Schlumberger

Company: Lamont Doherty

Well: Expedition 323 Site U1344A
Field: Bering Sea
Rig: JOIDES Resolution Country: USA

Rig: JOIDES Resolution
Field: Bering Sea
Location: Latitude: N 59* 03.00'
Well: Expedition 323 Site U1344A
Company: Lamont Doherty

APS Porosity
HLDS Lithodensity
Natural Gamma Spectroscopy

LOCATION

Latitude: N 59* 03.00'
Longitude: W 179* 12.20'

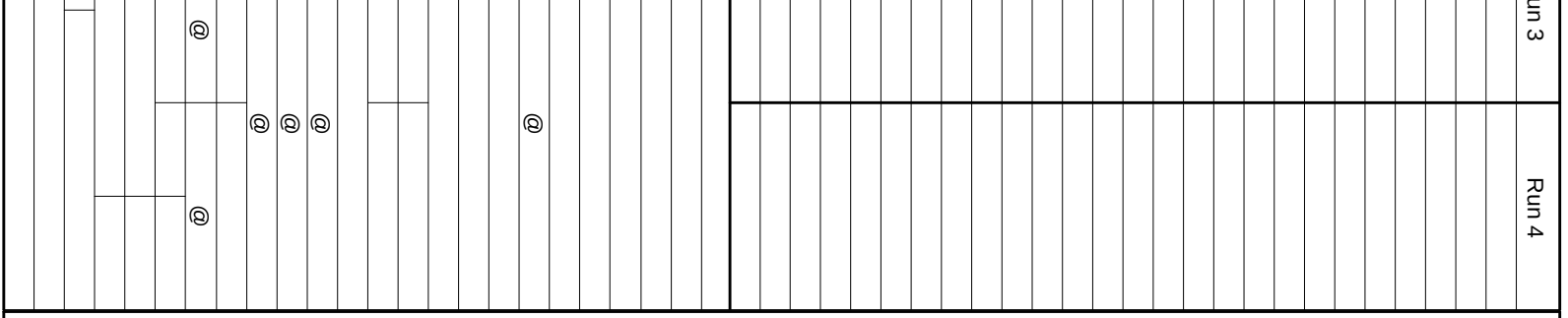
Elev.: K.B. 11.00 m
G.L. -3183.40 m
D.F. 11.00 m

Permanent Datum: Mean Sea Level Elev.: 0.00 m
Log Measured From: Drill Floor 11.00 m above Perm. Datum
Drilling Measured From: Drill Floor

Ocean: Pacific	Max. Well Deviation 0 deg	Longitude N 59* 03.00'	Latitude W 1795* 12.20'

	Run 1	Run 2	Run 3
Logging Date	18-Aug-2009		
Run Number	1		
Depth Driller	3929.9 m		
Schlumberger Depth	3928.2 m		
Bottom Log Interval	3917 m		
Top Log Interval	3278 m		
Casing Driller Size @ Depth	4.500 in @ 3280 m	@	@
Casing Schlumberger	3278 m		
Bit Size	11.438 in		
Type Fluid In Hole	Seawater Gel		
MUD Density / Viscosity	1.258 g/cm3		
MUD Fluid Loss / PH			
MUD Source Of Sample	N/A		
RM @ Measured Temperature	@	@	@
RMF @ Measured Temperature	@	@	@
RMC @ Measured Temperature	@	@	@
Source RMF / RMC	N/A / N/A		
RM @ MRT / RMF @ MRT	@ 15 / @ 15	@ / @	@ / @
Maximum Recorded Temperatures	15 degC		
Circulation Stopped / Time	20-Jul-2009 / 11:00		
Logger On Bottom / Time	18-Aug-2009 / 19:05		
Unit Number / Location	625003 Houston		
Recorded By	C. Furman		
Witnessed By	T. Liu, G. Guerin		

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



DISCLAIMER

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

OTHER SERVICES1

OS1: FMS
OS2: DSI
OS3: HNGS
OS4: DIT

REMARKS: RUN NUMBER 1

Logs run in first hole ("A" hole) of drilling site U1344 to aid in correlation of
core data collected in surface labs.
Average heave during the run was only 0.2m; Active Heave Compensator not used.
TD was found to be 3928.2mBRF with the pipe (bit) at 3278mBRF. Sea Bed at 3183mBRF.
Hole Size input taken from HLDS Caliper.
Tools run slick in order to fit through drill pipe, as is standard practice on this project.
HLDS Caliper closed at approximately 3301.8m to facility entry into drill pipe.
APS minitron deactivated at approximately 3303.5m.
Tools run with "Go-Devil" LFV Actuator attached to the bottom of the string for safe passage through the LFV.

RUN 1			RUN 2		
SERVICE ORDER #:			SERVICE ORDER #:		
PROGRAM VERSION:		17C0-154	PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1 RUN 2

SURFACE EQUIPMENT

SFT-281 2
SFT-178 2
GSR-U 616008
WITM (DTS)-A

DOWNHOLE EQUIPMENT

LEH-QT 30.21
LEH-QT 301

CTEM
TelStatus 29.04
DTC-H 29.32
ECH-KC 2304
ToolStatu 28.41

HNGS-BA 194
Upper_1 27.71 28.41

HNGS-BA 194
HNSH-BA 205

Lower_2 — 27.50

HNGC-B 300
HNGH-A 115 — HNGC Stat — 25.38 — 25.91

LDSC-B
LDSH-A 319 — LDSC Stat — 24.31 — 24.84

HLDS — 23.78
GSR-Z 2397
HLDV-D 51
HLDS-D 57
HEH-H 53
HLDP-C 61
Caliper
SS LS Status — 19.72

AH-191 — Status Minitron — 18.96

APS-C — 18.65
APH-AC 22
APS-C 22
MNTR-F 5589
Near TD — 16.21
Near Arr — 16.13
Near — 16.00
Far Arr — 15.90
Far
Far TD

AH-190 — 14.71

ILE-D — 14.40
ILE-D 25

DTA-A — 11.96
ECH-KE 8231

GPIT-A/B — 10.74
GPIC-A 719

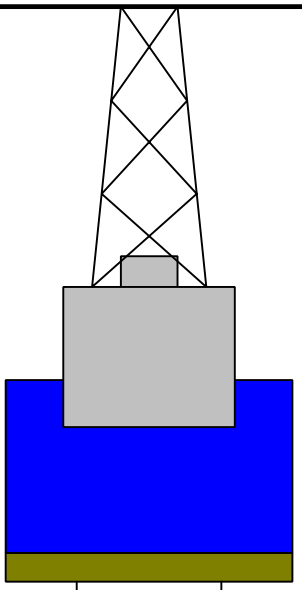
DIT-E — 9.52
DIC-EB 171
MIH-ZA 342
DIS-HB 129

SP — 3.15
Deep Ind — 2.90
Aux Meas SFL — 1.98
Med Ind — 1.83
HV DF
Status GPIT
Tension — 0.00

TOOL ZERO

MAXIMUM STRING DIAMETER 3.75 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

Production String	(in) OD	(in) ID	(m) MD	Well Schematic	(m) MD	(in) OD	(in) ID	Casing String

Kelly Bushing Elevation			11.0				
Derrick Floor Elevation			11.0				
Mean Sea Level			0.0				
					0.0	5.750	3.800
					3183.4	11.438	Sea Bed
					3280.0	5.750	3.800 Bit Depth
					3929.9	11.438	Total Depth - Driller

Schlumberger

Main Pass
TD to Sea Bed

MAXIS Field Log

Input DLIS Files

DEFAULT	PI_APS_LDL_NGS_104LUP	FN:13	PRODUCER	18-Aug-2009 19:06	3929.6 M	3181.0 M

Output DLIS Files

DEFAULT	PI_APS_LDL_NGS_118PUP	FN:33	PRODUCER	19-Aug-2009 19:31	3931.2 M	3182.9 M

OP System Version: 17C0-154

DIT-E	17C0-154	GPIT-A/B	SRPC-3762-Q1_2009_OP17
DTA-A	17C0-154	APS-C	17C0-154
HLDS	17C0-154	LDSC-B	17C0-154
HNGC-B	17C0-154	HNGS-BA	17C0-154
DTC-H	17C0-154		

PIP SUMMARY

Time Mark Every 60 S

HLDS HR Bulk Density Correction (HBDC)
-0.25 (G/C3) 0.25

Tension (TENS)
10000 (LBF) 0

HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 100

HLDS HR Long Spaced Photoelectric Effect (HLEF)
0 (----) 10

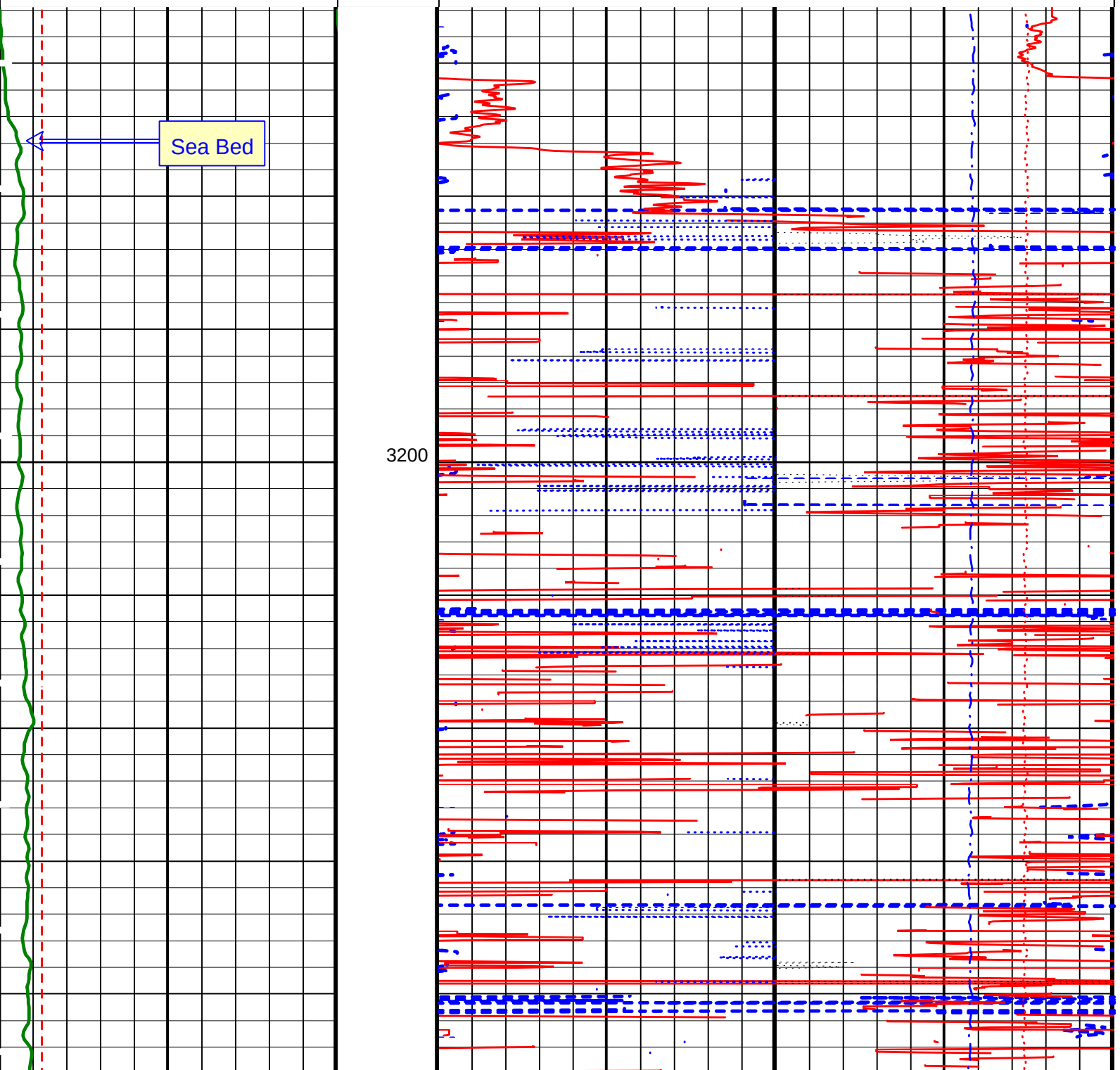
Calibrated Downhole Force (CDF)
5000 (LBF) 0

