

Company: Anadarko E&amp;P Onshore LLC

Well: Caboose 1548-21-44

Field: Wildcat

County: Cheyenne State: Colorado

## Sonic Scanner

## CBL-VDL

County:	Cheyenne				
Field:	Wildcat				
Location:	SESE Sec. 21, T15S, R48W				
Well:	Caboose 1548-21-44				
Company:	Anadarko E&P Onshore LLC				
		Location:			
		SESE Sec. 21, T15S, R48W	Elev.:		K.B. 4273.00 ft
		SHL: 675' FSL X 1100' FEL	G.L.		4254.00 ft
			D.F.		4272.00 ft
		Permanent Datum:	Ground Level	Elev.:	4254.00 f
		Log Measured From:	Kelly Bushing	19.00 ft	above Perm.Datum
		Drilling Measured From:	Kelly Bushing		
		API Serial No.	Section:	Township:	Range:
		05-017-07780-0000	21	15S	48W

Logging Date	09-Feb-2014			
Run Number	Run3: CBL MSIP			
Depth Driller	5416.00 ft			
Schlumberger Depth	5416.00 ft			
Bottom Log Interval				
Top Log Interval				
Casing Driller Size @ Depth	9.625 in @ 2784.00 ft			
Casing Schlumberger	2778 ft			
Bit Size	8.75 in			
Type Fluid In Hole	Polymer			
Density	Viscosity	8.7 lbm/gal	44 s	
Fluid Loss	PH	8.2 cm3	9.2	
MUD	Source of Sample			
RM @ Meas Temp	0.55 ohm.m @ 100 degF			
RMF @ Meas Temp	0.44 ohm.m @ 100 degF			
RMC @ Meas Temp	0.66 ohm.m @ 100 degF			
Source RMF	RMC	Pressed		
RM @ BHT	RMF @ BHT	0.37 @ 153	0.29 @ 153	
Max Recorded Temperatures				
Circulation Stopped				
Time				
Time				
Logger on Bottom	Time			
Unit Number	Location:	3022	Ft. Morgan, CO	
Recorded By	Tim Hoffman			
Witnessed By	Stuart Nelson			

## Disclaimer

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

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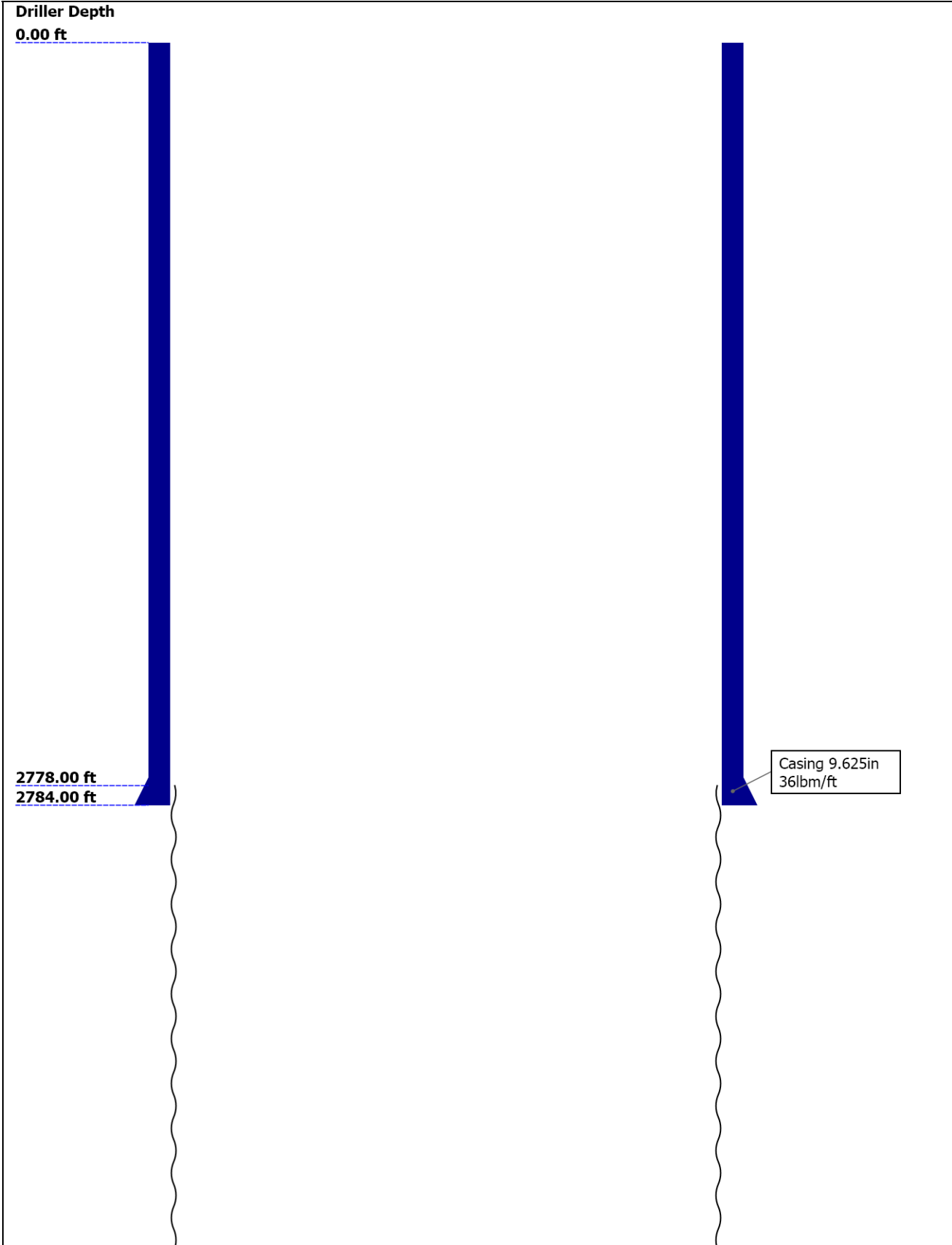
10.3 Composite Summary

10.4 Log ( MAST\_CE\_LQC\_3050 )

10.5 Parameter Listing

11. Tail

Well Sketch



5416.00 ft

Open Hole 8.75in

Borehole Size/Casing/Tubing Record

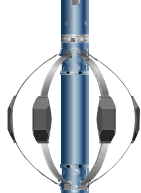
Bit						
Bit Size ( in )	8.75					
Top Driller ( ft )	2778					
Top Logger ( ft )	2778					
Bottom Driller ( ft )	5416					
Bottom Logger ( ft )	5416					
Casing						
Size ( in )	9.625					
Weight ( lbm/ft )	36					
Inner Diameter ( in )	8.921					
Grade	P110					
Top Driller ( ft )	0					
Top Logger ( ft )	0					
Bottom Driller ( ft )	2784					
Bottom Logger ( ft )	2778					

Operational Run Summary

Parameter ( unit )	Run3: CBL MSIP					
Date Log Started	09-Feb-2014					
Time Log Started	15:22:12					
Date Log Finished	09-Feb-2014					
Time Log Finished	17:11:33					
Top Log Interval ( ft )	NaN					
Bottom Log Interval ( ft )	NaN					
Total Depth ( ft )	5420.00					
Max Hole Deviation ( deg )	0.00					
Azimuth of Max Deviation ( deg )	0.00					
Bit Size ( in )	8.750					
Logging Unit Number	3022					
Logging Unit Location	Ft. Morgan, CO					
Recorded By	Tim Hoffman					
Witnessed By	Stuart Nelson					

Remarks and Equipment Summary	
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Run3: CBL MSIP: Toolstring		Run3: CBL MSIP: Remarks	
<b>Equip name</b>	<b>Length</b>	<b>MP name</b>	<b>Offset</b>
LEH-QT LEH-QT	82.64		
<b>EDTC-B:8593</b> EDTH-B:8625 EDTG-A:77756 EDTC-B:8593	79.72		
		CTEM	76.22
		ACCZ	0.00
		HV	0.00
		Gamma Ray	74.35
		TelStatus	73.22
<b>MAST-B:8524</b> ECH-SF:8023 MAPC-BA:8023 MAMS-BA:8524 MASS-BA:8202 MAXS-BA:8078	73.22		
		MAMS	57.78



PPC-B:8437 31.94  
PPC-B:8437

MAXS 31.94  
PPC-B Caliper 30.79  
s

FBST-E:1763 25.42  
ECH-MJA:3852  
FBPC-A:766  
AH-287  
AH-320  
FBSH-D:757  
FBAC-B:768  
DHRU-F  
FBSS-B:1763

Deviation 9.94  
GPIT-F Inclino- 9.94  
meter  
GPIT 0.00

Buttons 1.33  
Head Tension  
TOOL\_ZERO

Lengths are in ft  
Maximum Outer Diameter = 5.000 in

## Depth Summary

	Run3: CBL MSIP		
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Depth Measuring Device
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Type	IDW-B		
Serial Number			
Calibration Date			
Calibrator Serial Number			
Calibration Cable Type			
Wheel Correction 1	0		
Wheel Correction 2	0		

Tension Device
----------------

Type	CMTD-B/A		
Serial Number			
Calibration Date			
Calibrator Serial Number			
Number of Calibration Points	0		

[illegible]

Type	7-39P-LXS		
Serial Number			
Length	18000.00 ft		
Conveyance Type	Wireline		
Rig Type			

Run3: CBL MSIP:Depth Control Parameters	Depth Control Remarks
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Run3: CBL MSIP:Depth Control Parameters	Depth Control Remarks
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Log Sequence	First Log In the Well	
Rig Up Length At Surface		
Rig Up Length At Bottom		
Rig Up Length Correction		
Stretch Correction		
Tool Zero Check At Surface		

Run3: CBL MSIP

Software Version	
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Acquisition System	Version
MaxWell	4.0.9163.3000
Application Patch	Patch-SP-10767_13393-4.0.9163.3001

Computation	Description		Version
Borehole	Borehole Ensemble provides common Borehole Parameters and Channels		4.0.9213.3000
DepthCorrection	DepthCorrection		4.0.9213.3000
Tool Elements	Description	Software Version	Firmware Version
MAMS-BA	MAMS-BA Multimode Array Sonic Minimum Service Sonde	4.0.9119.3000	
EDTC-B	Enhanced Digital Telemetry Cartridge - B	4.0.9119.3000	

Pass Summary	
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Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
Run3: CBL MSIP	Log[3]:Up	Up	104.88 ft	2777.69 ft	09-Feb-2014 3:54:41 PM	09-Feb-2014 4:56:46 PM	ON	-2.86 ft	No

All depths are referenced to toolstring zero

<b>Log</b>		Company:Anadarko E&P Onshore LLC      Well:Caboose 1548-21-44	Run3: CBL MSIP: Log[3]:Up:S007
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Well:Caboose 1548-21-44

Run3: CBL MSIP: Log[3]:Up:S007

TIME\_1900 - Time Marked every 60.00 (s)

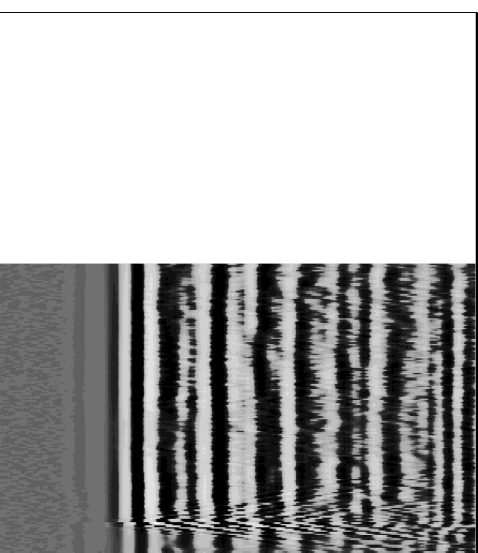
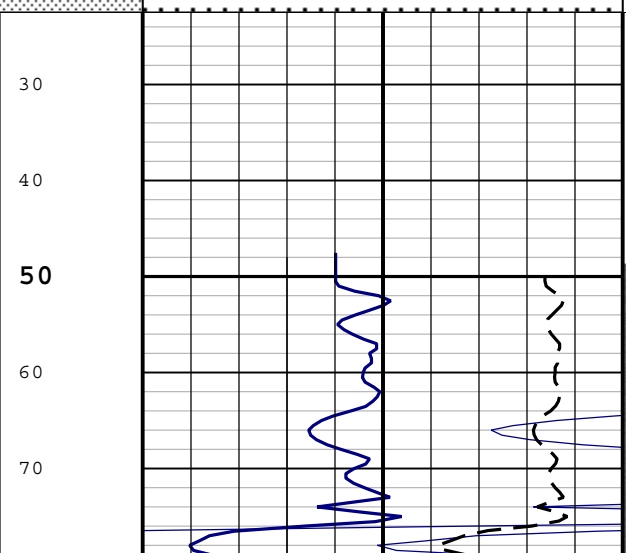
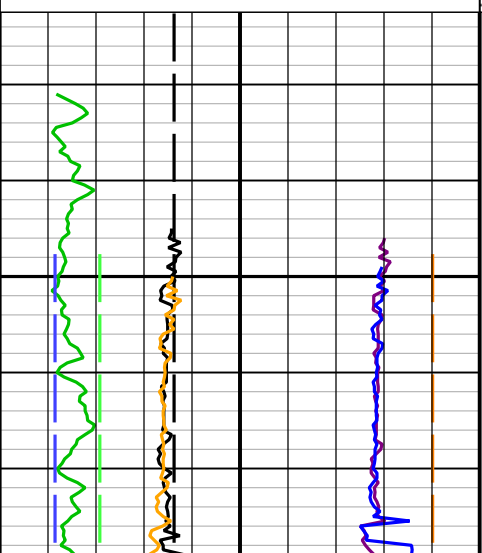
Cable Tension (TENS)		
10000	lbf	0
Gamma Ray (GR) EDTC-B		
0	gAPI	150
Bit Size (BS)		
6	in	16
Fixed Detection Length for from Monopole Upper Transmitter High Frequency Firing (FDET_LEN_MUH) MAST-B		
40	us	240
Fixed Detection Start from Monopole Upper Transmitter High Frequency Firing (FDET_STRT_MUH) MAST-B		
100	us	300
Detection Minimum Slowness from Monopole Upper Transmitter High Frequency Firing (DT_MIN_MUH) MAST-B		
40	us/ft	140
Transit Time 5 ft Average from Monopole Upper High Frequency Waveform (TT5F_AVE_MUH) MAST-B		
400	us	200
Transit Time 3 ft Average from Monopole Upper High Frequency Waveform (TT3F_AVE_MUH) MAST-B		
400	us	200

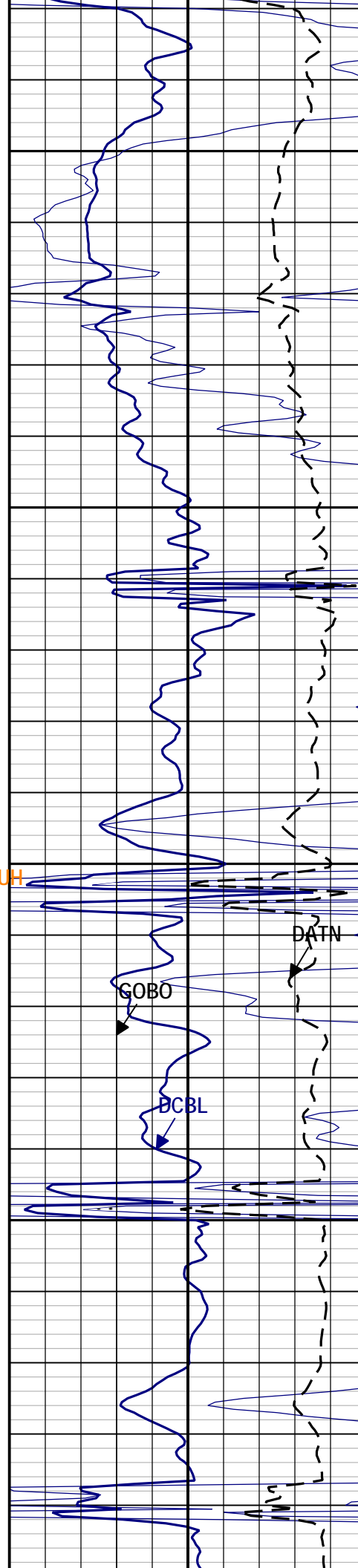
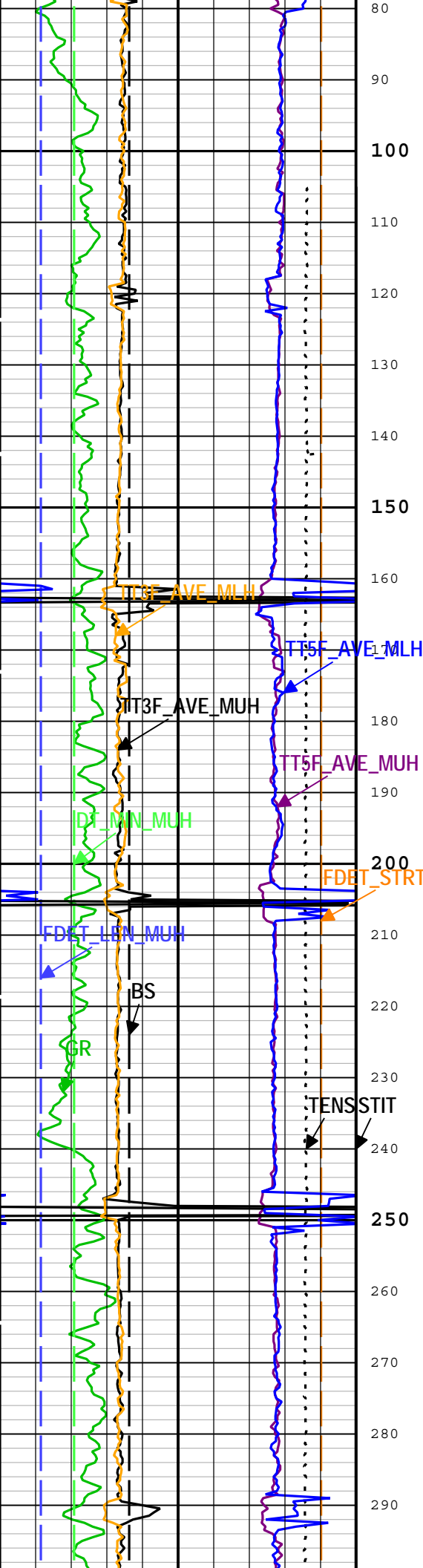
Transit Time 5 ft Average from Monopole Lower High Frequency Waveform (TT5F_AVE_MLH) MAST-B		
400	us	200
Transit Time 3 ft Average from Monopole Lower High Frequency Waveform (TT3F_AVE_MLH) MAST-B		
400	us	200

