

Company: ENCANA OIL & GAS (USA) INC

Well: HAGEN 22-3A (PC22)

Field: SOUTH PARACHUTE

County: GARFIELD State: COLORADO

SLIM CEMENT MAPPING LOG
CBL-VDL
GR-CCL

County: GARFIELD

Field: SOUTH PARACHUTE

Location: SHL: 619 FNL & 1785 FWL

Well: HAGEN 22-3A (PC22)

Company: ENCANA OIL & GAS (USA) INC

LOCATION			
SHL: 619 FNL & 1785 FWL	Elev.: K.B.	6543.00 ft	
BHL: 268 FNL & 2289 FWL	G.L.	6521.00 ft	
	D.F.	6542.00 ft	
Permanent Datum:	GROUND LEVEL	Elev.: 6521.00 ft	
Log Measured From:	KELLY BUSHING	22.00 ft above Perm. Datum	
Drilling Measured From:	KELLY BUSHING		
API Serial No.	Section	Township	Range
05-045-22023-0C	22	7S	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	22-Oct-2013		
Run Number	1		
Depth Driller	7822 ft		
Schlumberger Depth	7748 ft		
Bottom Log Interval	7739 ft		
Top Log Interval	60 ft		
Casing Fluid Type	FRESH WATER		
Salinity			
Density	8.4 lbm/gal		
Fluid Level	60 ft		
BIT/CASING/TUBING STRING			
Bit Size	8.750 in		
From	22 ft		
To	7822 ft		
Casing/Tubing Size	4.500 in		
Weight	11.6 lbm/ft		
Grade	S-80		
From	22 ft		
To	7800 ft		
Maximum Recorded Temperatures	217 degF		
Logger On Bottom	22-Oct-2013	16:00	
Unit Number	Location		
391	GRAND JUNCTION		
Recorded By	KIRSTIE BUNTING		
Witnessed By	SHANE		

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: 14-AUG-2013 11:54:57

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW-JB	Type:	CMTD-B/A	Type:	1-25ZT
Serial Number:	6349	Serial Number:	3421	Serial Number:	112136
Calibration Date:	7-31-2013	Calibration Date:	14-AUG-201	Length:	19000 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:	-5	Calibration RMS:	3		
Wheel Correction 2:	-4	Calibration Peak Error:	8		

Depth Control Parameters

Log Sequence:	First Log In the Well
Rig Up Length At Surface:	0.00 FT
Rig Up Length At Bottom:	0.00 FT
Rig Up Length Correction:	0.00 FT
Stretch Correction:	
Tool Zero Check At Surface:	

Depth Control Remarks

1. ALL SCHLUMBERGER DEPTH CONTROL PROCEDURES USED
2. IDW USED AS PRIMARY DEPTH REFERENCE
3. SPWT 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 OS1: RESERVOIR SATURATION OS2: LOG OS3: SIGMA MODE OS4: GR-CCL OS5:	OTHER SERVICES2 OS1: OS2: OS3: OS4: OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
FIRST RUN IN HOLE CORRELATED TO DOWN LOG	
TOOL RAN AS PER TOOL SKETCH	
ENTRANCE TIME: 15:30	
TIME ON BOTTOM: 16:00	
EXIT TIME: 18:30	

MAXIMUM RECORDED TEMPERATURE: 217 DEGF
MAXIMUM RECORDED PRESSURE: 3285 PSIA
EXPECTED CBL AMPLITUDE IN FREE PIPE IS 80MV
MAIN PASS LOGGED UNDER ZERO SURFACE PRESSURE
SHORT JOINTS : 5506 FT & 6500 FT
THANK YOU FOR CHOOSING E&P WIRELINE, A SCHLUMBERGER COMPANY CREW: KRUNTING, KIRWIN, WAZIR, KILUNG

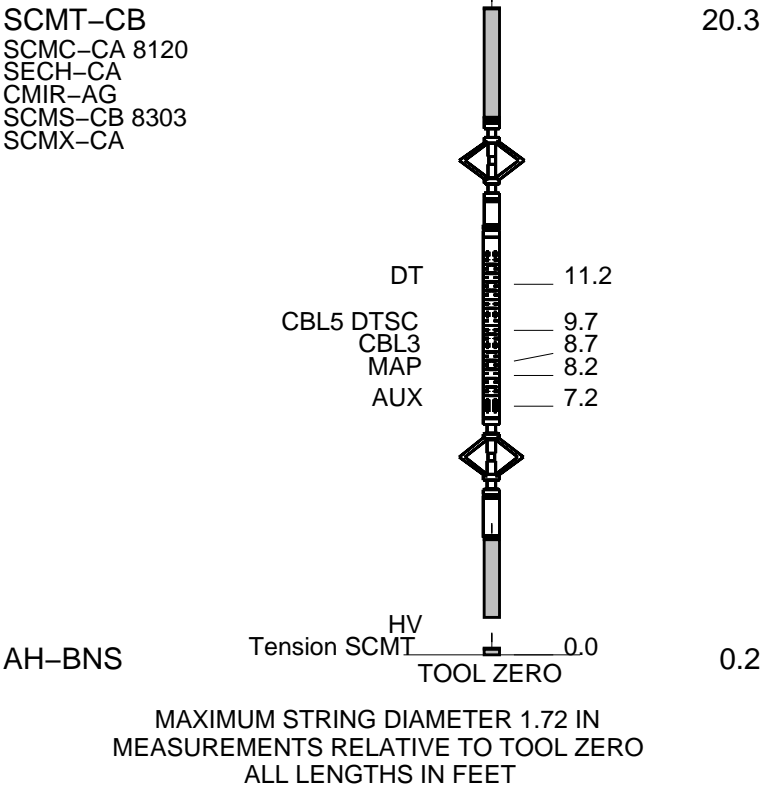
RUN 1			RUN 2		
SERVICE ORDER #:		CGF9-00162	SERVICE ORDER #:		
PROGRAM VERSION:		19C0-187	PROGRAM VERSION:		
FLUID LEVEL:		60 ft	FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION	
RUN 1	RUN 2
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
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99	99
100	100

SURFACE EQUIPMENT	
WITM-A	
PSC_16MHZ	

DOWNHOLE EQUIPMENT

Equipment Label	Value
MH-22	53.4
MH-22	
Detail MT	
TelStatus	
CTEM	51.5
51.5	51.8
51.5	51.5
GR	47.8
Well_Temp	44.8
CQG Manom	44.5
CCL	44.0
PBMS PSTC	43.3
43.3	43.3
34.2	
33.7	



