

Company: Caerus Operating LLC

Well: NPR 14D-10 596

Field: NPR

County: Garfield State: Colorado

Cement Bond Log

RST Sigma Log

Gamma Ray - Collar Locator Log

Location: K10-596
Well: NPR 14D-10 596
Company: Caerus Operating LLC

Location: K10-596		Elev.: K.B. 6733.00 ft	
Permanent Datum: Log Measured From: Kelly Bushing		G.L. 6709.00 ft	
Drilling Measured From: Kelly Bushing		D.F. 6733.00 ft	
API Serial No. 05045237920000	Section: 10	Township: 5S	Range: 96W

Logging Date	14-Sep-2018
Run Number	One
Depth Driller	9486.00 ft
Schlumberger Depth	7280.00 ft
Bottom Log Interval	7269.00 ft
Top Log Interval	1900.00 ft
Casing Fluid Type	2% KCL Water
Salinity	
Density	8.5 lbm/gal
Fluid Level	8.00 ft
BIT/CASING/TUBING STRING	
Bit Size	8.75 in
From	2050.00 ft
To	7280.00 ft
Casing/Tubing Size	4.5 in
Weight	11.6 lbm/ft
Grade	P110
From	0.00 ft
To	9486.00 ft
Max Recorded Temperatures	228.5 degF
Logger on Bottom	14-Sep-2018 01:55:00
Unit Number	3007
Recorded By	Richard Woods
Location:	Evanston, WY
Witnessed By	Trent Ray

Disclaimer

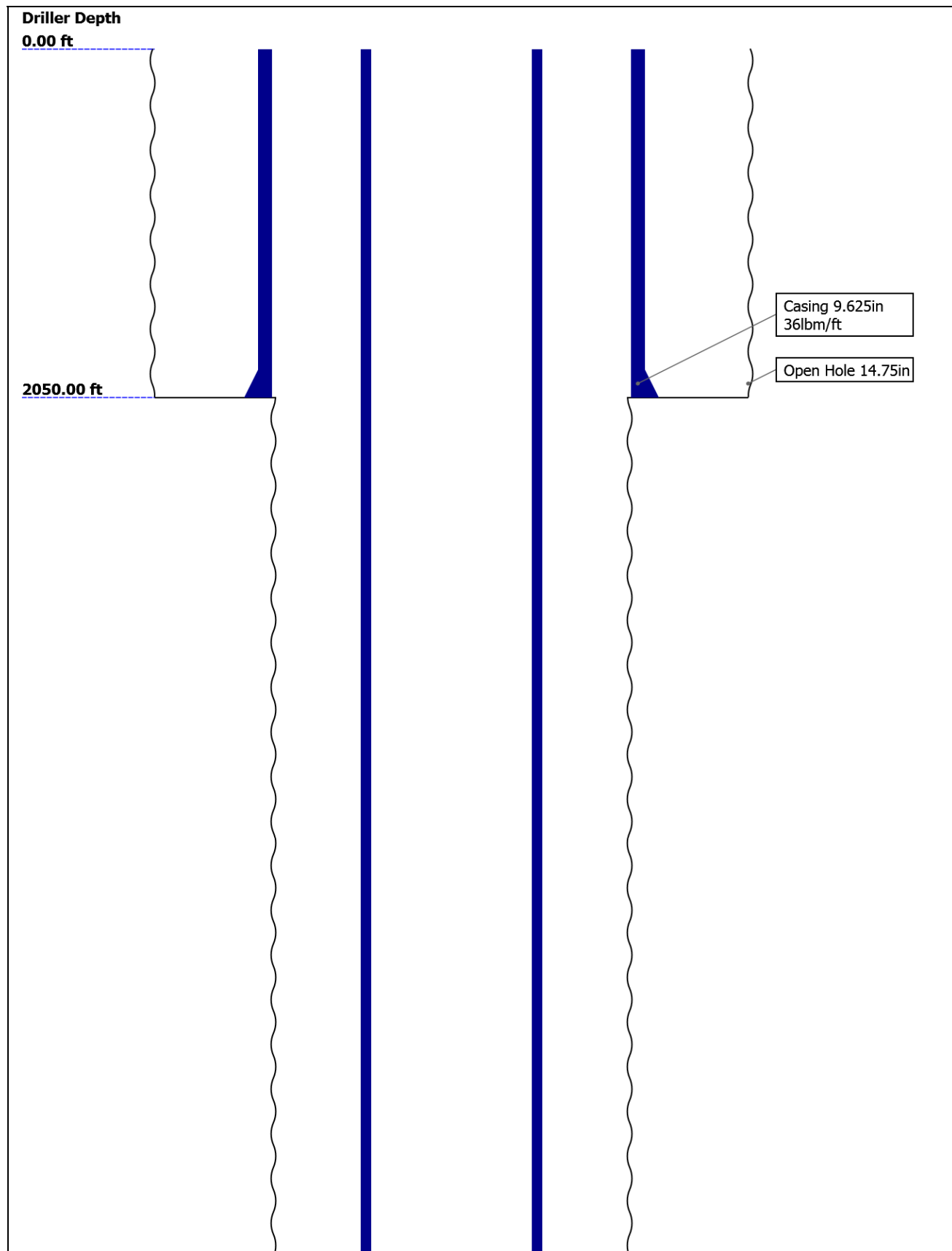
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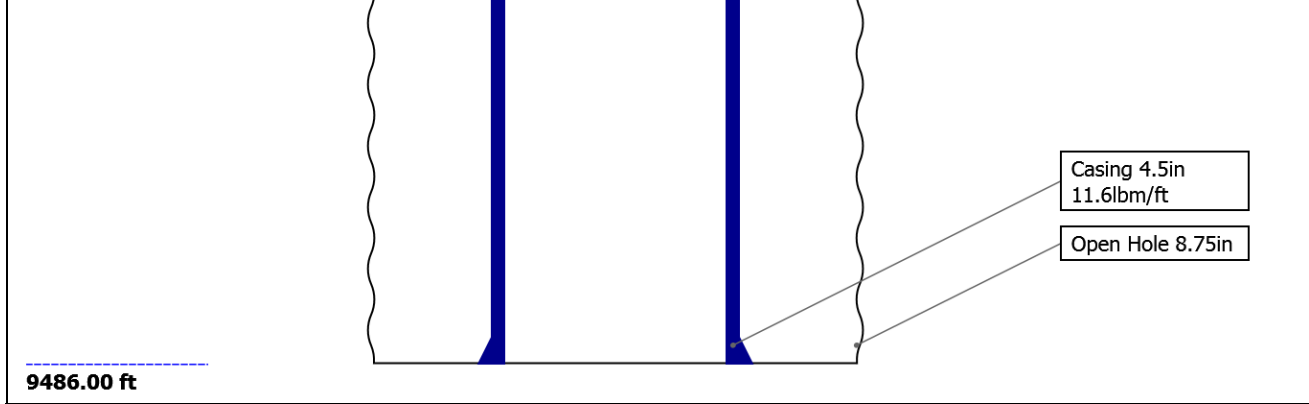
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Well Sketch



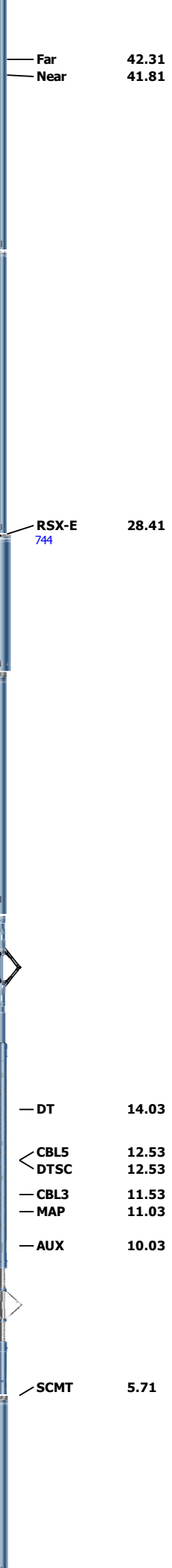


Borehole Size/Casing/Tubing Record

Bit					
Bit Size (in)	14.75	8.75			
Top Driller (ft)	0	2050			
Top Logger (ft)	0	2050			
Bottom Driller (ft)	2050	9486			
Bottom Logger (ft)	2050	7280			
Casing					
Size (in)	9.625	4.5			
Weight (lbm/ft)	36	11.6			
Inner Diameter (in)	8.921	4			
Grade	J55	P110			
Top Driller (ft)	0	0			
Top Logger (ft)	0	0			
Bottom Driller (ft)	2050	9486			
Bottom Logger (ft)	2050	9486			

Remarks and Equipment Summary

One: Toolstring				One: Remarks	
Equip name	Length	MP name	Offset	Toolstring run as per toolsketch	
PEH-E	61.66			RST Mode Sigma	
AH-38	59.98			Matrix: Sandstone	
PSTP-B:282	59.7	GR	55.99	Max Recorded Temperature 228.5degF	
6		PSTC	55.7	SLB Depth 7280ft	
PSC-A		PSTC Tool	0.00	Thank You For Choosing Schlumberger!	
PSTC-A		String Bot			
PBMS-B:2826		tom			
		Temperatu	52.94		
		re			
		CQG Press	52.6		
		ure			
		CCL	52.18		
		PBMS	51.43		
RST-C:578	51.43				
RSCH-A:437					
RSC-E:551					
RSS-A:488					
MNTR-F:1352					
-51352					
RSXH-A					
RSX-E:578					
		RSC-E	45.07		



— Far 42.31
 — Near 41.81

PPAT-A:744 28.41

— RSX-E 28.41
 744


SCMT-HC:82 26.49

25
 UDFH-RMC:8
 020
 SCMC-HC:822
 5
 SCME-K
 SCMS-CA:822
 5
 UDFH-RMT:80
 24
 SCMX-HC:803
 9

— DT 14.03
 < CBL5 12.53
 DTSC 12.53
 — CBL3 11.53
 — MAP 11.03
 — AUX 10.03

— SCMT 5.71

BNS-P **0.14**



TOOL_ZERO

Lengths are in ft
 Maximum Outer Diameter = 2.065 in
 Line: Sensor Location, Value: Gating Offset
 All measurements are relative to TOOL_ZERO

Depth Summary

	One		
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Depth Measuring Device

Type	IDW-JA		
Serial Number	5979		
Calibration Date	10-JUN-2017		
Calibrator Serial Number	IDWC-C-57		
Calibration Cable Type	1-25ZA-XXS		
Wheel Correction 1	-3		
Wheel Correction 2	-3		

Tension Device

Type	CMTD-B/A		
Serial Number	5036		
Calibration Date	10-Sep-2018		
Calibrator Serial Number	112544A		
Number of Calibration Points	10		
Calibration Root Mean Square Error	21		
Calibration Peak Error	10		

Logging Cable

Type	1-25ZA		
Serial Number	112140		
Length	16800.00 ft		
Conveyance Type	Wireline		
Rig Type	Crane		

One:Depth Control Parameters	Depth Control Remarks
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Log Sequence	First Log In the Well
Rig Up Length At Surface	All Schlumberger depth control policies followed.
Rig Up Length At Bottom	IDW used for primary depth control.
Rig Up Length Correction	Zchart used for secondary depth control.
Stretch Correction	
Tool Zero Check At Surface	

Composite 1

Main Pass

Software Version

Acquisition System	Version
Maxwell 2018 SP1	8.1.99839.3100
Application Patch	Wireline_Hotfix-Mandatory-2018SP1_8.1.102865

Composite Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include
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One	Log[6]:Up	Up	2401.26 ft	7297.71 ft	14-Sep-2018 3:33:22 AM	14-Sep-2018 6:21:23 AM	ON	4.28 ft	No
One	Log[7]:Up	Up	119.33 ft	2619.80 ft	14-Sep-2018 6:26:54 AM	14-Sep-2018 7:32:41 AM	ON	4.10 ft	No

All depths are referenced to toolstring zero

Log Company:Caerus Operating LLC Well:NPR 14D-10 596 Composite 1:S002

Description: Sonic CBL with VDL Format: Log (Sonic CBL with VDL) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 14-Sep-2018 10:30:40

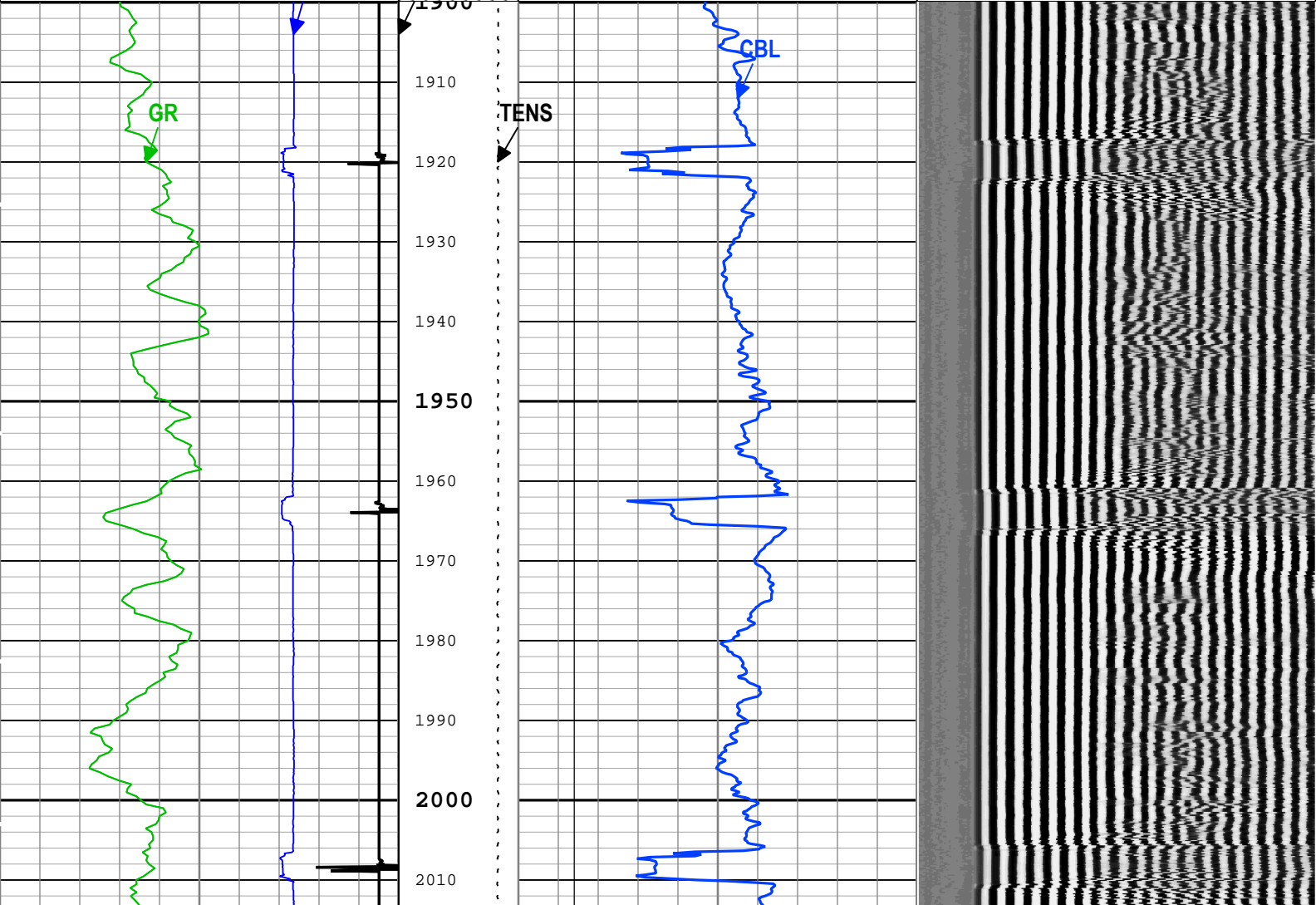
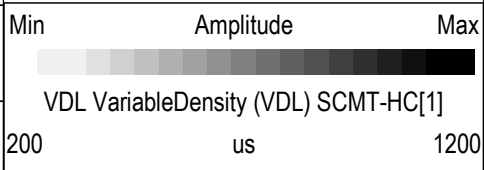
TIME_1900 - Time Marked every 60.00 (s)

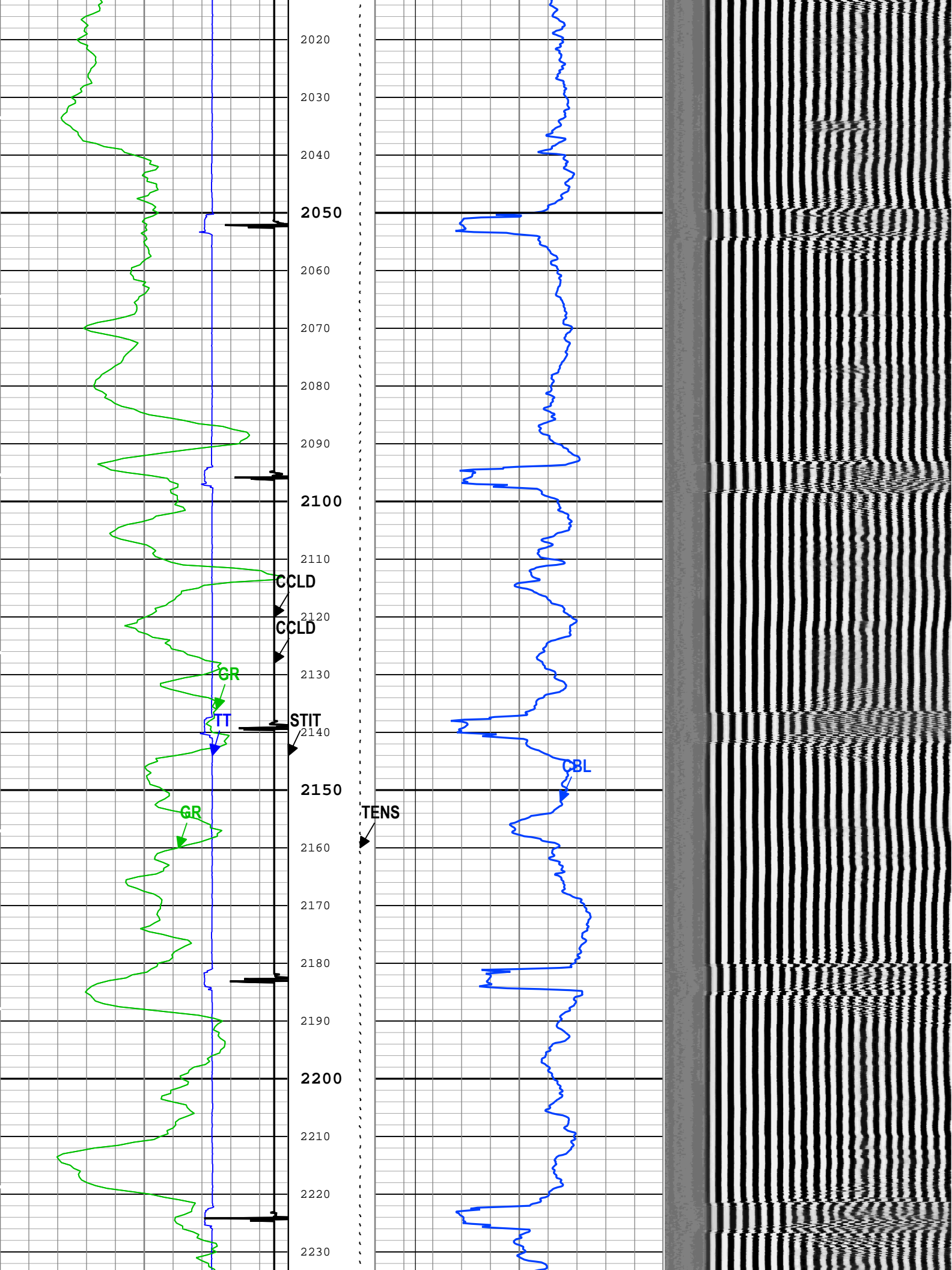
■ BIEP - Bond Index Event Pips SCMT-HC[1]

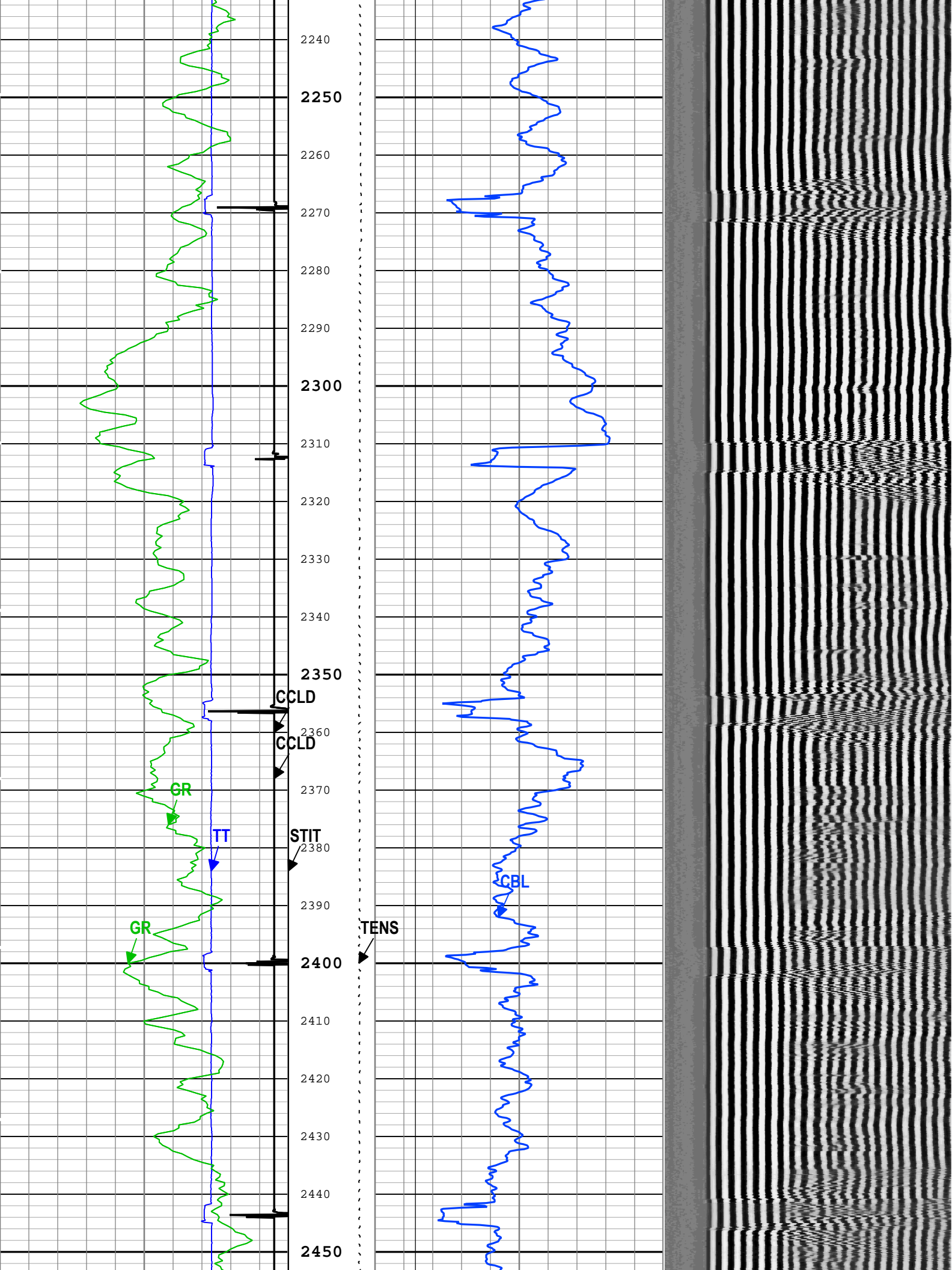
Gamma Ray (GR) PSTP-B[1]		
0	gAPI	150
Transit Time for CBL (TT) SCMT-HC[1]		
400	us	200
Gamma Ray (GR) PSTP-B[1]		
0	gAPI	150
CCL Discriminated Amplitude (CCLD) PSTP-B[1]		
-19	V	1
CCL Discriminated Amplitude (CCLD) PSTP-B[1]		
-19	V	1

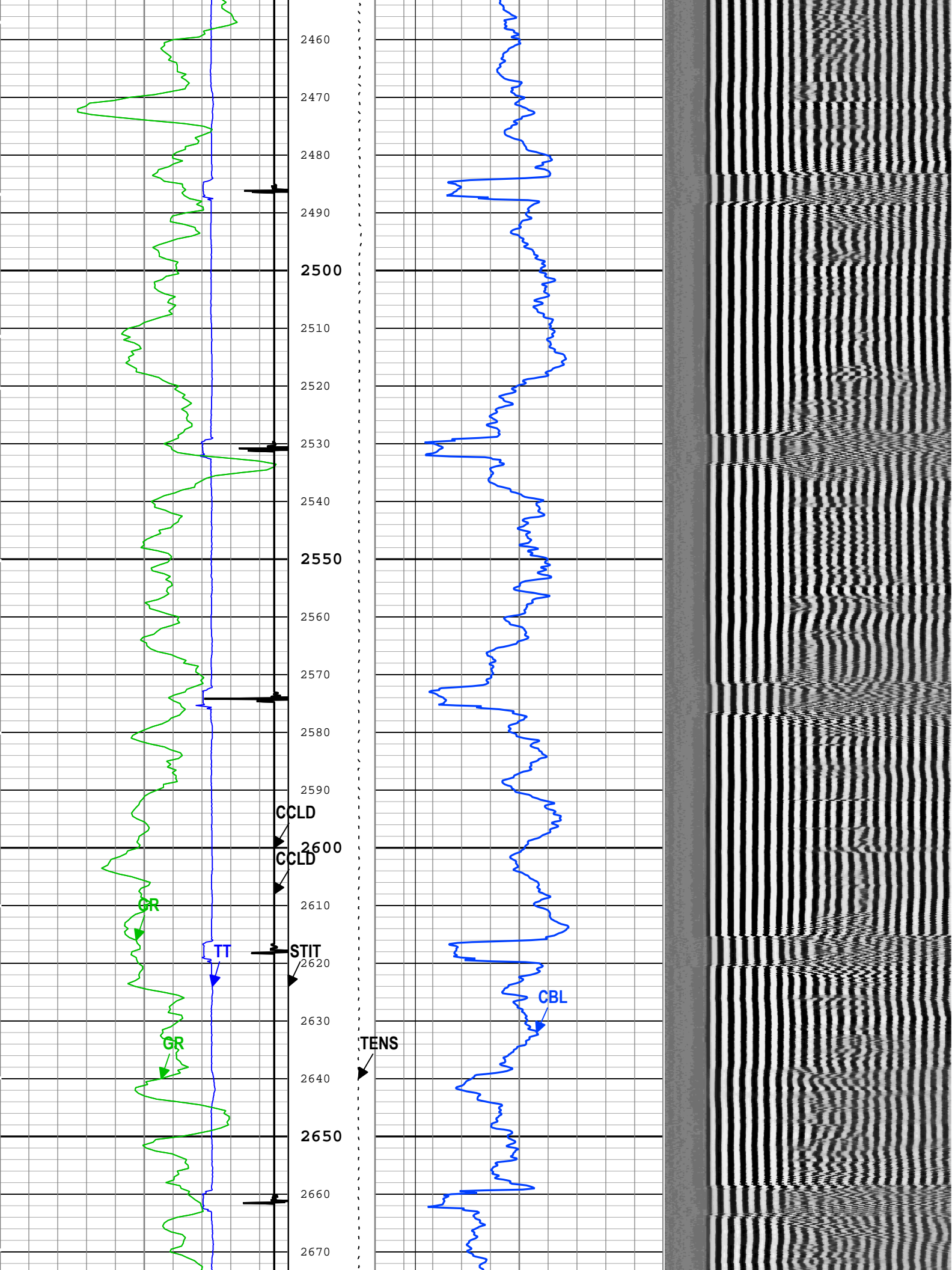
Cable Tension (TENS)	0	3000 lbf
Stuck Tool Indicator, Total (STIT)	0	50 ft
Cable Drag		
Tool_Tot. Drag		

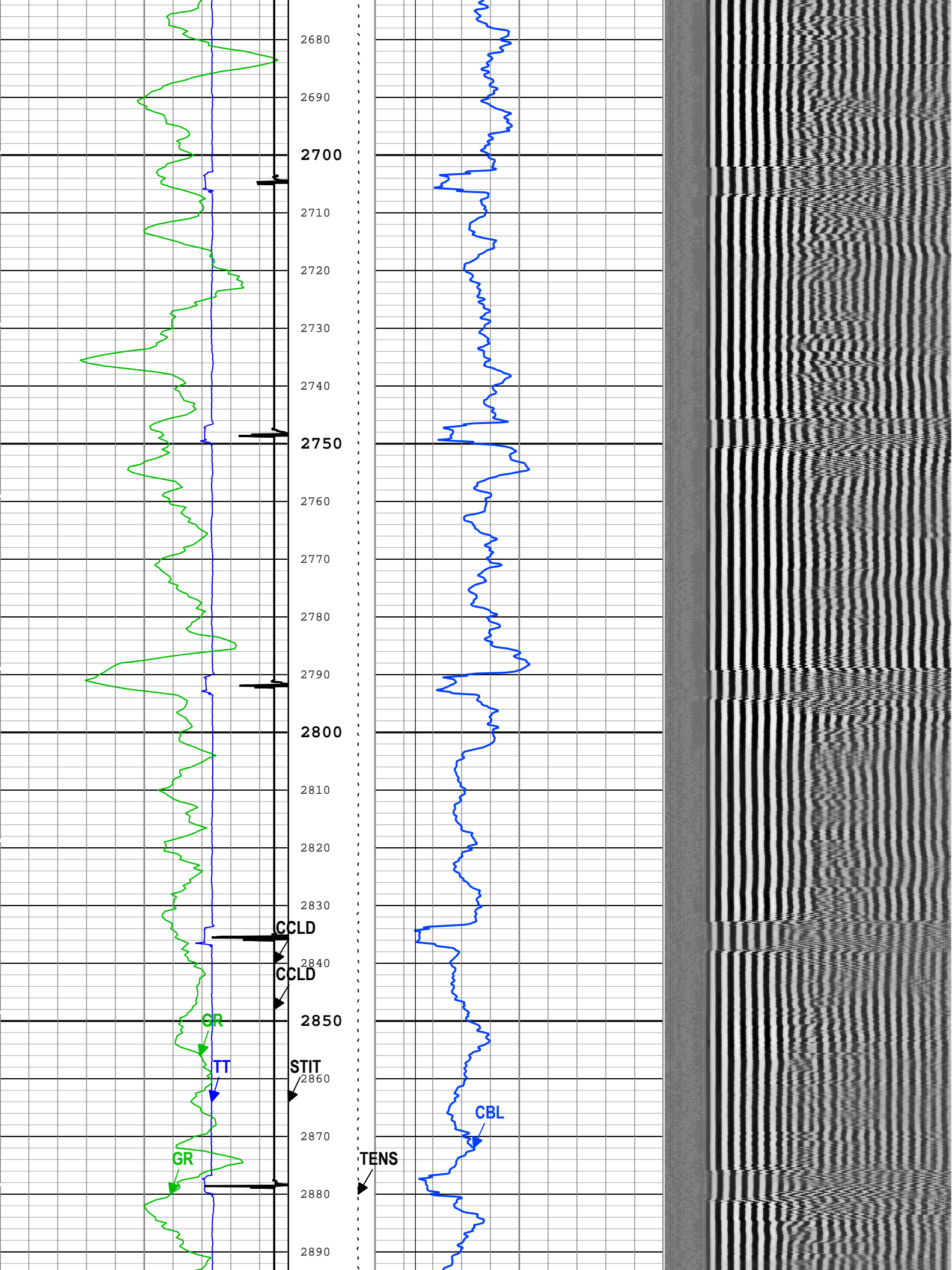
CBL Amplitude (CBL) SCMT-HC[1]		
0	mV	10
CBL Amplitude (CBL) SCMT-HC[1]		
0	mV	100
Good Bond (GOBO)		
0	mV	10
GoodBond From CBL to GOBO		
200	us	1200

