

Company: CONOCOPHILLIPS CANADA RESOURCES CORP.

Well: COPRC LOON CREEK O-6

Field: LOON CREEK

Province: NORTHWEST TERRITORIES ***VERTICAL WELL***

DIPOLE SHEAR
SONIC IMAGER LOG

Province:	NORTHWEST TERRITORIES		
Field:	LOON CREEK		
Location:	UNIT O SECTION 6		
Well:	COPRC LOON CREEK O-6		
Company:	CONOCOPHILLIPS CANADA RESOURCES CO		
Location:		UNIT O SECTION 6	Elev. K.B. 257.60 m
		3000066510127000	G.L. 252.40 m
NORTHING: 7220618.3 EASTING: 593560.14			D.F. 257.30 m
Permanent Datum:	Ground Level	Elev.:	252.40
Log Measured From:	Kelly Bushing	5.20 m	above Perm.Datum
Drilling Measured From:	Kelly Bushing		
API Serial No.		Longitude: 127° 0' 30.7" W	Latitude: 65° 5' 51.5" N
470			

Logging Date	30-Jan-2013		
Run Number	1.1		
Depth Driller	600.00 m		
Schlumberger Depth	600.00 m		
Bottom Log Interval	587.20 m		
Top Log Interval	0.00 m		
Casing Driller Size @ Depth	508 mm @ 20.00 m		
Casing Schlumberger	20 m		
Bit Size	311.15 mm		
Type Fluid In Hole	GEL CHEM		
Density	Viscosity	88 s	
Fluid Loss	PH		
MUD			
Source of Sample			
RM @ Meas Temp	1.86 ohm.m @ 0 degC		
RMF @ Meas Temp	1.15 ohm.m @ 0 degC		
RMC @ Meas Temp	2.84 ohm.m @ 0 degC		
Source RMF	RMC	Calculated	
RM @ BHT	RMF @ BHT	0.76 @ 30.9	0.47 @ 30.9
Max Recorded Temperatures	30.9 degC 34 38		
Circulation Stopped	30-Jan-2013 02:30:00		
Logger on Bottom	Time	30-Jan-2013 13:05:01	
Unit Number	Location:	2187	JEFFREY TATLOCK
Recorded By		DAVID LAWRENCE	
Witnessed By			

Disclaimer

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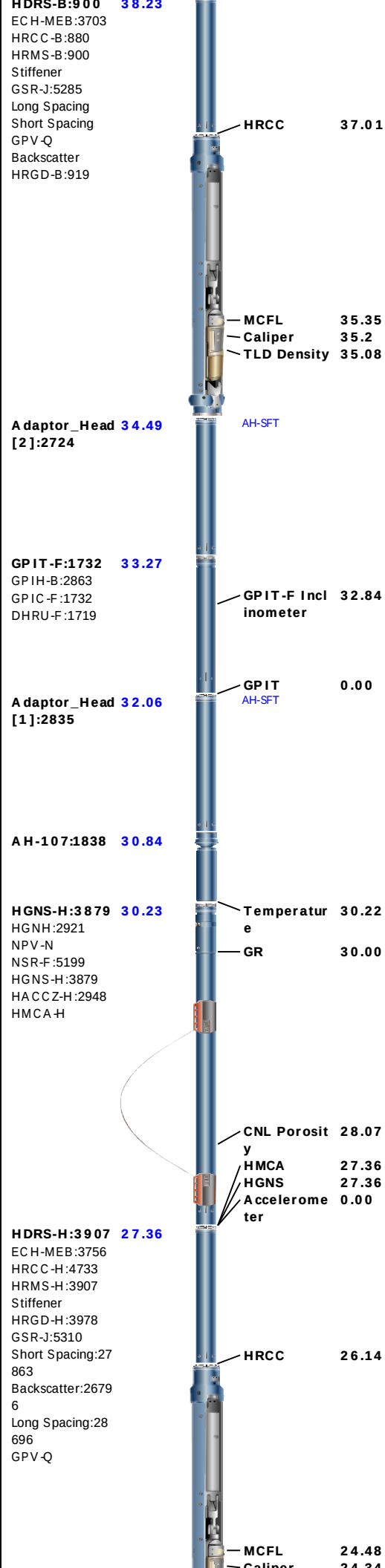
9.5 Parameter Listing

Borehole Fluids

Parameter(unit)	1.1					
Fluid Type	Water					
Fluid Name	GEL CHEM					
Max Recorded Temperatures (degC)	38					
Source of Sample	Flowline					
Salinity (ppm)	5500.91					
Density (kg/m3)	1150					
Funnel Viscosity (s)	88					
Fluid Loss (cm3)						
PH						
Date/Time Circulation Stopped	30-Jan-2013 02:30:00					
Date Logger on Bottom	30-Jan-2013					
Time Logger on Bottom	13:05:01					
Source RMF	Calculated					
RMC	Calculated					
RM @ Meas Temp (ohm.m@degC)	1.86 @ 0					
RMF @ Meas Temp (ohm.m@degC)	1.15 @ 0					
RMC @ Meas Temp (ohm.m@degC)	2.84 @ 0					
RM @ BHT (ohm.m@degC)	0.76 @ 30.9					
RMF @ BHT (ohm.m@degC)	0.47 @ 30.9					
RMC @ BHT (ohm.m@degC)	1.17 @ 30.9					
Total Solid (%)						
High Gravity Solids (%)						

Remarks and Equipment Summary

1.1: Toolstring				1.1: Remarks
Equip name Length MP name Offset LEH-QT:2135 41.71 LEH-QT:2135 EDTC-B:9048 40.82 EDTH-B:9060 EDTG-A:79224 EDTC-B:9048 HTBC-H:3701 38.84 ECH-TAA:1801 HMCA-H:3701 HMCA-H:3701 38.84 HMCA-H:3701 38.84		CTEM 39.75 ACCZ 0.00 HV 0.00 Gamma Ray 39.18 TelStatus 38.84 Temperature 38.23 HMCA 38.23		ALL PRESENTATIONS AND INTERVALS AS PER CLIENT REQUEST
				LOGGER REQUESTED AT: 07:15 30-JAN-2013
				LOGGER ARRIVED AT: 07:00 30-JAN-2013
				RIG READY AT: 07:45 30-JAN-2013
				RIG: BEAVER 2
				SLB CREW: GREG BOYD, MARK PORTER
				INDUCTION TOOL RUN WITH 38.1 MM STANDOFFS IN COMPUTE STANDOFF MO
				DSI RUN IN BCR MODE WITH MONOPOLE AND STONELY ACQUISITION ALSO
				DSI RUN WITH CMEZ CENTRALIZERS
				PPC RUN WITH 4 ARMS POWERED TO



LEVEL 2 TO CENTER DSI

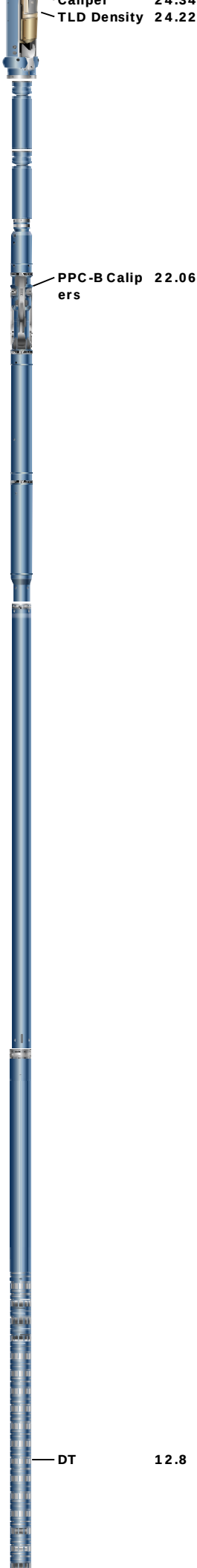
NEUTRON TOOL RUN WITH DUAL AXIS BOWSPRING

TLD2 RUN 90 DEGREES OFFSET FROM TLD

PEX TOOLS DECOUPLED FROM SONIC TOOL USING KNUCKLES

RUGOSE HOLE CREATES ELEVATED DENSITY CORRECTIONS, BOTH DENSITY TOOLS DATA AGREE

PH AND FLUID LOSS VALUES NOT PROVIDED



AH-184[2]:38 23.63
14

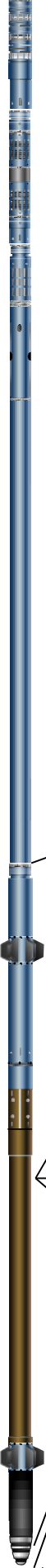
AH-184[1]:38 23.02
03

PPC-B:8221 22.41
PPC-B:8221

PPC-B Calipers 22.06

DSST-B:8234 20.42
ECH-SD:8220
SPAC-B:8234
SMDR-BD:8312
SSIJ-BA:8235
SMDX-AA:8227

DT 12.8



AIT-M:135
AMIS:135
AMRM:135

4.88

PWF 4.88

Power Supply 2.41
Induction 2.41
Temperature 2.41

SP 0.03
Mud Resistivity 0.00
Head Tension
TOOL_ZERO

Lengths are in m
Maximum Outer Diameter = 177.800 mm
Line: Sensor Location, Value: Gating Offset
All measurements are relative to TOOL_ZERO

Depth Summary

Depth Control Parameters

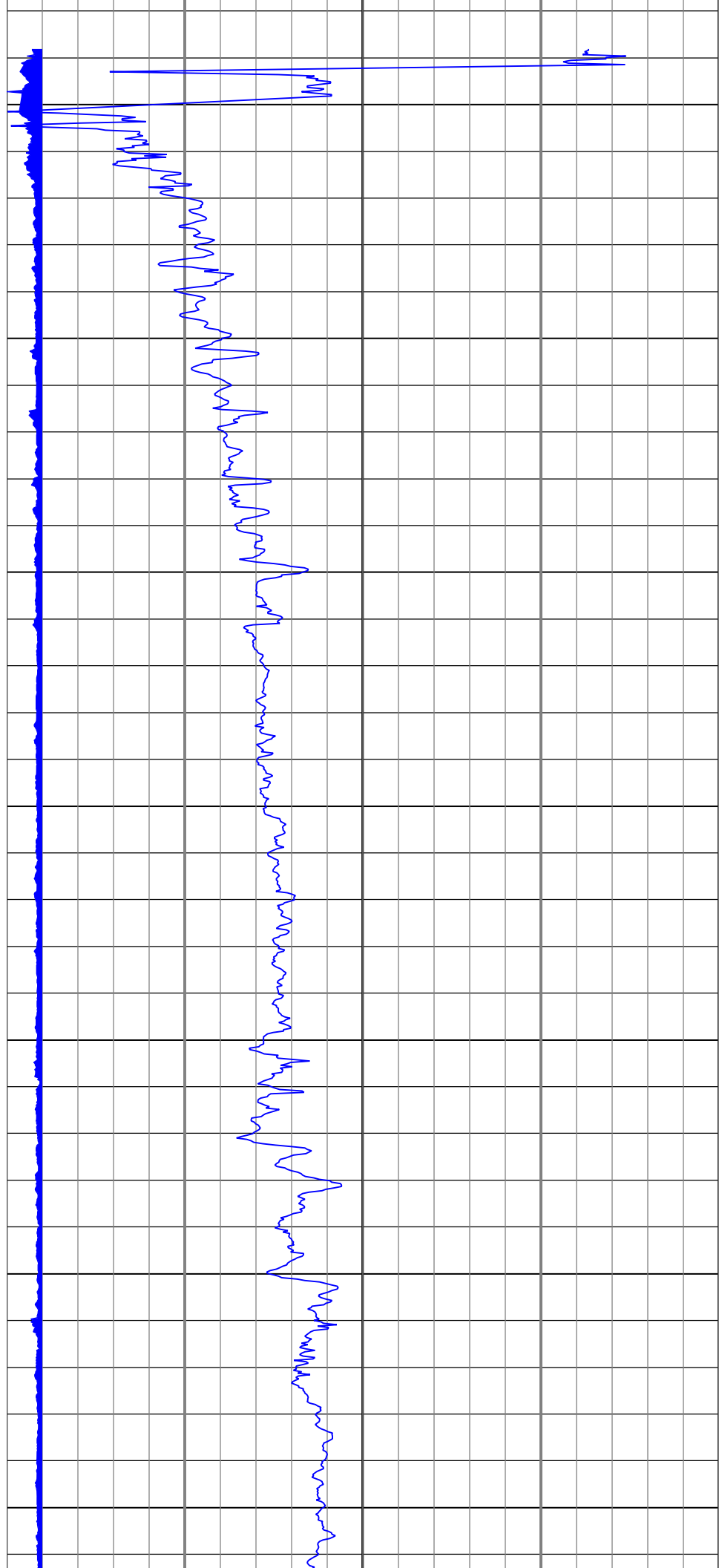
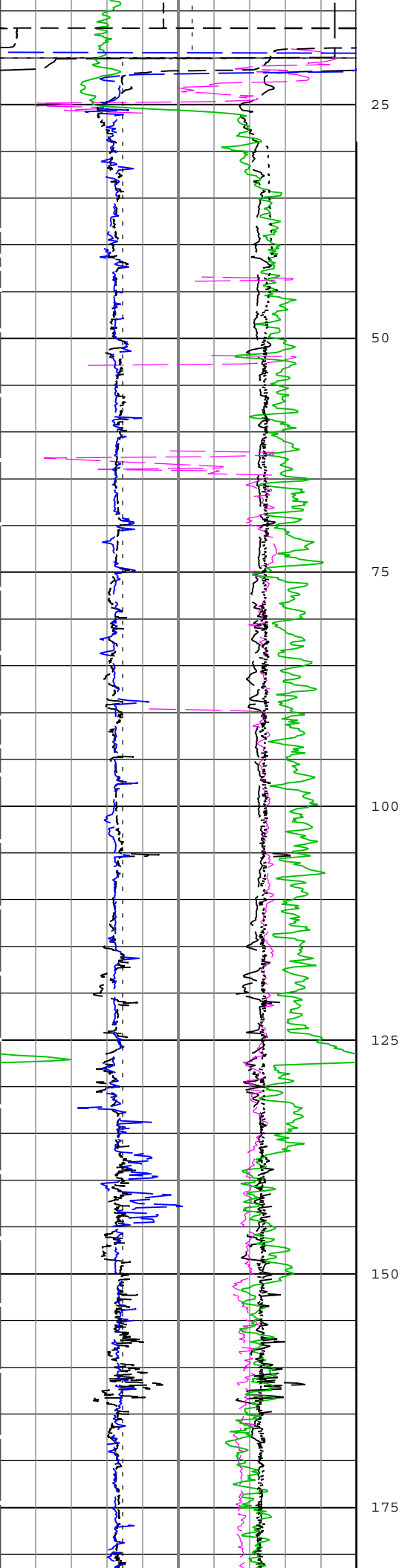
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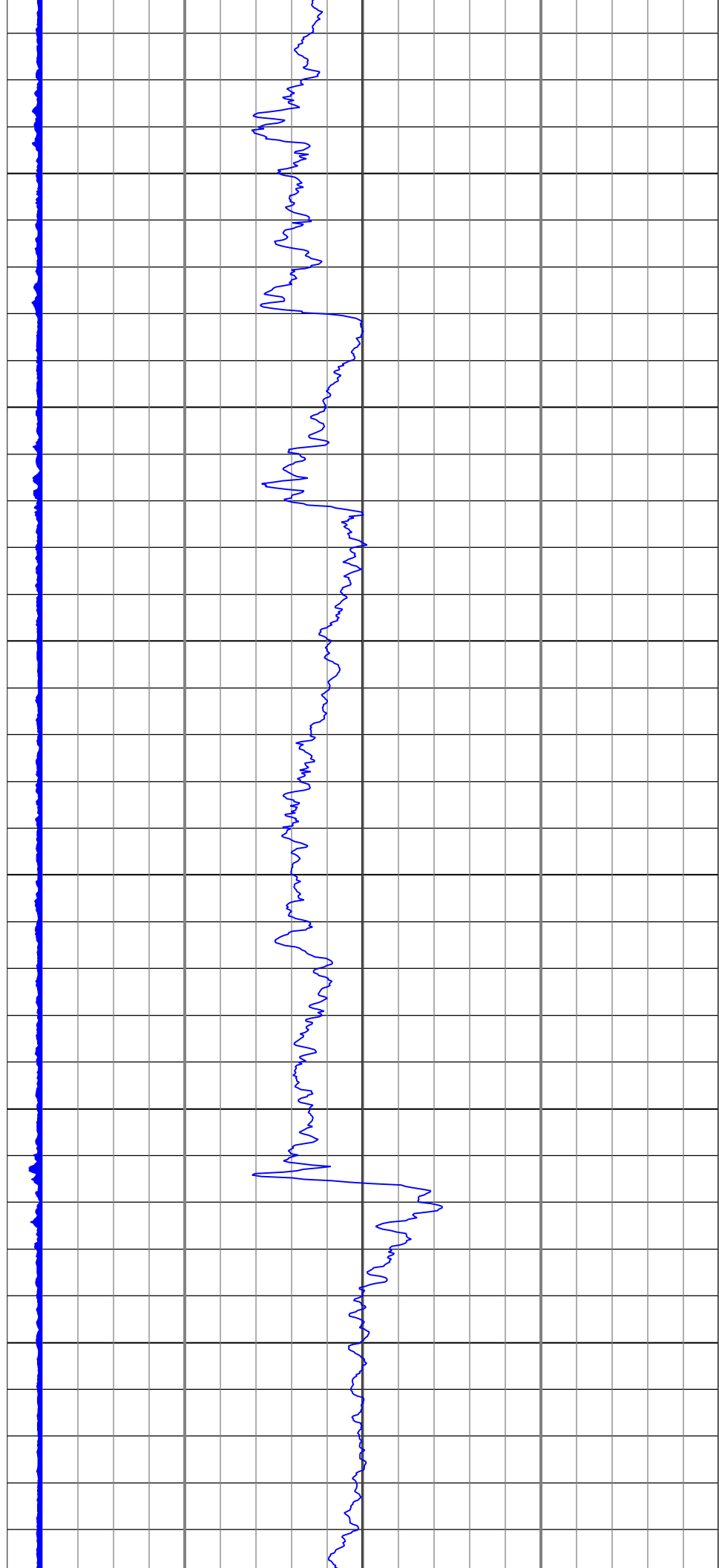
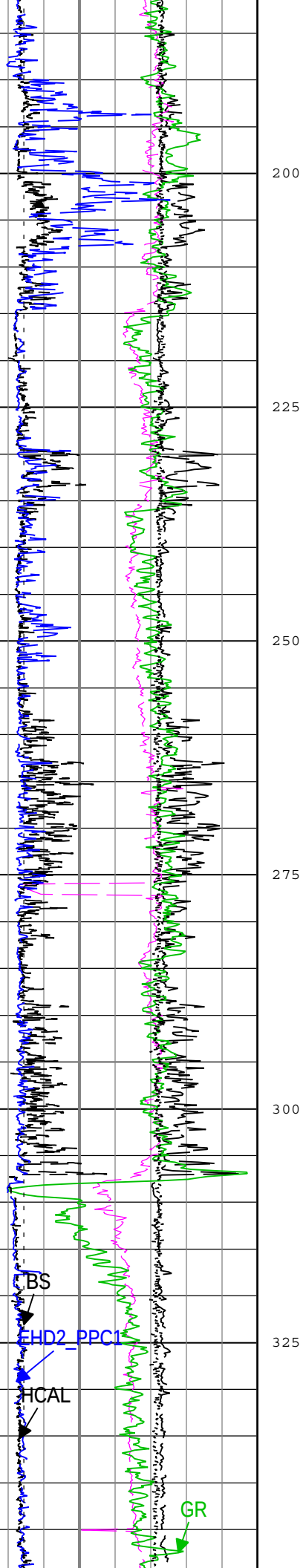
Conveyance Type	Wireline		
Log Sequence	FIRST LOG IN THE WELL		
Rig Up Length at Surface (m)	0.00		
Rig Up Length at Bottom (m)	0.00		
Rig Up Length Correction (m)	0.00		
Stretch Correction (m)	0.00		
Tool Zero Reference Check at Surface (m)	0.10		
Depth Remark Parameters	1.1		
Depth Remark 1	SCHLUMBERGER DEPTH CONTROL PROCEDURES FOLLOWED		
Depth Remark 2	IDW USED AS PRIMARY DEPTH CONTROL		
Depth Remark 3	Z-CHART USED AS SECONDARY DEPTH CONTROL		
Depth Remark 4	ALL LOGS CORRELATED TO DOWN LOG OVER BOTTOM 100 M		
Depth Measuring Device	1.1		
Type	IDW-B		
Serial Number	1734		
Calibration Date	13-NOV-2012		
Calibrator Serial Number	4		
Calibration Cable Type	7-46 PXS		
Wheel Correction 1	-5		
Wheel Correction 2	-4		
Tension Device	1.1		
Type	CMTD-B/A		
Serial Number	1223		
Calibration Date	17-JAN-2013		
Calibrator Serial Number	1142		
Calibration Points	10		
Calibration RMS	26		
Calibration Peak Error	45		
Logging Cable	1.1		
Type	7-46P-XS		
Serial Number	6075		
Logging Cable Length (m)	4500.00		

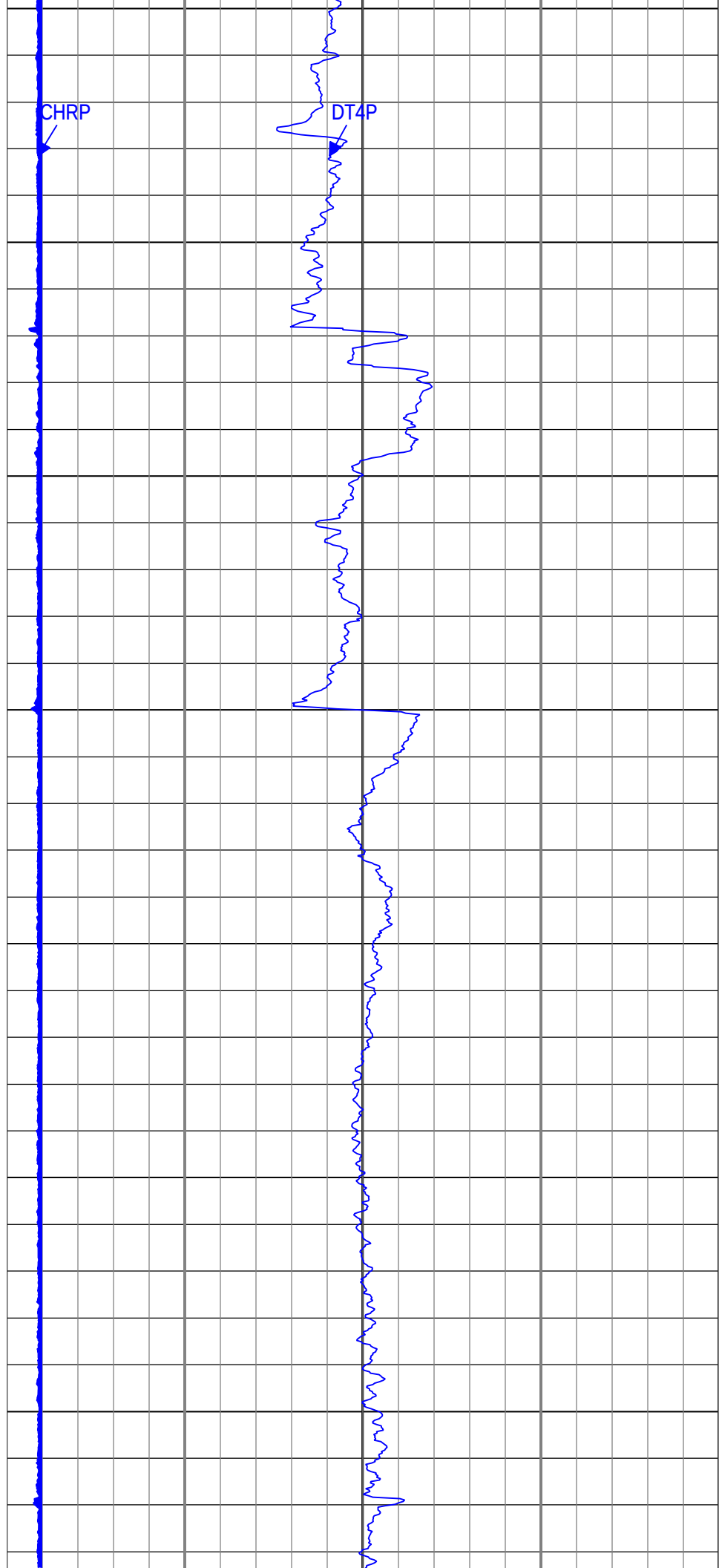
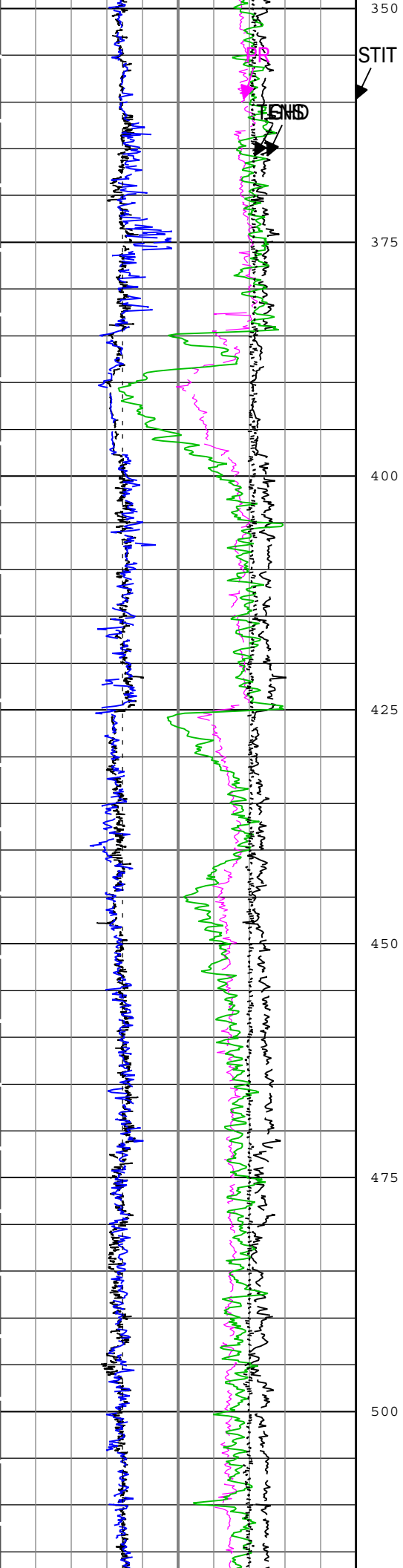
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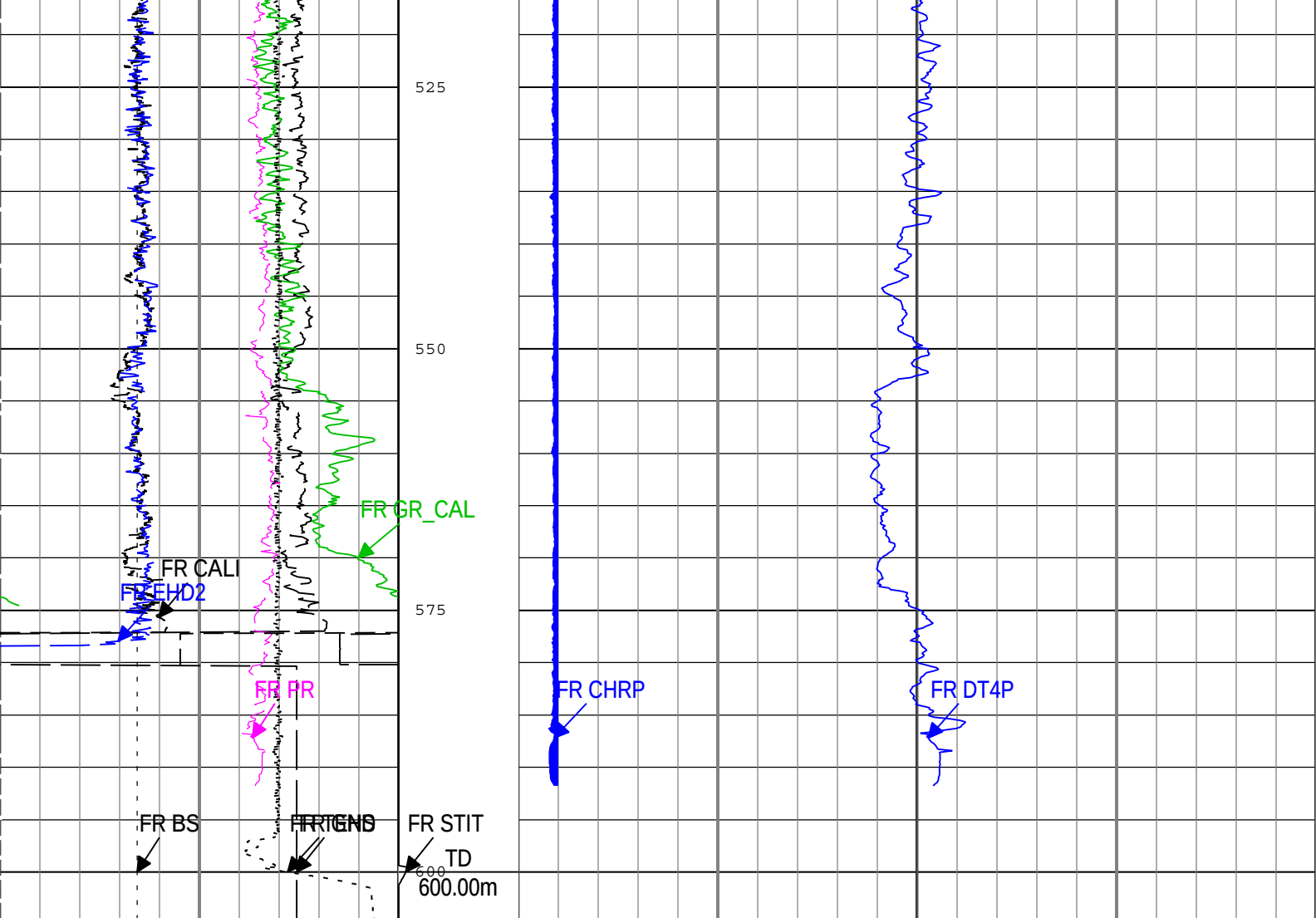
Integration Summary				
Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
Software Version				
Acquisition System		Version		
MaxWell		3.1.9755.0		
Application Patch		SP-20120723-3.1.9755.1112		
		EXP_APL-MASTAXIS-3.1.9755.1221		
		EXP_APL-NEXTA-3.1.9755.1340		