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

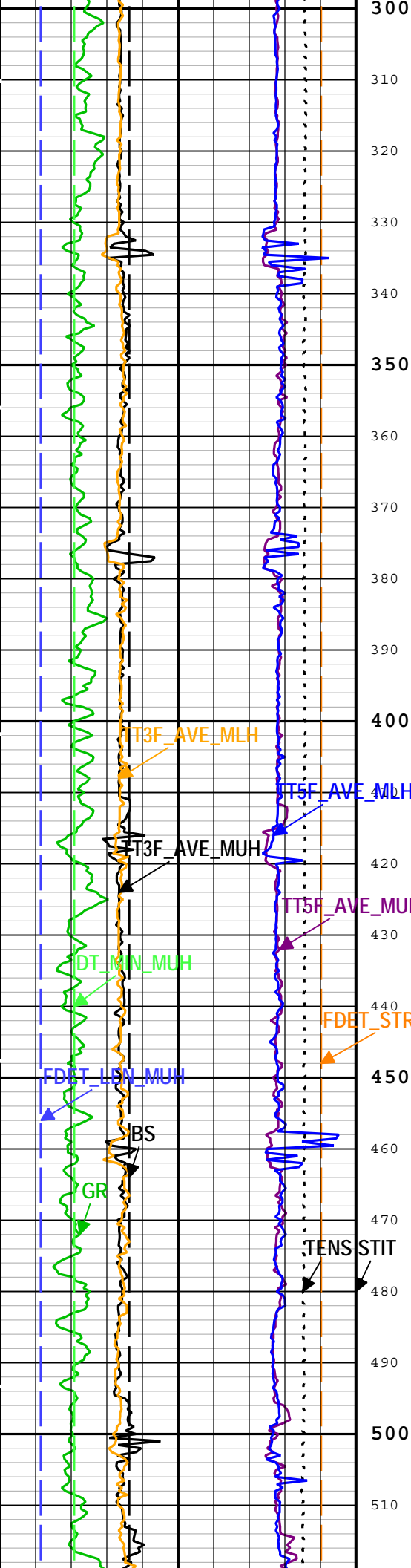
Synthetic CBL from Discriminated Attenuation (DCBL) MAST-B		
0	mV	50
Synthetic CBL from Discriminated Attenuation (DCBL) MAST-B		
0	mV	10
Good Bond (GOBO) MAST-B		
0	mV	10
Discriminated BHC Attenuation (DATN) MAST-B		
20	dB/ft	0
Good Bond		

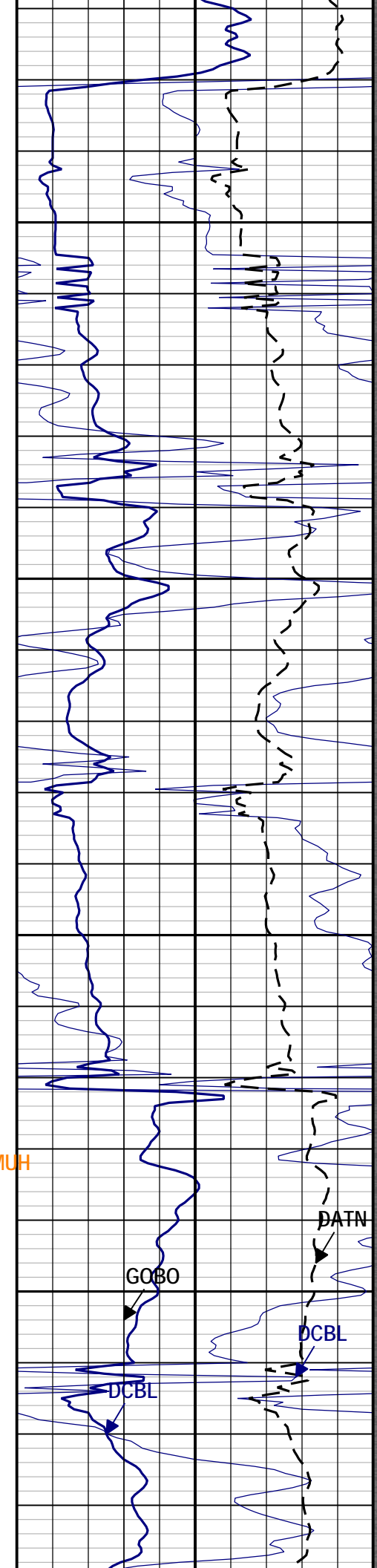
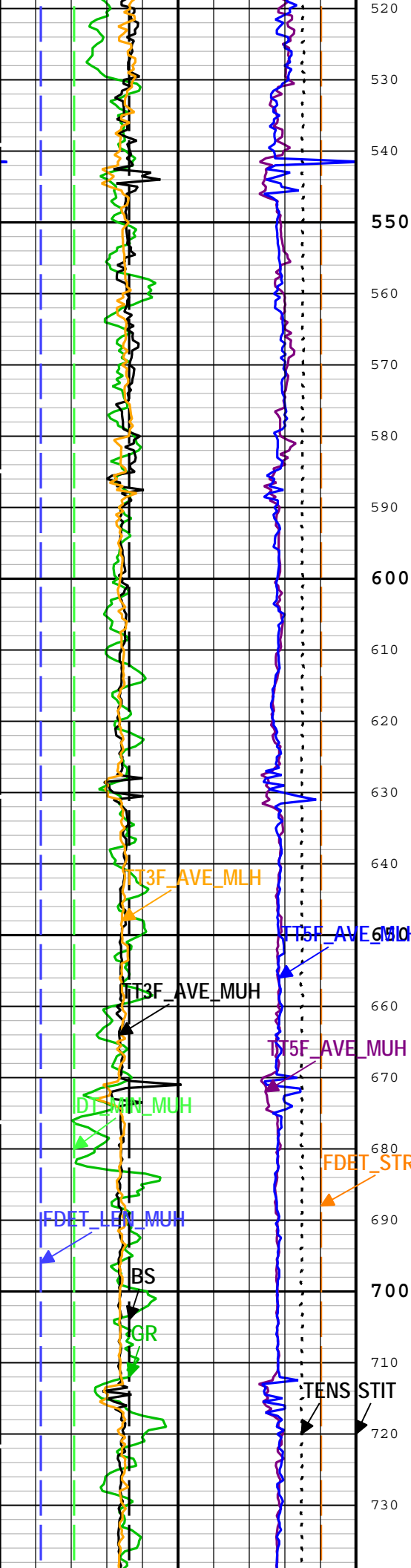
Min	Amplitude	Max
Variable Density Log MAST-B		
200	us	1200

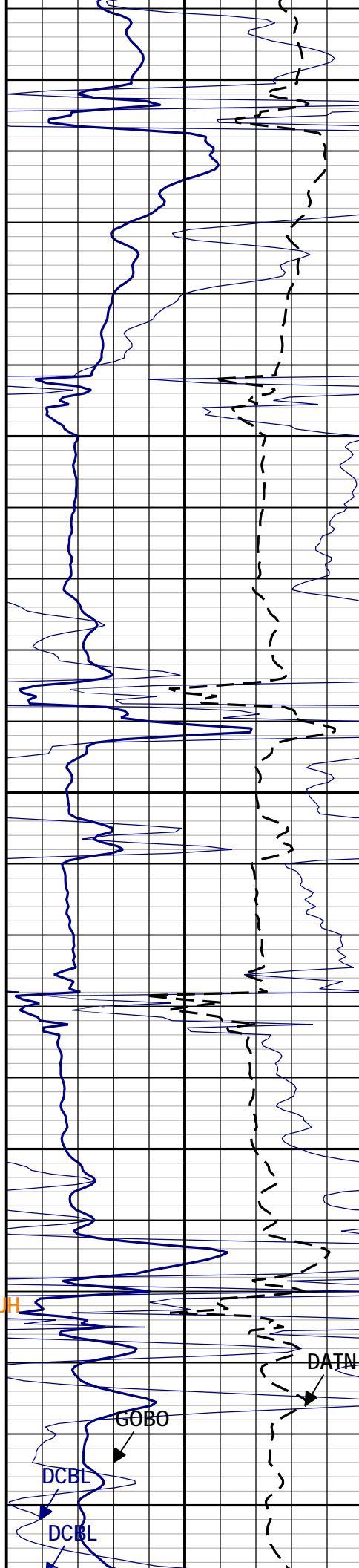
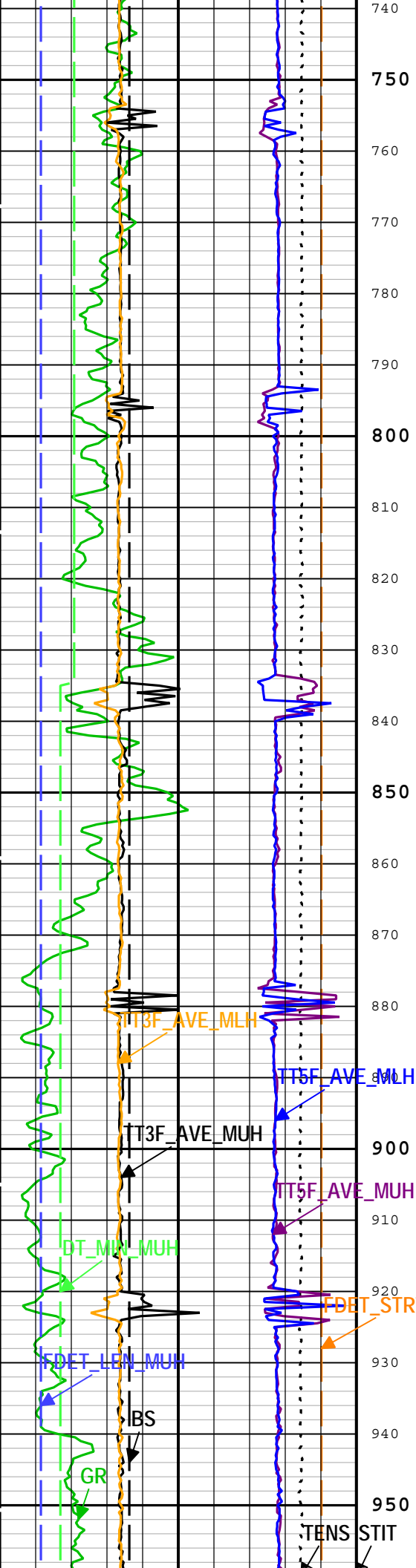




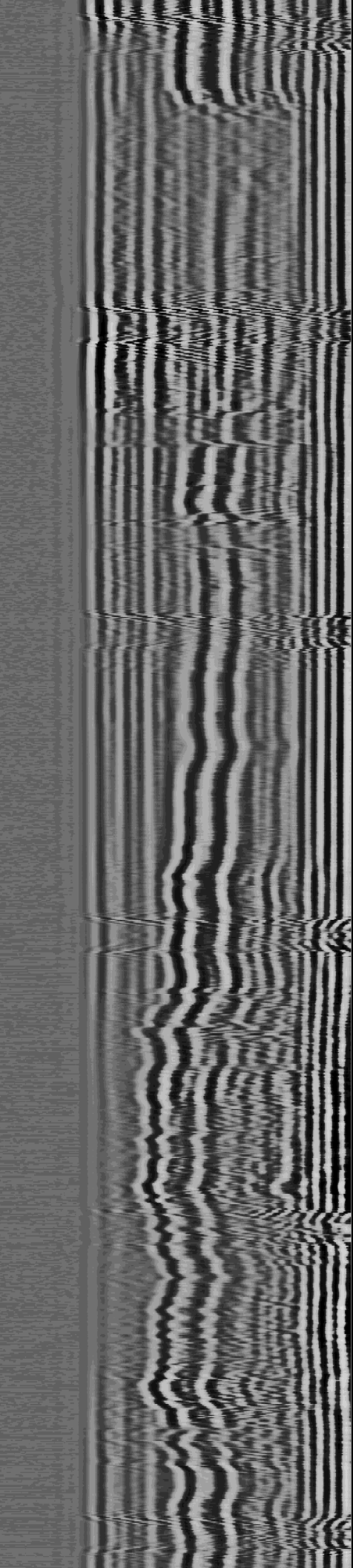
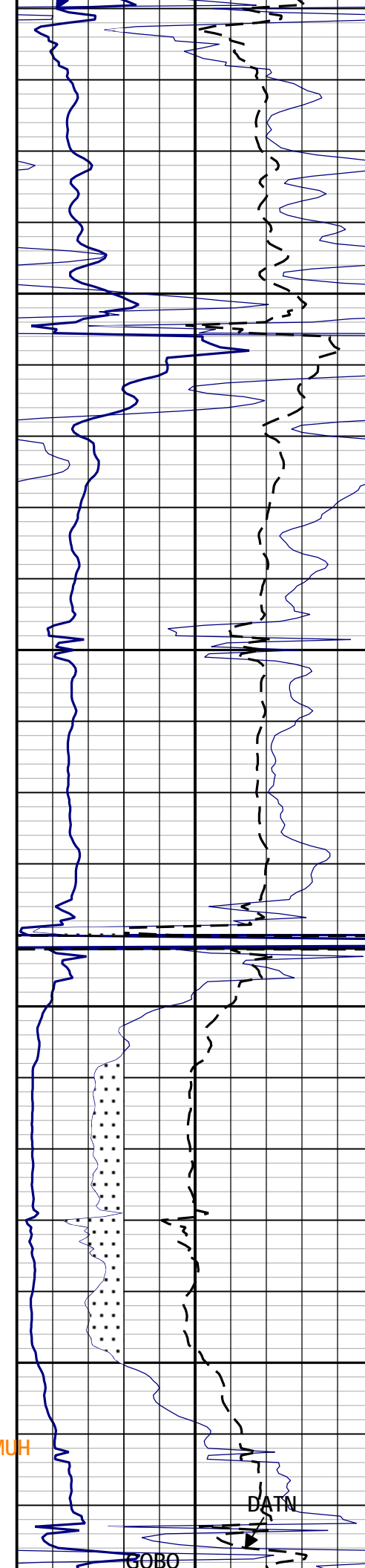
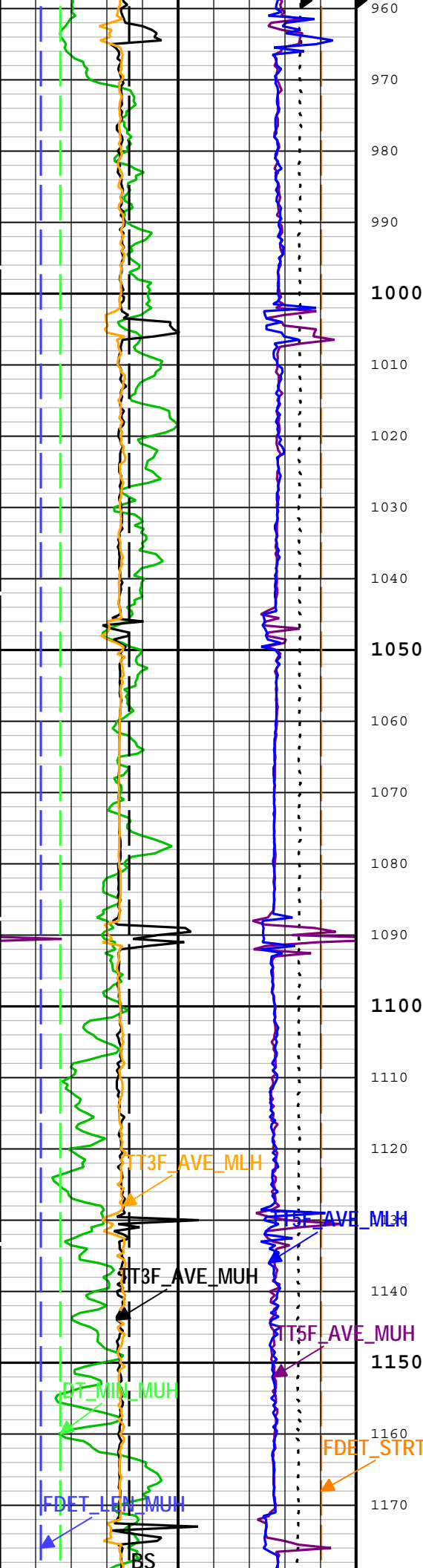


