



Company: ENCANA OIL & GAS (USA) INC.

Well: NP EF01A-34 P27 595

Field: NORTH PARACHUTE

County: GARFIELD

State: COLORADO

County:	GARFIELD		
Field:	NORTH PARACHUTE		
Location:	SHL: 623' FSL & 554' FEL		
Well:	NP EF01A-34 P27 595		
Company:	ENCANA OIL & GAS (USA) INC.		
CEMENT BOND LOG			
CBL - VDL			
GAMMA RAY - CCL			
LOCATION			
SHL: 623' FSL & 554' FEL		Elev.: K.B. 6677.00 ft	
BHL: 29' FNL & 554' FEL		G.L. 6650.00 ft	
		D.F. 6676.00 ft	
Permanent Datum: _____		GROUND LEVEL _____	
Log Measured From: _____		KELLY BUSHING _____	
Drilling Measured From: _____		KELLY BUSHING _____	
API Serial No. _____		Section 27	
05-045-20298-0000		Township 5S	
		Range 95W	

	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			
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			
Recorded By			
Witnessed By			

Logging Date	26-Apr-2012		
Run Number	TWO		
Depth Driller	10175 ft		
Schlumberger Depth	10122 ft		
Bottom Log Interval	10116 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	10175 ft		
Casing/Tubing Size	4.500 in		
Weight	11.6 lbm/ft		
Grade	S-80		
From	22 ft		
To	10149 ft		
Maximum Recorded Temperatures	278 degF		
Logger On Bottom	26-Apr-2012	Time	10:33
Unit Number	391	Location	GRAND JUNCTION
Recorded By	DAVID PATE		
Witnessed By	UNATTENDED		

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			
Recorded By			
Witnessed By			

DEPTH SUMMARY LISTING

Date Created: 26-APR-2012 12:47:51

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:	13-MAR-2012	Length:	19600 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:	5		
Wheel Correction 2:	-3	Calibration Peak Error:	9		

Depth Control Parameters

Log Sequence:	First Log In the Well
Rig Up Length At Surface:	272.00 FT
Rig Up Length At Bottom:	273.00 FT
Rig Up Length Correction:	-1.00 FT
Stretch Correction:	6.00 FT
Tool Zero Check At Surface:	1.10 FT

Depth Control Remarks

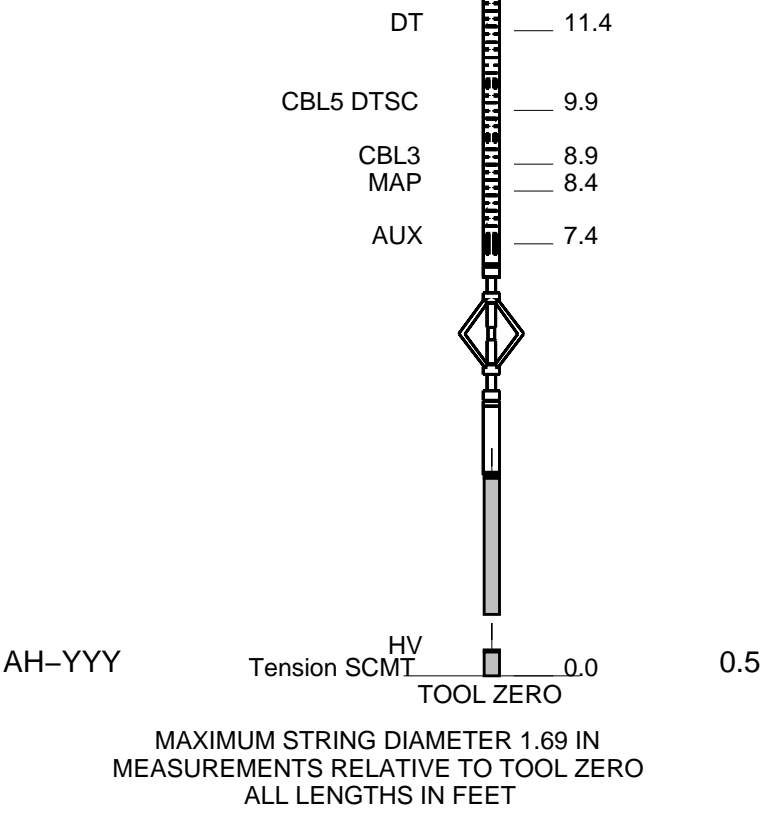
1. ALL SCHLUMBERGER DEPTH CONTROL PROCEDURES FOLLOWED.
2. IDW USED AS PRIMARY DEPTH CONTROL.
3. Z-CHART USED AS SECONDARY DEPTH CONTROL.
- 4.
- 5.
- 6.

DISCLAIMER

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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: 10122 FT	
MAXIMUM RECORDED PRESSURE AT TD: 4270 PSIA	
MAXIMUM RECORDED TEMPERATURE AT TD: 278 DEGF	

SHORT JOINTS: 6270 FT & 8660 FT					
EXPECTED FREE PIPE AMPLITUDE: 80 mV					
CYCLE SKIPING DUE TO GOOD BOND CAUSING TT TO READ HIGH					
AFE: 11160562					
THANK YOU FOR CHOOSING SCHLUMBERGER.					
CREW: KELLY J. & CHRIS A.					
RUN 1			RUN 2		
SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:			SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:		
BIHS-00232 19C0-187 22 ft					
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP
EQUIPMENT DESCRIPTION					
RUN 1			RUN 2		
SURFACE EQUIPMENT			<div></div>		
WITM-A 3412 PSC_16MHZ 3412					
DOWNHOLE EQUIPMENT					
MH-22 MH-22 391		30.6			
AH-38	Detail MT TelStatus CTEM	29.1			
PSPT		28.8			
PSC-A PSPT-A 3779 PSTC-A PBMS-A 3779 10k_Sapphire_Mano 3779 RTD_Thermometer 3779 GR CCL 3779 PBMS 3779					
	GR	25.1			



MAIN PASS 0 PSI

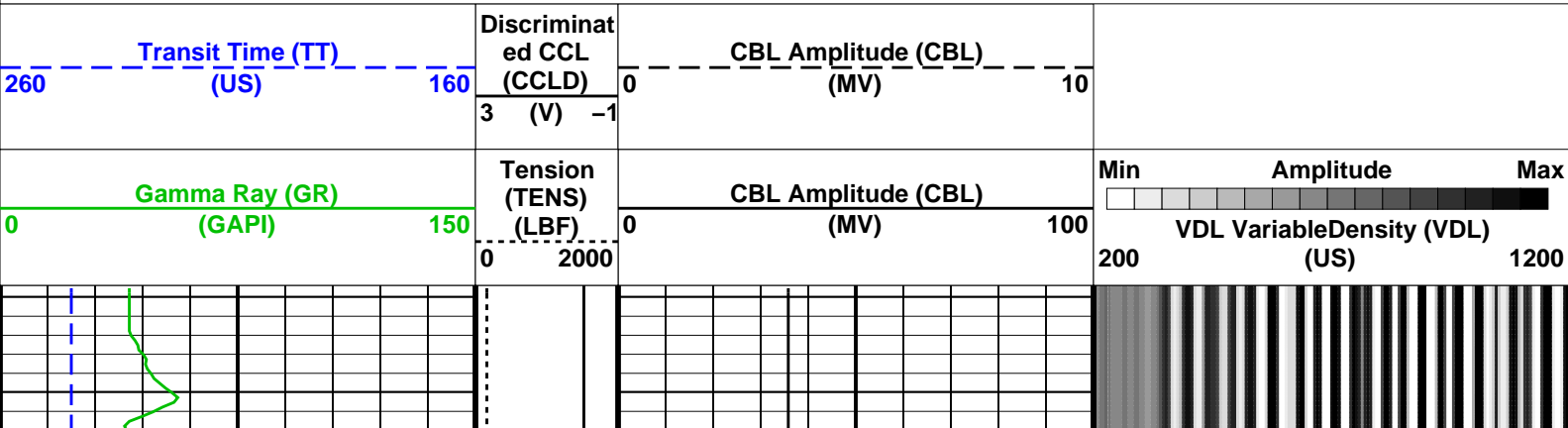
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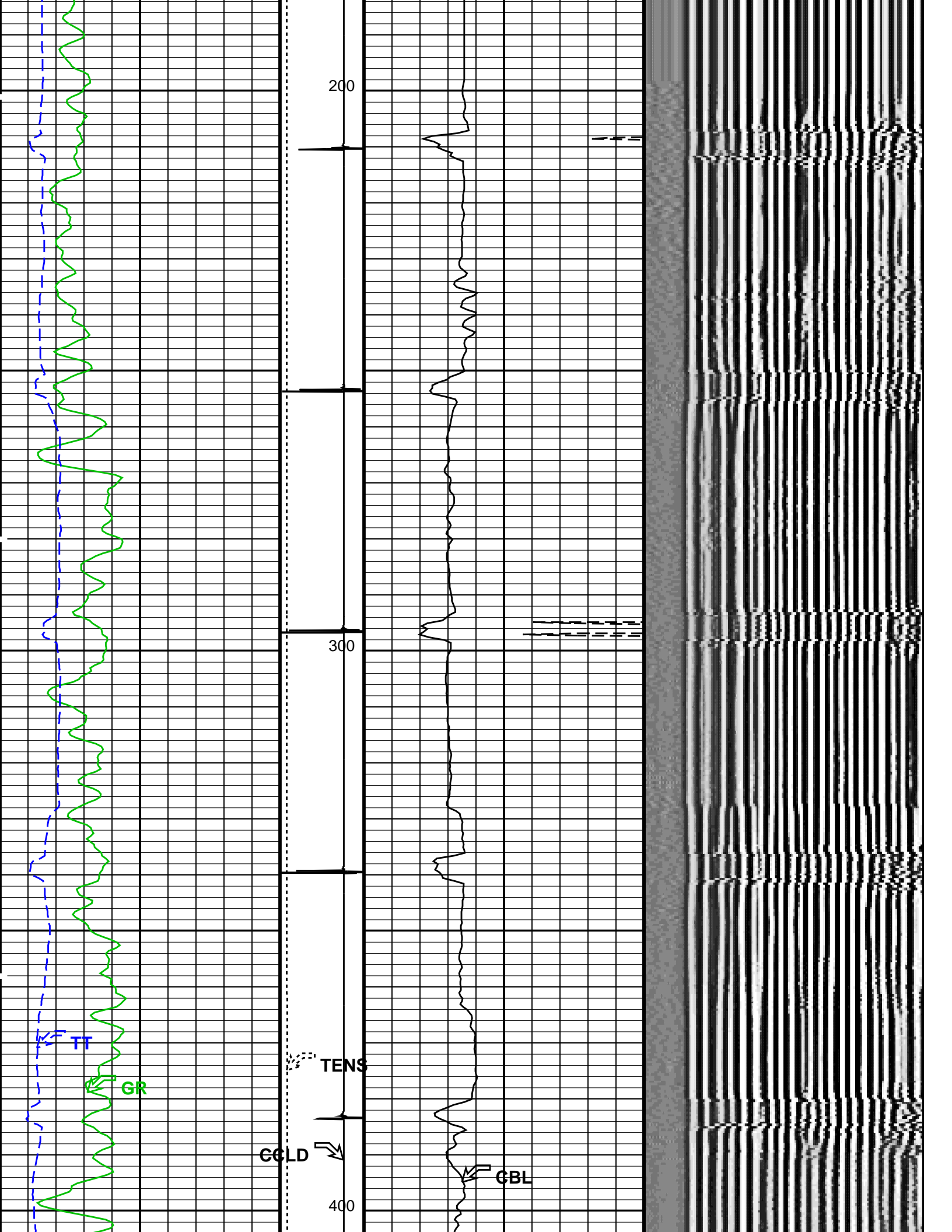
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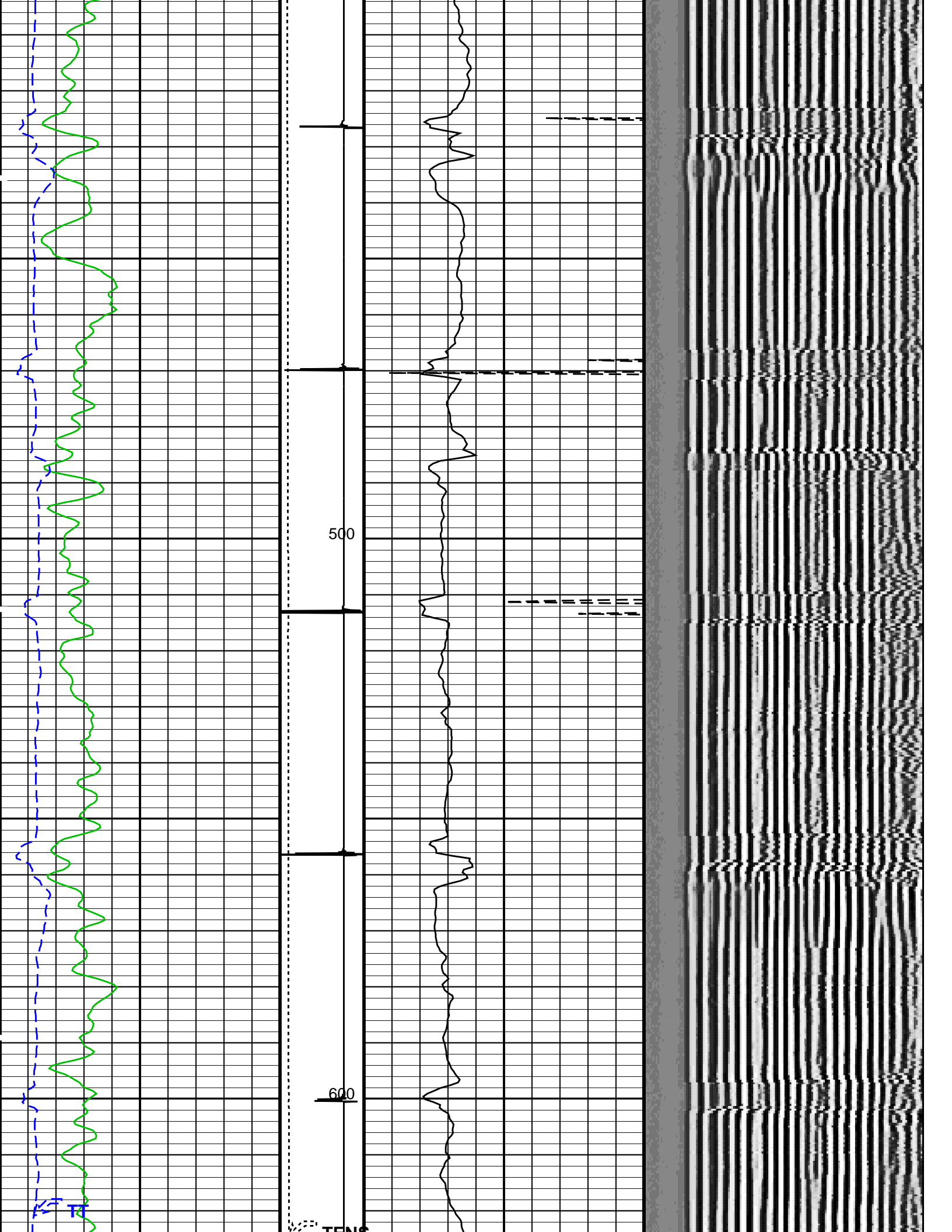
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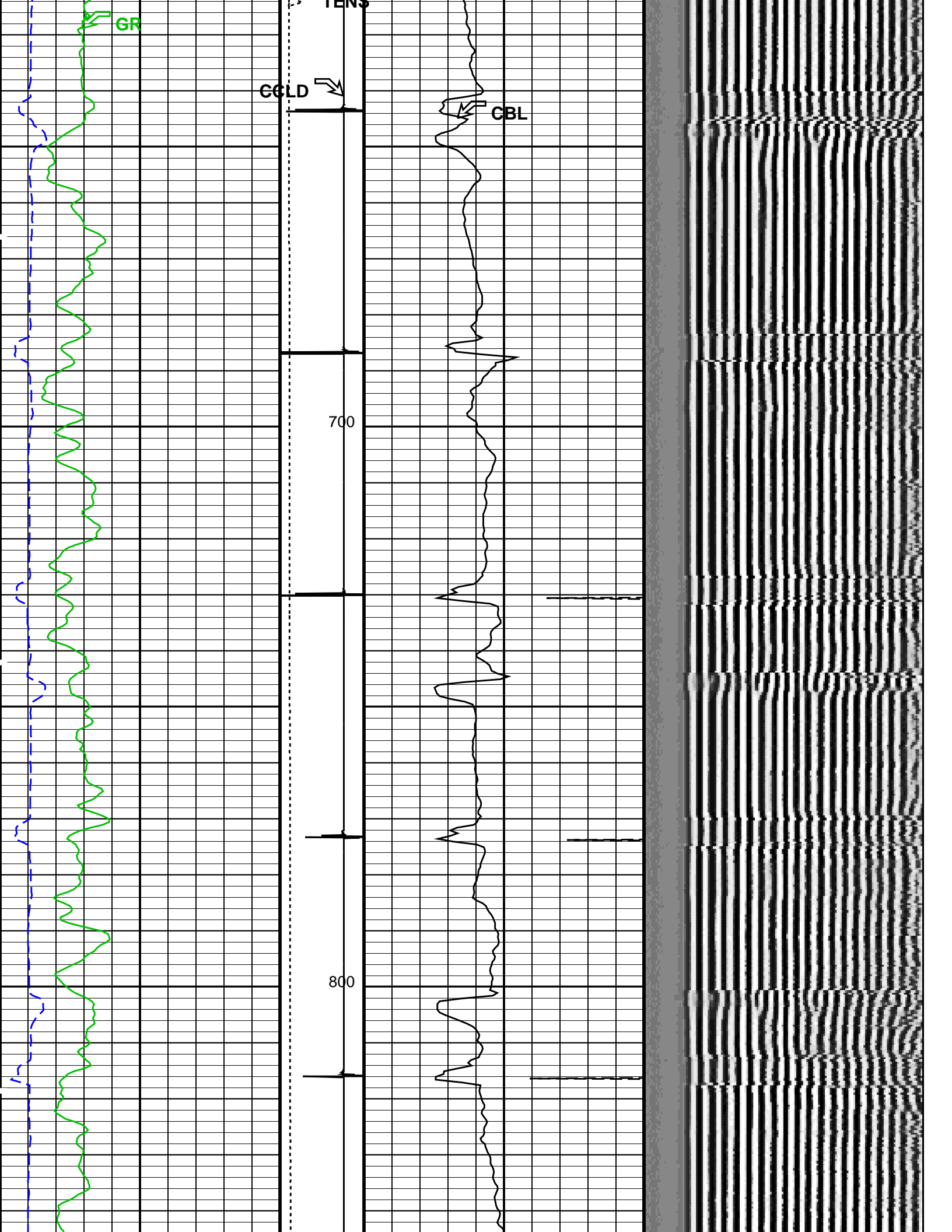
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SCMT-CB	SRPC-5095-H2-2011-OP19_b	PSPT	19C0-187	

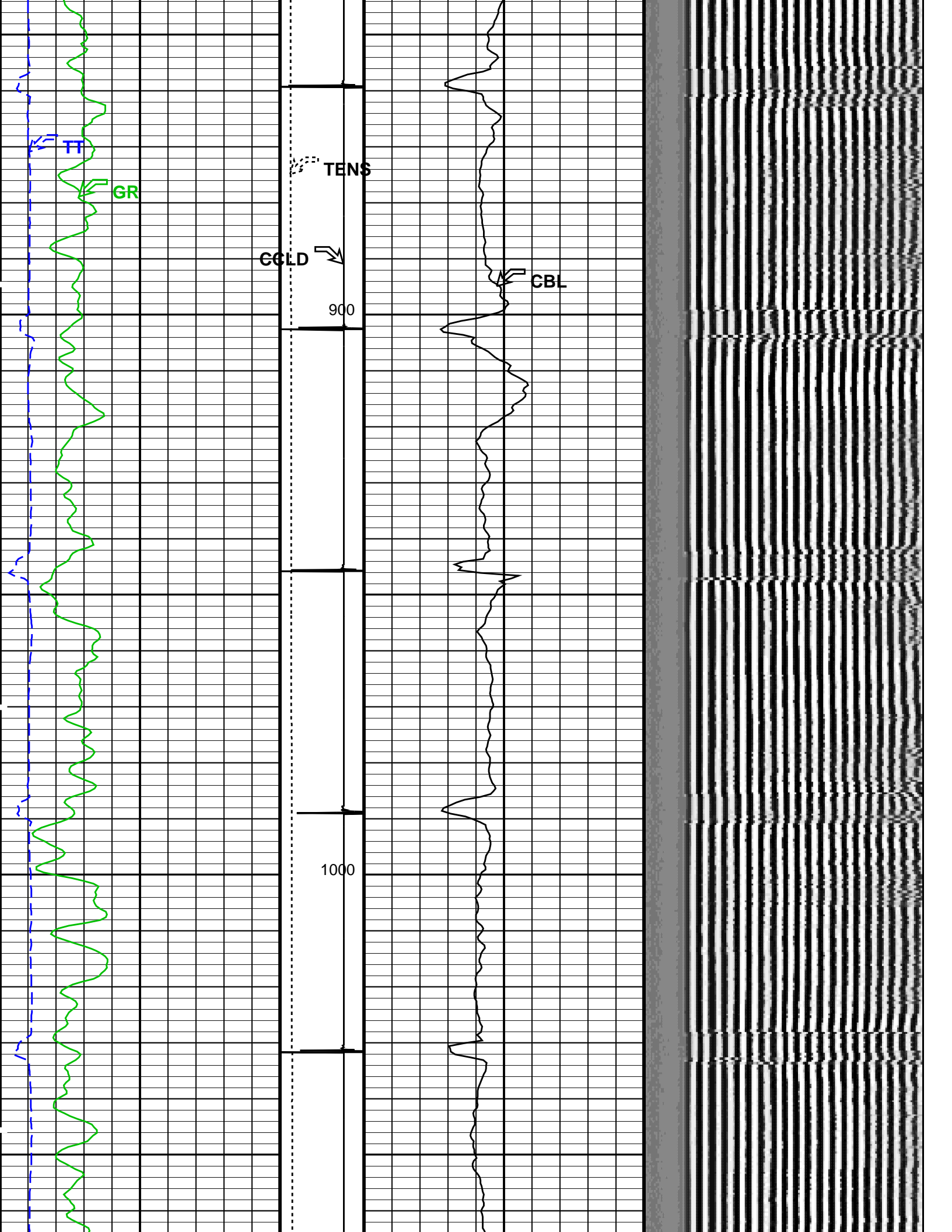
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Time Mark Every 60 S				