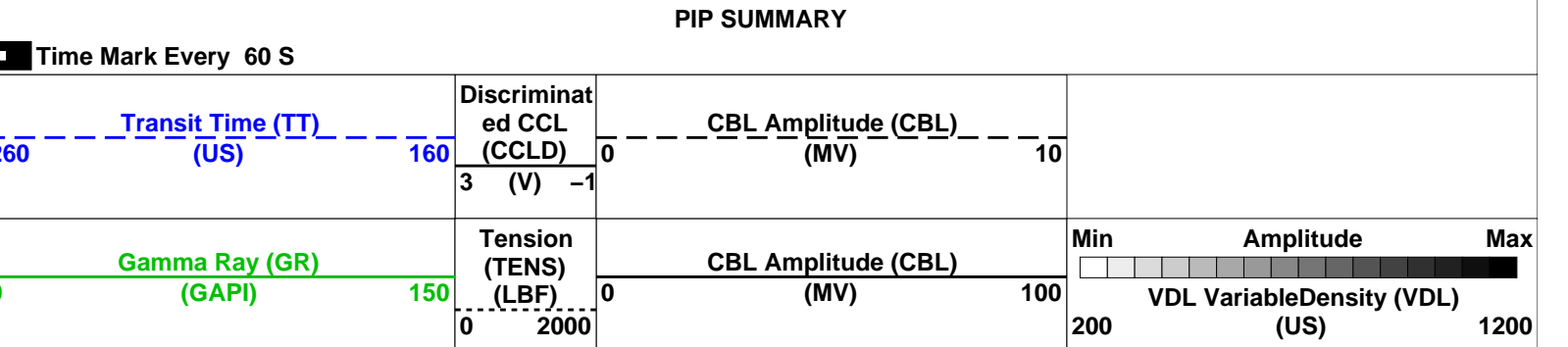
Schlumberger

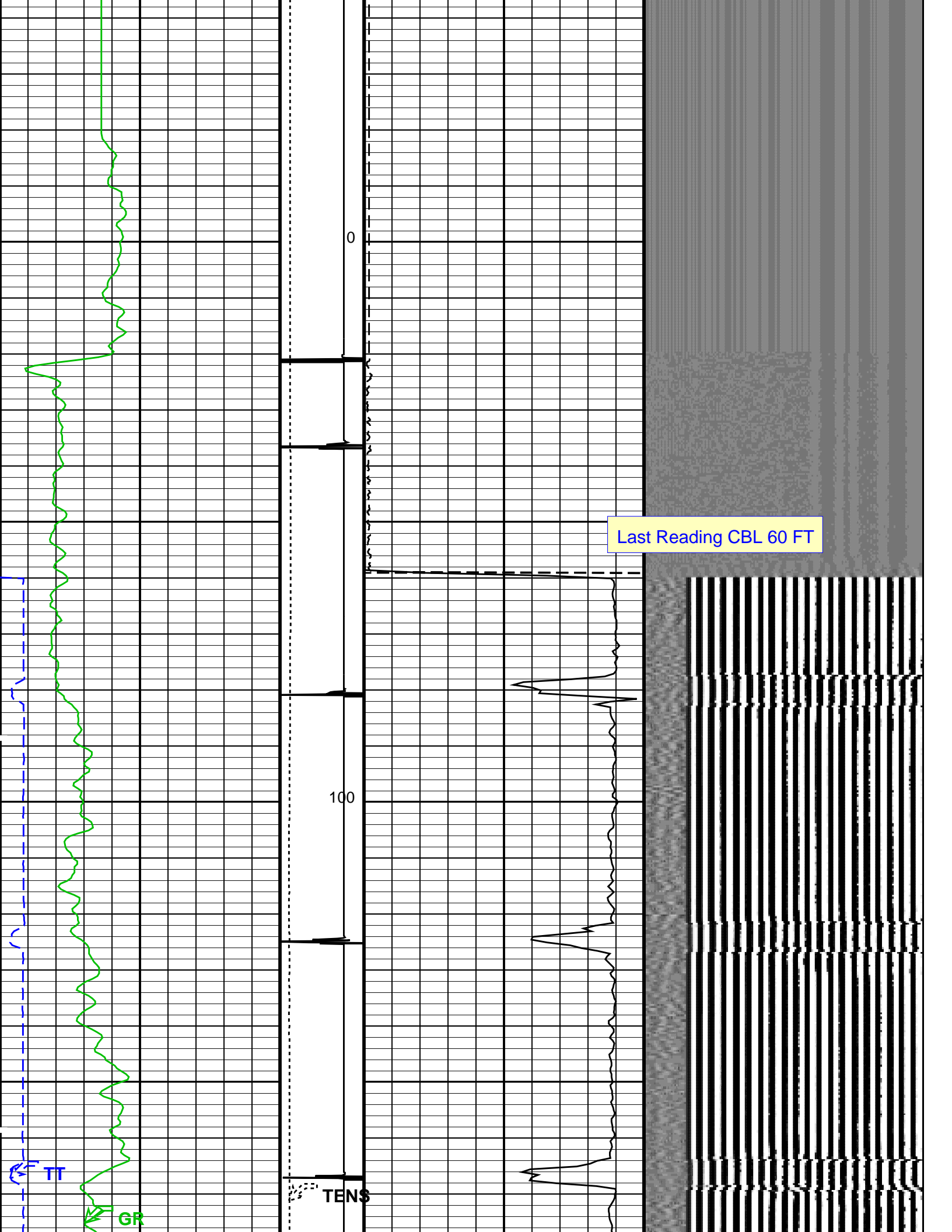
MAIN PASS CBL VDL

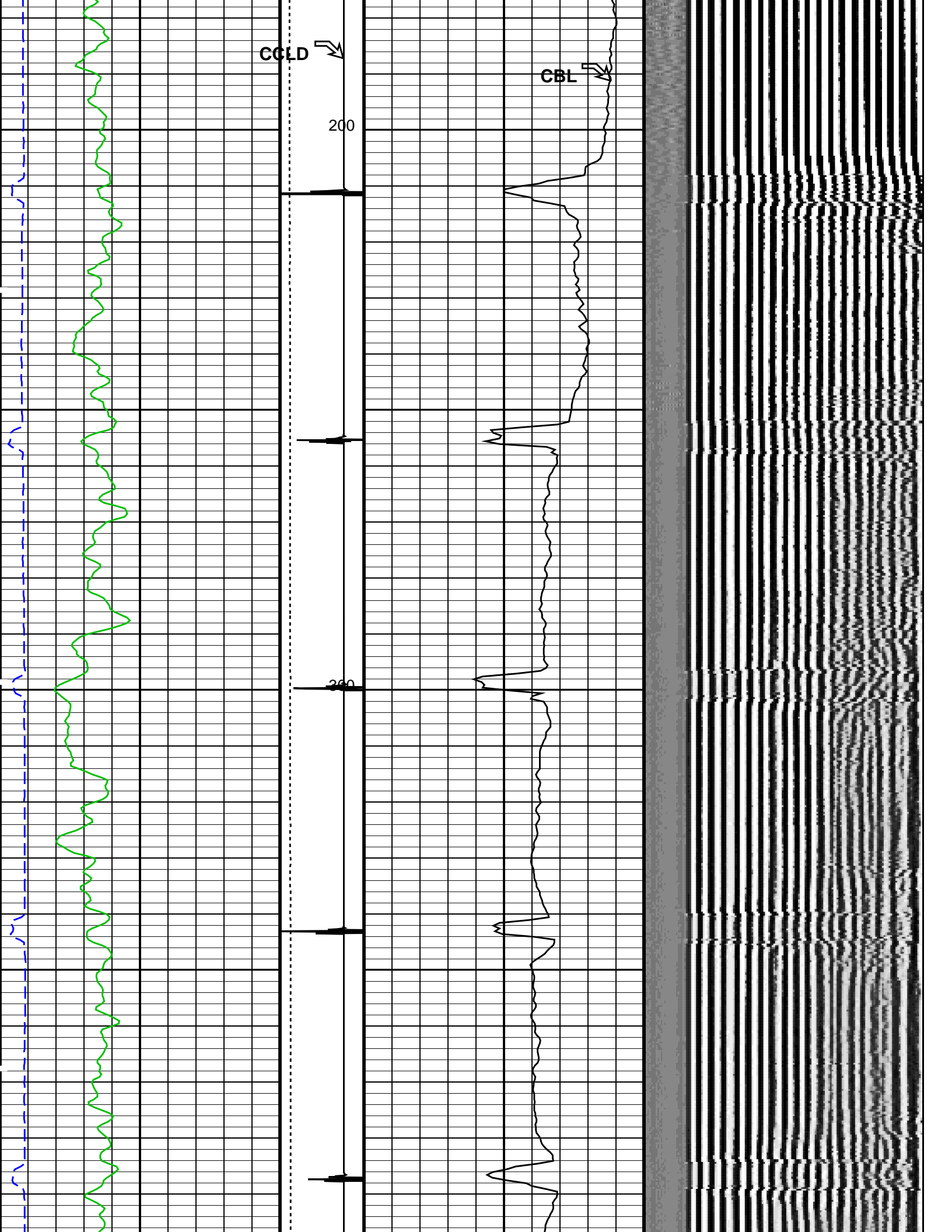
MAXIS Field Log

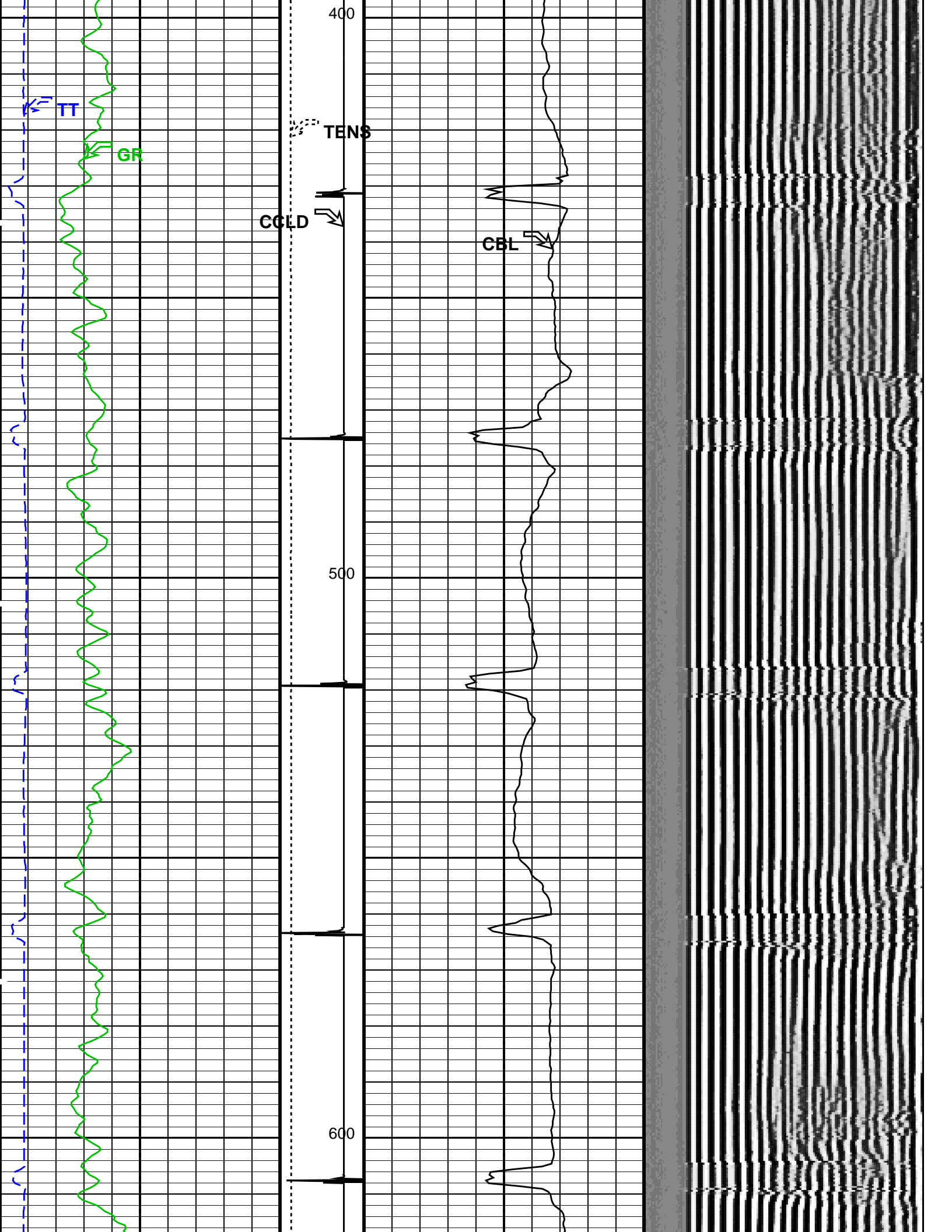
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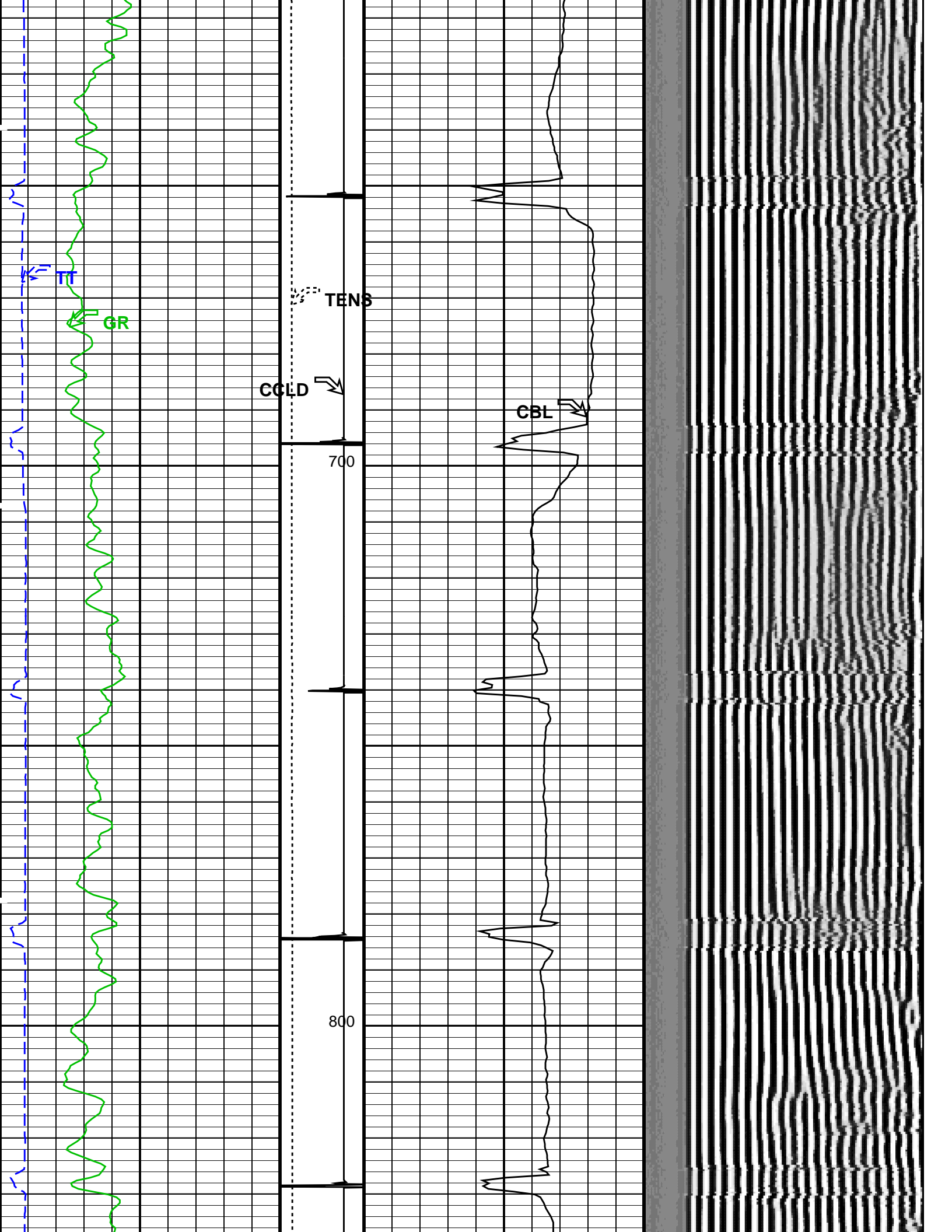
Input DLIS Files						
DEFAULT	Splice_SCMT_RST_PSP_121CUP	FN:1	PRODUCER	22-Oct-2013 19:30	7760.0 FT	-25.5 FT
Output DLIS Files						
DEFAULT	SCMT_RST_PSP_123PUP	FN:114	PRODUCER	22-Oct-2013 19:34	7755.0 FT	-44.0 FT
OP System Version: 19C0-187						
SCMT-CB	SRPC-5214-H2-2012-OP1		RST-C		SRPC-5214-H2-2012-OP1	
PSPT	SRPC-5214-H2-2012-OP1					

