



Company: Beach Petroleum Ltd.

Well: Kewarra-01

Field: Wildcat

Rig: Hunt Rig 2

Country: Australia

Rig: Hunt Rig 2

Field: Wildcat

Location: Gidgee 3-D Seismic Survey

Well: Kewarra-01

Company: Beach Petroleum Ltd.

HALS-BHC-PEX
Resistivity-Sonic-Density-Neutron-GR-5
Scale 1:200

LOCATION		Gidgee 3-D Seismic Survey Inline 303 / Xline 245	Elev.: K.B. 116.8 m G.L. 113 m D.F. 116.8 m
Permanent Datum: _____	AHD _____	Elev.: 0 m _____	
Log Measured From: _____	Rotary Table _____	116.8 m above Perm. Datum	
Drilling Measured From: _____	Rotary Table _____		
State: Queensland	Max. Well Deviation 1.5 deg	Longitude 141°08'48.96" E	Latitude 28°30'40.79" S

Logging Date	9-Apr-2007	
Run Number	1	
Depth Driller	1630 m	
Schlumberger Depth	1631.2 m	
Bottom Log Interval	1628.91 m	
Top Log Interval	577.3 m	
Casing Driller Size @ Depth	9.625 in @ 578.3 m	
Casing Schlumberger	577.3 m	
Bit Size	8.500 in	
Type Fluid In Hole	KCL Polymer	
Density	9.2 lbm/gal	38 s
Fluid Loss	6.8 cm3	10
Source Of Sample	Pit	
RM @ Measured Temperature	0.225 ohm.m	@ 28 degC
RMF @ Measured Temperature	0.206 ohm.m	@ 29 degC
RMC @ Measured Temperature	0.375 ohm.m	@ 26 degC
Source RMF	Press	Press
RM @ MRT	0.095 @ 96	0.088 @ 96
Maximum Recorded Temperatures	96 degC	96
Circulation Stopped	9-Apr-2007	16:15
Logger On Bottom	10-Apr-2007	1:00
Unit Number	3170	AUIMB
Recorded By	Michael Morse / Ashraf Dandi	
Witnessed By	Doug Short	

	Run 1	Run 2	Run 3
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			
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			

DEPTH SUMMARY LISTING

Date Created: 13-APR-2007 14:14:56

Depth System Equipment

Depth Measuring Device	Tension Device	Logging Cable
Type: IDW-B Serial Number: 4898 Calibration Date: 24-11-2006 Calibrator Serial Number: 1933 Calibration Cable Type: 7-42V-XS Wheel Correction 1: -6 Wheel Correction 2: -6	Type: CMTD-B/A Serial Number: 2251 Calibration Date: 01-04-2007 Calibrator Serial Number: 1050 Calibration Gain: 0.94 Calibration Offset: 784.00	Type: 7-42ZV-XS Serial Number: 6093 Length: 4675.94 M <hr/> Conveyance Method: Wireline Rig Type: LAND

Depth Control Parameters

Log Sequence:	First Log In the Well
Rig Up Length At Surface:	68.45 M
Rig Up Length At Bottom:	67.88 M
Rig Up Length Correction:	0.57 M
Stretch Correction:	0.70 M
Tool Zero Check At Surface:	0.80 M

Depth Control Remarks

1. First Log In Well.
2. All Schlumberger Depth Control Procedures Followed.
3. IDW Primary Depth Control, Z-Chart Secondary Depth Control
- 4.
- 5.
- 6.

DISCLAIMER

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OTHER SERVICES1	OTHER SERVICES2
OS1: CST-GR	OS1:
OS2: CST-GR	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Tool String run as per tool sketch with 3 x 1.5" standoffs, 3 x CMEZ, and a bowspring.	
High resolution data recorded from 1490 to 1440m.	
Standard resolution data recorded from TD to casing shoe, GR to surface.	
Density and Nuclear curves presented from TD to 1050m.	
Repeat section carried from 1580 to 1520m as per client request.	
Maximum recorded temperature 95.6 degC sourced from thermometers in LEH-QT.	

Neutron porosity corrected for hole size, borehole salinity, formation salinity, pressure, temperature, mud weight and standoff

Density corrected for bit size

Caliper check in casing 8.921".

Sonic Check in casing 57 us/ft

Mud Properties taken from Mud Report dated 9-Apr-2007

Chlorides = 20,000 mg/L

K+ = 21,000 mg/L and KCL = 4(%by Wt.)

Circulation stopped @ 16:15 on 9-Apr-07.

RUN 1			RUN 2		
SERVICE ORDER #:		AUMB07356895	SERVICE ORDER #:		
PROGRAM VERSION:		14C0-302	PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

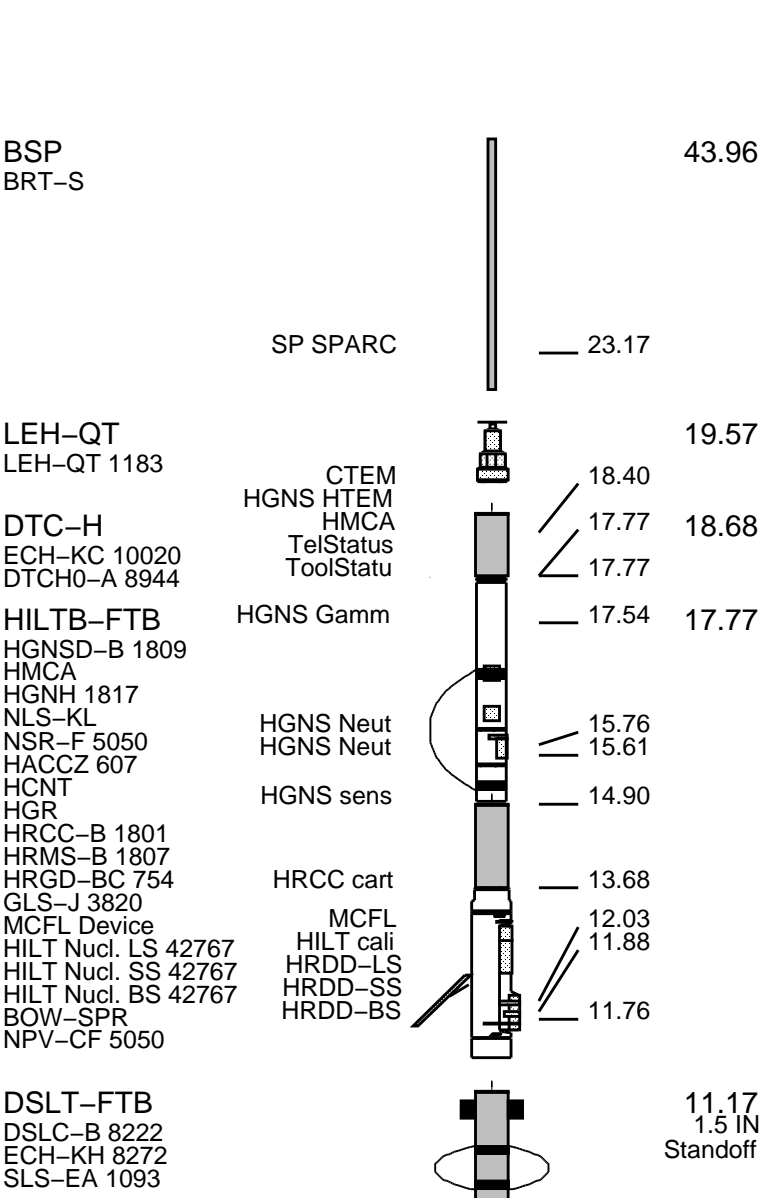
EQUIPMENT DESCRIPTION

RUN 1 RUN 2

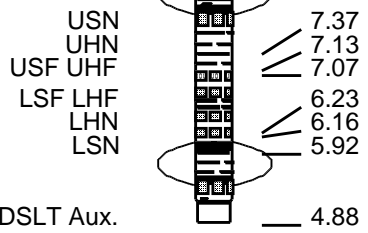
SURFACE EQUIPMENT

LCM-AA 2747	NCS-YC 4888
GSR-U 2006	WITM (DTS)-A
NCT-B	
CNB-AB	

DOWNHOLE EQUIPMENT



RUN 2

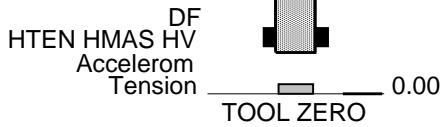


HALS-B
HALS-B 861

4.88
1.5 IN
Standoff

HALS-B — 2.29

BNS-CCS



1.5 IN
Standoff
0.14

MAXIMUM STRING DIAMETER 6.63 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

Client: Beach Petroleum Ltd.
Well: Kewarra-01
Field: Wildcat
State: Queensland
Country: Australia

Rig Name: Hunt Rig 2
Reference Datum: AHD
Elevation: 116.8 m

Drawing Date: 4/10/2007



Production String	(in)		(m)	Well Schematic			(m)	(in)		Casing String
	OD	ID	MD	MD	OD	ID	MD	OD	ID	
							0.0	12.250		Borehole Segment Casing String
							578.3	9.625		
							581.0	12.250		Casing Shoe Borehole Segment Bottom
							581.0	8.500		Borehole Segment

				TD	1630.0	8.500		Borehole Segment Bottom
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All Depths are Driller Depths

Schlumberger

Standard Resolution Pass

MAXIS Field Log

Input DLIS Files

HALS_SONIC_TLD_MCFL_021LUP FN:29	12-Apr-2007 10:27	1632.8 M	8.8 M
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Output DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_102PUP FN:8	PRODUCER	12-Apr-2007 13:27	1634.0 M	10.5 M
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Integrated Hole/Cement Volume Summary

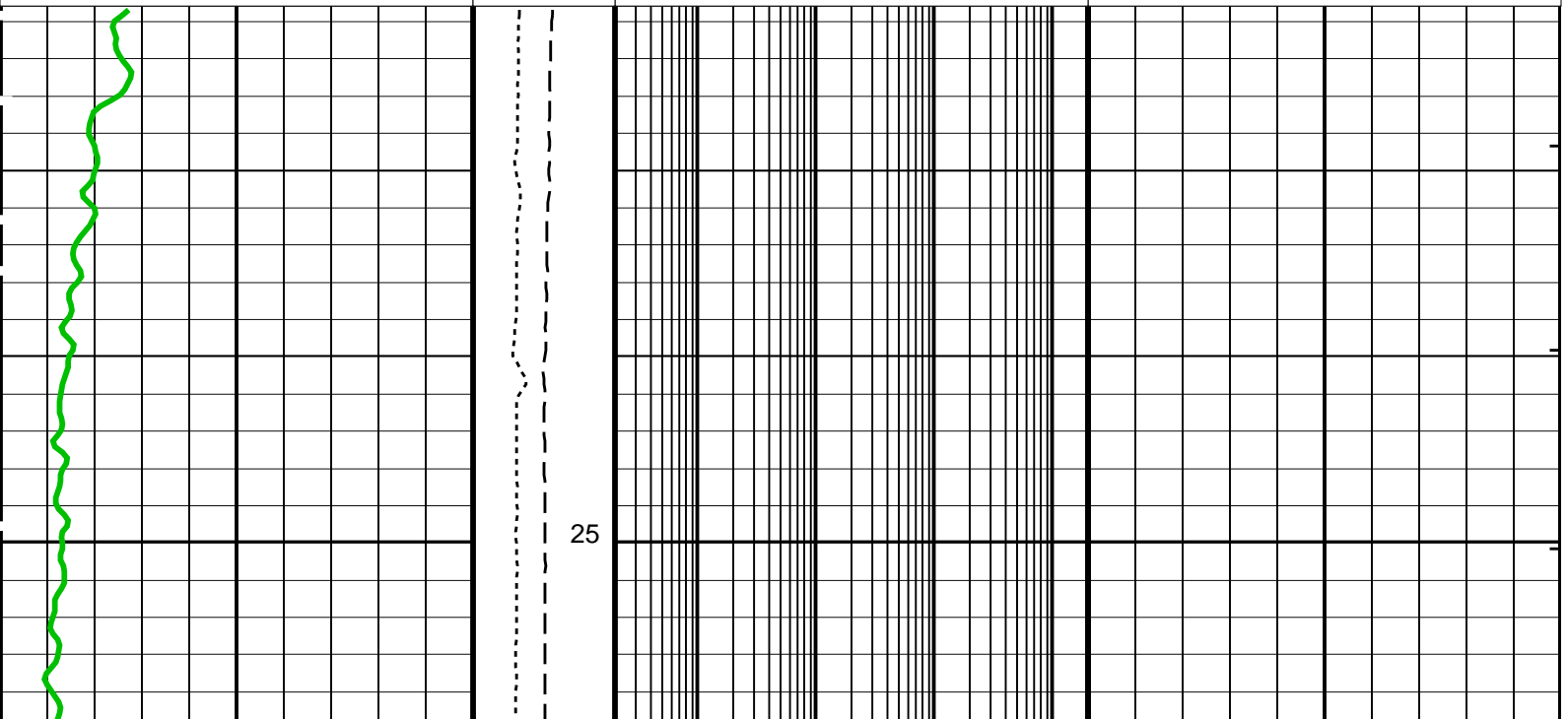
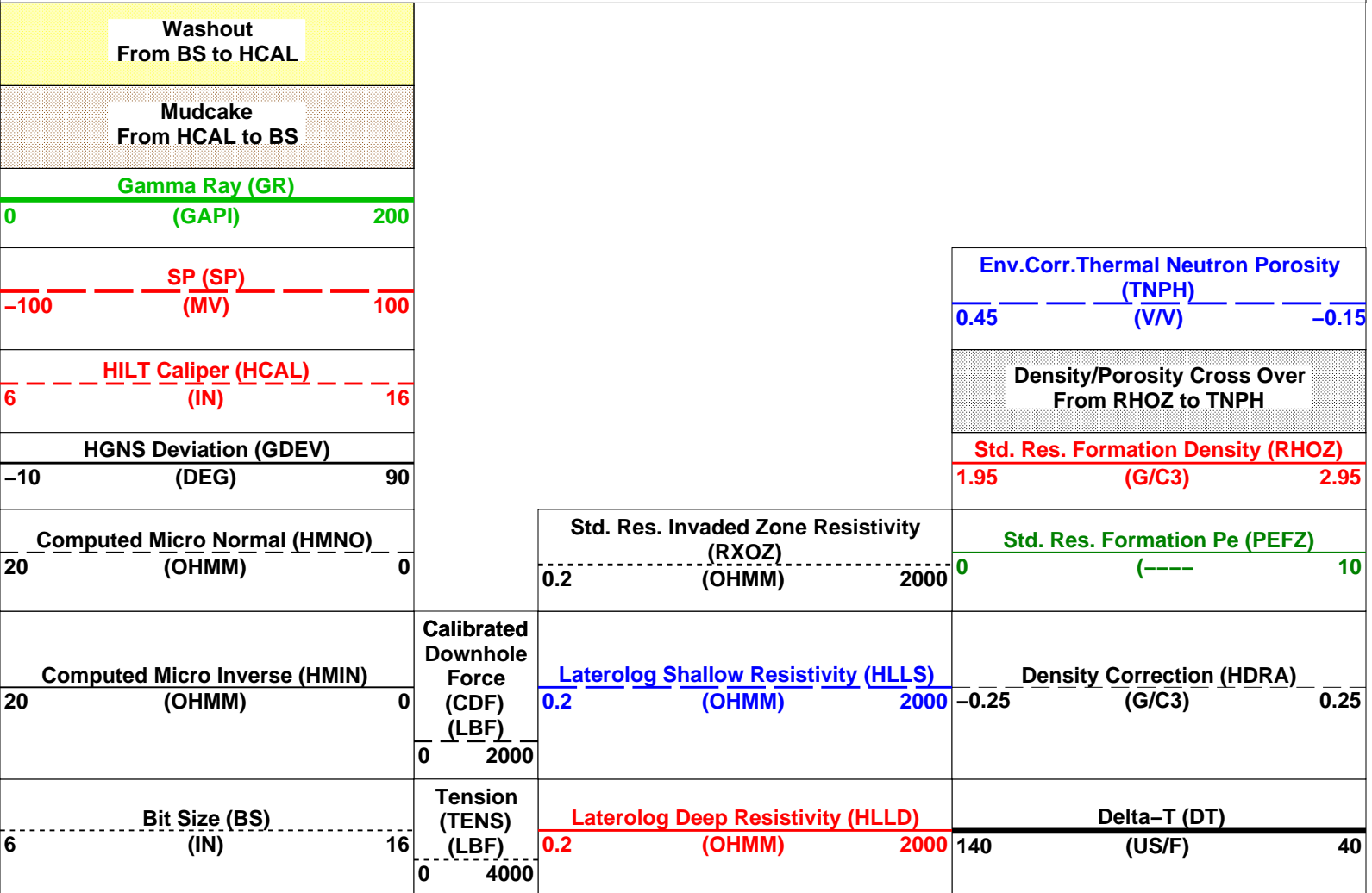
Hole Volume = 1449.85 F3
 Cement Volume = 525.88 F3 (assuming 7.00 IN casing O.D.)
 Computed from 1631.1 M to 577.4 M using data channel(s) HCAL

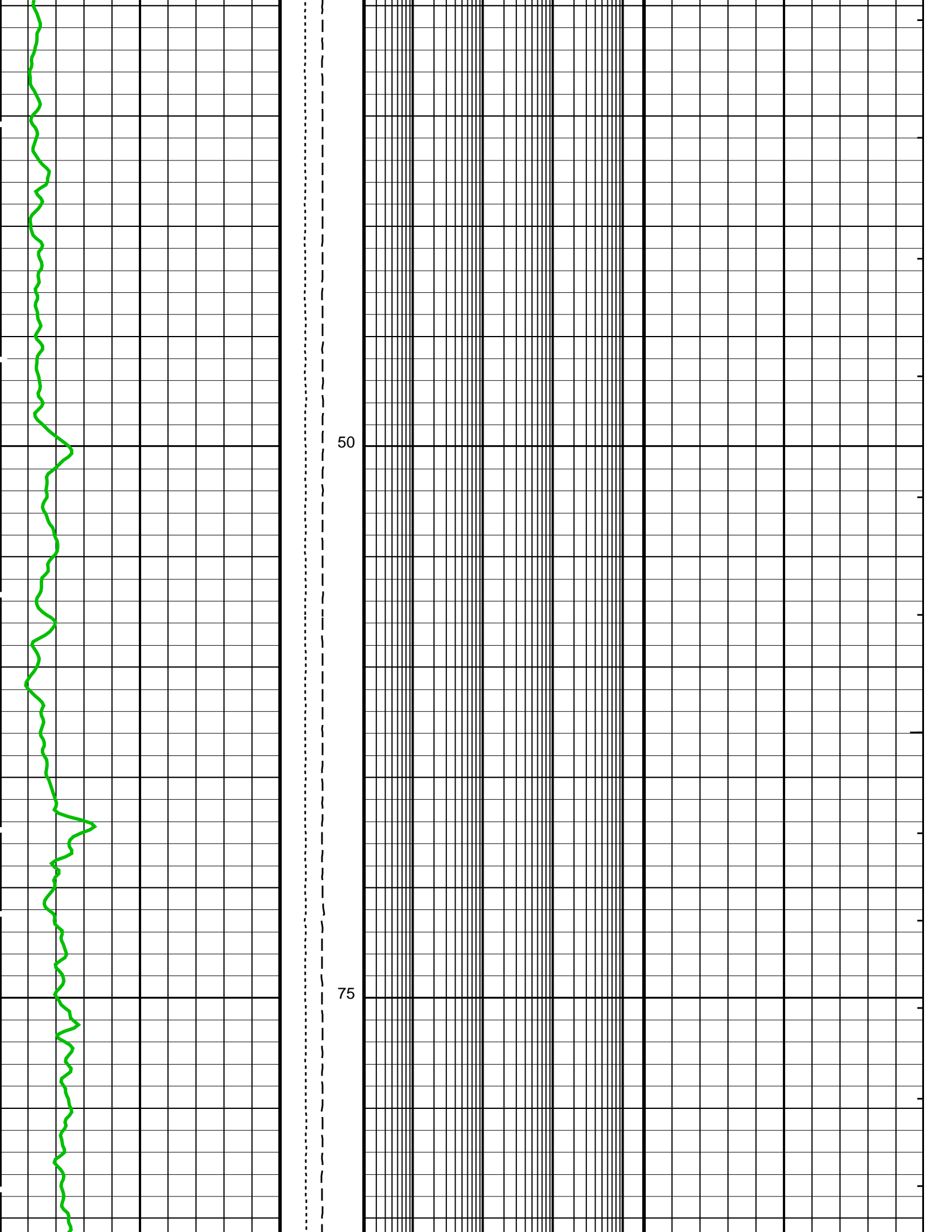
OP System Version: 14C0-302
MCM

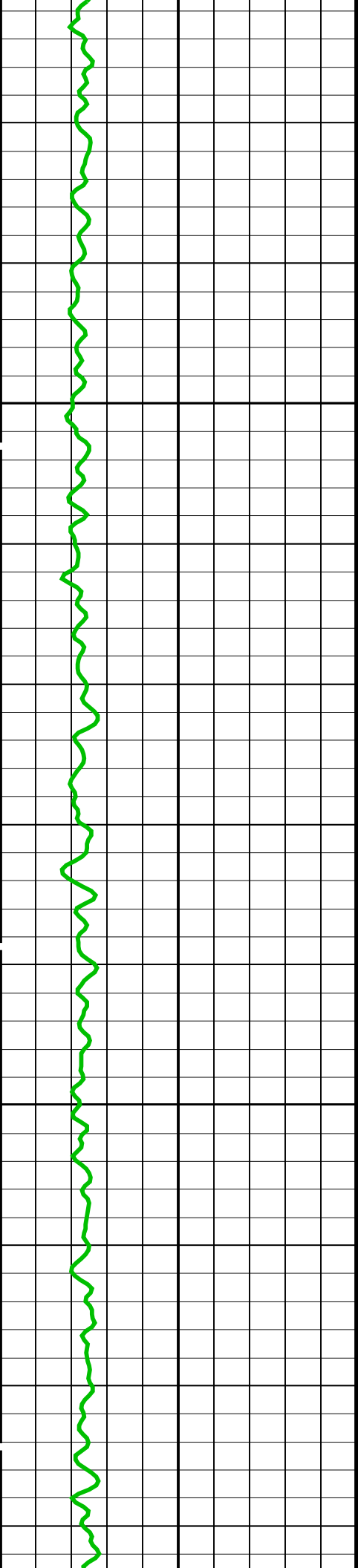
PIP SUMMARY

- ┌ Integrated Hole Volume Minor Pip Every 10 F3
- ┌ Integrated Hole Volume Major Pip Every 100 F3
 - └ Integrated Cement Volume Minor Pip Every 10 F3
 - └ Integrated Cement Volume Major Pip Every 100 F3
- Integrated Transit Time Minor Pip Every 1 MS ┌
- Integrated Transit Time Major Pip Every 10 MS ┌

Time Mark Every 60 S

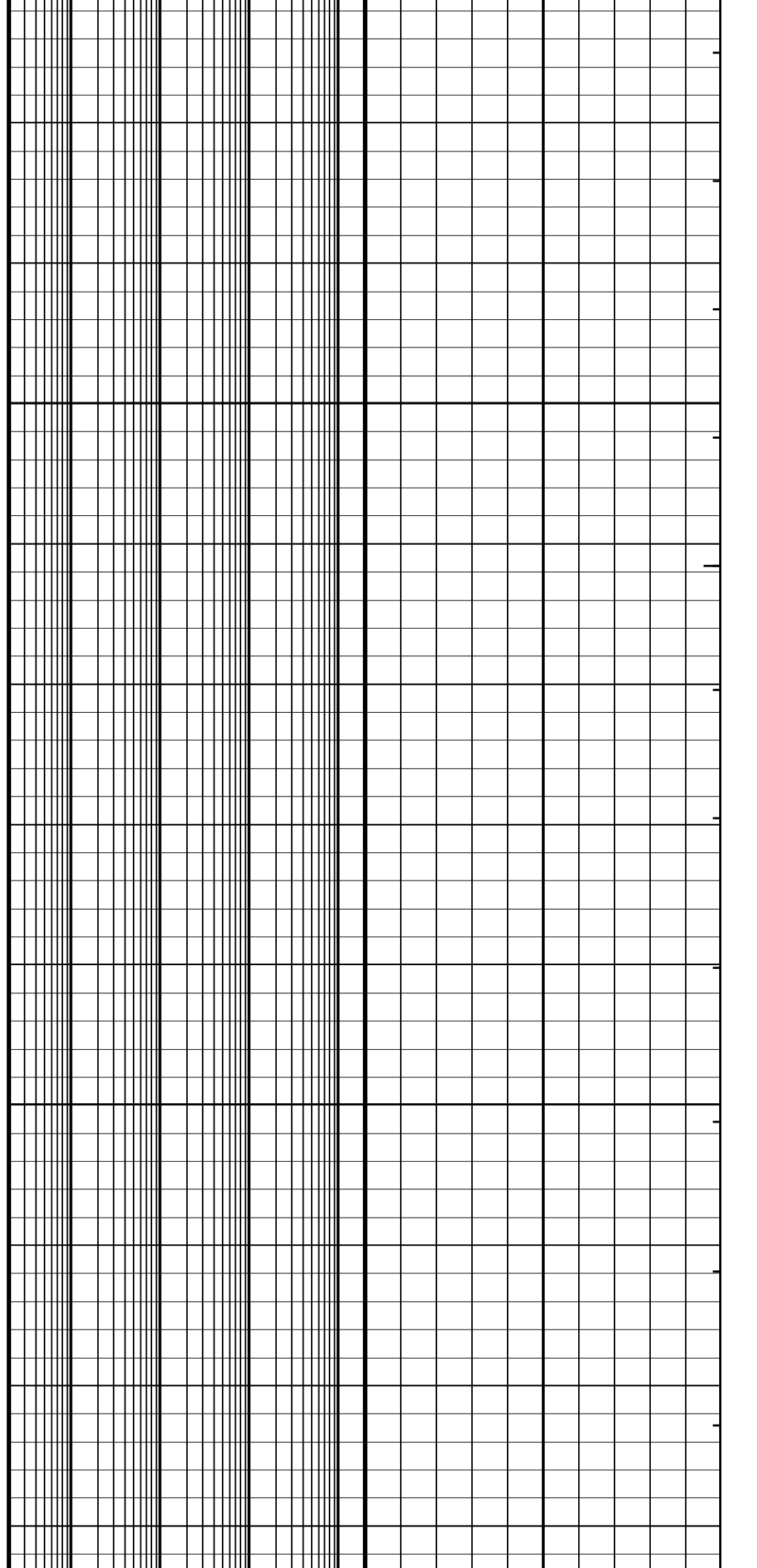


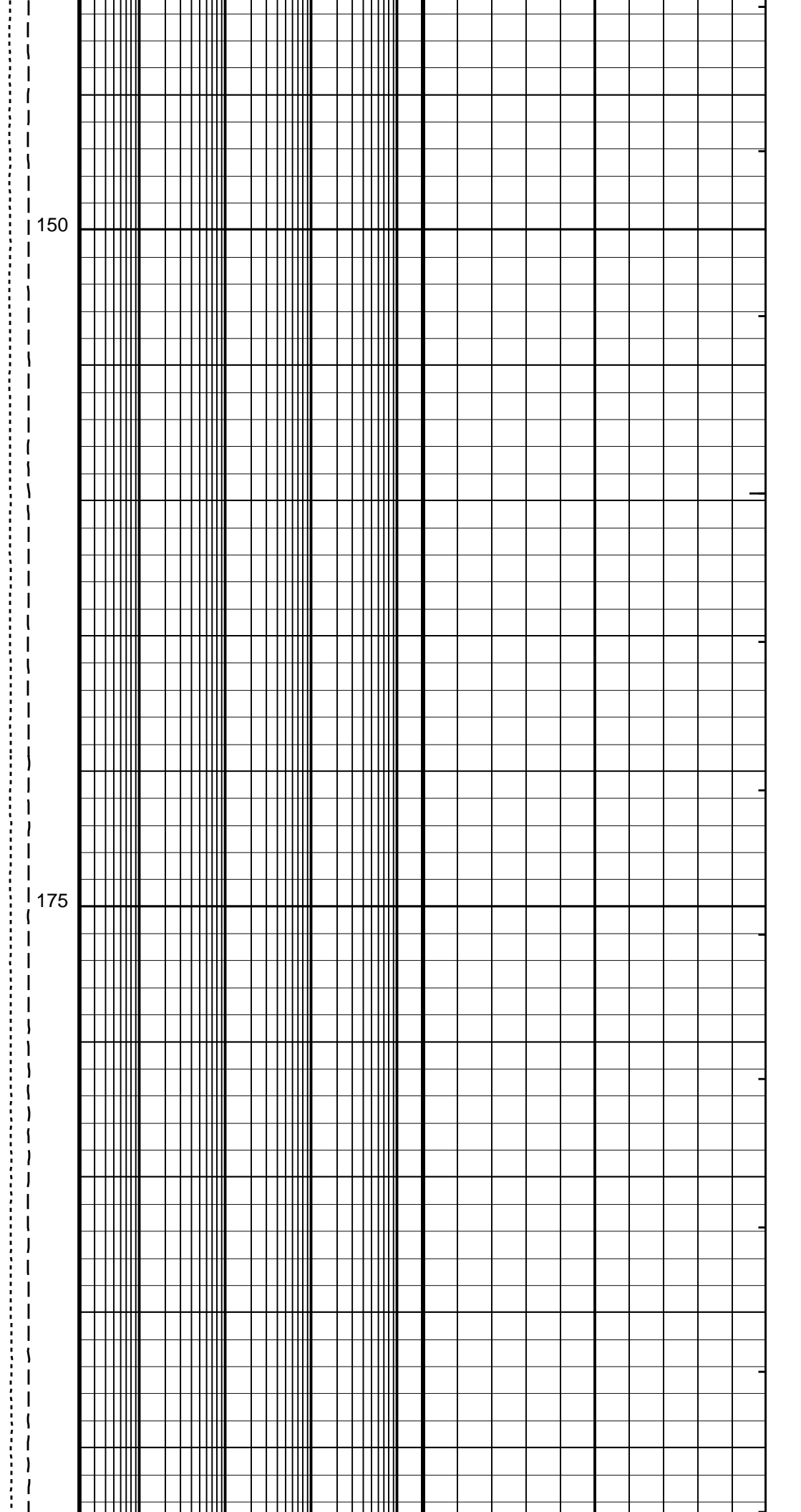
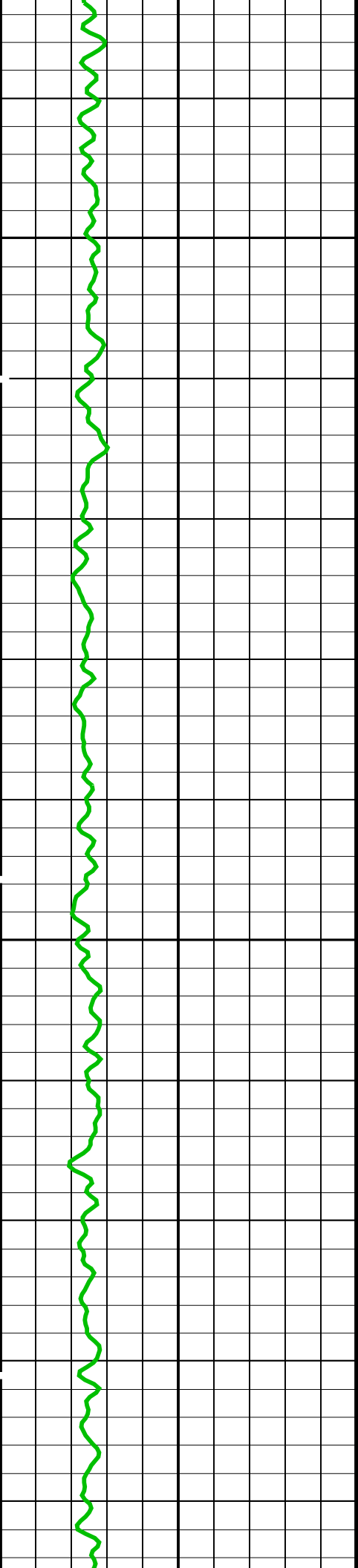