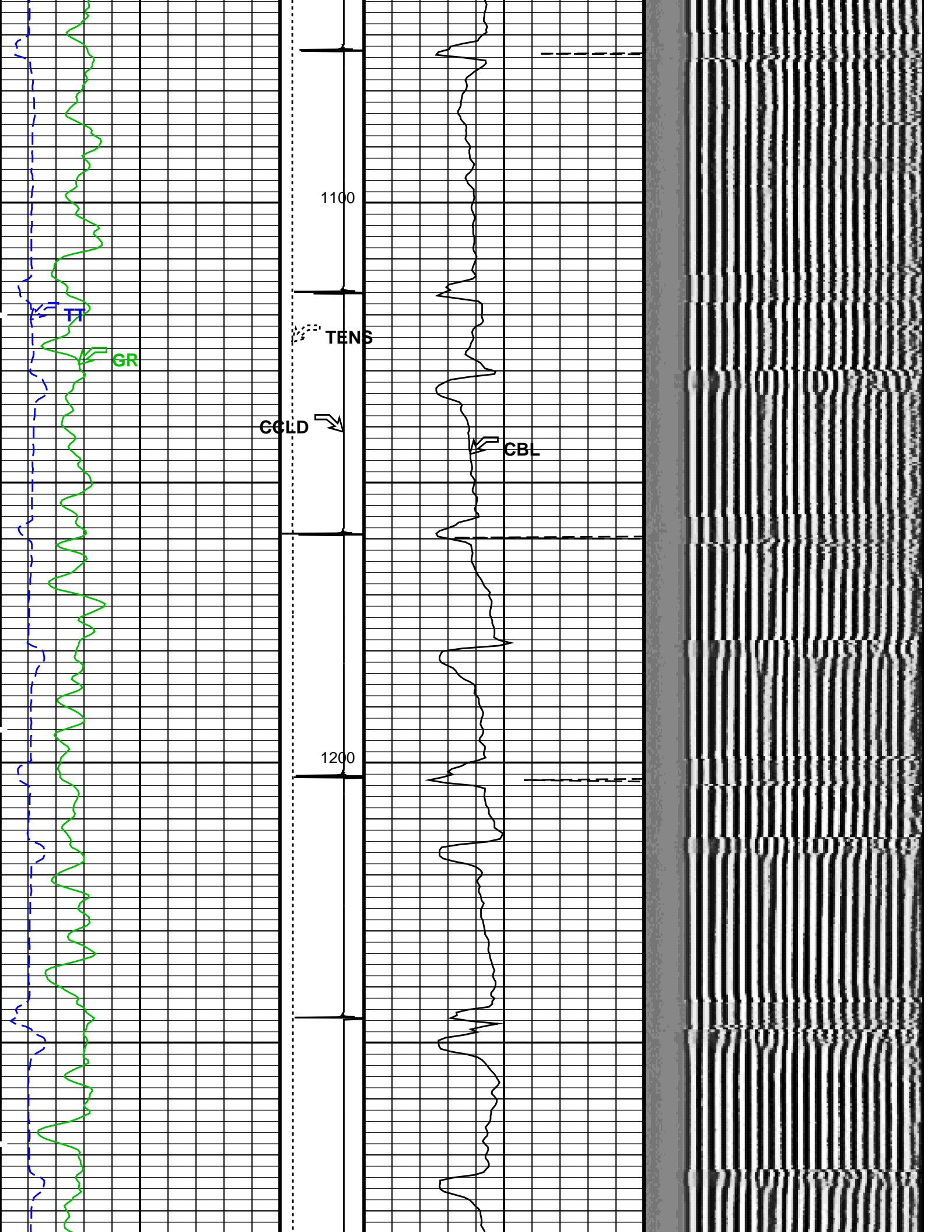


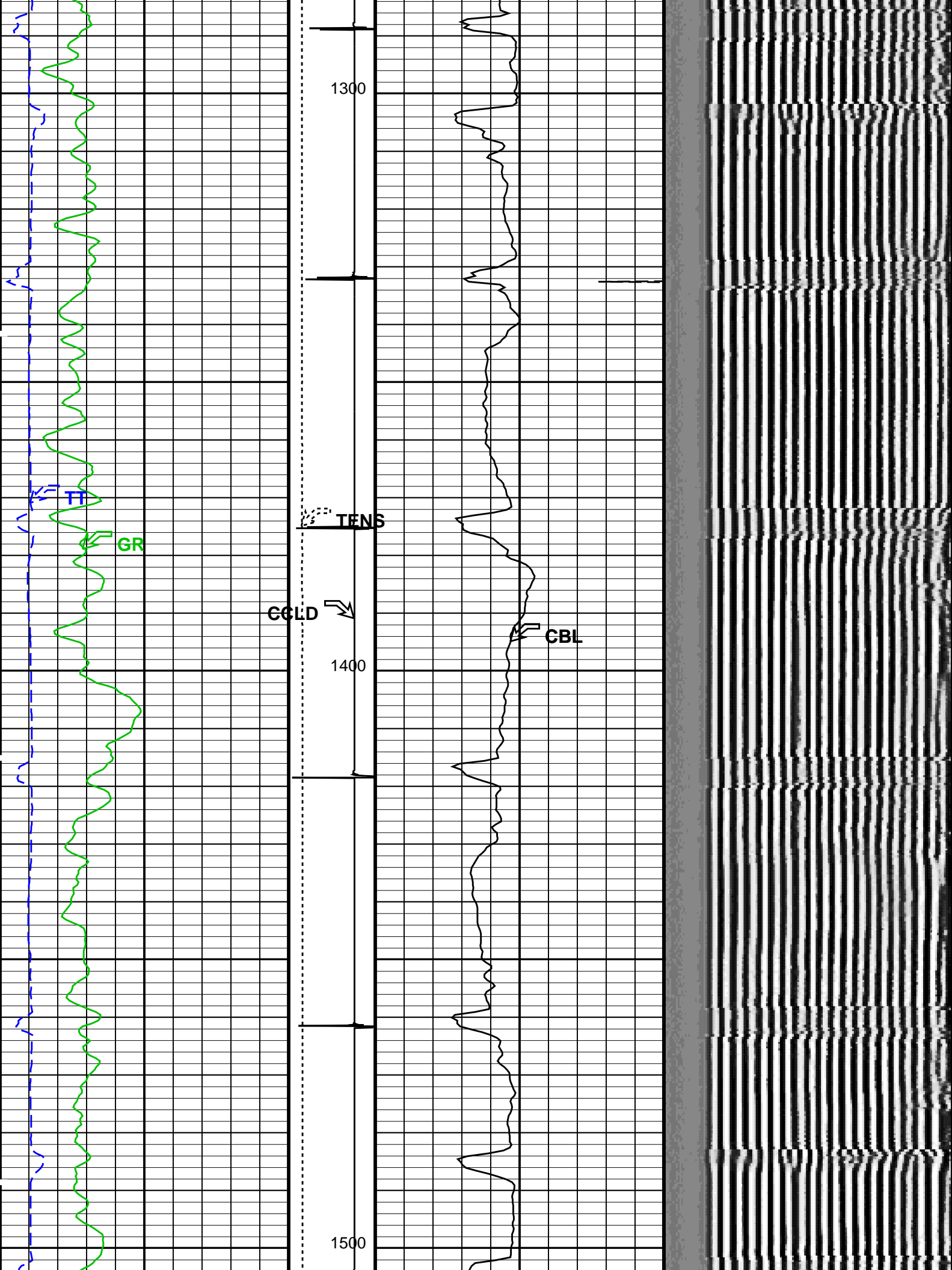


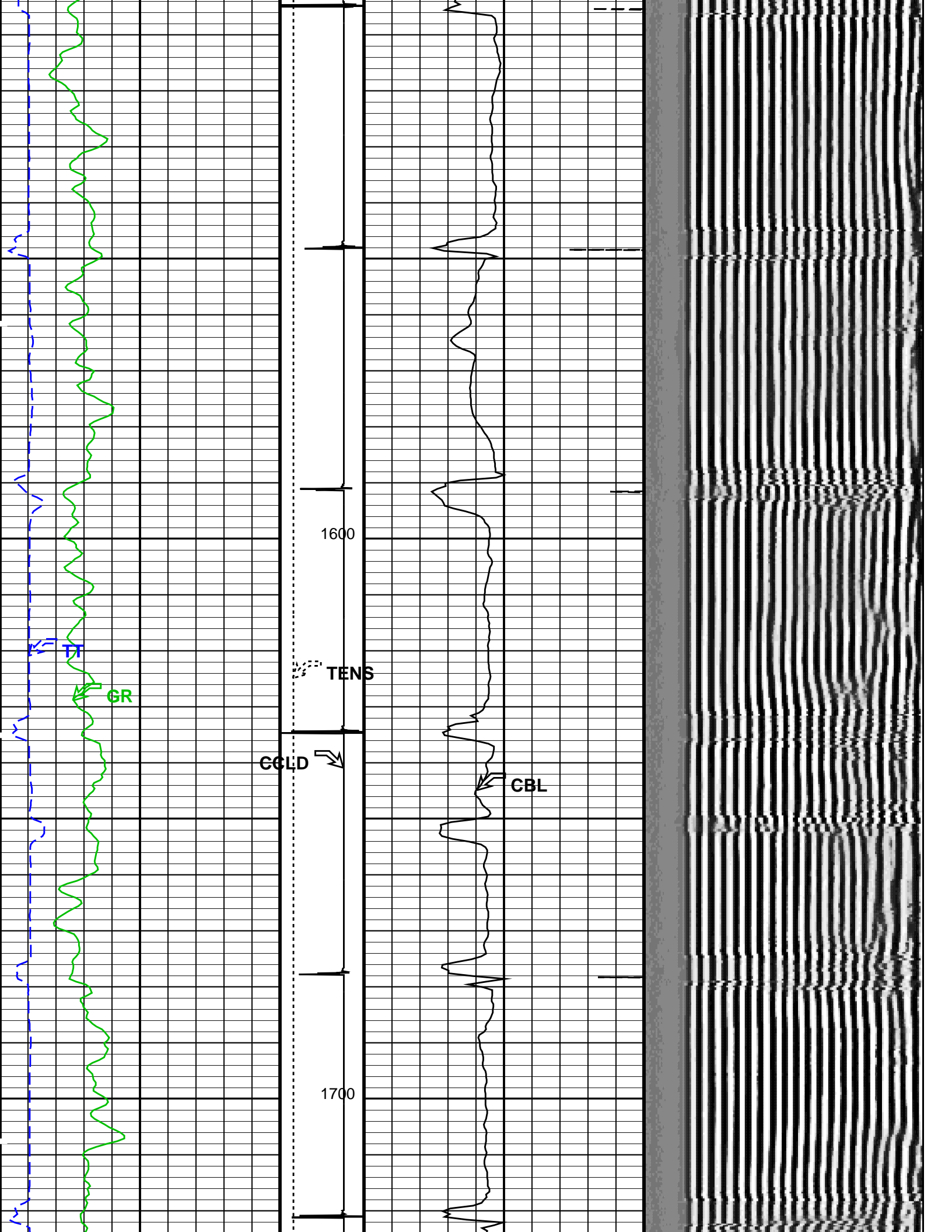


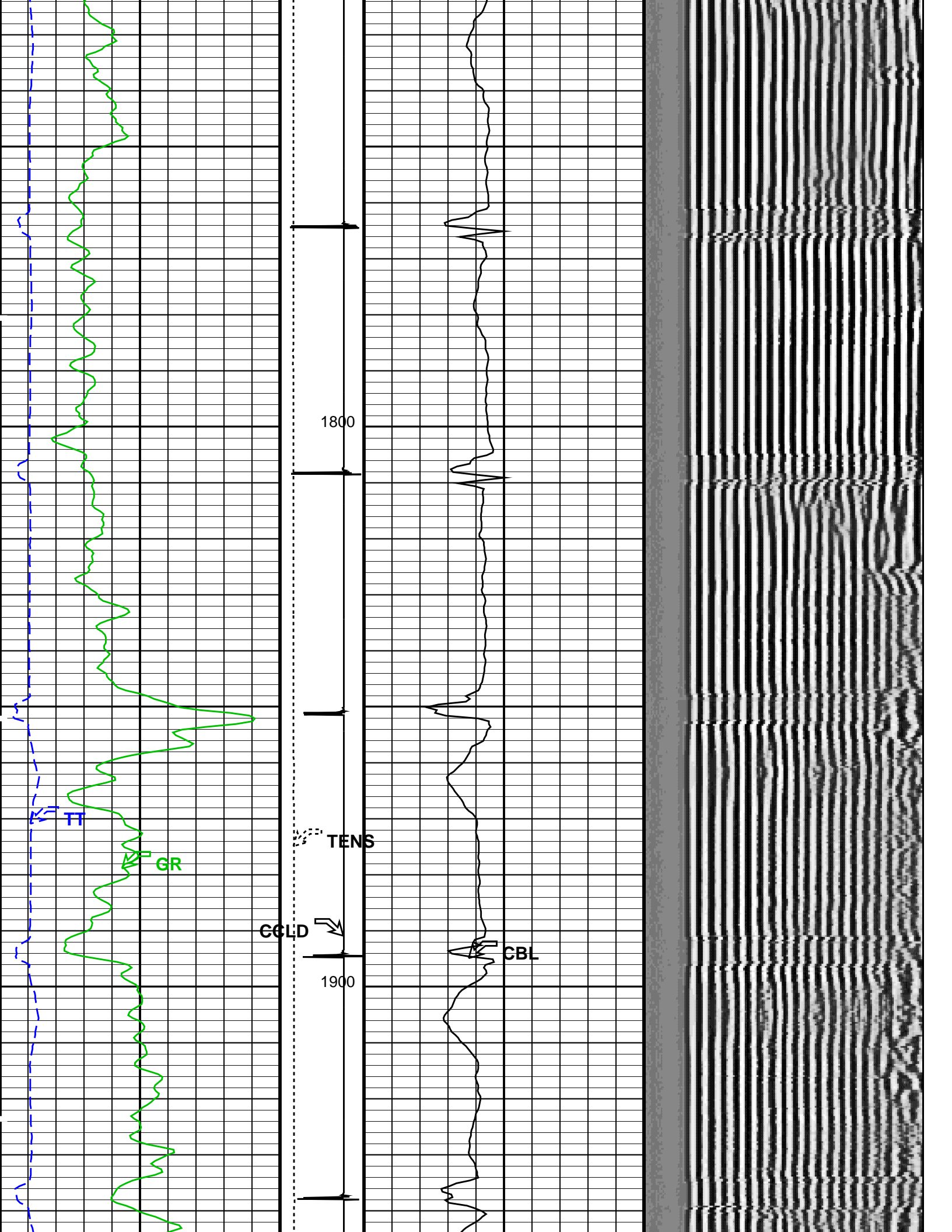


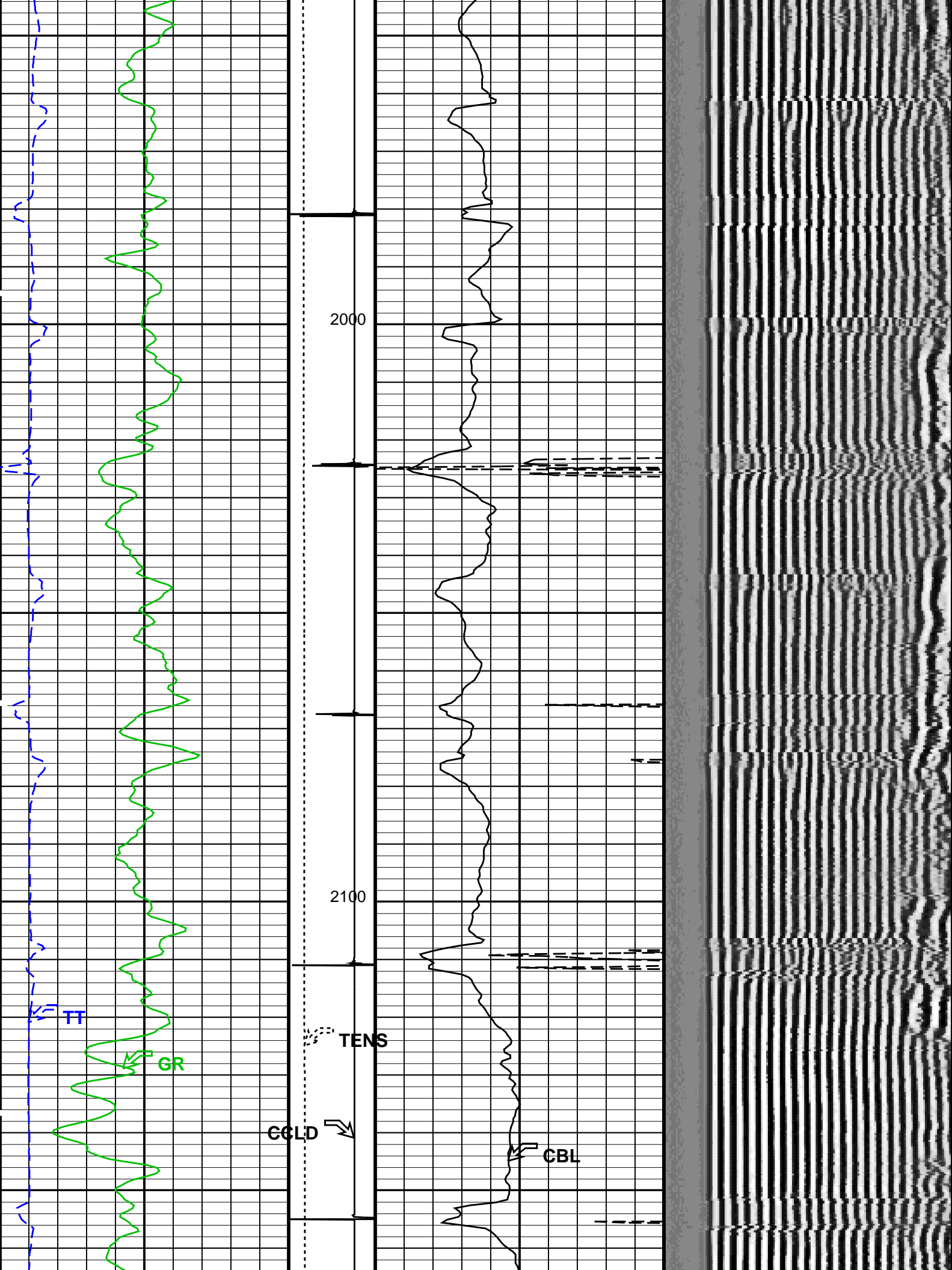


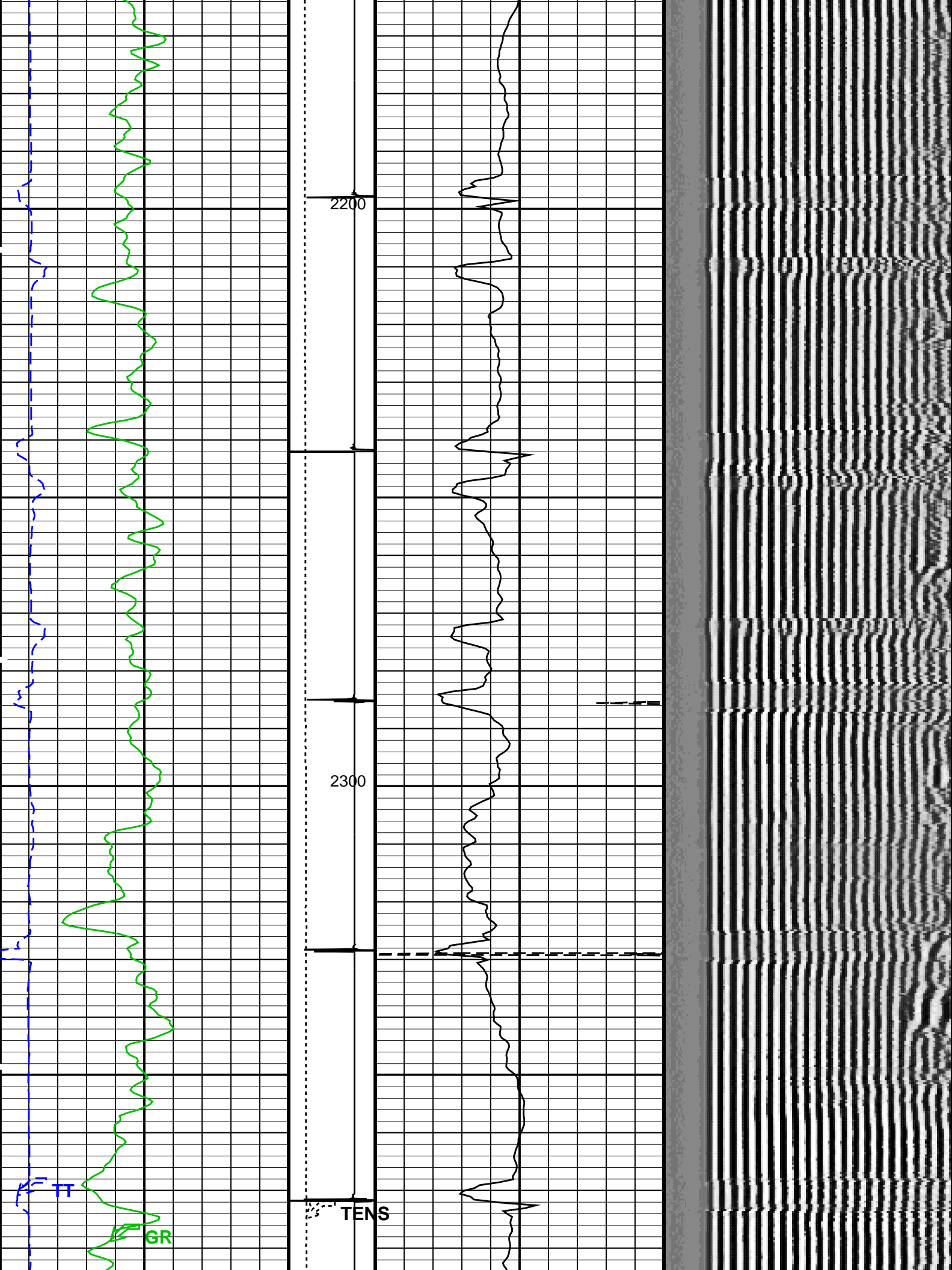


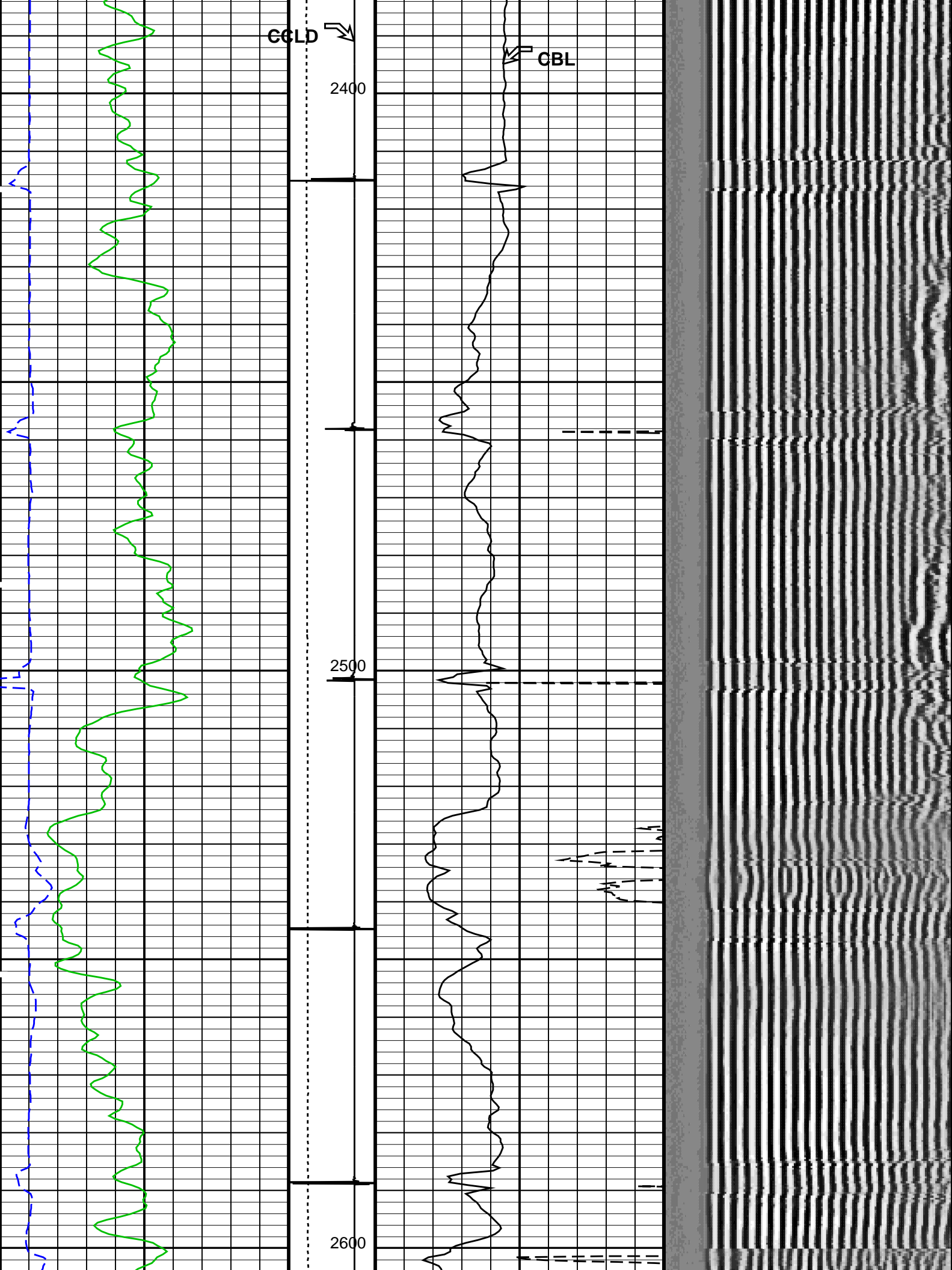


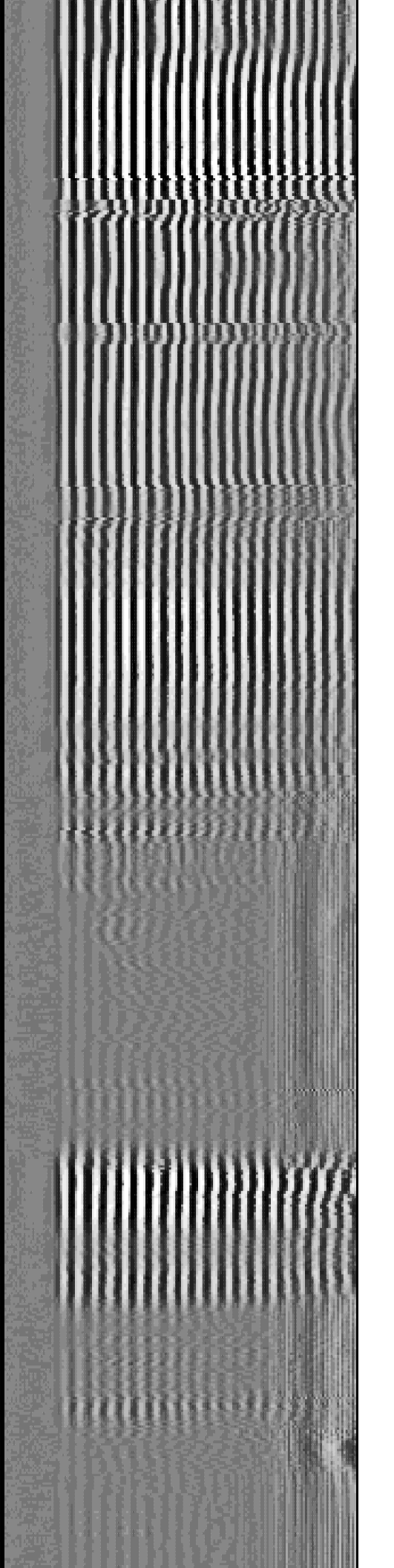
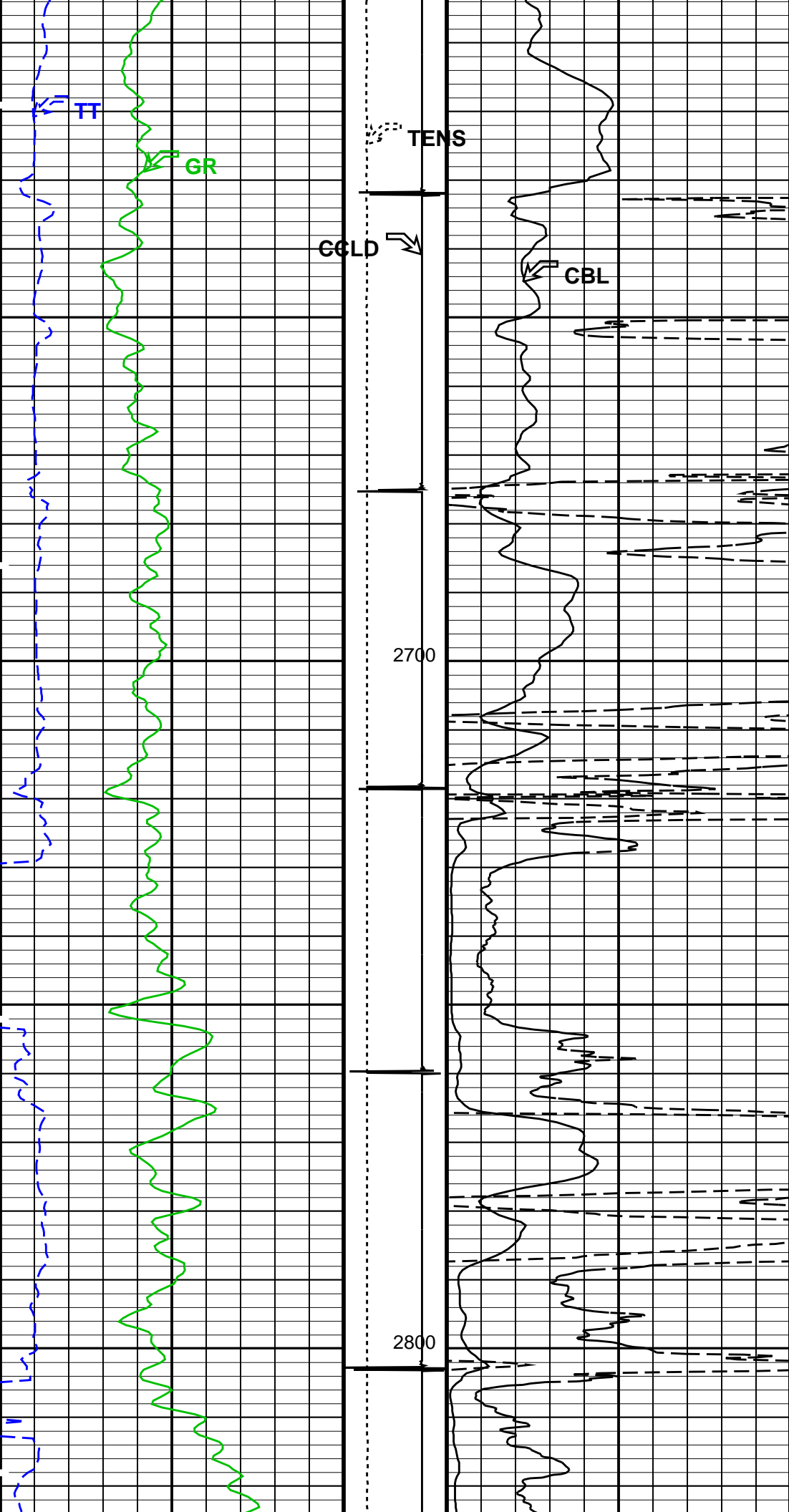