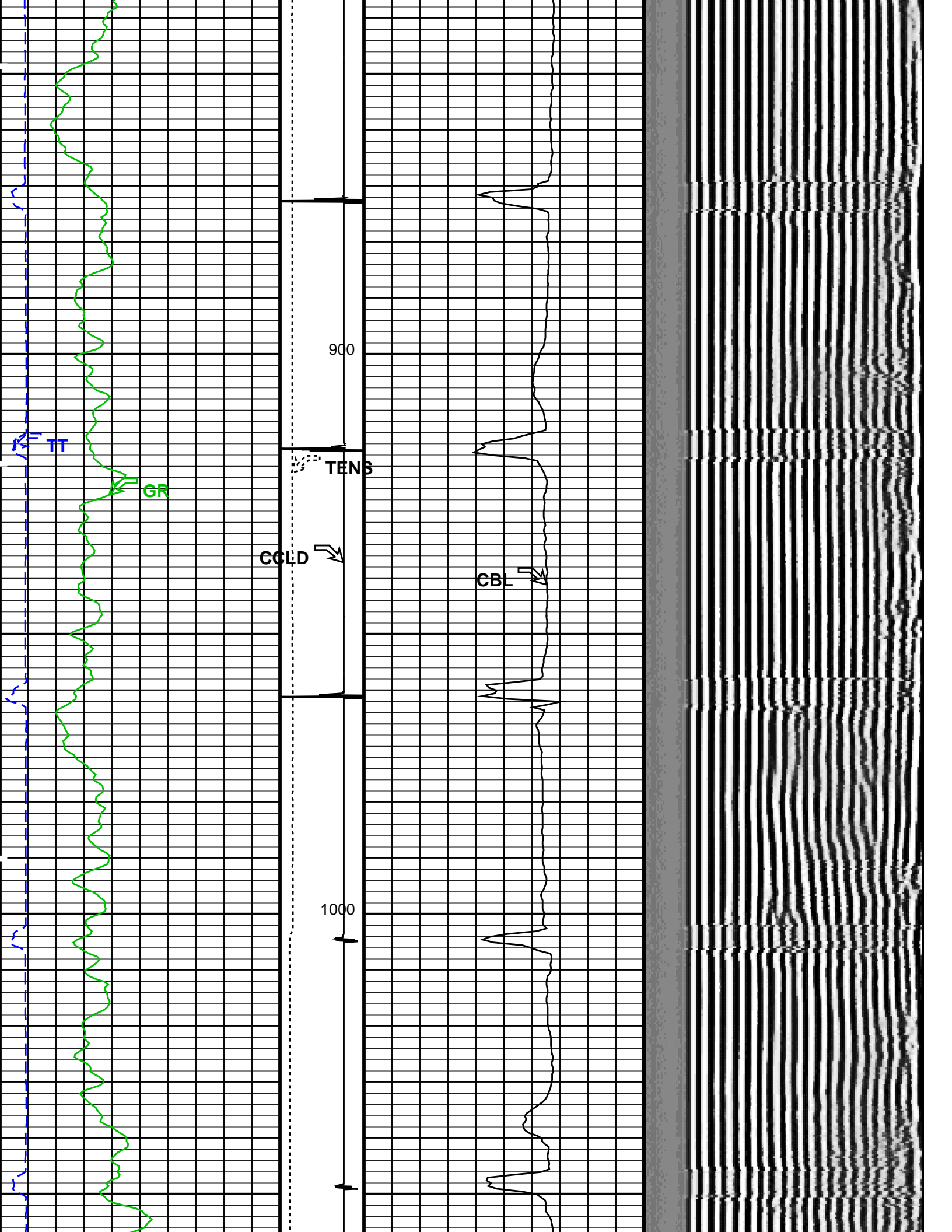


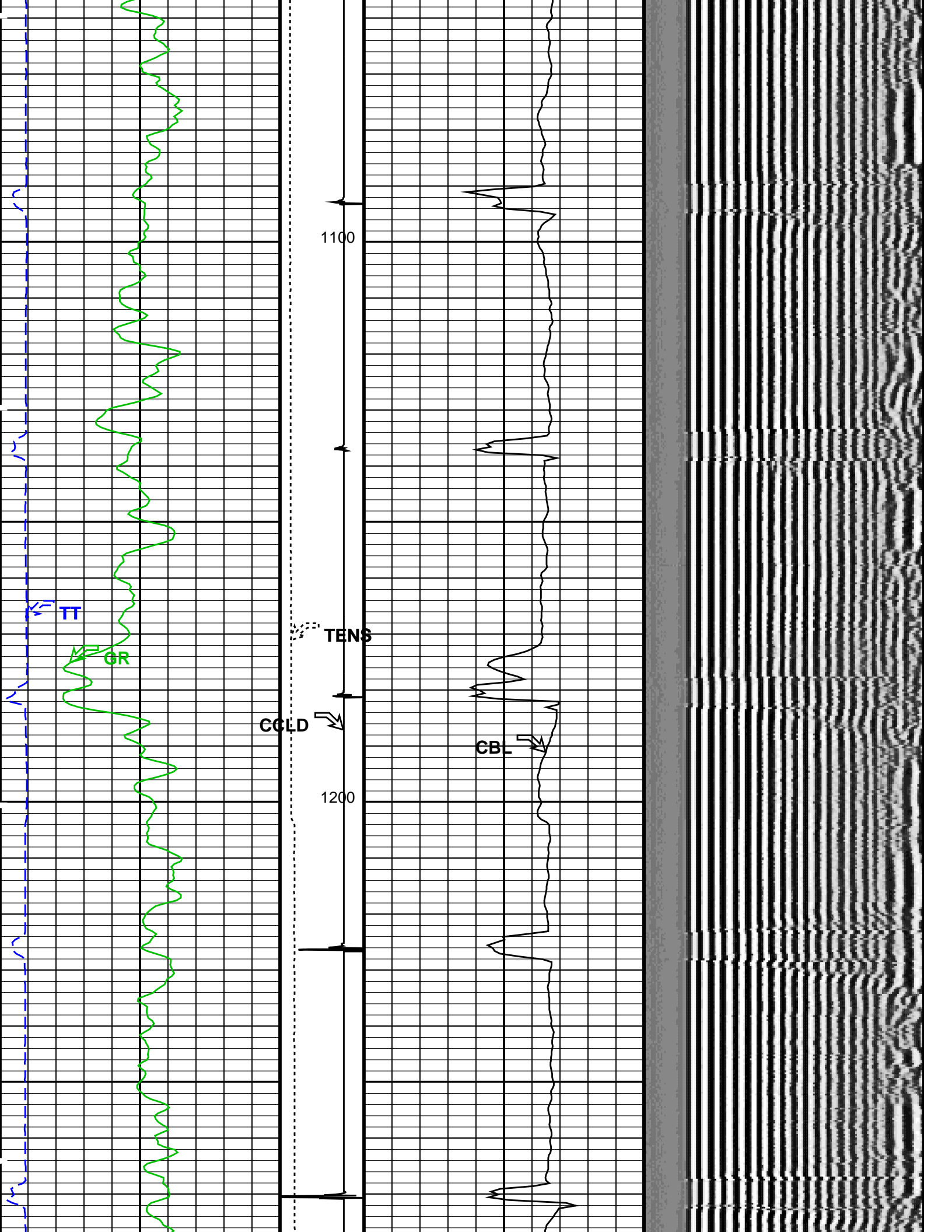


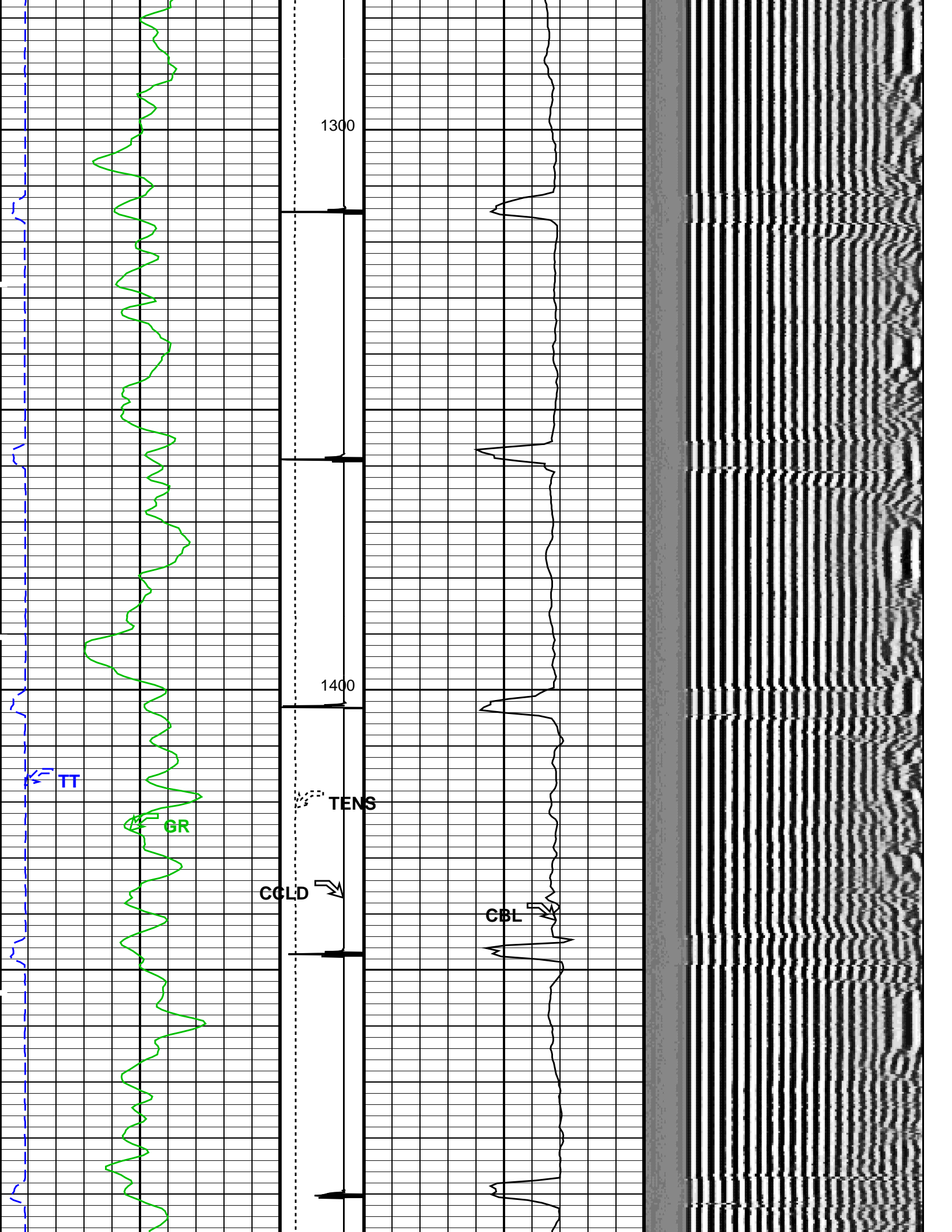


