



Company: ENCANA OIL & GAS (USA) INC.

Well: SG 8506D-22 N22 496

Field: STORY GULCH

County: GARFIELD

State: COLORADO

County: GARFIELD
Field: STORY GULCH
Location: SHL: SESW 1279' FSL & 1992' FSL
Well: SG 8506D-22 N22 496
Company: ENCANA OIL & GAS (USA) INC.

CEMENT BOND LOG			
CBL- VDL			
GAMMA RAY - CCL			
LOCATION			
SHL: SESW 1279' FSL & 1992' FWL		Elev.: K.B. 7607.00 ft	
BHL: SESW 2370' FNL & 1328' FWL		G.L. 7585.00 ft	
		D.F. 7606.00 ft	
Permanent Datum: _____		GROUND LEVEL _____	
Log Measured From: _____		KELLY BUSHING _____	
Drilling Measured From: _____		KELLY BUSHING _____	
API Serial No. _____		Section 22	
05-045-20648-000C		Township 4S	
		Range 96W	

	Run 1	Run 2	Run 3
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 28-Feb-2012

Run Number ONE

Depth Driller 11437 ft

Schlumberger Depth 11359 ft

Bottom Log Interval 11351 ft

Top Log Interval 200 ft

Casing Fluid Type WATER

Salinity

Density 8.4 lbm/gal

Fluid Level 22 ft

BIT/CASING/TUBING STRING

Bit Size 8.750 in

From 30 ft

To 11437 ft

Casing/Tubing Size 11437 ft

Weight 4.500 in

Grade 11.6 lbm/ft

From P-110

To 30 ft

Maximum Recorded Temperatures 11417 ft

Logger On Bottom 284 degF

Unit Number 28-Feb-2012

Recorded By 12:37

Witnessed By 391 GRAND JUNCTION

Recorded By DAVID PATE

Witnessed By UNATTENDED

DEPTH SUMMARY LISTING

Date Created: 28-FEB-2012 11:08:52

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW-B	Type:	CMTD-C	Type:	1-25ZT
Serial Number:	6322	Serial Number:	1155	Serial Number:	3017
Calibration Date:	13-DEC-2011	Calibration Date:	07-JAN-2012	Length:	19800 FT
Calibrator Serial Number:	33	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:	3		
Wheel Correction 2:	-4	Calibration Peak Error:	7		

Depth Control Parameters

Log Sequence:	First Log In the Well
Rig Up Length At Surface:	202.00 FT
Rig Up Length At Bottom:	201.00 FT
Rig Up Length Correction:	1.00 FT
Stretch Correction:	10.00 FT
Tool Zero Check At Surface:	1.10 FT

Depth Control Remarks

1. ALL SCHLUMBERGER DEPTH CONTROL PROCEDURES FOLLOWED
2. IDW USED AS PRIMARY DEPTH CONTROL.
3. Z-CHART USED AS SECONDARY DEPTH CONTROL
- 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 OS1: NONE OS2: OS3: OS4: OS5:	OTHER SERVICES2 OS1: OS2: OS3: OS4: OS5:
REMARKS: RUN NUMBER 1 THIS IS FIRST RUN IN WELL. TOOL RAN AS PER TOOL SKETCH.	REMARKS: RUN NUMBER 2
TD TAGGED AT: 11359 FT	
MAXIMUM RECORDED TEMPERATURE AT TD: 284 DEGF	
MAXIMUM RECORDED PRESSURE AT TD: 4702 PSIA	

SHORT JOINTS: 6920 FT & 9930 FT					
EXPECTED FREE PIPE AMPLITUDE: 80mA.					
CYCLESKIPPING DUE TO GOOD BOND CAUSING TT TO READ HIGH					
AFE: 11155328					
PAD: N22 QUAD 3					
THANK YOU FOR CHOOSING SCHLUMBERGER.					
CREW: 391					
<div> <div>RUN 1</div> <div> <div>SERVICE ORDER #:</div> <div>PROGRAM VERSION:</div> <div>FLUID LEVEL:</div> </div> <div> <div>BIHS-00220</div> <div>19C0-187</div> <div>22 ft</div> </div> </div>			<div> <div>RUN 2</div> <div> <div>SERVICE ORDER #:</div> <div>PROGRAM VERSION:</div> <div>FLUID LEVEL:</div> </div> </div>		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1

RUN 2

SURFACE EQUIPMENT

WITM-A 234

PSC_16MHZ 234

DOWNHOLE EQUIPMENT

MH-22

MH-22 391

30.6

AH-38

Detail MT

TelStatus

CTEM

29.0

PSPT

PSC-A

PSPT-A

PSTC-A

PBMS-A 3779

10k_Sapphire_Mano

RTD_Thermometer

GR

CCL

PBMS 3779

28.7

28.7

GR

25.0

Well_Temp

Manometer

CCL

PBMS PSTC

21.9

21.8

21.2

20.5

SCMT-CB

SCMC-CA 8172

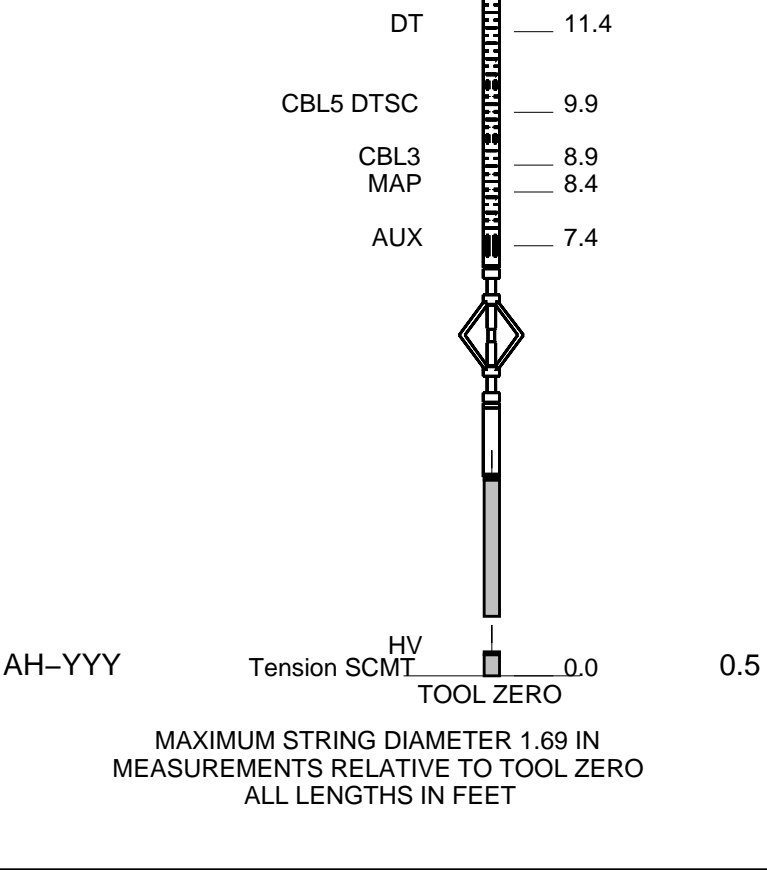
SECH-CA

CMIR-AG

SCMS-CB 8186

SCMX-CA 8132

20.5



MAIN PASS 0 PSI

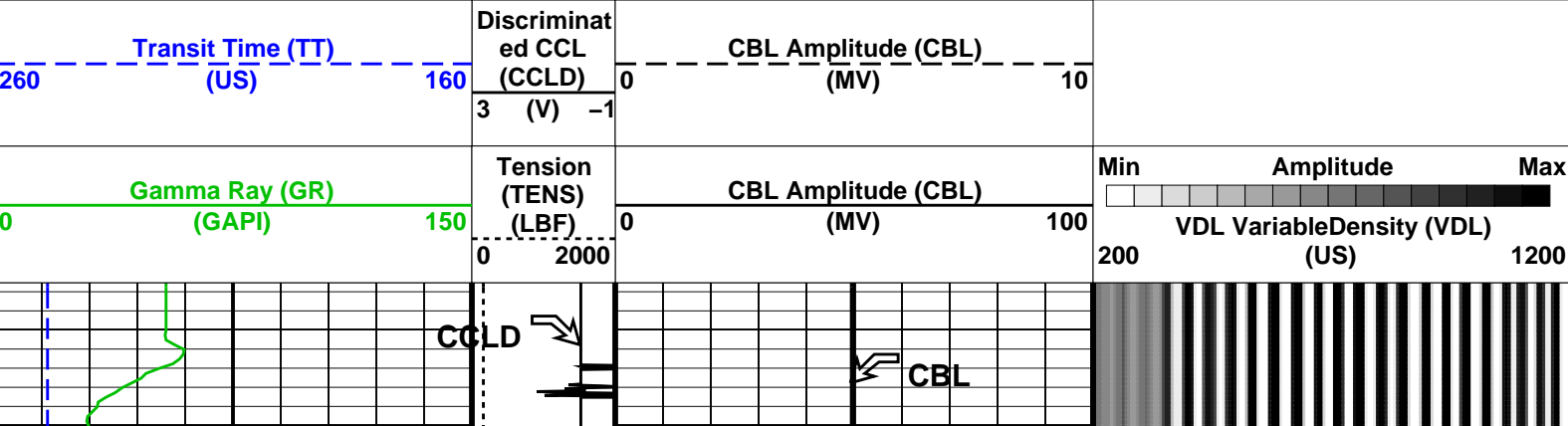
MAXIS Field Log

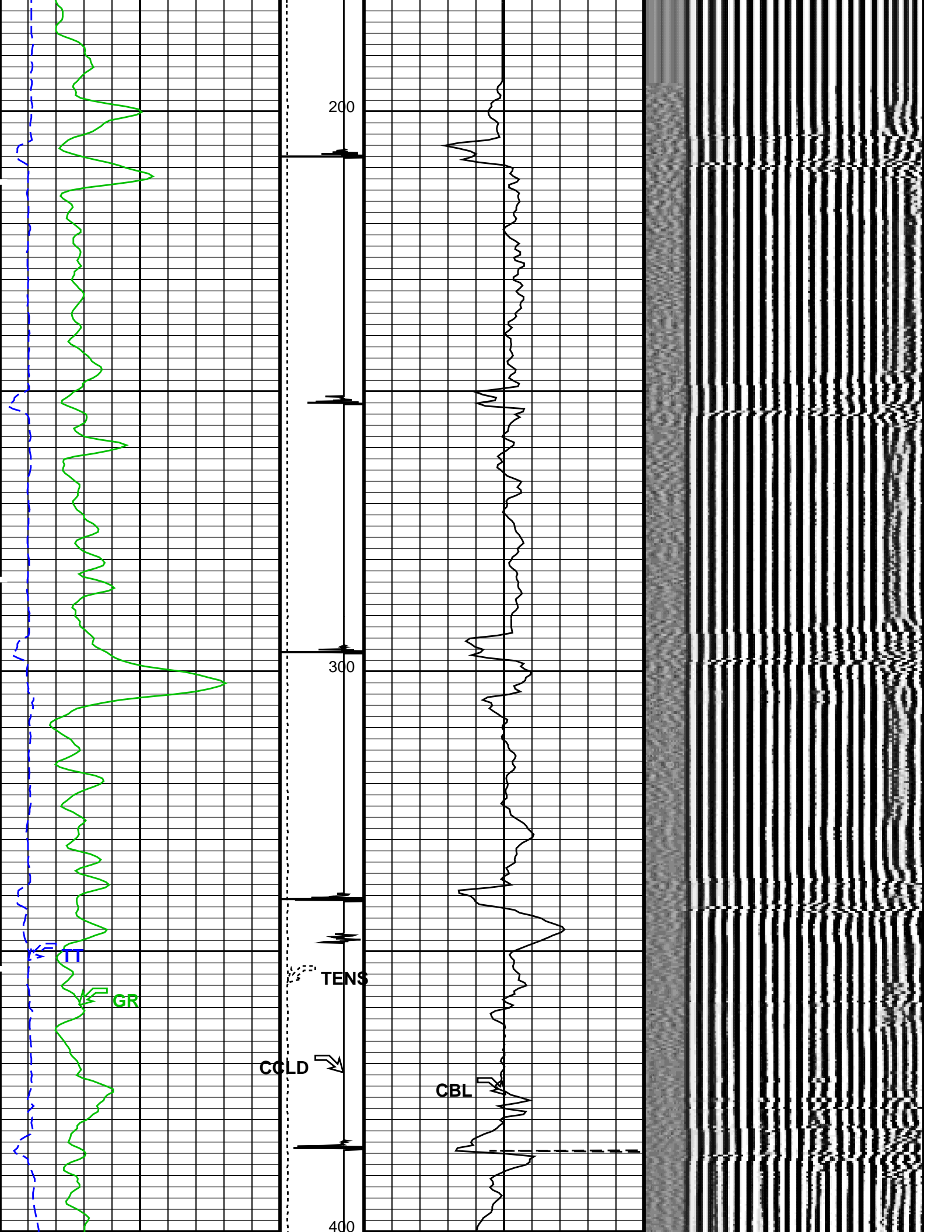
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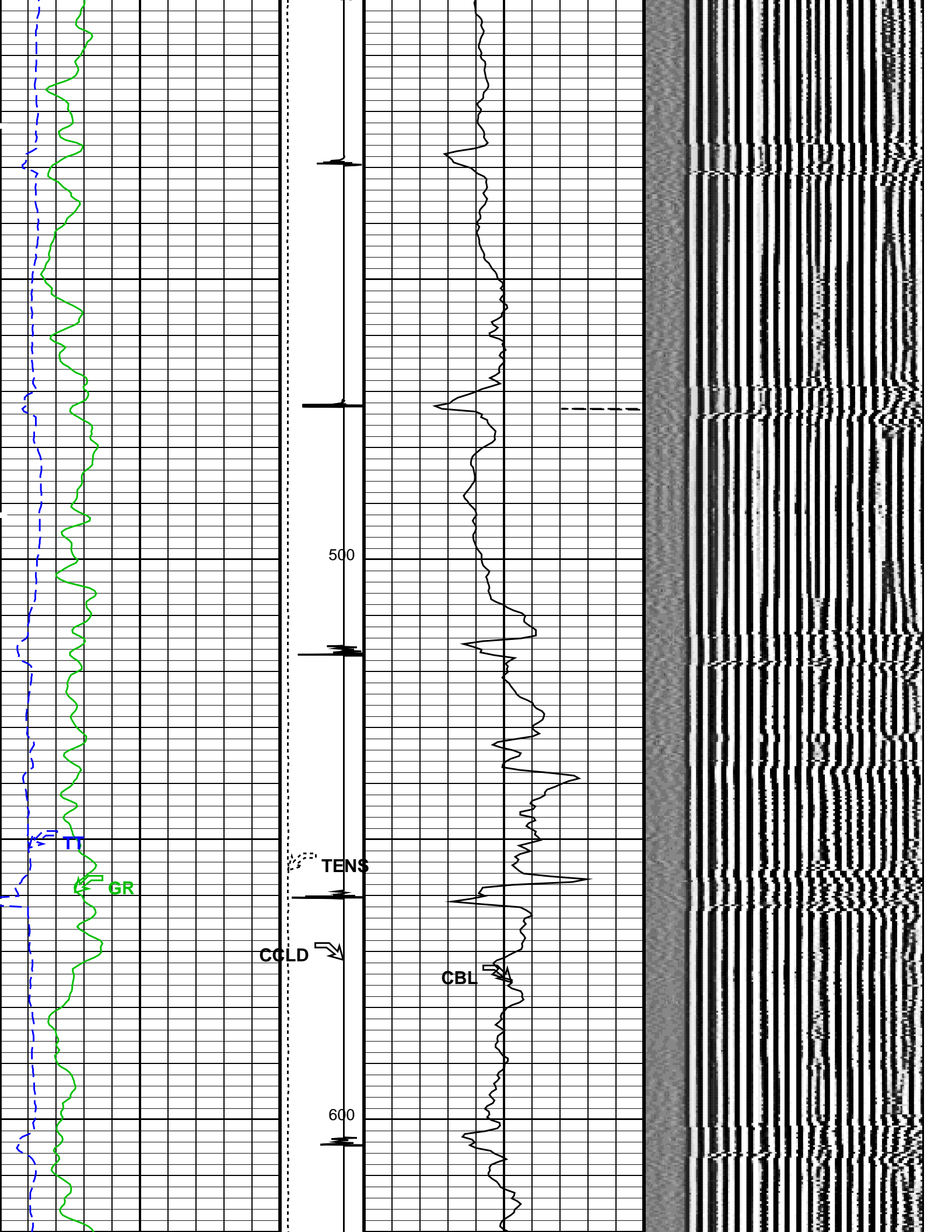
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DEFAULT	SCMT_PSP_021LUP	FN:20	PRODUCER	28-Feb-2012 12:42	11376.5 FT	165.1 FT

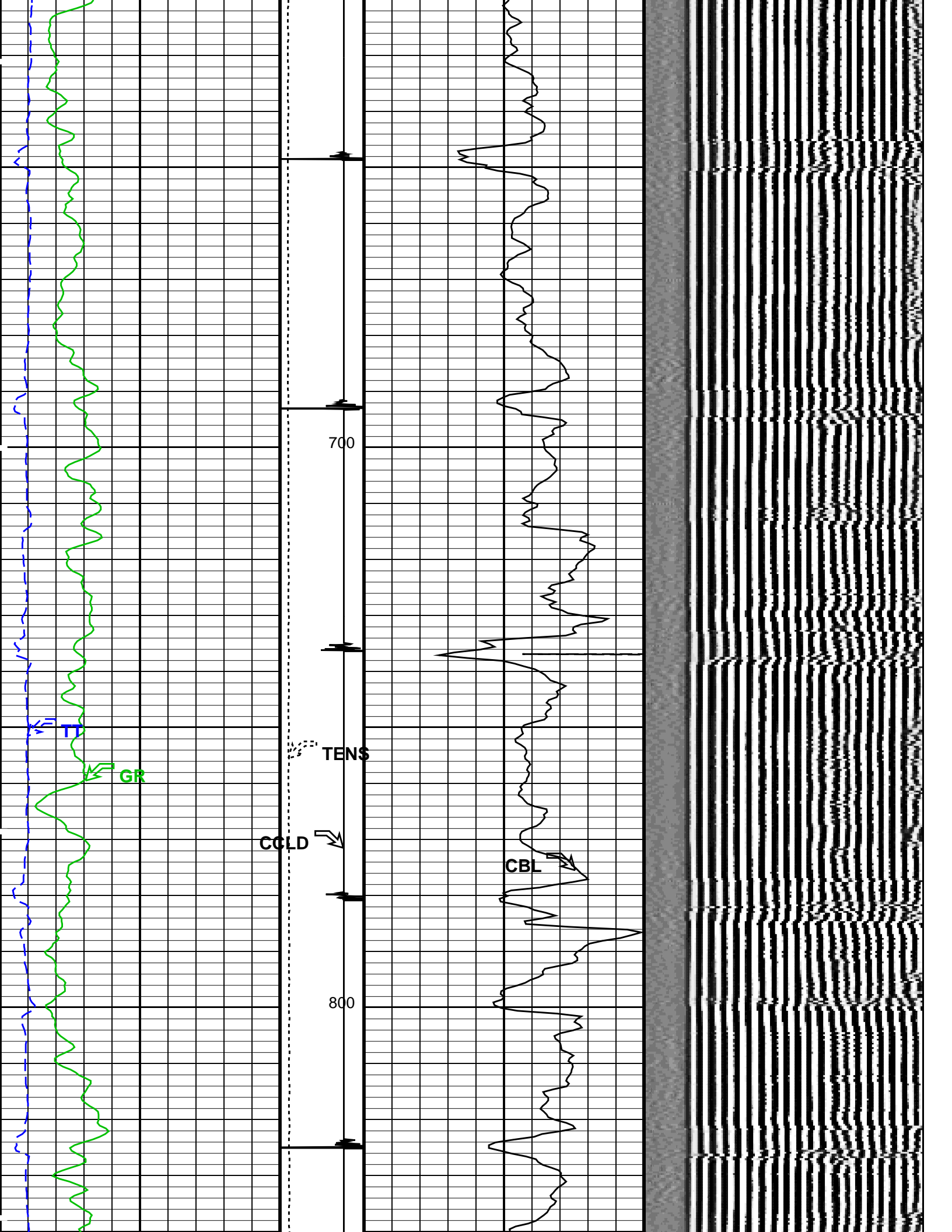
OP System Version: 19C0-187			
SCMT-CB	SRPC-5095-H2-2011-OP19_I	PSPT	19C0-187