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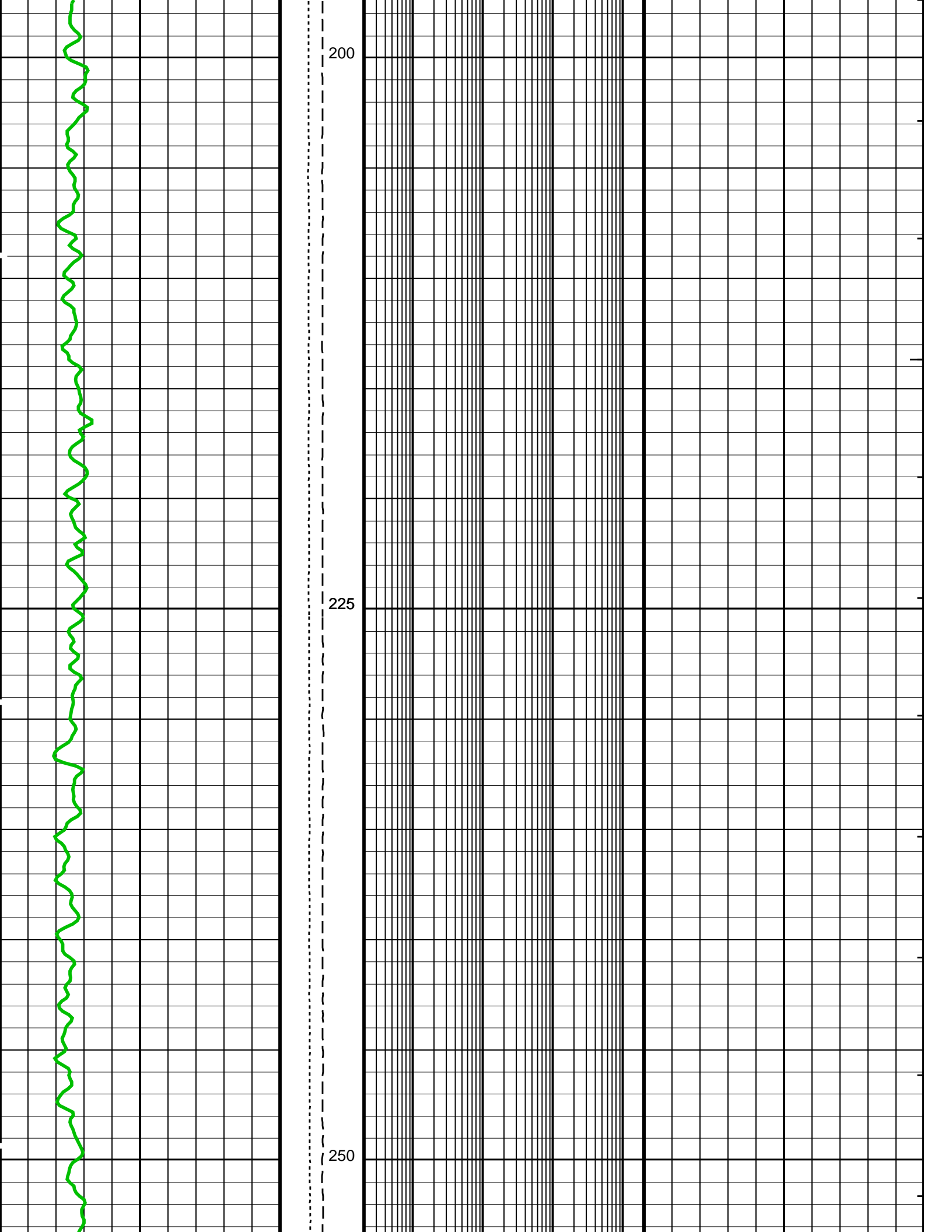
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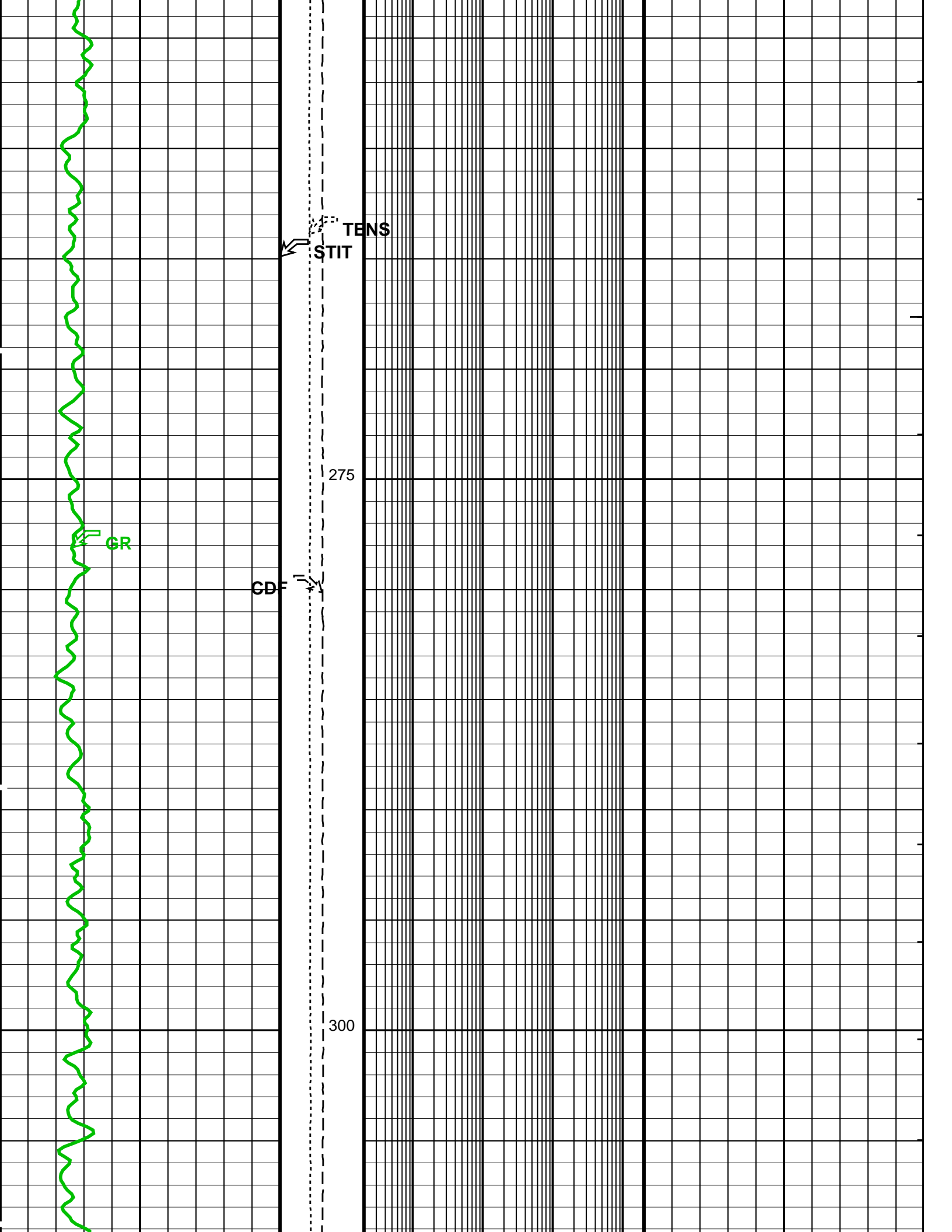


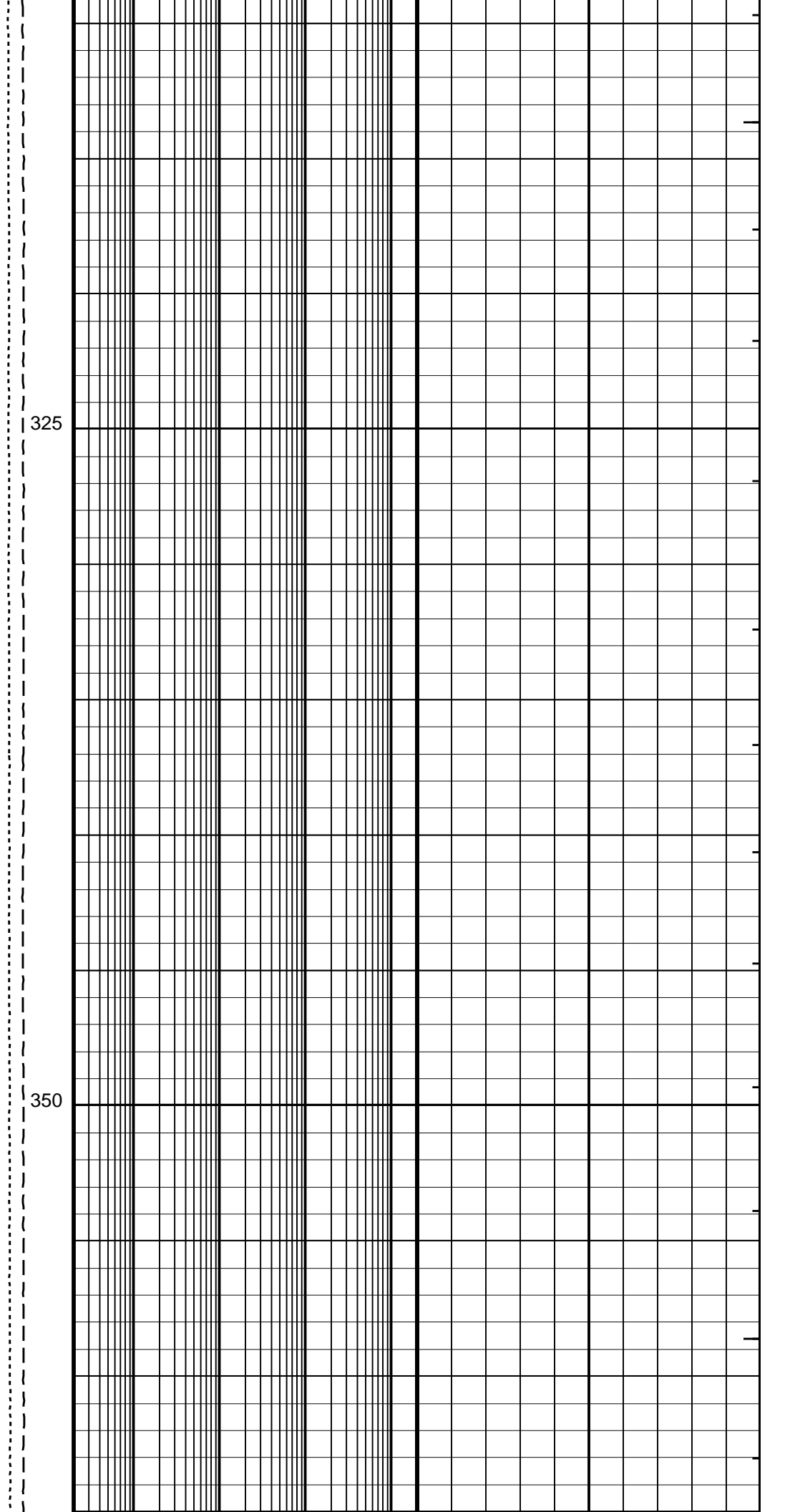
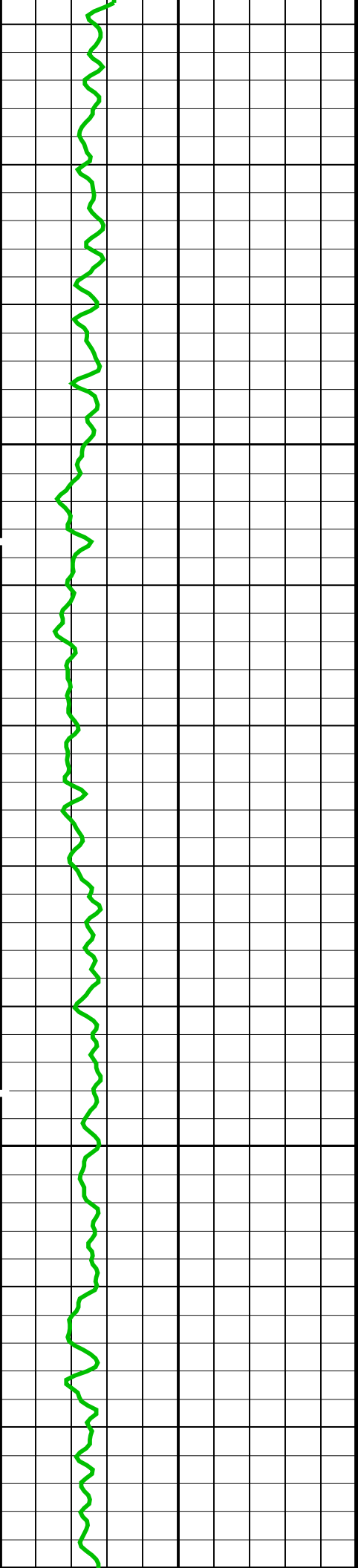


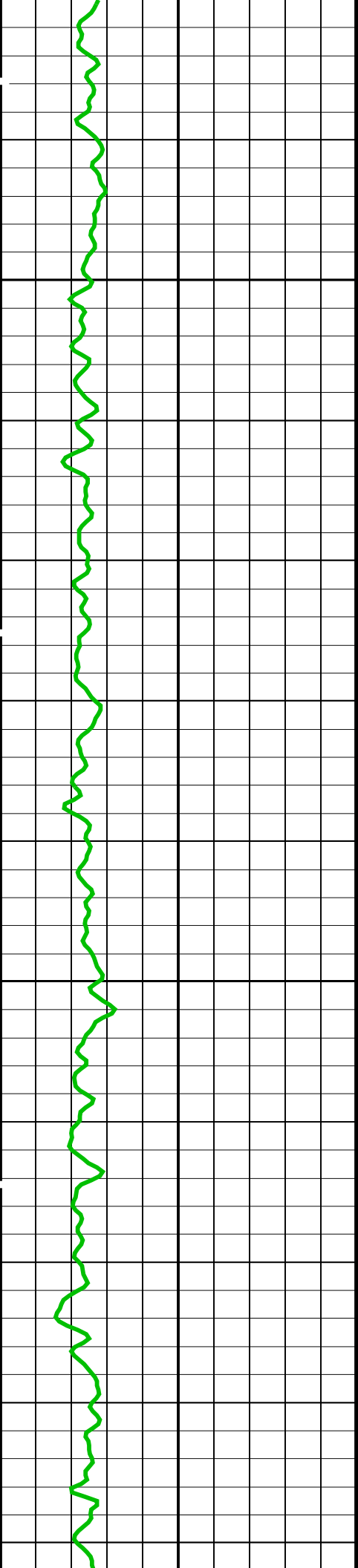
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175



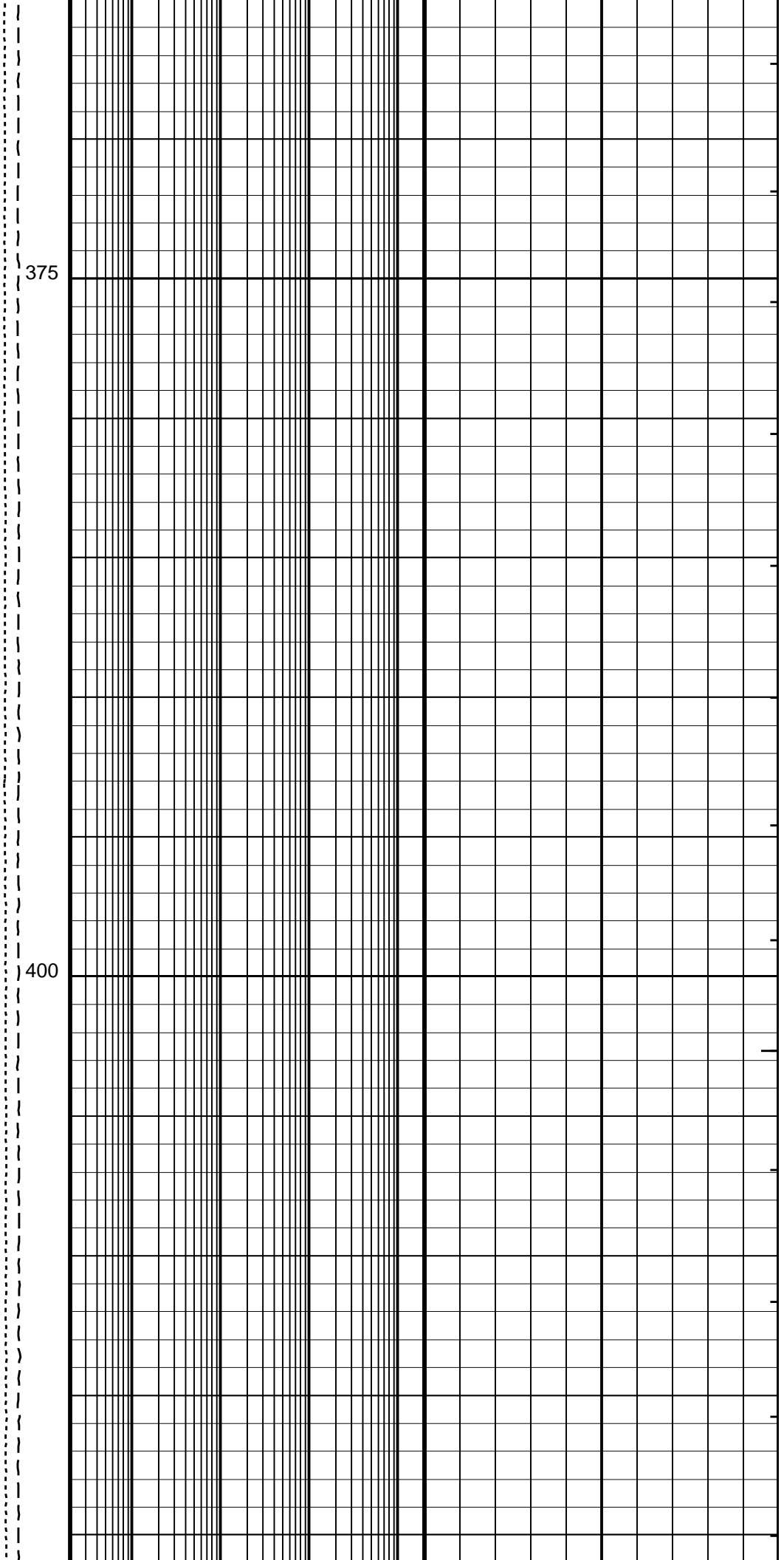


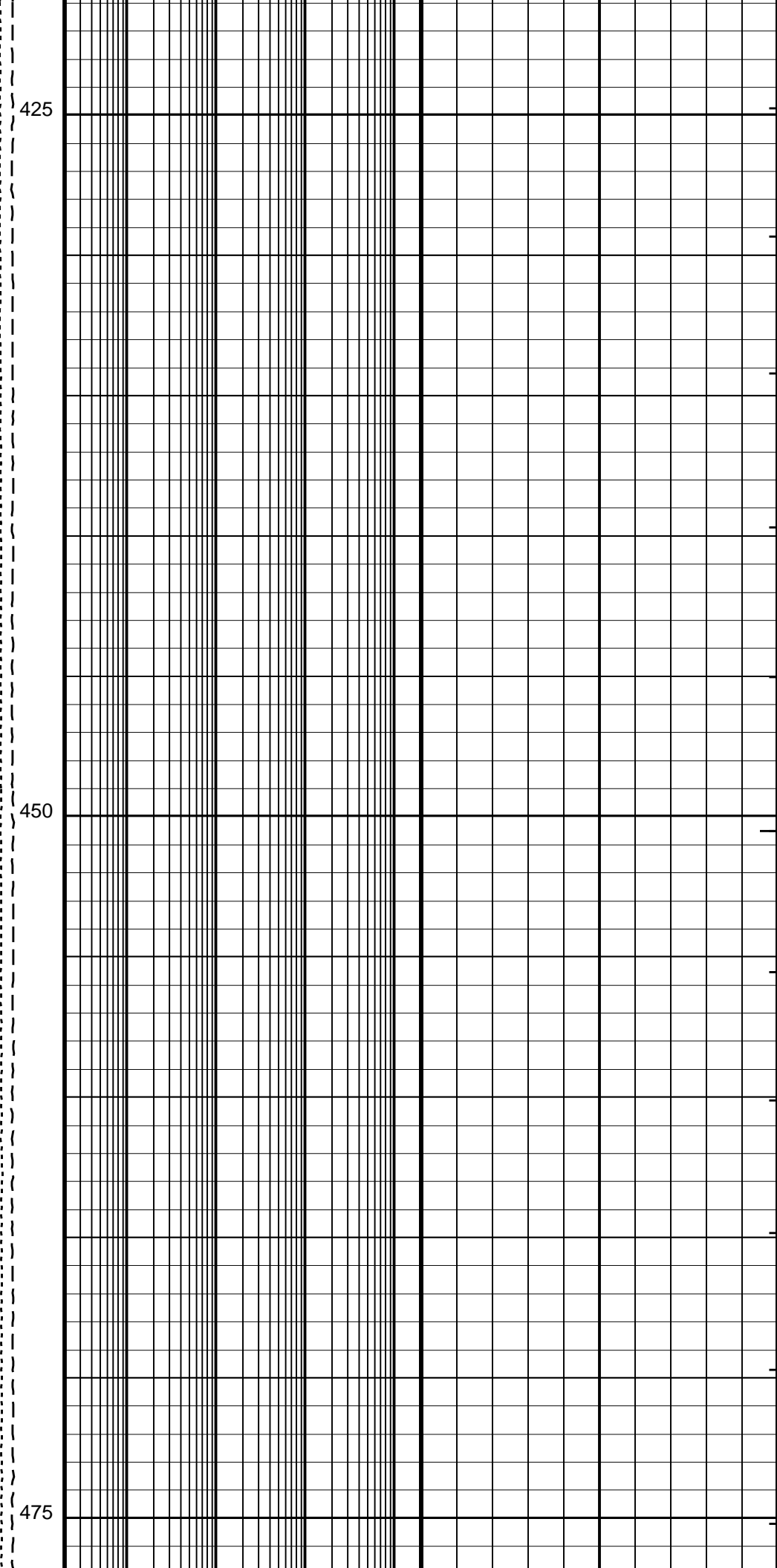
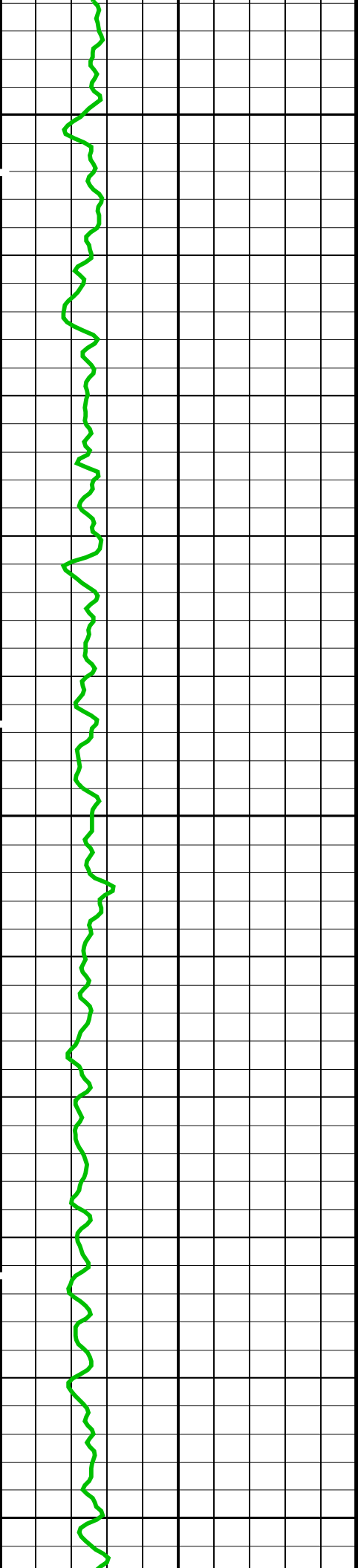


