



Company: ENCANA OIL & GAS (USA) INC.

Well: NP EF01C-34 P27 595

Field: NORTH PARACHUTE

County: GARFIELD

State: COLORADO

CEMENT BOND LOG
CBL – VDL
GAMMA RAY – CCL

County: GARFIELD
Field: NORTH PARACHUTE
Location: SHL: 626' FSL & 547' FEL
Well: NP EF01C-34 P27 595
Company: ENCANA OIL & GAS (USA) INC.

County:		GARFIELD		SHL: 626' FSL & 547' FEL		Elev.: K.B. 6677.00 ft	
Field:		NORTH PARACHUTE		BHL: 491' FNL & 663' FEL		G.L. 6650.00 ft	
Location:		SHL: 626' FSL & 547' FEL				D.F. 6676.00 ft	
Well:		NP EF01C-34 P2					
Company:		ENCANA OIL & GAS					
		LOCATION					
		Permanent Datum:		GROUND LEVEL		Elev.: 6650.00 ft	
		Log Measured From:		KELLY BUSHING		27.00 ft above Perm. Datum	
		Drilling Measured From:		KELLY BUSHING			
Logging Date		API Serial No. 05-045-20289-0000		Section 27		Township 5S	
Run Number		ONE				Range 95W	
Depth Driller		10260 ft					
Schlumberger Depth		10198 ft					
Bottom Log Interval		10191 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		22 ft					
To		10260 ft					
Casing/Tubing Size		4.500 in					
Weight		11.6 lbm/ft					
Grade		S-80					
From		22 ft					
To		10227 ft					
Maximum Recorded Temperatures		278 degF					
Logger On Bottom		26-Apr-2012		Time 13:30			
Unit Number		Location		391		GRAND JUNCTION	
Recorded By		DAVID PATE					
Witnessed By		UNATTENDED					

PVT DATA		Run 1	Run 2	Run 3
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				
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				
Unit Number	Location			
Recorded By				
Witnessed By				

DEPTH SUMMARY LISTING

Date Created: 26-APR-2012 15:56:44

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW-B	Type:	CMTD-C	Type:	1-25ZT
Serial Number:	5873	Serial Number:	5006	Serial Number:	391
Calibration Date:	20-DEC-2011	Calibration Date:	31-MAR-2012	Length:	19600 FT
Calibrator Serial Number:	33	Calibrator Serial Number:	174878	Conveyance Method: Wireline Rig Type: LAND	
Calibration Cable Type:	1-25ZT	Number of Calibration Points:	10		
Wheel Correction 1:	-3	Calibration RMS:	5		
Wheel Correction 2:	-3	Calibration Peak Error:	9		

Depth Control Parameters

Log Sequence:	First Log In the Well
Rig Up Length At Surface:	266.00 FT
Rig Up Length At Bottom:	267.00 FT
Rig Up Length Correction:	-1.00 FT
Stretch Correction:	3.20 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.

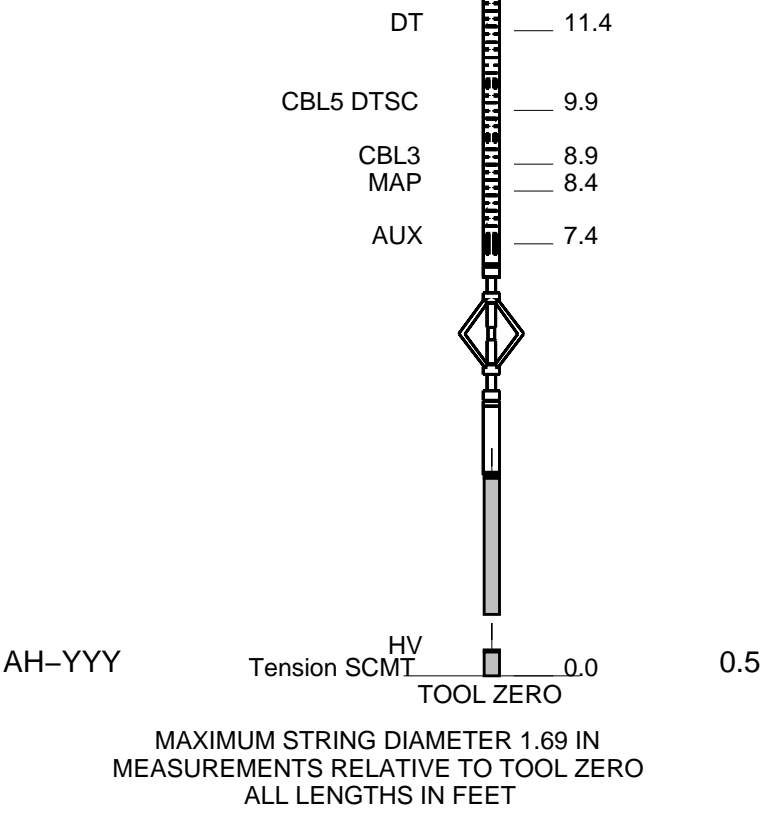
DISCLAIMER

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OTHER SERVICES1 OS1: NONE OS2: OS3: OS4: OS5:	OTHER SERVICES2 OS1: OS2: OS3: OS4: OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
THIS IS THE FIRST RUN IN THE HOLE.	
TOOL RAN AS PER TOOL SKETCH.	
TD TAGGED AT: 10198 FT	
MAXIMUM RECORDED PRESSURE AT TD: 4267 PSIA	
MAXIMUM RECORDED TEMPERATURE AT TD: 278 DEGF	

SHORT JOINTS: 6410 FT & 6720 FT					
EXPECTED FREE PIPE AMPLITUDE: 80 mV					
CYCLE SKIPING DUE TO GOOD BOND CAUSING TT TO READ HIGH					
AFE: 11160564					
THANK YOU FOR CHOOSING SCHLUMBERGER.					
CREW: KELLY J. & CHRIS A.					
<div> <div>RUN 1</div> <div> <div>SERVICE ORDER #:</div> <div>PROGRAM VERSION:</div> <div>FLUID LEVEL:</div> </div> <div> <div>BIHS-00233</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		
<div> <div>SURFACE EQUIPMENT</div> <div> <div>WITM-A 3412</div> <div>PSC_16MHZ 3412</div> </div> </div>					
<div> <div>DOWNHOLE EQUIPMENT</div> <div> <div> <div> <div>MH-22</div> <div>MH-22 391</div> </div> <div> <div>30.6</div> </div> </div> <div> <div> <div>AH-38</div> <div>Detail MT</div> <div>TelStatus</div> <div>CTEM</div> </div> <div> <div>29.1</div> </div> </div> <div> <div> <div>PSPT</div> <div>PSC-A</div> <div>PSPT-A 3779</div> <div>PSTC-A</div> <div>PBMS-A 3779</div> <div>10k_Sapphire_Mano 3779</div> <div>RTD_Thermometer 3779</div> <div>GR</div> <div>CCL 3779</div> <div>PBMS 3779</div> </div> <div> <div>28.8</div> <div>28.8</div> <div>25.1</div> <div>22.0</div> <div>21.9</div> <div>21.3</div> <div>20.5</div> </div> </div> <div> <div> <div>SCMT-CB</div> <div>SCMC-CA</div> <div>SECH-CA</div> <div>CMIR-AG</div> <div>SCMS-CB 8317</div> <div>SCMX-CA 8312</div> </div> <div> <div>20.5</div> </div> </div> </div> </div>					



MAIN PASS 0 PSI

MAXIS Field Log

Company: ENCANA OIL & GAS (USA) INC. Well: NP EF01C-34 P27 595

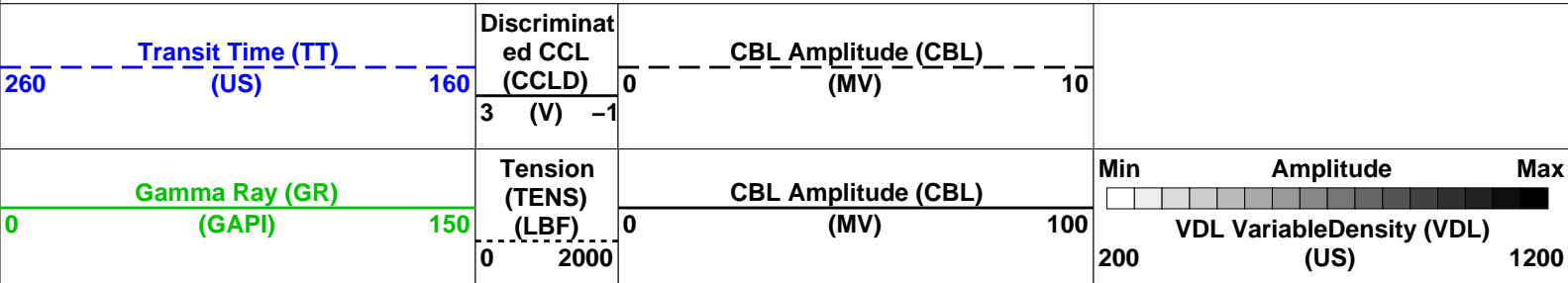
Input DLIS Files						
DEFAULT	Splice_SCMT_PSP_017CUP	FN:1	PRODUCER	26-Apr-2012 16:11	10210.0 FT	169.2 FT

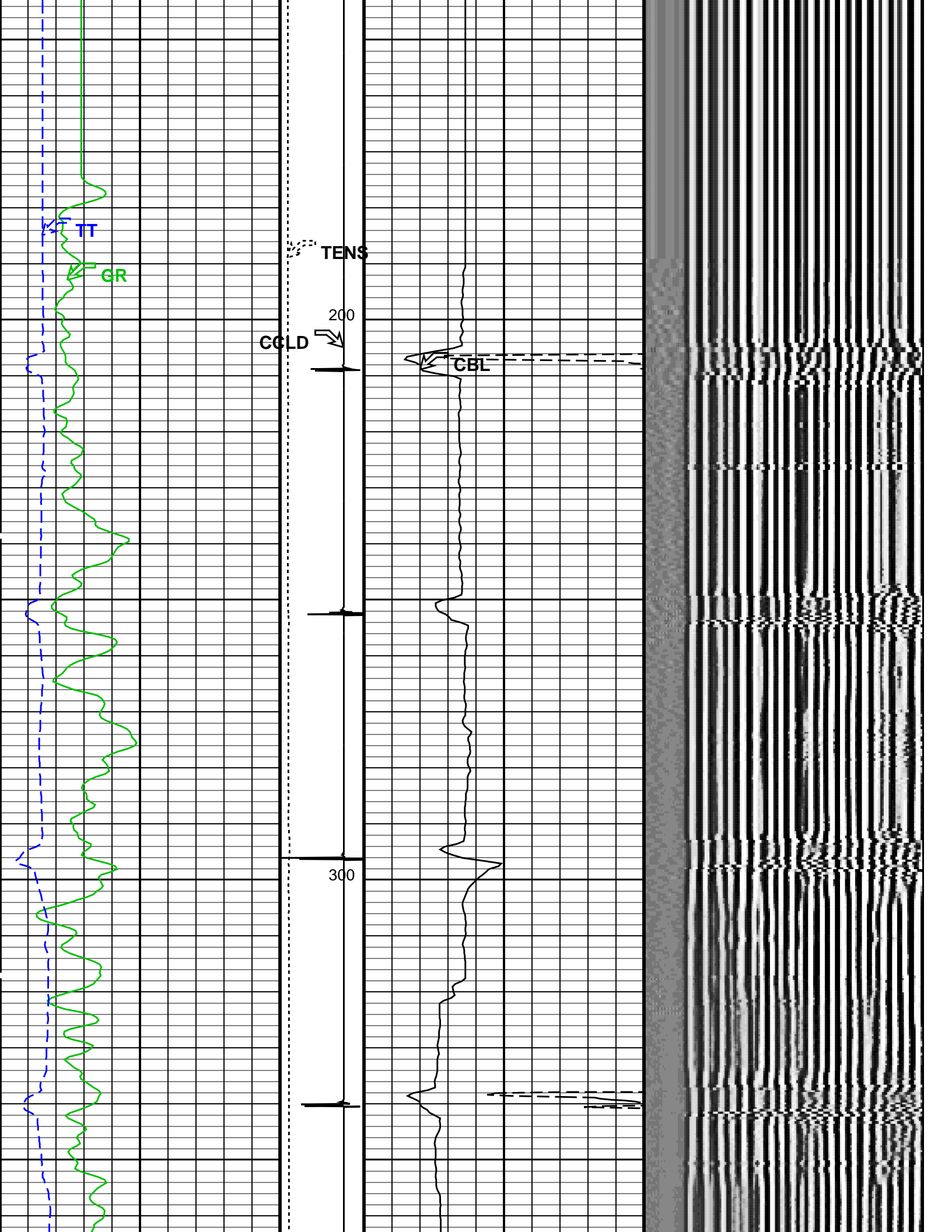
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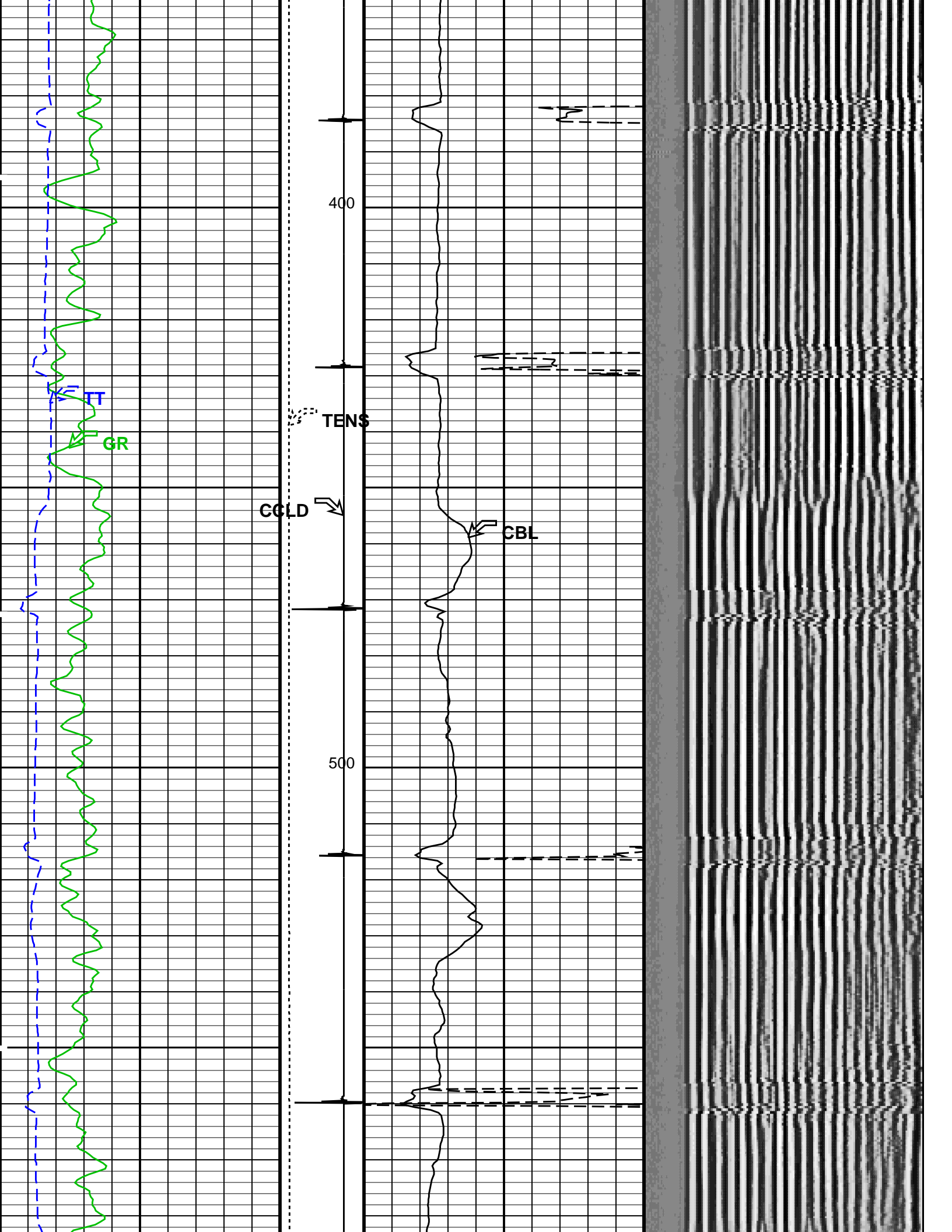
OP System Version: 19C0-187						
SCMT-CB	SRPC-5095-H2-2011-OP19_b	PSPT	19C0-187			

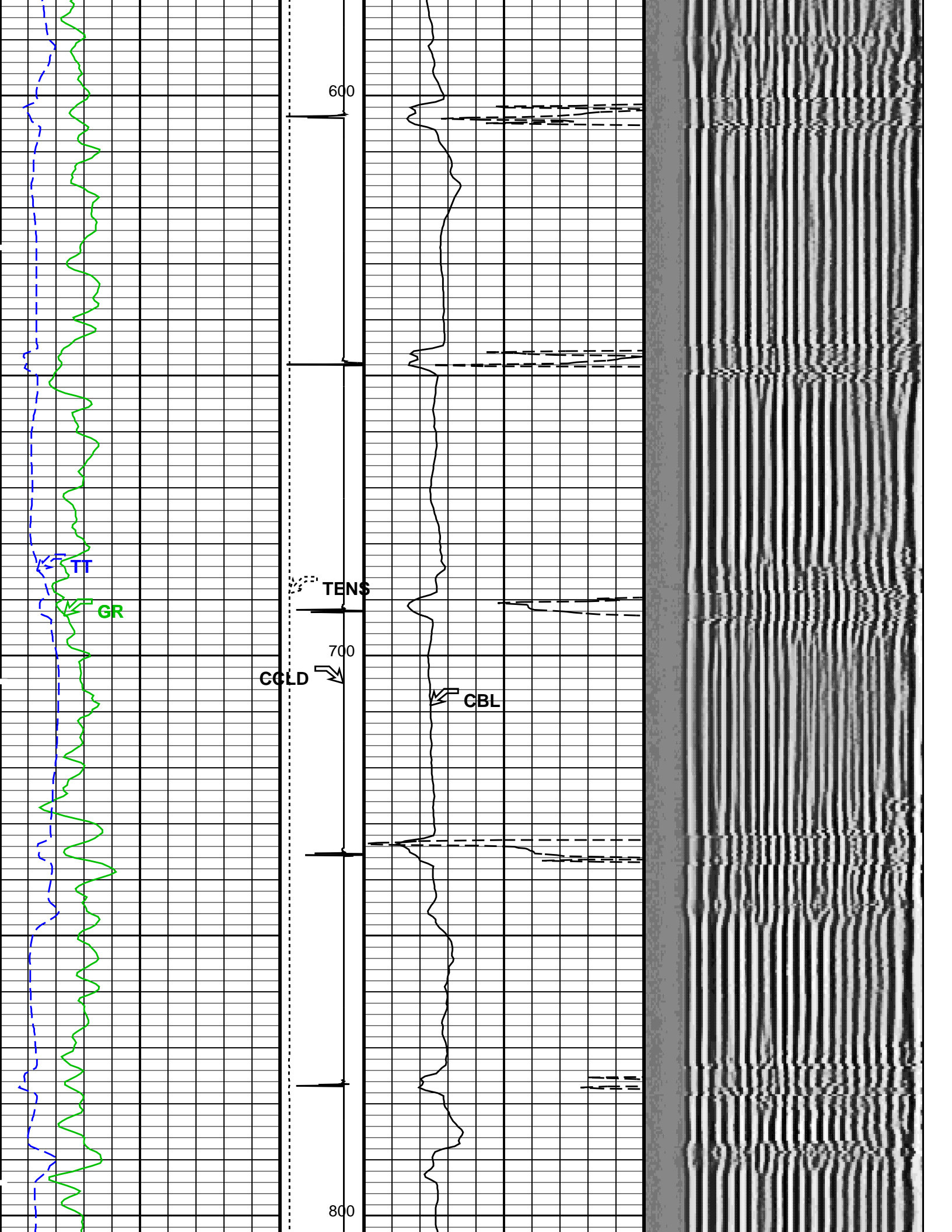
PIP SUMMARY

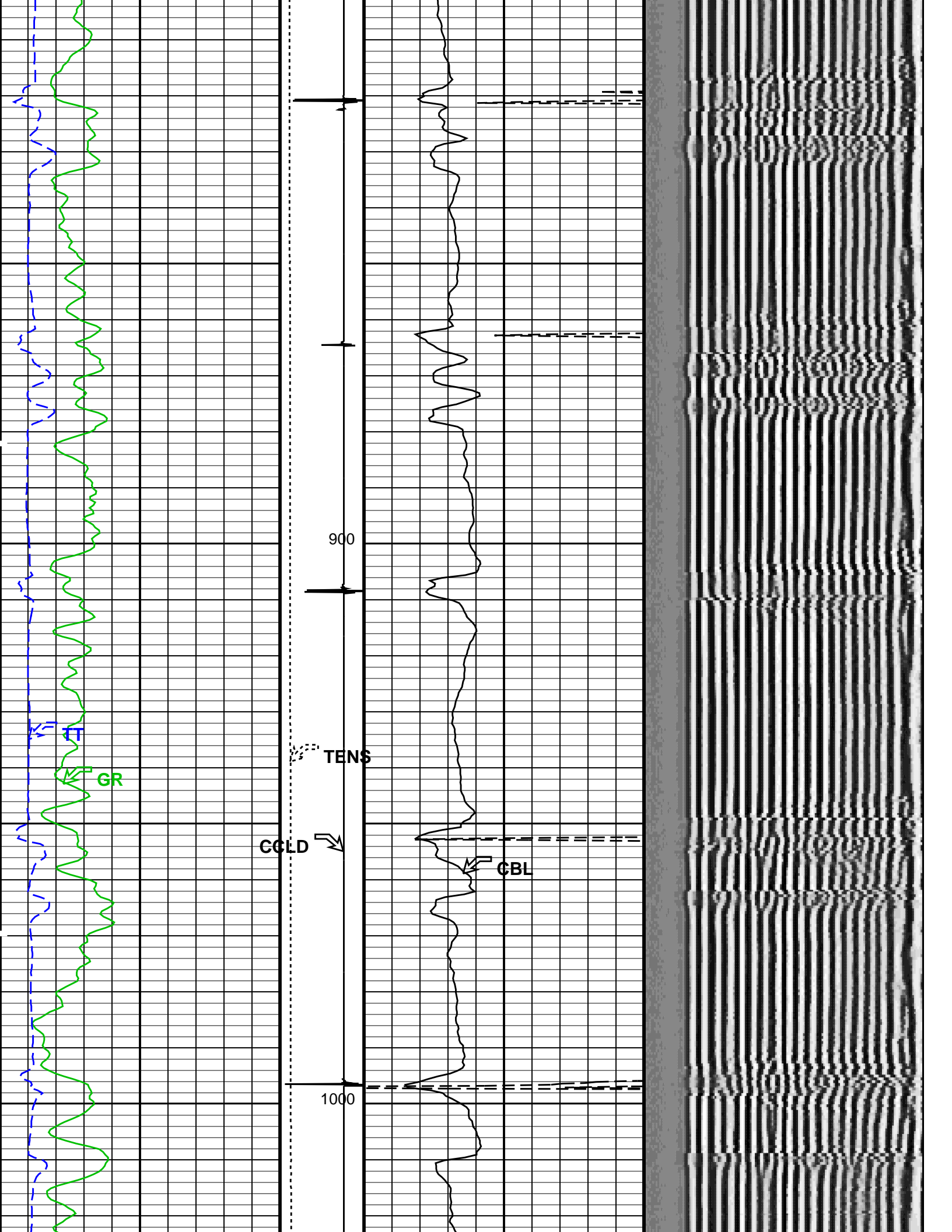
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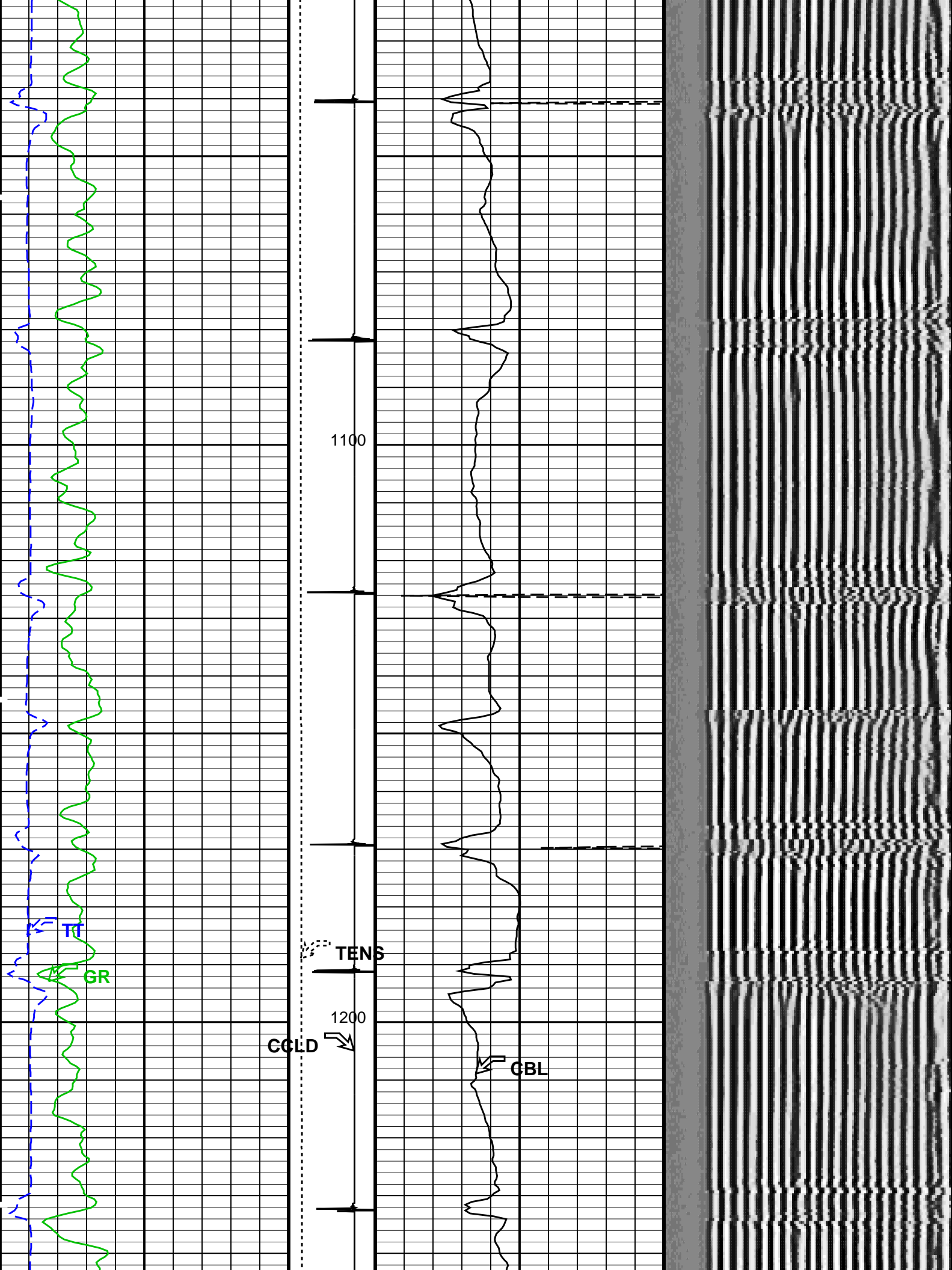


