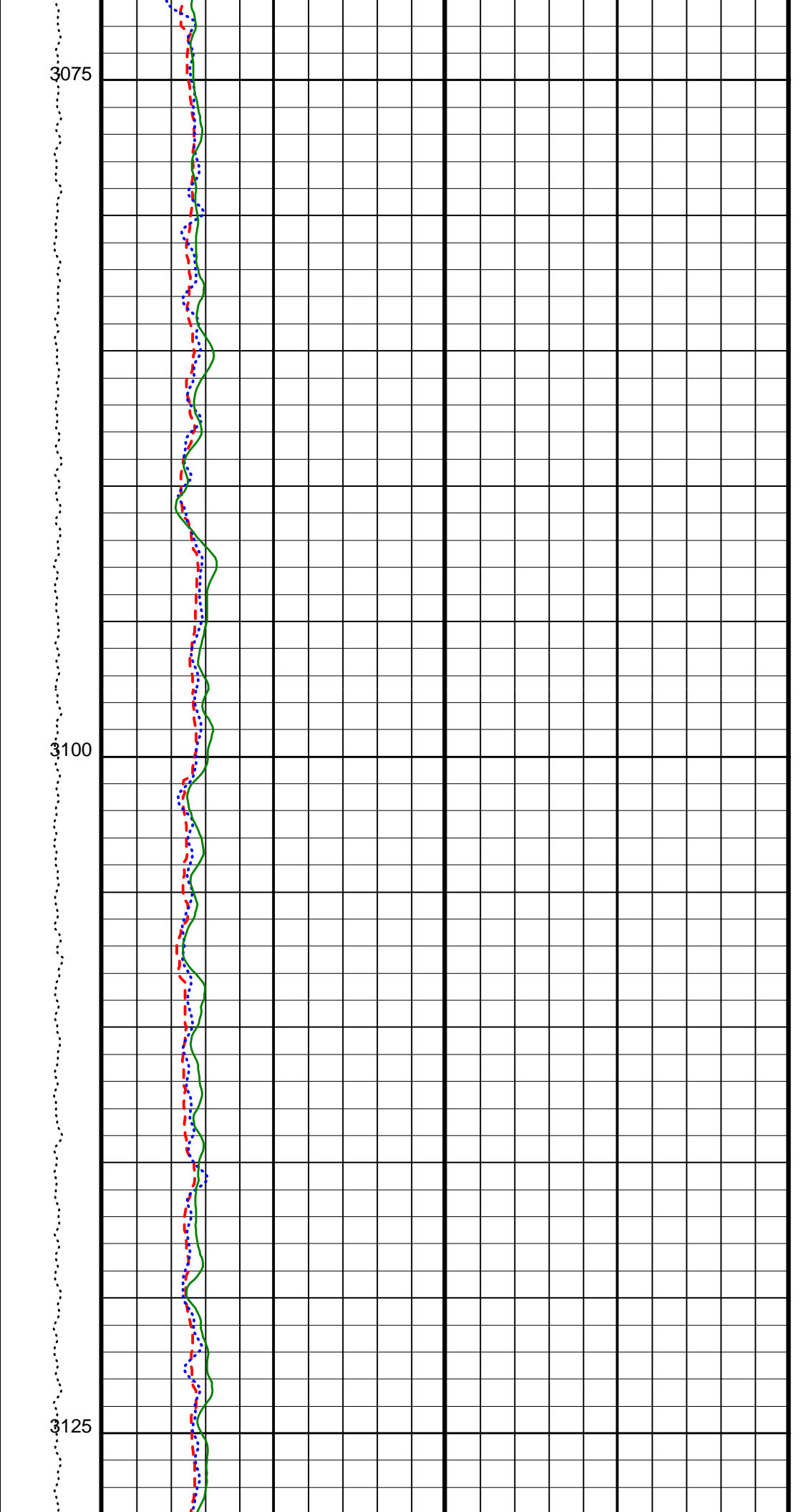
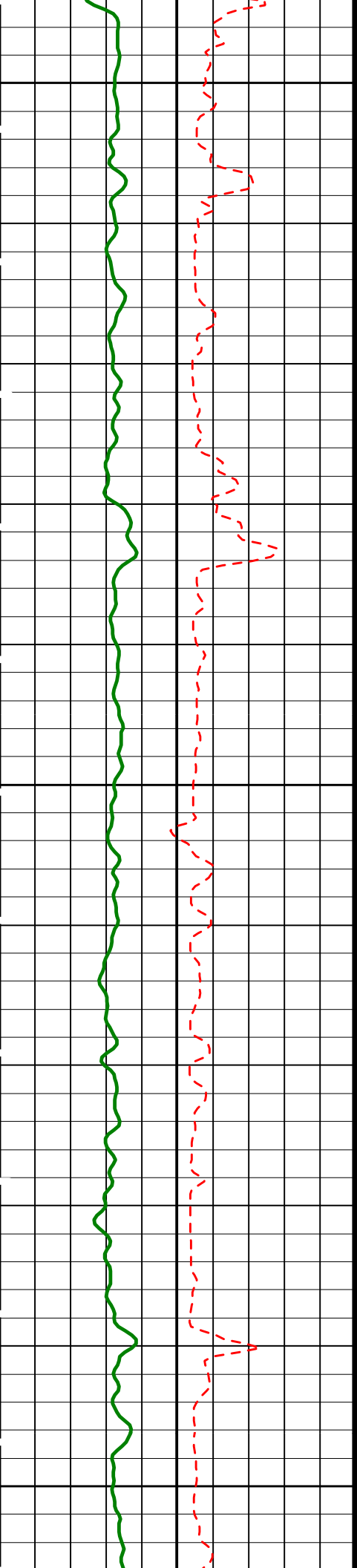