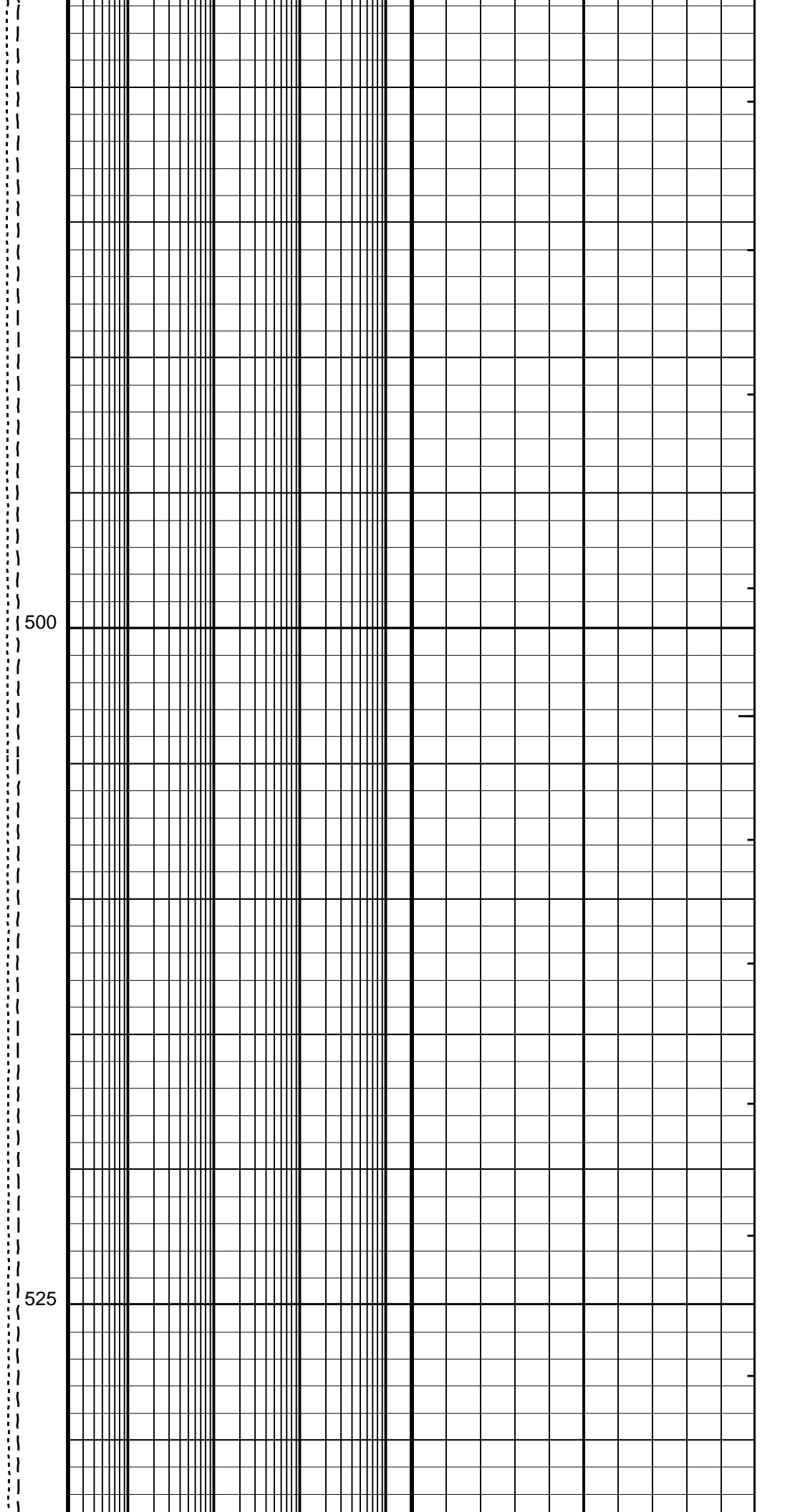
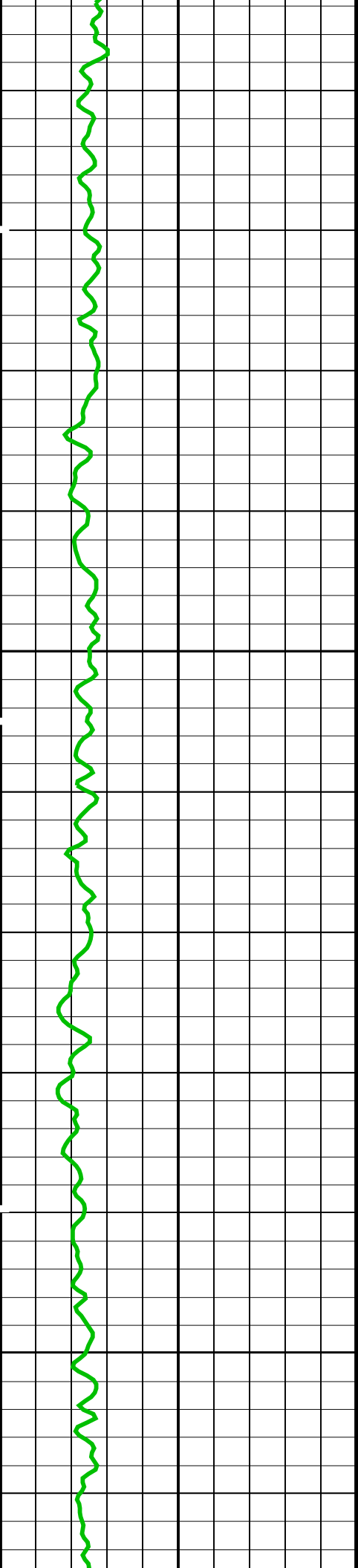


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400

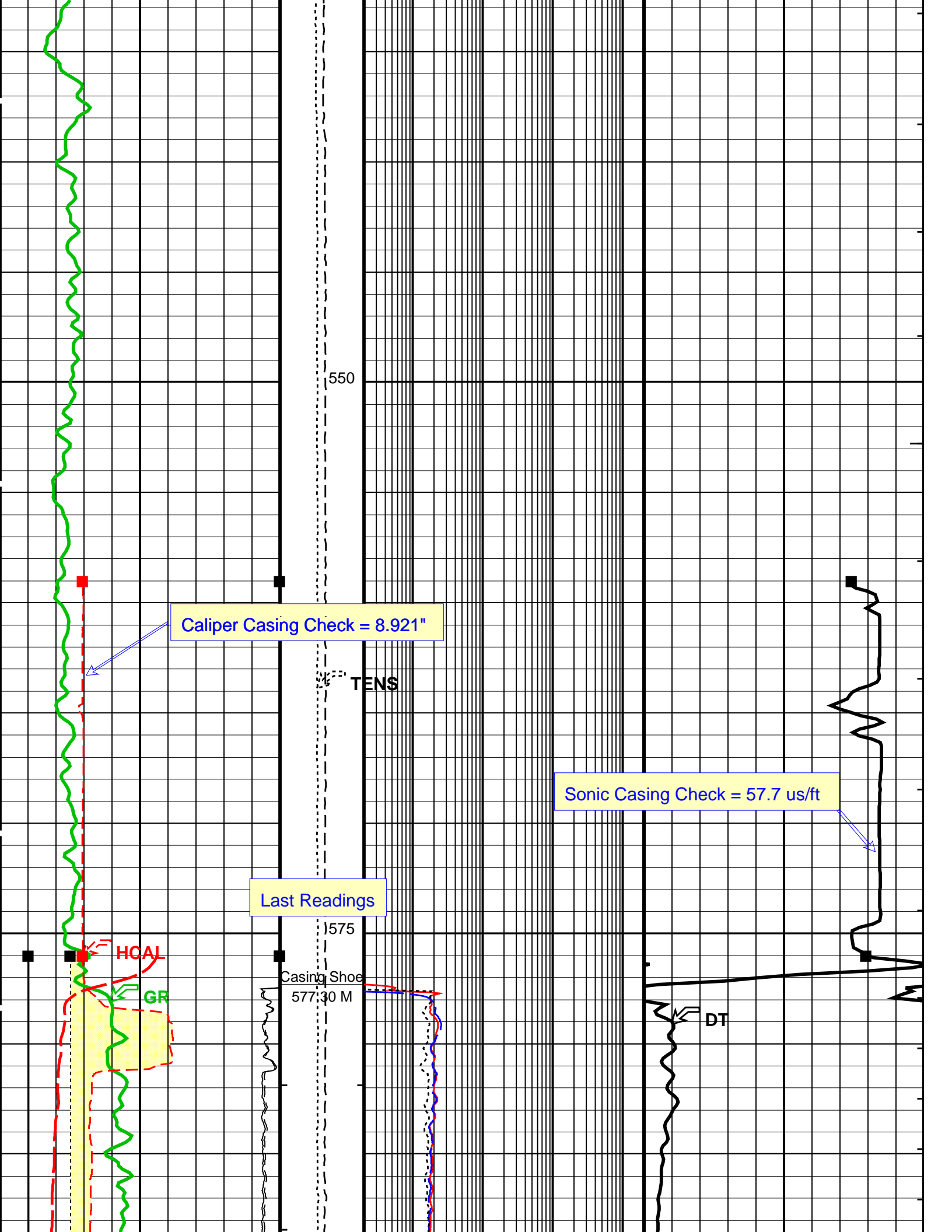


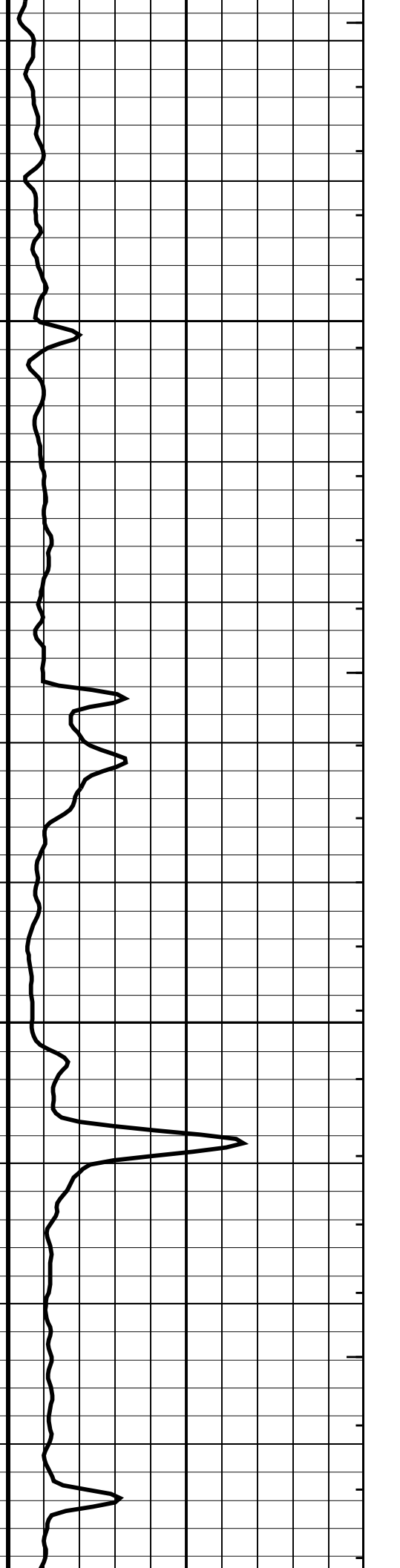
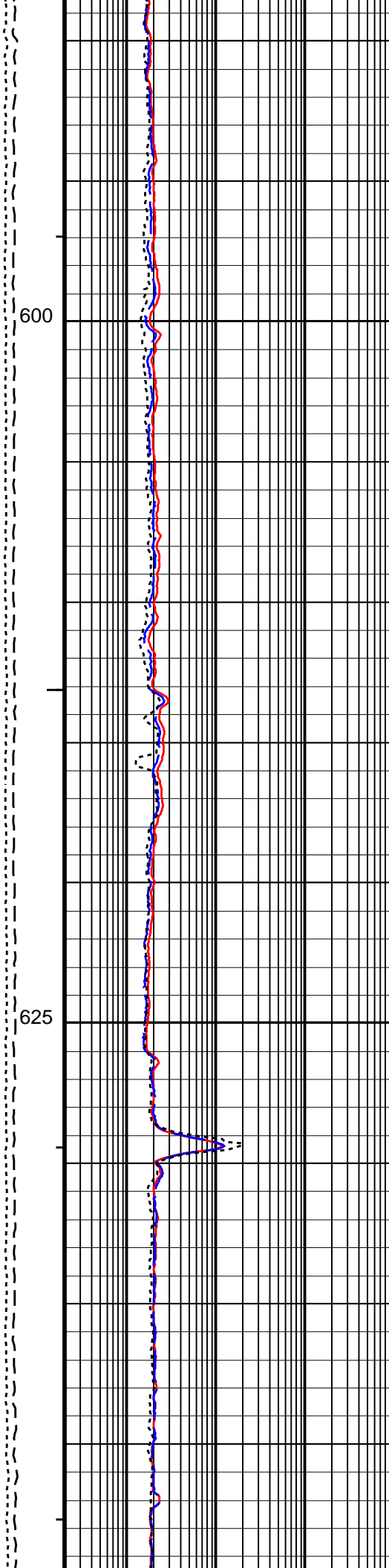
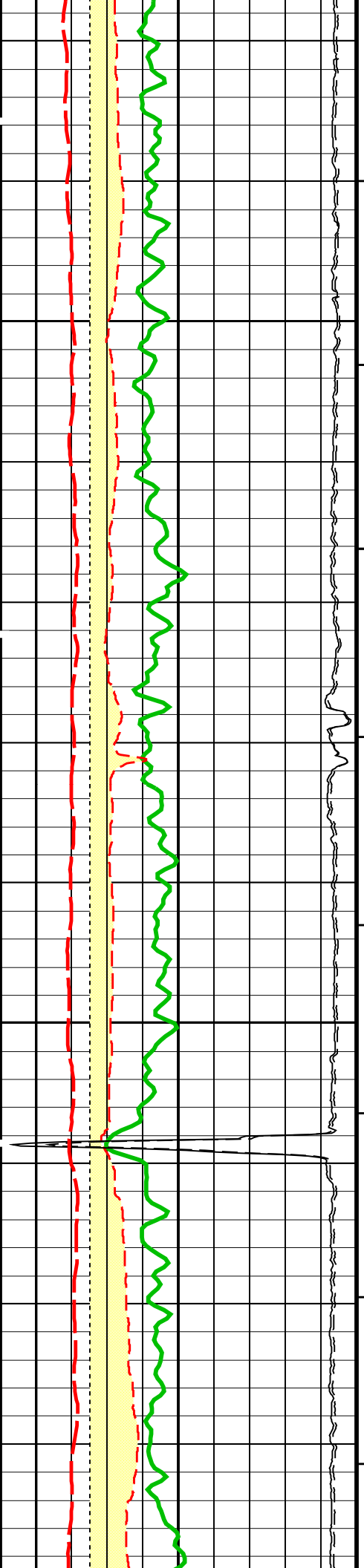


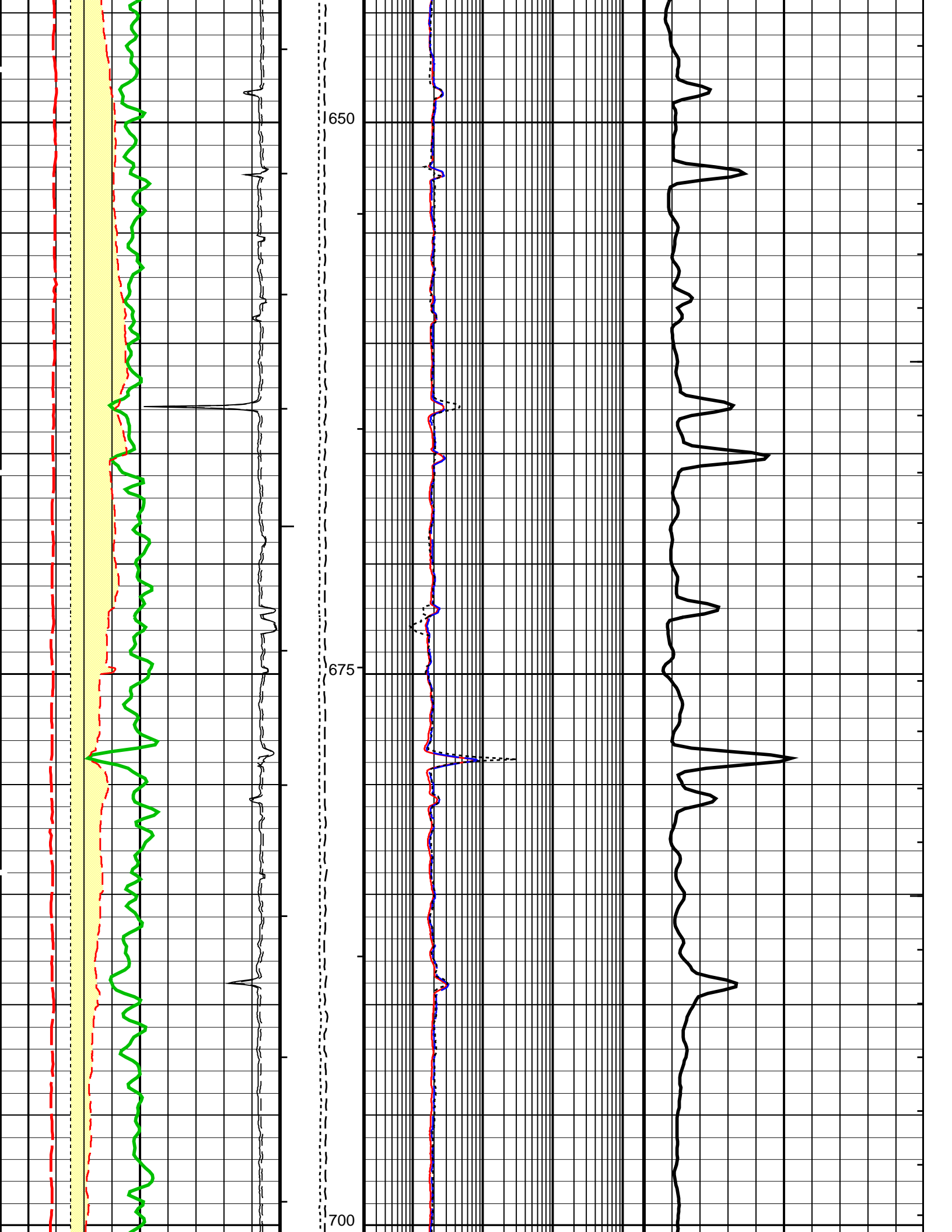


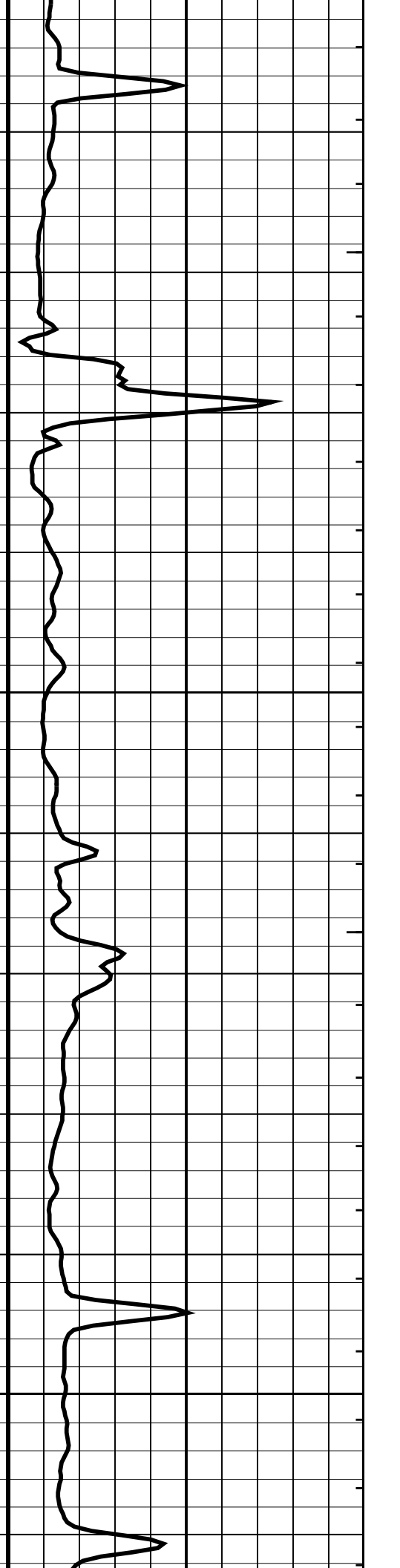
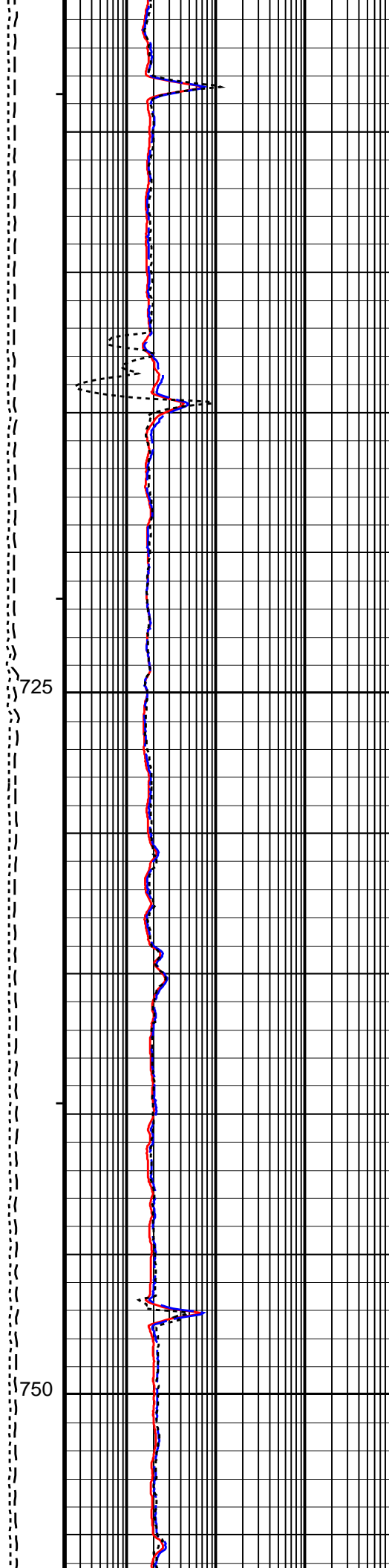
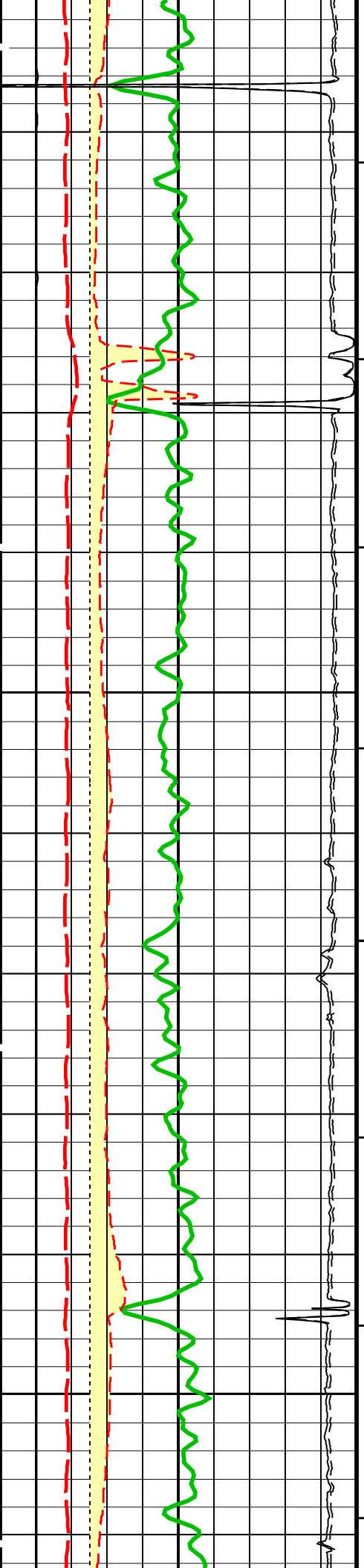
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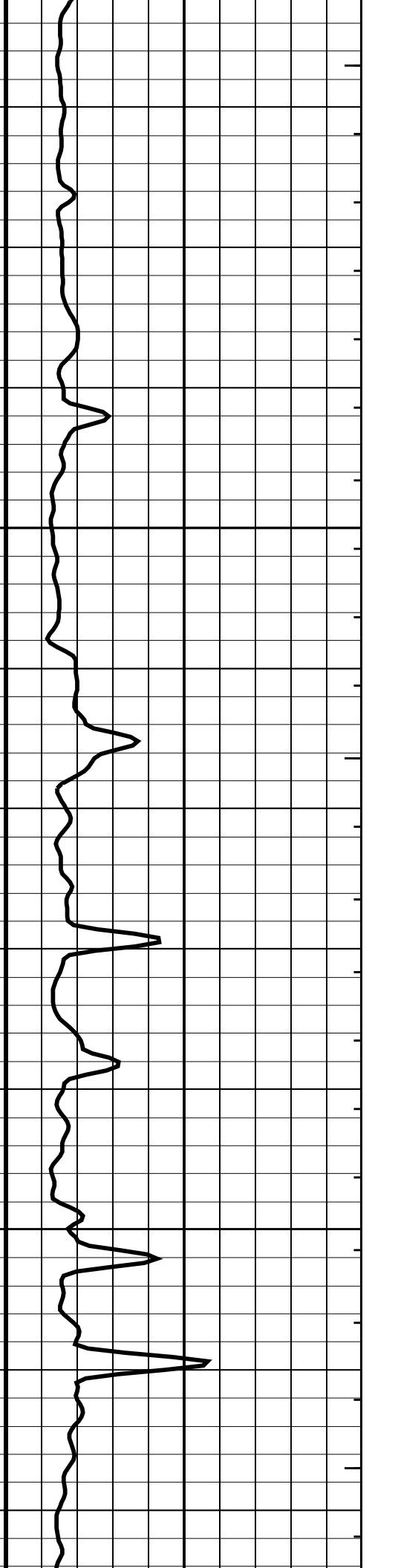
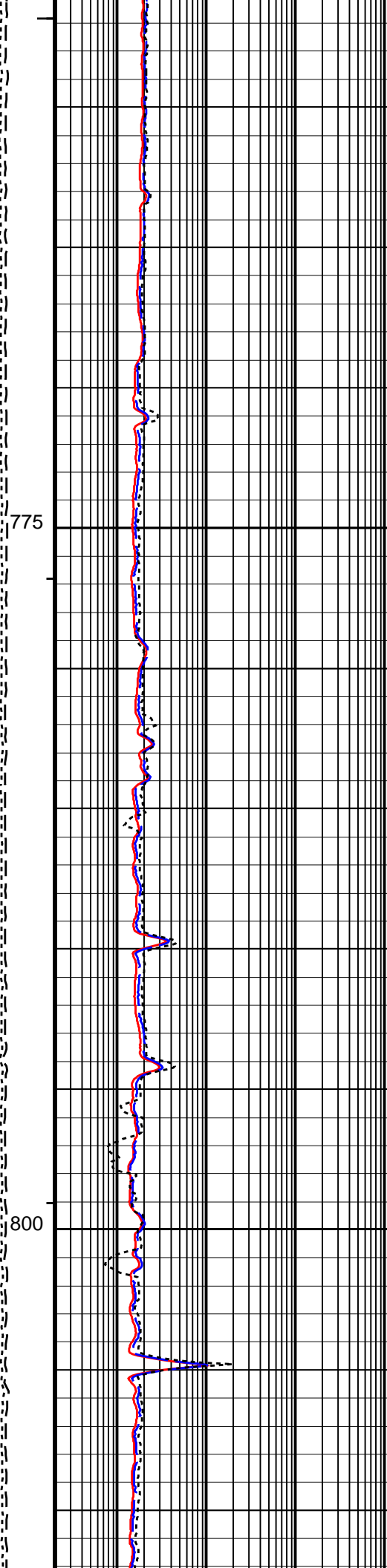
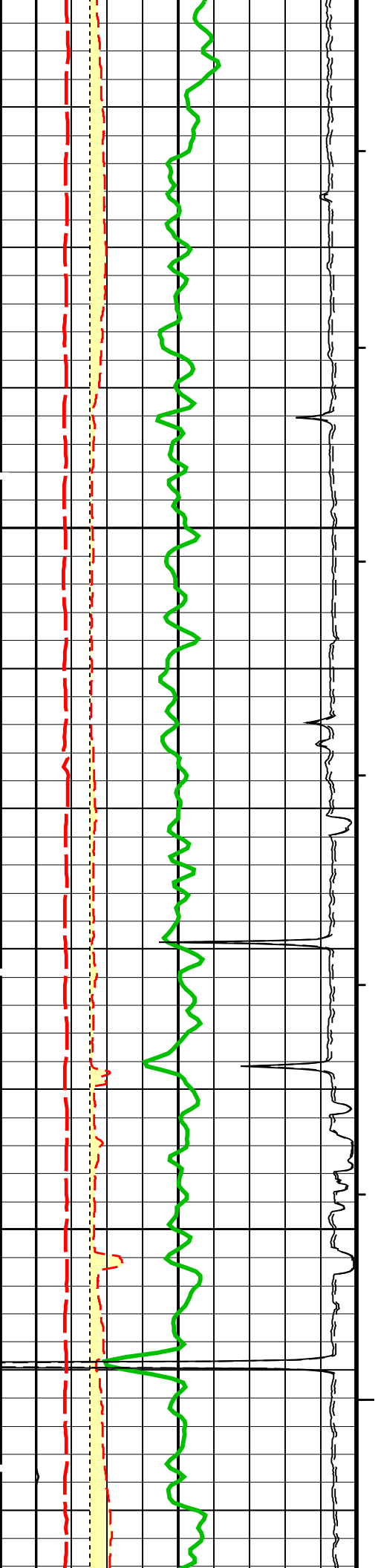


