

Schlumberger

Company: ENCANA OIL & GAS (USA) INC

Well: SG 8512A-36 (D36 496)

Field: STORY GULCH

County: GARFIELD State: COLORADO

County: GARFIELD		SLIM CEMENT MAPPING LOG CBL-VDL GR-CCL			
Field: STORY GULCH					
Location: SHL: 422 FNL & 1031 FWL					
Well: SG 8512A-36 (D36 496)					
Company: ENCANA OIL & GAS (USA) INC					
LOCATION		SHL: 422 FNL & 1031 FWL		Elev.: K.B. 8320.00 ft	
		BHL: 2562 FSL & 699 FWL		G.L. 8290.00 ft	
				D.F. 8319.00 ft	
Permanent Datum:		GROUND LEVEL		Elev.: 8290.00 ft	
Log Measured From:		KELLY BUSHING		30.00 ft above Perm. Datum	
Drilling Measured From:		KELLY BUSHING			
API Serial No.		Section 36		Township 4S	
05-045-20936-00				Range 96W	
Logging Date		12-Jun-2013			
Run Number		1			
Depth Driller		12210 ft			
Schlumberger Depth		12140 ft			
Bottom Log Interval		12132 ft			
Top Log Interval		70 ft			
Casing Fluid Type		FRESH WATER			
Salinity					
Density		8.4 lbm/gal			
Fluid Level		70 ft			
BIT/CASING/TUBING STRING					
Bit Size		7.875 in			
From		8076 ft			
To		12210 ft			
Casing/Tubing Size		4.500 in			
Weight		11.6 lbm/ft			
Grade		P-110			
From		30 ft			
To		12188 ft			
Maximum Recorded Temperatures		284 degF			
Logger On Bottom		12-Jun-2013		19:00	
Unit Number		391		GRAND JUNCTION	
Recorded By		KIRSTIE BUNTING			
Witnessed By		JOHN MILLER			

PVT DATA					Run 1	Run 2	Run
Oil Density							
Water Salinity							
Gas Gravity							
Bo							
Bw							
1/Bq							
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							

DEPTH SUMMARY LISTING

Date Created: 3-JUN-2013 9:46:48

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW-B	Type:	CMTD-B/A	Type:	1-25ZT
Serial Number:	6214	Serial Number:	3421	Serial Number:	112136
Calibration Date:	4-24-2012	Calibration Date:	6-3-2013	Length:	19500 FT
Calibrator Serial Number:		Calibrator Serial Number:	174878	Conveyance Method: Wireline Rig Type: LAND	
Calibration Cable Type:	1-25P	Number of Calibration Points:	10		
Wheel Correction 1:	-3	Calibration RMS:	2		
Wheel Correction 2:	-4	Calibration Peak Error:	6		

Depth Control Parameters

Log Sequence: First Log In the Well

Rig Up Length At Surface:

Rig Up Length At Bottom:

Rig Up Length Correction:

Stretch Correction:

Tool Zero Check At Surface:

Depth Control Remarks

1. ALL SCHLUMBERGER DEPTH CONTROL PROCEDURES USED
2. IDW USED AS PRIMARY DEPTH CONTROL
3. SWPT DRUM COUNTER 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

FIRST RUN IN HOLE CORRELATED TO DOWN LOG

TOOL RAN AS PER TOOL SKETCH

MAXIMUM RECORDED TEMPERATURE= 284 DEGF

MAXIMUM RECORDED PRESSURE= 4972 PSIA

SHORT JOINTS= 7711' / 10686'

REMARKS: RUN NUMBER 2

ENTRANCE TIME= 18:30					
LOGGER ON BOTTOM= 19:00					
EXIT TIME= 22:15					
MAIN PASS LOGGED UNDER ZERO SURFACE PRESSURE					
EXPECTED CBL AMPLITUDE IN FREE PIPE = 80MV					
THANK YOU FOR CHOOSING E&P WIRELINE, A SCHLUMBERGER COMPANY					
YOUR CREW: K. BUNTING W AZIZ K JOHNS					
RUN 1			RUN 2		
SERVICE ORDER #:			SERVICE ORDER #:		
PROGRAM VERSION:			PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
CGF9-00079					
19C0-187					
70 ft					
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

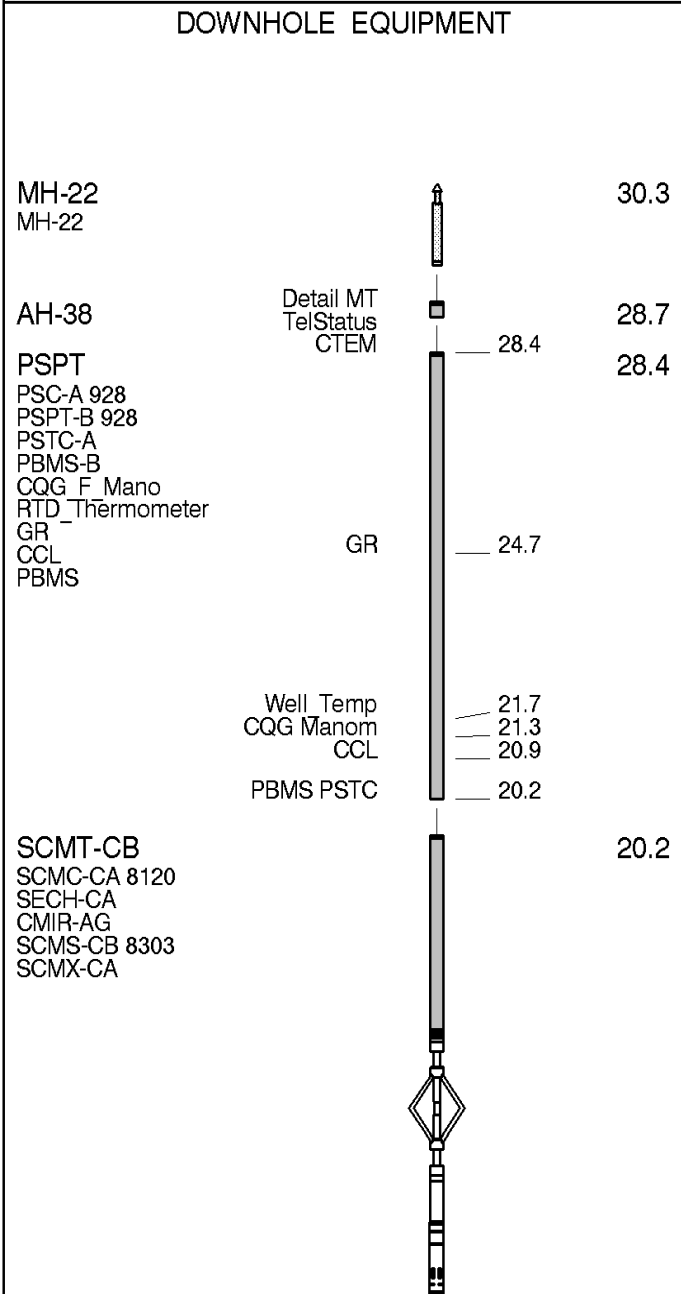
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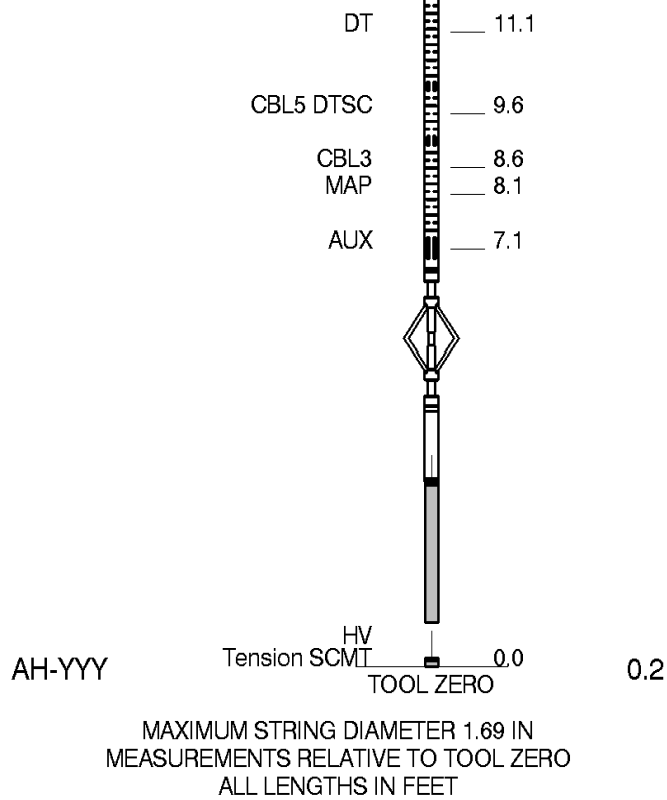
RUN 2

SURFACE EQUIPMENT

WITM-A

PSC_16MHZ





Schlumberger

MAIN PASS CBL VDL

MAXIS Field Log

Company: ENCANA OIL & GAS (USA) INC

Well: SG 8512A-36 (D36 496)

Input DLIS Files

DEFAULT	SCMT_PSP_024LUP	FN:23	PRODUCER	12-Jun-2013 19:07	12148.5 FT	19.0 FT
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Output DLIS Files

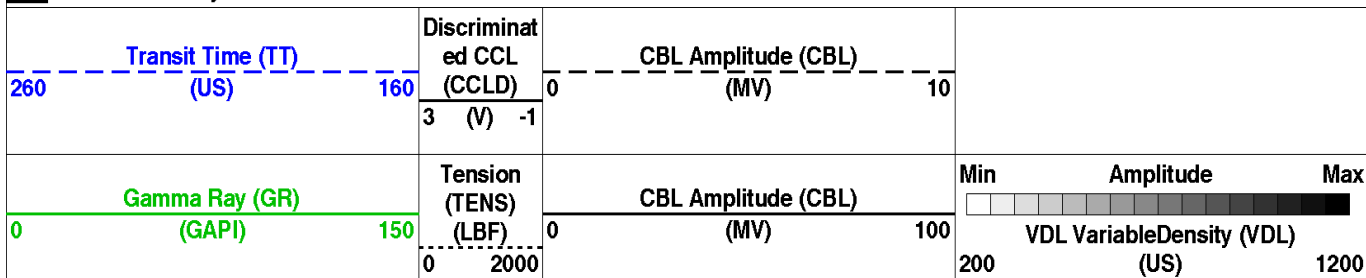
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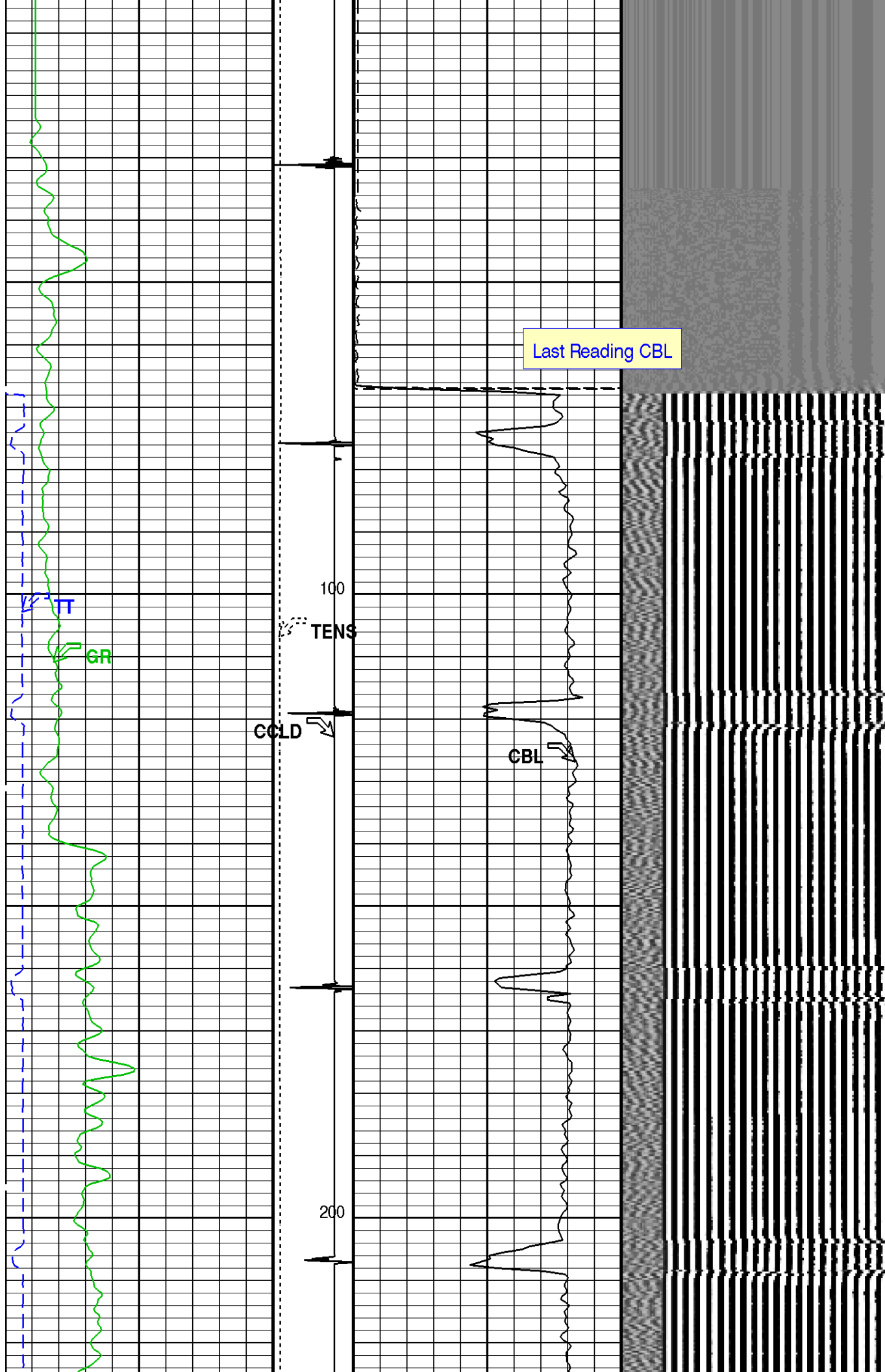
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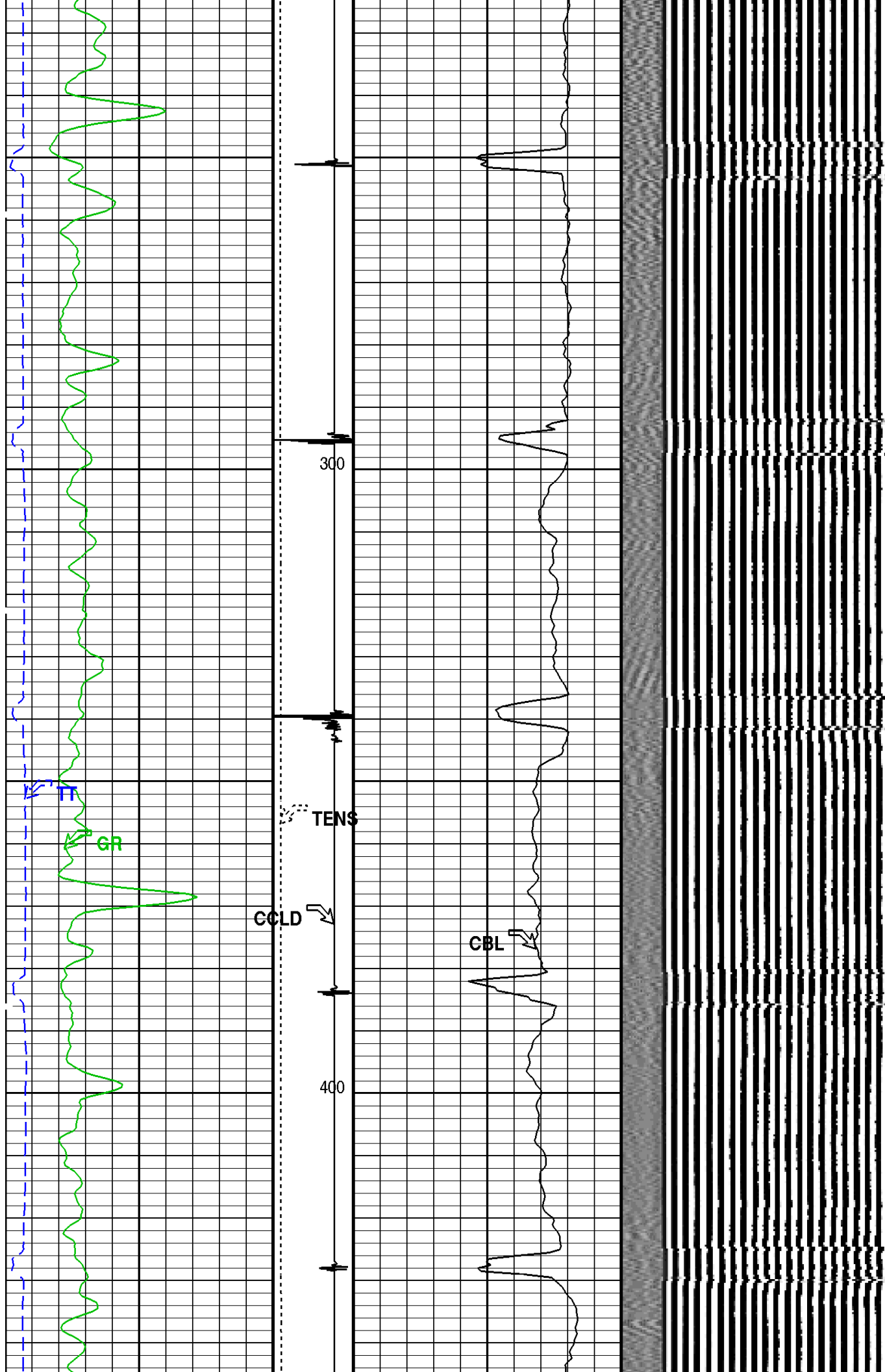
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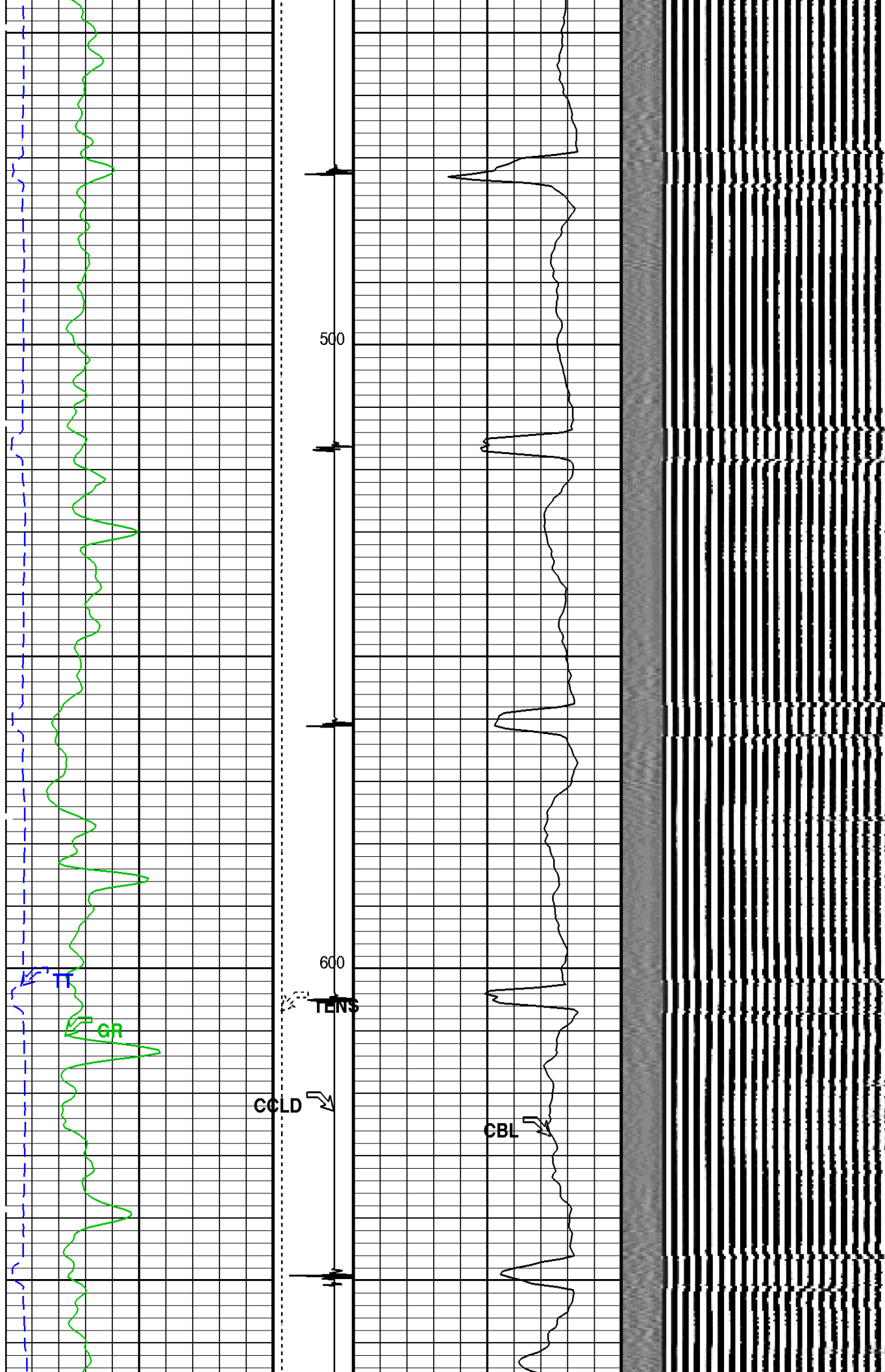
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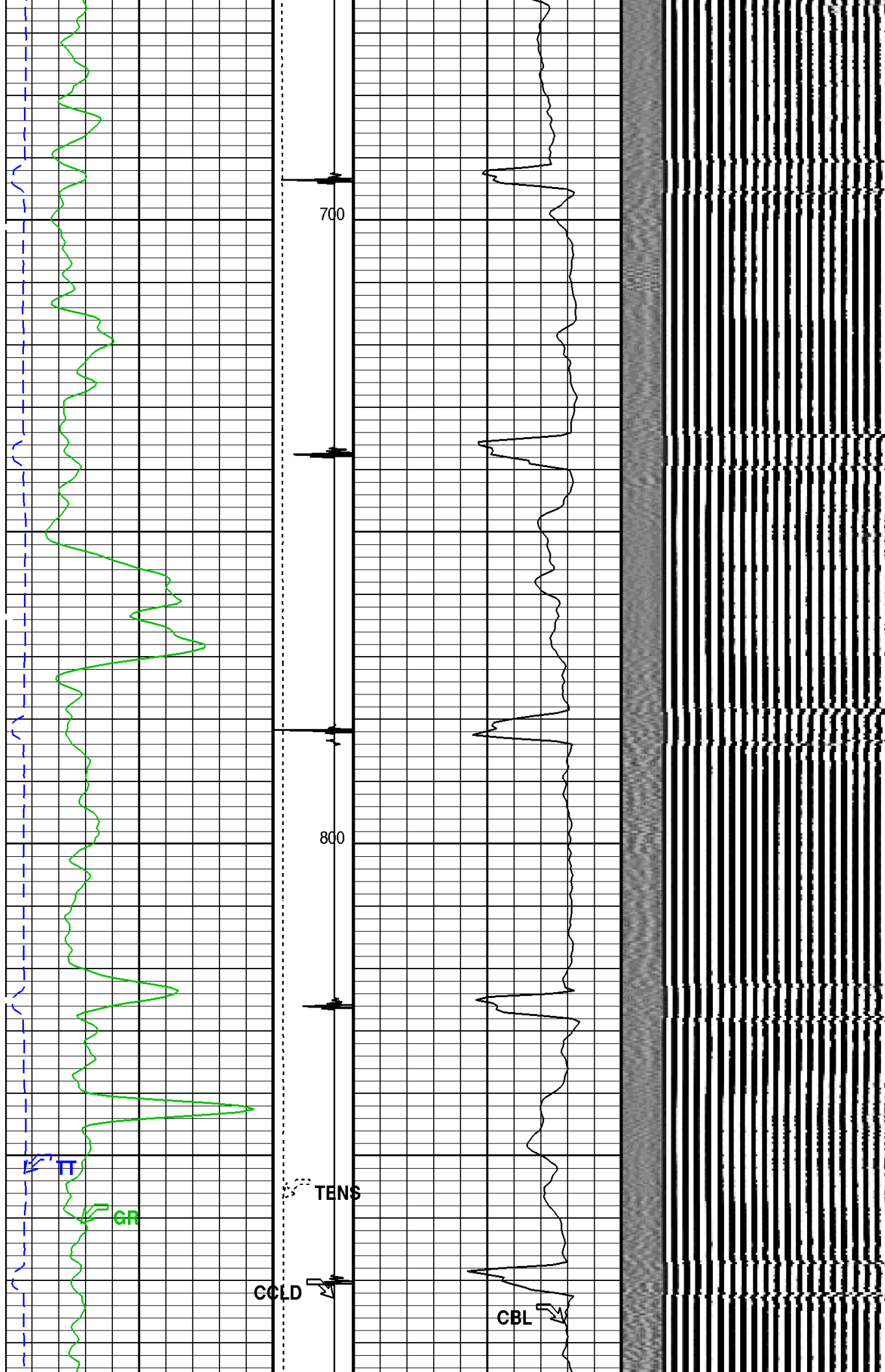
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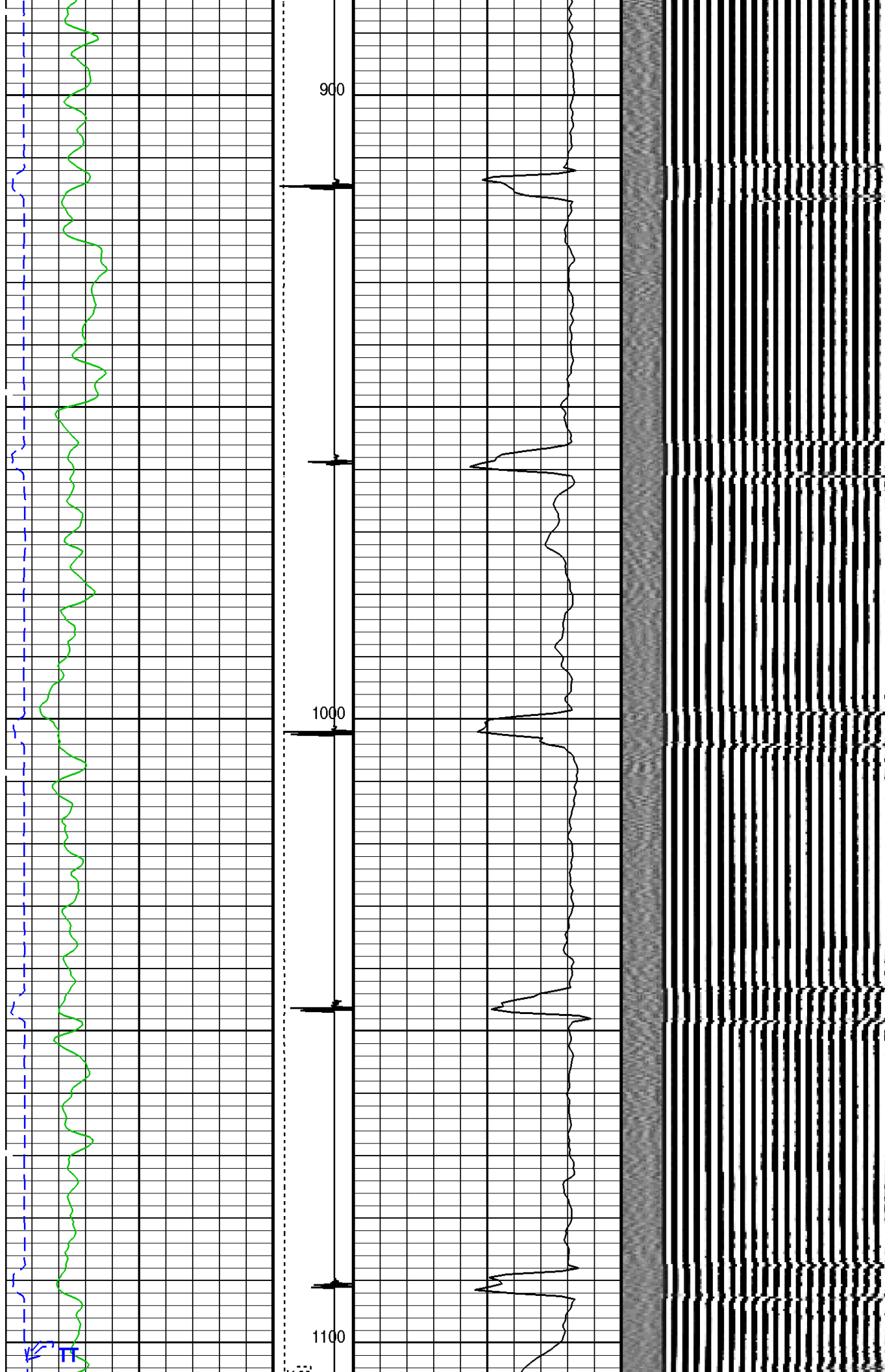