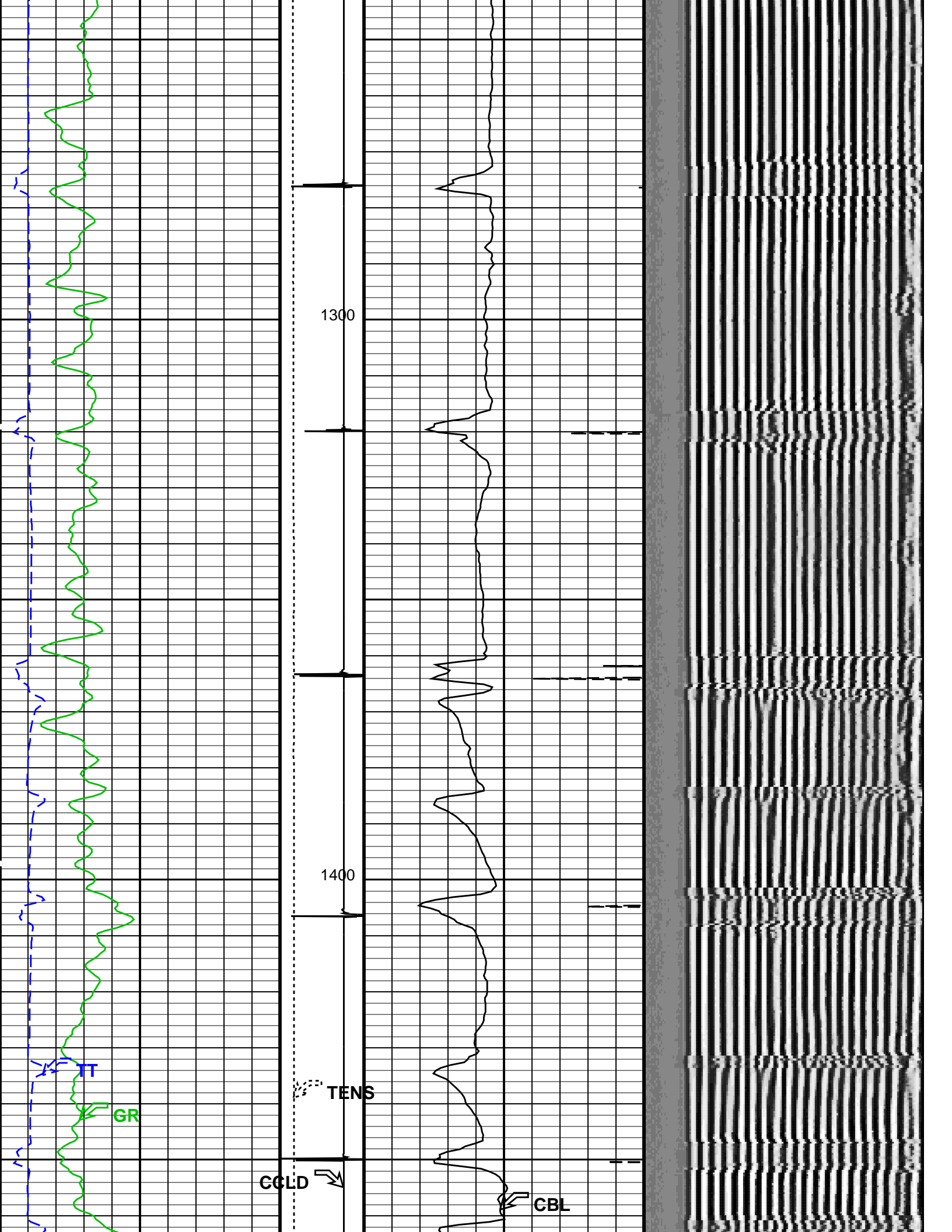


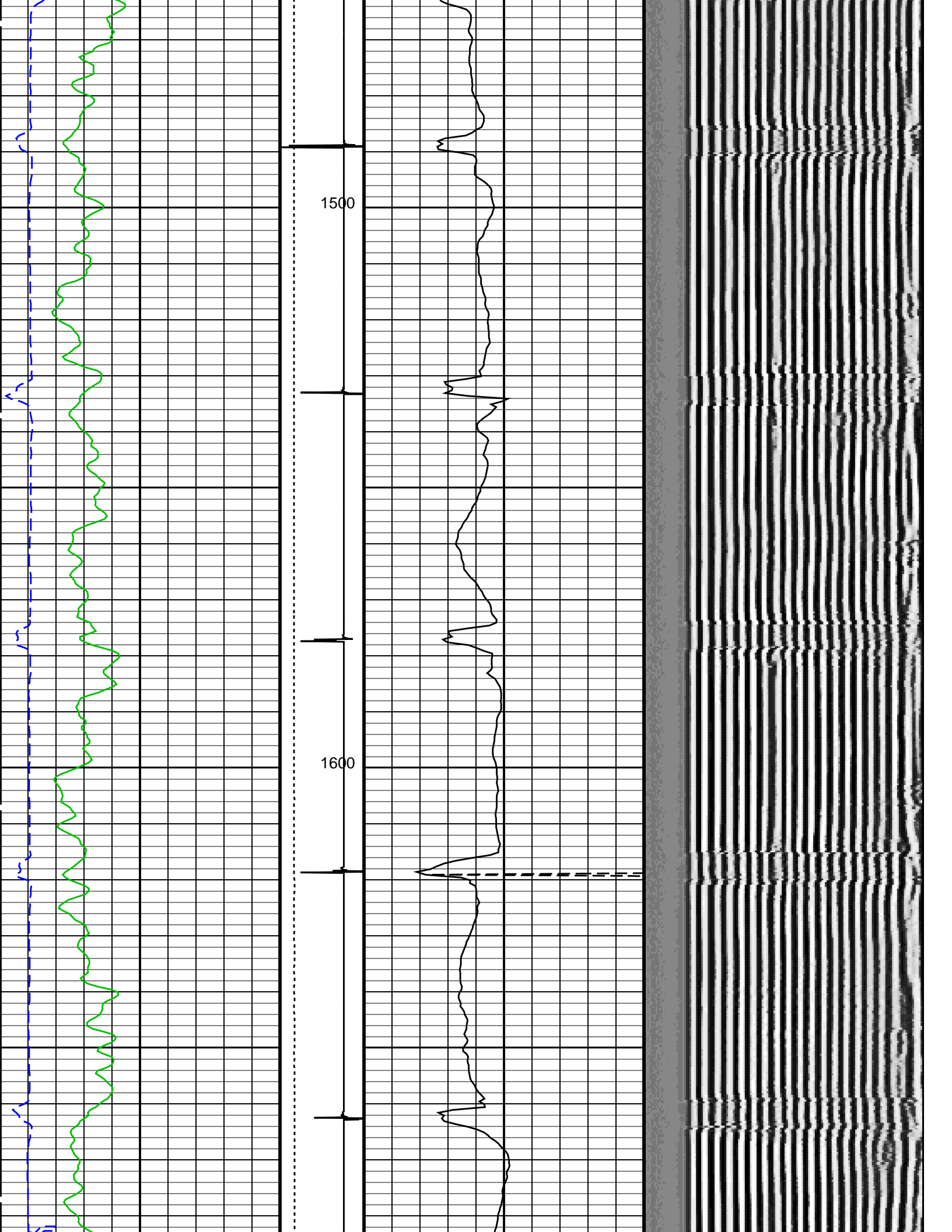


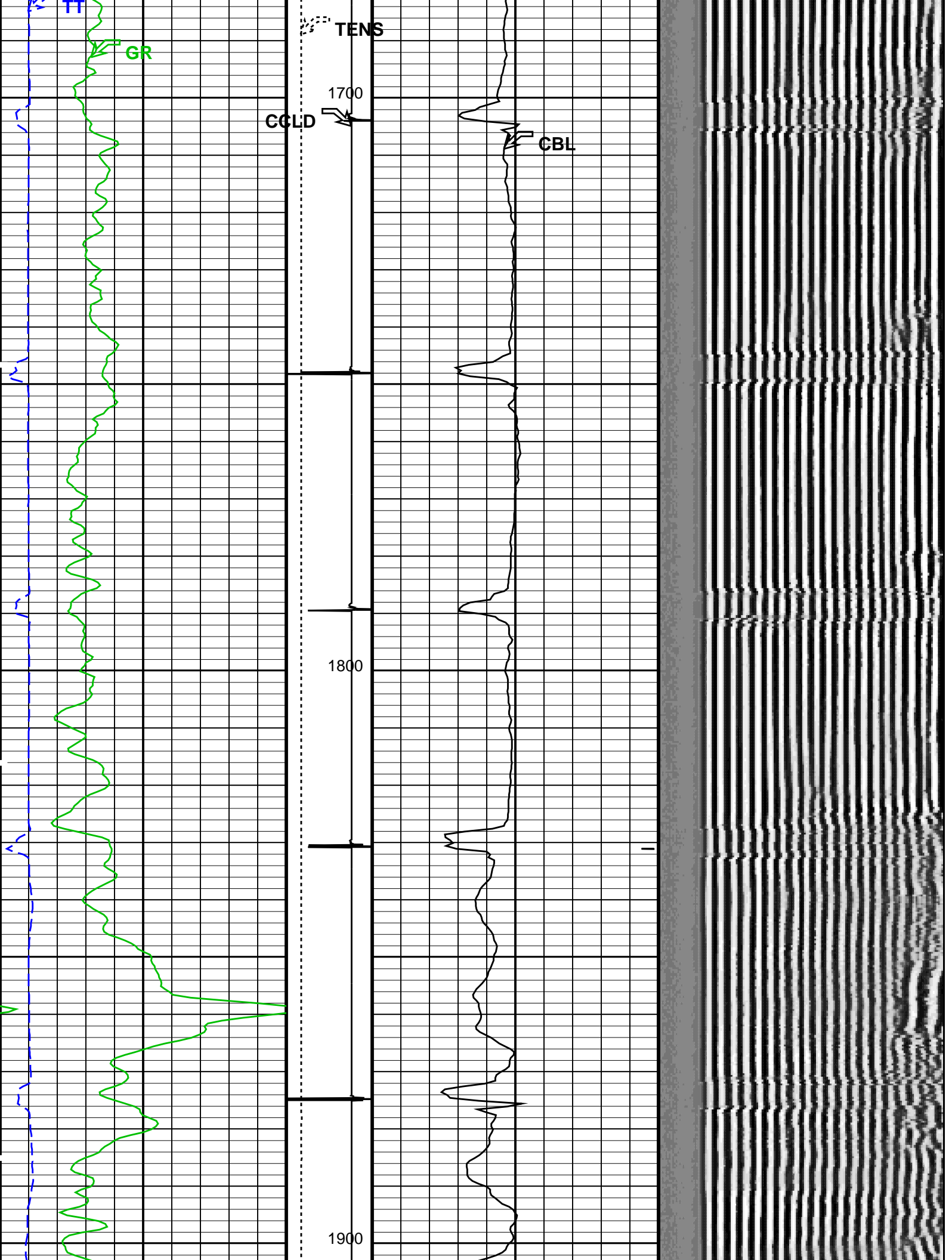


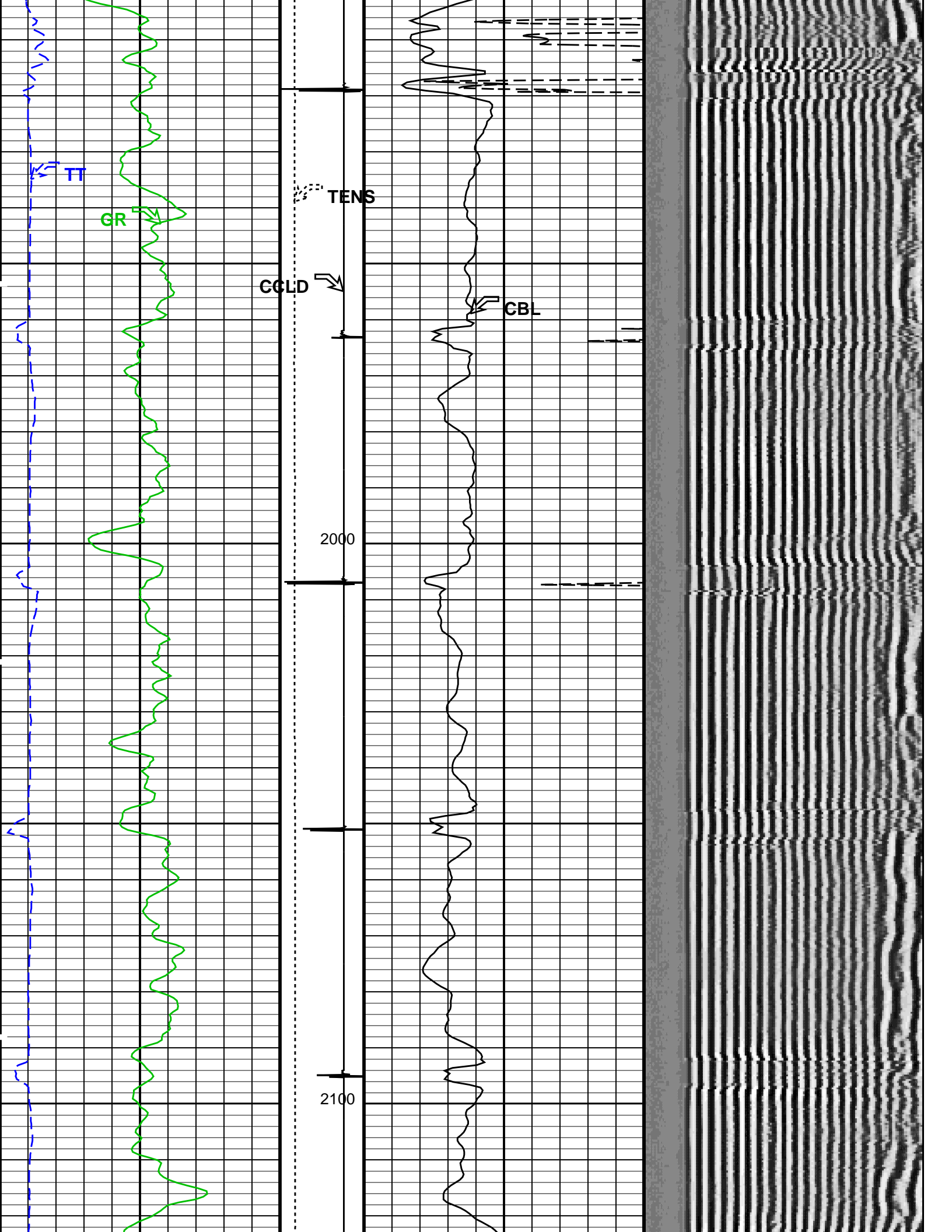


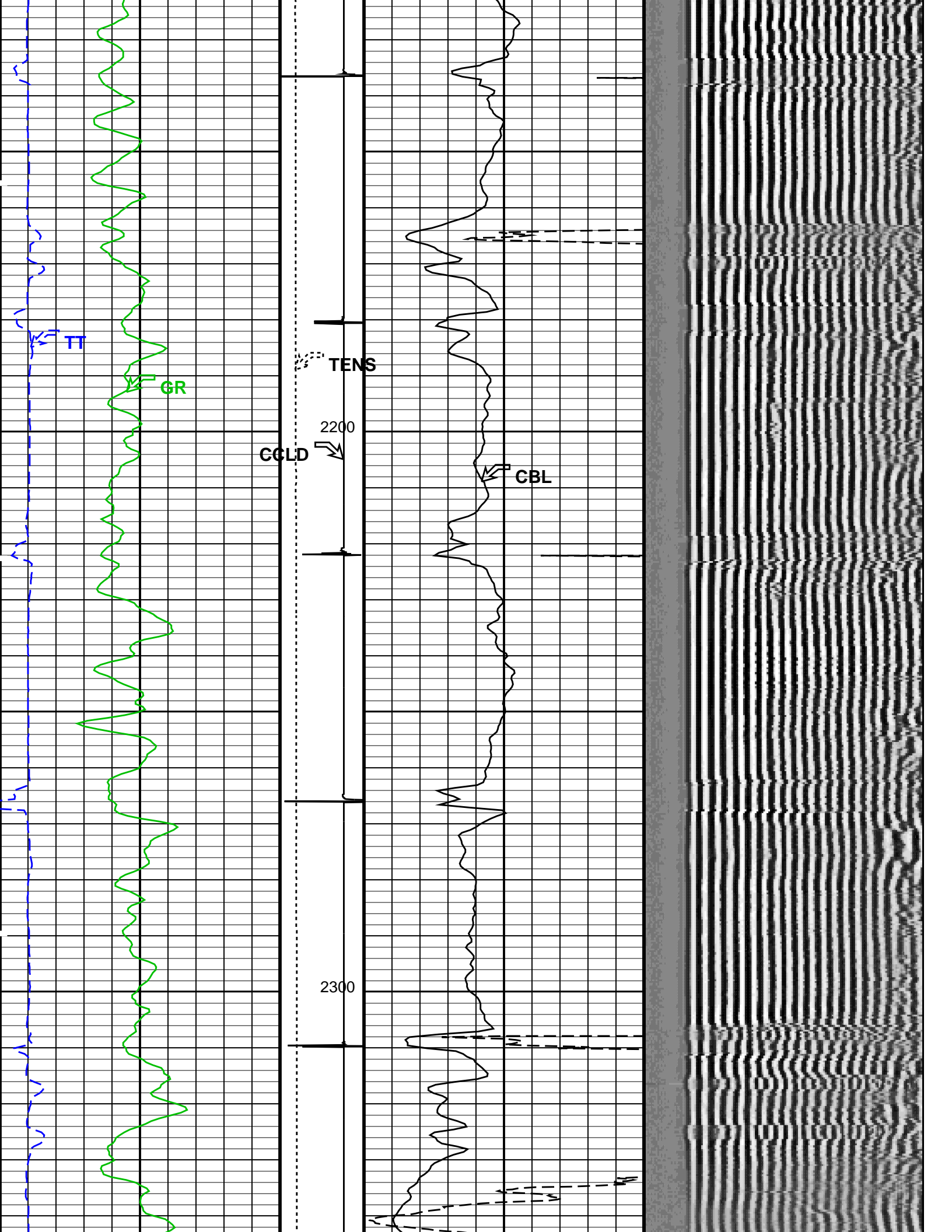


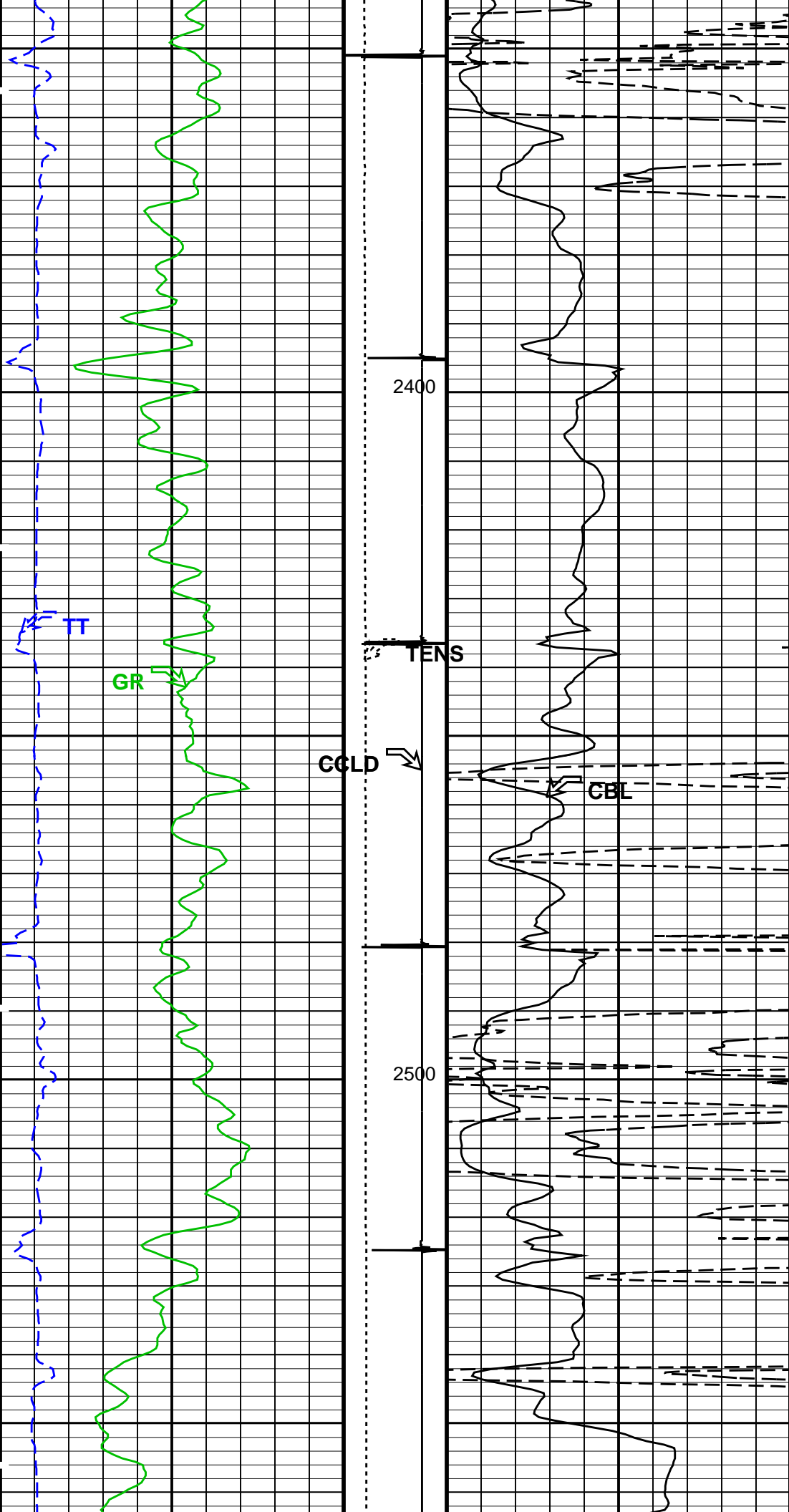


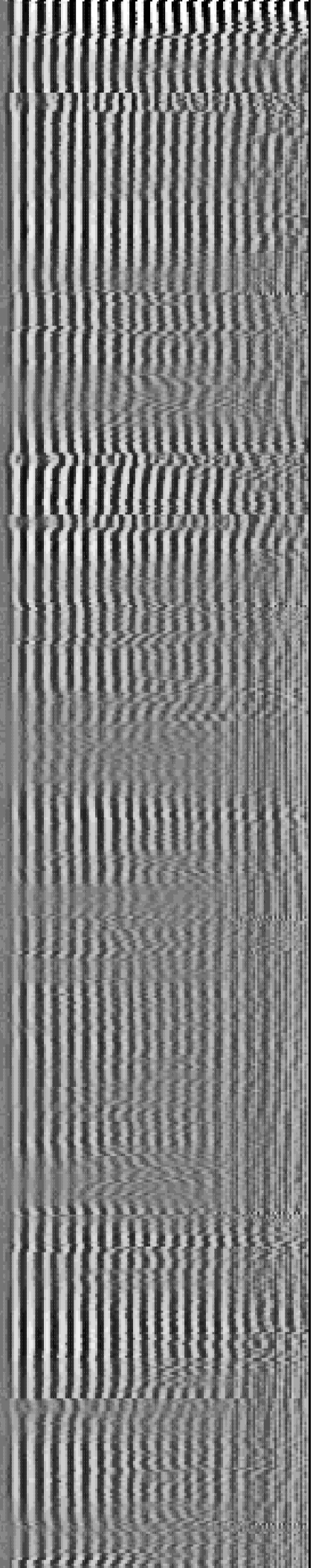
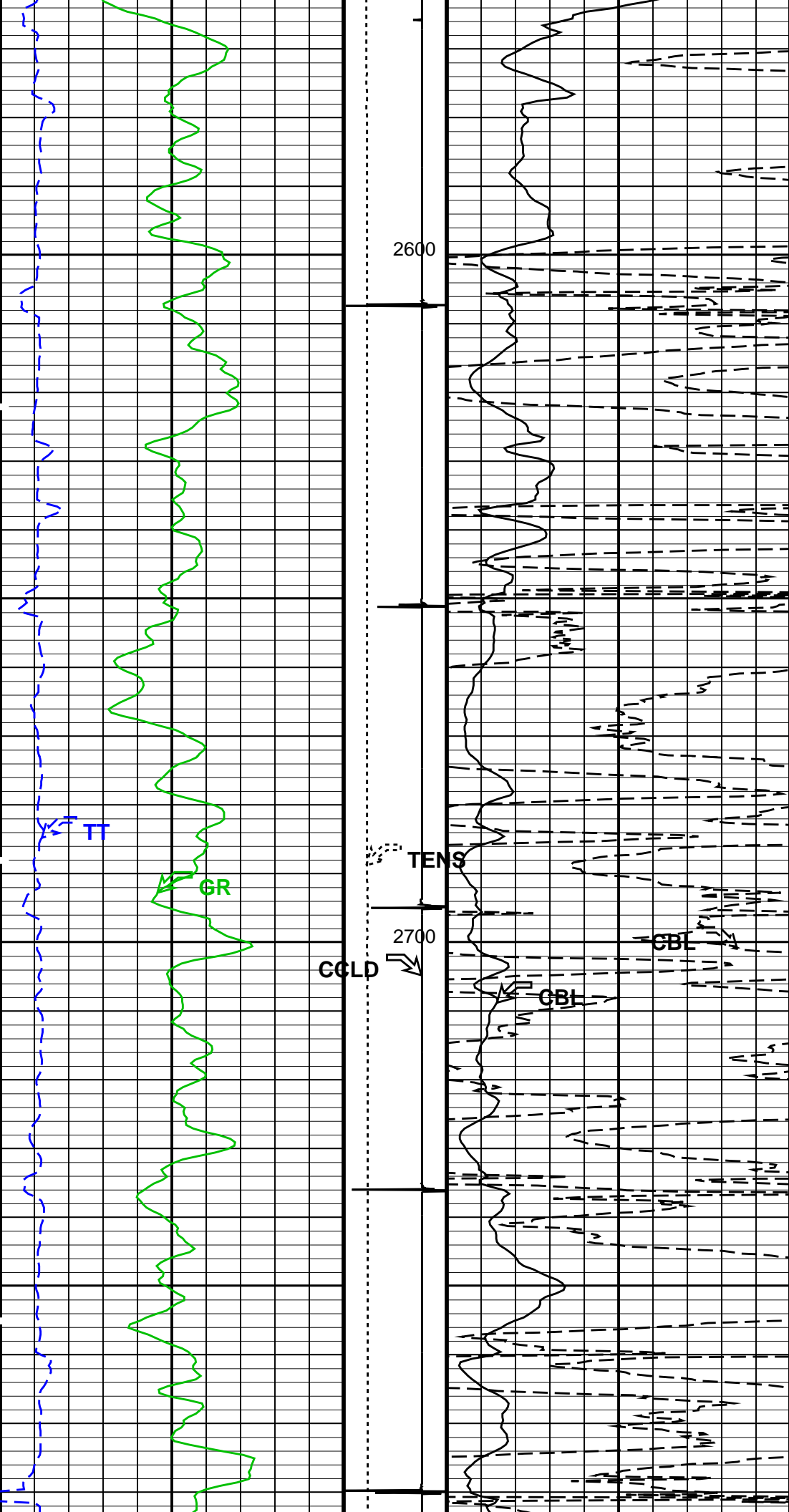


