

Company: ENCANA OIL & GAS (USA) INC

Well: SG 8502A-35 (D36 496)

Field: STORY GULCH

County: GARFIELD

State: COLORADO

County: GARFIELD

Field: STORY GULCH

Location: SHL: 1093 FWL & 322 FNL

Well: SG 8502A-35 (D36 496)

Company: ENCANA OIL & GAS (USA) INC

SLIM CEMENT MAPPING LOG

CBL-VDL

GR - CCL

SHL: 1093 FWL & 322 FNL

BHL: 1700 FEL & 112 FNL

Elev.: K.B. 8321.00 ft

G.L. 8291.00 ft

D.F. 8320.00 ft

Permanent Datum: GROUND LEVEL

Log Measured From: KELLY BUSHING

Drilling Measured From: KELLY BUSHING

Elev.: 8291.00 ft

30.00 ft above Perm. Datum

API Serial No. 05-045-20927-0C

Section 36

Township 4S

Range 96W

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 31-Dec-2012

Run Number 1

Depth Driller 12490 ft

Schlumberger Depth 12433 ft

Bottom Log Interval 12424 ft

Top Log Interval 77 ft

Casing Fluid Type FRESH WATER

Salinity

Density 8.4 lbm/gal

Fluid Level 77 ft

BIT/CASING/TUBING STRING

Bit Size 8.750 in

From 30 ft

To 12490 ft

Casing/Tubing Size 4.500 in

Weight 11.6 lbm/ft

Grade P-110

From 30 ft

To 12470 ft

Maximum Recorded Temperatures 284 degF

Logger On Bottom 31-Dec-2012 15:45

Unit Number 391

Location GRAND JUNCTION

Recorded By WILLIAM FLOYD

Witnessed By RYAN TOMPKINS

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: 12-DEC-2012 9:29:15

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:	
Calibration Date:	4-24-2012	Calibration Date:	28-11-2012	Length:	19700 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:	6		
Wheel Correction 2:	-4	Calibration Peak Error:	11		

Depth Control Parameters

Log Sequence:	First Log In the Well
Rig Up Length At Surface:	200.00 FT
Rig Up Length At Bottom:	200.00 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:	OS1:
OS2:	OS2:
OS3:	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= 284 DEGF	
MAXIMUM RECORDED PRESSURE= 5006 PSIA	

SHORT JOINTS=7900'/10050'	
ENTRANCE TIME= 14:45	
LOGGER ON BOTTOM= 15:45	
EXIT TIME=18:45	
EXPECTED CBL AMP IN FREE PIPE 80 MV	
CYCLE SKIPPING DUE TO GOOD BOND	
MAIN PASS LOGGED WITH ZERO SURFACE PRESSURE	
CBAF=.8	
THANK YOU FOR CHOOSING E&P WIRELINE A SCHLUMBERGER COMPANY	
YOUR CREW: KBUNTING WFLOYD WAZIZ KJOHNS BRANSBOTTOM	

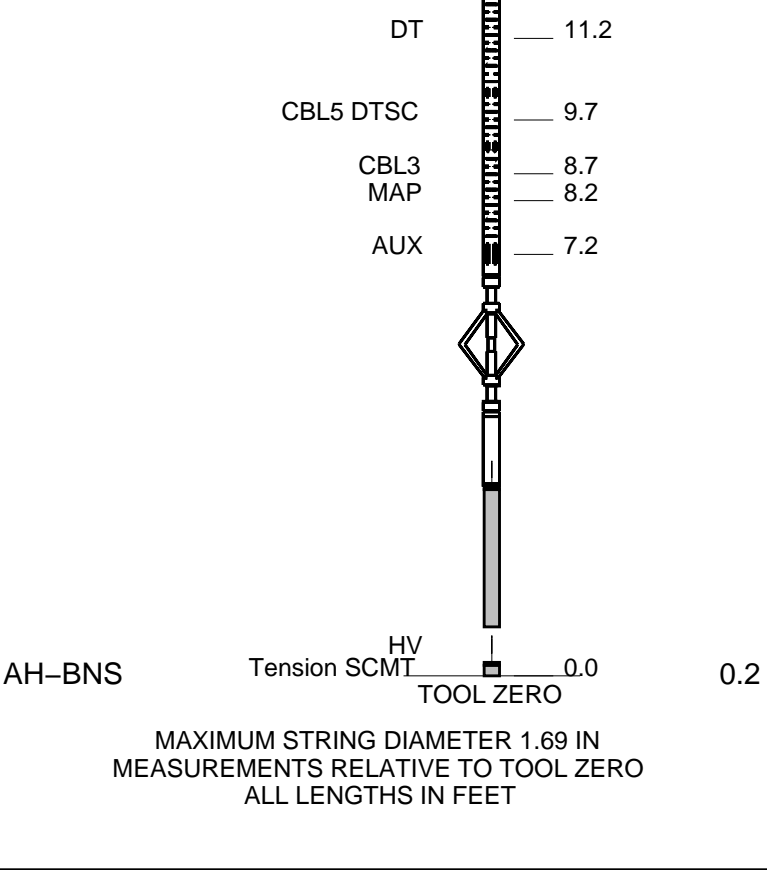
RUN 1			RUN 2		
SERVICE ORDER #:			SERVICE ORDER #:		
PROGRAM VERSION:			PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION					
RUN 1			RUN 2		

SURFACE EQUIPMENT	
WITM-A PSC_16MHZ	

DOWNHOLE EQUIPMENT	
MH-22 MH-22	30.4
AH-38	28.8
PSPT	28.5
PSC-A	
PSPT-B 928	
PSTC-A	
PBMS-B	
CQG_F_Mano	
RTD_Thermometer	
GR	24.8
CCL	
PBMS	
Well_Temp	21.8
CQG Manom	21.4
CCL	21.0
PBMS PSTC	20.3
SCMT-CA	20.3
SCMC-CA 8110	
SECH-CA	
SCME-K	
SCMS-CA 8140	
SCMX-CA	





MAIN PASS CBL VDL

MAXIS Field Log

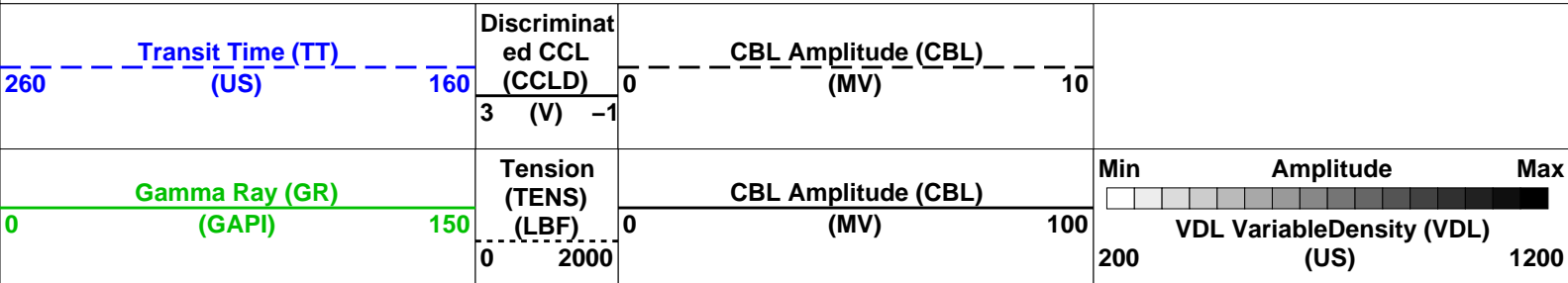
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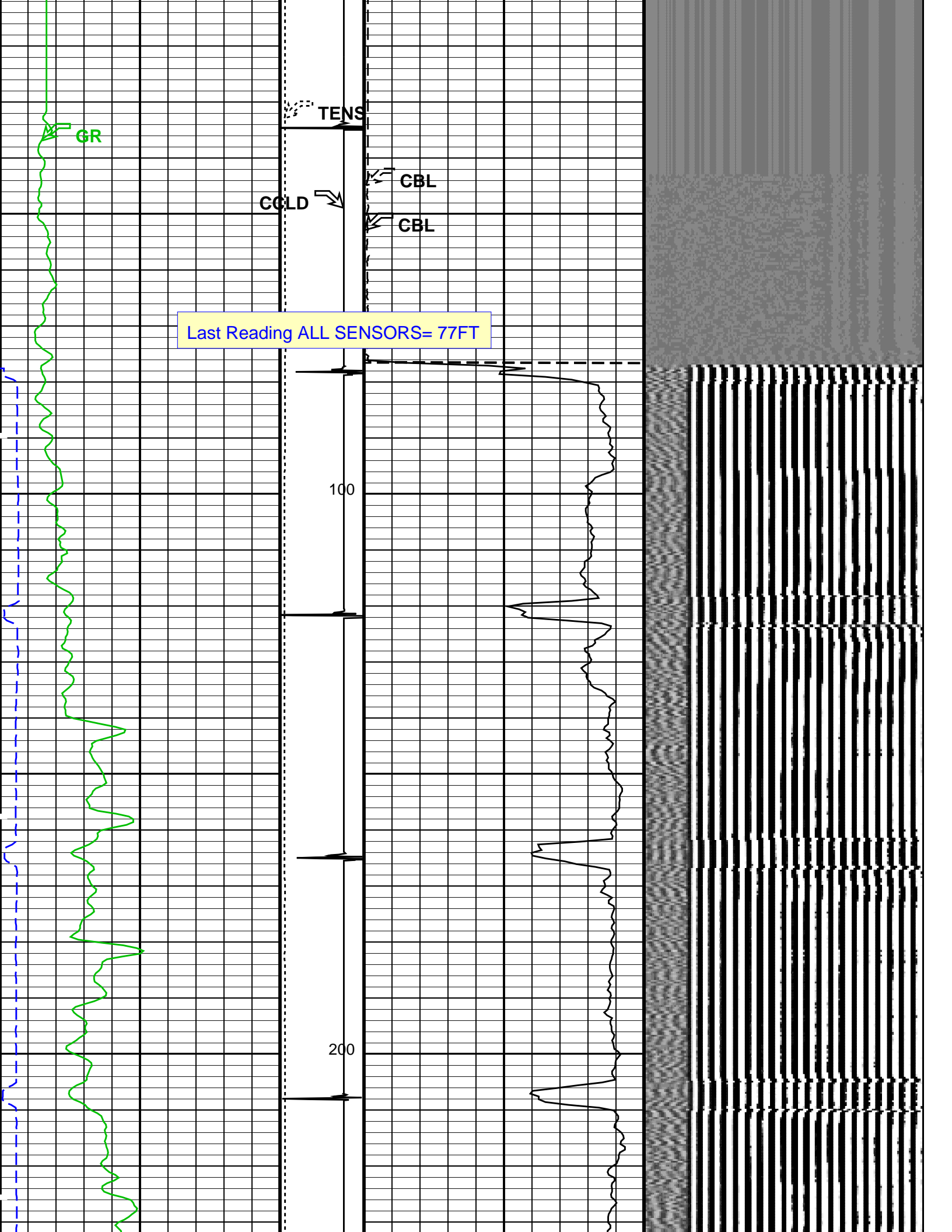
Input DLIS Files						
DEFAULT	SCMT_PSP_018LUP	FN:17	PRODUCER	31-Dec-2012 15:44	12439.5 FT	24.0 FT
Output DLIS Files						
DEFAULT	SCMT_PSP_022PUP	FN:21	PRODUCER	31-Dec-2012 19:04	12446.5 FT	9.5 FT

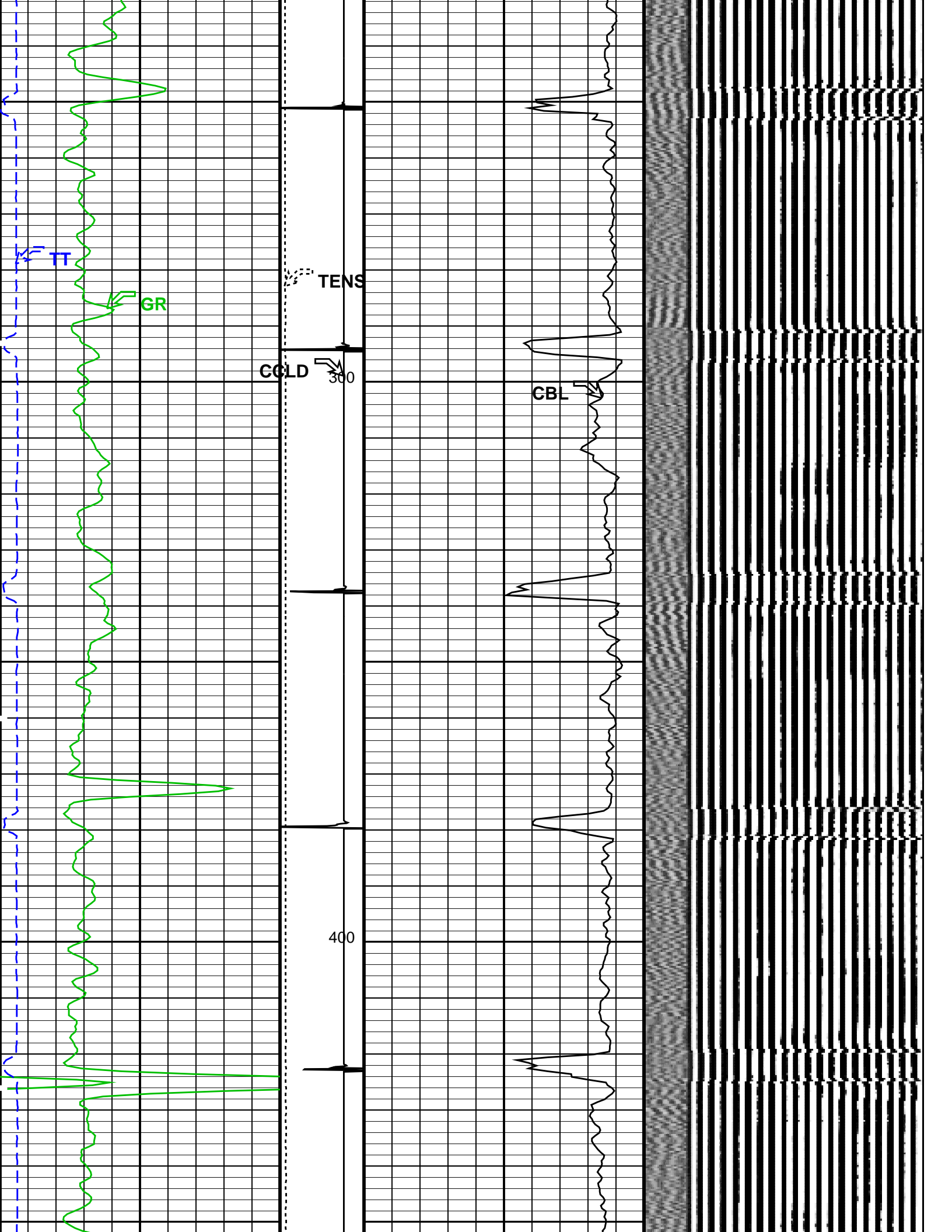
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SCMT-CA	SRPC-5214-H2-2012-OP1	PSPT	SRPC-5214-H2-2012-OP1

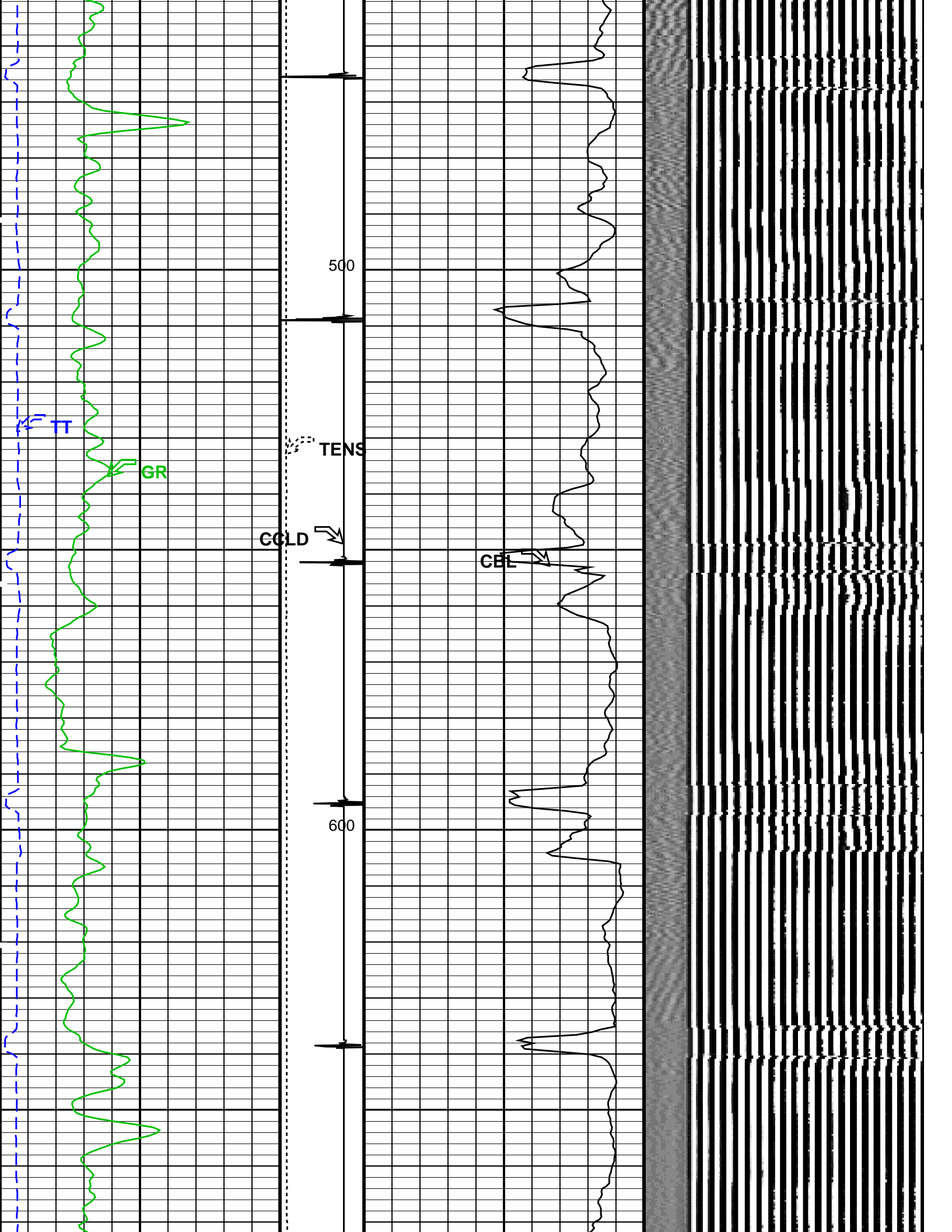
PIP SUMMARY

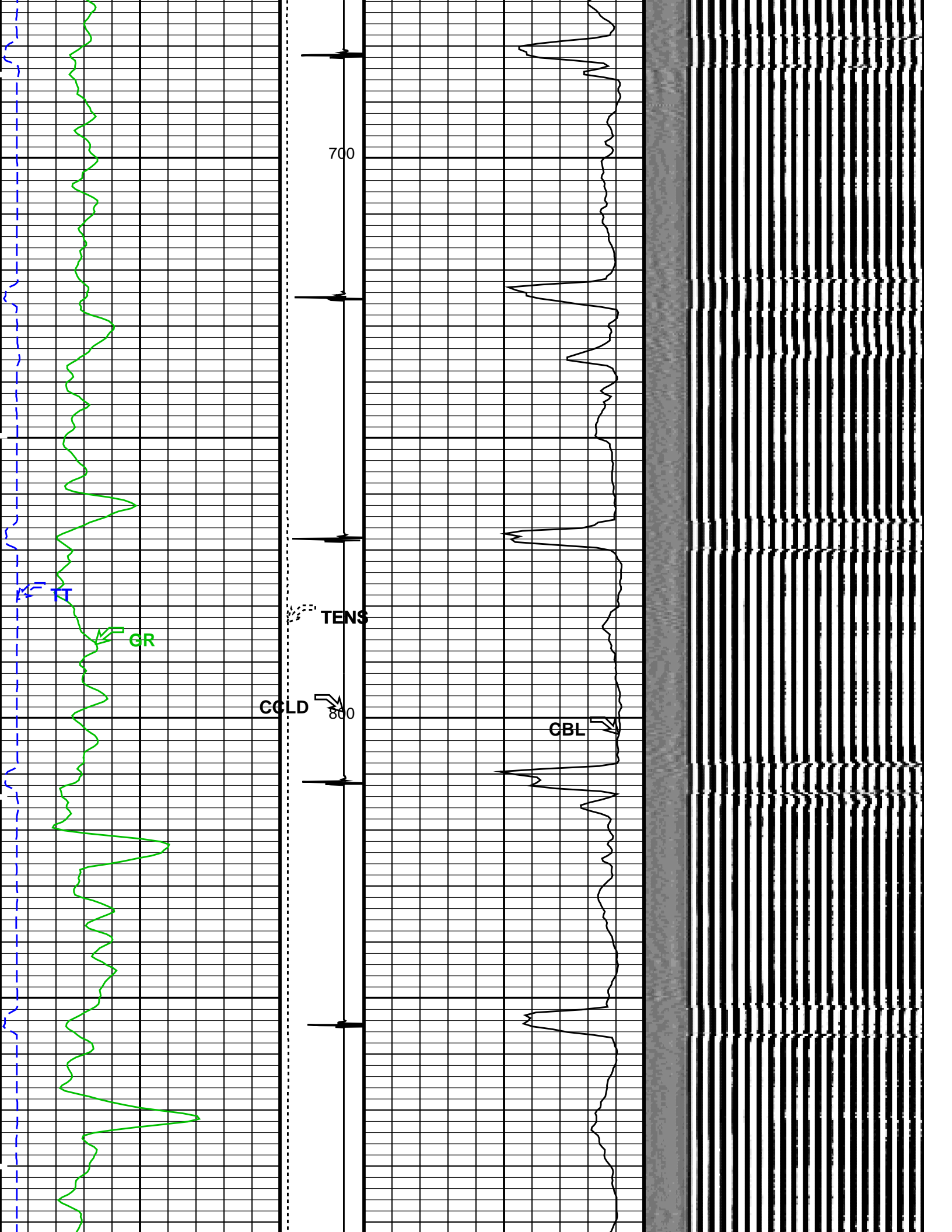
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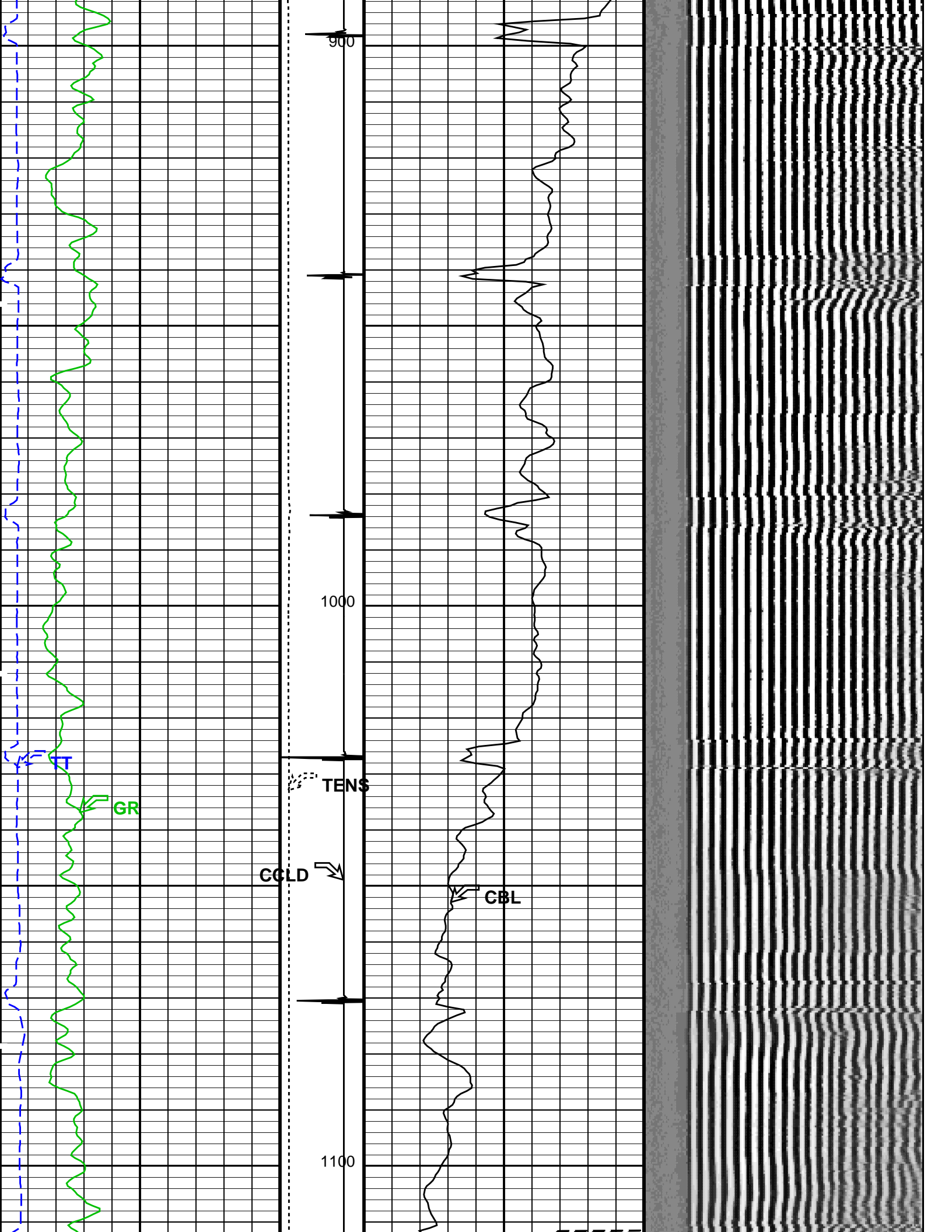