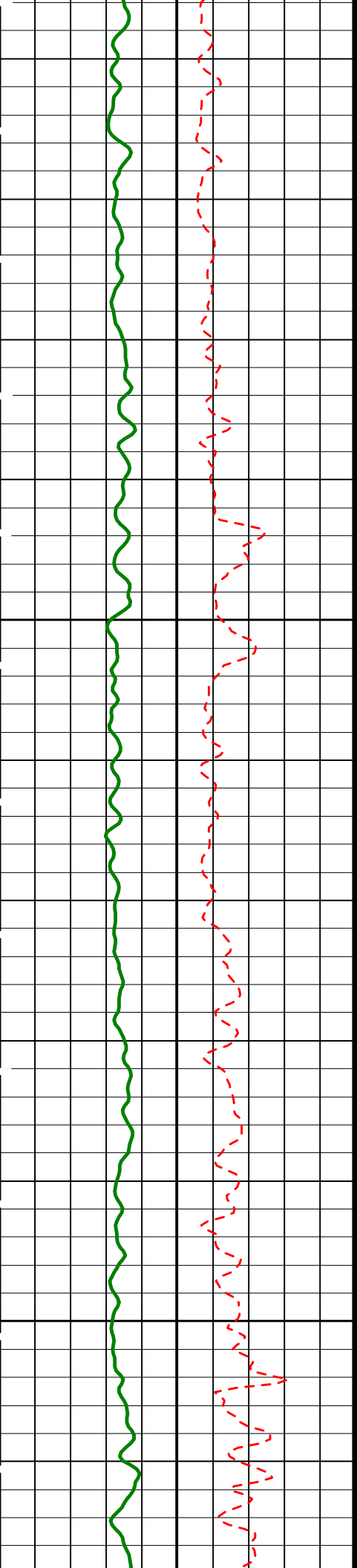
-Caliper Closed, See Remarks





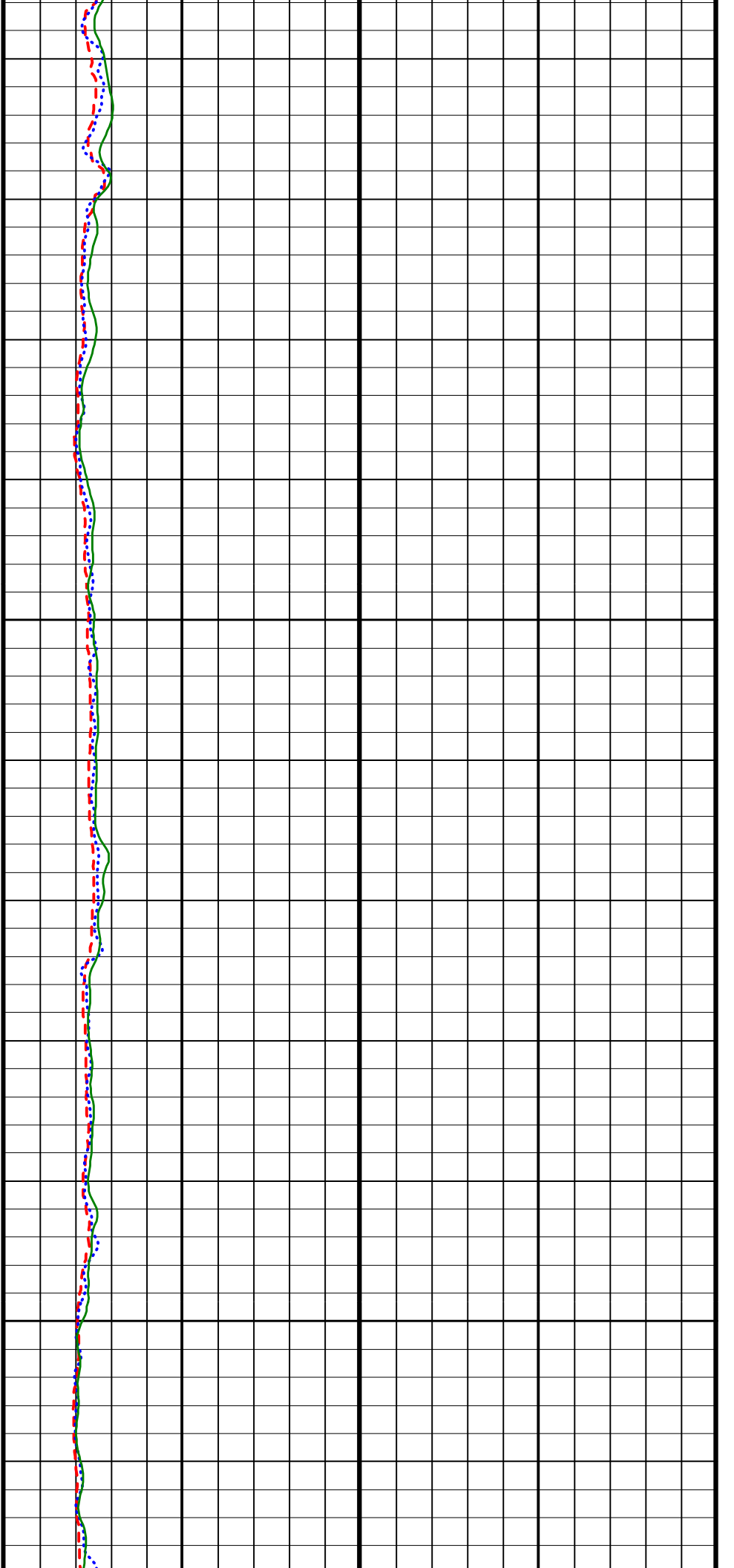