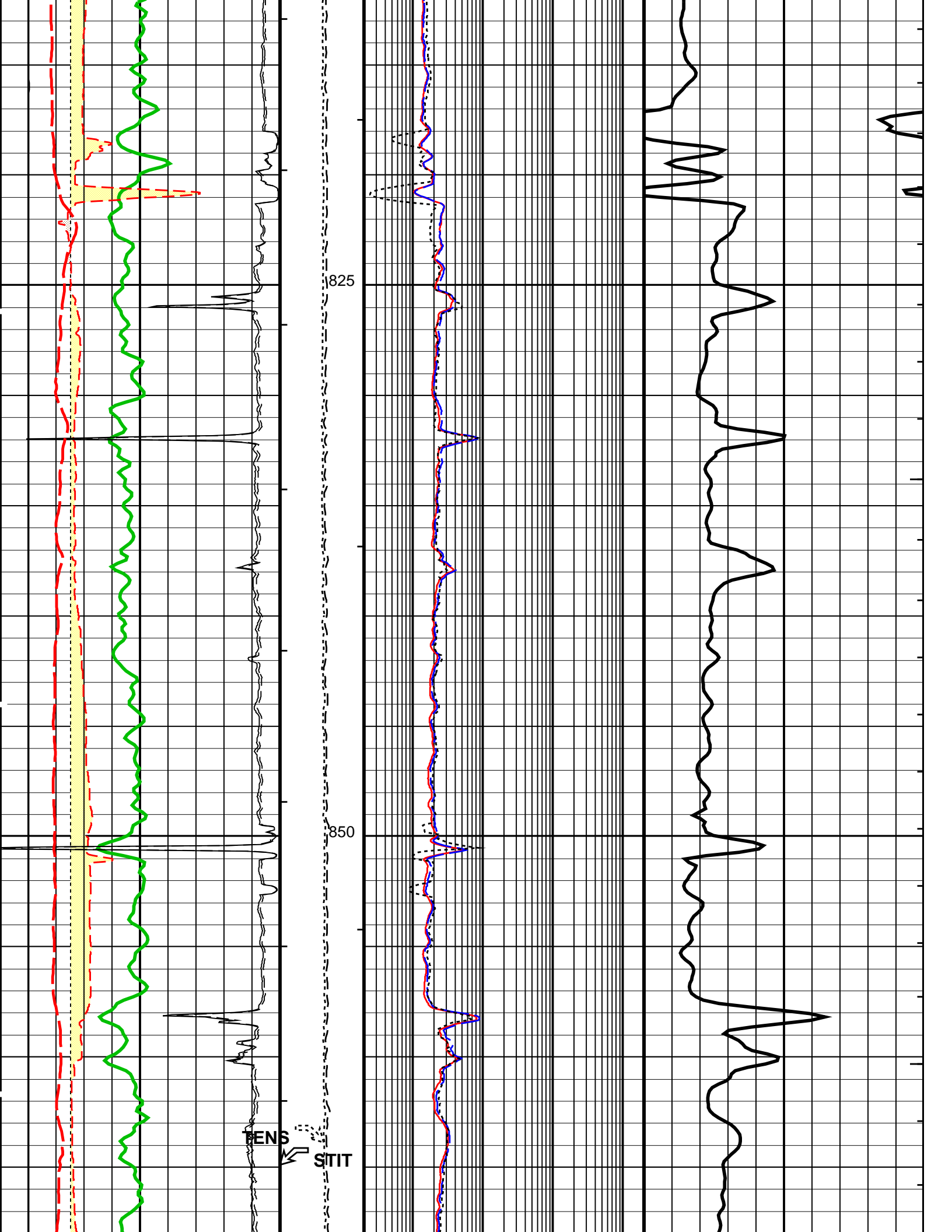


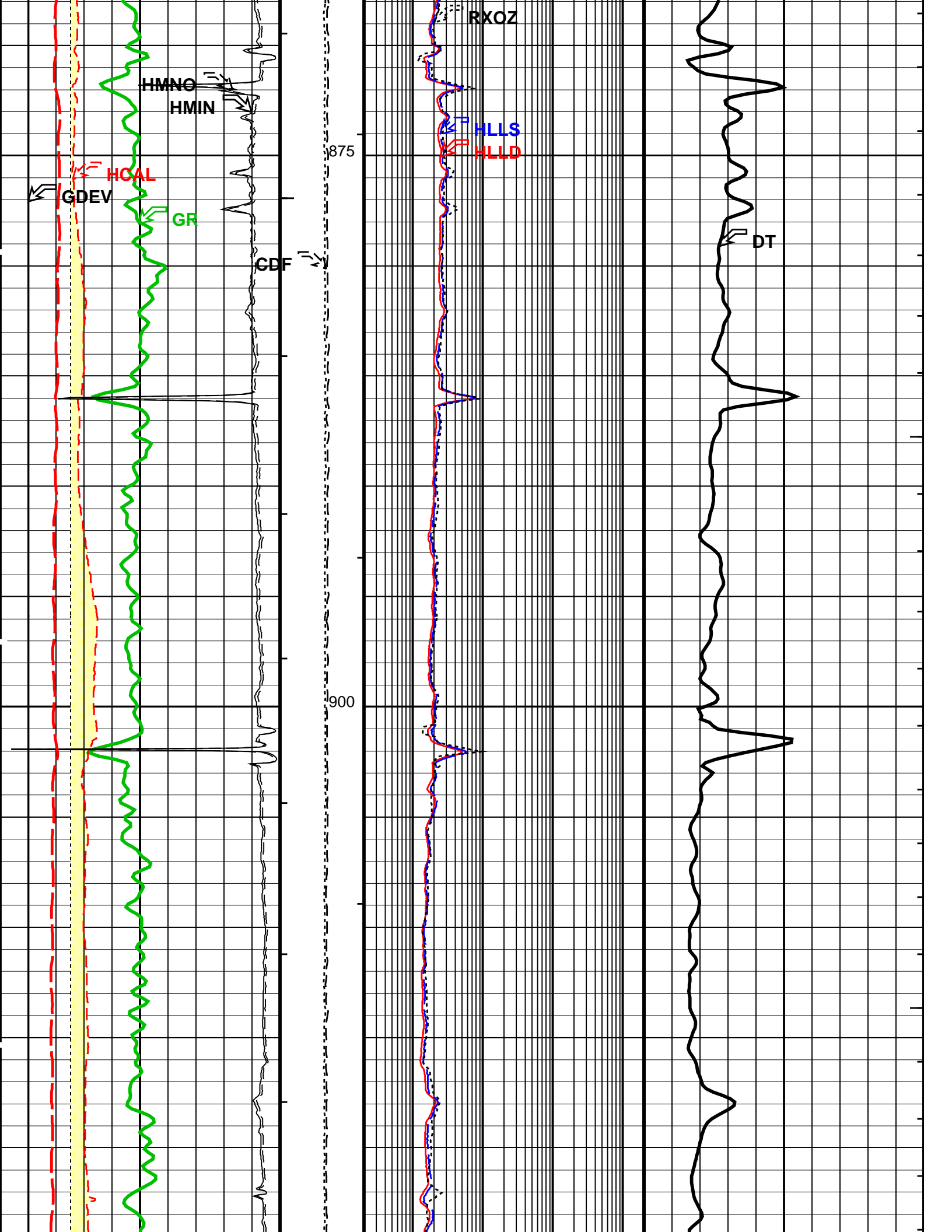


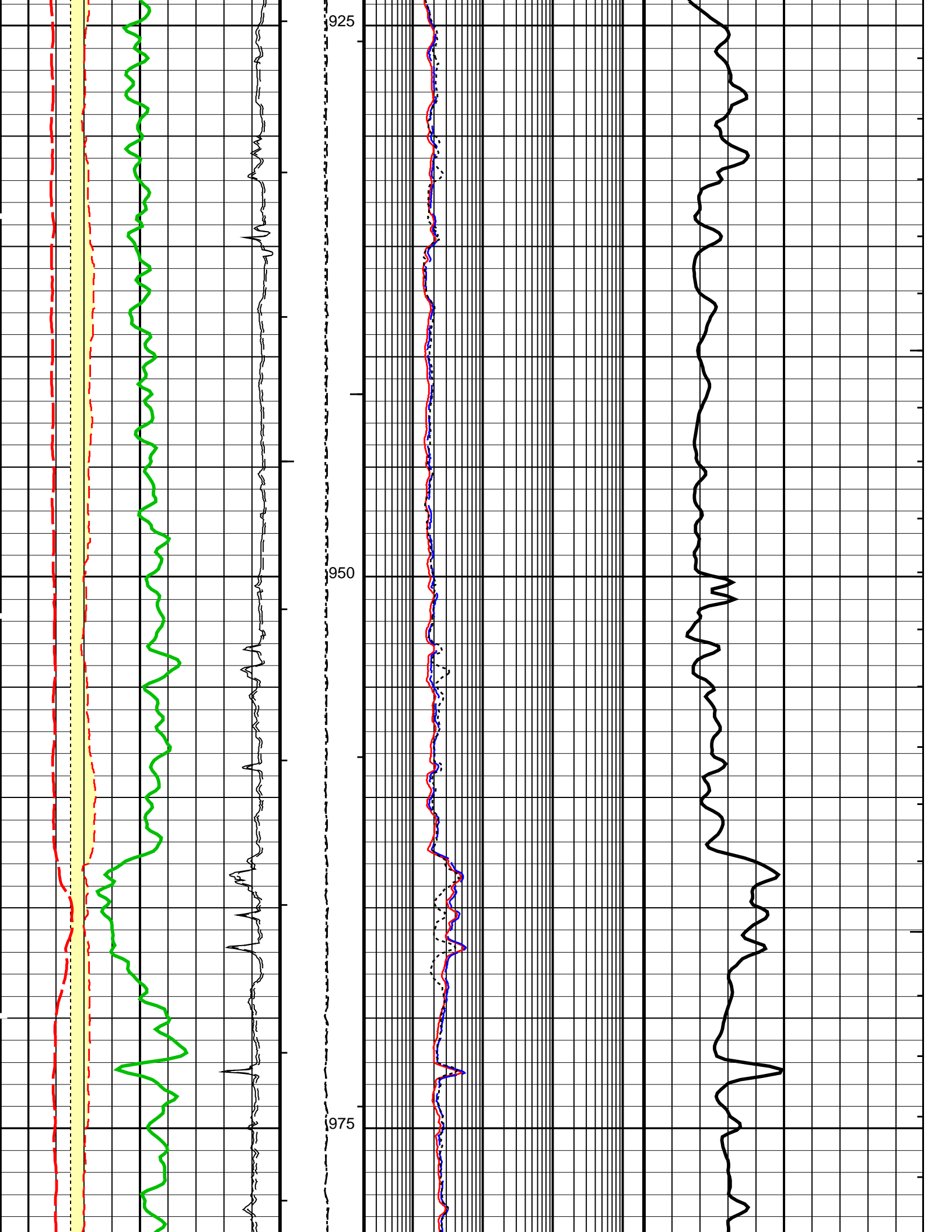
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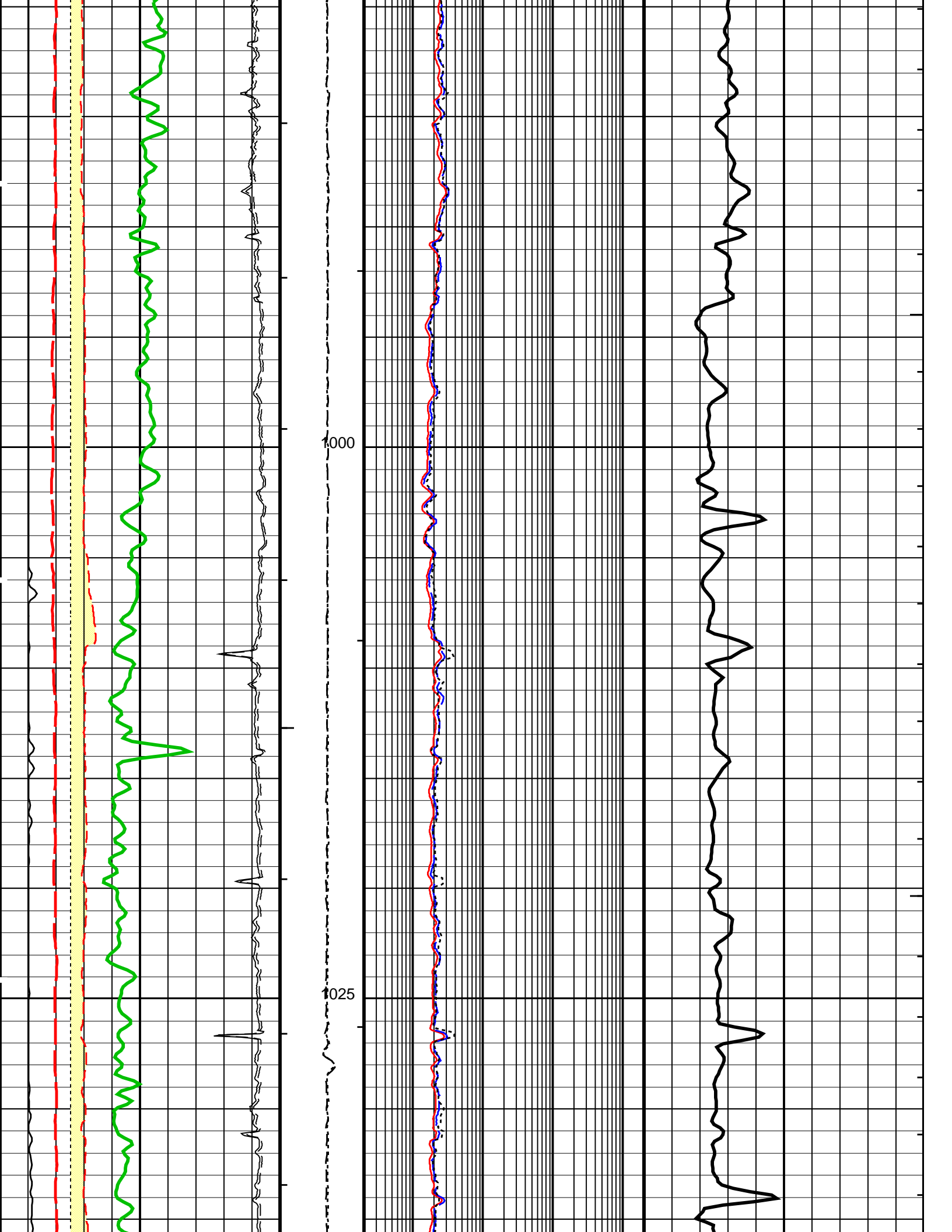
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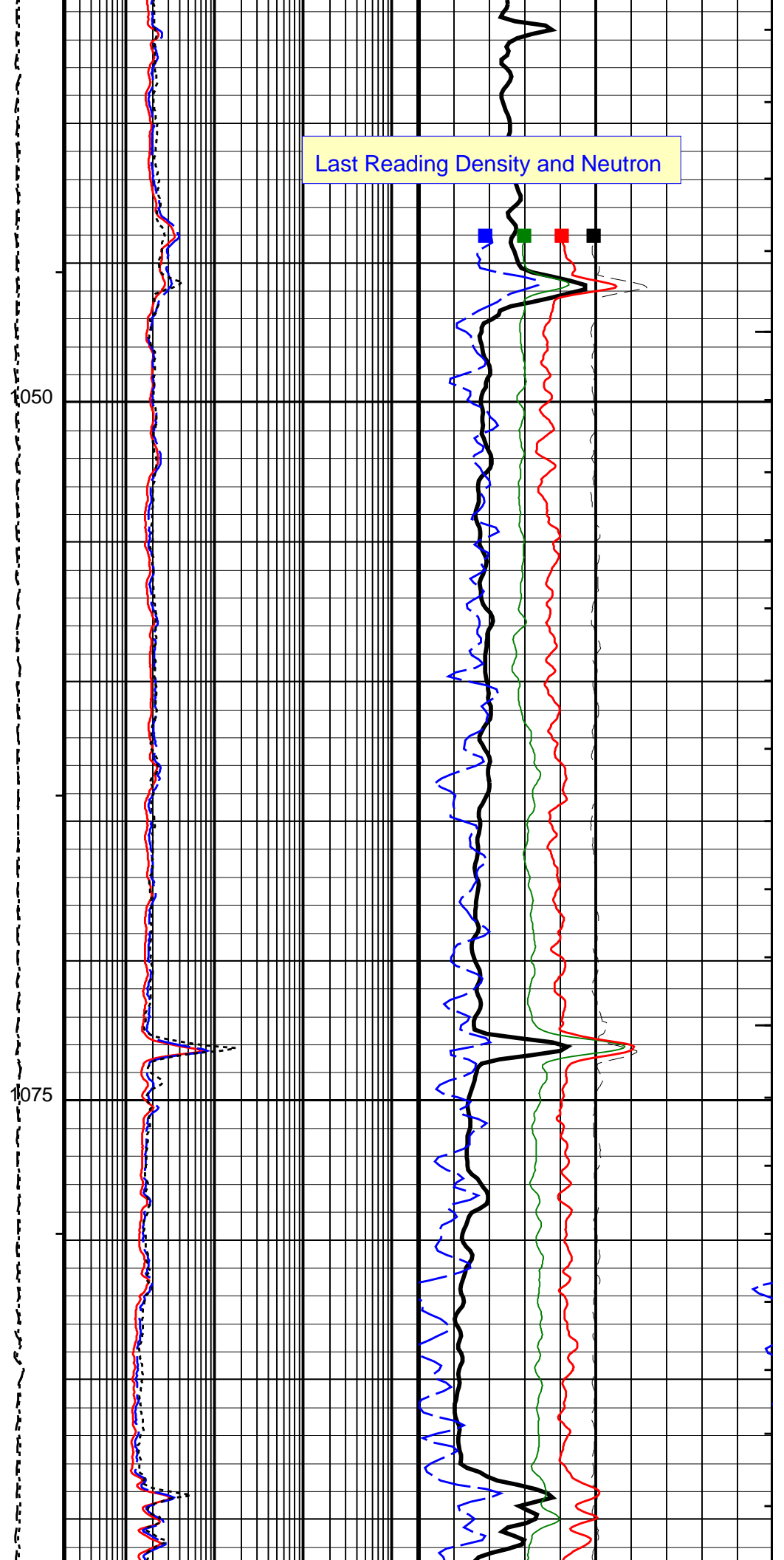
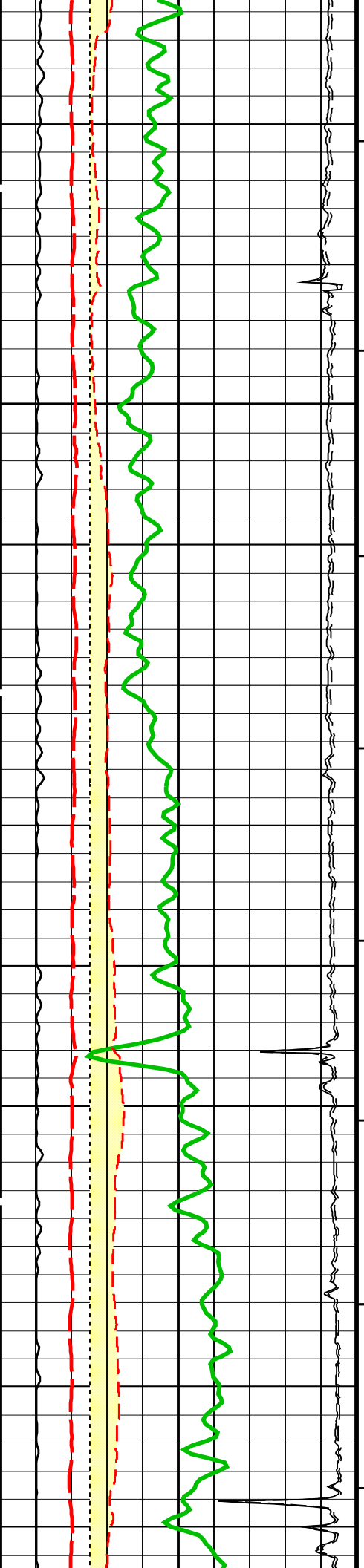