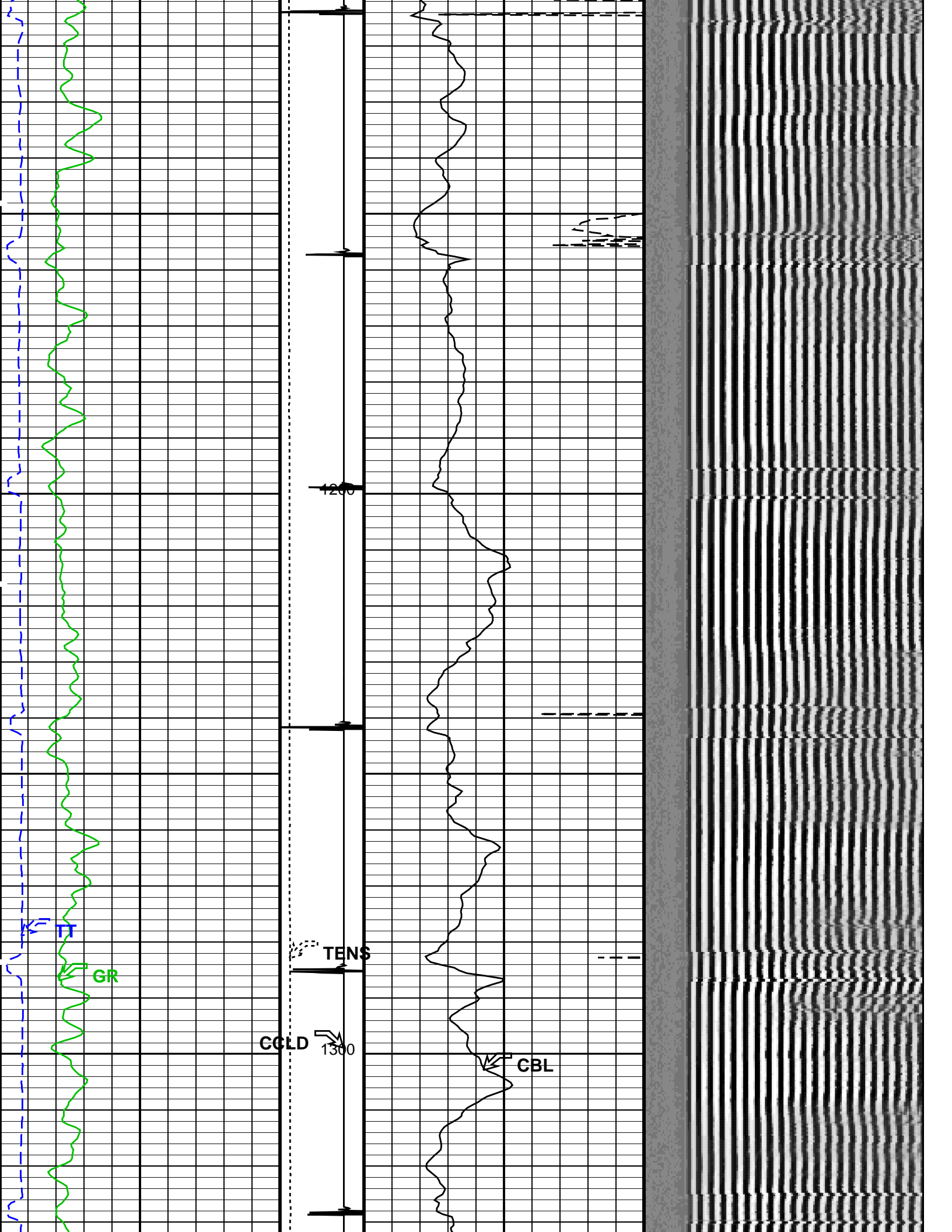


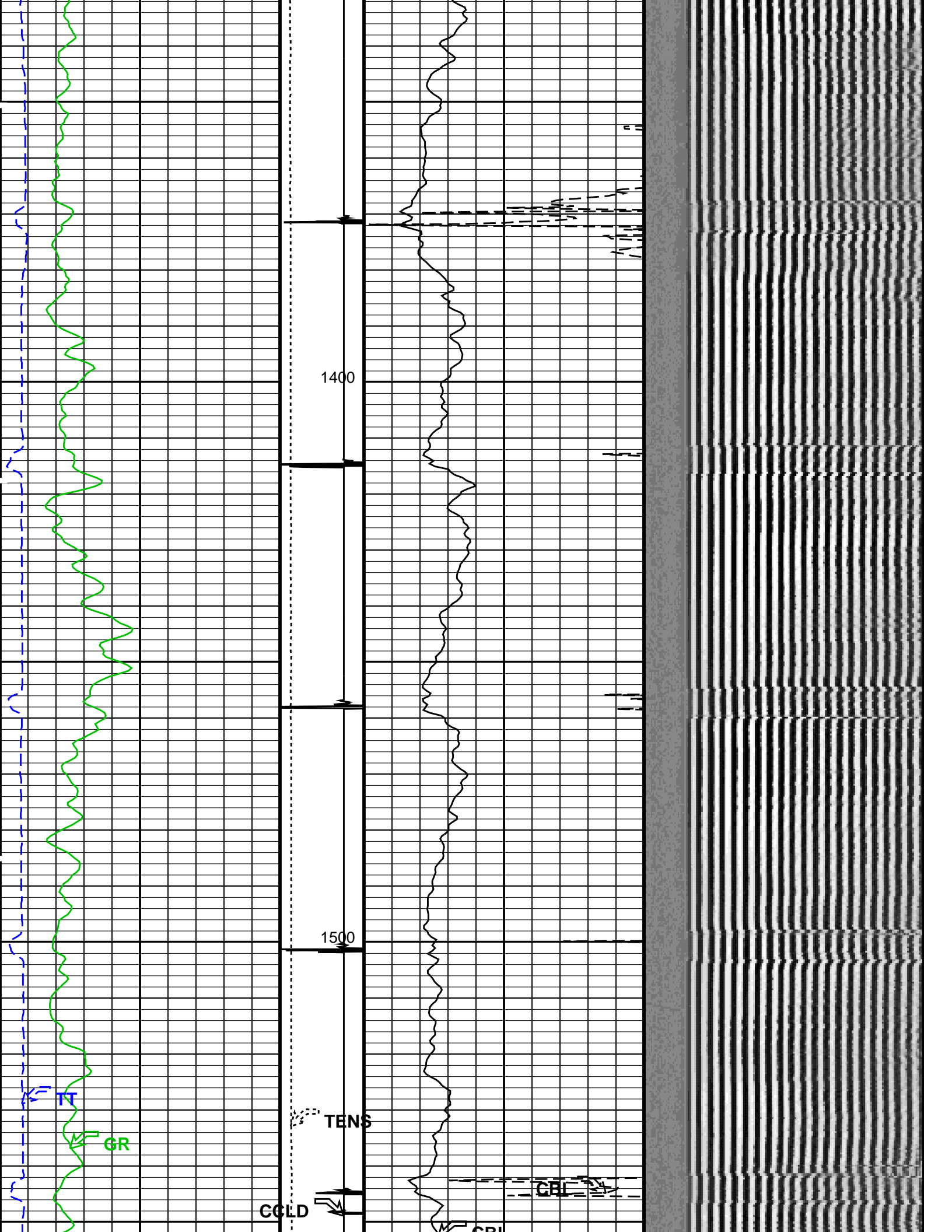


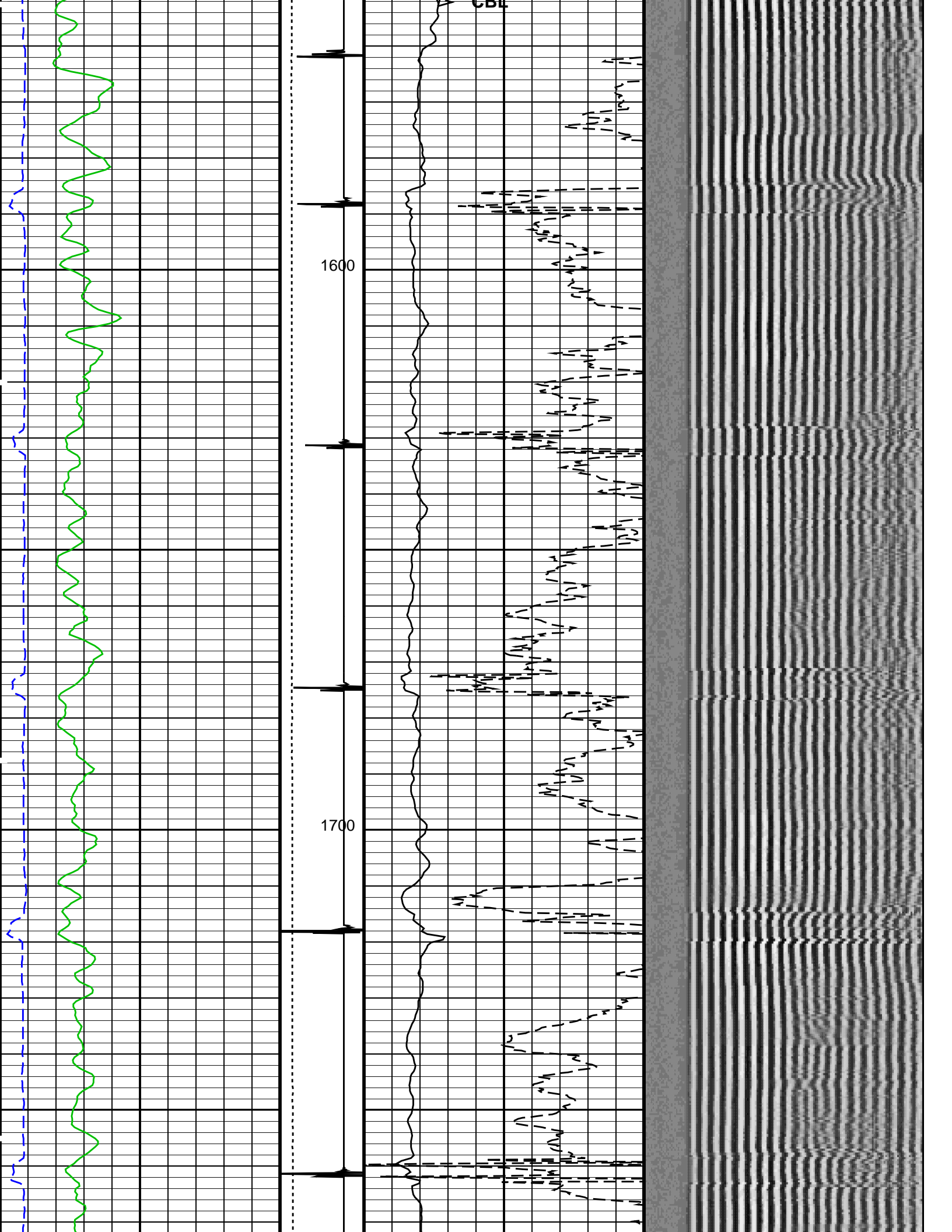


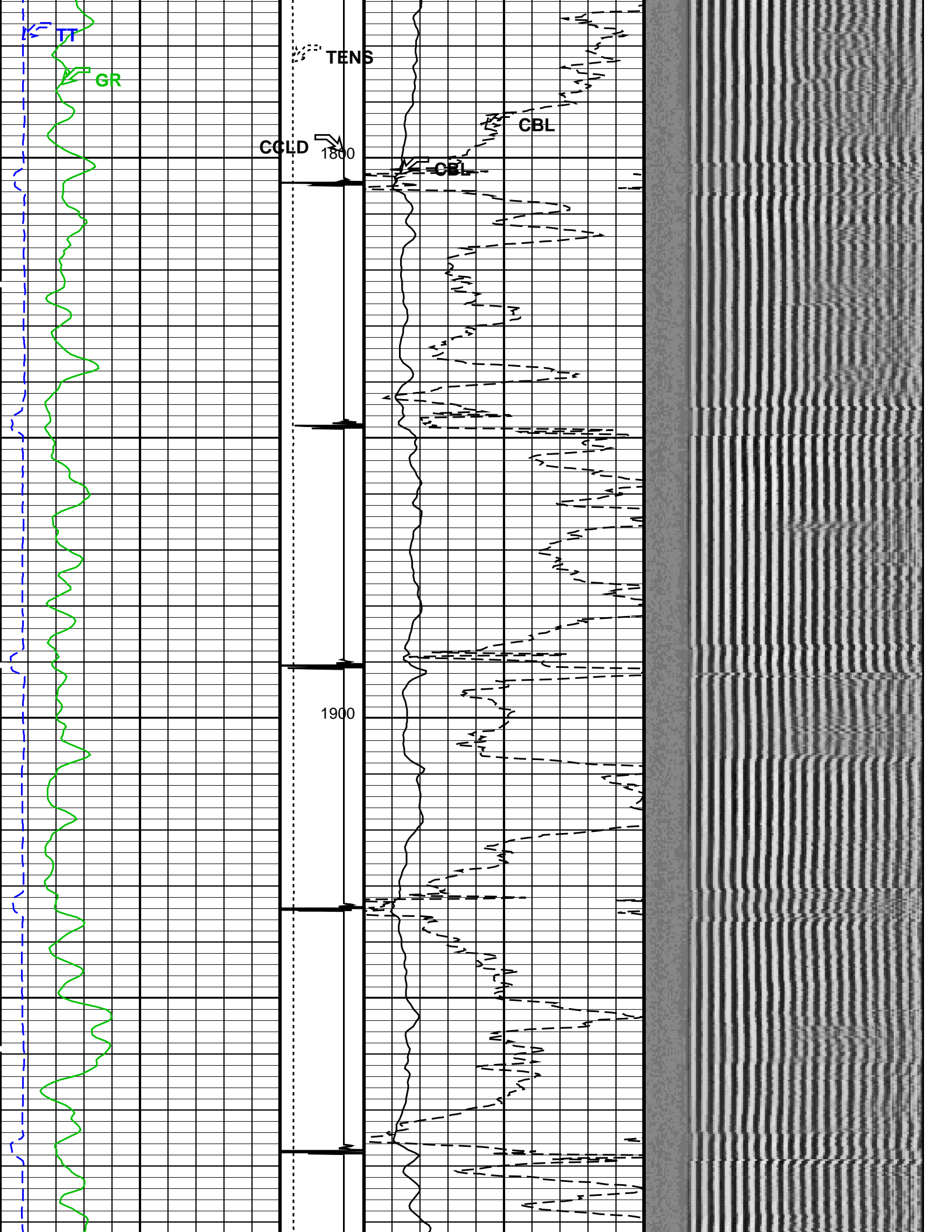


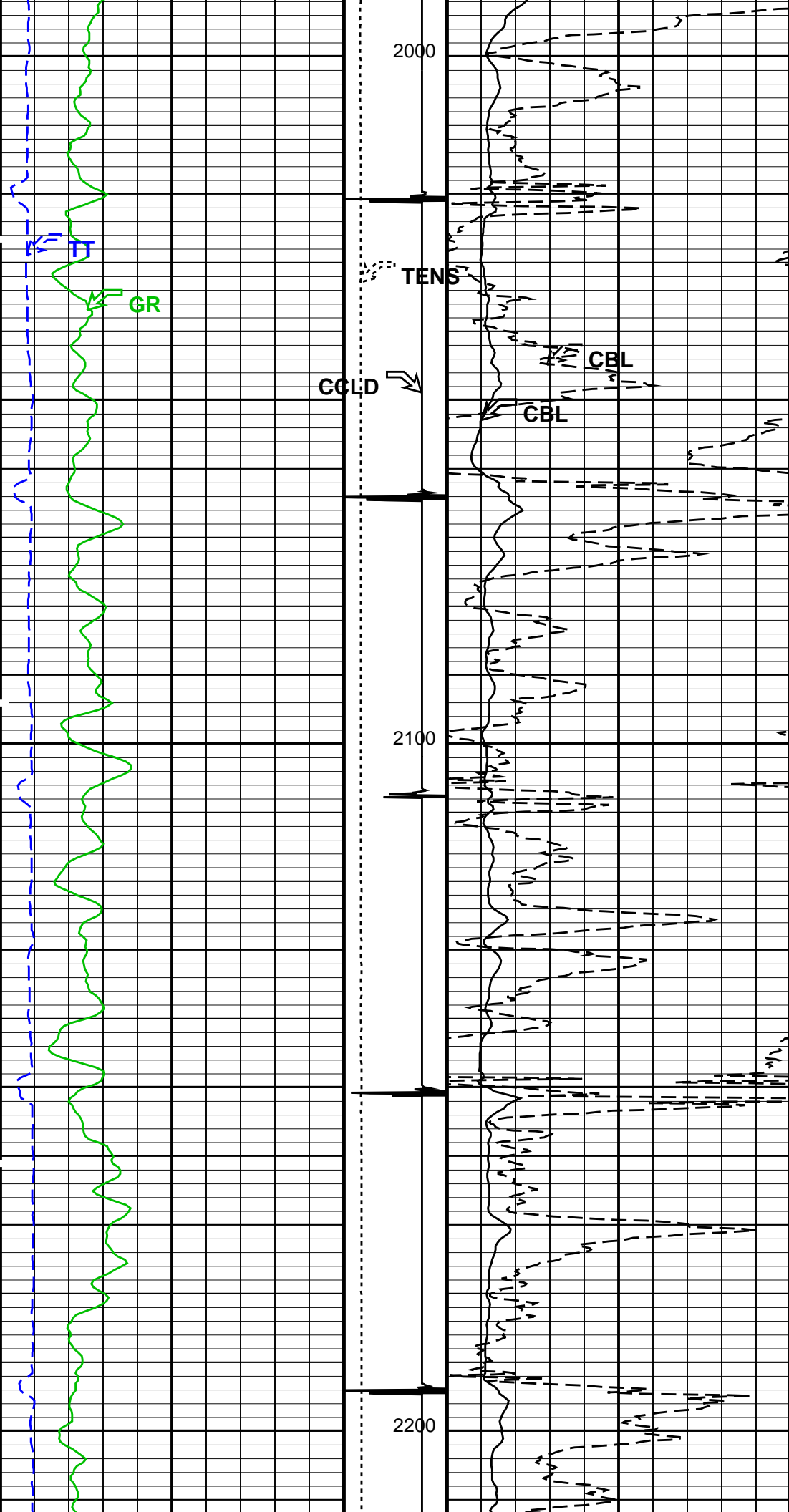


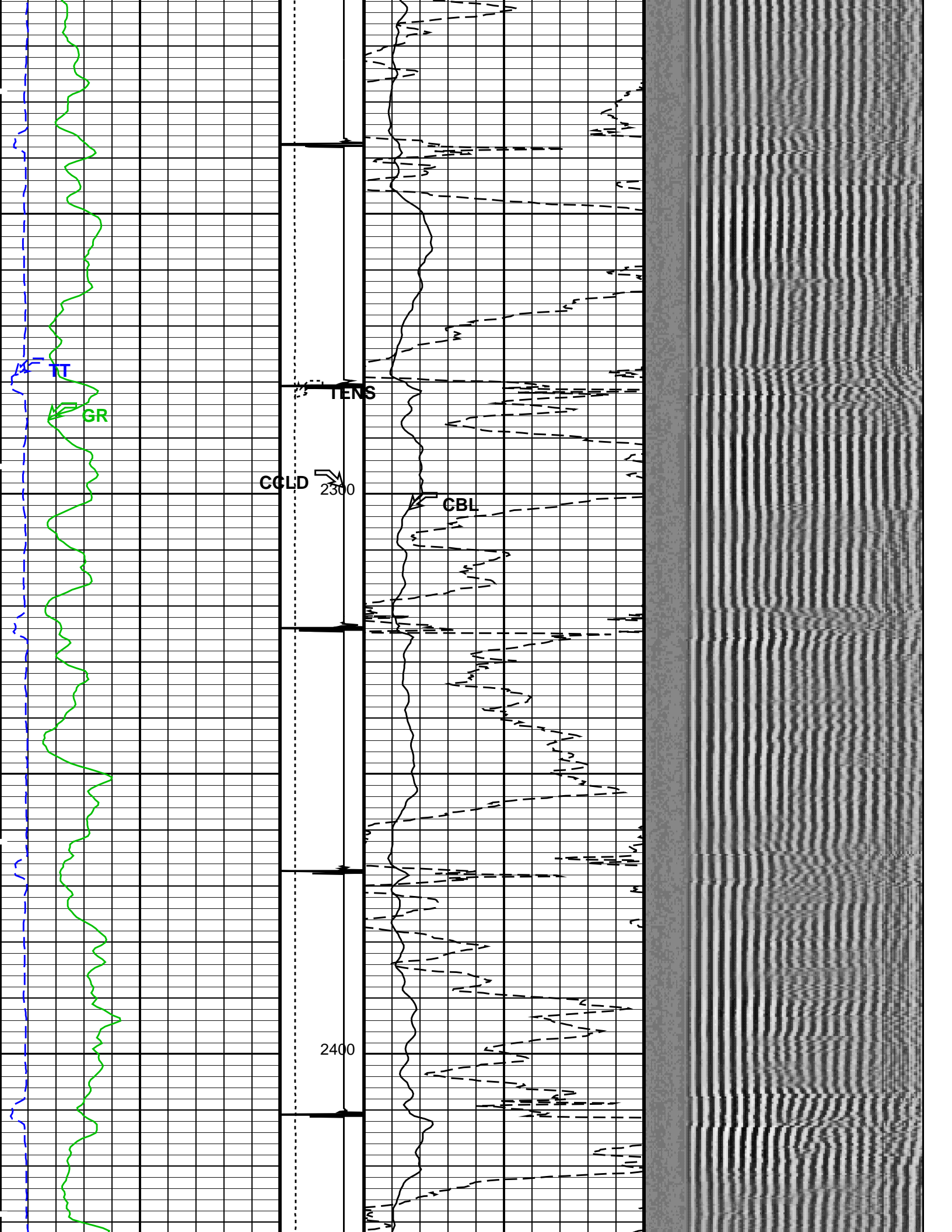


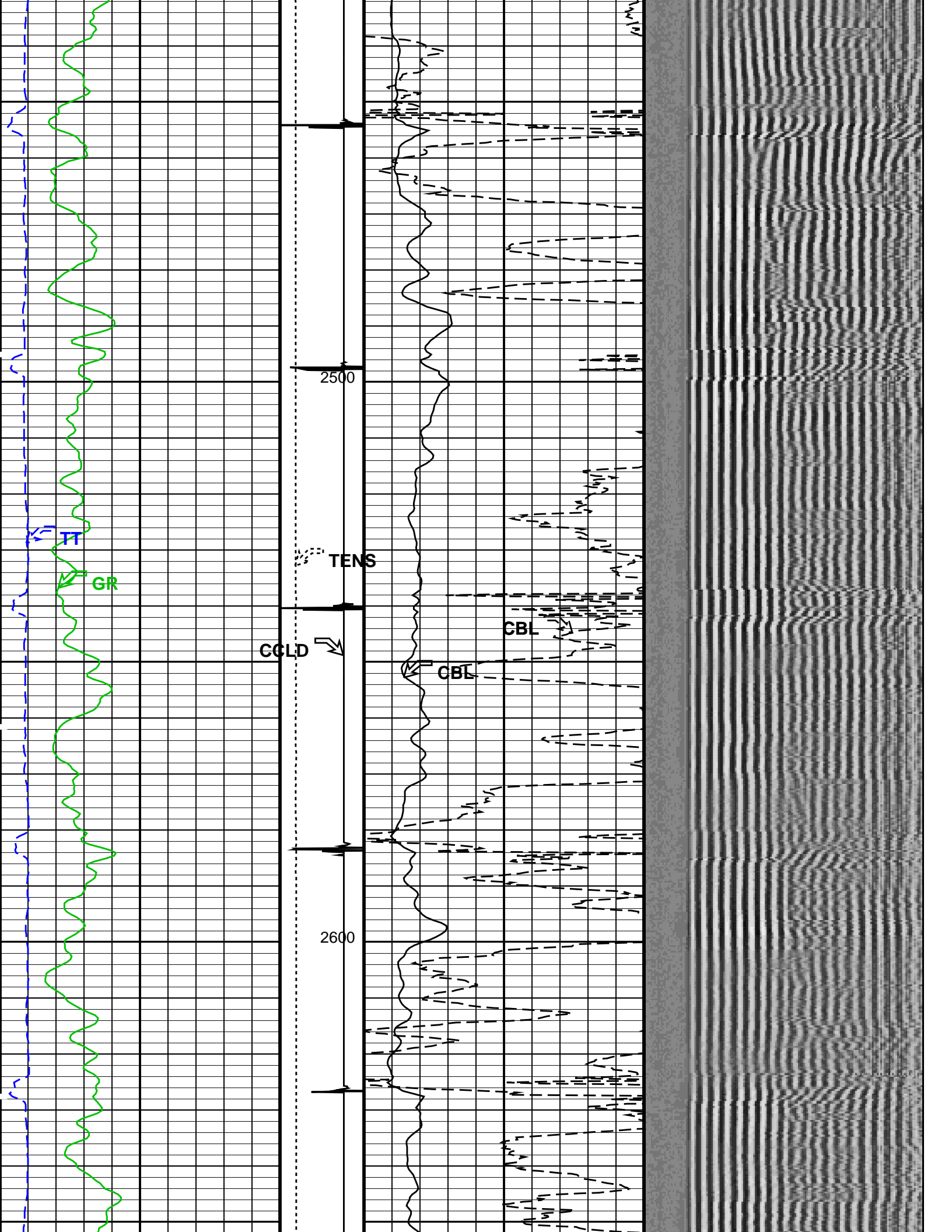


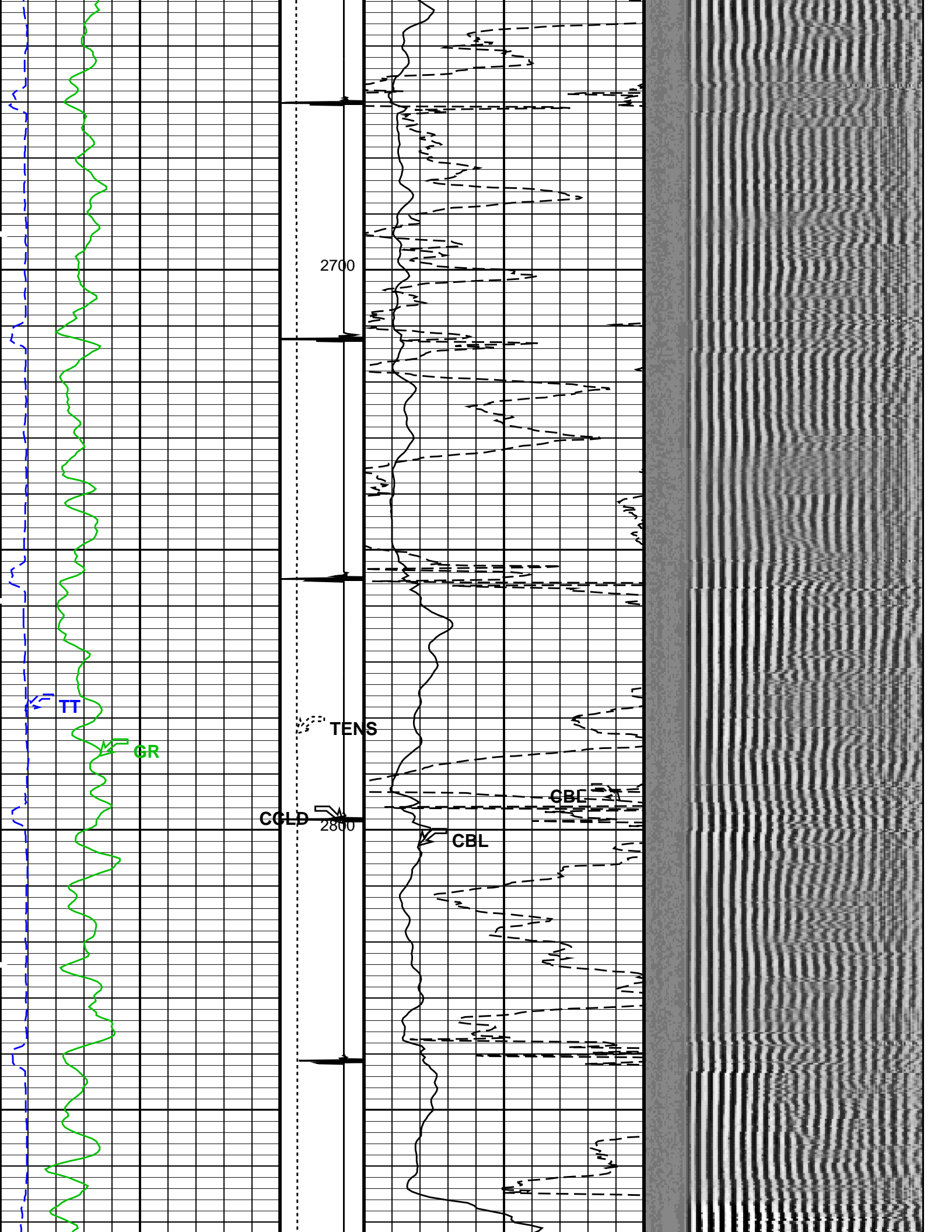


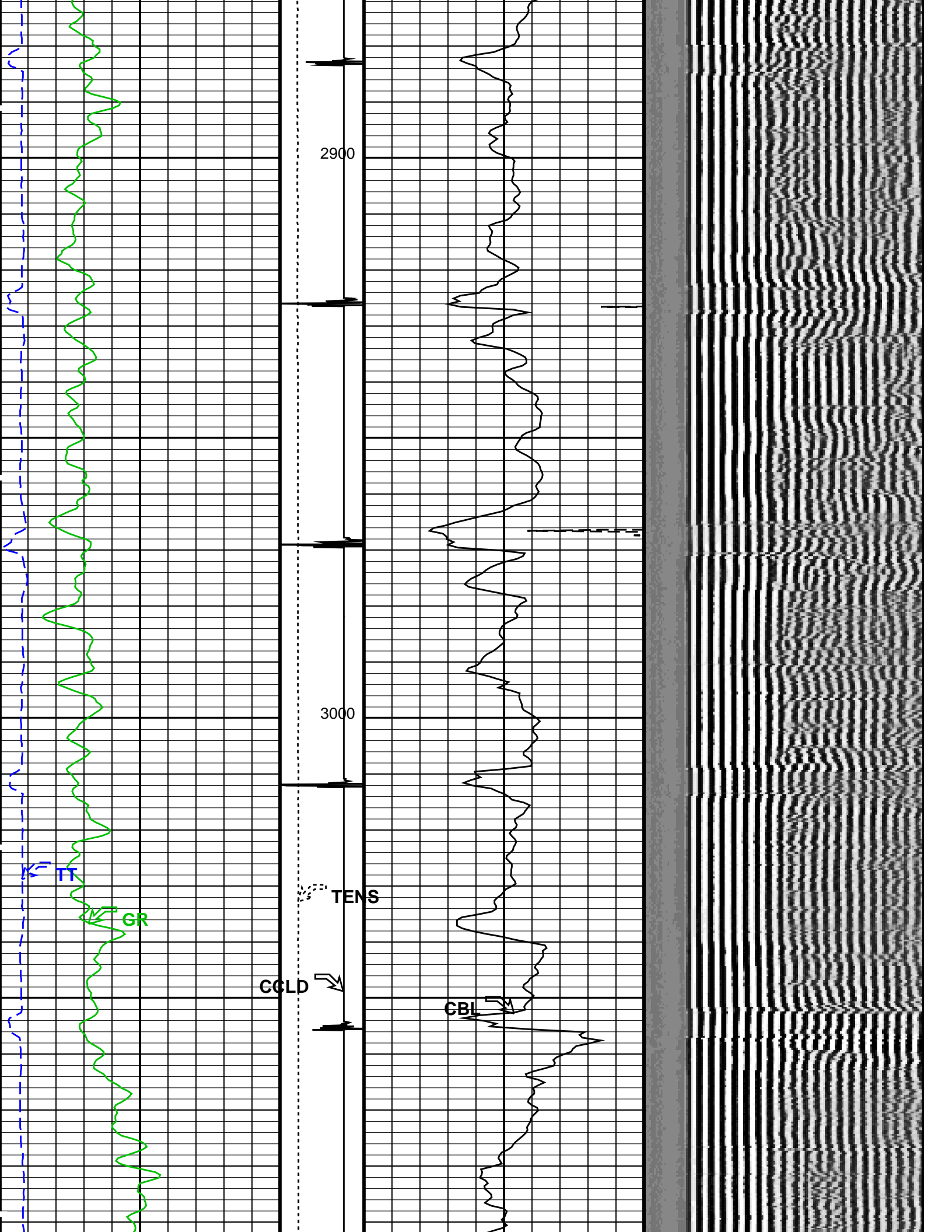


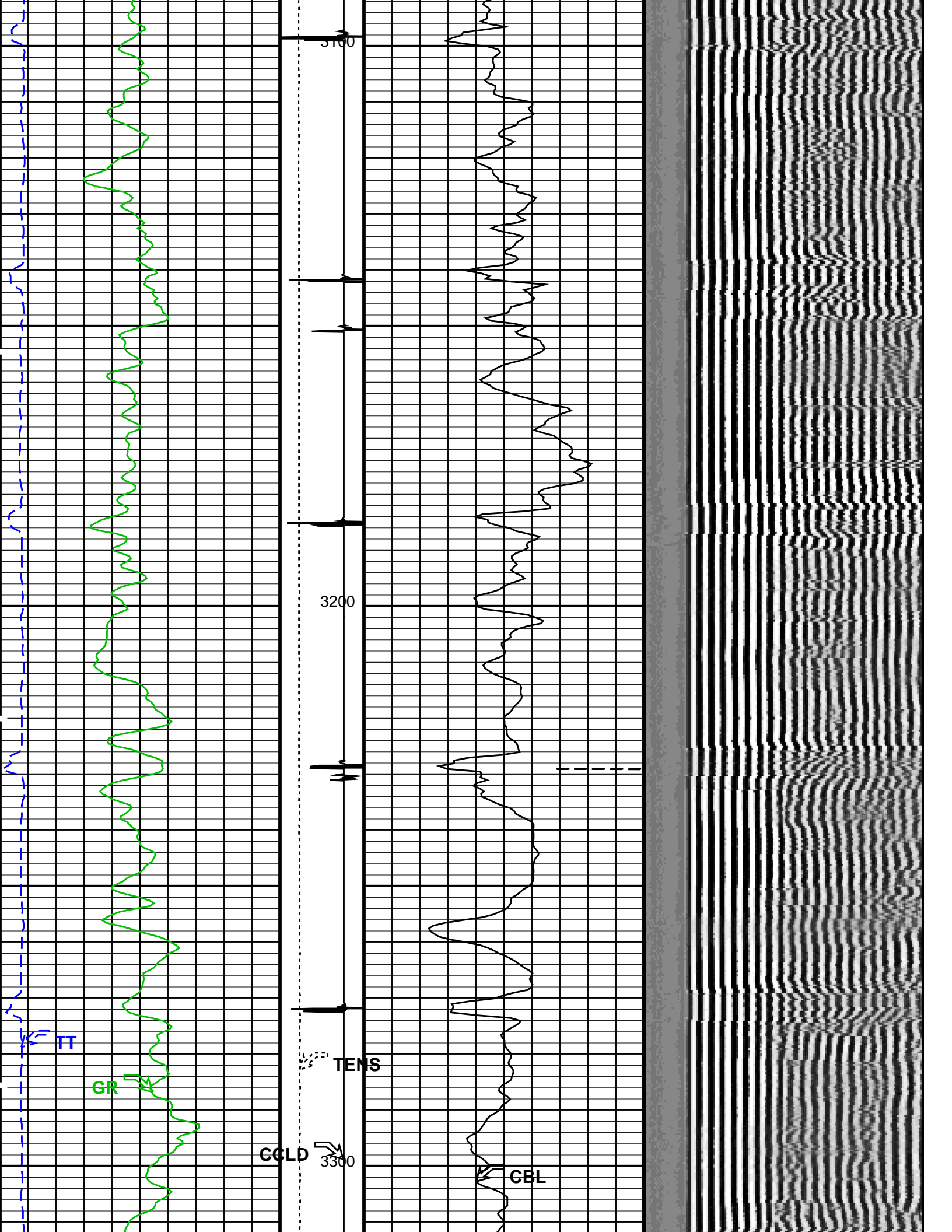


