

Company: University Of Utah

Well: FORGE 78B-32

Field: None

County: Beaver State: Utah

Sonic Print  
QSLT BHC

CSLI BHC

County:	Beaver						
Field:	None						
Location:	Lat: 38.500171, Long: -112.88221						
Well:	FORGE 78B-32						
Company:	University Of Utah						
Logging Date	Location:		Lat: 38.500171, Long: -112.88221				
	Permanent Datum:		Ground Level				
	Log Measured From:		Kelly Bushing				
	Drilling Measured From:		Kelly Bushing				
Run Number	API Serial No.	Max.Hole Deviation	Longitude:	Latitude:			
Depth Driller	NRC 42-00090-03	0 deg	112° 52' 55.956" W	38° 30' 0.616" N			
Schlumberger Depth							
Bottom Log Interval							
Top Log Interval							
Casing Driller Size @ Depth							
Casing Schlumberger							
Bit Size							
Type Fluid In Hole							
Density	Viscosity	24 s					
Fluid Loss	PH	11					
MUD							
Source of Sample							
RM @ Meas Temp	5.2 ohm.m	@	62 degF				
RMF @ Meas Temp	4.42 ohm.m	@	62 degF				
RMC @ Meas Temp	6.21 ohm.m	@	62 degF				
Source RMF	Calculated						
RM @ BHT	0.84 @	419	0.71 @	419			
Max Recorded Temperatures							
Circulation Stopped	Time	28-Jul-2021	20:00:00				
Logger on Bottom	Time	30-Jul-2021	02:17:00				
Unit Number	Location:	9108	F.Morgan				
Recorded By							
Witnessed By							

Disclaimer

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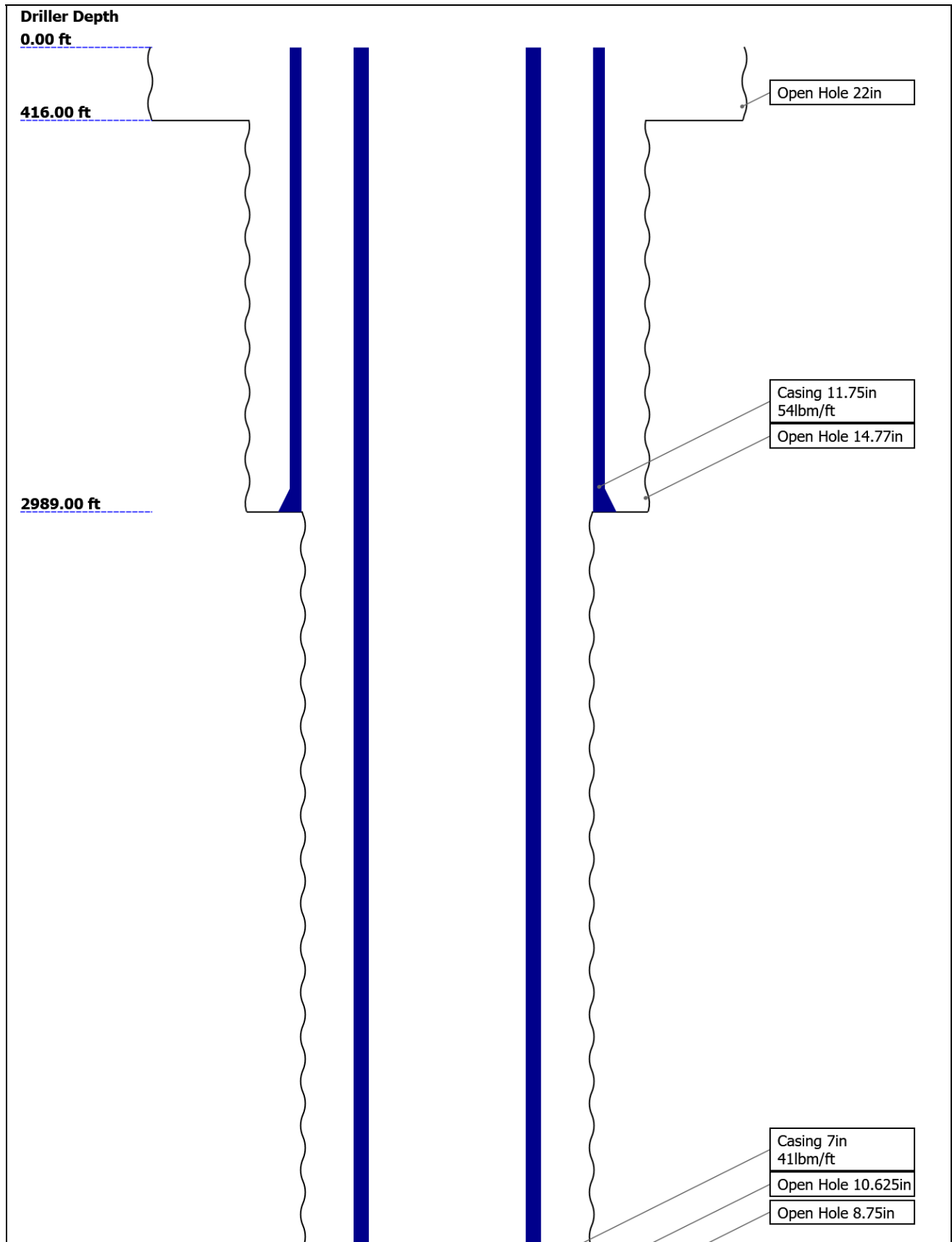
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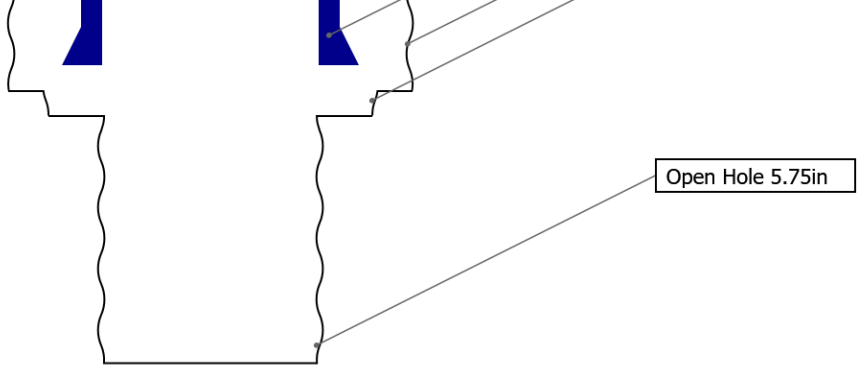
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## Well Sketch



8508.00 ft  
8514.00 ft  
8540.00 ft

9500.00 ft



Borehole Size/Casing/Tubing Record

Bit						
Bit Size ( in )	22	14.77	10.625	8.75	5.75	
Top Driller ( ft )	0	416	2989	8514	8540	
Top Logger ( ft )	0	416	2989	8514	8530	
Bottom Driller ( ft )	416	2989	8514	8540	9500	
Bottom Logger ( ft )	416	2989	8514	8530	9532	
Casing						
Size ( in )	11.75	7				
Weight ( lbm/ft )	54	41				
Inner Diameter ( in )	10.88	5.83				
Grade	N/A	N/A				
Top Driller ( ft )	0	0				
Top Logger ( ft )	0	0				
Bottom Driller ( ft )	2989	8508				
Bottom Logger ( ft )	2988	8530				

Remarks and Equipment Summary

1B: Toolstring				1B: Remarks	
<div><div><div>Equip name</div><div>Length</div><div>MP name</div><div>Offset</div></div><div><div>LEH-MT</div><div>92.55</div><div>LEH-MT</div><div></div></div><div><div>AH-234</div><div>89.4</div><div></div><div></div></div><div><div>QTGC-B</div><div>88.21</div><div>UDFH-PL</div><div>STGC-GR</div><div>STGC-ACC</div><div>Z:7</div><div>STGC-B:81</div><div>21</div></div><div><div>GR</div><div>84.87</div></div><div><div>STGC</div><div>0.00</div><div>Accelerometer</div><div>0.00</div></div><div><div>QILE-A</div><div>77.54</div></div></div>	Tool was run as per tool sketch				
	All logging intervals as per client request				

QCNT 69.9  
UDFH-PAT  
NPV-S  
QCNC-A:2  
NSR-L:4545

CNTM 63.94

CNL Porosity 60.54

AH-238[2] 57.98  
]

AH-238[1] 55.98  
]

QSLT-B:80 53.98  
22  
UDFH-PA  
QSTC-BB:8  
02  
QSAS-BB:8  
022  
UDFH-PP  
QSLC-BA:8  
002

CBL\_UP 46.32

VDL\_UP 45.32

RX\_ARRAY 43.82

VDL\_LOW 42.32

DT\_DDB 41.82

HC  
CBL\_LOW 41.32

QAIT-A:430.97  
UDFH-PLB  
SAIC-A:94  
QAIS-A:43  
AQRM



Power Supply 9.9  
Induction 9.9  
Temperature 9.9

SP 0.08  
Mid-Res 0.00  
Activity 0.00

Lengths are in ft  
Maximum Outer Diameter = 1.900 in  
Line: Sensor Location, Value: Gate Offset  
All measurements are relative to TOOL\_ZERO

Depth Summary

	1B		
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Depth Measuring Device

Type	IDW-JA		
Serial Number	6160		
Calibration Date	30-Sep-2020		
Calibrator Serial Number	57		
Calibration Cable Type	7-46 AXS		
Wheel Correction 1	-9		
Wheel Correction 2	-7		

Tension Device

Type	CMTD-B/A		
Serial Number	946		
Calibration Date	02-Jun-2020		
Calibrator Serial Number	78165A		
Number of Calibration Points	10		
Calibration Root Mean Square Error	8		
Calibration Peak Error	12		

### Logging Cable

Type	7-46A-XS		
Serial Number	1219083		
Length	18000.00 ft		
Conveyance Type	Wireline		
Rig Type	Land		

### 1B:Depth Control Parameters

### Depth Control Remarks

Log Sequence	First Log In the Well	Schlumberger depth control procedures followed
Rig Up Length At Surface		IDW used as primary depth control system
Rig Up Length At Bottom		Z-Chart used as secondary depth control system
Rig Up Length Correction		
Stretch Correction		
Tool Zero Check At Surface		

1B

## Integration Summary

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
ITT	Integrated Transit Time	ITTS	0.0544	s

## Software Version

Acquisition System	Version
Maxwell 2021.1	11.1.211946.3100
Application Patch	Wireline_Hotfix-Mandatory-2021.1_11.1.213678
	Wireline_NPD-ThruBit-2021.1_11.1.213816

## Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
1B	Log[4]:Up	Up	7538.68 ft	9553.06 ft	30-Jul-2021 1:59:13 AM	30-Jul-2021 2:41:25 AM	ON	22.92 ft	Yes

All depths are referenced to toolstring zero

## Log

Company:University Of Utah

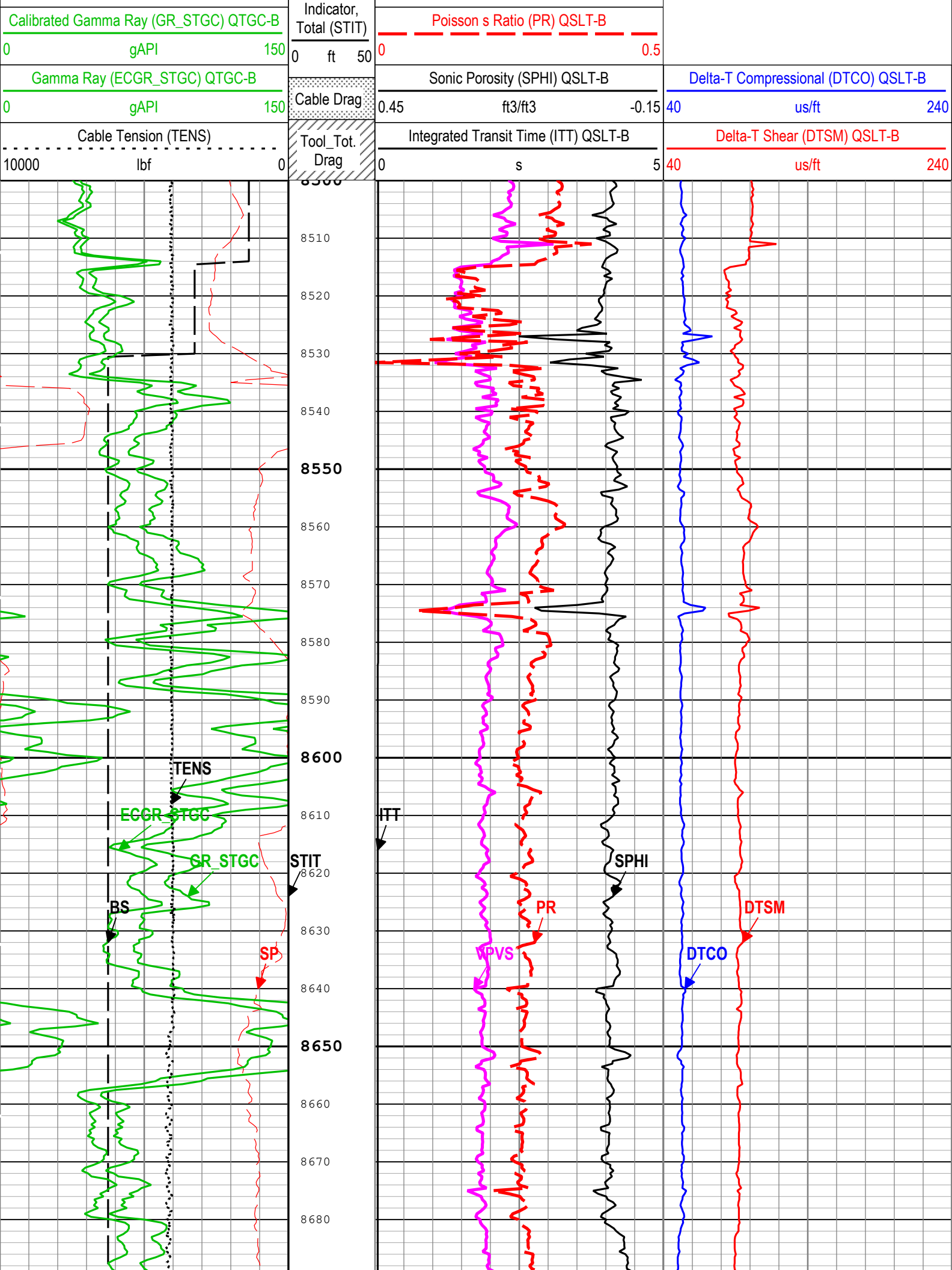
Well:FORGE 78B-32

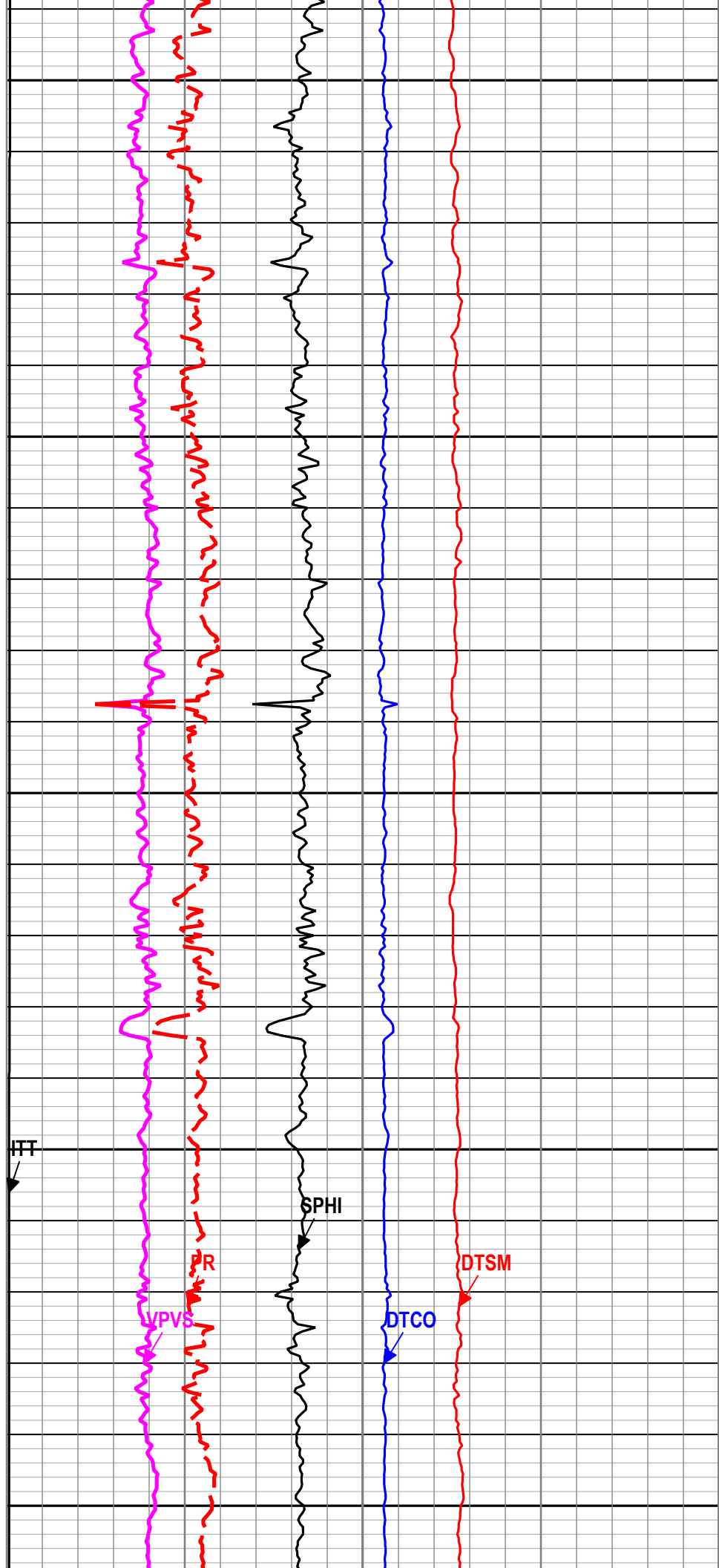
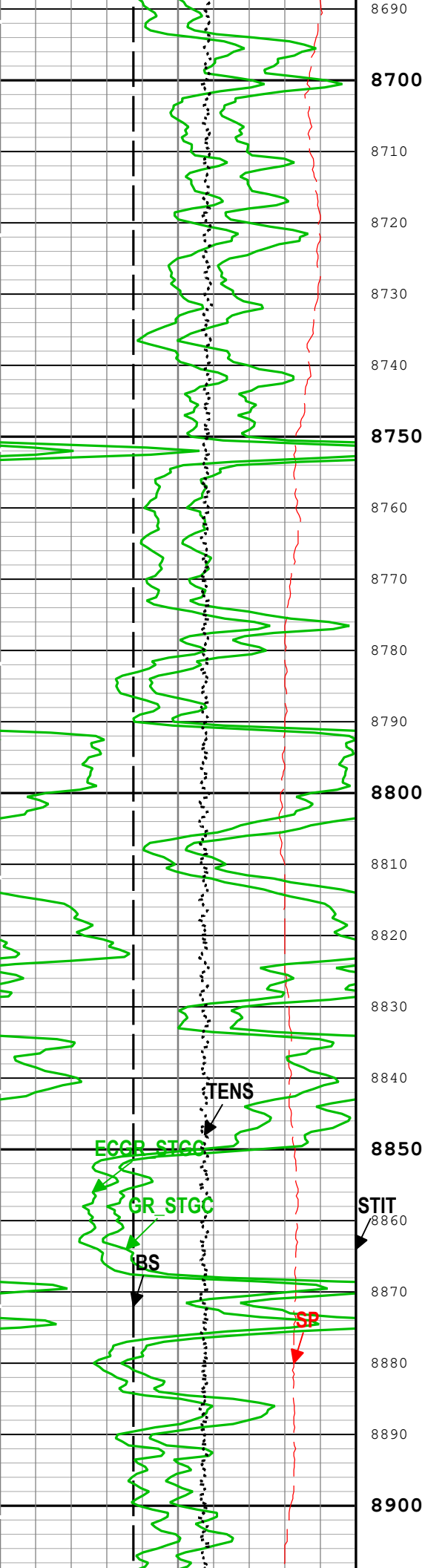
1B: Log[4]:Up:S035

Description: SSLT DT Finalization    Format: Log ( SSLT DT Finalization )    Index Scale: 5 in per 100 ft    Index Unit: ft    Index Type: Measured Depth    Creation Date: 30-Jul-2021 07:07:42