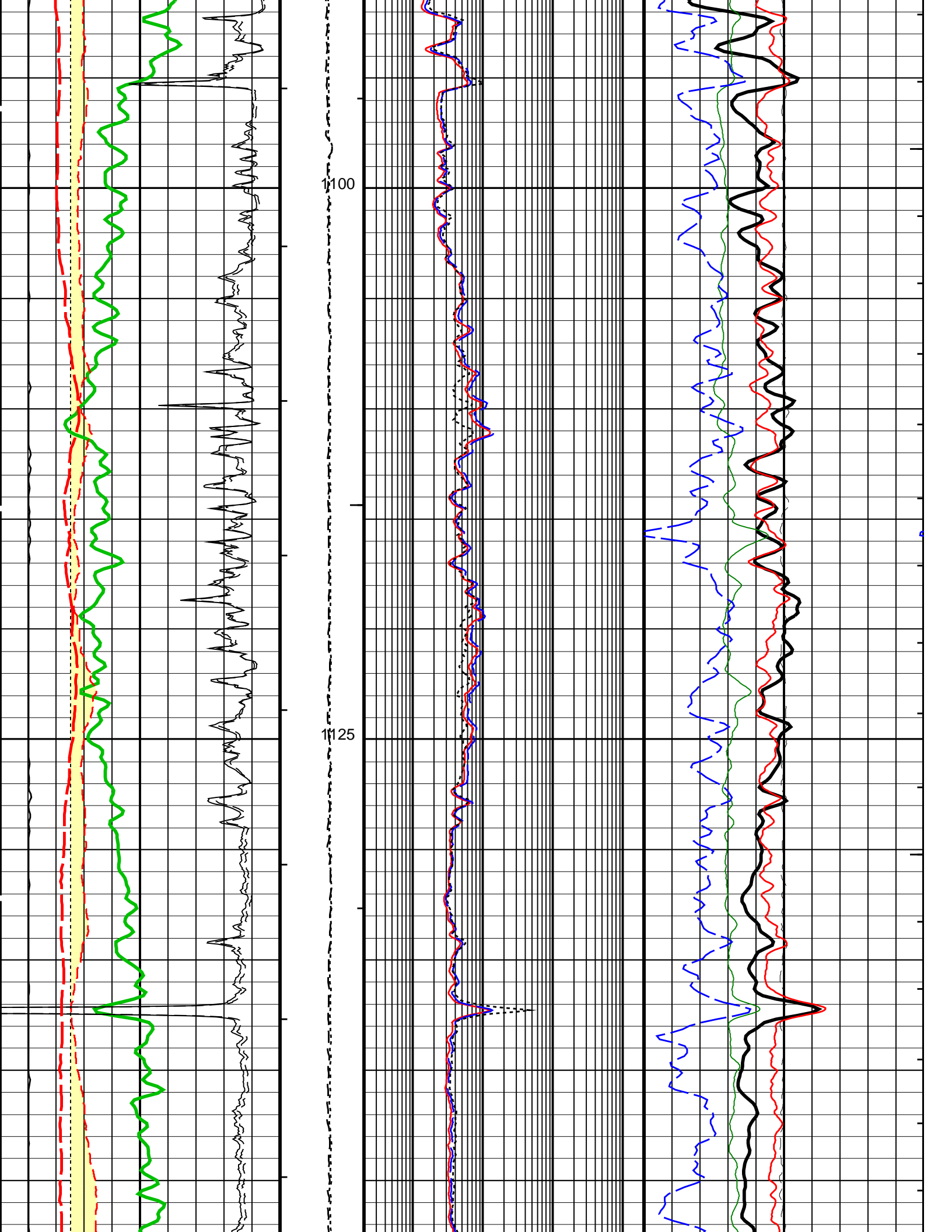


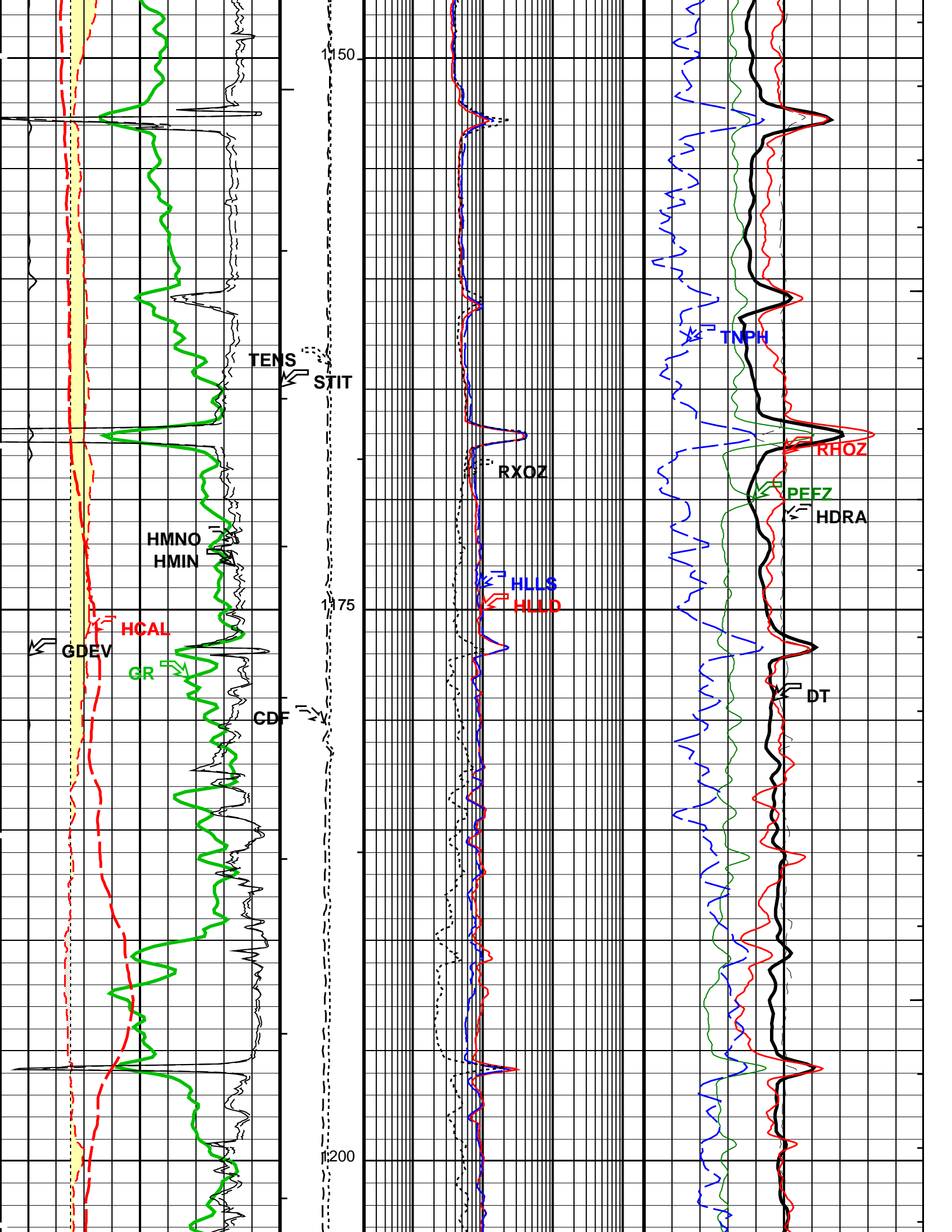


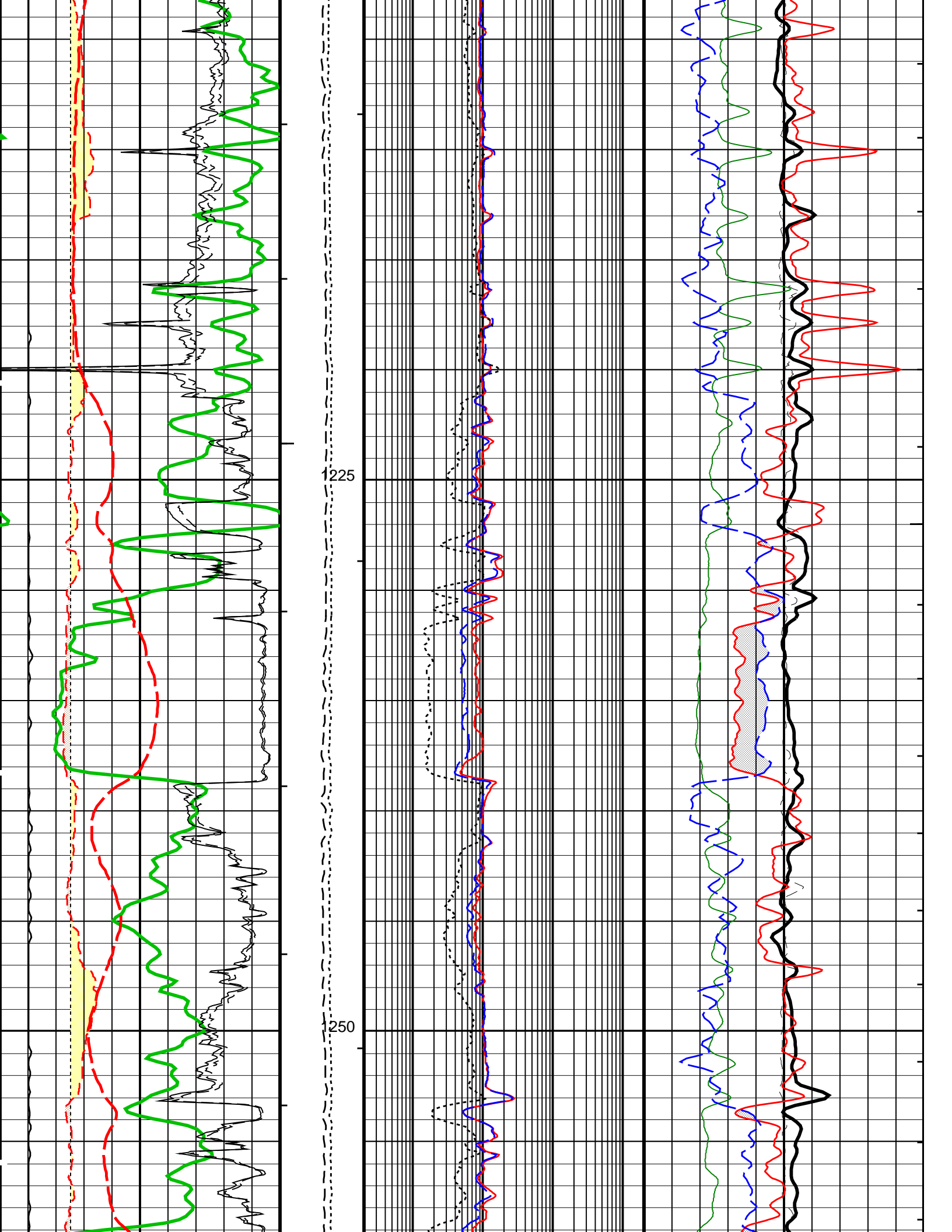


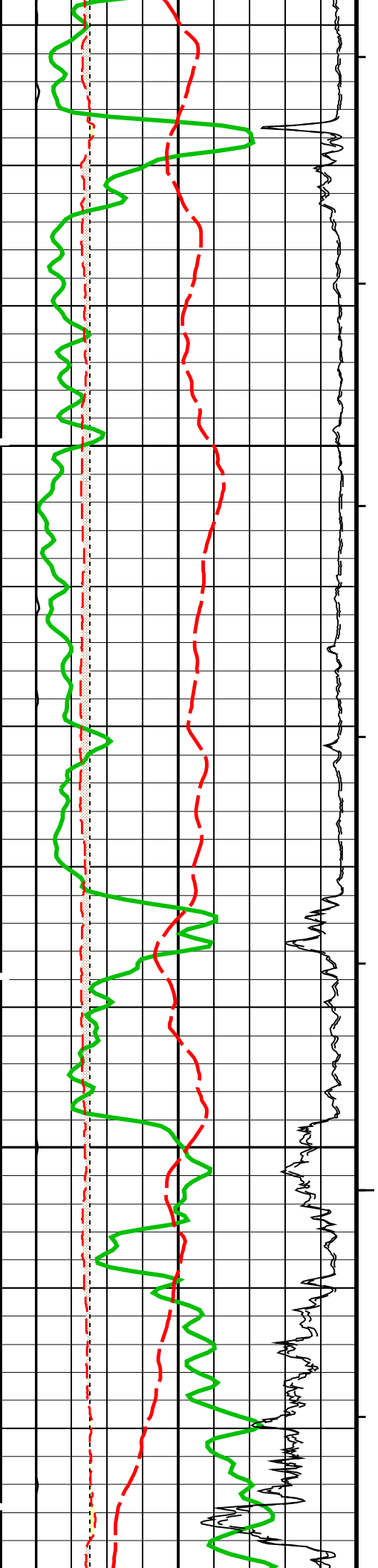






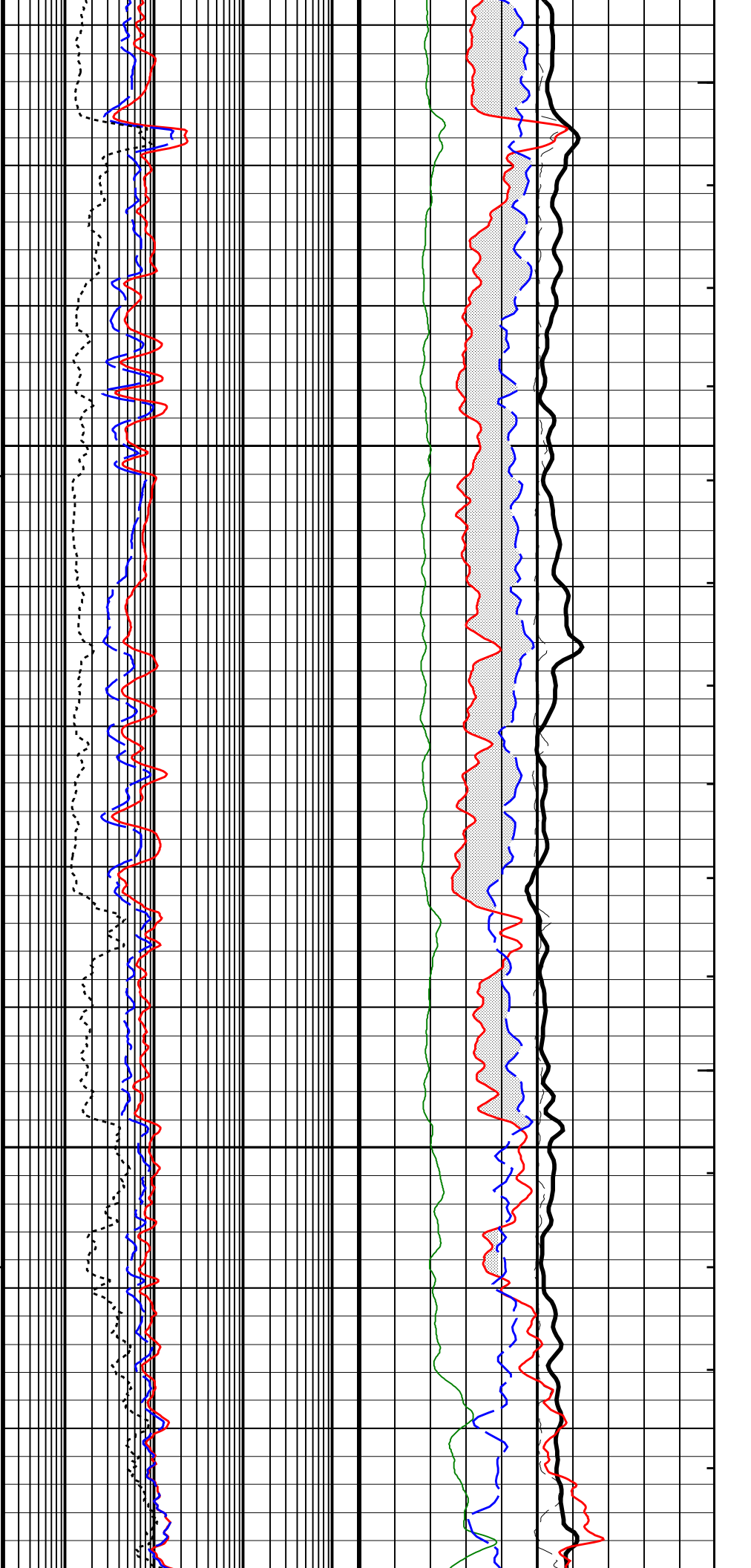


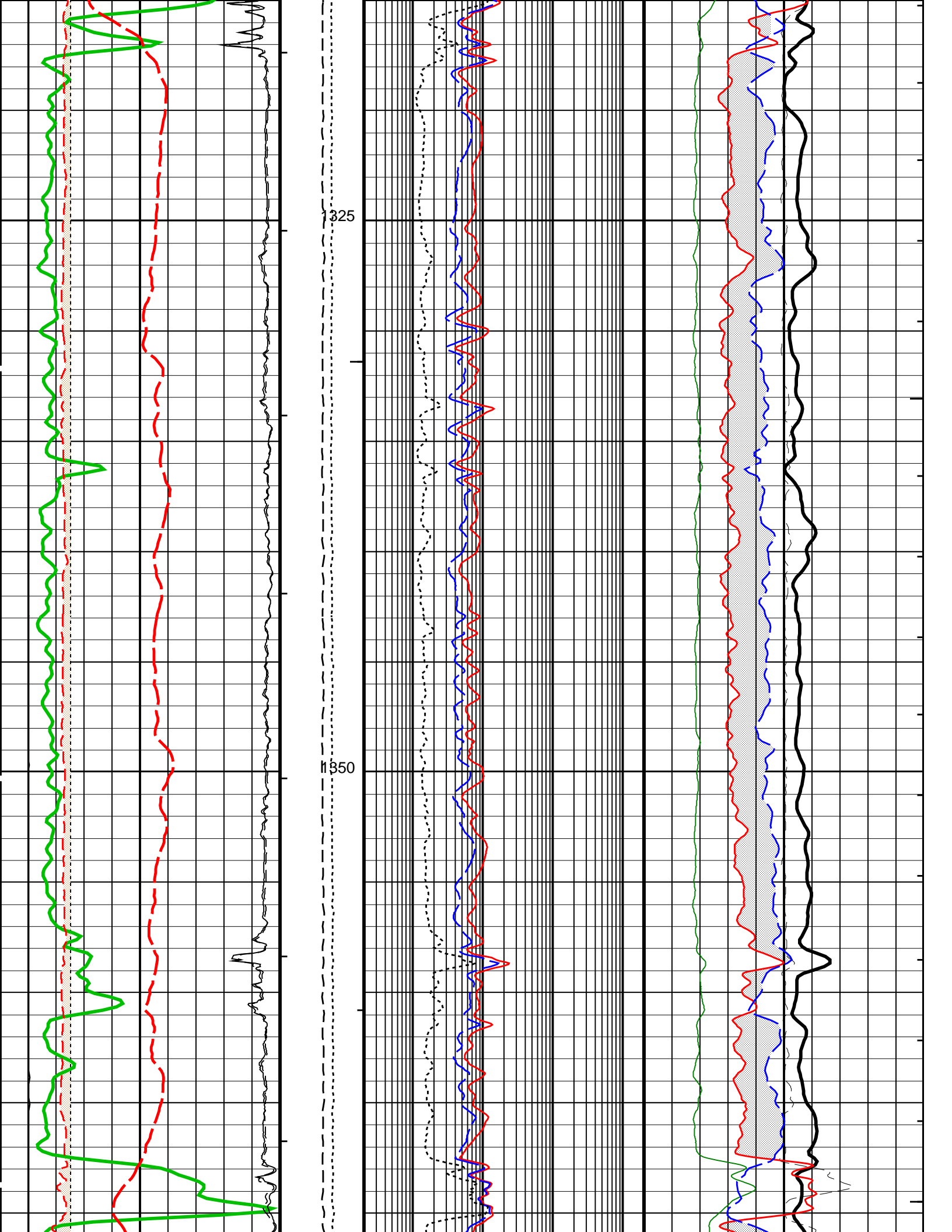


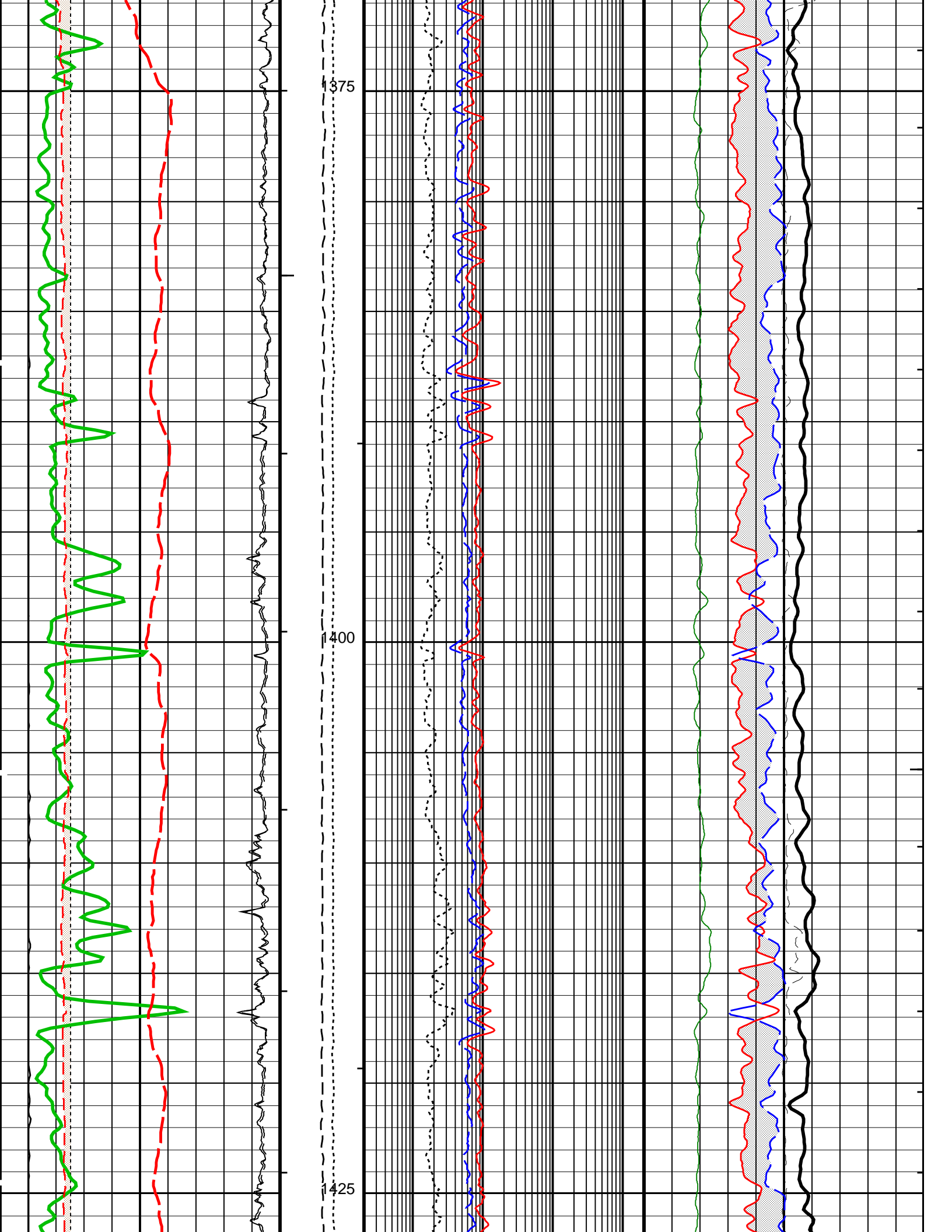


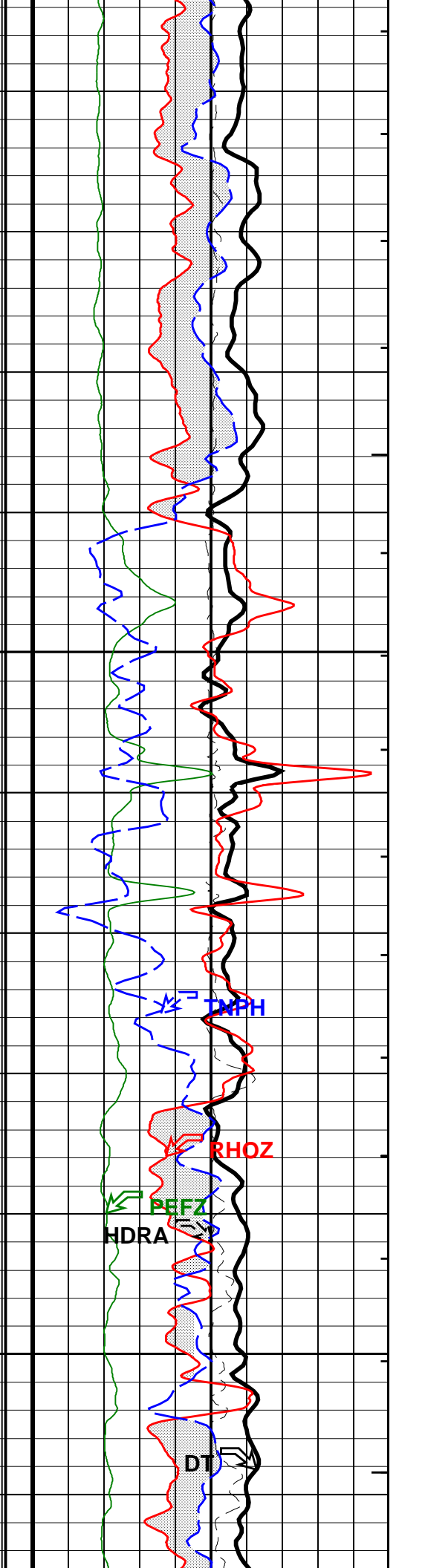
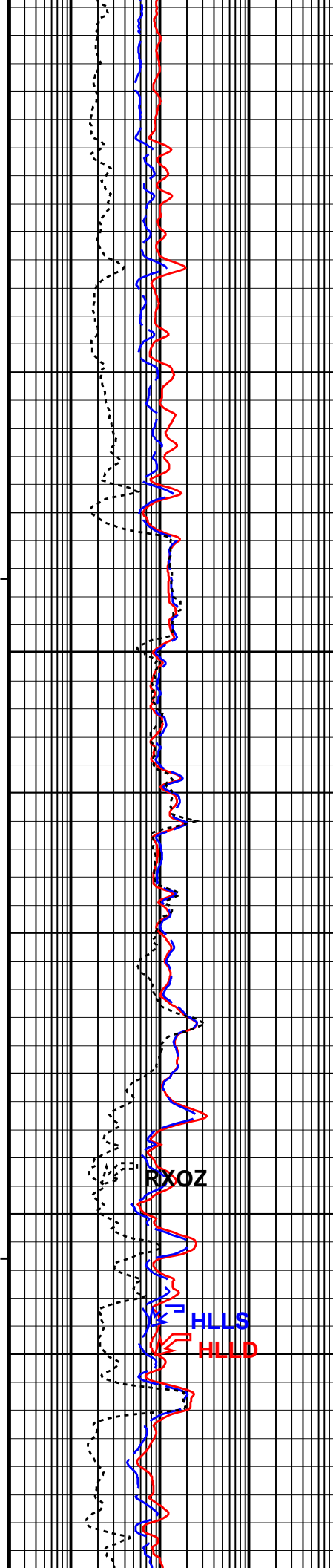
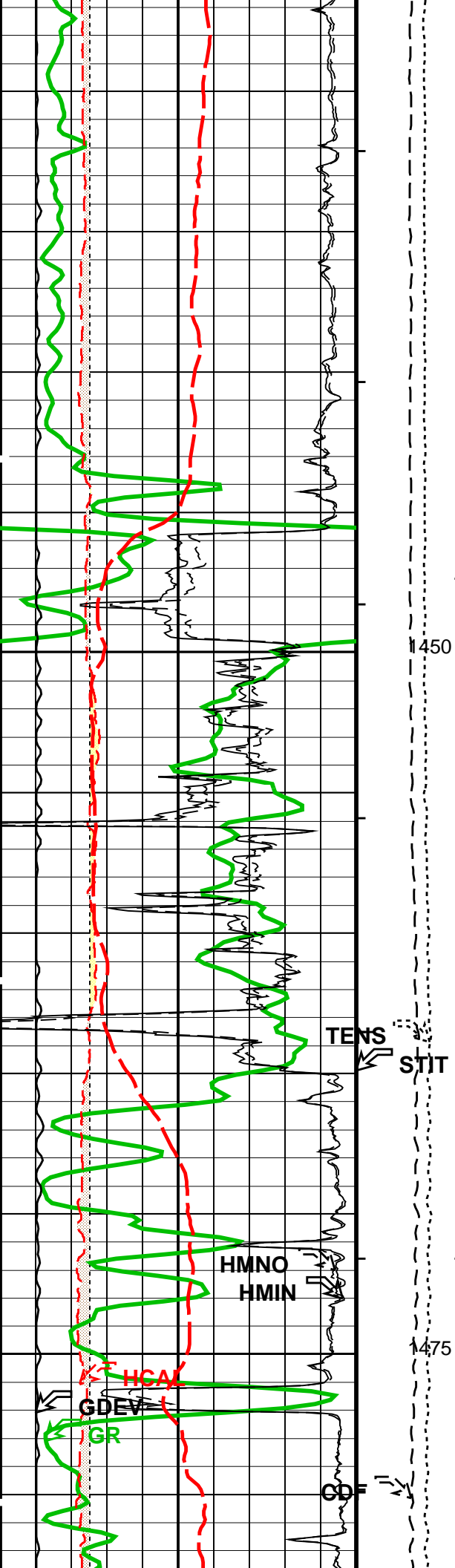
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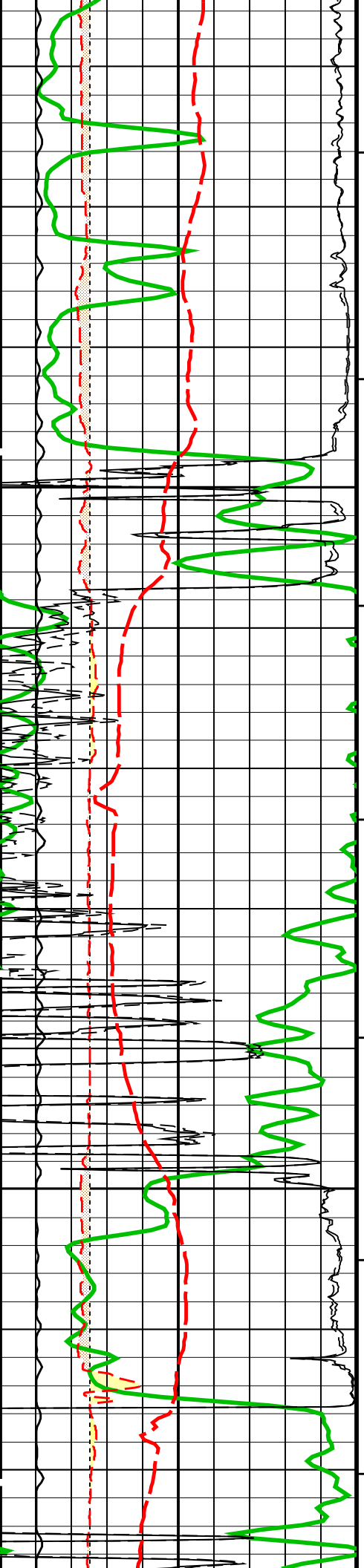
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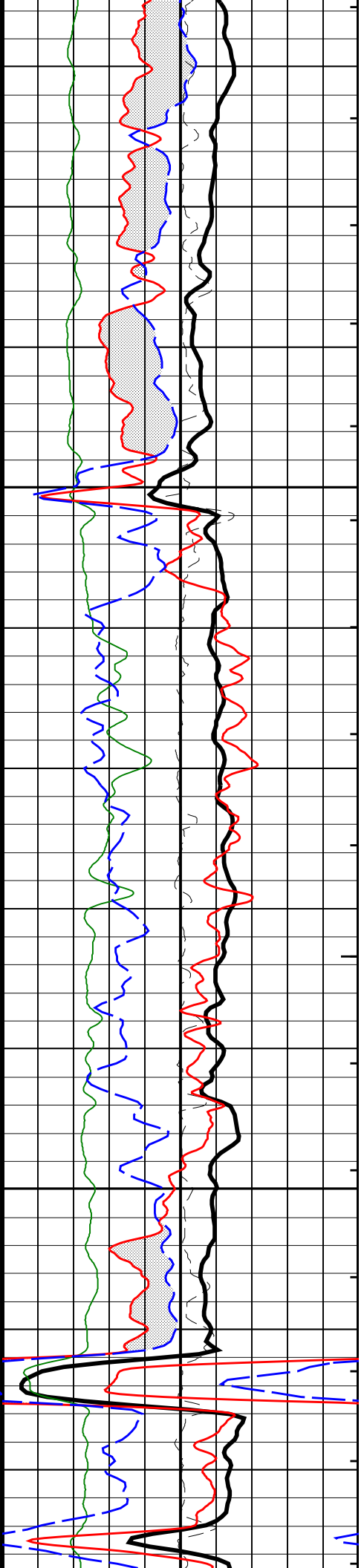
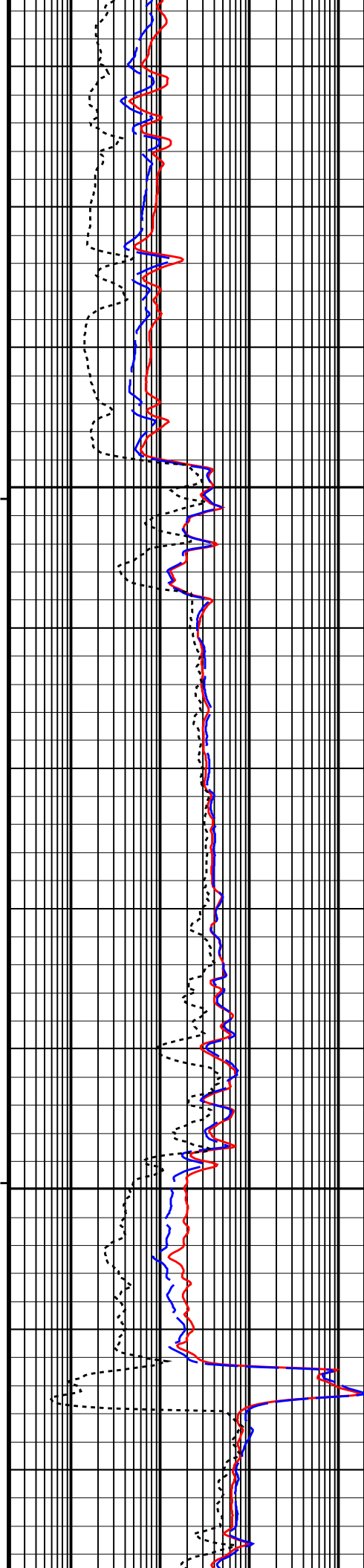