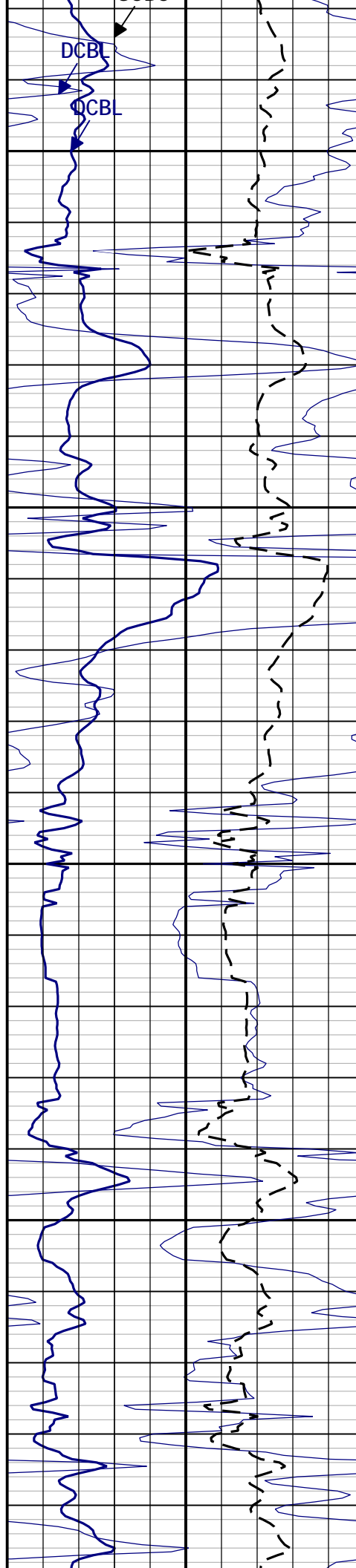
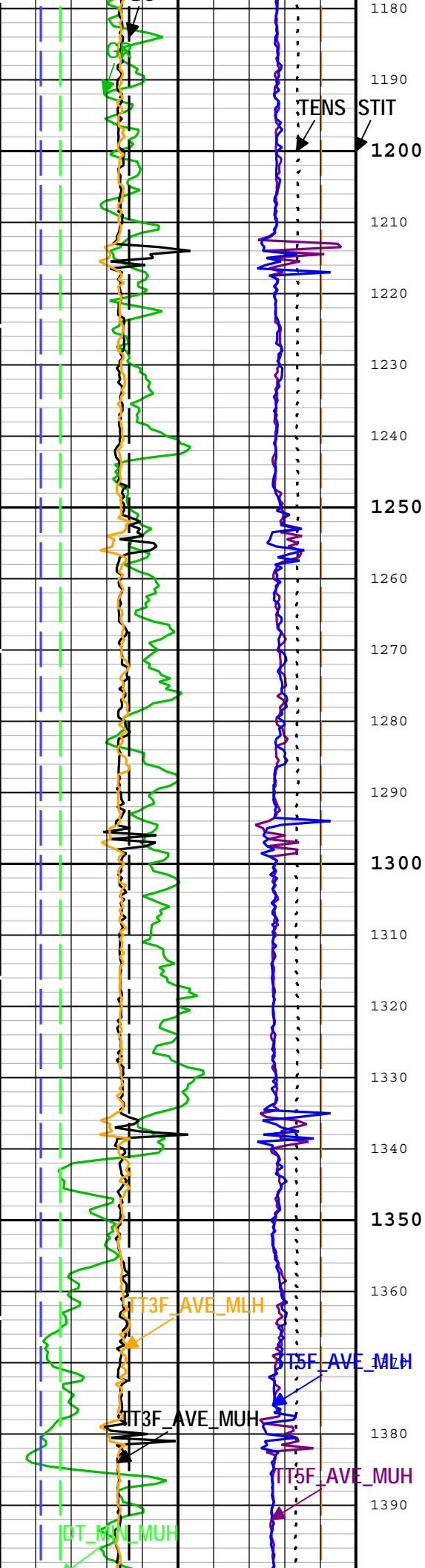






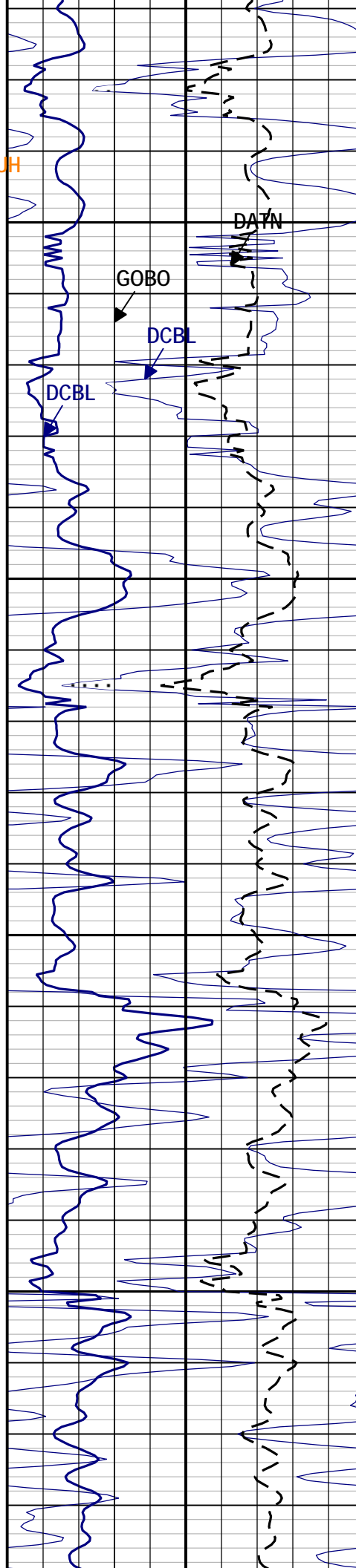
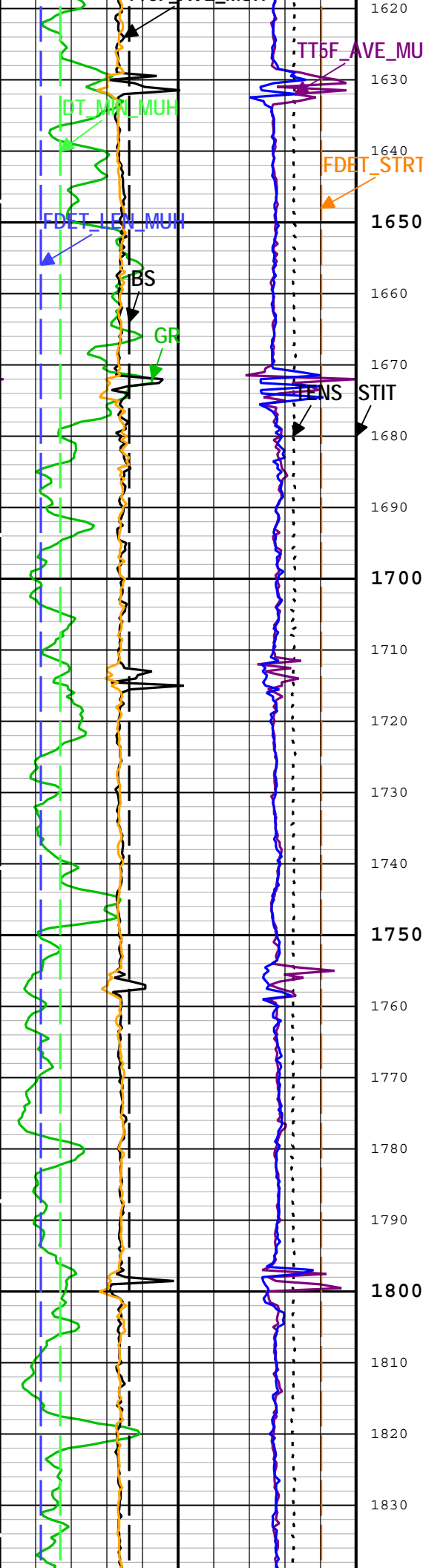




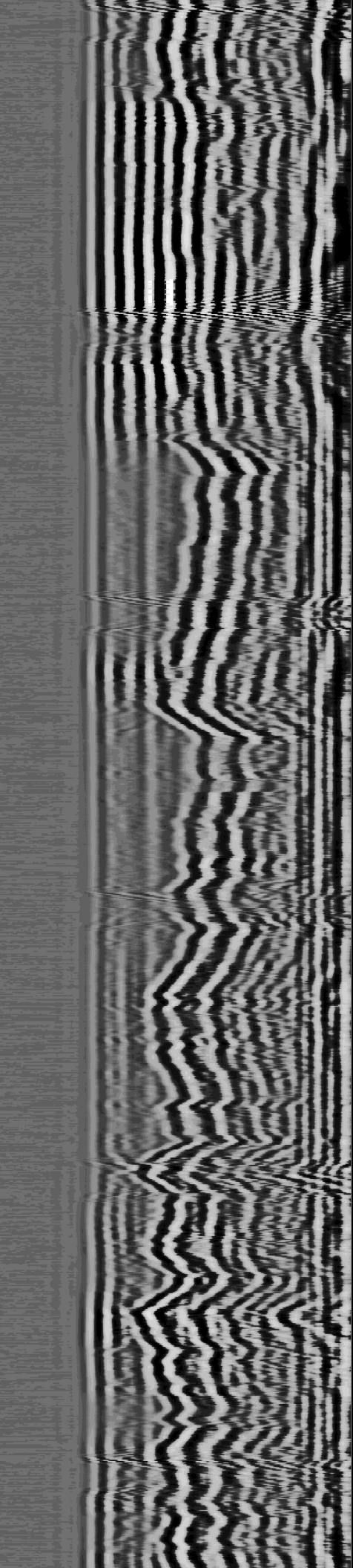
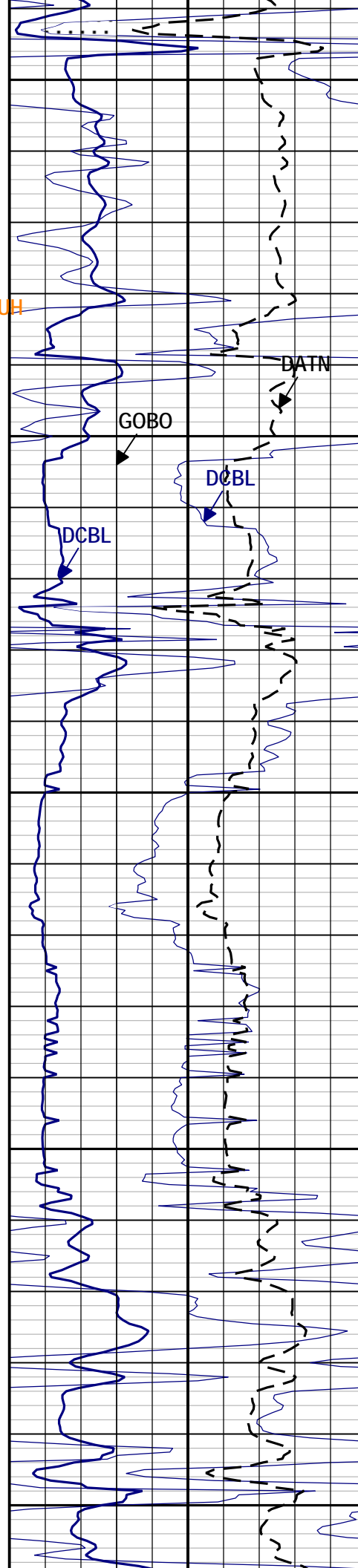
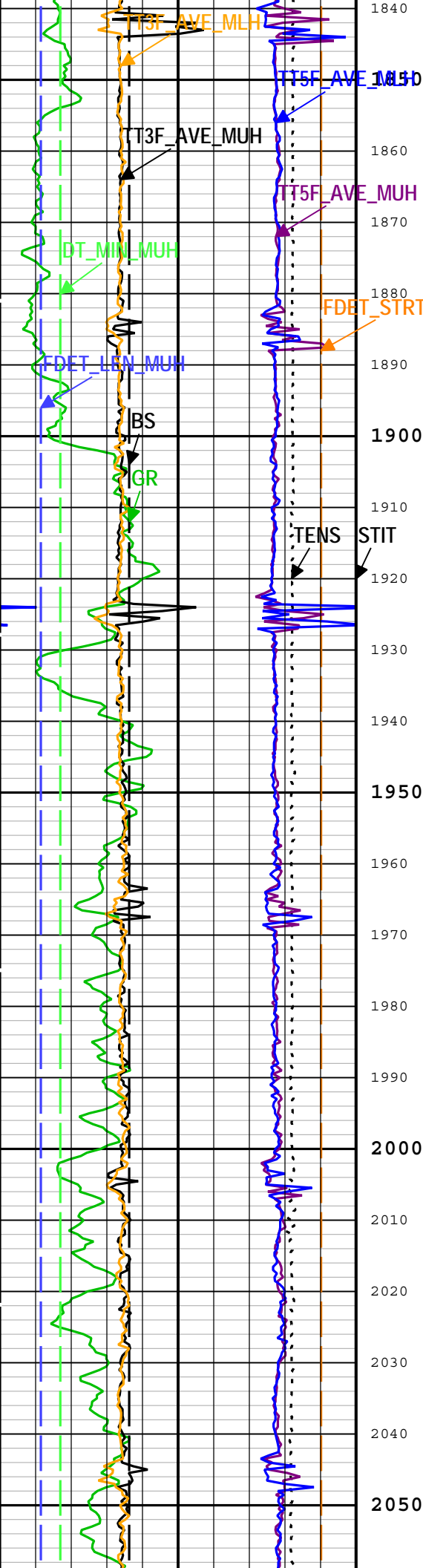




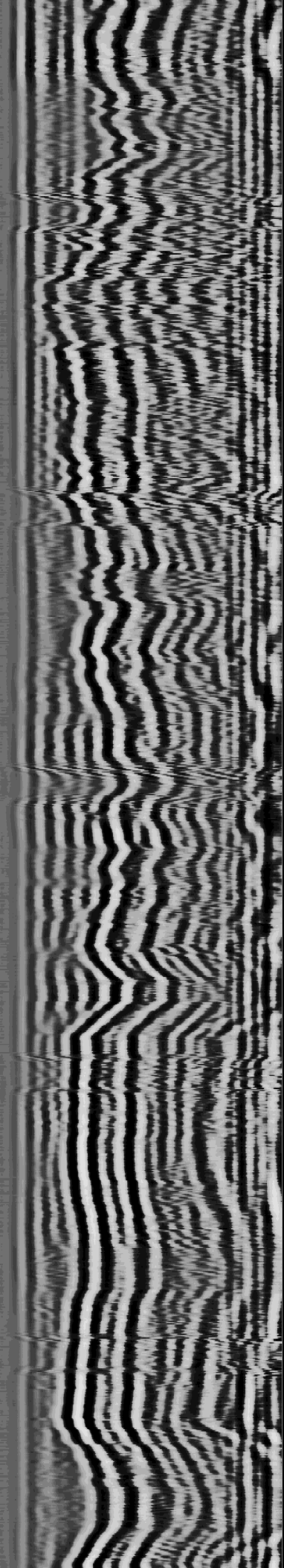
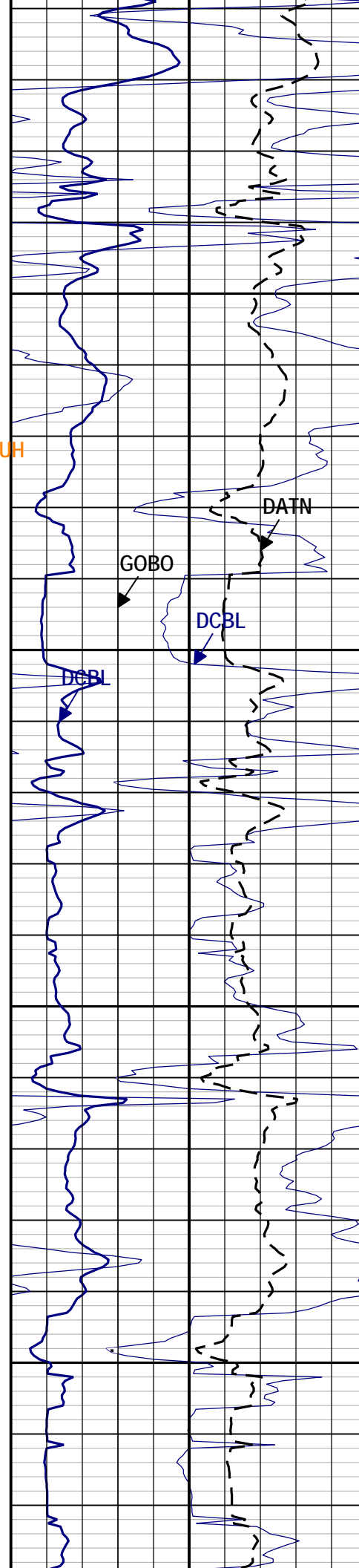
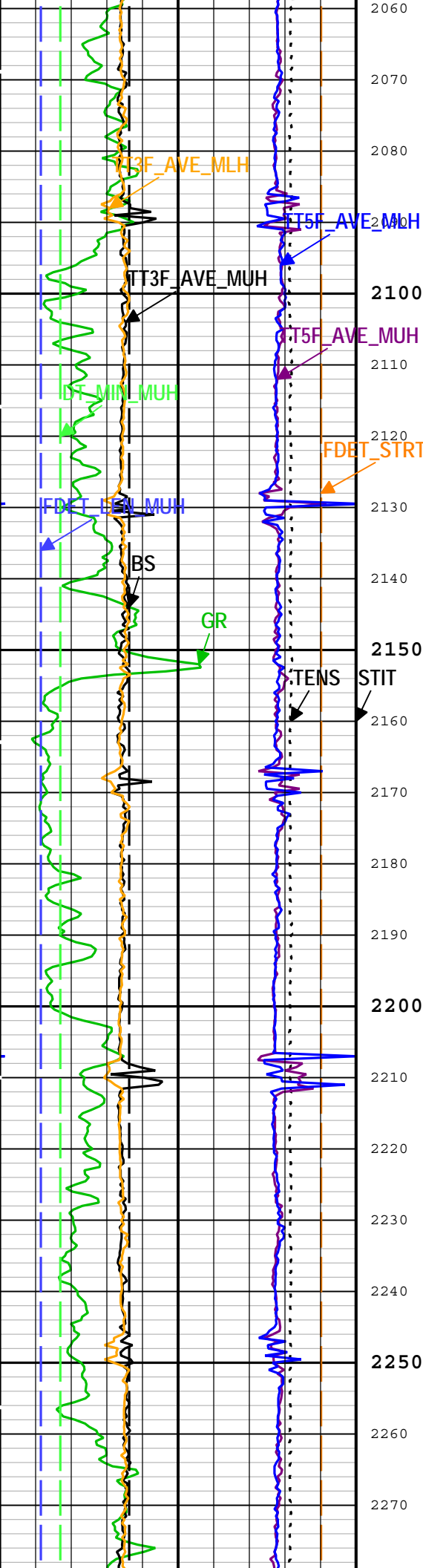