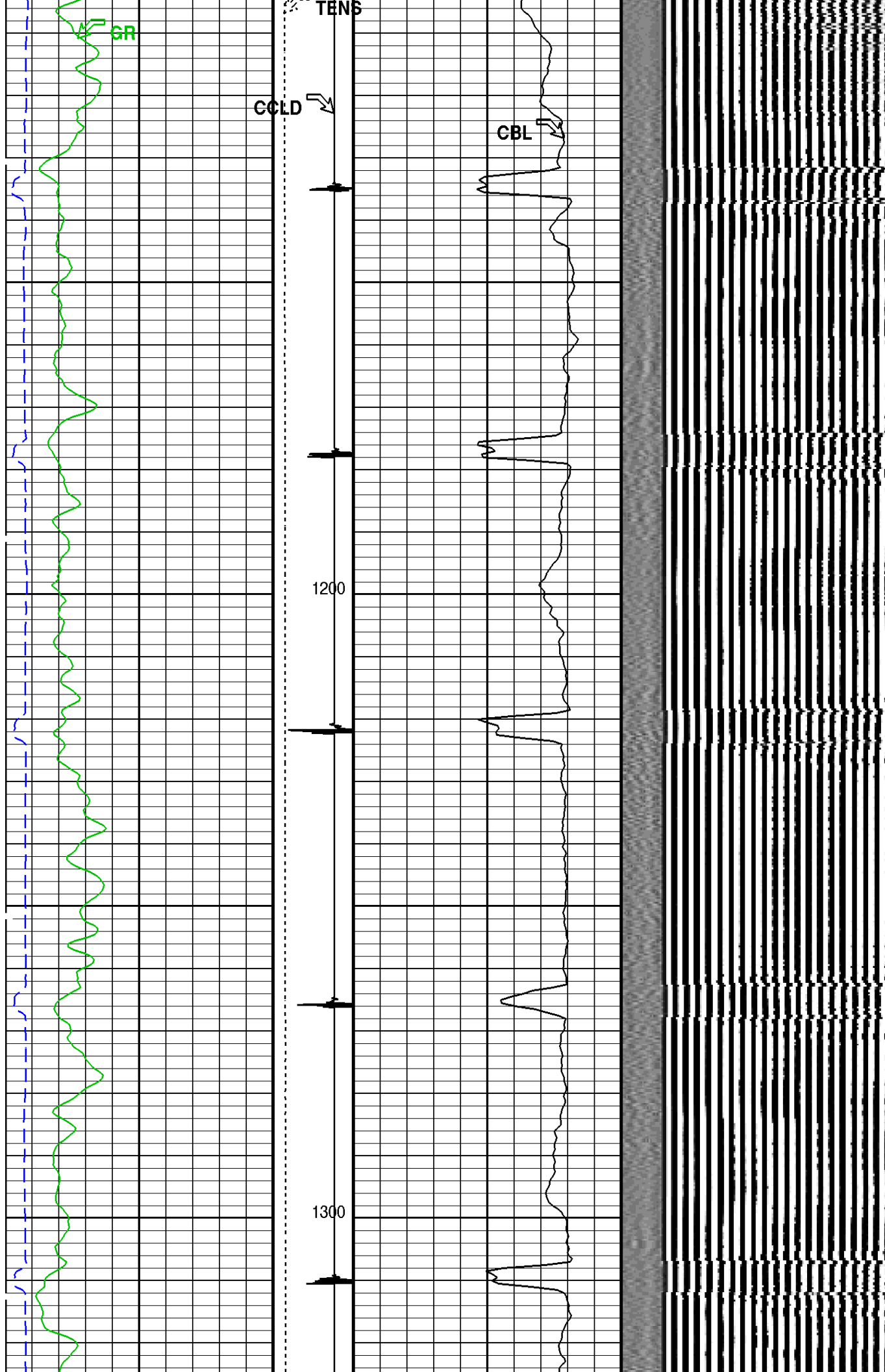


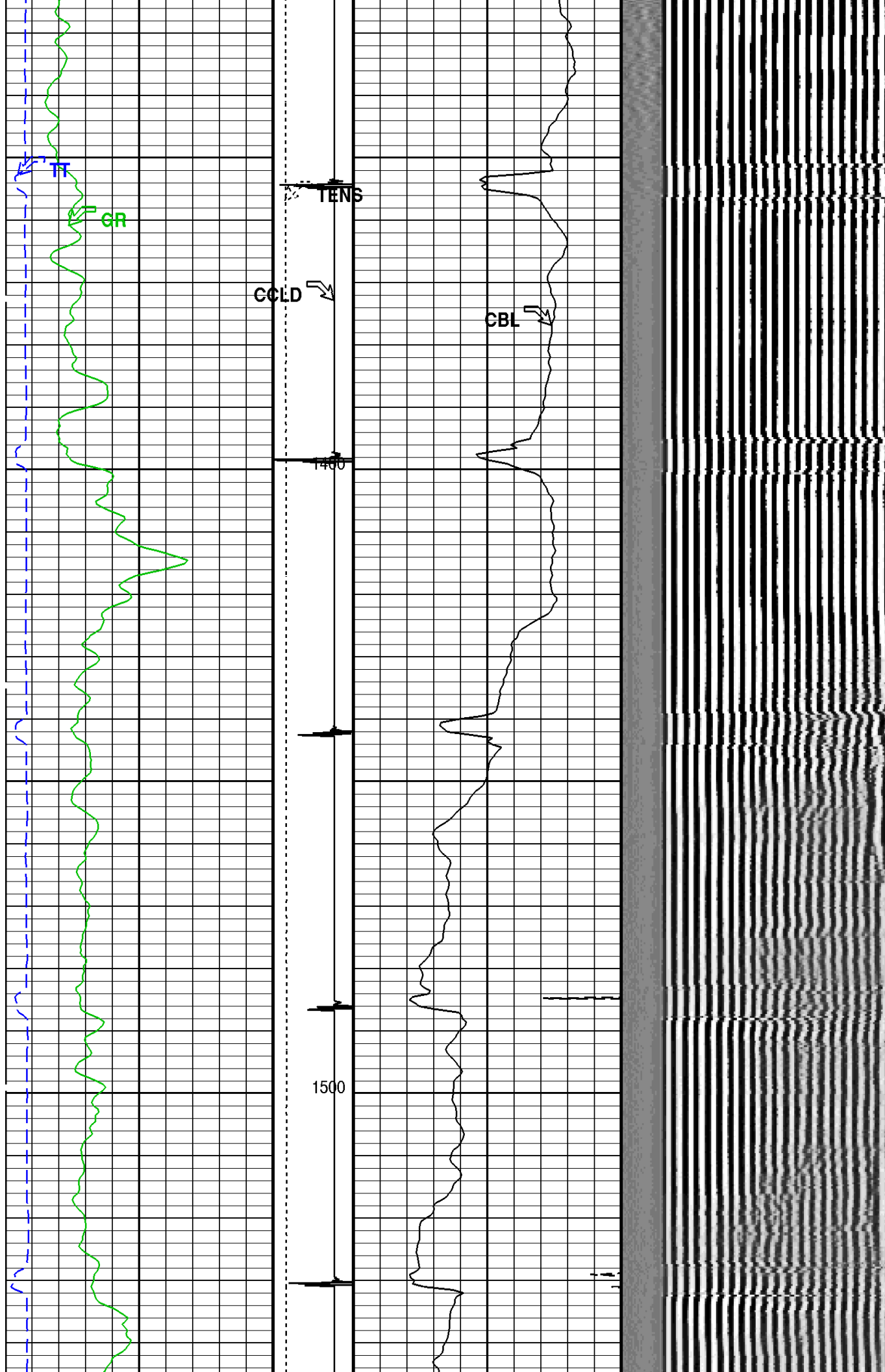


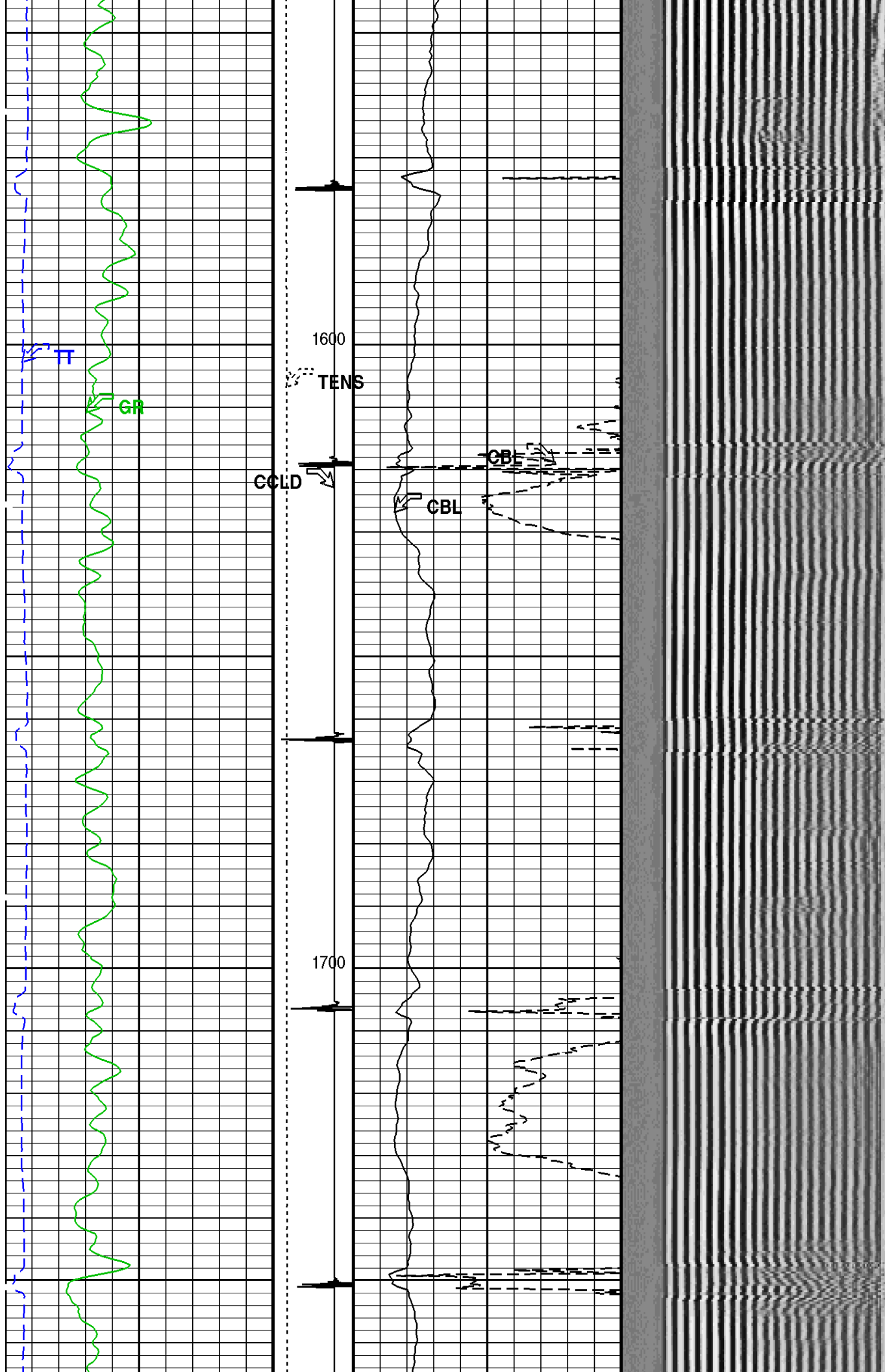


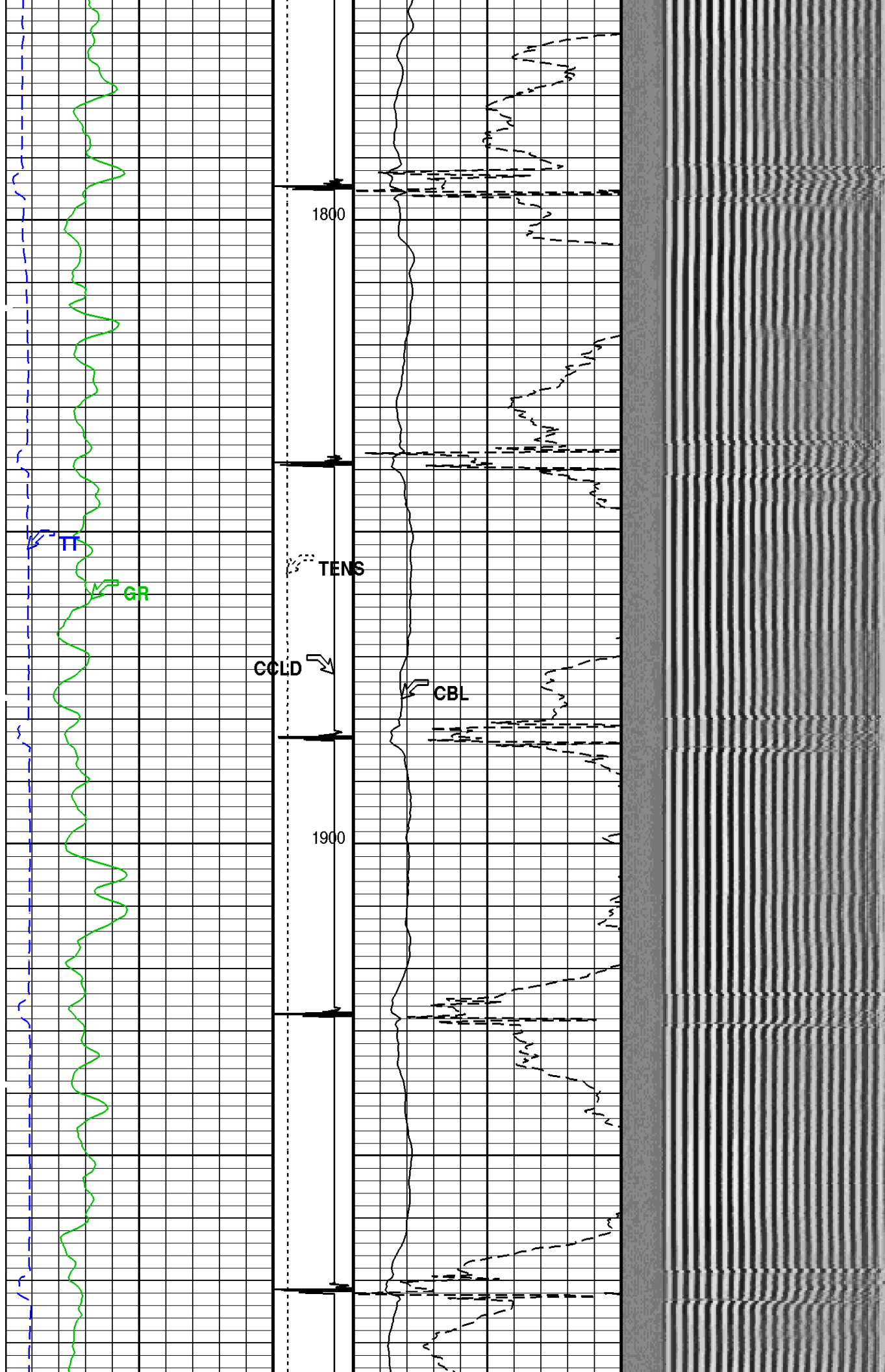


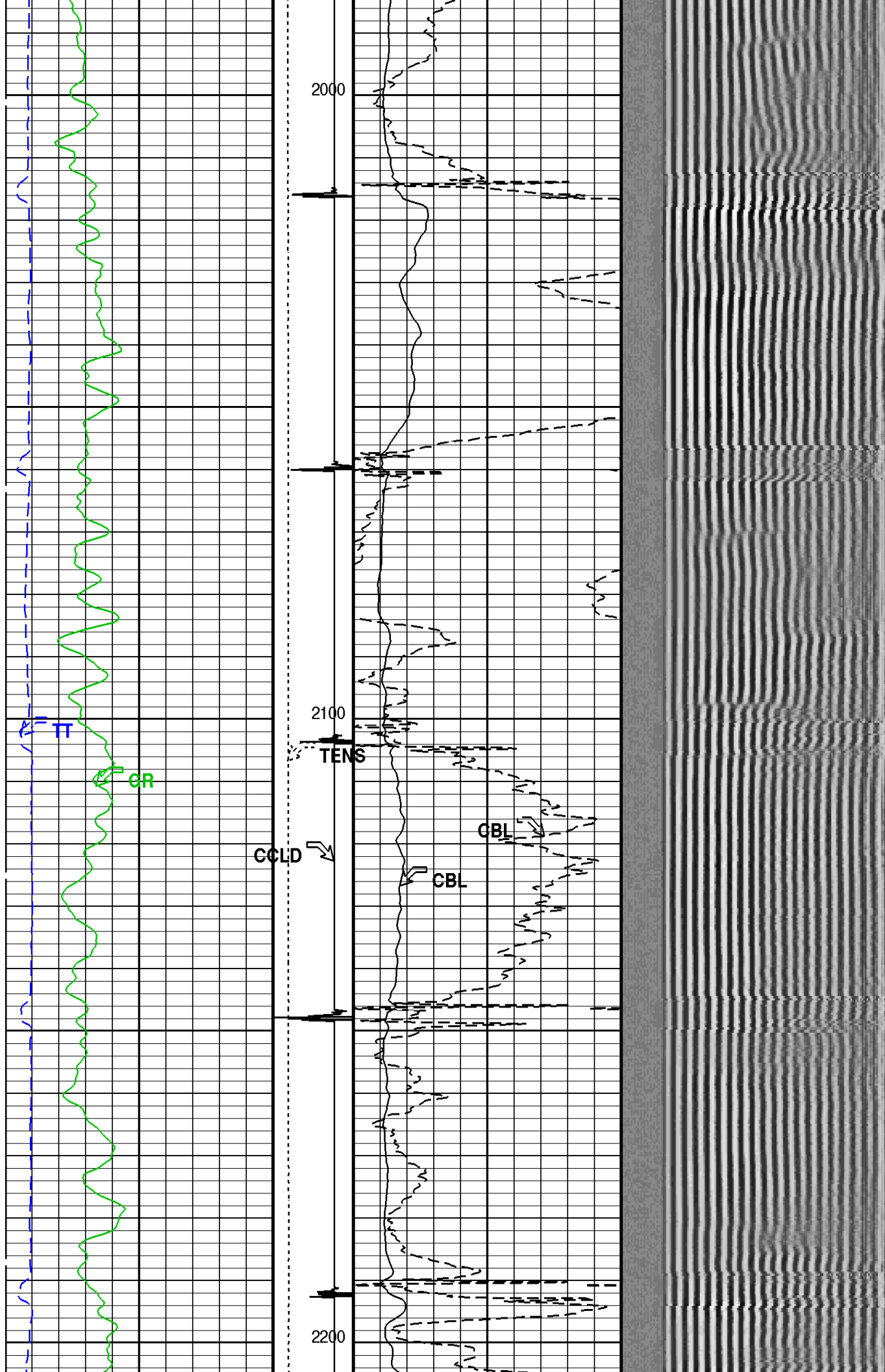


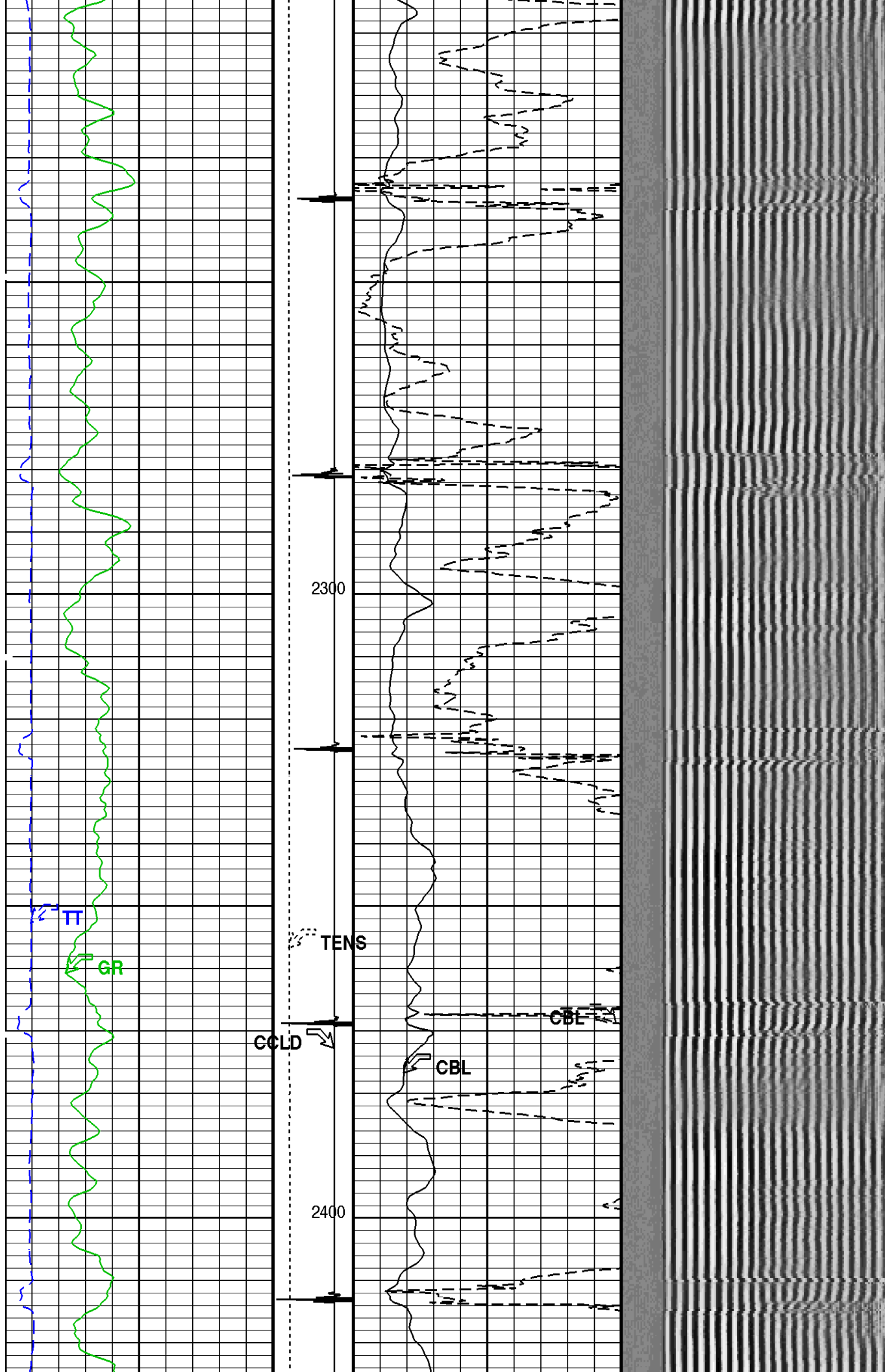


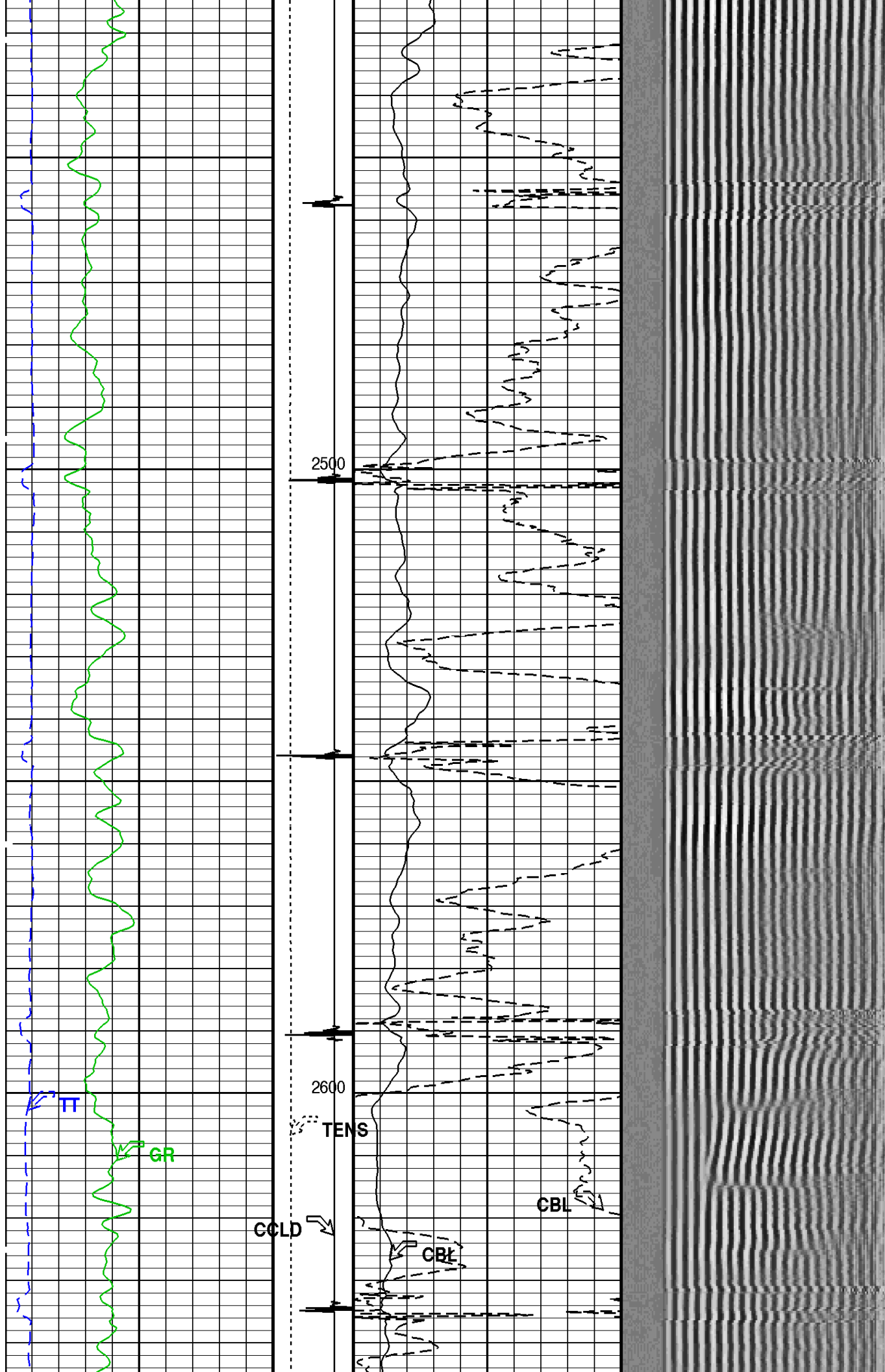


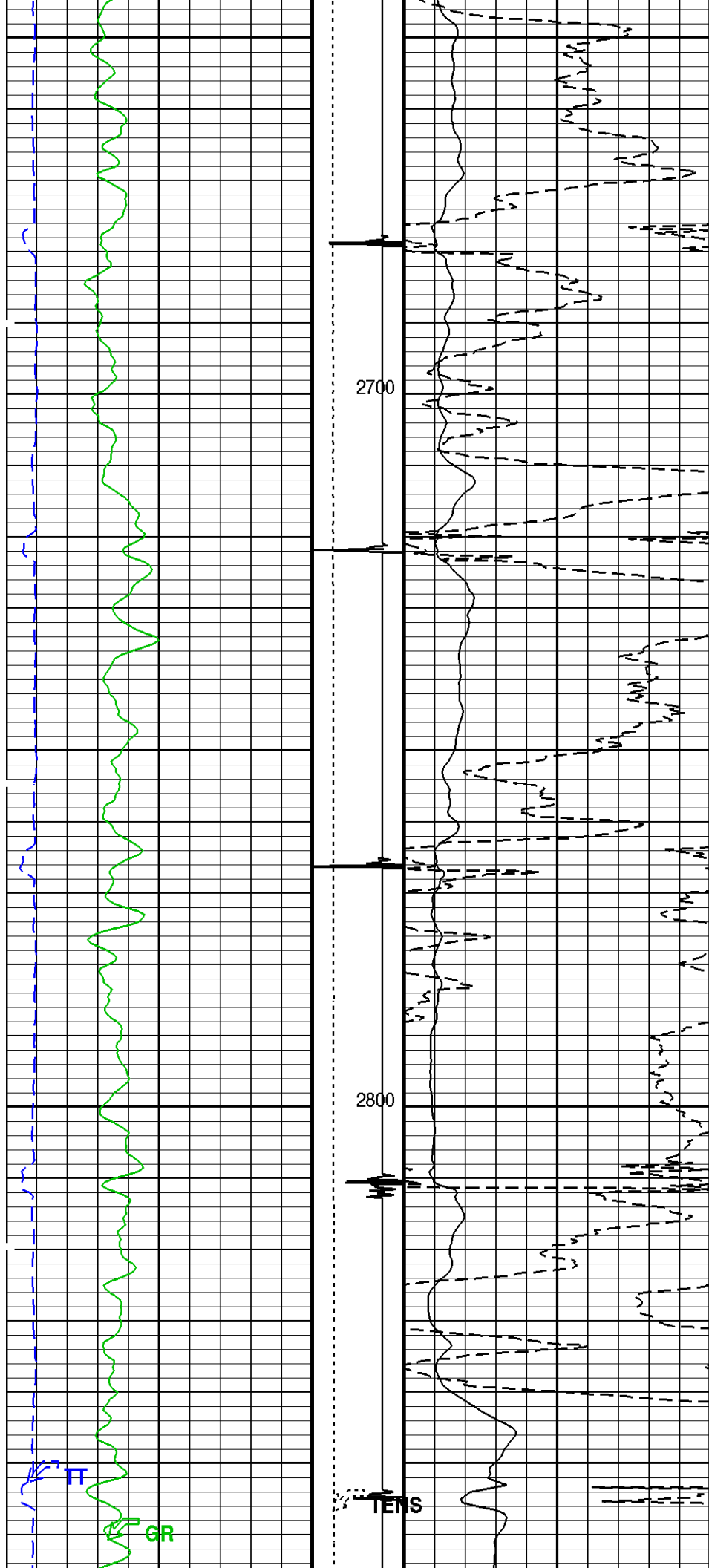


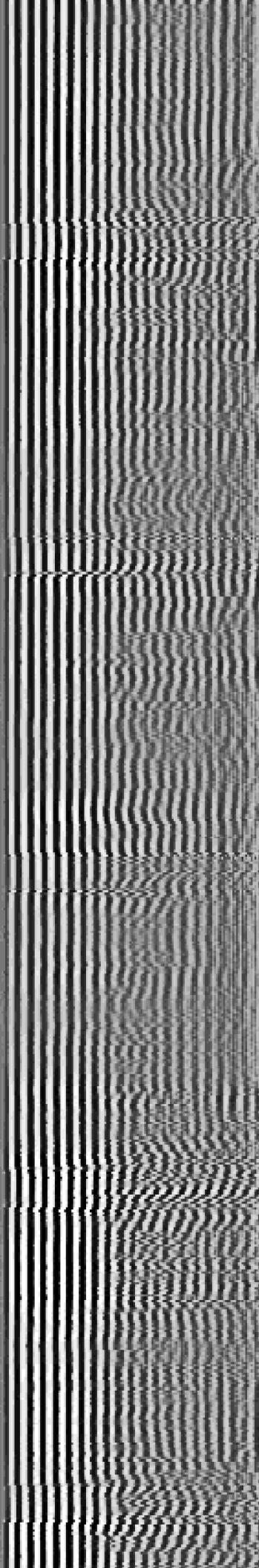
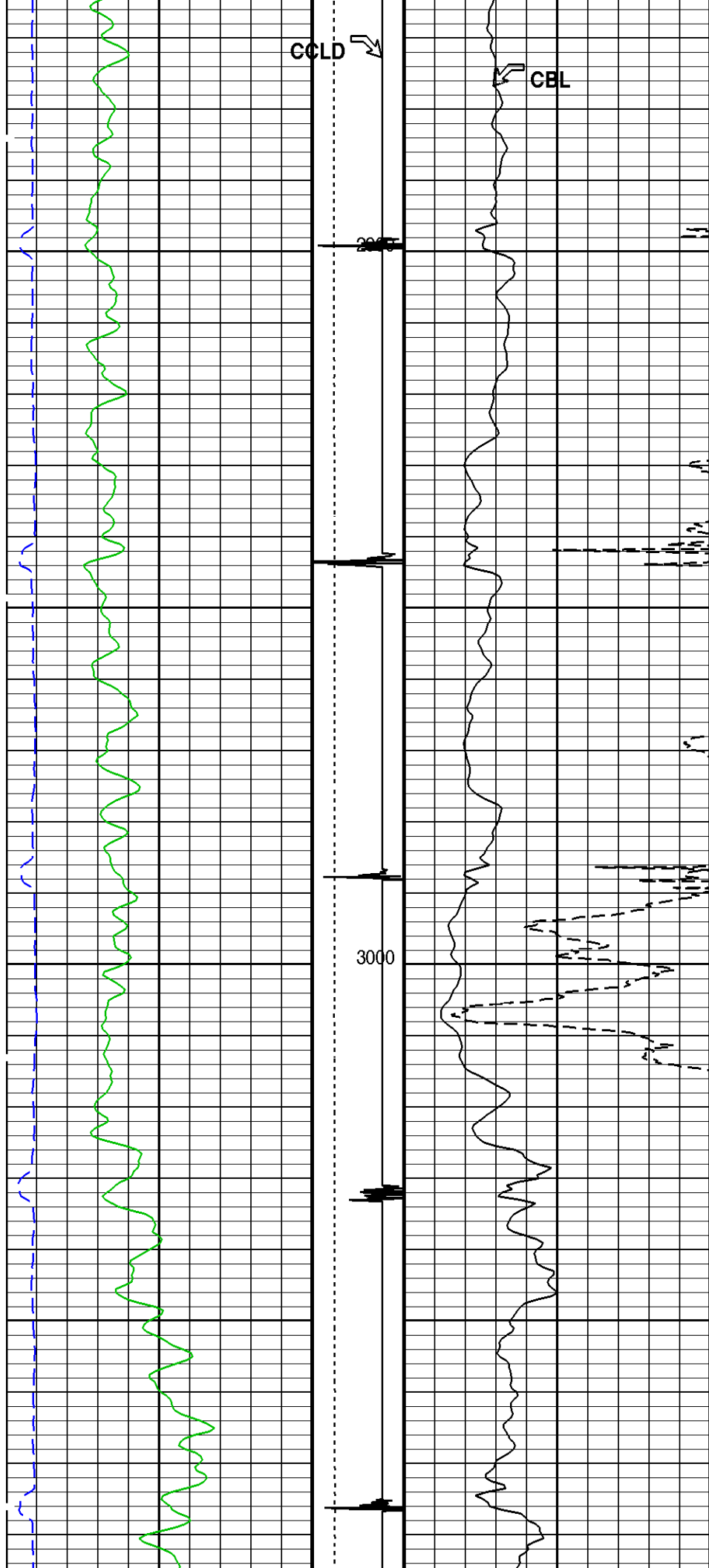