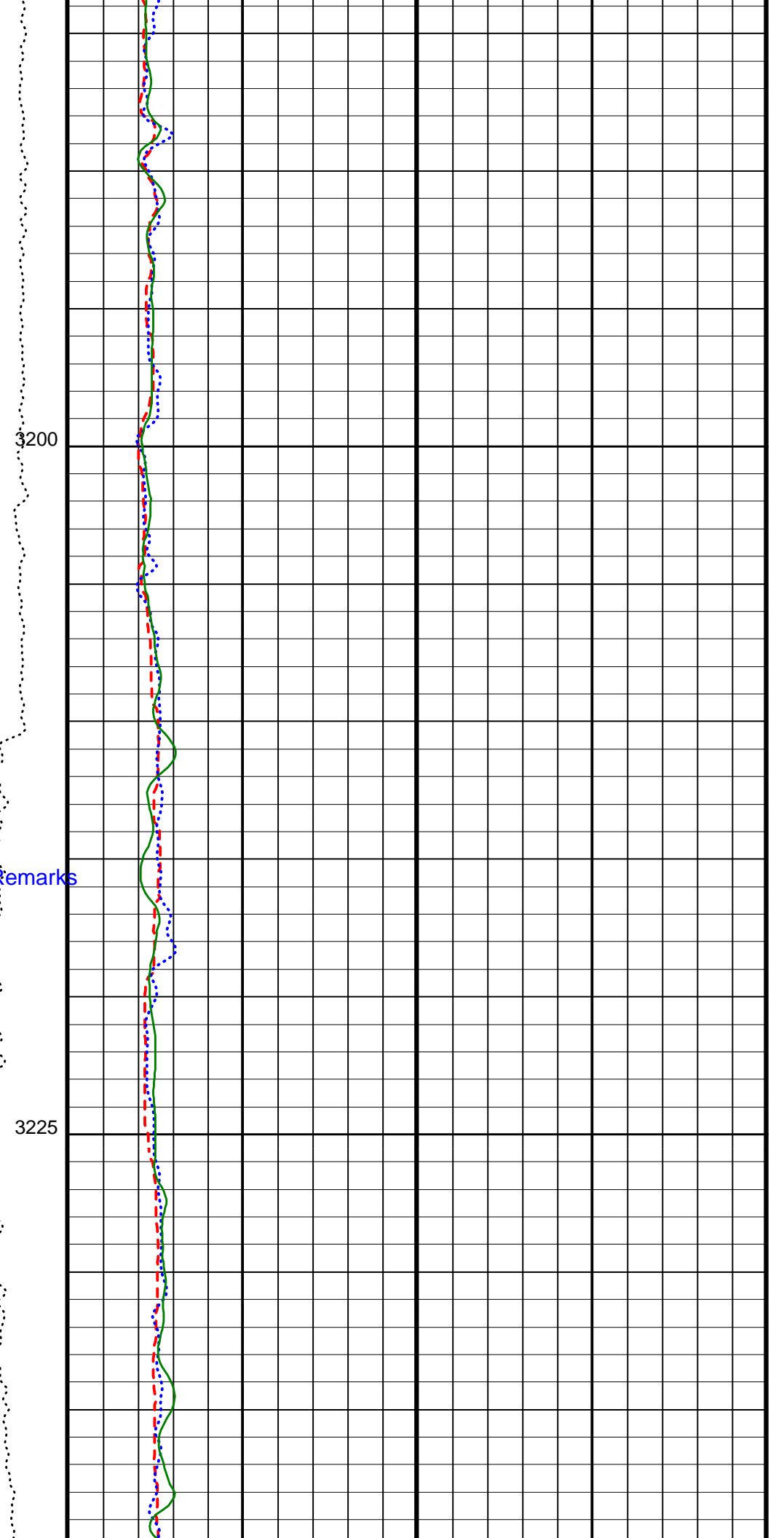
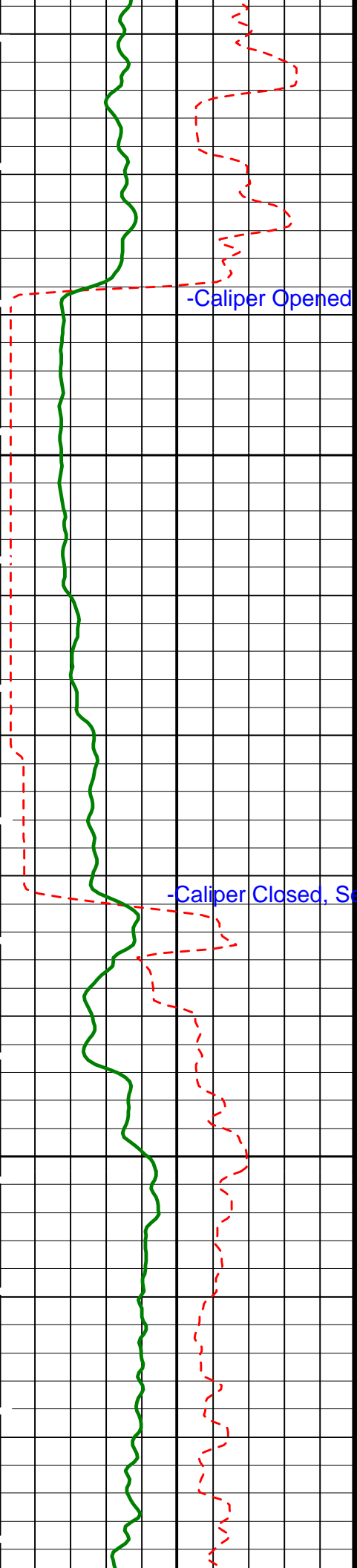