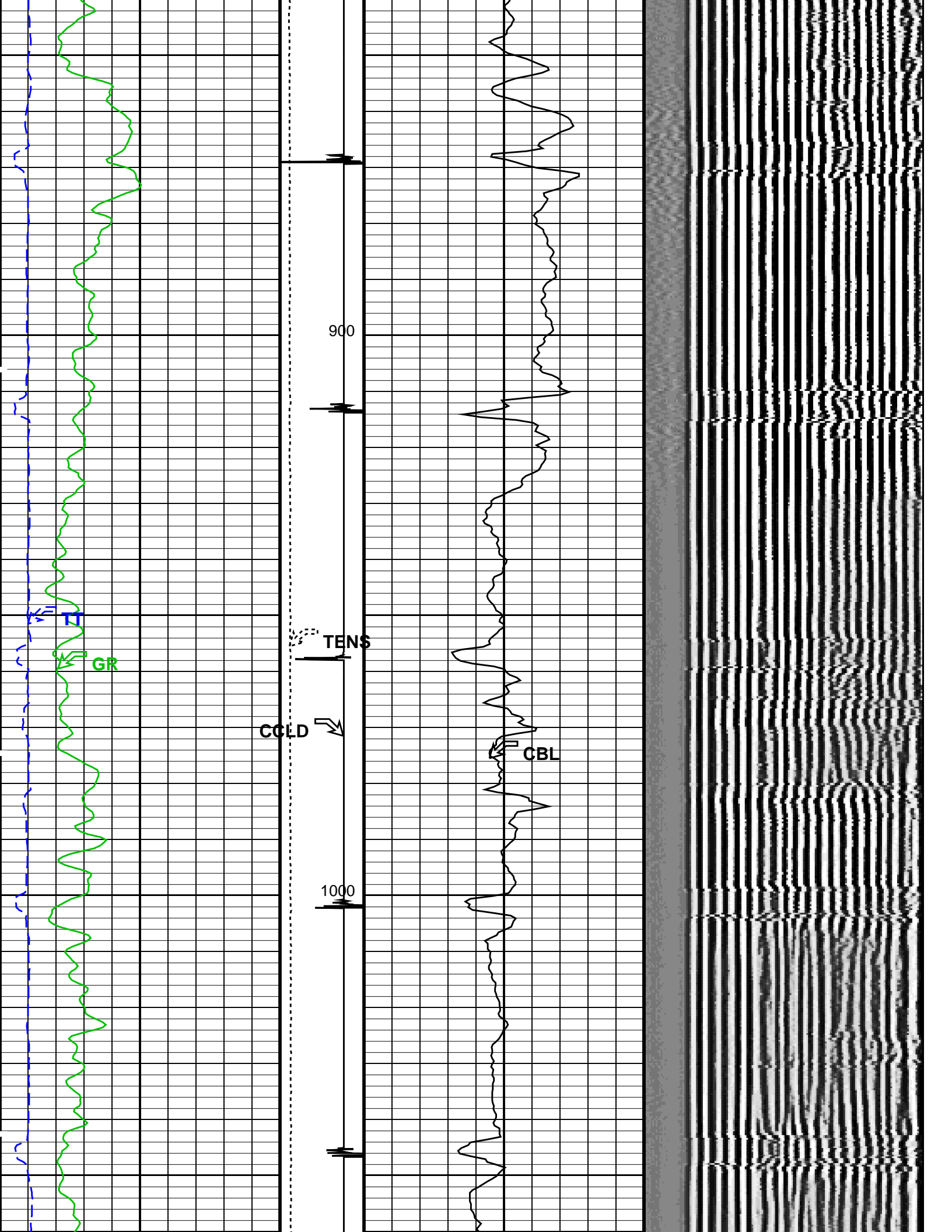
PIP SUMMARY

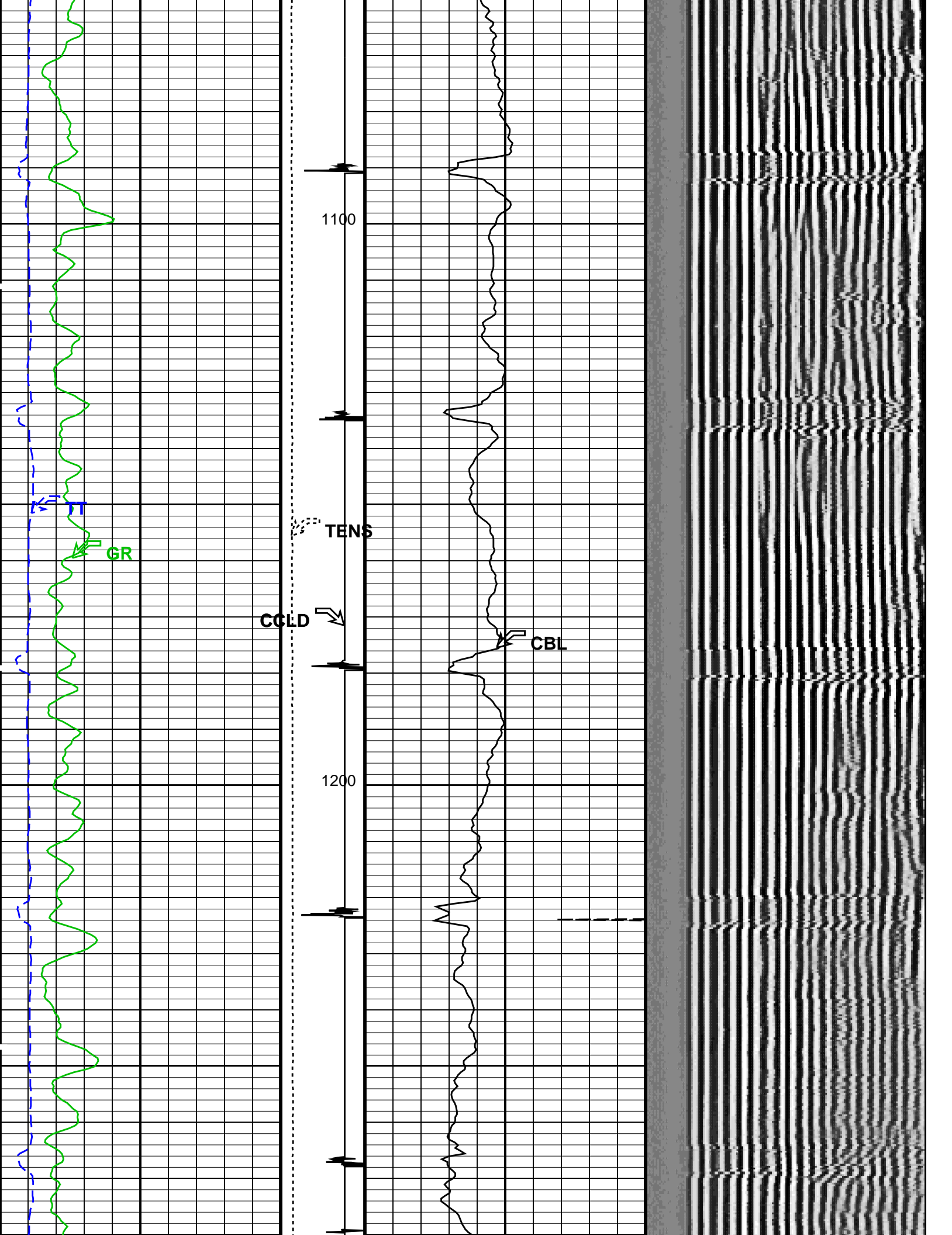


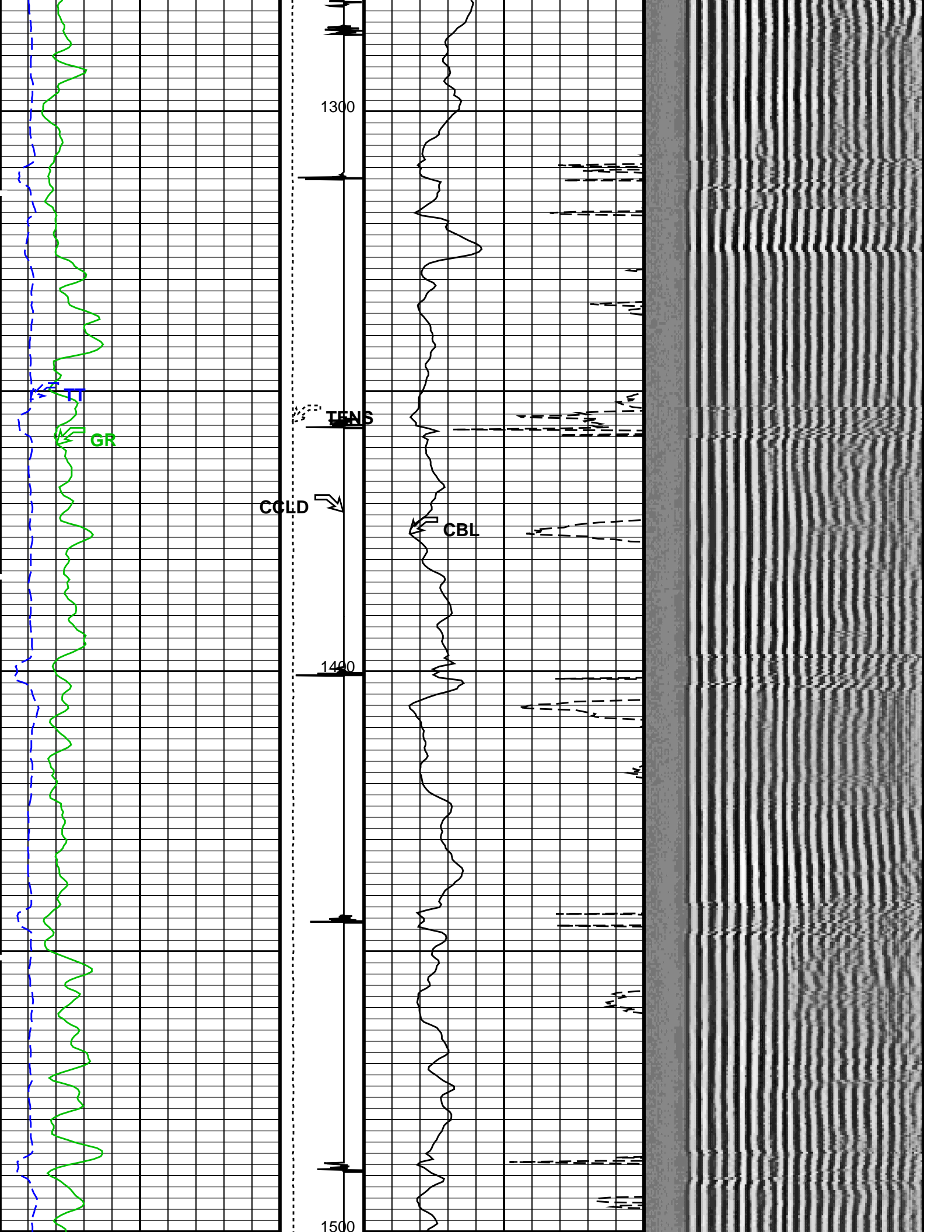


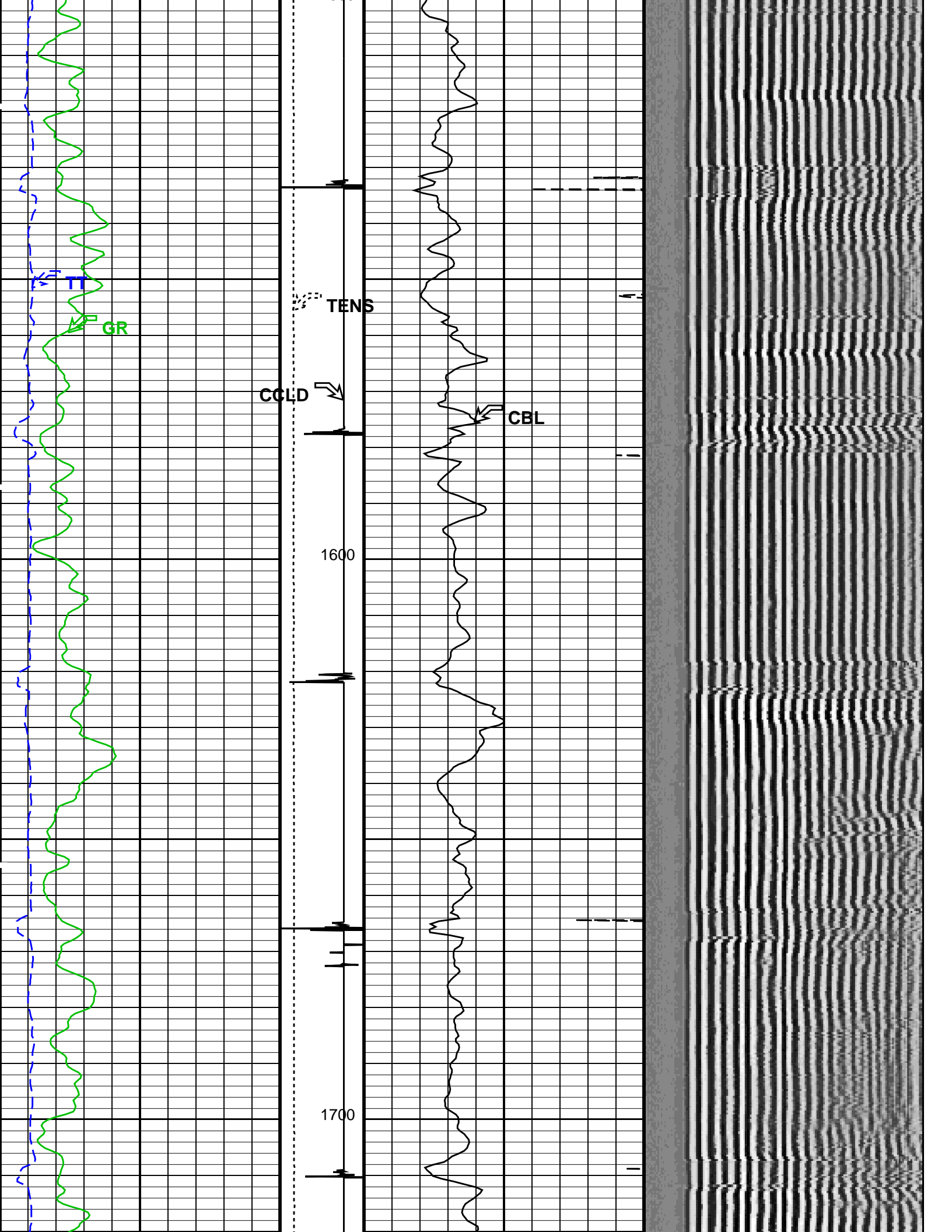


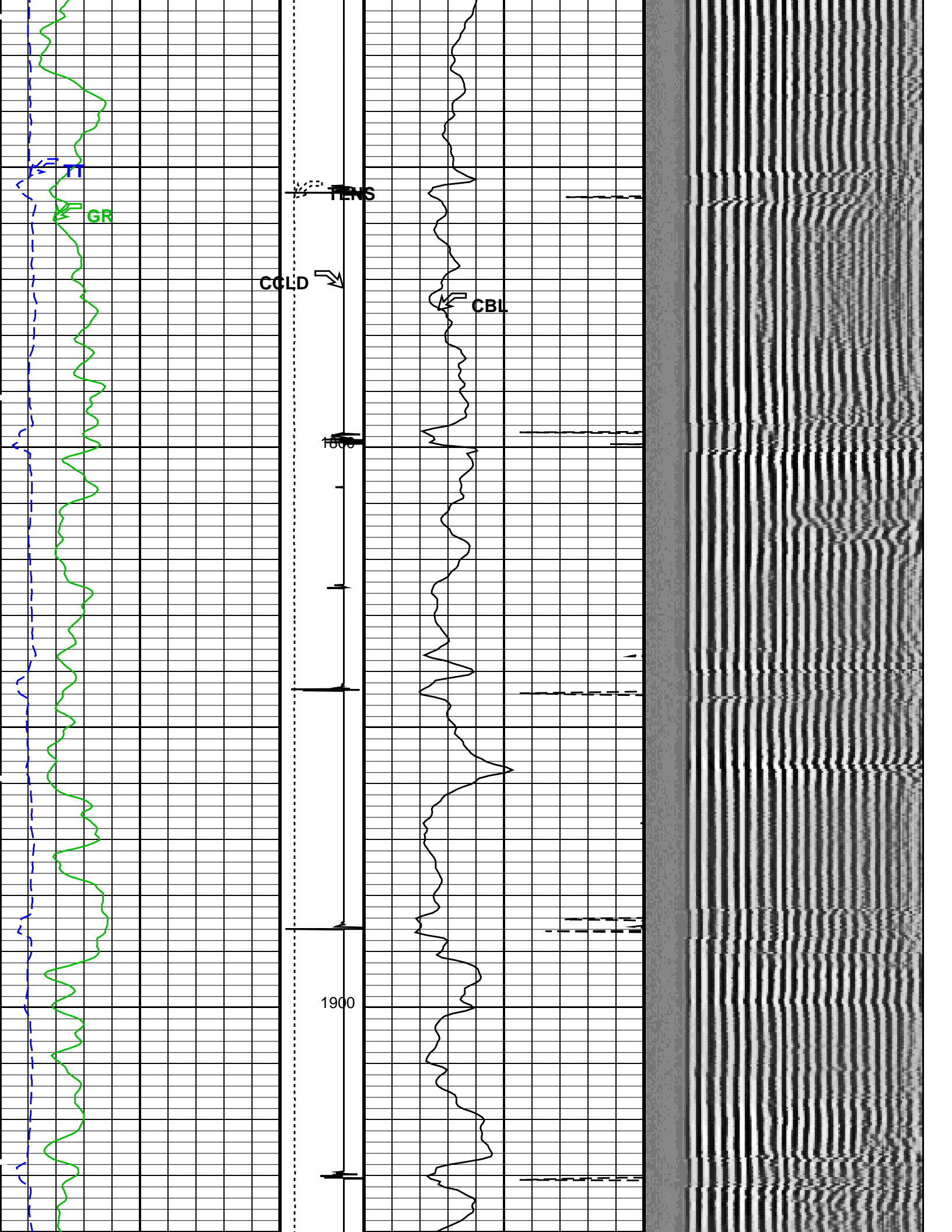


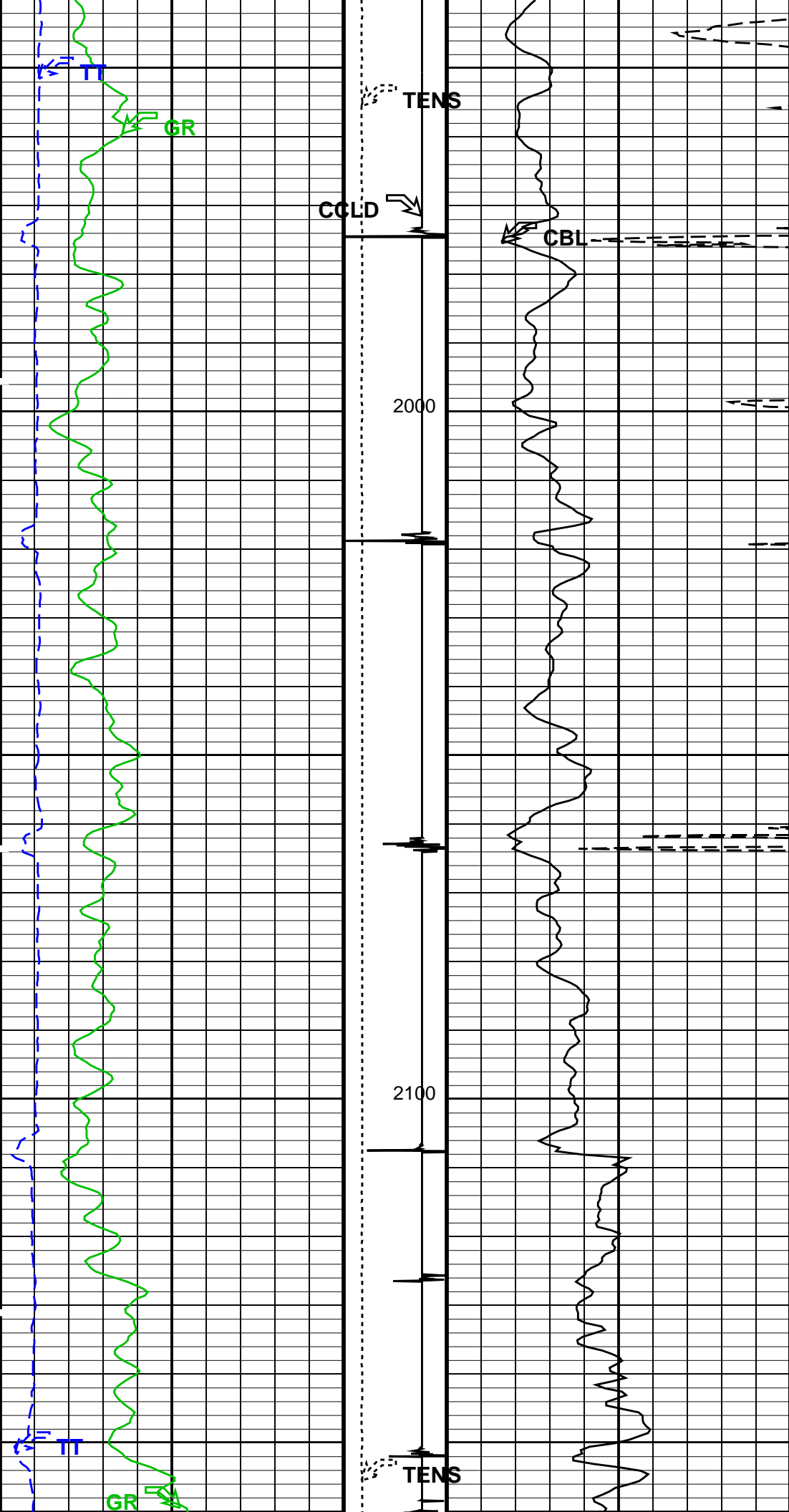


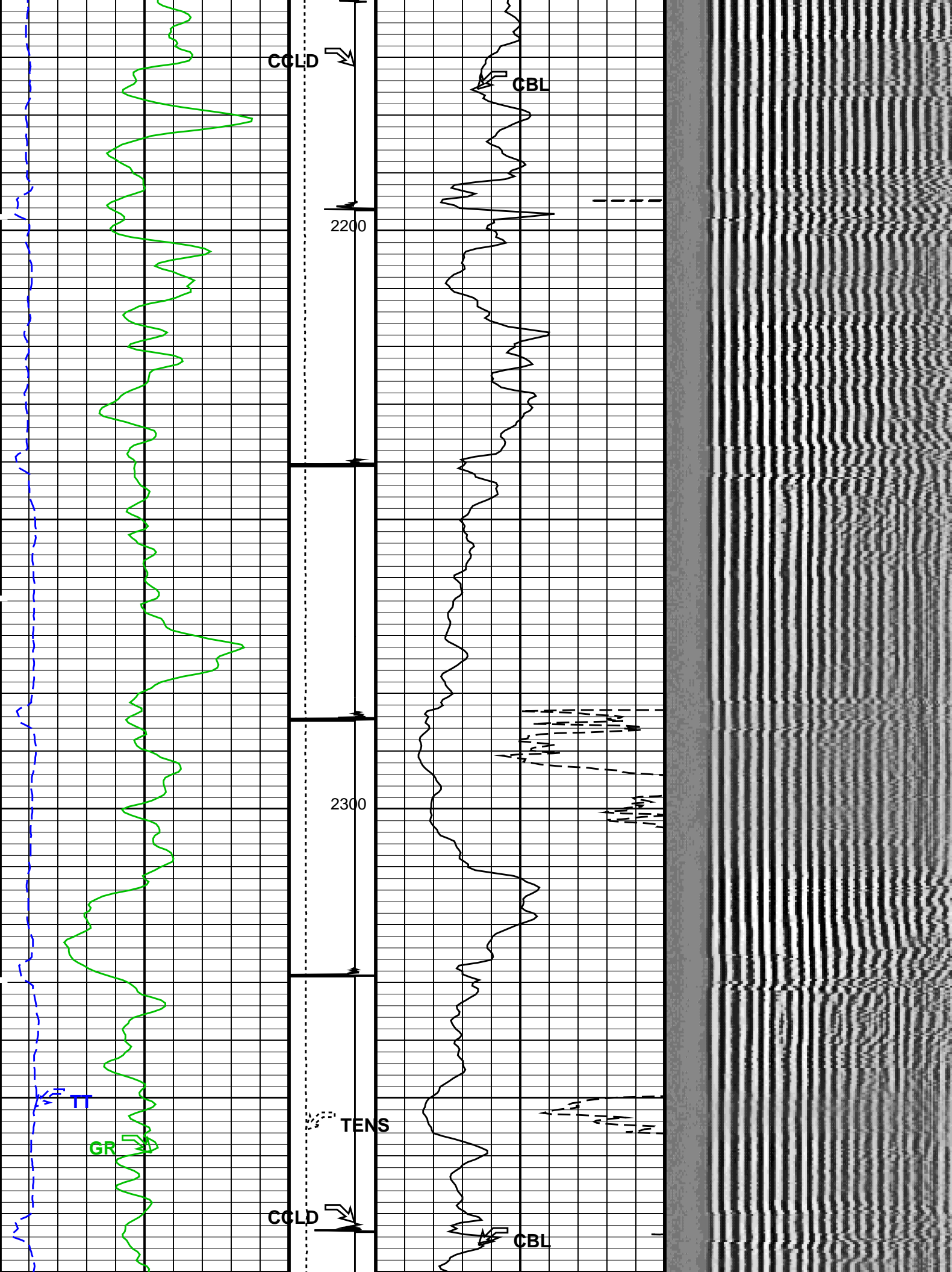


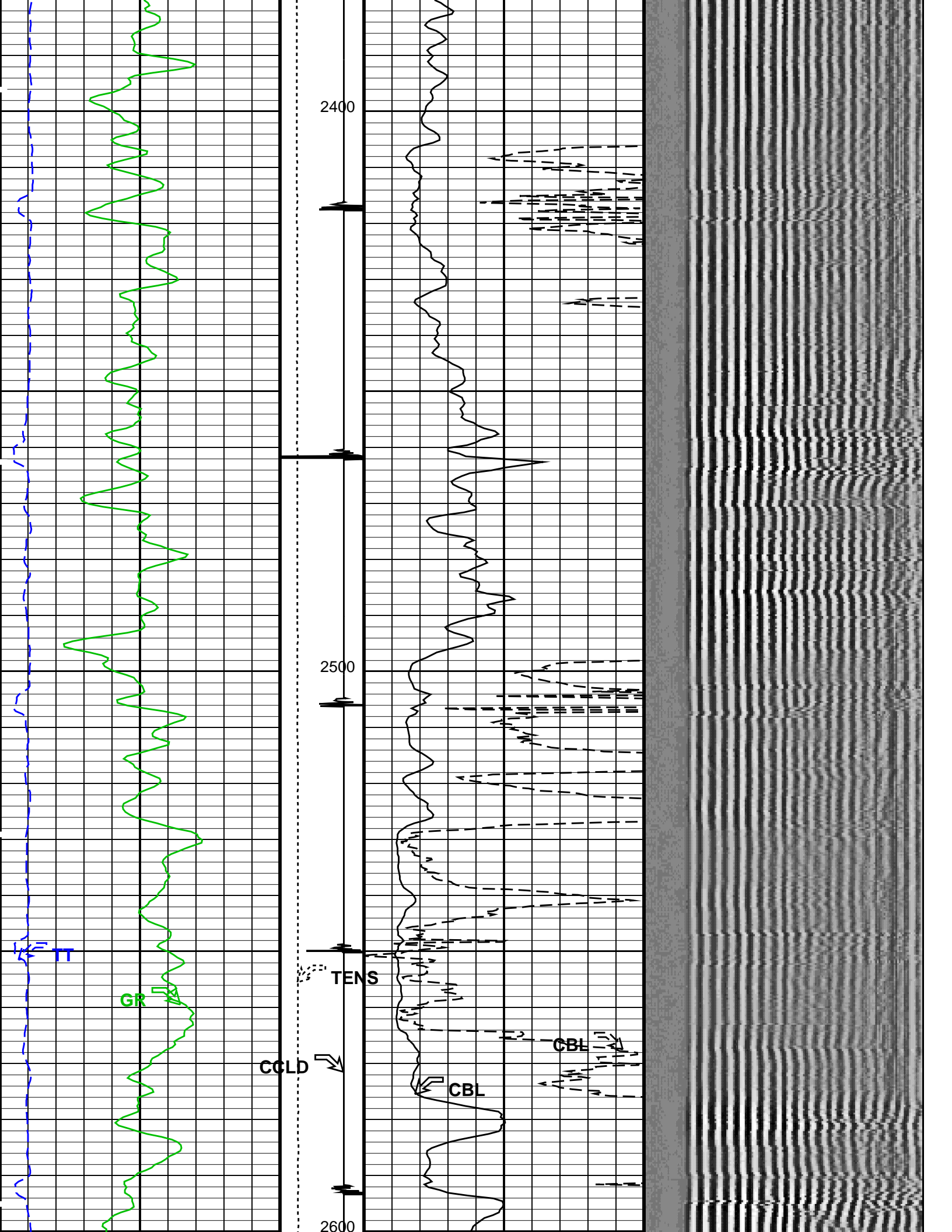