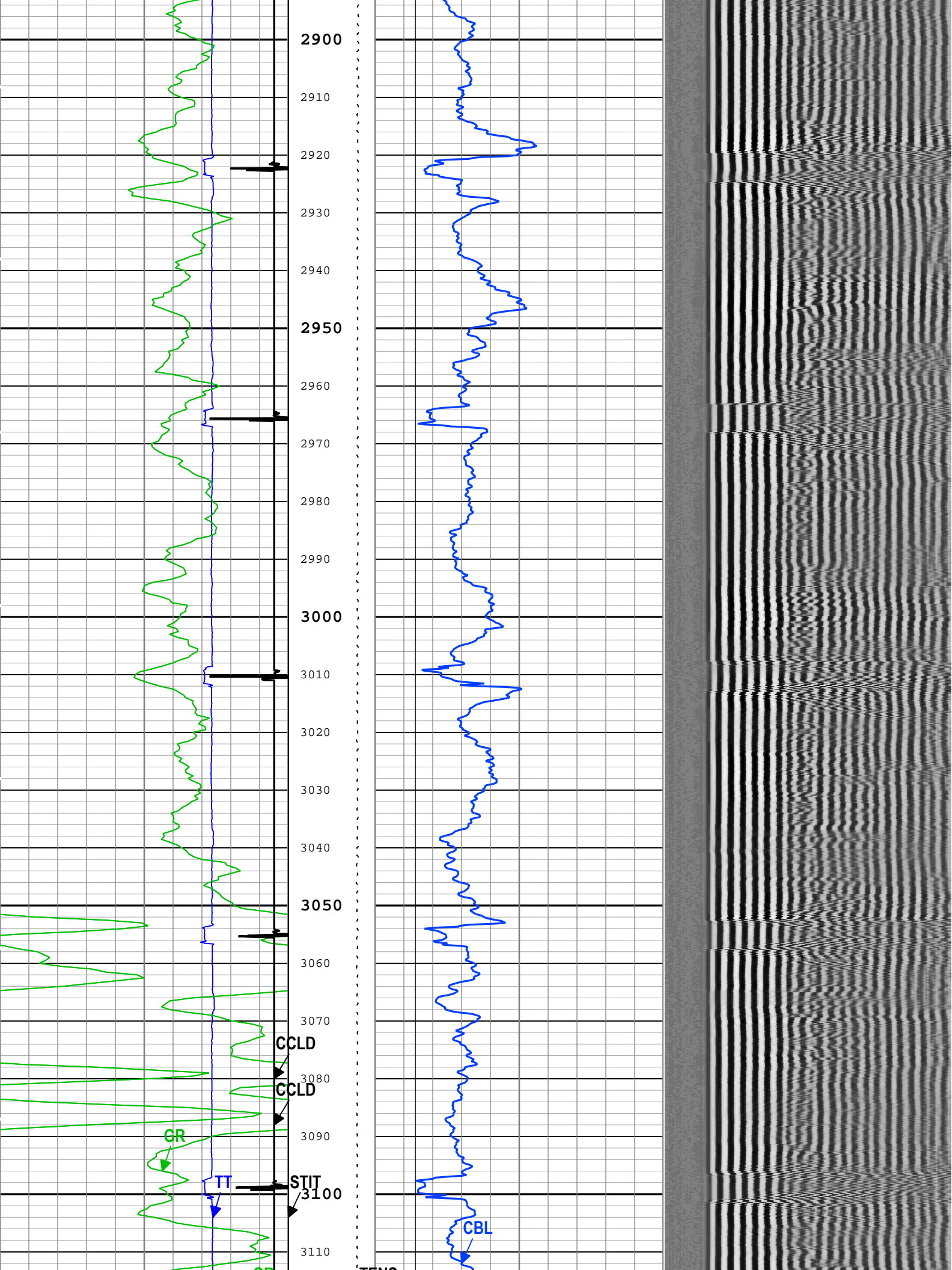


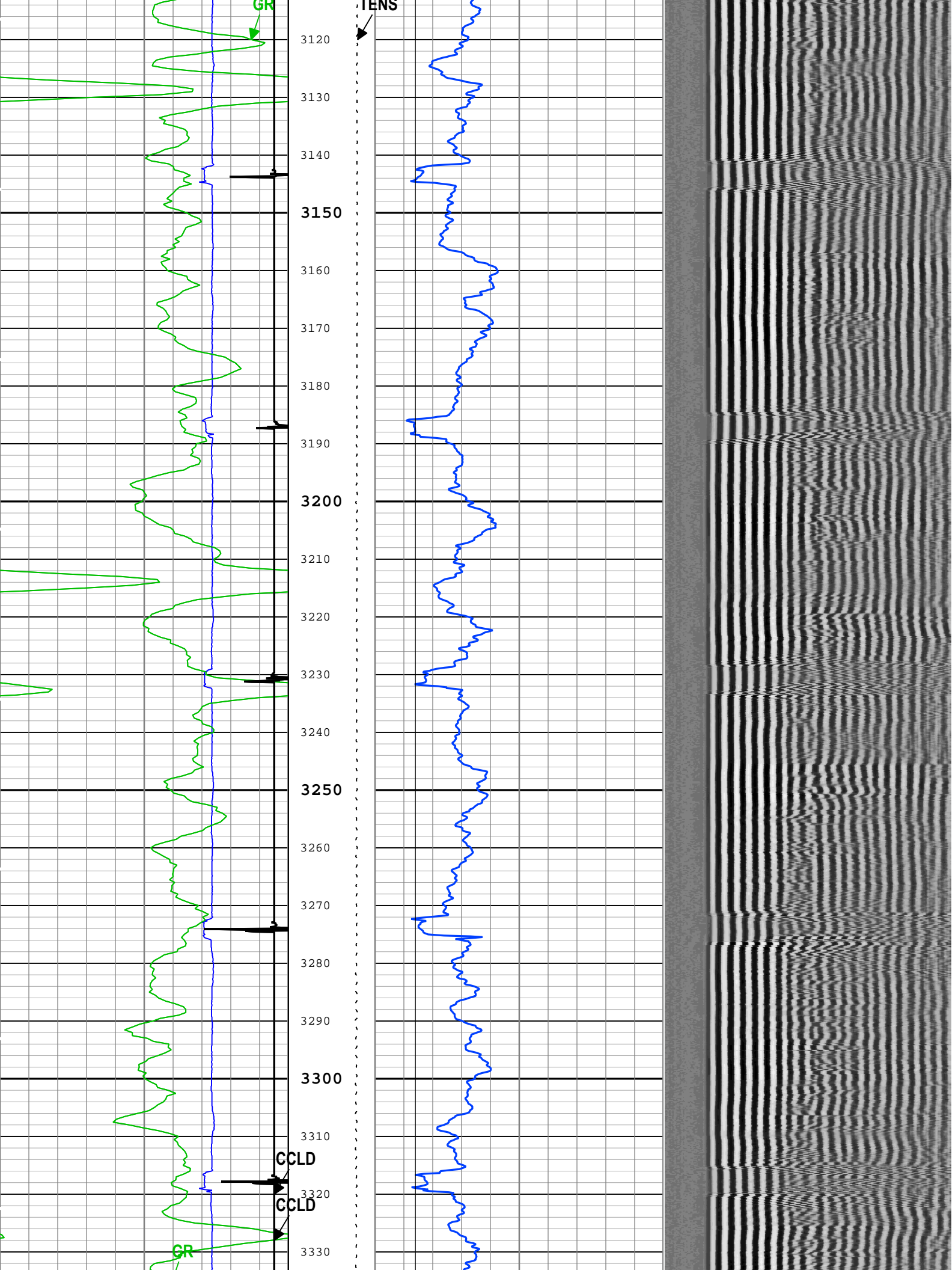


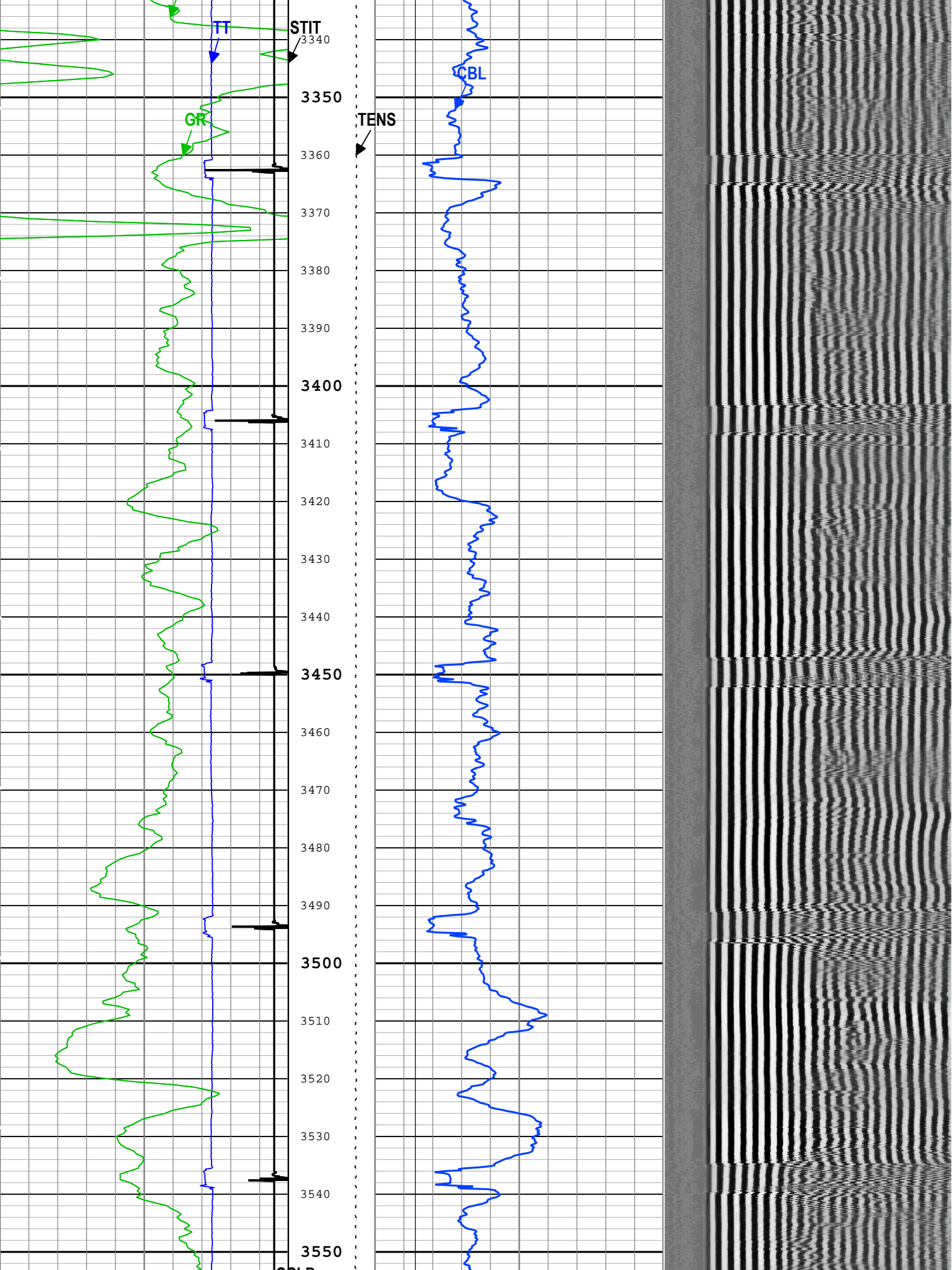


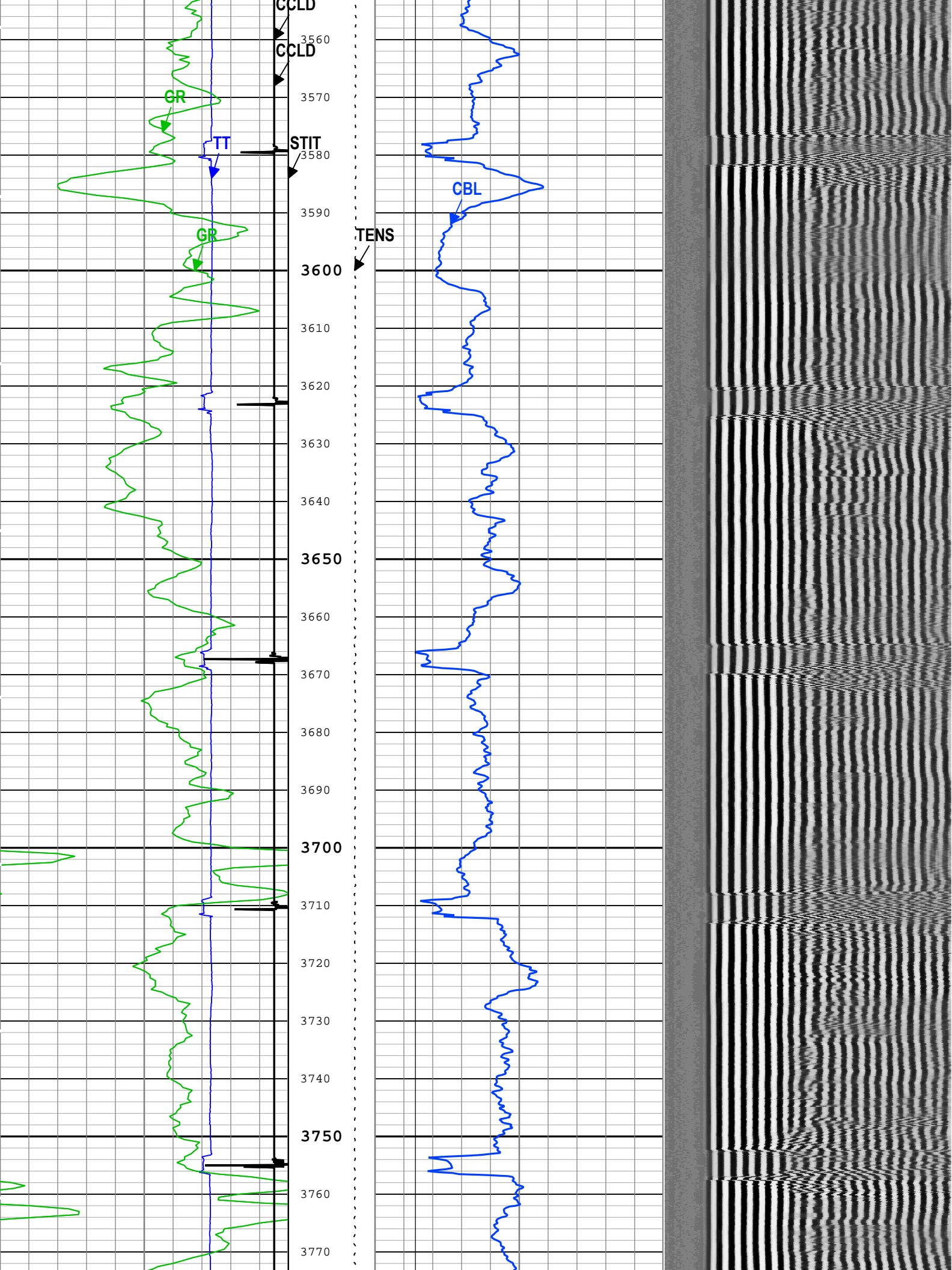


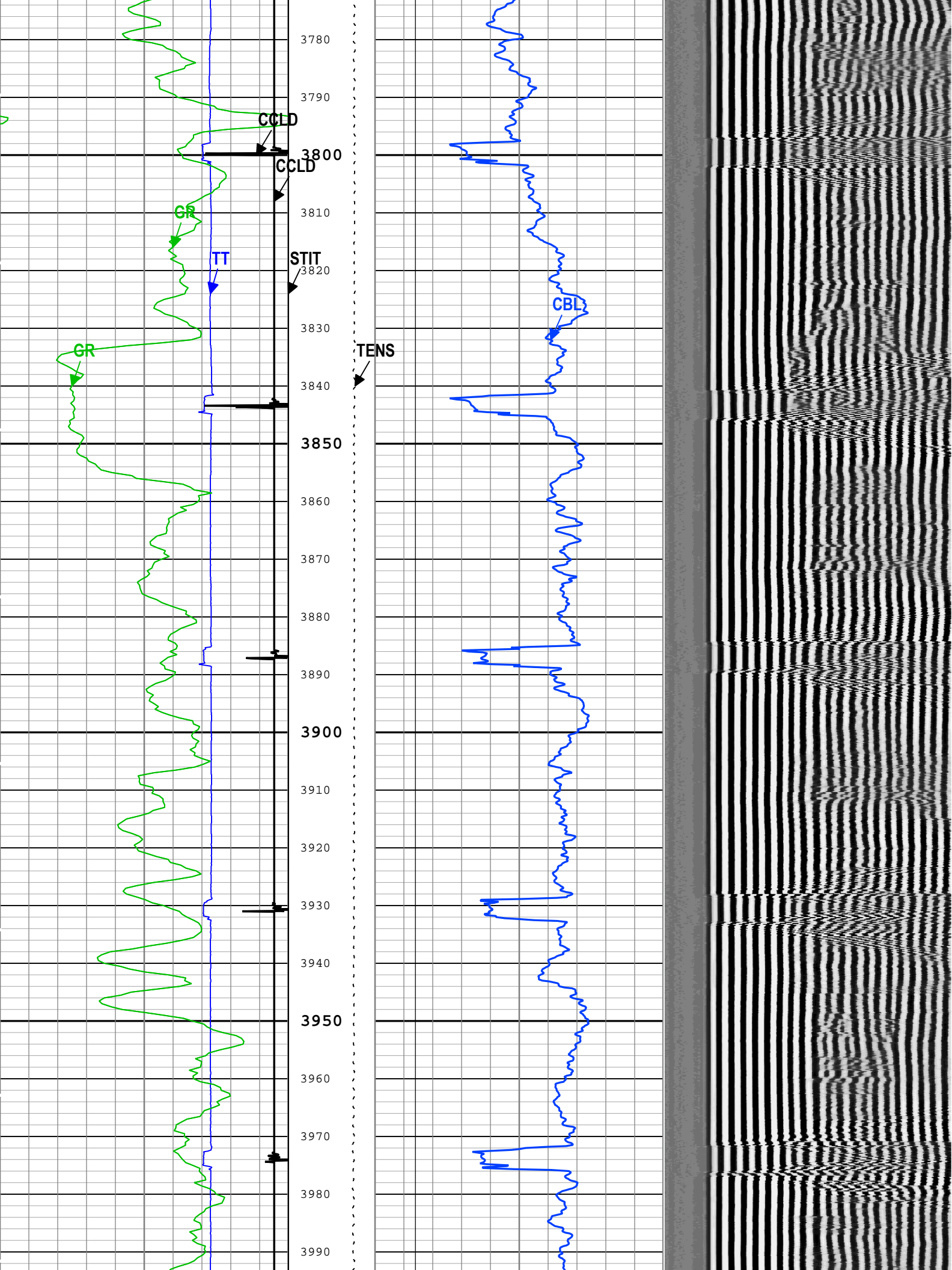


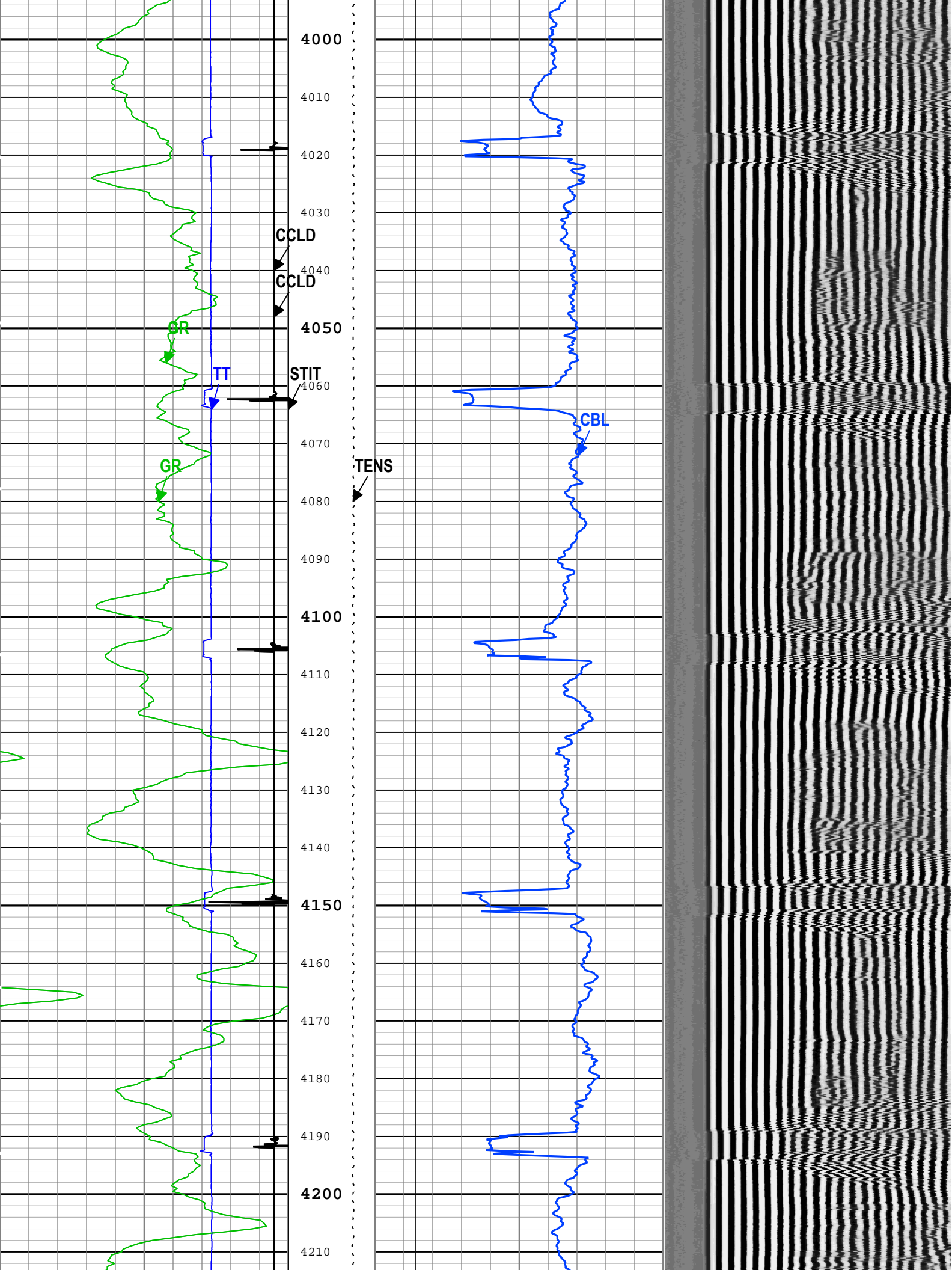


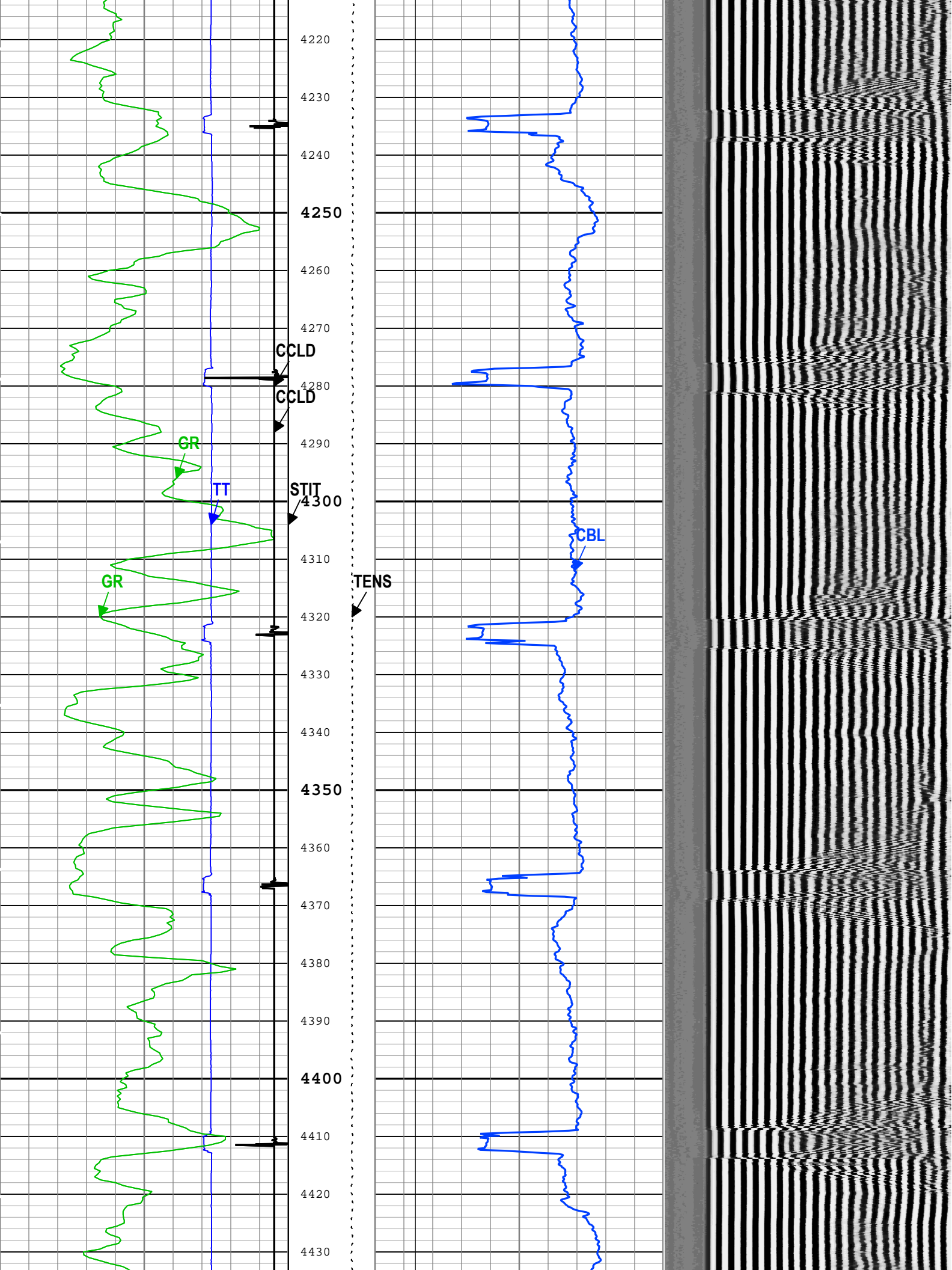


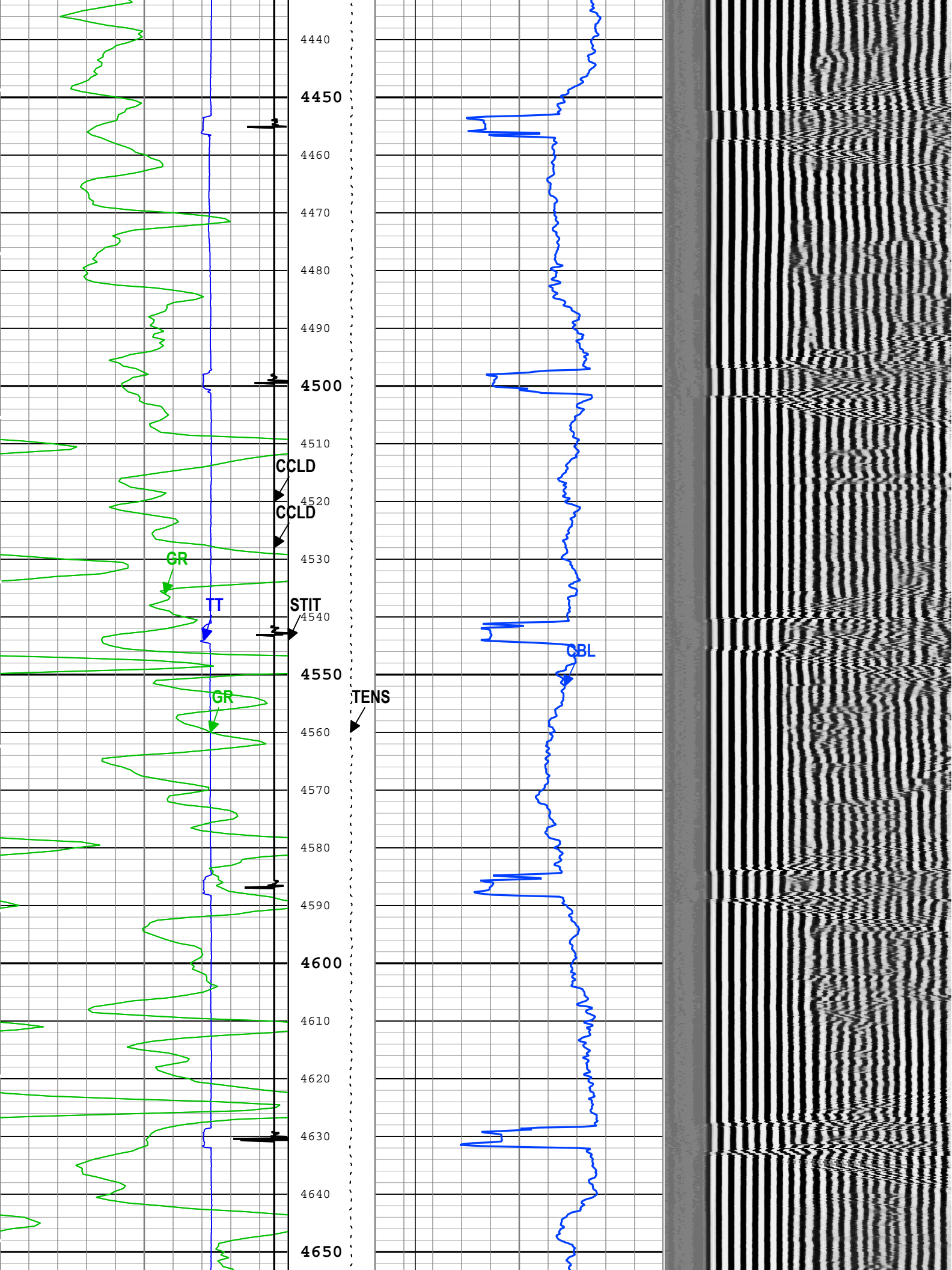


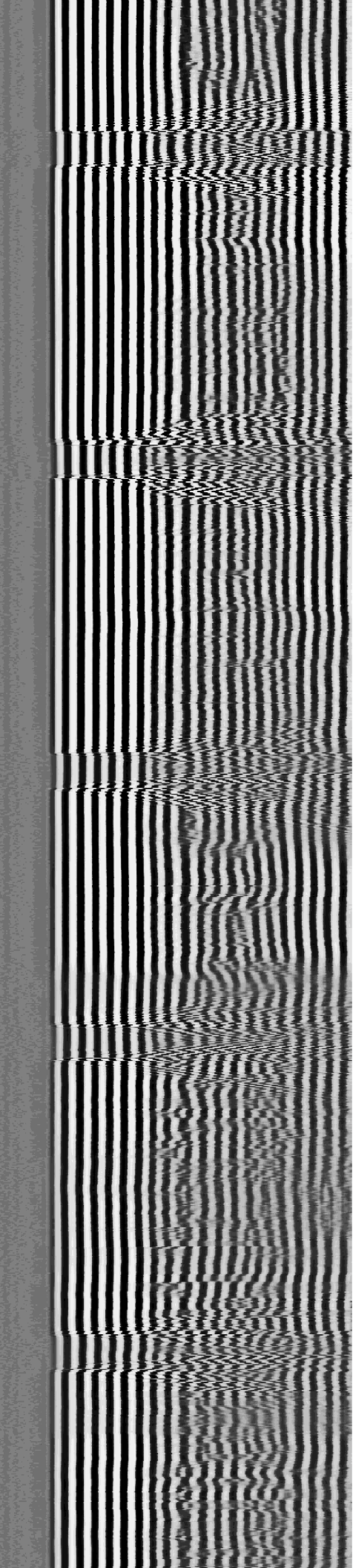
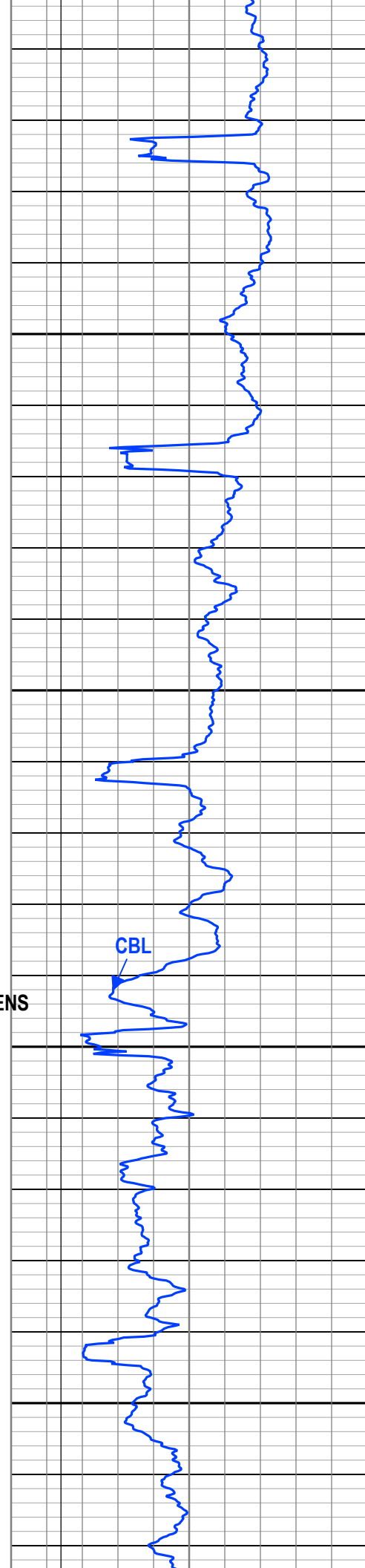
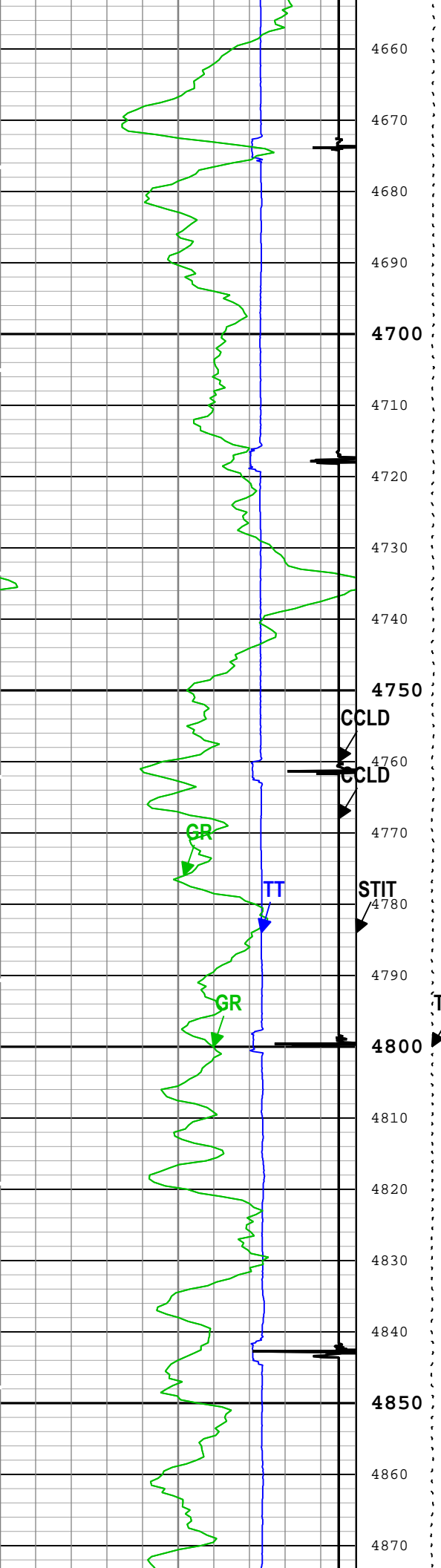