Computation	Description	Version
Borehole	Borehole Ensemble provides common Borehole Parameters and Channels	3.1.0755.0









MAIN PASS: DIPOLE SONIC - DELTA-T

Borehole Diameter (GHD)		Stuck Tool Indicator, Total (STIT)	Delta-T Compressional - Monopole P S (DT4P) DSST-B	
125	mm		500	us/m
Poisson s Ratio (PR) DSST-B		0 m 20	Low Comp Coherence Flag	
0	0.5			
GR		Cable Drag		
0	150	Tool_Tot. Drag		
HCAL				
225	mm			
EHD2_PPC1				
225	mm			
Bit Size (BS)				
225	mm			
Cable Tension (TENS)				
25000	N	0		

TIME_1900 - Time Marked every 60.00 (s)

Description: DSST P&S VDL Color Format: Log (DSST Sonic 600) Index Scale: 1:600 Index Unit: m Index Type: Measured Depth Creation Date: 30-Jan-2013 18:38:11

Channel Processing Parameters				
Parameter	Description	Tool	Value	Unit
BHS	Borehole Status (Open or Cased Hole)	Borehole	Depth Zoned	
BS	Bit Size	WLSESSION	Depth Zoned	mm

CALI_SHIFT	CALI Supplementary Offset	HDRS-H	9.6	mm
CBLO	Casing Bottom (Logger)	WLSESSION	20	m
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DFD	Drilling Fluid Density	Borehole	1150	kg/m3
DSST_DTCS	Compressional Delta-T Source for DTCO Channel	DSST-B	PS Comp	
DSST_DTSS	Shear Delta-T Source for DTSM Channel	DSST-B	Upper Dipole	
DTMD	Borehole Fluid Slowness	Borehole	675.85	us/m
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	CALI	
SBO2	STC Search Band Offset - Upper Dipole	DSST-B	Time Zoned	us
SBO4	STC Search Band Offset - Monopole P&S	DSST-B	Time Zoned	us
SBW2	STC Search Bandwidth - Upper Dipole	DSST-B	Time Zoned	us
SBW4	STC Search Bandwidth - Monopole P&S	DSST-B	Time Zoned	us
SEMTHR2	STC Semblance Threshold - Upper Dipole	DSST-B	0.35	
SEMTHR4	STC Semblance Threshold - Monopole P & S	DSST-B	0.35	
SFTY	Slowness Formation Type (Fast, Intermediate, Slow, etc.)	Borehole	Intermediate	
SLL2	STC Slowness Lower Limit - Upper Dipole	DSST-B	262.47	us/m
SLL4	STC Slowness Lower Limit - Monopole P&S	DSST-B	131.23	us/m
SPS1	Slowness Processing Switch for SAM1	DSST-B	On	
SPS2	Slowness Processing Switch for SAM2	DSST-B	On	
SPS4	Slowness Processing Switch for SAM4	DSST-B	On	
SST2	STC Slowness Step - Upper Dipole	DSST-B	13.12	us/m
SST4	STC Slowness Step - Monopole P&S	DSST-B	6.56	us/m
SSW2	STC Source Waveform - Upper Dipole	DSST-B	Odd in SAMX	
SUL2	STC Slowness Upper Limit - Upper Dipole	DSST-B	1771.65	us/m
SUL4	STC Slowness Upper Limit - Monopole P&S	DSST-B	787.4	us/m
SWD2	STC Slowness Width - Upper Dipole	DSST-B	196.85	us/m
SWD4	STC Slowness Width - Monopole P&S	DSST-B	65.62	us/m
TD	Total Measured Depth	Borehole	600	m
TLL2	STC Time Lower Limit - Upper Dipole	DSST-B	Time Zoned	us
TLL4	STC Time Lower Limit - Monopole P&S	DSST-B	400	us
TRCLL2	Tracking Compressinal Lower Limit - Upper Dipole	DSST-B	185.91	us/m
TRCLL4	Tracking Compressinal Lower Limit - Monopole PS	DSST-B	185.91	us/m
TRCUL2	Tracking Compressinal Upper Limit - Upper Dipole	DSST-B	418.31	us/m
TRCUL4	Tracking Compressinal Upper Limit - Monopole PS	DSST-B	418.31	us/m
TRSLL2	Tracking Shear Lower Limit - Upper Dipole	DSST-B	0	us/m
TRSLL4	Tracking Shear Lower Limit - Monopole PS	DSST-B	0	us/m
TRSUL2	Tracking Shear Upper Limit - Upper Dipole	DSST-B	0	us/m
TRSUL4	Tracking Shear Upper Limit - Monopole PS	DSST-B	0	us/m
TST2	STC Time Step - Upper Dipole	DSST-B	Time Zoned	us
TST4	STC Time Step - Monopole P&S	DSST-B	100	us
TUL2	STC Time Upper Limit - Upper Dipole	DSST-B	Time Zoned	us
TUL4	STC Time Upper Limit - Monopole P&S	DSST-B	Time Zoned	us
TWD2	STC Time Width - Upper Dipole	DSST-B	Time Zoned	us
TWD4	STC Time Width - Monopole P&S	DSST-B	Time Zoned	us
TWI2	STC Integration Time Window - Upper Dipole	DSST-B	Time Zoned	us
TWI4	STC Integration Time Window - Monopole P&S	DSST-B	320	us
XFH2	STC Filter High - Upper Dipole	DSST-B	Time Zoned	Hz
XFH4	STC Filter High - Monopole P & S	DSST-B	16000	Hz
XFL2	STC Filter Low - Upper Dipole	DSST-B	250	Hz

XFL4	STC Filter Low - Monopole P & S	DSST-B	4000	Hz
XFS2	STC Filter Size - Upper Dipole	DSST-B	101	
XFS4	STC Filter Size - Monopole P & S	DSST-B	49	

Depth Zone Parameters

Parameter	Value	Start (m)	Stop (m)
BHS	Cased	0	20
BHS	Open	20	604.6
BS	609.6	0	20
BS	311.15	20	604.6
All depth are actual.			

Time Zone Parameters					
Parameter	Value	Start Time	Stop Time	Start Depth (m)	Stop Depth (m)
SBO2	1520	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
SBO2	1640	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
SBO4	390	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
SBO4	490	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
SBW2	8080	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
SBW2	8280	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
SBW4	2460	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
SBW4	2660	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
TLL2	1134	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
TLL2	1200	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
TST2	378	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
TST2	400	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
TUL2	12096	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
TUL2	12400	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
TUL4	4100	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
TUL4	4300	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
TWD2	6060	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
TWD2	6210	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
TWD4	1844	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
TWD4	1994	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
TWI2	1512	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
TWI2	1400	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
XFH2	2612.24	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
XFH2	1333.33	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
All depth are at tool zero.					

Tool Control Parameters				
Parameter	Description	Tool	Value	Unit
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	548.64	m/h
SAM2	Sonic Acquisition Mode 2 - Upper Dipole Mode	DSST-B	Off	
SAM4	DSST Sonic Acquisition Mode 4 - Monopole Mode for P&S	DSST-B	Odd	
SAMX	Sonic Acquisition Mode X - Both Dipoles and Monopole Modes for Expert	DSST-B	BCR	

Integration Summary									
Output Channel(s)		Output Description		Input Parameter			Output Value		Unit
Software Version									
Acquisition System						Version			
MaxWell						3.1.9755.0			
Application Patch						SP-20120723-3.1.9755.1112			
						EXP_APL-MASTAXIS-3.1.9755.1221			
						EXP_APL-NEXTA-3.1.9755.1340			
Computation		Description						Version	
Borehole		Borehole Ensemble provides common Borehole Parameters and Channels						3.1.9755.0	
DepthCorrection		DepthCorrection						3.1.9755.0	
Tool Elements		Description			Software Version		Firmware Version		
HRCC-H		HILT High-Resolution Control Cartridge, 150 degC			3.1.9755.0		2.0		
PPC-B		PPC-B Element is used for usual logging at wellsite and check/diagnostics.			3.1.9755.0		1.0		
HGNS-H		HILT Gamma-Ray and Neutron Sonde, 150 degC			3.1.9755.0		2.0		
SPAC-B		Digitizing Sonic Logging Cartridge - B			3.1.9755.0				
Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Depth Shift	Include Parallel Data	
1.1	Log[1]:Down	Down	75.78 m	597.23 m	30-Jan-2013 12:45:33 PM	30-Jan-2013 1:05:03 PM	0.00 m	true	
All depths are referenced to toolstring zero									
Log									
1.1: Log[1]:Down									
Description: DSST P&S VDL Color Format: Log (DSST Sonic 240) Index Scale: 1:240 Index Unit: m Index Type: Measured Depth Creation Date: 30-Jan-2013 18:38:17									
Channel	Source		Sampling						
BS	Borehole		6in						
CALI	HDRS-H:HRCC-H:HRCC-H		1in						
CHRP	DSST-B:SPAC-B:SPAC-B		6in						
DT4P	DSST-B:SPAC-B:SPAC-B		6in						
EHD2	PPC-B:PPC-B:PPC-B		6in						
GHD	Borehole		6in						
GR_CAL	HGNS-H:HGNS-H:HGNS-H		6in						
PR	DSST-B:SPAC-B:SPAC-B		6in						
STIT	DepthCorrection		6in						
TENS	WLWorkflow		1in						
TIME_1900	WLWorkflow		0.1in						
TIME_1900 - Time Marked every 60.00 (s)									
		Cable Tension (TENS)							
		25000 N 0							
Borehole Diameter (GHD)									
125		mm						375	
Poisson s Ratio (PR) DSST-B									
0		0.5							
GR									
0		gAPI		150		Stuck Tool			

HCAL			Indicator, Total (STIT)
225	mm	475	0 m 20
EHD2_PPC1			
225	mm	475	
Bit Size (BS)			
225	mm	475	

Cable Drag

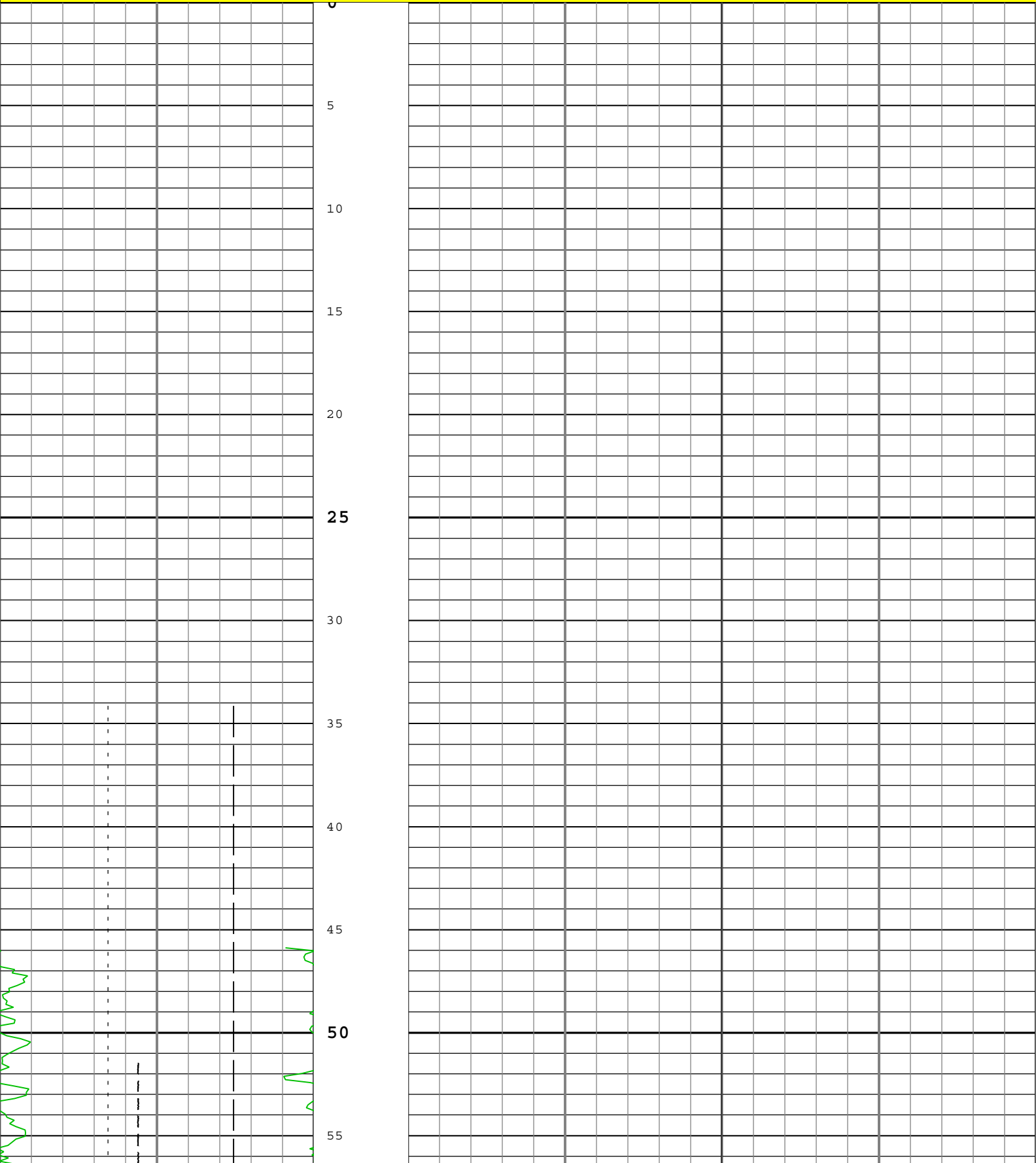
Low Comp
Coherence Flag

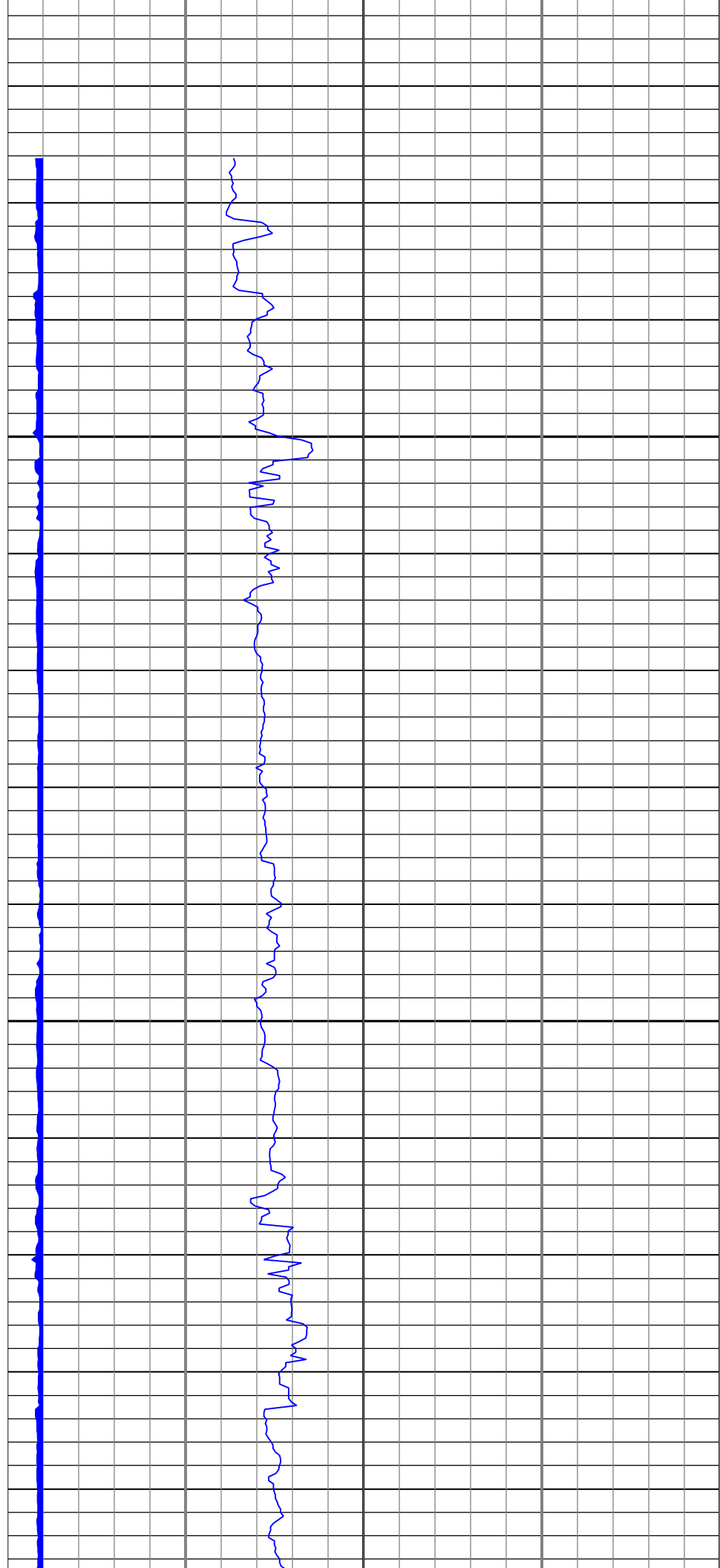
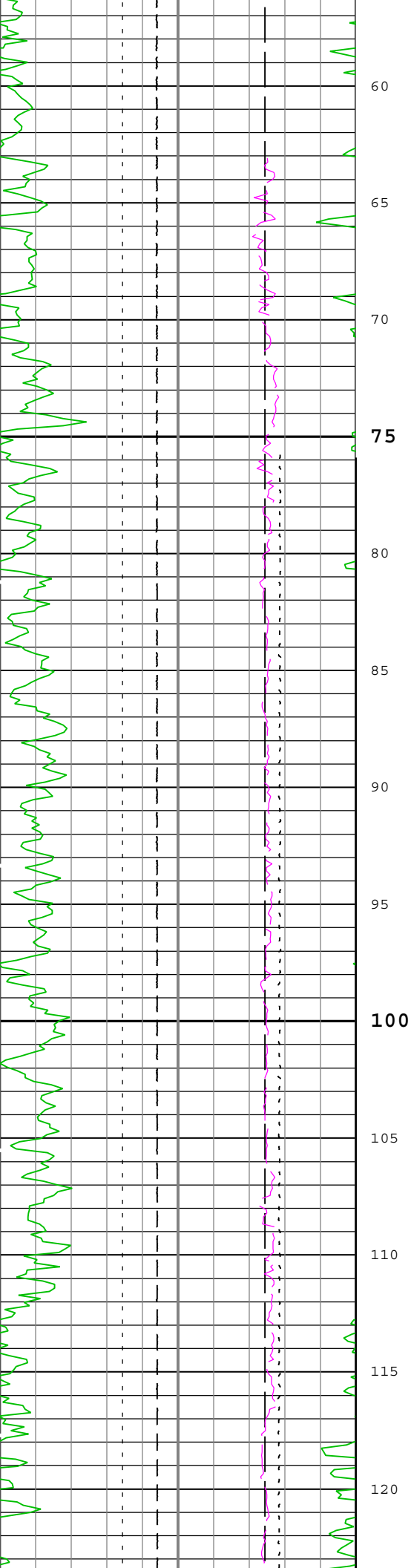
Tool_Tot.
Drag

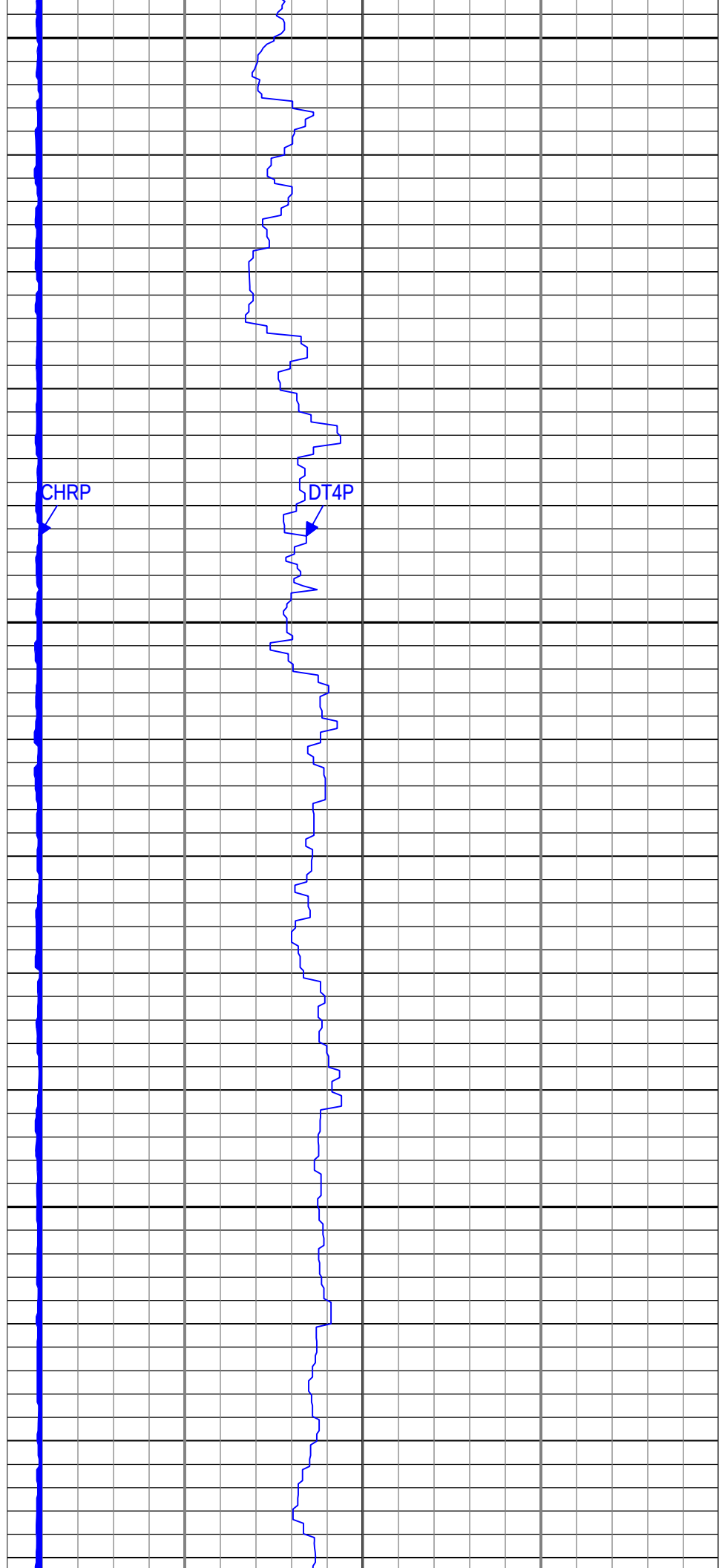
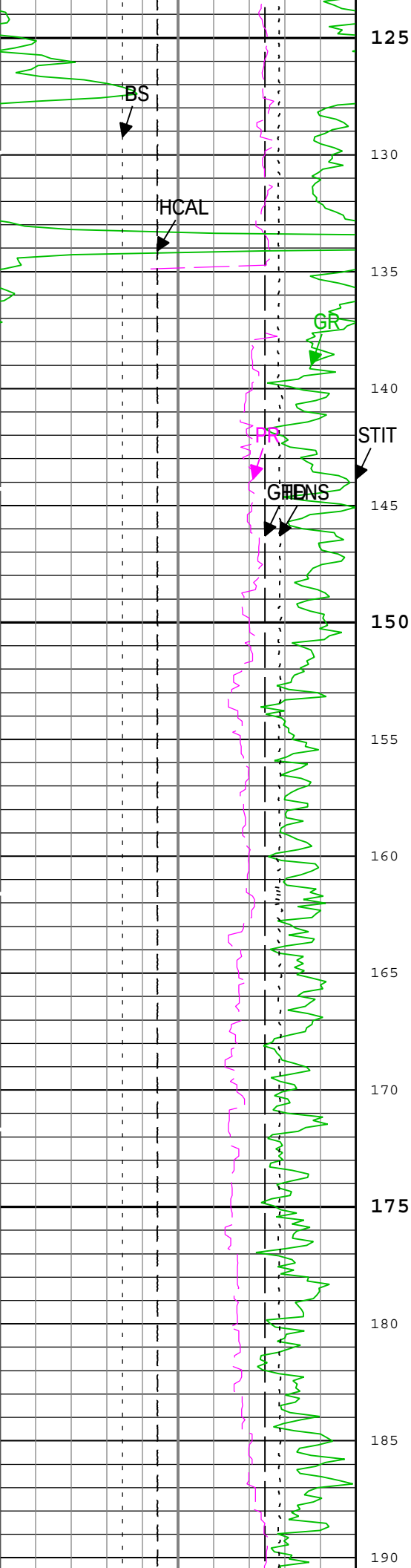
Delta-T Compressional - Monopole P S (DT4P) DSST-B

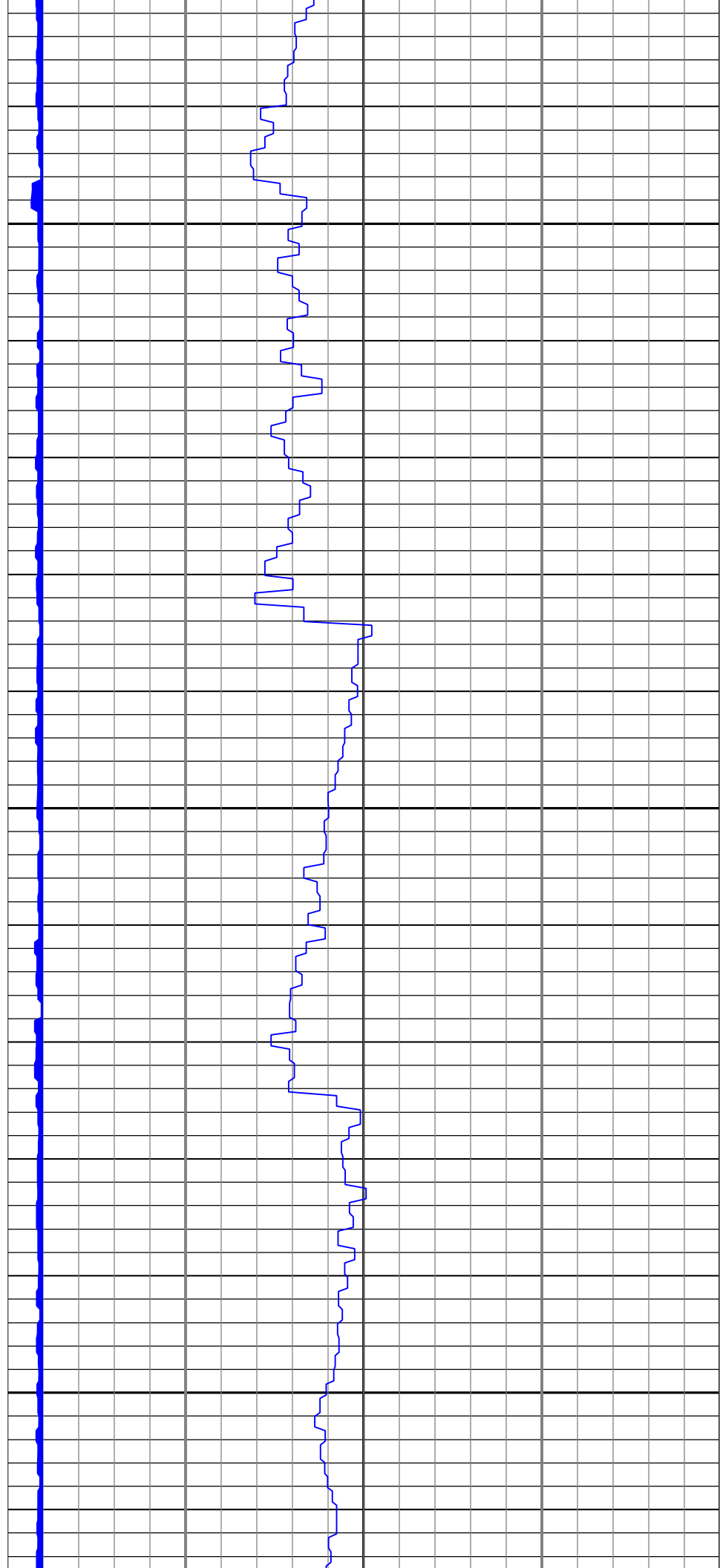
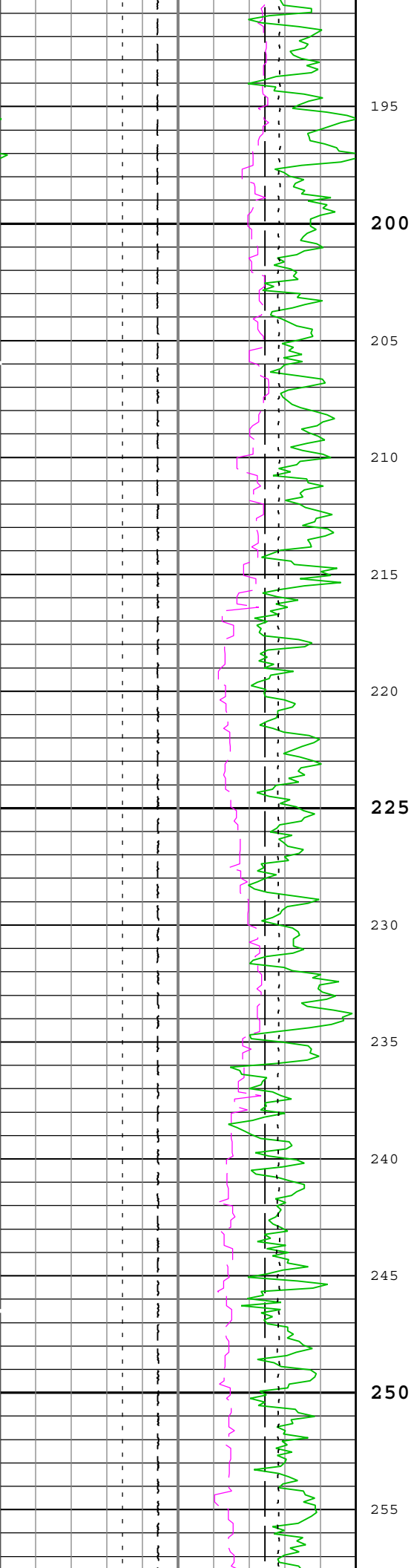
500 us/m 100