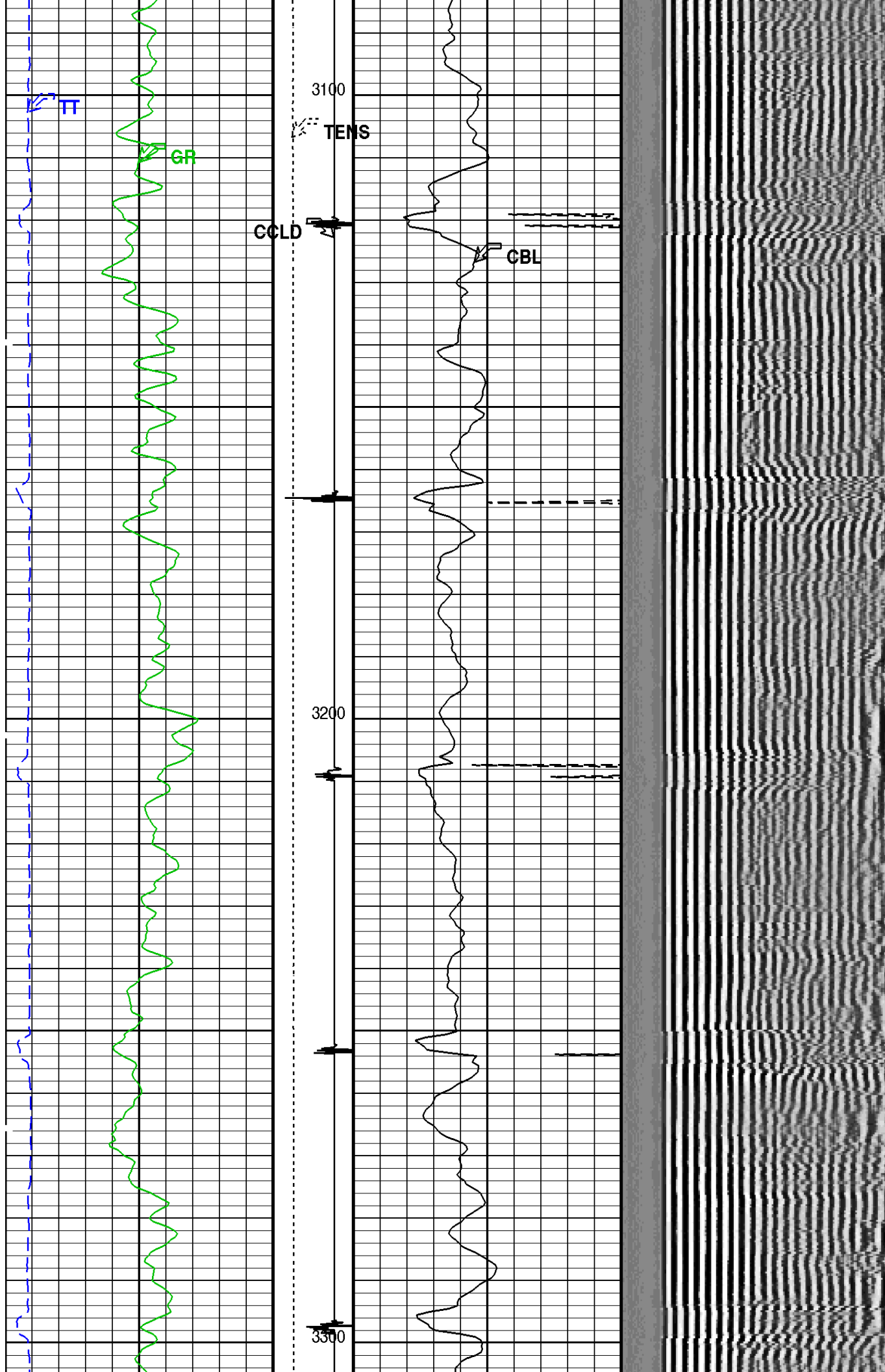


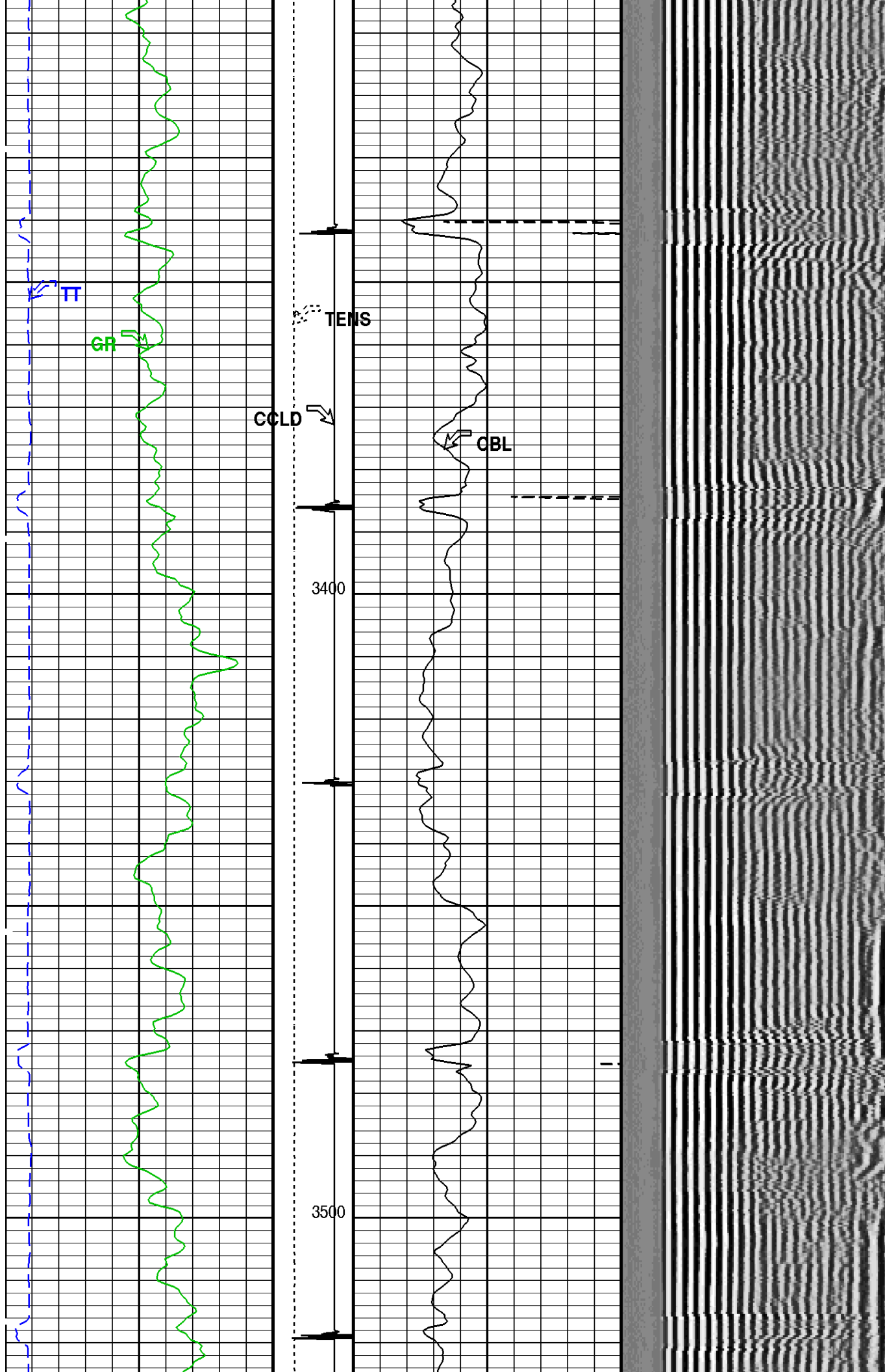


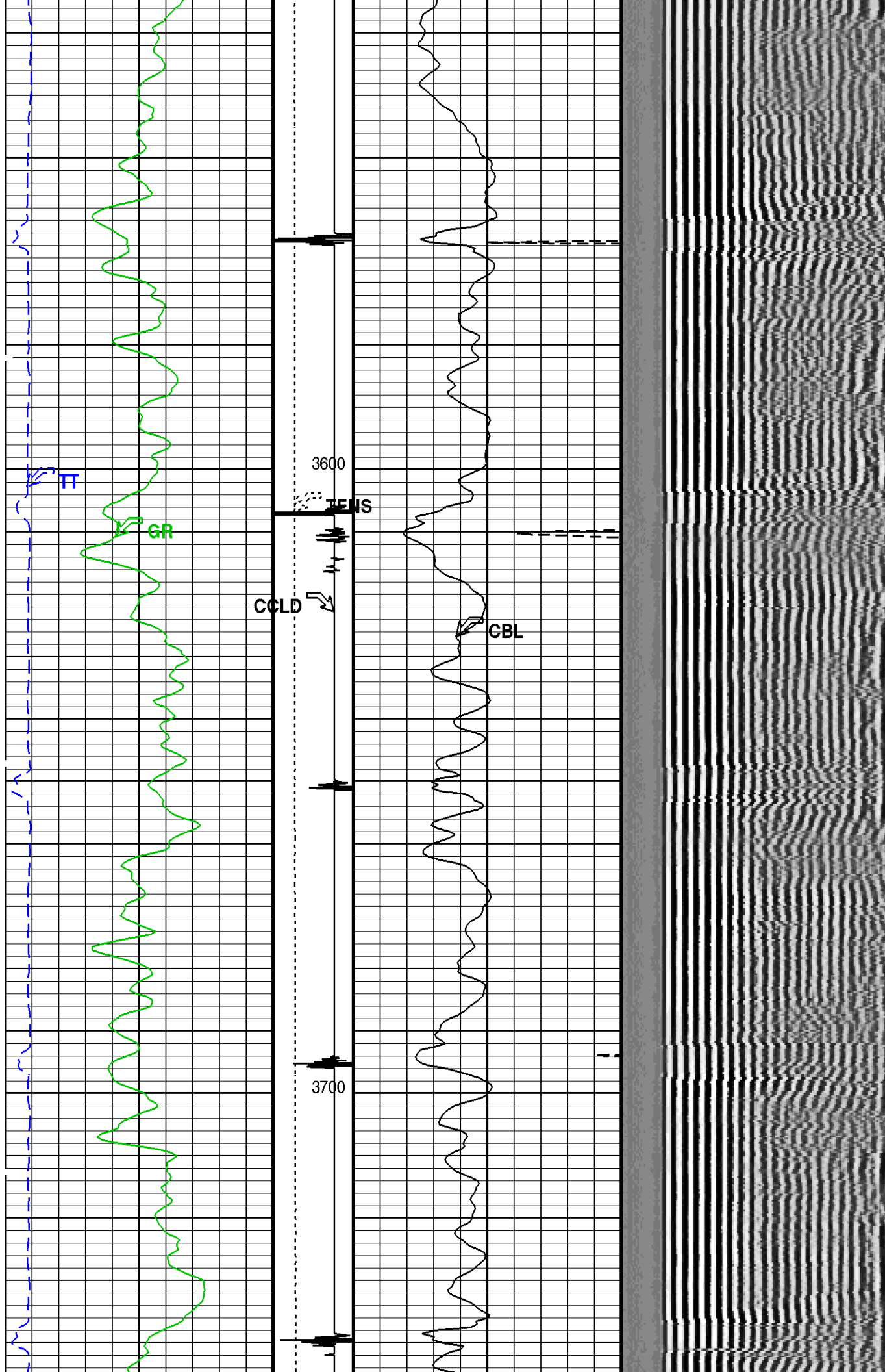


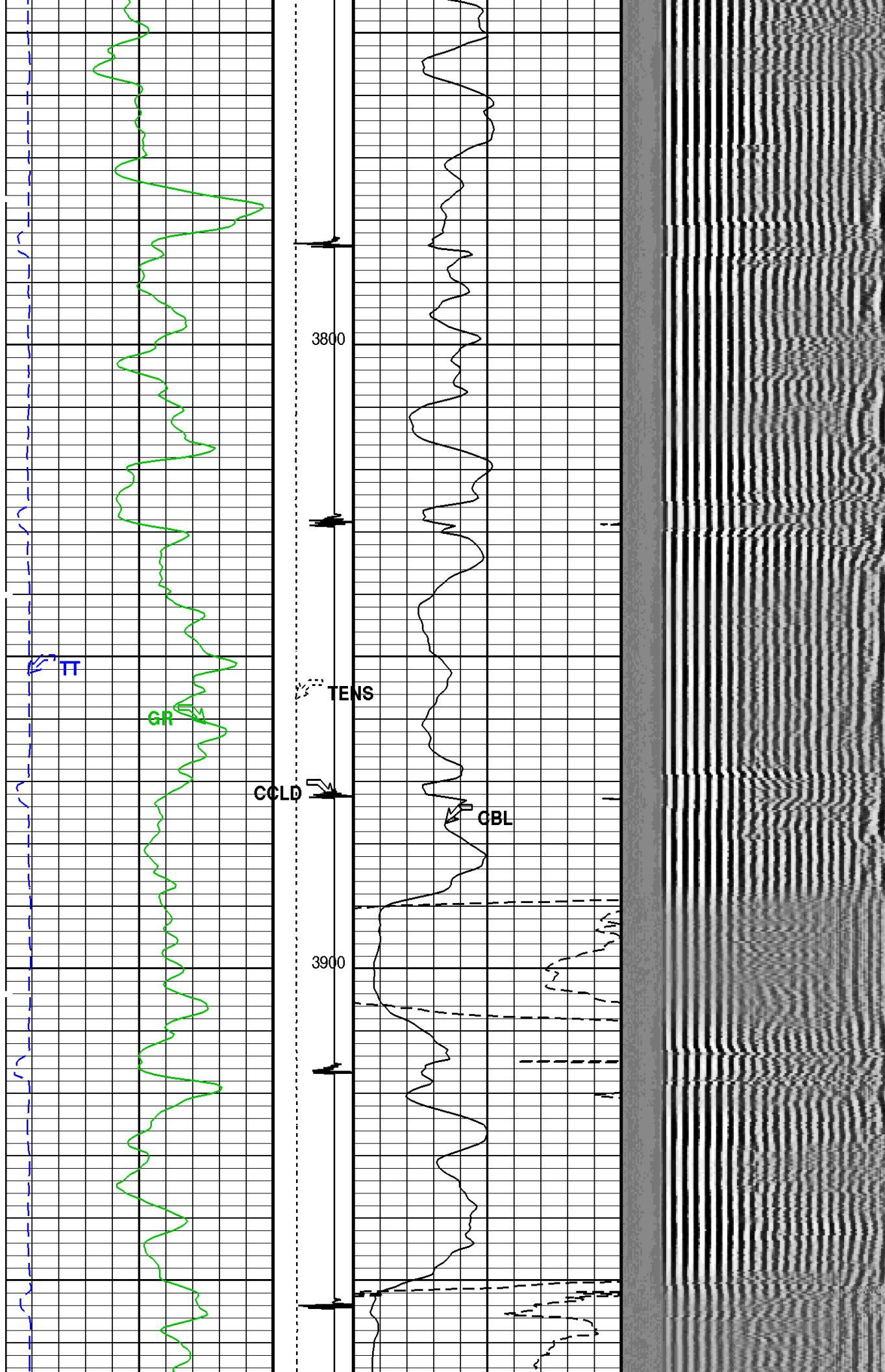


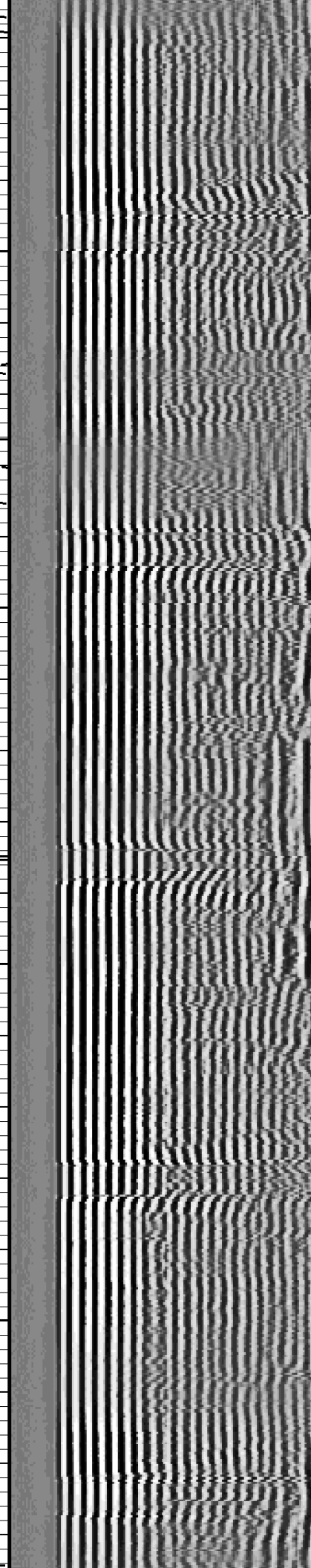
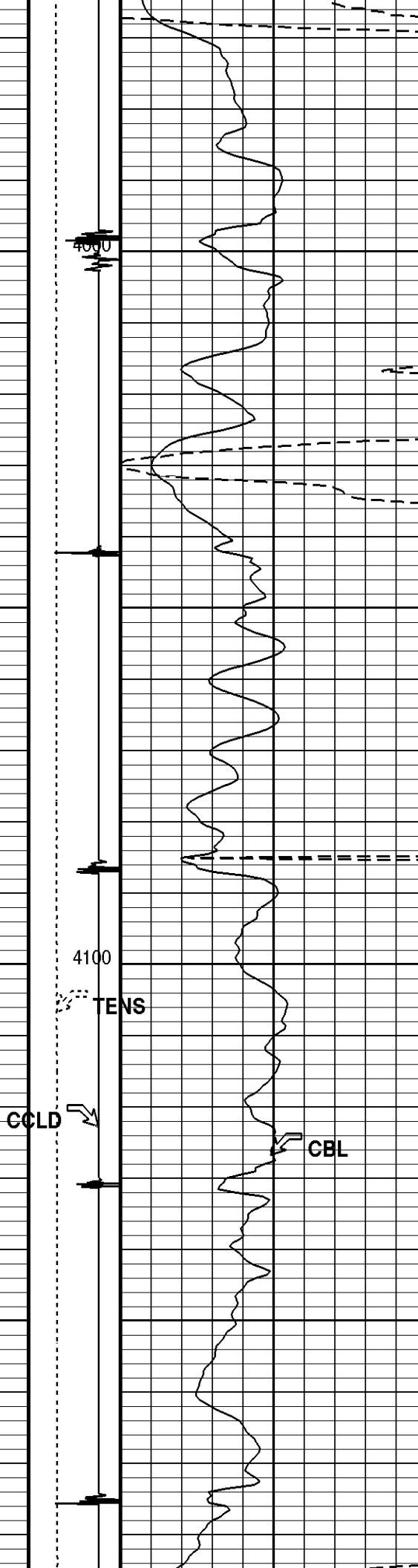
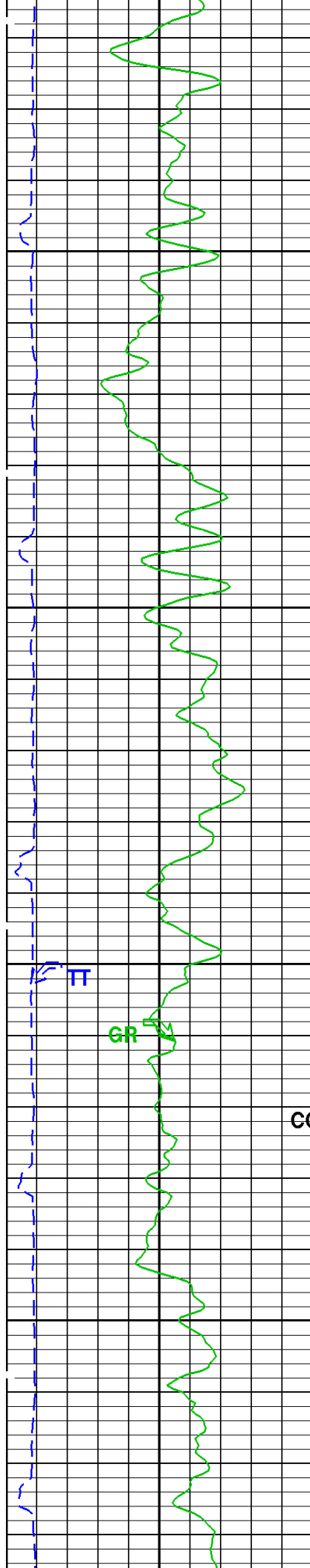