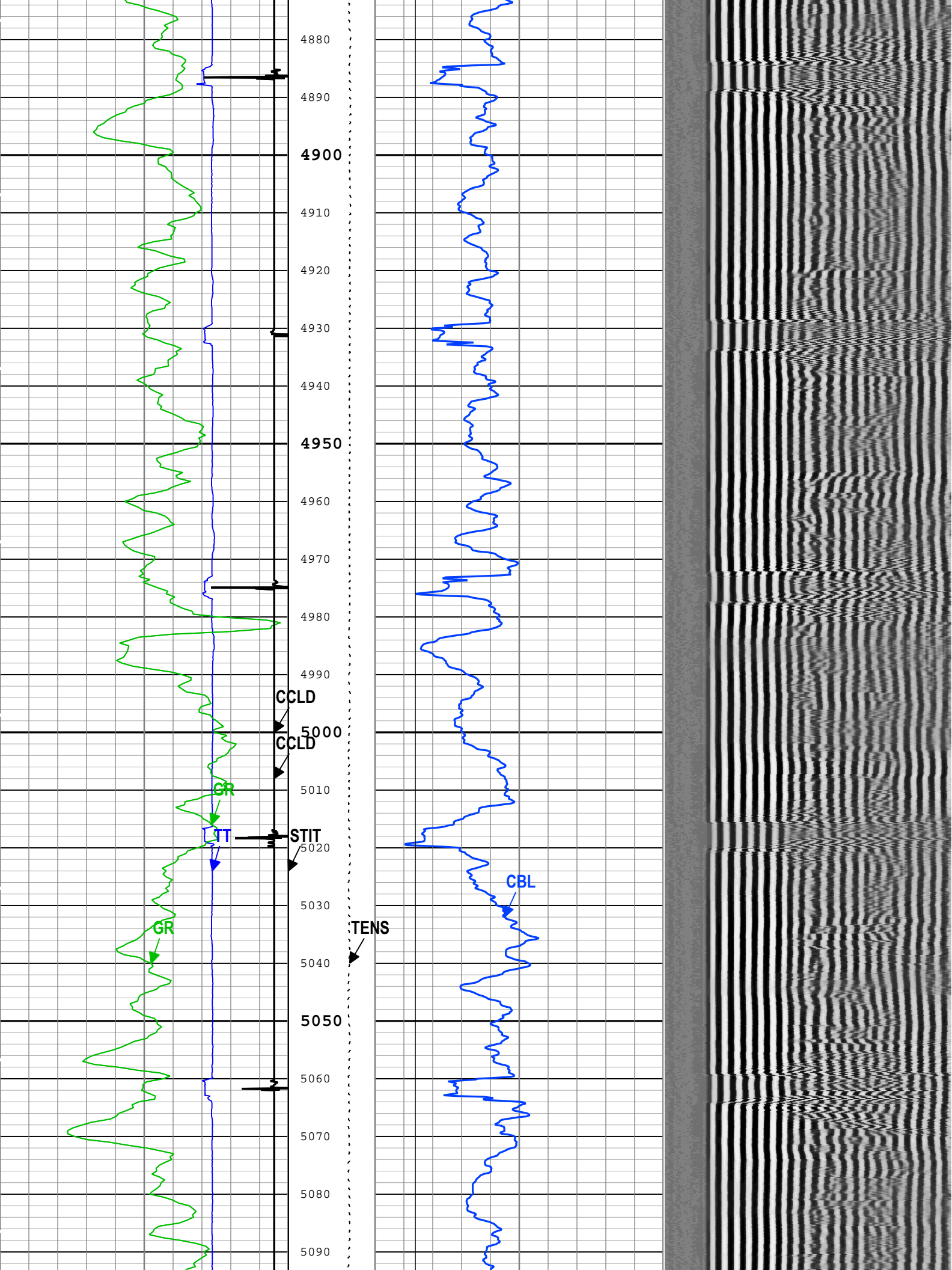


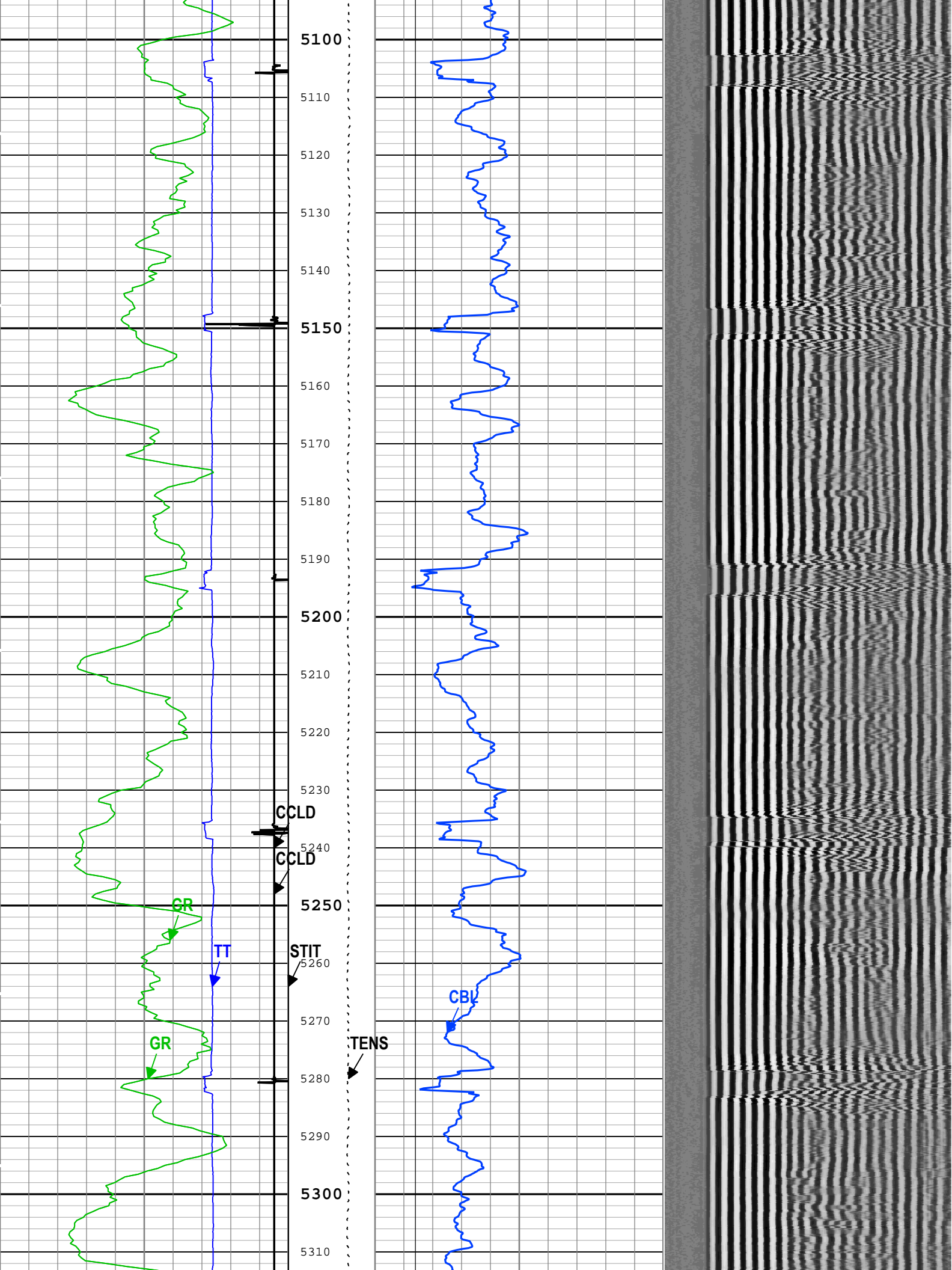


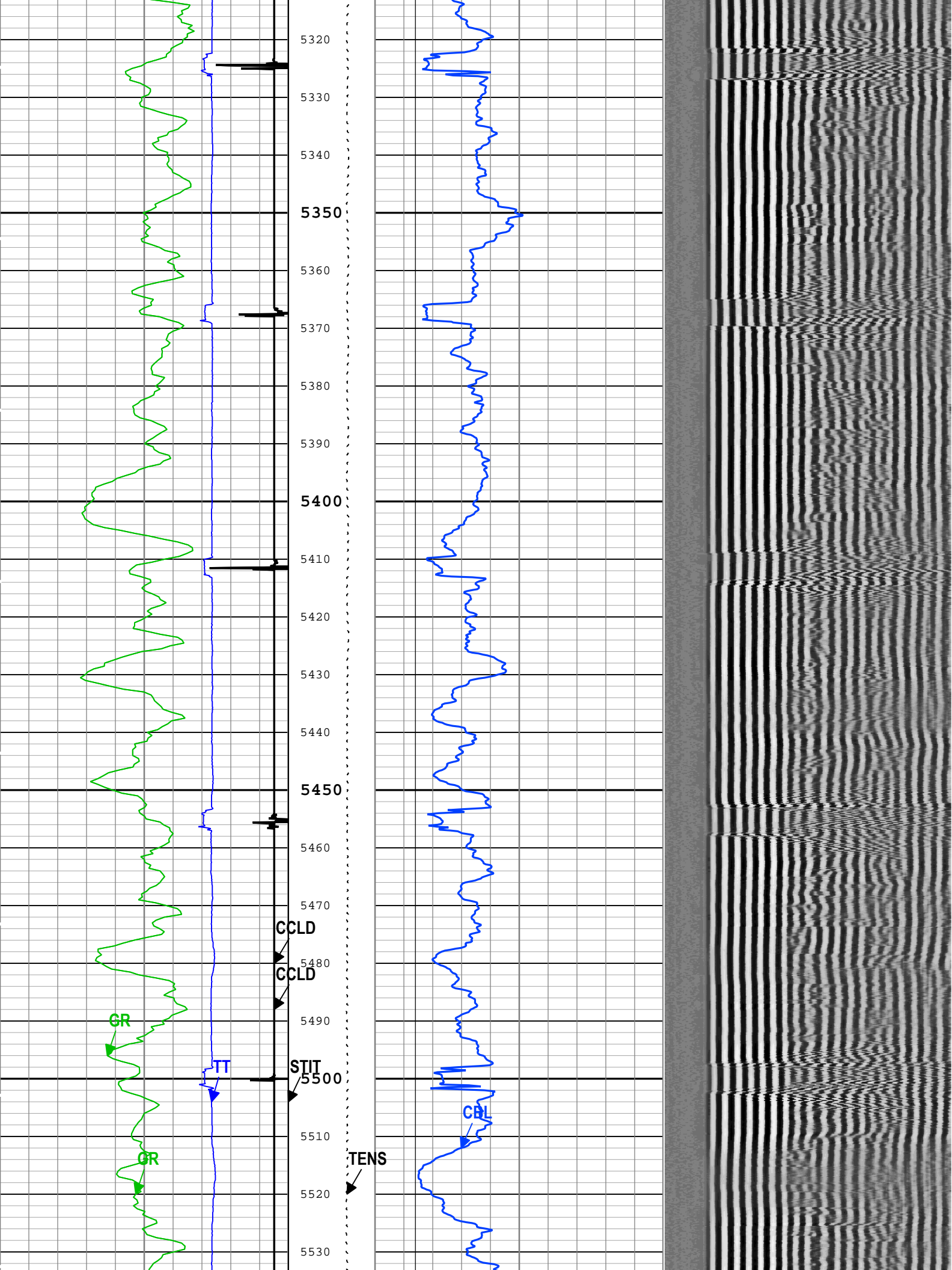


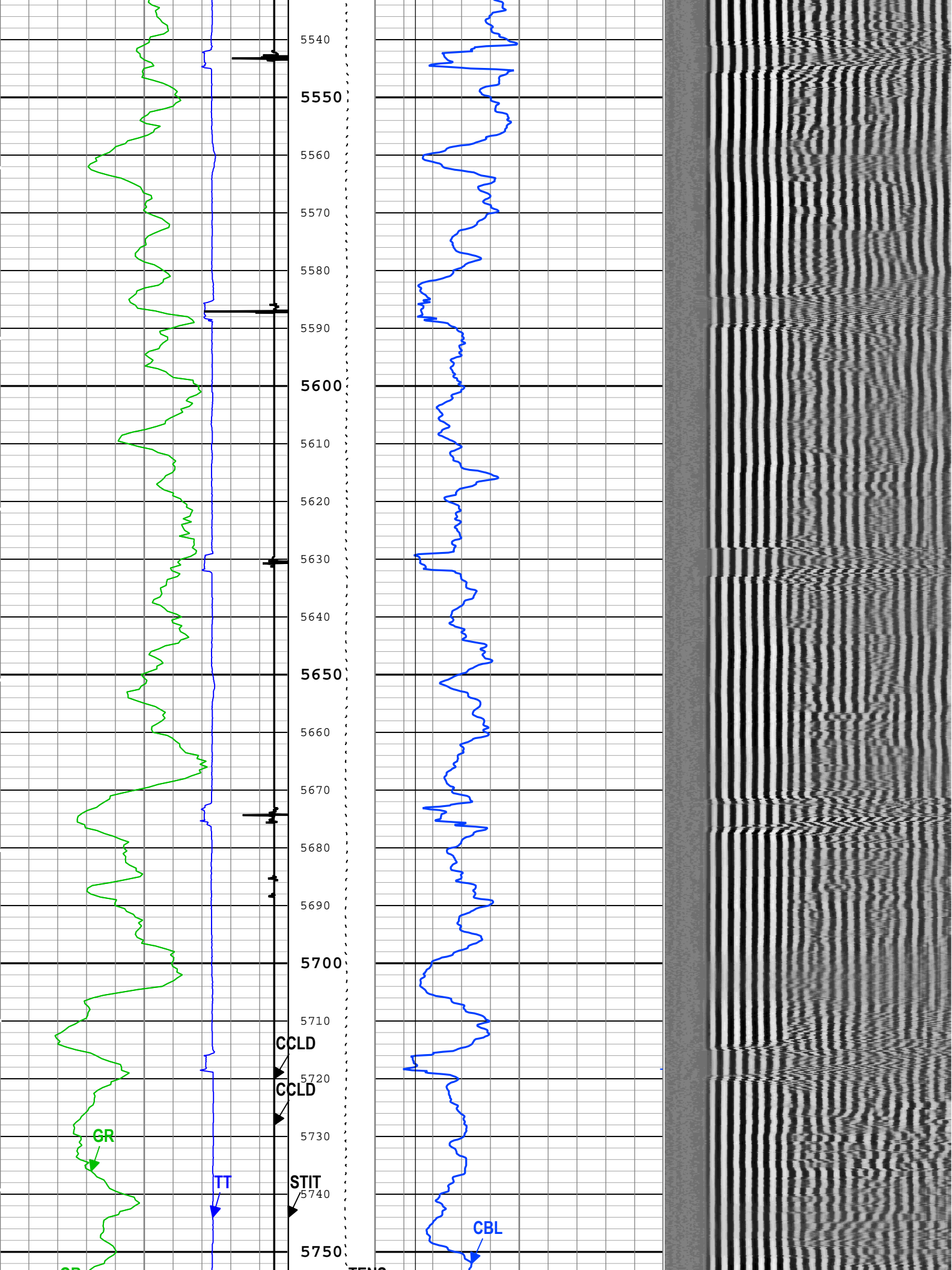


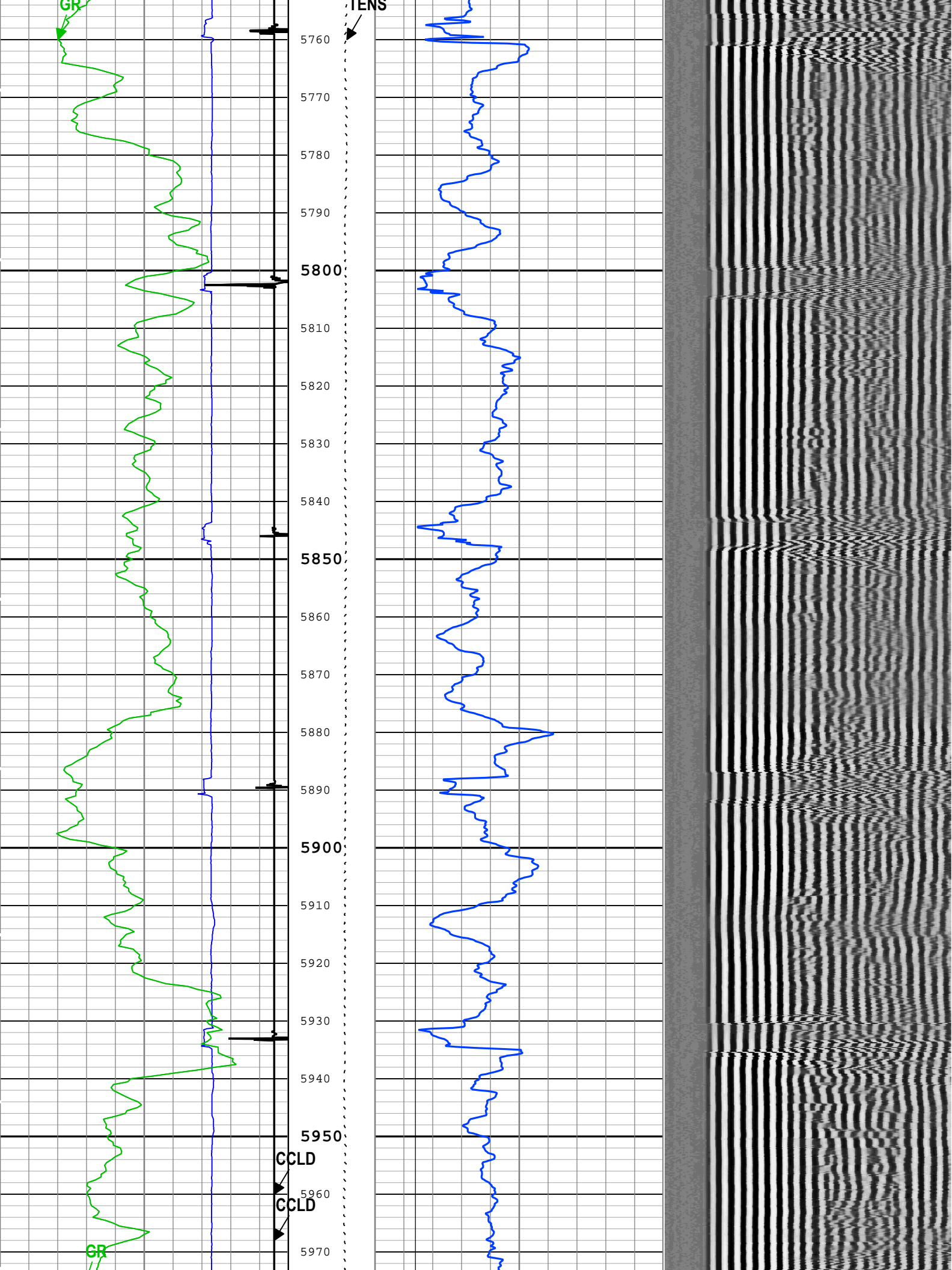


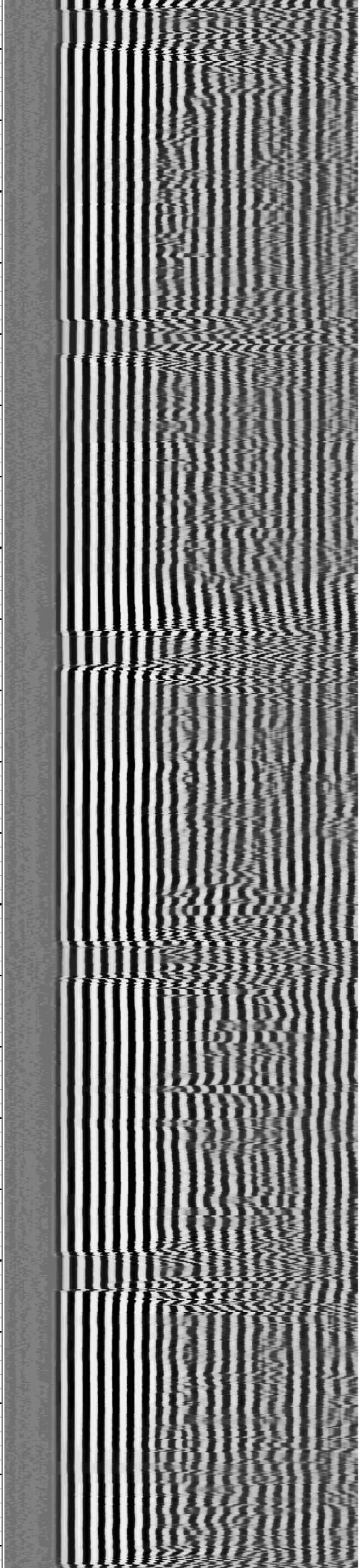
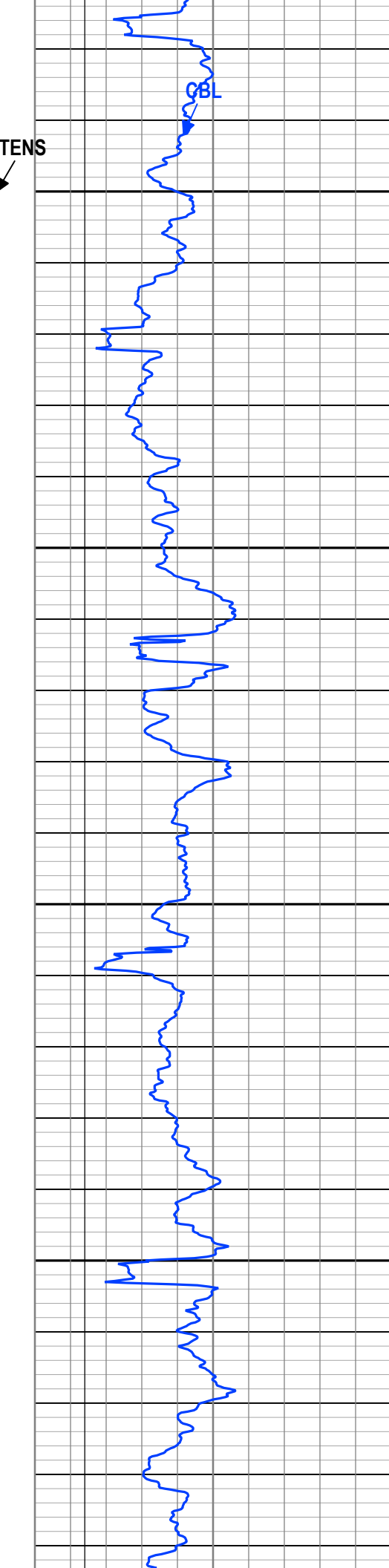
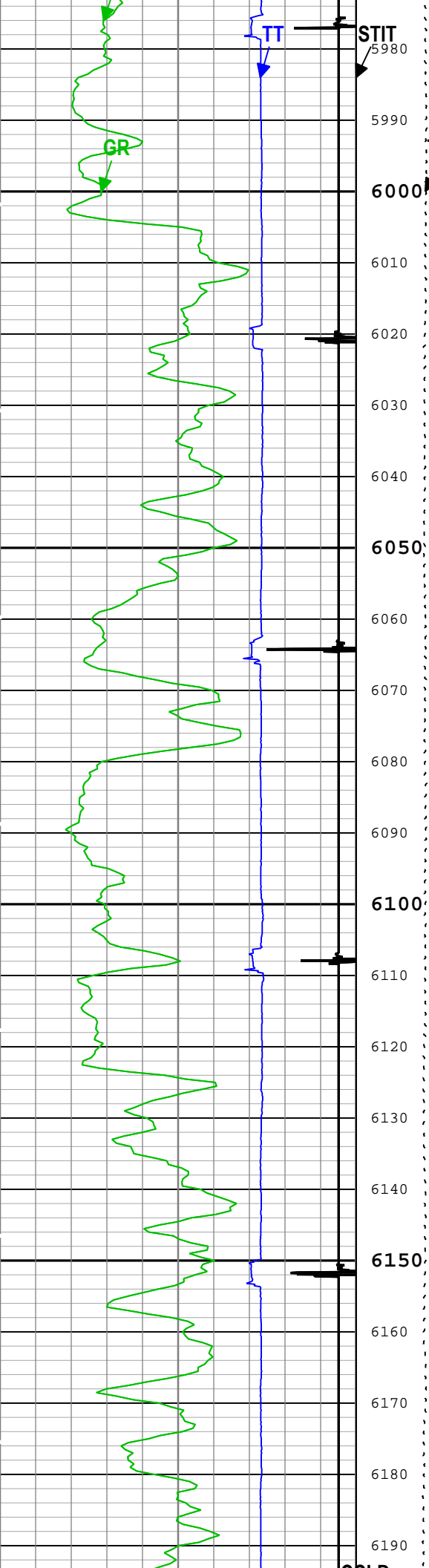


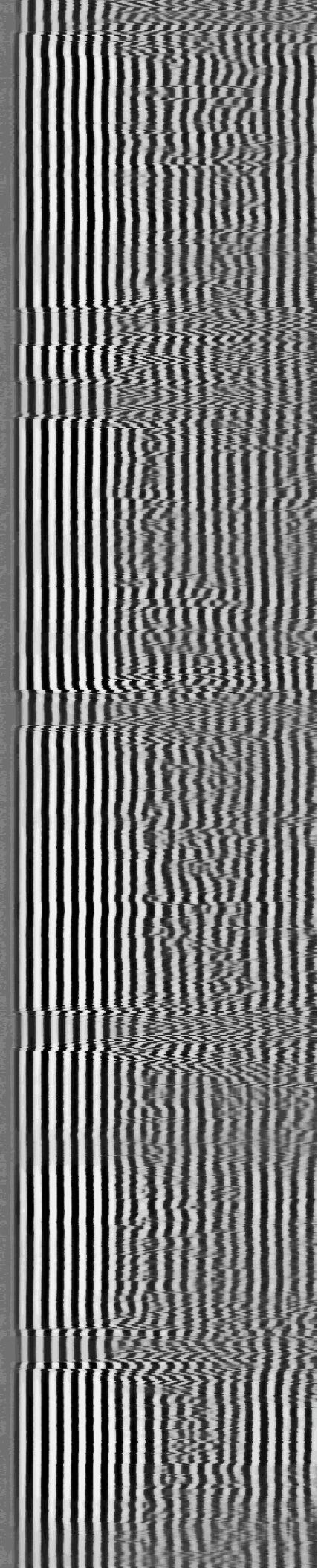
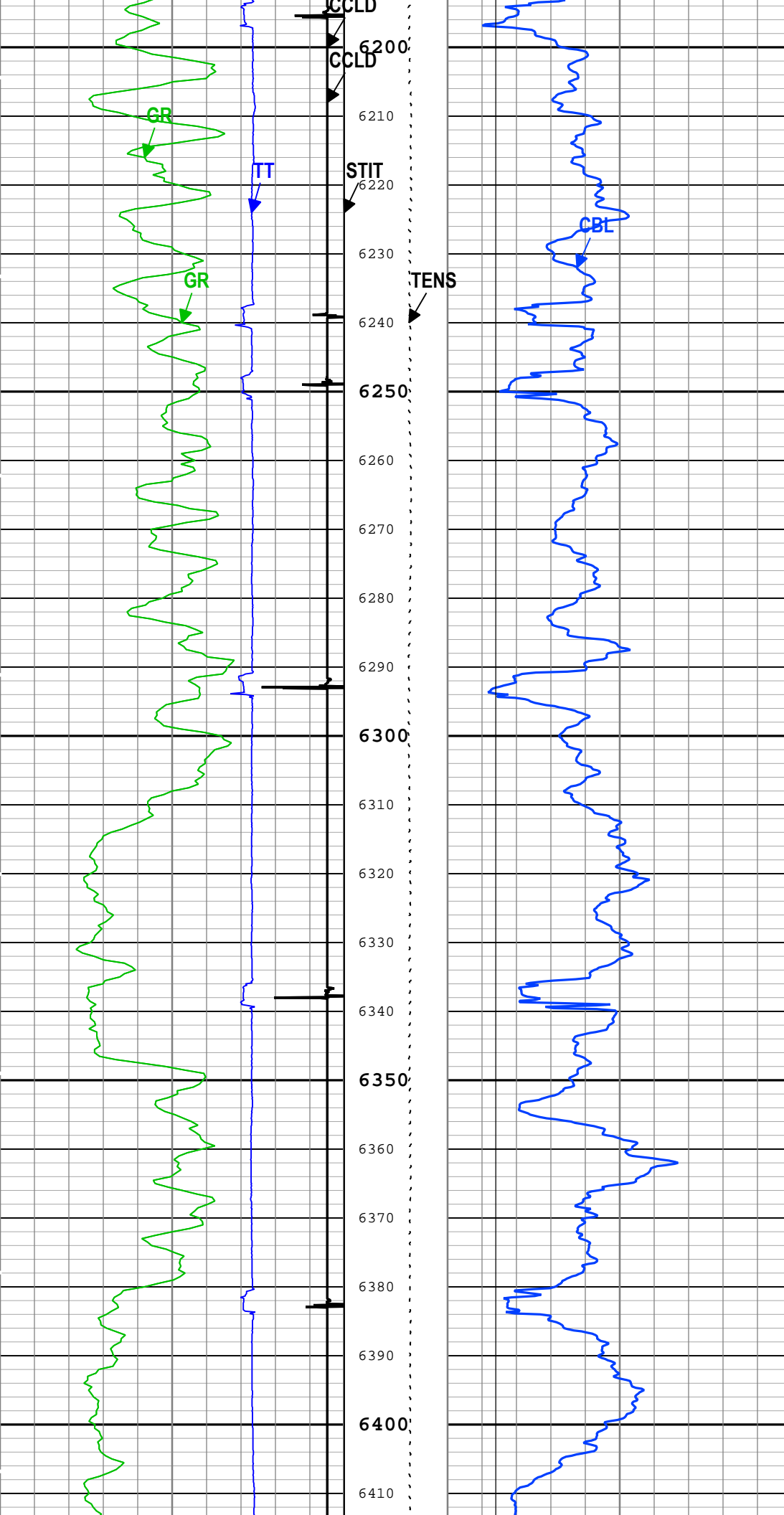


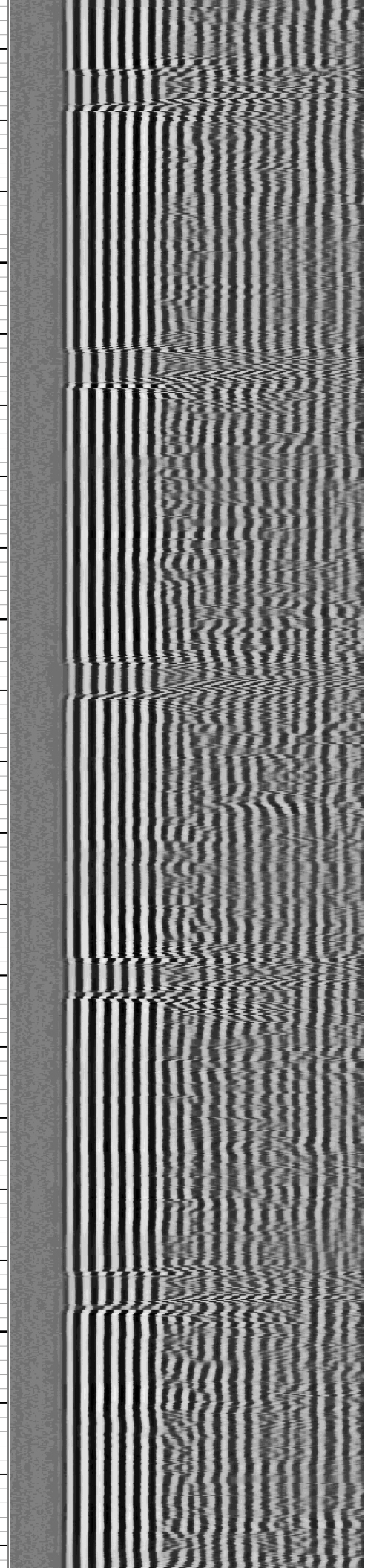
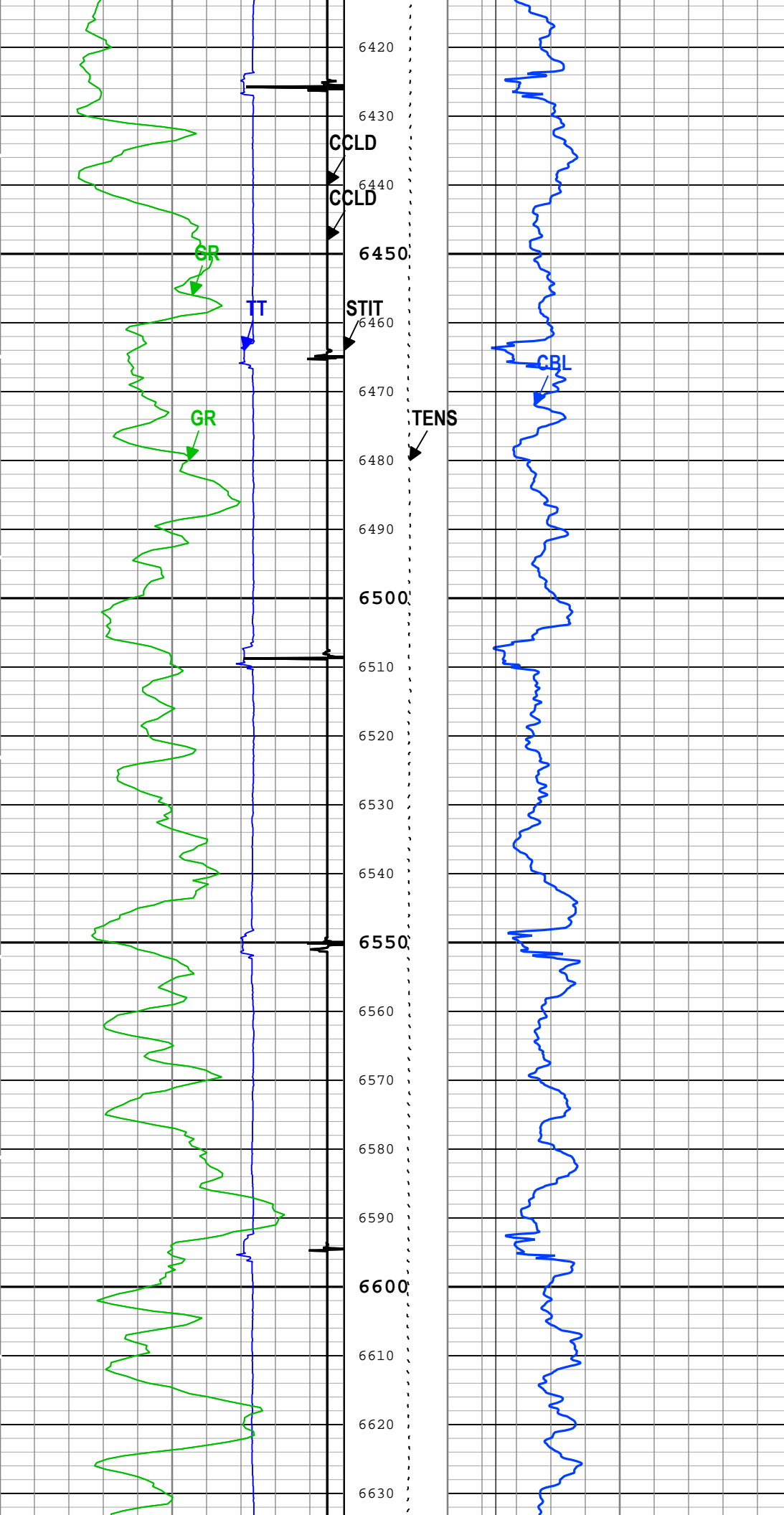


