

Company: ENCANA OIL & GAS (USA) INC

Well: SGU 8509B-24 (L24 496)

Field: STORY GULCH

County: GARFIELD State: COLORADO

SLIM CEMENT MAPPING LOG
CBL-VDL
GR-CCL

County: GARFIELD

Field: STORY GULCH

Location: SHL: 898 FWL & 1619 FSL

Well: SGU 8509B-24 (L24 496)

Company: ENCANA OIL & GAS (USA) INC

LOCATION			
SHL: 898 FWL & 1619 FSL	Elev.: K.B.	8210.00 ft	
BHL: 2282 FSL & 1996 FEL	G.L.	8180.00 ft	
	D.F.	8209.00 ft	
Permanent Datum:	GROUND LEVEL	Elev.: 8180.00 ft	
Log Measured From:	KELLY BUSHING	30.00 ft above Perm. Datum	
Drilling Measured From:	KELLY BUSHING		
API Serial No.	Section	Township	Range
05-045-21158-000C	24	4S	96W

	Run 1	Run 2	Run
PVT DATA			
Oil Density			
Water Salinity			
Gas Gravity			
Bo			
Bw			
1/Bg			
Bubble Point Pressure			
Bubble Point Temperature			
Solution GOR			
Maximum Deviation			
CEMENTING DATA			
Primary/Squeeze	Primary		
Casing String No			
Lead Cement Type			
Volume			
Density			
Water Loss			
Additives			
Tail Cement Type			
Volume			
Density			
Water Loss			
Additives			
Expected Cement Top			

Logging Date	25-Apr-2013		
Run Number	1		
Depth Driller	12889 ft		
Schlumberger Depth	12784 ft		
Bottom Log Interval	12775 ft		
Top Log Interval	70 ft		
Casing Fluid Type	FRESH WATER		
Salinity			
Density	8.4 lbm/gal		
Fluid Level	70 ft		
BIT/CASING/TUBING STRING			
Bit Size	7.875 in		
From	8906 ft		
To	12889 ft		
Casing/Tubing Size	4.500 in		
Weight	11.6 lbm/ft		
Grade			
From	30 ft		
To	12839 ft		
Maximum Recorded Temperatures	288 degF		
Logger On Bottom	25-Apr-2013	Time	12:45
Unit Number	Location	391 GRAND JUNCTION	
Recorded By	KIRSTIE BUNTING		
Witnessed By	SCOTT PITT		

Logging Date			
Run Number			
Depth Driller			
Schlumberger Depth			
Bottom Log Interval			
Top Log Interval			
Casing Fluid Type			
Salinity			
Density			
Fluid Level			
BIT/CASING/TUBING STRING			
Bit Size			
From			
To			
Casing/Tubing Size			
Weight			
Grade			
From			
To			
Maximum Recorded Temperatures			
Logger On Bottom		Time	
Unit Number	Location		
Recorded By			
Witnessed By			

DEPTH SUMMARY LISTING

Date Created: 14-MAR-2013 10:41:08

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW-B	Type:	CMTD-B/A	Type:	1-25ZT
Serial Number:	6214	Serial Number:	3421	Serial Number:	112136
Calibration Date:	24-APR-2012	Calibration Date:	20-FEB-2011	Length:	19500 FT
Calibrator Serial Number:		Calibrator Serial Number:	174878	Conveyance Method:	Wireline
Calibration Cable Type:	1-25ZT	Number of Calibration Points:	10	Rig Type:	LAND
Wheel Correction 1:	-3	Calibration RMS:	4		
Wheel Correction 2:	-4	Calibration Peak Error:	8		

Depth Control Parameters

Log Sequence:	First Log In the Well
Rig Up Length At Surface:	0.00 FT
Rig Up Length At Bottom:	0.00 FT
Rig Up Length Correction:	0.00 FT
Stretch Correction:	
Tool Zero Check At Surface:	

Depth Control Remarks

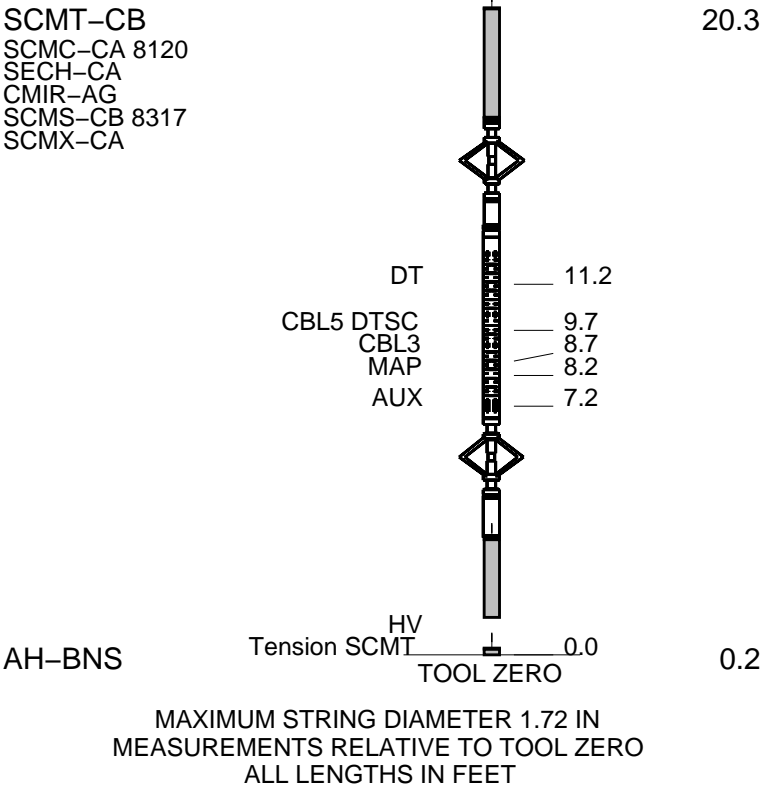
1. ALL SCHLUMBERGER DEPTH CONTROL POLICIES APPLIED
2. IDW USED AS PRIMARY DEPTH REFERENCE
3. SWPT DRUM COUNTER USED AS SECONDARY DEPTH REFERENCE
- 4.
- 5.
- 6.

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 OF 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.

OTHER SERVICES1	OTHER SERVICES2
OS1: RESERVOIR SATURATION	OS1:
OS2: LOG	OS2:
OS3: SIGMA MODE	OS3:
OS4:	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
FIRST RUN IN HOLE CORRELATED TO DOWN LOG	
TOOL RAN AS PER TOOL SKETCH	
MAXIMUM RECORDED TEMPERATURE= 288 DEGF	
MAXIMUM RECORDED PRESSURE= 5220 PSIA	
ENTRANCE TIME= 12:00	

[illegible]



MAIN PASS CBL VDL

MAXIS Field Log

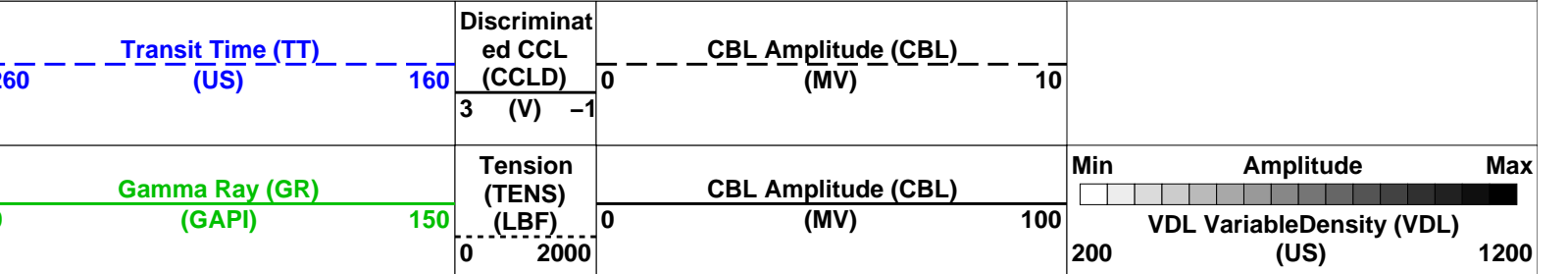
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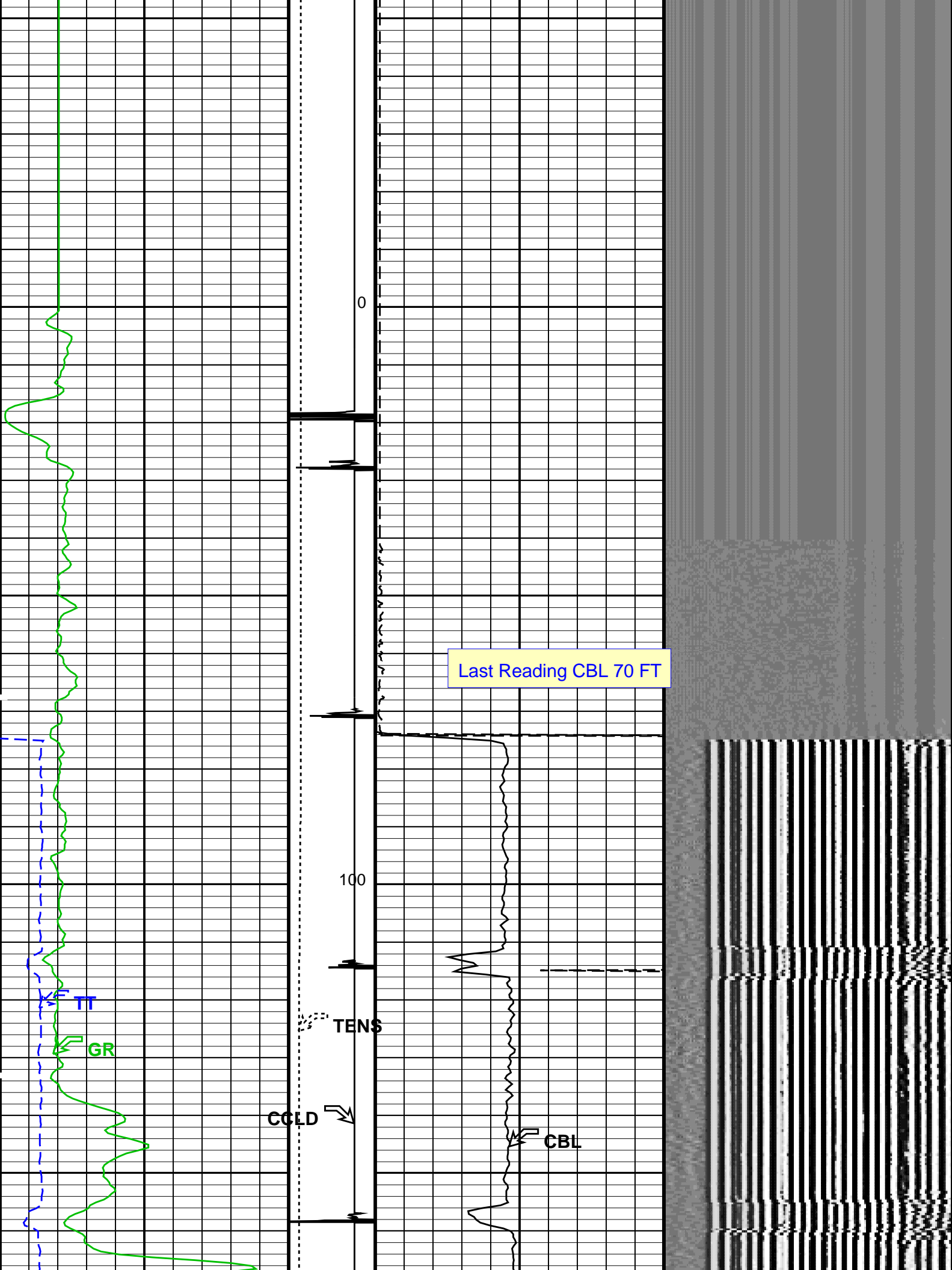
Input DLIS Files						
DEFAULT	SCMT_RST_PSP_011PUP	FN:9	PRODUCER	25-Apr-2013 19:00	12804.0 FT	-54.0 FT
Output DLIS Files						
DEFAULT	SCMT_RST_PSP_005PUP	FN:4	PRODUCER	25-Apr-2013 19:18	12804.0 FT	-54.0 FT

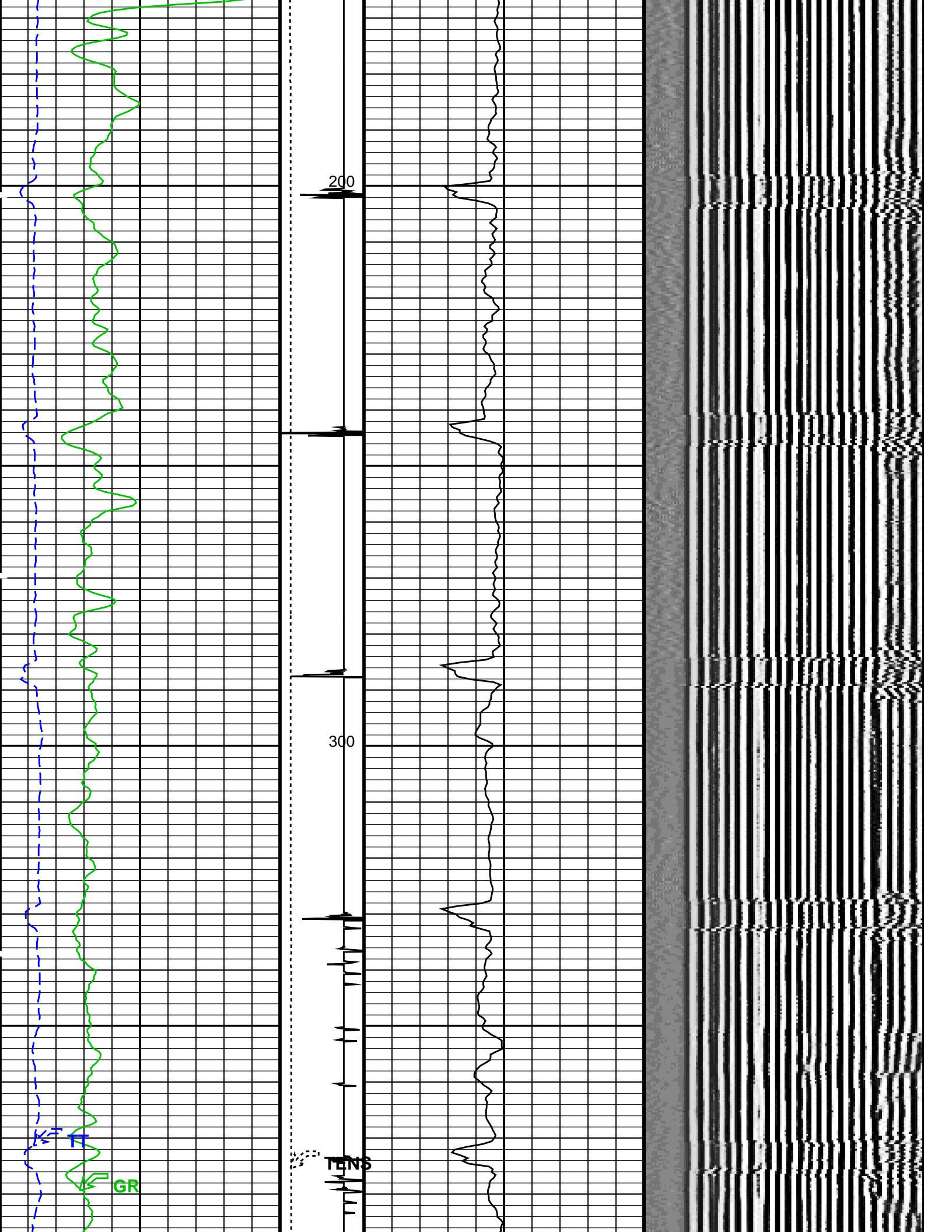
OP System Version: 19C0-187			
SCMT-CB	19C0-187	RST-C	19C0-187
PSPT	19C0-187		

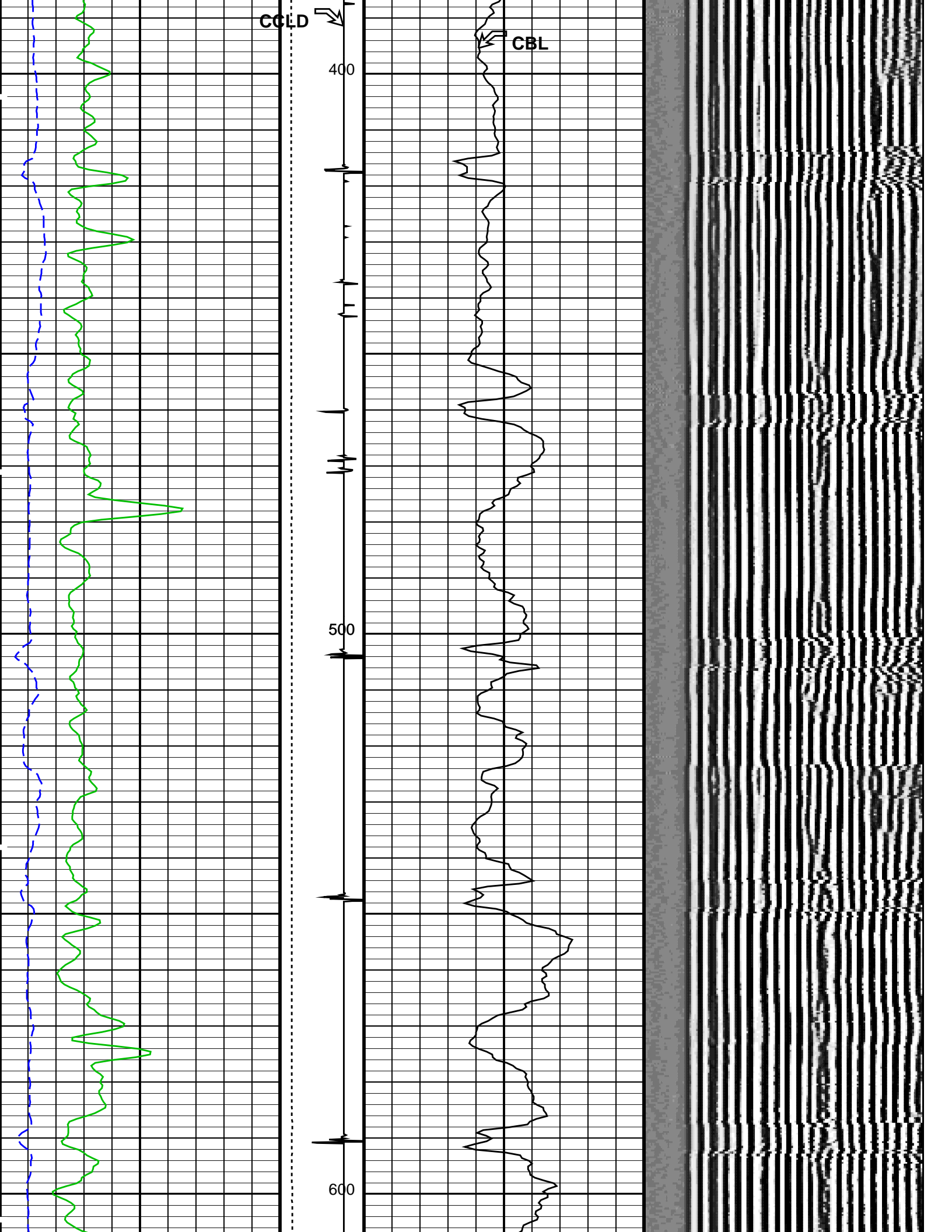
PIP SUMMARY

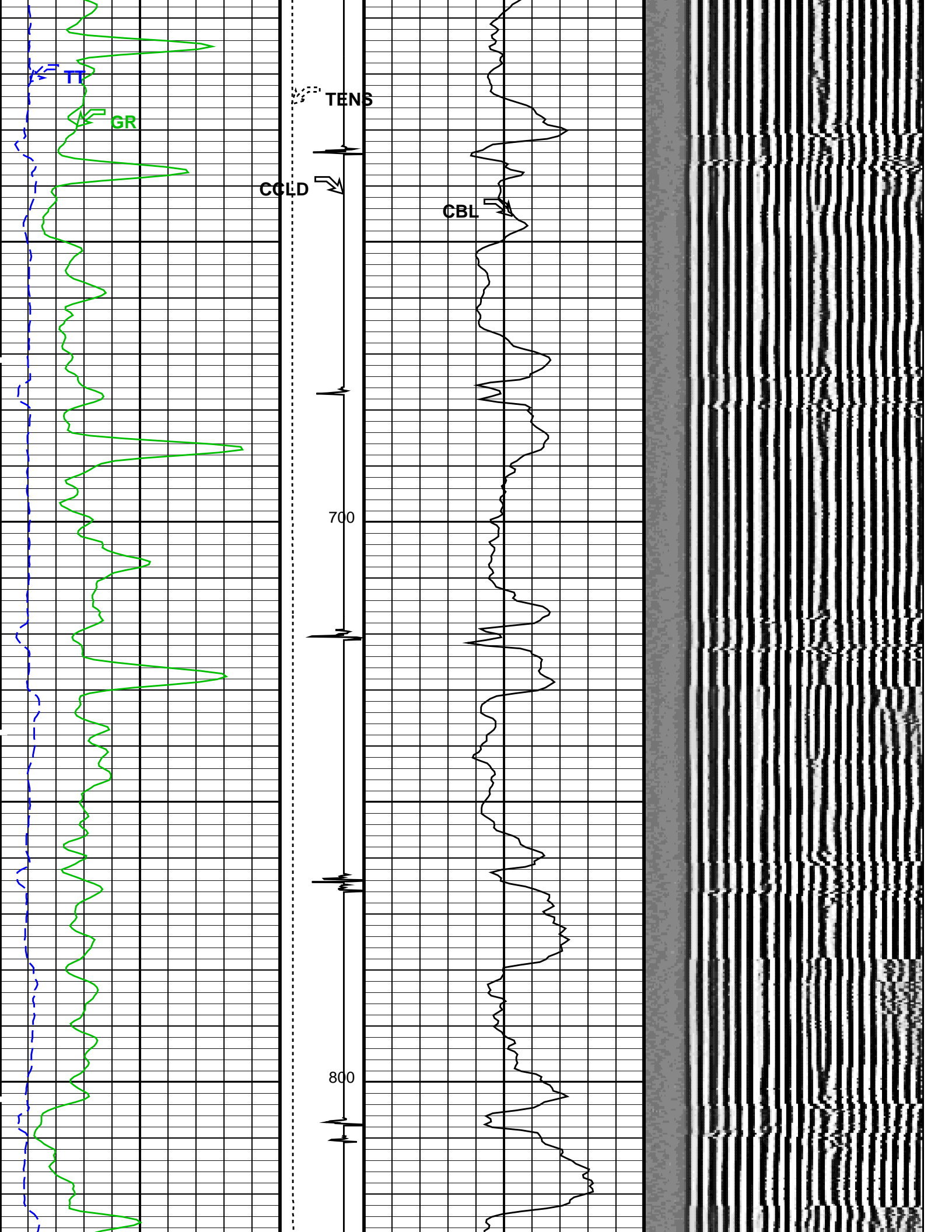
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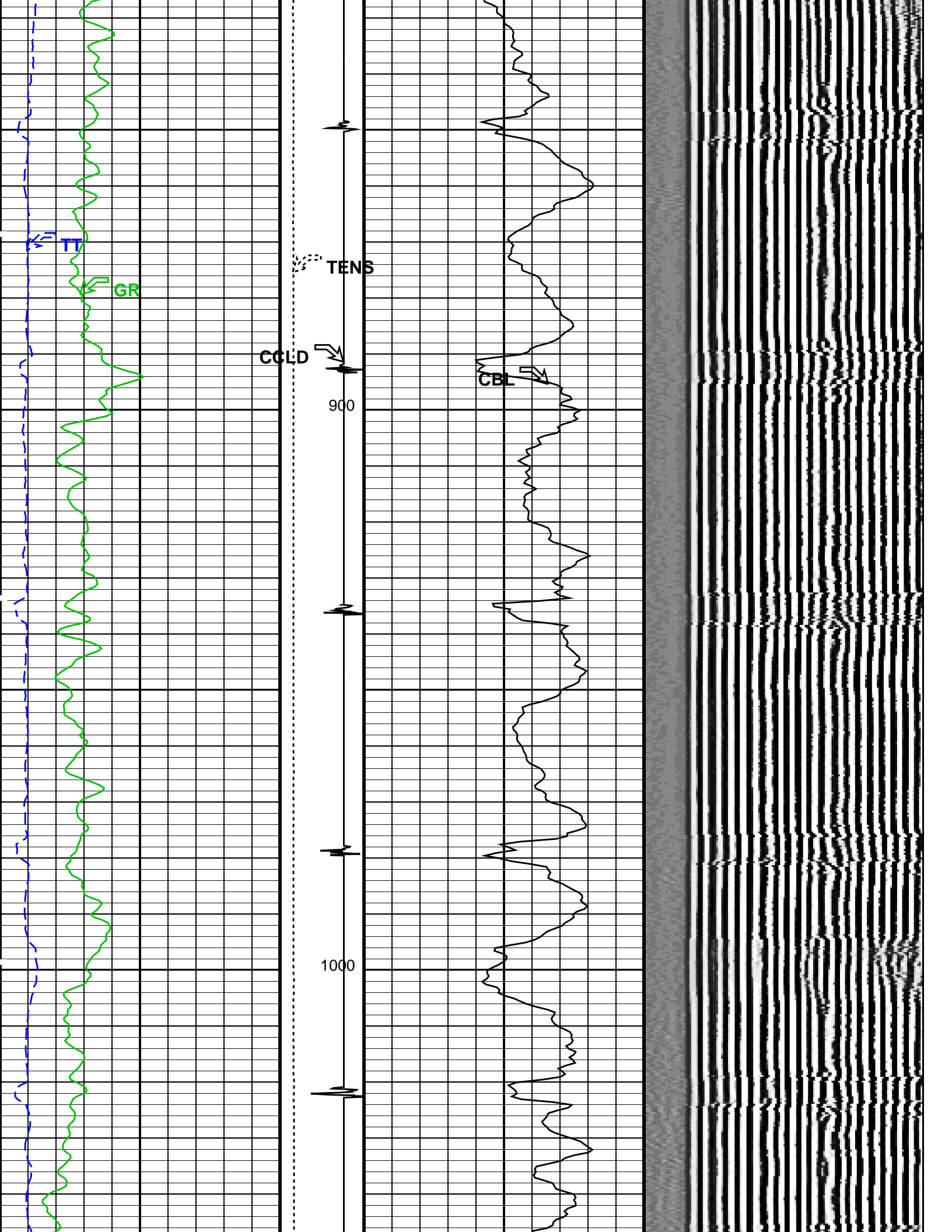