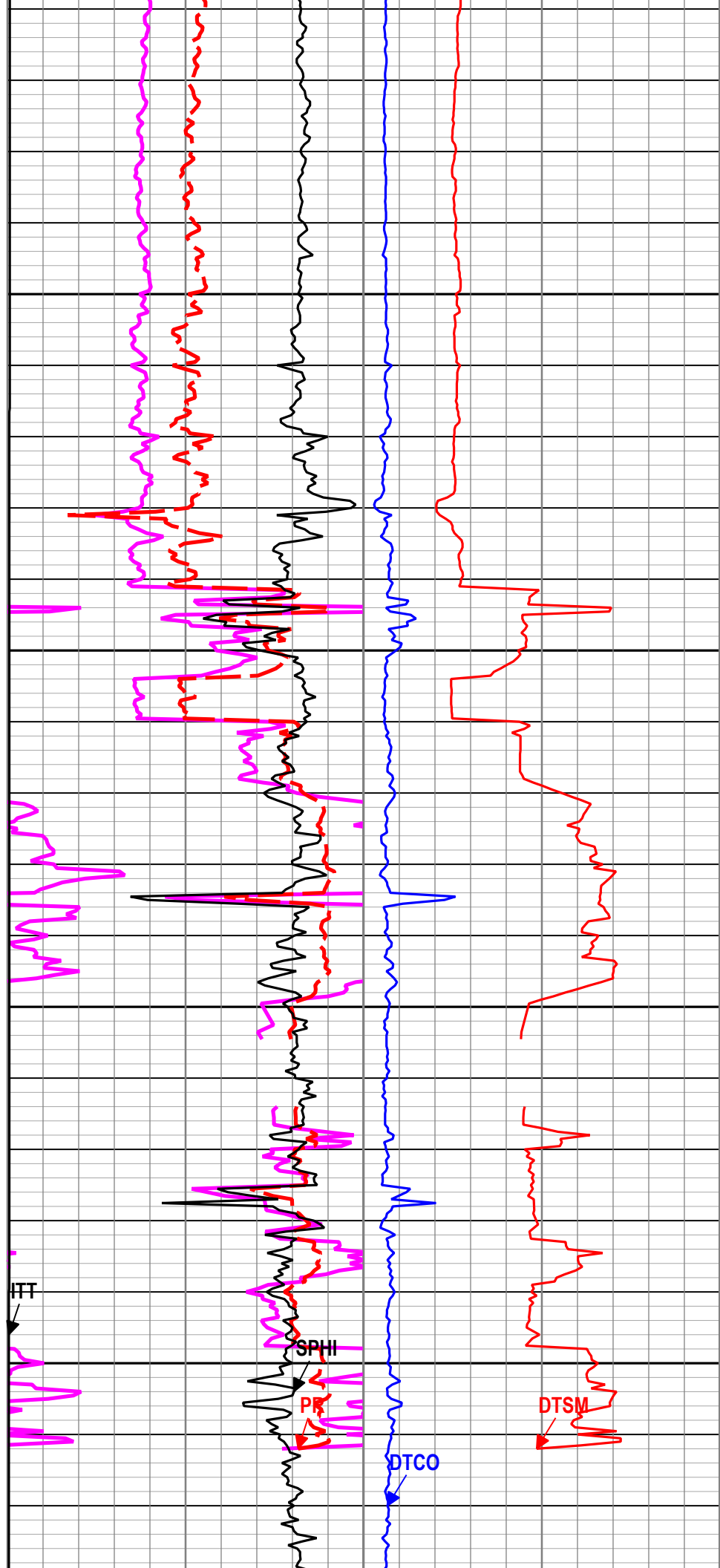
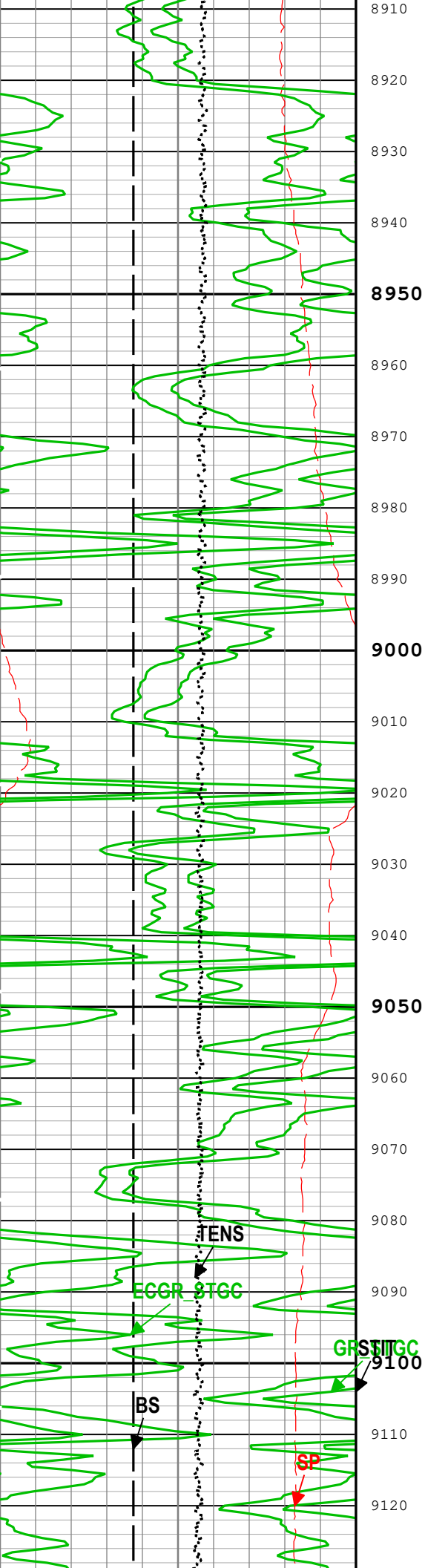
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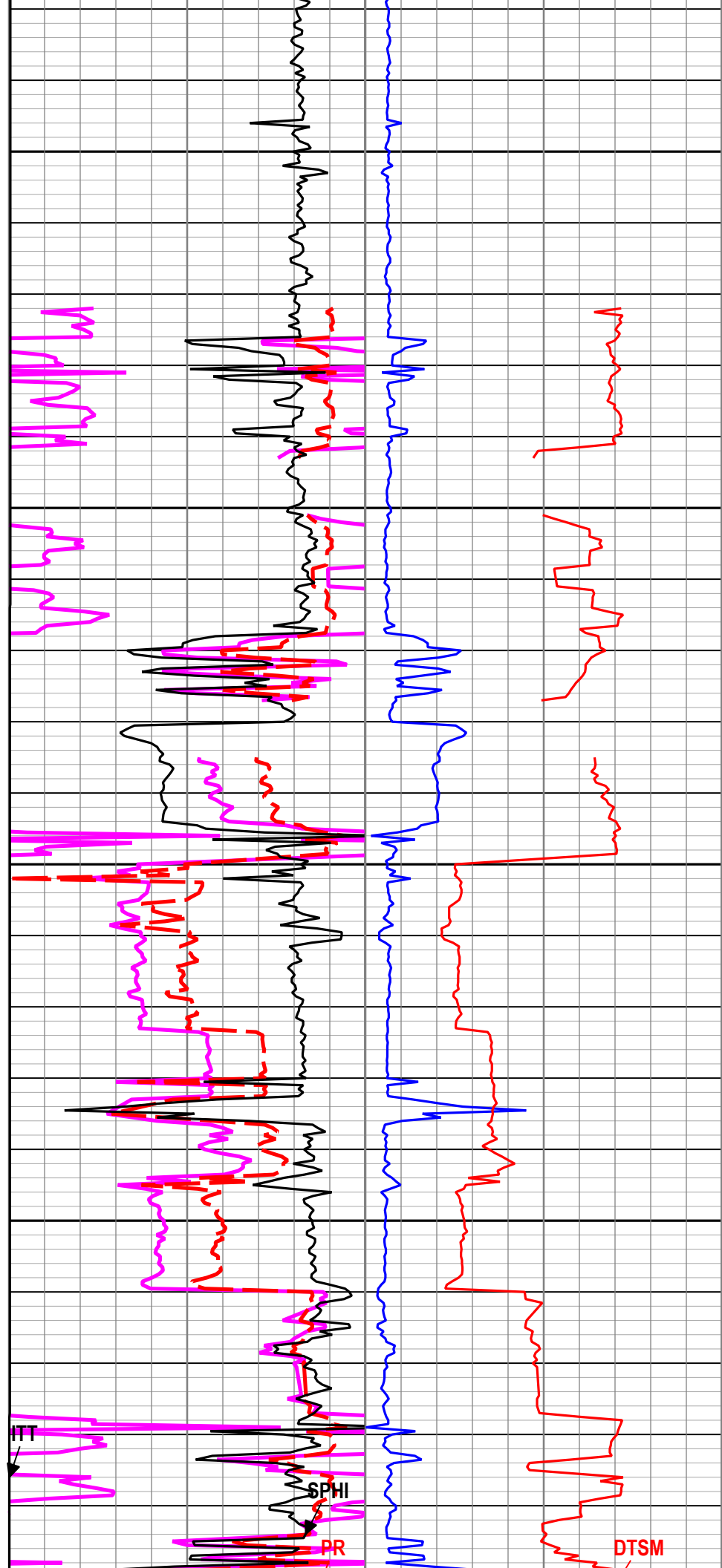
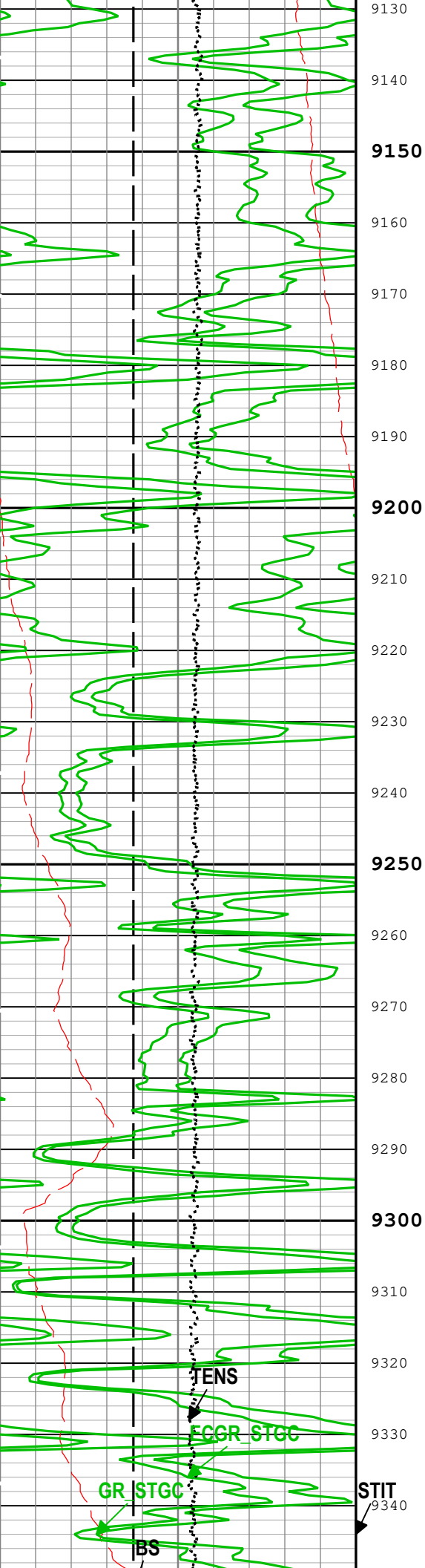
<p>Spontaneous Potential (SP) QAIT-A</p> <p>-80 mV 20</p>		<p>Compressional to Shear Velocity Ratio (VPVS) QSLT-B</p> <p>1 3</p>
<p>Bit Size (BS) RT</p> <p>2 in 12</p>		
<p>Stuck Tool</p>		

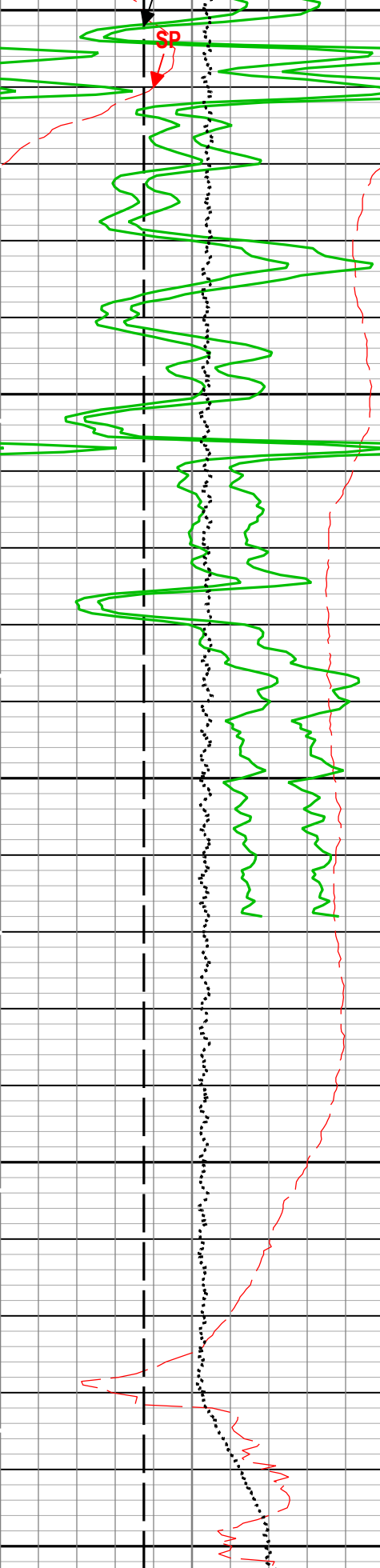








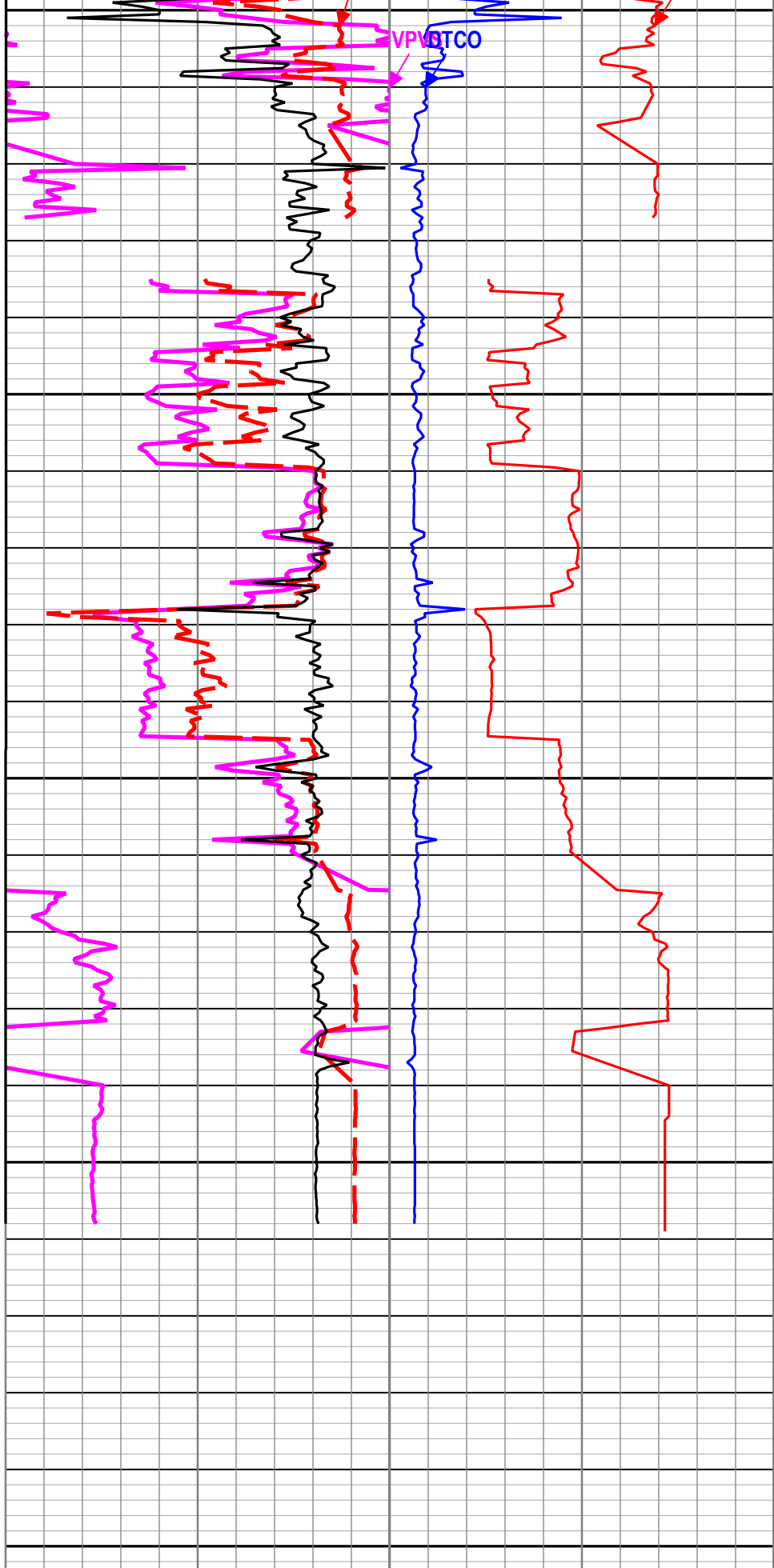




9350  
9360  
9370  
9380  
9390  
9400  
9410  
9420  
9430  
9440  
9450  
9460  
9470  
9480  
9490  
9500  
9510  
9520  
9530  
9540  
9550

Spontaneous Potential (SP) QAIT-A  
-80 mV 20  
Bit Size (BS) RT

Stuck Tool  
Indicator,  
Total (STIT)  
0 ft 50



Compressional to Shear Velocity Ratio (VPVS)  
QSLT-B  
1 3

Delta-T Compressional (DTCO) QSLT-B  
40 us/ft 240  
Delta-T Shear (DTSM) QSLT-B

2 in 12			Poisson s Ratio (PR) QSLT-B		40	us/ft	240
Calibrated Gamma Ray (GR_STGC) QTGC-B		Cable Drag	0 0.5				
0 gAPI 150		Tool_Tot. Drag	Sonic Porosity (SPHI) QSLT-B				
Gamma Ray (ECGR_STGC) QTGC-B			0.45 ft3/ft3 -0.15				
0 gAPI 150			Integrated Transit Time (ITT) QSLT-B				
Cable Tension (TENS)			0 s 5				
-----							
10000 lbf 0							

TIME\_1900 - Time Marked every 60.00 (s)

Description: SSLT DT Finalization    Format: Log ( SSLT DT Finalization )    Index Scale: 5 in per 100 ft    Index Unit: ft    Index Type: Measured Depth    Creation Date: 30-Jul-2021 07:07:42

Channel Processing Parameters

1B: Parameters

Parameter	Description	Tool	Value	Unit
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BS	Bit Size	WLSESSION	Depth Zoned	in
CBLO	Casing Bottom (Logger)	WLSESSION	8530	ft
CDTS	Correction for Delta-T Shale, Empirical	Borehole	100	us/ft
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DFD	Drilling Fluid Density	Borehole	8.3	lbm/gal
DTCS	Slim Sonic Compressional Delta-T Source for DTCO Channel	QSLT-B	DT	
DTF	Delta-T Fluid	Borehole	189	us/ft
DTM	Delta-T Matrix	Borehole	56	us/ft
DTMD	Borehole Fluid Slowness	Borehole	206	us/ft
DTSS	Slim Sonic Shear Delta-T Source for DTSM Channel	QSLT-B	DTS_RA_BHC	
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS(RT)	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	BS(RT)	
SOCN	Standoff Distance of the Gamma Ray Tool	QTGC-B	0	in
SPDR	SP Drift Per Foot	QAIT-A	0	mV/ft
SPFS	Sonic Porosity Formula	Borehole	Raymer-Hunt	
SPM_LT	STC Processing Mode - Lower Transmitter	QSLT-B	Receiver	
SPM_UT	STC Processing Mode - Upper Transmitter	QSLT-B	Receiver	
TD	Total Measured Depth	Borehole	9532	ft
TPOS_STGC	Tool Position: Centered or Eccentered	QTGC-B	Eccentered	

Depth Zone Parameters

Parameter	Value	Start ( ft )	Stop ( ft )
BS	10.625	8500	8514
BS	8.75	8514	8530
BS	5.75	8530	9532

All depth are actual.

Tool Control Parameters

1B: Parameters

Parameter	Description	Tool	Value	Unit
DDE1	Digitizing Delay 1	QSLT-B	40	us
DDE2	Digitizing Delay 2	QSLT-B	40	us
GAI1	SSLT Manual Gain 1	QSLT-B	High	
GAI2	SSLT Manual Gain 2	QSLT-B	High	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	1800	ft/h

MODE	SSLT Firing Mode	QSLT-B	DT_BHC	
RATE	Firing Rate	QSLT-B	8.93	Hz
VDM	SSLT VDL Display Mode	QSLT-B	NONE	

1B

Software Version	
Acquisition System	Version
Maxwell 2021.1	11.1.211946.3100
Application Patch	Wireline_Hotfix-Mandatory-2021.1_11.1.213678
	Wireline_NPD-ThruBit-2021.1_11.1.213816

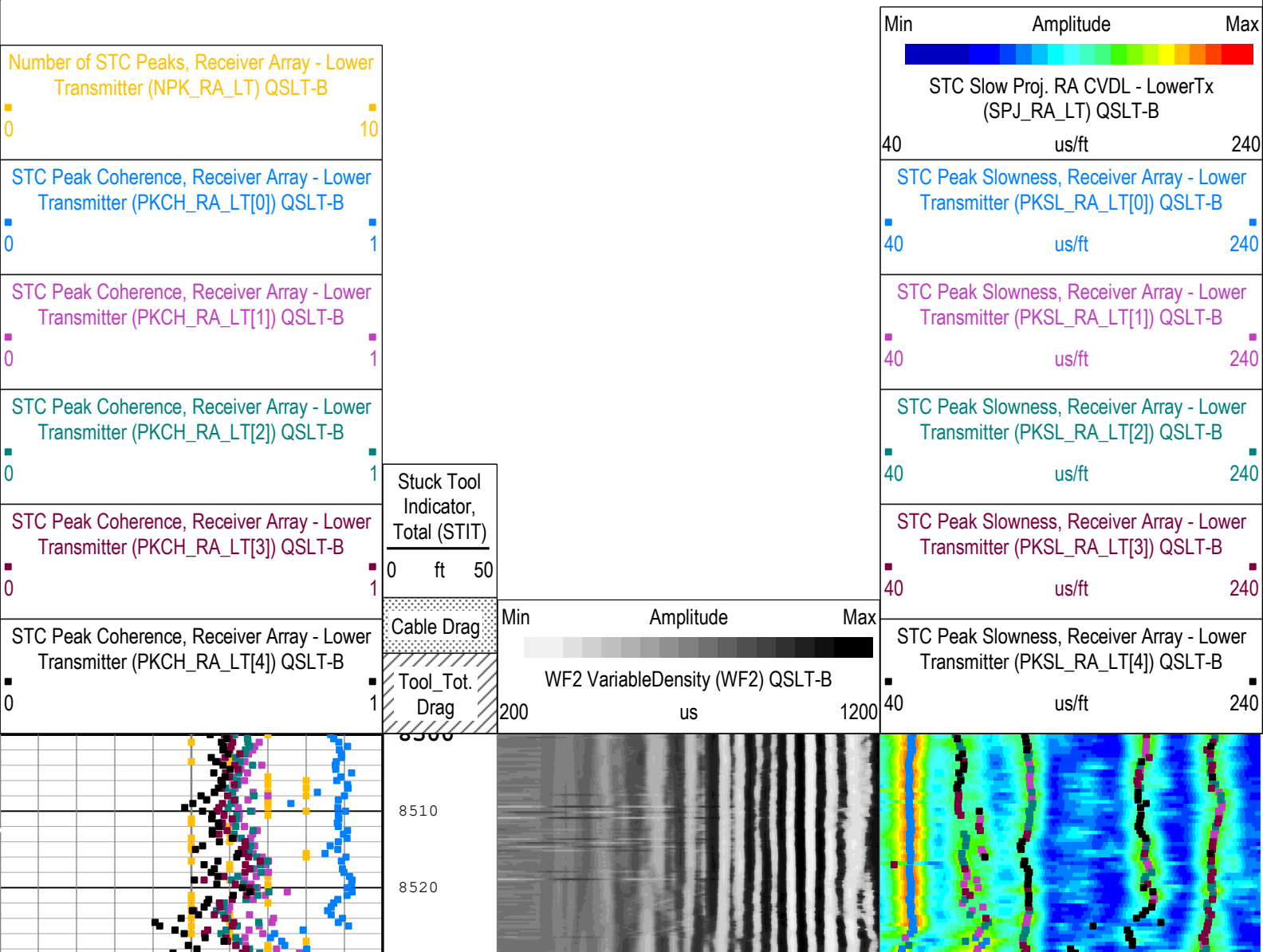
Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
1B	Log[4]:Up	Up	7538.68 ft	9553.06 ft	30-Jul-2021 1:59:13 AM	30-Jul-2021 2:41:25 AM	ON	22.92 ft	Yes