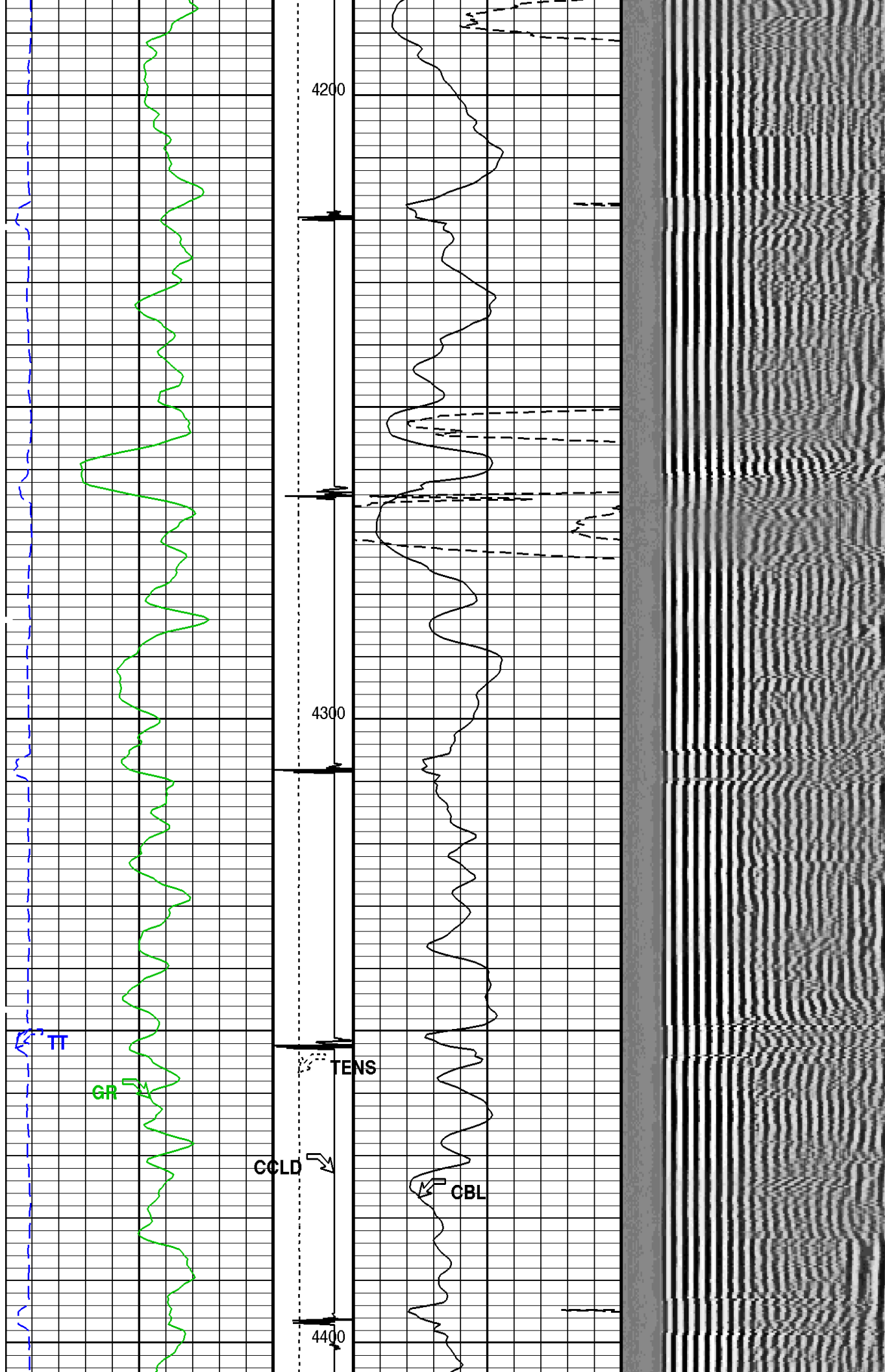


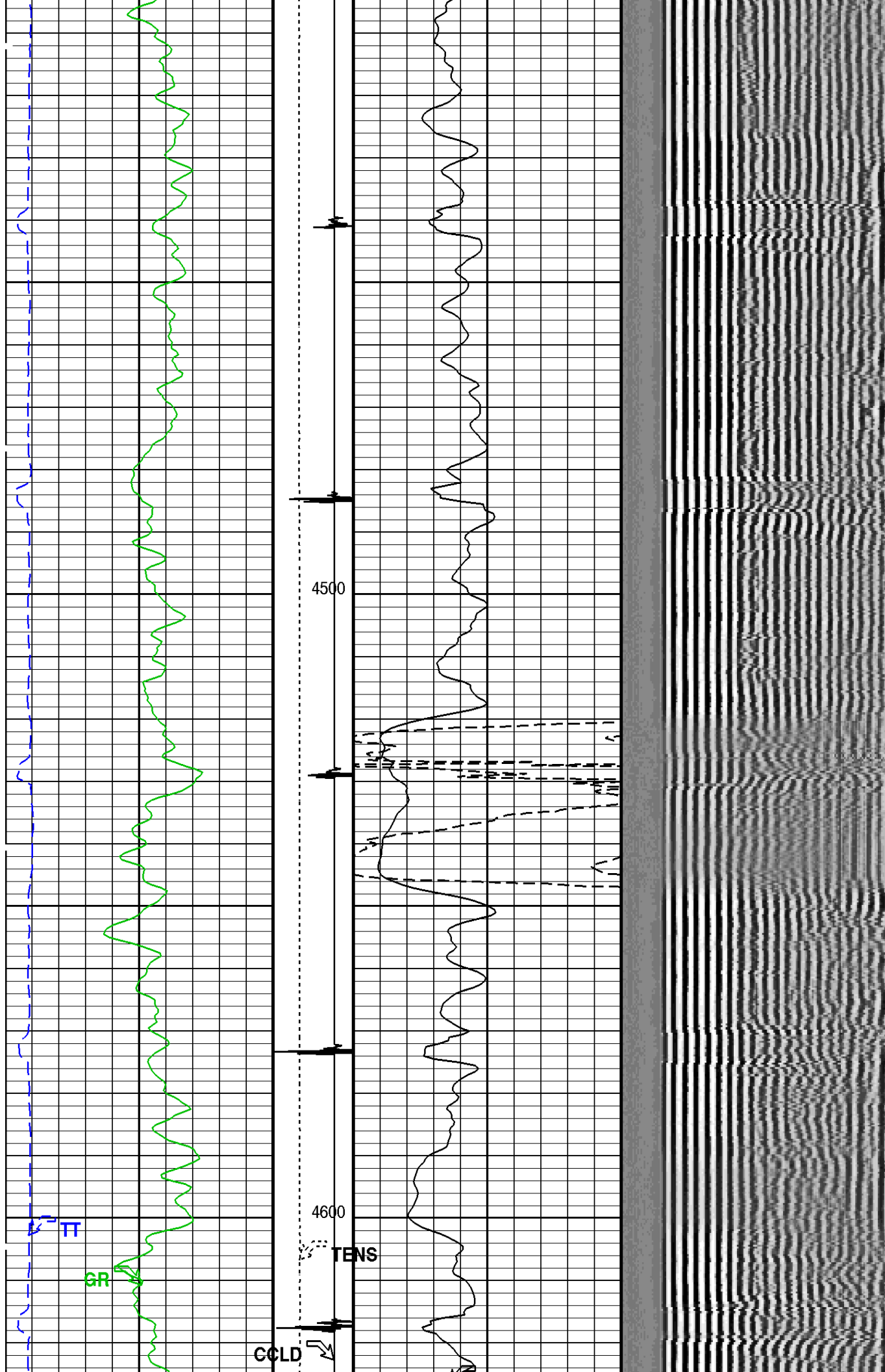


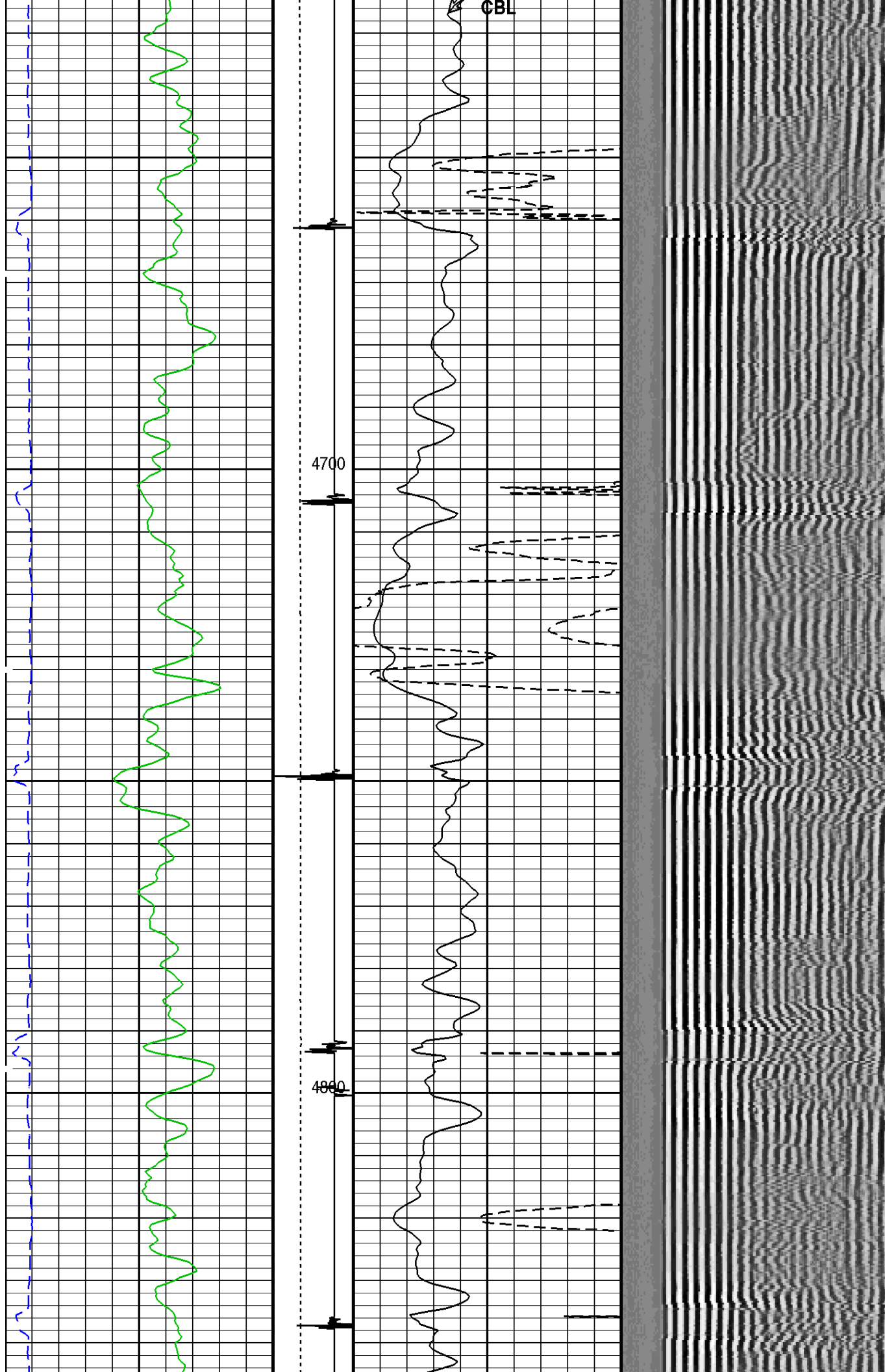


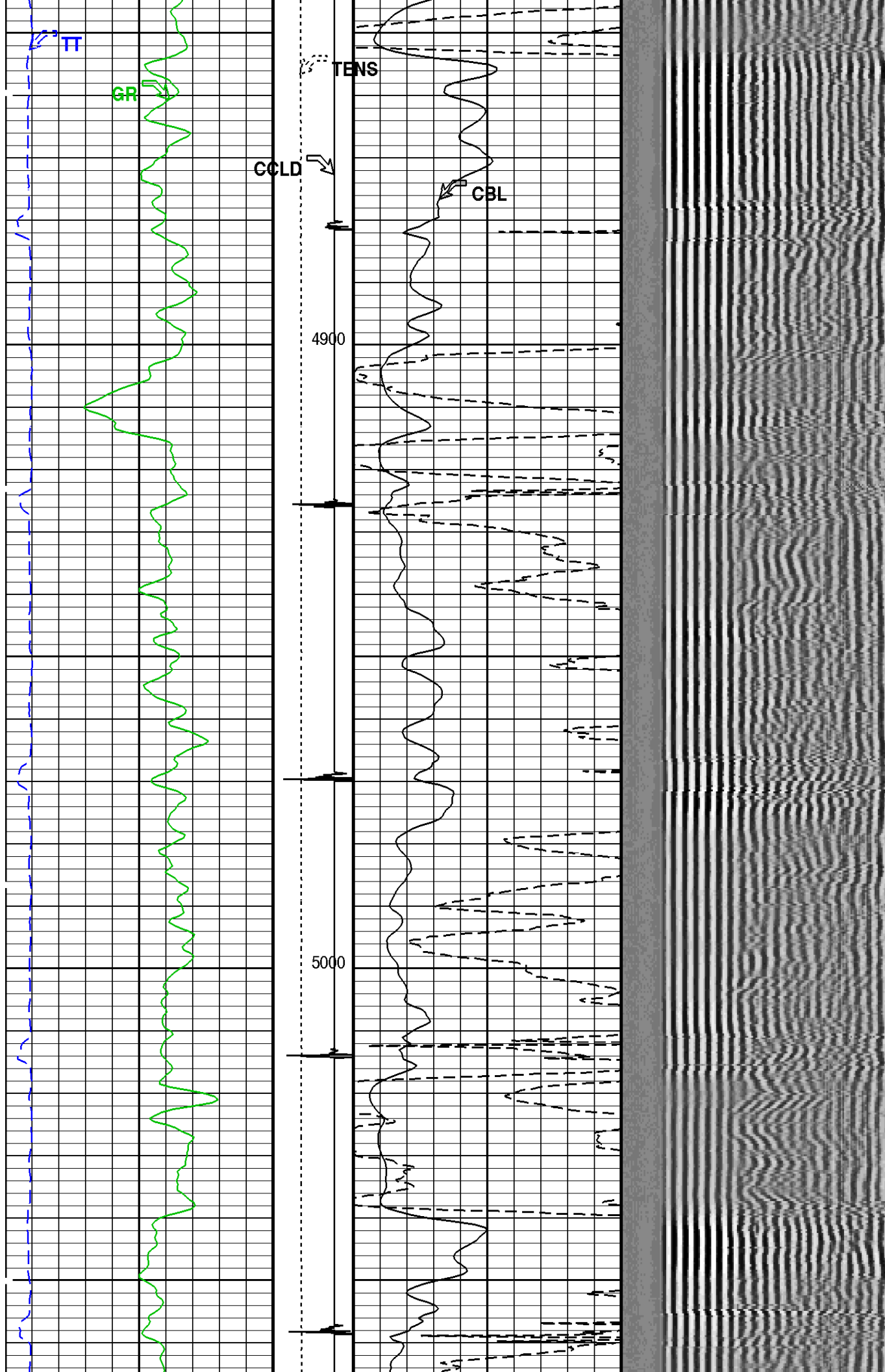


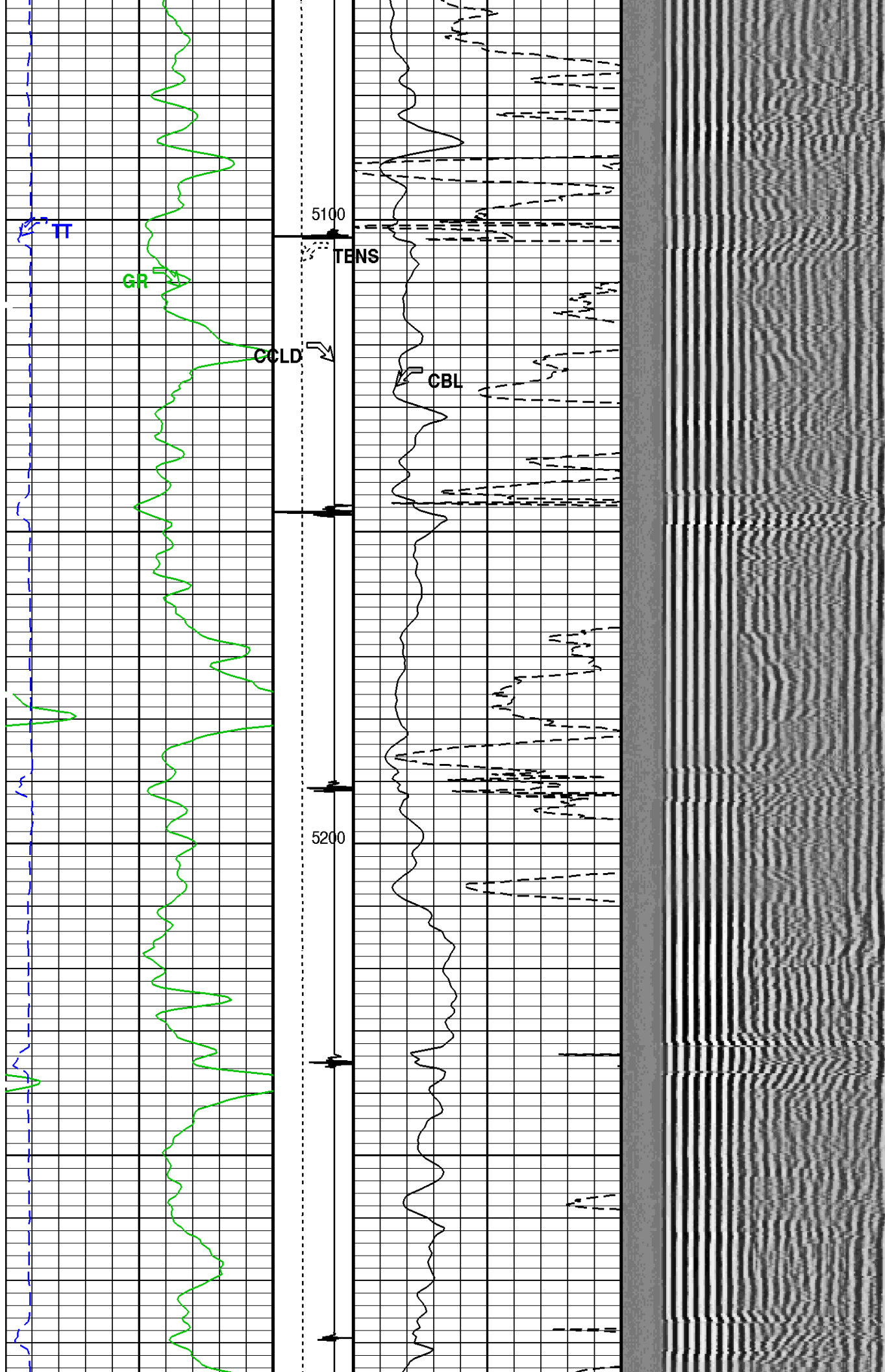


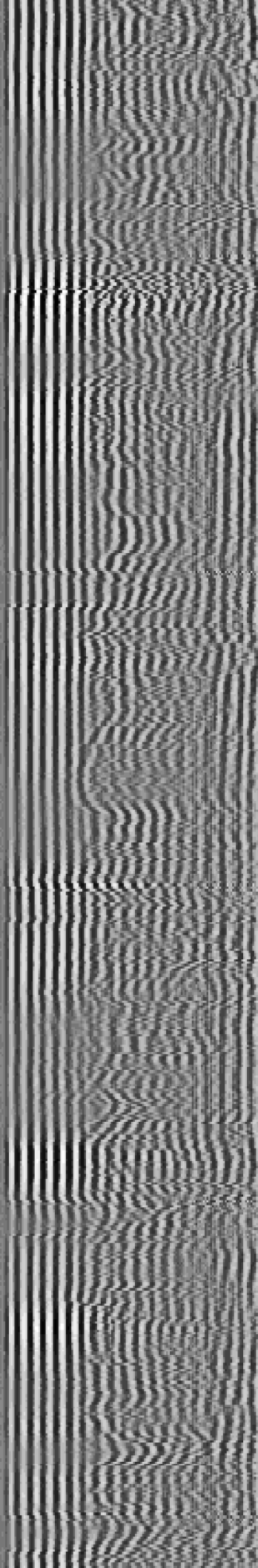
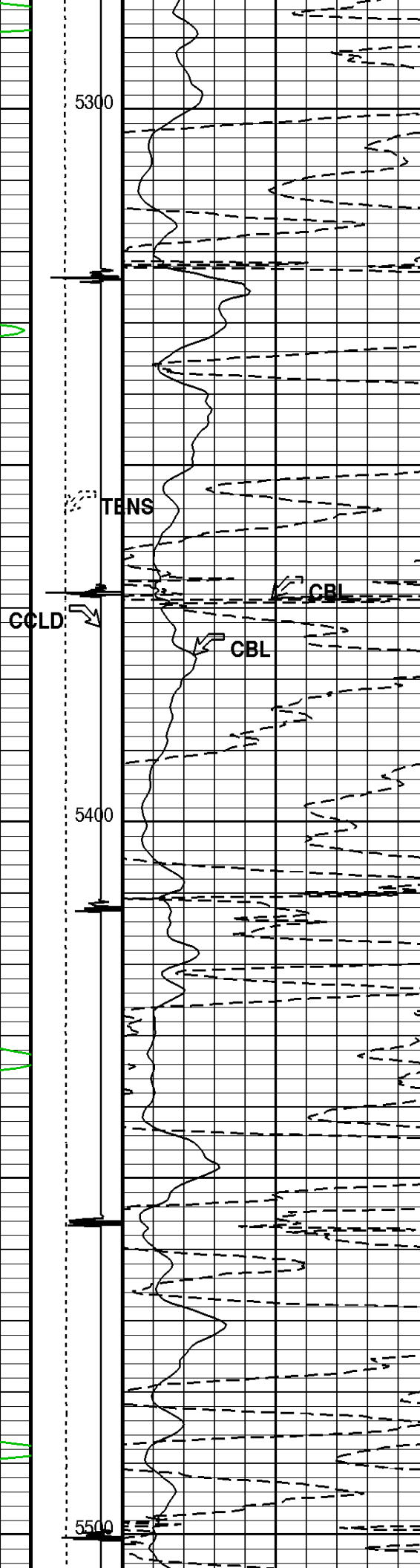
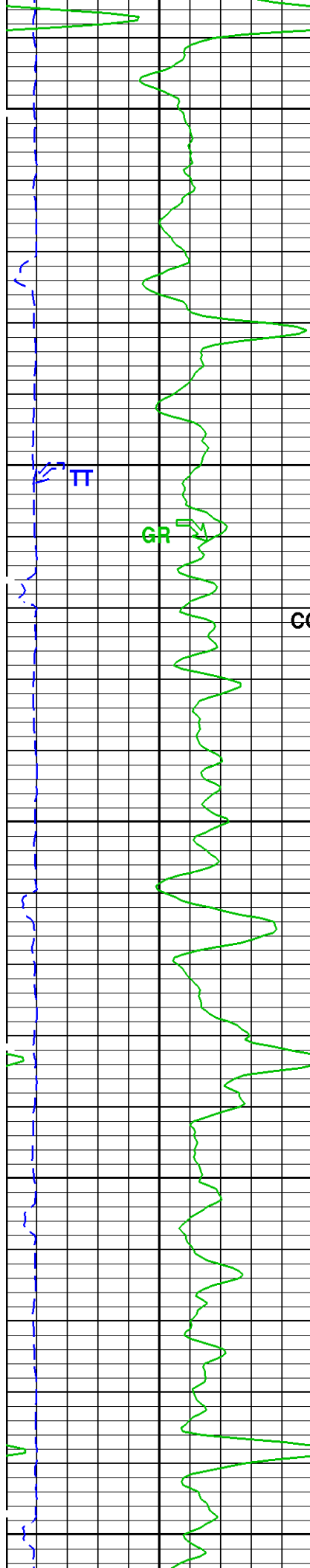


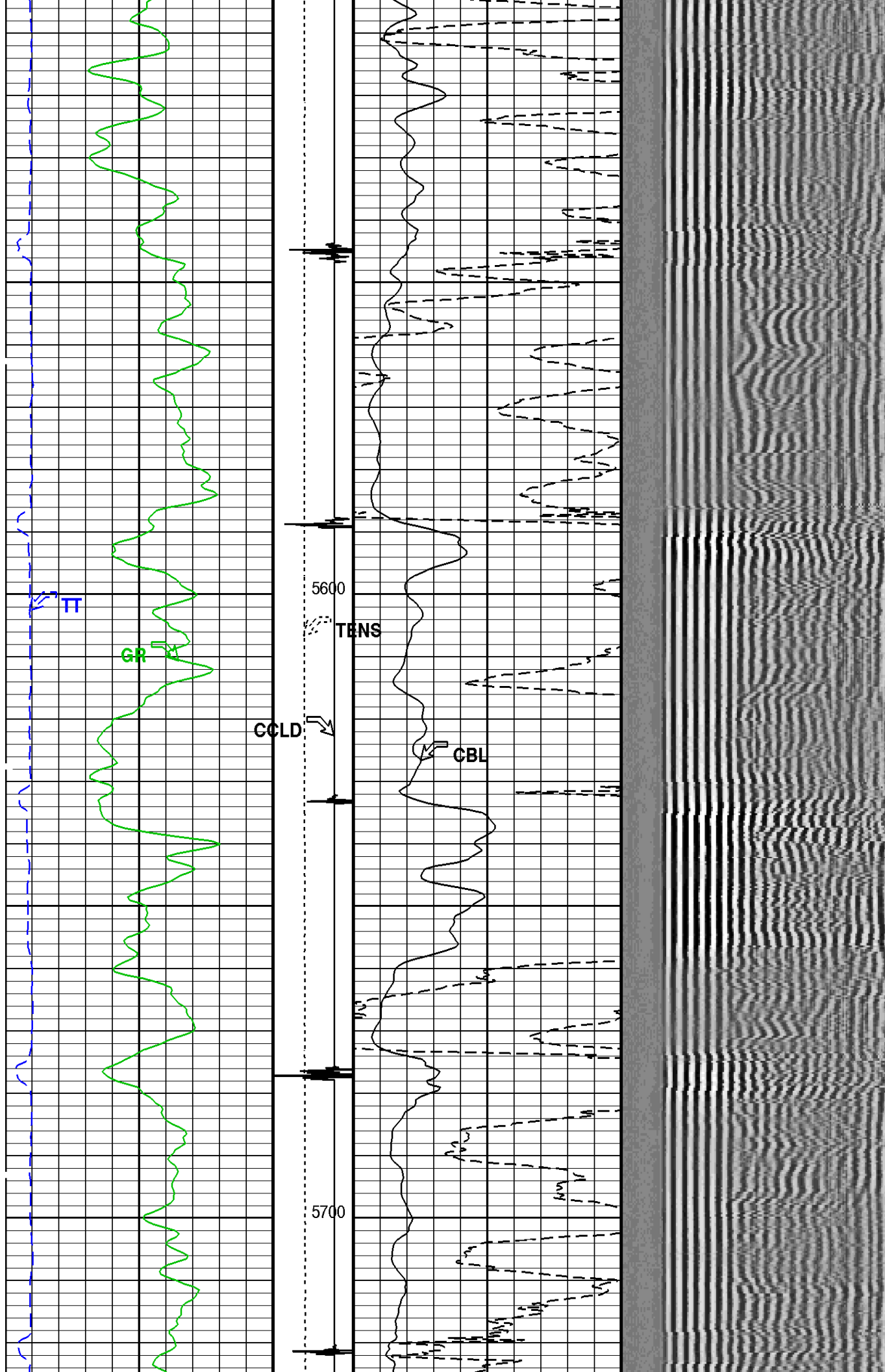


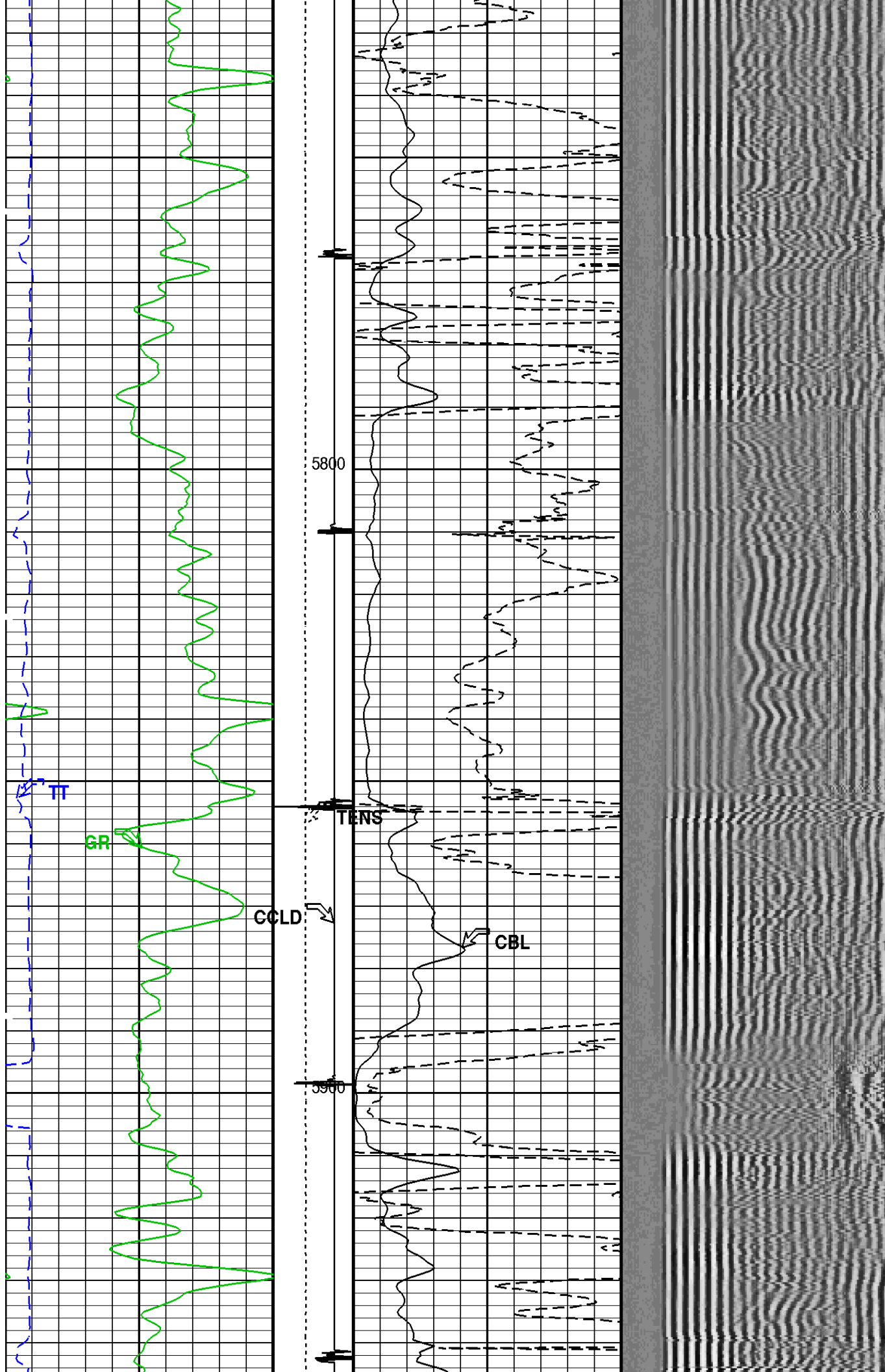


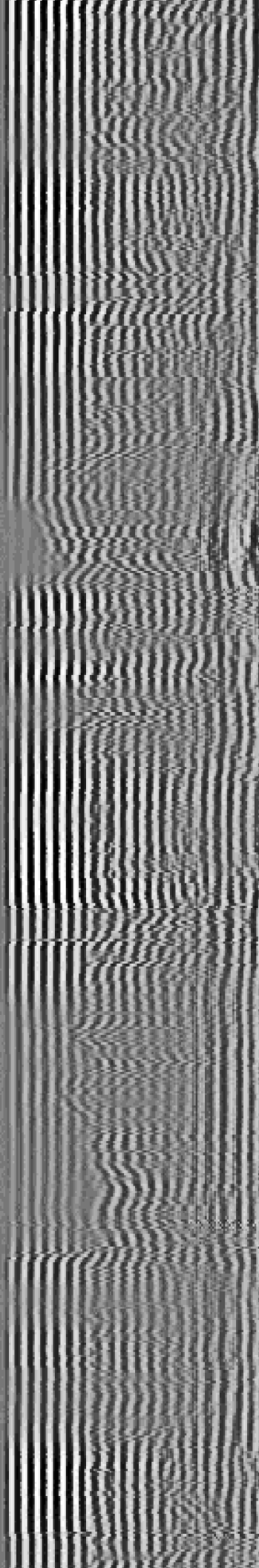
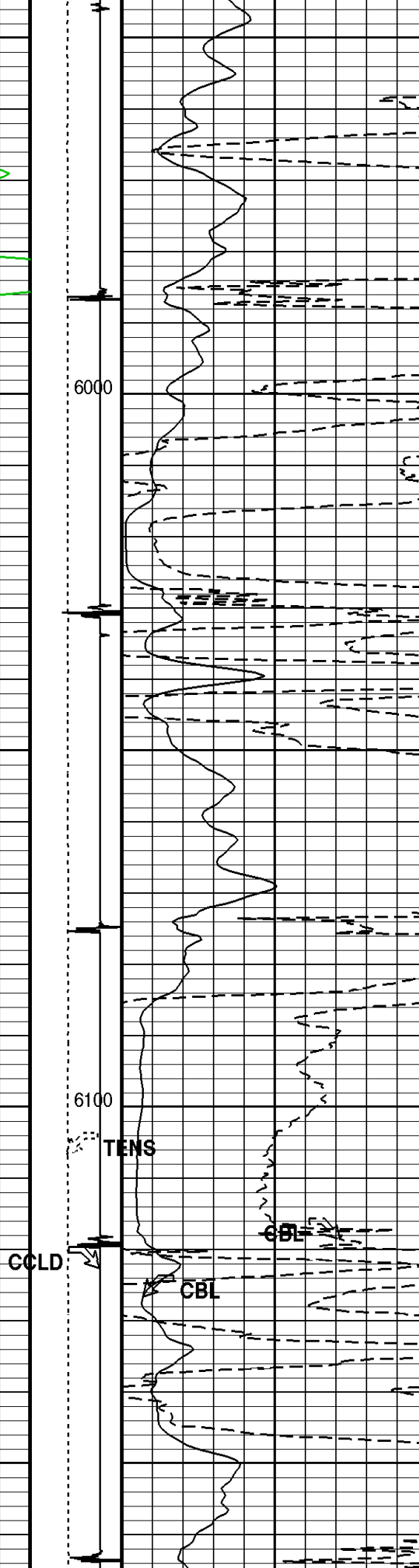
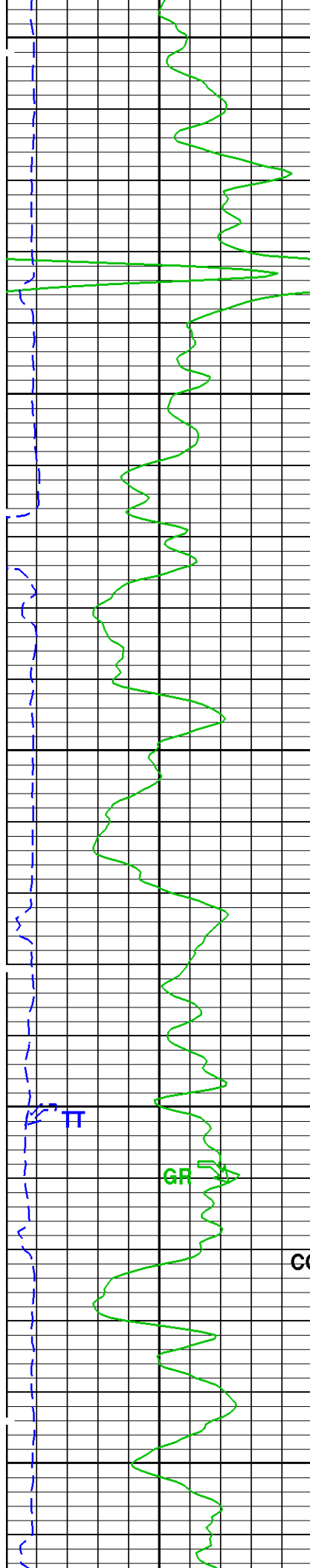


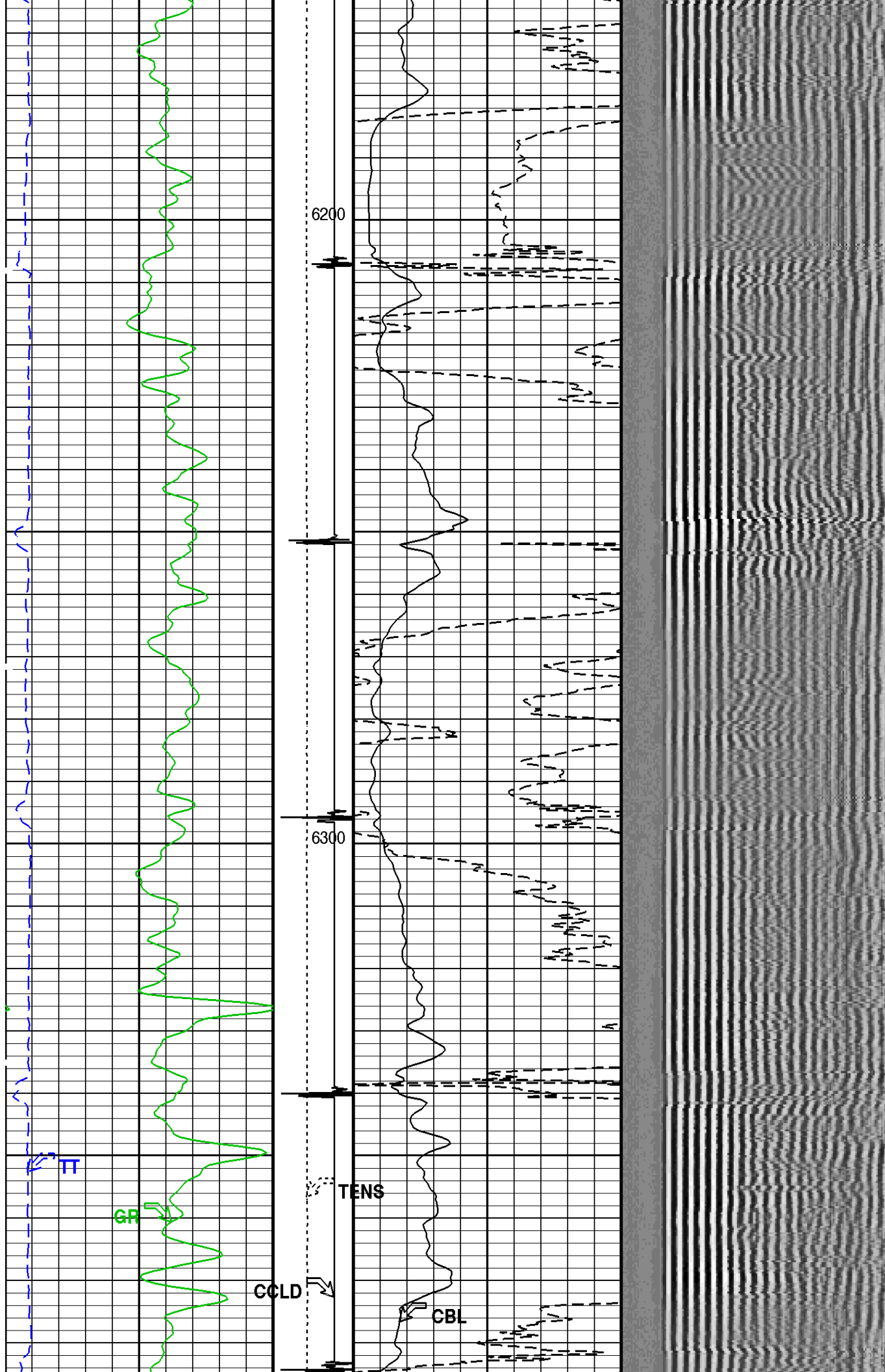


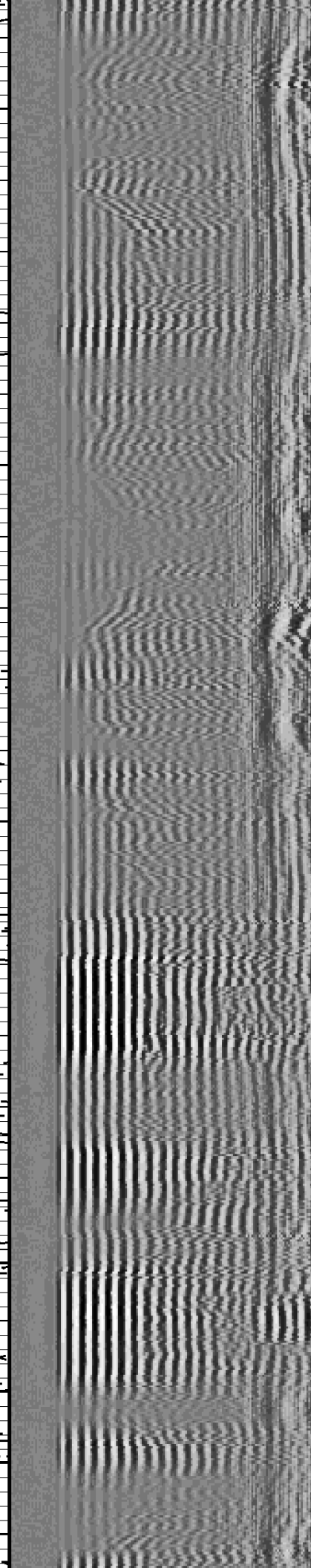
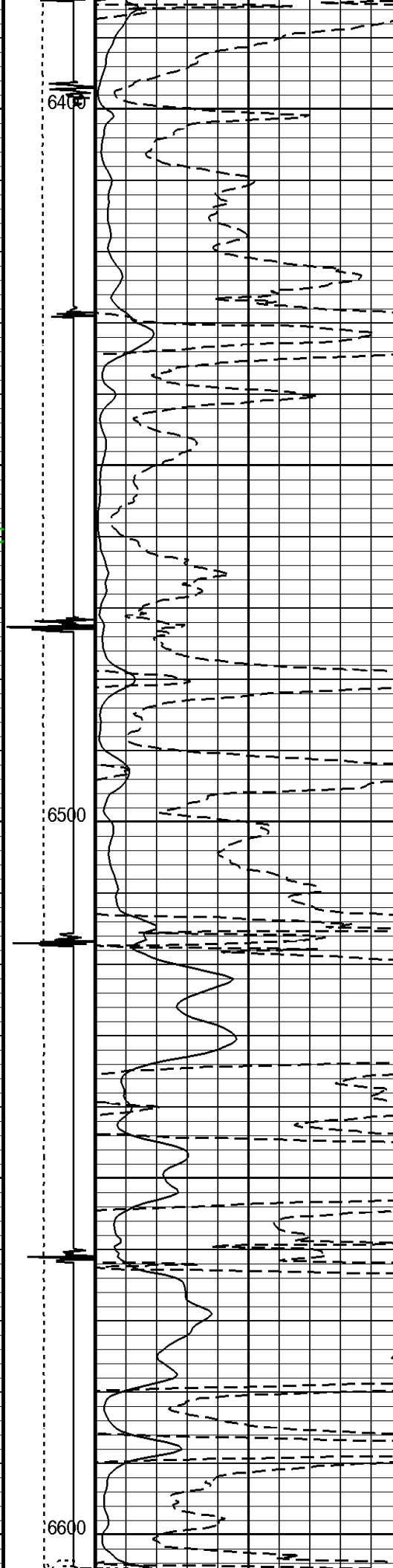
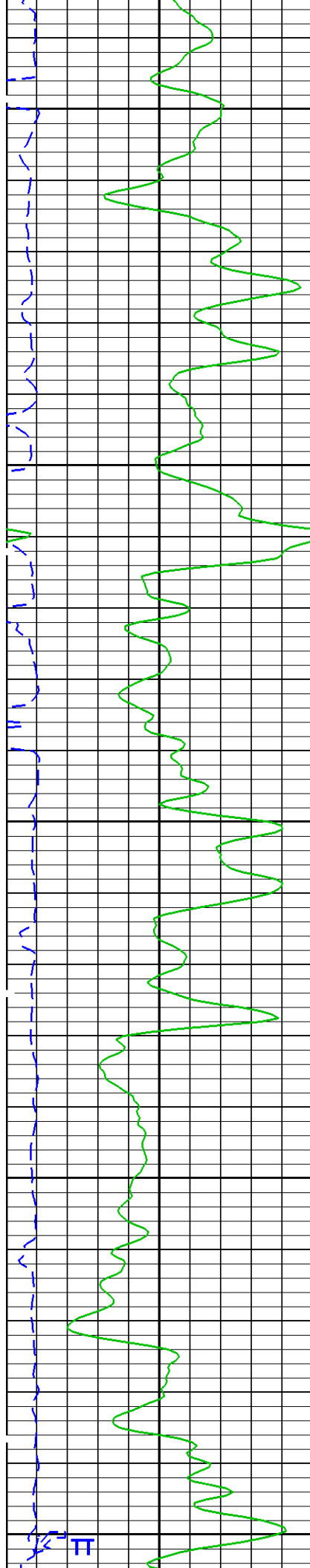