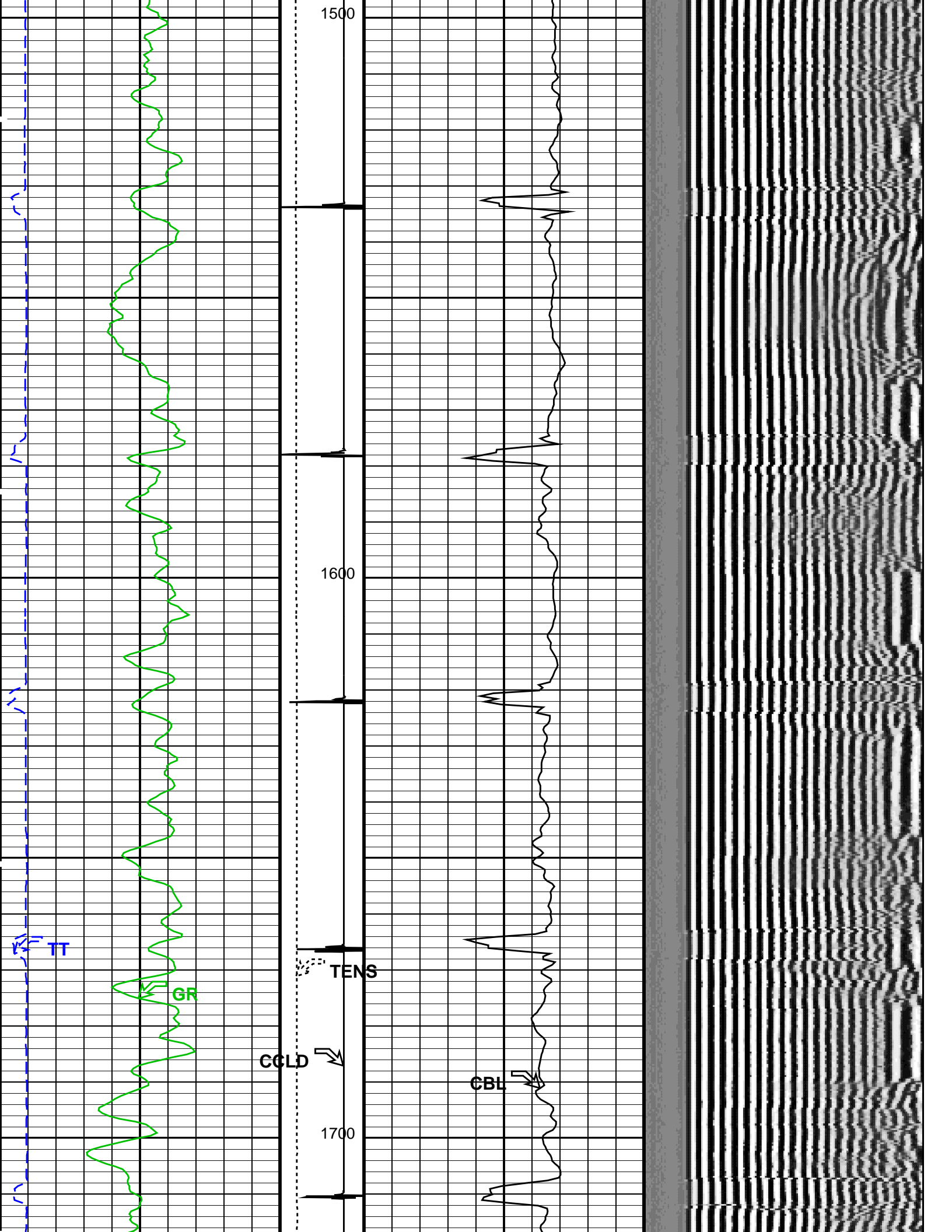


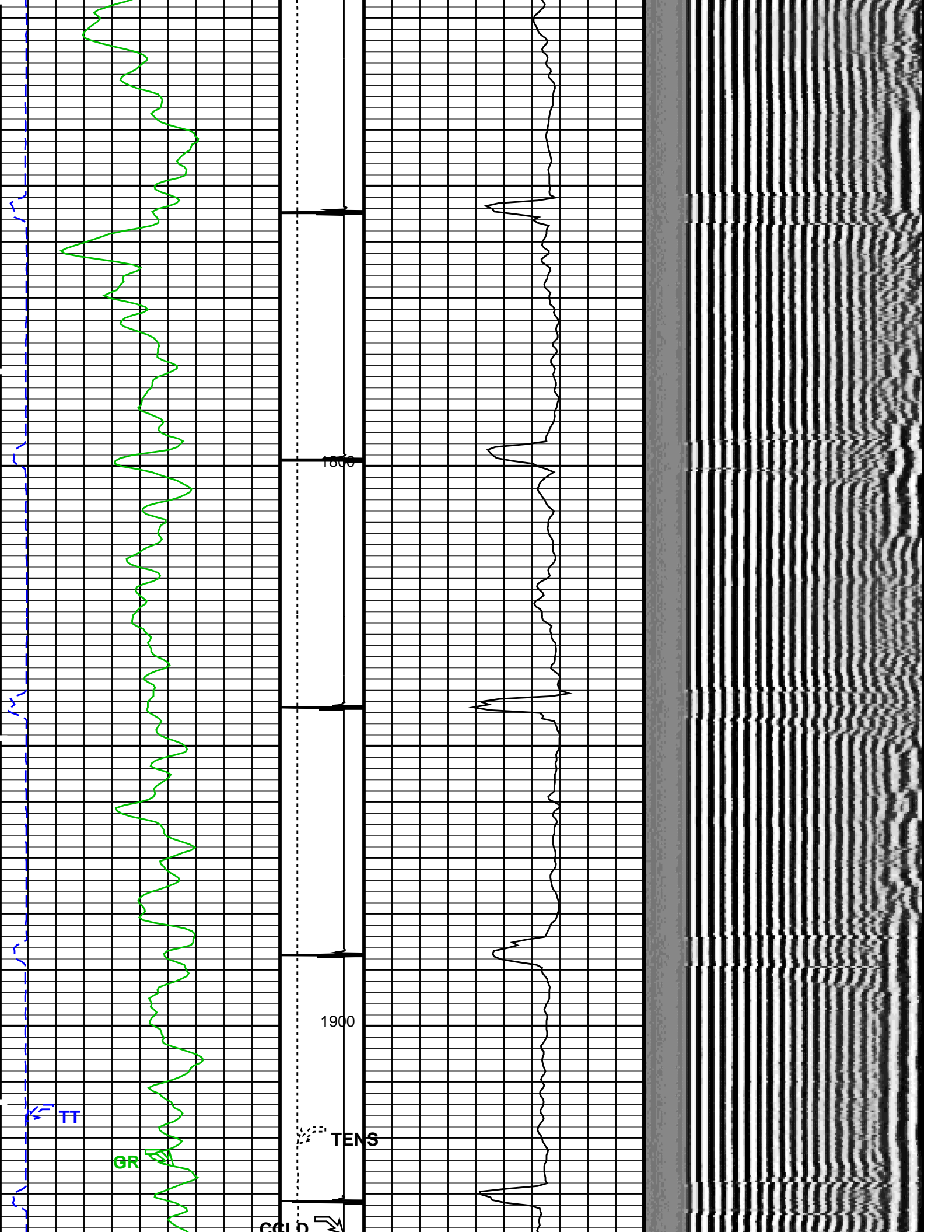


