

Company: Caerus Operating LLC

Well: NPR 12B-10 596

Field: NPR

County: Garfield State: Colorado

Cement Bond Log

RST Sigma Log

Gamma Ray - Collar Locator Log

Location: K10-596
 Well: NPR 12B-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. 05045237680000	Section: 10	Township: 5S	Range: 96W

Logging Date	08-Sep-2018
Run Number	ONE
Depth Driller	9861.00 ft
Schlumberger Depth	9819.00 ft
Bottom Log Interval	9819.00 ft
Top Log Interval	2300.00 ft
Casing Fluid Type	Water
Salinity	
Density	8.5 lbm/gal
Fluid Level	8.00 ft
BIT/CASING/TUBING STRING	
Bit Size	8.75 in
From	2414.00 ft
To	9819.00 ft
Casing/Tubing Size	4.5 in
Weight	11.6 lbm/ft
Grade	P110
From	0.00 ft
To	9819.00 ft
Max Recorded Temperatures	278.25 degF
Logger on Bottom	08-Sep-2018 03:30:00
Unit Number	3108
Recorded By	Richard Woods
Witnessed By	Trent Ray

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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9.4 Log (Sonic CBL with VDL)

9.5 Parameter Listing

10. ONE

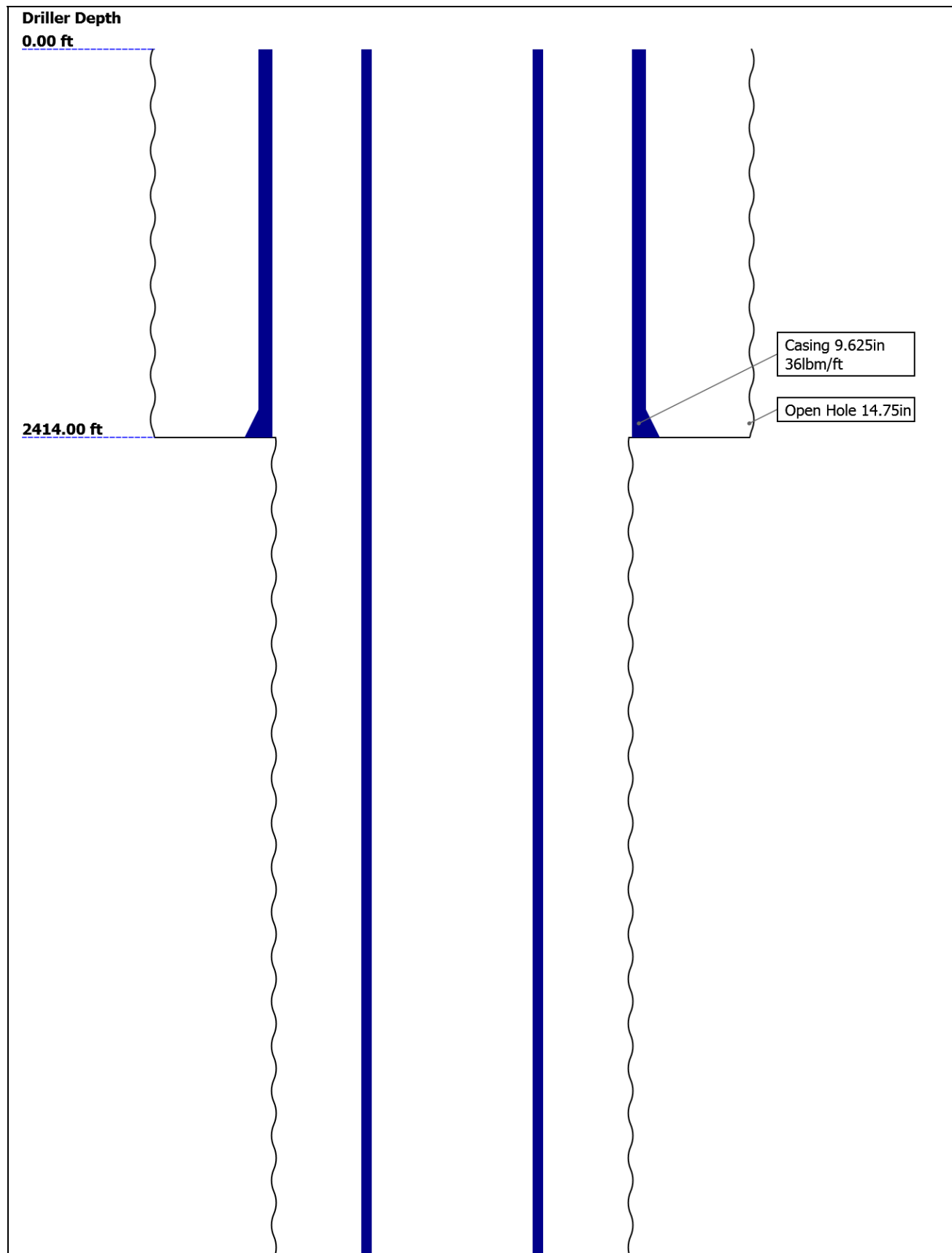
10.1 Integration Summary

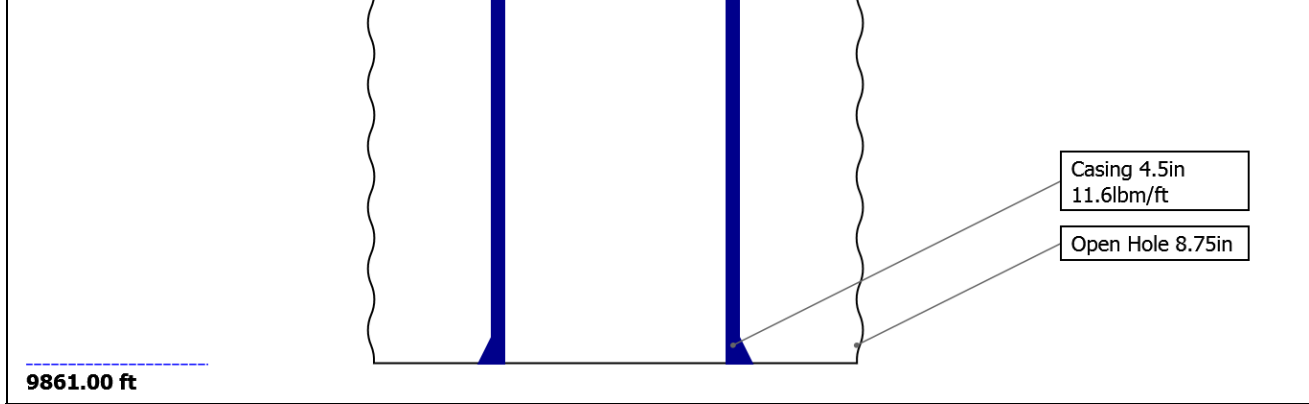
10.2 Software Version

10.3 Composite Summary

10.4 Log (RST SIGMA Answer)

Well Sketch





Borehole Size/Casing/Tubing Record

Bit					
Bit Size (in)	14.75	8.75			
Top Driller (ft)	0	2414			
Top Logger (ft)	0	2414			
Bottom Driller (ft)	2414	9861			
Bottom Logger (ft)	2414	9819			
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)	2414	9861			
Bottom Logger (ft)	2414	9819			

Remarks and Equipment Summary

ONE: Toolstring				ONE: Remarks
Equip name	Length	MP name	Offset	Toolstring run as per toolsketch.
PEH-E	59.74			RST Mode: Sigma
AH-38	58.06			Matrix: Sandstone
PSTP-B:282	57.78	GR	54.07	Max Recorded Temp: 273.25
6		PSTC	53.78	SLB Depth: 9819
PSC-A		PSTC Tool	0.00	Thank You for choosing Schlumberger!
PSTC-A		String Bot		
PBMS-B:2826		tom		
		Temperatu	51.03	
		re		
		CQG Press	50.68	
		ure		
		CCL	50.26	
		PBMS	49.51	
RST-C	49.51			
RSCH-A:530				
RSC-E				
RSS-A:488				
MNTR-F				
RSXH-A:597				
RSX-E				
		RSC-E	43.16	



SCMT-HC:82 26.49
25
 UDFH-RMC
 SCMC-HC:822
 0
 SCME-K
 SCMS-CA:822
 5
 UDFH-RMT
 SCMX-HC

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

Depth Measuring Device

Type	IDW-JA		
Serial Number	6693		
Calibration Date	02-Feb-2018		
Calibrator Serial Number	IDWC-C-57		
Calibration Cable Type	1-25ZA-XXS		
Wheel Correction 1	-4		
Wheel Correction 2	-4		

Tension Device

Type	CMTD-B/A		
Serial Number	1127		
Calibration Date	25-Jul-2018		
Calibrator Serial Number	112544		
Number of Calibration Points	10		
Calibration Root Mean Square Error	1320		
Calibration Peak Error	25		

Logging Cable

Type	1-25ZA-XXS		
Serial Number	F112140		
Length	17500.00 ft		
Conveyance Type	Wireline		
Rig Type	Crane		

ONE:Depth Control Parameters

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

ONE

Software Version

Acquisition System	Version
Maxwell 2018	8.0.95333.3100

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
ONE	Log[3]:Up	Up	1358.18 ft	9831.08 ft	08-Sep-2018 2:31:30 AM	08-Sep-2018 7:22:15 AM	ON	9.70 ft	No

All depths are referenced to toolstring zero

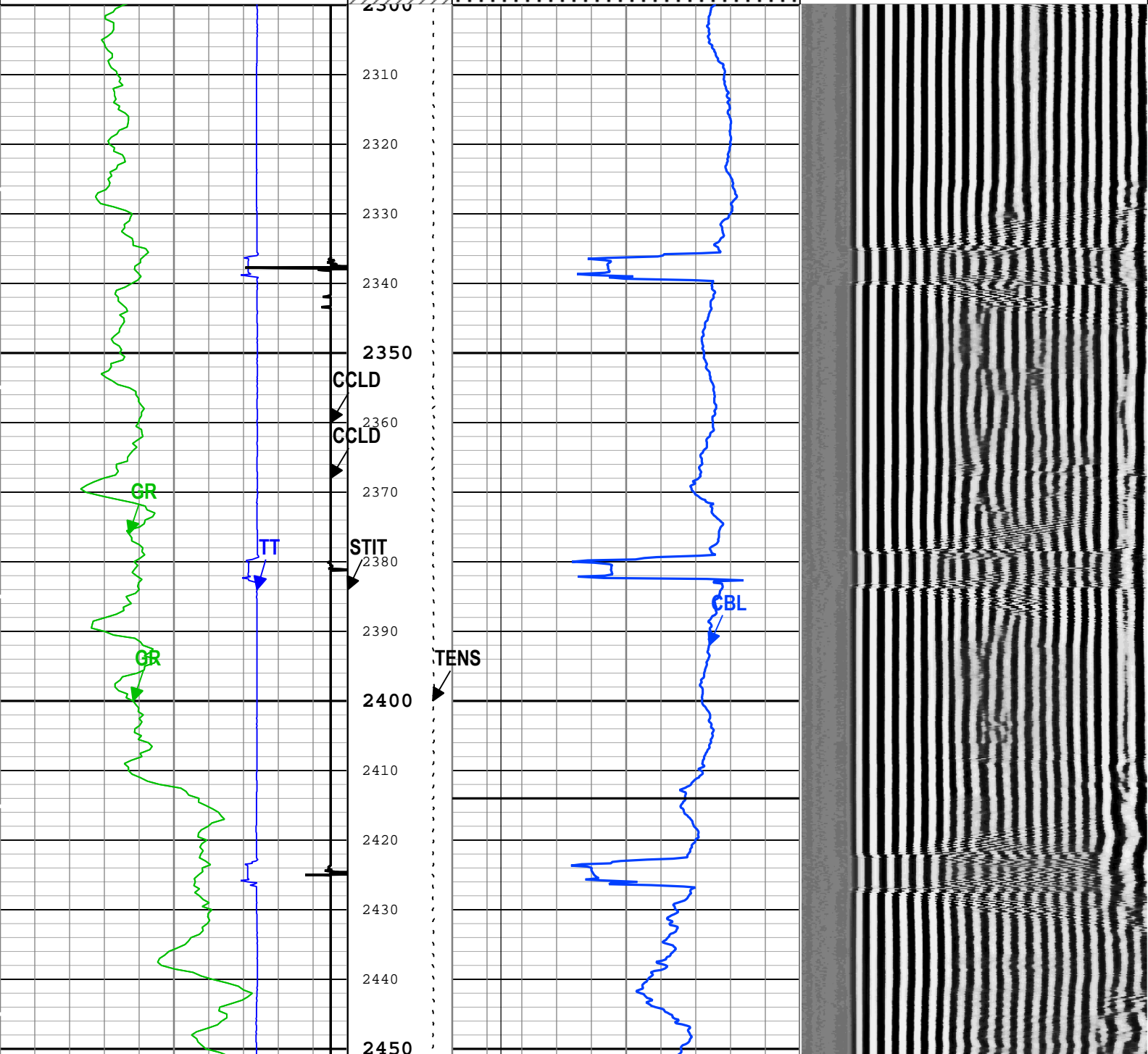
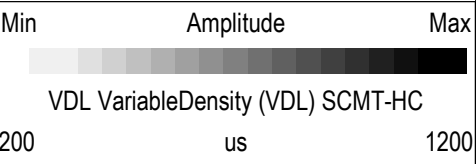
TIME_1900 - Time Marked every 60.00 (s)

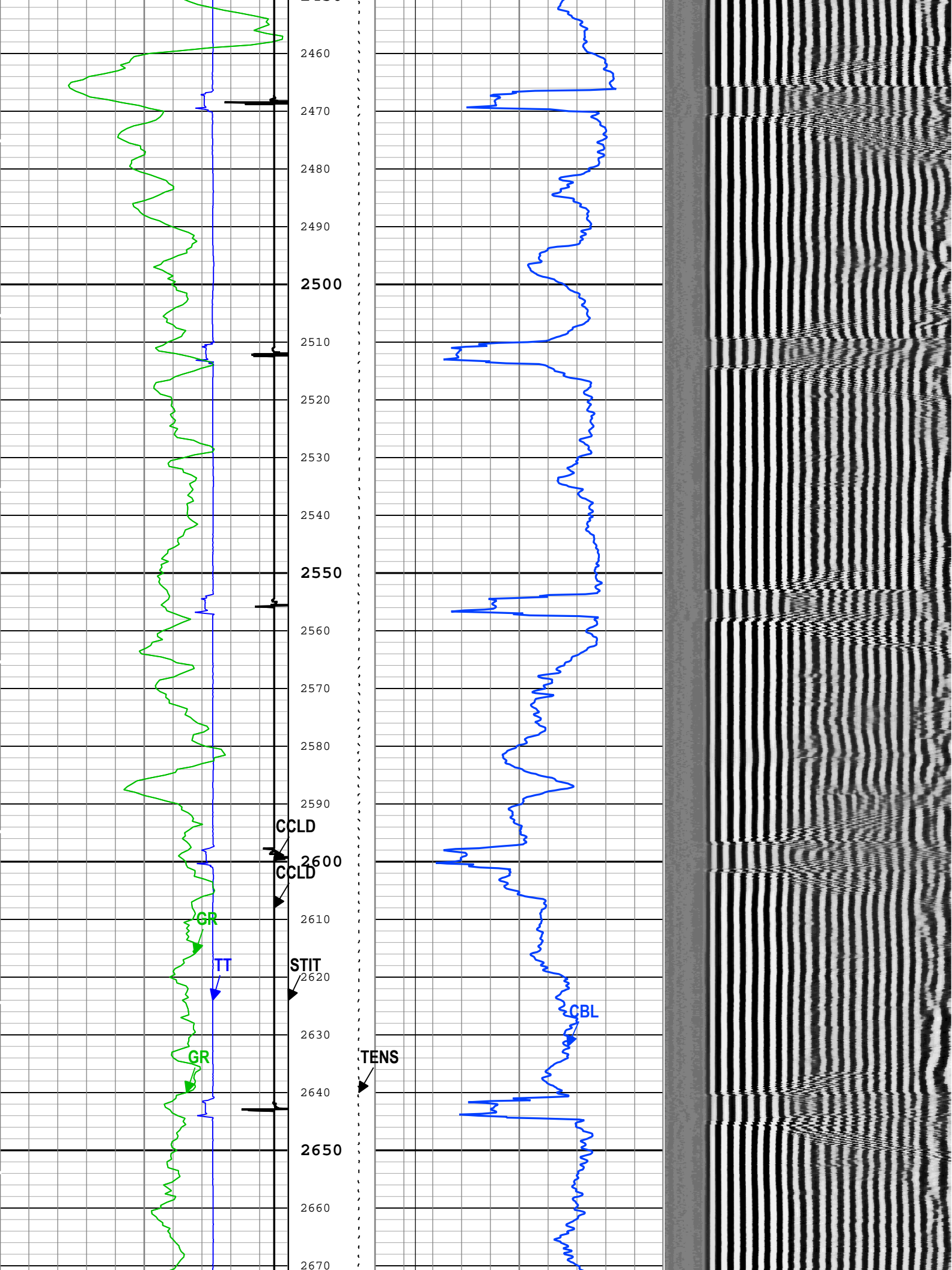
■ BIEP - Bond Index Event Pips SCMT-HC

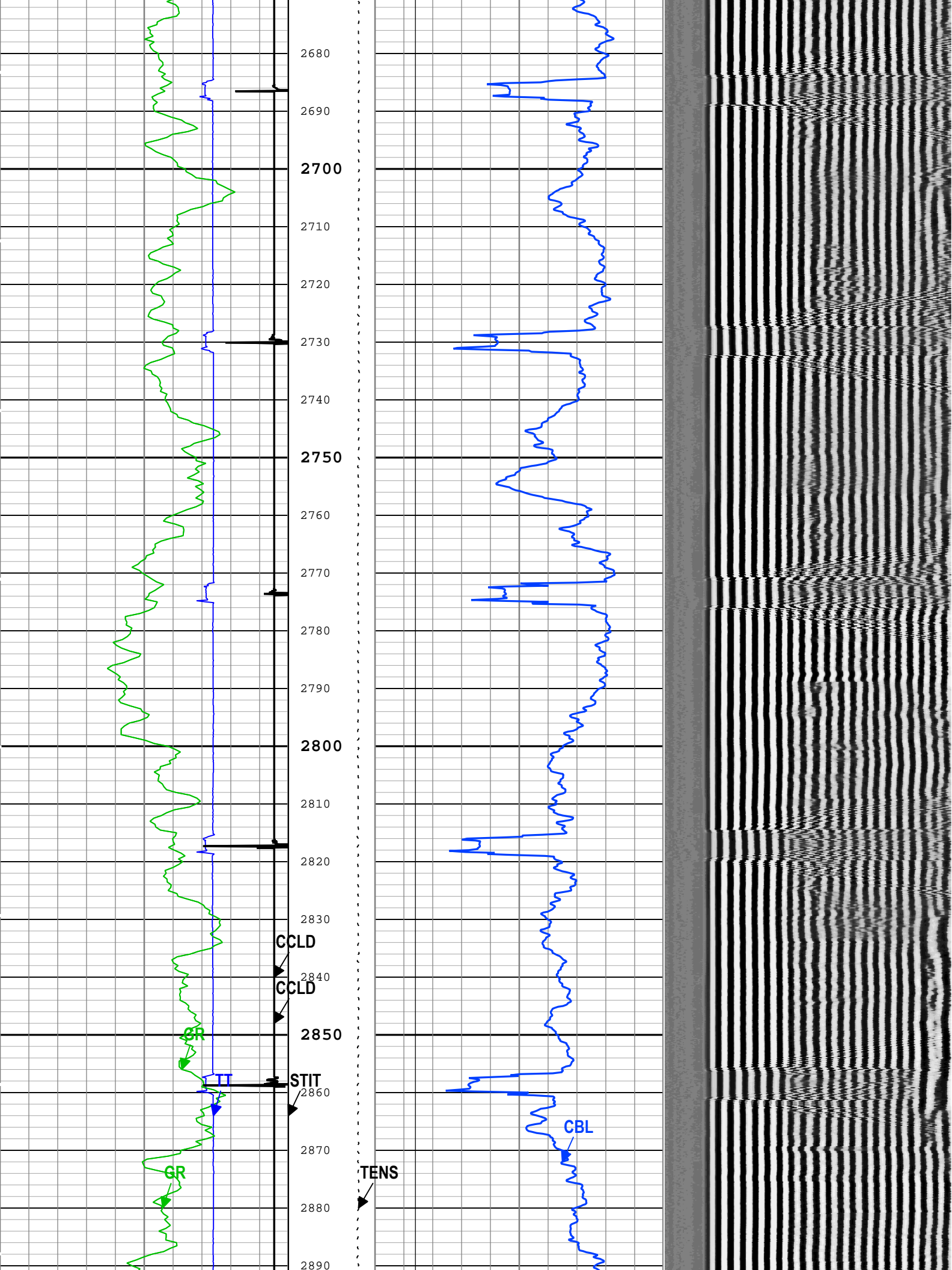
Gamma Ray (GR) PSTP-B		
0	gAPI	150
Transit Time for CBL (TT) SCMT-HC		
400	us	200
Gamma Ray (GR) PSTP-B		
0	gAPI	150
CCL Discriminated Amplitude (CCLD) PSTP-B		
-19	V	1
CCL Discriminated Amplitude (CCLD) PSTP-B		
-19	V	1

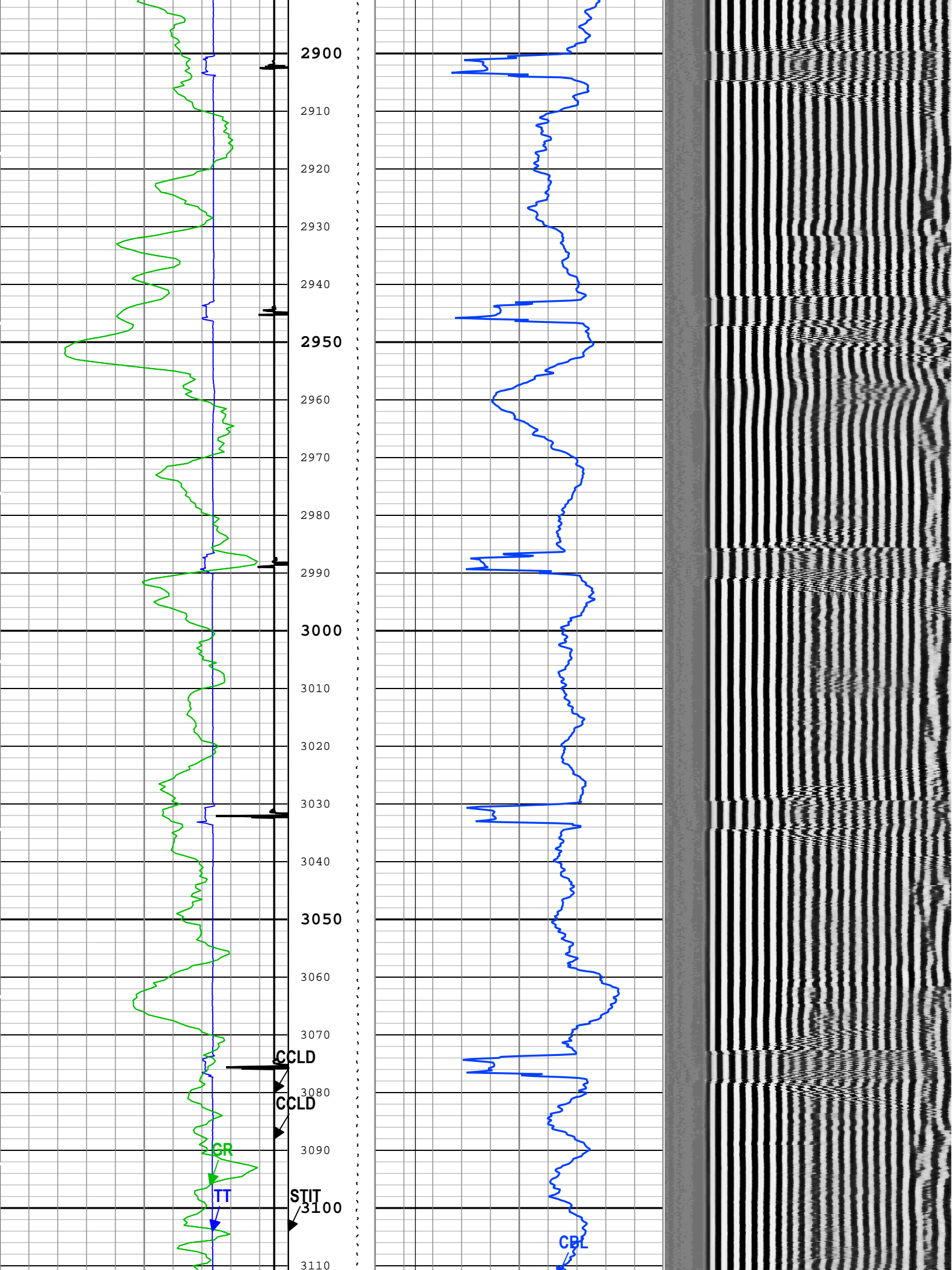
Cable Tension (TENS)	3000 lbf	0
Stuck Tool Indicator, Total (STIT)	0	50
Cable Drag		
Tool_Tot. Drag		

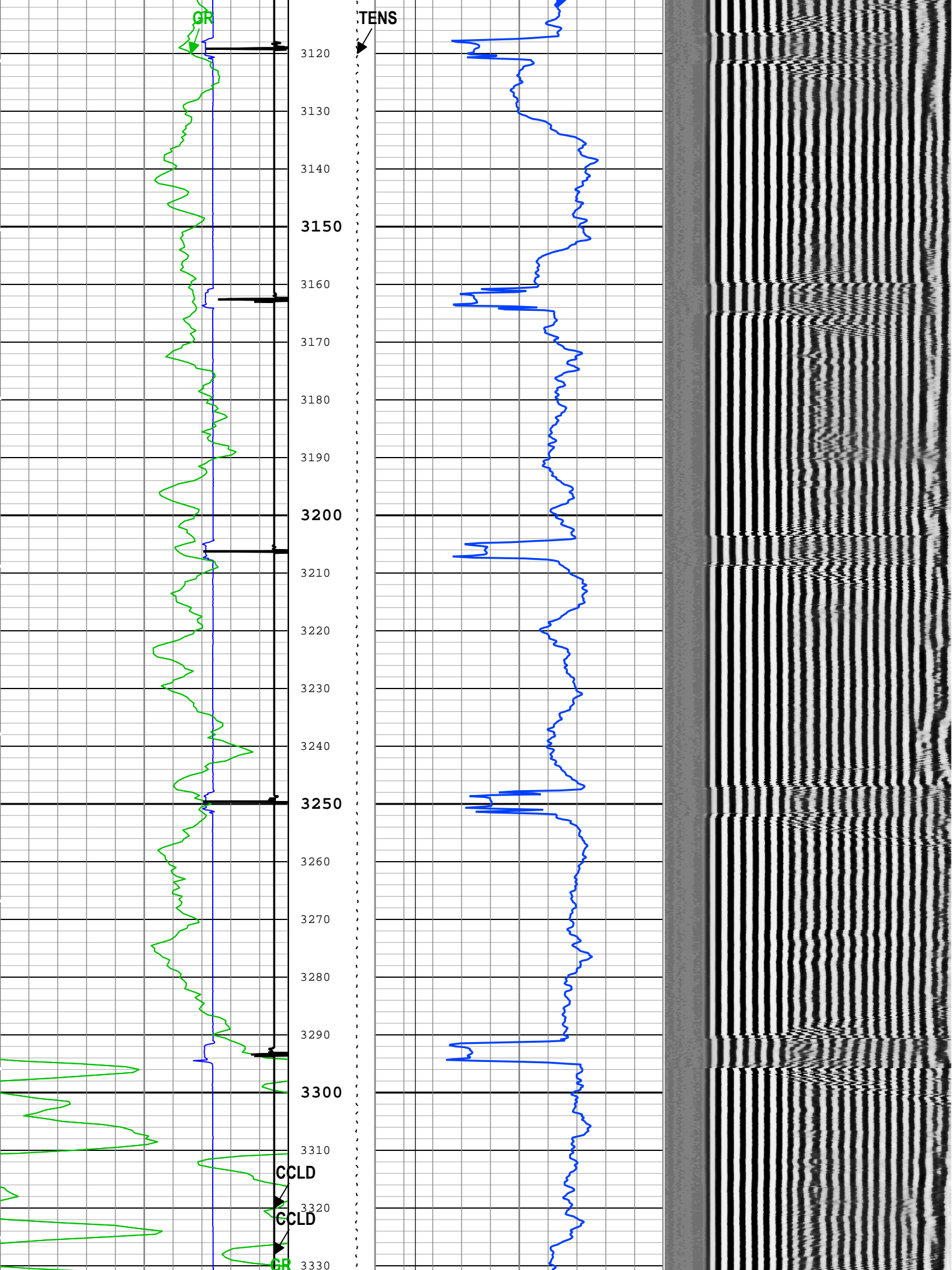
CBL Amplitude (CBL) SCMT-HC		
0	mV	10
CBL Amplitude (CBL) SCMT-HC		
0	mV	100
Good Bond (GOBO)		
0	mV	10
GoodBond From CBL to GOBO		
200	us	1200

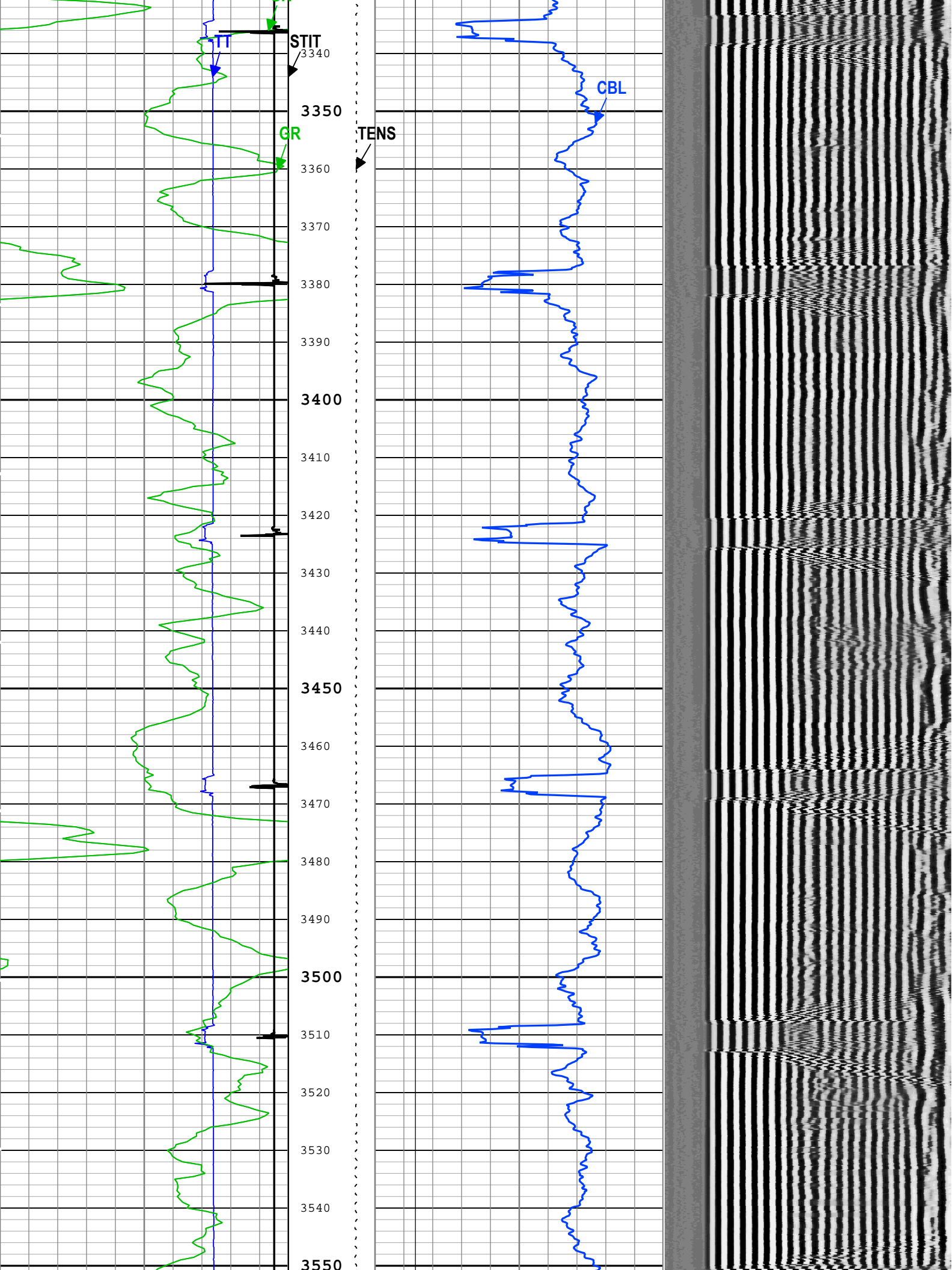


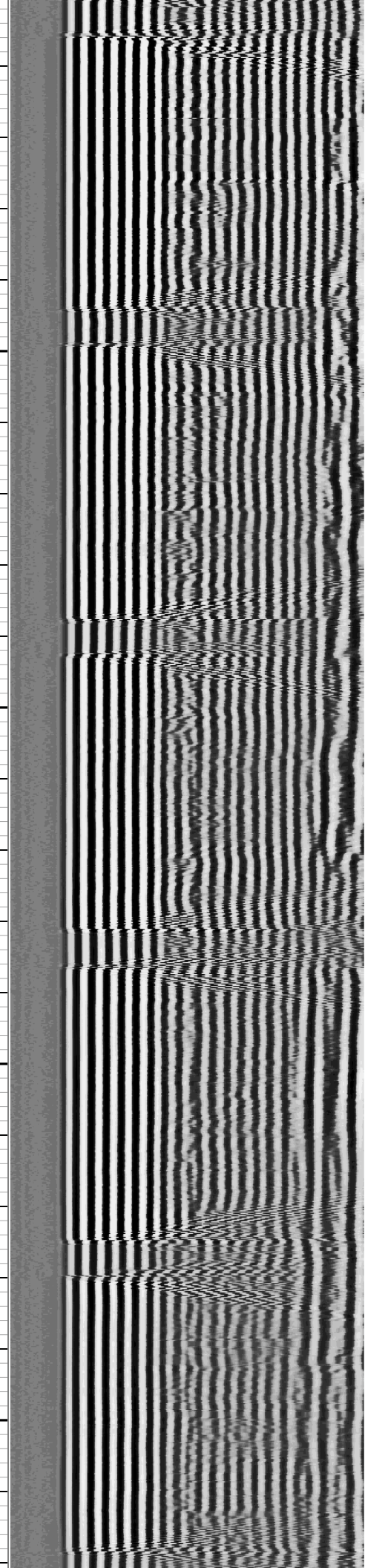
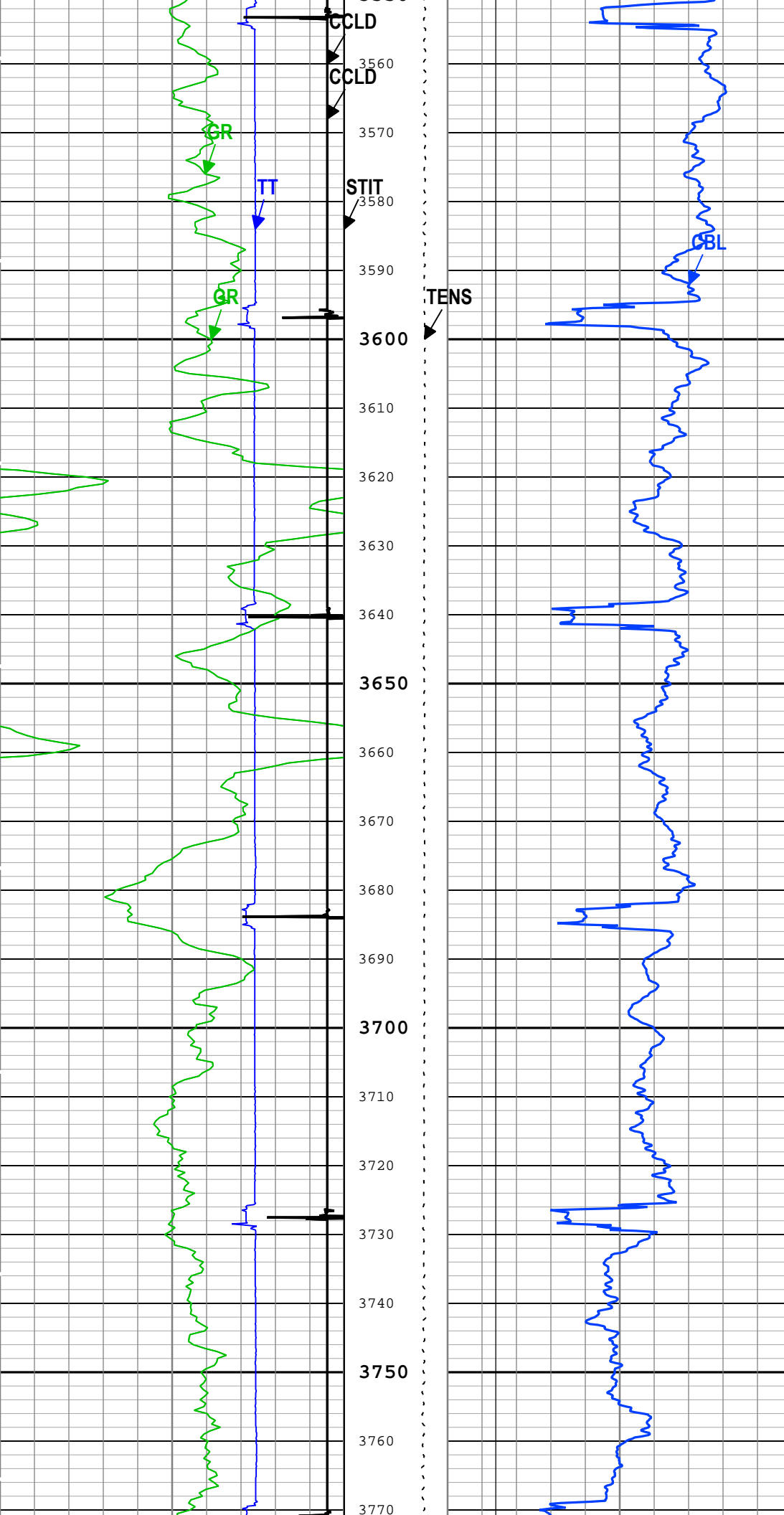