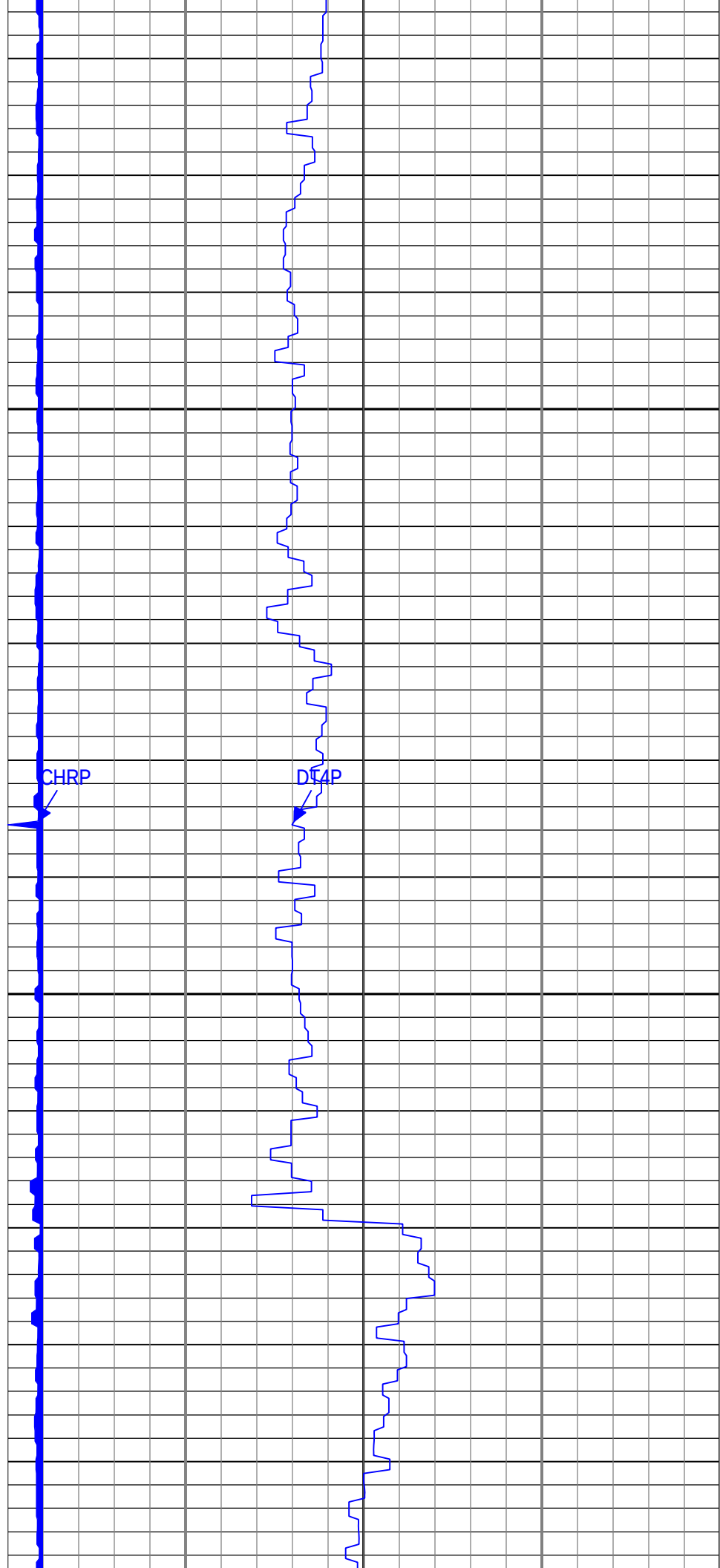
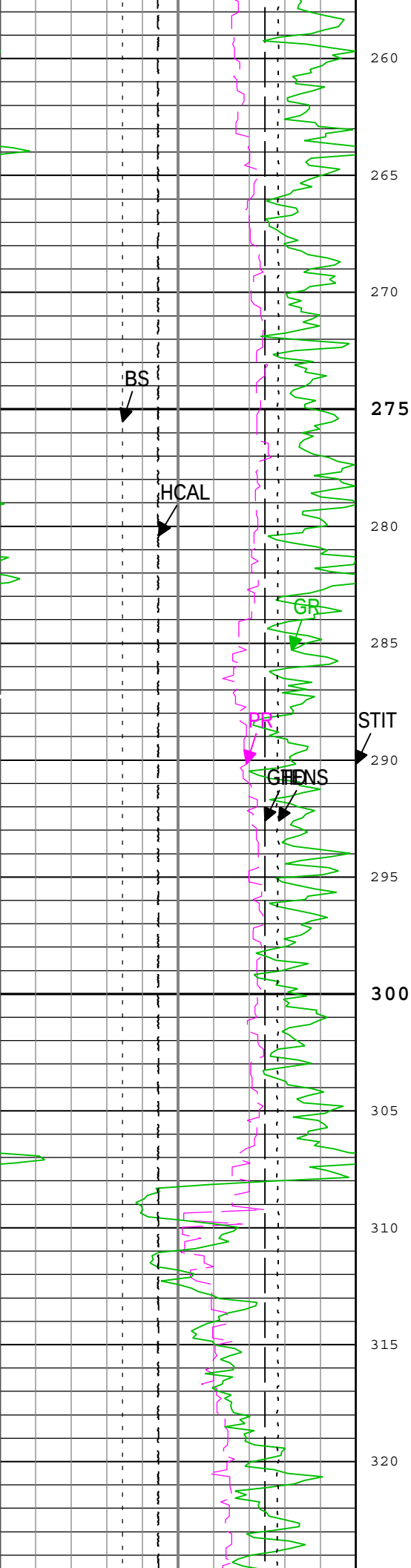
MAIN PASS: DIPOLE SONIC - DELTA-T

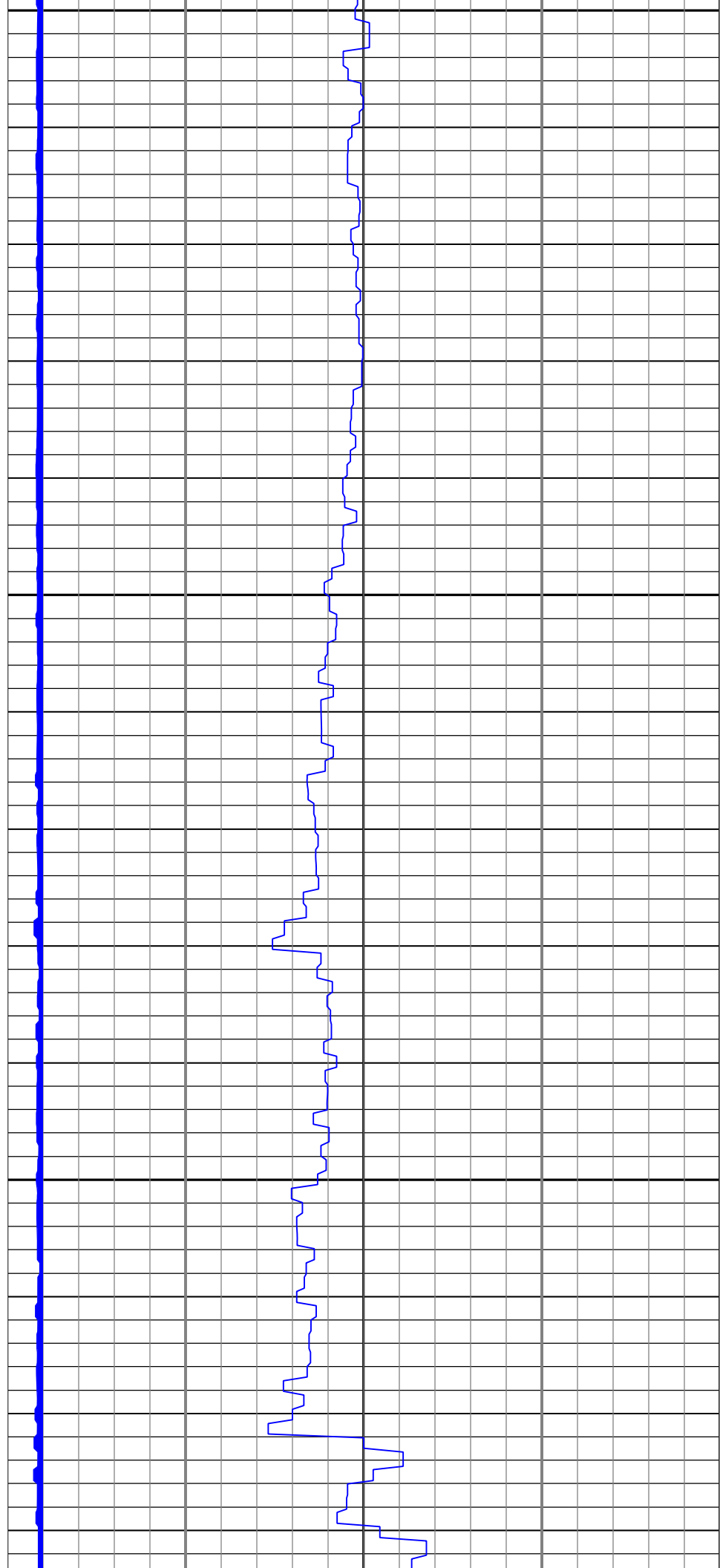
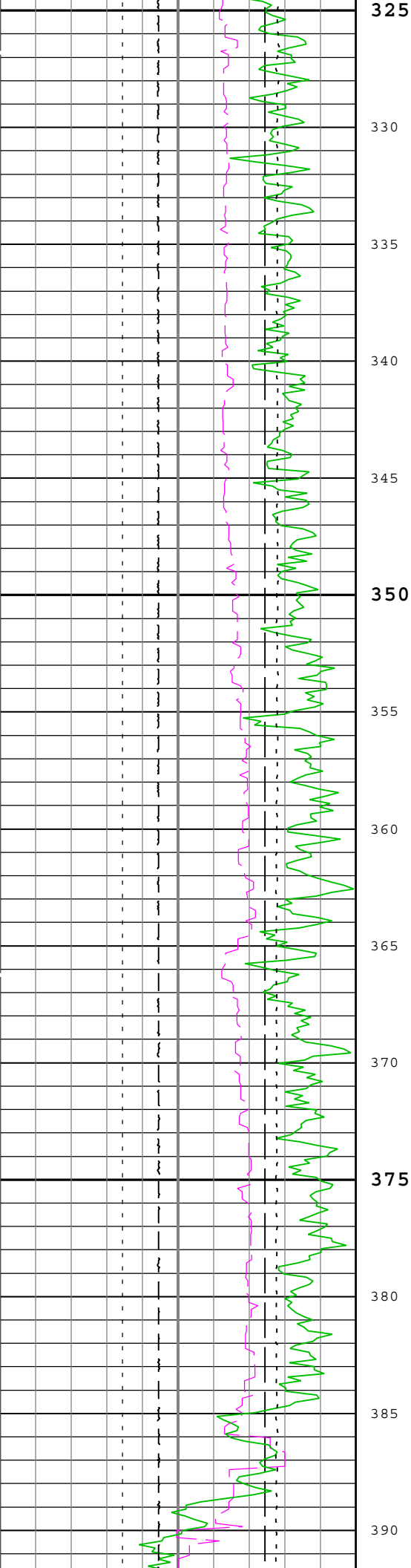


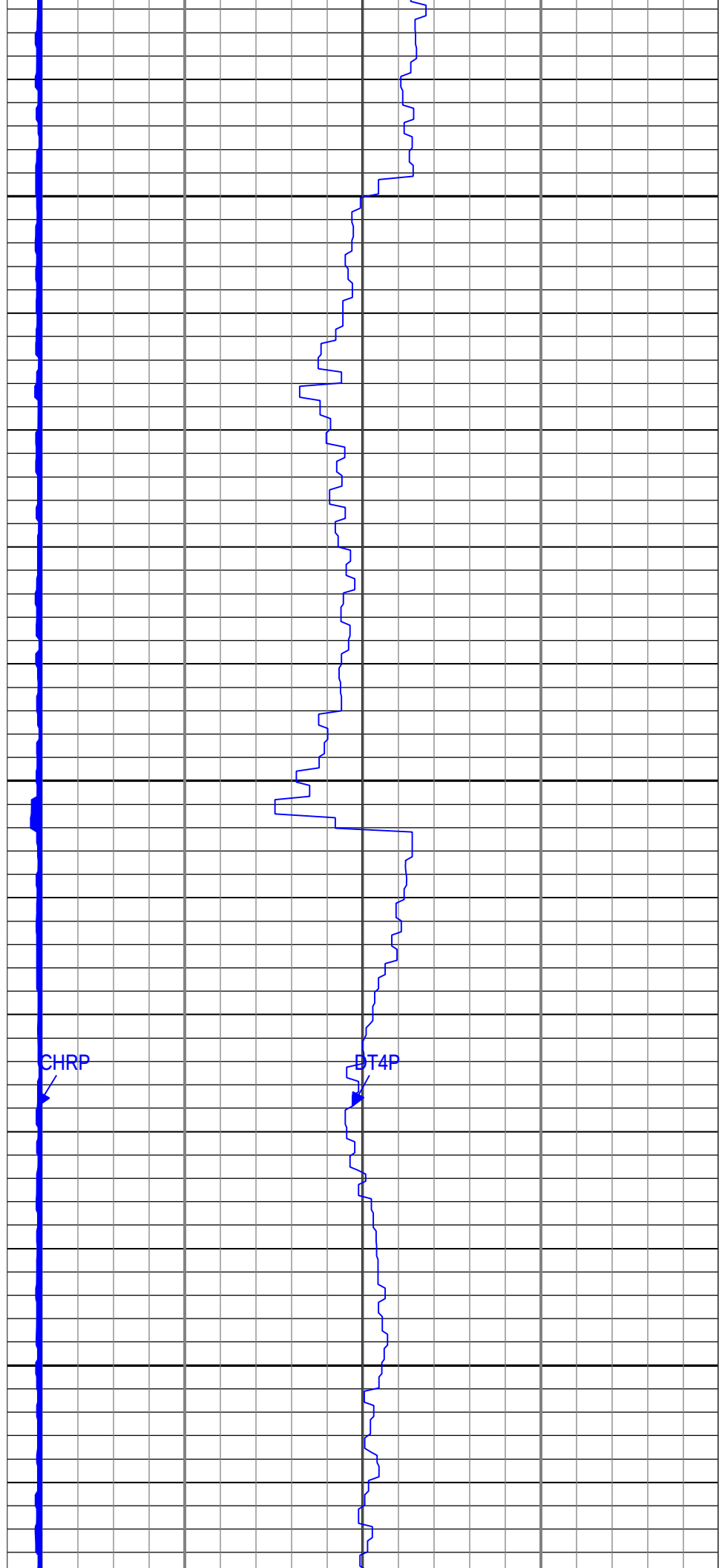
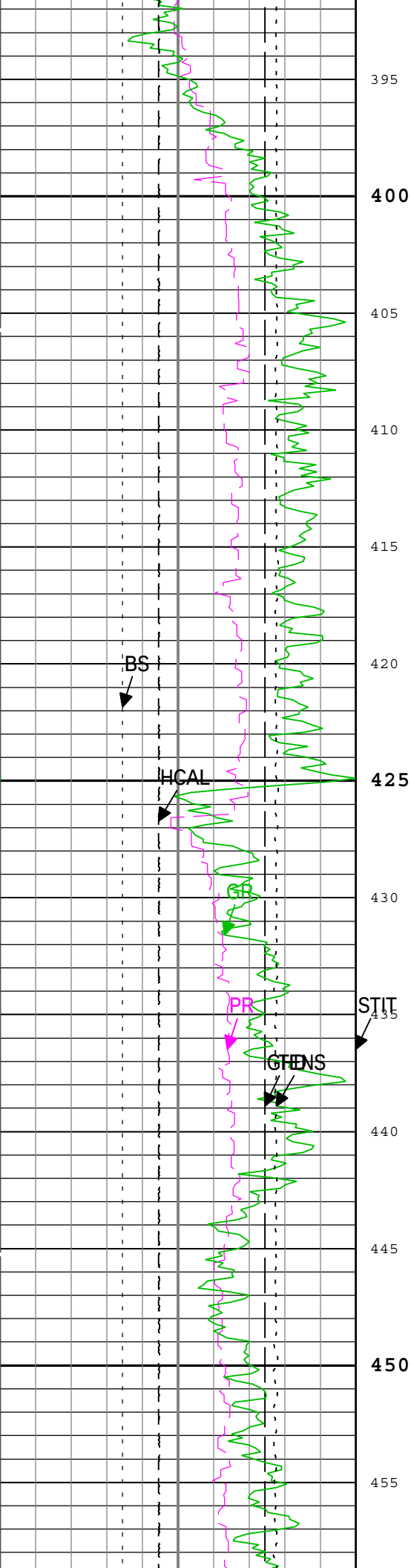


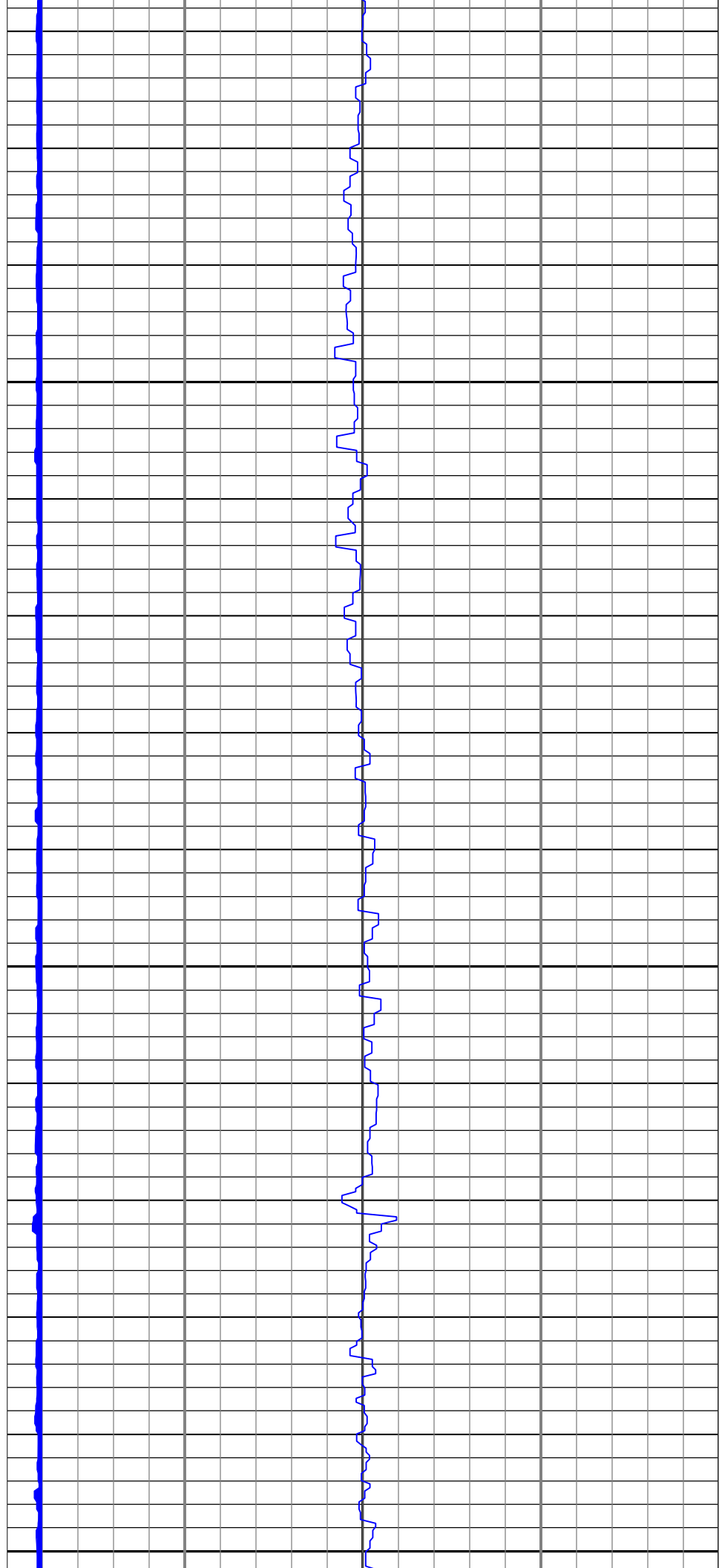
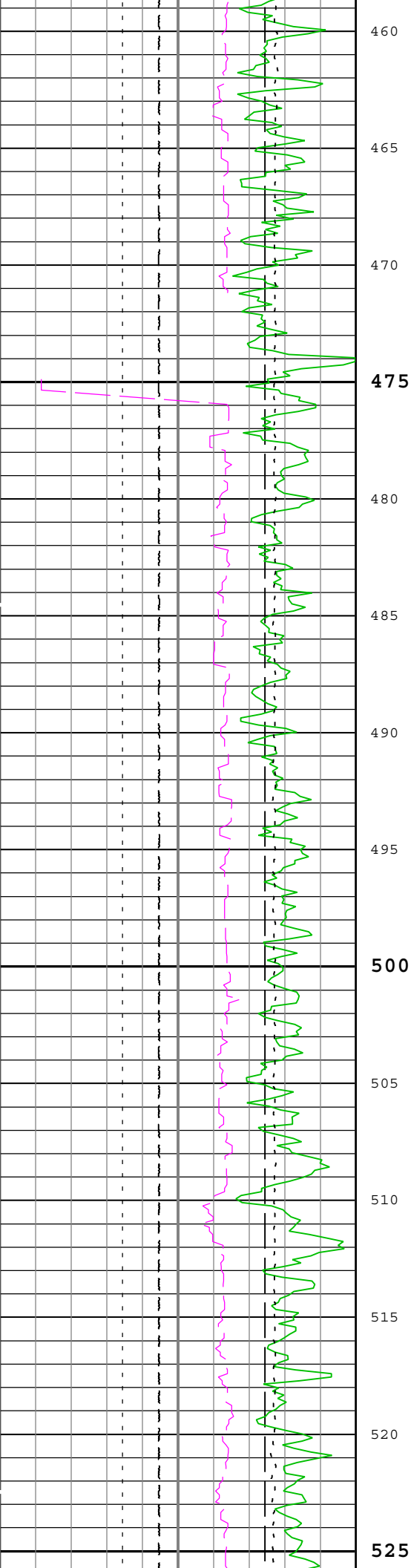


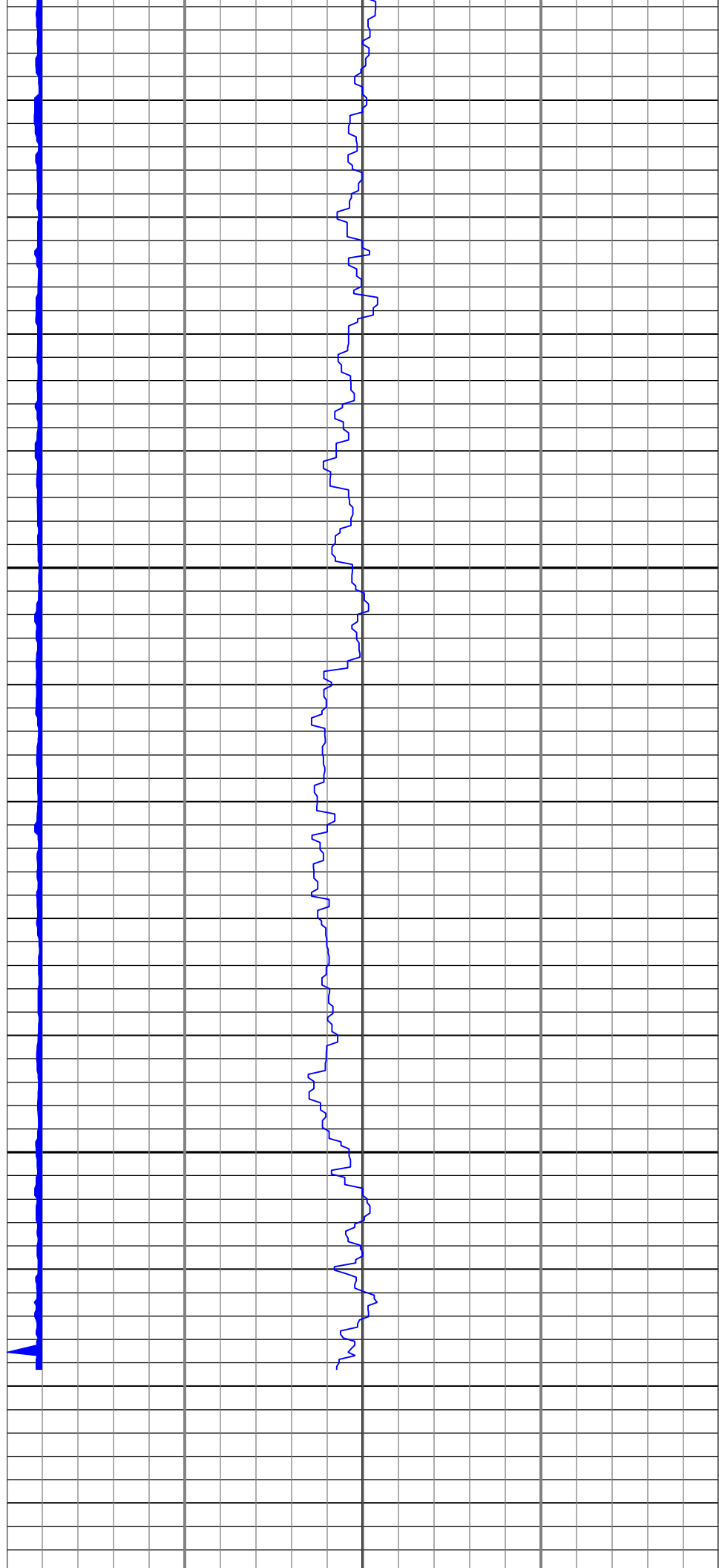
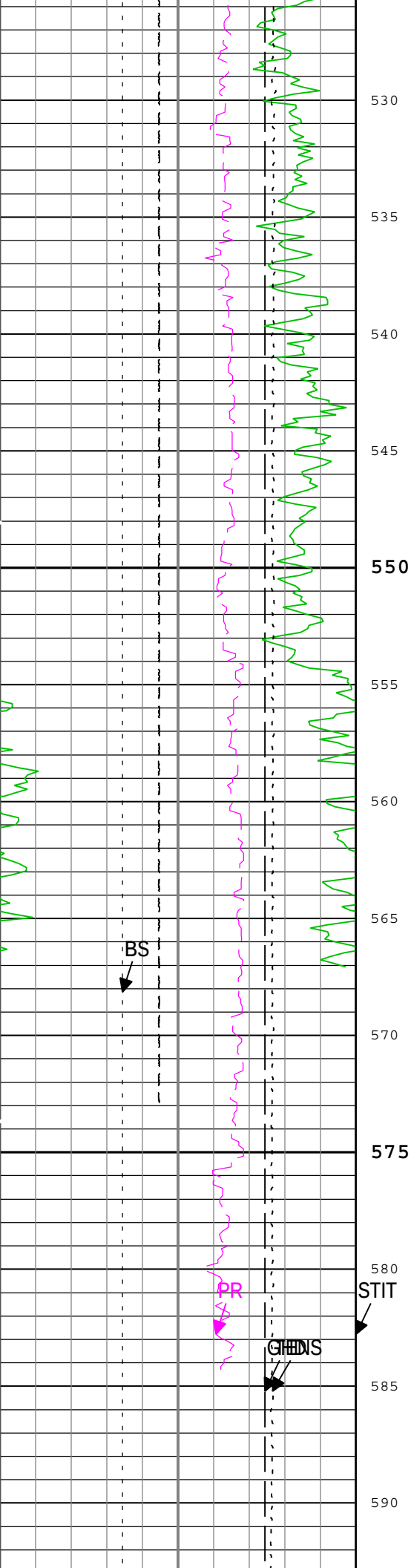












Stuck Tool Indicator, Total (STIT)	0	m	20
Cable Drag			
Tool_Tot. Drag			

500 us/m 100

Low Comp
Coherence Flag

Description: DSST P&S VDL Color Format: Log (DSST Sonic 240) Index Scale: 1:240 Index Unit: m Index Type: Measured Depth Creation Date: 30-Jan-2013 18:38:17

Channel Processing Parameters

Parameter	Description	Tool	Value	Unit
BHS	Borehole Status (Open or Cased Hole)	Borehole	Depth Zoned	
BS	Bit Size	WLSESSION	Depth Zoned	mm
CALI_SHIFT	CALI Supplementary Offset	HDRS-H	9.6	mm
CBLO	Casing Bottom (Logger)	WLSESSION	20	m
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DFD	Drilling Fluid Density	Borehole	1150	kg/m3
DSST_DTCS	Compressional Delta-T Source for DTCO Channel	DSST-B	PS Comp	
DSST_DTSS	Shear Delta-T Source for DTSM Channel	DSST-B	Upper Dipole	
DTMD	Borehole Fluid Slowness	Borehole	675.85	us/m
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	CALI	
SBO2	STC Search Band Offset - Upper Dipole	DSST-B	1520	us
SBO4	STC Search Band Offset - Monopole P&S	DSST-B	390	us
SBW2	STC Search Bandwidth - Upper Dipole	DSST-B	8080	us
SBW4	STC Search Bandwidth - Monopole P&S	DSST-B	2460	us
SEMTHR2	STC Semblance Threshold - Upper Dipole	DSST-B	0.35	
SEMTHR4	STC Semblance Threshold - Monopole P & S	DSST-B	0.35	
SFTY	Slowness Formation Type (Fast, Intermediate, Slow, etc.)	Borehole	Intermediate	
SLL2	STC Slowness Lower Limit - Upper Dipole	DSST-B	262.47	us/m
SLL4	STC Slowness Lower Limit - Monopole P&S	DSST-B	131.23	us/m
SPS1	Slowness Processing Switch for SAM1	DSST-B	On	
SPS2	Slowness Processing Switch for SAM2	DSST-B	On	
SPS4	Slowness Processing Switch for SAM4	DSST-B	On	
SST2	STC Slowness Step - Upper Dipole	DSST-B	13.12	us/m
SST4	STC Slowness Step - Monopole P&S	DSST-B	6.56	us/m

SSW2	STC Source Waveform - Upper Dipole	DSST-B	Odd in SAMX	
SUL2	STC Slowness Upper Limit - Upper Dipole	DSST-B	1771.65	us/m
SUL4	STC Slowness Upper Limit - Monopole P&S	DSST-B	787.4	us/m
SWD2	STC Slowness Width - Upper Dipole	DSST-B	196.85	us/m
SWD4	STC Slowness Width - Monopole P&S	DSST-B	65.62	us/m
TD	Total Measured Depth	Borehole	600	m
TLL2	STC Time Lower Limit - Upper Dipole	DSST-B	1134	us
TLL4	STC Time Lower Limit - Monopole P&S	DSST-B	400	us
TRCLL2	Tracking Compressinal Lower Limit - Upper Dipole	DSST-B	185.91	us/m
TRCLL4	Tracking Compressinal Lower Limit - Monopole PS	DSST-B	185.91	us/m
TRCUL2	Tracking Compressinal Upper Limit - Upper Dipole	DSST-B	418.31	us/m
TRCUL4	Tracking Compressinal Upper Limit - Monopole PS	DSST-B	418.31	us/m
TRSLL2	Tracking Shear Lower Limit - Upper Dipole	DSST-B	0	us/m
TRSLL4	Tracking Shear Lower Limit - Monopole PS	DSST-B	0	us/m
TRSUL2	Tracking Shear Upper Limit - Upper Dipole	DSST-B	0	us/m
TRSUL4	Tracking Shear Upper Limit - Monopole PS	DSST-B	0	us/m
TST2	STC Time Step - Upper Dipole	DSST-B	378	us
TST4	STC Time Step - Monopole P&S	DSST-B	100	us
TUL2	STC Time Upper Limit - Upper Dipole	DSST-B	12096	us
TUL4	STC Time Upper Limit - Monopole P&S	DSST-B	4100	us
TWD2	STC Time Width - Upper Dipole	DSST-B	6060	us
TWD4	STC Time Width - Monopole P&S	DSST-B	1844	us
TWI2	STC Integration Time Window - Upper Dipole	DSST-B	1512	us
TWI4	STC Integration Time Window - Monopole P&S	DSST-B	320	us
XFH2	STC Filter High - Upper Dipole	DSST-B	2612.24	Hz
XFH4	STC Filter High - Monopole P & S	DSST-B	16000	Hz
XFL2	STC Filter Low - Upper Dipole	DSST-B	250	Hz
XFL4	STC Filter Low - Monopole P & S	DSST-B	4000	Hz
XFS2	STC Filter Size - Upper Dipole	DSST-B	101	
XFS4	STC Filter Size - Monopole P & S	DSST-B	49	

Depth Zone Parameters

Parameter	Value	Start (m)	Stop (m)
BHS	Cased	0	20
BHS	Open	20	597.2
BS	609.6	0	20
BS	311.15	20	597.2

All depth are actual.