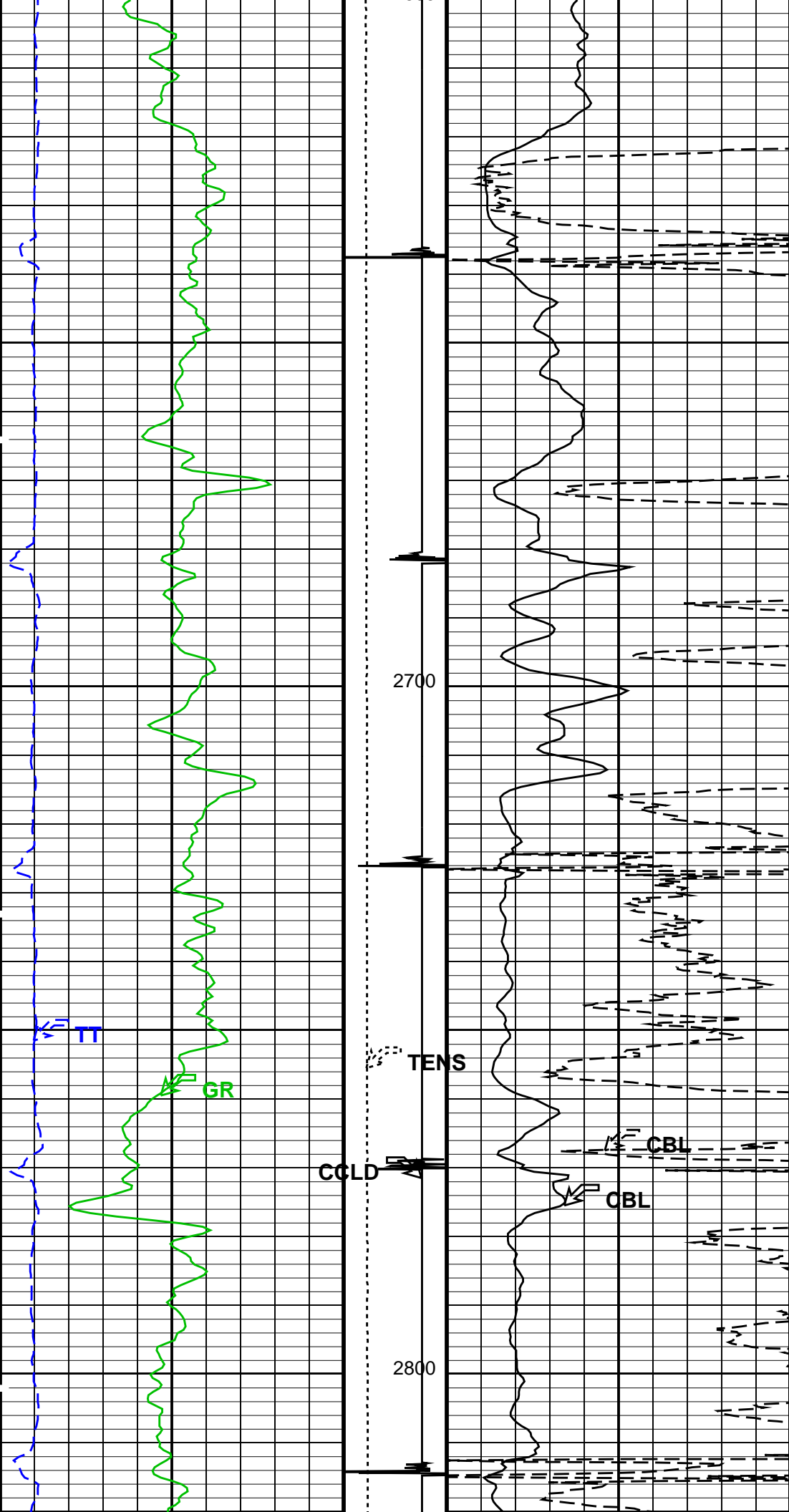


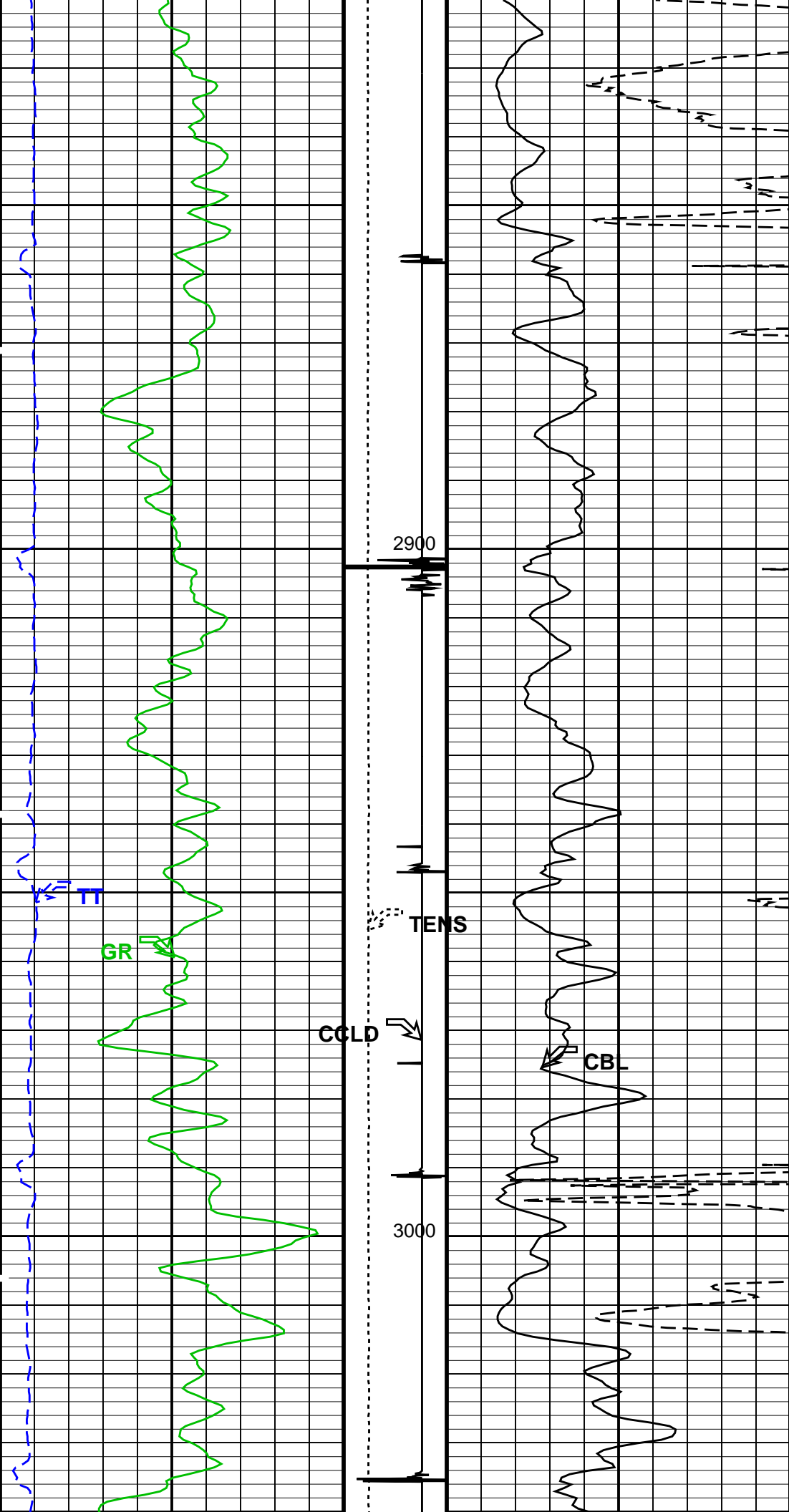


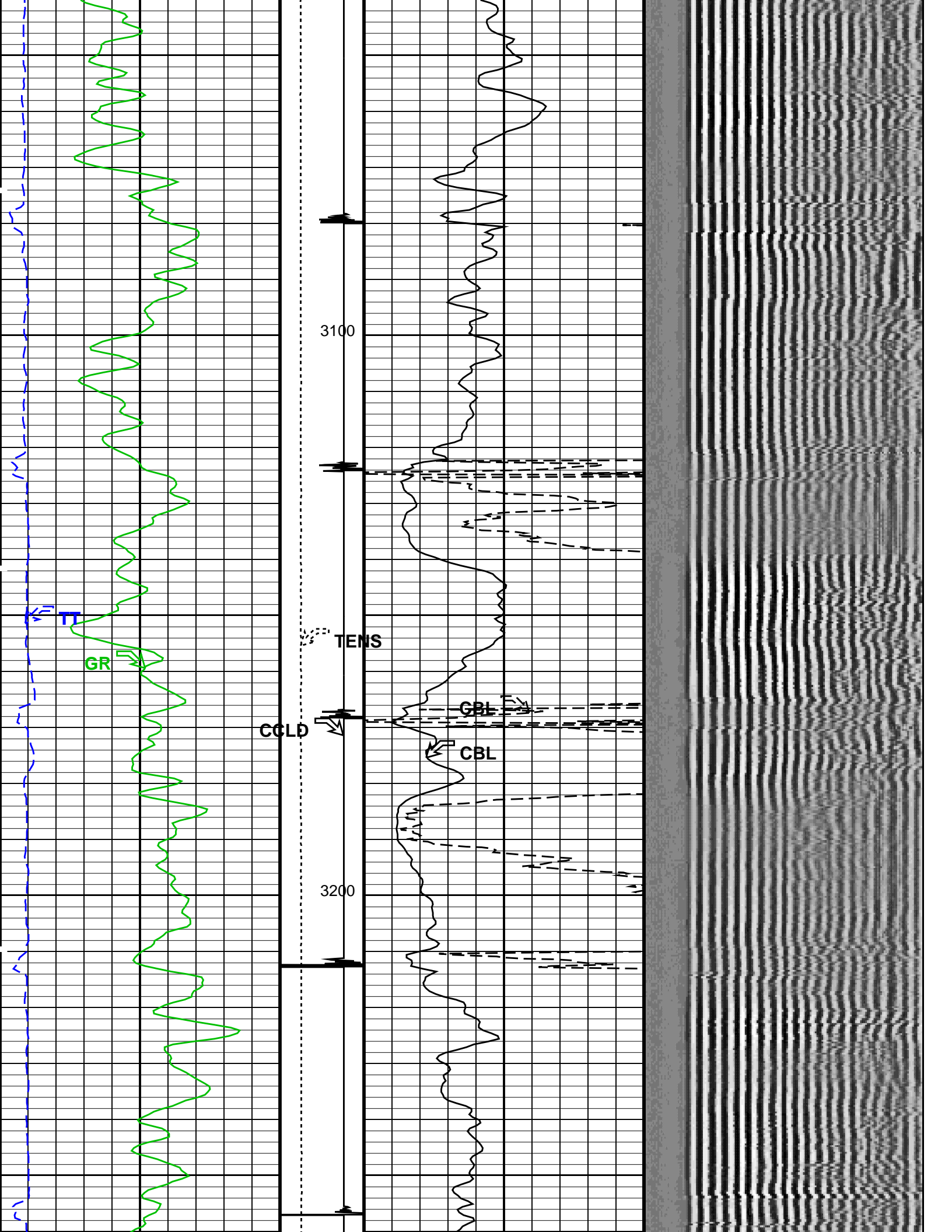


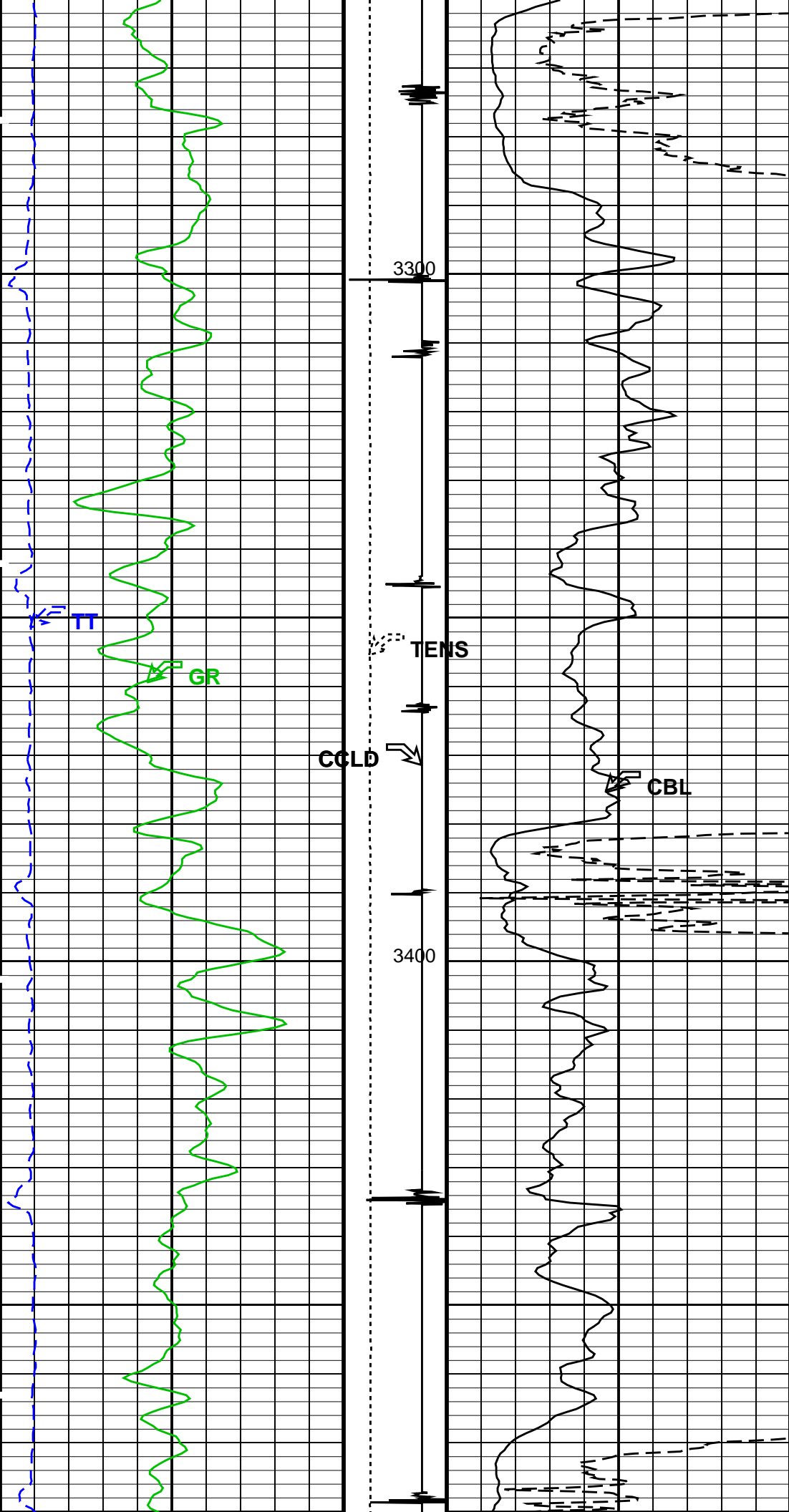


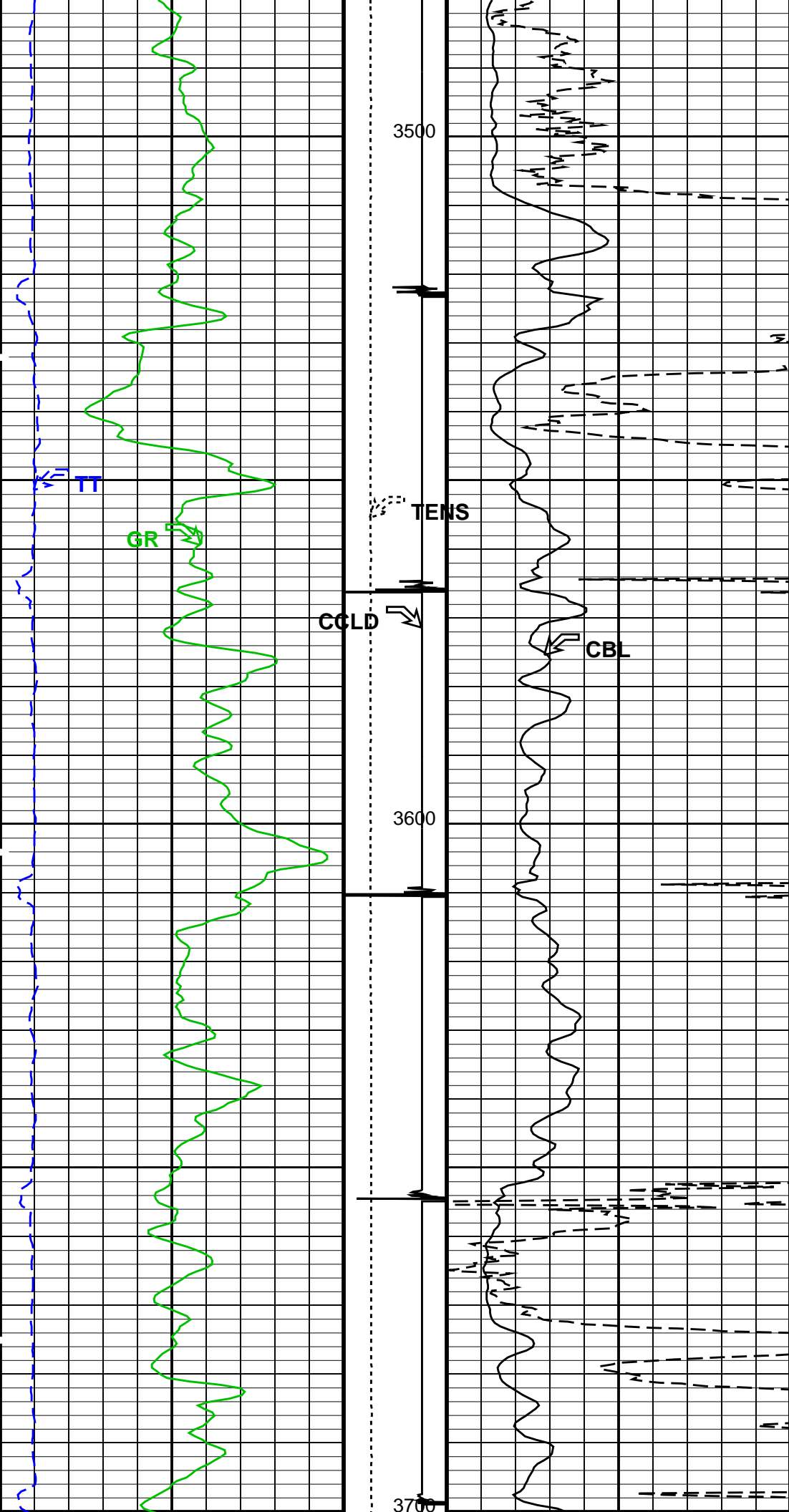


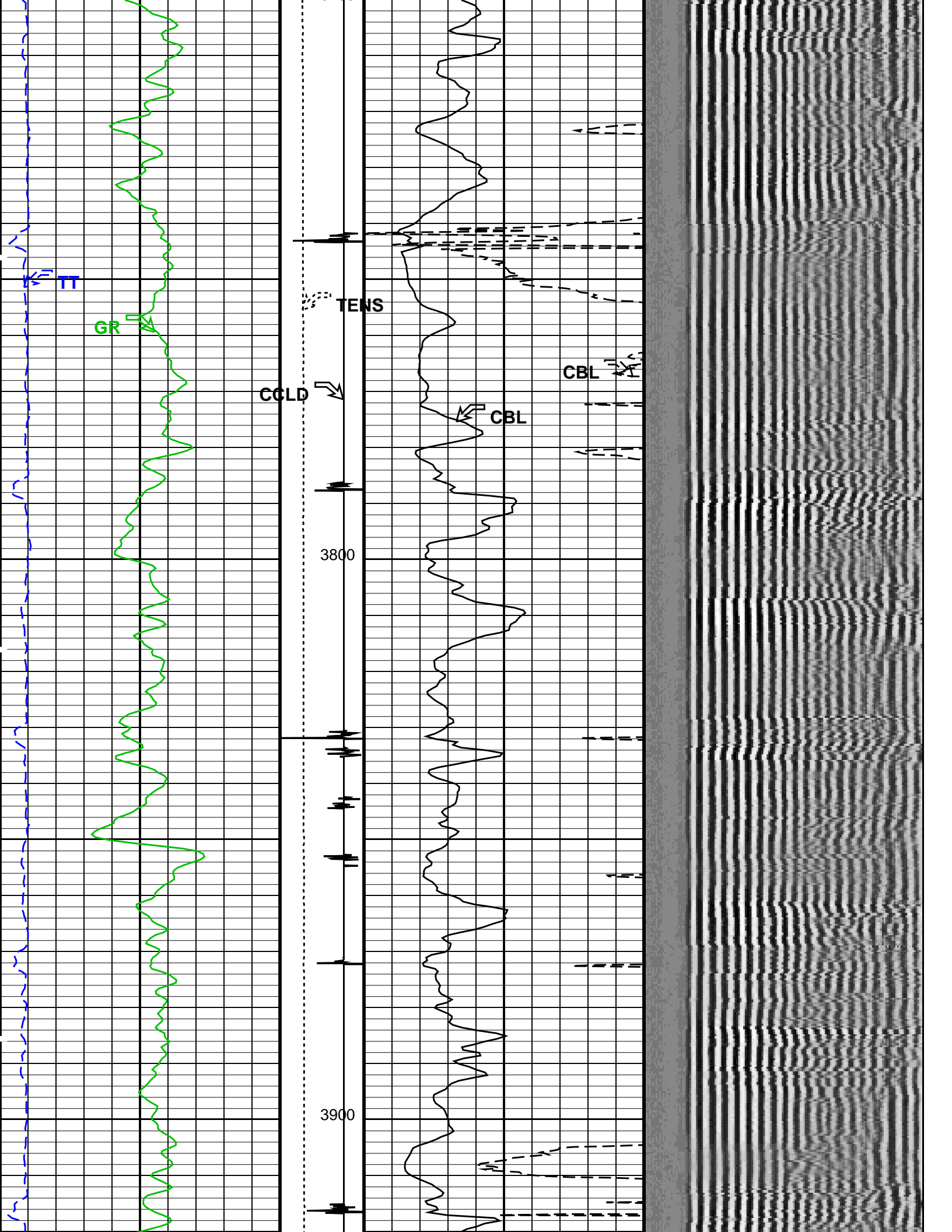


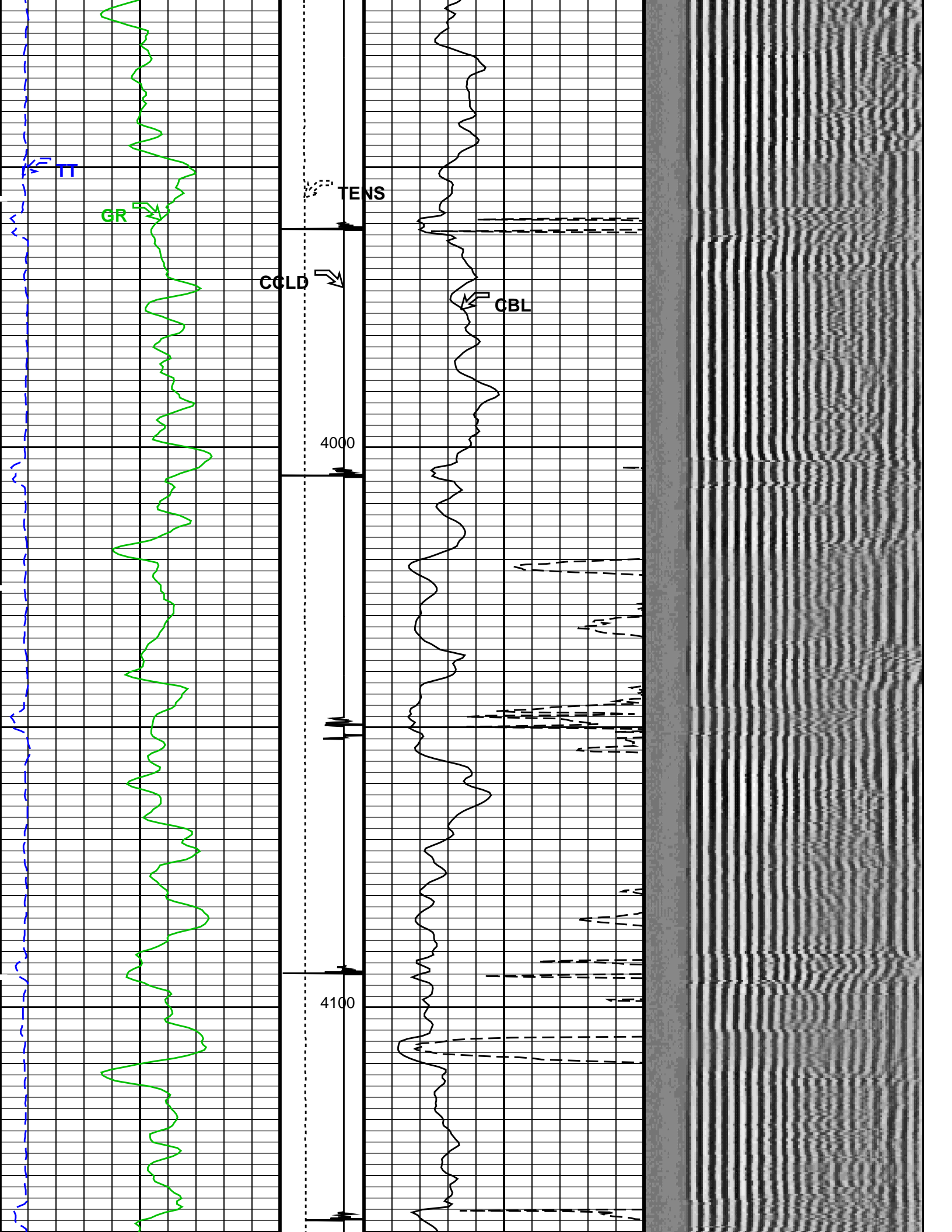


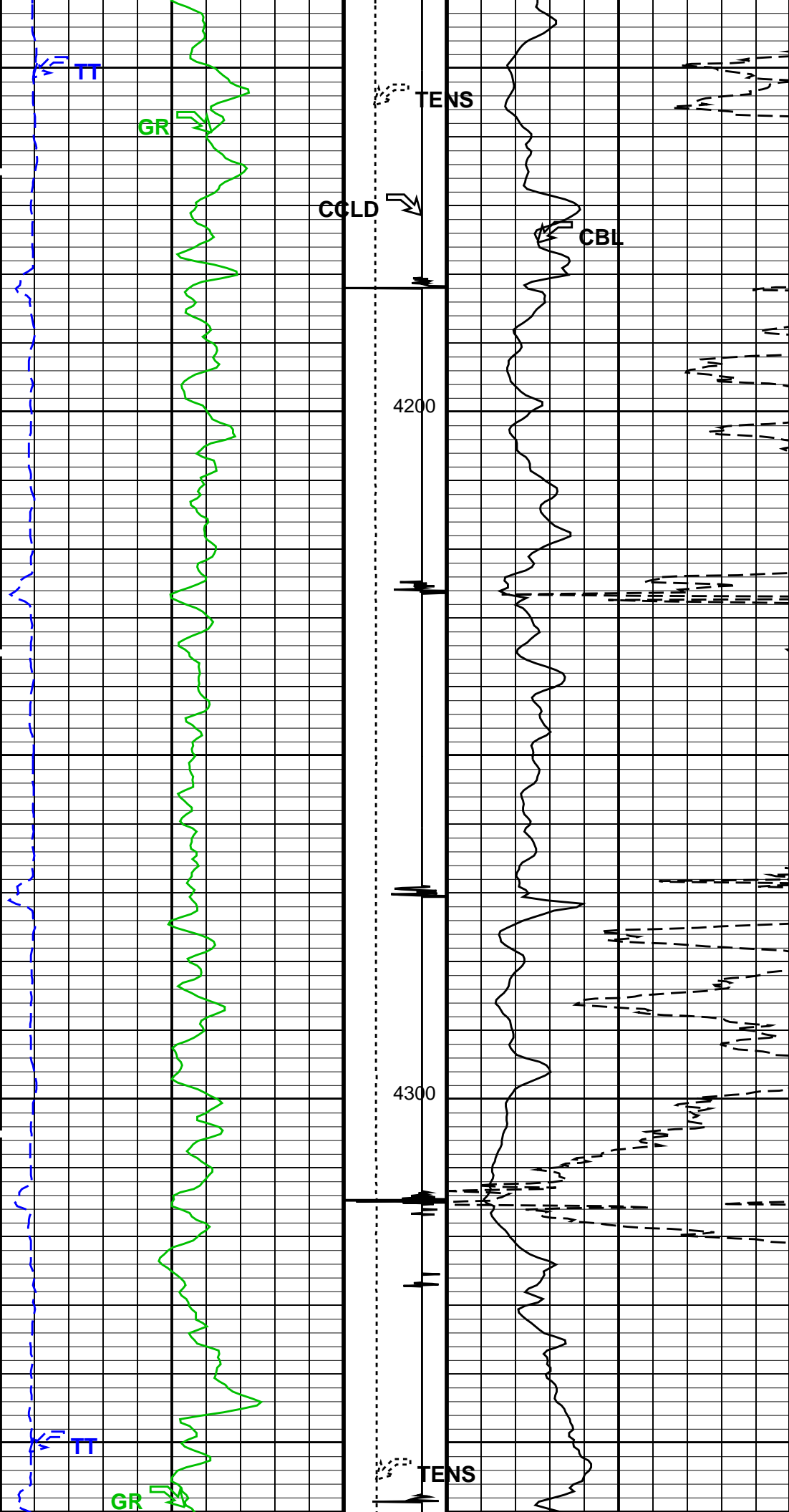


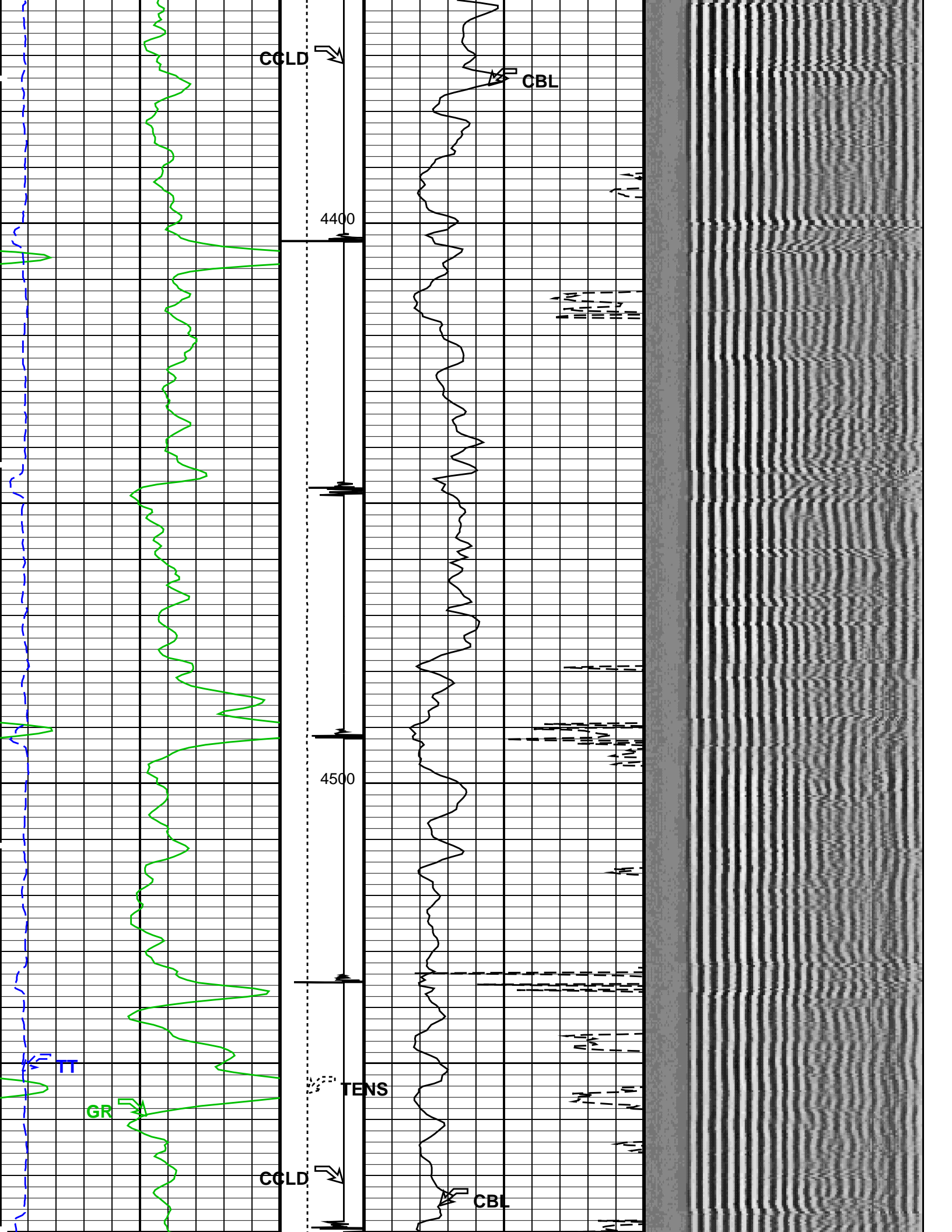