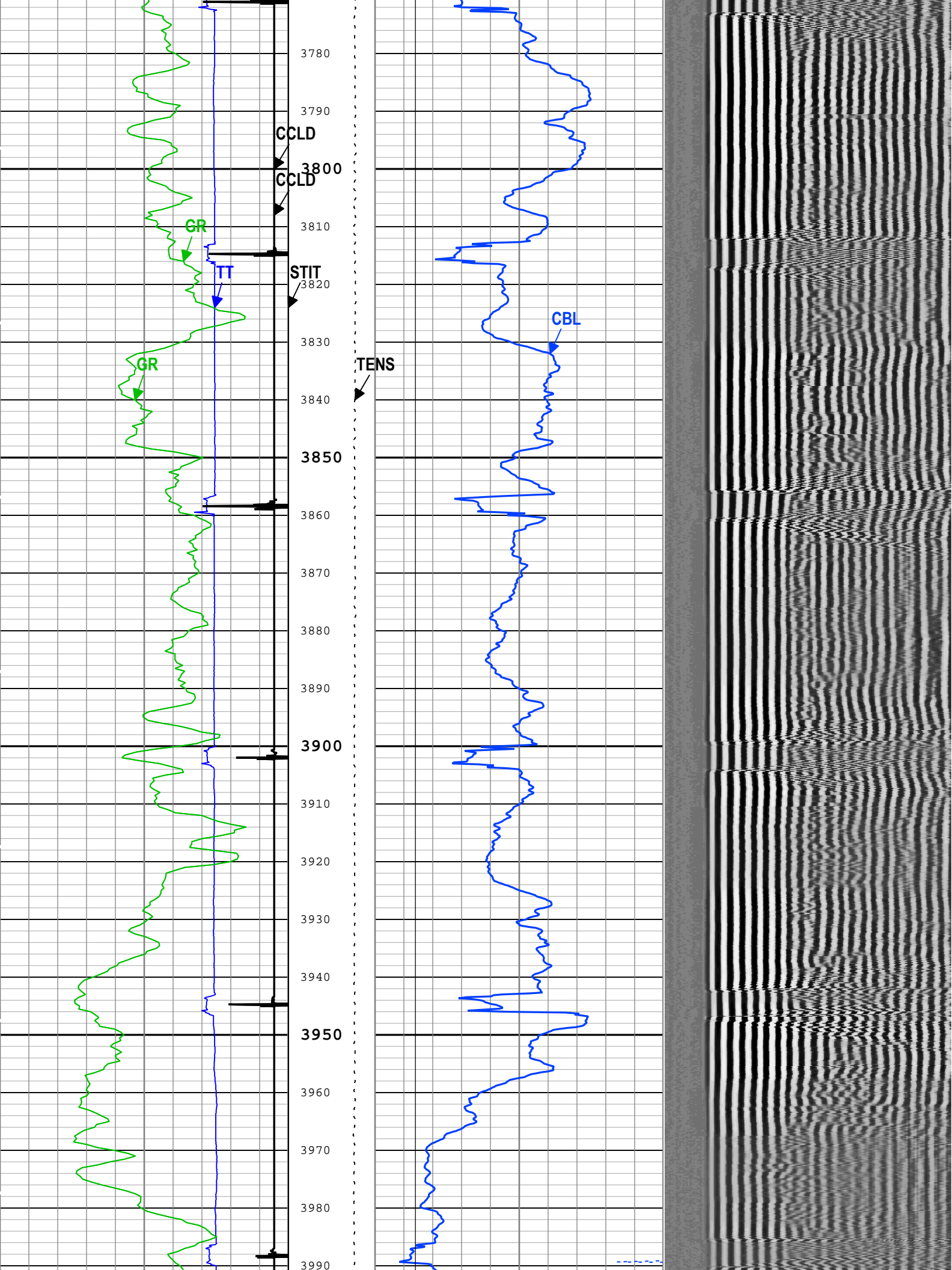


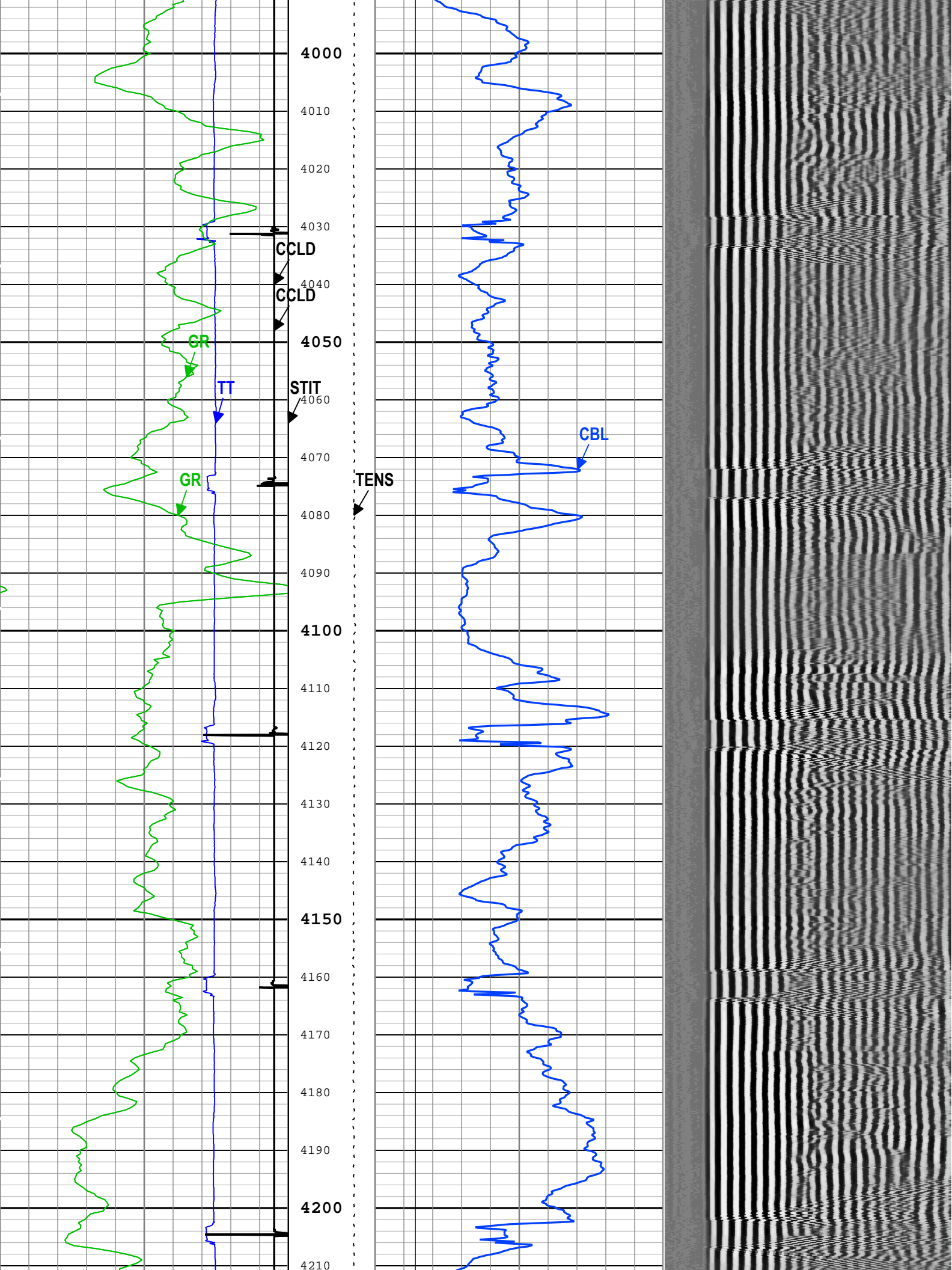


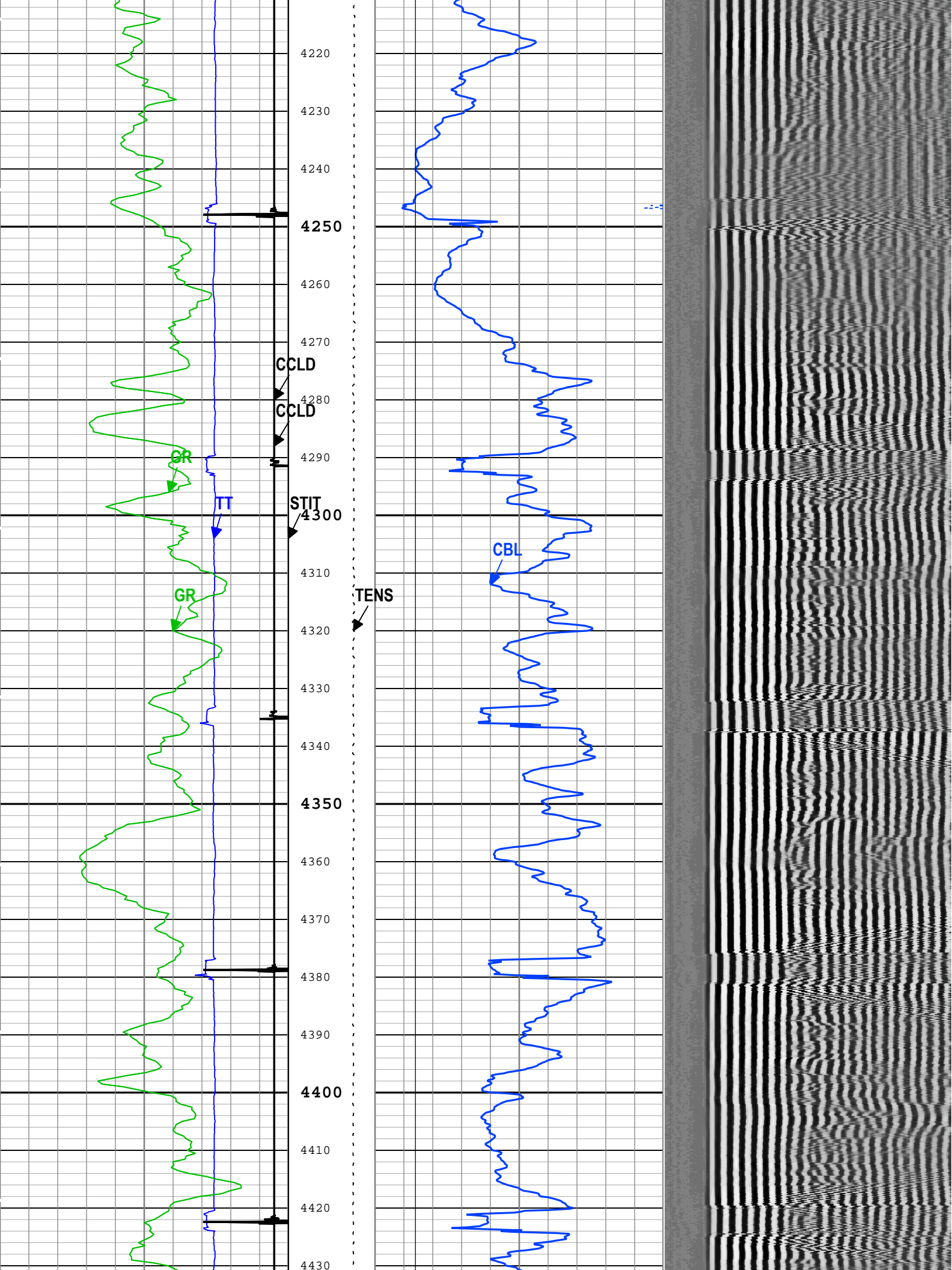


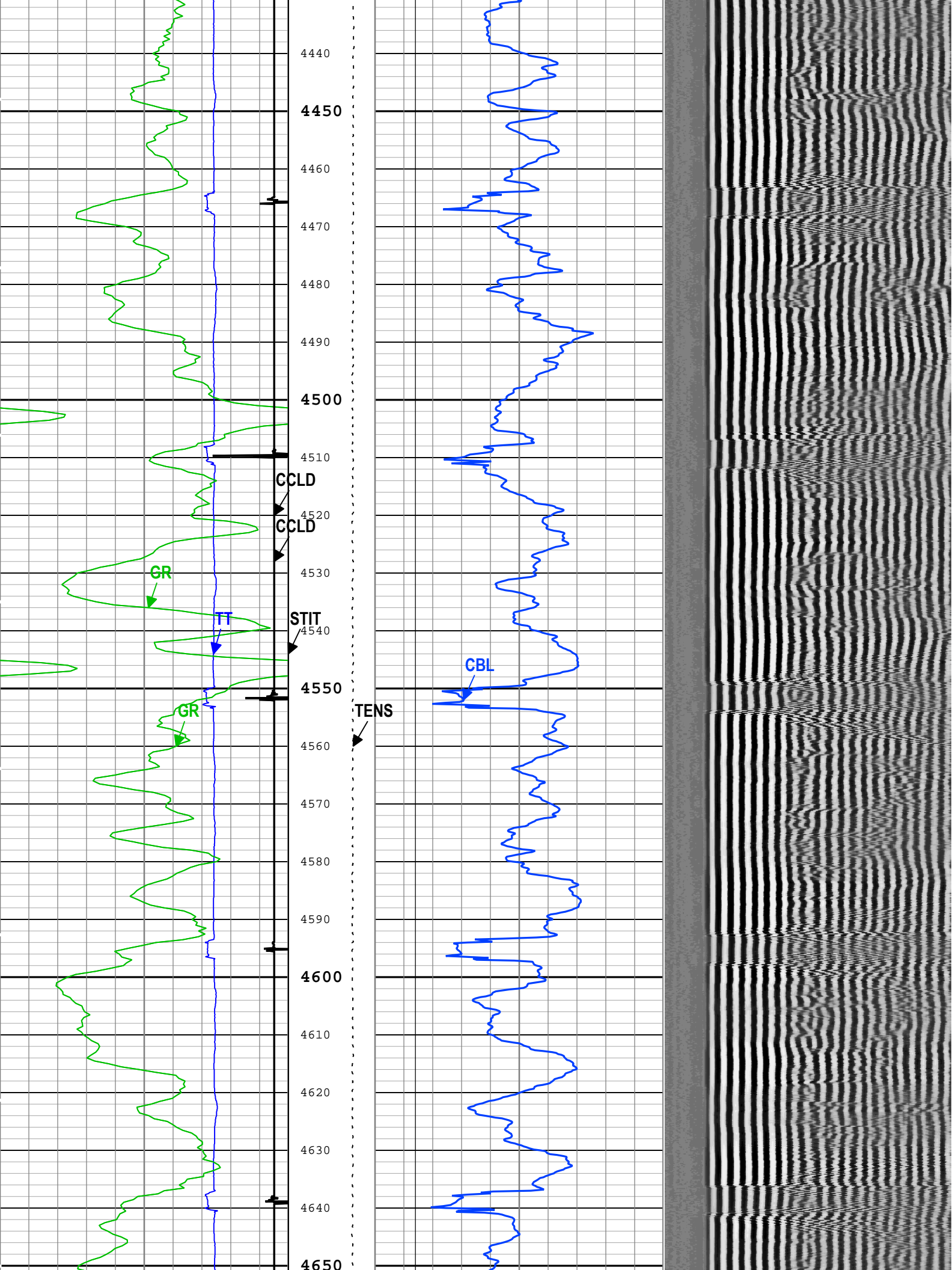


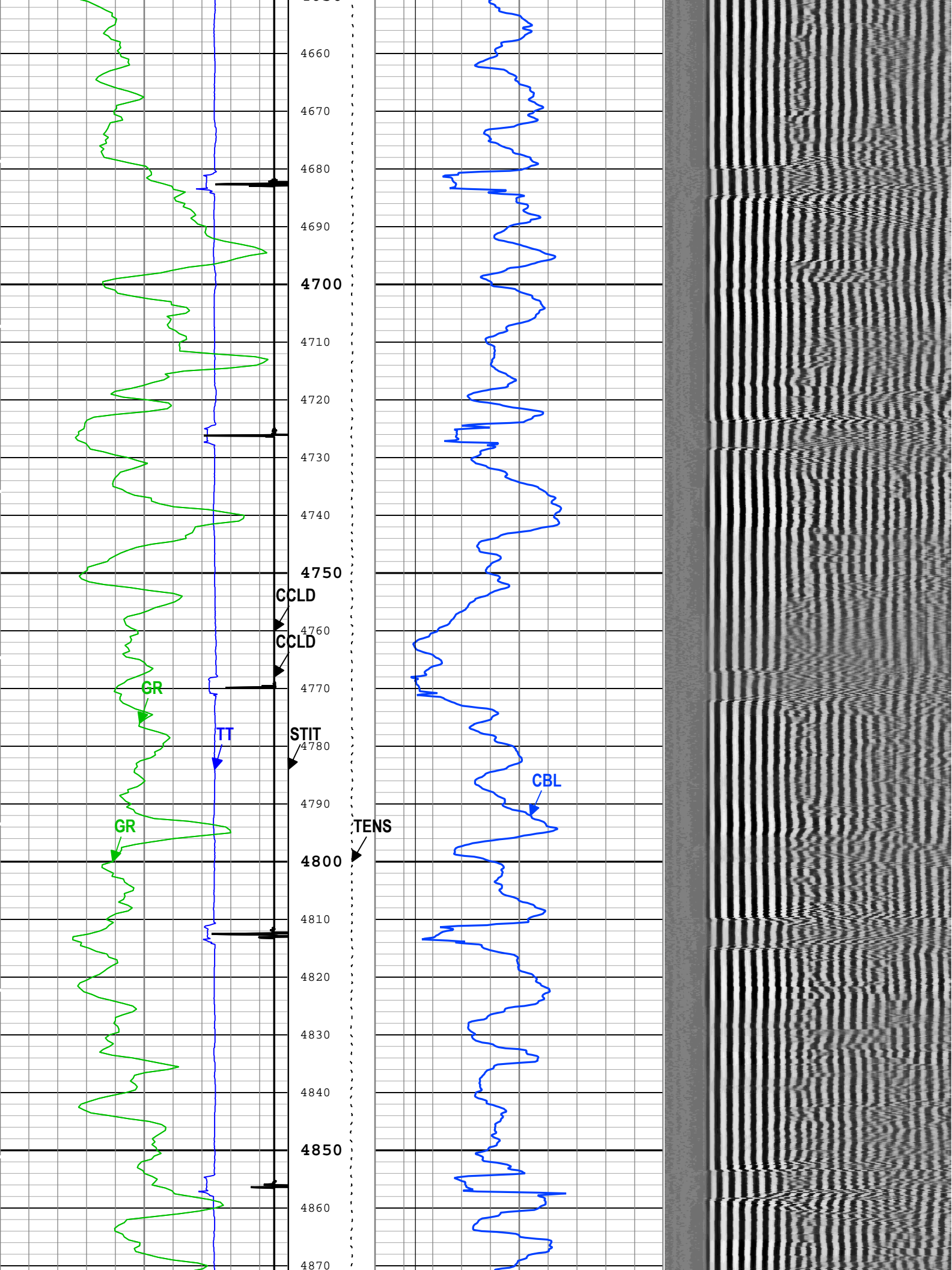


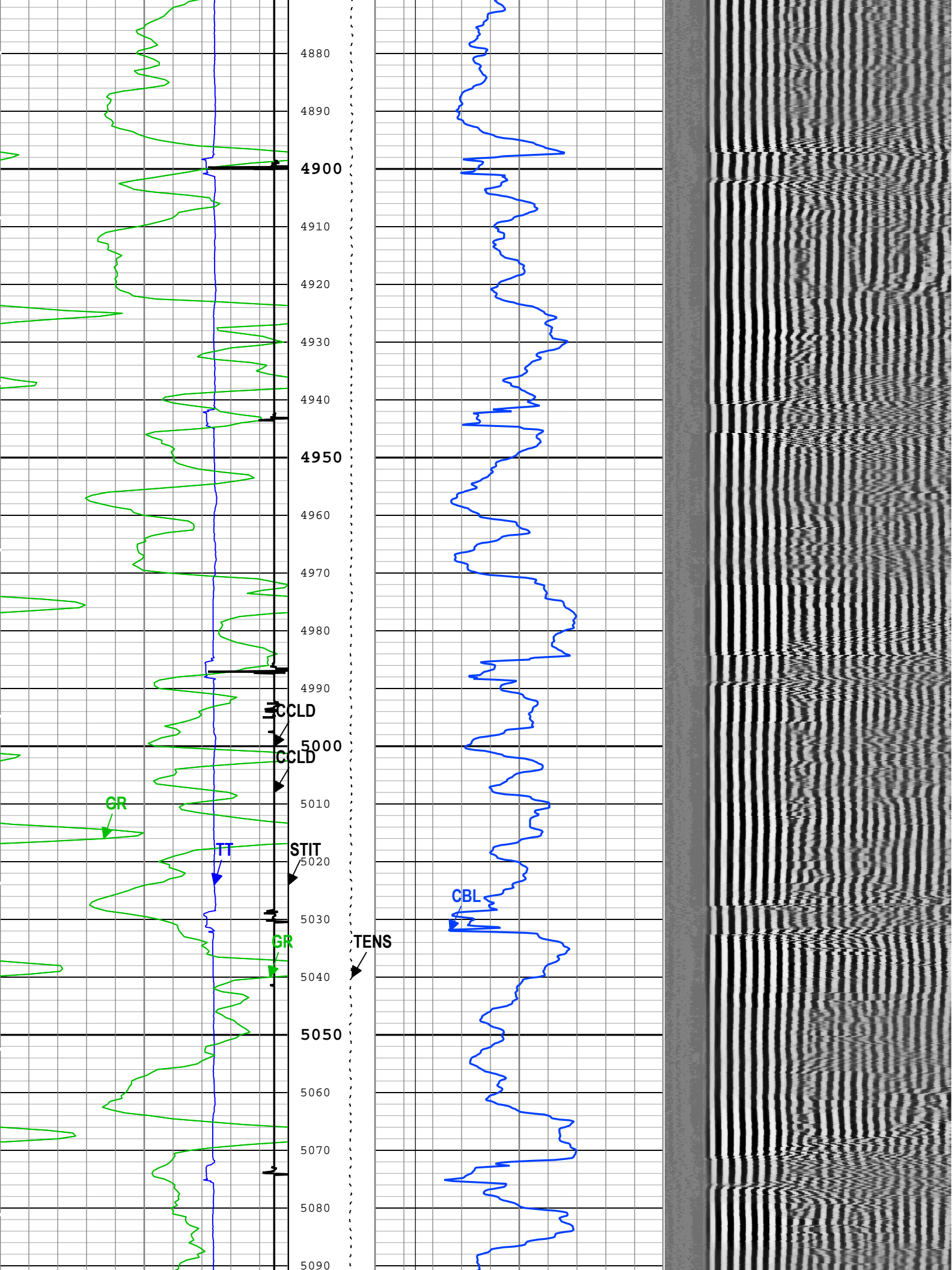


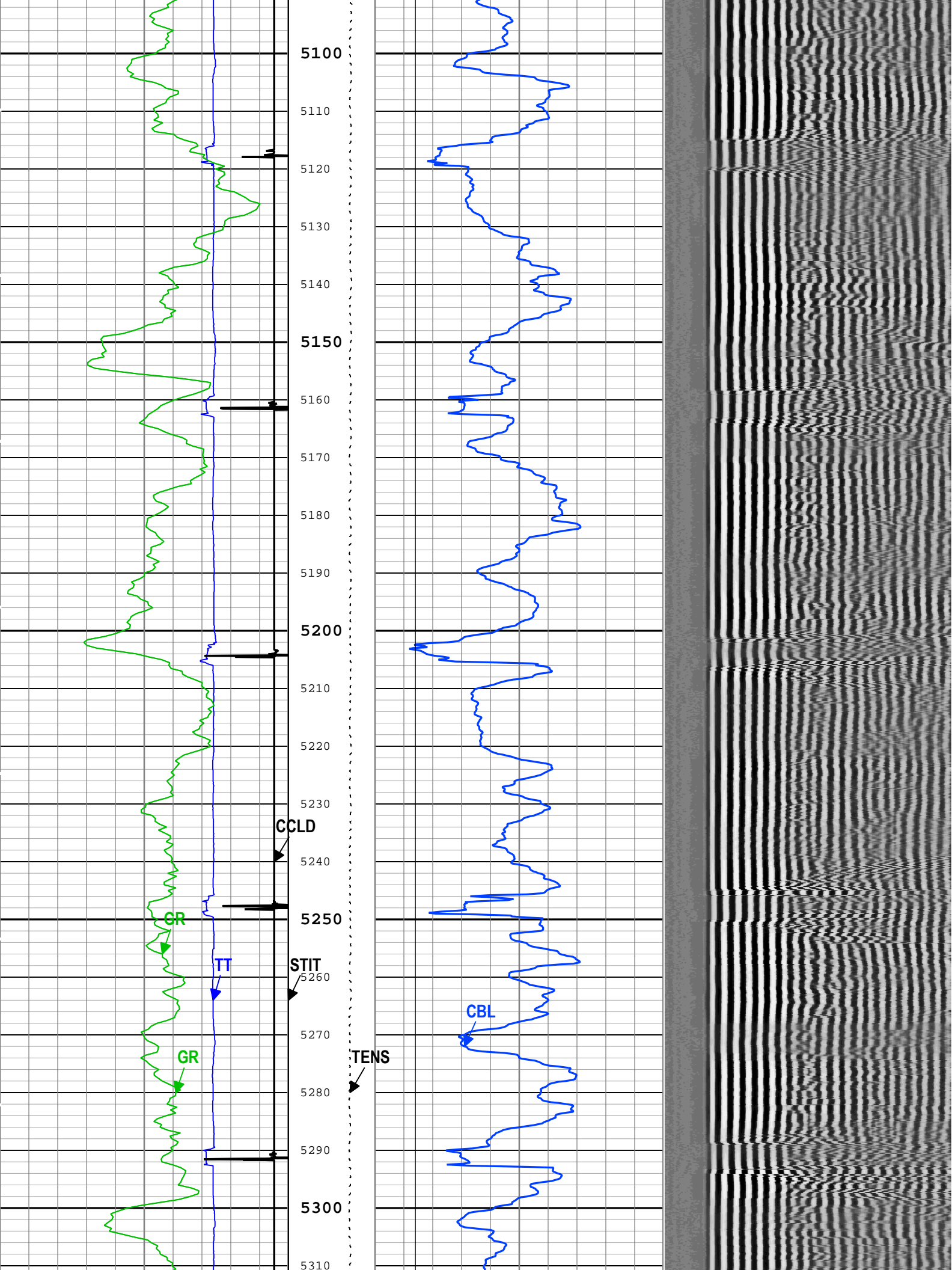


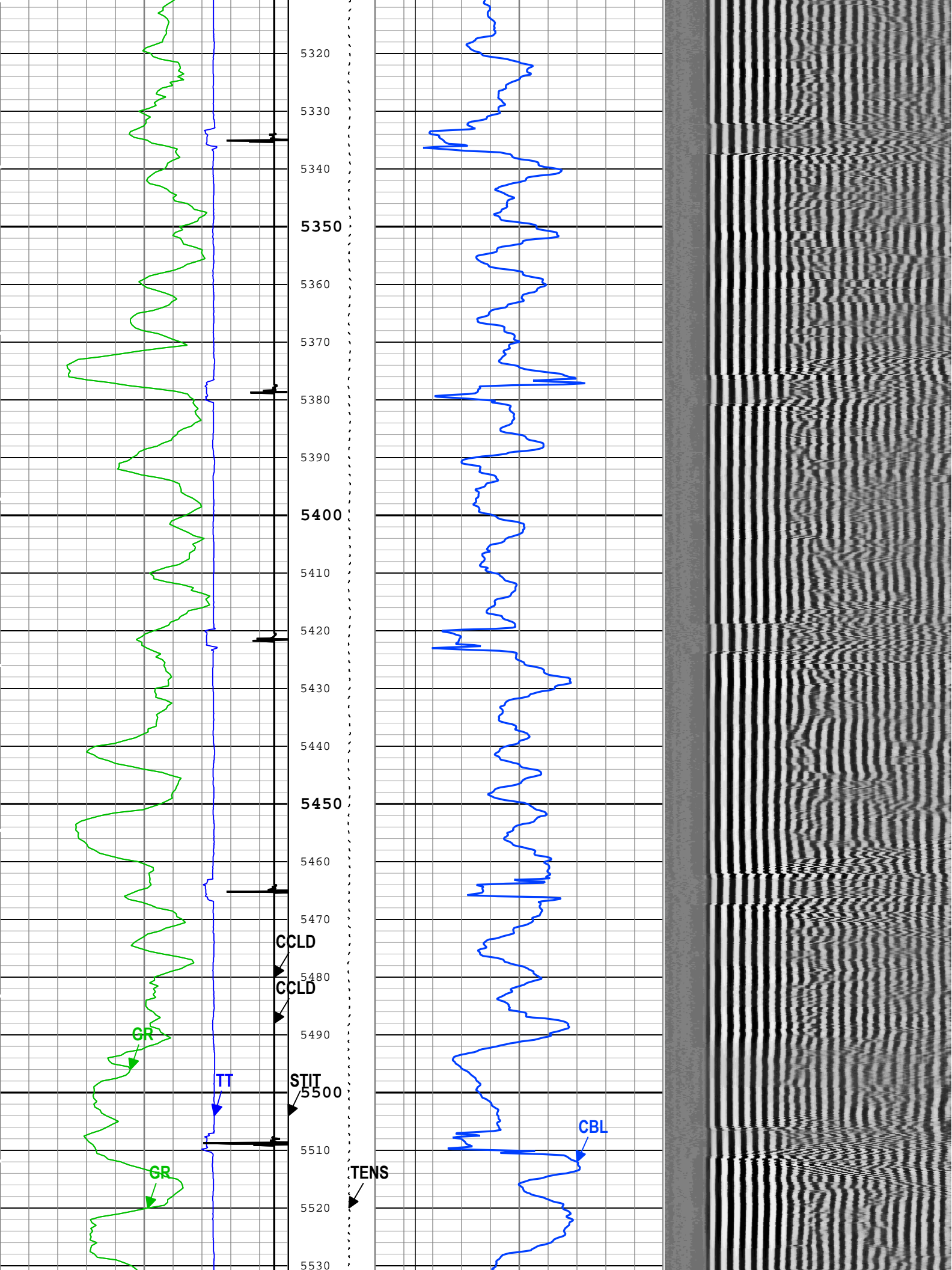


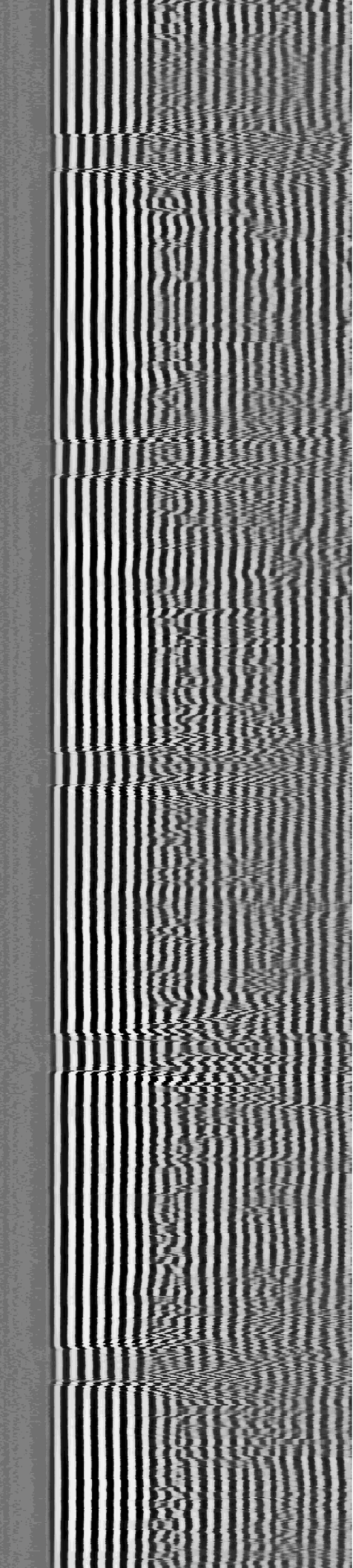
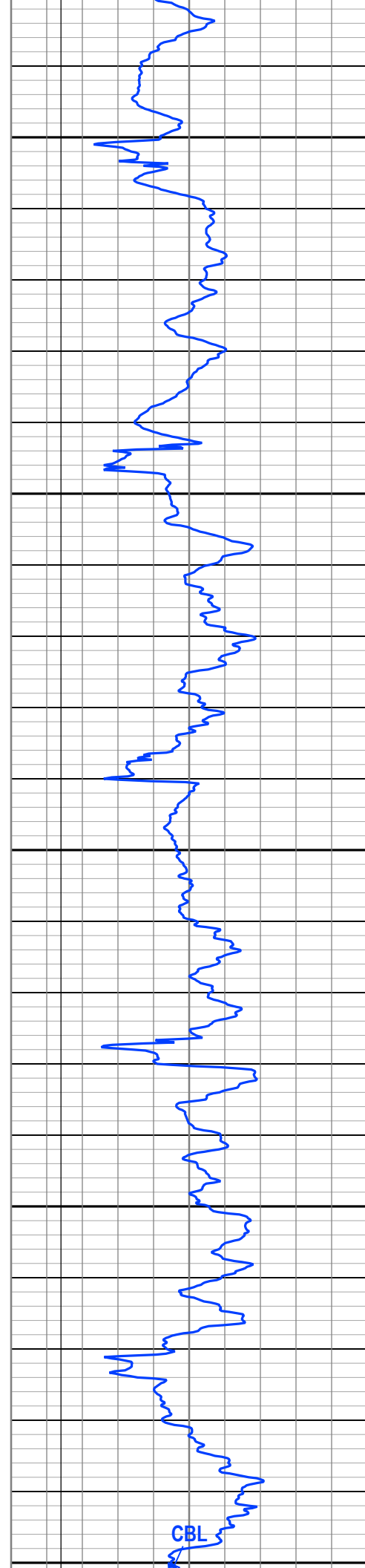
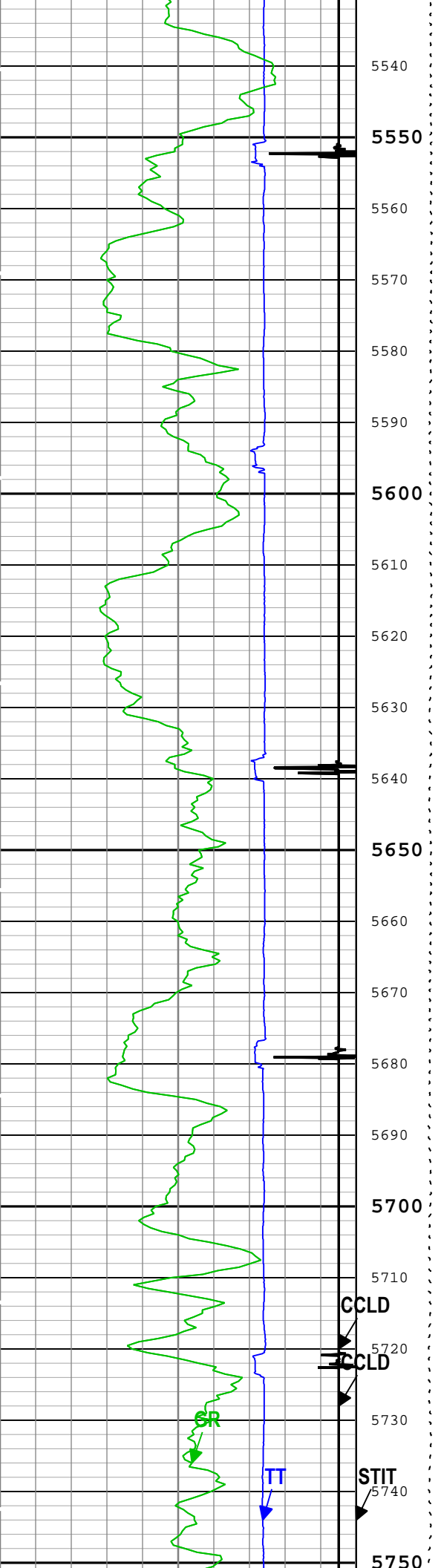