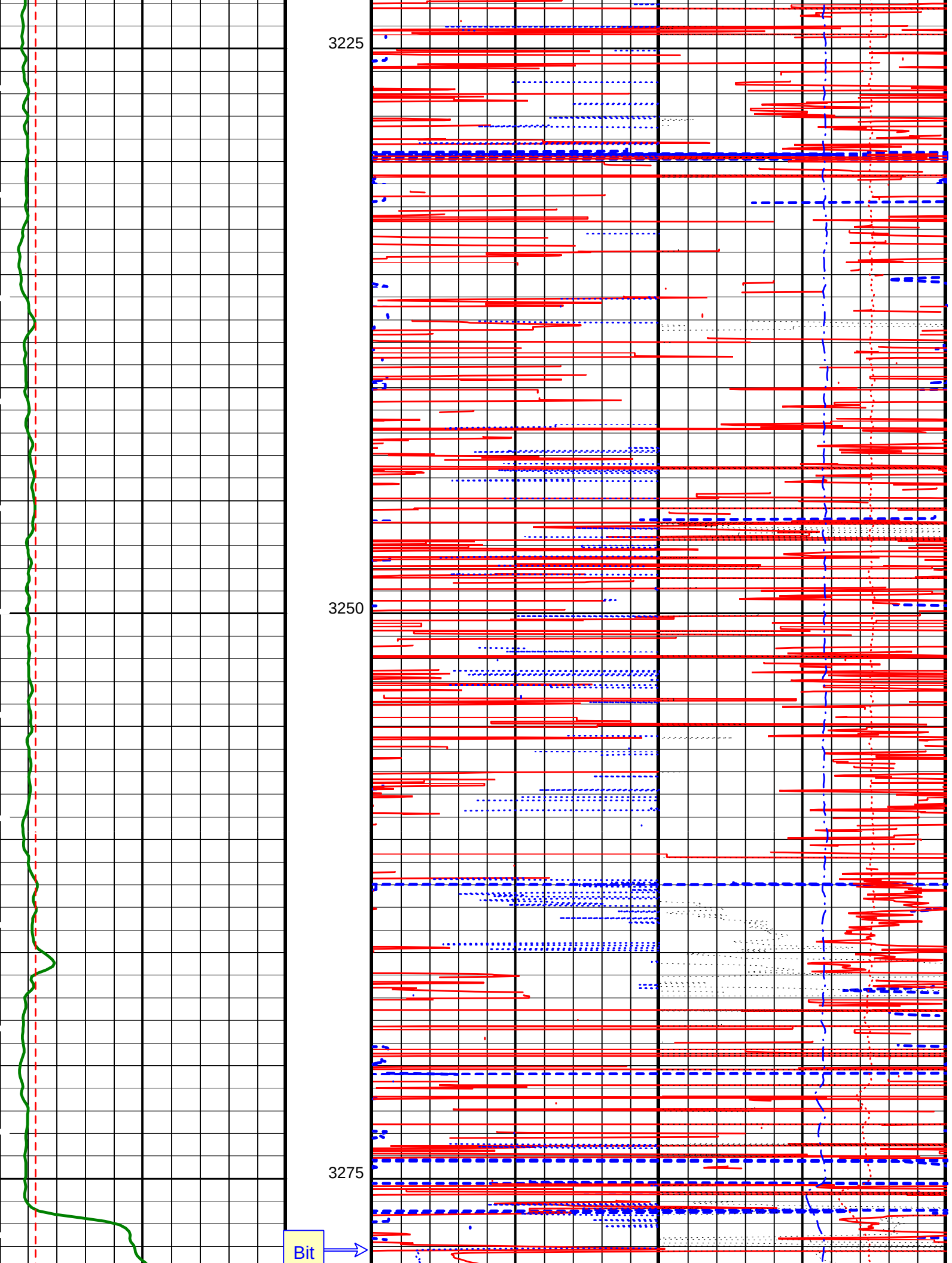
APS Effective Standoff in Limestone (STOF)
-1 (IN) 4

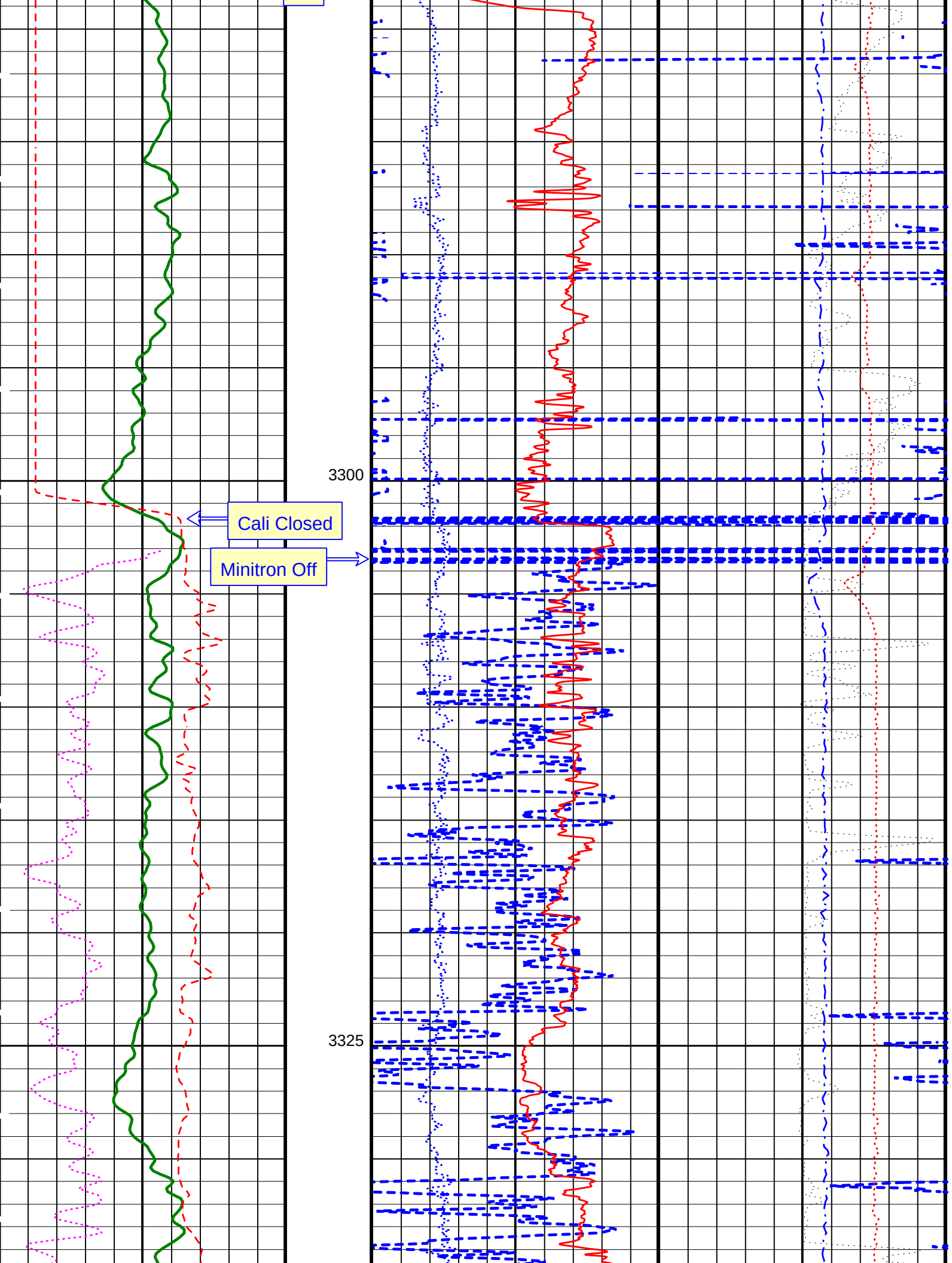
HLDS HR Bulk Density (HROM)
1 (G/C3) 3

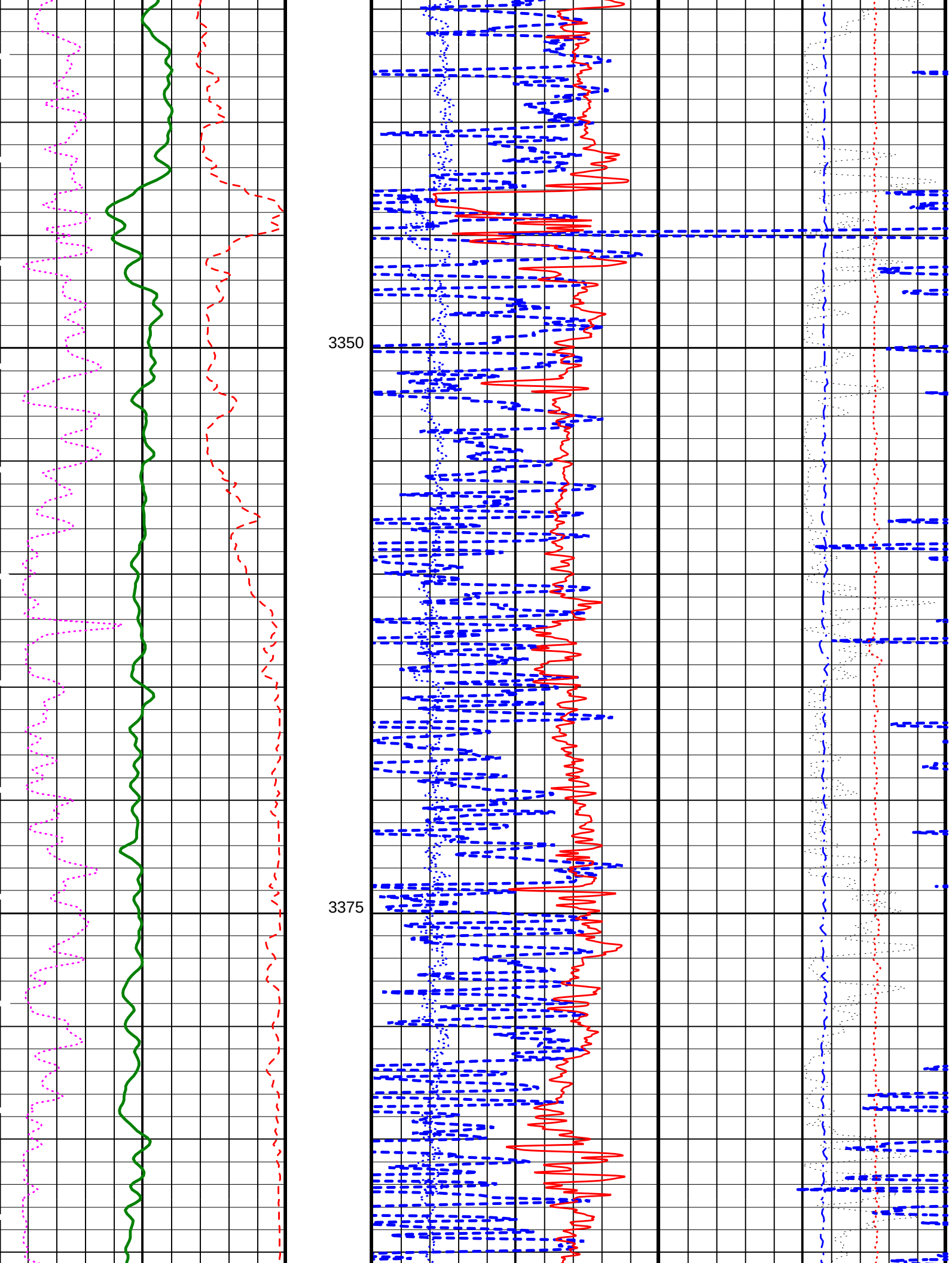
HLDS Caliper (LCAL)
0 (IN) 20

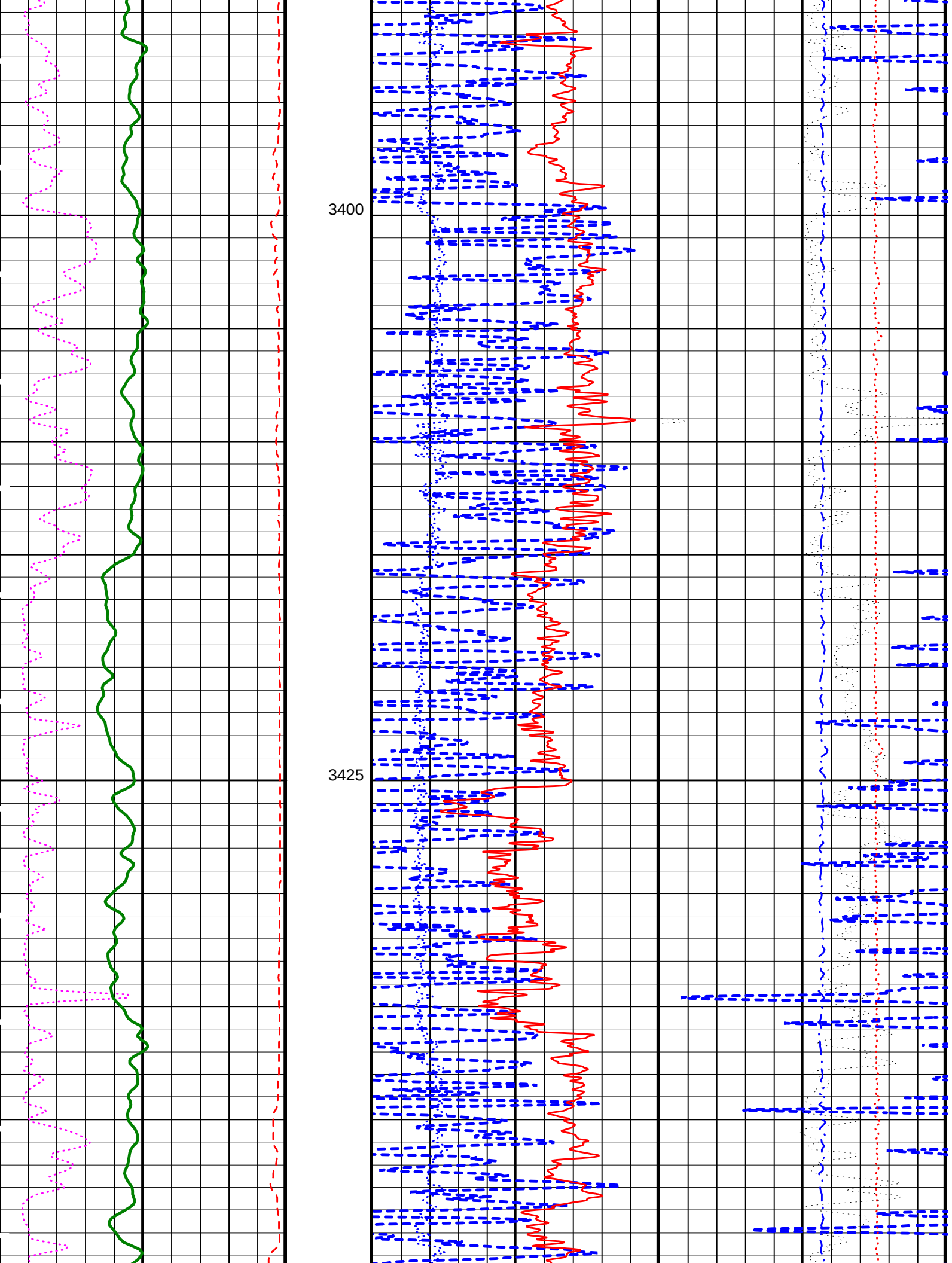
APS HR Near/Far Corrected Limestone Porosity (HFLC)
100 (PU) 0

