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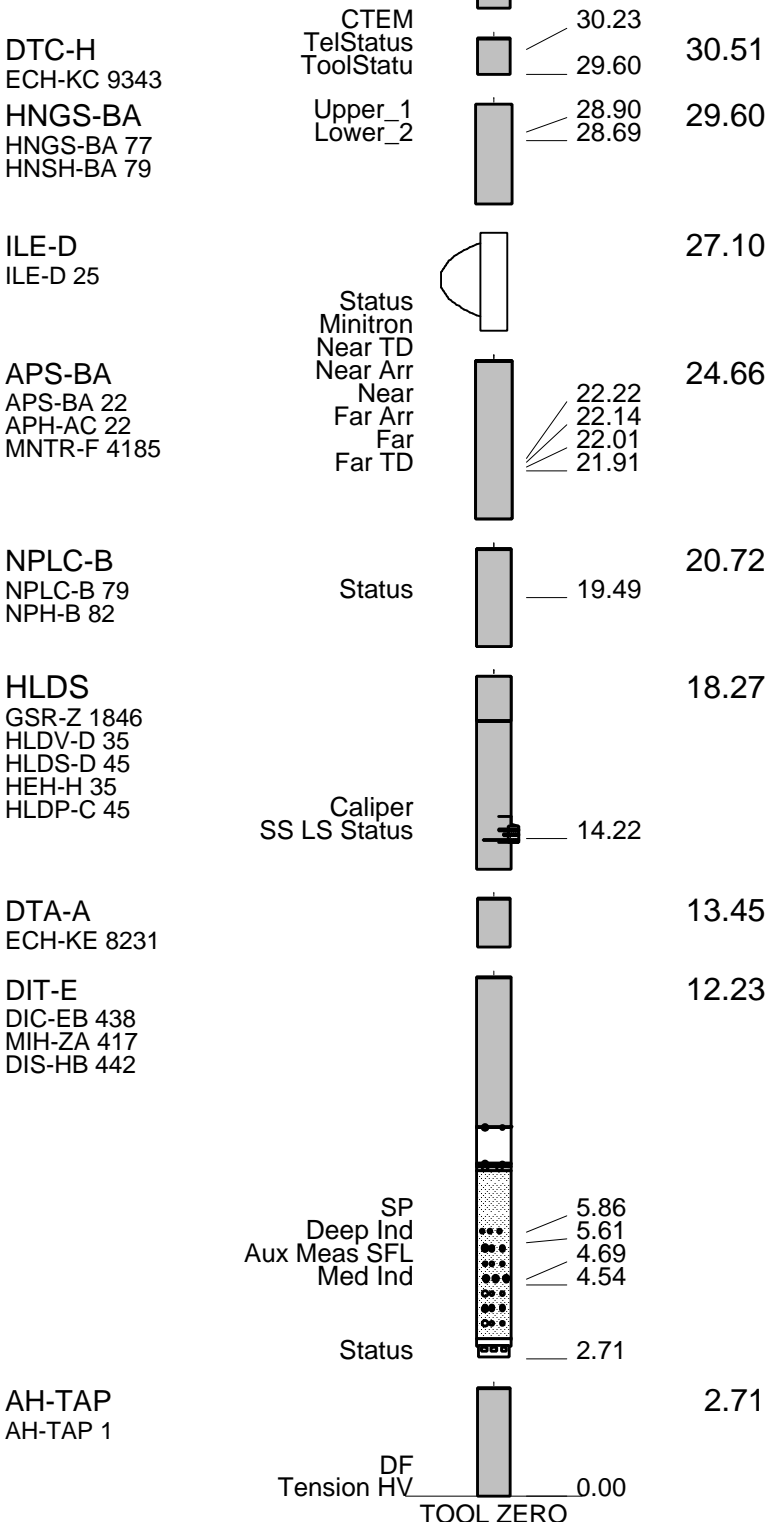
OTHER SERVICES1 OS1: DITE OS2: HLDS/APS/HNGS OS3: WST OS4: FMS OS5:	OTHER SERVICES2 OS1: OS2: OS3: OS4: OS5:
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REMARKS: RUN NUMBER 1 Hole cored with RCB, 9 7/8" bit. Driller Sea Floor at:1911 mbrf. Log measured in meters below rig floor.	REMARKS: RUN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

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

**EQUIPMENT DESCRIPTION**

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



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

## Output DLIS Files

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

## OP System Version: 10C0-306

MCM

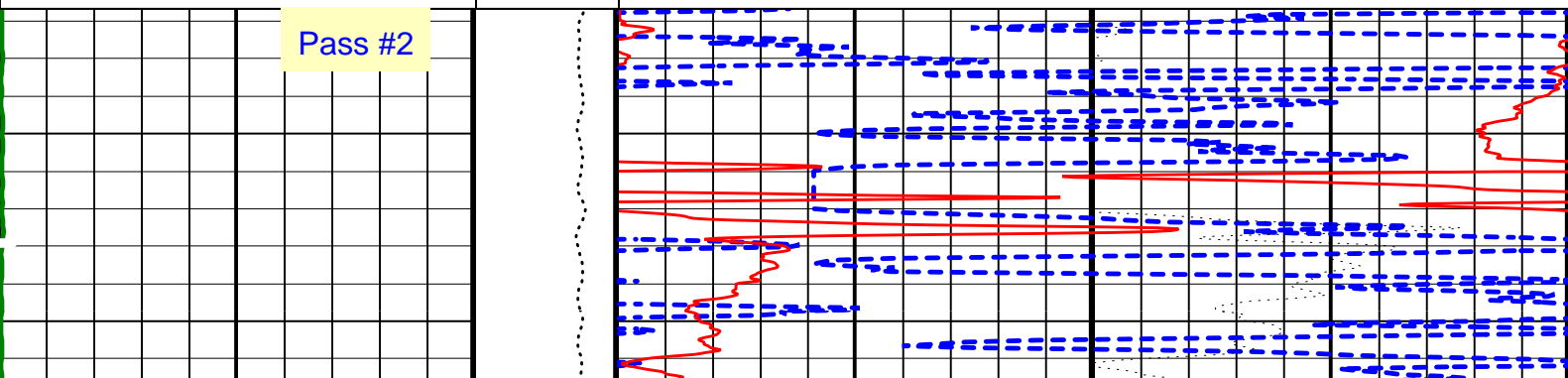
DIT-E	10C0-306	DTA-A	10C0-306
HLDS	SPC-2277-NUCL_b	NPLC-B	OP10-KP1
APS-BA	SPC-2277-NUCL_b	HNGS-BA	SPC-2277-NUCL_b
DTC-H	10C0-306		

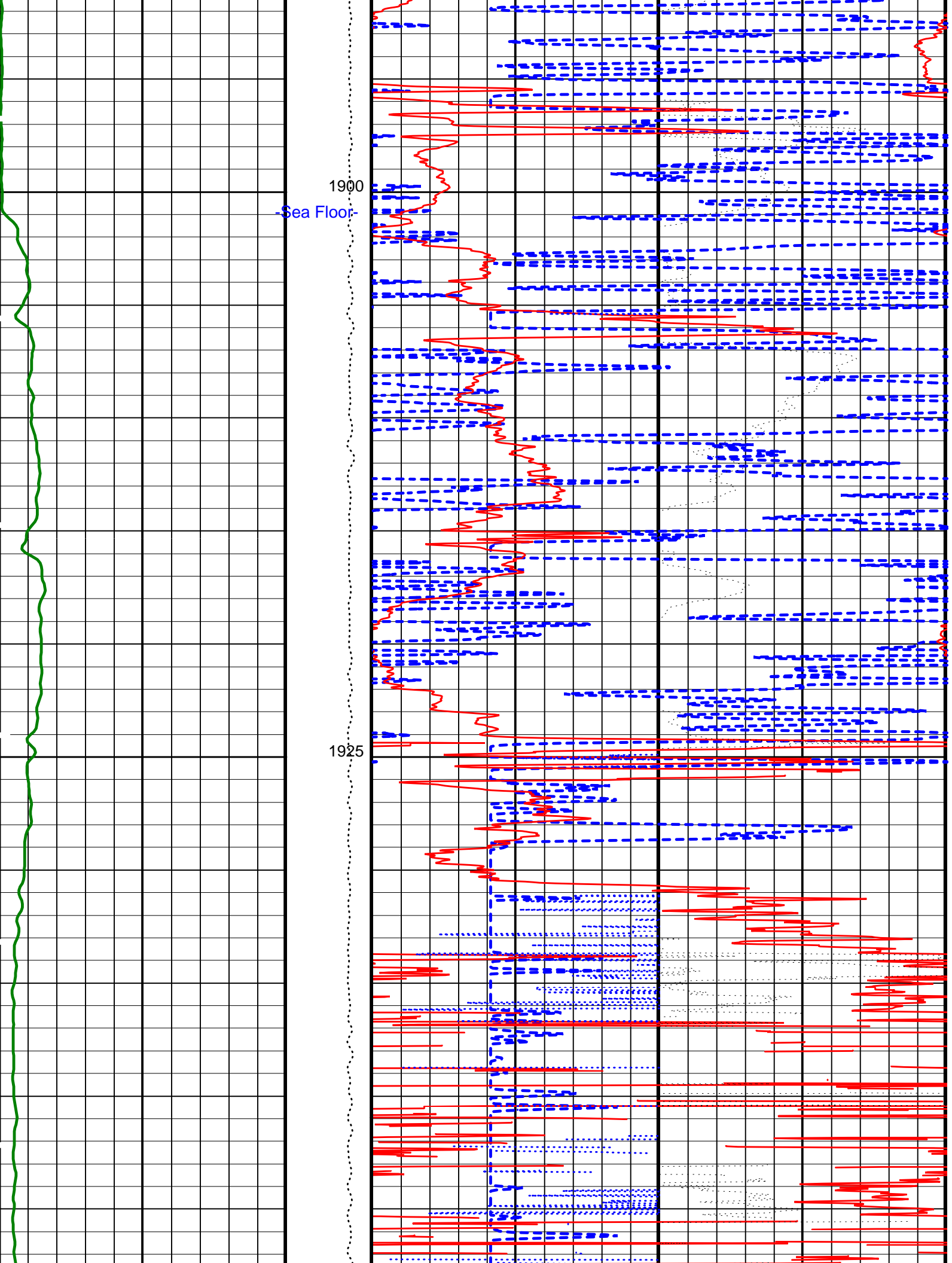
### PIP SUMMARY

Time Mark Every 60 S

<b>HNGS Spectroscopy Gamma Ray (HSGR)</b> (GAPI) 150	<b>HLDS HR Long Spaced Photoelectric Effect (HLEF)</b> (---) 10	<b>HLDS HR Bulk Density Correction (HBDC)</b> (G/C3) -0.25 0.25
<b>APS Effective Standoff in Limestone (STOF)</b> (IN) -1 4	<b>HLDS HR Bulk Density (HROM)</b> (G/C3) 1 3	
<b>HLDS Caliper (LCAL)</b> (IN) 0 20	<b>APS HR Near/Far Corrected Limestone Porosity (HFLC)</b> (PU) 100 0	<b>Tension (TENS) (LBF)</b> 10000 0