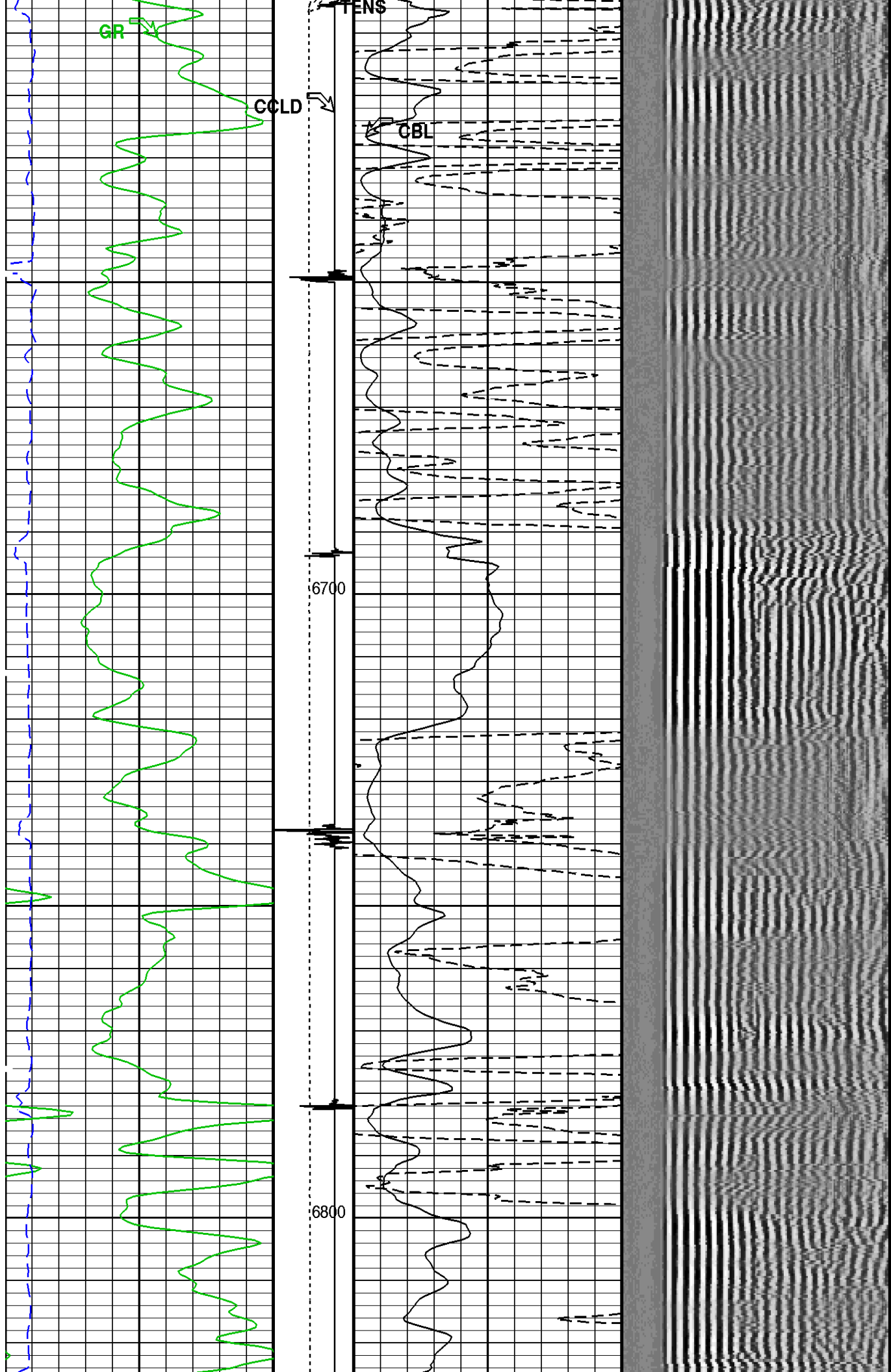


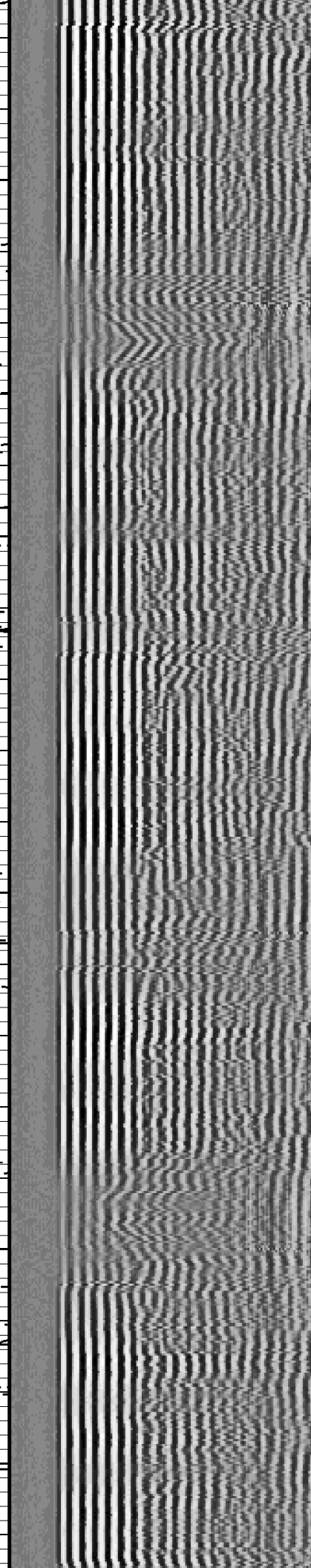
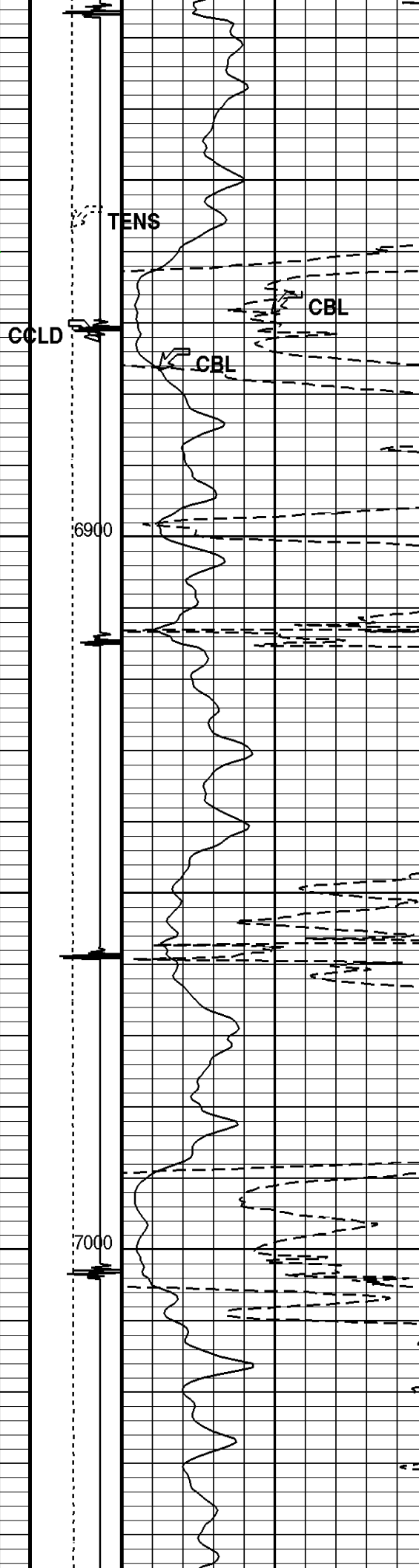
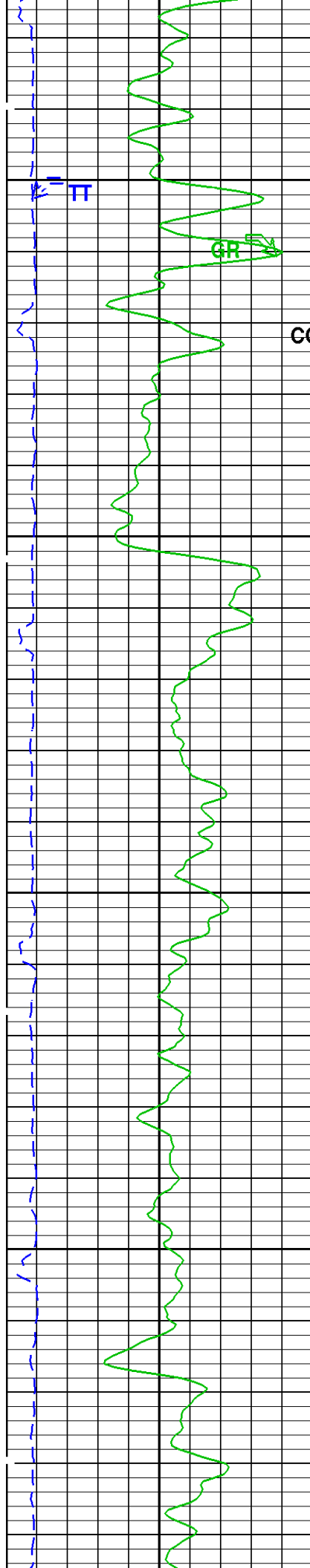


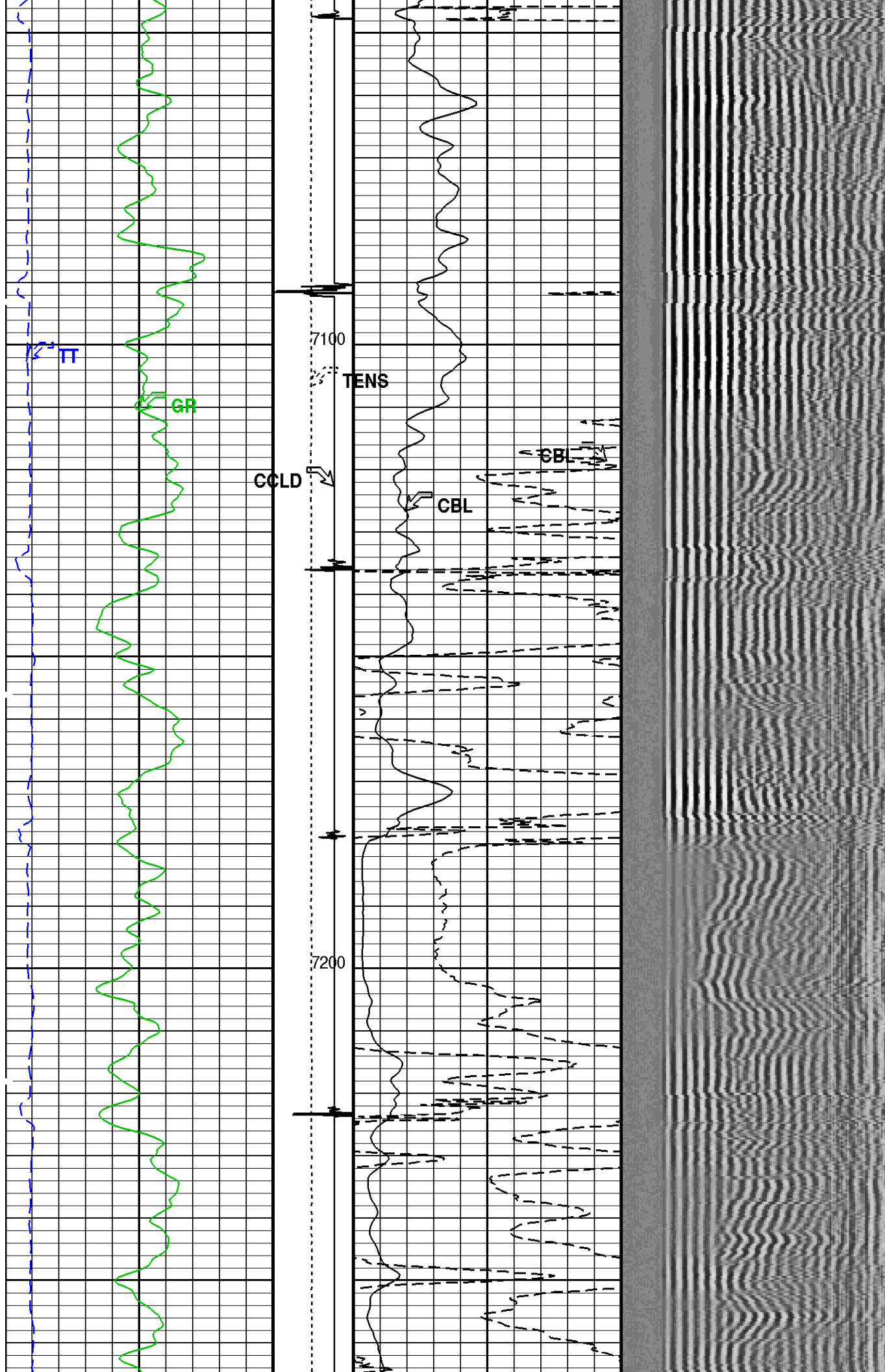


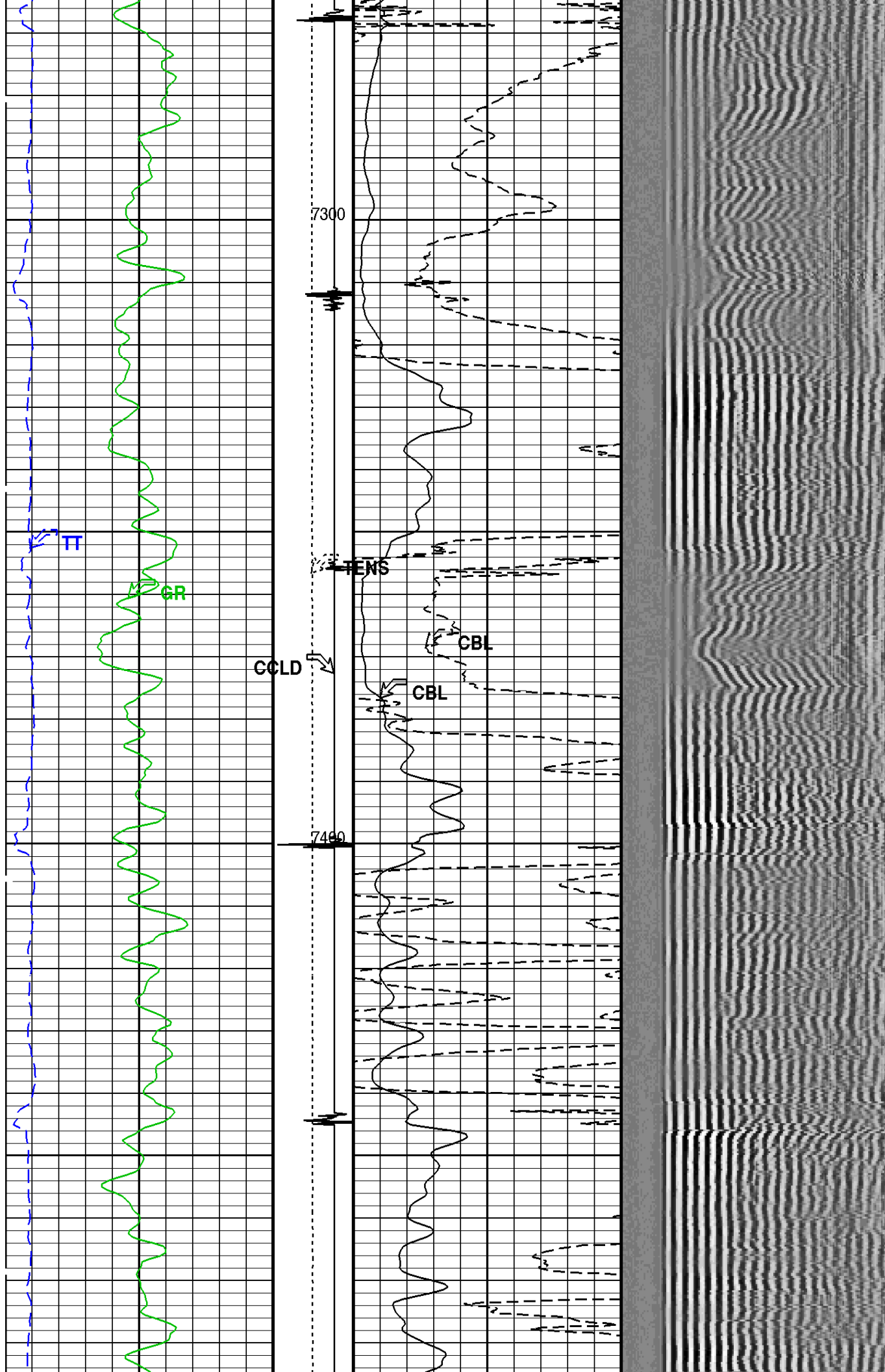


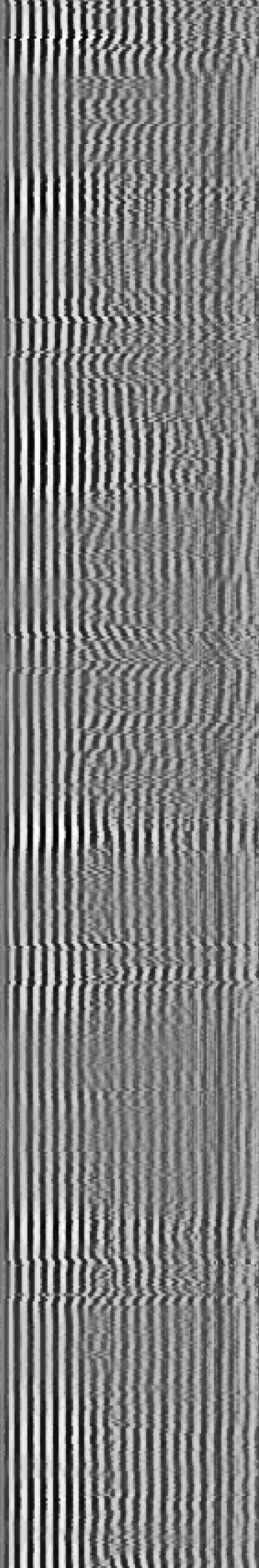
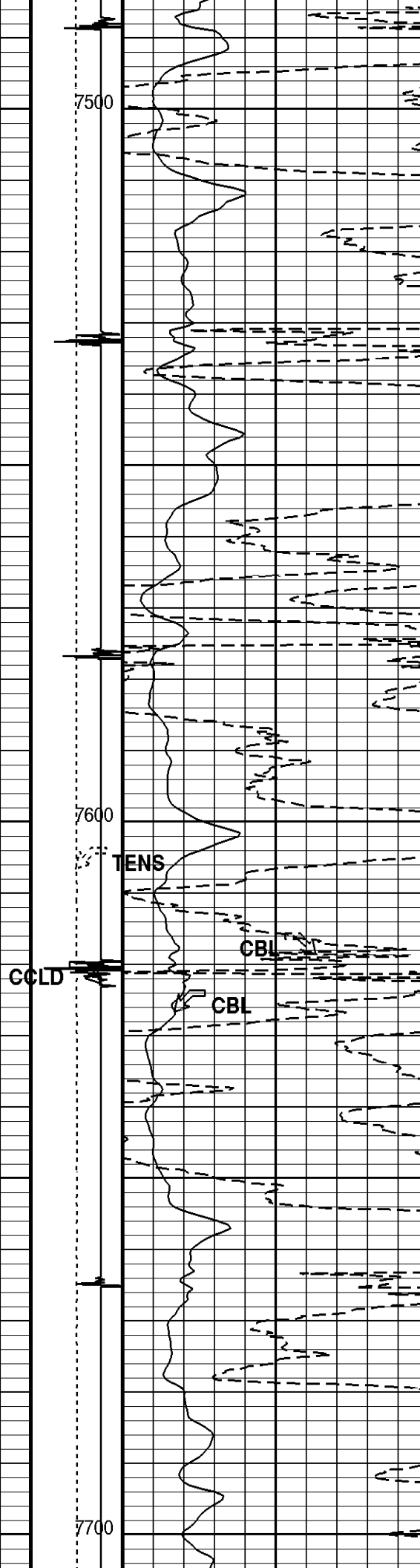


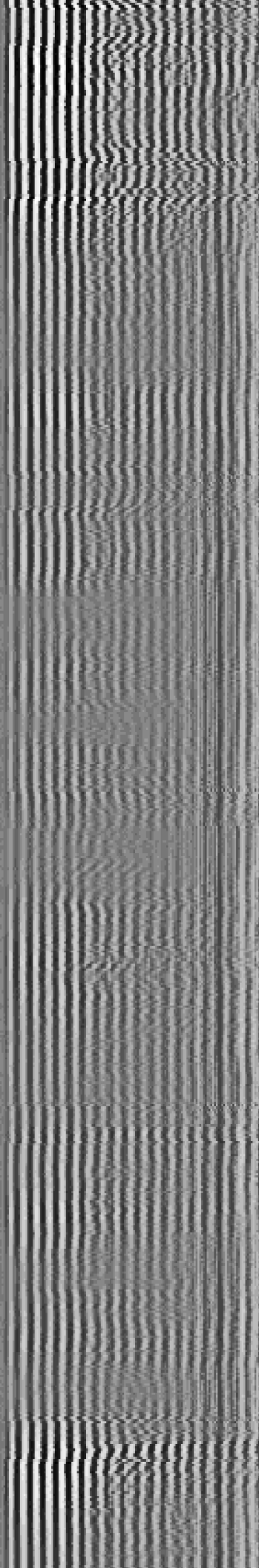
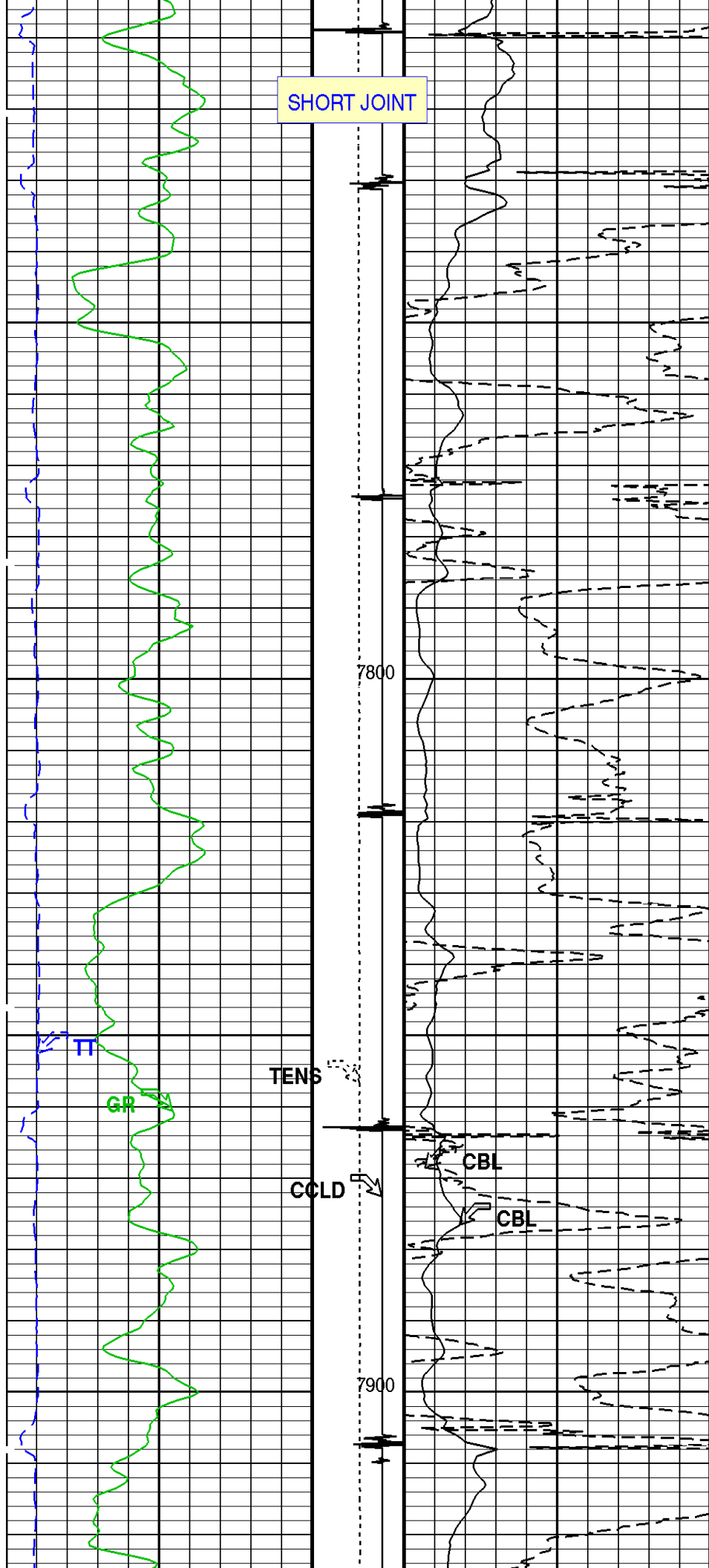