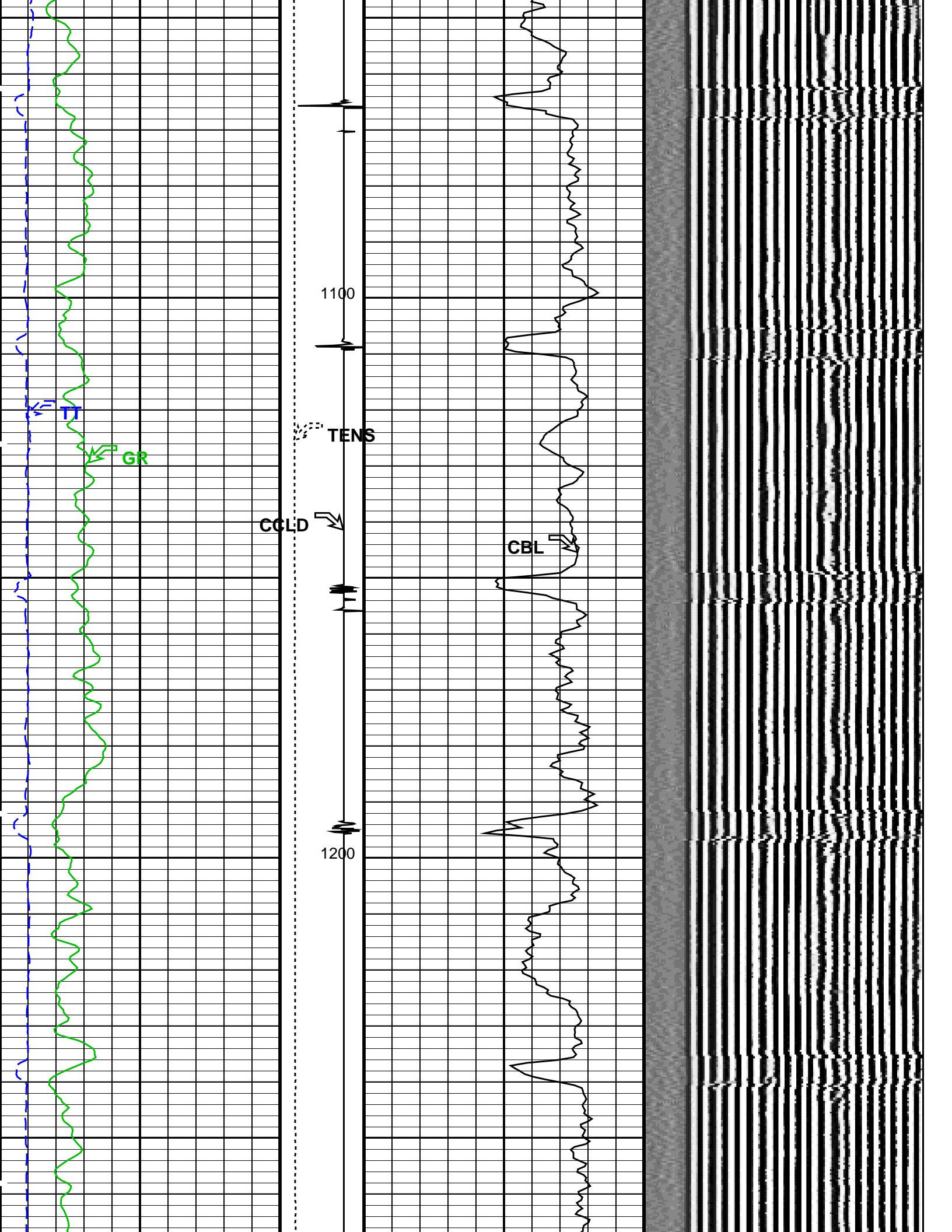


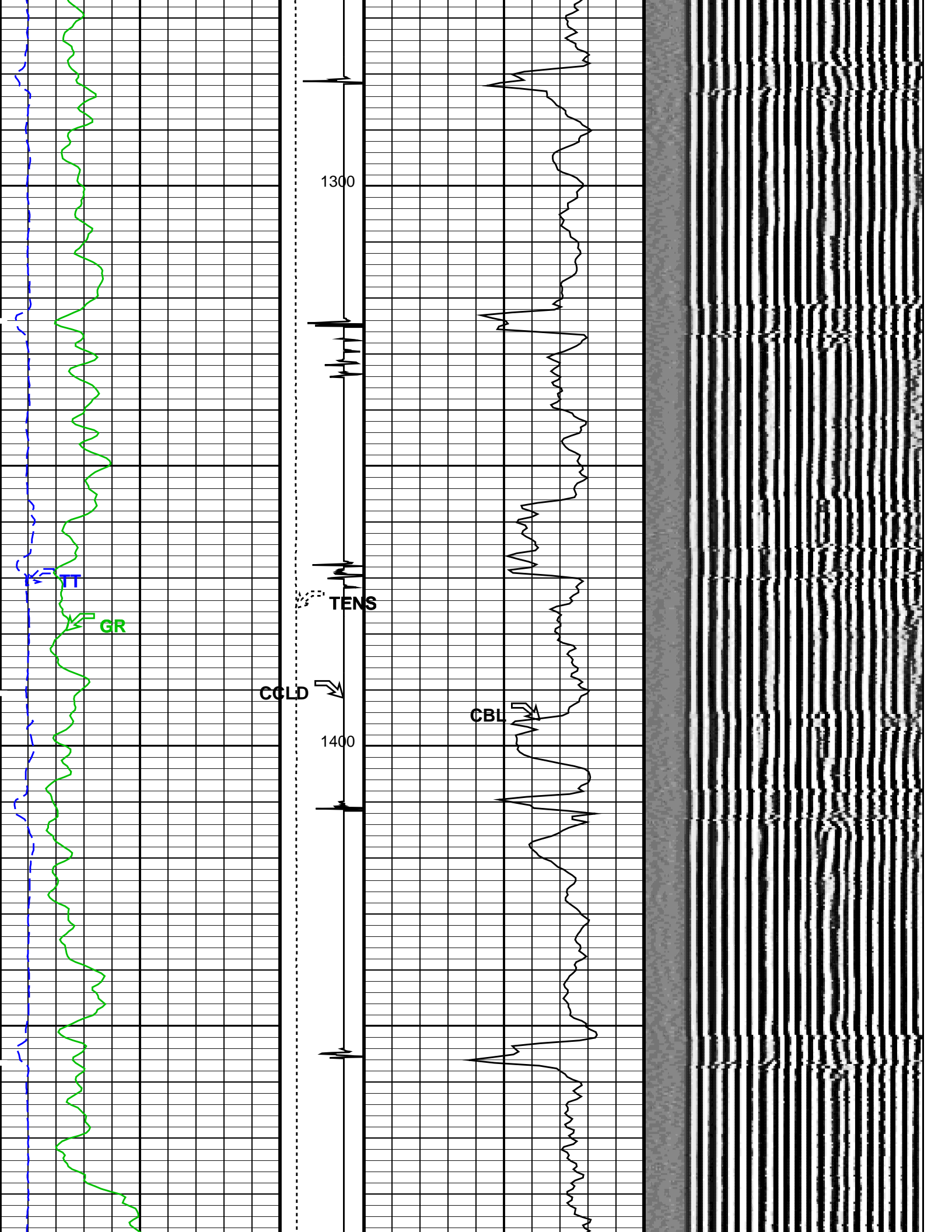


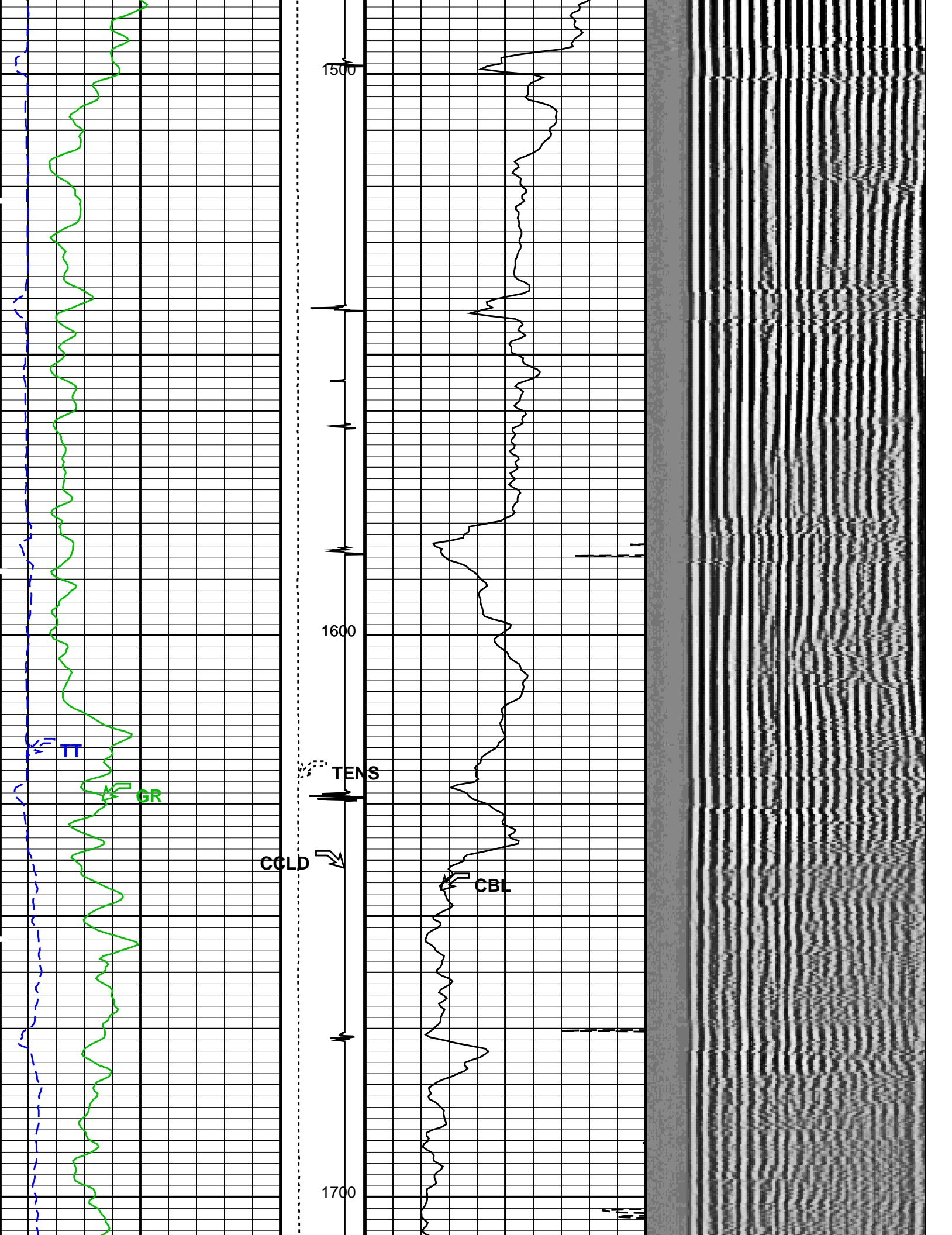


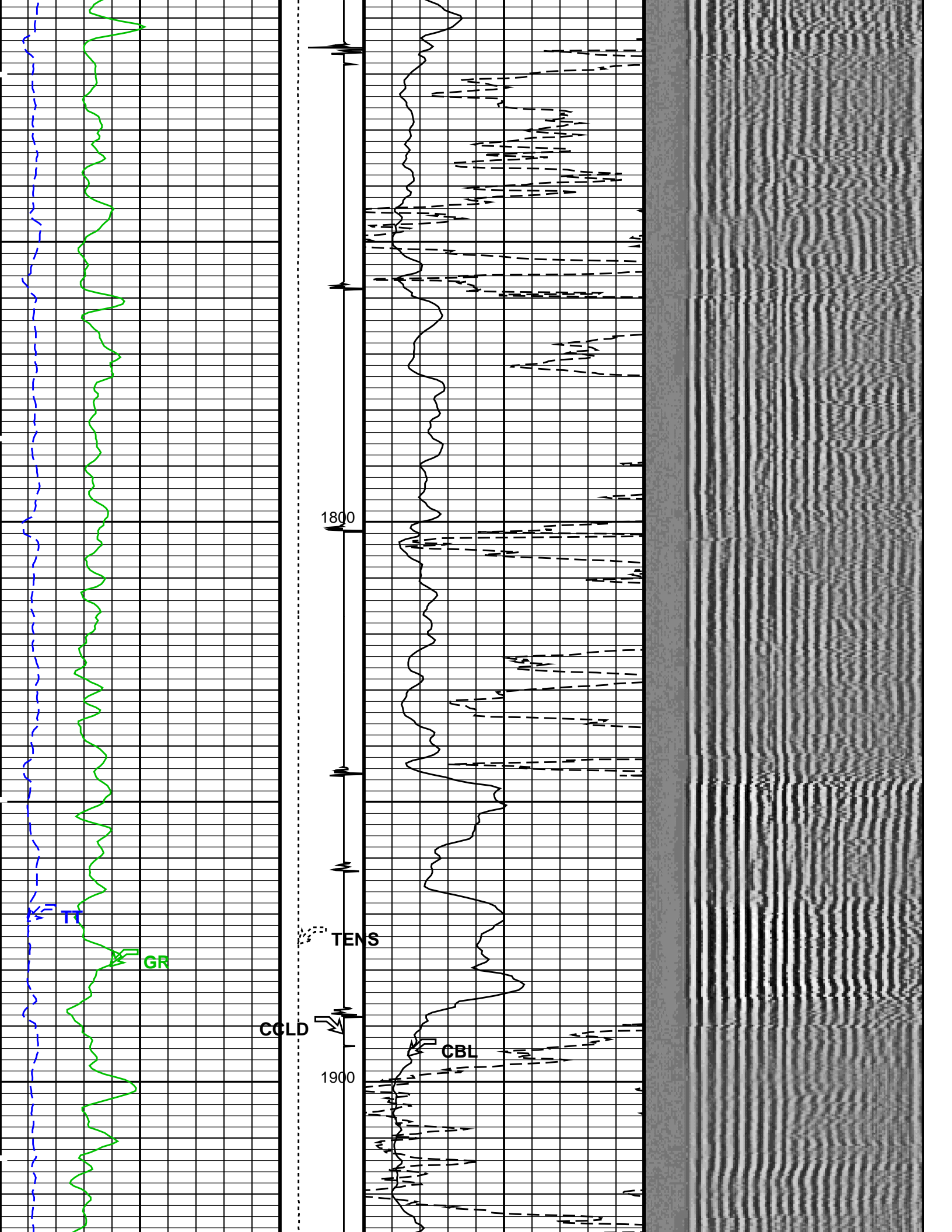


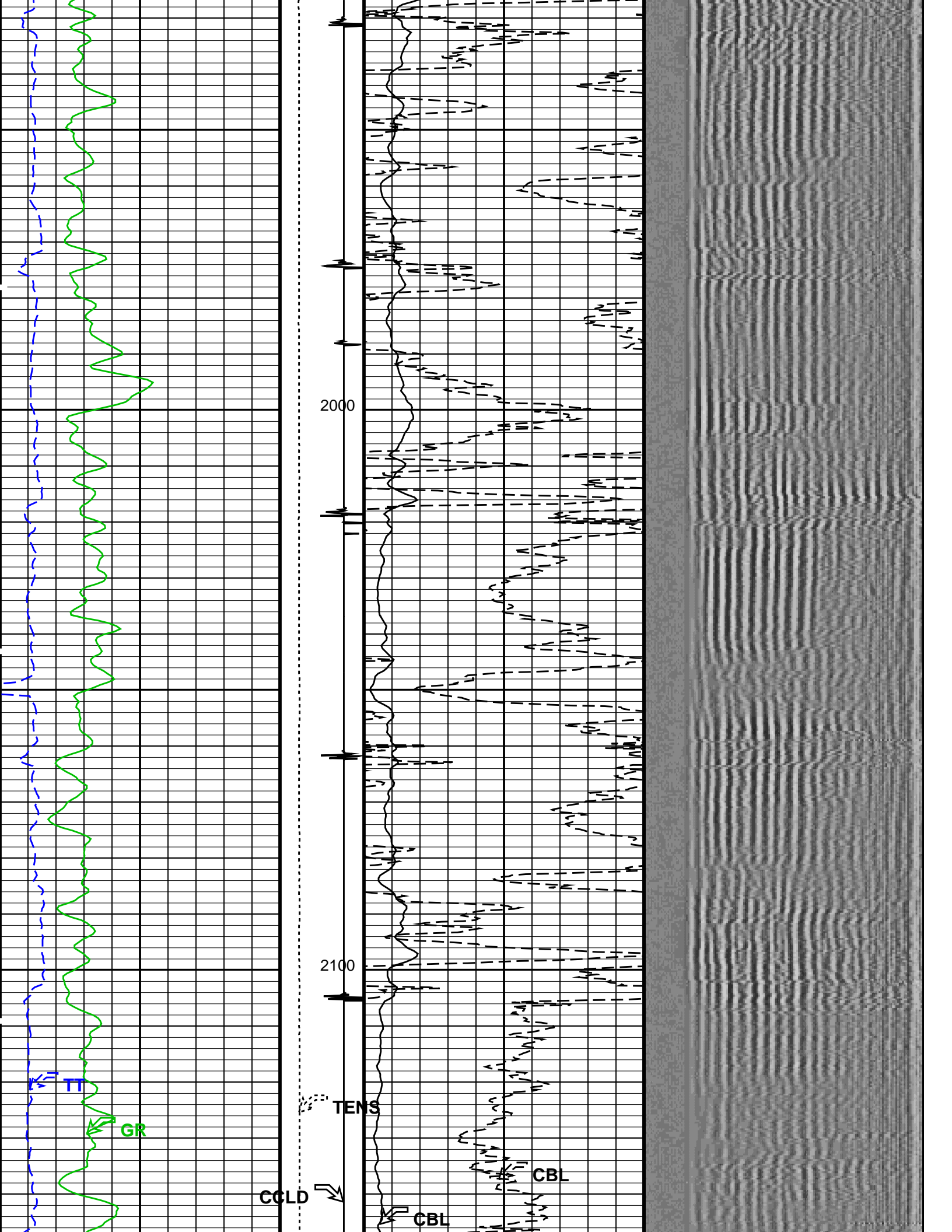


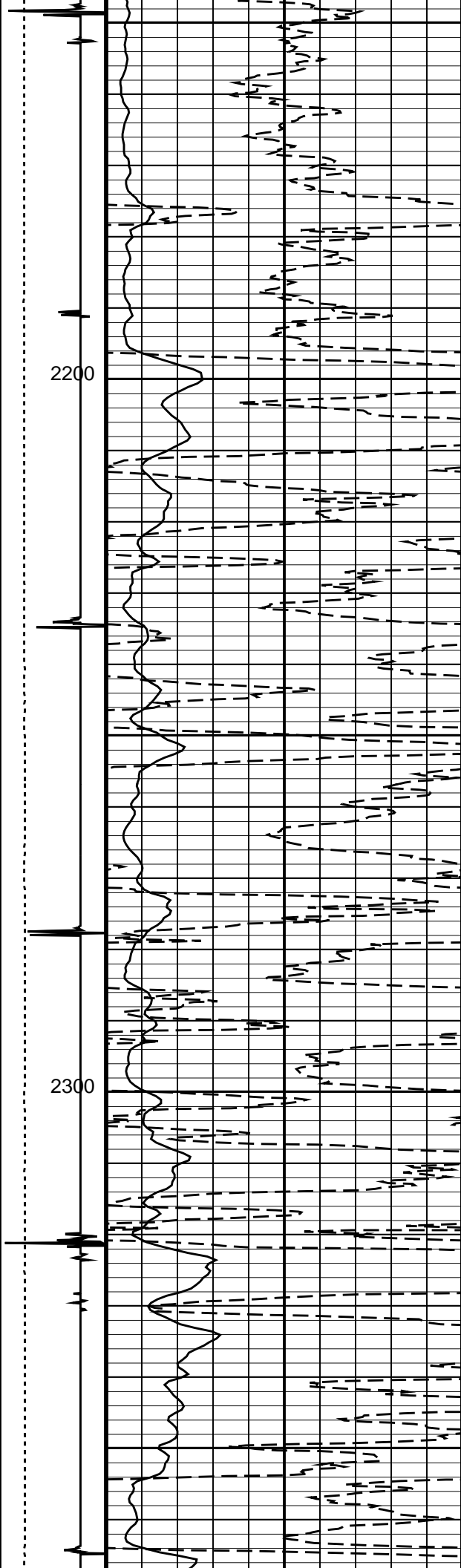
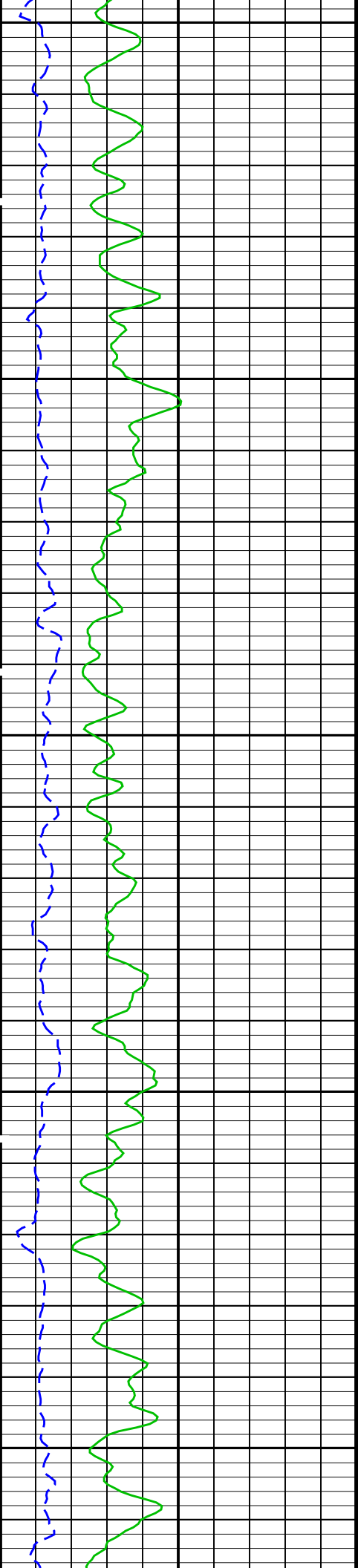


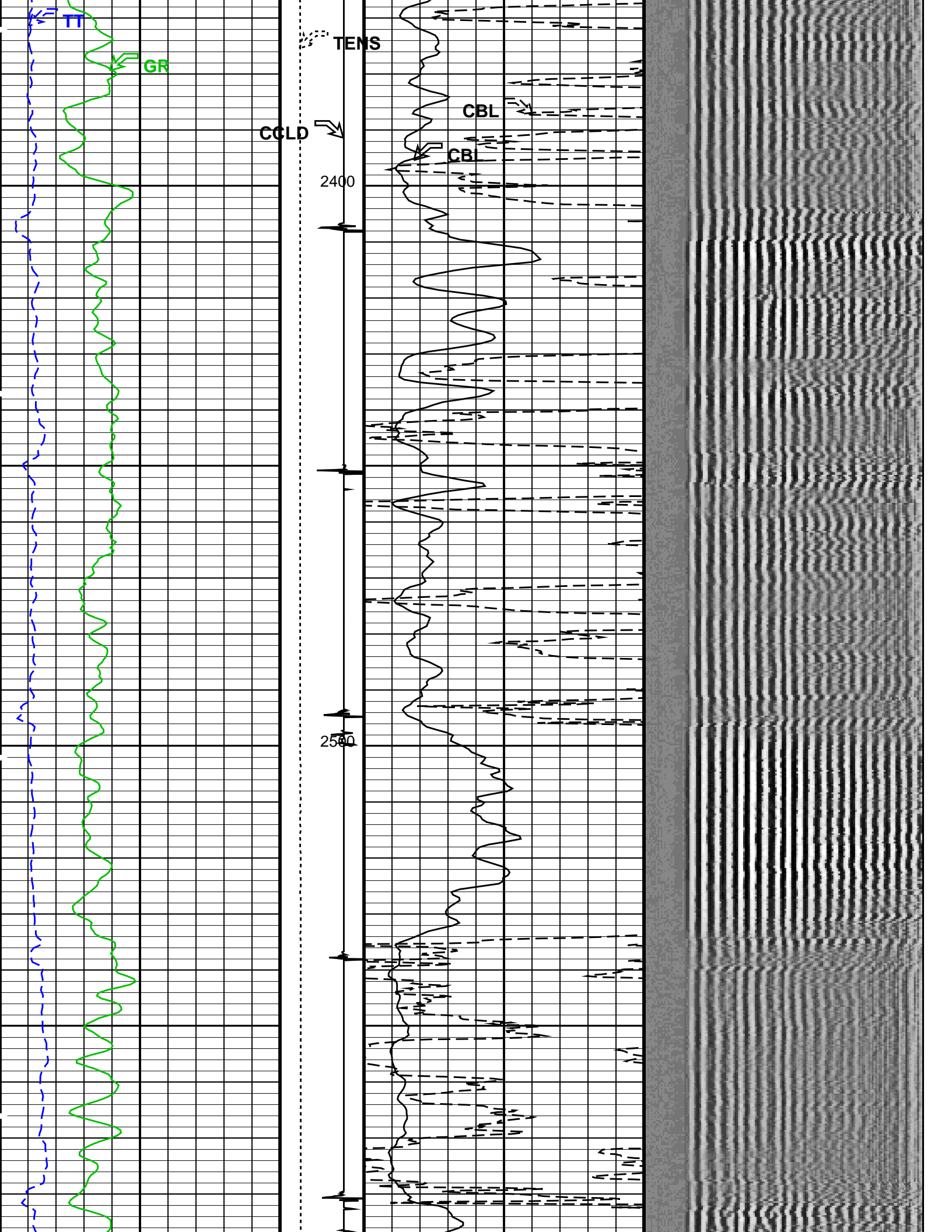


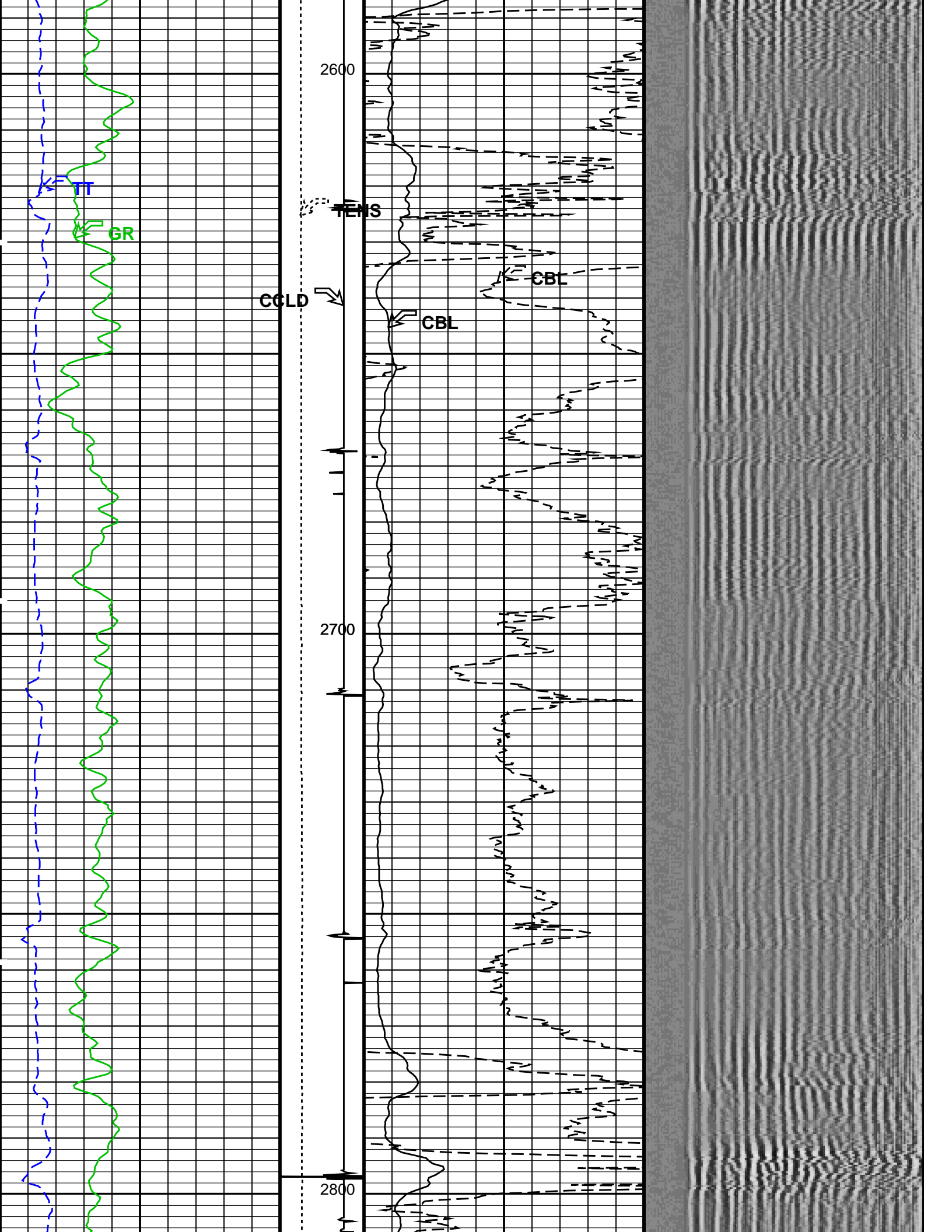


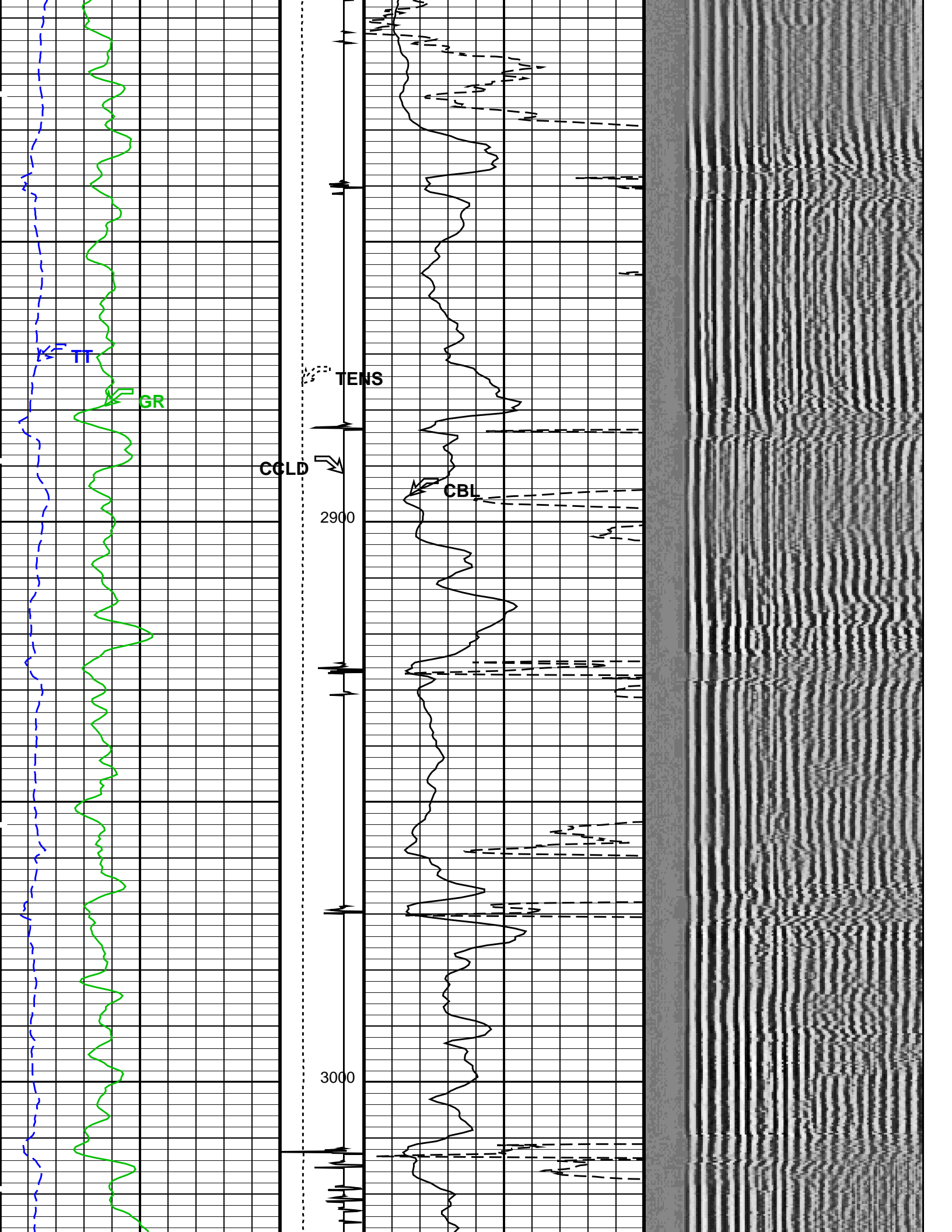


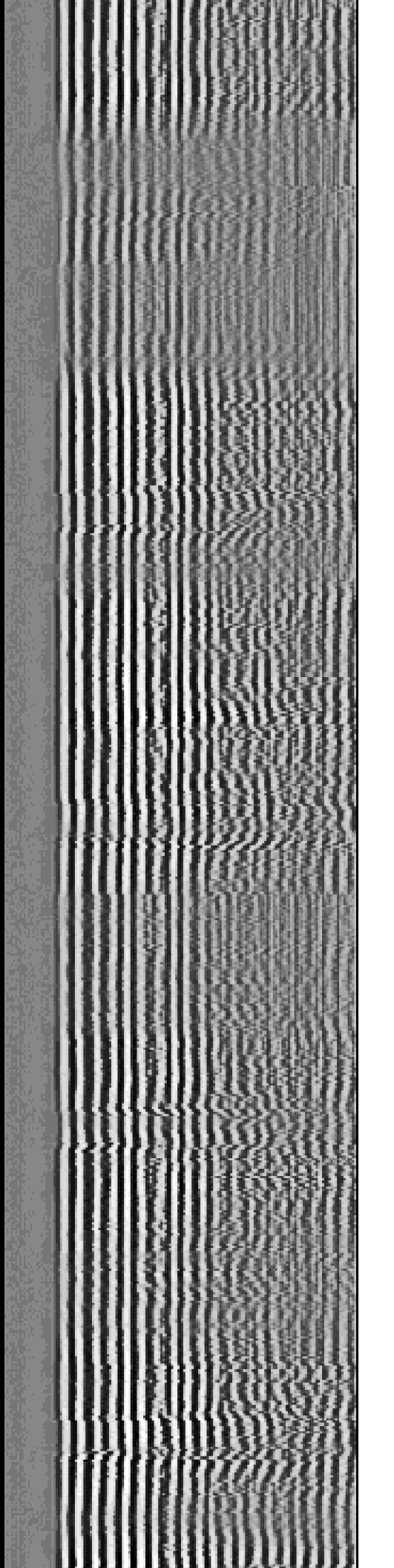
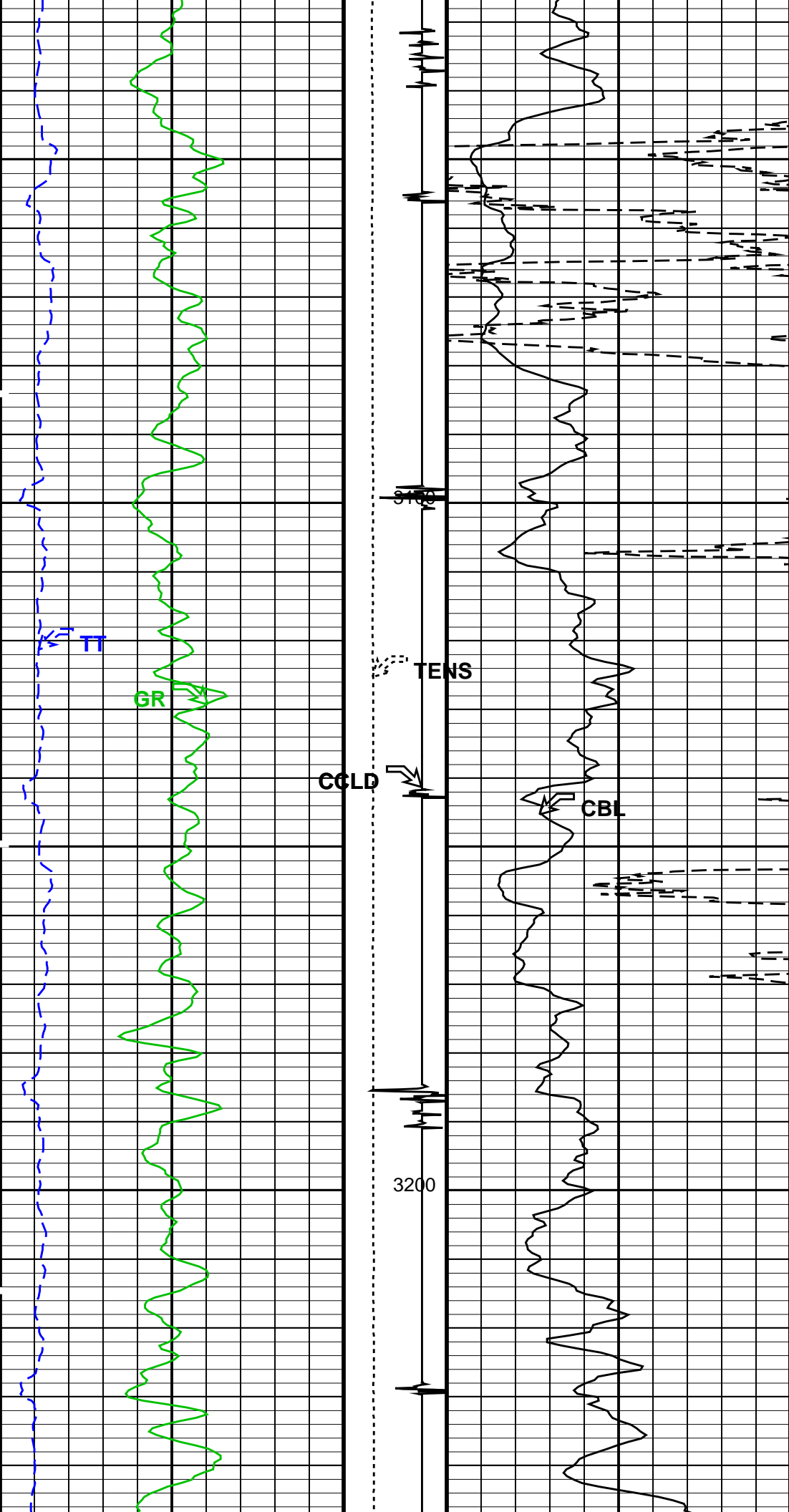