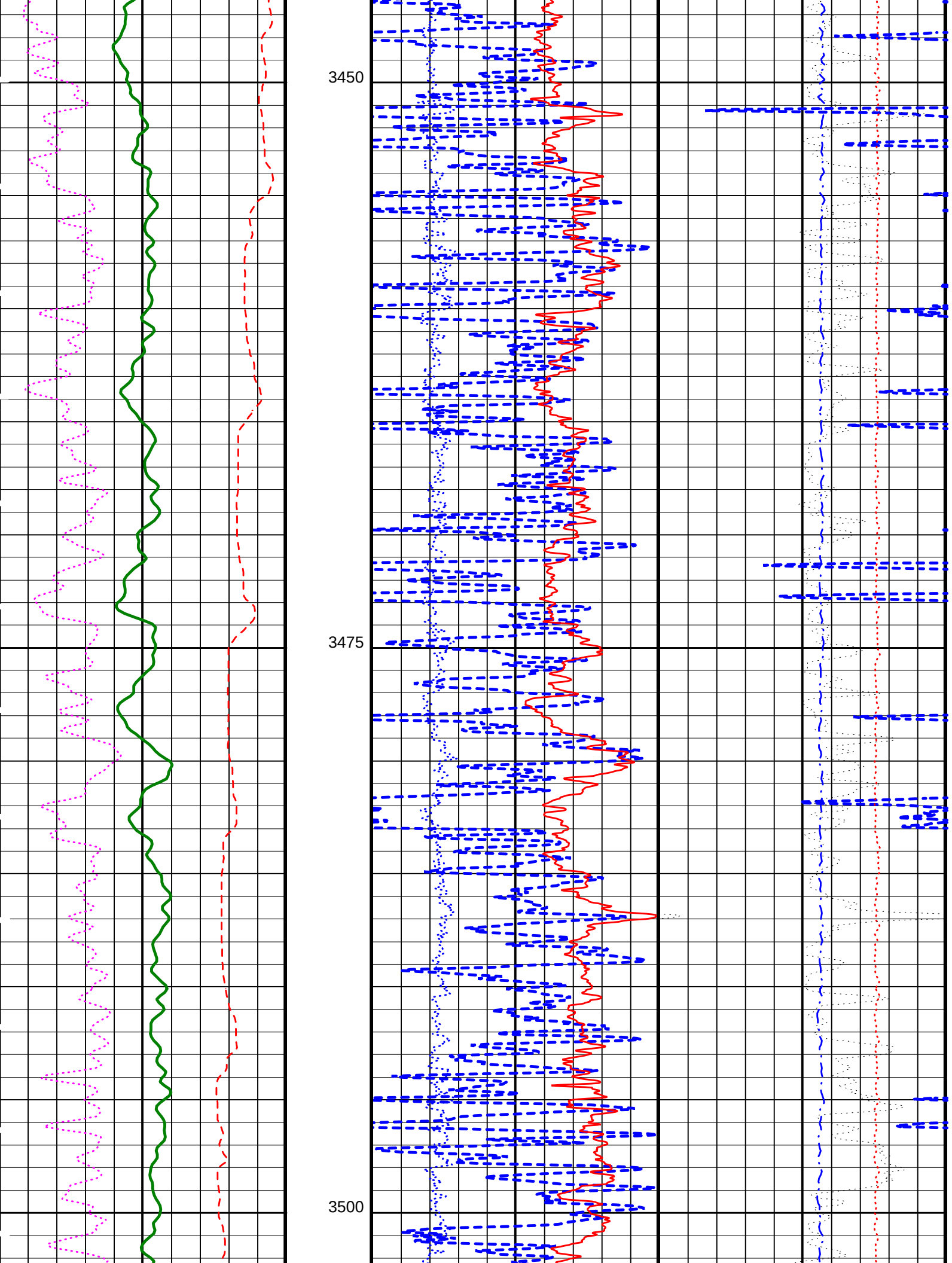


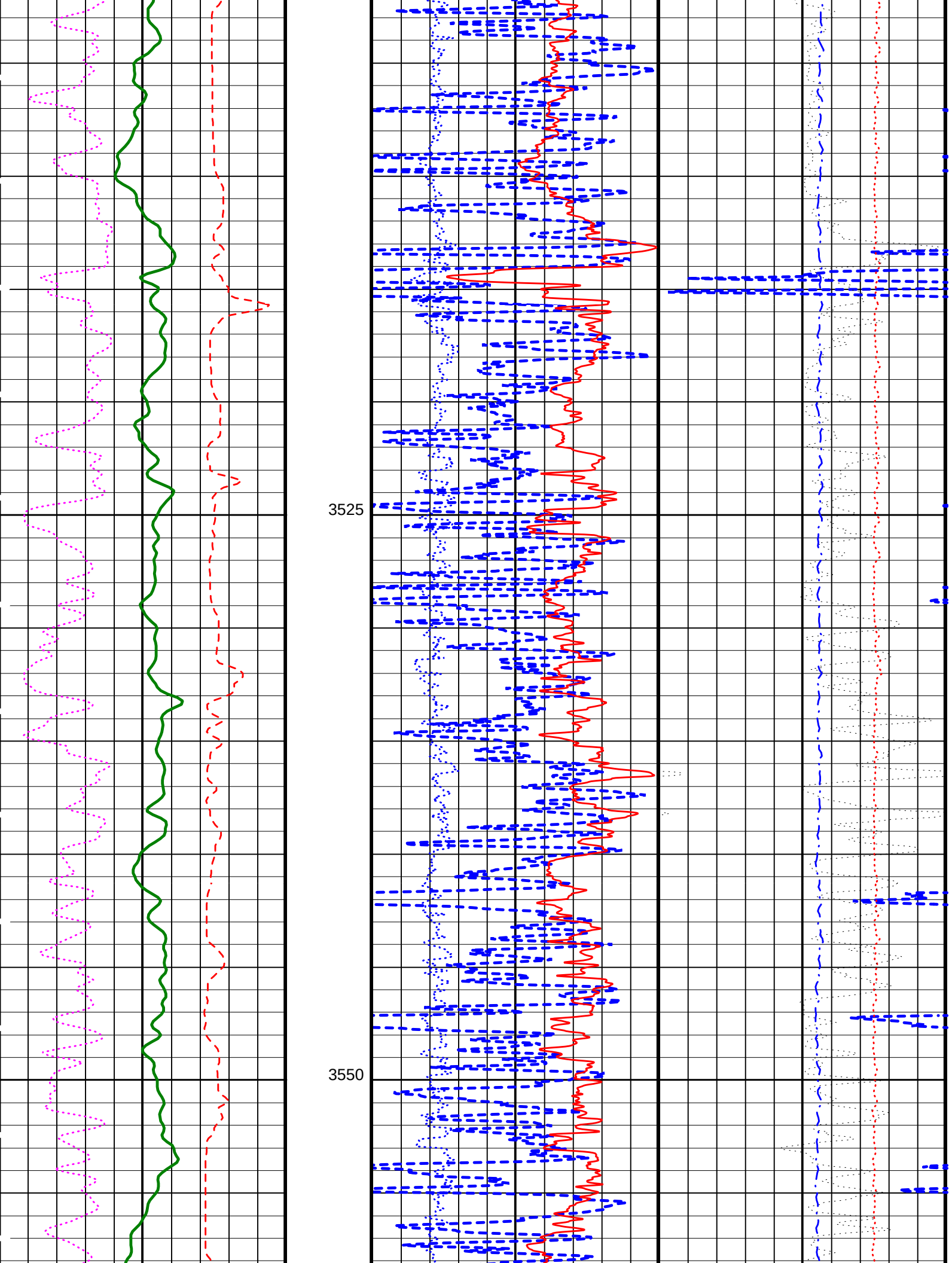

3225
3250
3275
Bit

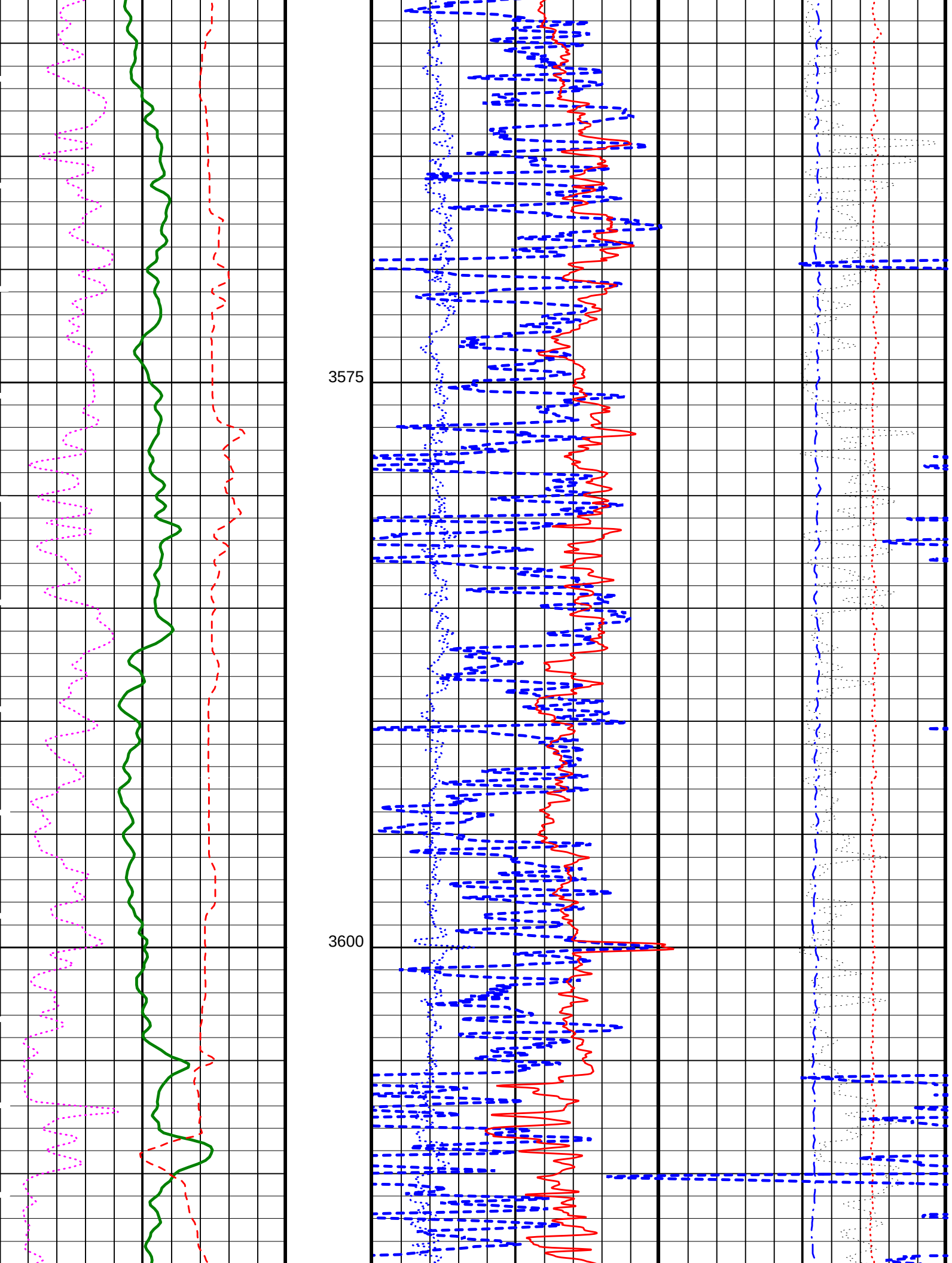

3300
Cali Closed
Minitron Off
3325

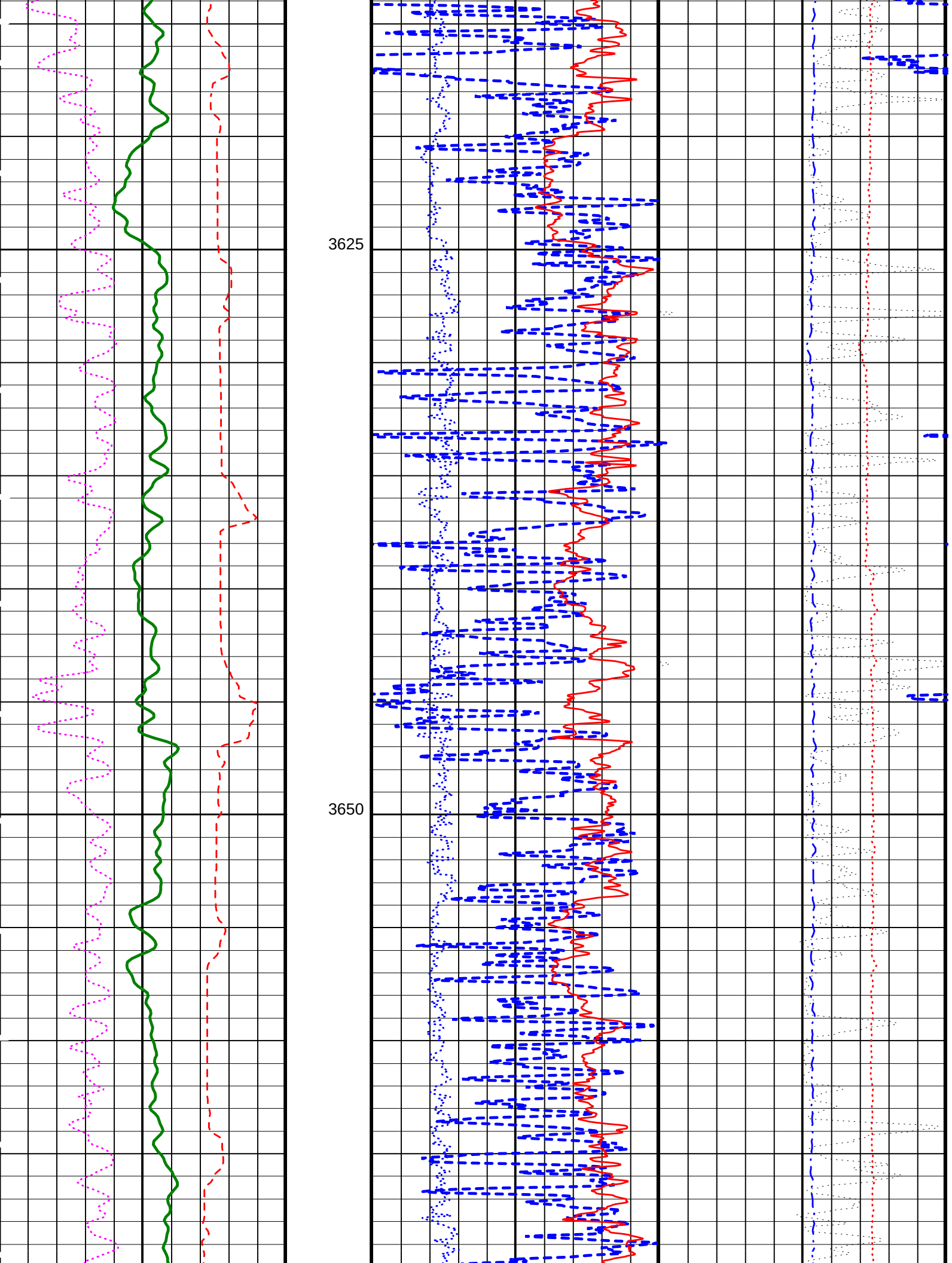

3350
3375

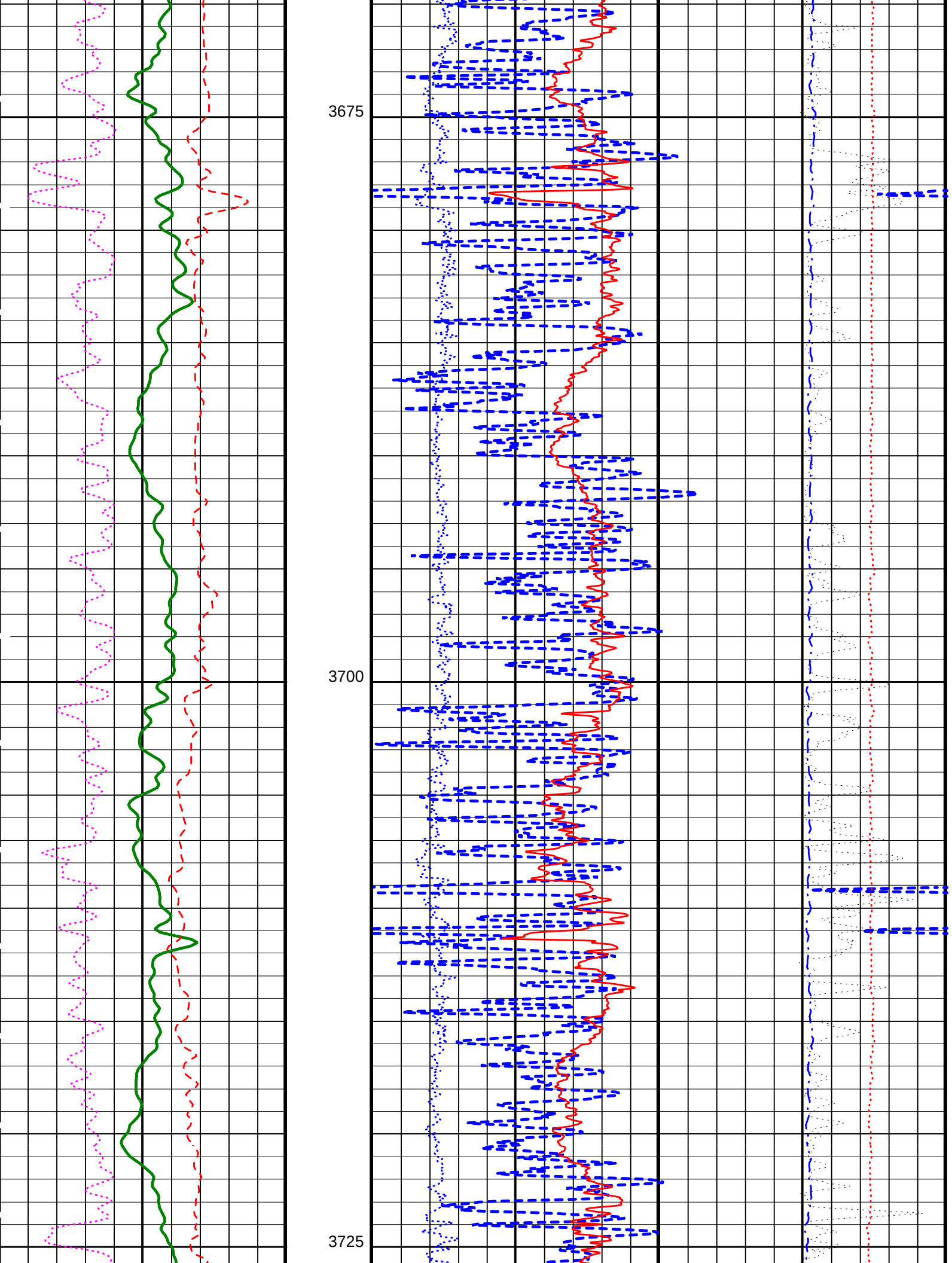

3400
3425

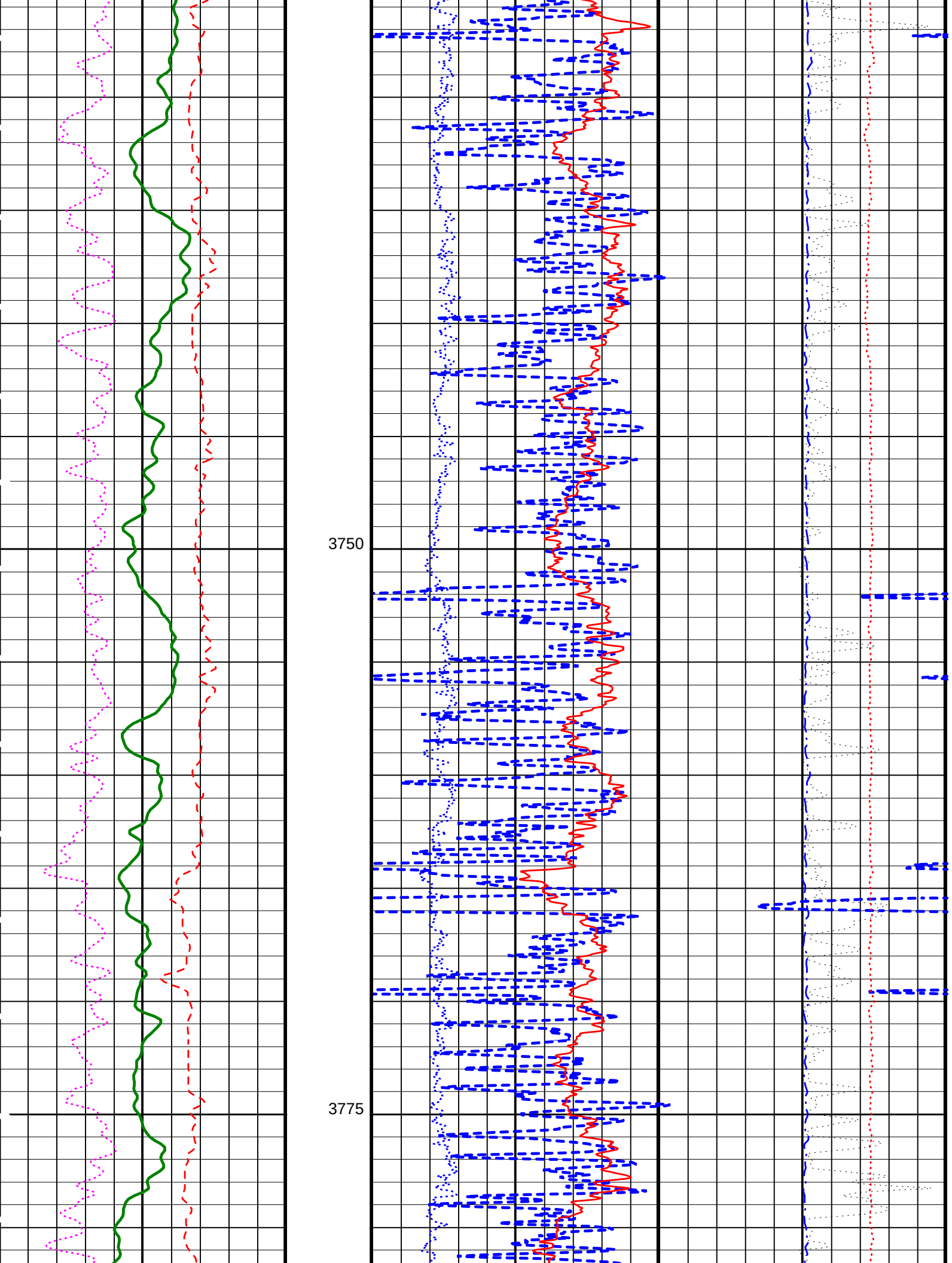

3450
3475
3500

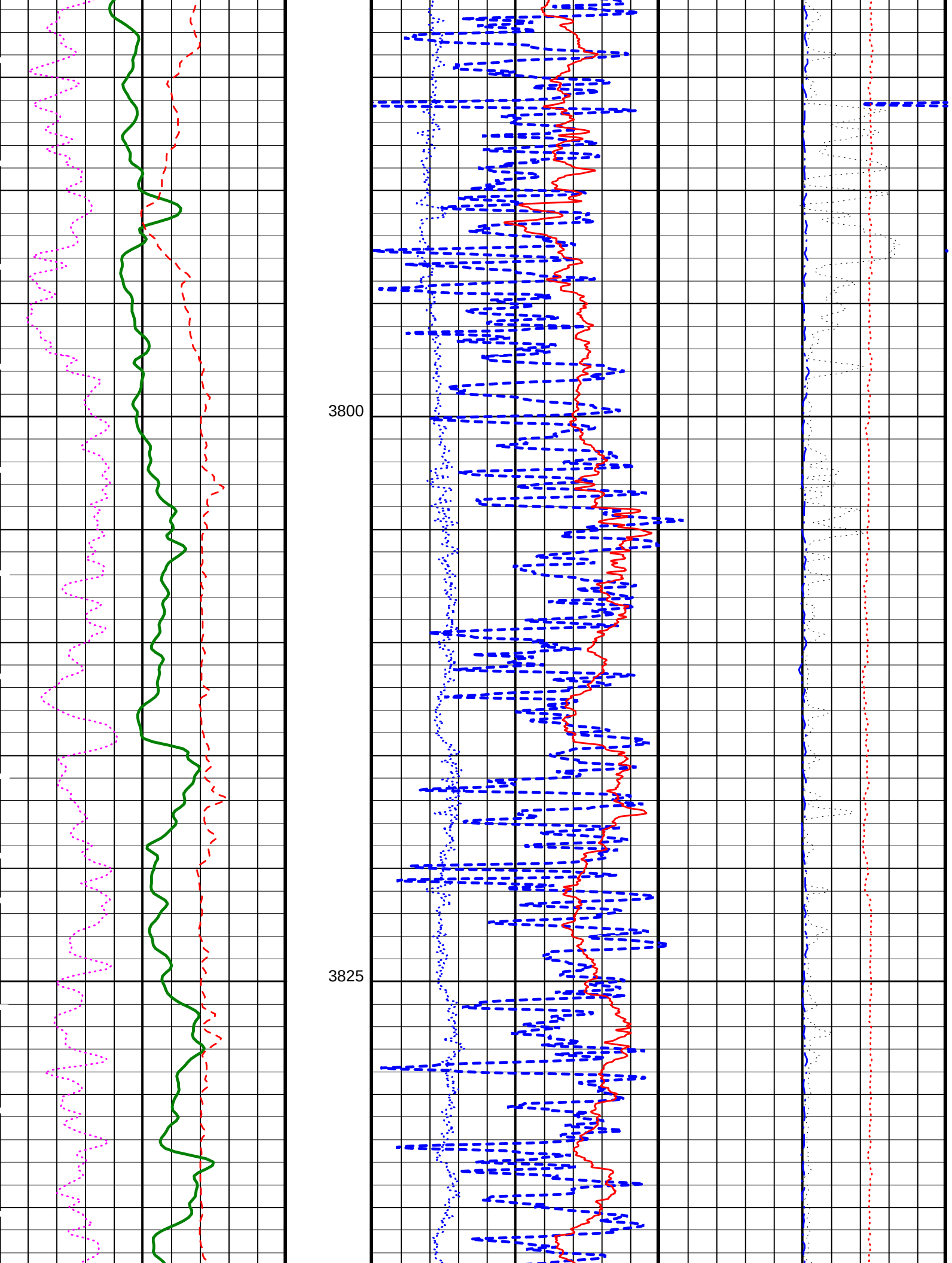

3525
3550

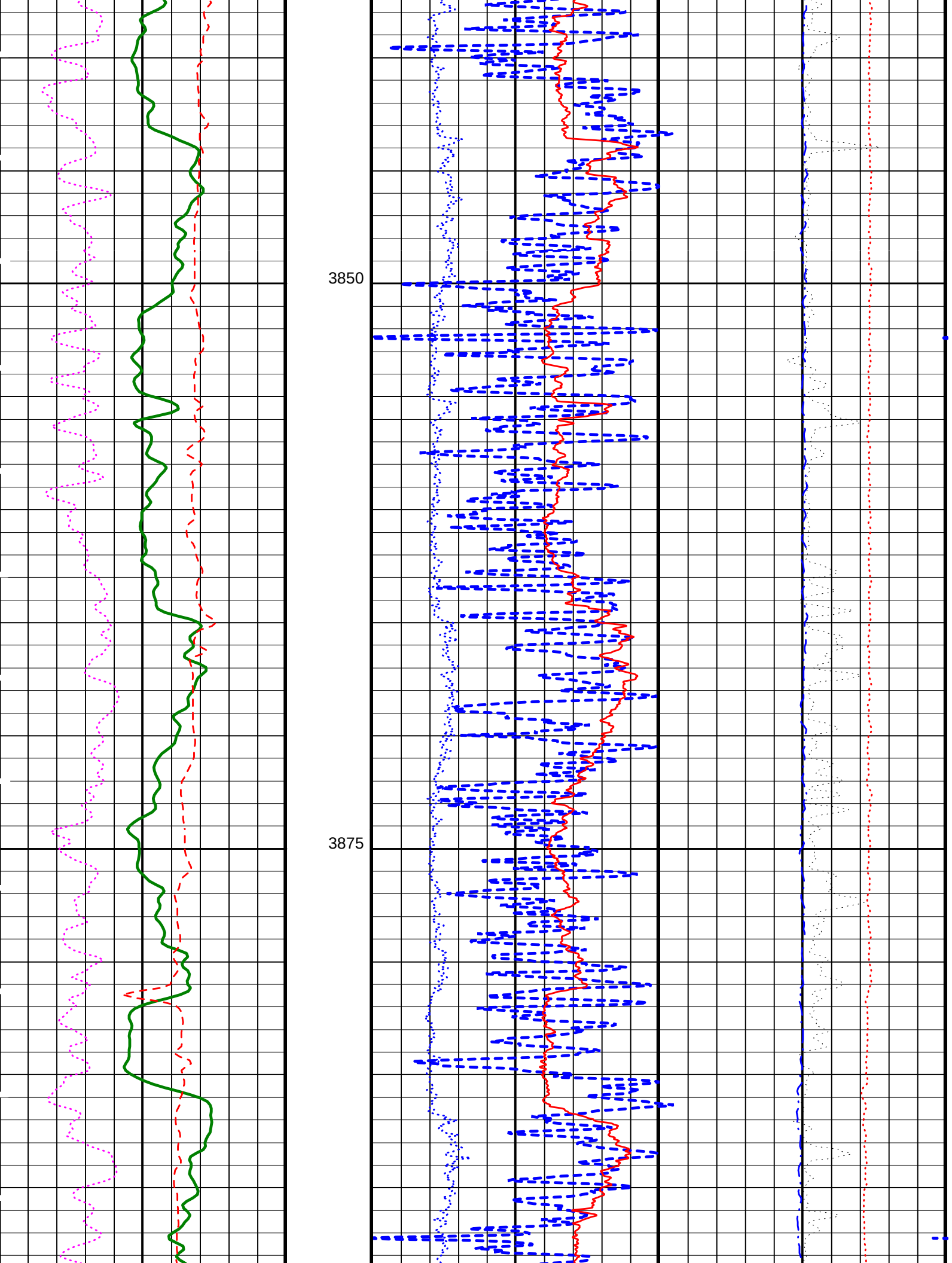

3575
3600

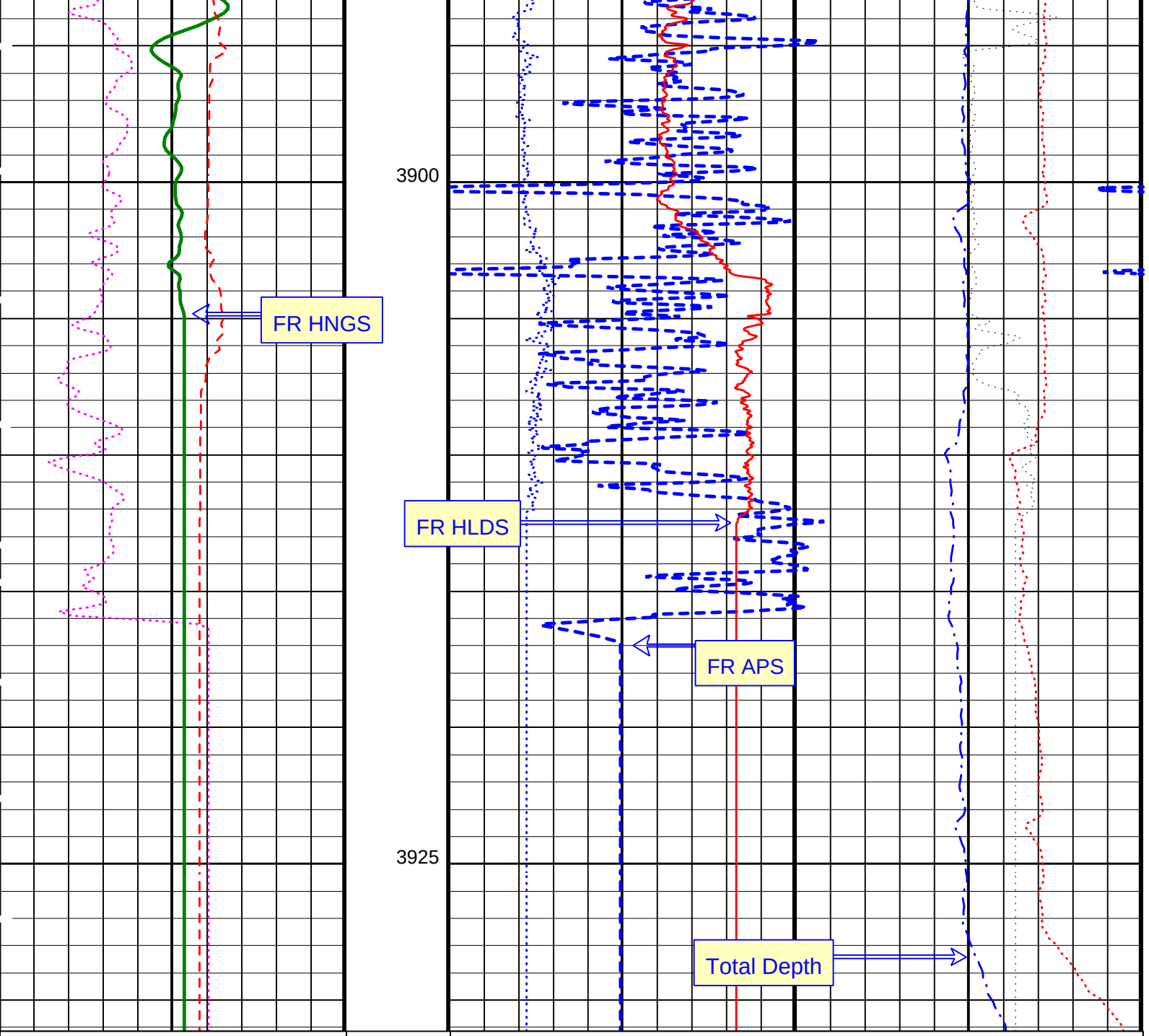

3625
3650


3675
3700
3725


3750
3775


3800
3825


3850
3875



HLDS Caliper (LCAL)
0 (IN) 20

APS Effective Standoff in Limestone (STOF)
-1 (IN) 4

HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 100

APS HR Near/Far Corrected Limestone Porosity (HFLC)
100 (PU) 0

HLDS HR Bulk Density (HROM)
1 (G/C3) 3

HLDS HR Long Spaced Photoelectric Effect (HLEF)
0 (----) 10

Calibrated Downhole Force (CDF)
5000 (LBF) 0

Tension (TENS)
10000 (LBF) 0

HLDS HR Bulk Density Correction (HBDC)
-0.25 (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)	212	DEGF
DGF1	Deep 10 kHz Gain Factor	0.968645	
DGF2	Deep 20 kHz Gain Factor	0.979119	
DGF4	Deep 40 kHz Gain Factor	0.990252	
DPH1	Deep 10 kHz Phase Shift	0.26358	DEG
DPH2	Deep 20 kHz Phase Shift	0.0159963	DEG
DPH4	Deep 40 kHz Phase Shift	-1.11256	DEG
DRE1	Deep Real 10 kHz Sonde Error Correction	39.5751	MM/M
DRE2	Deep Real 20 kHz Sonde Error Correction	17.0457	MM/M
DRE4	Deep Real 40 kHz Sonde Error Correction	5.15121	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	245.841	MM/M
DXE2	Deep Quad 20 kHz Sonde Error Correction	136.154	MM/M
DXE4	Deep Quad 40 kHz Sonde Error Correction	78.4516	MM/M
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
IFRS	DIT-E Induction Frequency Selector	20	
IPHA	DIT-E Phasor Processing Mode	ALL	
IPRO	DIT-E Induction Processing Selector	PHASOR	
ISSBAR	Barite Mud Switch	NOBARITE	
ITEN	DIT-E Temperature Enable	ENABLE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MGF1	Medium 10 kHz Gain Factor	0.969585	