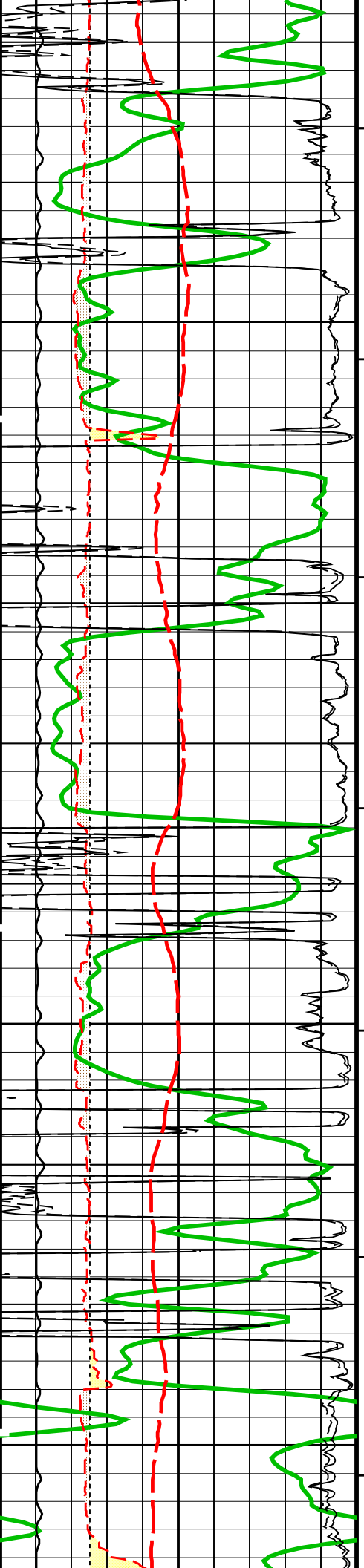




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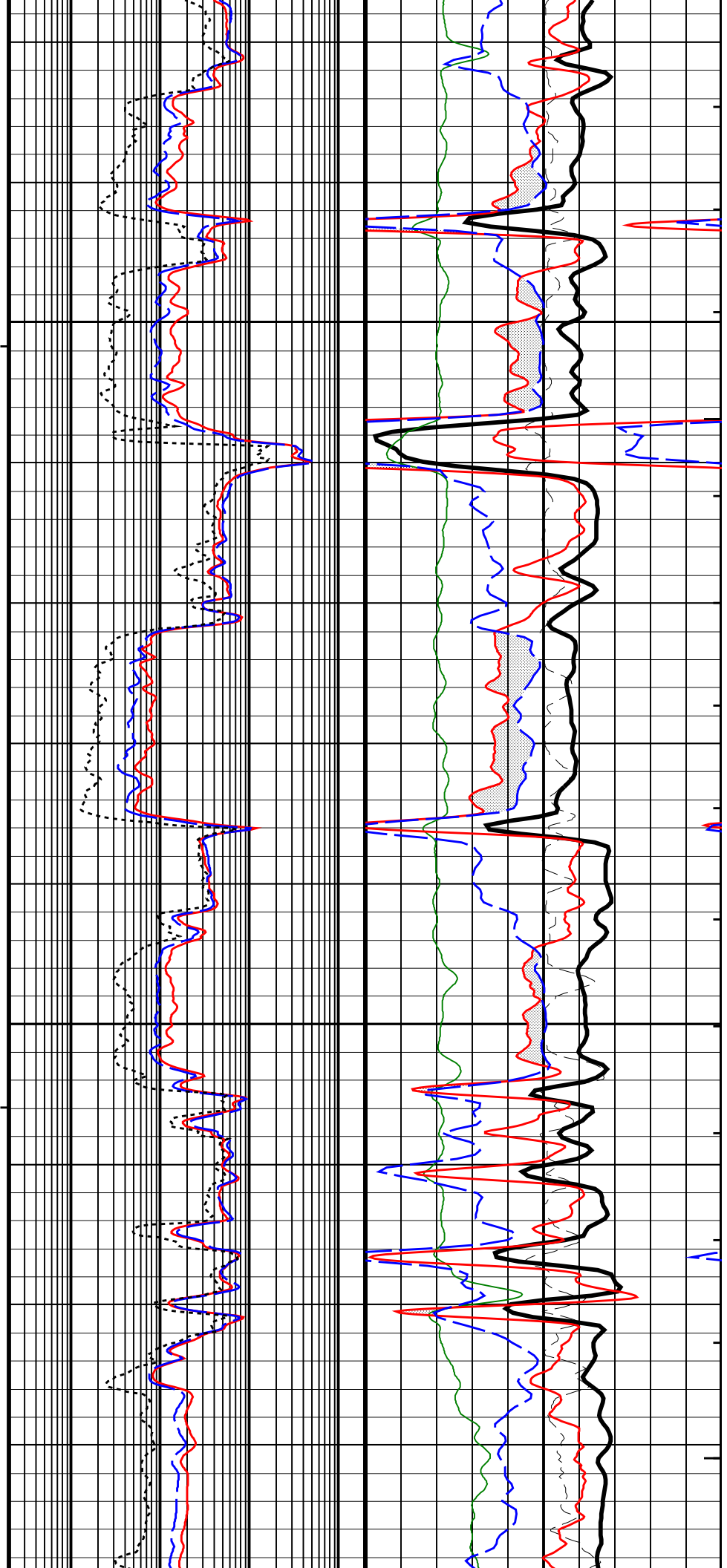
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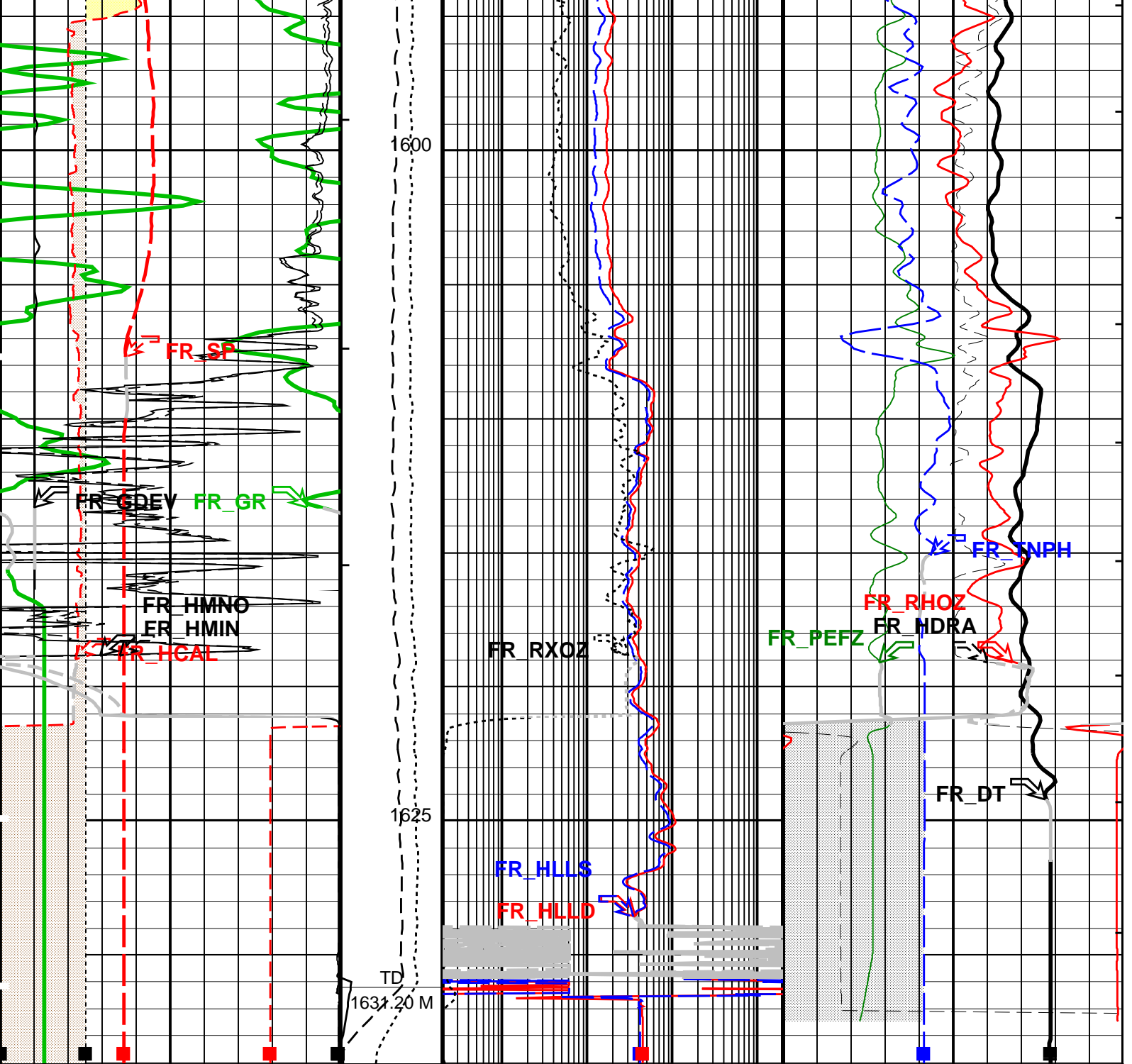




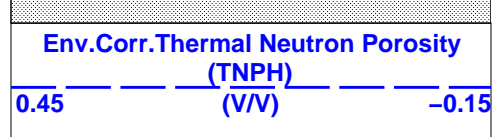
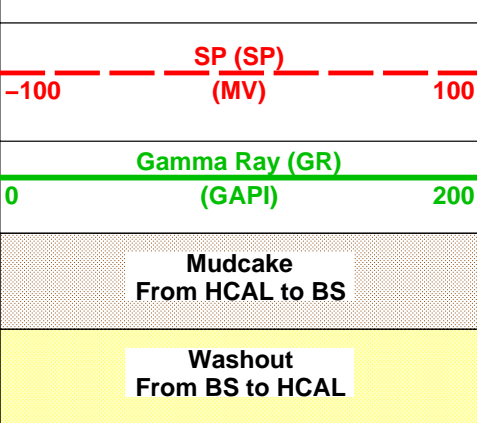
1550

575





Bit Size (BS) (IN)	Tension (TENS) (LBF)	Laterolog Deep Resistivity (HLLD) (OHMM)	Delta-T (DT) (US/F)
6	0 4000	0.2 2000	140 40
Computed Micro Inverse (HMIN) (OHMM)	Calibrated Downhole Force (CDF) (LBF)	Laterolog Shallow Resistivity (HLLS) (OHMM)	Density Correction (HDRA) (G/C3)
20 0	0 2000	0.2 2000	-0.25 0.25
Computed Micro Normal (HMNO) (OHMM)		Std. Res. Invaded Zone Resistivity (RXOZ) (OHMM)	Std. Res. Formation Pe (PEFZ) (G/C3)
20 0		0.2 2000	0 10
HGNS Deviation (GDEV) (DEG)			Std. Res. Formation Density (RHOZ) (G/C3)
-10 90			1.95 2.95
HILT Caliper (HCAL) (IN)			Density/Porosity Cross Over From RHOZ to TNPH
6 16			



PIP SUMMARY

- └ Integrated Hole Volume Minor Pip Every 10 F3
 - └ Integrated Hole Volume Major Pip Every 100 F3
 - └ Integrated Cement Volume Minor Pip Every 10 F3
 - └ Integrated Cement Volume Major Pip Every 100 F3
- Integrated Transit Time Minor Pip Every 1 MS └
Integrated Transit Time Major Pip Every 10 MS └

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
HALS-B: HILT Azimuthal Laterolog Sonde B		
A2EX	HALS Type of Image	Conductivities
AGOS	HALS-B A2 Extended (Groningen effect)	OFF
ARIP_LTS	HALS-GPIT OFFSET	-90 IN
ARIP_SHOULDER	HALS Long Tool String Correction	OFF
BHCC	HALS Shoulder Correction	OFF
BHS	HALS Borehole Correction	ON
BHT	Borehole Status	OPEN
DHOP	Bottom Hole Temperature (used in calculations)	95.6 DEGC
	Diameter & Eccentering used in HALS Borehole Corrections	Caliper_Eccentered
GCSE	Generalized Caliper Selection	HCAL
GDEV	Average Angular Deviation of Borehole from Normal	0 DEG
GGRD	Geothermal Gradient	0.018227 DC/M
GRCC	HALS Groningen Correction	OFF
GRSE	Generalized Mud Resistivity Selection	HALS_RESIST
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE
HLAC	HALS-B Loop A Coefficient	LOW
HLMO	HALS Logging Mode	STAN
HMSO	HALS Mechanical Standoff	1.5 IN
HRUN	HALS-B Record Uncalibrated Channels	NO
IMOS	HALS Image Orientation	OFF
ISSBAR	Barite Mud Switch	NOBARITE
LIMP	HALS Left Image Processing	DeepRaw
LOP1	HALS-B Mode 1 Loop Mode	OFF
LOP2	HALS-B Mode 2 Loop Mode	OFF
LOP3	HALS-B Mode 3 Loop Mode	OFF
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE
RIMP	HALS Right Image Processing	ShallowRaw
RTCMP	HALS Rt Computation	Hals_LowRes
RTRE	HALS Resistivity Threshold	100000 OHMM
SHT	Surface Hole Temperature	31.6 DEGC
SPCO	HALS-B Special Power Connection	OFF
TCOR	HALS TLC Correction	OFF
UNSPK	HALS Despiking Filter Option	OFF
UNSPK_THOLD	HALS Despiking Filter Threshold (in %)	20 %
UNSPK_WINDOW	HALS Despiking Filter Window (inches)	6 IN
DSLT-FTB: Digitizing		
	Sonic Logging Tool	
	Telemetry Mode	DSLC_FT B
	DSLT Firing Mode	BHC
AGC	Automatic Gain Control Status	ON
AMSG	Auxiliary Minimum Sliding Gate	140 US
CBAF	CBL Adjustment Factor	1
CBLG	CBL Gate Width	45 US
CDTS	C-Delta-T Shale	100 US/F
DDEL	Digitizing Delay	0 US
DETE	Delta-T Detection	E2
DFAD	Digital First Arrival Detection Switch	HOST
DIVL	DSLT Depth Sampling Interval	20
DRCS	DSLT DLIS Recording Size	150
DSIN	Digitizing Sample Interval	10
DTCM	Delta-T Computation Mode	FULL

DTF	Delta-T Fluid	189	US/F
DTFS	DSLCL Telemetry Frame Size	336	
DTM	Delta-T Matrix	56	US/F
DWCO	Digitizing Word Count	150	
GAI	Manual Gain	40	
HRSP	High Resolution Spacing	5.118	IN
ITTS	Integrated Transit Time Source	DT	
LTUT	Lower to Upper Transmitter Spacing Ratio	1	
MAHTR	Manual High Threshold Reference	120	
MGAI	Maximum Gain	60	
MIGA	Minimum Gain	1	
MNHTR	Minimum High Threshold Reference	100	
MODE	Sonic Firing Mode	BHC	
NMSG	Near Minimum Sliding Gate	140	US
NMXG	Near Maximum Sliding Gate	970	US
NUMP	Number of Detection Passes	2	
RATE	Firing Rate	R15	
RDFA	Reset DFAD	OFF	
SDTH	Switch Down Threshold	20000	
SFAF	Sonic Formation Attenuation Factor	10	DB/M
SGAD	Sliding Gate Status	ON	
SGAI	Selectable Acquisition Gain	AUTO	
SGCL	Sliding Gate Closing Delta-T	140	US/F
SGCW	Sliding Gate Closing Width	25	US
SGDT	Sliding Gate Delta-T	40	US/F
SGW	Sliding Gate Width	110	US
SLEV	Signal Level for AGC	5000	
SPFS	Sonic Porosity Formula	RAYMER_HUNT	
SPSO	Sonic Porosity Source	DT	
SUTH	Switch Up Threshold	1000	
VDLG	VDL Manual Gain	40	
WAGC	Waveform AGC Allow/Disallow	OFF	
WGAI	Waveform Manual Gain	20	
WGDT	Waveform Gain Delta-T	240	US/F
WGIN	Waveform Gain Interval	2540	US
WMOD	Waveform Firing Mode	FULL	
HILTB--FTB: High resolution Integrated Logging Tool--DTS			
BHFL	Borehole Fluid Type	WATER	
BHFL_TLD	HILT Nuclear Mud Base	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	95.6	DEGC
BSCO	Borehole Salinity Correction Option	YES	
CCCO	Casing & Cement Thickness Correction Option	NO	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	STAN	
EXSICL	External Shale Indicator Clean Value	20	
EXSISH	External Shale Indicator Shale Value	150	
FD	Fluid Density	1	G/C3
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
FPHI	Form Factor Porosity Source	DPHZ	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	YES	
GCLF	Germany Coal-like Formation Option	NO	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	HALS_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HACPP	Accelerometer PROM Presence	PRESENT_FILE	
HART	Accelerometer Reference Temperature	20	DEGC
HDCOD	HILT Density Coal detection	2	G/C3
HDSAD	HILT Density Salt detection	2.1	G/C3
HILT_GAS_DENSITY	HILT Gas Downhole Density	0	G/C3
HILT_GAS_OPTION	HILT Gas Computation Option	OFF	
HNCOD	HILT Neutron Coal detection	45	PU
HNSAD	HILT Neutron Salt detection	5	PU
HPHIECUT	HILT effective Porosity Cutoff	5	PU
HSCO	Hole Size Correction Option	YES	
HSIS	HILT Shale Indicator Selection	GR	
HSSO	HRDD Nuclear Source Strength Option	NORMAL	
HSWCUT	HILT Water Saturation from AITH cutoff	50	%
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MDEN	Matrix Density	2.71	G/C3
MHC0	MCFL B0 Contrast Correction Coefficient	2.2e-005	OHMS
MHC1	MCFL B1 Contrast Correction Coefficient	3.2e-005	OHMS
MHCC	MCFL High Contrast Correction Switch	NO	
MPOF	MCFL Processing Operation Mode	ON	
MWCO	Mud Weight Correction Option	YES	
NAAC	HRDD APS Activation Correction	OFF	
NMT	HILT Nuclear Mud Type	NOBARITE	
NPRM	HRDD Processing Mode	StdProc	

NPRM	HRDD Processing Mode	StuRes	1	IN
NSAR	HRDD Depth Sampling Rate	NO_FILTER		
PEA_FILTER	PEA Filter	NO_FILTER		
PEFC_FILTER	PEFC Filter	NO_FILTER		
PHIMAX	HILT max porosity	35		PU
PTCO	Pressure/Temperature Correction Option	YES		
SDAT	Standoff Data Source	SOCN		
SEXP_HILT	HILT Saturation Exponent	2		
SHT	Surface Hole Temperature	31.6		DEGC
SOCN	Standoff Distance	0		IN
SOCO	Standoff Correction Option	YES		
BSP: Bridle SP				
SPNV	SP Next Value	0		MV
HOLEV: Integrated Hole/Cement Volume				
BHS	Borehole Status	OPEN		
BHT	Bottom Hole Temperature (used in calculations)	95.6		DEGC
FCD	Future Casing (Outer) Diameter	7		IN
GCSE	Generalized Caliper Selection	HCAL		
GDEV	Average Angular Deviation of Borehole from Normal	0		DEG
GGRD	Geothermal Gradient	0.018227		DC/M
GRSE	Generalized Mud Resistivity Selection	HALS_RESIST		
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE		
HVCS	Integrated Hole Volume Caliper Selection	HCAL		
ISSBAR	Barite Mud Switch	NOBARITE		
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE		
SHT	Surface Hole Temperature	31.6		DEGC
STI: Stuck Tool Indicator				
LBFR	Trigger for MAXIS First Reading Label	STI		
STKT	STI Stuck Threshold	0.762		M
TDD	Total Depth - Driller	1630.00		M
TDL	Total Depth - Logger	1631.20		M
System and Miscellaneous				
ALTDPCCHAN	Name of alternate depth channel	SpeedCorrectedDepth		
BS	Bit Size	8.500		IN
BSAL	Borehole Salinity	28000.00		PPM
CSIZ	Current Casing Size	9.625		IN
CWEI	Casing Weight	36.00		LB/F
DFD	Drilling Fluid Density	9.18		LB/G
DO	Depth Offset for Playback	1.3		M
MST	Mud Sample Temperature	27.80		DEGC
PBVSADP	Use alternate depth channel for playback	NO		
PP	Playback Processing	RECOMPUTE		
RMFS	Resistivity of Mud Filtrate Sample	0.2060		OHMM
RW	Resistivity of Connate Water	1.0000		OHMM
TD	Total Depth	1631.2		M
TWS	Temperature of Connate Water Sample	37.78		DEGC

Format: RES_SON_DENS_NEUT_GR_SP_HCAL_200 Vertical Scale: 1:200 Graphics File Created: 12-Apr-2007 13:27

OP System Version: 14C0-302

MCM

HALS-B	SRPC-3243-Q4_2006	DSL-FTB	SRPC-3243-Q4_2006
HILTB-FTB	SRPC-3243-Q4_2006	DTC-H	SRPC-3243-Q4_2006
BSP	SRPC-3243-Q4_2006		

Input DLIS Files

HALS_SONIC_TLD_MCFL_021LUP FN:29 12-Apr-2007 10:27 1632.8 M 8.8 M

Output DLIS Files

DEFAULT HALS_SONIC_TLD_MCFL_102PUP FN:8 PRODUCER 12-Apr-2007 13:27

Schlumberger

High Resolution Pass

MAXIS Field Log

Input DLIS Files

Output DLIS Files

DEFAULT

HALS_SONIC_TLD_MCFL_116PUP FN:22

PRODUCER

13-Apr-2007 14:29

1495.0 M

1435.5 M

Integrated Hole/Cement Volume Summary

Hole Volume = 74.67 F3

Cement Volume = 22.42 F3 (assuming 7.00 IN casing O.D.)

Computed from 1495.0 M to 1435.6 M using data channel(s) HCAL

OP System Version: 14C0-302

MCM

HALS-B
HILTB-FTB
BSP

SRPC-3243-Q4_2006
SRPC-3243-Q4_2006
SRPC-3243-Q4_2006

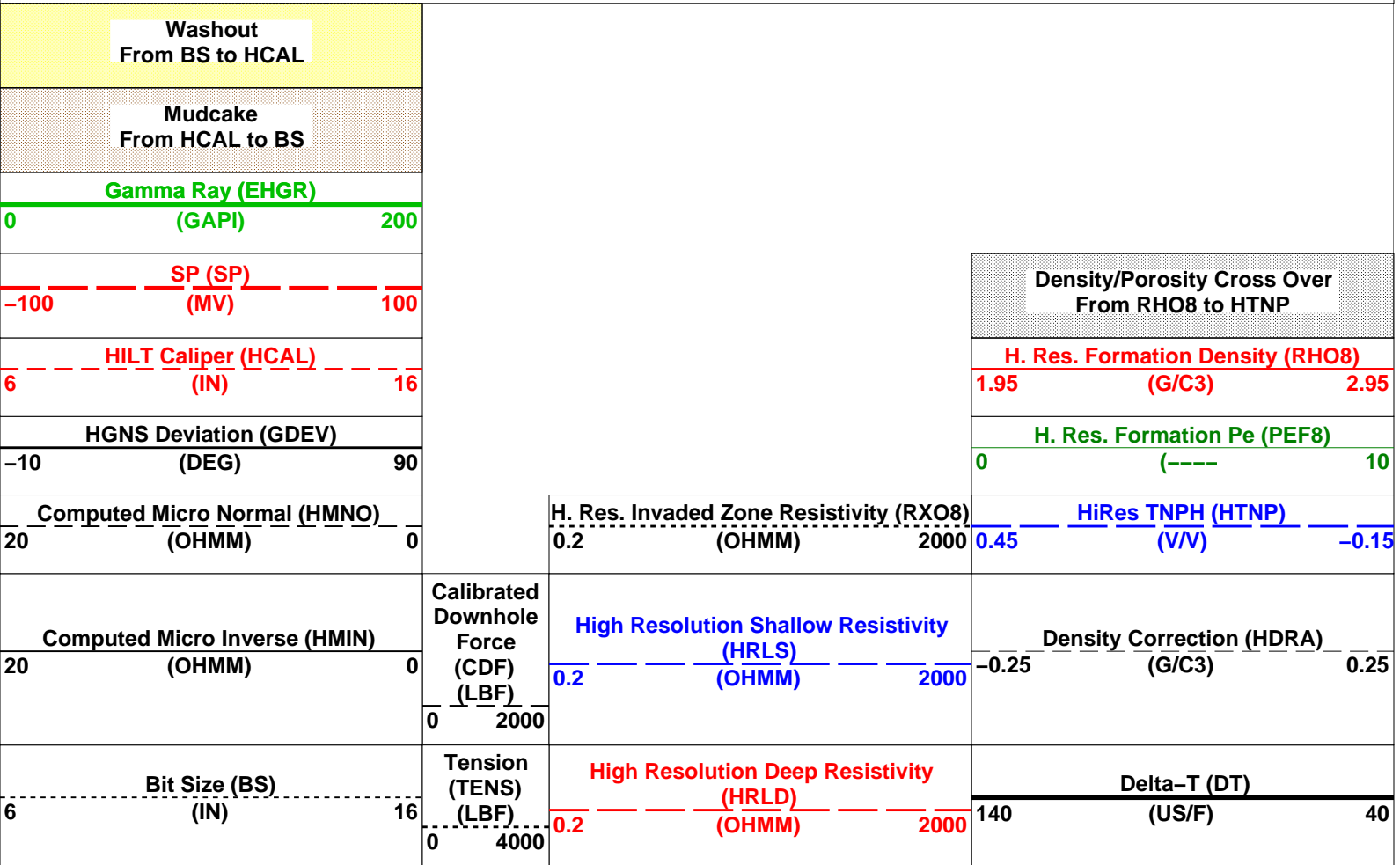
DSLTT-FTB
DTC-H

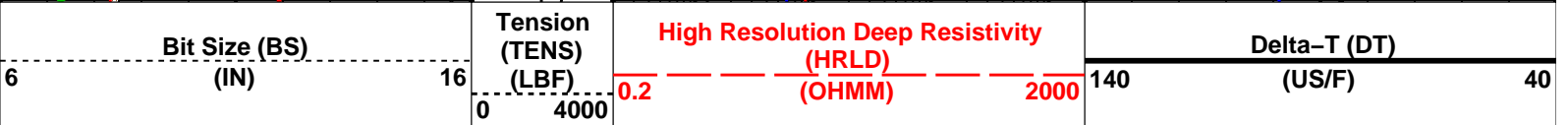
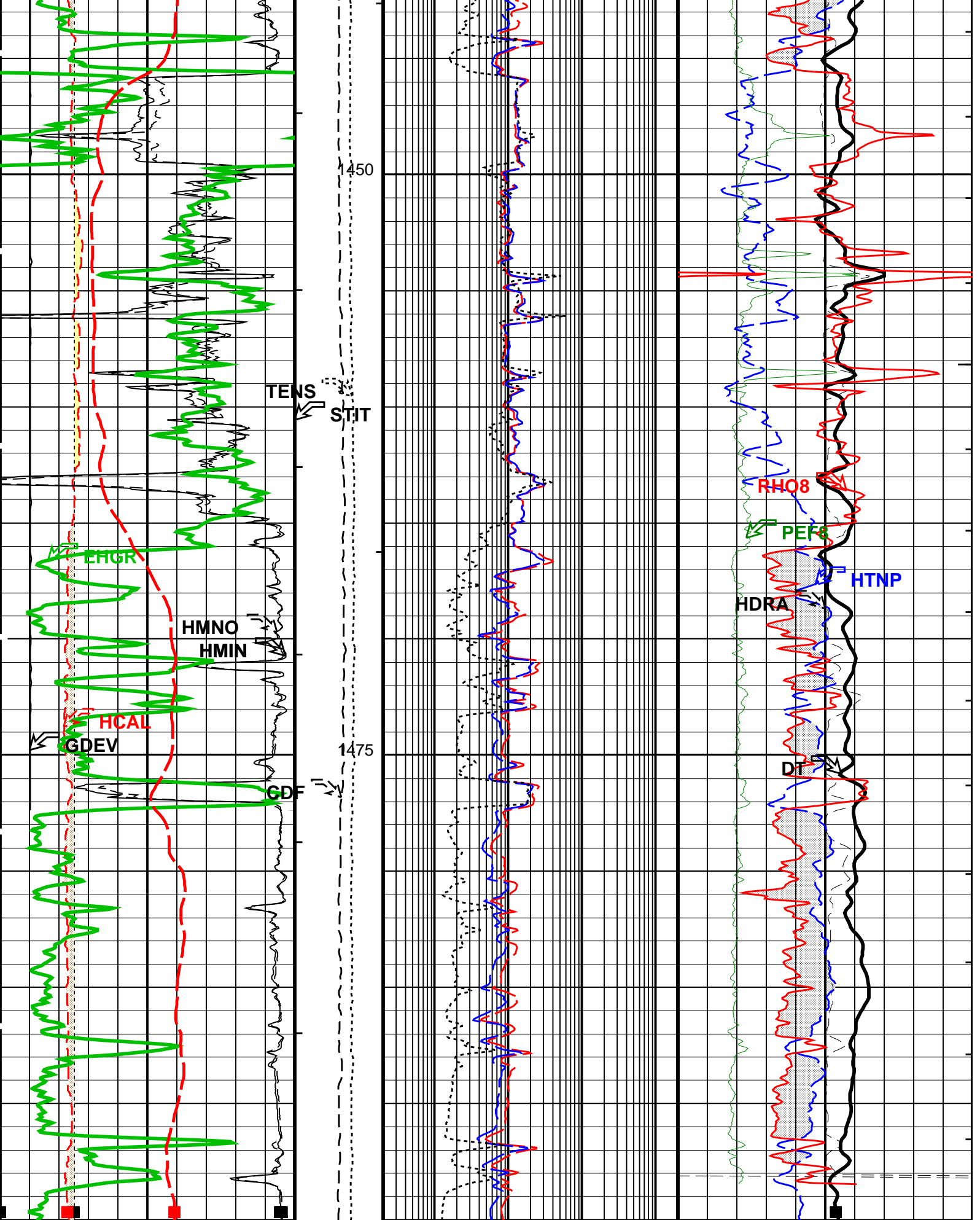
SRPC-3243-Q4_2006
SRPC-3243-Q4_2006

PIP SUMMARY

- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
 - └ Integrated Cement Volume Minor Pip Every 10 F3
 - └ Integrated Cement Volume Major Pip Every 100 F3
- Integrated Transit Time Minor Pip Every 1 MS └
- Integrated Transit Time Major Pip Every 10 MS └

Time Mark Every 60 S





Computed Micro Inverse (HMIN) 20 (OHMM) 0	Calibrated Downhole Force (CDF) (LBF) 0 2000	High Resolution Shallow Resistivity (HRLS) (OHMM) 0.2 2000	Density Correction (HDRA) (G/C3) -0.25 0.25
Computed Micro Normal (HMNO) 20 (OHMM) 0		H. Res. Invaded Zone Resistivity (RXO8) (OHMM) 0.2 2000	HiRes TNPH (HTNP) (V/V) 0.45 -0.15
HGNS Deviation (GDEV) -10 (DEG) 90			H. Res. Formation Pe (PEF8) 0 (----) 10
HILT Caliper (HCAL) (IN) 6 16			H. Res. Formation Density (RHO8) (G/C3) 1.95 2.95
SP (SP) (MV) -100 100			Density/Porosity Cross Over From RHO8 to HTNP
Gamma Ray (EHGR) (GAPI) 0 200			
Mudcake From HCAL to BS			
Washout From BS to HCAL			

PIP SUMMARY

- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
 - └ Integrated Cement Volume Minor Pip Every 10 F3
 - └ Integrated Cement Volume Major Pip Every 100 F3
- Integrated Transit Time Minor Pip Every 1 MS └
- Integrated Transit Time Major Pip Every 10 MS └

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
HALS-B: HILT Azimuthal Laterolog Sonde B		
A2EX	HALS Type of Image	Conductivities
AGOS	HALS-B A2 Extended (Groningen effect)	OFF
ARIP_LTS	HALS-GPIT OFFSET	-90 IN
ARIP_SHOULDER	HALS Long Tool String Correction	OFF
BHCC	HALS Shoulder Correction	OFF
BHCC	HALS Borehole Correction	ON
BHS	Borehole Status	OPEN
BHT	Bottom Hole Temperature (used in calculations)	95.6 DEGC
DHOP	Diameter & Eccentering used in HALS Borehole Corrections	Caliper_Eccentered
GCSE	Generalized Caliper Selection	HCAL
GDEV	Average Angular Deviation of Borehole from Normal	0 DEG
GGRD	Geothermal Gradient	0.018227 DC/M
GRCC	HALS Groningen Correction	OFF
GRSE	Generalized Mud Resistivity Selection	HALS_RESIST
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE
HLAC	HALS-B Loop A Coefficient	LOW
HLMO	HALS Logging Mode	HIRES
HMSO	HALS Mechanical Standoff	1.5 IN
HRUN	HALS-B Record Uncalibrated Channels	NO
IMOS	HALS Image Orientation	OFF
ISSBAR	Barite Mud Switch	NOBARITE
LIMP	HALS Left Image Processing	DeepRaw
LOP1	HALS-B Mode 1 Loop Mode	OFF
LOP2	HALS-B Mode 2 Loop Mode	OFF
LOP3	HALS-B Mode 3 Loop Mode	OFF
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE
RIMP	HALS Right Image Processing	ShallowRaw
RTCMP	HALS Rt Computation	Hals_Highres
RTRE	HALS Resistivity Threshold	100000 OHMM
SHT	Surface Hole Temperature	31.6 DEGC
SPCO	HALS-B Special Power Connection	OFF
TCOR	HALS TLC Correction	OFF
UNSPK	HALS Despiking Filter Option	OFF