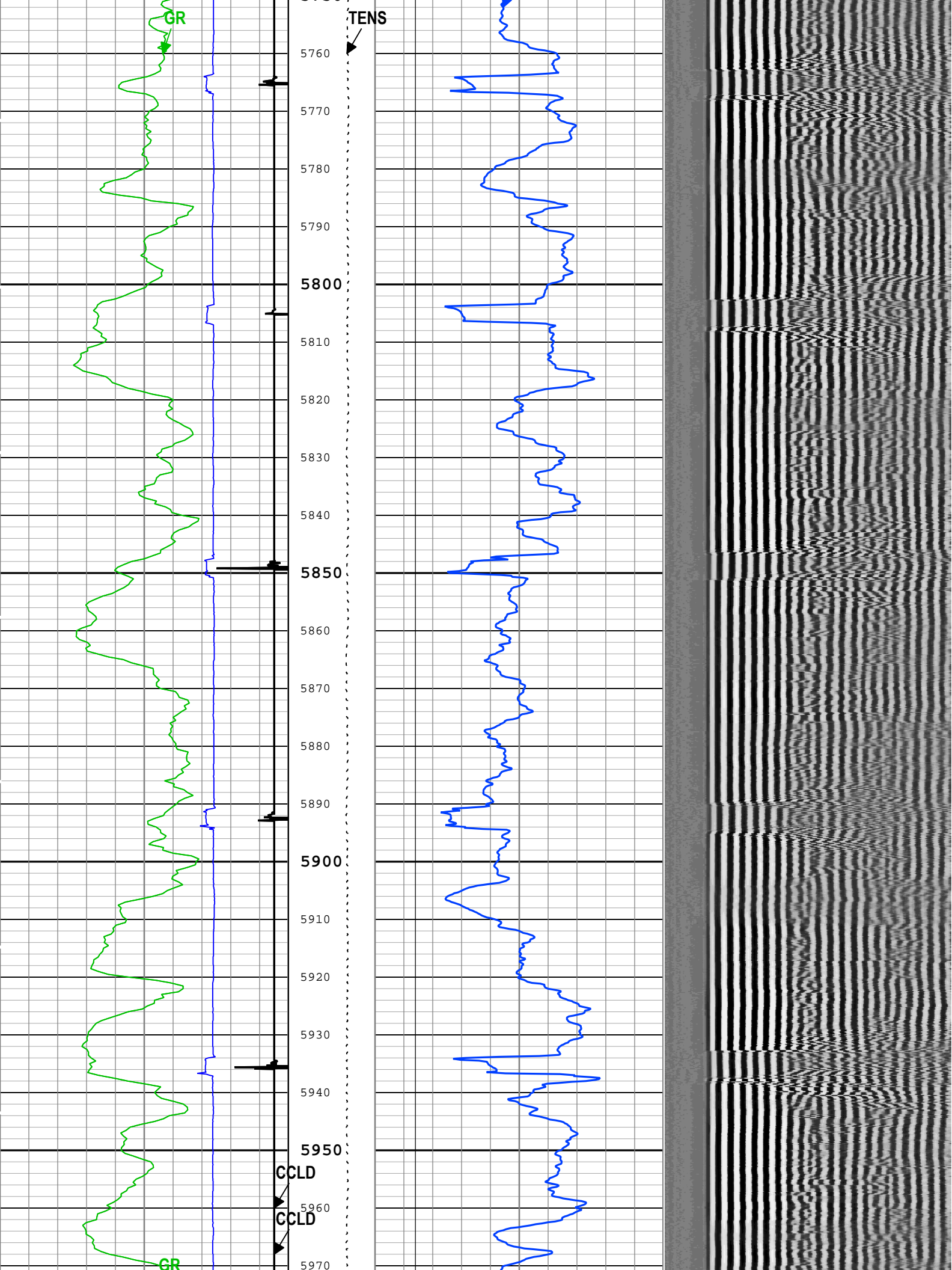


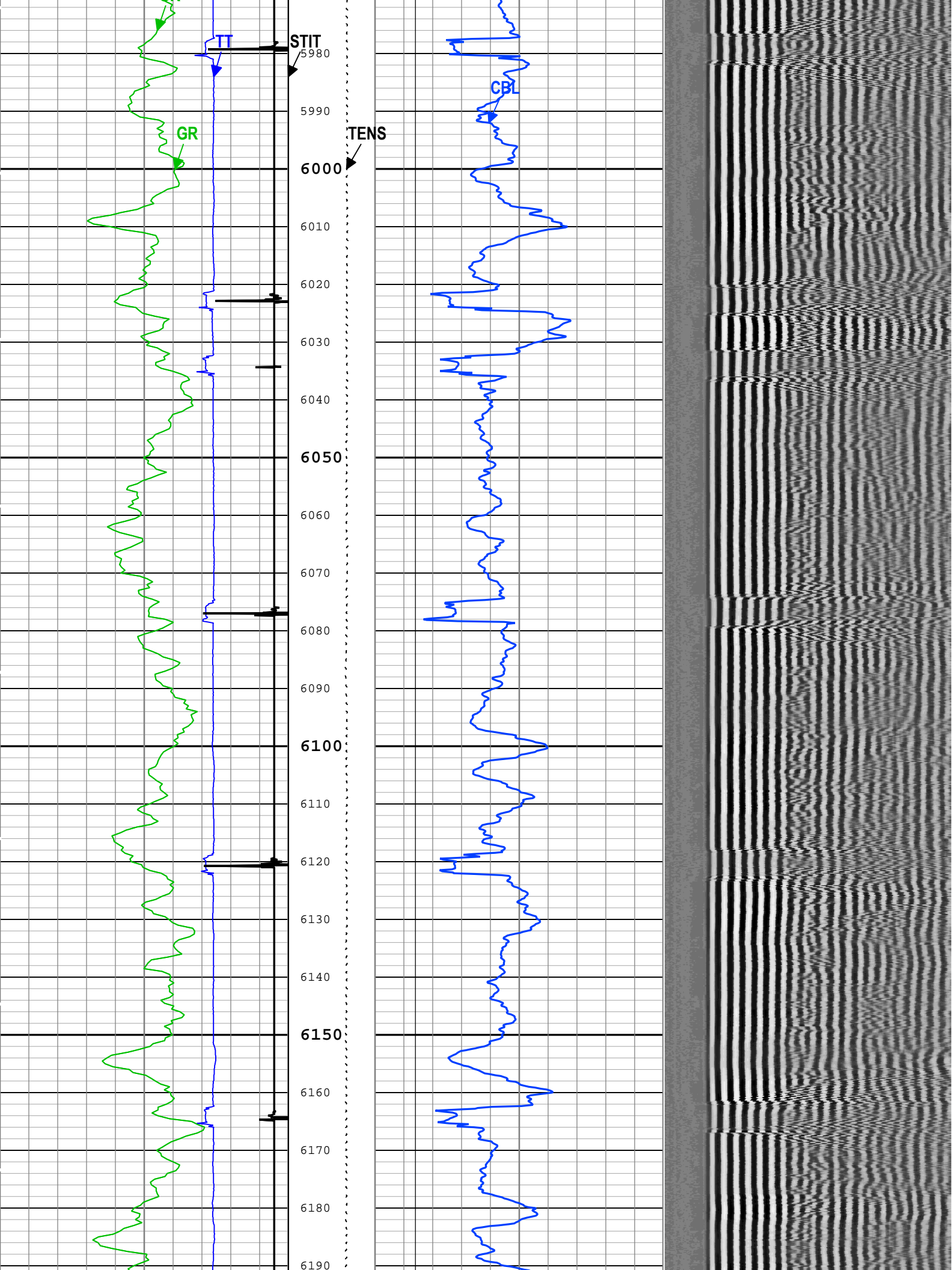


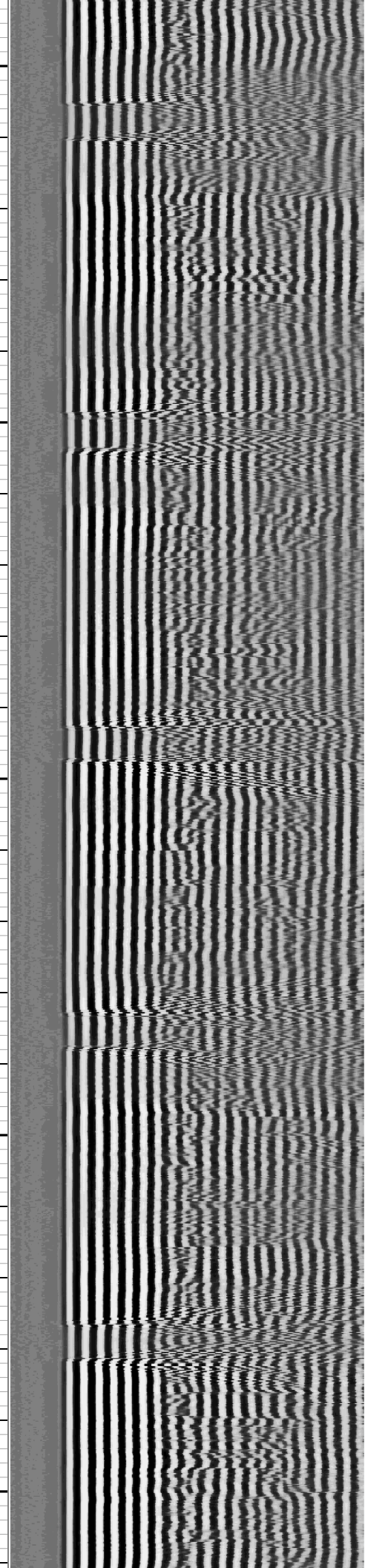
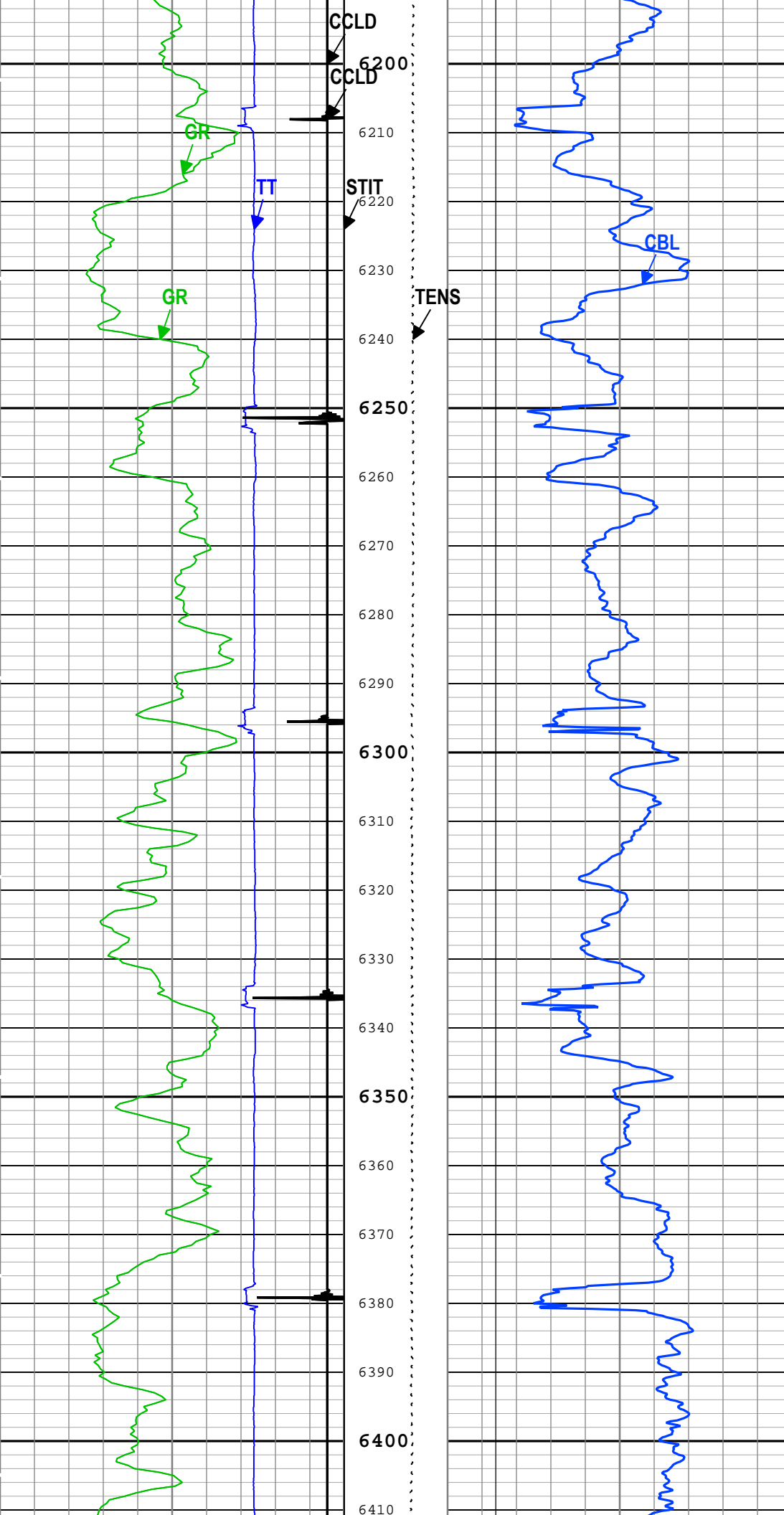