Pass #2

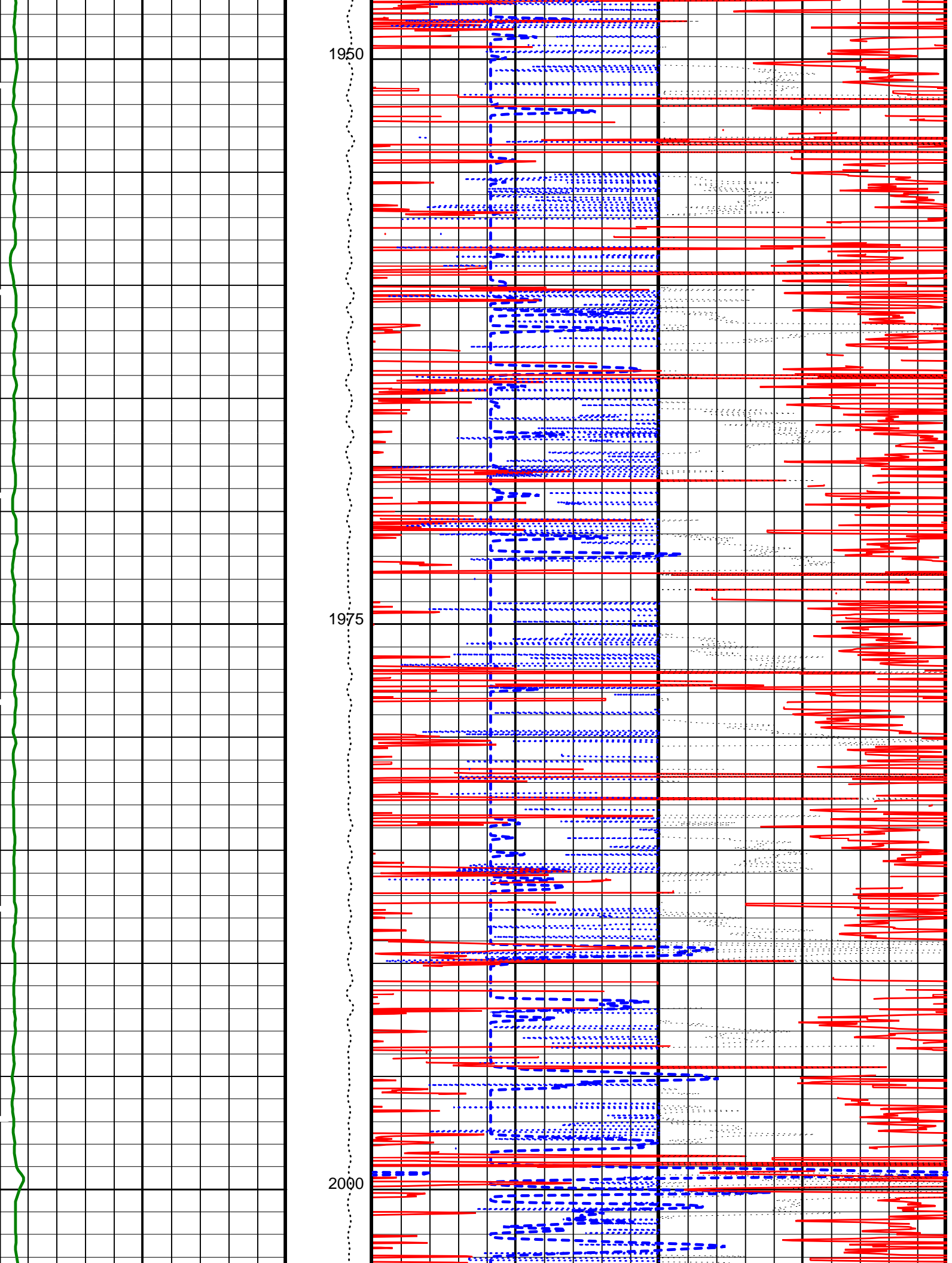


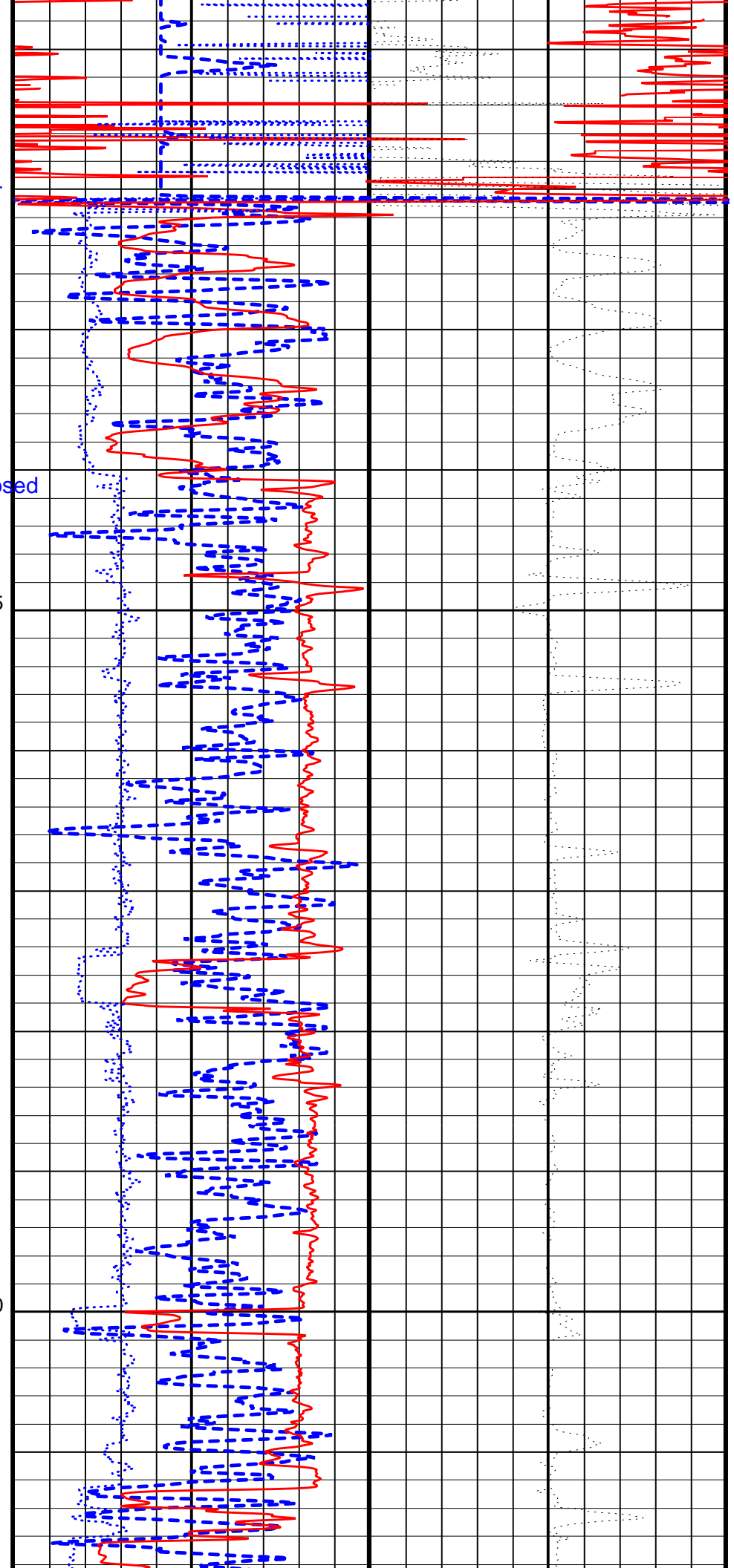
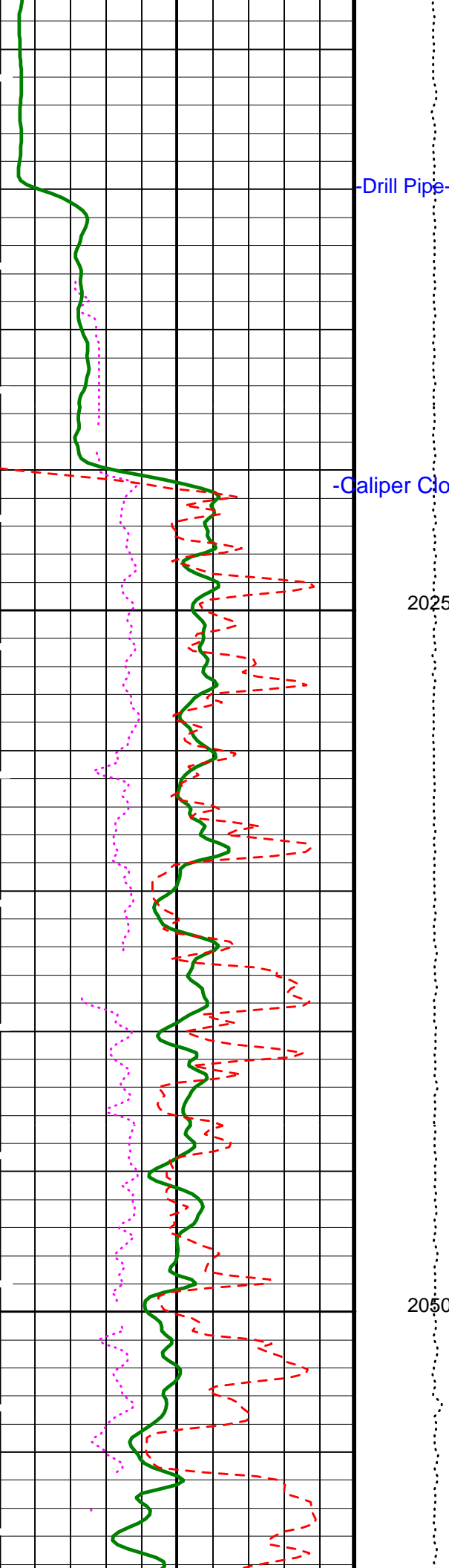


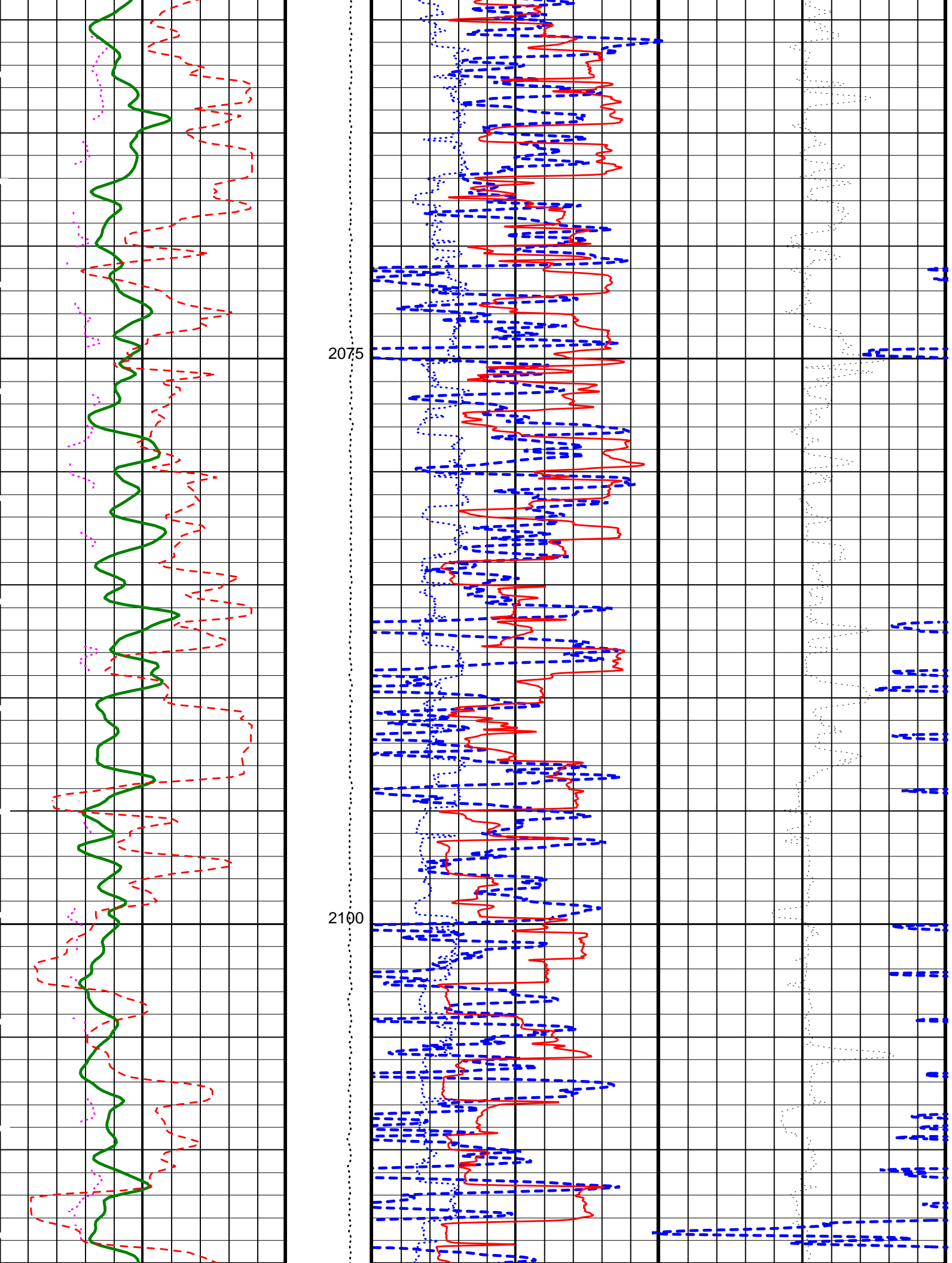
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Sea Floor

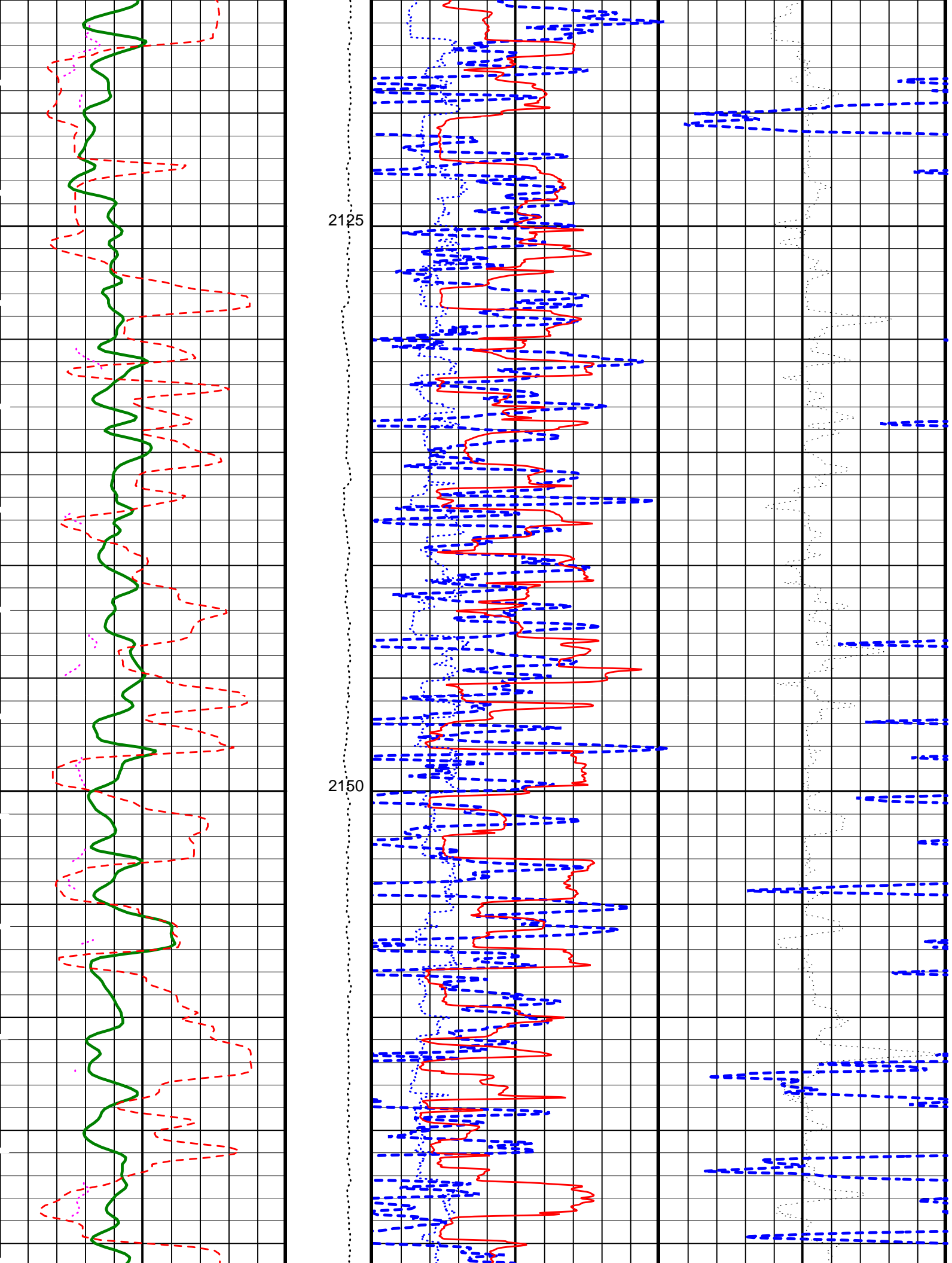
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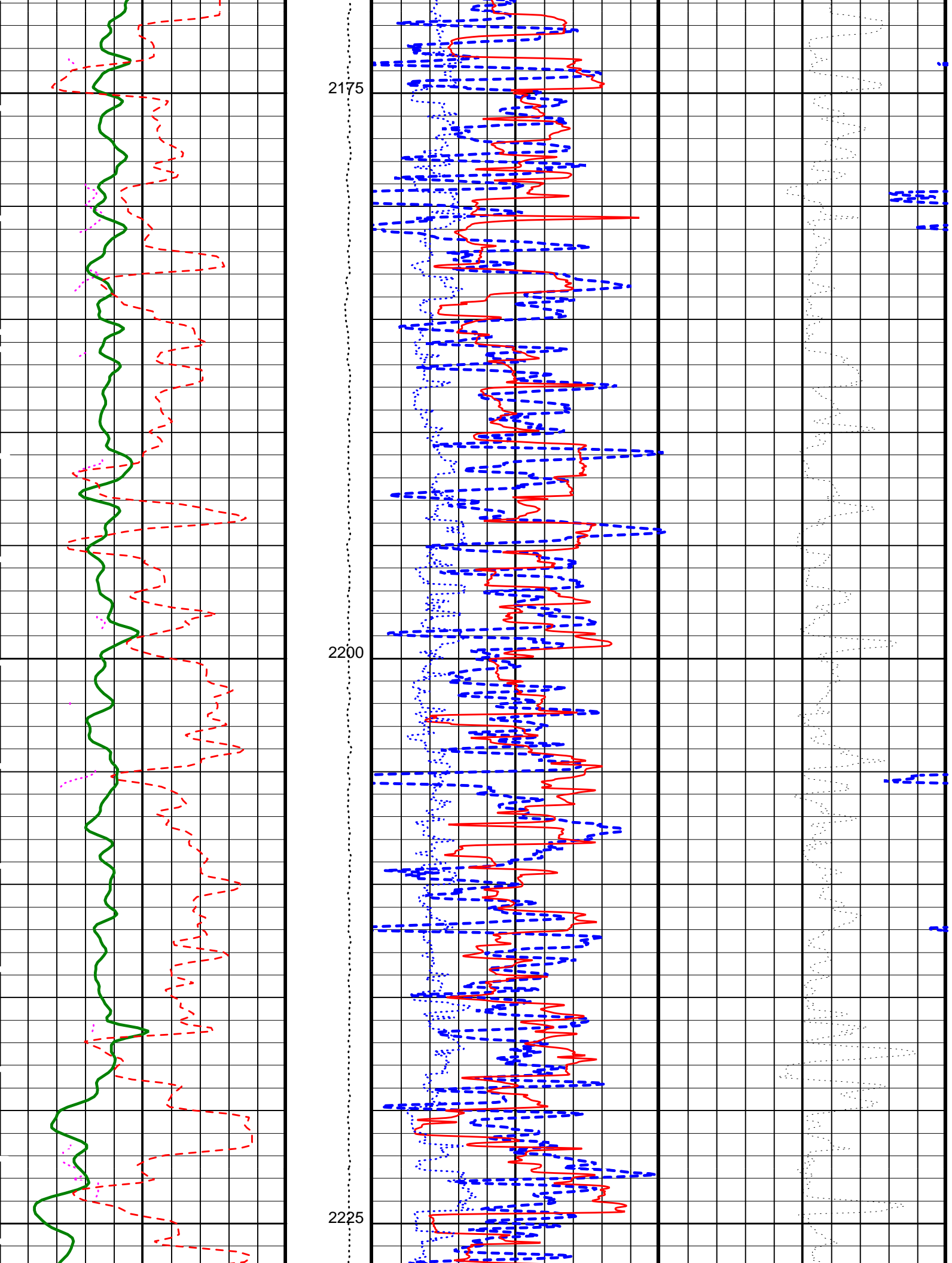