UNSPK_HOLD	HALS Despiking Filter Threshold (in %)	0	%
UNSPK_WINDOW	HALS Despiking Filter Window (inches)	6	IN
	DSLTL-FTB: Digitizing Sonic Logging Tool		
	Telemetry Mode	DSLCL_FTB	
	DSLTL Firing Mode	BHC	
AGC	Automatic Gain Control Status	ON	
AMSG	Auxiliary Minimum Sliding Gate	140	US
CBAF	CBL Adjustment Factor	1	
CBLG	CBL Gate Width	45	US
CDTS	C-Delta-T Shale	100	US/F
DDEL	Digitizing Delay	0	US
DETE	Delta-T Detection	E2	
DFAD	Digital First Arrival Detection Switch	HOST	
DIVL	DSLTL Depth Sampling Interval	20	
DRCS	DSLTL DLIS Recording Size	150	
DSIN	Digitizing Sample Interval	10	
DTCM	Delta-T Computation Mode	FULL	
DTF	Delta-T Fluid	189	US/F
DTFS	DSLCL Telemetry Frame Size	336	
DTM	Delta-T Matrix	56	US/F
DWCO	Digitizing Word Count	150	
GAI	Manual Gain	40	
HRSP	High Resolution Spacing	5.118	IN
ITTS	Integrated Transit Time Source	DT	
LTUT	Lower to Upper Transmitter Spacing Ratio	1	
MAHTR	Manual High Threshold Reference	120	
MGAI	Maximum Gain	60	
MIGA	Minimum Gain	1	
MNHTR	Minimum High Threshold Reference	100	
MODE	Sonic Firing Mode	BHC	
NMSG	Near Minimum Sliding Gate	140	US
NMXG	Near Maximum Sliding Gate	970	US
NUMP	Number of Detection Passes	2	
RATE	Firing Rate	R15	
RDFA	Reset DFAD	OFF	
SDTH	Switch Down Threshold	20000	
SFAF	Sonic Formation Attenuation Factor	10	DB/M
SGAD	Sliding Gate Status	ON	
SGAI	Selectable Acquisition Gain	AUTO	
SGCL	Sliding Gate Closing Delta-T	140	US/F
SGCW	Sliding Gate Closing Width	25	US
SGDT	Sliding Gate Delta-T	40	US/F
SGW	Sliding Gate Width	110	US
SLEV	Signal Level for AGC	5000	
SPFS	Sonic Porosity Formula	RAYMER_HUNT	
SPSO	Sonic Porosity Source	DT	
SUTH	Switch Up Threshold	1000	
VDLG	VDL Manual Gain	40	
WAGC	Waveform AGC Allow/Disallow	OFF	
WGAI	Waveform Manual Gain	20	
WGDT	Waveform Gain Delta-T	240	US/F
WGIN	Waveform Gain Interval	2540	US
WMOD	Waveform Firing Mode	FULL	
	HILTB-FTB: High resolution Integrated Logging Tool-DTS		
BHFL	Borehole Fluid Type	WATER	
BHFL_TLD	HILT Nuclear Mud Base	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	95.6	DEGC
BSCO	Borehole Salinity Correction Option	YES	
CCCO	Casing & Cement Thickness Correction Option	NO	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
EXSICL	External Shale Indicator Clean Value	20	
EXSISH	External Shale Indicator Shale Value	150	
FD	Fluid Density	1	G/C3
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
FPHI	Form Factor Porosity Source	DPHZ	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	YES	
GCLF	Germany Coal-like Formation Option	NO	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	HALS_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HACPP	Accelerometer PROM Presence	PRESENT_FILE	
HART	Accelerometer Reference Temperature	20	DEGC
HDCOD	HILT Density Coal detection	2	G/C3
HDSAD	HILT Density Salt detection	2.1	G/C3
HILT_GAS_DENSITY	HILT Gas Downhole Density	0	G/C3
HILT_GAS_OPTION	HILT Gas Computation Option	OFF	
HNCOD	HILT Neutron Coal detection	45	PU
HNSAD	HILT Neutron Salt detection	5	PU
HNSAD	HILT Neutron Salt detection	5	PU

HPHIECUT	HILT Effective Porosity Cutoff	5	PU
HSCO	Hole Size Correction Option	YES	
HSIS	HILT Shale Indicator Selection	GR	
HSSO	HRDD Nuclear Source Strength Option	NORMAL	
HSWCUT	HILT Water Saturation from AITH cutoff	50	%
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MDEN	Matrix Density	2.71	G/C3
MHC0	MCFL B0 Contrast Correction Coefficient	2.2e-005	OHMS
MHC1	MCFL B1 Contrast Correction Coefficient	3.2e-005	OHMS
MHCC	MCFL High Contrast Correction Switch	NO	
MPOF	MCFL Processing Operation Mode	ON	
MWCO	Mud Weight Correction Option	YES	
NAAC	HRDD APS Activation Correction	OFF	
NMT	HILT Nuclear Mud Type	NOBARITE	
NPRM	HRDD Processing Mode	HiRes	
NSAR	HRDD Depth Sampling Rate	1	IN
PEA_FILTER	PEA Filter	NO_FILTER	
PEFC_FILTER	PEFC Filter	NO_FILTER	
PHIMAX	HILT max porosity	35	PU
PTCO	Pressure/Temperature Correction Option	YES	
SDAT	Standoff Data Source	SOCN	
SEXP_HILT	HILT Saturation Exponent	2	
SHT	Surface Hole Temperature	31.6	DEGC
SOCN	Standoff Distance	0	IN
SOCO	Standoff Correction Option	YES	
BSP: Bridle SP			
SPNV	SP Next Value	0	MV
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	95.6	DEGC
FCD	Future Casing (Outer) Diameter	7	IN
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	HALS_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HVCS	Integrated Hole Volume Caliper Selection	HCAL	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
SHT	Surface Hole Temperature	31.6	DEGC
STI: Stuck Tool Indicator			
LBFR	Trigger for MAXIS First Reading Label	STI	
STKT	STI Stuck Threshold	0.762	M
TDD	Total Depth - Driller	1630.00	M
TDL	Total Depth - Logger	1631.20	M
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	8.500	IN
BSAL	Borehole Salinity	28000.00	PPM
CSIZ	Current Casing Size	9.625	IN
CWEI	Casing Weight	36.00	LB/F
DFD	Drilling Fluid Density	9.20	LB/G
DO	Depth Offset for Playback	1.3	M
MST	Mud Sample Temperature	27.80	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	0.2060	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	1631.2	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: RES SON DENS NEUT GR SP HCAL 200 HiRes Vertical Scale: 1:200 Graphics File Created: 13-Apr-2007 14:29

OP System Version: 14C0-302

MCM

HALS-B	SRPC-3243-Q4_2006	DSL-FTB	SRPC-3243-Q4_2006
HILTB-FTB	SRPC-3243-Q4_2006	DTC-H	SRPC-3243-Q4_2006
BSP	SRPC-3243-Q4_2006		

Input DLIS Files

HALS_SONIC_TLD_MCFL_016LUP FN:19	12-Apr-2007 10:26	1533.9 M	1411.2 M
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Output DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_116PUP FN:22	PRODUCER	13-Apr-2007 14:29
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MAXIS Field Log

Input DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_021LUP FN:29	PRODUCER	10-Apr-2007 01:03	1632.8 M	8.8 M
DEFAULT	HALS_SONIC_TLD_MCFL_013LUP FN:13	PRODUCER	09-Apr-2007 23:54	1591.8 M	1468.1 M

Output DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_061PUP FN:89	PRODUCER	10-Apr-2007 21:27	1590.0 M	1520.3 M
CUSTOMER	HALS_SONIC_TLD_MCFL_061PUC FN:90	CUSTOMER	10-Apr-2007 21:27	1590.0 M	1520.3 M
CUSTOMER_GENERALS	SONIC_TLD_MCFL_061PUC FN:91	CUSTOMER	10-Apr-2007 21:27	1590.0 M	1520.3 M

Integrated Hole/Cement Volume Summary

Hole Volume = 87.55 F3
 Cement Volume = 26.48 F3 (assuming 7.00 IN casing O.D.)
 Computed from 1590.0 M to 1520.5 M using data channel(s) HCAL

OP System Version: 14C0-302

MCM

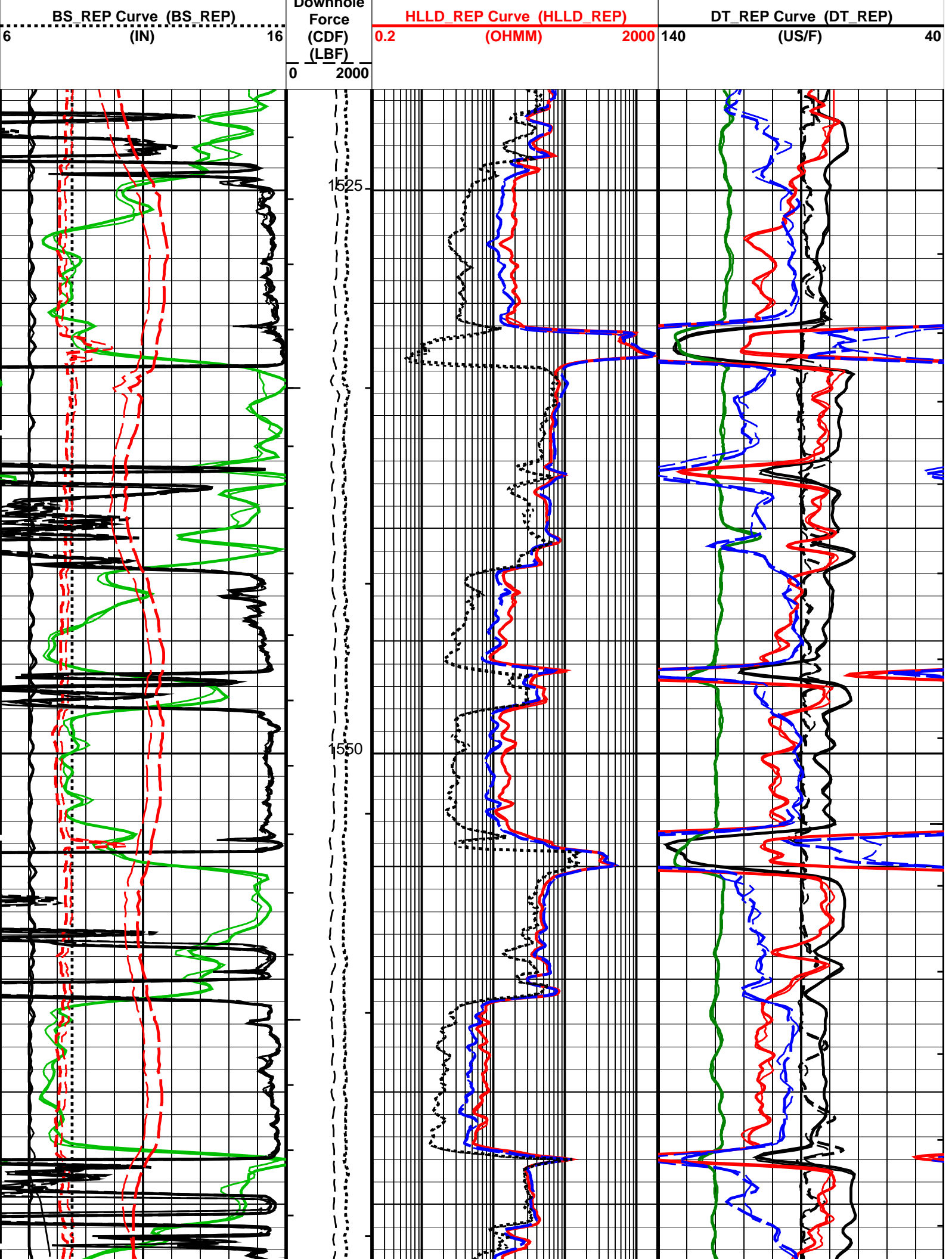
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BSP	SRPC-3243-Q4_2006		

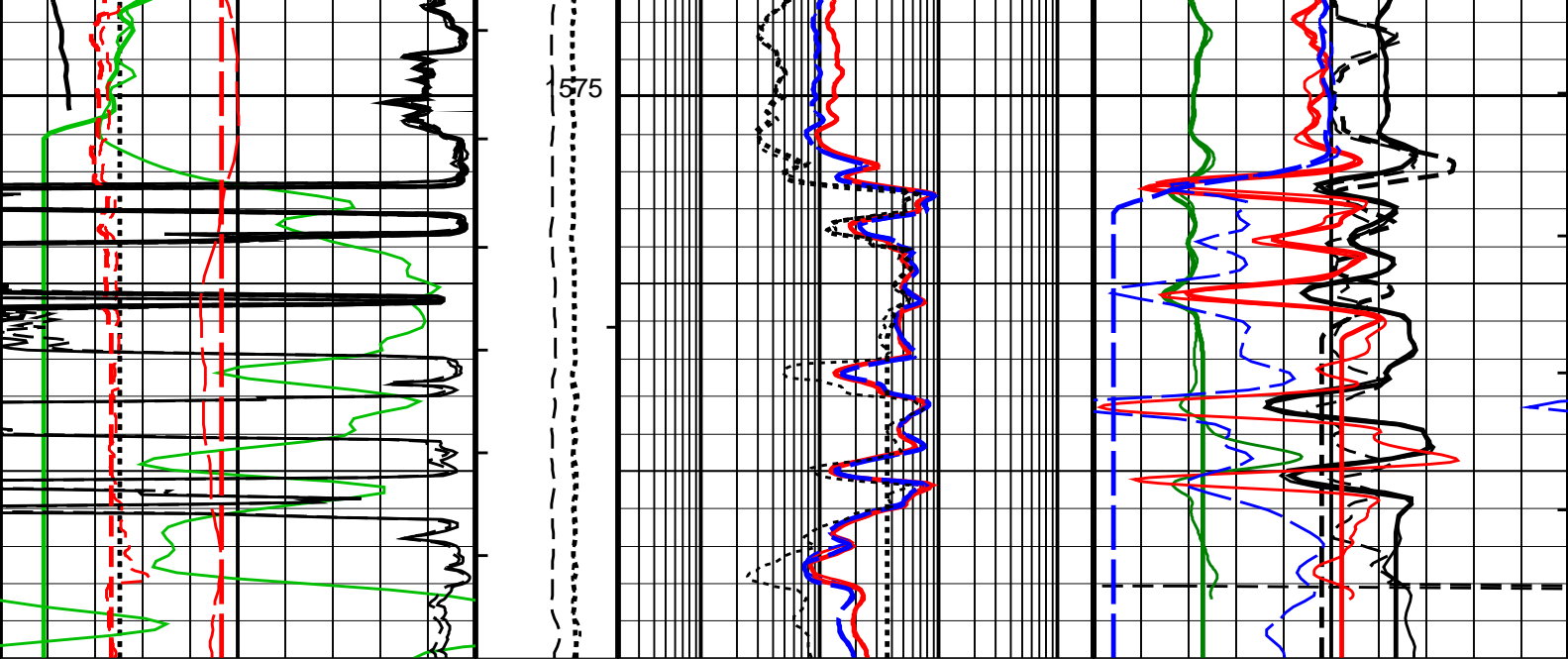
PIP SUMMARY

- └ Integrated Hole Volume Minor Pip Every 0.1 M3
- └ Integrated Hole Volume Major Pip Every 1 M3
 - └ Integrated Cement Volume Minor Pip Every 0.1 M3
 - └ Integrated Cement Volume Major Pip Every 1 M3
- Integrated Transit Time Minor Pip Every 1 MS └
- Integrated Transit Time Major Pip Every 10 MS └

Time Mark Every 60 S

<p><u>SP_REP Curve (SP_REP)</u> -100 (MV) 100</p>			
<p><u>HMNO_REP Curve (HMNO_REP)</u> 20 (OHMM) 0</p>			
<p><u>HMIN_REP Curve (HMIN_REP)</u> 20 (OHMM) 0</p>		<p><u>TNPH_REP Curve (TNPH_REP)</u> 0.45 (V/V) -0.15</p>	
<p><u>HCAL_REP Curve (HCAL_REP)</u> 6 (IN) 16</p>		<p><u>RHOZ_REP Curve (RHOZ_REP)</u> 1.95 (G/C3) 2.95</p>	
<p><u>GDEV_REP Curve (GDEV_REP)</u> -10 (DEG) 90</p>		<p><u>RXOZ_REP Curve (RXOZ_REP)</u> 0.2 (OHMM) 2000</p>	
<p><u>GR_REP Curve (GR_REP)</u> 0 (GAPI) 200</p>		<p><u>PEFZ_REP Curve (PEFZ_REP)</u> 0 (----) 10</p>	
<p>TENS_REP Curve (TENS_REP) (LBF) 0 4000</p>		<p><u>HLLS_REP Curve (HLLS_REP)</u> 0.2 (OHMM) 2000</p>	
<p>Calibrated Downhole</p>		<p><u>HDRA_REP Curve (HDRA_REP)</u> -0.25 (G/C3) 0.25</p>	





BS_REP Curve (BS_REP) 6 (IN) 16	Calibrated Downhole Force (CDF) (LBF) 0 2000	HLLD_REP Curve (HLLD_REP) 0.2 (OHMM) 2000	DT_REP Curve (DT_REP) 140 (US/F) 40
GR_REP Curve (GR_REP) 0 (GAPI) 200	TENS_REP Curve (TENS_REP) (LBF) 0 4000	HLLS_REP Curve (HLLS_REP) 0.2 (OHMM) 2000	HDRA_REP Curve (HDRA_REP) -0.25 (G/C3) 0.25
GDEV_REP Curve (GDEV_REP) -10 (DEG) 90		RXOZ_REP Curve (RXOZ_REP) 0.2 (OHMM) 2000	PEFZ_REP Curve (PEFZ_REP) 0 (----) 10
HCAL_REP Curve (HCAL_REP) 6 (IN) 16			RHOZ_REP Curve (RHOZ_REP) 1.95 (G/C3) 2.95
HMIN_REP Curve (HMIN_REP) 20 (OHMM) 0			TNPH_REP Curve (TNPH_REP) 0.45 (V/V) -0.15
HMNO_REP Curve (HMNO_REP) 20 (OHMM) 0			
SP_REP Curve (SP_REP) -100 (MV) 100			

PIP SUMMARY

- ┆ Integrated Hole Volume Minor Pip Every 0.1 M3
- ┆ Integrated Hole Volume Major Pip Every 1 M3
- ┆ Integrated Cement Volume Minor Pip Every 0.1 M3
- ┆ Integrated Cement Volume Major Pip Every 1 M3
- ┆ Integrated Transit Time Minor Pip Every 1 MS
- ┆ Integrated Transit Time Major Pip Every 10 MS

Time Mark Every 60 S

Format: RES_SON_DENS_NEUT_GR_SP_HCAL_200_REP Vertical Scale: 1:200 Graphics File Created: 10-Apr-2007 21:27

OP System Version: 14C0-302
MCM

HALS-B	SRPC-3243-Q4_2006	DSLТ-FTB	SRPC-3243-Q4_2006
HILTB-FTB	SRPC-3243-Q4_2006	DTC-H	SRPC-3243-Q4_2006
BSP	SRPC-3243-Q4_2006		

Input DLIS Files

DEFAULT	HALS SONIC TLD MCFL 021LUP FN:29	PRODUCER	10-Apr-2007 01:03	1632.8 M	8.8 M
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Output DLIS Files

DEFAULT HALS_SONIC_TLD_MCFL_061PUP FN:89 PRODUCER 10-Apr-2007 21:27
 CUSTOMER HALS_SONIC_TLD_MCFL_061PUC FN:90 CUSTOMER 10-Apr-2007 21:27
 CUSTOMER_GENERALS_SONIC_TLD_MCFL_061PUC FN:91 CUSTOMER 10-Apr-2007 21:27



Calibrations

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Total current mode 1							
Before: 9-Apr-2007 18:40							
Itot 1 Gain	1.000	N/A	0.995	N/A	N/A	0.026	MA
Itot 1 Phase	0.000	N/A	-0.000	N/A	N/A	0.100	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux current mode 1							
Before: 9-Apr-2007 18:40							
Iaux 1 Gain	1.000	N/A	0.993	N/A	N/A	0.035	MA
Iaux 1 Phase	0.000	N/A	0.189	N/A	N/A	1.900	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux current mode 2							
Before: 9-Apr-2007 18:40							
Iaux 2 Gain	1.000	N/A	0.981	N/A	N/A	0.048	MA
Iaux 2 Phase	0.000	N/A	0.000	N/A	N/A	0.100	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0 current mode 3A							
Before: 9-Apr-2007 18:40							
I0 3A Gain	1.000	N/A	0.985	N/A	N/A	0.036	UA
I0 3A Phase	0.000	N/A	-0.000	N/A	N/A	0.100	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0 current mode 3B							
Before: 9-Apr-2007 18:40							
I0 3B Gain	1.000	N/A	0.985	N/A	N/A	0.036	UA
I0 3B Phase	0.000	N/A	0.000	N/A	N/A	0.100	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Torpedo Voltage gains							
Before: 9-Apr-2007 18:40							
Zvt 1 Gain	1.000	N/A	0.993	N/A	N/A	0.025	MV
Zvt 2 Gain	1.000	N/A	0.992	N/A	N/A	0.045	MV
Zvt 3 Gain	1.000	N/A	1.000	N/A	N/A	0.045	MV
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Torpedo Voltage Phases							
Before: 9-Apr-2007 18:40							
Zvt 1 Phase	0.000	N/A	0.136	N/A	N/A	2.300	DEG
Zvt 2 Phase	0.000	N/A	-0.541	N/A	N/A	0.800	DEG
Zvt 3 Phase	0.000	N/A	-0.350	N/A	N/A	0.500	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Upper Bridle Voltage mode 1							
Before: 9-Apr-2007 18:40							
Zvb 1 Gain	1.000	N/A	0.993	N/A	N/A	0.025	MV
Zvb 1 Phase	0.000	N/A	0.143	N/A	N/A	2.300	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1-M2 Voltage gains							
Before: 9-Apr-2007 18:40							
ZVM 1 Gain	1.000	N/A	0.998	N/A	N/A	0.039	UV
ZVM 2 Gain	1.000	N/A	0.995	N/A	N/A	0.019	UV
ZVM 3 Gain	1.000	N/A	0.993	N/A	N/A	0.019	UV

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1–M2 Voltage Phases

Before: 9–Apr–2007 18:40

ZVM 1 Phase	0.000	N/A	0.336	N/A	N/A	3.800	DEG
ZVM 2 Phase	0.000	N/A	1.407	N/A	N/A	1.300	DEG
ZVM 3 Phase	0.000	N/A	0.900	N/A	N/A	1.000	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1–A0* Voltage gains

Before: 9–Apr–2007 18:40

ZVH 1 Gain	1.000	N/A	0.999	N/A	N/A	0.013	UV
ZVH 2 Gain	1.000	N/A	0.999	N/A	N/A	0.046	UV
ZVH 3 Gain	1.000	N/A	0.994	N/A	N/A	0.046	UV

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1–A0* Voltage Phases

Before: 9–Apr–2007 18:40

ZVH 1 Phase	0.000	N/A	-0.019	N/A	N/A	3.800	DEG
ZVH 2 Phase	0.000	N/A	2.065	N/A	N/A	1.300	DEG
ZVH 3 Phase	0.000	N/A	1.286	N/A	N/A	1.000	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux Voltage gains

Before: 9–Apr–2007 18:40

ZVA 1 Gain	1.000	N/A	1.053	N/A	N/A	0.032	MV
ZVA 2 Gain	1.000	N/A	1.046	N/A	N/A	0.045	MV
ZVA 3 Gain	1.000	N/A	1.018	N/A	N/A	0.045	MV

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux Voltage Phases

Before: 9–Apr–2007 18:40

ZVA 1 Phase	0.000	N/A	-0.075	N/A	N/A	2.300	DEG
ZVA 2 Phase	0.000	N/A	0.201	N/A	N/A	0.800	DEG
ZVA 3 Phase	0.000	N/A	0.450	N/A	N/A	0.500	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*–A0** Diff. Voltage mode 1

Before: 9–Apr–2007 18:40

ZVD 1 Gain	1.000	N/A	0.998	N/A	N/A	0.047	UV
ZVD 1 Phase	0.000	N/A	0.249	N/A	N/A	3.800	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*–A0** Diff. Voltage mode 2

Before: 9–Apr–2007 18:40

ZVD 2 Gain	1.000	N/A	0.985	N/A	N/A	0.056	UV
ZVD 2 Phase	0.000	N/A	1.057	N/A	N/A	1.300	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*–A0** Diff. Voltage mode 3A

Before: 9–Apr–2007 18:40

ZVD 3A Gain	1.000	N/A	0.990	N/A	N/A	0.056	UV
ZVD 3A Phase	0.000	N/A	0.580	N/A	N/A	1.000	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*–A0** Diff. Voltage mode 3B

Before: 9–Apr–2007 18:40

ZVD 3B Gain	1.000	N/A	1.016	N/A	N/A	0.054	UV
ZVD 3B Phase	0.000	N/A	0.179	N/A	N/A	1.000	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB vertical Voltage mode 1

Before: 9–Apr–2007 18:40

ZVV 1 Gain	1.000	N/A	0.996	N/A	N/A	0.022	UV
ZVV 1 Phase	0.000	N/A	0.462	N/A	N/A	2.800	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB vertical Voltage mode 2

Before: 9–Apr–2007 18:40

ZVV 2 Gain	1.000	N/A	0.984	N/A	N/A	0.036	UV
ZVV 2 Phase	0.000	N/A	2.298	N/A	N/A	1.300	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Azimuthal Voltages mode 1

Before: 9–Apr–2007 18:40

Az 1 Gain – 0	1.000	N/A	1.000	N/A	N/A	0.047	UV
Az 1 Gain – 1	1.000	N/A	1.001	N/A	N/A	0.047	UV
Az 1 Gain – 2	1.000	N/A	0.998	N/A	N/A	0.047	UV
Az 1 Gain – 3	1.000	N/A	1.002	N/A	N/A	0.047	UV
Az 1 Gain – 4	1.000	N/A	1.003	N/A	N/A	0.047	UV
Az 1 Gain – 5	1.000	N/A	1.000	N/A	N/A	0.047	UV
Az 1 Gain – 6	1.000	N/A	1.004	N/A	N/A	0.047	UV
Az 1 Gain – 7	1.000	N/A	0.999	N/A	N/A	0.047	UV
Az 1 Gain – 8	1.000	N/A	1.000	N/A	N/A	0.047	UV
Az 1 Gain – 9	1.000	N/A	1.000	N/A	N/A	0.047	UV
Az 1 Gain – 10	1.000	N/A	1.003	N/A	N/A	0.047	UV
Az 1 Gain – 11	1.000	N/A	1.000	N/A	N/A	0.047	UV
AZ 1 Phase – 0	0.000	N/A	-0.001	N/A	N/A	3.800	DEG
AZ 1 Phase – 1	0.000	N/A	0.104	N/A	N/A	3.800	DEG
AZ 1 Phase – 2	0.000	N/A	-0.116	N/A	N/A	3.800	DEG
AZ 1 Phase – 3	0.000	N/A	-0.241	N/A	N/A	3.800	DEG
AZ 1 Phase – 4	0.000	N/A	-0.074	N/A	N/A	3.800	DEG
AZ 1 Phase – 5	0.000	N/A	-0.009	N/A	N/A	3.800	DEG
AZ 1 Phase – 6	0.000	N/A	0.052	N/A	N/A	3.800	DEG

AZ 1 Phase - 6	0.000	N/A	0.053	N/A	N/A	3.800	DEG
AZ 1 Phase - 7	0.000	N/A	0.141	N/A	N/A	3.800	DEG
AZ 1 Phase - 8	0.000	N/A	0.111	N/A	N/A	3.800	DEG
AZ 1 Phase - 9	0.000	N/A	-0.248	N/A	N/A	3.800	DEG
AZ 1 Phase - 10	0.000	N/A	-0.075	N/A	N/A	3.800	DEG
AZ 1 Phase - 11	0.000	N/A	0.377	N/A	N/A	3.800	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration - HALSB Azimuthal Voltages mode 2