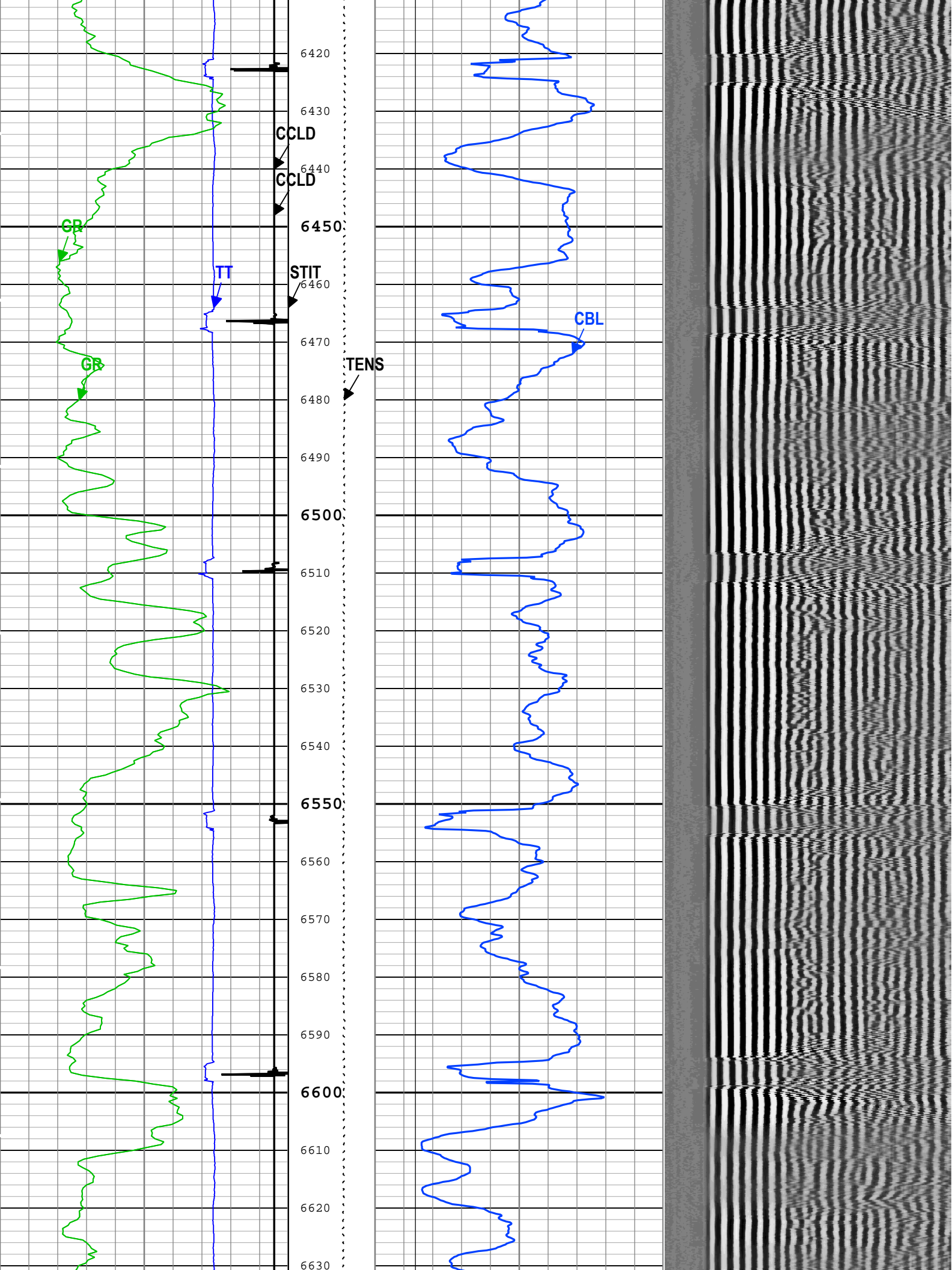


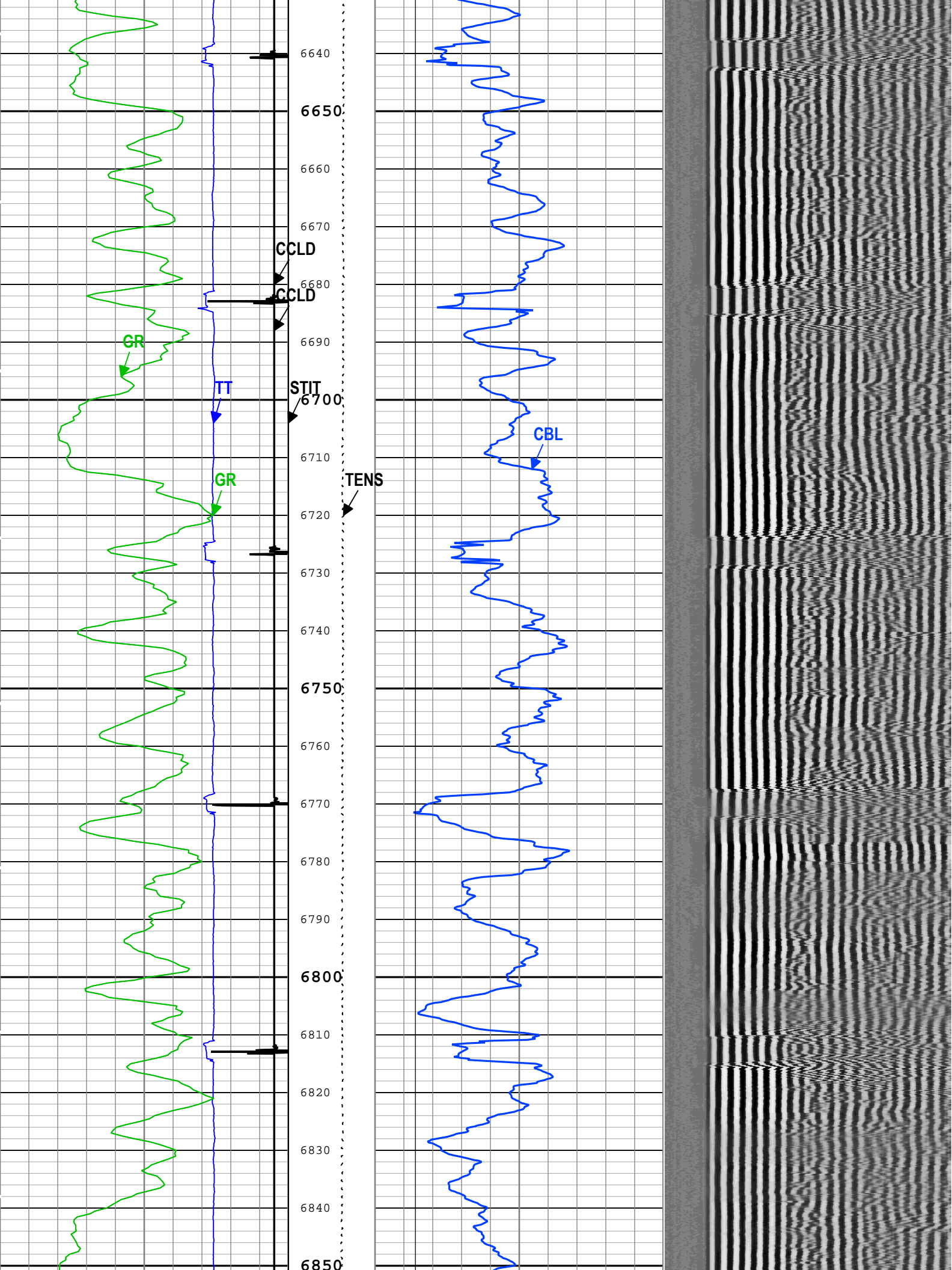


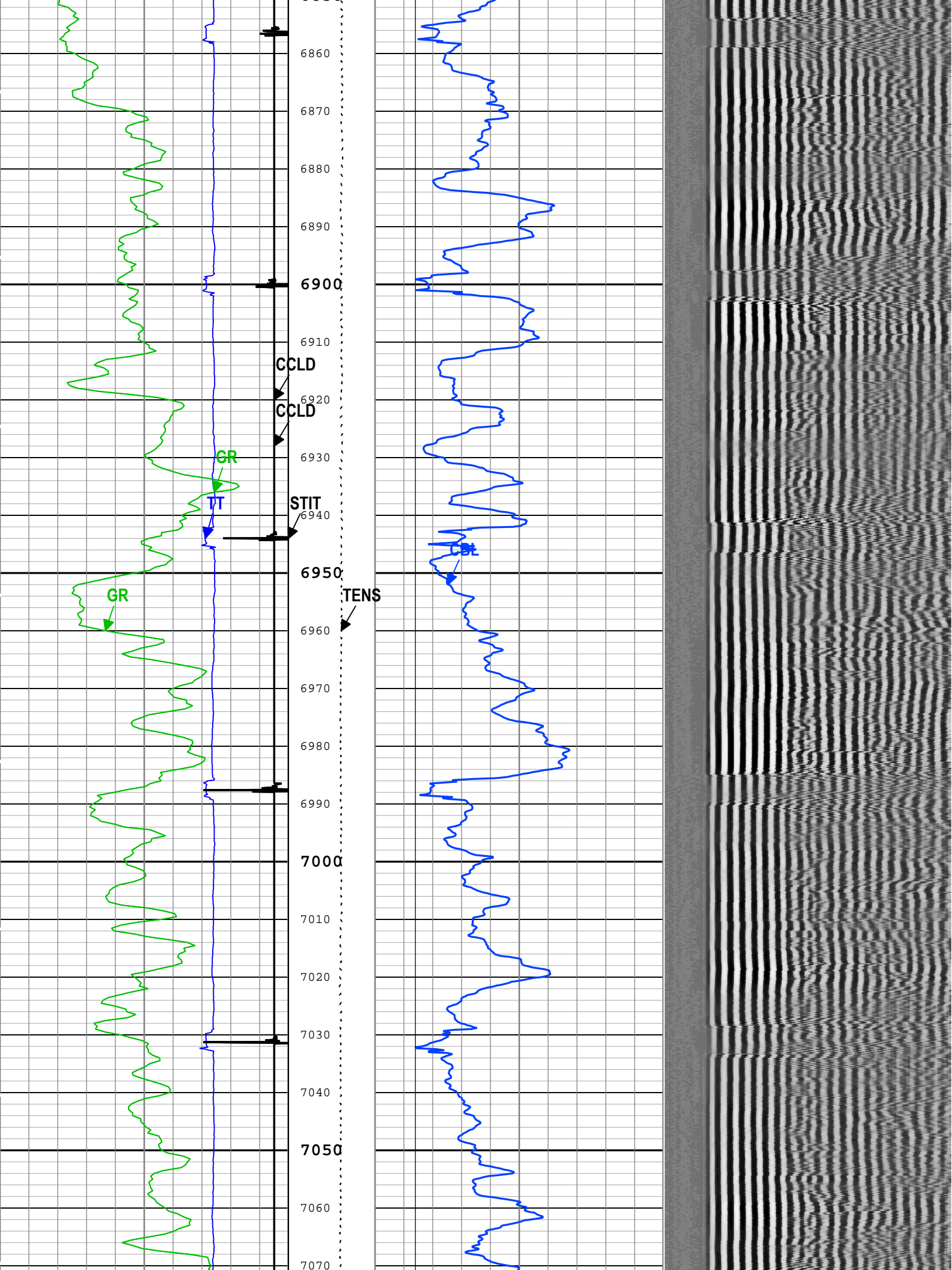


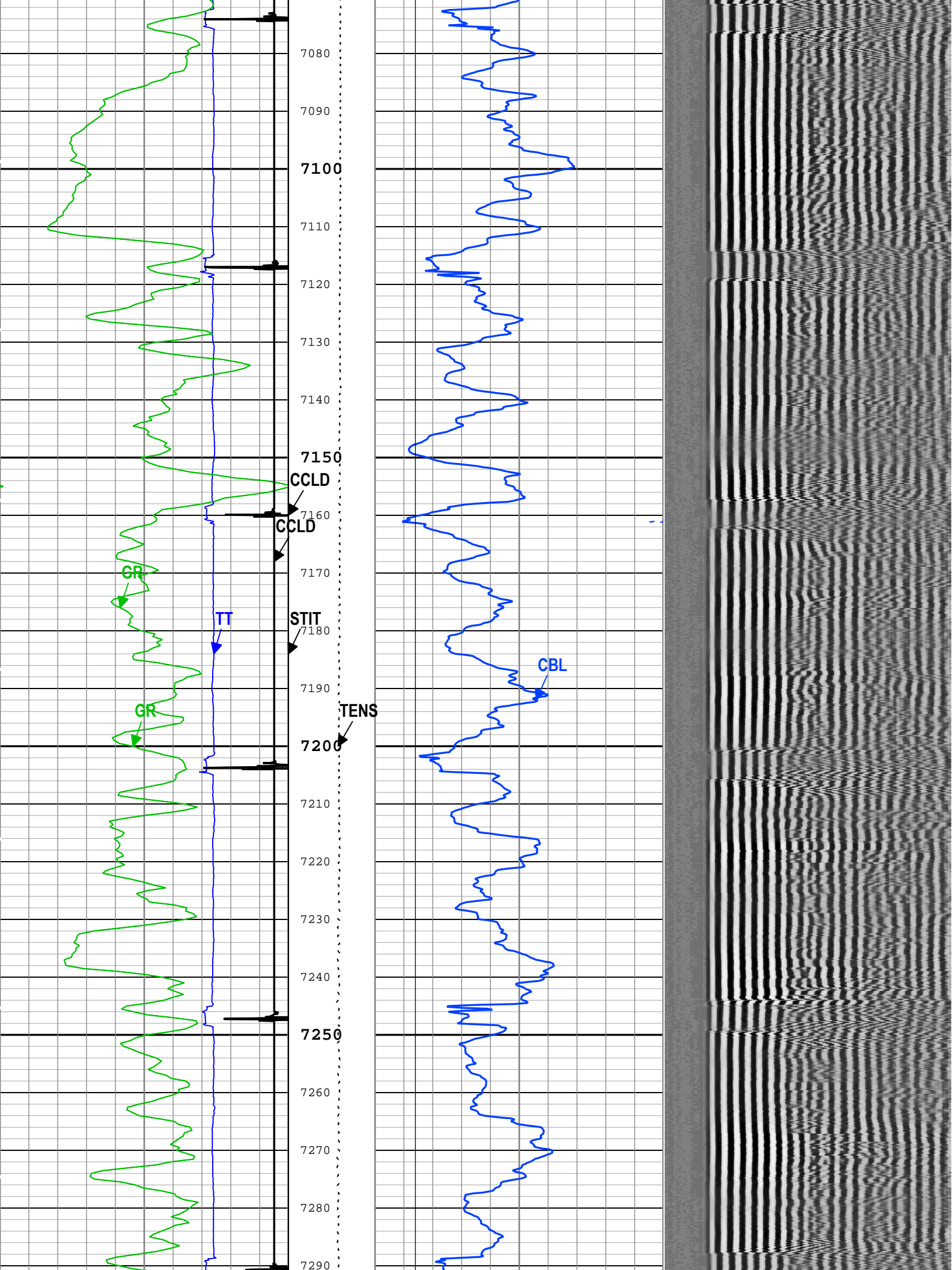


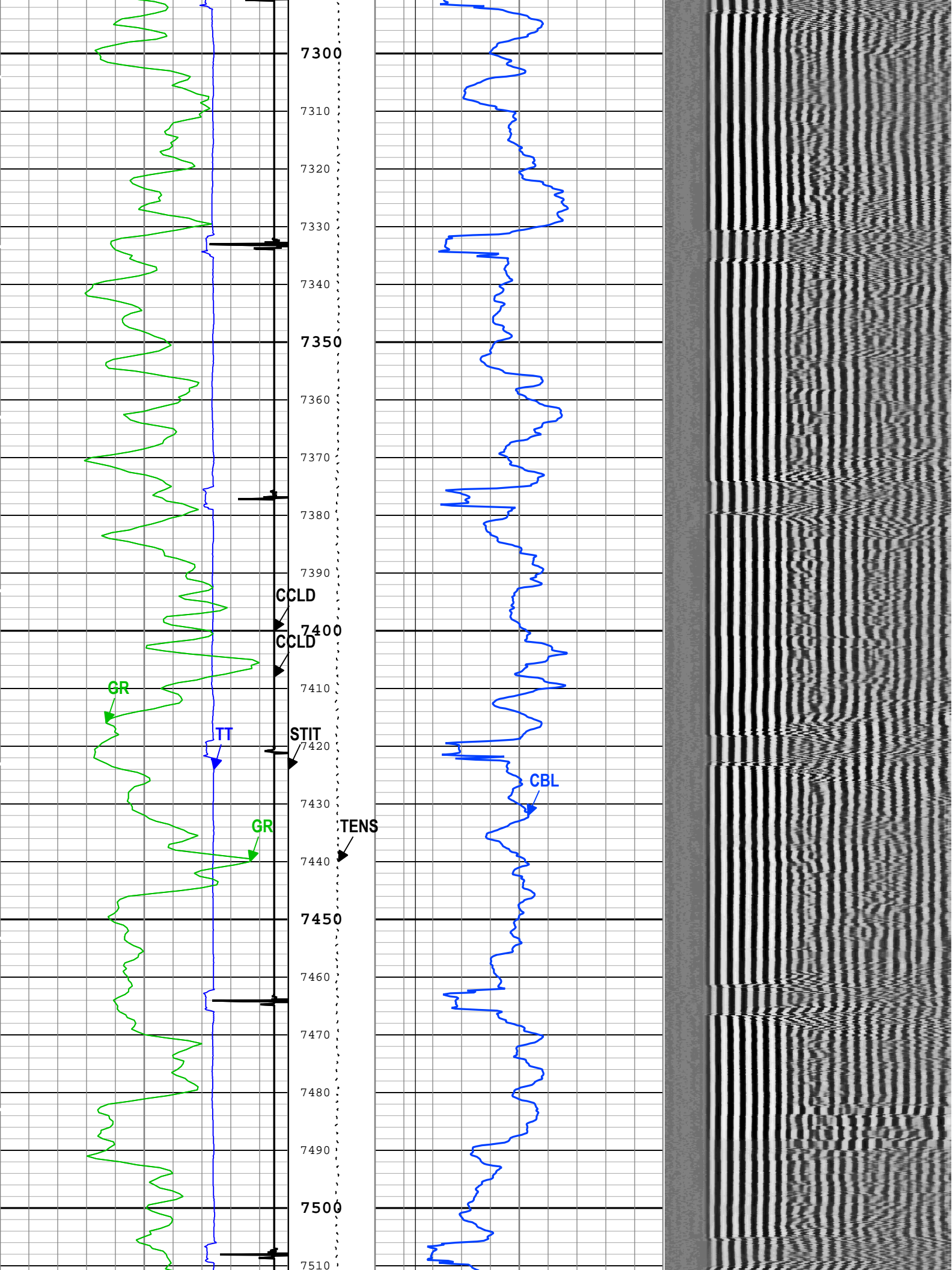


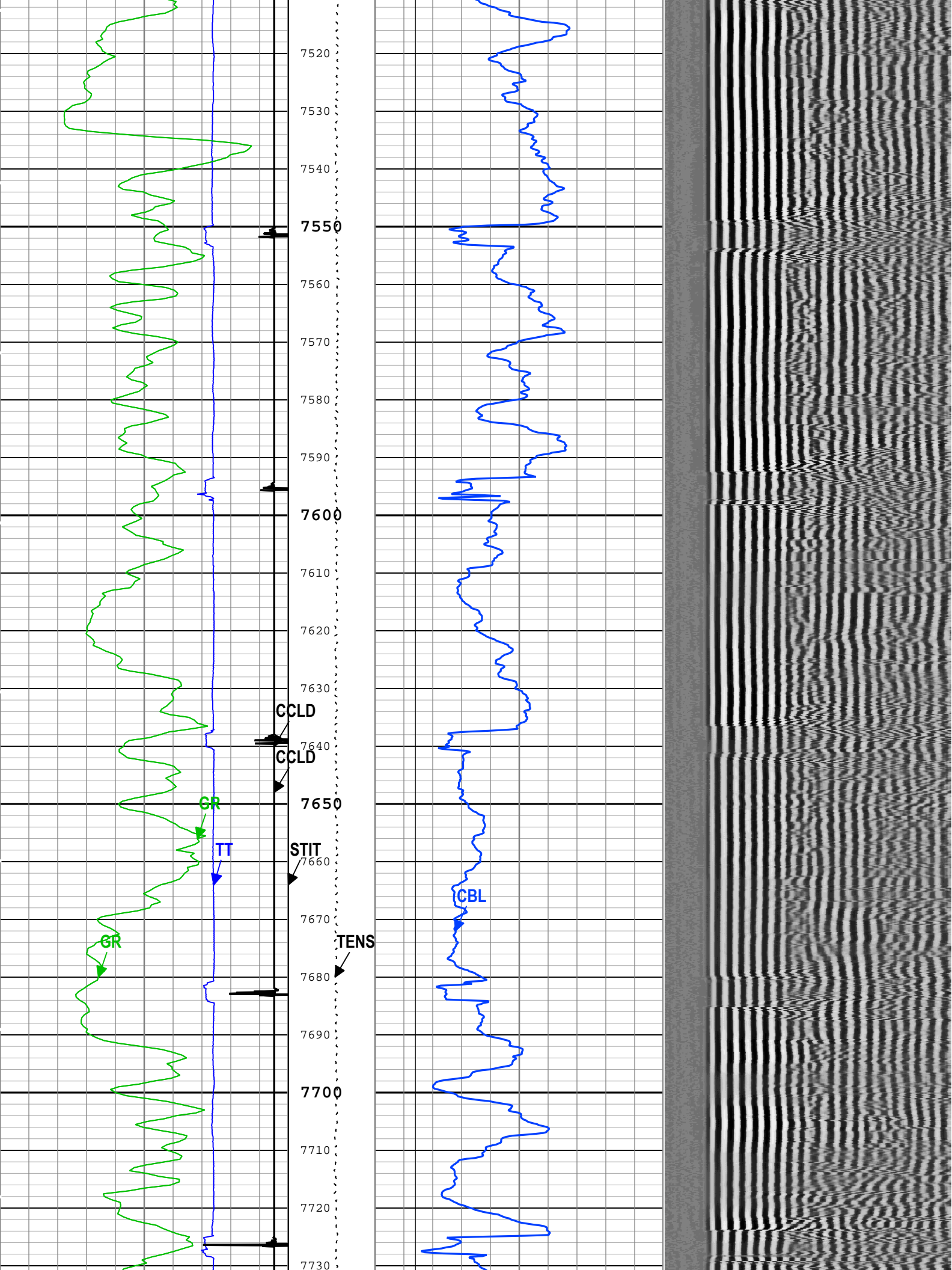


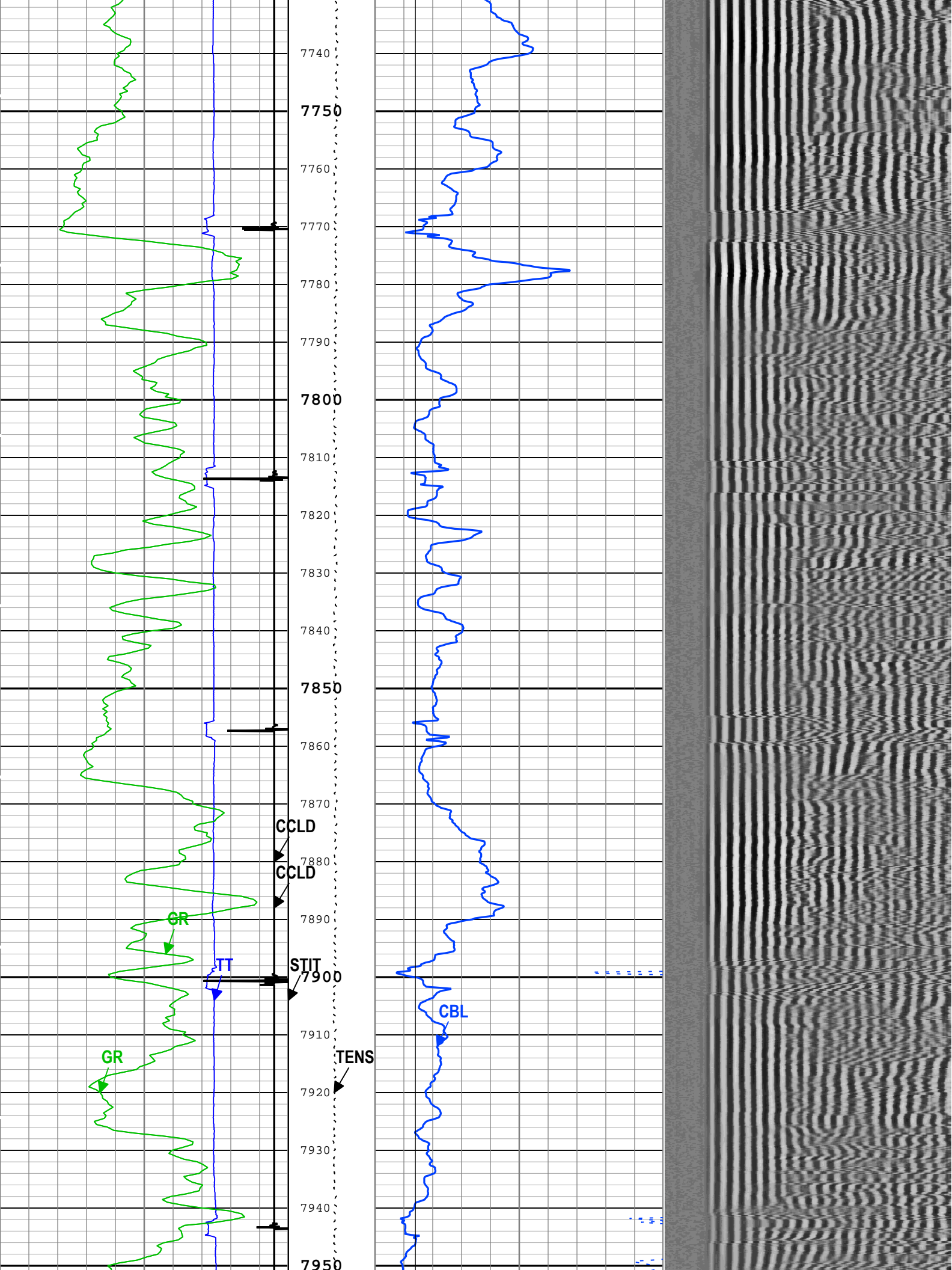


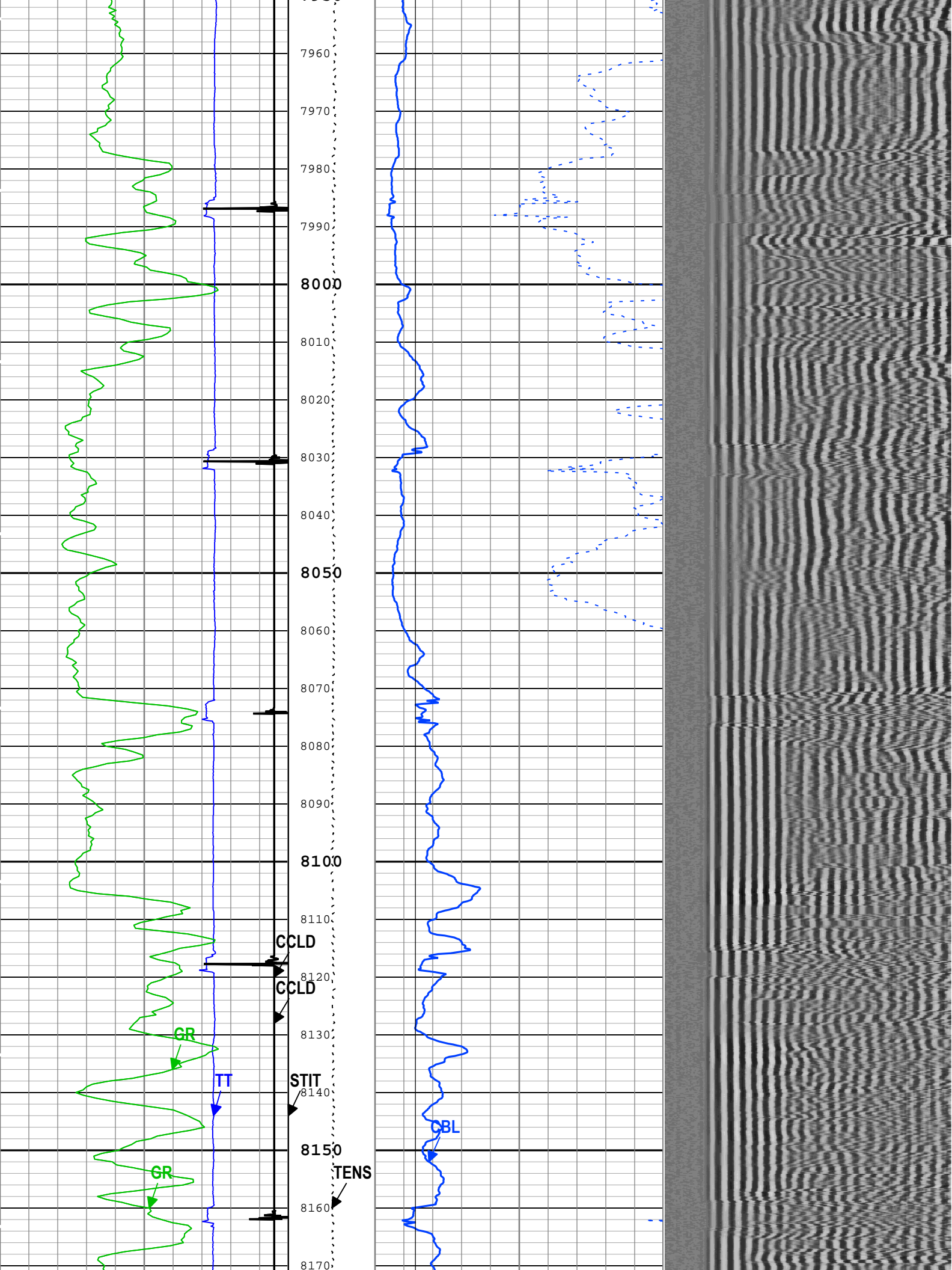


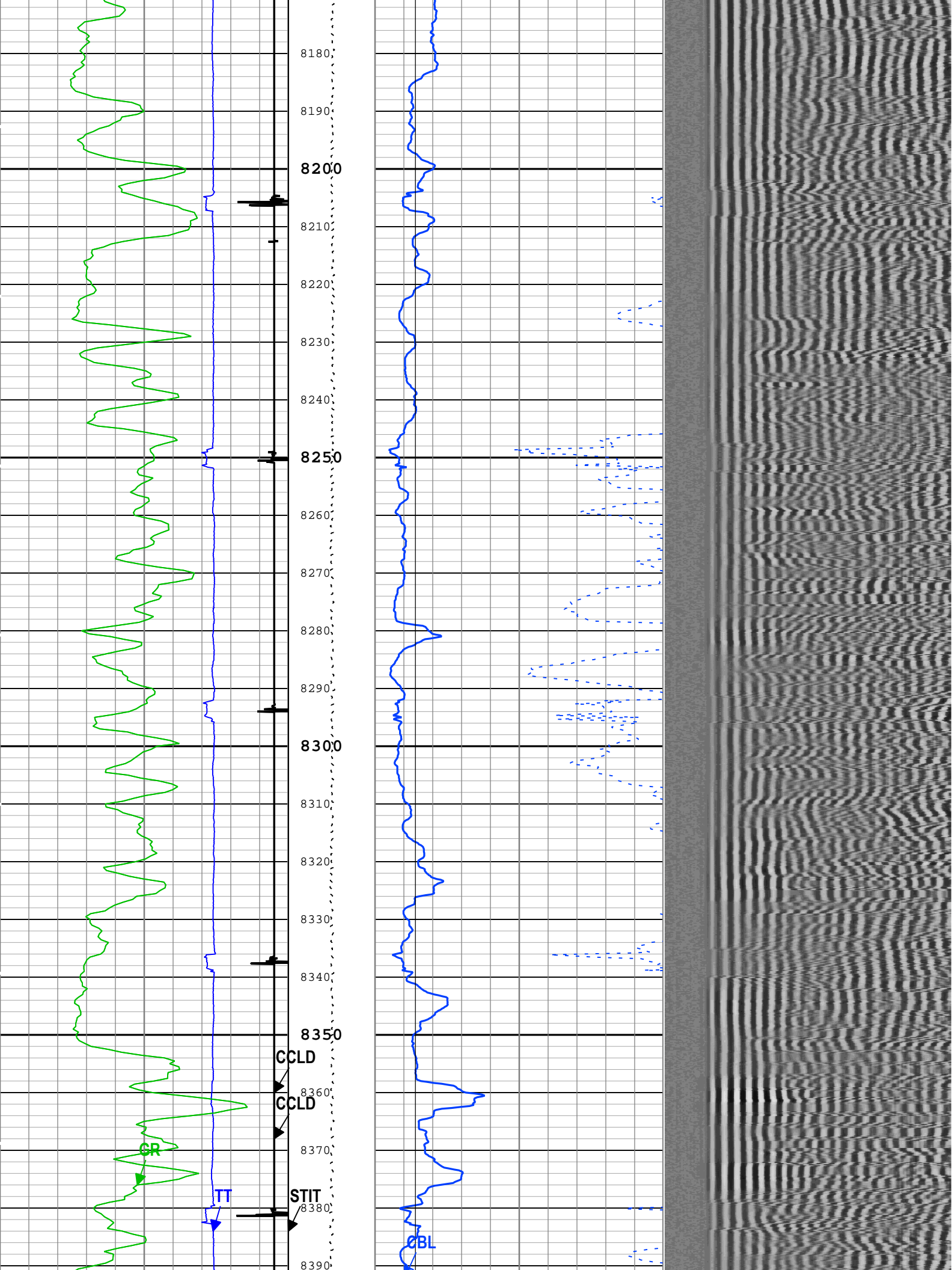


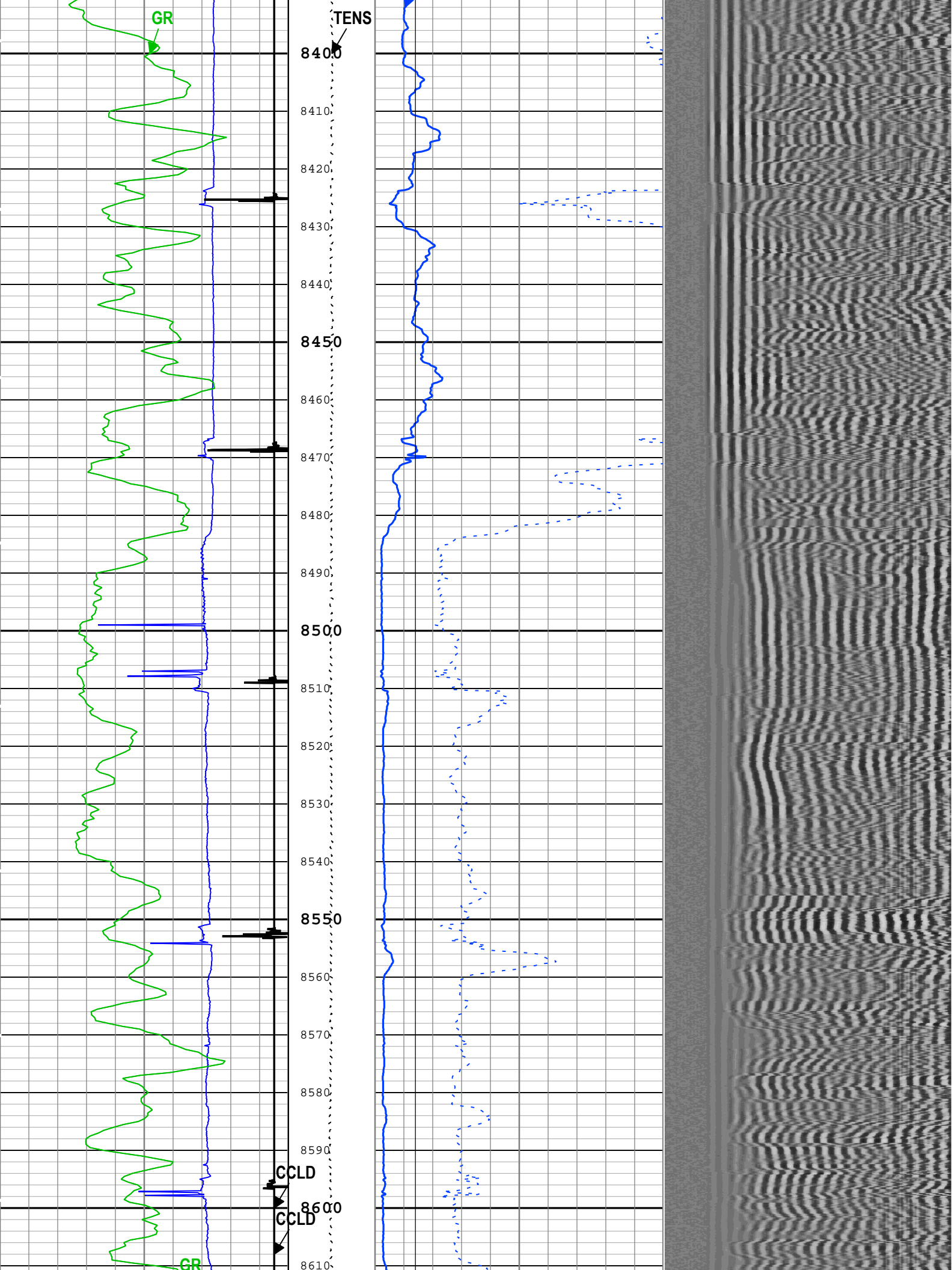


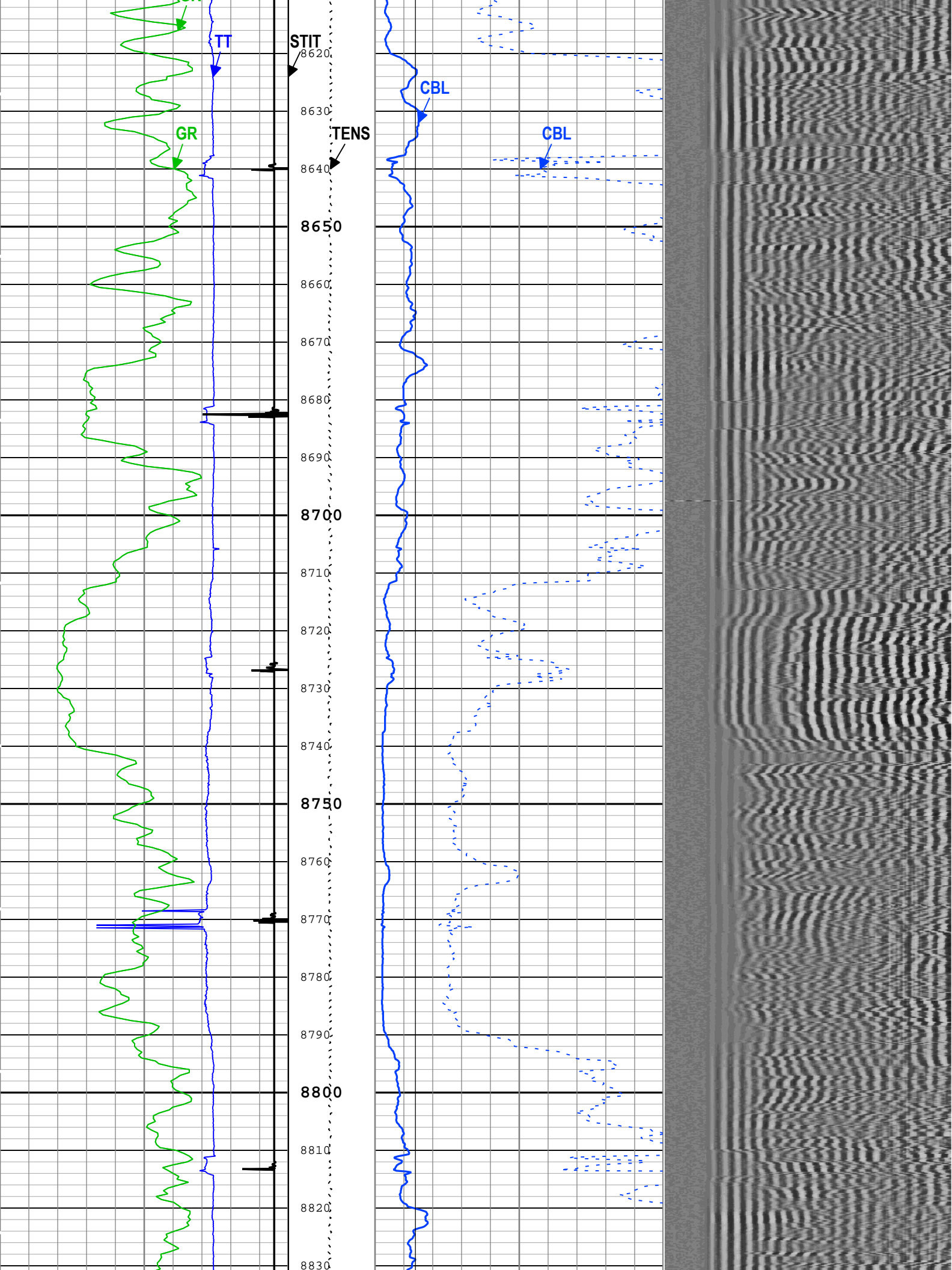


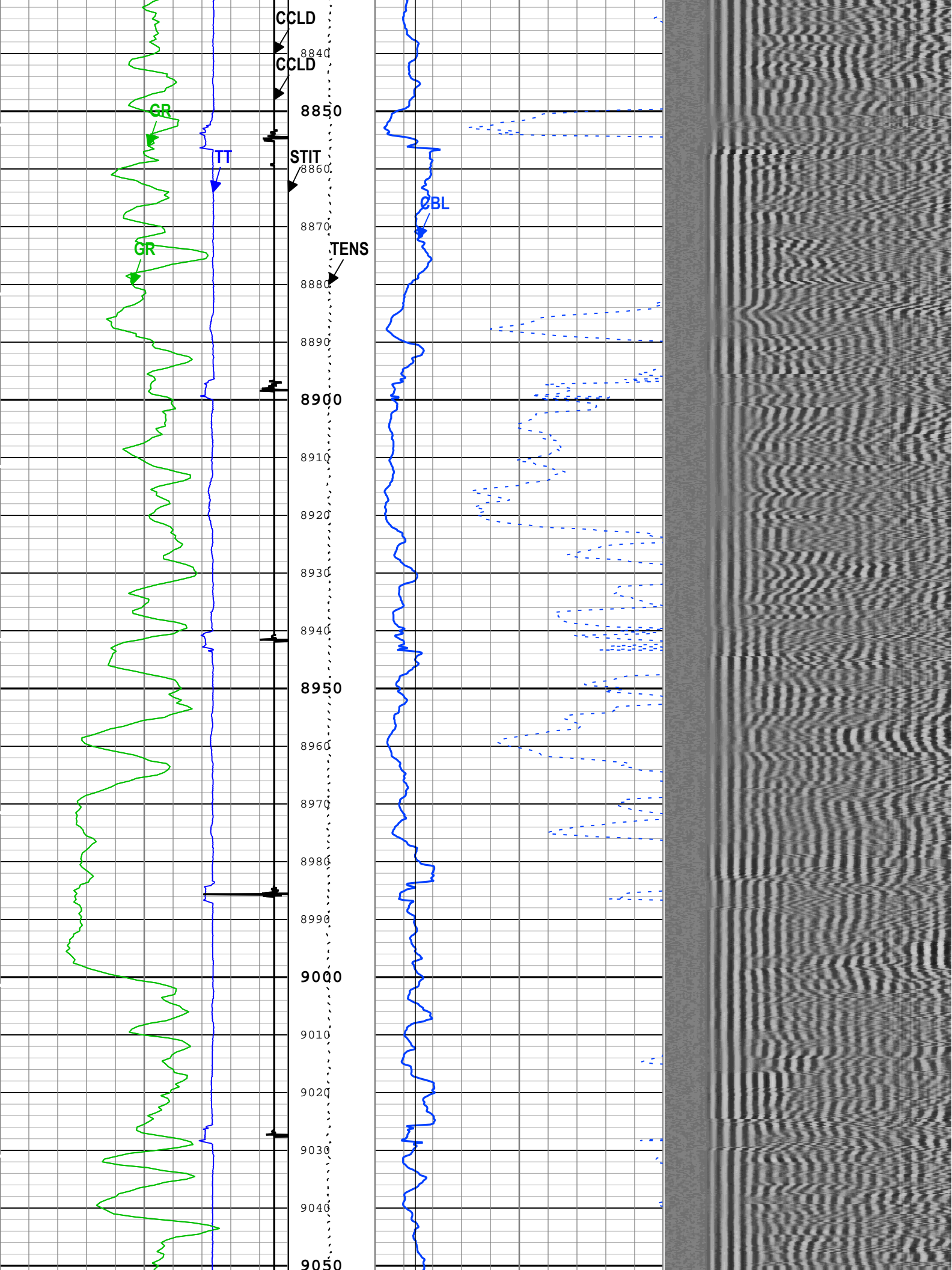


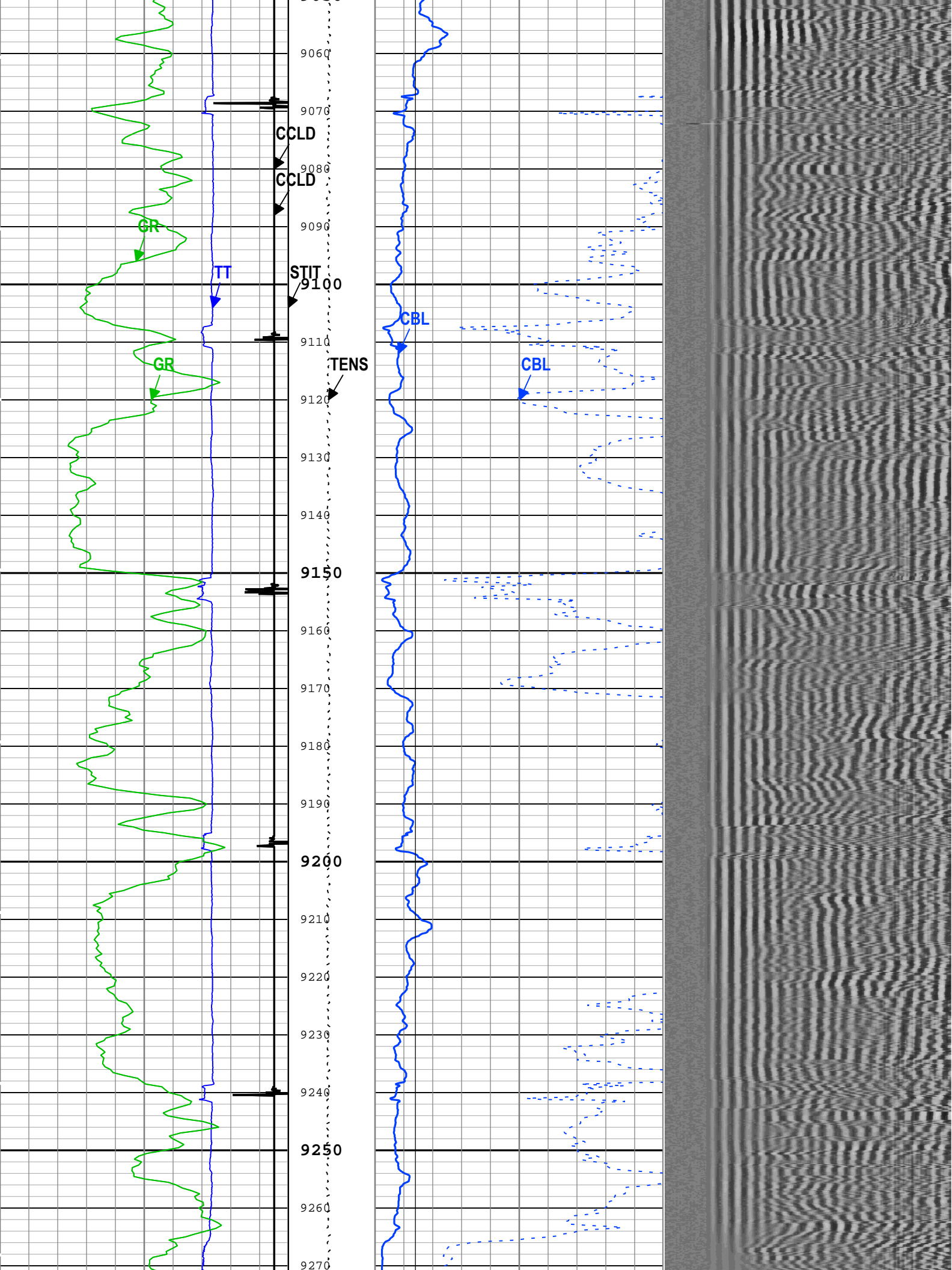


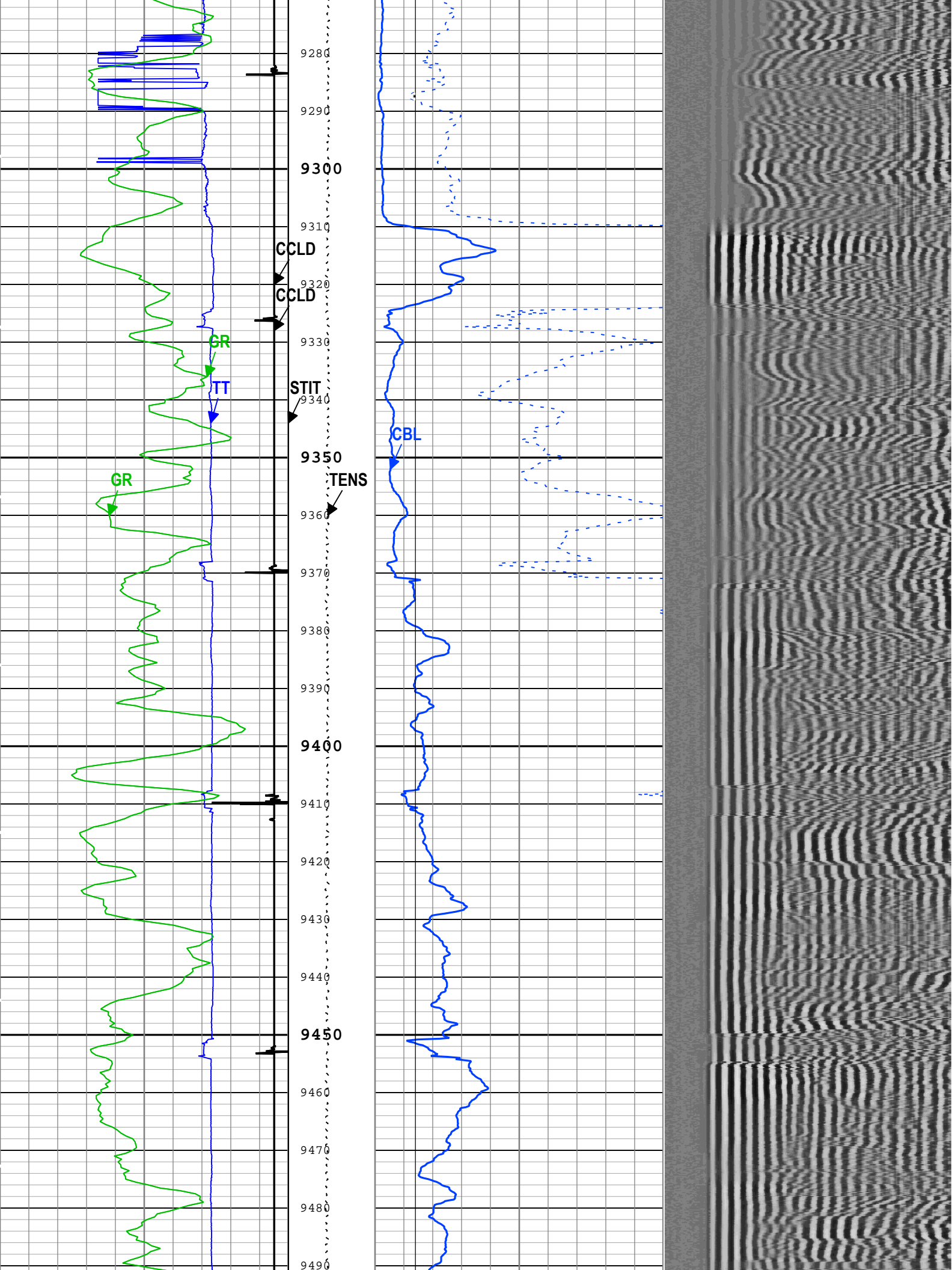


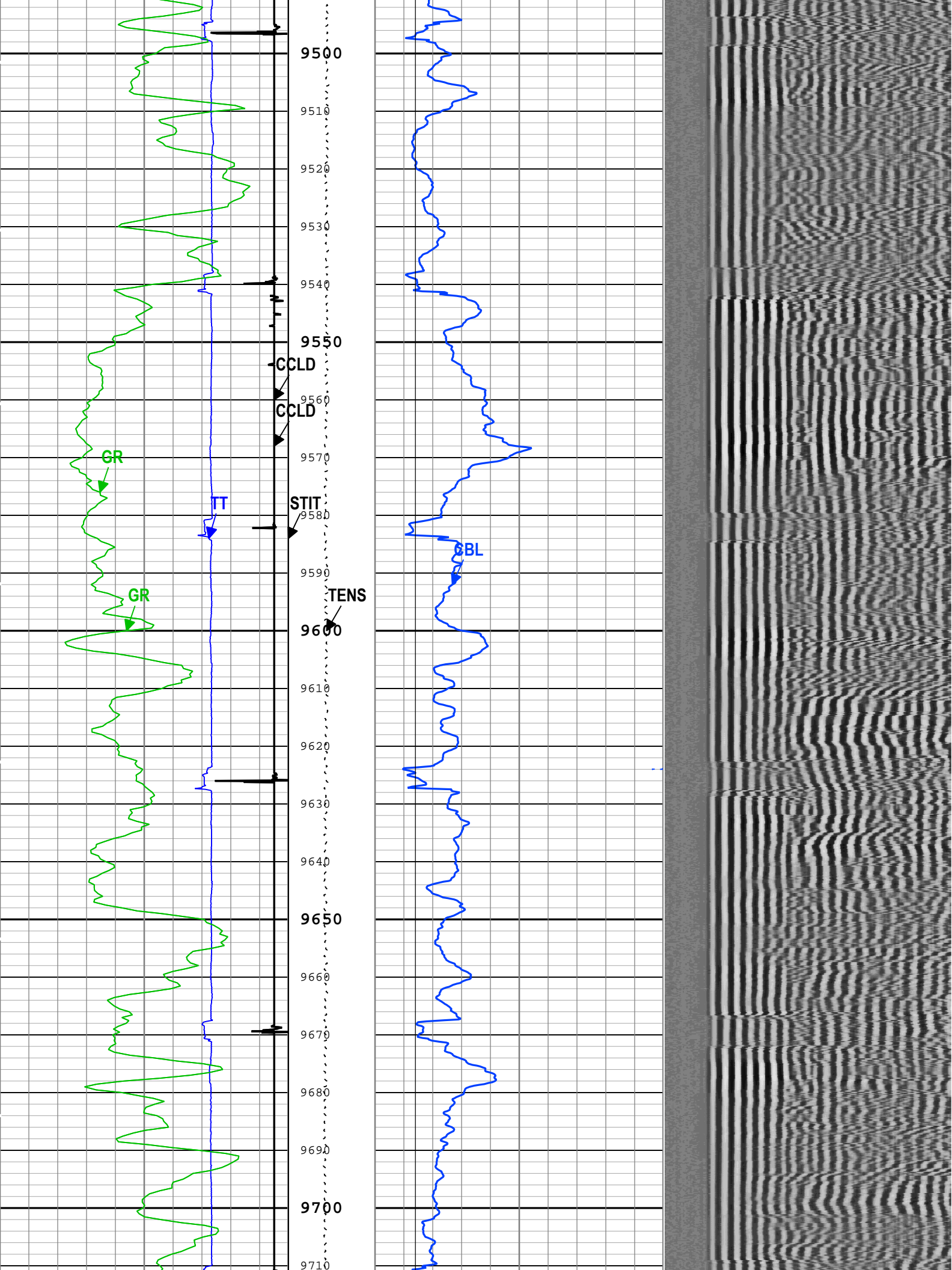


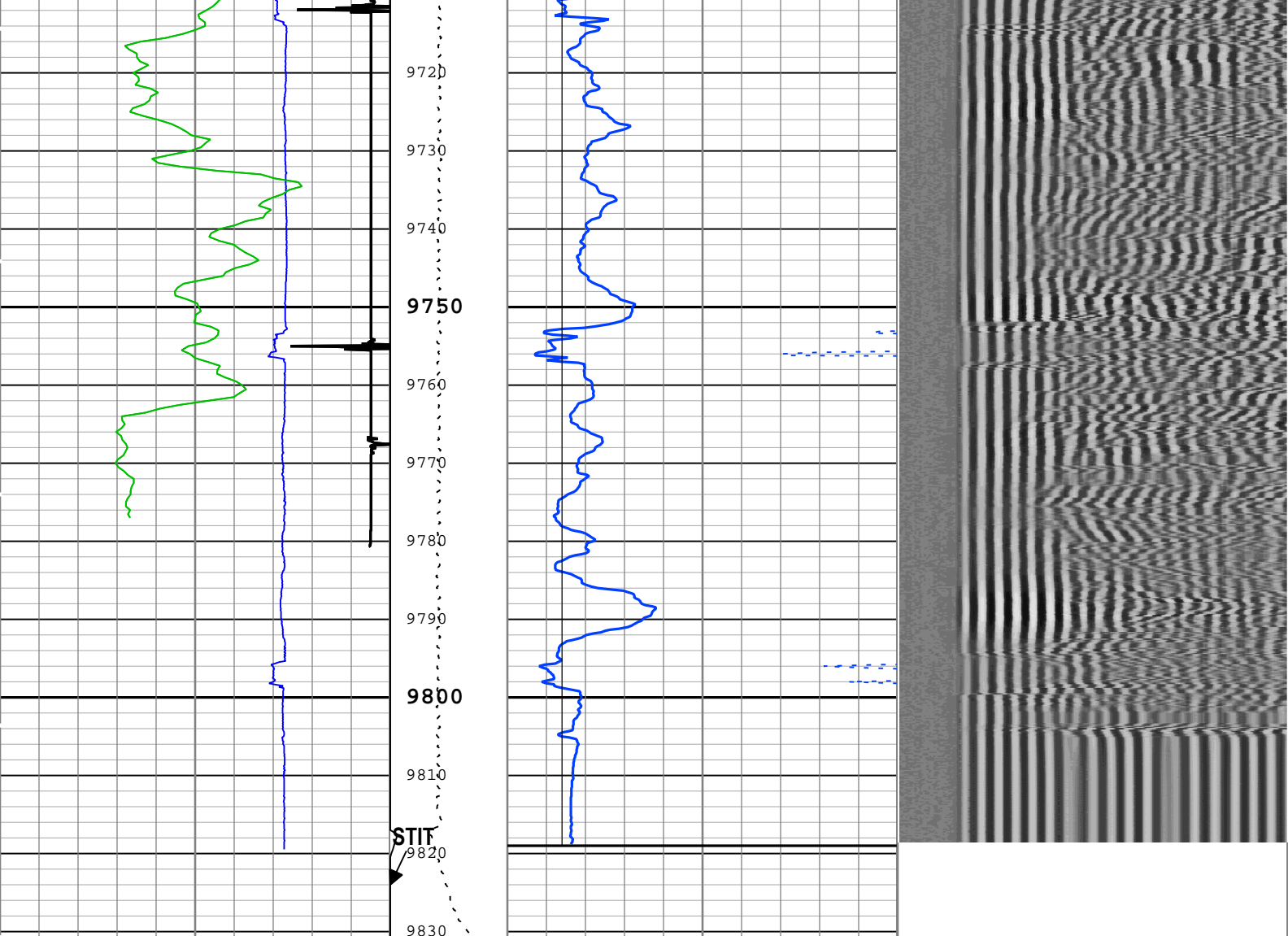












Gamma Ray (GR) PSTP-B 0 gAPI 150	Cable Tension (TENS) 3000 lbf 0	CBL Amplitude (CBL) SCMT-HC 0 mV 10	Min Amplitude Max
Transit Time for CBL (TT) SCMT-HC 400 us 200	Stuck Tool Indicator, Total (STIT) 0 ft 50	CBL Amplitude (CBL) SCMT-HC 0 mV 100	VDL VariableDensity (VDL) SCMT-HC 200 us 1200
Gamma Ray (GR)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

■ 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: 08-Sep-2018 09:05:55

Channel Processing Parameters

ONE: Parameters

Parameter	Description	Tool	Value	Unit
BHT	Bottom Hole Temperature	Borehole	278.25	degF
CB3G	SCMT CBL 3 ft Peak Detection T0_Delay and Noise Gate	SCMT-HC	232.63	us
CBLG	CBL Gate Width	SCMT-HC	40	us

CBRA	CBL LQC Reference Amplitude in Free Pipe	SCMT-HC	Depth Zoned	mV
THNO	Nominal Casing Thickness - Zoned along logger depths	WLSESSION	0.25	in
DFD	Drilling Fluid Density	Borehole	8.5	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	206	us/ft
EDF	Elevation of Derrick Floor Above Permanent Datum	WLSESSION	24	ft
EPD	Elevation of Permanent Datum (PDAT) above Mean Sea Level	WLSESSION	6709	ft
GGRD	Geothermal Gradient	Borehole	1	0.01 degF/ft
GOBO_CURR	Good Bond in Arbitrary Cement	SCMT-HC	Depth Zoned	mV
GTSE	Generalized Temperature Selection, from Measured or Computed Temperature	Borehole	GTEM_LINEST(RT)	
MATT_CURR	Maximum Attenuation in Arbitrary Cement	SCMT-HC	Depth Zoned	dB/ft
MCI	Minimum Cemented Interval for Isolation	SCMT-HC	Depth Zoned	ft
MSA	Minimum Sonic Amplitude	SCMT-HC	Depth Zoned	mV
MSA_CURR	Minimum Sonic Amplitude in Arbitrary Cement	SCMT-HC	Depth Zoned	mV
PDAT	Permanent Datum	WLSESSION	GL	
RUN_SNUM	Run Sequence Number	WSDRUN	1	
SHT	Surface Hole Temperature	Borehole	68	degF
TD	Total Measured Depth	Borehole	9819	ft

Depth Zone Parameters

Parameter	Value	Start (ft)	Stop (ft)
CBRA	80	2300	9819
CBRA	0	9819	9831.08
GOBO_CURR	1.4	2300	9819
GOBO_CURR	0	9819	9831.08
MATT_CURR	16.92	2300	9819
MATT_CURR	0	9819	9831.08
MCI	14.81	2300	2414
MCI	1.25	2414	9819
MCI	0	9819	9831.08
MSA	0.51	2300	9819
MSA	0	9819	9831.08
MSA_CURR	0.51	2300	9819
MSA_CURR	0	9819	9831.08

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

Software Version

Acquisition System	Version
Maxwell 2018	8.0.95333.3100

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
ONE	Log[2]:Up	Up	9483.43 ft	9830.81 ft	08-Sep-2018 2:06:28 AM	08-Sep-2018 2:22:51 AM	ON	9.36 ft	No

All depths are referenced to toolstring zero

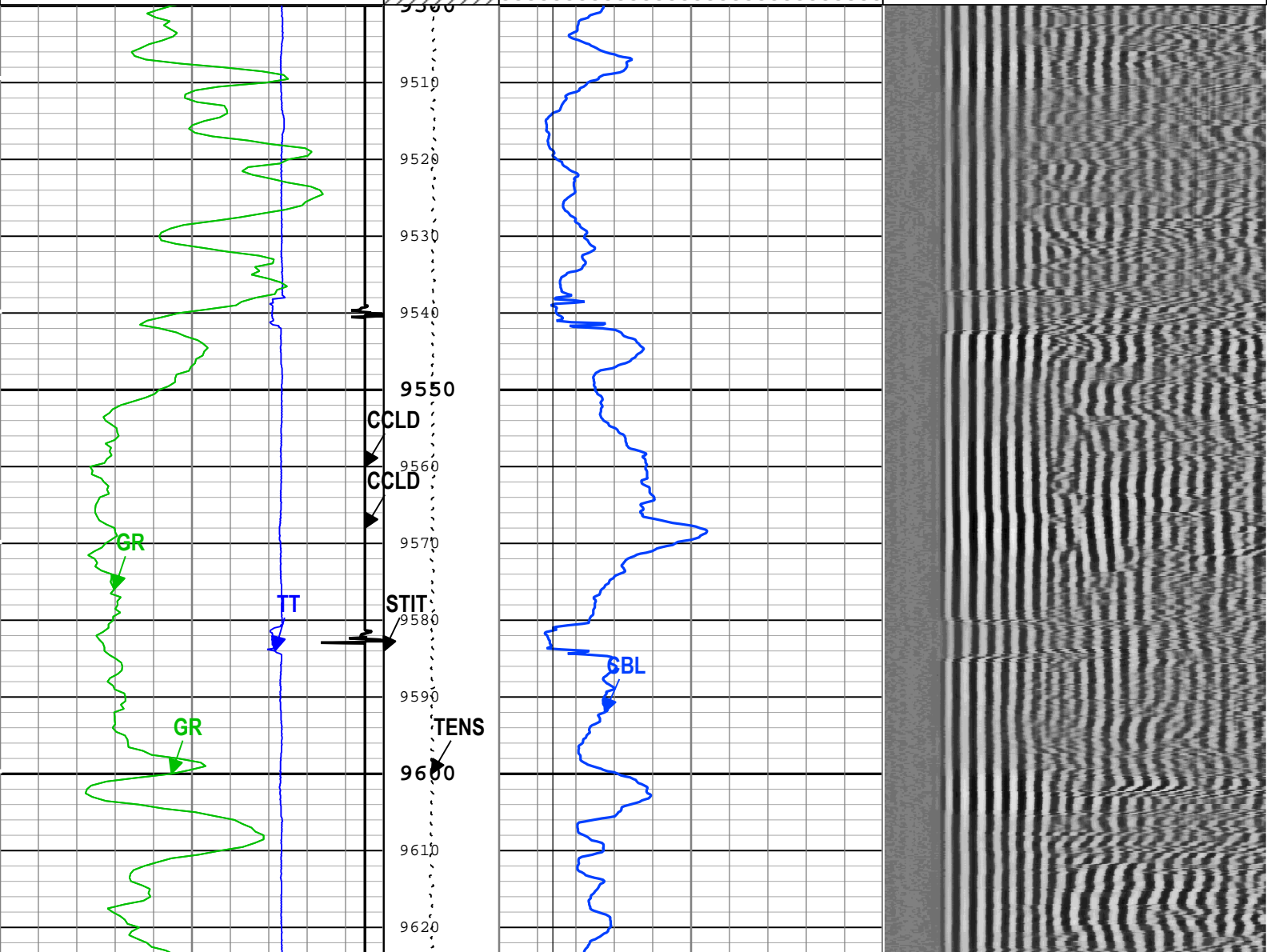
Log Company:Caerus Operating LLC Well:NPR 12B-10 596 ONE: Log[2]:Up:S002

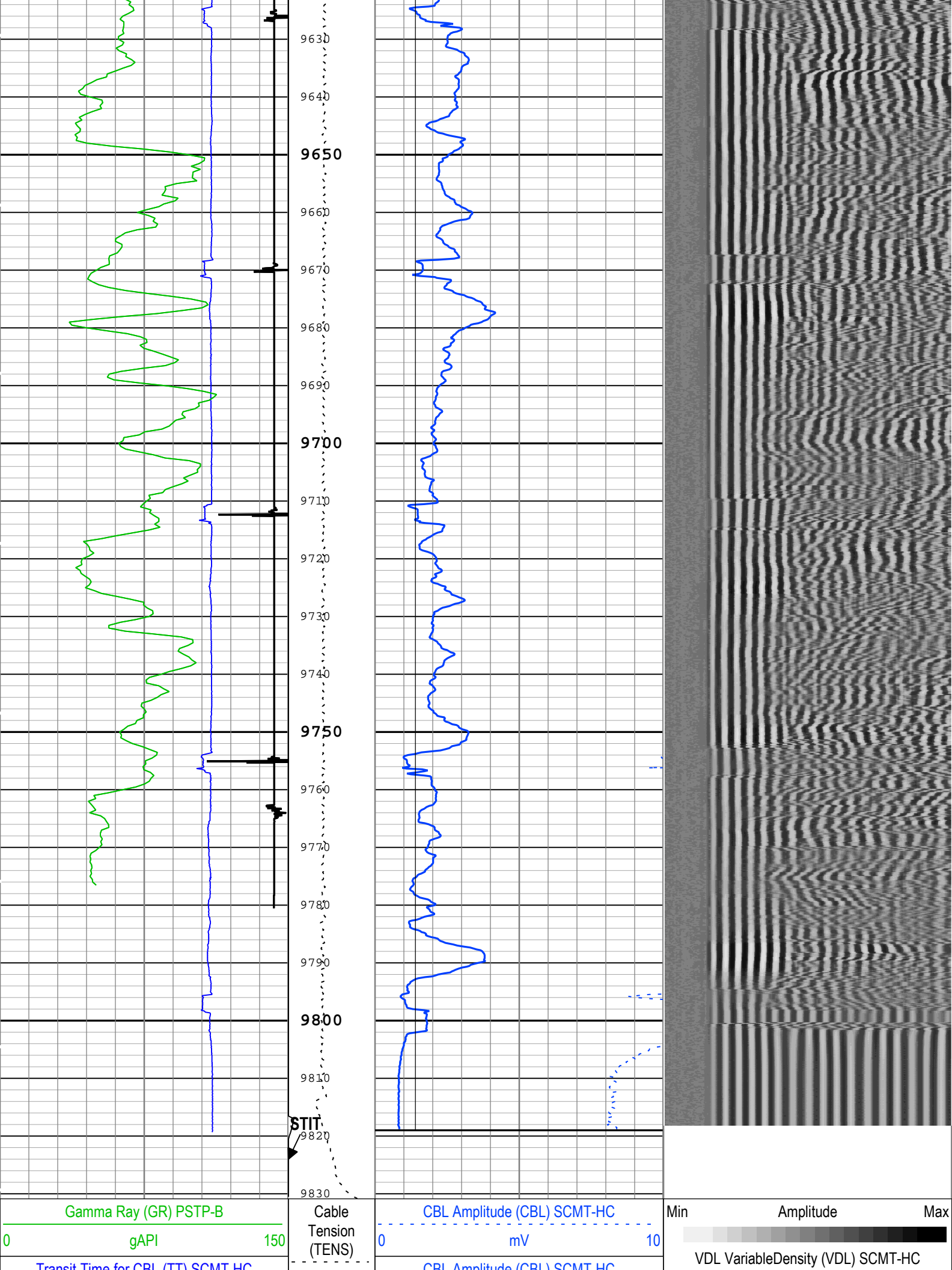
Description: Sonic CBL with VDL Format: Log (Sonic CBL with VDL) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 08-Sep-2018 09:06:09

■ BIEP - Bond Index Event Pips SCMT-HC

TIME_1900 - Time Marked every 60.00 (s)

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





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

TIME_1900 - Time Marked every 60.00 (s)

■ BIEP - Bond Index Event Pips SCMT-HC

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: 08-Sep-2018 09:06:09

Channel Processing Parameters

ONE: Parameters

Parameter	Description	Tool	Value	Unit
BHT	Bottom Hole Temperature	Borehole	278.25	degF
CB3G	SCMT CBL 3 ft Peak Detection T0_Delay and Noise Gate	SCMT-HC	232.63	us
CBLG	CBL Gate Width	SCMT-HC	40	us
CBRA	CBL LQC Reference Amplitude in Free Pipe	SCMT-HC	Depth Zoned	mV
THNO	Nominal Casing Thickness - Zoned along logger depths	WLSESSION	0.25	in
DFD	Drilling Fluid Density	Borehole	8.5	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	206	us/ft
EDF	Elevation of Derrick Floor Above Permanent Datum	WLSESSION	24	ft
EPD	Elevation of Permanent Datum (PDAT) above Mean Sea Level	WLSESSION	6709	ft
GGRD	Geothermal Gradient	Borehole	1	0.01 degF/ft
GOBO_CURR	Good Bond in Arbitrary Cement	SCMT-HC	Depth Zoned	mV
GTSE	Generalized Temperature Selection, from Measured or Computed Temperature	Borehole	GTEM_LINEST(RT)	
MATT_CURR	Maximum Attenuation in Arbitrary Cement	SCMT-HC	Depth Zoned	dB/ft
MCI	Minimum Cemented Interval for Isolation	SCMT-HC	Depth Zoned	ft
MSA	Minimum Sonic Amplitude	SCMT-HC	Depth Zoned	mV
MSA_CURR	Minimum Sonic Amplitude in Arbitrary Cement	SCMT-HC	Depth Zoned	mV
PDAT	Permanent Datum	WLSESSION	GL	
RUN_SNUM	Run Sequence Number	WSDRUN	1	
SHT	Surface Hole Temperature	Borehole	68	degF
TD	Total Measured Depth	Borehole	9819	ft

Depth Zone Parameters

Parameter	Value	Start (ft)	Stop (ft)
CBRA	80	9500	9819
CBRA	0	9819	9830.83
GOBO_CURR	1.4	9500	9819
GOBO_CURR	0	9819	9830.83
MATT_CURR	16.92	9500	9819
MATT_CURR	0	9819	9830.83
MCI	1.25	9500	9819
MCI	0	9819	9830.83
MSA	0.51	9500	9819

MSA	0	9819	9830.83
MSA_CURR	0.51	9500	9819
MSA_CURR	0	9819	9830.83

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

Software Version

Acquisition System	Version
Maxwell 2018	8.0.95333.3100

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
ONE	Log[3]:Up	Up	1358.18 ft	9831.08 ft	08-Sep-2018 2:31:30 AM	08-Sep-2018 7:22:15 AM	ON	9.70 ft	No