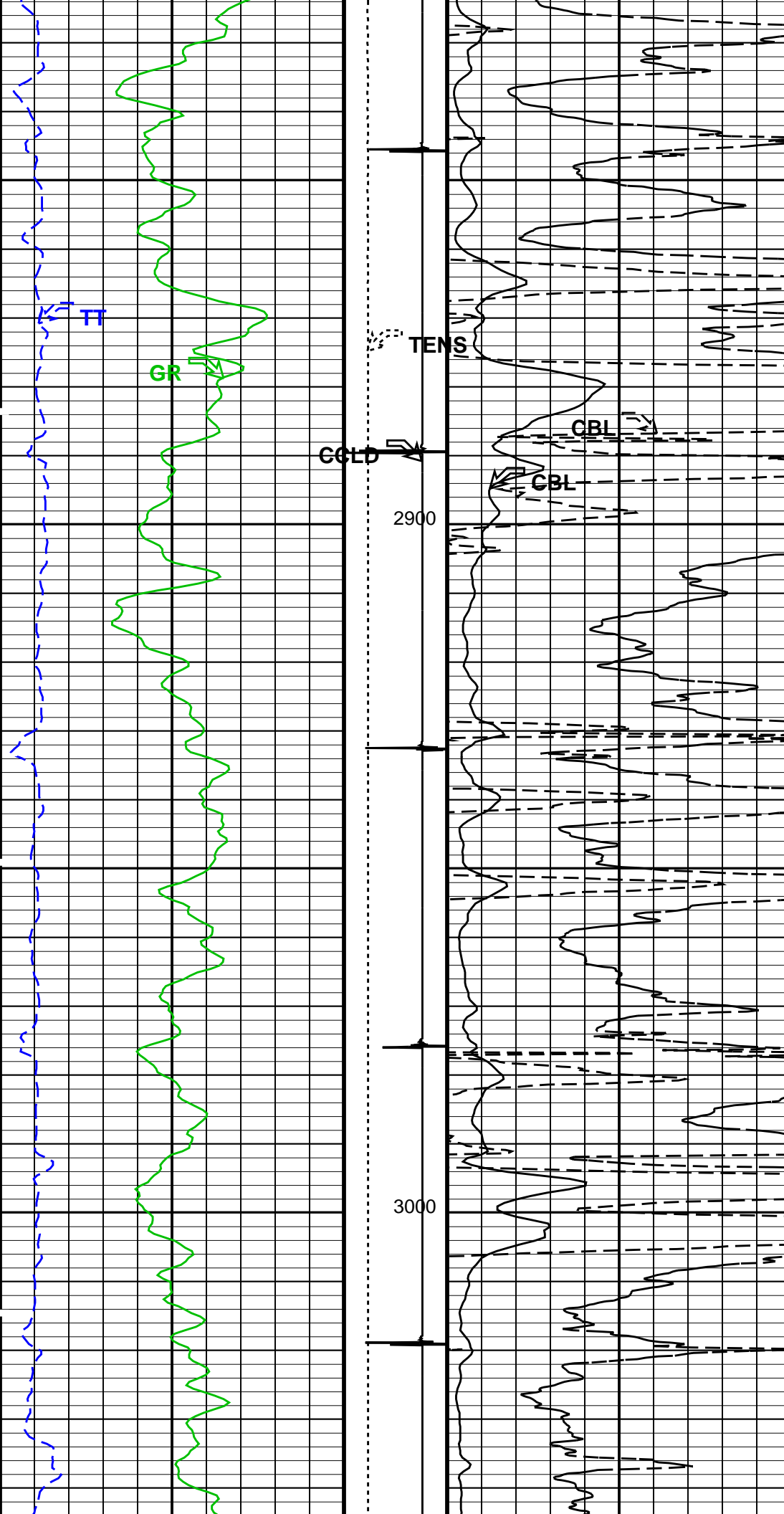


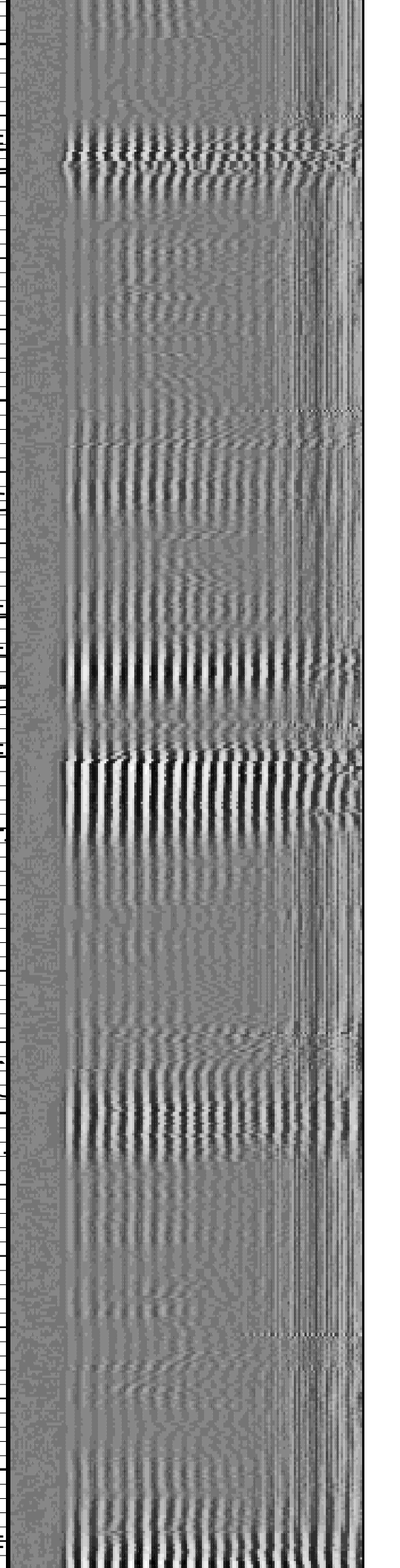
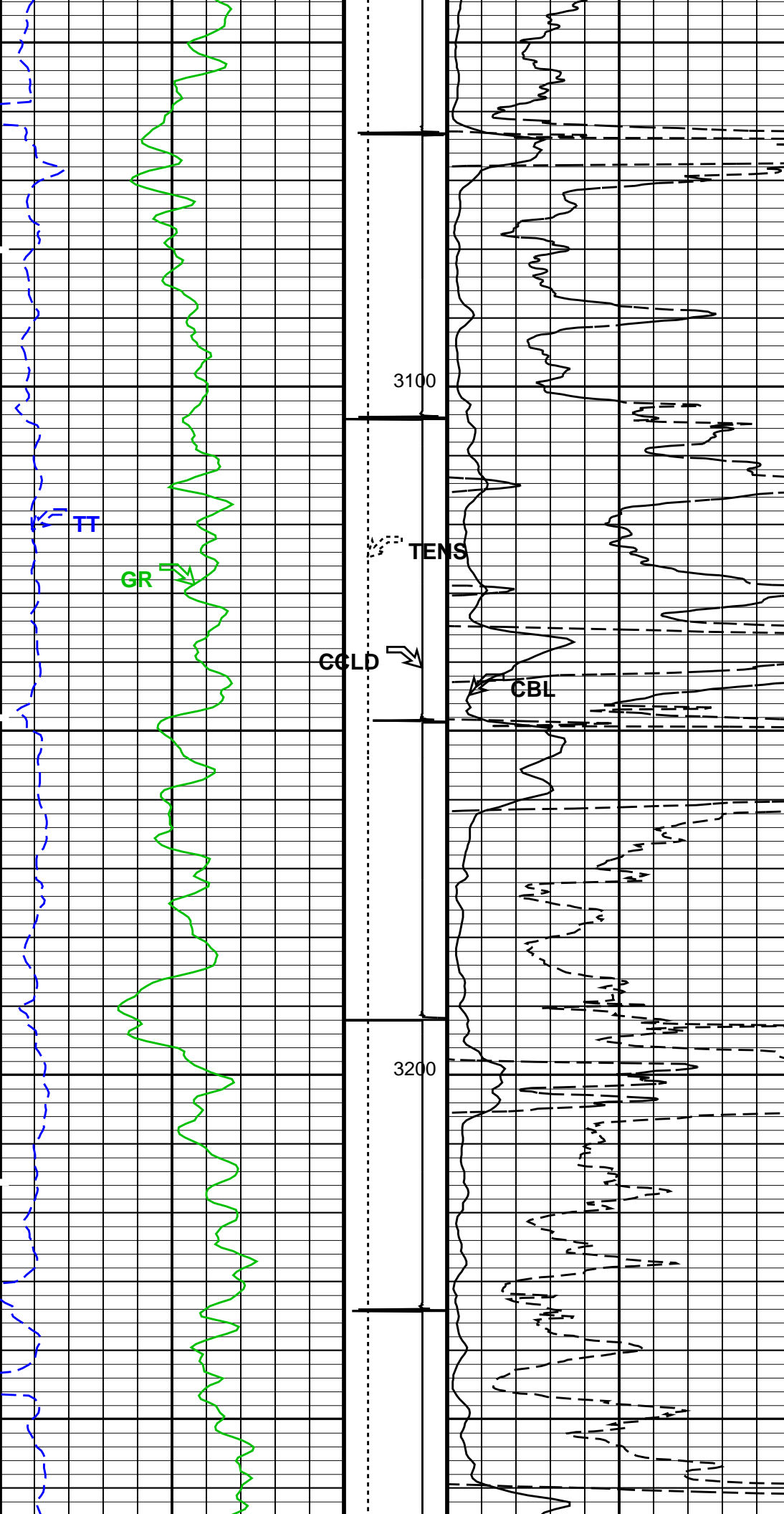


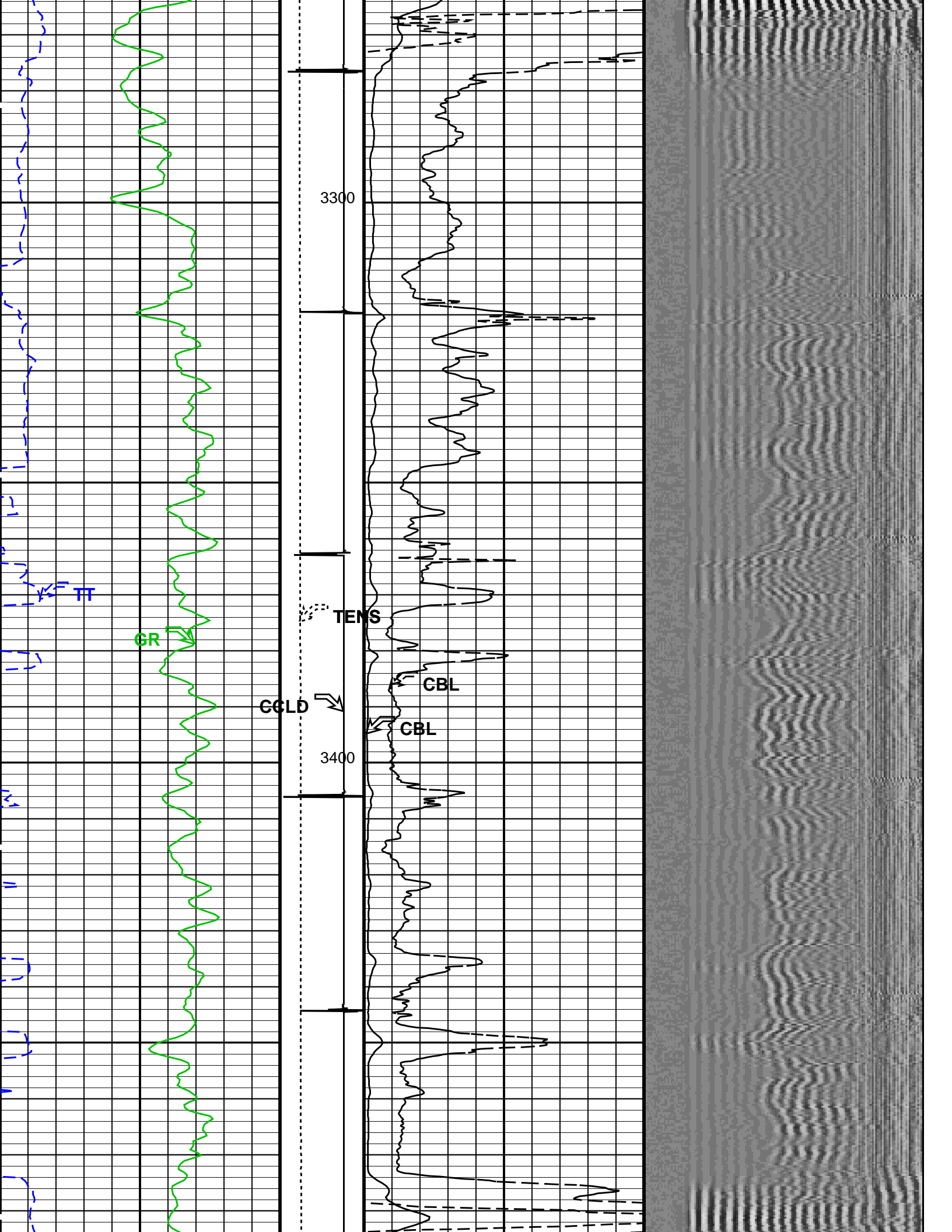


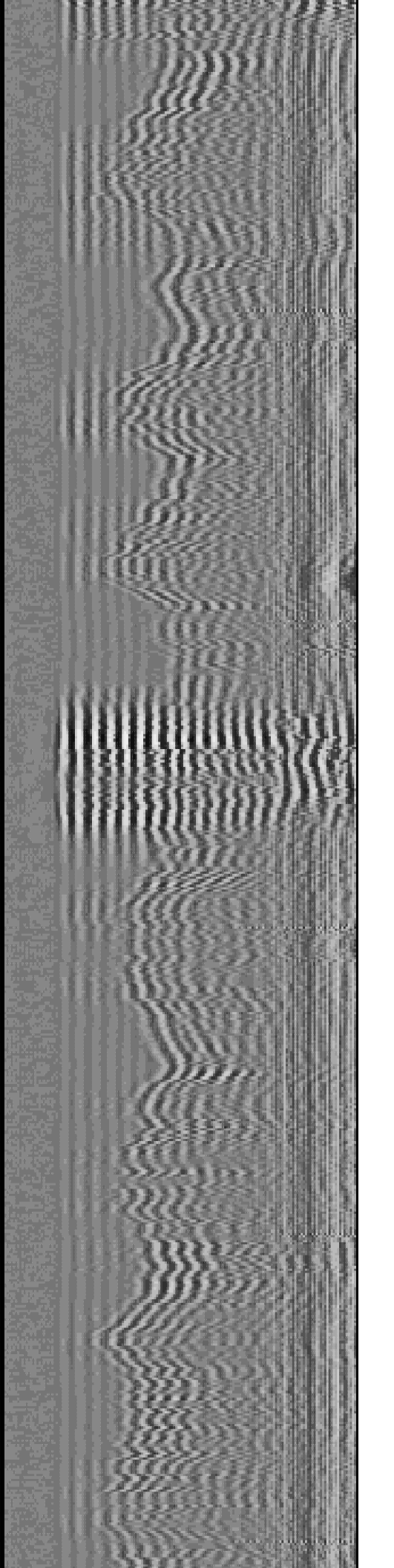
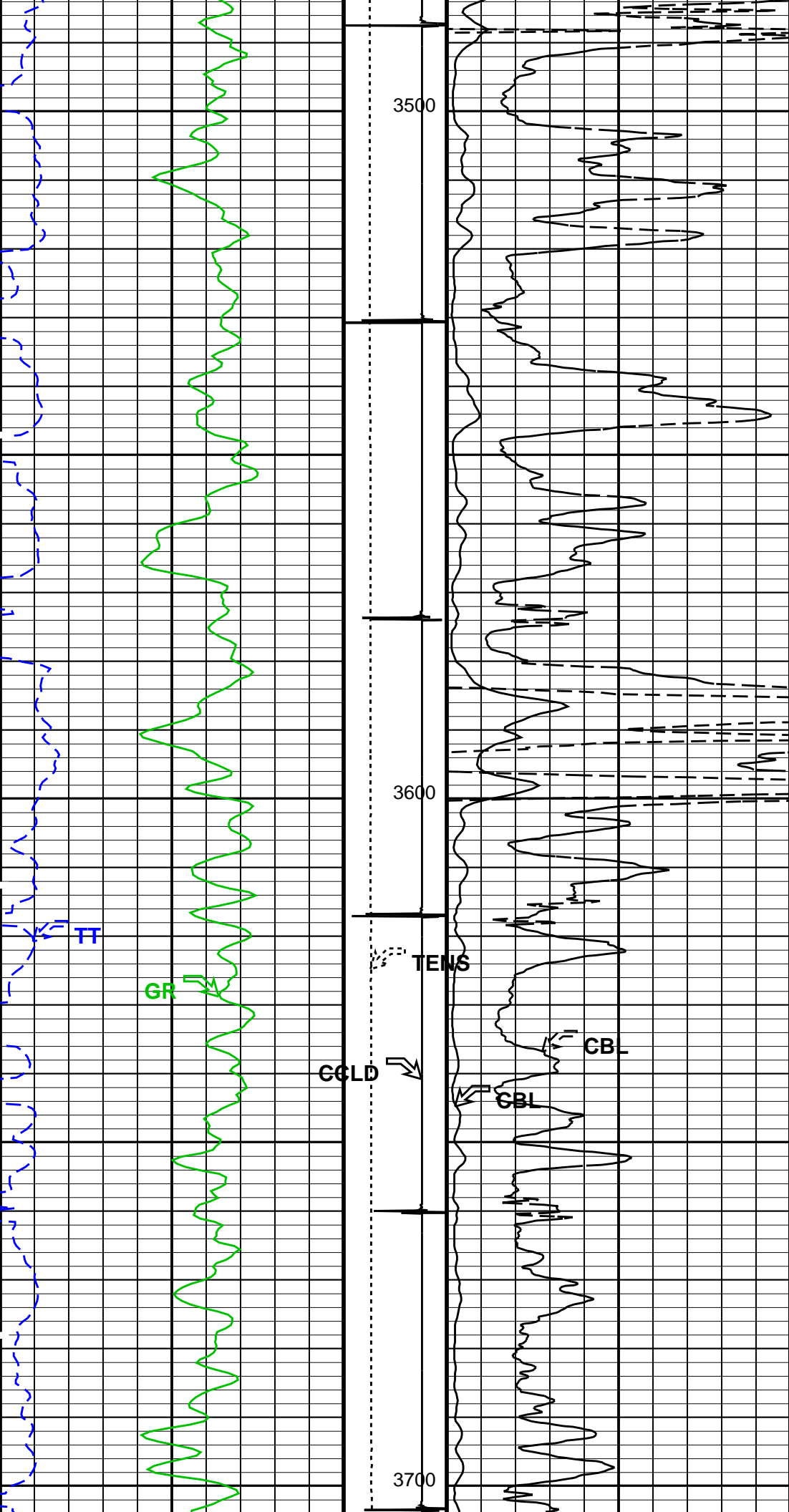