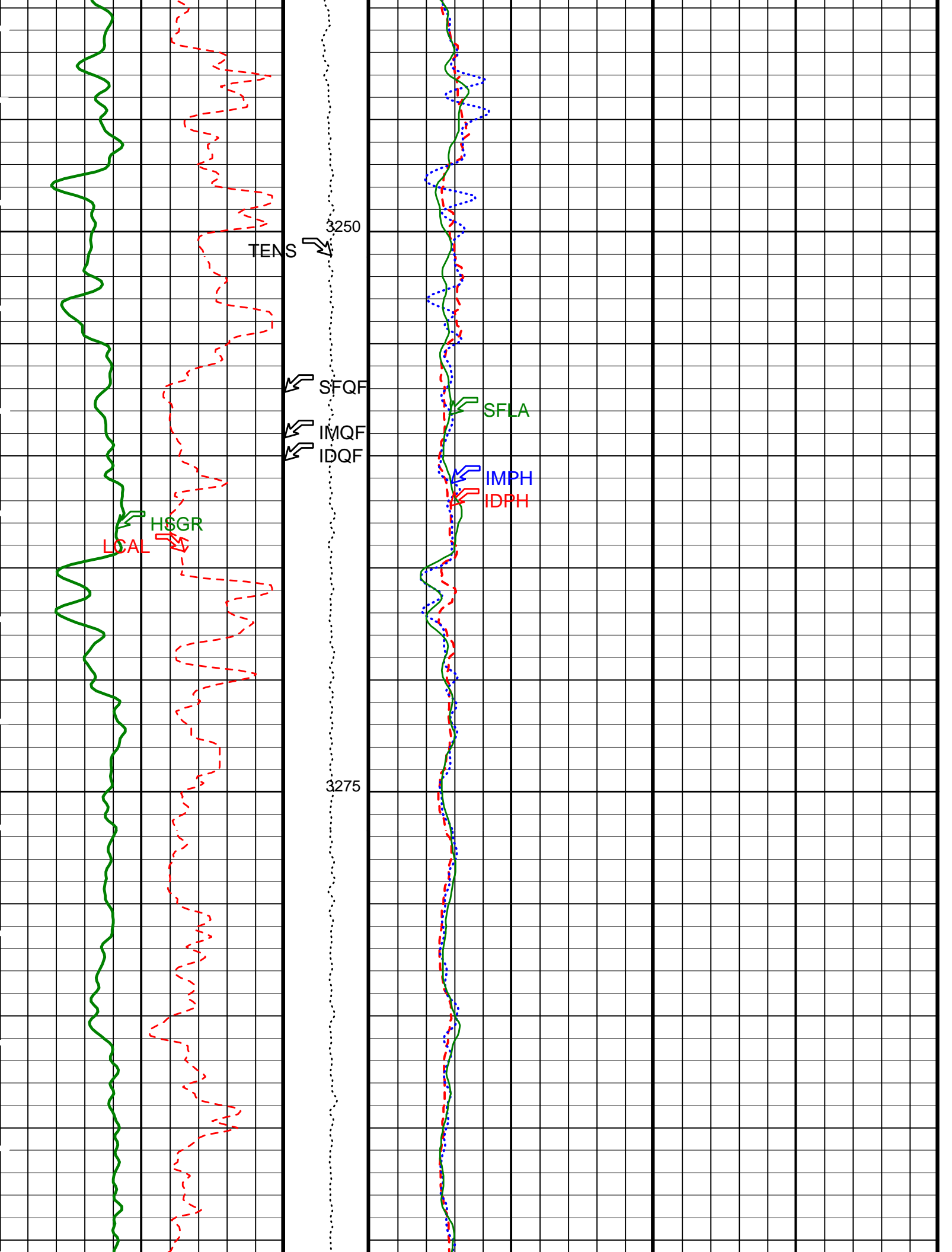


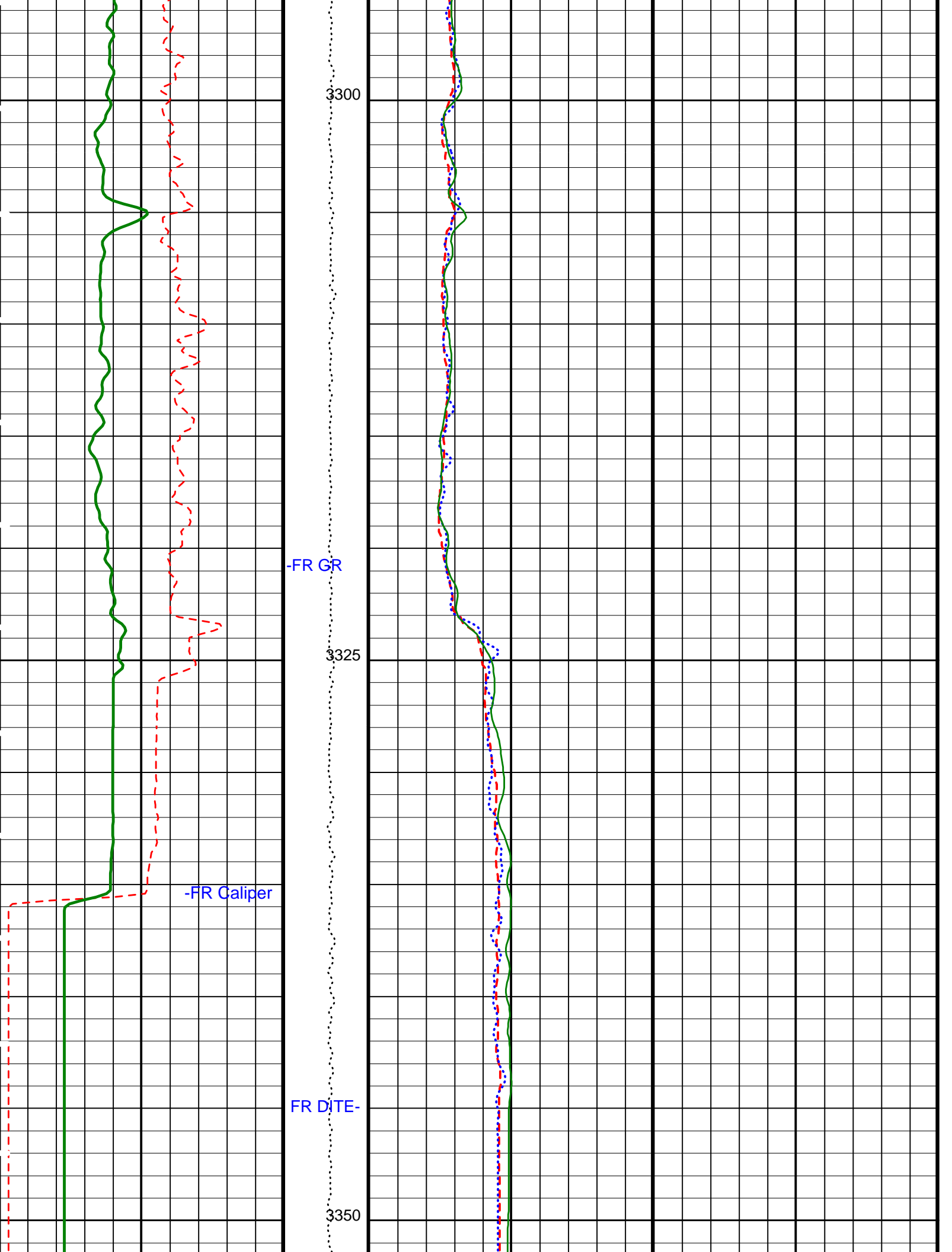
3150

3175









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

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	BS
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)	120 DEG F
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
CONTYP	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 DEG F
D1TL	HNGS Detector 1 Calibration Thorium Peak Location	211.312
D2PR	HNGS Detector 2 Calibration Thorium Peak Resolution	6.19449 %

D21R	HNGS Detector 1 Calibration Thorium Peak Resolution	0.15443	%
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
DGF2	Deep 20 kHz Gain Factor	0.995065	
DHC	Density Hole Correction	BS	
DPH2	Deep 20 kHz Phase Shift	0.0162086	DEG
DPPM	Density Porosity Processing Mode	HIRS	
DRE2	Deep Real 20 kHz Sonde Error Correction	16.8047	MM/M
DSR2	Deep Sigma Reference (20 kHz)	1843	MM/M
DXE2	Deep Quad 20 kHz Sonde Error Correction	75.7555	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	1.74098e-031	
IDWCD	IDW Calibration Date (dd-MMM-yyyy)	dd-MMM-yyyy	
IDWCSN	IDW Calibrator Serial Number	-999	
IDWLNCN	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	0.997244	
MPH2	Medium 20 kHz Phase Shift	-0.99866	DEG
MRE2	Medium Real 20 kHz Sonde Error Correction	18.6856	MM/M
MSR2	Medium Sigma Reference (20 kHz)	3250	MM/M
MST	Mud Sample Temperature	62.00	DEGF
MXE2	Medium Quad 20 kHz Sonde Error Correction	113.021	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	
PBVSDAP	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 Sodium 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	
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	4232.28	FT
TDD	Total Depth - Driller	11016.08	FT
TDL	Total Depth - Logger	-50000.00	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: 23-Mar-2000 14:13

