

**Company: Beach Petroleum Ltd**

**Well: Bodalla South 18**

**Field: Bodalla South**

**Rig: Hunt Rig 2**

**Country: Australia**

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

<b>LOCATION</b>		Bodalla Sth 3D Survey	Elev.: R.T. 153.8 m
InLine: 425 Xline: 187		G.L. 150 m	
Permanent Datum:	AHD	Elev.: 0 m	
Log Measured From:	RT	153.8 m above Perm. Datum	
Drilling Measured From:	RT		
State: QLD.	Max. Well Deviation	Longitude	Latitude
	5.25 deg	143 25' 10.11" E	26 26' 39.50" S

Rig: Hunt Rig 2  
 Field: Bodalla South  
 Location: Bodalla Sth 3D Survey  
 Well: Bodalla South 18  
 Company: Beach Petroleum Ltd

Logging Date	10-Aug-2007
Run Number	1
Depth Driller	1524 m
Schlumberger Depth	1523 m
Bottom Log Interval	1520.71 m
Top Log Interval	25 m
Casing Driller Size @ Depth	9.625 in @ 198.8 m
Casing Schlumberger	199 m
Bit Size	8.500 in
Type Fluid In Hole	KCl Polymer
Density	9.6 lbm/gal
Fluid Loss	6.8 cm <sup>3</sup>
Source Of Sample	Pit

RM @ Measured Temperature	0.240 ohm.m	@	25 degC
RMF @ Measured Temperature	0.194 ohm.m	@	25 degC
RMC @ Measured Temperature	0.255 ohm.m	@	25 degC
Source RMF	Press	Press	
RM @ MRT	0.102 @ 88	0.083 @ 88	
Maximum Recorded Temperatures	88 degC	88	
Circulation Stopped	10-Aug-2007	4:10	
Logger On Bottom	10-Aug-2007	11:20	
Unit Number	3061	AUMB	
Recorded By	Jose Flavio/ Sarah Corbett		
Witnessed By	Mr. Peter Morris		

Logging Date		Run 1	Run 2
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			

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: 10-AUG-2007 15:17:42

### Depth System Equipment

Depth Measuring Device	Tension Device	Logging Cable
Type: IDW-B Serial Number: 4898 Calibration Date: 01-July-2007 Calibrator Serial Number: 1009 Calibration Cable Type: 7-42V-XS Wheel Correction 1: -5 Wheel Correction 2: -2	Type: CMTD-B/A Serial Number: 2007 Calibration Date: 03-August-2007 Calibrator Serial Number: 1050 Calibration Gain: 0.98 Calibration Offset: -634.00	Type: 7-42V-XS Serial Number: 6155 Length: 4700.02 M <hr/> Conveyance Method: Wireline Rig Type: LAND

### Depth Control Parameters

Log Sequence:	First Log In the Well
Rig Up Length At Surface:	58.39 M
Rig Up Length At Bottom:	58.16 M
Rig Up Length Correction:	0.23 M
Stretch Correction:	0.30 M
Tool Zero Check At Surface:	0.70 M

### Depth Control Remarks

1. First log in well.
2. All Schlumberger depth control porcedures followed.
3. IDW used as primary depth control, Z-chart as secondary depth control.
- 4.
- 5.
- 6.

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OTHER SERVICES1	OTHER SERVICES2
OS1:	OS1:
OS2:	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:

REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
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- Tool String run as per tool sketch with 5x1.5" satndoffs.
- Tight spots found at 1430m and 1460m during logging down.
- Repeat section and high resolution data recorded from TD to 1270m as per client request.
- The tool got stuck at 1430m during logging up, caliper was closed to get free.
- The TD was tagged just one time as per client agreement.
- Standard resolution data recorded from 1425m to casing shoe.

Neutron and density curves presented from 1425m to 1060m as per client request.

Resistivity and sonic curves presented from 1425m to casing shoe.

Maximum recorded temperature was 88 degC from thermometers in LEH-QT.

Maximum deviation was 5.25 degrees provided by the client.

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

Density corrected for bit size.

Mud properties from mud report dated 10-August-2007

Chlorides = 23,000 mg/L

KCL = 4(%by Wt.)

RUN 1			RUN 2		
SERVICE ORDER #:	AUSL07356902		SERVICE ORDER #:		
PROGRAM VERSION:	15C0-309		PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

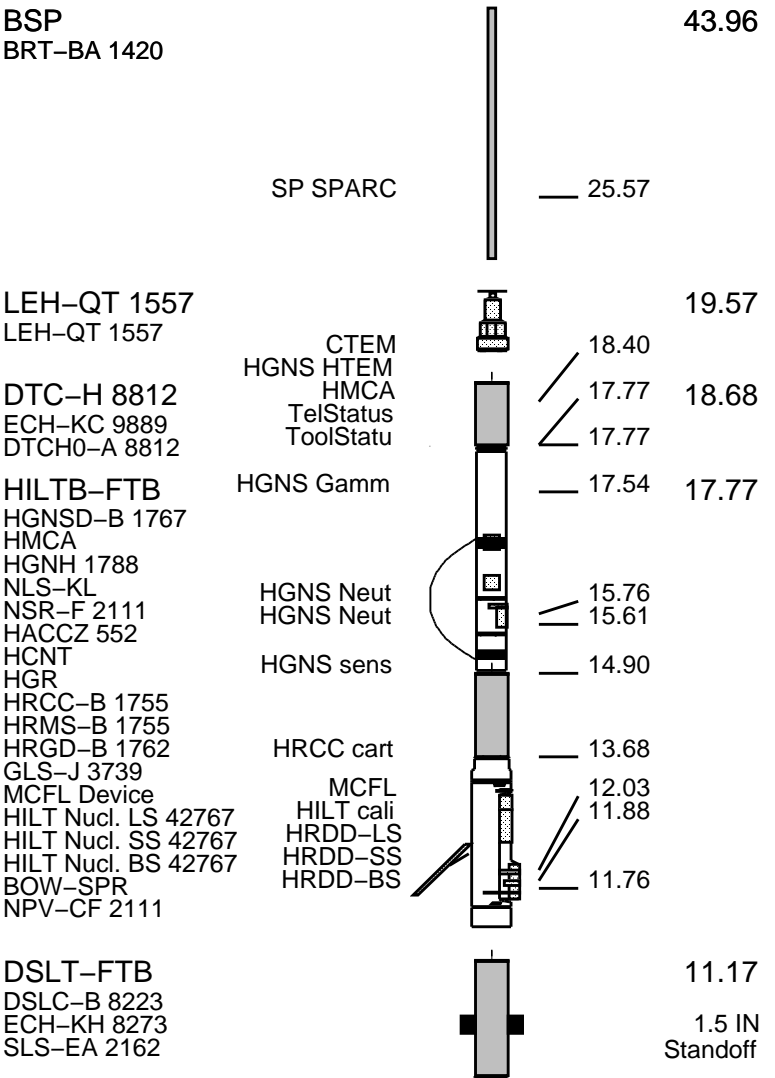
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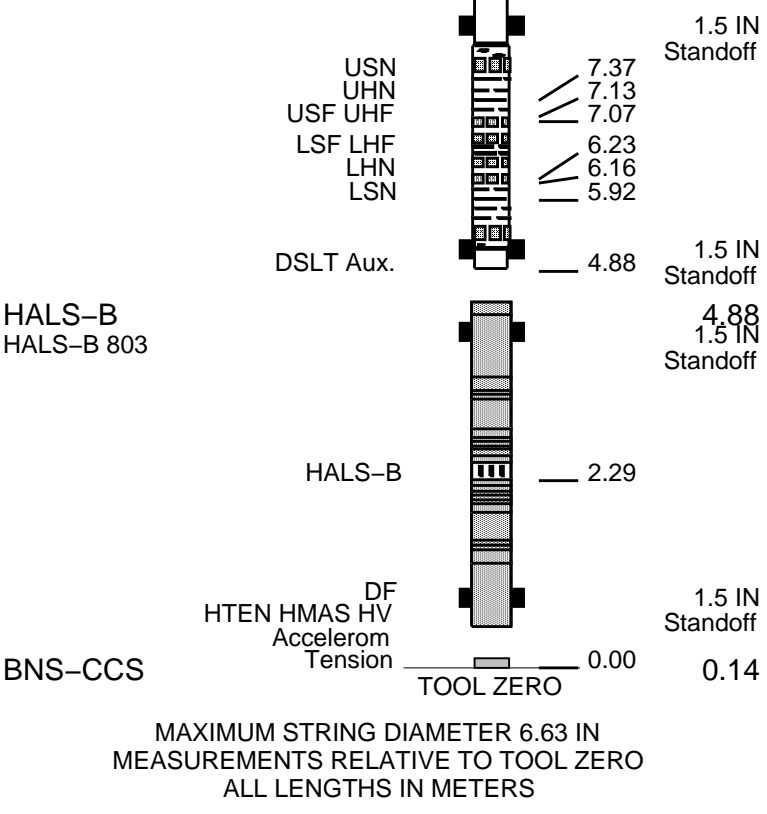
RUN 1	RUN 2
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**SURFACE EQUIPMENT**

LCM-AA 1858      NCS-YC 4889  
 GSR-U 2001      WITM (DTS)-A 929  
 NCT-B 2032  
 CNB-AB 1412

**DOWNHOLE EQUIPMENT**



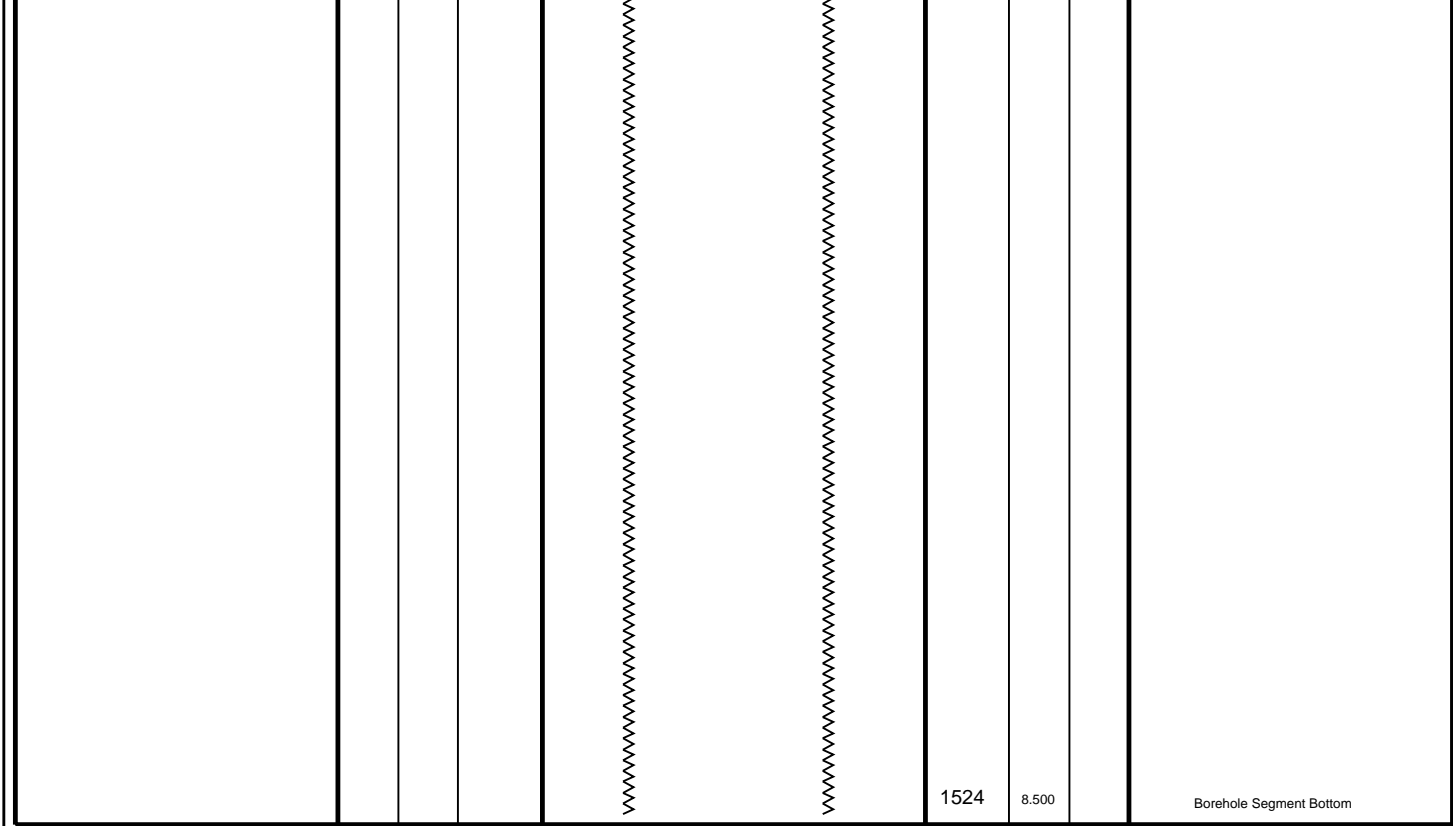


Client: Beach Petroleum  
Well: Bodalla South 18  
Field: Bodalla South  
State: QLD.  
Country: Australia

Drawing Date: 8/10/2007  
API #:

Rig Name: Hunt Rig 2  
Reference Datum: RT  
Elevation: 153.8 m

Production String	(in)			Well Schematic	(in)			Casing String
	OD	ID	MD		MD	OD	ID	
					0.0	12.250	9.625	Casing String Borehole Segment
					198.8	9.625		Casing Shoe Borehole Segment
					198.8	8.500		



All depths are driller's depths.



**Resistivity–Sonic–Density–Porosity  
Standard Resolution, 1:200 Scale**

MAXIS Field Log

Company: Beach Petroleum Ltd

Well: Bodalla South 18

**Input DLIS Files**

DEFAULT	HALS_SONIC_TLD_MCFL_012LUP FN:16	PRODUCER	10–Aug–2007 12:22	1425.5 M	23.5 M
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**Output DLIS Files**

DEFAULT	HALS_SONIC_TLD_MCFL_022PUP FN:32	PRODUCER	10–Aug–2007 17:16	1425.5 M	23.9 M
RTB	HALS_SONIC_TLD_MCFL_022PUP FN:33	PRODUCER	10–Aug–2007 17:16	1425.5 M	23.9 M

**Integrated Hole/Cement Volume Summary**

Hole Volume = 47.46 M3  
 Cement Volume = 17.00 M3 (assuming 7.00 IN casing O.D.)  
 Computed from 1425.5 M to 199.0 M using data channel(s) HCAL

# OP System Version: 15C0-309

MCM

HALS-B  
HILTB-FTB  
BSP

SRPC-3292-Q1\_2007  
SRPC-3292-Q1\_2007  
15C0-309

DSLT-FTB  
DTC-H

15C0-309  
15C0-309

## 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

Washout From BS to HCAL			
Mudcake From HCAL to BS			
SP (SP) (MV)	-50	50	
HILT Caliper (HCAL) (IN)	6	16	
HGNS Deviation (GDEV) (DEG)	-10	90	
Gamma Ray (GR) (GAPI)	0	200	
Bit Size (BS) (IN)	6	16	
Computed Micro Normal (HMNO) (OHMM)	20	0	
Computed Micro Inverse (HMIN) (OHMM)	20	0	
Calibrated Downhole Force (CDF) (LBF)	0	2000	
Tension (TENS) (LBF)	0	4000	

Env.Corr.Thermal Neutron Porosity  
(TNPH)  
(V/V)

0.45                      -0.15

Density/Porosity Cross Over  
From RHOZ to TNPH

Std. Res. Formation Density (RHOZ)  
(G/C3)

1.95                      2.95

Std. Res. Invaded Zone Resistivity  
(RXOZ)  
(OHMM)

0.2                      2000

Std. Res. Formation Pe (PEFZ)  
(----)

0                      10

Laterolog Shallow Resistivity (HLLS)  
(OHMM)

0.2                      2000

Density Correction (HDRA)  
(G/C3)

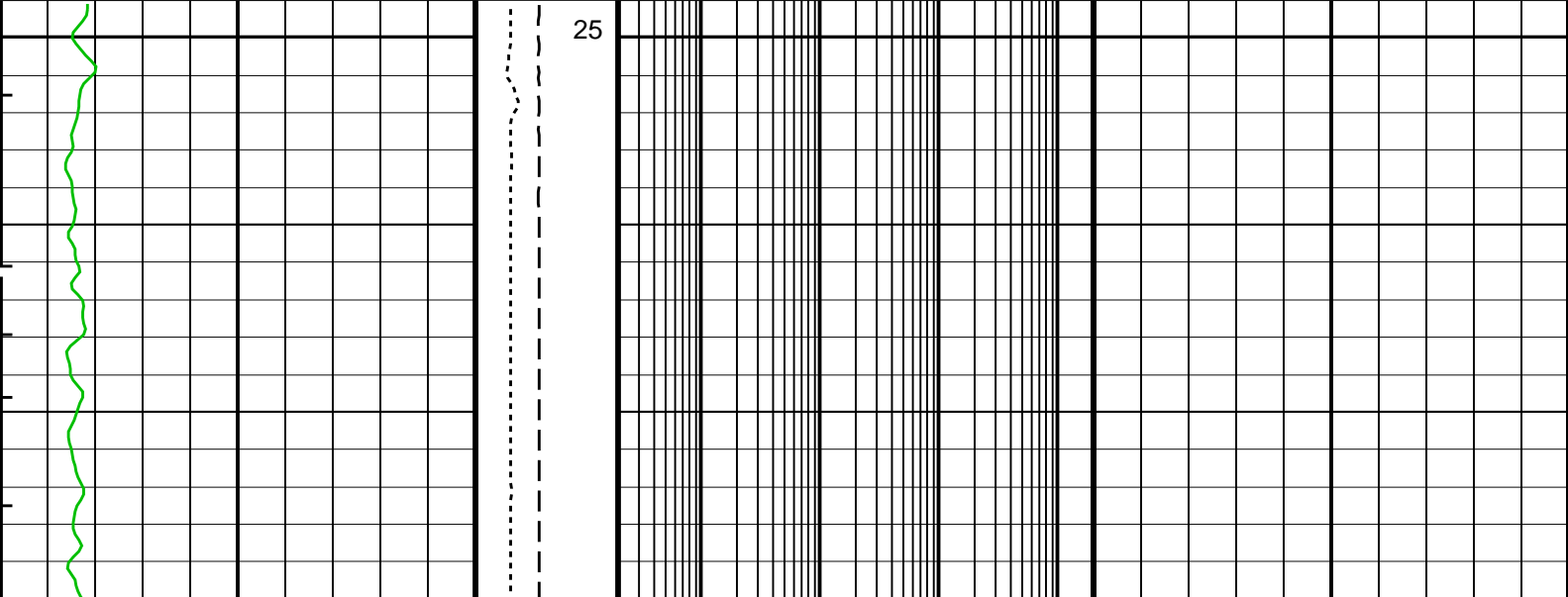
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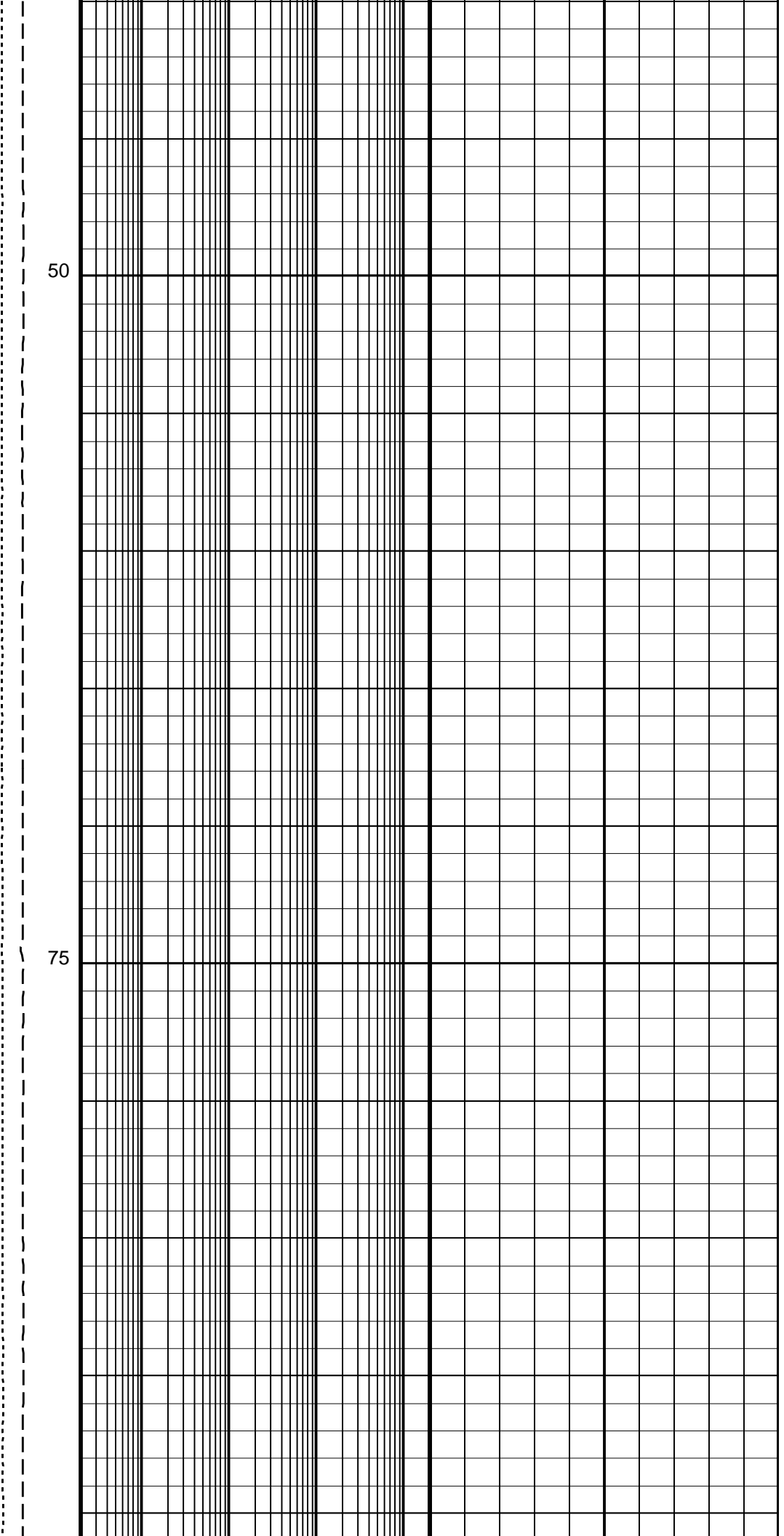
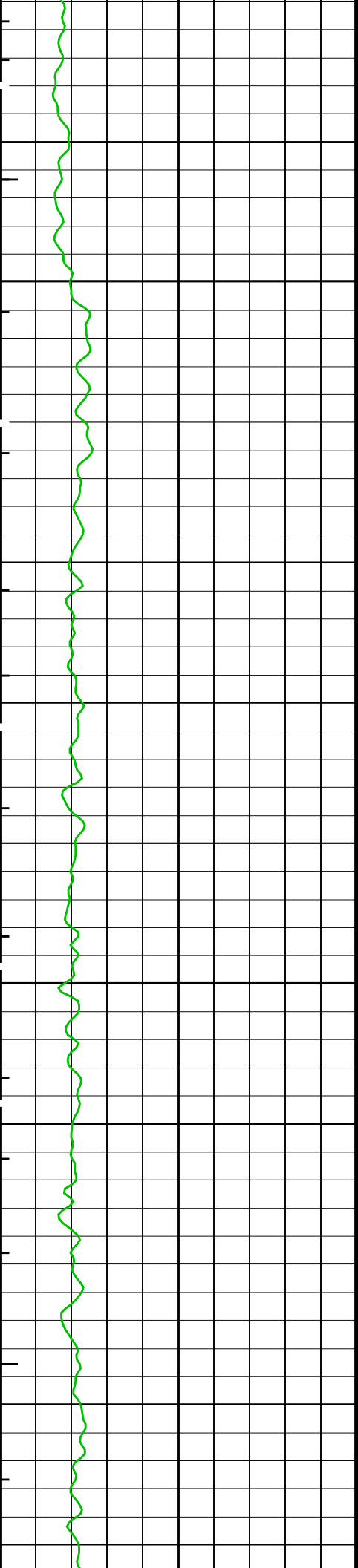
Laterolog Deep Resistivity (HLLD)  
(OHMM)

0.2                      2000

Delta-T (DT)  
(US/F)

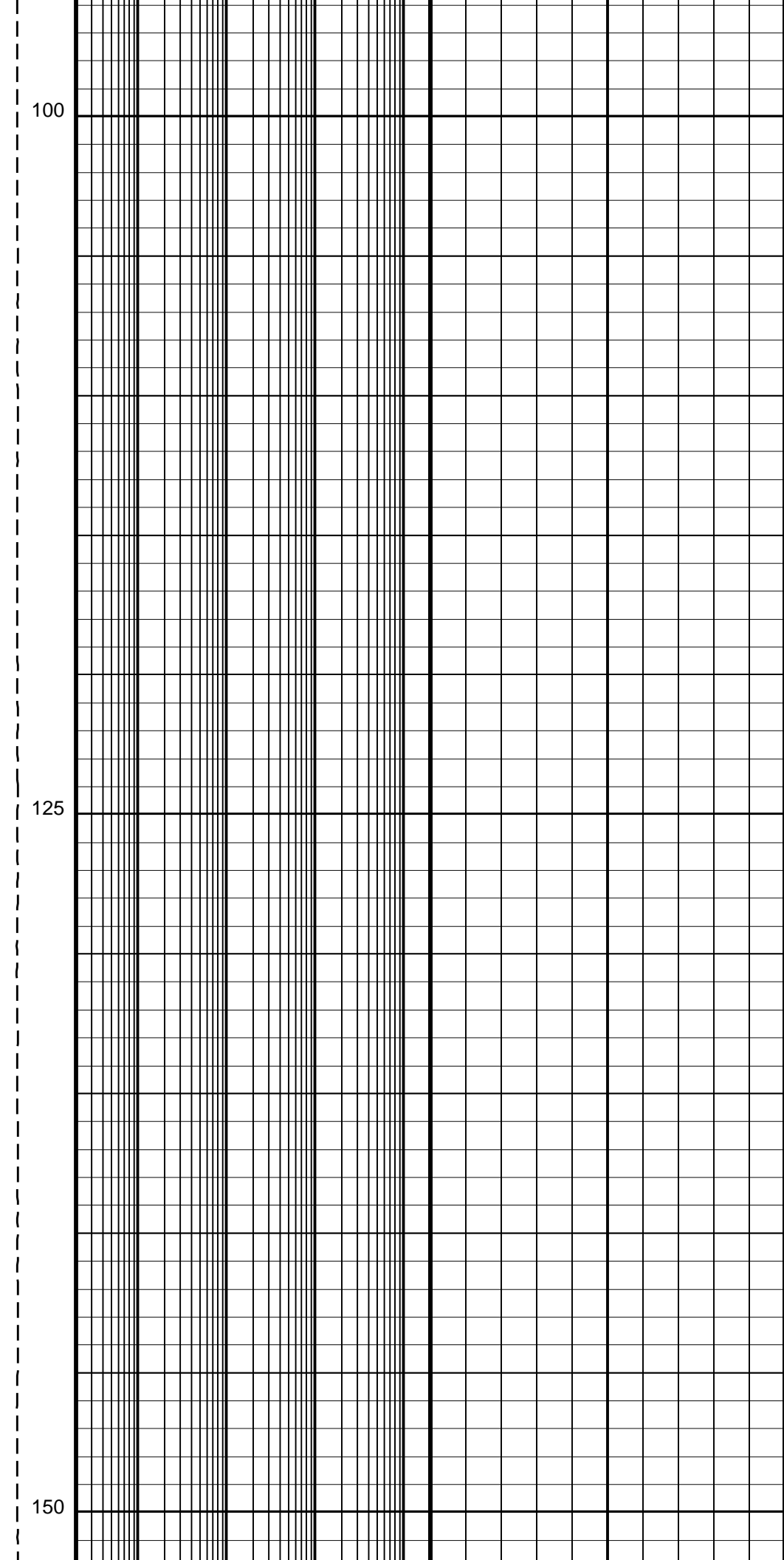
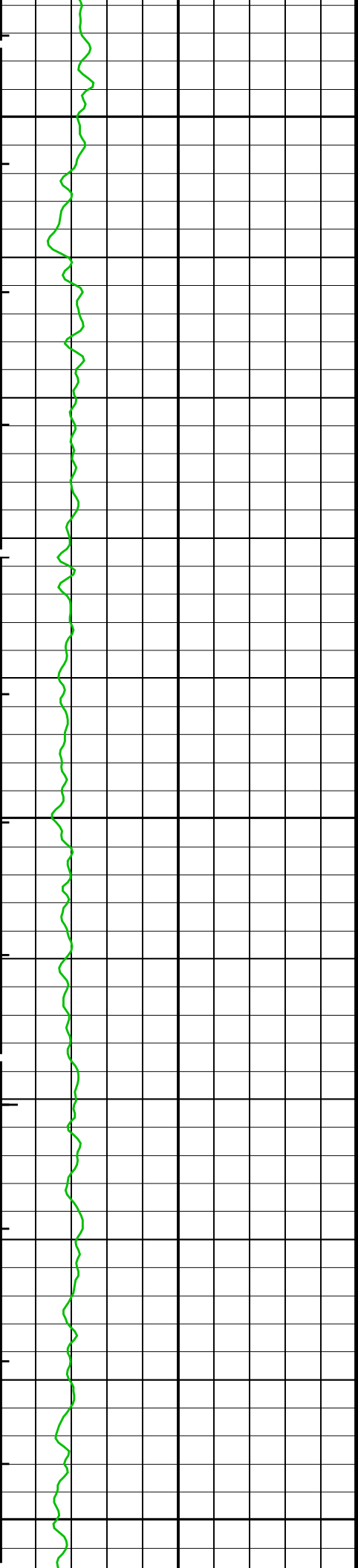
140                      40