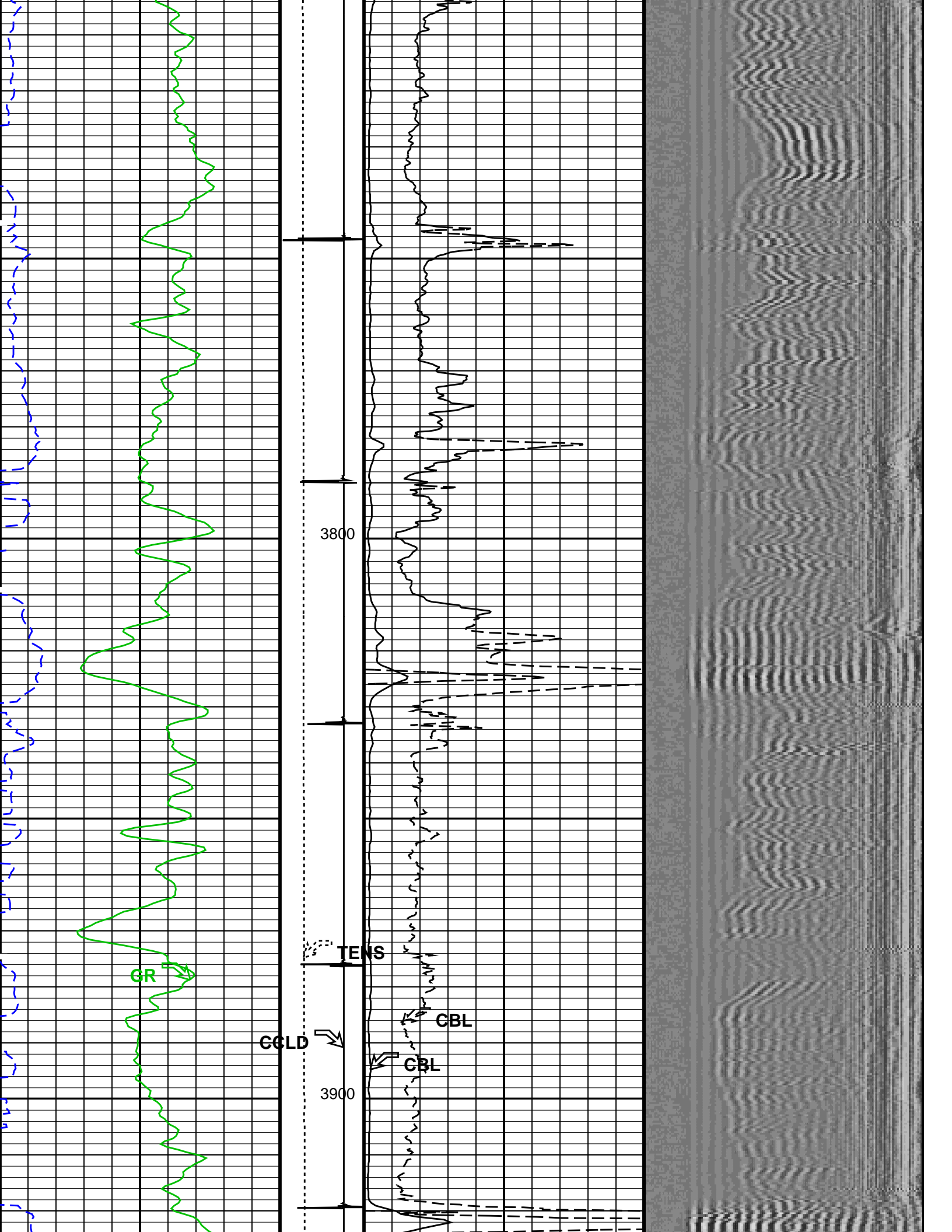


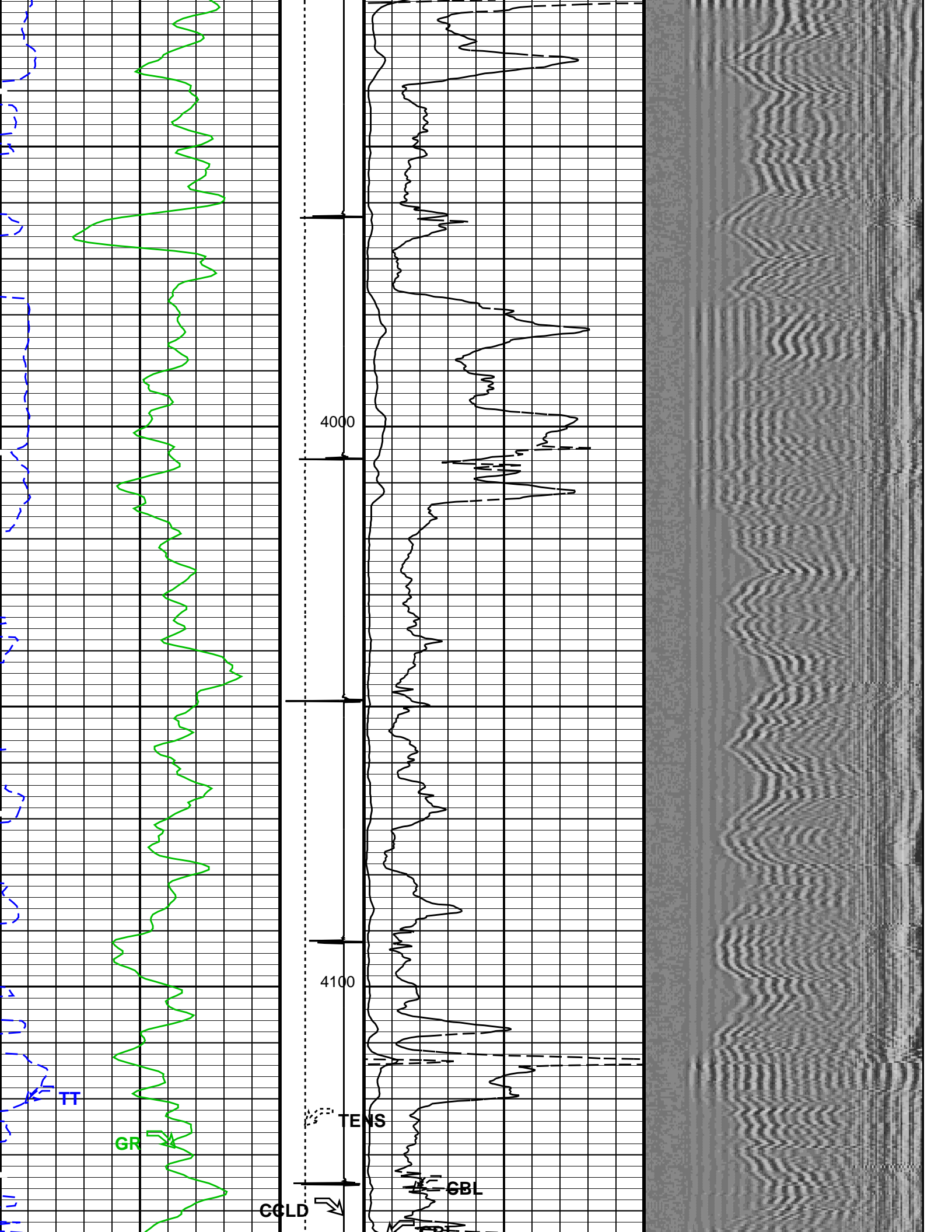


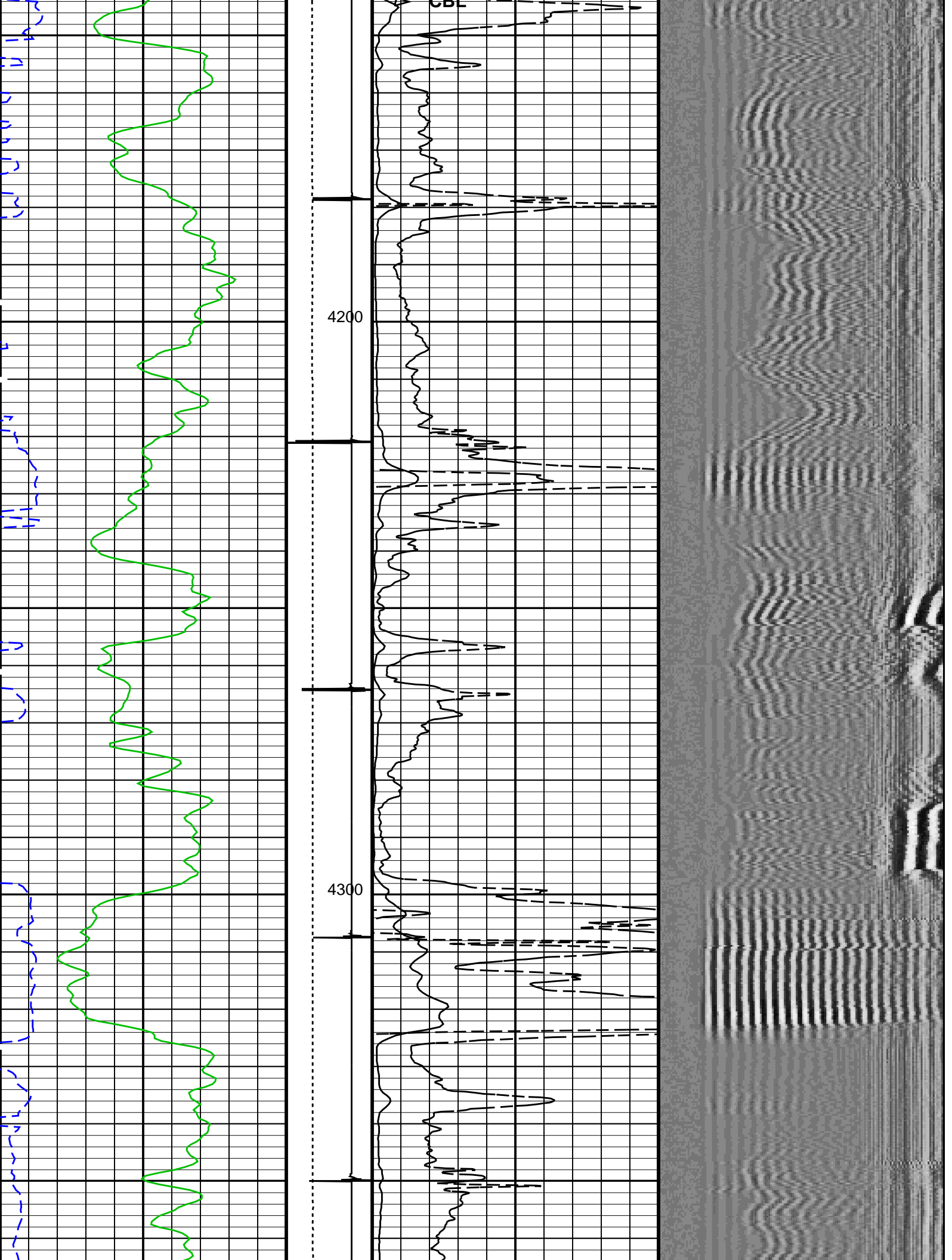


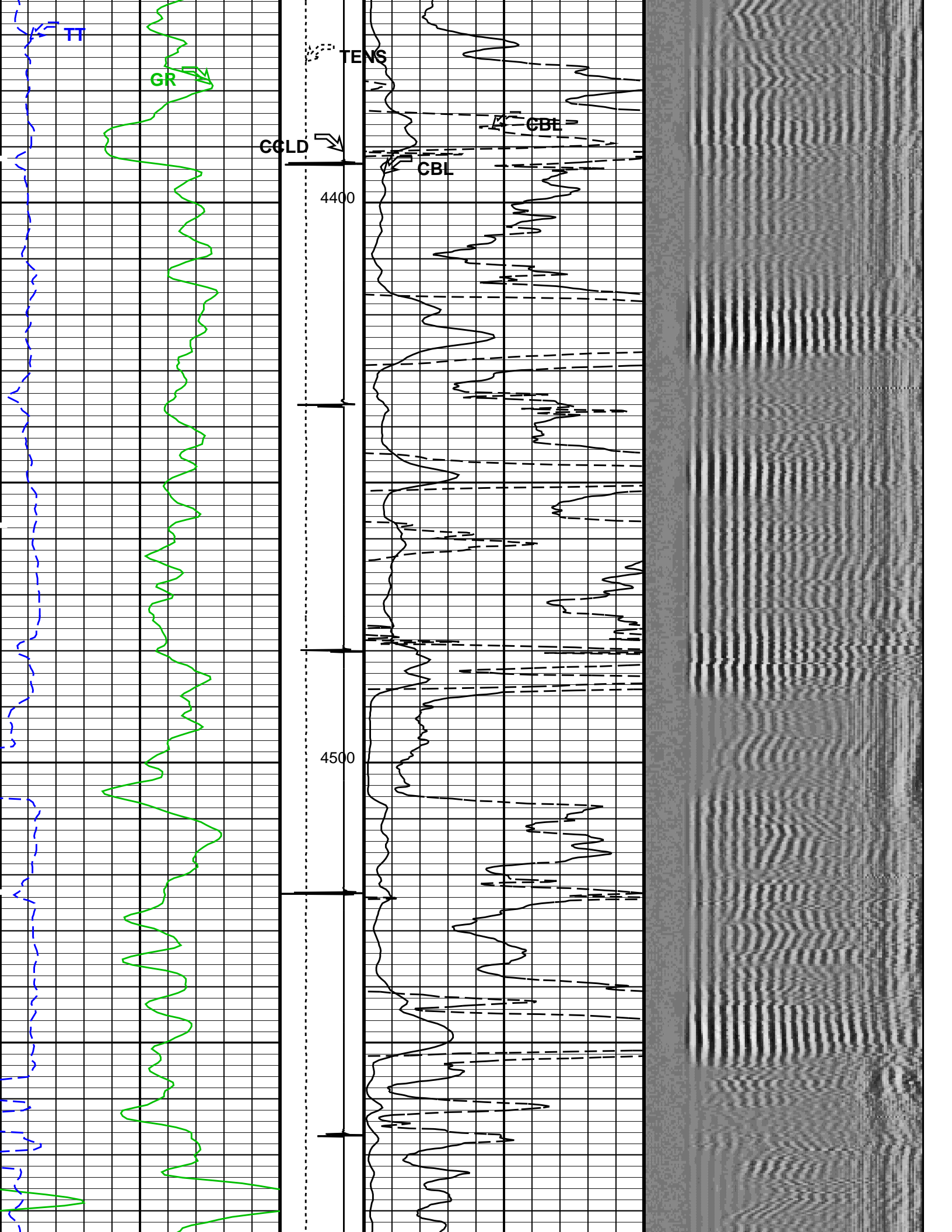


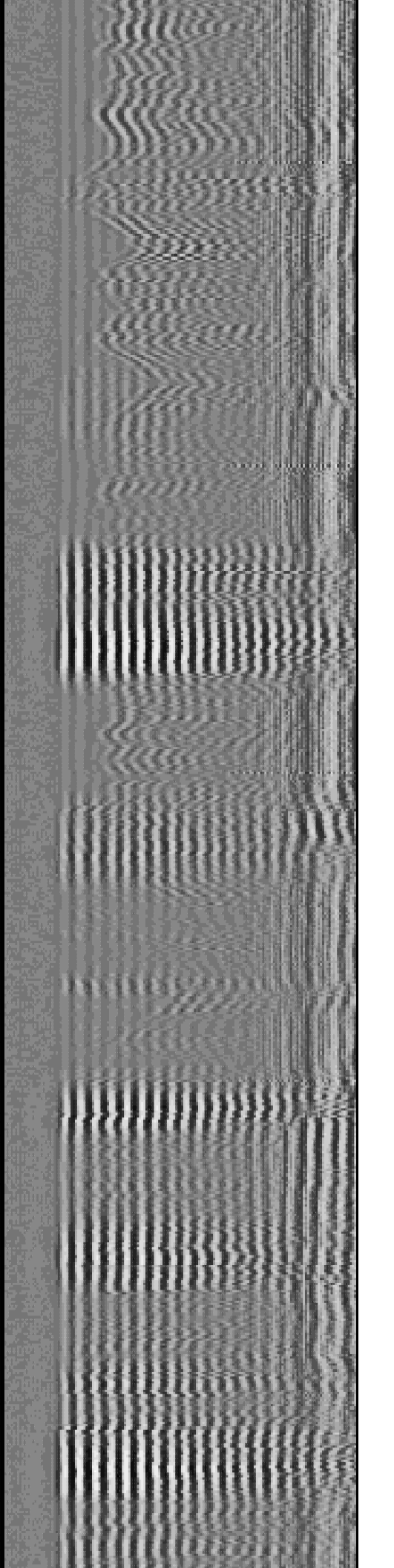
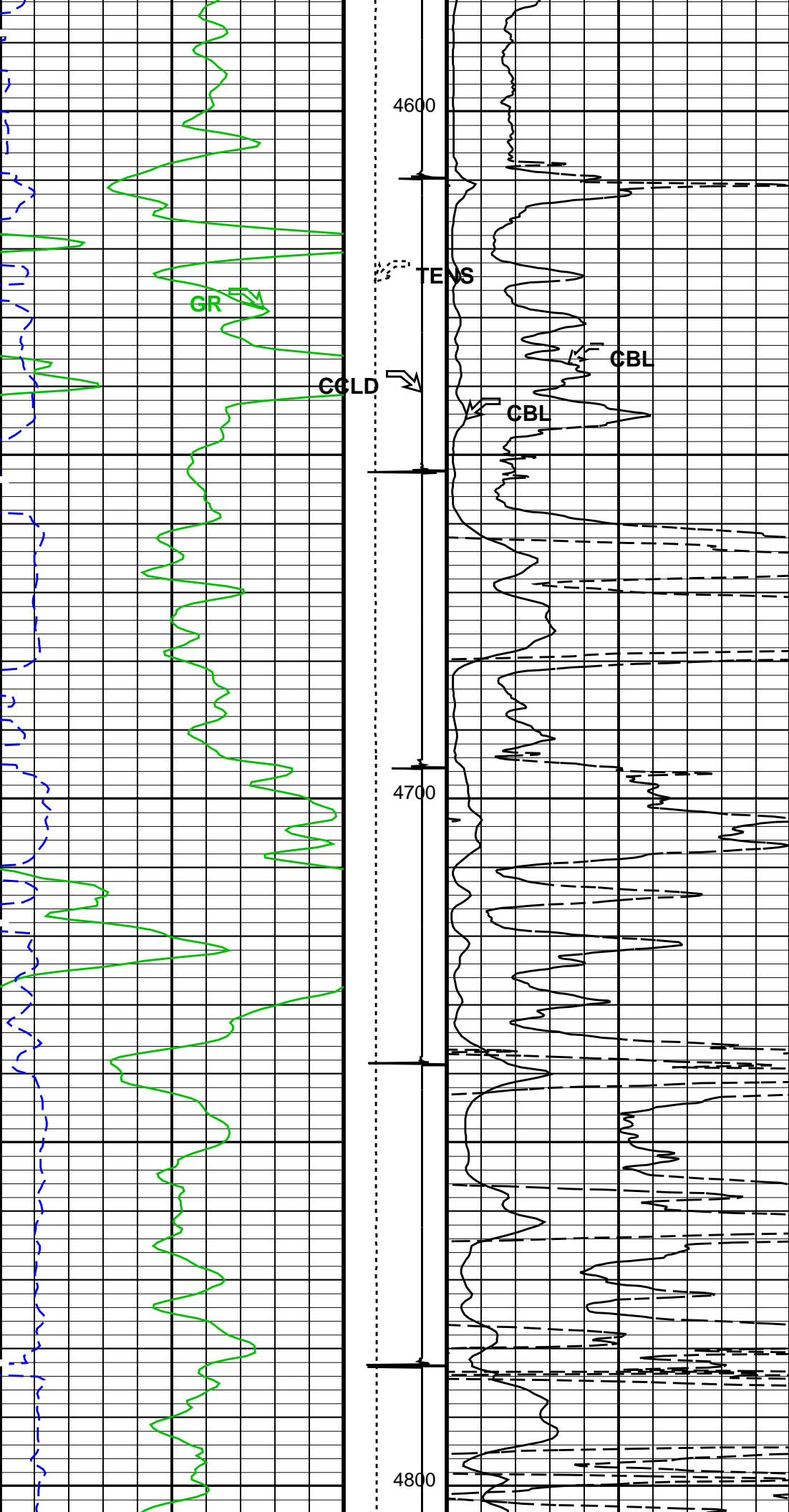


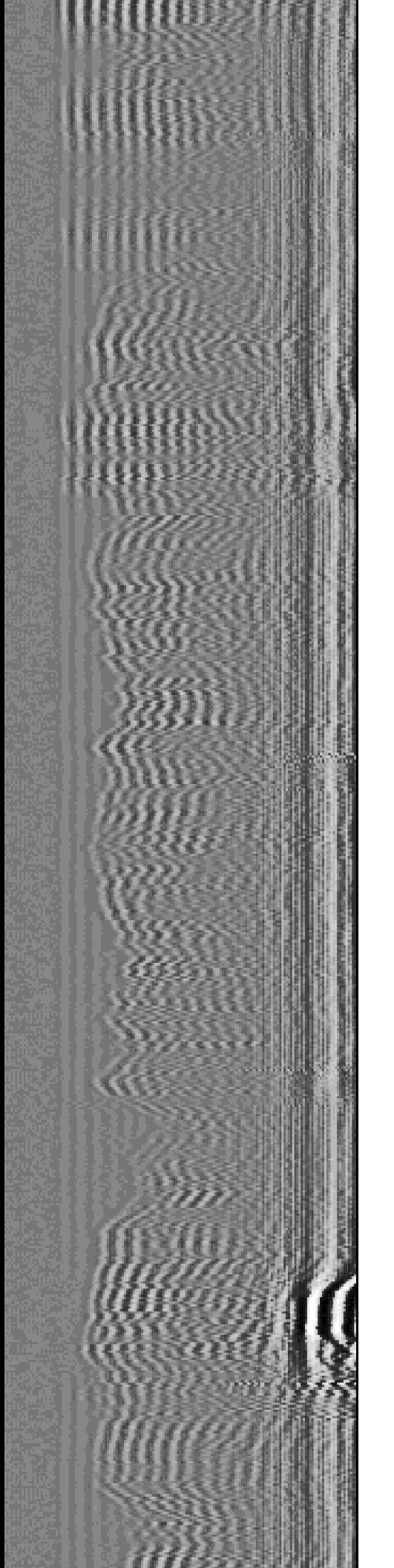
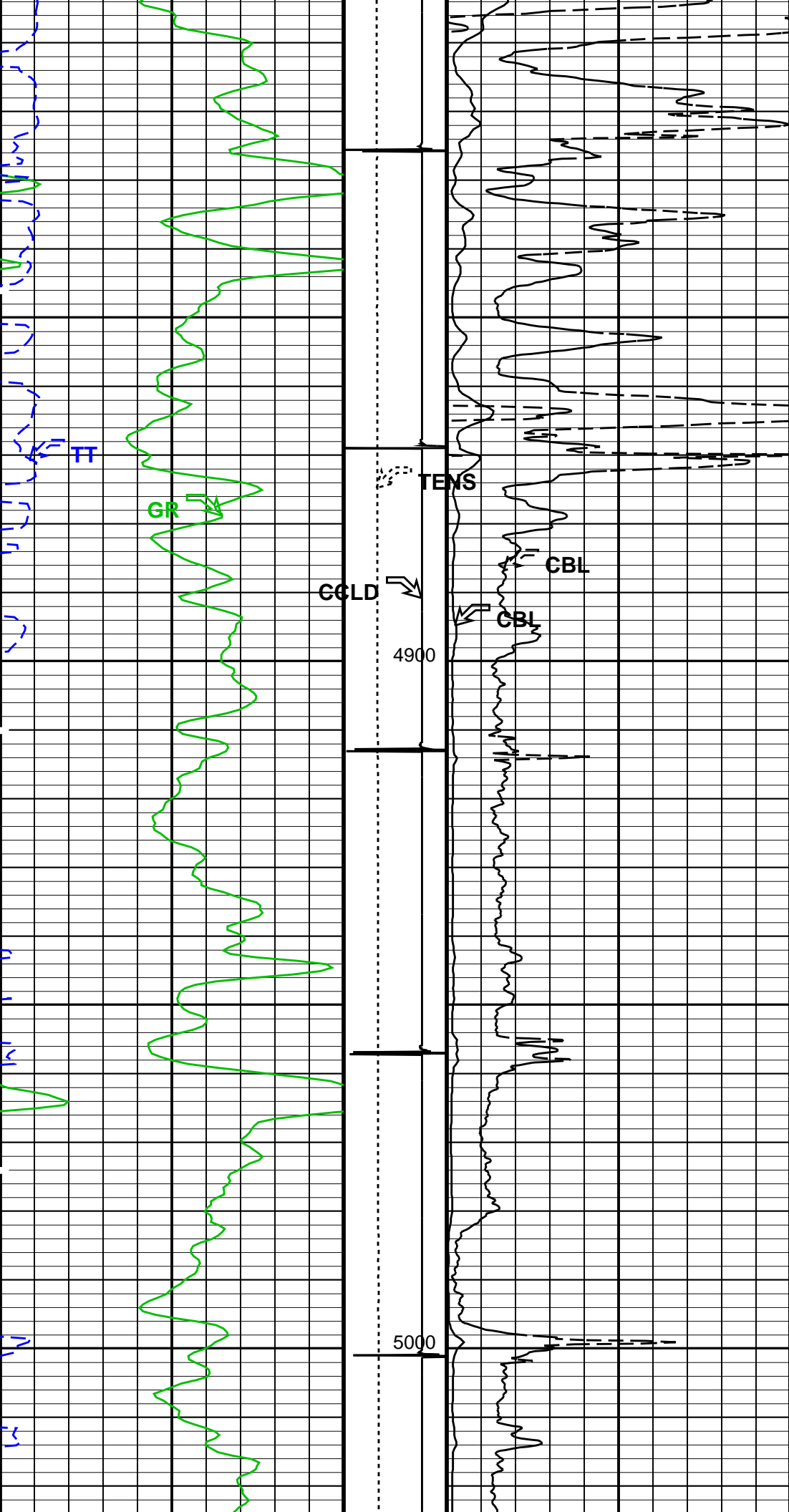


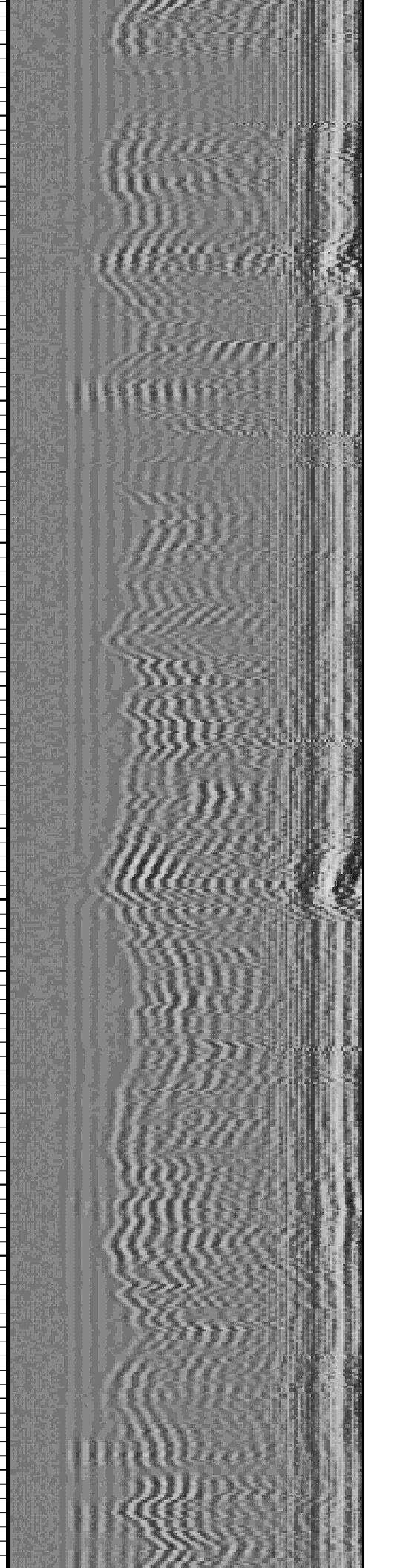
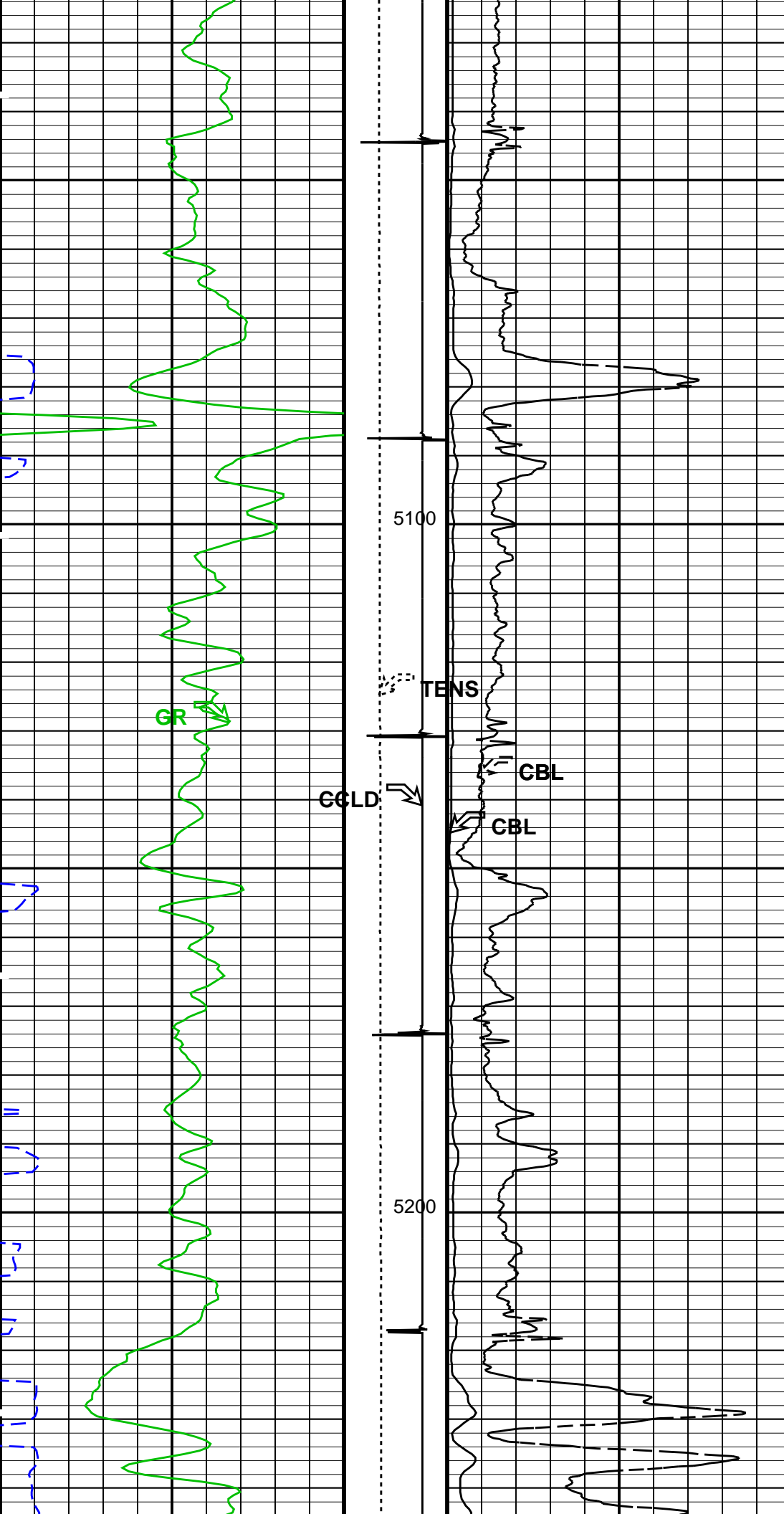