All depths are referenced to toolstring zero

Log

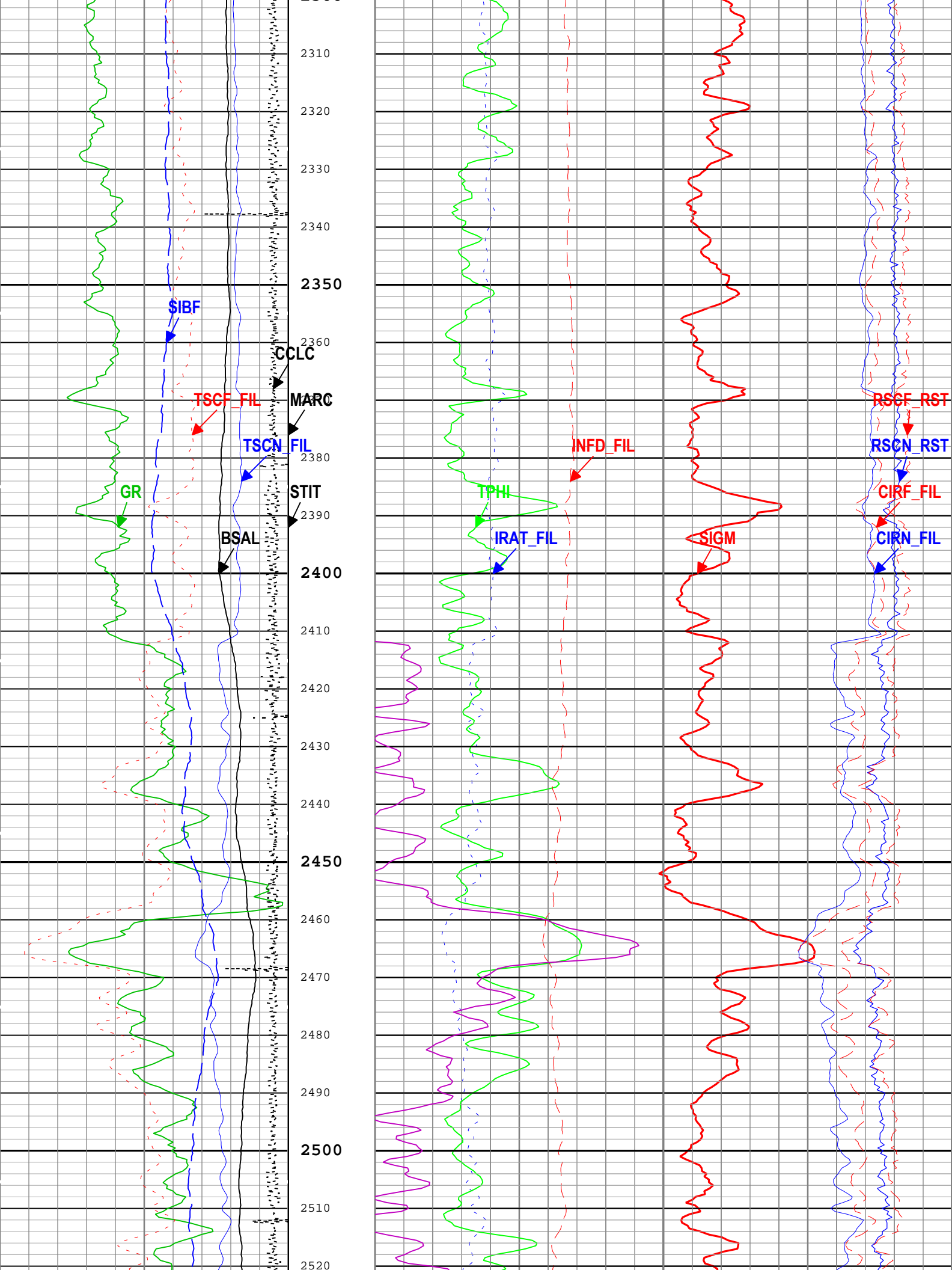
Company:Caerus Operating LLC Well:NPR 12B-10 596
ONE: Log[3]:Up:S002

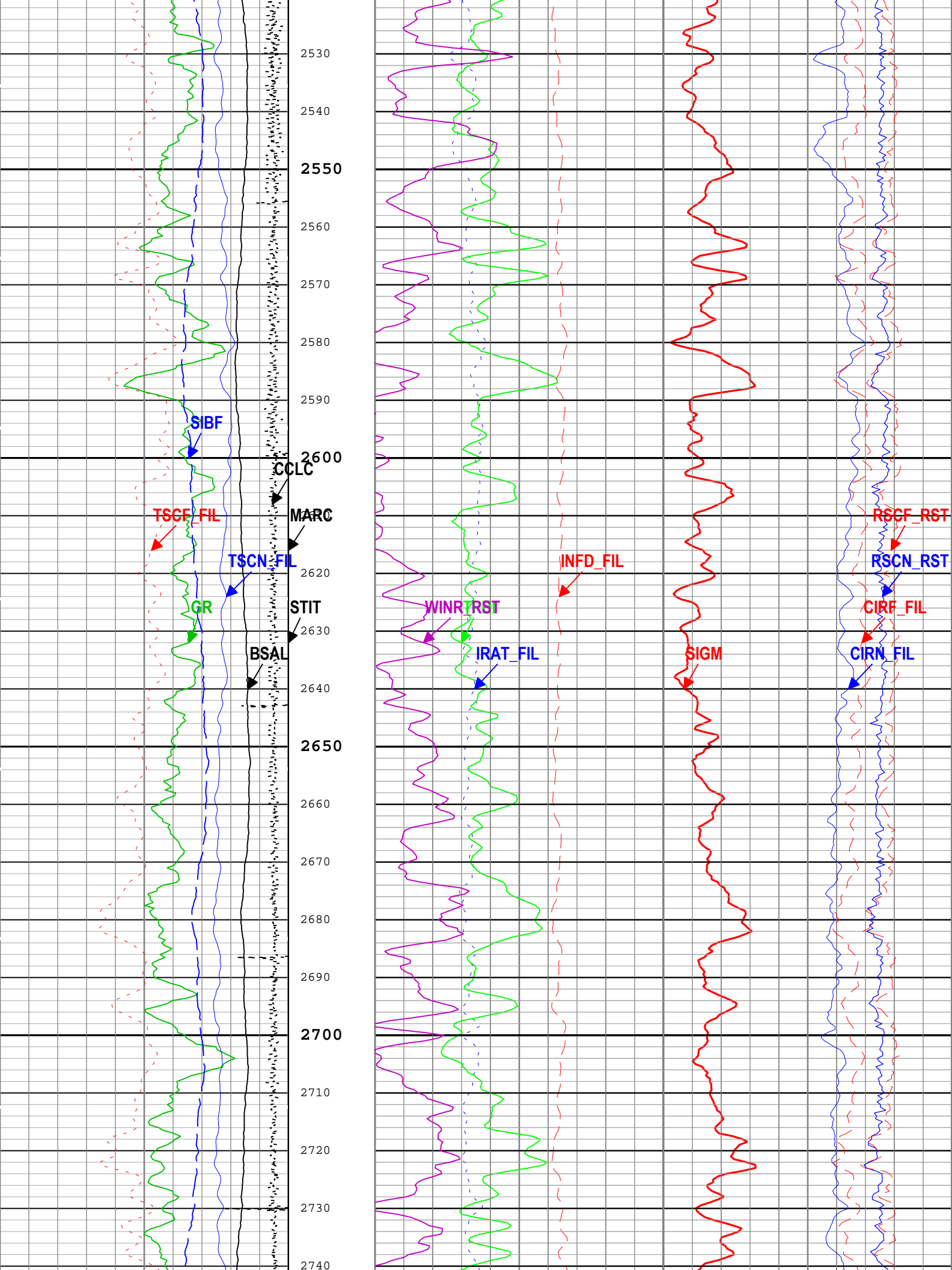
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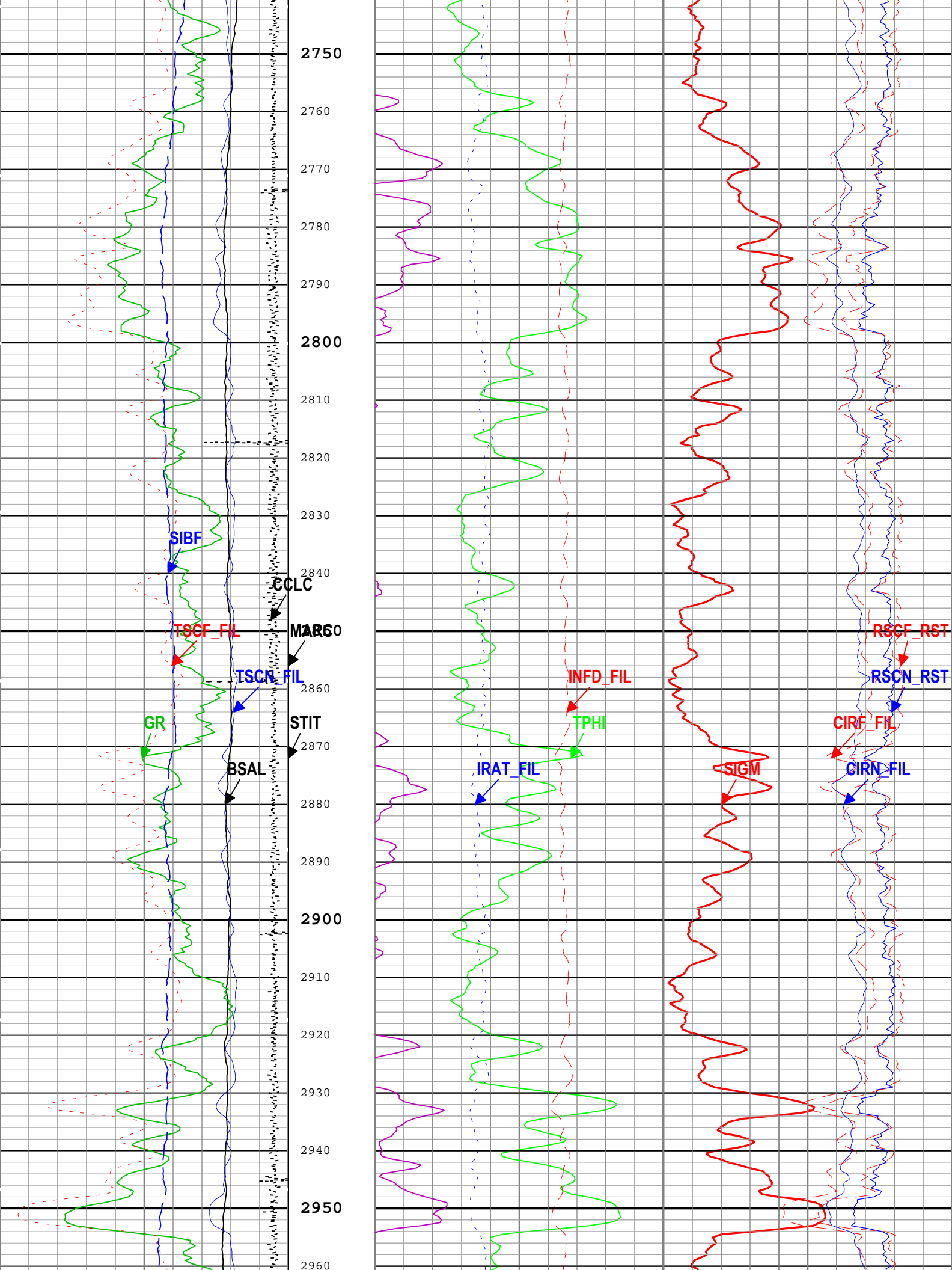
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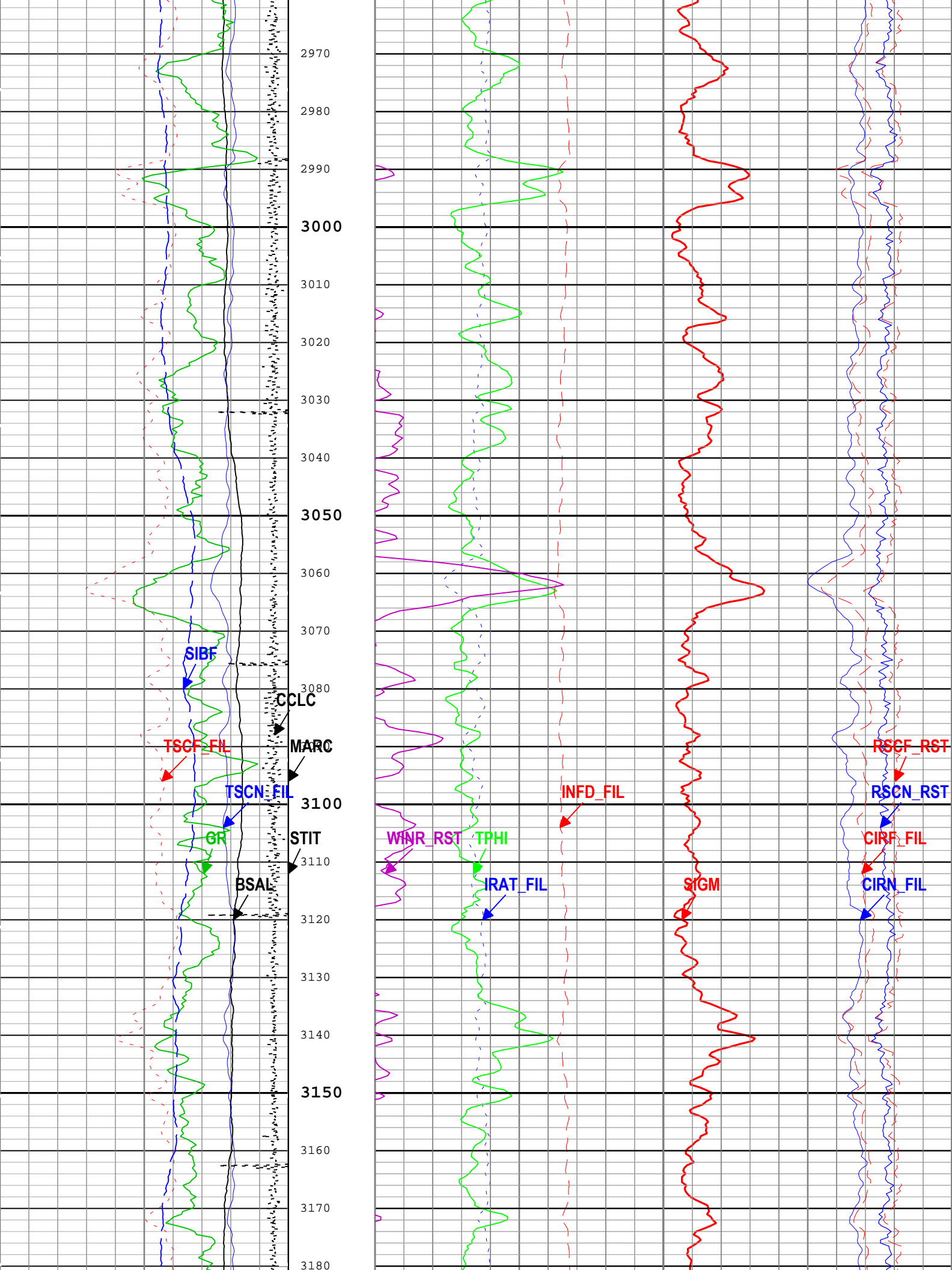
- |TIME_1900 - Elapsed time since midnight, 30 December 1899 every 60.00 (s)
- |IHV - Integrated Hole Volume every 10.00 (ft3)
- |IHV - Integrated Hole Volume every 100.00 (ft3)
- |ICV - Integrated Cement Volume every 10.00 (ft3)
- |ICV - Integrated Cement Volume every 100.00 (ft3)

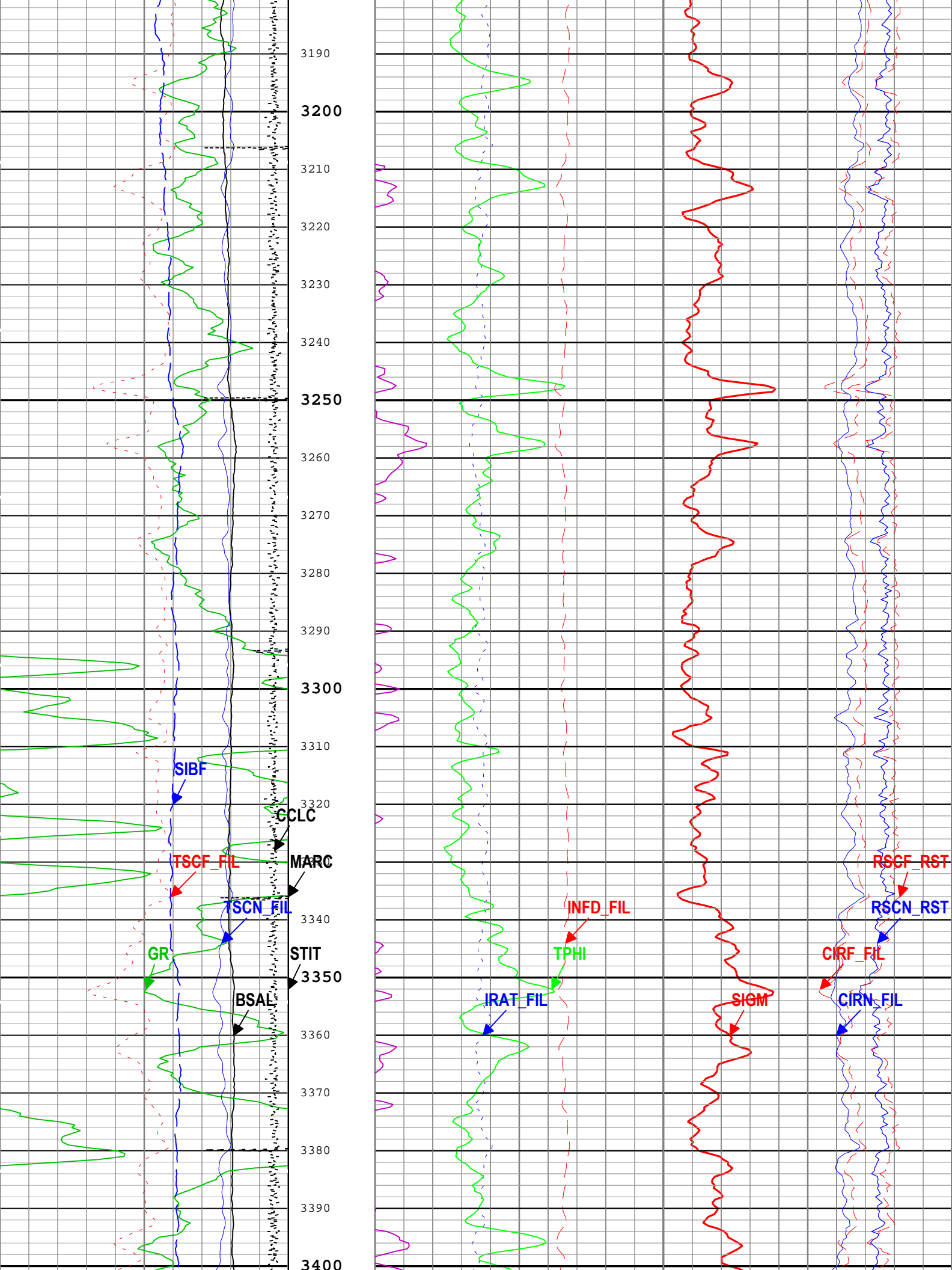
			Stuck Tool Indicator, Total (STIT)		Capture to Inelastic Ratio Near Filtered (CIRN_FIL) RST-C	
Borehole Salinity (BSAL) RST-C			0	ft	5	0
450 ppk	-50					
Gamma Ray (GR) PSTP-B			0	ft	5	0
0 gAPI	150					
Total Selected Count Rate Near Detector Filtered (TSCN_FIL) RST-C			0.75		0	0
30000 1/s	0					
Total Selected Count Rate Far Detector Filtered (TSCF_FIL) RST-C			0.6	ft3/ft3	0	0
12000 1/s	0					
CCL Computed Amplitude (CCLC) PSTP-B			0		45	0
-19 V	1					
Sigma Borehole Fluid (SIBF) RST-C			60		cu	0
100 cu	0					
			0		0	0.4

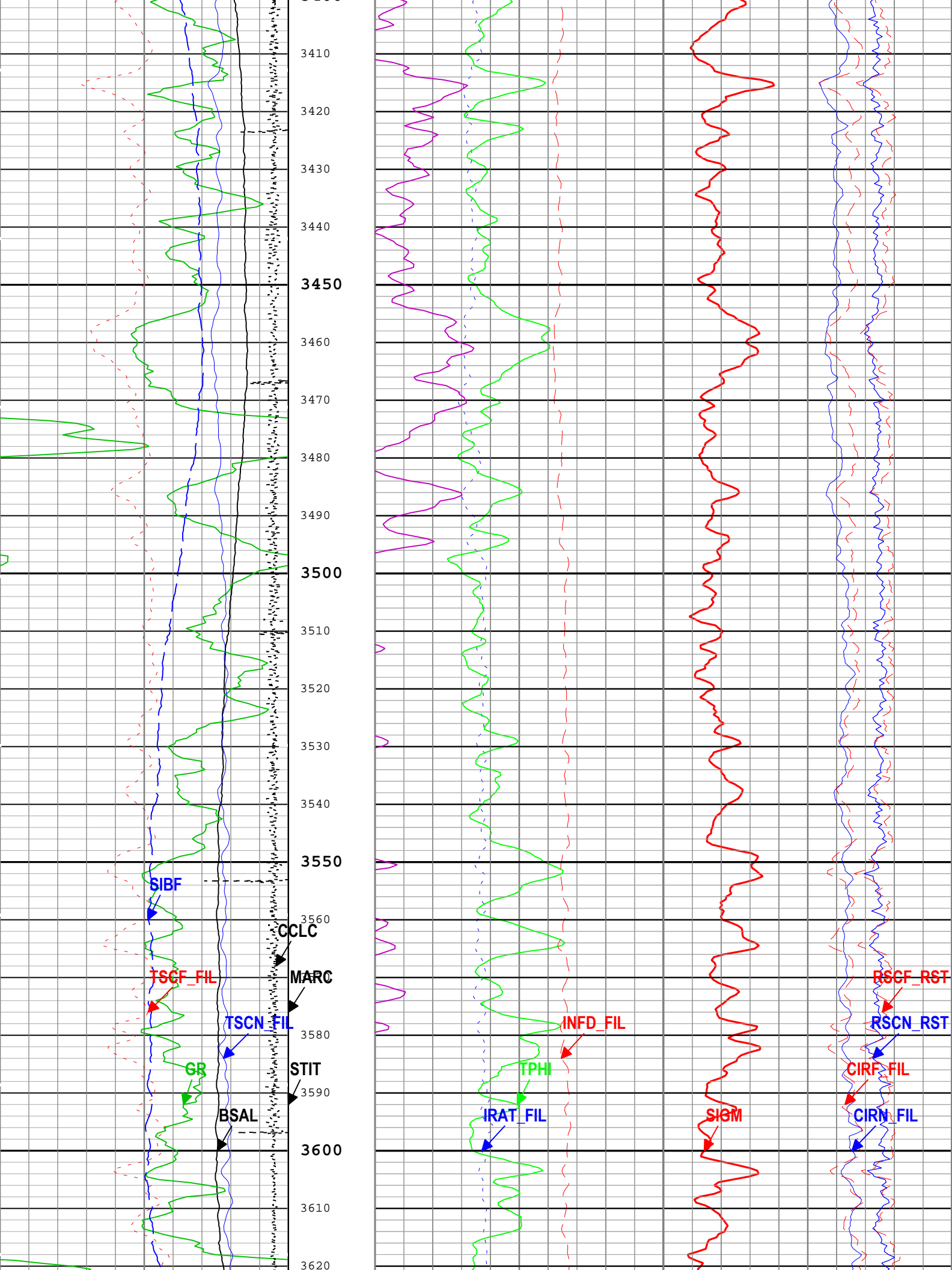


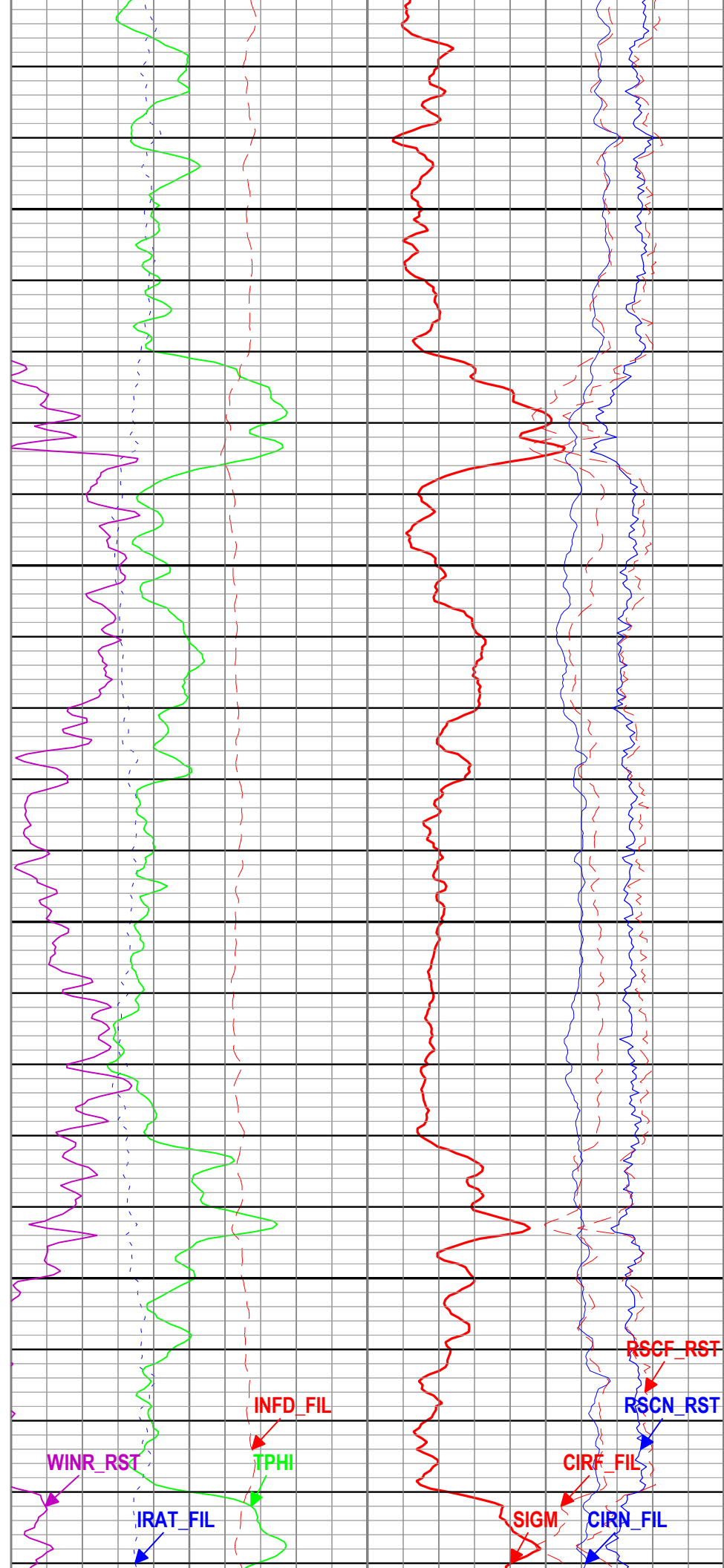
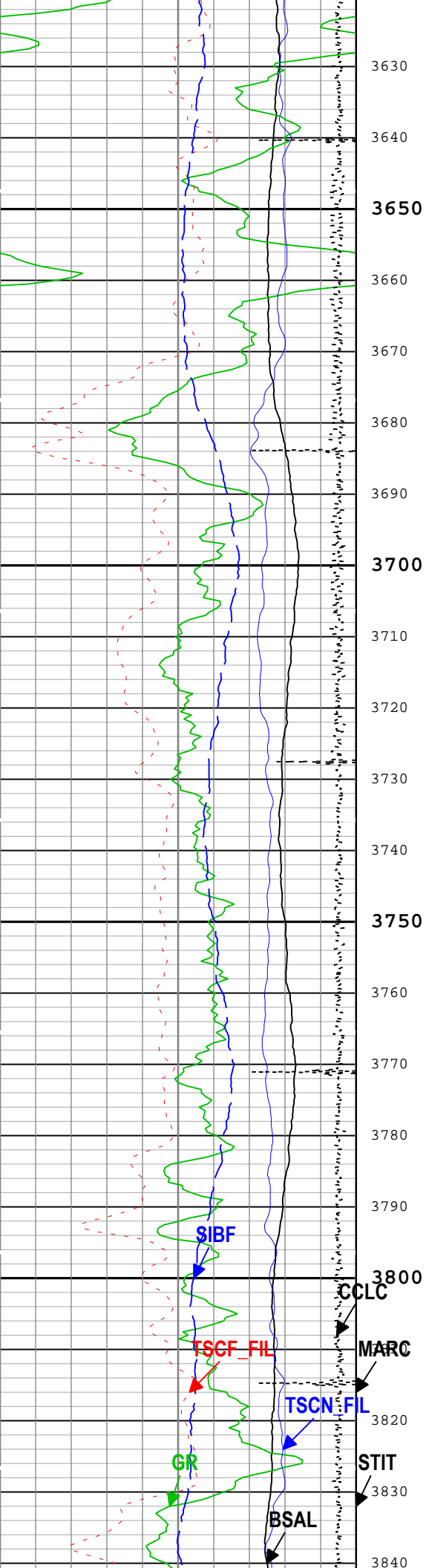


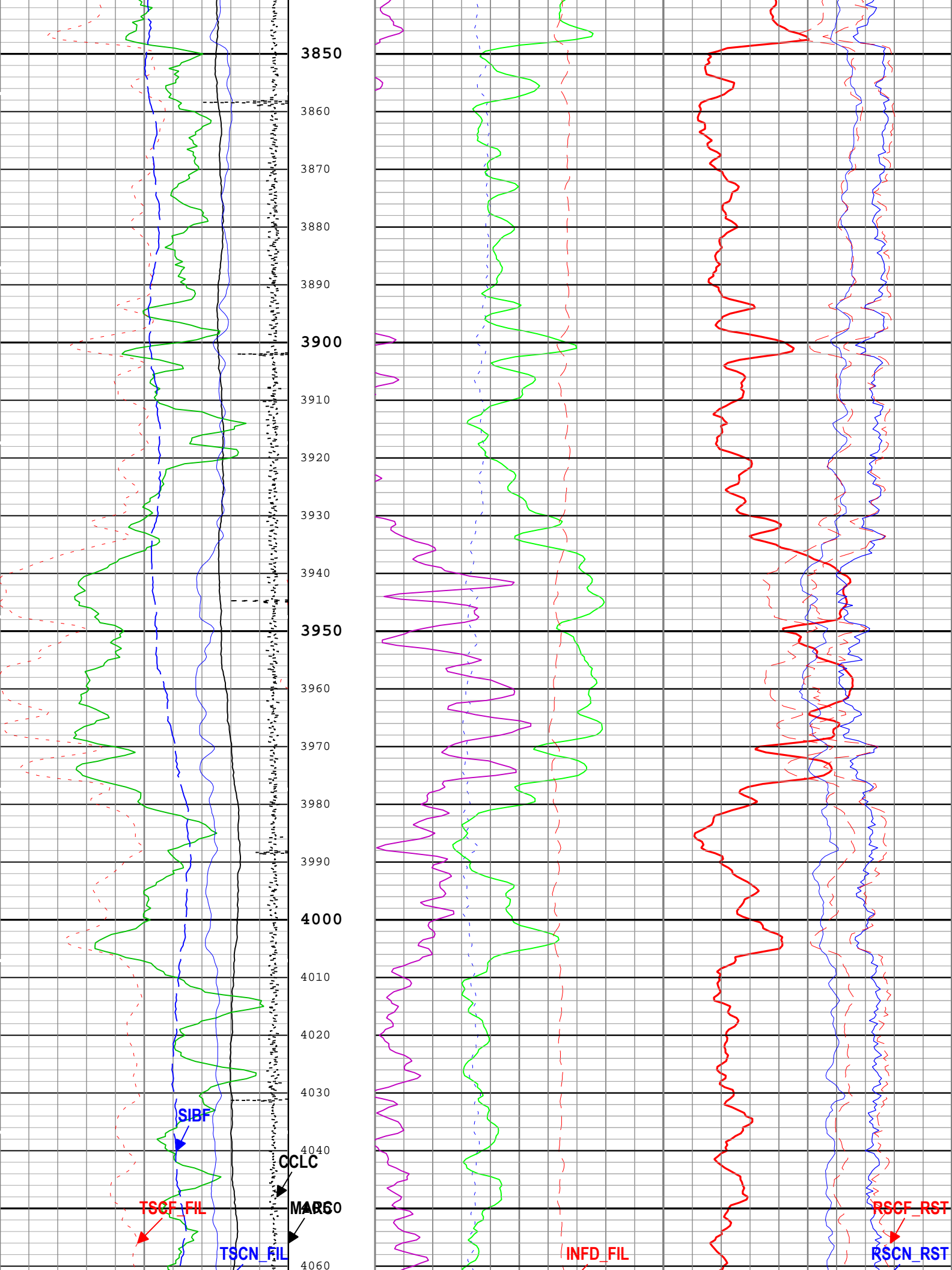


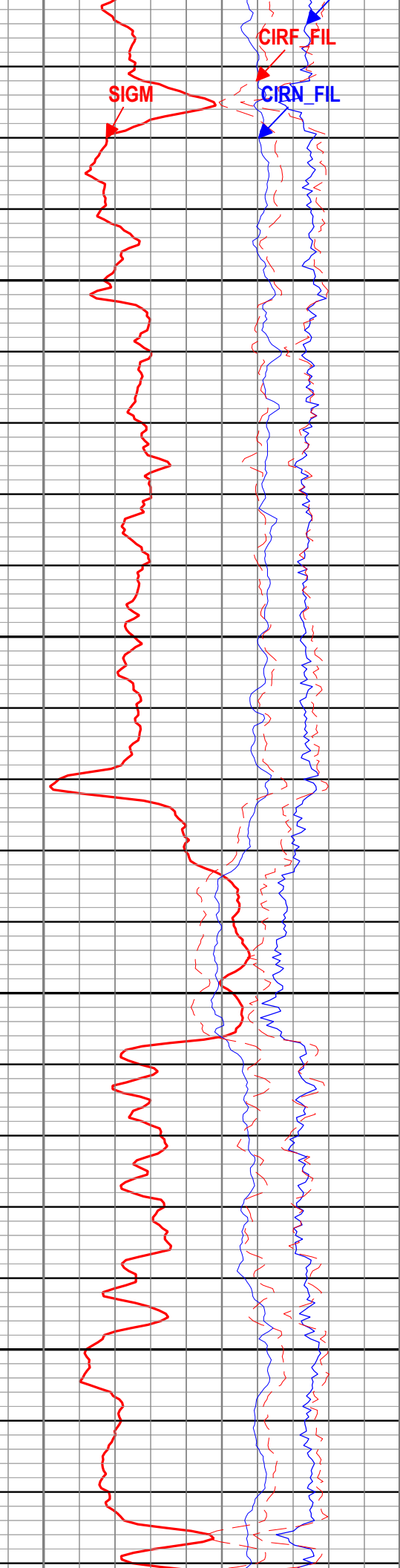
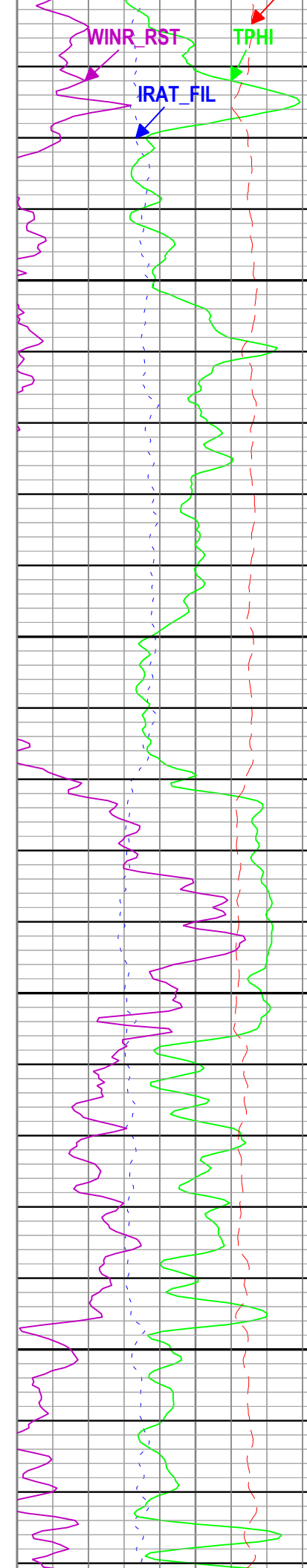
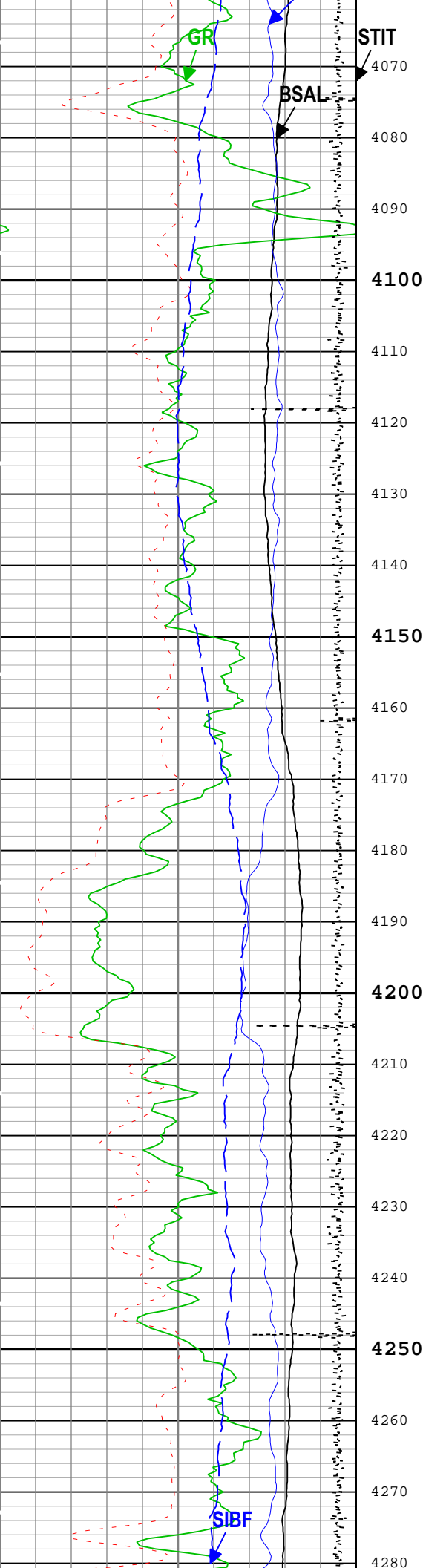