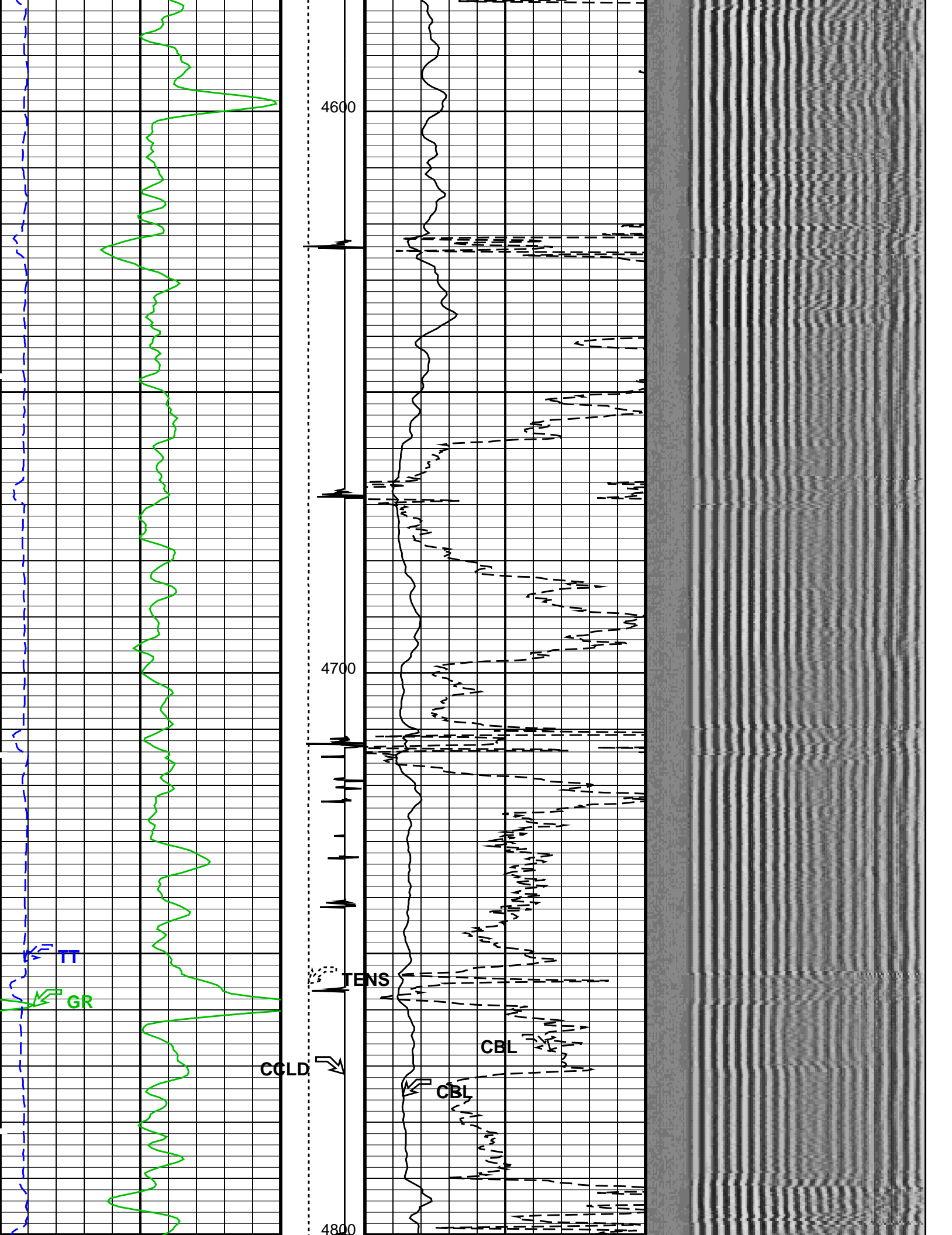


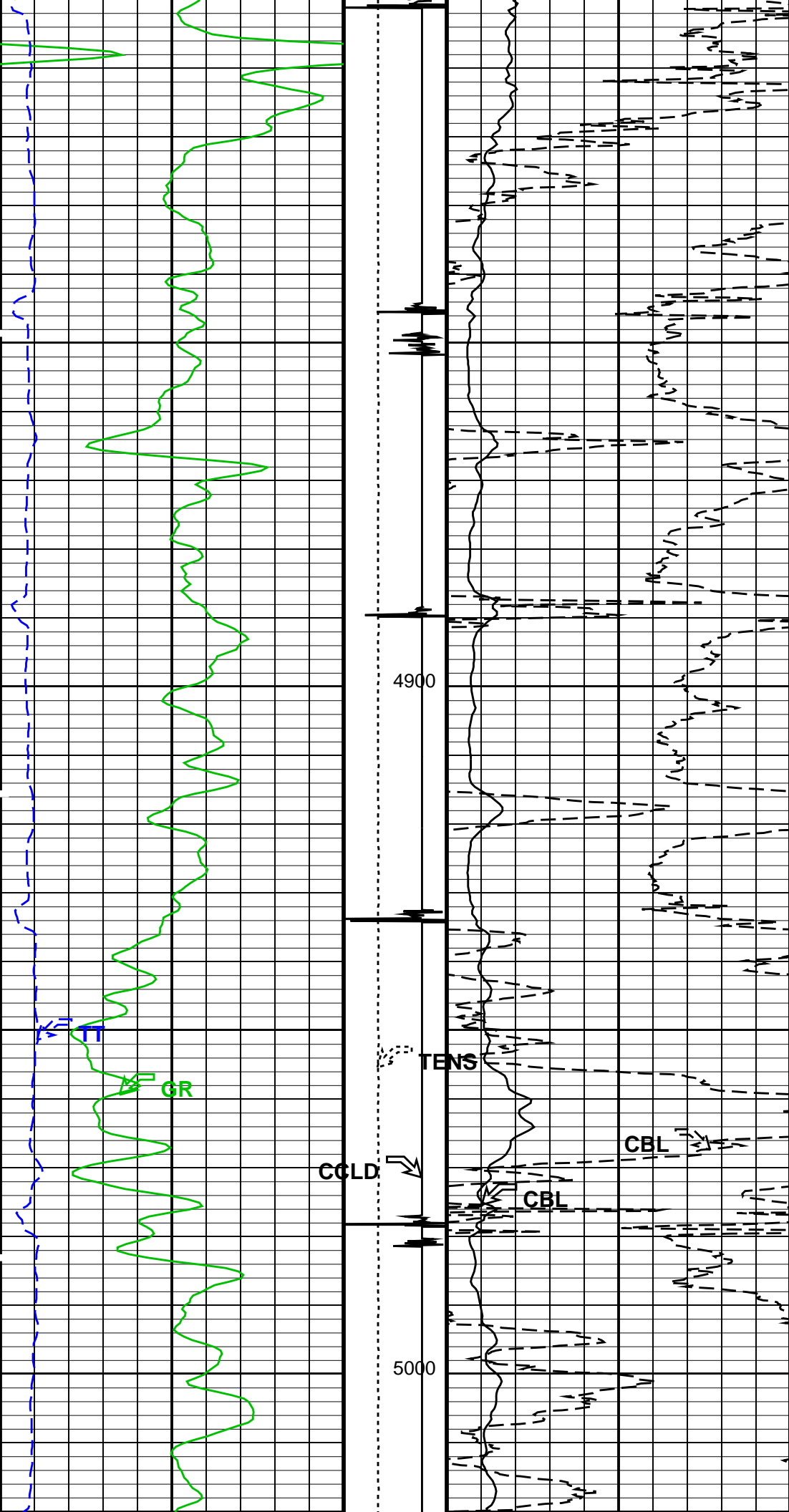


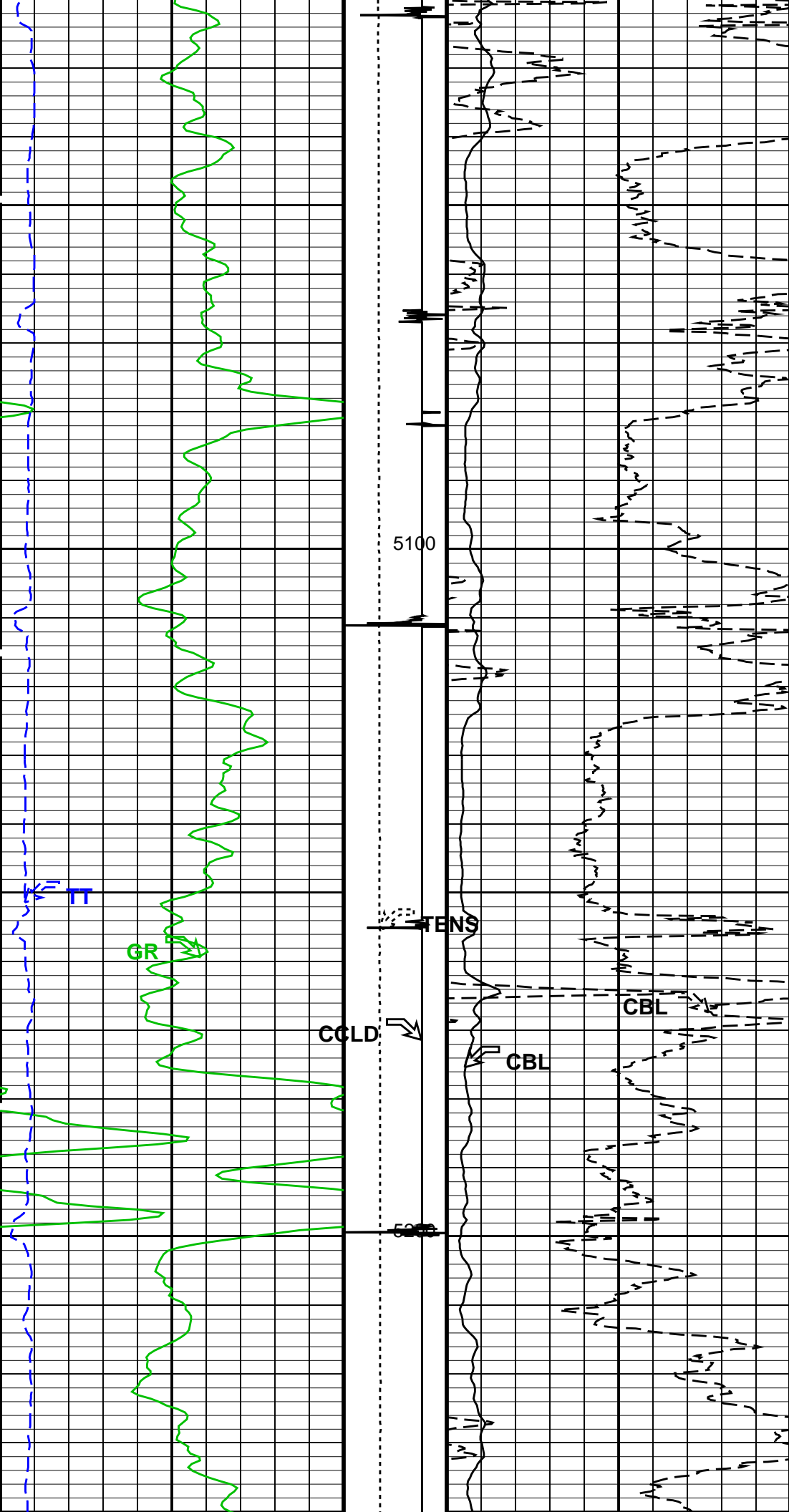


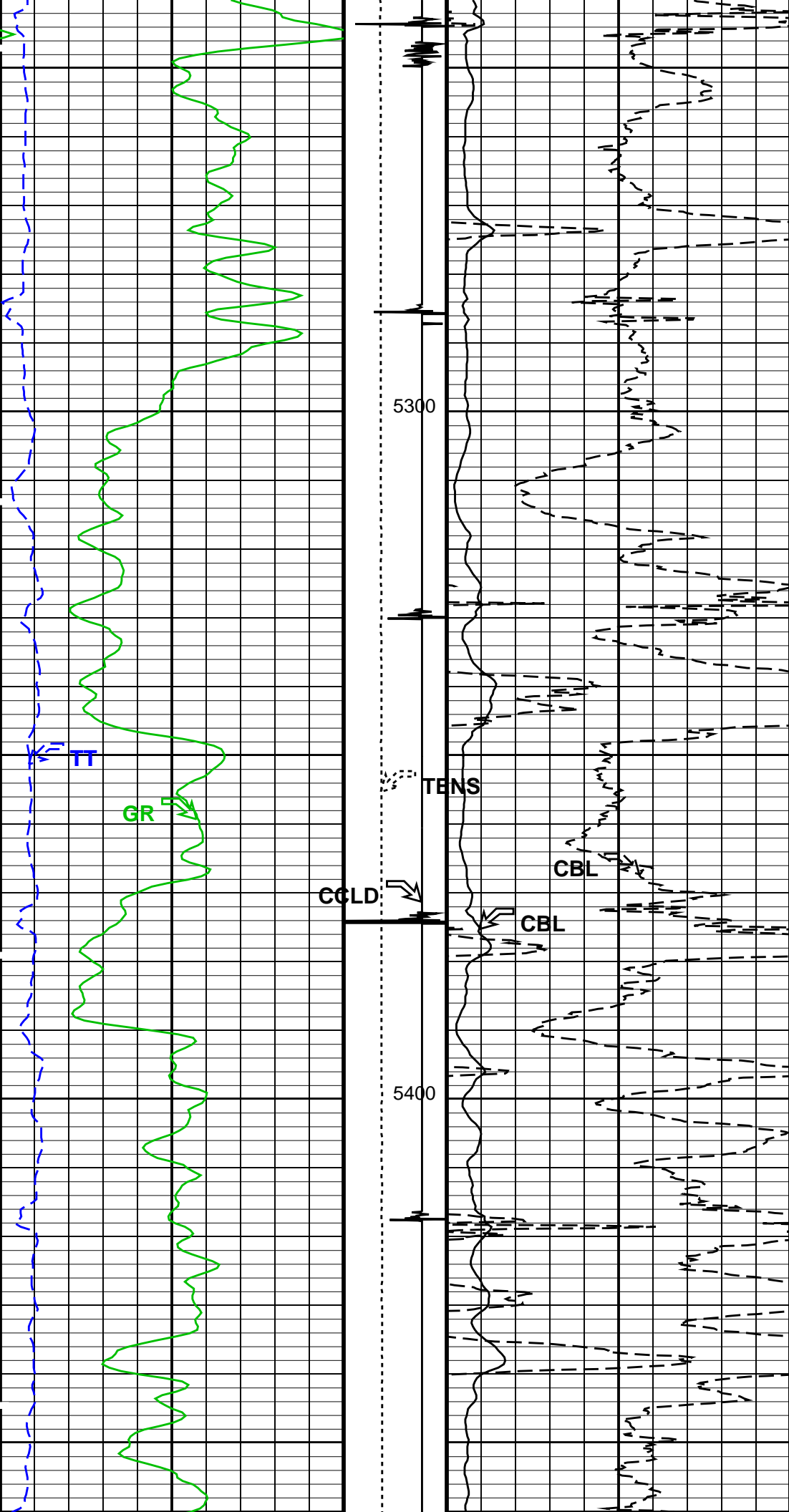


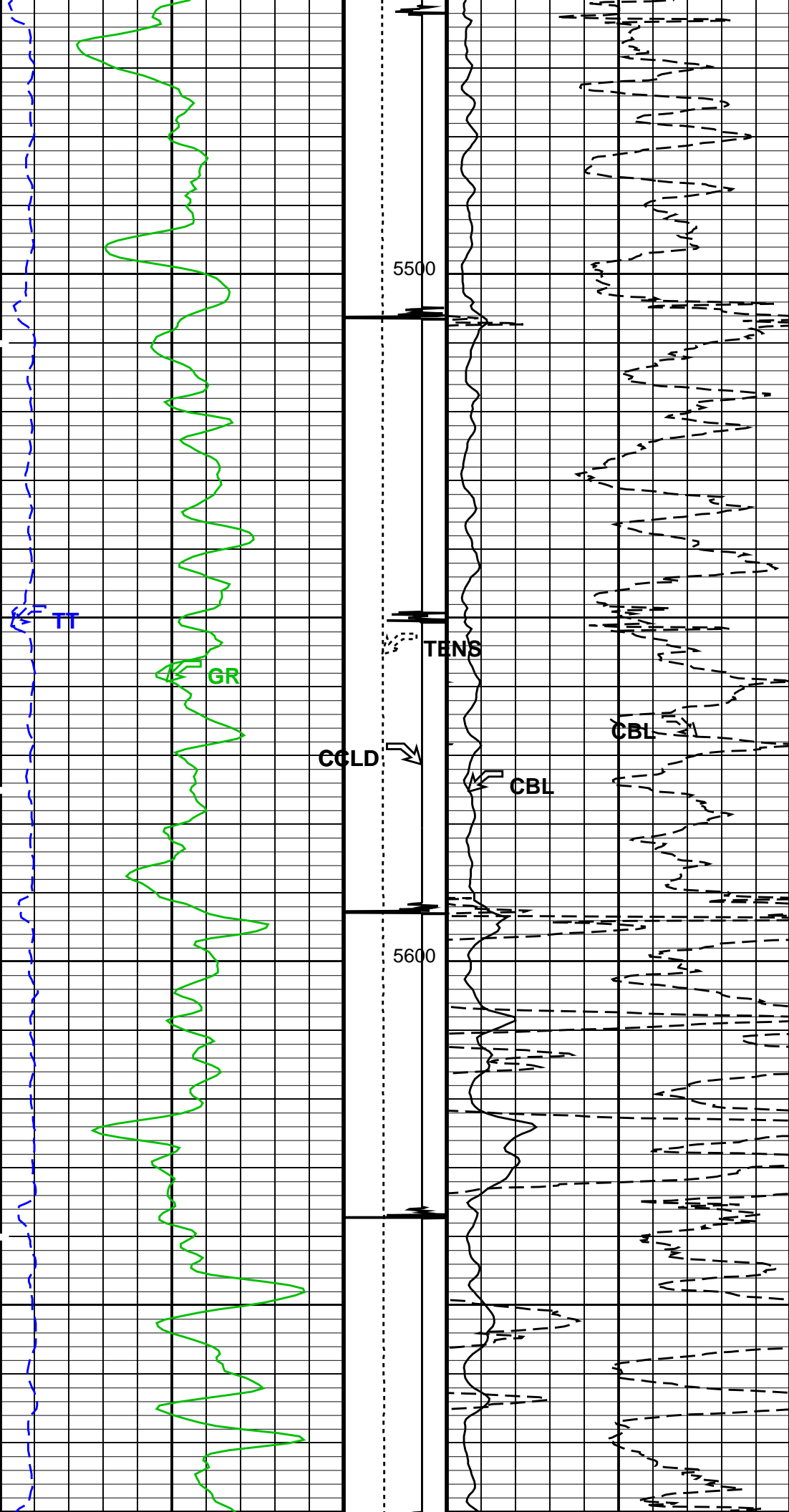


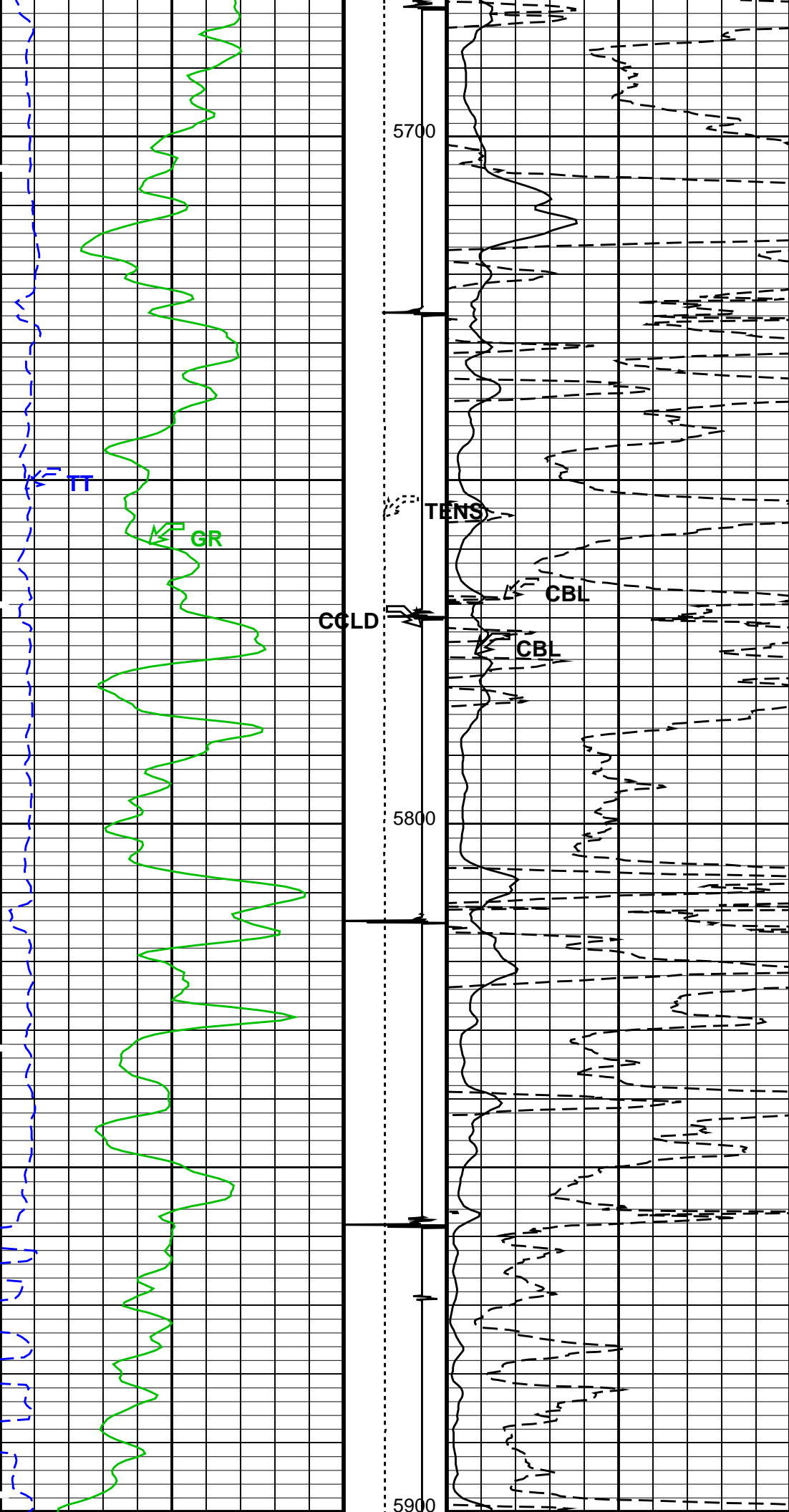


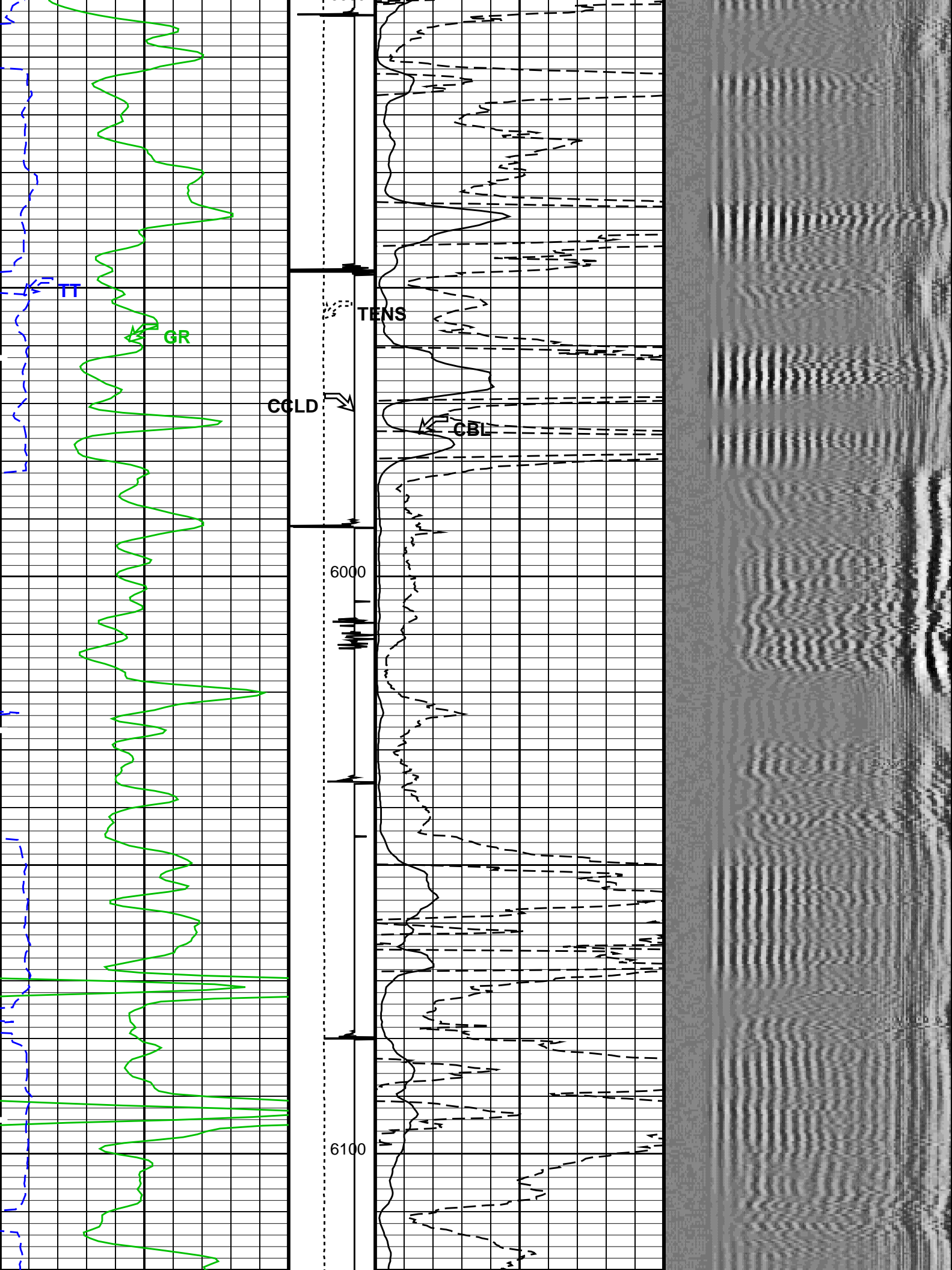


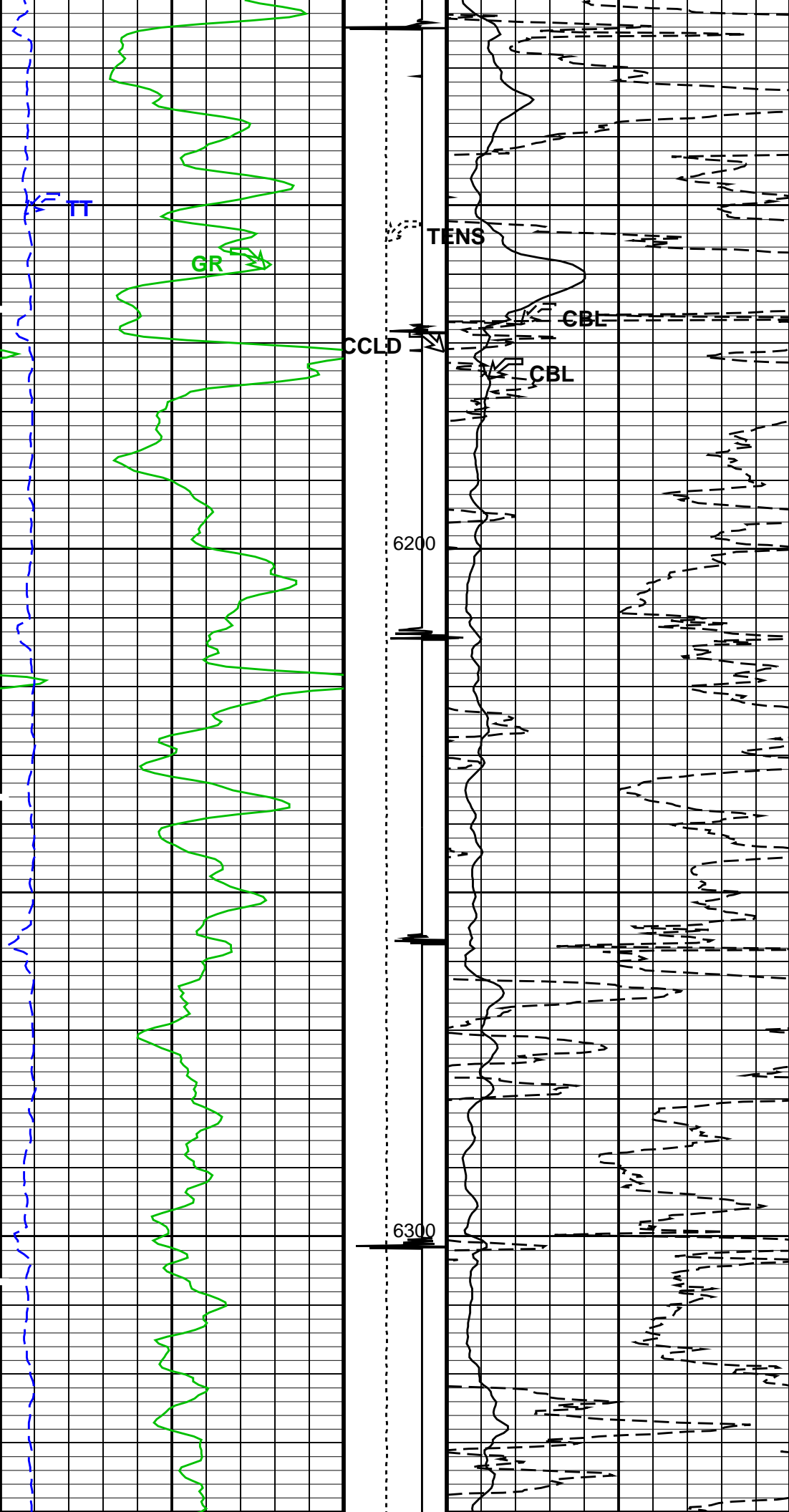