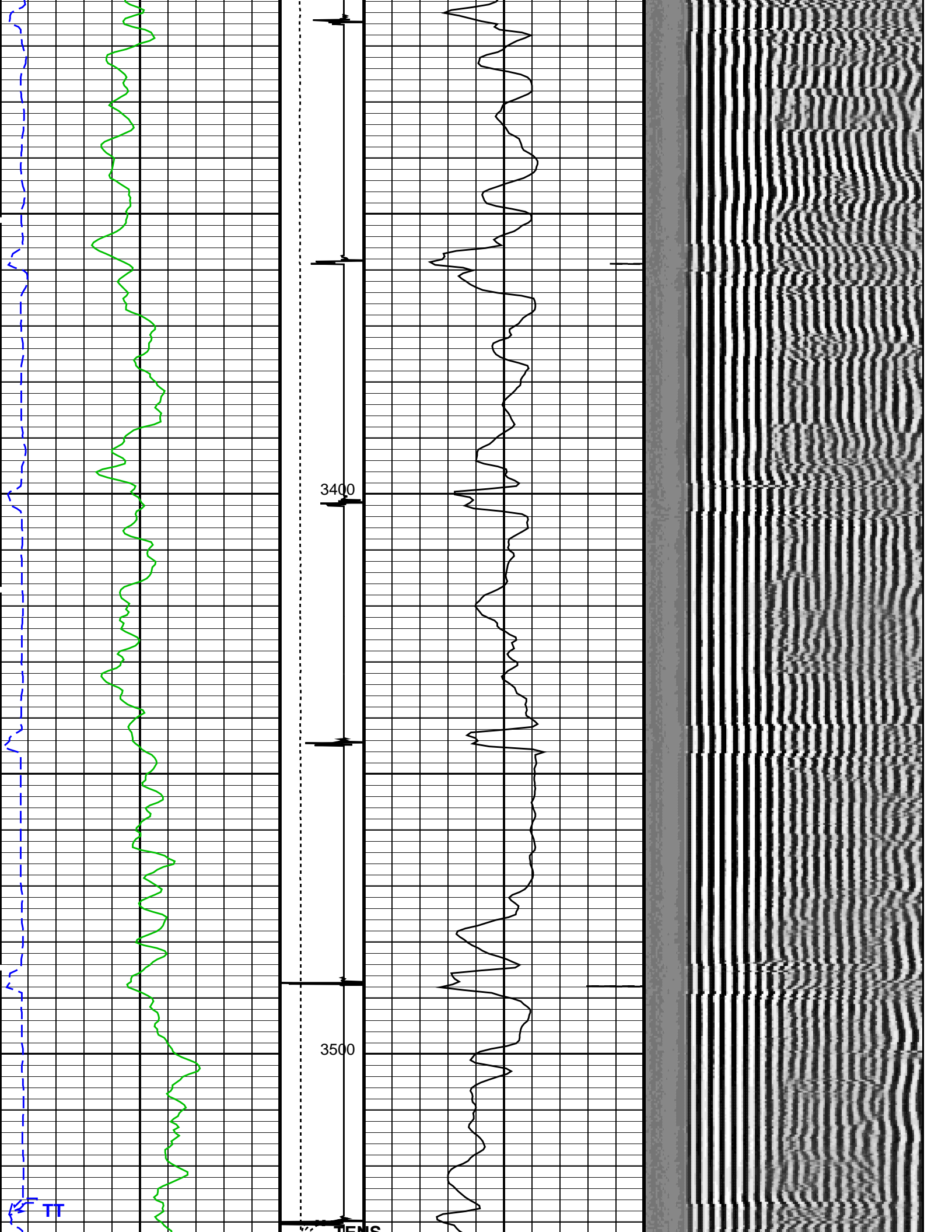


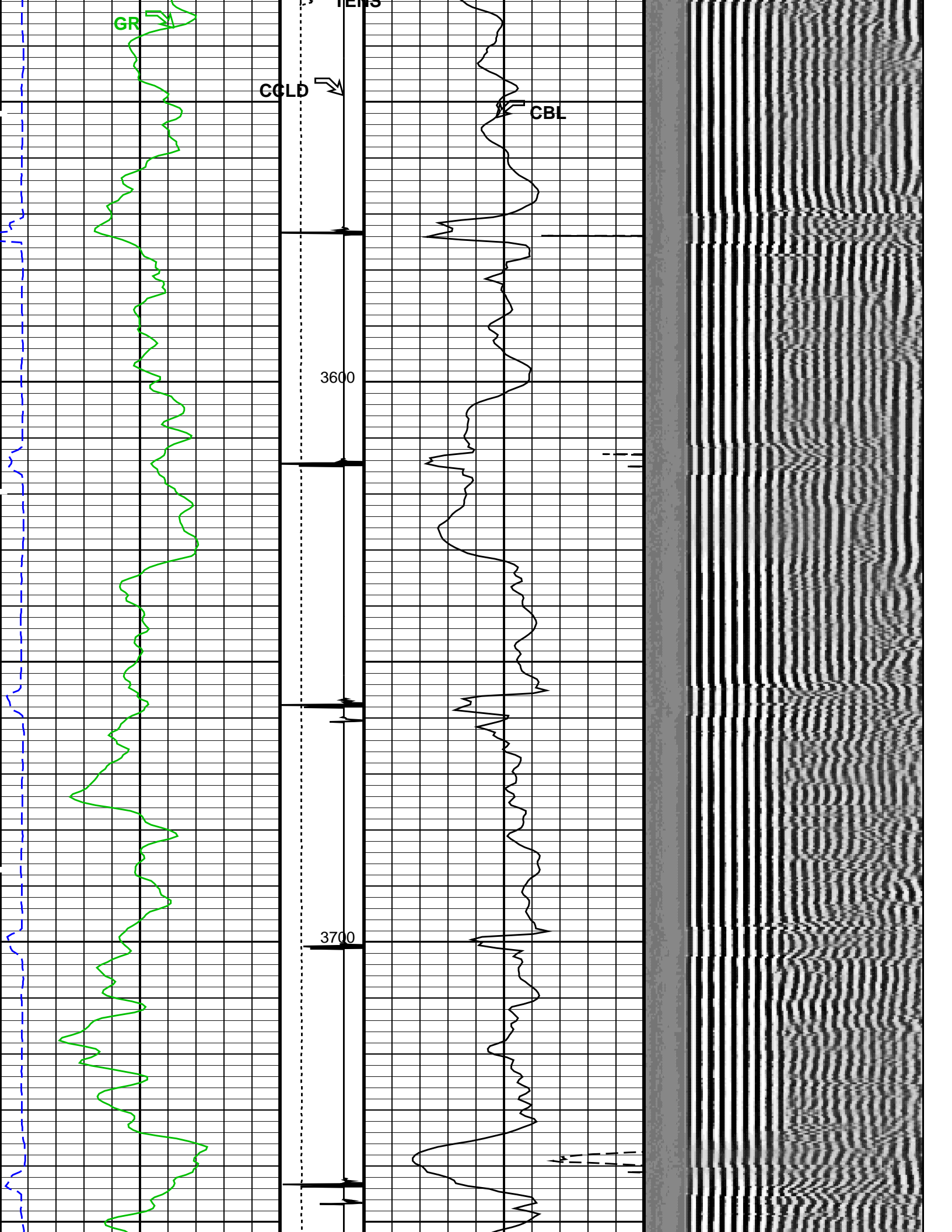


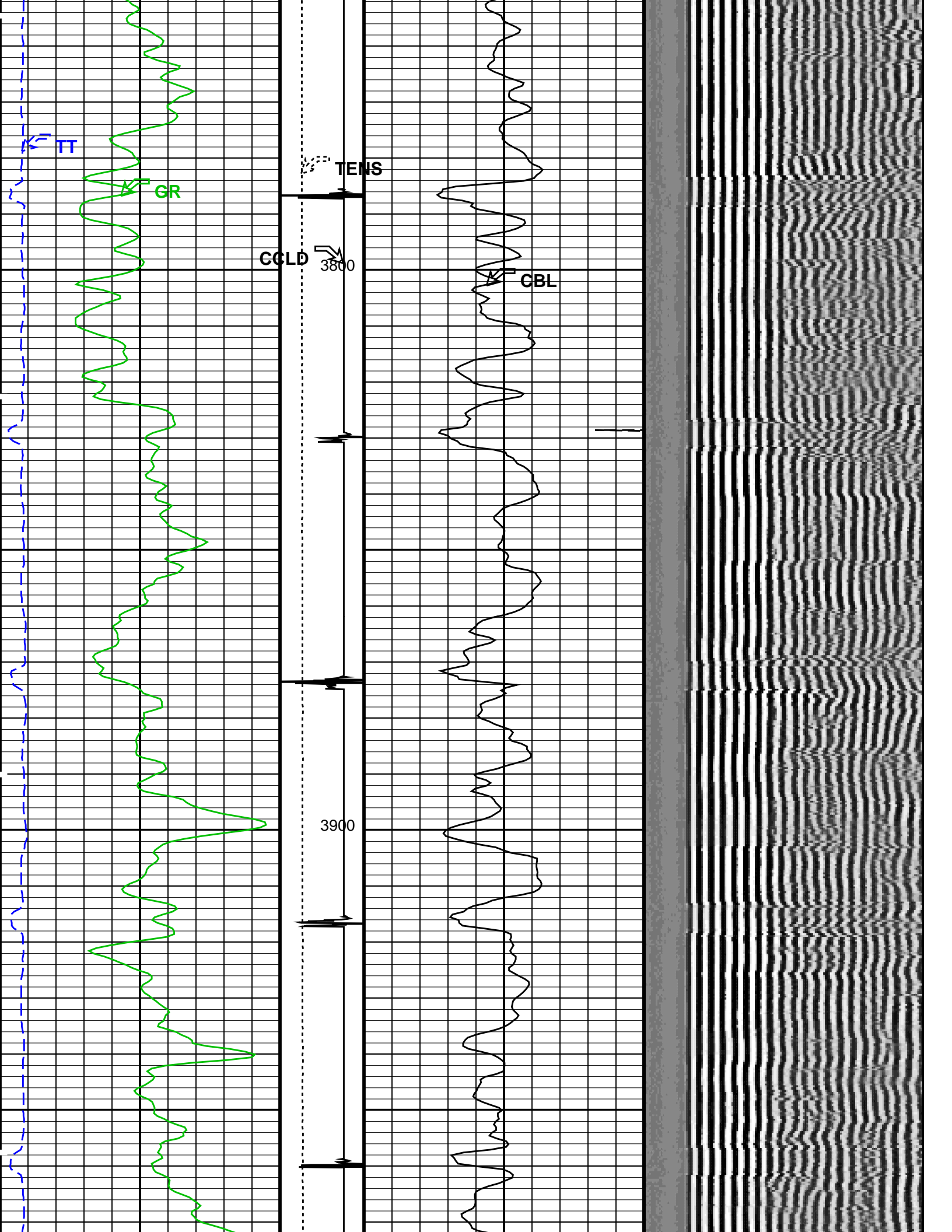


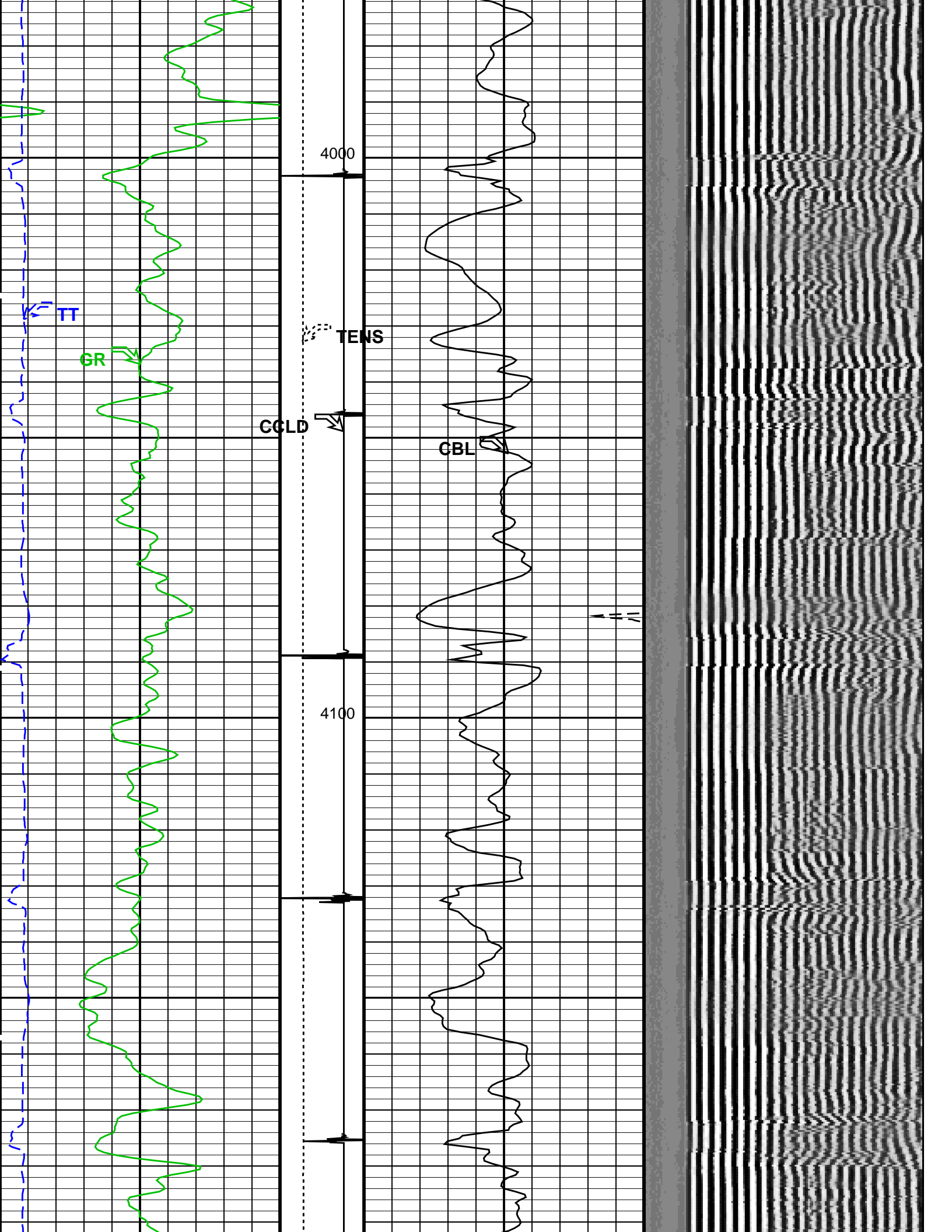


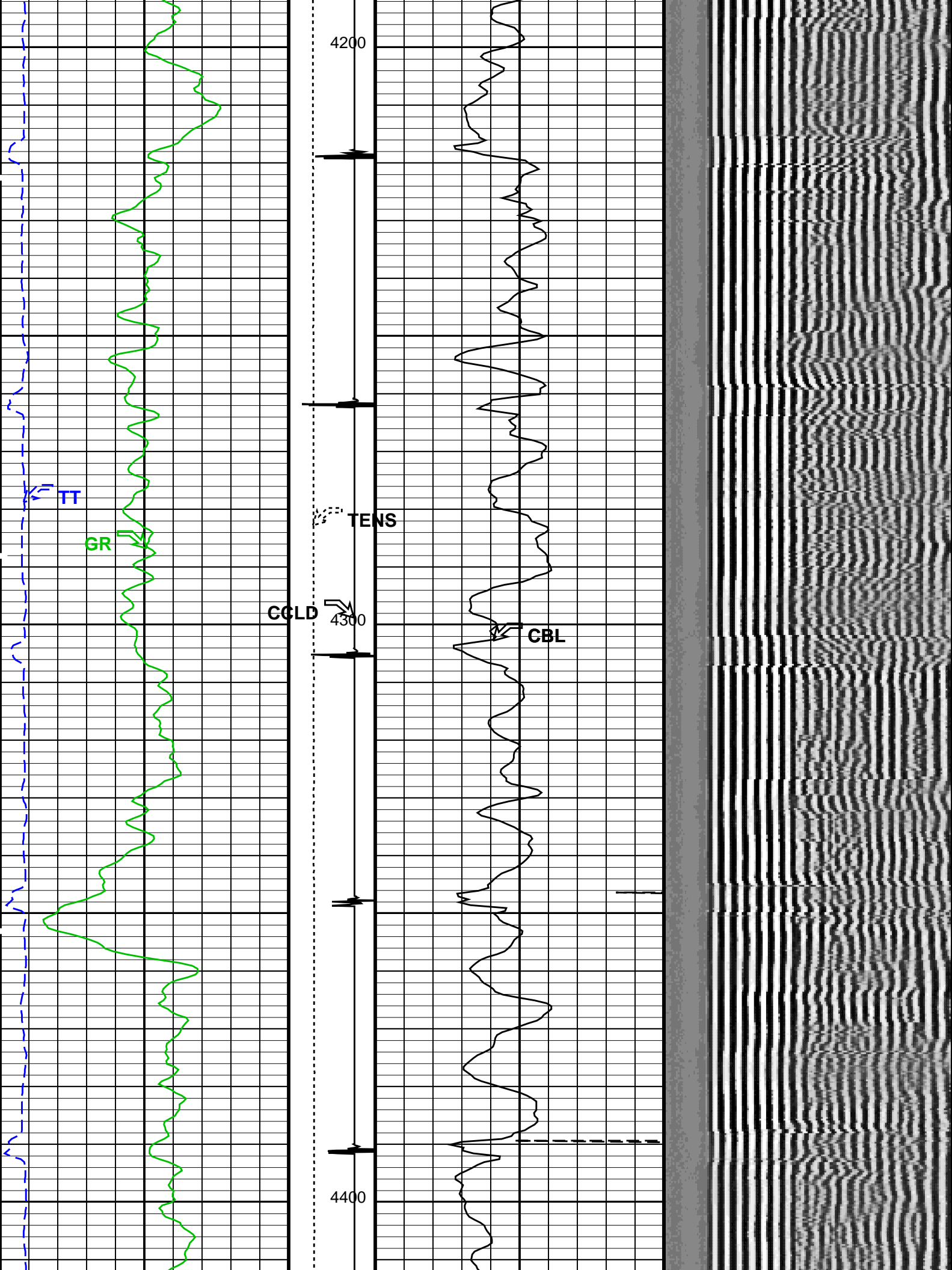


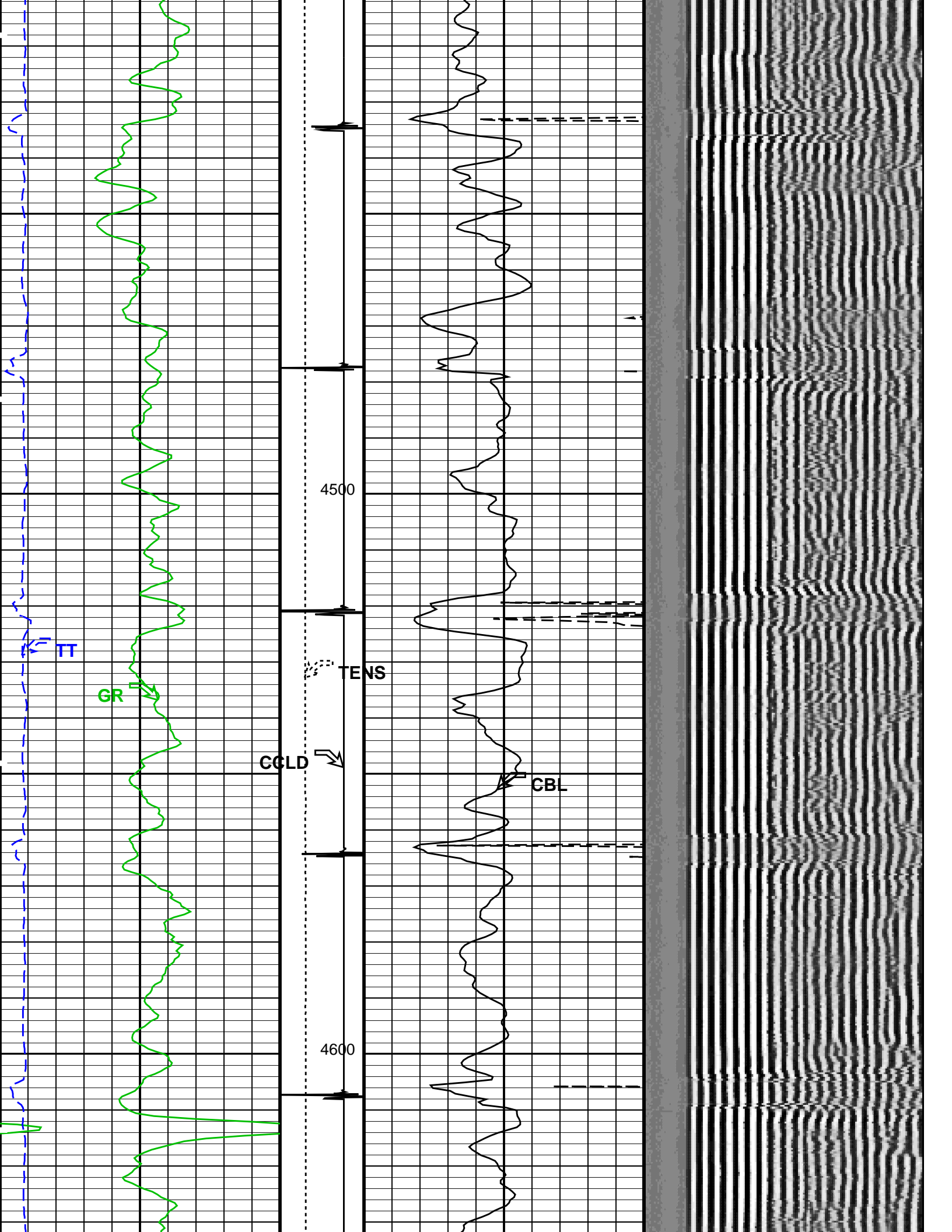


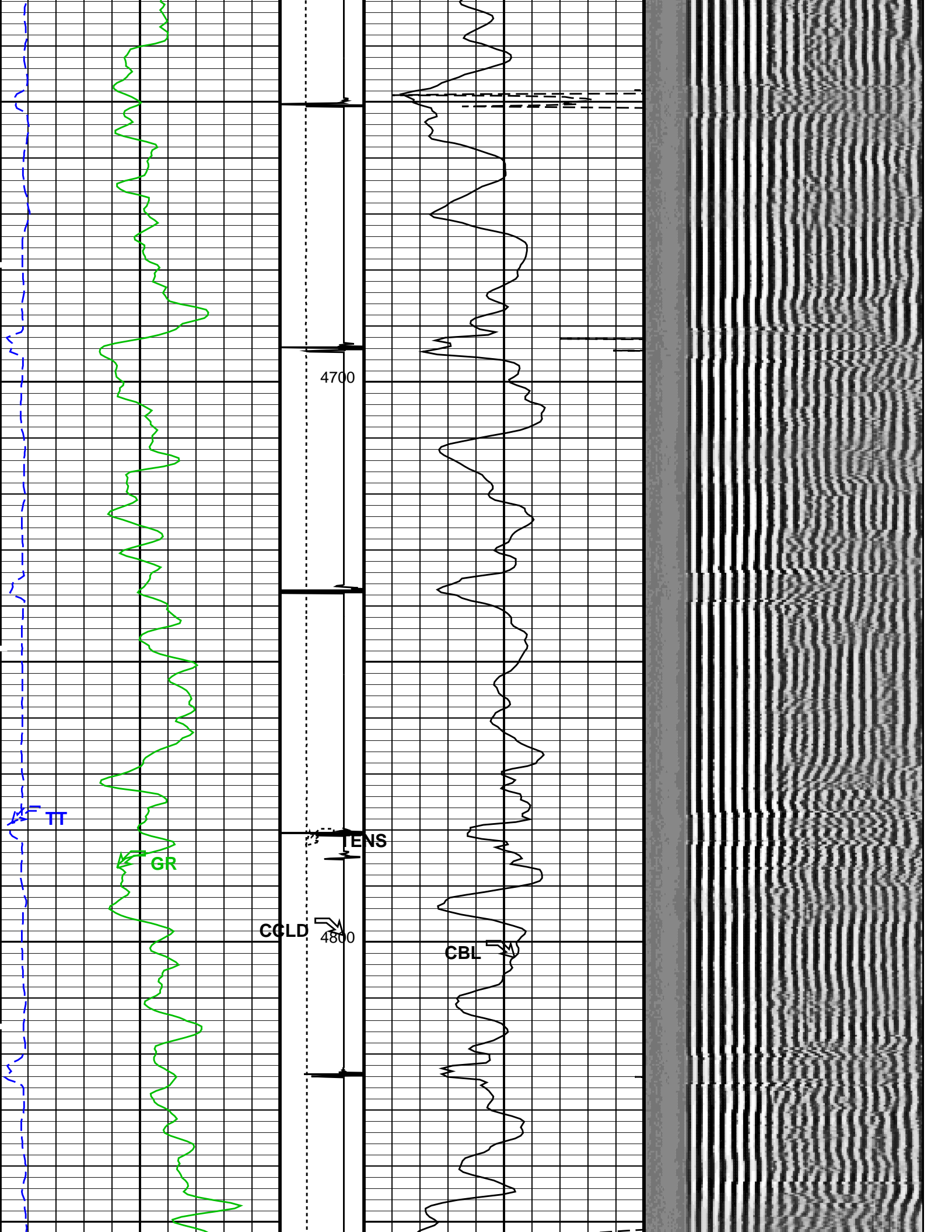


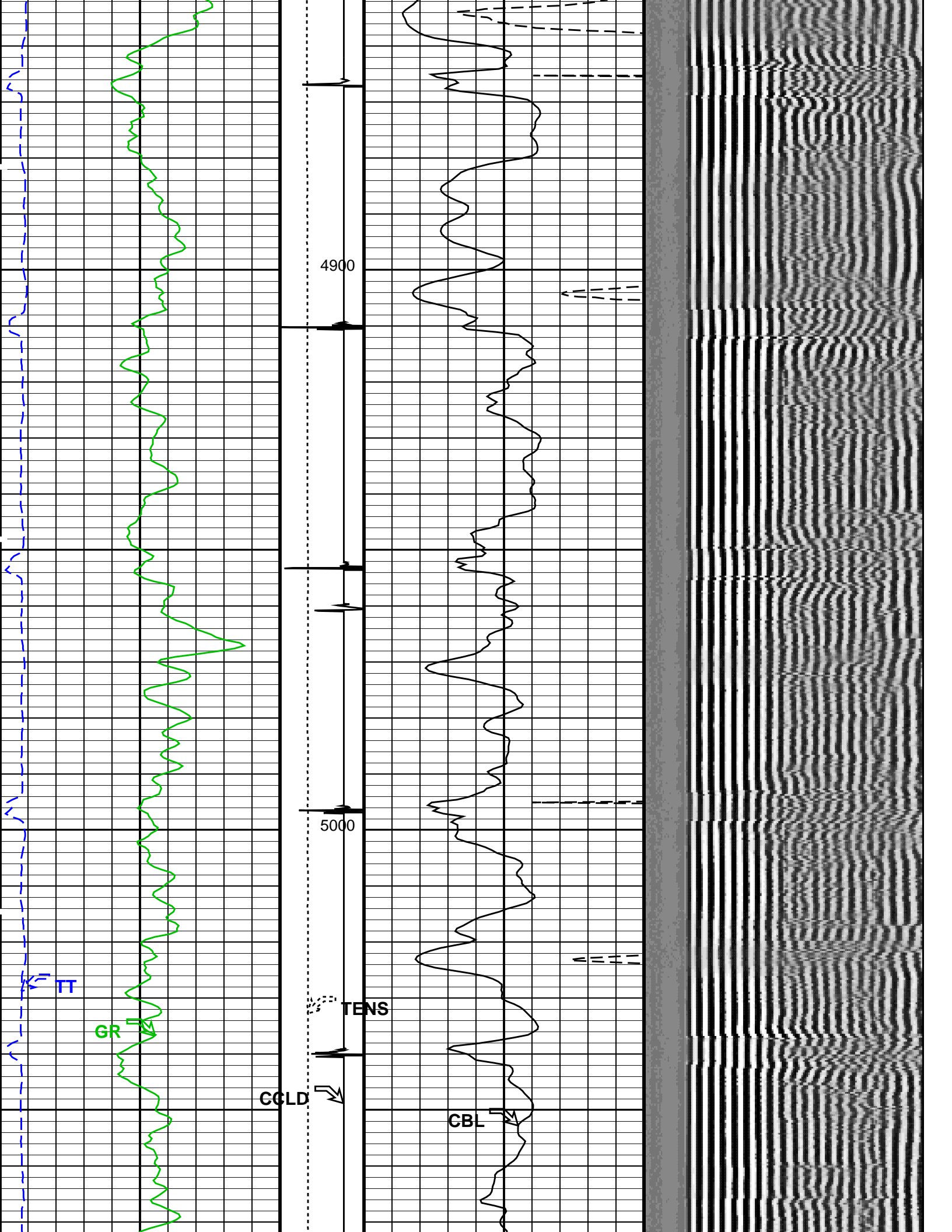


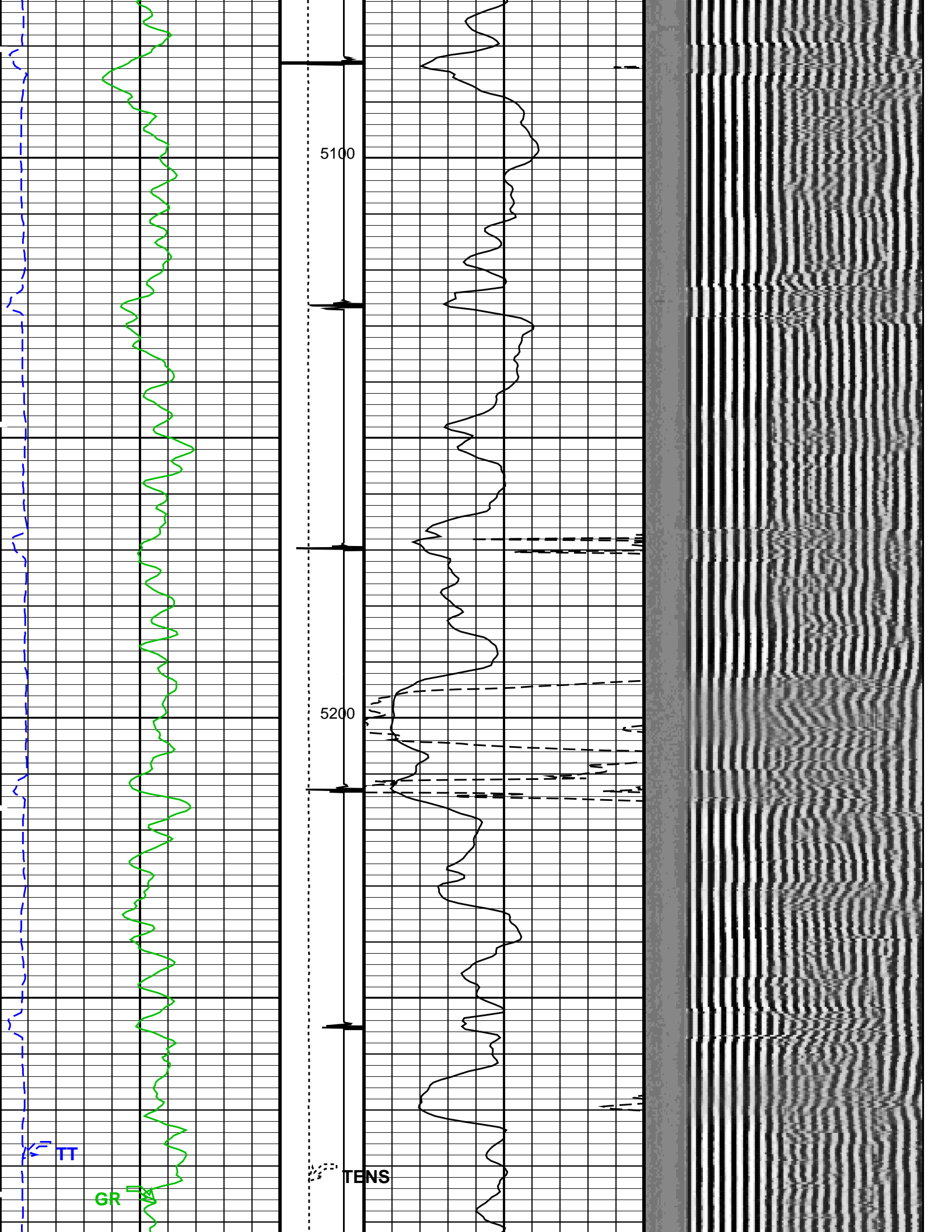


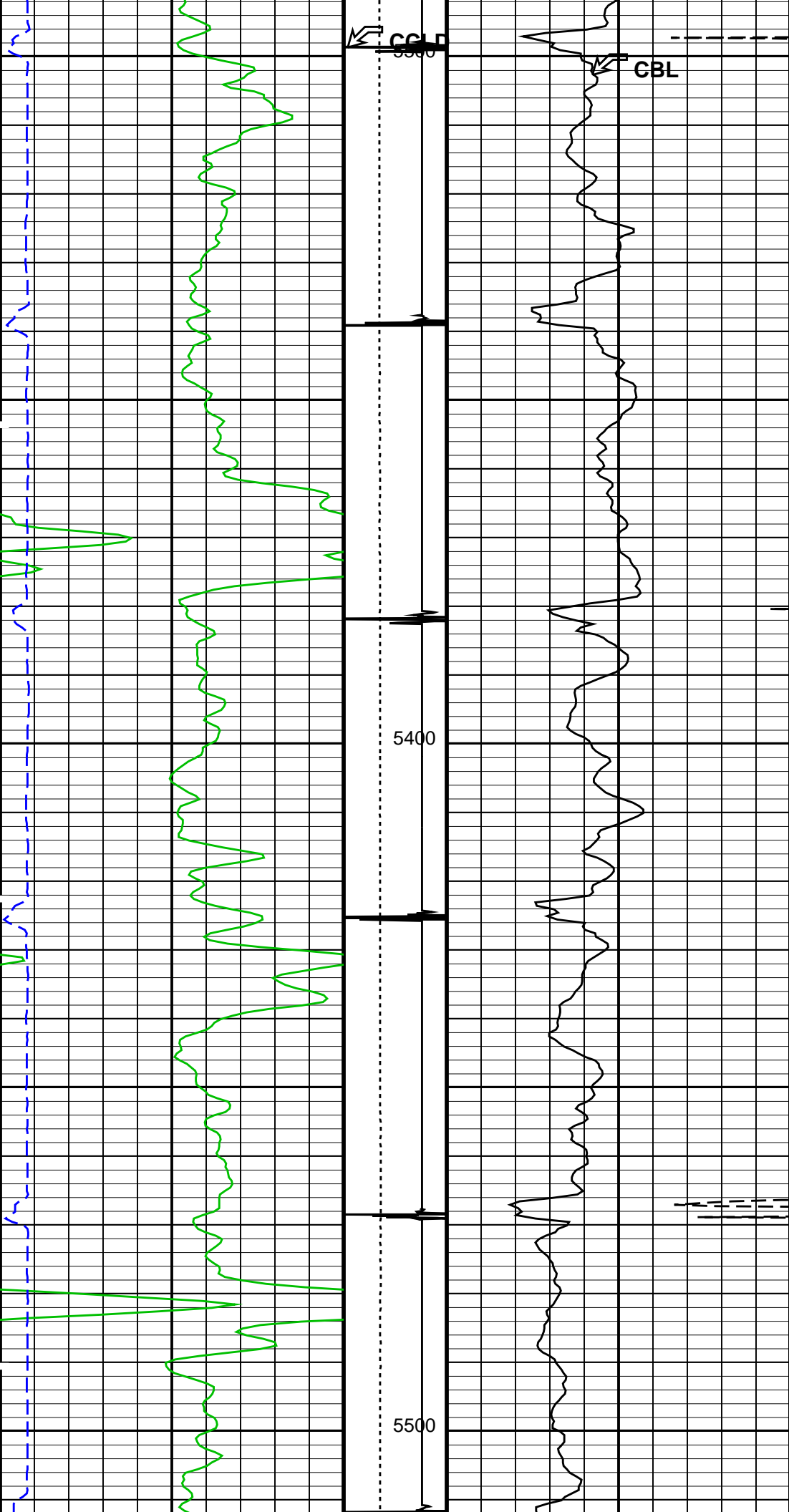


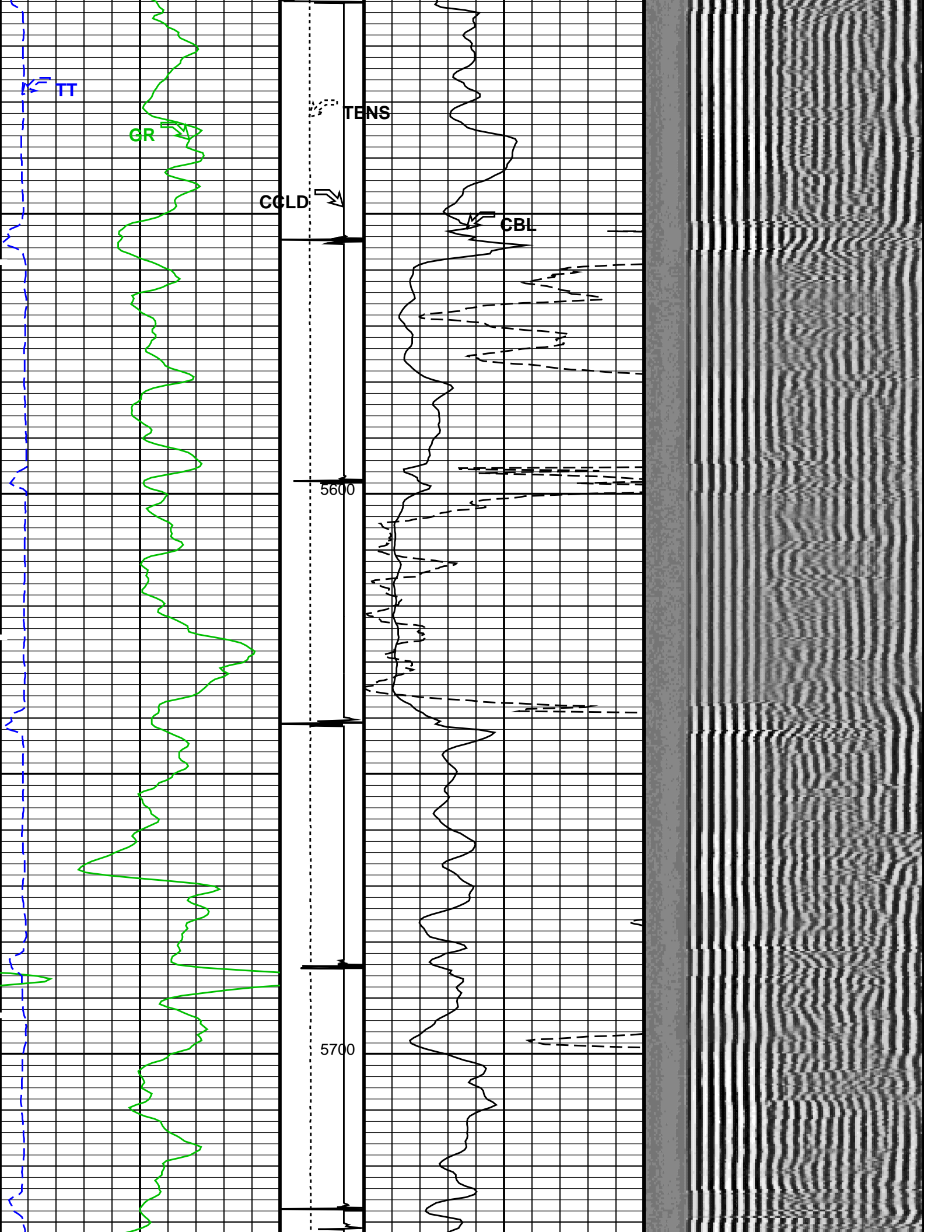