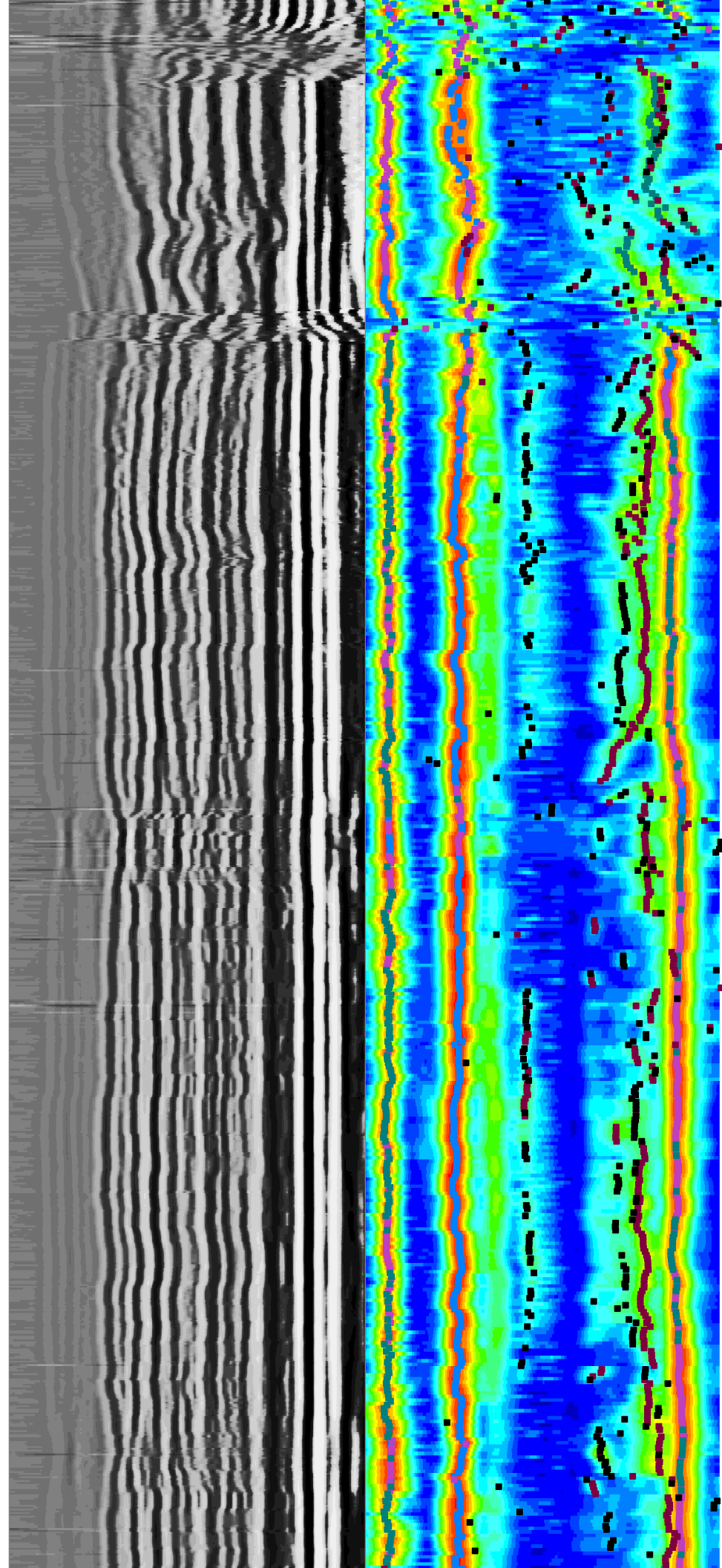
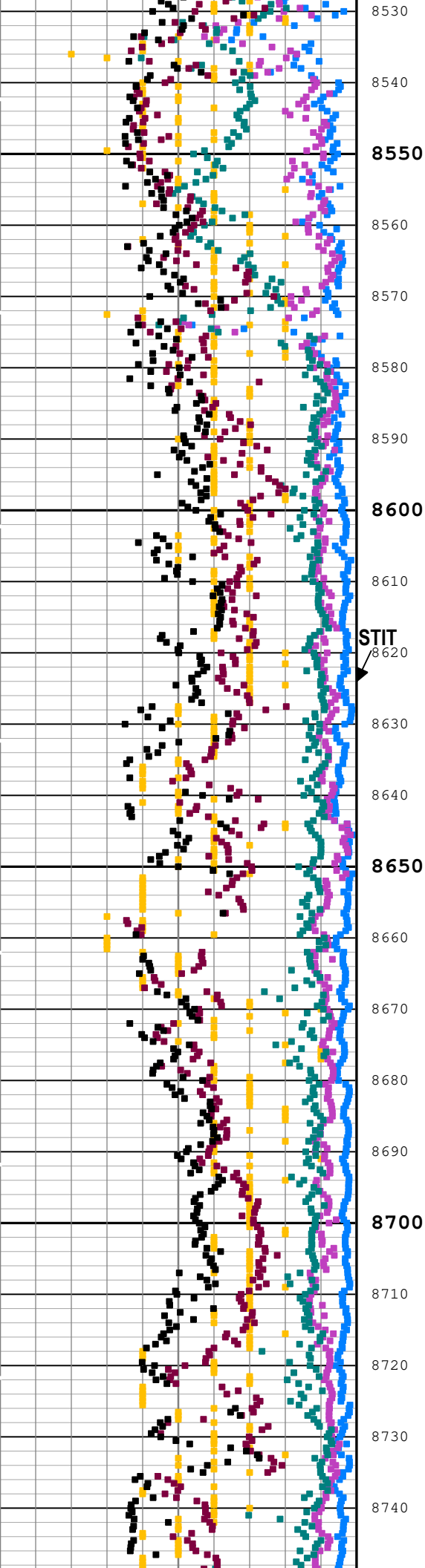
All depths are referenced to toolstring zero

Log	Company:University Of Utah      Well:FORGE 78B-32 1B: Log[4]:Up:S035
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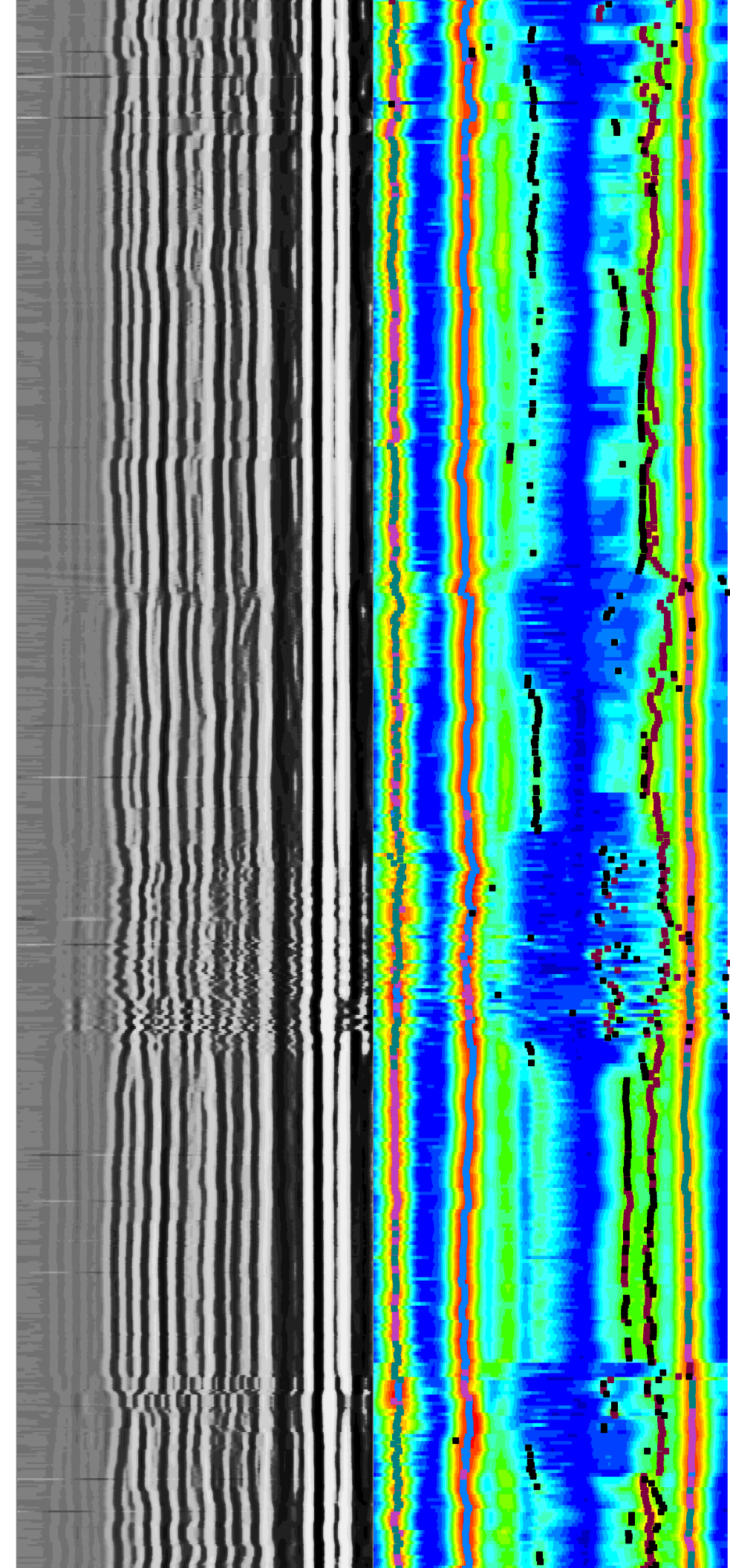
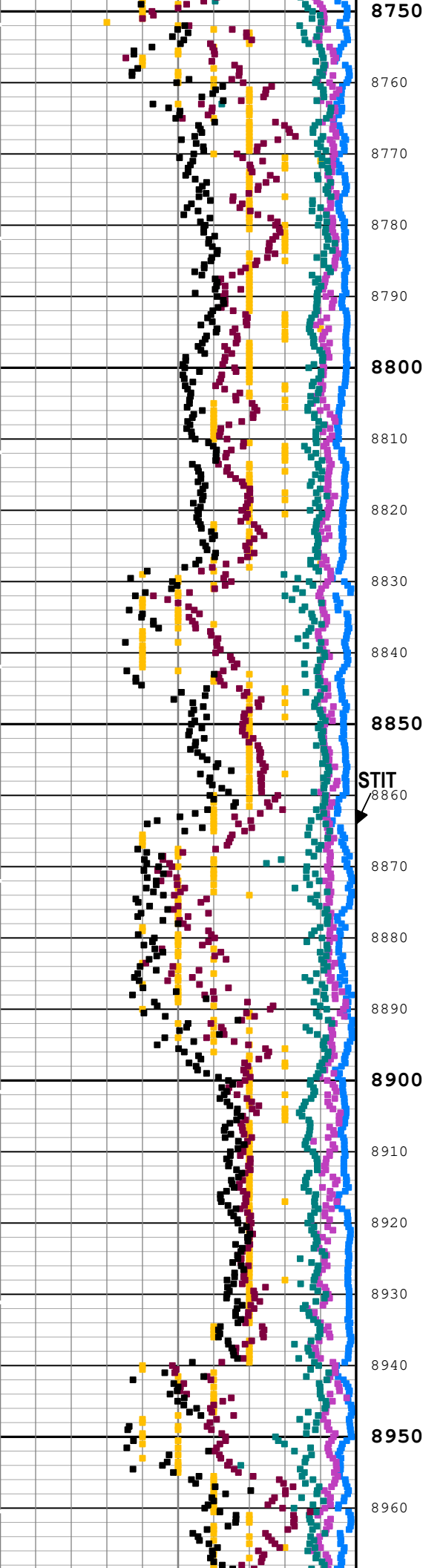
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Creation Date: 30-Jul-2021 07:07:46

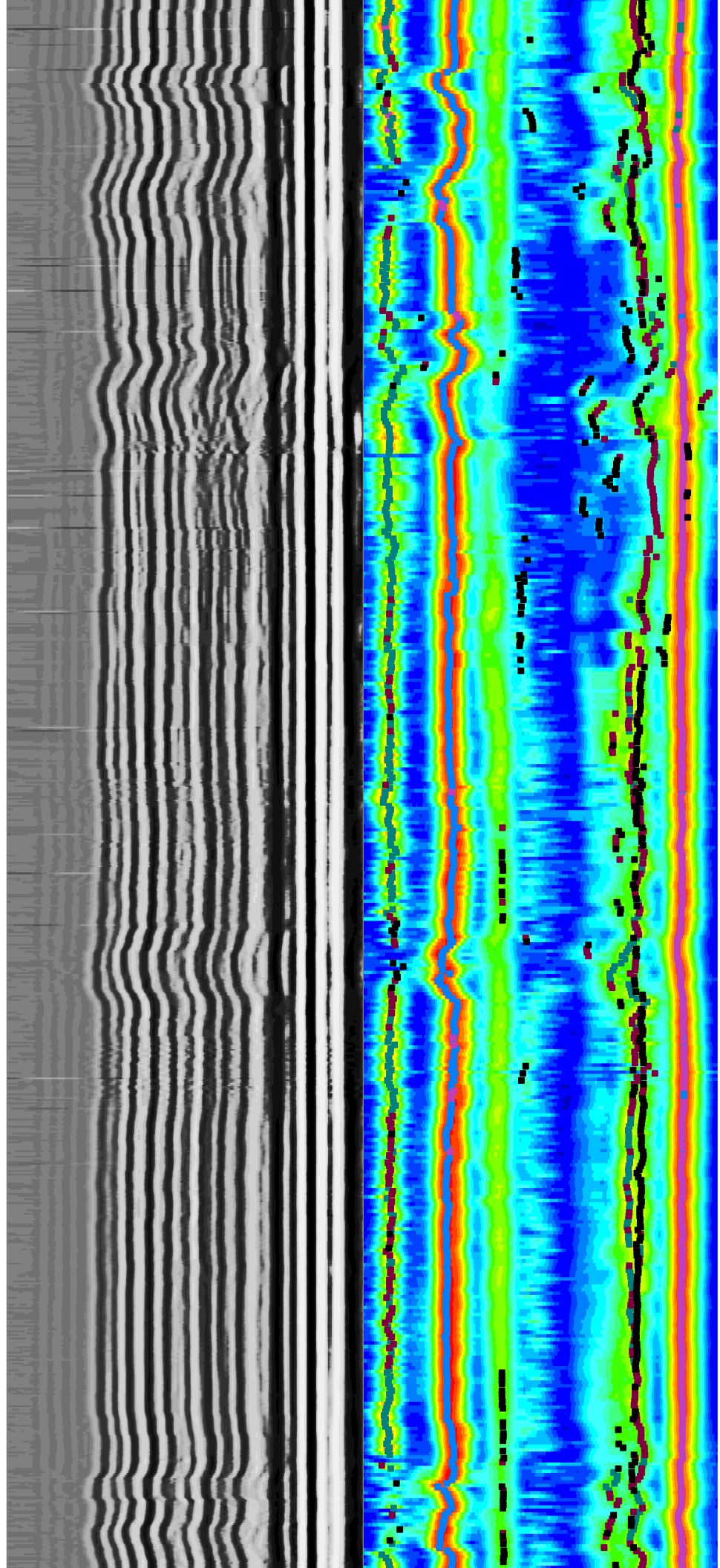
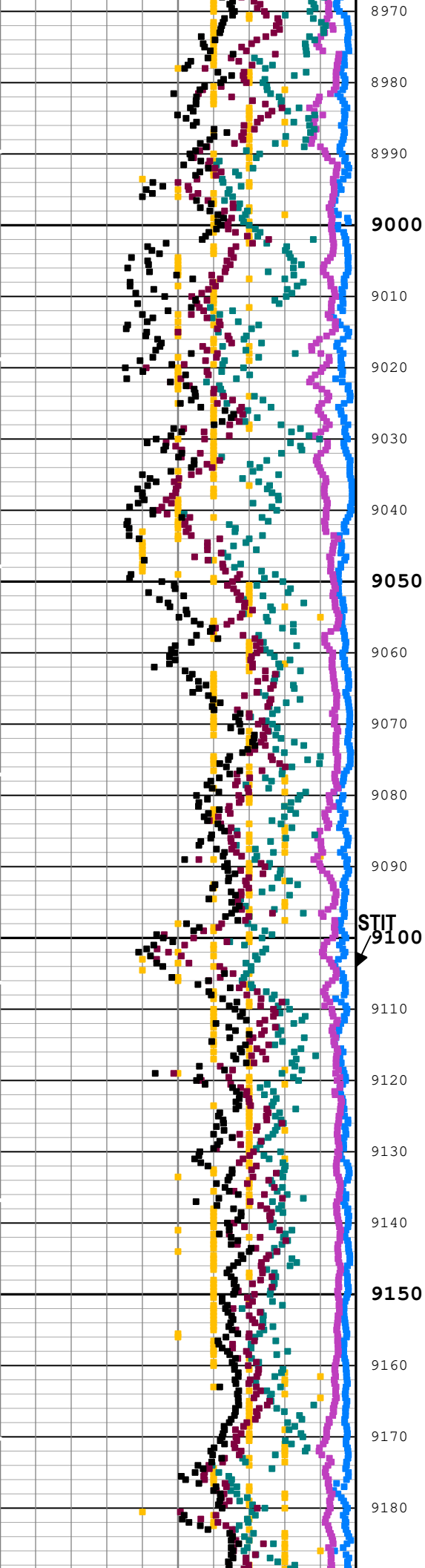
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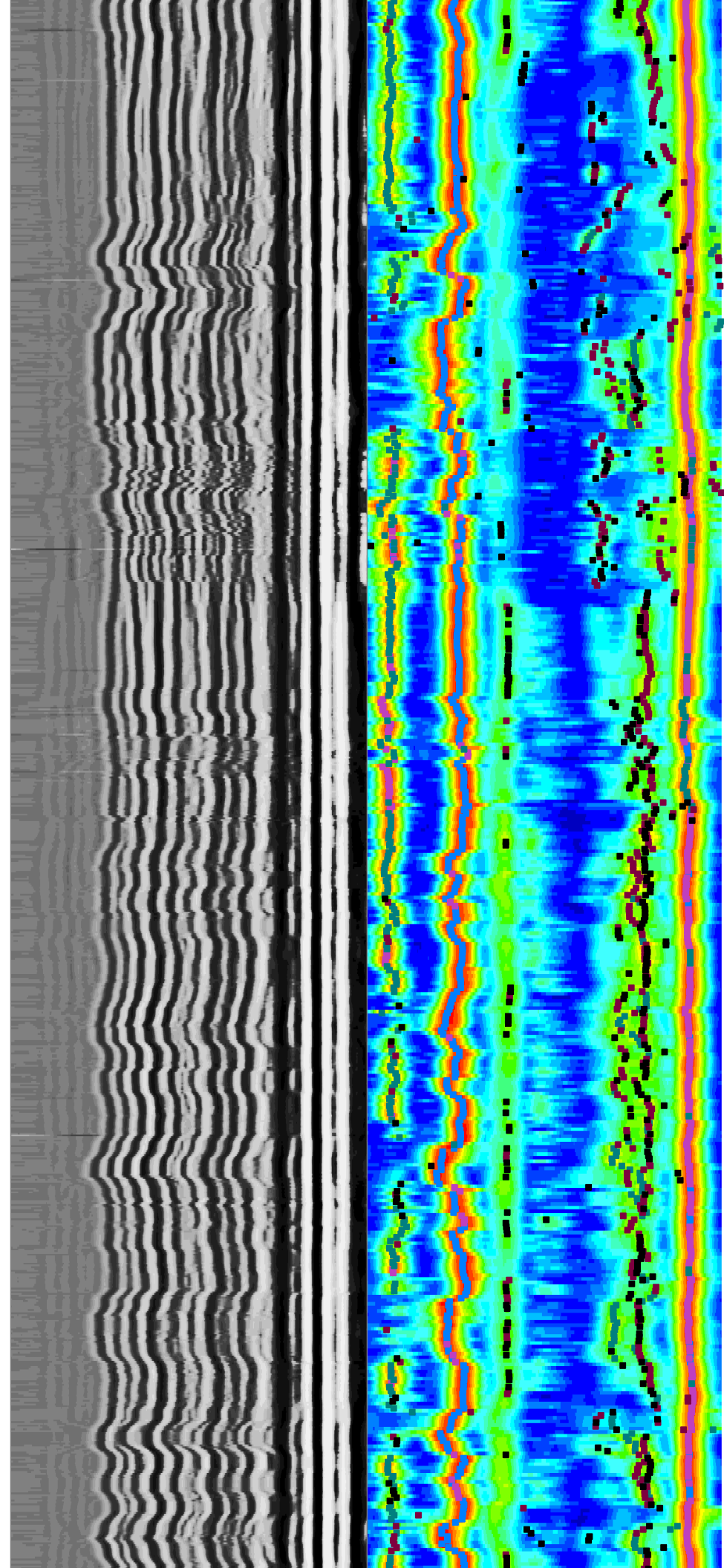
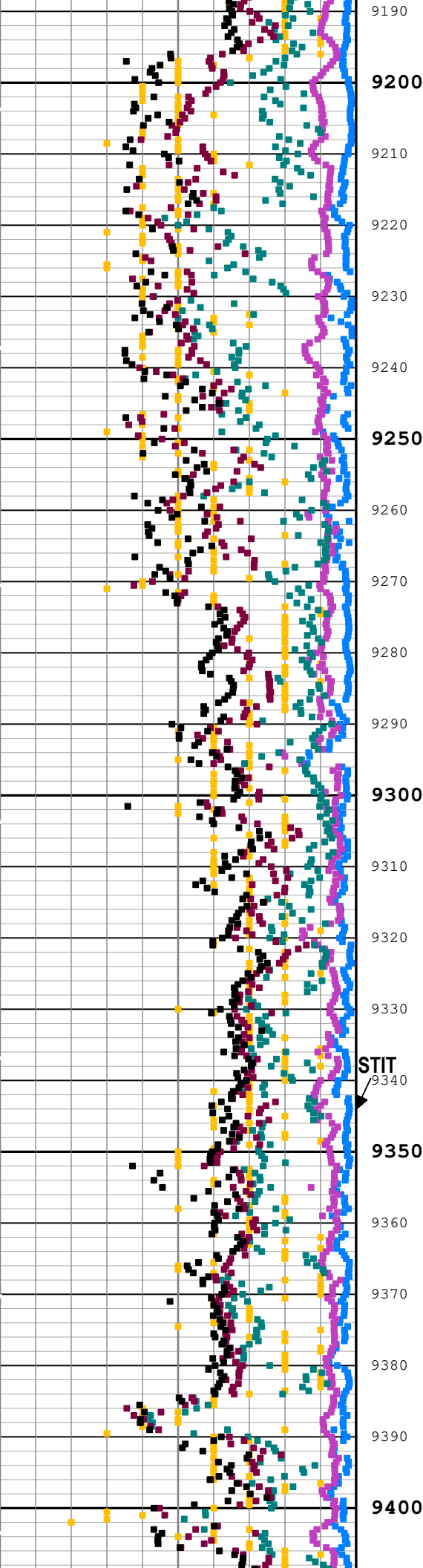


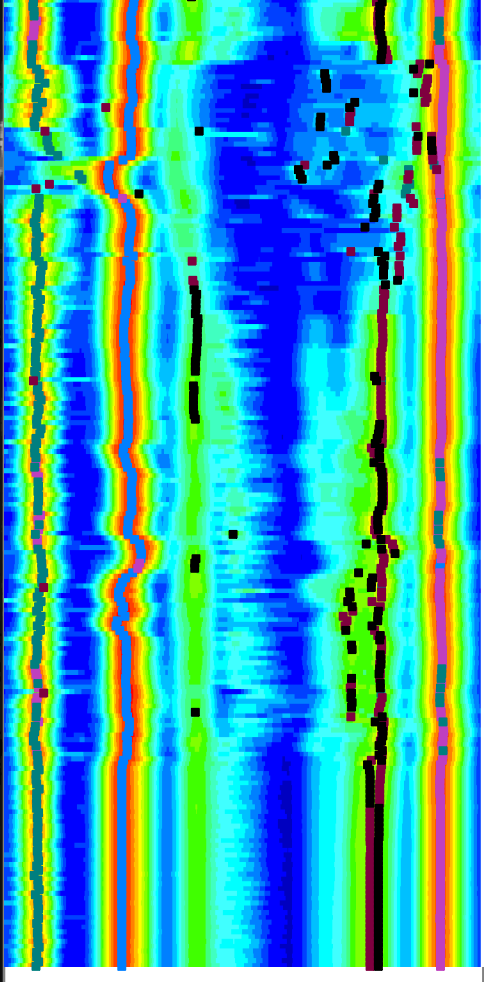
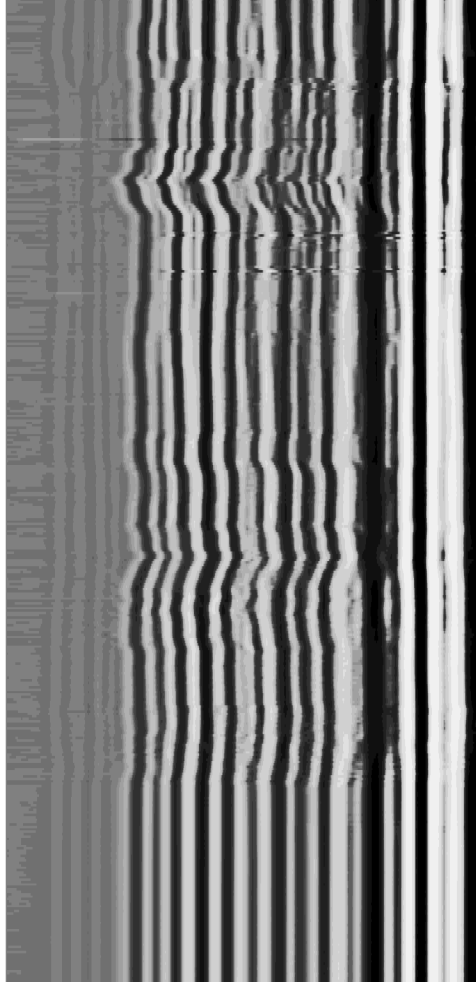
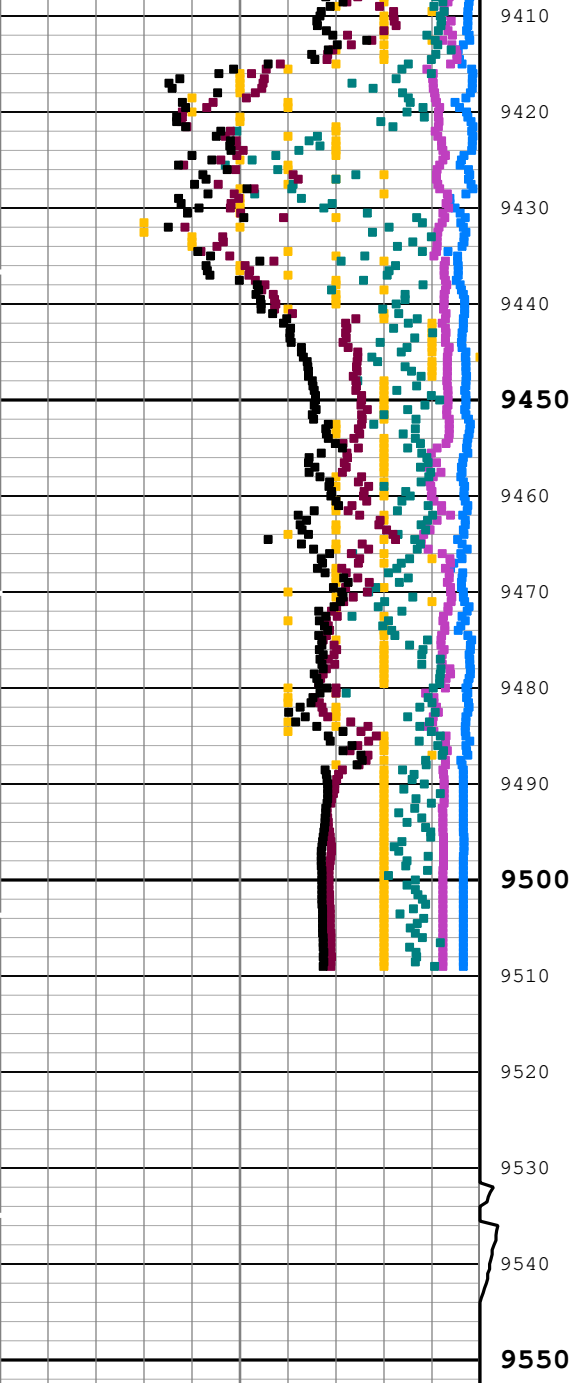