MGF2	Medium 20 kHz Gain Factor	0.974788	
MGF4	Medium 40 kHz Gain Factor	0.999842	
MPH1	Medium 10 kHz Phase Shift	0.0787021	DEG
MPH2	Medium 20 kHz Phase Shift	-0.199528	DEG
MPH4	Medium 40 kHz Phase Shift	-0.885081	DEG
MRE1	Medium Real 10 kHz Sonde Error Correction	31.1041	MM/M
MRE2	Medium Real 20 kHz Sonde Error Correction	11.3259	MM/M
MRE4	Medium Real 40 kHz Sonde Error Correction	3.5782	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	328.09	MM/M
MXE2	Medium Quad 20 kHz Sonde Error Correction	172.606	MM/M
MXE4	Medium Quad 40 kHz Sonde Error Correction	112.808	MM/M
SBR	Shoulder Bed Resistivity Factor	1	OHMM
SFCR	SFL Channel Ratio	1000	
SFLE	SFL Enable	ENABLE	
SHT	Surface Hole Temperature	68	DEGF
SPAE	DIT-E SPARC Processing Enable	ENABLE	
SPNV	SP Next Value	0	MV
	GPIT-A/B: General Purpose Inclinometer		
ACPP	Accelerometer PROM Presence	PRESENT	
AFMO	Accelerometer Filtering Mode	MOVING_AVERAGE	
ART	Accelerometer Reference Temperature	20	DEGC
GLM	GPIT Logging Mode	DIPM	
ICMO	Inclinometry Computation Mode	AUTOMATIC_SELECTION	
MAPP	Magnetometer PROM Presence	PRESENT	
MDEC	Magnetic Field Declination	4.728	DEG
MRTE	Magneto Reference Temperature	23	DEGC
TEMS	GPIT Temperature Sensor Used	BOTH	
U-GPOF	Playback OLD VERSION GPIT FILE (BEFORE OP14 + SRPC-3098-FEB_2006_C) ?	NO	
	APS-C: Accelerator-Porosity Tool		
	APS Software Version	0	
AASD	APS Thermal and Array Detectors High Voltage Setting	1965.7	V
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2077.27	V
AHCS	APS Holesize Correction Source	BS	
AHSS	APS Holesize Correction Switch	ON	
AMTY	APS Environmental Corrections Mud Type	WaterBaseBarite	
ANSD	APS Near Detector High Voltage Setting	1732.81	V
ASOS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	ON	
BHFL_APS	APS TNPH Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
BSCO_APS	APS TNPH Borehole Salinity Correction Option	YES	
DPPM	Density Porosity Processing Mode	HIRS	