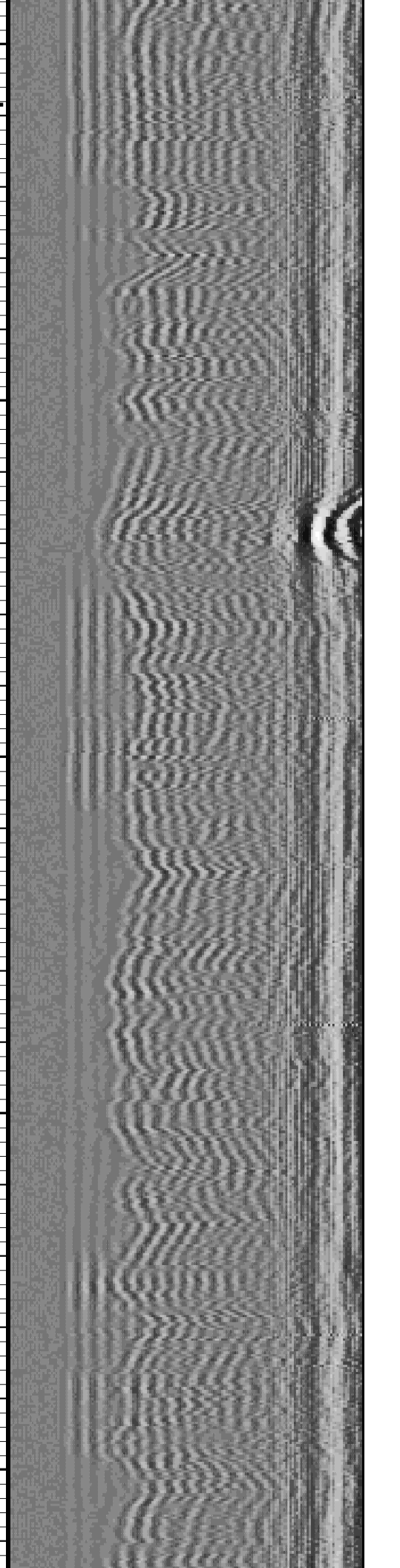
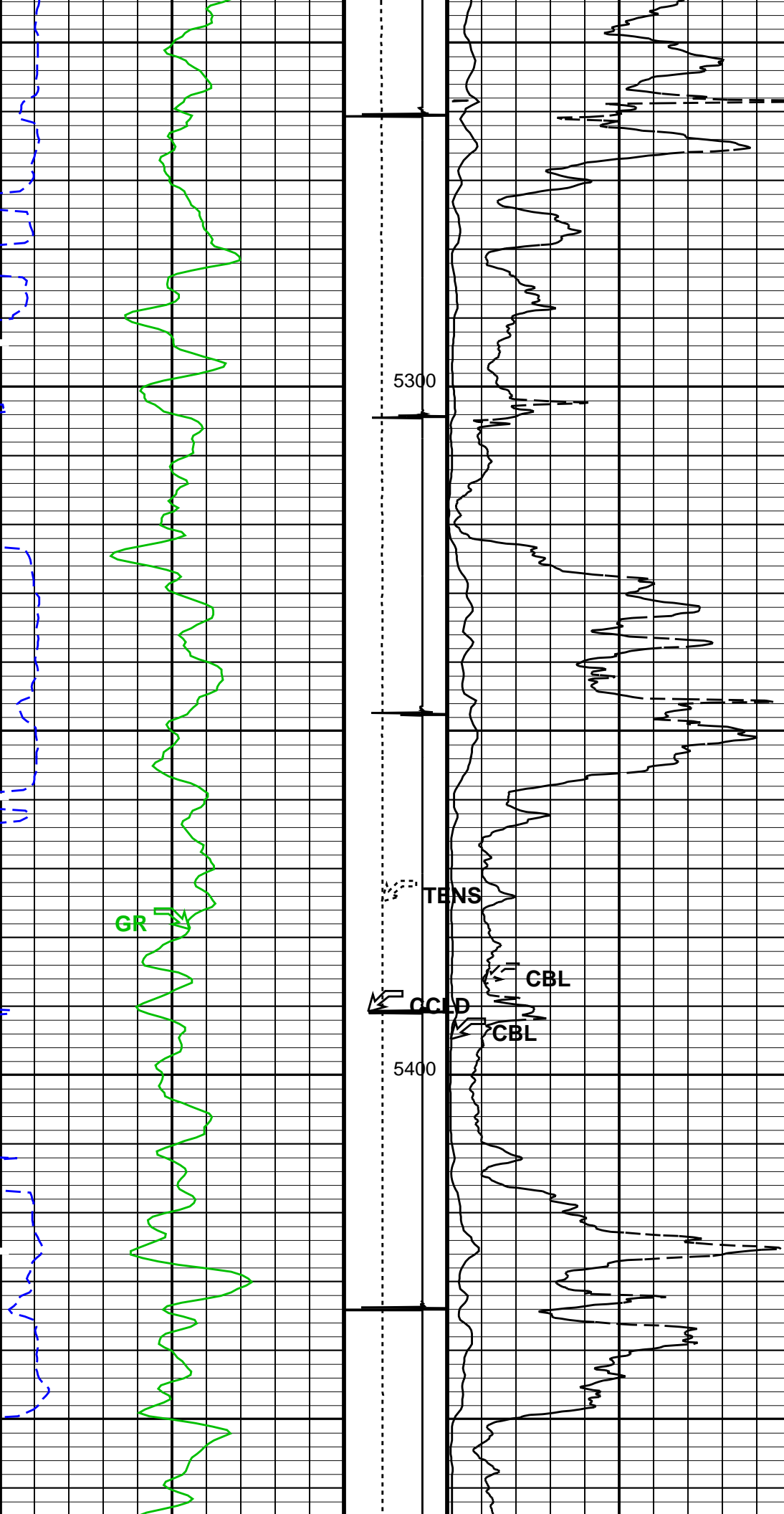


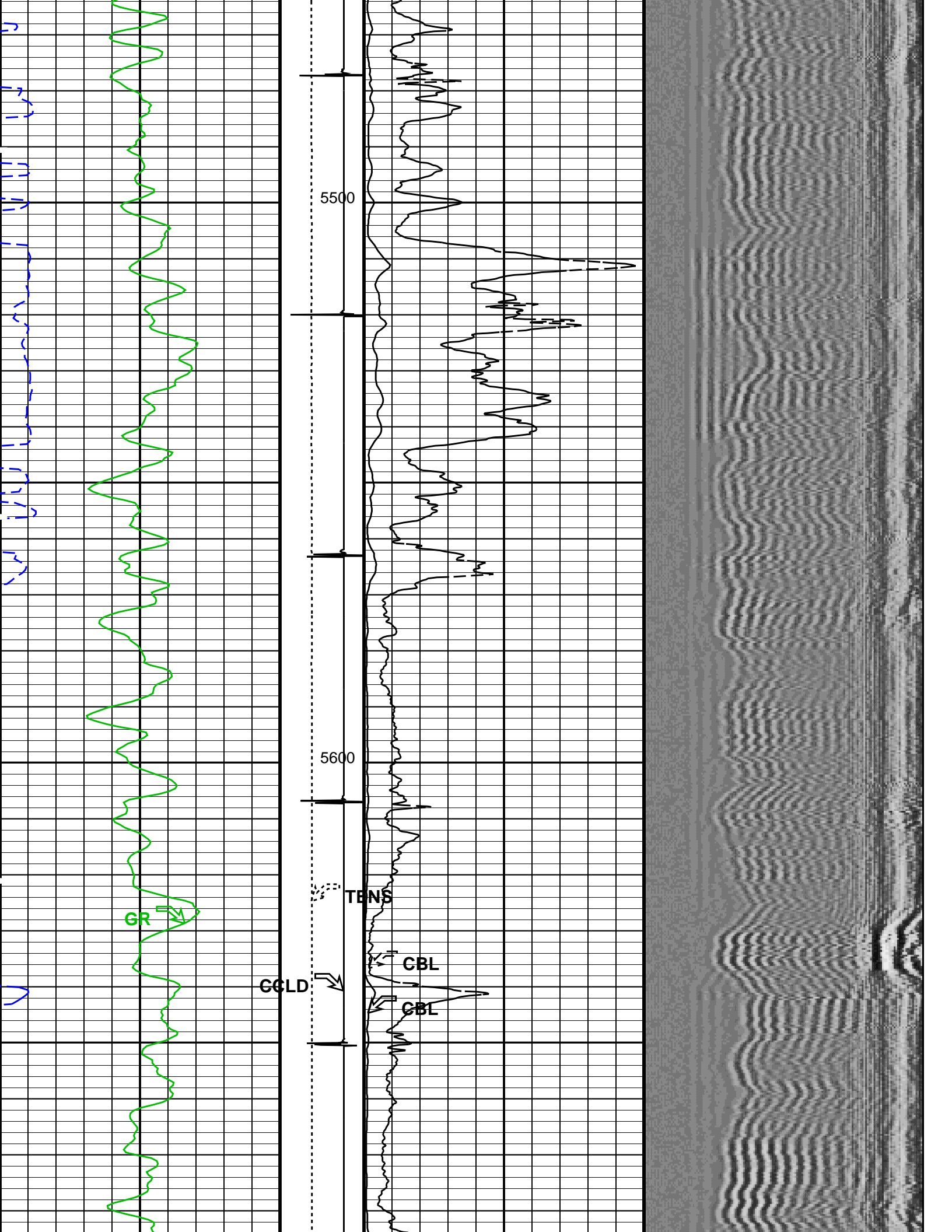


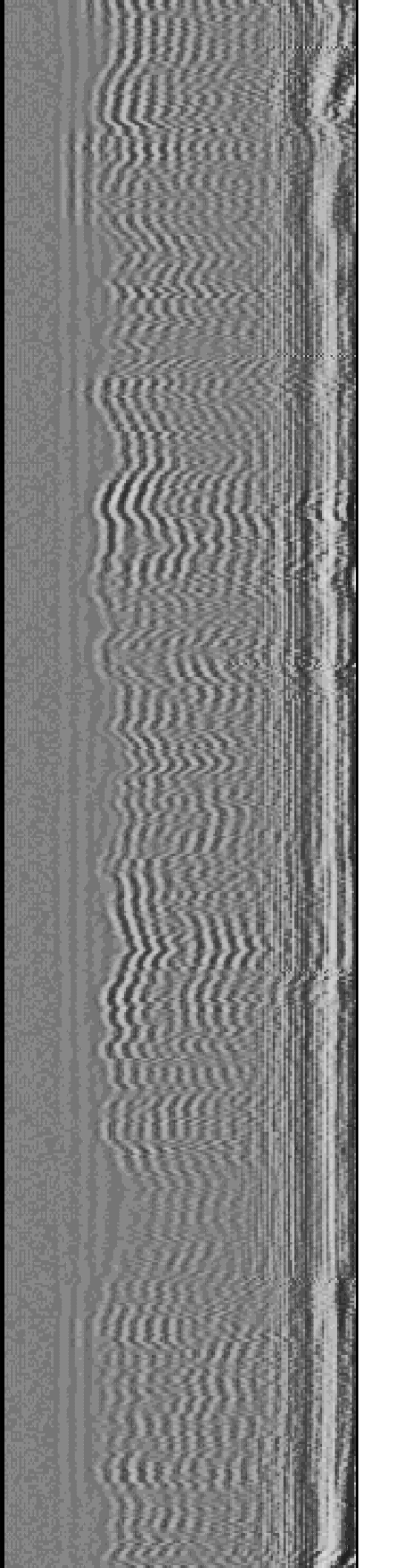
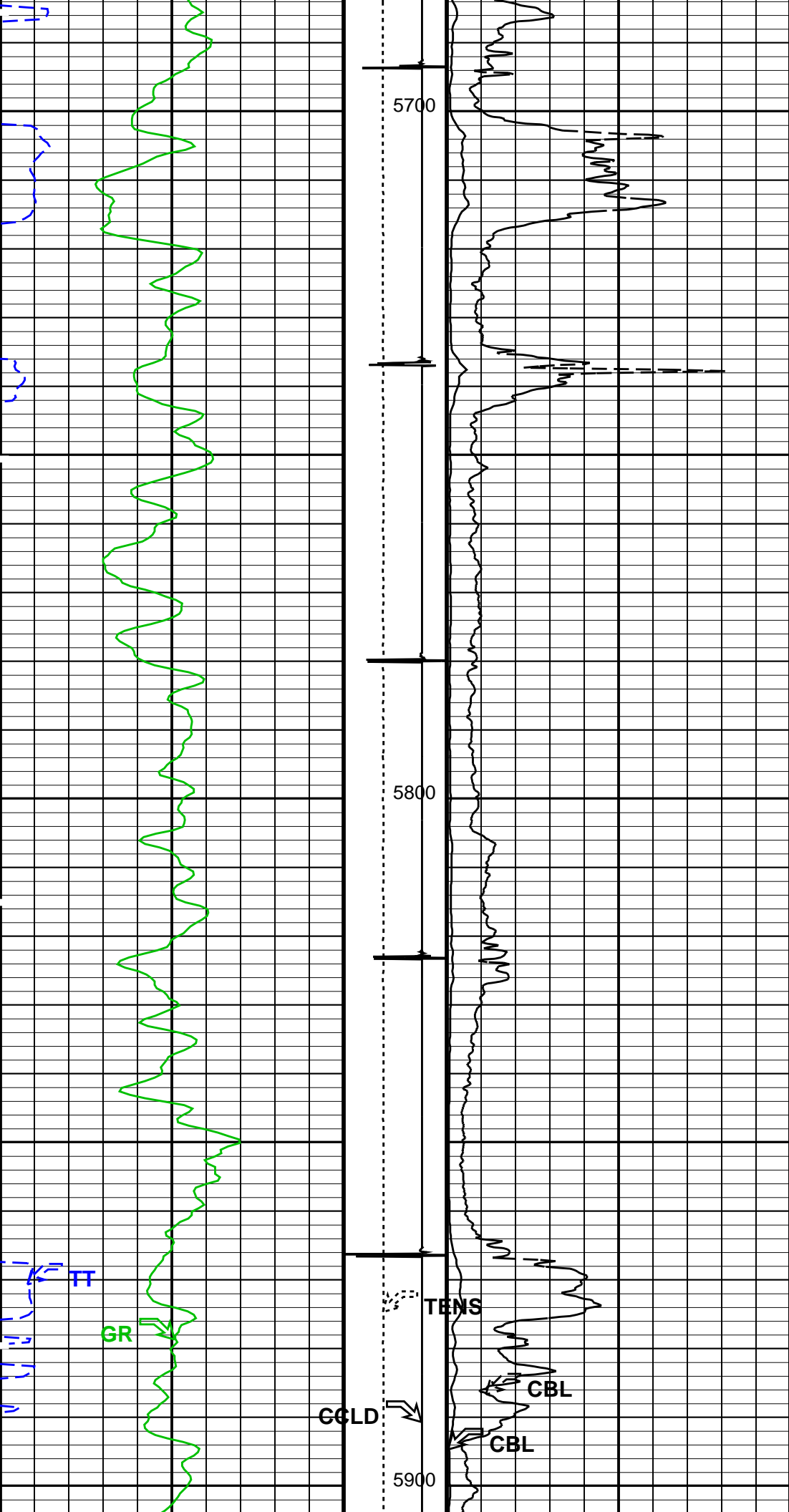


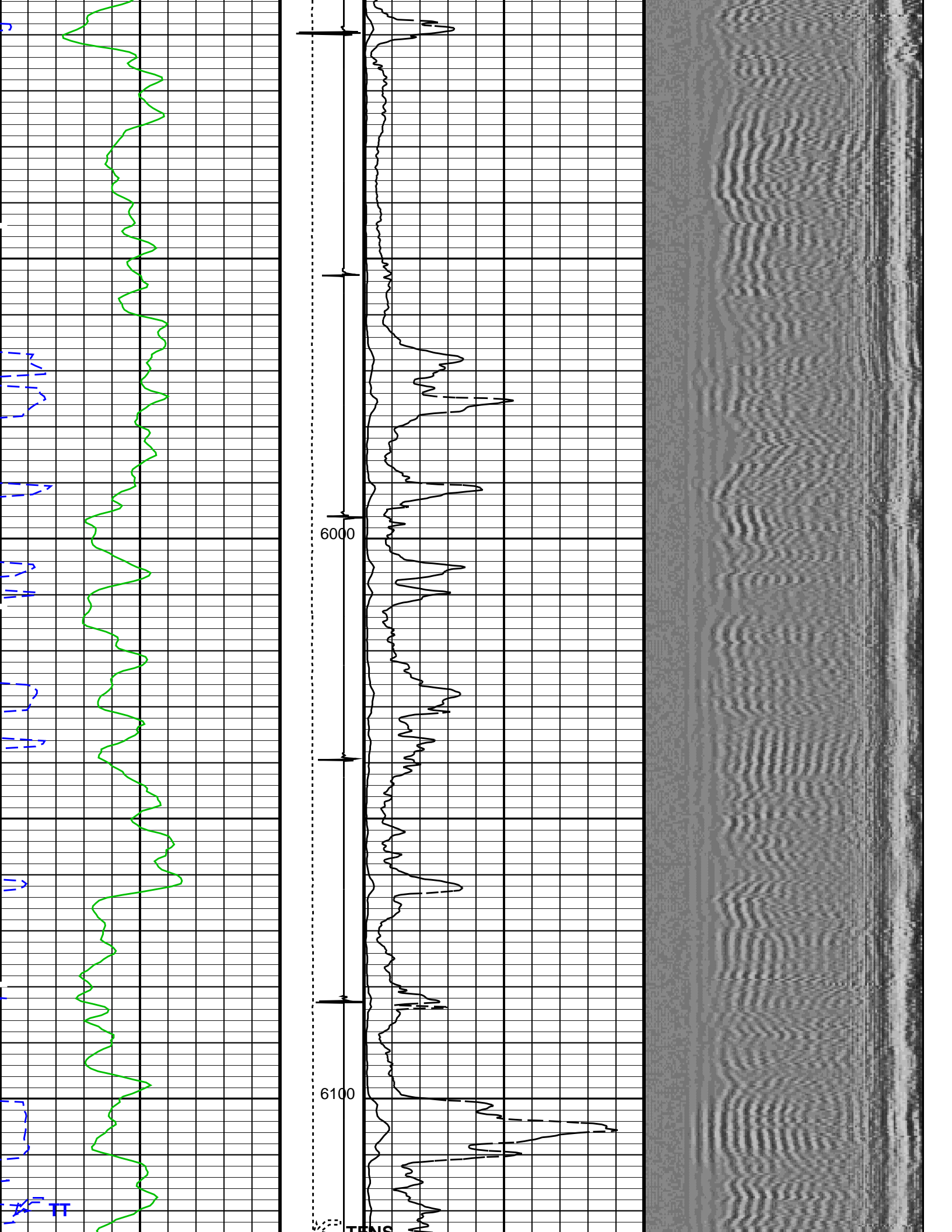


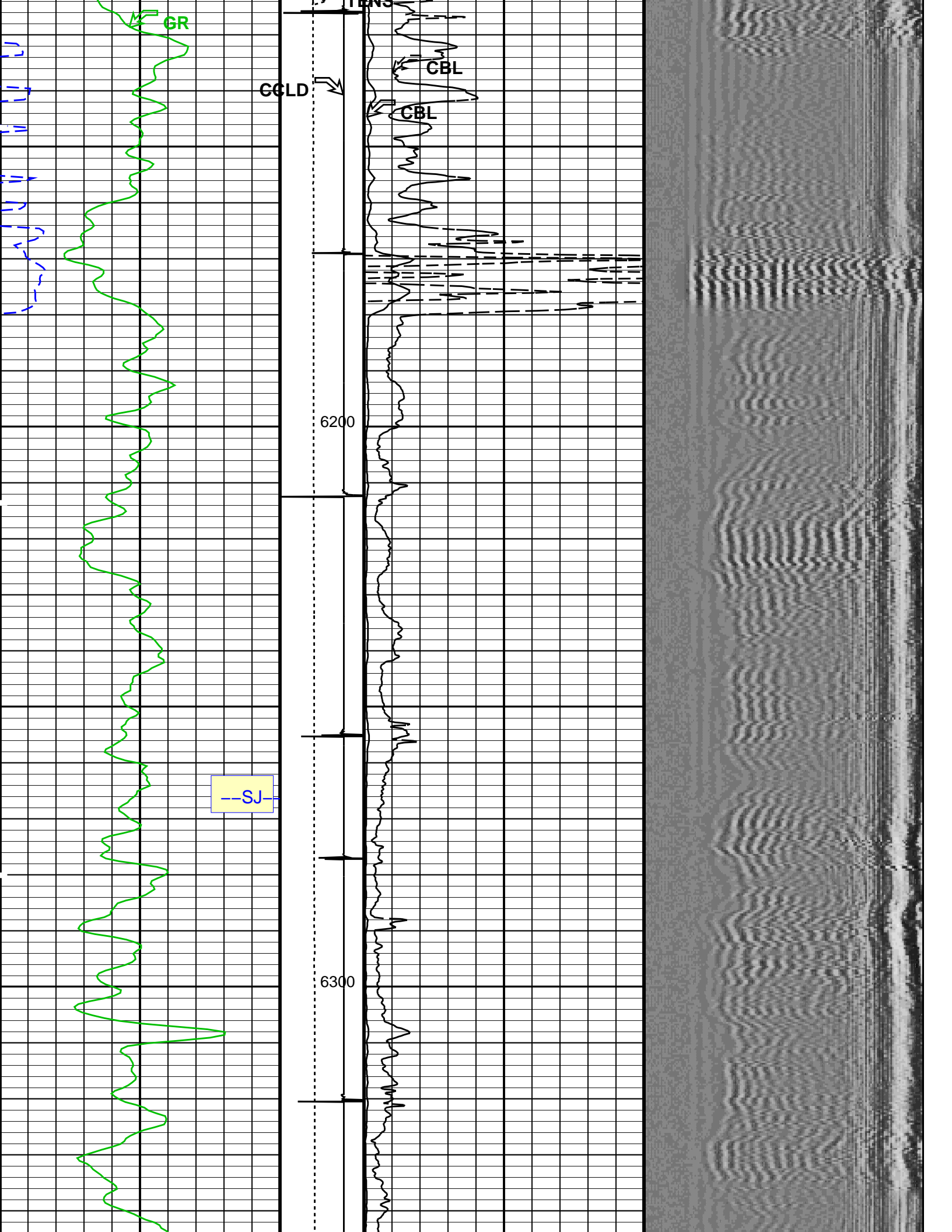


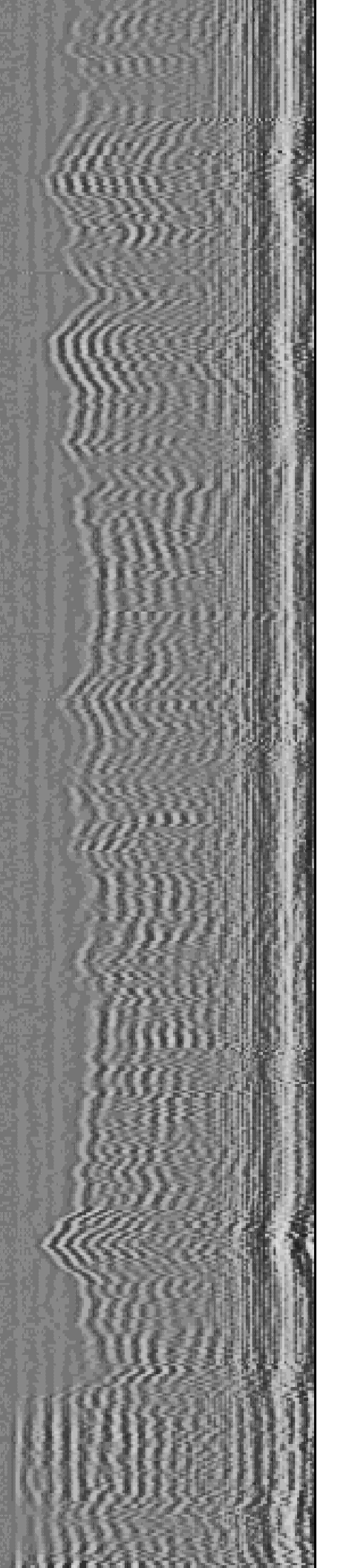
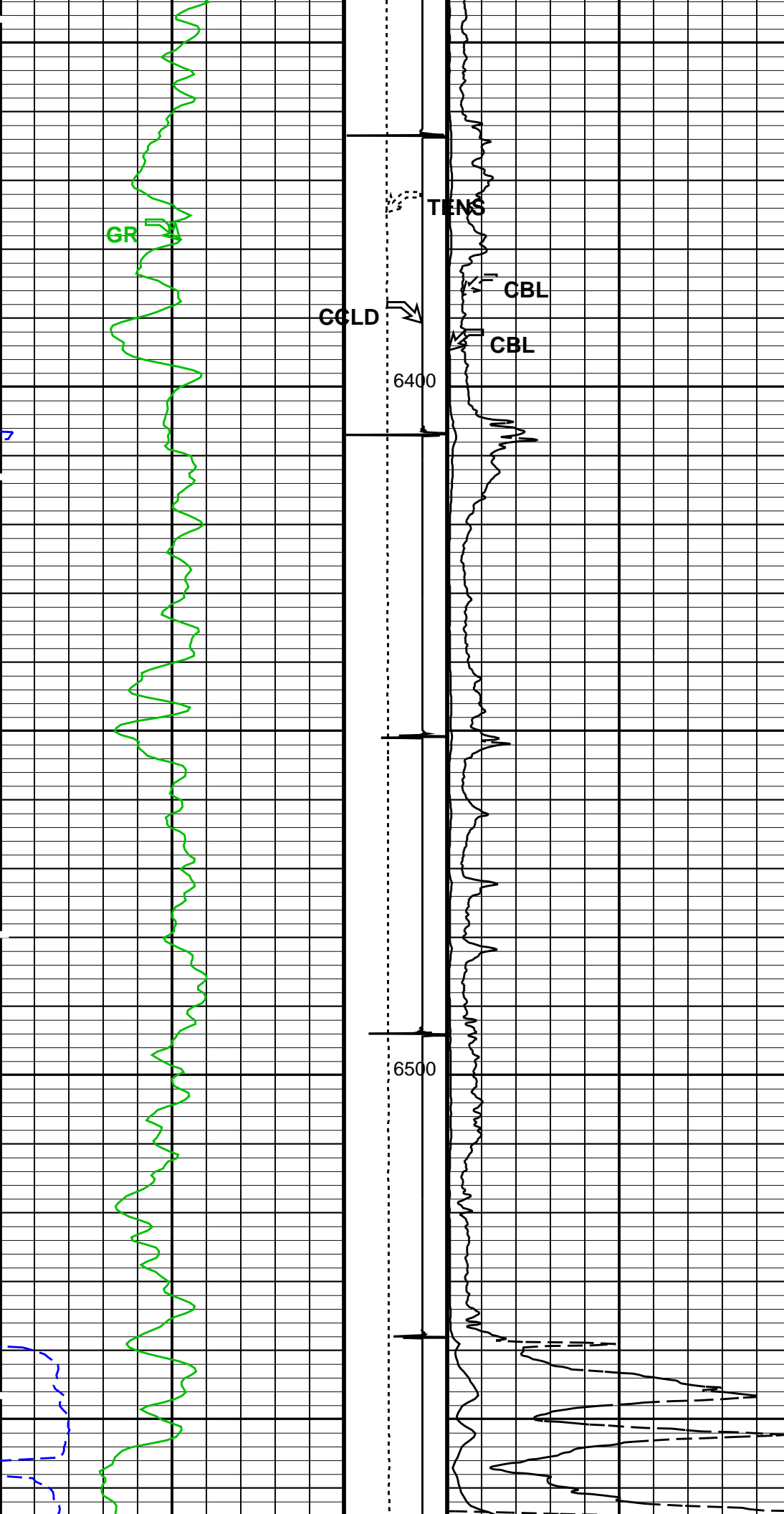