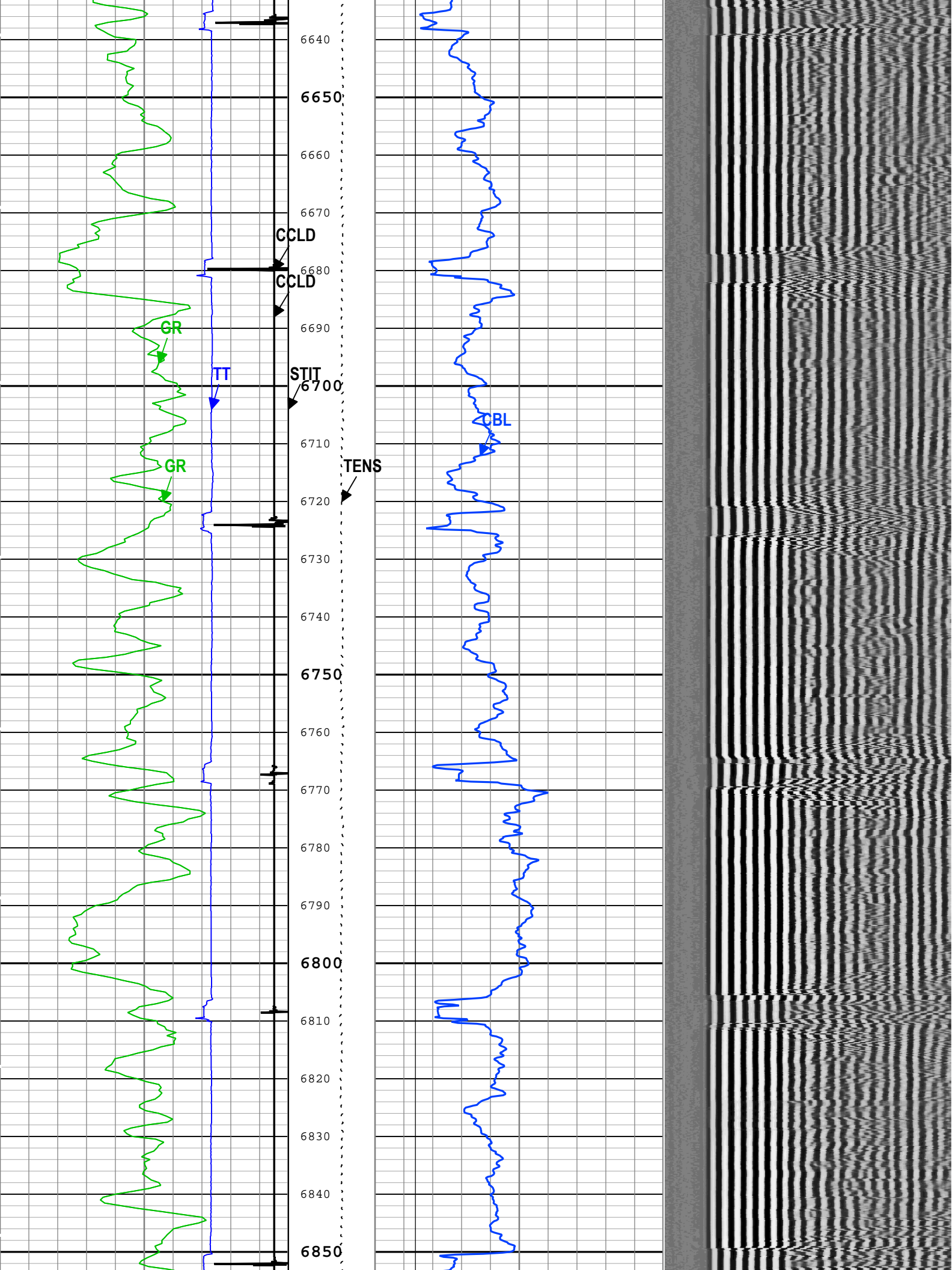


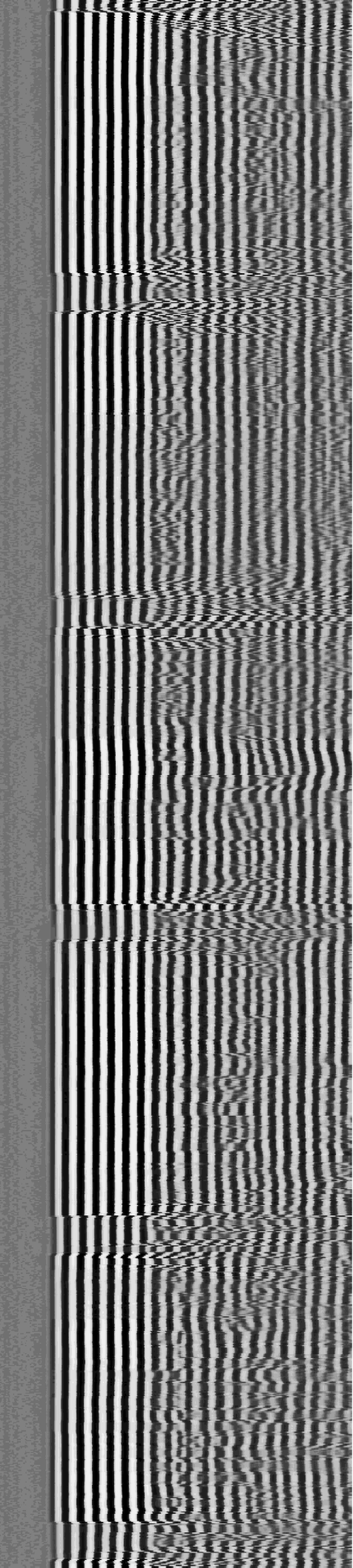
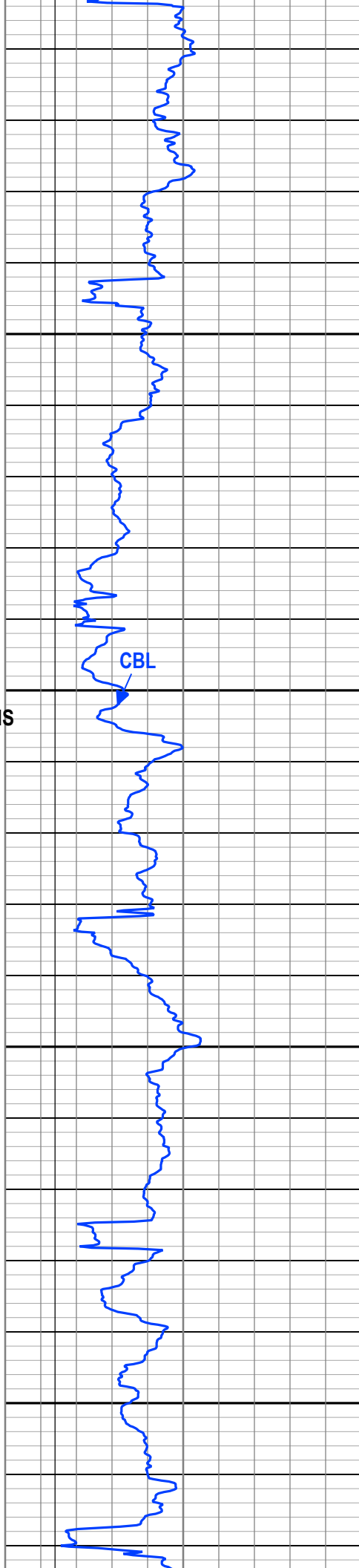
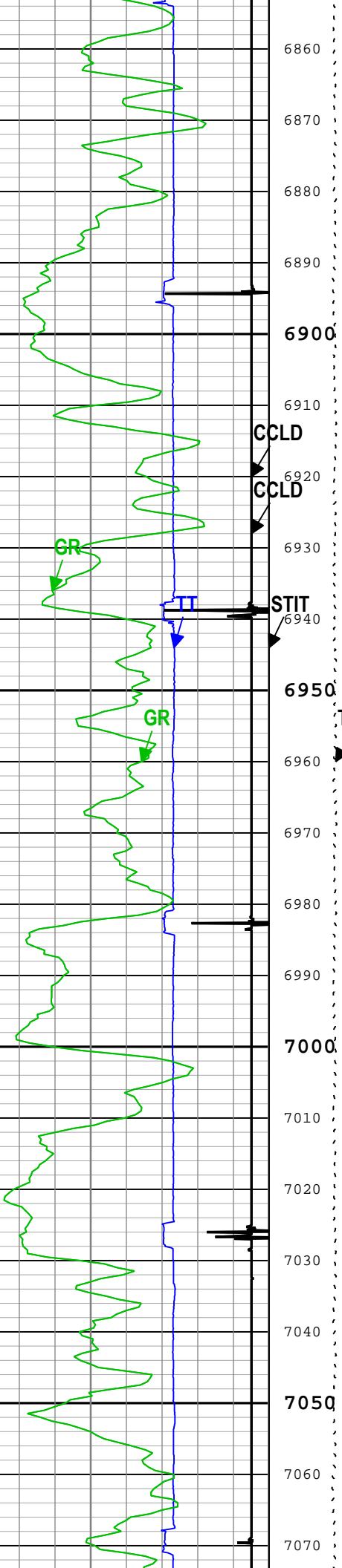


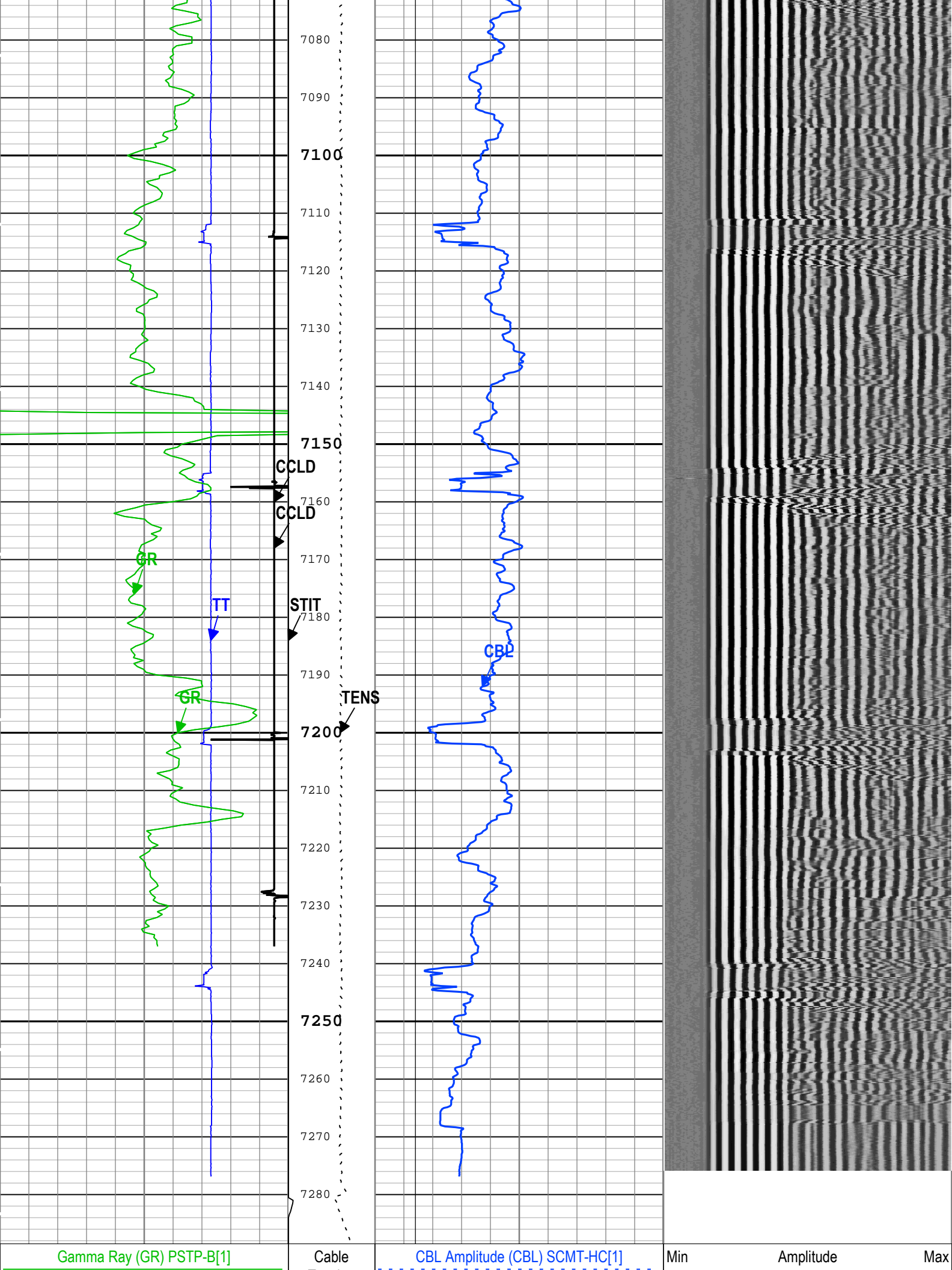












Gamma Ray (GR) PSTP-B[1]

Cable

CBL Amplitude (CBL) SCMT-HC[1]

Min

Amplitude

Max

0	gAPI	150	Tension (TENS)	0	mV	10	VDL VariableDensity (VDL) SCMT-HC[1]	200	us	1200
Transit Time for CBL (TT) SCMT-HC[1]			3000 lbf	CBL Amplitude (CBL) SCMT-HC[1]						
400	us	200	Stuck Tool Indicator, Total (STIT)	0	mV	100				
Gamma Ray (GR) PSTP-B[1]										
0	gAPI	150	0 ft 50		Good Bond (GOBO)					
CCL Discriminated Amplitude (CCLD) PSTP-B[1]			GoodBond From CBL to GOBO							
-19	V	1	Cable Drag							
CCL Discriminated Amplitude (CCLD) PSTP-B[1]			Tool_Tot. Drag							
-19	V	1								

■ BIEP - Bond Index Event Pips SCMT-HC[1]

TIME_1900 - Time Marked every 60.00 (s)

Description: Sonic CBL with VDL Format: Log (Sonic CBL with VDL) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 14-Sep-2018 10:30:40

Channel Processing Parameters

One: Parameters

Parameter	Description	Tool	Value	Unit
BHT	Bottom Hole Temperature	Borehole	228.5	degF
CB3G	SCMT CBL 3 ft Peak Detection T0_Delay and Noise Gate	SCMT-HC	229.74	us
CBLG	CBL Gate Width	SCMT-HC	40	us
CBRA	CBL LQC Reference Amplitude in Free Pipe	SCMT-HC	80	mV
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DFD	Drilling Fluid Density	Borehole	8.5	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
GOBO_CURR	Good Bond in Arbitrary Cement	SCMT-HC	1.4	mV
GTSE	Generalized Temperature Selection, from Measured or Computed Temperature	Borehole	WTEP	
MATT_CURR	Maximum Attenuation in Arbitrary Cement	SCMT-HC	16.92	dB/ft
MCI	Minimum Cemented Interval for Isolation	SCMT-HC	Depth Zoned	ft
MSA	Minimum Sonic Amplitude	SCMT-HC	0.51	mV
MSA_CURR	Minimum Sonic Amplitude in Arbitrary Cement	SCMT-HC	0.51	mV
RUN_SNUM	Run Sequence Number	WSDRUN	1	
TD	Total Measured Depth	Borehole	7280	ft

OneDepth Zoned Parameters

Parameter	Value	Start (ft)	Stop (ft)
MCI	14.81	1900	2050
MCI	1.25	2050	7288.5

All depth are actual.

Tool Control Parameters

One: Parameters

Parameter	Description	Tool	Value	Unit
CMTM	SCMT Operating Mode	SCMT-HC	Log	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	150	ft/h
PCCG	PSP Downhole CCL Gain	PSTP-B	24 dB	

One

Repeat Pass

Software Version

Acquisition System	Version
Maxwell 2018 SP1	8.1.99839.3100
Application Patch	Wireline_Hotfix-Mandatory-2018SP1_8.1.102865

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
One	Log[4]:Up	Up	6949.27 ft	7291.58 ft	14-Sep-2018 2:05:57 AM	14-Sep-2018 2:18:18 AM	ON	6.19 ft	No

All depths are referenced to toolstring zero

Log	Company:Caerus Operating LLC Well:NPR 14D-10 596 One: Log[4]:Up:S002
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Description: Sonic CBL with VDL Format: Log (Sonic CBL with VDL) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 14-Sep-2018 10:30:46

TIME_1900 - Time Marked every 60.00 (s)

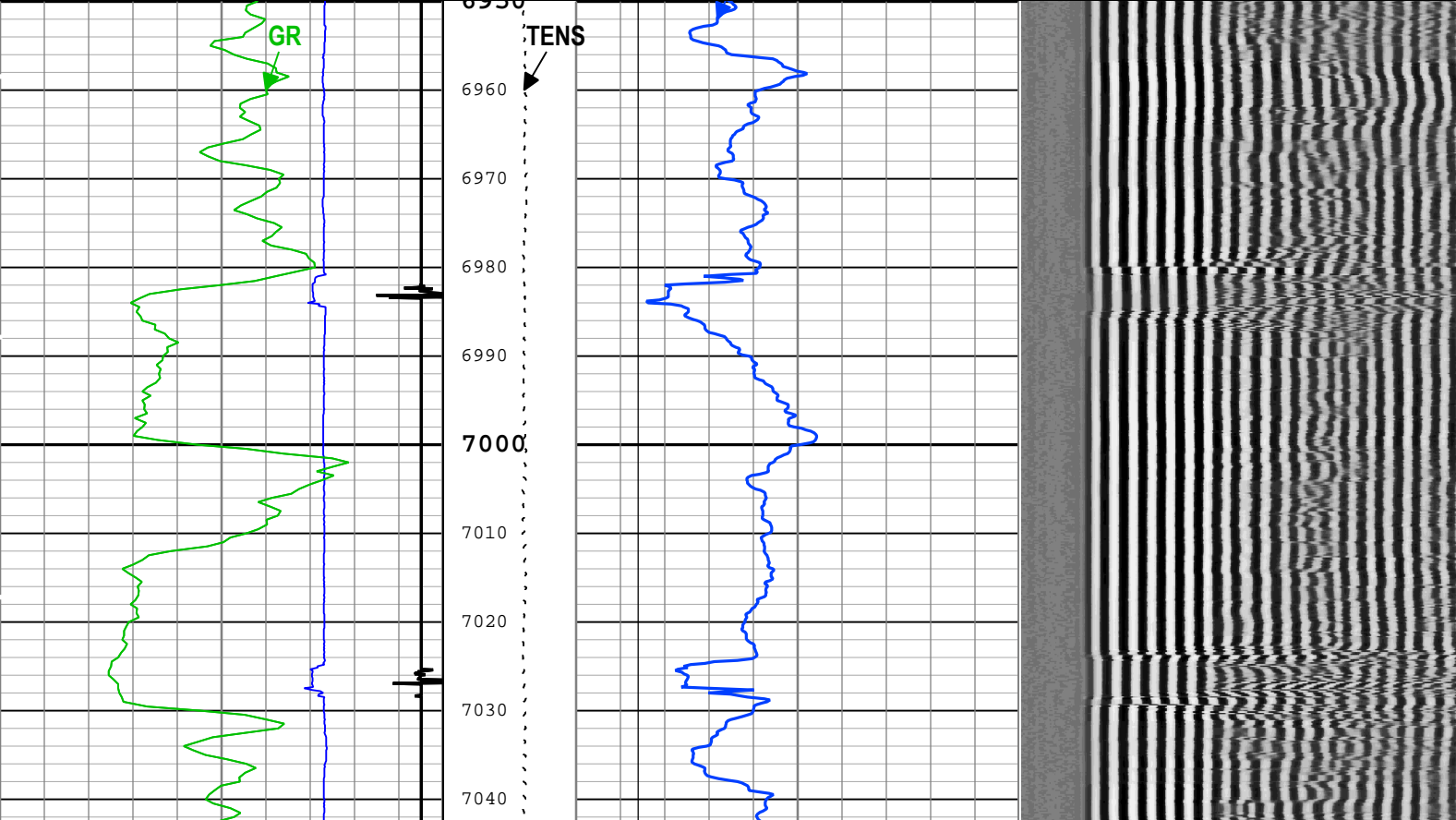
■ BIEP - Bond Index Event Pips SCMT-HC

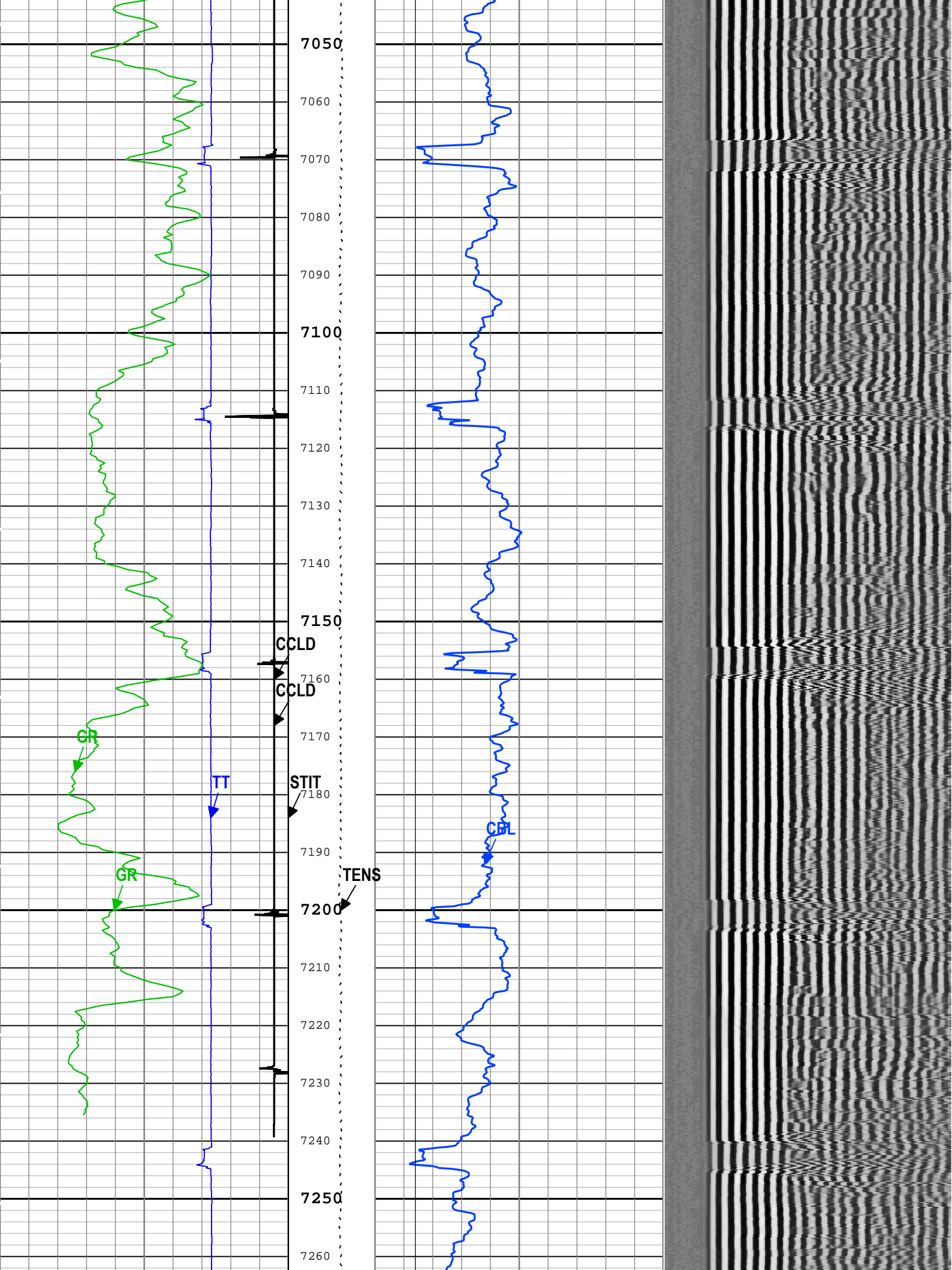
Gamma Ray (GR) PSTP-B							
0	gAPI	150					
Transit Time for CBL (TT) SCMT-HC							
400	us	200					
Gamma Ray (GR) PSTP-B							
0	gAPI	150					
CCL Discriminated Amplitude (CCLD) PSTP-B							
-19	V	1					
CCL Discriminated Amplitude (CCLD) PSTP-B							
-19	V	1					

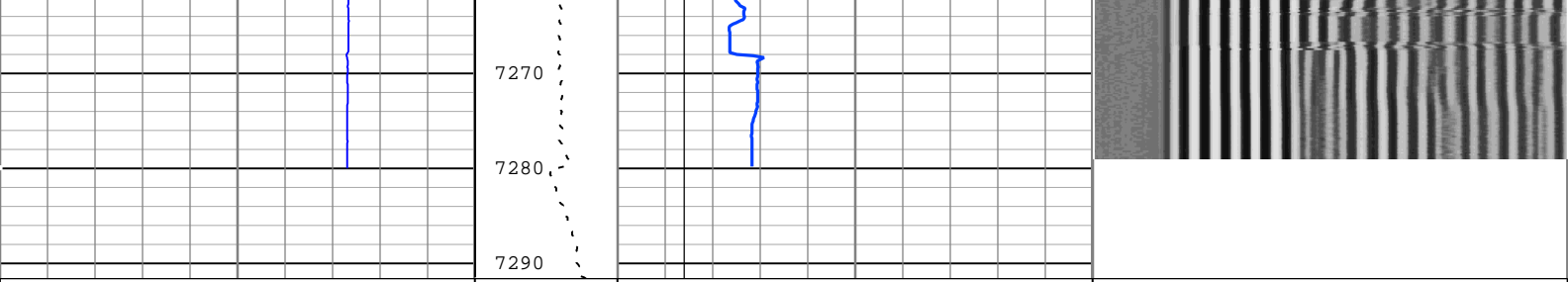
Cable Tension (TENS)	3000 lbf	0
Stuck Tool Indicator, Total (STIT)	0	50
Cable Drag	0	50
Tool_Tot. Drag	0	50

CBL Amplitude (CBL) SCMT-HC	0	10
CBL Amplitude (CBL) SCMT-HC	0	100
Good Bond (GOBO)	0	10
GoodBond From CBL to GOBO	200	1200

Min	Amplitude	Max
200	us	1200







Gamma Ray (GR) PSTP-B	Cable Tension (TENS)	CBL Amplitude (CBL) SCMT-HC	Min	Amplitude	Max
0 gAPI 150	3000 lbf 0	0 mV 10			
Transit Time for CBL (TT) SCMT-HC	Stuck Tool Indicator, Total (STIT)	CBL Amplitude (CBL) SCMT-HC	200	us	1200
400 us 200	0 ft 50	0 mV 100			
Gamma Ray (GR) PSTP-B	Cable Drag	Good Bond (GOBO)			
0 gAPI 150		0 mV 10			
CCL Discriminated Amplitude (CCLD) PSTP-B	Tool_Tot. Drag	GoodBond From CBL to GOBO			
-19 V 1					
CCL Discriminated Amplitude (CCLD) PSTP-B					
-19 V 1					

■ BIEP - Bond Index Event Pips SCMT-HC

TIME_1900 - Time Marked every 60.00 (s)

Description: Sonic CBL with VDL Format: Log (Sonic CBL with VDL) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 14-Sep-2018 10:30:46

Channel Processing Parameters

One: Parameters

Parameter	Description	Tool	Value	Unit
BHT	Bottom Hole Temperature	Borehole	228.5	degF
CB3G	SCMT CBL 3 ft Peak Detection T0_Delay and Noise Gate	SCMT-HC	229.74	us
CBLG	CBL Gate Width	SCMT-HC	40	us
CBRA	CBL LQC Reference Amplitude in Free Pipe	SCMT-HC	80	mV
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DFD	Drilling Fluid Density	Borehole	8.5	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
GOBO_CURR	Good Bond in Arbitrary Cement	SCMT-HC	1.4	mV
GTSE	Generalized Temperature Selection, from Measured or Computed Temperature	Borehole	WTEP	
MATT_CURR	Maximum Attenuation in Arbitrary Cement	SCMT-HC	16.92	dB/ft
MCI	Minimum Cemented Interval for Isolation	SCMT-HC	1.25	ft
MSA	Minimum Sonic Amplitude	SCMT-HC	0.51	mV
MSA_CURR	Minimum Sonic Amplitude in Arbitrary Cement	SCMT-HC	0.51	mV
RUN_SNUM	Run Sequence Number	WSDRUN	1	
TD	Total Measured Depth	Borehole	7280	ft

Tool Control Parameters

One: Parameters

Parameter	Description	Tool	Value	Unit
CMTM	SCMT Operating Mode	SCMT-HC	Log	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	150	ft/h
PCCG	PSP Downhole CCL Gain	PSTP-B	24 dB	

Composite 1

Main Pass

Software Version

Acquisition System	Version
Maxwell 2018 SP1	8.1.99839.3100
Application Patch	Wireline_Hotfix-Mandatory-2018SP1_8.1.102865

Composite Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
One	Log[6]:Up	Up	2401.26 ft	7297.71 ft	14-Sep-2018 3:33:22 AM	14-Sep-2018 6:21:23 AM	ON	4.28 ft	No
One	Log[7]:Up	Up	119.33 ft	2619.80 ft	14-Sep-2018 6:26:54 AM	14-Sep-2018 7:32:41 AM	ON	4.10 ft	No

All depths are referenced to toolstring zero

Log

Company:Caerus Operating LLC Well:NPR 14D-10 596

Composite 1:S002

Description: RST SIGMA Answer Format: Log (RST SIGMA Answer) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 14-Sep-2018 10:30:48

TIME_1900 - Elapsed time since midnight, 30 December 1899 every 60.00 (s)

TIME_1900 - Time Marked every 60.00 (s)

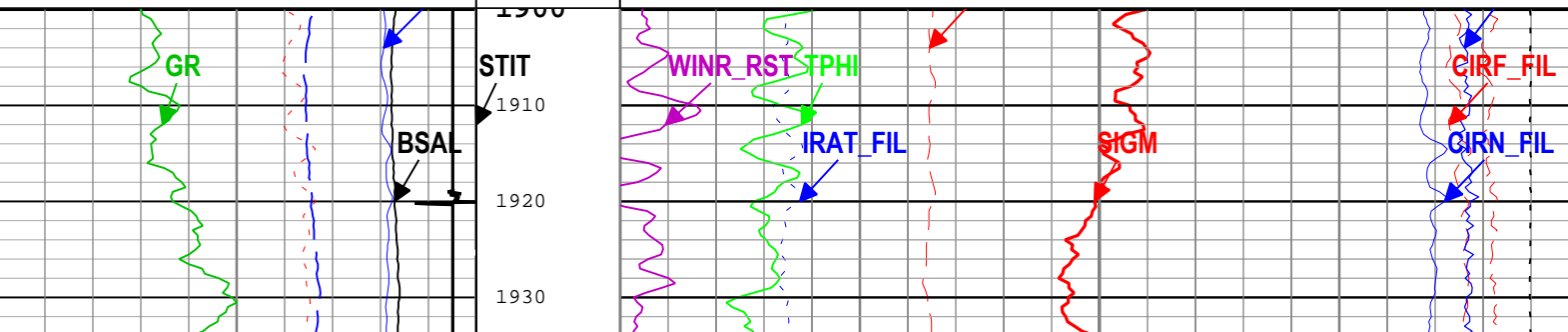
IHV - Integrated Hole Volume every 10.00 (ft3)

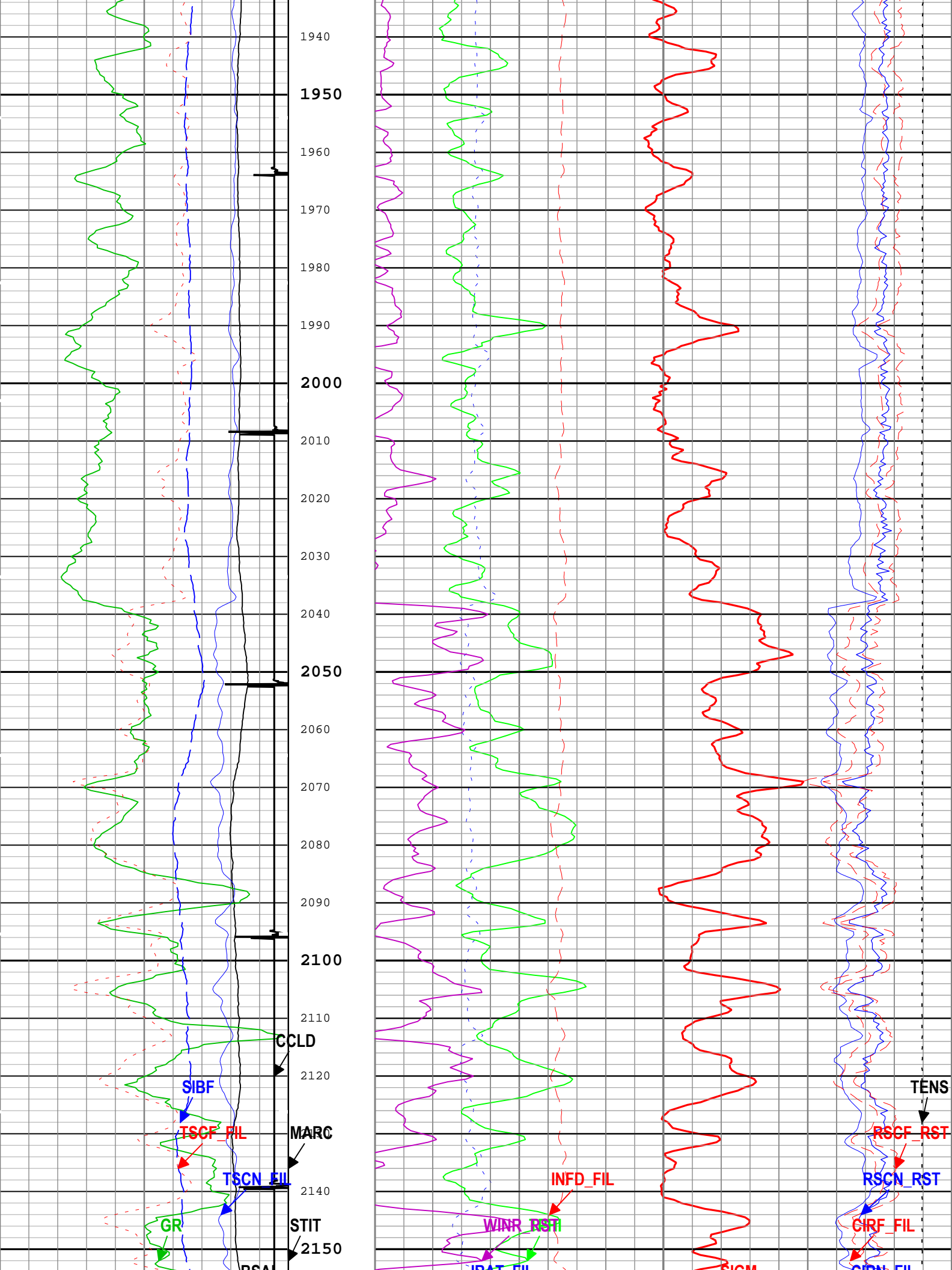
IHV - Integrated Hole Volume every 100.00 (ft3)