DSCO_APS	APS TNPH Density Source	COMPUTED	
FSAL	Formation Salinity	-50000	PPM

FSCO_APS	APS TNPH Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO_APS	APS TNPH Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO_APS	APS TNPH Mud Cake Correction Option	YES	
MCOR_APS	APS TNPH Mud Correction	NATU	
MWCO_APS	APS TNPH Mud Weight Correction Option	YES	
NARC	APS Near/Array Calibration Ratio	1.05904	
NFRC	APS Near/Far Calibration Ratio	0.885245	
PTCO_APS	APS TNPH Pressure/Temperature Correction Option	YES	
SHT	Surface Hole Temperature	68	DEGF
TNCO_APS	APS TNPH Computation Option	NO	
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	OFF	
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	30000	
PSDS	HLDS SS Pulse Shape Compensation DAC	30000	
PSML	HLDS LS Pulse Shape Compensation Mode	AUTO	
PSMS	HLDS SS Pulse Shape Compensation Mode	AUTO	
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)	212	DEGF
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	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.00183121	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGS Processing Enable	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	68	DEGF
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.994454	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.988514	
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	11.438	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	4.500	IN
CWEI	Casing Weight	0.00	LB/F
DFD	Drilling Fluid Density	1.26	G/C3
DO	Depth Offset for Playback	1.9	M
FLEV	Fluid Level	-50000.00	M
MST	Mud Sample Temperature	-50000.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	NORMAL	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	-50000	FT
TDD	Total Depth - Driller	3030.00	M

TDD	Total Depth - Driller	3929.90	M
TDL	Total Depth - Logger	3929.90	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: APSLiquidPorosity_1 Vertical Scale: 1:200 Graphics File Created: 19-Aug-2009 19:31