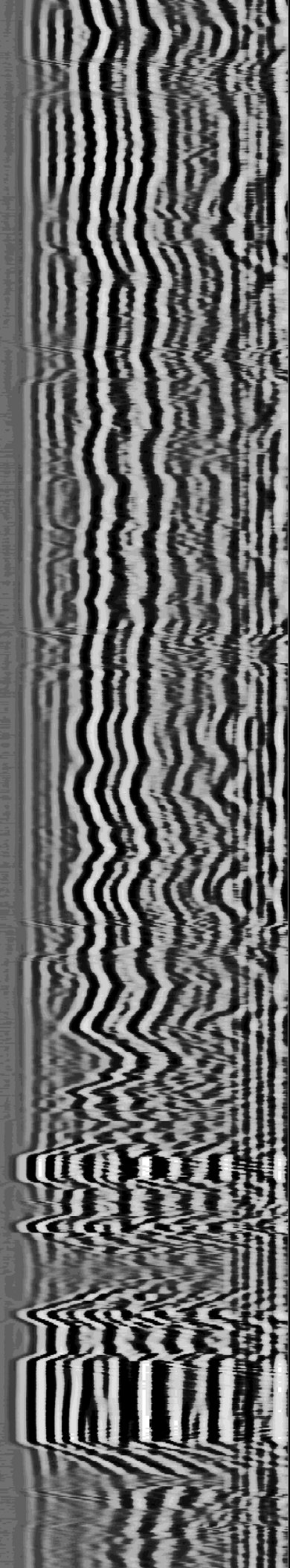
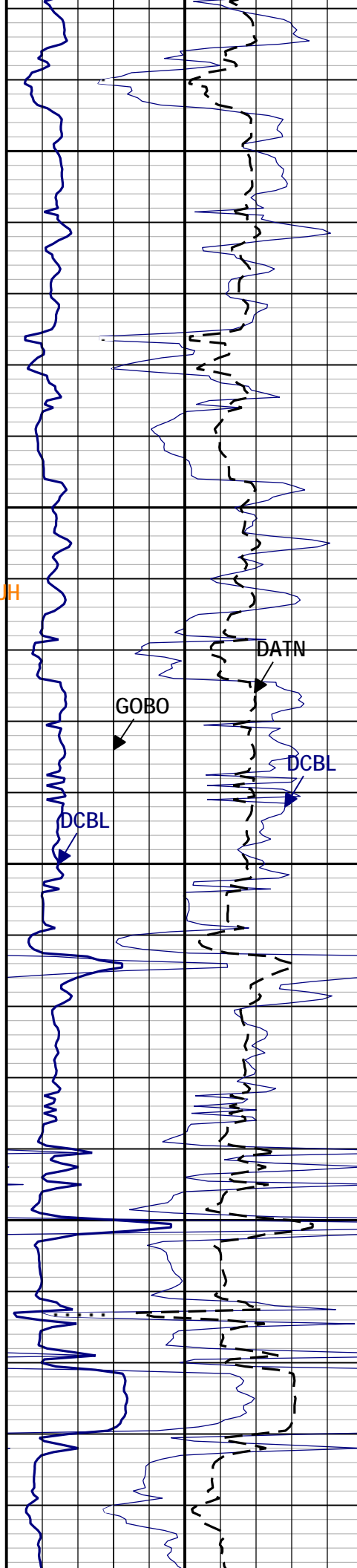
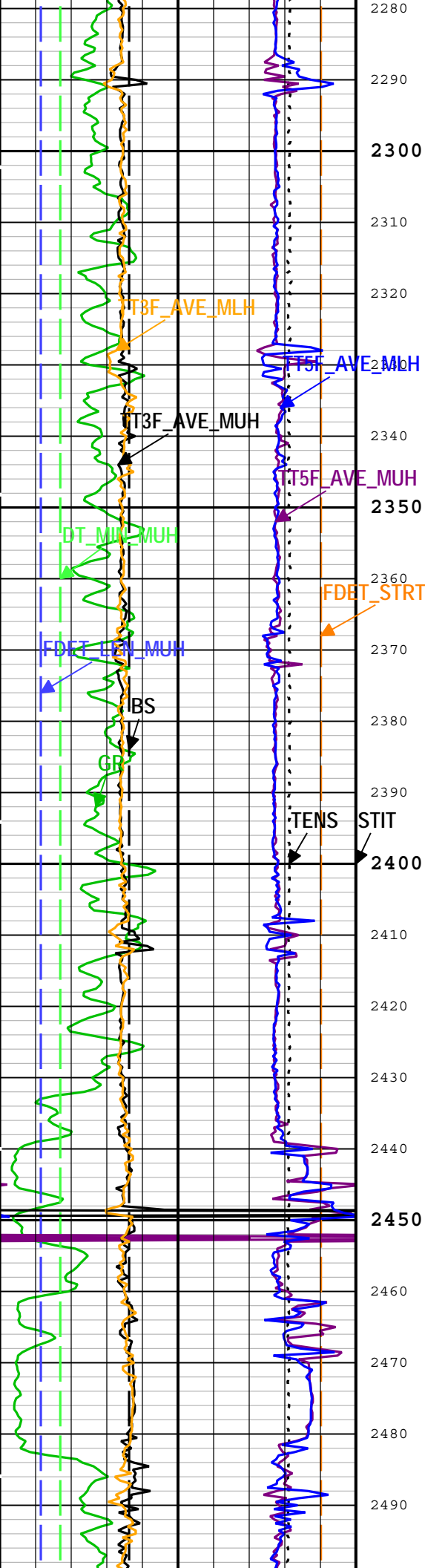




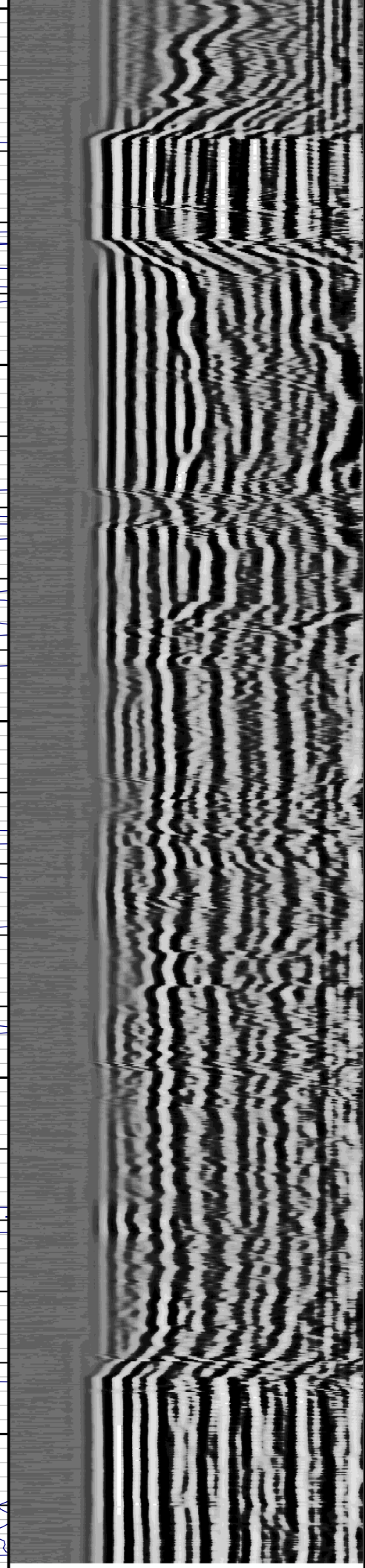
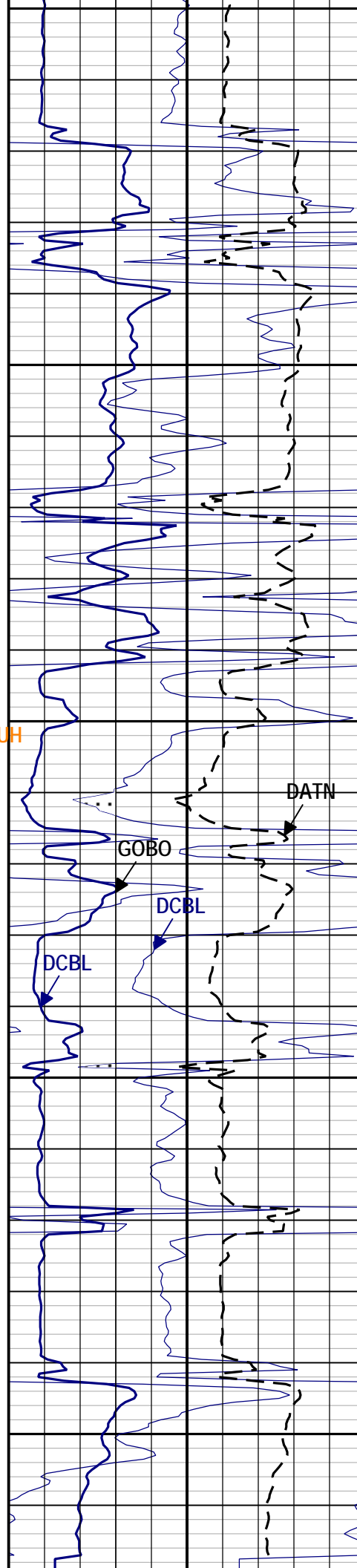
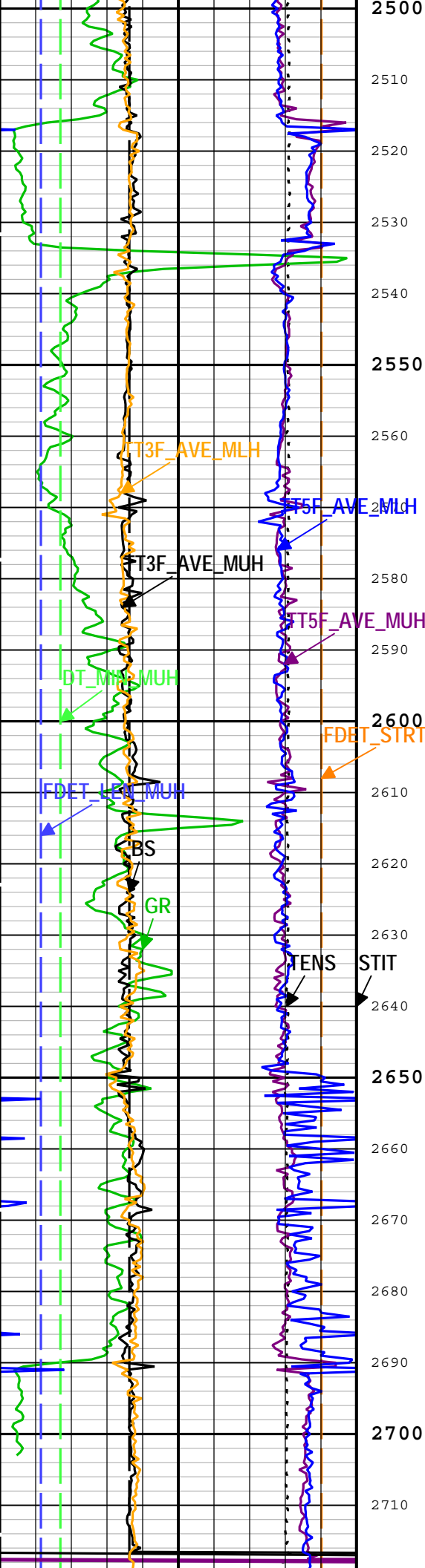