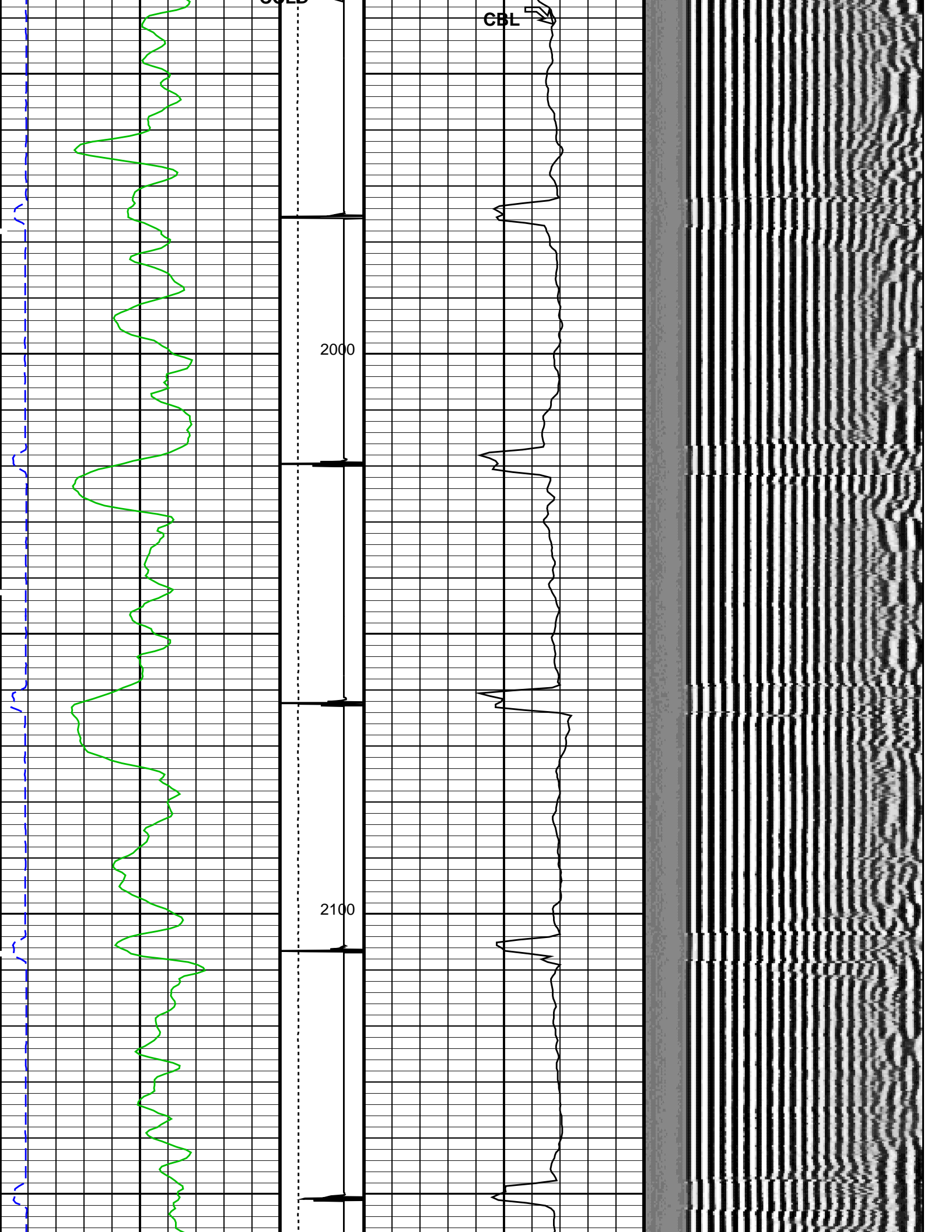


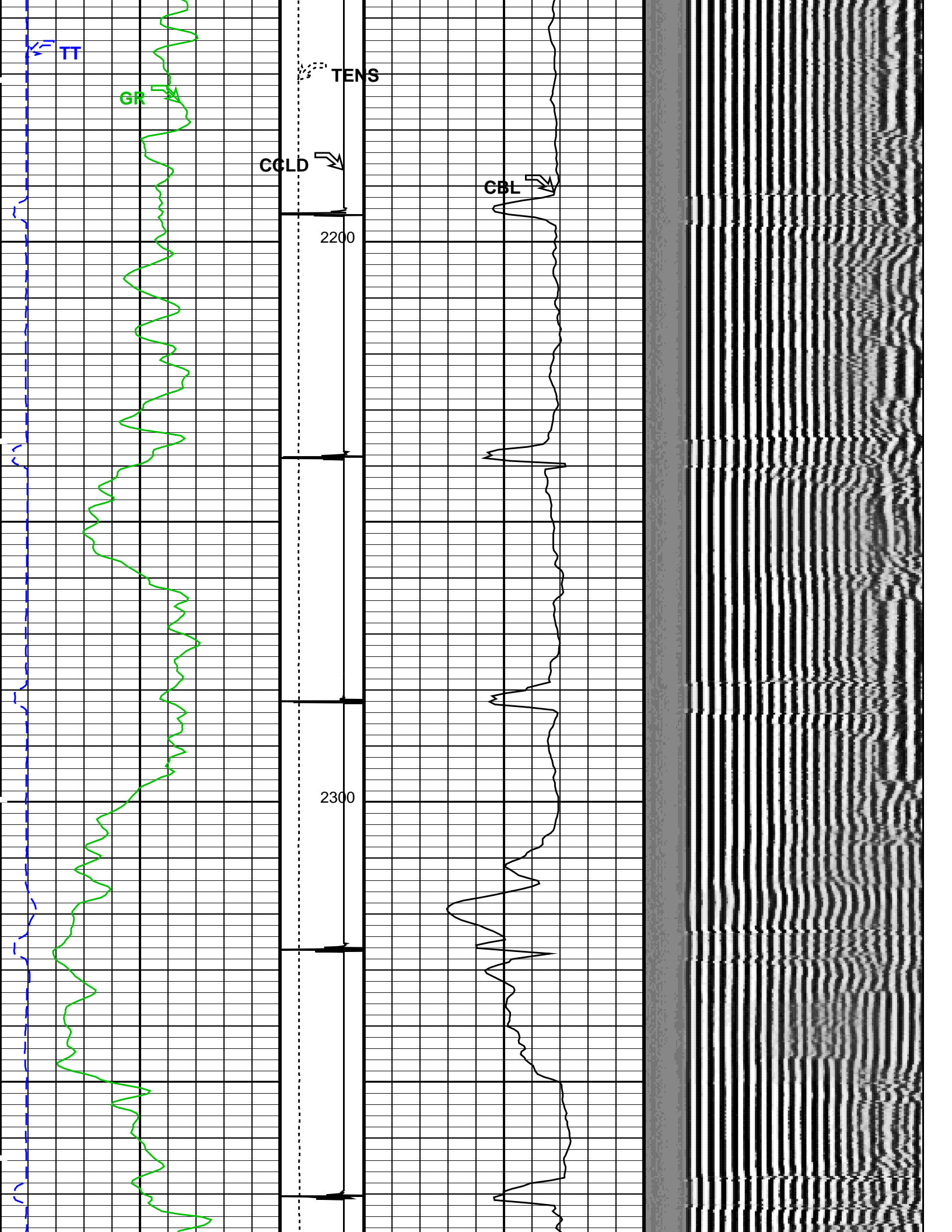


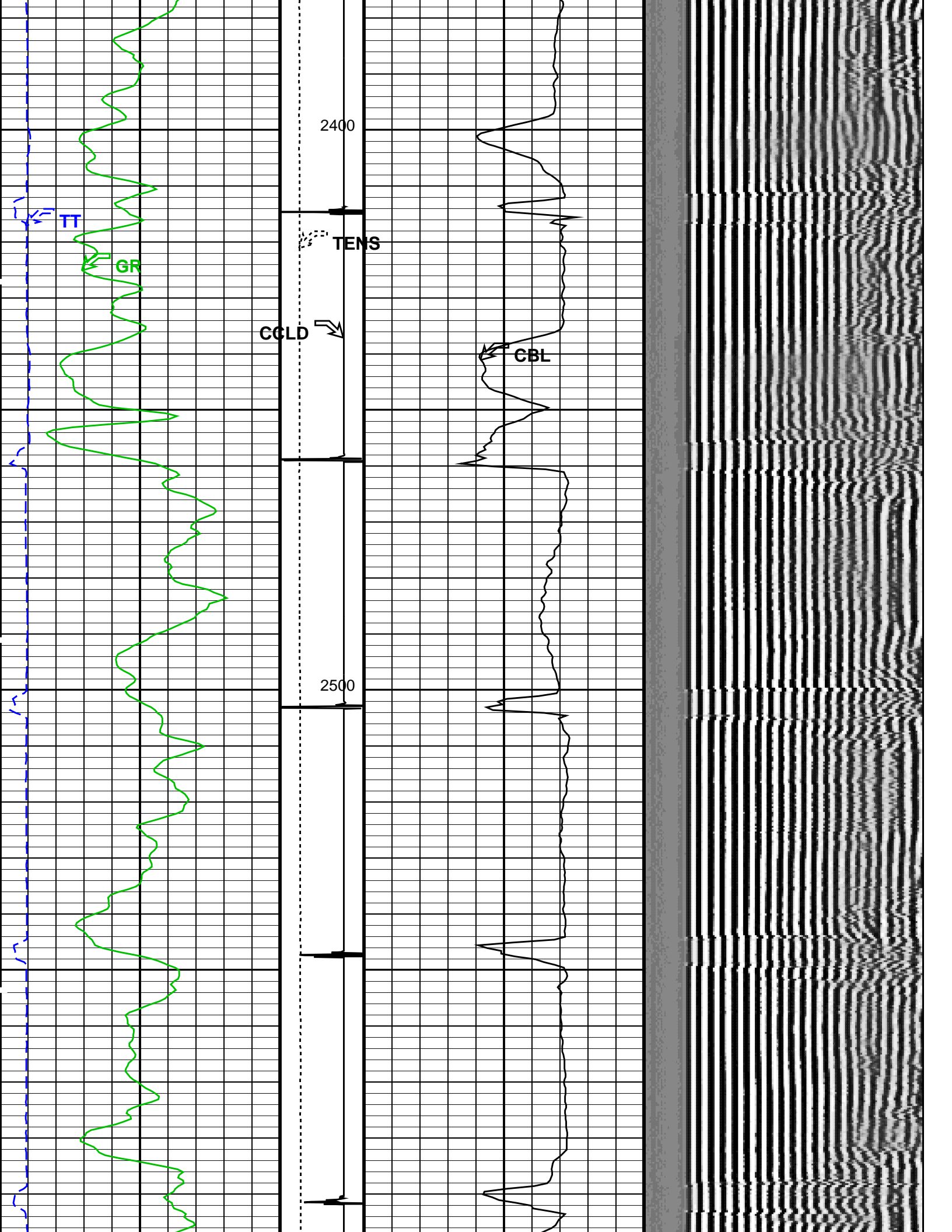