OP System Version: 17C0-154

DIT-E	17C0-154	GPIT-A/B	SRPC-3762-Q1_2009_OP17
DTA-A	17C0-154	APS-C	17C0-154
HLDS	17C0-154	LDSC-B	17C0-154
HNGC-B	17C0-154	HNGS-BA	17C0-154
DTC-H	17C0-154		

Input DLIS Files

DEFAULT	PI_APS_LDL_NGS_104LUP	FN:13	PRODUCER	18-Aug-2009 19:06	3929.6 M	3181.0 M

Output DLIS Files

DEFAULT	PI_APS_LDL_NGS_118PUP	FN:33	PRODUCER	19-Aug-2009 19:31		

Schlumberger

Repeat Pass
OH Only

MAXIS Field Log

Input DLIS Files

DEFAULT	PI_APS_LDL_NGS_103LUP	FN:11	PRODUCER	18-Aug-2009 18:36	3929.6 M	3849.6 M

Output DLIS Files

DEFAULT	PI_APS_LDL_NGS_117PUP	FN:32	PRODUCER	19-Aug-2009 19:29	3931.2 M	3849.3 M

OP System Version: 17C0-154

DIT-E	17C0-154	GPIT-A/B	SRPC-3762-Q1_2009_OP17
DTA-A	17C0-154	APS-C	17C0-154
HLDS	17C0-154	LDSC-B	17C0-154
HNGC-B	17C0-154	HNGS-BA	17C0-154
DTC-H	17C0-154		

PIP SUMMARY

Time Mark Every 60 S

HLDS HR Bulk Density Correction (HBDC)
-0.25 (G/C3) 0.25

Tension (TENS)
10000 (LBF) 0

HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 100

HLDS HR Long Spaced Photoelectric Effect (HLEF)
0 (---) 10

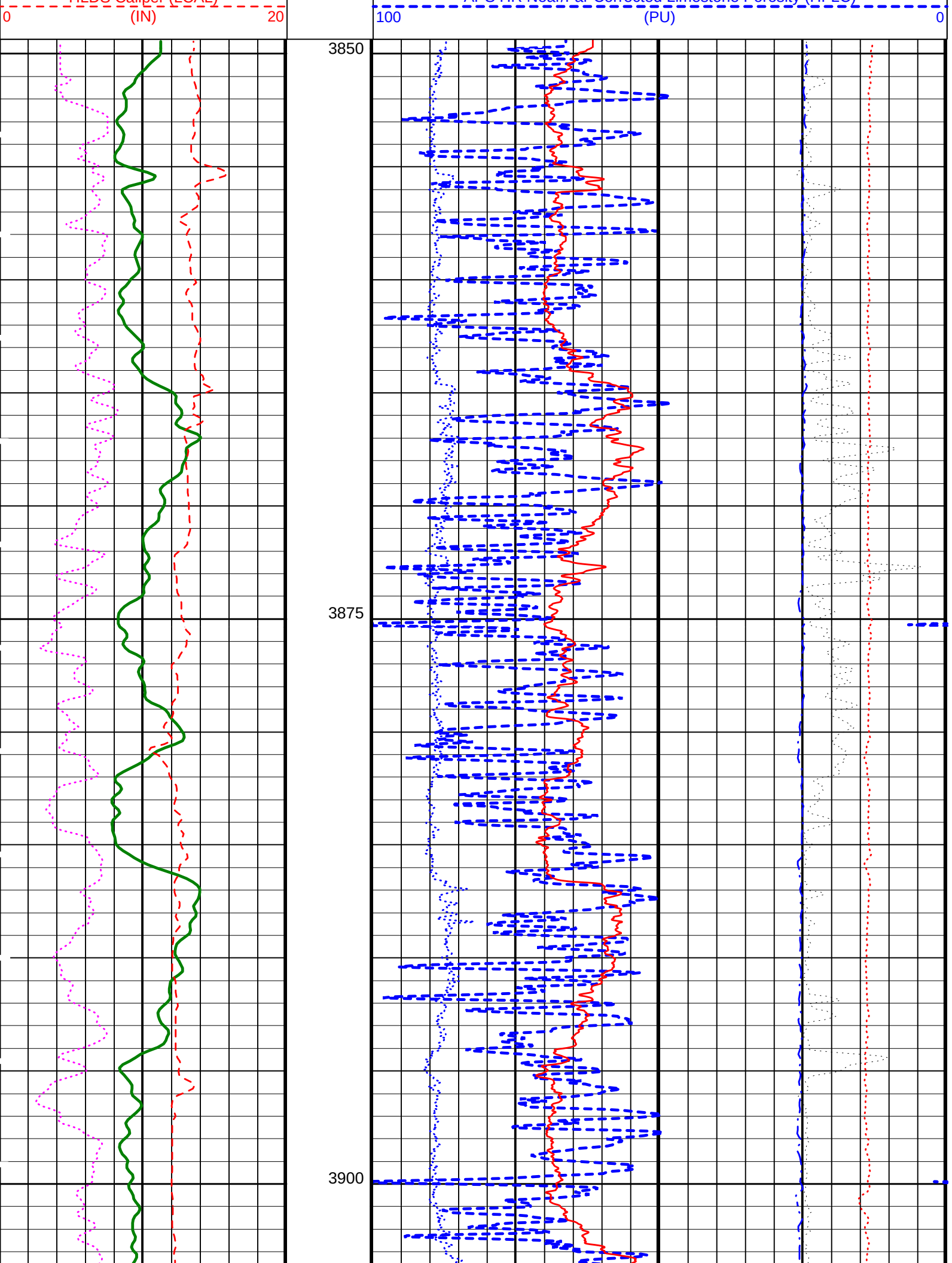
Calibrated Downhole Force (CDF)
5000 (LBF) 0

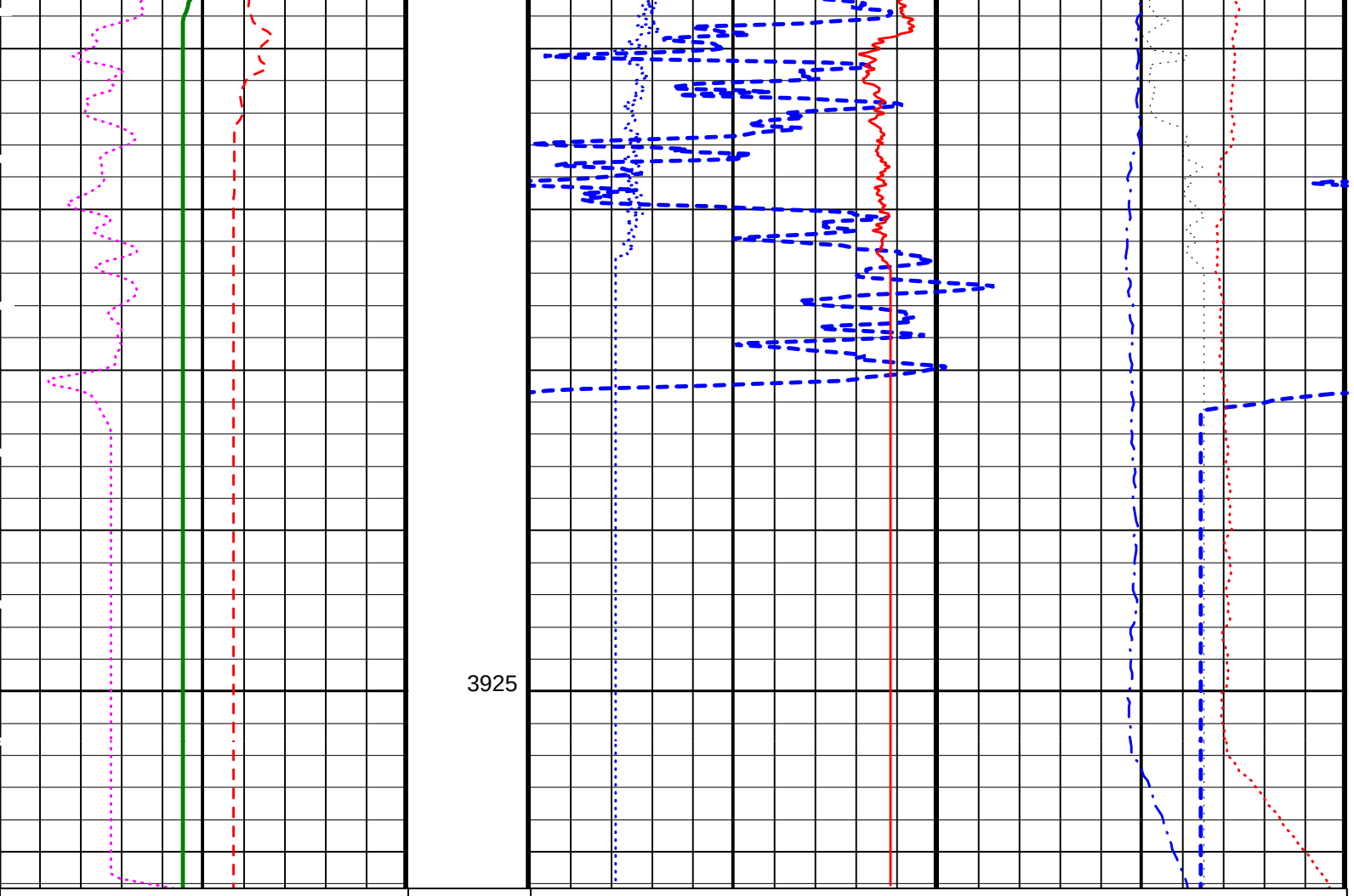
APS Effective Standoff in Limestone (STOF)
-1 (IN) 4

HLDS HR Bulk Density (HROM)
1 (G/C3) 3

HLDS Caliper (LCAL)

APS HR Near/Far Corrected Limestone Porosity (HFLC)


0
(IN)
20
100
(PU)
0
3850
3875
3900



HLDS Caliper (LCAL)
0 (IN) 20

APS Effective Standoff in Limestone (STOF)
-1 (IN) 4

HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 100

APS HR Near/Far Corrected Limestone Porosity (HFLC)
100 (PU) 0

HLDS HR Bulk Density (HROM)
1 (G/C3) 3

HLDS HR Long Spaced Photoelectric Effect (HLEF)
0 (----) 10

Calibrated Downhole Force (CDF)
5000 (LBF) 0

Tension (TENS)
10000 (LBF) 0

HLDS HR Bulk Density Correction (HBDC)
-0.25 (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)	212	DEGF
DGF1	Deep 10 kHz Gain Factor	0.968645	
DGF2	Deep 20 kHz Gain Factor	0.979119	
DGF4	Deep 40 kHz Gain Factor	0.990252	
DPH1	Deep 10 kHz Phase Shift	0.26358	DEG
DPH2	Deep 20 kHz Phase Shift	0.0159963	DEG
DPH4	Deep 40 kHz Phase Shift	-1.11256	DEG
DRE1	Deep Real 10 kHz Sonde Error Correction	39.5751	MM/M
DRE2	Deep Real 20 kHz Sonde Error Correction	17.0457	MM/M
DRE4	Deep Real 40 kHz Sonde Error Correction	5.15121	MM/M
DRIM	DIT-E Radial Invasion Mode	Rxo>Rt	

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	245.841	MM/M
DXE2	Deep Quad 20 kHz Sonde Error Correction	136.154	MM/M
DXE4	Deep Quad 40 kHz Sonde Error Correction	78.4516	MM/M
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
IFRS	DIT-E Induction Frequency Selector	20	
IPHA	DIT-E Phasor Processing Mode	ALL	
IPRO	DIT-E Induction Processing Selector	PHASOR	
ISSBAR	Barite Mud Switch	NOBARITE	
ITEN	DIT-E Temperature Enable	ENABLE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MGF1	Medium 10 kHz Gain Factor	0.969585	
MGF2	Medium 20 kHz Gain Factor	0.974788	
MGF4	Medium 40 kHz Gain Factor	0.999842	
MPH1	Medium 10 kHz Phase Shift	0.0787021	DEG
MPH2	Medium 20 kHz Phase Shift	-0.199528	DEG
MPH4	Medium 40 kHz Phase Shift	-0.885081	DEG
MRE1	Medium Real 10 kHz Sonde Error Correction	31.1041	MM/M
MRE2	Medium Real 20 kHz Sonde Error Correction	11.3259	MM/M
MRE4	Medium Real 40 kHz Sonde Error Correction	3.5782	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	328.09	MM/M
MXE2	Medium Quad 20 kHz Sonde Error Correction	172.606	MM/M
MXE4	Medium Quad 40 kHz Sonde Error Correction	112.808	MM/M
SBR	Shoulder Bed Resistivity Factor	1	OHMM
SFCR	SFL Channel Ratio	1000	
SFLE	SFL Enable	ENABLE	
SHT	Surface Hole Temperature	68	DEGF
SPAE	DIT-E SPARC Processing Enable	ENABLE	
SPNV	SP Next Value	0	MV
GPIT-A/B: General Purpose Inclinometer			
ACPP	Accelerometer PROM Presence	PRESENT	
AFMO	Accelerometer Filtering Mode	MOVING_AVERAGE	
ART	Accelerometer Reference Temperature	20	DEGC
GLM	GPIT Logging Mode	DIPM	
ICMO	Inclinometry Computation Mode	AUTOMATIC_SELECTION	
MAPP	Magnetometer PROM Presence	PRESENT	
MDEC	Magnetic Field Declination	4.728	DEG
MRTE	Magneto Reference Temperature	23	DEGC
TEMS	GPIT Temperature Sensor Used	BOTH	
U-GPOF	Playback OLD VERSION GPIT FILE (BEFORE OP14 + SRPC-3098-FEB_2006_C) ?	NO	
APS-C: Accelerator-Porosity Tool			
	APS Software Version	0	
AASD	APS Thermal and Array Detectors High Voltage Setting	1965.7	V
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2077.27	V
AHCS	APS Holesize Correction Source	BS	
AHSS	APS Holesize Correction Switch	ON	
AMTY	APS Environmental Corrections Mud Type	WaterBaseBarite	
ANSD	APS Near Detector High Voltage Setting	1732.81	V
ASOS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	ON	
BHFL_APS	APS TNPH Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
BSCO_APS	APS TNPH Borehole Salinity Correction Option	YES	
DPPM	Density Porosity Processing Mode	HIRS	
DSCO_APS	APS TNPH Density Source	COMPUTED	
FSAL	Formation Salinity	-50000	PPM
FSCO_APS	APS TNPH Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO_APS	APS TNPH Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO_APS	APS TNPH Mud Cake Correction Option	YES	
MCOR_APS	APS TNPH Mud Correction	NATU	
MWCO_APS	APS TNPH Mud Weight Correction Option	YES	
NARC	APS Near/Array Calibration Ratio	1.05904	
NFRC	APS Near/Far Calibration Ratio	0.885245	
PTCO_APS	APS TNPH Pressure/Temperature Correction Option	YES	