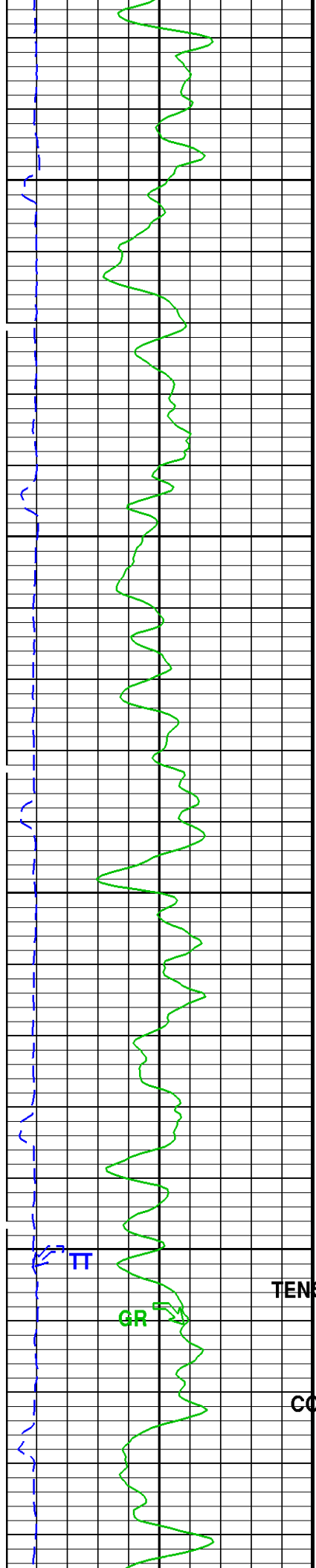






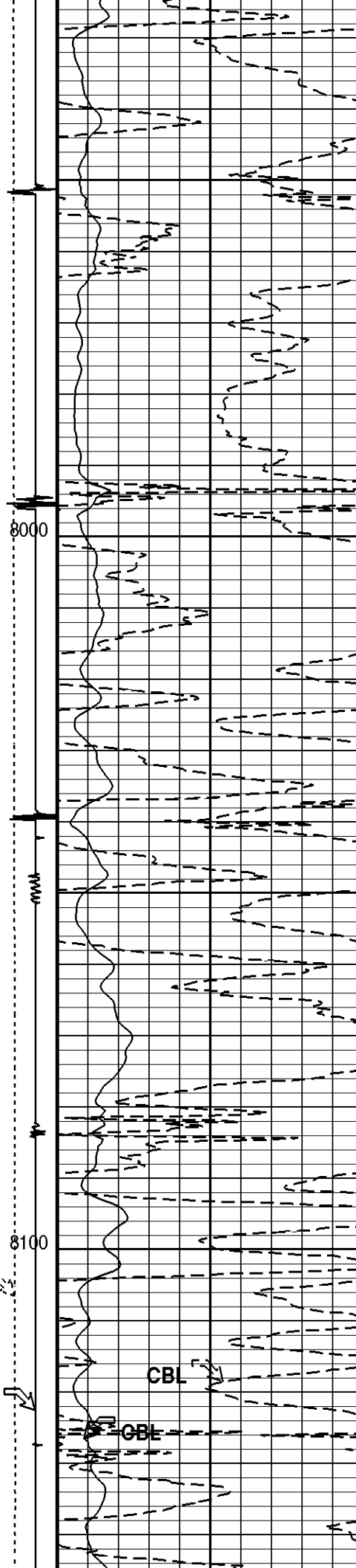


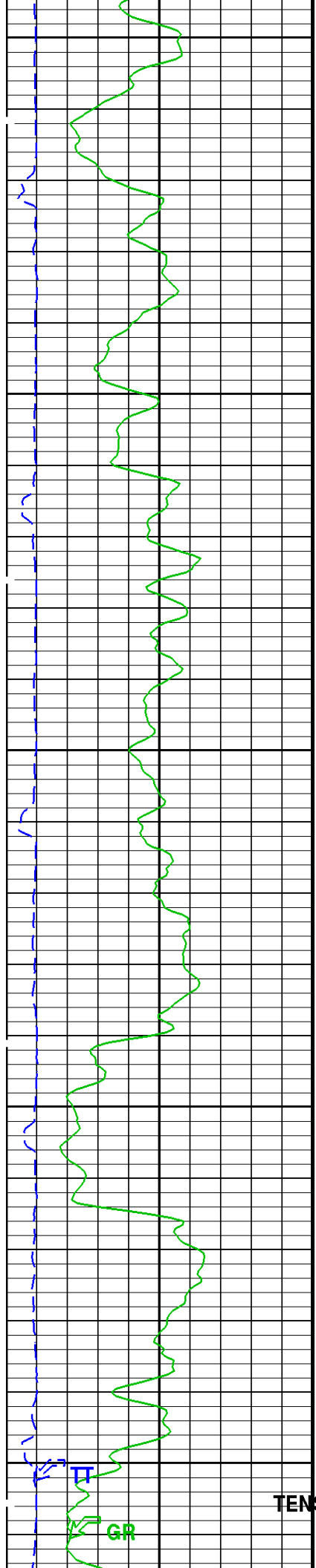




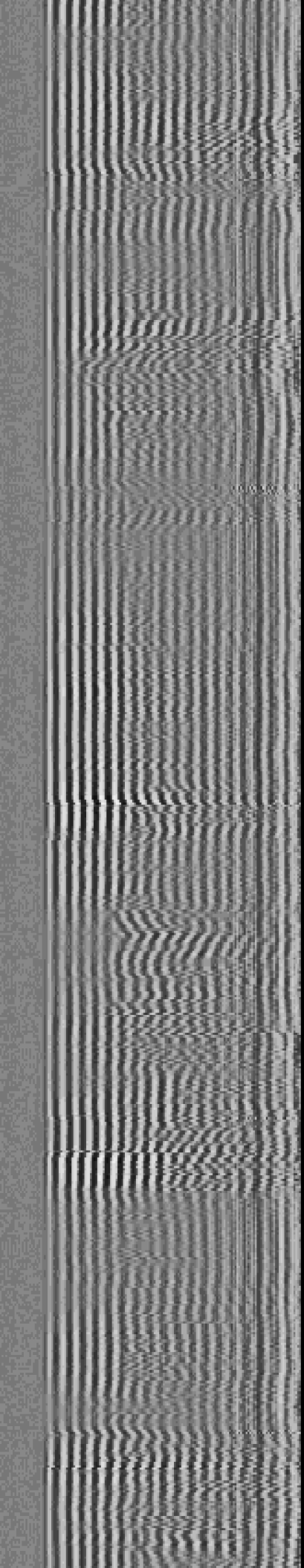
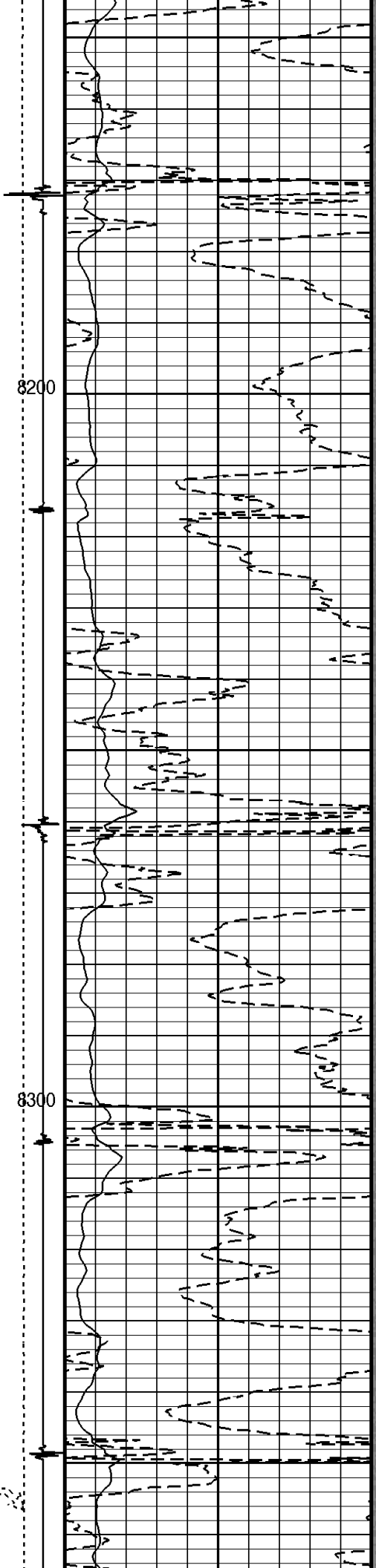
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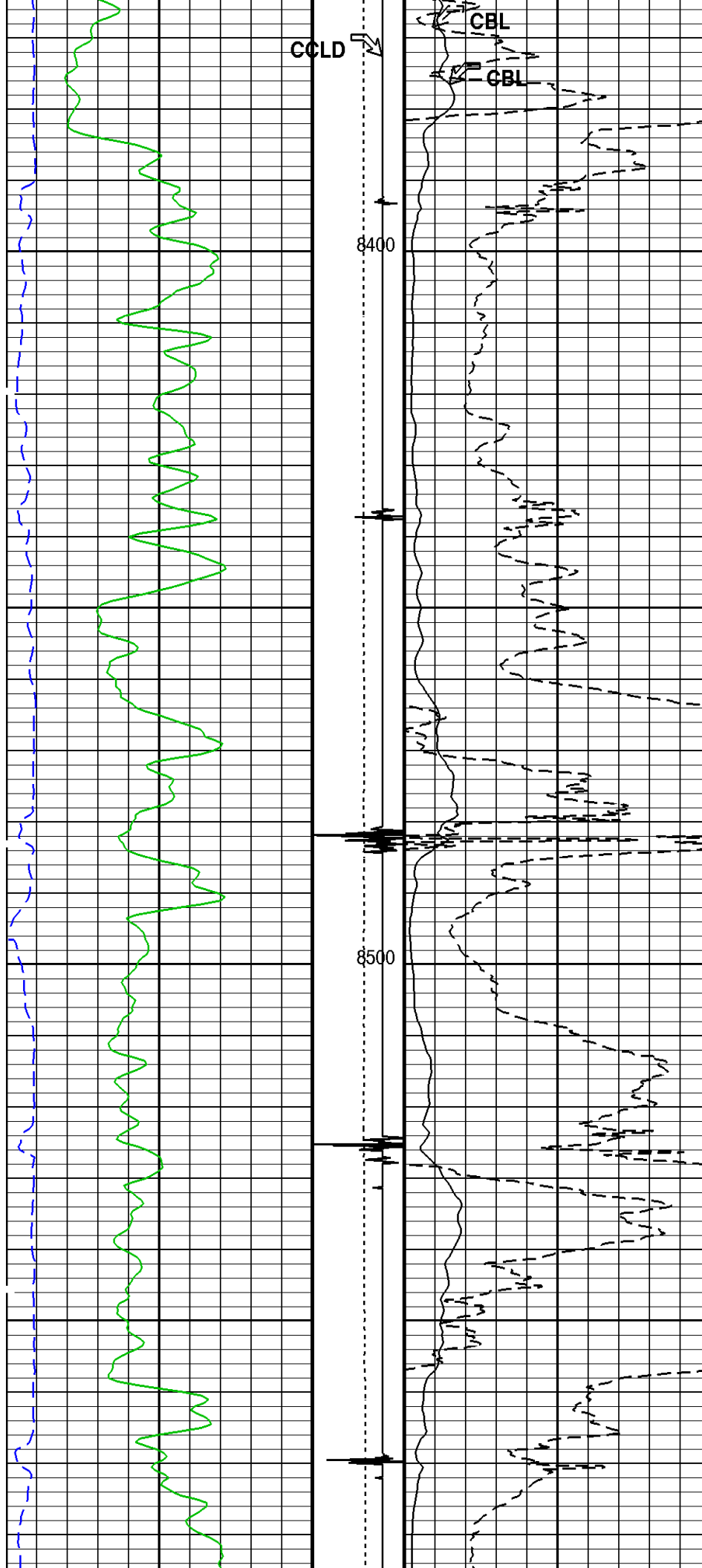
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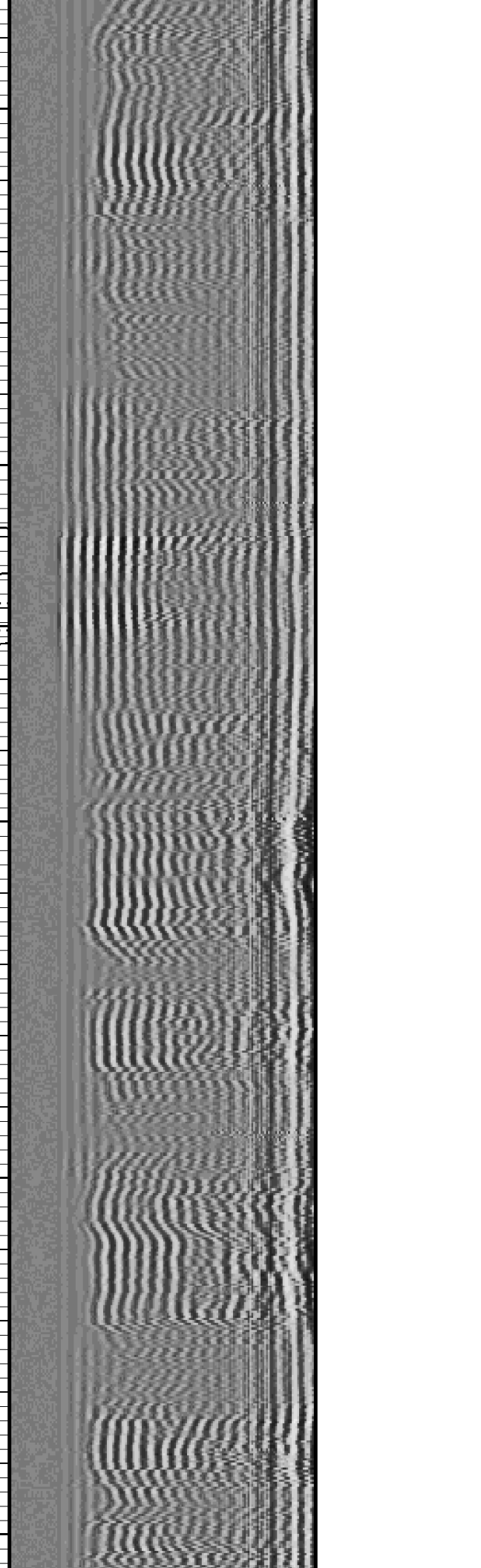
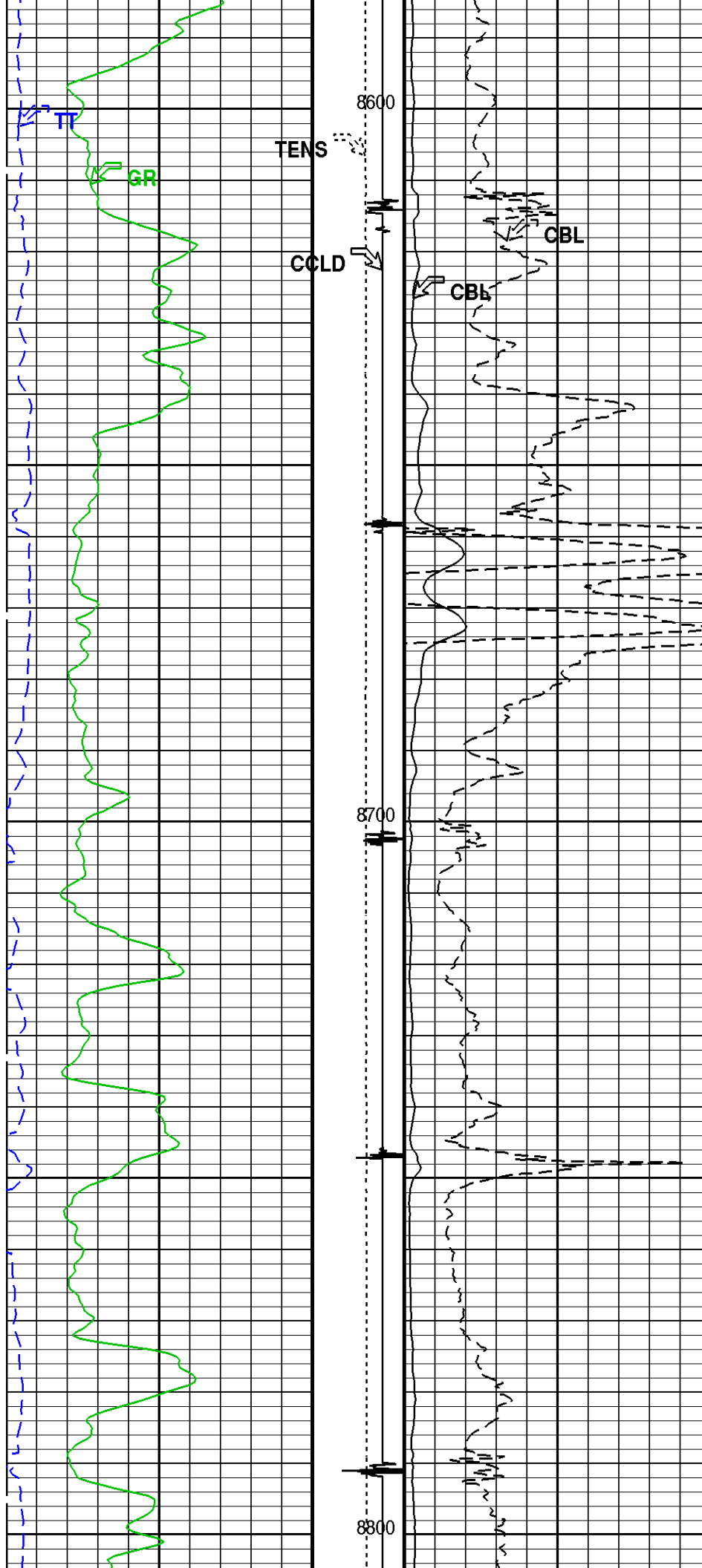


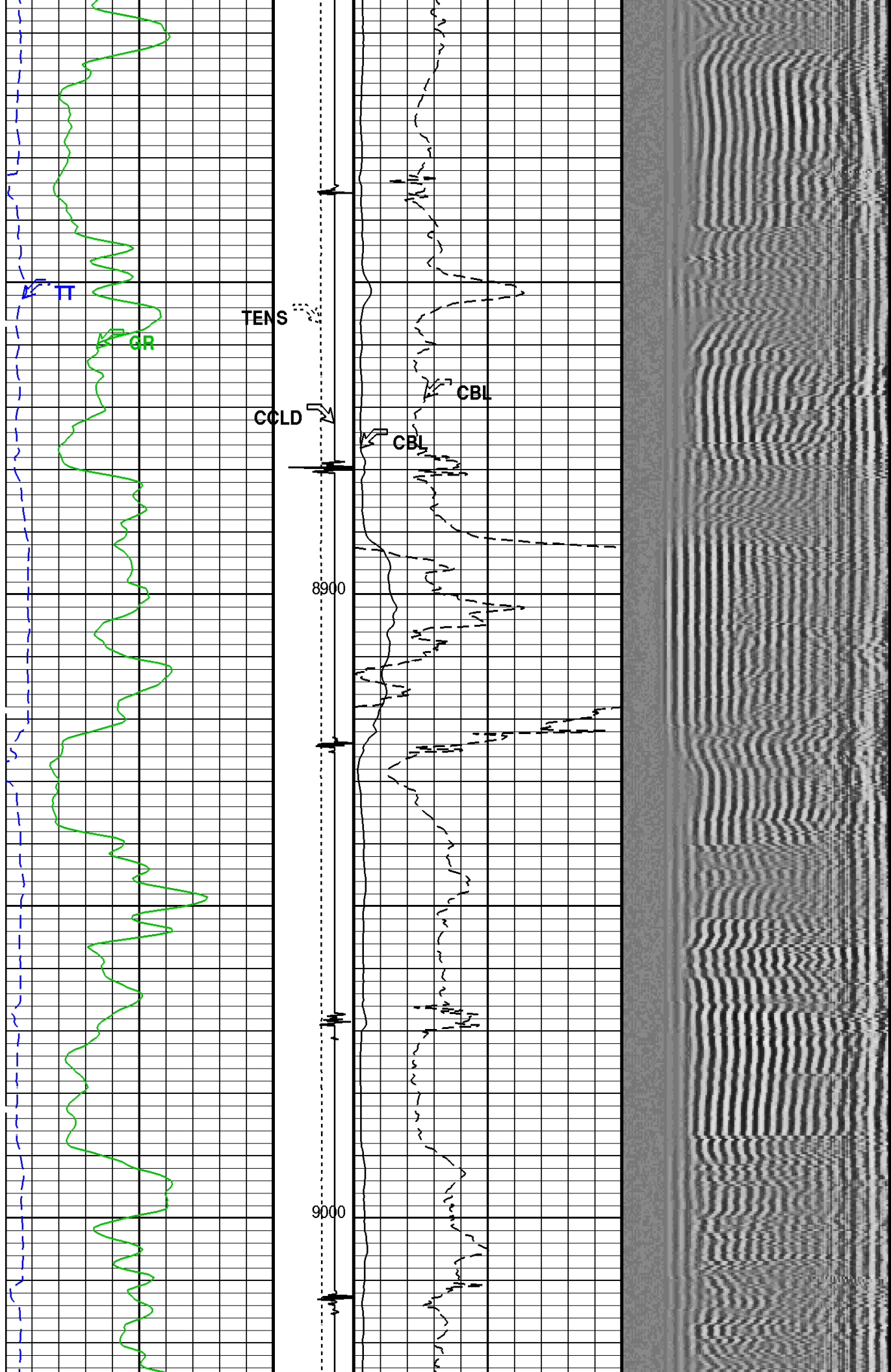


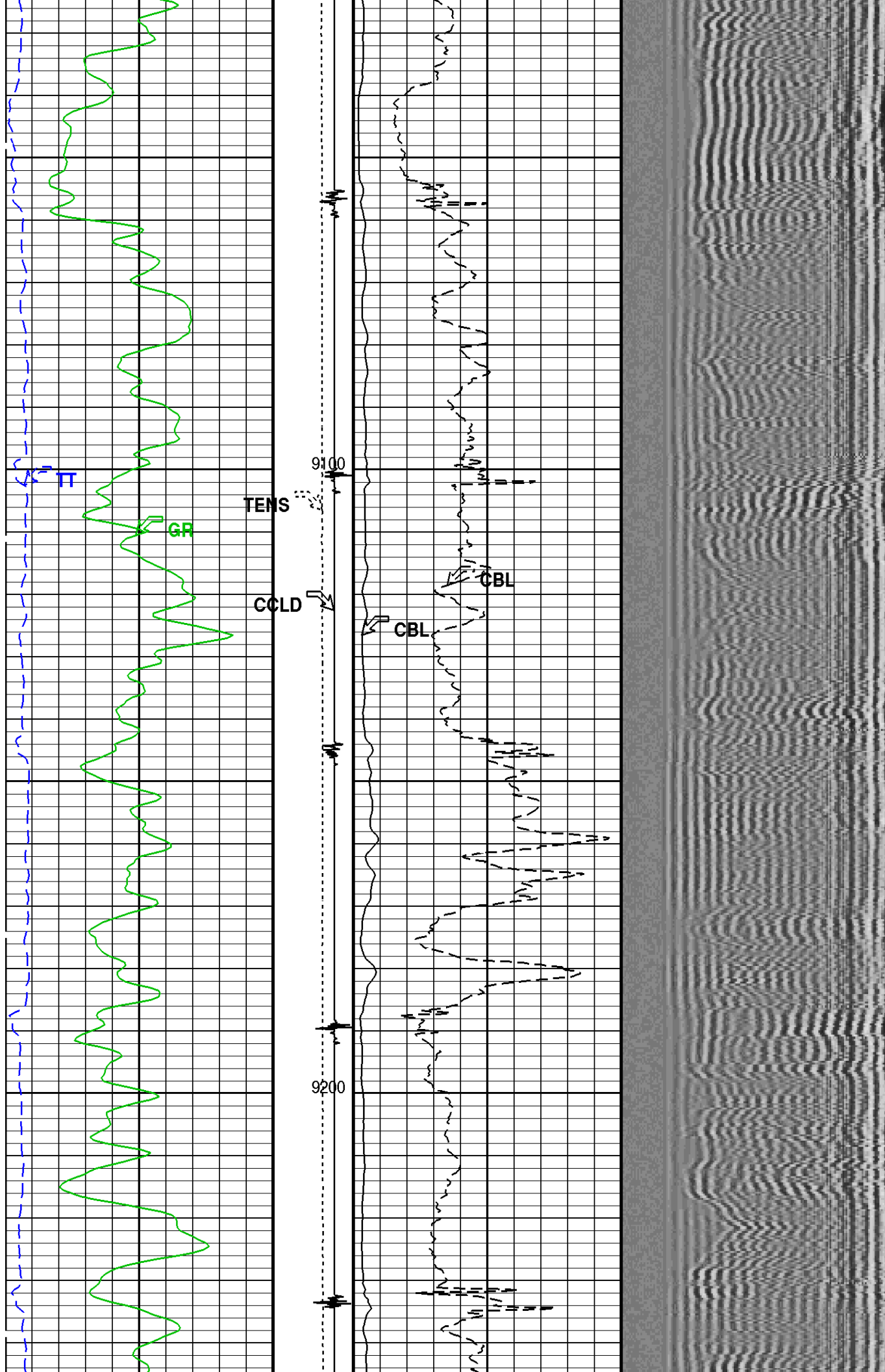
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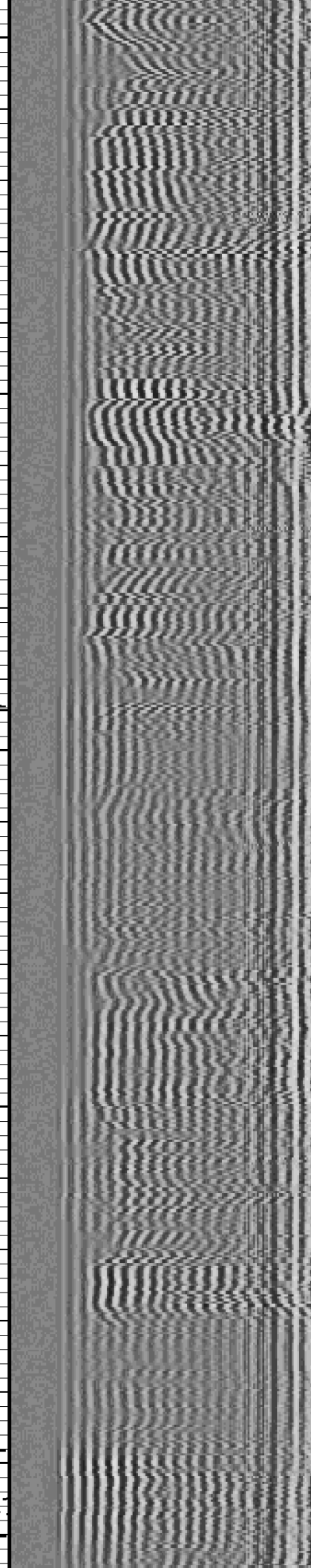
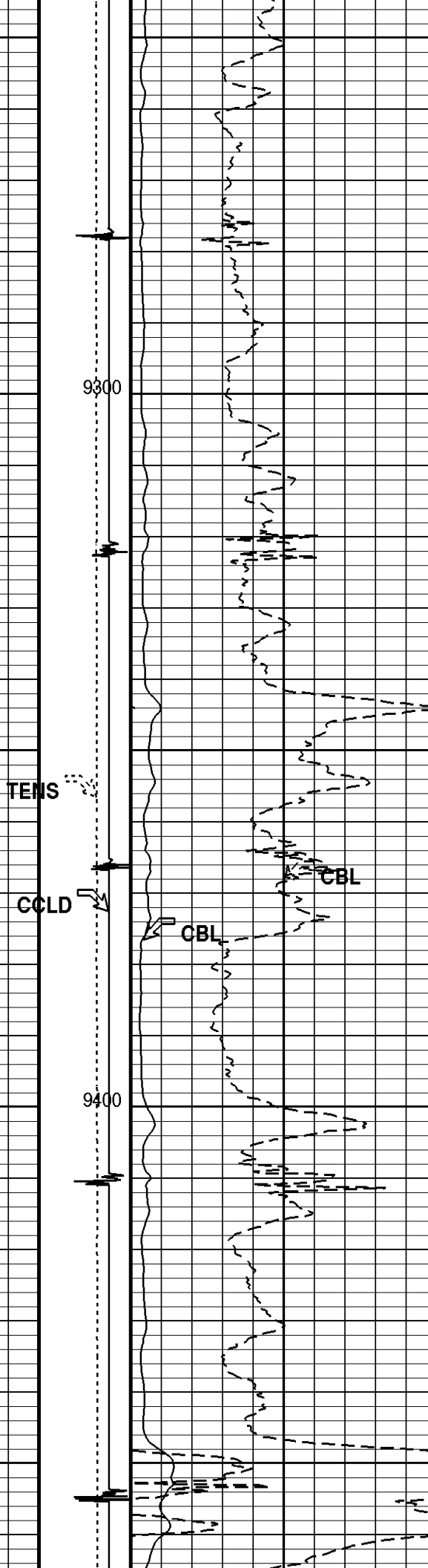
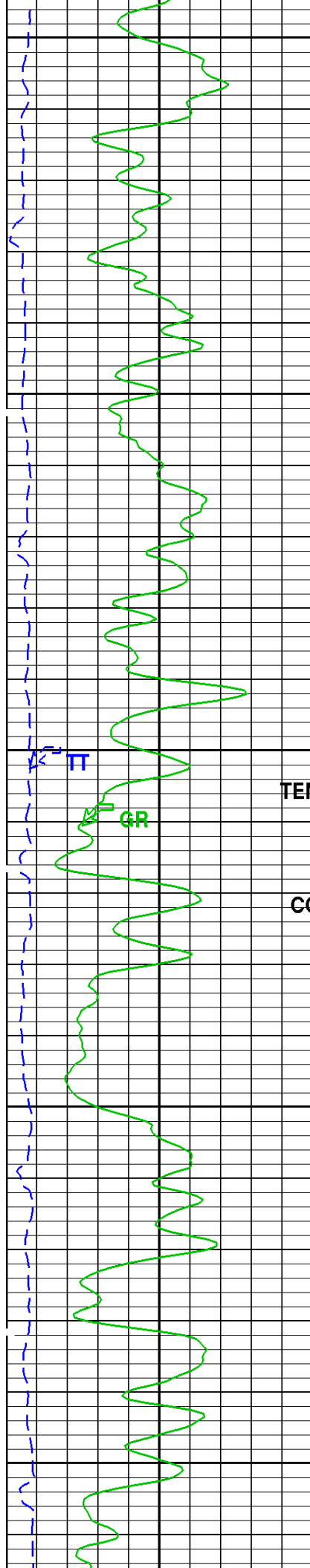


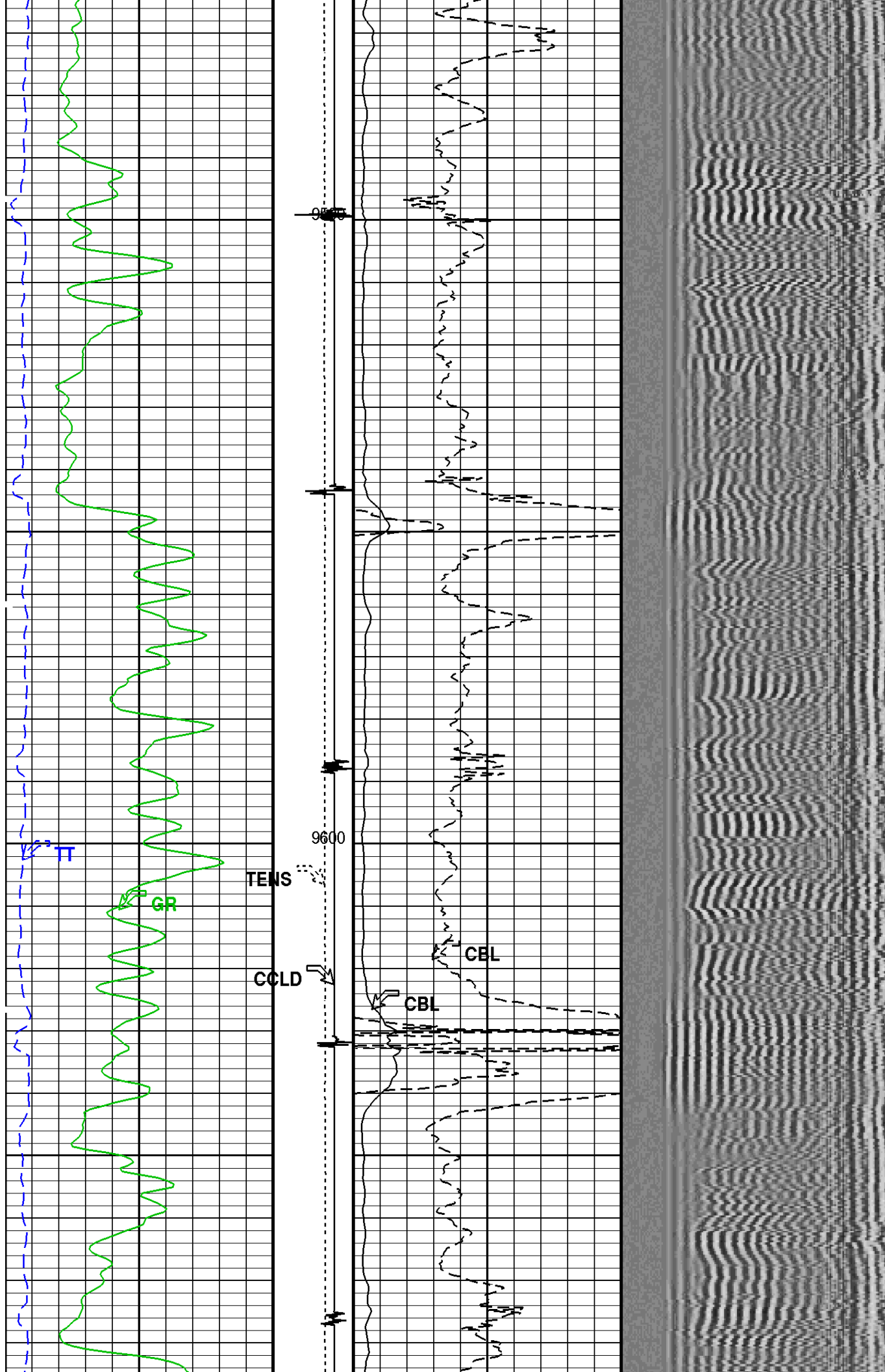


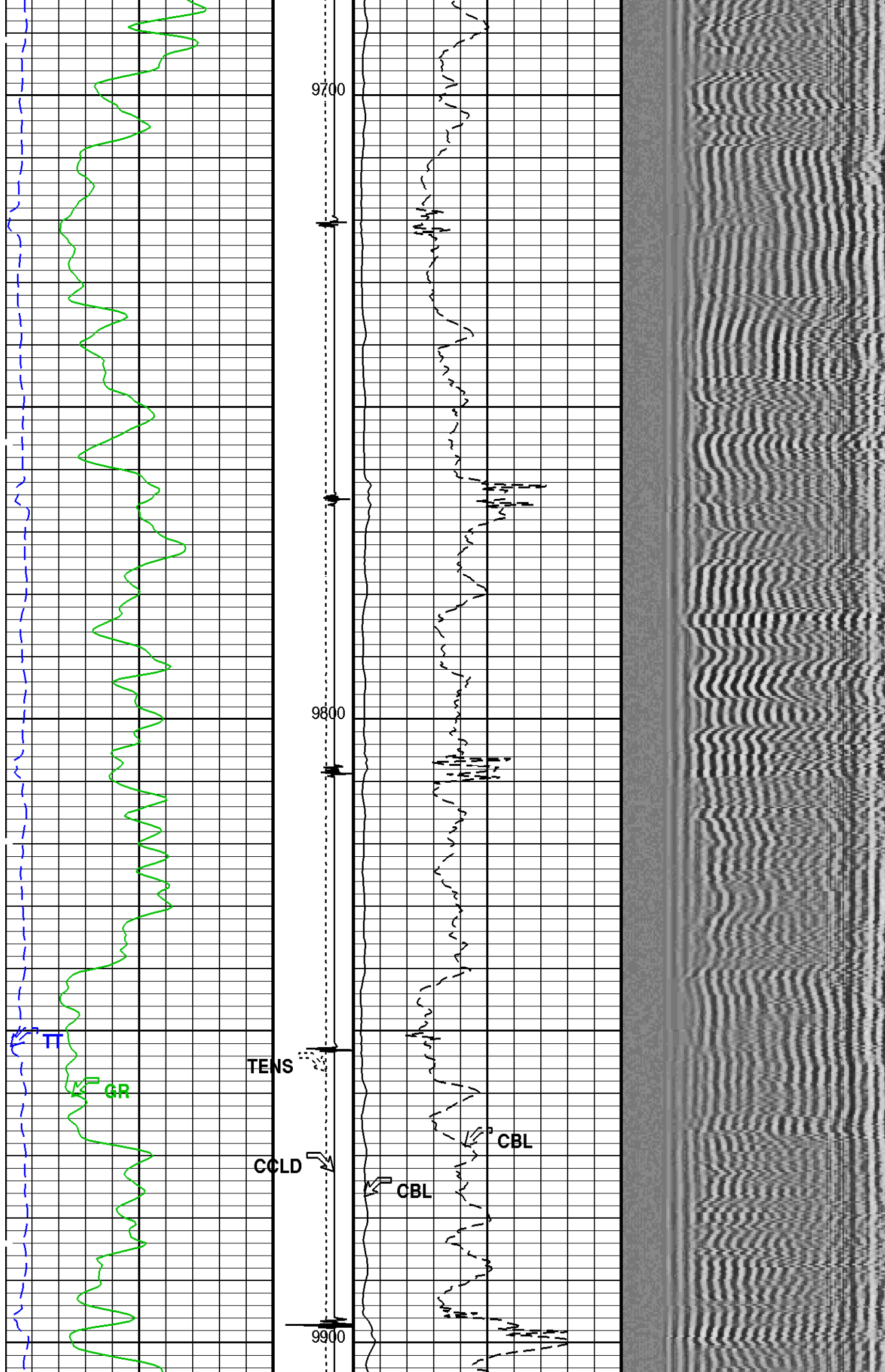


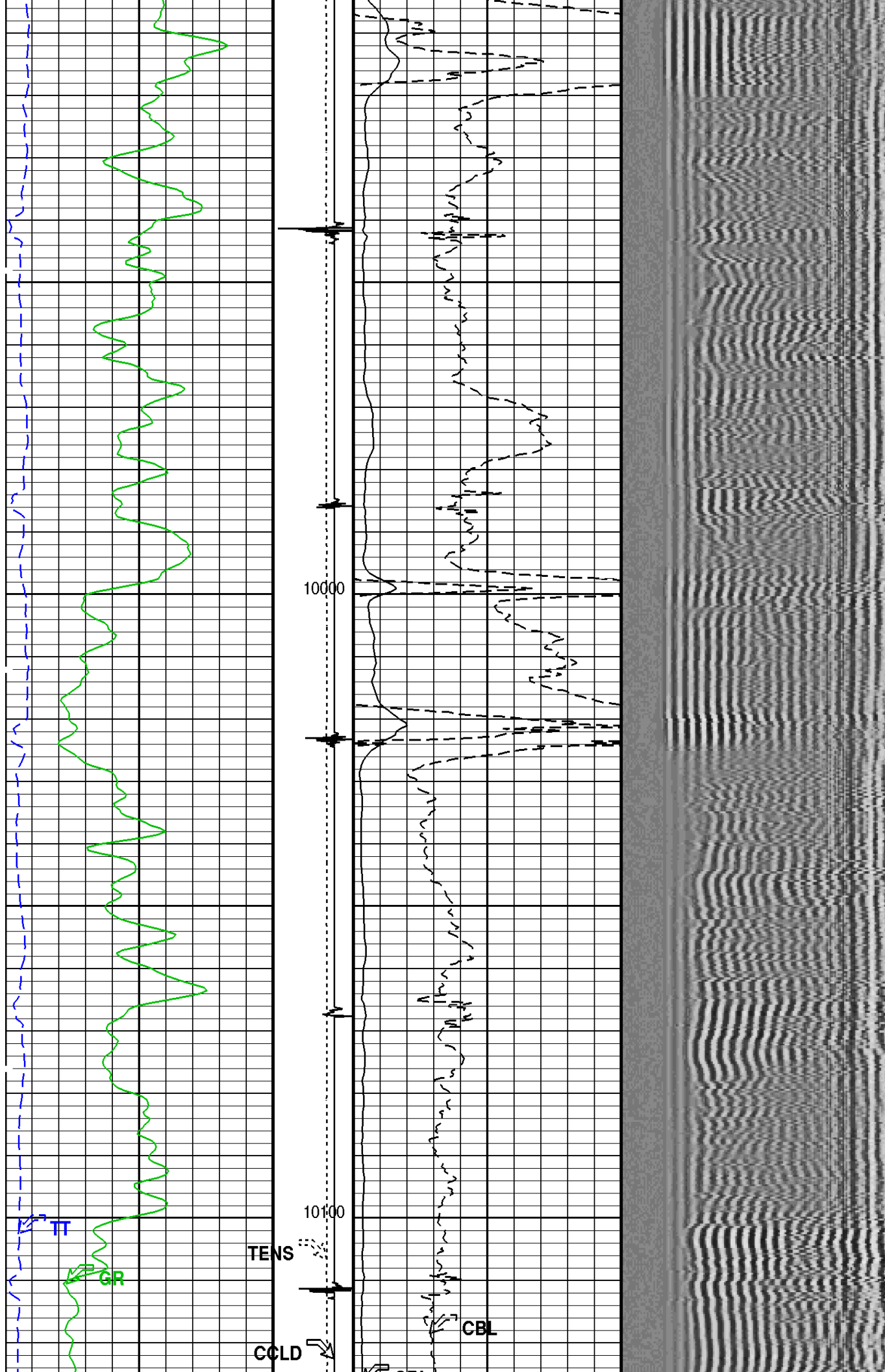


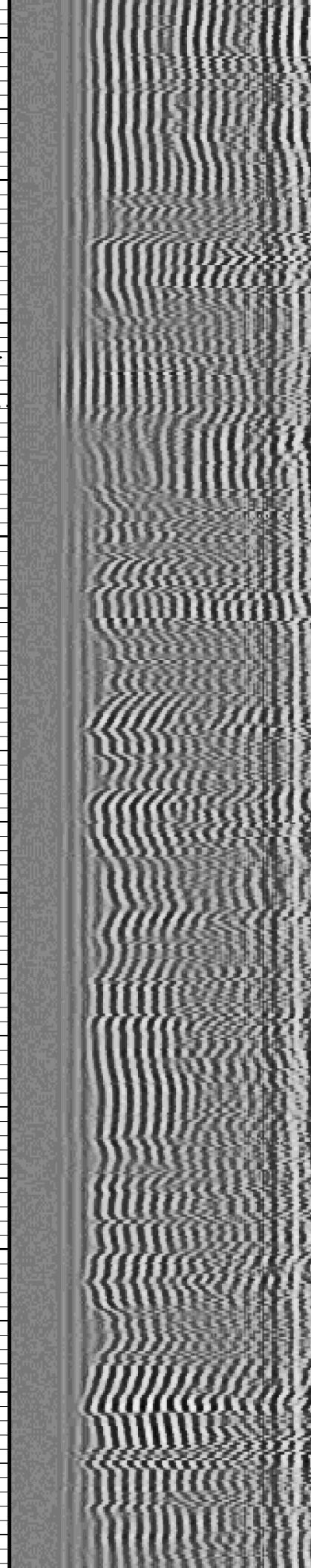
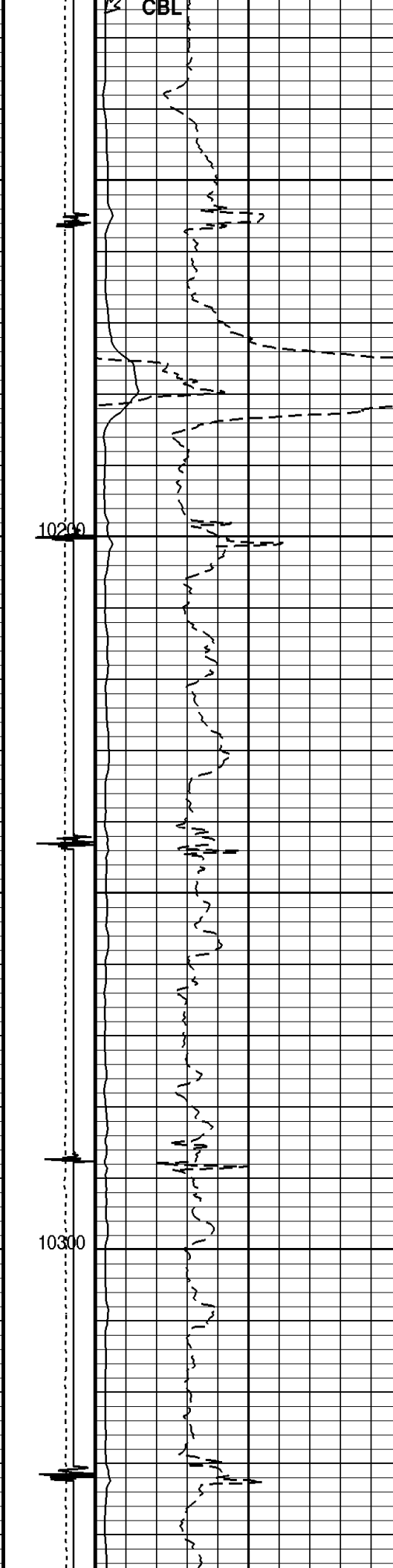
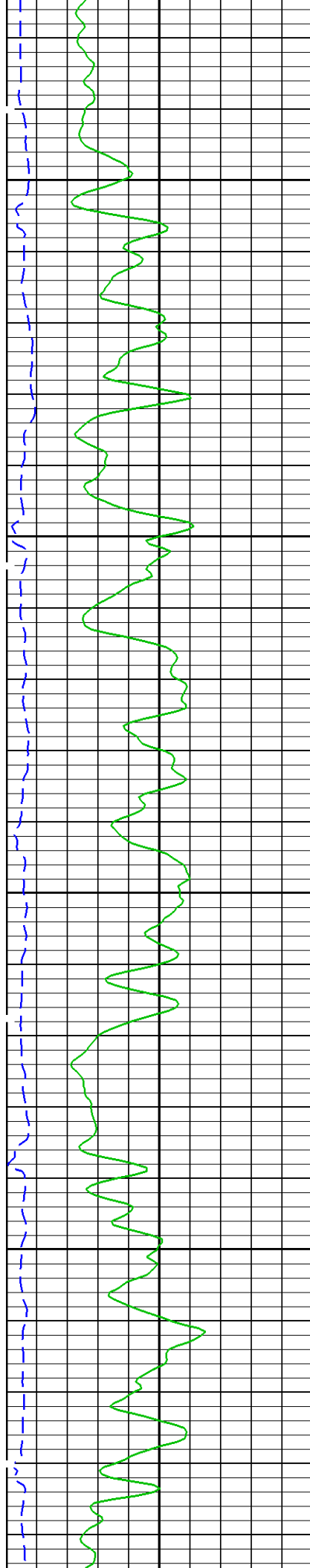