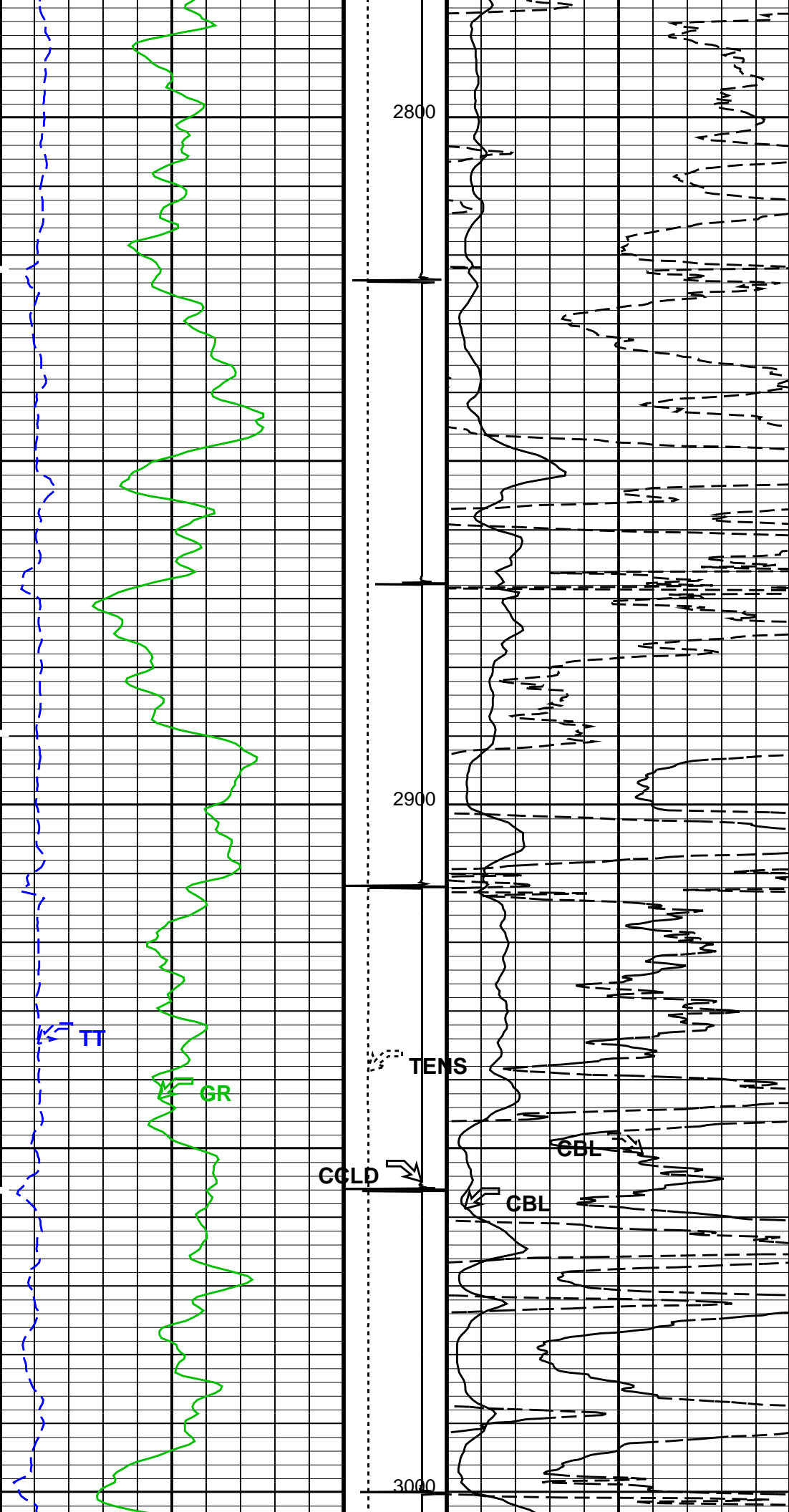


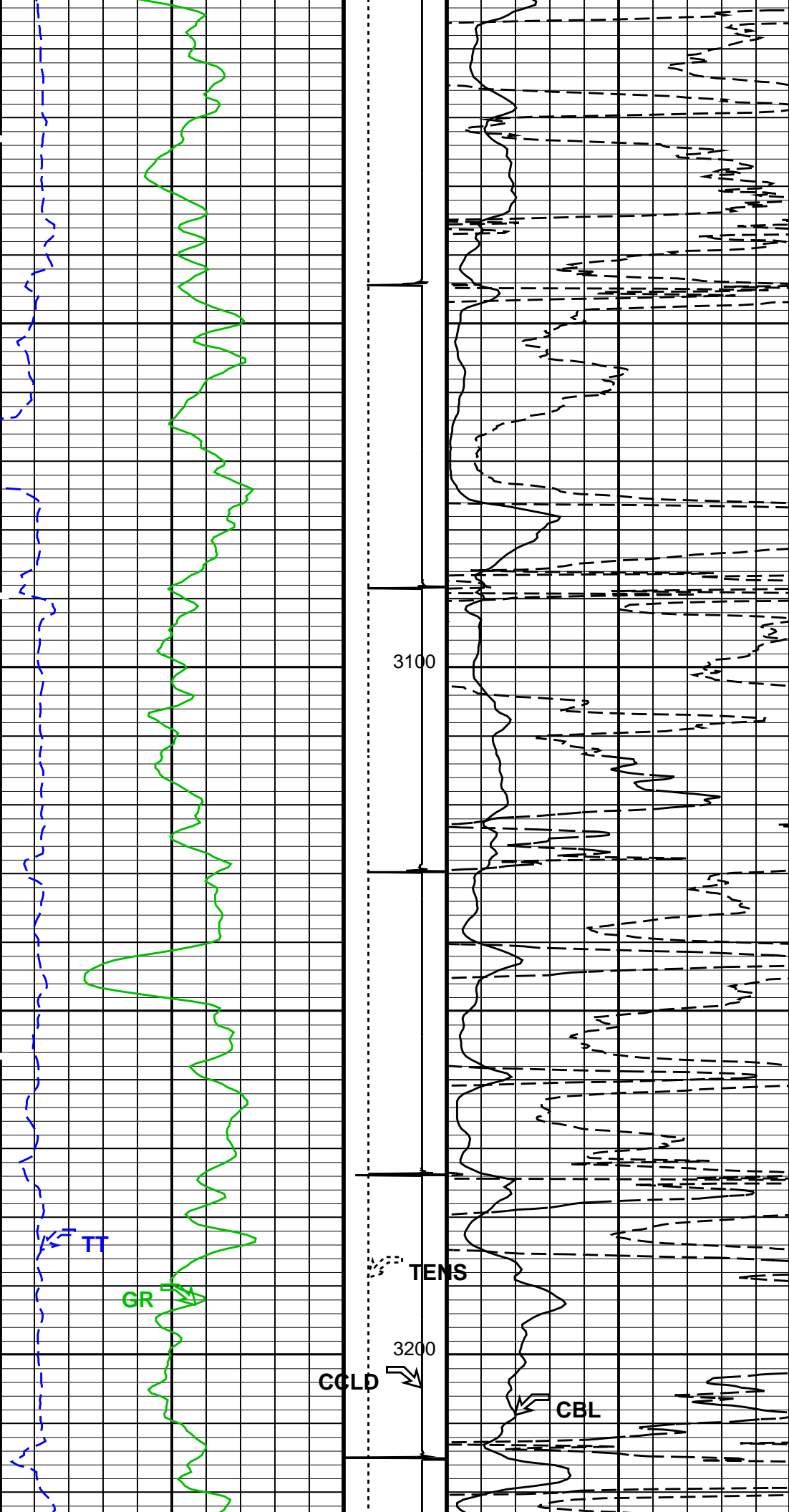


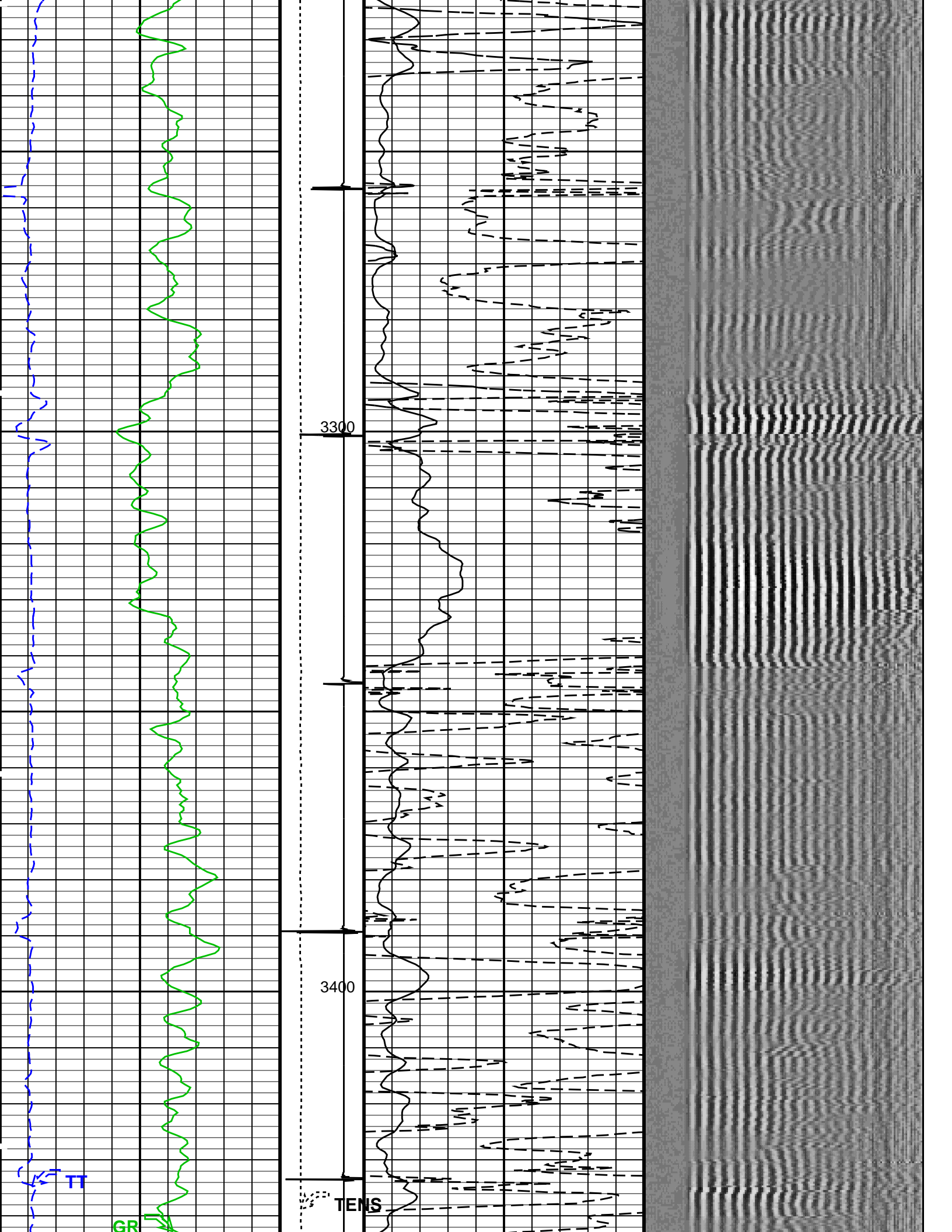


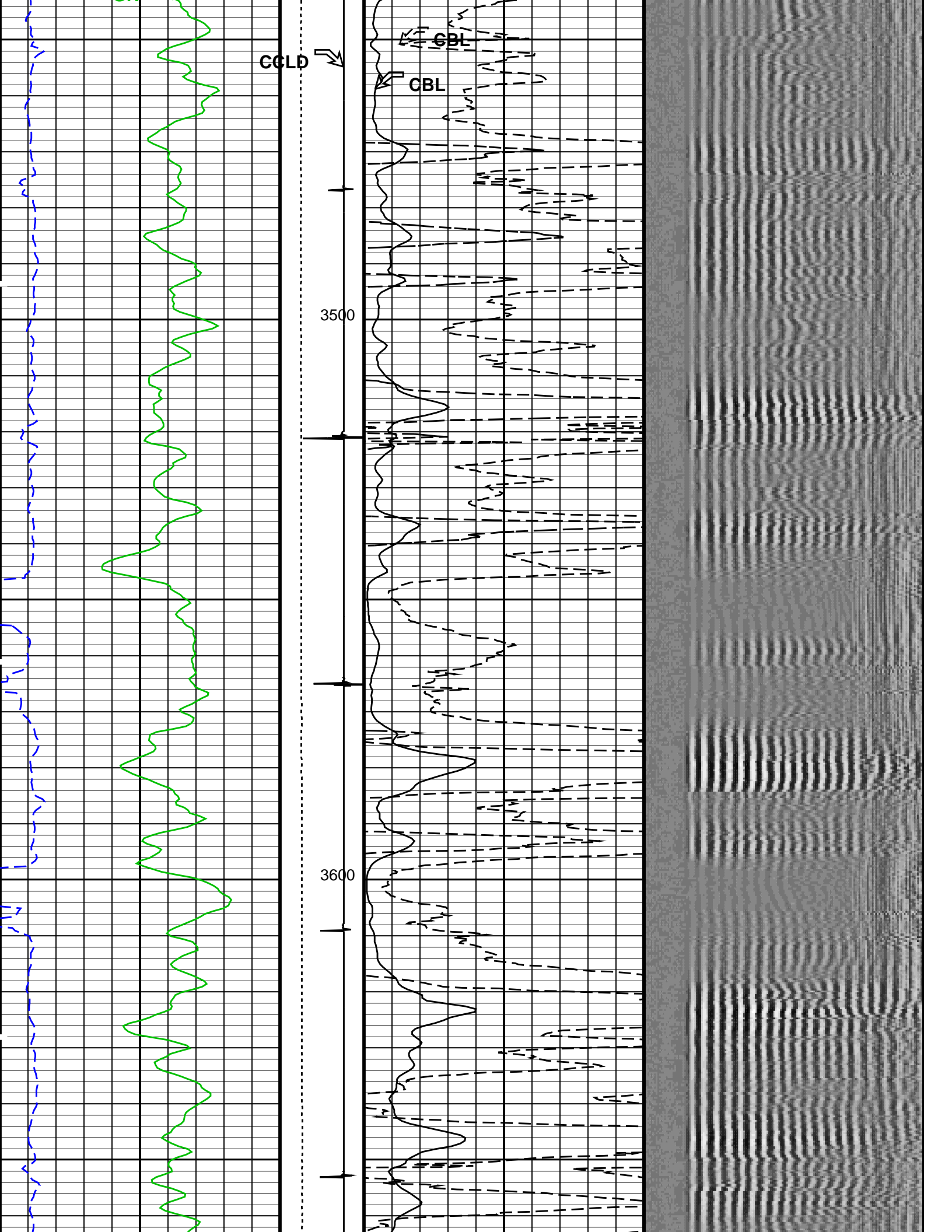


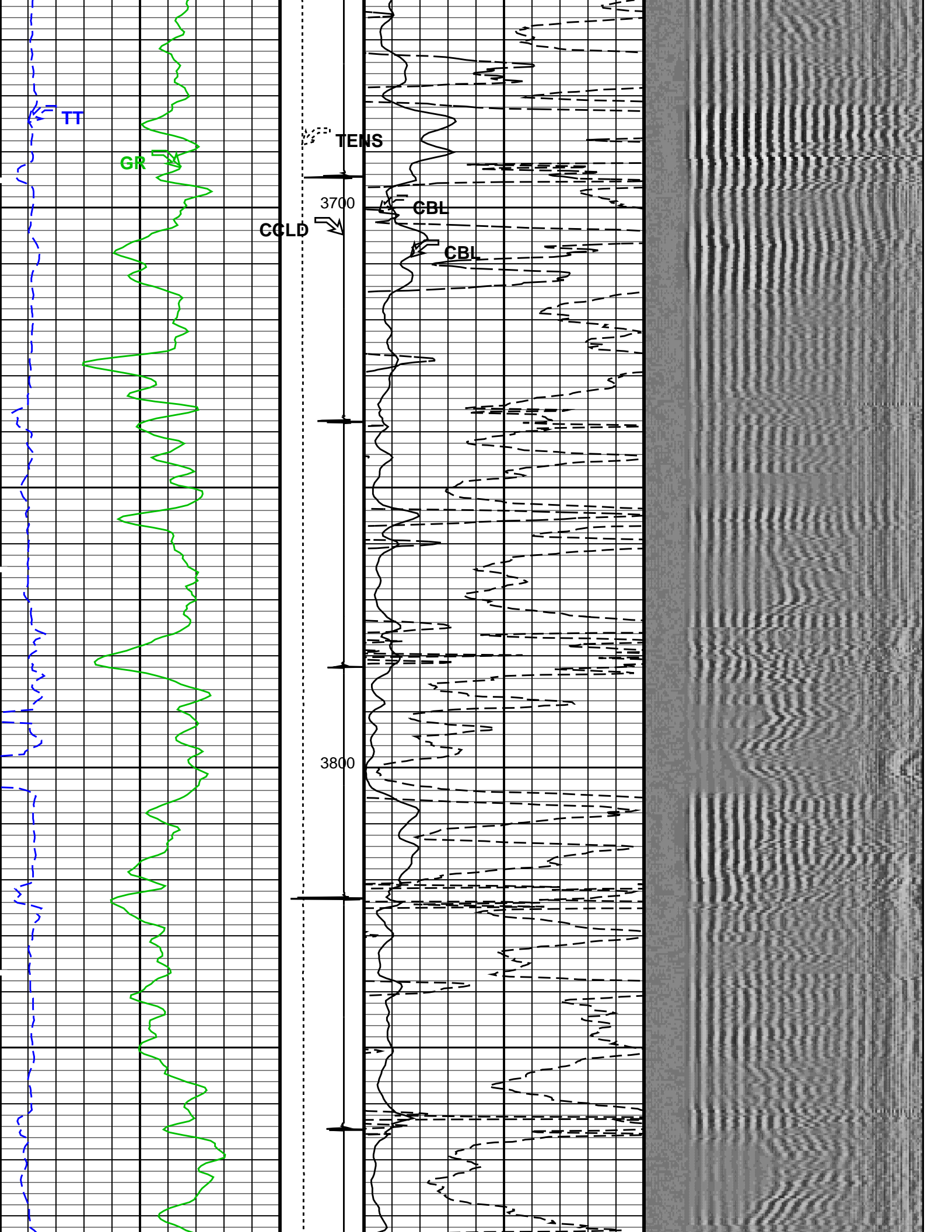


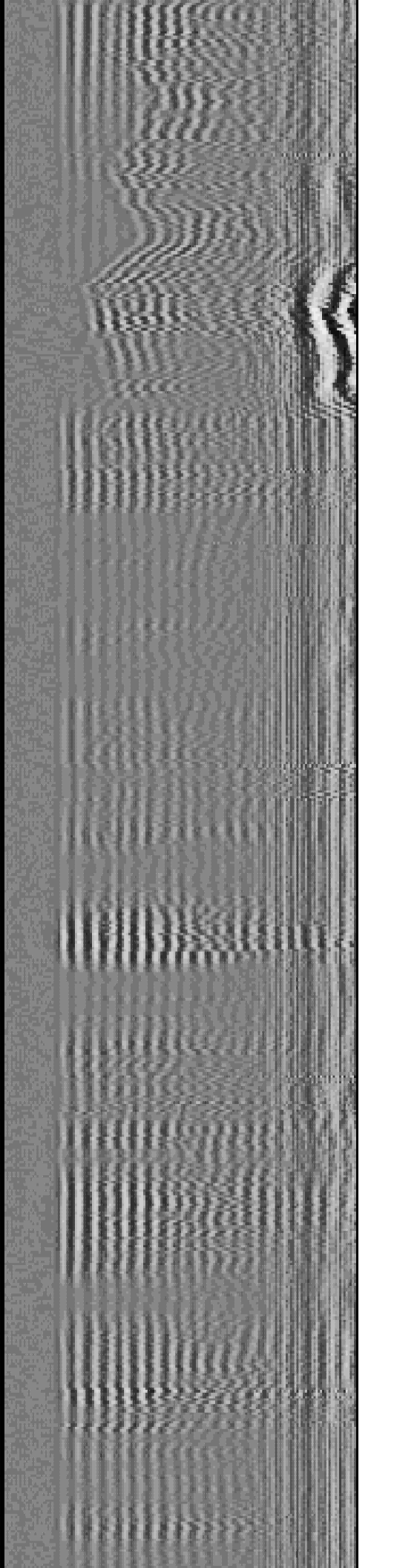
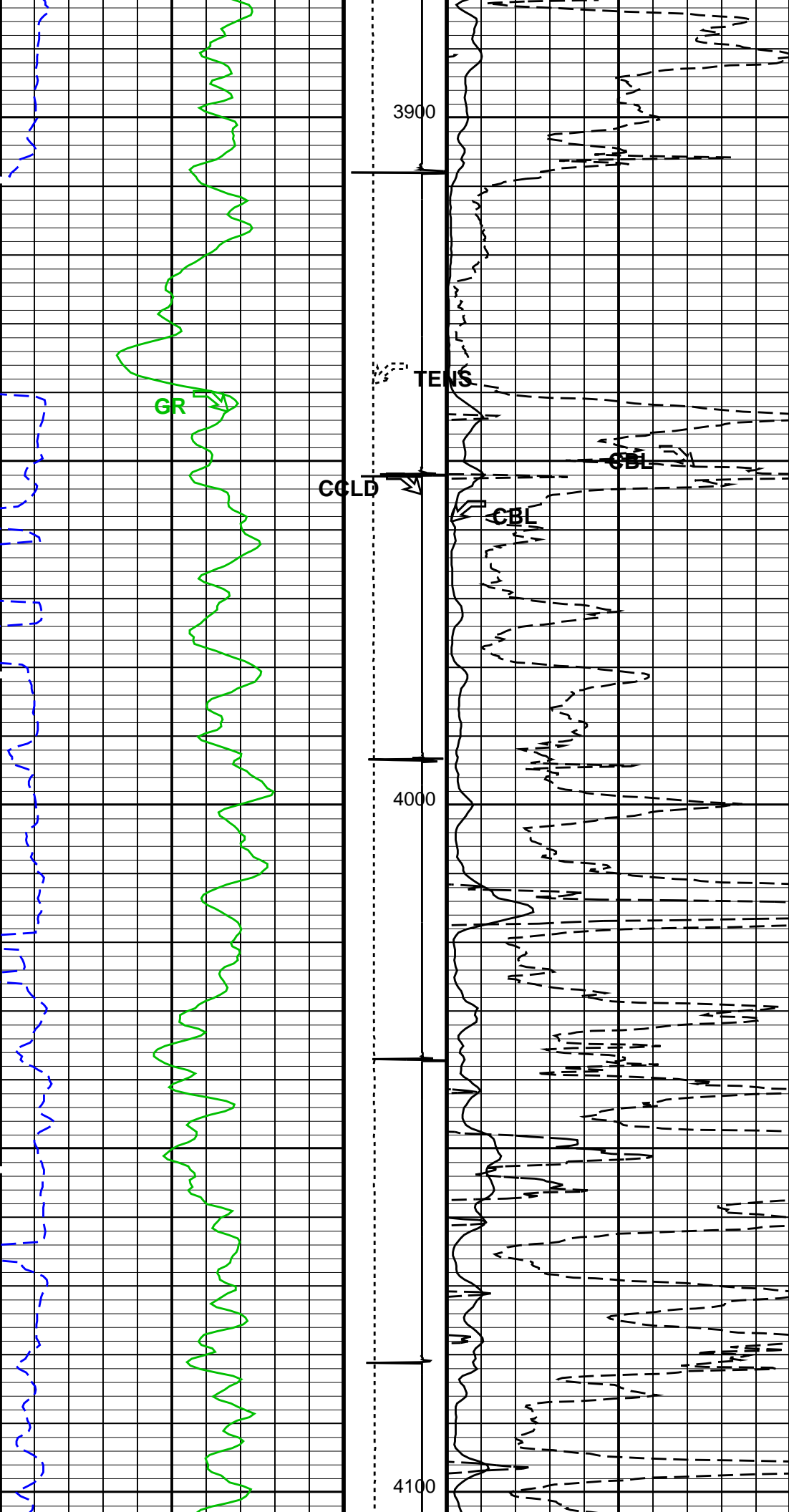