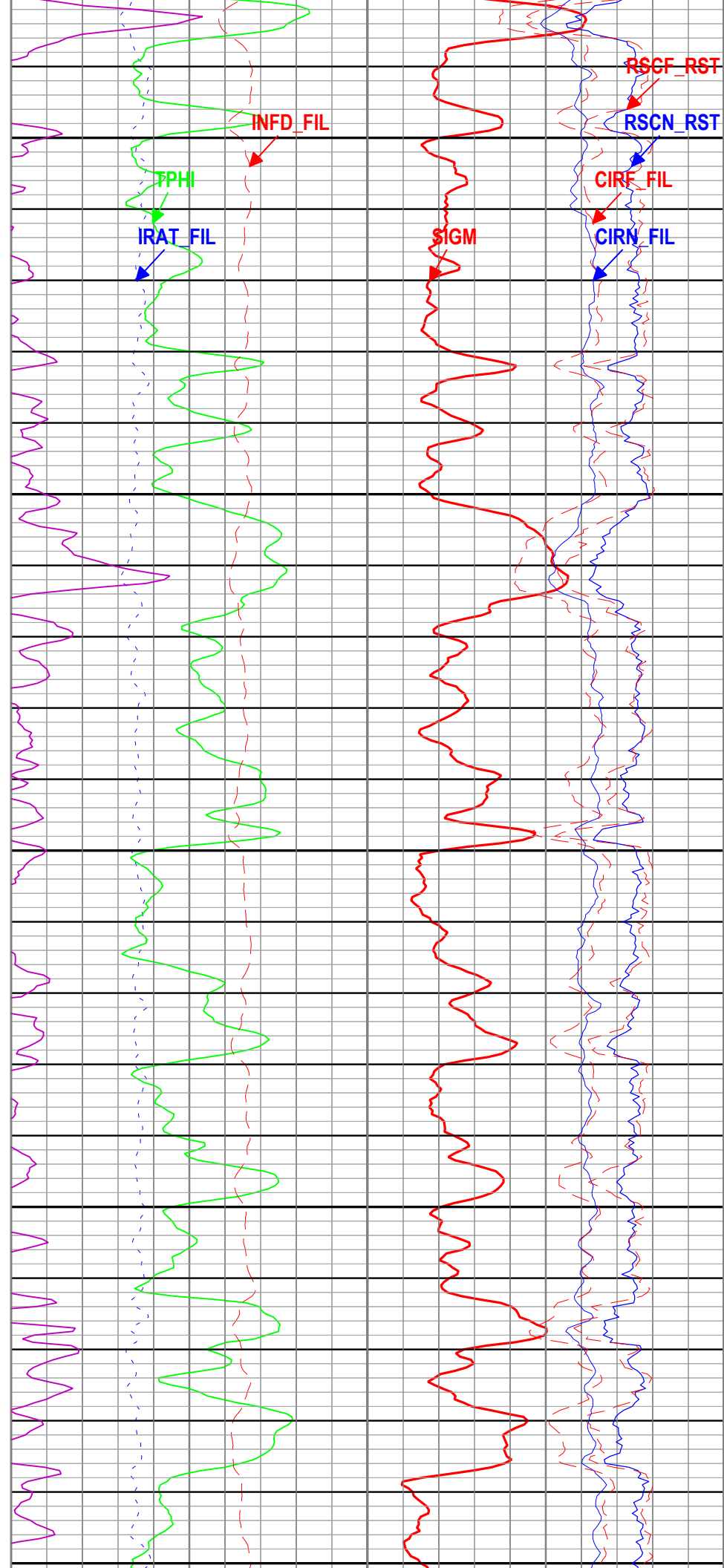
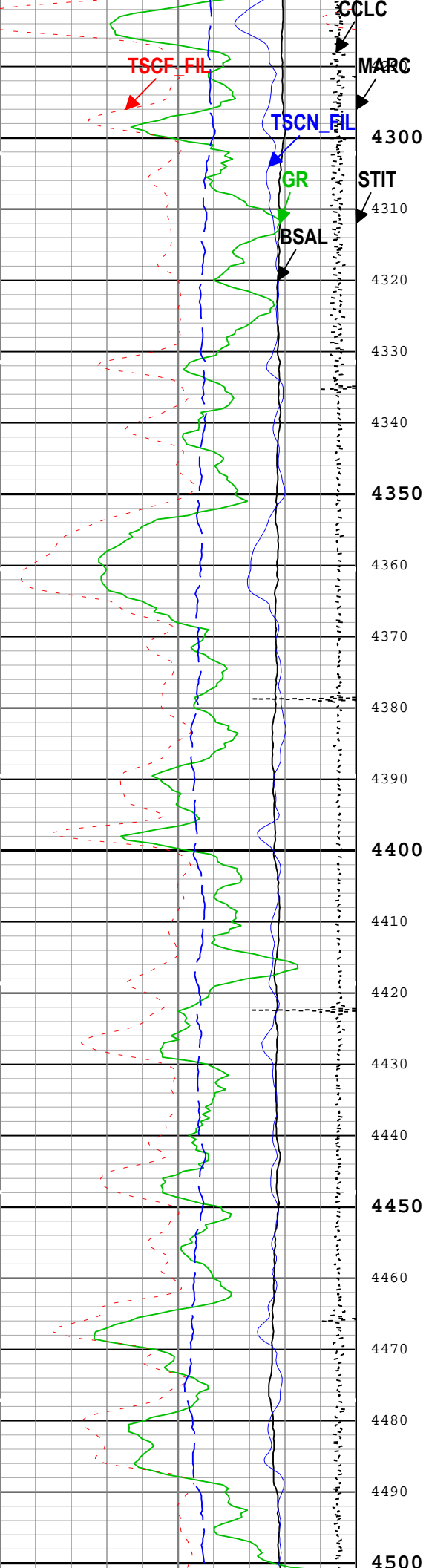


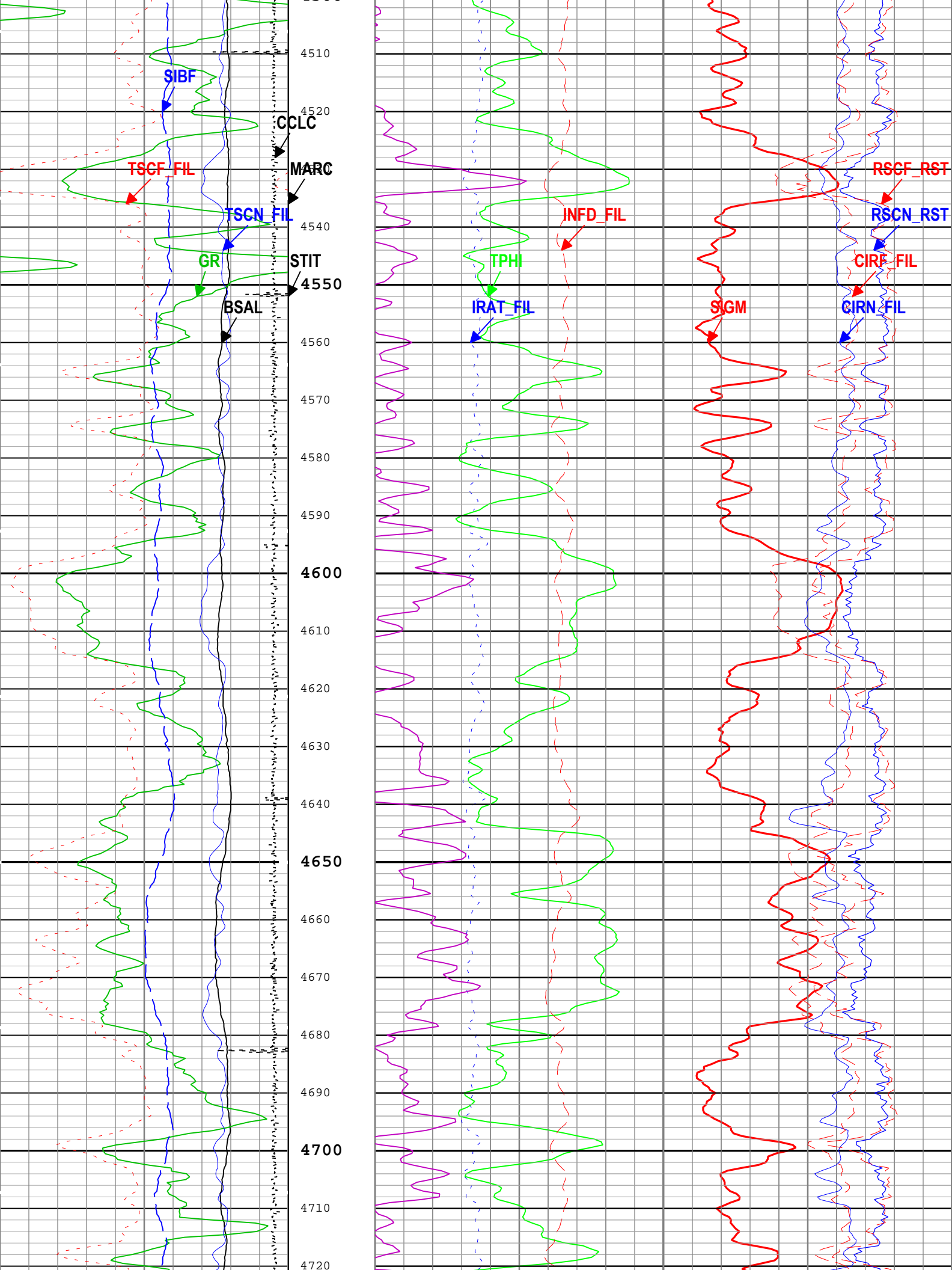


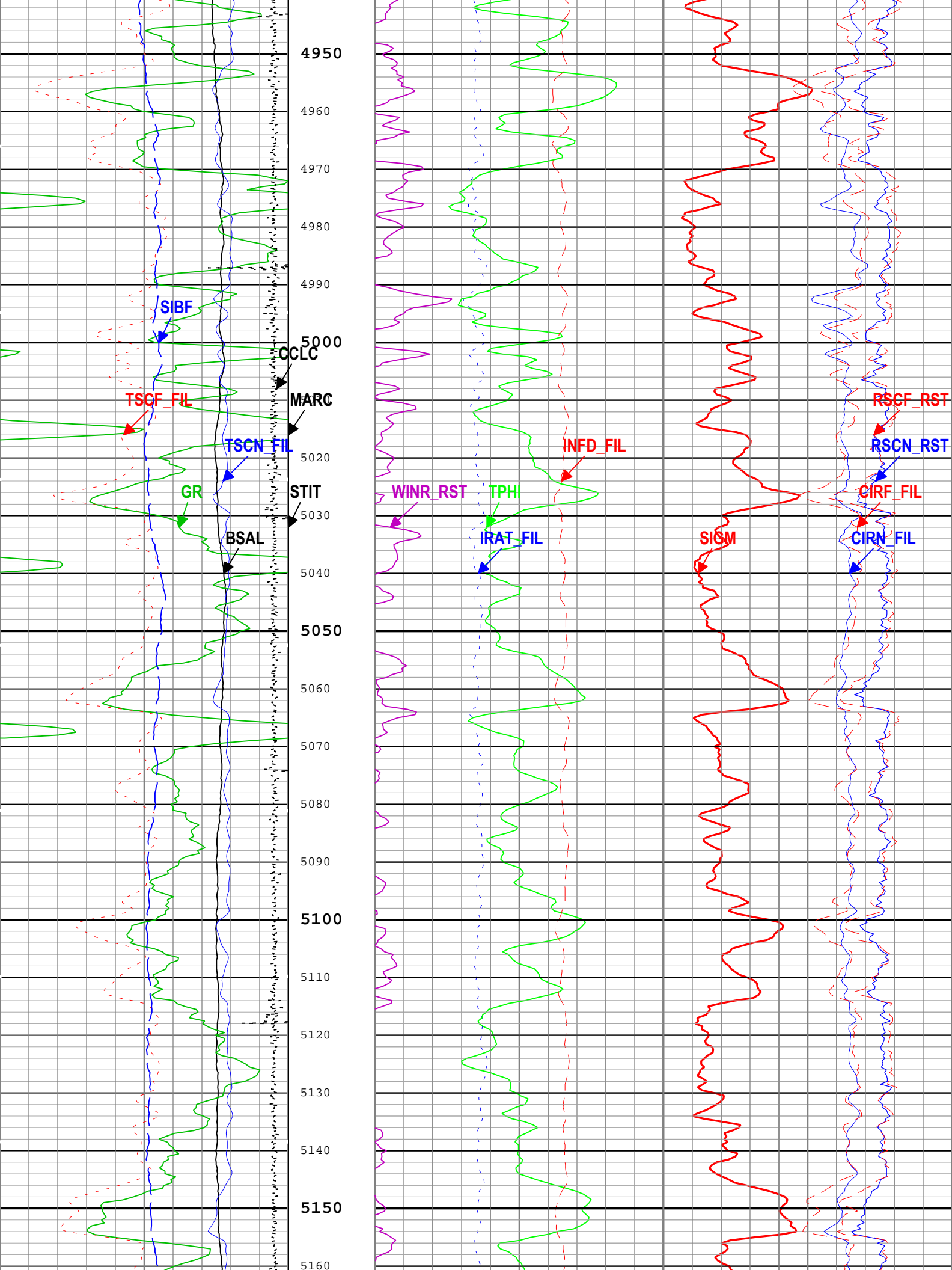


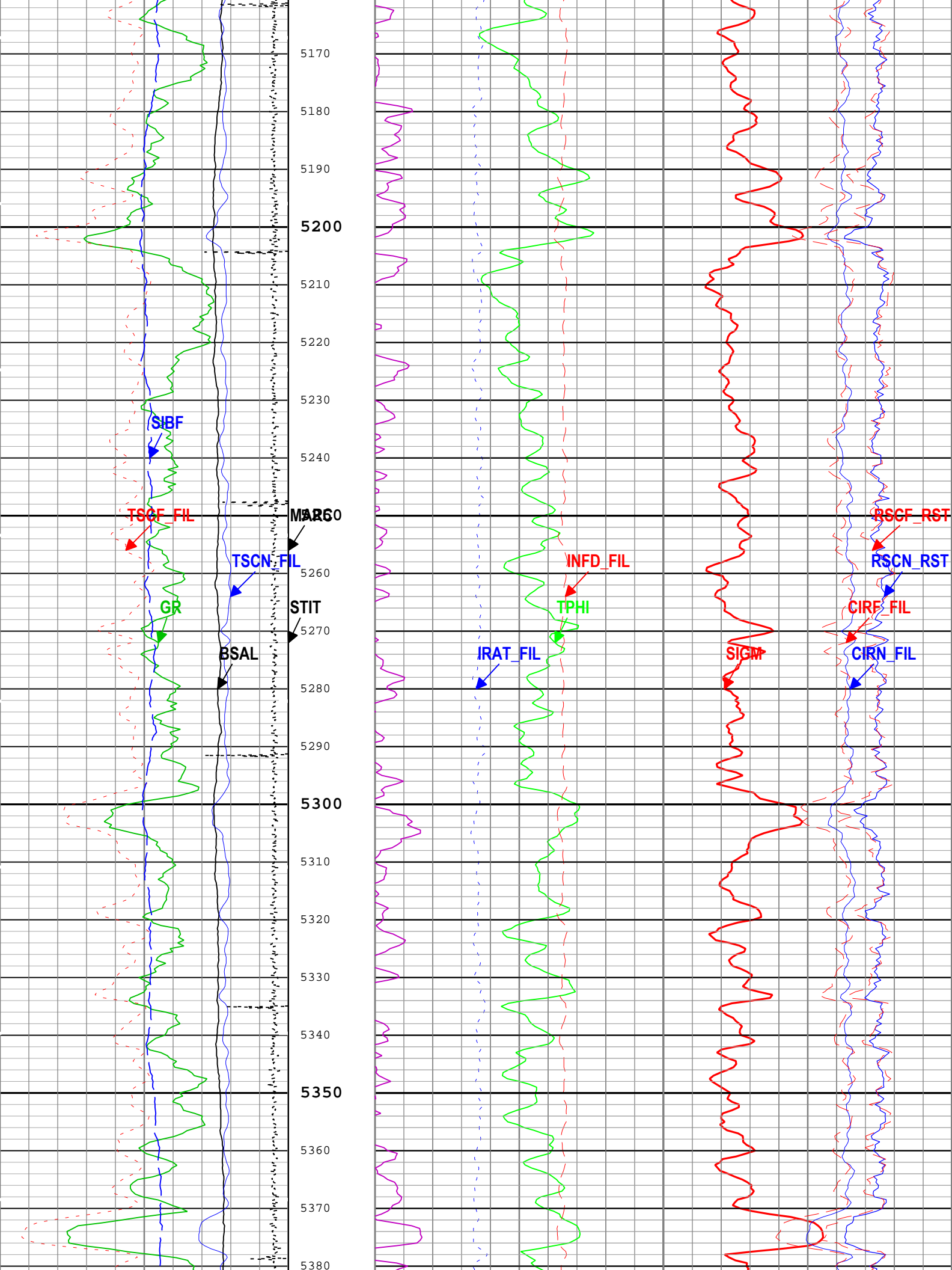


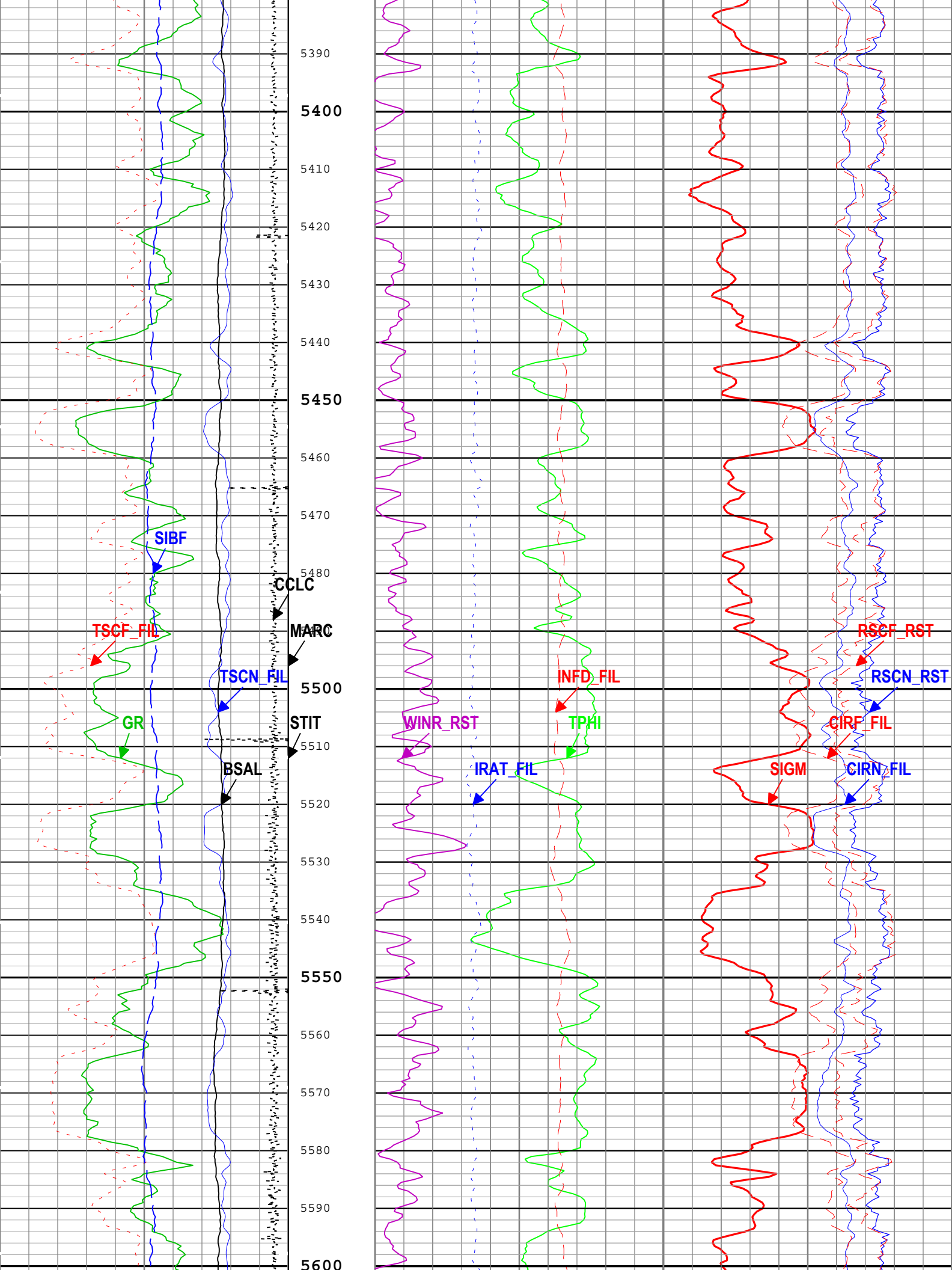


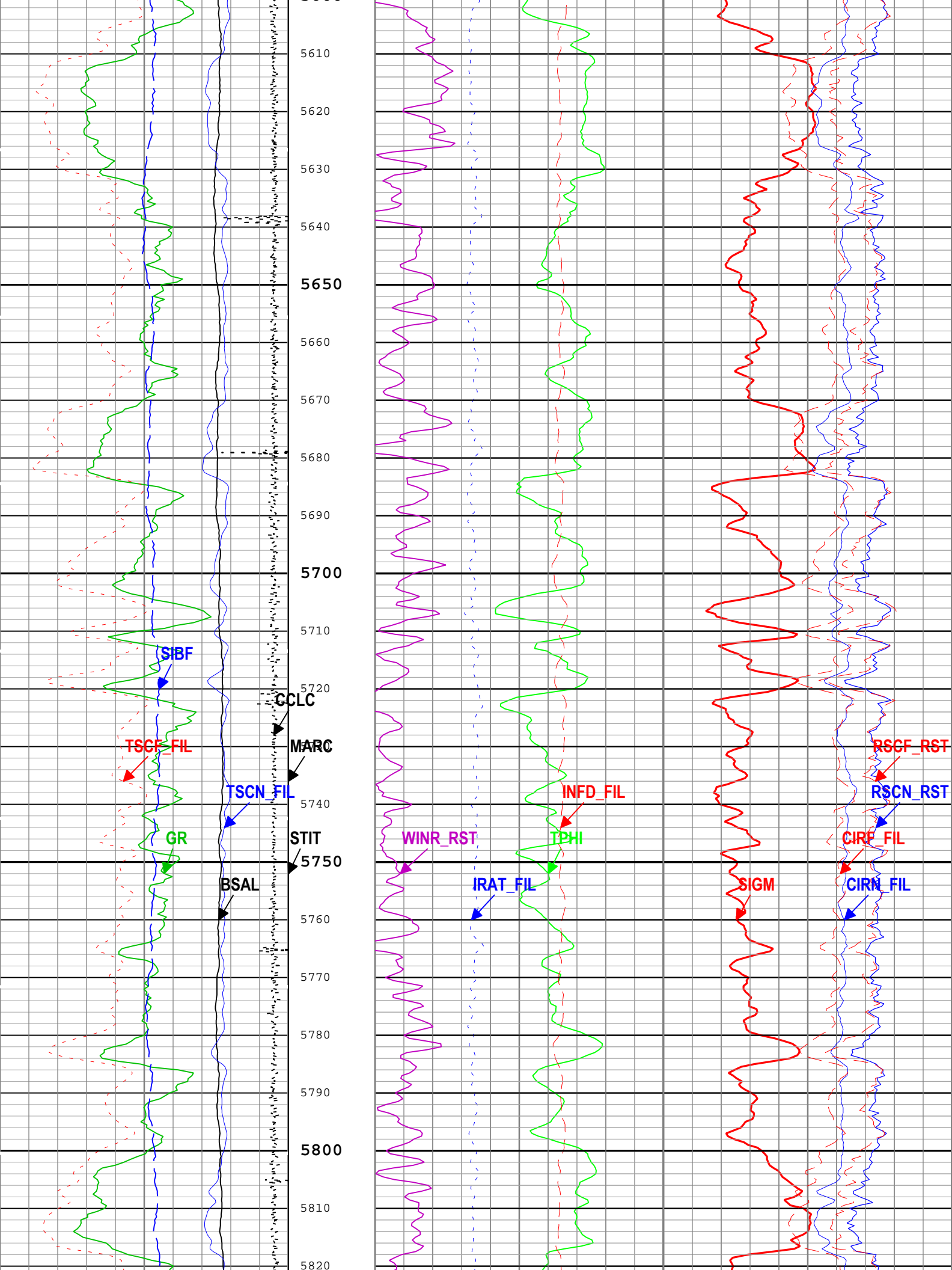


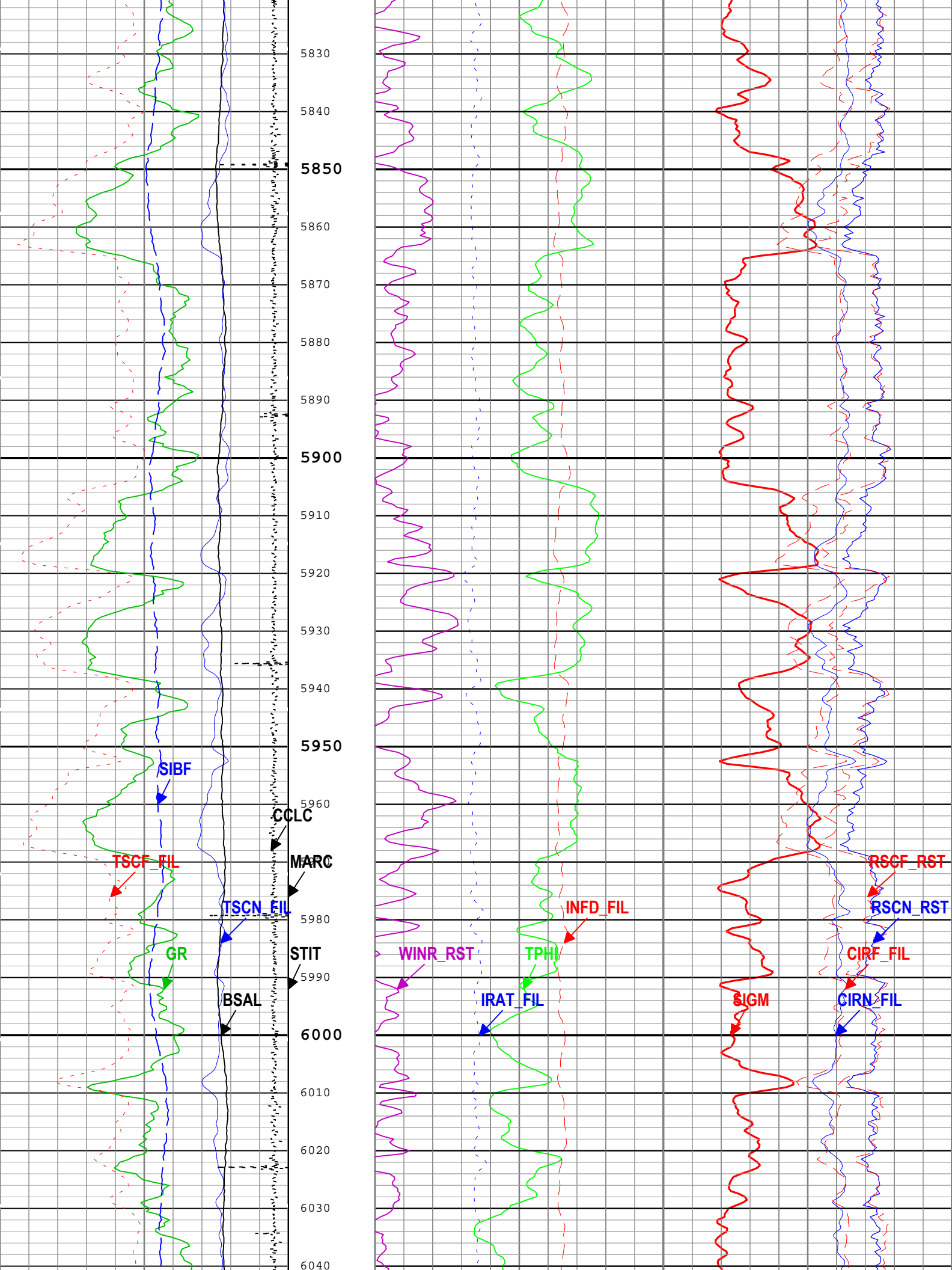


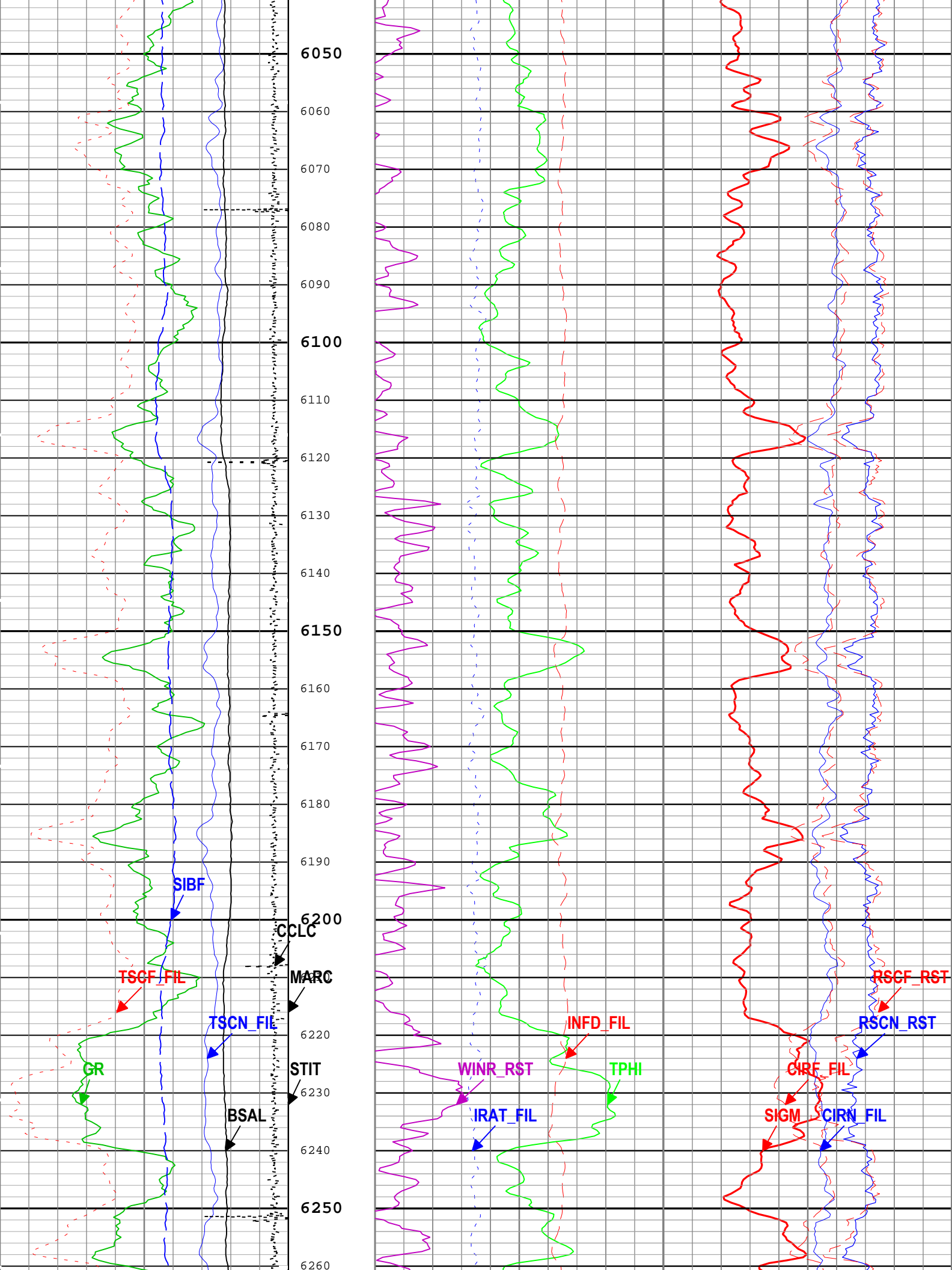


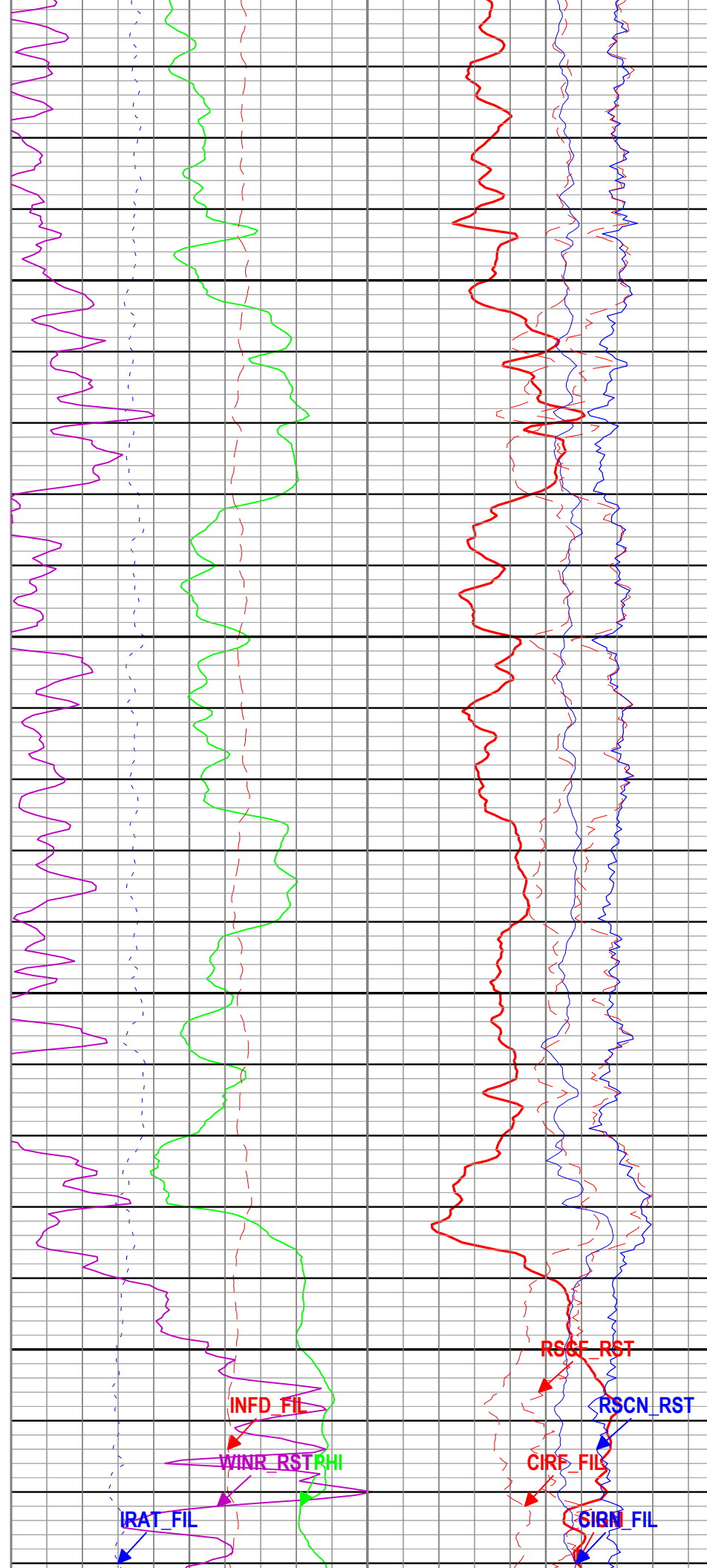
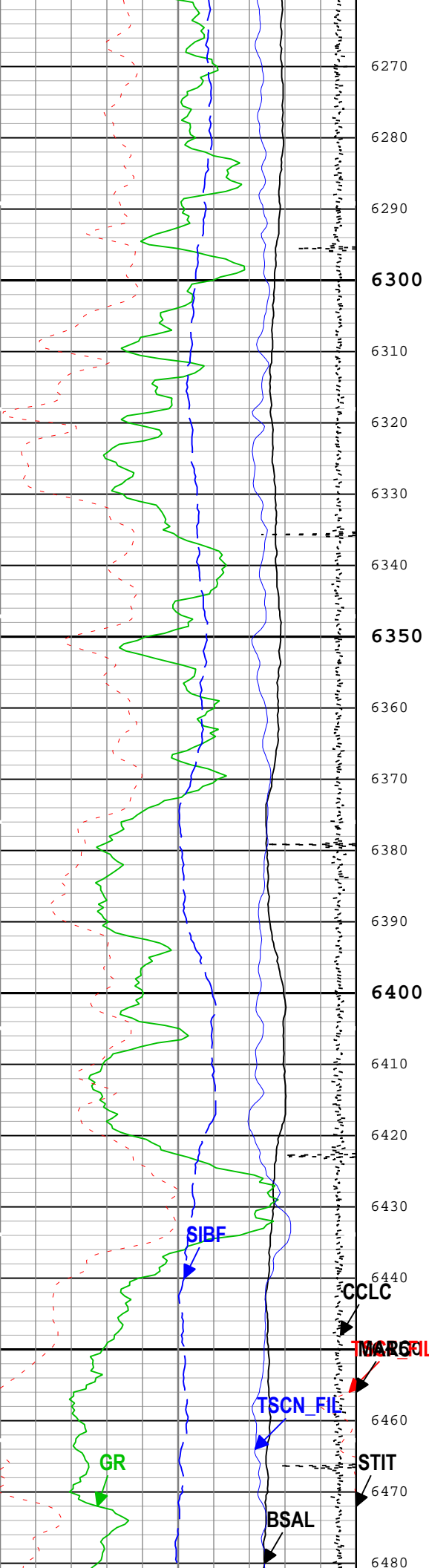


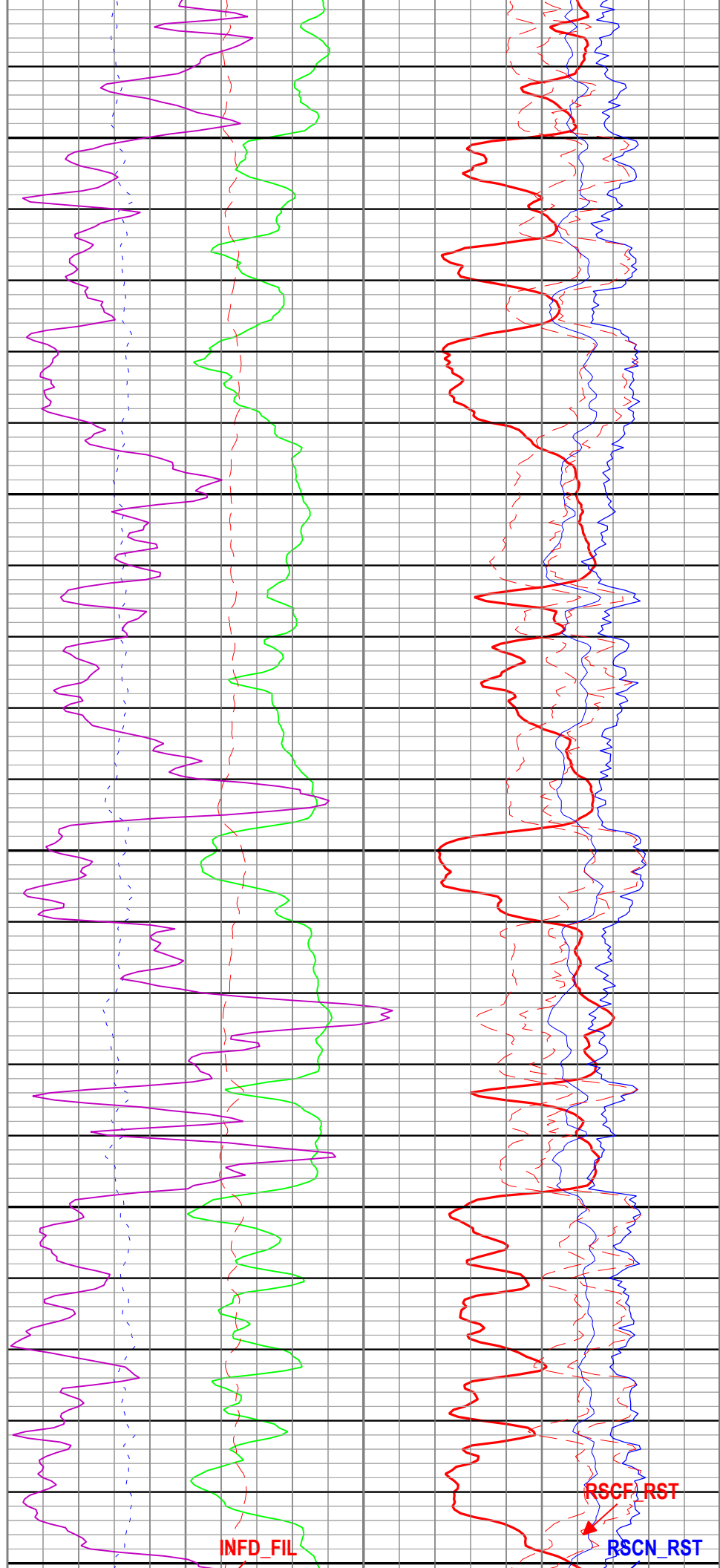
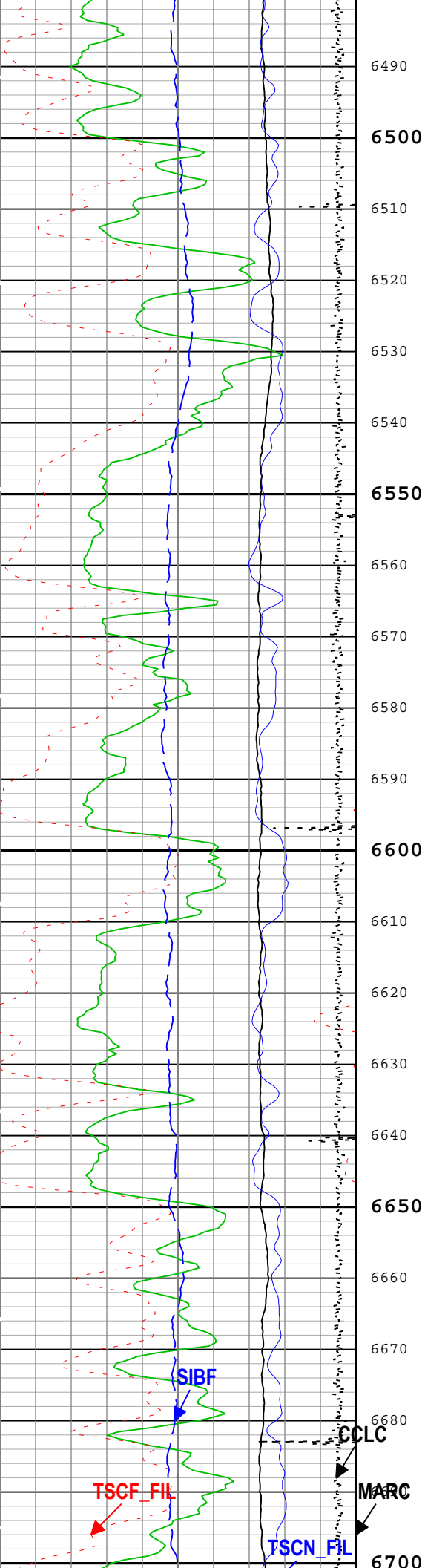