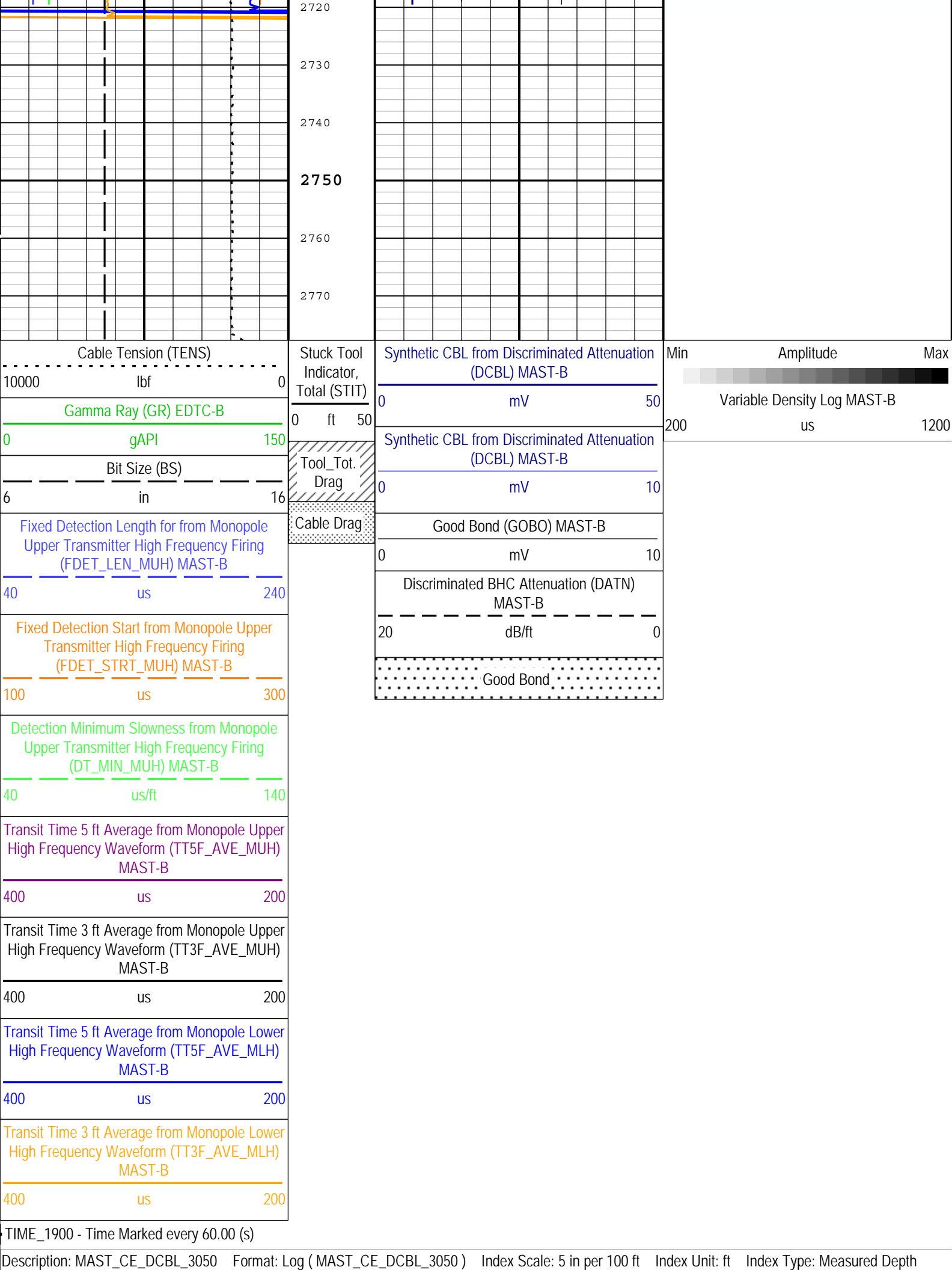












Channel Processing Parameters				
Parameter	Description	Tool	Value	Unit
BARI	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Cased	
BS	Bit Size	WLSESSION	Depth Zoned	in
CBLO	Casing Bottom (Logger)	WLSESSION	2778	ft
CBRA	CBL LQC Reference Amplitude in Free Pipe	MAST-B	51	mV
CDEN	Cement Density	EDTC-B	2	g/cm3
CTHILGR	Nominal Casing Thickness - Zoned along logger depths	WLSESSION	0.352	in
DCBLCTL	Discriminated Cement Bond Log Processing Control Flag	MAST-B	On	
DFD	Drilling Fluid Density	Borehole	8.7	lbm/gal
DT_MIN_MLH	Detection Minimum Slowness for Monopole Lower Transmitter High Frequency Firing	MAST-B	48.35	us/ft
DT_MIN_MUH	Detection Minimum Slowness for Monopole Upper Transmitter High Frequency Firing	MAST-B	57	us/ft
DTF	Delta-T Fluid	Borehole	189	us/ft
FDET_LEN_MLH	Fixed Detection Time Length for Monopole Lower Transmitter High Frequency Firing	MAST-B	80.47	us
FDET_LEN_MUH	Fixed Detection Time Length for Monopole Upper Transmitter High Frequency Firing	MAST-B	62.98	us
FDET_STRT_MLH	Fixed Detection Start Time for Monopole Lower Transmitter High Frequency Firing	MAST-B	269.93	us
FDET_STRT_MUH	Fixed Detection Start Time for Monopole Upper Transmitter High Frequency Firing	MAST-B	280.16	us
FMDCTL_MLH	First Motion Detection Processing Control Flag for Monopole Lower Transmitter High Frequency Firing	MAST-B	On	
FMDCTL_MUH	First Motion Detection Processing Control Flag for Monopole Upper Transmitter High Frequency Firing	MAST-B	On	
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	C1	
GOBO	Good Bond	MAST-B	3.01	mV
MATT	Maximum Attenuation	MAST-B	11.77	dB/ft
MODALCTL_MUH	Modal Decomposition Processing Control Flag for Monopole Upper Transmitter High Frequency Firing	MAST-B	On	
SSCCTL_MLH	Sensor Sensitivity Correction Processing Control Flag for Monopole Lower Transmitter High Frequency Firing	MAST-B	On	
SSCCTL_MUH	Sensor Sensitivity Correction Processing Control Flag for Monopole Upper Transmitter High Frequency Firing	MAST-B	On	
TD	Total Measured Depth	Borehole	5420	ft
VDLCTL_MUH	Variable Density Log Processing Control Flag for Monopole Upper High Frequency Waveforms	MAST-B	On	
VDLSELCTL	Variable Density Log Selection Processing Control Flag	MAST-B	On	

Depth Zone Parameters

All depth are actual.

Tool Control Parameters				
Parameter	Description	Tool	Value	Unit
AMIP	Adaptive Mode Initial Phase	FBST-E	0	deg
APM	Acquisition Phase Mode	FBST-E	WBM - Adaptive Phase Control	
DIGDEL	Waveform Digitizing Delay	MAST-B	[0, 0]	us
DIGDT	Sonic Waveform Digitizing Slowness	MAST-B	[0, 0]	us/ft
DIGTIME	Digitizing Time	MAST-B	[1200, 1200]	us
EMXGMOD	EMEX and Gain Modes	FBST-E	EMEX= Auto and Gain= Auto	
FLM	Logging Mode	FBST-E	Full Image Mode	
GAIN_FBST	Electronic Gain Value in Manual Mode	FBST-E	0 dB	
GARM_A	Electronic Gain Value for Arm A	FBST-E	0 dB	
GARM_B	Electronic Gain Value for Arm B	FBST-E	0 dB	
GARM_C	Electronic Gain Value for Arm C	FBST-E	0 dB	
GARM_D	Electronic Gain Value for Arm D	FBST-E	0 dB	

MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	1800	ft/h
MPSC	Manual Phase Shift Compensation	FBST-E	0	deg
MSMT_LIST	Measurement List	MAST-B	[MUH, MLH]	
RXSEL	Receiver Station Select	MAST-B	[[Off, Off], [Off, Off], [Off, Off], [Off, Off], [On, On], [On, On], [On, On], [On, On], [On, On], [Off, Off], [Off, Off], [Off, Off], [Off, Off]]	
SAMINT	Sonic Waveform Sampling Interval	MAST-B	[10, 10]	
SNSRSEL	Sensor Element Select	MAST-B	[[On, On], [On, On], [On, On], [On, On], [On, On], [On, On], [On, On], [On, On]]	
VDL_INT	Variable Density Log Step Interval	MAST-B	STANDARD	
VDL_MODE	Variable Density Log Mode	MAST-B	STANDARD	
XVOL	EMEX Voltage	FBST-E	0	V

## Run3: CBL MSIP

### Software Version

Acquisition System		Version	
MaxWell		4.0.9163.3000	
Application Patch		Patch-SP-10767_13393-4.0.9163.3001	
Computation	Description		Version
Borehole	Borehole Ensemble provides common Borehole Parameters and Channels		4.0.9213.3000
DepthCorrection	DepthCorrection		4.0.9213.3000
Tool Elements	Description	Software Version	Firmware Version
MAMS-BA	MAMS-BA Multimode Array Sonic Minimum Service Sonde	4.0.9119.3000	
EDTC-B	Enhanced Digital Telemetry Cartridge - B	4.0.9119.3000	

### Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
Run3: CBL MSIP	Log[3]:Up	Up	104.88 ft	2777.69 ft	09-Feb-2014 3:54:41 PM	09-Feb-2014 4:56:46 PM	ON	-2.86 ft	No























All depths are referenced to toolstring zero

### Log

Company:Anadarko E&P Onshore LLC Well:Caboose 1548-21-44  
Run3: CBL MSIP: Log[3]:Up:S007

Description: MAST\_CE\_LOC\_3050 Format: Log ( MAST\_CE\_LOC\_3050 ) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth  
Creation Date: 09-Feb-2014 17:27:54

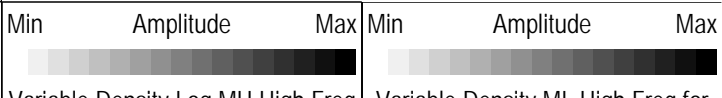
Sonic Waveform Data Copy Indicator (DCSI) MAST-B

1 - MU Data Copy Indicator - :	<input type="checkbox"/> Absent.	 MU data is copied	 MU no data is copied.
2 - ML Data Copy Indicator - :	<input type="checkbox"/> Absent.	 ML data is copied	 ML no data is copied.
3 - MF Data Copy Indicator - :	<input type="checkbox"/> Absent.	 MF data is copied	 MF no data is copied.
4 - ST Data Copy Indicator - :	<input type="checkbox"/> Absent.	 ST data is copied	 ST no data is copied.
5 - XD Data Copy Indicator - :	<input type="checkbox"/> Absent.	 XD data is copied	 XD no data is copied.
6 - YD Data Copy Indicator - :	<input type="checkbox"/> Absent.	 YD data is copied	 YD no data is copied.
7 - UCBL Data Copy Indicator - :	<input type="checkbox"/> Absent.	 UCBL data is copied	 UCBL no data is copied.
8 - LCBL Data Copy Indicator - :	<input type="checkbox"/> Absent.	 LCBL data is copied	 LCBL no data is copied.
9 - IMU Data Copy Indicator - :	<input type="checkbox"/> Absent.	 IMU data is copied	 IMU no data is copied.
10 - IML Data Copy Indicator - :	<input type="checkbox"/> Absent.	 IML data is copied	 IML no data is copied.
11 - IMF Data Copy Indicator - :	<input type="checkbox"/> Absent.	 IMF data is copied	 IMF no data is copied.

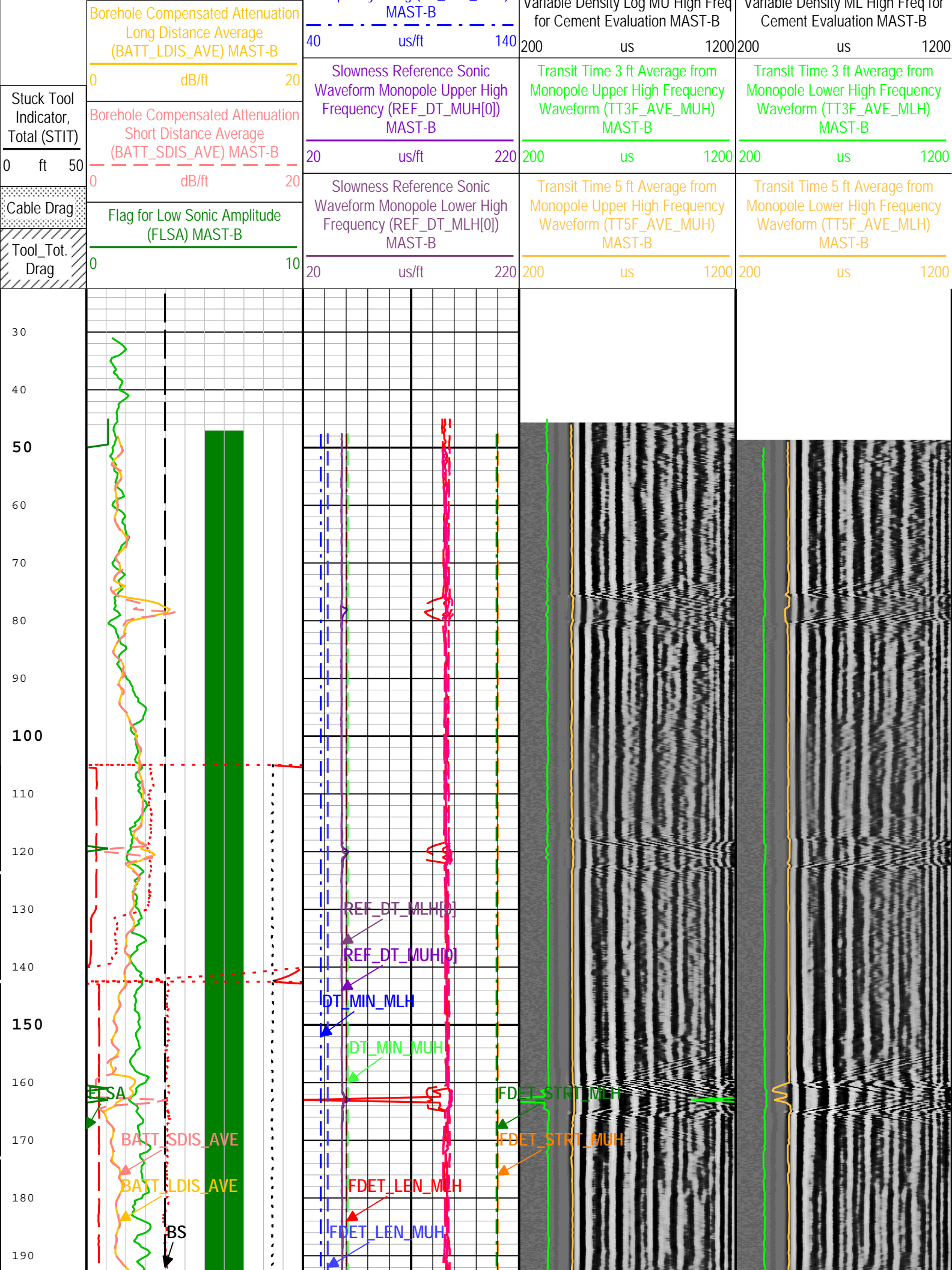
TIME\_1900 - Time Marked every 60.00 (s)

Transit Time 3 ft Average from  
Monopole Upper High Frequency  
Waveform (TT3F\_AVE\_MUH)

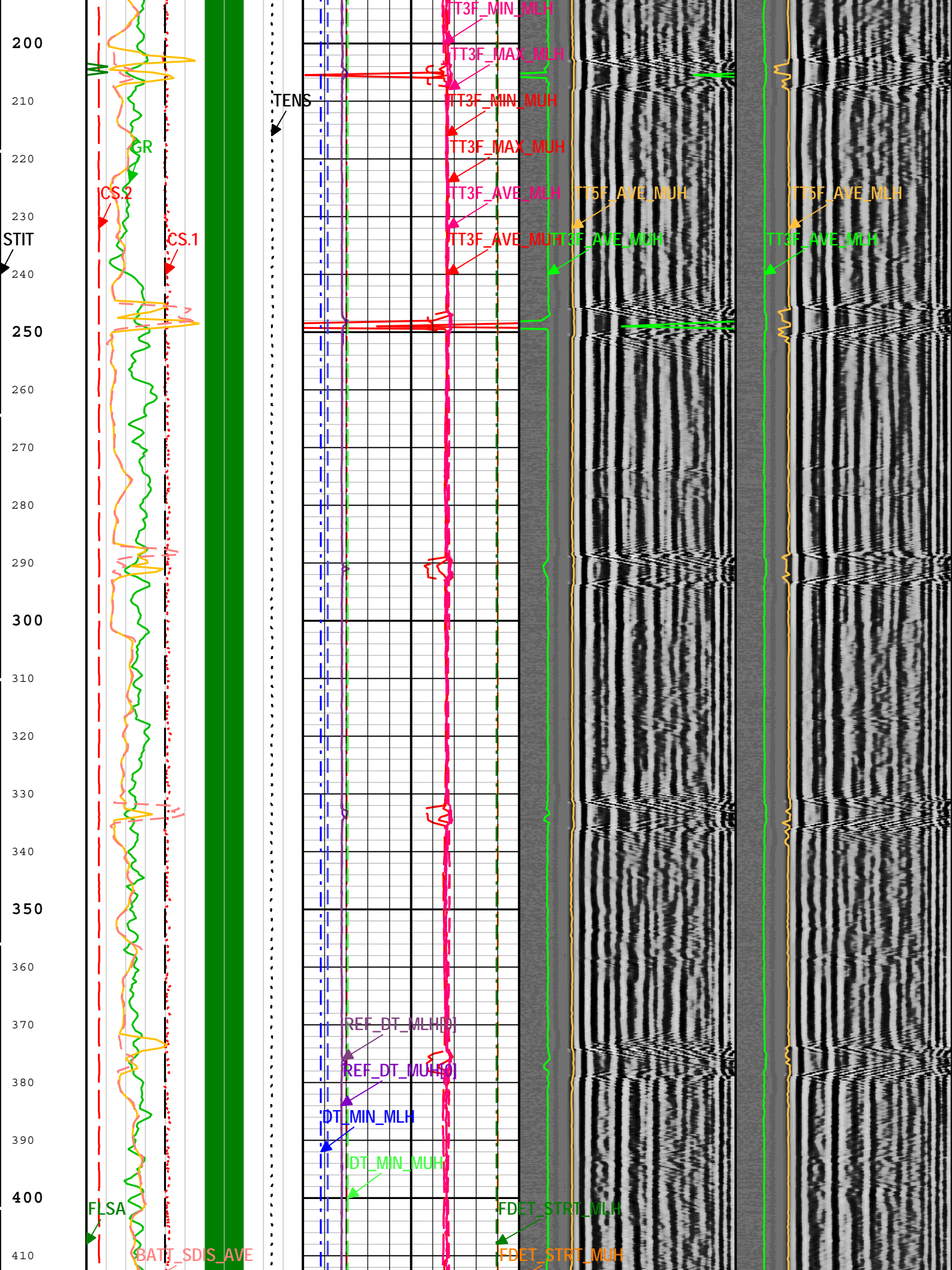
			MAST-B		
0			us		
			500		
			Transit Time 3 ft Average from Monopole Lower High Frequency Waveform (TT3F_AVE_MLH) MAST-B		
0			us		
			500		
			Transit Time 3 ft Maximum from Monopole Upper High Frequency Waveform (TT3F_MAX_MUH) MAST-B		
0			us		
			500		
			Transit Time 3 ft Minimum from Monopole Upper High Frequency Waveform (TT3F_MIN_MUH) MAST-B		
0			us		
			500		
			Transit Time 3 ft Maximum from Monopole Lower High Frequency Waveform (TT3F_MAX_MLH) MAST-B		
0			us		
			500		
			Transit Time 3 ft Minimum from Monopole Lower High Frequency Waveform (TT3F_MIN_MLH) MAST-B		
0			us		
			500		
			Fixed Detection Length for from Monopole Upper Transmitter High Frequency Firing (FDET_LEN_MUH) MAST-B		
40			us		
			240		
			Fixed Detection Length for from Monopole Lower Transmitter High Frequency Firing (FDET_LEN_MLH) MAST-B		
40			us		
			240		
Sonic Waveform Data Copy Indicator (DCSI) MAST-B			Fixed Detection Start from Monopole Upper Transmitter High Frequency Firing (FDET_STRT_MUH) MAST-B		
1		11	100		
Cable Speed (CS).1			us		
0			300		
Cable Speed (CS).2			Fixed Detection Start from Monopole Lower Transmitter High Frequency Firing (FDET_STRT_MLH) MAST-B		
2000			100		
ft/h			us		
15000			300		
Gamma Ray (GR) EDTC-B			Detection Minimum Slowness from Monopole Upper Transmitter High Frequency Firing (DT_MIN_MUH) MAST-B		
0			40		
gAPI			us/ft		
150			140		
Cable Tension (TENS)			Detection Minimum Slowness from Monopole Lower Transmitter High Frequency Firing (DT_MIN_MLH) MAST-B		
10000			40		
lbf			us/ft		
0			140		
Sonic Porosity (SPHI) MAST-B			Detection Minimum Slowness from Monopole Upper Transmitter High Frequency Firing (DT_MIN_MUH) MAST-B		
0.45			40		
ft3/ft3			us/ft		
-0.15			140		
Bit Size (BS)			Detection Minimum Slowness from Monopole Lower Transmitter High Frequency Firing (DT_MIN_MLH) MAST-B		
6			40		
in			us/ft		
16			140		