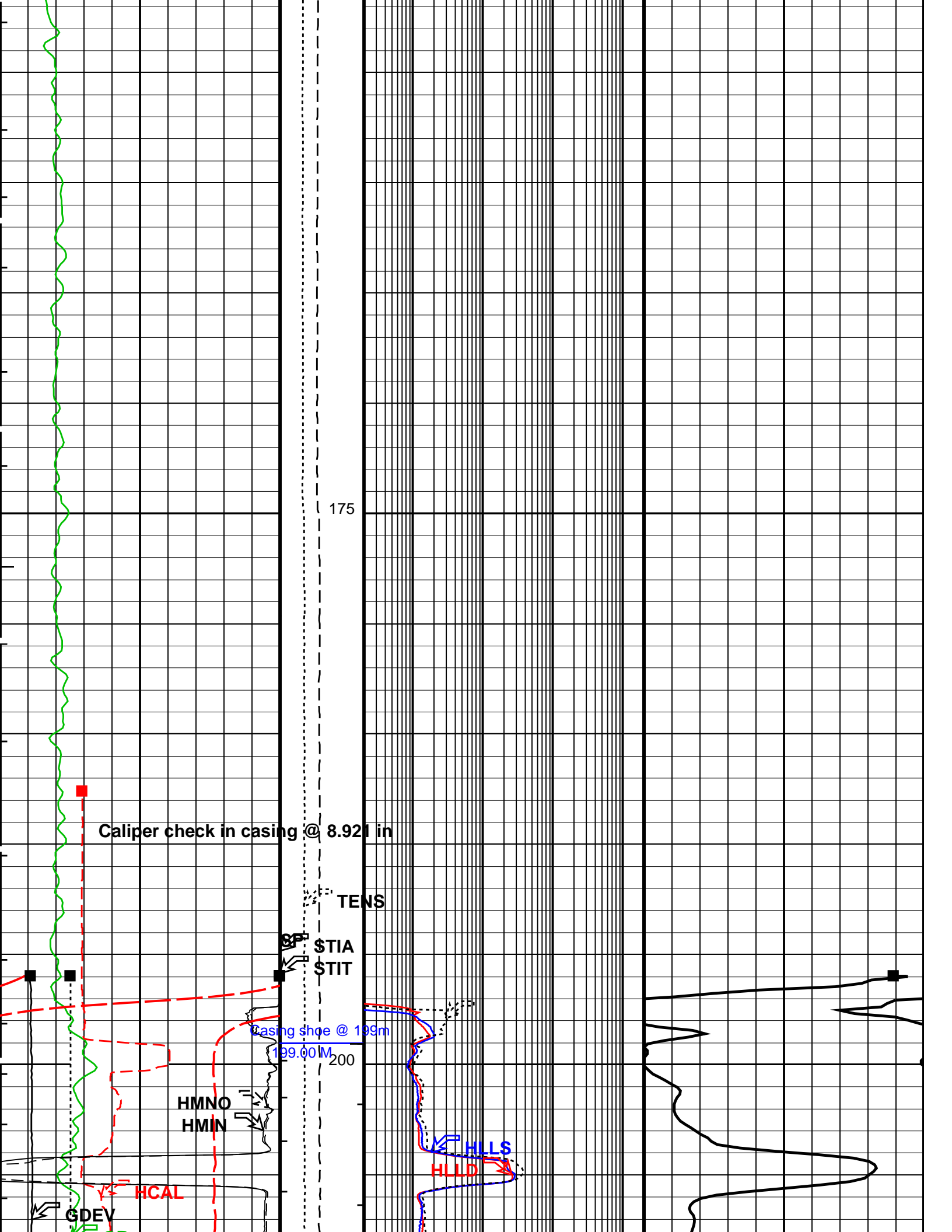


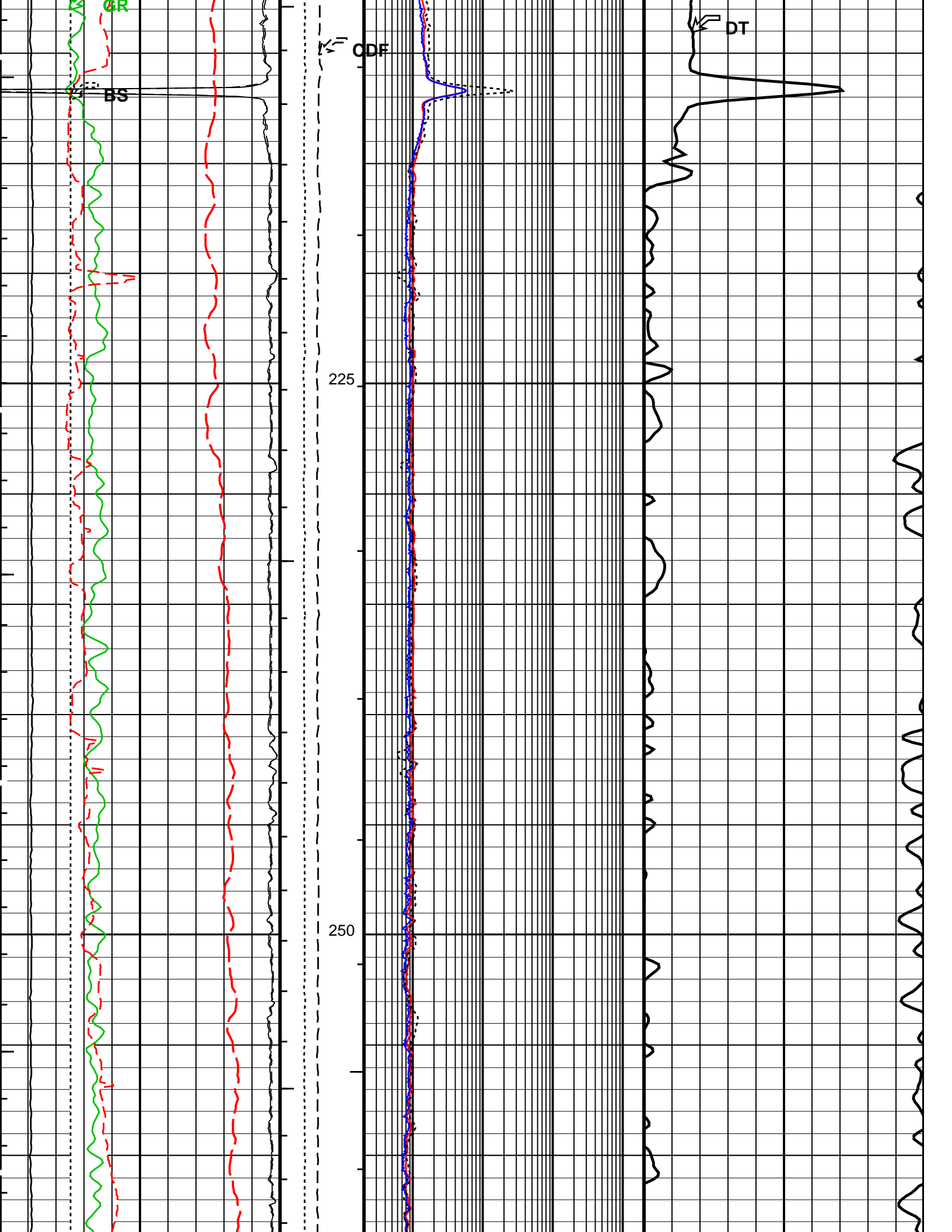
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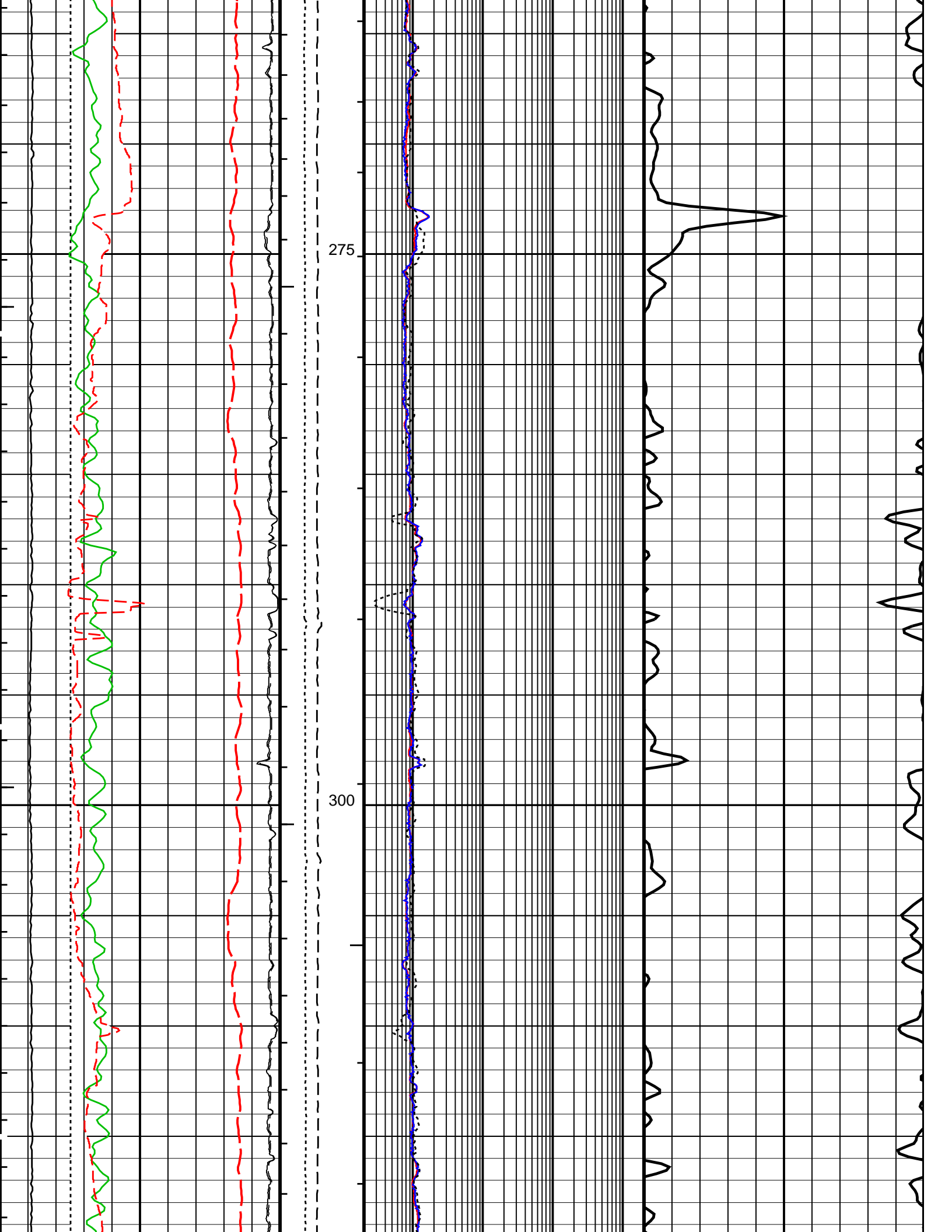
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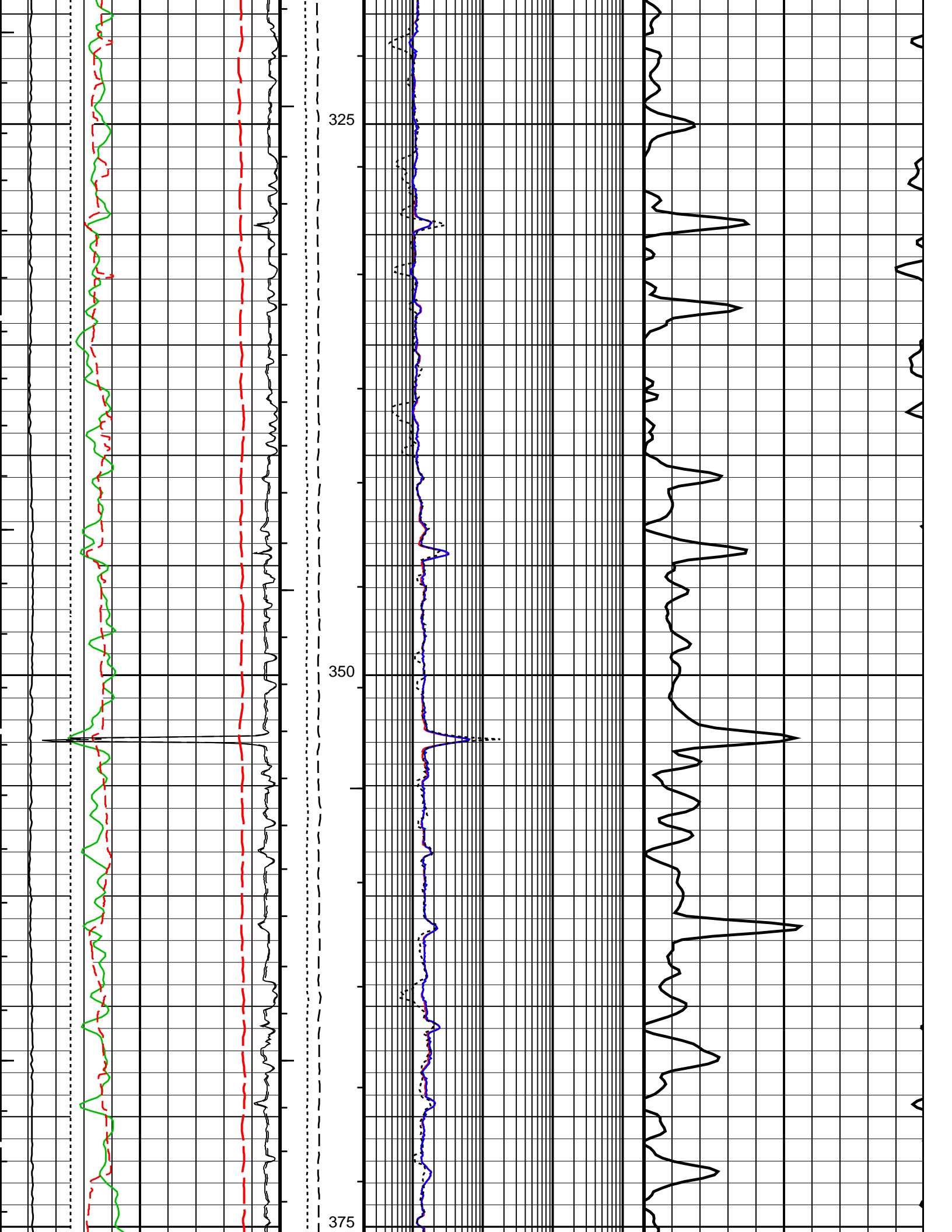


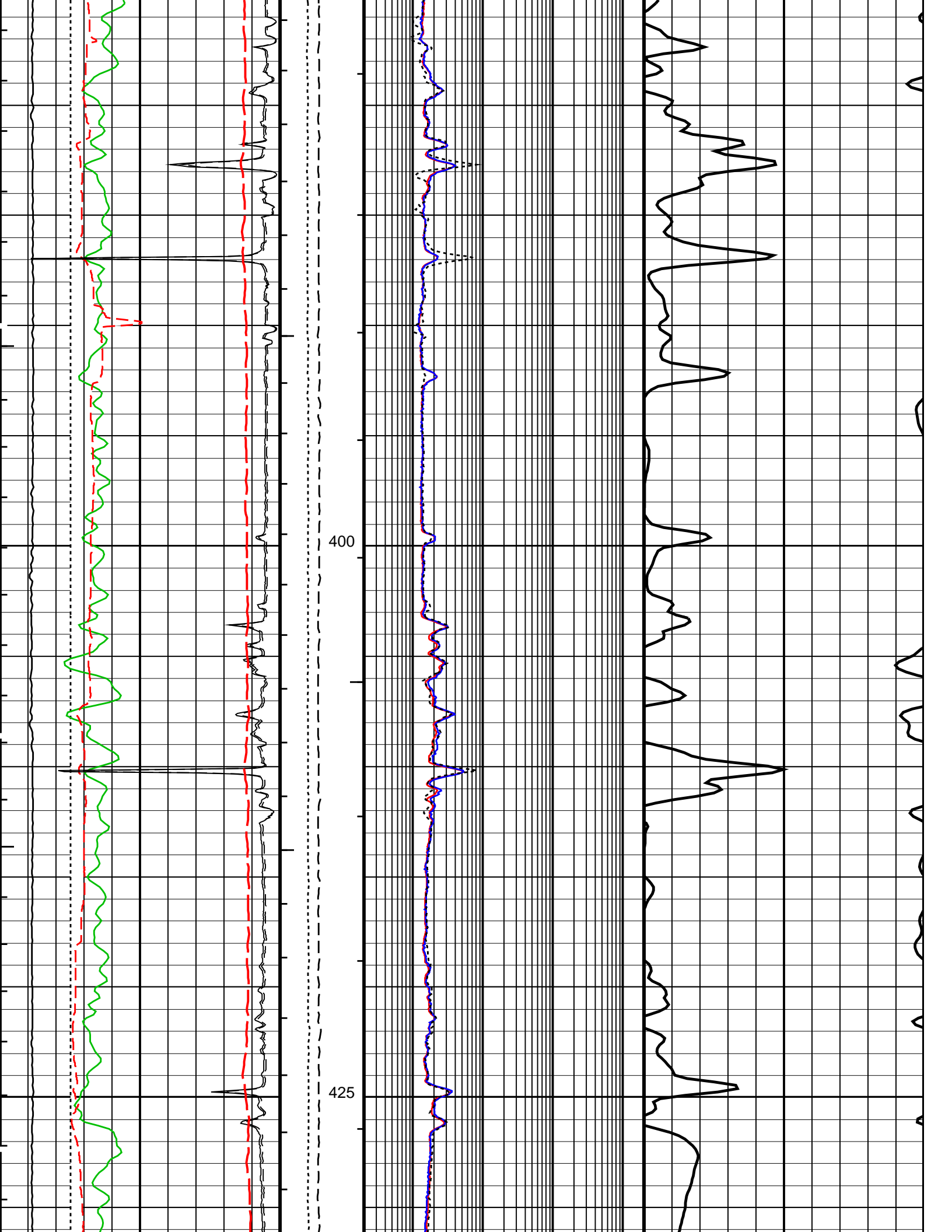


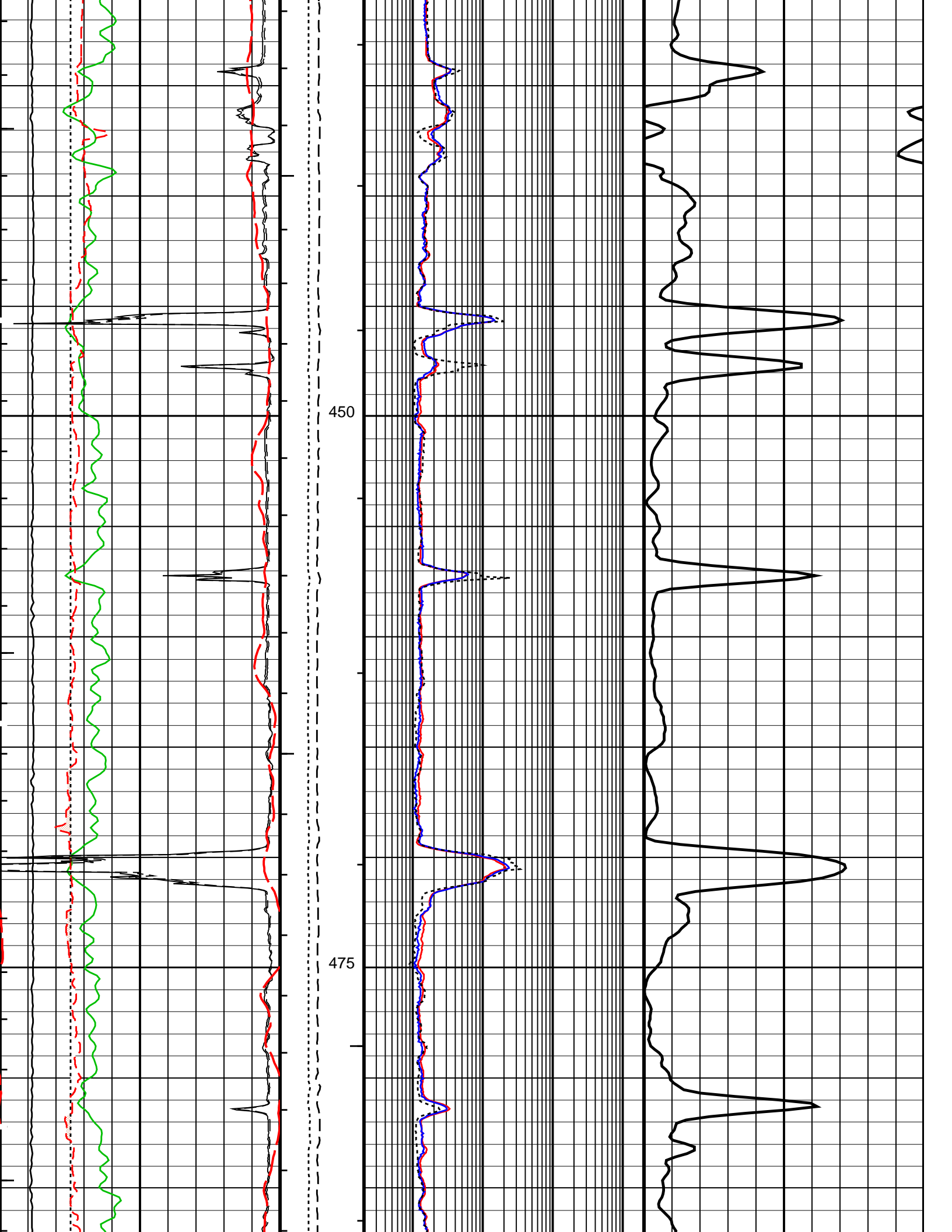


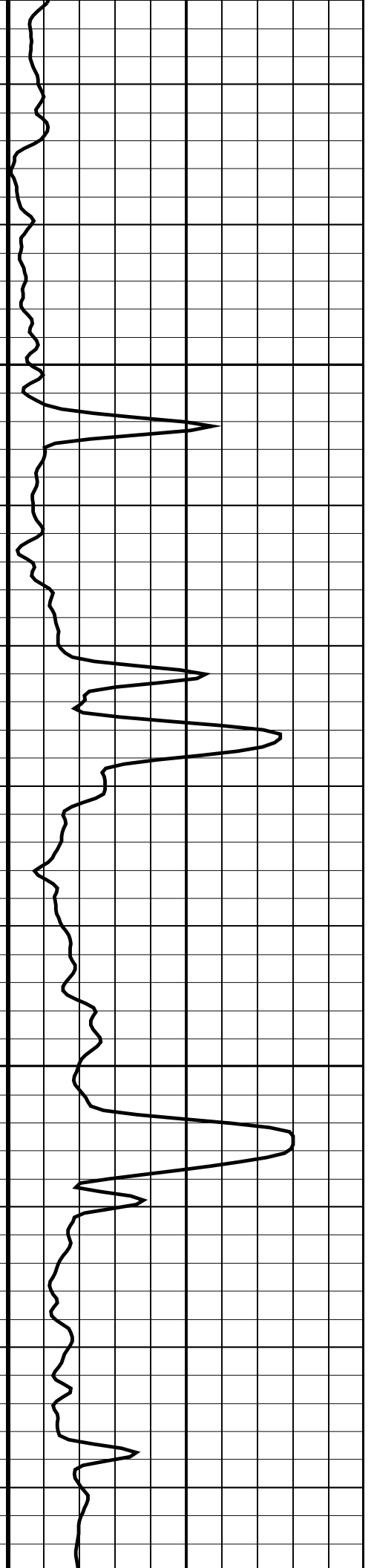
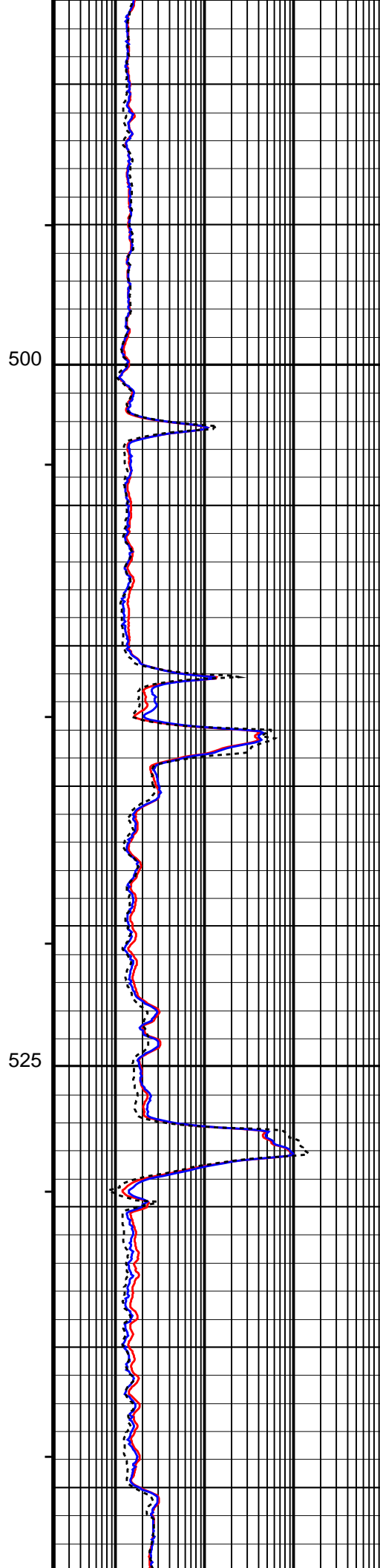
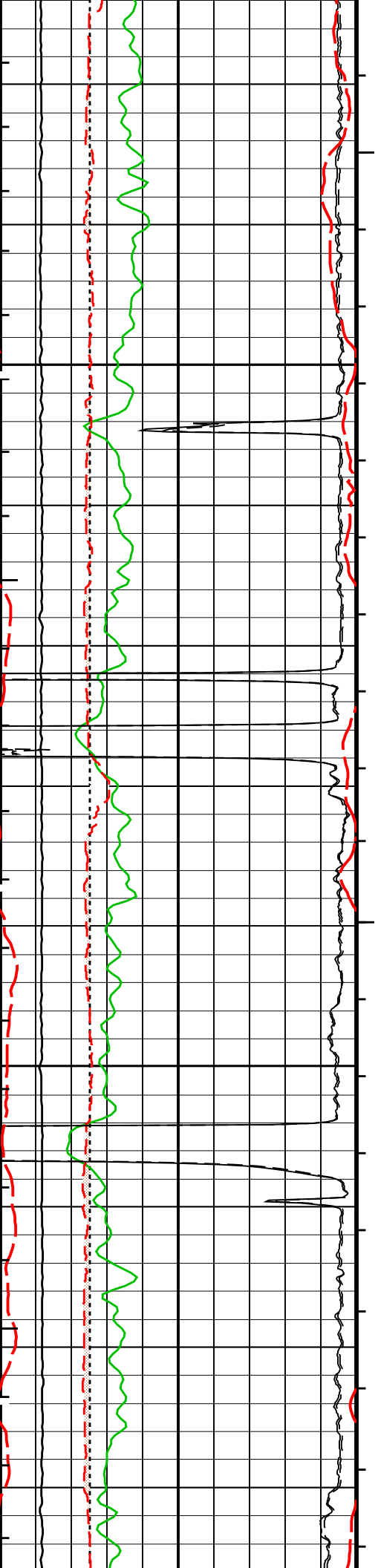