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		

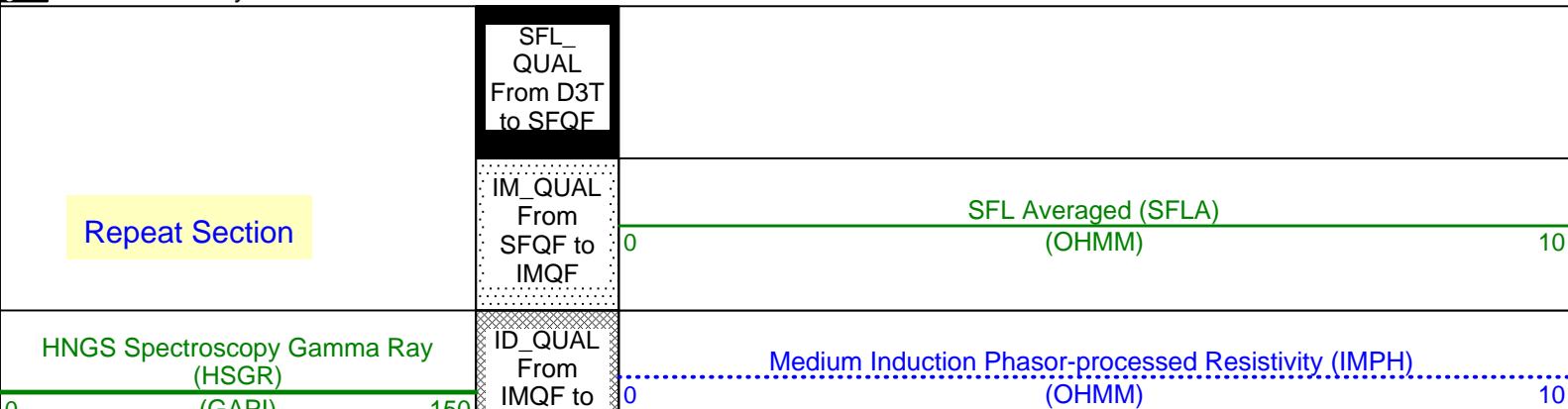
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BACKUP	DITE .008	FN:8	PRODUCER	23-Mar-2000 14:13

Output DLIS Files				
DEFAULT	DITE .010	FN:11	PRODUCER	23-Mar-2000 17:46
BACKUP	DITE .010	FN:12	PRODUCER	23-Mar-2000 17:46

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



(GAPI)

150

IDQF

Tension
(TENS)
(LBF)

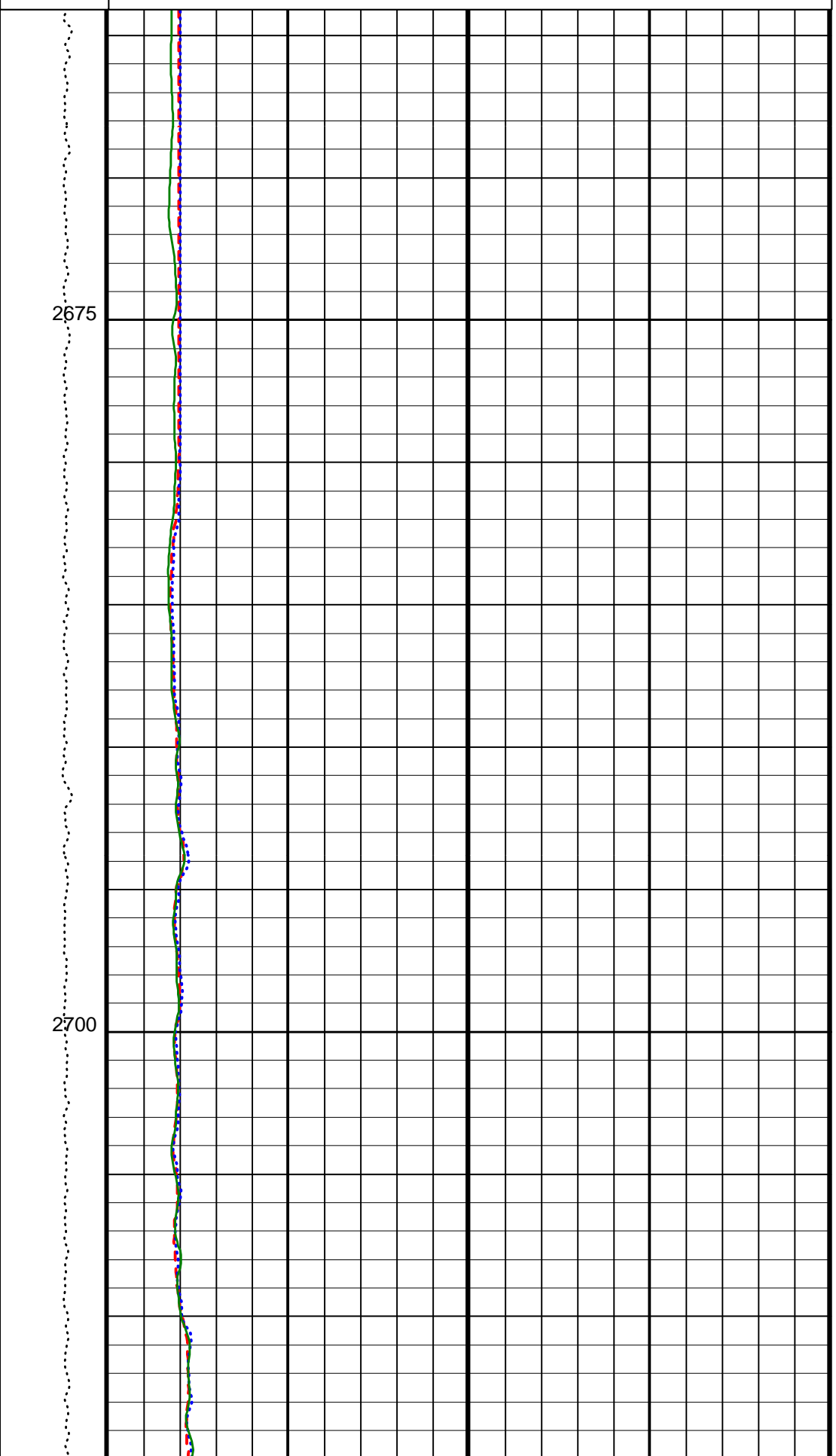
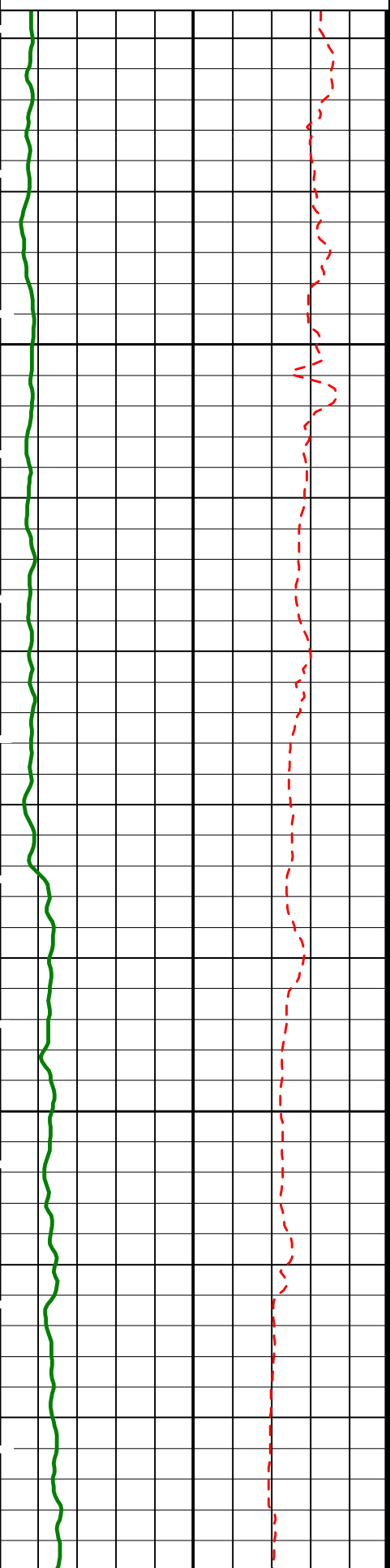
HLDS Caliper (LCAL)
(IN)