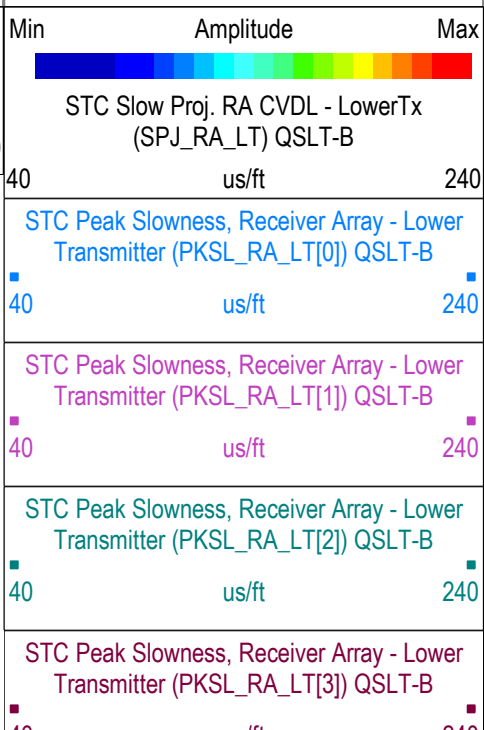
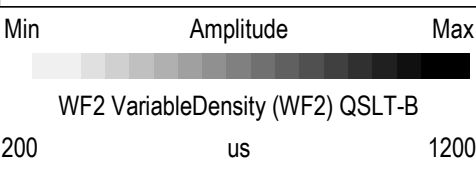






Number of STC Peaks, Receiver Array - Lower Transmitter (NPK_RA_LT) QSLT-B	0	10
STC Peak Coherence, Receiver Array - Lower Transmitter (PKCH_RA_LT[0]) QSLT-B	0	1
STC Peak Coherence, Receiver Array - Lower Transmitter (PKCH_RA_LT[1]) QSLT-B	0	1
STC Peak Coherence, Receiver Array - Lower Transmitter (PKCH_RA_LT[2]) QSLT-B	0	1
STC Peak Coherence, Receiver Array - Lower Transmitter (PKCH_RA_LT[3]) QSLT-B	0	1

Stuck Tool Indicator, Total (STIT)	0	ft	50
Cable Drag			
Tool_Tot. Drag			

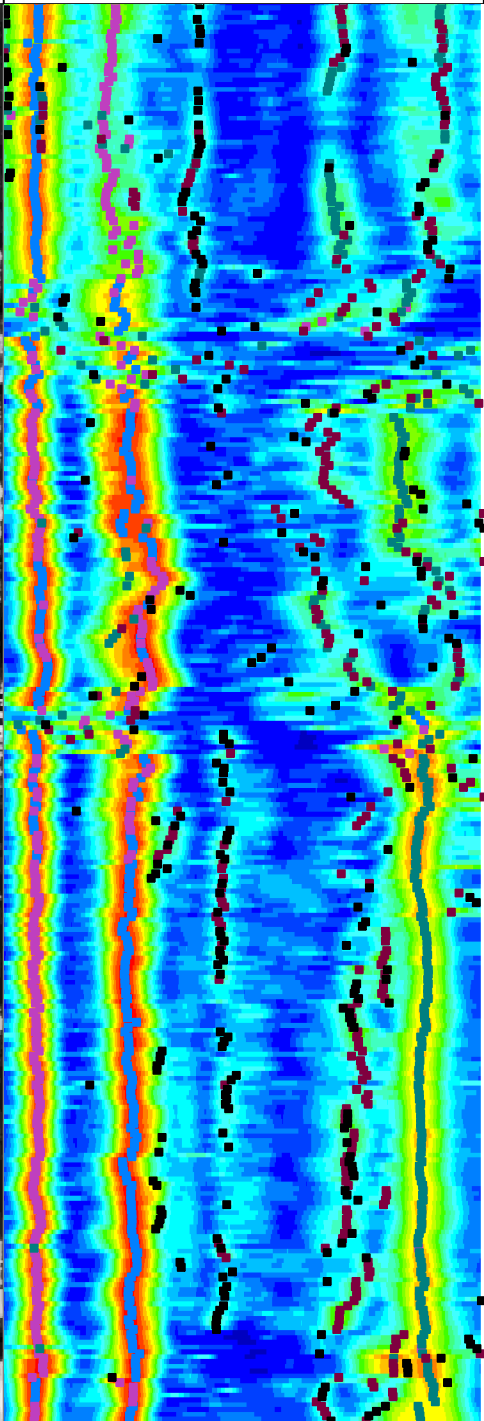
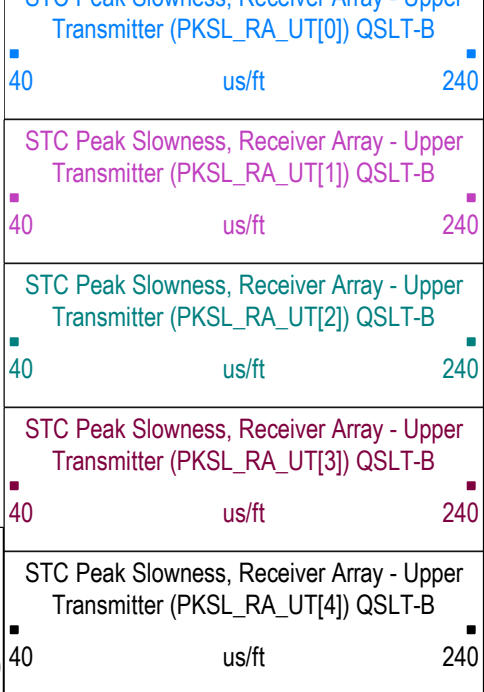
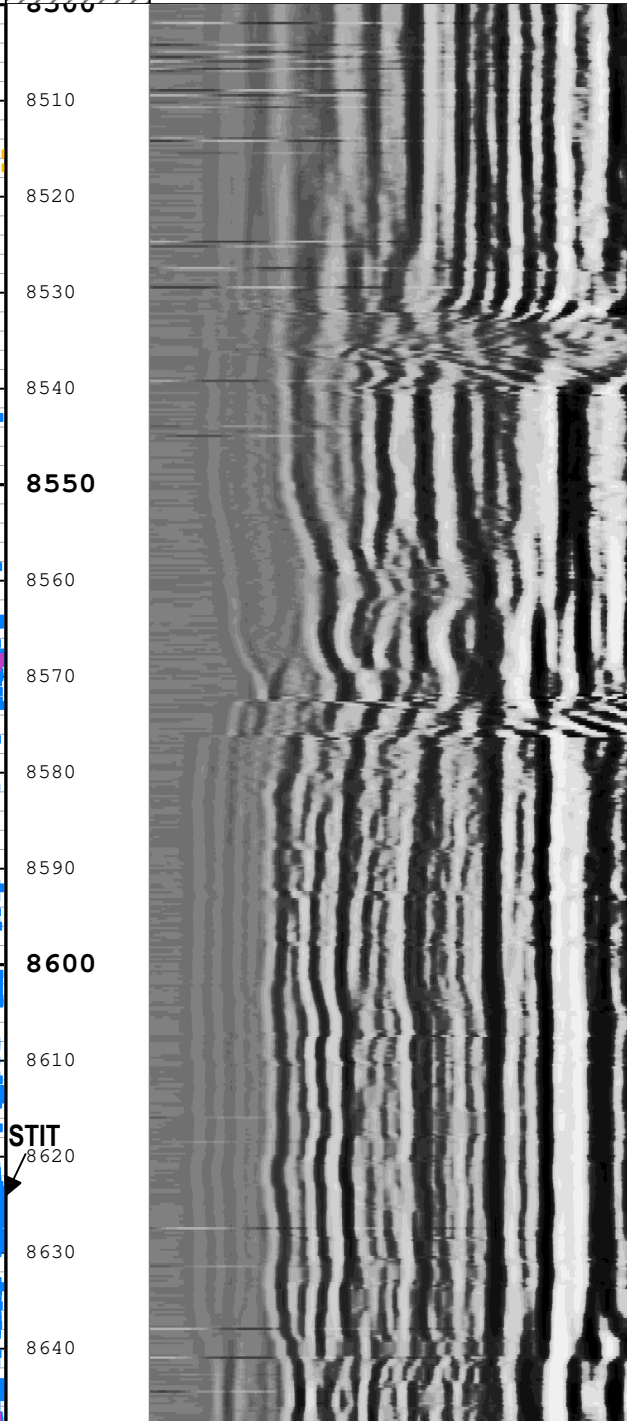
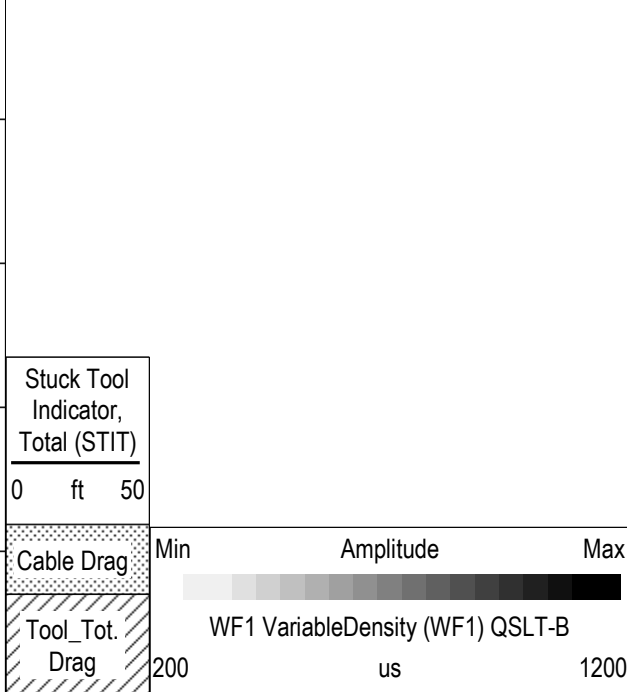
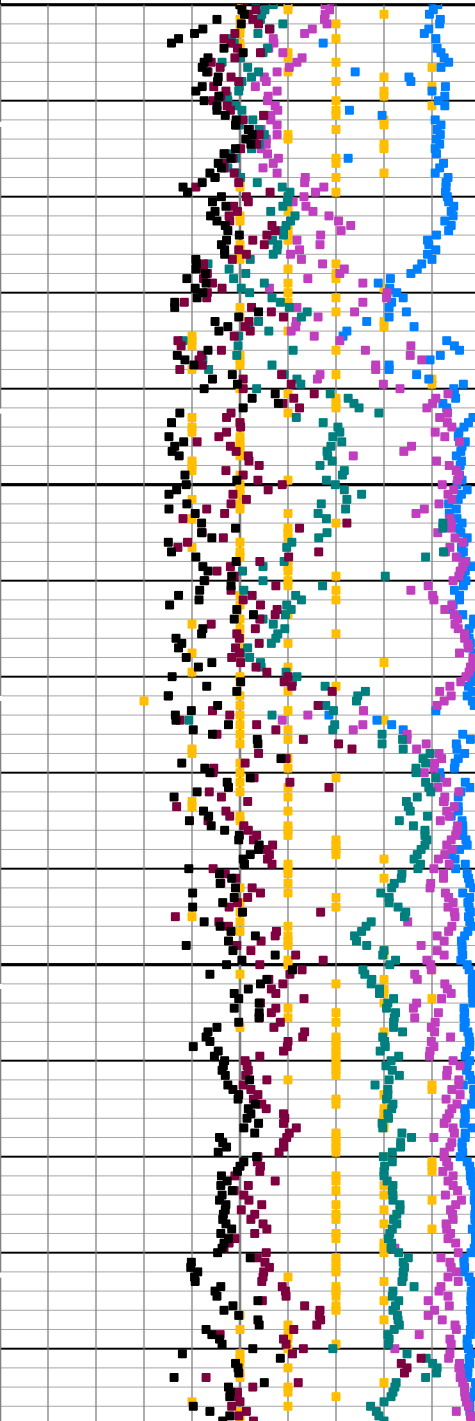
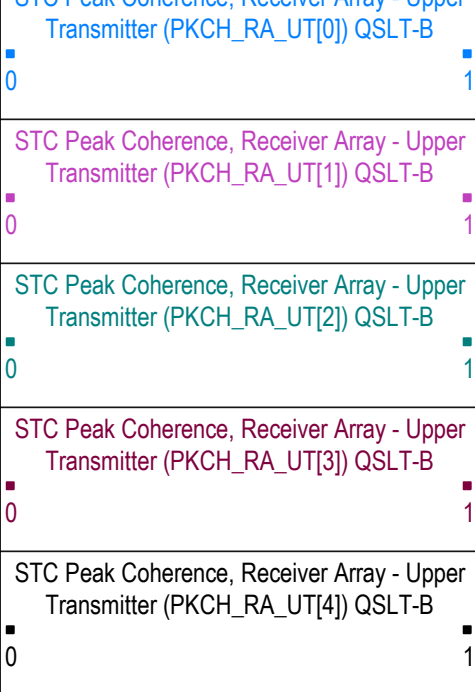


Number of STC Peaks, Receiver Array - Upper Transmitter (NPK\_RA\_UT) QSLT-B

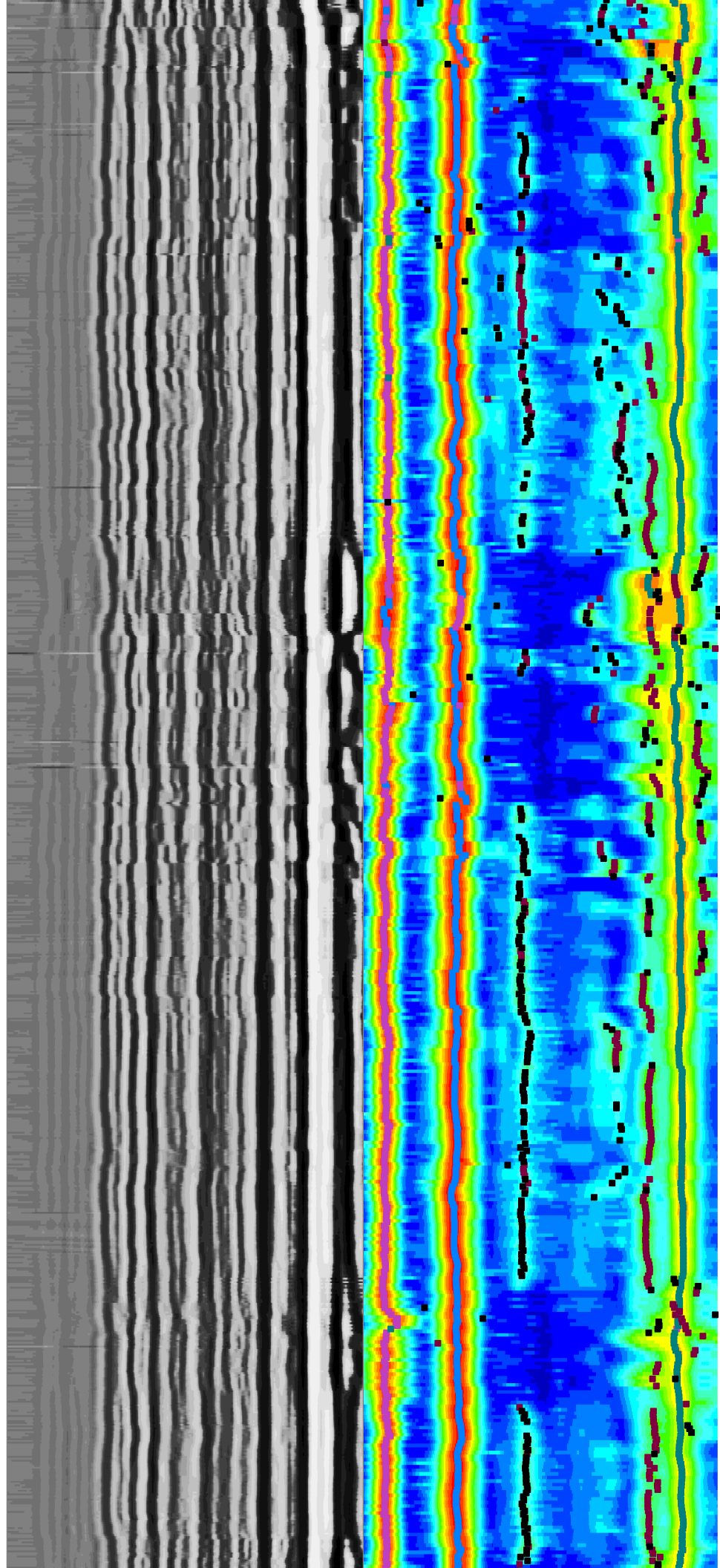
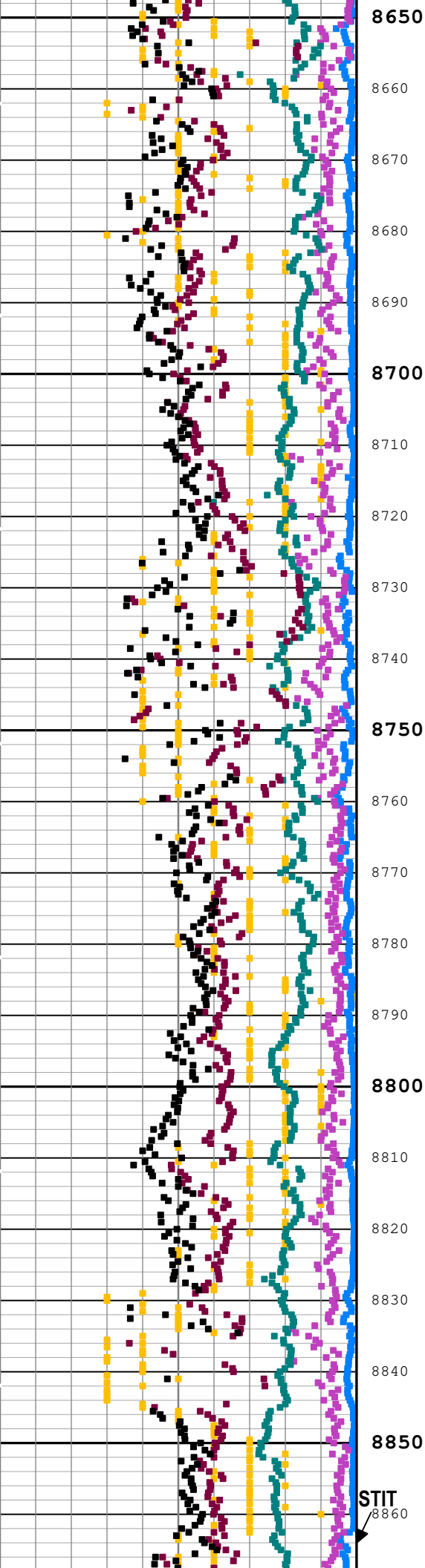
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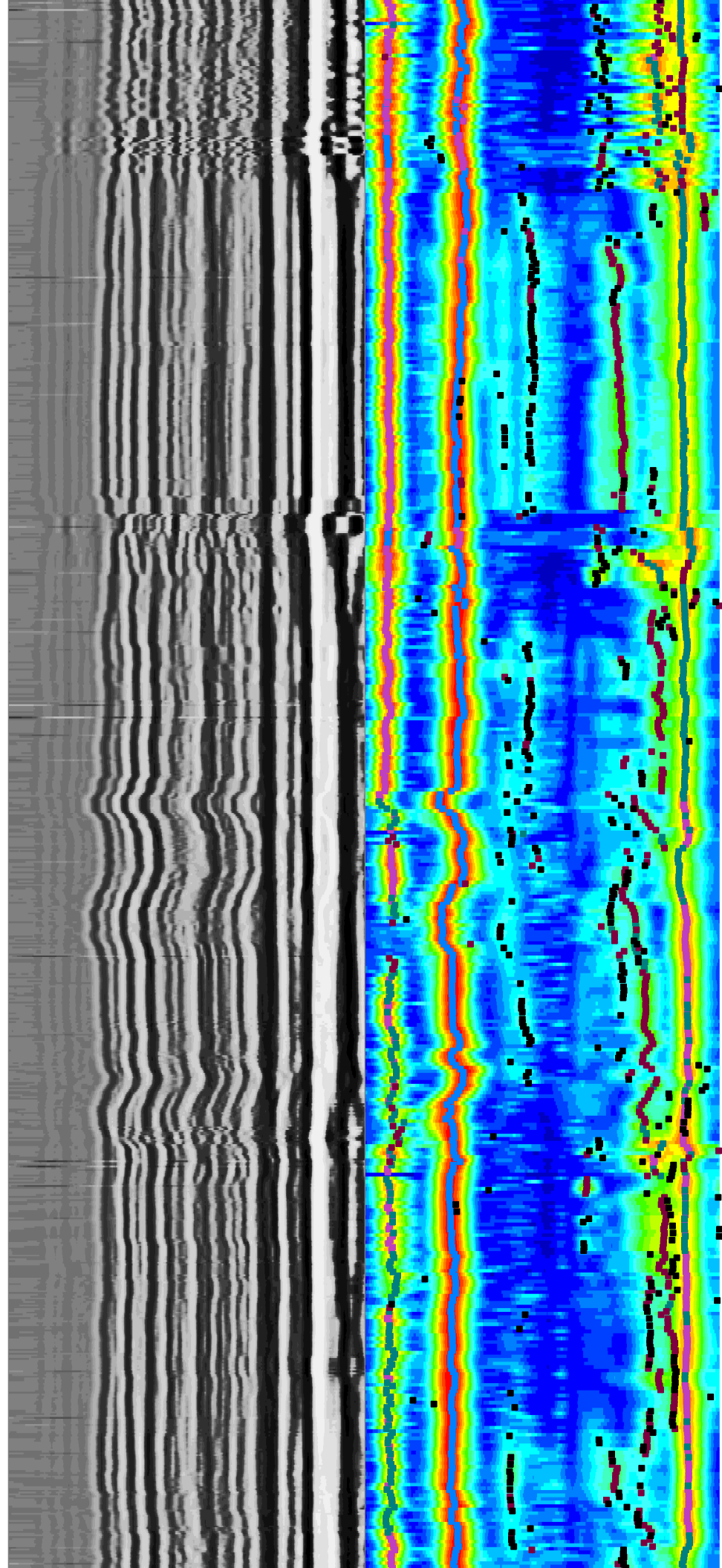
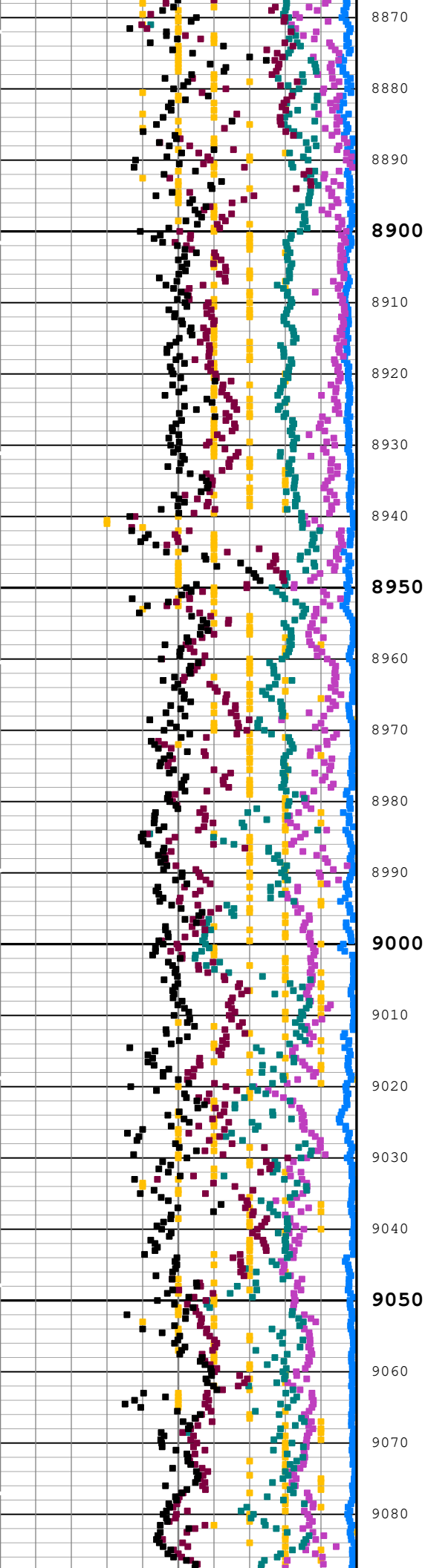
STC Slow Proj. RA CVDL - UpperTx (SPJ\_RA\_UT) QSLT-B