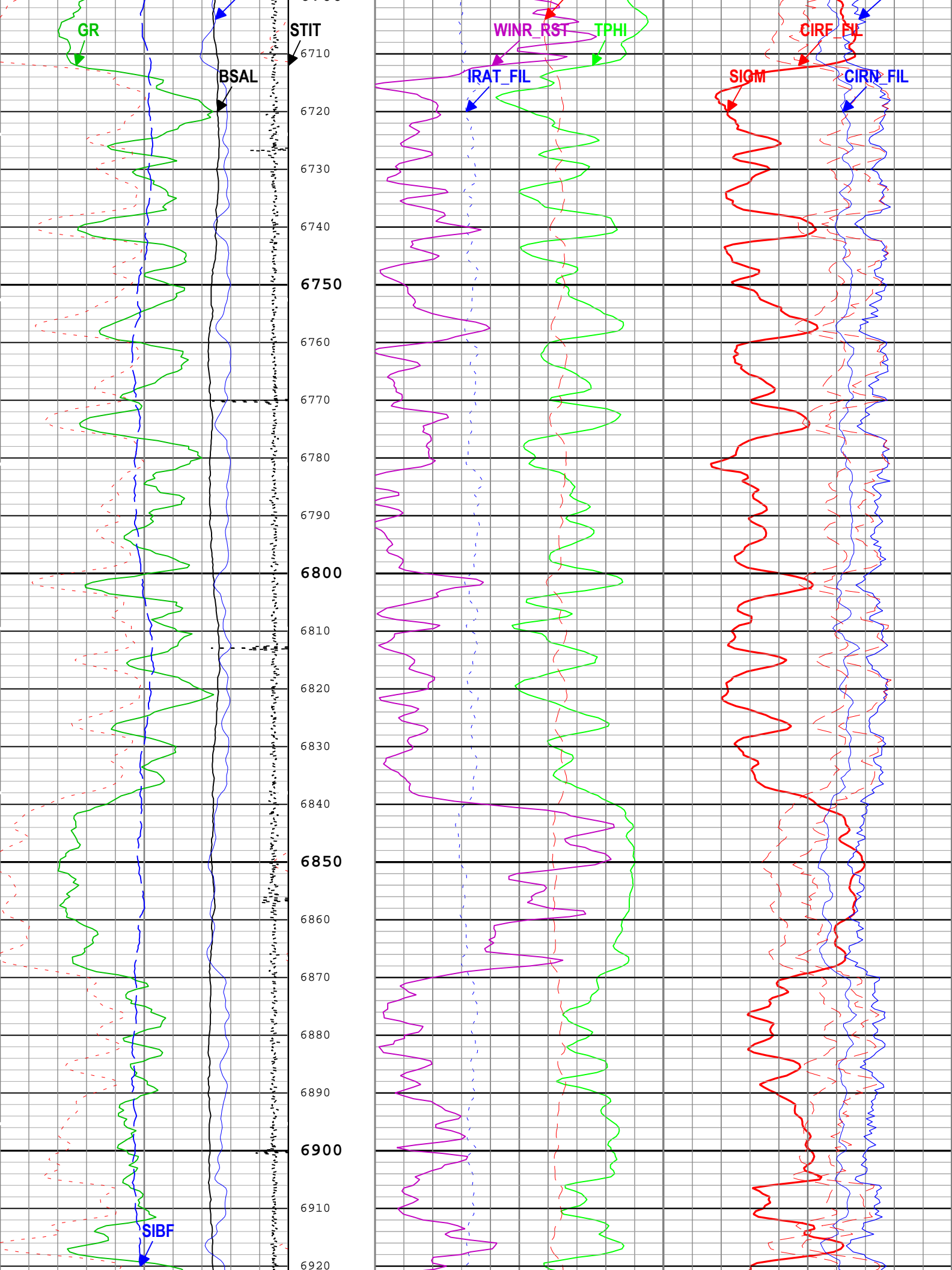


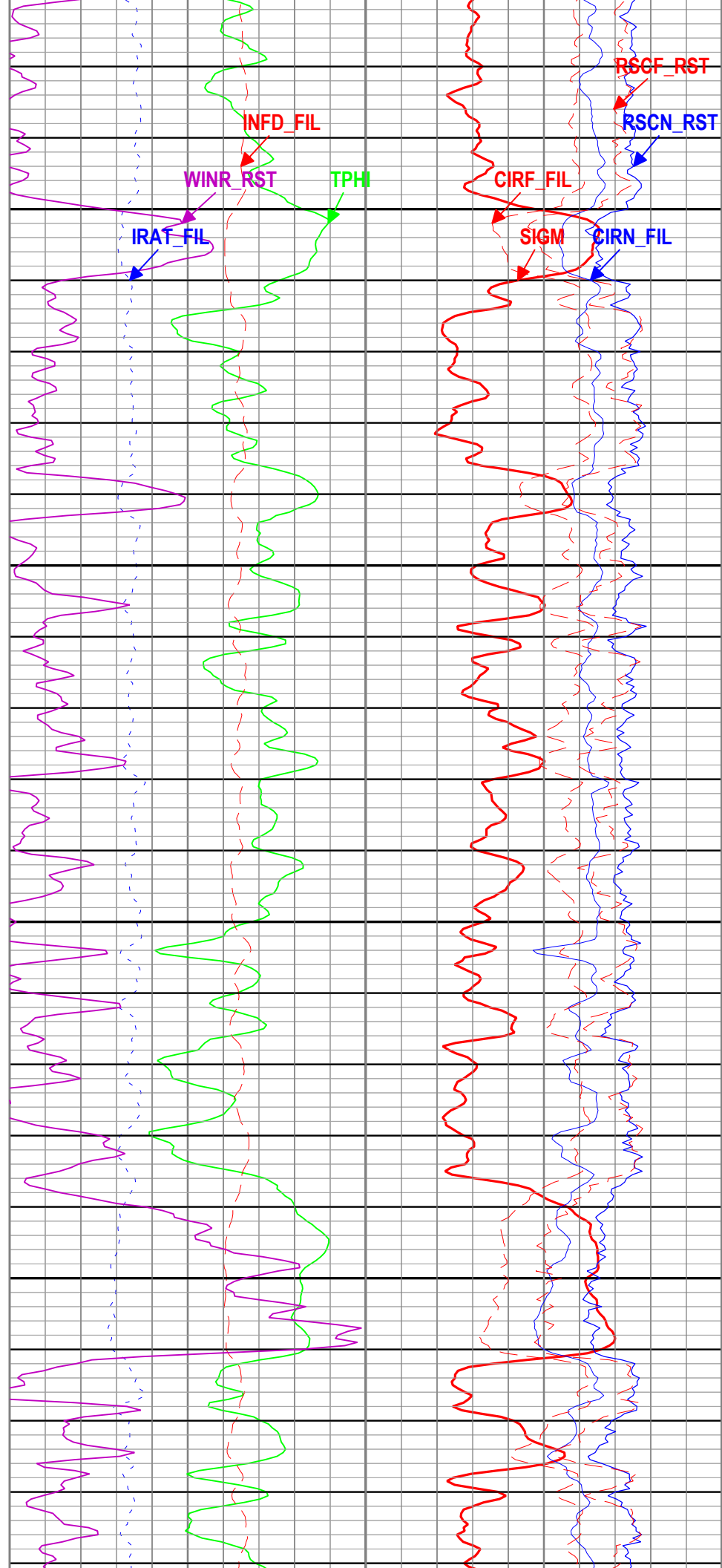
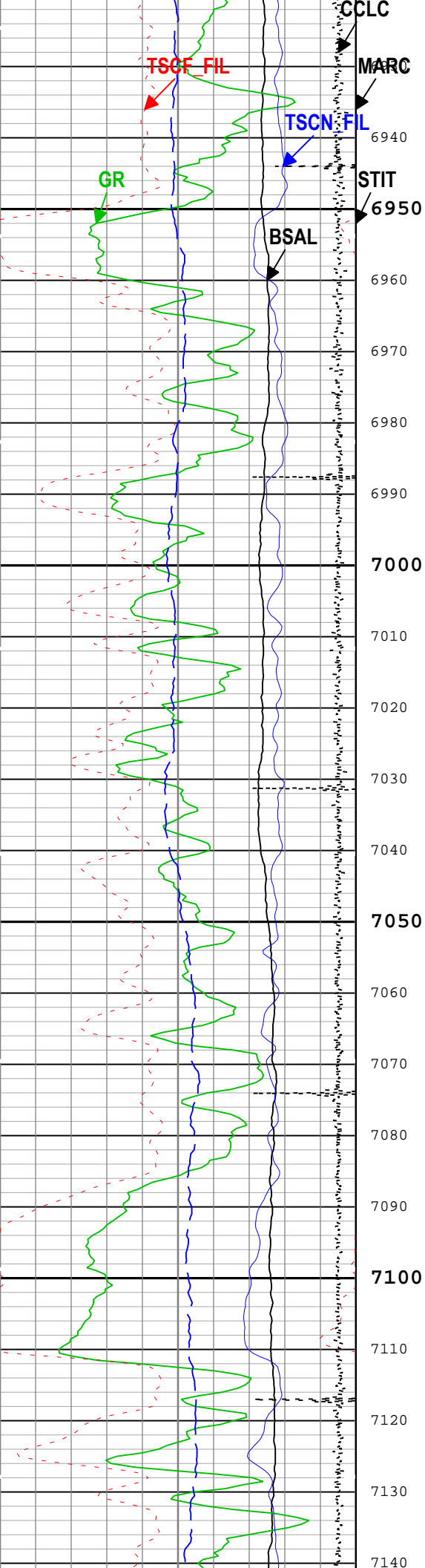


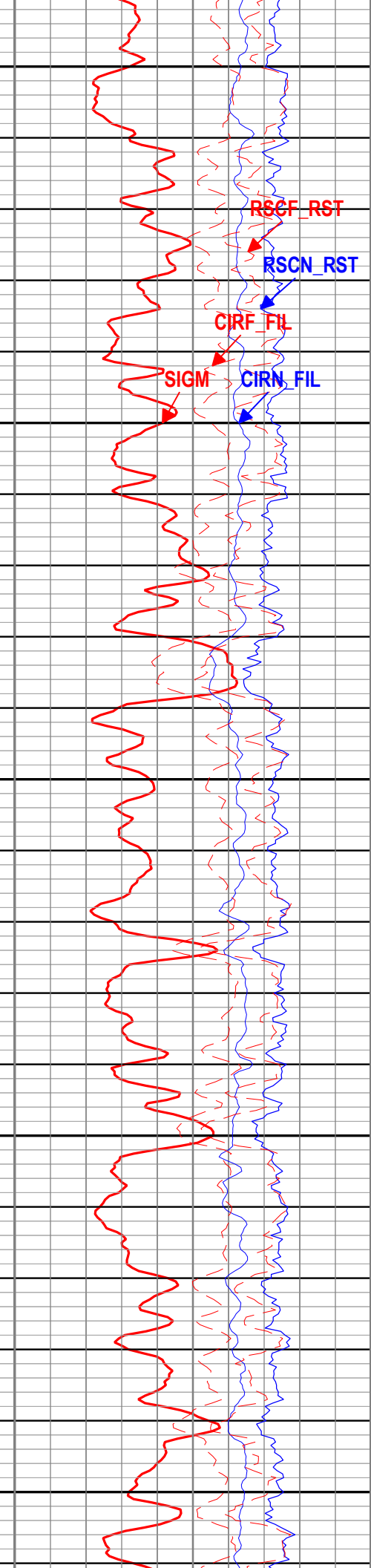
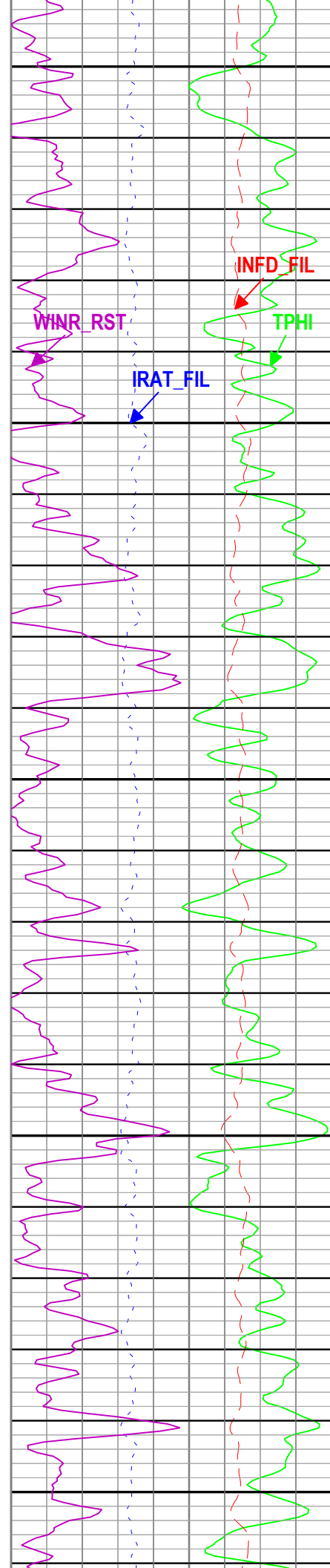
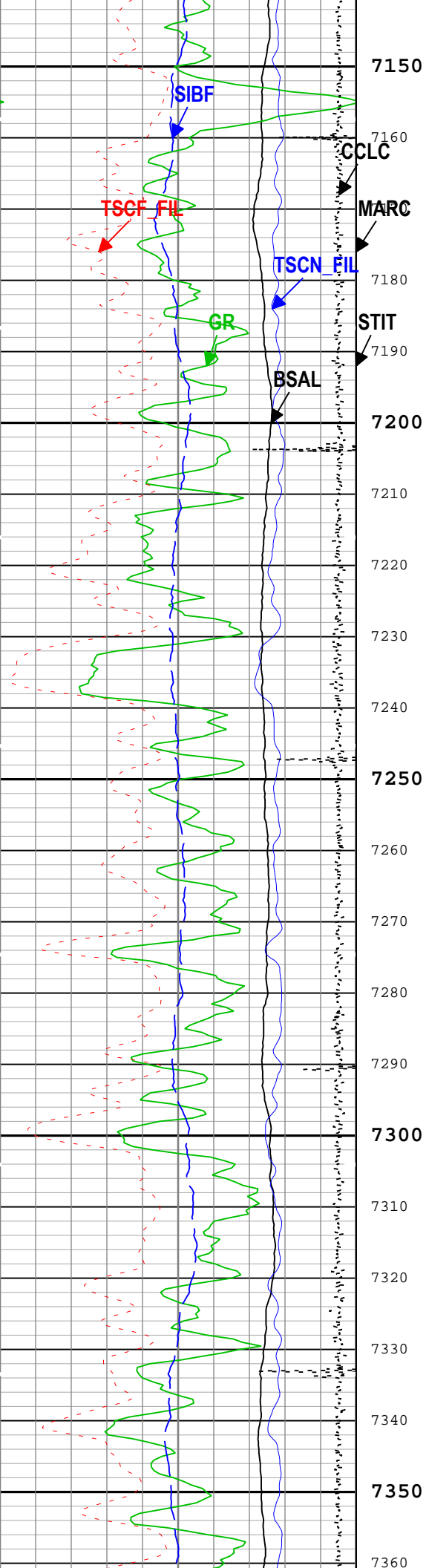


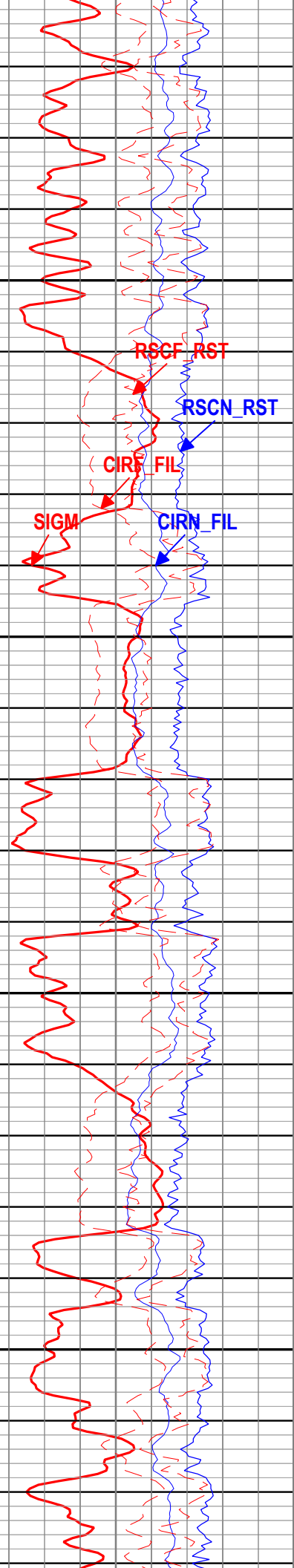
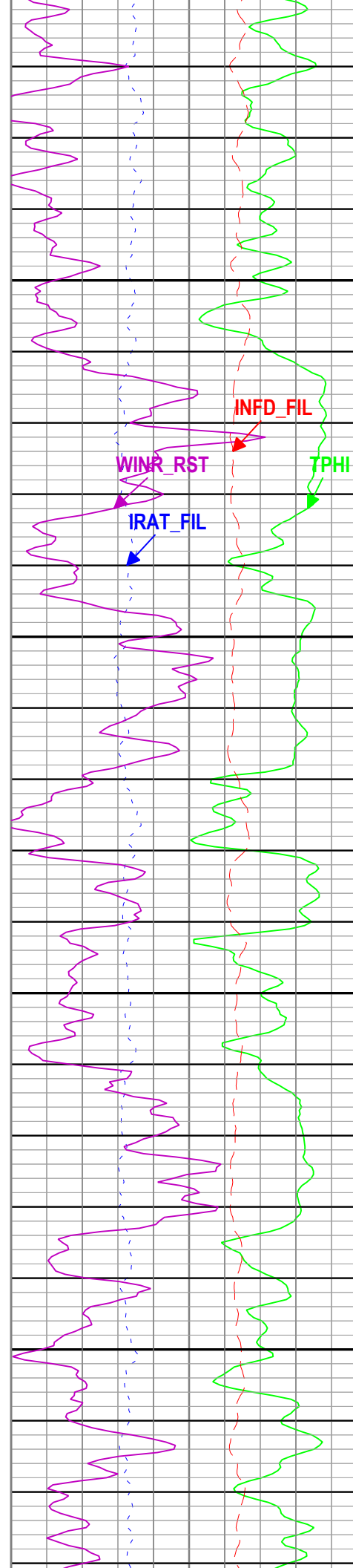
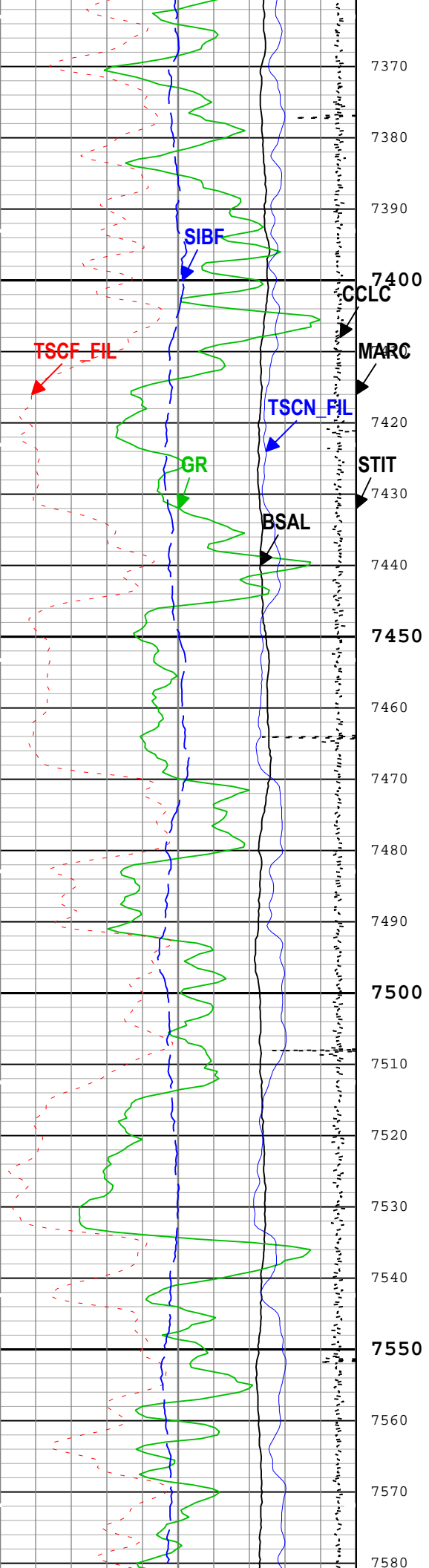


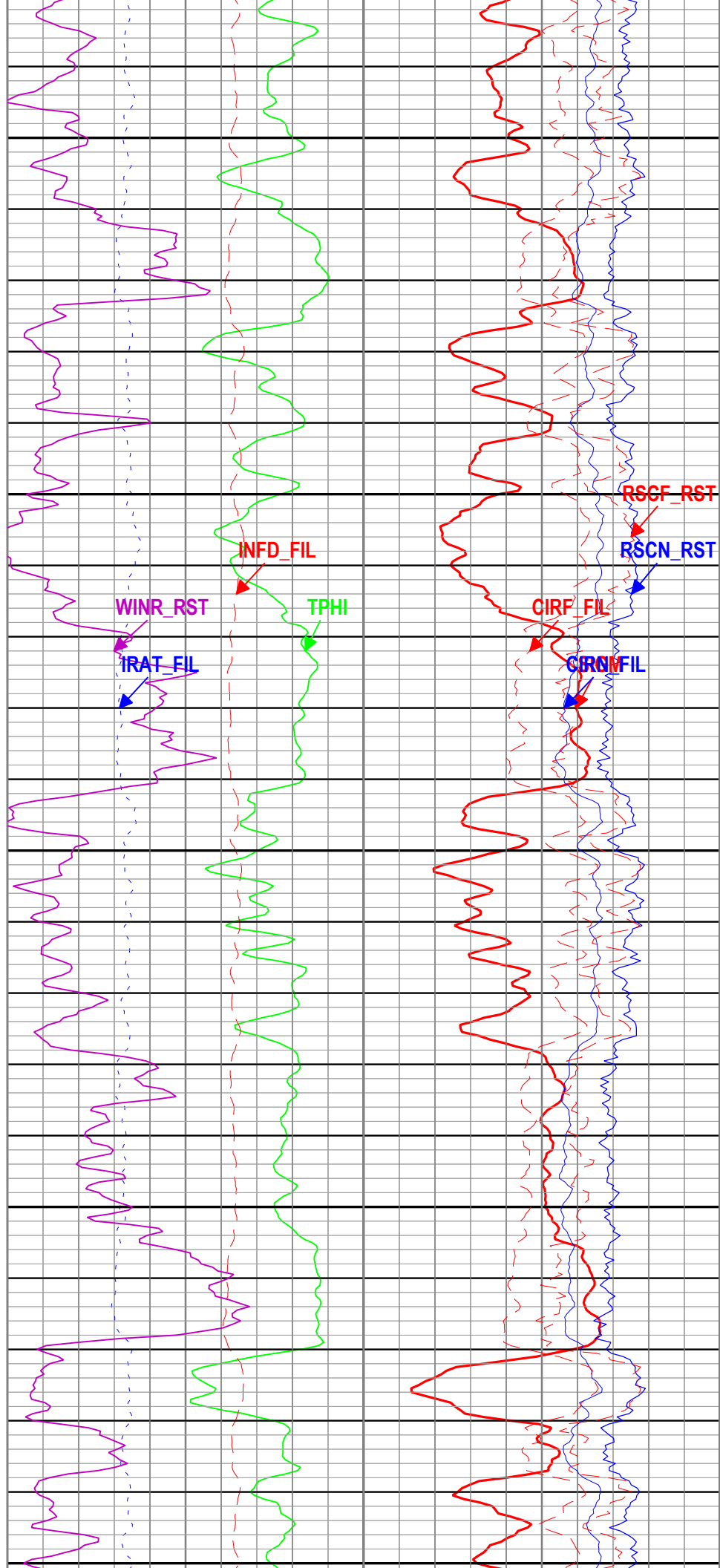
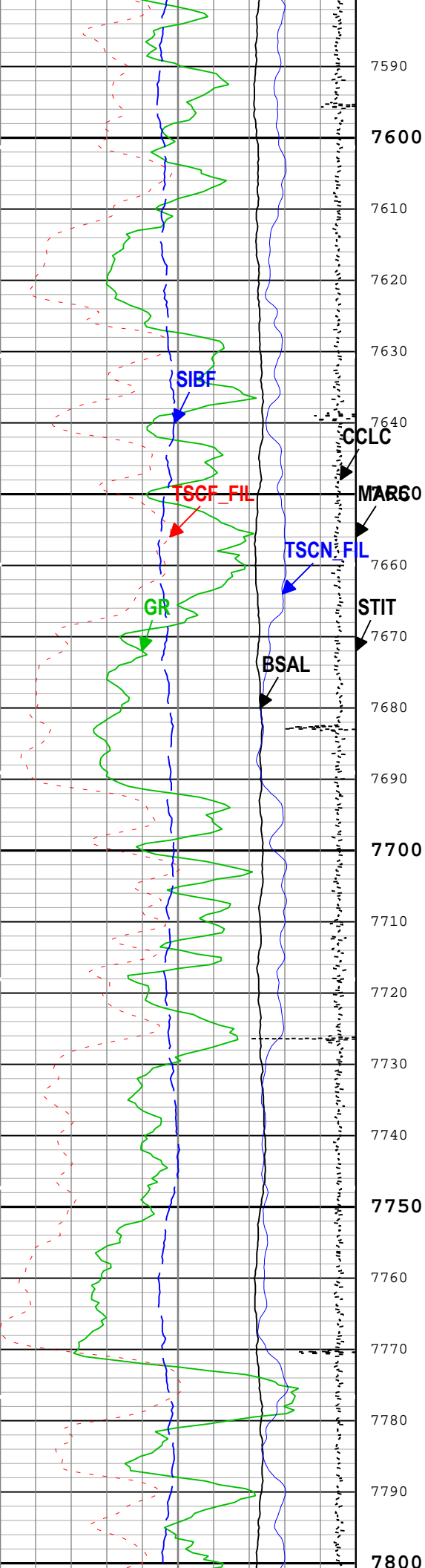