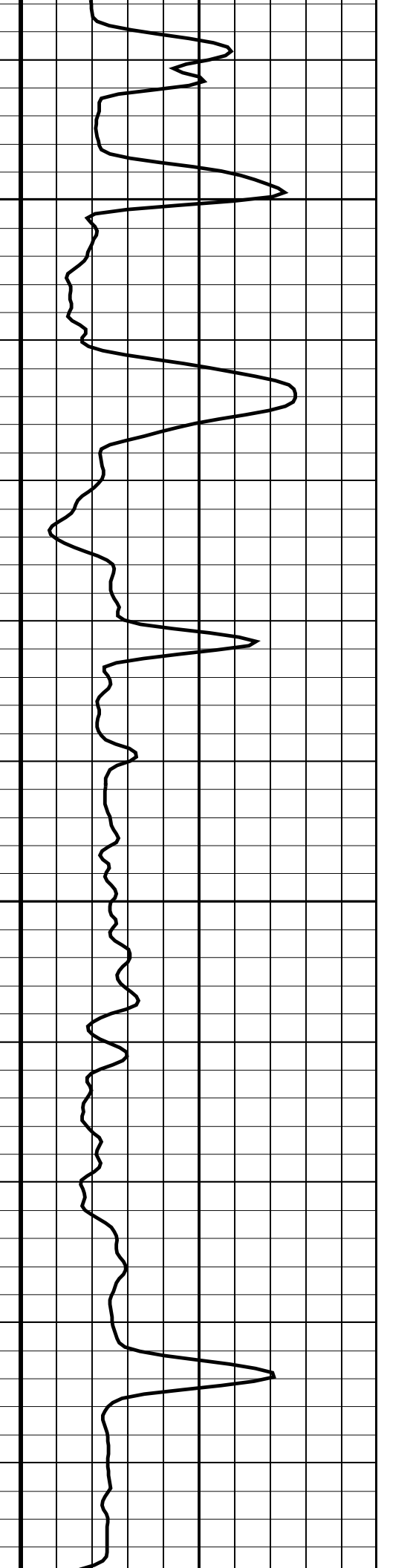
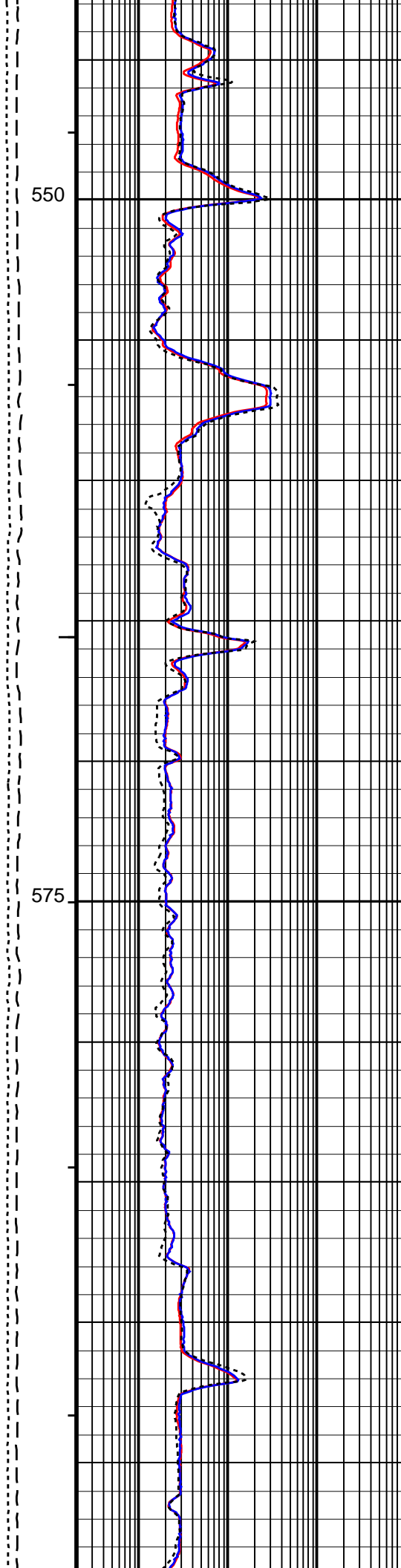
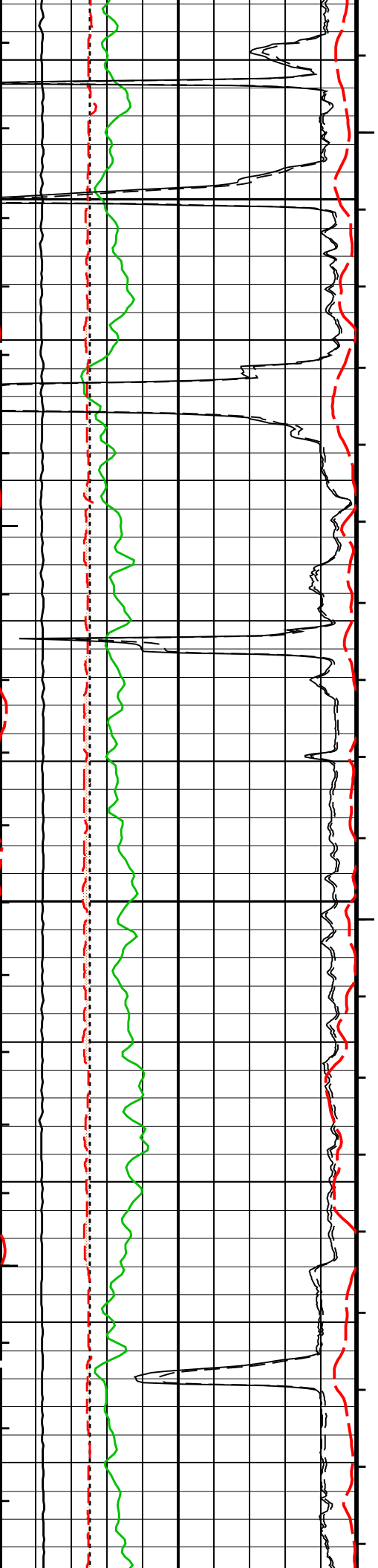




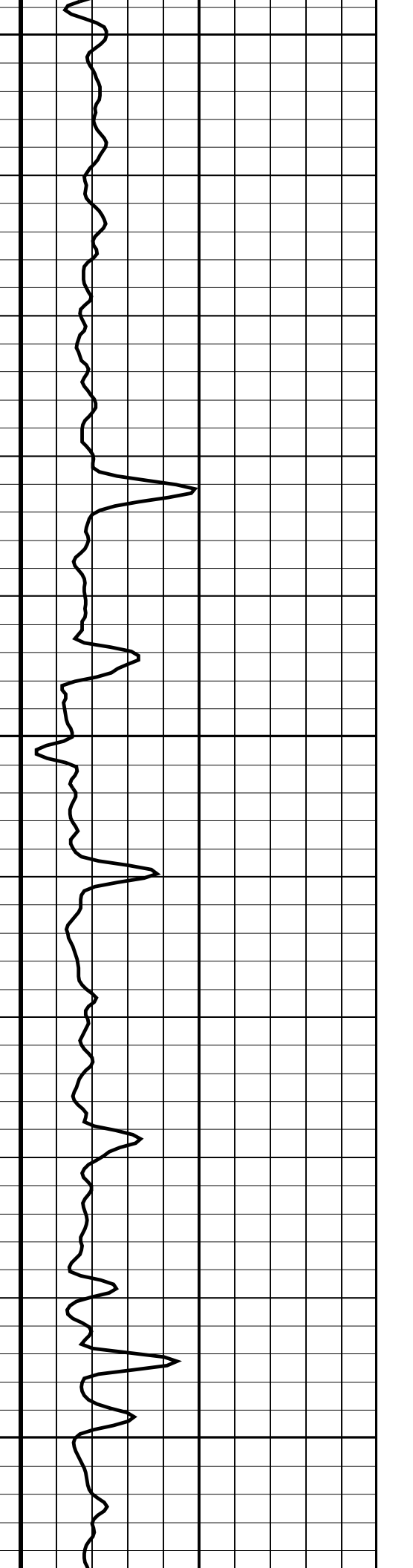
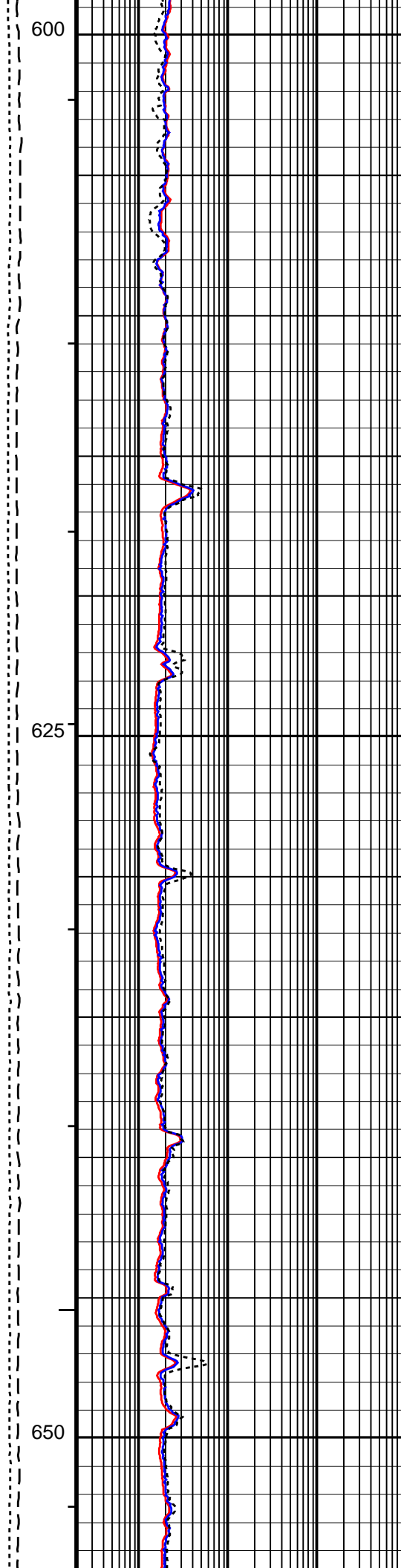
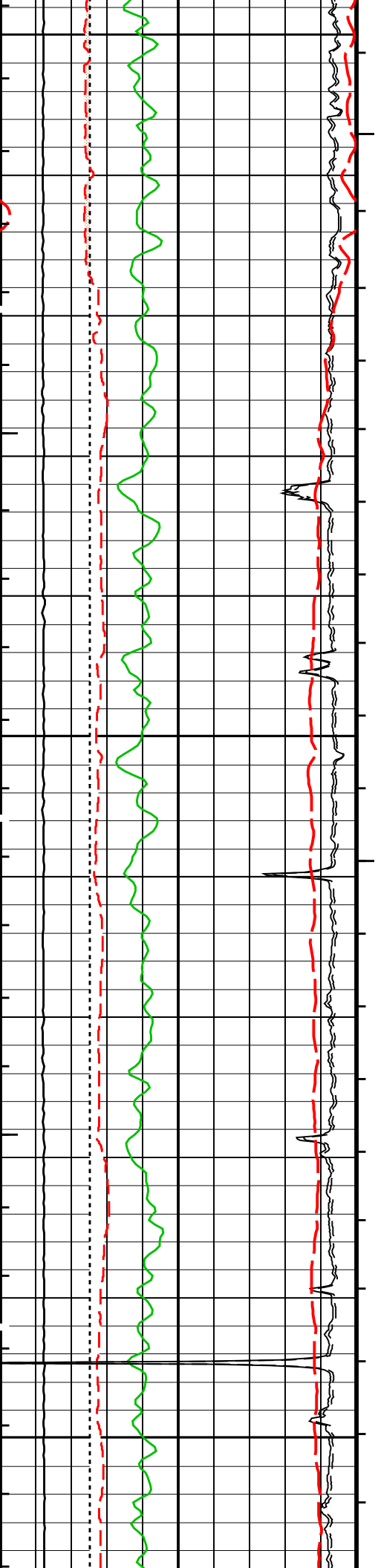


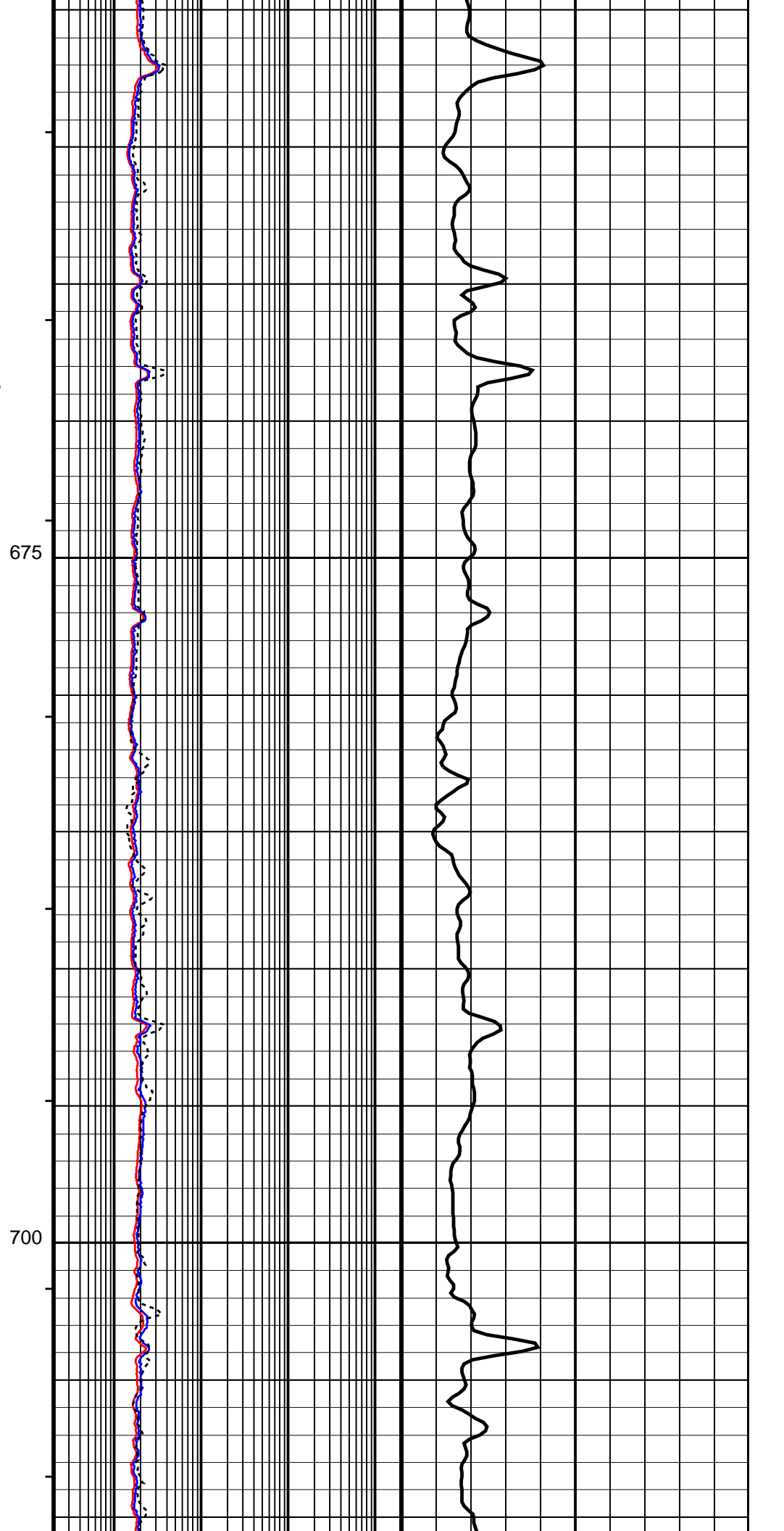
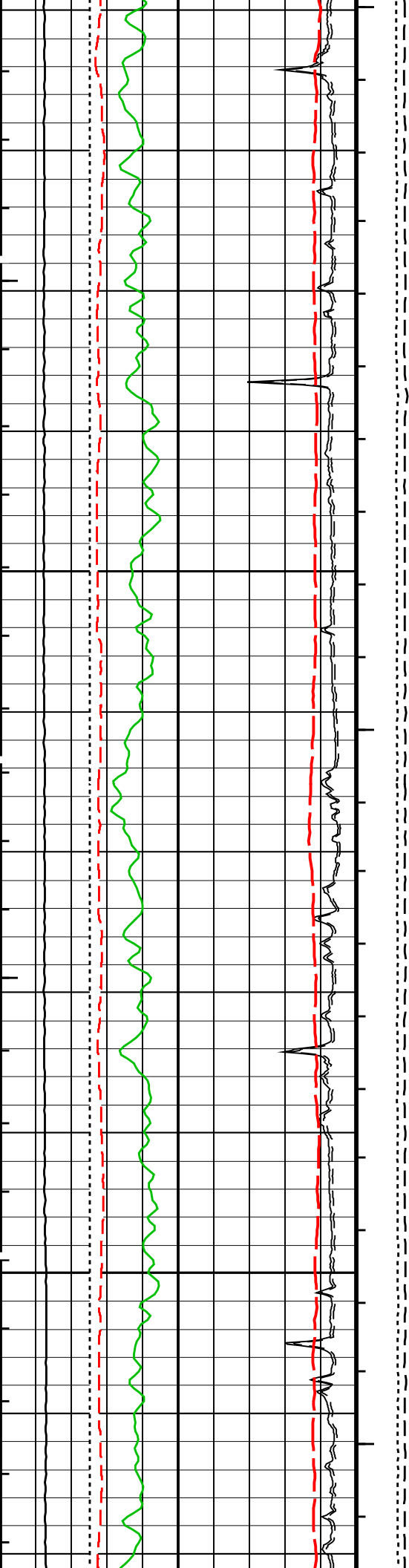


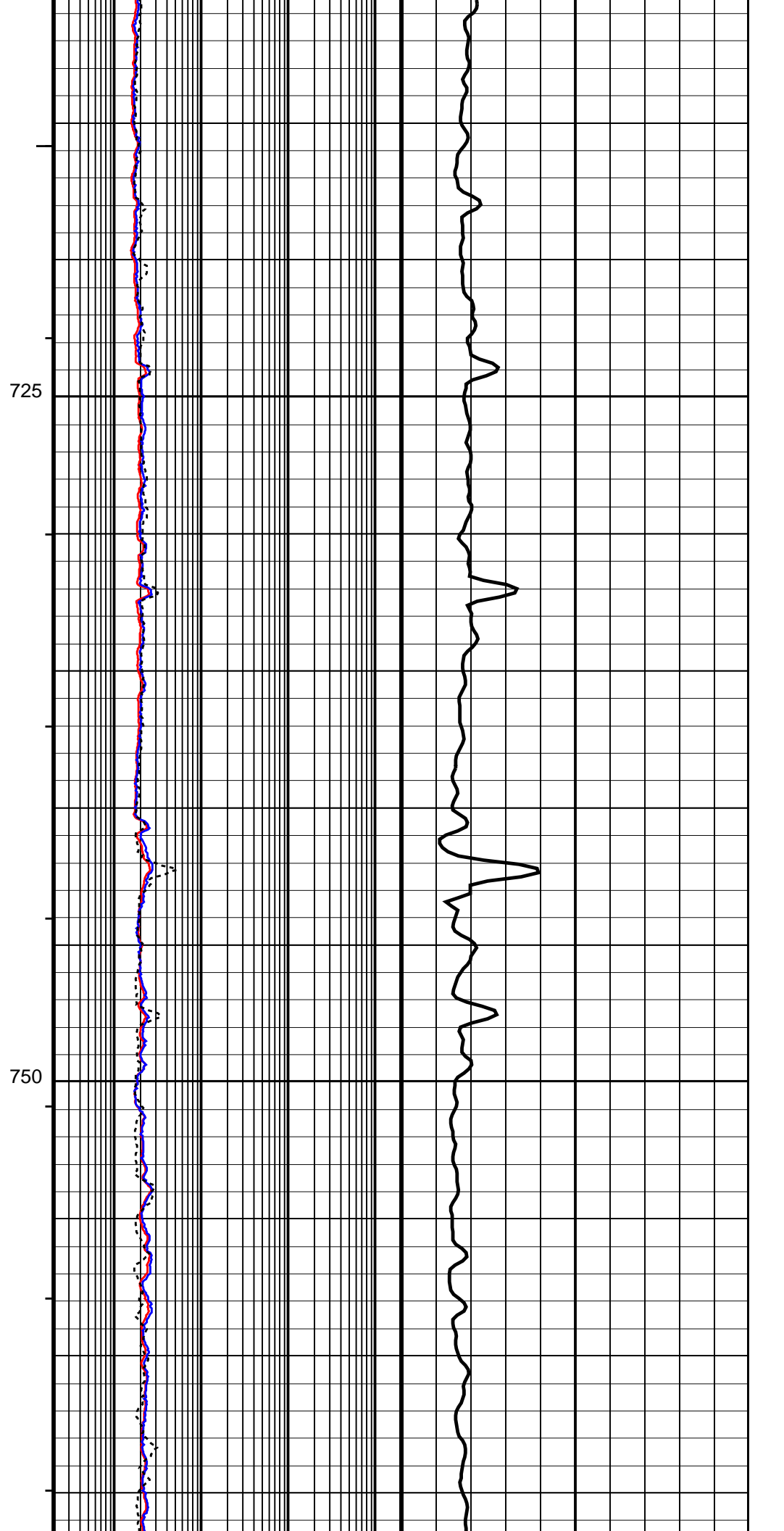
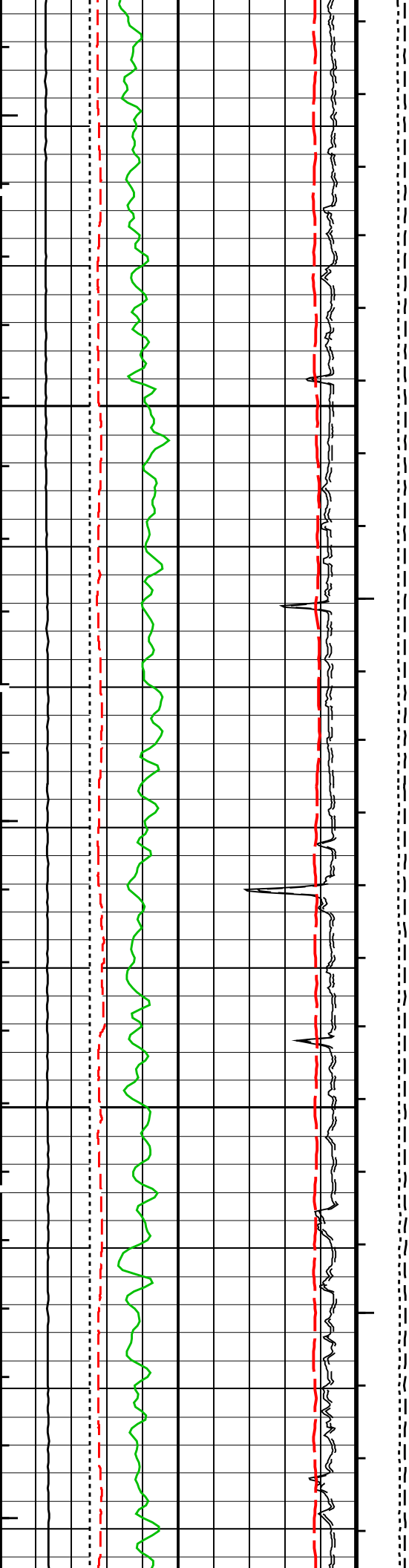