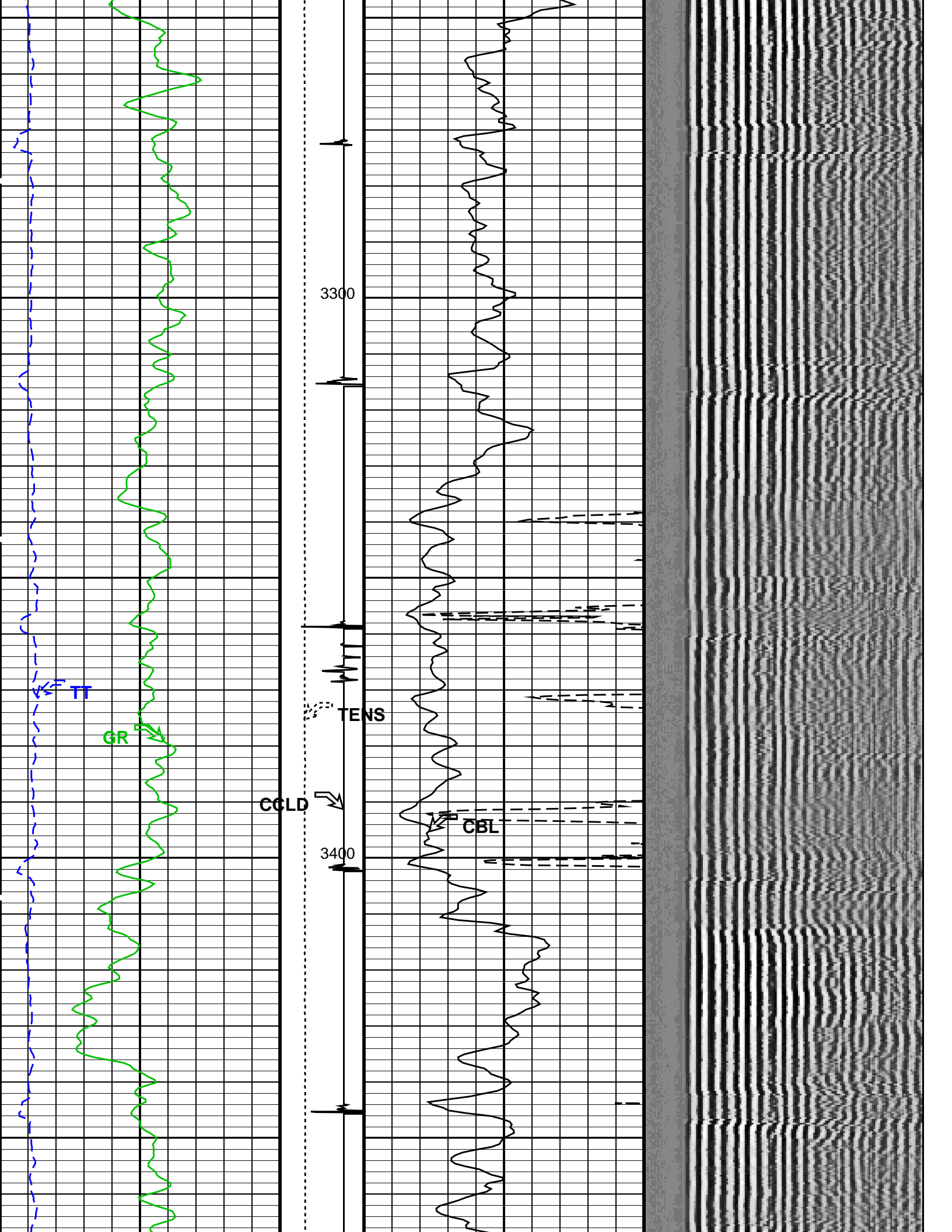


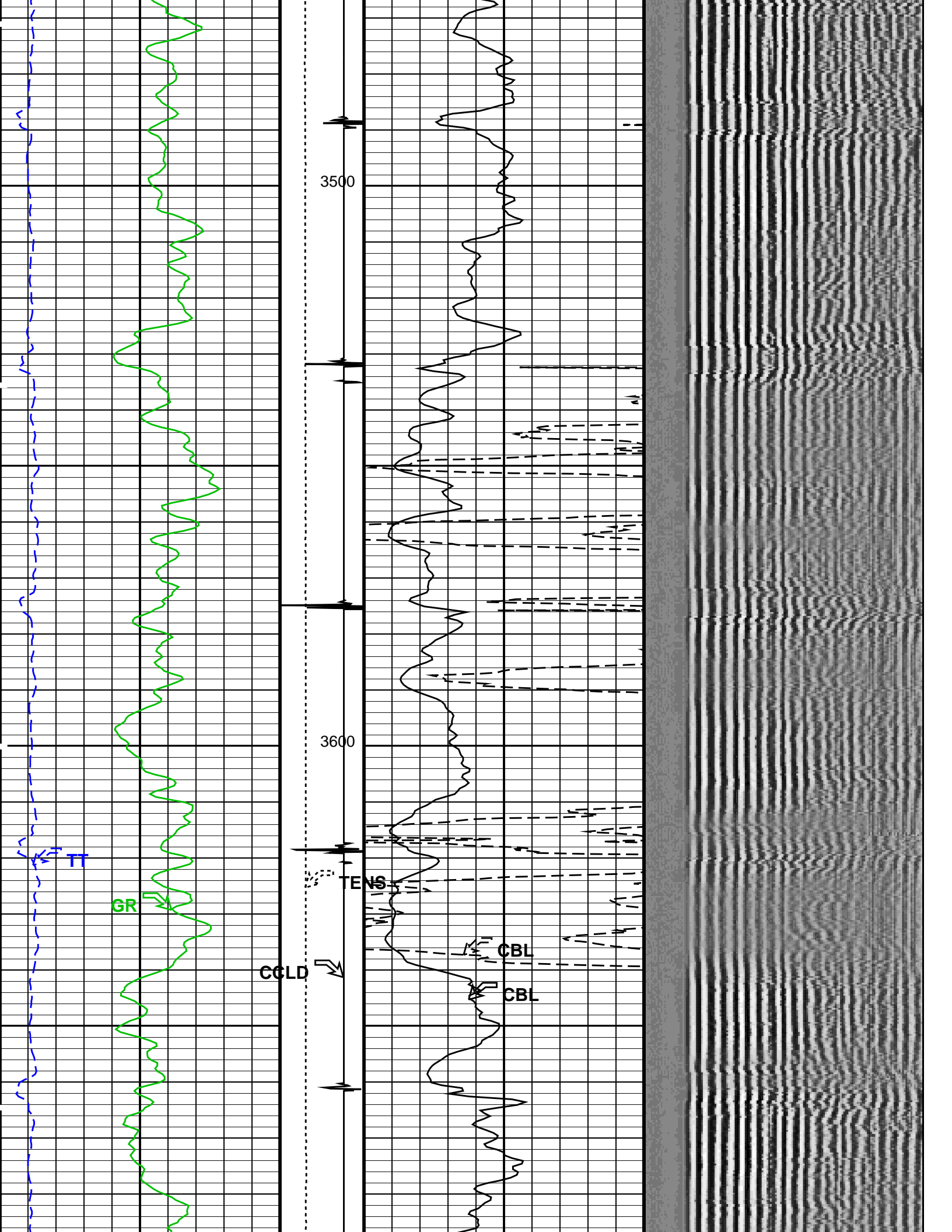


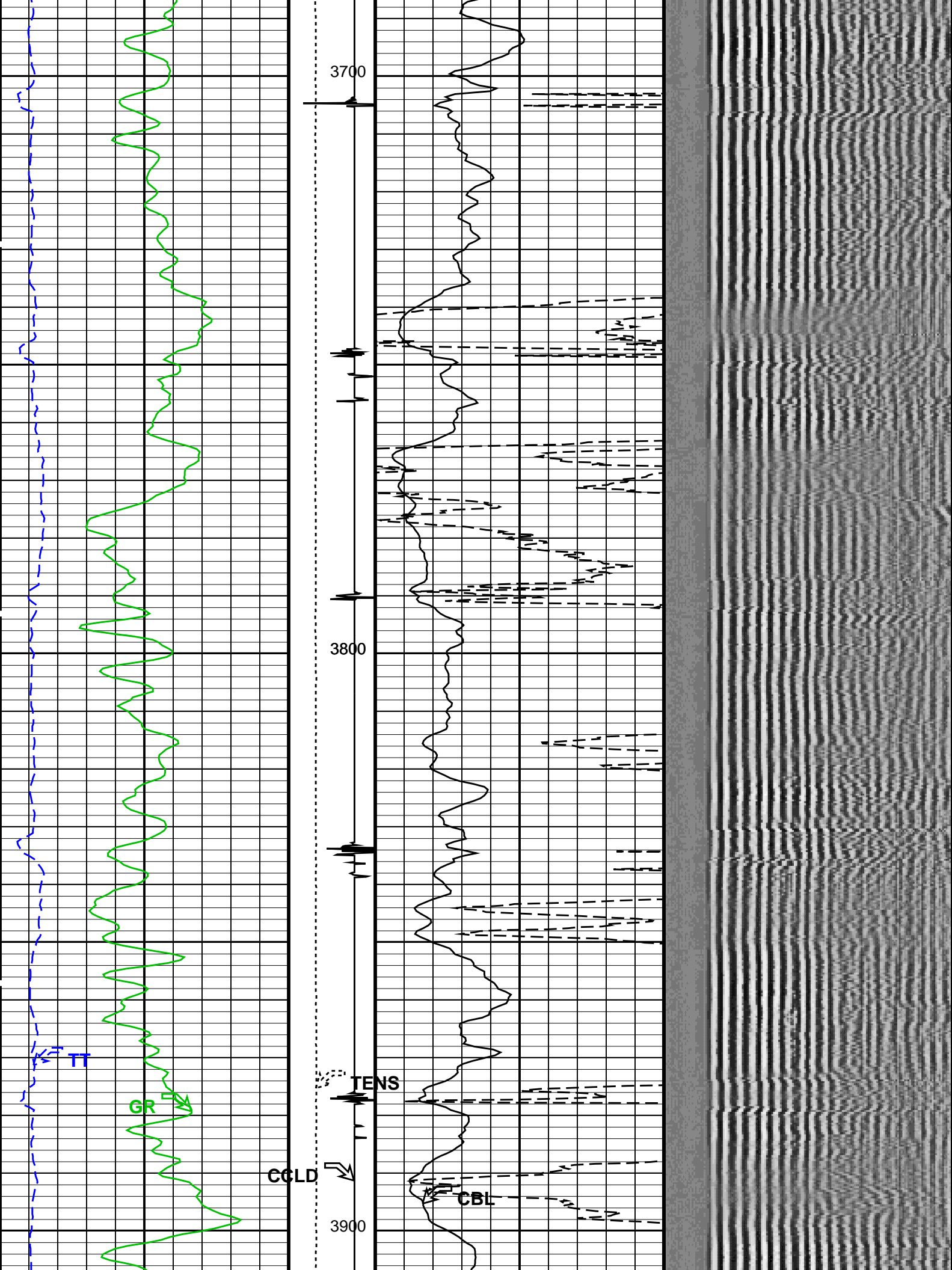


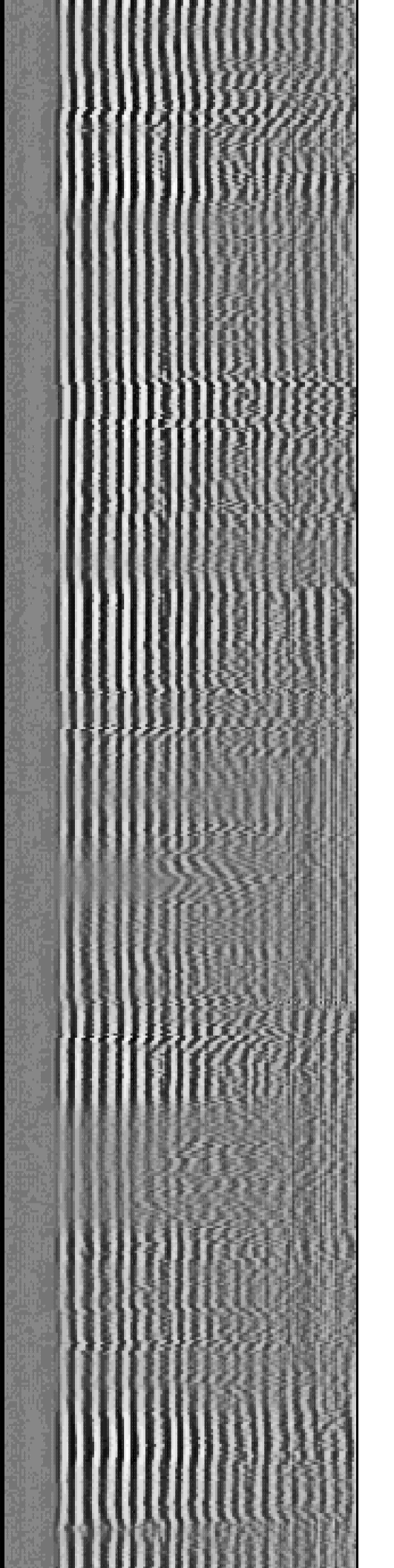
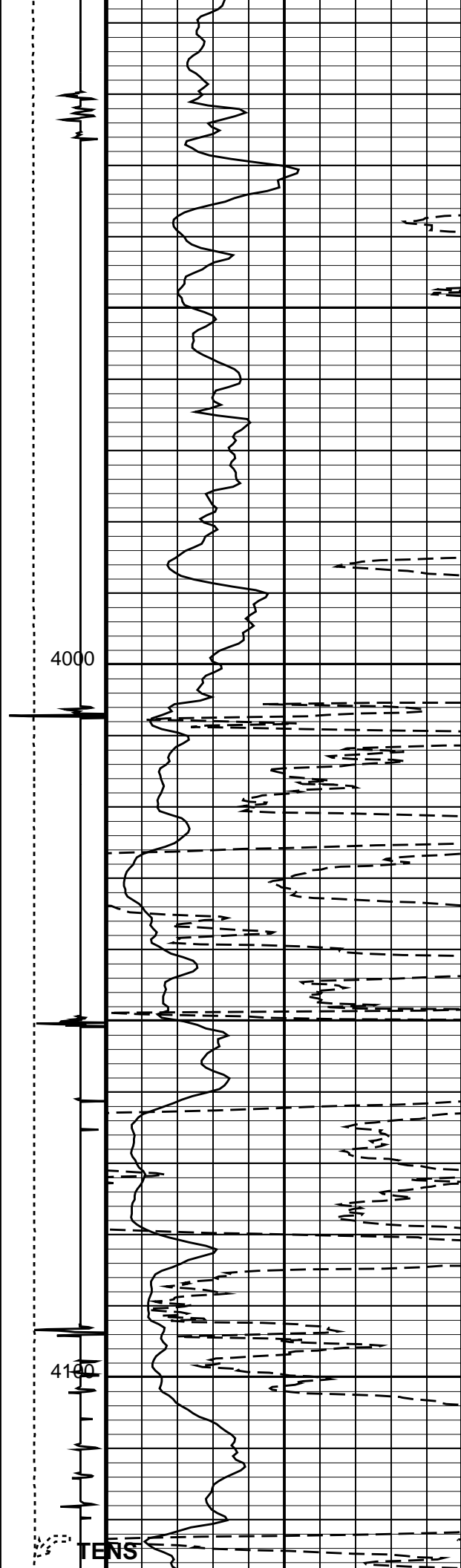
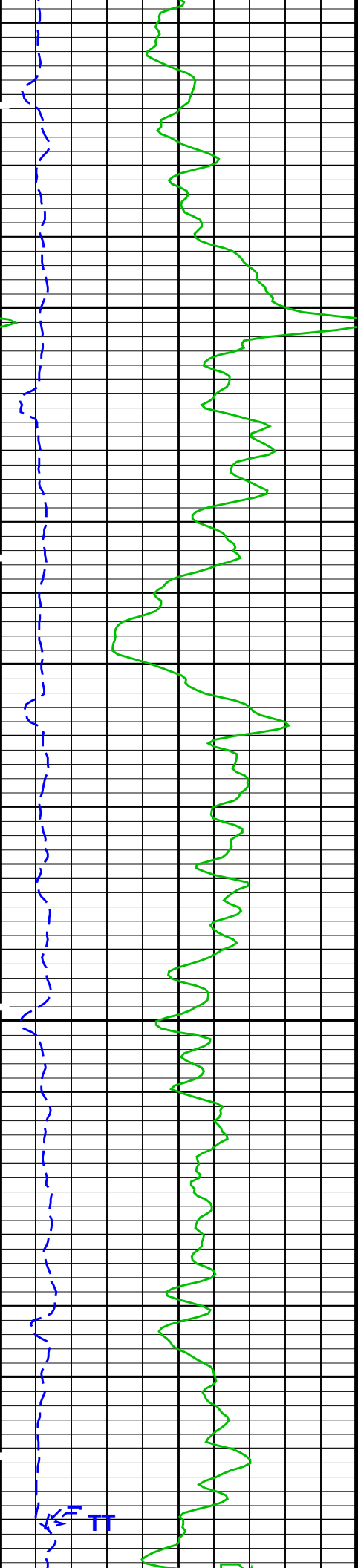


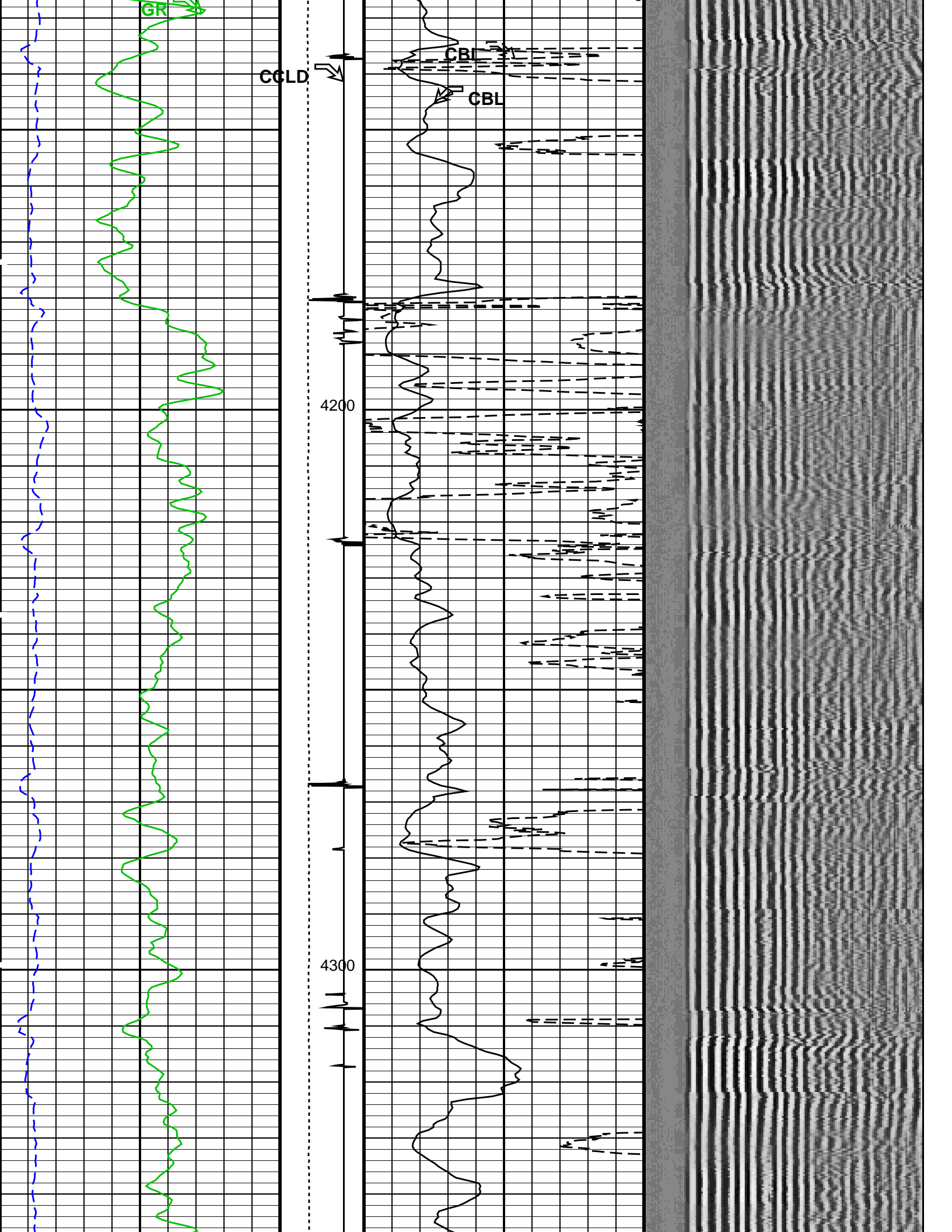


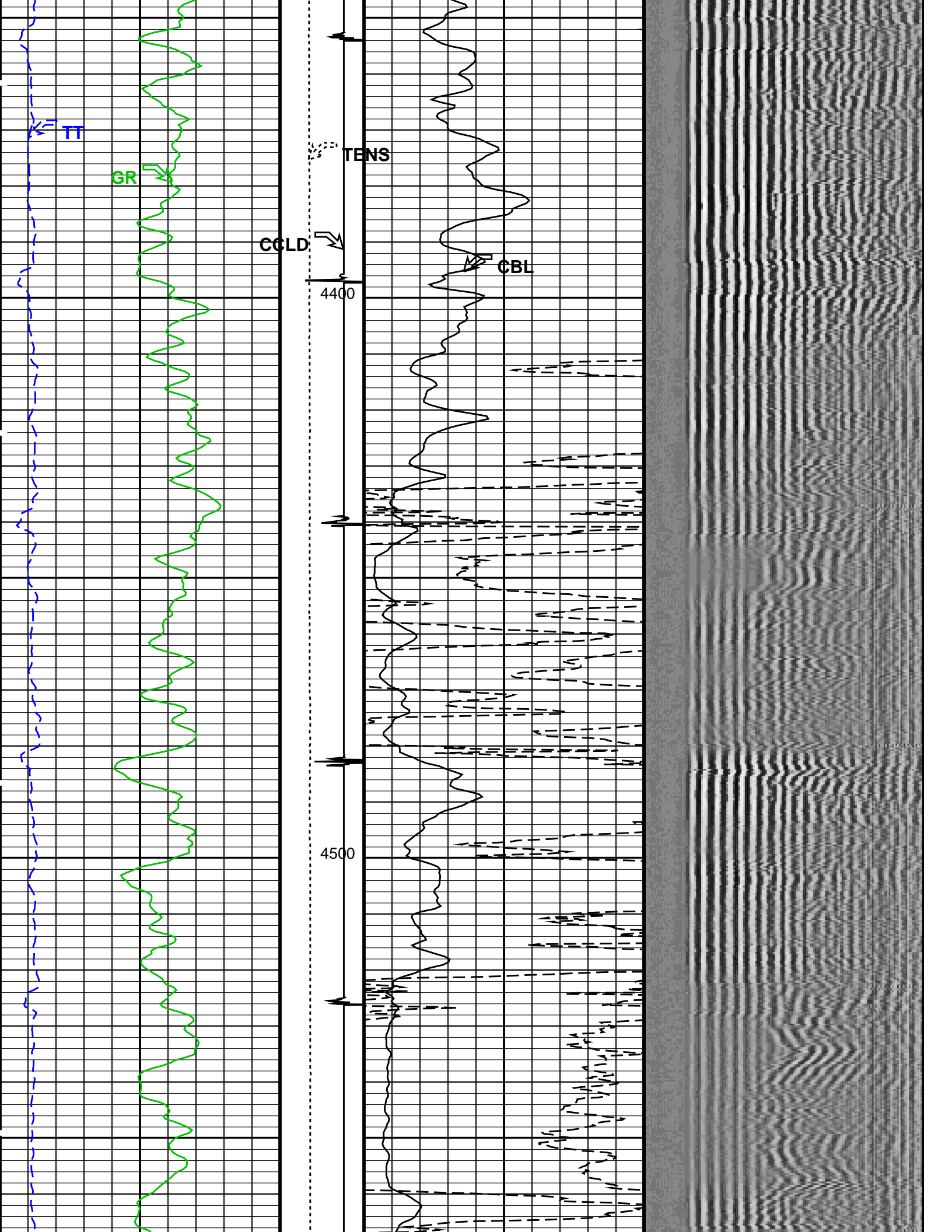


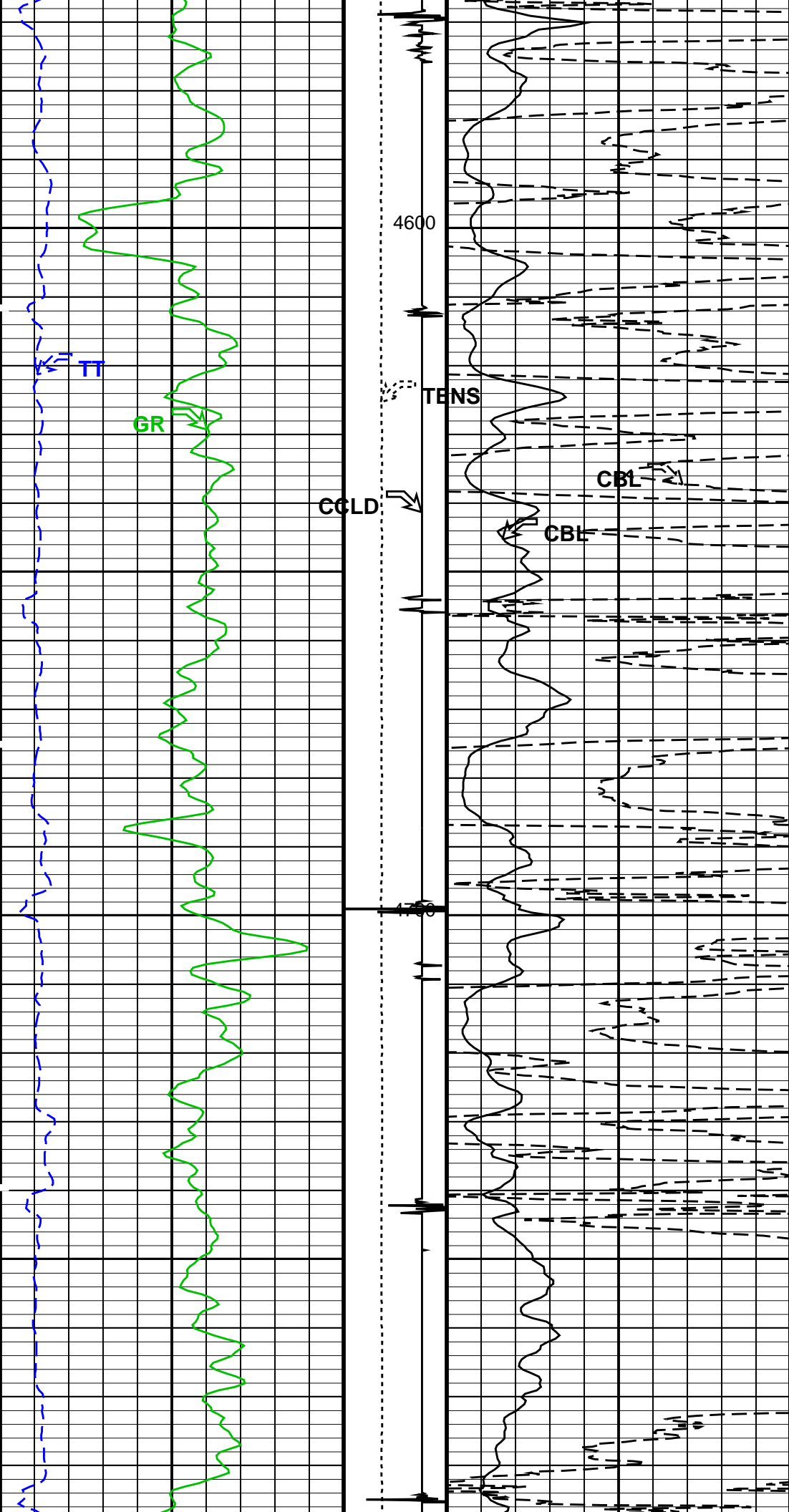


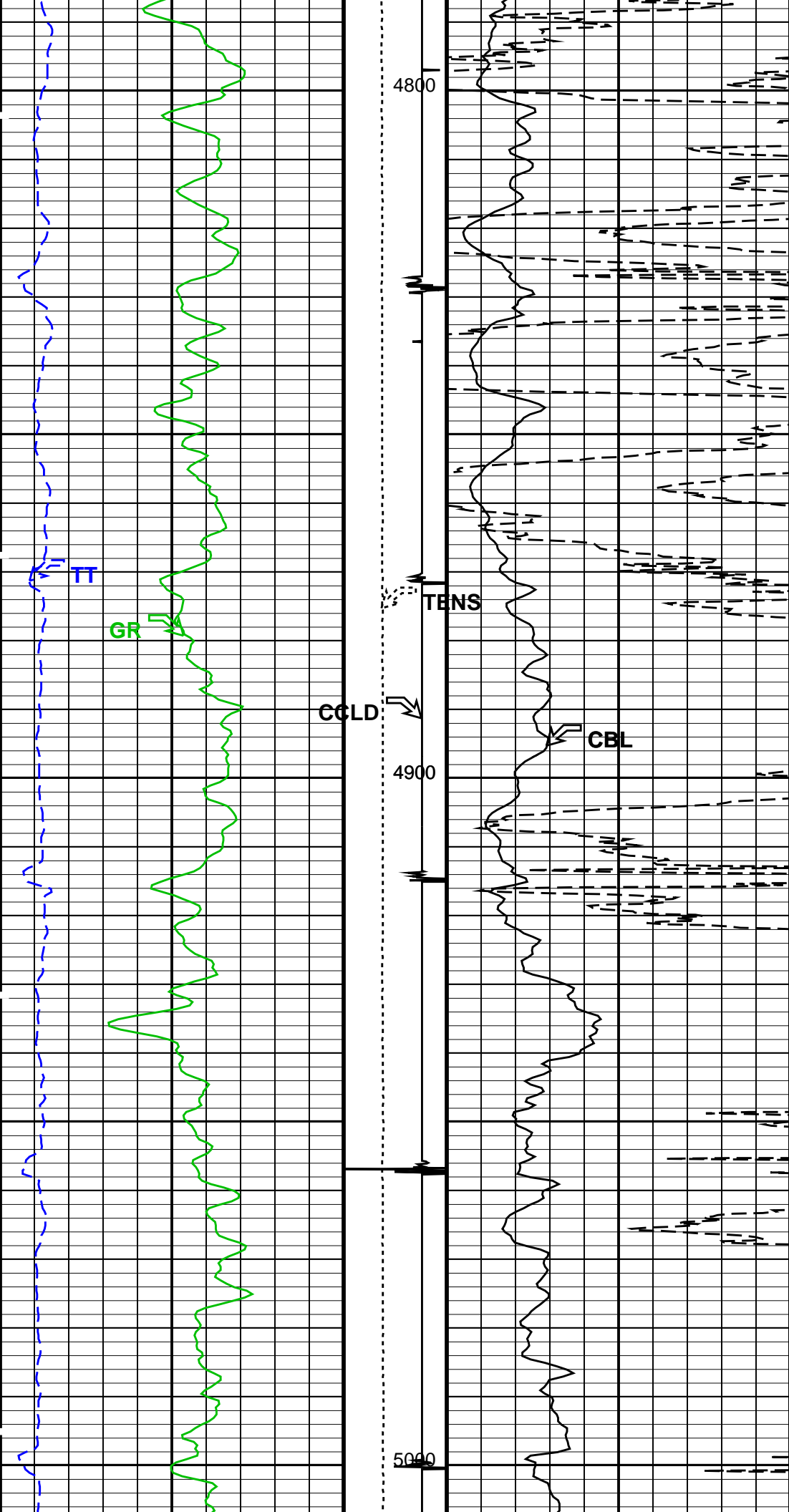


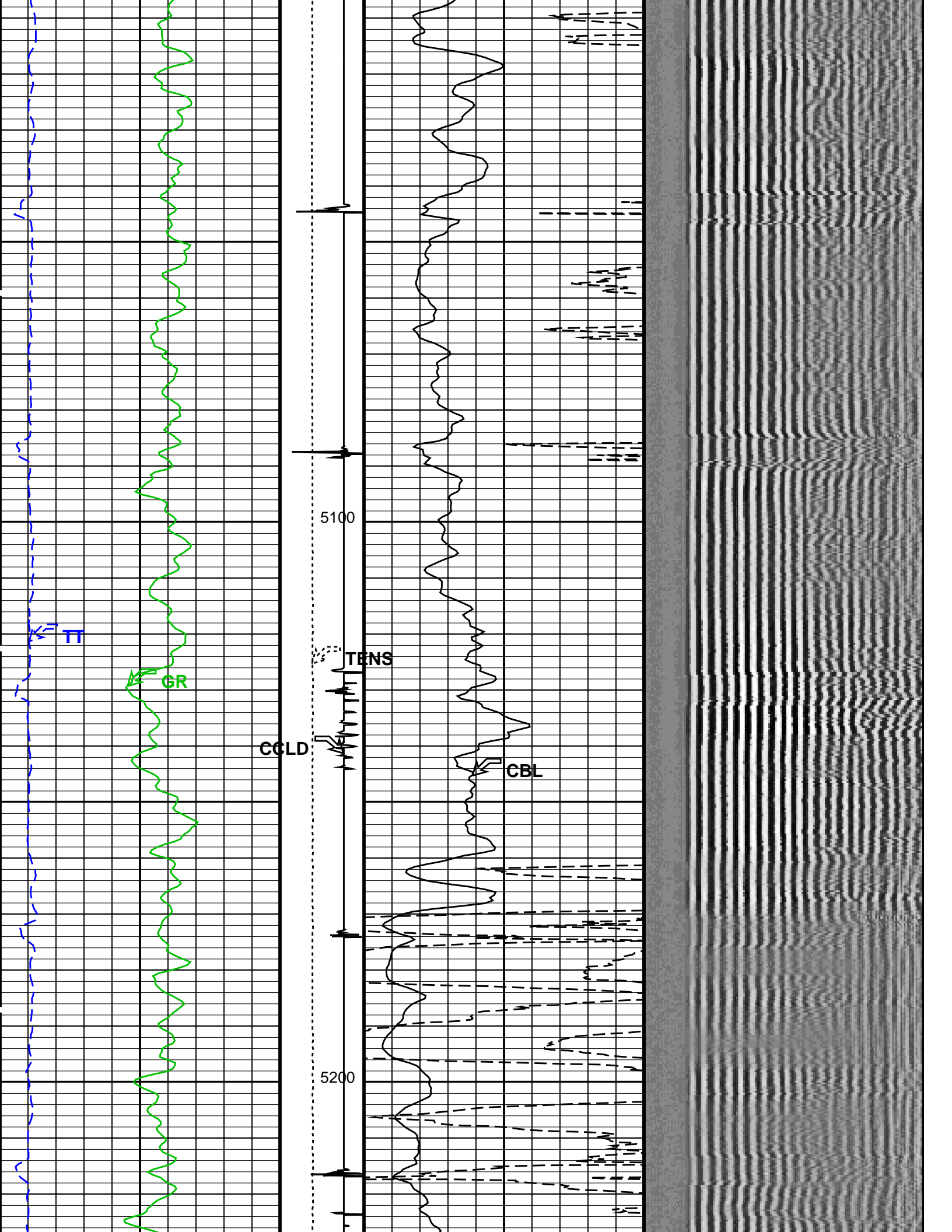


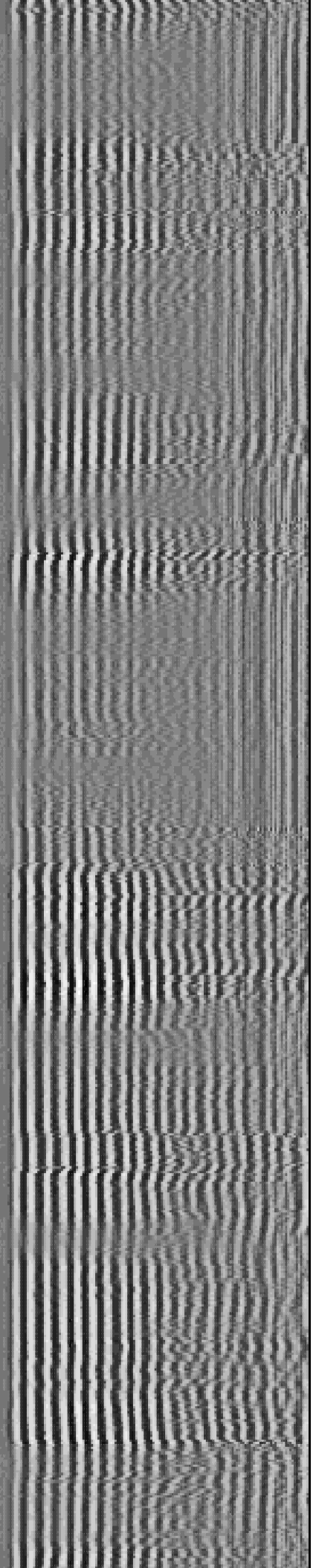
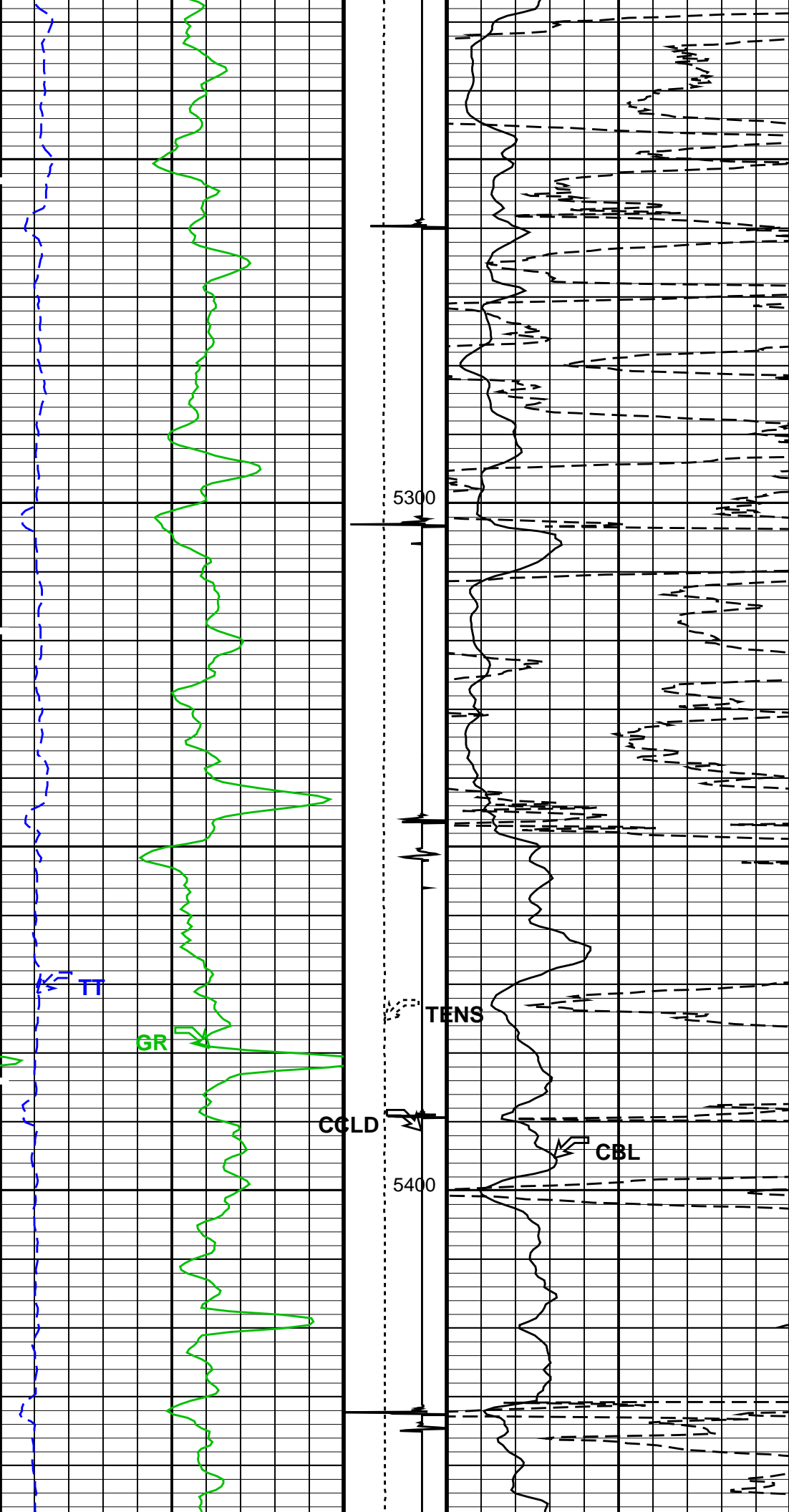