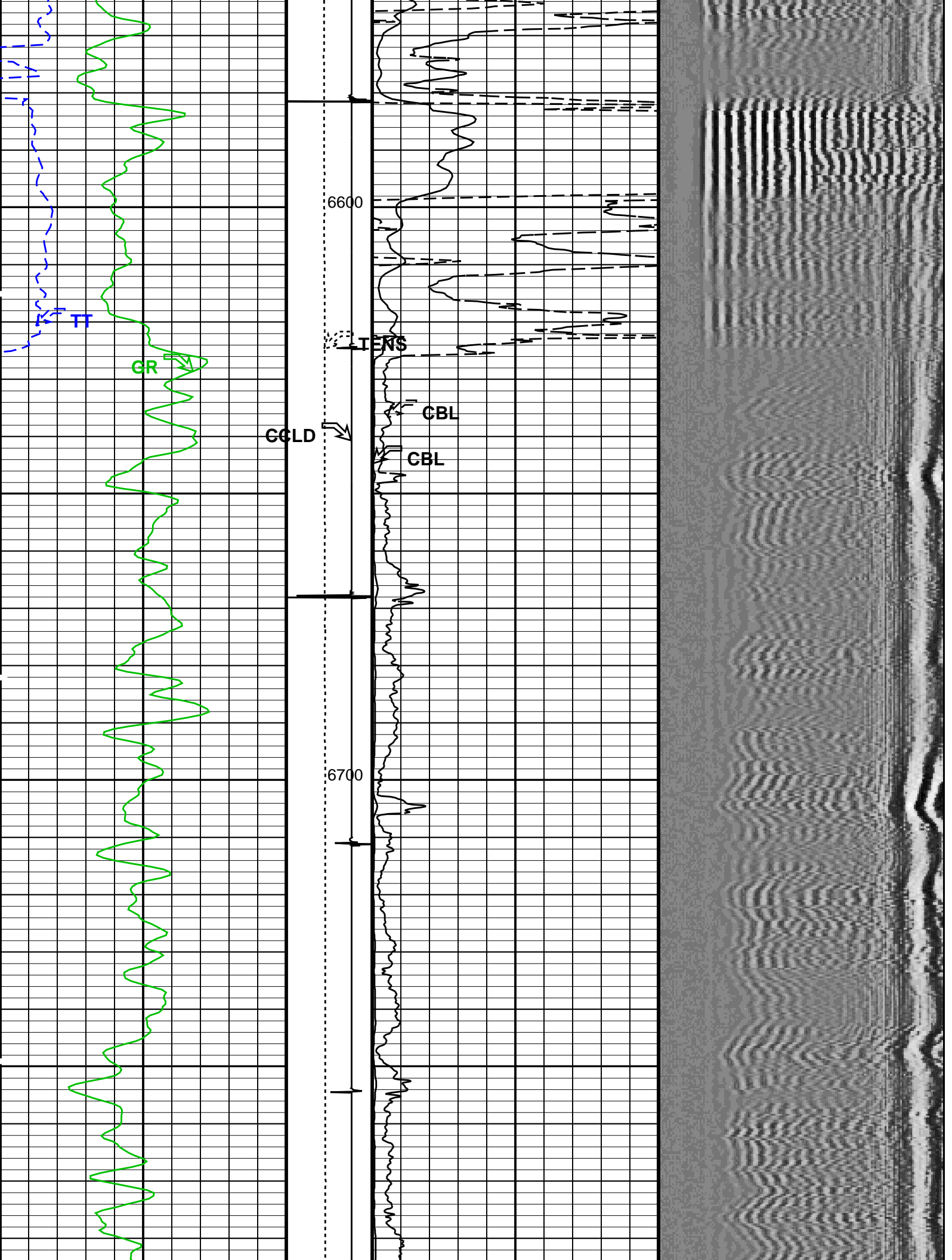


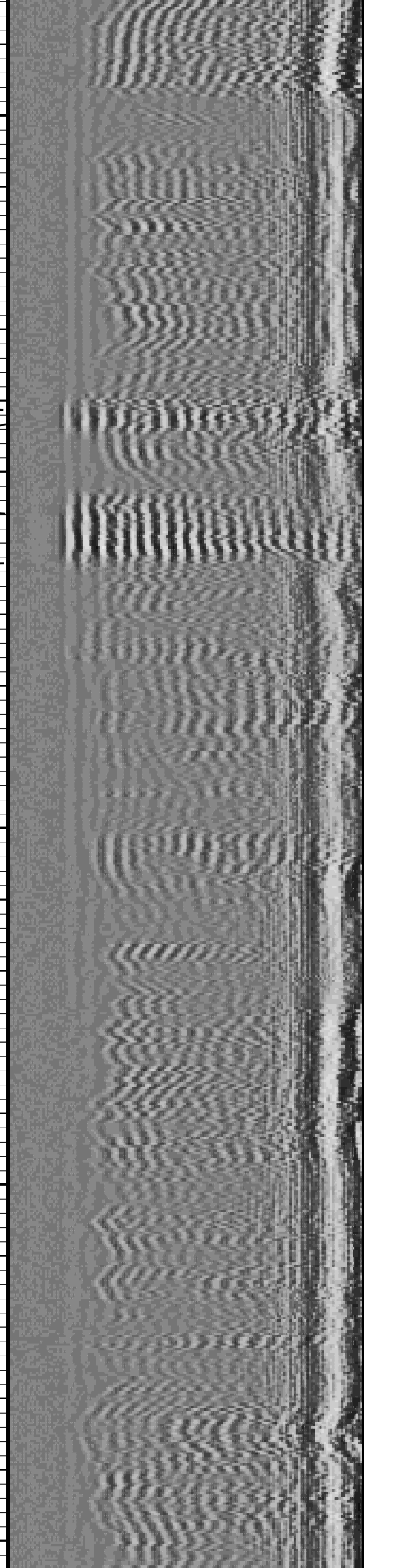
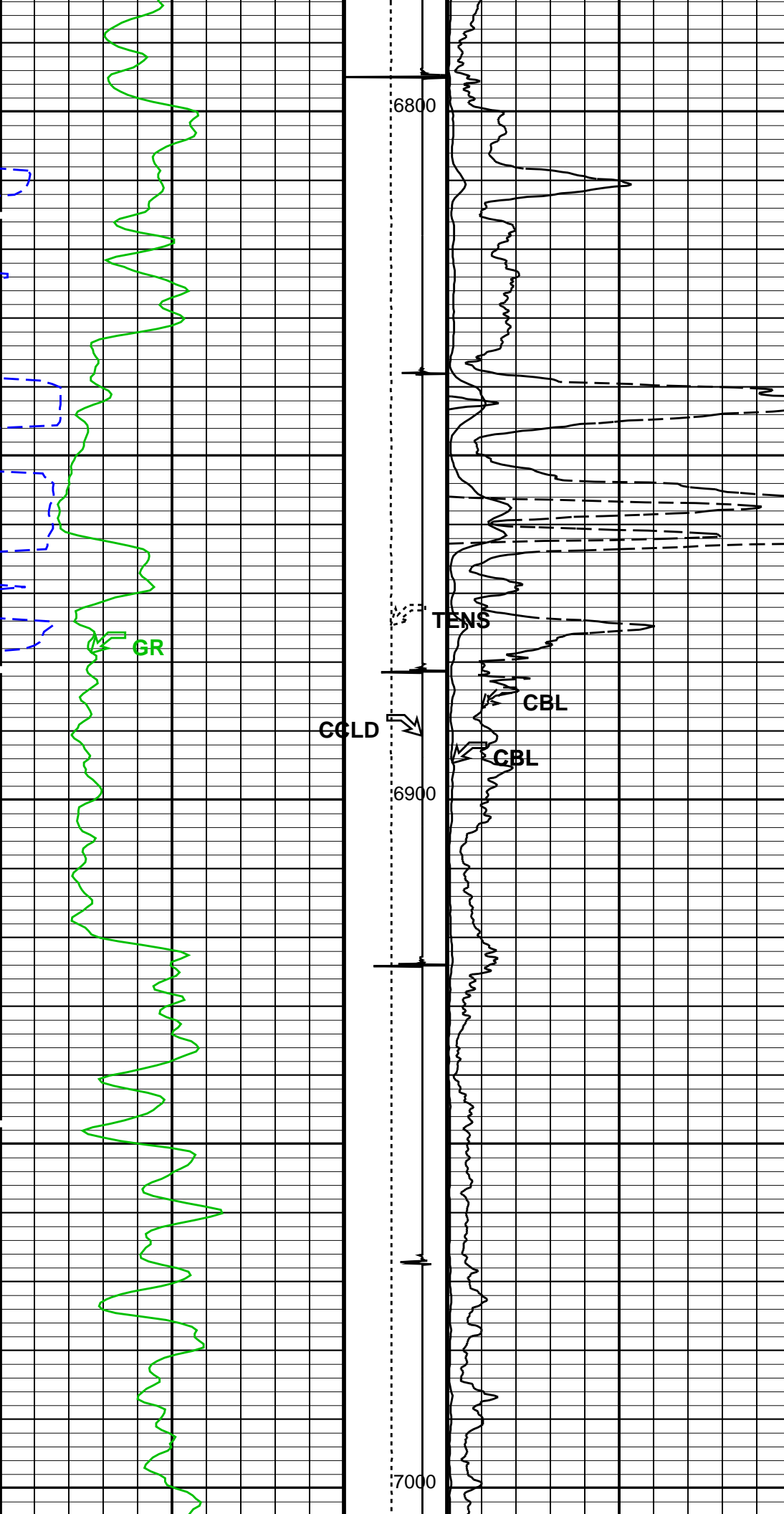