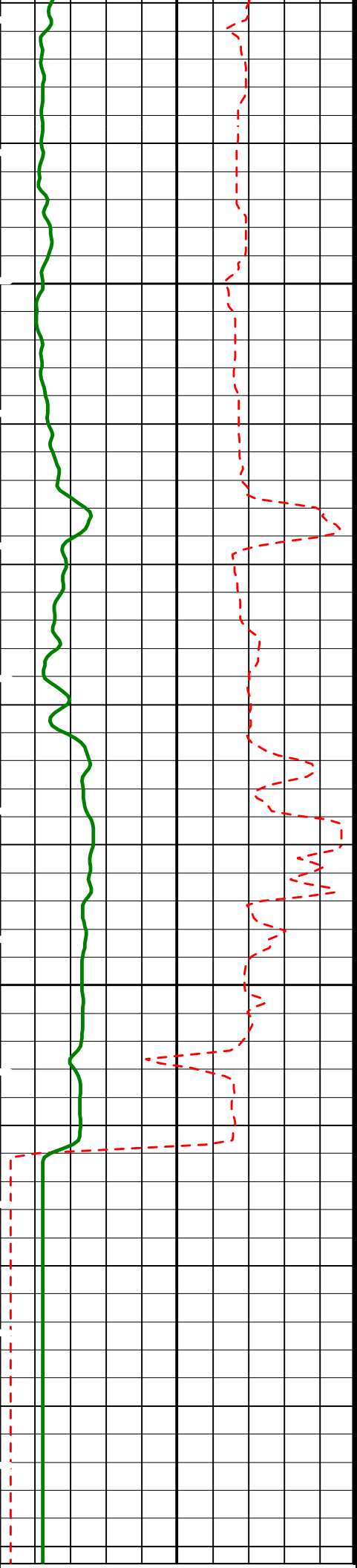
Deep Induction Phasor-processed Resistivity (IDPH)
(OHMM)

0 20

0 10

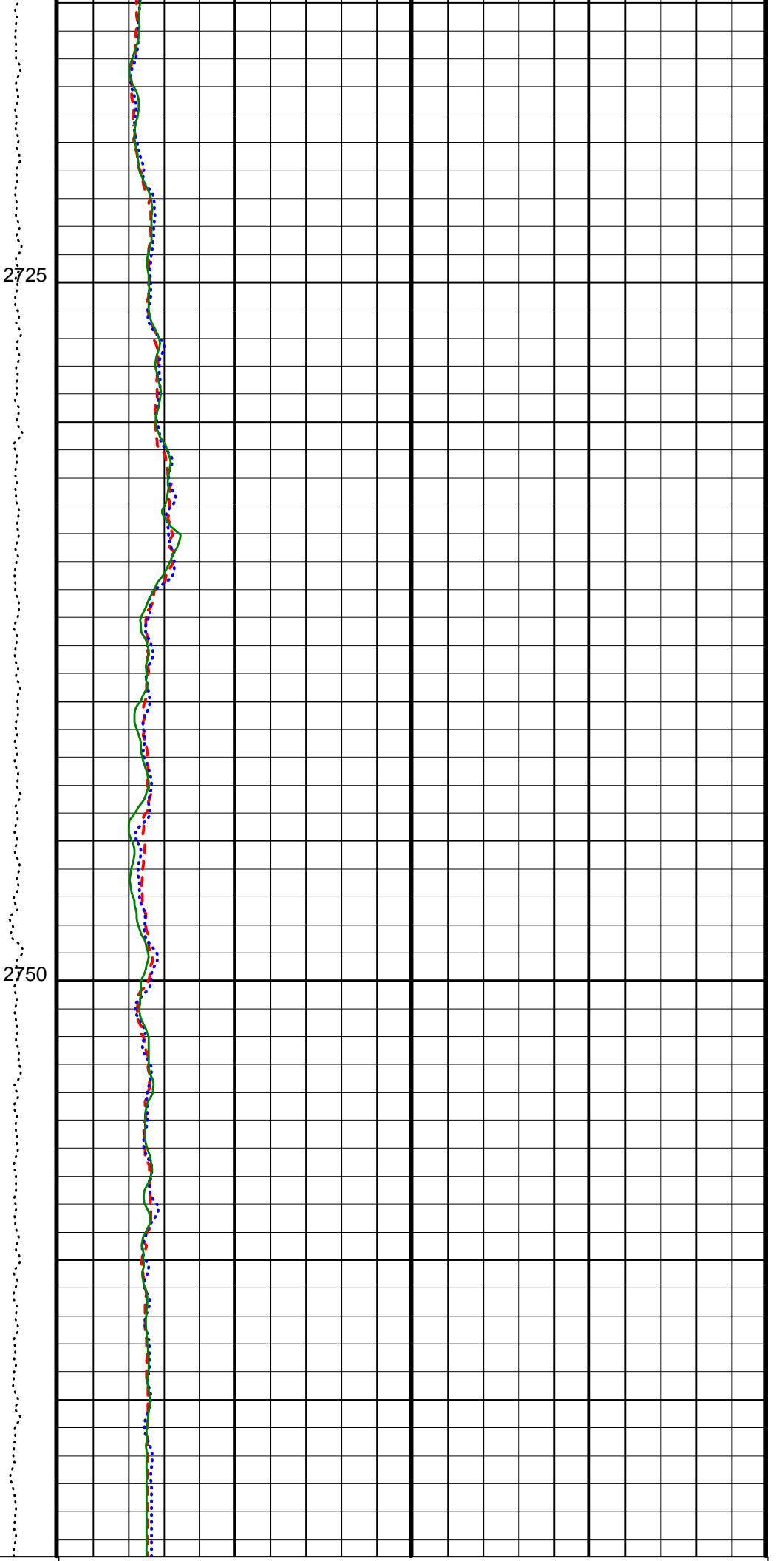
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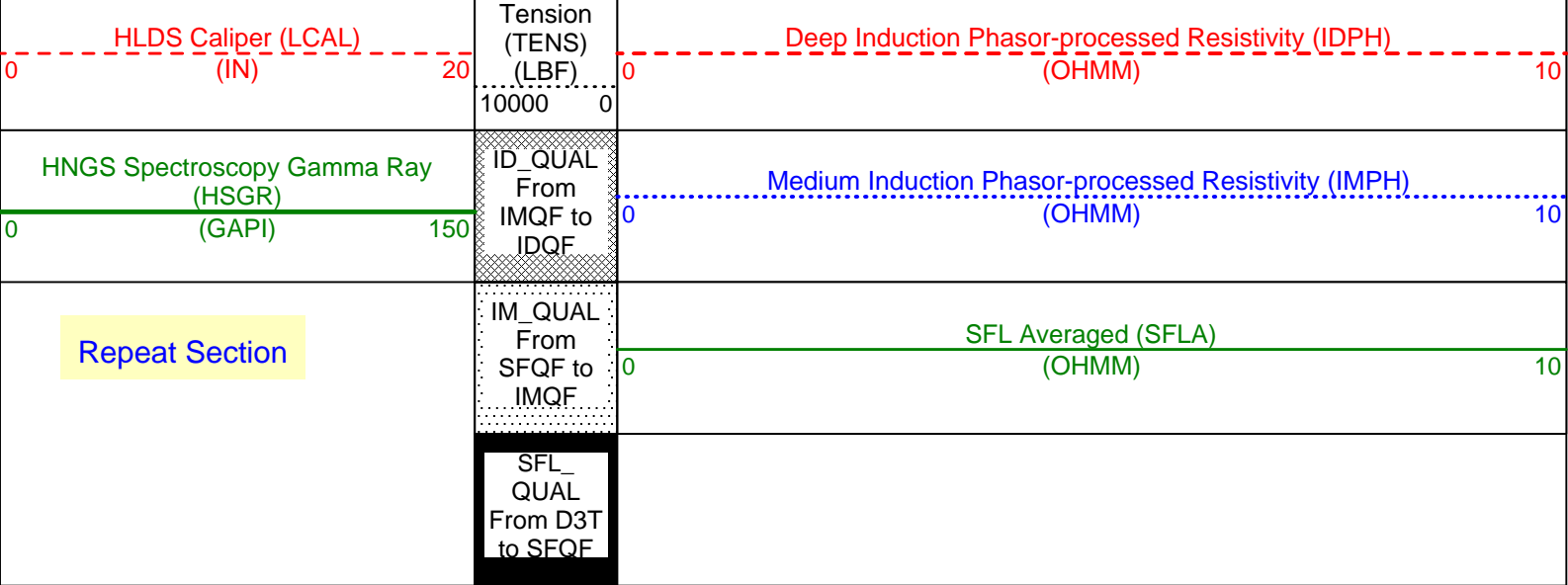