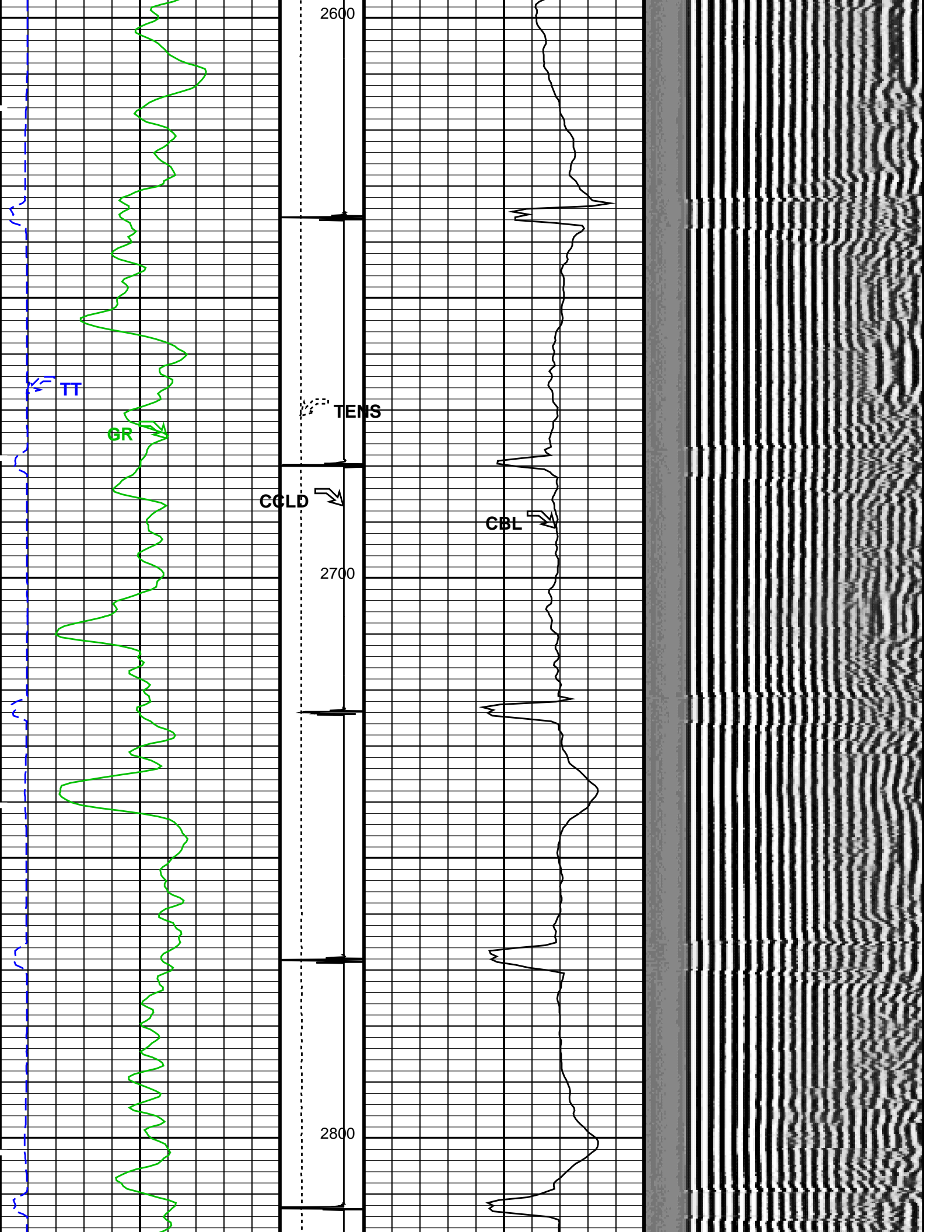


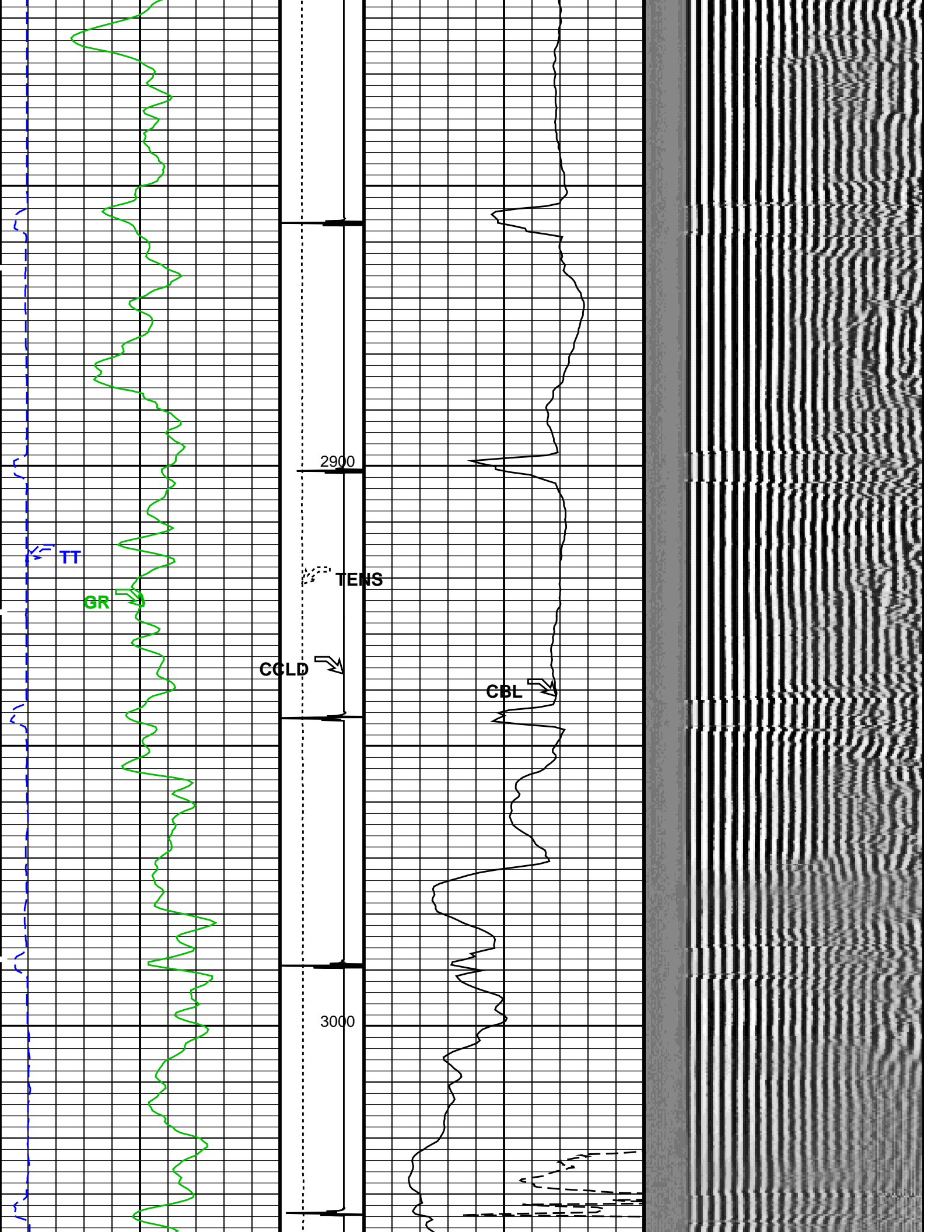