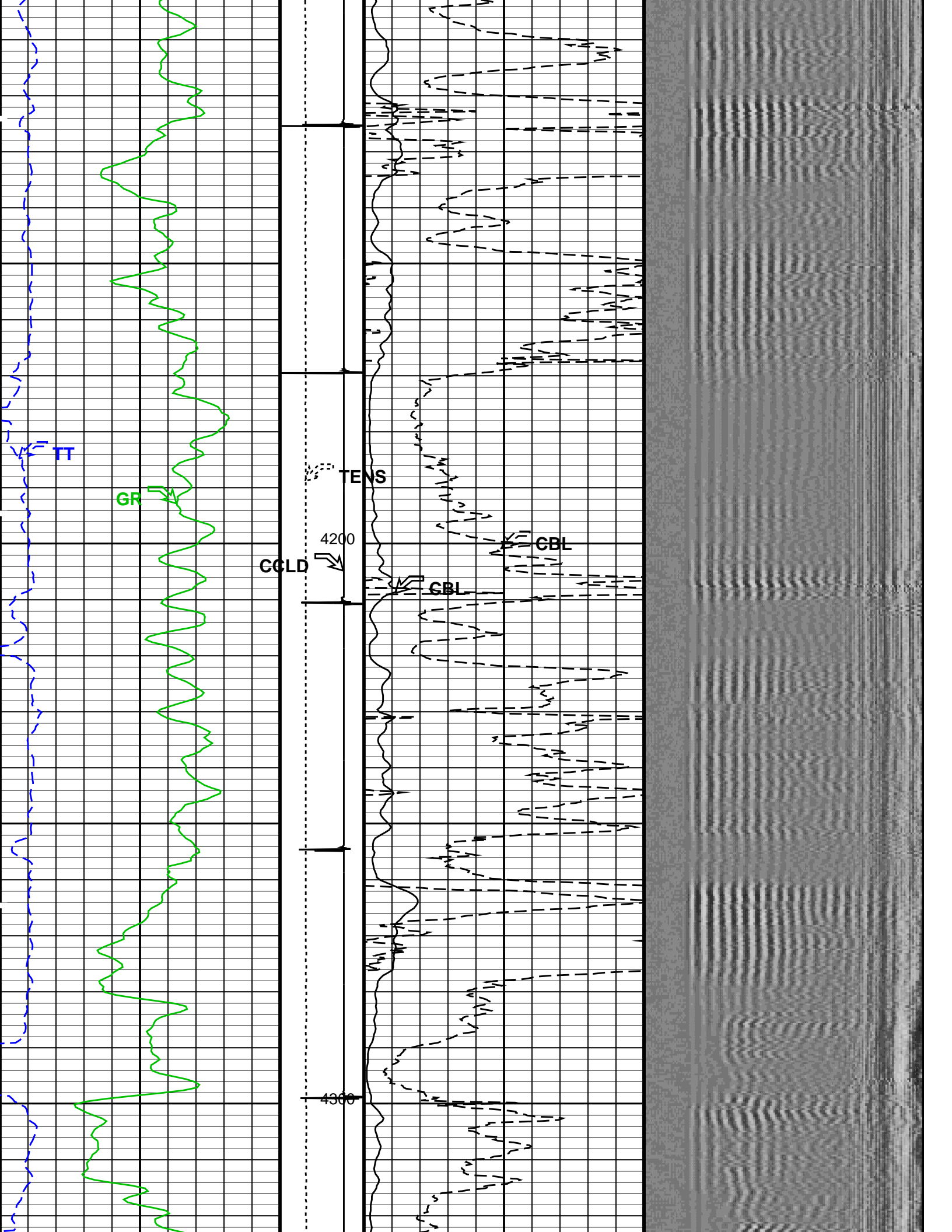


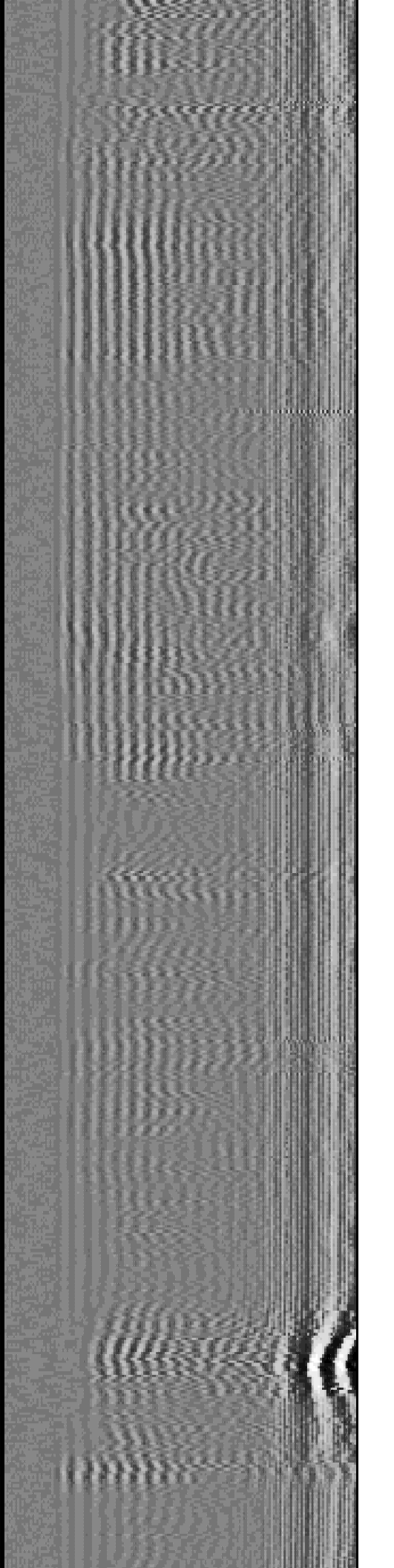
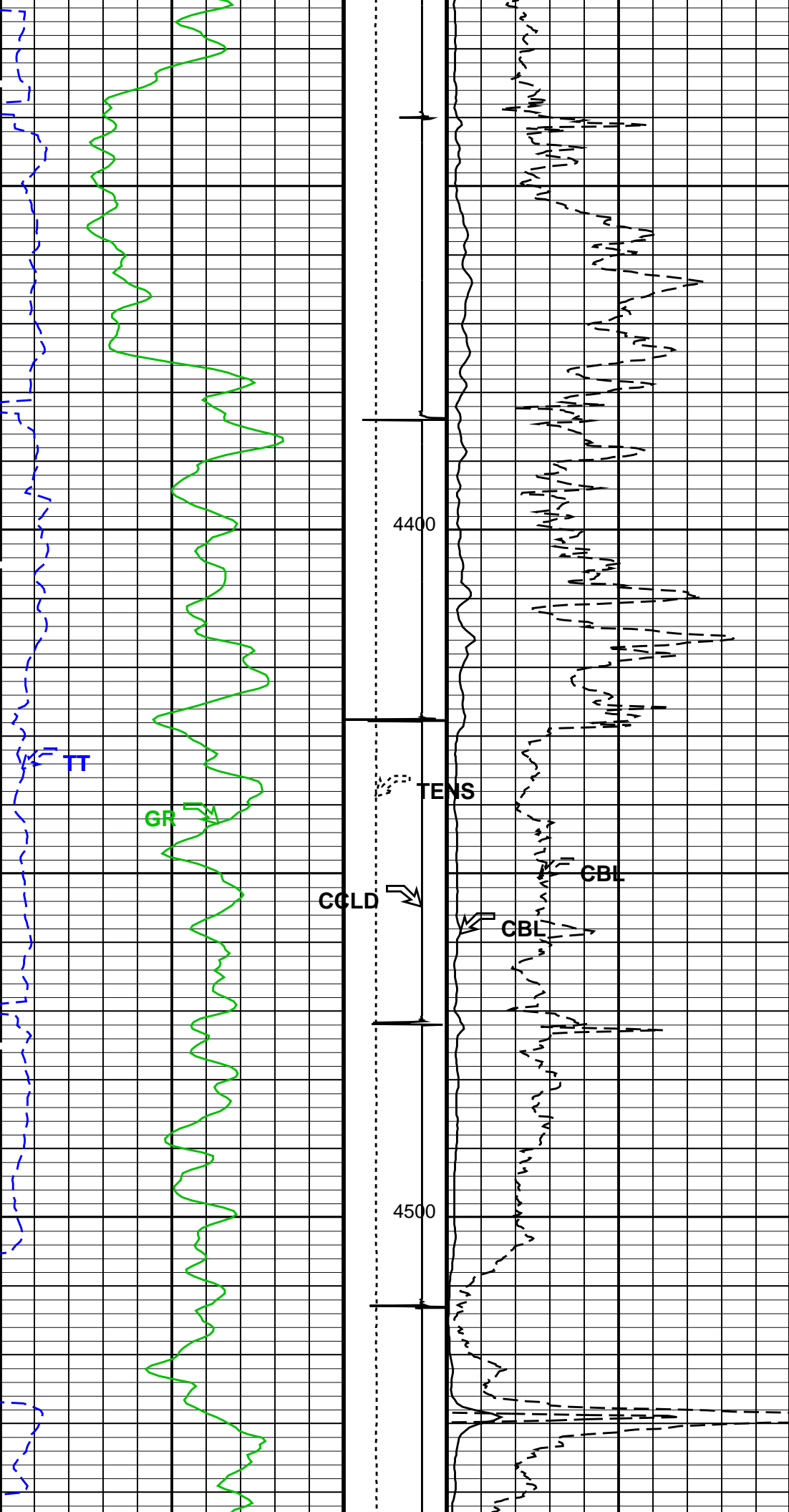