2725

2750





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	BS
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)	120 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
CONTYP	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
DGF2	Deep 20 kHz Gain Factor	0.995065	
DHC	Density Hole Correction	BS	
DPH2	Deep 20 kHz Phase Shift	0.0162086	DEG
DPPM	Density Porosity Processing Mode	HIRS	
DRE2	Deep Real 20 kHz Sonde Error Correction	16.8047	MM/M
DSR2	Deep Sigma Reference (20 kHz)	1843	MM/M
DXE2	Deep Quad 20 kHz Sonde Error Correction	75.7555	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	-1.25452e-005	
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	1.16746e-028	
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
MGF2	Medium 20 kHz Gain Factor	0.997244	
MPH2	Medium 20 kHz Phase Shift	-0.99866	DEG
MRE2	Medium Real 20 kHz Sonde Error Correction	18.6856	MM/M
MSR2	Medium Sigma Reference (20 kHz)	3250	MM/M
MST	Mud Sample Temperature	62.00	DEGF
MXE2	Medium Quad 20 kHz Sonde Error Correction	113.021	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
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 1 Calibration End-On / Side-On Gain Ratio	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	0.000475432	
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	4232.28	FT
TDD	Total Depth - Driller	11016.08	FT
TDL	Total Depth - Logger	-50000.00	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	1.02775	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.975119	
ZRCS	Tool Zero Reference Check at Surface	-50000	FT

Format: DITE_LinPhasor Vertical Scale: 1:200 Graphics File Created: 23-Mar-2000 17:46

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 .010	FN:11 PRODUCER	23-Mar-2000 17:46
BACKUP	DITE .010	FN:12 PRODUCER	23-Mar-2000 17:46

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: 23-MAR-2000 20:14							
SS Total Countrate Bkg	1645	1446	1441	1446	4.654	80.00	CPS
SS HV Measured Bkg	1100	1077	1070	1068	-1.901	80.00	V
SS Cs Centroid Bkg	661.0	661.3	661.0	661.3	0.3008	1.500	KEV
SS Cs Resolution Bkg	9.000	8.490	8.564	8.483	-0.08115	1.800	%
LS Total Countrate Bkg	1645	1468	1467	1470	2.342	80.00	CPS
LS HV Measured Bkg	1100	1195	1190	1186	-4.608	80.00	V
LS Cs Centroid Bkg	661.0	661.3	661.2	661.2	0.03925	1.500	KEV
LS Cs Resolution Bkg	9.000	8.744	8.772	8.800	0.02856	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: 23-MAR-2000 11:08 After: 23-MAR-2000 18:53							
Near Det Bkg Cntrate	30.00	32.07	31.49	32.45	0.9638	N/A	CPS
Far Det Bkg Cntrate	30.00	32.19	33.27	34.28	1.014	N/A	CPS
Array-1 Det Bkg Cntrate	30.00	28.58	29.13	29.26	0.1329	N/A	CPS
Array-2 Det Bkg Cntrate	30.00	30.06	30.44	29.11	-1.329	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	33.94	32.50	33.14	0.6384	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

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	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Near/Array Calibration Ratio	1.030	1.068	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	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: 23-MAR-2000 20:15														
Na 511 Peak Loc	40.00	40.51	40.70	40.78	0.07146	1.000								
Na 511 Peak Res	15.50	15.86	15.41	15.58	0.1705	2.000								%
High Voltage	1150	1114	1112	1109	-2.535	30.00								V
Na 1785 Peak Loc	142.6	145.5	145.3	145.7	0.3397	7.000								
Na 1785 Peak Res	8.500	9.054	8.948	8.298	-0.6500	2.000								%
Temperature	15.50	8.268	21.55	21.11	-0.4336	N/A								DEGC
Na Count Rate	45.00	28.90	27.69	26.81	-0.8835	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: 23-MAR-2000 20:15														
Na 511 Peak Loc	40.00	40.64	40.50	40.61	0.1106	1.000								
Na 511 Peak Res	15.50	14.00	15.27	14.30	-0.9701	2.000								%
High Voltage	1150	1201	1200	1196	-4.111	30.00								V
Na 1785 Peak Loc	142.6	144.2	145.0	145.2	0.2045	7.000								
Na 1785 Peak Res	8.500	8.101	8.587	8.370	-0.2170	2.000								%
Temperature	15.50	7.197	20.53	21.24	0.7135	N/A								DEGC
Na Count Rate	45.00	29.49	28.21	27.04	-1.168	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: 23-MAR-2000 20:15														
Coincidence Count Rate Ratio	1.000	0.9809	0.9840	0.9920	0.008062	0.05000								
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