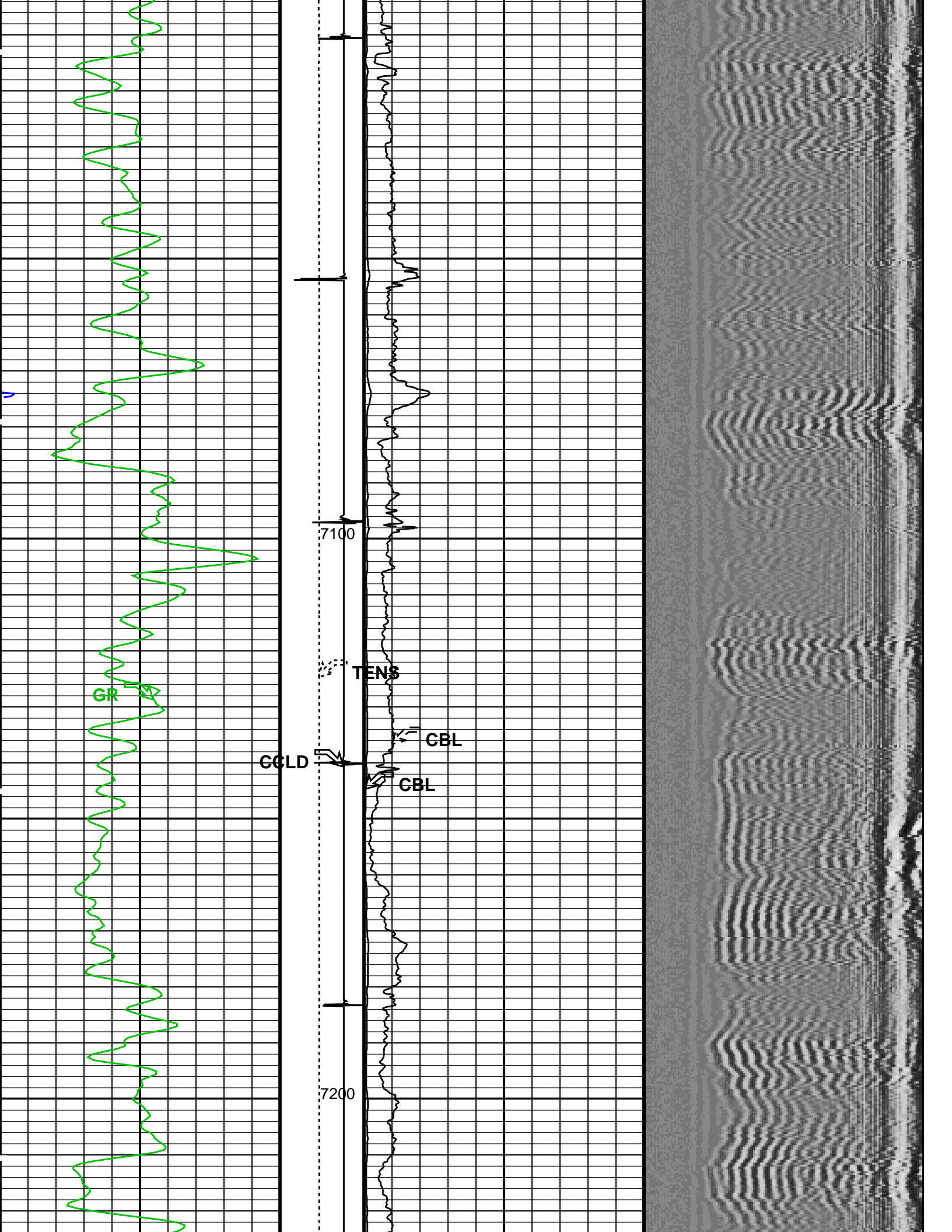


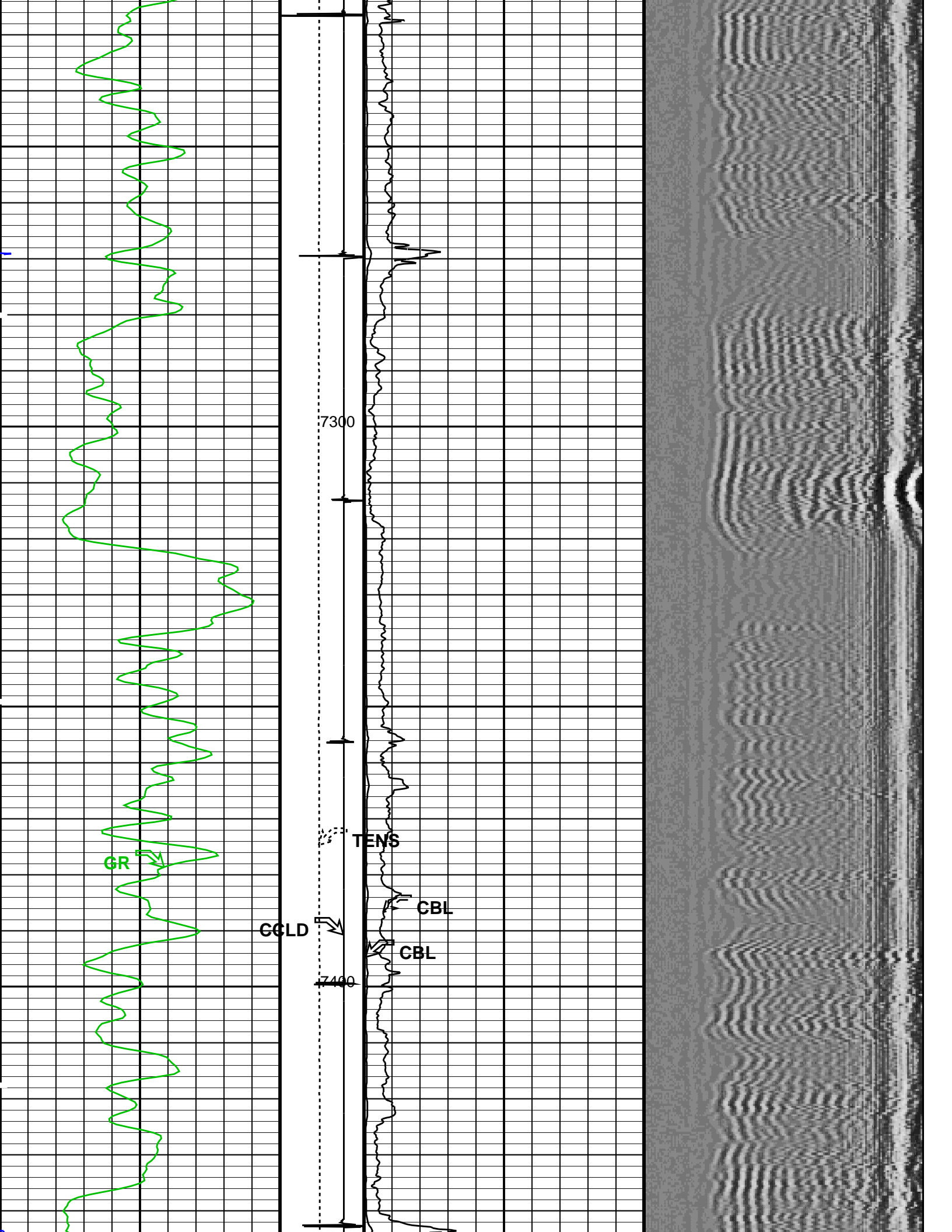


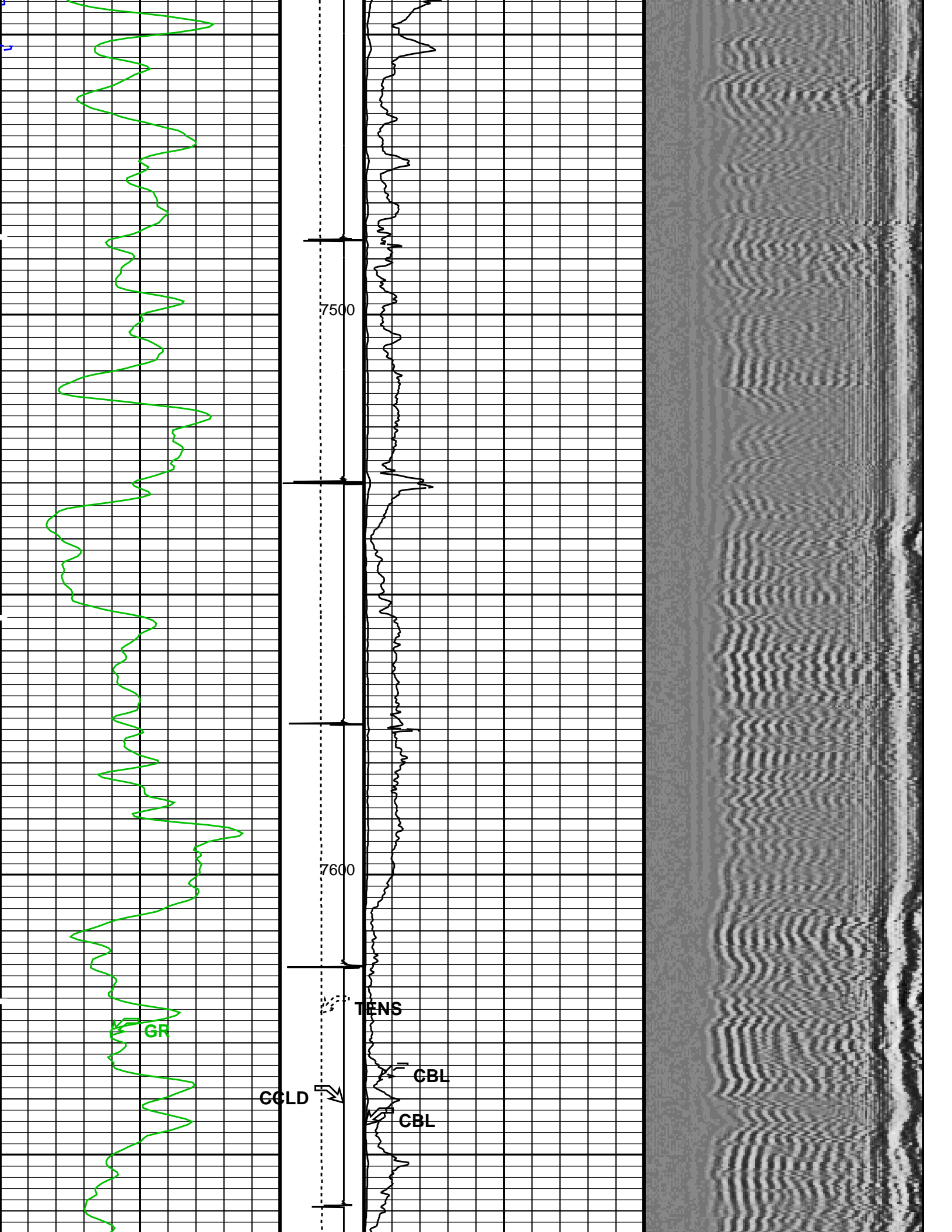


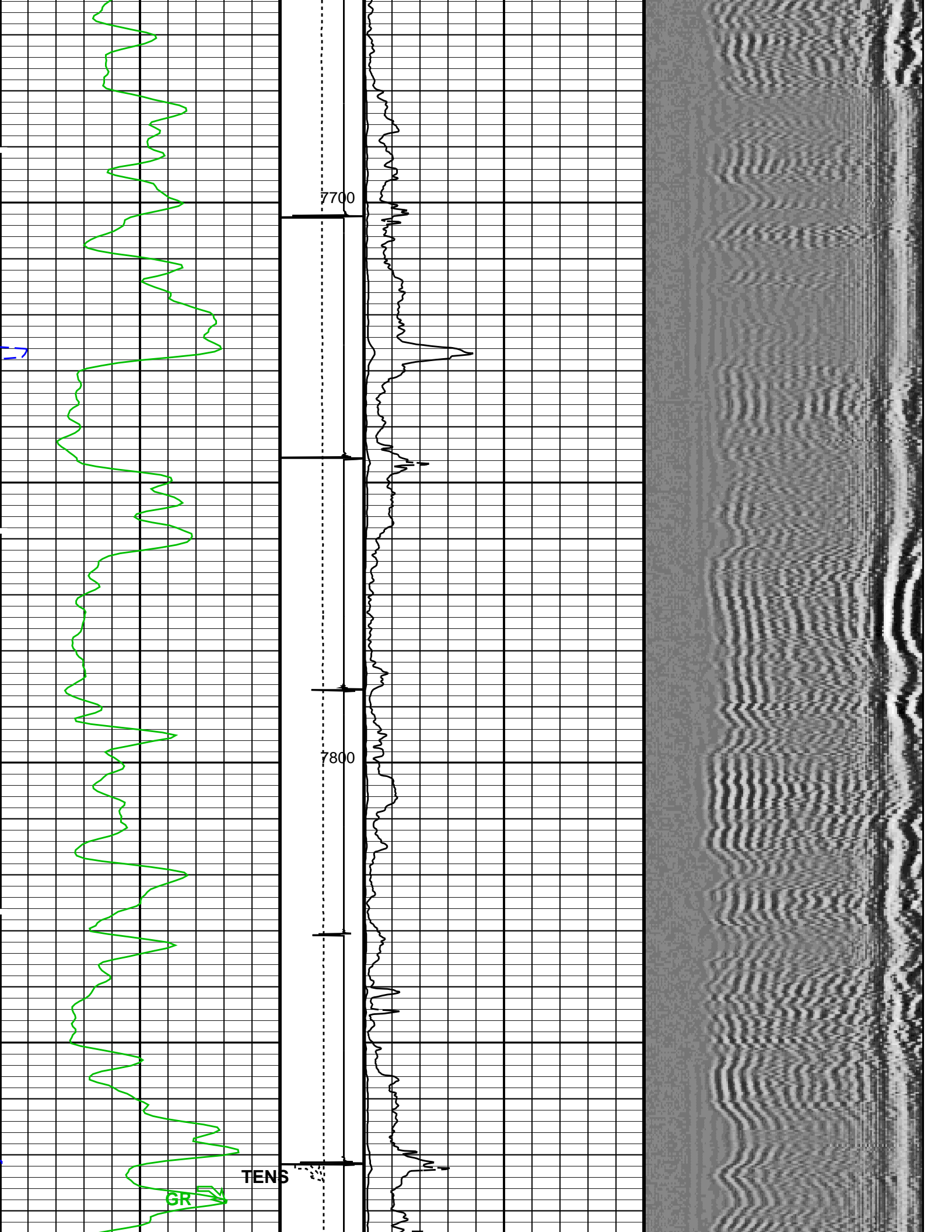


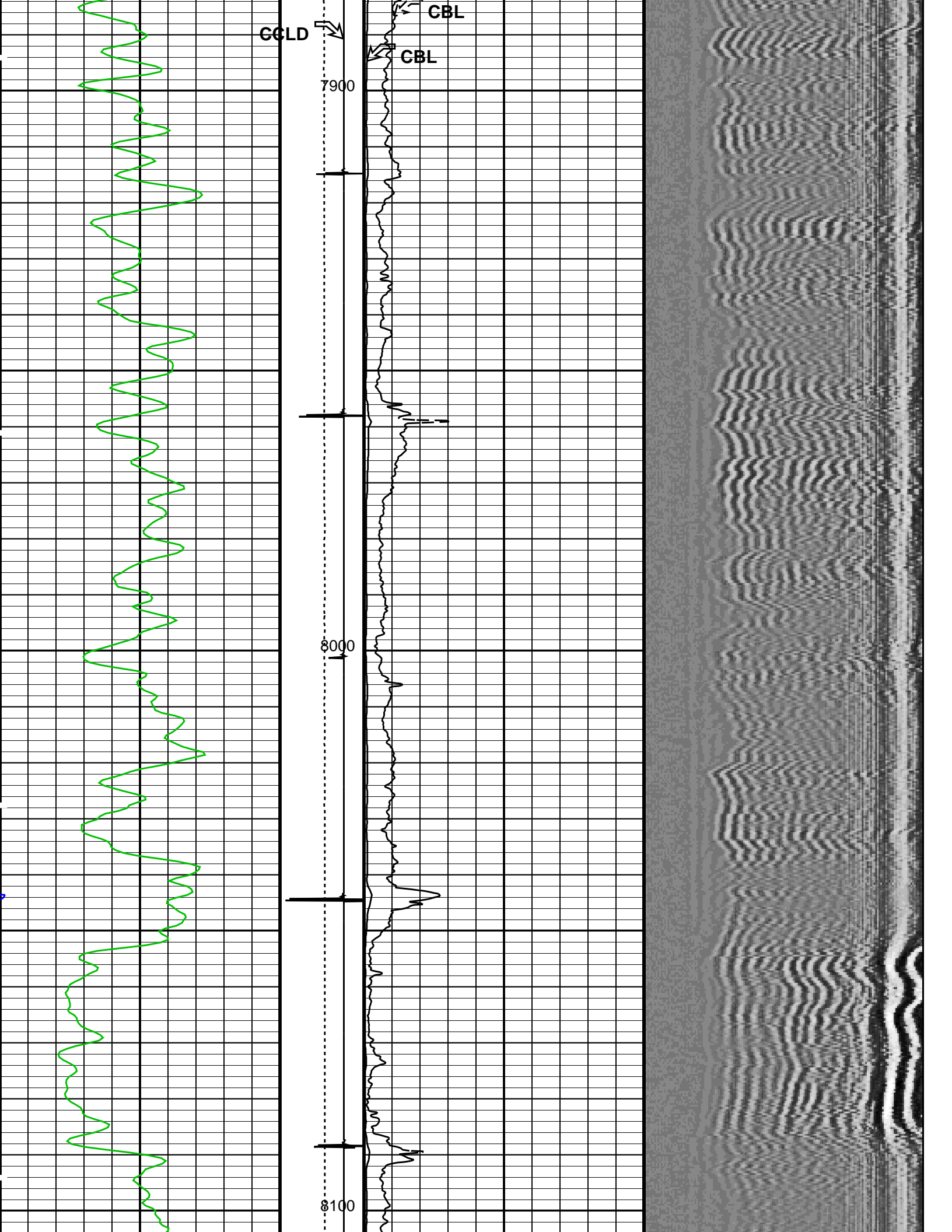


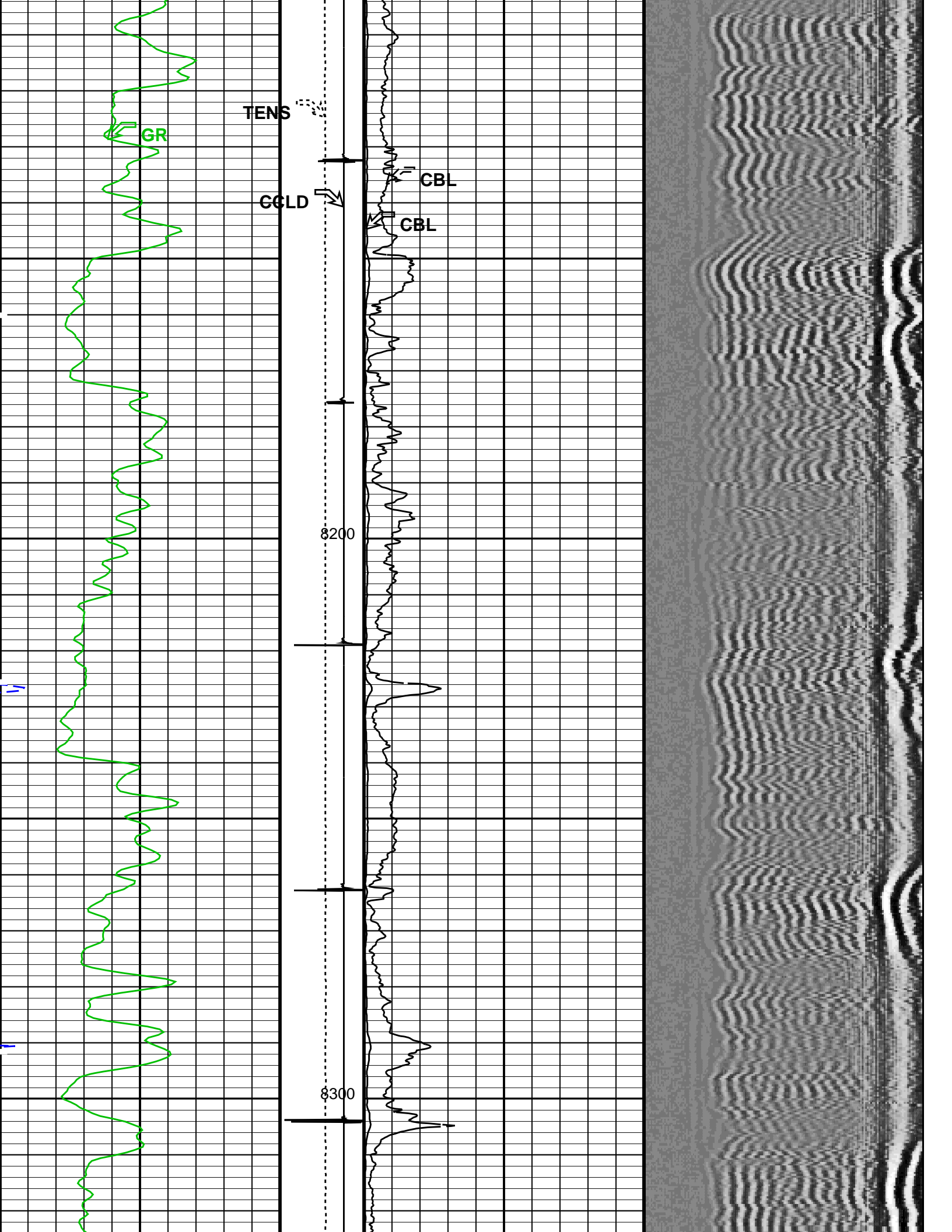


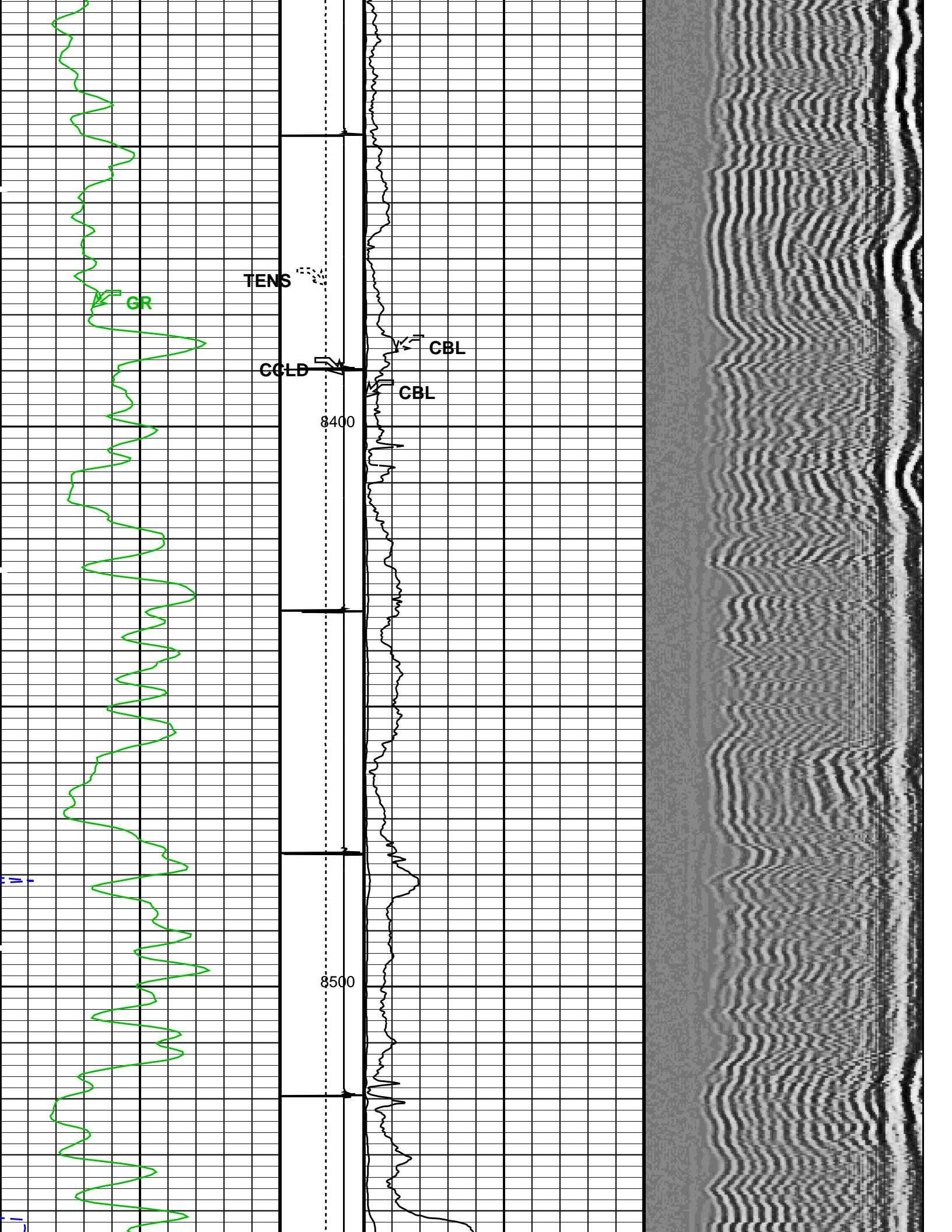


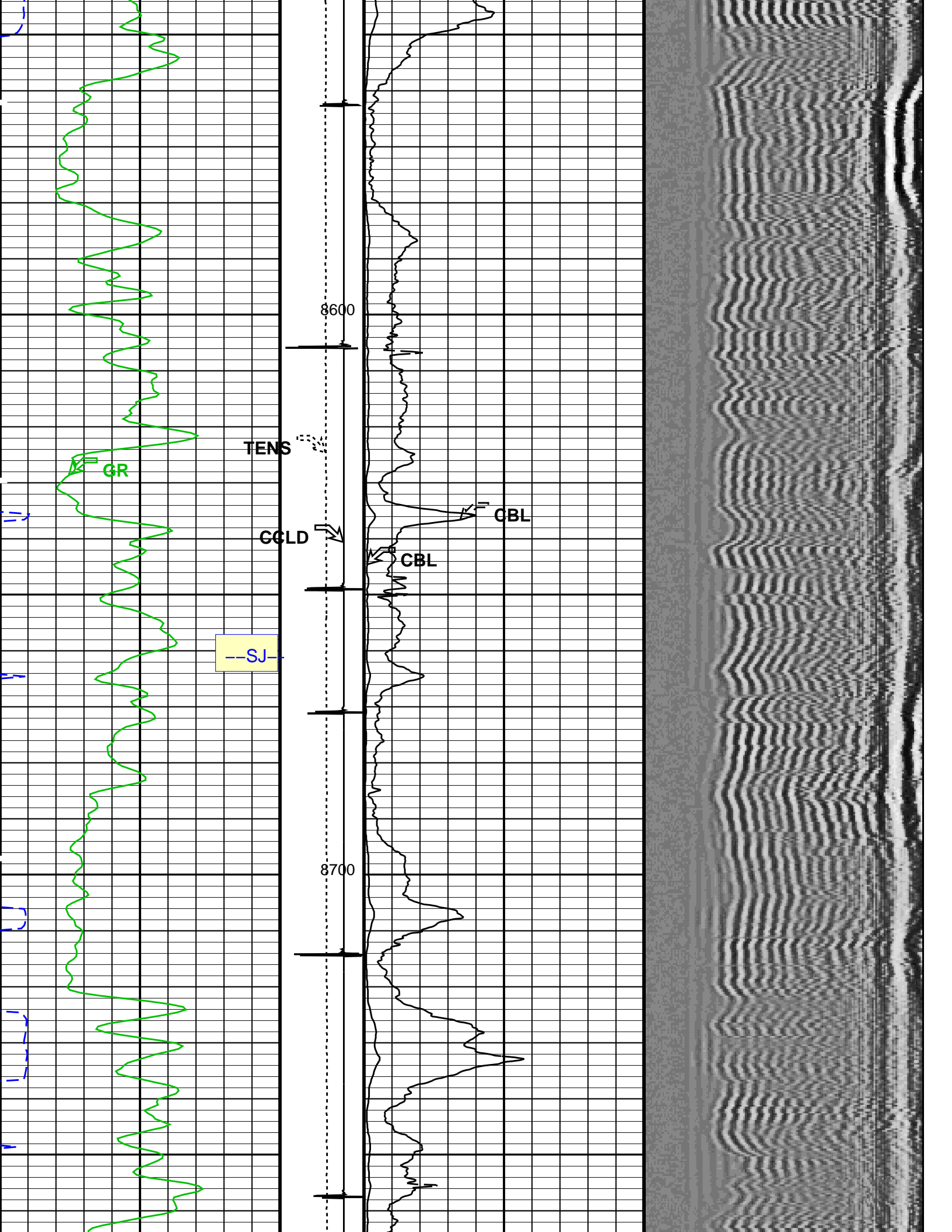


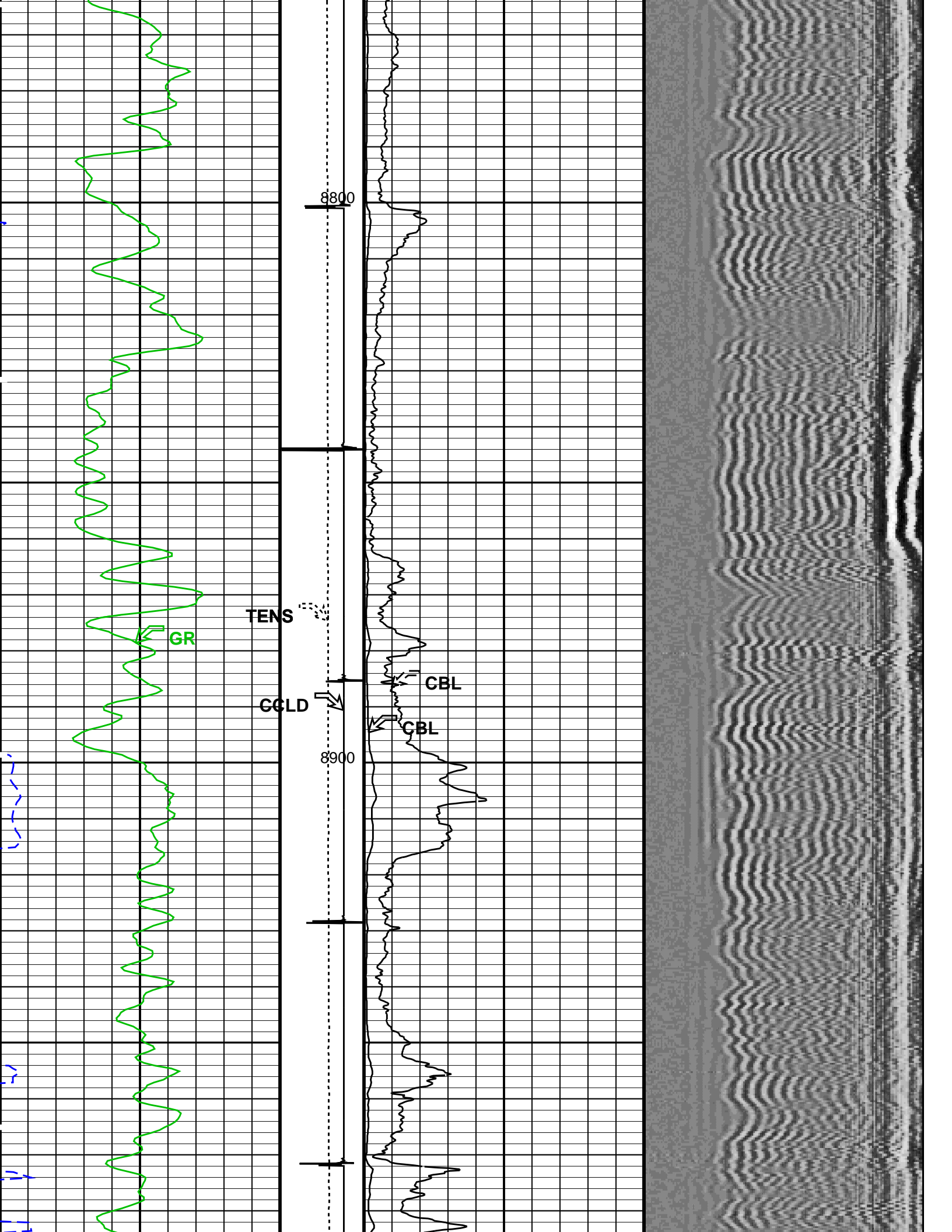


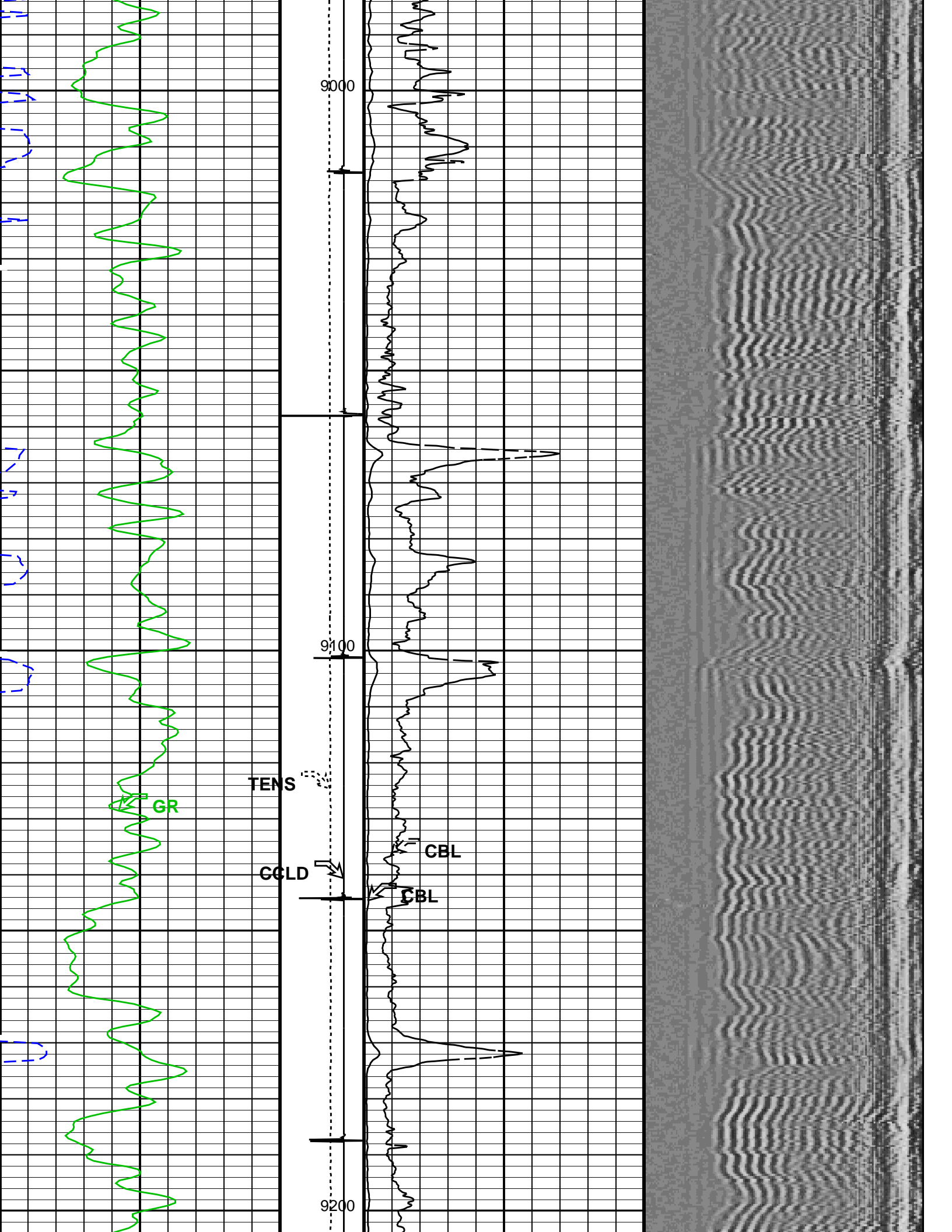


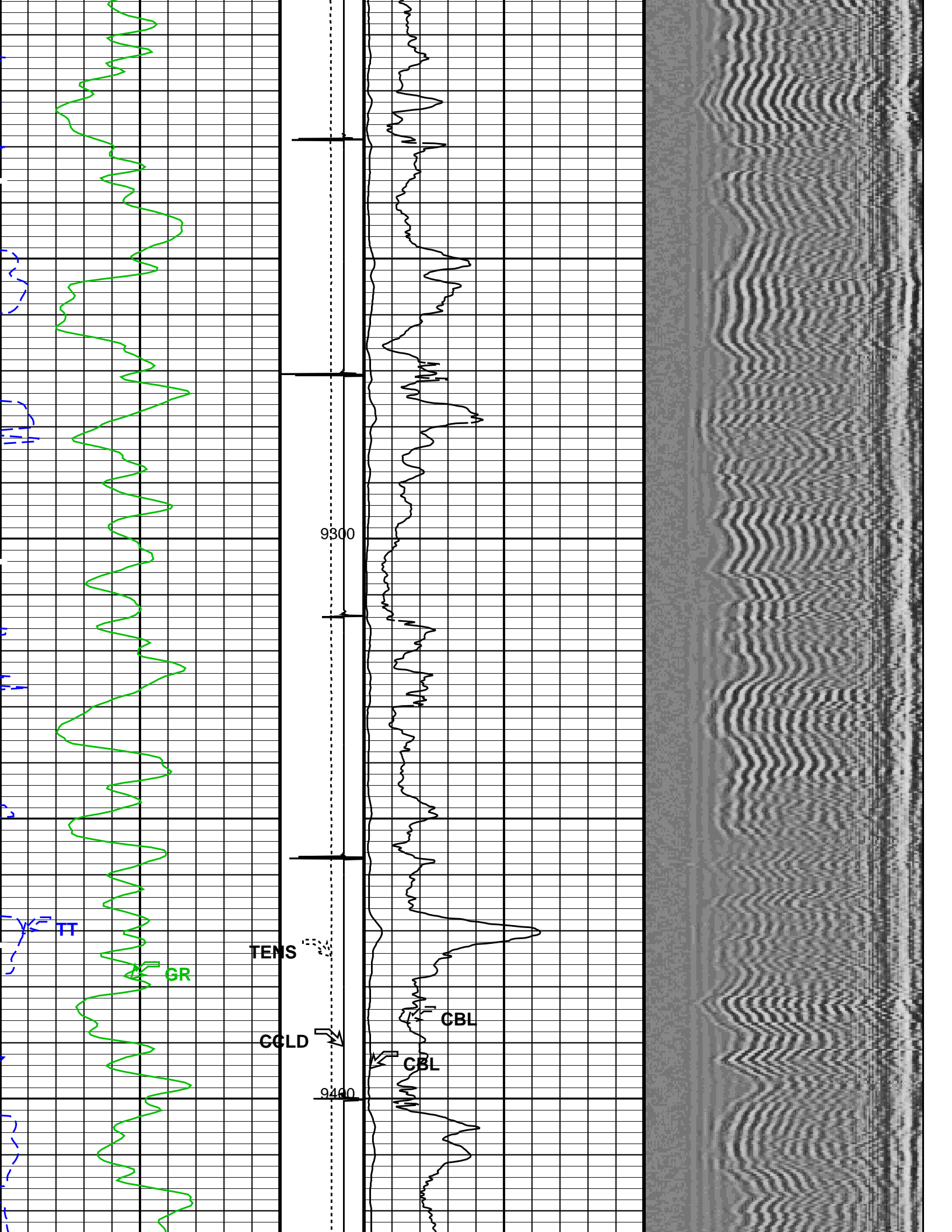


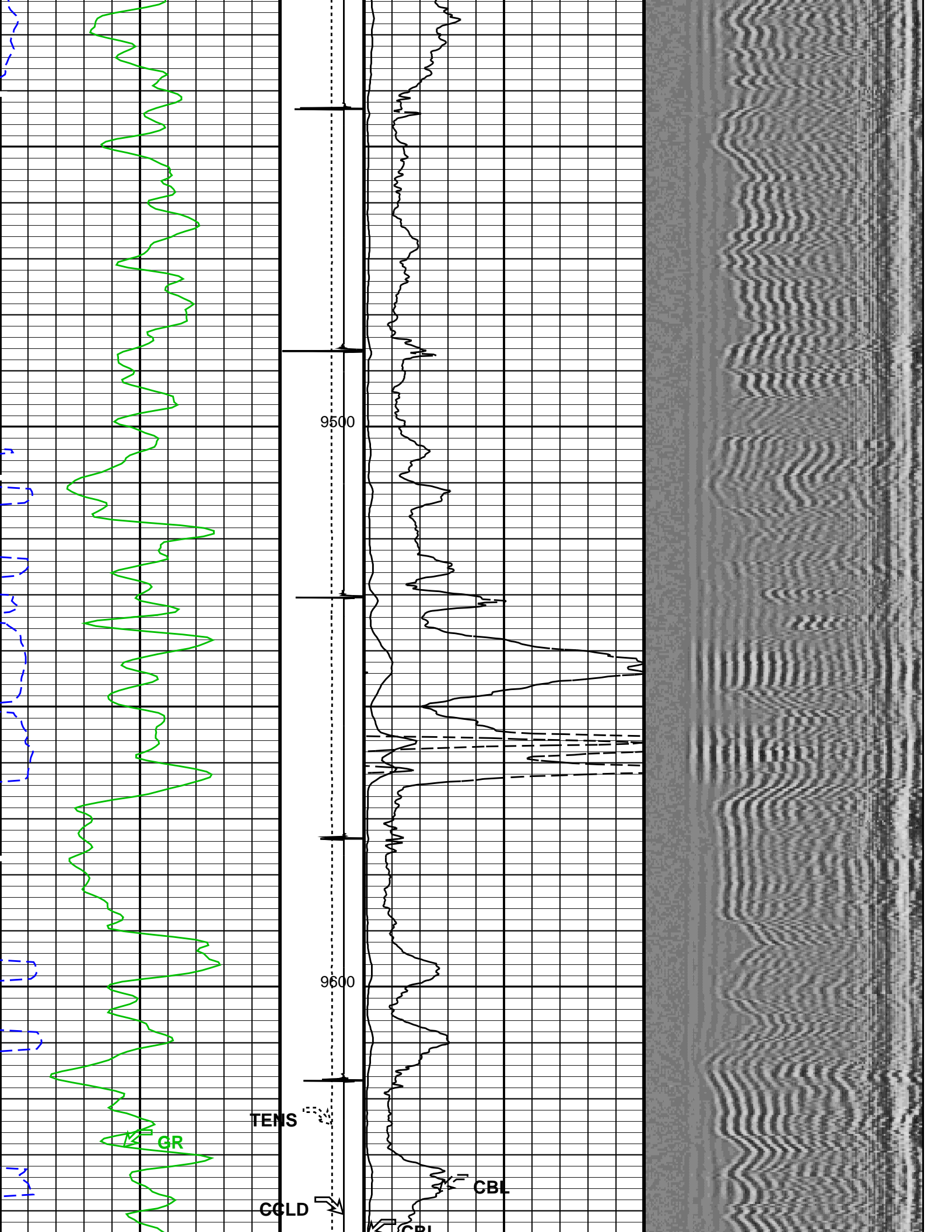


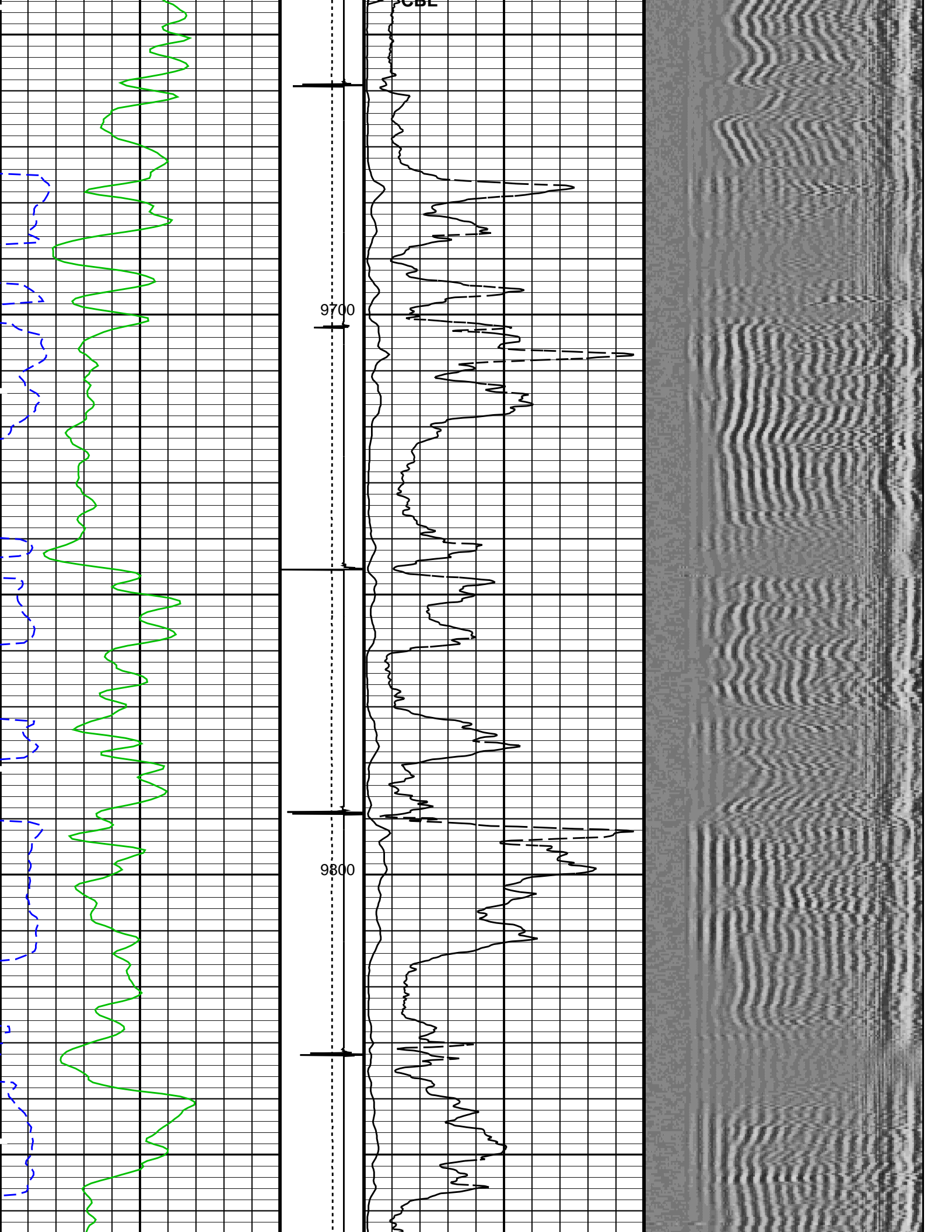


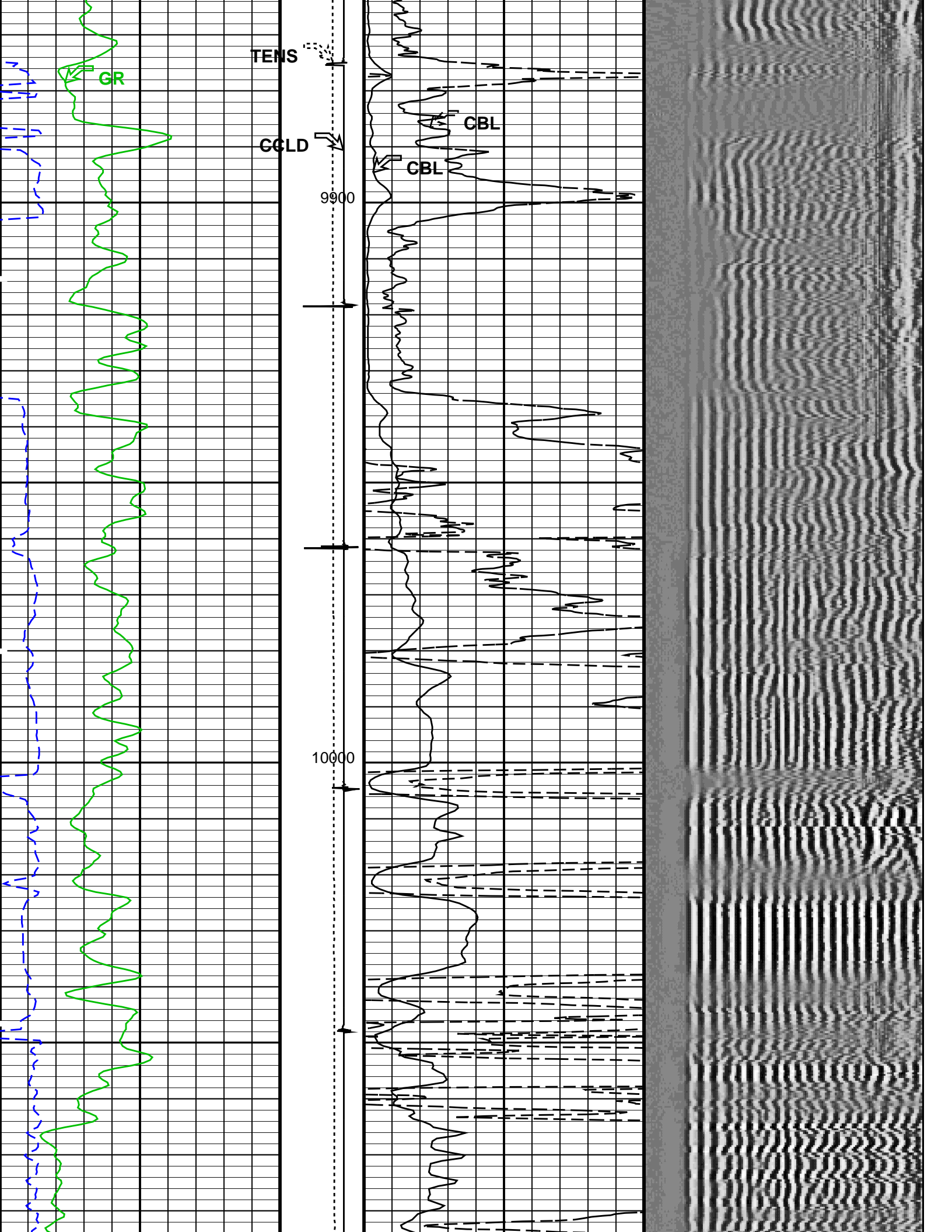


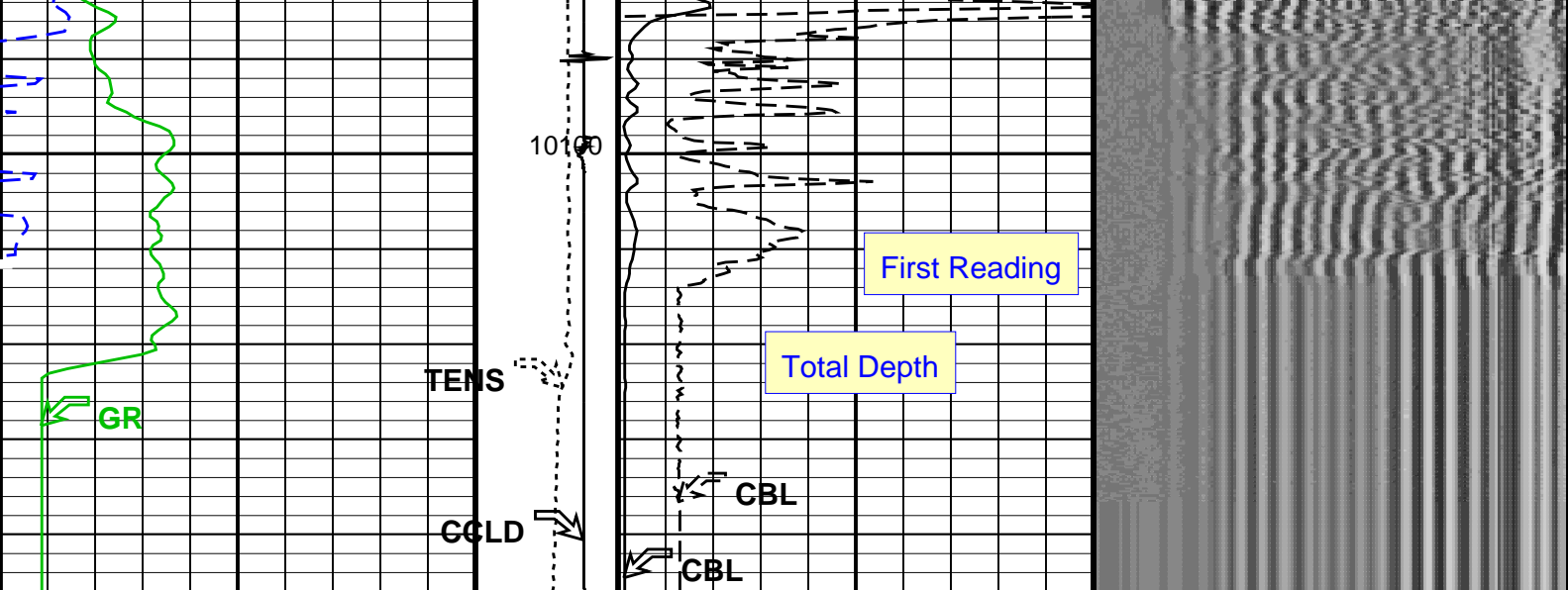












Gamma Ray (GR) (GAPI)		Tension (TENS) (LBF)	CBL Amplitude (CBL) (MV)	Min Amplitude Max
0	150	0 2000	0 100	200 1200
Transit Time (TT) (US)		Discriminated CCL (CCLD) (V)	CBL Amplitude (CBL) (MV)	
260	160	3 -1	0 10	

PIP SUMMARY

Time Mark Every 60 S

Format: CBL_VDL Vertical Scale: 5" per 100'

Graphics File Created: 26-Apr-2012 10:33

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		CBL Adjustment Factor (CBAF)	1.0
MAP 1 Correction Factor		MAP Adjustment Factor (MPAF)	1.0
MAP 2 Correction Factor			
MAP 3 Correction Factor			
MAP 4 Correction Factor			
MAP 5 Correction Factor			
MAP 6 Correction Factor			
MAP 7 Correction Factor			
MAP 8 Correction Factor			

Parameters

DLIS Name	Description	Value
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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
DORL	Depth Offset for Repeat Analysis	0.0	FT
TD	Total Depth	-50000	FT

Output DLIS Files

DEFAULT SCMT_PSP_007LUP FN:6 PRODUCER 26-Apr-2012 10:33

Schlumberger

REPEAT ANALYSIS

MAXIS Field Log

Company: ENCANA OIL & GAS (USA) INC.

Well: ENCANA P27 QUAD 3

Input DLIS Files

DEFAULT SCMT_PSP_006PUP FN:5 PRODUCER 26-Apr-2012 10:32 10137.5 FT 9851.0 FT

Output DLIS Files

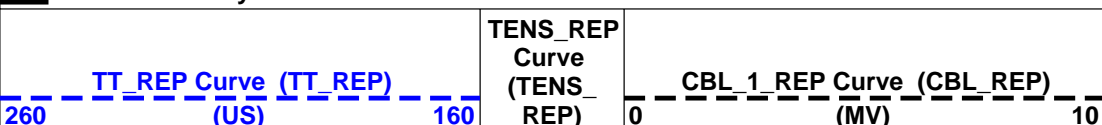
DEFAULT SCMT_PSP_007LUP FN:6 PRODUCER 26-Apr-2012 10:33

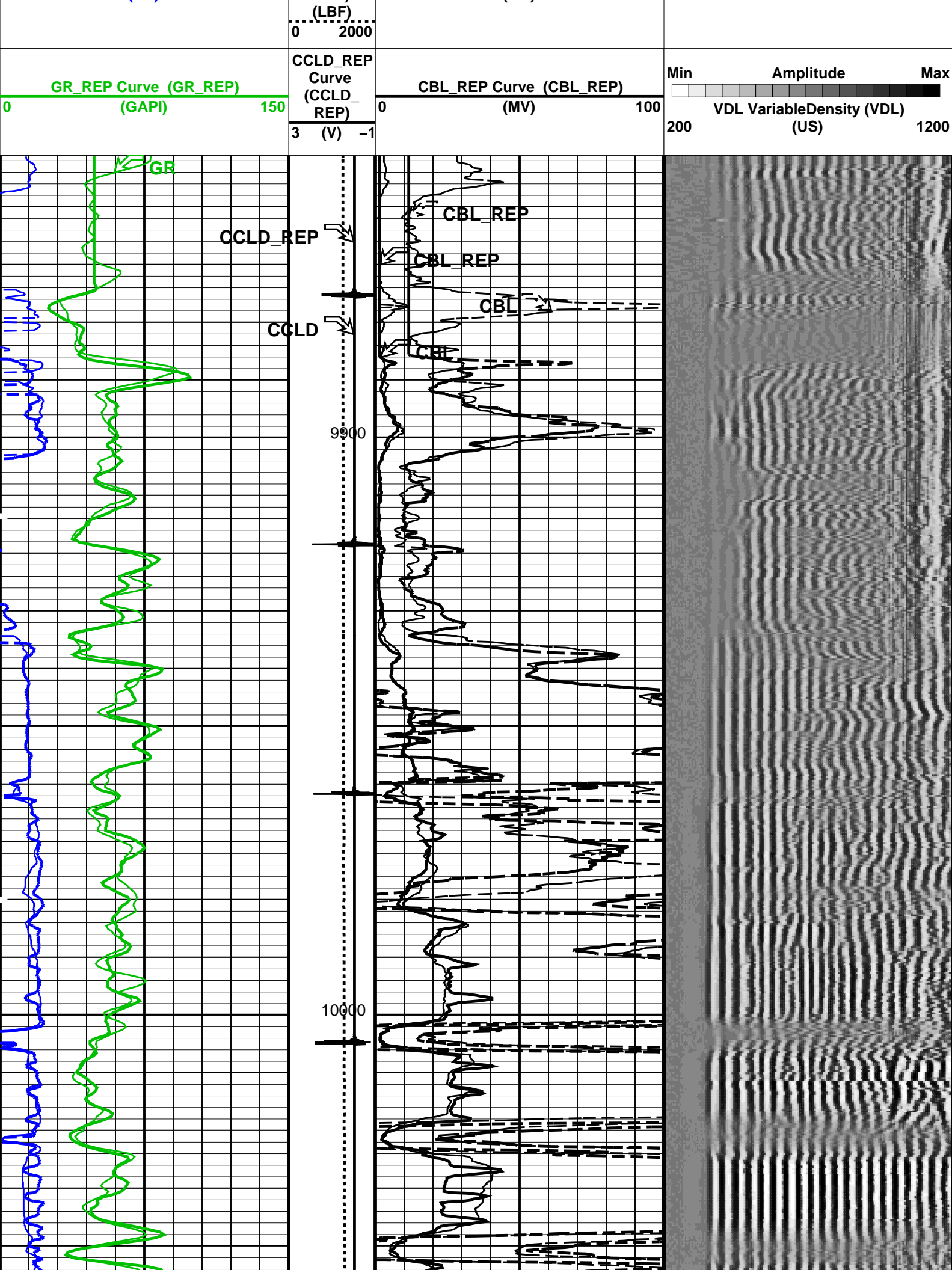
OP System Version: 19C0-187

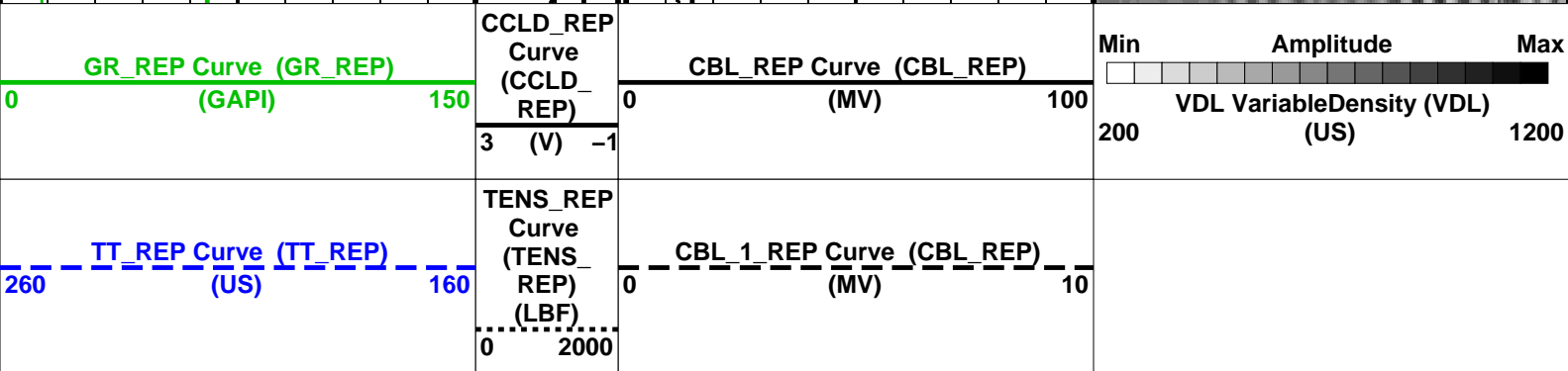
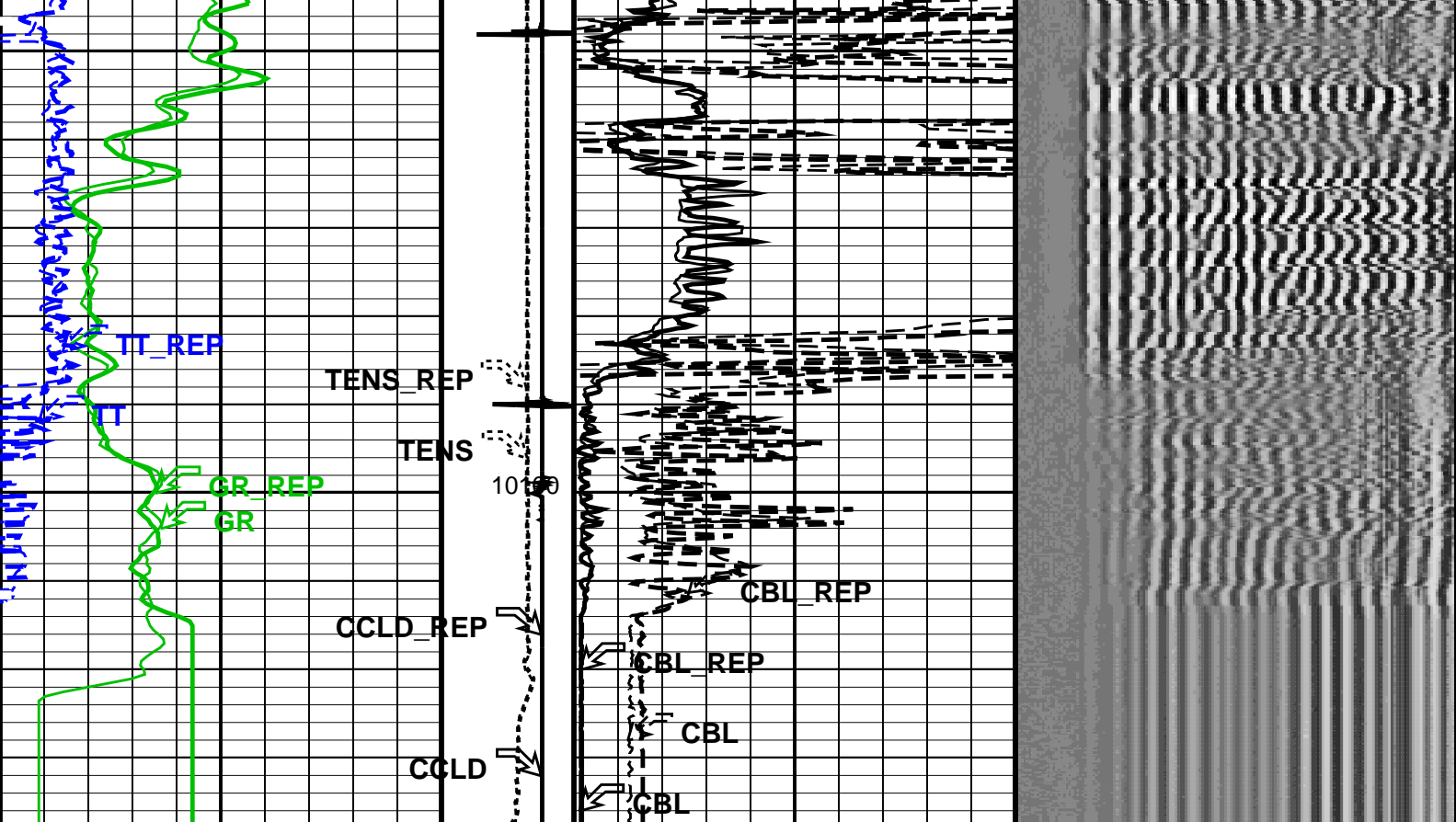
SCMT-CB SRPC-5095-H2-2011-OP19_b PSPT 19C0-187

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: 26-Apr-2012 10:33