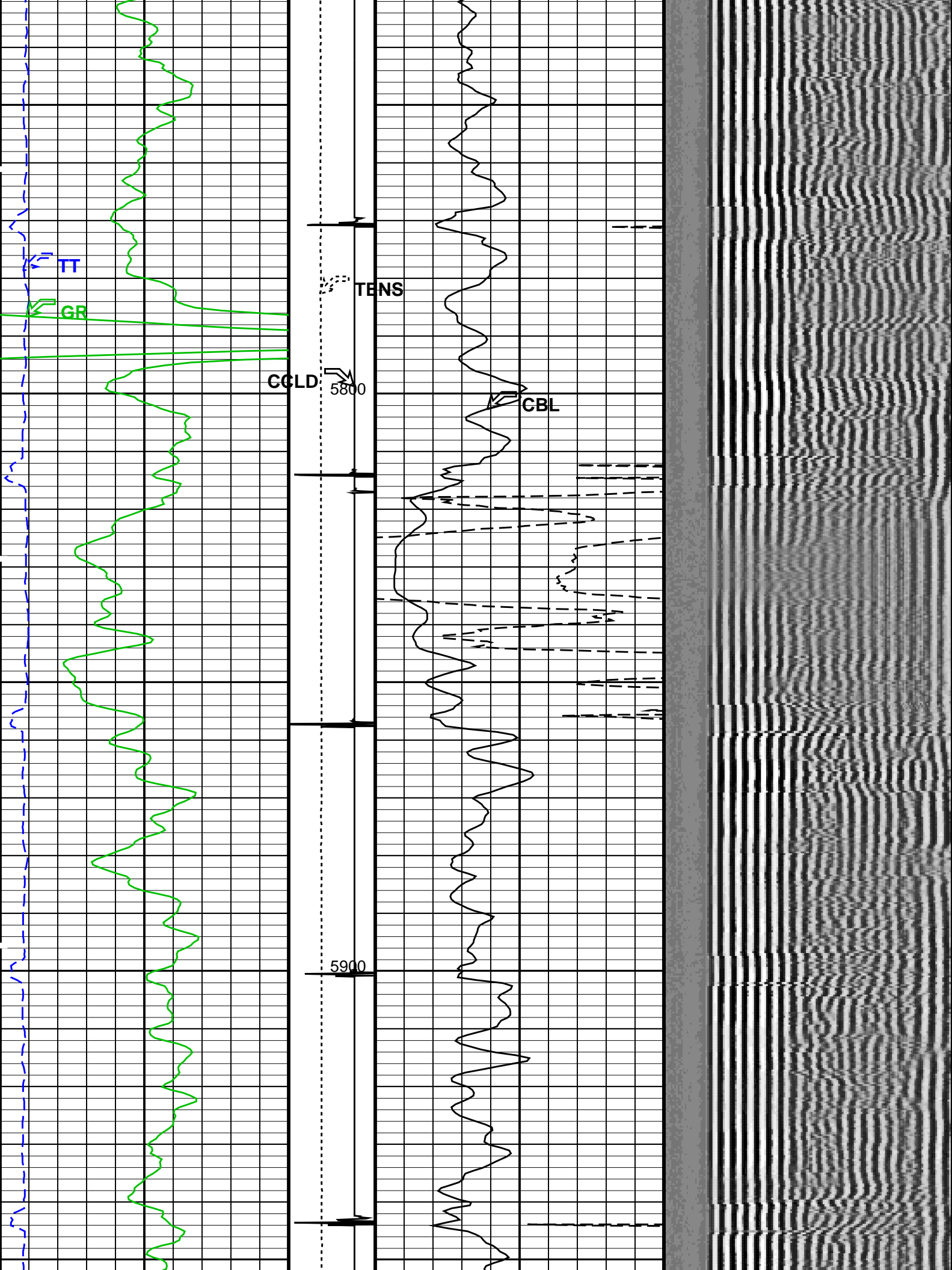


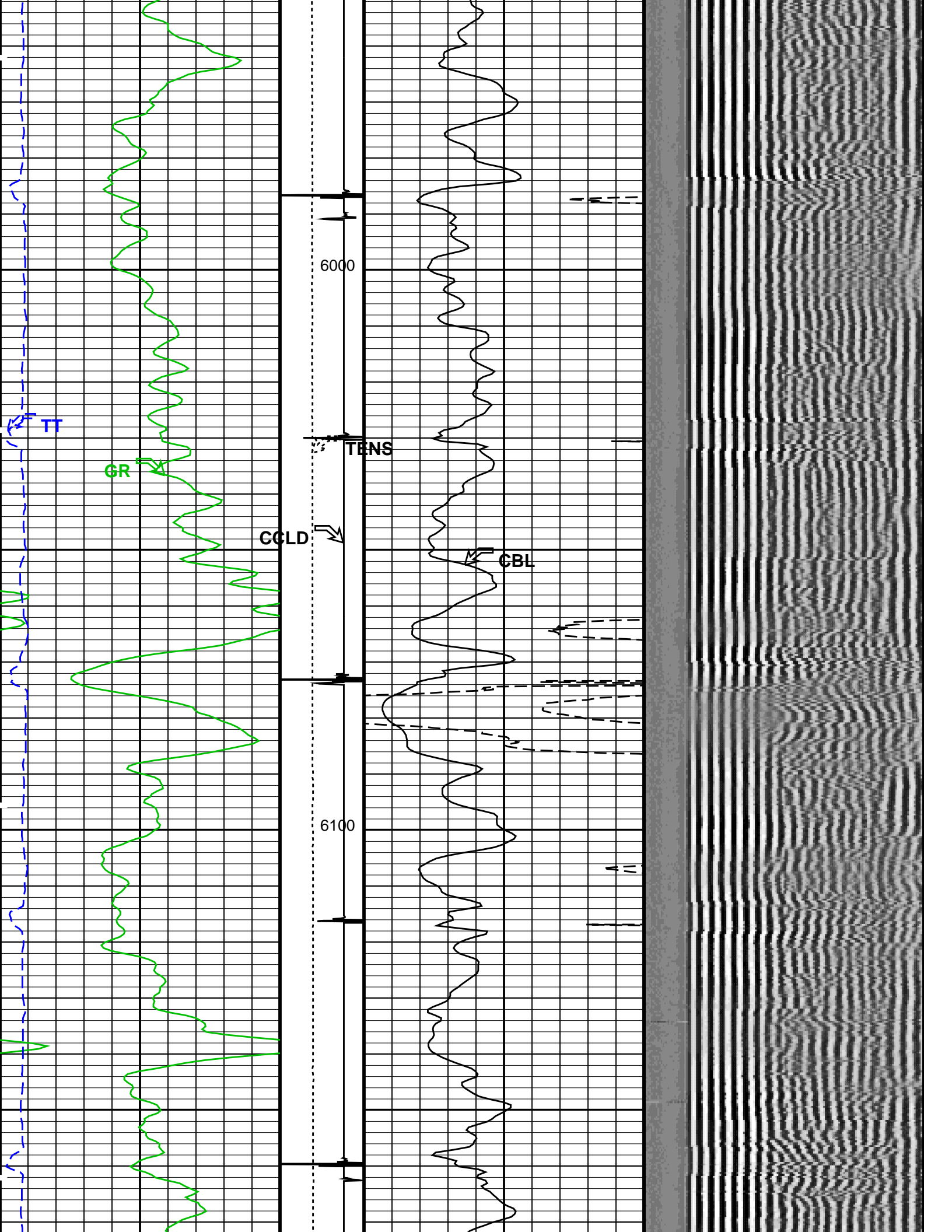


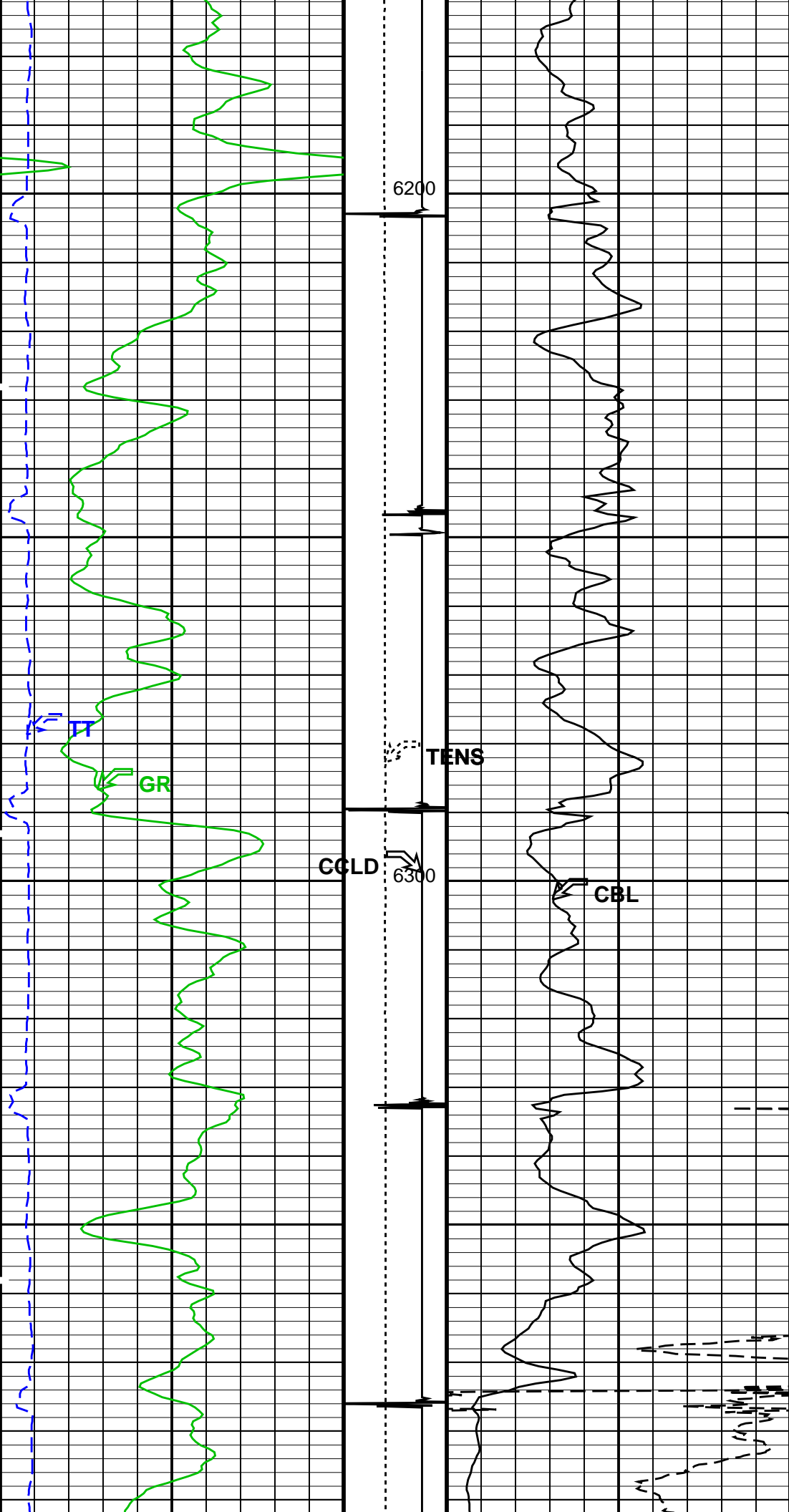


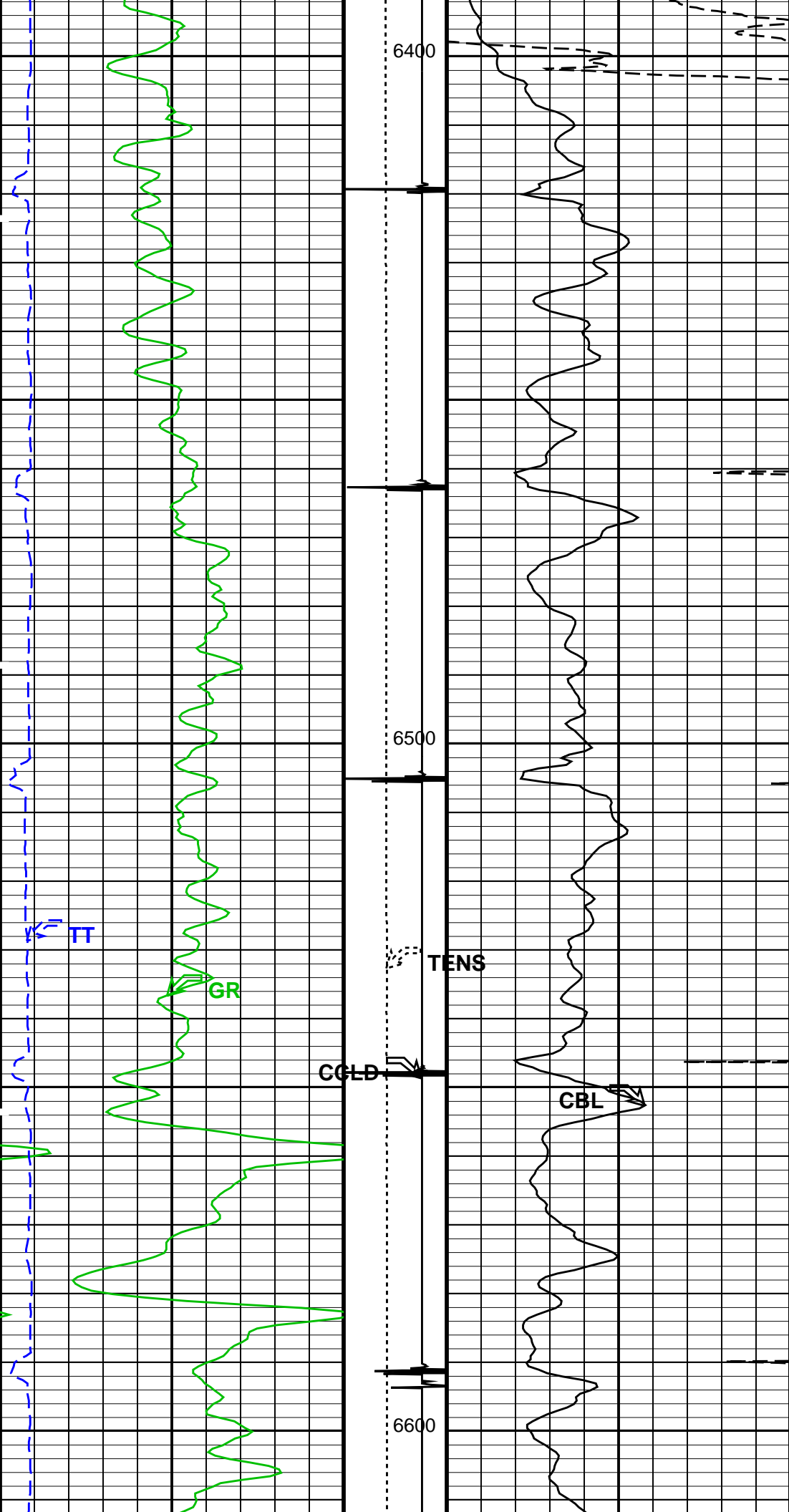


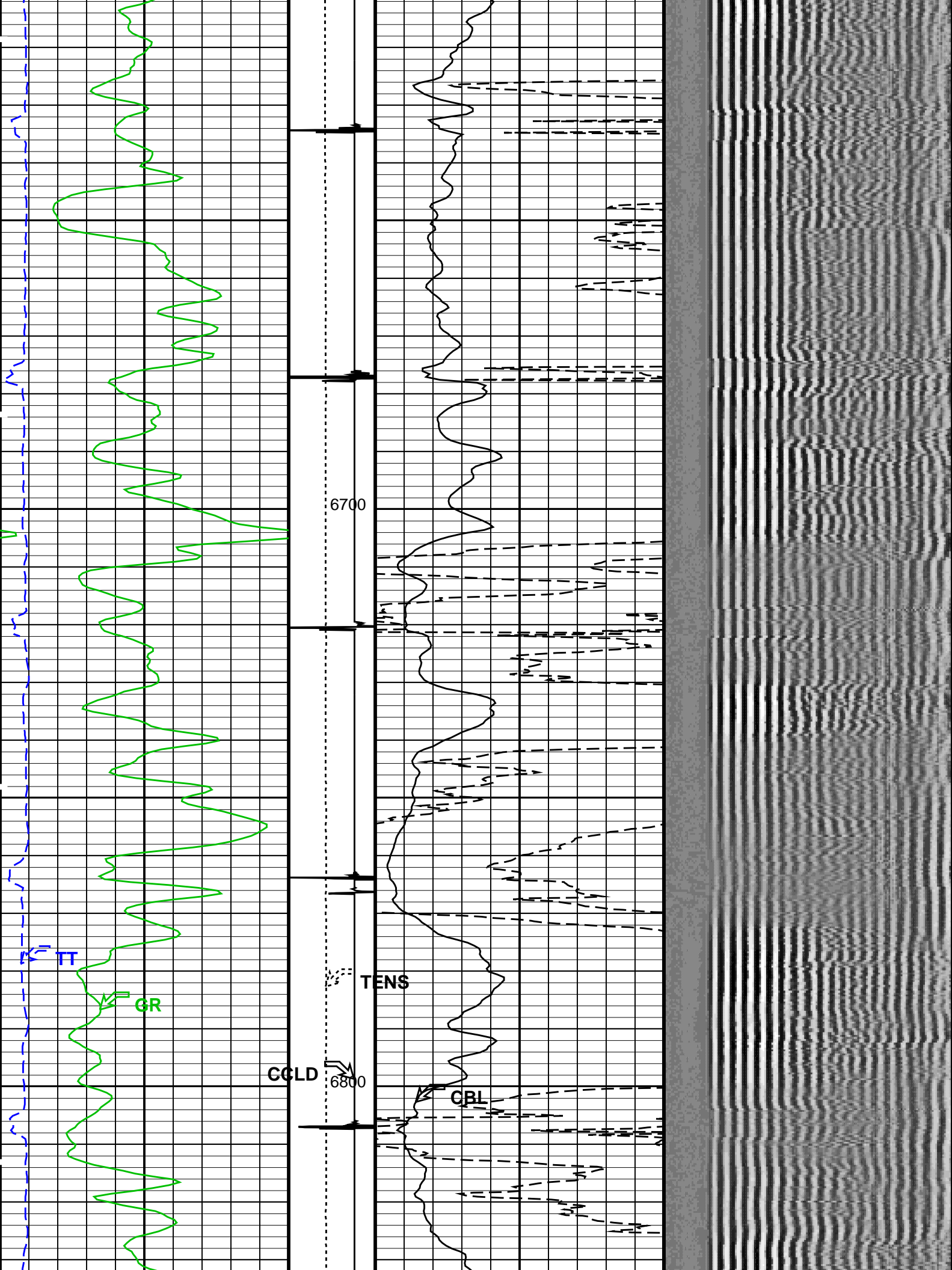


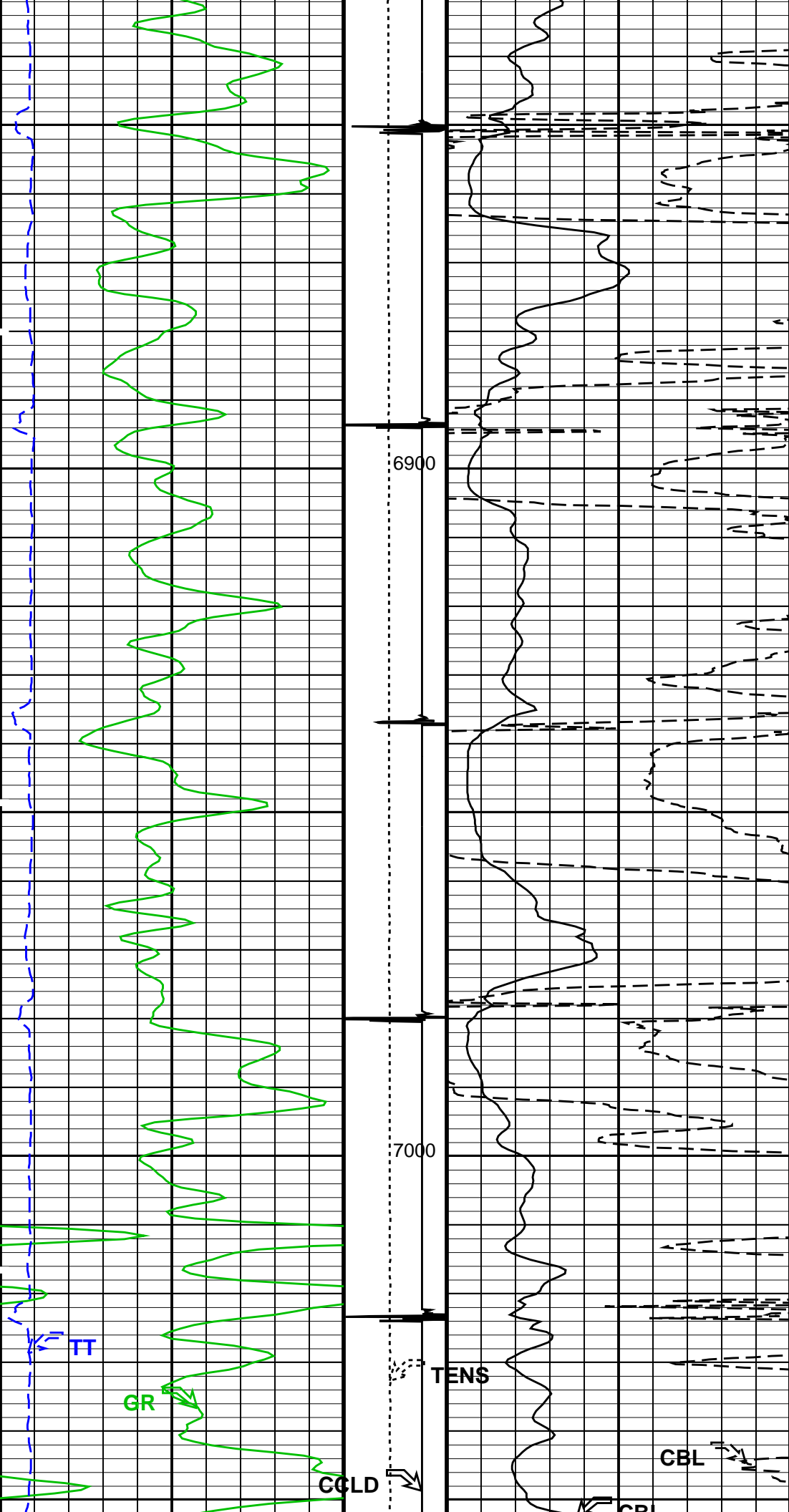


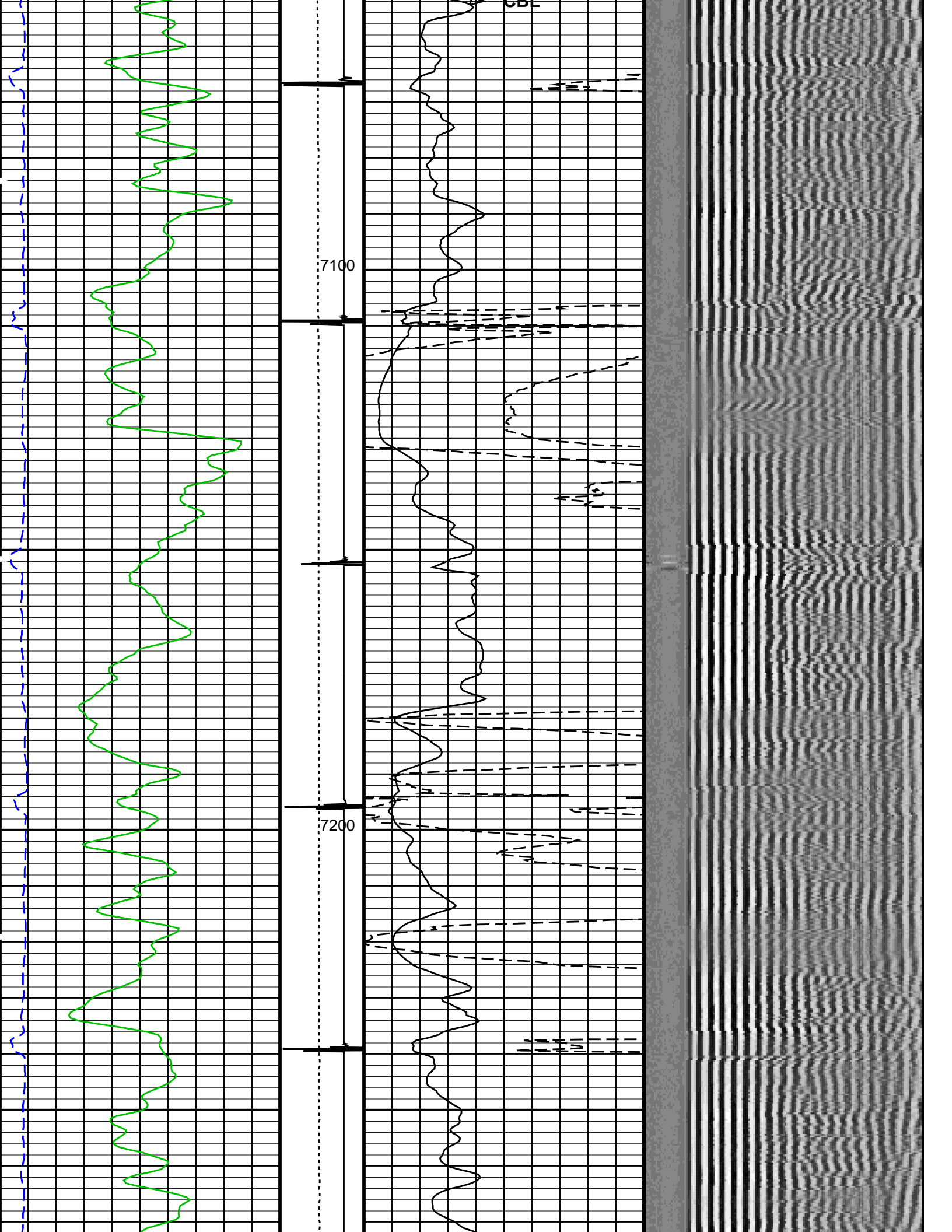


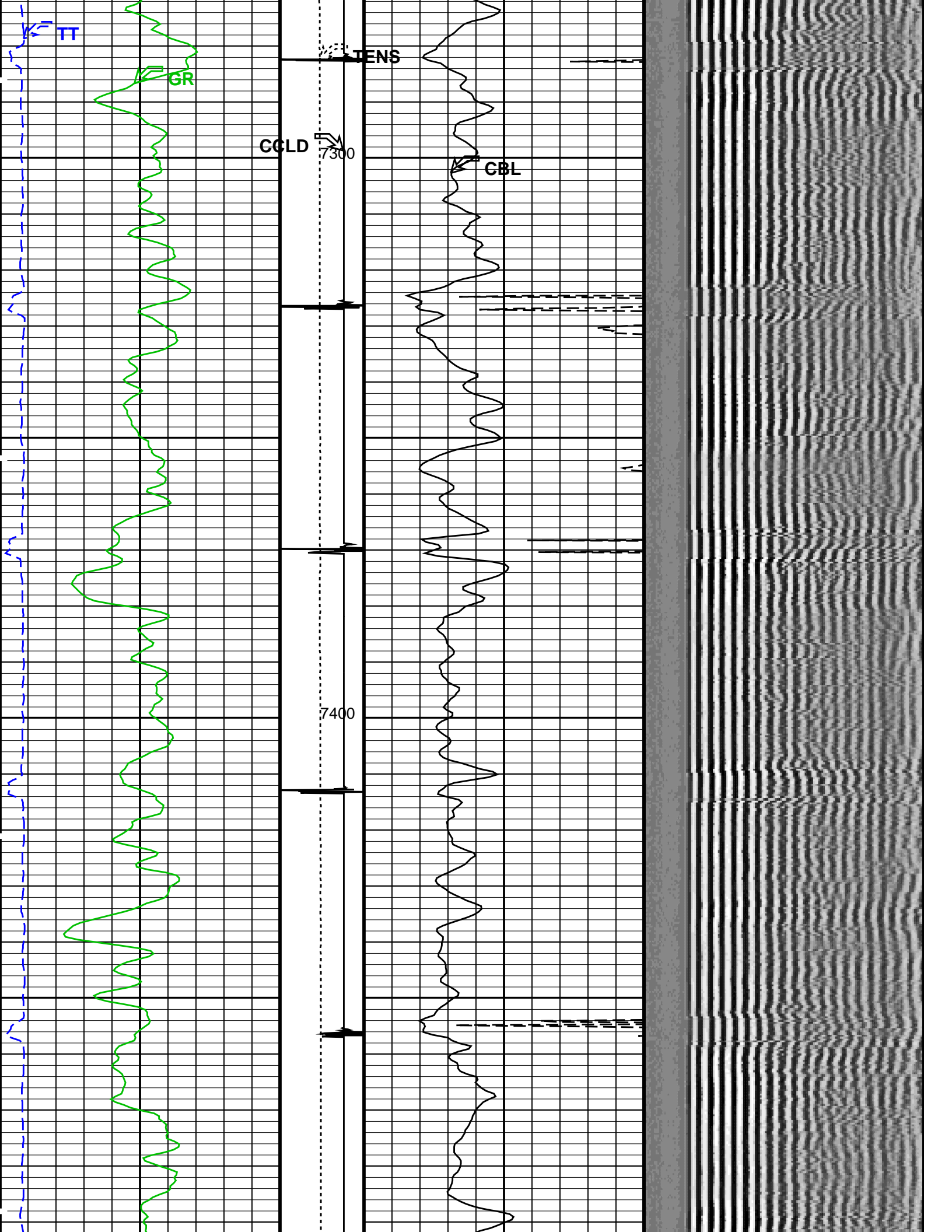


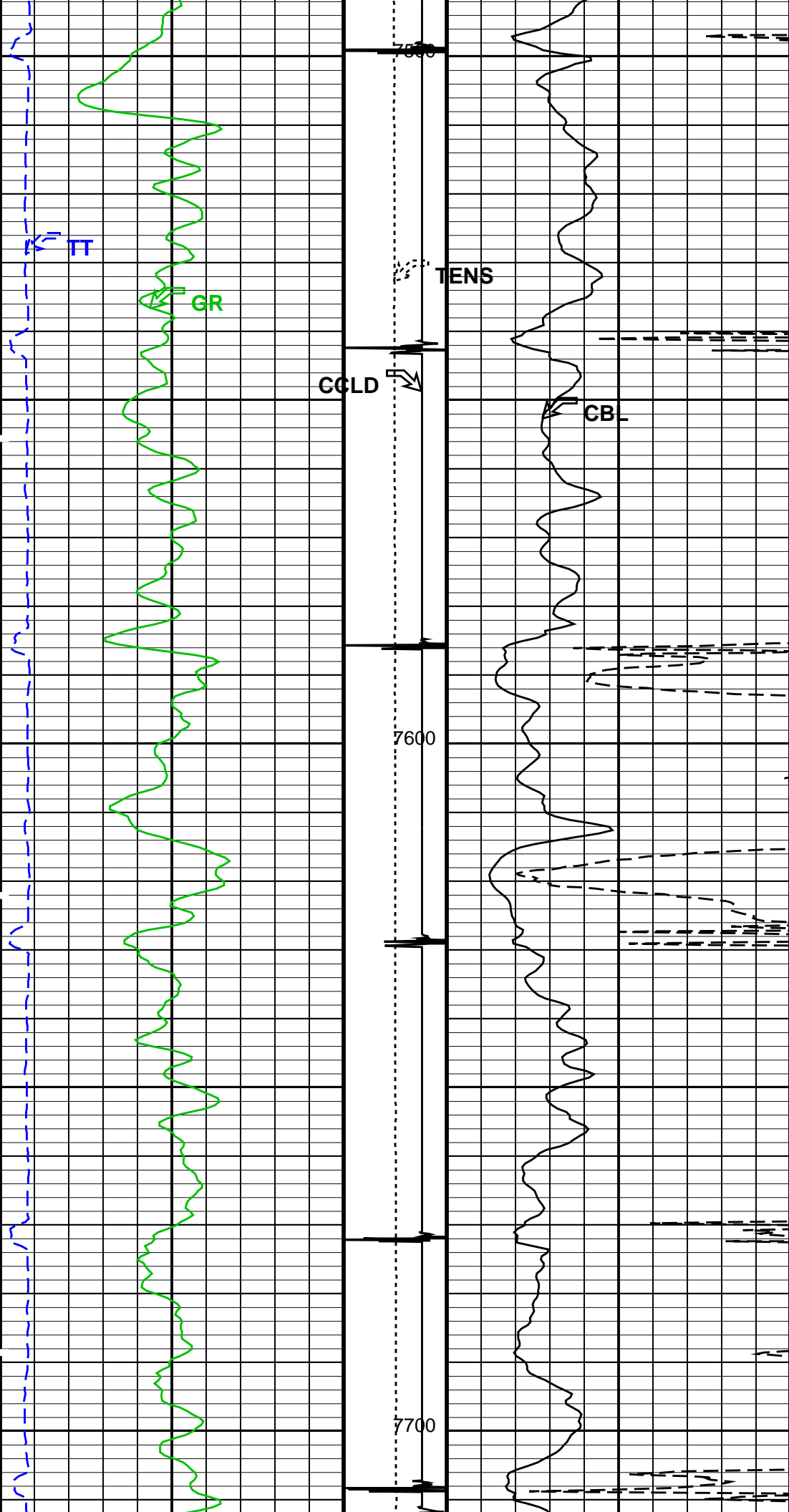


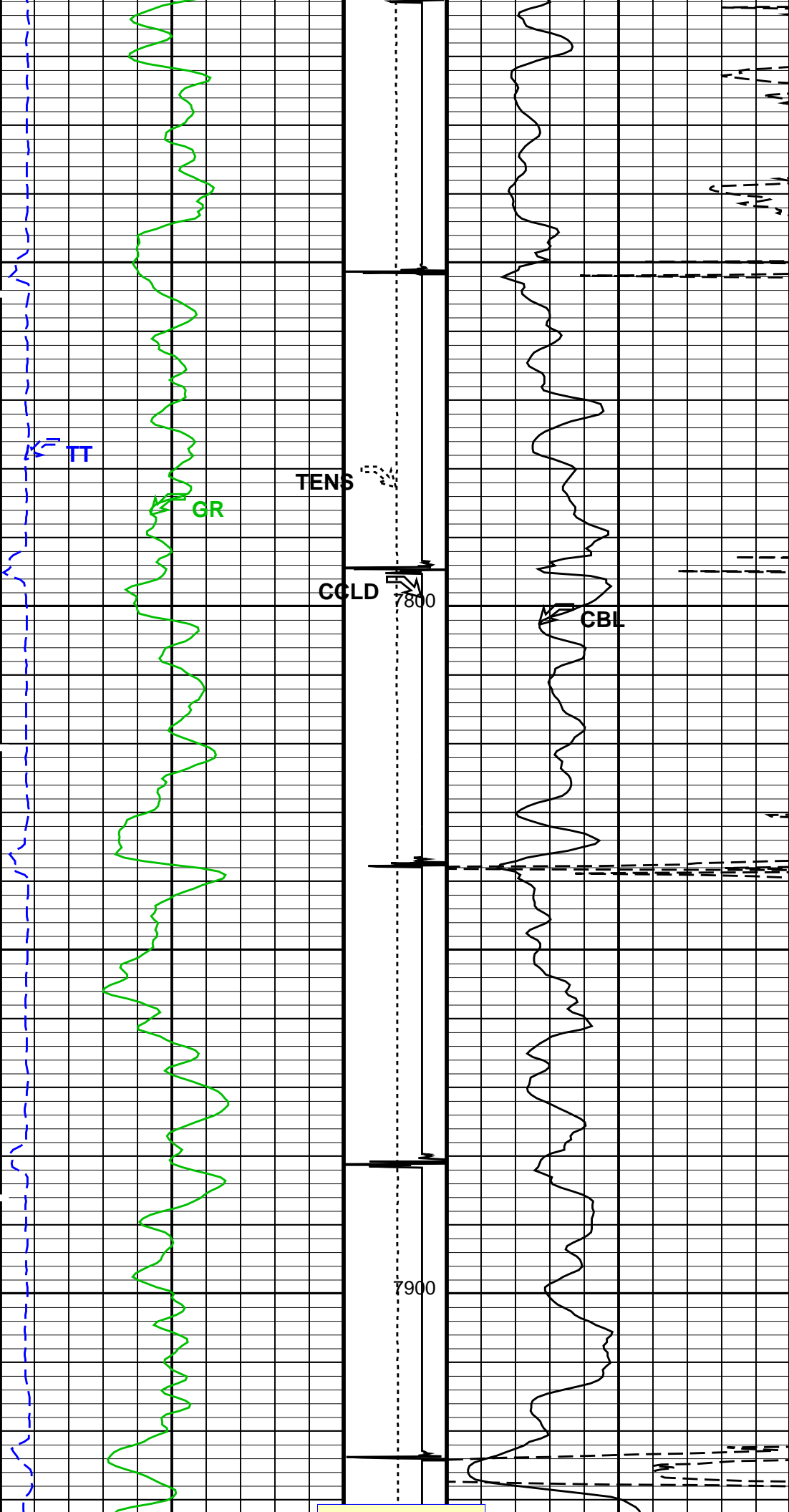