Tool Control Parameters

Parameter	Description	Tool	Value	Unit
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	548.64	m/h
SAM2	Sonic Acquisition Mode 2 - Upper Dipole Mode	DSST-B	Off	
SAM4	DSST Sonic Acquisition Mode 4 - Monopole Mode for P&S	DSST-B	Odd	
SAMX	Sonic Acquisition Mode X - Both Dipoles and Monopole Modes for Expert	DSST-B	BCR	

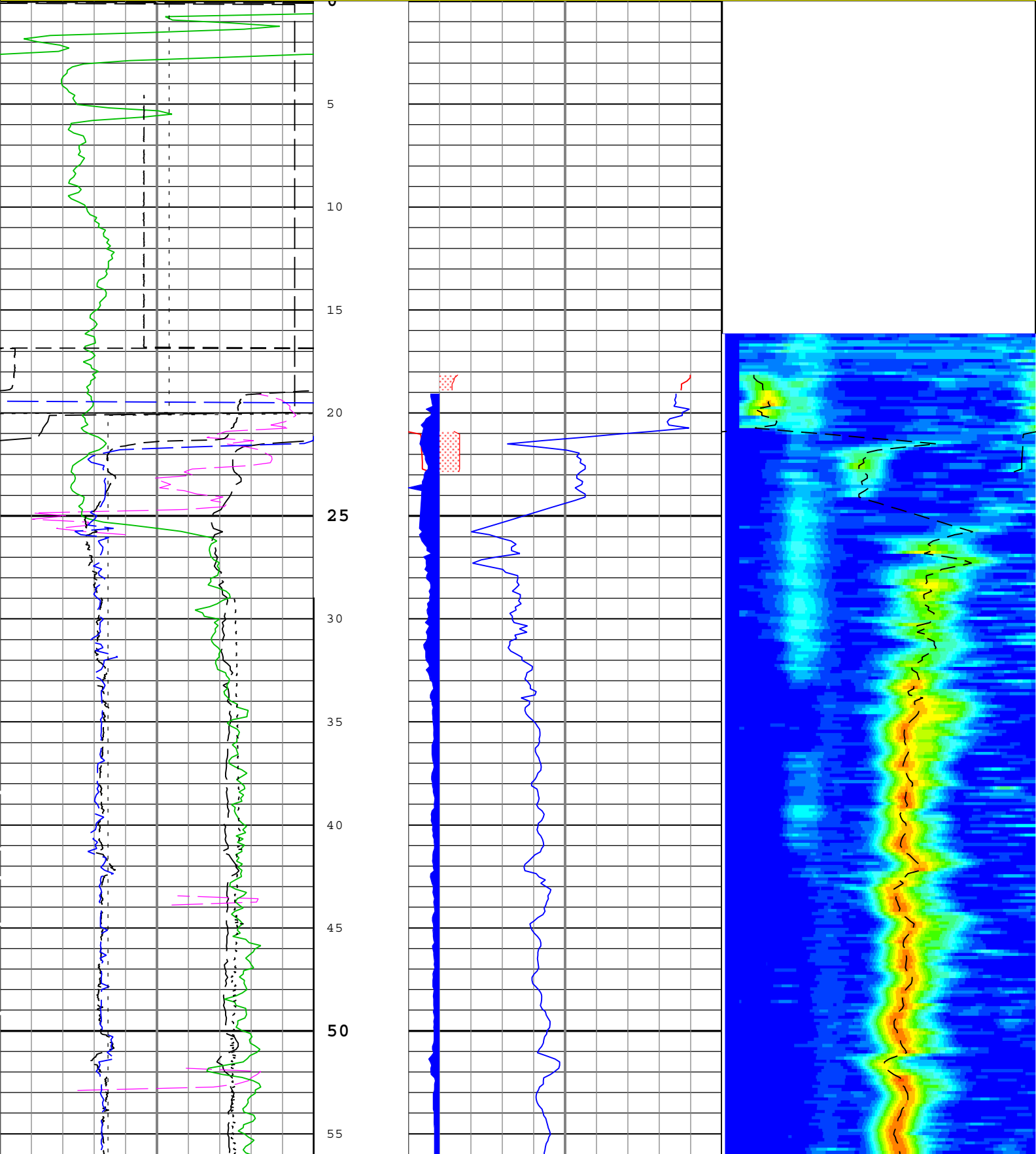
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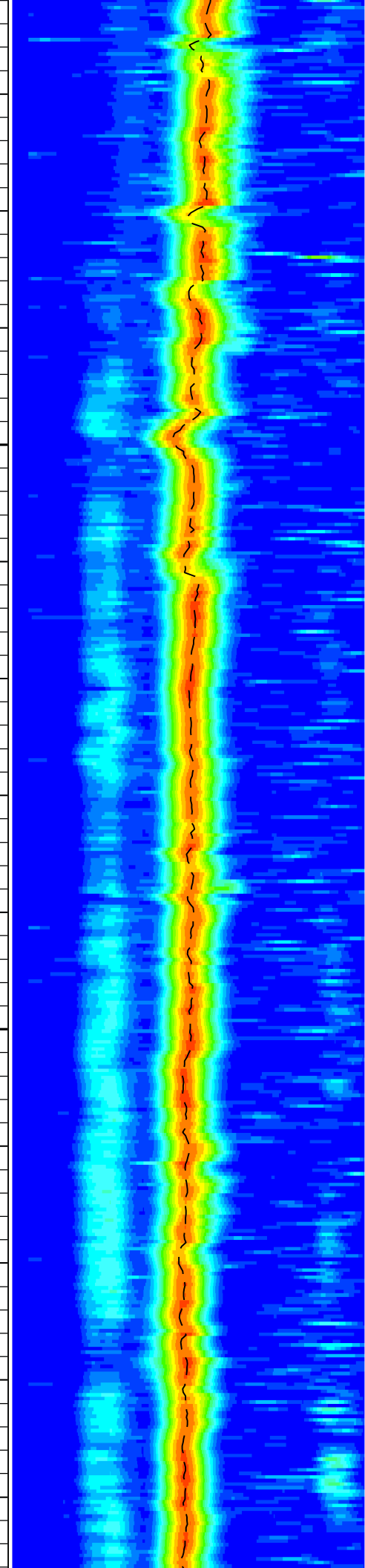
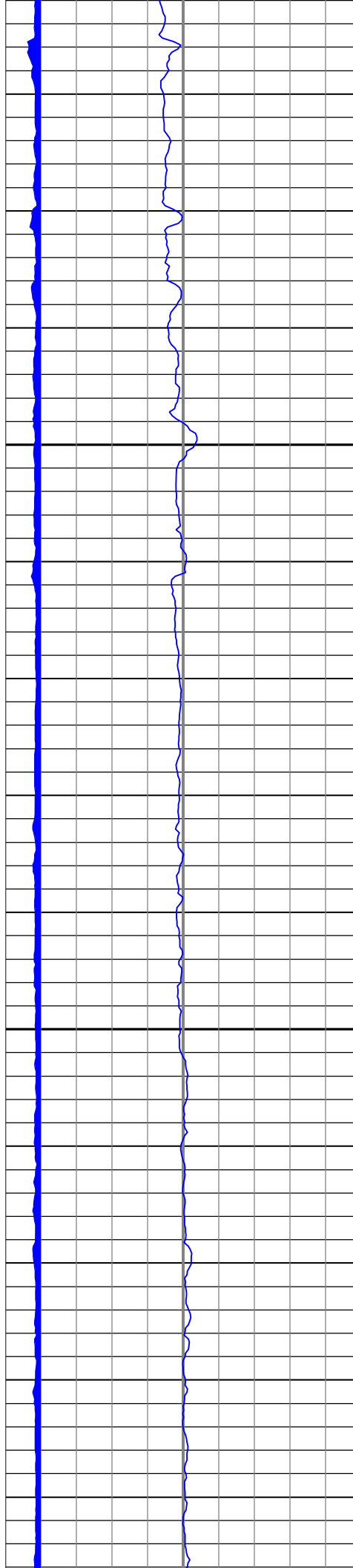
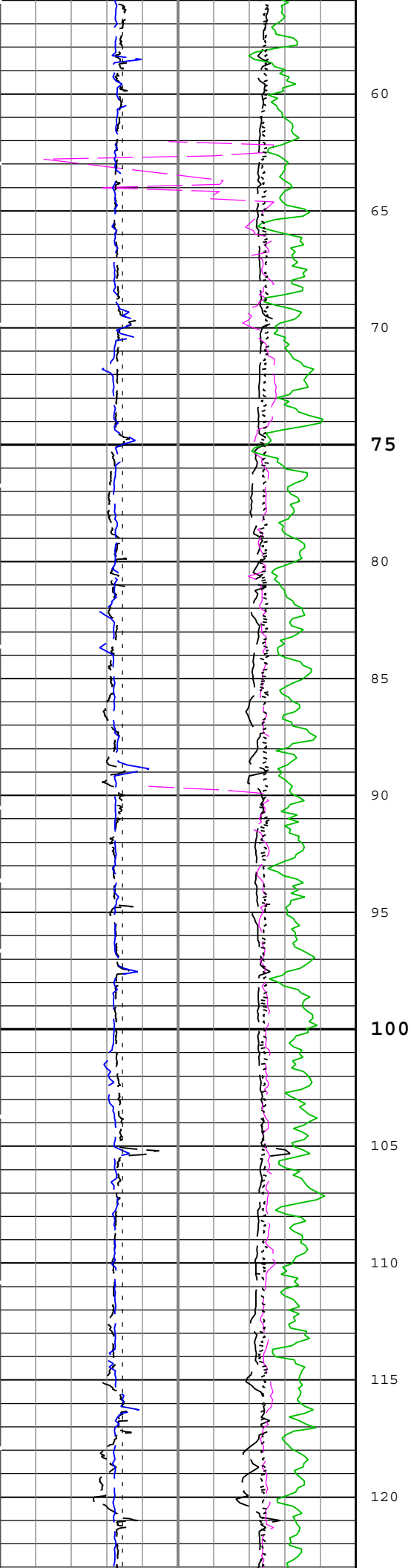
Integration Summary

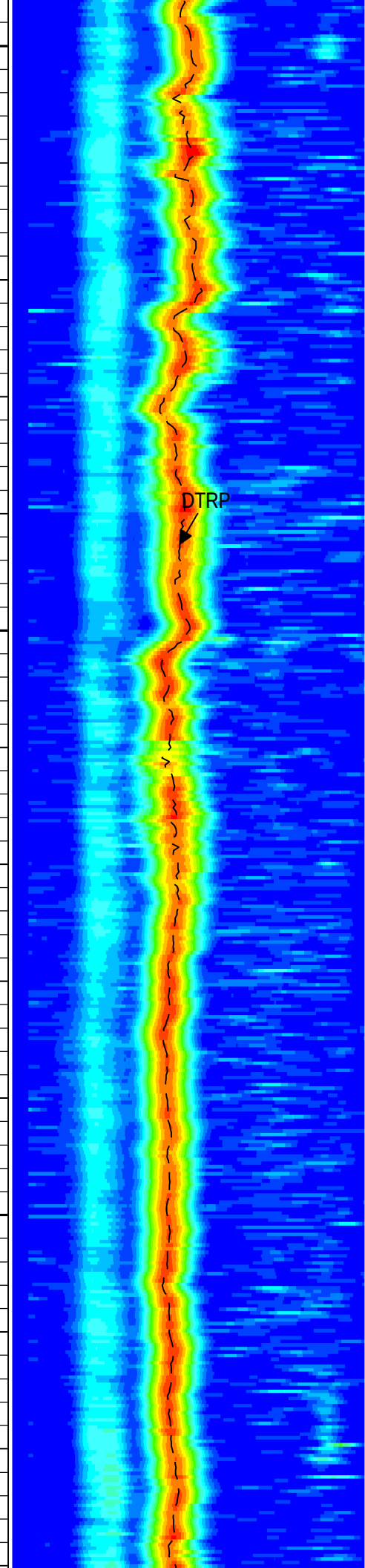
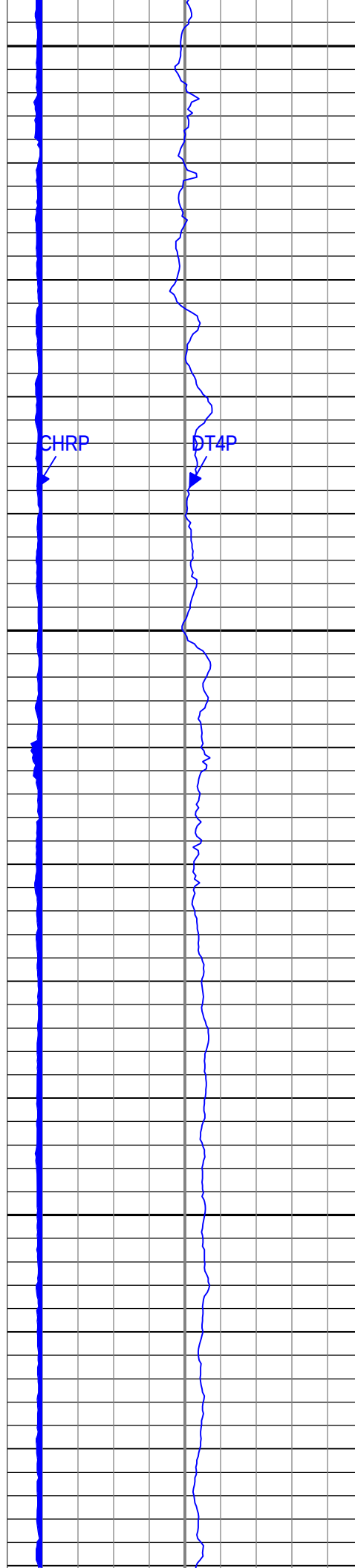
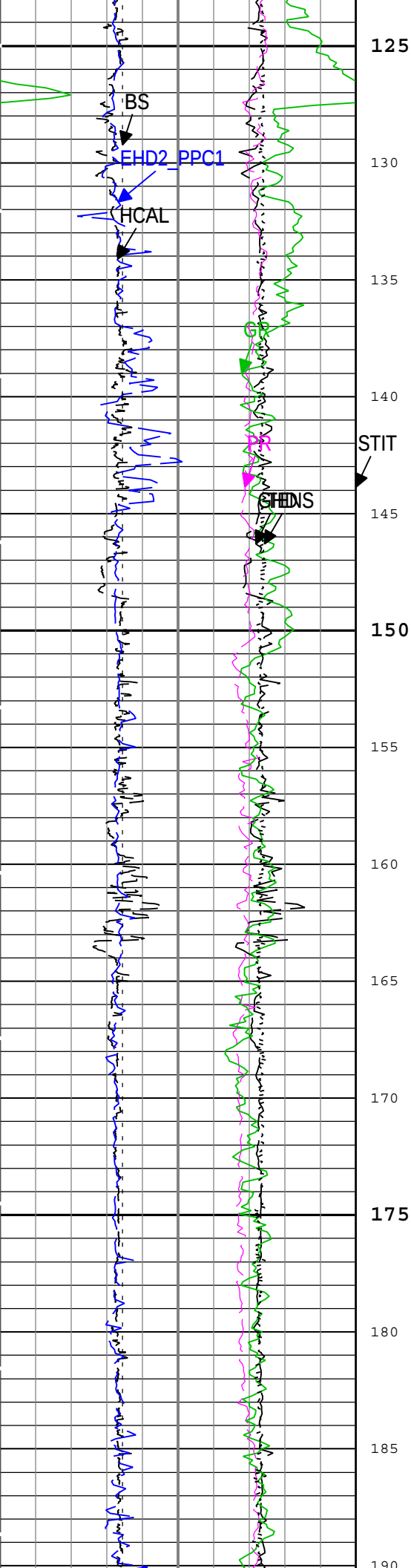
Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
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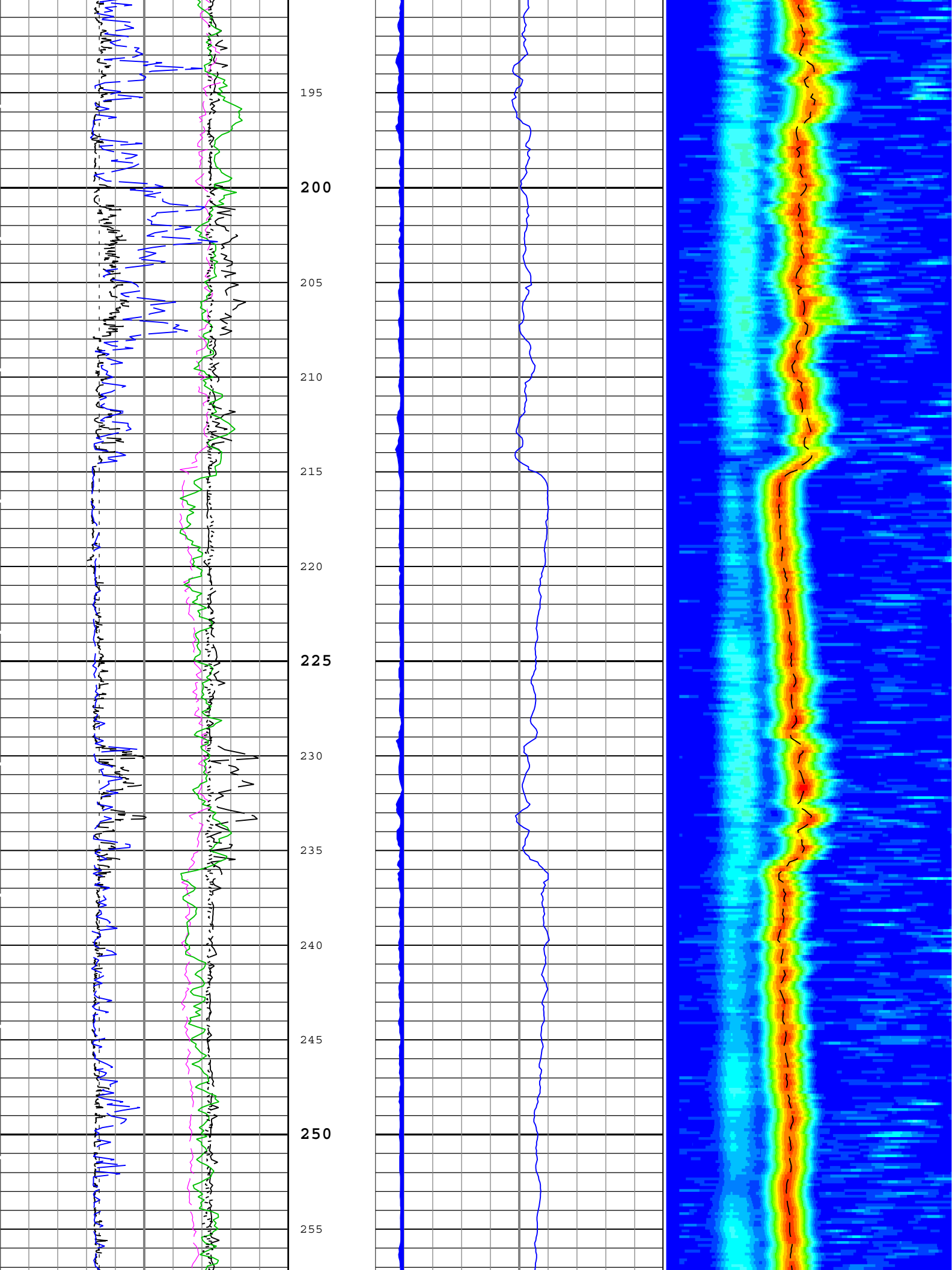
HCAL			Indicator, Total (STIT)		Low Comp Coherence Flag		Rec.Array P&S Slow Proj. CVDL DSST-B		
225	mm	475	0	m	20		Delta-T Shear - Monopole P S (DT4S) DSST-B		
EHD2_PPC1							100	us/m	600
225	mm	475	Cable Drag				Delta-T Compressional - Monopole P S (DT4P) DSST-B		
Bit Size (BS)			Tool_Tot. Drag				100	us/m	600
225	mm	475					DTRS		
							100	us/m	600

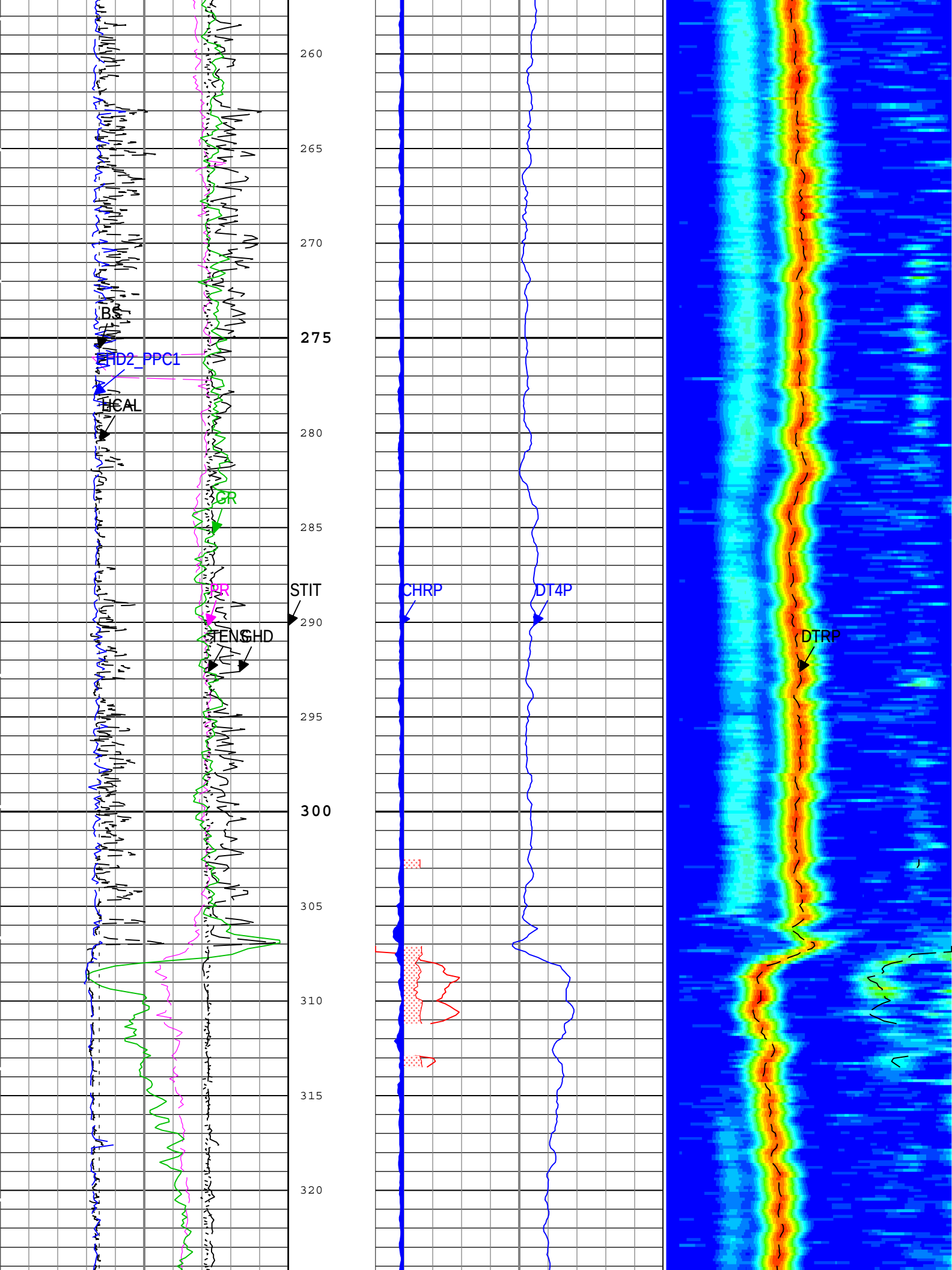
MAIN PASS: DIPOLE SONIC - P & S IMAGE

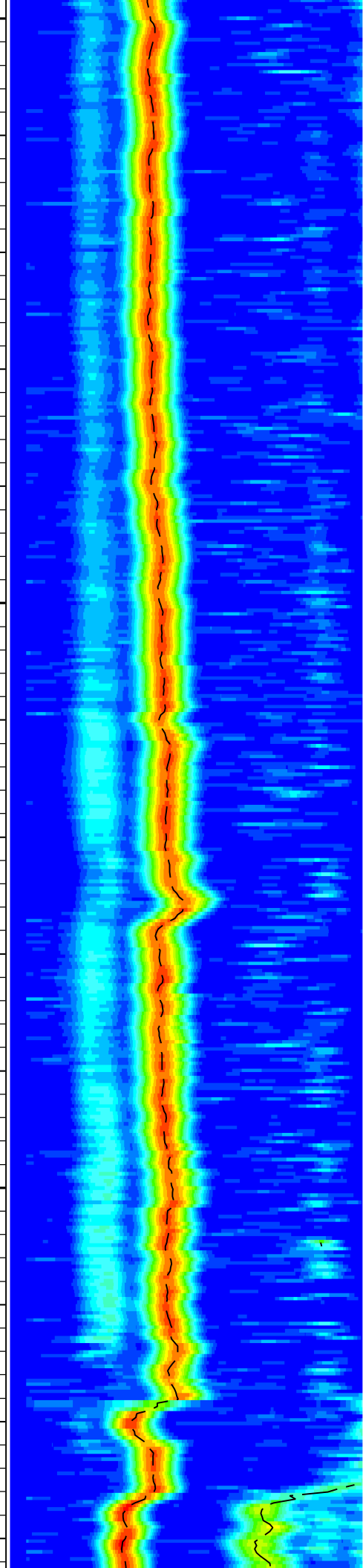
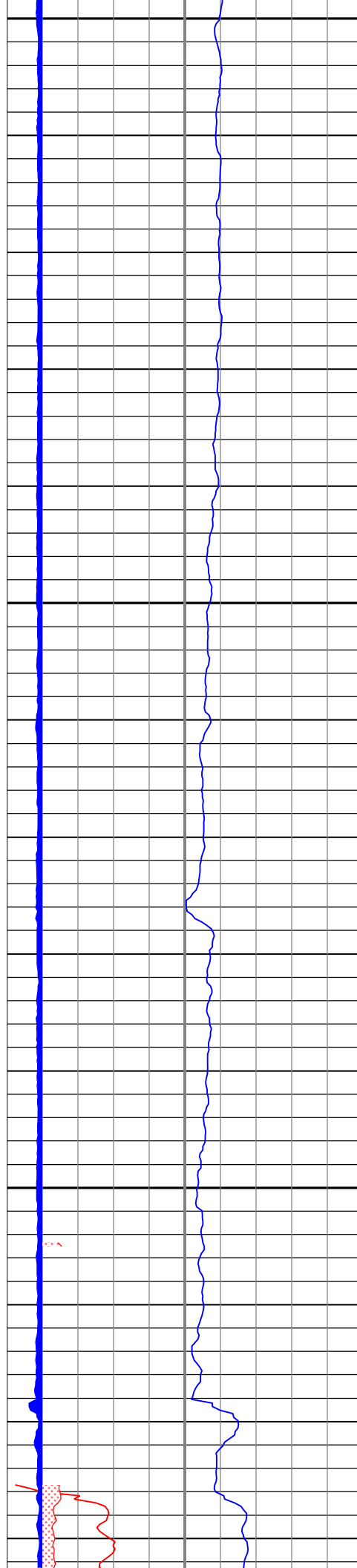
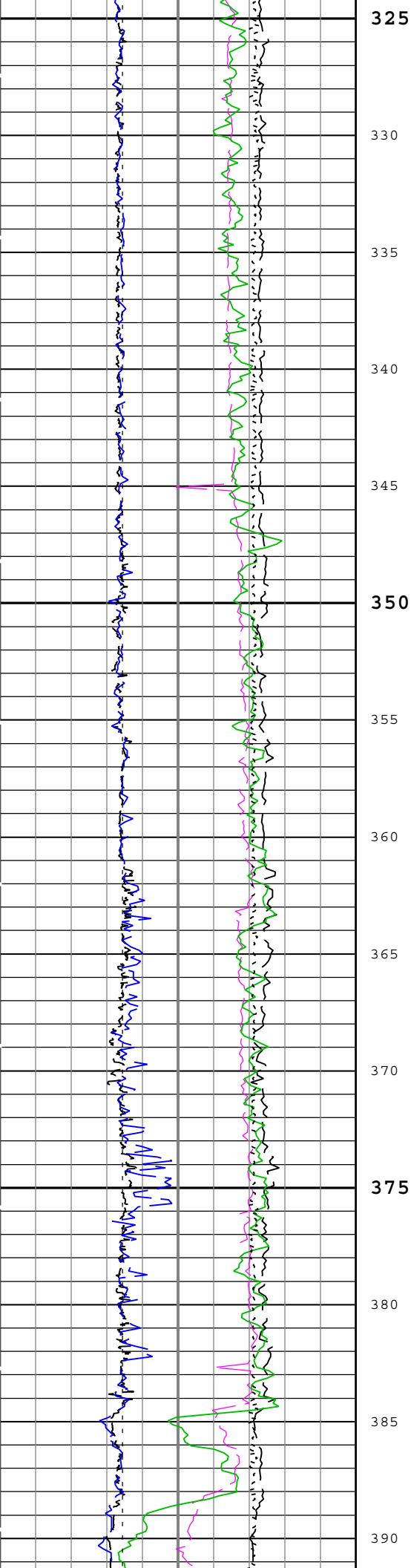