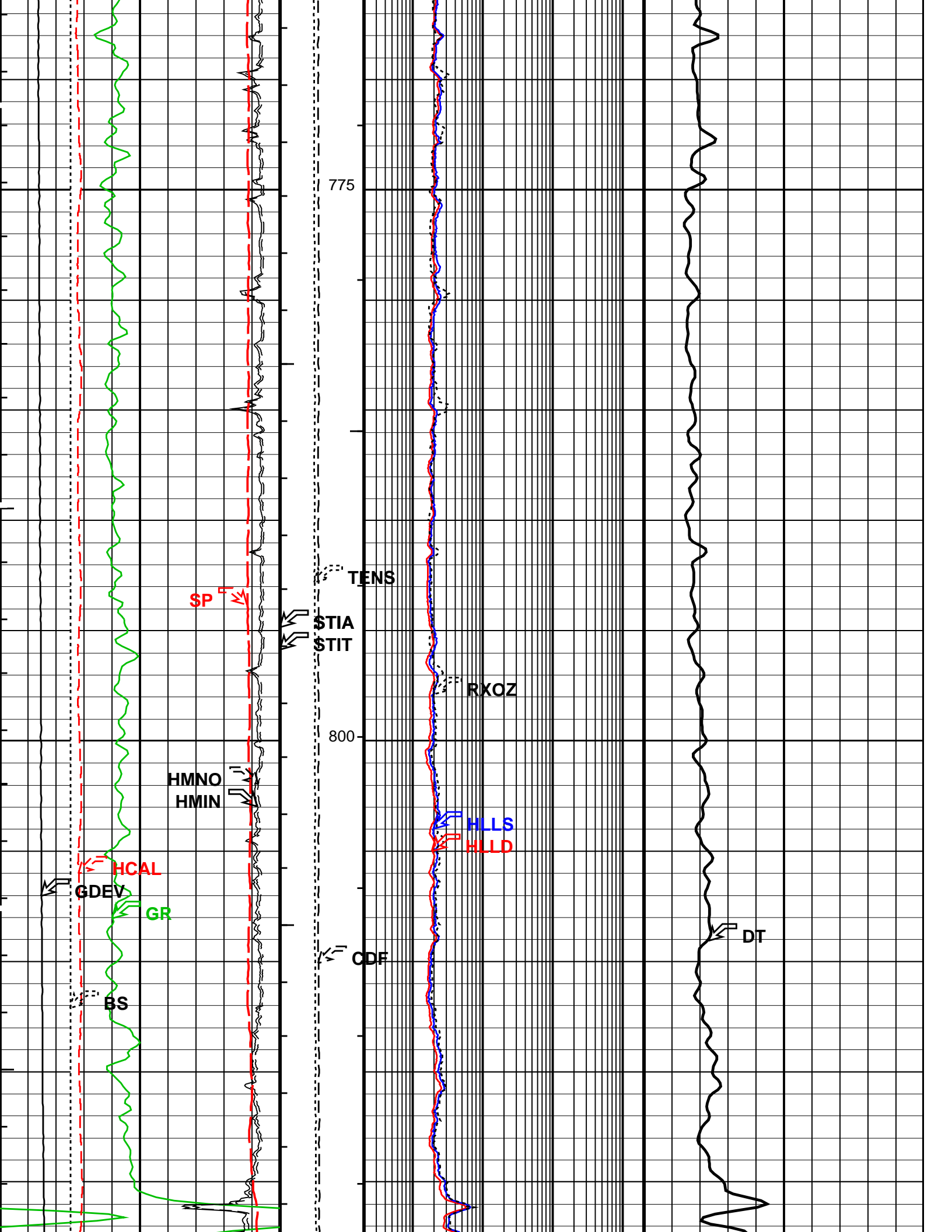


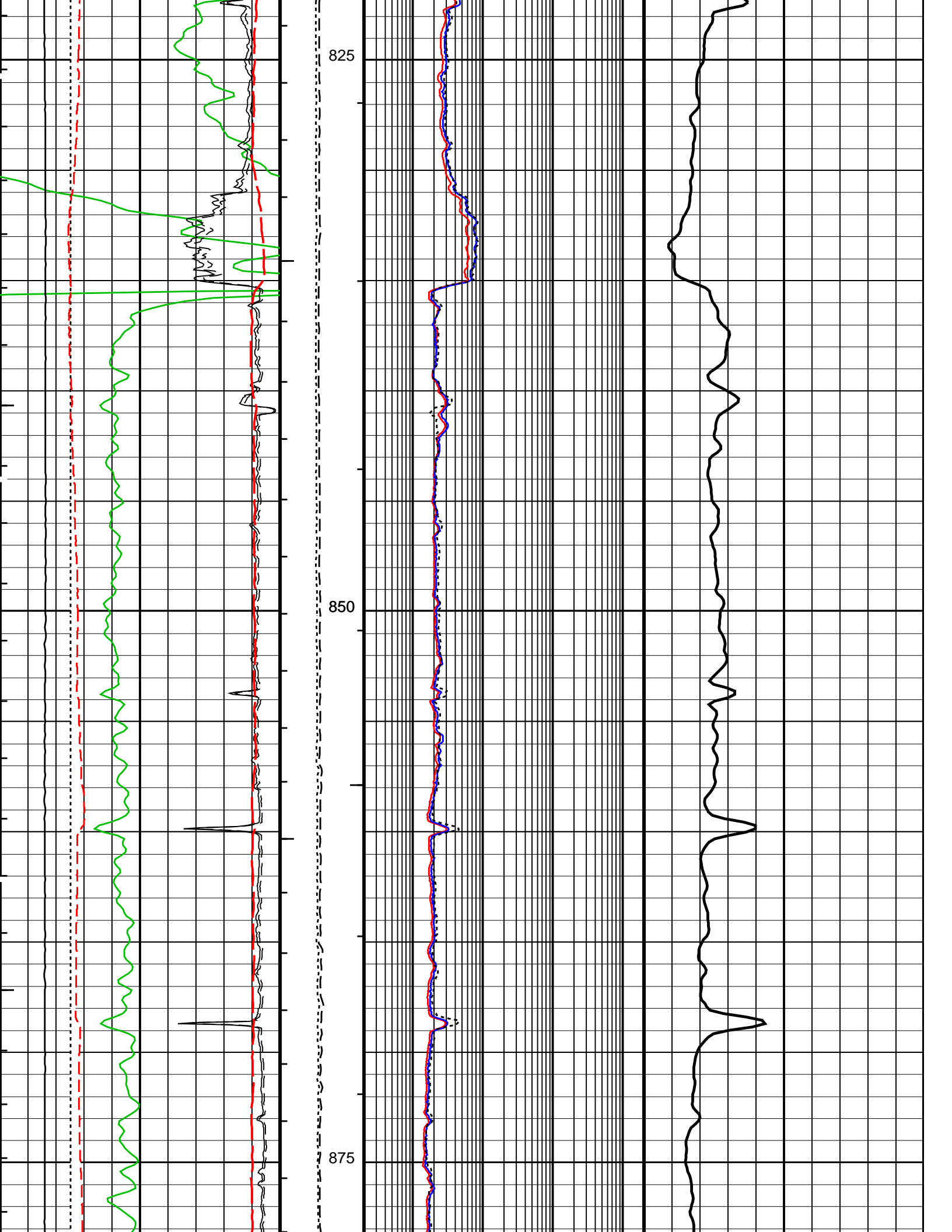


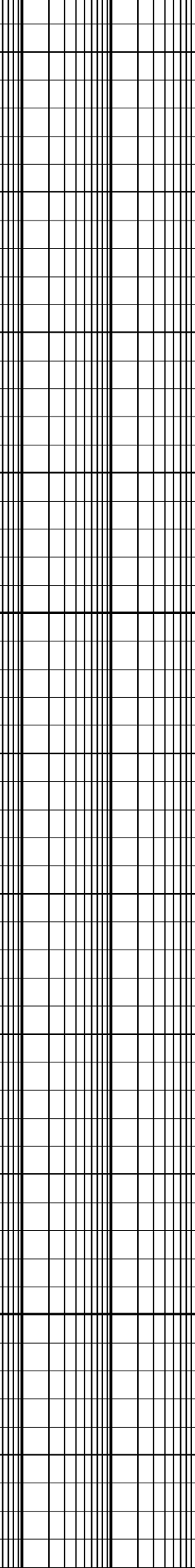
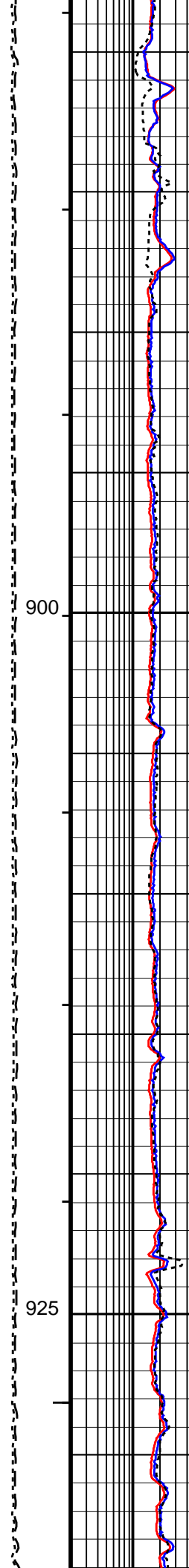
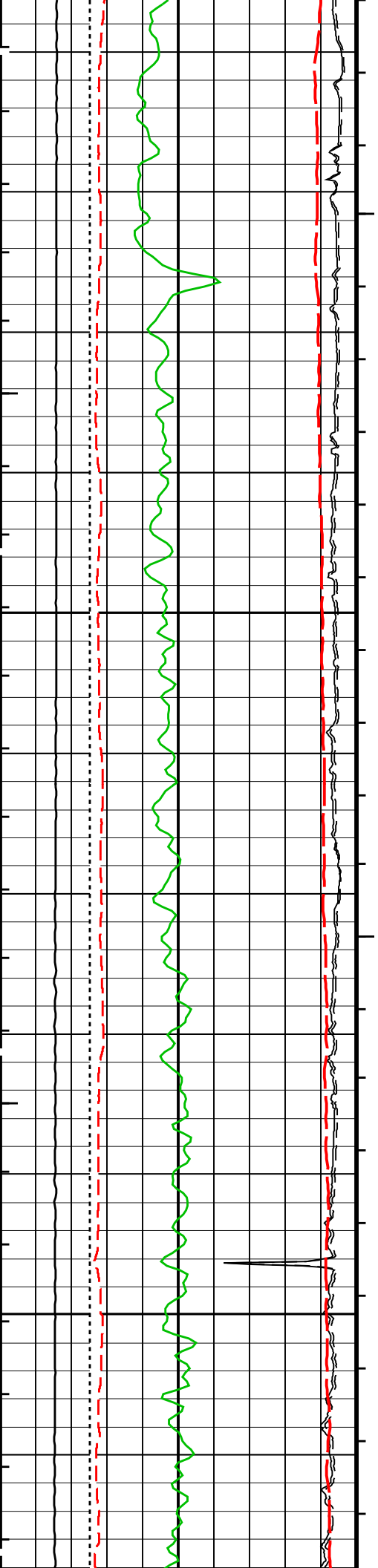






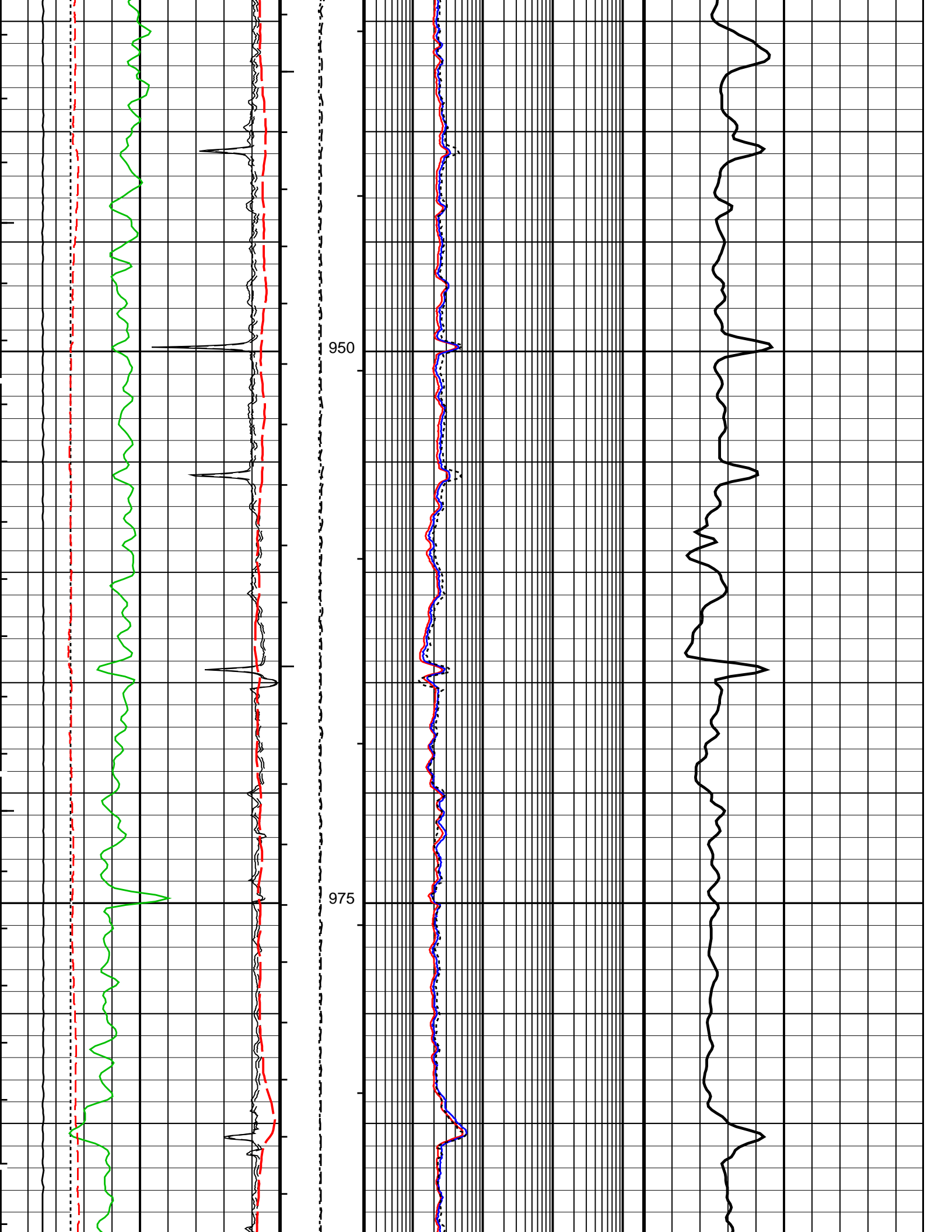


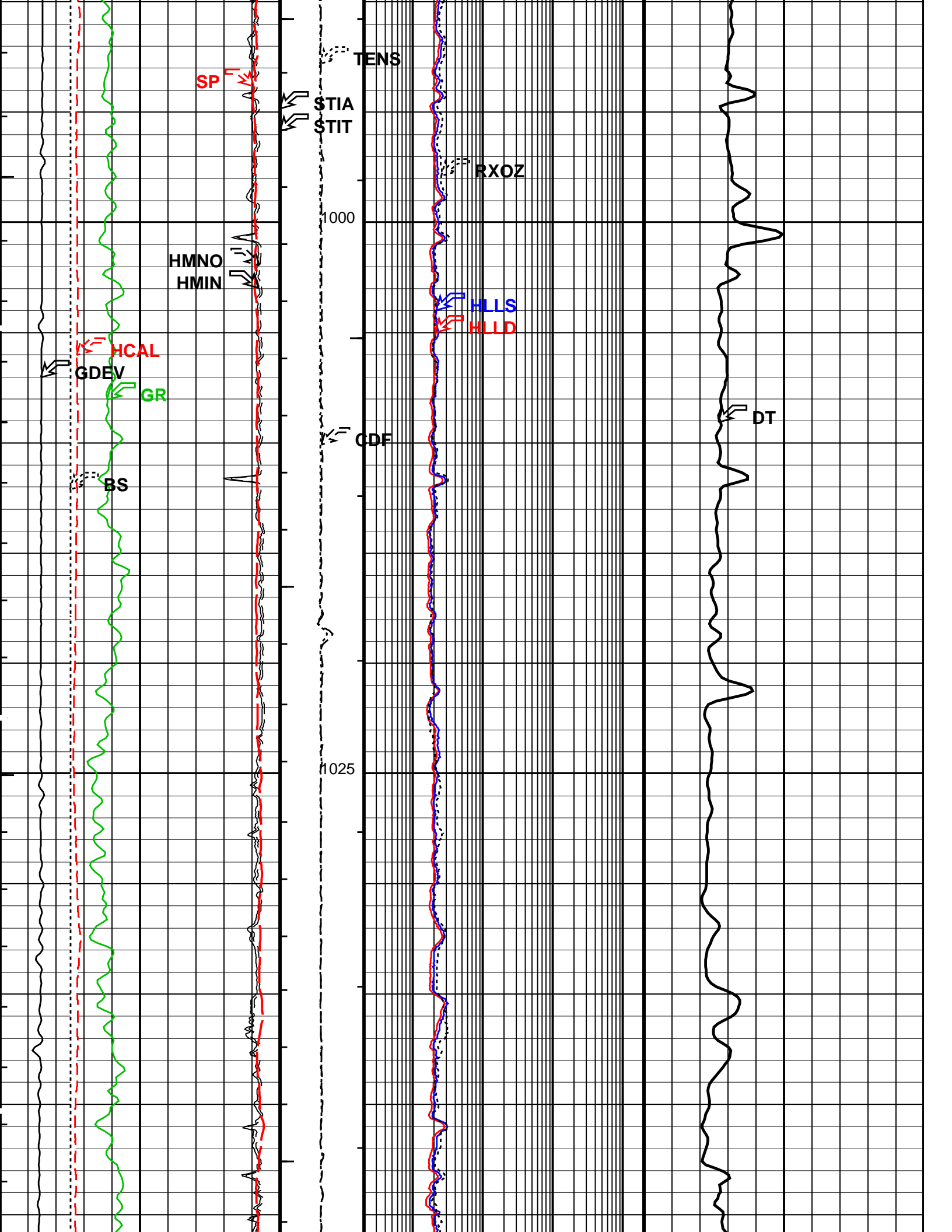




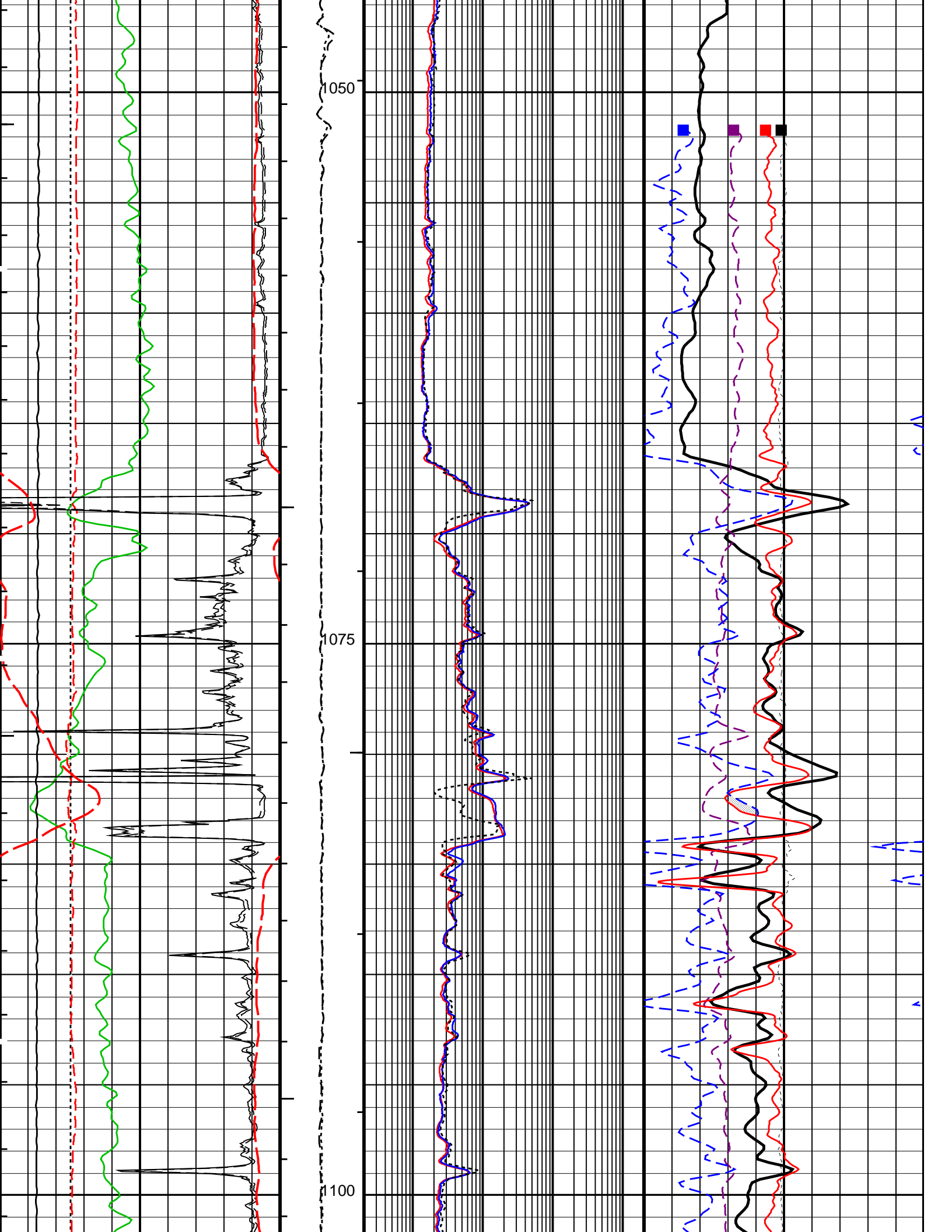
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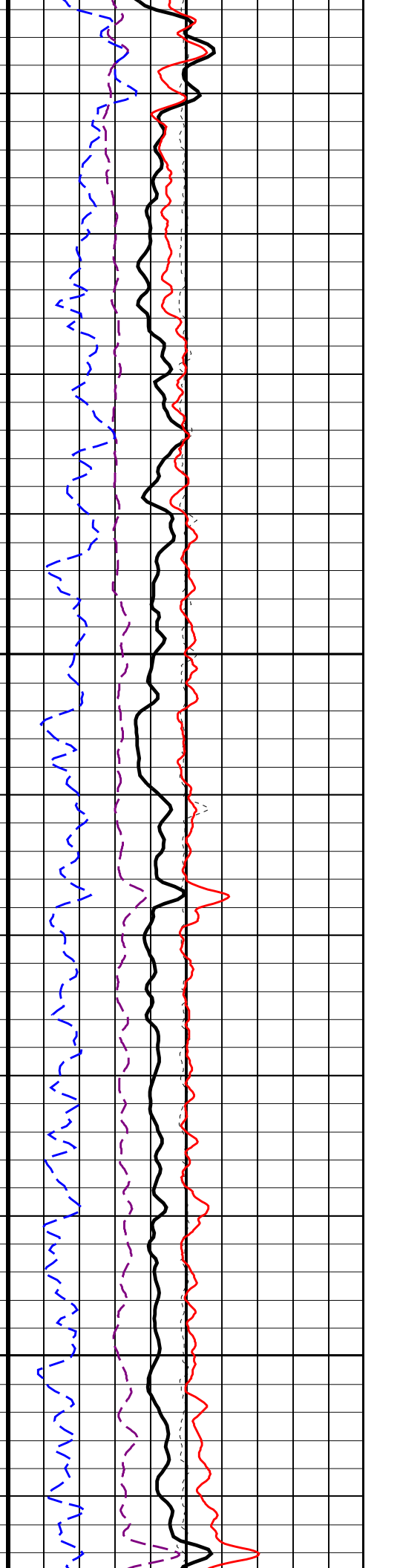
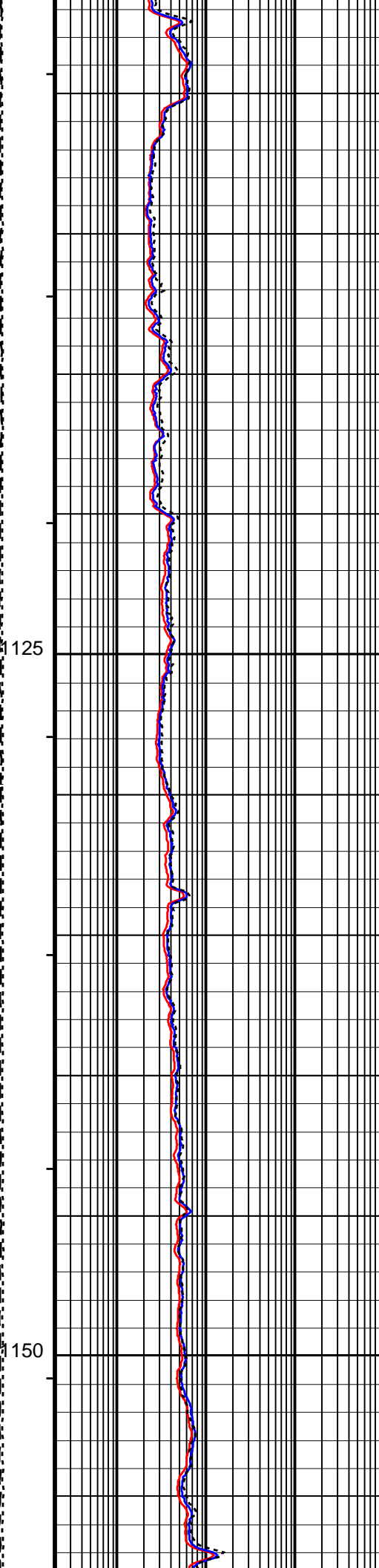
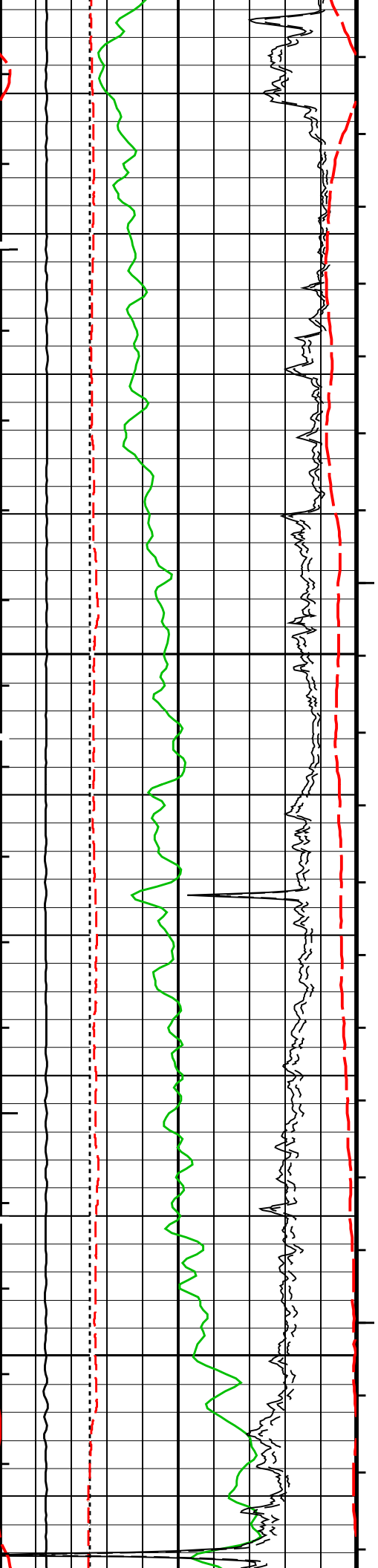
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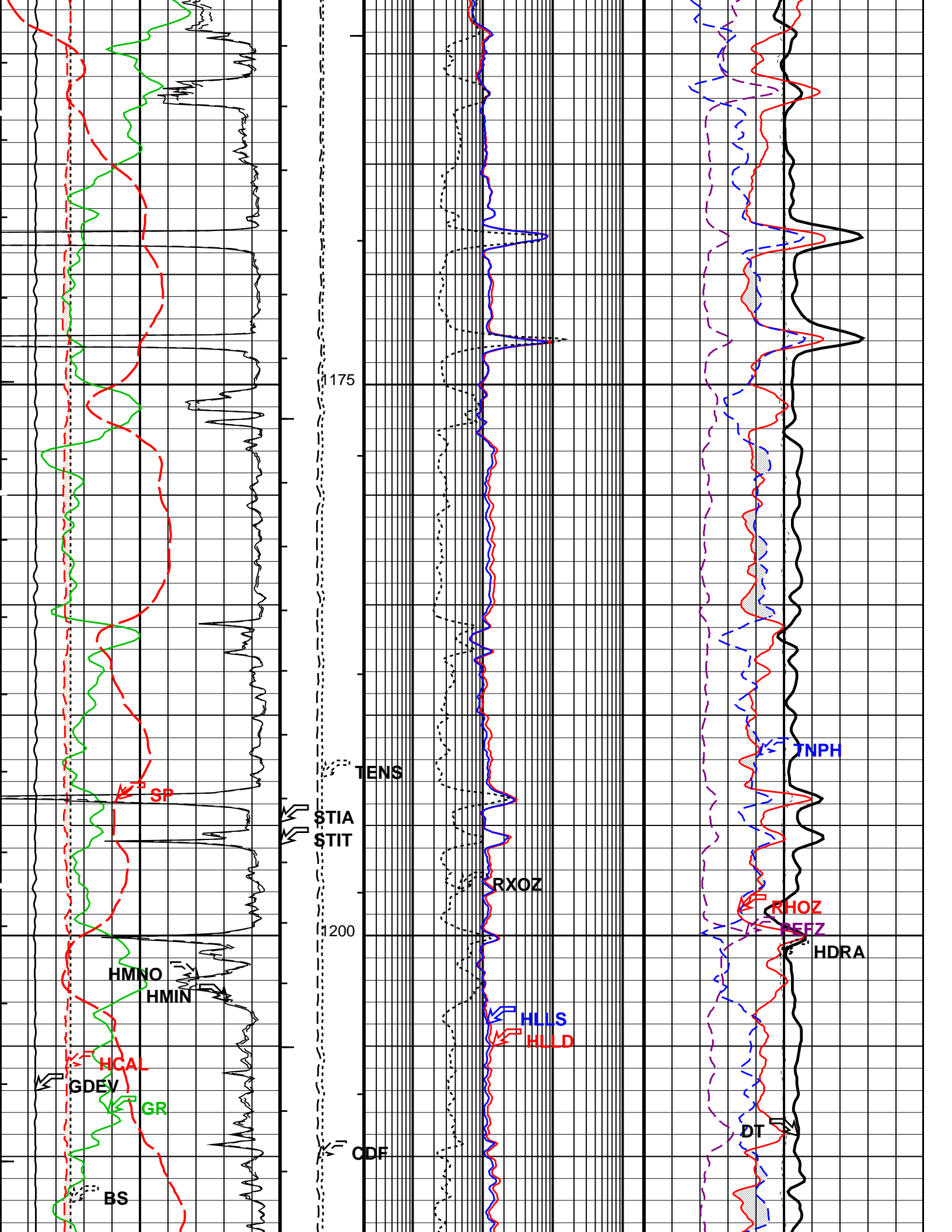