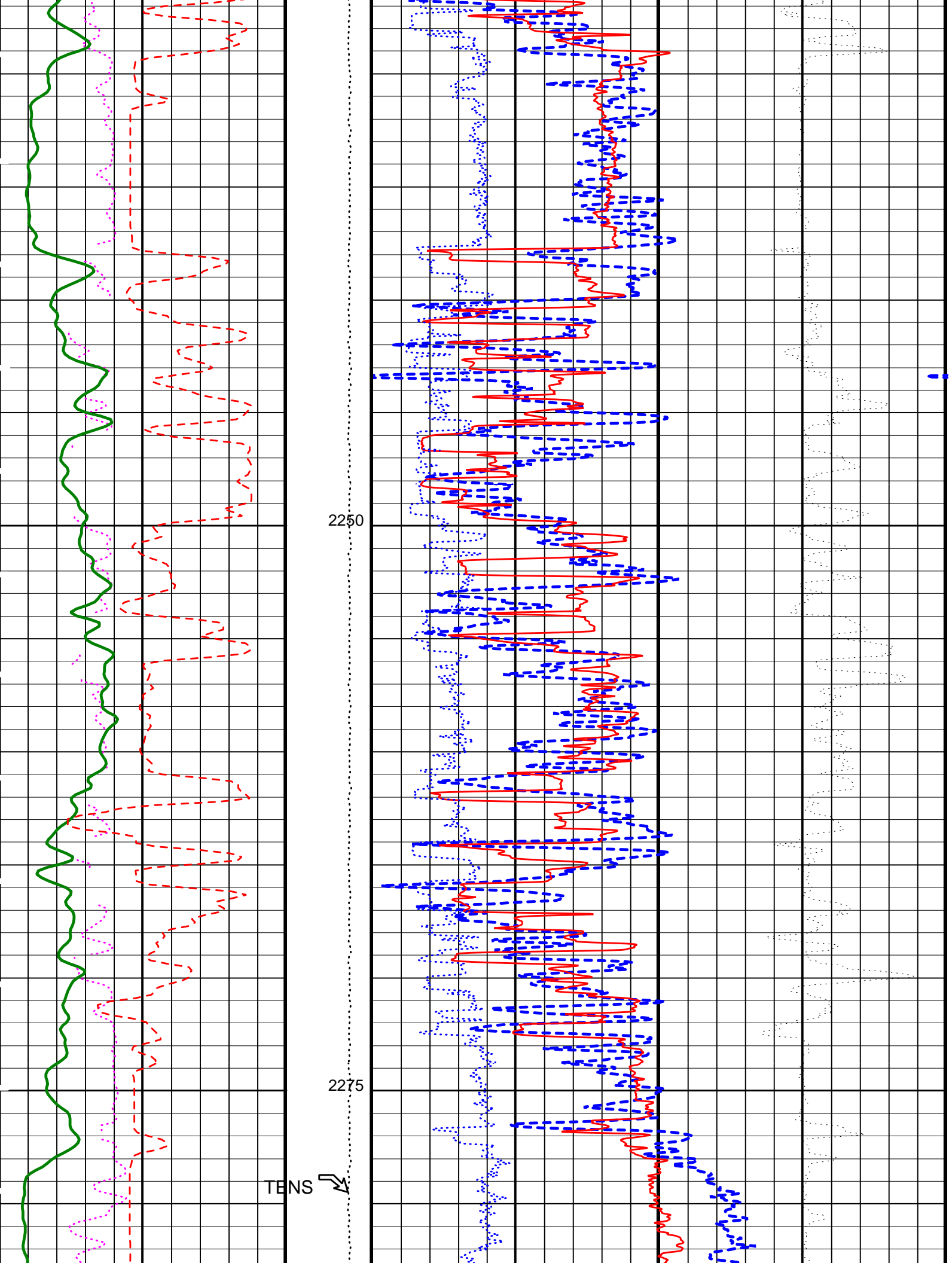


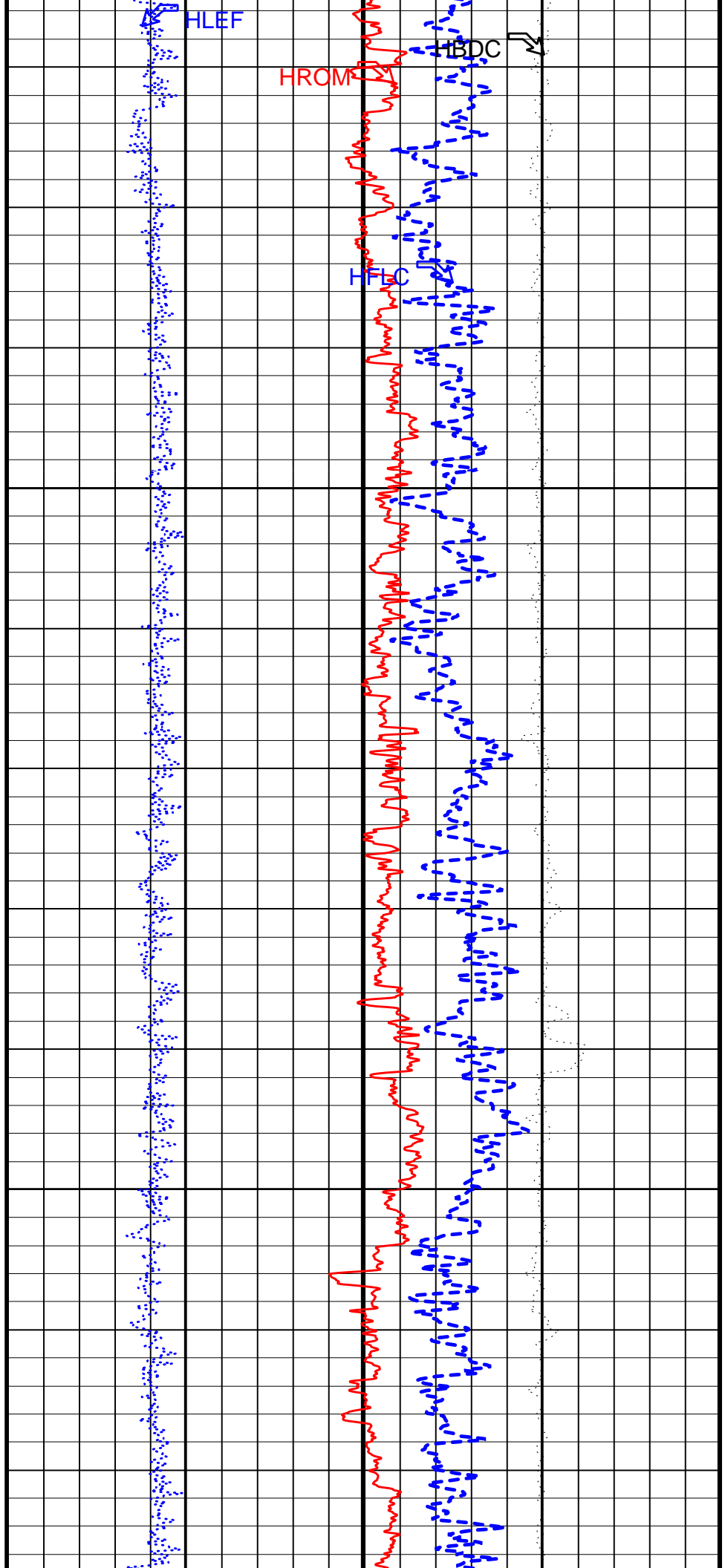
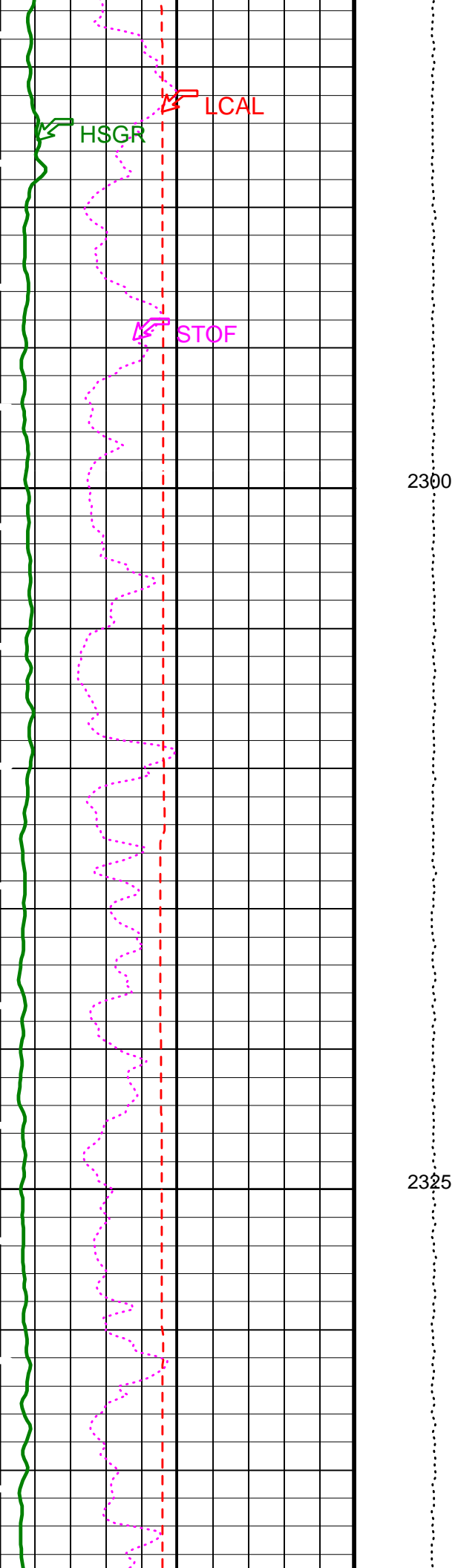


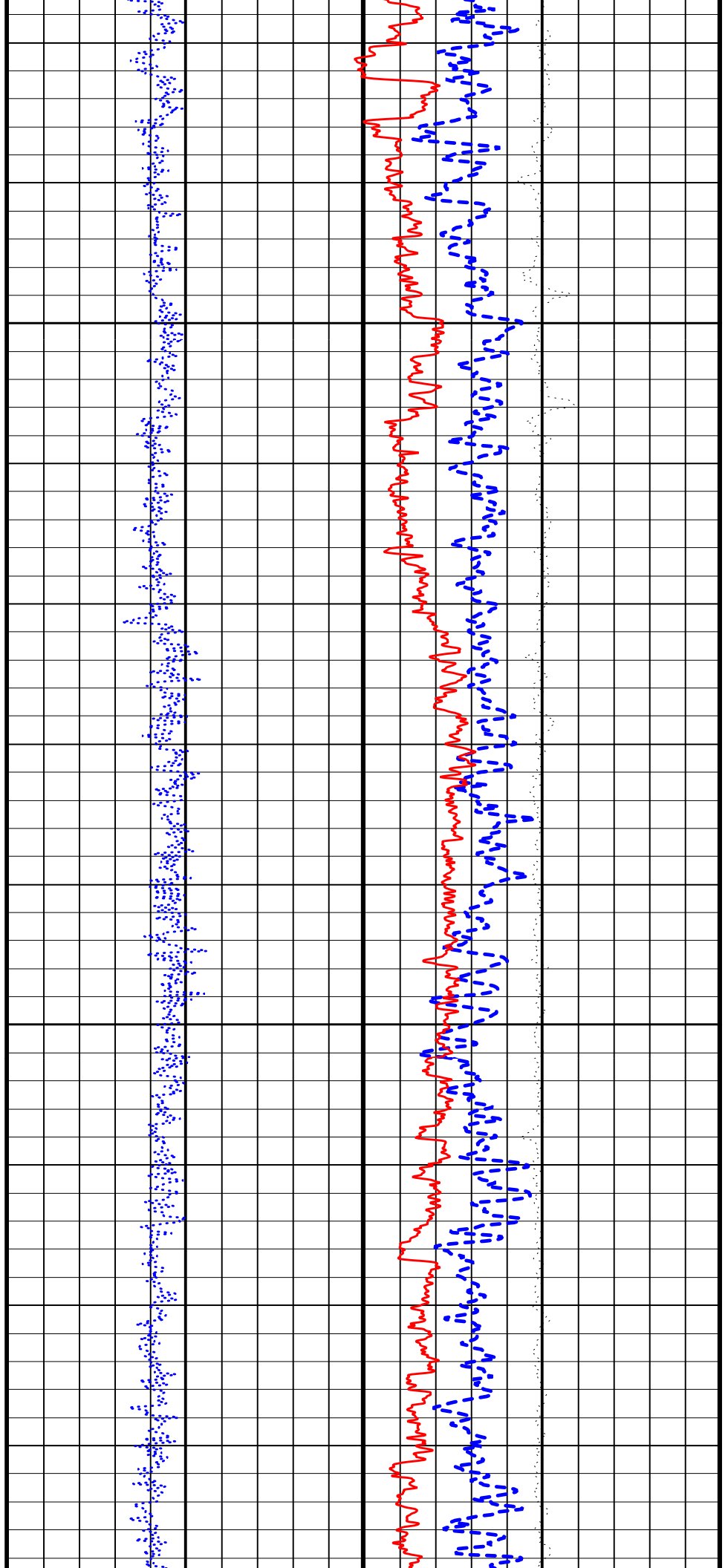
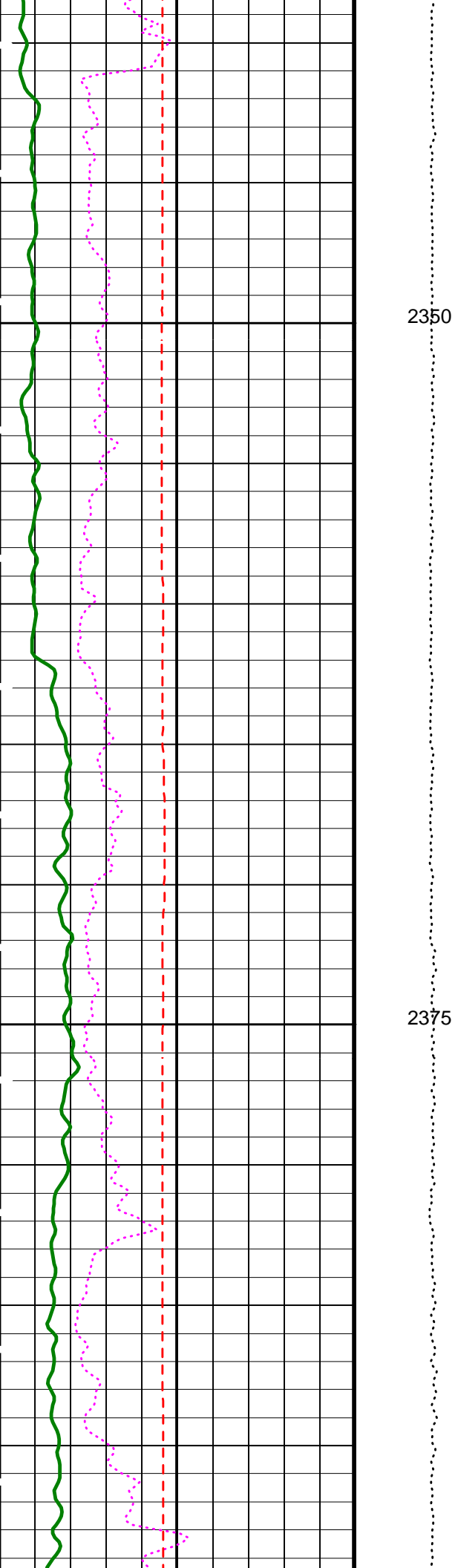