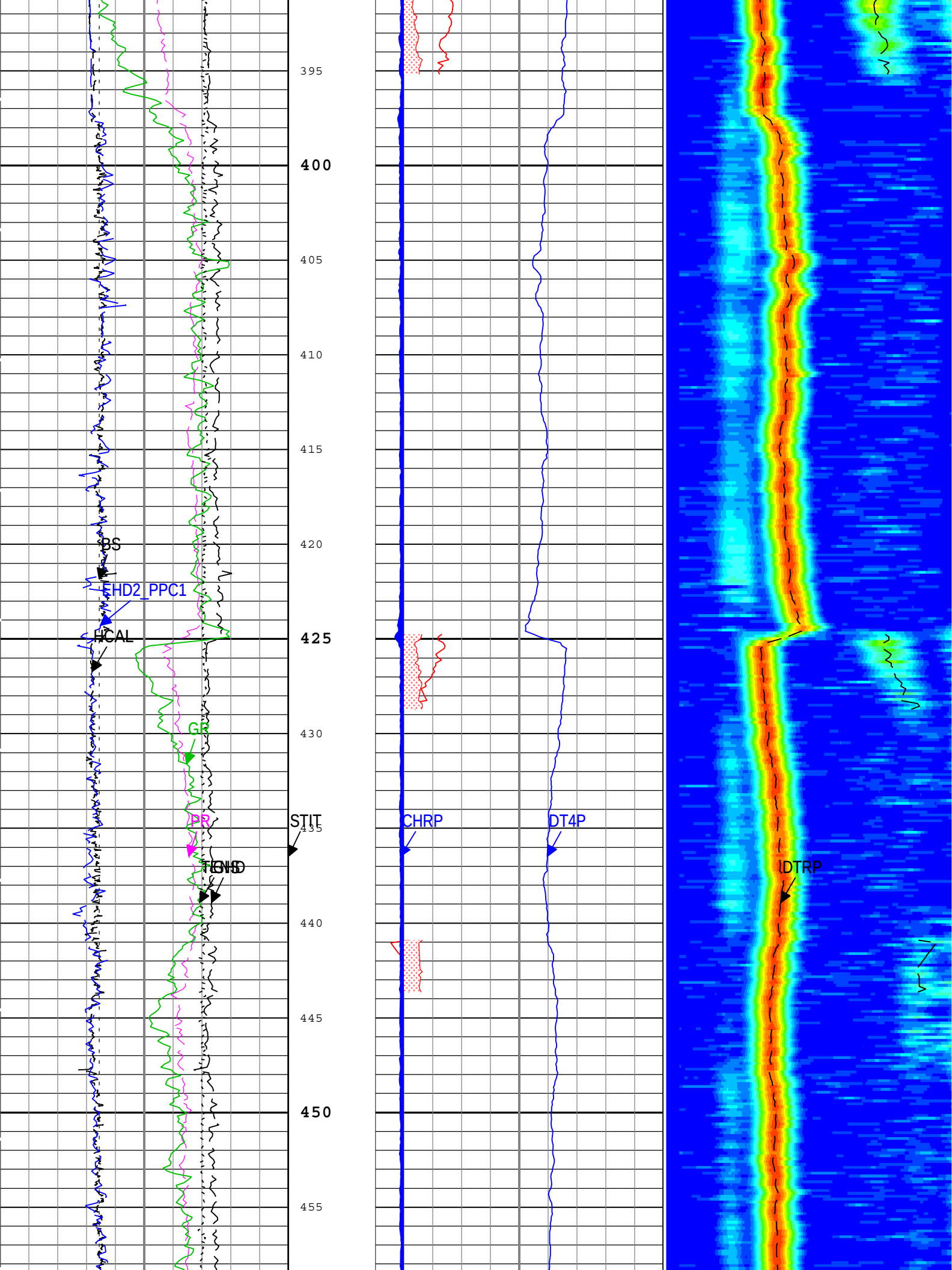


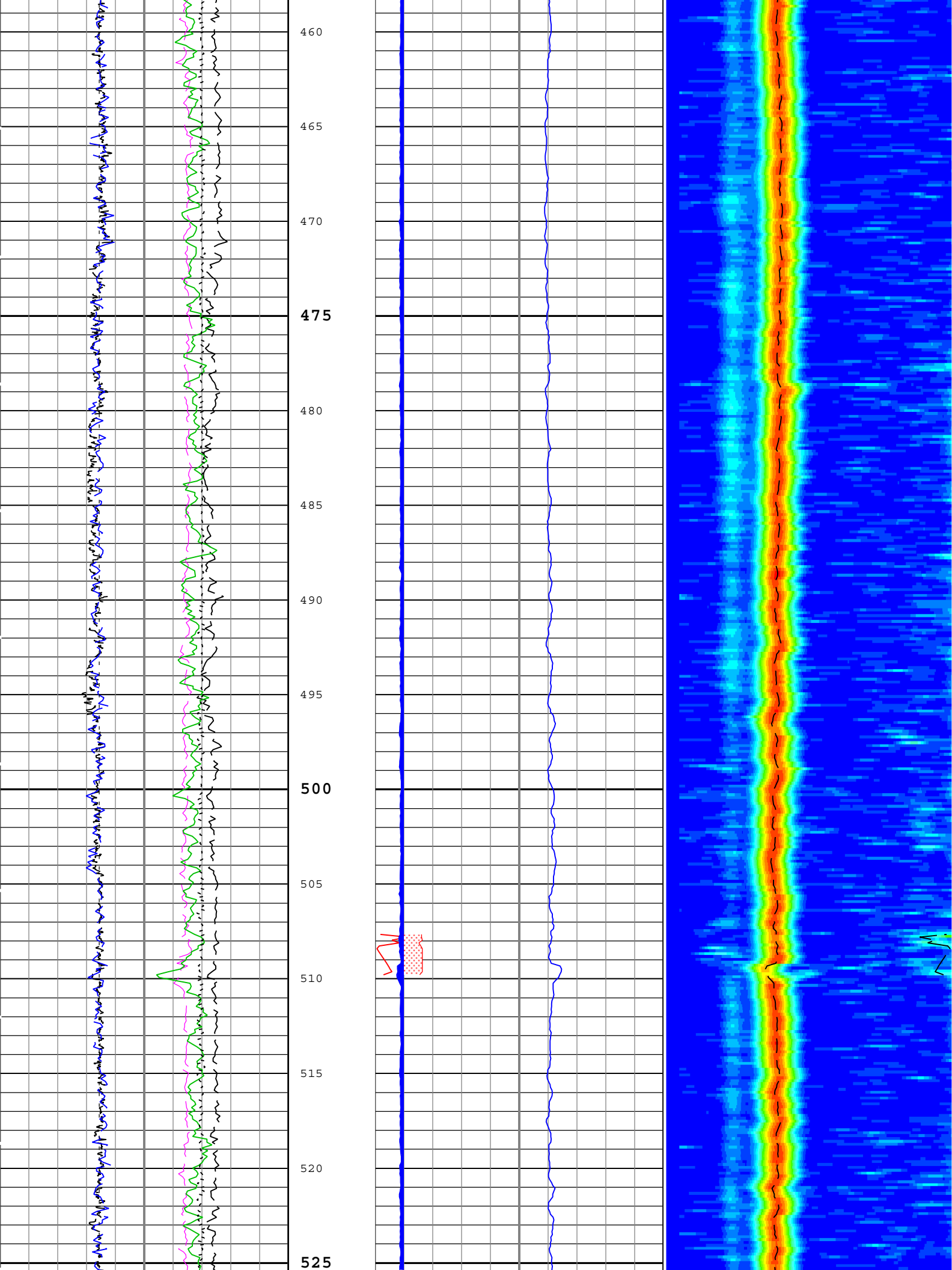


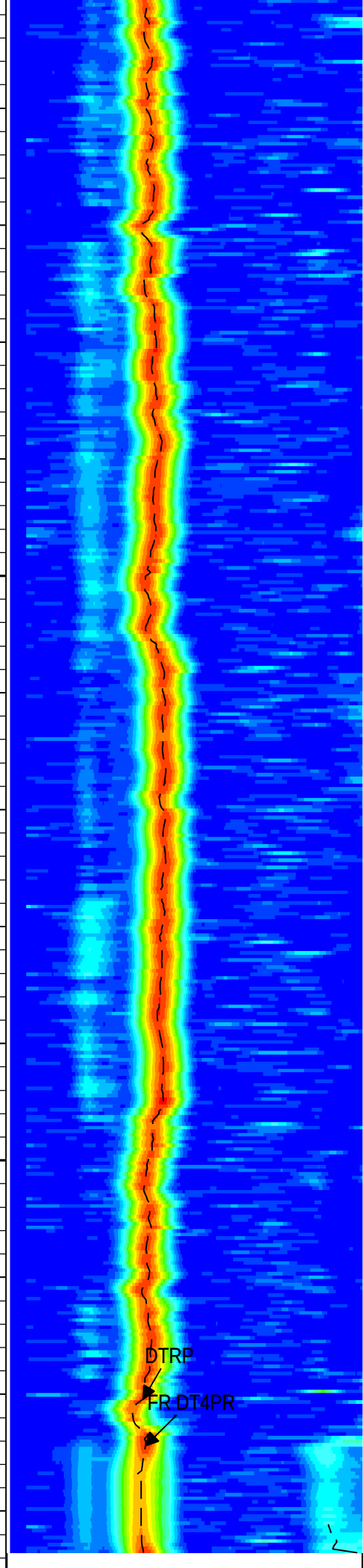
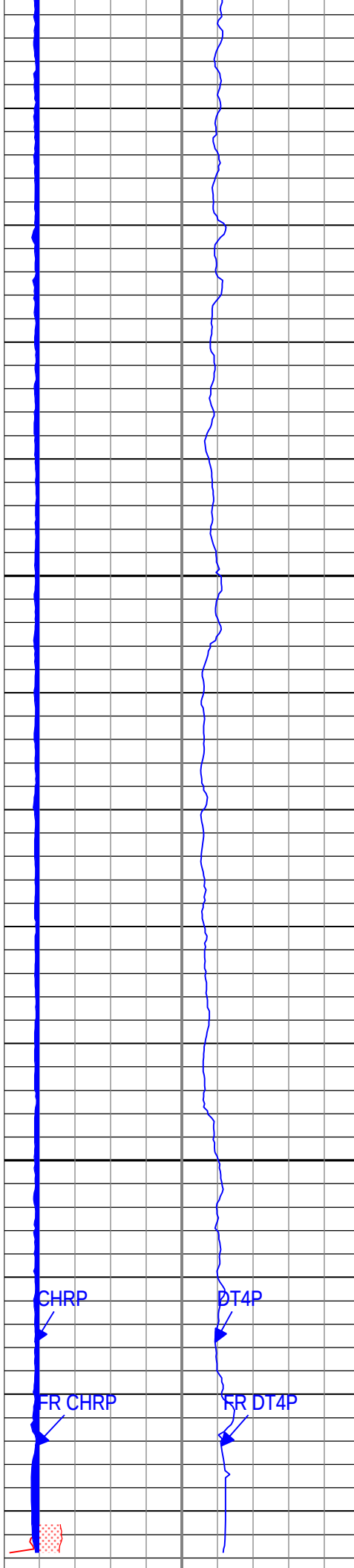
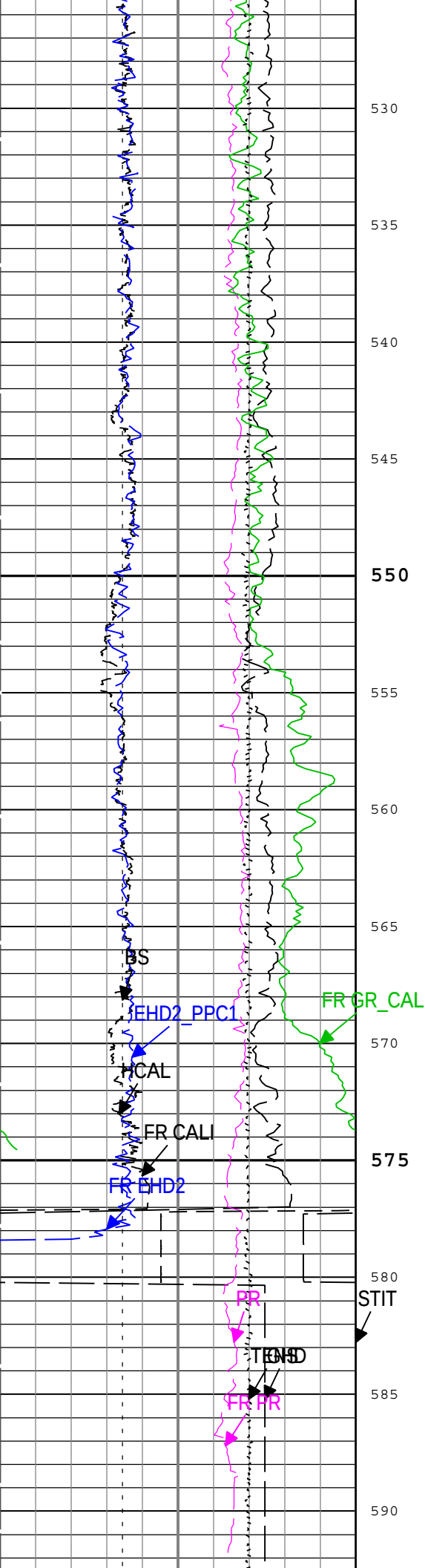


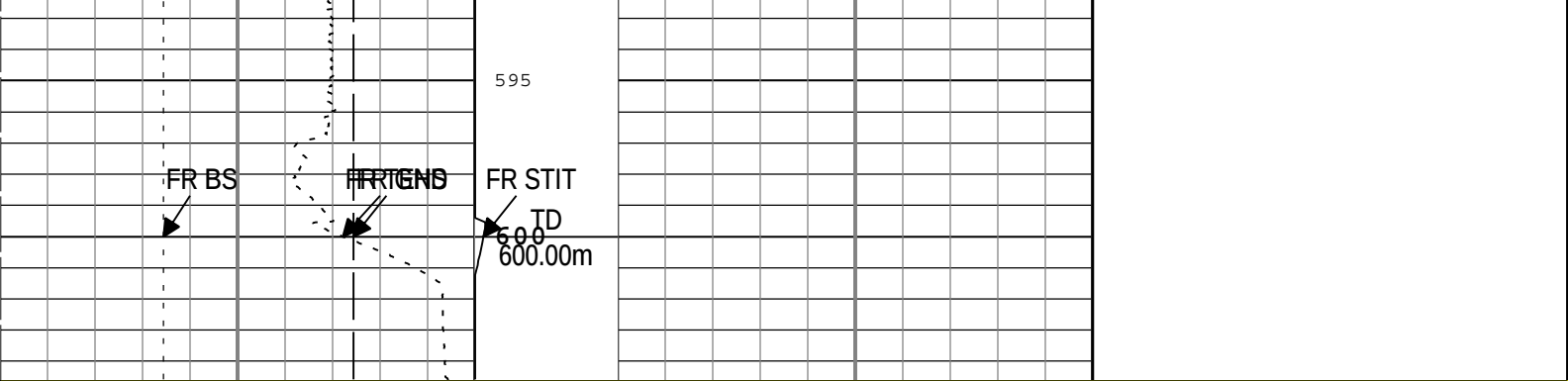












MAIN PASS: DIPOLE SONIC - P & S IMAGE									
Borehole Diameter (GHD)			Stuck Tool Indicator, Total (STIT)	Delta-T Shear - Monopole P S (DT4S) DSST-B			Min	Amplitude	Max
125	mm	375		600	us/m	100			
Poisson s Ratio (PR) DSST-B			0 m 20	Delta-T Compressional - Monopole P S (DT4P) DSST-B			Rec.Array P&S Slow Proj. CVDL DSST-B		
0		0.5		600	us/m	100	100	us/m	600
GR			Cable Drag	600	us/m	100	DTRP		
0		150					100	us/m	600
gAPI			Tool_Tot. Drag	Low Shear Coherence Flag			DTRS		
HCAL				Low Comp Coherence Flag			100	us/m	600
225	mm	475							
EHD2_PPC1									
225	mm	475							
Bit Size (BS)									
225	mm	475							
Cable Tension (TENS)									
25000	N	0							

TIME_1900 - Time Marked every 60.00 (s)

Description: DSST P&S VDL Color Format: Log (DSST PS VDL Color) Index Scale: 1:240 Index Unit: m Index Type: Measured Depth Creation Date: 30-Jan-2013 18:38:26

Channel Processing Parameters				
Parameter	Description	Tool	Value	Unit
BHS	Borehole Status (Open or Cased Hole)	Borehole	Depth Zoned	
BS	Bit Size	WLSESSION	Depth Zoned	mm
CALI_SHIFT	CALI Supplementary Offset	HDRS-H	9.6	mm
CBLO	Casing Bottom (Logger)	WLSESSION	20	m
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DFD	Drilling Fluid Density	Borehole	1150	kg/m3
DSST_DTCS	Compressional Delta-T Source for DTCO Channel	DSST-B	PS Comp	
DSST_DTSS	Shear Delta-T Source for DTSM Channel	DSST-B	Upper Dipole	
DTMD	Borehole Fluid Slowness	Borehole	675.85	us/m
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	CALI	
SBO2	STC Search Band Offset - Upper Dipole	DSST-B	Time Zoned	us
SBO4	STC Search Band Offset - Monopole P&S	DSST-B	Time Zoned	us
SBW2	STC Search Bandwidth - Upper Dipole	DSST-B	Time Zoned	us
SBW4	STC Search Bandwidth - Monopole P&S	DSST-B	Time Zoned	us
SEMTHR2	STC Semblance Threshold - Upper Dipole	DSST-B	0.35	
SEMTHR4	STC Semblance Threshold - Monopole P & S	DSST-B	0.35	
SFTY	Slowness Formation Type (Fast, Intermediate, Slow, etc.)	Borehole	Intermediate	
SLL2	STC Slowness Lower Limit - Upper Dipole	DSST-B	262.47	us/m

SLL4	STC Slowness Lower Limit - Monopole P&S	DSST-B	131.23	us/m
SPS1	Slowness Processing Switch for SAM1	DSST-B	On	
SPS2	Slowness Processing Switch for SAM2	DSST-B	On	
SPS4	Slowness Processing Switch for SAM4	DSST-B	On	
SST2	STC Slowness Step - Upper Dipole	DSST-B	13.12	us/m
SST4	STC Slowness Step - Monopole P&S	DSST-B	6.56	us/m
SSW2	STC Source Waveform - Upper Dipole	DSST-B	Odd in SAMX	
SUL2	STC Slowness Upper Limit - Upper Dipole	DSST-B	1771.65	us/m
SUL4	STC Slowness Upper Limit - Monopole P&S	DSST-B	787.4	us/m
SWD2	STC Slowness Width - Upper Dipole	DSST-B	196.85	us/m
SWD4	STC Slowness Width - Monopole P&S	DSST-B	65.62	us/m
TD	Total Measured Depth	Borehole	600	m
TLL2	STC Time Lower Limit - Upper Dipole	DSST-B	Time Zoned	us
TLL4	STC Time Lower Limit - Monopole P&S	DSST-B	400	us
TRCLL2	Tracking Compressinal Lower Limit - Upper Dipole	DSST-B	185.91	us/m
TRCLL4	Tracking Compressinal Lower Limit - Monopole PS	DSST-B	185.91	us/m
TRCUL2	Tracking Compressinal Upper Limit - Upper Dipole	DSST-B	418.31	us/m
TRCUL4	Tracking Compressinal Upper Limit - Monopole PS	DSST-B	418.31	us/m
TRSLL2	Tracking Shear Lower Limit - Upper Dipole	DSST-B	0	us/m
TRSLL4	Tracking Shear Lower Limit - Monopole PS	DSST-B	0	us/m
TRSUL2	Tracking Shear Upper Limit - Upper Dipole	DSST-B	0	us/m
TRSUL4	Tracking Shear Upper Limit - Monopole PS	DSST-B	0	us/m
TST2	STC Time Step - Upper Dipole	DSST-B	Time Zoned	us
TST4	STC Time Step - Monopole P&S	DSST-B	100	us
TUL2	STC Time Upper Limit - Upper Dipole	DSST-B	Time Zoned	us
TUL4	STC Time Upper Limit - Monopole P&S	DSST-B	Time Zoned	us
TWD2	STC Time Width - Upper Dipole	DSST-B	Time Zoned	us
TWD4	STC Time Width - Monopole P&S	DSST-B	Time Zoned	us
TWI2	STC Integration Time Window - Upper Dipole	DSST-B	Time Zoned	us
TWI4	STC Integration Time Window - Monopole P&S	DSST-B	320	us
XFH2	STC Filter High - Upper Dipole	DSST-B	Time Zoned	Hz
XFH4	STC Filter High - Monopole P & S	DSST-B	16000	Hz
XFL2	STC Filter Low - Upper Dipole	DSST-B	250	Hz
XFL4	STC Filter Low - Monopole P & S	DSST-B	4000	Hz
XFS2	STC Filter Size - Upper Dipole	DSST-B	101	
XFS4	STC Filter Size - Monopole P & S	DSST-B	49	

Depth Zone Parameters			
Parameter	Value	Start (m)	Stop (m)
BHS	Cased	0	20
BHS	Open	20	604.6
BS	609.6	0	20
BS	311.15	20	604.6
All depth are actual.			

Time Zone Parameters					
Parameter	Value	Start Time	Stop Time	Start Depth (m)	Stop Depth (m)
SBO2	1520	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
SBO2	1640	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
SBO4	390	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
SBO4	490	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86

SBW4	490	30-Jan-2013 13:24:31	30-Jan-2013 15:25:45	32.78	28.86
SBW2	8080	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
SBW2	8280	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
SBW4	2460	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
SBW4	2660	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
TLL2	1134	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
TLL2	1200	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
TST2	378	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
TST2	400	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
TUL2	12096	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
TUL2	12400	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
TUL4	4100	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
TUL4	4300	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
TWD2	6060	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
TWD2	6210	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
TWD4	1844	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
TWD4	1994	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
TWI2	1512	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
TWI2	1400	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
XFH2	2612.24	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
XFH2	1333.33	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86

All depth are at tool zero.

Tool Control Parameters				
Parameter	Description	Tool	Value	Unit
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	548.64	m/h
SAM2	Sonic Acquisition Mode 2 - Upper Dipole Mode	DSST-B	Off	
SAM4	DSST Sonic Acquisition Mode 4 - Monopole Mode for P&S	DSST-B	Odd	
SAMX	Sonic Acquisition Mode X - Both Dipoles and Monopole Modes for Expert	DSST-B	BCR	
1.1				

Integration Summary				
Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
Software Version				
Acquisition System			Version	
MaxWell			3.1.9755.0	
Application Patch			SP-20120723-3.1.9755.1112	
			EXP_APL-MASTAXIS-3.1.9755.1221	
			EXP_APL-NEXTA-3.1.9755.1340	
Computation	Description			Version
Borehole	Borehole Ensemble provides common Borehole Parameters and Channels			3.1.9755.0
DepthCorrection	DepthCorrection			3.1.9755.0
Tool Elements	Description		Software Version	Firmware Version
HRCC-H	HILT High-Resolution Control Cartridge, 150 degC		3.1.9755.0	2.0
PPC-B	PPC-B Element is used for usual logging at wellsite and check/diagnostics.		3.1.9755.0	1.0

HGNS-H	HILT Gamma-Ray and Neutron Sonde, 150 degC	3.1.9755.0	2.0
SPAC-B	Digitizing Sonic Logging Cartridge - B	3.1.9755.0	

Pass Summary								
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Depth Shift	Include Parallel Data
1.1	Log[3]:Up	Up	28.86 m	604.59 m	30-Jan-2013 1:43:56 PM	30-Jan-2013 3:25:45 PM	0.00 m	true
All depths are referenced to toolstring zero								

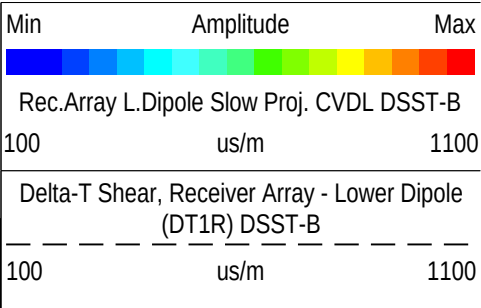
Log	1.1: Log[3]:Up
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Description: DSST Lower Dipole VDL Color
 Format: Log (DSST Lower Dipole VDL Color)
 Index Scale: 1:240
 Index Unit: m
 Index Type: Measured

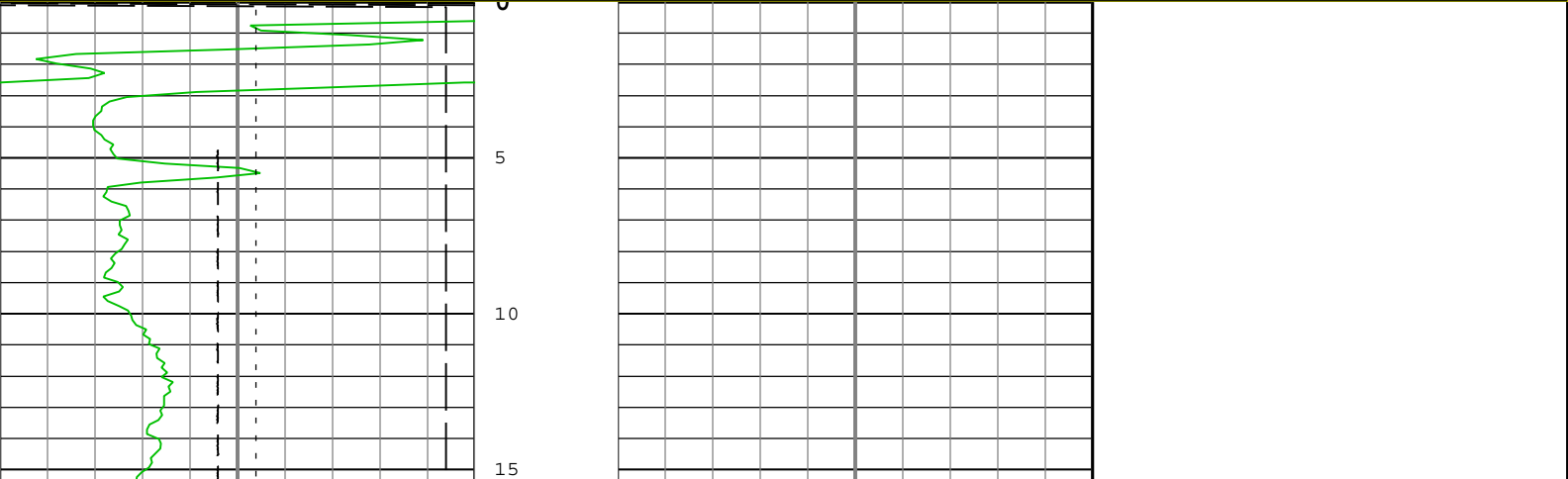
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 Creation Date: 30-Jan-2013 18:38:36