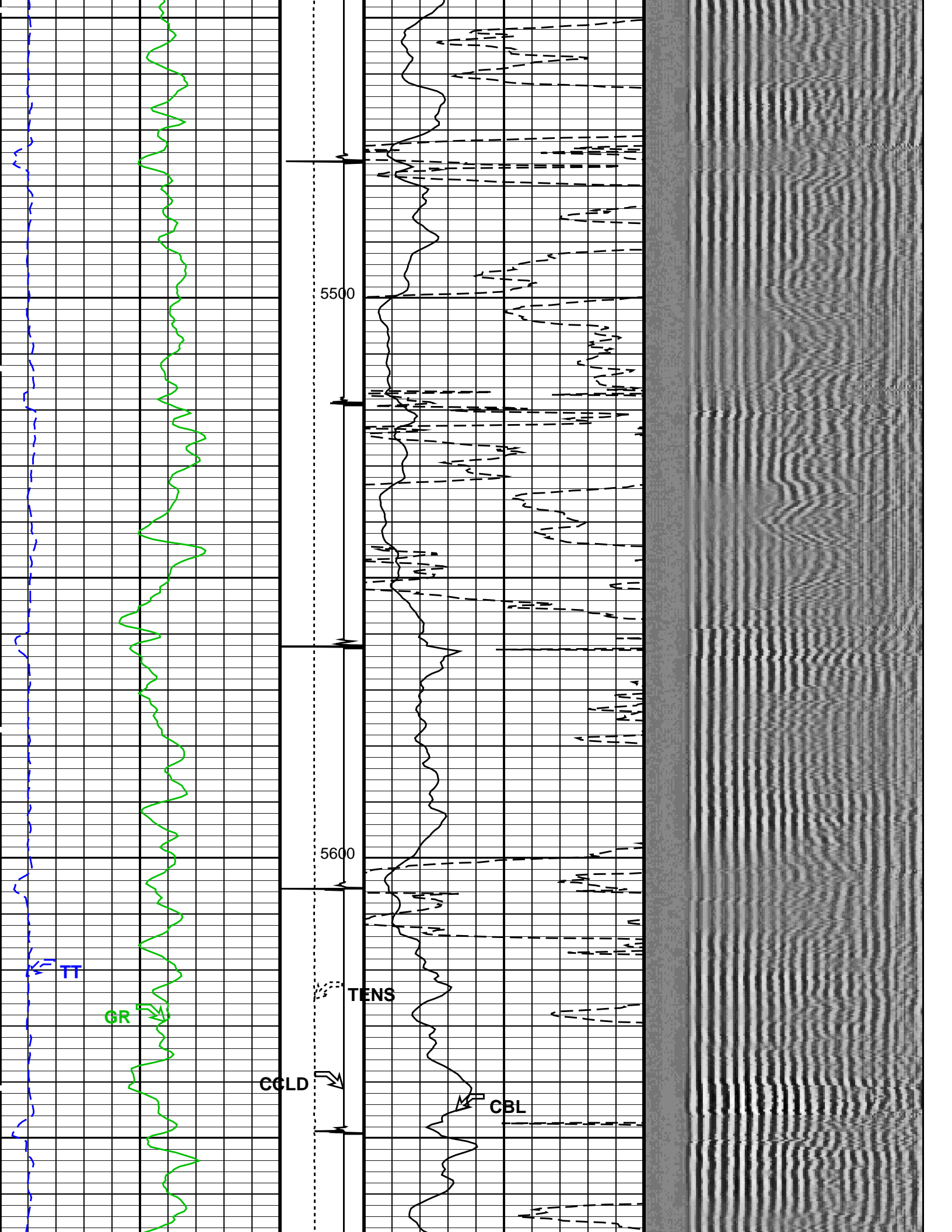


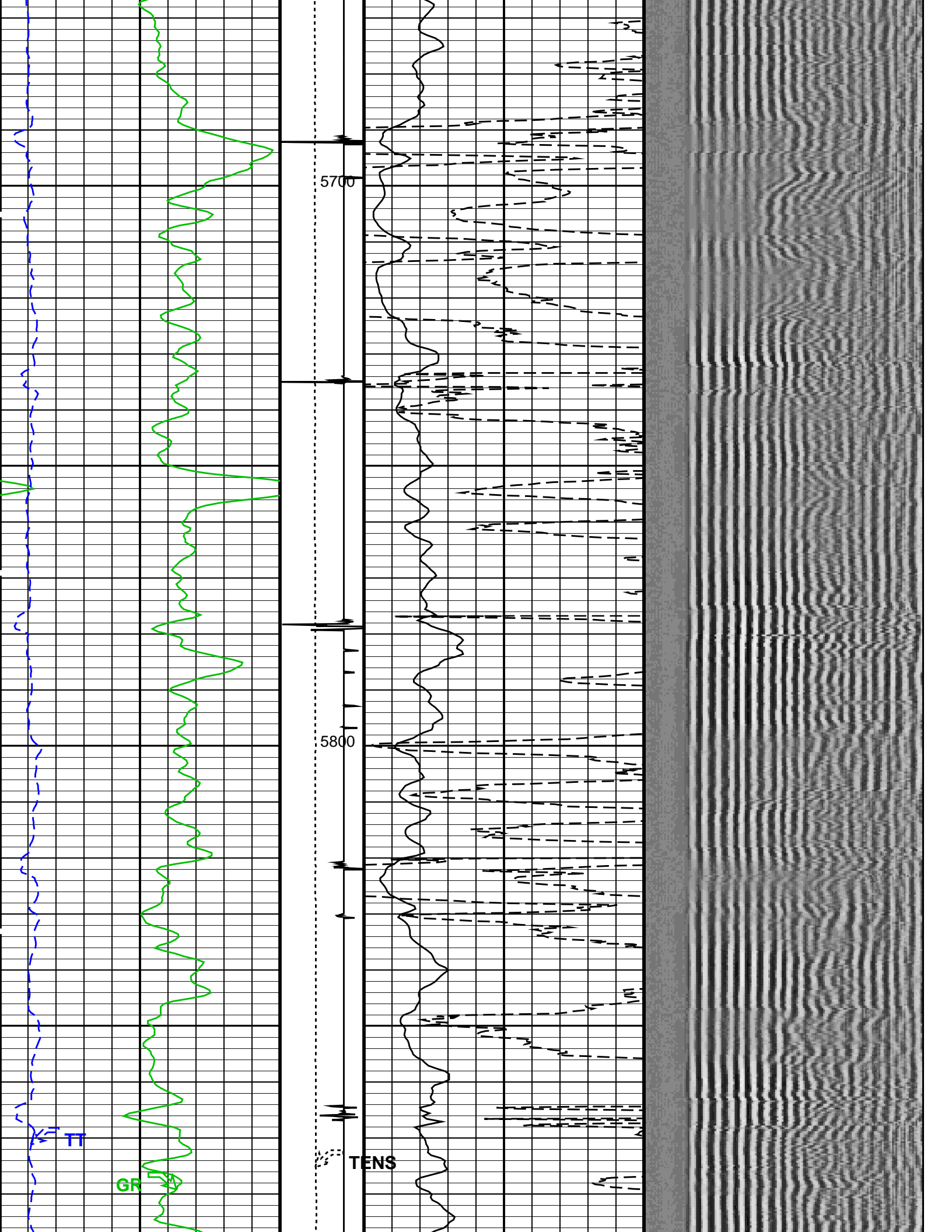


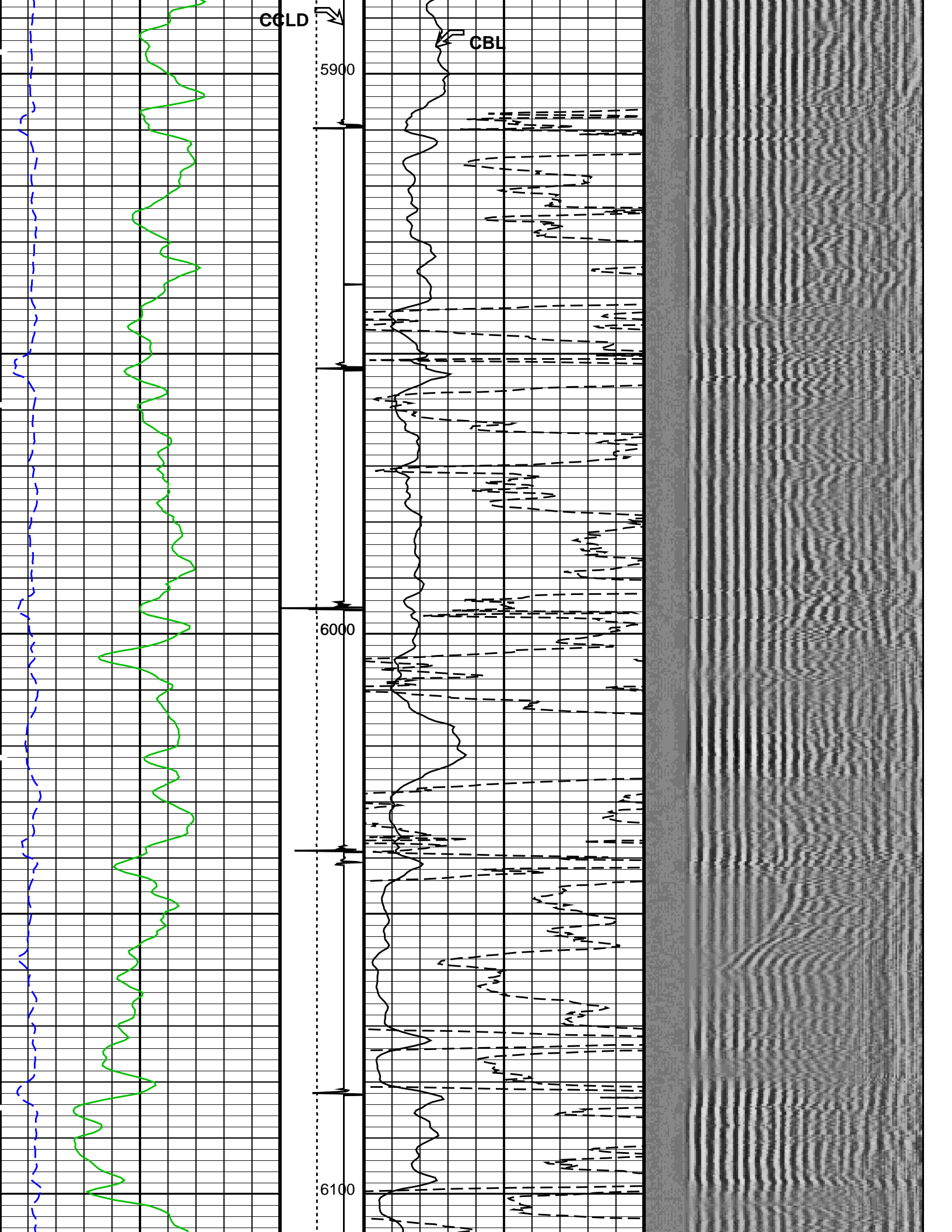


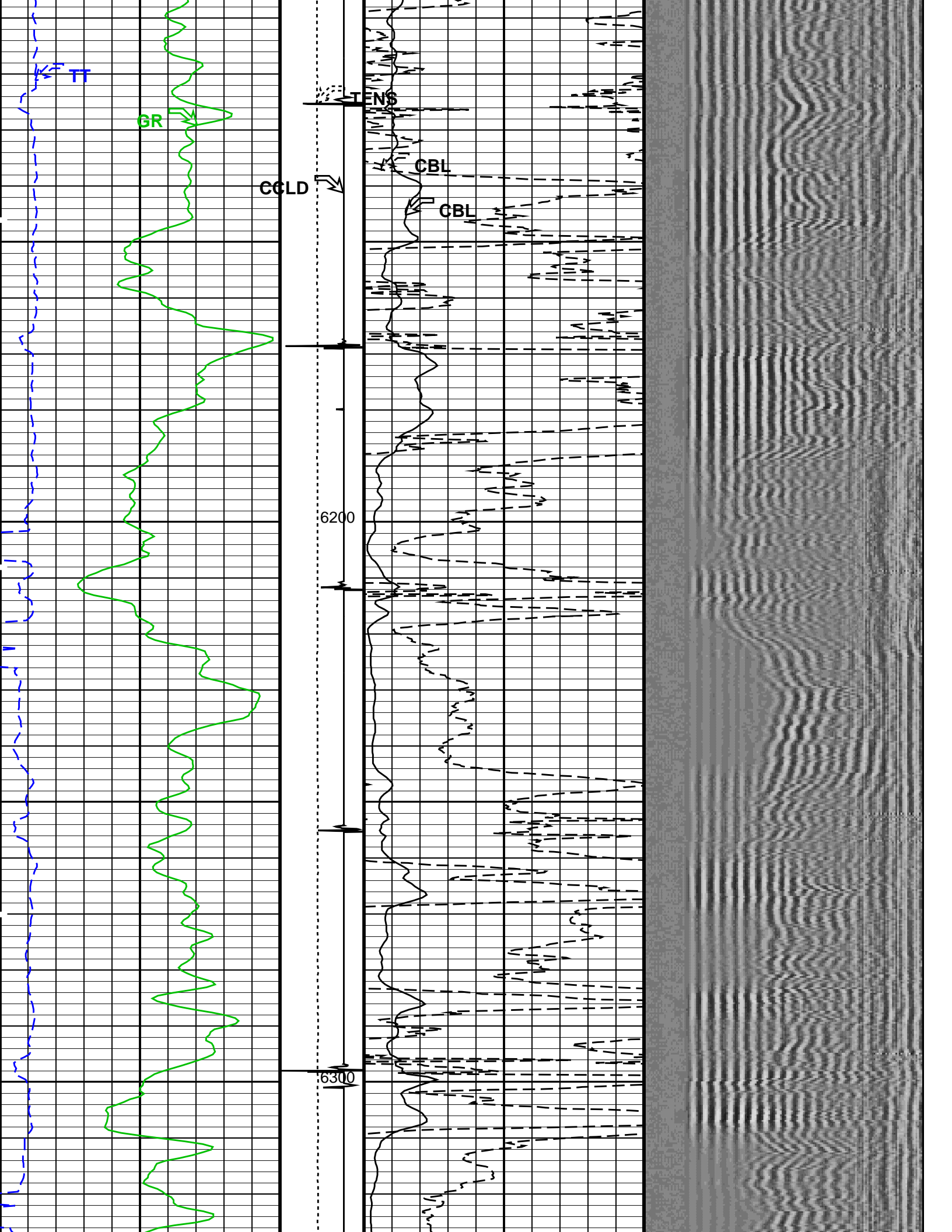


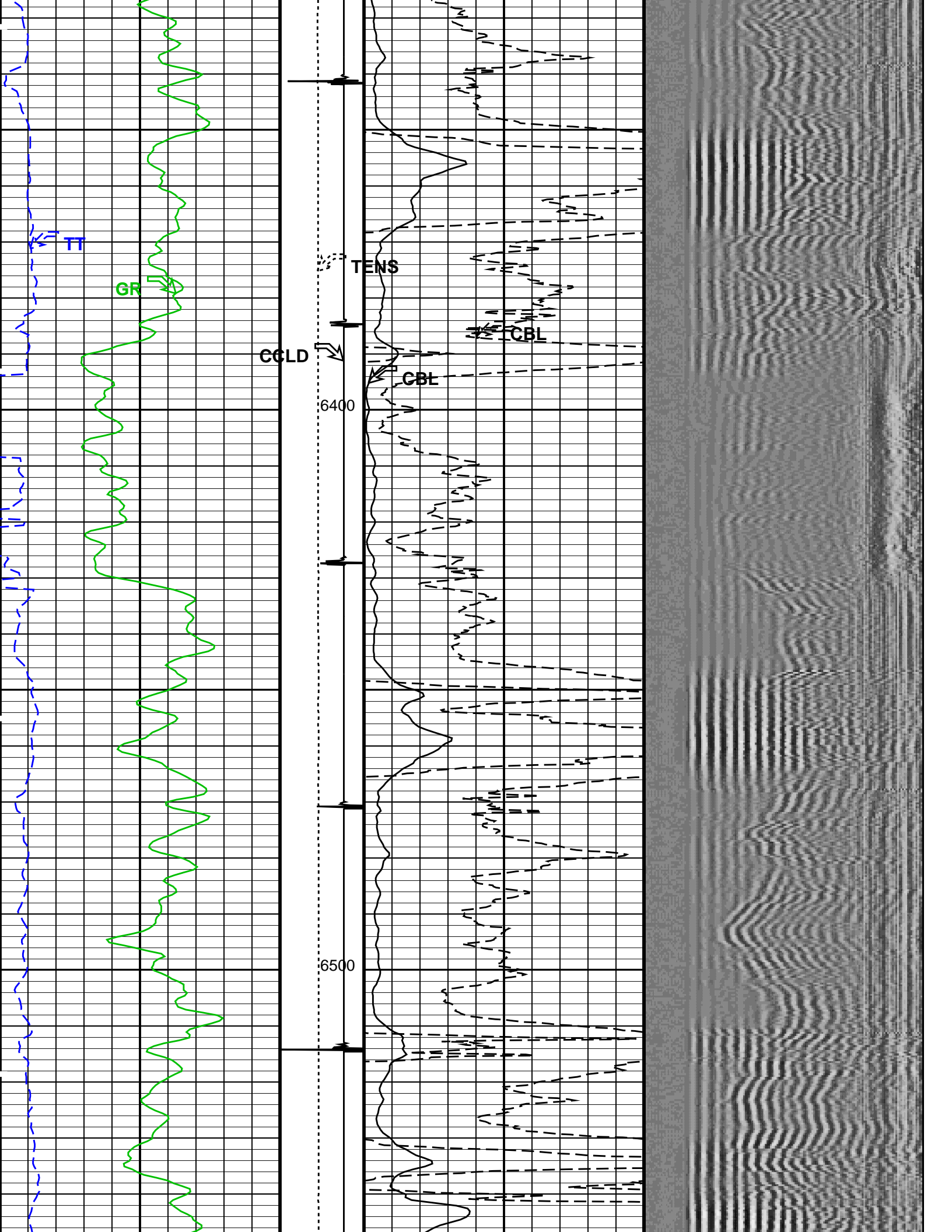


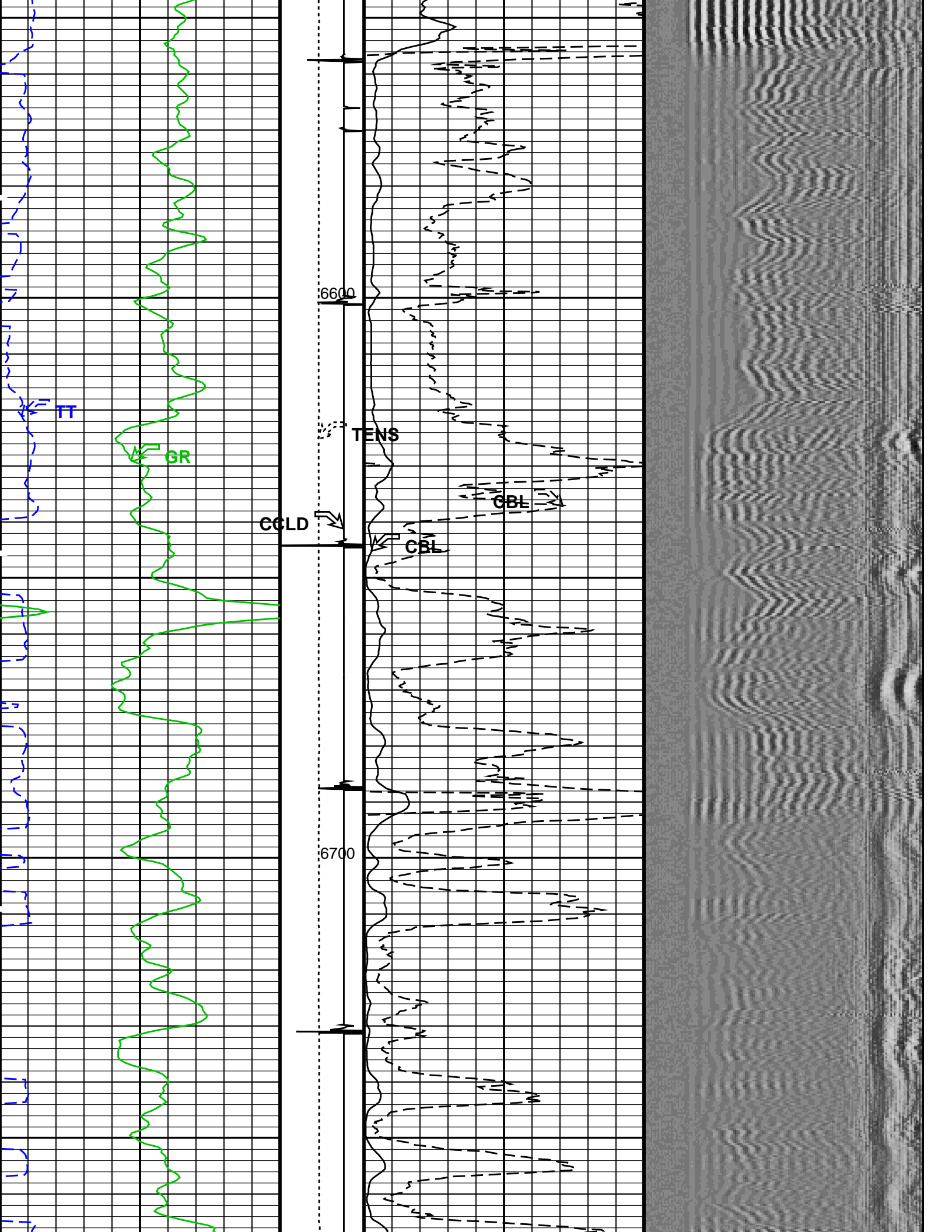


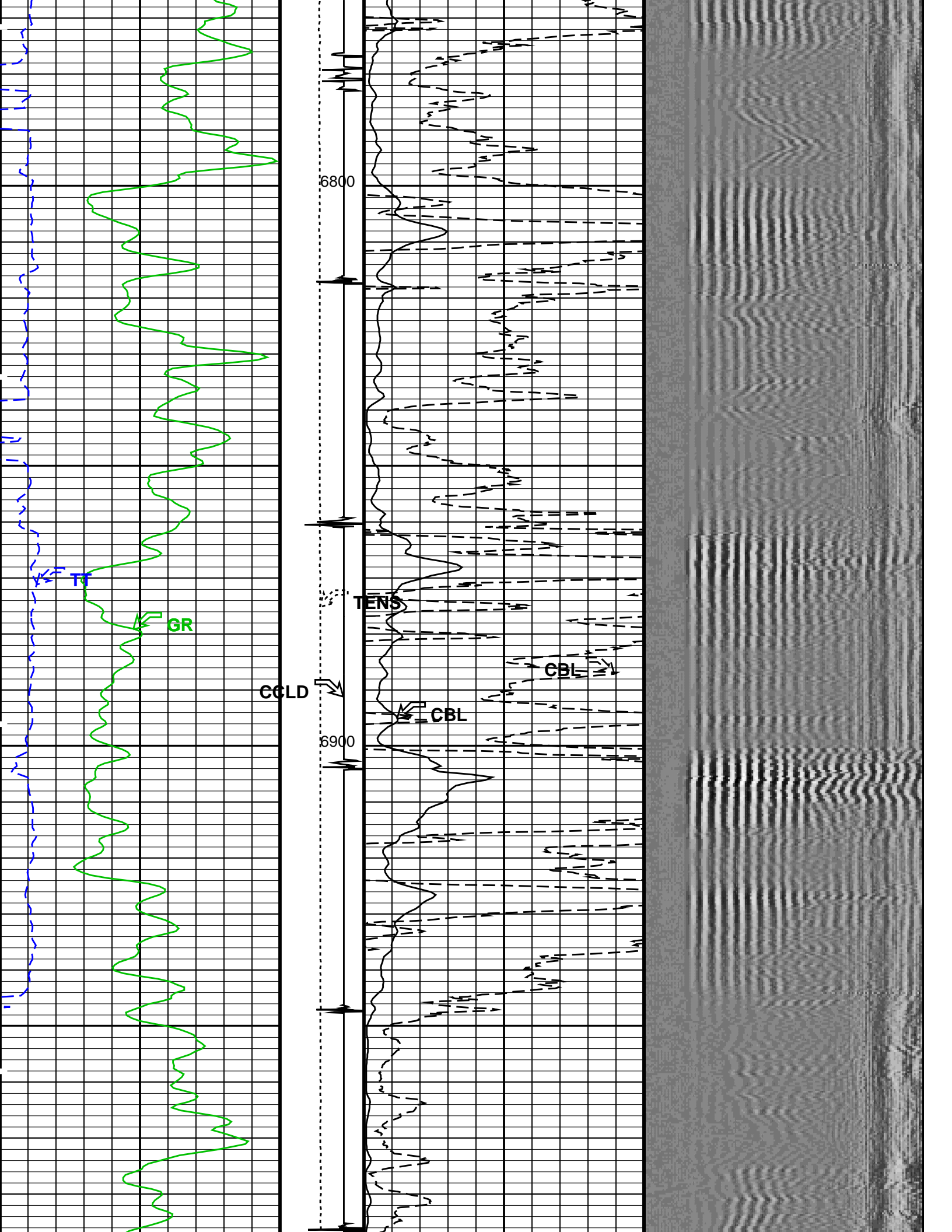


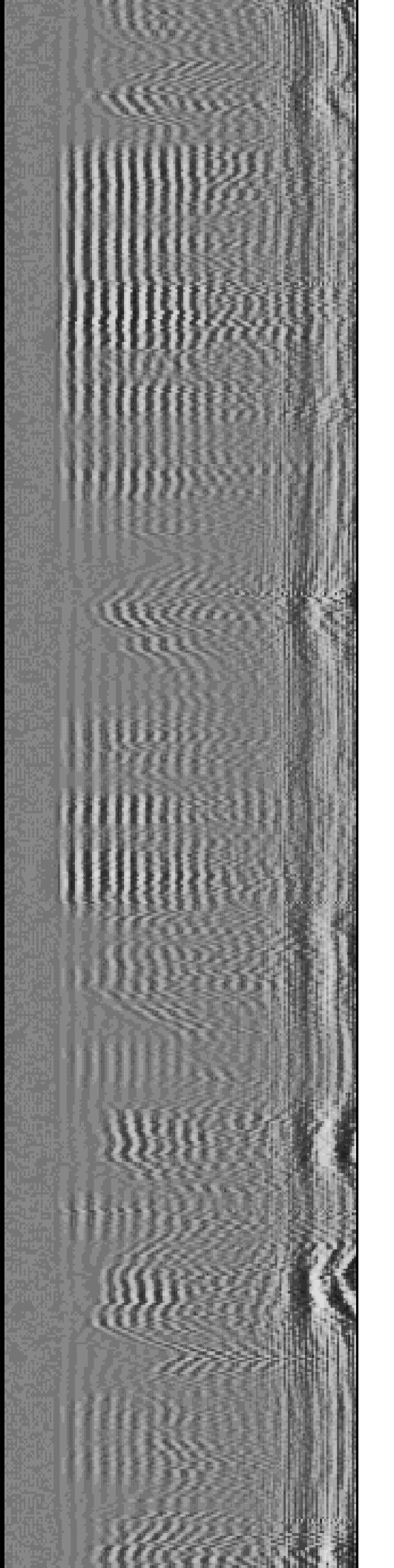
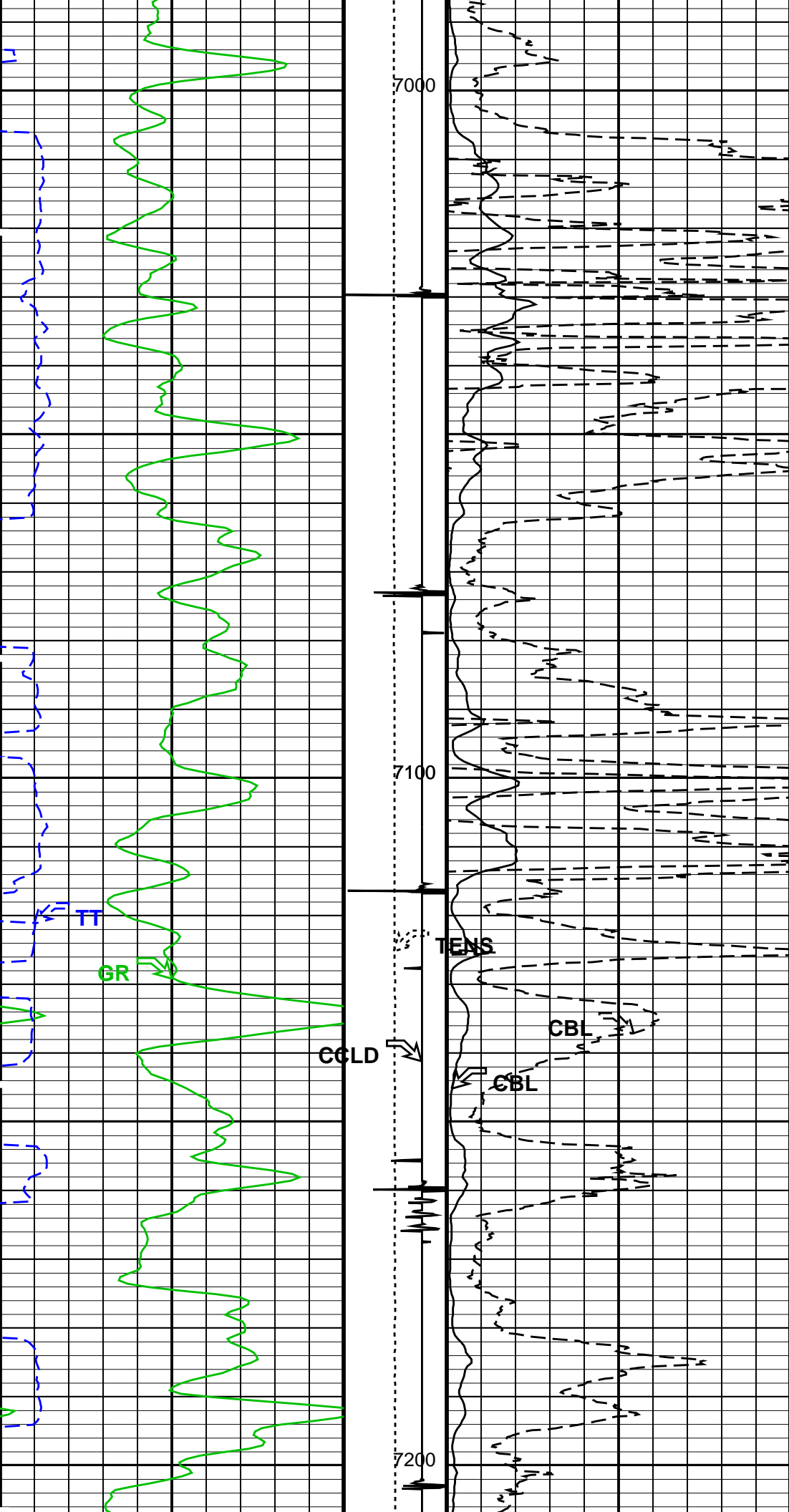