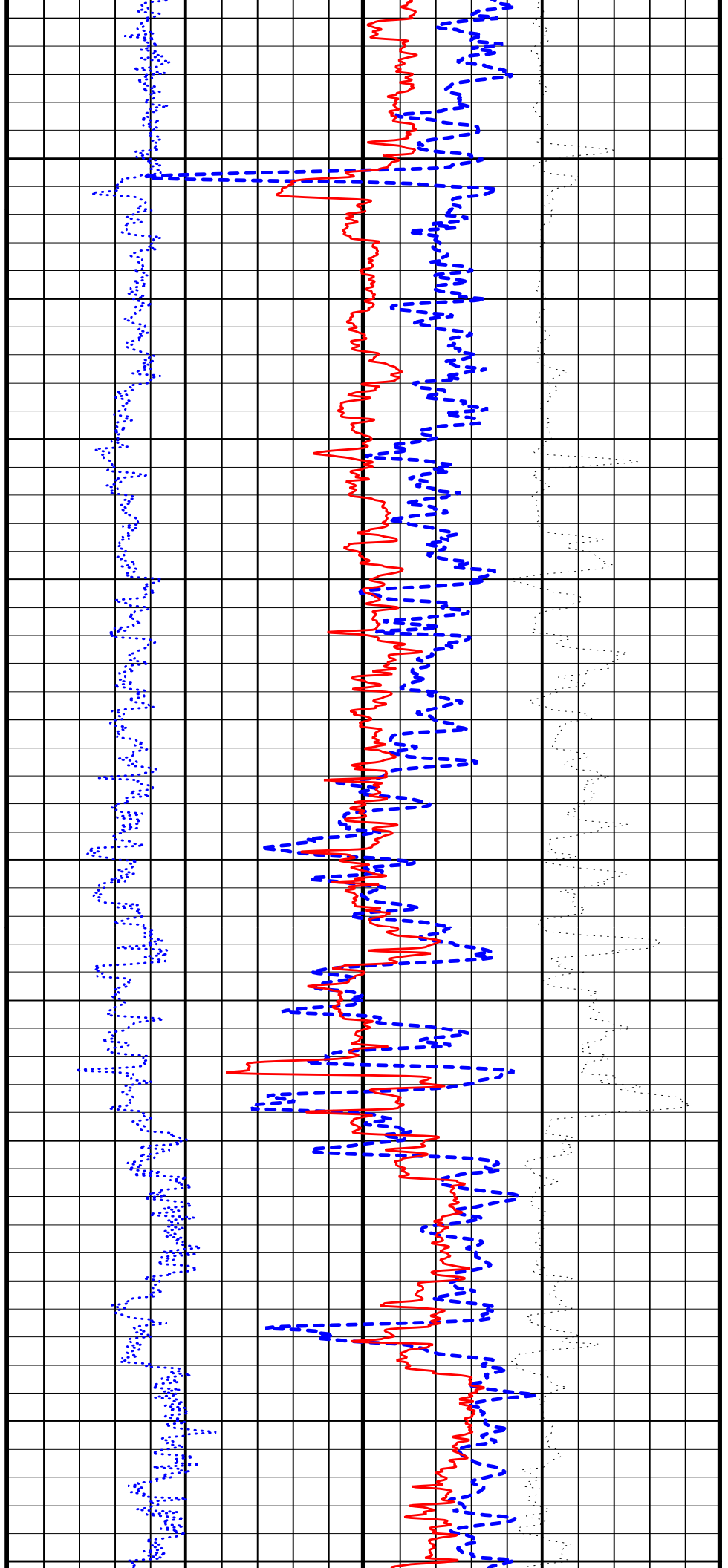
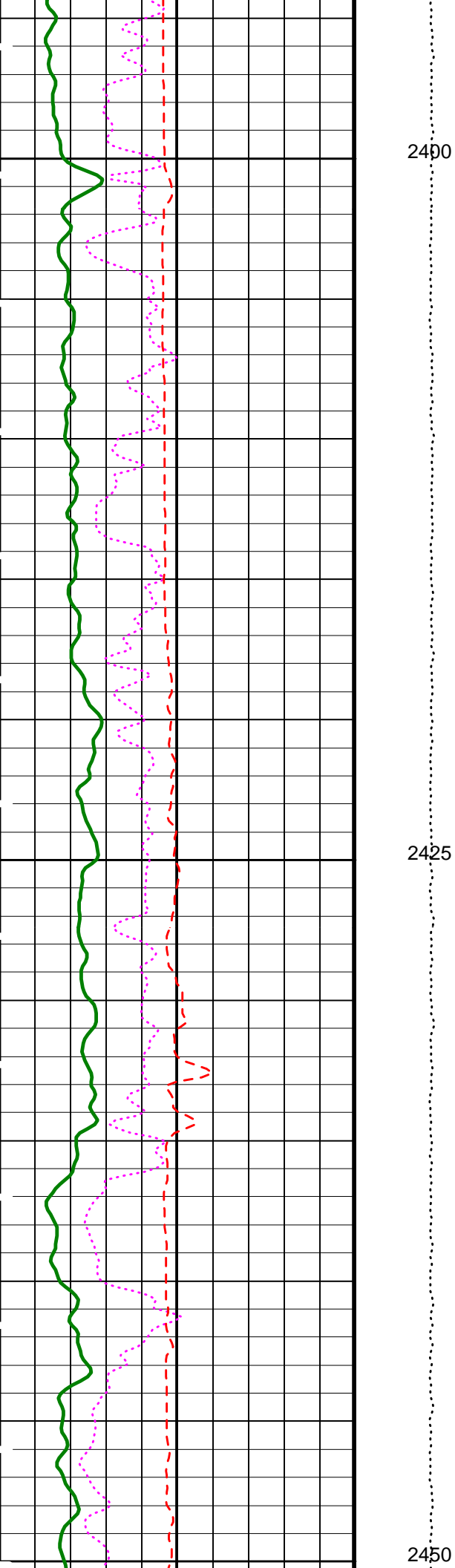


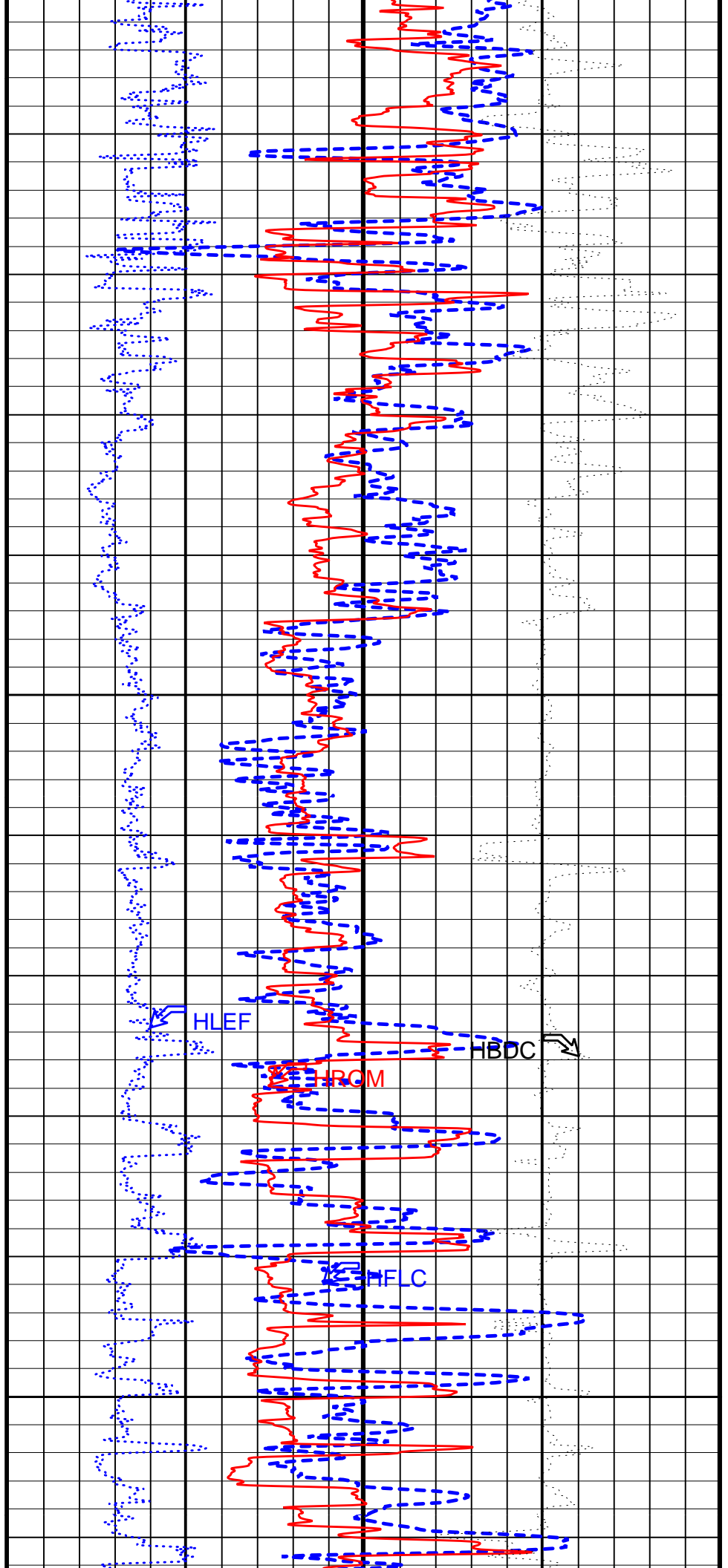
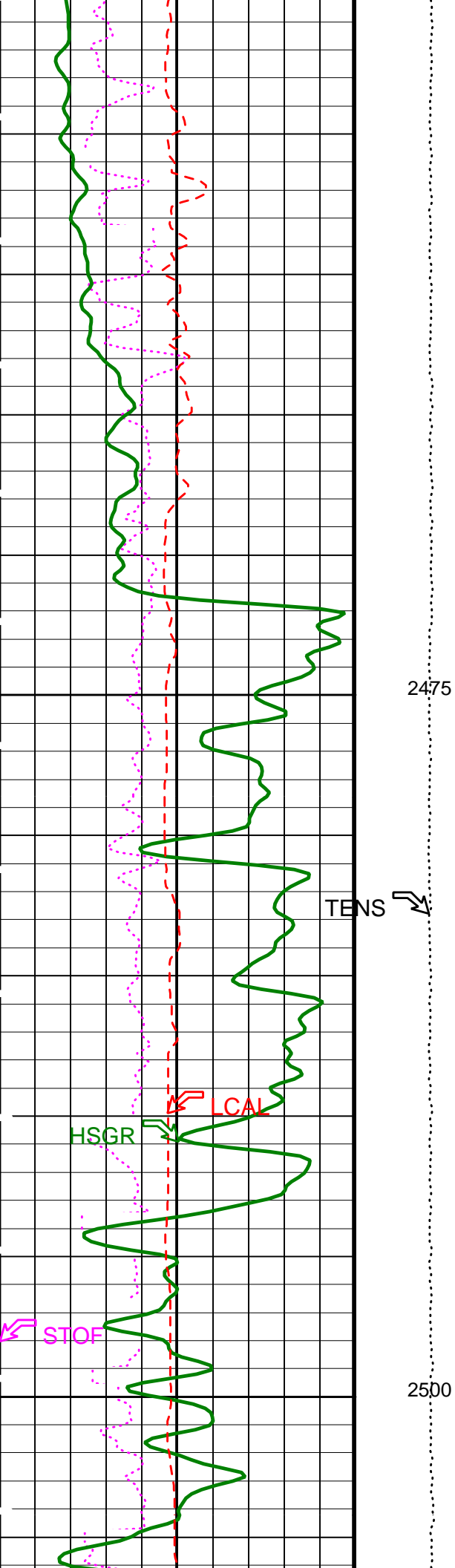


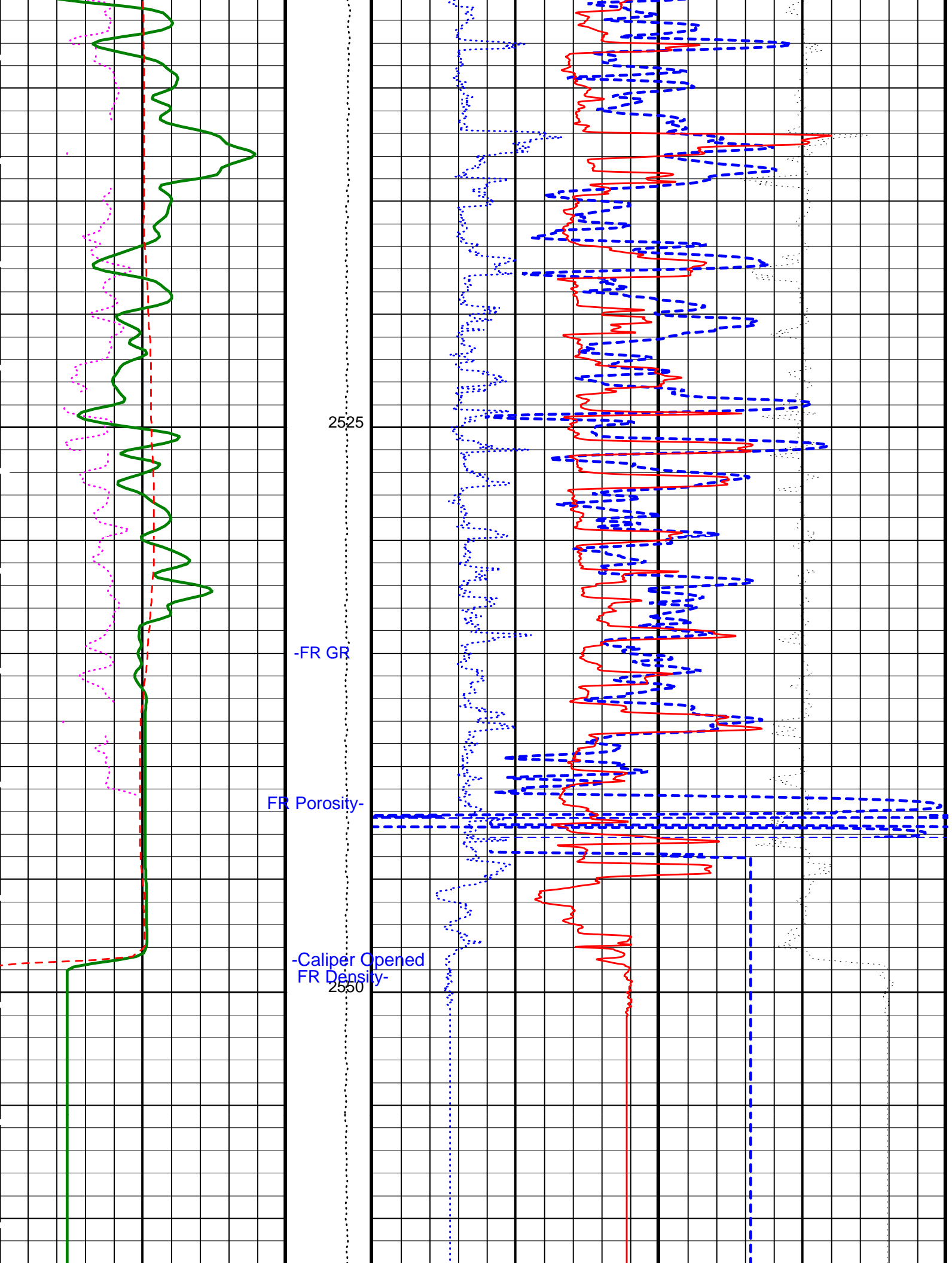














		-TD-	Pass #2			
HLDS Caliper (LCAL) (IN)		Tension (TENS) (LBF)	APS HR Near/Far Corrected Limestone Porosity (HFLC) (PU)			
0 20		10000 0	100 0			
APS Effective Standoff in Limestone (STOF) (IN)		HLDS HR Bulk Density (HROM) (G/C3)				
-1 4		1 3				
HNGS Spectroscopy Gamma Ray (HSGR) (GAPI)		HLDS HR Long Spaced Photoelectric Effect (HLEF)		HLDS HR Bulk Density Correction (HBDC) (G/C3)		
0 150		0 10		-0.25 0.25		