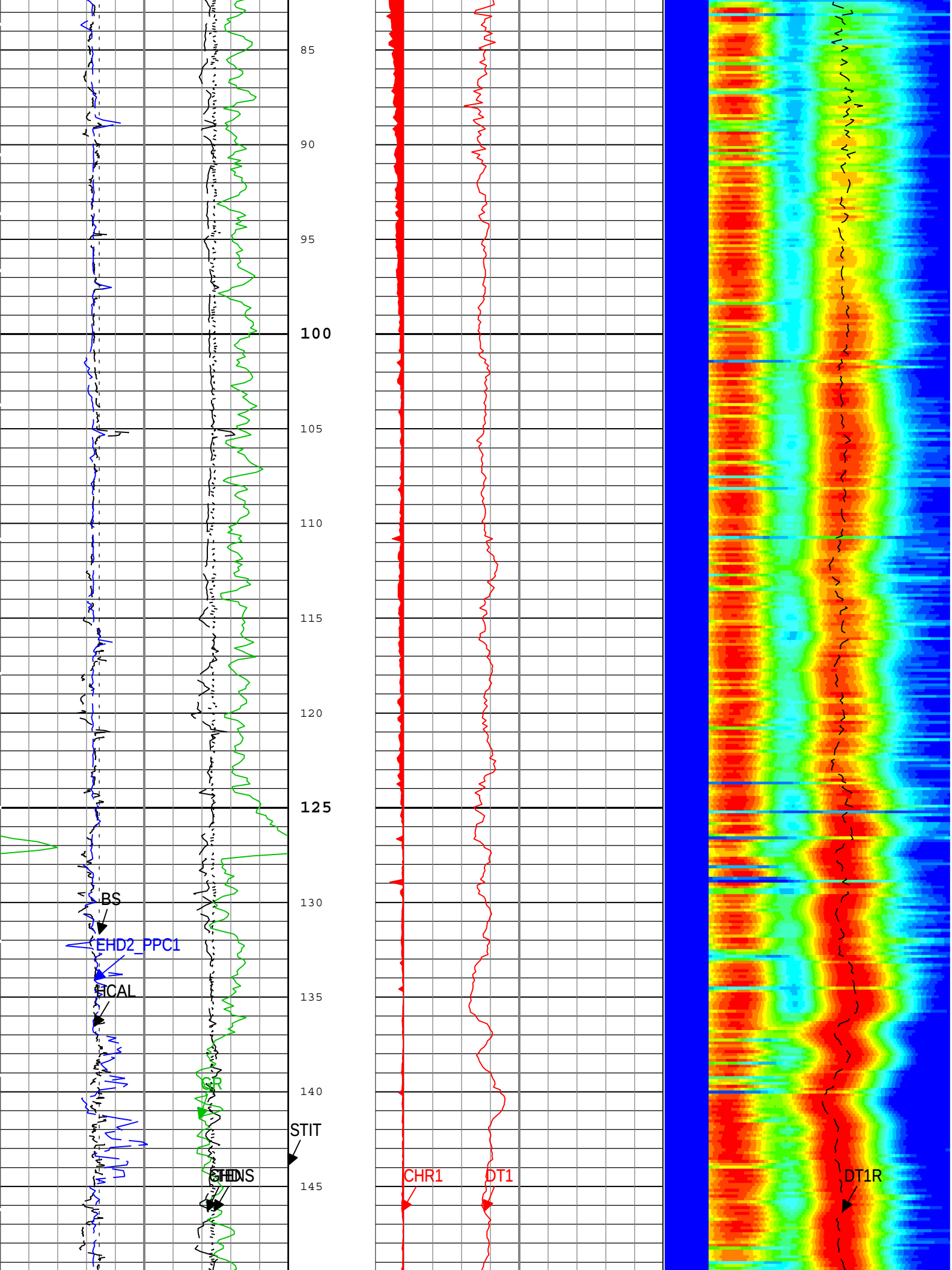
Channel	Source	Sampling
BS	Borehole	6in
CALI	HDRS-H:HRCC-H:HRCC-H	1in
CHR1	DSST-B:SPAC-B:SPAC-B	6in
DT1	DSST-B:SPAC-B:SPAC-B	6in
DT1R	DSST-B:SPAC-B:SPAC-B	6in
EHD2	PPC-B:PPC-B:PPC-B	6in
GHD	Borehole	6in
GR_CAL	HGNS-H:HGNS-H:HGNS-H	6in
STIT	DepthCorrection	6in
TENS	WLWorkflow	1in
TIME_1900	WLWorkflow	0.1in

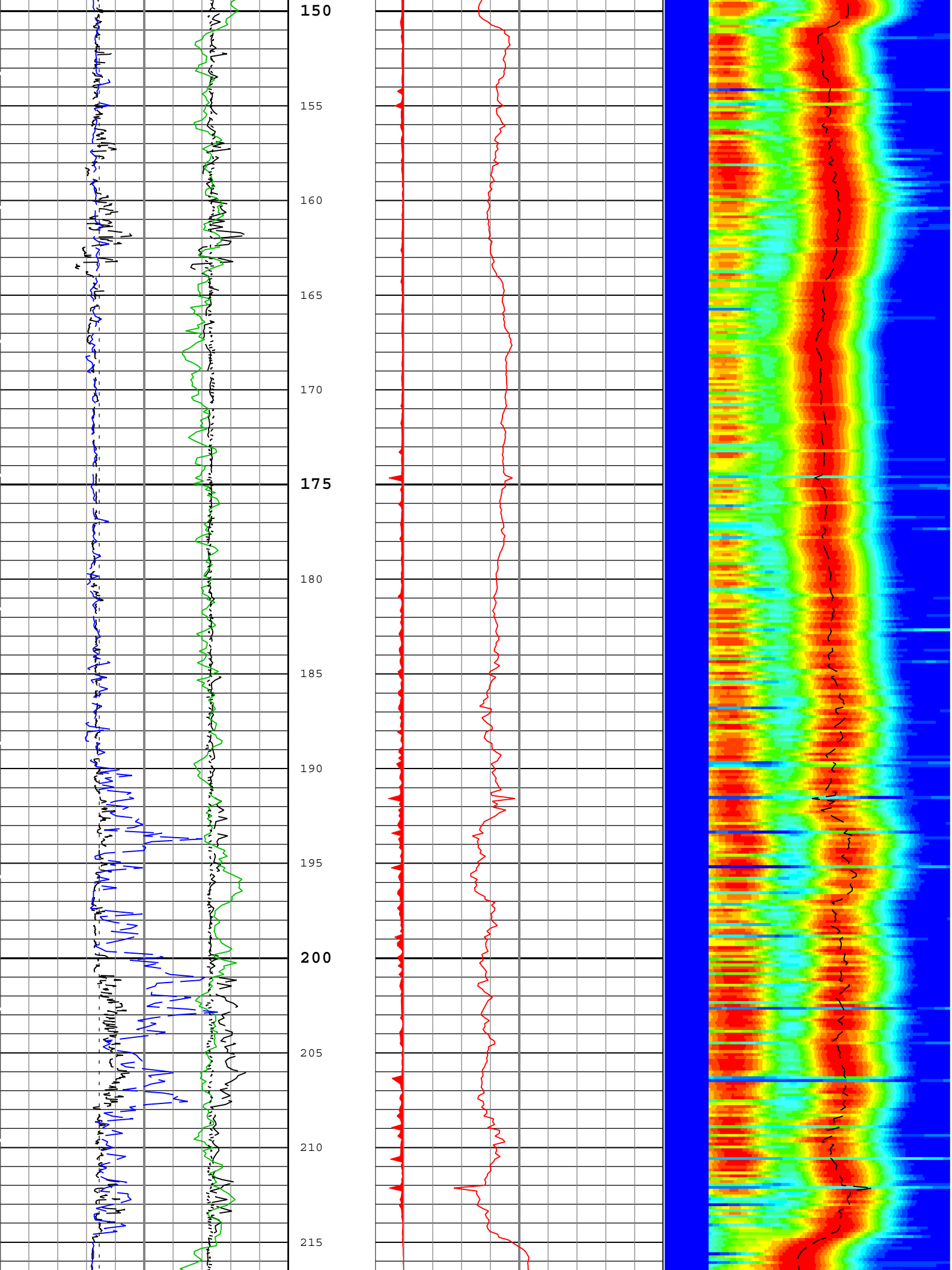
TIME_1900 - Time Marked every 60.00 (s)		
Cable Tension (TENS)		
25000	N	0
Borehole Diameter (GHD)		
125	mm	375
GR		
0	gAPI	150
HCAL		
225	mm	475
EHD2_PPC1		
225	mm	475
Bit Size (BS)		
225	mm	475
Stuck Tool Indicator, Total (STIT)		0 m 20
Cable Drag		
Tool_Tot. Drag		
Delta-T Shear - Lower Dipole (DT1) DSST-B		
1100	us/m	100

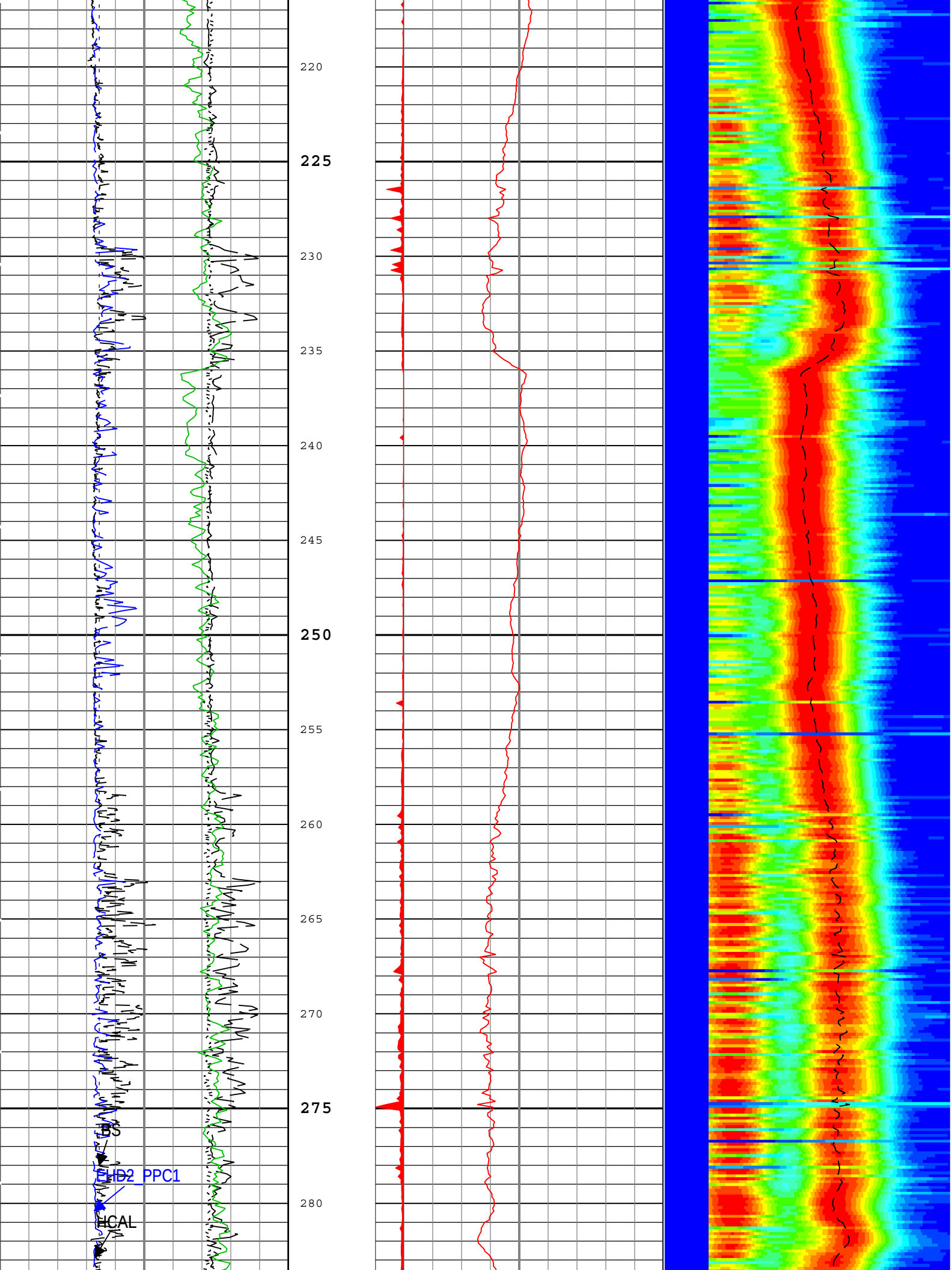


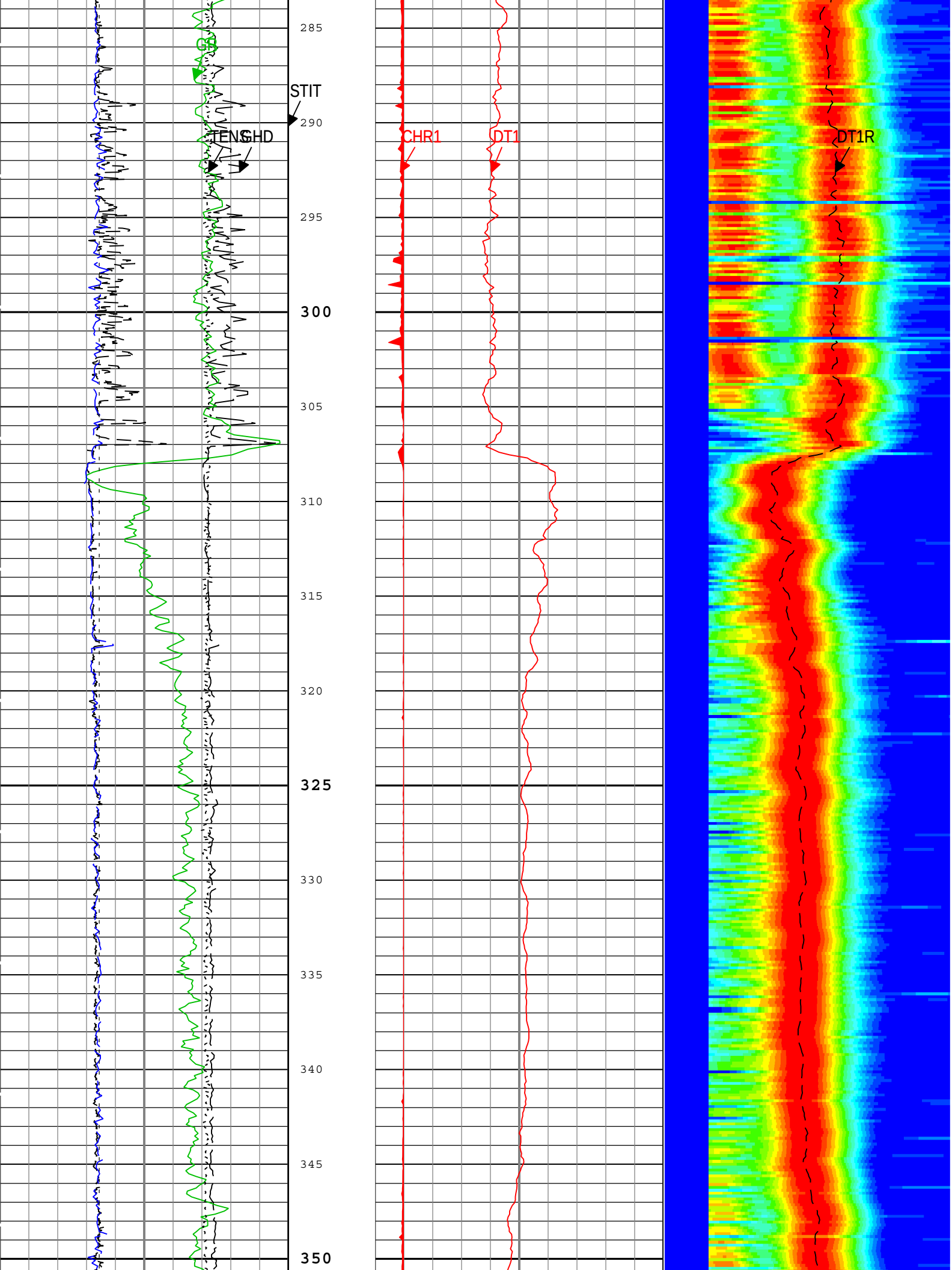
MAIN PASS: DIPOLE SONIC - LOWER DIPOLE IMAGE

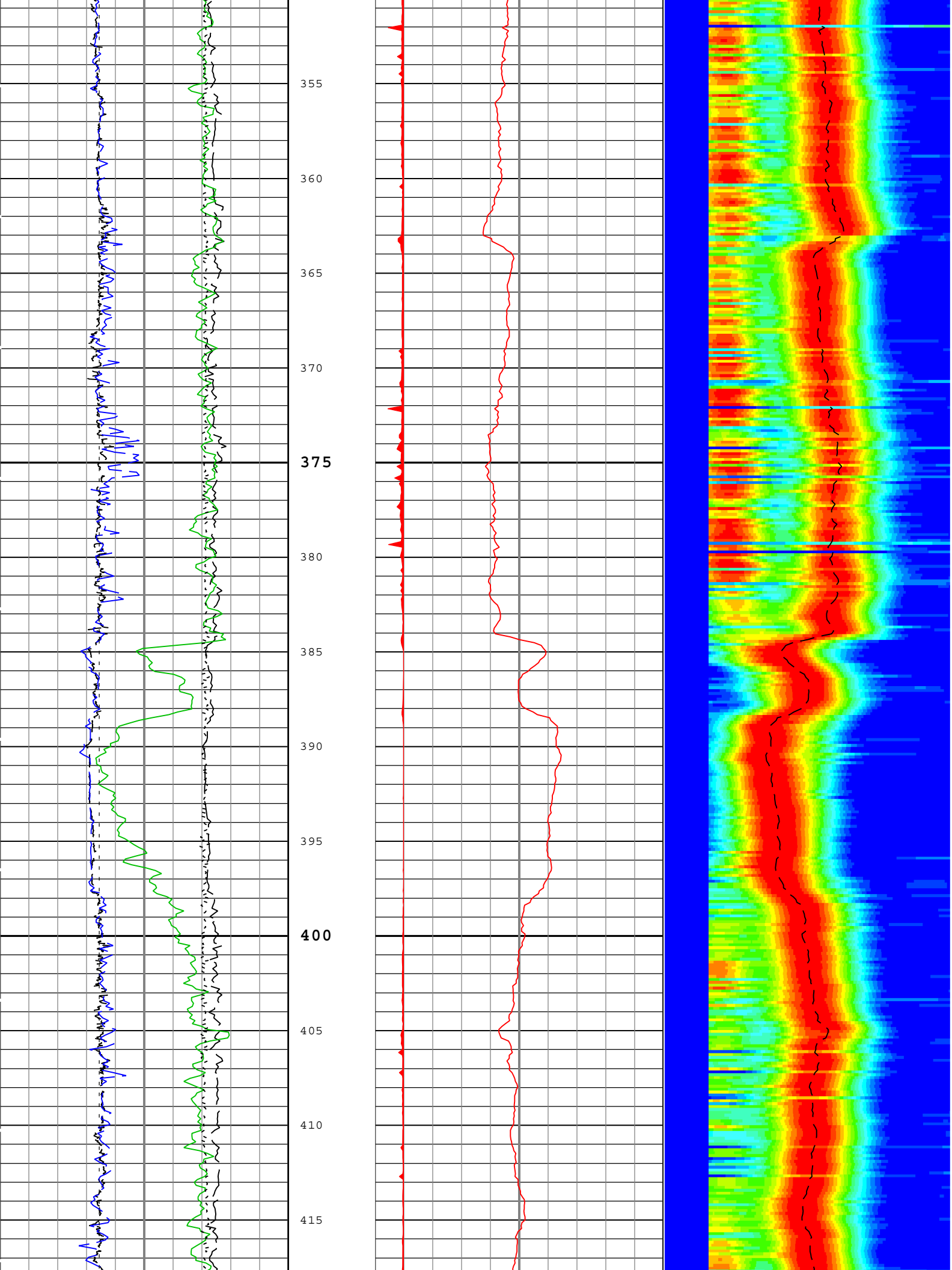


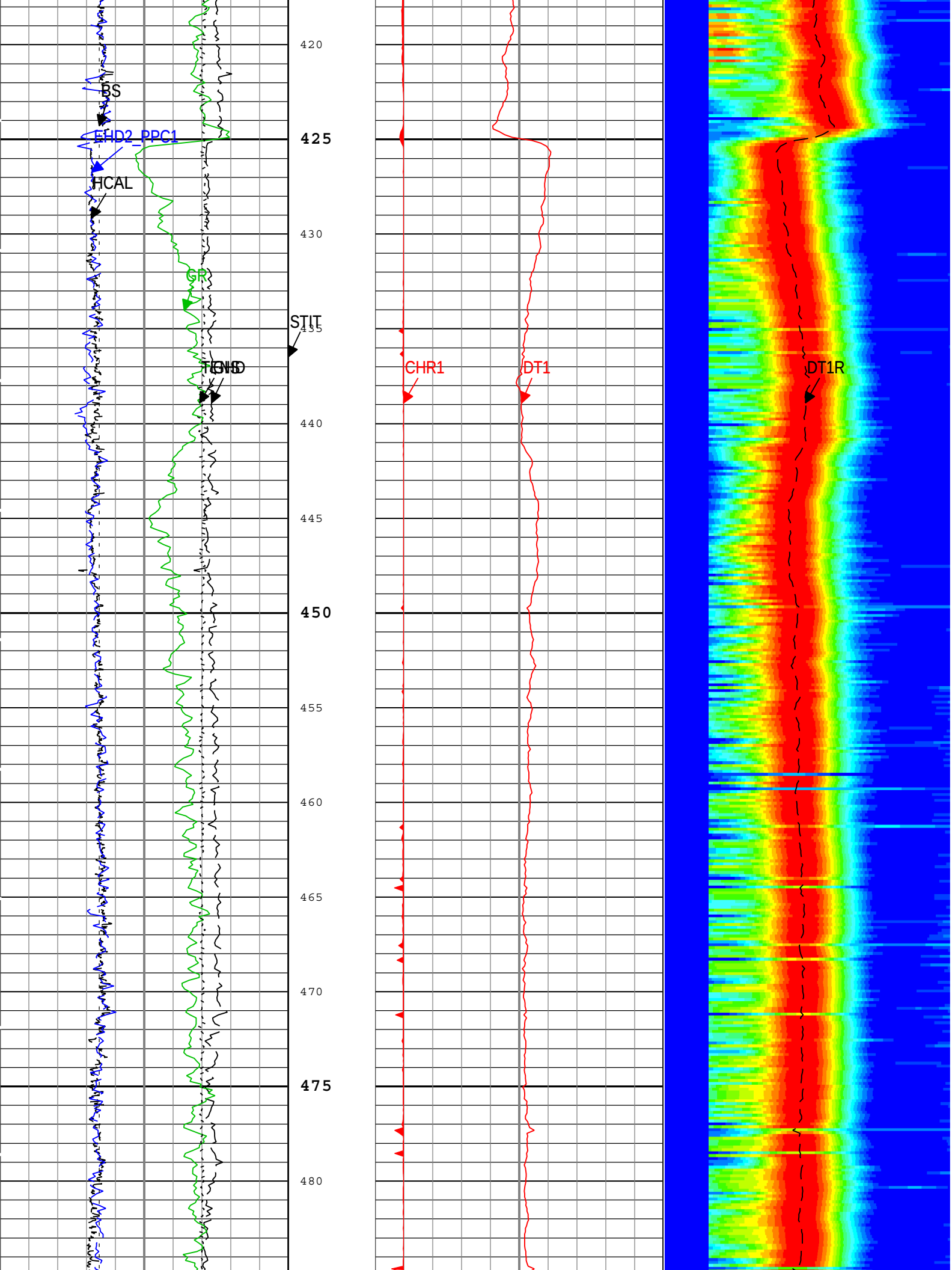


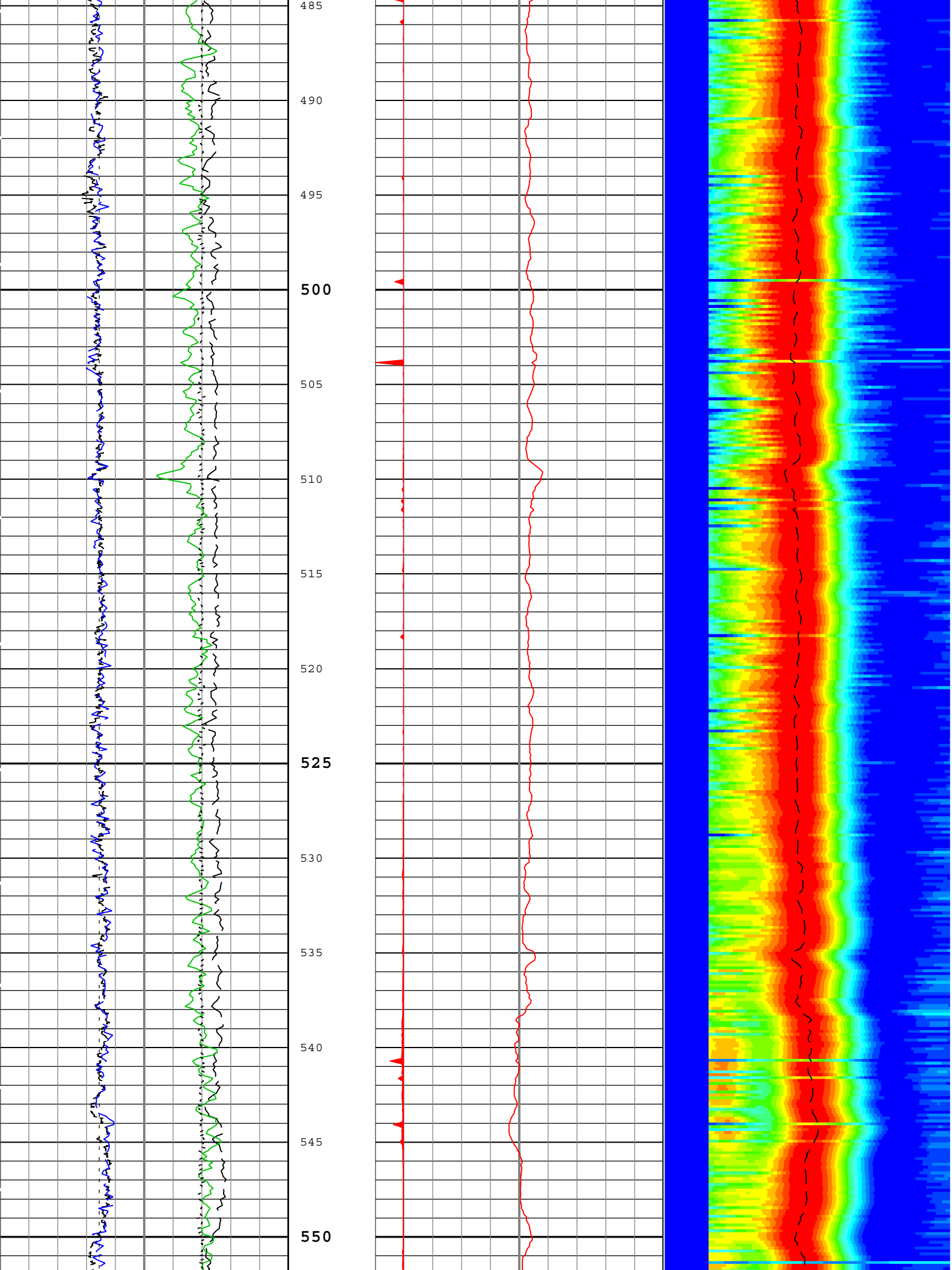


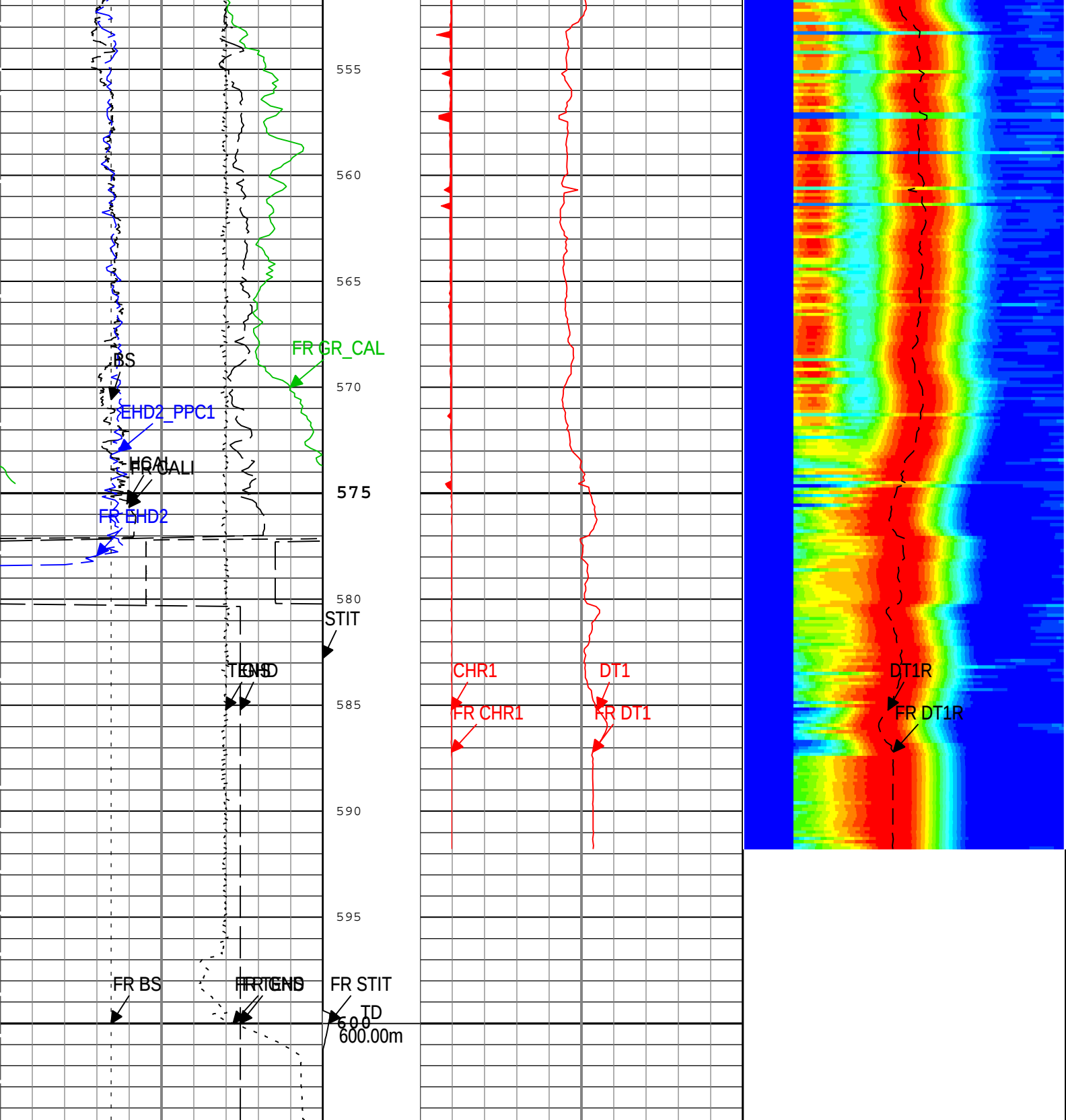












MAIN PASS: DIPOLE SONIC - LOWER DIPOLE IMAGE									
Borehole Diameter (GHD)			Stuck Tool Indicator, Total (STIT)	Delta-T Shear - Lower Dipole (DT1) DSST-B			Min	Amplitude	Max
125	mm	375		1100 us/m 100					
GR			0 m 20	Low Shear Coherence Flag			Rec.Array L.Dipole Slow Proj. CVDL DSST-B		
0	gAPI	150					100 us/m 1100		
HCAL			Cable Drag				Delta-T Shear, Receiver Array - Lower Dipole (DT1R) DSST-B		
225	mm	475	Tool_Tot. Drag				100	us/m	1100
EHD2_PPC1									
225	mm	475							
Bit Size (BS)									