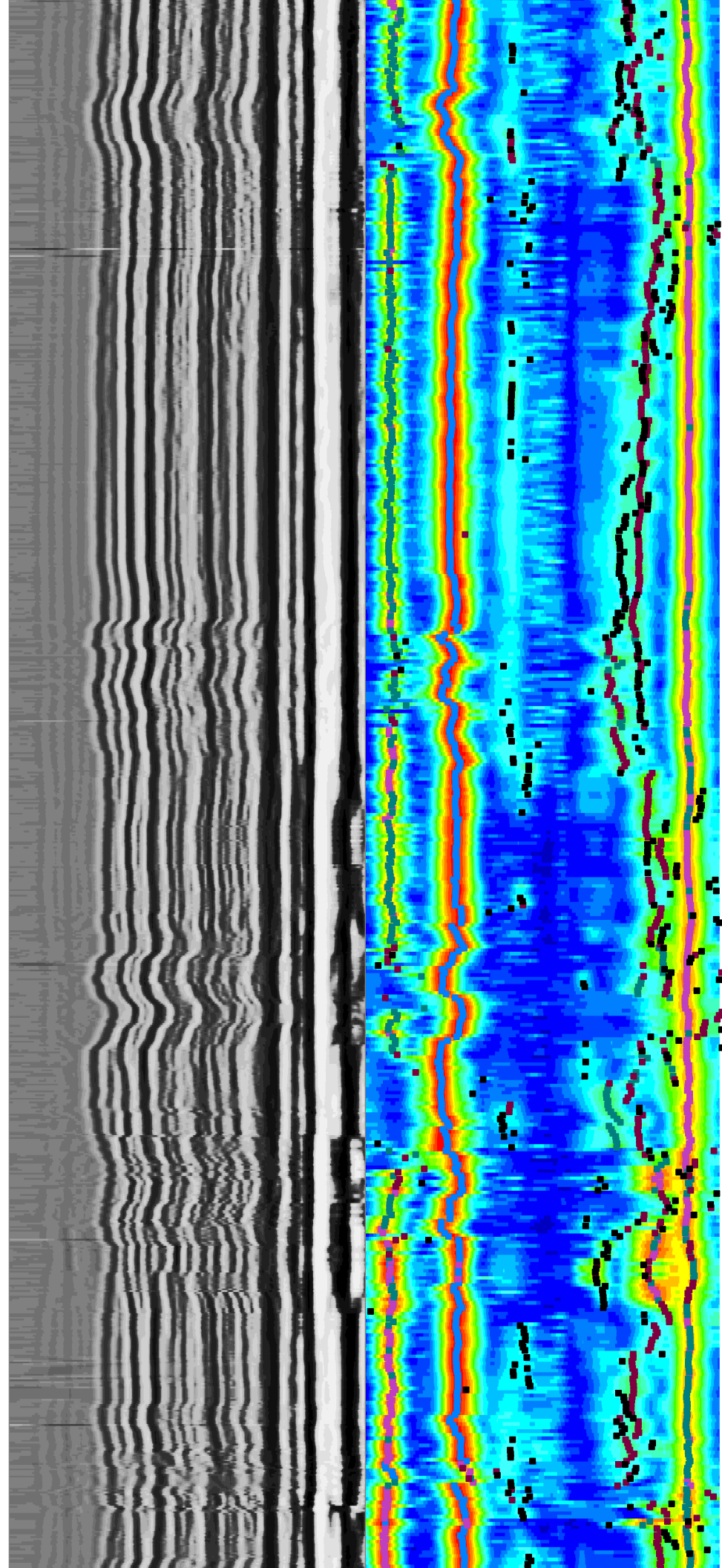
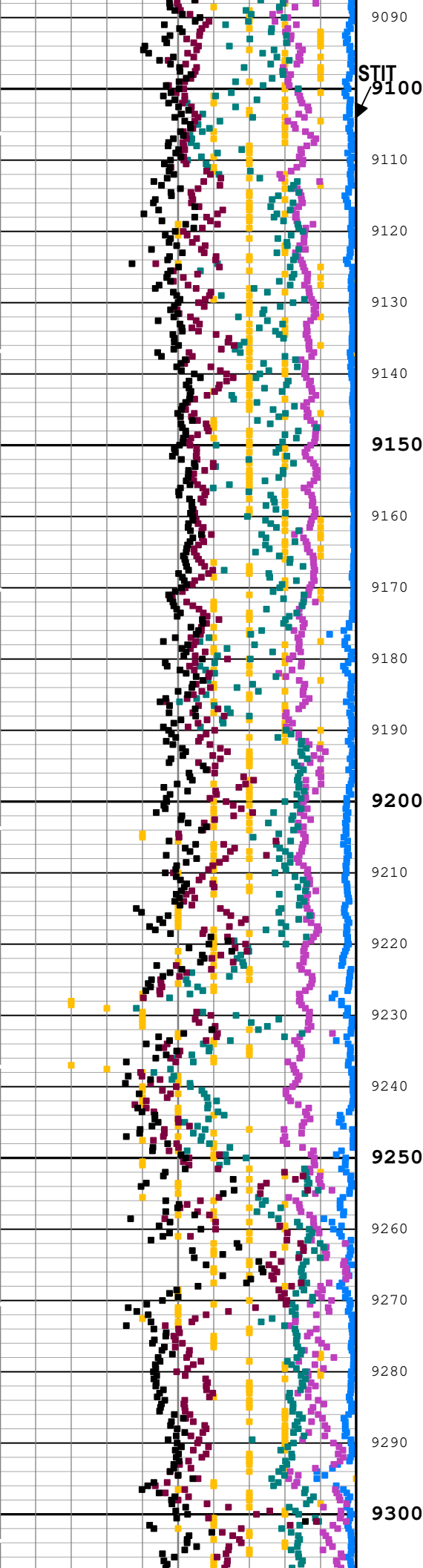
40 240 us/ft



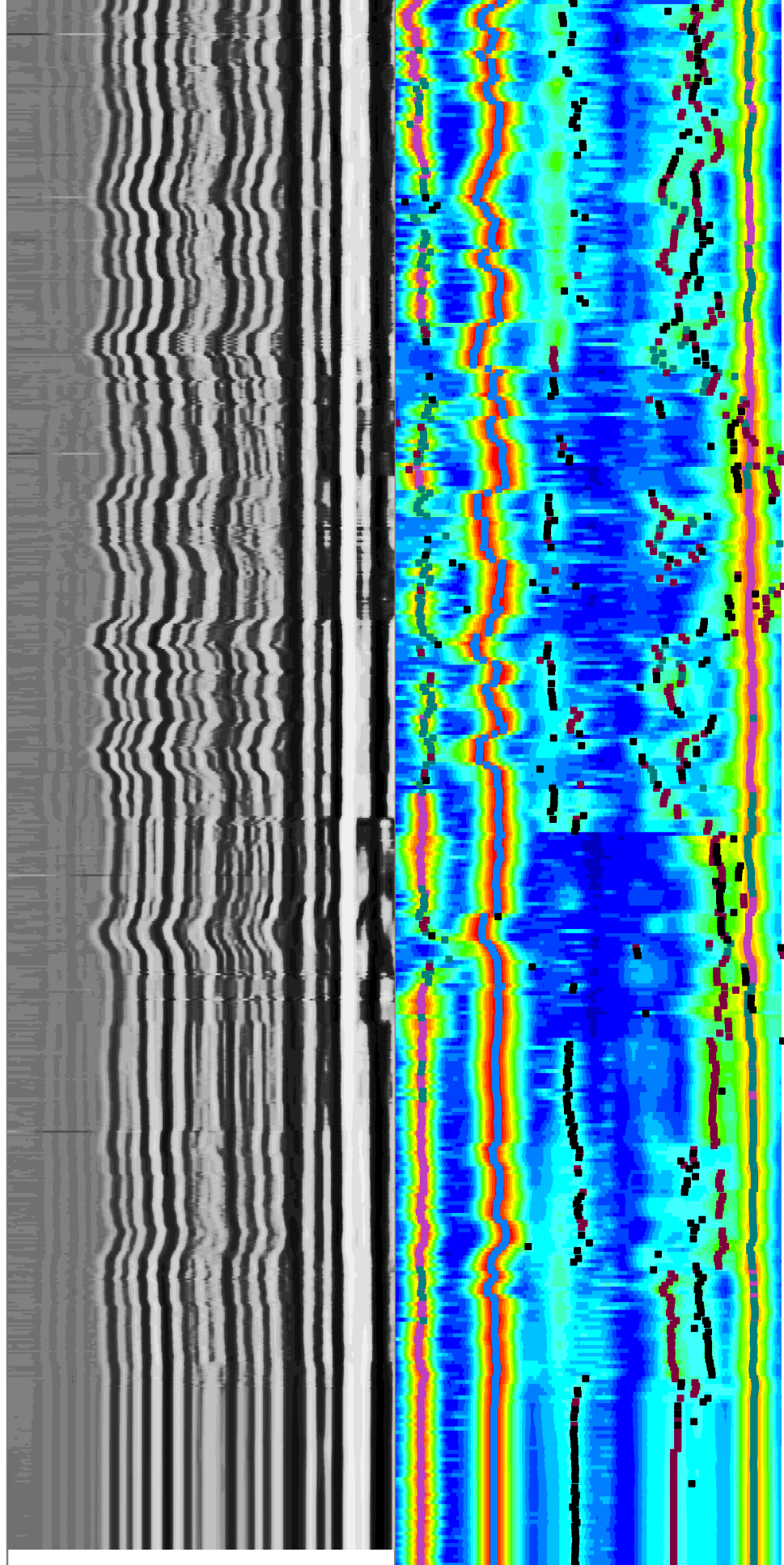
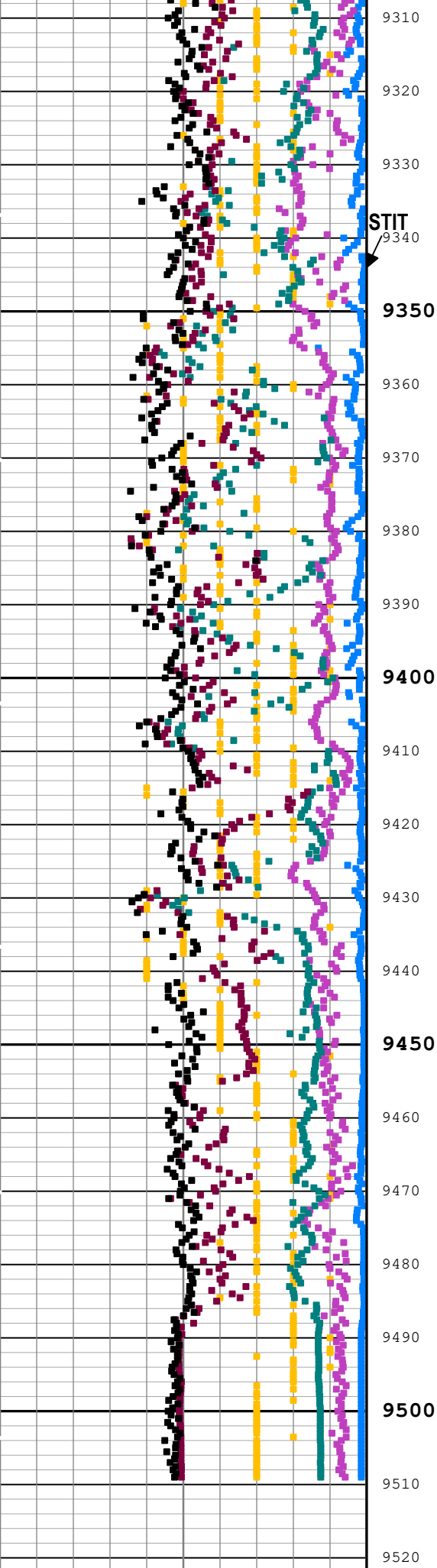




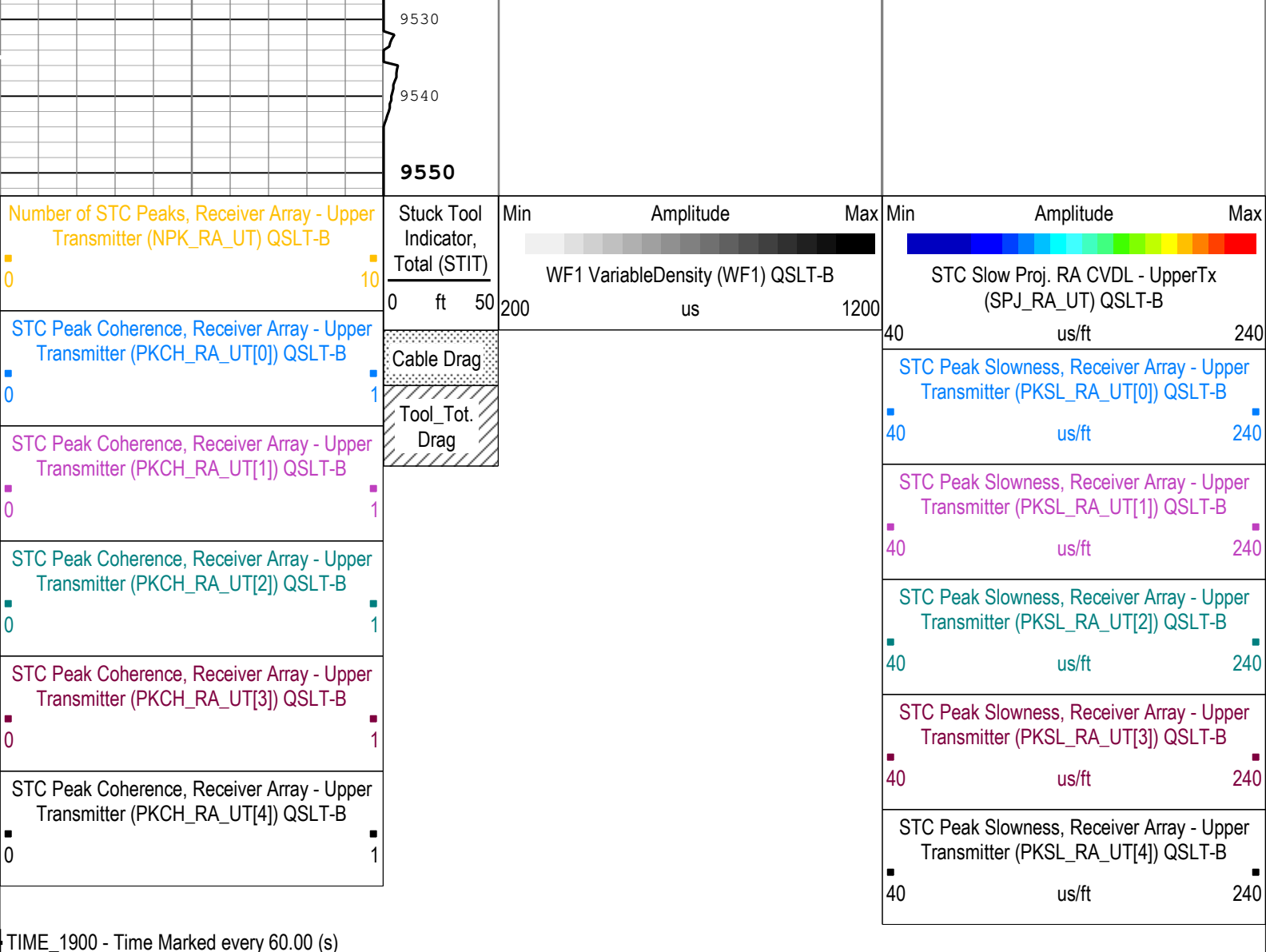












Description: SSLT STC LQC Upper    Format: Log ( SSLT STC LQC Upper )    Index Scale: 5 in per 100 ft    Index Unit: ft    Index Type: Measured Depth  
 Creation Date: 30-Jul-2021 07:07:55

Channel Processing Parameters	
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## 1B: Parameters

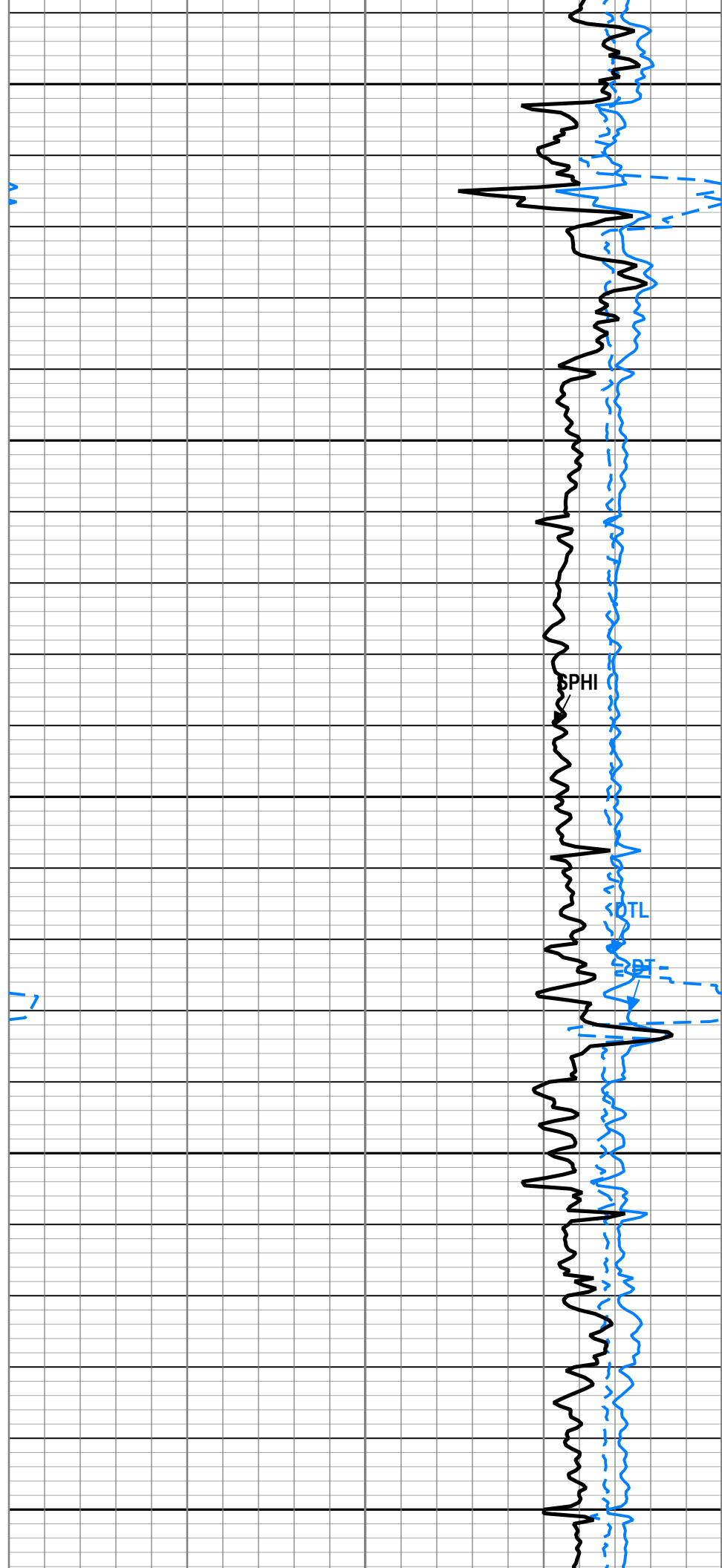
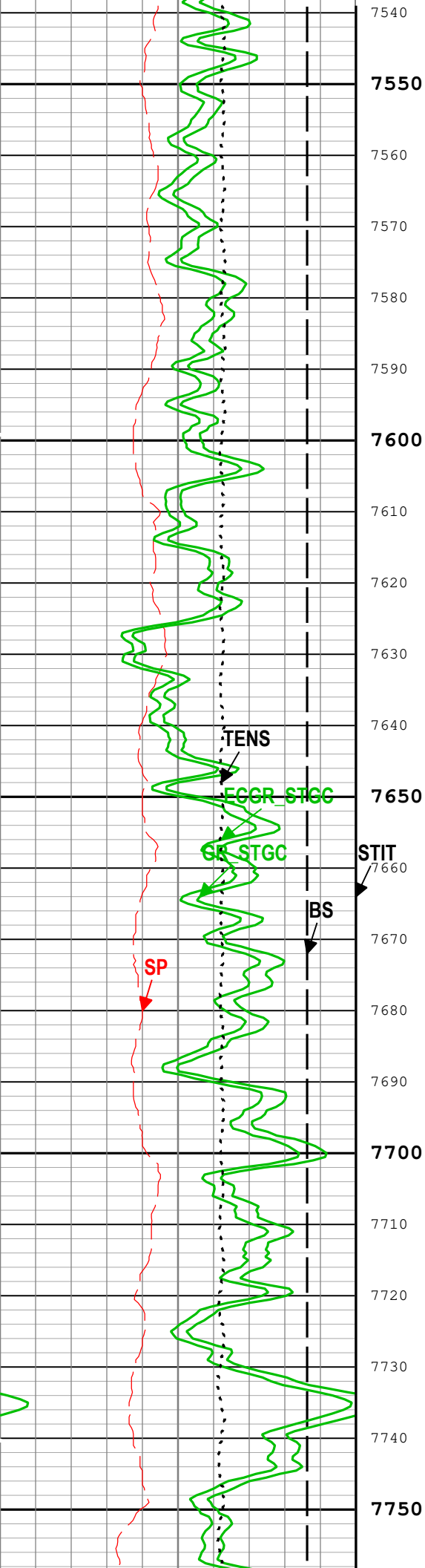
Parameter	Description	Tool	Value	Unit
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
SPM_UT	STC Processing Mode - Upper Transmitter	QSLT-B	Receiver	
TD	Total Measured Depth	Borehole	9532	ft