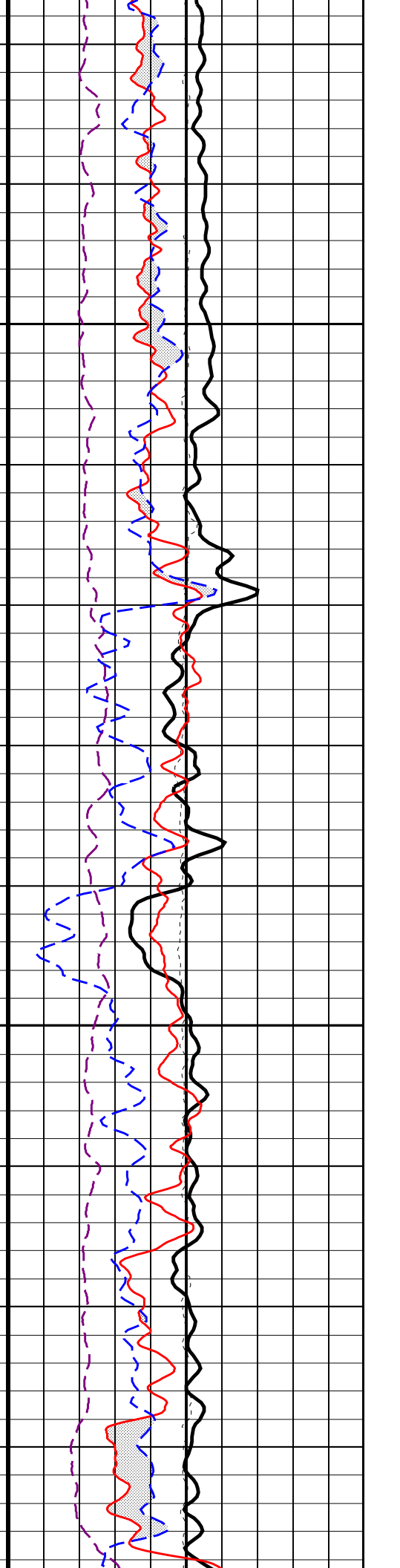
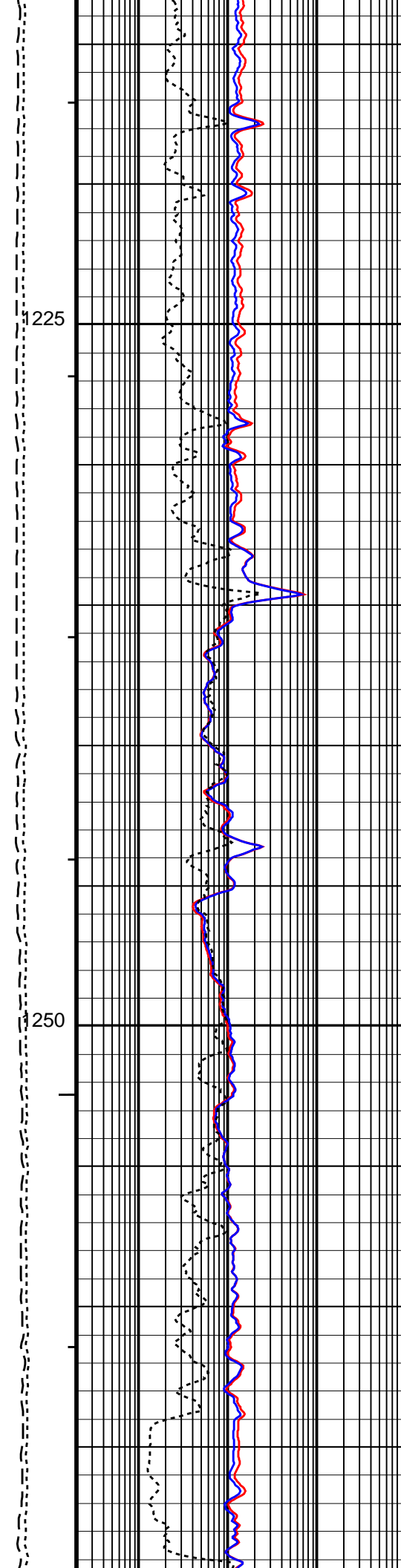
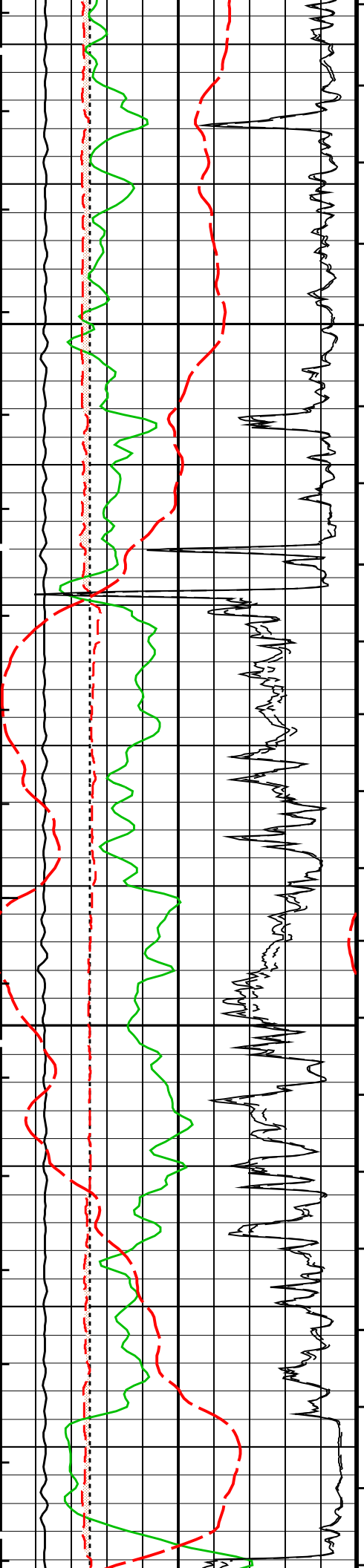






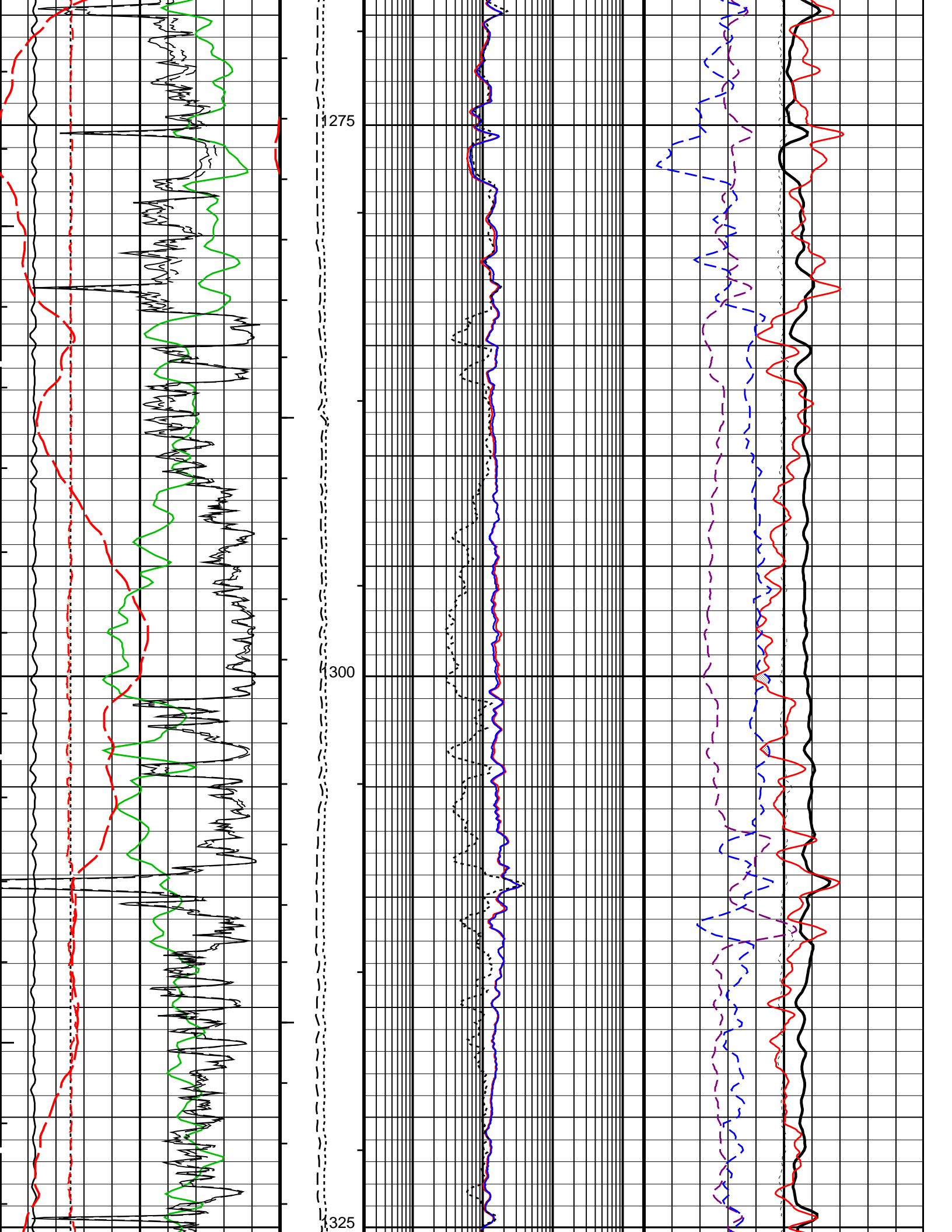


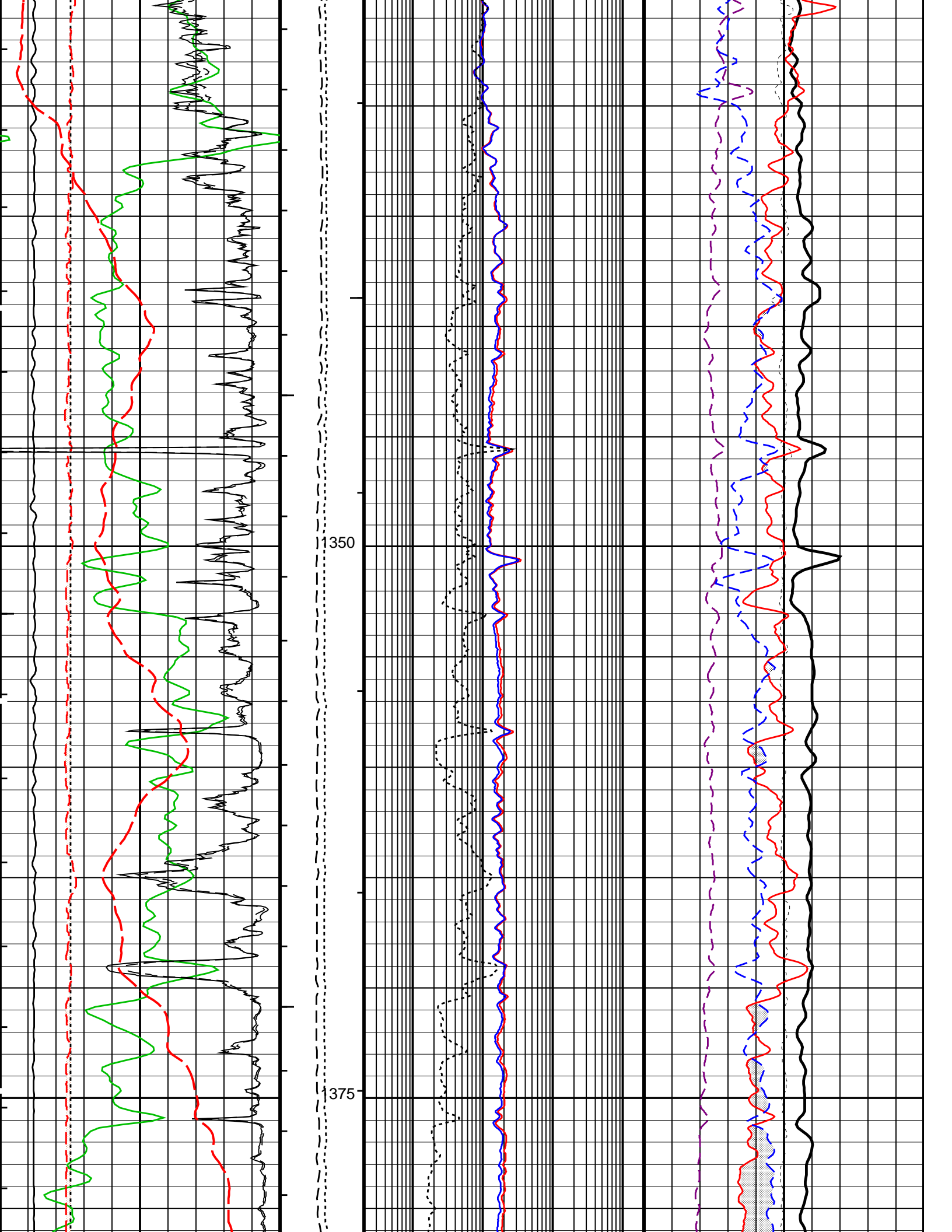


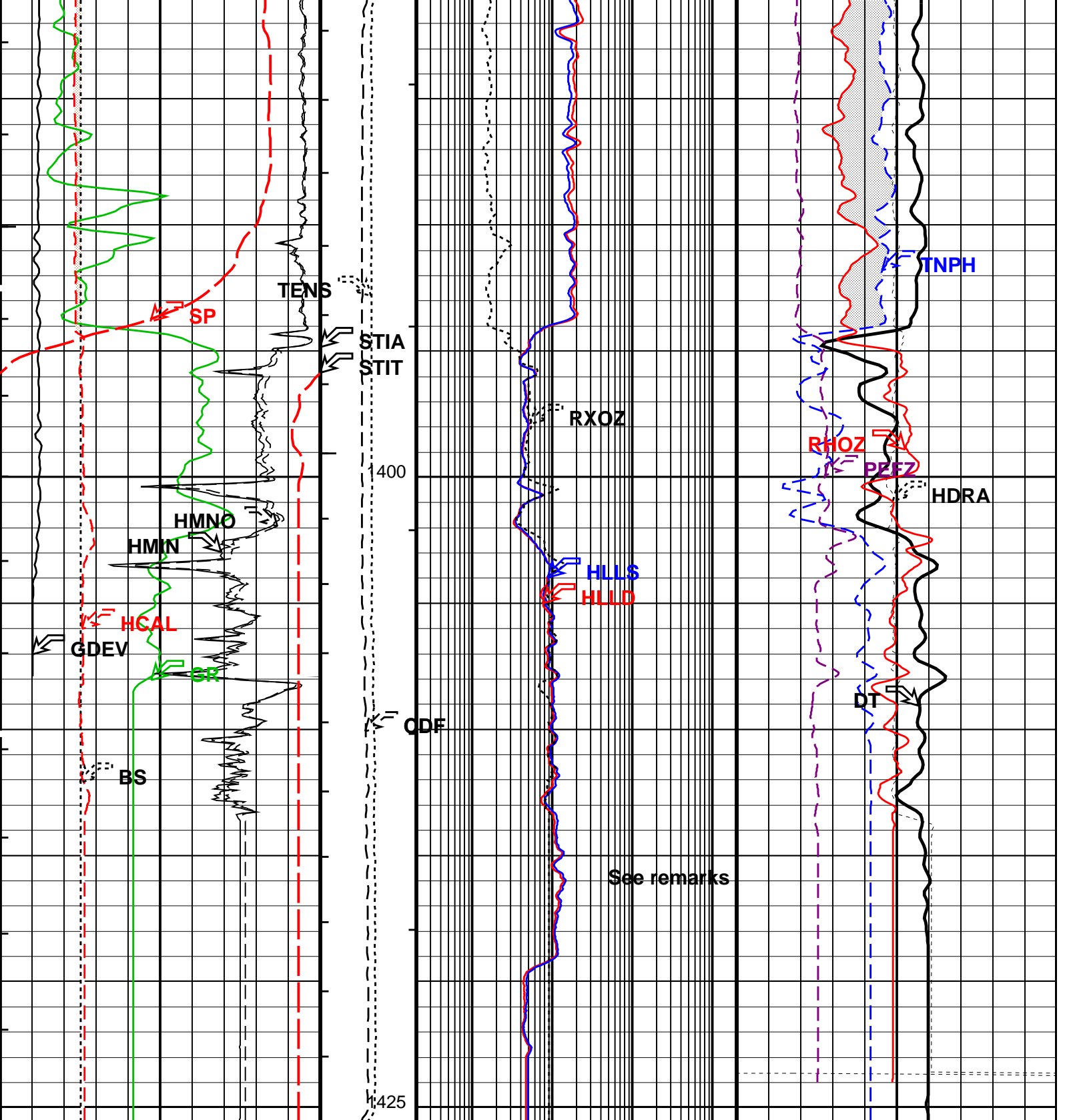


225

250







<p>Computed Micro Inverse (HMIN) (OHMM)</p> <p>20 0</p>	<p>Tension (TENS) (LBF)</p> <p>0 4000</p>	<p>Laterolog Deep Resistivity (HLLD) (OHMM)</p> <p>0.2 2000</p>	<p>Delta-T (DT) (US/F)</p> <p>140 40</p>
<p>Computed Micro Normal (HMNO) (OHMM)</p> <p>20 0</p>	<p>Calibrated Downhole Force (CDF) (LBF)</p> <p>0 2000</p>	<p>Laterolog Shallow Resistivity (HLLS) (OHMM)</p> <p>0.2 2000</p>	<p>Density Correction (HDRA) (G/C3)</p> <p>-0.25 0.25</p>
<p>Bit Size (BS) (IN)</p> <p>6 16</p>		<p>Std. Res. Invaded Zone Resistivity (RXOZ) (OHMM)</p> <p>0.2 2000</p>	<p>Std. Res. Formation Pe (PEFZ) (---</p> <p>0 10</p>

Gamma Ray (GR)		
0	(GAPI)	200
HGNS Deviation (GDEV)		
-10	(DEG)	90
HILT Caliper (HCAL)		
6	(IN)	16
SP (SP)		
-50	(MV)	50
Mudcake From HCAL to BS		
Washout From BS to HCAL		

Std. Res. Formation Density (RHOZ)		
1.95	(G/C3)	2.95
Density/Porosity Cross Over From RHOZ to TNPH		
Env.Corr.Thermal Neutron Porosity		
0.45	(TNPH) (V/V)	-0.15

**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

**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	OFF
BHT	Borehole Status	OPEN
DHOP	Bottom Hole Temperature (used in calculations)	88 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
RTCOMP	HALS Rt Computation	Hals_LowRes
RTRE	HALS Resistivity Threshold	100000
SHT	Surface Hole Temperature	28.8 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
DSLTL-FTB: Digitizing		
	Sonic Logging Tool	
	DSLTL Firing Mode	BHC
	Telemetry Mode	DSLCL_FTBL
AGC	Automatic Gain Control Status	ON
AMSG	Auxiliary Minimum Sliding Gate	140 US
CBAF	CBL Adjustment Factor	1
CBLG	CBL Gate Width	45 US
CBLT	C-Delta-T Shale	100 IIS/E



DDDEL	Digitizing Delay	100	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	DSLTL 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)	88	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
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		2.2e-005	OHMS
MHC1	MCFL B0 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	StdRes	
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	28.8	DEGC
SOCN	Standoff Distance	0	IN
SOCO	Standoff Correction Option	NO	
<b>BSP: Bridle SP</b>			
SPNV	SP Next Value	0	MV
<b>HOLEV: Integrated Hole/Cement Volume</b>			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	88	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	28.8	DEGC
<b>STI: Stuck Tool Indicator</b>			
LBFR	Trigger for MAXIS First Reading Label	TDL	
STKT	STI Stuck Threshold	0.762	M
TDD	Total Depth - Driller	1524.00	M
TDL	Total Depth - Logger	1523.00	M
<b>System and Miscellaneous</b>			
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	9.60	LB/G
DO	Depth Offset for Playback	0.0	M
FLEV	Fluid Level	-50000.00	M
MST	Mud Sample Temperature	25.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	0.1943	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	1523	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: Beach\_StdRes\_hals\_pex\_sonic\_200 Vertical Scale: 1:200 Graphics File Created: 10-Aug-2007 17:16

**OP System Version: 15C0-309**  
MCM

HALS-B	SRPC-3292-Q1_2007	DSLTT-FTB	15C0-309
HILTB-FTB	SRPC-3292-Q1_2007	DTC-H	15C0-309
BSP	15C0-309		

**Input DLIS Files**

DEFAULT	HALS_SONIC_TLD_MCFL_012LUP FN:16	PRODUCER	10-Aug-2007 12:22	1425.5 M	23.5 M
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**Output DLIS Files**

DEFAULT	HALS_SONIC_TLD_MCFL_022PUP FN:32	PRODUCER	10-Aug-2007 17:16		
RTB	HALS_SONIC_TLD_MCFL_022PUP FN:33	PRODUCER	10-Aug-2007 17:16		



**Resistivity-Sonic-Density-Porosity  
High Resolution, 1:200 Scale**

Company: Beach Petroleum Ltd

Well: Bodalla South 18

### Input DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_009LUP	FN:11	PRODUCER	10-Aug-2007 11:19	1526.7 M	1252.6 M
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### Output DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_024PUP	FN:36	PRODUCER	10-Aug-2007 17:33	1527.2 M	1253.5 M
RTB	HALS_SONIC_TLD_MCFL_024PUP	FN:37	PRODUCER	10-Aug-2007 17:33	1527.2 M	1253.5 M

### Integrated Hole/Cement Volume Summary

Hole Volume = 9.68 M3  
 Cement Volume = 2.99 M3 (assuming 7.00 IN casing O.D.)  
 Computed from 1522.9 M to 1253.6 M using data channel(s) HCAL

### OP System Version: 15C0-309

MCM

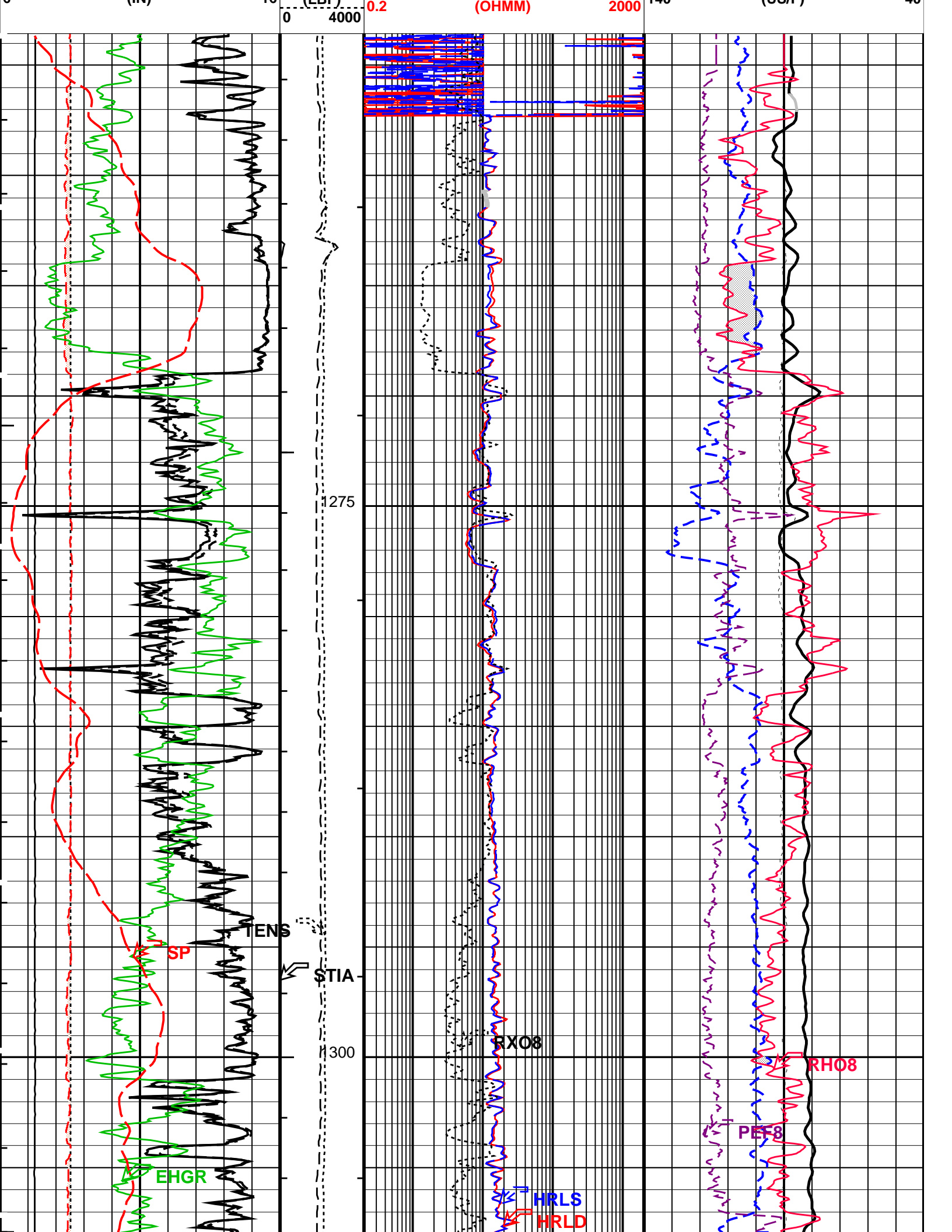
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HILTB-FTB	SRPC-3292-Q1_2007	DTC-H	15C0-309
BSP	15C0-309		

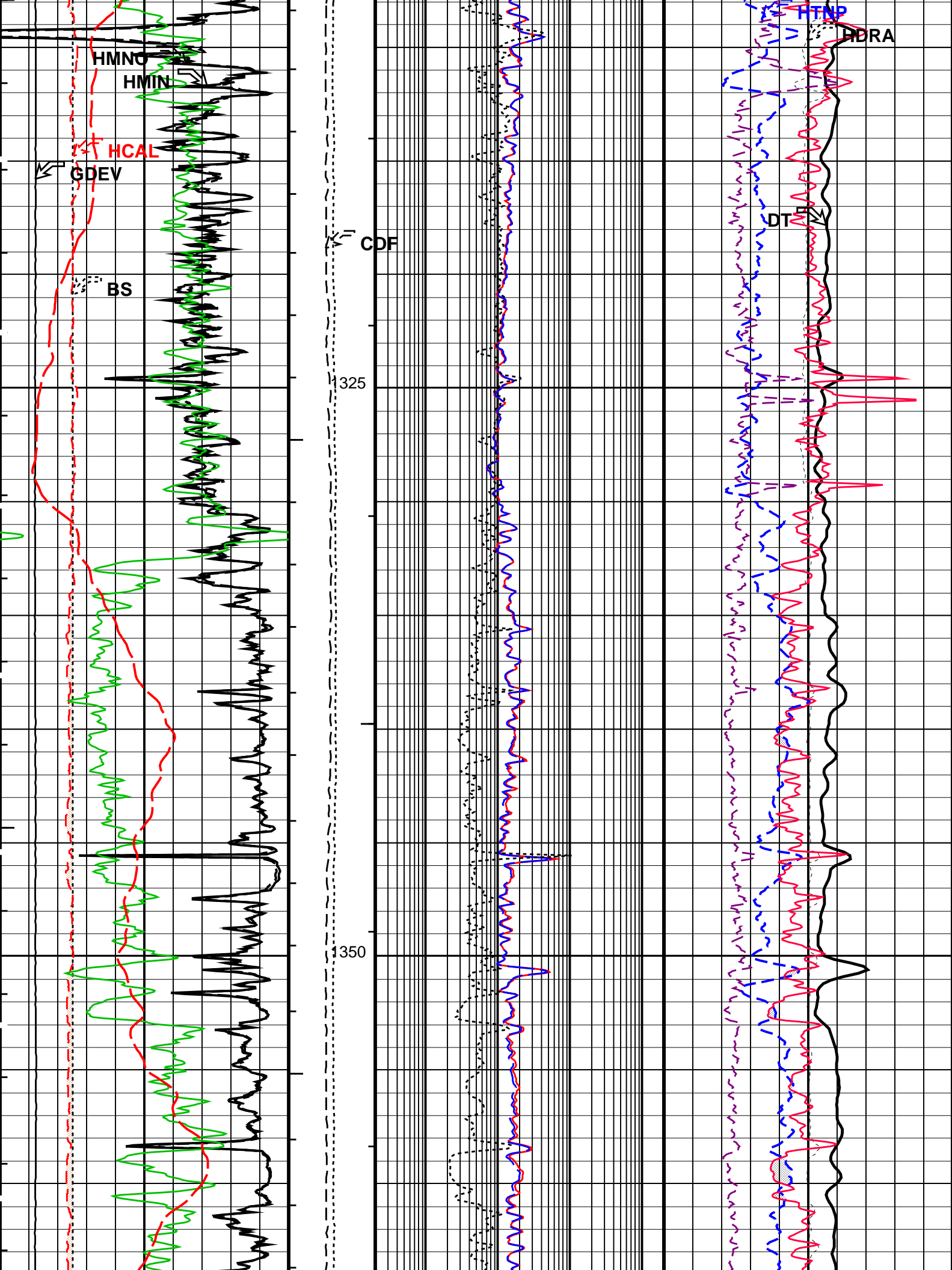
#### PIP SUMMARY

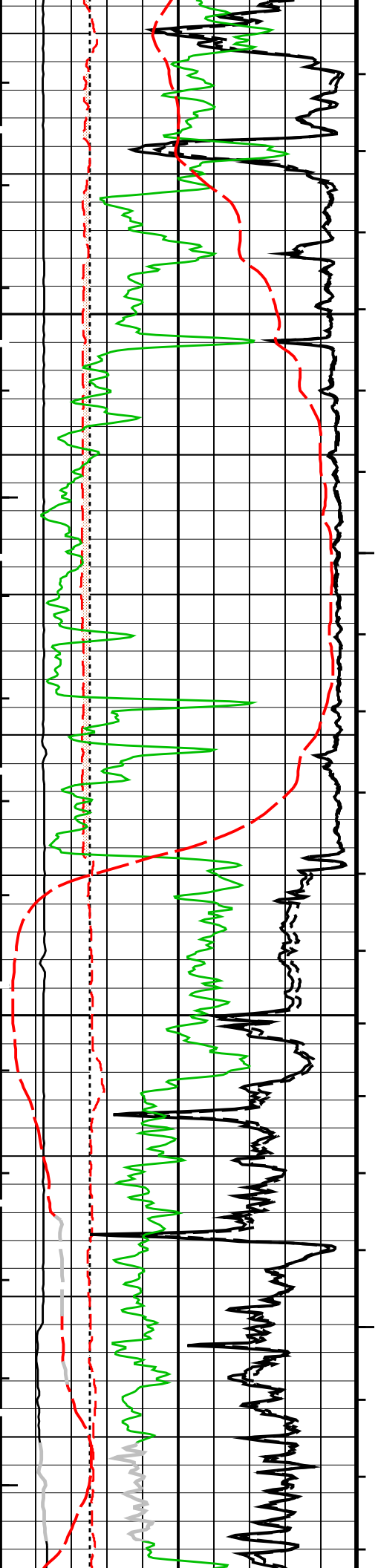
- └ Integrated Hole Volume Minor Pip Every 0.1 M3
- └ Integrated Hole Volume Major Pip Every 1 M3
  - └ Integrated Cement Volume Minor Pip Every 0.1 M3
  - └ Integrated Cement Volume Major Pip Every 1 M3