Before: 9-Apr-2007 18:40

Az 2 Gain - 0	1.000	N/A	0.986	N/A	N/A	0.056	UV
Az 2 Gain - 1	1.000	N/A	0.988	N/A	N/A	0.056	UV
Az 2 Gain - 2	1.000	N/A	0.983	N/A	N/A	0.056	UV
Az 2 Gain - 3	1.000	N/A	0.987	N/A	N/A	0.056	UV
Az 2 Gain - 4	1.000	N/A	0.988	N/A	N/A	0.056	UV
Az 2 Gain - 5	1.000	N/A	0.985	N/A	N/A	0.056	UV
Az 2 Gain - 6	1.000	N/A	0.990	N/A	N/A	0.056	UV
Az 2 Gain - 7	1.000	N/A	0.985	N/A	N/A	0.056	UV
Az 2 Gain - 8	1.000	N/A	0.986	N/A	N/A	0.056	UV
Az 2 Gain - 9	1.000	N/A	0.985	N/A	N/A	0.056	UV
Az 2 Gain - 10	1.000	N/A	0.989	N/A	N/A	0.056	UV
Az 2 Gain - 11	1.000	N/A	0.987	N/A	N/A	0.056	UV
Az 2 Phase - 0	0.000	N/A	1.025	N/A	N/A	1.300	DEG
Az 2 Phase - 1	0.000	N/A	1.045	N/A	N/A	1.300	DEG
Az 2 Phase - 2	0.000	N/A	0.993	N/A	N/A	1.300	DEG
Az 2 Phase - 3	0.000	N/A	0.909	N/A	N/A	1.300	DEG
Az 2 Phase - 4	0.000	N/A	0.970	N/A	N/A	1.300	DEG
Az 2 Phase - 5	0.000	N/A	0.974	N/A	N/A	1.300	DEG
Az 2 Phase - 6	0.000	N/A	0.957	N/A	N/A	1.300	DEG
Az 2 Phase - 7	0.000	N/A	1.063	N/A	N/A	1.300	DEG
Az 2 Phase - 8	0.000	N/A	0.953	N/A	N/A	1.300	DEG
Az 2 Phase - 9	0.000	N/A	0.965	N/A	N/A	1.300	DEG
Az 2 Phase - 10	0.000	N/A	1.039	N/A	N/A	1.300	DEG
Az 2 Phase - 11	0.000	N/A	1.097	N/A	N/A	1.300	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration - HALSB Azimuthal Voltages mode 3A

Before: 9-Apr-2007 18:40

Az 3A Gain - 0	1.000	N/A	0.990	N/A	N/A	0.056	UV
Az 3A Gain - 1	1.000	N/A	0.992	N/A	N/A	0.056	UV
Az 3A Gain - 2	1.000	N/A	0.987	N/A	N/A	0.056	UV
Az 3A Gain - 3	1.000	N/A	0.992	N/A	N/A	0.056	UV
Az 3A Gain - 4	1.000	N/A	0.993	N/A	N/A	0.056	UV
Az 3A Gain - 5	1.000	N/A	0.990	N/A	N/A	0.056	UV
Az 3A Gain - 6	1.000	N/A	0.995	N/A	N/A	0.056	UV
Az 3A Gain - 7	1.000	N/A	0.990	N/A	N/A	0.056	UV
Az 3A Gain - 8	1.000	N/A	0.991	N/A	N/A	0.056	UV
Az 3A Gain - 9	1.000	N/A	0.990	N/A	N/A	0.056	UV
Az 3A Gain - 10	1.000	N/A	0.994	N/A	N/A	0.056	UV
Az 3A Gain - 11	1.000	N/A	0.991	N/A	N/A	0.056	UV
Az 3A Phase - 0	0.000	N/A	0.539	N/A	N/A	1.000	DEG
Az 3A Phase - 1	0.000	N/A	0.547	N/A	N/A	1.000	DEG
Az 3A Phase - 2	0.000	N/A	0.464	N/A	N/A	1.000	DEG
Az 3A Phase - 3	0.000	N/A	0.401	N/A	N/A	1.000	DEG
Az 3A Phase - 4	0.000	N/A	0.458	N/A	N/A	1.000	DEG
Az 3A Phase - 5	0.000	N/A	0.494	N/A	N/A	1.000	DEG
Az 3A Phase - 6	0.000	N/A	0.518	N/A	N/A	1.000	DEG
Az 3A Phase - 7	0.000	N/A	0.603	N/A	N/A	1.000	DEG
Az 3A Phase - 8	0.000	N/A	0.529	N/A	N/A	1.000	DEG
Az 3A Phase - 9	0.000	N/A	0.468	N/A	N/A	1.000	DEG
Az 3A Phase - 10	0.000	N/A	0.521	N/A	N/A	1.000	DEG
Az 3A Phase - 11	0.000	N/A	0.618	N/A	N/A	1.000	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration - HALSB Azimuthal Voltages mode 3B

Before: 9-Apr-2007 18:40

Az 3B Gain - 0	1.000	N/A	1.016	N/A	N/A	0.054	UV
Az 3B Gain - 1	1.000	N/A	1.019	N/A	N/A	0.054	UV
Az 3B Gain - 2	1.000	N/A	1.016	N/A	N/A	0.054	UV
Az 3B Gain - 3	1.000	N/A	1.017	N/A	N/A	0.054	UV
Az 3B Gain - 4	1.000	N/A	1.016	N/A	N/A	0.054	UV
Az 3B Gain - 5	1.000	N/A	1.011	N/A	N/A	0.054	UV
Az 3B Gain - 6	1.000	N/A	1.015	N/A	N/A	0.054	UV
Az 3B Gain - 7	1.000	N/A	1.017	N/A	N/A	0.054	UV
Az 3B Gain - 8	1.000	N/A	1.013	N/A	N/A	0.054	UV
Az 3B Gain - 9	1.000	N/A	1.014	N/A	N/A	0.054	UV
Az 3B Gain - 10	1.000	N/A	1.020	N/A	N/A	0.054	UV
Az 3B Gain - 11	1.000	N/A	1.019	N/A	N/A	0.054	UV
Az 3B Phase - 0	0.000	N/A	0.144	N/A	N/A	1.000	DEG
Az 3B Phase - 1	0.000	N/A	0.408	N/A	N/A	1.000	DEG
Az 3B Phase - 2	0.000	N/A	0.385	N/A	N/A	1.000	DEG
Az 3B Phase - 3	0.000	N/A	-0.112	N/A	N/A	1.000	DEG
Az 3B Phase - 4	0.000	N/A	-0.082	N/A	N/A	1.000	DEG
Az 3B Phase - 5	0.000	N/A	-0.115	N/A	N/A	1.000	DEG
Az 3B Phase - 6	0.000	N/A	-0.008	N/A	N/A	1.000	DEG

Az 3B Phase – 7	0.000	N/A	0.197	N/A	N/A	1.000	DEG
Az 3B Phase – 8	0.000	N/A	-0.095	N/A	N/A	1.000	DEG
Az 3B Phase – 9	0.000	N/A	-0.092	N/A	N/A	1.000	DEG
Az 3B Phase – 10	0.000	N/A	0.217	N/A	N/A	1.000	DEG
Az 3B Phase – 11	0.000	N/A	0.138	N/A	N/A	1.000	DEG

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Stab Measurement Summary

Before: 9–Apr–2007 18:32

BS Window Ratio	0.7077	N/A	0.7073	N/A	N/A	N/A	
BS Window Sum	8902	N/A	8910	N/A	N/A	N/A	CPS
SS Window Ratio	0.5069	N/A	0.5052	N/A	N/A	N/A	
SS Window Sum	10990	N/A	10990	N/A	N/A	N/A	CPS
LS Window Ratio	0.2888	N/A	0.2937	N/A	N/A	N/A	
LS Window Sum	1039	N/A	1037	N/A	N/A	N/A	CPS

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Photo–multiplier High Voltages Calibrations

Before: 9–Apr–2007 18:32

BS PM High Voltage (Command)	1785	N/A	1794	N/A	N/A	N/A	V
SS PM High Voltage (Command)	1568	N/A	1566	N/A	N/A	N/A	V
LS PM High Voltage (Command)	1685	N/A	1682	N/A	N/A	N/A	V

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Crystal Quality Resolutions Calibration

Before: 9–Apr–2007 18:32

BS Crystal Resolution	13.11	N/A	13.17	N/A	N/A	N/A	%
SS Crystal Resolution	9.979	N/A	9.931	N/A	N/A	N/A	%
LS Crystal Resolution	10.03	N/A	10.09	N/A	N/A	N/A	%

High resolution Integrated Logging Tool–DTS Wellsite Calibration – MCFL Calibration

Before: 9–Apr–2007 18:33

Raw B0 Resistivity	3875	N/A	3862	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3817	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3812	N/A	N/A	N/A	OHMM

High resolution Integrated Logging Tool–DTS Wellsite Calibration – HILT Caliper Calibration

Before: 9–Apr–2007 18:27

HILT Caliper Zero Measurement	8.000	N/A	7.877	N/A	N/A	N/A	IN
HILT Caliper Plus Measurement	12.00	N/A	11.96	N/A	N/A	N/A	IN

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Detector Calibration

Before: 9–Apr–2007 18:29

Gamma Ray Background	30.00	N/A	50.03	N/A	N/A	N/A	GAPI
Gamma Ray (Jig – Bkg)	147.6	N/A	147.6	N/A	N/A	13.42	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Zero Measurement

Master: 29–Mar–2007 11:11 Before: 9–Apr–2007 18:34

CNTC Background	27.13	27.13	27.19	N/A	N/A	4.069	CPS
CFTC Background	26.02	26.02	28.36	N/A	N/A	3.903	CPS

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Ratio Measurement

Master: 29–Mar–2007 11:11

Thermal Near Corr. (Tank)	5800	4923	N/A	N/A	N/A	N/A	CPS
Thermal Far Corr. (Tank)	2400	2054	N/A	N/A	N/A	N/A	CPS
CNTC/CFTC (Tank)	2.159	2.397	N/A	N/A	N/A	N/A	

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Accelerometer Calibration

Before: 9–Apr–2007 22:48

Z–Axis Acceleration	9.810	N/A	9.788	N/A	N/A	N/A	M/S2
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High resolution Integrated Logging Tool–DTS Master Calibration – Inversion results

Master: 30–Mar–2007 17:12

Rho Aluminum	2.596	2.598	---	---	---	---	G/C3
Rho Magnesium	1.686	1.689	---	---	---	---	G/C3
Pe Aluminum	2.570	2.579	---	---	---	---	
Pe Magnesium	2.650	2.622	---	---	---	---	

High resolution Integrated Logging Tool–DTS Master Calibration – Deviation Summary

Master: 30–Mar–2007 17:12

BS Average Deviation	0	0.09544	---	---	---	---	%
BS Max Deviation	0	0.1646	---	---	---	---	%
SS Average Deviation	0	0.2737	---	---	---	---	%
SS Max Deviation	0	0.7800	---	---	---	---	%
LS Average Deviation	0	0.5526	---	---	---	---	%
LS Max Deviation	0	1.433	---	---	---	---	%

The GLS–VJ source activity is acceptable.

The HGNS Neutron Master Calibration was done with the following parameters :

NCT-B Water Temperature 20.0 DEGC.
 Thermal Housing Size 3.383 IN.
 NSR-F serial number 5050

HILT Azimuthal Laterolog Sonde B / Equipment Identification

Primary Equipment:

Auxiliary Equipment:
 Laterolog Control Module

LCM - AA

2747

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Total current mode 1					
Itot 1 Gain MA		Value	Itot 1 Phase DEG		Value
		0.995			-0.000
0.926	1.000	1.081	-0.100	0.000	0.100
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 9-Apr-2007 18:40					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Aux current mode 1					
Iaux 1 Gain MA		Value	Iaux 1 Phase DEG		Value
		0.993			0.189
0.854	1.000	1.180	-4.600	0.000	4.600
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 9-Apr-2007 18:40					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Aux current mode 2					
Iaux 2 Gain MA		Value	Iaux 2 Phase DEG		Value
		0.981			0.000
0.816	1.000	1.232	-1.000	0.000	0.100
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 9-Apr-2007 18:40					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB A0 current mode 3A					
IO 3A Gain UA		Value	IO 3A Phase DEG		Value
		0.985			-0.000
0.893	1.000	1.114	-1.000	0.000	0.100
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 9-Apr-2007 18:40					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB A0 current mode 3B					
IO 3B Gain UA		Value	IO 3B Phase DEG		Value
		0.985			0.000
0.893	1.000	1.114	-1.000	0.000	0.100
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 9-Apr-2007 18:40					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Torpedo Voltage gains					
Zvt 1 Gain MV		Value	Zvt 2 Gain MV		Value
		0.993			0.992
		1.000			1.000
0.925	1.000	1.078	0.865	1.000	1.153
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 9-Apr-2007 18:40					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Torpedo Voltage Phases					
Zvt 1 Phase DEG		Value	Zvt 2 Phase DEG		Value
		0.136			-0.541
		0.000			0.000
-4.400	0.000	4.400	-2.800	0.000	2.800
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 9-Apr-2007 18:40					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Upper Bridle Voltage mode 1					
Zvb 1 Gain MV		Value	Zvb 1 Phase DEG		Value
		0.993			0.143
		1.000			0.000
0.925	1.000	1.078	-4.400	0.000	4.400
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 9-Apr-2007 18:40					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB M1-M2 Voltage gains					
ZVM 1 Gain UV		Value	ZVM 2 Gain UV		Value
		0.998			0.995
		1.000			1.000
0.895	1.000	1.117	0.943	1.000	1.056
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 9-Apr-2007 18:40					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB M1-M2 Voltage Phases					
ZVM 1 Phase DEG	Value	ZVM 2 Phase DEG	Value	ZVM 3 Phase DEG	Value
	0.336		1.407		0.900
-6.500 (Minimum) 0.000 (Nominal) 6.500 (Maximum)		-3.300 (Minimum) 0.000 (Nominal) 3.300 (Maximum)		-2.000 (Minimum) 0.000 (Nominal) 2.000 (Maximum)	

Before: 9-Apr-2007 18:40

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB M1-A0* Voltage gains					
ZVH 1 Gain UV	Value	ZVH 2 Gain UV	Value	ZVH 3 Gain UV	Value
	0.999		0.999		0.994
0.962 (Minimum) 1.000 (Nominal) 1.039 (Maximum)		0.864 (Minimum) 1.000 (Nominal) 1.154 (Maximum)		0.864 (Minimum) 1.000 (Nominal) 1.154 (Maximum)	

Before: 9-Apr-2007 18:40

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB M1-A0* Voltage Phases					
ZVH 1 Phase DEG	Value	ZVH 2 Phase DEG	Value	ZVH 3 Phase DEG	Value
	-0.019		2.065		1.286
-6.500 (Minimum) 0.000 (Nominal) 6.500 (Maximum)		-3.300 (Minimum) 0.000 (Nominal) 3.300 (Maximum)		-2.000 (Minimum) 0.000 (Nominal) 2.000 (Maximum)	

Before: 9-Apr-2007 18:40

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Aux Voltage gains					
ZVA 1 Gain MV	Value	ZVA 2 Gain MV	Value	ZVA 3 Gain MV	Value
	1.053		1.046		1.018
0.905 (Minimum) 1.000 (Nominal) 1.103 (Maximum)		0.866 (Minimum) 1.000 (Nominal) 1.151 (Maximum)		0.866 (Minimum) 1.000 (Nominal) 1.151 (Maximum)	

Before: 9-Apr-2007 18:40

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Aux Voltage Phases					
ZVA 1 Phase DEG	Value	ZVA 2 Phase DEG	Value	ZVA 3 Phase DEG	Value
	-0.075		0.201		0.450
-4.100 (Minimum) 0.000 (Nominal) 4.100 (Maximum)		-2.300 (Minimum) 0.000 (Nominal) 2.300 (Maximum)		-1.000 (Minimum) 0.000 (Nominal) 1.000 (Maximum)	

Before: 9-Apr-2007 18:40

HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB A0*-A0* Diff. Voltage mode 1			
ZVD 1 Gain UV	Value	ZVD 1 Phase DEG	Value
	0.998		0.249
0.874 (Minimum) 1.000 (Nominal) 1.147 (Maximum)		-6.300 (Minimum) 0.000 (Nominal) 6.300 (Maximum)	

Before: 9-Apr-2007 18:40

HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB A0*-A0* Diff. Voltage mode 2			
ZVD 2 Gain UV	Value	ZVD 2 Phase DEG	Value
	0.985		1.057
0.842 (Minimum) 1.000 (Nominal) 1.187 (Maximum)		-3.300 (Minimum) 0.000 (Nominal) 3.300 (Maximum)	

Before: 9-Apr-2007 18:40

HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB A0*-A0* Diff. Voltage mode 3A			
ZVD 3A Gain UV	Value	ZVD 3A Phase DEG	Value
	0.990		0.580
0.842 (Minimum) 1.000 (Nominal) 1.187 (Maximum)		-2.000 (Minimum) 0.000 (Nominal) 2.000 (Maximum)	

Before: 9-Apr-2007 18:40

HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB A0*-A0* Diff. Voltage mode 3B			
ZVD 3B Gain UV	Value	ZVD 3B Phase DEG	Value
	1.016		0.179
0.845 (Minimum) 1.000 (Nominal) 1.183 (Maximum)		-2.000 (Minimum) 0.000 (Nominal) 2.000 (Maximum)	

Before: 9-Apr-2007 18:40

HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB vertical Voltage mode 1			
ZVV 1 Gain UV	Value	ZVV 1 Phase DEG	Value
	0.996		0.462
0.936 (Minimum) 1.000 (Nominal) 1.065 (Maximum)		-4.600 (Minimum) 0.000 (Nominal) 4.600 (Maximum)	

Before: 9-Apr-2007 18:40

HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB vertical Voltage mode 2			
ZVV 2 Gain UV	Value	ZVV 2 Phase DEG	Value
	0.984		2.298
0.895 (Minimum) 1.000 (Nominal) 1.112 (Maximum)		-2.800 (Minimum) 0.000 (Nominal) 2.800 (Maximum)	

Before: 9-Apr-2007 18:40

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Azimuthal Voltages mode 1					
Idx	Az 1 Gain UV	Value	Idx	Az 1 Phase DEG	Value
0		1.000	0		-0.001

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Azimuthal Voltages mode 2					
Idx	Az 2 Gain UV	Value	Idx	Az 2 Phase DEG	Value
0		0.986	0		1.025

1		1.001	1		0.104
2		0.998	2		-0.116
3		1.002	3		-0.241
4		1.003	4		-0.074
5		1.000	5		-0.009
6		1.004	6		0.053
7		0.999	7		0.141
8		1.000	8		0.111
9		1.000	9		-0.248
10		1.003	10		-0.075
11		1.000	11		0.377
0.874 (Minimum)		1.000 (Nominal)	1.147 (Maximum)	-6.300 (Minimum) 0.000 (Nominal) 6.300 (Maximum)	
Before: 9-Apr-2007 18:40					

0		0.986	0		1.025
1		0.988	1		1.045
2		0.983	2		0.993
3		0.987	3		0.909
4		0.988	4		0.970
5		0.985	5		0.974
6		0.990	6		0.957
7		0.985	7		1.063
8		0.986	8		0.953
9		0.985	9		0.965
10		0.989	10		1.039
11		0.987	11		1.097
0.842 (Minimum)		1.000 (Nominal)	1.187 (Maximum)	-3.300 (Minimum) 0.000 (Nominal) 3.300 (Maximum)	
Before: 9-Apr-2007 18:40					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Azimuthal Voltages mode 3A					
Idx	Az 3A Gain UV	Value	Idx	Az 3A Phase DEG	Value
0		0.990	0		0.539
1		0.992	1		0.547
2		0.987	2		0.464
3		0.992	3		0.401
4		0.993	4		0.458
5		0.990	5		0.494
6		0.995	6		0.518
7		0.990	7		0.603
8		0.991	8		0.529
9		0.990	9		0.468
10		0.994	10		0.521
11		0.991	11		0.618
0.842 (Minimum)		1.000 (Nominal)	1.187 (Maximum)	-2.000 (Minimum) 0.000 (Nominal) 2.000 (Maximum)	
Before: 9-Apr-2007 18:40					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Azimuthal Voltages mode 3B					
Idx	Az 3B Gain UV	Value	Idx	Az 3B Phase DEG	Value
0		1.016	0		0.144
1		1.019	1		0.408
2		1.016	2		0.385
3		1.017	3		-0.112
4		1.016	4		-0.082
5		1.011	5		-0.115
6		1.015	6		-0.008
7		1.017	7		0.197
8		1.013	8		-0.095
9		1.014	9		-0.092
10		1.020	10		0.217
11		1.019	11		0.138
0.845 (Minimum)		1.000 (Nominal)	1.183 (Maximum)	-2.000 (Minimum) 0.000 (Nominal) 2.000 (Maximum)	
Before: 9-Apr-2007 18:40					

High resolution Integrated Logging Tool-DTS / Equipment Identification

Primary Equipment:

HILT high-Resolution Mechanical Sonde
 HILT Rxo Gamma-ray Device
 HILT Micro Cylindrically Focused Log Dev
 GR Logging Source
 HILT High Res. Control Cartridge
 HILT Gamma-Ray Neutron Sonde-DTS
 HGNS Gamma-Ray Device
 HGNS Neutron Detector with Alpha Source

HRMS - B 1807
 HRGD - BC 754
 MCFL -
 GLS - J 3820
 HRCC - B 1801
 HGNS - B 1809
 HGR -
 HCNT -

Auxiliary Equipment:

Neutron Calibration Tank
 Gamma Source Radioactive
 HGNS Housing

NCT - B
 GSR - U 2006
 HGNH - 1817

High resolution Integrated Logging Tool-DTS Wellsite Calibration								
Stab Measurement Summary								
Phase	BS Window Ratio	Value	Phase	SS Window Ratio	Value	Phase	LS Window Ratio	Value
Before		0.7073	Before		0.5052	Before		0.2937

0.6723 (Minimum) 0.7077 (Nominal) 0.7431 (Maximum)			0.4816 (Minimum) 0.5069 (Nominal) 0.5323 (Maximum)			0.2743 (Minimum) 0.2888 (Nominal) 0.3032 (Maximum)		
Phase	BS Window Sum CPS	Value	Phase	SS Window Sum CPS	Value	Phase	LS Window Sum CPS	Value
Before		8910	Before		10990	Before		1037
	8457 (Minimum) 8902 (Nominal) 9347 (Maximum)			10440 (Minimum) 10990 (Nominal) 11540 (Maximum)			987.2 (Minimum) 1039 (Nominal) 1091 (Maximum)	

Before: 9-Apr-2007 18:32

High resolution Integrated Logging Tool-DTS Wellsite Calibration											
Photo-multiplier High Voltages Calibrations											
Phase	BS PM High Voltage (Command) V		Value	Phase	SS PM High Voltage (Command) V		Value	Phase	LS PM High Voltage (Command) V		Value
Before			1794	Before			1566	Before			1682
	1685 (Minimum) 1785 (Nominal) 1885 (Maximum)				1468 (Minimum) 1568 (Nominal) 1668 (Maximum)				1585 (Minimum) 1685 (Nominal) 1785 (Maximum)		

Before: 9-Apr-2007 18:32

High resolution Integrated Logging Tool-DTS Wellsite Calibration											
Crystal Quality Resolutions Calibration											
Phase	BS Crystal Resolution %		Value	Phase	SS Crystal Resolution %		Value	Phase	LS Crystal Resolution %		Value
Before			13.17	Before			9.931	Before			10.09
	12.11 (Minimum) 13.11 (Nominal) 14.11 (Maximum)				8.979 (Minimum) 9.979 (Nominal) 10.98 (Maximum)				9.027 (Minimum) 10.03 (Nominal) 11.03 (Maximum)		

Before: 9-Apr-2007 18:32

High resolution Integrated Logging Tool-DTS Wellsite Calibration											
MCFL Calibration											
Phase	Raw B0 Resistivity OHMM		Value	Phase	Raw B1 Resistivity OHMM		Value	Phase	Raw B2 Resistivity OHMM		Value
Before			3862	Before			3817	Before			3812
	3565 (Minimum) 3875 (Nominal) 4185 (Maximum)				3524 (Minimum) 3830 (Nominal) 4136 (Maximum)				3524 (Minimum) 3830 (Nominal) 4136 (Maximum)		

Before: 9-Apr-2007 18:33

High resolution Integrated Logging Tool-DTS Wellsite Calibration							
HILT Caliper Calibration							
Phase	HILT Caliper Zero Measurement IN		Value	Phase	HILT Caliper Plus Measurement IN		Value
Before			7.877	Before			11.96
	6.000 (Minimum) 8.000 (Nominal) 10.00 (Maximum)				9.000 (Minimum) 12.00 (Nominal) 15.00 (Maximum)		

Before: 9-Apr-2007 18:27

High resolution Integrated Logging Tool-DTS Wellsite Calibration											
Detector Calibration											
Phase	Gamma Ray Background GAPI		Value	Phase	Gamma Ray (Jig - Bkg) GAPI		Value	Phase	Gamma Ray (Calibrated) GAPI		Value
Before			50.03	Before			147.6	Before			165.0
	0 (Minimum) 30.00 (Nominal) 120.0 (Maximum)				134.2 (Minimum) 147.6 (Nominal) 161.1 (Maximum)				150.0 (Minimum) 165.0 (Nominal) 180.0 (Maximum)		

Before: 9-Apr-2007 18:29

High resolution Integrated Logging Tool-DTS Wellsite Calibration							
Zero Measurement							
Phase	CNTC Background CPS		Value	Phase	CFTC Background CPS		Value
Master			27.13	Master			26.02
Before			27.19	Before			28.36
	5.000 (Minimum) 27.13 (Nominal) 40.00 (Maximum)				5.000 (Minimum) 26.02 (Nominal) 40.00 (Maximum)		

Master: 29-Mar-2007 11:11

Before: 9-Apr-2007 18:34

High resolution Integrated Logging Tool-DTS Wellsite Calibration											
Ratio Measurement											
Phase	Thermal Near Corr. (Tank) CPS		Value	Phase	Thermal Far Corr. (Tank) CPS		Value	Phase	CNTC/CFTC (Tank)		Value
Master			4923	Master			2054	Master			2.397
	4700 (Minimum) 5800 (Nominal) 6900 (Maximum)				1900 (Minimum) 2400 (Nominal) 2900 (Maximum)				2.120 (Minimum) 2.159 (Nominal) 2.540 (Maximum)		

Master: 29-Mar-2007 11:11

High resolution Integrated Logging Tool-DTS

Wellsite Calibration

Accelerometer Calibration

Phase	Z-Axis Acceleration M/S2	Value
Before		9.788
	9.610 (Minimum) 9.810 (Nominal) 10.01 (Maximum)	

Before: 9-Apr-2007 22:48

High resolution Integrated Logging Tool-DTS Master Calibration

Inversion results

Phase	Rho Aluminum G/C3	Value	Phase	Rho Magnesium G/C3	Value
Master		2.598	Master		1.689
	2.586 (Minimum) 2.596 (Nominal) 2.606 (Maximum)			1.676 (Minimum) 1.686 (Nominal) 1.696 (Maximum)	
Phase	Pe Aluminum	Value	Phase	Pe Magnesium	Value
Master		2.579	Master		2.622
	2.470 (Minimum) 2.570 (Nominal) 2.670 (Maximum)			2.550 (Minimum) 2.650 (Nominal) 2.750 (Maximum)	

Master: 30-Mar-2007 17:12

High resolution Integrated Logging Tool-DTS Master Calibration

Deviation Summary

Phase	BS Average Deviation %	Value	Phase	SS Average Deviation %	Value	Phase	LS Average Deviation %	Value
Master		0.09544	Master		0.2737	Master		0.5526
	-0.6000 (Minimum) 0 (Nominal) 0.6000 (Maximum)			-1.000 (Minimum) 0 (Nominal) 1.000 (Maximum)			-1.500 (Minimum) 0 (Nominal) 1.500 (Maximum)	
Phase	BS Max Deviation %	Value	Phase	SS Max Deviation %	Value	Phase	LS Max Deviation %	Value
Master		0.1646	Master		0.7800	Master		1.433
	-1.600 (Minimum) 0 (Nominal) 1.600 (Maximum)			-2.500 (Minimum) 0 (Nominal) 2.500 (Maximum)			-3.500 (Minimum) 0 (Nominal) 3.500 (Maximum)	

Master: 30-Mar-2007 17:12

High resolution Integrated Logging Tool-DTS Master Calibration

Zero Measurement

Phase	CNTC Background CPS	Value	Phase	CFTC Background CPS	Value
Master		27.13	Master		26.02
	5.000 (Minimum) 27.13 (Nominal) 40.00 (Maximum)			5.000 (Minimum) 26.02 (Nominal) 40.00 (Maximum)	

Master: 29-Mar-2007 11:11

High resolution Integrated Logging Tool-DTS Master Calibration

Tank Measurement

Phase	Thermal Near Corr. (Tank) CPS	Value	Phase	Thermal Far Corr. (Tank) CPS	Value	Phase	CNTC/CFTC (Tank)	Value
Master		4923	Master		2054	Master		2.397
	4700 (Minimum) 5800 (Nominal) 6900 (Maximum)			1900 (Minimum) 2400 (Nominal) 2900 (Maximum)			2.120 (Minimum) 2.159 (Nominal) 2.540 (Maximum)	

Master: 29-Mar-2007 11:11

DTS Telemetry Tool / Equipment Identification

Primary Equipment:

DTC-H Auxiliary Cartridge
DTC-H Telemetry Cartridge

DTCH - A
DTCH - A 8944

Auxiliary Equipment:

DTCH Telemetry Cartridge Housing

ECH - KC 10020

Company: **Beach Petroleum Ltd.**

Schlumberger

Well: **Kewarra-01**

Field: **Wildcat**

Rig: **Hunt Rig 2**

Country: **Australia**

HALS-BHC-PEX

Resistivity-Sonic-Density-Neutron-GR- ϵ

Scale 1:200