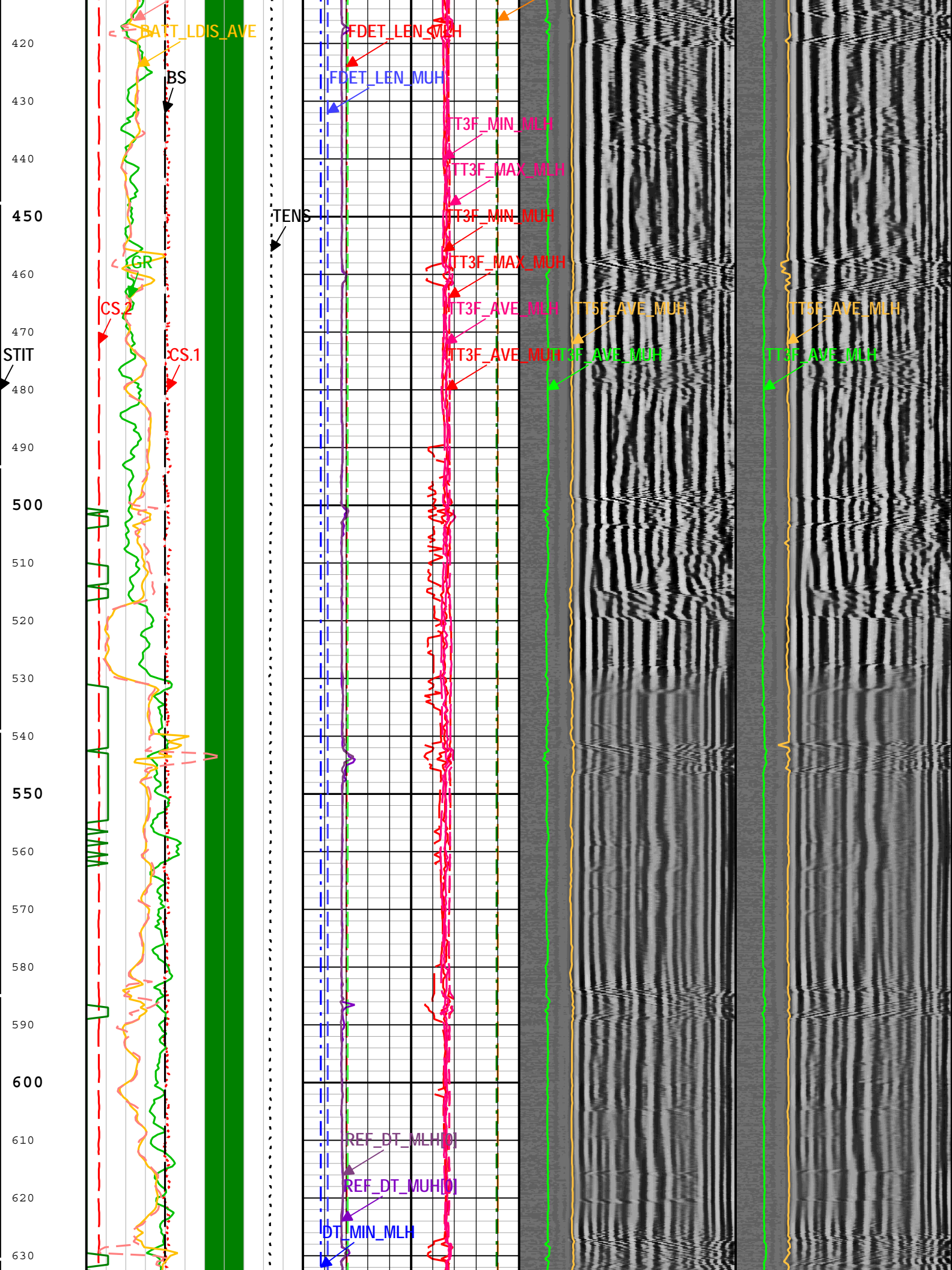




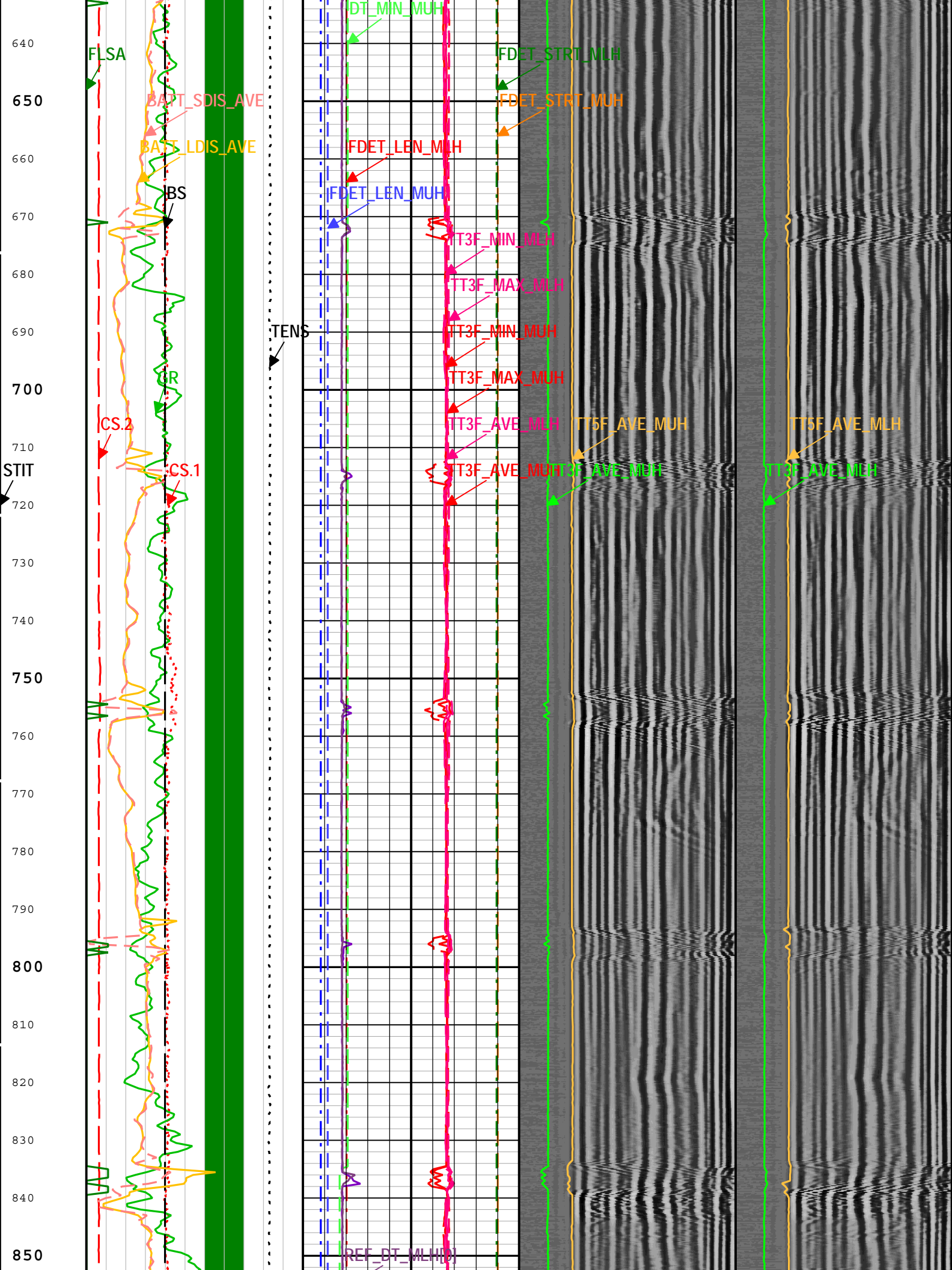


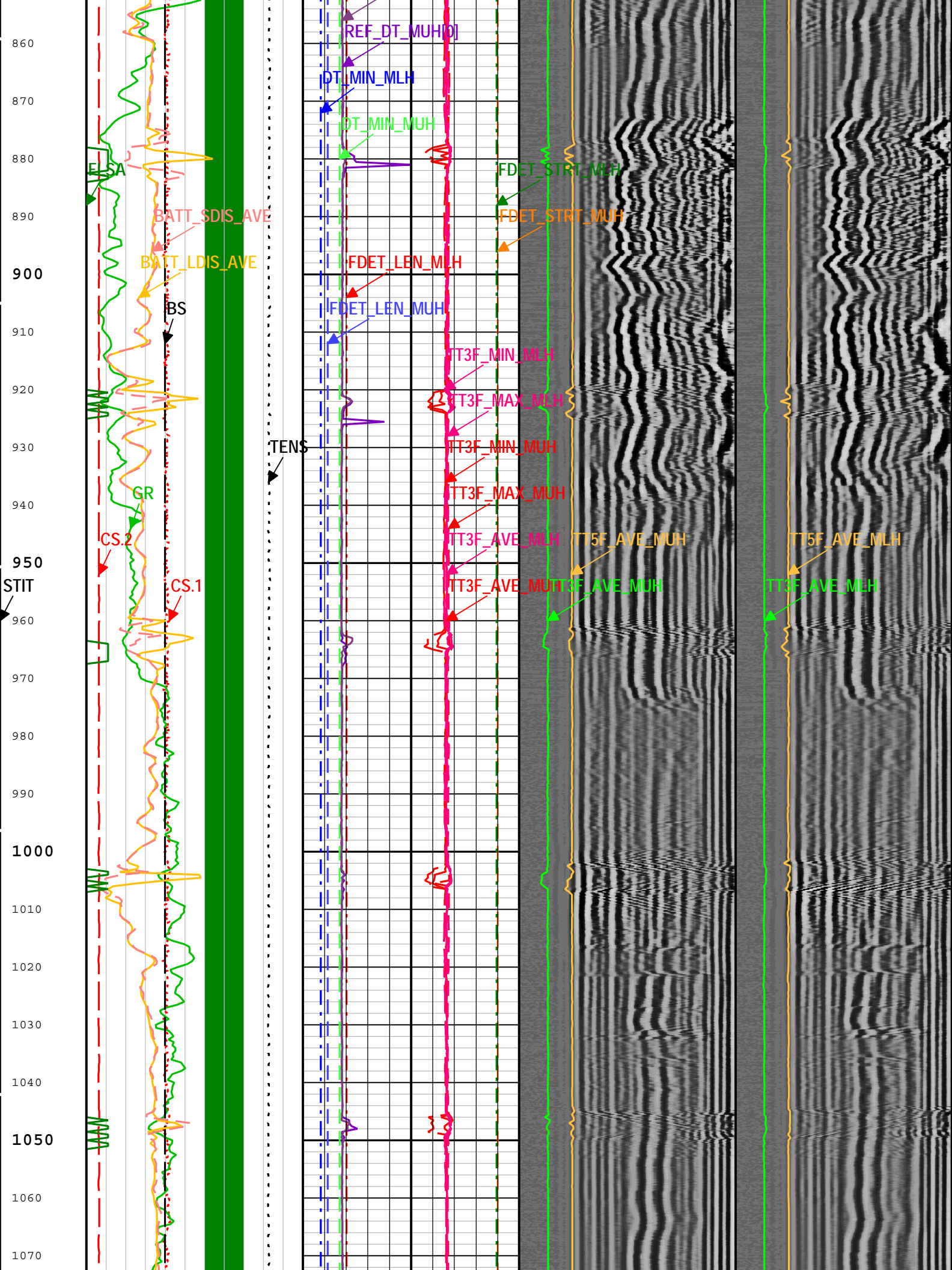




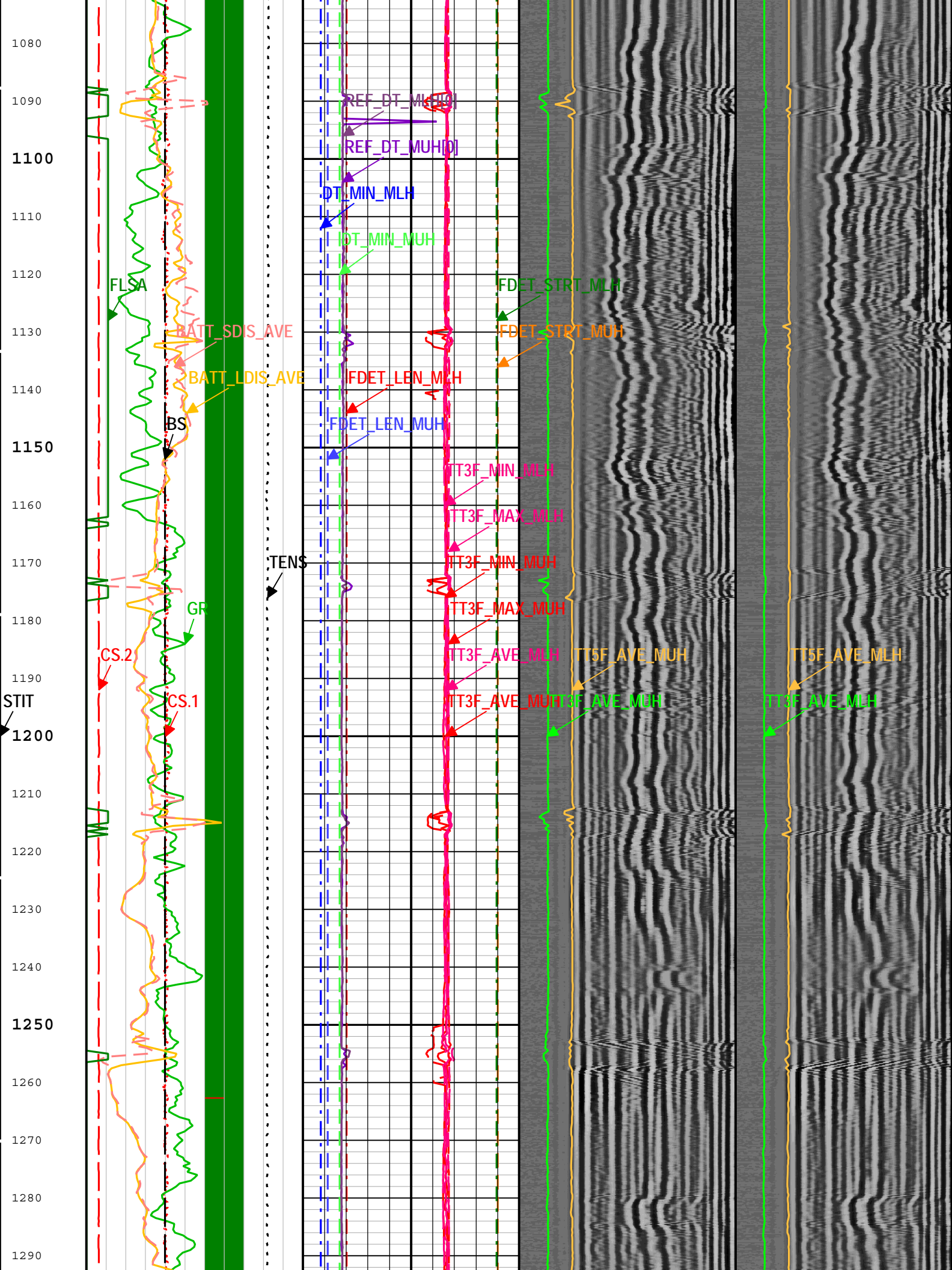


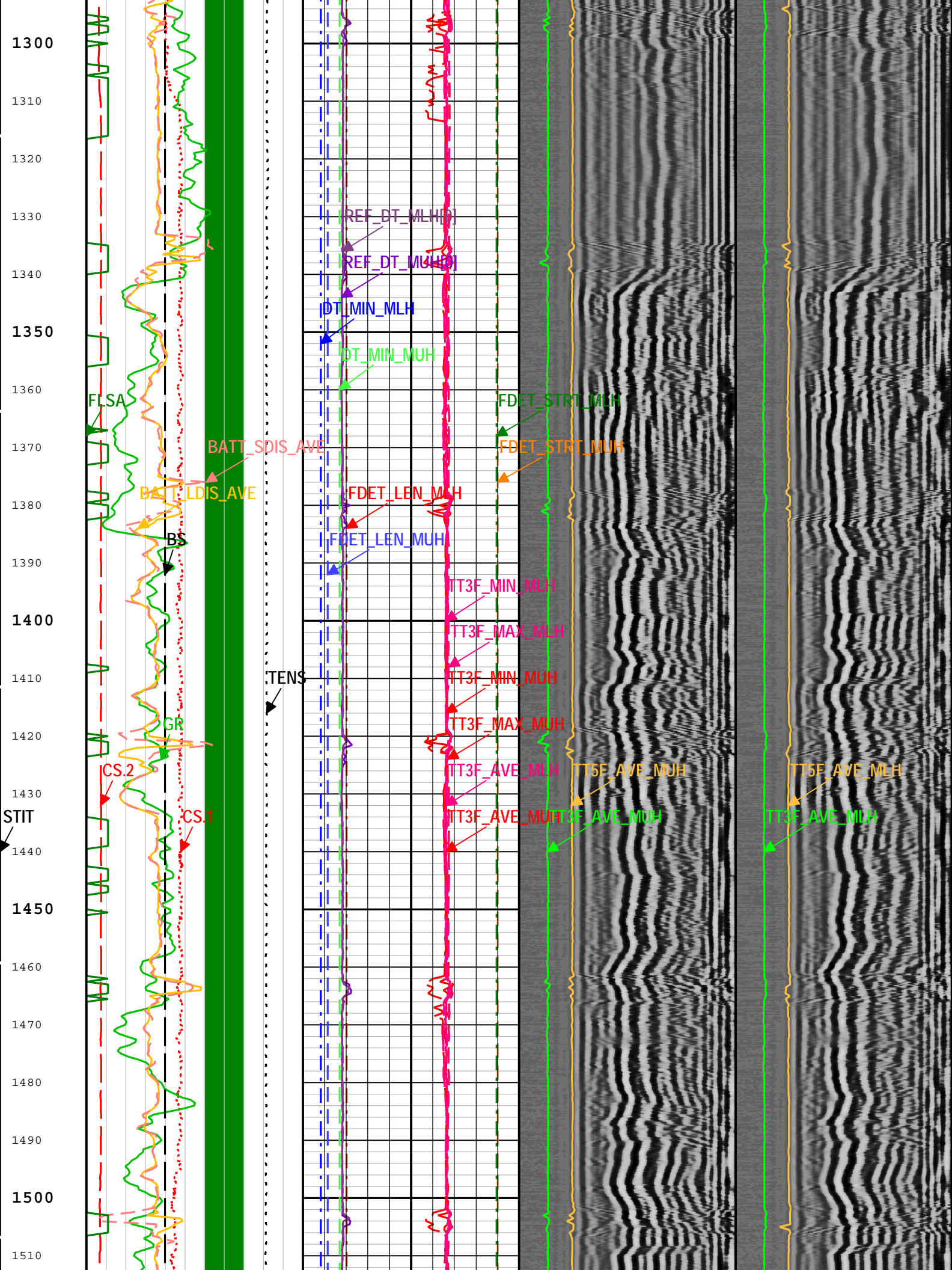




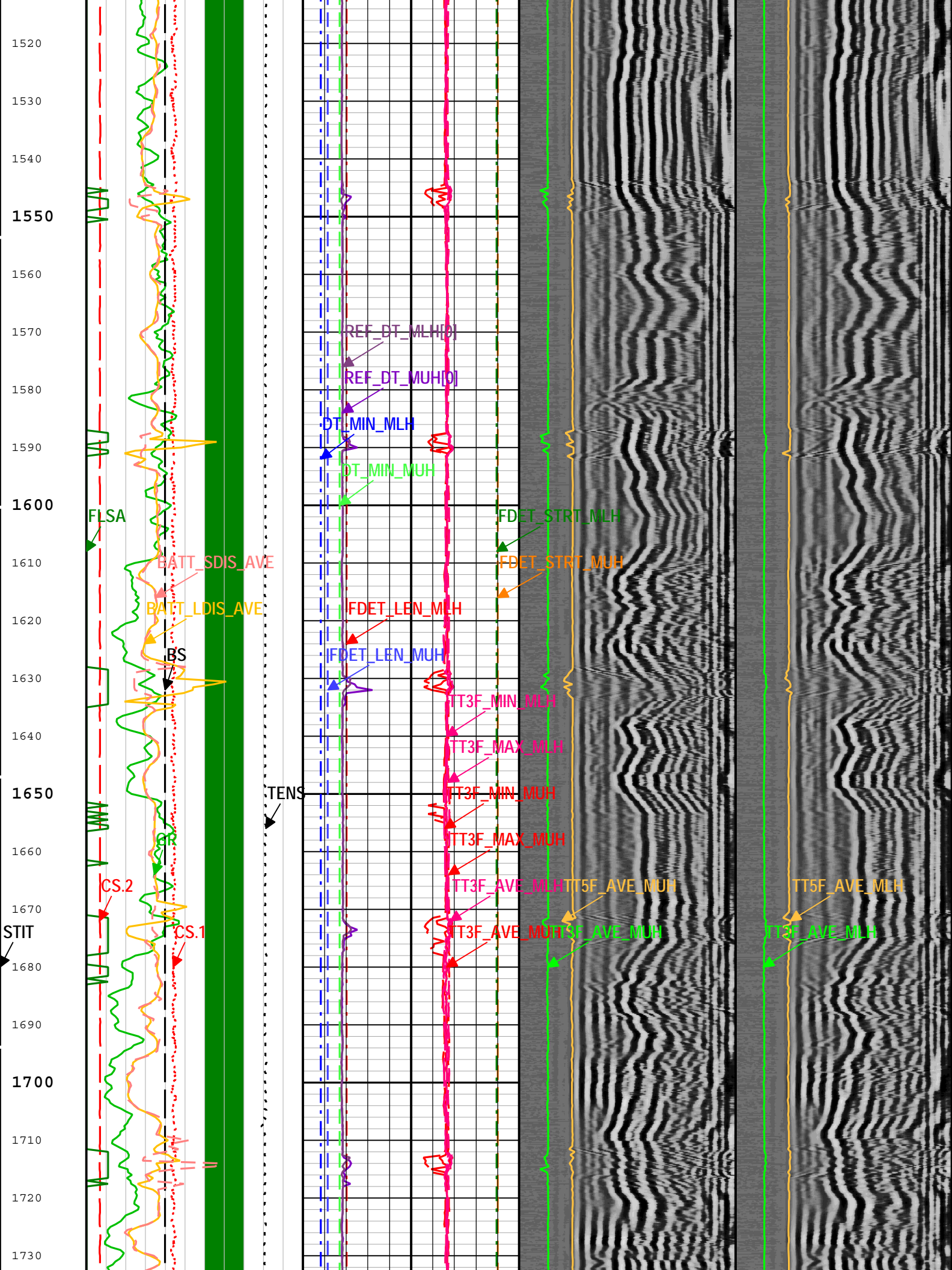


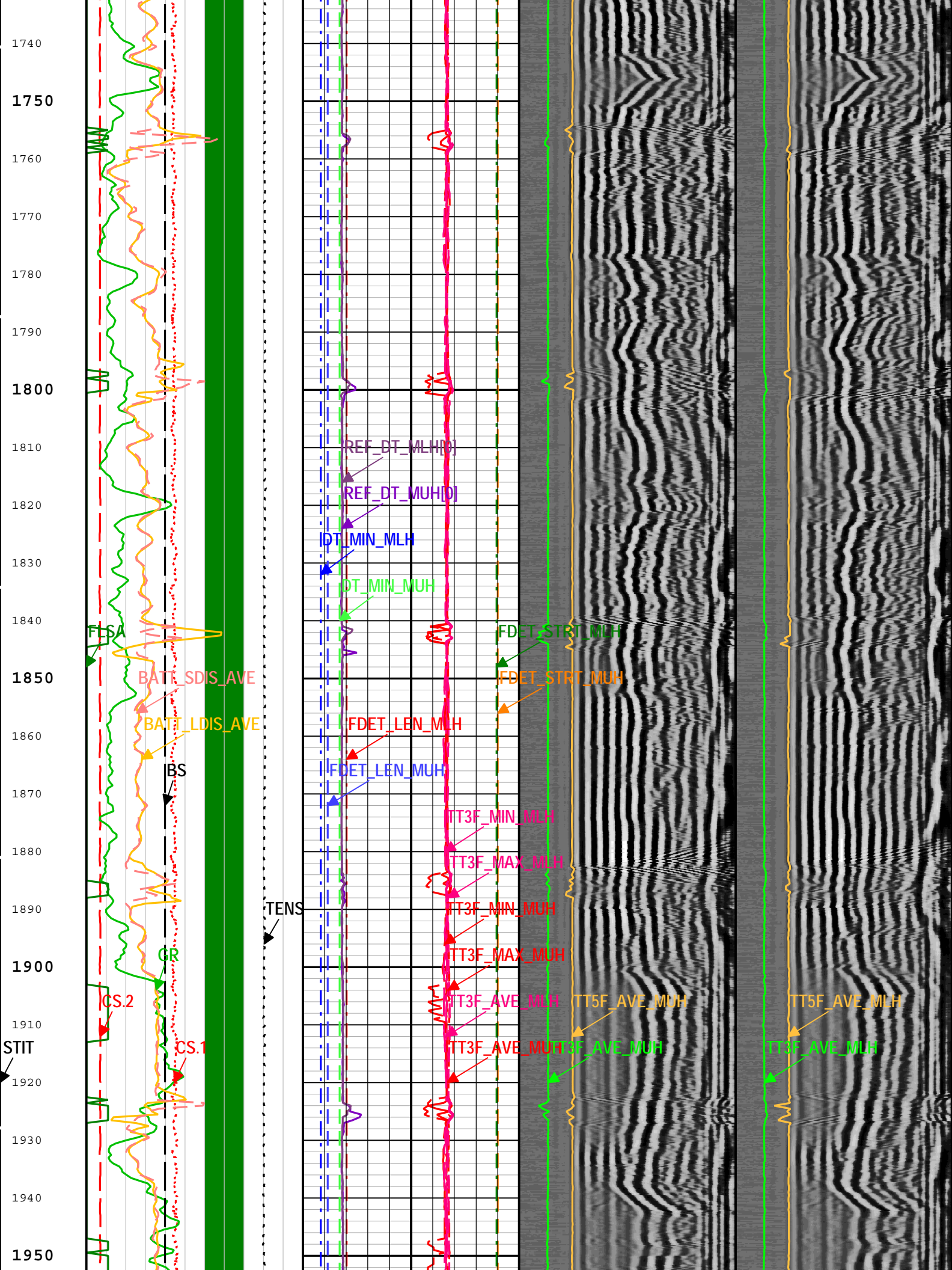




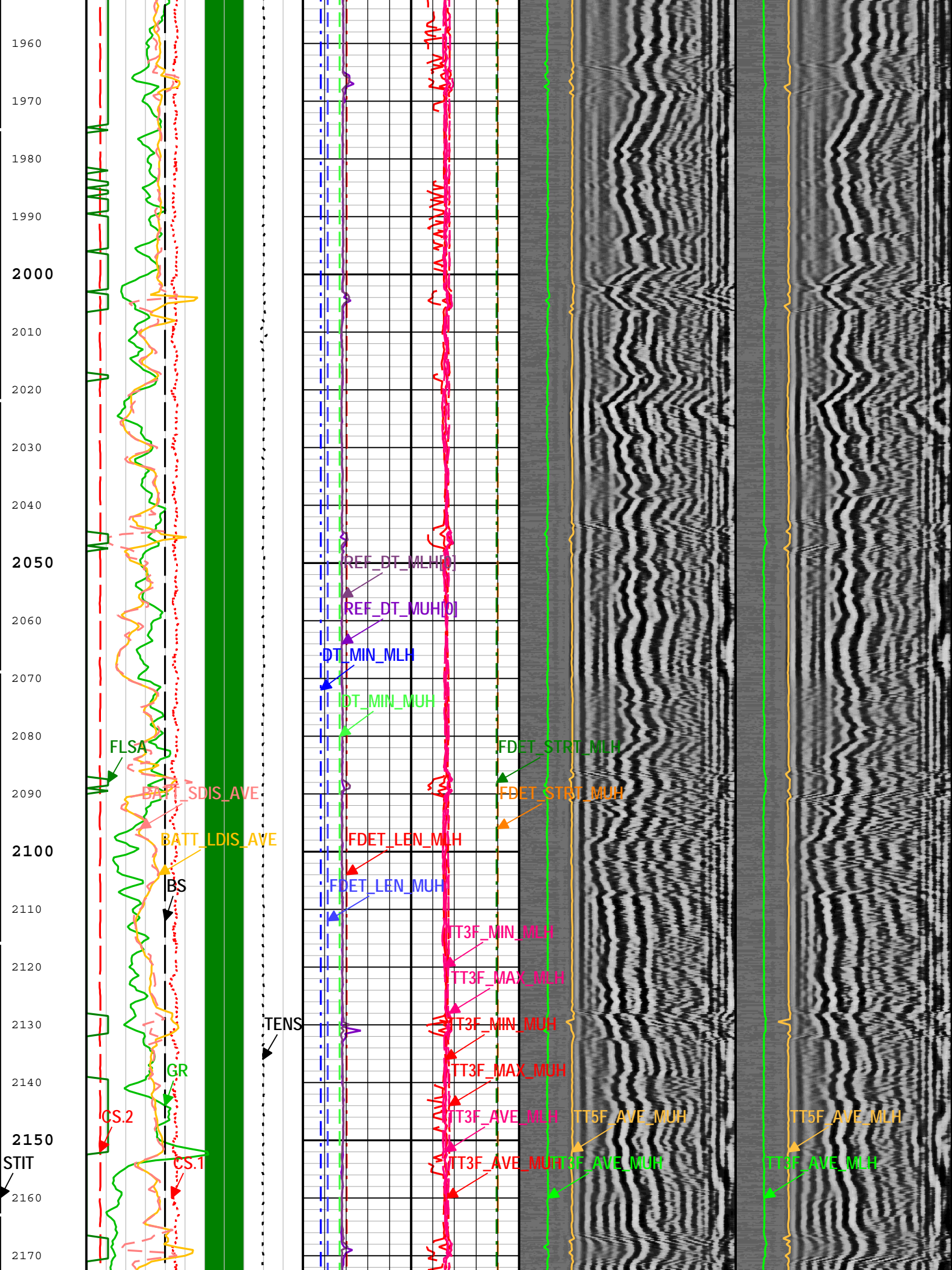


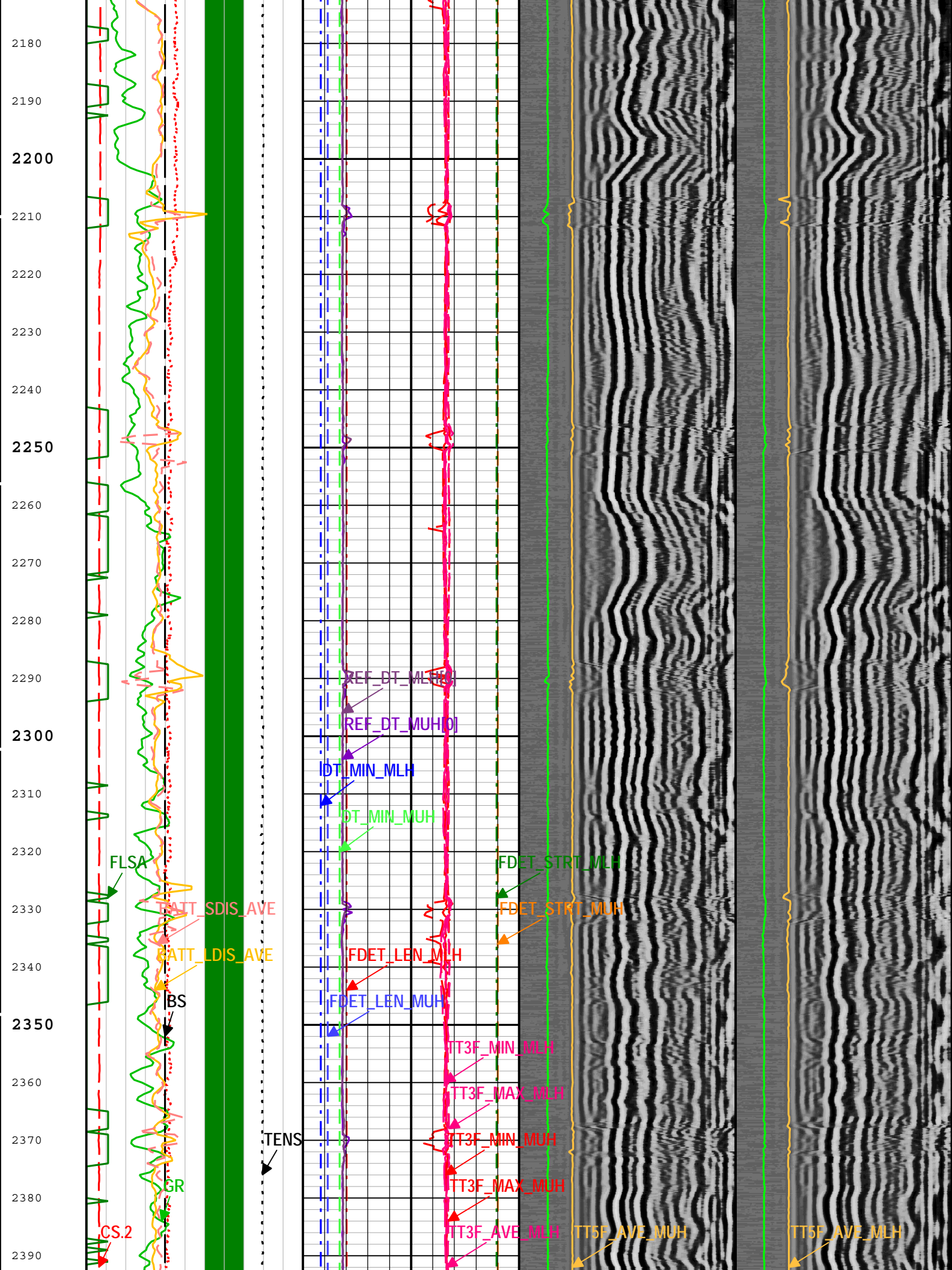




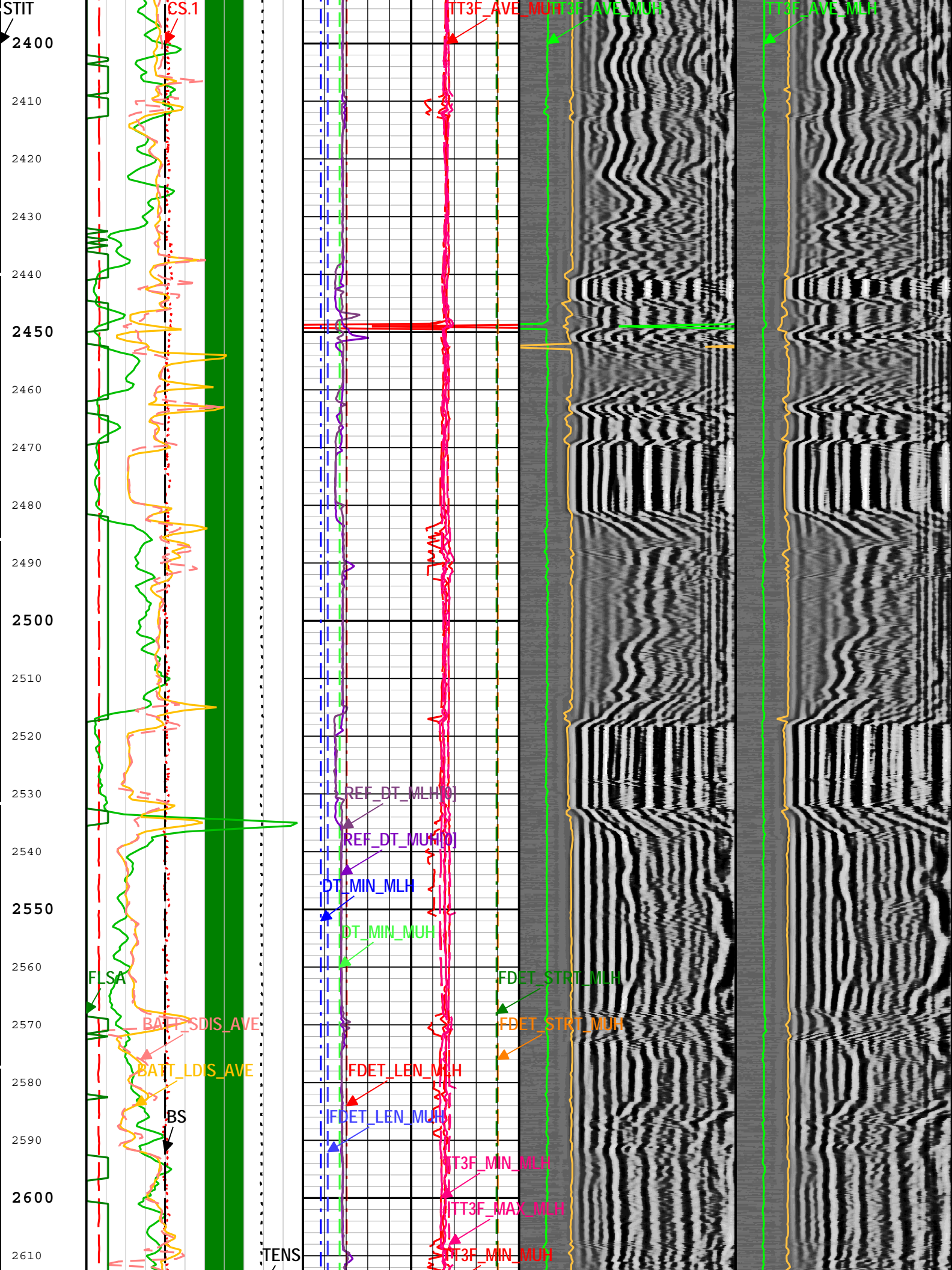


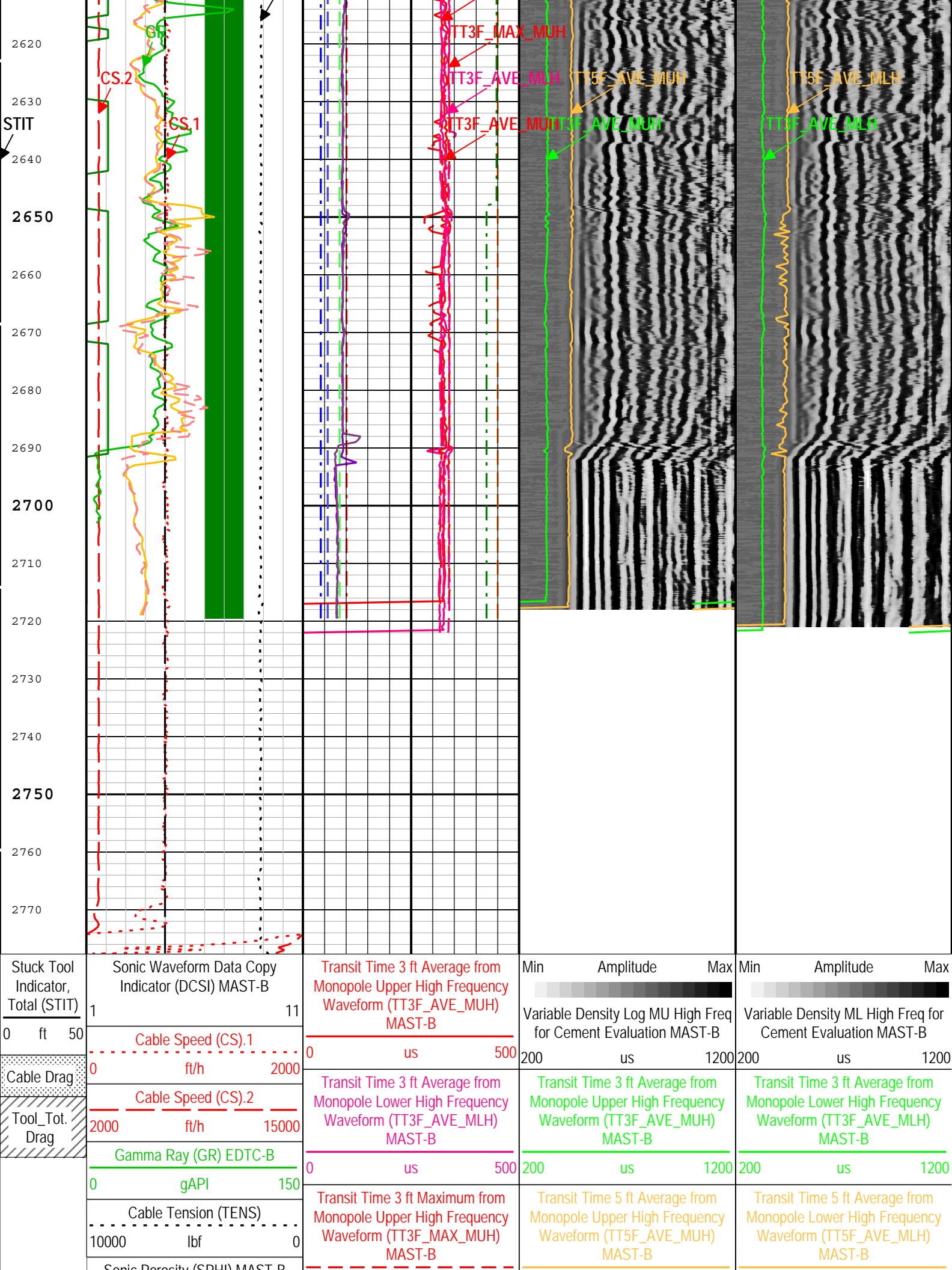


































Sonic Porosity (SPHI) MAST-B			0	us	500	200	us	1200	200	us	1200
0.45	ft3/ft3	-0.15									
Bit Size (BS)											
6	in	16									
Borehole Compensated Attenuation Long Distance Average (BATT_LDIS_AVE) MAST-B			0	us	500						
dB/ft			20								
Borehole Compensated Attenuation Short Distance Average (BATT_SDIS_AVE) MAST-B			0	us	500						
dB/ft			20								
Flag for Low Sonic Amplitude (FLSA) MAST-B			0	us	500						
			10								
			Transit Time 3 ft Minimum from Monopole Upper High Frequency Waveform (TT3F_MIN_MUH) MAST-B								
			Transit Time 3 ft Maximum from Monopole Lower High Frequency Waveform (TT3F_MAX_MLH) MAST-B								
			Transit Time 3 ft Minimum from Monopole Lower High Frequency Waveform (TT3F_MIN_MLH) MAST-B								
			Fixed Detection Length for from Monopole Upper Transmitter High Frequency Firing (FDET_LEN_MUH) MAST-B								
			40	us	240						
			Fixed Detection Length for from Monopole Lower Transmitter High Frequency Firing (FDET_LEN_MLH) MAST-B								
			40	us	240						
			Fixed Detection Start from Monopole Upper Transmitter High Frequency Firing (FDET_STRT_MUH) MAST-B								
			100	us	300						
			Fixed Detection Start from Monopole Lower Transmitter High Frequency Firing (FDET_STRT_MLH) MAST-B								
			100	us	300						
			Detection Minimum Slowness from Monopole Upper Transmitter High Frequency Firing (DT_MIN_MUH) MAST-B								
			40	us/ft	140						
			Detection Minimum Slowness from Monopole Lower Transmitter High Frequency Firing (DT_MIN_MLH) MAST-B								
			40	us/ft	140						
			Slowness Reference Sonic Waveform Monopole Upper High Frequency (REF_DT_MUH[0]) MAST-B								
			20	us/ft	220						
			Slowness Reference Sonic Waveform Monopole Lower High Frequency (REF_DT_MLH[0]) MAST-B								



TIME\_1900 - Time Marked every 60.00 (s)

Sonic Waveform Data Copy Indicator (DCSI) MAST-B

1 - MU Data Copy Indicator - :	<input type="checkbox"/> Absent.	 MU data is copied	 MU no data is copied.
2 - ML Data Copy Indicator - :	<input type="checkbox"/> Absent.	 ML data is copied	 ML no data is copied.