- └ Integrated Transit Time Minor Pip Every 1 MS
- └ Integrated Transit Time Major Pip Every 10 MS
- ▣ Time Mark Every 60 S

Washout From BS to HCAL			
Mudcake From HCAL to BS			
SP (SP) -50 (MV) 50			
Computed Micro Normal (HMNO) 20 (OHMM) 0			
Computed Micro Inverse (HMIN) 20 (OHMM) 0			
Gamma Ray (EHGR) 0 (GAPI) 200			
HILT Caliper (HCAL) 6 (IN) 16			
HGNS Deviation (GDEV) -10 (DEG) 90	Calibrated Downhole Force (CDF) (LBF) 0 2000	High Resolution Shallow Resistivity (HRLS) 0.2 (OHMM) 2000	Density/Porosity Cross Over From RHO8 to HTNP
Bit Size (BS) 6 (IN) 16	Tension (TENS) (LBF)	High Resolution Deep Resistivity (HRLD)	Density Correction (HDRA) -0.25 (G/C3) 0.25
			H. Res. Invaded Zone Resistivity (RXO8) 0.2 (OHMM) 2000
			H. Res. Formation Density (RHO8) 1.95 (G/C3) 2.95
			H. Res. Formation Pe (PEF8) 0 (----) 10
			HiRes TNPH (HTNP) 0.45 (V/V) -0.15
			Delta-T (DT) 140 (LIS/E) 40

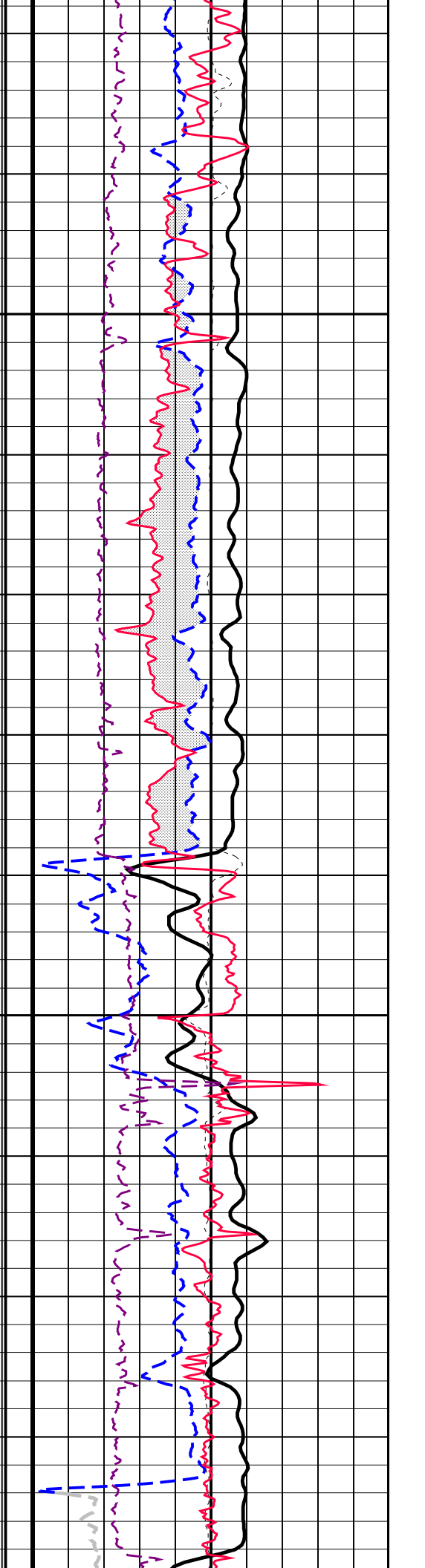
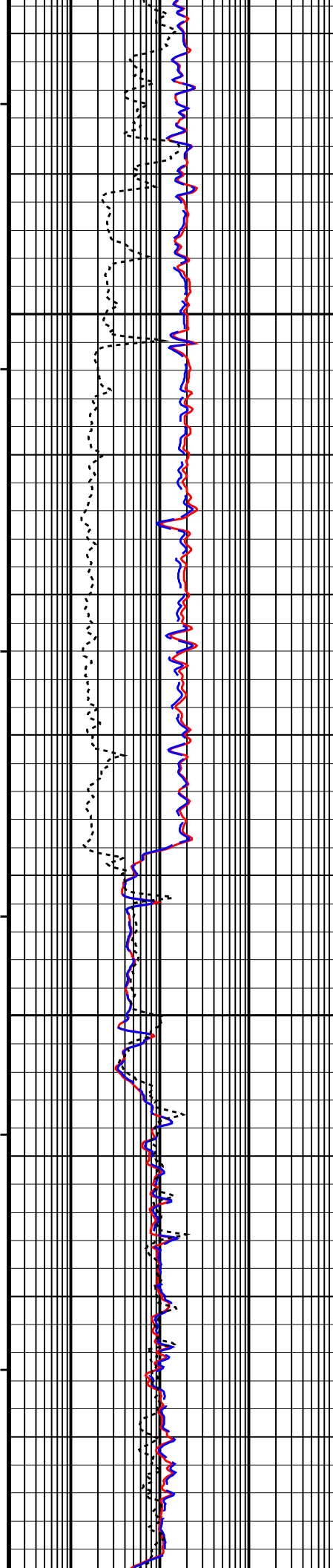


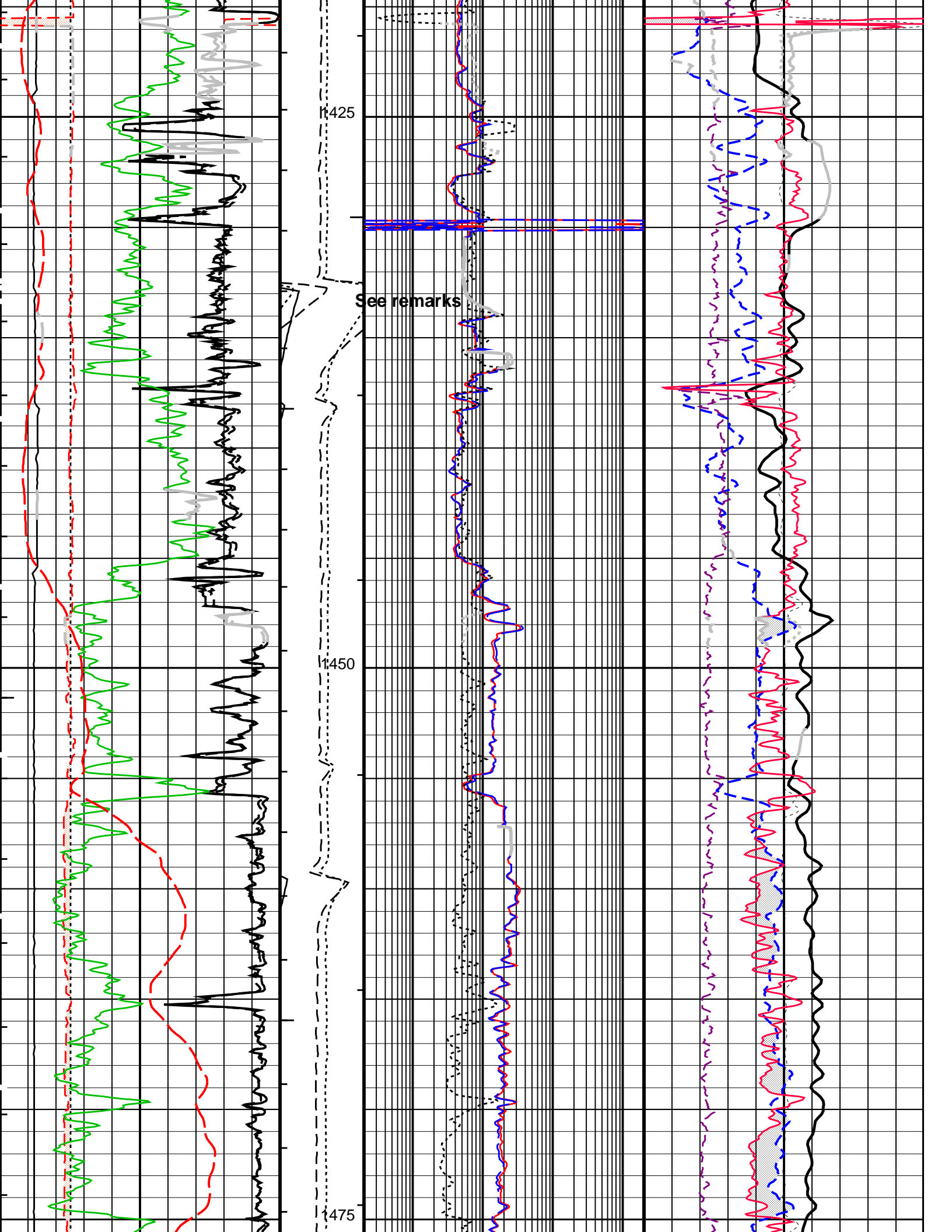


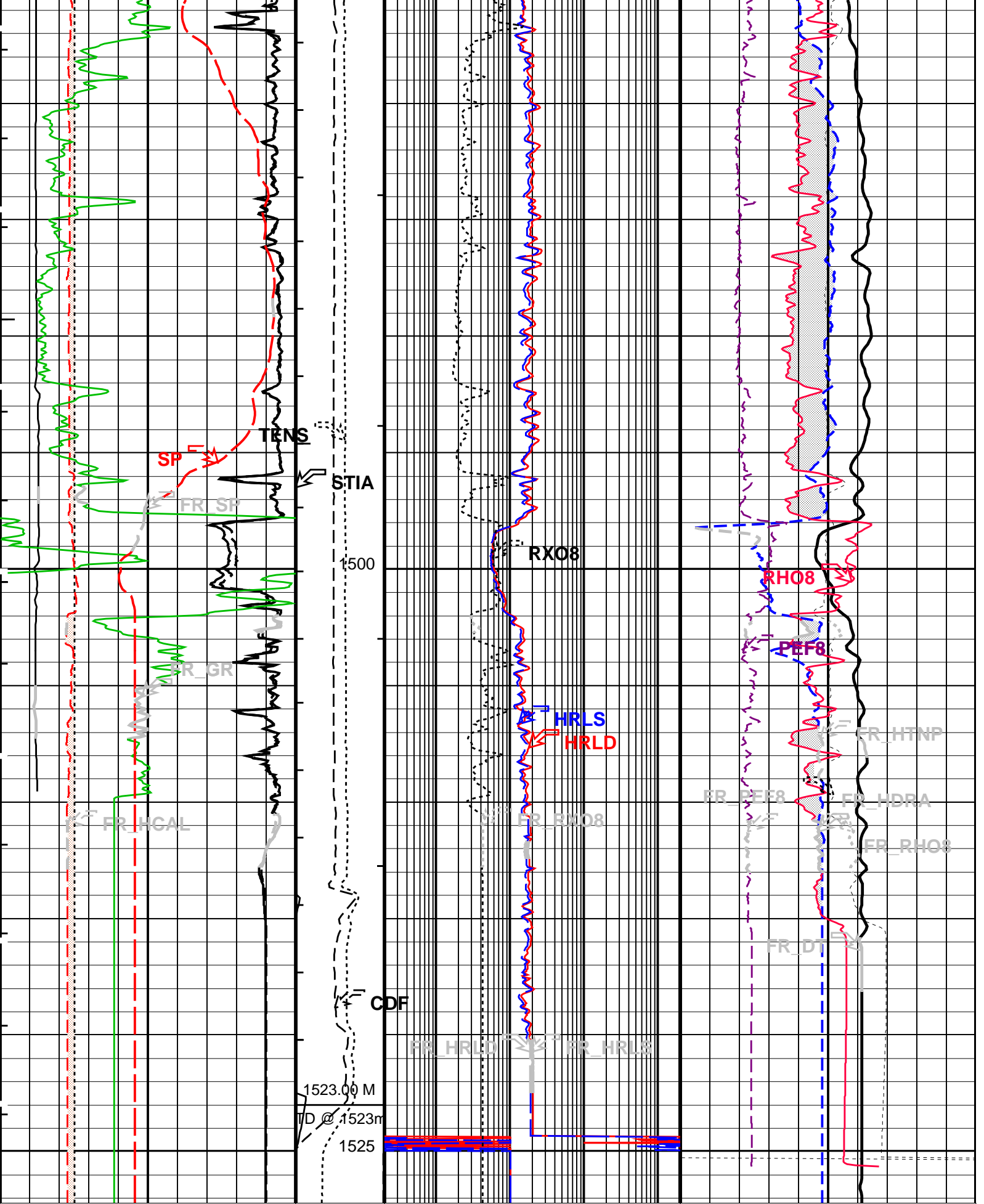


375

400







Bit Size (BS) (IN)	Tension (TENS) (LBF)	High Resolution Deep Resistivity (HRLD) (OHMM)	Delta-T (DT) (US/F)
6 ————— 16	0 ————— 4000	0.2 ————— 2000	140 ————— 40
	Calibrated		



<b>HGNS Deviation (GDEV)</b> -10 (DEG) 90	Calibrated Downhole Force (CDF) (LBF) 0 2000	<b>High Resolution Shallow Resistivity</b> (HRLS) (OHMM) 0.2 2000	<b>Density Correction (HDRA)</b> (G/C3) -0.25 0.25
<b>HILT Caliper (HCAL)</b> (IN) 6 16		<b>H. Res. Invaded Zone Resistivity (RXO8)</b> (OHMM) 0.2 2000	<b>HiRes TNPH (HTNP)</b> (V/V) 0.45 -0.15
<b>Gamma Ray (EHGR)</b> (GAPI) 0 200			<b>H. Res. Formation Pe (PEF8)</b> (----) 0 10
<b>Computed Micro Inverse (HMIN)</b> (OHMM) 20 0			<b>H. Res. Formation Density (RHO8)</b> (G/C3) 1.95 2.95
<b>Computed Micro Normal (HMNO)</b> (OHMM) 20 0			<b>Density/Porosity Cross Over</b> From RHO8 to HTNP
<b>SP (SP)</b> (MV) -50 50			
<b>Mudcake</b> From HCAL to BS			
<b>Washout</b> From BS to HCAL			

**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

**Parameters**

DLIS Name	Description	Value
HALS-B: HILT Azimuthal Laterolog Sonde B		
	HALS Type of Image	Conductivities
ARIP_LTS	HALS Long Tool String Correction	OFF
ARIP_SHOULDER	HALS Shoulder Correction	OFF
BHCC	HALS Borehole Correction	OFF
BHS	Borehole Status	OPEN
BHT	Bottom Hole Temperature (used in calculations)	88 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
HMSO	HALS Mechanical Standoff	1.5 IN
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE
SHT	Surface Hole Temperature	28.8 DEGC
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
DSLTL-FTB: Digitizing		
	Sonic Logging Tool	BHC
	DSLTL Firing Mode	DSLCL_FTBL
	Telemetry Mode	0 US
DDEL	Digitizing Delay	0
DIVL	DSLTL Depth Sampling Interval	20
DRCS	DSLTL DLIS Recording Size	150
DSIN	Digitizing Sample Interval	10
DTFS	DSLCL Telemetry Frame Size	336
DWCO	Digitizing Word Count	150
GAI	Manual Gain	40
ITTS	Integrated Transit Time Source	DT
MAHTR	Manual High Threshold Reference	120
MGAI	Maximum Gain	60
MNHTR	Minimum High Threshold Reference	100
NMSG	Near Minimum Sliding Gate	140 US
NMXG	Near Maximum Sliding Gate	970 US

RATE	Firing Rate	R15	
SFAF	Sonic Formation Attenuation Factor	10	DB/M
SGCL	Sliding Gate Closing Delta-T	140	US/F
SGDT	Sliding Gate Delta-T	40	US/F
SGW	Sliding Gate Width	110	US
SLEV	Signal Level for AGC	5000	
WMOD	Waveform Firing Mode	FULL	
<b>HILTB-FTB: High resolution Integrated Logging Tool-DTS</b>			
BHFL	Borehole Fluid Type	WATER	
BHFL_TLD	HILT Nuclear Mud Base	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	88	DEGC
BSCO	Borehole Salinity Correction Option	YES	
CCCO	Casing & Cement Thickness Correction Option	NO	
DHC	Density Hole Correction	BS	
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
HSCO	Hole Size Correction Option	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
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
PTCO	Pressure/Temperature Correction Option	YES	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	28.8	DEGC
SOCN	Standoff Distance	0	IN
SOCO	Standoff Correction Option	NO	
<b>BSP: Bridle SP</b>			
SPNV	SP Next Value	0	MV
<b>HOLEV: Integrated Hole/Cement Volume</b>			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	88	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
HVCS	Integrated Hole Volume Caliper Selection	HCAL	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
SHT	Surface Hole Temperature	28.8	DEGC
<b>STI: Stuck Tool Indicator</b>			
LBFR	Trigger for MAXIS First Reading Label	TDL	
STKT	STI Stuck Threshold	0.762	M
TDD	Total Depth - Driller	1524.00	M
TDL	Total Depth - Logger	1523.00	M
<b>System and Miscellaneous</b>			
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	9.60	LB/G
DO	Depth Offset for Playback	0.4	M
MST	Mud Sample Temperature	25.00	DEGC
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	0.1943	OHMM
TD	Total Depth	1523	M

Format: Beach\_Hires\_hals\_pex\_sonic\_200 Vertical Scale: 1:200 Graphics File Created: 10-Aug-2007 17:33

## OP System Version: 15C0-309

MCM

HALS-B	SRPC-3292-Q1_2007	DSL-FTB	15C0-309
HILTB-FTB	SRPC-3292-Q1_2007	DTC-H	15C0-309
BSP	15C0-309		

### Input DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_009LUP FN:11	PRODUCER	10-Aug-2007 11:19	1526.7 M	1252.6 M
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### Output DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_024PUP FN:36	PRODUCER	10-Aug-2007 17:33
RTB	HALS_SONIC_TLD_MCFL_024PUP FN:37	PRODUCER	10-Aug-2007 17:33

Company: Beach Petroleum Ltd

Well: Bodalla South 18

**Input DLIS Files**

DEFAULT	HALS_SONIC_TLD_MCFL_022PUP FN:32	PRODUCER	10-Aug-2007 17:16	1425.5 M	23.9 M
DEFAULT	HALS_SONIC_TLD_MCFL_024PUP FN:36	PRODUCER	10-Aug-2007 17:33	1527.2 M	1253.5 M

**Output DLIS Files**

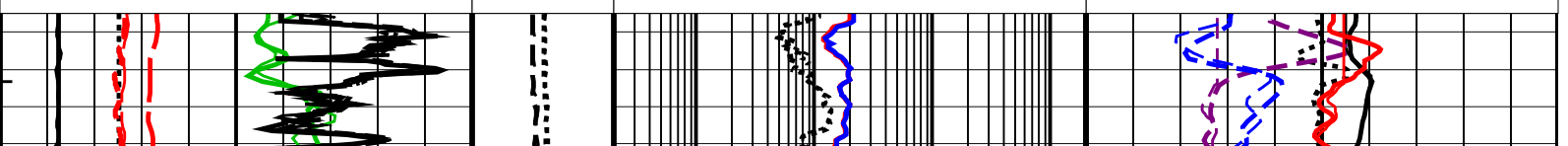
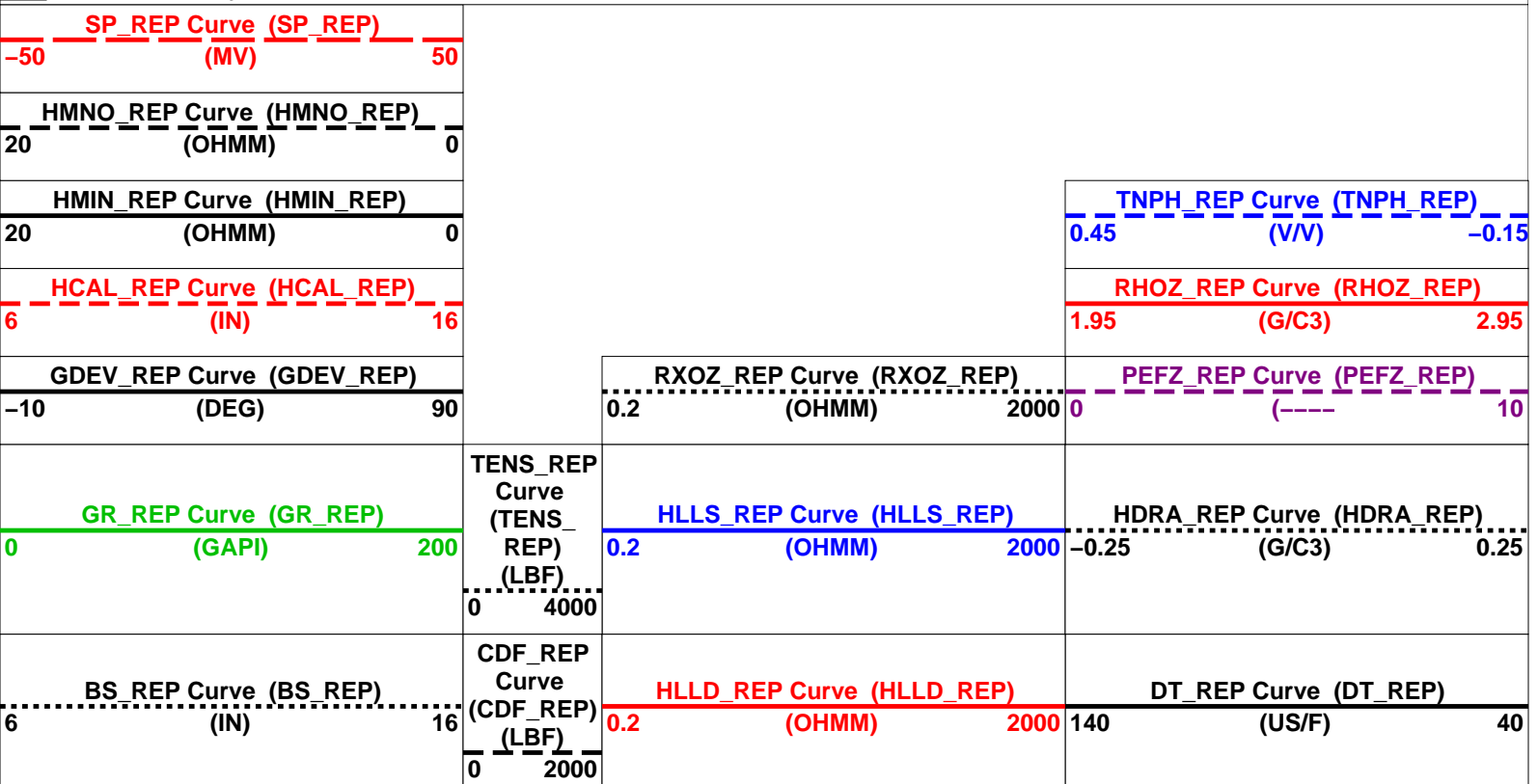
DEFAULT	HALS_SONIC_TLD_MCFL_025PUP FN:38	PRODUCER	10-Aug-2007 17:36	1410.0 M	1310.3 M
RTB	HALS_SONIC_TLD_MCFL_025PUP FN:39	PRODUCER	10-Aug-2007 17:36	1410.0 M	1310.3 M

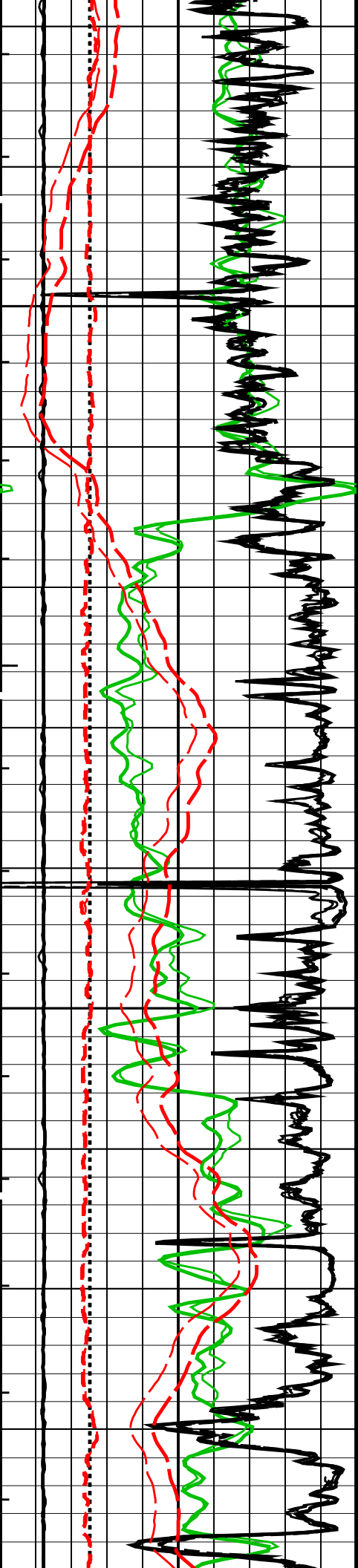
**OP System Version: 15C0-309  
MCM**

HALS-B	SRPC-3292-Q1_2007	DSLTT-FTB	15C0-309
HILTB-FTB	SRPC-3292-Q1_2007	DTC-H	15C0-309
BSP	15C0-309		

**PIP SUMMARY**

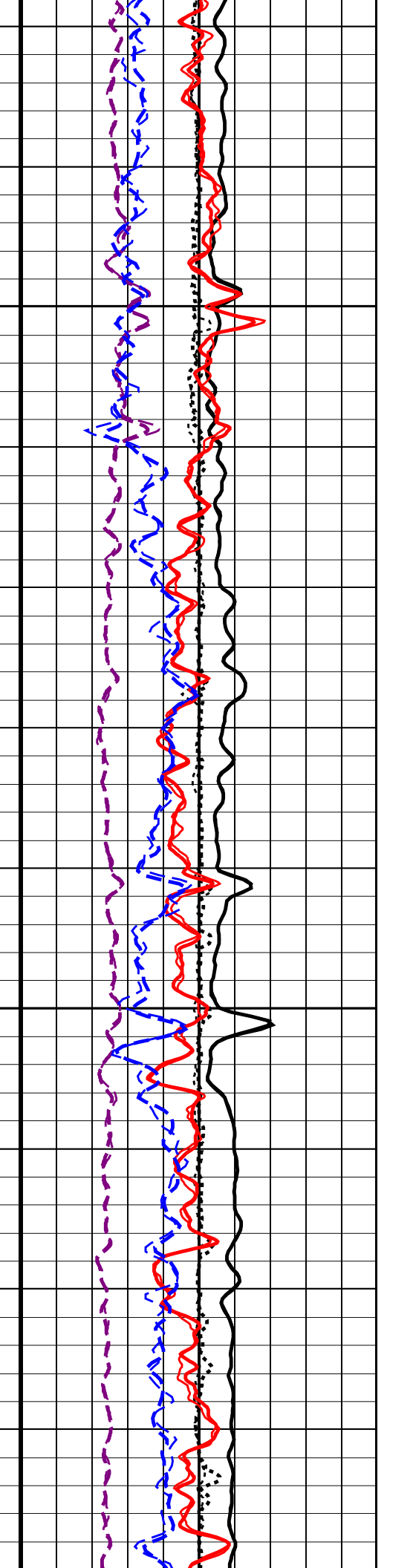
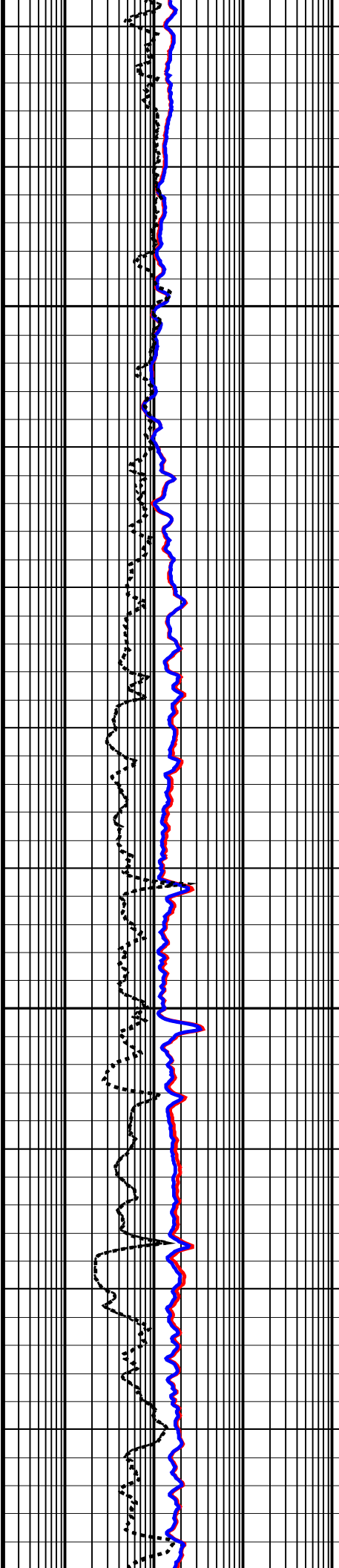
- └ Integrated Transit Time Minor Pip Every 1 MS
- └ Integrated Transit Time Major Pip Every 10 MS
- ▣ Time Mark Every 60 S