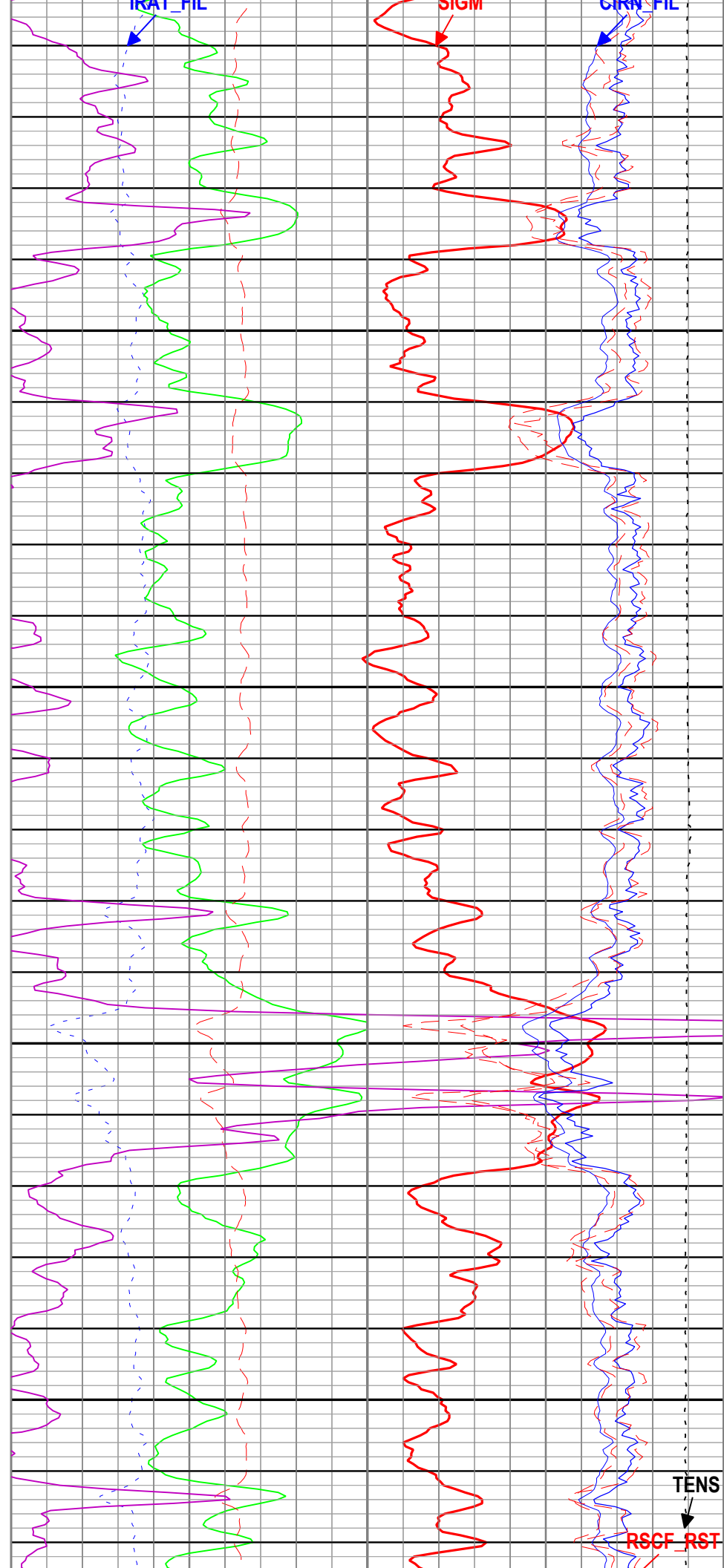
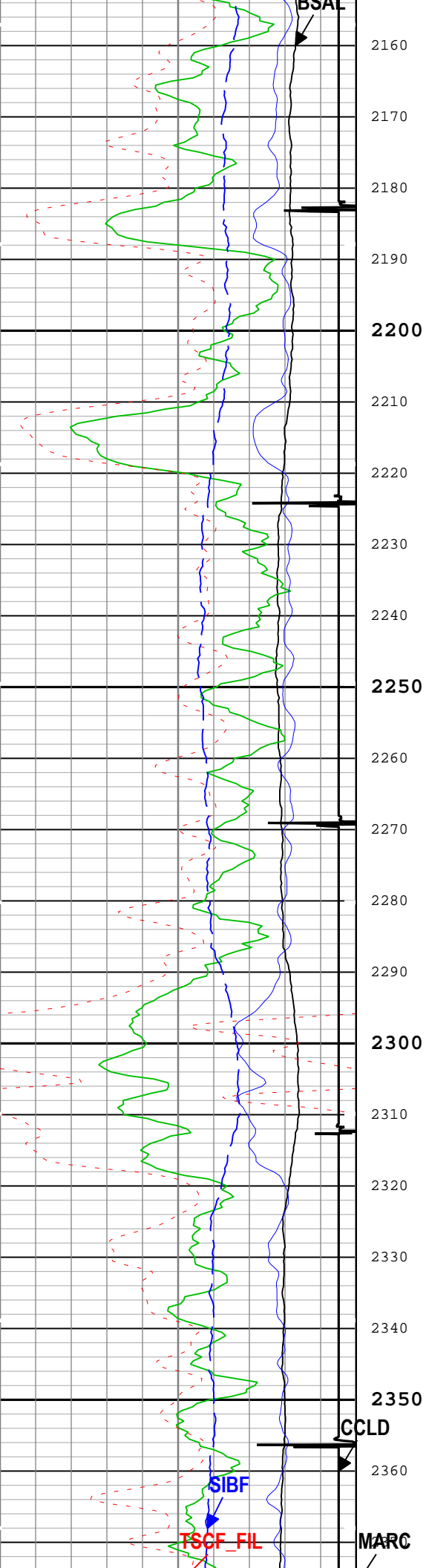
ICV - Integrated Cement Volume every 10.00 (ft3)

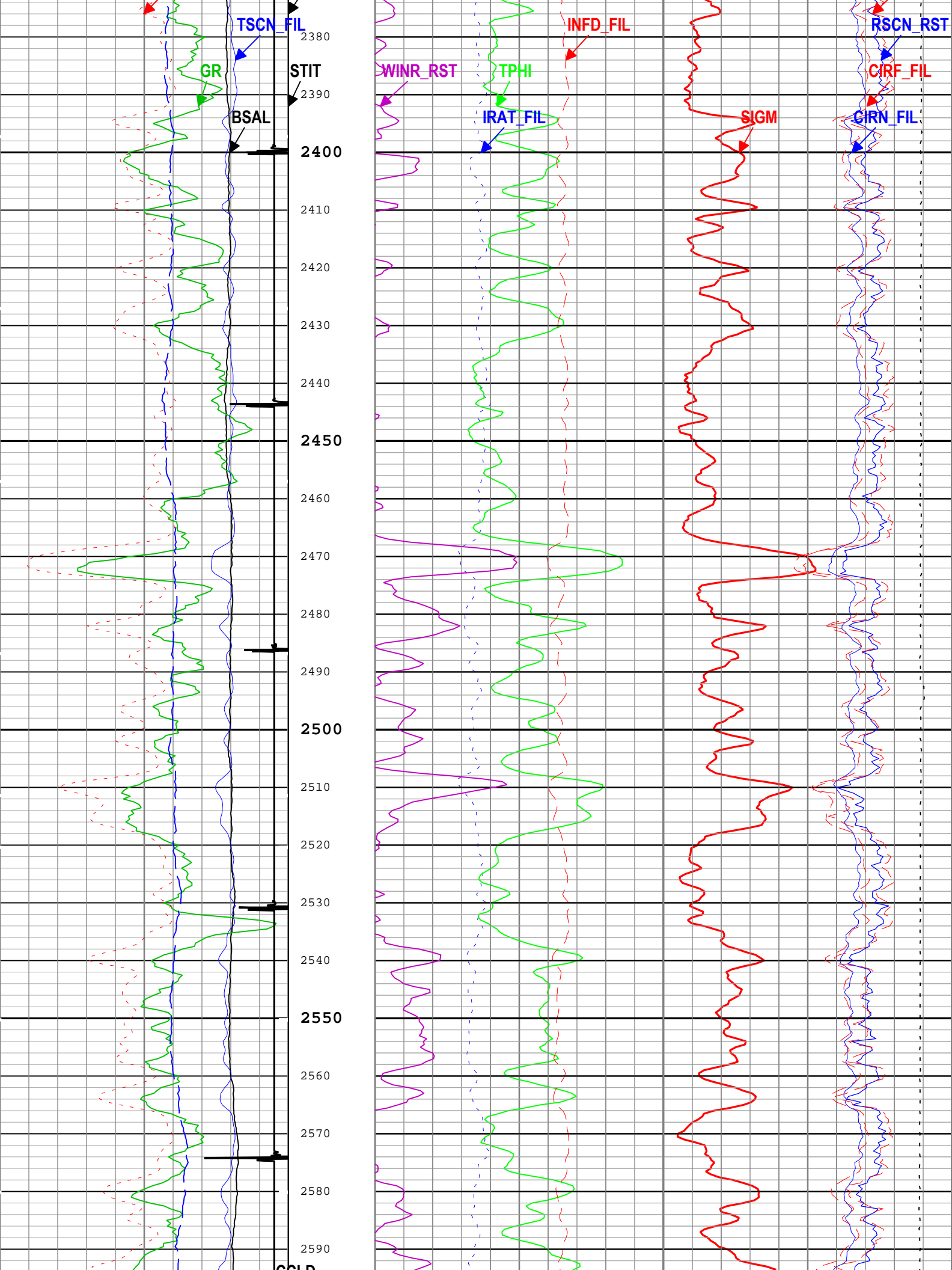
ICV - Integrated Cement Volume every 100.00 (ft3)

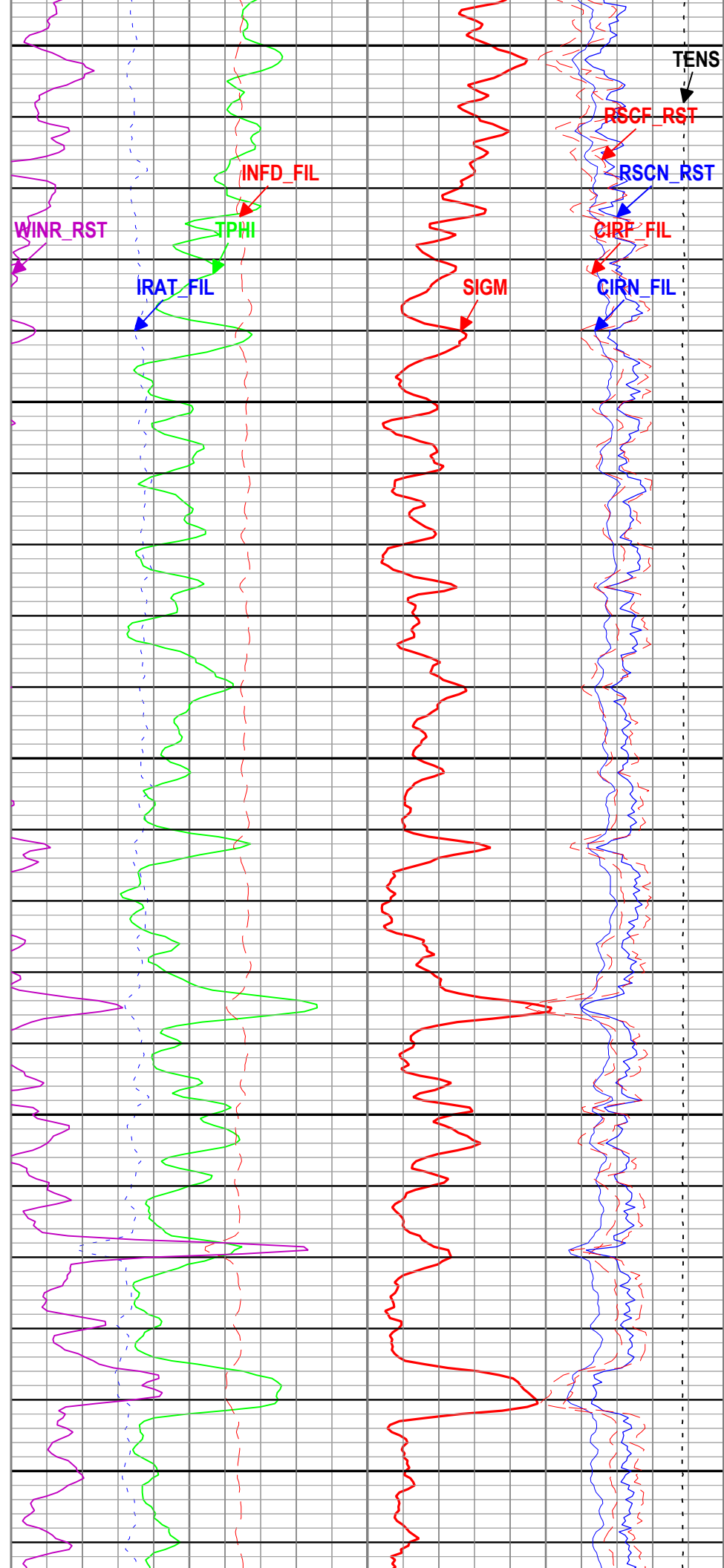
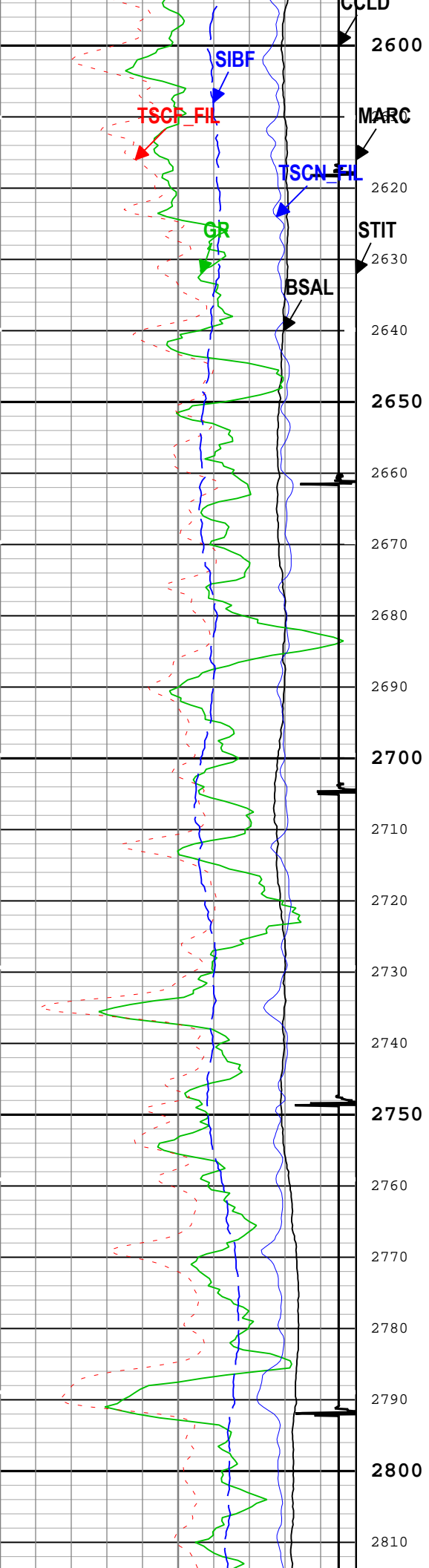
Borehole Salinity (BSAL) RST-C[1]	Stuck Tool Indicator, Total (STIT)	Capture to Inelastic Ratio Near Filtered (CIRN_FIL) RST-C[1]
450 ppk -50	0 ft 50	2.5 0
Gamma Ray (GR) PSTP-B[1]	Cable Drag From STIA to STIT	Capture to Inelastic Ratio Far Filtered (CIRF_FIL) RST-C[1]
0 gAPI 150	0.75 0	5 0
Total Selected Count Rate Near Detector Filtered (TSCN_FIL) RST-C[1]	Tool_Tot. Drag From D3T to STIT	Near Detector Effective Unregulated Capture Count Rate (RSCN_RST) RST-C[1]
30000 1/s 0	0.6 ft3/ft3 0	45 0
Total Selected Count Rate Far Detector Filtered (TSCF_FIL) RST-C[1]	Minitron Arc Count (MARC) RST-C[1]	Far Detector Effective Unregulated Capture Count Rate (RSCF_RST) RST-C[1]
12000 1/s 0	10000 1/s 0	45 0
Sigma Borehole Fluid (SIBF) RST-C[1]		Cable Tension (TENS)
100 cu 0		5000 lbf 0
CCL Discriminated Amplitude (CCLD) PSTP-B[1]		Formation Sigma (Neutron Capture Cross Section) (SIGM) RST-C[1]
-19 V 1		60 cu 0
		Weighted Inelastic Ratio (WINR_RST) RST-C[1]
		0 0.4

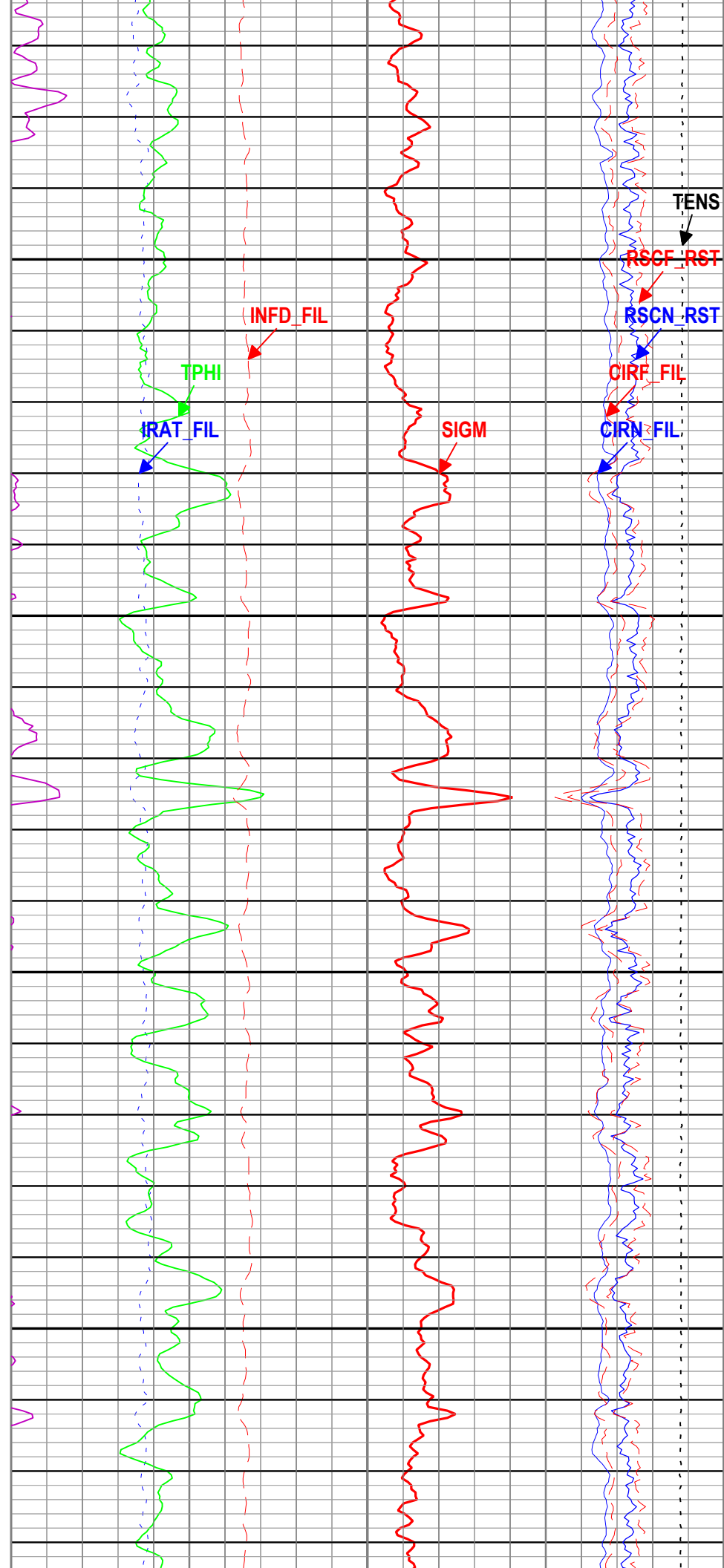
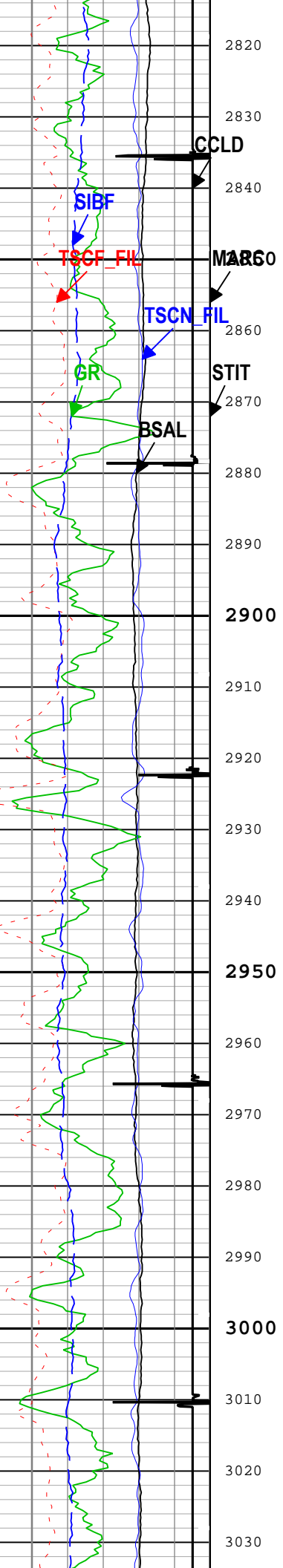


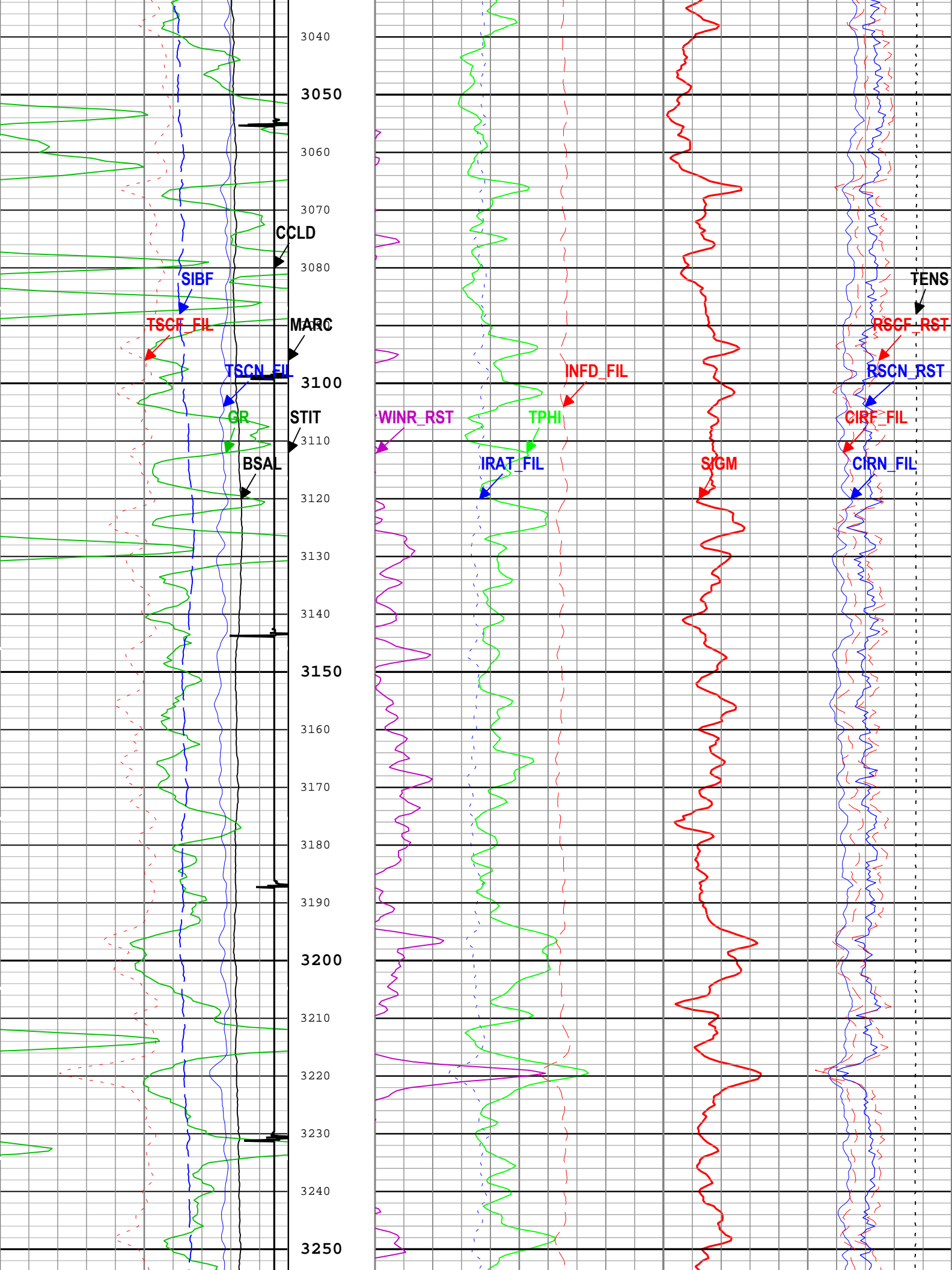


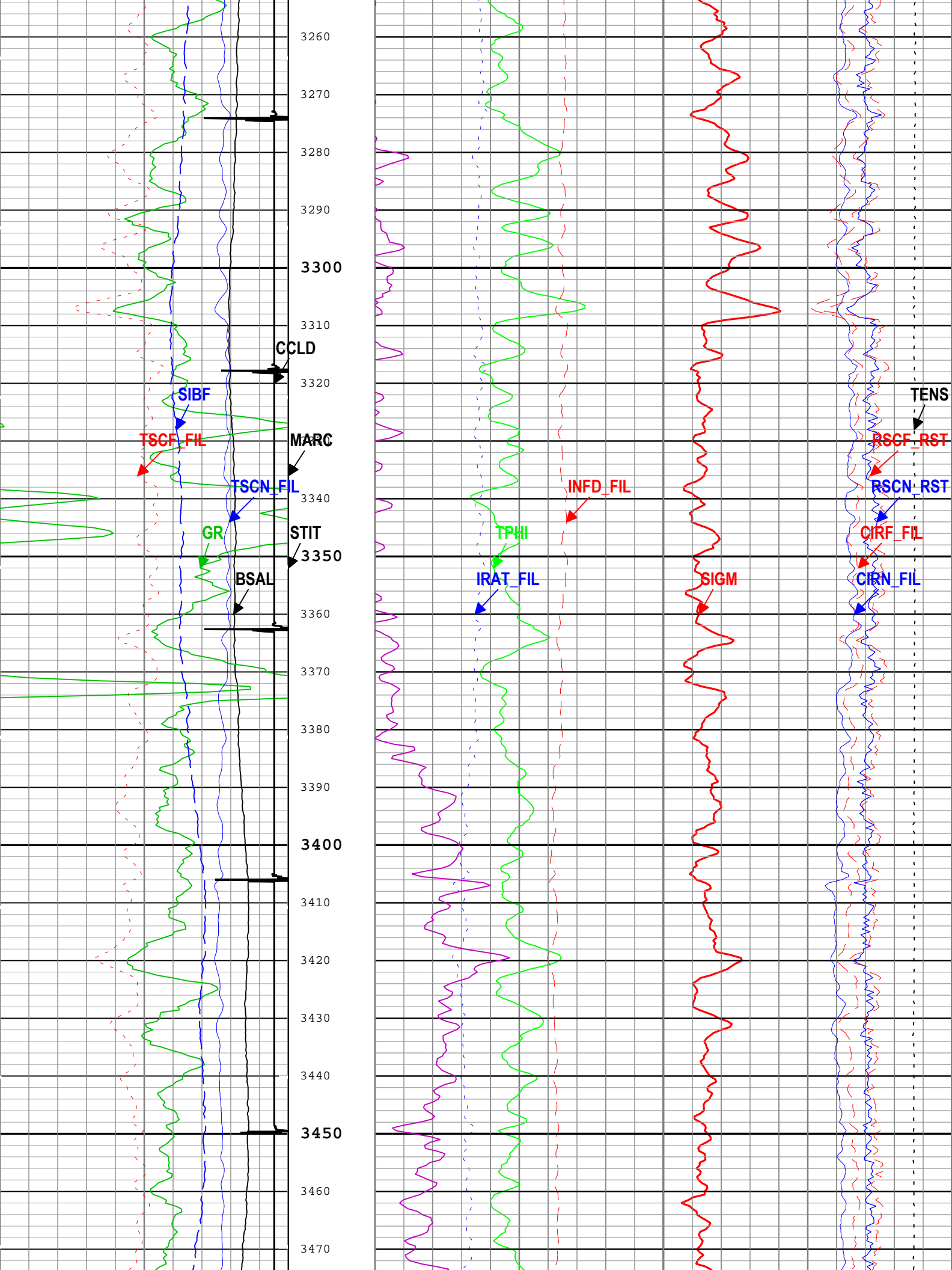


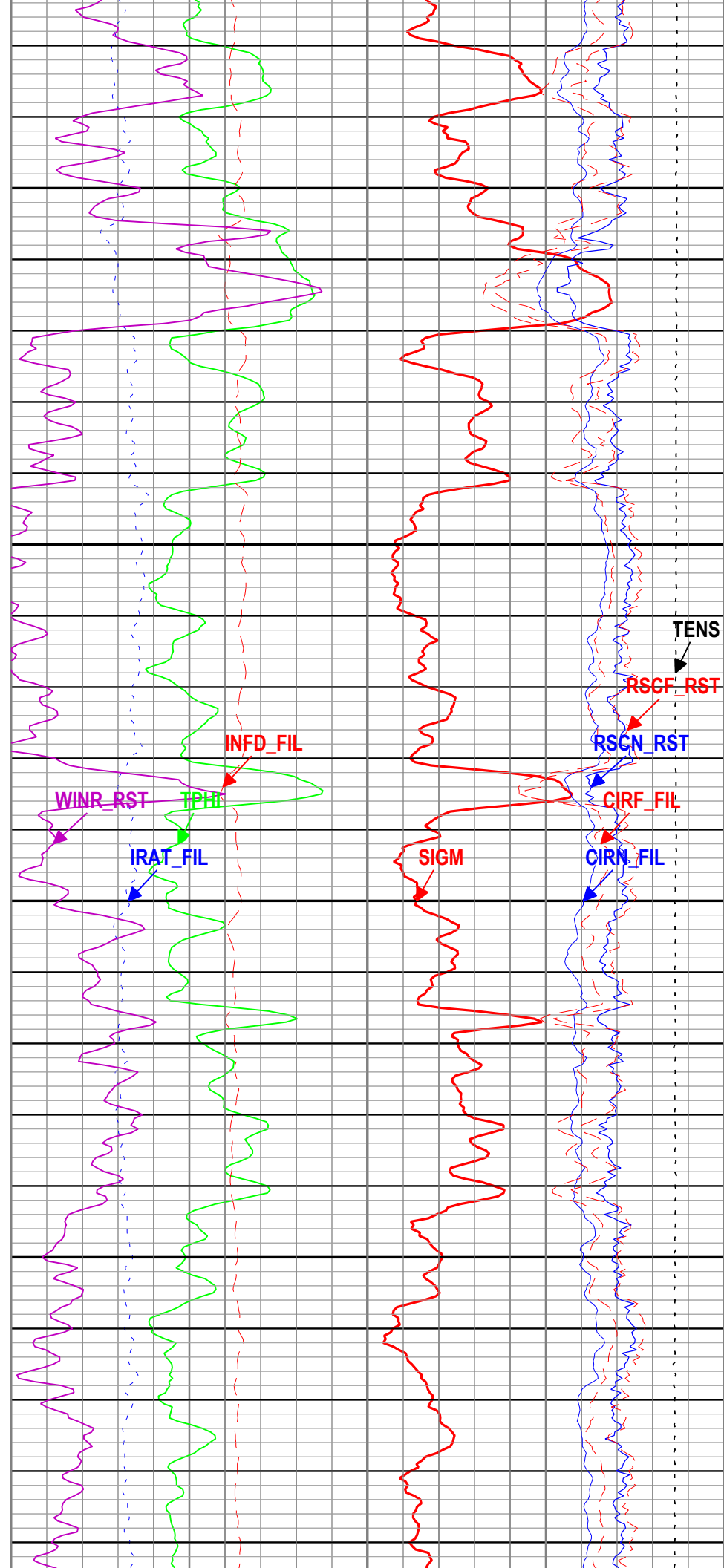
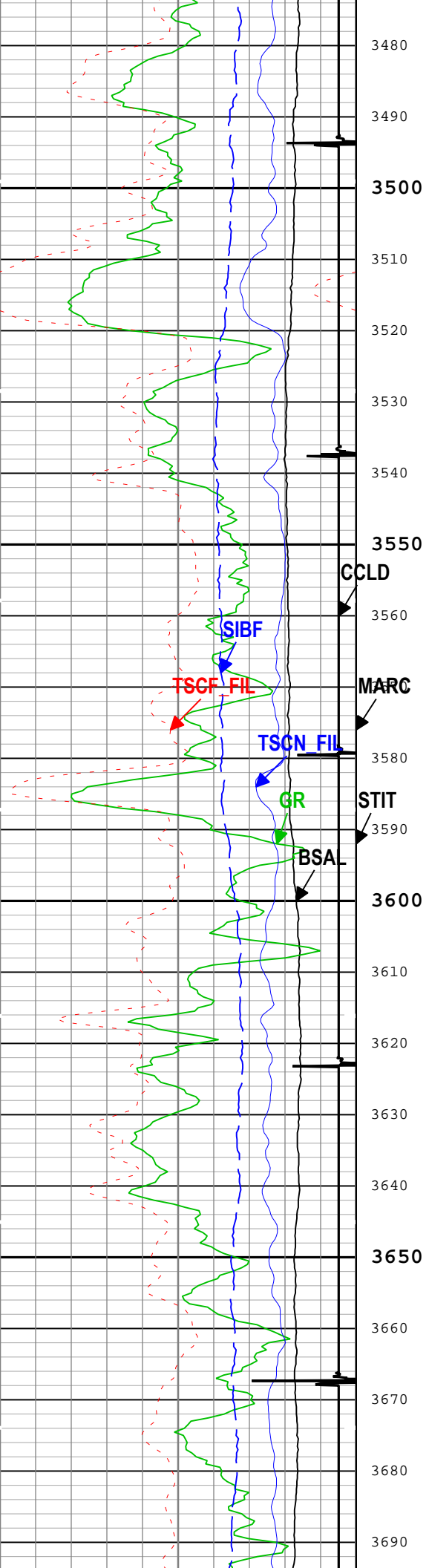