3 - MF Data Copy Indicator - :	<input type="checkbox"/> Absent.	 MF data is copied	 MF no data is copied.
4 - ST Data Copy Indicator - :	<input type="checkbox"/> Absent.	 ST data is copied	 ST no data is copied.
5 - XD Data Copy Indicator - :	<input type="checkbox"/> Absent.	 XD data is copied	 XD no data is copied.
6 - YD Data Copy Indicator - :	<input type="checkbox"/> Absent.	 YD data is copied	 YD no data is copied.
7 - UCBL Data Copy Indicator - :	<input type="checkbox"/> Absent.	 UCBL data is copied	 UCBL no data is copied.
8 - LCBL Data Copy Indicator - :	<input type="checkbox"/> Absent.	 LCBL data is copied	 LCBL no data is copied.
9 - IMU Data Copy Indicator - :	<input type="checkbox"/> Absent.	 IMU data is copied	 IMU no data is copied.
10 - IML Data Copy Indicator - :	<input type="checkbox"/> Absent.	 IML data is copied	 IML no data is copied.
11 - IMF Data Copy Indicator - :	<input type="checkbox"/> Absent.	 IMF data is copied	 IMF no data is copied.

Description: MAST\_CE\_LQC\_3050    Format: Log ( MAST\_CE\_LQC\_3050 )    Index Scale: 5 in per 100 ft    Index Unit: ft    Index Type: Measured Depth  
Creation Date: 09-Feb-2014 17:27:54

Channel Processing Parameters				
Parameter	Description	Tool	Value	Unit
BARI	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Cased	
BS	Bit Size	WLSESSION	Depth Zoned	in
CBLO	Casing Bottom (Logger)	WLSESSION	2778	ft
CBRA	CBL LQC Reference Amplitude in Free Pipe	MAST-B	51	mV
CDEN	Cement Density	EDTC-B	2	g/cm3
CDTS	Correction for Delta-T Shale, Empirical	Borehole	100	us/ft
CTHILGR	Nominal Casing Thickness - Zoned along logger depths	WLSESSION	0.352	in
DCBLCTL	Discriminated Cement Bond Log Processing Control Flag	MAST-B	On	
DFD	Drilling Fluid Density	Borehole	8.7	lbm/gal
DT_MIN_MLH	Detection Minimum Slowness for Monopole Lower Transmitter High Frequency Firing	MAST-B	48.35	us/ft
DT_MIN_MUH	Detection Minimum Slowness for Monopole Upper Transmitter High Frequency Firing	MAST-B	57	us/ft
DTF	Delta-T Fluid	Borehole	189	us/ft
DTM	Delta-T Matrix	Borehole	47.6	us/ft
FDET_LEN_MLH	Fixed Detection Time Length for Monopole Lower Transmitter High Frequency Firing	MAST-B	80.47	us
FDET_LEN_MUH	Fixed Detection Time Length for Monopole Upper Transmitter High Frequency Firing	MAST-B	62.98	us
FDET_STRT_MLH	Fixed Detection Start Time for Monopole Lower Transmitter High Frequency Firing	MAST-B	269.93	us
FDET_STRT_MUH	Fixed Detection Start Time for Monopole Upper Transmitter High Frequency Firing	MAST-B	280.16	us
FMDCTL_MLH	First Motion Detection Processing Control Flag for Monopole Lower Transmitter High Frequency Firing	MAST-B	On	
FMDCTL_MUH	First Motion Detection Processing Control Flag for Monopole Upper Transmitter High Frequency Firing	MAST-B	On	