SHT	Surface Hole Temperature	68	DEGF
TNCO_APS	APS TNPH Computation Option	NO	
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	OFF	
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	30000	
PSDS	HLDS SS Pulse Shape Compensation DAC	30000	
PSML	HLDS LS Pulse Shape Compensation Mode	AUTO	
PSMS	HLDS SS Pulse Shape Compensation Mode	AUTO	
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)	212	DEGF
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	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.00183121	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGS Processing Enable	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	68	DEGF
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.994454	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.988514	
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	11.438	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	4.500	IN
CWEI	Casing Weight	0.00	LB/F
DFD	Drilling Fluid Density	1.26	G/C3
DO	Depth Offset for Playback	1.6	M
FLEV	Fluid Level	-50000.00	M
MST	Mud Sample Temperature	-50000.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	NORMAL	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	-50000	FT
TDD	Total Depth - Driller	3929.90	M
TDL	Total Depth - Logger	3929.90	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: APSLiquidPorosity_1 Vertical Scale: 1:200 Graphics File Created: 19-Aug-2009 19:29

OP System Version: 17C0-154

DIT-E	17C0-154	GPIT-A/B	SRPC-3762-Q1_2009_OP17
DTA-A	17C0-154	APS-C	17C0-154
HLDS	17C0-154	LDSC-B	17C0-154
HNGC-B	17C0-154	HNGS-BA	17C0-154
DTC-H	17C0-154		

Input DLIS Files

DEFAULT	PI_APS_LDL_NGS_103LUP	FN:11	PRODUCER	18-Aug-2009 18:36	3929.6 M	3849.6 M

Output DLIS Files

DEFAULT	PI_APS_LDL_NGS_117PUP	FN:32	PRODUCER	19-Aug-2009 19:29

Schlumberger

Calibrations

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
General Purpose Inclinometer Wellsite Calibration - CROUZET ACCELEROMETER PROM HAS BEEN READ CORRECTLY							
Before: 18-Aug-2009 15:47							
TEMPERATURE REFERENCE :	N/A	N/A	20	N/A	N/A	N/A	DEGC
YEAR OF CALIBRATION :	N/A	N/A	99	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	3	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	743	N/A	N/A	N/A	
General Purpose Inclinometer Wellsite Calibration - CROUZET MAGNETOMETER PROM HAS BEEN READ CORRECTLY							
Before: 18-Aug-2009 15:47							
TEMPERATURE REFERENCE :	N/A	N/A	23	N/A	N/A	N/A	DEGC
YEAR OF CALIBRATION :	N/A	N/A	3	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	9	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	507	N/A	N/A	N/A	
Accelerator-Porosity Tool Wellsite Calibration - Detector Background							
Master: 18-Jun-2009 23:03 Before: 18-Aug-2009 15:52 After: 18-Aug-2009 23:56							
Near Det Bkg Cntrate	30.00	32.09	34.30	30.88	-3.418	N/A	CPS
Far Det Bkg Cntrate	30.00	31.69	32.14	33.72	1.576	N/A	CPS
Array-1 Det Bkg Cntrate	30.00	28.61	30.63	29.67	-0.9549	N/A	CPS
Array-2 Det Bkg Cntrate	30.00	30.40	29.70	30.21	0.5026	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	32.33	30.32	30.50	0.1716	N/A	CPS
Accelerator-Porosity Tool Wellsite Calibration - Calibration Ratios							
Master: 18-Jun-2009 23:03							
Near/Far Calibration Ratio	0.9250	0.8852	N/A	N/A	N/A	N/A	
Near/Array Calibration Ratio	1.030	1.059	N/A	N/A	N/A	N/A	
Near/Array Cal Ratio Up/Down	1.000	1.008	N/A	N/A	N/A	N/A	
Accelerator-Porosity Tool Wellsite Calibration - Tank Check							
Master: 18-Jun-2009 23:03							
Array-1 Standoff Porosity	11.75	11.81	N/A	N/A	N/A	N/A	PU
Array-2 Standoff Porosity	11.75	11.56	N/A	N/A	N/A	N/A	PU
Average Slowing Down Time	6.000	5.860	N/A	N/A	N/A	N/A	US
Array-1 SDT Ratio Up/Down	1.000	0.9891	N/A	N/A	N/A	N/A	
Array-2 SDT Ratio Up/Down	1.000	1.006	N/A	N/A	N/A	N/A	
Sigma Formation	27.50	27.25	N/A	N/A	N/A	N/A	CU
Accelerator-Porosity Tool Wellsite Calibration - CCR7 signal boxes							
Master: 18-Jun-2009 23:03							
Near Detector Plateau Setting	1650	1733	N/A	N/A	N/A	N/A	V
Far Detector Plateau Setting	2000	2077	N/A	N/A	N/A	N/A	V
Array Detector Plateau Setting	2000	1966	N/A	N/A	N/A	N/A	V
Hostile Litho-Density Sonde Wellsite Calibration - Background Measurement							
Master: 30-Jun-2009 22:48 Before: 18-Aug-2009 15:52 After: 19-Aug-2009 0:46							
SS Cs Resolution Bkg	9.000	7.767	7.740	7.751	0.01079	1.800	%
LS Cs Resolution Bkg	9.000	7.963	8.160	8.120	-0.03943	1.800	%
LSW1 Background	100.0	92.51	92.69	92.96	0.2753	3.000	CPS

LSW2 Background	100.0	83.43	84.00	83.55	-0.4472	3.000	CPS
LSW3 Background	200.0	192.3	189.3	191.2	1.851	6.000	CPS
LSW4 Background	250.0	236.2	235.1	235.0	-0.07654	7.500	CPS
LSW5 Background	600.0	548.3	548.4	544.7	-3.680	18.00	CPS
SSW1 Background	100.0	90.55	90.67	89.44	-1.226	3.000	CPS
SSW2 Background	200.0	155.0	156.2	155.0	-1.237	6.000	CPS
SSW3 Background	500.0	433.9	429.5	431.9	2.377	15.00	CPS
SSW4 Background	270.0	232.2	231.8	231.2	-0.5577	8.100	CPS
SSW5 Background	200.0	167.8	165.1	165.0	-0.1062	6.000	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Aluminum Measurement
Master: 30-Jun-2009 22:48

LSW1 Aluminum	600.0	554.7	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	804.9	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	966.0	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	485.4	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	446.3	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2501	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	6891	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	9659	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	3955	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	474.6	N/A	N/A	N/A	N/A	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Lithology Measurement
Master: 30-Jun-2009 22:48

LSW1 Iron	400.0	378.8	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	651.5	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	856.2	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	445.8	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	411.6	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1825	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	5726	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	8806	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3618	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	422.6	N/A	N/A	N/A	N/A	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Caliper Calibration
Before: 16-Jul-2009 10:33

HLDS Caliper Small Ring	12.00	N/A	13.30	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	15.19	N/A	16.70	N/A	N/A	N/A	IN

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 1 Check
Master: 19-Jun-2009 22:52 Before: 18-Aug-2009 15:53 After: 19-Aug-2009 0:47

Na 511 Peak Loc	40.00	39.80	39.67	39.61	-0.05349	1.000	
Na 511 Peak Res	15.50	15.76	14.85	14.86	0.008362	2.000	%
High Voltage	1150	1181	1142	1147	5.267	N/A	V
Na 1785 Peak Loc	142.6	142.6	143.1	142.5	-0.5837	7.000	
Na 1785 Peak Res	8.500	8.553	8.147	7.976	-0.1707	2.000	%
Temperature	15.50	32.22	13.66	14.42	0.7543	N/A	DEGC
Na Count Rate	45.00	37.08	36.31	36.45	0.1412	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 2 Check
Master: 19-Jun-2009 22:52 Before: 18-Aug-2009 15:53 After: 19-Aug-2009 0:47

Na 511 Peak Loc	40.00	39.62	39.54	39.64	0.09639	1.000	
Na 511 Peak Res	15.50	16.69	15.84	14.61	-1.232	2.000	%
High Voltage	1150	1114	1079	1081	2.457	N/A	V
Na 1785 Peak Loc	142.6	142.4	142.4	142.0	-0.3956	7.000	
Na 1785 Peak Res	8.500	8.478	8.222	8.881	0.6593	2.000	%
Temperature	15.50	32.71	13.80	16.14	2.338	N/A	DEGC
Na Count Rate	45.00	38.14	36.40	36.73	0.3349	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Ratio Of Detector 1 To Detector 2
Master: 19-Jun-2009 22:52 Before: 18-Aug-2009 15:53 After: 19-Aug-2009 0:47

Coincidence Count Rate Ratio	1.000	0.9751	0.9972	0.9917	-0.005419	0.05000	

Accelerator-Porosity Tool - Detector Plateau Settings :

Near Detector Plateau Setting 1733 V
Far Detector Plateau Setting 2077 V
Array Detector Plateau Setting 1966 V

Dual Induction - E / Equipment Identification

Primary Equipment:

Dual Induction Sonde	DIS - HB	129
Dual Induction Cartridge	DIC - EB	171

Dual Induction Cartridge	DIC - EB	171
Auxiliary Equipment:		
Mass Isolated Housing	MIH - ZA	342

Dual Induction - E Wellsite Calibration

Induction Electronics (10 kHz)

Phase	ID Elect Real Offset 10 kHz MM/M	Value
Before		30.01
	-300.0 (Minimum) / 0 (Nominal) / 300.0 (Maximum)	

Phase	ID Elect Real Gain 10 kHz	Value
Before		0.9407
	0.8500 (Minimum) / 1.000 (Nominal) / 1.200 (Maximum)	

Phase	ID Elect Phase 10 kHz DEG	Value
Before		8.951
	-10.00 (Minimum) / 0 (Nominal) / 10.00 (Maximum)	

Phase	ID Elect Quad Offset 10 kHz MM/M	Value
Before		25.69
	-300.0 (Minimum) / 0 (Nominal) / 300.0 (Maximum)	

Phase	ID Elect Quad Gain 10 kHz	Value
Before		0.9559
	0.8500 (Minimum) / 1.000 (Nominal) / 1.200 (Maximum)	

Phase	IM Elect Phase 10 kHz DEG	Value
Before		8.760
	-10.00 (Minimum) / 0 (Nominal) / 10.00 (Maximum)	

Phase	IM Elect Real Offset 10 kHz MM/M	Value
Before		83.37
	-550.0 (Minimum) / 0 (Nominal) / 550.0 (Maximum)	

Phase	IM Elect Real Gain 10 kHz	Value
Before		0.9490
	0.8500 (Minimum) / 1.000 (Nominal) / 1.200 (Maximum)	

Phase	IM Elect Quad Offset 10 kHz MM/M	Value
Before		44.00
	-550.0 (Minimum) / 0 (Nominal) / 550.0 (Maximum)	

Phase	IM Elect Quad Gain 10 kHz	Value
Before		0.9300
	0.8500 (Minimum) / 1.000 (Nominal) / 1.200 (Maximum)	

Before: 18-Aug-2009 18:33

Dual Induction - E Wellsite Calibration

Induction Electronics (20 kHz)

Phase	ID Elect Real Offset 20 kHz MM/M	Value
Before		11.87
	-125.0 (Minimum) / 0 (Nominal) / 125.0 (Maximum)	

Phase	ID Elect Real Gain 20 kHz	Value
Before		0.9677
	0.8500 (Minimum) / 1.000 (Nominal) / 1.200 (Maximum)	

Phase	ID Elect Phase 20 kHz DEG	Value
Before		3.950
	-15.00 (Minimum) / 0 (Nominal) / 15.00 (Maximum)	

Phase	ID Elect Quad Offset 20 kHz MM/M	Value
Before		10.39
	-125.0 (Minimum) / 0 (Nominal) / 125.0 (Maximum)	

Phase	ID Elect Quad Gain 20 kHz	Value
Before		0.9858
	0.8500 (Minimum) / 1.000 (Nominal) / 1.200 (Maximum)	

Phase	IM Elect Phase 20 kHz DEG	Value
Before		4.346
	-15.00 (Minimum) / 0 (Nominal) / 15.00 (Maximum)	

Phase	IM Elect Real Offset 20 kHz MM/M	Value
Before		34.21
	-225.0 (Minimum) / 0 (Nominal) / 225.0 (Maximum)	

Phase	IM Elect Real Gain 20 kHz	Value
Before		0.9922
	0.8500 (Minimum) / 1.000 (Nominal) / 1.200 (Maximum)	

Phase	IM Elect Quad Offset 20 kHz MM/M	Value
Before		18.15
	-225.0 (Minimum) / 0 (Nominal) / 225.0 (Maximum)	