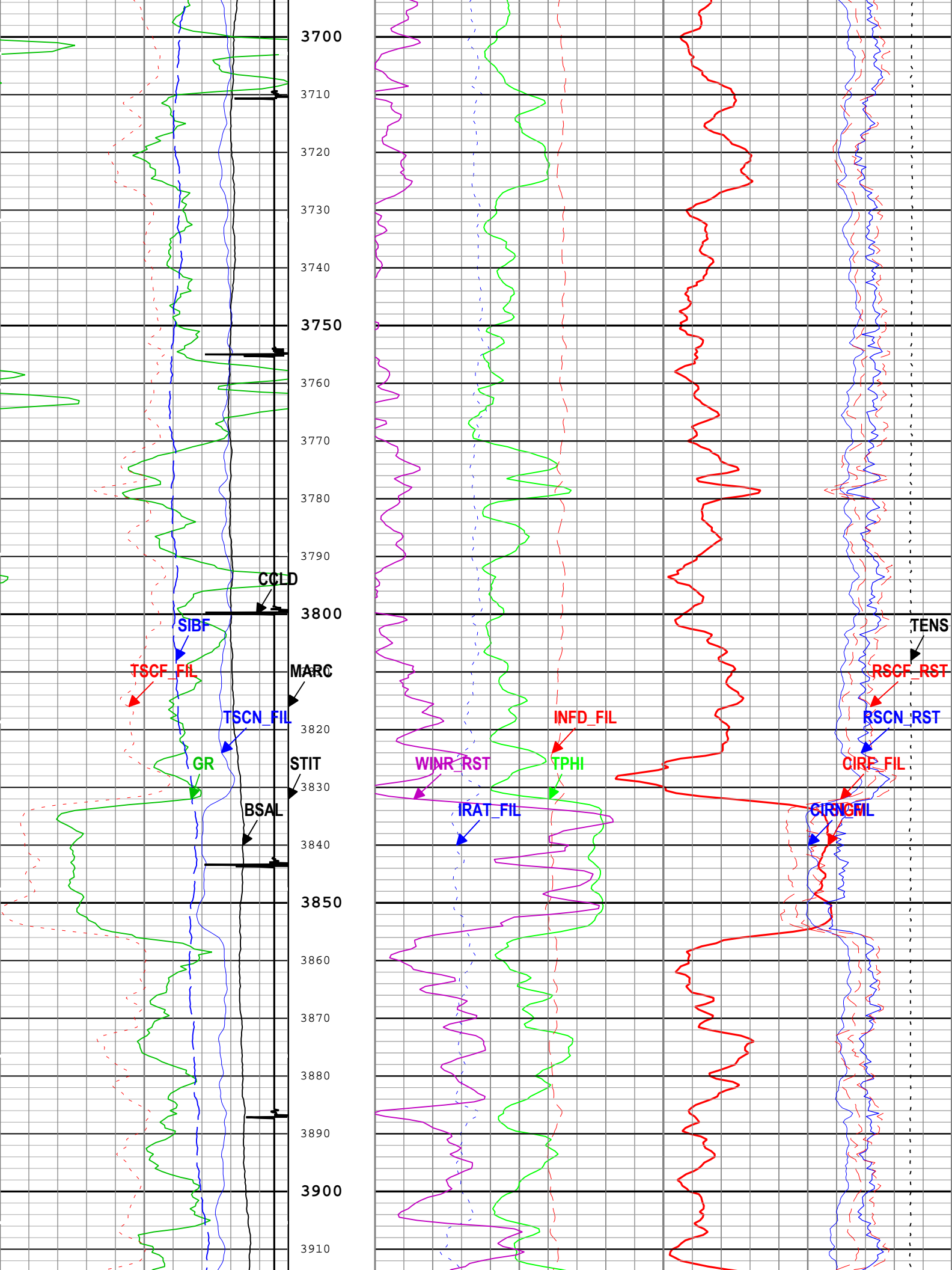


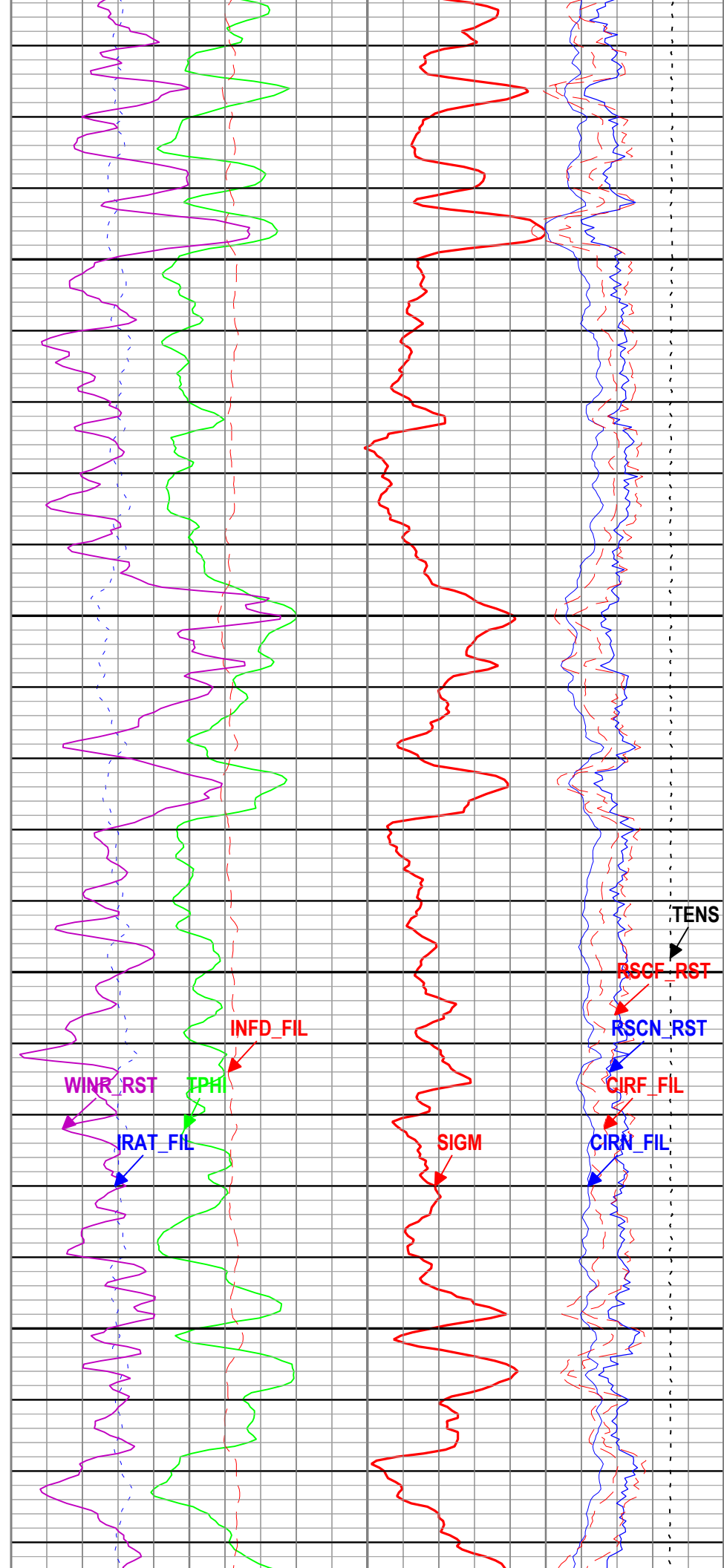
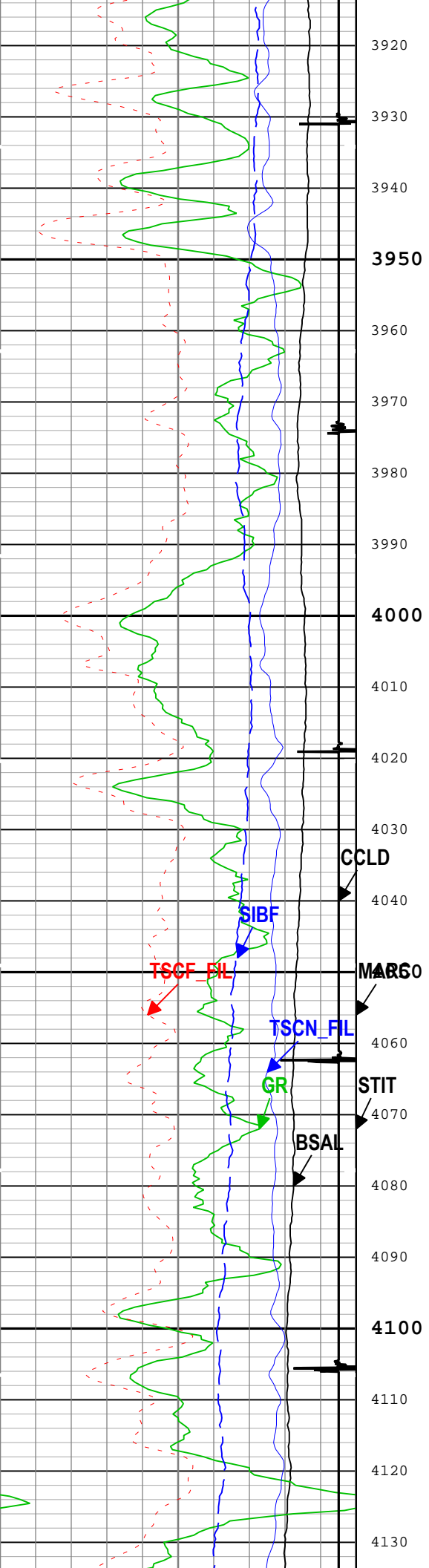


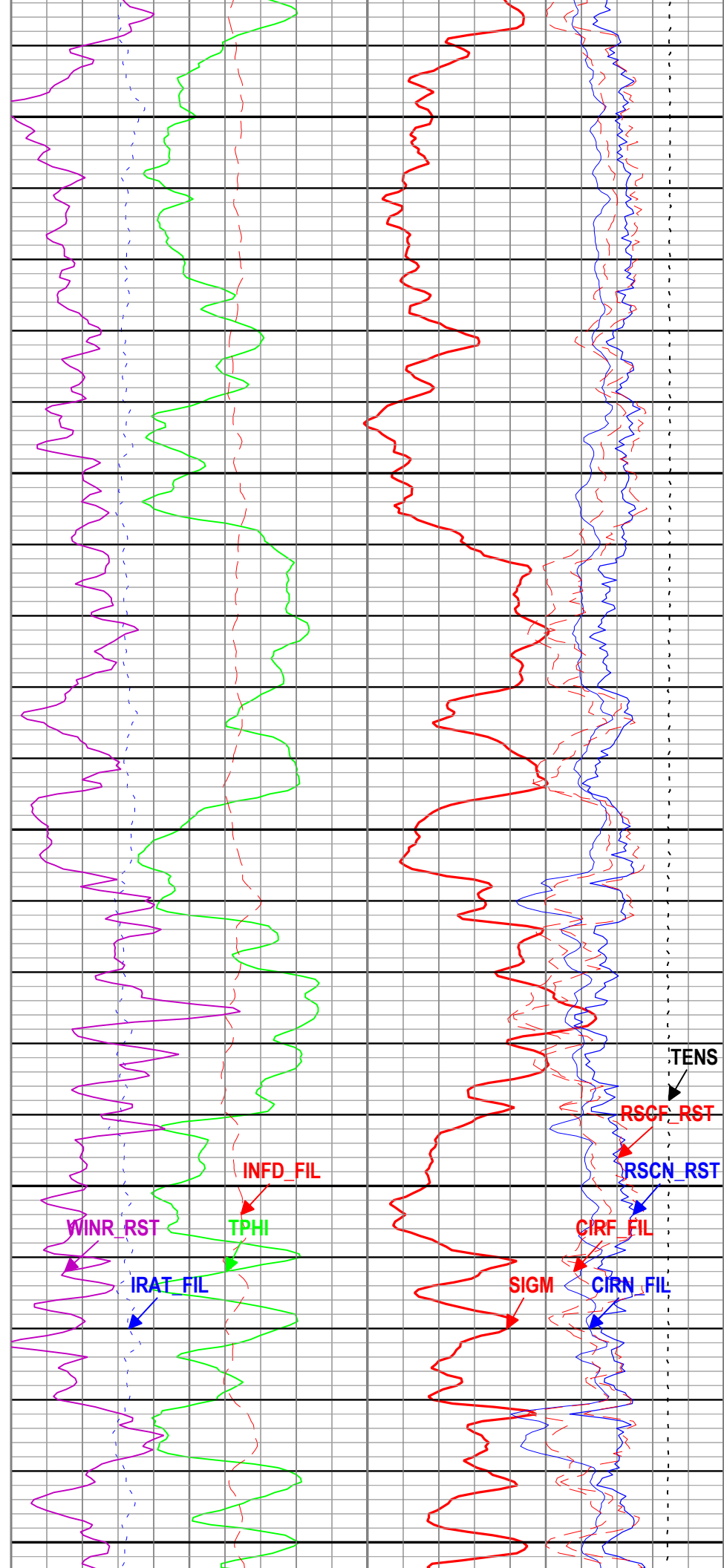
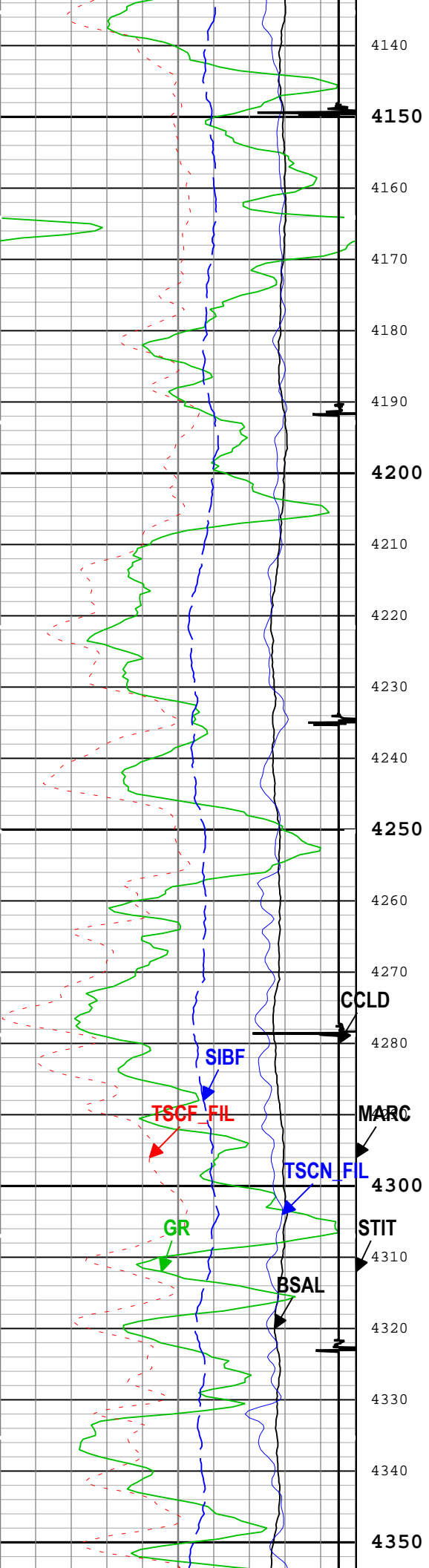


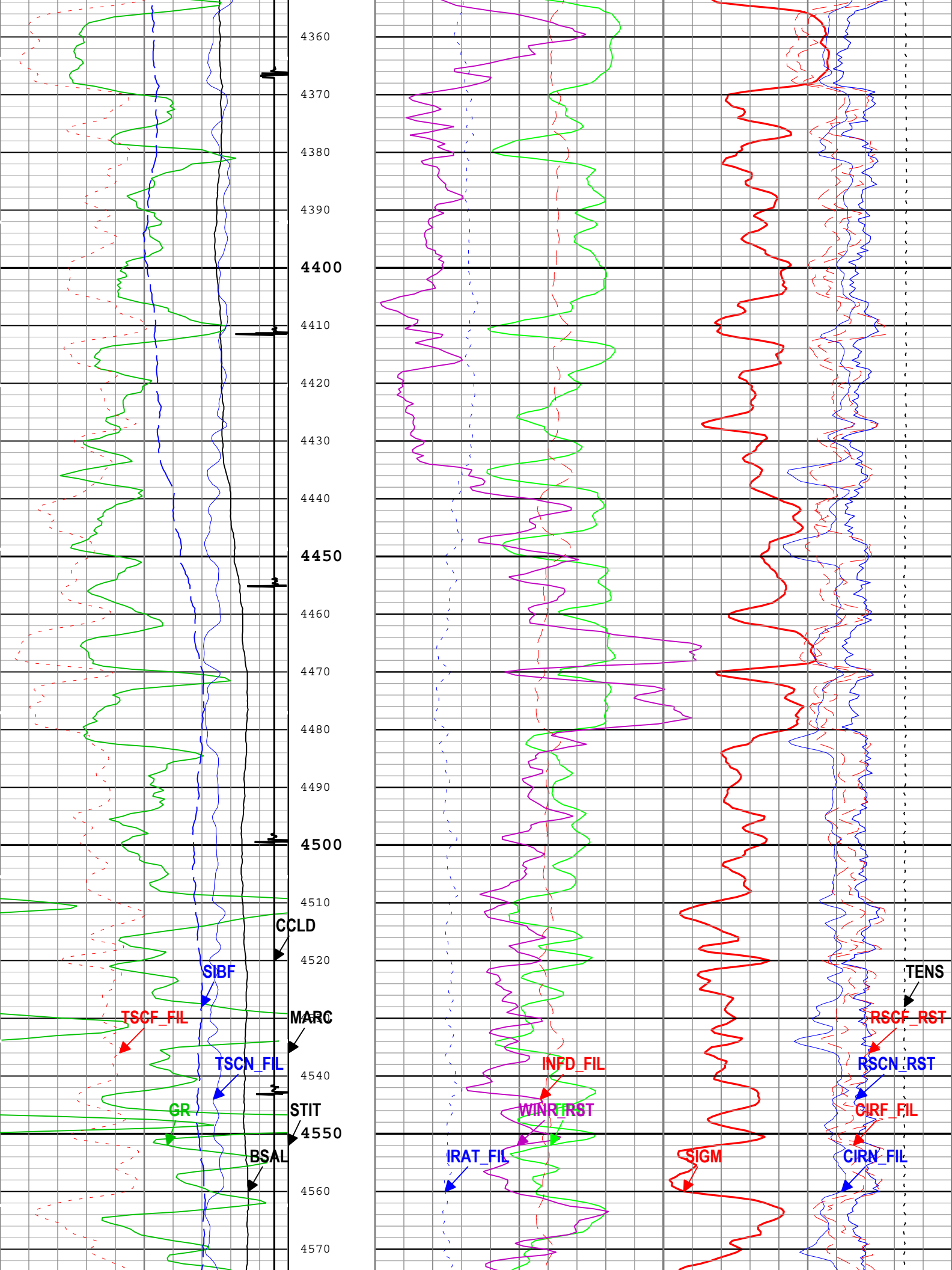


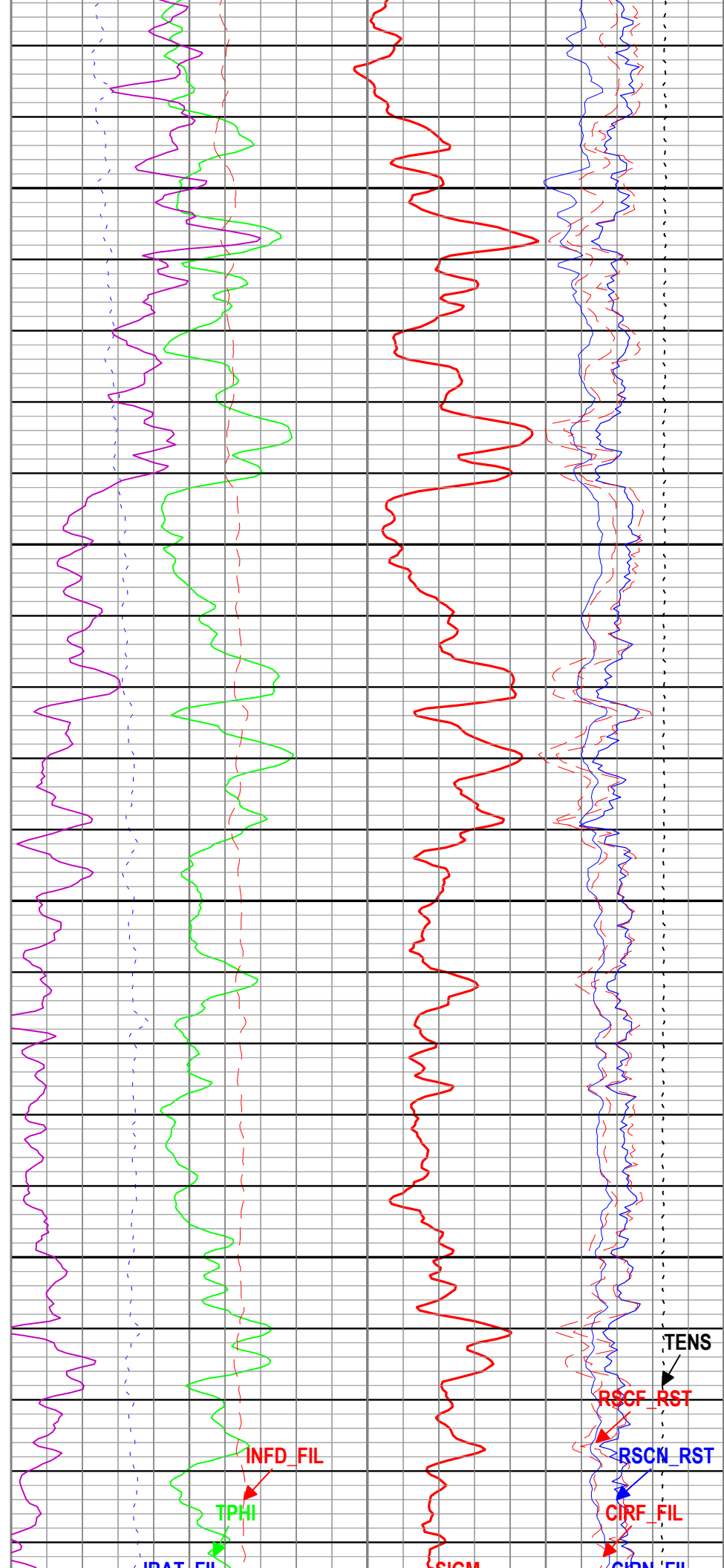
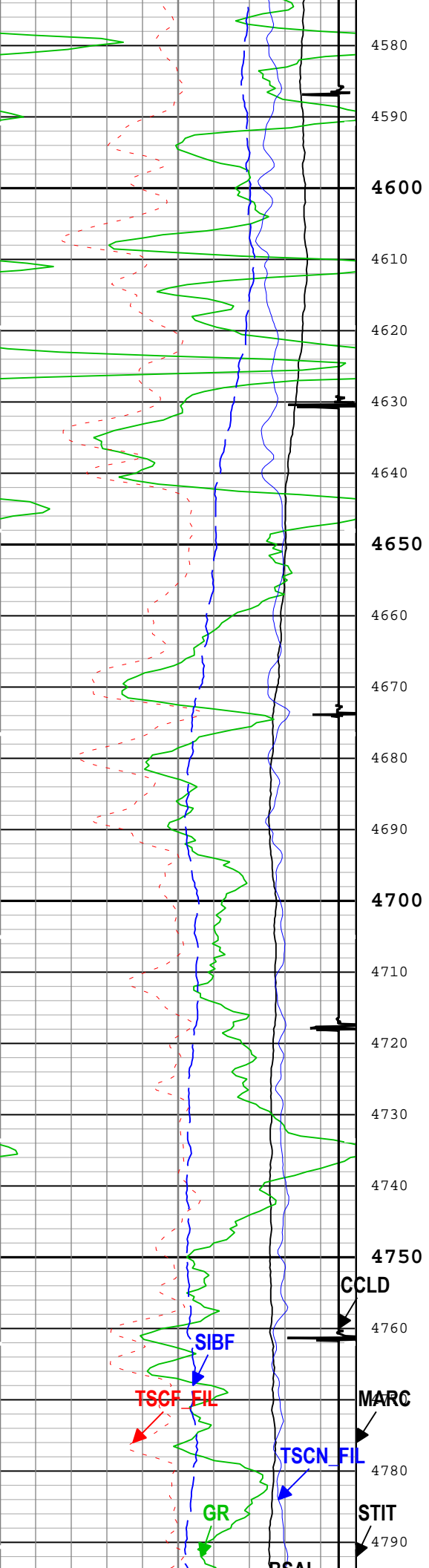


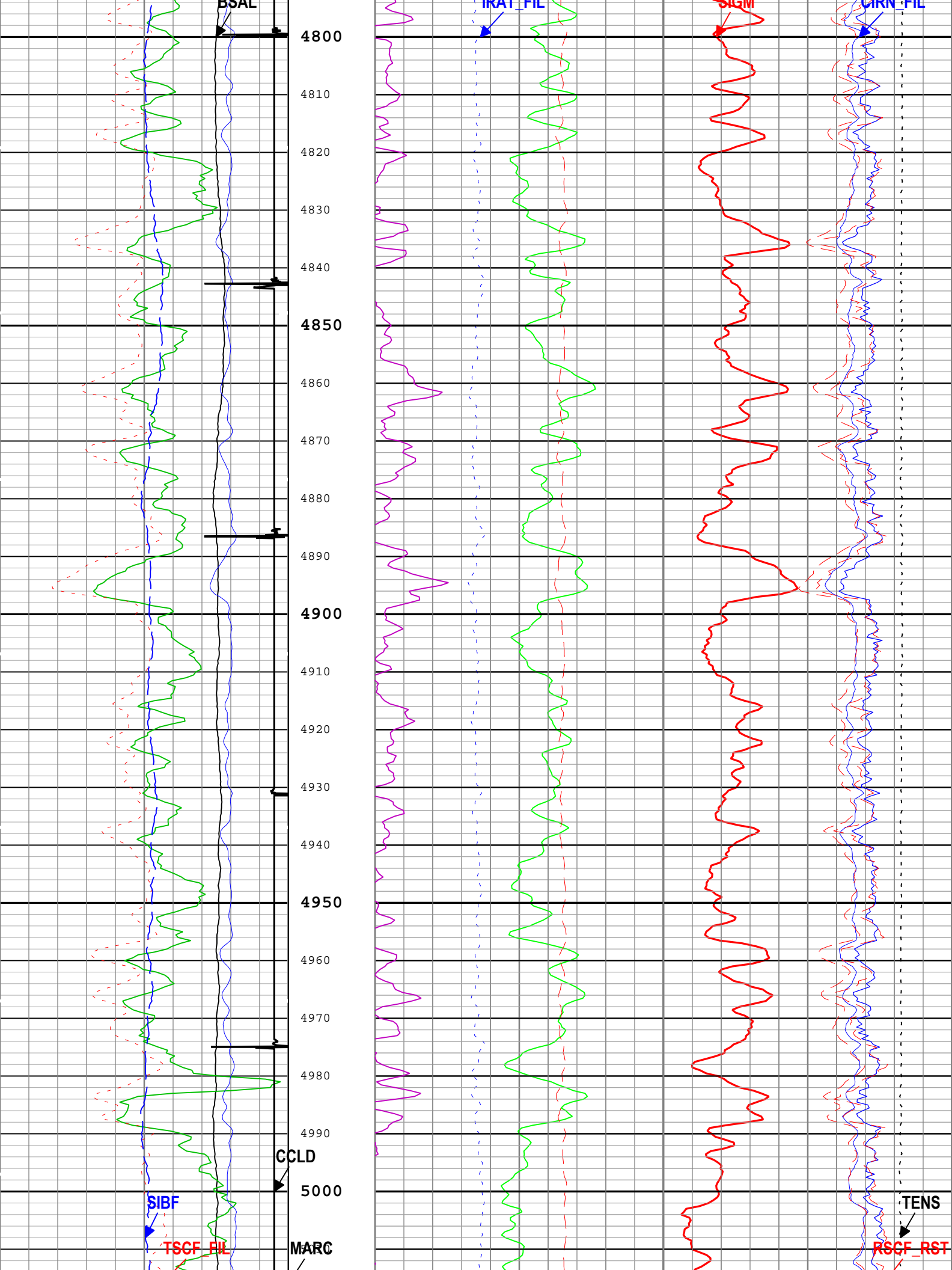


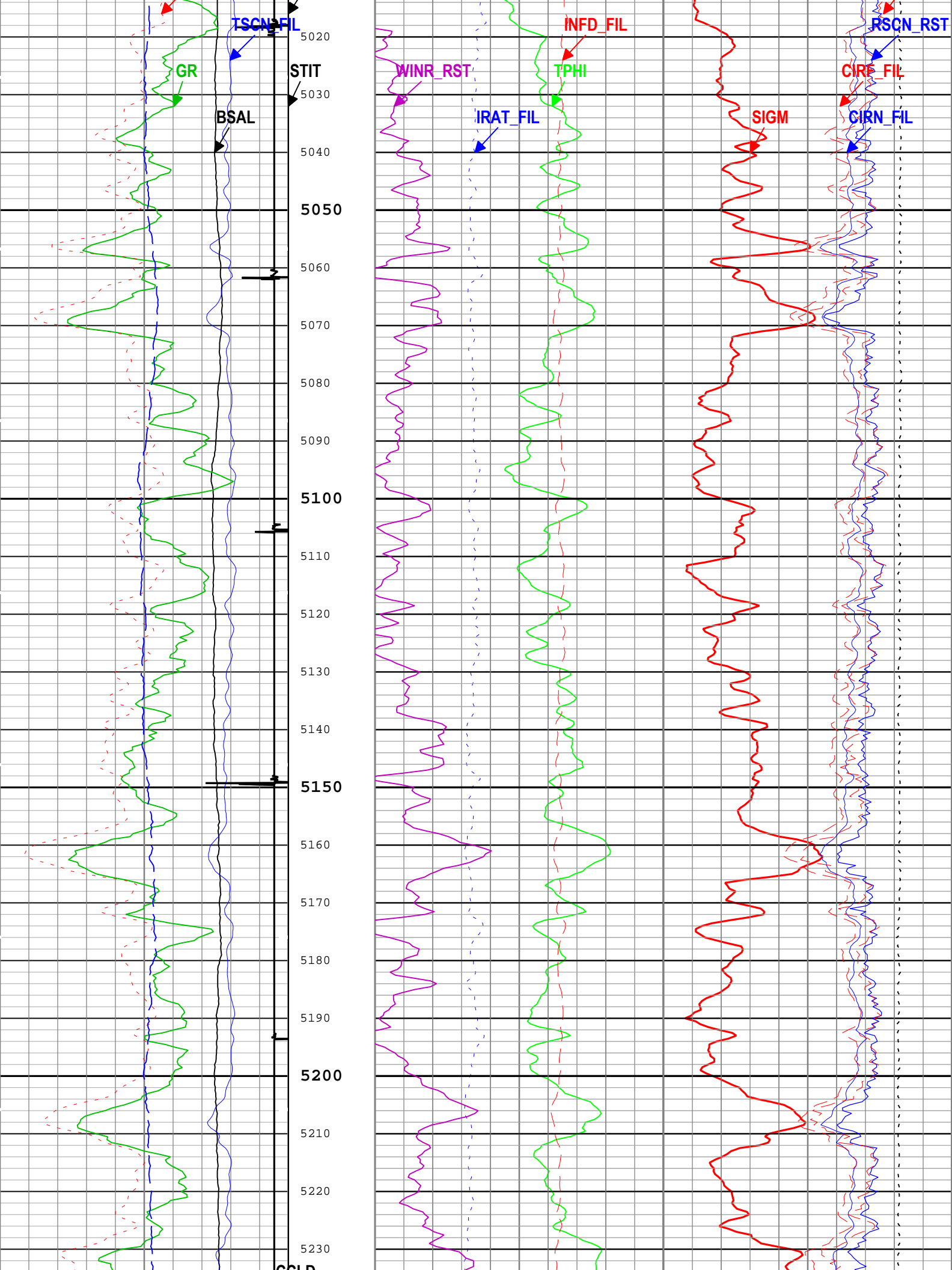


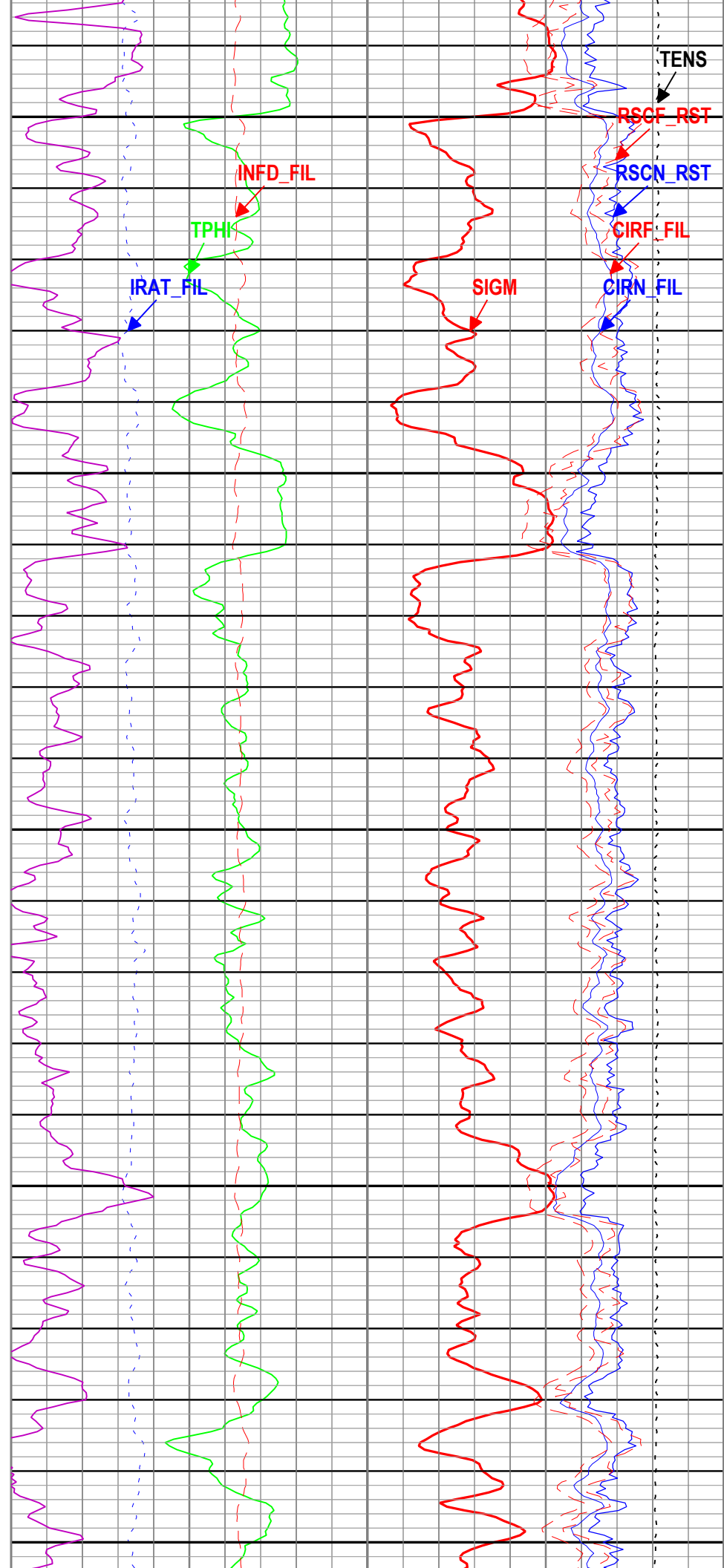
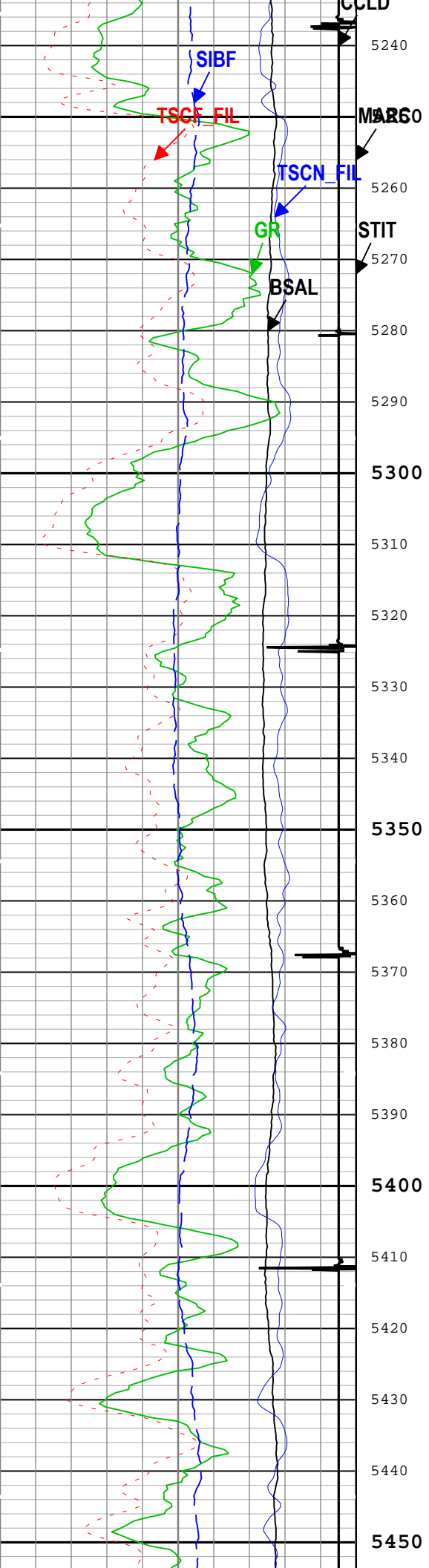