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	C1	
GOBO	Good Bond	MAST-B	3.01	mV
MATT	Maximum Attenuation	MAST-B	11.77	dB/ft
MODALCTL_MLH	Modal Decomposition Processing Control Flag for Monopole Lower Transmitter High Frequency Firing	MAST-B	On	
MODALCTL_MUH	Modal Decomposition Processing Control Flag for Monopole Upper Transmitter High Frequency Firing	MAST-B	On	
SPFS	Sonic Porosity Formula	Borehole	Raymer-Hunt	
SSCCTL_MLH	Sensor Sensitivity Correction Processing Control Flag for Monopole Lower Transmitter High Frequency Firing	MAST-B	On	
SSCCTL_MUH	Sensor Sensitivity Correction Processing Control Flag for Monopole Upper Transmitter High Frequency Firing	MAST-B	On	
TD	Total Measured Depth	Borehole	5420	ft

	Total Measured Depth	0.125	ft	
VDLCTL_MLH	Variable Density Log Processing Control Flag for Monopole Lower High Frequency Waveforms	MAST-B	On	
VDLCTL_MUH	Variable Density Log Processing Control Flag for Monopole Upper High Frequency Waveforms	MAST-B	On	

Depth Zone Parameters				
All depth are actual.				

Tool Control Parameters				
Parameter	Description	Tool	Value	Unit
AMIP	Adaptive Mode Initial Phase	FBST-E	0	deg
APM	Acquisition Phase Mode	FBST-E	WBM - Adaptive Phase Control	
DIGDEL	Waveform Digitizing Delay	MAST-B	[0, 0]	us
DIGDT	Sonic Waveform Digitizing Slowness	MAST-B	[0, 0]	us/ft
DIGTIME	Digitizing Time	MAST-B	[1200, 1200]	us
EMXGMOD	EMEX and Gain Modes	FBST-E	EMEX= Auto and Gain= Auto	
FLM	Logging Mode	FBST-E	Full Image Mode	
GAIN_FBST	Electronic Gain Value in Manual Mode	FBST-E	0 dB	
GARM_A	Electronic Gain Value for Arm A	FBST-E	0 dB	
GARM_B	Electronic Gain Value for Arm B	FBST-E	0 dB	
GARM_C	Electronic Gain Value for Arm C	FBST-E	0 dB	
GARM_D	Electronic Gain Value for Arm D	FBST-E	0 dB	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	1800	ft/h
MPSC	Manual Phase Shift Compensation	FBST-E	0	deg
MSMT_LIST	Measurement List	MAST-B	[MUH, MLH]	
RXSEL	Receiver Station Select	MAST-B	[[Off, Off], [Off, Off], [Off, Off], [Off, Off], [On, On], [On, On], [On, On], [On, On], [On, On], [On, On], [Off, Off], [Off, Off], [Off, Off], [Off, Off]]	
SAMINT	Sonic Waveform Sampling Interval	MAST-B	[10, 10]	
SNSRSEL	Sensor Element Select	MAST-B	[[On, On], [On, On], [On, On], [On, On], [On, On], [On, On], [On, On], [On, On], [On, On], [On, On]]	
VDL_INT	Variable Density Log Step Interval	MAST-B	STANDARD	
VDL_MODE	Variable Density Log Mode	MAST-B	STANDARD	
XVOL	EMEX Voltage	FBST-E	0	V

Company:	Anadarko E&P Onshore LLC	<b>Schlumberger</b>
Well:	Caboose 1548-21-44	
Field:	Wildcat	
County:	Cheyenne	
State:	Colorado	
Sonic Scanner		
CBL-VDL		