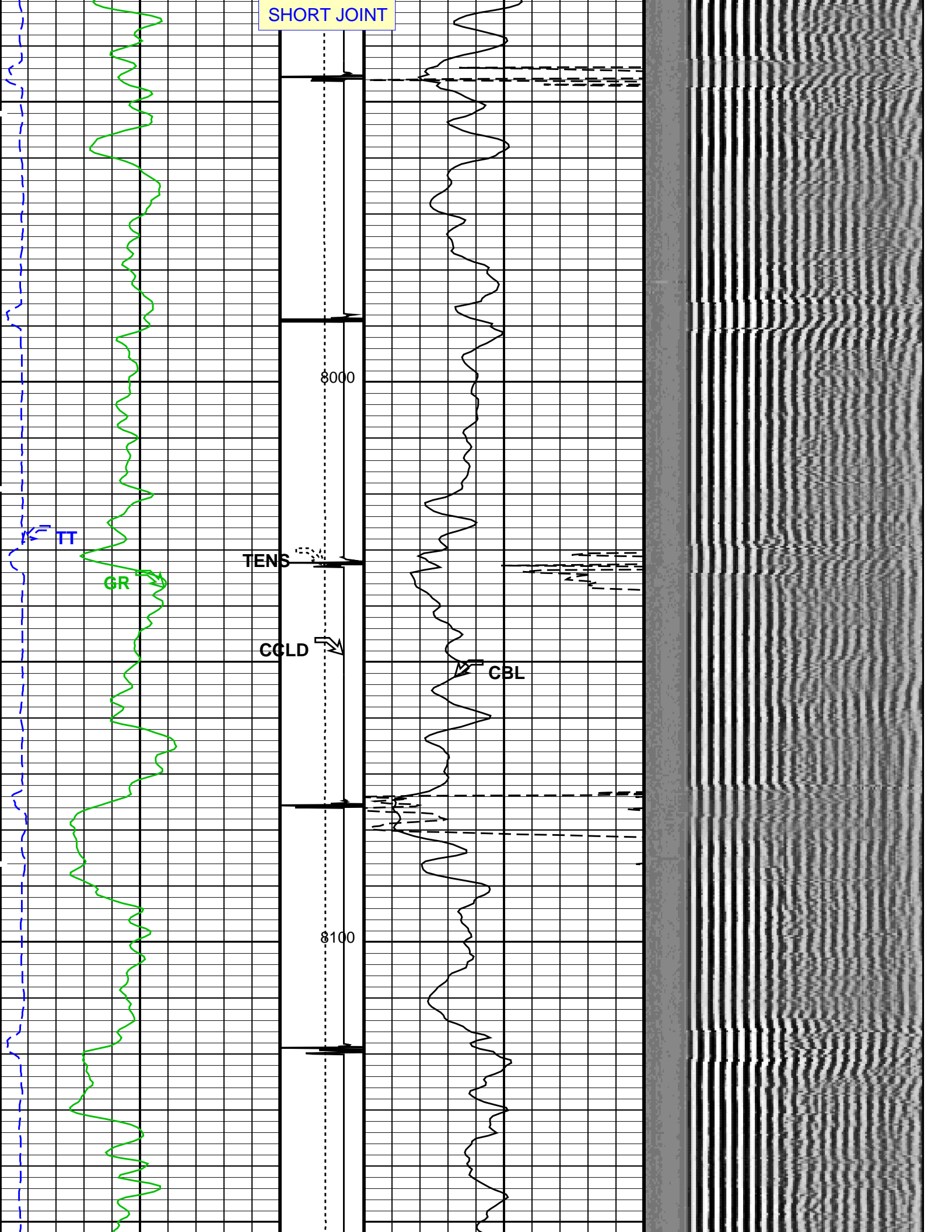


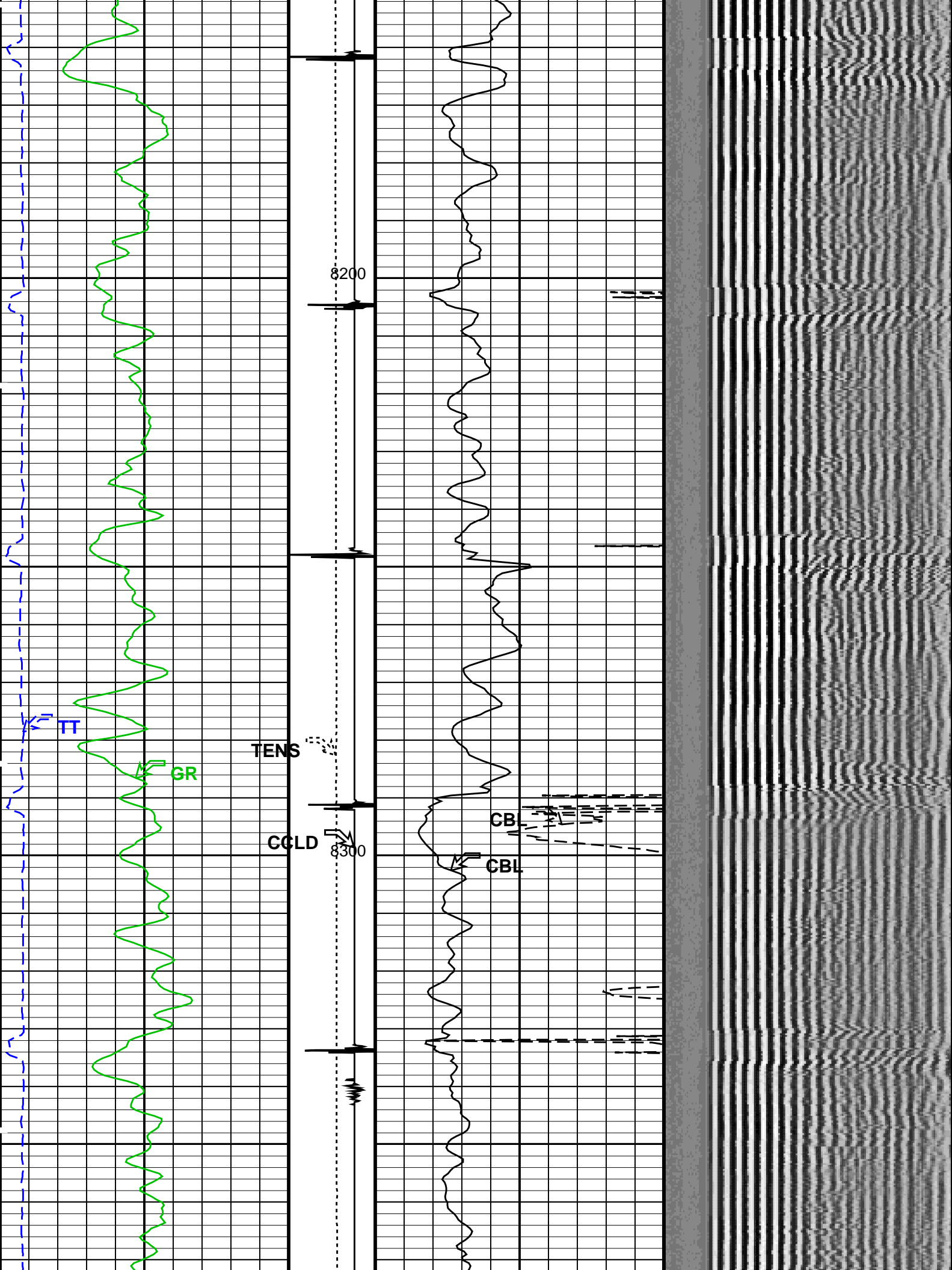


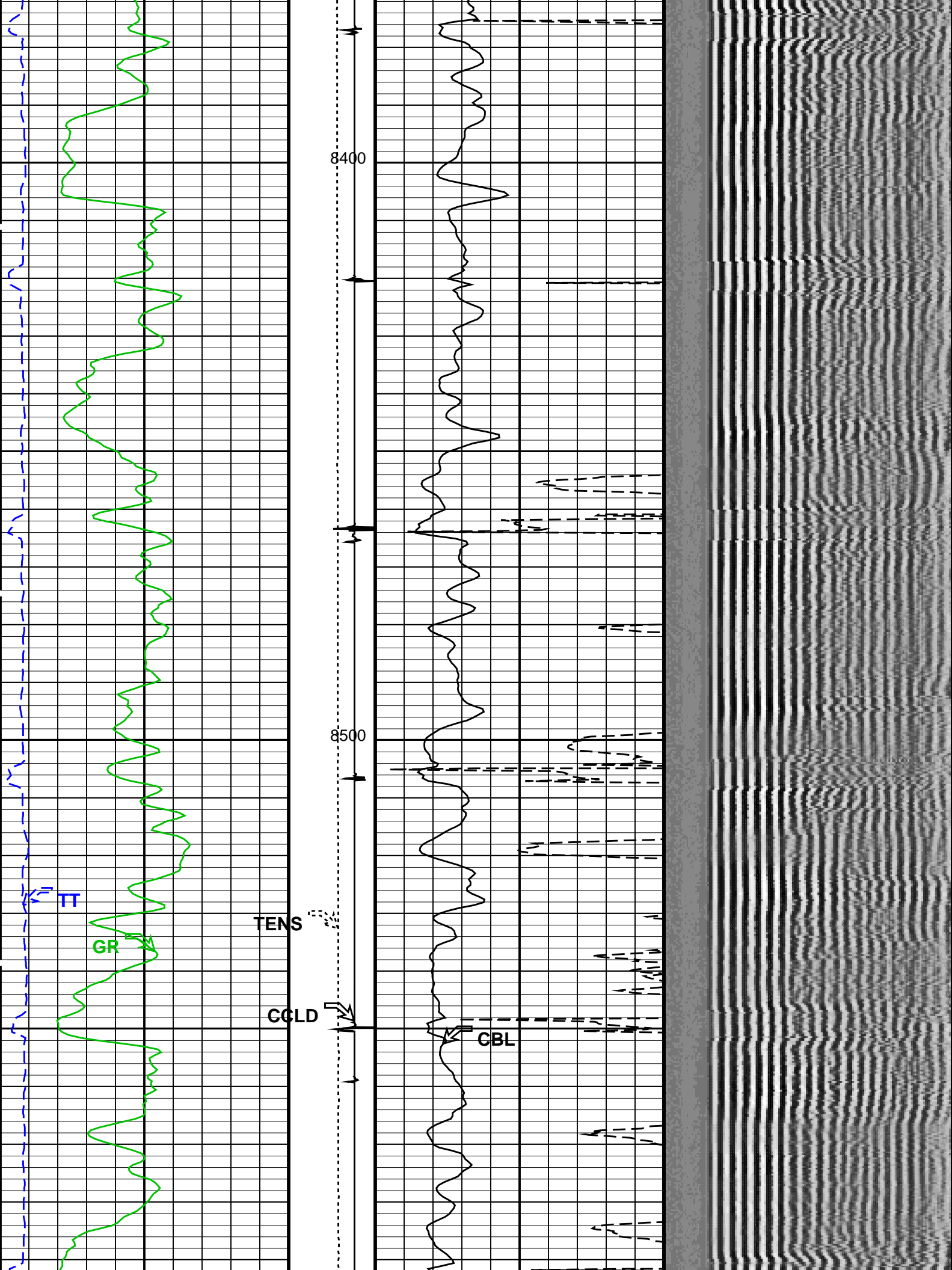


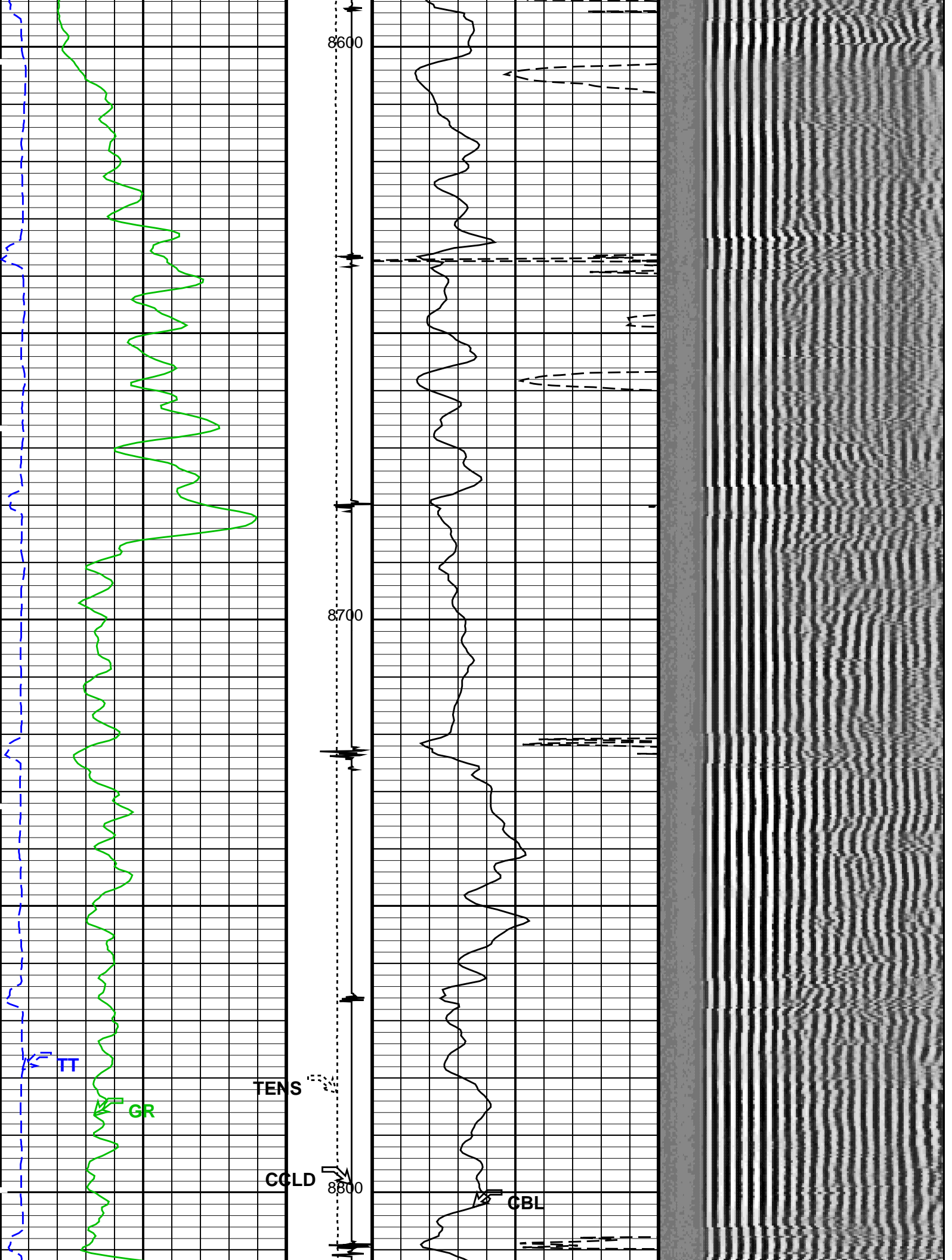


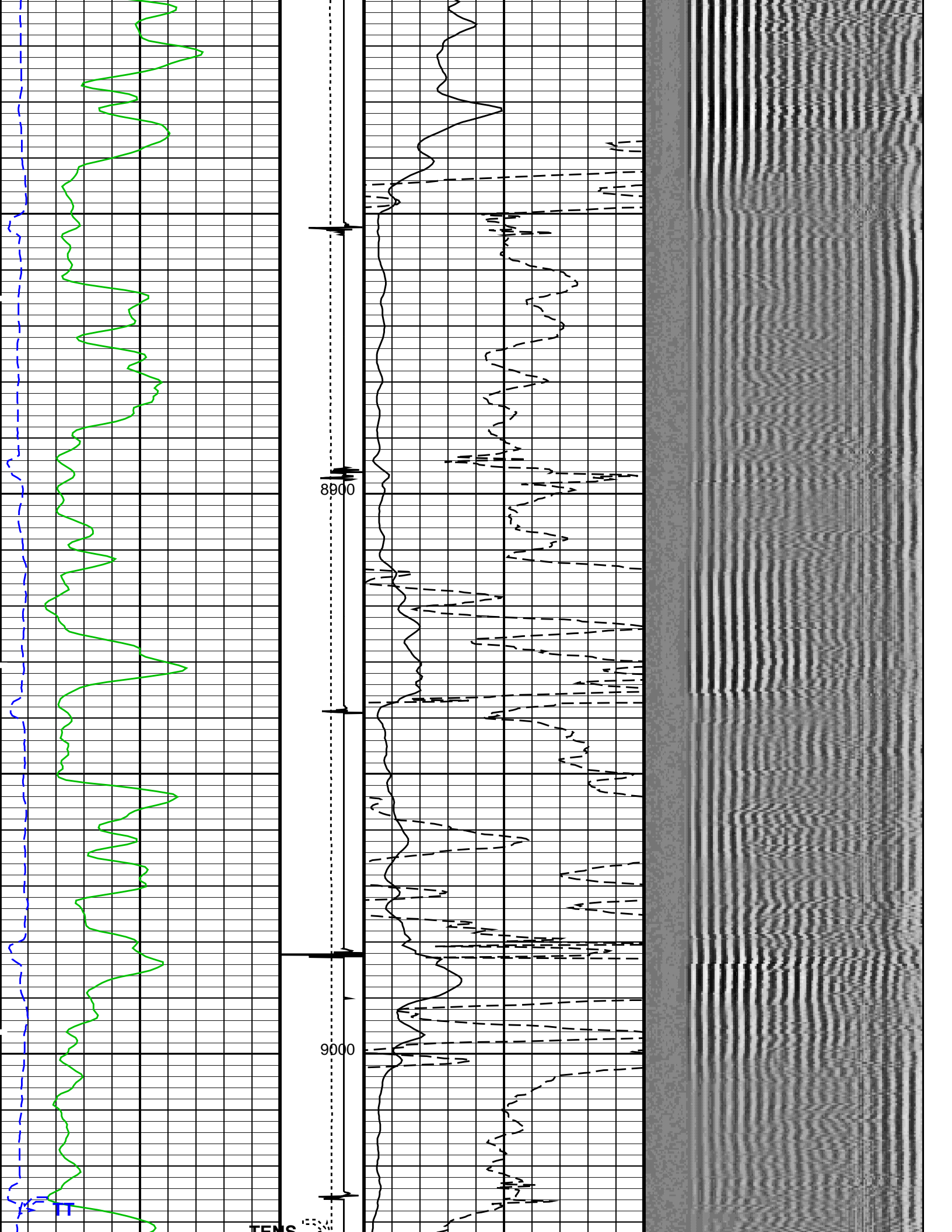
SHORT JOINT

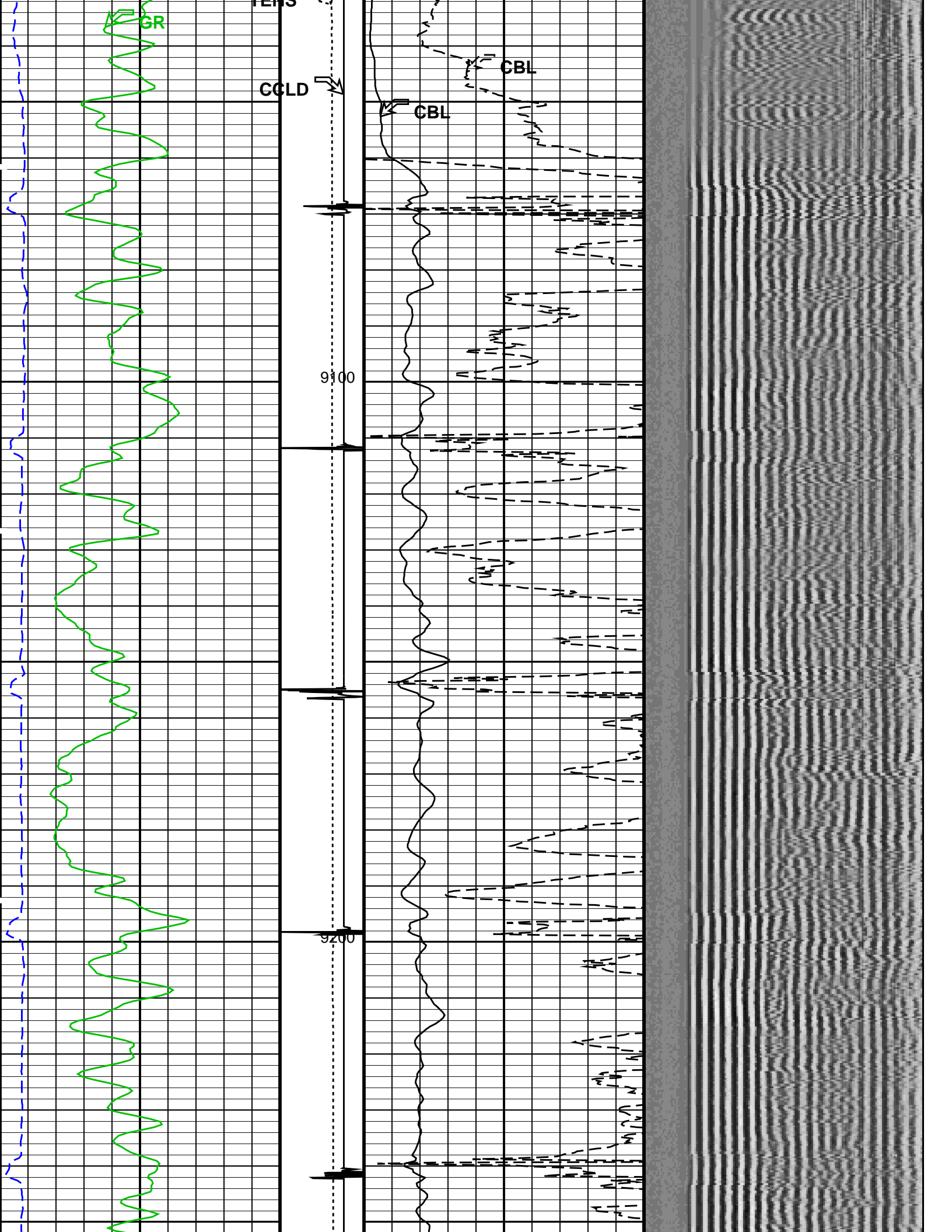


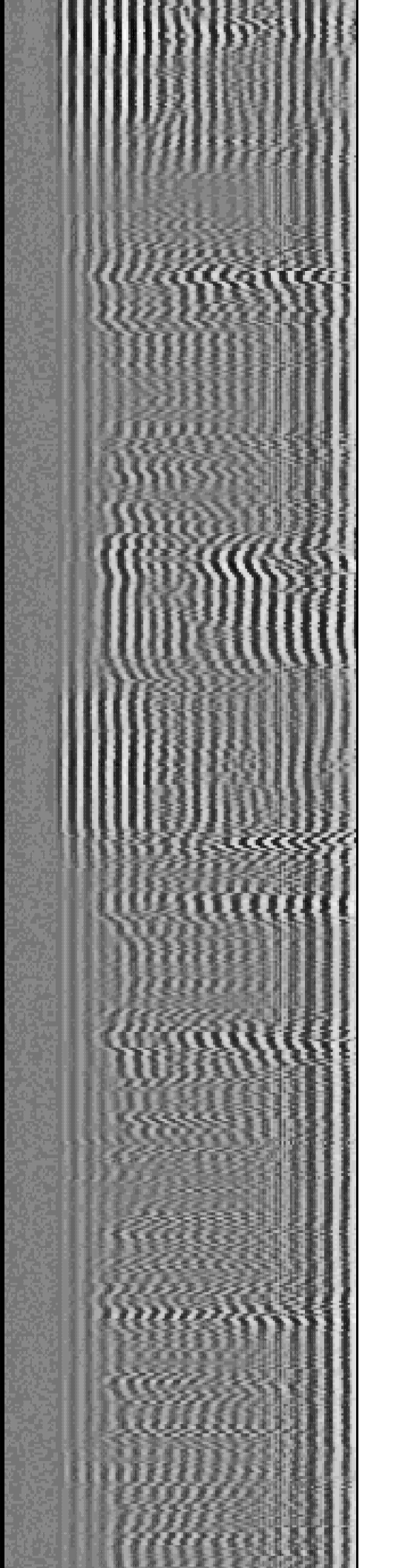
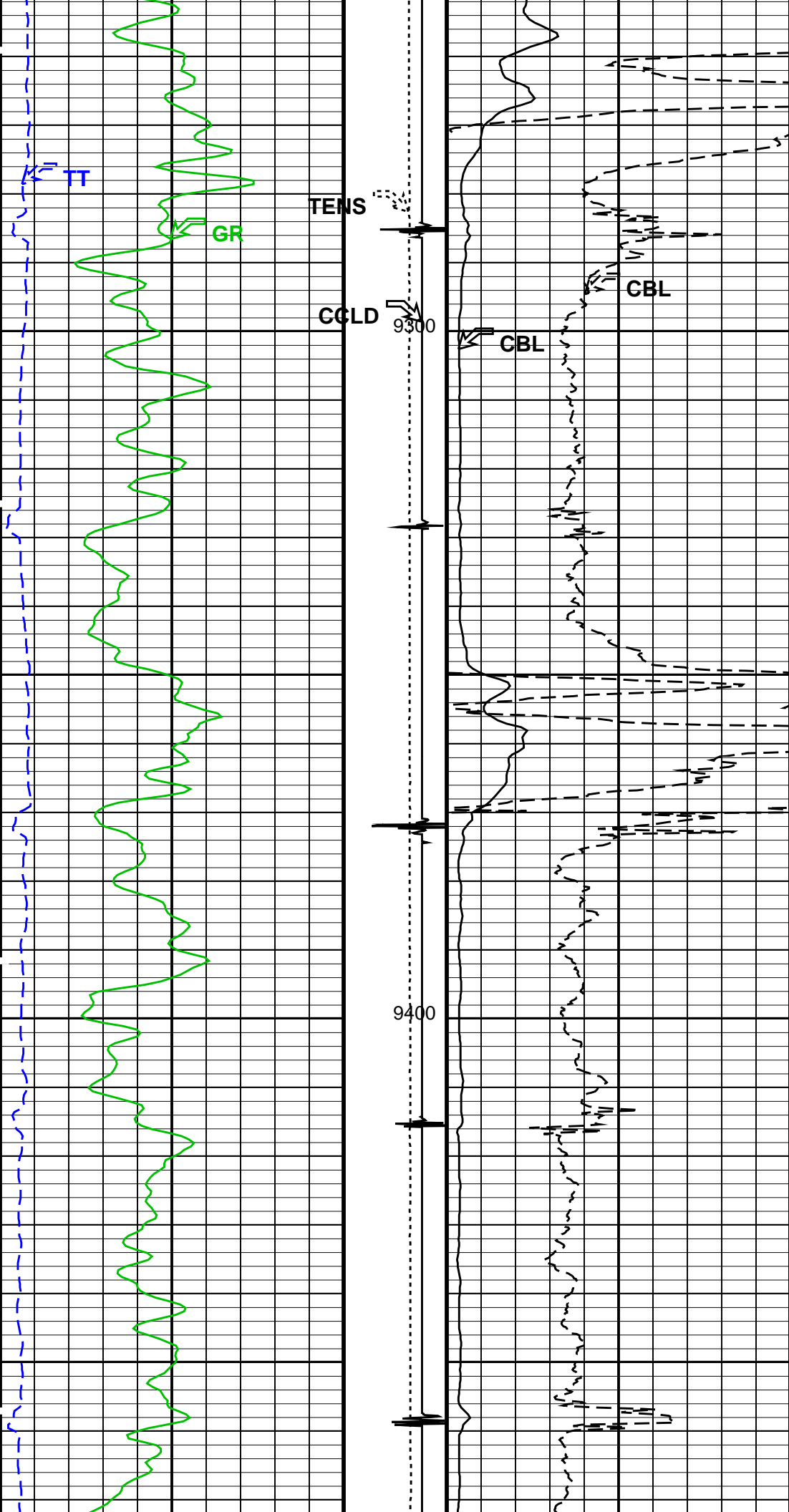


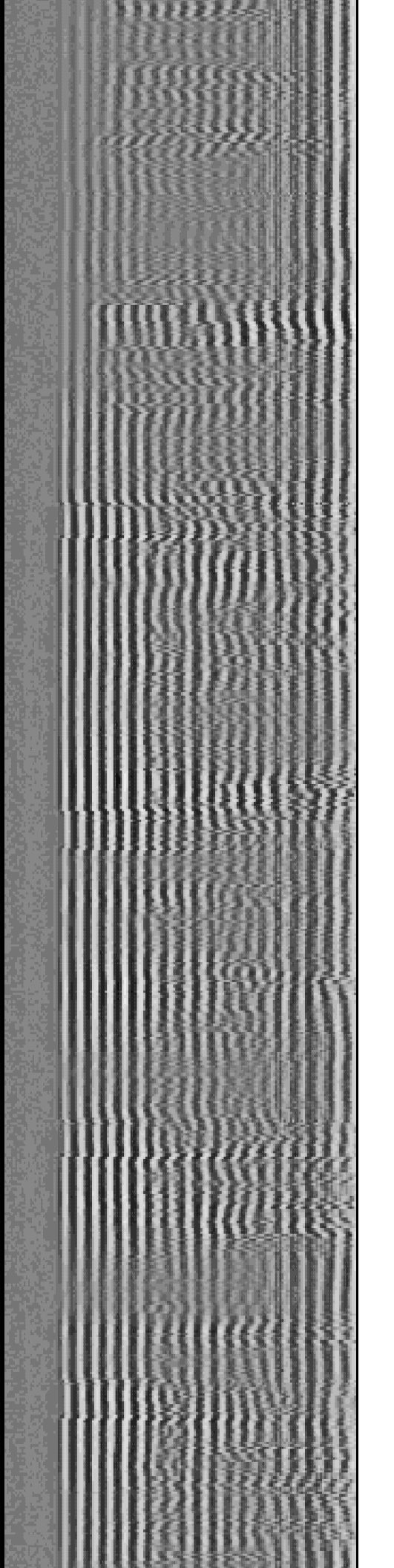
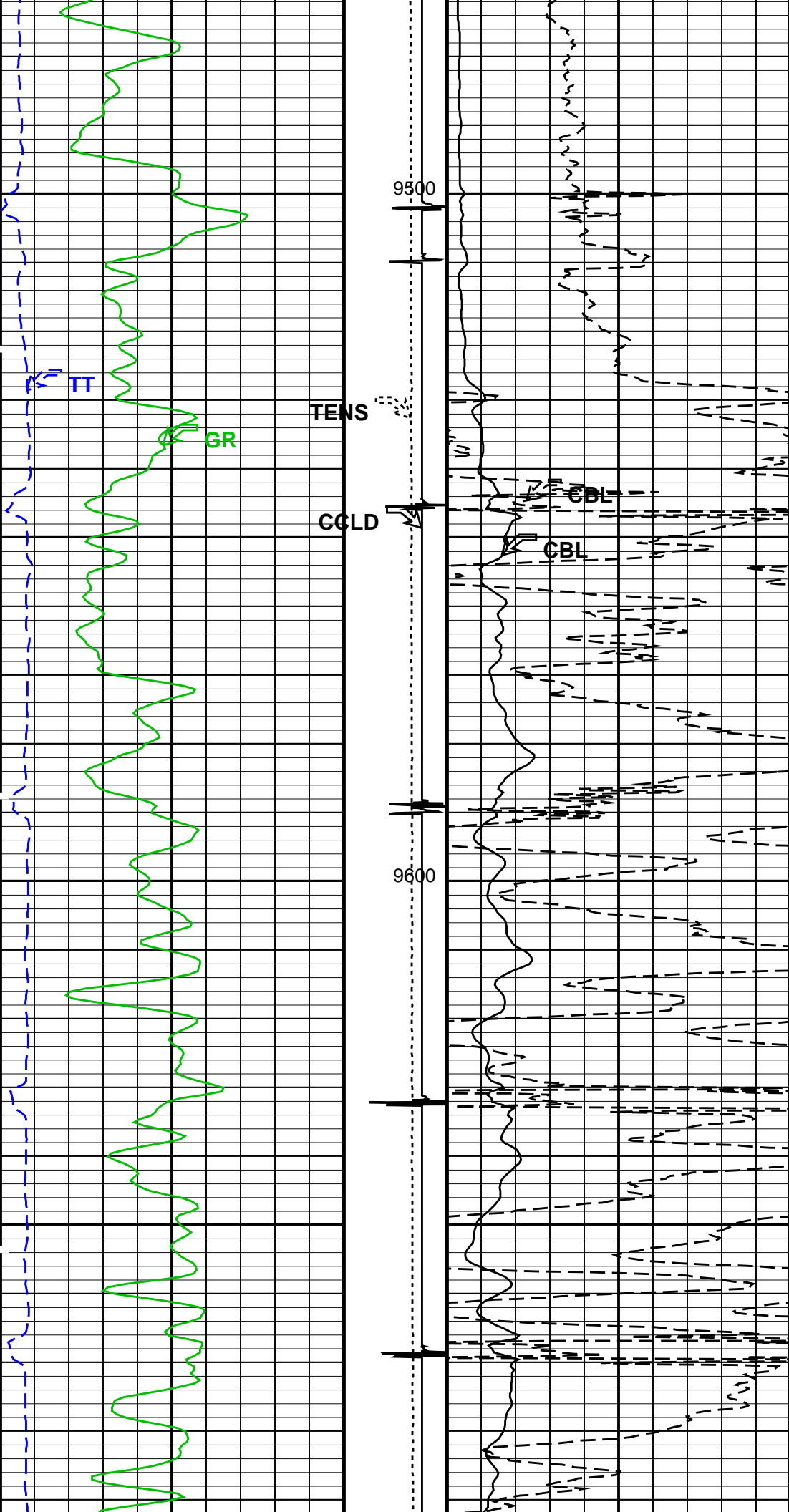