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
DIT-E: Dual Induction - E		
BHS	Borehole Status	OPEN
BHT	Bottom Hole Temperature (used in calculations)	12 DEGC
DGF1	Deep 10 kHz Gain Factor	0.995593
DGF2	Deep 20 kHz Gain Factor	1.00789
DGF4	Deep 40 kHz Gain Factor	1.02614
DPH1	Deep 10 kHz Phase Shift	0.114289 DEG
DPH2	Deep 20 kHz Phase Shift	-0.152394 DEG
DPH4	Deep 40 kHz Phase Shift	-1.42629 DEG
DRE1	Deep Real 10 kHz Sonde Error Correction	44.9501 MM/M
DRE2	Deep Real 20 kHz Sonde Error Correction	16.357 MM/M
DRE4	Deep Real 40 kHz Sonde Error Correction	4.69026 MM/M
DRIM	DIT-E Radial Invasion Mode	Rxo>Rt
DSR1	Deep Sigma Reference (10 kHz)	7637 MM/M
DSR2	Deep Sigma Reference (20 kHz)	1843 MM/M
DSR4	Deep Sigma Reference (40 kHz)	405 MM/M
DSTA	DIT-E Transversal Standoff	0 IN
DXE1	Deep Quad 10 kHz Sonde Error Correction	108.903 MM/M
DXE2	Deep Quad 20 kHz Sonde Error Correction	64.6326 MM/M
DXE4	Deep Quad 40 kHz Sonde Error Correction	46.096 MM/M
GCSE	Generalized Caliper Selection	LCAL
GDEV	Average Angular Deviation of Borehole from Normal	0 DEG
GGRD	Geothermal Gradient	0.018227 DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE
IFRS	DIT-E Induction Frequency Selector	20
IPHA	DIT-E Phasor Processing Mode	ALL
IPRO	DIT-E Induction Processing Selector	PHASOR
ITEN	DIT-E Temperature Enable	ENABLE
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE
MGF1	Medium 10 kHz Gain Factor	1.02182
MGF2	Medium 20 kHz Gain Factor	1.02964
MGF4	Medium 40 kHz Gain Factor	1.06122
MPH1	Medium 10 kHz Phase Shift	-0.255819 DEG
MPH2	Medium 20 kHz Phase Shift	-0.933067 DEG
MPH4	Medium 40 kHz Phase Shift	-2.46117 DEG
MRE1	Medium Real 10 kHz Sonde Error Correction	20.7292 MM/M
MRE2	Medium Real 20 kHz Sonde Error Correction	-1.78642 MM/M
MRE4	Medium Real 40 kHz Sonde Error Correction	-10.4594 MM/M
MSR1	Medium Sigma Reference (10 kHz)	13520 MM/M
MSR2	Medium Sigma Reference (20 kHz)	3250 MM/M
MSR4	Medium Sigma Reference (40 kHz)	685 MM/M
MXE1	Medium Quad 10 kHz Sonde Error Correction	-105.752 MM/M
MXE2	Medium Quad 20 kHz Sonde Error Correction	-34.2041 MM/M
MXE4	Medium Quad 40 kHz Sonde Error Correction	11.4521 MM/M
SBR	Shoulder Bed Resistivity Factor	1 OHMM
SFCR	SFL Channel Ratio	1000
SFLE	SFL Enable	ENABLE
SHT	Surface Hole Temperature	20 DEGC
SPAE	DIT-E SPARC Processing Enable	ENABLE
SPNV	SP Next Value	0 MV
HLDS: Hostile Litho-Density Sonde		
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
CLSC	Density Hole Correction	PS

DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
FD	Fluid Density	1	G/C3
LATC	HLDS Activation Correction	ON	
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	
MDEN	Matrix Density	2.71	G/C3
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	
	NPLC-B: Nuclear Porosity Lithology Cartridge - B		
NOTS	NPLC Old Temperature Sensor	NO	
	APS-BA: Accelerator-Porosity Tool		
	APS Software Version	5	
AASD	APS Thermal and Array Detectors High Voltage Setting	1958.44	V
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2072.71	V
AHCS	APS Holesize Correction Source	GCSE	
AHSS	APS Holesize Correction Switch	ON	
AMTY	APS Environmental Corrections Mud Type	WaterBaseBarite	
ANSD	APS Near Detector High Voltage Setting	1727.99	V
AOTS	APS Old Temperature Sensor Switch	NO	
ASOS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	OFF	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	12	DEGC
DPPM	Density Porosity Processing Mode	HIRS	
FSAL	Formation Salinity	-50000	PPM
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
NARC	APS Near/Array Calibration Ratio	1.05147	
NFRC	APS Near/Far Calibration Ratio	0.886931	
SHT	Surface Hole Temperature	20	DEGC
	HNGS-BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	12	DEGC
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
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	-0.0016781	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	-999.25	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	-999.25	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	20	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.982356	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.991526	
	System and Miscellaneous		
ALTDCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	0.000	IN
CWEI	Casing Weight	0.00	LB/F
DFD	Drilling Fluid Density	1.10	G/C3
MST	Mud Sample Temperature	32.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	-50000	M

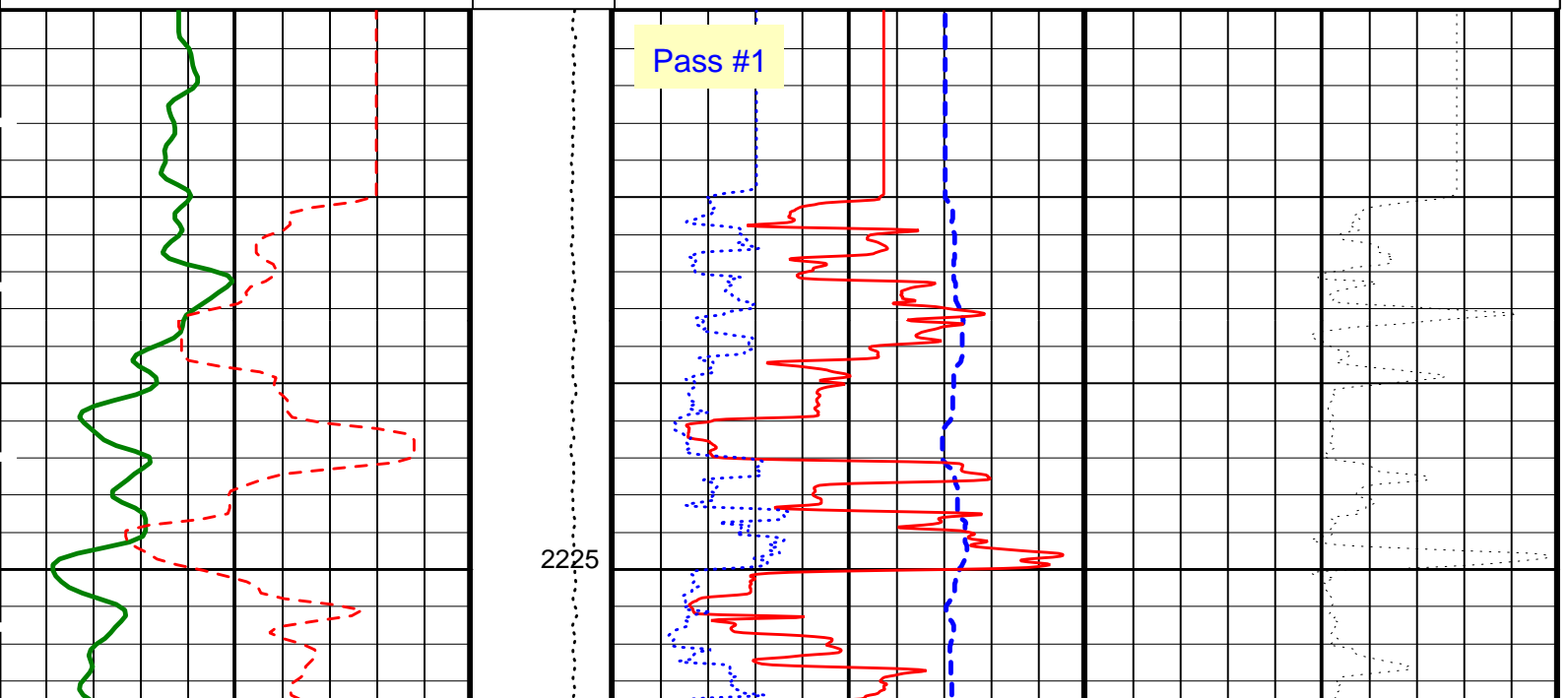
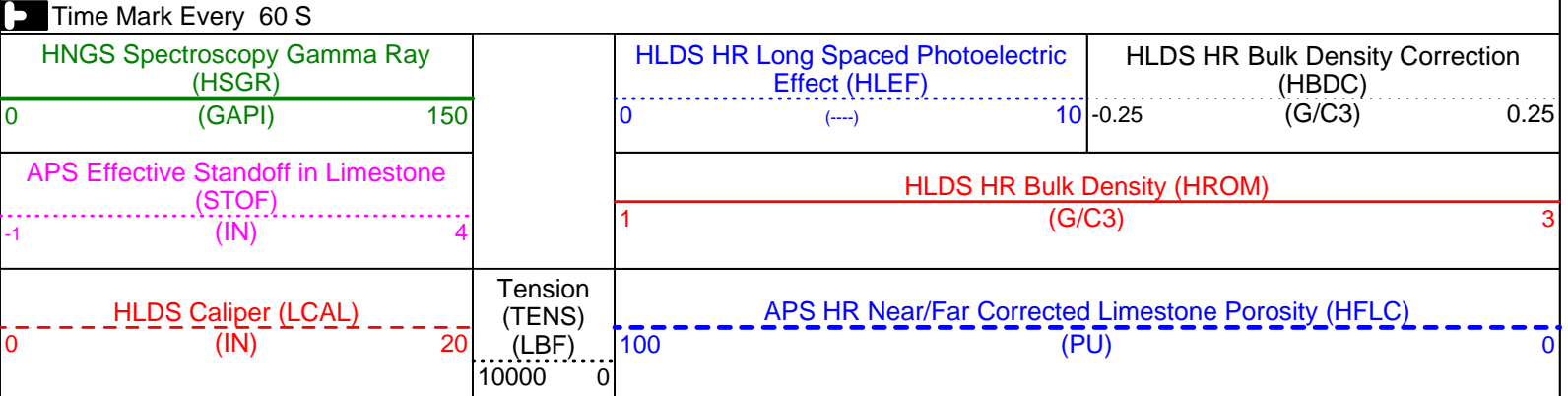
<b>OP System Version: 10C0-306</b>			
MCM			
DIT-E	10C0-306	DTA-A	10C0-306
HLDS	SPC-2277-NUCL_b	NPLC-B	OP10-KP1
APS-BA	SPC-2277-NUCL_b	HNGS-BA	SPC-2277-NUCL_b
DTC-H	10C0-306		

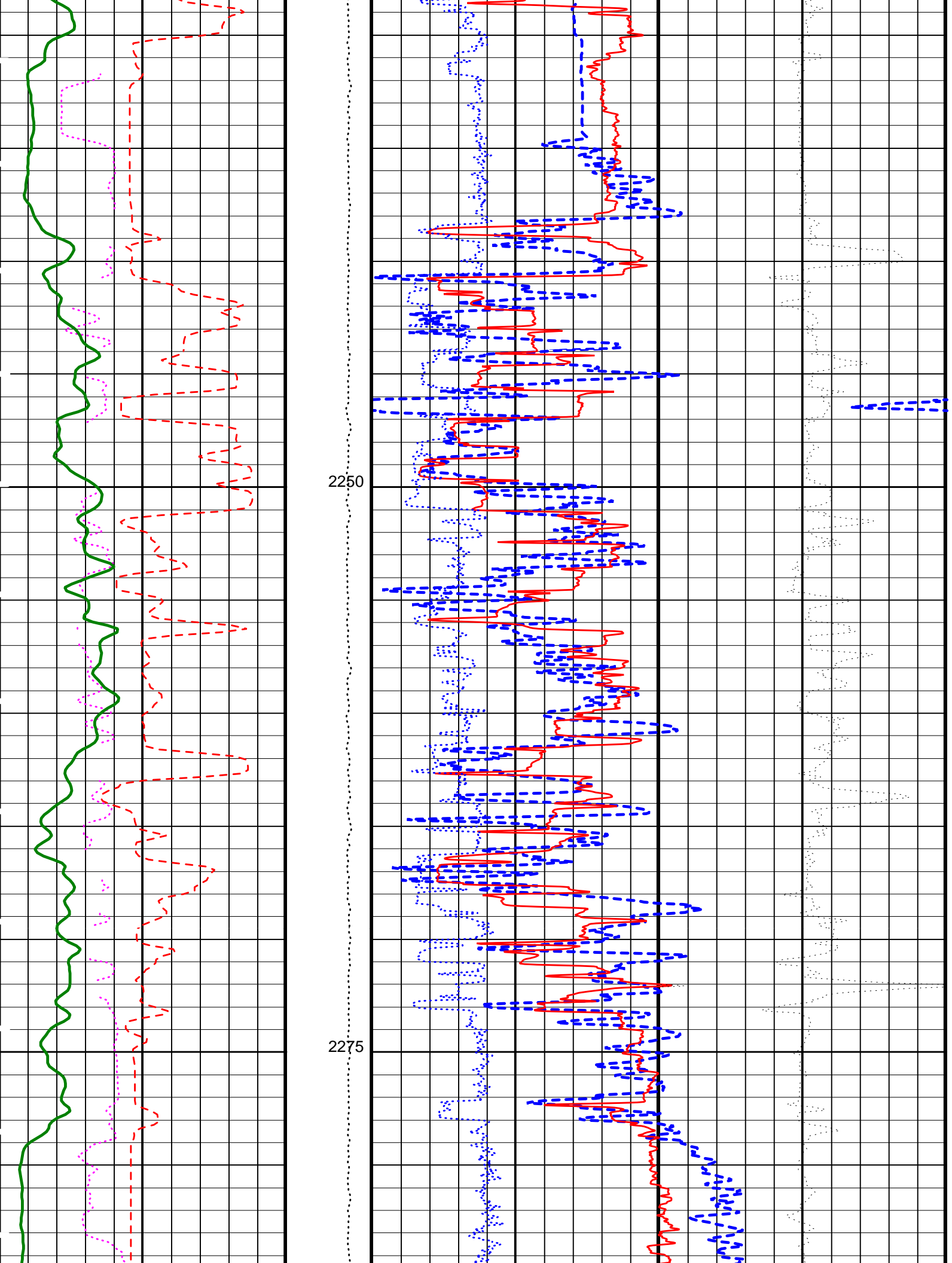
<b>Output DLIS Files</b>					
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REDUCE	PI_LDL_APS_NGS_008LUP	FN:13	PRODUCER	21-Feb-2003 21:50	

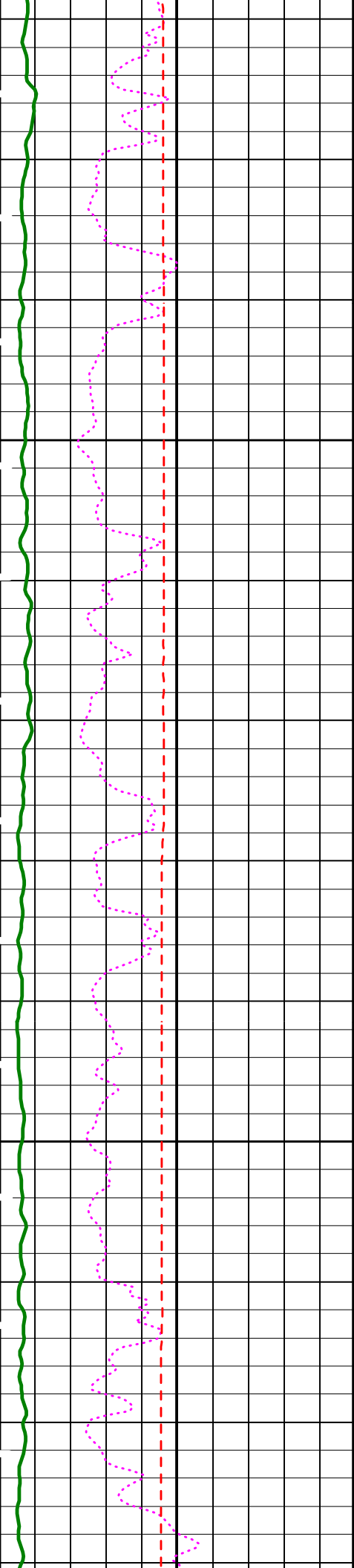
<b>Output DLIS Files</b>					
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REDUCE	PI_LDL_APS_NGS_007LUP	FN:11	PRODUCER	21-Feb-2003 20:16	2564.9 M      2210.0 M

<b>OP System Version: 10C0-306</b>			
MCM			
DIT-E	10C0-306	DTA-A	10C0-306
HLDS	SPC-2277-NUCL_b	NPLC-B	OP10-KP1
APS-BA	SPC-2277-NUCL_b	HNGS-BA	SPC-2277-NUCL_b
DTC-H	10C0-306		