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		1.038	Before			6.846		
	-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			21.54	Before		1.026	Before			5.825		
	-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 <th>IM Elect Real Offset 10 kHz</th> <th>MM/M</th> <th>Value</th> <th>Phase</th> <th>IM Elect Real Gain 10 kHz</th> <th>Value</th> <td colspan="5"></td>	IM Elect Real Offset 10 kHz	MM/M	Value	Phase	IM Elect Real Gain 10 kHz	Value						
Before			58.88	Before		0.9594						
	-491.7 (Minimum)	58.28 (Nominal)	608.3 (Maximum)		0.8099 (Minimum)	0.9599 (Nominal)	1.143 (Maximum)					
Phase <th>IM Elect Quad Offset 10 kHz</th> <th>MM/M</th> <th>Value</th> <th>Phase</th> <th>IM Elect Quad Gain 10 kHz</th> <th>Value</th> <td colspan="5"></td>	IM Elect Quad Offset 10 kHz	MM/M	Value	Phase	IM Elect Quad Gain 10 kHz	Value						
Before			40.75	Before		0.9587						

-510.3 (Minimum)	39.69 (Nominal)	589.7 (Maximum)	0.8092 (Minimum)	0.9592 (Nominal)	1.142 (Maximum)
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Before: 23-MAR-2000 12:44

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			5.002	
	-105.1 (Minimum)	19.85 (Nominal)	144.9 (Maximum)		0.8430 (Minimum)	0.9930 (Nominal)	1.190 (Maximum)		-8.631 (Minimum)	6.369 (Nominal)	21.37 (Maximum)
Phase	ID Elect Quad Offset 20 kHz	MM/M	Value	Phase	ID Elect Quad Gain 20 kHz	Value	Phase	IM Elect Phase 20 kHz	DEG	Value	
Before			8.170	Before		0.9999	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			23.89	Before		0.9969					
	-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			16.65	Before		0.9961					
	-208.8 (Minimum)	16.20 (Nominal)	241.2 (Maximum)		0.8391 (Minimum)	0.9891 (Nominal)					1.185 (Maximum)

Before: 23-MAR-2000 12:45

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			12.78	Before		0.9778	Before			18.24	
	-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			5.383	Before		0.9662	Before			19.58	
	-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			15.29	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			10.74	Before		0.9880					
	-119.5 (Minimum)	10.52 (Nominal)	140.5 (Maximum)		0.8405 (Minimum)	0.9905 (Nominal)					1.187 (Maximum)

Before: 23-MAR-2000 12:46

Dual Induction - E Wellsite Calibration							
SFL Electronics							
Phase	SFL Voltage Offset MV	Value	Phase	SFL Voltage Gain	Value		
Before		1.158	Before		0.9977		
	-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		0.04958	Before		1.008		
	-0.6000 (Minimum)	0 (Nominal)	0.6000 (Maximum)		0.8500 (Minimum)	1.000 (Nominal)	1.200 (Maximum)

Before: 23-MAR-2000 12:46

Dual Induction - E Wellsite Calibration											
Electronics Calibration Changes Files/Depth Intervals: 8: 3353.6 - 2453.6 10: 2770.6 - 2664.1											
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			0.5228	After		0.001239	After			0.004584	
	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			0.6156	After		0.0002755					
	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	840400000	After	EXCEEDS LIMIT	237700
0 (Minimum)	0 (Nominal)	0.7500 (Maximum)		0 (Minimum)	0 (Nominal)	2.000 (Maximum)

After: 23-MAR-2000 20:16

Dual Induction - E Master Calibration								
Test Loop Calibration: Calibration of Internal Reference to Test Loop Standard								
Phase	Deep 10 kHz Gain Factor	Value	Phase	Deep 20 kHz Gain Factor	Value	Phase	Deep 40 kHz Gain Factor	Value
Master		0.9849	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 16:15

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 16:40

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

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:

HNGS Sonde	HNGS - BA	27
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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		40.78	After		15.58	After		1109
	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		145.7	After		8.298	After		21.11
	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		26.81						
	15.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							
Master: 2-FEB-2000 11:55			Before: 17-MAR-2000 18:42			After: 23-MAR-2000 20:15		

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		40.61	After		14.30	After		1196
	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		145.2	After		8.370	After		21.24
	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		26.81						
	15.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							

Master		29.49
Before		28.21
After		27.04
	15.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)	

Master: 2-FEB-2000 11:55 Before: 17-MAR-2000 18:42 After: 23-MAR-2000 20:15

Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		0.9809
Before		0.9840
After		0.9920
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)	
Master: 2-FEB-2000 11:55		
Before: 17-MAR-2000 18:42		
After: 23-MAR-2000 20:15		

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		211.3	Master		7.466
	38.00 (Minimum) 40.00 (Nominal) 42.00 (Maximum)			201.0 (Minimum) 209.6 (Nominal) 218.3 (Maximum)			5.000 (Minimum) 7.000 (Nominal) 9.000 (Maximum)	
Phase	Background Count Rate CPS	Value	Phase	Gain Ratio	Value			
Master	EXCEEDS LIMIT	18.16	Master		0.9923			
	20.00 (Minimum) 142.5 (Nominal) 265.0 (Maximum)			0.9400 (Minimum) 1.000 (Nominal) 1.060 (Maximum)				
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	Phase	Th Peak Res %	Value
Master		41.00	Master		209.6	Master		6.194
	38.00 (Minimum) 40.00 (Nominal) 42.00 (Maximum)			201.0 (Minimum) 209.6 (Nominal) 218.3 (Maximum)			5.000 (Minimum) 7.000 (Nominal) 9.000 (Maximum)	
Phase	Background Count Rate CPS	Value	Phase	Gain Ratio	Value			
Master		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	3346 M.
WELL:	ODP Leg 189, Site 1168 (WT-1A)	SCHLUMBERGER DEPTH	3351 M.
FIELD:	Tasmanian Seaway, West Tasmania Site	DEPTH DRILLER	3357.7 M.
COUNTY:	Offshore	KELLY BUSHING	11.2 M.
STATE:	Indian Ocean	DRILL FLOOR	10.9 M.
		GROUND LEVEL	-2474 M.

Phasor Induction Log