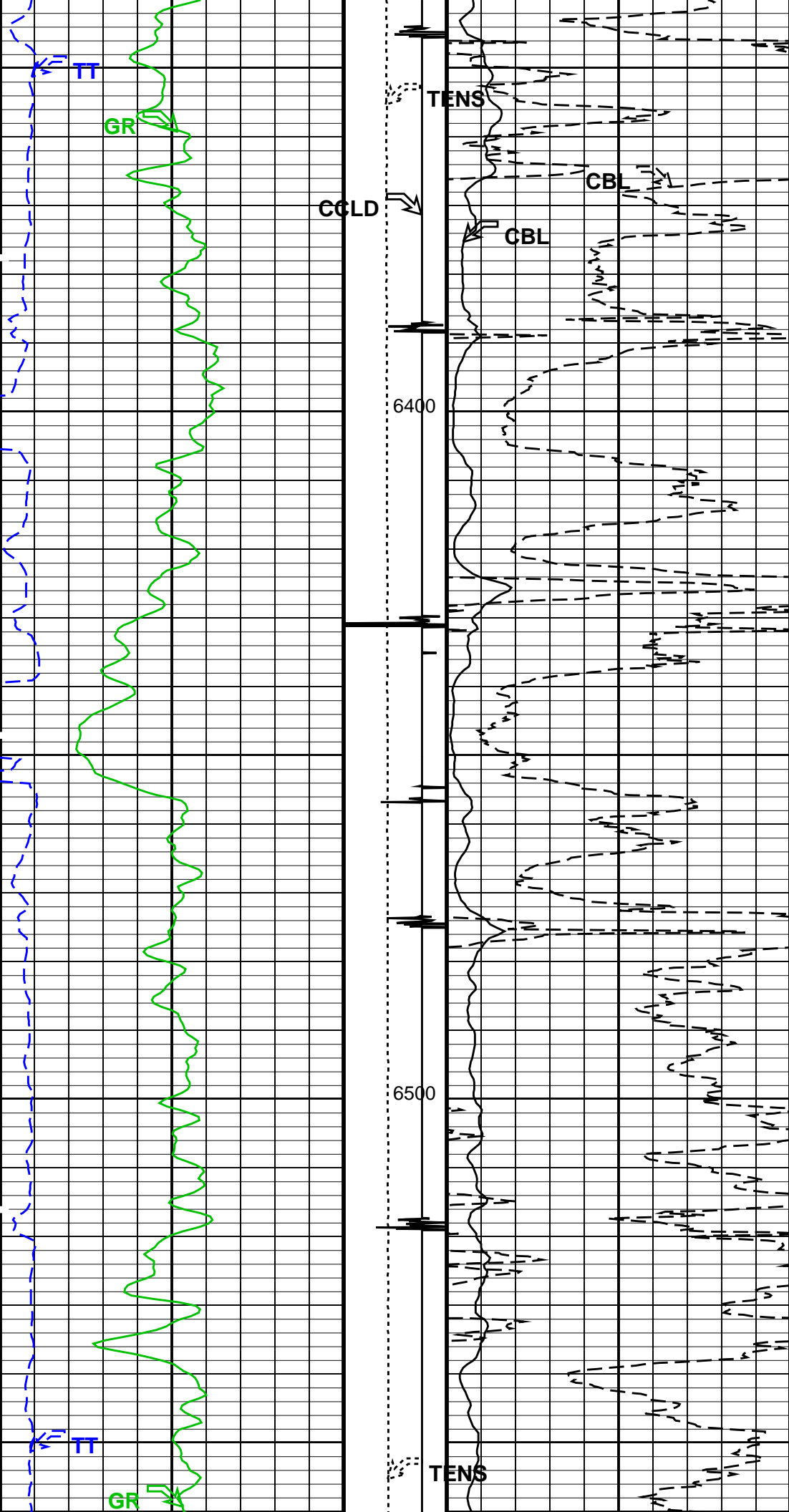


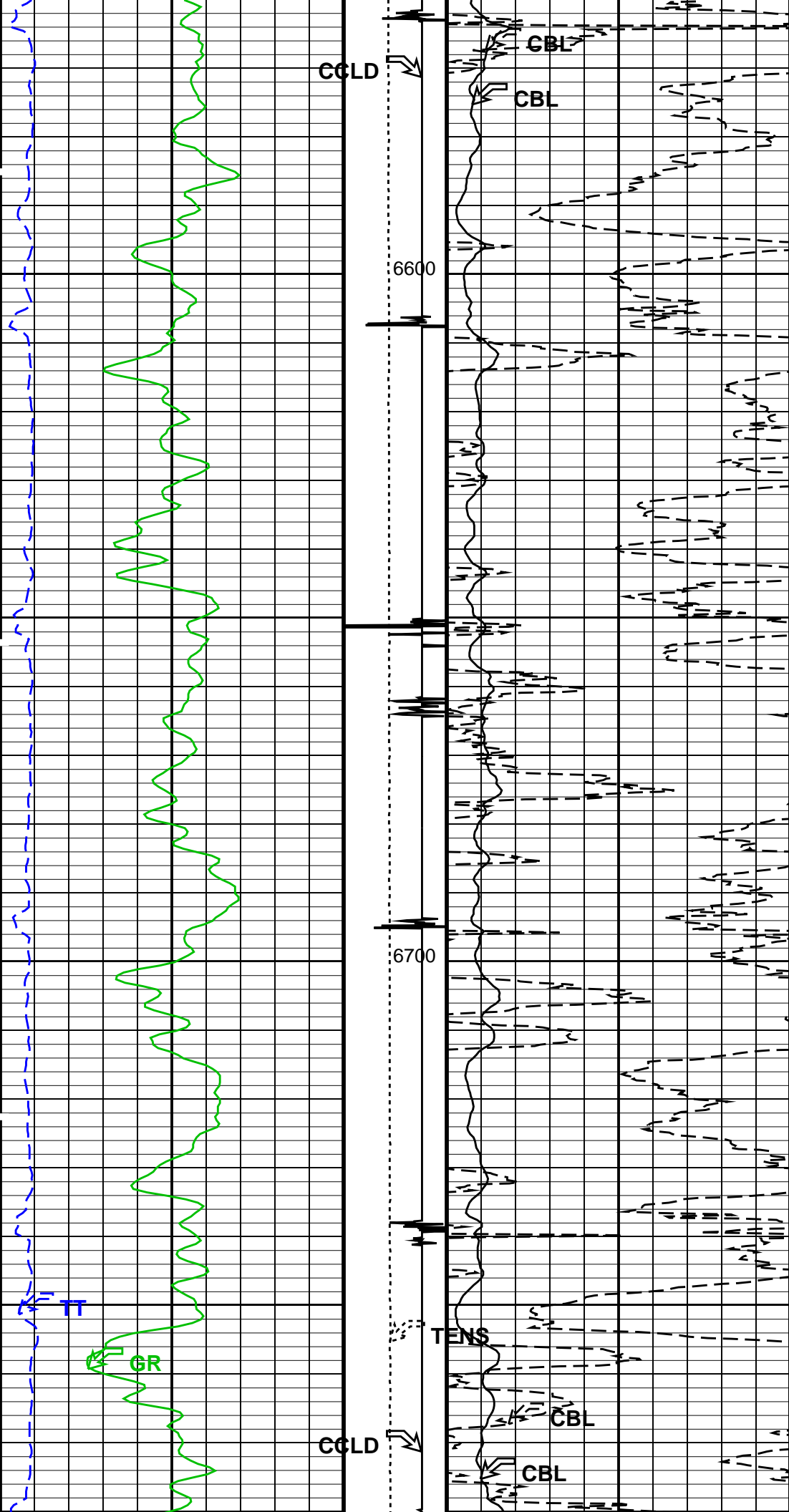


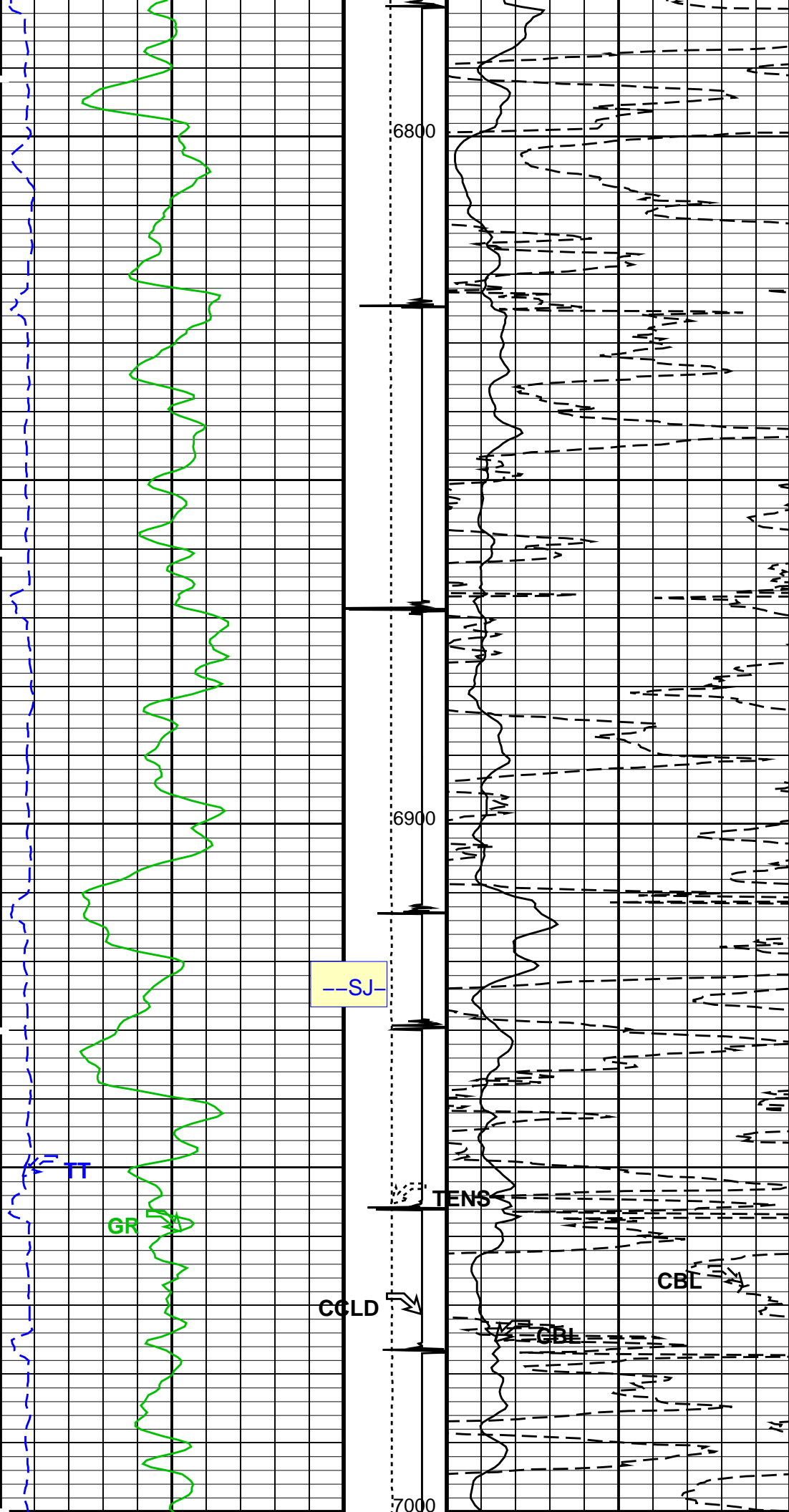


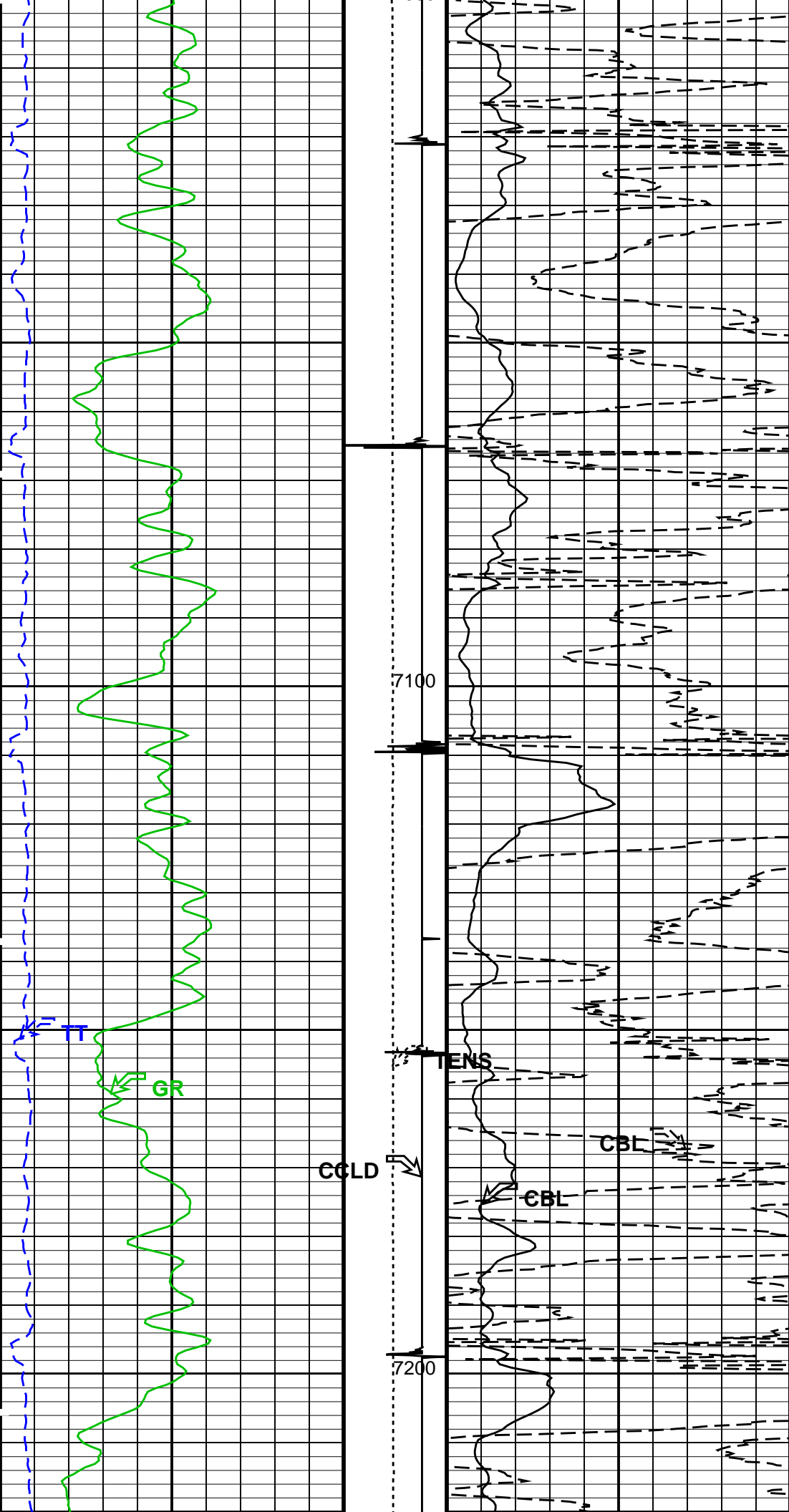


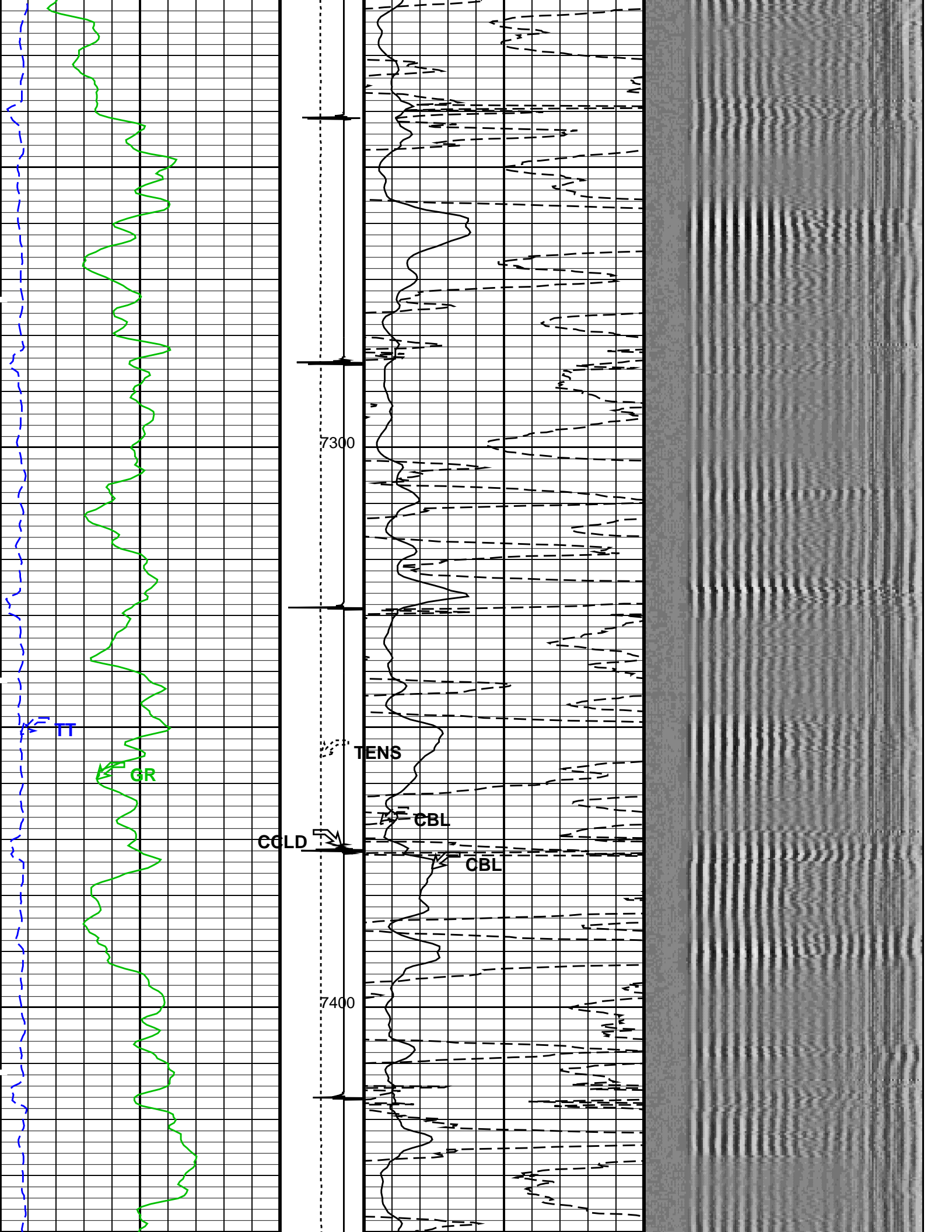


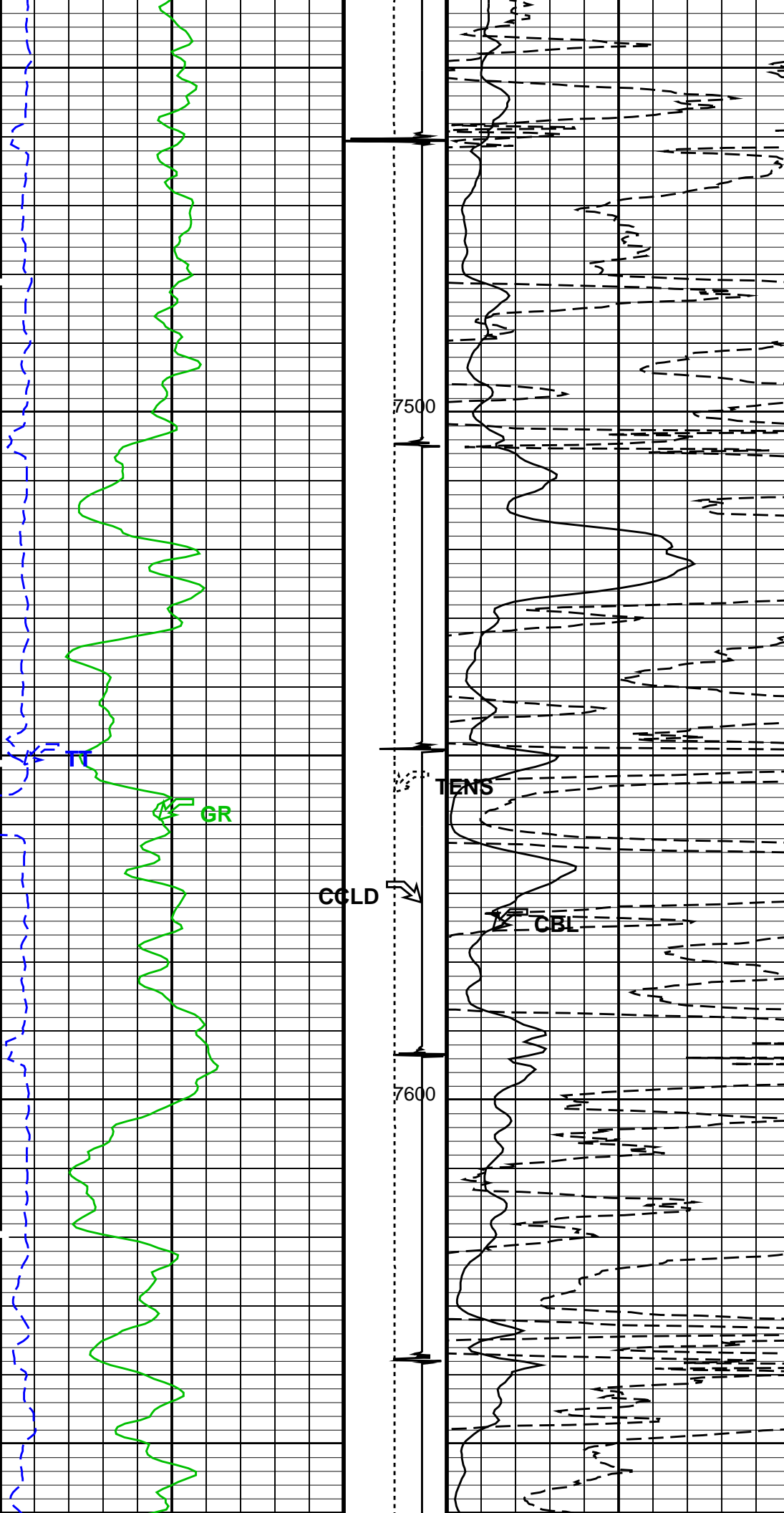


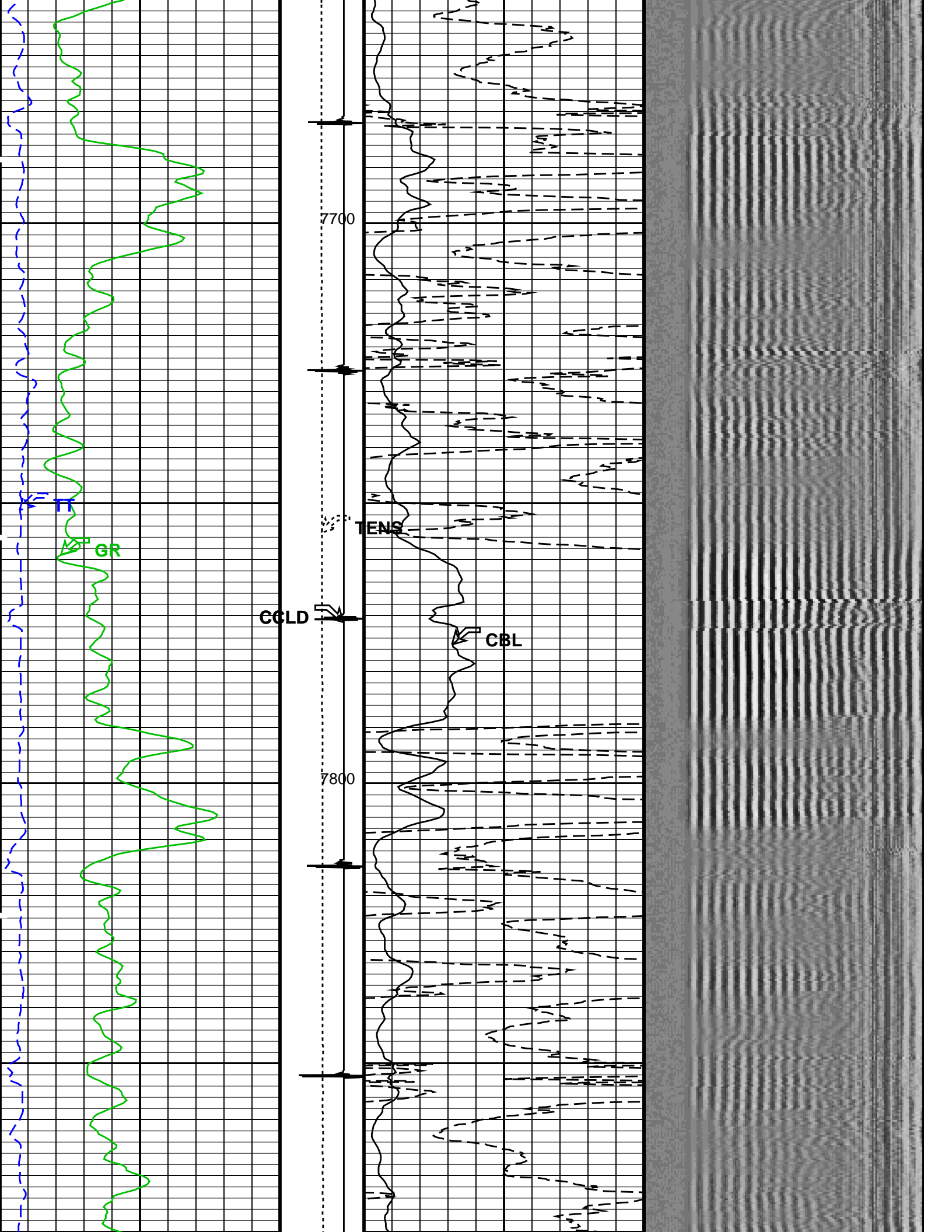


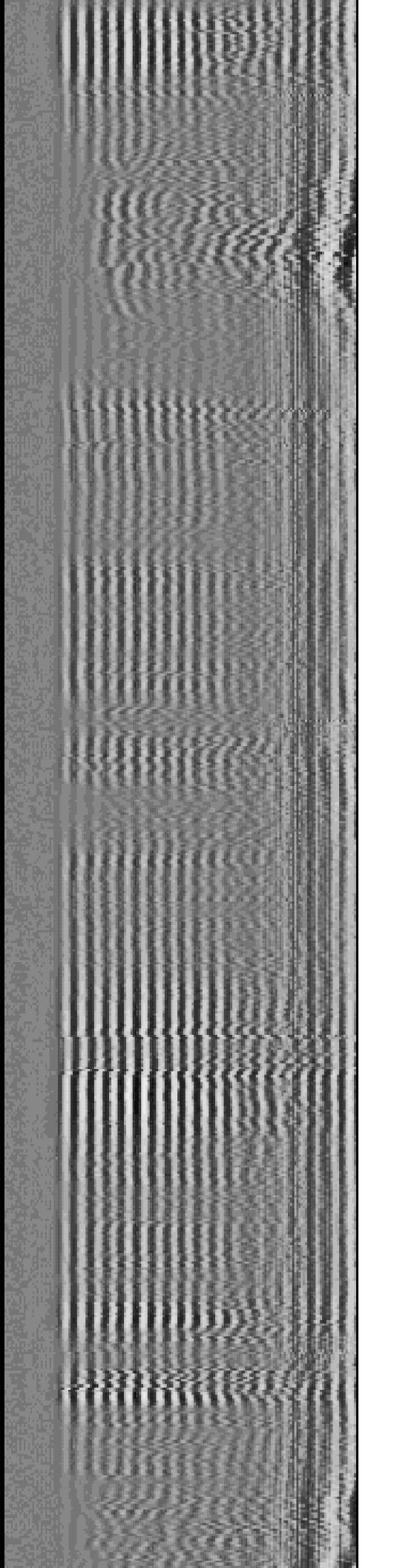
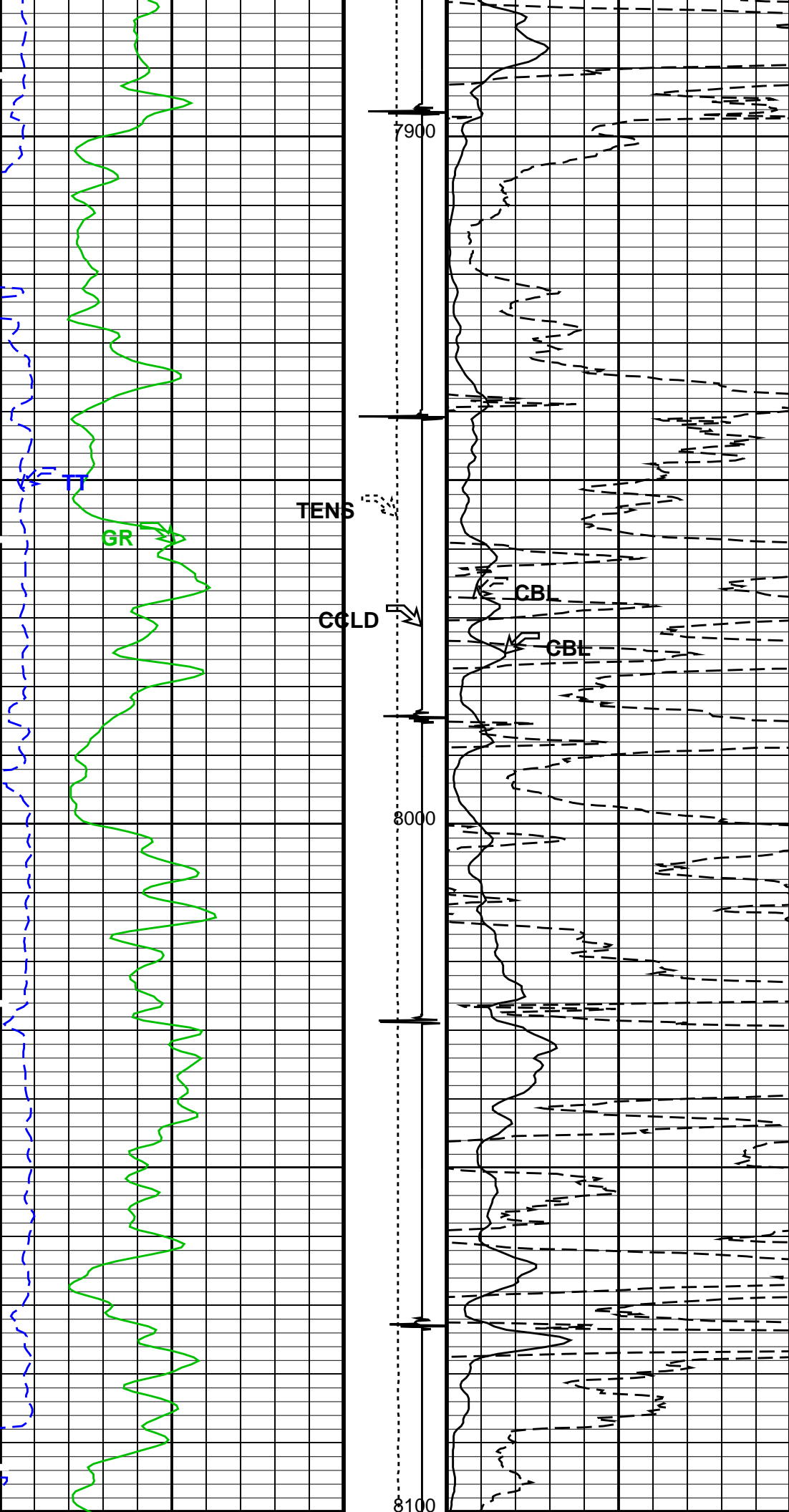