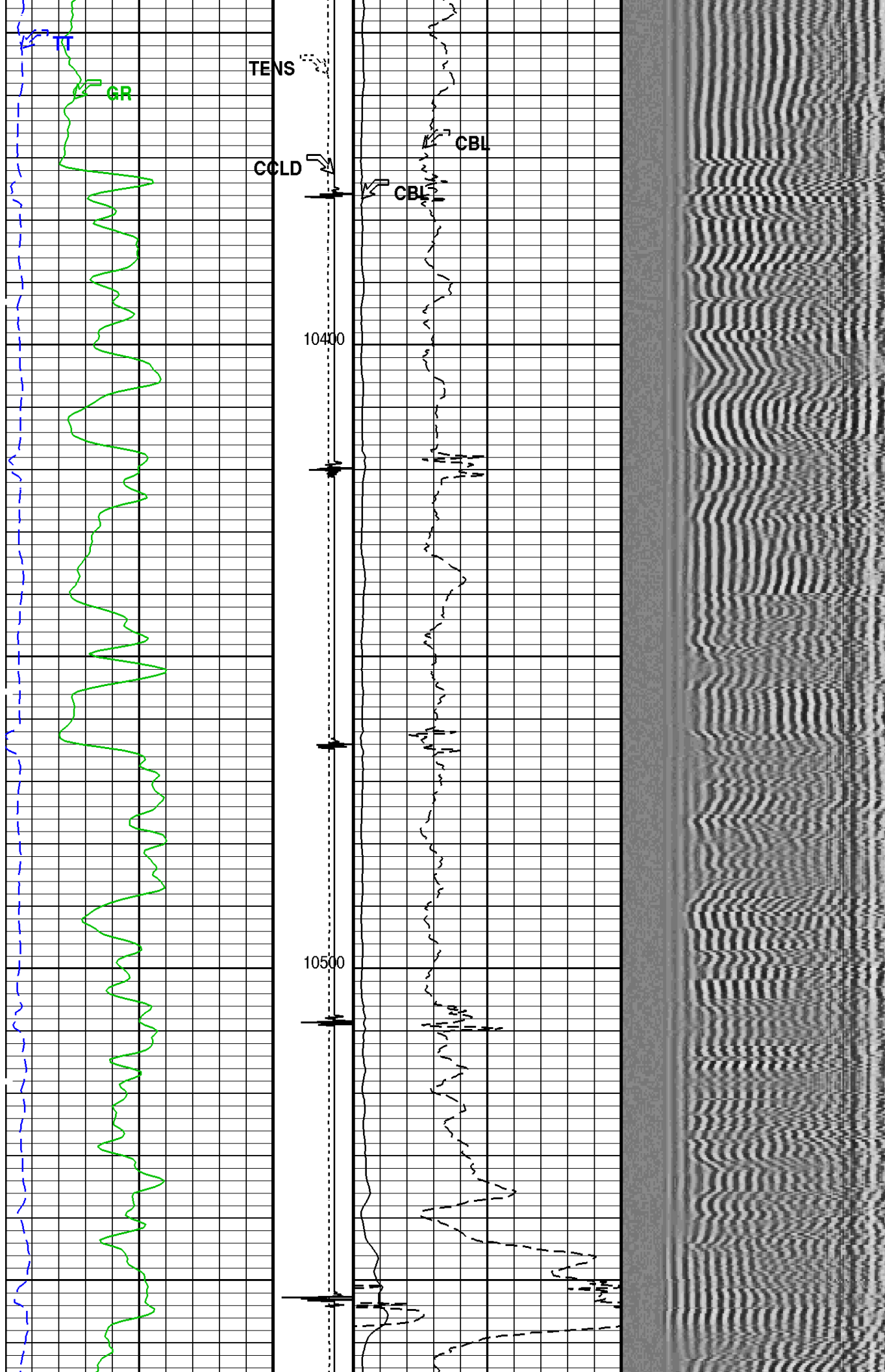


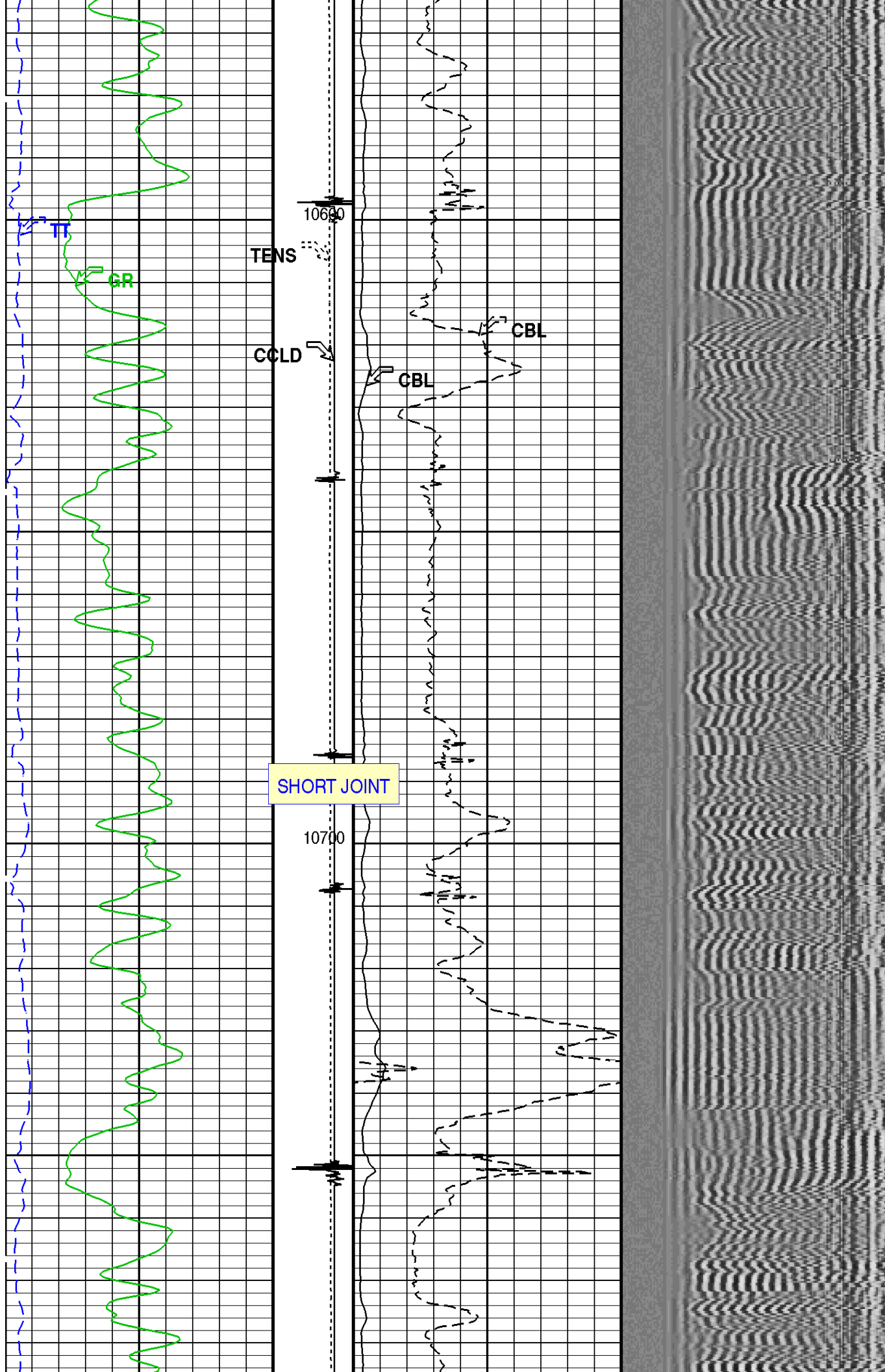


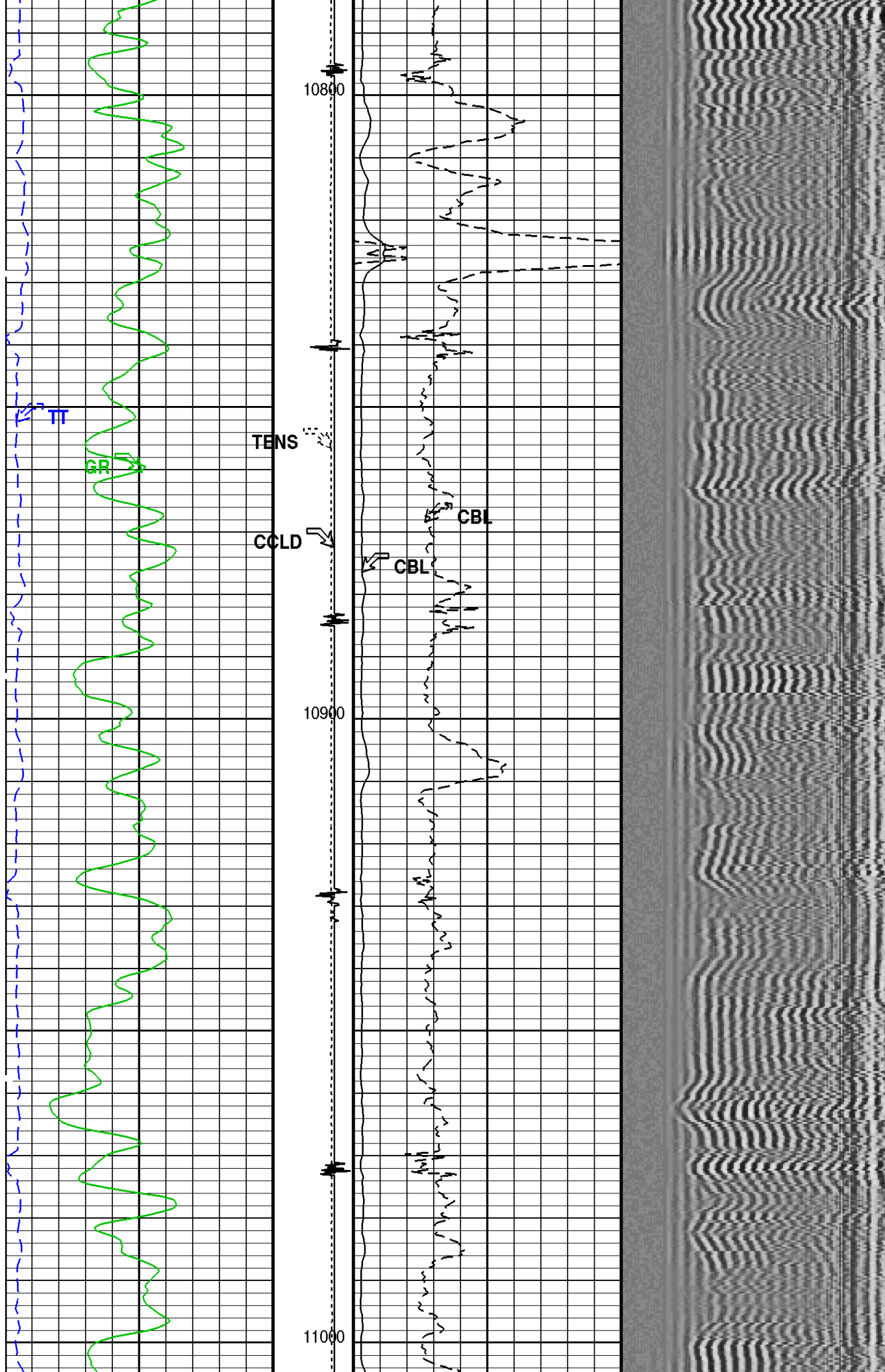


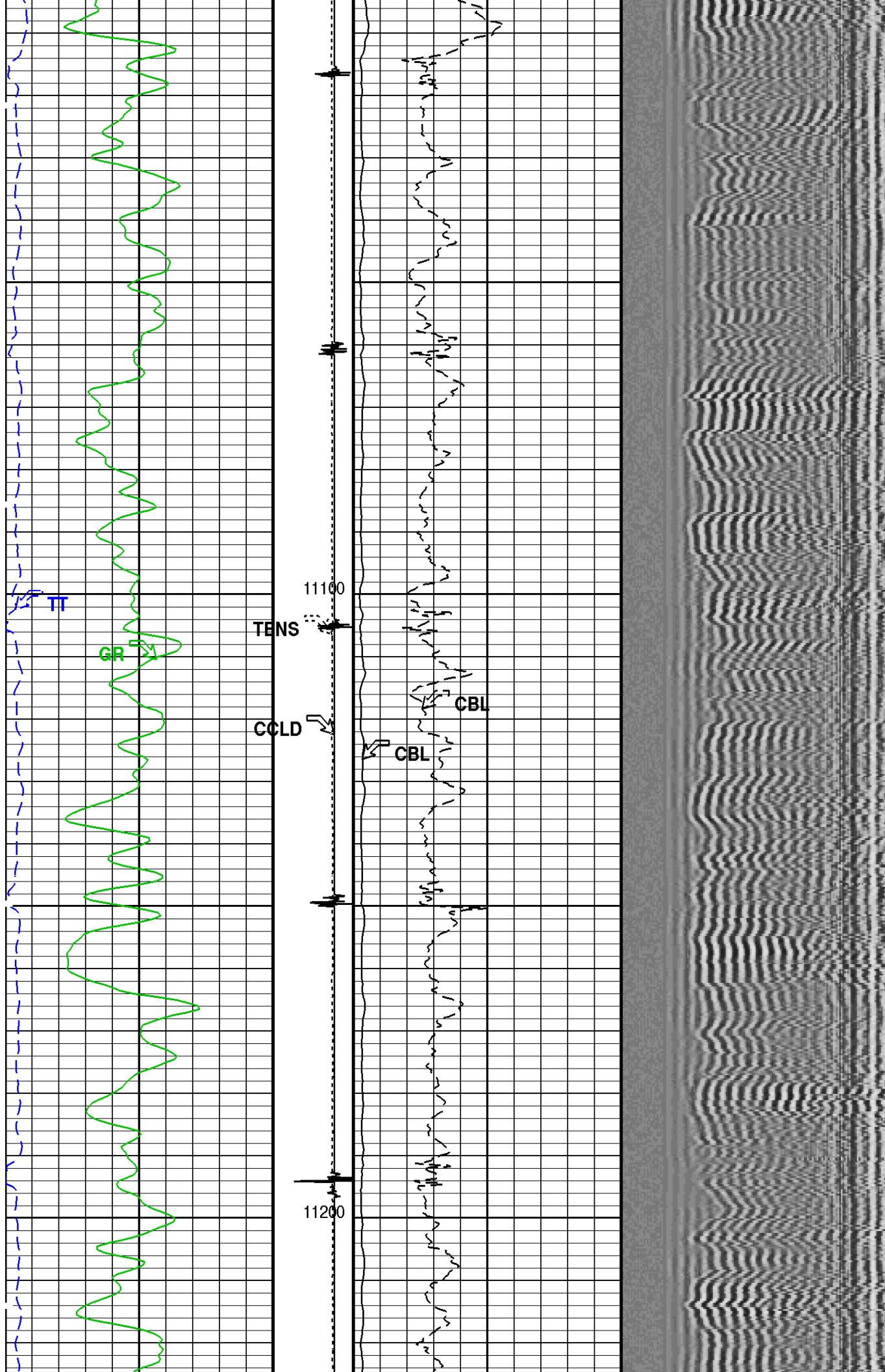


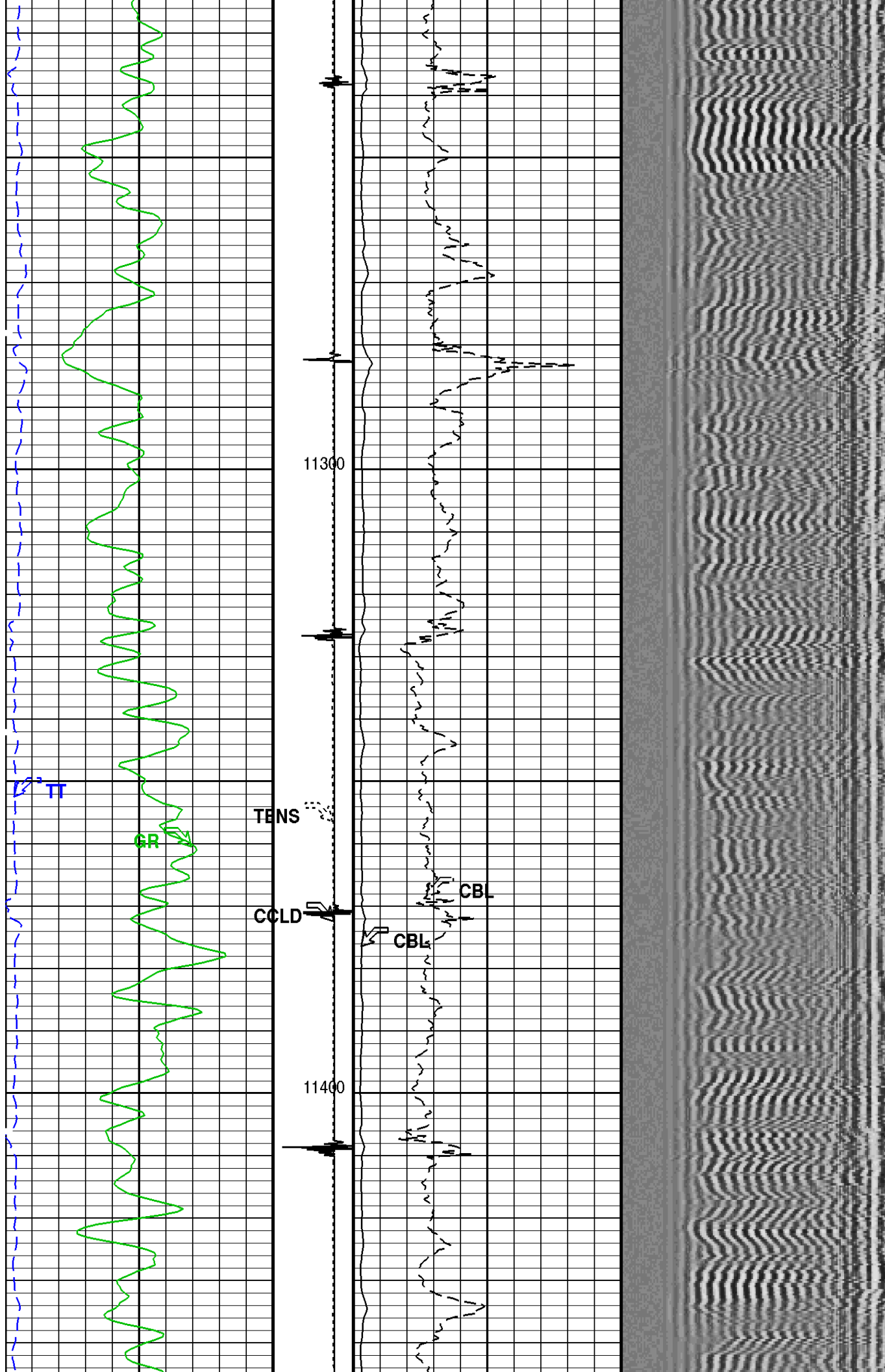


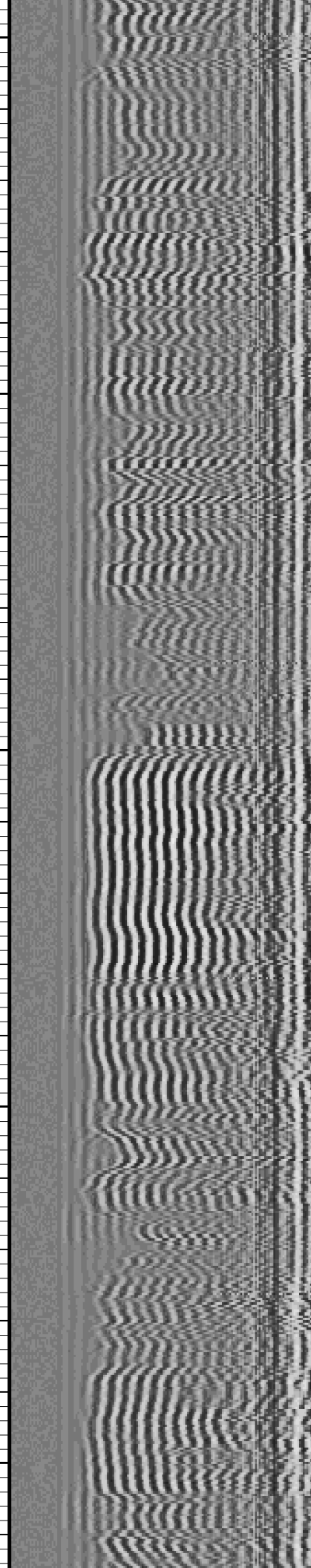
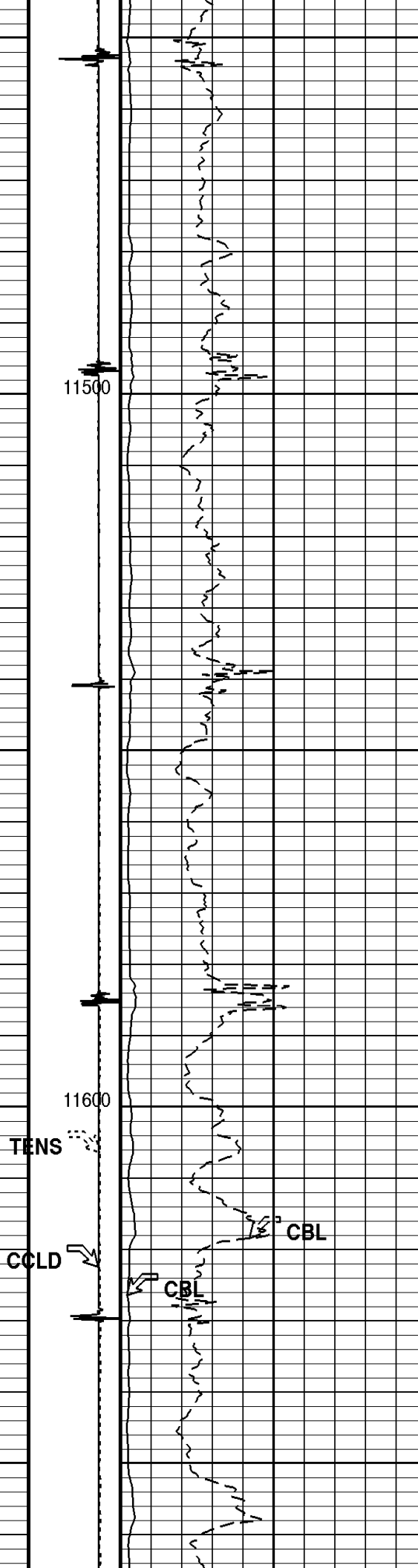
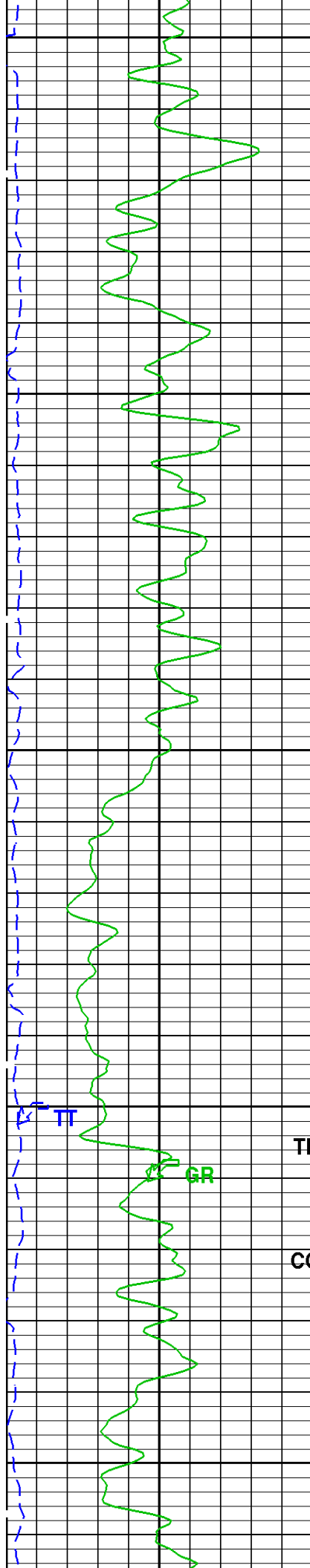