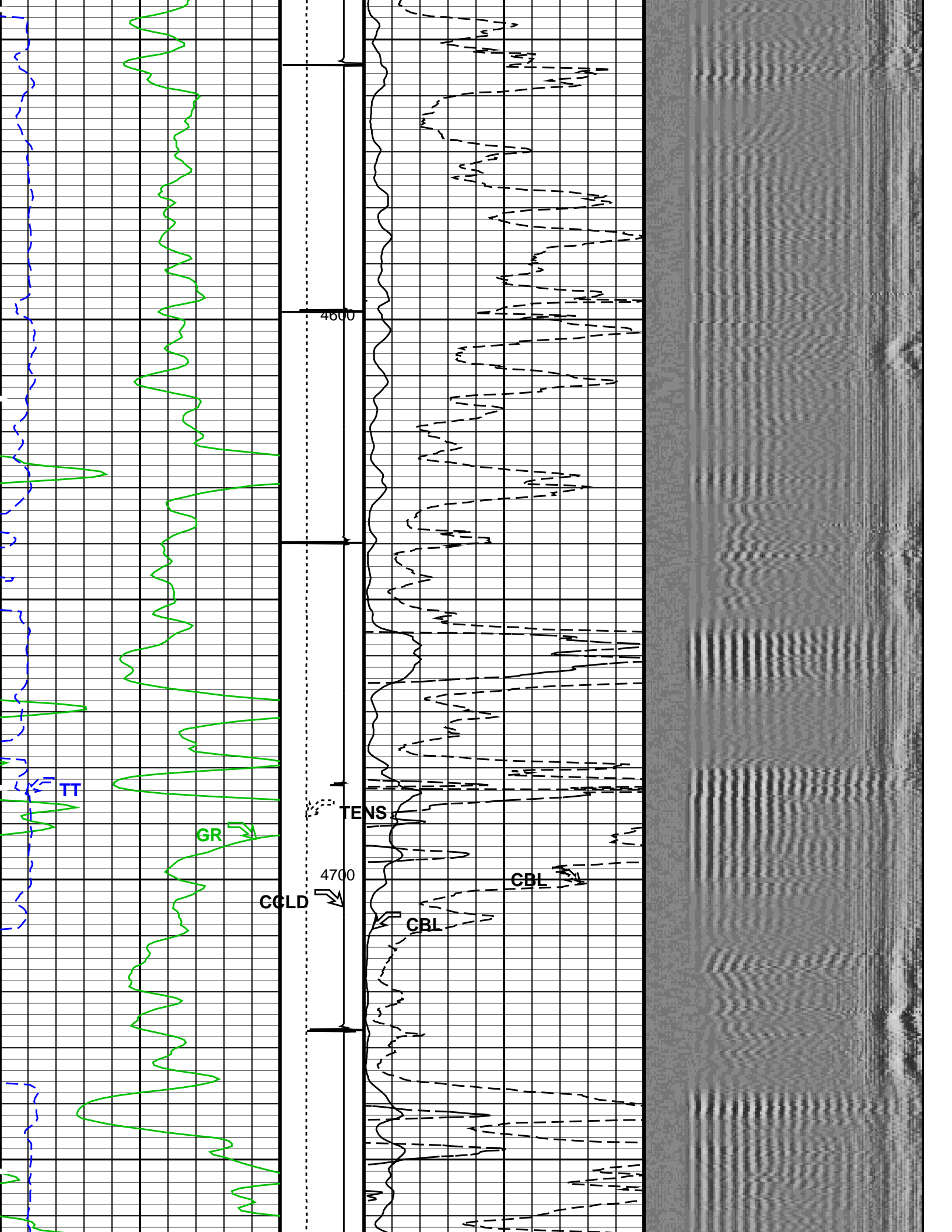


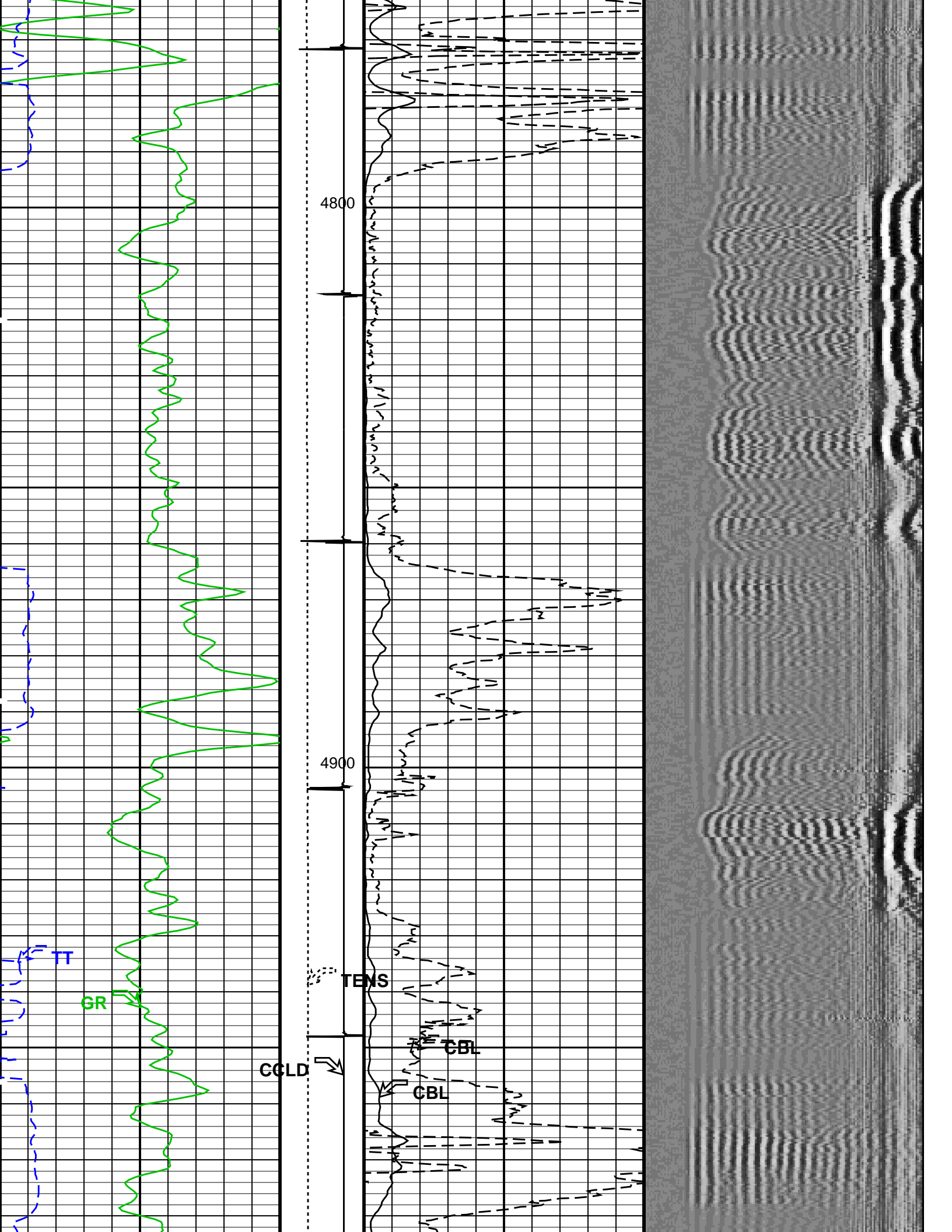


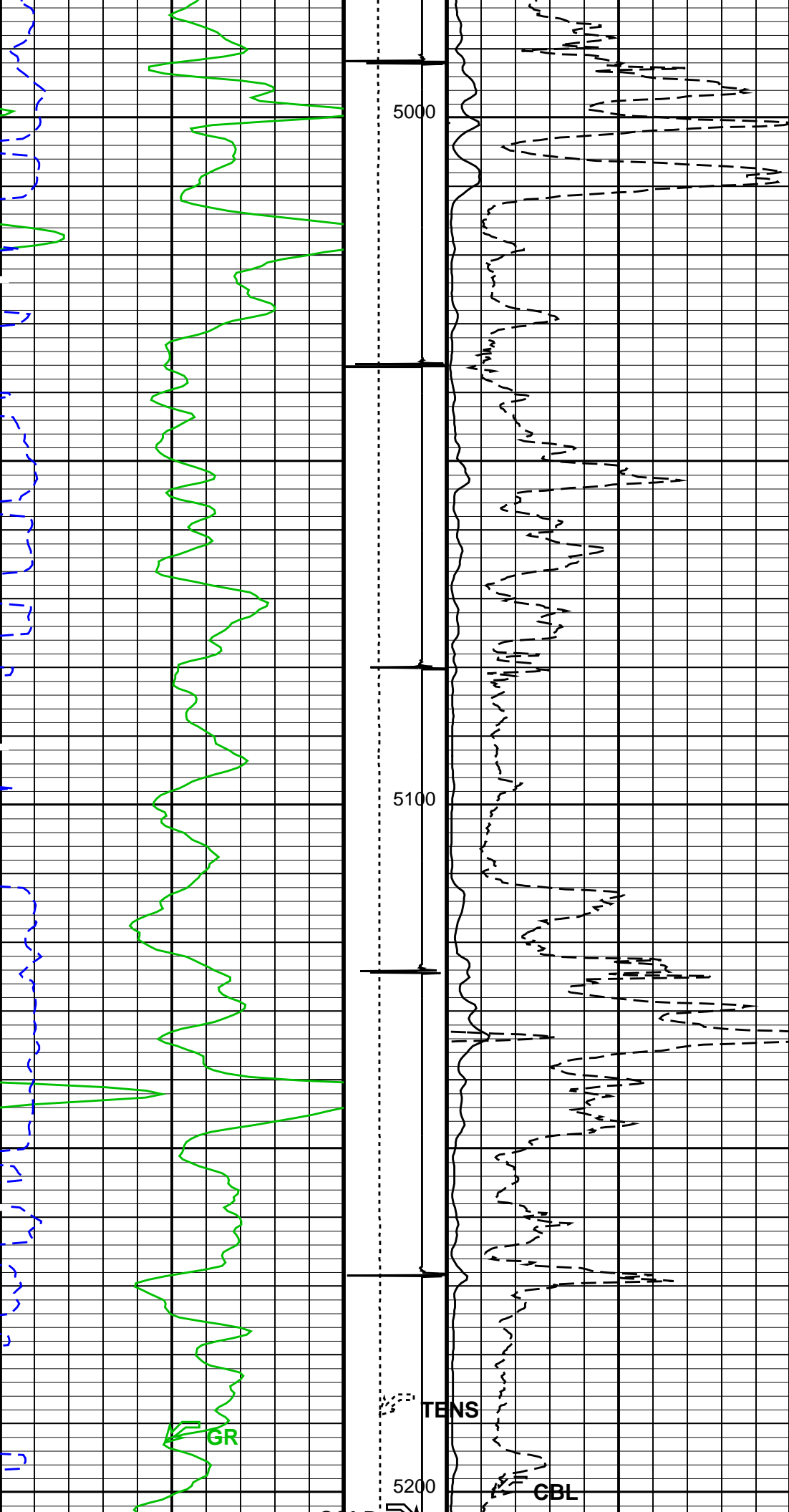


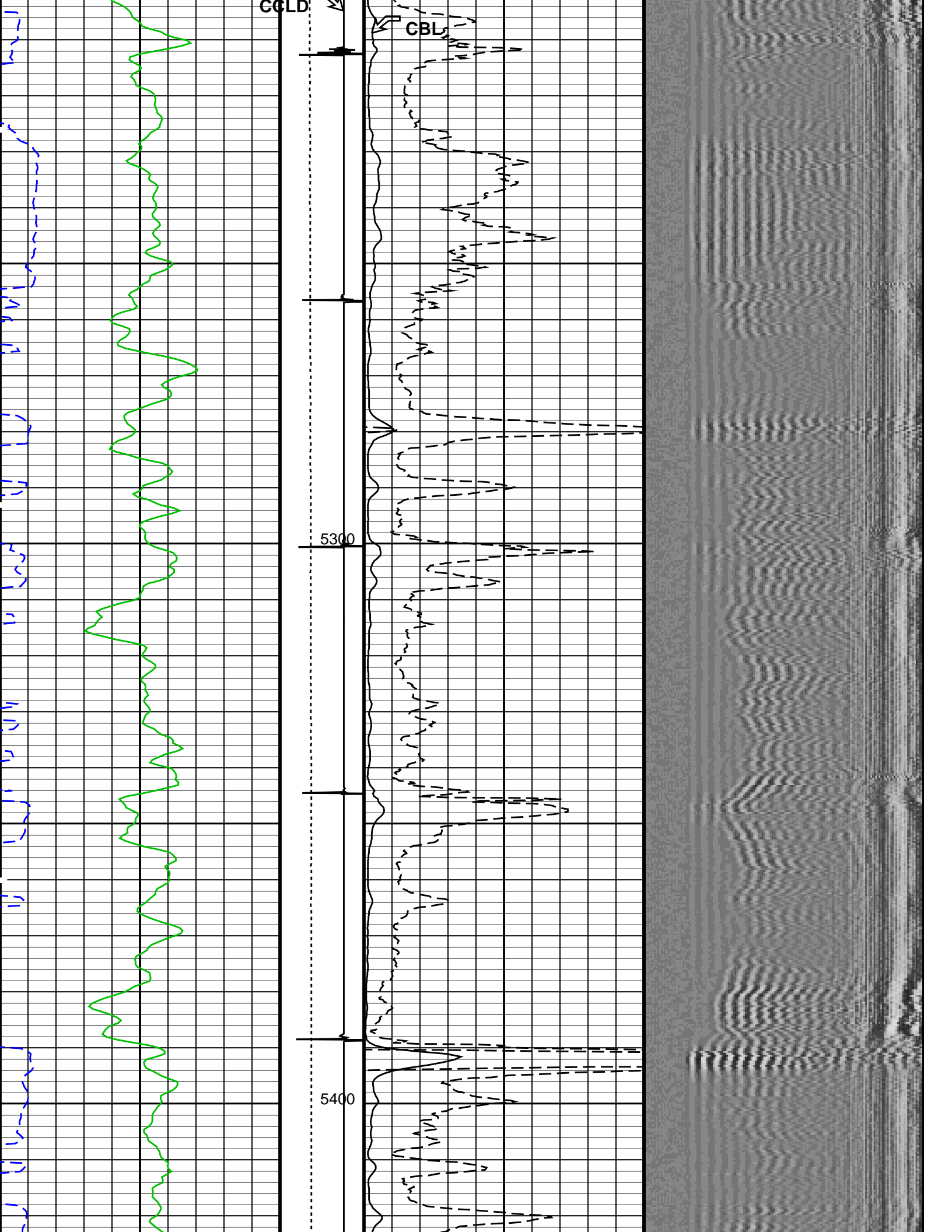


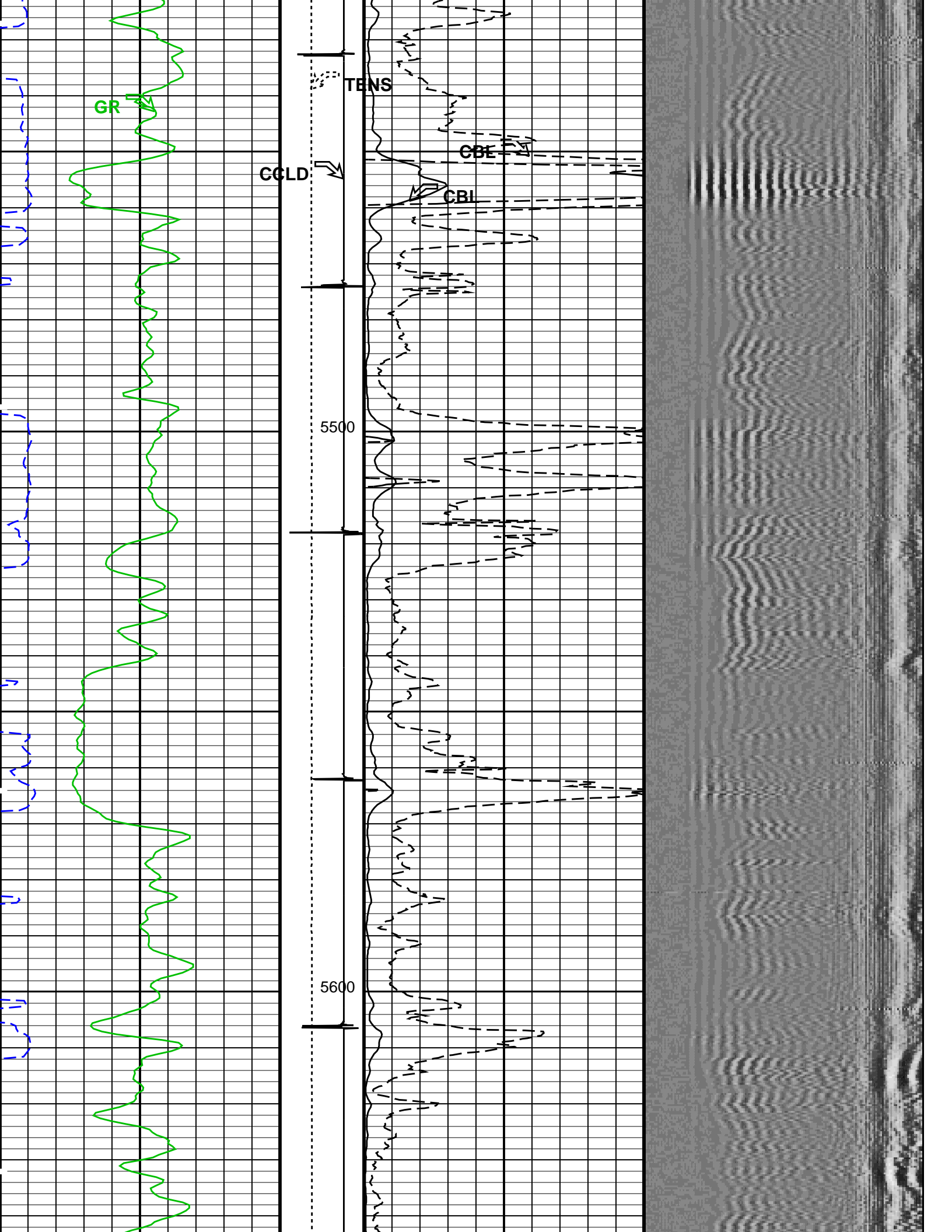


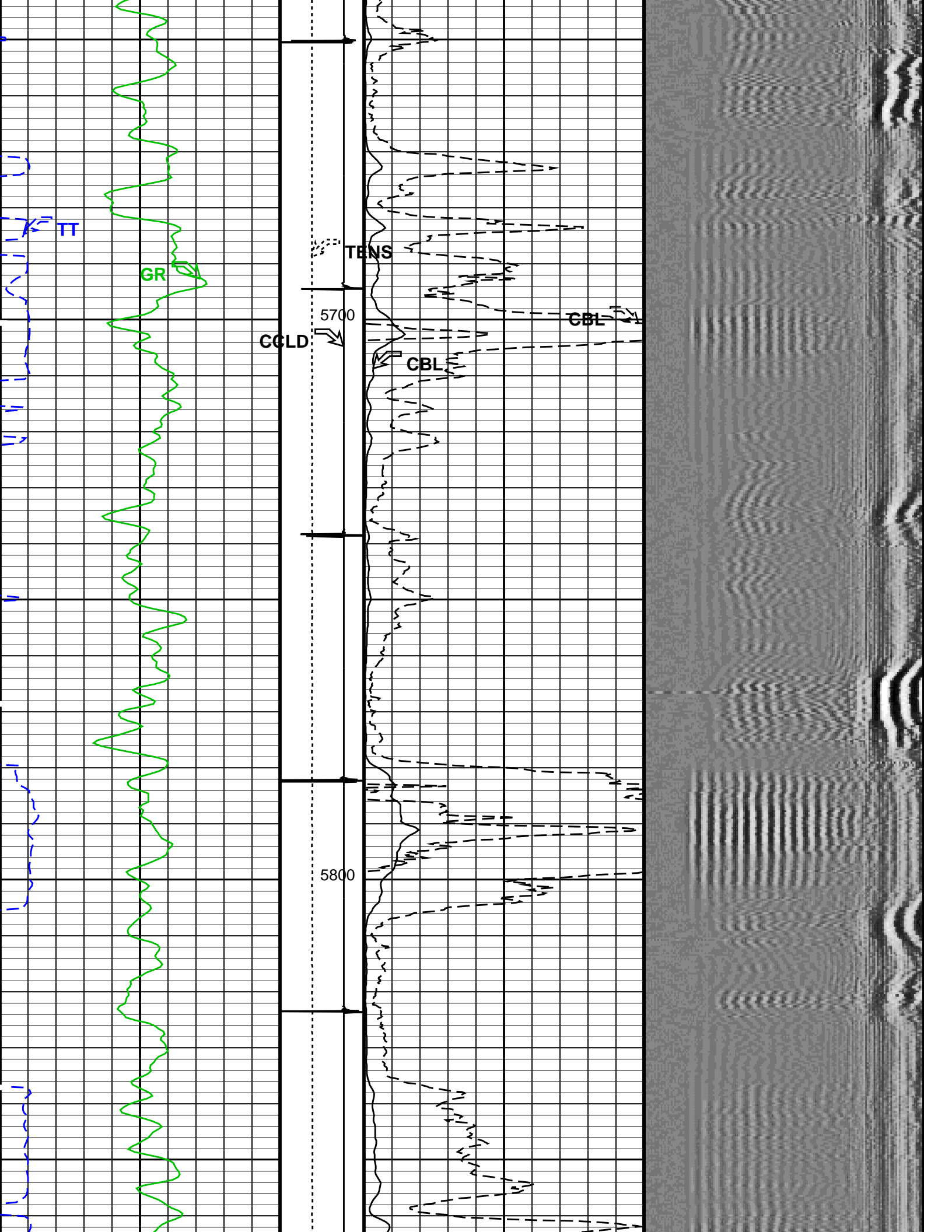


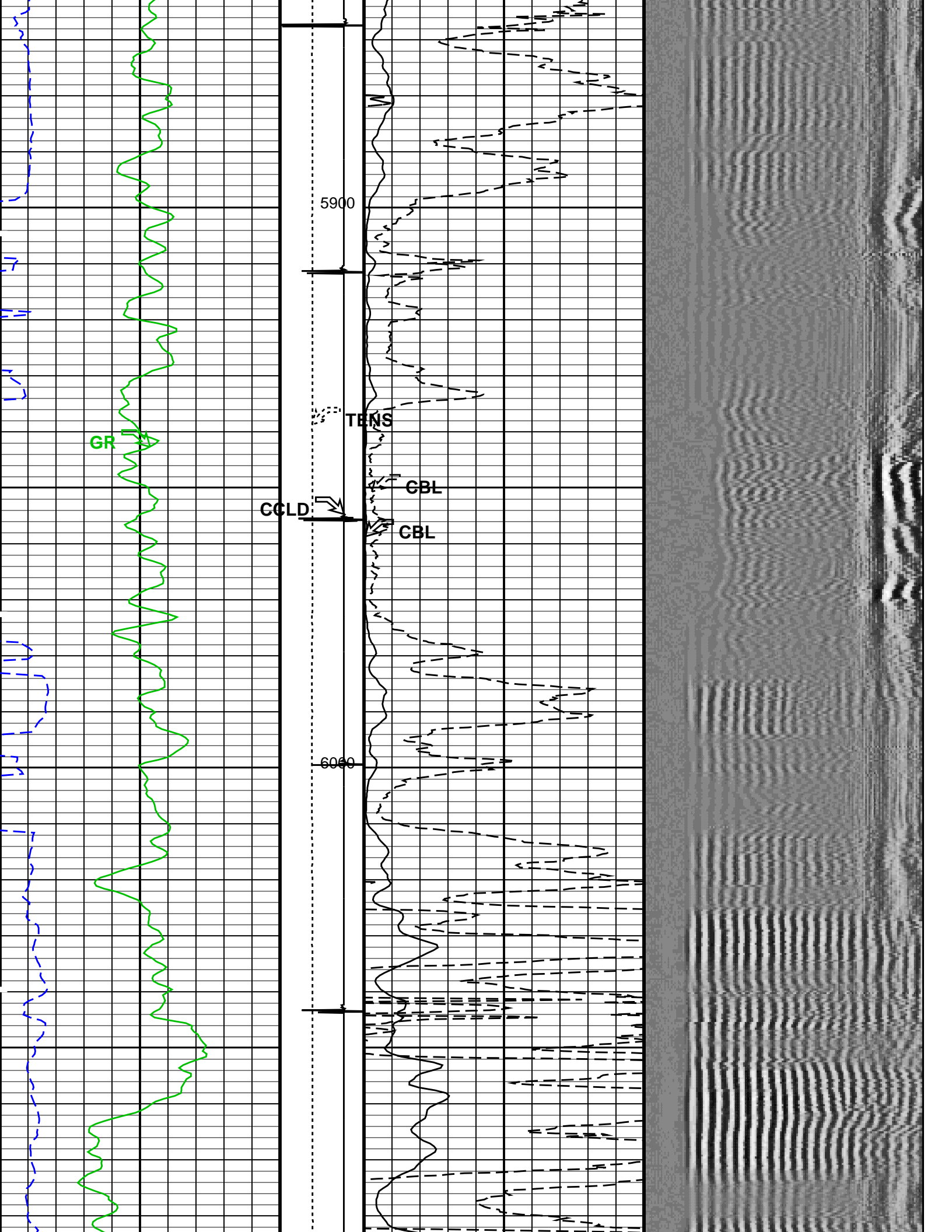


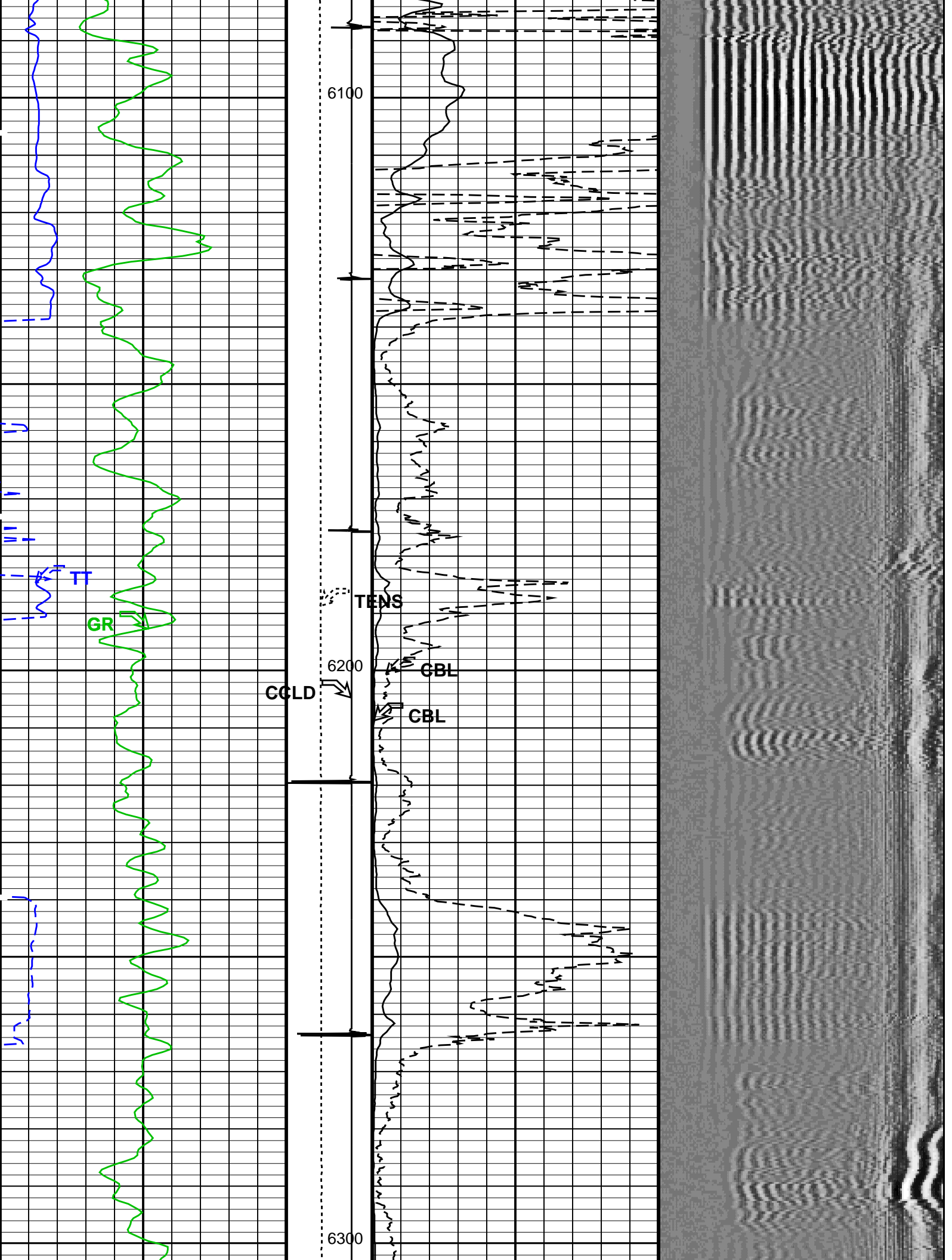


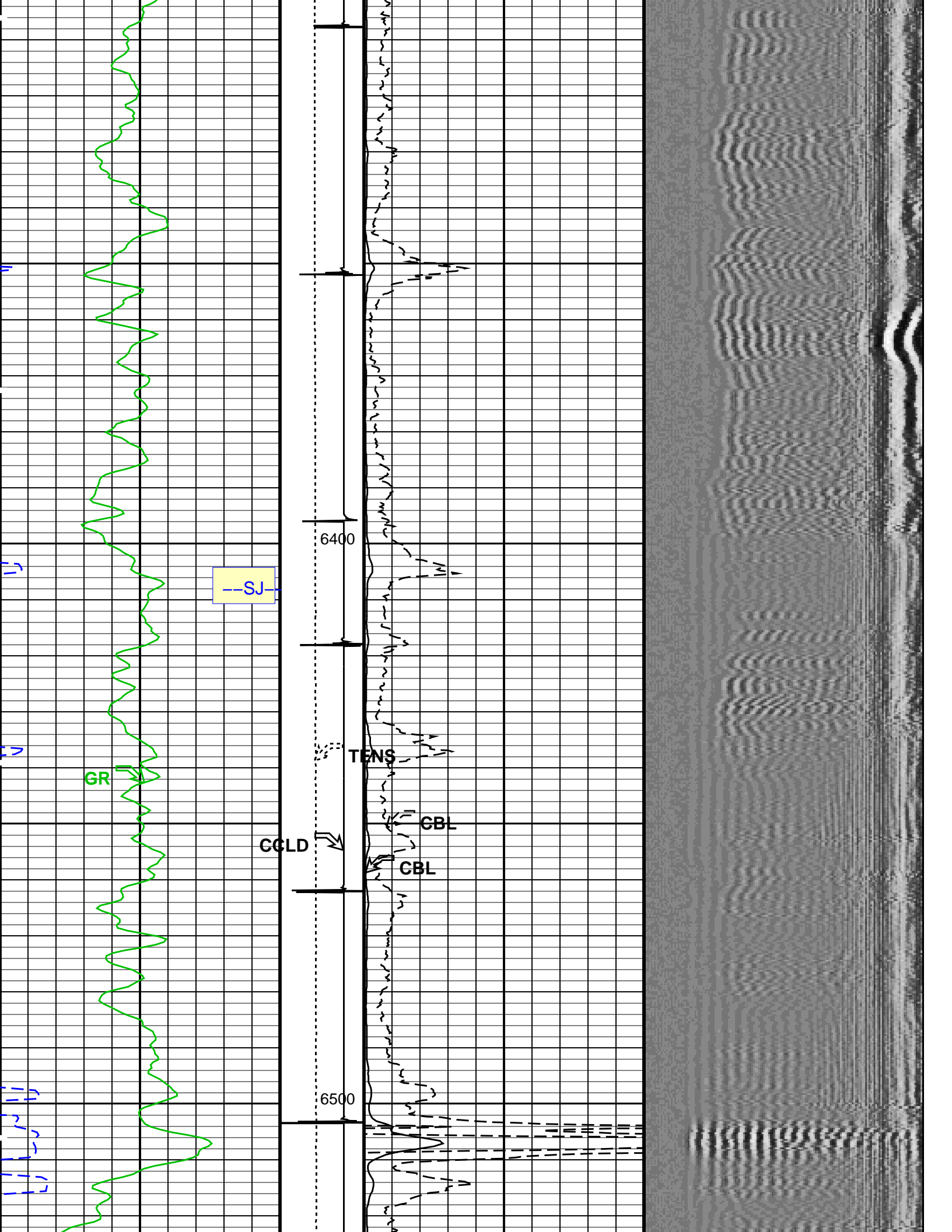


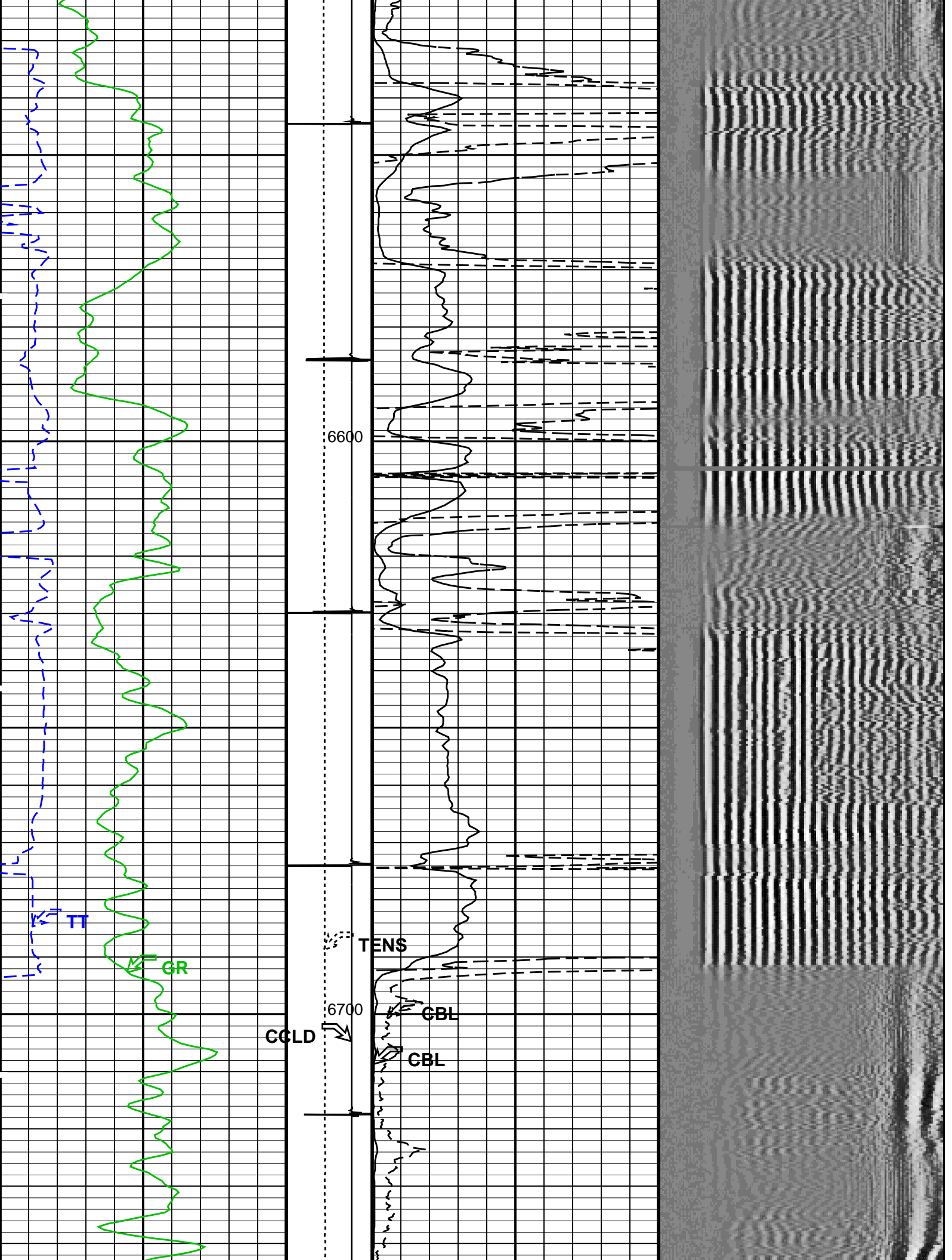


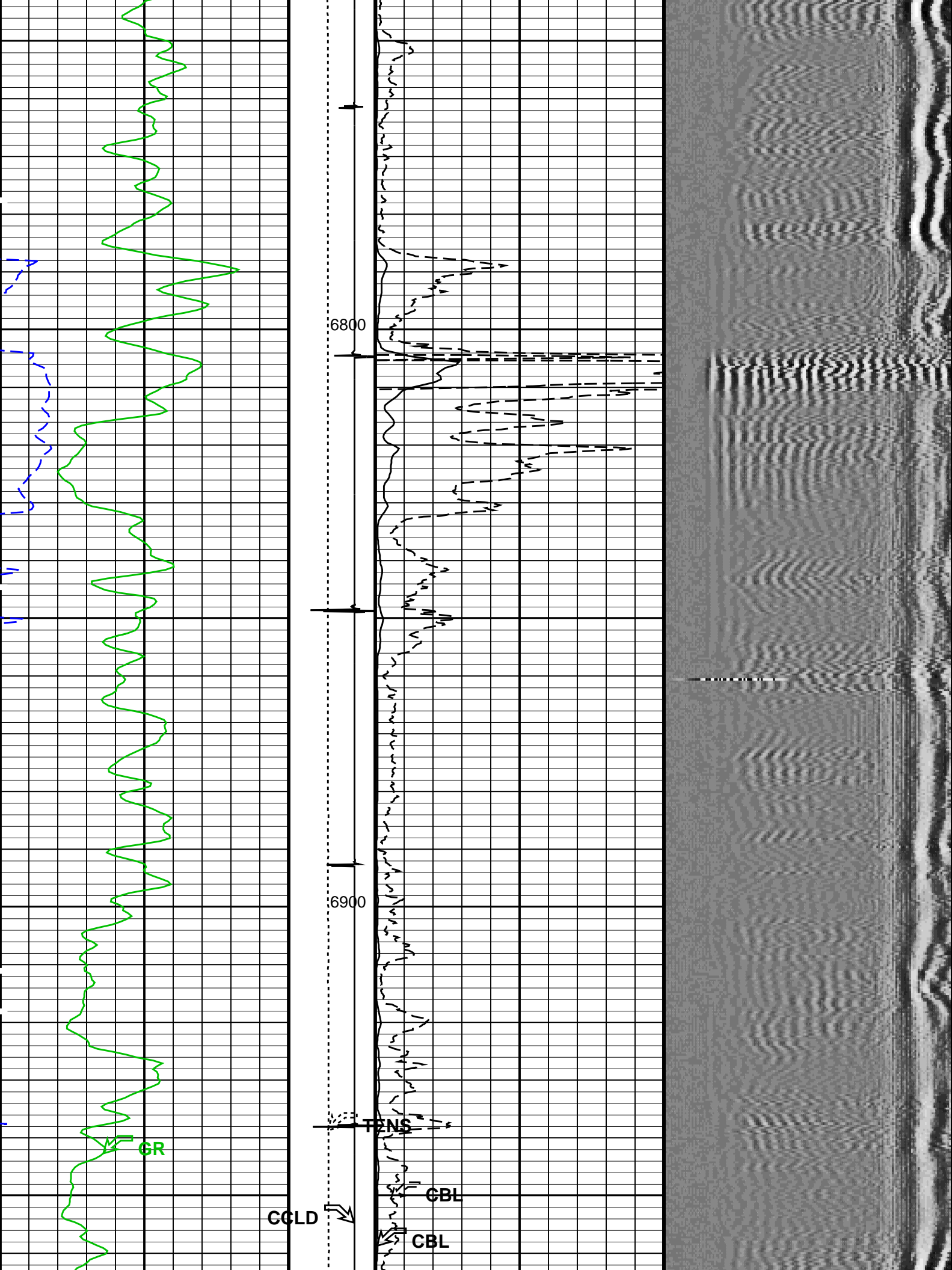


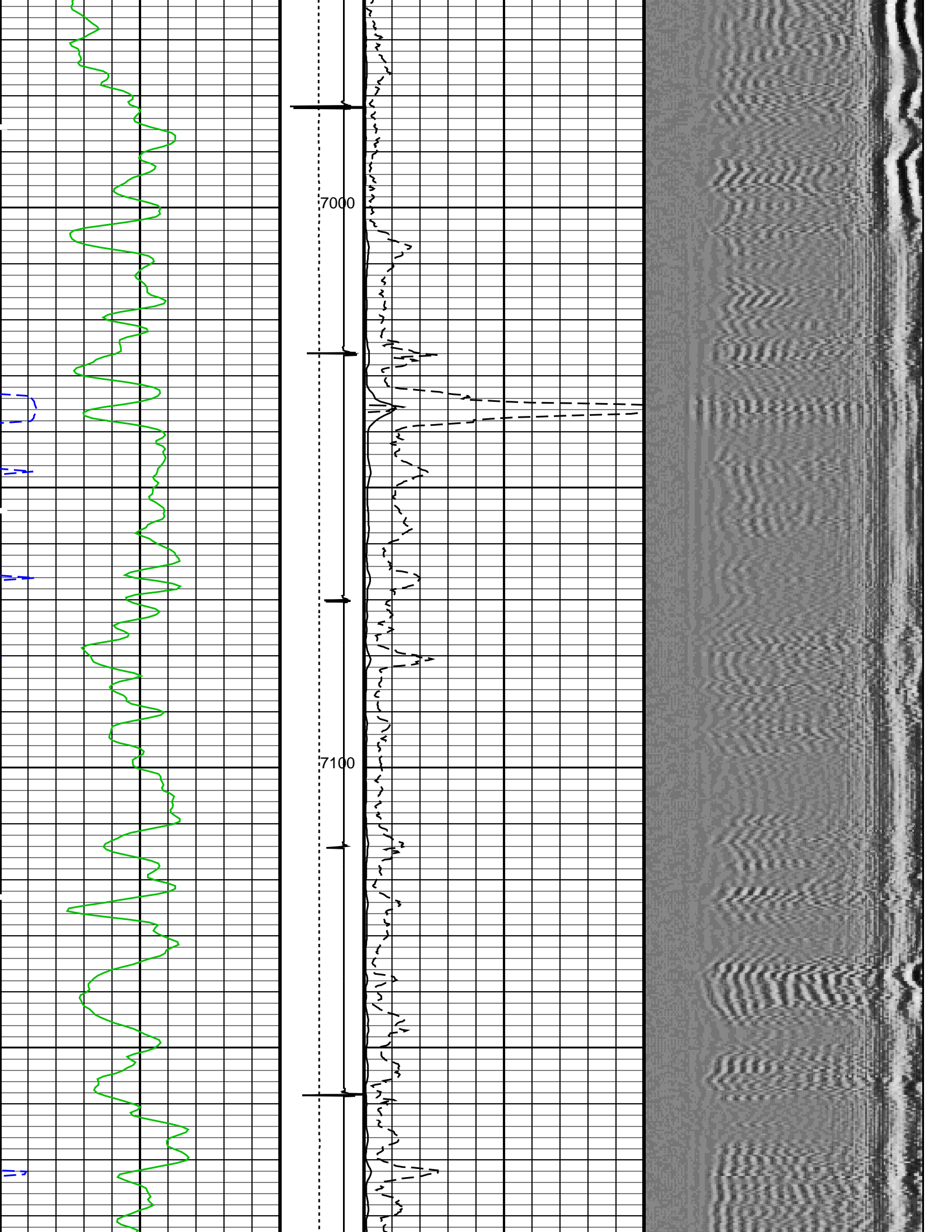


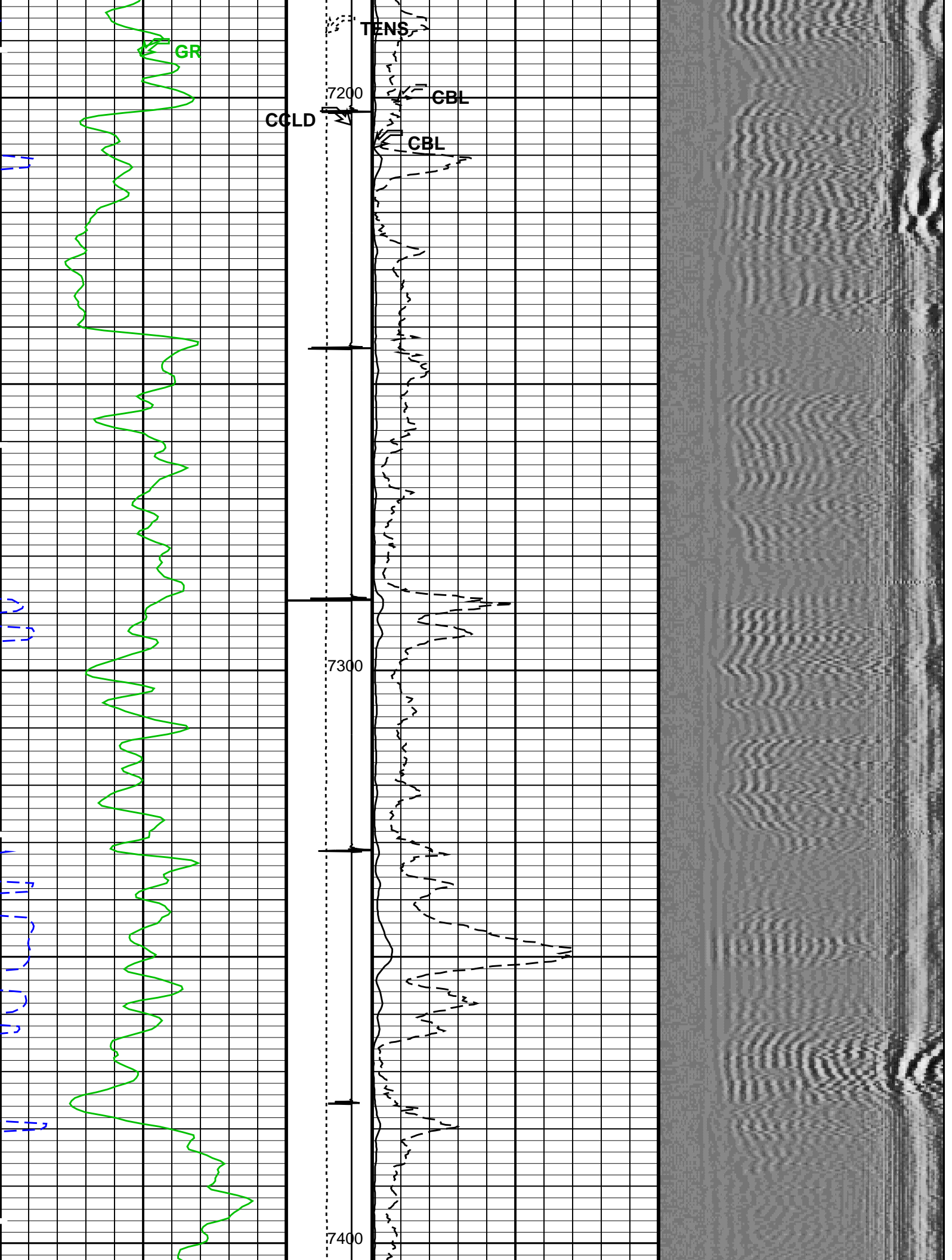


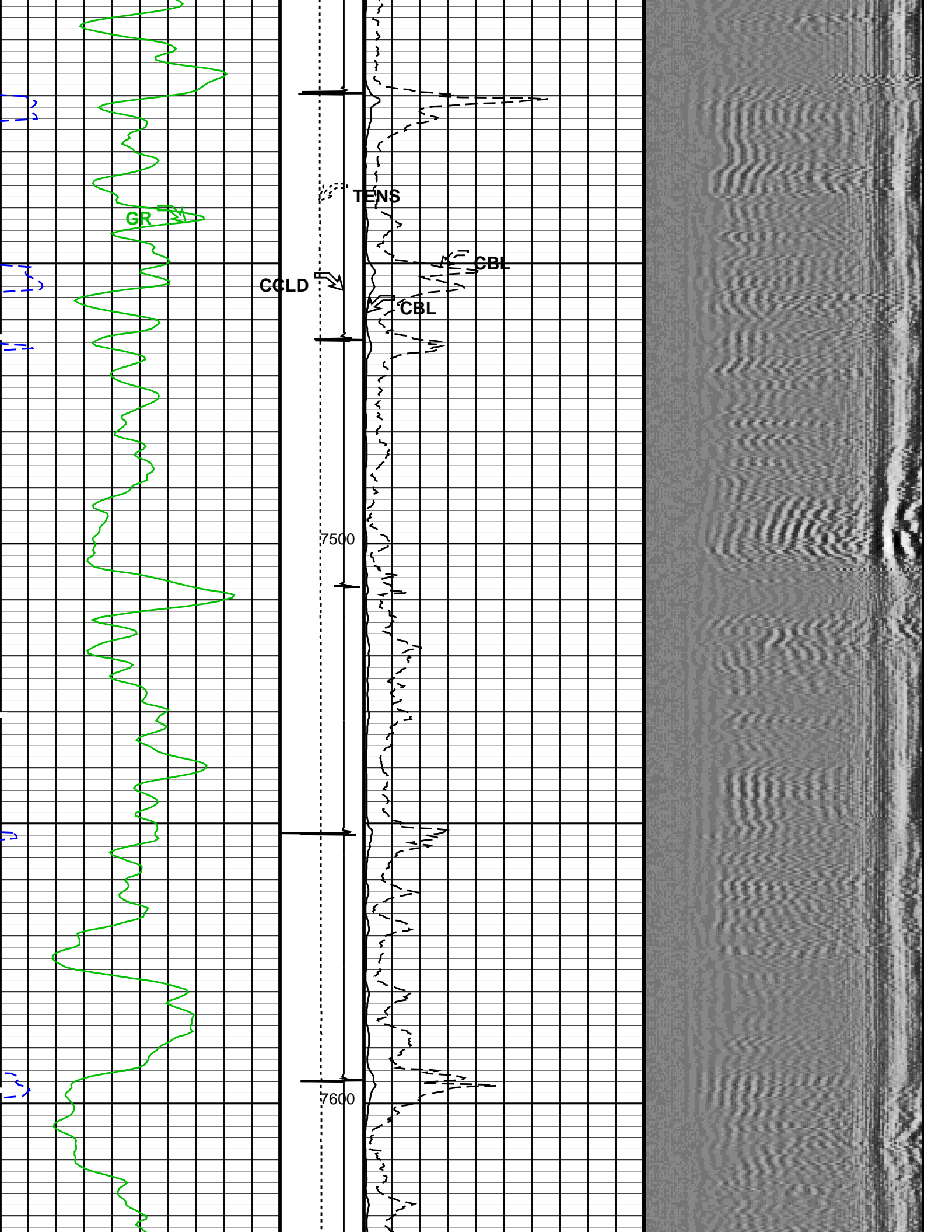


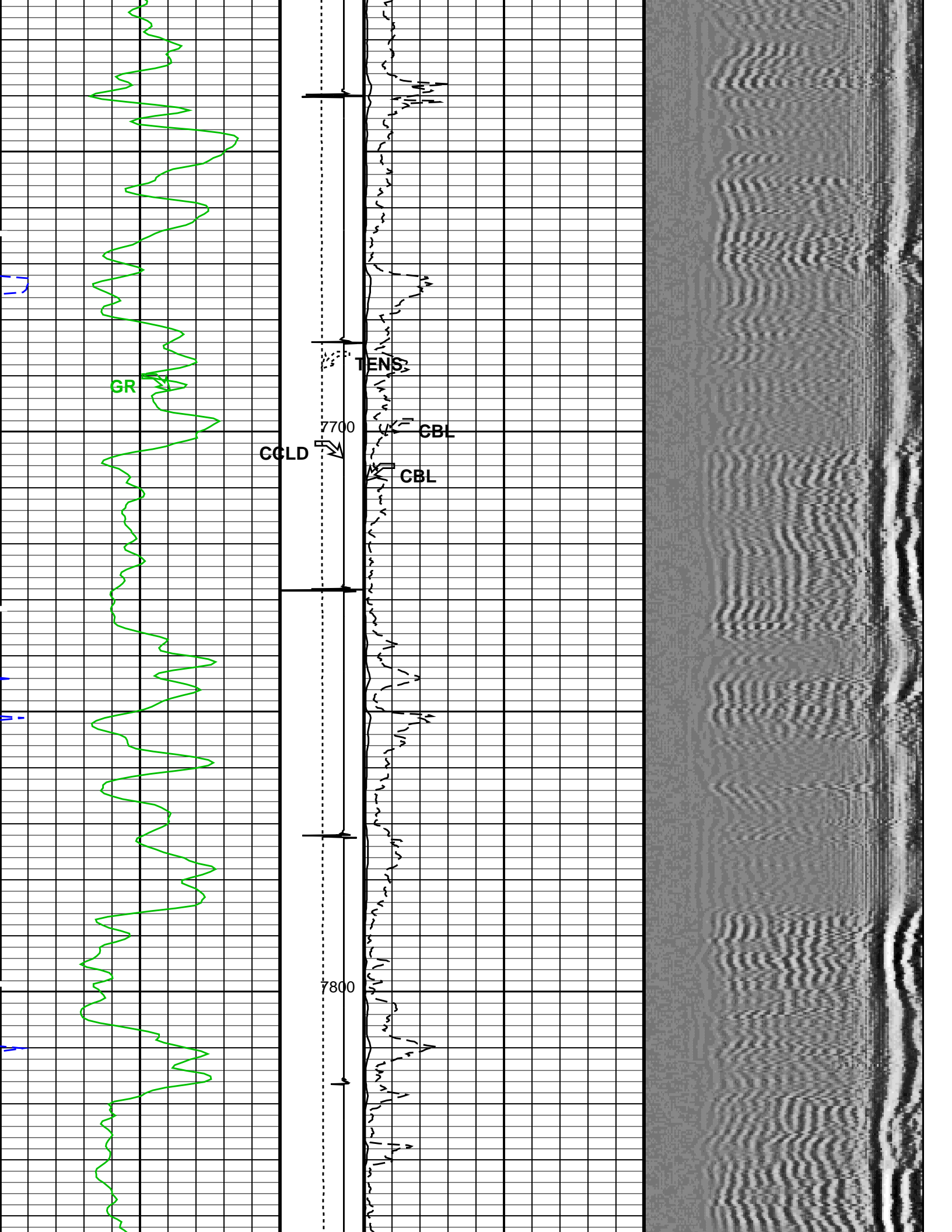


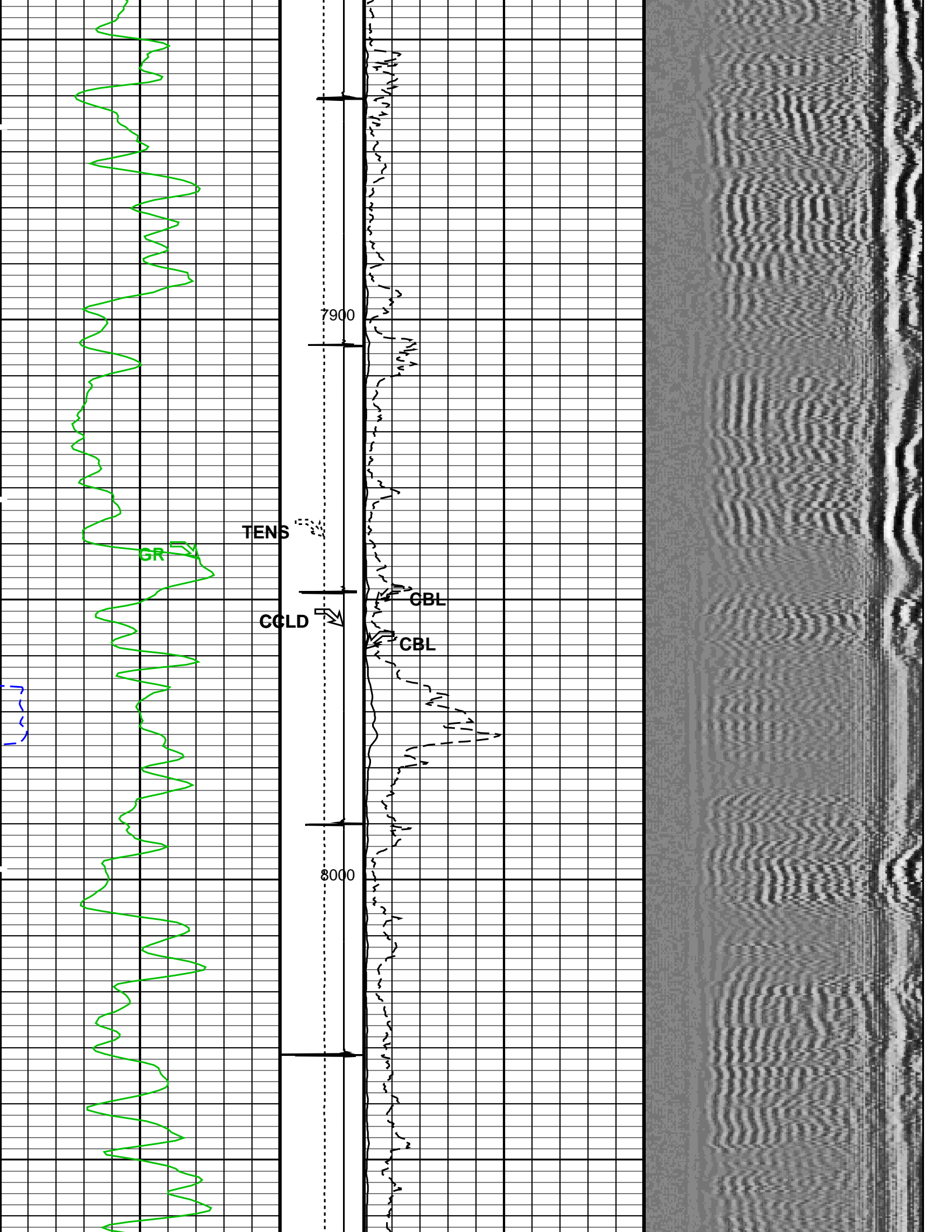


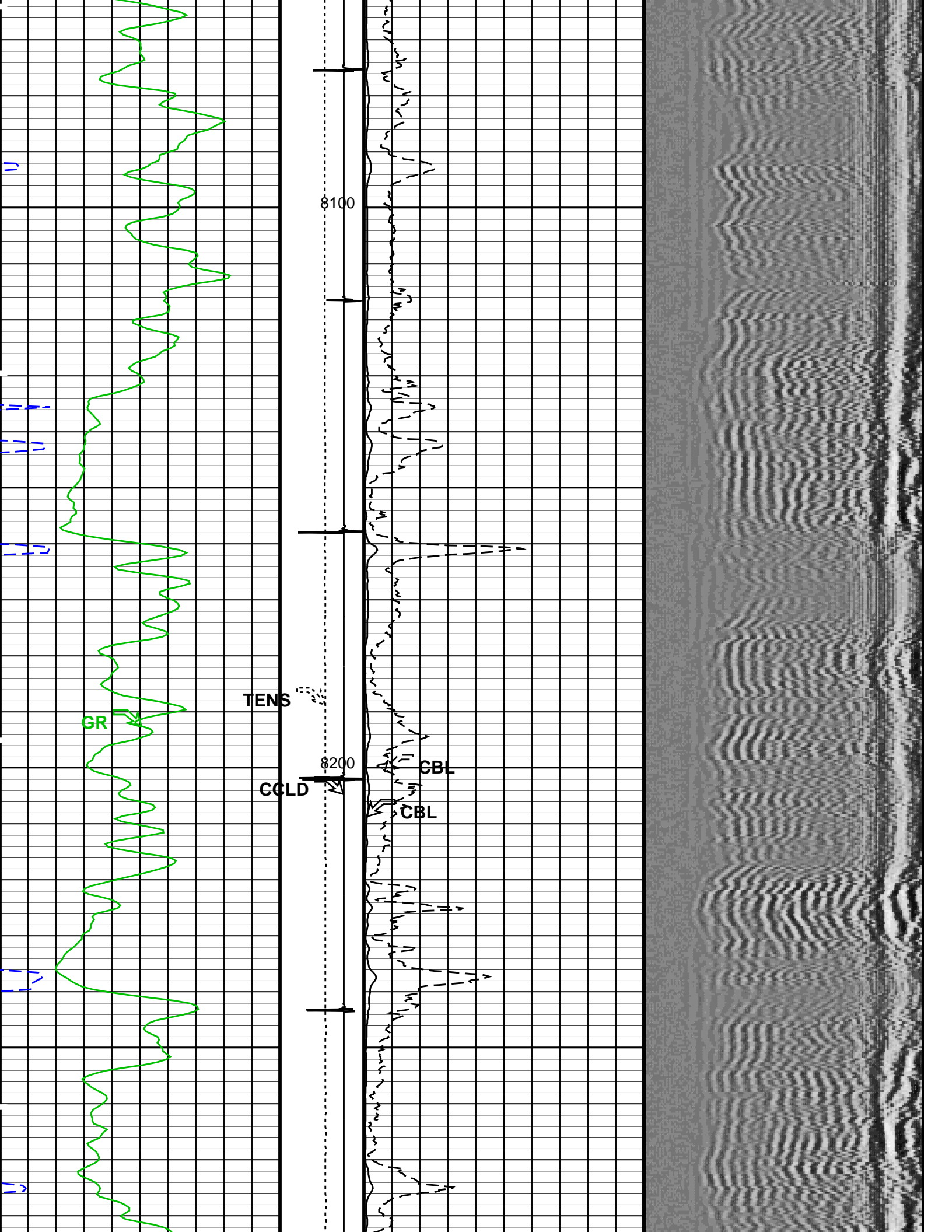


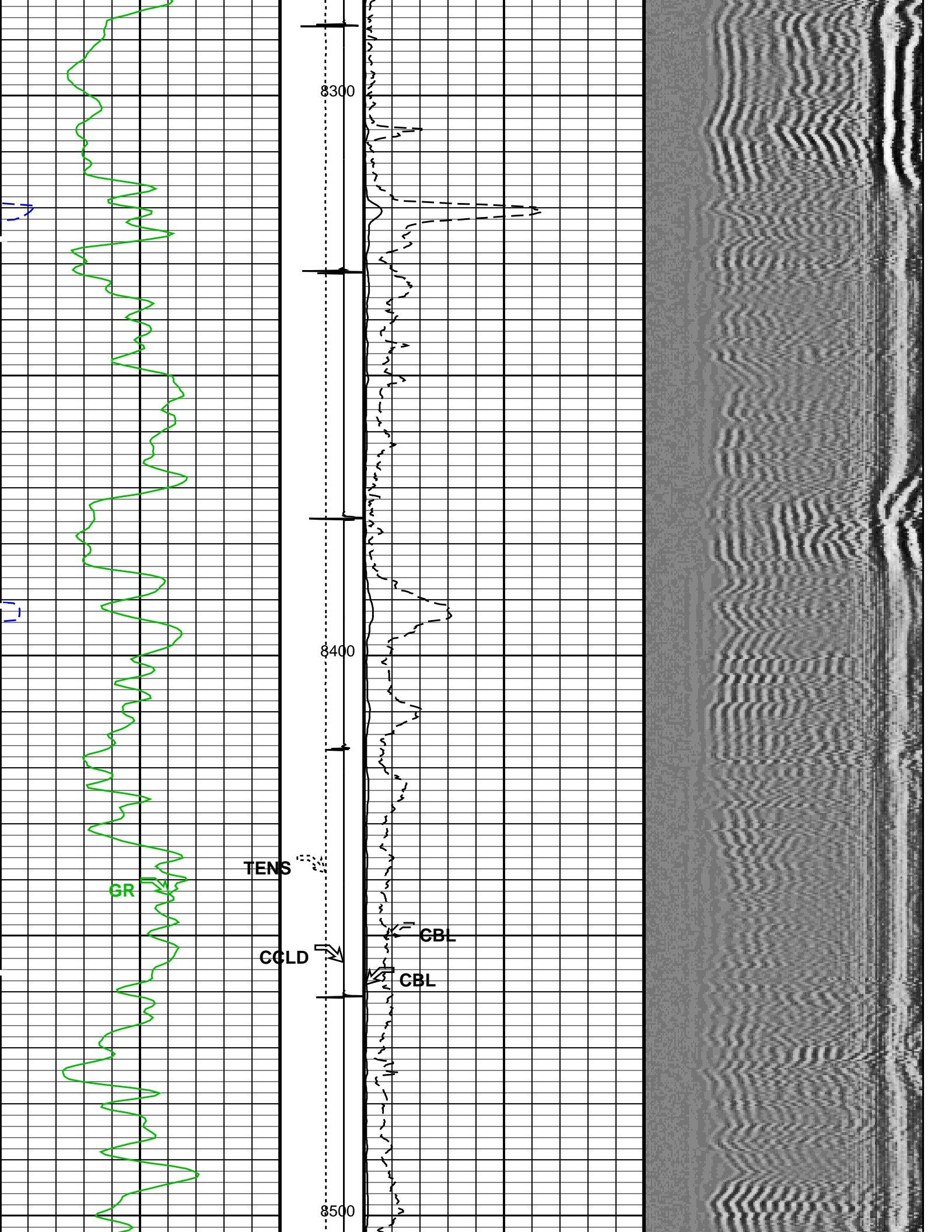


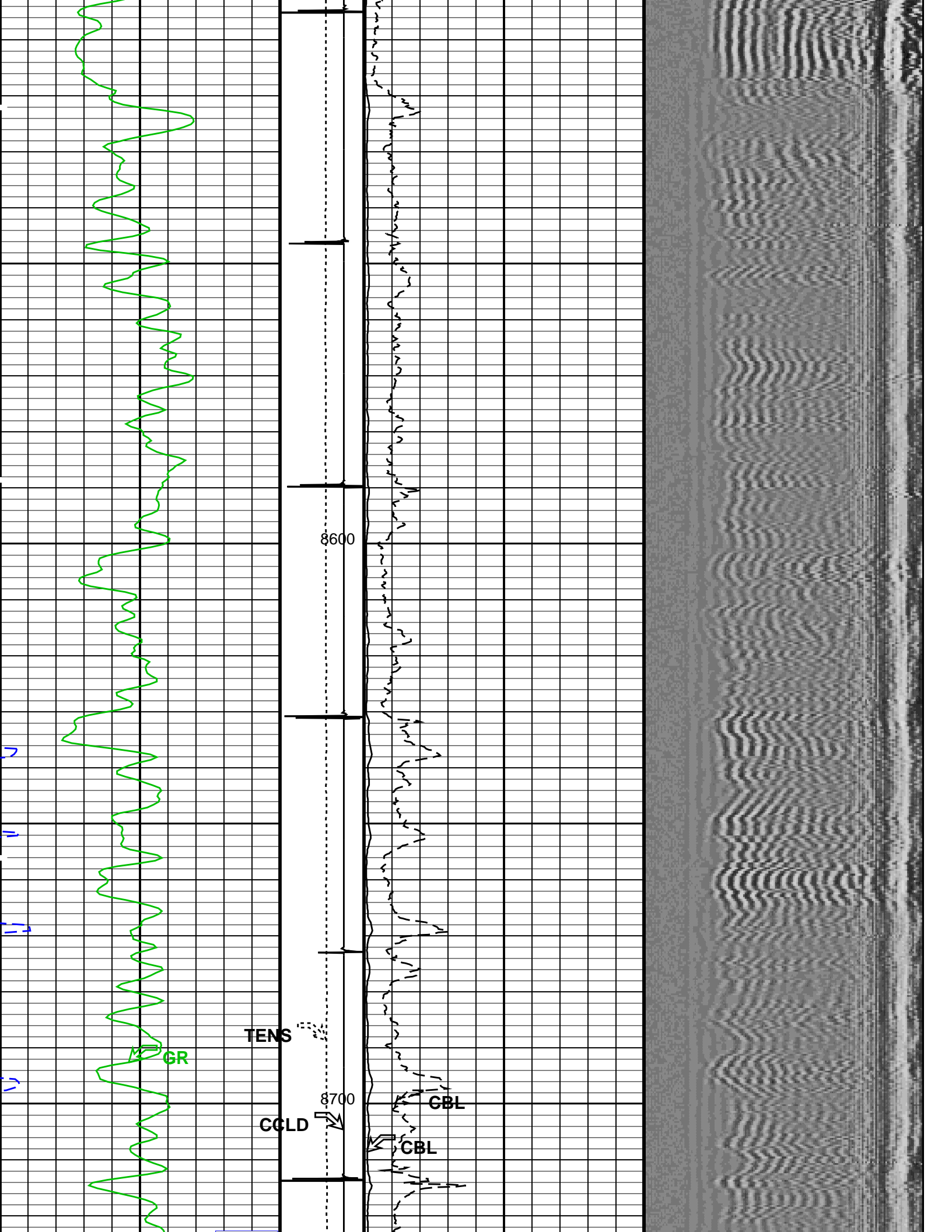