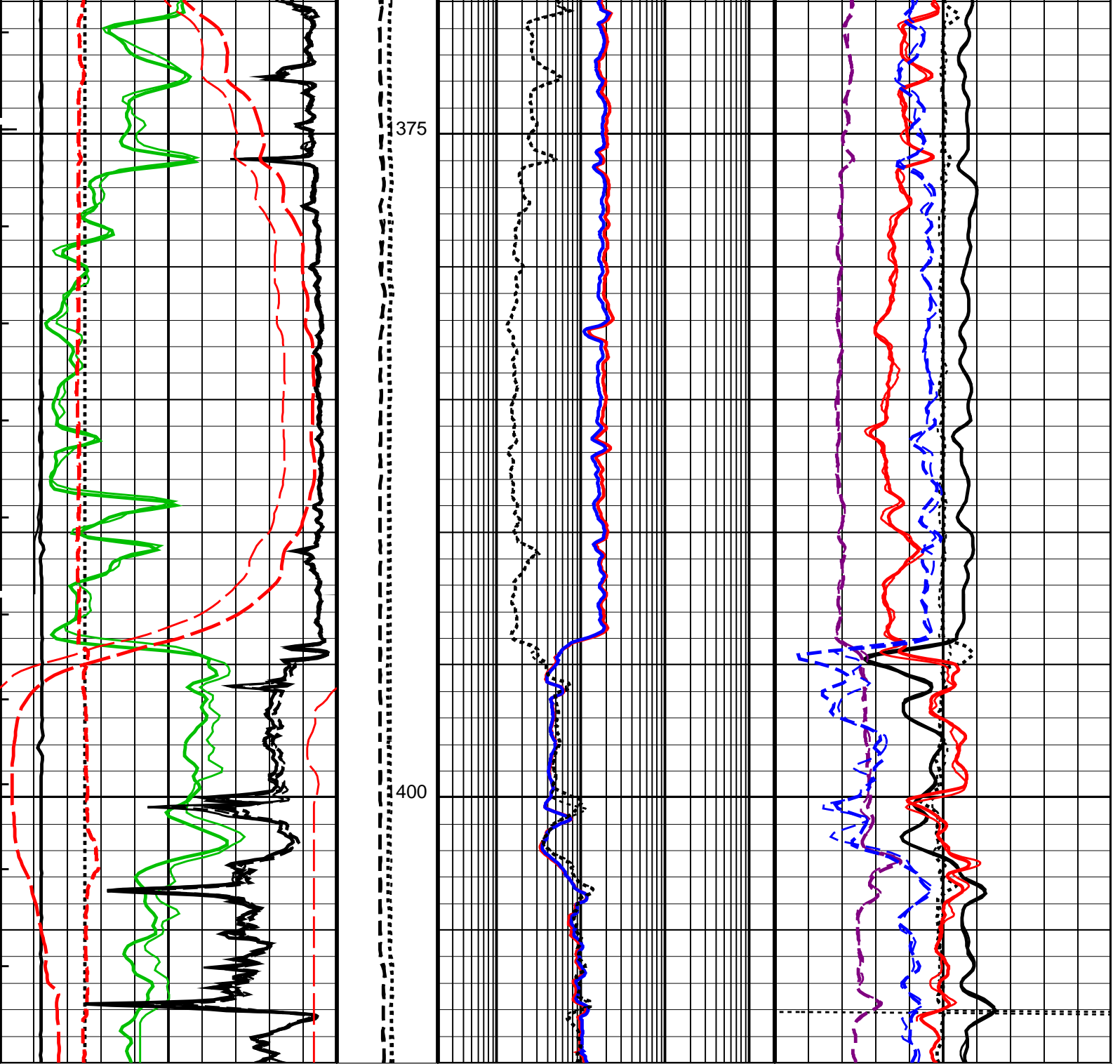




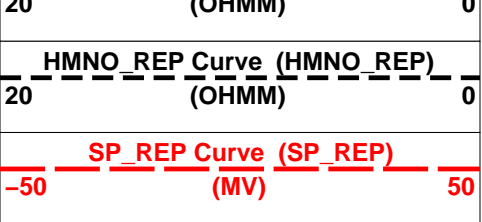
325

350





<p>BS_REP Curve (BS_REP) (IN)</p> <p>6 16</p>	<p>CDF_REP Curve (CDF_REP) (LBF)</p> <p>0 2000</p>	<p>HLLD_REP Curve (HLLD_REP) (OHMM)</p> <p>0.2 2000</p>	<p>DT_REP Curve (DT_REP) (US/F)</p> <p>140 40</p>
<p>GR_REP Curve (GR_REP) (GAPI)</p> <p>0 200</p>	<p>TENS_REP Curve (TENS_REP) (LBF)</p> <p>0 4000</p>	<p>HLLS_REP Curve (HLLS_REP) (OHMM)</p> <p>0.2 2000</p>	<p>HDRA_REP Curve (HDRA_REP) (G/C3)</p> <p>-0.25 0.25</p>
<p>GDEV_REP Curve (GDEV_REP) (DEG)</p> <p>-10 90</p>		<p>RXOZ_REP Curve (RXOZ_REP) (OHMM)</p> <p>0.2 2000</p>	<p>PEFZ_REP Curve (PEFZ_REP) (----</p> <p>0 10</p>
<p>HCAL_REP Curve (HCAL_REP) (IN)</p> <p>6 16</p>			<p>RHOZ_REP Curve (RHOZ_REP) (G/C3)</p> <p>1.95 2.95</p>
<p>HMIN_REP Curve (HMIN_REP) (OHMM)</p> <p>0 0</p>			<p>TNPH_REP Curve (TNPH_REP) (OHMM)</p> <p>0.15 0.15</p>



0.45 (V/V) -0.15

**PIP SUMMARY**

- └ Integrated Transit Time Minor Pip Every 1 MS
- └ Integrated Transit Time Major Pip Every 10 MS
- ▣ Time Mark Every 60 S

Format: Beach\_StdRes\_hals\_pex\_sonic\_200\_REP Vertical Scale: 1:200 Graphics File Created: 10-Aug-2007 17:37

**OP System Version: 15C0-309**  
MCM

HALS-B	SRPC-3292-Q1_2007	DSLТ-FTB	15C0-309
HILTB-FTB	SRPC-3292-Q1_2007	DTC-H	15C0-309
BSP	15C0-309		

**Input DLIS Files**

DEFAULT	HALS_SONIC_TLD_MCFL_022PUP FN:32	PRODUCER	10-Aug-2007 17:16	1425.5 M	23.9 M
DEFAULT	HALS_SONIC_TLD_MCFL_024PUP FN:36	PRODUCER	10-Aug-2007 17:33	1527.2 M	1253.5 M

**Output DLIS Files**

DEFAULT	HALS_SONIC_TLD_MCFL_025PUP FN:38	PRODUCER	10-Aug-2007 17:36
RTB	HALS_SONIC_TLD_MCFL_025PUP FN:39	PRODUCER	10-Aug-2007 17:36



**Sonic Check in casing**

MAXIS Field Log

Company: Beach Petroleum Ltd Well: Bodalla South 18

**Input DLIS Files**

DEFAULT	HALS_SONIC_TLD_MCFL_012LUP FN:16	PRODUCER	10-Aug-2007 12:22	1425.5 M	23.5 M
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**Output DLIS Files**

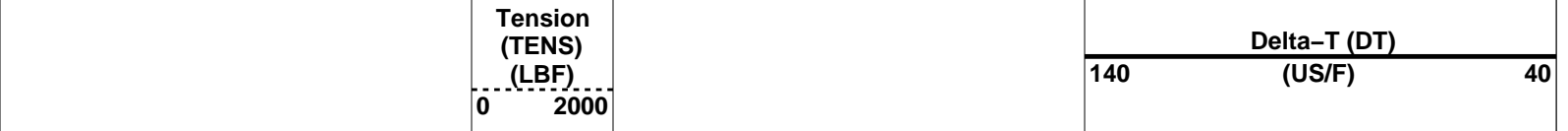
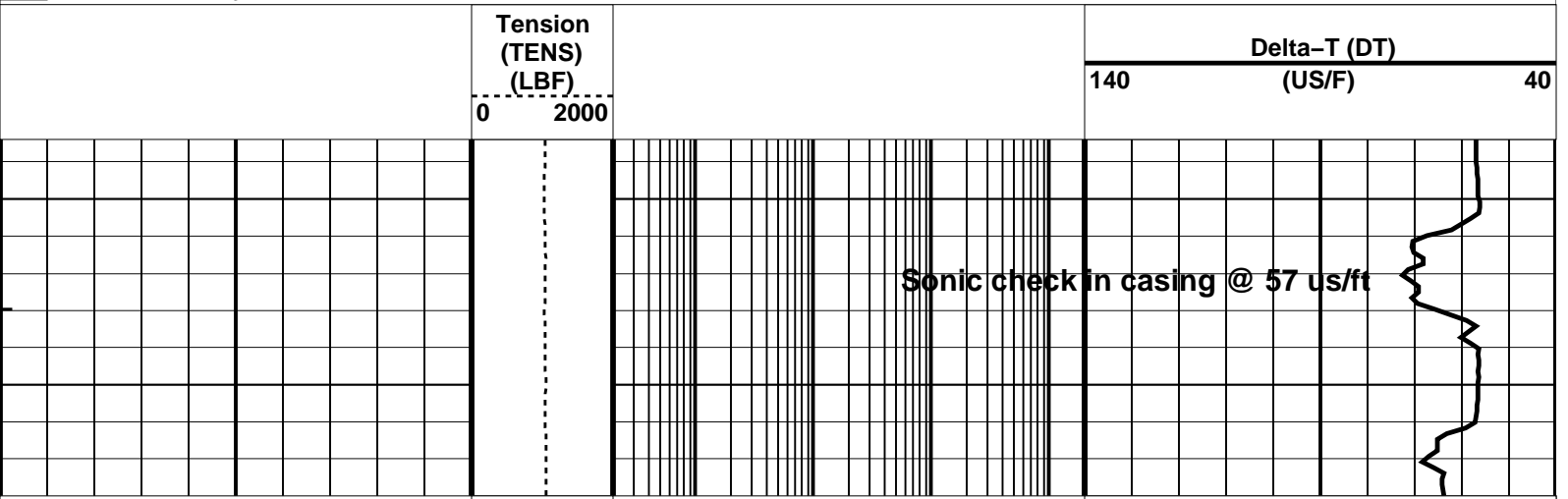
DEFAULT	HALS_SONIC_TLD_MCFL_027PUP FN:42	PRODUCER	10-Aug-2007 17:43	123.0 M	113.4 M
RTB	HALS_SONIC_TLD_MCFL_027PUP FN:43	PRODUCER	10-Aug-2007 17:43	123.0 M	113.4 M

**OP System Version: 15C0-309**  
MCM

HALS-B	SRPC-3292-Q1_2007	DSLТ-FTB	15C0-309
HILTB-FTB	SRPC-3292-Q1_2007	DTC-H	15C0-309
BSP	15C0-309		

**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



**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: Sonic Check in Casing\_200    Vertical Scale: 1:200    Graphics File Created: 10-Aug-2007 17:43

**OP System Version: 15C0-309**

MCM

HALS-B	SRPC-3292-Q1_2007	DSLT-FTB	15C0-309
HILTB-FTB	SRPC-3292-Q1_2007	DTC-H	15C0-309
BSP	15C0-309		

**Input DLIS Files**

DEFAULT	HALS_SONIC_TLD_MCFL_012LUP FN:16	PRODUCER	10-Aug-2007 12:22	1425.5 M	23.5 M
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**Output DLIS Files**

DEFAULT	HALS_SONIC_TLD_MCFL_027PUP FN:42	PRODUCER	10-Aug-2007 17:43
RTB	HALS_SONIC_TLD_MCFL_027PUP FN:43	PRODUCER	10-Aug-2007 17:43



**Calibrations**

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
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Before: 10-Aug-2007 11:17		After: 10-Aug-2007 14:44							
ltot 1 Gain	1.000	N/A	0.995	0.996	0.000	0.026	MA		
ltot 1 Phase	0.000	N/A	-0.000	0.000	0.000	0.100	DEG		
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux current mode 1									
Before: 10-Aug-2007 11:17		After: 10-Aug-2007 14:44							
laux 1 Gain	1.000	N/A	0.989	0.991	0.002	0.035	MA		
laux 1 Phase	0.000	N/A	0.830	0.335	-0.495	1.900	DEG		
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux current mode 2									
Before: 10-Aug-2007 11:17		After: 10-Aug-2007 14:44							
laux 2 Gain	1.000	N/A	0.979	0.980	0.000	0.048	MA		
laux 2 Phase	0.000	N/A	0.000	-0.000	-0.000	0.100	DEG		
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0 current mode 3A									
Before: 10-Aug-2007 11:17		After: 10-Aug-2007 14:44							
l0 3A Gain	1.000	N/A	0.983	0.984	0.000	0.036	UA		
l0 3A Phase	0.000	N/A	-0.000	-0.000	0.000	0.100	DEG		
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0 current mode 3B									
Before: 10-Aug-2007 11:17		After: 10-Aug-2007 14:44							
l0 3B Gain	1.000	N/A	0.980	0.976	-0.004	0.036	UA		
l0 3B Phase	0.000	N/A	-0.000	-0.000	0.000	0.100	DEG		
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Torpedo Voltage gains									
Before: 10-Aug-2007 11:17		After: 10-Aug-2007 14:44							
Zvt 1 Gain	1.000	N/A	0.990	0.991	0.001	0.025	MV		
Zvt 2 Gain	1.000	N/A	0.980	0.981	0.002	0.045	MV		
Zvt 3 Gain	1.000	N/A	0.982	0.984	0.002	0.045	MV		
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Torpedo Voltage Phases									
Before: 10-Aug-2007 11:17		After: 10-Aug-2007 14:44							
Zvt 1 Phase	0.000	N/A	0.394	0.245	-0.148	2.300	DEG		
Zvt 2 Phase	0.000	N/A	0.222	0.240	0.018	0.800	DEG		
Zvt 3 Phase	0.000	N/A	0.041	0.084	0.044	0.500	DEG		
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Upper Bridle Voltage mode 1									
Before: 10-Aug-2007 11:17		After: 10-Aug-2007 14:44							
Zvb 1 Gain	1.000	N/A	0.991	0.991	0.001	0.025	MV		
Zvb 1 Phase	0.000	N/A	0.447	0.305	-0.142	2.300	DEG		
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1-M2 Voltage gains									
Before: 10-Aug-2007 11:17		After: 10-Aug-2007 14:44							
ZVM 1 Gain	1.000	N/A	0.996	0.995	-0.000	0.039	UV		
ZVM 2 Gain	1.000	N/A	0.992	0.992	-0.000	0.019	UV		
ZVM 3 Gain	1.000	N/A	0.990	0.990	-0.000	0.019	UV		
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1-M2 Voltage Phases									
Before: 10-Aug-2007 11:17		After: 10-Aug-2007 14:44							
ZVM 1 Phase	0.000	N/A	0.170	0.279	0.109	3.800	DEG		
ZVM 2 Phase	0.000	N/A	1.291	1.329	0.038	1.300	DEG		
ZVM 3 Phase	0.000	N/A	0.600	0.745	0.145	1.000	DEG		
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1-A0* Voltage gains									
Before: 10-Aug-2007 11:17		After: 10-Aug-2007 14:44							
ZVH 1 Gain	1.000	N/A	0.999	0.999	-0.000	0.013	UV		
ZVH 2 Gain	1.000	N/A	0.999	0.999	-0.001	0.046	UV		
ZVH 3 Gain	1.000	N/A	0.995	0.995	-0.001	0.046	UV		
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1-A0* Voltage Phases									
Before: 10-Aug-2007 11:17		After: 10-Aug-2007 14:44							
ZVH 1 Phase	0.000	N/A	0.308	0.413	0.104	3.800	DEG		
ZVH 2 Phase	0.000	N/A	1.891	1.918	0.026	1.300	DEG		
ZVH 3 Phase	0.000	N/A	1.000	1.137	0.137	1.000	DEG		
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux Voltage gains									
Before: 10-Aug-2007 11:17		After: 10-Aug-2007 14:44							
ZVA 1 Gain	1.000	N/A	1.051	1.066	0.016	0.032	MV		
ZVA 2 Gain	1.000	N/A	1.037	1.038	0.000	0.045	MV		
ZVA 3 Gain	1.000	N/A	1.019	1.018	-0.001	0.045	MV		
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux Voltage Phases									
Before: 10-Aug-2007 11:17		After: 10-Aug-2007 14:44							
ZVA 1 Phase	0.000	N/A	0.610	0.500	-0.110	2.300	DEG		
ZVA 2 Phase	0.000	N/A	0.013	-0.097	-0.109	0.800	DEG		
ZVA 3 Phase	0.000	N/A	0.371	0.331	-0.040	0.500	DEG		
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*-A0** Diff. Voltage mode 1									
Before: 10-Aug-2007 11:17		After: 10-Aug-2007 14:44							
ZVD 1 Gain	1.000	N/A	0.993	0.993	-0.000	0.047	UV		
ZVD 1 Phase	0.000	N/A	0.095	0.197	0.102	3.800	DEG		



HILT Azimuthal Laterolog Sonde B WellSite Calibration – HALSB A0\*–A0\*\* Diff. Voltage mode 2  
 Before: 10–Aug–2007 11:17 After: 10–Aug–2007 14:44

ZVD 2 Gain	1.000	N/A	0.981	0.982	0.000	0.056	UV
ZVD 2 Phase	0.000	N/A	1.066	1.107	0.041	1.300	DEG

HILT Azimuthal Laterolog Sonde B WellSite Calibration – HALSB A0\*–A0\*\* Diff. Voltage mode 3A  
 Before: 10–Aug–2007 11:17 After: 10–Aug–2007 14:44

ZVD 3A Gain	1.000	N/A	0.985	0.985	0.000	0.056	UV
ZVD 3A Phase	0.000	N/A	0.418	0.527	0.109	1.000	DEG

HILT Azimuthal Laterolog Sonde B WellSite Calibration – HALSB A0\*–A0\*\* Diff. Voltage mode 3B  
 Before: 10–Aug–2007 11:17 After: 10–Aug–2007 14:44

ZVD 3B Gain	1.000	N/A	1.005	1.002	–0.002	0.054	UV
ZVD 3B Phase	0.000	N/A	0.229	0.161	–0.068	1.000	DEG

HILT Azimuthal Laterolog Sonde B WellSite Calibration – HALSB vertical Voltage mode 1  
 Before: 10–Aug–2007 11:17 After: 10–Aug–2007 14:44

ZVV 1 Gain	1.000	N/A	0.993	0.995	0.002	0.022	UV
ZVV 1 Phase	0.000	N/A	1.139	0.635	–0.505	2.800	DEG

HILT Azimuthal Laterolog Sonde B WellSite Calibration – HALSB vertical Voltage mode 2  
 Before: 10–Aug–2007 11:17 After: 10–Aug–2007 14:44

ZVV 2 Gain	1.000	N/A	0.987	0.986	–0.001	0.036	UV
ZVV 2 Phase	0.000	N/A	2.351	2.409	0.058	1.300	DEG

HILT Azimuthal Laterolog Sonde B WellSite Calibration – HALSB Azimuthal Voltages mode 1  
 Before: 10–Aug–2007 11:17 After: 10–Aug–2007 14:44

Az 1 Gain – 0	1.000	N/A	0.998	0.998	–0.000	0.047	UV
Az 1 Gain – 1	1.000	N/A	0.998	0.997	–0.000	0.047	UV
Az 1 Gain – 2	1.000	N/A	0.993	0.993	–0.000	0.047	UV
Az 1 Gain – 3	1.000	N/A	0.999	0.999	–0.000	0.047	UV
Az 1 Gain – 4	1.000	N/A	1.000	1.000	0.000	0.047	UV
Az 1 Gain – 5	1.000	N/A	0.995	0.994	–0.000	0.047	UV
Az 1 Gain – 6	1.000	N/A	0.994	0.994	–0.000	0.047	UV
Az 1 Gain – 7	1.000	N/A	0.991	0.990	–0.000	0.047	UV
Az 1 Gain – 8	1.000	N/A	0.995	0.995	–0.000	0.047	UV
Az 1 Gain – 9	1.000	N/A	0.995	0.995	0.000	0.047	UV
Az 1 Gain – 10	1.000	N/A	0.993	0.993	–0.000	0.047	UV
Az 1 Gain – 11	1.000	N/A	0.998	0.998	0.000	0.047	UV
AZ 1 Phase – 0	0.000	N/A	–0.138	–0.005	0.133	3.800	DEG
AZ 1 Phase – 1	0.000	N/A	–0.052	0.078	0.129	3.800	DEG
AZ 1 Phase – 2	0.000	N/A	0.116	0.216	0.100	3.800	DEG
AZ 1 Phase – 3	0.000	N/A	0.005	0.113	0.109	3.800	DEG
AZ 1 Phase – 4	0.000	N/A	–0.083	0.019	0.102	3.800	DEG
AZ 1 Phase – 5	0.000	N/A	0.066	0.164	0.098	3.800	DEG
AZ 1 Phase – 6	0.000	N/A	0.115	0.197	0.082	3.800	DEG
AZ 1 Phase – 7	0.000	N/A	–0.149	–0.038	0.110	3.800	DEG
AZ 1 Phase – 8	0.000	N/A	0.066	0.180	0.113	3.800	DEG
AZ 1 Phase – 9	0.000	N/A	–0.026	0.068	0.094	3.800	DEG
AZ 1 Phase – 10	0.000	N/A	0.020	0.106	0.086	3.800	DEG
AZ 1 Phase – 11	0.000	N/A	–0.053	0.041	0.095	3.800	DEG

HILT Azimuthal Laterolog Sonde B WellSite Calibration – HALSB Azimuthal Voltages mode 2  
 Before: 10–Aug–2007 11:17 After: 10–Aug–2007 14:44

Az 2 Gain – 0	1.000	N/A	0.985	0.985	–0.000	0.056	UV
Az 2 Gain – 1	1.000	N/A	0.986	0.985	–0.000	0.056	UV
Az 2 Gain – 2	1.000	N/A	0.981	0.981	–0.000	0.056	UV
Az 2 Gain – 3	1.000	N/A	0.987	0.987	–0.000	0.056	UV
Az 2 Gain – 4	1.000	N/A	0.988	0.988	0.000	0.056	UV
Az 2 Gain – 5	1.000	N/A	0.983	0.983	0.000	0.056	UV
Az 2 Gain – 6	1.000	N/A	0.982	0.983	0.000	0.056	UV
Az 2 Gain – 7	1.000	N/A	0.978	0.978	0.000	0.056	UV
Az 2 Gain – 8	1.000	N/A	0.983	0.983	0.000	0.056	UV
Az 2 Gain – 9	1.000	N/A	0.983	0.983	0.001	0.056	UV
Az 2 Gain – 10	1.000	N/A	0.981	0.981	0.000	0.056	UV
Az 2 Gain – 11	1.000	N/A	0.986	0.986	0.001	0.056	UV
Az 2 Phase – 0	0.000	N/A	0.915	0.977	0.061	1.300	DEG
Az 2 Phase – 1	0.000	N/A	1.040	1.099	0.059	1.300	DEG
Az 2 Phase – 2	0.000	N/A	1.014	1.074	0.061	1.300	DEG
Az 2 Phase – 3	0.000	N/A	1.026	1.089	0.063	1.300	DEG
Az 2 Phase – 4	0.000	N/A	1.051	1.111	0.060	1.300	DEG
Az 2 Phase – 5	0.000	N/A	1.008	1.057	0.049	1.300	DEG
Az 2 Phase – 6	0.000	N/A	1.054	1.112	0.059	1.300	DEG
Az 2 Phase – 7	0.000	N/A	0.965	1.032	0.067	1.300	DEG
Az 2 Phase – 8	0.000	N/A	1.062	1.118	0.056	1.300	DEG
Az 2 Phase – 9	0.000	N/A	1.013	1.073	0.060	1.300	DEG
Az 2 Phase – 10	0.000	N/A	1.054	1.101	0.047	1.300	DEG
Az 2 Phase – 11	0.000	N/A	1.021	1.071	0.051	1.300	DEG

HILT Azimuthal Laterolog Sonde B WellSite Calibration – HALSB Azimuthal Voltages mode 3A  
 Before: 10–Aug–2007 11:17 After: 10–Aug–2007 14:44

Az 3A Gain - 0	1.000	N/A	0.989	0.989	-0.000	0.056	UV
Az 3A Gain - 1	1.000	N/A	0.989	0.989	-0.000	0.056	UV
Az 3A Gain - 2	1.000	N/A	0.985	0.984	-0.000	0.056	UV
Az 3A Gain - 3	1.000	N/A	0.991	0.990	-0.000	0.056	UV
Az 3A Gain - 4	1.000	N/A	0.991	0.991	0.000	0.056	UV
Az 3A Gain - 5	1.000	N/A	0.986	0.986	0.000	0.056	UV
Az 3A Gain - 6	1.000	N/A	0.986	0.986	0.000	0.056	UV
Az 3A Gain - 7	1.000	N/A	0.981	0.982	0.000	0.056	UV
Az 3A Gain - 8	1.000	N/A	0.987	0.987	0.000	0.056	UV
Az 3A Gain - 9	1.000	N/A	0.987	0.987	0.000	0.056	UV
Az 3A Gain - 10	1.000	N/A	0.984	0.985	0.000	0.056	UV
Az 3A Gain - 11	1.000	N/A	0.989	0.990	0.001	0.056	UV
Az 3A Phase - 0	0.000	N/A	0.319	0.432	0.113	1.000	DEG
Az 3A Phase - 1	0.000	N/A	0.410	0.494	0.084	1.000	DEG
Az 3A Phase - 2	0.000	N/A	0.411	0.485	0.073	1.000	DEG
Az 3A Phase - 3	0.000	N/A	0.394	0.476	0.082	1.000	DEG
Az 3A Phase - 4	0.000	N/A	0.385	0.475	0.089	1.000	DEG
Az 3A Phase - 5	0.000	N/A	0.382	0.484	0.102	1.000	DEG
Az 3A Phase - 6	0.000	N/A	0.431	0.540	0.108	1.000	DEG
Az 3A Phase - 7	0.000	N/A	0.351	0.458	0.106	1.000	DEG
Az 3A Phase - 8	0.000	N/A	0.443	0.539	0.096	1.000	DEG
Az 3A Phase - 9	0.000	N/A	0.395	0.491	0.096	1.000	DEG
Az 3A Phase - 10	0.000	N/A	0.419	0.508	0.089	1.000	DEG
Az 3A Phase - 11	0.000	N/A	0.389	0.481	0.093	1.000	DEG