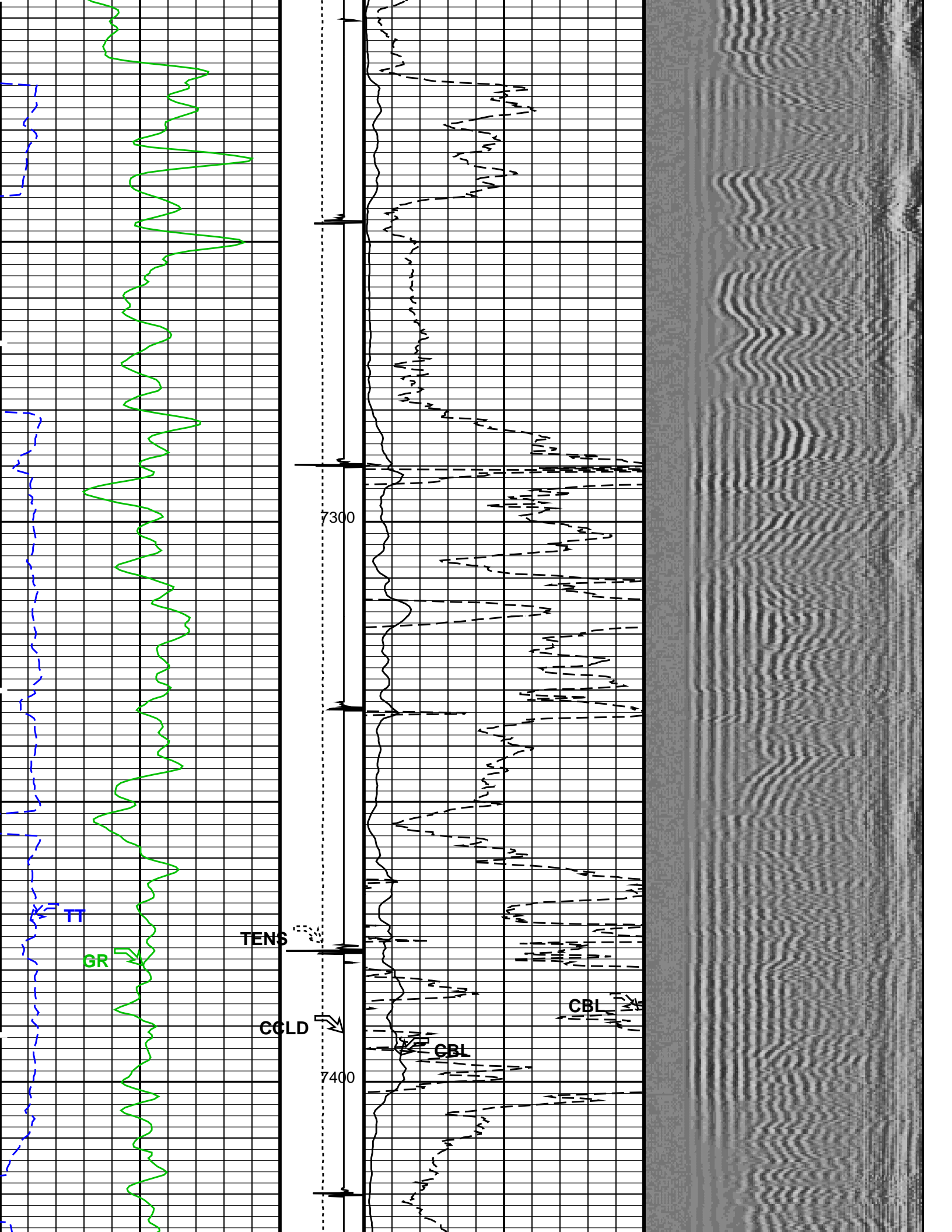


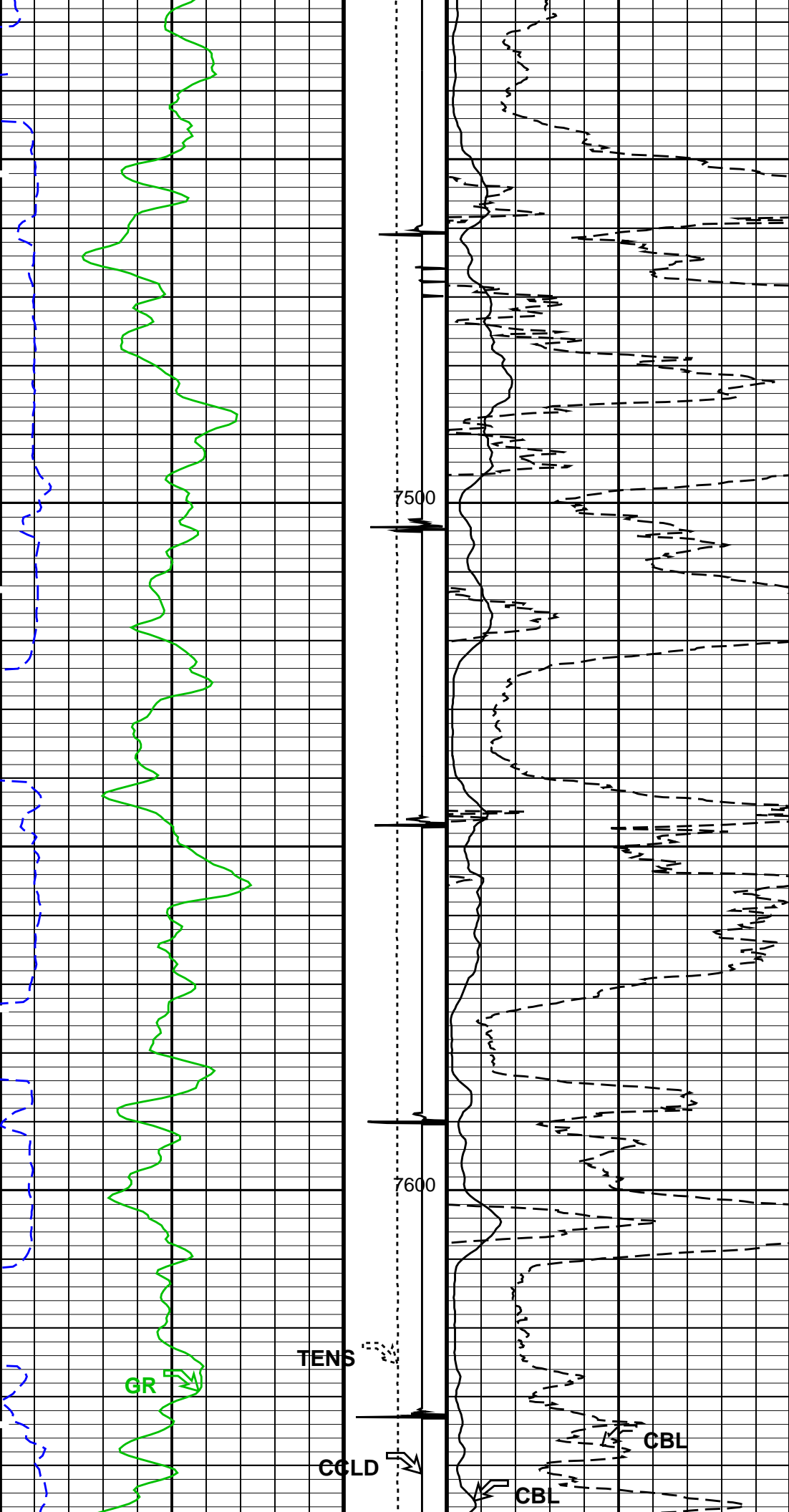


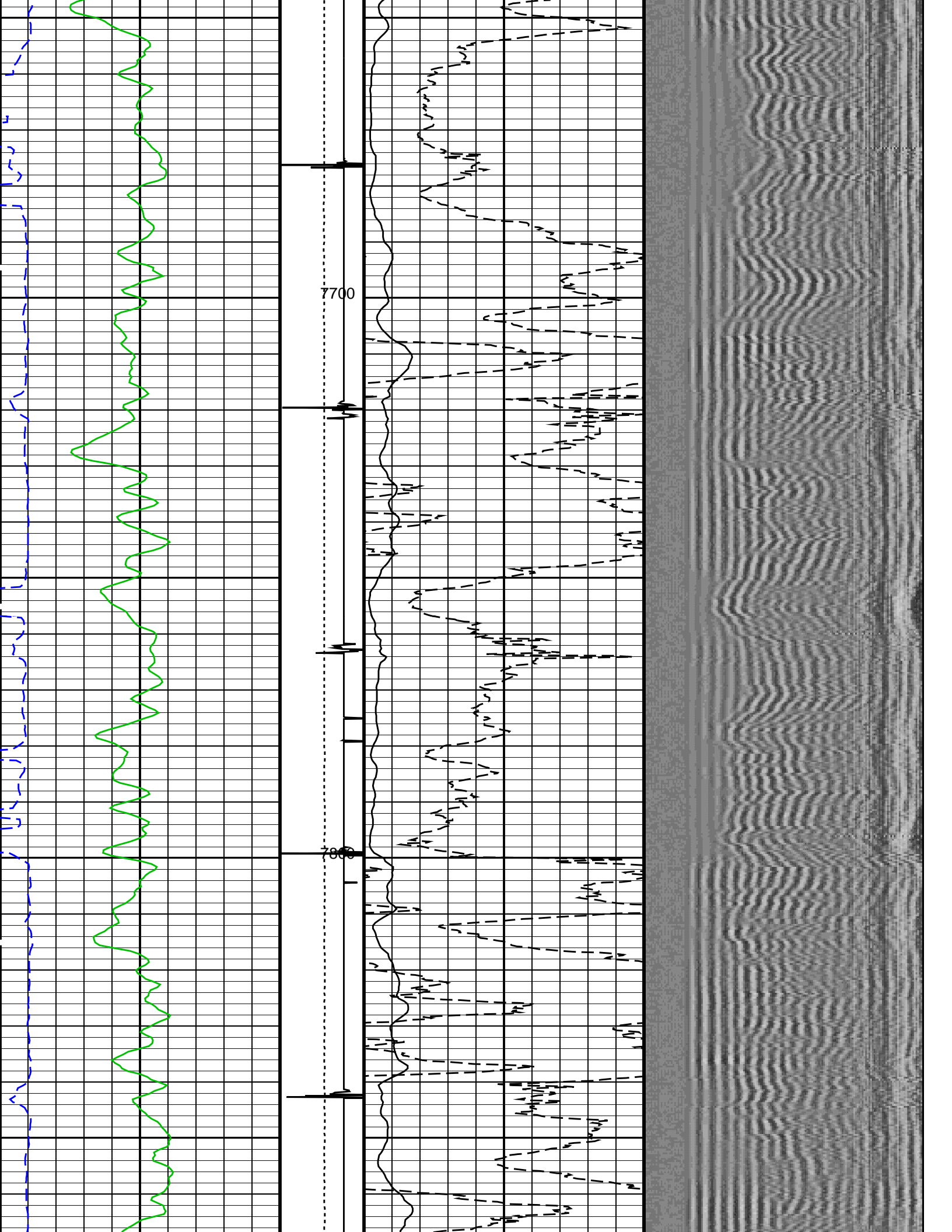


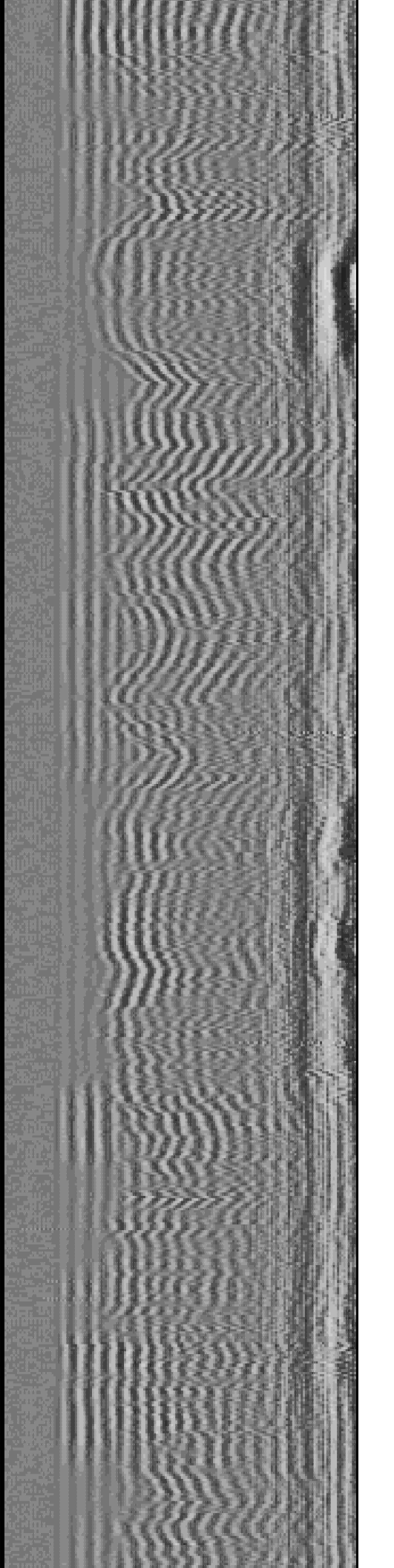
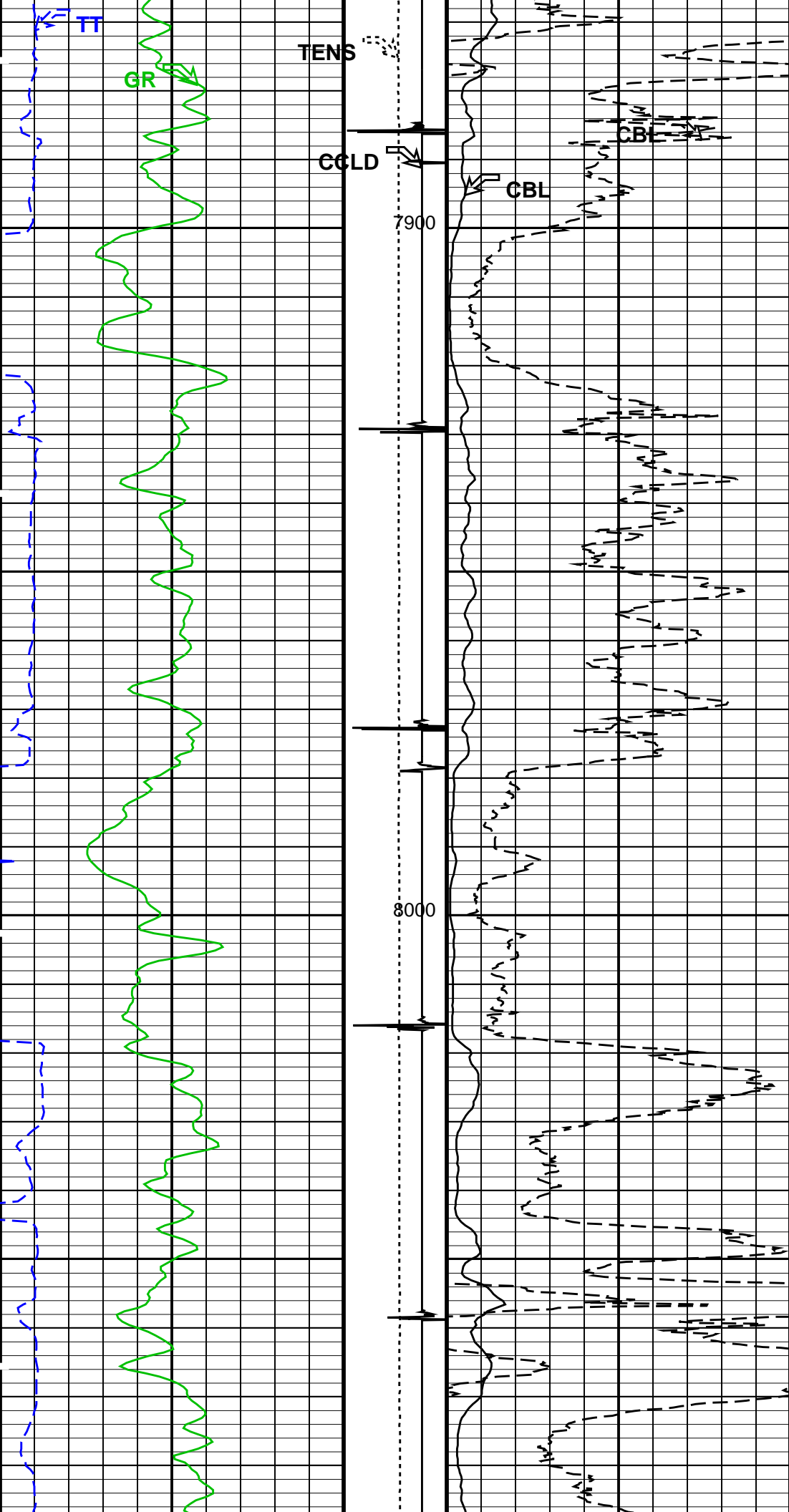


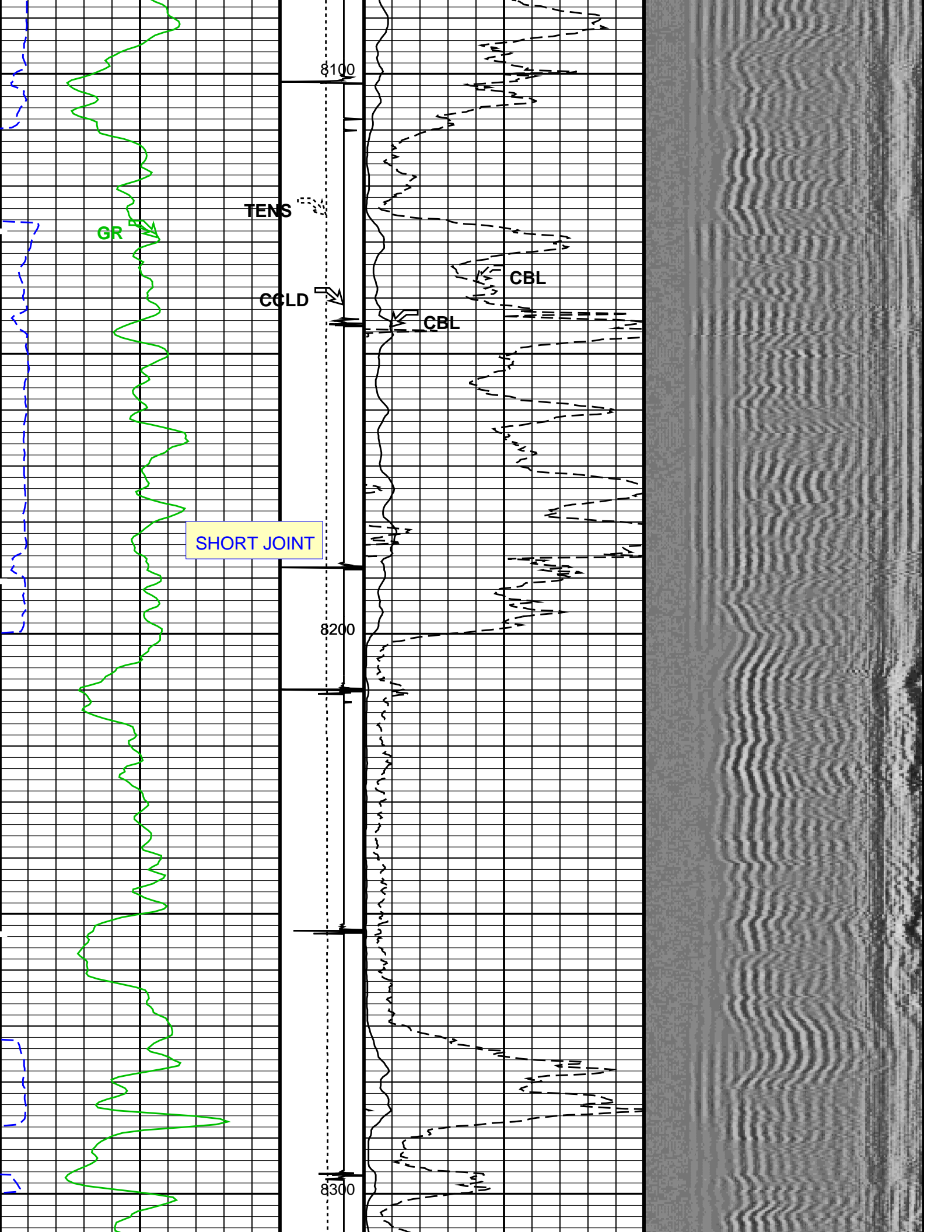


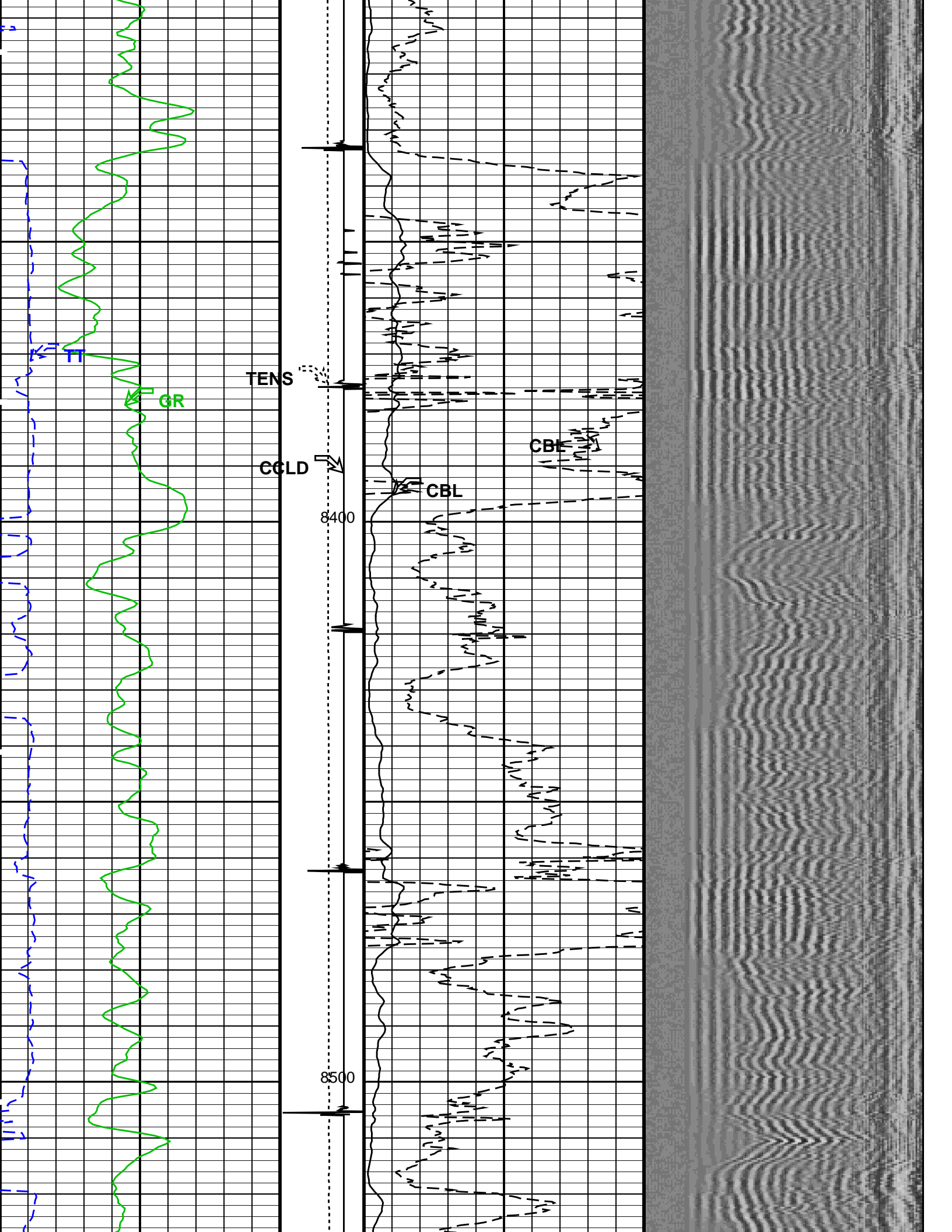


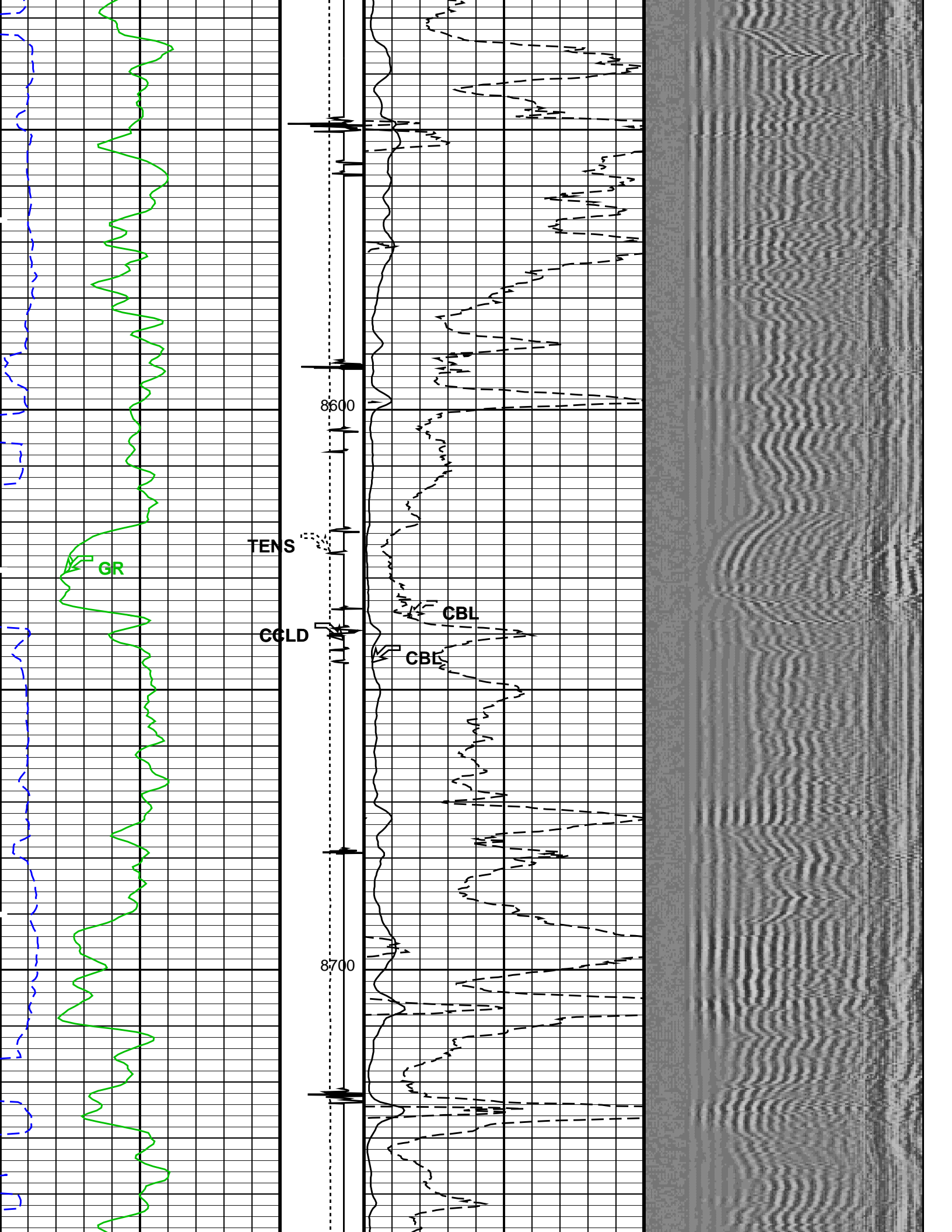


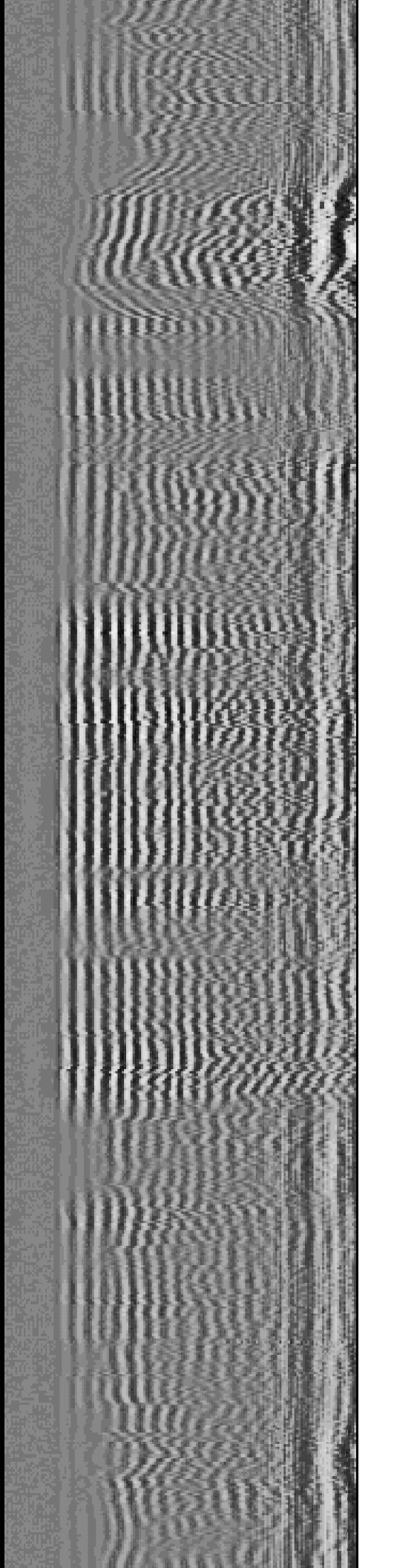
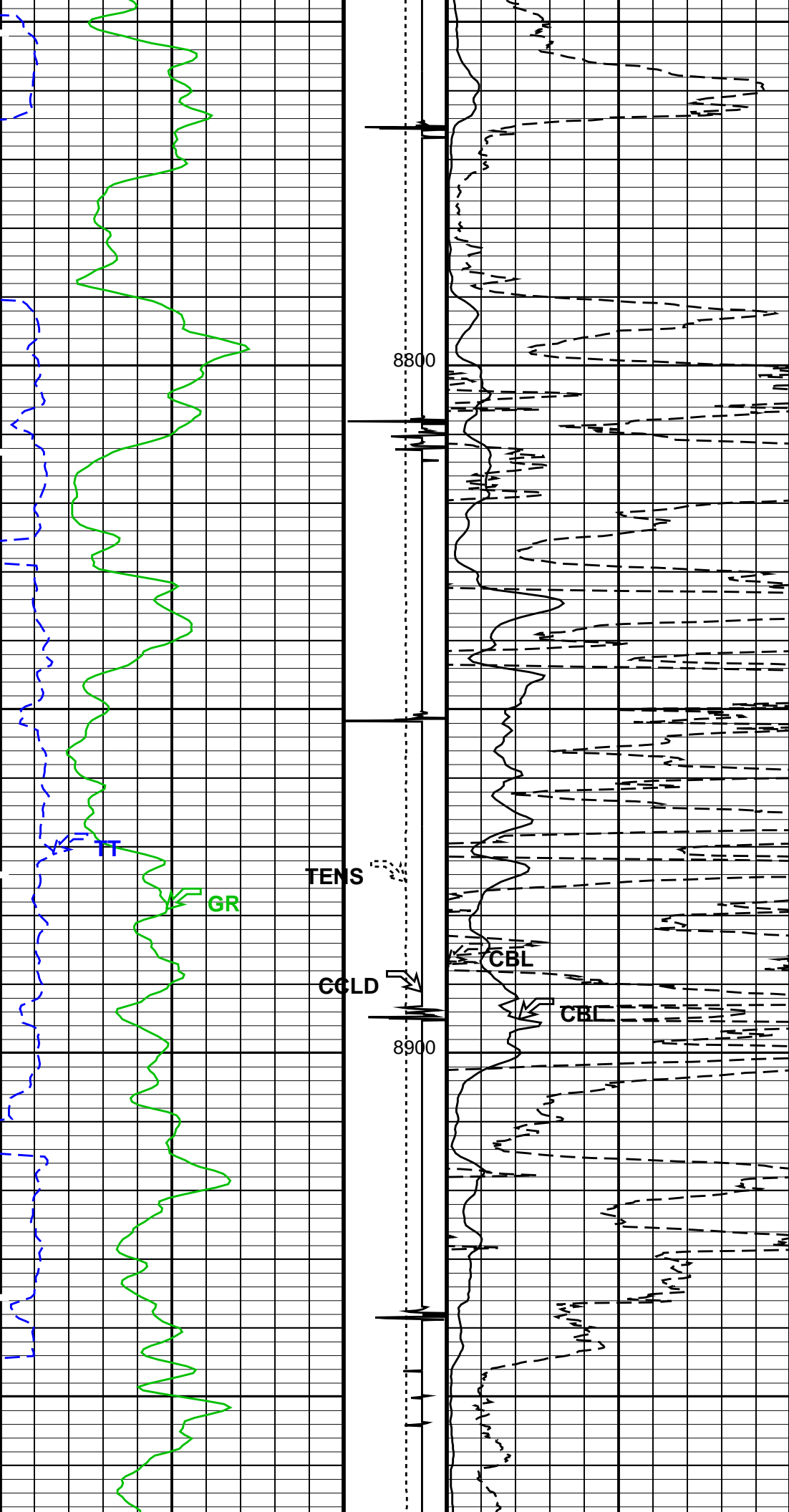