**PIP SUMMARY**

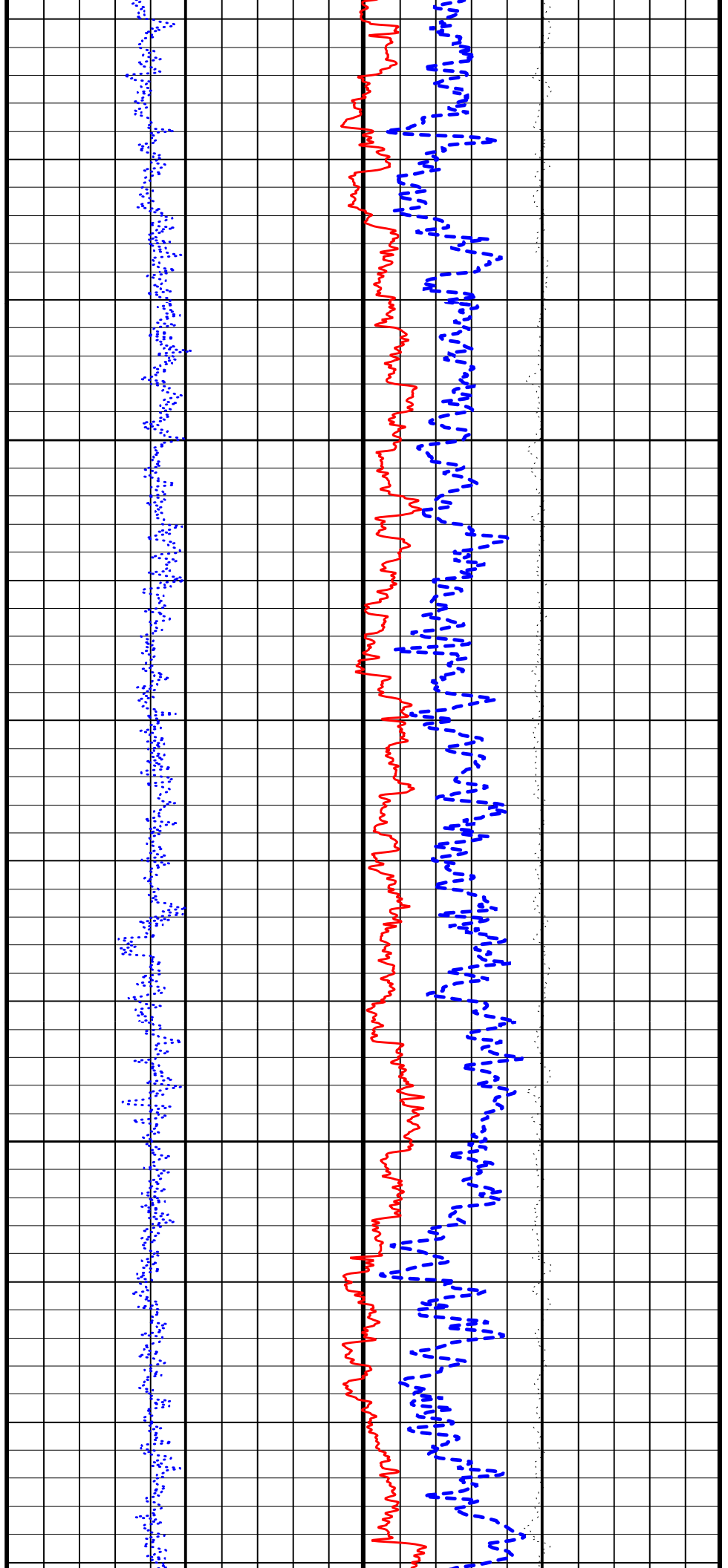


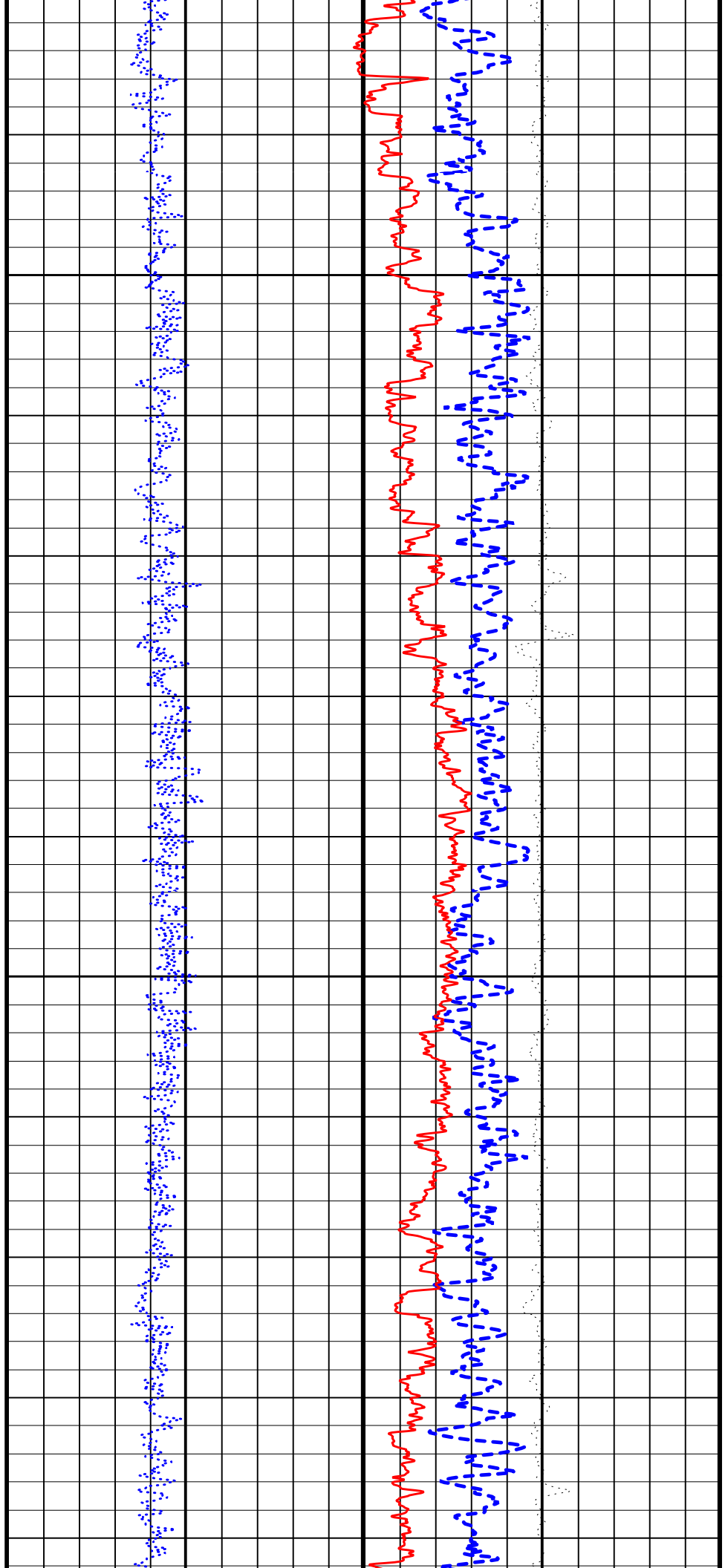
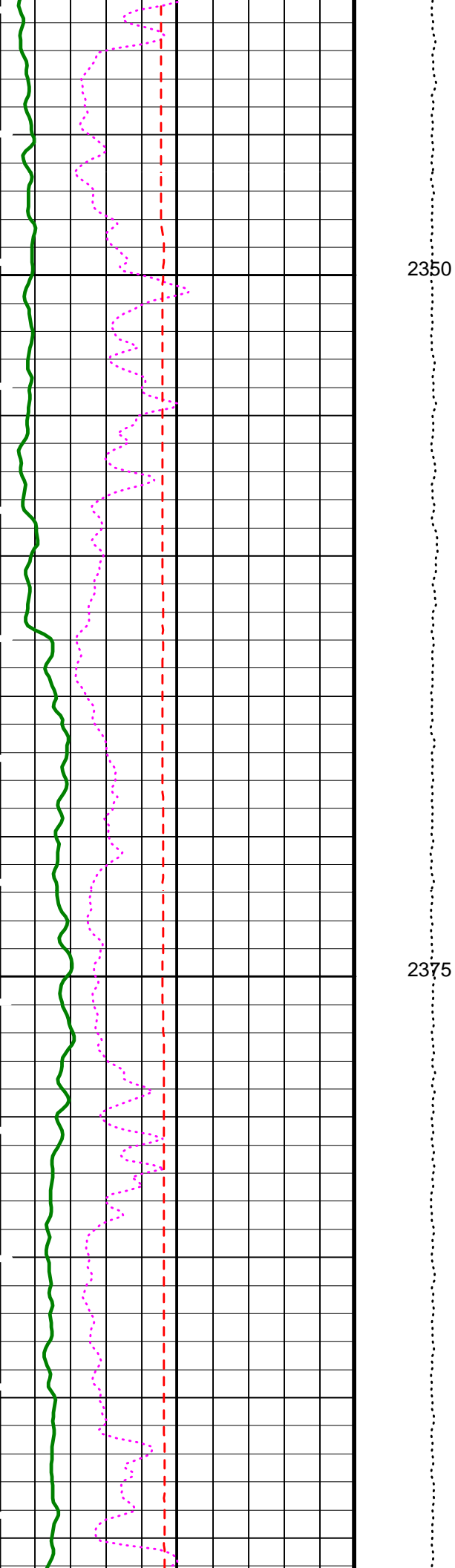