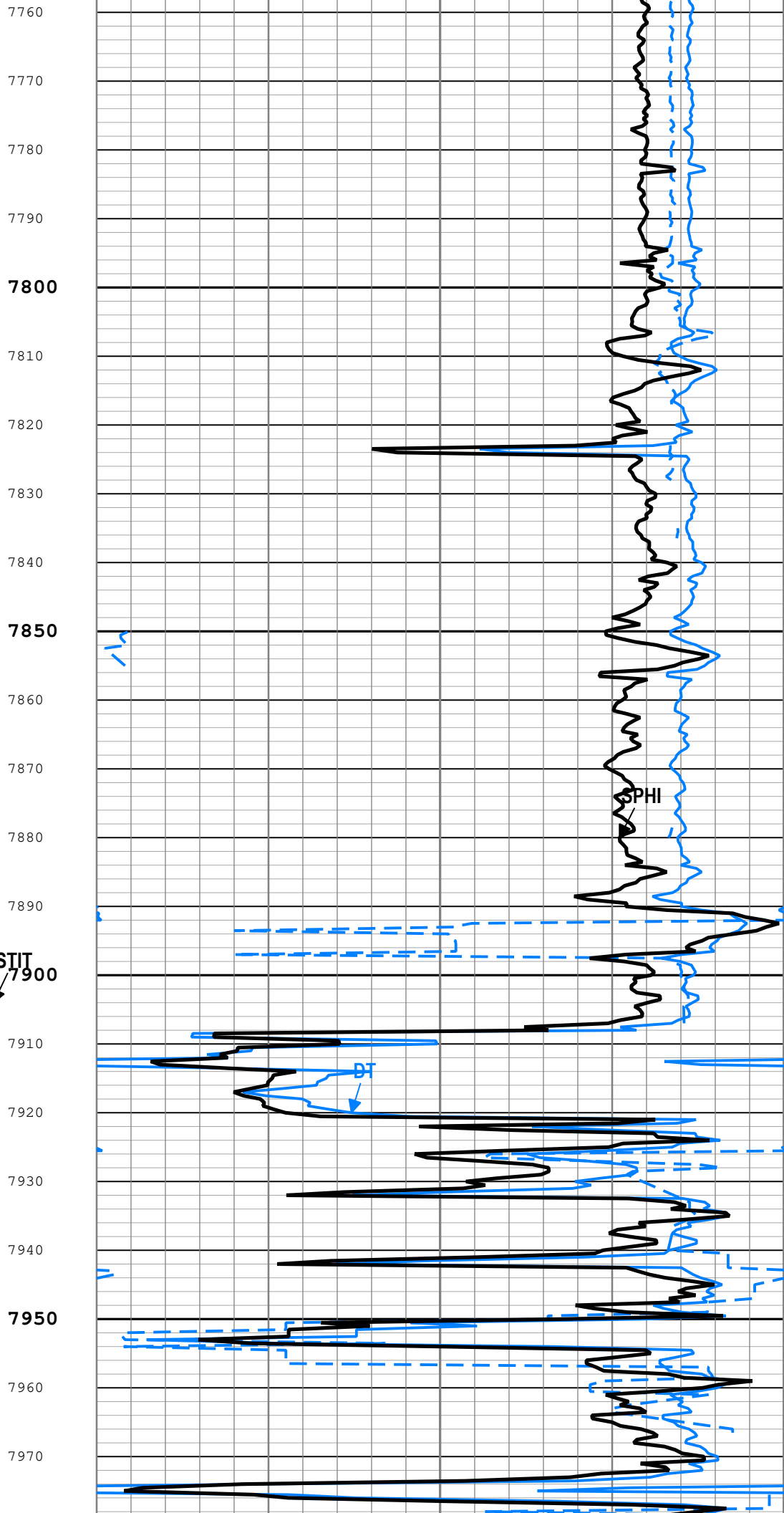
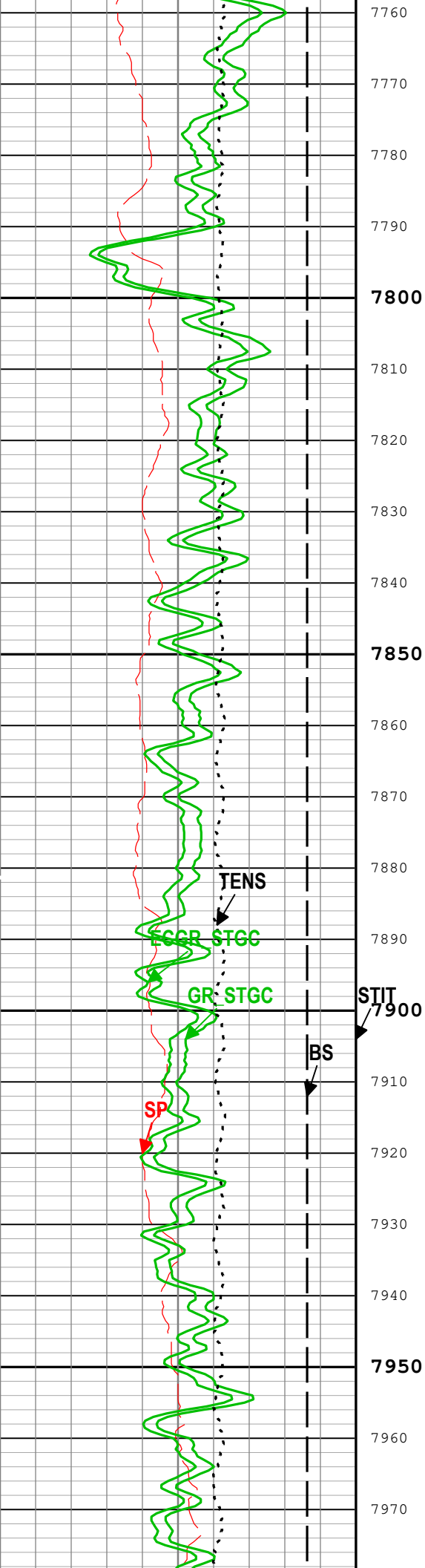
Tool Control Parameters	
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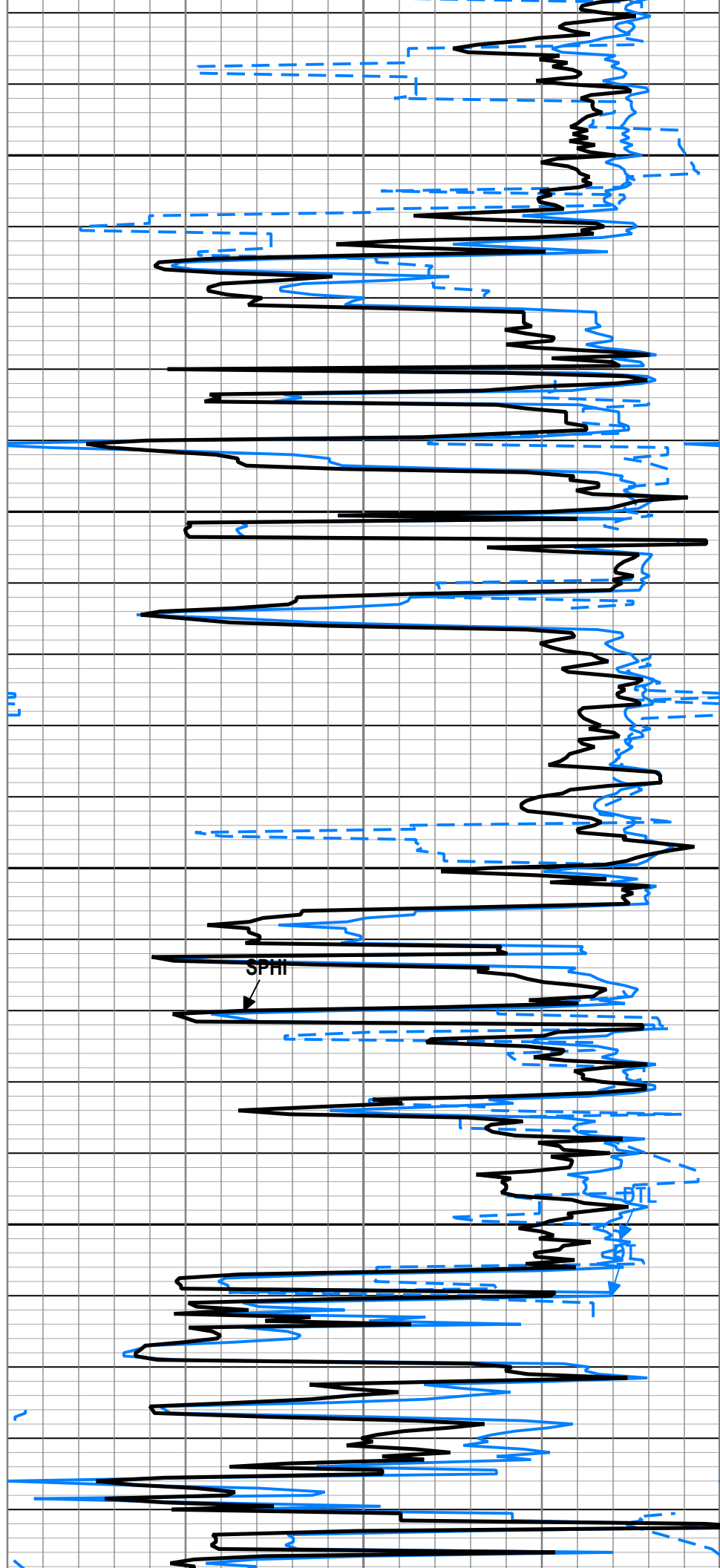
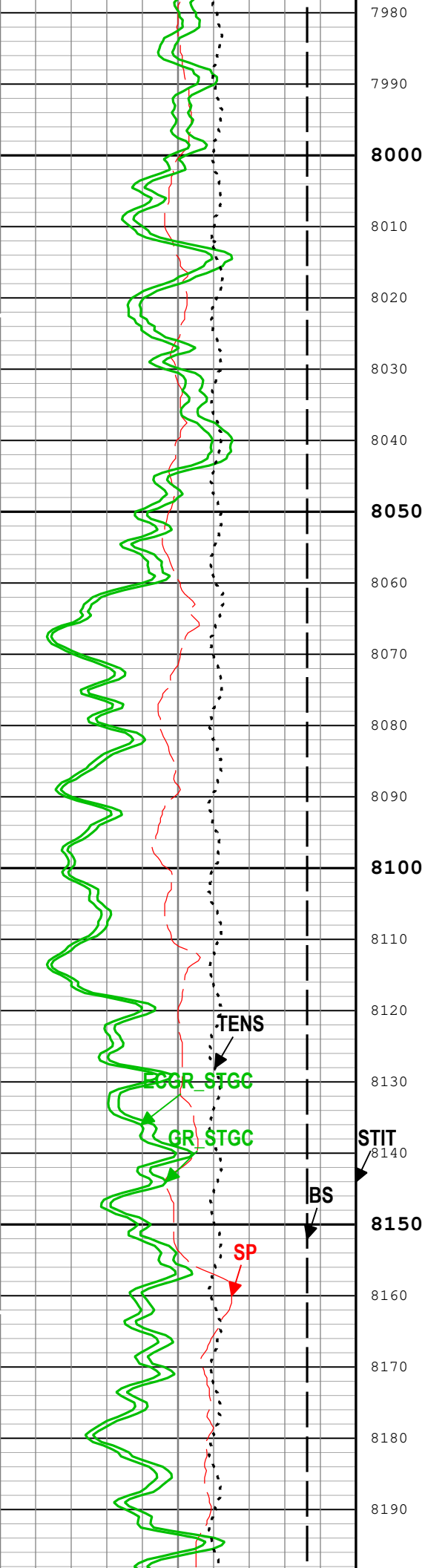
## 1B: Parameters

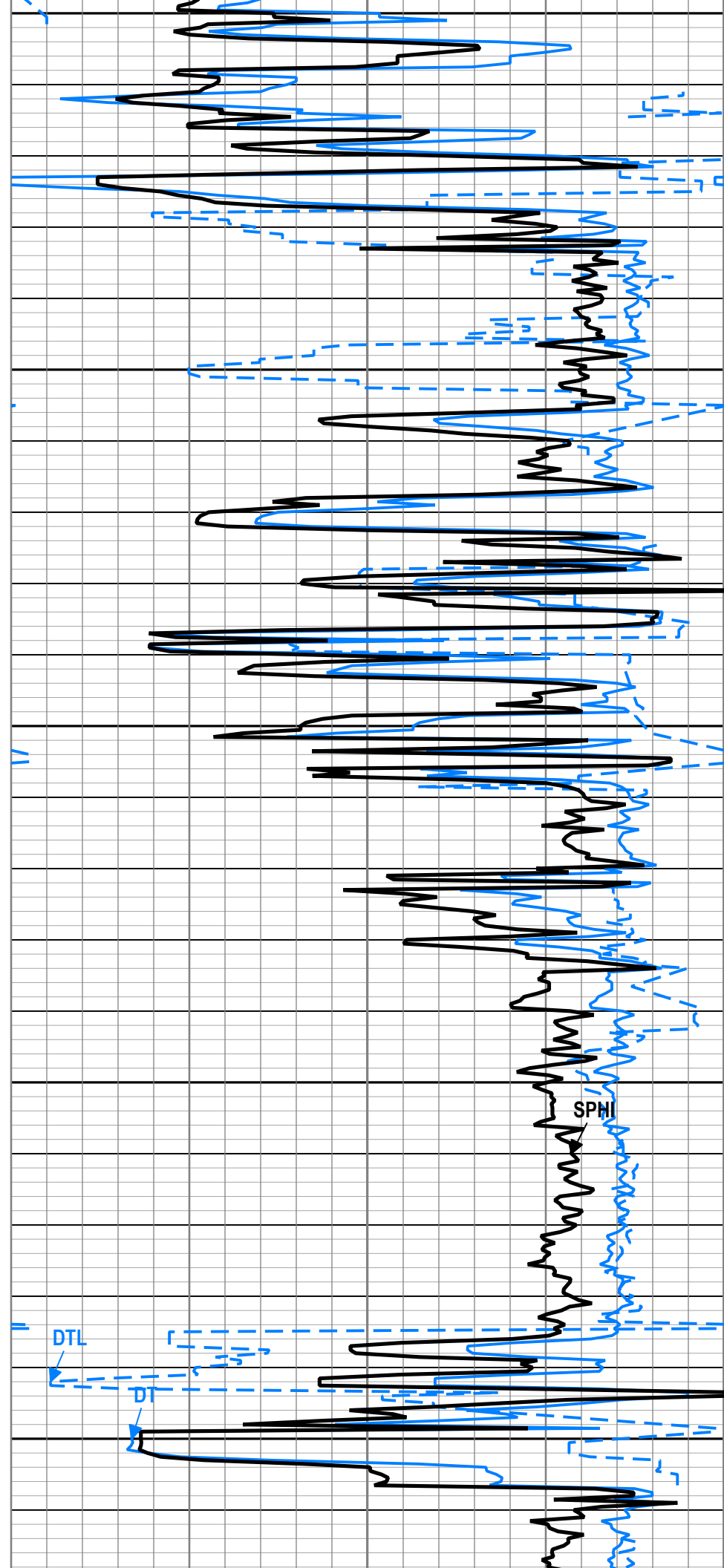
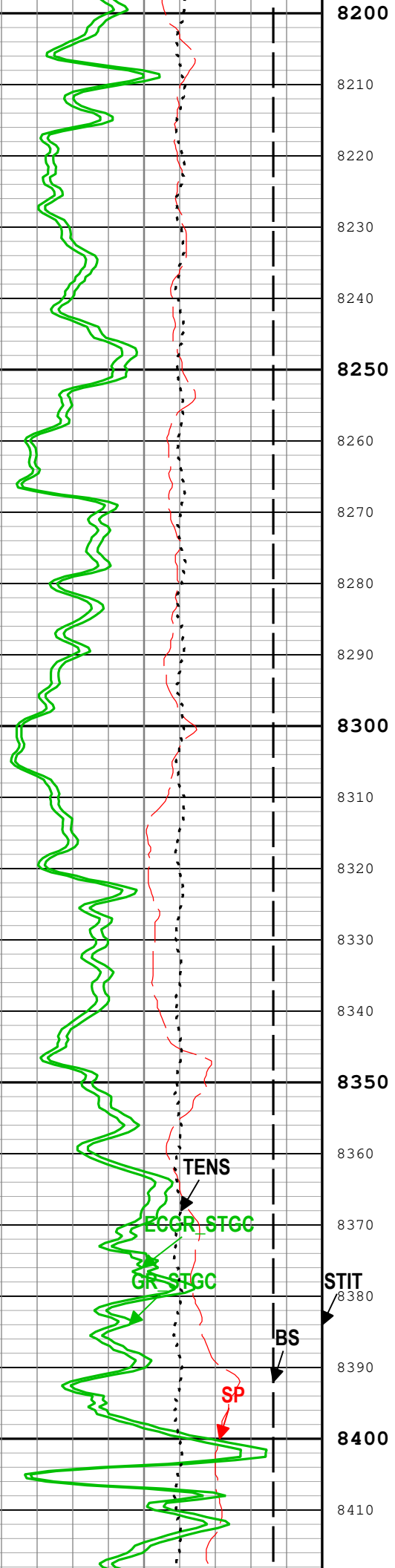
Parameter	Description	Tool	Value	Unit
DDE1	Digitizing Delay 1	QSLT-B	40	us
DDE2	Digitizing Delay 2	QSLT-B	40	us
GAI1	SSLT Manual Gain 1	QSLT-B	High	
GAI2	SSLT Manual Gain 2	QSLT-B	High	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	1800	ft/h
MODE	SSLT Firing Mode	QSLT-B	DT_BHC	
RATE	Firing Rate	QSLT-B	8.93	Hz
VDM	SSLT VDL Display Mode	QSLT-B	NONE	

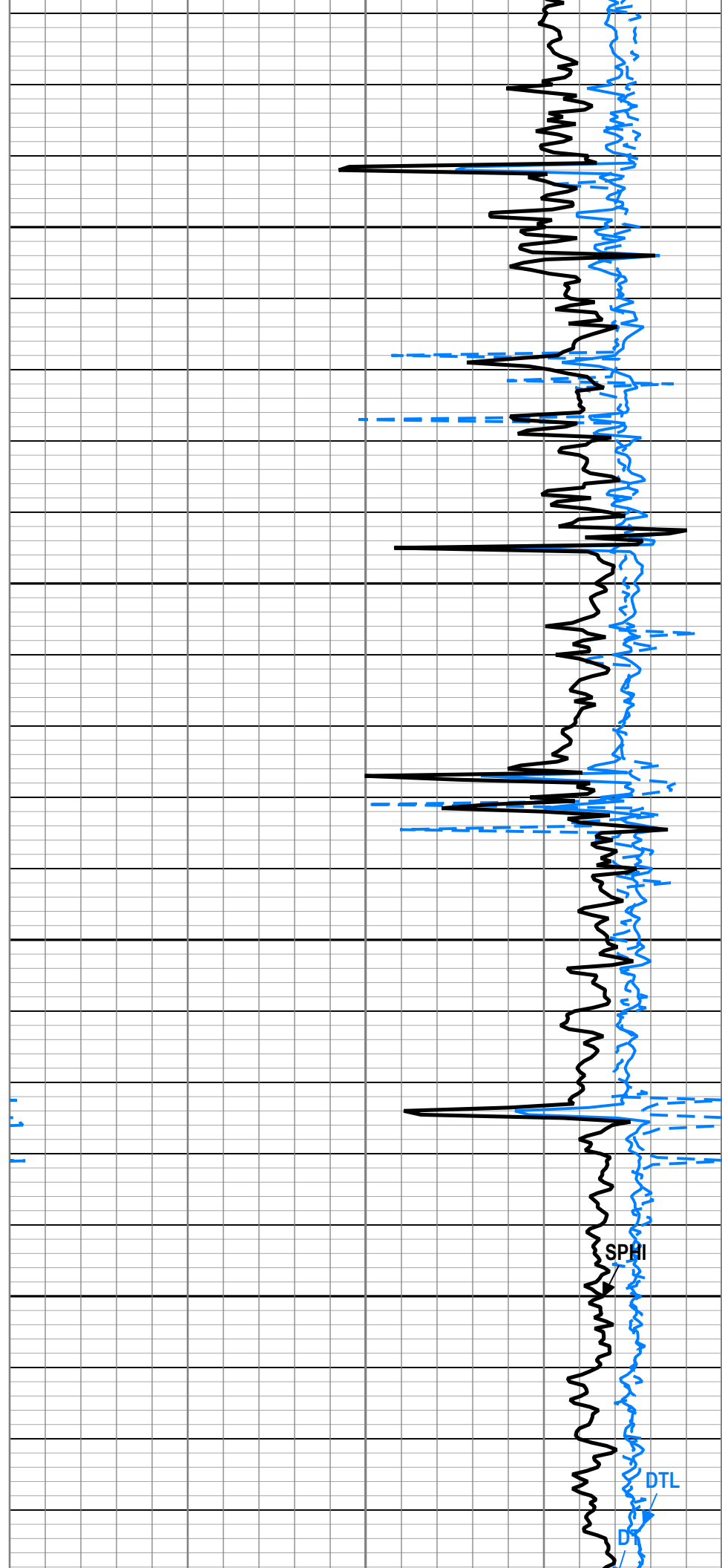
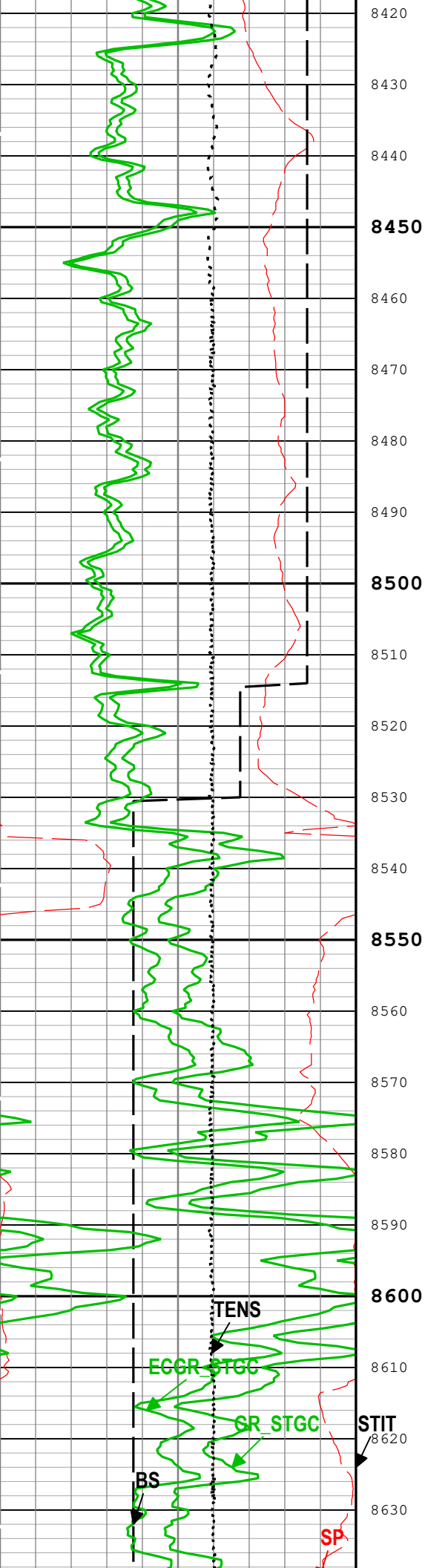