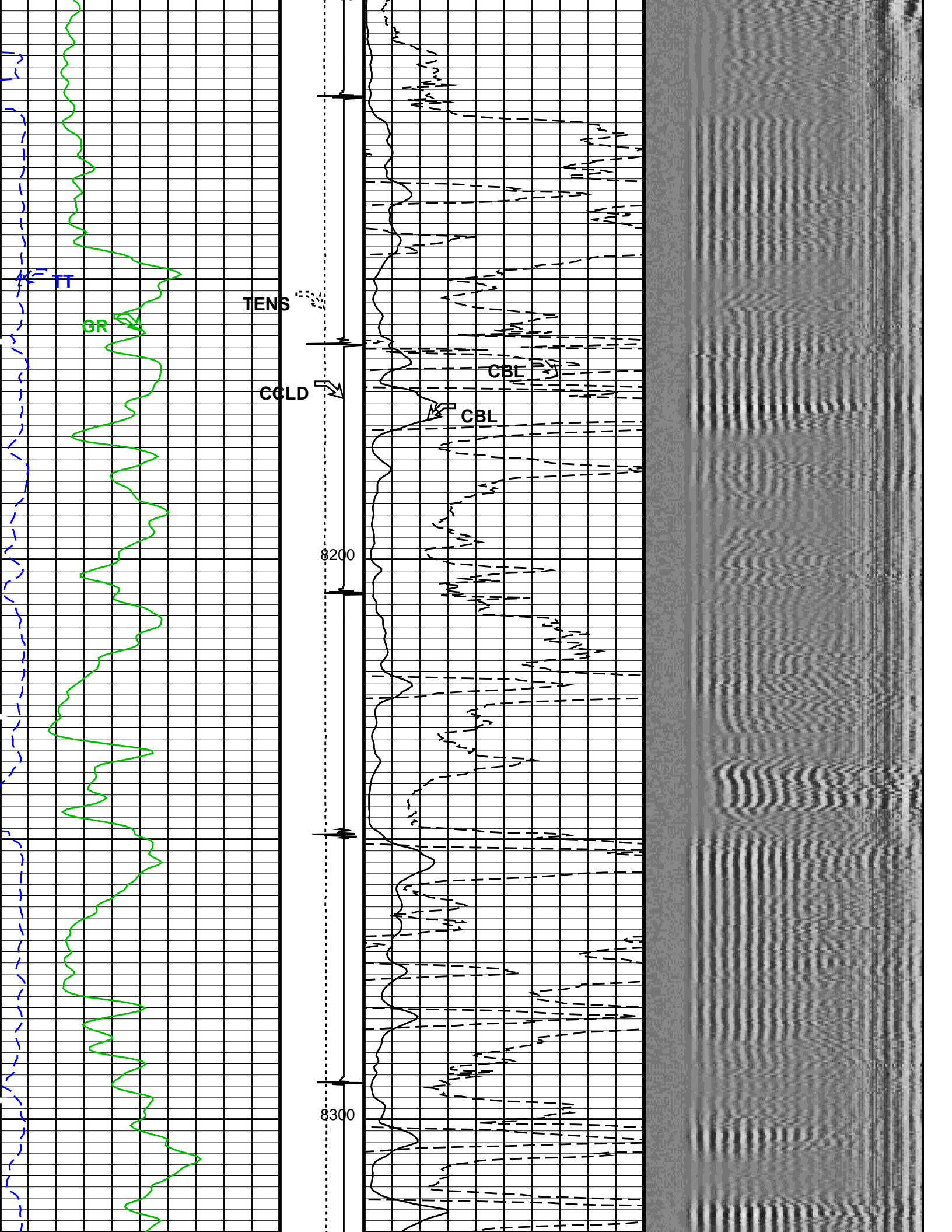


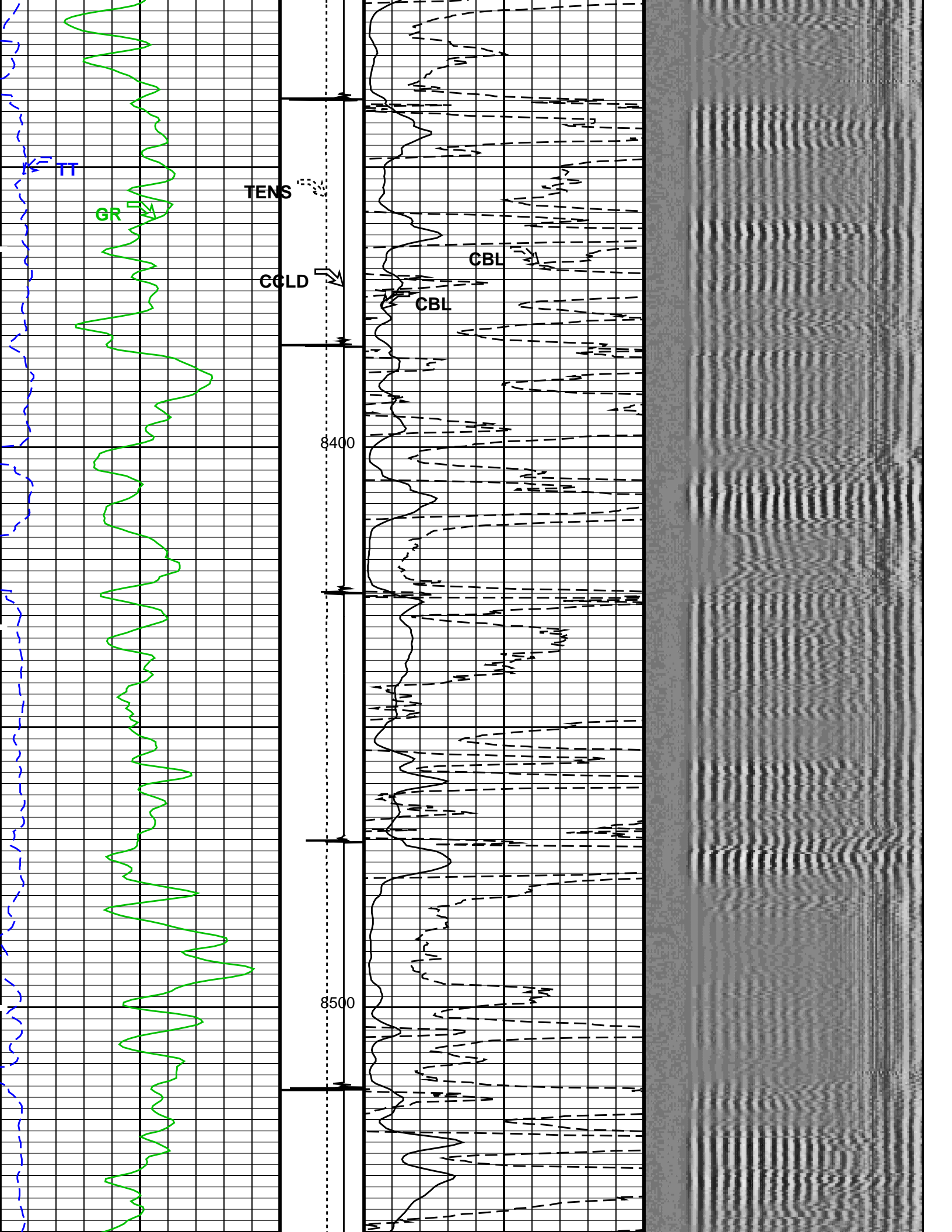


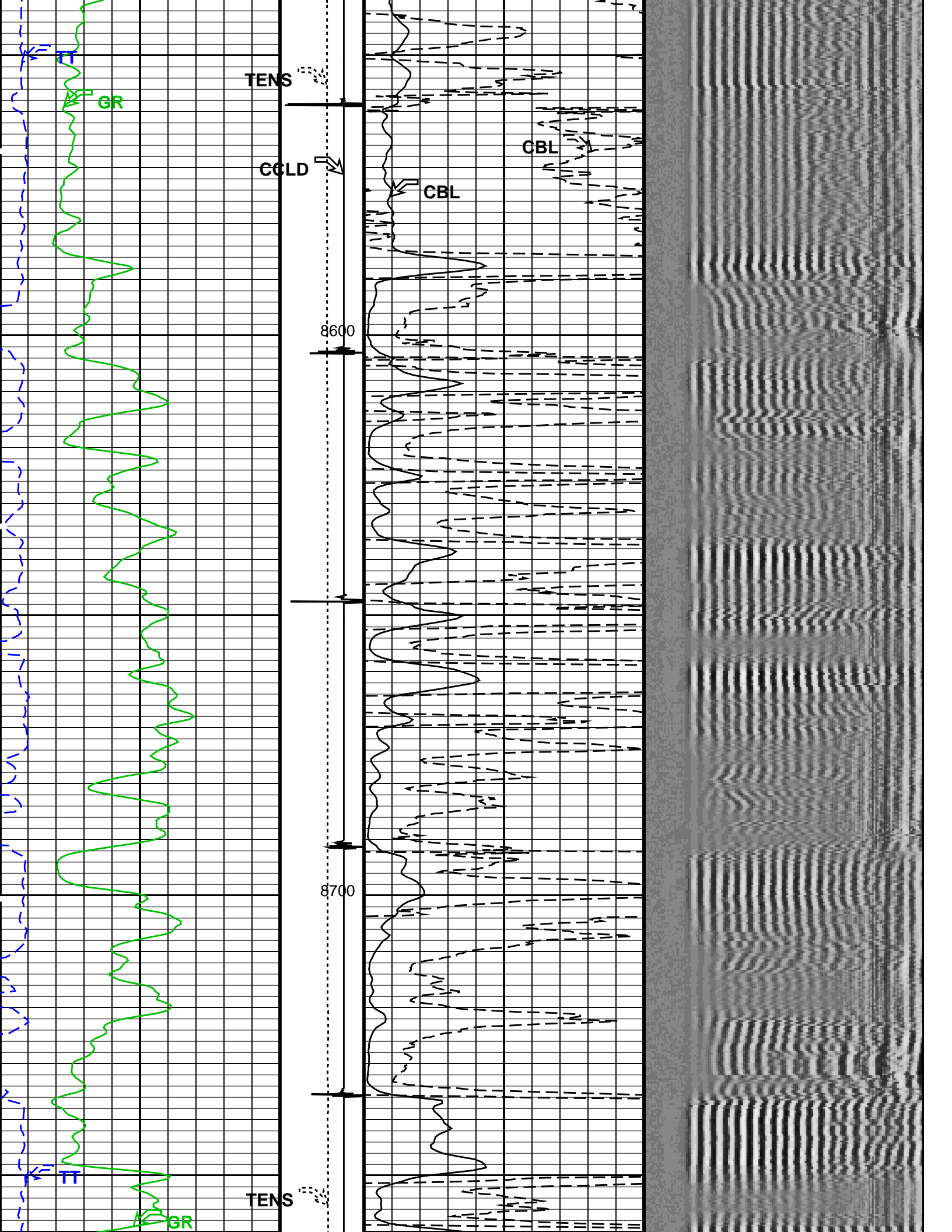


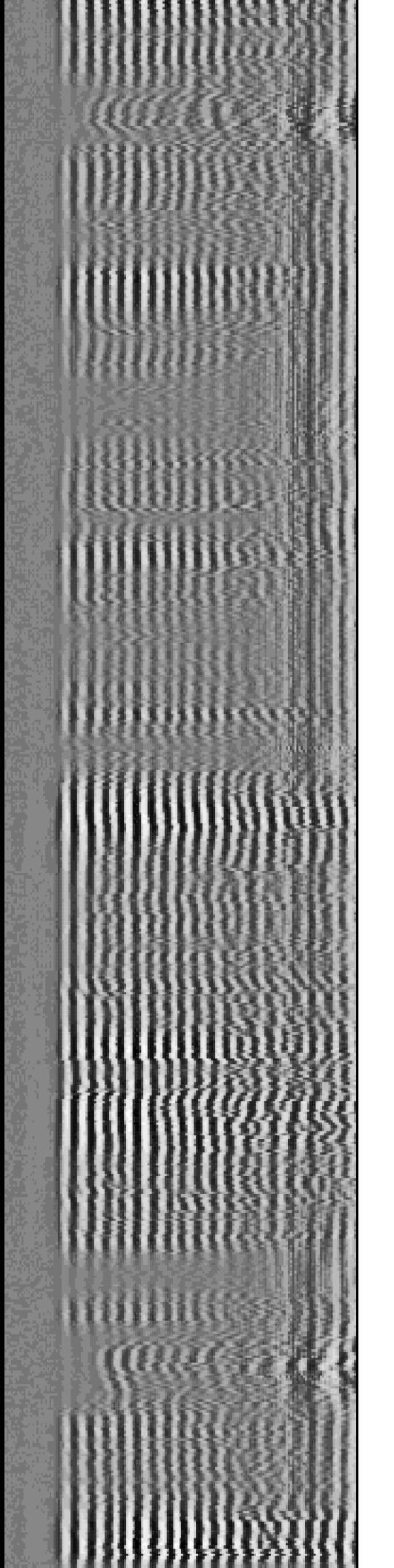
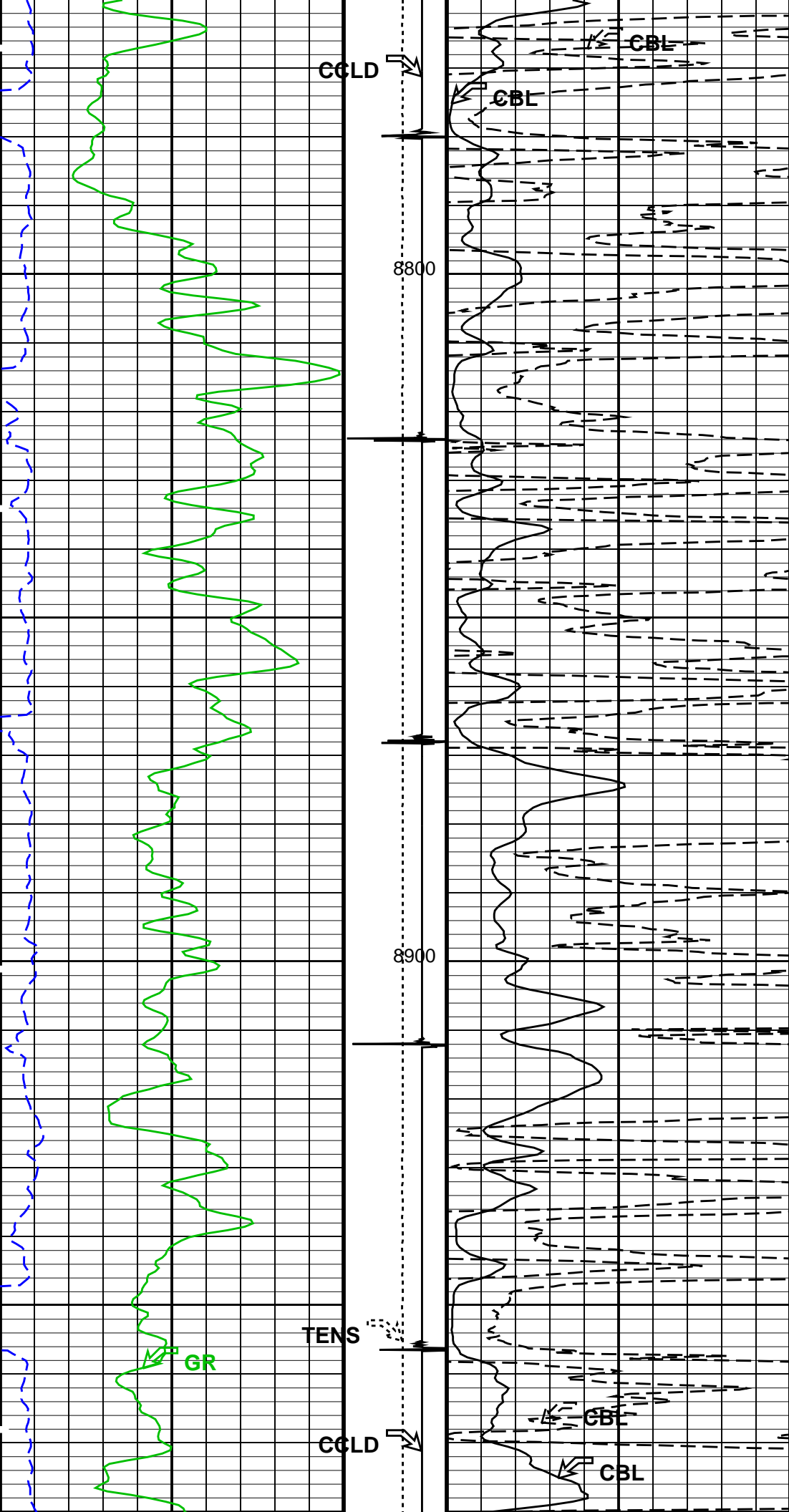


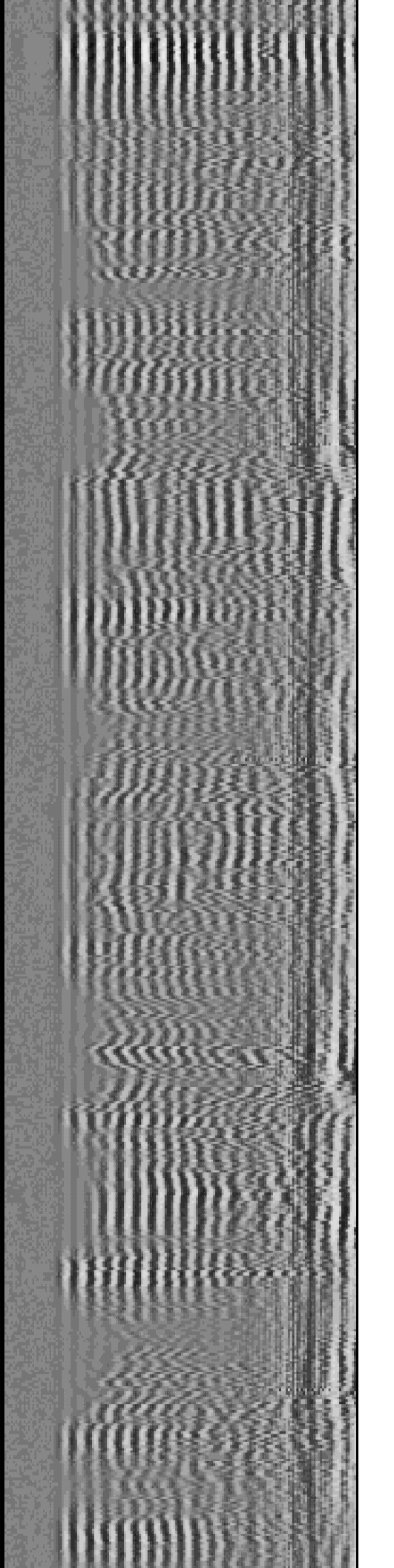
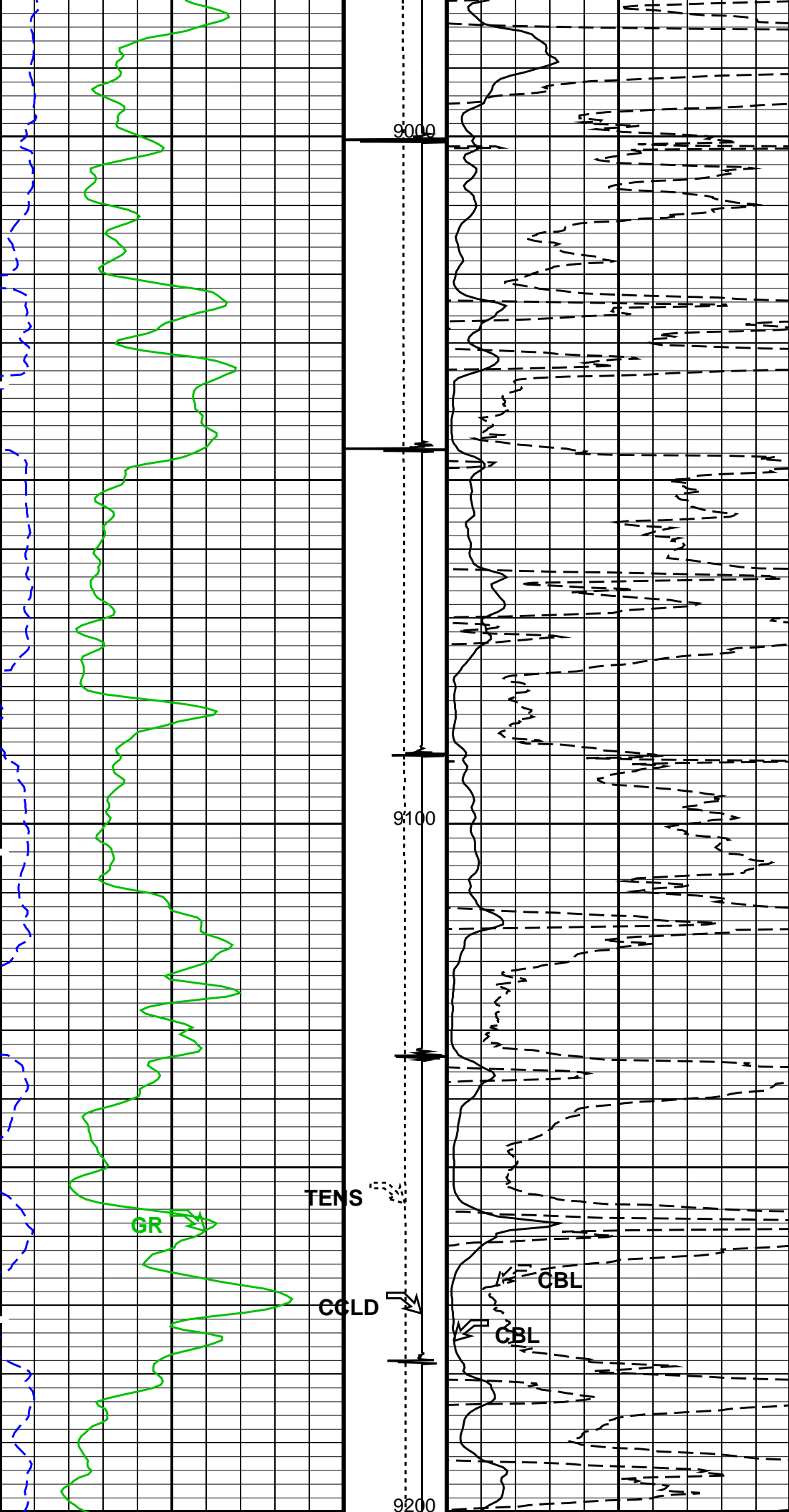