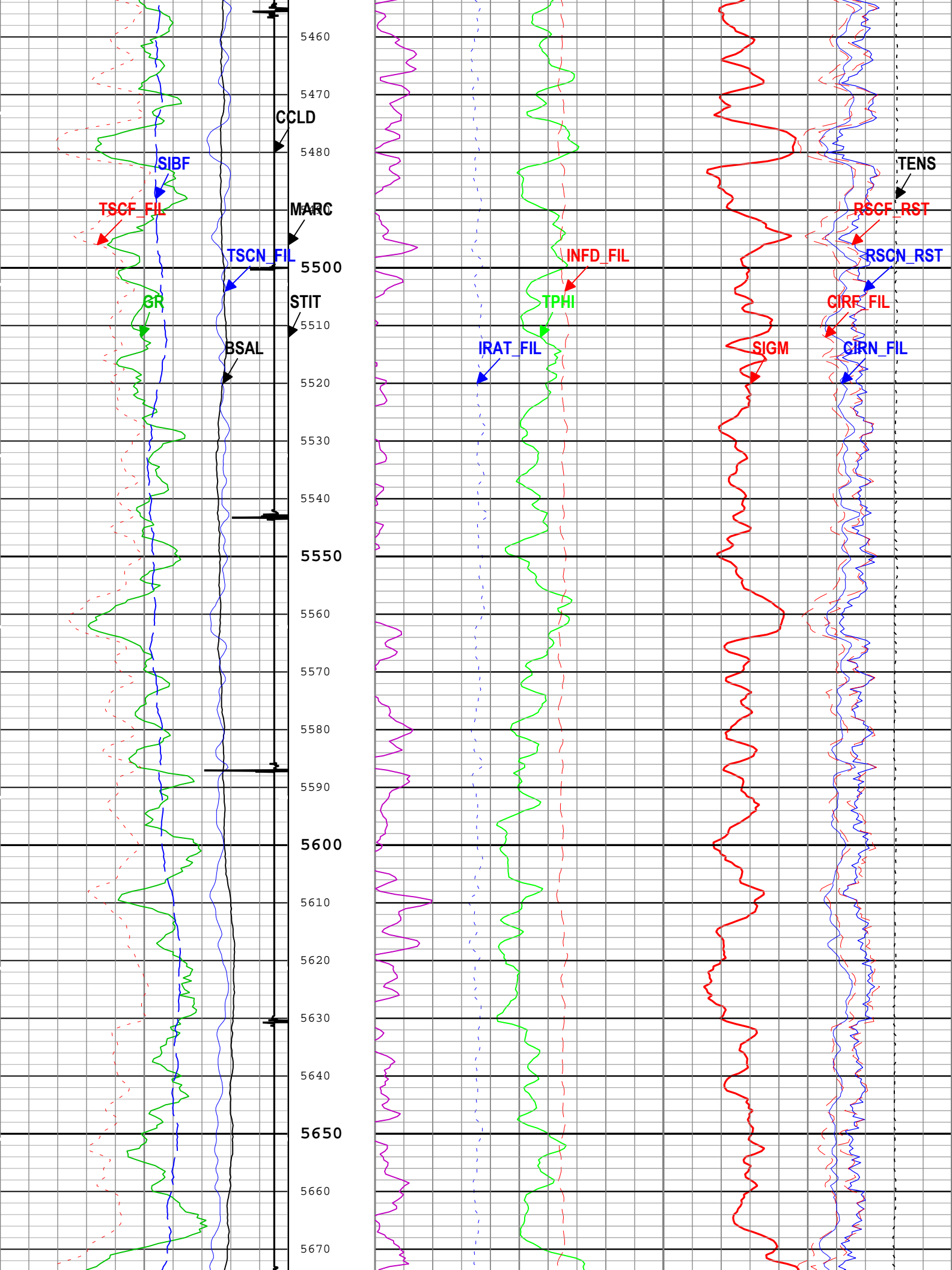


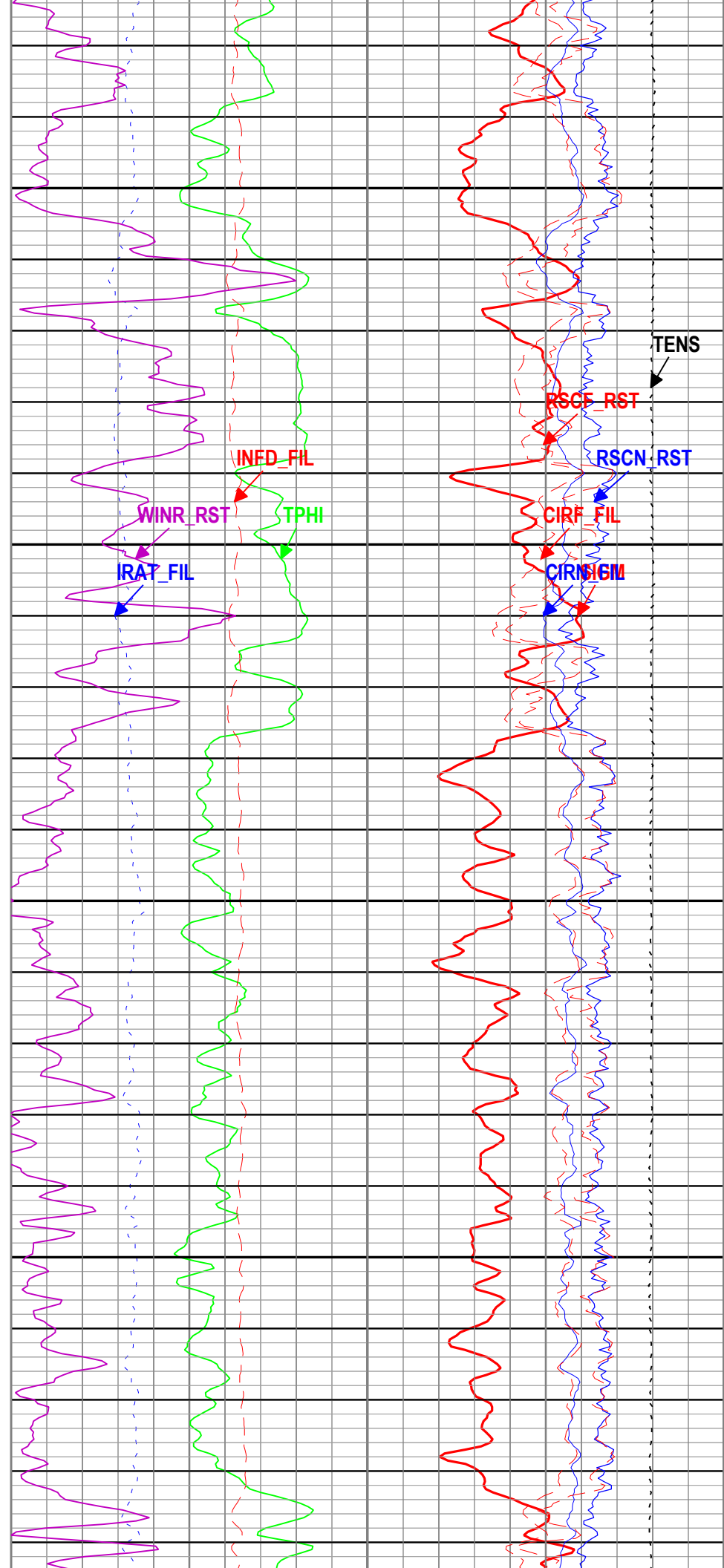
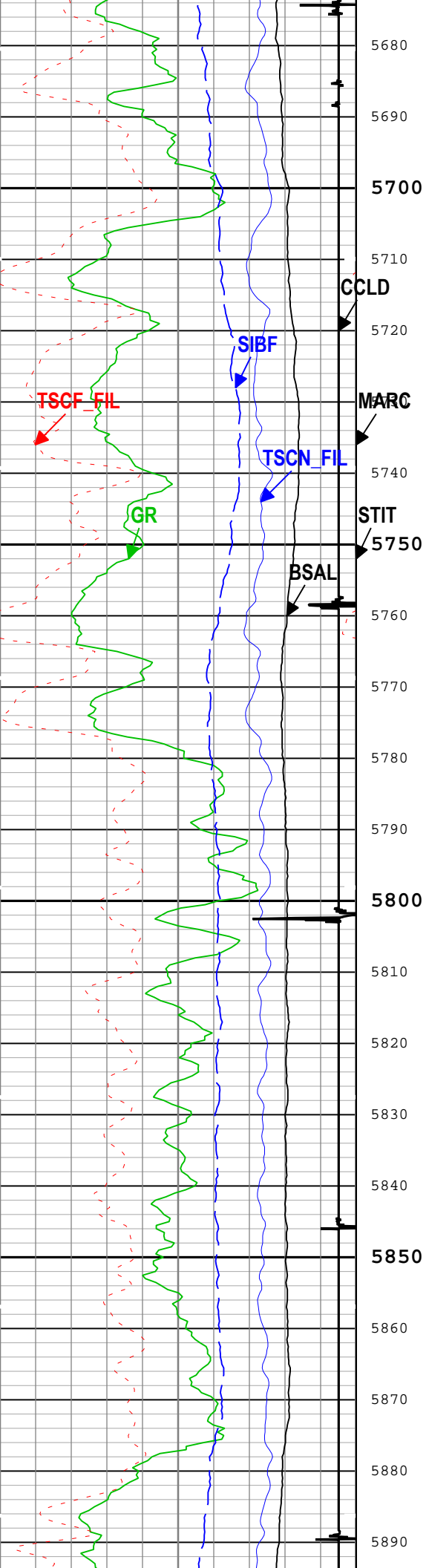


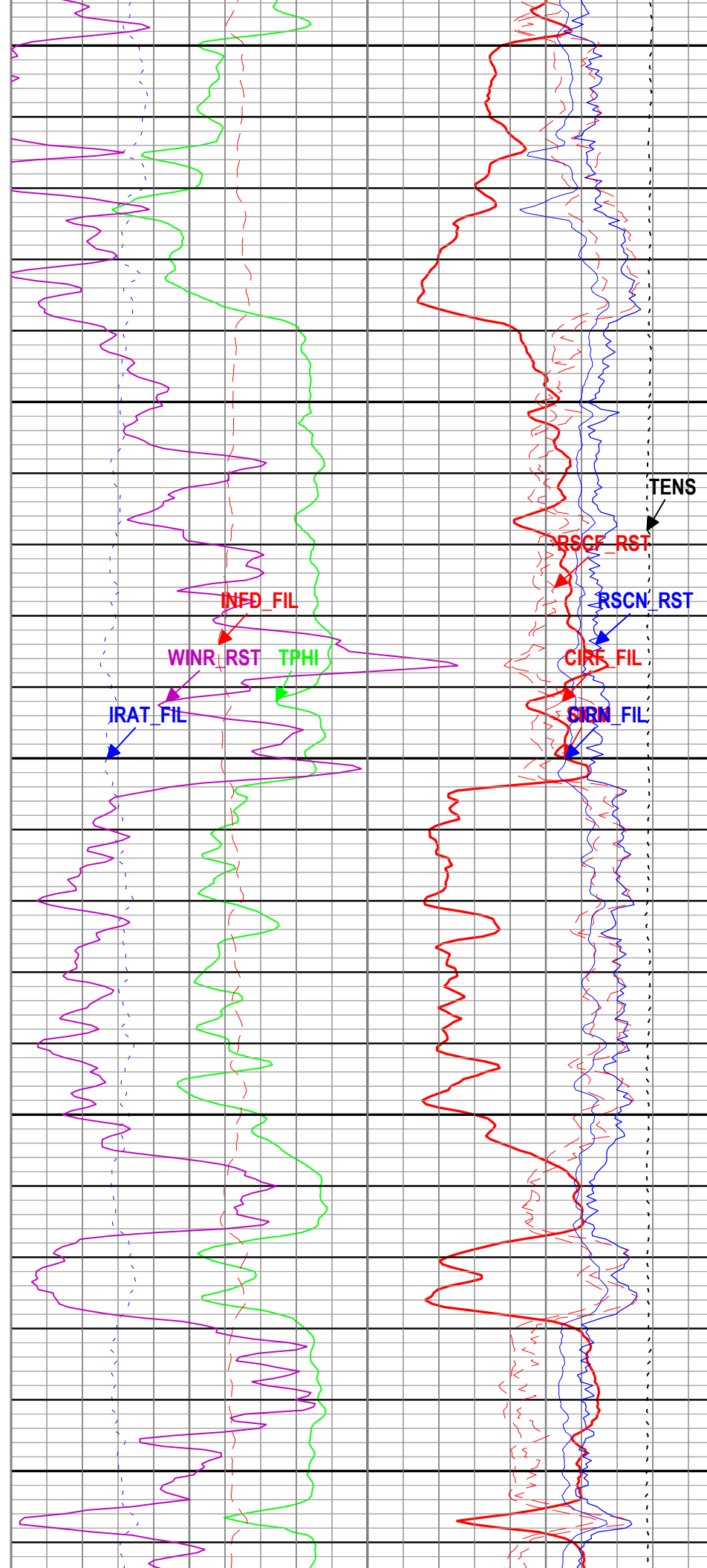
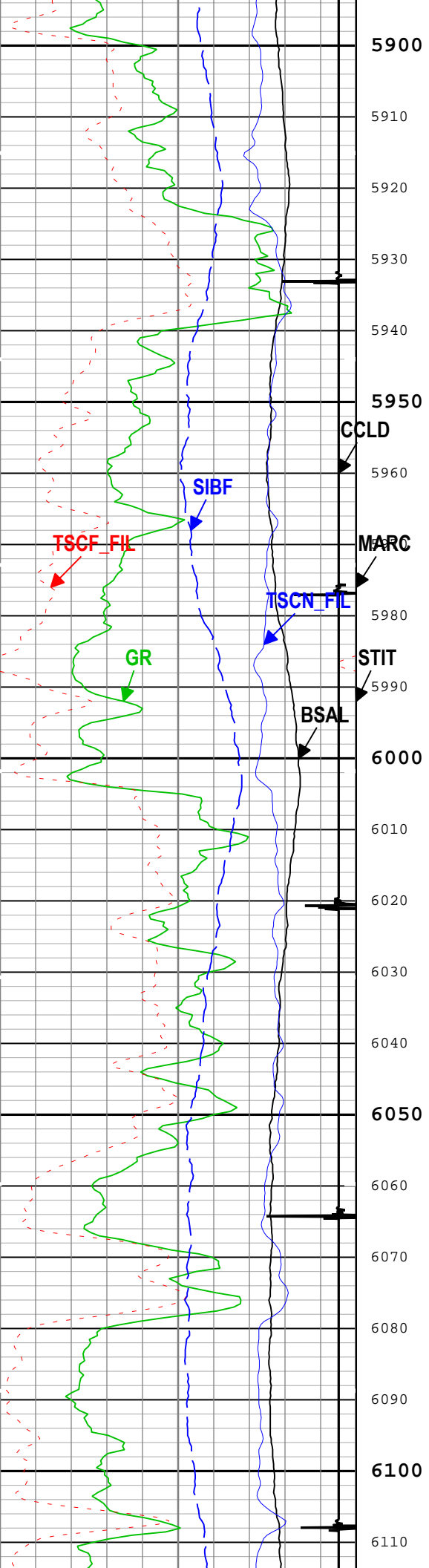


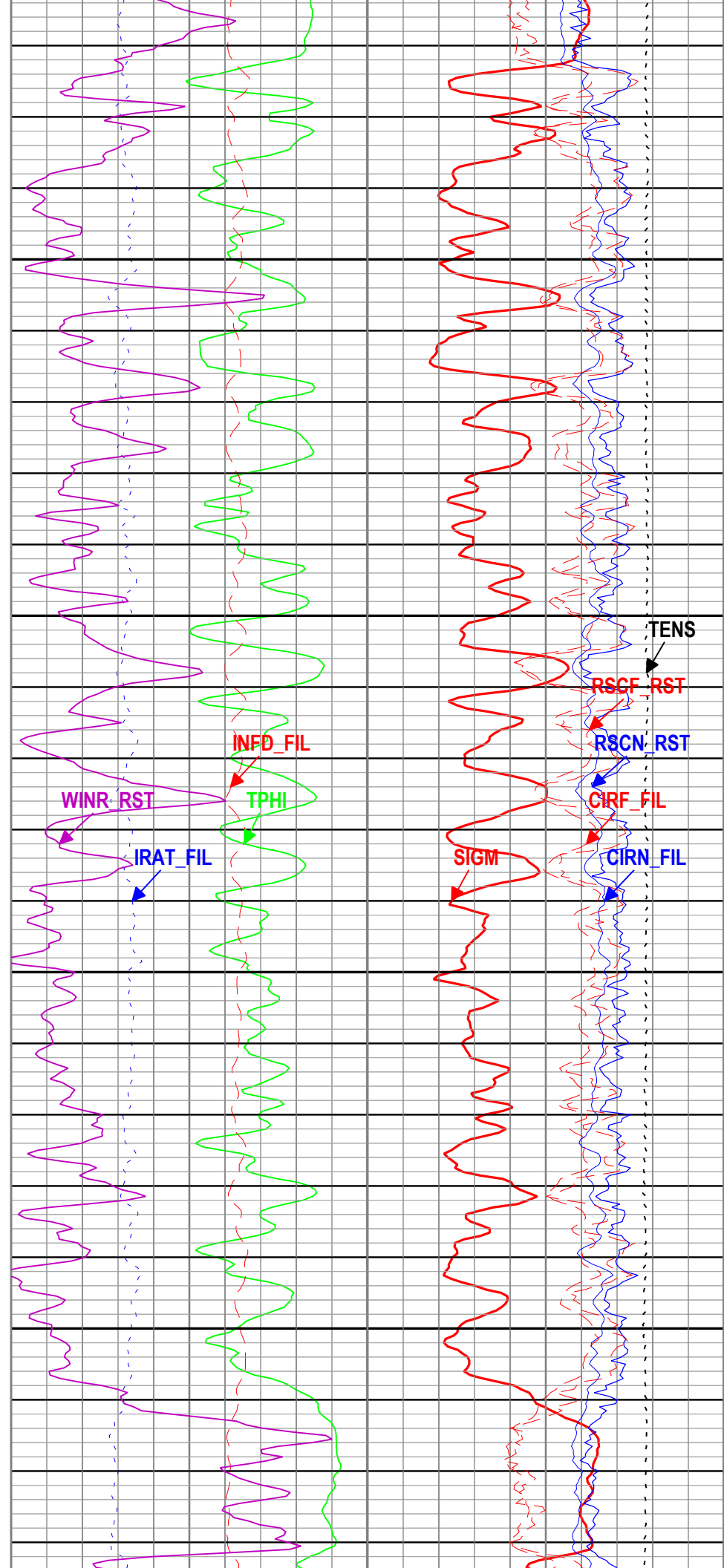
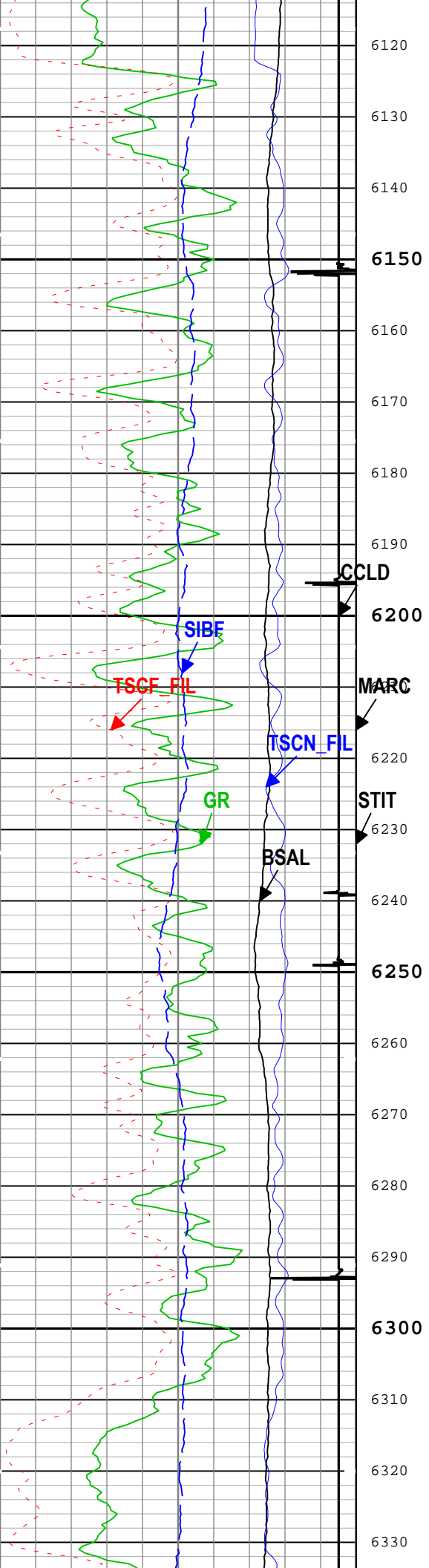


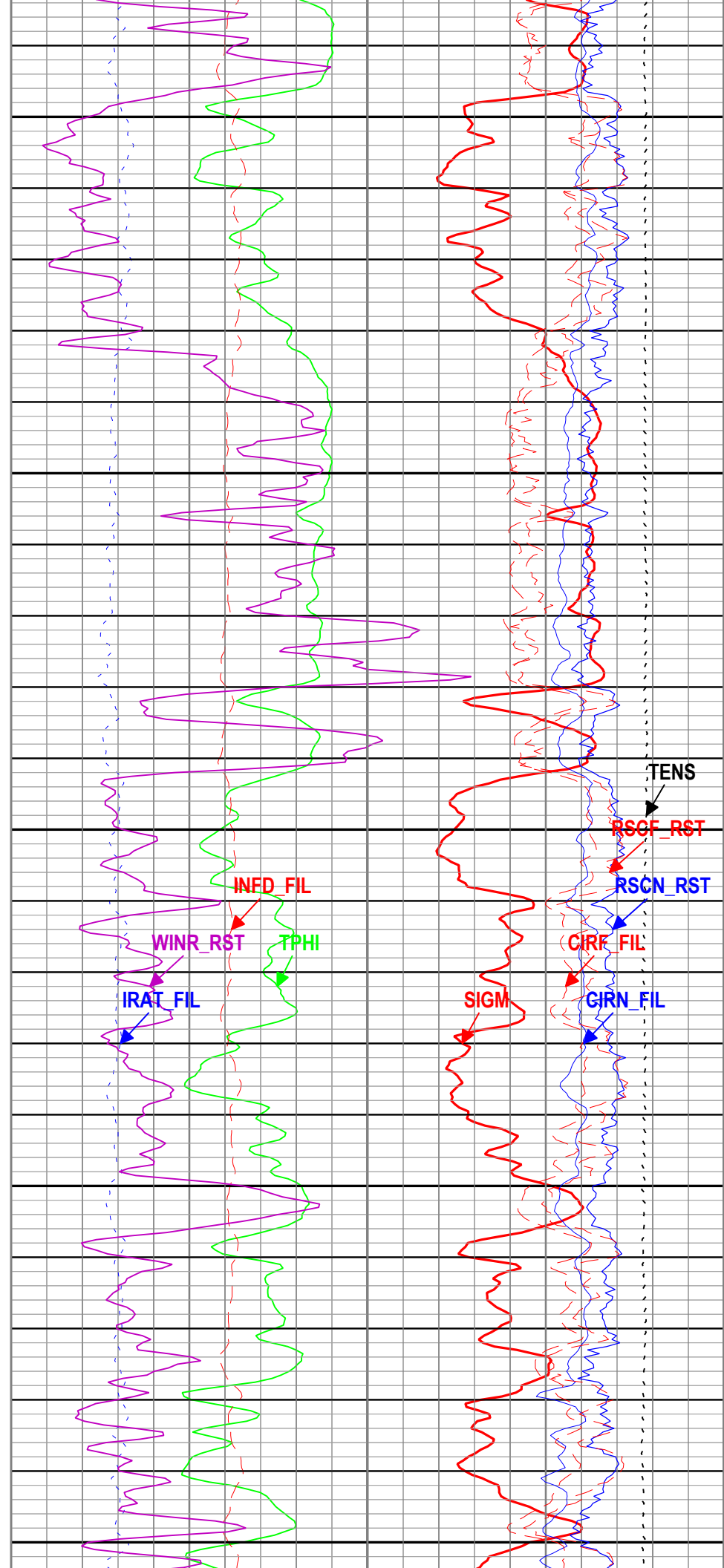
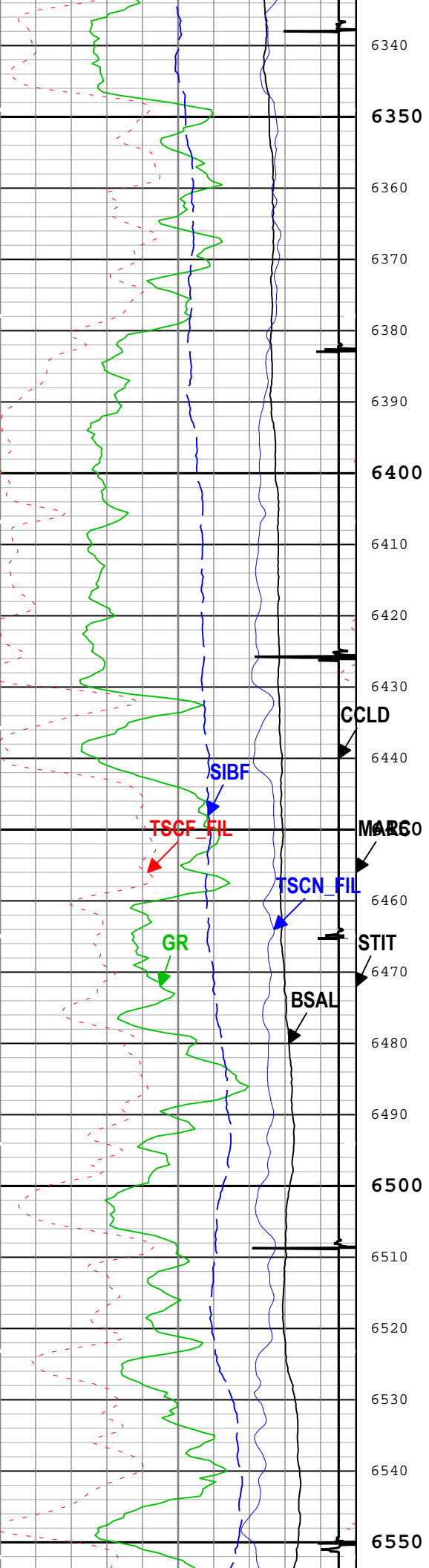


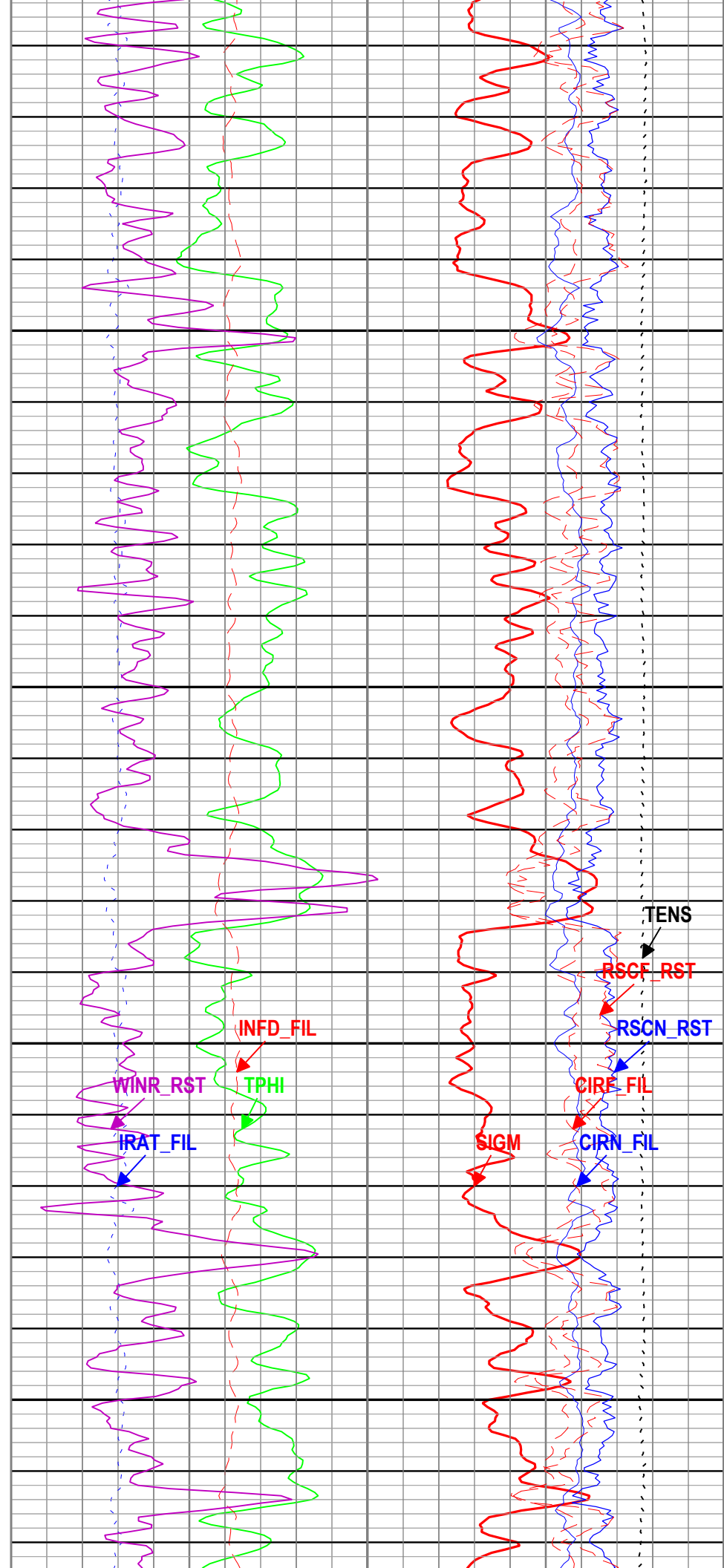
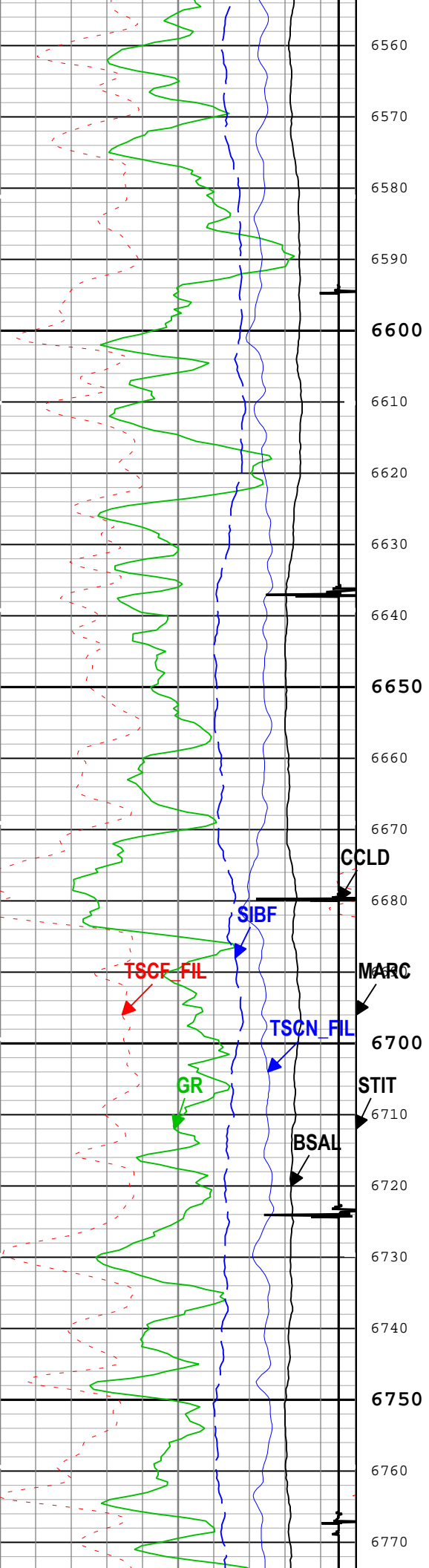