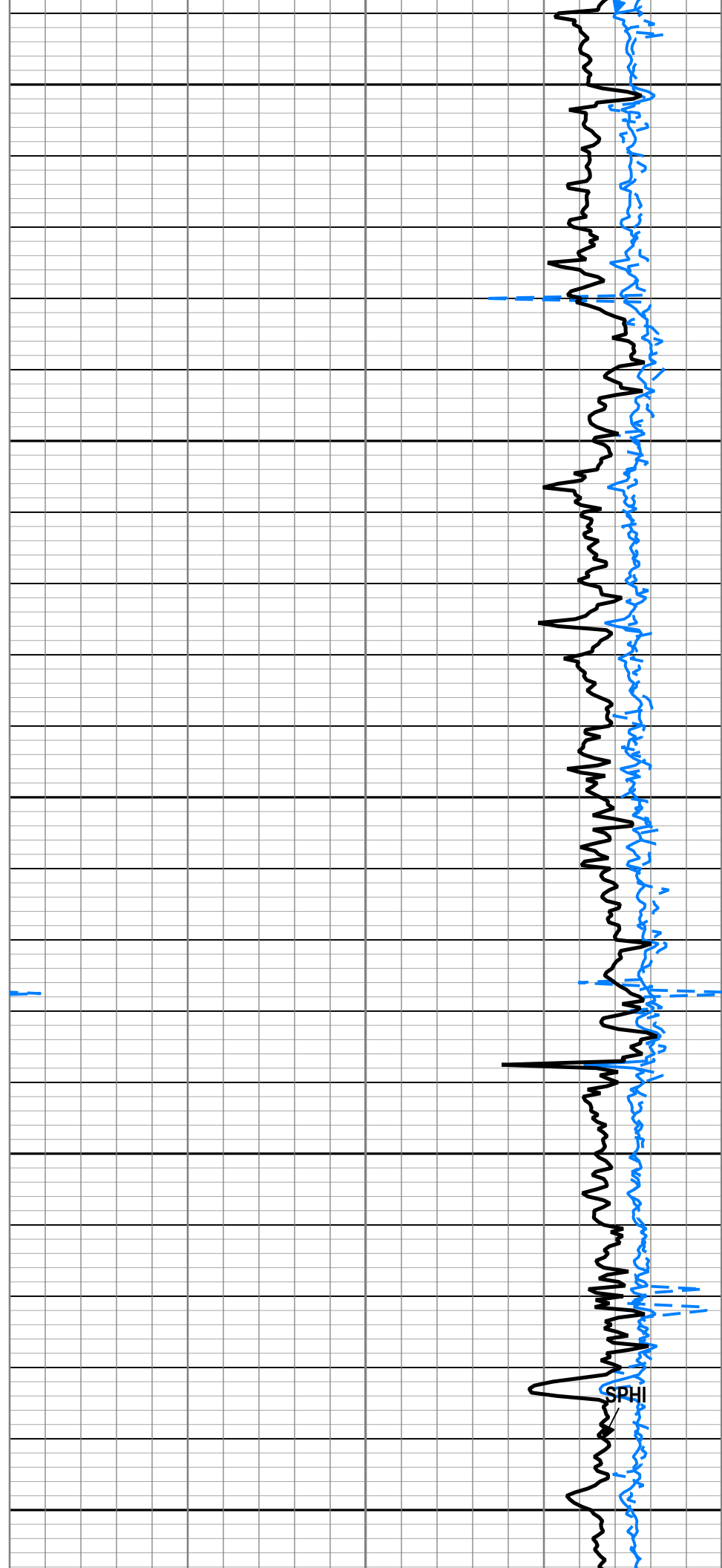
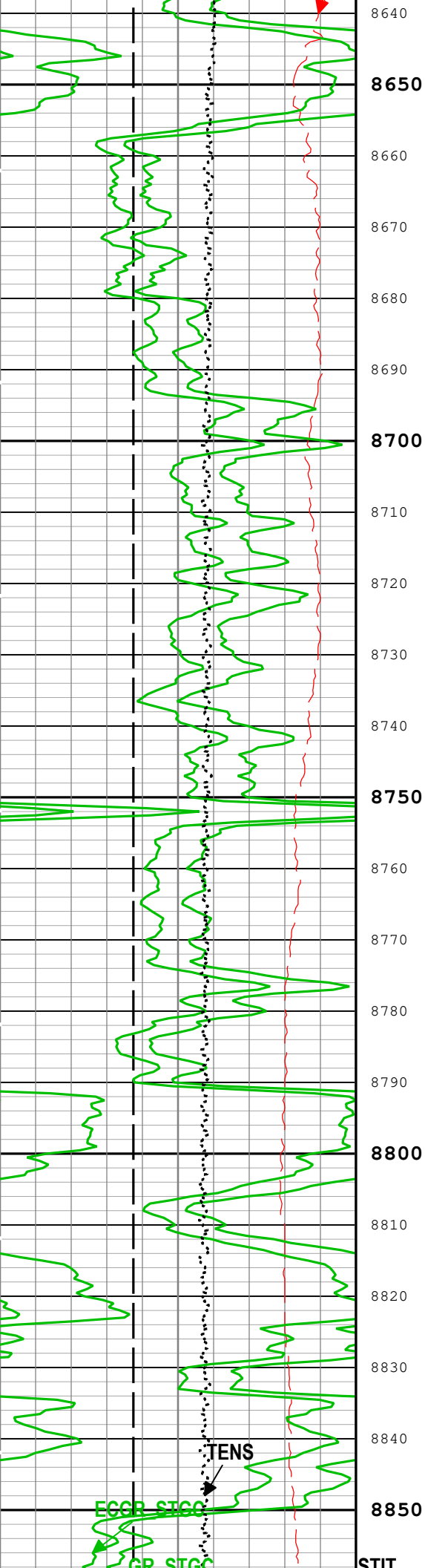




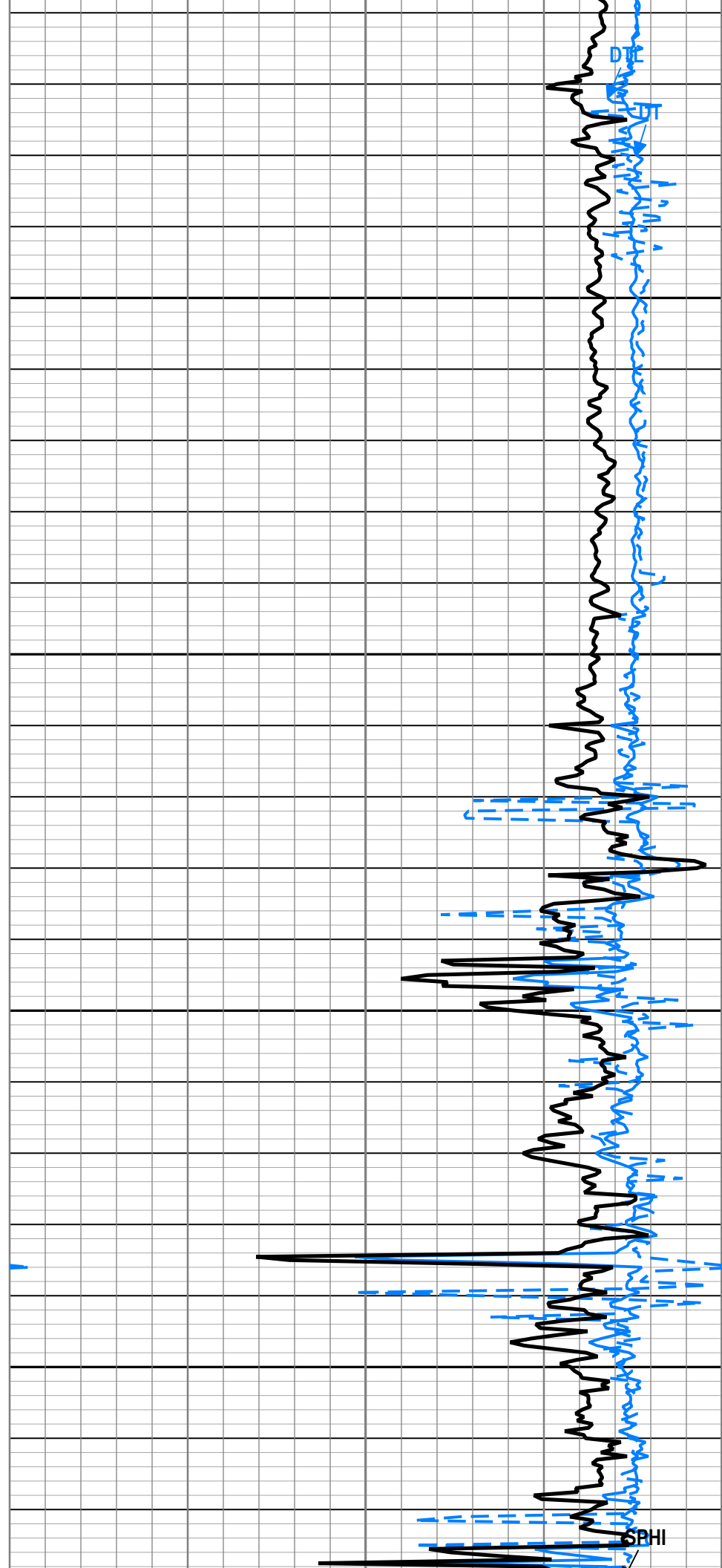
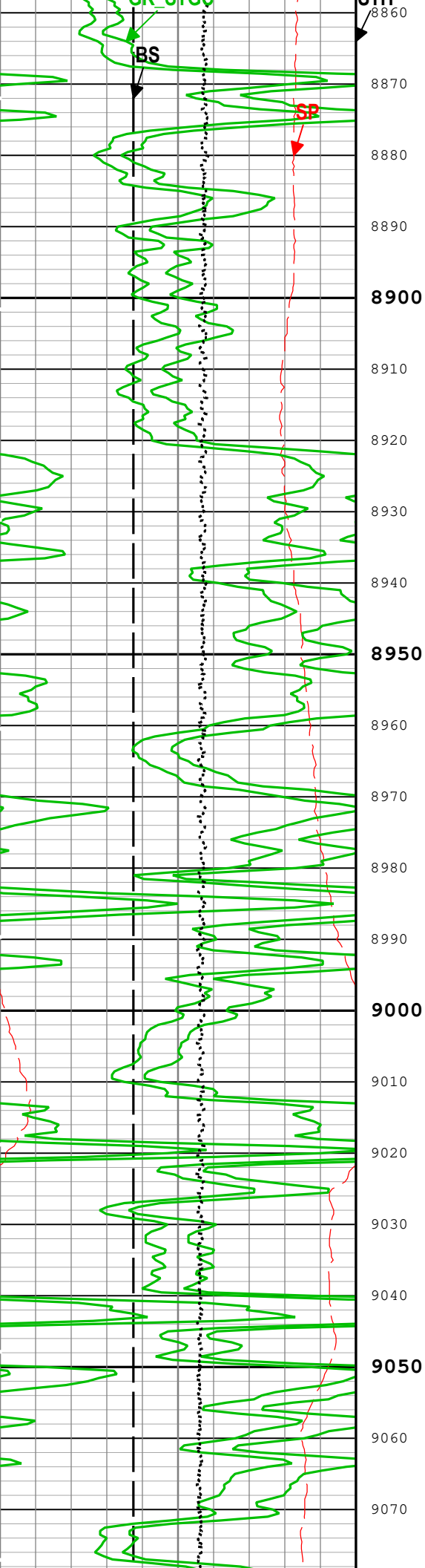


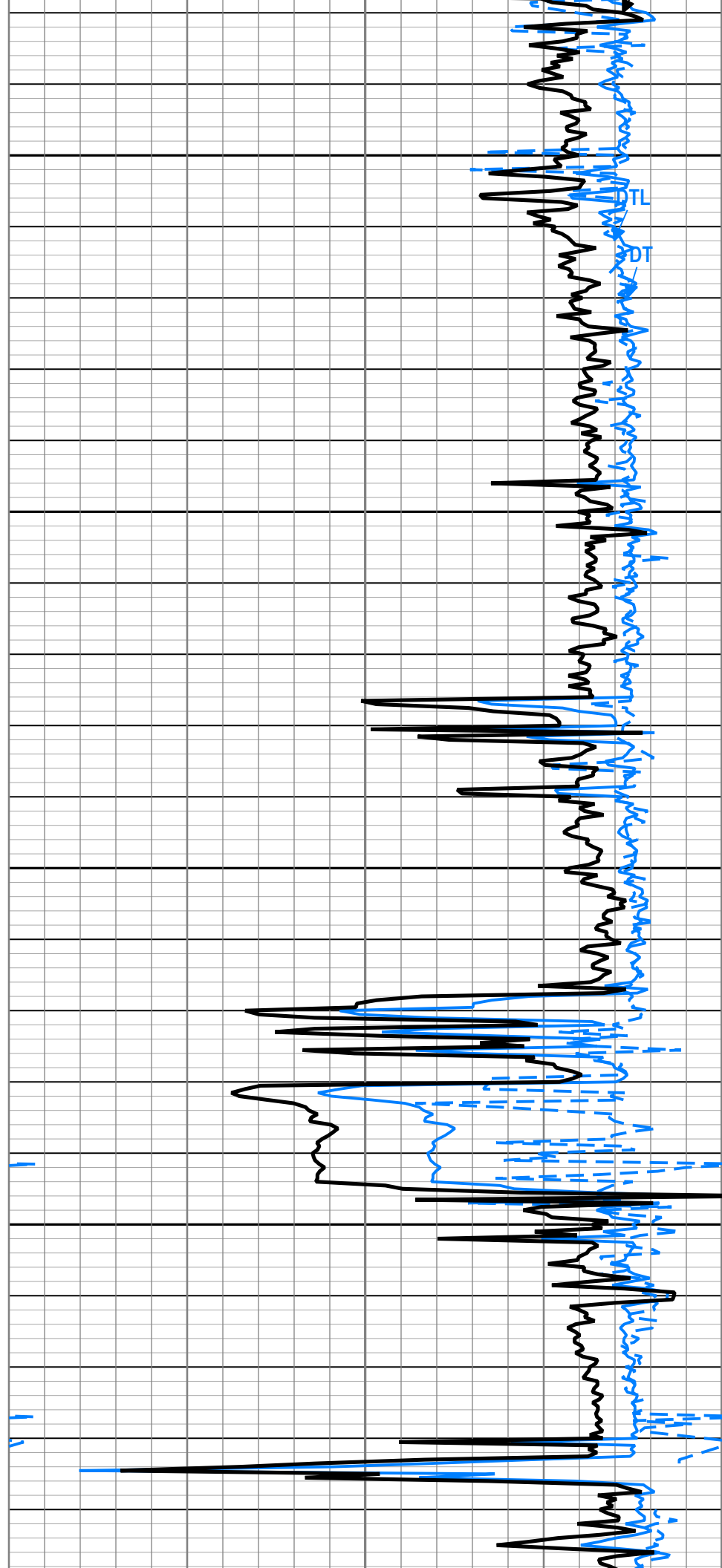
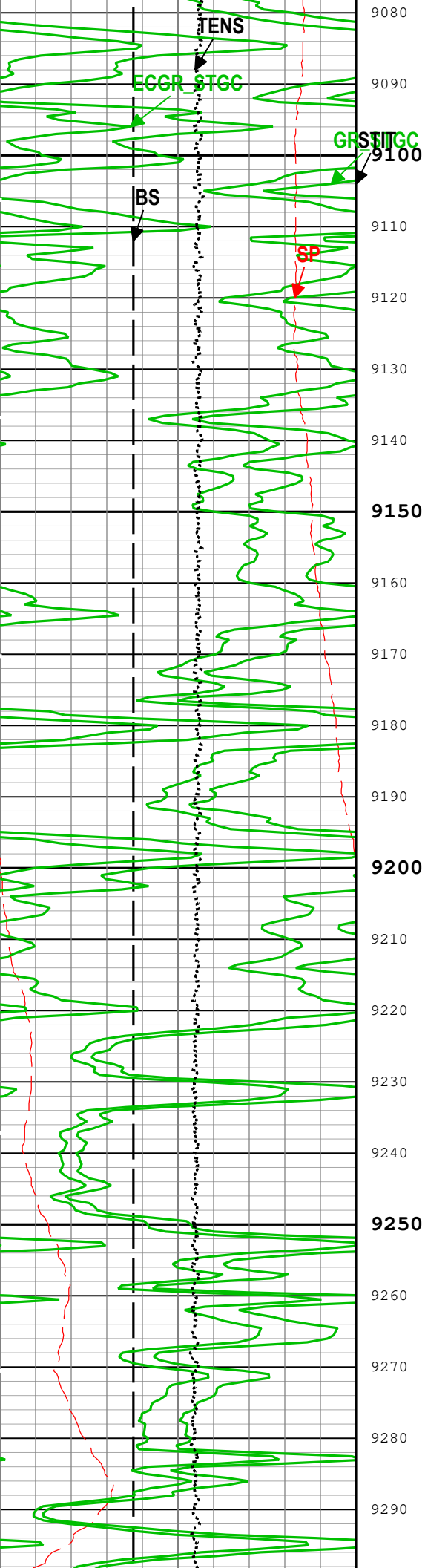


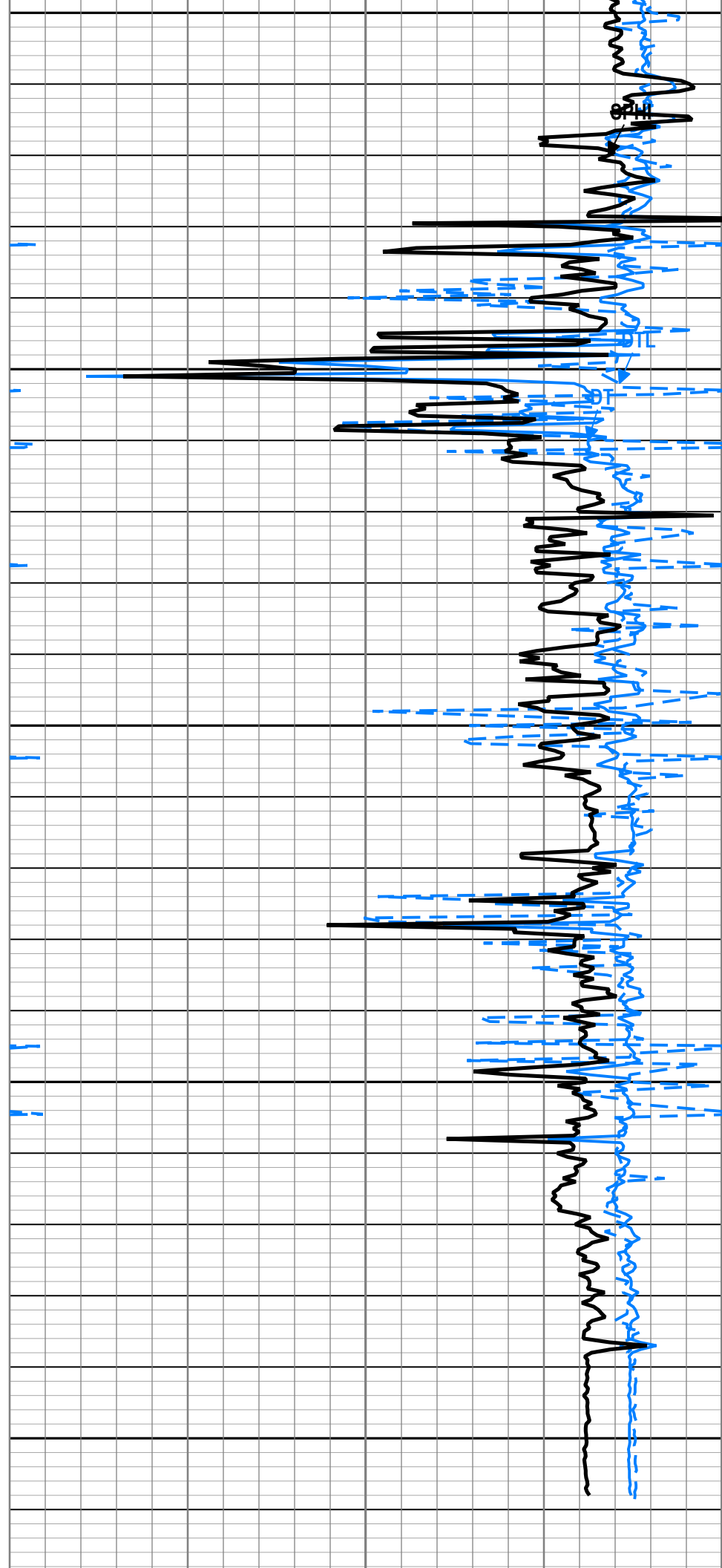
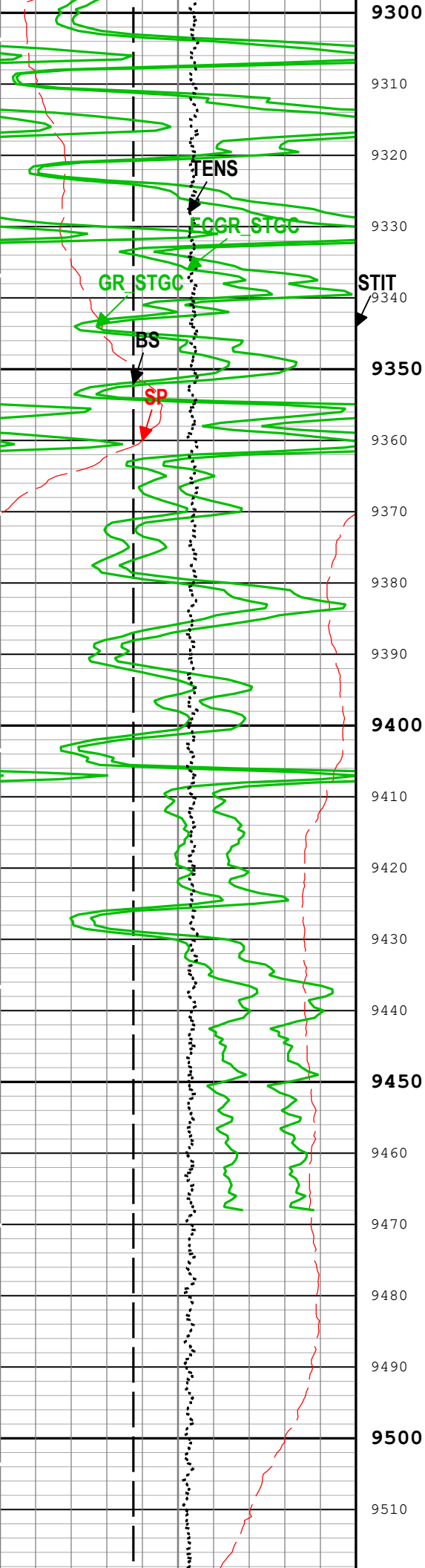


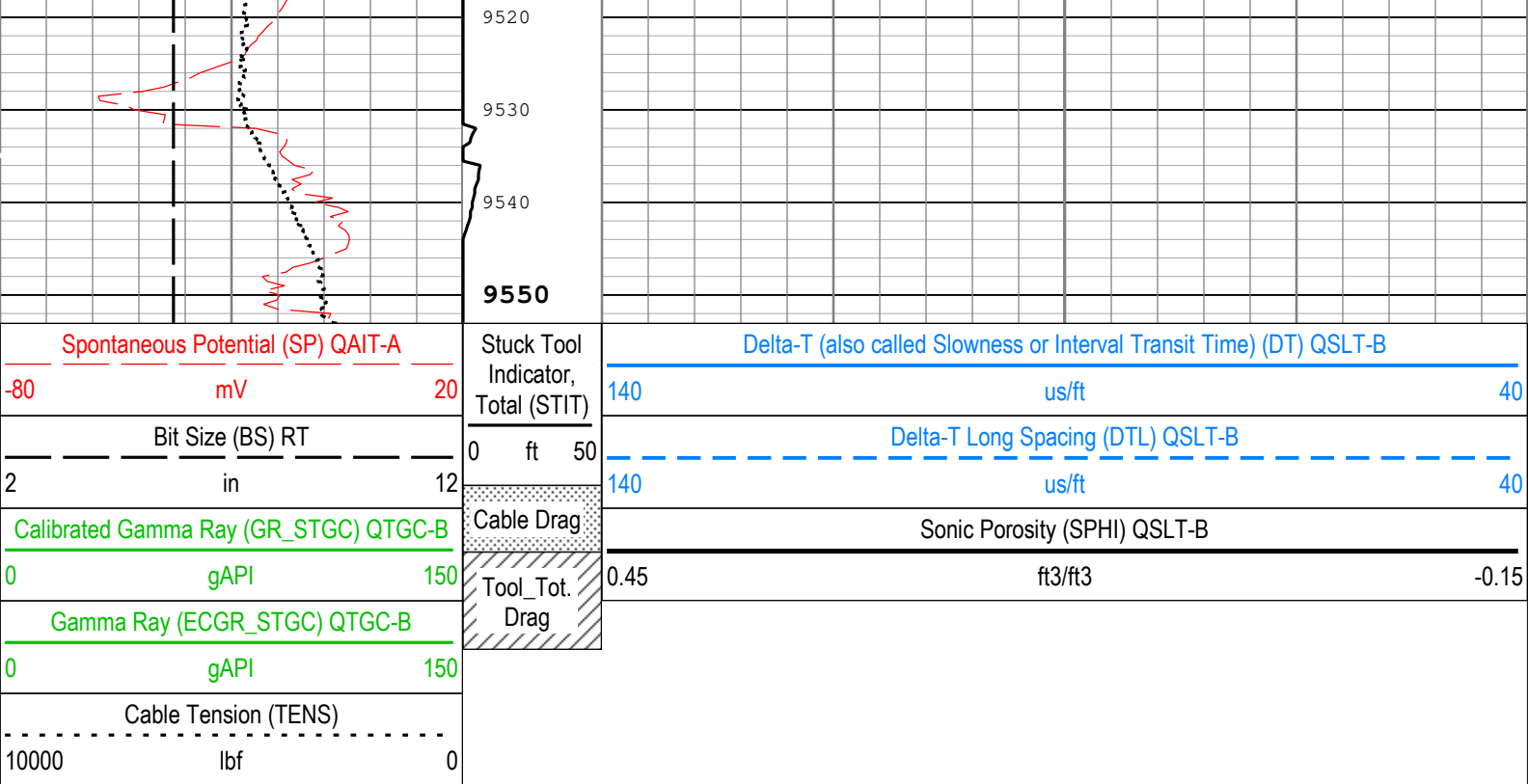












Description: SSLT Sonic    Format: Log ( SSLT Sonic )    Index Scale: 5 in per 100 ft    Index Unit: ft    Index Type: Measured Depth    Creation Date: 30-Jul-2021 07:08:02