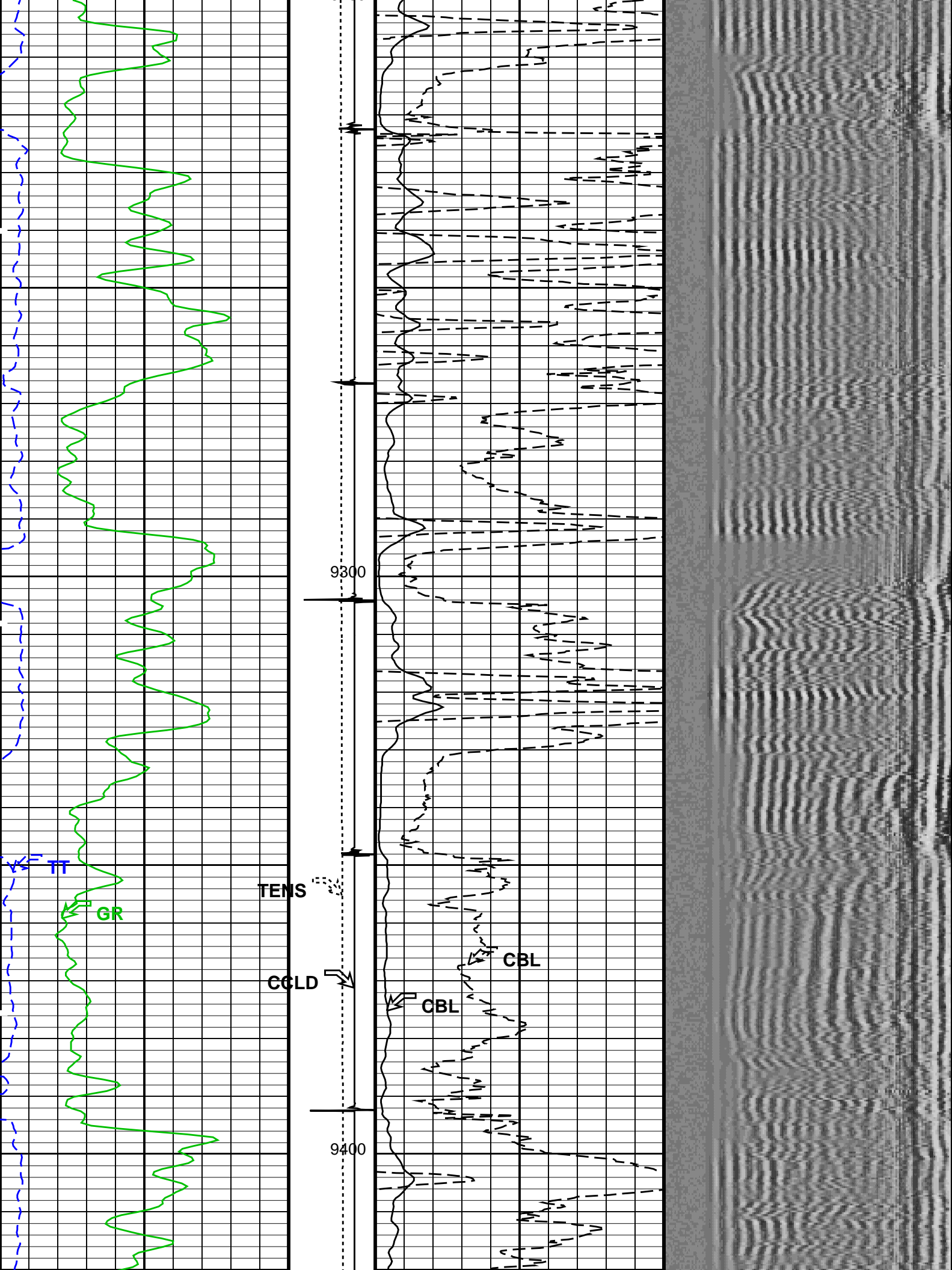


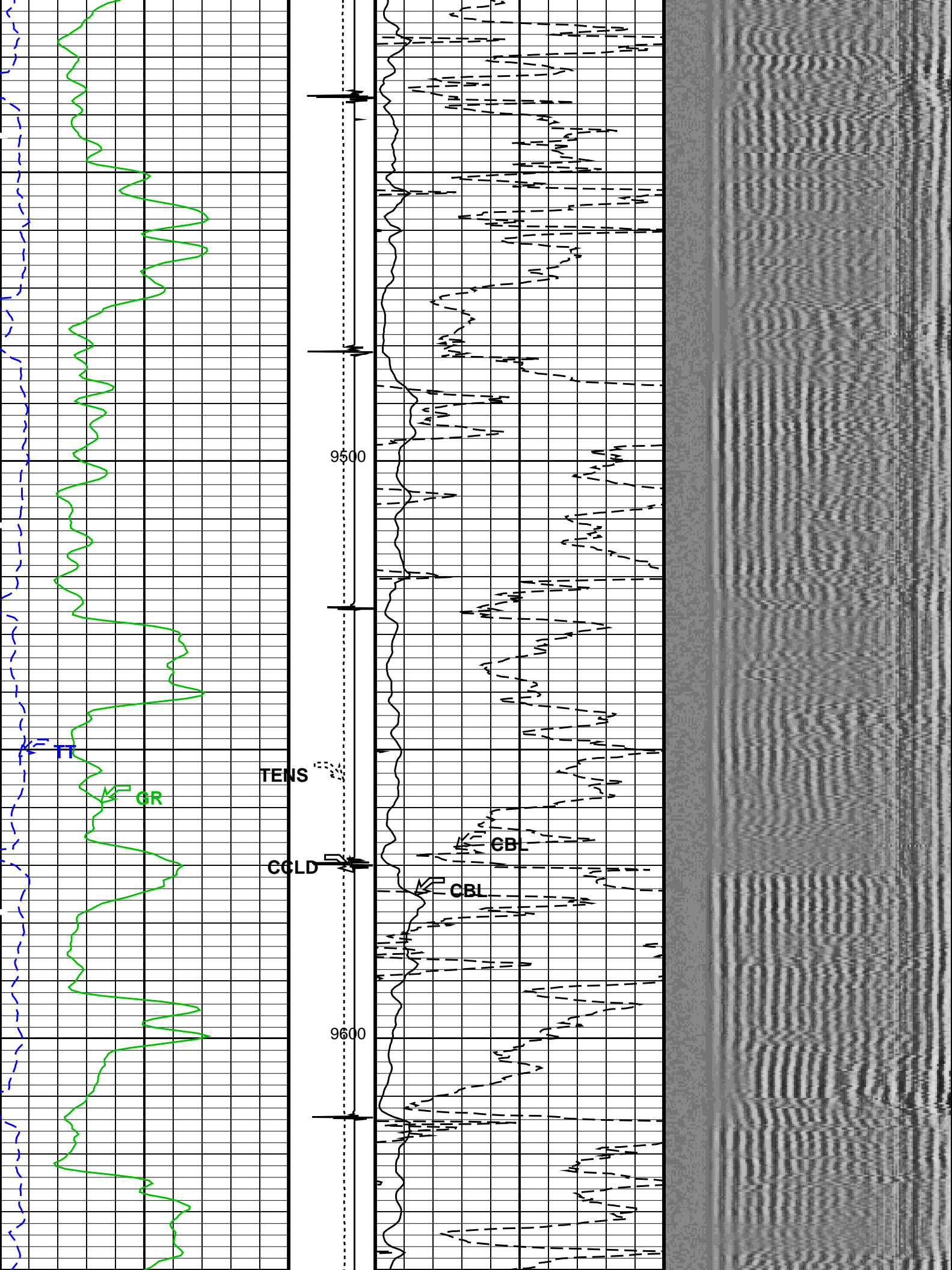


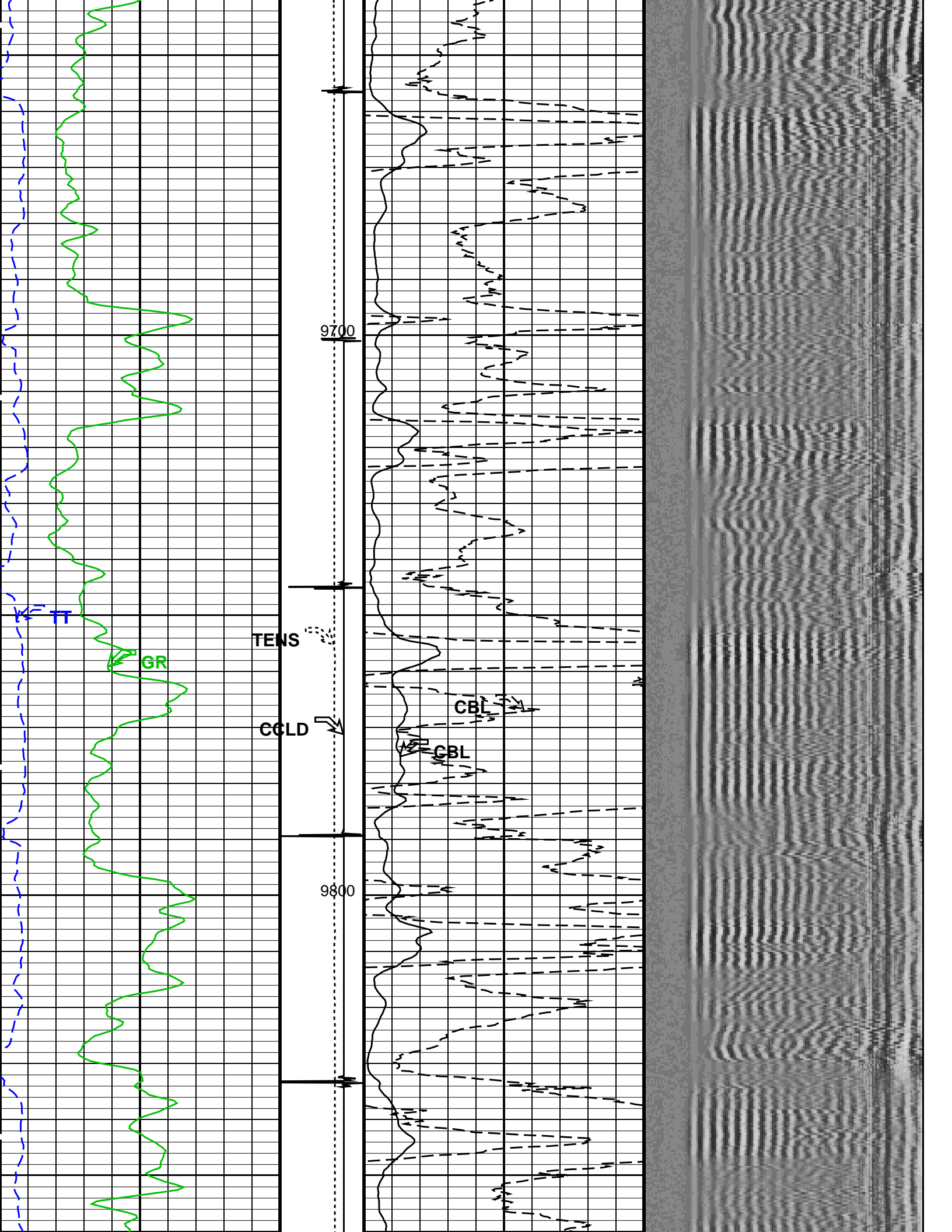


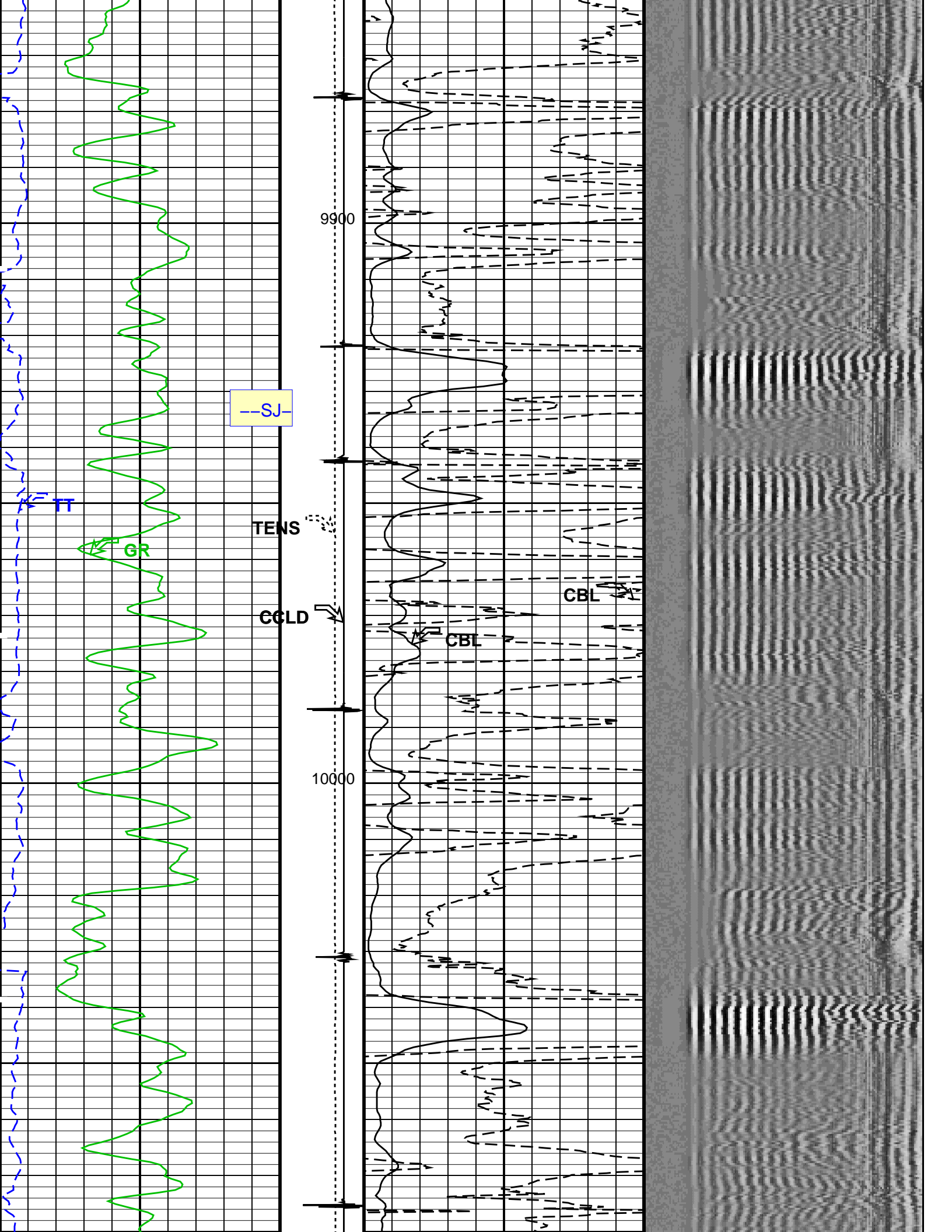


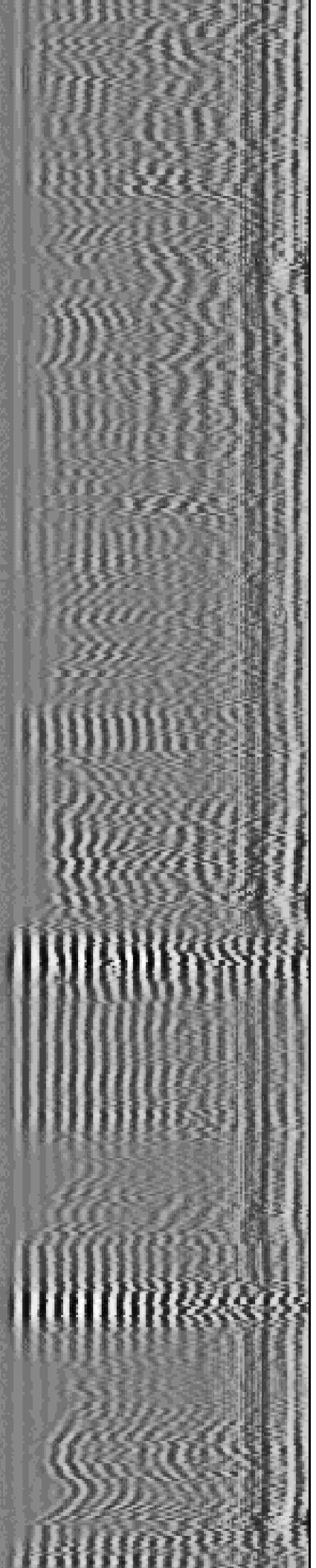
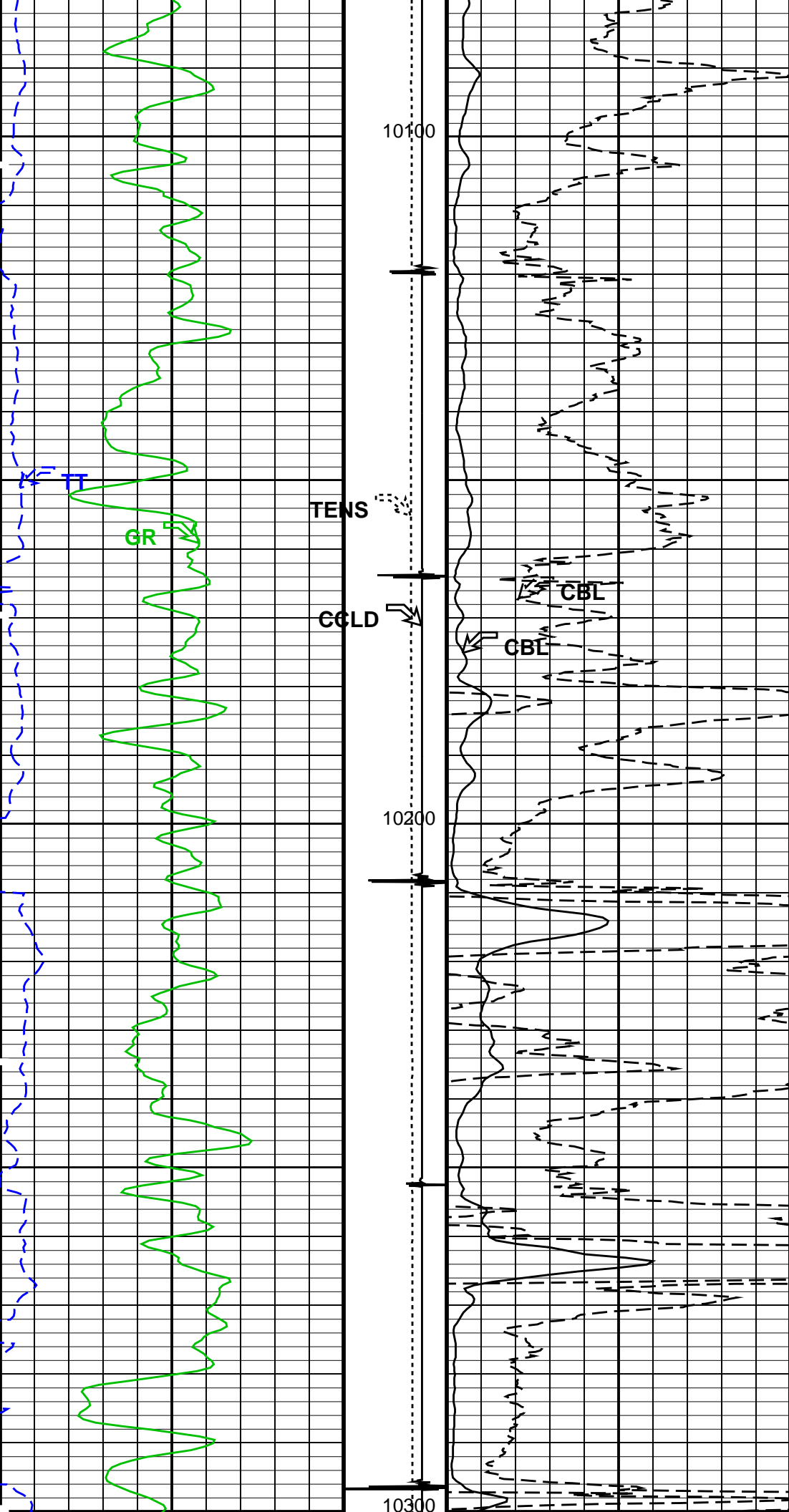


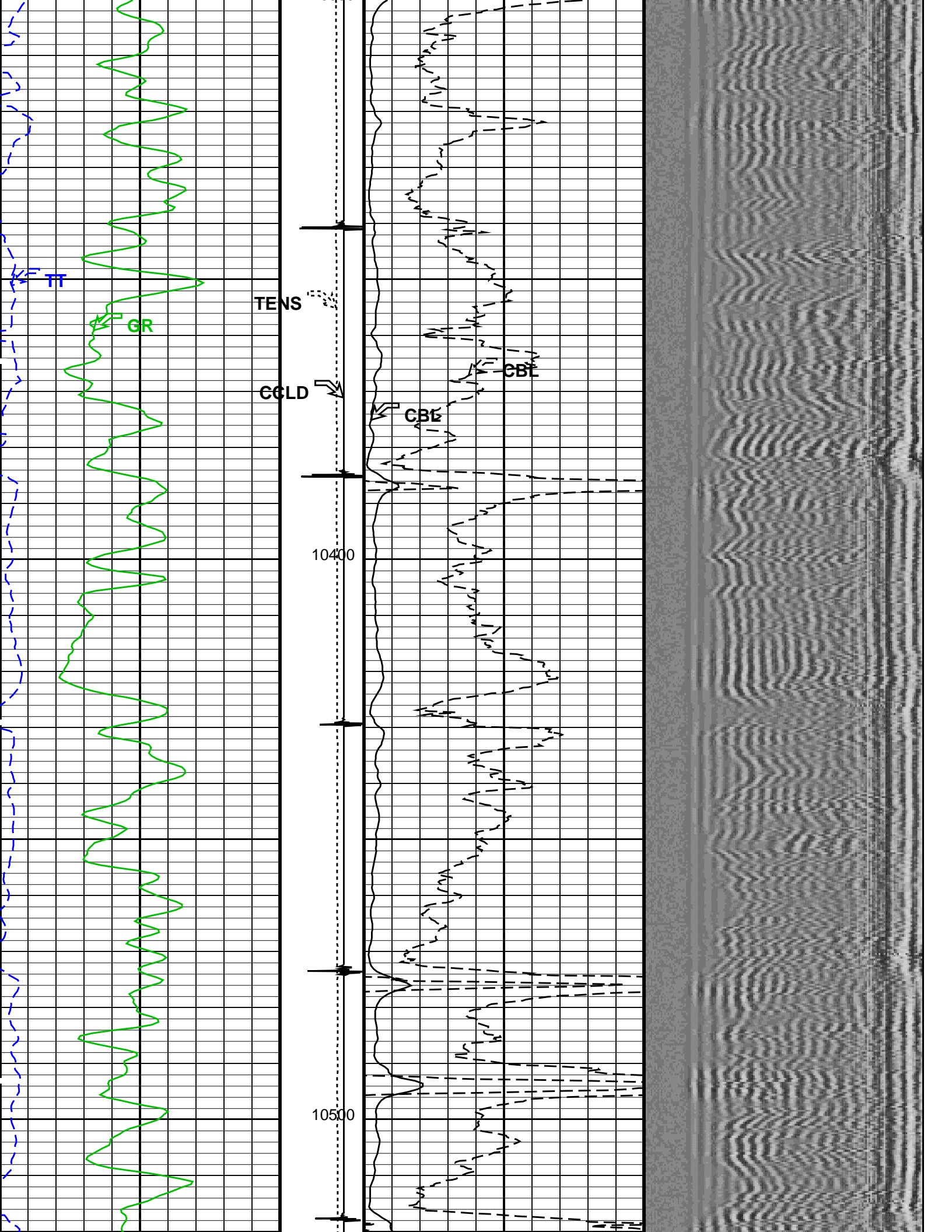


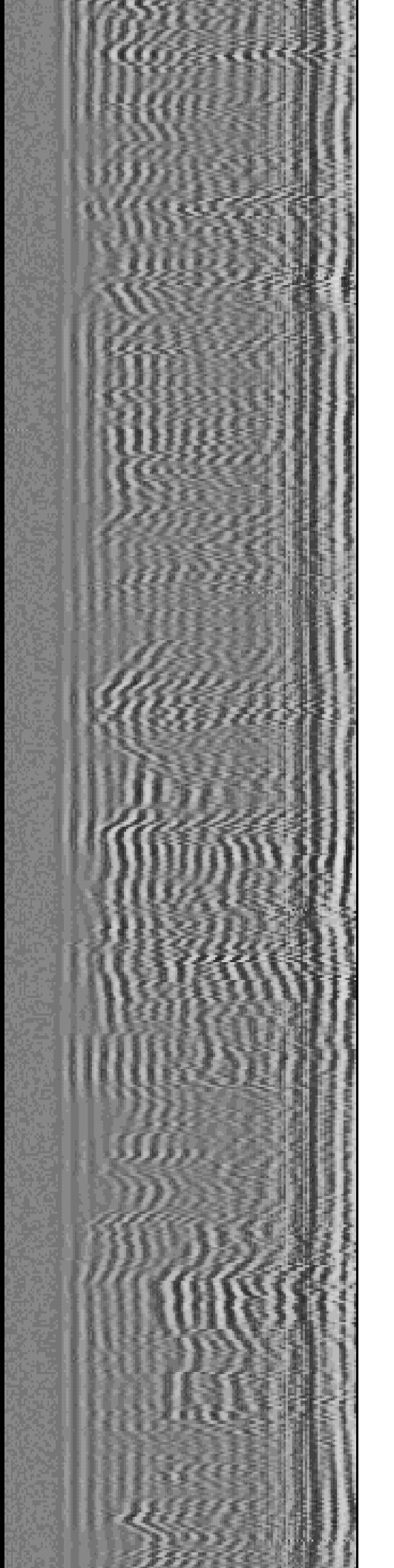
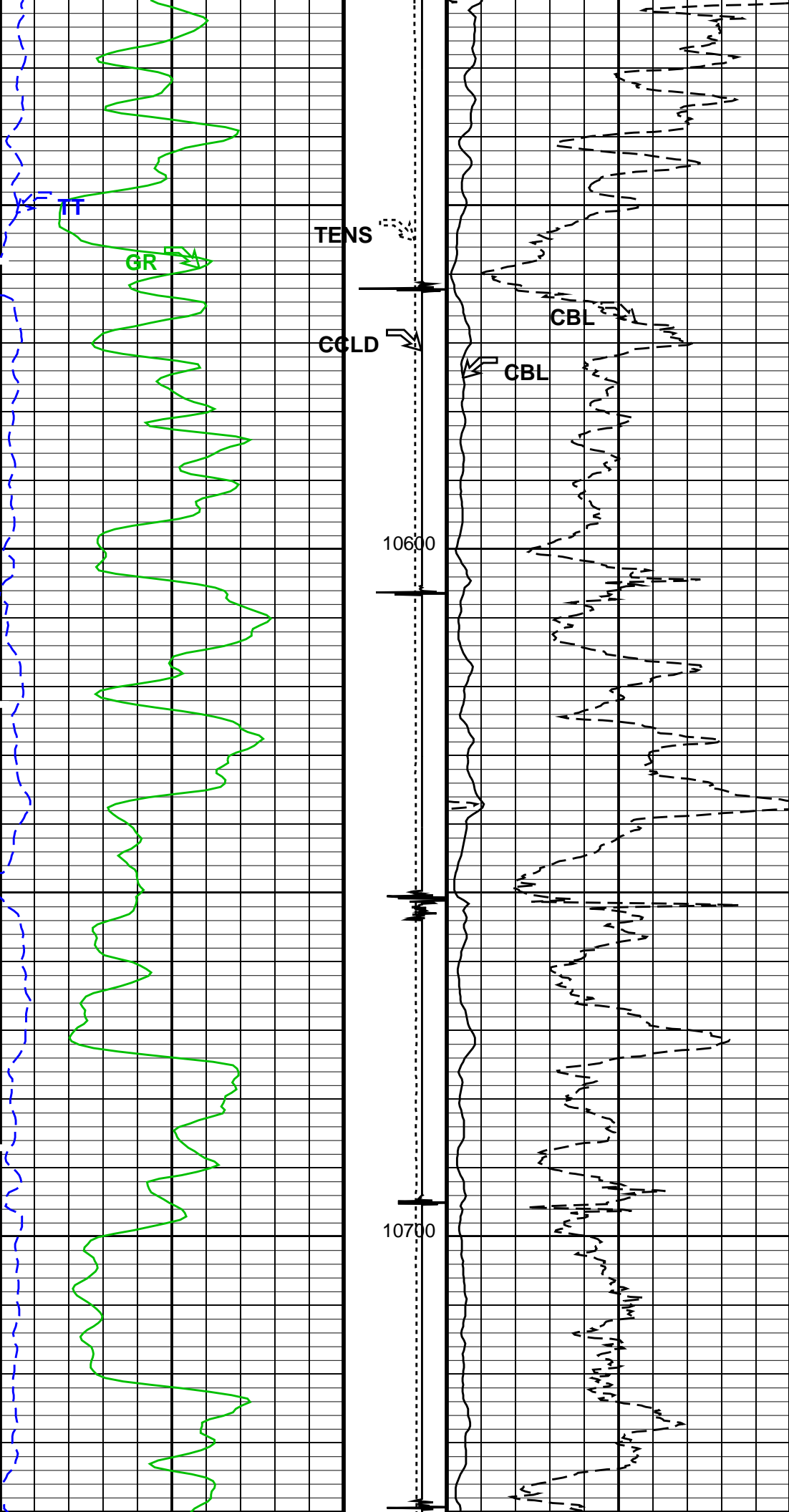


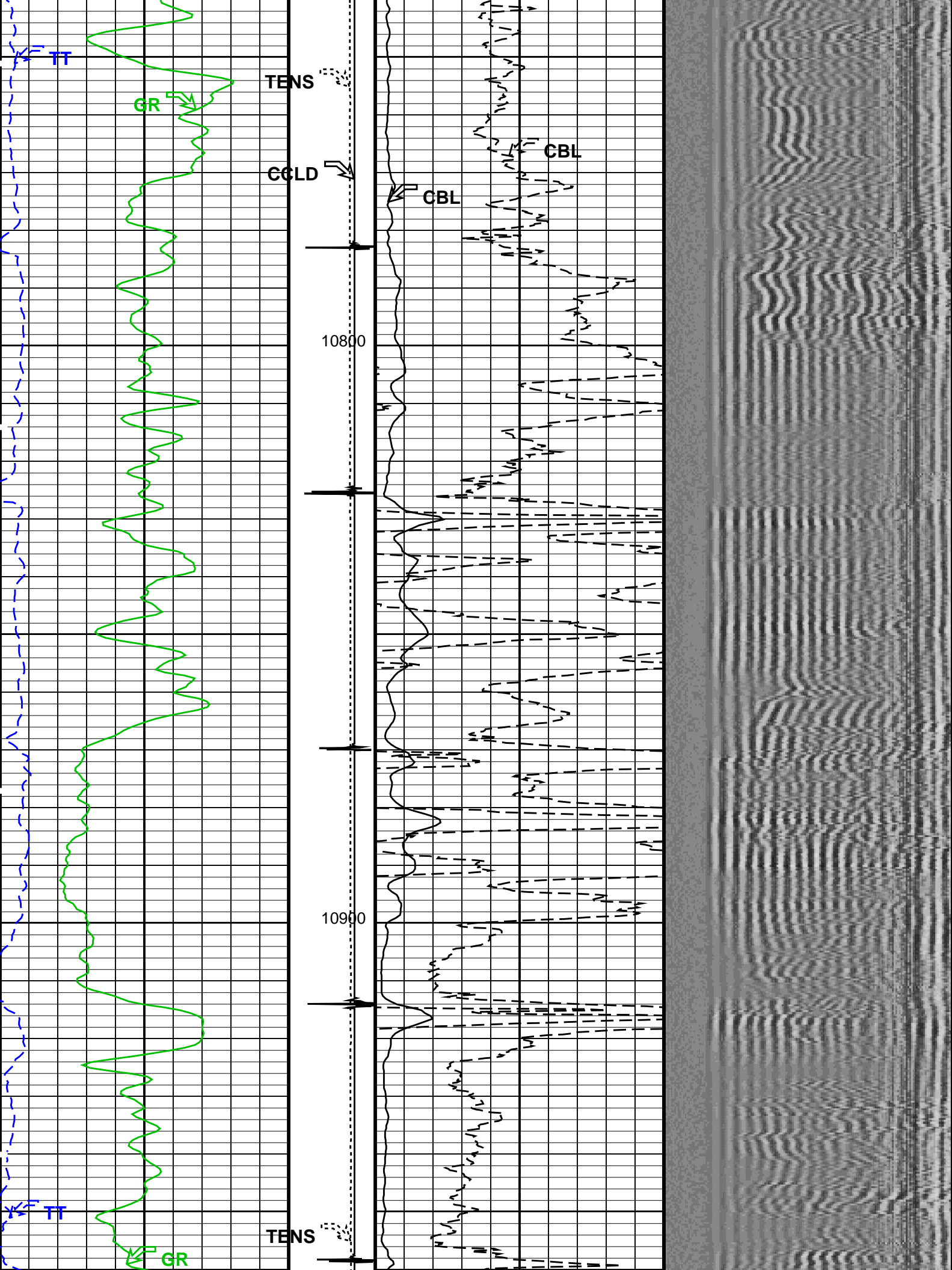


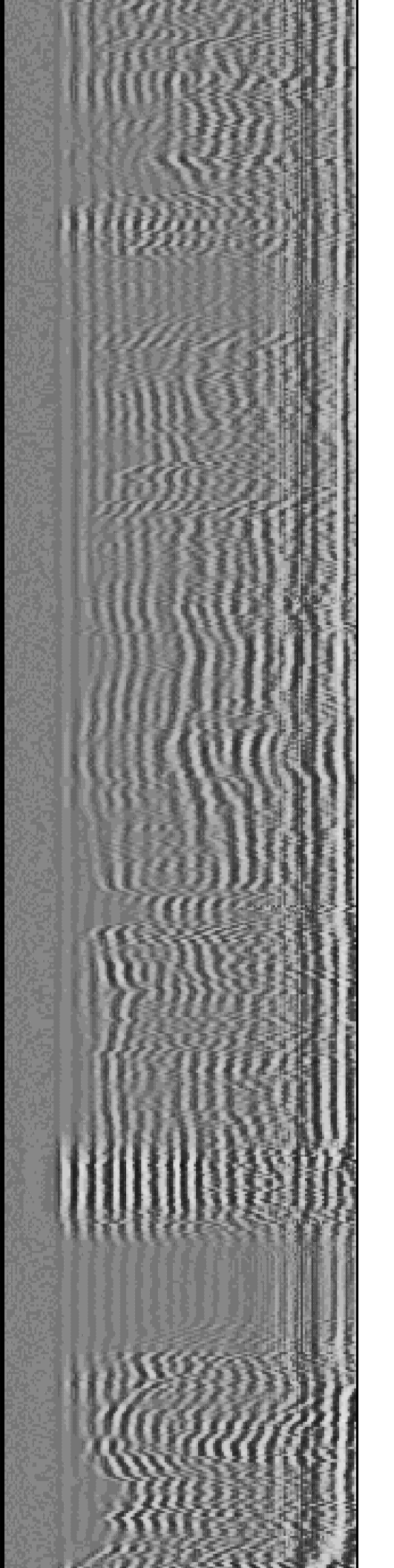
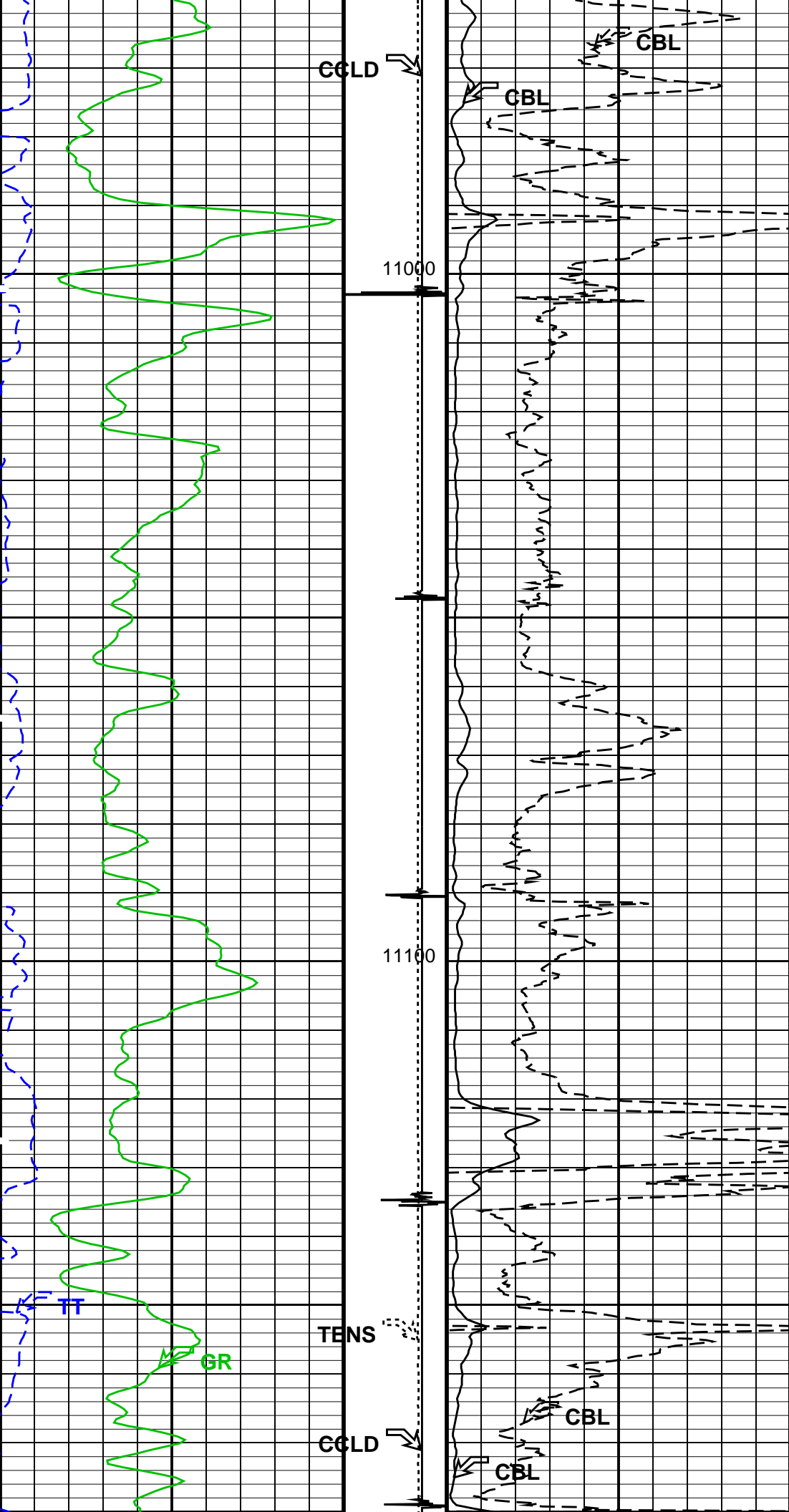