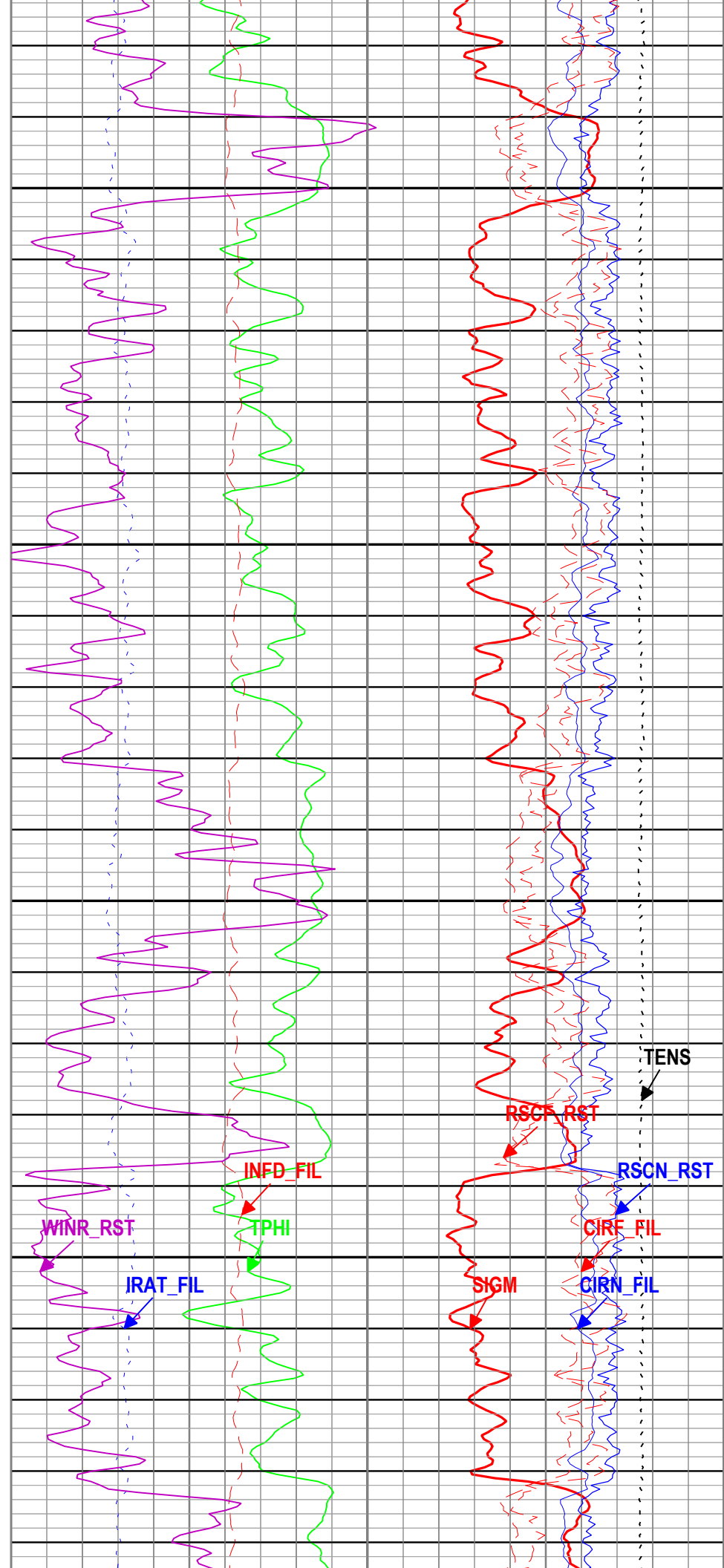
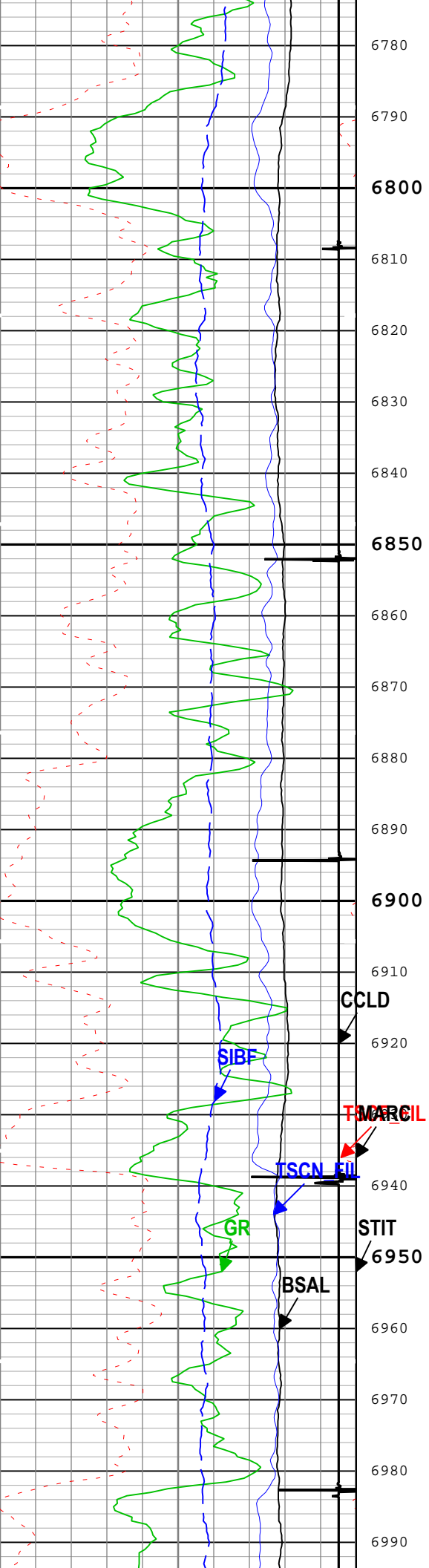


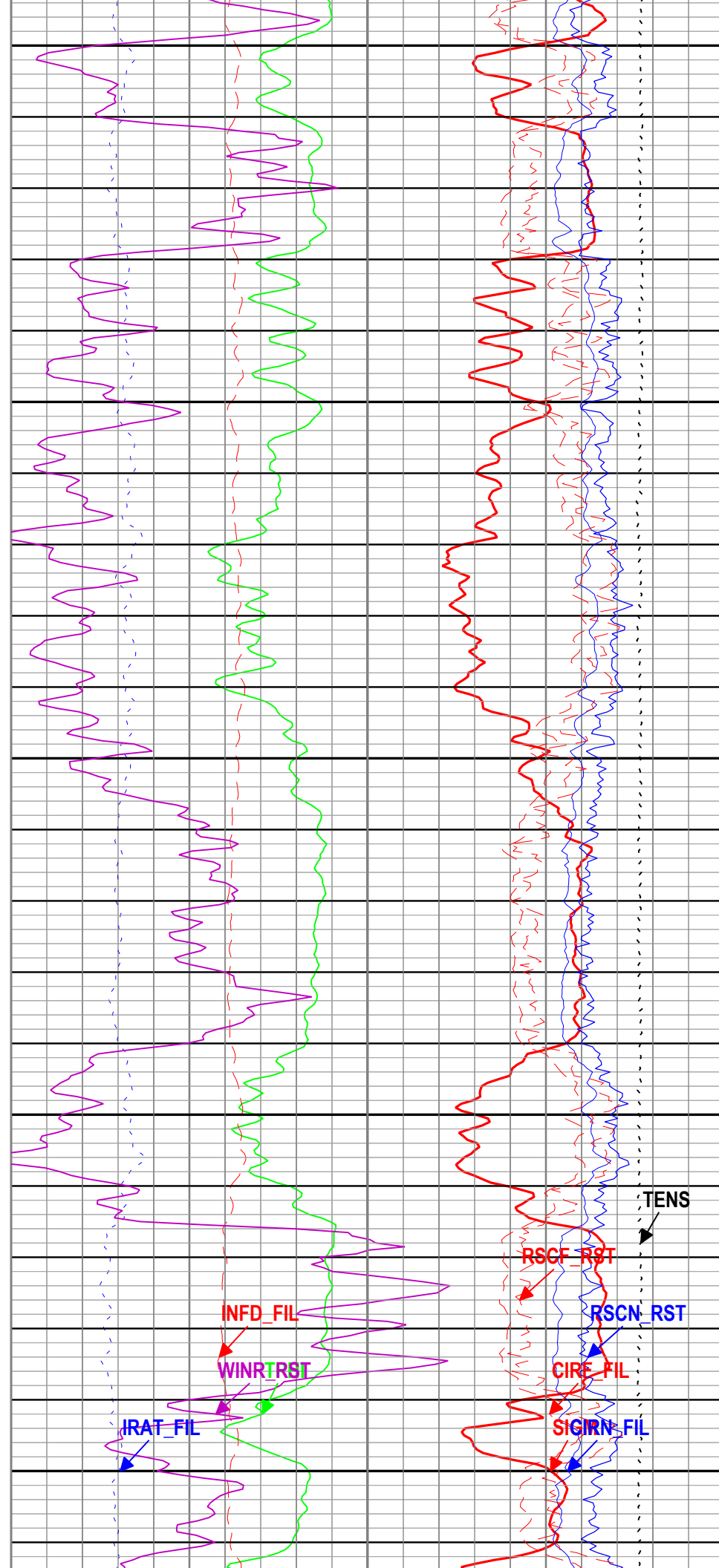
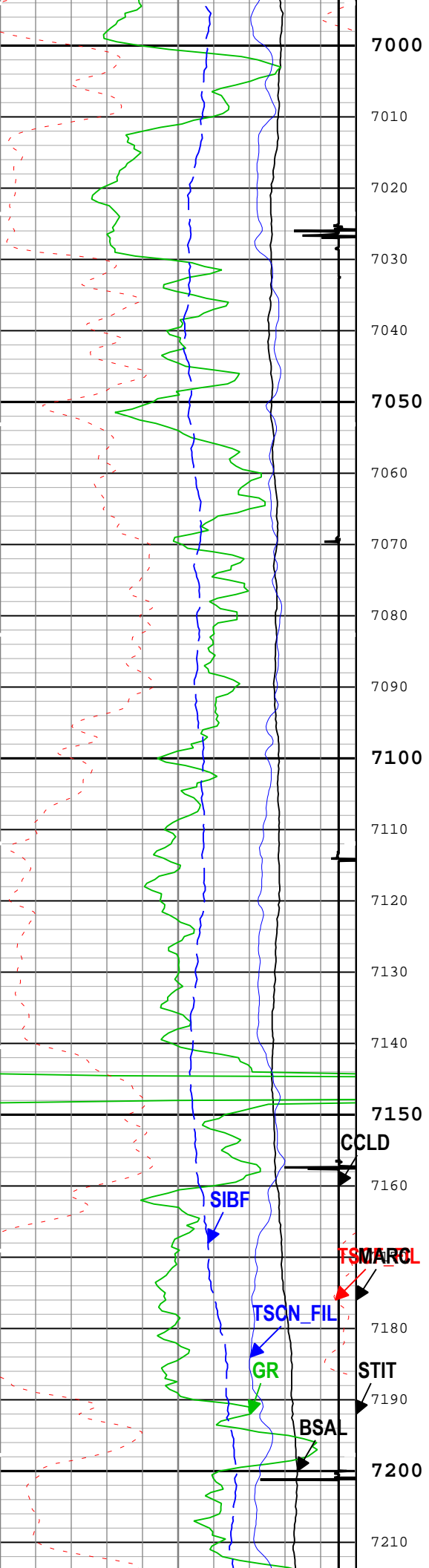


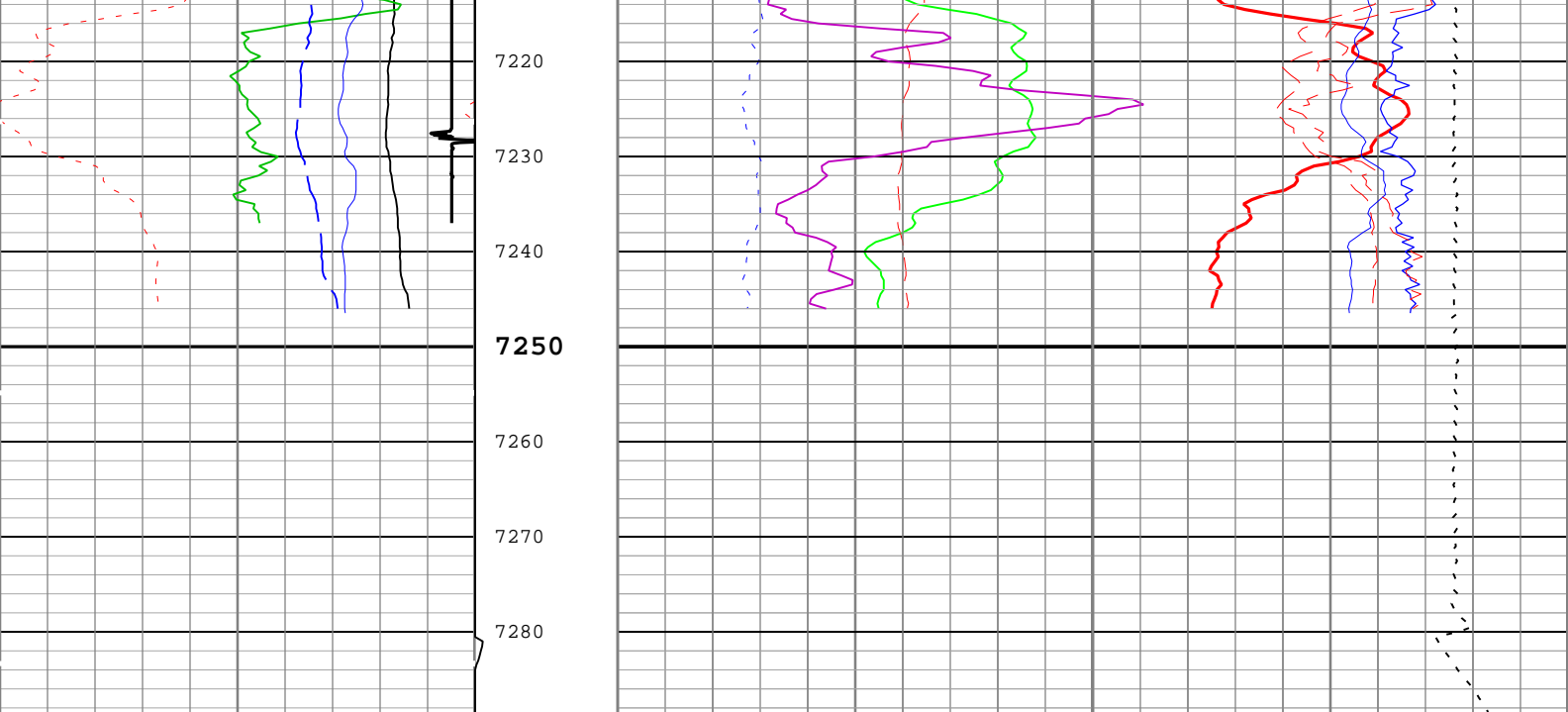












Borehole Salinity (BSAL) RST-C[1] 450 ppk -50	Stuck Tool Indicator, Total (STIT) 0 ft 50	Formation Sigma (Neutron Capture Cross Section) (SIGM) RST-C[1] 60 cu 0
Gamma Ray (GR) PSTP-B[1] 0 gAPI 150	Cable Drag From STIA to STIT	Weighted Inelastic Ratio (WINR_RST) RST-C[1] 0 0.4
Total Selected Count Rate Near Detector Filtered (TSCN_FIL) RST-C[1] 30000 1/s 0	Tool_Tot. Drag From D3T to STIT	Inelastic Ratio Filtered (IRAT_FIL) RST-C[1] 0.75 0
Total Selected Count Rate Far Detector Filtered (TSCF_FIL) RST-C[1] 12000 1/s 0	Minitron Arc Count (MARC) RST-C[1] 0 5	Capture to Inelastic Ratio Near Filtered (CIRN_FIL) RST-C[1] 2.5 0
Sigma Borehole Fluid (SIBF) RST-C[1] 100 cu 0		Capture to Inelastic Ratio Far Filtered (CIRF_FIL) RST-C[1] 5 0
CCL Discriminated Amplitude (CCLD) PSTP-B[1] -19 V 1		Near Detector Effective Unregulated Capture Count Rate (RSCN_RST) RST-C[1] 45 0
		Far Detector Effective Unregulated Capture Count Rate (RSCF_RST) RST-C[1] 45 0
		Cable Tension (TENS) 5000 lbf 0

- ICV - Integrated Cement Volume every 100.00 (ft3)
- ICV - Integrated Cement Volume every 10.00 (ft3)
- IHV - Integrated Hole Volume every 100.00 (ft3)
- IHV - Integrated Hole Volume every 10.00 (ft3)

TIME_1900 - Time Marked every 60.00 (s)

— TIME_1900 - Elapsed time since midnight, 30 December 1899 every 60.00 (s)

Description: RST SIGMA Answer Format: Log (RST SIGMA Answer) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 14-Sep-2018 10:30:48

Channel Processing Parameters

One: Parameters

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

BSAL	Borehole Salinity	Borehole	0	ppm
BSALOPT	Borehole Salinity Option	RST-C	Unknown	
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
MATR	Rock Matrix for Neutron Porosity Corrections	Borehole	SANDSTONE	
TD	Total Measured Depth	Borehole	7280	ft

OneDepth Zoned Parameters

Parameter	Value	Start (ft)	Stop (ft)
BS	14.75	1900	2050
BS	8.75	2050	7280

All depth are actual.

Tool Control Parameters

One: Parameters

Parameter	Description	Tool	Value	Unit
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	150	ft/h
PCCG	PSP Downhole CCL Gain	PSTP-B	24 dB	
RST_DLM	Depth Log Mode	RST-C	Sigma	

One

Repeat Pass

Software Version

Acquisition System	Version
Maxwell 2018 SP1	8.1.99839.3100
Application Patch	Wireline_Hotfix-Mandatory-2018SP1_8.1.102865

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
One	Log[4]:Up	Up	6949.27 ft	7291.58 ft	14-Sep-2018 2:05:57 AM	14-Sep-2018 2:18:18 AM	ON	6.19 ft	No

All depths are referenced to toolstring zero

Log

Company:Caerus Operating LLC Well:NPR 14D-10 596
One: Log[4]:Up:S002

Description: RST SIGMA Answer Format: Log (RST SIGMA Answer) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 14-Sep-2018 10:30:52

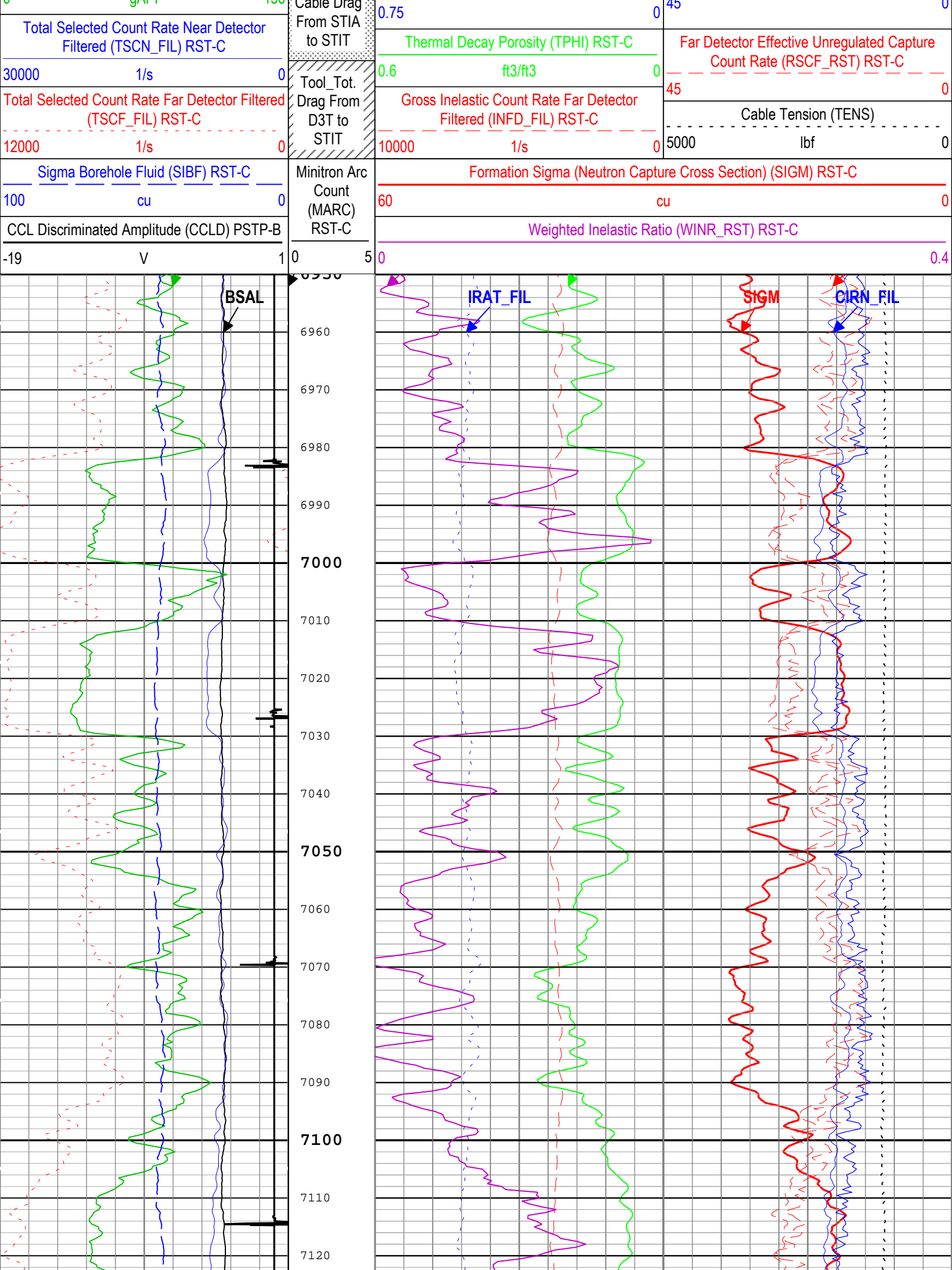
-| TIME_1900 - Elapsed time since midnight, 30 December 1899 every 60.00 (s)
 -| IHV - Integrated Hole Volume every 10.00 (ft3)
 -| IHV - Integrated Hole Volume every 100.00 (ft3)
 -| ICV - Integrated Cement Volume every 10.00 (ft3)
 TIME_1900 - Time Marked every 60.00 (s)
 -| ICV - Integrated Cement Volume every 100.00 (ft3)

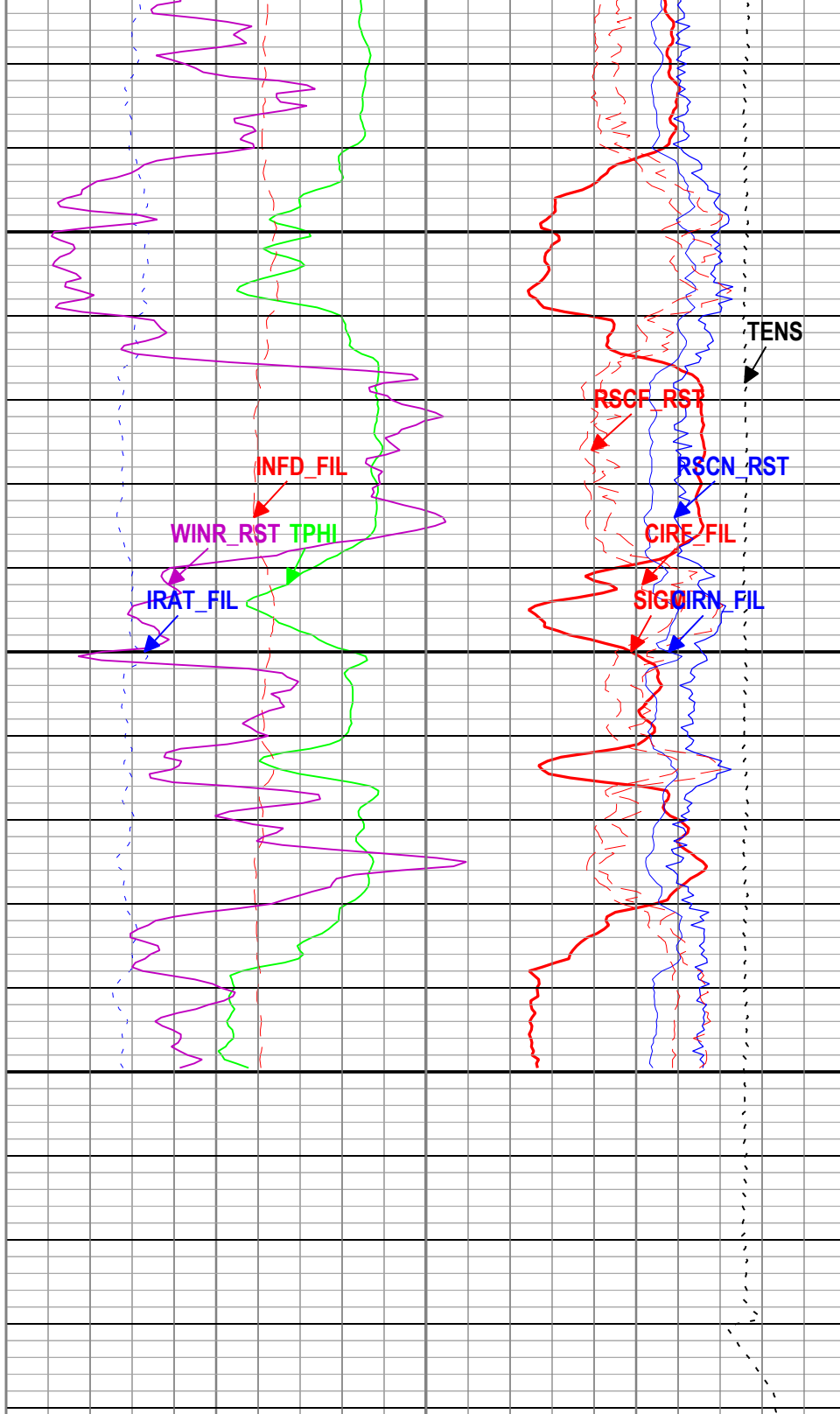
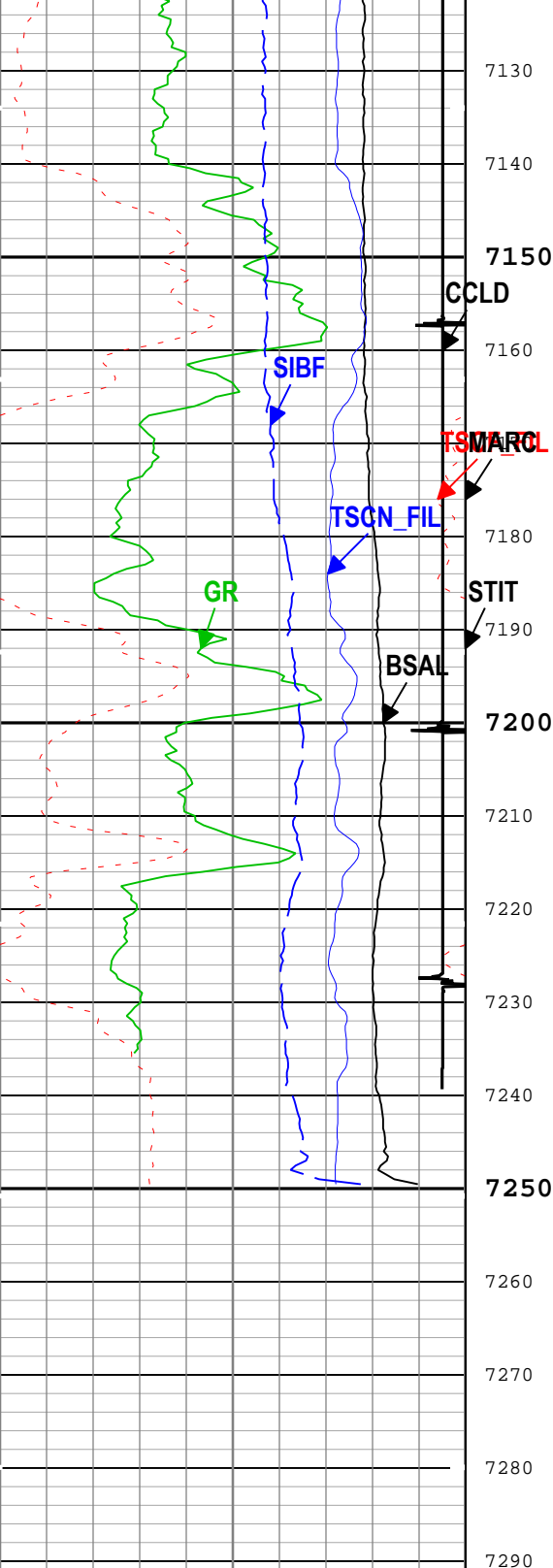
Borehole Salinity (BSAL) RST-C	450	ppk	-50
Gamma Ray (GR) PSTP-B	0	aAPI	150

Stuck Tool Indicator, Total (STIT)
0 ft 50

Inelastic Ratio Filtered (IRAT_FIL) RST-C

Capture to Inelastic Ratio Near Filtered (CIRN_FIL) RST-C	2.5	0
Capture to Inelastic Ratio Far Filtered (CIRF_FIL) RST-C	5	0
Near Detector Effective Unregulated Capture Count Rate (RSCN_RST) RST-C	45	





Borehole Salinity (BSAL) RST-C	450	ppk	-50
Gamma Ray (GR) PSTP-B	0	gAPI	150
Total Selected Count Rate Near Detector Filtered (TSCN_FIL) RST-C	30000	1/s	0
Total Selected Count Rate Far Detector Filtered (TSCF_FIL) RST-C	12000	1/s	0
Sigma Borehole Fluid (SIBF) RST-C			

Stuck Tool Indicator, Total (STIT)	0	ft	50
Cable Drag From STIA to STIT			
Tool_Tot. Drag From D3T to STIT			
Minitron Arc			

Formation Sigma (Neutron Capture Cross Section) (SIGM) RST-C	60	cu	0
Weighted Inelastic Ratio (WINR_RST) RST-C	0		0.4
Inelastic Ratio Filtered (IRAT_FIL) RST-C	0.75		0
Thermal Decay Porosity (TPHI) RST-C	0.6	ft ³ /ft ³	0
Gross Inelastic Count Rate Far Detector Filtered (INFD_FIL) RST-C	10000	1/s	0
Capture to Inelastic Ratio Near Filtered (CIRN_FIL) RST-C	2.5		0
Capture to Inelastic Ratio Far Filtered (CIRF_FIL) RST-C	5		0
Near Detector Effective Unregulated Capture Count Rate (RSCN_RST) RST-C			

100	cu	0	Minimum ARC Count (MARC) RST-C	10000	175	0	Count Rate (RSCF_RST) RST-C	45	0	
CCL Discriminated Amplitude (CCLD) PSTP-B							Far Detector Effective Unregulated Capture Count Rate (RSCF_RST) RST-C	45	0	
-19	V	1		0	5		Cable Tension (TENS)	5000	lbf	0

| ICV - Integrated Cement Volume every 100.00 (ft3)

TIME_1900 - Time Marked every 60.00 (s)

| ICV - Integrated Cement Volume every 10.00 (ft3)

-| IHV - Integrated Hole Volume every 100.00 (ft3)

-| IHV - Integrated Hole Volume every 10.00 (ft3)

-| TIME_1900 - Elapsed time since midnight, 30 December 1899 every 60.00 (s)

Description: RST SIGMA Answer Format: Log (RST SIGMA Answer) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 14-Sep-2018 10:30:52

Channel Processing Parameters

One: Parameters

Parameter	Description	Tool	Value	Unit
BHS	Borehole Status (Open or Cased Hole)	Borehole	Cased	
BS	Bit Size	WLSESSION	8.75	in
BSAL	Borehole Salinity	Borehole	0	ppm
BSALOPT	Borehole Salinity Option	RST-C	Unknown	
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
MATR	Rock Matrix for Neutron Porosity Corrections	Borehole	SANDSTONE	
TD	Total Measured Depth	Borehole	7280	ft

Tool Control Parameters

One: Parameters

Parameter	Description	Tool	Value	Unit
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	150	ft/h
PCCG	PSP Downhole CCL Gain	PSTP-B	24 dB	
RST_DLM	Depth Log Mode	RST-C	Sigma	

Company: Caerus Operating LLC

Schlumberger

Well: NPR 14D-10 596

Field: NPR

County: Garfield

State: Colorado

Cement Bond Log

RST Sigma Log

Gamma Ray - Collar Locator Log