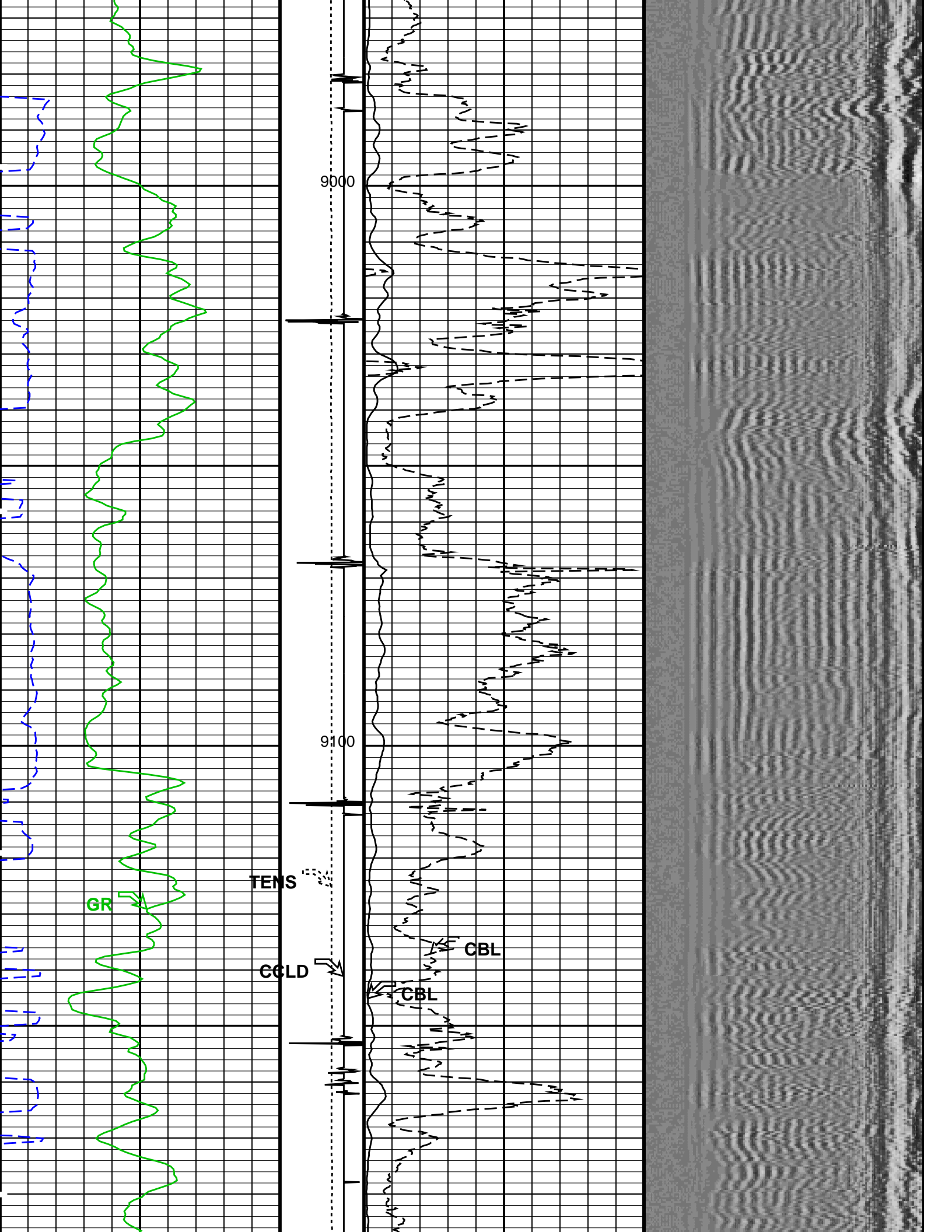


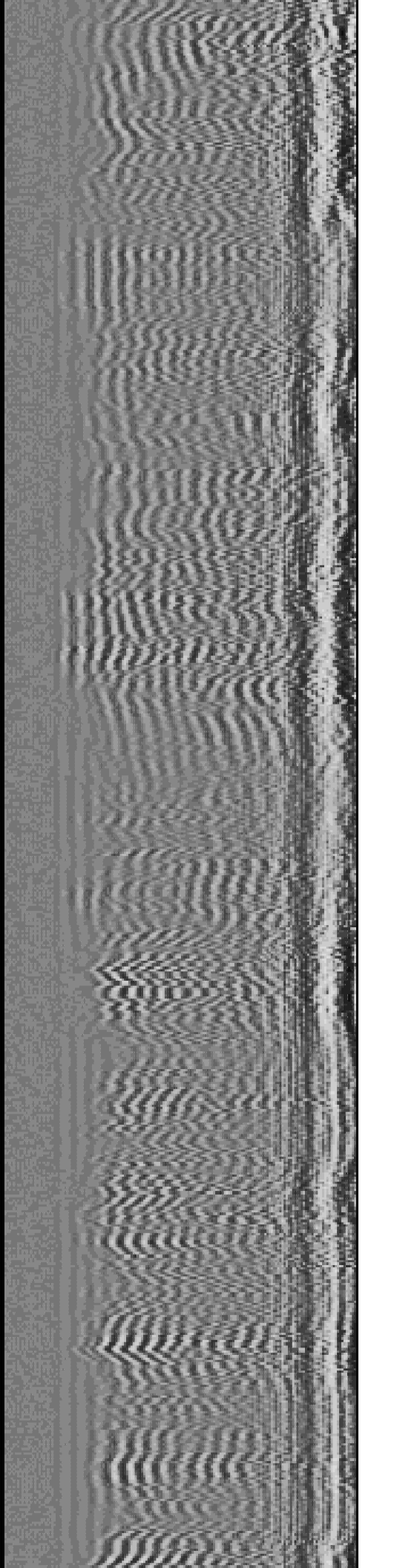
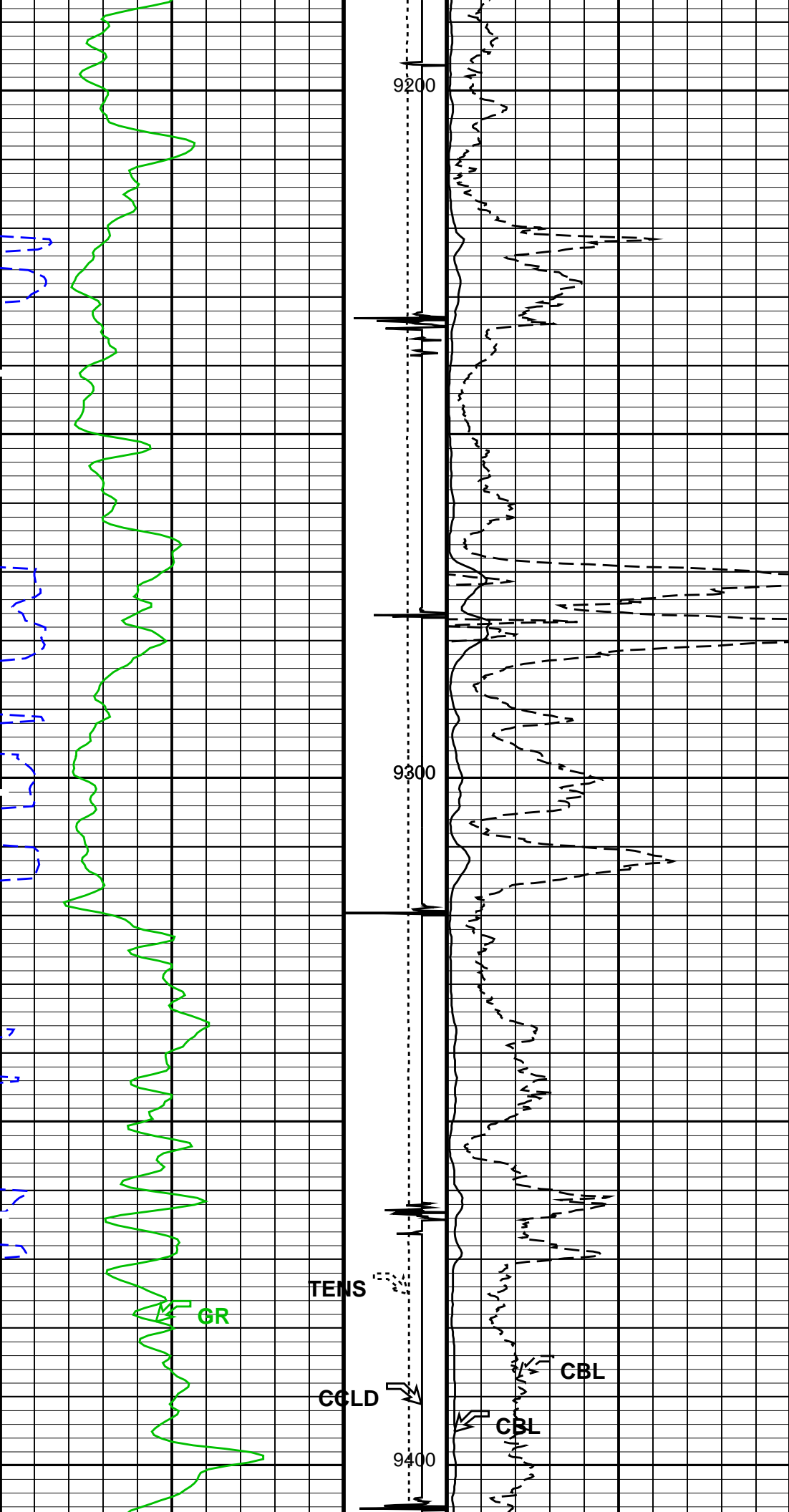