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

Before: 10-Aug-2007 11:17 After: 10-Aug-2007 14:44

Az 3B Gain - 0	1.000	N/A	1.003	1.001	-0.002	0.054	UV
Az 3B Gain - 1	1.000	N/A	1.009	1.009	-0.001	0.054	UV
Az 3B Gain - 2	1.000	N/A	1.003	1.005	0.002	0.054	UV
Az 3B Gain - 3	1.000	N/A	1.009	1.013	0.004	0.054	UV
Az 3B Gain - 4	1.000	N/A	1.011	1.011	0.000	0.054	UV
Az 3B Gain - 5	1.000	N/A	1.002	1.001	-0.001	0.054	UV
Az 3B Gain - 6	1.000	N/A	1.005	1.003	-0.002	0.054	UV
Az 3B Gain - 7	1.000	N/A	0.997	0.998	0.001	0.054	UV
Az 3B Gain - 8	1.000	N/A	1.007	1.007	-0.000	0.054	UV
Az 3B Gain - 9	1.000	N/A	1.005	1.004	-0.000	0.054	UV
Az 3B Gain - 10	1.000	N/A	1.005	1.002	-0.002	0.054	UV
Az 3B Gain - 11	1.000	N/A	1.008	1.006	-0.001	0.054	UV
Az 3B Phase - 0	0.000	N/A	-0.061	-0.162	-0.101	1.000	DEG
Az 3B Phase - 1	0.000	N/A	0.356	0.388	0.031	1.000	DEG
Az 3B Phase - 2	0.000	N/A	0.124	0.312	0.188	1.000	DEG
Az 3B Phase - 3	0.000	N/A	0.233	0.024	-0.209	1.000	DEG
Az 3B Phase - 4	0.000	N/A	0.265	0.085	-0.180	1.000	DEG
Az 3B Phase - 5	0.000	N/A	0.178	-0.093	-0.271	1.000	DEG
Az 3B Phase - 6	0.000	N/A	0.218	0.223	0.005	1.000	DEG
Az 3B Phase - 7	0.000	N/A	0.180	-0.012	-0.192	1.000	DEG
Az 3B Phase - 8	0.000	N/A	0.281	0.131	-0.151	1.000	DEG
Az 3B Phase - 9	0.000	N/A	0.234	-0.087	-0.321	1.000	DEG
Az 3B Phase - 10	0.000	N/A	0.255	0.137	-0.119	1.000	DEG
Az 3B Phase - 11	0.000	N/A	0.272	0.007	-0.265	1.000	DEG

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

Before: 9-Aug-2007 18:19

BS Window Ratio	0.7420	N/A	0.7415	N/A	N/A	N/A	
BS Window Sum	10400	N/A	10360	N/A	N/A	N/A	CPS
SS Window Ratio	0.4841	N/A	0.4881	N/A	N/A	N/A	
SS Window Sum	10150	N/A	10230	N/A	N/A	N/A	CPS
LS Window Ratio	0.2976	N/A	0.2926	N/A	N/A	N/A	
LS Window Sum	1159	N/A	1161	N/A	N/A	N/A	CPS

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

Before: 9-Aug-2007 18:19

BS PM High Voltage (Command)	1462	N/A	1505	N/A	N/A	N/A	V
SS PM High Voltage (Command)	2151	N/A	2099	N/A	N/A	N/A	V
LS PM High Voltage (Command)	1644	N/A	1631	N/A	N/A	N/A	V

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

Before: 9-Aug-2007 18:19

BS Crystal Resolution	12.18	N/A	12.67	N/A	N/A	N/A	%
SS Crystal Resolution	11.37	N/A	10.56	N/A	N/A	N/A	%
LS Crystal Resolution	10.18	N/A	10.37	N/A	N/A	N/A	%

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

Before: 9-Aug-2007 18:20

Raw B0 Resistivity	3875	N/A	3889	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3838	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3848	N/A	N/A	N/A	OHMM

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

Before: 9-Aug-2007 18:14

HILT Caliper Zone Measurement	0.000	N/A	0.435	N/A	N/A	N/A	IN
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HILT Caliper Zero Measurement	8.000	N/A	8.135	N/A	N/A	N/A	N/A	IN
HILT Caliper Plus Measurement	12.00	N/A	12.33	N/A	N/A	N/A	N/A	IN

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

Before: 9–Aug–2007 18:13

Gamma Ray Background	30.00	N/A	34.90	N/A	N/A	N/A	GAPI
Gamma Ray (Jig – Bkg)	167.9	N/A	167.9	N/A	N/A	15.27	GAPI
Gamma Ray (Calibrated)	162.0	N/A	162.0	N/A	N/A	15.00	GAPI

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

Master: 8–Jul–2007 9:06 Before: 9–Aug–2007 18:14

CNTC Background	31.09	31.09	29.32	N/A	N/A	4.664	CPS
CFTC Background	31.04	31.04	28.63	N/A	N/A	4.656	CPS

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

Master: 8–Jul–2007 9:06

Thermal Near Corr. (Tank)	5800	5912	N/A	N/A	N/A	N/A	CPS
Thermal Far Corr. (Tank)	2400	2469	N/A	N/A	N/A	N/A	CPS
CNTC/CFTC (Tank)	2.159	2.394	N/A	N/A	N/A	N/A	

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

Before: 10–Aug–2007 9:49

Z–Axis Acceleration	9.810	N/A	9.777	N/A	N/A	N/A	M/S2
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High resolution Integrated Logging Tool–DTS Master Calibration – Inversion results

Master: 4–Aug–2007 9:39

Rho Aluminum	2.596	2.594	--	--	--	--	G/C3
Rho Magnesium	1.686	1.691	--	--	--	--	G/C3
Pe Aluminum	2.570	2.562	--	--	--	--	
Pe Magnesium	2.650	2.632	--	--	--	--	

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

Master: 4–Aug–2007 9:39

BS Average Deviation	0	0.3603	--	--	--	--	%
BS Max Deviation	0	0.8266	--	--	--	--	%
SS Average Deviation	0	0.7347	--	--	--	--	%
SS Max Deviation	0	1.743	--	--	--	--	%
LS Average Deviation	0	0.6353	--	--	--	--	%
LS Max Deviation	0	1.705	--	--	--	--	%

The GLS–VJ source activity is acceptable.

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

NCT–B Water Temperature	10.0	DEGC.
Thermal Housing Size	3.378	IN.
NSR–F serial number	2111	

HILT Azimuthal Laterolog Sonde B / Equipment Identification

Primary Equipment:

Auxiliary Equipment:

Laterolog Control Module LCM – AA 1858

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
	0.996		0.000
0.926 (Minimum) 1.000 (Nominal) 1.081 (Maximum)		–0.100 (Minimum) 0.000 (Nominal) 0.100 (Maximum)	
Before: 10–Aug–2007 11:17		After: 10–Aug–2007 14:44	

HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB Aux current mode 1			
laux 1 Gain MA	Value	laux 1 Phase DEG	Value
	0.989		0.830
	0.991		0.335

HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB Aux current mode 2			
laux 2 Gain MA	Value	laux 2 Phase DEG	Value
	0.979		0.000
	0.980		–0.000

0.854 (Minimum)	1.000 (Nominal)	1.180 (Maximum)	-4.600 (Minimum)	0.000 (Nominal)	4.600 (Maximum)
Before: 10-Aug-2007 11:17			After: 10-Aug-2007 14:44		

0.816 (Minimum)	1.000 (Nominal)	1.232 (Maximum)	-1.000 (Minimum)	0.000 (Nominal)	0.100 (Maximum)
Before: 10-Aug-2007 11:17			After: 10-Aug-2007 14:44		

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB A0 current mode 3A					
I0 3A Gain UA		Value	I0 3A Phase DEG		Value
		0.983			-0.000
		0.984			-0.000
0.893 (Minimum)	1.000 (Nominal)	1.114 (Maximum)	-1.000 (Minimum)	0.000 (Nominal)	0.100 (Maximum)
Before: 10-Aug-2007 11:17			After: 10-Aug-2007 14:44		

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB A0 current mode 3B					
I0 3B Gain UA		Value	I0 3B Phase DEG		Value
		0.980			-0.000
		0.976			-0.000
0.893 (Minimum)	1.000 (Nominal)	1.114 (Maximum)	-1.000 (Minimum)	0.000 (Nominal)	0.100 (Maximum)
Before: 10-Aug-2007 11:17			After: 10-Aug-2007 14:44		

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Torpedo Voltage gains					
Zvt 1 Gain MV		Value	Zvt 2 Gain MV		Value
		0.990			0.980
		0.991			0.981
0.925 (Minimum)	1.000 (Nominal)	1.078 (Maximum)	0.865 (Minimum)	1.000 (Nominal)	1.153 (Maximum)
Before: 10-Aug-2007 11:17			After: 10-Aug-2007 14:44		

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Torpedo Voltage Phases					
Zvt 1 Phase DEG		Value	Zvt 2 Phase DEG		Value
		0.394			0.222
		0.245			0.240
-4.400 (Minimum)	0.000 (Nominal)	4.400 (Maximum)	-2.800 (Minimum)	0.000 (Nominal)	2.800 (Maximum)
Before: 10-Aug-2007 11:17			After: 10-Aug-2007 14:44		

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Upper Bridle Voltage mode 1					
Zvb 1 Gain MV		Value	Zvb 1 Phase DEG		Value
		0.991			0.447
		0.991			0.305
0.925 (Minimum)	1.000 (Nominal)	1.078 (Maximum)	-4.400 (Minimum)	0.000 (Nominal)	4.400 (Maximum)
Before: 10-Aug-2007 11:17			After: 10-Aug-2007 14:44		

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB M1-M2 Voltage gains					
ZVM 1 Gain UV		Value	ZVM 2 Gain UV		Value
		0.996			0.992
		0.995			0.992
0.895 (Minimum)	1.000 (Nominal)	1.117 (Maximum)	0.943 (Minimum)	1.000 (Nominal)	1.056 (Maximum)
Before: 10-Aug-2007 11:17			After: 10-Aug-2007 14:44		

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB M1-M2 Voltage Phases					
ZVM 1 Phase DEG		Value	ZVM 2 Phase DEG		Value
		0.170			1.291
		0.279			1.329
-6.500 (Minimum)	0.000 (Nominal)	6.500 (Maximum)	-3.300 (Minimum)	0.000 (Nominal)	3.300 (Maximum)
Before: 10-Aug-2007 11:17			After: 10-Aug-2007 14:44		

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB M1-A0* Voltage gains					
ZVH 1 Gain UV		Value	ZVH 2 Gain UV		Value
		0.999			0.999
		0.999			0.999
0.962 (Minimum)	1.000 (Nominal)	1.039 (Maximum)	0.864 (Minimum)	1.000 (Nominal)	1.154 (Maximum)
Before: 10-Aug-2007 11:17			After: 10-Aug-2007 14:44		

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
	0.308		1.891		1.000
	0.413		1.918		1.137
-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: 10-Aug-2007 11:17			After: 10-Aug-2007 14:44		

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
	1.051		1.037		1.019
	1.066		1.038		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: 10-Aug-2007 11:17			After: 10-Aug-2007 14:44		

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
	0.610		0.013		0.371
	0.500		-0.097		0.331
-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: 10-Aug-2007 11:17			After: 10-Aug-2007 14:44		

HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB A0*-A0* Diff. Voltage mode 1			
ZVD 1 Gain UV	Value	ZVD 1 Phase DEG	Value
	0.993		0.095
	0.993		0.197
0.874 (Minimum) 1.000 (Nominal) 1.147 (Maximum)		-6.300 (Minimum) 0.000 (Nominal) 6.300 (Maximum)	
Before: 10-Aug-2007 11:17		After: 10-Aug-2007 14:44	

HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB A0*-A0* Diff. Voltage mode 2			
ZVD 2 Gain UV	Value	ZVD 2 Phase DEG	Value
	0.981		1.066
	0.982		1.107
0.842 (Minimum) 1.000 (Nominal) 1.187 (Maximum)		-3.300 (Minimum) 0.000 (Nominal) 3.300 (Maximum)	
Before: 10-Aug-2007 11:17		After: 10-Aug-2007 14:44	

HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB A0*-A0* Diff. Voltage mode 3A			
ZVD 3A Gain UV	Value	ZVD 3A Phase DEG	Value
	0.985		0.418
	0.985		0.527
0.842 (Minimum) 1.000 (Nominal) 1.187 (Maximum)		-2.000 (Minimum) 0.000 (Nominal) 2.000 (Maximum)	
Before: 10-Aug-2007 11:17		After: 10-Aug-2007 14:44	

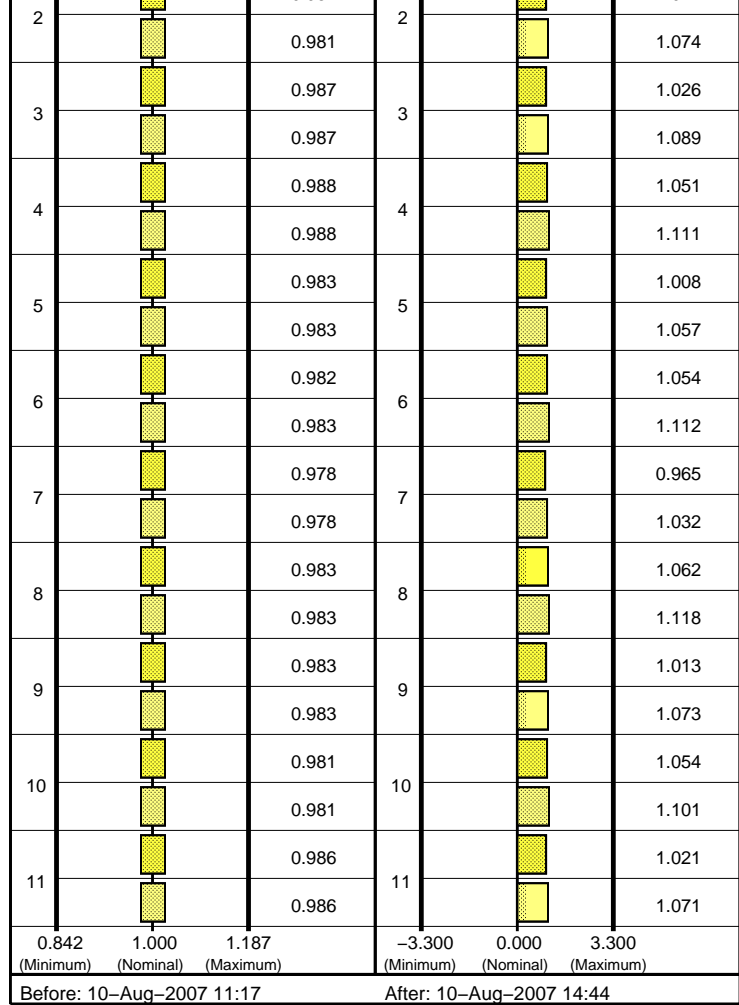
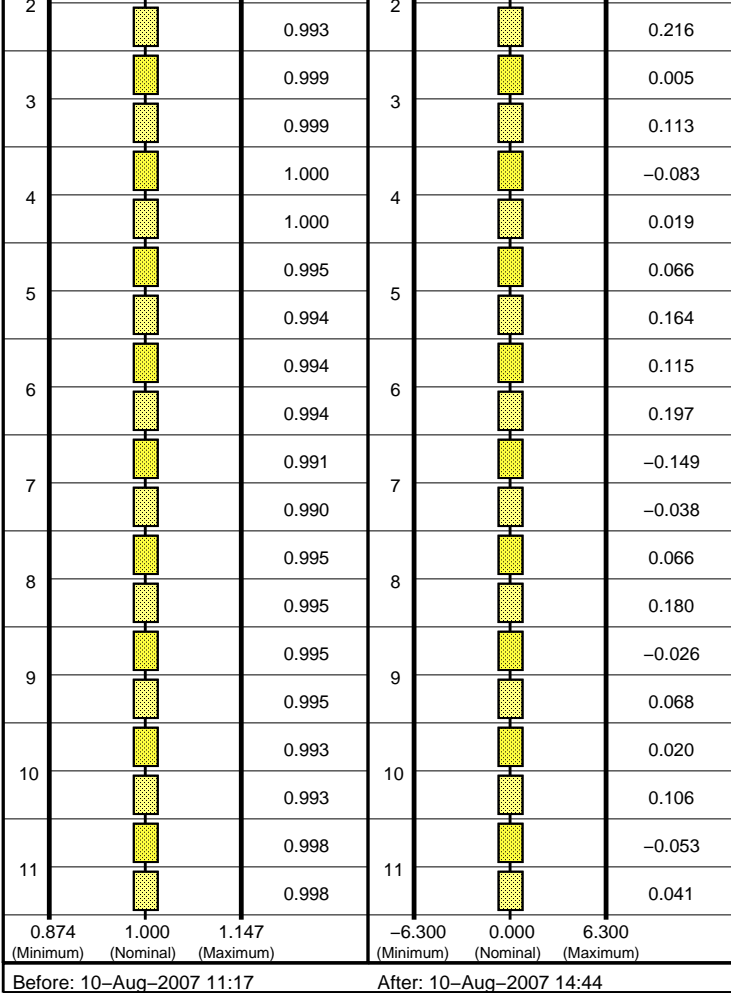
HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB A0*-A0* Diff. Voltage mode 3B			
ZVD 3B Gain UV	Value	ZVD 3B Phase DEG	Value
	1.005		0.229
	1.002		0.161
0.845 (Minimum) 1.000 (Nominal) 1.183 (Maximum)		-2.000 (Minimum) 0.000 (Nominal) 2.000 (Maximum)	
Before: 10-Aug-2007 11:17		After: 10-Aug-2007 14:44	

HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB vertical Voltage mode 1			
ZVV 1 Gain UV	Value	ZVV 1 Phase DEG	Value
	0.993		1.139
	0.995		0.635
0.936 (Minimum) 1.000 (Nominal) 1.065 (Maximum)		-4.600 (Minimum) 0.000 (Nominal) 4.600 (Maximum)	
Before: 10-Aug-2007 11:17		After: 10-Aug-2007 14:44	

HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB vertical Voltage mode 2			
ZVV 2 Gain UV	Value	ZVV 2 Phase DEG	Value
	0.987		2.351
	0.986		2.409
0.895 (Minimum) 1.000 (Nominal) 1.112 (Maximum)		-2.800 (Minimum) 0.000 (Nominal) 2.800 (Maximum)	
Before: 10-Aug-2007 11:17		After: 10-Aug-2007 14:44	

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		0.998	0		-0.138
		0.998			-0.005
1		0.998	1		-0.052
		0.997			0.078
		0.993			0.116

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		0.985	0		0.915
		0.985			0.977
1		0.986	1		1.040
		0.985			1.099
		0.981			1.014



HILT Azimuthal Laterolog Sonde B Wellsite Calibration

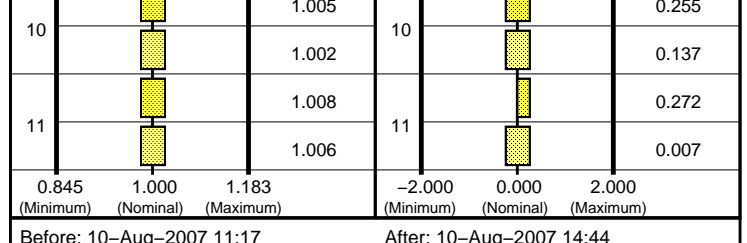
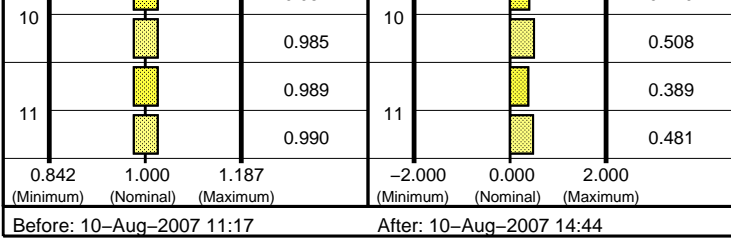
HALSB Azimuthal Voltages mode 3A

Idx	Az 3A Gain UV	Value	Idx	Az 3A Phase DEG	Value
0		0.989	0		0.319
1		0.989	1		0.432
2		0.989	2		0.410
3		0.989	3		0.494
4		0.985	4		0.411
5		0.984	5		0.485
6		0.991	6		0.394
7		0.990	7		0.476
8		0.991	8		0.385
9		0.991	9		0.475
10		0.986	10		0.382
11		0.986	11		0.484
12		0.986	12		0.431
13		0.981	13		0.540
14		0.982	14		0.351
15		0.987	15		0.458
16		0.987	16		0.443
17		0.987	17		0.539
18		0.987	18		0.395
19		0.987	19		0.491
20		0.984	20		0.419

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		1.003	0		-0.061
1		1.001	1		-0.162
2		1.009	2		0.356
3		1.009	3		0.388
4		1.003	4		0.124
5		1.005	5		0.312
6		1.009	6		0.233
7		1.013	7		0.024
8		1.011	8		0.265
9		1.011	9		0.085
10		1.002	10		0.178
11		1.001	11		-0.093
12		1.005	12		0.218
13		1.003	13		0.223
14		0.997	14		0.180
15		0.998	15		-0.012
16		1.007	16		0.281
17		1.007	17		0.131
18		1.005	18		0.234
19		1.004	19		-0.087
20		1.005	20		0.355



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 1755
- HRGD - B 1762
- MCFL -
- GLS - J 3739
- HRCC - B 1755
- HGNS - B 1767
- HGR -
- HCNT -

Auxiliary Equipment:

- Neutron Calibration Tank
- Gamma Source Radioactive
- HGNS Housing

- NCT - B
- GSR - U 2001
- HGNH - 1788

High resolution Integrated Logging Tool-DTS Wellsite Calibration									
Stab Measurement Summary									
Phase	BS Window Ratio			Value	Phase	SS Window Ratio			Value
Before				0.7415	Before				0.4881
	0.7049 (Minimum)	0.7420 (Nominal)	0.7791 (Maximum)			0.4599 (Minimum)	0.4841 (Nominal)	0.5084 (Maximum)	
Phase	BS Window Sum CPS			Value	Phase	SS Window Sum CPS			Value
Before				10360	Before				10230
	9876 (Minimum)	10400 (Nominal)	10920 (Maximum)			9647 (Minimum)	10150 (Nominal)	10660 (Maximum)	
Phase	LS Window Ratio			Value	Phase	LS Window Sum CPS			Value
Before				0.2926	Before				1161
	0.2827 (Minimum)	0.2976 (Nominal)	0.3124 (Maximum)			1101 (Minimum)	1159 (Nominal)	1217 (Maximum)	

Before: 9-Aug-2007 18:19

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	
Before				1505	Before				2099	
	1362 (Minimum)	1462 (Nominal)	1562 (Maximum)			2051 (Minimum)	2151 (Nominal)	2251 (Maximum)		
Phase	LS PM High Voltage (Command) V			Value						
Before				1631						
	1544 (Minimum)	1644 (Nominal)	1744 (Maximum)							

Before: 9-Aug-2007 18:19

High resolution Integrated Logging Tool-DTS Wellsite Calibration										
Crystal Quality Resolutions Calibration										
Phase	BS Crystal Resolution %			Value	Phase	SS Crystal Resolution %			Value	
Before				12.67	Before				10.56	
	11.18 (Minimum)	12.18 (Nominal)	13.18 (Maximum)			10.37 (Minimum)	11.37 (Nominal)	12.37 (Maximum)		
Phase	LS Crystal Resolution %			Value						
Before				10.37						
	9.184 (Minimum)	10.18 (Nominal)	11.18 (Maximum)							

Before: 9-Aug-2007 18:19

High resolution Integrated Logging Tool-DTS Wellsite Calibration										
MCFL Calibration										
Phase	Raw B0 Resistivity OHMM			Value	Phase	Raw B1 Resistivity OHMM			Value	
Before				3889	Before				3838	
	3565 (Minimum)	3875 (Nominal)	4185 (Maximum)			3524 (Minimum)	3830 (Nominal)	4136 (Maximum)		
Phase	Raw B2 Resistivity OHMM			Value						
Before				3848						
	3524 (Minimum)	3830 (Nominal)	4136 (Maximum)							

Before: 9-Aug-2007 18:20

High resolution Integrated Logging Tool-DTS Wellsite Calibration							
HILT Caliper Calibration							
Phase	HILT Caliper Zero Measurement IN		Value	Phase	HILT Caliper Plus Measurement IN		
Before			8.135	Before			12.33

6.000 (Minimum)	8.000 (Nominal)	10.00 (Maximum)	9.000 (Minimum)	12.00 (Nominal)	15.00 (Maximum)
Before: 9-Aug-2007 18:14					

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			34.90	Before			167.9	Before			162.0
	0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)		152.7 (Minimum)	167.9 (Nominal)	183.2 (Maximum)		147.0 (Minimum)	162.0 (Nominal)	177.0 (Maximum)
Before: 9-Aug-2007 18:13											

High resolution Integrated Logging Tool-DTS Wellsite Calibration							
Zero Measurement							
Phase	CNTC Background CPS		Value	Phase	CFTC Background CPS		Value
Master			31.09	Master			31.04
Before			29.32	Before			28.63
	5.000 (Minimum)	31.09 (Nominal)	40.00 (Maximum)		5.000 (Minimum)	31.04 (Nominal)	40.00 (Maximum)
Master: 8-Jul-2007 9:06			Before: 9-Aug-2007 18:14				

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			5912	Master			2469	Master			2.394
	4700 (Minimum)	5800 (Nominal)	6900 (Maximum)		1900 (Minimum)	2400 (Nominal)	2900 (Maximum)		2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)
Master: 8-Jul-2007 9:06											



High resolution Integrated Logging Tool-DTS Wellsite Calibration		
Accelerometer Calibration		
Phase	Z-Axis Acceleration M/S2	Value
Before		9.777
	9.610 (Minimum)	9.810 (Nominal)
Before: 10-Aug-2007 9:49		

High resolution Integrated Logging Tool-DTS Master Calibration							
Inversion results							
Phase	Rho Aluminum G/C3		Value	Phase	Rho Magnesium G/C3		Value
Master			2.594	Master			1.691
	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			2.562	Master			2.632
	2.470 (Minimum)	2.570 (Nominal)	2.670 (Maximum)		2.550 (Minimum)	2.650 (Nominal)	2.750 (Maximum)
Master: 4-Aug-2007 9:39							




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			0.3603	Master			0.7347	Master			0.6353
	-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			0.8266	Master			1.743	Master			1.705
	-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: 4-Aug-2007 9:39											

High resolution Integrated Logging Tool-DTS Master Calibration							
Zero Measurement							
Phase	CNTC Background CPS		Value	Phase	CFTC Background CPS		Value



Master		31.09	Master		31.04
5.000 (Minimum)	31.09 (Nominal)	40.00 (Maximum)	5.000 (Minimum)	31.04 (Nominal)	40.00 (Maximum)

Master: 8-Jul-2007 9:06

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			5912	Master			2469	Master		2.394
4700 (Minimum)	5800 (Nominal)	6900 (Maximum)		1900 (Minimum)	2400 (Nominal)	2900 (Maximum)		2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)

Master: 8-Jul-2007 9:06

DTS Telemetry Tool / Equipment Identification		
Primary Equipment:		
DTC-H Auxiliary Cartridge	DTCH - A	
DTC-H Telemetry Cartridge	DTCH - A	8812
Auxiliary Equipment:		
DTCH Telemetry Cartridge Housing	ECH - KC	9889

Company: **Beach Petroleum Ltd**

**Schlumberger**

Well: **Bodalla South 18**

Field: **Bodalla South**

Rig: **Hunt Rig 2**

Country: **Australia**

HALS-BHC-PEX-GR-ξ

Resistivity-Sonic-Density-Neutron-GR-ξ

Scale 1:200