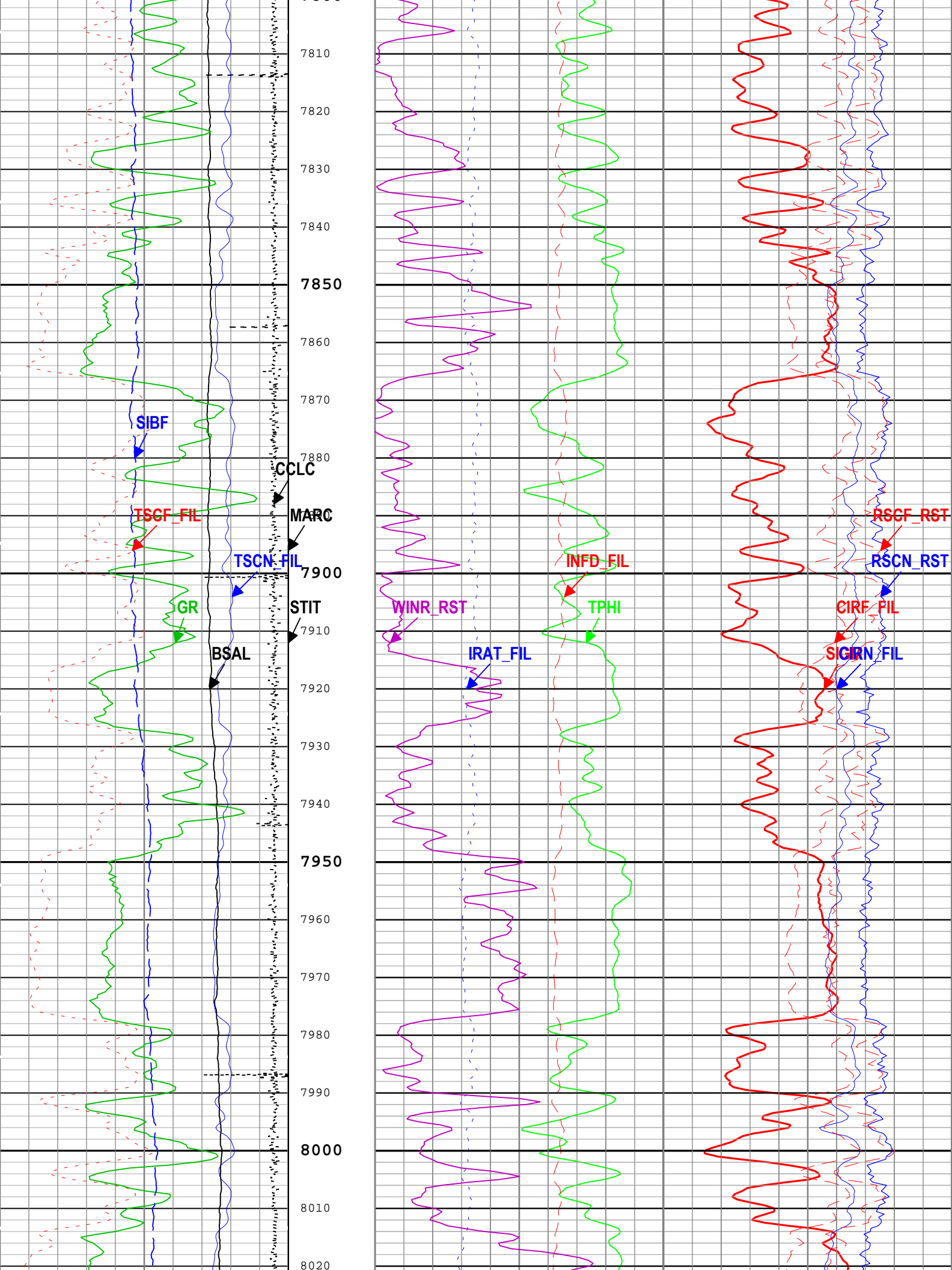


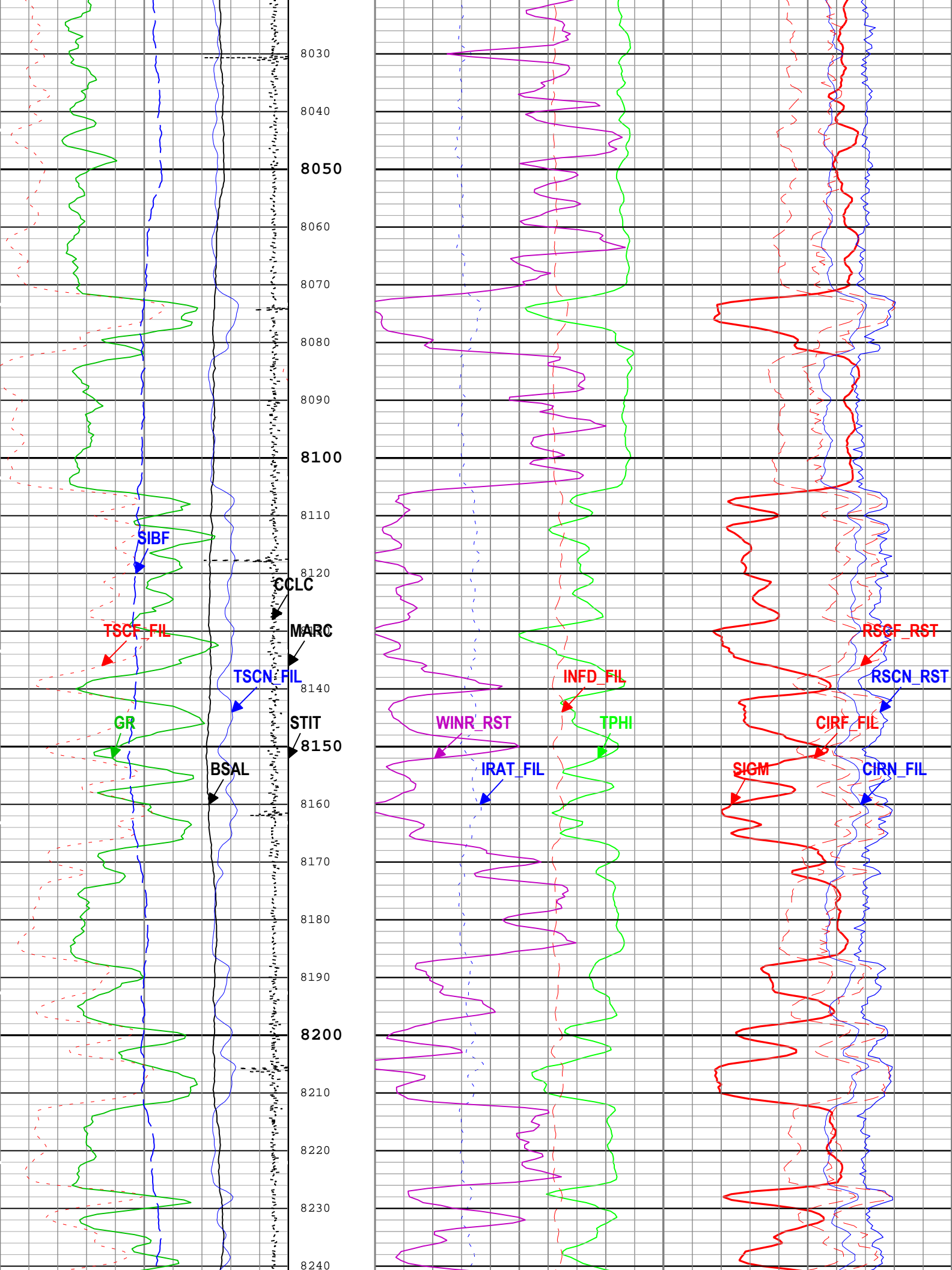


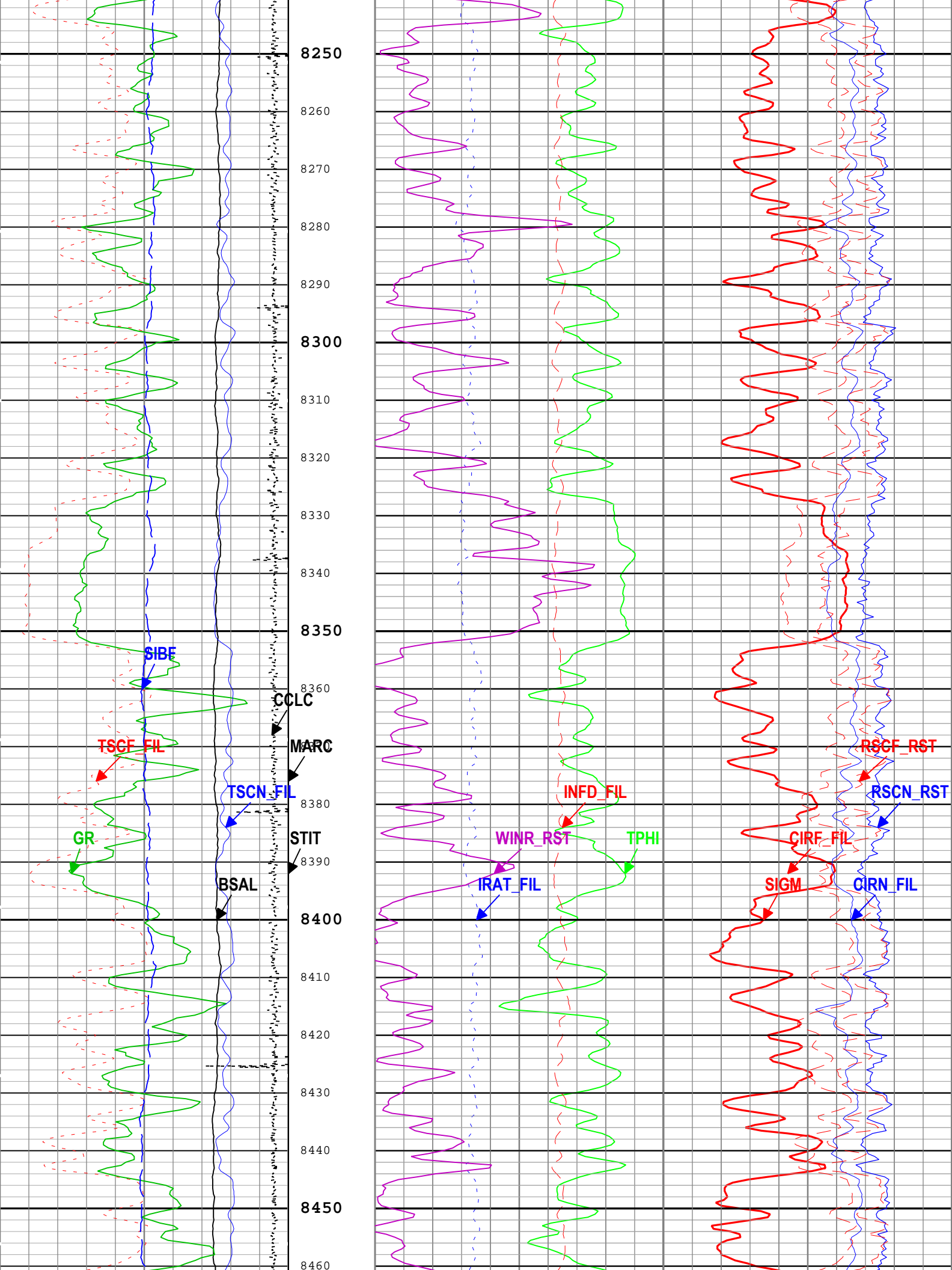


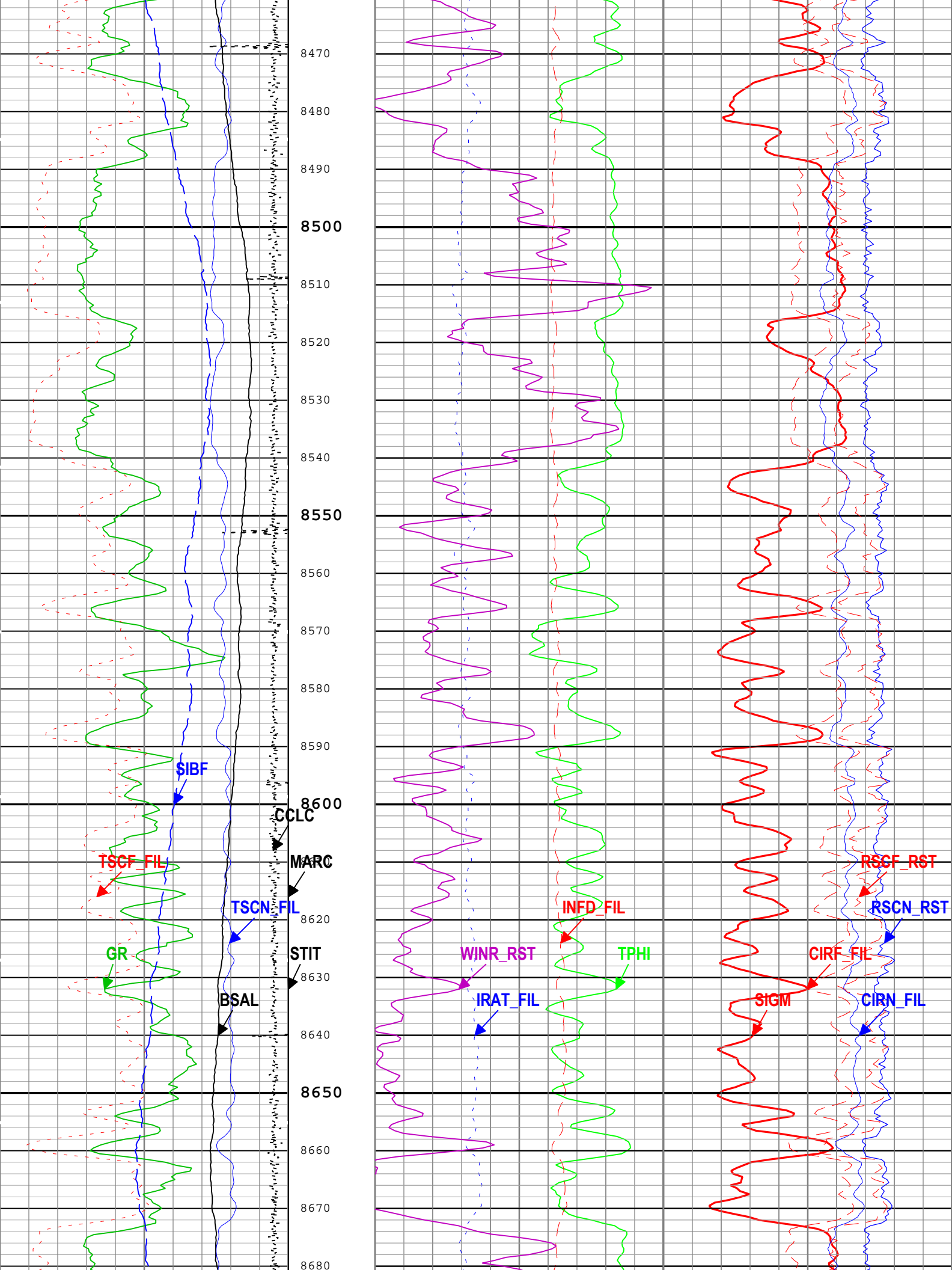


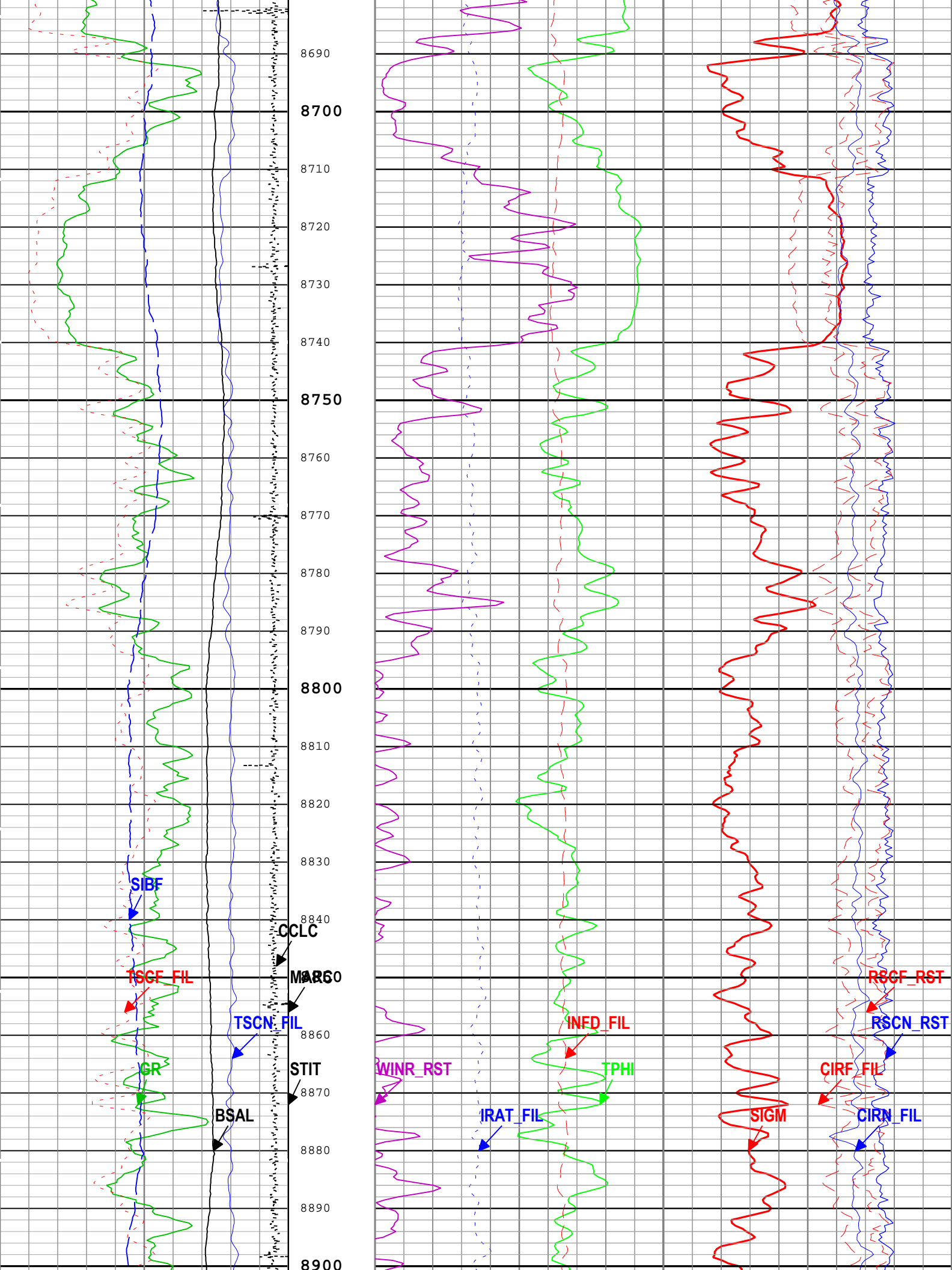


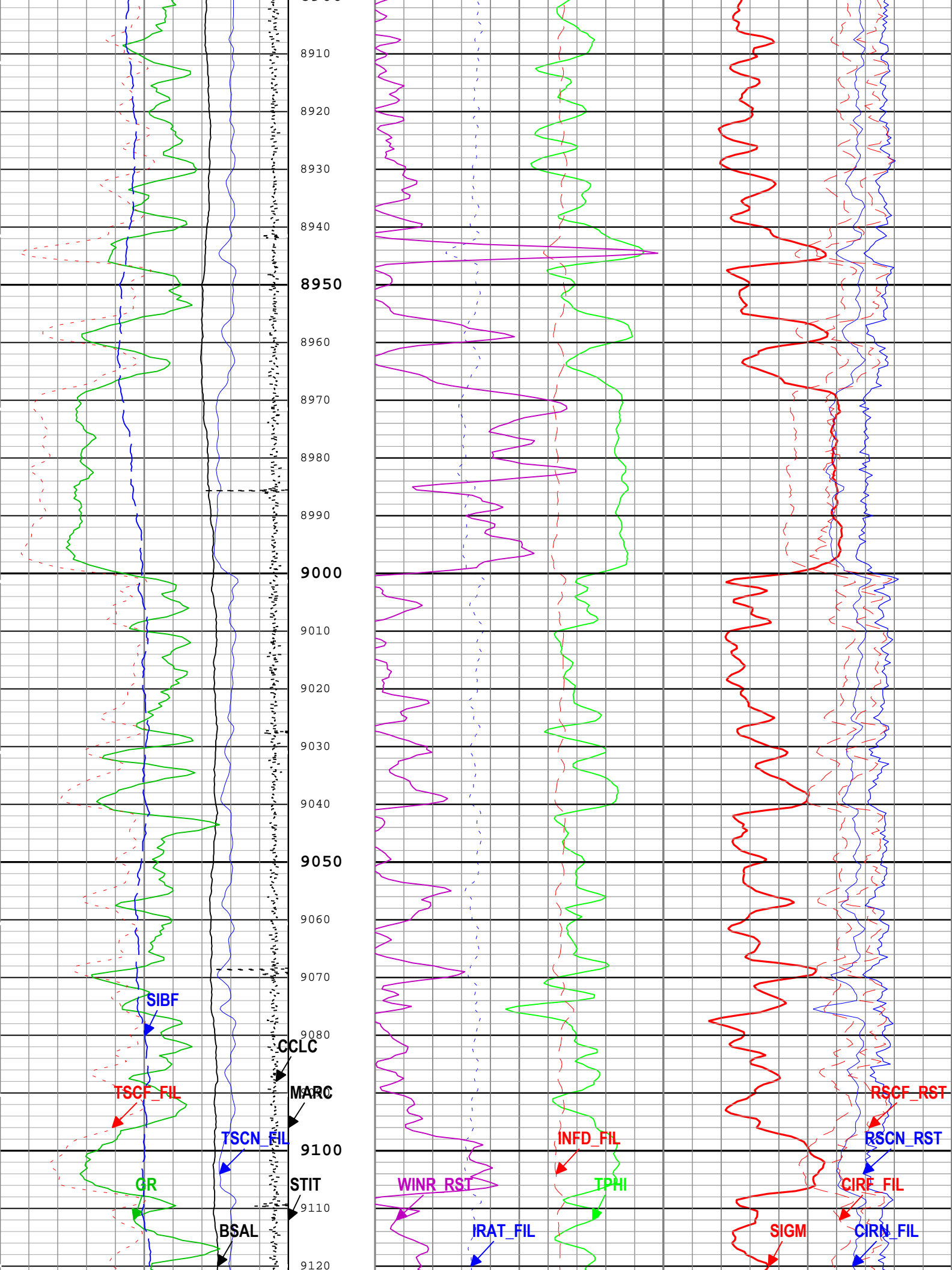


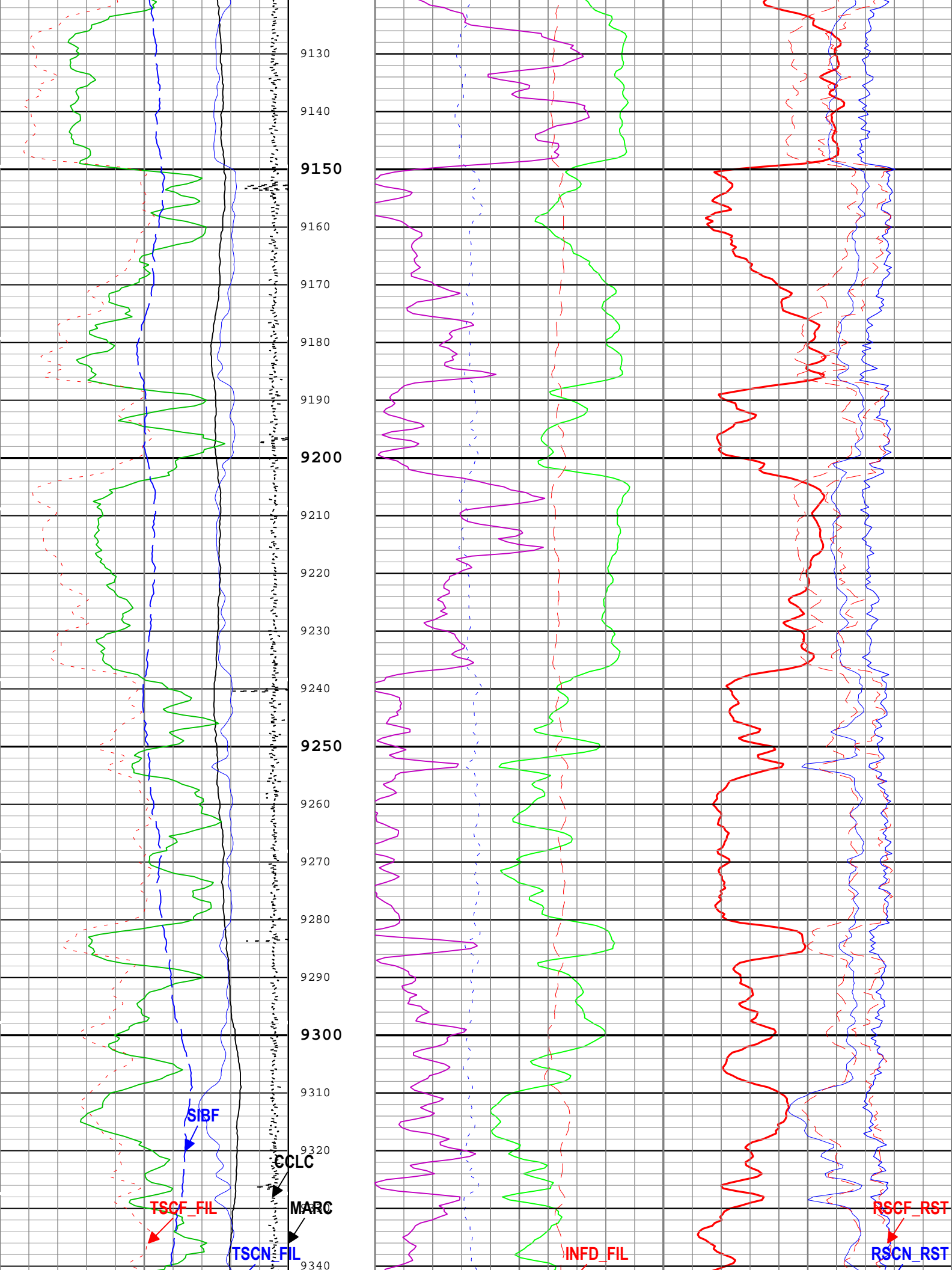


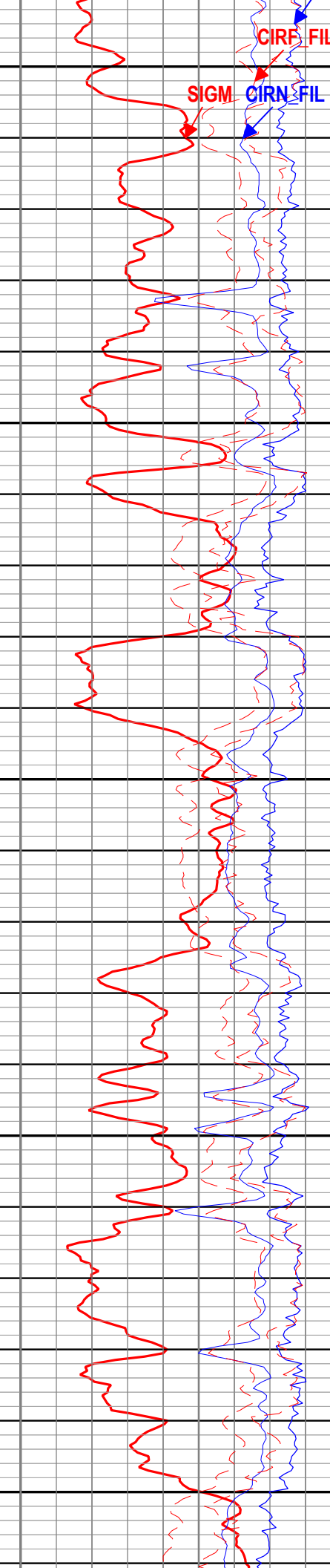
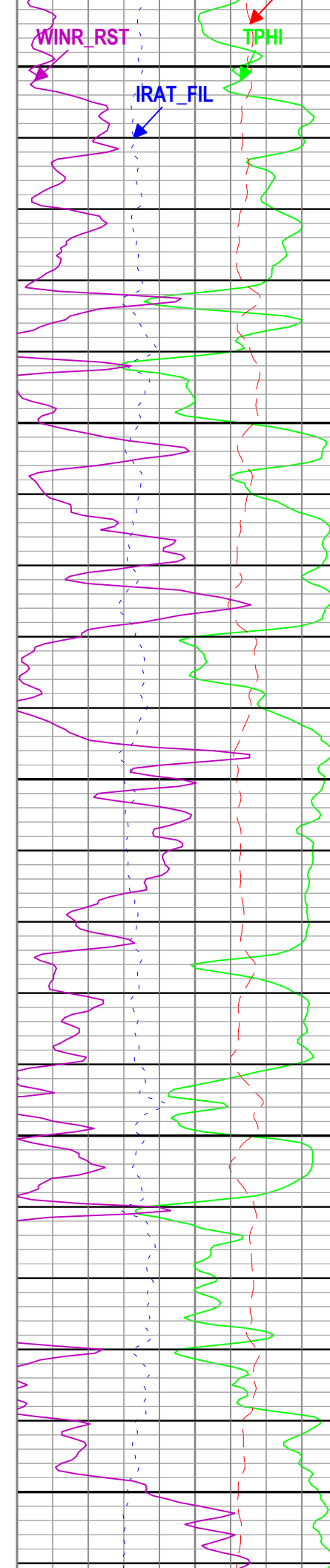
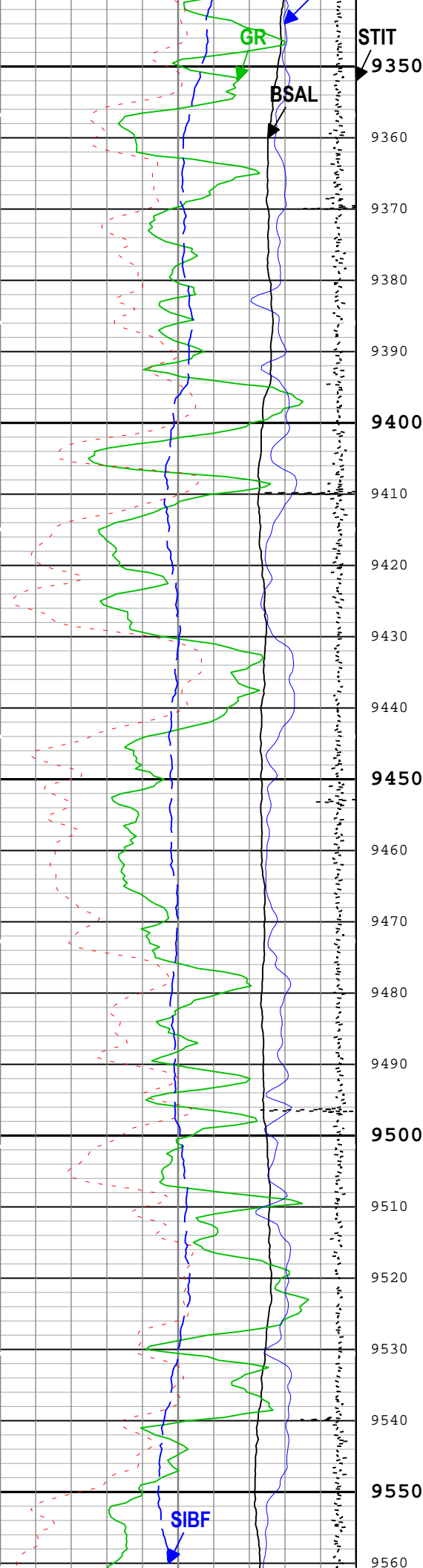


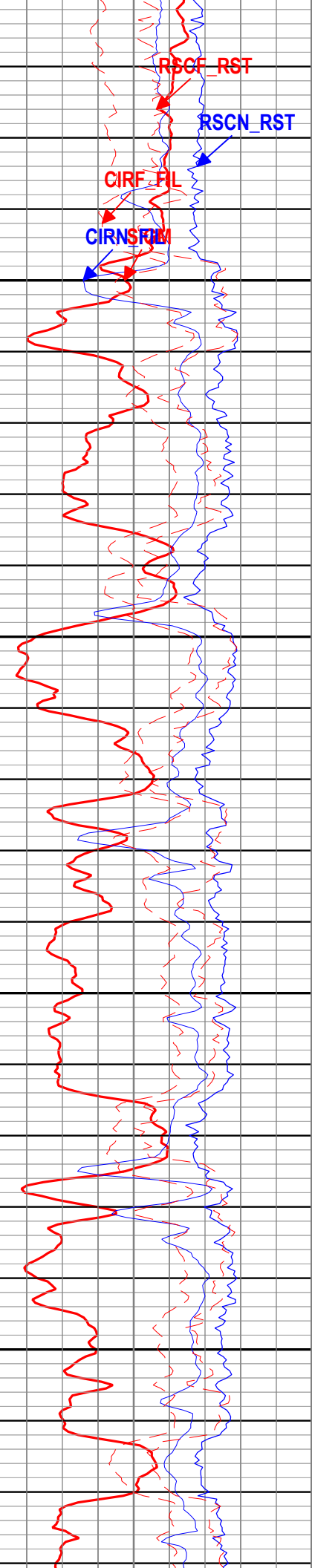
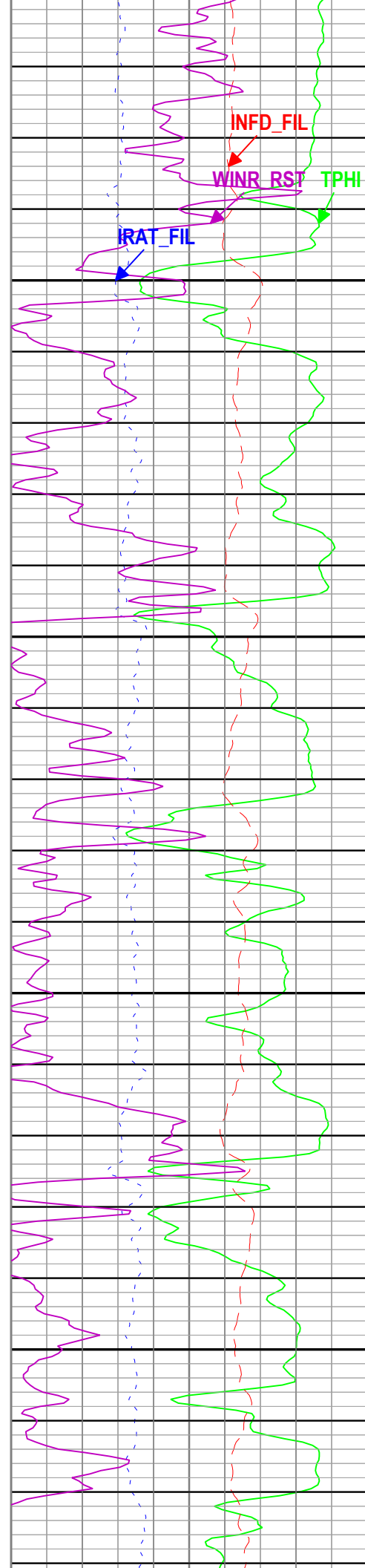
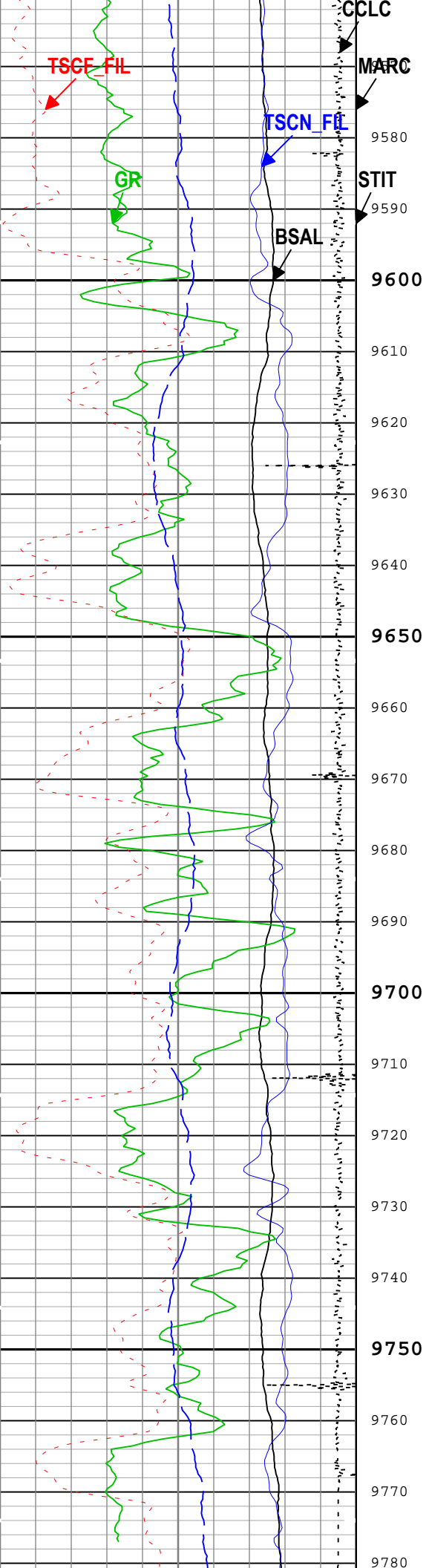


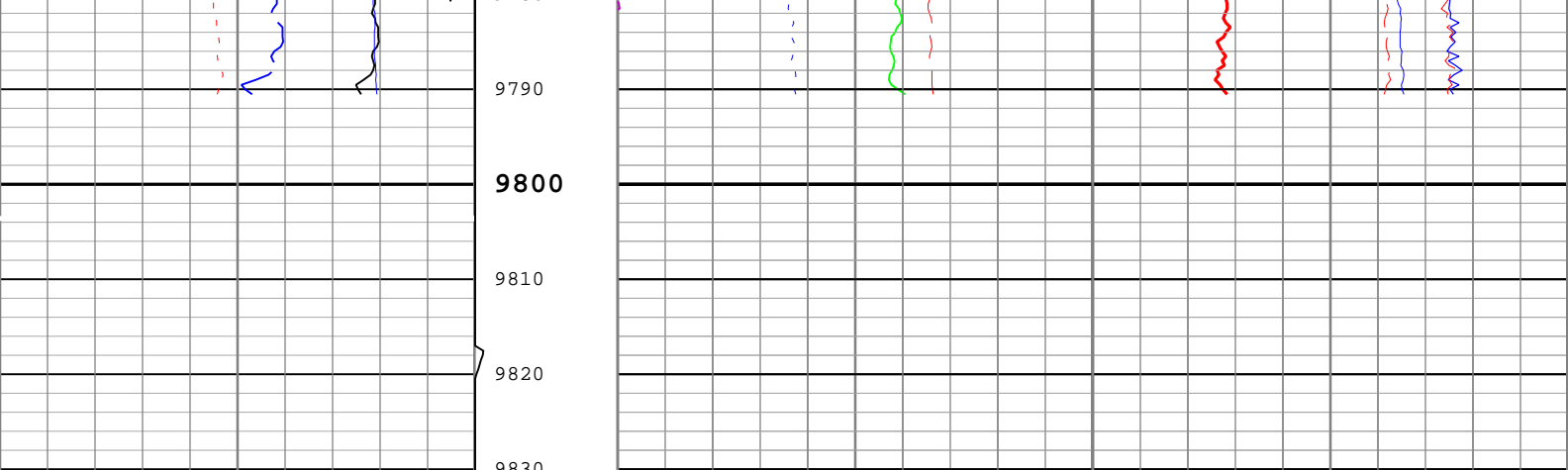












Borehole Salinity (BSAL) RST-C 450 ppk -50	Stuck Tool Indicator, Total (STIT) 60 cu 0	Formation Sigma (Neutron Capture Cross Section) (SIGM) RST-C	
Gamma Ray (GR) PSTP-B 0 gAPI 150	0 ft 50	Weighted Inelastic Ratio (WINR_RST) RST-C 0 0.4	
Total Selected Count Rate Near Detector Filtered (TSCN_FIL) RST-C 30000 1/s 0	Cable Drag From STIA to STIT	Inelastic Ratio Filtered (IRAT_FIL) RST-C 0.75 0	Capture to Inelastic Ratio Near Filtered (CIRN_FIL) RST-C 2.5 0
Total Selected Count Rate Far Detector Filtered (TSCF_FIL) RST-C 12000 1/s 0	Tool_Tot. Drag From D3T to STIT	Thermal Decay Porosity (TPHI) RST-C 0.6 ft3/ft3 0	Capture to Inelastic Ratio Far Filtered (CIRF_FIL) RST-C 5 0
CCL Computed Amplitude (CCLC) PSTP-B -19 V 1	Minitron Arc Count (MARC) RST-C 0 5	Gross Inelastic Count Rate Far Detector Filtered (INFD_FIL) RST-C 10000 1/s 0	Near Detector Effective Unregulated Capture Count Rate (RSCN_RST) RST-C 45 0
Sigma Borehole Fluid (SIBF) RST-C 100 cu 0			Far Detector Effective Unregulated Capture Count Rate (RSCF_RST) RST-C 45 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 - Elapsed time since midnight, 30 December 1899 every 60.00 (s)

TIME_1900 - Time Marked 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: 08-Sep-2018 09:06:13

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	
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
MATR	Rock Matrix for Neutron Porosity Corrections	Borehole	SANDSTONE	
TD	Total Measured Depth	Borehole	9819	ft

Depth Zone Parameters

Parameter	Value	Start (ft)	Stop (ft)
CC	11.75	9800	9811

BS	14.75	2300	2414	9819
----	-------	------	------	------

All depth are actual.

Tool Control 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

Software Version

Acquisition System	Version
Maxwell 2018	8.0.95333.3100

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
ONE	Log[2]:Up	Up	9483.43 ft	9830.81 ft	08-Sep-2018 2:06:28 AM	08-Sep-2018 2:22:51 AM	ON	9.36 ft	No

All depths are referenced to toolstring zero

Log

Company:Caerus Operating LLC Well:NPR 12B-10 596
ONE: Log[2]:Up:S002

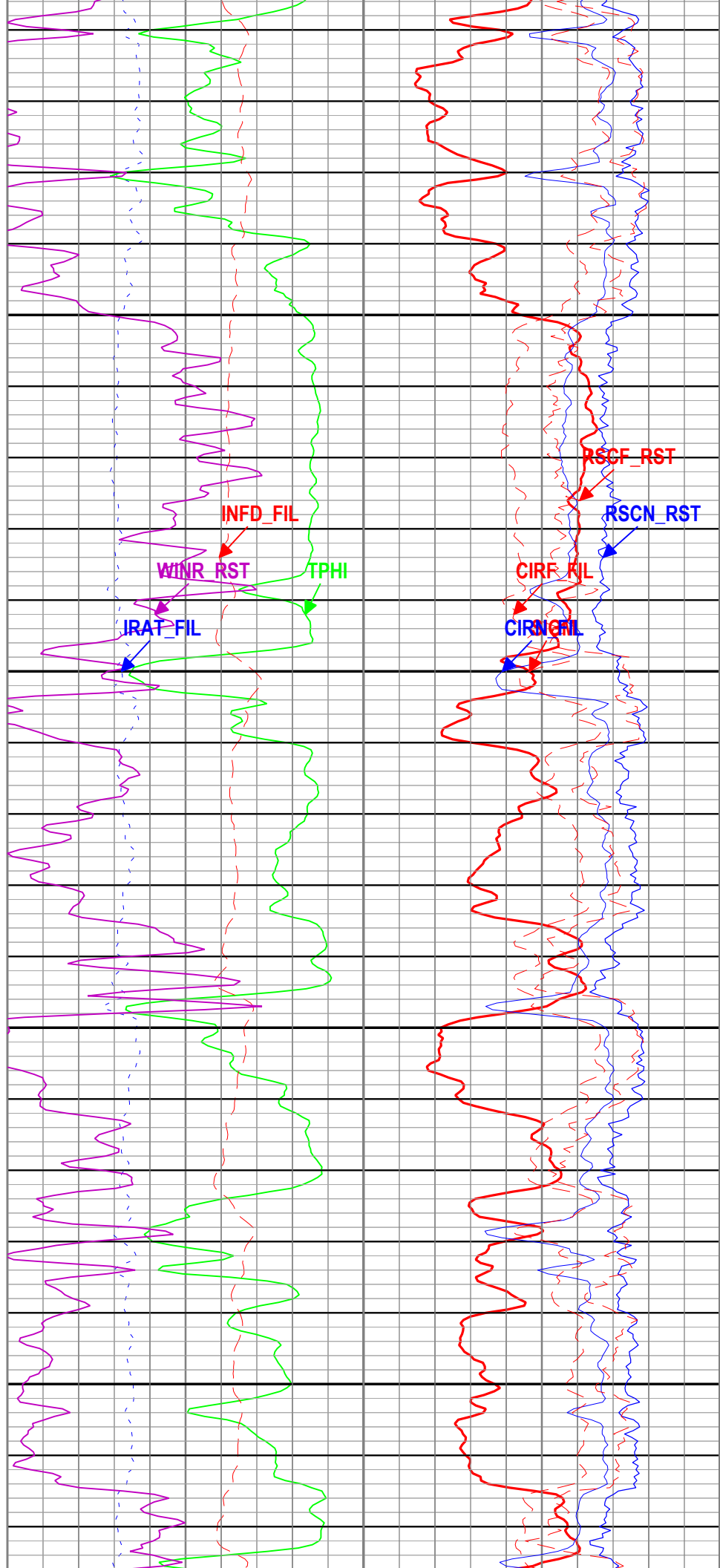
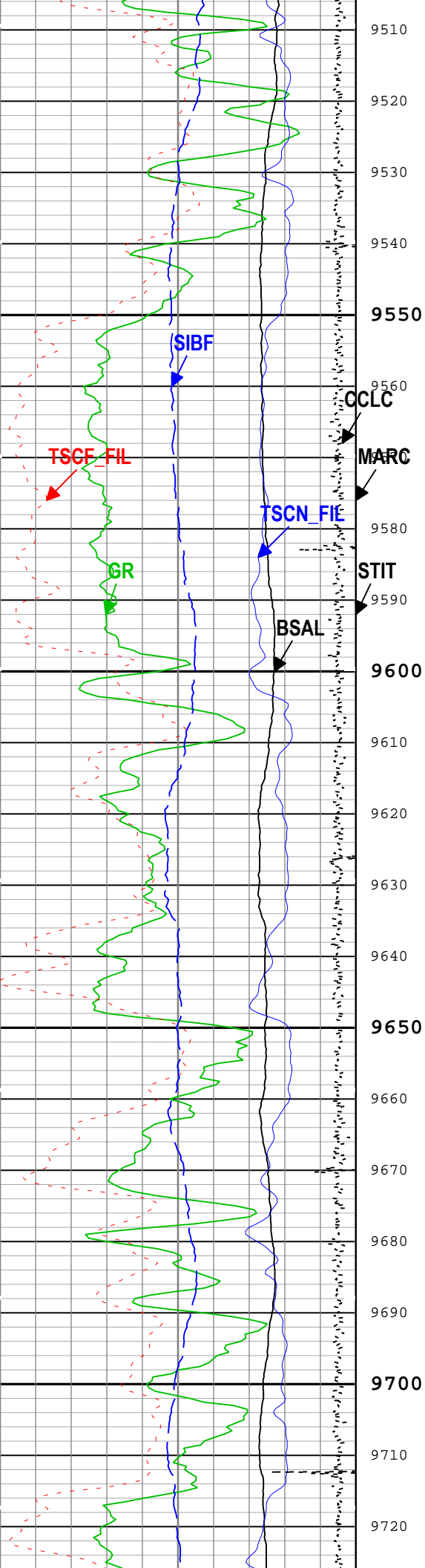
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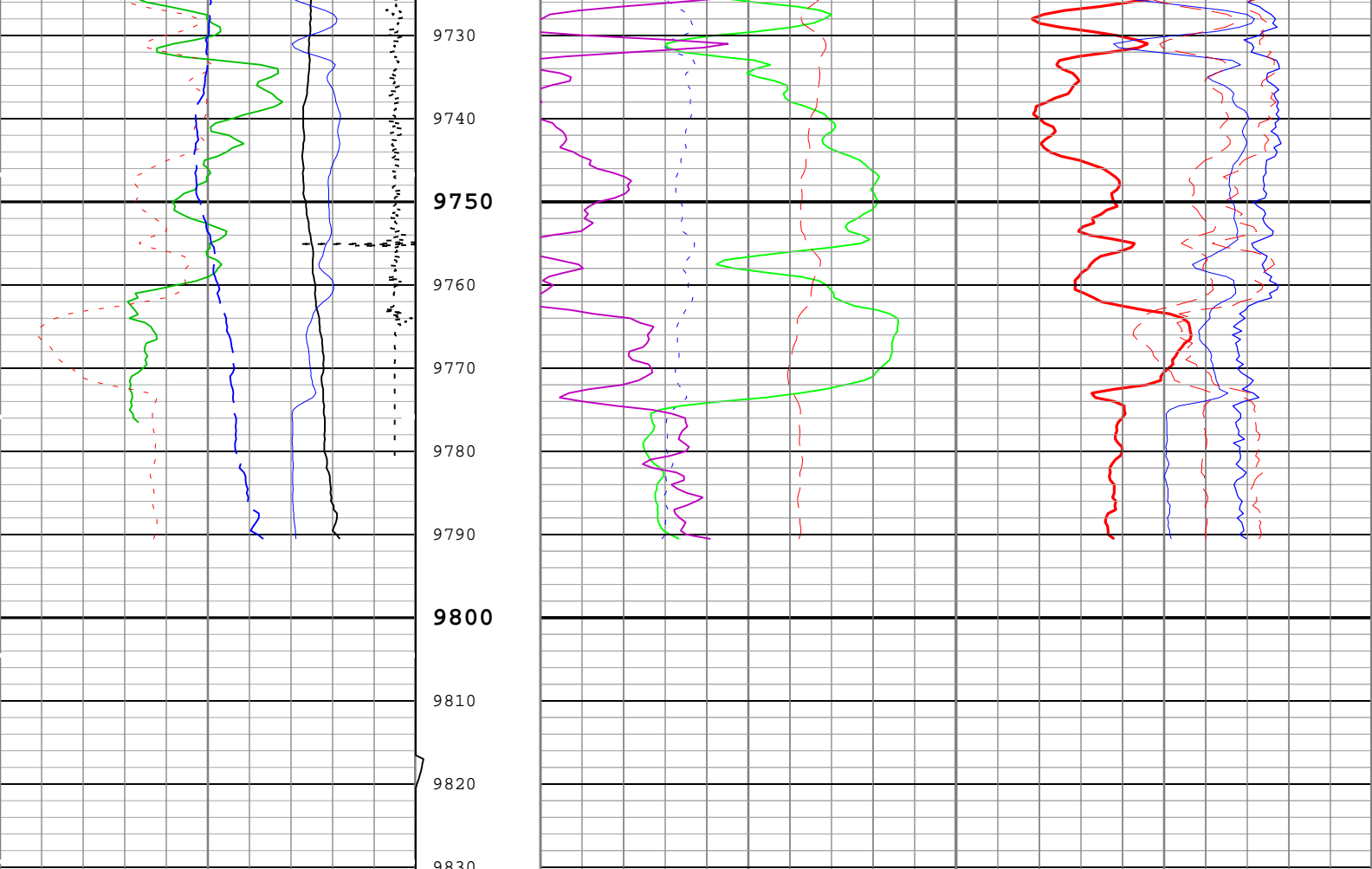
TIME_1900 - Time Marked every 60.00 (s)

- 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)
- ICV - Integrated Cement Volume every 100.00 (ft3)

Parameter	Value	Unit	Tool	Value	Unit
Borehole Salinity (BSAL) RST-C	450	ppk	Stuck Tool Indicator, Total (STIT)	0	ft 50
Gamma Ray (GR) PSTP-B	0	gAPI	Cable Drag From STIA to STIT	0.75	0
Total Selected Count Rate Near Detector Filtered (TSCN_FIL) RST-C	30000	1/s	Tool_Tot. Drag From D3T to STIT	0.6	ft3/ft3
Total Selected Count Rate Far Detector Filtered (TSCF_FIL) RST-C	12000	1/s	Minitron Arc Count (MARC) RST-C	60	cu
CCL Computed Amplitude (CCLC) PSTP-B	-19	V	Formation Sigma (Neutron Capture Cross Section) (SIGM) RST-C	45	0
Sigma Borehole Fluid (SIBF) RST-C	100	cu	Weighted Inelastic Ratio (WINR_RST) RST-C	0	0.4
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			
Inelastic Ratio Filtered (IRAT_FIL) RST-C	0.75	0			
Near Detector Effective Unregulated Capture Count Rate (RSCN_RST) RST-C	45	0			
Thermal Decay Porosity (TPHI) RST-C	0.6	ft3/ft3			
Far Detector Effective Unregulated Capture Count Rate (RSCF_RST) RST-C	45	0			
Gross Inelastic Count Rate Far Detector Filtered (INFD_FIL) RST-C	10000	1/s			







Borehole Salinity (BSAL) RST-C 450 ppk -50	Stuck Tool Indicator, Total (STIT) 0 ft 50	Formation Sigma (Neutron Capture Cross Section) (SIGM) RST-C 60 cu 0
Gamma Ray (GR) PSTP-B 0 gAPI 150	Cable Drag From STIA to STIT	Weighted Inelastic Ratio (WINR_RST) RST-C 0 0.4
Total Selected Count Rate Near Detector Filtered (TSCN_FIL) RST-C 30000 1/s 0	Tool_Tot. Drag From D3T to STIT	Inelastic Ratio Filtered (IRAT_FIL) RST-C 0.75 0
Total Selected Count Rate Far Detector Filtered (TSCF_FIL) RST-C 12000 1/s 0	Minitron Arc Count (MARC) RST-C 0 5	Capture to Inelastic Ratio Near Filtered (CIRN_FIL) RST-C 2.5 0
CCL Computed Amplitude (CCLC) PSTP-B -19 V 1		Capture to Inelastic Ratio Far Filtered (CIRF_FIL) RST-C 5 0
Sigma Borehole Fluid (SIBF) RST-C 100 cu 0		Near Detector Effective Unregulated Capture Count Rate (RSCN_RST) RST-C 45 0
		Far Detector Effective Unregulated Capture Count Rate (RSCF_RST) RST-C 45 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 - Elapsed time since midnight, 30 December 1899 every 60.00 (s)

TIME_1900 - Time Marked every 60.00 (s)

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	
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
MATR	Rock Matrix for Neutron Porosity Corrections	Borehole	SANDSTONE	
TD	Total Measured Depth	Borehole	9819	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 12B-10 596

Field: NPR

County: Garfield

State: Colorado

Cement Bond Log

Cement Bond Log

RST Sigma Log

Gamma Ray - Collar Locator Log