Phase	IM Elect Quad Gain 20 kHz	Value
Before		0.9723
	0.8500 (Minimum) / 1.000 (Nominal) / 1.200 (Maximum)	

Before: 18-Aug-2009 18:34

Dual Induction - E Wellsite Calibration

Induction Electronics (40 kHz)

Phase	ID Elect Real Offset 40 kHz MM/M	Value
Before		7.721
	-85.00 (Minimum) / 0 (Nominal) / 85.00 (Maximum)	

Phase	ID Elect Real Gain 40 kHz	Value
Before		0.9480
	0.8500 (Minimum) / 1.000 (Nominal) / 1.200 (Maximum)	

Phase	ID Elect Phase 40 kHz DEG	Value
Before		14.31
	-20.00 (Minimum) / 0 (Nominal) / 20.00 (Maximum)	

Phase	ID Elect Quad Offset 40 kHz MM/M	Value
Before		6.916
	-85.00 (Minimum) / 0 (Nominal) / 85.00 (Maximum)	

Phase	ID Elect Quad Gain 40 kHz	Value
Before		0.9747
	0.8500 (Minimum) / 1.000 (Nominal) / 1.200 (Maximum)	

Phase	IM Elect Phase 40 kHz DEG	Value
Before		14.11
	-20.00 (Minimum) / 0 (Nominal) / 20.00 (Maximum)	

Phase	IM Elect Real Offset 40 kHz MM/M	Value
Before		21.96
	-130.0 (Minimum) / 0 (Nominal) / 130.0 (Maximum)	

Phase	IM Elect Real Gain 40 kHz	Value
Before		0.9898
	0.8500 (Minimum) / 1.000 (Nominal) / 1.200 (Maximum)	

Phase	IM Elect Quad Offset 40 kHz MM/M	Value
Before		11.70
	-130.0 (Minimum) / 0 (Nominal) / 130.0 (Maximum)	

Phase	IM Elect Quad Gain 40 kHz	Value
Before		0.9696
	0.8500 (Minimum) / 1.000 (Nominal) / 1.200 (Maximum)	

Before: 18-Aug-2009 18:35

Dual Induction - E Wellsite Calibration

SFL Electronics

Phase	SFL Voltage Offset MV	Value
Before		0.1356
	-15.00 (Minimum) 0 (Nominal) 15.00 (Maximum)	

Phase	SFL Voltage Gain	Value
Before		0.9954
	0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)	

Phase	SFL Current Offset MA	Value
Before		0.03358
	-0.6000 (Minimum) 0 (Nominal) 0.6000 (Maximum)	

Phase	SFL Current Gain	Value
Before		1.006
	0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)	

Before: 18-Aug-2009 18:35

Dual Induction - E Wellsite Calibration

Electronics Calibration Changes Files/Depth Intervals: 100: 2923.8 - 2993.3 101: 3115.8 - 3899.2 103: 3929.6 - 3847.8 104: 3929.6 - 3181.

Phase	ID (R > 27 OHM-M) MM/M	Value
After		0.2095
	0 (Minimum) 0 (Nominal) 0.7500 (Maximum)	

Phase	ID (R < 27 OHM-M) %	Value
After		0.0002155
	0 (Minimum) 0 (Nominal) 2.000 (Maximum)	

Phase	SFL (R < 1 OHM-M) OHMM	Value
After		0.0006504
	0 (Minimum) 0 (Nominal) 0.02000 (Maximum)	

Phase	IM (R > 27 OHM-M) MM/M	Value
After		0.2311
	0 (Minimum) 0 (Nominal) 0.7500 (Maximum)	

Phase	IM (R < 27 OHM-M) %	Value
After		0.0002152
	0 (Minimum) 0 (Nominal) 2.000 (Maximum)	

Phase	SFL (R > 27 OHM-M) MM/M	Value
After		0
	0 (Minimum) 0 (Nominal) 0.7500 (Maximum)	

Phase	SFL (R < 27 OHM-M) %	Value
After		0.01652
	0 (Minimum) 0 (Nominal) 2.000 (Maximum)	

After: 18-Aug-2009 21:53

General Purpose Inclinometer / Equipment Identification

Primary Equipment:		
GPIT Cartridge - A	GPIC - A	719
Auxiliary Equipment:		
GPIT Housing	GPIH - A	2864

Accelerator-Porosity Tool / Equipment Identification

Primary Equipment:		
Accelerator-Porosity Sonde	APS - C	22
APS Minitron	MNTR - F	5589
Auxiliary Equipment:		
Accelerator-Porosity Housing	APH - AC	22
APS Calibration Water Tank	SFT - 178	2
APS Aluminum Calibrator Sleeve	SFT - 281	2

Accelerator-Porosity Tool Wellsite Calibration

Detector Background

Phase	Near Det Bkg Cntrate CPS	Value
Master		32.09
Before		34.30
After		30.88
	1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum)	

Phase	Far Det Bkg Cntrate CPS	Value
Master		31.69
Before		32.14
After		33.72
	1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum)	

Phase	Array-1 Det Bkg Cntrate CPS	Value
Master		28.61
Before		30.63
After		29.67
	1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum)	

Phase	Array-2 Det Bkg Cntrate CPS	Value
Master		30.40
Before		29.70
After		30.21
	1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum)	

Phase	Array Therm Det Bkg Cntrate CPS	Value
Master		32.33
Before		30.32
After		30.50
	1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum)	

Master: 18-Jun-2009 23:03 Before: 18-Aug-2009 15:52 After: 18-Aug-2009 23:56

Accelerator-Porosity Tool Wellsite Calibration

Calibration Ratios

Phase	Near/Far Calibration Ratio	Value
Master		0.8852
	0.8000 (Minimum) 0.9250 (Nominal) 1.050 (Maximum)	

Phase	Near/Array Calibration Ratio	Value
Master		1.059
	0.9000 (Minimum) 1.030 (Nominal) 1.170 (Maximum)	

Phase	Near/Array Cal Ratio Up/Down	Value
Master		1.008
	0.9700 (Minimum) 1.000 (Nominal) 1.030 (Maximum)	

Master: 18-Jun-2009 23:03

Accelerator-Porosity Tool Wellsite Calibration

Tank Check

Phase	Array-1 Standoff Porosity PU	Value
Master		11.81
	9.900 (Minimum) 11.75 (Nominal) 13.60 (Maximum)	

Phase	Array-2 Standoff Porosity PU	Value
Master		11.56
	9.900 (Minimum) 11.75 (Nominal) 13.60 (Maximum)	

Phase	Average Slowing Down Time US	Value
Master		5.860
	5.500 (Minimum) 6.000 (Nominal) 6.250 (Maximum)	

Phase	Array-1 SDT Ratio Up/Down	Value
Master		0.9891
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)	

Phase	Array-2 SDT Ratio Up/Down	Value
Master		1.006
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)	

Phase	Sigma Formation CU	Value
Master		27.25
	20.00 (Minimum) 27.50 (Nominal) 35.00 (Maximum)	

Master: 18-Jun-2009 23:03

Hostile Litho-Density Sonde / Equipment Identification

Primary Equipment:		
Hostile Litho Density Sonde	HLDS - D	57
Hostile Litho Density High Voltage	HLDV - D	51
Gamma Source Radioactive	GSR - Z	2397
Auxiliary Equipment:		
Hostile Litho Density Pad	HLDP - C	61
Hostile Litho Density High Voltage Housi	HEH - H	53

Hostile Litho-Density Sonde Wellsite Calibration

Background Measurement

Phase	SS Cs Resolution Bkg %	Value
Master		7.767
Before		7.740
After		7.751
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)	

Phase	LS Cs Resolution Bkg %	Value
Master		7.963
Before		8.160
After		8.120
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)	

Phase	LSW1 Background CPS	Value
Master		92.51
Before		92.69
After		92.96
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)	

Phase	LSW2 Background CPS	Value
Master		83.43
Before		84.00
After		83.55
	50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)	

Phase	LSW3 Background CPS	Value
Master		192.3
Before		189.3
After		191.2
	110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)	

Phase	LSW4 Background CPS	Value
Master		236.2
Before		235.1
After		235.0
	140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)	

Phase	LSW5 Background CPS	Value
Master		548.3
Before		548.4
After		544.7
	330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)	

Phase	SSW1 Background CPS	Value
Master		90.55
Before		90.67
After		89.44
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)	

Phase	SSW2 Background CPS	Value
Master		155.0
Before		156.2
After		155.0
	100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)	

Phase	SSW3 Background CPS	Value
Master		433.9
Before		429.5
After		431.9
	280.0 (Minimum) 500.0 (Nominal) 700.0 (Maximum)	

Phase	SSW4 Background CPS	Value
Master		232.2
Before		231.8
After		231.2
	150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum)	

Phase	SSW5 Background CPS	Value
Master		167.8
Before		165.1
After		165.0
	110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum)	

Master: 30-Jun-2009 22:48 Before: 18-Aug-2009 15:52 After: 19-Aug-2009 0:46

Litho-Density Spectroscopy Cartridge - B / Equipment Identification

Primary Equipment:		
LDSC Cartridge	LDSC - B	326
Auxiliary Equipment:		
LDSC Housing	LDSH - A	319

Hostile Natural Gamma Ray Cartridge - B / Equipment Identification

Primary Equipment:		
HNGC Cartridge	HNGC - B	300
Auxiliary Equipment:		
HNGC Housing	HNGH - A	115

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:		
HNGS Sonde	HNGS - BA	194
Auxiliary Equipment:		
HNGS Sonde Housing	HNSH - BA	205
Gamma Source Radioactive	GSR - U	616008

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 1 Check

Phase	Na 511 Peak Loc	Value
Master		39.80
Before		39.67
After		39.61
	37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)	

Phase	Na 511 Peak Res %	Value
Master		15.76
Before		14.85
After		14.86
	12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)	

Phase	High Voltage V	Value
Master		1181
Before		1142
After		1147
	900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	

Phase	Na 1785 Peak Loc	Value
Master		142.6
Before		143.1
After		142.5
	135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)	

Phase	Na 1785 Peak Res %	Value
Master		8.553
Before		8.147
After		7.976
	7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)	

Phase	Temperature DEGC	Value
Master		32.22
Before		13.66
After		14.42
	-28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)	

Phase	Na Count Rate CPS	Value
Master		37.08
Before		36.31
After		36.45
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)	

Master: 19-Jun-2009 22:52 Before: 18-Aug-2009 15:53 After: 19-Aug-2009 0:47

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 2 Check

Phase	Na 511 Peak Loc	Value
Master		39.62
Before		39.54
After		39.64
	37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)	

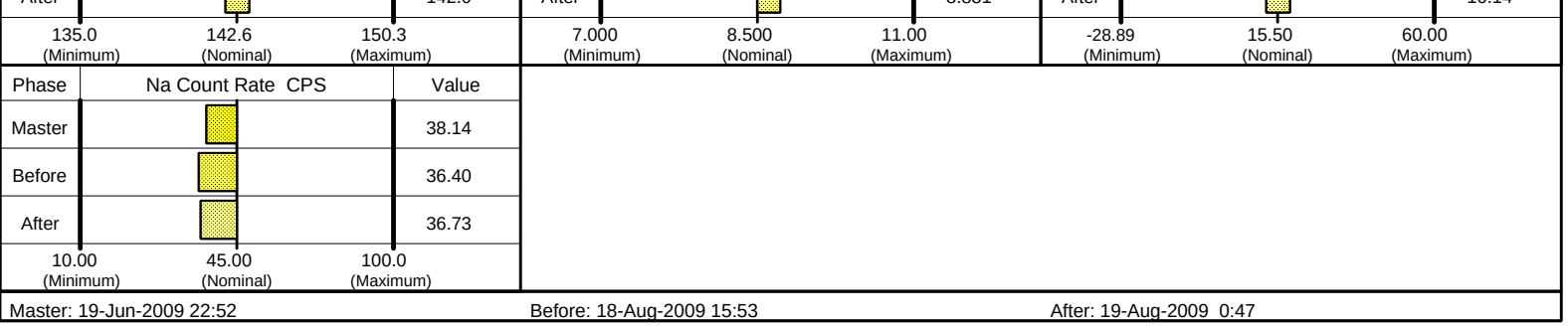
Phase	Na 511 Peak Res %	Value
Master		16.69
Before		15.84
After		14.61
	12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)	

Phase	High Voltage V	Value
Master		1114
Before		1079
After		1081
	900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	

Phase	Na 1785 Peak Loc	Value
Master		142.4
Before		142.4
After		142.0

Phase	Na 1785 Peak Res %	Value
Master		8.478
Before		8.222
After		8.881

Phase	Temperature DEGC	Value
Master		32.71
Before		13.80
After		16.14



Phase	Na Count Rate CPS	Value
Master		38.14
Before		36.40
After		36.73

10.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)

Master: 19-Jun-2009 22:52 Before: 18-Aug-2009 15:53 After: 19-Aug-2009 0:47

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Ratio Of Detector 1 To Detector 2

Phase	Coincidence Count Rate Ratio	Value
Master		0.9751
Before		0.9972
After		0.9917

0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)

Master: 19-Jun-2009 22:52

Before: 18-Aug-2009 15:53

After: 19-Aug-2009 0:47

DTS Telemetry Tool / Equipment Identification

Primary Equipment:		
DTC-H Auxiliary Cartridge	DTCH - A	
DTC-H Telemetry Cartridge	DTCH - A	8798
Auxiliary Equipment:		
DTCH Telemetry Cartridge Housing	ECH - KC	2304

Company: Lamont Doherty

Schlumberger

Well: Expedition 323 Site U1344A
Field: Bering Sea
Rig: JOIDES Resolution
Country: USA

APS Porosity
HLDS Lithodensity
Natural Gamma Spectroscopy