Bit Size (BS)		
225	mm	475
Cable Tension (TENS)		
25000	N	0

TIME_1900 - Time Marked every 60.00 (s)

Description: DSST Lower Dipole VDL Color Format: Log (DSST Lower Dipole VDL Color) Index Scale: 1:240 Index Unit: m Index Type: Measured Depth Creation Date: 30-Jan-2013 18:38:36

Channel Processing Parameters				
Parameter	Description	Tool	Value	Unit
BHS	Borehole Status (Open or Cased Hole)	Borehole	Depth Zoned	
BS	Bit Size	WLSESSION	Depth Zoned	mm
CALI_SHIFT	CALI Supplementary Offset	HDRS-H	9.6	mm
CBLO	Casing Bottom (Logger)	WLSESSION	20	m
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DFD	Drilling Fluid Density	Borehole	1150	kg/m3
DSST_DTCS	Compressional Delta-T Source for DTCO Channel	DSST-B	PS Comp	
DTMD	Borehole Fluid Slowness	Borehole	675.85	us/m
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	CALI	
SBO1	STC Search Band Offset - Lower Dipole	DSST-B	Time Zoned	us
SBO4	STC Search Band Offset - Monopole P&S	DSST-B	Time Zoned	us
SBW1	STC Search Bandwidth - Lower Dipole	DSST-B	Time Zoned	us
SBW4	STC Search Bandwidth - Monopole P&S	DSST-B	Time Zoned	us
SEMTHR1	STC Semblance Threshold - Lower Dipole	DSST-B	0.35	
SEMTHR4	STC Semblance Threshold - Monopole P & S	DSST-B	0.35	
SFTY	Slowness Formation Type (Fast, Intermediate, Slow, etc.)	Borehole	Intermediate	
SLL1	STC Slowness Lower Limit - Lower Dipole	DSST-B	262.47	us/m
SLL4	STC Slowness Lower Limit - Monopole P&S	DSST-B	131.23	us/m
SPS1	Slowness Processing Switch for SAM1	DSST-B	On	
SPS4	Slowness Processing Switch for SAM4	DSST-B	On	
SST1	STC Slowness Step - Lower Dipole	DSST-B	13.12	us/m
SST4	STC Slowness Step - Monopole P&S	DSST-B	6.56	us/m
SSW1	STC Source Waveform - Lower Dipole	DSST-B	Even in SAMX	
SUL1	STC Slowness Upper Limit - Lower Dipole	DSST-B	1771.65	us/m
SUL4	STC Slowness Upper Limit - Monopole P&S	DSST-B	787.4	us/m
SWD1	STC Slowness Width - Lower Dipole	DSST-B	196.85	us/m
SWD4	STC Slowness Width - Monopole P&S	DSST-B	65.62	us/m
TD	Total Measured Depth	Borehole	600	m
TLL1	STC Time Lower Limit - Lower Dipole	DSST-B	Time Zoned	us
TLL4	STC Time Lower Limit - Monopole P&S	DSST-B	400	us
TRCLL1	Tracking Compressinal Lower Limit - Lower Dipole	DSST-B	185.91	us/m
TRCLL4	Tracking Compressinal Lower Limit - Monopole PS	DSST-B	185.91	us/m
TRCUL1	Tracking Compressinal Upper Limit - Lower Dipole	DSST-B	418.31	us/m
TRCUL4	Tracking Compressinal Upper Limit - Monopole PS	DSST-B	418.31	us/m
TRSLL1	Tracking Shear Lower Limit - Lower Dipole	DSST-B	0	us/m
TRSLL4	Tracking Shear Lower Limit - Monopole PS	DSST-B	0	us/m
TRSUL1	Tracking Shear Upper Limit - Lower Dipole	DSST-B	0	us/m
TRSUL4	Tracking Shear Upper Limit - Monopole PS	DSST-B	0	us/m
TST1	STC Time Step - Lower Dipole	DSST-B	Time Zoned	us
TST4	STC Time Step - Monopole P&S	DSST-B	100	us

TUL1	STC Time Upper Limit - Lower Dipole	DSST-B	Time Zoned	us
TUL4	STC Time Upper Limit - Monopole P&S	DSST-B	Time Zoned	us
TWD1	STC Time Width - Lower Dipole	DSST-B	Time Zoned	us
TWD4	STC Time Width - Monopole P&S	DSST-B	Time Zoned	us
TWI1	STC Integration Time Window - Lower Dipole	DSST-B	Time Zoned	us
TWI4	STC Integration Time Window - Monopole P&S	DSST-B	320	us
XFH1	STC Filter High - Lower Dipole	DSST-B	Time Zoned	Hz
XFH4	STC Filter High - Monopole P & S	DSST-B	16000	Hz
XFL1	STC Filter Low - Lower Dipole	DSST-B	250	Hz
XFL4	STC Filter Low - Monopole P & S	DSST-B	4000	Hz
XFS1	STC Filter Size - Lower Dipole	DSST-B	101	
XFS4	STC Filter Size - Monopole P & S	DSST-B	49	

Depth Zone Parameters

Parameter	Value	Start (m)	Stop (m)
BHS	Cased	0	20
BHS	Open	20	604.6
BS	609.6	0	20
BS	311.15	20	604.6

All depth are actual.

Time Zone Parameters

Parameter	Value	Start Time	Stop Time	Start Depth (m)	Stop Depth (m)
SBO1	1520	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
SBO1	1640	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
SBO4	390	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
SBO4	490	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
SBW1	8280	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
SBW1	8480	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
SBW4	2460	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
SBW4	2660	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
TLL1	1134	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
TLL1	1200	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
TST1	378	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
TST1	400	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
TUL1	12852	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
TUL1	12800	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
TUL4	4100	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
TUL4	4300	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
TWD1	6210	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
TWD1	6360	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
TWD4	1844	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
TWD4	1994	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
TWI1	1512	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
TWI1	1400	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86
XFH1	2612.24	30-Jan-2013 13:43:56	30-Jan-2013 15:24:31	604.59	32.78
XFH1	1333.33	30-Jan-2013 15:24:31	30-Jan-2013 15:25:45	32.78	28.86

All depth are at tool zone

All depth are at tool zero.

Tool Control Parameters				
Parameter	Description	Tool	Value	Unit
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	548.64	m/h
SAM1	Sonic Acquisition Mode 1 - Lower Dipole Mode	DSST-B	Off	
SAM4	DSST Sonic Acquisition Mode 4 - Monopole Mode for P&S	DSST-B	Odd	
SAMX	Sonic Acquisition Mode X - Both Dipoles and Monopole Modes for Expert	DSST-B	BCR	

1.1

Pass Summary								
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Depth Shift	Include Parallel Data
1.1	Log[2]:Up	Up	453.66 m	607.39 m	30-Jan-2013 1:05:51 PM	30-Jan-2013 1:30:38 PM	0.00 m	true
1.1	Log[3]:Up	Up	28.86 m	604.59 m	30-Jan-2013 1:43:56 PM	30-Jan-2013 3:25:45 PM	0.00 m	true

All depths are referenced to toolstring zero

Log	1.1: Log[3]:Up
-----	----------------

Description: DSST P&S VDL Color Format: Log (DSST Sonic 240 RA) Index Scale: 1:240 Index Unit: m Index Type: Measured Depth Creation Date: 30-Jan-2013 18:38:46

Channel Source Sampling

TIME_1900 WLWorkflow 0.1in

TIME_1900 - Time Marked every 60.00 (s)

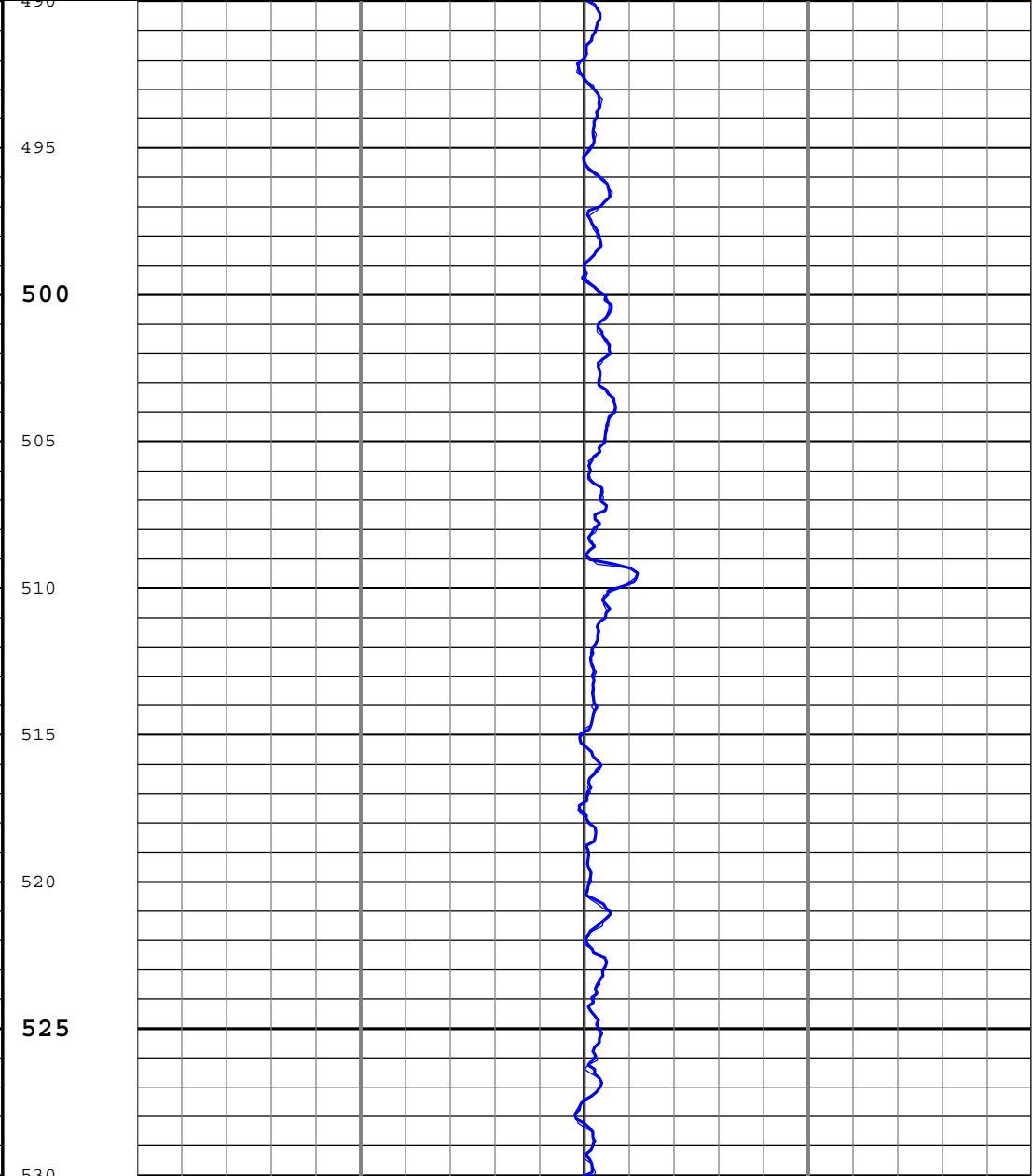
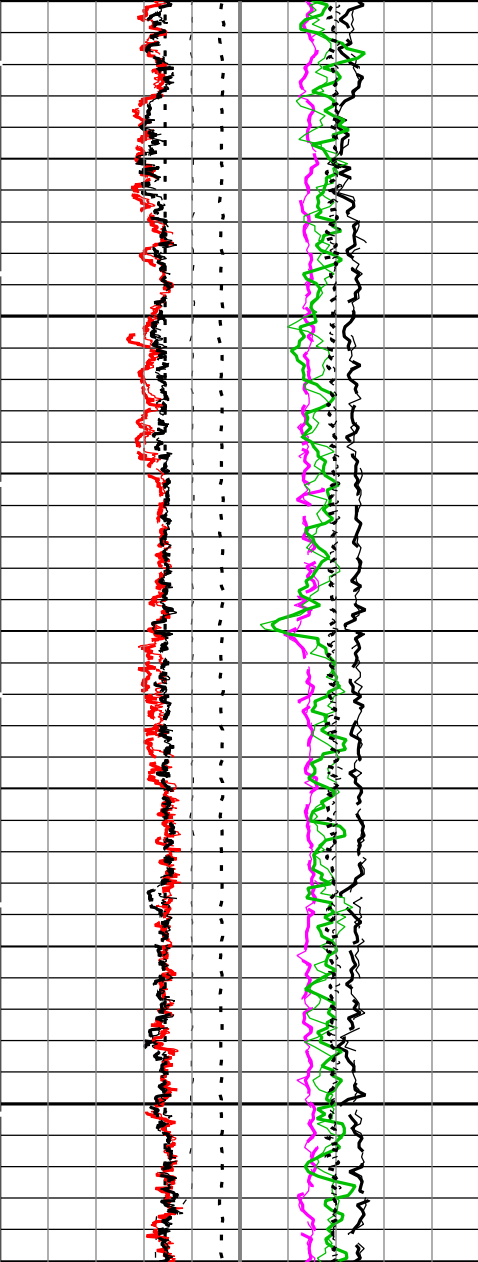
	Main To Repeat Repeat To Main Cable Tension (TENS) 25000 N 0
	Main To Repeat Repeat To Main Cable Speed (CS) 0 m/h 1000
	Main To Repeat Repeat To Main Bit Size (BS) 225 mm 475
	Main To Repeat Repeat To Main Caliper (HCAL2) HDRS-B 225 mm 475
	Main To Repeat Repeat To Main

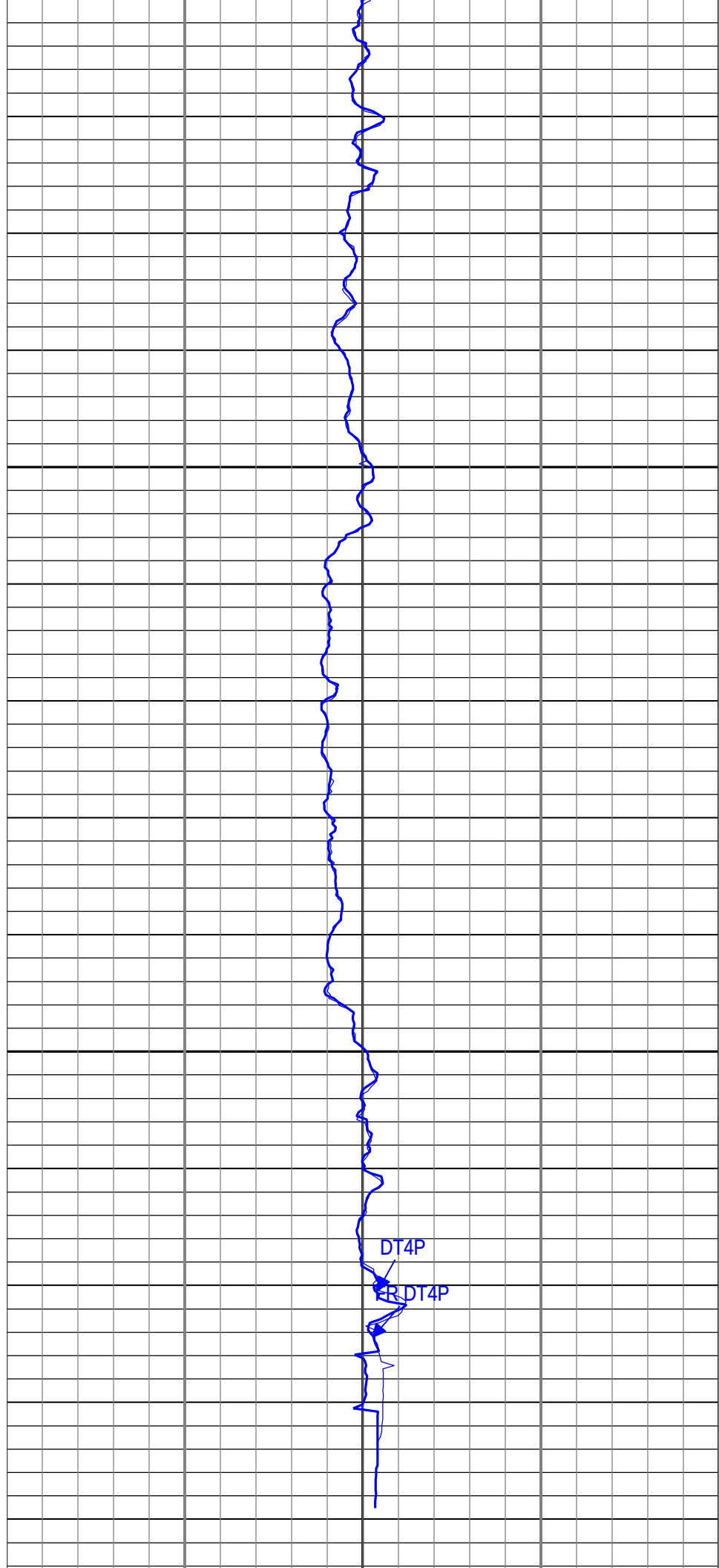
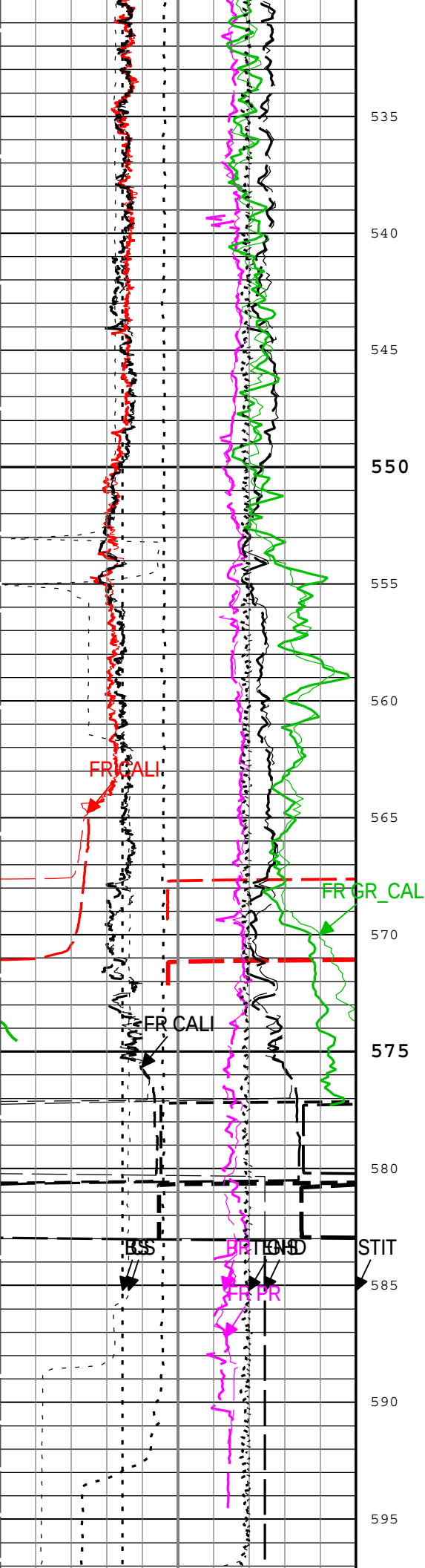
Borehole Diameter (GHD)		
125	mm	375
Main To Repeat		
Repeat To Main		
Caliper (HCAL) HDRS-H		
225	mm	475
Main To Repeat		
Repeat To Main		
Poisson s Ratio (PR) DSST-B		
0		0.5
Main To Repeat		
Repeat To Main		
Calibrated Gamma Ray (GR) HGNS-H		
0	gAPI	150

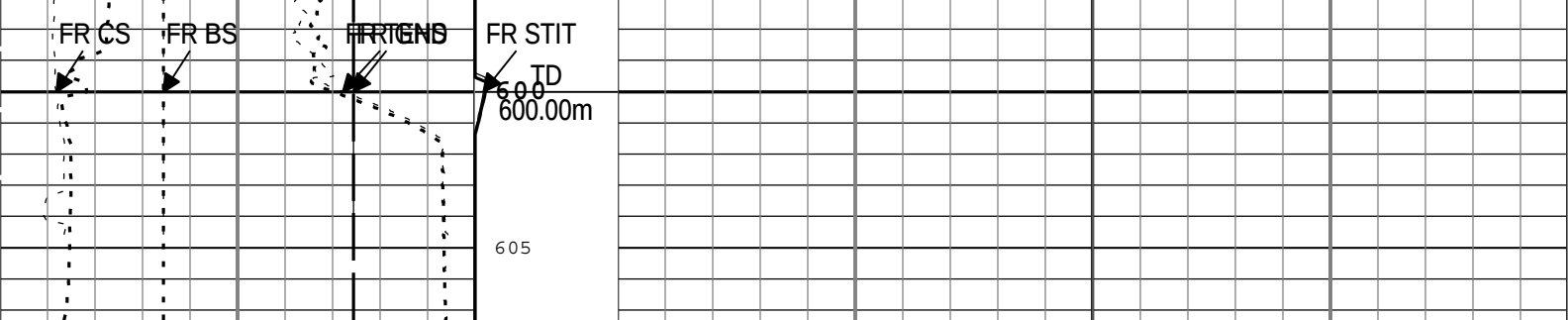
Main To Repeat
Repeat To Main
Stuck Tool Indicator, Total (STIT)
0 m 20

Main To Repeat
Repeat To Main
Delta-T Compressional - Monopole P S (DT4P) DSST-B
500 us/m 100

REPEAT ANALYSIS: DIPOLE SONIC - DELTA-T







REPEAT ANALYSIS: DIPOLE SONIC - DELTA-T

Main To Repeat		Main To Repeat	Main To Repeat	
Repeat To Main			Repeat To Main	
Cable Speed (CS)			Delta-T Compressional - Monopole P S (DT4P) DSST-B	
0	m/h1000		500	us/m100
Main To Repeat		Stuck Tool Indicator, Total (STIT)		
Repeat To Main				
Bit Size (BS)				
225	mm475			
Main To Repeat				
Repeat To Main				
Caliper (HCAL2) HDRS-B				
225	mm475			
Main To Repeat				
Repeat To Main				
Borehole Diameter (GHD)				
125	mm375			
Main To Repeat				
Repeat To Main				
Caliper (HCAL) HDRS-H				
225	mm475			
Main To Repeat				
Repeat To Main				
Poisson s Ratio (PR) DSST-B				
0	0.5			
Main To Repeat				
Repeat To Main				
Calibrated Gamma Ray (GR) HGNS-H				
0	gAPI150			
	Main To Repeat			

Repeat To Main

Cable Tension (TENS)

25000 N 0

TIME_1900 - Time Marked every 60.00 (s)

Description: DSST P&S VDL Color Format: Log (DSST Sonic 240 RA) Index Scale: 1:240 Index Unit: m Index Type: Measured Depth Creation Date: 30-Jan-2013 18:38:46

Calibration Report

AIT-M (Array Induction Tool - M) Calibration - Run 1.1

Primary Equipment :							
Array Induction Sonde - M			AMIS			135	
Auxiliary Equipment :							
AITM Rm/SP Bottom Nose			AMRM			135	

AIT Sonde Calibration - Test Loop Gain

Master (EEPROM):		00:21:54 17-Jan-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Test Loop Gain - 0		Master	1.000	0.950	1.015	1.050	
Test Loop Phase - 0	deg	Master	0	-3.000	-1.075	3.000	
Test Loop Gain - 1		Master	1.000	0.950	1.015	1.050	
Test Loop Phase - 1	deg	Master	0	-3.000	0.018	3.000	
Test Loop Gain - 2		Master	1.000	0.950	1.016	1.050	
Test Loop Phase - 2	deg	Master	0	-3.000	0.136	3.000	
Test Loop Gain - 3		Master	1.000	0.950	1.009	1.050	
Test Loop Phase - 3	deg	Master	0	-3.000	0.187	3.000	
Test Loop Gain - 4		Master	1.000	0.950	0.996	1.050	
Test Loop Phase - 4	deg	Master	0	-3.000	0.106	3.000	
Test Loop Gain - 5		Master	1.000	0.950	0.988	1.050	
Test Loop Phase - 5	deg	Master	0	-3.000	0.125	3.000	
Test Loop Gain - 6		Master	1.000	0.950	0.998	1.050	
Test Loop Phase - 6	deg	Master	0	-3.000	0.326	3.000	
Test Loop Gain - 7		Master	1.000	0.950	1.008	1.050	
Test Loop Phase - 7	deg	Master	0	-3.000	0.031	3.000	

AIT Sonde Calibration - Sonde Error Correction

Master (EEPROM):		00:21:54 17-Jan-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Sonde Error Correction Real - 0	mS/m	Master	-----	-231.000	-86.077	119.000	
Sonde Error Correction Quad - 0		Master	-----	-2250.000	20.355	2250.000	
Sonde Error Correction Real - 1	mS/m	Master	-----	114.000	153.971	204.000	
Sonde Error Correction Quad - 1		Master	-----	-625.000	298.419	625.000	
Sonde Error Correction Real - 2	mS/m	Master	-----	66.000	108.886	156.000	
Sonde Error Correction Quad - 2		Master	-----	-350.000	-50.862	350.000	
Sonde Error Correction Real - 3	mS/m	Master	-----	39.000	62.871	89.000	
Sonde Error Correction Quad - 3		Master	-----	-250.000	-18.524	250.000	
Sonde Error Correction Real - 4	mS/m	Master	-----	15.000	25.191	35.000	
Sonde Error Correction Quad - 4		Master	-----	-63.000	13.633	63.000	
Sonde Error Correction Real - 5	mS/m	Master	-----	4.000	12.311	24.000	
Sonde Error Correction Quad - 5		Master	-----	-50.000	-11.737	50.000	
Sonde Error Correction Real - 6	mS/m	Master	-----	5.000	9.460	15.000	
Sonde Error Correction Quad - 6		Master	-----	-30.000	-7.528	30.000	
Sonde Error Correction Real - 7	mS/m	Master	-----	-5.000	-2.115	5.000	
Sonde Error Correction Quad - 7		Master	-----	-30.000	-3.935	30.000	

AIT Mud Calibration - Mud Calibration Gain

Master (EEPROM):		00:21:54 17-Jan-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Coarse Gain		Master	1.000	0.800	0.958	1.200	
Fine Gain		Master	1.000	0.800	0.959	1.200	

AIT Electronics Check - Thru Calibration Check

Master (EEPROM):		00:21:54 17-Jan-2013	Before (Measured):	11:16:14 30-Jan-2013	After:		
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Thru Cal Mag - 0	V	Master	----	0.366	0.610	0.854	
		Before	----	0.366	0.609	0.854	
		After	----	----	----	----	
		Before-Master	----	----	-0.001	----	
		After-Before	----	----	----	----	
Thru Cal Phase - 0	deg	Master	----	137.000	-165.950	-103.000	
		Before	----	137.000	-158.981	-103.000	
		After	----	----	----	----	
		Before-Master	----	----	6.969	----	
		After-Before	----	----	----	----	
Thru Cal Mag - 1	V	Master	----	0.762	1.247	1.778	
		Before	----	0.762	1.246	1.778	
		After	----	----	----	----	
		Before-Master	----	----	-0.001	----	
		After-Before	----	----	----	----	
Thru Cal Phase - 1	deg	Master	----	136.000	-167.129	-104.000	
		Before	----	136.000	-160.160	-104.000	
		After	----	----	----	----	
		Before-Master	----	----	6.969	----	
		After-Before	----	----	----	----	
Thru Cal Mag - 2	V	Master	----	0.372	0.618	0.868	
		Before	----	0.372	0.617	0.868	
		After	----	----	----	----	
		Before-Master	----	----	-0.001	----	
		After-Before	----	----	----	----	
Thru Cal Phase - 2	deg	Master	----	132.000	-170.682	-108.000	
		Before	----	132.000	-163.702	-108.000	
		After	----	----	----	----	
		Before-Master	----	----	6.980	----	
		After-Before	----	----	----	----	
Thru Cal Mag - 3	V	Master	----	0.420	0.697	0.980	
		Before	----	0.420	0.697	0.980	
		After	----	----	----	----	
		Before-Master	----	----	0.000	----	
		After-Before	----	----	----	----	
Thru Cal Phase - 3	deg	Master	----	131.000	-171.447	-109.000	
		Before	----	131.000	-164.476	-109.000	
		After	----	----	----	----	
		Before-Master	----	----	6.971	----	
		After-Before	----	----	----	----	
Thru Cal Mag - 4	V	Master	----	0.804	1.307	1.876	
		Before	----	0.804	1.306	1.876	
		After	----	----	----	----	
		Before-Master	----	----	-0.001	----	
		After-Before	----	----	----	----	
Thru Cal Phase - 4	deg	Master	----	125.000	-177.673	-115.000	
		Before	----	125.000	-170.695	-115.000	
		After	----	----	----	----	
		Before-Master	----	----	6.978	----	
		After-Before	----	----	----	----	
Thru Cal Mag - 5	V	Master	----	1.176	1.901	2.744	
		Before	----	1.176	1.897	2.744	
		After	----	----	----	----	
		Before-Master	----	----	-0.004	----	
		After-Before	----	----	----	----	
Thru Cal Phase - 5	deg	Master	----	122.000	-179.355	-118.000	
		Before	----	122.000	-172.362	-118.000	
		After	----	----	----	----	
		Before-Master	----	----	6.993	----	
		After-Before	----	----	----	----	
Thru Cal Mag - 6	V	Master	----	1.176	1.897	2.744	
		Before	----	1.176	1.893	2.744	
		After	----	----	----	----	
		Before-Master	----	----	-0.004	----	
		After-Before	----	----	----	----	
Thru Cal Phase - 6	deg	Master	----	121.000	-179.328	-119.000	
		Before	----	121.000	-172.335	-119.000	