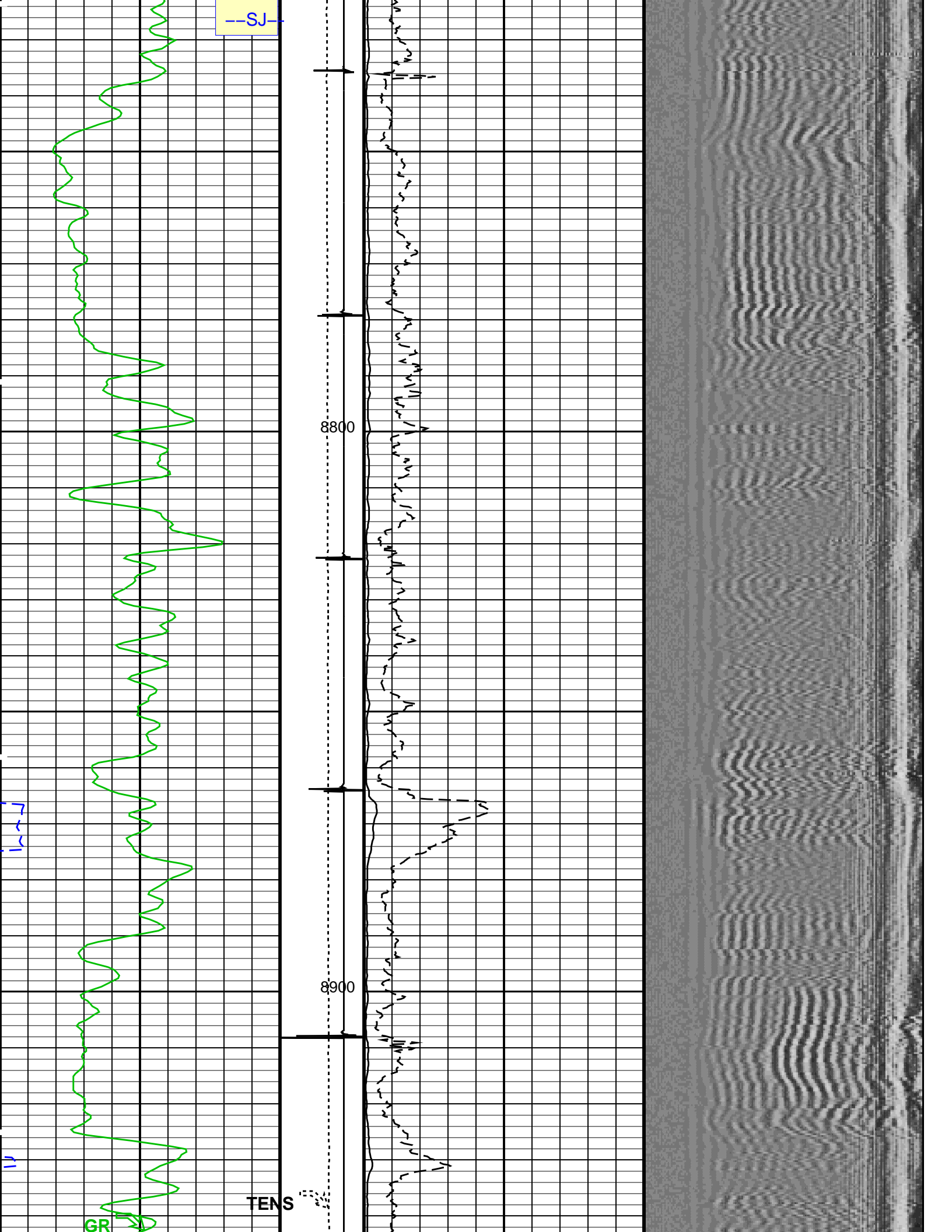


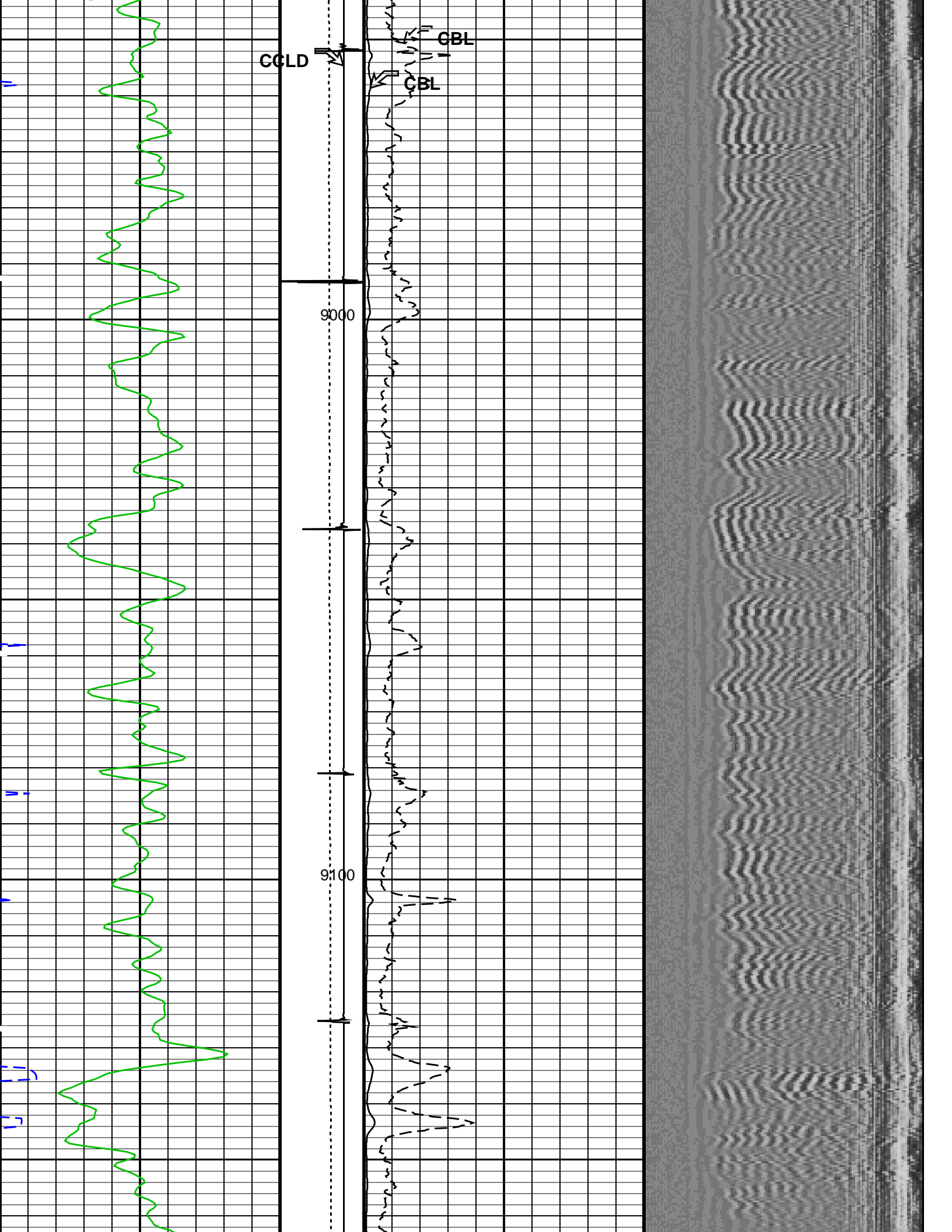


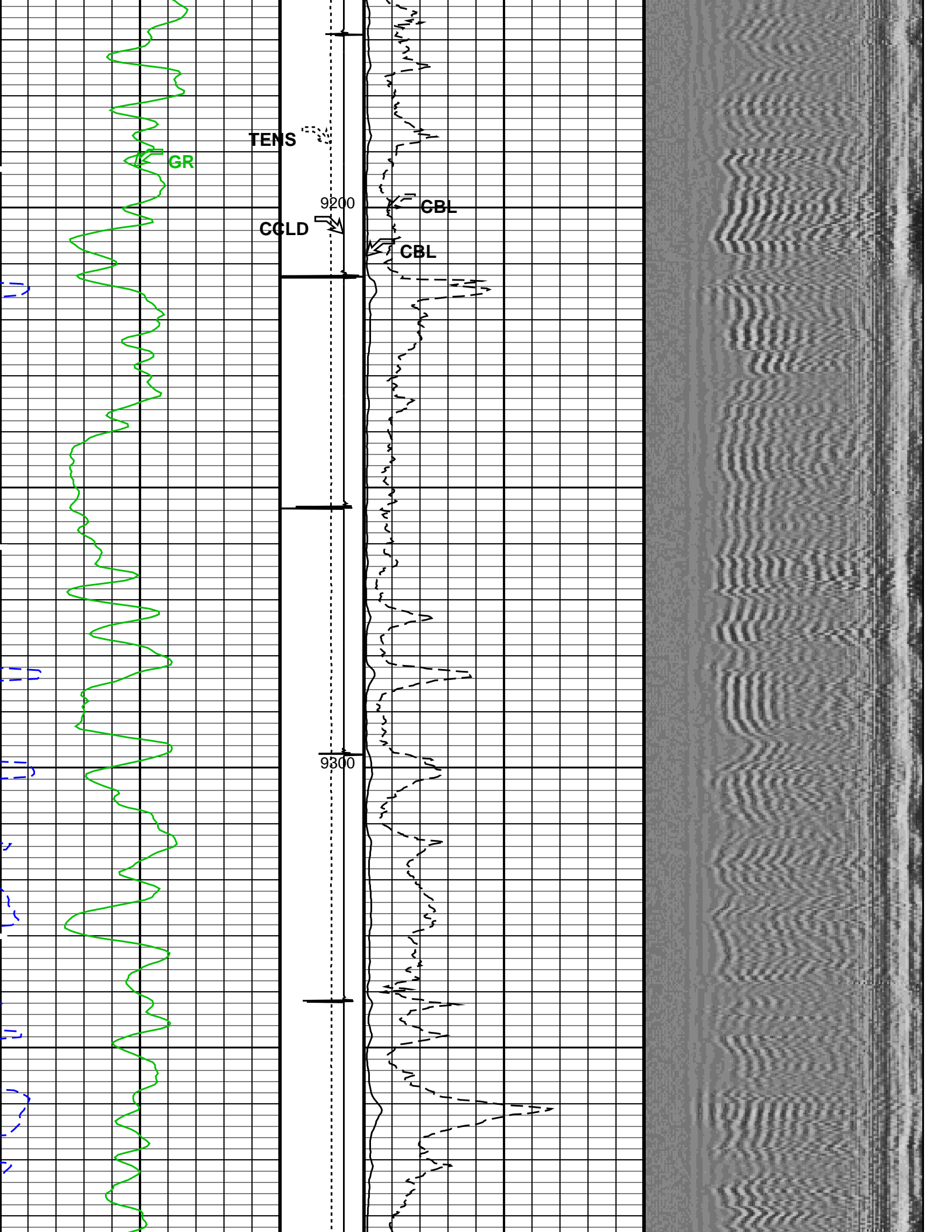


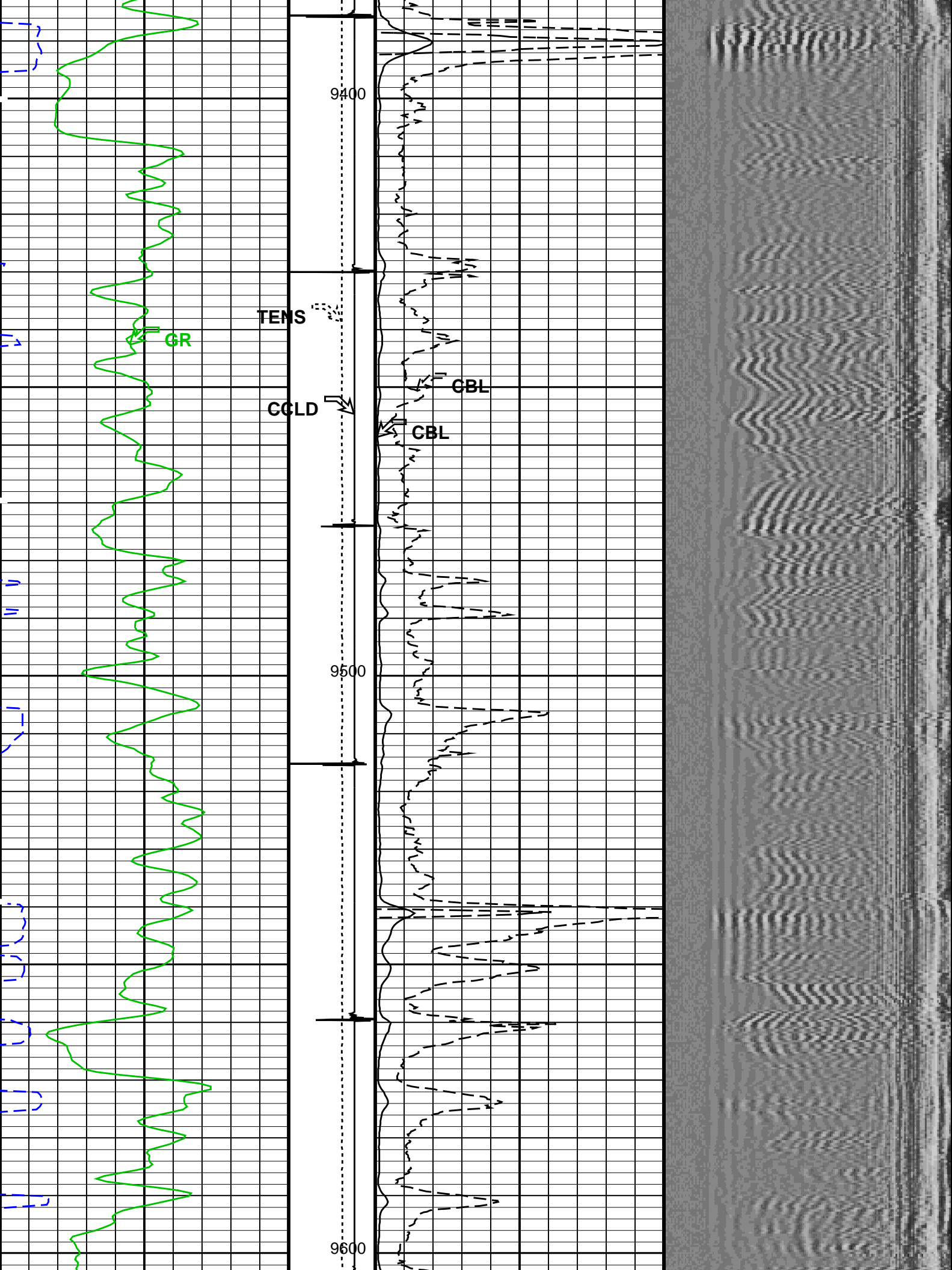


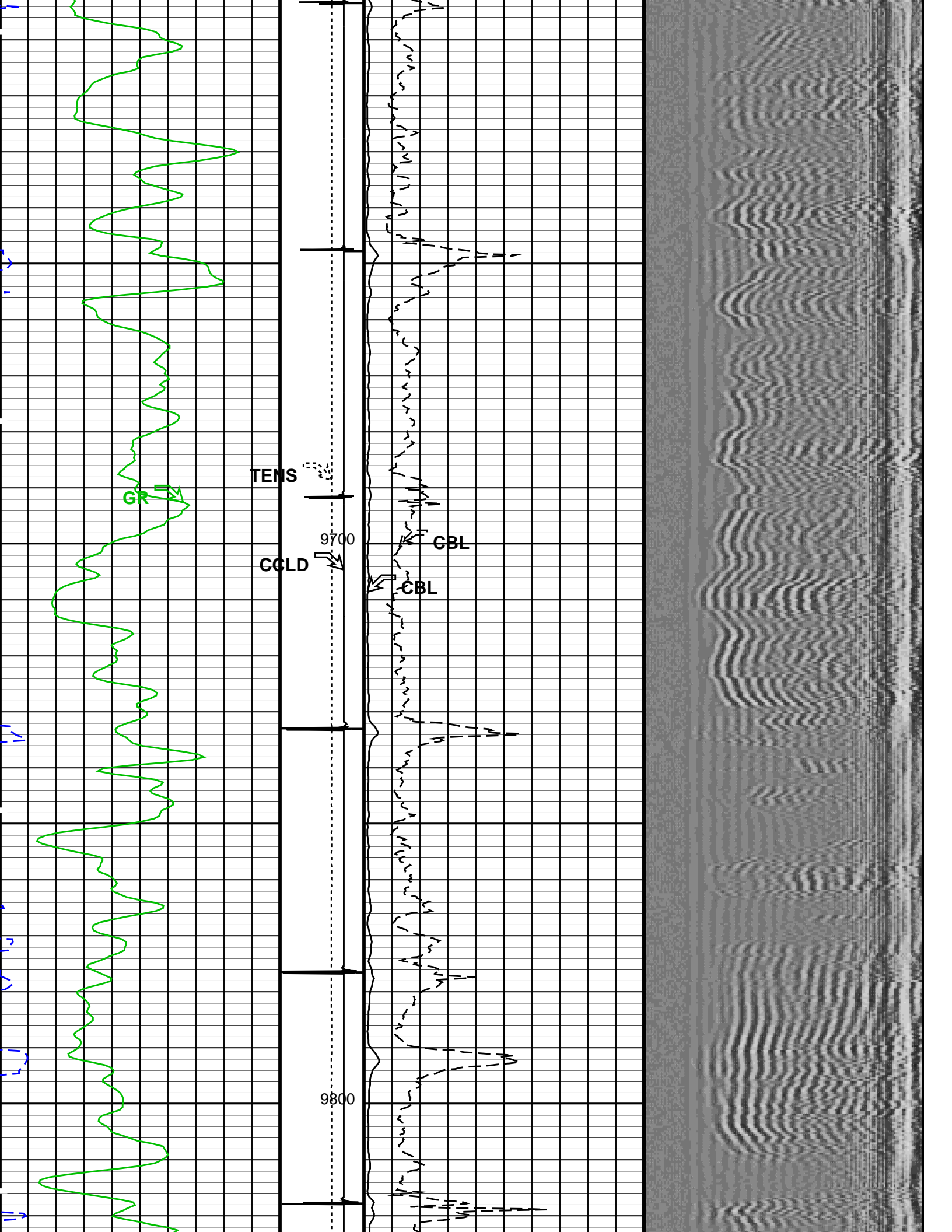


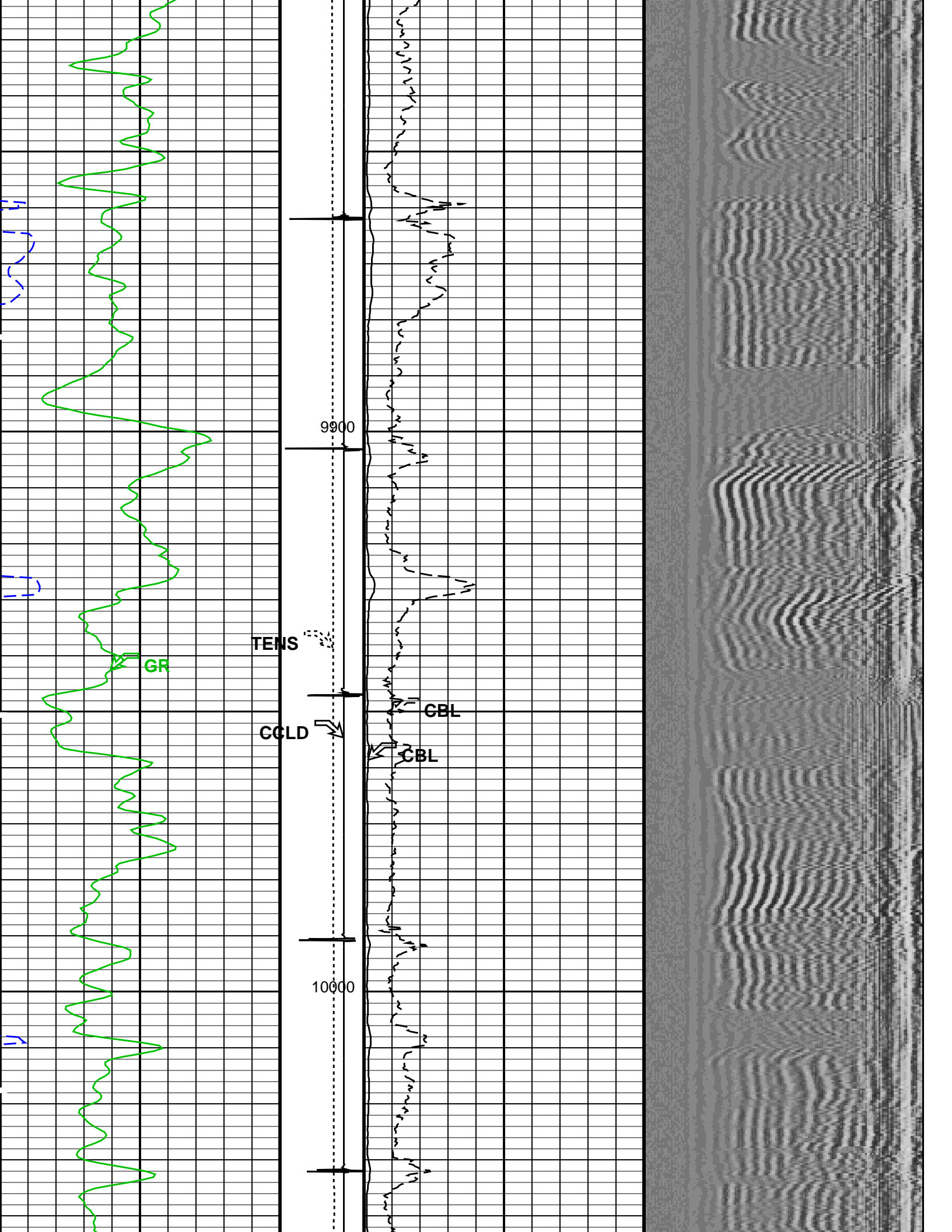


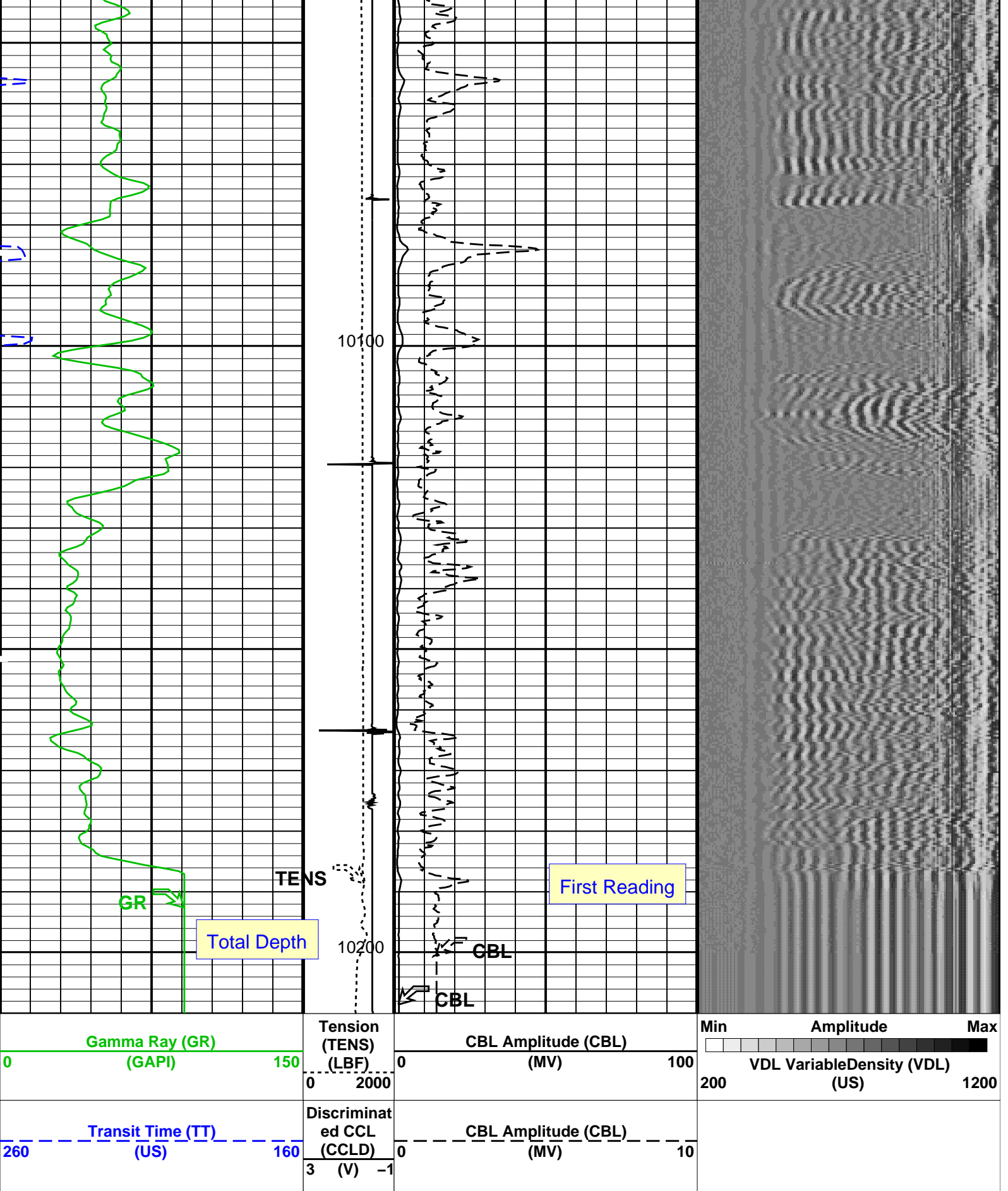












SCMT-CB		SRPC-5095-H2-2011-OP19_b		PSPT		19C0-187	
<<<SCMT Cement Evaluation Information Summary>>>							
Sonde Serial Number		SCMS-CB 8317					
Current Casing Size		4.50000 IN					
Casing Weight		11.6000 LB/F					
Expected CBL Amplitude in Free Pipe Section		80 MV	Minimum Sonic Amplitude		0.573313 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		6-MAR-2012					
CBL Correction Factor		0.0689824	CBL Adjustment Factor (CBAF)		1.0		
MAP 1 Correction Factor		0.107072	MAP Adjustment Factor (MPAF)		1.0		
MAP 2 Correction Factor		0.128400					
MAP 3 Correction Factor		0.135634					
MAP 4 Correction Factor		0.115019					
MAP 5 Correction Factor		0.108562					
MAP 6 Correction Factor		0.113017					
MAP 7 Correction Factor		0.117769					
MAP 8 Correction Factor		0.123422					
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							
CWEI	Casing Weight				11.60	LB/F	
DFD	Drilling Fluid Density				8.40	LB/G	
DO	Depth Offset for Playback				0.0	FT	
DORL	Depth Offset for Repeat Analysis				0.0	FT	
PP	Playback Processing				NORMAL		
TD	Total Depth				-50000	FT	
Input DLIS Files							
DEFAULT	Splice_SCMT_PSP_017CUP		FN:1	PRODUCER	26-Apr-2012 16:11	10210.0 FT	169.2 FT

Output DLIS Files

DEFAULT

SCMT_PSP_018PUP

FN:16

PRODUCER

26-Apr-2012 16:21

Schlumberger

REPEAT ANALYSIS

MAXIS Field Log

Company: ENCANA OIL & GAS (USA) INC.