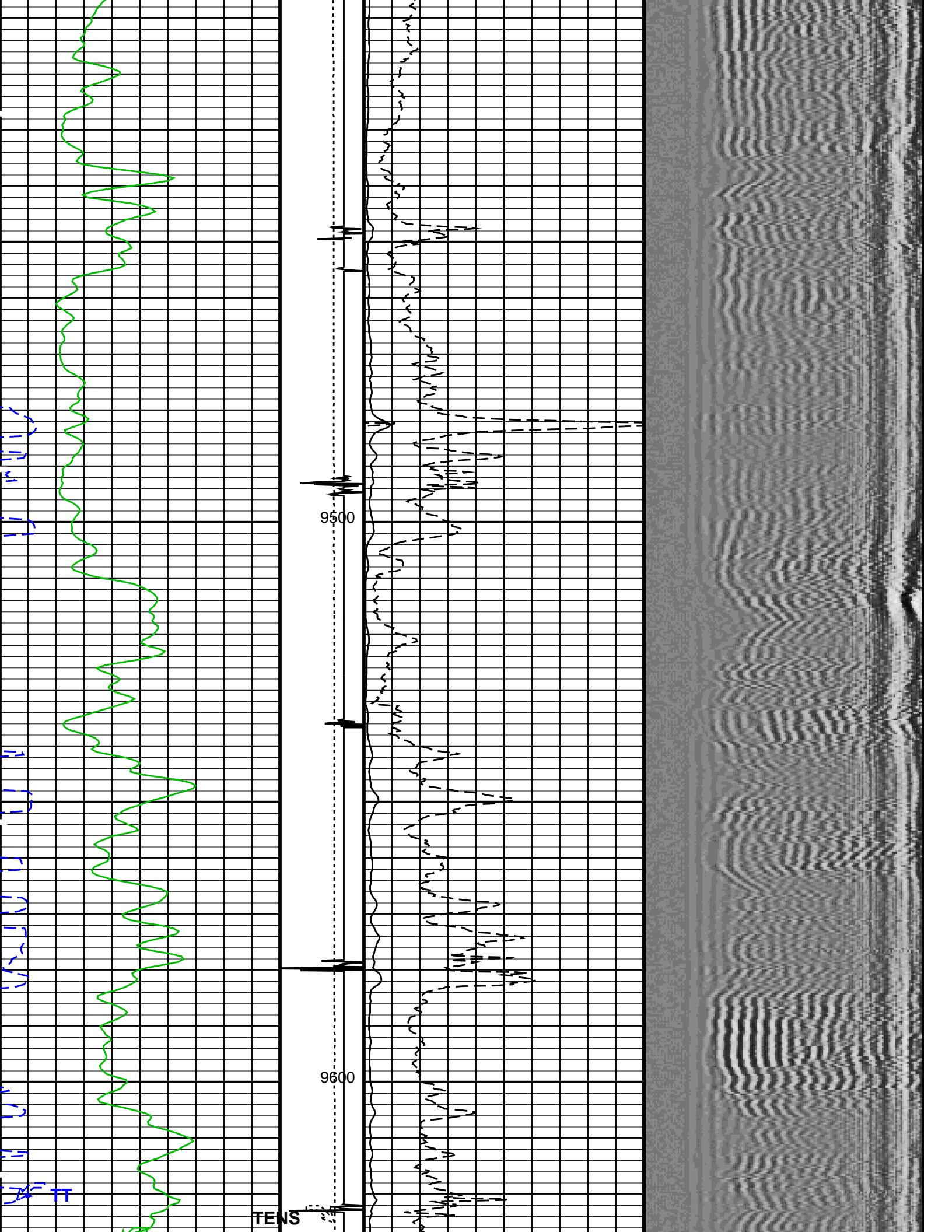


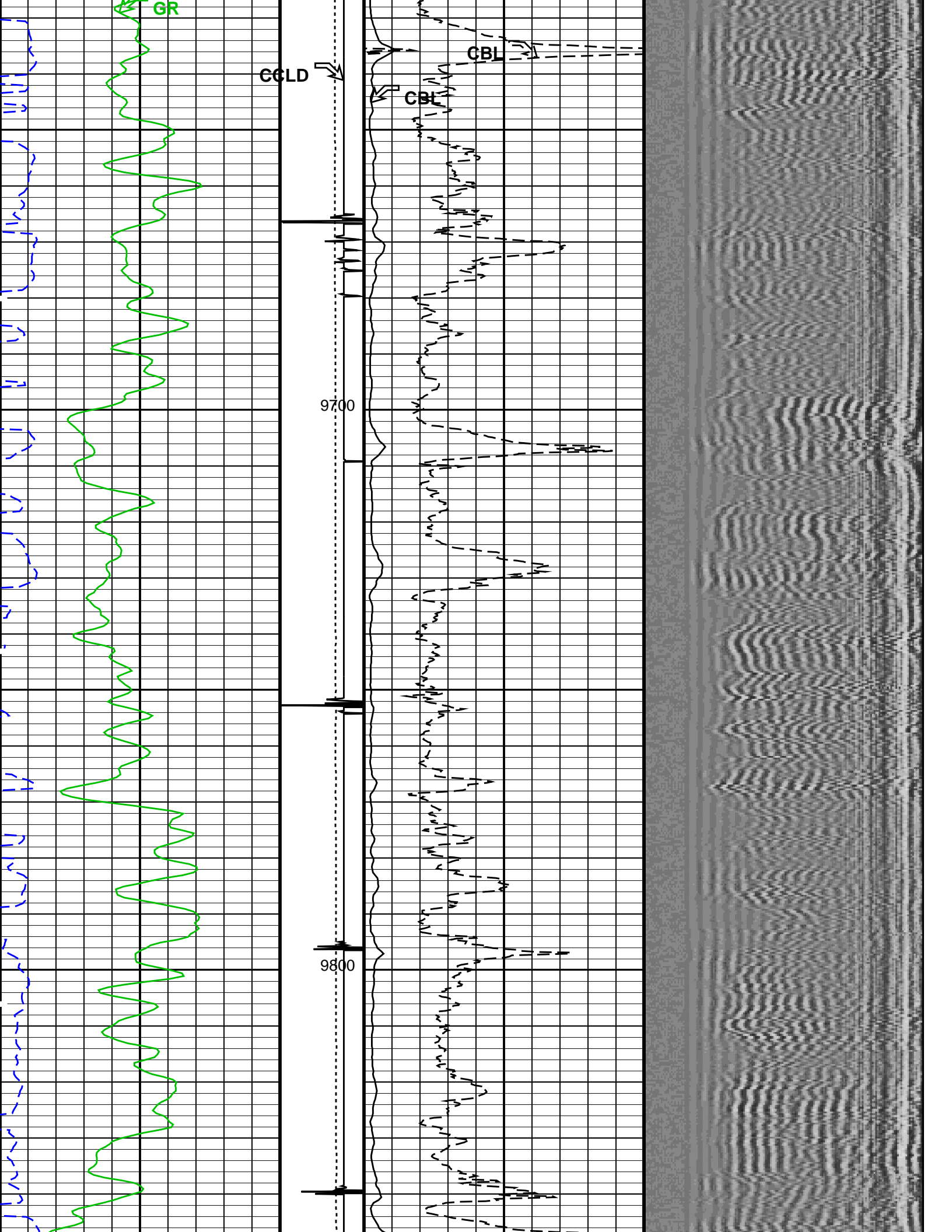


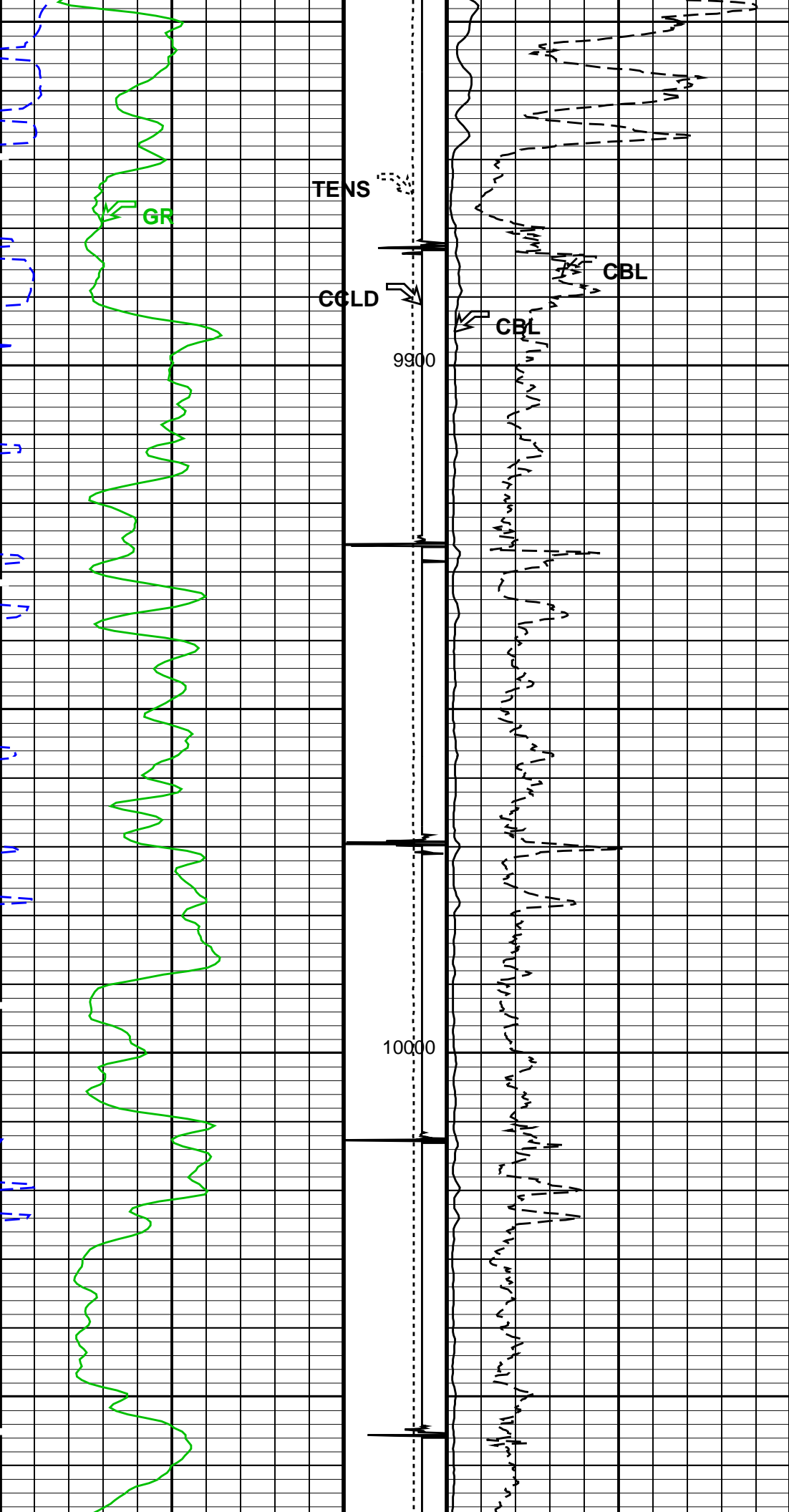


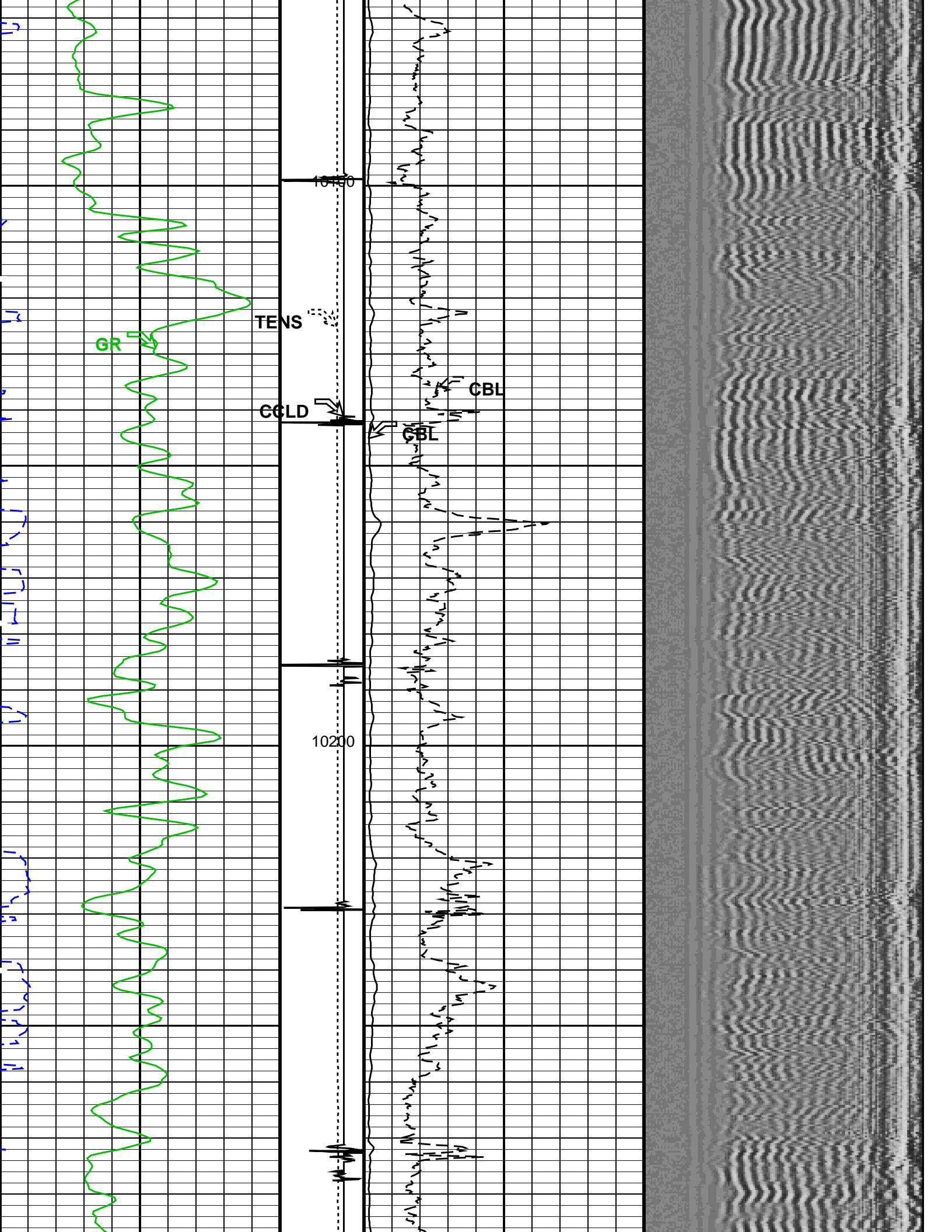


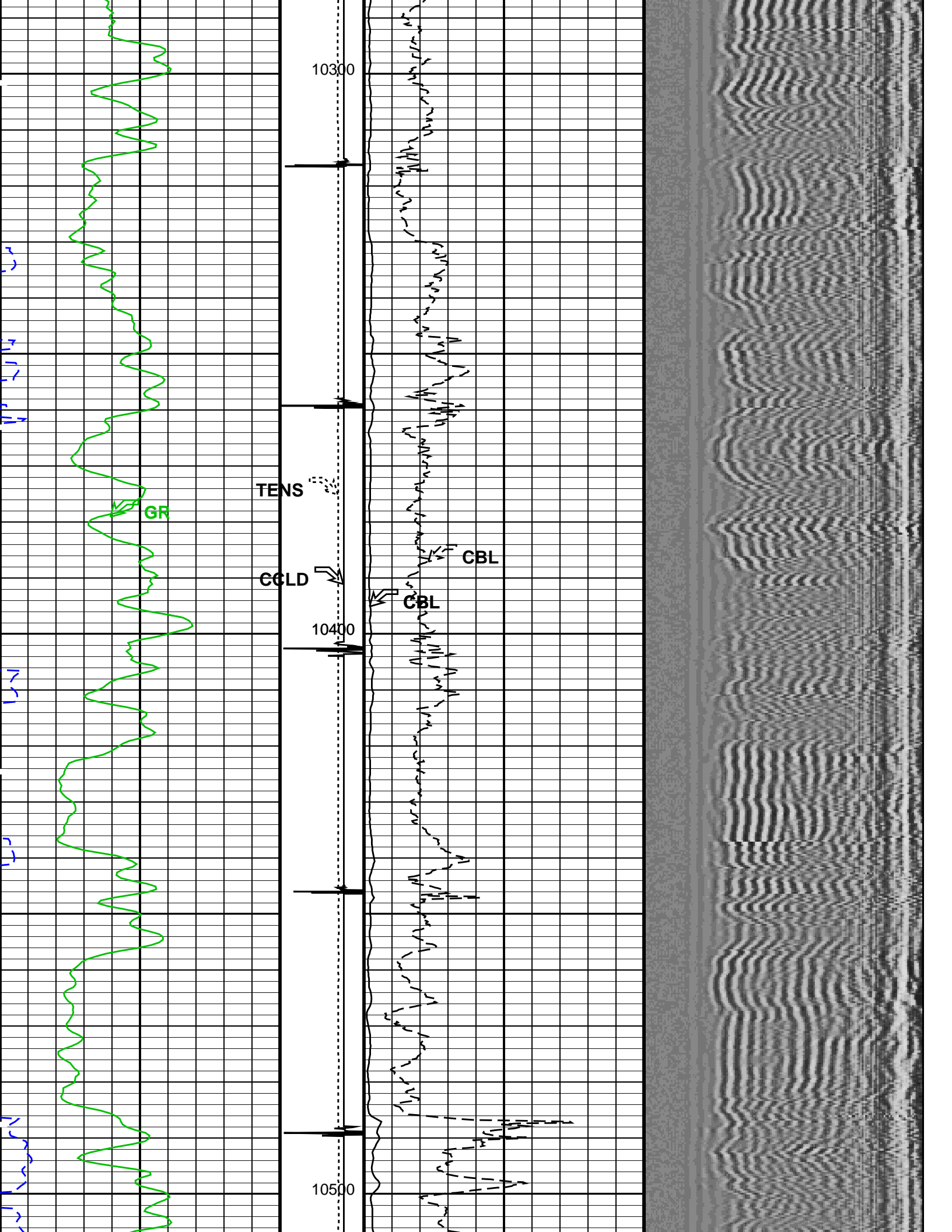


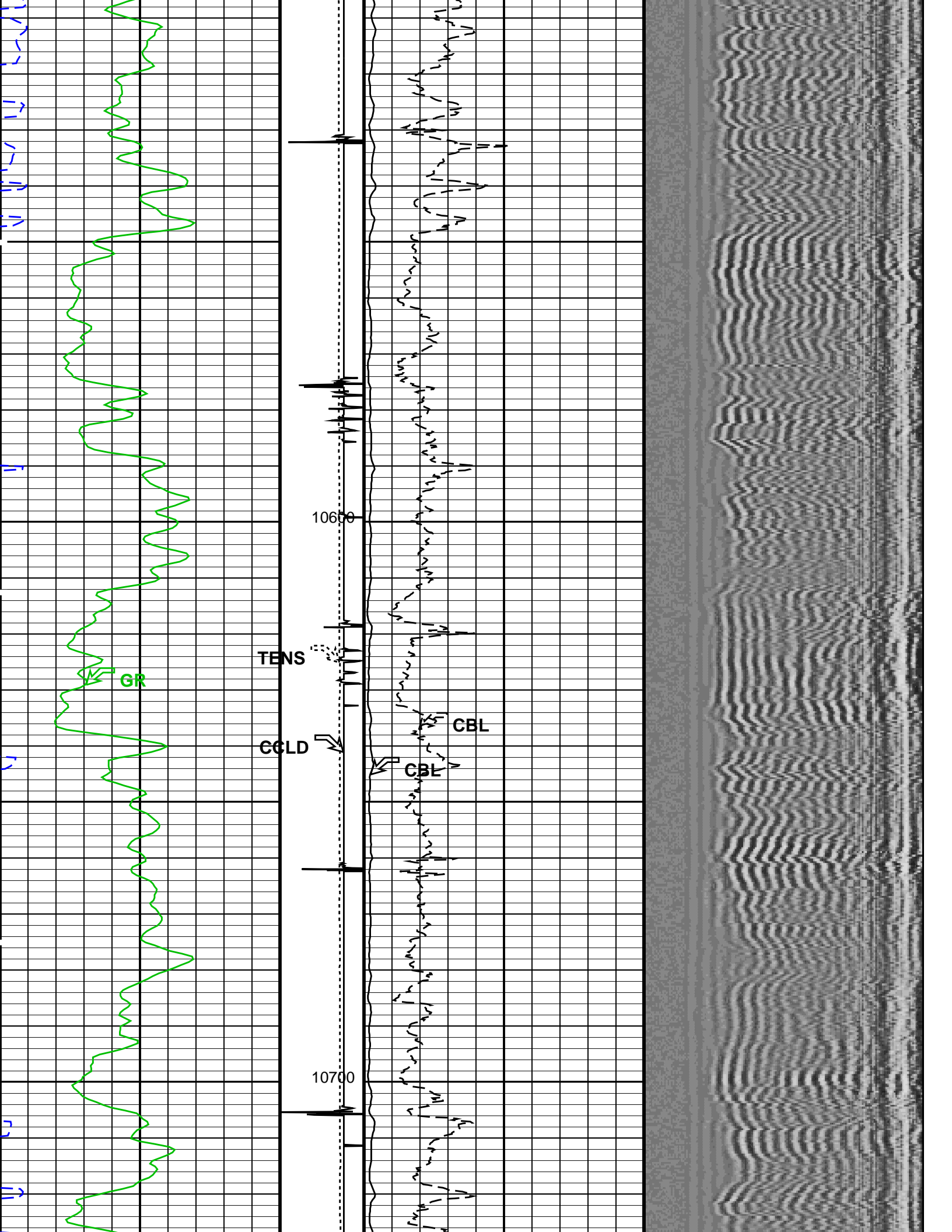


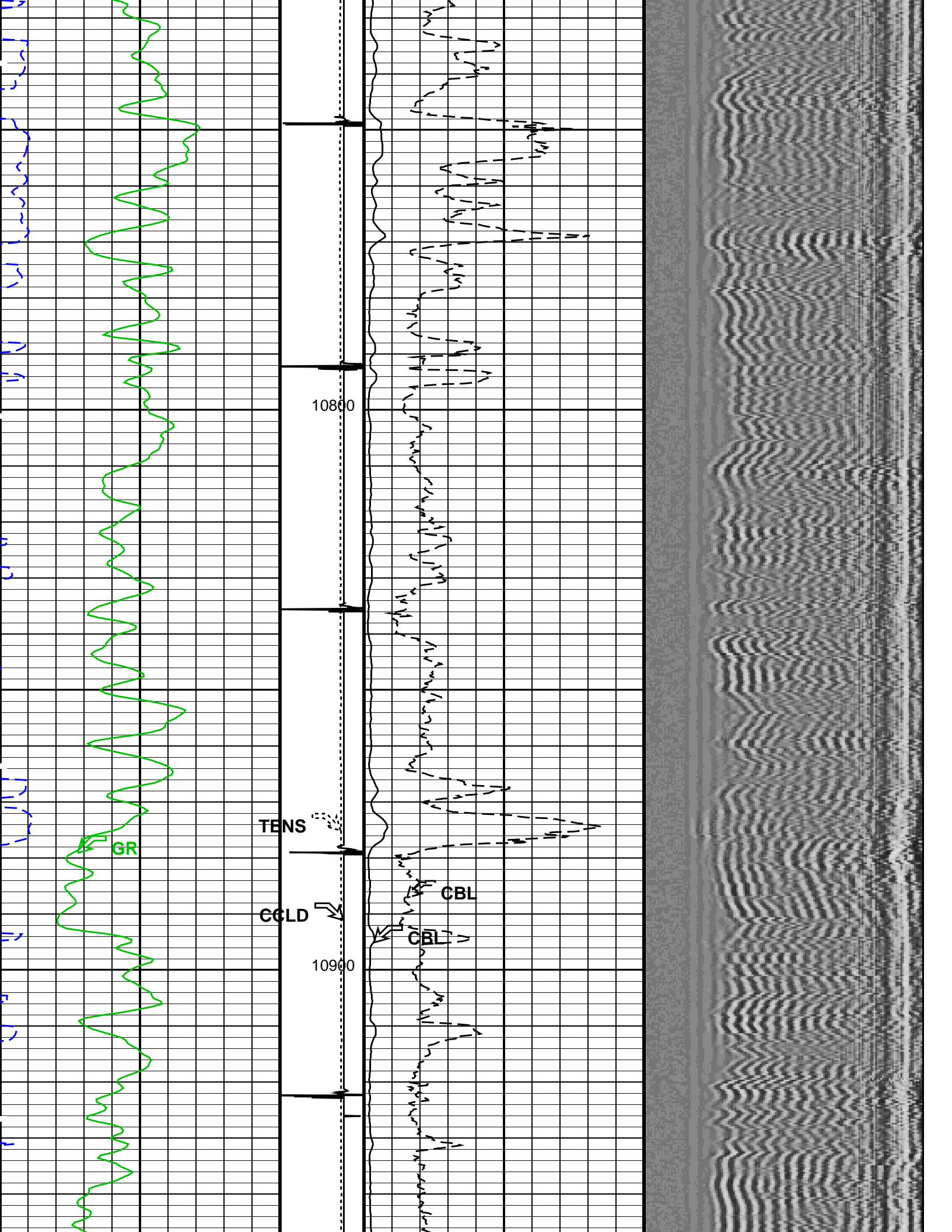


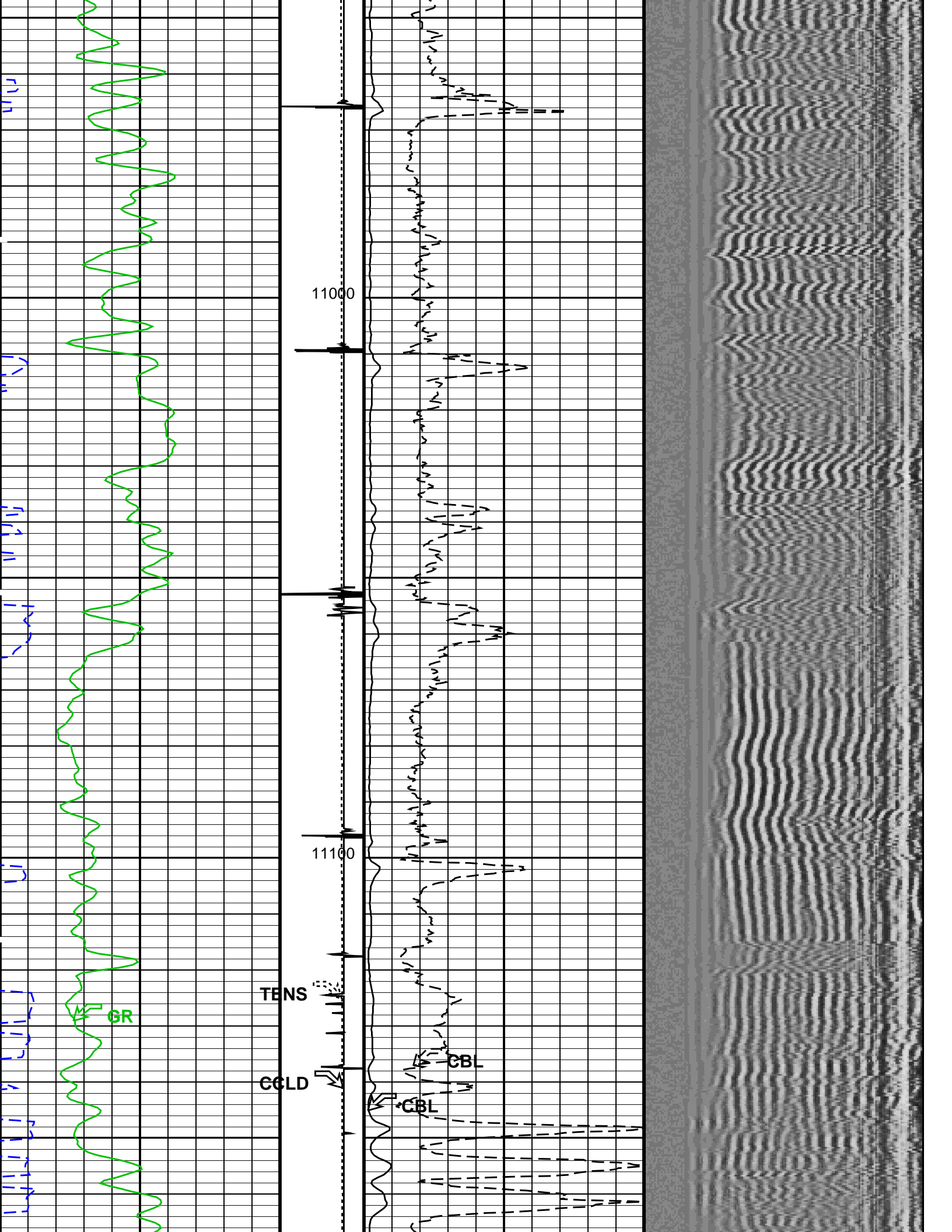


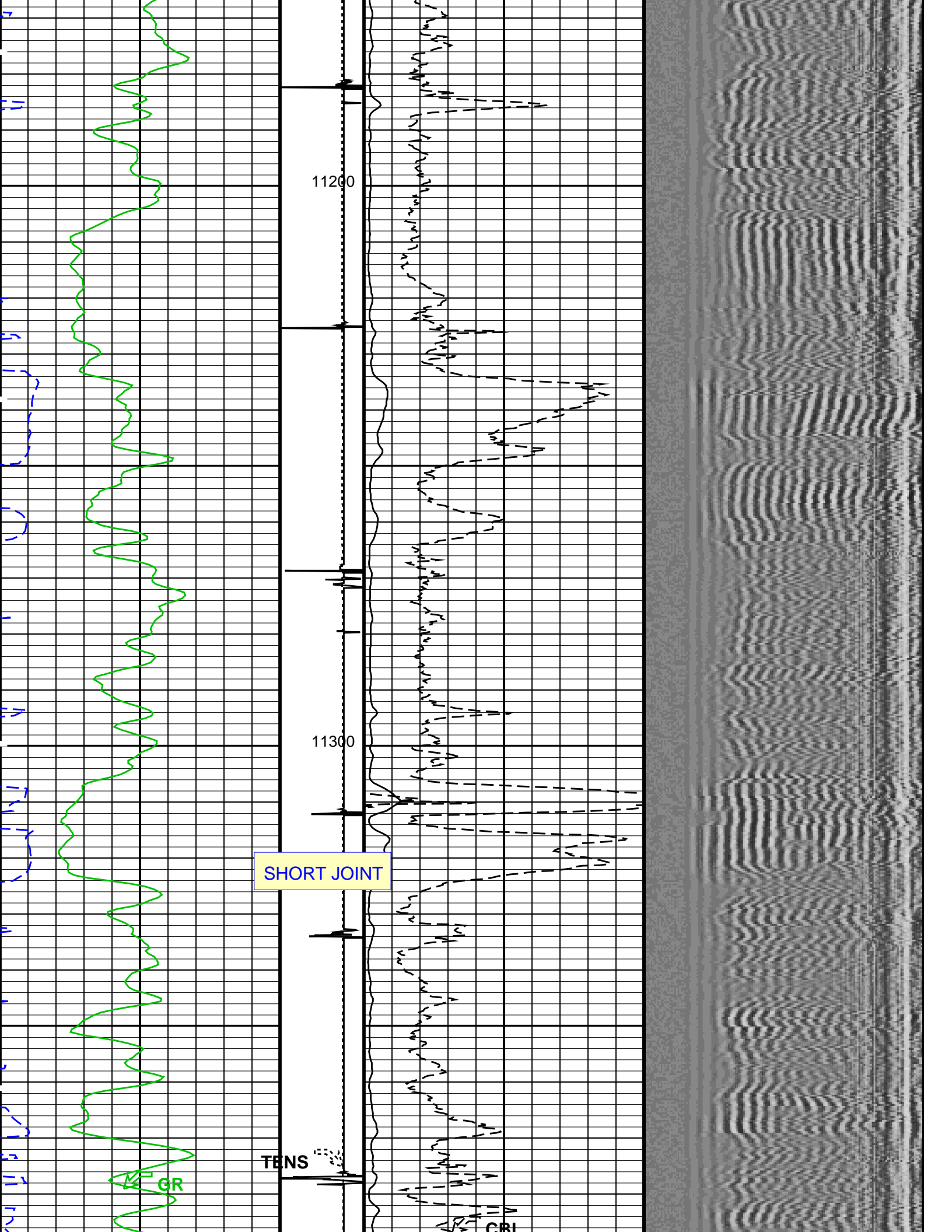


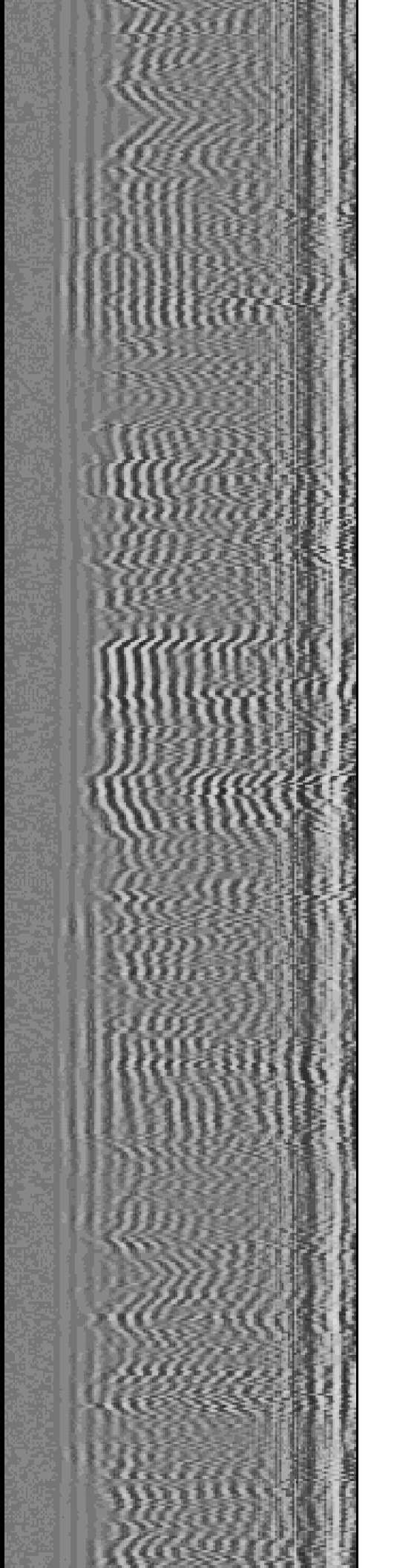
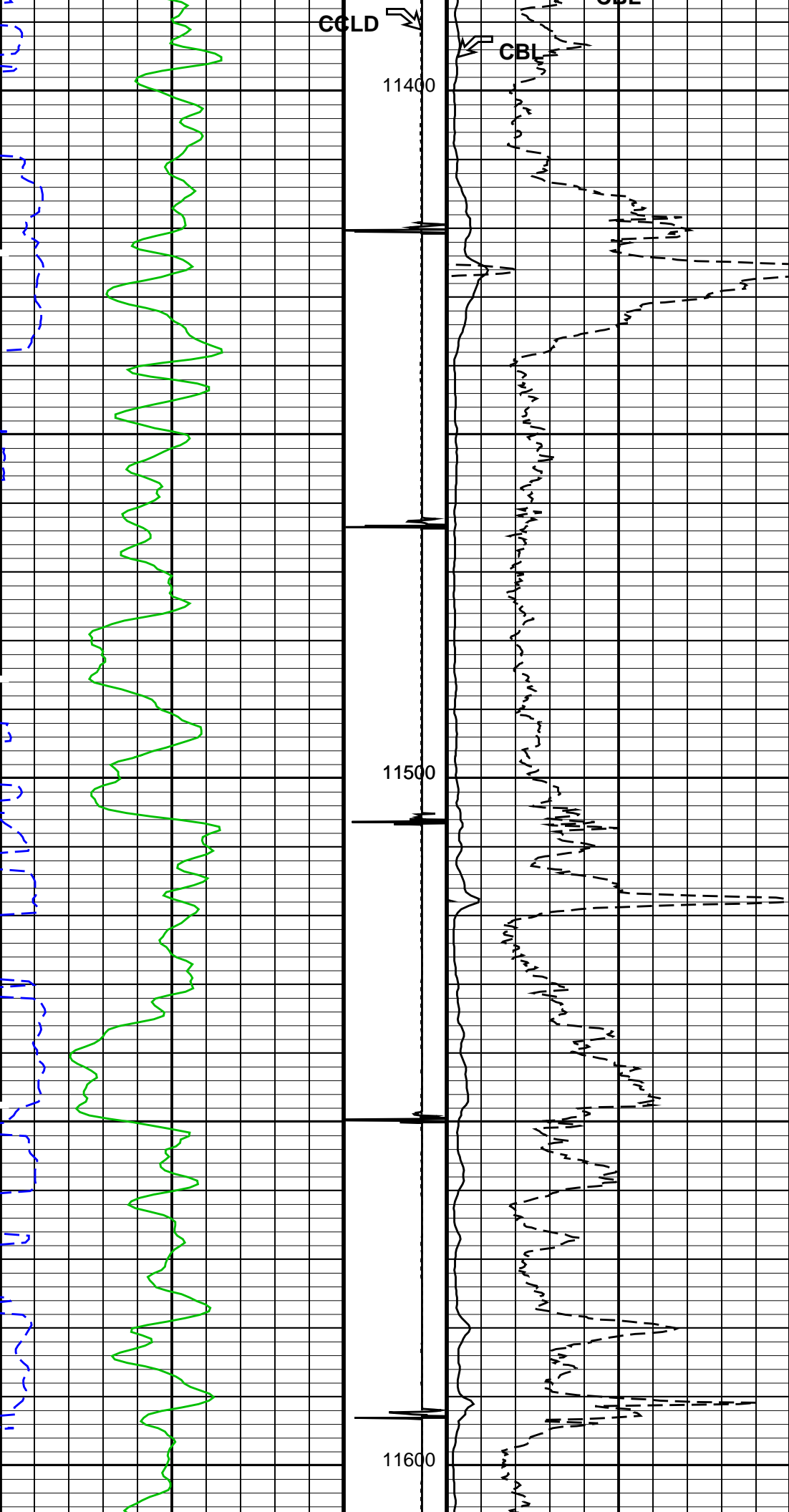


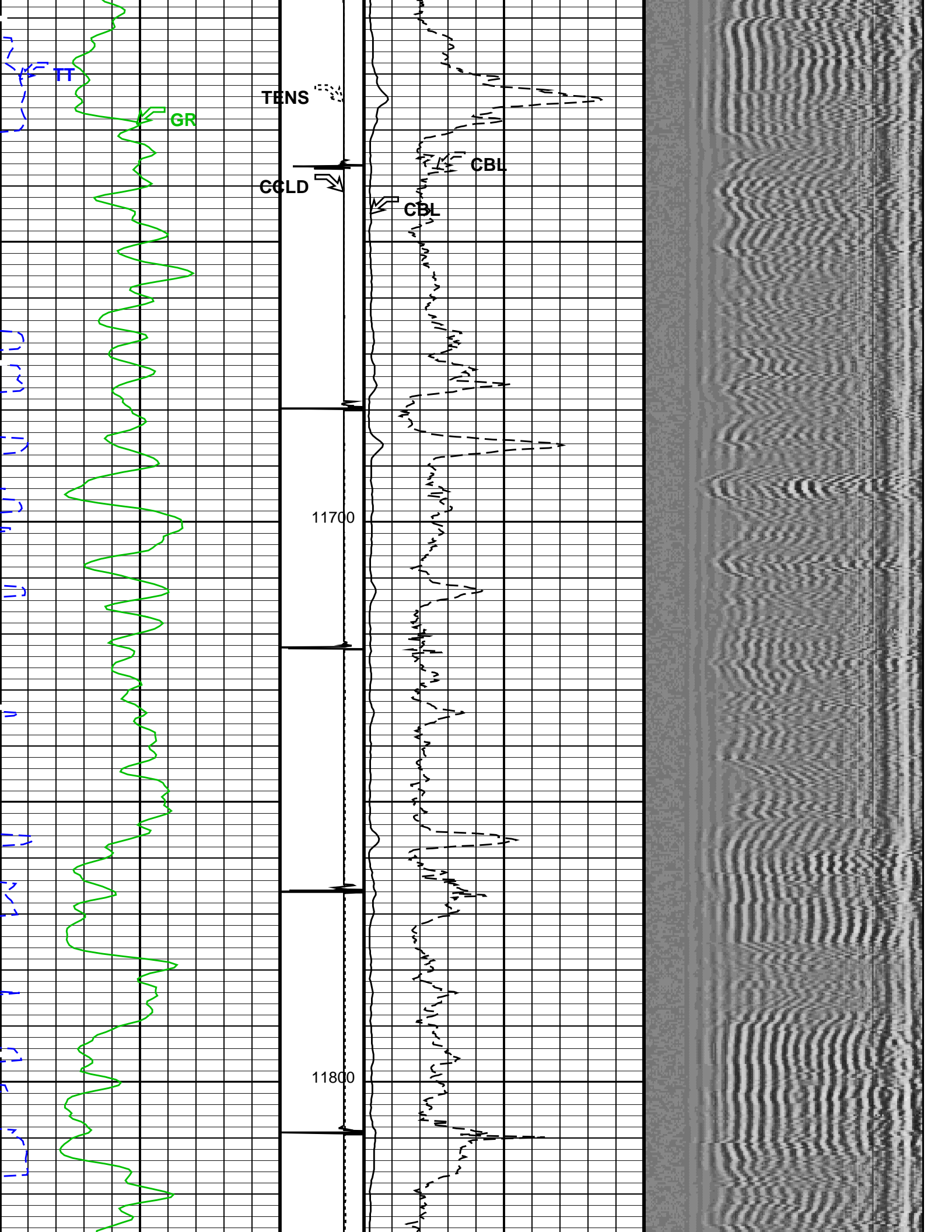


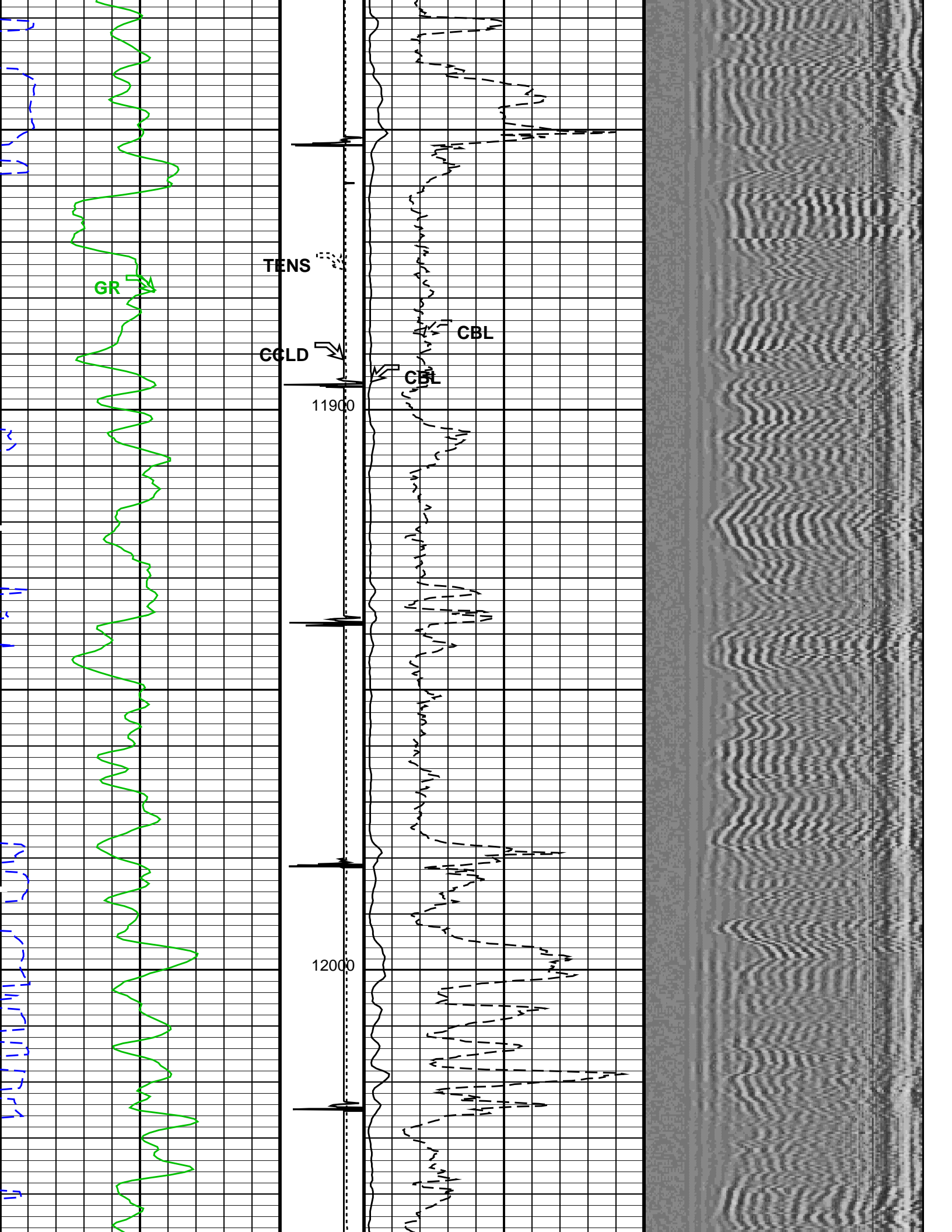


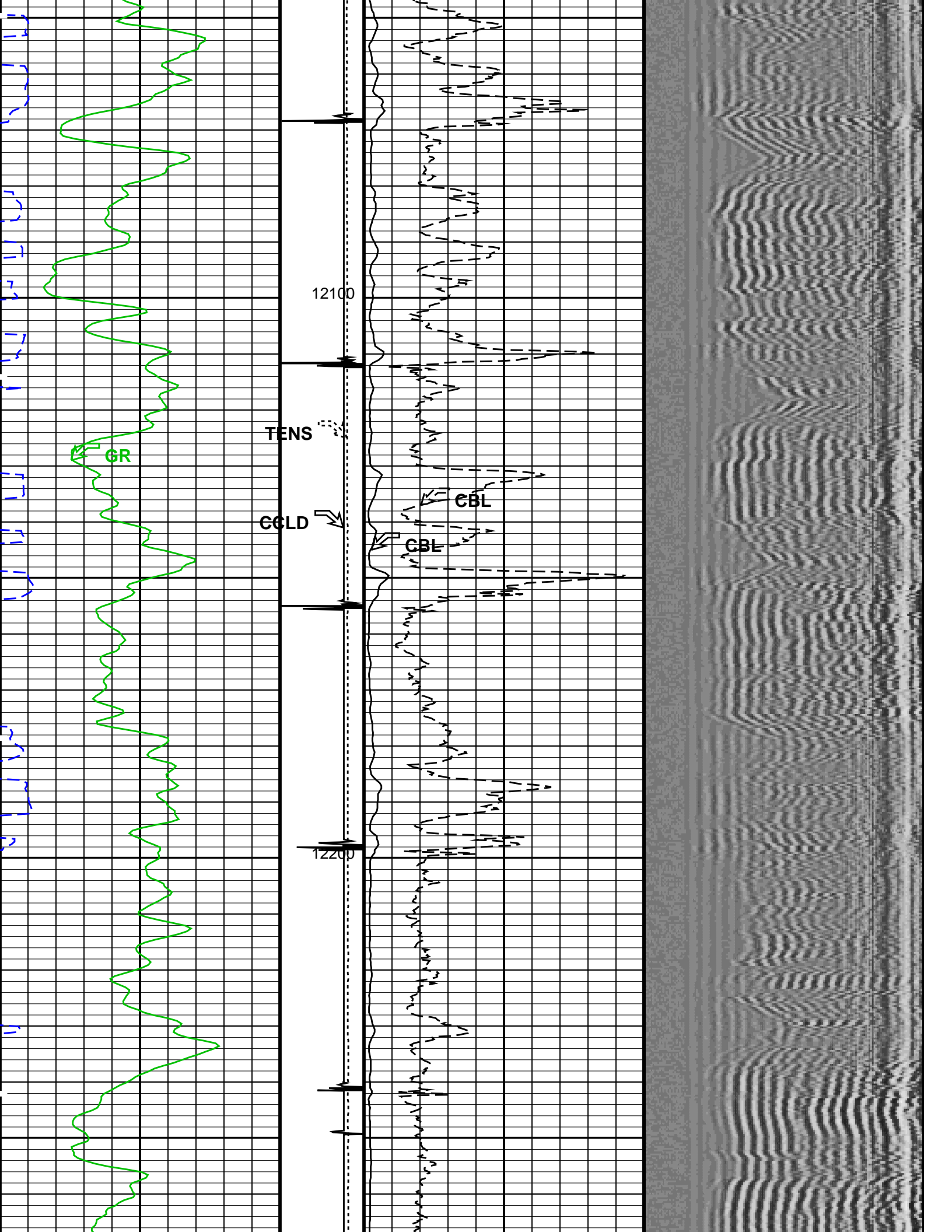


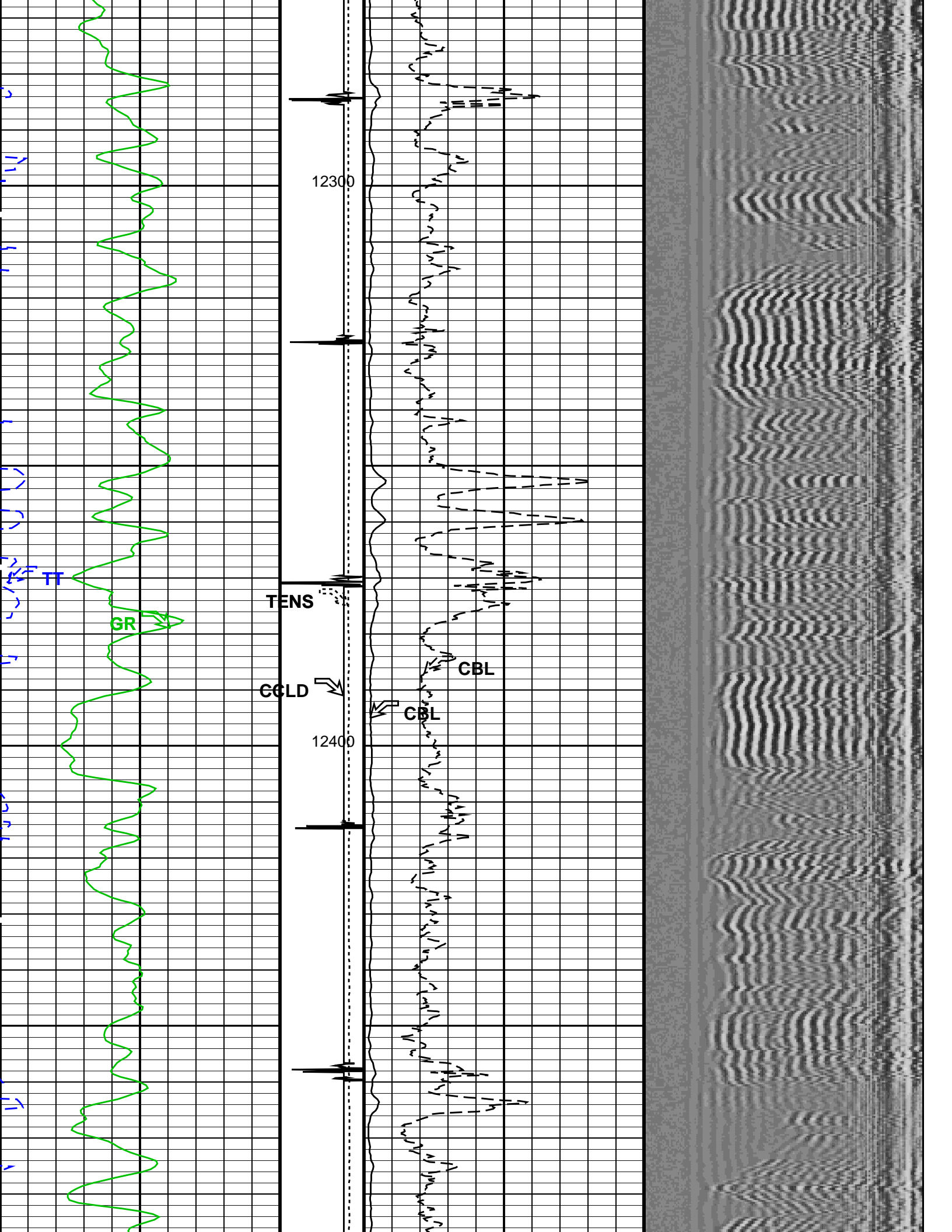


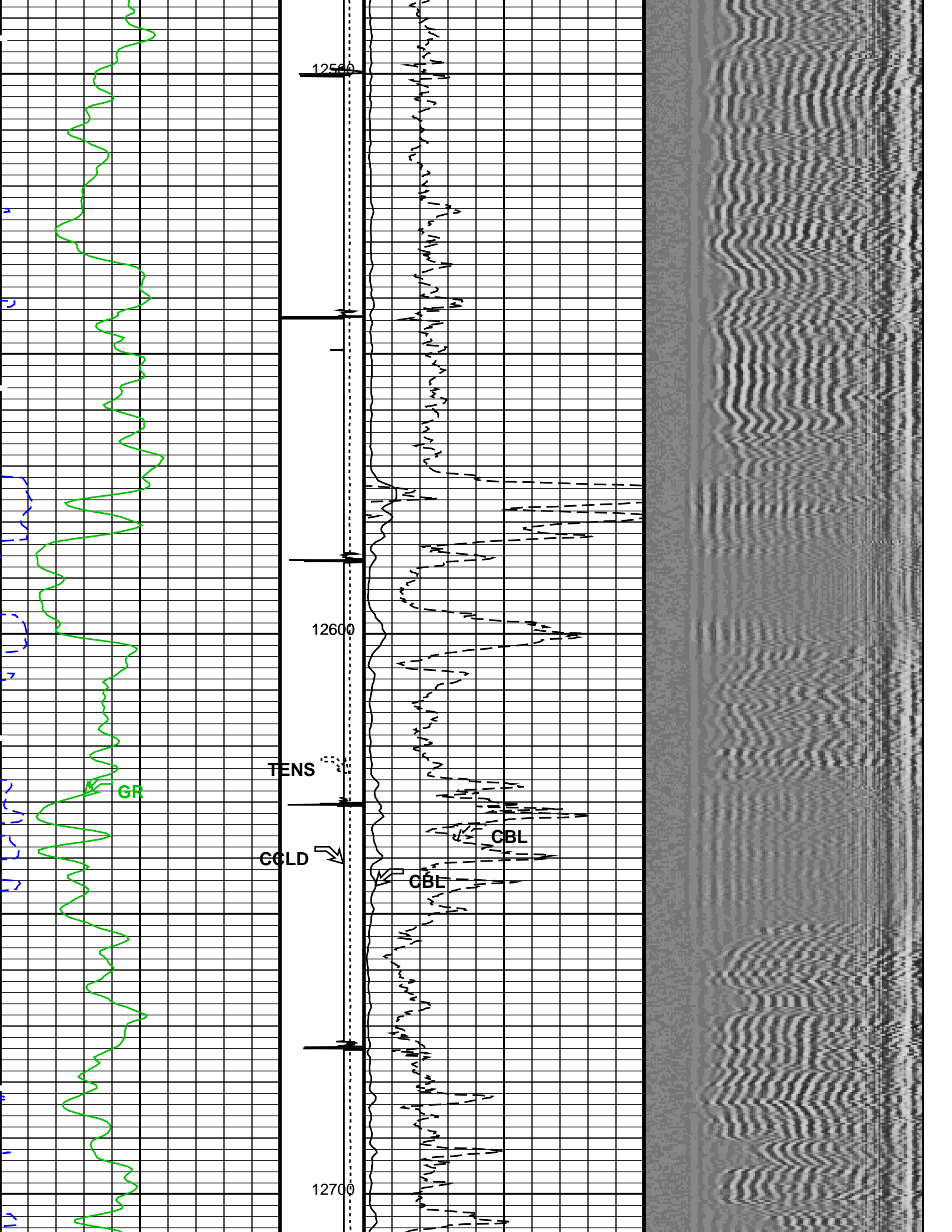


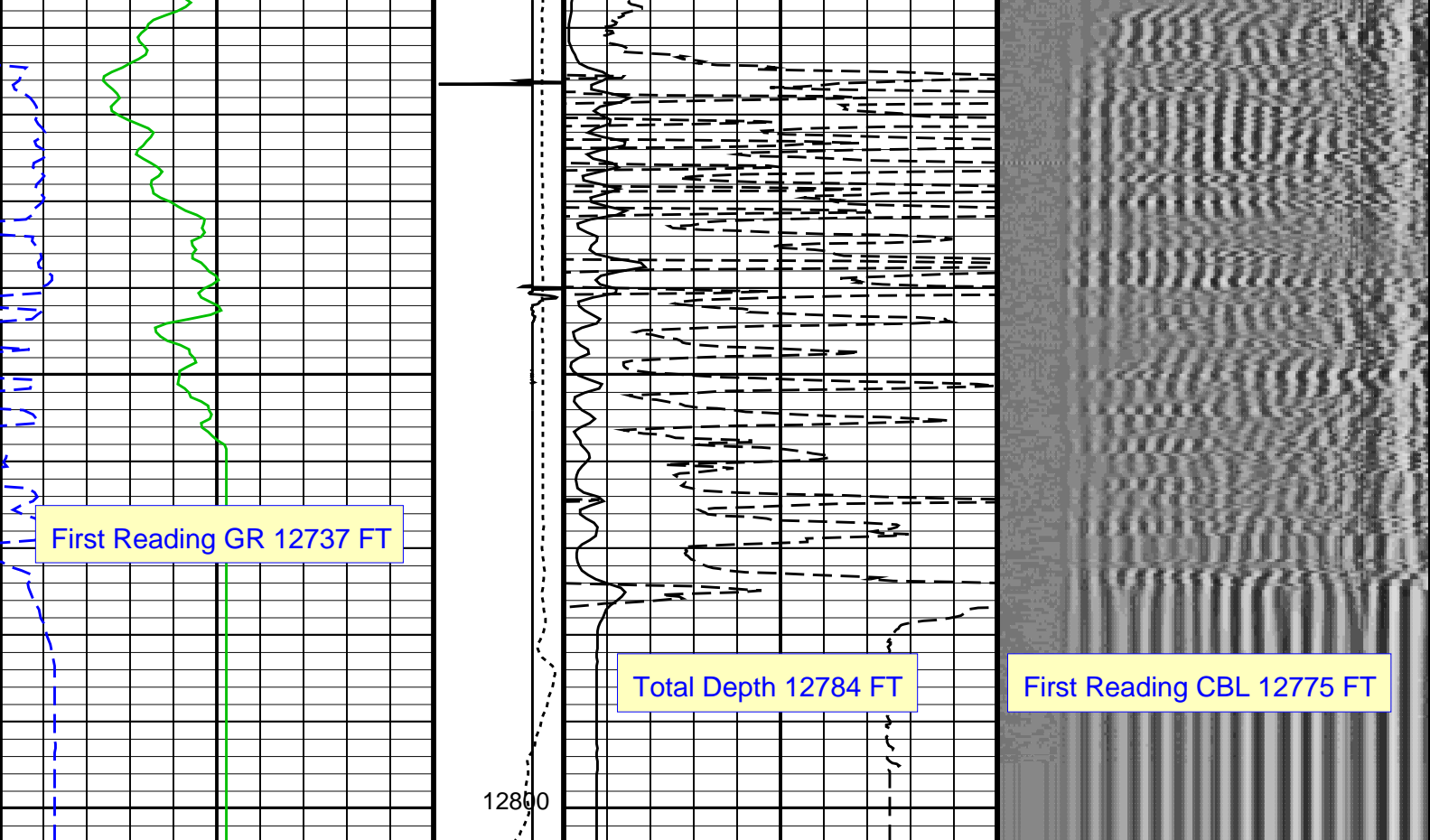












Gamma Ray (GR) (GAPI)		Tension (TENS) (LBF)	CBL Amplitude (CBL) (MV)		Min	Amplitude	Max
0	150	0 2000	0	100	200	VDL VariableDensity (VDL) (US)	1200
Transit Time (TT) (US)		Discriminat ed CCL (CCLD) (V)	CBL Amplitude (CBL) (MV)				
260	160	3 -1	0	10			