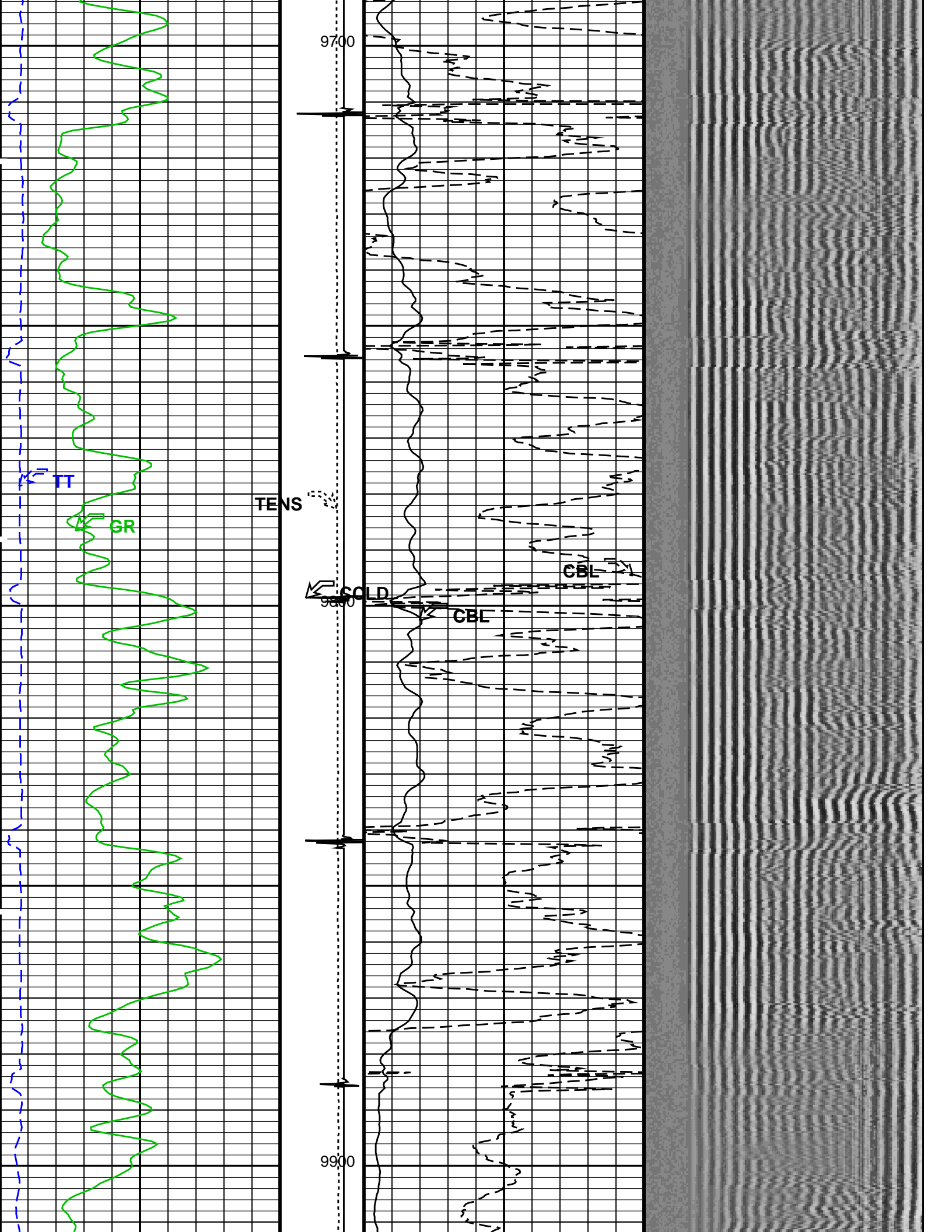


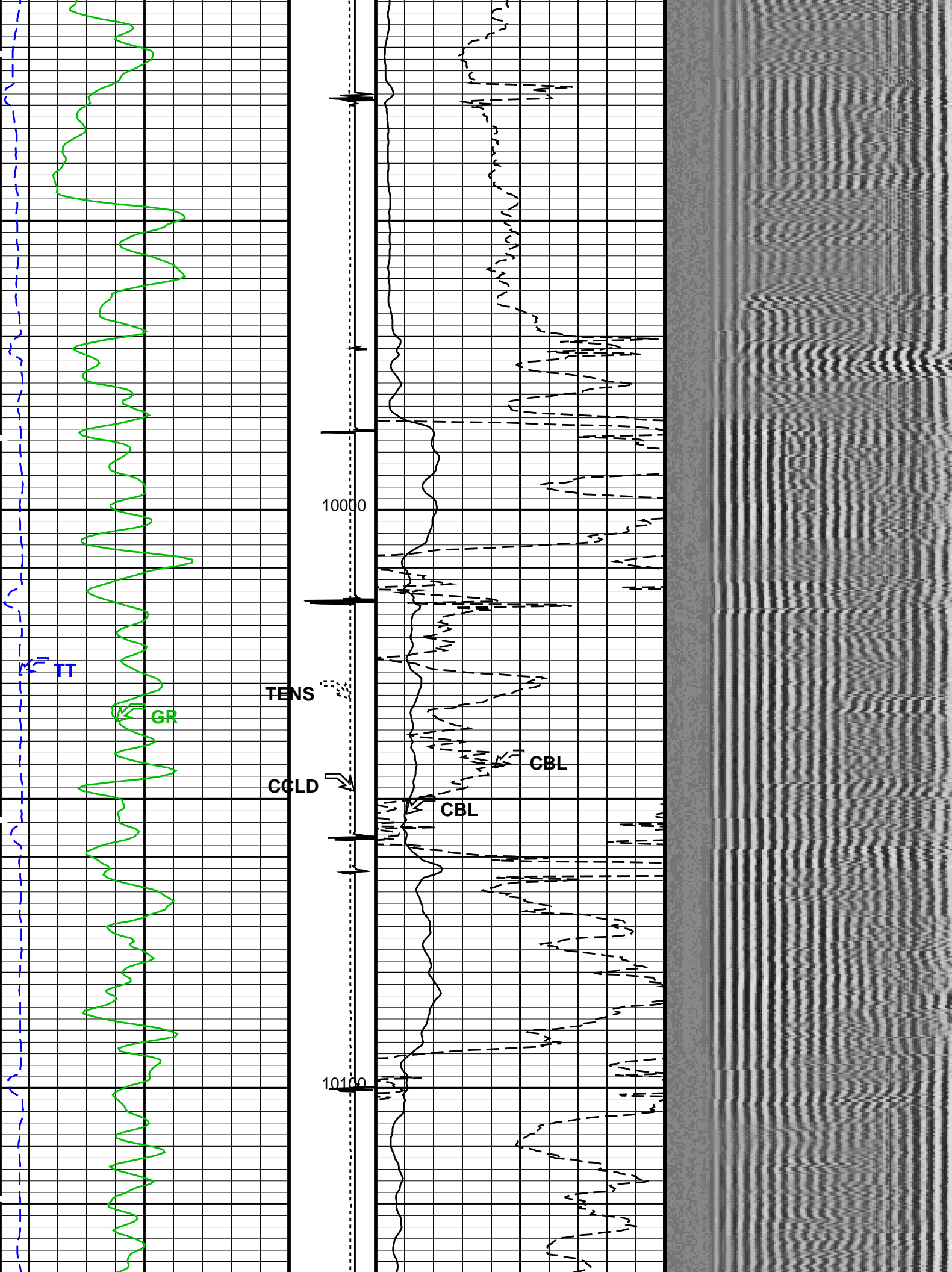


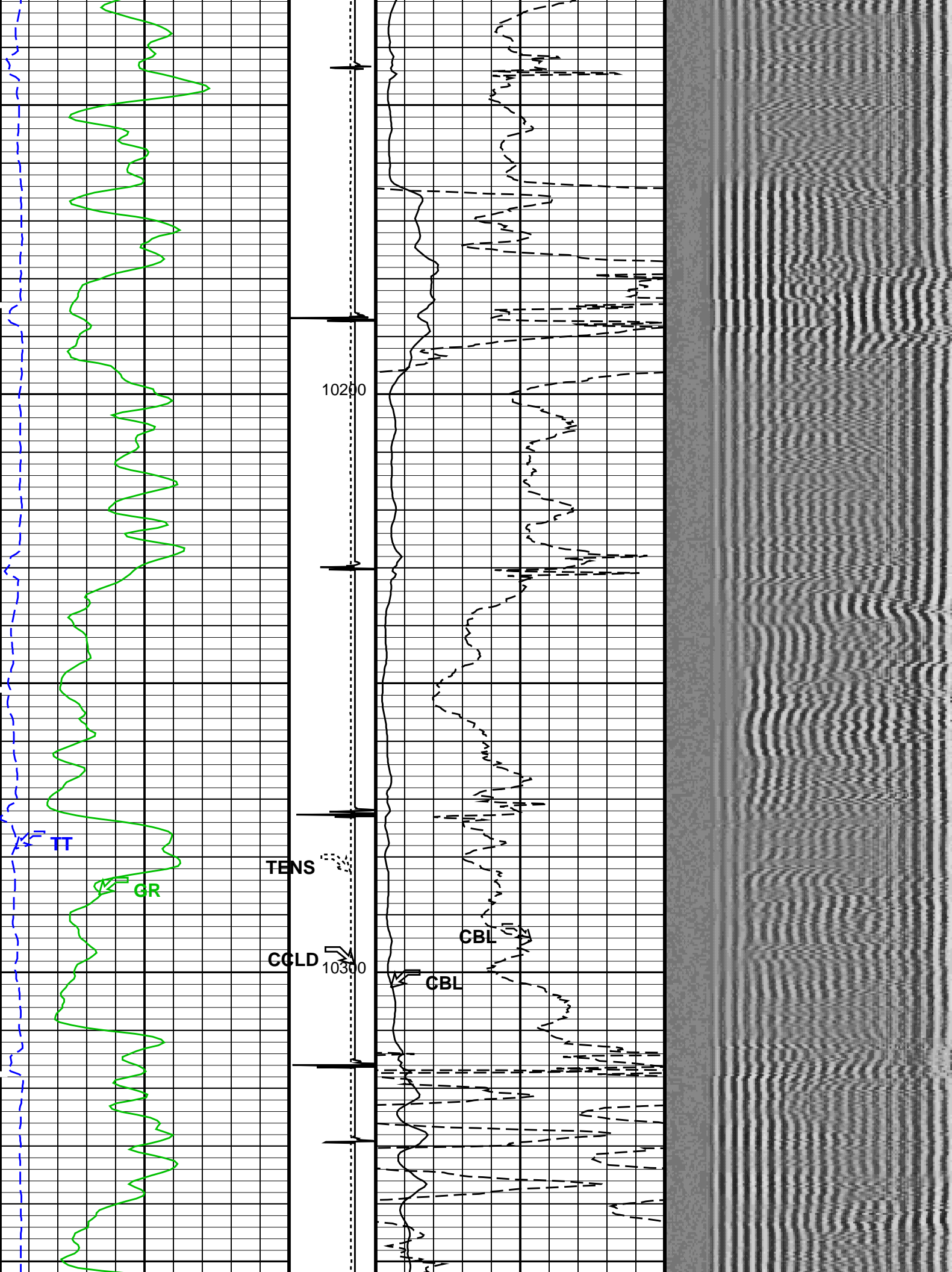


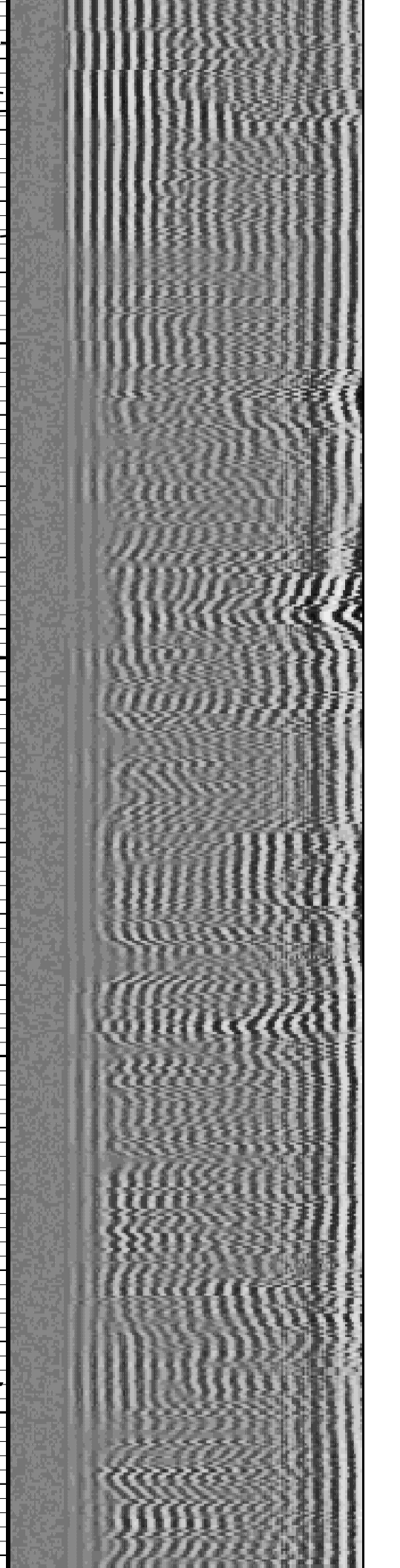
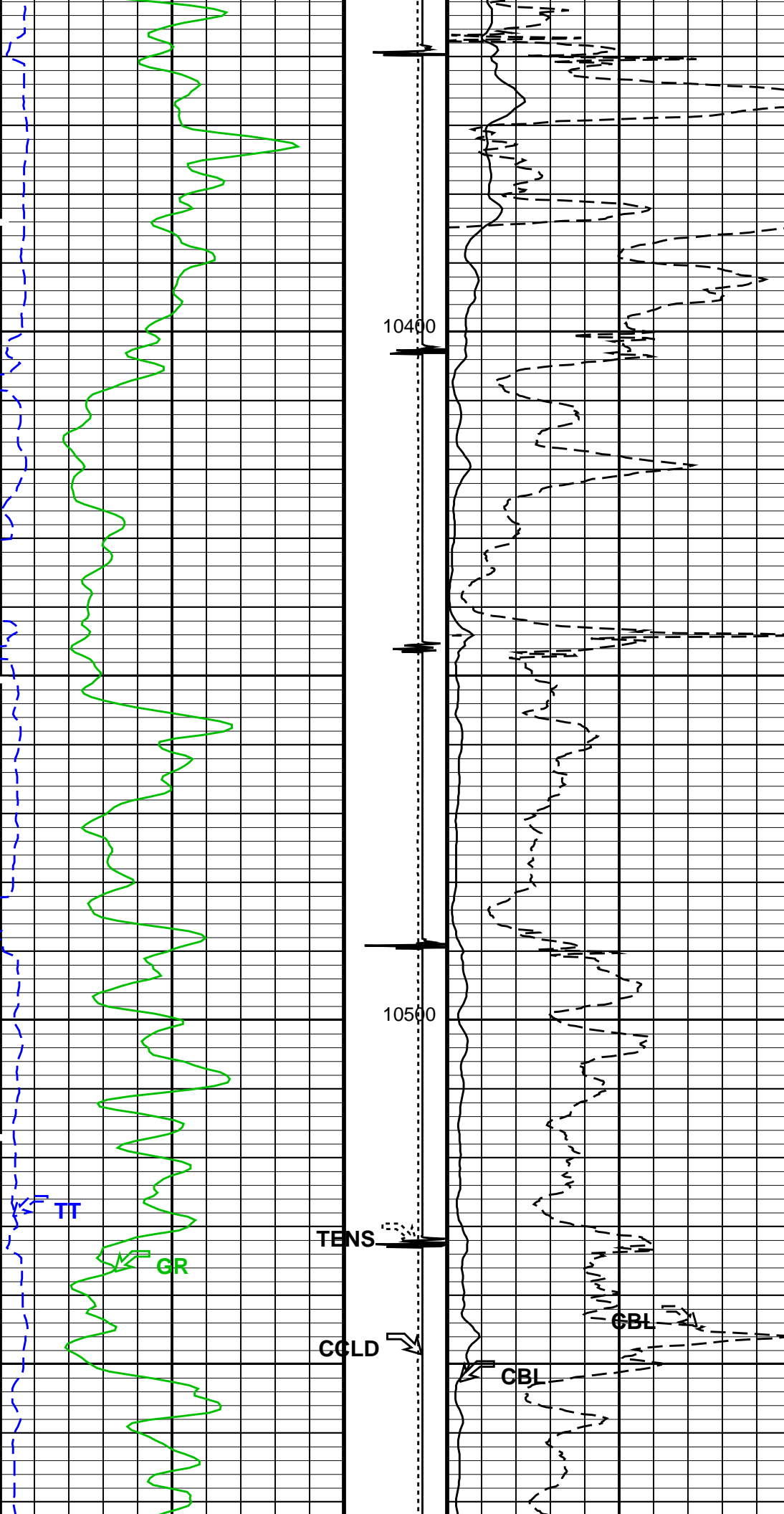