Well: NP EF01C-34 P27 595

Input DLIS Files

DEFAULT	Splice_SCMT_PSP_017CUP	FN:1	PRODUCER	26-Apr-2012 16:11	10210.0 FT	169.2 FT
DEFAULT	SCMT_PSP_013PUP	FN:12	PRODUCER	26-Apr-2012 13:34	10209.5 FT	9958.0 FT

Output DLIS Files

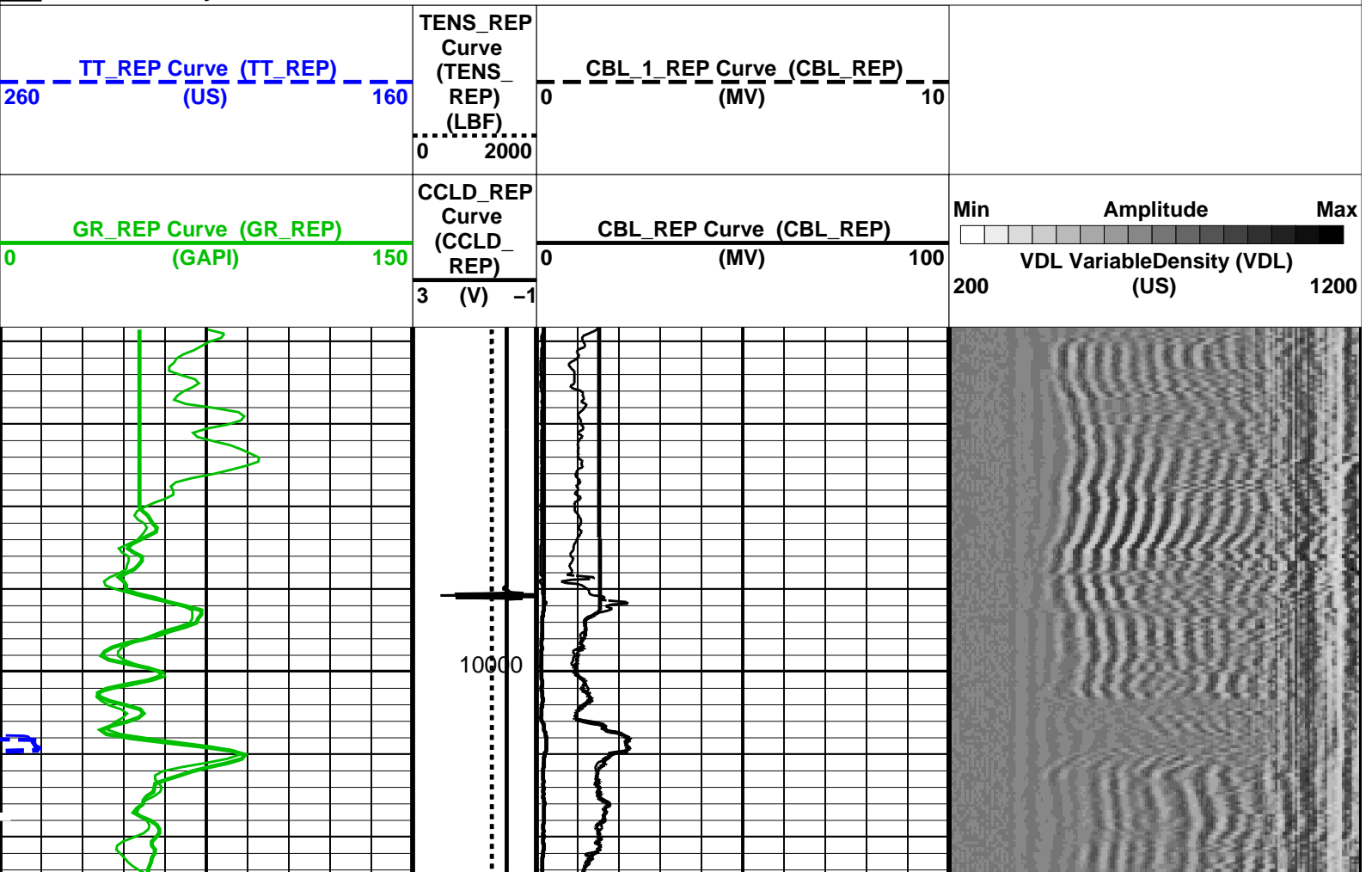
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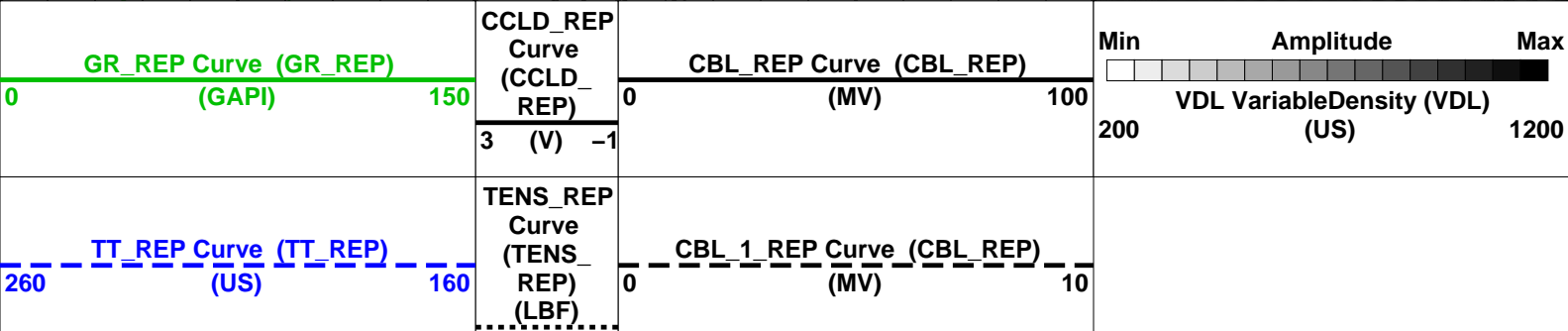
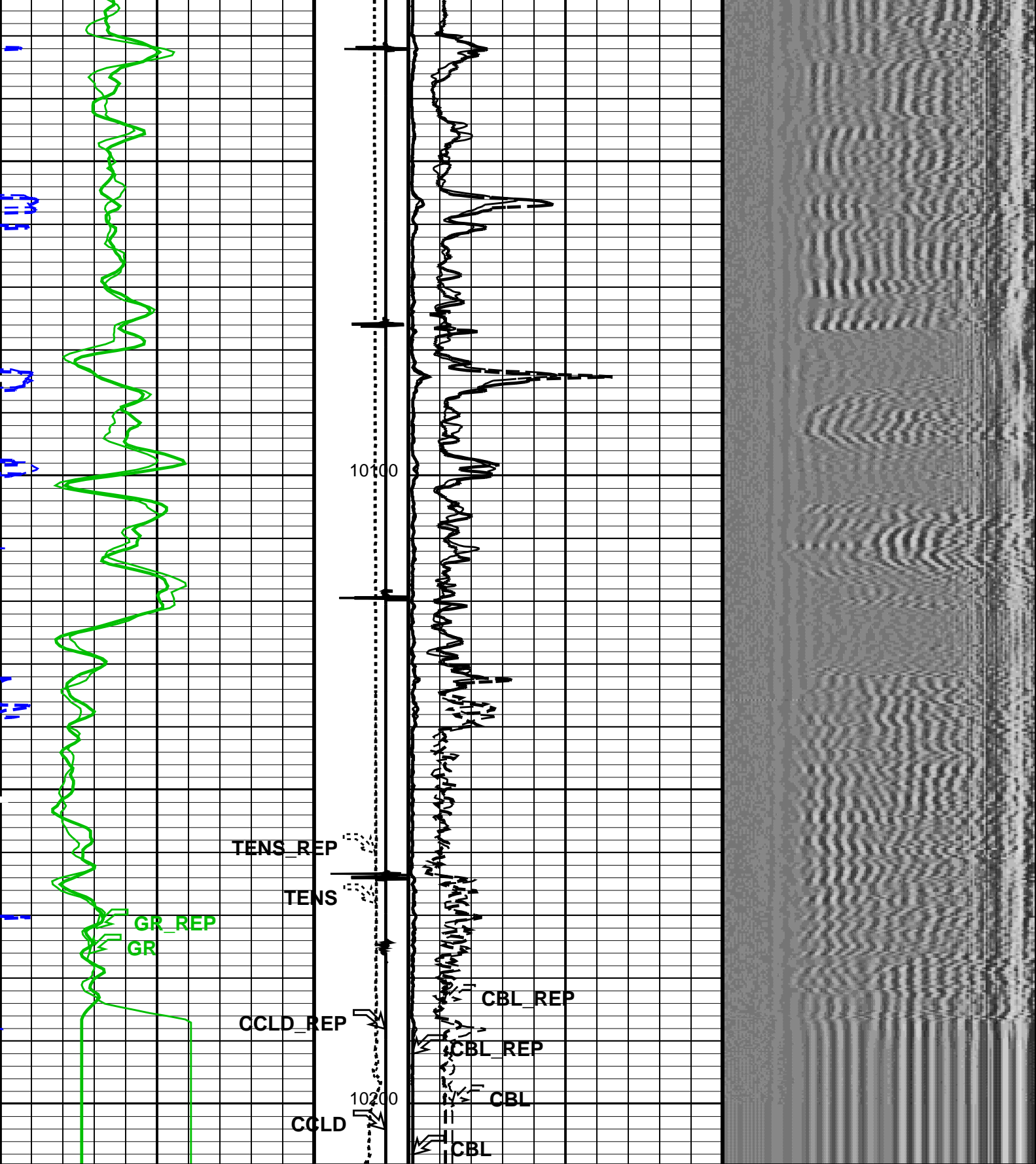
OP System Version: 19C0-187

SCMT-CB	SRPC-5095-H2-2011-OP19_b	PSPT	19C0-187
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PIP SUMMARY

Time Mark Every 60 S





02000

PIP SUMMARY

Time Mark Every 60 S

Format: CBL_VDL_REP Vertical Scale: 5" per 100' Graphics File Created: 26-Apr-2012 16:21

OP System Version: 19C0-187

SCMT-CB SRPC-5095-H2-2011-OP19_b 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

0.573313 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

6-MAR-2012

CBL Correction Factor

0.0689824

CBL Adjustment Factor (CBAF)

1.0

MAP 1 Correction Factor

0.107072

MAP Adjustment Factor (MPAF)

1.0

MAP 2 Correction Factor

0.128400

MAP 3 Correction Factor

0.135634

MAP 4 Correction Factor

0.115019

MAP 5 Correction Factor

0.108562

MAP 6 Correction Factor

0.113017

MAP 7 Correction Factor

0.117769

MAP 8 Correction Factor

0.123422

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

CWEI

Casing Weight

11.60

LB/F

DFD	Drilling Fluid Density	8.40	LB/G
DO	Depth Offset for Playback	0.0	FT
DORL	Depth Offset for Repeat Analysis	0.0	FT
PP	Playback Processing	NORMAL	
TD	Total Depth	-50000	FT

Input DLIS Files

DEFAULT	Splice_SCMT_PSP_017CUP	FN:1	PRODUCER	26-Apr-2012 16:11	10210.0 FT	169.2 FT
DEFAULT	SCMT_PSP_013PUP	FN:12	PRODUCER	26-Apr-2012 13:34	10209.5 FT	9958.0 FT

Output DLIS Files

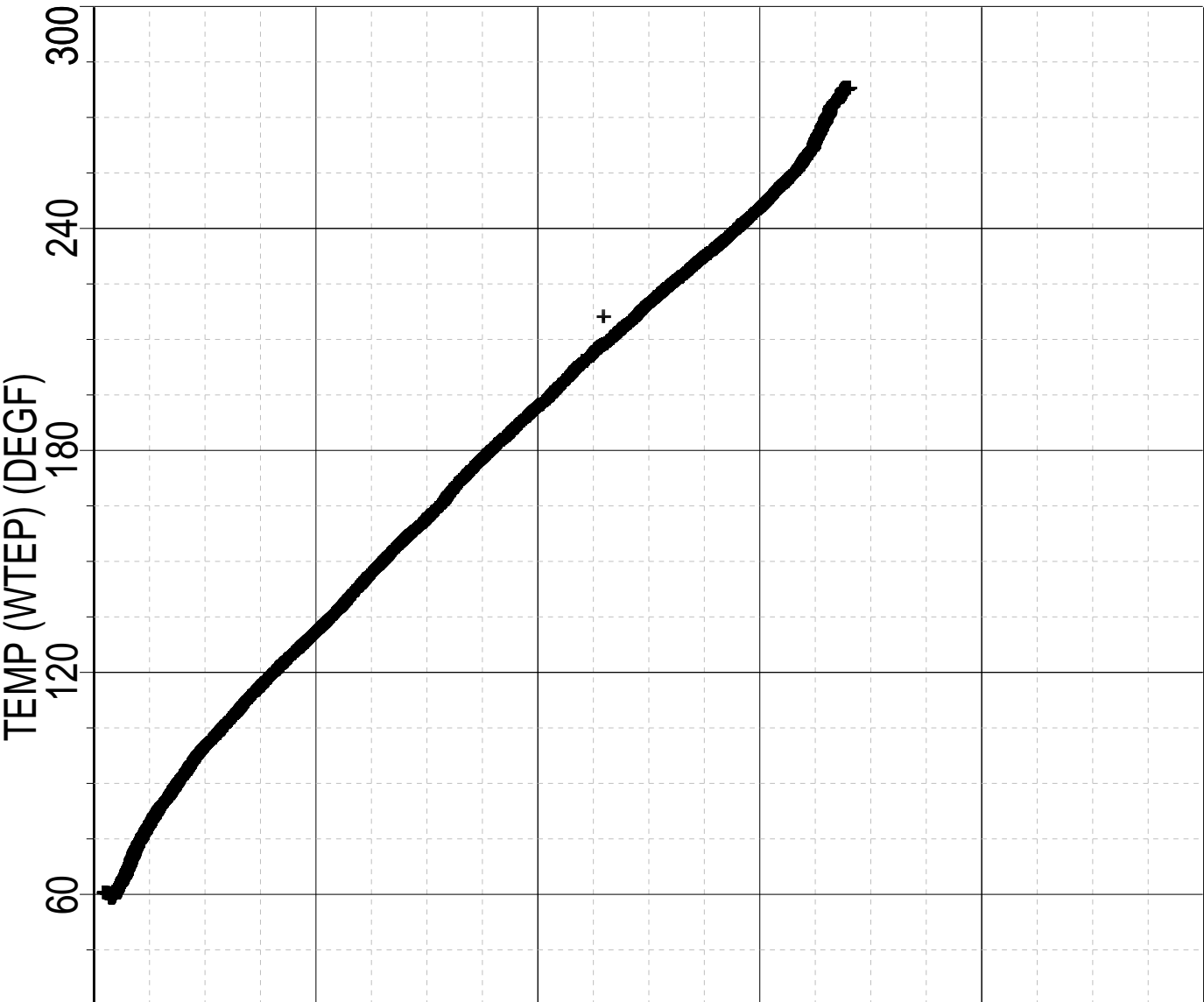
DEFAULT	SCMT_PSP_018PUP	FN:16	PRODUCER	26-Apr-2012 16:21
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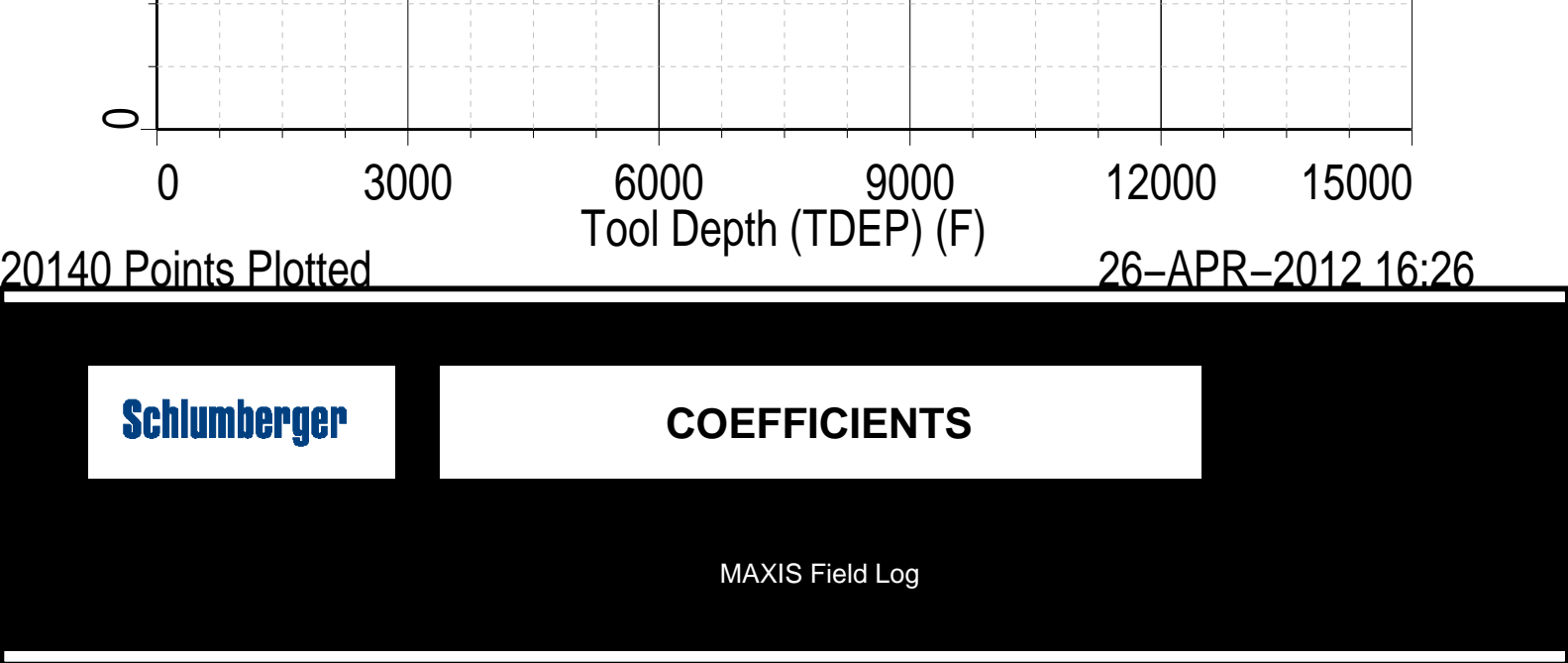


TEMPERATURE PLOT

MAXIS Field Log

Index: 10210.0 – 140.5 FT





Client: ENCANA OIL & GAS (USA) INC.

Field: NORTH PARACHUTE

Well: ENCANA P27 QUAD 3

Run date: 26-Apr-2012

Tool: PSP

Sub Type: PBMS

Sensor: Sapphire

PBMS Sapphire 10kPsi Gauge

Sonde Serial NB

Sensor Serial NB

Calib Date ddmmyy

Matrix Size

Coeff CRC

COEFFICIENTS FOR SAPPHIRE PBMS-A.3779 S/N:

3779

090107

66

4C82

Pres Coeff

	Tt**0	Tt**1	Tt**2
Tp**0	-.611876617639E+04	+.471061007964E+04	-.216447354932E+04
Tp**1	+.371836126905E+04	-.234756196935E+04	+.129149325686E+04
Tp**2	+.193143980957E+02	-.189348218853E+01	-.341812471126E+01
Tp**3	-.568815065386E+01	+.200079683569E+01	0.0
Tp**4	0.0	0.0	0.0
Tp**5	0.0	0.0	0.0

	Tt**3	Tt**4	Tt**5
Tp**0	+.380249508124E+03	-.247683004908E+02	0.0
Tp**1	-.227135245080E+03	+.146352372057E+02	0.0
Tp**2	0.0	0.0	0.0
Tp**3	0.0	0.0	0.0
Tp**4	0.0	0.0	0.0
Tp**5	0.0	0.0	0.0

PBMS Sapphire 10kPsi Gauge

Sonde Serial NB :
Sensor Serial NB 3779
Calib Date ddmmyy 090107
Matrix Size 66
Coeff CRC C39E

Temp Coeff

	Tp**0	Tp**1	Tp**2
Tt**0	-.278275571347E+03	+.251216271916E+01	-.820715649824E+00
Tt**1	+.598349067015E+02	-.107326373545E+01	+.652890183203E-01
Tt**2	+.109160002120E+02	+.262812193556E+00	-.450134240377E-02
Tt**3	-.673302171285E+00	-.213772918779E-01	0.0
Tt**4	0.0	0.0	0.0
Tt**5	0.0	0.0	0.0

	Tp**3	Tp**4	Tp**5
Tt**0	+.151507143209E+00	-.592670012996E-02	0.0
Tt**1	+.127486538512E-01	-.437897076104E-02	0.0
Tt**2	0.0	0.0	0.0
Tt**3	0.0	0.0	0.0
Tt**4	0.0	0.0	0.0
Tt**5	0.0	0.0	0.0

Client: ENCANA OIL & GAS (USA) INC.

Field: NORTH PARACHUTE

Well: ENCANA P27 QUAD 3

Run date: 26-Apr-2012

Tool: PSP

Sub Type: PBMS

Sensor: WellTemp RTD

PBMS RTD Well Thermometer

Sonde Serial NB COEFFICIENTS FOR RTD THERMOMETER PBMS-A.3779 S/N:
Sensor Serial NB 3779
Calib Date ddmmyy 090107
Matrix Size 16
Coeff CRC 3846

WTemp Coeff

	Tt**0	Tt**1	Tt**2
Tt**0	+.492135102627E+02	-.278827553804E+03	+.142867554561E+03

PBMS Gamma Ray

Sonde Serial NB

Sensor Serial NB

Calib Date ddmmyy

Matrix Size

Coeff CRC

RESISTORS FOR GR SENSOR N.34552,TOOL PBMS-AA3779. SENSOR S/N:

34552

030606

12

3AE5

GR HV Rt		
	Rt**0	Rt**1
Rt**0	<div>+.200000000000e+04</div>	<div>+.214000000000e+04</div>

Company:

Well:

Field:

County:

State:

ENCANA OIL & GAS (USA) INC.

NP EF01C-34 P27 595

NORTH PARACHUTE

GARFIELD

COLORADO

Schlumberger

CEMENT BOND LOG

CBL – VDL

GAMMA RAY – CCL