## Channel Processing Parameters

### 1B: Parameters

Parameter	Description	Tool	Value	Unit
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BS	Bit Size	WLSESSION	Depth Zoned	in
CBLO	Casing Bottom (Logger)	WLSESSION	8530	ft
CDS	Correction for Delta-T Shale, Empirical	Borehole	100	us/ft
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DFD	Drilling Fluid Density	Borehole	8.3	lbm/gal
DTCS	Slim Sonic Compressional Delta-T Source for DTCO Channel	QSLT-B	DT	
DTF	Delta-T Fluid	Borehole	189	us/ft
DTM	Delta-T Matrix	Borehole	56	us/ft
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS(RT)	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	BS(RT)	
SOCN	Standoff Distance of the Gamma Ray Tool	QTGC-B	0	in
SPDR	SP Drift Per Foot	QAIT-A	0	mV/ft
SPFS	Sonic Porosity Formula	Borehole	Raymer-Hunt	
SPM_LT	STC Processing Mode - Lower Transmitter	QSLT-B	Receiver	
SPM_UT	STC Processing Mode - Upper Transmitter	QSLT-B	Receiver	
TD	Total Measured Depth	Borehole	9532	ft
TPOS_STGC	Tool Position: Centered or Eccentered	QTGC-B	Eccentered	

### Depth Zone Parameters

Parameter	Value	Start ( ft )	Stop ( ft )
BS	10.625	7446.5	8514
BS	8.75	8514	8530
BS	5.75	8530	9532

All depths are measured

## Tool Control Parameters

### 1B: Parameters

Parameter	Description	Tool	Value	Unit
DDE1	Digitizing Delay 1	QSLT-B	40	us
DDE2	Digitizing Delay 2	QSLT-B	40	us
GAI1	SSLT Manual Gain 1	QSLT-B	High	
GAI2	SSLT Manual Gain 2	QSLT-B	High	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	1800	ft/h
MODE	SSLT Firing Mode	QSLT-B	DT_BHC	
RATE	Firing Rate	QSLT-B	8.93	Hz
VDM	SSLT VDL Display Mode	QSLT-B	NONE	

## Calibration Report

### QAIT-A (Slim Hostile Array Induction Tool - A) Calibration - Run 1B

#### Primary Equipment :

Slim Hot Array Induction Sonde

QAIS-A

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#### Auxiliary Equipment :

QAIT Rm/SP Bottom Nose

AQRM

Slim Array Induction Electronics Cartridge

SAIC-A

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### AIT Sonde Calibration - Test Loop Gain

Master (EEPROM): 03:47:46 11-Mar-2021

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Test Loop Gain - 0		Master	1.000	0.950	1.012	1.050	
Test Loop Phase - 0	deg	Master	0	-3.000	0.326	3.000	
Test Loop Gain - 1		Master	1.000	0.950	1.011	1.050	
Test Loop Phase - 1	deg	Master	0	-3.000	0.454	3.000	
Test Loop Gain - 2		Master	1.000	0.950	1.016	1.050	
Test Loop Phase - 2	deg	Master	0	-3.000	0.012	3.000	
Test Loop Gain - 3		Master	1.000	0.950	1.011	1.050	
Test Loop Phase - 3	deg	Master	0	-3.000	0.112	3.000	
Test Loop Gain - 4		Master	1.000	0.950	1.008	1.050	
Test Loop Phase - 4	deg	Master	0	-3.000	0.052	3.000	
Test Loop Gain - 5		Master	1.000	0.950	1.017	1.050	
Test Loop Phase - 5	deg	Master	0	-3.000	0.268	3.000	
Test Loop Gain - 6		Master	1.000	0.950	1.025	1.050	
Test Loop Phase - 6	deg	Master	0	-3.000	0.262	3.000	
Test Loop Gain - 7		Master	1.000	0.950	1.023	1.050	
Test Loop Phase - 7	deg	Master	0	-3.000	-0.272	3.000	

### AIT Sonde Calibration - Sonde Error Correction

Master (EEPROM): 03:47:46 11-Mar-2021

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Sonde Error Correction Real - 0	mS/m	Master	-----	-1166.000	-535.925	-216.000	
Sonde Error Correction Quad - 0		Master	-----	-2700.000	729.997	2700.000	
Sonde Error Correction Real - 1	mS/m	Master	-----	187.000	280.733	377.000	
Sonde Error Correction Quad - 1		Master	-----	-625.000	139.282	625.000	
Sonde Error Correction Real - 2	mS/m	Master	-----	24.000	93.836	174.300	
Sonde Error Correction Quad - 2		Master	-----	-350.000	16.560	350.000	
Sonde Error Correction Real - 3	mS/m	Master	-----	5.000	55.223	95.000	
Sonde Error Correction Quad - 3		Master	-----	-250.000	102.589	250.000	
Sonde Error Correction Real - 4	mS/m	Master	-----	-2.000	19.493	40.000	
Sonde Error Correction Quad - 4		Master	-----	-63.000	11.885	63.000	
Sonde Error Correction Real - 5	mS/m	Master	-----	-9.000	3.589	15.000	
Sonde Error Correction Quad - 5		Master	-----	-50.000	13.356	50.000	
Sonde Error Correction Real - 6	mS/m	Master	-----	-2.000	3.067	10.000	
Sonde Error Correction Quad - 6		Master	-----	-30.000	-11.403	30.000	

Sonde Error Correction Quad - 0		Master		-50.000	-17.100	50.000	<div><div></div><div></div><div></div><div></div><div></div></div>
Sonde Error Correction Real - 7	mS/m	Master	-----	-5.000	-0.098	5.000	<div><div></div><div></div><div></div><div></div><div></div></div>
Sonde Error Correction Quad - 7		Master	-----	-30.000	-1.876	30.000	<div><div></div><div></div><div></div><div></div><div></div></div>
AIT Mud Calibration - Mud Calibration Gain							
Master (EEPROM):		03:47:46 11-Mar-2021					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	<div><div></div><div></div><div></div><div></div><div></div></div>
Coarse Gain		Master	1.000	0.800	1.038	1.200	<div><div></div><div></div><div></div><div></div><div></div></div>
Fine Gain		Master	1.000	0.800	1.039	1.200	<div><div></div><div></div><div></div><div></div><div></div></div>
AIT Electronics Check - Thru Calibration Check							
Master (EEPROM):		03:47:46 11-Mar-2021		Before (Measured):		01:05:49 30-Jul-2021	
				After:			
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	<div><div></div><div></div><div></div><div></div><div></div></div>
Thru Cal Mag - 0	V	Master	-----	0.330	0.555	0.770	<div><div></div><div></div><div></div><div></div><div></div></div>
		Before	-----	0.330	0.553	0.770	<div><div></div><div></div><div></div><div></div><div></div></div>
		After	-----	-----	-----	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
		Before-Master	-----	-----	-0.002	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
		After-Before	-----	-----	-----	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
Thru Cal Phase - 0	deg	Master	-----	137.000	-135.247	-103.000	<div><div></div><div></div><div></div><div></div><div></div></div>
		Before	-----	137.000	-143.163	-103.000	<div><div></div><div></div><div></div><div></div><div></div></div>
		After	-----	-----	-----	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
		Before-Master	-----	-----	-7.916	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
		After-Before	-----	-----	-----	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
Thru Cal Mag - 1	V	Master	-----	0.594	0.992	1.386	<div><div></div><div></div><div></div><div></div><div></div></div>
		Before	-----	0.594	0.988	1.386	<div><div></div><div></div><div></div><div></div><div></div></div>
		After	-----	-----	-----	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
		Before-Master	-----	-----	-0.004	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
		After-Before	-----	-----	-----	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
Thru Cal Phase - 1	deg	Master	-----	136.000	-136.315	-104.000	<div><div></div><div></div><div></div><div></div><div></div></div>
		Before	-----	136.000	-144.242	-104.000	<div><div></div><div></div><div></div><div></div><div></div></div>
		After	-----	-----	-----	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
		Before-Master	-----	-----	-7.927	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
		After-Before	-----	-----	-----	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
Thru Cal Mag - 2	V	Master	-----	0.312	0.521	0.728	<div><div></div><div></div><div></div><div></div><div></div></div>
		Before	-----	0.312	0.518	0.728	<div><div></div><div></div><div></div><div></div><div></div></div>
		After	-----	-----	-----	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
		Before-Master	-----	-----	-0.003	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
		After-Before	-----	-----	-----	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
Thru Cal Phase - 2	deg	Master	-----	132.000	-141.557	-108.000	<div><div></div><div></div><div></div><div></div><div></div></div>
		Before	-----	132.000	-149.513	-108.000	<div><div></div><div></div><div></div><div></div><div></div></div>
		After	-----	-----	-----	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
		Before-Master	-----	-----	-7.956	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
		After-Before	-----	-----	-----	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
Thru Cal Mag - 3	V	Master	-----	0.384	0.633	0.896	<div><div></div><div></div><div></div><div></div><div></div></div>
		Before	-----	0.384	0.629	0.896	<div><div></div><div></div><div></div><div></div><div></div></div>
		After	-----	-----	-----	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
		Before-Master	-----	-----	-0.004	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
		After-Before	-----	-----	-----	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
Thru Cal Phase - 3	deg	Master	-----	131.000	-143.431	-109.000	<div><div></div><div></div><div></div><div></div><div></div></div>
		Before	-----	131.000	-151.402	-109.000	<div><div></div><div></div><div></div><div></div><div></div></div>
		After	-----	-----	-----	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
		Before-Master	-----	-----	-7.971	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
		After-Before	-----	-----	-----	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
Thru Cal Mag - 4	V	Master	-----	0.726	1.162	1.694	<div><div></div><div></div><div></div><div></div><div></div></div>
		Before	-----	0.726	1.155	1.694	<div><div></div><div></div><div></div><div></div><div></div></div>
		After	-----	-----	-----	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
		Before-Master	-----	-----	-0.007	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
		After-Before	-----	-----	-----	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
Thru Cal Phase - 4	deg	Master	-----	125.000	-152.689	-115.000	<div><div></div><div></div><div></div><div></div><div></div></div>
		Before	-----	125.000	-160.734	-115.000	<div><div></div><div></div><div></div><div></div><div></div></div>
		After	-----	-----	-----	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
		Before-Master	-----	-----	-8.045	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
		After-Before	-----	-----	-----	-----	<div><div></div><div></div><div></div><div></div><div></div></div>
Thru Cal Mag - 5	V	Master	-----	1.068	1.683	2.492	<div><div></div><div></div><div></div><div></div><div></div></div>
		Before	-----	1.068	1.673	2.492	<div><div></div><div></div><div></div><div></div><div></div></div>

		After Before-Master After-Before	----- ----- -----	----- ----- -----	-0.010 ----- -----	----- ----- -----	<div><div></div></div> <div><div></div></div> <div><div></div></div>
Thru Cal Phase - 5	deg	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	122.000 122.000 ----- ----- -----	-154.900 -162.982 ----- -8.082 -----	-118.000 -118.000 ----- ----- -----	<div><div></div></div> <div><div></div></div> <div><div></div></div> <div><div></div></div> <div><div></div></div>
Thru Cal Mag - 6	V	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	1.170 1.170 ----- ----- -----	1.816 1.807 ----- -0.009 -----	2.730 2.730 ----- ----- -----	<div><div></div></div> <div><div></div></div> <div><div></div></div> <div><div></div></div> <div><div></div></div>
Thru Cal Phase - 6	deg	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	121.000 121.000 ----- ----- -----	-156.659 -164.785 ----- -8.126 -----	-119.000 -119.000 ----- ----- -----	<div><div></div></div> <div><div></div></div> <div><div></div></div> <div><div></div></div> <div><div></div></div>
Thru Cal Mag - 7	V	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	0.852 0.852 ----- ----- -----	1.330 1.318 ----- -0.012 -----	1.988 1.988 ----- ----- -----	<div><div></div></div> <div><div></div></div> <div><div></div></div> <div><div></div></div> <div><div></div></div>
Thru Cal Phase - 7	deg	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	115.000 115.000 ----- ----- -----	-156.577 -165.043 ----- -8.466 -----	-125.000 -125.000 ----- ----- -----	<div><div></div></div> <div><div></div></div> <div><div></div></div> <div><div></div></div> <div><div></div></div>
SPA Zero	mV	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	-50.000 -50.000 ----- ----- -----	-0.138 -0.094 ----- 0.044 -----	50.000 50.000 ----- ----- -----	<div><div></div></div> <div><div></div></div> <div><div></div></div> <div><div></div></div> <div><div></div></div>
SPA Plus	mV	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	941.000 941.000 ----- ----- -----	990.201 990.888 ----- 0.687 -----	1040.000 1040.000 ----- ----- -----	<div><div></div></div> <div><div></div></div> <div><div></div></div> <div><div></div></div> <div><div></div></div>
Temperature Zero	V	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	-0.050 -0.050 ----- ----- -----	0.000 0.000 ----- 0.000 -----	0.050 0.050 ----- ----- -----	<div><div></div></div> <div><div></div></div> <div><div></div></div> <div><div></div></div> <div><div></div></div>
Temperature Plus	V	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	0.870 0.870 ----- ----- -----	0.917 0.918 ----- 0.001 -----	0.960 0.960 ----- ----- -----	<div><div></div></div> <div><div></div></div> <div><div></div></div> <div><div></div></div> <div><div></div></div>

QSLT-B (SlimXtreme Sonic Logging Tool - B) Calibration - Run 1B							
Primary Equipment :							
SlimXtreme Sonic Array Sonde Segment - BB			QSAS-BB		8022		
CBL Amplitude Normalization - CBL Accumulations							
Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	<div><div></div></div>
Sonic Amplitude Upper Transmitter - Receiver 5 (SA_U5) - 0		Master	----	----	----	----	<div><div></div></div>
Sonic Raw Amplitude Upper Transmitter - Receiver 1 (RA_U1) - 0	mV	Master	----	----	----	----	<div><div></div></div>
Sonic Amplitude Lower Transmitter - Receiver 1 (SA_L1) - 0		Master	----	----	----	----	<div><div></div></div>
Sonic Raw Amplitude Lower Transmitter - Receiver 5 (RA_L5) - 0	mV	Master	----	----	----	----	<div><div></div></div>

CBL Amplitude Normalization - CBL/VDL Coefficients							
Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
CBL Correction Factor for Upper Transmitter (CBCF_UT)		Master	0.500	----	NOT DONE	----	
CBL Correction Factor for Lower Transmitter (CBCF_LT)		Master	0.500	----	NOT DONE	----	
VDL Ratio between UT and LT for CBLB Mode (VDR)		Master	1.000	----	NOT DONE	----	
CBL Amplitude Free Pipe Adjustment - Free Pipe Measurements							
Before:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
CBL Amplitude (CBLF) - 0	mV	Before	----	----	----	----	
CBL Reference Amplitude (CBRA) - 0	mV	Before	----	----	----	----	
Measurement Depth (DEPTH) - 0	ft	Before	----	----	----	----	
CBL Amplitude Free Pipe Adjustment - CBL Amplitude Coefficients							
Before:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
CBL Adjustment Factor (CBL_ADJUST_FACTOR)		Before	1.000	0.300	NOT DONE	3.000	
Depth of Before Calibration (BDEP)	ft	Before	----	----	NOT DONE	----	

QCNT (SlimExtreme Compensated Neutron Tool) Calibration - Run 1B							
Primary Equipment :							
Compensated Neutron Cartridge SlimXtreme			QCNC-A		2		
Auxiliary Equipment :							
Doubly encapsulated AmBe radioactive source material			NSR-L		4545		
Calibration Parameter :							
Water Temperature							

CNT Neutron Calibration - CNT Neutron Accumulations							
Master (Measured): 20:46:51 17-Jul-2021		Before (Measured): 09:41:51 18-Jul-2021		After:			
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Near Zero Measurement	1/s	Master	----	0	0.668	5.000	
		Before	----	0	0.267	5.000	
		After	----	----	----	----	
		Before-Master	----	----	-0.401	----	
		After-Before	----	----	----	----	
Far Zero Measurement	1/s	Master	----	0	1.636	5.000	
		Before	----	0	0.999	5.000	
		After	----	----	----	----	
		Before-Master	----	----	-0.637	----	
		After-Before	----	----	----	----	
Near Plus Measurement	1/s	Master	7328.000	5600.000	5955.926	8700.000	
		Before	----	----	----	----	
		After	----	----	----	----	
		Before-Master	----	----	----	----	
		After-Before	----	----	----	----	
Far Plus Measurement	1/s	Master	1600.000	1300.000	1496.078	1900.000	
		Before	----	----	----	----	
		After	----	----	----	----	
		Before-Master	----	----	----	----	
		After-Before	----	----	----	----	

CNT Neutron Calibration - CNT Neutron Coefficients							
Master (Measured): 20:46:51 17-Jul-2021		Before (Measured): 09:41:51 18-Jul-2021		After:			
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Near Corrected Plus Measurement	1/s	Master	7328.000	5600.000	5980.594	8700.000	
		Before	----	----	----	----	



		After Before-Master After-Before	----- ----- -----	----- ----- -----	----- ----- -----	----- ----- -----	
Far Corrected Plus Measurement	1/s	Master Before After Before-Master After-Before	1600.000 ----- ----- ----- -----	1300.000 ----- ----- ----- -----	1515.994 ----- ----- ----- -----	1900.000 ----- ----- ----- -----	
Near Corrected Gain		Master Before After Before-Master After-Before	1.000 ----- ----- ----- -----	0.797 ----- ----- ----- -----	1.225 ----- ----- ----- -----	1.304 ----- ----- ----- -----	
Far Corrected Gain		Master Before After Before-Master After-Before	1.000 ----- ----- ----- -----	0.842 ----- ----- ----- -----	1.055 ----- ----- ----- -----	1.231 ----- ----- ----- -----	
Computed Thermal Neutron Ratio Average		Master Before After Before-Master After-Before	4.240 ----- ----- ----- -----	3.740 ----- ----- ----- -----	3.945 ----- ----- ----- -----	4.740 ----- ----- ----- -----	

## CNT Neutron Calibration - CNT Neutron Ratio R6 Measurement

Master (Measured): 20:46:51 17-Jul-2021		Before (Measured): 09:41:51 18-Jul-2021		After:			
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Near R6 Measurement	1/s	Master	5000.000	4750.000	4999.806	5250.000	
		Before	5000.000	4750.000	4999.871	5250.000	
		After	-----	-----	-----	-----	
		Before-Master	-----	-----	0.065	-----	
		After-Before	-----	-----	-----	-----	
Far R6 Measurement	1/s	Master	833.330	791.660	833.301	875.000	
		Before	833.330	791.660	833.323	875.000	
		After	-----	-----	-----	-----	
		Before-Master	-----	-----	0.022	-----	
		After-Before	-----	-----	-----	-----	
Ratio R6 Computed Ratio		Master	6.000	5.430	6.000	6.630	
		Before	6.000	5.430	6.000	6.630	
		After	6.000	5.430	NOT DONE	6.630	
		Before-Master	-----	-----	0.000	-----	
		After-Before	-----	-----	-----	-----	

## QTGC-B (SlimXtreme Telemetry Gamma-ray Cartridge - B (3.0 in. OD)) Calibration - Run 1B

Primary Equipment :			STGC-B Cartridge			STGC-B		8121	
Auxiliary Equipment :			Accelerometer			STGC-ACCZ		7	
Calibration Parameter :			JIG-BKG (Jig minus background reference)			165			

## STGC Accelerometer Calibration - STGC Read EEPROM Coefficient

Master (EEPROM): 14:58:40 19-Jul-2021							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Accelerometer Coefficients - 0		Master	0	-----	3.79700E+000	-----	
Accelerometer Coefficients - 1		Master	0	-----	-3.90300E-003	-----	
Accelerometer Coefficients - 2		Master	0	-----	2.97600E-005	-----	
Accelerometer Coefficients - 3		Master	0	-----	-4.56300E-008	-----	
Accelerometer Coefficients - 4		Master	0	-----	2.74030E+000	-----	
Accelerometer Coefficients - 5		Master	0	-----	2.64830E-004	-----	
Accelerometer Coefficients - 6		Master	0	-----	4.39200E-007	-----	
Accelerometer Coefficients - 7		Master	0	-----	2.85580E-010	-----	

Accelerometer Coefficients - 7		Master	0	----	2.00000E+000	----		
Accelerometer Coefficients - 8		Master	0	----	-2.73150E+002	----		
Accelerometer Coefficients - 9		Master	0	----	1.00000E+000	----		

## STGC Gamma-Ray Calibration - Gamma-Ray Coefficients

Before (Measured): 09:32:58 18-Jul-2021 Expired by 10 days After:								
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
Gamma-Ray Gain		Before	1.000	0.900	1.029	1.100		
		After	----	----	----	----		
		After-Before	----	----	----	----		

## STGC Gamma-Ray Calibration - Gamma-Ray Accumulations

Before (Measured): 09:32:58 18-Jul-2021 Expired by 10 days After:								
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
RGR Background Measurement	gAPI	Before	----	0	77.109	120.000		
		After	----	----	----	----		
		After-Before	----	----	----	----		
RGR Plus Measurement	gAPI	Before	191.400	172.260	185.968	210.540		
		After	----	----	NOT DONE	----		
		After-Before	----	----	----	----		

## STGC Gamma-Ray Plateau Check - Gamma-Ray Plateau Check

Before: After:								
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
RGR Zero Plateau Check - 0	gAPI	Before	----	----	----	----		
		After	----	----	----	----		
		After-Before	----	----	----	----		
RGR Plus Plateau Check - 0	gAPI	Before	----	----	----	----		
		After	----	----	----	----		
		After-Before	----	----	----	----		
RGR Minus Plateau Check - 0	gAPI	Before	----	----	----	----		
		After	----	----	----	----		
		After-Before	----	----	----	----		

## LEH-MT (Logging Equipment Head - MT, 3-3/8 inch 31 pin HPHT with Tension and Temperature Sensor (Need STGC/HTGC to process temperature signal)) Calibration - Run 1B

Primary Equipment :		Logging Equipment Head - MT, 3-3/8 inch 31 pin HPHT with Tension and Temperature Sensor (Need STGC/HTGC to process temperature signal) LEH-MT						
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## HTEN Master Calibration - HTEN Master Calibration

Master:								
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
HTEN Shop Gain		Master	1.000	0.800	NOT DONE	4.500		
HTEN Shop Offset	lbf	Master	0	-1000.000	NOT DONE	1000.000		

## 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: University Of Utah

**Schlumberger**

Well: FORGE 78B-32

Field: None

County:	Beaver
State:	Utah
Sonic Print	
QSLT BHC	