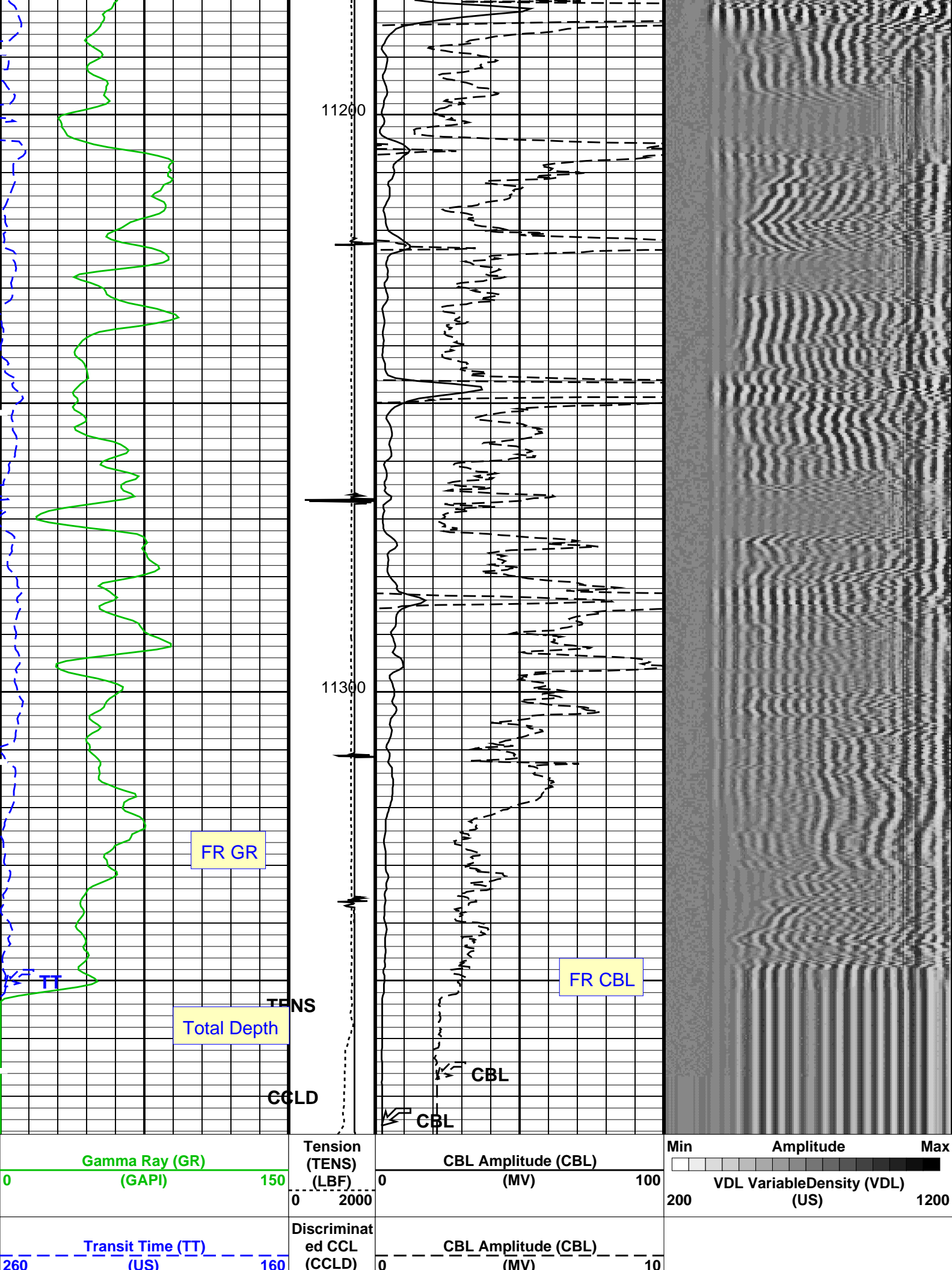












		3	(V)	-1		
PIP SUMMARY						
Time Mark Every 60 S						
Format: CBL_VDL		Vertical Scale: 5" per 100'			Graphics File Created: 28-Feb-2012 12:42	
OP System Version: 19C0-187						
SCMT-CB	SRPC-5095-H2-2011-OP19_I		PSPT		19C0-187	
<<<SCMT Cement Evaluation Information Summary>>>						
Sonde Serial Number		SCMS-CB 8186				
Current Casing Size		4.50000 IN				
Casing Weight		11.6000 LB/F				
Expected CBL Amplitude in Free Pipe Section		80 MV	Minimum Sonic Amplitude		0.573313 MV (100% Cement)	
					1.53933 MV (80% Cement)	
			MAP Minimum Sonic Amplitude		4.27928 MV (100% Cement)	
					8.03705 MV (80% Cement)	
Master Calibration (Normalization)			Before Calibration (Adjustment)			
Date of Master Calibration		23-FEB-2011				
CBL Correction Factor		0.0700110	CBL Adjustment Factor (CBAF)		1.0	
MAP 1 Correction Factor		0.0960446	MAP Adjustment Factor (MPAF)		1.0	
MAP 2 Correction Factor		0.103019				
MAP 3 Correction Factor		0.112474				
MAP 4 Correction Factor		0.170246				
MAP 5 Correction Factor		0.138168				
MAP 6 Correction Factor		0.126543				
MAP 7 Correction Factor		0.0891491				
MAP 8 Correction Factor		0.107987				
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			228.052	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			342.052	US	
CB5T	SCMT CBL 5 ft Fixed Threshold Level			20	MV	
CBLG	CBL Gate Width			40	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			203	US/F	
FATT	Acoustic Attenuation due to Fluid			0	DB/F	
FCF	CBL Fluid Compensation Factor			0.992742		
GOBO	Good Bond			1.53933	MV	
MAPD	SCMT MAP Peak Detection Mode			PEAK		
MAPG	SCMT MAP Peak Detection T0_Delay and Noise Gate			171.052	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			4.27928	MV	
MSA	Minimum Sonic Amplitude			0.573313	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	

CWEL	Current Casing Size	4.500	IN
DORL	Casing Weight	11.60	LB/F
TD	Depth Offset for Repeat Analysis	0.0	FT
	Total Depth	9117	FT

Output DLIS Files

DEFAULT
 SCMT_PSP_021LUP
 FN:20
 PRODUCER
 28-Feb-2012 12:42

Schlumberger

REPEAT ANALYSIS

MAXIS Field Log

Company: ENCANA OIL & GAS (USA) INC.
 Well: SG 8508C-21 N22 496

Input DLIS Files

DEFAULT
 SCMT_PSP_020PUP
 FN:19
 PRODUCER
 28-Feb-2012 12:42
 11377.0 FT
 11098.0 FT

Output DLIS Files

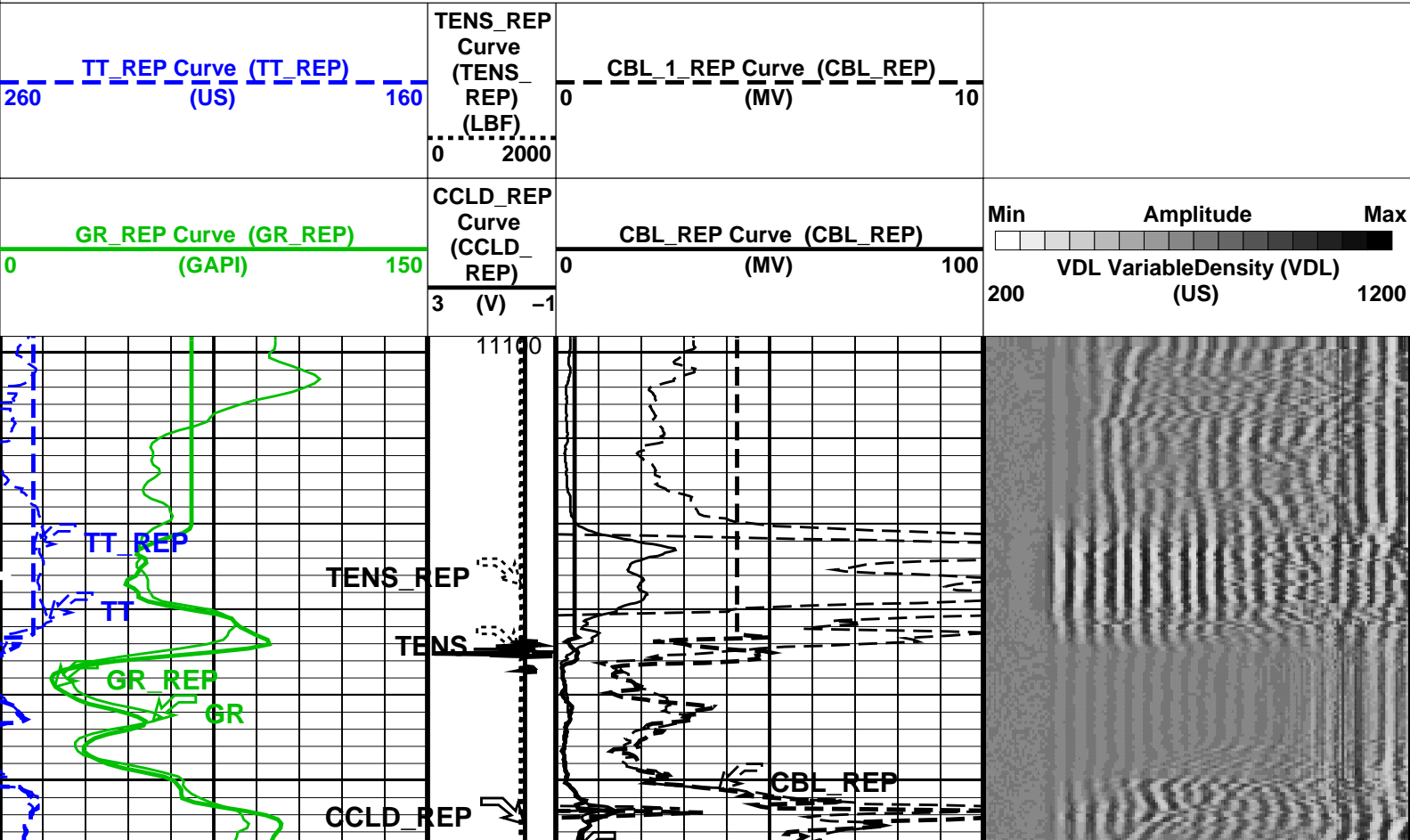
DEFAULT
 SCMT_PSP_021LUP
 FN:20
 PRODUCER
 28-Feb-2012 12:42

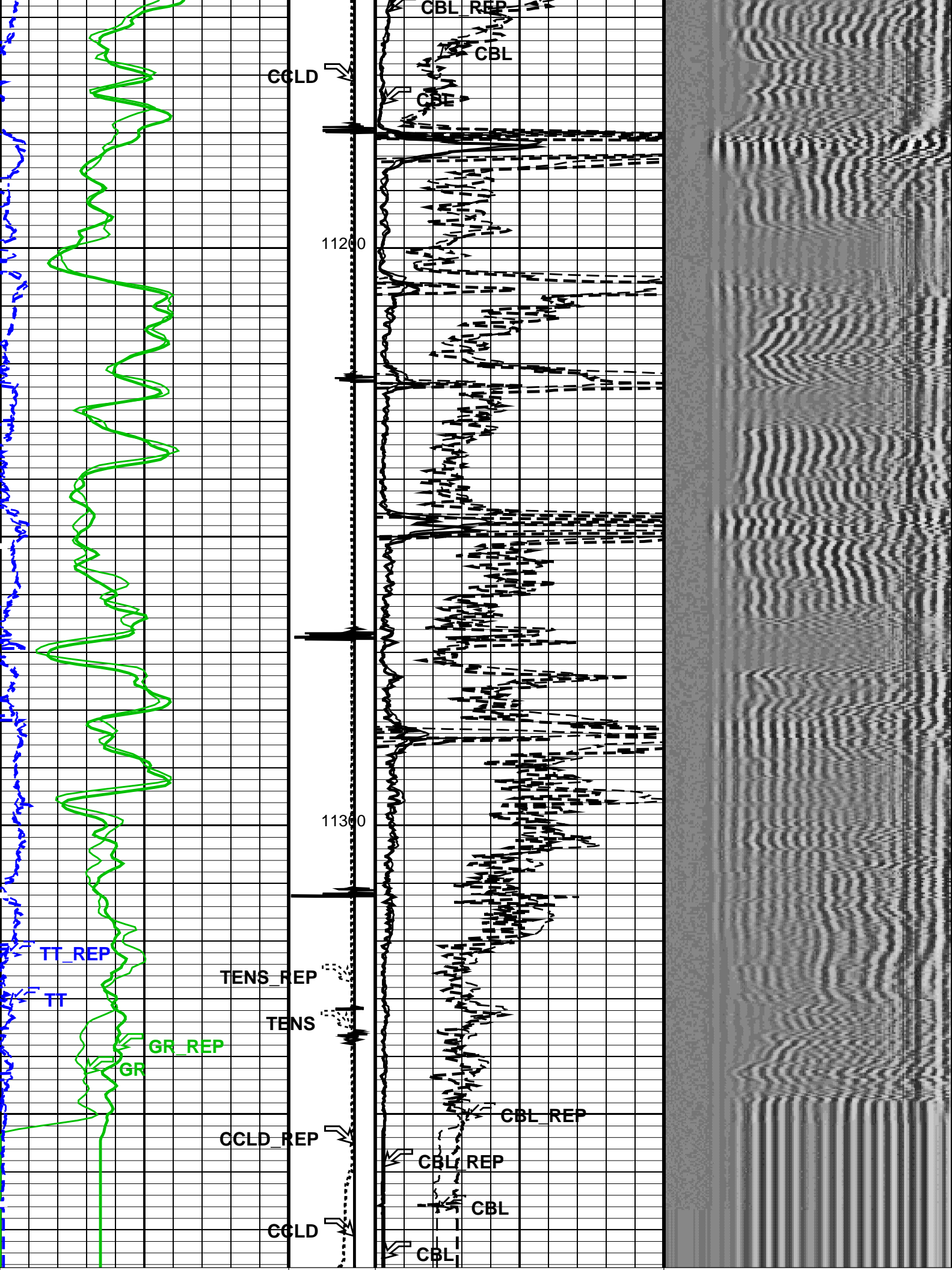
OP System Version: 19C0-187

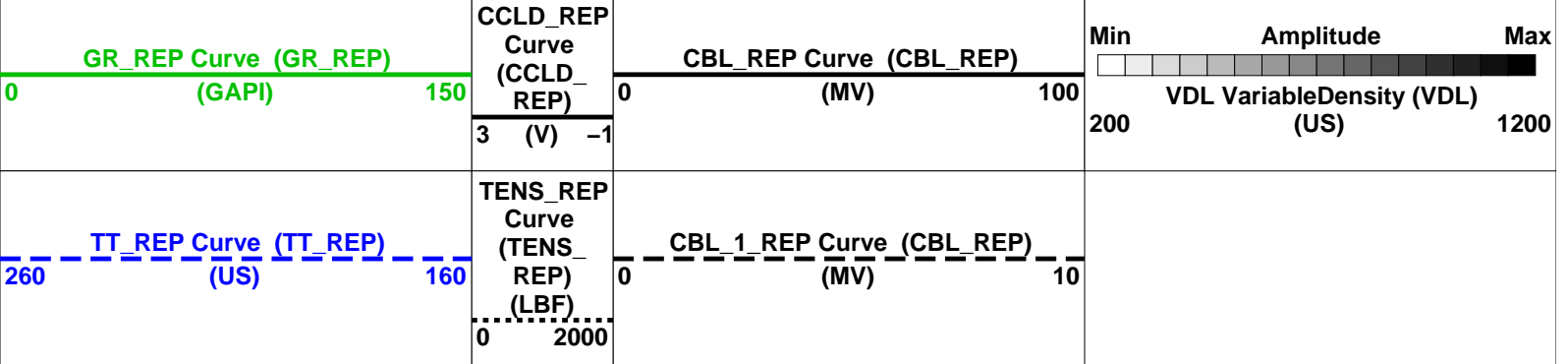
SCMT-CB
 SRPC-5095-H2-2011-OP19_I
 PSPT
 19C0-187

PIP SUMMARY

Time Mark Every 60 S







PIP SUMMARY

Time Mark Every 60 S

Format: CBL_VDL_REP Vertical Scale: 5" per 100' Graphics File Created: 28-Feb-2012 12:42

OP System Version: 19C0-187

SCMT-CB SRPC-5095-H2-2011-OP19_I PSPT 19C0-187

<<<SCMT Cement Evaluation Information Summary>>>			
Sonde Serial Number	SCMS-CB 8186		
Current Casing Size	4.50000 IN		
Casing Weight	11.6000 LB/F		
Expected CBL Amplitude in Free Pipe Section	80 MV	Minimum Sonic Amplitude	0.573313 MV (100% Cement) 1.53933 MV (80% Cement)
		MAP Minimum Sonic Amplitude	4.27928 MV (100% Cement) 8.03705 MV (80% Cement)
Master Calibration (Normalization)	Before Calibration (Adjustment)		
Date of Master Calibration	23-FEB-2011		
CBL Correction Factor	0.0700110	CBL Adjustment Factor (CBAF)	1.0
MAP 1 Correction Factor	0.0960446	MAP Adjustment Factor (MPAF)	1.0
MAP 2 Correction Factor	0.103019		
MAP 3 Correction Factor	0.112474		
MAP 4 Correction Factor	0.170246		
MAP 5 Correction Factor	0.138168		
MAP 6 Correction Factor	0.126543		
MAP 7 Correction Factor	0.0891491		
MAP 8 Correction Factor	0.107987		

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	228.052	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	342.052	US
CB5T	SCMT CBL 5 ft Fixed Threshold Level	20	MV
CBLG	CBL Gate Width	40	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	203	US/F
FATT	Acoustic Attenuation due to Fluid	0	DB/F
FCF	CBL Fluid Compensation Factor	0.992742	
GOBO	Good Bond	1.53933	MV

MAPD	SCMT MAP Peak Detection Mode	PEAK	
MAPG	SCMT MAP Peak Detection T0_Delay and Noise Gate	171.052	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	4.27928	MV
MSA	Minimum Sonic Amplitude	0.573313	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
CWEI	Casing Weight	11.60	LB/F
DORL	Depth Offset for Repeat Analysis	0.0	FT
TD	Total Depth	9117	FT

Input DLIS Files

DEFAULT	SCMT_PSP_020PUP	FN:19	PRODUCER	28-Feb-2012 12:42	11377.0 FT	11098.0 FT
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Output DLIS Files

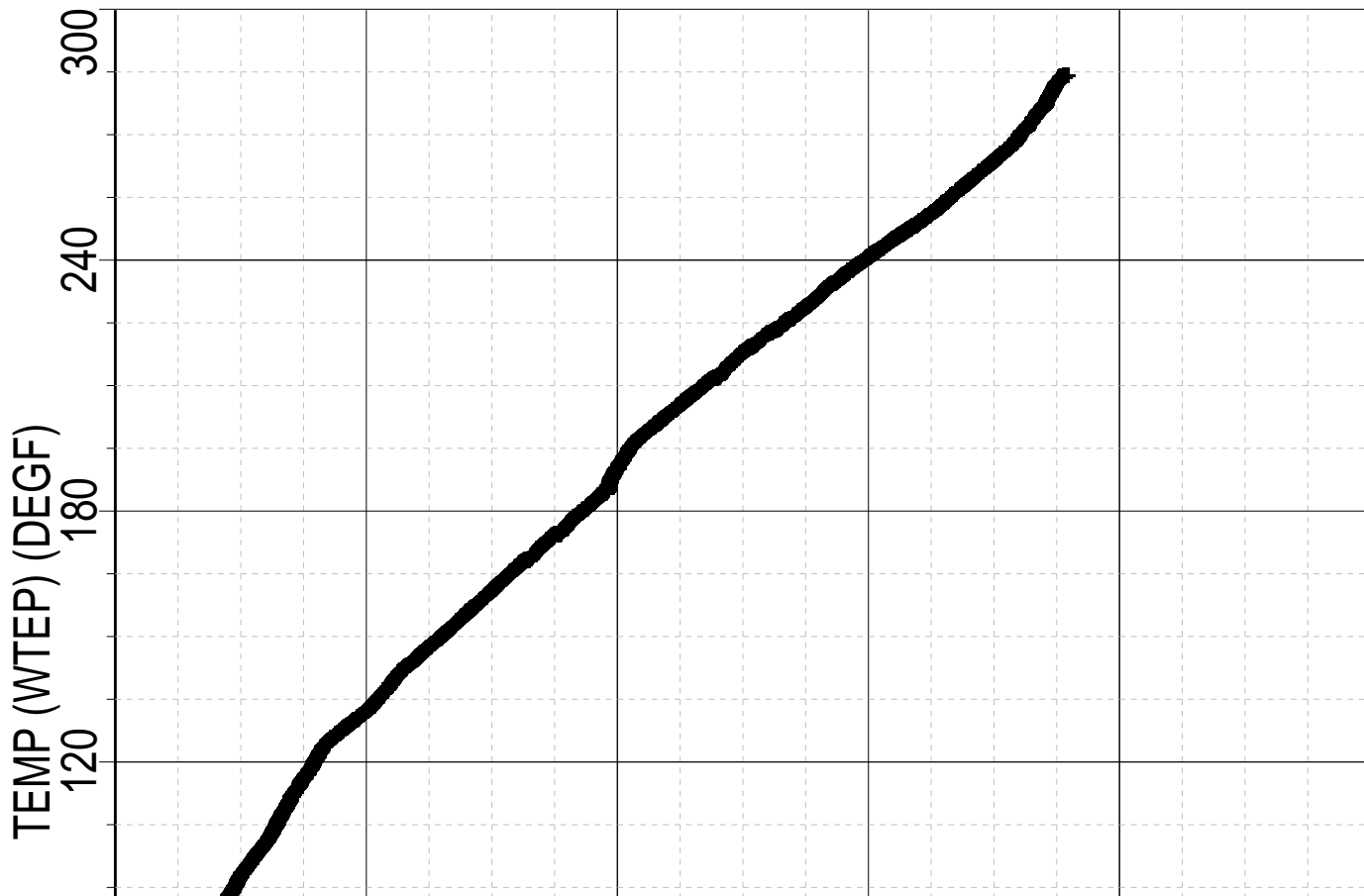
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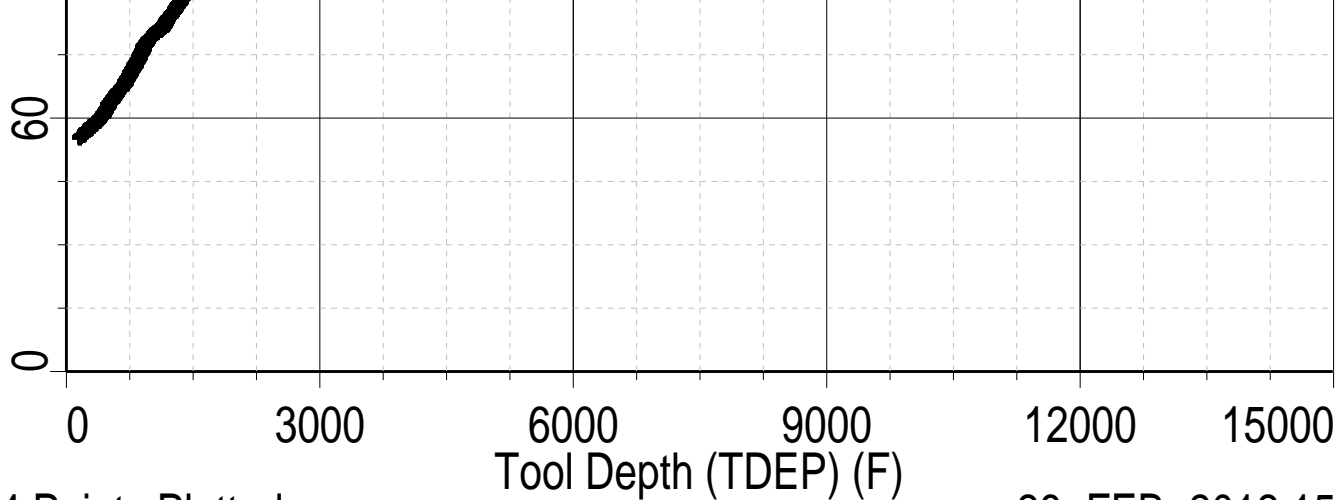
Schlumberger

TEMPERATURE PLOT

MAXIS Field Log

Index: 11376.5 – 165.0 FT





22424 Points Plotted

28-FEB-2012 15:29

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

Schlumberger

Well: **SG 8506D-22 N22 496**

Field: **STORY GULCH**

County: **GARFIELD**

State: **COLORADO**

CEMENT BOND LOG

CBL- VDL

GAMMA RAY - CCL