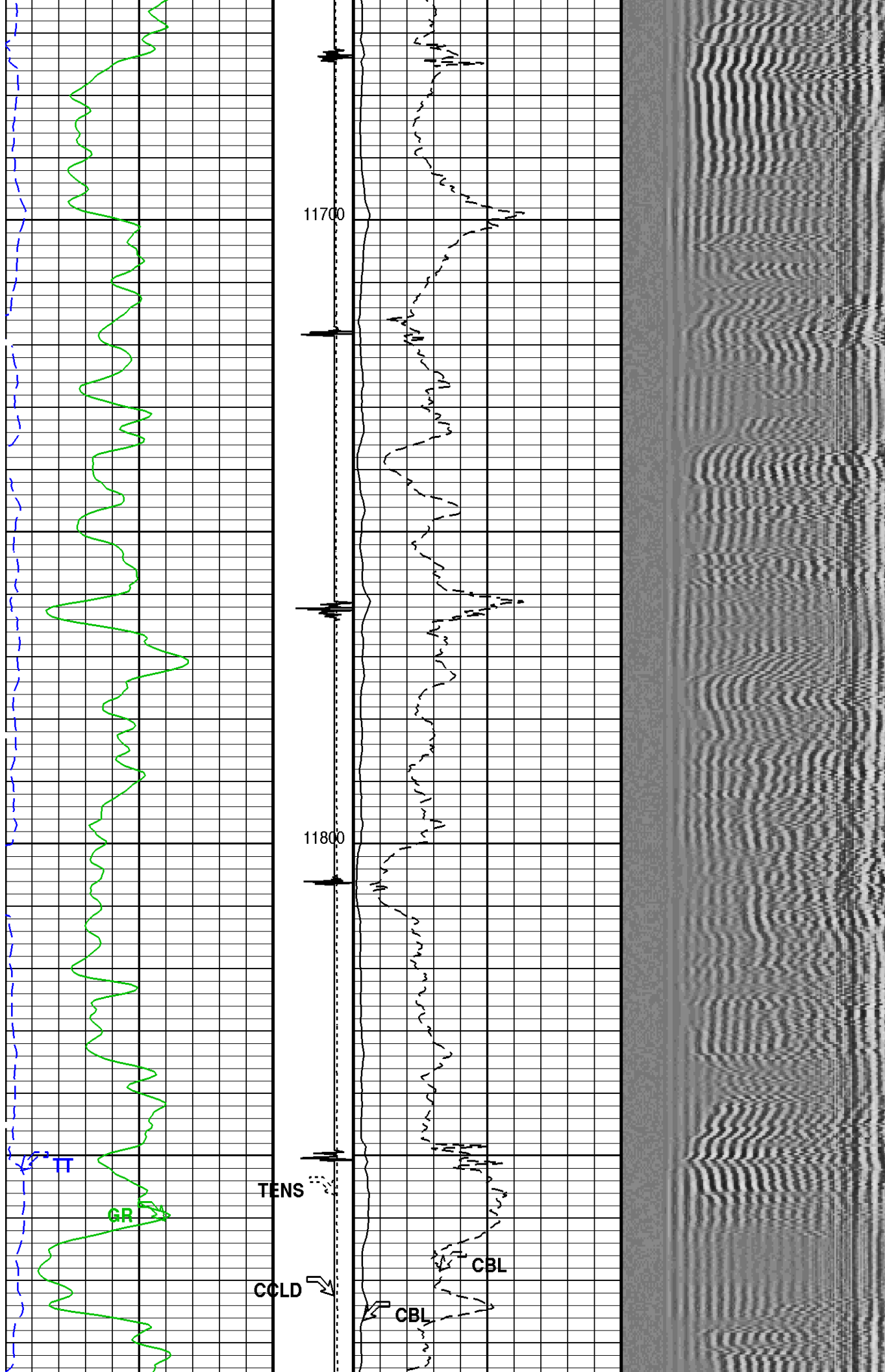


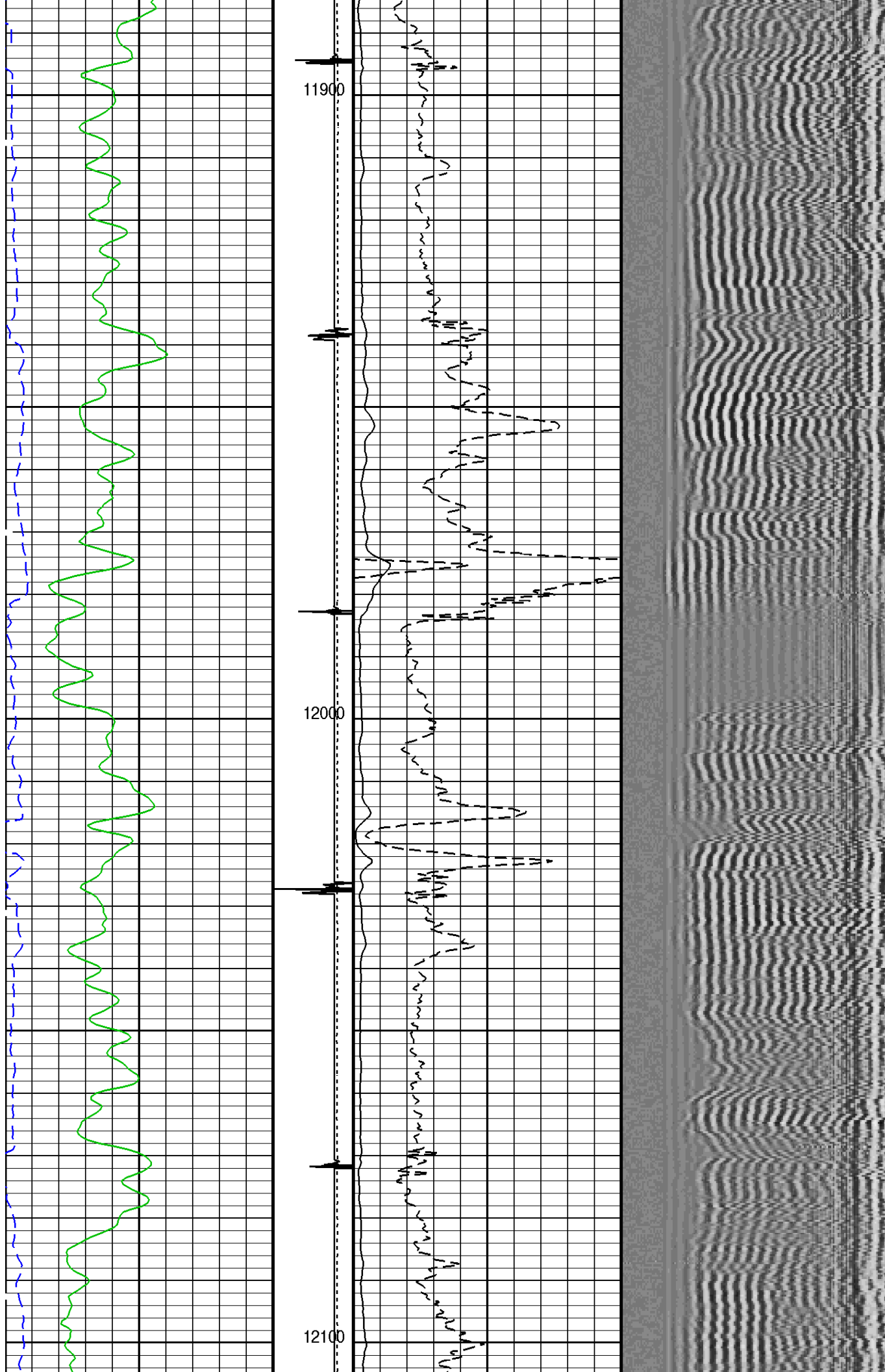


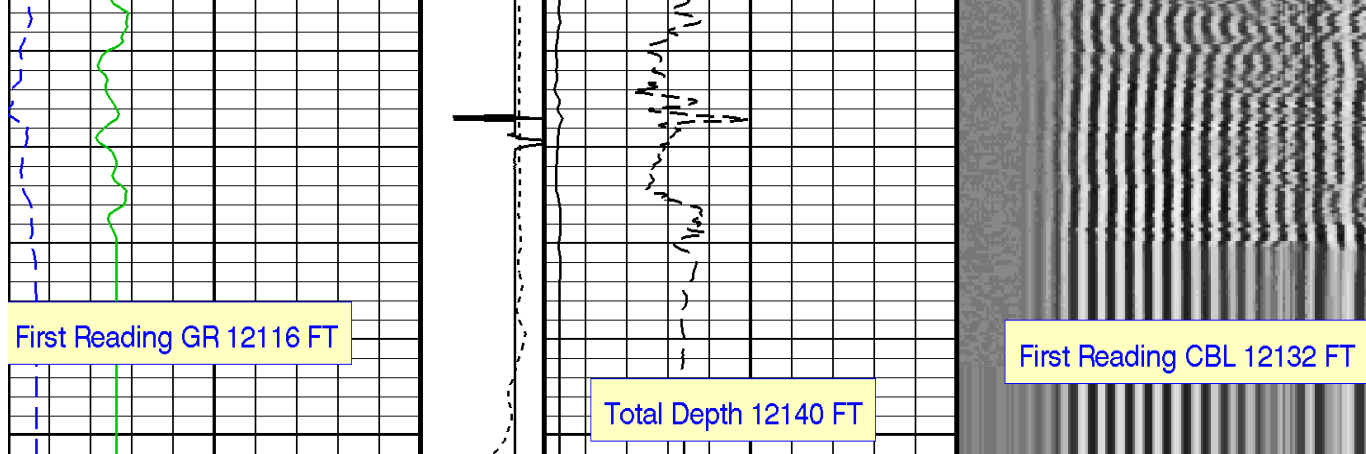












Gamma Ray (GR) (GAPI)	Tension (TENS) (LBF)	CBL Amplitude (CBL) (MV)	Min	Amplitude	Max
0	0	0	200	VDL Variable Density (VDL) (US)	1200
150	2000	100			
Transit Time (TT) (US)	Discriminat ed CCL (CCLD) (V)	CBL Amplitude (CBL) (MV)			
260	3	0			
160	-1	10			

PIP SUMMARY

Time Mark Every 60 S

Format: CBL_VDL Vertical Scale: 5" per 100'

Graphics File Created: 12-Jun-2013 22:21

OP System Version: 19C0-187

SCMT-CB SRPC-5214-H2-2012-OP19 PSPT SRPC-5214-H2-2012-OP19

<<<SCMT Cement Evaluation Information Summary>>>

Sonde Serial Number SCMS-CB 8303

Current Casing Size 4.50000 IN

Casing Weight 11.6000 LB/F

Expected CBL Amplitude 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 7-SEP-2012

CBL Correction Factor 0.0756720

CBL Adjustment Factor (CBAF) 0.700000

MAP 1 Correction Factor 0.136845

MAP Adjustment Factor (MPAF) 1.0

MAP 2 Correction Factor 0.165126

MAP 3 Correction Factor 0.125717

MAP 4 Correction Factor 0.196395

MAP 5 Correction Factor 0.147692

MAP 6 Correction Factor 0.128887

MAP 7 Correction Factor 0.150775

MAP 8 Correction Factor 0.144577

Parameters

DLIS Name	Description	Value
SCMT-CB	Slim Cement Mapping Tool, 1-11/16 OD	
BILI	Bond Index Level for Zone Isolation	0.8
CB3D	SCMT CBL 3 ft Peak Detection Mode	PEAK
CB3G	SCMT CBL 3 ft Peak Detection T0_Delay and Noise Gate	224.559 US

CB3T	SCMT CBL 3 ft Fixed Threshold Level	20	MV
CB5D	SCMT CBL 5 ft Peak Detection Mode	PEAK	
CB5G	SCMT CBL 5 ft Peak Detection T0_Delay and Noise Gate	338.559	US
CB5T	SCMT CBL 5 ft Fixed Threshold Level	20	MV
CBLG	CBL Gate Width	45	US
CBRA	CBL LQC Reference Amplitude in Free Pipe	80	MV
CMCF	CBL Cement Type Compensation Factor	1	
CMT C	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			
CWEI	Casing Weight	11.60	LB/F
DFD	Drilling Fluid Density	8.40	LB/G
DO	Depth Offset for Playback	4.0	FT
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	12140	FT

Input DLIS Files

DEFAULT	SCMT_PSP_024LUP	FN:23	PRODUCER	12-Jun-2013 19:07	12148.5 FT	19.0 FT
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Output DLIS Files

DEFAULT	SCMT_PSP_026PUP	FN:25	PRODUCER	12-Jun-2013 22:21
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Schlumberger

REPEAT ANALYSIS CBL VDL

MAXIS Field Log

Company: ENCANA OIL & GAS (USA) INC

Well: SG 8512A-36 (D36 496)

Input DLIS Files

DEFAULT	SCMT_PSP_022LUP	FN:21	PRODUCER	12-Jun-2013 18:49	7865.0 FT	7570.0 FT
DEFAULT	SCMT_PSP_026PUP	FN:25	PRODUCER	12-Jun-2013 22:21	12152.5 FT	1.5 FT

Output DLIS Files

DEFAULT	SCMT_PSP_028PUP	FN:27	PRODUCER	12-Jun-2013 22:28	7863.0 FT	7546.5 FT
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OP System Version: 19C0-187

SCMT-CB	SRPC-5214-H2-2012-OP19	PSPT	SRPC-5214-H2-2012-OP19
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PIP SUMMARY

☒ Time Mark Every 60 S

TENS_REP
Curve

CBL 1 - REP 2 (CBL 1 - REP 2)

TI REP Curve (TI REP)
(US)

260 160

GR REP Curve (GR REP)
(GAPI)

0 150

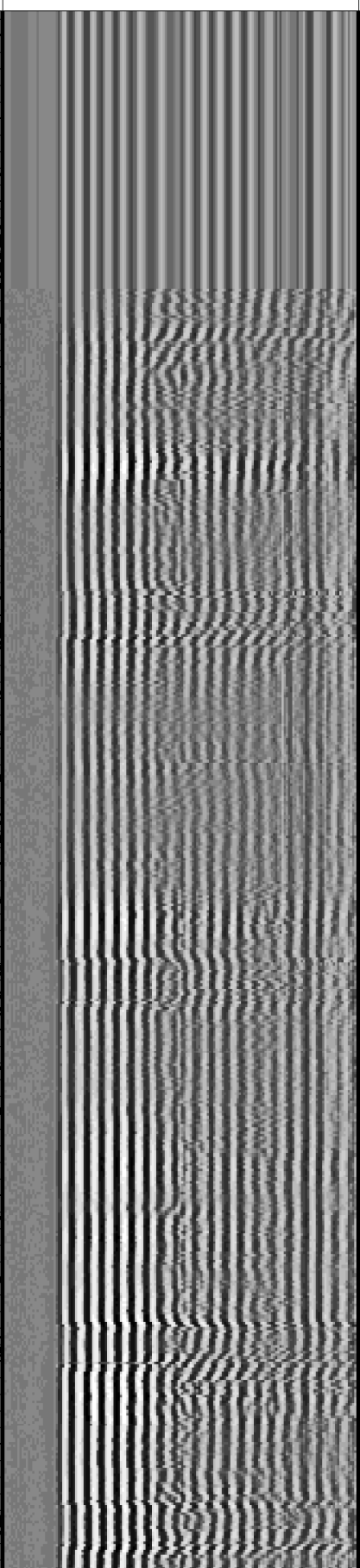
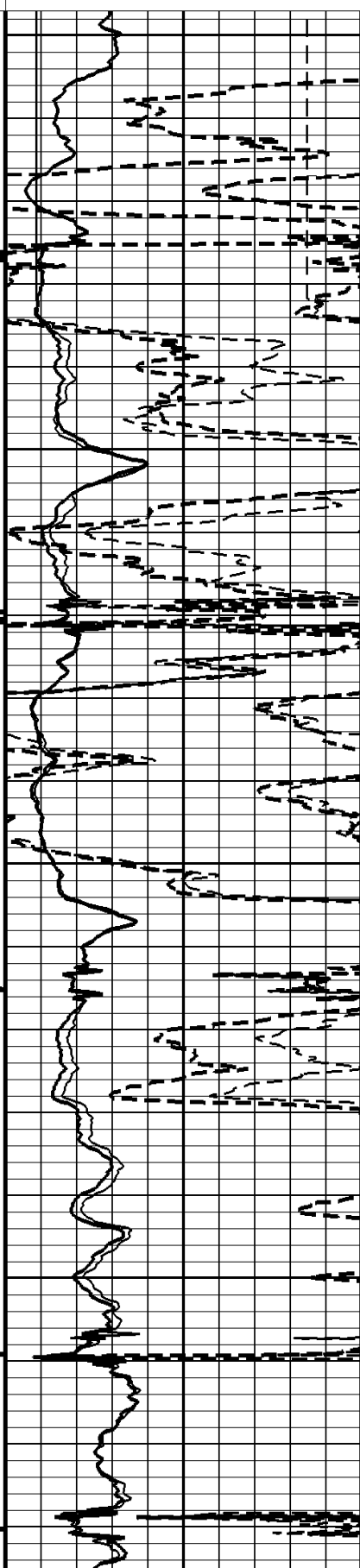
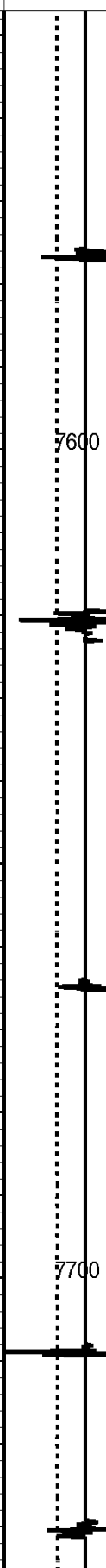
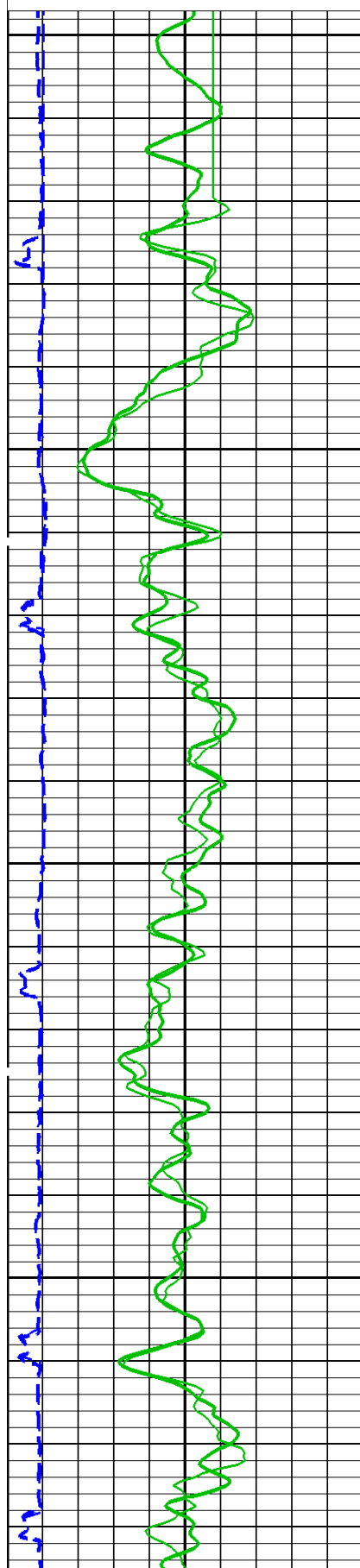
(TENS-
REP)
(LBF)

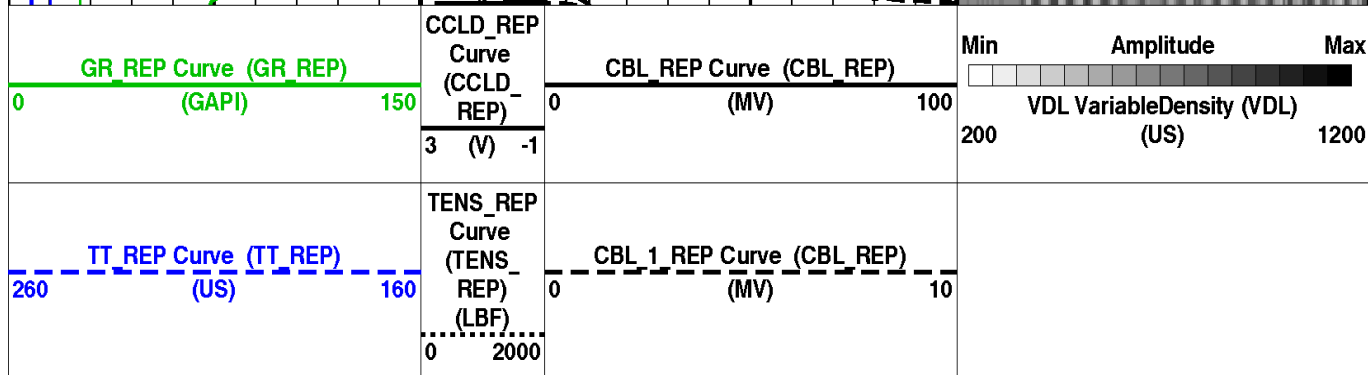
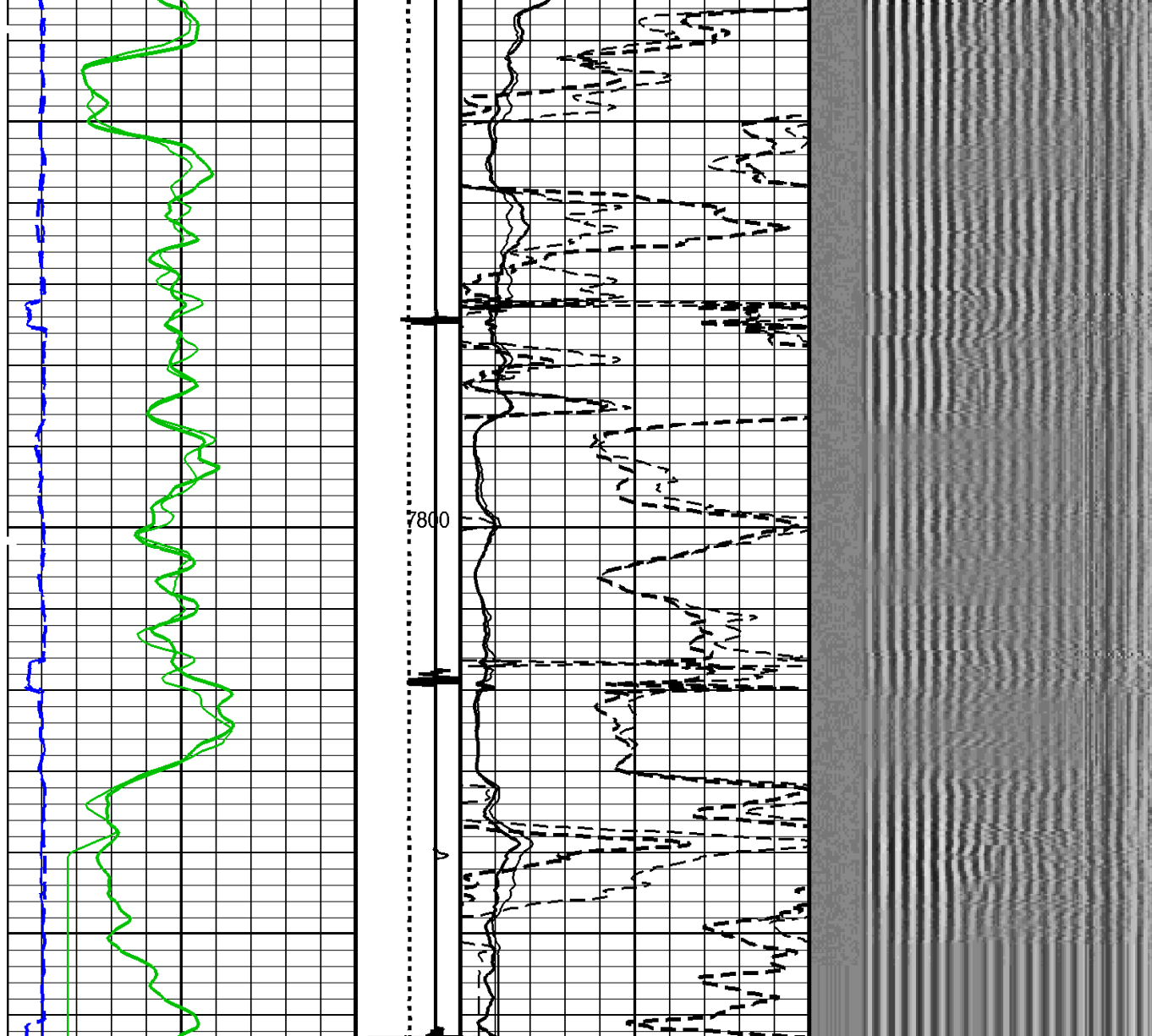
CCLD REP
Curve
(CCLD-
REP)
3 (V) -1

CBL 1 REP Curve (CBL REP)
(MV)

CBL REP Curve (CBL REP)
(MV)

Min Amplitude Max
VDL VariableDensity (VDL)
(US)





PIP SUMMARY

Time Mark Every 60 S

Format: CBL_VDL_REP Vertical Scale: 5" per 100'

Graphics File Created: 12-Jun-2013 22:28

OP System Version: 19C0-187

SCMT-CB SRPC-5214-H2-2012-OP19 PSPT SRPC-5214-H2-2012-OP19

<<<SCMT Cement Evaluation Information Summary>>>

Sonde Serial Number SCMS-CB 8303

Current Casing Size 4.50000 IN

Casing Weight 11.6000 LB/F

Expected CBL Amplitude 80 MV Minimum Sonic Amplitude 0.570140 MV (100% Cement)

Expected CBL Amplitude	80 MV	Minimum Sonic Amplitude	0.579149 MV (100% Cement)
in Free Pipe Section			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	7-SEP-2012		
CBL Correction Factor	0.0756720	CBL Adjustment Factor (CBAF)	0.700000
MAP 1 Correction Factor	0.136845	MAP Adjustment Factor (MPAF)	1.0
MAP 2 Correction Factor	0.165126		
MAP 3 Correction Factor	0.125717		
MAP 4 Correction Factor	0.196395		
MAP 5 Correction Factor	0.147692		
MAP 6 Correction Factor	0.128887		
MAP 7 Correction Factor	0.150775		
MAP 8 Correction Factor	0.144577		

Parameters

DLIS Name	Description	Value	
SCMT-CB: Slim Cement Mapping Tool, 1-11/16 OD			
BILI	Bond Index Level for Zone Isolation	0.8	
CB3D	SCMT CBL 3 ft Peak Detection Mode	PEAK	
CB3G	SCMT CBL 3 ft Peak Detection T0_Delay and Noise Gate	224.559	US
CB3T	SCMT CBL 3 ft Fixed Threshold Level	20	MV
CB5D	SCMT CBL 5 ft Peak Detection Mode	PEAK	
CB5G	SCMT CBL 5 ft Peak Detection T0_Delay and Noise Gate	338.559	US
CB5T	SCMT CBL 5 ft Fixed Threshold Level	20	MV
CBLG	CBL Gate Width	45	US
CBRA	CBL LQC Reference Amplitude in Free Pipe	80	MV
CMCF	CBL Cement Type Compensation Factor	1	
CMTC	SCMT Slow Channel Multiplexer Mode	SCAN	
CMTM	SCMT Operating Mode	LOG	
CSCS	SCMT Slow Channel Index	VCC	
CTHI	Casing Thickness	0.255617	IN
DTF	Delta-T Fluid	189	US/F
FATT	Acoustic Attenuation due to Fluid	0	DB/F
FCF	CBL Fluid Compensation Factor	0.924277	
GOBO	Good Bond	1.55185	MV
MAPD	SCMT MAP Peak Detection Mode	PEAK	
MAPG	SCMT MAP Peak Detection T0_Delay and Noise Gate	167.559	US
MAPT	SCMT MAP Fixed Threshold Level	30	MV
MATT	Maximum Attenuation	16.5449	DB/F
MCCF	MAP Cement Type Compensation Factor	1	
MCI	Minimum Cemented Interval for Isolation	1.25	FT
MMSA	MAP Minimum Sonic Amplitude	4.32284	MV
MSA	Minimum Sonic Amplitude	0.579149	MV
PEDE	Peak Detection On/Off Switch in Playback	OFF	
VDLG	VDL Manual Gain	5	
ZCMT	Acoustic Impedance of Cement	6.8	MRAY
System and Miscellaneous			
CWEI	Casing Weight	11.60	LB/F
DFD	Drilling Fluid Density	8.40	LB/G
DO	Depth Offset for Playback	-2.0	FT
DORL	Depth Offset for Repeat Analysis	0.0	FT
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	12140	FT

Input DLIS Files

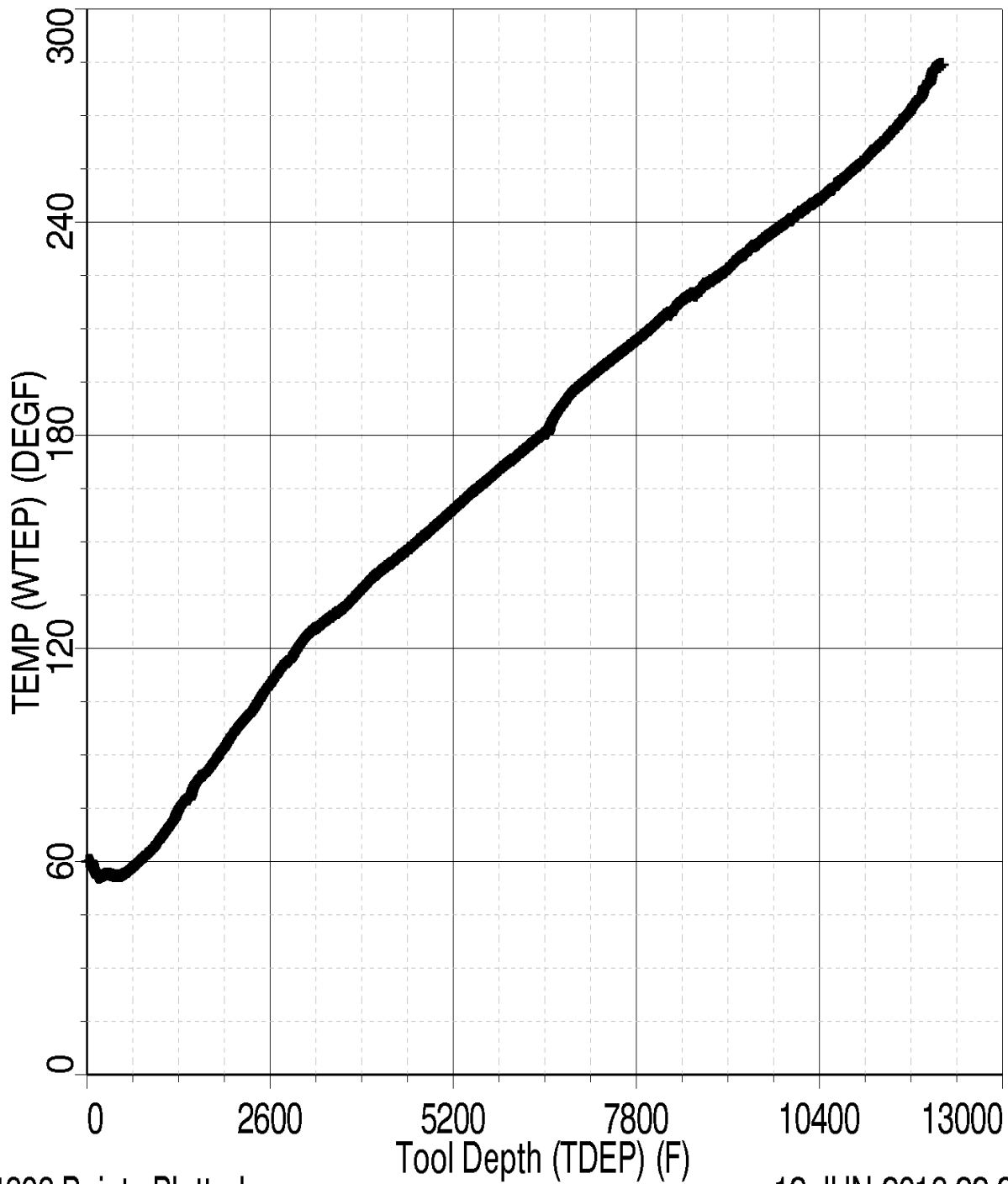
DEFAULT	SCMT_PSP_022LUP	FN:21	PRODUCER	12-Jun-2013 18:49	7865.0 FT	7570.0 FT
DEFAULT	SCMT_PSP_026PUP	FN:25	PRODUCER	12-Jun-2013 22:21	12152.5 FT	1.5 FT

Output DLIS Files

DEFAULT	SCMT_PSP_028PUP	FN:27	PRODUCER	12-Jun-2013 22:28
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MAXIS Field Log

Index: 12152.5 - 1.5 FT



24303 Points Plotted

12-JUN-2013 22:27

Client: ENCANA OIL & GAS (USA) INC
Field: STORY GULCH
Well: SG 8512A-36 (D36 496)
Run date: 12-Jun-2013

Tool: PSP
Sub Type: PBMS
Sensor: GR

PBMS Gamma Ray

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

GR HV Rt

Rt**0

Rt**1

Rt**0

+.182000000000e+04

+.332000000000e+04

Client: ENCANA OIL & GAS (USA) INC
Field: STORY GULCH
Well: SG 8512A-36 (D36 496)
Run date: 12-Jun-2013

Tool: PSP
Sub Type: PBMS
Sensor: WellTemp RTD

PBMS RTD Well Thermometer

Sonde Serial NB COEFFICIENTS FOR RTD THERMOMETER PBMS-B.928 S/N:
Sensor Serial NB 928
Calib Date ddmmyy 280612
Matrix Size 16
Coeff CRC 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 8512A-36 (D36 496)
 Run date: 12-Jun-2013

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	+.936268101283E-06	+.423898071451E-10	+.958076371919E-15
Fc**3	+.185123362373E-11	+.203107925433E-15	0.0
Fc**4	0.0	0.0	0.0
Fc**5	0.0	0.0	0.0

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

PBMS Quartz Gauge type F
Sonde Serial NB :
Sensor Serial NB 928
Calib Date ddmmyy 280612
Matrix Size 66
Coeff CRC 283B

Temp Coeff

	Fc**0	Fc**1	Fc**2
Fb**0	+.117016867873E+03	-.284359629614E-03	+.604391180345E-08
Fb**1	-.598309140812E-02	+.182731130848E-07	+.160166486172E-12
Fb**2	-.307621454576E-07	+.300601550309E-12	+.311233548560E-17
Fb**3	-.419658736767E-12	+.117473708647E-16	0.0
Fb**4	0.0	0.0	0.0
Fb**5	0.0	0.0	0.0

	Fc**3	Fc**4	Fc**5
Fb**0	+.114322792679E-12	+.153807711176E-17	-.736714260866E-21
Fb**1	-.528037875456E-18	-.220337637519E-21	0.0
Fb**2	0.0	0.0	0.0
Fb**3	0.0	0.0	0.0
Fb**4	0.0	0.0	0.0
Fb**5	0.0	0.0	0.0

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

Clock Freq Coeff

	(Fb'-Fc')**0	(Fb'-Fc')**1	(Fb'-Fc')**2
(Fb'-Fc')**0	+.310874009898E+05	+.288920923041E-02	+.697940727038E-06

	(Fb'-Fc')**3	(Fb'-Fc')**4	(Fb'-Fc')**5
(Fb'-Fc')**0	-.657432344763E-10	-.412920638782E-15	+.213369826099E-20

PBMS Quartz Gauge type F
Sonde Serial NB :
Sensor Serial NB 928
Calib Date ddmmyy 280612
Matrix Size 16

Coeff CRC

8419

Clock Temp Coeff

(Fb'-Fc')**0

(Fb'-Fc')**1

(Fb'-Fc')**2

$$(Fb'-Fc')^{**0}$$

+.115369519827E+03

-.565338877075E-02

-.333717531829E-07

(Fb'-Fc')**3

(Fb'-Fc')**4

(Fb'-Fc')**5

$$(Fb'-Fc')^{**0}$$

-.124387135327E-12

+ .713102327208E-16

-.316084316842E-20



MASTER CALIBRATION

MAXIS Field Log

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

Primary Equipment:

Slim Cement Mapping Xmitter Electronics

Slim Cement Mapping Sonde

Slim Cement Mapping Cartridge

SCMX - CA










SCMS - CB 8303

SCMC - CA 8120

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				876.9	Master				726.7
500.0 (Minimum)		1075 (Nominal)		1650 (Maximum)	500.0 (Minimum)		1075 (Nominal)		1650 (Maximum)
Phase		MAP 3 Amplitude Plus MV		Value	Phase		MAP 4 Amplitude Plus MV		Value
Master				954.5	Master				611.0
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				812.5	Master				931.0
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				795.9	Master				830.0
500.0 (Minimum)		1075 (Nominal)		1650 (Maximum)	500.0 (Minimum)		1075 (Nominal)		1650 (Maximum)
Phase		CBL Amplitude Plus MV		Value					
Master				1269					
1000 (Minimum)		1350 (Nominal)		1700 (Maximum)					
Master: 7-Sep-2012 16:30									

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

Schlumberger

Well: **SG 8512A-36 (D36 496)**

Field: **STORY GULCH**

County: **GARFIELD**

State: **COLORADO**

SLIM CEMENT MAPPING LOG

CBL-VDL

GR-CCL