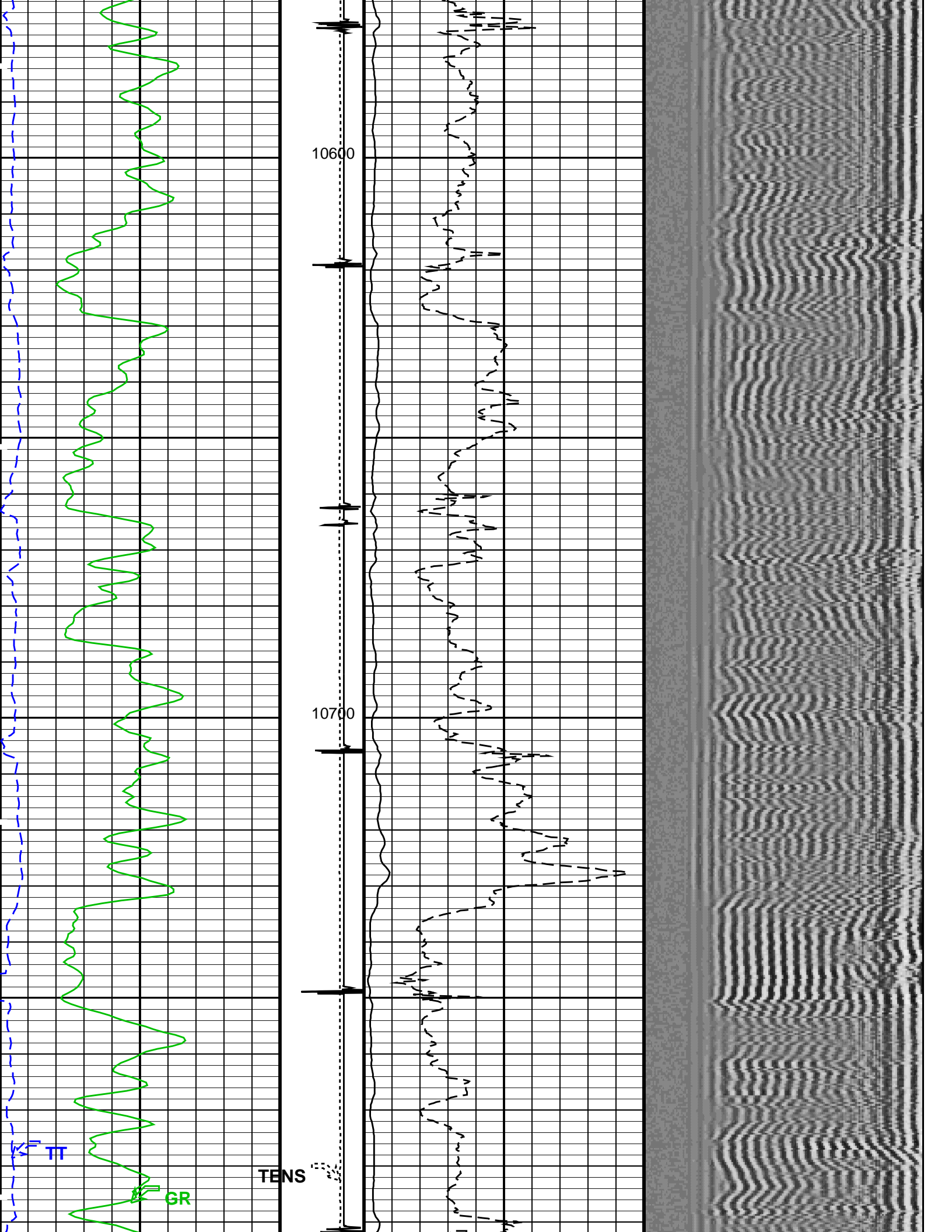


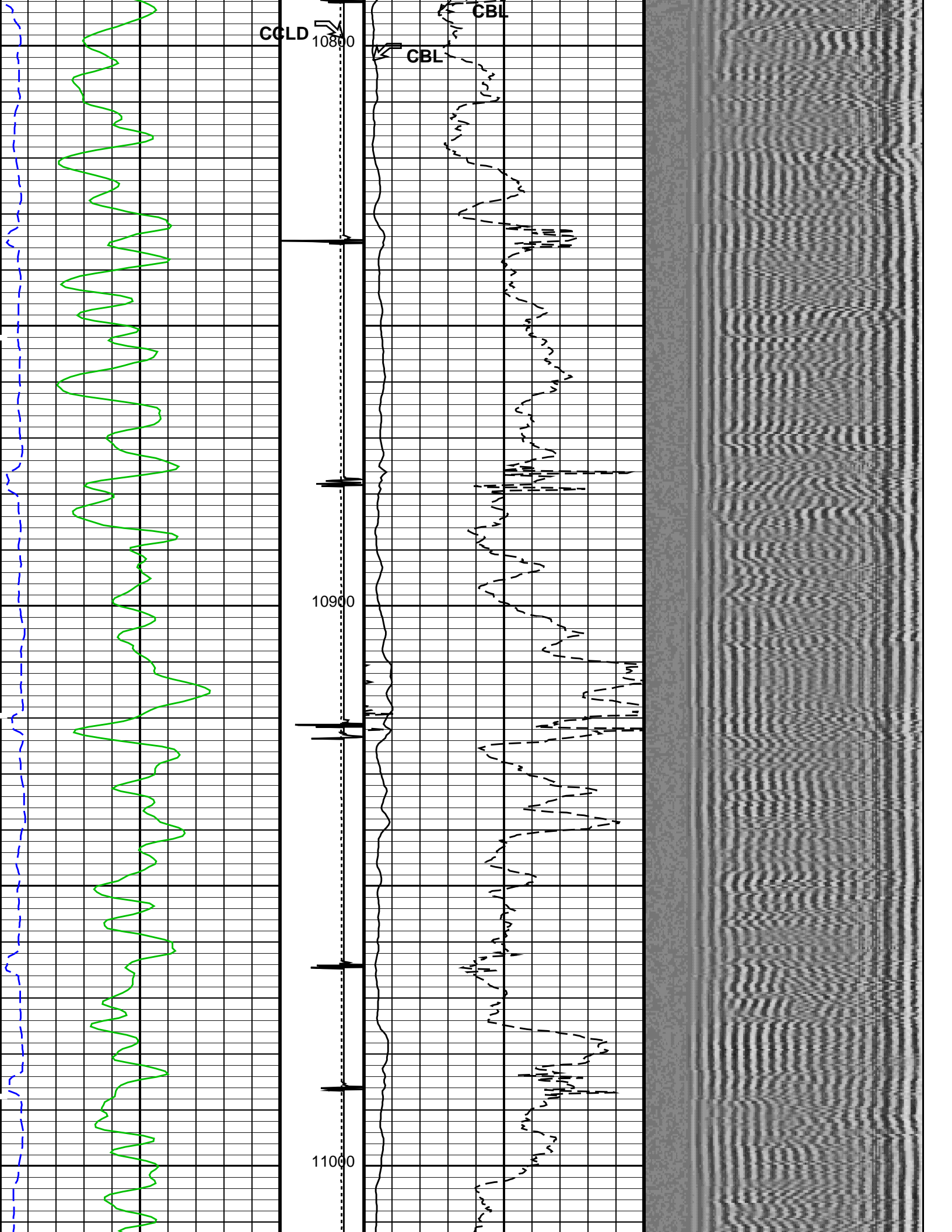


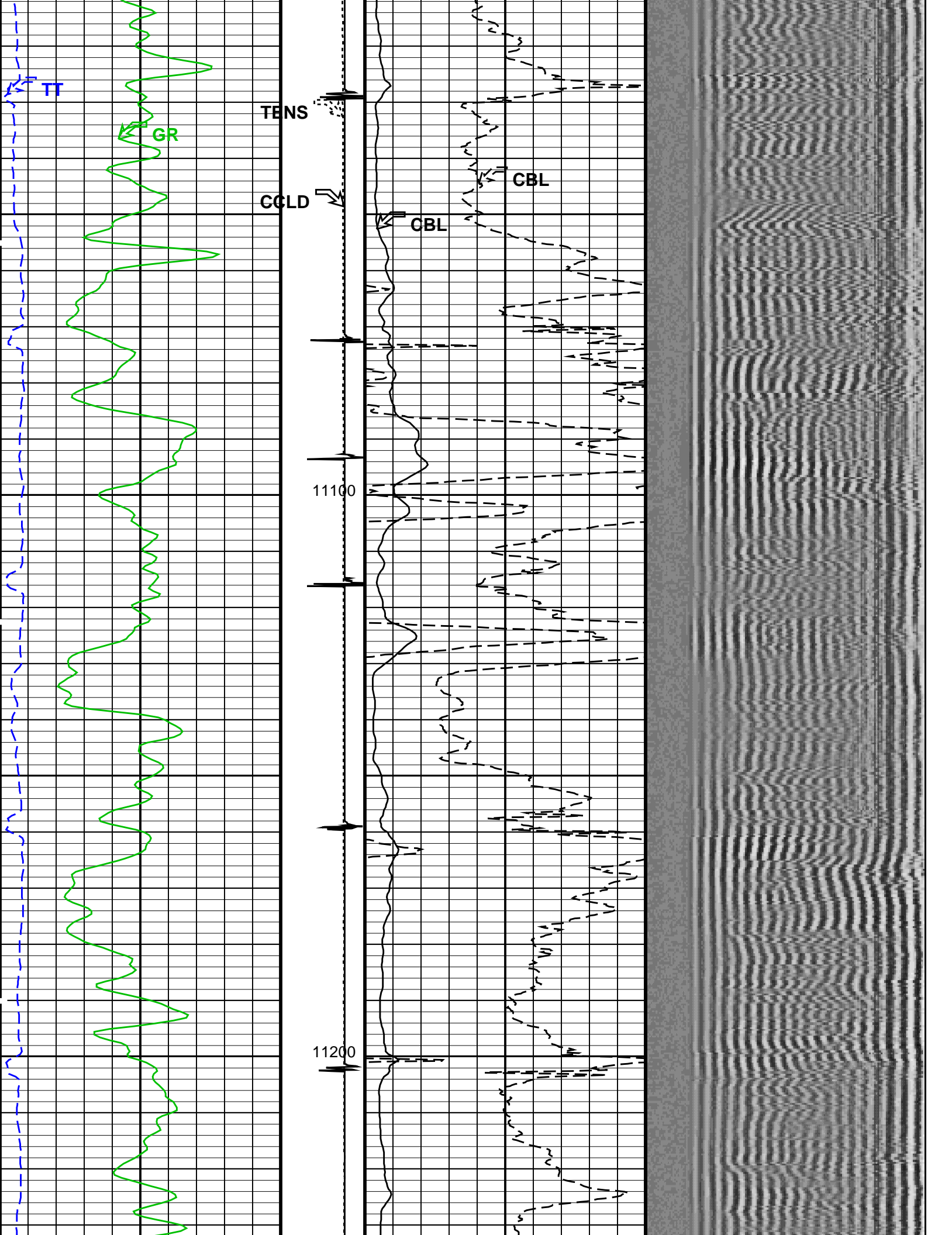


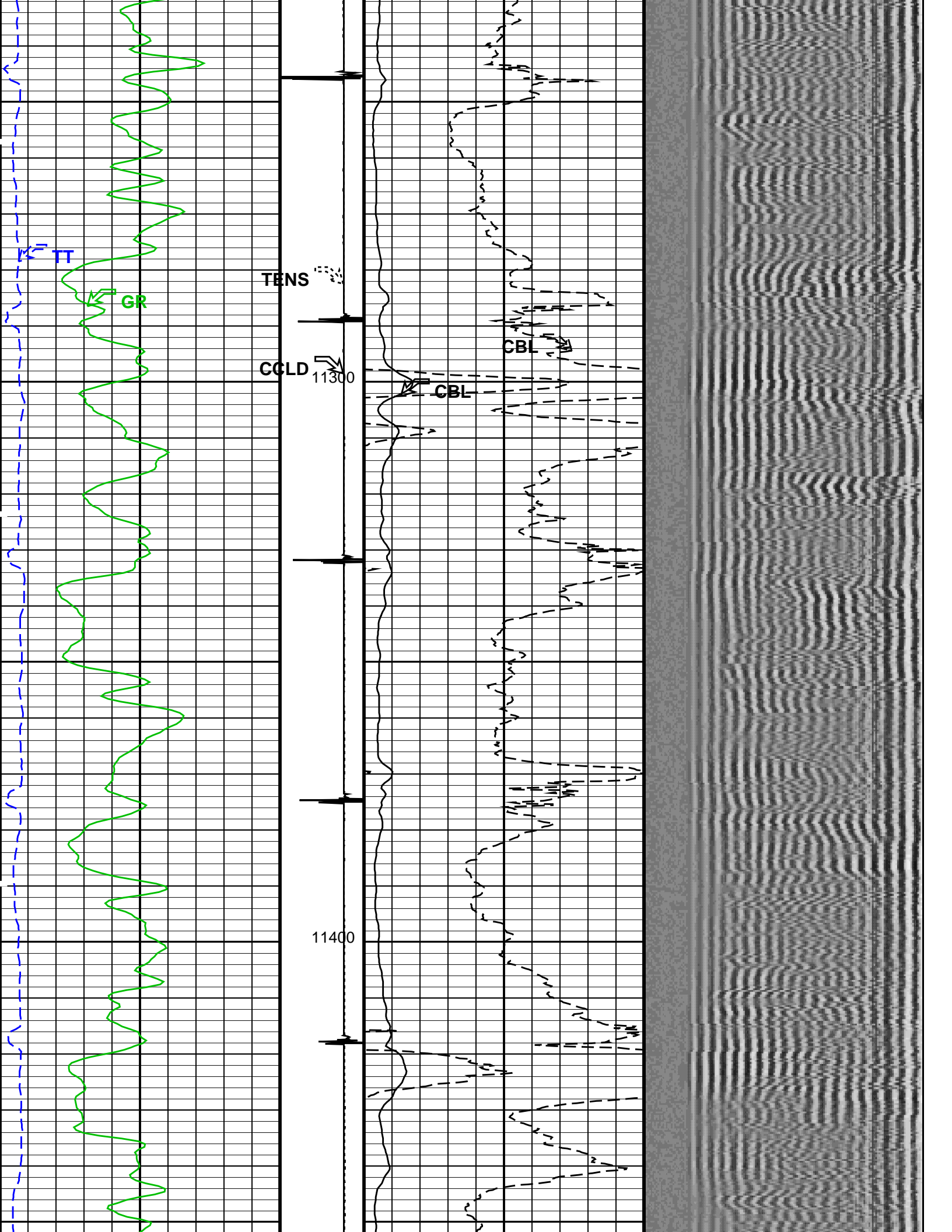


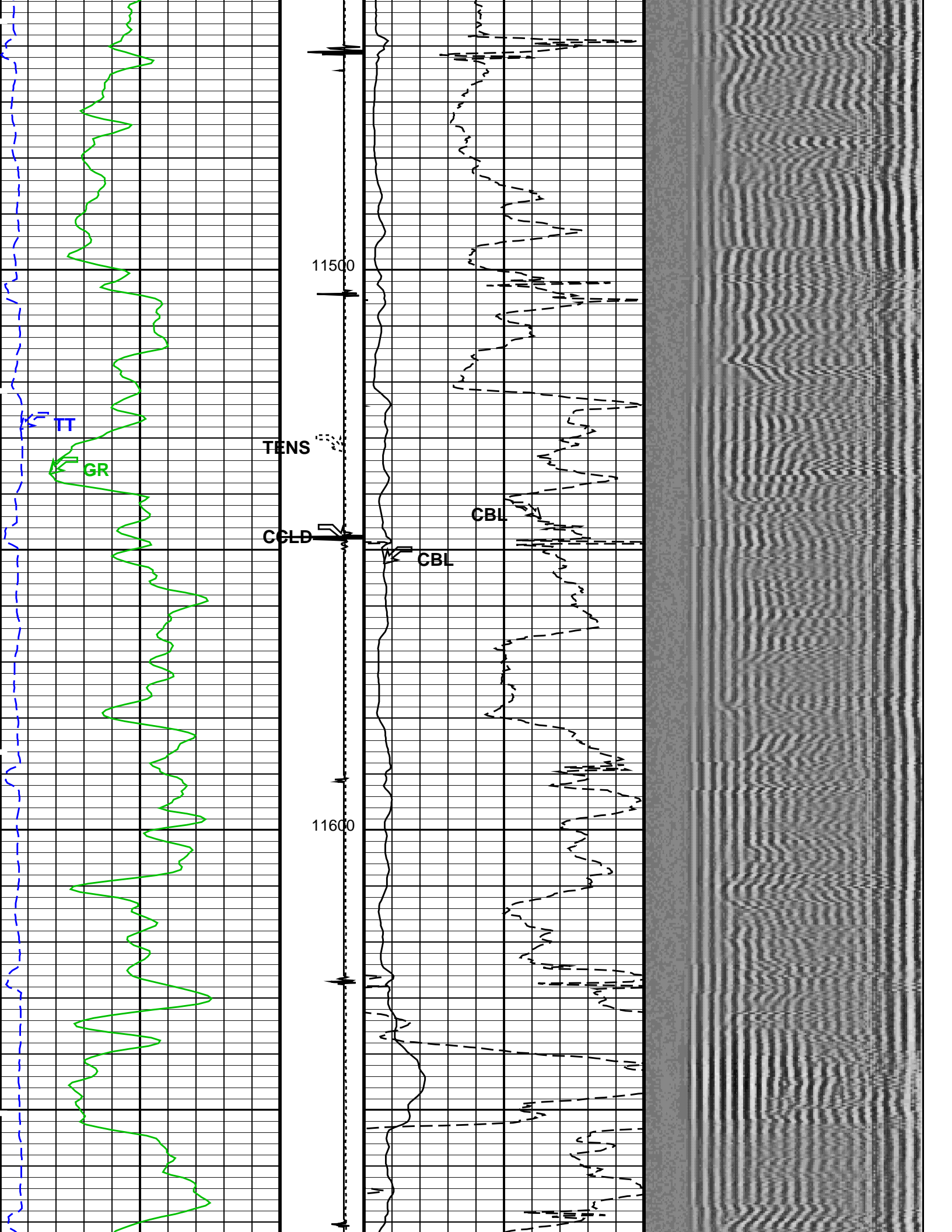


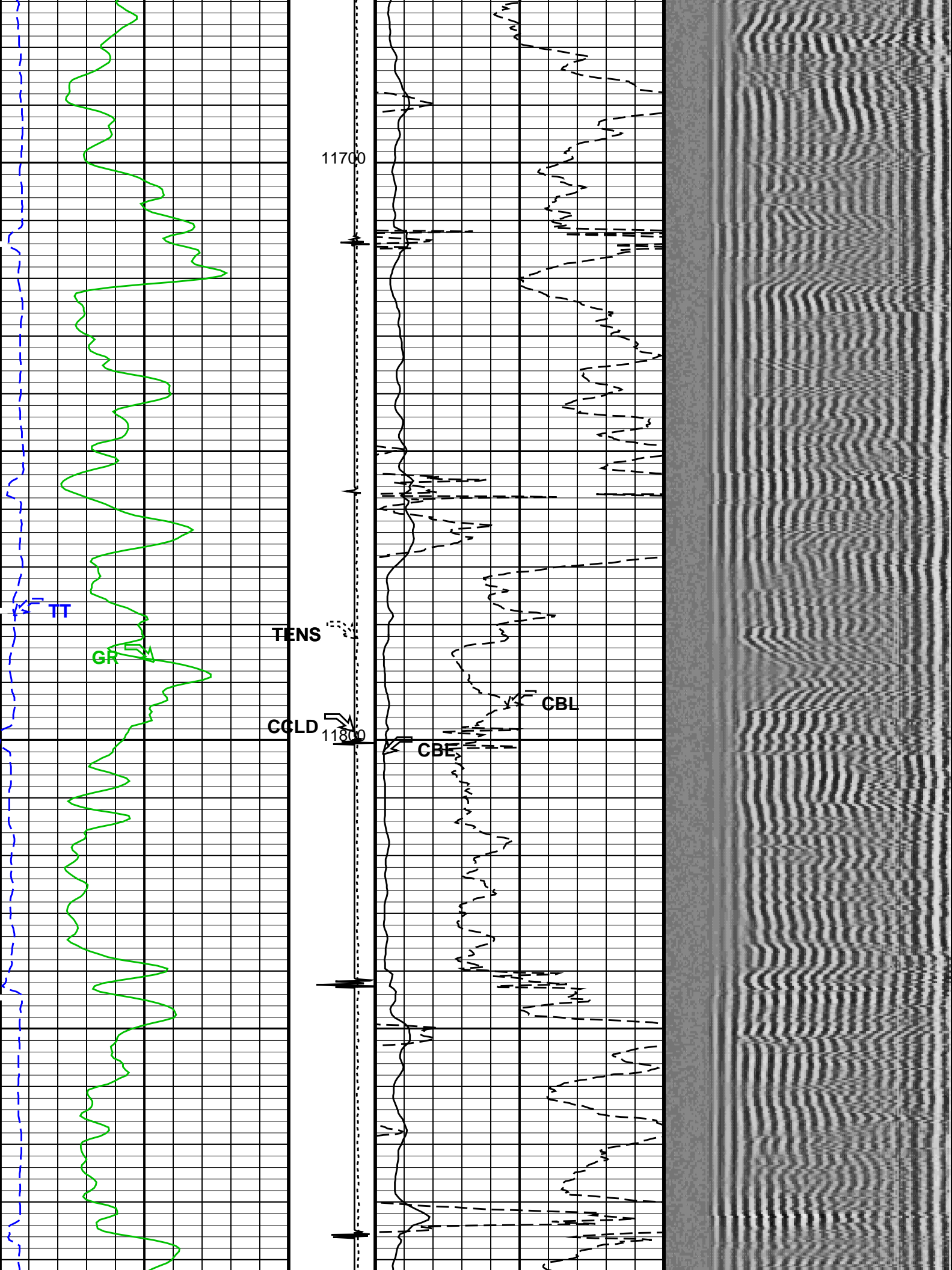


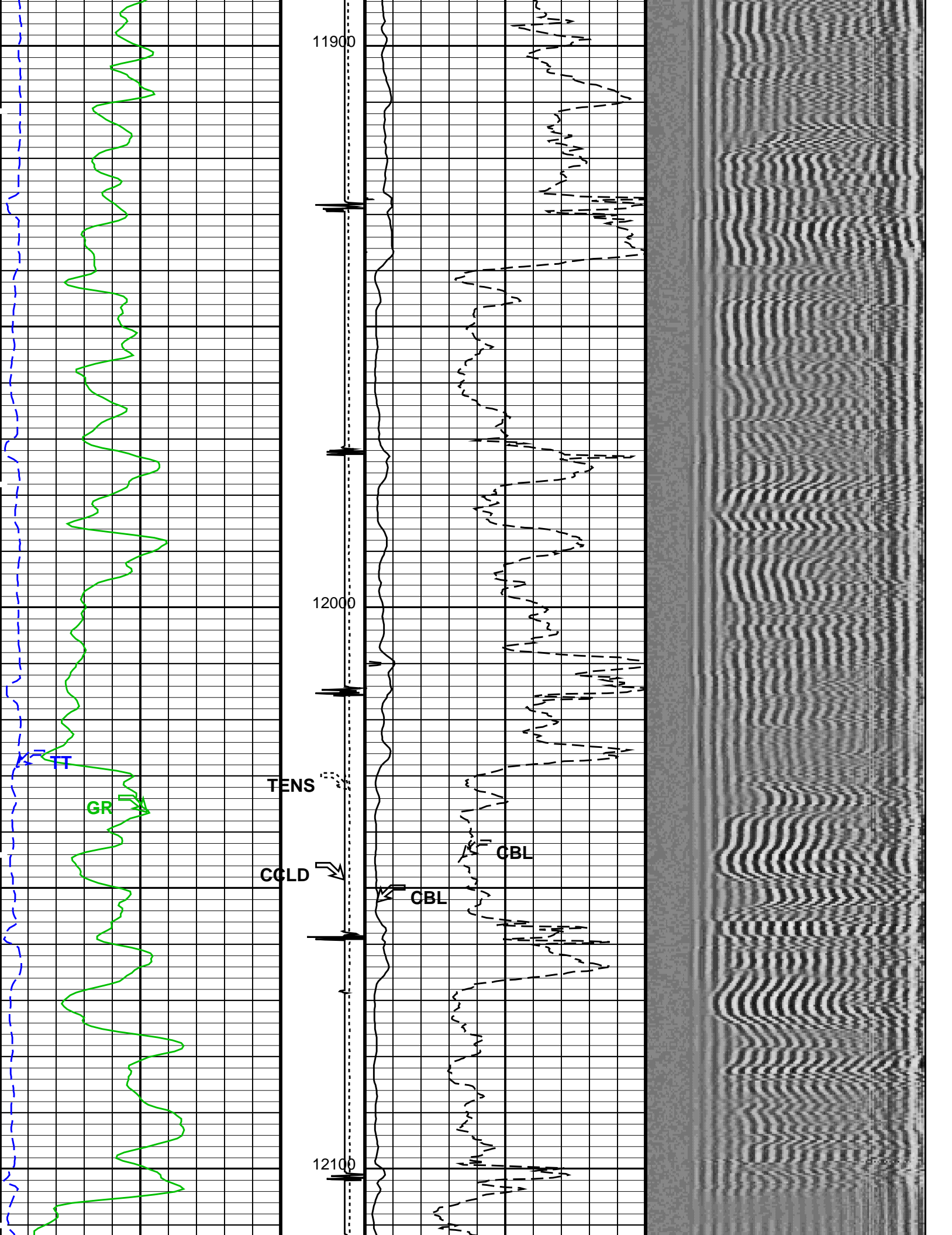


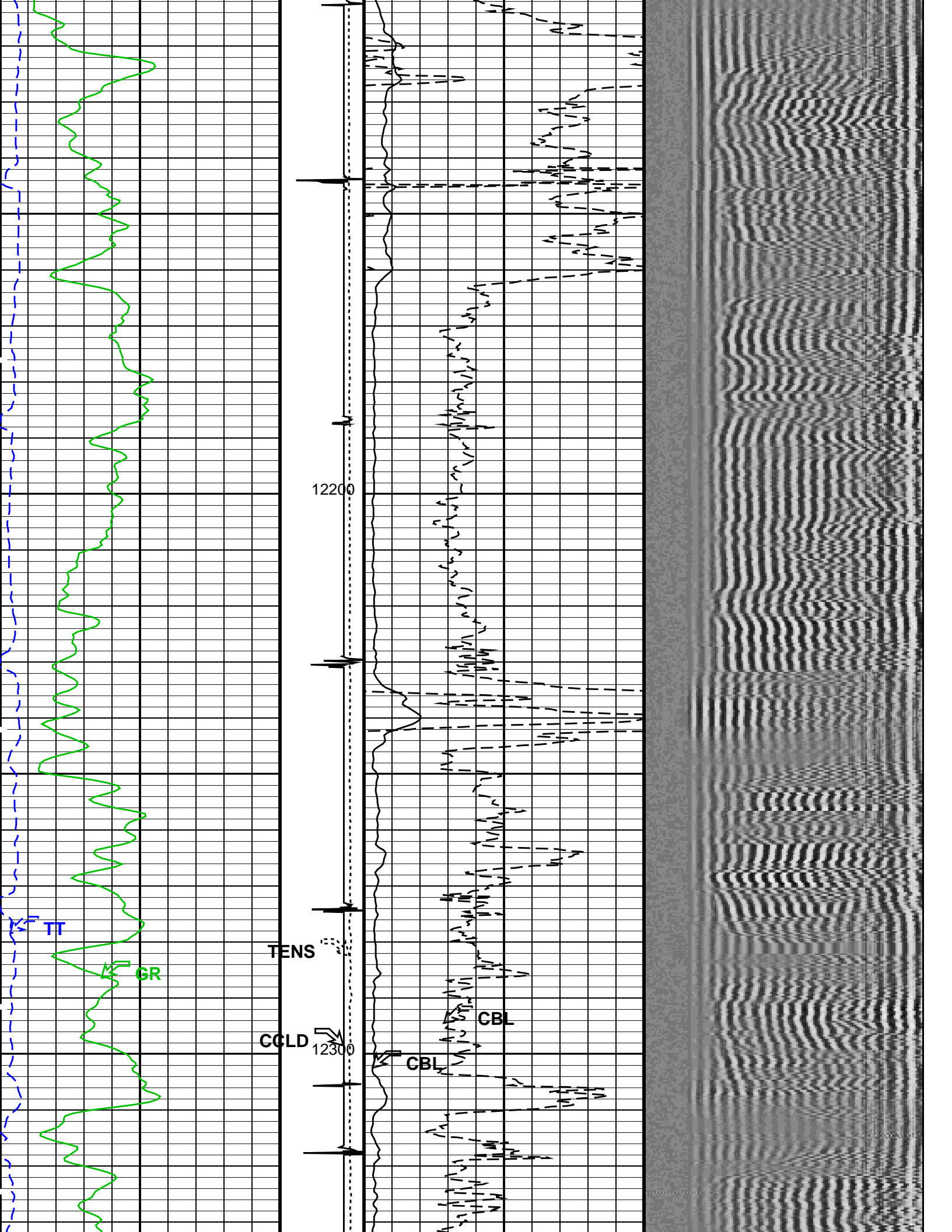


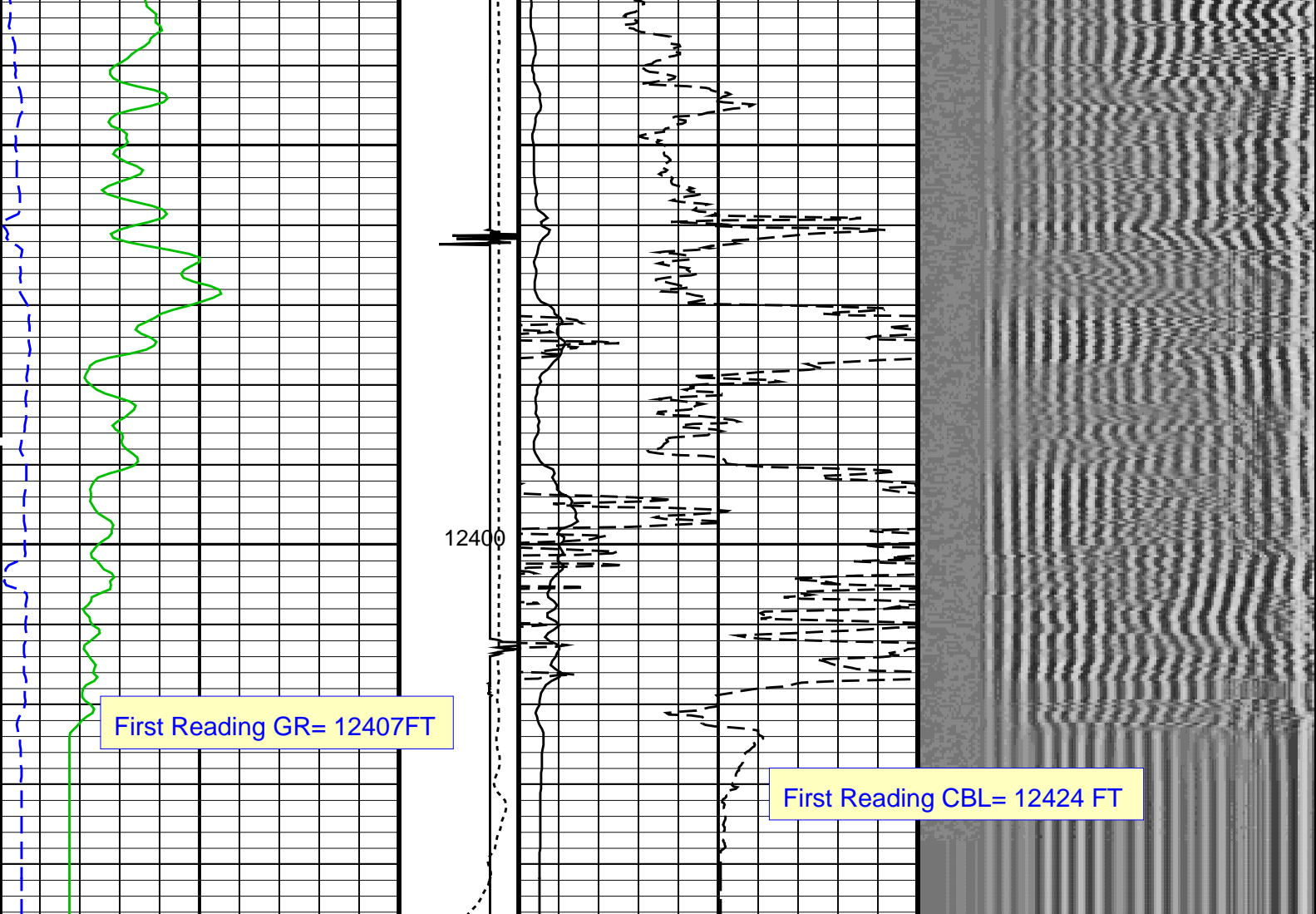












Gamma Ray (GR) (GAPI)		Tension (TENS) (LBF)	CBL Amplitude (CBL) (MV)	Min	Amplitude	Max
0	150	0 2000	0 100			
Transit Time (TT) (US)		Discriminat ed CCL (CCLD) (V)	CBL Amplitude (CBL) (MV)	VDL VariableDensity (VDL) (US)		
260	160	3 -1	0 10	200		1200

PIP SUMMARY

Time Mark Every 60 S

Format: CBL_VDL Vertical Scale: 5" per 100'

Graphics File Created: 31-Dec-2012 19:04

OP System Version: 19C0-187

SCMT-CA SRPC-5214-H2-2012-OP1 PSPT SRPC-5214-H2-2012-OP1

<<<SCMT Cement Evaluation Information Summary>>>

Sonde Serial Number	SCMS-CA 8140		
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 22 OCT 2012

CBL Correction Factor	0.0696059	CBL Adjustment Factor (CBAF)	0.800000
MAP 1 Correction Factor	0.0973857	MAP Adjustment Factor (MPAF)	1.0
MAP 2 Correction Factor	0.104582		
MAP 3 Correction Factor	0.100665		
MAP 4 Correction Factor	0.0886387		
MAP 5 Correction Factor	0.0999776		
MAP 6 Correction Factor	0.110054		
MAP 7 Correction Factor	0.113590		
MAP 8 Correction Factor	0.0958998		

Parameters

DLIS Name	Description	Value	
SCMT-CA: 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
CWEI	Casing Weight	11.60	LB/F
DFD	Drilling Fluid Density	8.40	LB/G
DO	Depth Offset for Playback	7.0	FT
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	12433	FT

Input DLIS Files

DEFAULT	SCMT_PSP_018LUP	FN:17	PRODUCER	31-Dec-2012 15:44	12439.5 FT	24.0 FT
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Output DLIS Files

DEFAULT	SCMT_PSP_022PUP	FN:21	PRODUCER	31-Dec-2012 19:04
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Schlumberger**REPEAT ANALYSIS CBL VDL**

Input DLIS Files

DEFAULT	SCMT_PSP_016LUP	FN:15	PRODUCER	31-Dec-2012 15:23	8069.5 FT	7768.0 FT
DEFAULT	SCMT_PSP_022PUP	FN:21	PRODUCER	31-Dec-2012 19:04	12446.5 FT	9.5 FT

Output DLIS Files

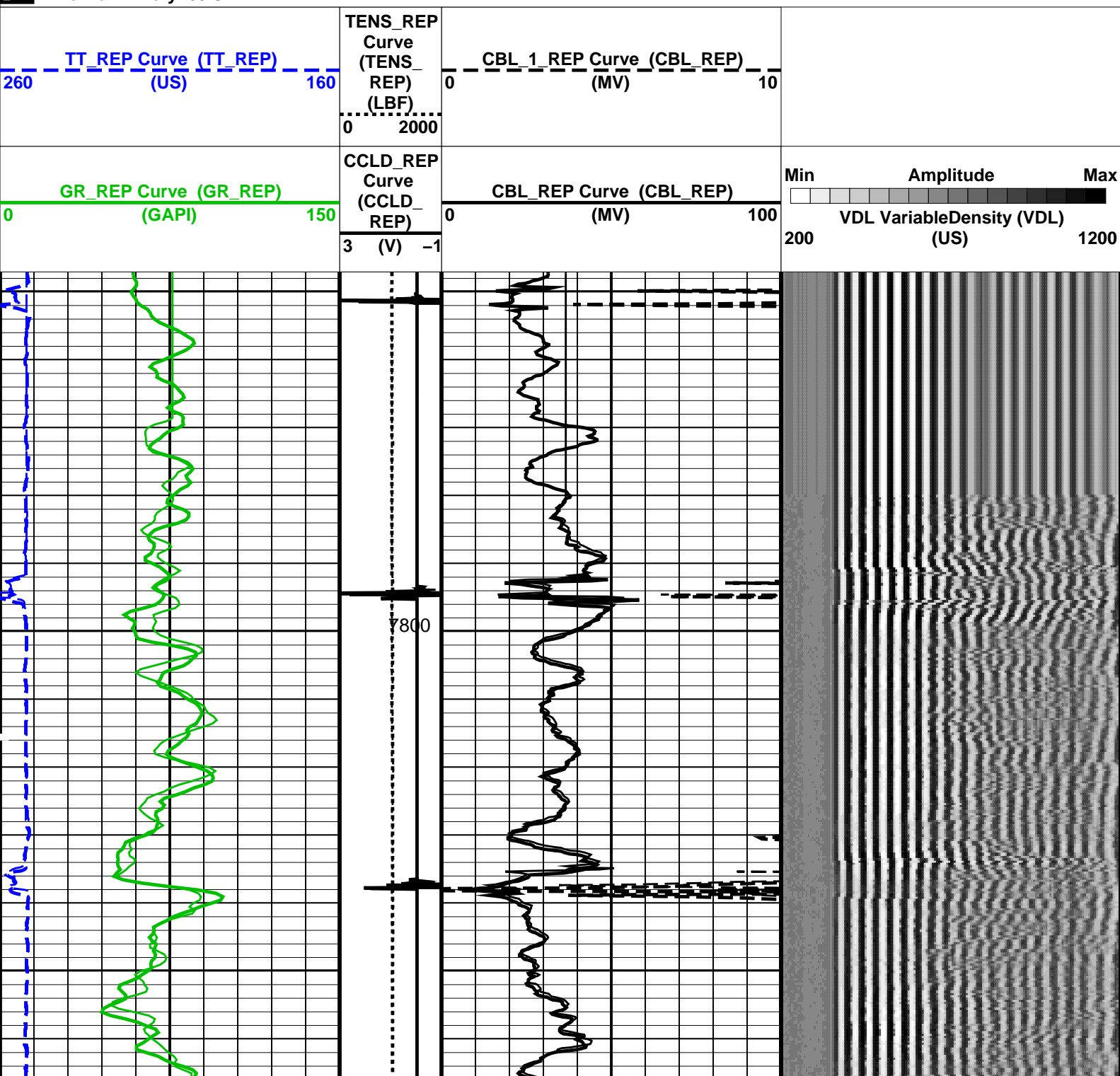
DEFAULT	SCMT_PSP_024PUP	FN:23	PRODUCER	31-Dec-2012 19:16	8069.5 FT	7746.5 FT
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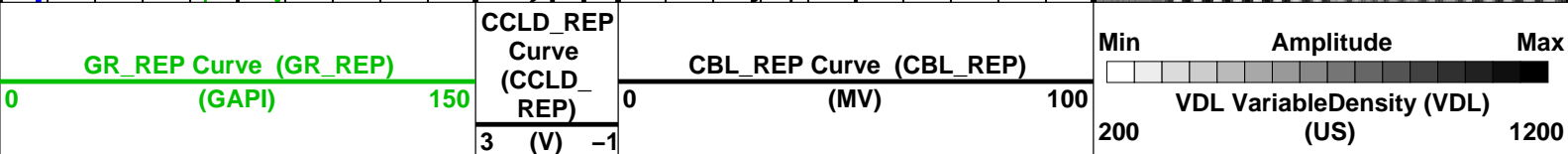
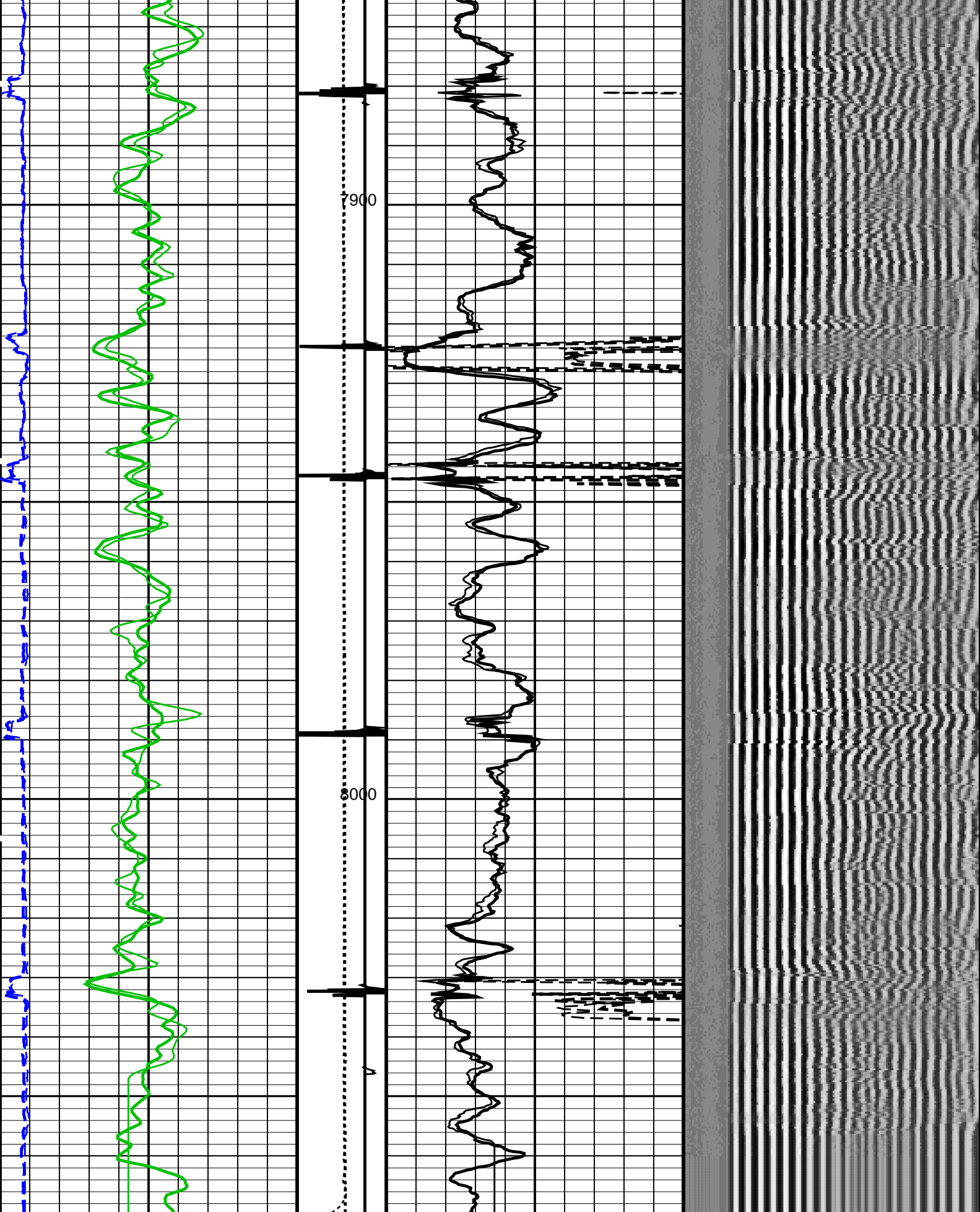
OP System Version: 19C0-187

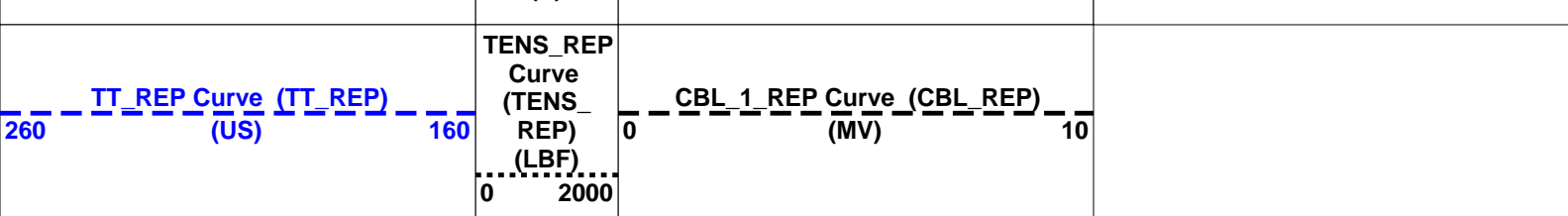
SCMT-CA	SRPC-5214-H2-2012-OP1!	PSPT	SRPC-5214-H2-2012-OP1!
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PIP SUMMARY

Time Mark Every 60 S







PIP SUMMARY

Time Mark Every 60 S

Format: CBL_VDL_REP Vertical Scale: 5" per 100'

Graphics File Created: 31-Dec-2012 19:16

OP System Version: 19C0-187

SCMT-CA SRPC-5214-H2-2012-OP1 PSPT SRPC-5214-H2-2012-OP1

<<<SCMT Cement Evaluation Information Summary>>>

Sonde Serial Number	SCMS-CA 8140		
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	23-OCT-2012		
CBL Correction Factor	0.0696059	CBL Adjustment Factor (CBAF)	0.800000
MAP 1 Correction Factor	0.0973857	MAP Adjustment Factor (MPAF)	1.0
MAP 2 Correction Factor	0.104582		
MAP 3 Correction Factor	0.100665		
MAP 4 Correction Factor	0.0886387		
MAP 5 Correction Factor	0.0999776		
MAP 6 Correction Factor	0.110054		
MAP 7 Correction Factor	0.113590		
MAP 8 Correction Factor	0.0958998		