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
DORL	Depth Offset for Repeat Analysis	0.0	FT
TD	Total Depth	-50000	FT

Input DLIS Files

DEFAULT	SCMT_PSP_006PUP	FN:5	PRODUCER	26-Apr-2012 10:32	10137.5 FT	9851.0 FT
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Output DLIS Files

DEFAULT	SCMT_PSP_007LUP	FN:6	PRODUCER	26-Apr-2012 10:33		
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COEFFICIENTS

MAXIS Field Log

Client:	ENCANA OIL & GAS (USA) INC.	Tool:	PSP
Field:	NORTH PARACHUTE	Sub Type:	PBMS
Well:	ENCANA P27 QUAD 3	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

Calib Date ddmmyy

Matrix Size

Coeff CRC

:

3779
090107
66
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.	Tool:	PSP
Field:	NORTH PARACHUTE	Sub Type:	PBMS
Well:	ENCANA P27 QUAD 3	Sensor:	WellTemp RTD
Run date:	26−Apr−2012		

PBMS RTD Well Thermometer

Sonde Serial NB

Sensor Serial NB

Calib Date ddmmyy

Matrix Size

Coeff CRC

COEFFICIENTS FOR RTD THERMOMETER PBMS-A.3779 S/N:

3779

090107

16

3846

WTemp Coeff

	Tt**0	Tt**1	Tt**2
Tt**0	+.492135102627E+02	-.278827553804E+03	+.142867554561E+03
	Tt**3	Tt**4	Tt**5
Tt**0	-.233378392336E+02	+.145553494493E+01	0.0

Client:	ENCANA OIL & GAS (USA) INC.	Tool:	PSP
Field:	NORTH PARACHUTE	Sub Type:	PBMS
Well:	ENCANA P27 QUAD 3	Sensor:	Clock Model
Run date:	26−Apr−2012		

PBMS Digitalization Clock
Sonde Serial NB
Sensor Serial NB 3779
Calib Date ddmmyy 090107
Matrix Size 16
Coeff CRC D285

Clock Coeff

	Temp**0	Temp**1	Temp**2
Temp**0	-.210501098404E+03	-.537713340627E+01	-.752421519422E-01
	Temp**3	Temp**4	Temp**5
Temp**0	+.630273975887E-03	+.266728381738E-05	0.0

Client:	ENCANA OIL & GAS (USA) INC.	Tool:	PSP
Field:	NORTH PARACHUTE	Sub Type:	PBMS
Well:	ENCANA P27 QUAD 3	Sensor:	GR
Run date:	26-Apr-2012		

PBMS Gamma Ray
Sonde Serial NB RESISTORS FOR GR SENSOR N.34552,TOOL PBMS-AA3779. SENSOR S/N:
Sensor Serial NB 34552
Calib Date ddmmyy 030606
Matrix Size 12
Coeff CRC 3AE5

GR HV Rt

	Rt**0	Rt**1
Rt**0	+.200000000000e+04	+.214000000000e+04

Company: ENCANA OIL & GAS (USA) INC.



Well: NP EF01A–34 P27 595
Field: NORTH PARACHUTE
County: GARFIELD
State: COLORADO

CEMENT BOND LOG
CBL – VDL
GAMMA RAY – CCL