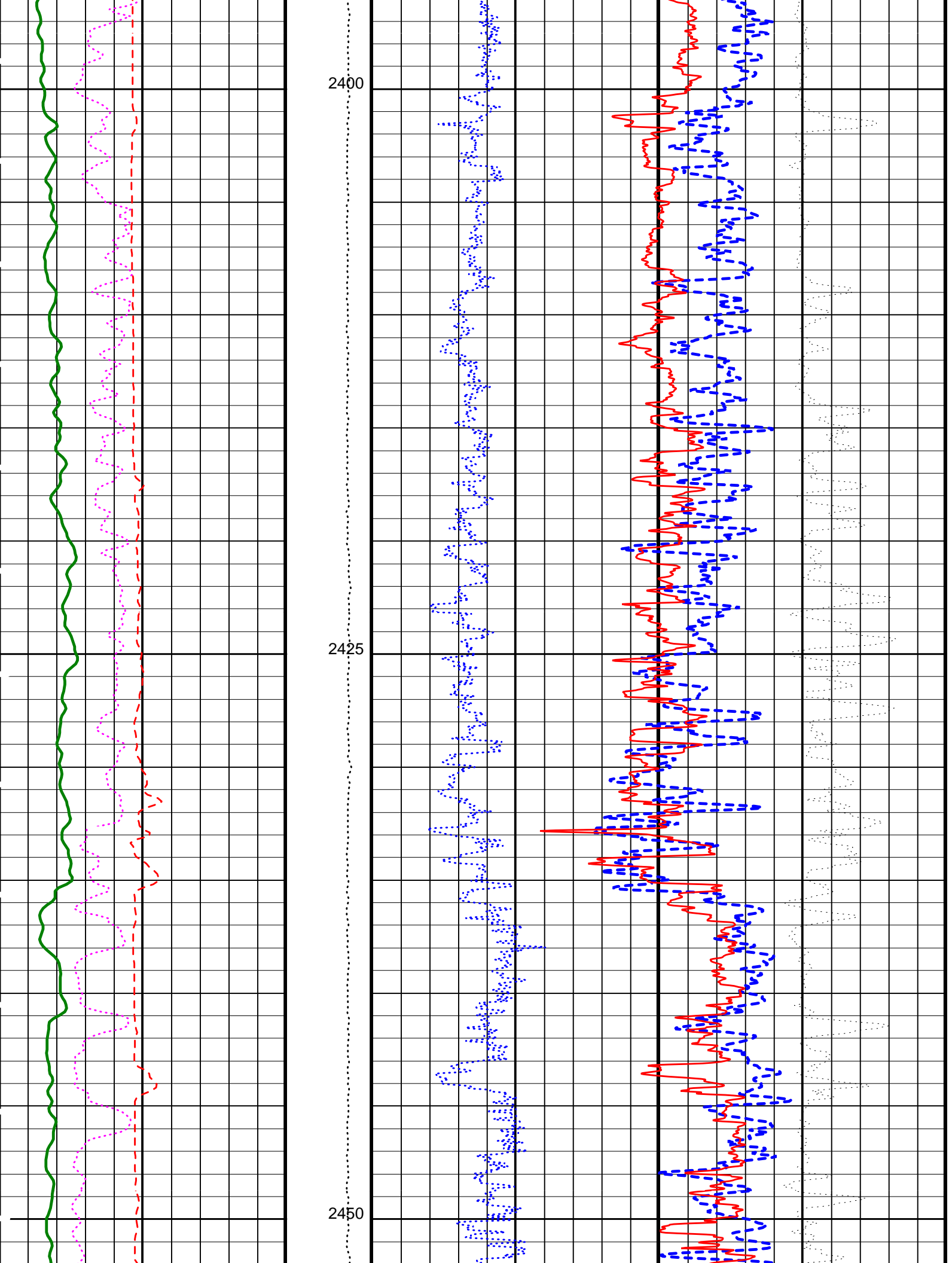


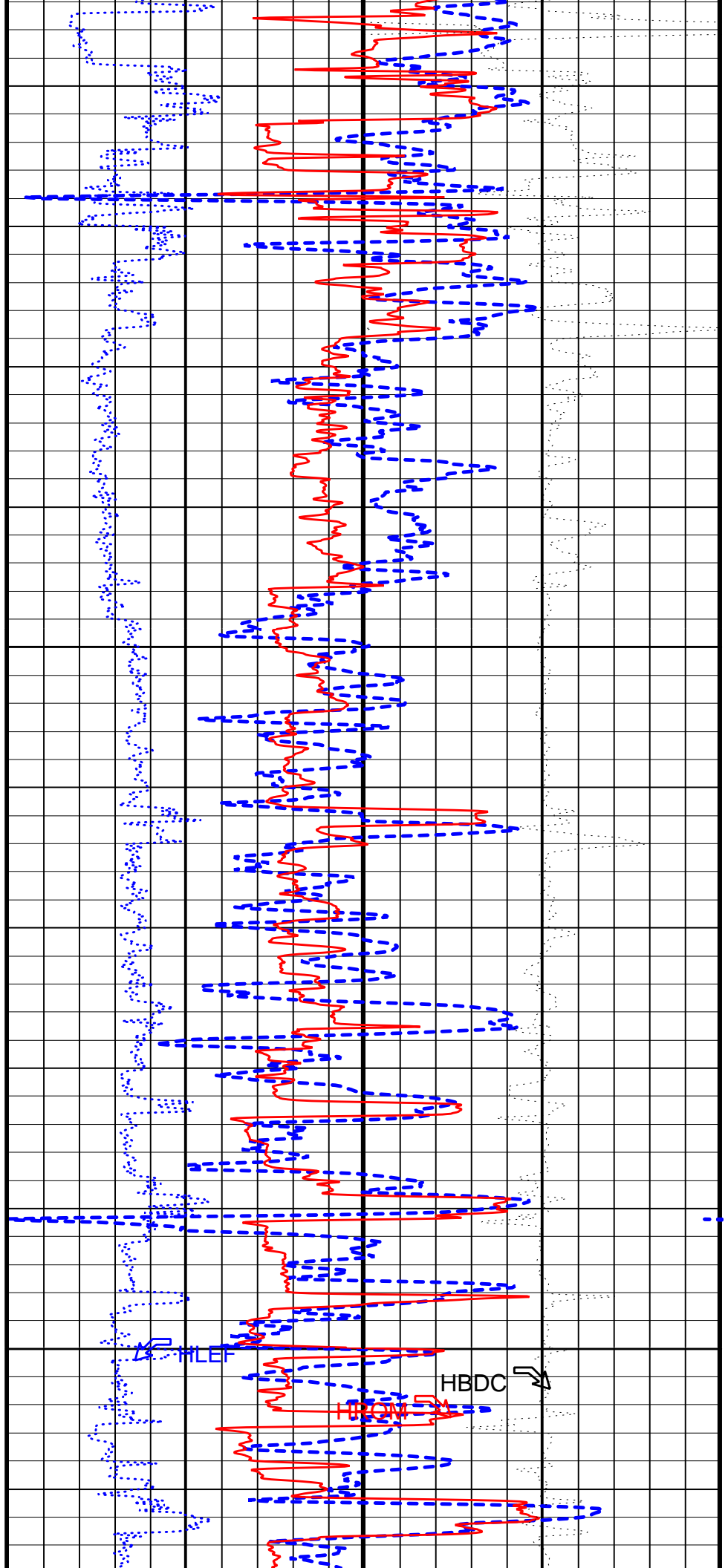
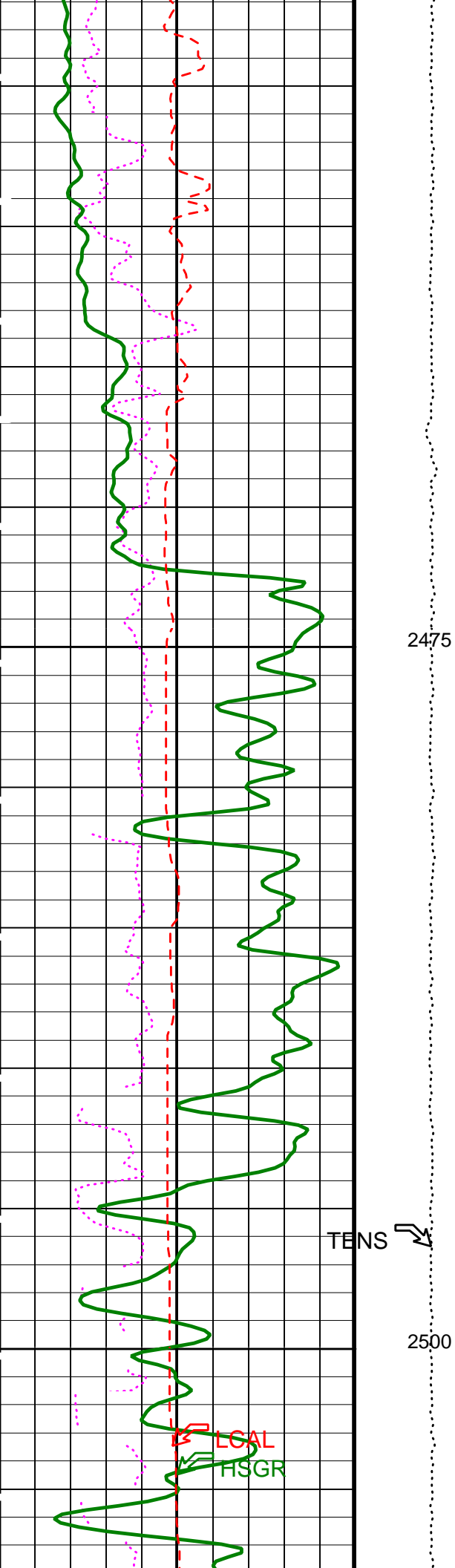
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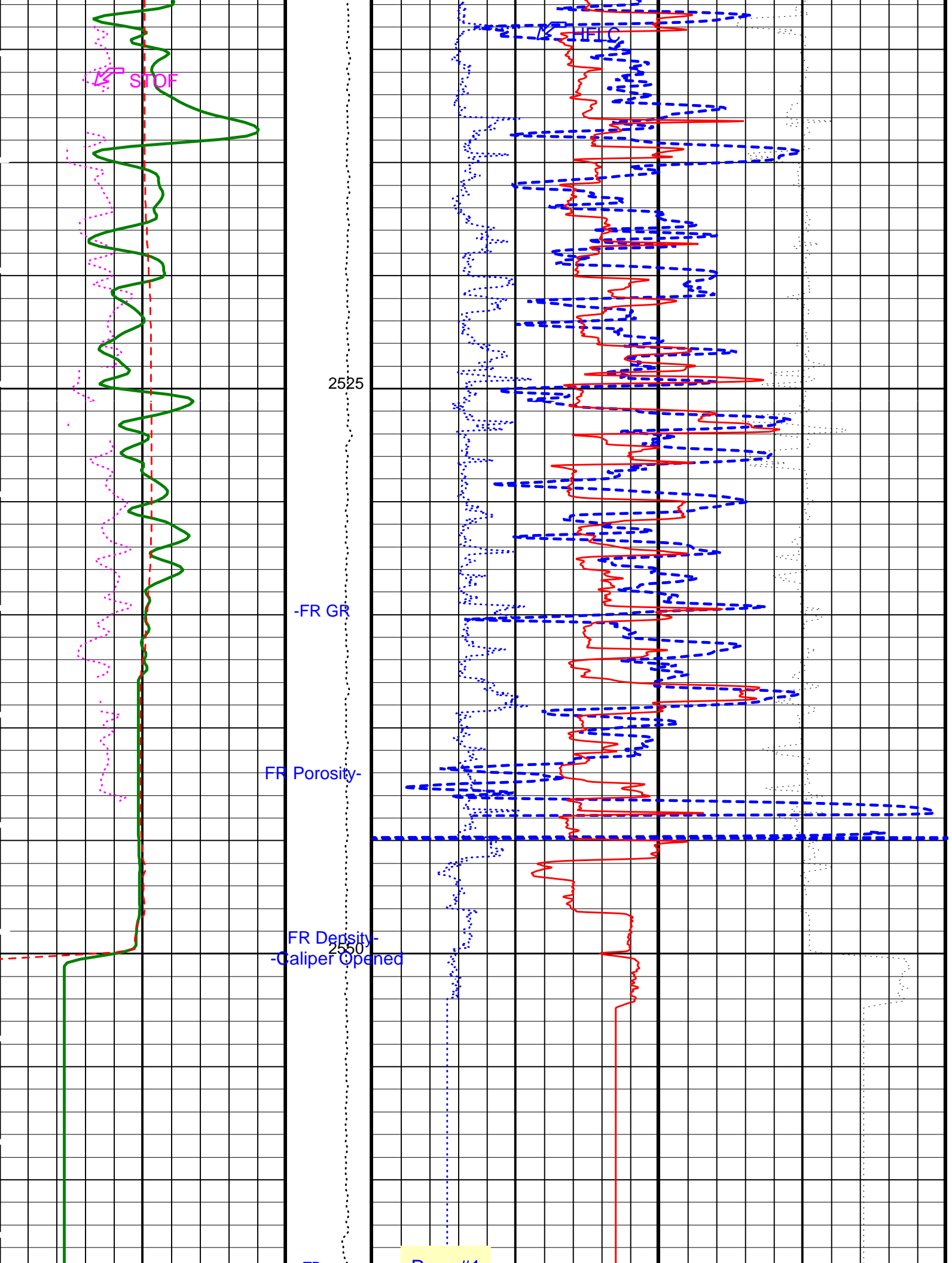












0	HLDS Caliper (LCAL) (IN)	20	Tension (TENS) (LBF)	10000	0	100	APS HR Near/Far Corrected Limestone Porosity (HFLC) (PU)	0
-1	APS Effective Standoff in Limestone (STOF) (IN)	4				1	HLDS HR Bulk Density (HROM) (G/C3)	3
0	HNGS Spectroscopy Gamma Ray (HSGR) (GAPI)	150				0	HLDS HR Long Spaced Photoelectric Effect (HLEF) (--)	10
						-0.25	HLDS HR Bulk Density Correction (HBDC) (G/C3)	0.25

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
DIT-E: Dual Induction - E		
BHS	Borehole Status	OPEN
BHT	Bottom Hole Temperature (used in calculations)	12 DEGC
DGF1	Deep 10 kHz Gain Factor	0.995593
DGF2	Deep 20 kHz Gain Factor	1.00789
DGF4	Deep 40 kHz Gain Factor	1.02614
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DPH4	Deep 40 kHz Phase Shift	-1.42629 DEG
DRE1	Deep Real 10 kHz Sonde Error Correction	44.9501 MM/M
DRE2	Deep Real 20 kHz Sonde Error Correction	16.357 MM/M
DRE4	Deep Real 40 kHz Sonde Error Correction	4.69026 MM/M
DRIM	DIT-E Radial Invasion Mode	Rxo>Rt
DSR1	Deep Sigma Reference (10 kHz)	7637 MM/M
DSR2	Deep Sigma Reference (20 kHz)	1843 MM/M
DSR4	Deep Sigma Reference (40 kHz)	405 MM/M
DSTA	DIT-E Transversal Standoff	0 IN
DXE1	Deep Quad 10 kHz Sonde Error Correction	108.903 MM/M
DXE2	Deep Quad 20 kHz Sonde Error Correction	64.6326 MM/M
DXE4	Deep Quad 40 kHz Sonde Error Correction	46.096 MM/M
GCSE	Generalized Caliper Selection	LCAL
GDEV	Average Angular Deviation of Borehole from Normal	0 DEG
GGRD	Geothermal Gradient	0.018227 DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE
IFRS	DIT-E Induction Frequency Selector	20
IPHA	DIT-E Phasor Processing Mode	ALL
IPRO	DIT-E Induction Processing Selector	PHASOR
ITEN	DIT-E Temperature Enable	ENABLE
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE
MGF1	Medium 10 kHz Gain Factor	1.02182
MGF2	Medium 20 kHz Gain Factor	1.02964
MGF4	Medium 40 kHz Gain Factor	1.06122
MPH1	Medium 10 kHz Phase Shift	-0.255819 DEG
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MRE2	Medium Real 20 kHz Sonde Error Correction	-1.78642 MM/M
MRE4	Medium Real 40 kHz Sonde Error Correction	-10.4594 MM/M
MSR1	Medium Sigma Reference (10 kHz)	13520 MM/M
MSR2	Medium Sigma Reference (20 kHz)	3250 MM/M
MSR4	Medium Sigma Reference (40 kHz)	685 MM/M
MXE1	Medium Quad 10 kHz Sonde Error Correction	-105.752 MM/M
MXE2	Medium Quad 20 kHz Sonde Error Correction	-34.2041 MM/M
MXE4	Medium Quad 40 kHz Sonde Error Correction	11.4521 MM/M
SBR	Shoulder Bed Resistivity Factor	1 OHMM
SFCR	SFL Channel Ratio	1000
SFLE	SFL Enable	ENABLE
SHT	Surface Hole Temperature	20 DEGC
SPAE	DIT-E SPARC Processing Enable	ENABLE
SPNV	SP Next Value	0 MV
HLDS: Hostile Litho-Density Sonde		
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
DHC	Density Hole Correction	BS
DPPM	Density Porosity Processing Mode	HIRS
FD	Fluid Density	1 G/C3

LATC	HLDS Activation Correction	ON	
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	
MDEN	Matrix Density	2.71	G/C3
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	
NPLC-B: Nuclear Porosity Lithology Cartridge - B			
NOTS	NPLC Old Temperature Sensor	NO	
APS-BA: Accelerator-Porosity Tool			
	APS Software Version	5	
AASD	APS Thermal and Array Detectors High Voltage Setting	1958.44	V
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2072.71	V
AHCS	APS Holesize Correction Source	GCSE	
AHSS	APS Holesize Correction Switch	ON	
AMTY	APS Environmental Corrections Mud Type	WaterBaseBarite	
ANSD	APS Near Detector High Voltage Setting	1727.99	V
AOTS	APS Old Temperature Sensor Switch	NO	
ASOS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	OFF	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	12	DEGC
DPPM	Density Porosity Processing Mode	HIRS	
FSAL	Formation Salinity	-50000	PPM
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
NARC	APS Near/Array Calibration Ratio	1.05147	
NFRC	APS Near/Far Calibration Ratio	0.886931	
SHT	Surface Hole Temperature	20	DEGC
HNGS-BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	12	DEGC
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
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	-0.0363765	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	-999.25	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	-999.25	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	20	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.989291	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.986123	
System and Miscellaneous			
ALTDPC	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	0.000	IN
CWEI	Casing Weight	0.00	LB/F
DFD	Drilling Fluid Density	1.10	G/C3
MST	Mud Sample Temperature	32.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	-50000	M
TDD	Total Depth - Driller	2665.00	M
TDL	Total Depth - Logger	2665.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

## OP System Version: 10C0-306

MCM

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

### Output DLIS Files

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

### Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
<b>Hostile Litho-Density Sonde Wellsite Calibration - Background Measurement</b>							
Master: 13-Dec-2002 14:00 Before: 15-Jan-2003 11:10 After: 31-Jan-2003 17:05							
SS Cs Resolution Bkg	9.000	8.065	8.135	8.015	-0.1196	1.800	%
LS Cs Resolution Bkg	9.000	8.249	8.108	8.087	-0.02139	1.800	%
LSW1 Background	100.0	86.88	86.46	87.40	0.9397	3.000	CPS
LSW2 Background	100.0	82.90	80.84	82.04	1.202	3.000	CPS
LSW3 Background	200.0	182.1	179.4	182.1	2.733	6.000	CPS
LSW4 Background	250.0	221.9	216.6	221.3	4.695	7.500	CPS
LSW5 Background	600.0	510.1	505.1	504.3	-0.8560	18.00	CPS
SSW1 Background	100.0	96.14	98.01	97.37	-0.6340	3.000	CPS
SSW2 Background	200.0	176.7	177.3	174.6	-2.675	6.000	CPS
SSW3 Background	500.0	478.2	477.6	476.6	-0.9975	15.00	CPS
SSW4 Background	270.0	244.1	244.0	243.2	-0.8002	8.100	CPS
SSW5 Background	200.0	177.5	175.7	176.8	1.146	6.000	CPS
<b>Hostile Litho-Density Sonde Wellsite Calibration - Aluminum Measurement</b>							
Master: 13-Dec-2002 15:15							
LSW1 Aluminum	600.0	580.8	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	822.1	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	985.4	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	489.2	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	453.3	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2597	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	7087	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	9849	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	4127	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	537.2	N/A	N/A	N/A	N/A	CPS
<b>Hostile Litho-Density Sonde Wellsite Calibration - Lithology Measurement</b>							
Master: 13-Dec-2002 15:11							
LSW1 Iron	400.0	401.7	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	683.6	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	900.2	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	465.6	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	434.8	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1961	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	6103	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	9305	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3921	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	502.8	N/A	N/A	N/A	N/A	CPS
<b>Hostile Litho-Density Sonde Wellsite Calibration - Caliper Calibration</b>							
Before: 15-Jan-2003 11:25							
HLDS Caliper Small Ring	15.00	N/A	18.20	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	17.50	N/A	20.31	N/A	N/A	N/A	IN
<b>Accelerator-Porosity Tool Wellsite Calibration - Detector Background</b>							
Master: 28-Nov-2002 19:52 Before: 21-Feb-2003 17:27 After: 22-Feb-2003 4:27							
Near Det Bkg Cntrate	30.00	32.65	31.99	30.78	-1.202	N/A	CPS
Far Det Bkg Cntrate	30.00	31.56	34.38	32.17	-2.210	N/A	CPS
Array-1 Det Bkg Cntrate	30.00	29.11	28.81	27.45	-1.365	N/A	CPS
Array-2 Det Bkg Cntrate	30.00	29.96	30.42	29.06	-1.358	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	32.97	32.24	33.57	1.331	N/A	CPS

## Accelerator-Porosity Tool Wellsite Calibration - Calibration Ratios

Master: 28-Nov-2002 19:53

Near/Far Calibration Ratio	0.9250	0.8869	N/A	N/A	N/A	N/A
Near/Array Calibration Ratio	1.030	1.051	N/A	N/A	N/A	N/A
Near/Array Cal Ratio Up/Down	1.000	1.002	N/A	N/A	N/A	N/A

## Accelerator-Porosity Tool Wellsite Calibration - Tank Check

Master: 28-Nov-2002 19:54

Array-1 Standoff Porosity	11.75	11.90	N/A	N/A	N/A	N/A	PU
Array-2 Standoff Porosity	11.75	11.44	N/A	N/A	N/A	N/A	PU
Average Slowing Down Time	6.000	5.850	N/A	N/A	N/A	N/A	US
Array-1 SDT Ratio Up/Down	1.000	0.9966	N/A	N/A	N/A	N/A	
Array-2 SDT Ratio Up/Down	1.000	0.9889	N/A	N/A	N/A	N/A	
Sigma Formation	27.50	27.81	N/A	N/A	N/A	N/A	CU

## Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 1 Check

Master: 15-Jan-2003 16:08 Before: 15-Jan-2003 16:17 After: 31-Jan-2003 17:06

Na 511 Peak Loc	40.00	40.59	40.72	40.59	-0.1351	1.000	
Na 511 Peak Res	15.50	17.05	17.42	16.56	-0.8642	2.000	%
High Voltage	1150	1212	1212	1214	1.855	30.00	V
Na 1785 Peak Loc	142.6	145.6	145.3	145.7	0.3604	7.000	
Na 1785 Peak Res	8.500	9.037	9.666	8.507	-1.159	2.000	%
Temperature	15.50	32.69	32.84	29.39	-3.458	N/A	DEGC
Na Count Rate	45.00	44.80	43.98	42.72	-1.260	8.000	CPS

## Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 2 Check

Master: 15-Jan-2003 16:08 Before: 15-Jan-2003 16:17 After: 31-Jan-2003 17:06

Na 511 Peak Loc	40.00	40.55	40.57	40.60	0.02974	1.000	
Na 511 Peak Res	15.50	16.60	16.91	16.65	-0.2540	2.000	%
High Voltage	1150	1239	1239	1242	2.482	30.00	V
Na 1785 Peak Loc	142.6	144.7	144.4	144.6	0.2119	7.000	
Na 1785 Peak Res	8.500	9.925	9.708	9.652	-0.05593	2.000	%
Temperature	15.50	32.80	32.89	29.19	-3.703	N/A	DEGC
Na Count Rate	45.00	44.45	43.98	42.38	-1.601	8.000	CPS

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

Master: 15-Jan-2003 16:08 Before: 15-Jan-2003 16:17 After: 31-Jan-2003 17:06

Coincidence Count Rate Ratio	1.000	1.008	1.0000	1.006	0.006140	0.05000
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## Hostile Natural Gamma Ray Sonde Master Calibration - Detector 1 Calibration

Master: 15-Jan-2003 16:01

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

## Hostile Natural Gamma Ray Sonde Master Calibration - Detector 2 Calibration

Master: 15-Jan-2003 16:01

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

## Accelerator-Porosity Tool - Detector Plateau Settings :

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

## Dual Induction - E / Equipment Identification

## Primary Equipment:

Dual Induction Sonde	DIS - HB	442
Dual Induction Cartridge	DIC - EB	438

## Auxiliary Equipment:

Mass Isolated Housing	MIH - ZA	417
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## Hostile Litho-Density Sonde / Equipment Identification

## Primary Equipment:

Hostile Litho Density Sonde  
 Hostile Litho Density High Voltage  
 Gamma Source Radioactive

HLDS - D 45  
 HLDV - D 35  
 GSR - Z 1846

Auxiliary Equipment:

Hostile Litho Density Pad  
 Hostile Litho Density High Voltage Housi

HLDP - C 45  
 HEH - H 35

Hostile Litho-Density Sonde Wellsite Calibration									
Background Measurement									
Phase	SS Cs Resolution Bkg %	Value	Phase	LS Cs Resolution Bkg %	Value	Phase	LSW1 Background CPS	Value	
Master		8.065	Master		8.249	Master		86.88	
Before		8.135	Before		8.108	Before		86.46	
After		8.015	After		8.087	After		87.40	
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)			7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)			55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)		
Phase	LSW2 Background CPS	Value	Phase	LSW3 Background CPS	Value	Phase	LSW4 Background CPS	Value	
Master		82.90	Master		182.1	Master		221.9	
Before		80.84	Before		179.4	Before		216.6	
After		82.04	After		182.1	After		221.3	
	50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)			110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)			140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)		
Phase	LSW5 Background CPS	Value	Phase	SSW1 Background CPS	Value	Phase	SSW2 Background CPS	Value	
Master		510.1	Master		96.14	Master		176.7	
Before		505.1	Before		98.01	Before		177.3	
After		504.3	After		97.37	After		174.6	
	330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)			55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)			100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)		
Phase	SSW3 Background CPS	Value	Phase	SSW4 Background CPS	Value	Phase	SSW5 Background CPS	Value	
Master		478.2	Master		244.1	Master		177.5	
Before		477.6	Before		244.0	Before		175.7	
After		476.6	After		243.2	After		176.8	
	280.0 (Minimum) 500.0 (Nominal) 700.0 (Maximum)			150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum)			110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum)		
Master: 13-Dec-2002 14:00			Before: 15-Jan-2003 11:10			After: 31-Jan-2003 17:05			

Hostile Litho-Density Sonde Master Calibration									
Detector Background Measurement									
Phase	LSW1 Background CPS	Value	Phase	LSW2 Background CPS	Value	Phase	LSW3 Background CPS	Value	
Master		86.88	Master		82.90	Master		182.1	
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)			50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)			110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)		
Phase	LSW4 Background CPS	Value	Phase	LSW5 Background CPS	Value	Phase	LS Cs Resolution Bkg %	Value	
Master		221.9	Master		510.1	Master		8.249	
	140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)			330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)			7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)		
Phase	SSW1 Background CPS	Value	Phase	SSW2 Background CPS	Value	Phase	SSW3 Background CPS	Value	
Master		96.14	Master		176.7	Master		478.2	
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)			100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)			280.0 (Minimum) 500.0 (Nominal) 700.0 (Maximum)		
Phase	SSW4 Background CPS	Value	Phase	SSW5 Background CPS	Value	Phase	SS Cs Resolution Bkg %	Value	
Master		244.1	Master		177.5	Master		8.065	
	150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum)			110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum)			7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)		
Master: 13-Dec-2002 14:00									

Hostile Litho-Density Sonde Master Calibration									
Detector Aluminum Measurement (bkgd-subtracted)									
Phase	LSW1 Aluminum CPS	Value	Phase	LSW2 Aluminum CPS	Value	Phase	LSW3 Aluminum CPS	Value	
Master		580.8	Master		822.1	Master		985.4	
	420.0 (Minimum) 600.0 (Nominal) 700.0 (Maximum)			650.0 (Minimum) 900.0 (Nominal) 1050 (Maximum)			800.0 (Minimum) 1100 (Nominal) 1300 (Maximum)		

Phase	LSW4 Aluminum CPS			Value	Phase	LSW5 Aluminum CPS			Value	Phase	SSW1 Aluminum CPS			Value
Master				489.2	Master				453.3	Master				2597
	410.0 (Minimum)	580.0 (Nominal)	670.0 (Maximum)			410.0 (Minimum)	570.0 (Nominal)	660.0 (Maximum)			2000 (Minimum)	2800 (Nominal)	3200 (Maximum)	
Phase	SSW2 Aluminum CPS			Value	Phase	SSW3 Aluminum CPS			Value	Phase	SSW4 Aluminum CPS			Value
Master				7087	Master				9849	Master				4127
	5800 (Minimum)	8000 (Nominal)	9300 (Maximum)			8300 (Minimum)	11600 (Nominal)	13500 (Maximum)			3500 (Minimum)	5000 (Nominal)	5800 (Maximum)	
Phase	SSW5 Aluminum CPS			Value										
Master				537.2										
	470.0 (Minimum)	660.0 (Nominal)	770.0 (Maximum)											

Master: 13-Dec-2002 15:15

Hostile Litho-Density Sonde Master Calibration														
Detector Litholog Measurement (bkqd-subtracted)														
Phase	LSW1 Iron CPS			Value	Phase	LSW2 Iron CPS			Value	Phase	LSW3 Iron CPS			Value
Master				401.7	Master				683.6	Master				900.2
	290.0 (Minimum)	400.0 (Nominal)	470.0 (Maximum)			520.0 (Minimum)	730.0 (Nominal)	850.0 (Maximum)			720.0 (Minimum)	1000 (Nominal)	1160 (Maximum)	
Phase	LSW4 Iron CPS			Value	Phase	LSW5 Iron CPS			Value	Phase	SSW1 Iron CPS			Value
Master				465.6	Master				434.8	Master				1961
	370.0 (Minimum)	520.0 (Nominal)	600.0 (Maximum)			340.0 (Minimum)	470.0 (Nominal)	550.0 (Maximum)			1500 (Minimum)	2100 (Nominal)	2400 (Maximum)	
Phase	SSW2 Iron CPS			Value	Phase	SSW3 Iron CPS			Value	Phase	SSW4 Iron CPS			Value
Master				6103	Master				9305	Master				3921
	4900 (Minimum)	6800 (Nominal)	7900 (Maximum)			7800 (Minimum)	10800 (Nominal)	12600 (Maximum)			3300 (Minimum)	4600 (Nominal)	5400 (Maximum)	
Phase	SSW5 Iron CPS			Value										
Master				502.8										
	420.0 (Minimum)	580.0 (Nominal)	680.0 (Maximum)											

Master: 13-Dec-2002 15:11

Hostile Litho-Density Sonde Master Calibration														
Quality Ratios														
Phase	AL CALIBRATION RATIO 1			Value	Phase	AL CALIBRATION RATIO 2			Value	Phase	AL CALIBRATION RATIO 3			Value
Master				1.046	Master				2.112	Master				0.6163
	0.9000 (Minimum)	1.000 (Nominal)	1.100 (Maximum)			1.800 (Minimum)	2.000 (Nominal)	2.200 (Maximum)			0.4500 (Minimum)	0.5500 (Nominal)	0.6500 (Maximum)	
Phase	AL CALIBRATION RATIO 4			Value	Phase	Pad-Wear SS Ratio			Value	Phase	Pad-Wear LS Ratio			Value
Master				0.5569	Master				0.9905	Master				0.9885
	0.4000 (Minimum)	0.5000 (Nominal)	0.6000 (Maximum)			0.9800 (Minimum)	0.9880 (Nominal)	0.9960 (Maximum)			0.9800 (Minimum)	0.9880 (Nominal)	0.9960 (Maximum)	
Phase	Pad-Position SS Ratio			Value	Phase	Pad-Position LS Ratio			Value					
Master				0.9979	Master				0.9509					
	0.9900 (Minimum)	0.9940 (Nominal)	1.015 (Maximum)			0.9850 (Minimum)	0.9940 (Nominal)	1.010 (Maximum)						

Master: 14-Dec-2002 14:24

### Nuclear Porosity Lithology Cartridge - B / Equipment Identification

Primary Equipment: NPLC Cartridge	NPLC - B	79
Auxiliary Equipment: NPLC Housing	NPH - B	82

### Accelerator-Porosity Tool / Equipment Identification

Primary Equipment: Accelerator-Porosity Sonde APS Minitron	APS - BA MNTR - F	22 4185
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Accelerator-Porosity Tool Wellsite Calibration									
Detector Background									
Phase	Near Det Bkg Cntrate CPS	Value	Phase	Far Det Bkg Cntrate CPS	Value	Phase	Array-1 Det Bkg Cntrate CPS	Value	
Master		32.65	Master		31.56	Master		29.11	
Before		31.99	Before		34.38	Before		28.81	
After		30.78	After		32.17	After		27.45	
	1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum)			1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum)			1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum)		
Phase	Array-2 Det Bkg Cntrate CPS	Value	Phase	Array Therm Det Bkg Cntrate CPS	Value				
Master		29.96	Master		32.97				
Before		30.42	Before		32.24				
After		29.06	After		33.57				
	1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum)			1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum)					
Master: 28-Nov-2002 19:52			Before: 21-Feb-2003 17:27			After: 22-Feb-2003 4:27			

Accelerator-Porosity Tool Wellsite Calibration								
Calibration Ratios								
Phase	Near/Far Calibration Ratio	Value	Phase	Near/Array Calibration Ratio	Value	Phase	Near/Array Cal Ratio Up/Down	Value
Master		0.8869	Master		1.051	Master		1.002
	0.8000 (Minimum) 0.9250 (Nominal) 1.050 (Maximum)			0.9000 (Minimum) 1.030 (Nominal) 1.170 (Maximum)			0.9700 (Minimum) 1.000 (Nominal) 1.030 (Maximum)	
Master: 28-Nov-2002 19:53								

Accelerator-Porosity Tool Wellsite Calibration									
Tank Check									
Phase	Array-1 Standoff Porosity PU	Value	Phase	Array-2 Standoff Porosity PU	Value	Phase	Average Slowing Down Time US	Value	
Master		11.90	Master		11.44	Master		5.850	
	9.900 (Minimum) 11.75 (Nominal) 13.60 (Maximum)			9.900 (Minimum) 11.75 (Nominal) 13.60 (Maximum)			5.500 (Minimum) 6.000 (Nominal) 6.250 (Maximum)		
Phase	Array-1 SDT Ratio Up/Down	Value	Phase	Array-2 SDT Ratio Up/Down	Value	Phase	Sigma Formation CU	Value	
Master		0.9966	Master		0.9889	Master		27.81	
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)			0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)			20.00 (Minimum) 27.50 (Nominal) 35.00 (Maximum)		
Master: 28-Nov-2002 19:54									

Accelerator-Porosity Tool Master Calibration								
Detector Calibration								
Phase	Near/Far Calibration Ratio	Value	Phase	Near/Array Calibration Ratio	Value	Phase	Near/Array Cal Ratio Up/Down	Value
Master		0.8869	Master		1.051	Master		1.002
	0.8000 (Minimum) 0.9250 (Nominal) 1.050 (Maximum)			0.9000 (Minimum) 1.030 (Nominal) 1.170 (Maximum)			0.9700 (Minimum) 1.000 (Nominal) 1.030 (Maximum)	
Master: 28-Nov-2002 19:53								

Accelerator-Porosity Tool Master Calibration									
Tank Check									
Phase	Array-1 Standoff Porosity PU	Value	Phase	Array-2 Standoff Porosity PU	Value	Phase	Average Slowing Down Time US	Value	
Master		11.90	Master		11.44	Master		5.850	
	9.900 (Minimum) 11.75 (Nominal) 13.60 (Maximum)			9.900 (Minimum) 11.75 (Nominal) 13.60 (Maximum)			5.500 (Minimum) 6.000 (Nominal) 6.250 (Maximum)		
Phase	Array-1 SDT Ratio Up/Down	Value	Phase	Array-2 SDT Ratio Up/Down	Value	Phase	Sigma Formation CU	Value	
Master		0.9966	Master		0.9889	Master		27.81	
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)			0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)			20.00 (Minimum) 27.50 (Nominal) 35.00 (Maximum)		
Master: 28-Nov-2002 19:54									



**Hostile Natural Gamma Ray Sonde / Equipment Identification**

Primary Equipment:

HNGS Sonde

HNGS - BA

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Auxiliary Equipment:

HNGS Sonde Housing

HNSH - BA

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Gamma Source Radioactive

GSR - U

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**Hostile Natural Gamma Ray Sonde Wellsite Calibration**

**Detector 1 Check**

Phase	Na 511 Peak Loc	Value	Phase	Na 511 Peak Res %	Value	Phase	High Voltage V	Value
Master		40.59	Master		17.05	Master		1212
Before		40.72	Before		17.42	Before		1212
After		40.59	After		16.56	After		1214
	37.50 (Minimum) 40.00 (Nominal) 42.50 (Maximum)			12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)			900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	
Phase	Na 1785 Peak Loc	Value	Phase	Na 1785 Peak Res %	Value	Phase	Temperature DEGC	Value
Master		145.6	Master		9.037	Master		32.69
Before		145.3	Before		9.666	Before		32.84
After		145.7	After		8.507	After		29.39
	135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)			7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)			-28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)	
Phase	Na Count Rate CPS	Value						
Master		44.80						
Before		43.98						
After		42.72						
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							
Master: 15-Jan-2003 16:08			Before: 15-Jan-2003 16:17			After: 31-Jan-2003 17:06		

**Hostile Natural Gamma Ray Sonde Wellsite Calibration**

**Detector 2 Check**

Phase	Na 511 Peak Loc	Value	Phase	Na 511 Peak Res %	Value	Phase	High Voltage V	Value
Master		40.55	Master		16.60	Master		1239
Before		40.57	Before		16.91	Before		1239
After		40.60	After		16.65	After		1242
	37.50 (Minimum) 40.00 (Nominal) 42.50 (Maximum)			12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)			900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	
Phase	Na 1785 Peak Loc	Value	Phase	Na 1785 Peak Res %	Value	Phase	Temperature DEGC	Value
Master		144.7	Master		9.925	Master		32.80
Before		144.4	Before		9.708	Before		32.89
After		144.6	After		9.652	After		29.19
	135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)			7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)			-28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)	
Phase	Na Count Rate CPS	Value						
Master		44.45						
Before		43.98						
After		42.38						
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							
Master: 15-Jan-2003 16:08			Before: 15-Jan-2003 16:17			After: 31-Jan-2003 17:06		

**Hostile Natural Gamma Ray Sonde Wellsite Calibration**

**Ratio Of Detector 1 To Detector 2**

Phase	Coincidence Count Rate Ratio	Value
Master		1.008
Before		1.0000
After		1.006

0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)
Master: 15-Jan-2003 16:08		
Before: 15-Jan-2003 16:17		
After: 31-Jan-2003 17:06		

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

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

Company: Lamont Doherty

**Schlumberger**

Well: ODP Leg 207 Site 1261B

Field: Demarara Rise

Country: Venezuela

Ocean: Atlantic

Density (HLDS) / Porosity (APS)  
Natural Gamma Ray