Parameters

DLIS Name	Description	Value	
SCMT-CA: 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
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	RECOMPUTE	
TD	Total Depth	12433	FT

Input DLIS Files

DEFAULT	SCMT_PSP_016LUP	FN:15	PRODUCER	31-Dec-2012 15:23	8069.5 FT	7768.0 FT
DEFAULT	SCMT_PSP_022PUP	FN:21	PRODUCER	31-Dec-2012 19:04	12446.5 FT	9.5 FT

Output DLIS Files

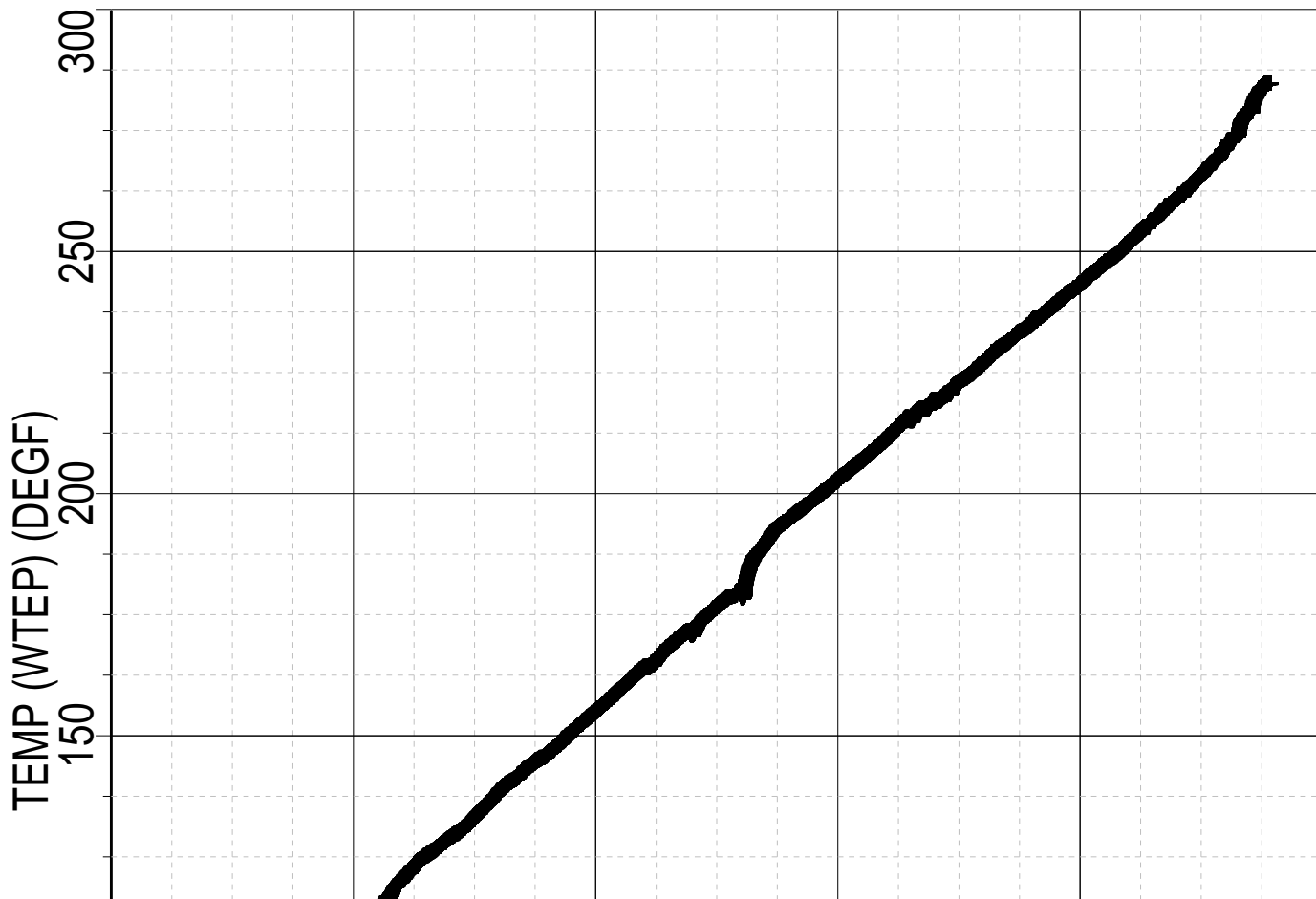
DEFAULT	SCMT_PSP_024PUP	FN:23	PRODUCER	31-Dec-2012 19:16		
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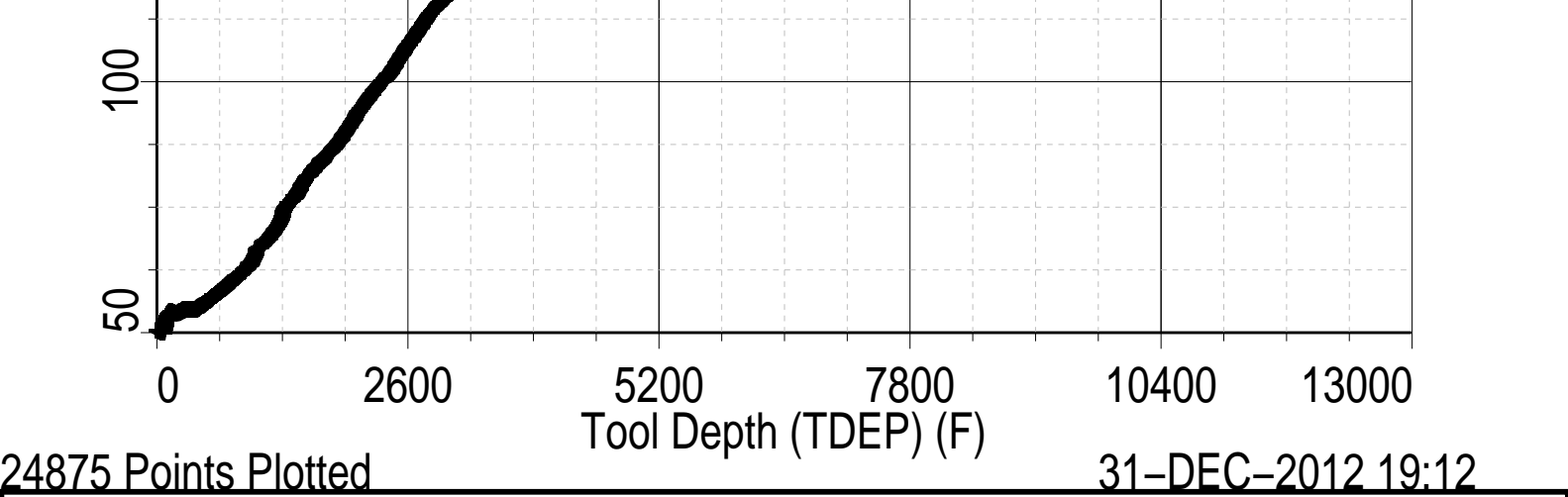
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TEMPERATURE PLOT

MAXIS Field Log

Index: 12446.5 – 9.5 FT





PBMS COEFFICIENTS

MAXIS Field Log

Client:	ENCANA OIL & GAS (USA) INC	Tool:	PSP
Field:	STORY GULCH	Sub Type:	PBMS
Well:	SG 8502A-35 (D36 496)	Sensor:	GR
Run date:	31-Dec-2012		

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

Well: SG 8502A-35 (D36 496)

Run date: 31-Dec-2012

Tool: PSP

Sub Type: PBMS

Sensor: WellTemp RTD

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

Field: STORY GULCH

Well: SG 8502A-35 (D36 496)

Run date: 31-Dec-2012

Tool: PSP

Sub Type: PBMS

Sensor: CQG

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	-.222222101222E-02	+.222222714515E-12	-.252272271212E-15

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

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

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








MASTER CALIBRATION

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Slim Cement Mapping Tool, 1-11/16 OD Master Calibration - SCMT CBL and MAP Amplitude Normalization in SFT-155/-255							
Master: 23-Oct-2012 16:09							
MAP 1 Amplitude Plus	1075	1232	--	--	--	--	MV
MAP 2 Amplitude Plus	1075	1147	--	--	--	--	MV
MAP 3 Amplitude Plus	1075	1192	--	--	--	--	MV
MAP 4 Amplitude Plus	1075	1354	--	--	--	--	MV
MAP 5 Amplitude Plus	1075	1200	--	--	--	--	MV
MAP 6 Amplitude Plus	1075	1090	--	--	--	--	MV
MAP 7 Amplitude Plus	1075	1056	--	--	--	--	MV
MAP 8 Amplitude Plus	1075	1251	--	--	--	--	MV

Slim Cement Mapping Tool, 1–11/16 OD / Equipment Identification			
Primary Equipment:			
Slim Cement Mapping Xmitter Electronics	SCMX – CA		
Slim Cement Mapping Sonde	SCMS – CA	8140	
Slim Cement Mapping Cartridge	SCMC – CA	8110	
Auxiliary Equipment:			
Slim Electronics Cartridge Housing	SECH – CA		

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			1232	Master			1147
	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			1192	Master			1354
	500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)		500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)
Phase	MAP 5 Amplitude Plus MV		Value	Phase	MAP 6 Amplitude Plus MV		Value
Master			1200	Master			1090
	500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)		500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)
Phase	MAP 7 Amplitude Plus MV		Value	Phase	MAP 8 Amplitude Plus MV		Value
Master			1056	Master			1251
	500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)		500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)
Phase	CBL Amplitude Plus MV		Value				
Master			1379				
	1000 (Minimum)	1350 (Nominal)	1700 (Maximum)				
Master: 23–Oct–2012 16:09							

Company:

ENCANA OIL & GAS (USA) INC

Well:

SG 8502A–35 (D36 496)

Field:

STORY GULCH

County:

GARFIELD

State:

COLORADO

Schlumberger

SLIM CEMENT MAPPING LOG

CBL–VDL

GR – CCL