PIP SUMMARY

Time Mark Every 60 S

Format: CBL_VDL Vertical Scale: 5" per 100'

Graphics File Created: 25-Apr-2013 19:18

OP System Version: 19C0-187

SCMT-CB	19C0-187	RST-C	19C0-187
PSPT	19C0-187		

<<<SCMT Cement Evaluation Information Summary>>>

Sonde Serial Number SCMS-CB 8317

Current Casing Size 4.50000 IN

Casing Weight 11.6000 LB/F

Expected CBL Amplitude
in Free Pipe Section 80 MV

Minimum Sonic Amplitude	0.579149 MV (100% Cement)
	1.55185 MV (80% Cement)
MAP Minimum Sonic Amplitude	4.32284 MV (100% Cement)
	8.10244 MV (80% Cement)

Master Calibration (Normalization)

Before Calibration (Adjustment)

Date of Master Calibration 26-SEP-2012

CBL Correction Factor 0.0719381

CBL Adjustment Factor (CBAF) 1.20000

MAP 1 Correction Factor 0.116622

MAP Adjustment Factor (MPAF) 1.0

MAP 2 Correction Factor 0.138771

MAP 3 Correction Factor	0.154480
MAP 4 Correction Factor	0.126474
MAP 5 Correction Factor	0.116062
MAP 6 Correction Factor	0.126351
MAP 7 Correction Factor	0.134711
MAP 8 Correction Factor	0.138445

Parameters

DLIS Name	Description	Value	
SCMT-CB: Slim Cement Mapping Tool, 1-11/16 OD			
BILI	Bond Index Level for Zone Isolation	0.8	
CB3D	SCMT CBL 3 ft Peak Detection Mode	PEAK	
CB3G	SCMT CBL 3 ft Peak Detection T0_Delay and Noise Gate	224.559	US
CB3T	SCMT CBL 3 ft Fixed Threshold Level	20	MV
CB5D	SCMT CBL 5 ft Peak Detection Mode	PEAK	
CB5G	SCMT CBL 5 ft Peak Detection T0_Delay and Noise Gate	338.559	US
CB5T	SCMT CBL 5 ft Fixed Threshold Level	20	MV
CBLG	CBL Gate Width	45	US
CBRA	CBL LQC Reference Amplitude in Free Pipe	80	MV
CMCF	CBL Cement Type Compensation Factor	1	
CMTC	SCMT Slow Channel Multiplexer Mode	SCAN	
CMTM	SCMT Operating Mode	LOG	
CSCS	SCMT Slow Channel Index	VCC	
CTHI	Casing Thickness	0.255617	IN
DTF	Delta-T Fluid	189	US/F
FATT	Acoustic Attenuation due to Fluid	0	DB/F
FCF	CBL Fluid Compensation Factor	0.924277	
GOBO	Good Bond	1.55185	MV
MAPD	SCMT MAP Peak Detection Mode	PEAK	
MAPG	SCMT MAP Peak Detection T0_Delay and Noise Gate	167.559	US
MAPT	SCMT MAP Fixed Threshold Level	30	MV
MATT	Maximum Attenuation	16.5449	DB/F
MCCF	MAP Cement Type Compensation Factor	1	
MCi	Minimum Cemented Interval for Isolation	1.25	FT
MMSA	MAP Minimum Sonic Amplitude	4.32284	MV
MSA	Minimum Sonic Amplitude	0.579149	MV
PEDE	Peak Detection On/Off Switch in Playback	OFF	
VDLG	VDL Manual Gain	5	
ZCMT	Acoustic Impedance of Cement	6.8	MRAY
System and Miscellaneous			
CSIZ	Current Casing Size	4.500	IN
DFD	Drilling Fluid Density	8.40	LB/G
DO	Depth Offset for Playback	0.0	FT
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	12784	FT

Input DLIS Files

DEFAULT	SCMT_RST_PSP_011PUP	FN:9	PRODUCER	25-Apr-2013 19:00	12804.0 FT	-54.0 FT
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Output DLIS Files

DEFAULT	SCMT_RST_PSP_005PUP	FN:4	PRODUCER	25-Apr-2013 19:18
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REPEAT ANALYSIS CBL VDL

MAXIS Field Log

Input DLIS Files

SCMT_RST_PSP_003LUP	FN:2	25-Apr-2013 19:29	8319.5 FT	7994.5 FT
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Output DLIS Files

DEFAULT

SCMT_RST_PSP_006PUP

FN:5

PRODUCER

25-Apr-2013 19:35

8321.5 FT

7996.5 FT

OP System Version: 19C0-187

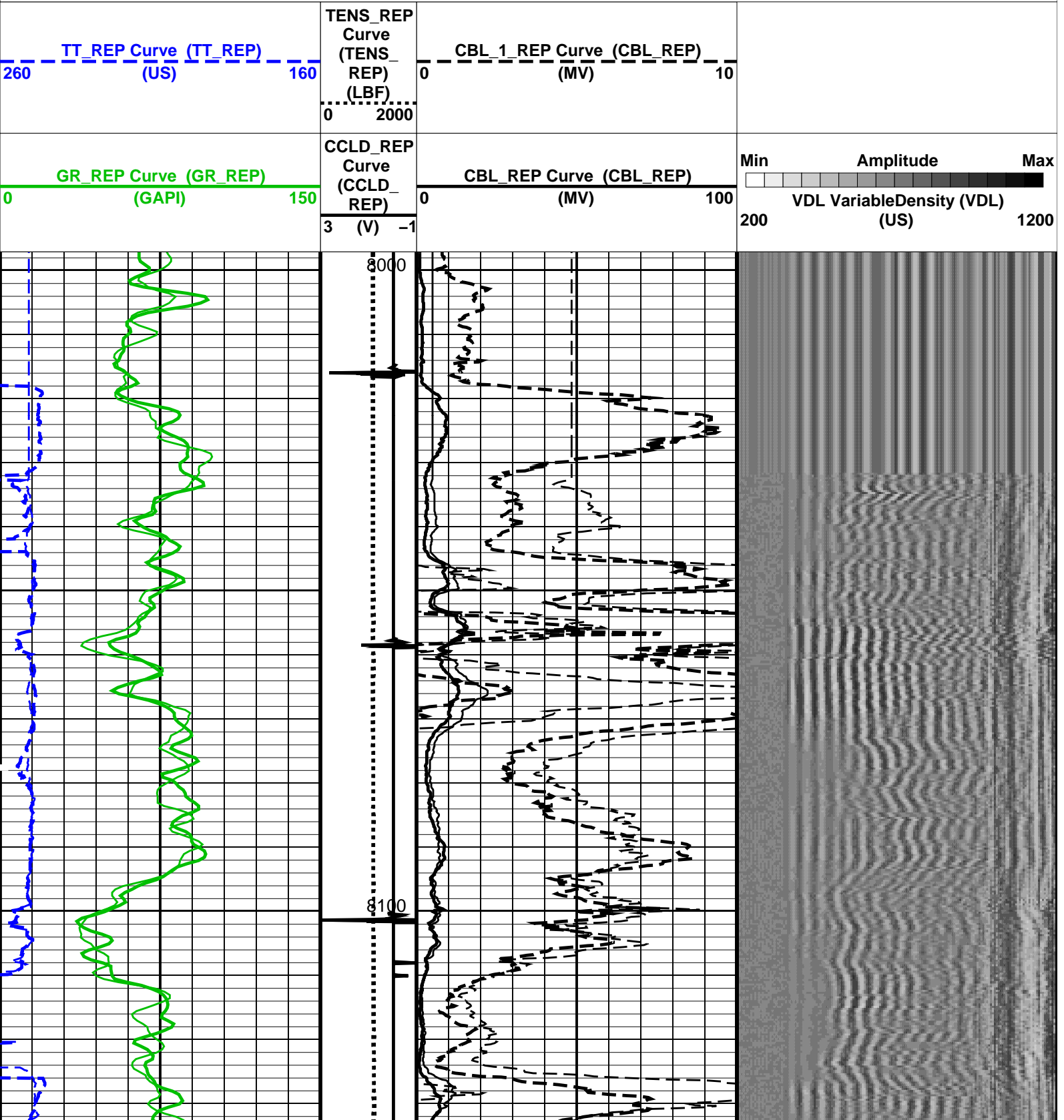
SCMT-CB
PSPT19C0-187
19C0-187

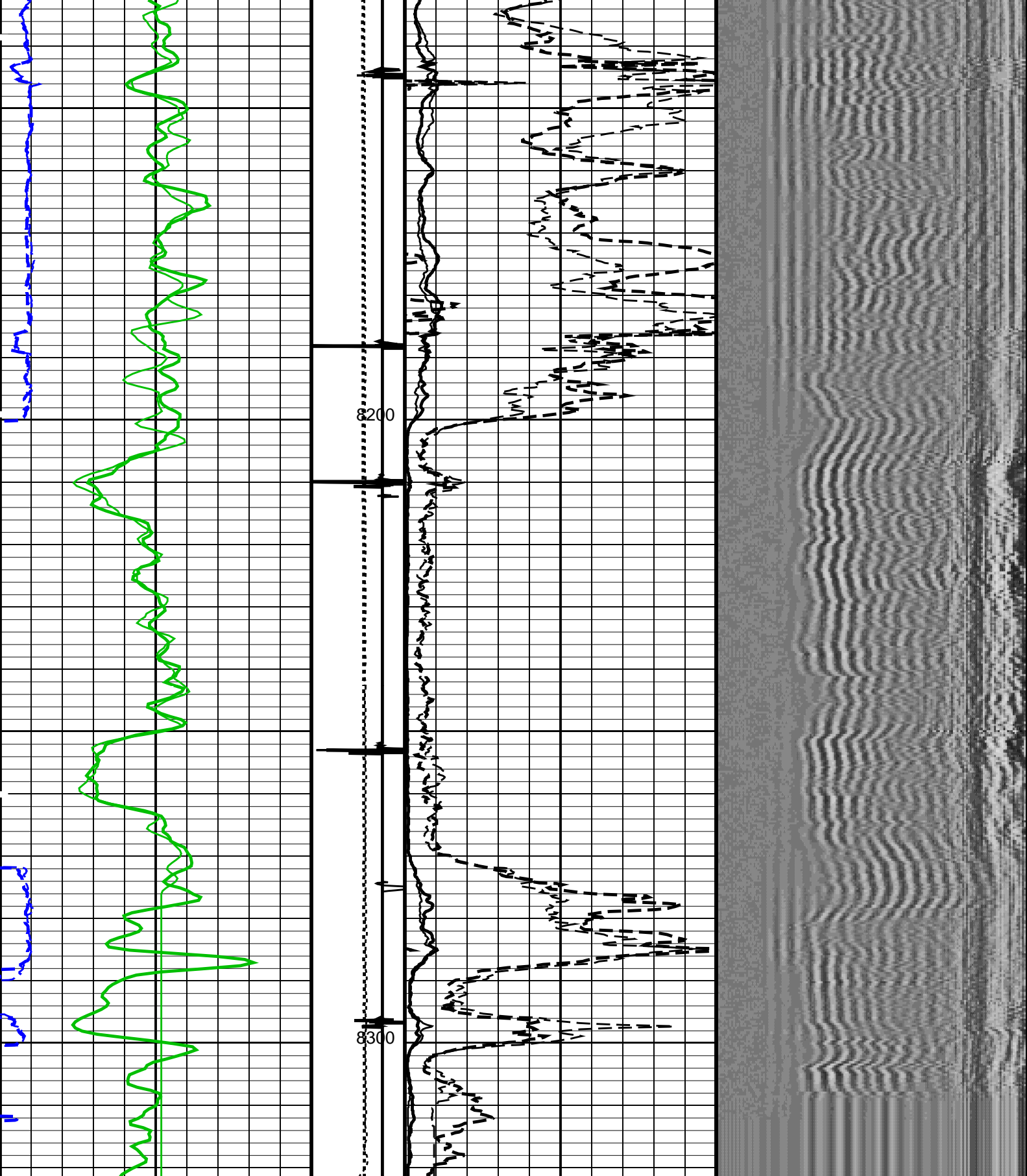
RST-C

19C0-187

PIP SUMMARY

Time Mark Every 60 S





<p>GR_REP Curve (GR_REP)</p> <p>(GAPI)</p> <p>0 150</p>	<p>CCLD_REP Curve (CCLD_REP)</p> <p>(V)</p> <p>3 -1</p>	<p>CBL_REP Curve (CBL_REP)</p> <p>(MV)</p> <p>0 100</p> <p>Min Amplitude Max</p> <p>VDL VariableDensity (VDL)</p> <p>(US)</p> <p>200 1200</p>
<p>TT_REP Curve (TT_REP)</p> <p>(US)</p> <p>260 160</p>	<p>TENS_REP Curve (TENS_REP)</p> <p>(MV)</p> <p>0 10</p>	

PIP SUMMARY

Time Mark Every 60 S

Format: CBL_VDL_REP Vertical Scale: 5" per 100'

Graphics File Created: 25-Apr-2013 19:35

OP System Version: 19C0-187

SCMT-CB 19C0-187 RST-C 19C0-187
PSPT 19C0-187

<<<SCMT Cement Evaluation Information Summary>>>

Sonde Serial Number	SCMS-CB 8317		
Current Casing Size	4.50000 IN		
Casing Weight	11.6000 LB/F		
Expected CBL Amplitude in Free Pipe Section	80 MV	Minimum Sonic Amplitude	0.579149 MV (100% Cement) 1.55185 MV (80% Cement)
		MAP Minimum Sonic Amplitude	4.32284 MV (100% Cement) 8.10244 MV (80% Cement)
Master Calibration (Normalization)		Before Calibration (Adjustment)	
Date of Master Calibration	26-SEP-2012		
CBL Correction Factor	0.0719381	CBL Adjustment Factor (CBAF)	1.20000
MAP 1 Correction Factor	0.116622	MAP Adjustment Factor (MPAF)	1.0
MAP 2 Correction Factor	0.138771		
MAP 3 Correction Factor	0.154480		
MAP 4 Correction Factor	0.126474		
MAP 5 Correction Factor	0.116062		
MAP 6 Correction Factor	0.126351		
MAP 7 Correction Factor	0.134711		
MAP 8 Correction Factor	0.138445		

Parameters

DLIS Name	Description	Value	
	SCMT-CB: Slim Cement Mapping Tool, 1-11/16 OD		
BILI	Bond Index Level for Zone Isolation	0.8	
CB3D	SCMT CBL 3 ft Peak Detection Mode	PEAK	
CB3G	SCMT CBL 3 ft Peak Detection T0_Delay and Noise Gate	224.559	US
CB3T	SCMT CBL 3 ft Fixed Threshold Level	20	MV
CB5D	SCMT CBL 5 ft Peak Detection Mode	PEAK	
CB5G	SCMT CBL 5 ft Peak Detection T0_Delay and Noise Gate	338.559	US
CB5T	SCMT CBL 5 ft Fixed Threshold Level	20	MV
CBLG	CBL Gate Width	45	US
CBRA	CBL LQC Reference Amplitude in Free Pipe	80	MV
CMCF	CBL Cement Type Compensation Factor	1	
CMTC	SCMT Slow Channel Multiplexer Mode	SCAN	
CMTM	SCMT Operating Mode	LOG	
CSCS	SCMT Slow Channel Index	VCC	
CTHI	Casing Thickness	0.255617	IN
DTF	Delta-T Fluid	189	US/F
FATT	Acoustic Attenuation due to Fluid	0	DB/F
FCF	CBL Fluid Compensation Factor	0.924277	
GOBO	Good Bond	1.55185	MV
MAPD	SCMT MAP Peak Detection Mode	PEAK	
MAPG	SCMT MAP Peak Detection T0_Delay and Noise Gate	167.559	US
MAPT	SCMT MAP Fixed Threshold Level	30	MV
MATT	Maximum Attenuation	16.5449	DB/F
MCCF	MAP Cement Type Compensation Factor	1	
MCI	Minimum Cemented Interval for Isolation	1.25	FT
MMSA	MAP Minimum Sonic Amplitude	4.32284	MV
MSA	Minimum Sonic Amplitude	0.579149	MV
PEDE	Peak Detection On/Off Switch in Playback	OFF	
VDLG	VDL Manual Gain	5	
ZCMT	Acoustic Impedance of Cement	6.8	MRAY

System and Miscellaneous		Current Casing Size		4.500	IN
CSIZ		Drilling Fluid Density		8.40	LB/G
DFD		Depth Offset for Playback		2.0	FT
DO		Depth Offset for Repeat Analysis		0.0	FT
DORL		Playback Processing	RECOMPUTE		
PP		Total Depth	12784		FT
TD					

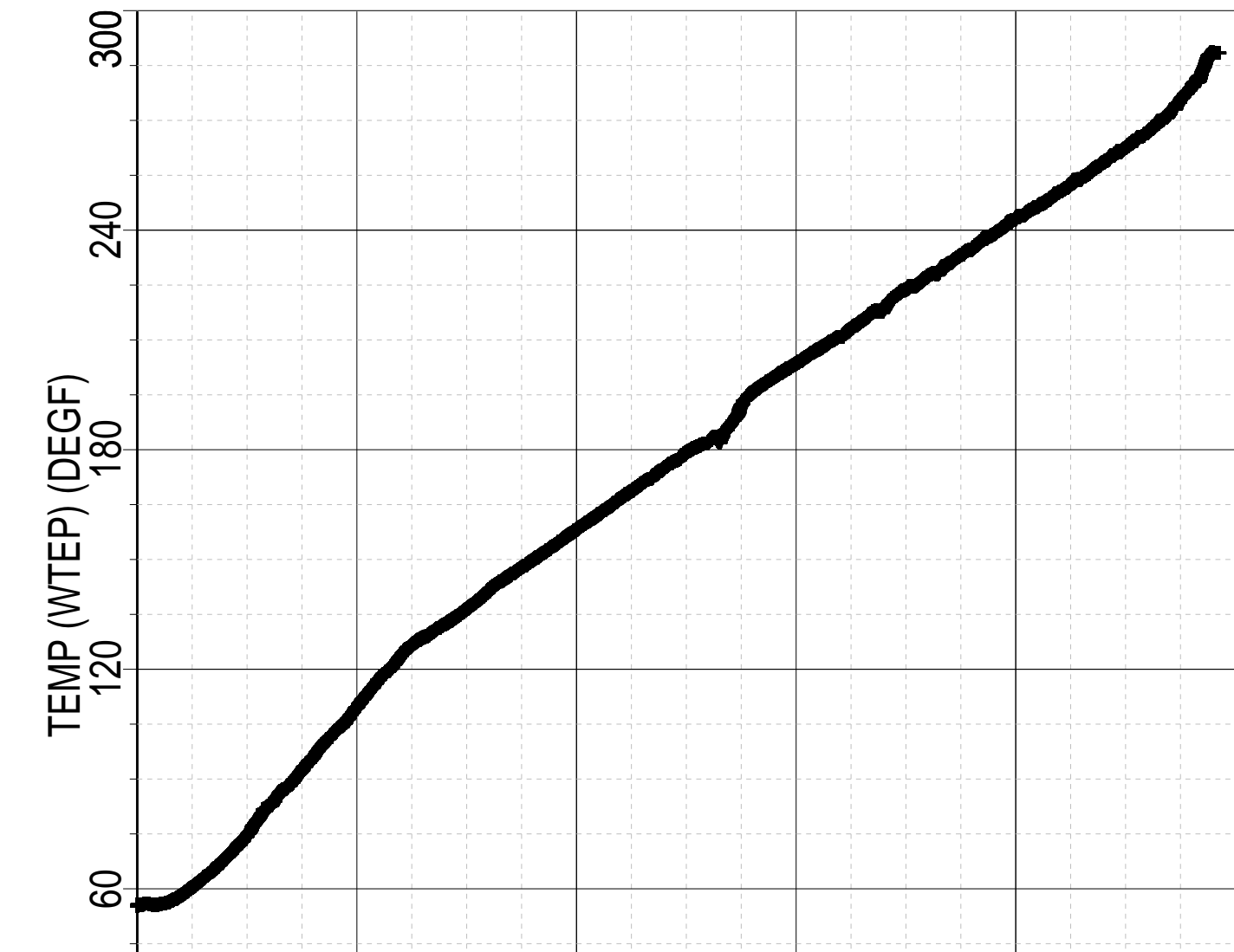
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SCMT_RST_PSP_005PUP	FN:4	25-Apr-2013 19:30	12804.0 FT	-54.0 FT	
Output DLIS Files					
DEFAULT	SCMT_RST_PSP_006PUP	FN:5	PRODUCER	25-Apr-2013 19:35	

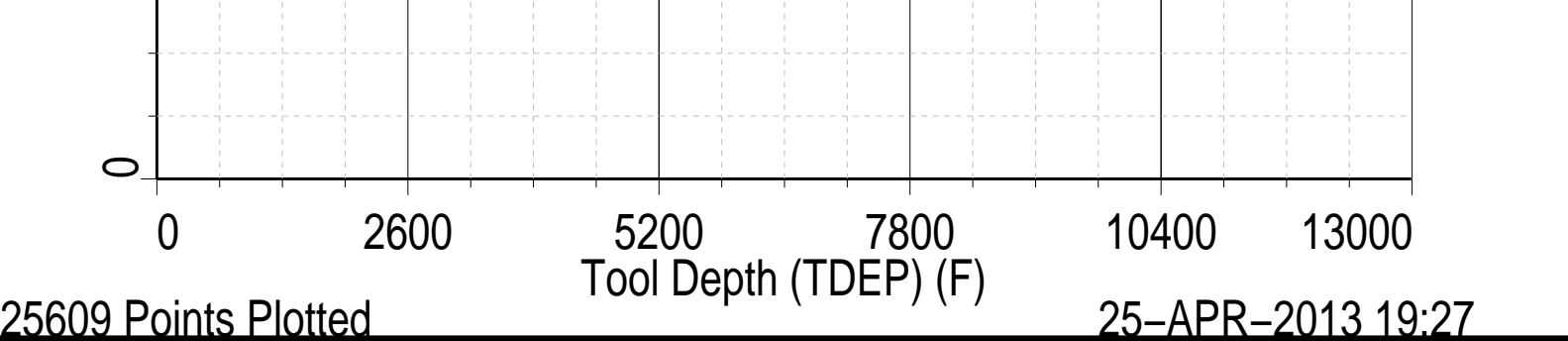


TEMPERATURE PLOT

MAXIS Field Log

Index: 12804.0 – -54.0 FT





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PBMS COEFFICIENTS

MAXIS Field Log

Client: ENCANA OIL & GAS (USA) INC
Field: STORY GULCH
Well: SGU 8509B-24 (L24 496)
Run date: 25-Apr-2013

Tool: PSP
Sub Type: PBMS
Sensor: GR

PBMS Gamma Ray
Sonde Serial NB RESISTORS FOR GR SENSOR N.33223,TOOL PBMS-BA0928. SENSOR S/N:
Sensor Serial NB 33223
Calib Date ddmmyy 090800
Matrix Size 12
Coeff CRC CFE2

GR HV Rt		
	Rt**0	Rt**1
Rt**0	<div>+.182000000000e+04</div>	<div>+.332000000000e+04</div>

Client: ENCANA OIL & GAS (USA) INC
Field: STORY GULCH

Tool: PSP
Sub Type: PBMS

PBMS RTD Well Thermometer

Sonde Serial NB

Sensor Serial NB

Calib Date ddmmyy

Matrix Size

Coeff CRC

COEFFICIENTS FOR RTD THERMOMETER PBMS–B.928 S/N:

928

280612

16

A24E

WTemp Coeff

Tt**0

Tt**1

Tt**2

Tt**0

–.391987973189E+03

+.191346892512E+03

–.440920753451E+02

Tt**3

Tt**4

Tt**5

Tt**0

+.957191300908E+01

–.711421725686E+00

0.0

Client:	ENCANA OIL & GAS (USA) INC	Tool:	PSP
Field:	STORY GULCH	Sub Type:	PBMS
Well:	SGU 8509B–24 (L24 496)	Sensor:	CQG
Run date: 25–Apr–2013			

PBMS Quartz Gauge type F

Sonde Serial NB

Sensor Serial NB

Calib Date ddmmyy

Matrix Size

Coeff CRC

COEFFICIENTS FOR CQG PBMS–B.928 S/N:

928

280612

66

9DC3

Pres Coeff

	Fb**0	Fb**1	Fb**2
Fc**0	+.714463802232E+04	+.183434658655E–01	–.156620073569E–06
Fc**1	–.100638308957E+01	–.119899563644E–04	–.912155899025E–10
Fc**2	+.936268101283E–06	+.423898071451E–10	+.958076371919E–15
Fc**3	+.185123362373E–11	+.203107925433E–15	0.0
Fc**4	0.0	0.0	0.0

Fc**5	0.0	0.0	0.0
	Fb**3	Fb**4	Fb**5
Fc**0	−.746577997611E−10	−.588773826860E−15	−.622250441458E−19
Fc**1	−.120636521092E−15	+.400325894750E−19	0.0
Fc**2	0.0	0.0	0.0
Fc**3	0.0	0.0	0.0
Fc**4	0.0	0.0	0.0
Fc**5	0.0	0.0	0.0

PBMS Quartz Gauge type F

Sonde Serial NB :
Sensor Serial NB 928
Calib Date ddmmyy 280612
Matrix Size 66
Coeff CRC 283B

Temp Coeff

	Fc**0	Fc**1	Fc**2
Fb**0	+.117016867873E+03	−.284359629614E−03	+.604391180345E−08
Fb**1	−.598309140812E−02	+.182731130848E−07	+.160166486172E−12
Fb**2	−.307621454576E−07	+.300601550309E−12	+.311233548560E−17
Fb**3	−.419658736767E−12	+.117473708647E−16	0.0
Fb**4	0.0	0.0	0.0
Fb**5	0.0	0.0	0.0
	Fc**3	Fc**4	Fc**5
Fb**0	+.114322792679E−12	+.153807711176E−17	−.736714260866E−21
Fb**1	−.528037875456E−18	−.220337637519E−21	0.0
Fb**2	0.0	0.0	0.0
Fb**3	0.0	0.0	0.0
Fb**4	0.0	0.0	0.0
Fb**5	0.0	0.0	0.0

PBMS Quartz Gauge type F

Sonde Serial NB :
Sensor Serial NB 928
Calib Date ddmmyy 280612
Matrix Size 16
Coeff CRC 093F

Clock Freq Coeff			
	(Fb'–Fc')**0	(Fb'–Fc')**1	(Fb'–Fc')**2
(Fb'–Fc')**0	+310874009898E+05	+288920923041E–02	+697940727038E–06
	(Fb'–Fc')**3	(Fb'–Fc')**4	(Fb'–Fc')**5
(Fb'–Fc')**0	–.657432344763E–10	–.412920638782E–15	+213369826099E–20

PBMS Quartz Gauge type F

Sonde Serial NB :
Sensor Serial NB 928
Calib Date ddmmyy 280612
Matrix Size 16
Coeff CRC 8419

Clock Temp Coeff			
	(Fb'–Fc')**0	(Fb'–Fc')**1	(Fb'–Fc')**2
(Fb'–Fc')**0	+115369519827E+03	–.565338877075E–02	–.333717531829E–07
	(Fb'–Fc')**3	(Fb'–Fc')**4	(Fb'–Fc')**5
(Fb'–Fc')**0	–.124387135327E–12	+713102327208E–16	–.316084316842E–20



MASTER CALIBRATION

MAXIS Field Log

Slim Cement Mapping Tool, 1–11/16 OD / Equipment Identification

Primary Equipment:

Slim Cement Mapping Xmitter Electronics	SCMX – CA	
Slim Cement Mapping Sonde	SCMS – CB	8317
Slim Cement Mapping Cartridge	SCMC – CA	8120

Auxiliary Equipment:

Slim Electronics Cartridge Housing	SECH – CA	
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Slim Cement Mapping Tool, 1–11/16 OD Master Calibration									
SCMT CBL and MAP Amplitude Normalization in SFT–155/–255									
Phase	MAP 1 Amplitude Plus MV			Value	Phase	MAP 2 Amplitude Plus MV			Value
Master	<div><div></div></div>			1029	Master	<div><div></div></div>			864.7
500.0 (Minimum) 1075 (Nominal) 1650 (Maximum)					500.0 (Minimum) 1075 (Nominal) 1650 (Maximum)				
Phase	MAP 3 Amplitude Plus MV			Value	Phase	MAP 4 Amplitude Plus MV			Value
Master	<div><div></div></div>			776.8	Master	<div><div></div></div>			948.8

<div><div></div></div> <div>500.0 (Minimum)</div> <div>1075 (Nominal)</div> <div>1650 (Maximum)</div>			<div><div></div></div> <div>500.0 (Minimum)</div> <div>1075 (Nominal)</div> <div>1650 (Maximum)</div>				
Phase	MAP 5 Amplitude Plus MV		Value	Phase	MAP 6 Amplitude Plus MV		Value
Master	<div><div></div></div>		1034	Master	<div><div></div></div>		949.7
<div><div></div></div> <div>500.0 (Minimum)</div> <div>1075 (Nominal)</div> <div>1650 (Maximum)</div>			<div><div></div></div> <div>500.0 (Minimum)</div> <div>1075 (Nominal)</div> <div>1650 (Maximum)</div>				
Phase	MAP 7 Amplitude Plus MV		Value	Phase	MAP 8 Amplitude Plus MV		Value
Master	<div><div></div></div>		890.8	Master	<div><div></div></div>		866.8
<div><div></div></div> <div>500.0 (Minimum)</div> <div>1075 (Nominal)</div> <div>1650 (Maximum)</div>			<div><div></div></div> <div>500.0 (Minimum)</div> <div>1075 (Nominal)</div> <div>1650 (Maximum)</div>				
Phase	CBL Amplitude Plus MV		Value				
Master	<div><div></div></div>		1334				
<div><div></div></div> <div>1000 (Minimum)</div> <div>1350 (Nominal)</div> <div>1700 (Maximum)</div>							
Master: 26-Sep-2012 14:15							

Company: **ENCANA OIL & GAS (USA) INC**

Schlumberger

Well: **SGU 8509B-24 (L24 496)**

Field: **STORY GULCH**

County: **GARFIELD**

State: **COLORADO**

SLIM CEMENT MAPPING LOG

CBL-VDL

GR-CCL