		After	----	----	----	----	
		Before-Master	----	----	6.993	----	
		After-Before	----	----	----	----	
Thru Cal Mag - 7	V	Master	----	0.846	1.372	1.974	
		Before	----	0.846	1.370	1.974	
		After	----	----	----	----	
		Before-Master	----	----	-0.002	----	
		After-Before	----	----	----	----	
Thru Cal Phase - 7	deg	Master	----	115.000	-179.977	-125.000	
		Before	----	115.000	-172.895	-125.000	
		After	----	----	----	----	
		Before-Master	----	----	7.082	----	
		After-Before	----	----	----	----	
SPA Zero	mV	Master		-50.000	0.079	50.000	
		Before		-50.000	0.088	50.000	
		After	----	----	----	----	
		Before-Master	----	----	0.009	----	
		After-Before	----	----	----	----	
SPA Plus	mV	Master		941.000	990.165	1040.000	
		Before		941.000	989.855	1040.000	
		After	----	----	----	----	
		Before-Master	----	----	-0.310	----	
		After-Before	----	----	----	----	
Temperature Zero	V	Master		-0.050	0.000	0.050	
		Before		-0.050	0.000	0.050	
		After	----	----	----	----	
		Before-Master	----	----	0.000	----	
		After-Before	----	----	----	----	
Temperature Plus	V	Master		0.870	0.918	0.960	
		Before		0.870	0.917	0.960	
		After	----	----	----	----	
		Before-Master	----	----	-0.001	----	
		After-Before	----	----	----	----	

PPC Diagnostics - Arm Close Position Test

Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Caliper-arm 1, radius raw - 0	mm	Master	-----	-----	-----	-----	
Caliper-arm 2, radius raw - 0	mm	Master	-----	-----	-----	-----	
Caliper-arm 3, radius raw - 0	mm	Master	-----	-----	-----	-----	
Caliper-arm 4, radius raw - 0	mm	Master	-----	-----	-----	-----	
Power Control LVDT - 0	cm	Master	-----	-----	-----	-----	
LVDT excitation - 0	V	Master	-----	-----	-----	-----	

PPC Diagnostics - Downhole Electronics Test

Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Positive Analog Voltage - 0	V	Master	-----	-----	-----	-----	
Minus Analog Voltage - 0	V	Master	-----	-----	-----	-----	
Digital Voltage - 0	V	Master	-----	-----	-----	-----	
Digital Voltage for Analog Digital Converter - 0	V	Master	-----	-----	-----	-----	
Status Word of Analog Digital Converter Offset - 0		Master	-----	-----	-----	-----	

PPC Diagnostics - RBS Test

Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Relative Bearing - 0	deg	Master	-----	-----	-----	-----	
Potentiometer Excitation - 0	V	Master	-----	-----	-----	-----	

PPC Diagnostics - Cartridge Temperature Test

Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Cartridge Temperature - 0	degC	Master	-----	-----	-----	-----	

PPC Diagnostics - Power Control LVDT Test

Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
LVDT5 Caliper Open Position - 0	cm	Master	-----	-----	-----	-----	
LVDT5 Full Power Position - 0	cm	Master	-----	-----	-----	-----	

PPC LVDT5 Master Calibration - PPC CaliCoefficients

Master (EEPROM):		12:32:00 29-Jan-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
CCS	cm	Master	-3.8354		-3.74086		
COP	cm	Master	-3.3274		-3.26895		
CPW	cm	Master	3.5814		3.53033		

PPC Caliper Calibration - PPC CaliCoefficients

Before (Manual Entry):		15:35:22 30-Jan-2013		After:			
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RD1_GAIN		Before	1	0.85	1.05243	1.15	
		After	-----	-----	-----	-----	
		After-Before	-----	-----	-----	-----	
RD2_GAIN		Before	1	0.85	1.02414	1.15	
		After	-----	-----	-----	-----	
		After-Before	-----	-----	-----	-----	
RD3_GAIN		Before	1	0.85	1.04379	1.15	
		After	-----	-----	-----	-----	
		After-Before	-----	-----	-----	-----	
RD4_GAIN		Before	1	0.85	1.0192	1.15	
		After	-----	-----	-----	-----	
		After-Before	-----	-----	-----	-----	
RD1_OFFSET	mm	Before	0	-55.88	-20.143	66.04	
		After	-----	-----	-----	-----	
		After-Before	-----	-----	-----	-----	
RD2_OFFSET	mm	Before	0	-55.88	-4.5535	66.04	
		After	-----	-----	-----	-----	
		After-Before	-----	-----	-----	-----	
RD3_OFFSET	mm	Before	0	-55.88	-20.763	66.04	
		After	-----	-----	-----	-----	
		After-Before	-----	-----	-----	-----	
RD4_OFFSET	mm	Before	0	-55.88	-1.7622	66.04	
		After	-----	-----	-----	-----	
		After-Before	-----	-----	-----	-----	

Master (EEPROM): 11:33:48 18-Jan-2013

HDRS Density Calibration - Background Summary

HDRS Density Calibration - Photo-multiplier High VoltagesHDRS Density Calibration - Crystal Quality Resolutions

HDRS MCFL Calibration - MCFL Accumulations

HGNS-H (HILT Gamma-Ray and Neutron Sonde, 150 degC) Calibration - Run 1.1

Primary Equipment :			
	HILT Gamma-Ray and Neutron Sonde, 150 degC	HGNS-H	3879
Auxiliary Equipment :			

Maximally Equipment :	HGNS Accelerometer, 150 degC	HAC CZ-H	2948
	AmBe Neutron Logging Source	NSR-F	5199
Calibration Parameter :			
	Water Temperature		
	Housing Size		
	JIG-BKG (Jig minus background reference)	166	

HGNS Accelerometer Calibration - Accelerometer Accumulations							
Before (Measured):		11:17:29 30-Jan-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
AZ Vertical Measurement	m/s2	Before	9.81	9.61	9.80	10.01	

HGNS Accelerometer EEPROM - Accelerometer EEPROM Read							
Master (EEPROM):		00:00:00 15-Apr-2004					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Accelerometer Manufacturer		Master			QAT_160		
Accelerometer Reference Temperature	degC	Master		-1.0	25.0	50.0	
Accelerometer Coefficients - 0		Master	----	----	-1234.400	----	
Accelerometer Coefficients - 1		Master	----	----	26.320	----	
Accelerometer Coefficients - 2		Master	----	----	-0.007	----	
Accelerometer Coefficients - 3		Master	----	----	0.000	----	
Accelerometer Coefficients - 4		Master	----	----	2.747	----	
Accelerometer Coefficients - 5		Master	----	----	0.000	----	
Accelerometer Coefficients - 6		Master	----	----	0.000	----	
Accelerometer Coefficients - 7		Master	----	----	0.000	----	
Accelerometer Coefficients - 8		Master	----	----	298.800	----	
Accelerometer Coefficients - 9		Master	----	----	1.003	----	

HGNS Neutron Calibration - HGNS Neutron Accumulations							
Master (EEPROM):		21:51:08 10-Jan-2013	Before (Measured):		15:42:37 29-Jan-2013	After:	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Near Zero Measurement	1/s	Master	0	5.0	27.2	40.0	
		Before	0	5.0	28.1	40.0	
		After	----	----	----	----	
		Before-Master	----	-4.1	0.9	4.1	
		After-Before	----	----	----	----	
Far Zero Measurement	1/s	Master	0	5.0	27.1	40.0	
		Before	0	5.0	27.6	40.0	
		After	----	----	----	----	
		Before-Master	----	-4.1	0.5	4.1	
		After-Before	----	----	----	----	
Near Plus Measurement - 0	1/s	Master	6031.0	4700.0	5360.0	6900.0	
		Before	----	----	----	----	
		After	----	----	----	----	
		Before-Master	----	----	----	----	
		After-Before	----	----	----	----	
Far Plus Measurement - 0	1/s	Master	2793.0	1900.0	2360.0	2900.0	
		Before	----	----	----	----	
		After	----	----	----	----	
		Before-Master	----	----	----	----	
		After-Before	----	----	----	----	
Near Corrected Plus Measurement - 0	1/s	Master		4700.0	5338.0	6900.0	
		Before	----	----	----	----	
		After	----	----	----	----	
		Before-Master	----	----	----	----	
		After-Before	----	----	----	----	
Far Corrected Plus Measurement - 0	1/s	Master		1900.0	2333.0	2900.0	
		Before	----	----	----	----	
		After	----	----	----	----	
		Before-Master	----	----	----	----	
		After-Before	----	----	----	----	

HGNS Gamma-Ray Calibration - Gamma-Ray Accumulations							
Before (Measured):		15:44:06 29-Jan-2013					
After:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RGR Zero Measurement	gAPI	Before	30.0	0	32.9	120.0	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RGR Plus Measurement	gAPI	Before	186.5	158.1	160.5	207.5	
		After	----	----	NOT DONE	----	
		After-Before	----	----	----	----	
GR Calibration Gain		Before	0.89	0.80	1.03	1.05	
		After	----	----	----	----	
		After-Before	----	----	----	----	

GPIT-F (General-Purpose Inclinometer Tool) Calibration - Run 1.1

Primary Equipment :			GPIT DHRU Sensor Block - F			DHRU-F		1719	
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GPIT-F Accelerometers Master Calibration - Signals and Temperature Correction for Accelerometers

Master (EEPROM):		00:00:00 26-Aug-2008						
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
GPIT-F Accelerometer X Model[0,0]		Master	----	----	0.02083545	----		
GPIT-F Accelerometer X Model[0,1]		Master	----	----	0.0006718004	----		
GPIT-F Accelerometer X Model[1,0]		Master	----	----	9.363444E-05	----		
GPIT-F Accelerometer X Model[1,1]		Master	----	----	-1.419544E-07	----		
GPIT-F Accelerometer X Model[2,0]		Master	----	----	2.685801E-06	----		
GPIT-F Accelerometer X Model[2,1]		Master	----	----	1.640218E-09	----		
GPIT-F Accelerometer X Model[3,0]		Master	----	----	-1.750351E-08	----		
GPIT-F Accelerometer X Model[3,1]		Master	----	----	-7.283021E-12	----		
GPIT-F Accelerometer Y Model[0,0]		Master	----	----	0.03108478	----		
GPIT-F Accelerometer Y Model[0,1]		Master	----	----	-0.0006634712	----		
GPIT-F Accelerometer Y Model[1,0]		Master	----	----	-0.0004138362	----		
GPIT-F Accelerometer Y Model[1,1]		Master	----	----	1.383469E-07	----		
GPIT-F Accelerometer Y Model[2,0]		Master	----	----	-1.224624E-06	----		
GPIT-F Accelerometer Y Model[2,1]		Master	----	----	-1.51153E-09	----		
GPIT-F Accelerometer Y Model[3,0]		Master	----	----	1.025784E-08	----		
GPIT-F Accelerometer Y Model[3,1]		Master	----	----	6.754733E-12	----		
GPIT-F Accelerometer Z Model[0,0]		Master	----	----	0.02316506	----		
GPIT-F Accelerometer Z Model[0,1]		Master	----	----	0.0006561076	----		
GPIT-F Accelerometer Z Model[1,0]		Master	----	----	0.0004232987	----		
GPIT-F Accelerometer Z Model[1,1]		Master	----	----	-1.412186E-07	----		
GPIT-F Accelerometer Z Model[2,0]		Master	----	----	-1.26776E-06	----		
GPIT-F Accelerometer Z Model[2,1]		Master	----	----	1.641676E-09	----		
GPIT-F Accelerometer Z Model[3,0]		Master	----	----	-5.217573E-09	----		
GPIT-F Accelerometer Z Model[3,1]		Master	----	----	-7.394943E-12	----		

GPIT-F Accelerometers Master Calibration - Perpendicular Correction for Accelerometers

Master (EEPROM):		00:00:00 26-Aug-2008						
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
GPIT-F Accelero Axis Model[0,0]		Master	----	----	-0.0001966913	----		
GPIT-F Accelero Axis Model[0,1]		Master	----	----	0.0006901673	----		
GPIT-F Accelero Axis Model[0,2]		Master	----	----	-0.0001628145	----		
GPIT-F Accelero Axis Model[0,3]		Master	----	----	-5.680317E-05	----		
GPIT-F Accelero Axis Model[0,4]		Master	----	----	4.07189E-05	----		
GPIT-F Accelero Axis Model[0,5]		Master	----	----	8.292276E-05	----		
GPIT-F Accelero Axis Model[0,6]		Master	----	----	0	----		
GPIT-F Accelero Axis Model[1,0]		Master	----	----	-3.326675E-07	----		
GPIT-F Accelero Axis Model[1,1]		Master	----	----	-4.654971E-06	----		
GPIT-F Accelero Axis Model[1,2]		Master	----	----	-3.099905E-06	----		
GPIT-F Accelero Axis Model[1,3]		Master	----	----	-1.677593E-06	----		
GPIT-F Accelero Axis Model[1,4]		Master	----	----	1.571826E-06	----		
GPIT-F Accelero Axis Model[1,5]		Master	----	----	1.489649E-06	----		
GPIT-F Accelero Axis Model[1,6]		Master	----	----	0	----		

GPIT-F Magnetometers Master Calibration - Signals and Temperature Correction for Magnetometer

Master (EEPROM):		00:00:00 26-Aug-2008					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
GPIT-F Magneto X Model[0,0]		Master	----	----	198.1605	----	
GPIT-F Magneto X Model[0,1]		Master	----	----	1.82224	----	

GPIT-F Magneto X Model[0,1]		Master	----	----	4.89094	----		
GPIT-F Magneto X Model[1,0]		Master	----	----	-7.675484	----		
GPIT-F Magneto X Model[1,1]		Master	----	----	-0.0007672089	----		
GPIT-F Magneto X Model[2,0]		Master	----	----	0.06957046	----		
GPIT-F Magneto X Model[2,1]		Master	----	----	1.237954E-05	----		
GPIT-F Magneto X Model[3,0]		Master	----	----	-0.0003306787	----		
GPIT-F Magneto X Model[3,1]		Master	----	----	-4.880398E-08	----		
GPIT-F Magneto Y Model[0,0]		Master	----	----	165.94	----		
GPIT-F Magneto Y Model[0,1]		Master	----	----	-4.940951	----		
GPIT-F Magneto Y Model[1,0]		Master	----	----	-5.017055	----		
GPIT-F Magneto Y Model[1,1]		Master	----	----	0.0008111733	----		
GPIT-F Magneto Y Model[2,0]		Master	----	----	0.07478225	----		
GPIT-F Magneto Y Model[2,1]		Master	----	----	-1.230758E-05	----		
GPIT-F Magneto Y Model[3,0]		Master	----	----	-0.0002725917	----		
GPIT-F Magneto Y Model[3,1]		Master	----	----	4.779239E-08	----		
GPIT-F Magneto Z Model[0,0]		Master	----	----	-3.884398	----		
GPIT-F Magneto Z Model[0,1]		Master	----	----	4.883152	----		
GPIT-F Magneto Z Model[1,0]		Master	----	----	-3.829239	----		
GPIT-F Magneto Z Model[1,1]		Master	----	----	-0.0009558625	----		
GPIT-F Magneto Z Model[2,0]		Master	----	----	0.02639634	----		
GPIT-F Magneto Z Model[2,1]		Master	----	----	1.401763E-05	----		
GPIT-F Magneto Z Model[3,0]		Master	----	----	-0.0001204358	----		
GPIT-F Magneto Z Model[3,1]		Master	----	----	-5.318234E-08	----		

GPIT-F Magnetometers Master Calibration - Perpendicular Correction for Magnetometer								
Master (EEPROM):		00:00:00 26-Aug-2008						
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
GPIT-F Magneto Axis Model[0,0]		Master	----	----	-0.0001320723	----		
GPIT-F Magneto Axis Model[0,1]		Master	----	----	0.002519899	----		
GPIT-F Magneto Axis Model[0,2]		Master	----	----	-0.002410411	----		
GPIT-F Magneto Axis Model[0,3]		Master	----	----	0.00206358	----		
GPIT-F Magneto Axis Model[0,4]		Master	----	----	0.002383545	----		
GPIT-F Magneto Axis Model[0,5]		Master	----	----	-0.002601481	----		
GPIT-F Magneto Axis Model[0,6]		Master	----	----	0	----		
GPIT-F Magneto Axis Model[1,0]		Master	----	----	2.377108E-06	----		
GPIT-F Magneto Axis Model[1,1]		Master	----	----	-9.225543E-06	----		
GPIT-F Magneto Axis Model[1,2]		Master	----	----	-5.170158E-06	----		
GPIT-F Magneto Axis Model[1,3]		Master	----	----	4.893004E-06	----		
GPIT-F Magneto Axis Model[1,4]		Master	----	----	-2.741137E-06	----		
GPIT-F Magneto Axis Model[1,5]		Master	----	----	1.069634E-06	----		
GPIT-F Magneto Axis Model[1,6]		Master	----	----	0	----		

GPIT-F DHRU102 Master Calibration -								
Master (EEPROM):		00:00:00 22-Aug-2008						
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
GPIT-F Electronic Coeff 1[0,0]		Master	----	----	-0.1425928	----		
GPIT-F Electronic Coeff 1[0,1]		Master	----	----	249.7813	----		
GPIT-F Electronic Coeff 1[1,0]		Master	----	----	-0.00934667	----		
GPIT-F Electronic Coeff 1[1,1]		Master	----	----	0.01745275	----		
GPIT-F Electronic Coeff 1[2,0]		Master	----	----	0.0002608125	----		
GPIT-F Electronic Coeff 1[2,1]		Master	----	----	-0.0003361361	----		
GPIT-F Electronic Coeff 1[3,0]		Master	----	----	-3.340233E-06	----		
GPIT-F Electronic Coeff 1[3,1]		Master	----	----	2.570753E-06	----		
GPIT-F Electronic Coeff 1[4,0]		Master	----	----	1.294355E-08	----		
GPIT-F Electronic Coeff 1[4,1]		Master	----	----	-7.670941E-09	----		
GPIT-F Electronic Coeff 2[0,0]		Master	----	----	0.5081379	----		
GPIT-F Electronic Coeff 2[0,1]		Master	----	----	249.7232	----		
GPIT-F Electronic Coeff 2[1,0]		Master	----	----	-0.004489578	----		
GPIT-F Electronic Coeff 2[1,1]		Master	----	----	0.01932923	----		
GPIT-F Electronic Coeff 2[2,0]		Master	----	----	0.000176937	----		
GPIT-F Electronic Coeff 2[2,1]		Master	----	----	-0.0003608702	----		
GPIT-F Electronic Coeff 2[3,0]		Master	----	----	-2.281621E-06	----		
GPIT-F Electronic Coeff 2[3,1]		Master	----	----	2.730957E-06	----		
GPIT-F Electronic Coeff 2[4,0]		Master	----	----	8.618913E-09	----		
GPIT-F Electronic Coeff 2[4,1]		Master	----	----	-8.099707E-09	----		
GPIT-F Electronic Coeff 3[0,0]		Master	----	----	-2.017343	----		

GPIT-F Electronic Coeff 3[0,1]		Master	----	----	249.8453	----	
GPIT-F Electronic Coeff 3[1,0]		Master	----	----	-0.007388029	----	
GPIT-F Electronic Coeff 3[1,1]		Master	----	----	0.01663022	----	
GPIT-F Electronic Coeff 3[2,0]		Master	----	----	0.000213988	----	
GPIT-F Electronic Coeff 3[2,1]		Master	----	----	-0.0003028827	----	
GPIT-F Electronic Coeff 3[3,0]		Master	----	----	-2.250001E-06	----	
GPIT-F Electronic Coeff 3[3,1]		Master	----	----	2.292859E-06	----	
GPIT-F Electronic Coeff 3[4,0]		Master	----	----	7.906366E-09	----	
GPIT-F Electronic Coeff 3[4,1]		Master	----	----	-6.965986E-09	----	

GPIT-F DHRU102 Master Calibration -

Master (EEPROM): 00:00:00 22-Aug-2008

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
GPIT-F Electronic Coeff 4[0,0]		Master	----	----	-0.4362828	----	
GPIT-F Electronic Coeff 4[0,1]		Master	----	----	0.127975	----	
GPIT-F Electronic Coeff 4[1,0]		Master	----	----	0.02081654	----	
GPIT-F Electronic Coeff 4[1,1]		Master	----	----	4.840483E-06	----	
GPIT-F Electronic Coeff 4[2,0]		Master	----	----	-0.0001969435	----	
GPIT-F Electronic Coeff 4[2,1]		Master	----	----	-1.086873E-07	----	
GPIT-F Electronic Coeff 4[3,0]		Master	----	----	1.667087E-06	----	
GPIT-F Electronic Coeff 4[3,1]		Master	----	----	9.594155E-10	----	
GPIT-F Electronic Coeff 4[4,0]		Master	----	----	-3.872378E-09	----	
GPIT-F Electronic Coeff 4[4,1]		Master	----	----	-3.135457E-12	----	
GPIT-F Electronic Coeff 5[0,0]		Master	----	----	-0.4362828	----	
GPIT-F Electronic Coeff 5[0,1]		Master	----	----	0.127975	----	
GPIT-F Electronic Coeff 5[1,0]		Master	----	----	0.02081654	----	
GPIT-F Electronic Coeff 5[1,1]		Master	----	----	4.840483E-06	----	
GPIT-F Electronic Coeff 5[2,0]		Master	----	----	-0.0001969435	----	
GPIT-F Electronic Coeff 5[2,1]		Master	----	----	-1.086873E-07	----	
GPIT-F Electronic Coeff 5[3,0]		Master	----	----	1.667087E-06	----	
GPIT-F Electronic Coeff 5[3,1]		Master	----	----	9.594155E-10	----	
GPIT-F Electronic Coeff 5[4,0]		Master	----	----	-3.872378E-09	----	
GPIT-F Electronic Coeff 5[4,1]		Master	----	----	-3.135457E-12	----	
GPIT-F Electronic Coeff 6[0,0]		Master	----	----	-0.4362828	----	
GPIT-F Electronic Coeff 6[0,1]		Master	----	----	0.127975	----	
GPIT-F Electronic Coeff 6[1,0]		Master	----	----	0.02081654	----	
GPIT-F Electronic Coeff 6[1,1]		Master	----	----	4.840483E-06	----	
GPIT-F Electronic Coeff 6[2,0]		Master	----	----	-0.0001969435	----	
GPIT-F Electronic Coeff 6[2,1]		Master	----	----	-1.086873E-07	----	
GPIT-F Electronic Coeff 6[3,0]		Master	----	----	1.667087E-06	----	
GPIT-F Electronic Coeff 6[3,1]		Master	----	----	9.594155E-10	----	
GPIT-F Electronic Coeff 6[4,0]		Master	----	----	-3.872378E-09	----	
GPIT-F Electronic Coeff 6[4,1]		Master	----	----	-3.135457E-12	----	

HDRS-B (HILT Density and Rxo Sonde, 125 degC) Calibration - Run 1.1

Primary Equipment :

HILT High-Resolution Control Cartridge, 125 degC	HRCC-B	880
HILT Resistivity Gamma-Ray Density Device, 125 degC	HRGD-B	919

Auxiliary Equipment :

HRDD Backscatter Detector	Backscatter	
HRDD Long Spacing Detector	Long Spacing	
HRDD Short Spacing Detector	Short Spacing	
Cesium 137 Gamma-Ray Logging Source	GSR-J	5285
HILT High-Resolution Control Cartridge, 125 degC	HRCC-B	880
HILT High-Resolution Mechanical Sonde, 125 degC	HRMS-B	900

Calibration Parameter :

Small Ring Size (Caliper Calibration Small Ring)	203.2
Large Ring Size (Caliper Calibration Large Ring)	304.8

HDRS Caliper Calibration - Caliper Accumulations

Before (Measured): 12:30:17 29-Jan-2013

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Small Ring	mm	Before	203.2	152.4	228.7	254.0	
Large Ring	mm	Before	304.8	228.6	332.7	381.0	
HDRS Density Calibration - Inversion Results							
Master (EEPROM):		15:30:56 28-Jan-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Rho Aluminum	kg/m3	Master	2596	2586	2599	2606	
Rho Magnesium	kg/m3	Master	1686	1676	1688	1696	
Pe Aluminum		Master	2.570	2.470	2.578	2.670	
Pe Magnesium		Master	2.650	2.550	2.622	2.750	
HDRS Density Calibration - Deviation Summary							
Master (EEPROM):		15:30:56 28-Jan-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Average Deviation	%	Master	0	-0.6000	0.2529	0.6000	
BS Max Deviation	%	Master	0	-1.6000	0.6566	1.6000	
SS Average Deviation	%	Master	0	-1.0000	0.3478	1.0000	
SS Max Deviation	%	Master	0	-2.5000	1.5398	2.5000	
LS Average Deviation	%	Master	0	-1.5000	0.6316	1.5000	
LS Max Deviation	%	Master	0	-3.5000	1.4401	3.5000	
HDRS Density Calibration - Background Summary							
Master (EEPROM):		15:30:56 28-Jan-2013		Before (Measured):		15:44:24 29-Jan-2013	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Window Ratio		Master	1.0000		0.7679		
		Before	0.7679	0.7295	0.7639	0.8063	
		Before-Master	-----	-----	-0.0040	-----	
BS Window Sum	1/s	Master	1		8506		
		Before	8506	8081	8503	8932	
		Before-Master	-----	-----	-3	-----	
SS Window Ratio		Master	1.0000		0.4881		
		Before	0.4881	0.4637	0.4871	0.5125	
		Before-Master	-----	-----	-0.0010	-----	
SS Window Sum	1/s	Master	1		8884		
		Before	8884	8440	8908	9329	
		Before-Master	-----	-----	24	-----	
LS Window Ratio		Master	1.0000		0.3024		
		Before	0.3024	0.2873	0.2998	0.3175	
		Before-Master	-----	-----	-0.0026	-----	
LS Window Sum	1/s	Master	1		1056		
		Before	1056	1003	1052	1109	
		Before-Master	-----	-----	-4	-----	
HDRS Density Calibration - Photo-multiplier High Voltages							
Master (EEPROM):		15:30:56 28-Jan-2013		Before (Measured):		15:44:24 29-Jan-2013	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS PM High Voltage	V	Master		1000	1211	2400	
		Before		1000	1222	2400	
		Before-Master	-----	-100	11	100	
SS PM High Voltage	V	Master		1000	1730	2400	
		Before		1000	1744	2400	
		Before-Master	-----	-100	14	100	
LS PM High Voltage	V	Master		1000	1542	2400	
		Before		1000	1549	2400	
		Before-Master	-----	-100	7	100	
HDRS Density Calibration - Crystal Quality Resolutions							
Master (EEPROM):		15:30:56 28-Jan-2013		Before (Measured):		15:44:24 29-Jan-2013	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Crystal Resolution	%	Master		5.00	9.91	25.00	
		Before		5.00	9.76	25.00	
		Before-Master	-----	-1.00	-0.15	1.00	
SS Crystal Resolution	%	Master		5.00	10.23	20.00	
		Before		5.00	10.40	20.00	
		Before-Master	-----	-1.00	0.17	1.00	
LS Crystal Resolution	%	Master		5.00	9.55	20.00	
		Before		5.00	9.83	20.00	
		Before-Master		-1.00	-0.28	1.00	

			Before-Master	-----	-1.00	0.28	1.00	
HDRS MCFL Calibration - MCFL Accumulations								
Before:								
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
Main Resistivity - 0	ohm.m	Before	----	----	----	----		
Deep Resistivity - 0	ohm.m	Before	----	----	----	----		
Shallow Resistivity - 0	ohm.m	Before	----	----	----	----		

EDTC-B (Enhanced Digital Telemetry Cartridge - Version B) Calibration - Run 1.1

Primary Equipment :

Enhanced Digital Telemetry Cartridge - B

EDTC-B

9048

Calibration Parameter :

Plus Reference (Jig minus background reference)

164

EDTC-B Accelerometer Calibration - EDTC-B Accelerometer Calibration

Before (Measured): 11:13:47 30-Jan-2013

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
AZ Vertical Measurement	m/s2	Before	9.810	9.610	9.803	10.010		

EDTC-B Memory Data - EDTC-B Memory Data

Master (EEPROM): 11:13:02 30-Jan-2013

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
Initial PMT HV	V	Master			1612.000			
Accelerometer Serial Number		Master			1203			
Accelerometer Coefficients - 0		Master	----	----	3.003	----		
Accelerometer Coefficients - 1		Master	----	----	0.000	----		
Accelerometer Coefficients - 2		Master	----	----	0.000	----		
Accelerometer Coefficients - 3		Master	----	----	0.000	----		
Accelerometer Coefficients - 4		Master	----	----	0.000	----		
Accelerometer Coefficients - 5		Master	----	----	0.000	----		
Accelerometer Coefficients - 6		Master	----	----	0.000	----		
Accelerometer Coefficients - 7		Master	----	----	-0.003	----		
Accelerometer Coefficients - 8		Master	----	----	0.000	----		
Accelerometer Coefficients - 9		Master	----	----	0.000	----		
Accelerometer Coefficients - 10		Master	----	----	0.000	----		
Accelerometer Coefficients - 11		Master	----	----	0.000	----		
Gamma-Ray Detector Serial Number		Master			79224			

EDTC-B Gamma-Ray Calibration - Gamma Ray Coefficients

Before (Measured): 15:51:10 29-Jan-2013

After:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
Gamma Ray Gain		Before	1.000	0.900	1.082	1.100		
		After	----	----	----	----		
		After-Before	----	----	----	----		

EDTC-B Gamma-Ray Calibration - Gamma Ray Accumulations

Before (Measured): 15:51:10 29-Jan-2013

After:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
RGR Zero Measurement	gAPI	Before		0	30.235	120.000		
		After	----	----	----	----		
		After-Before	----	----	----	----		
RGR Plus Measurement	gAPI	Before	164.000	149.000	151.615	179.000		
		After			NOT DONE			
		After-Before	----	----	----	----		

LEH-QT (Logging Equipment Head - QT, 3-3/8 inch 31 pin HPHT with Tension Sensor) Calibration - Run 1.1

Primary Equipment :

Logging Equipment Head - QT, 3-3/8 inch 31 pin HPHT with
Tension Sensor

LEH-QT

2135

HTEN Master Calibration - HTEN Master Calibration

Master:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
HTEN Master Calibration		Master	1.000	0.900	NOT DONE	1.100		

HTEN Shop Gain		Master	1.000	0.800	NOT DONE	4.500	
HTEN Shop Offset	lbf	Master	0	-4448.222	NOT DONE	4448.222	
HTEN Before Calibration - HTEN Before Calibration							
Before:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RHTE Zero Measurement - 0	lbf	Before	----	----	----	----	
RHTE Plus Measurement - 0	lbf	Before	----	----	----	----	
HTEN Gain - 0		Before	----	----	----	----	
HTEN Offset - 0	lbf	Before	----	----	----	----	

Company:	CONOCOPHILLIPS CANADA RESOURCES CORP	Schlumberger
Well:	COPRC LOON CREEK O-6	
Field:	LOON CREEK	
Province:	NORTHWEST TERRITORIES	
	VERTICAL WELL	
DIPOLE SHEAR		
SONIC IMAGER LOG		