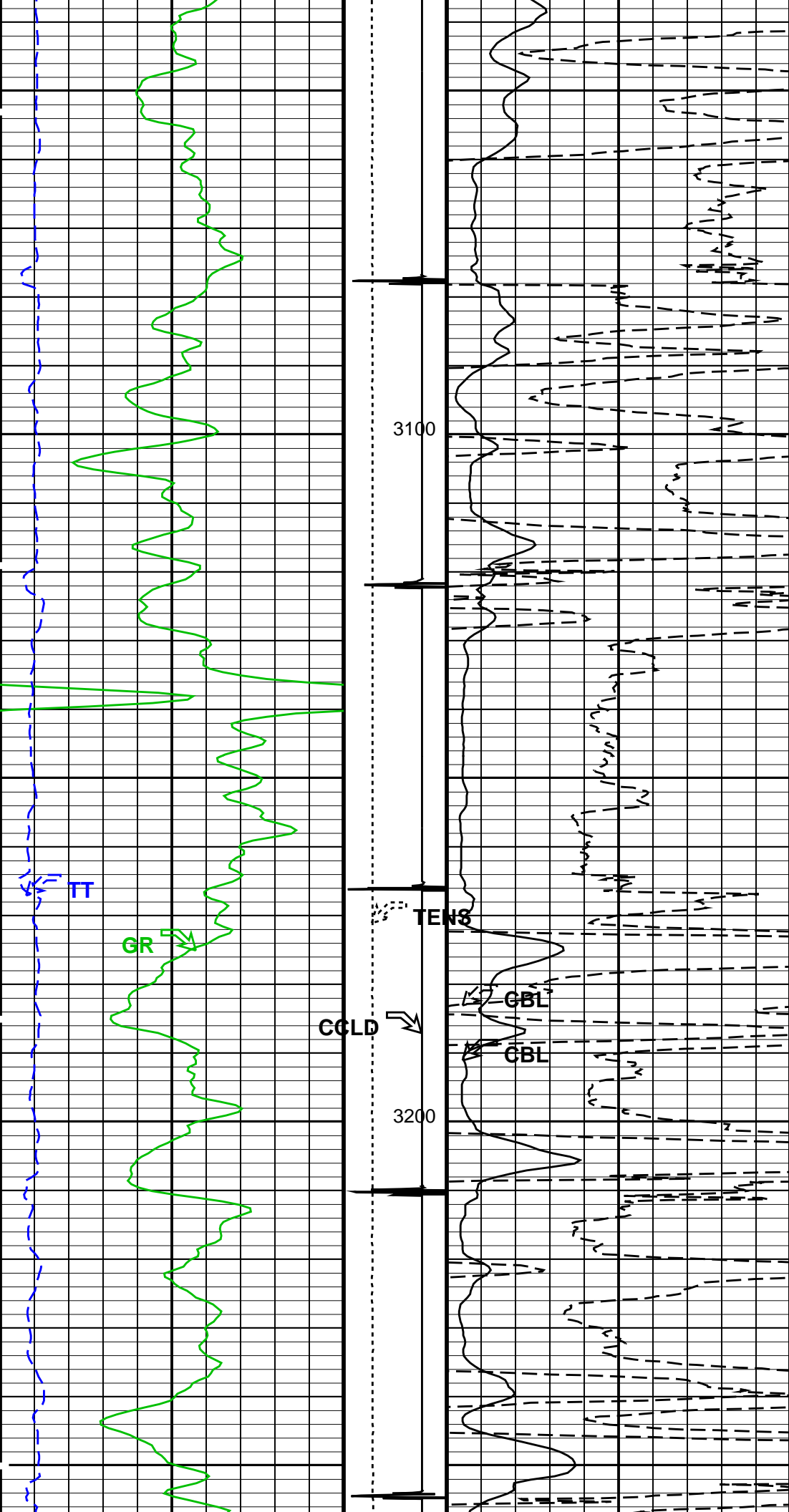


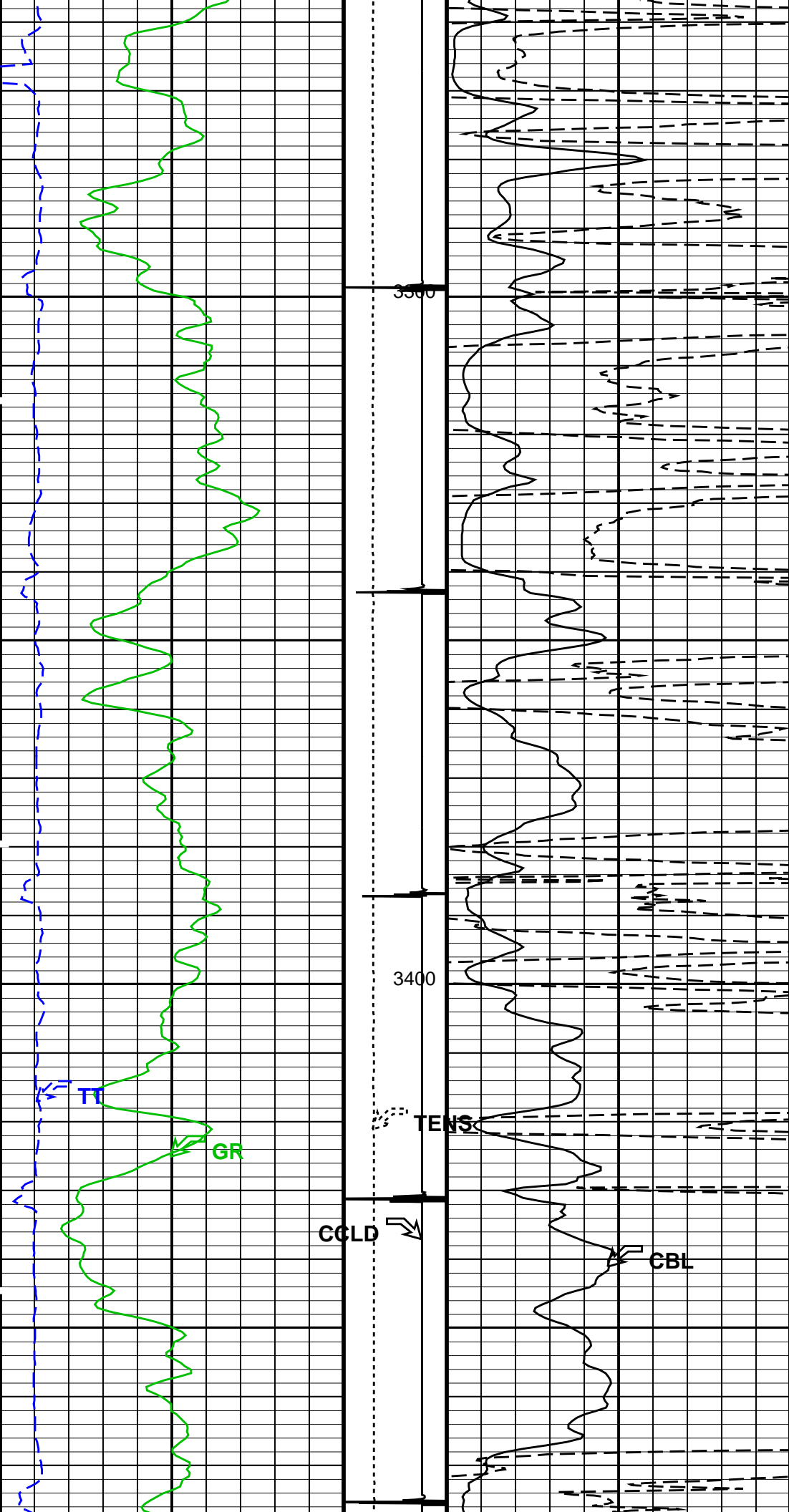


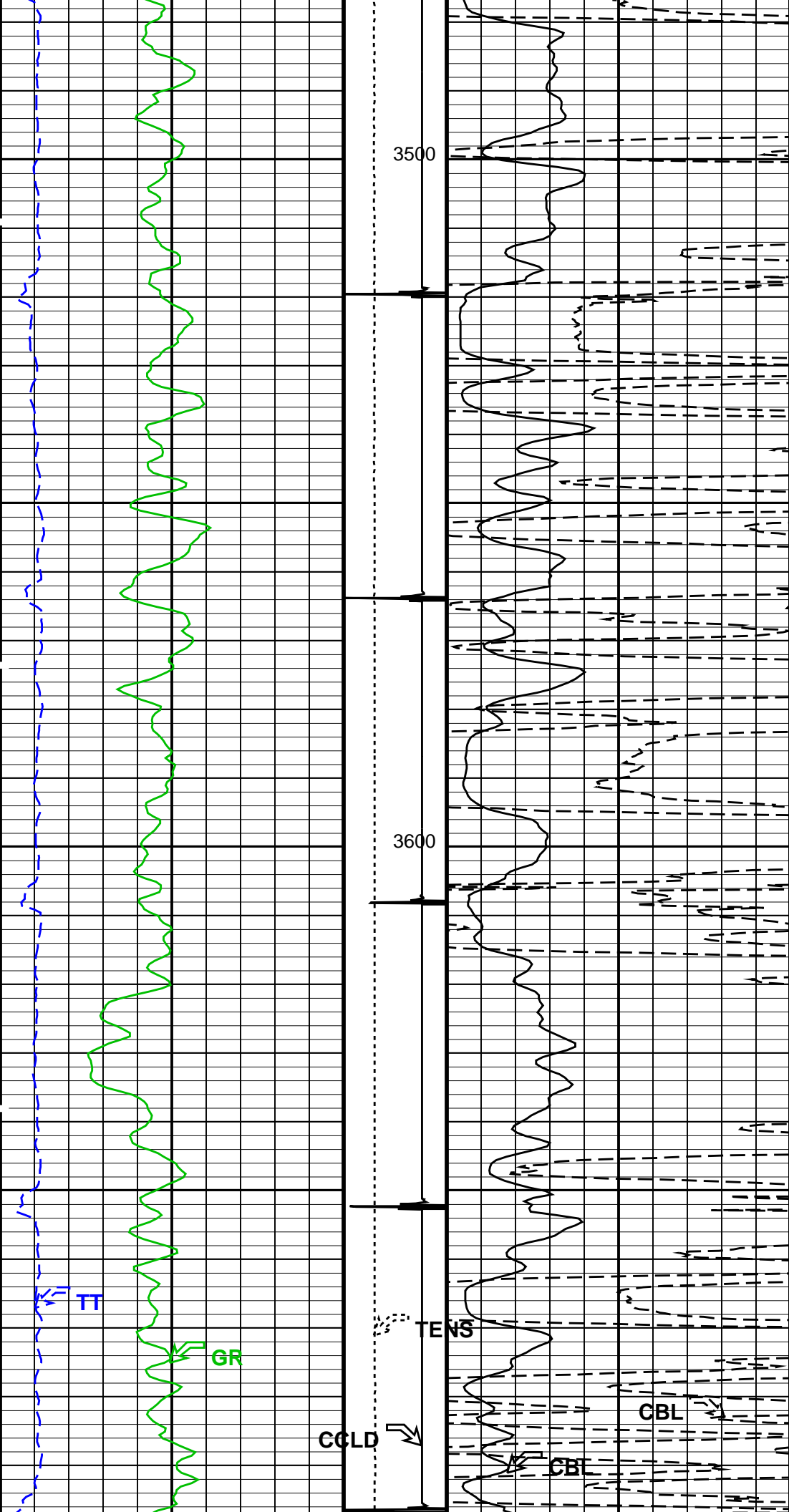


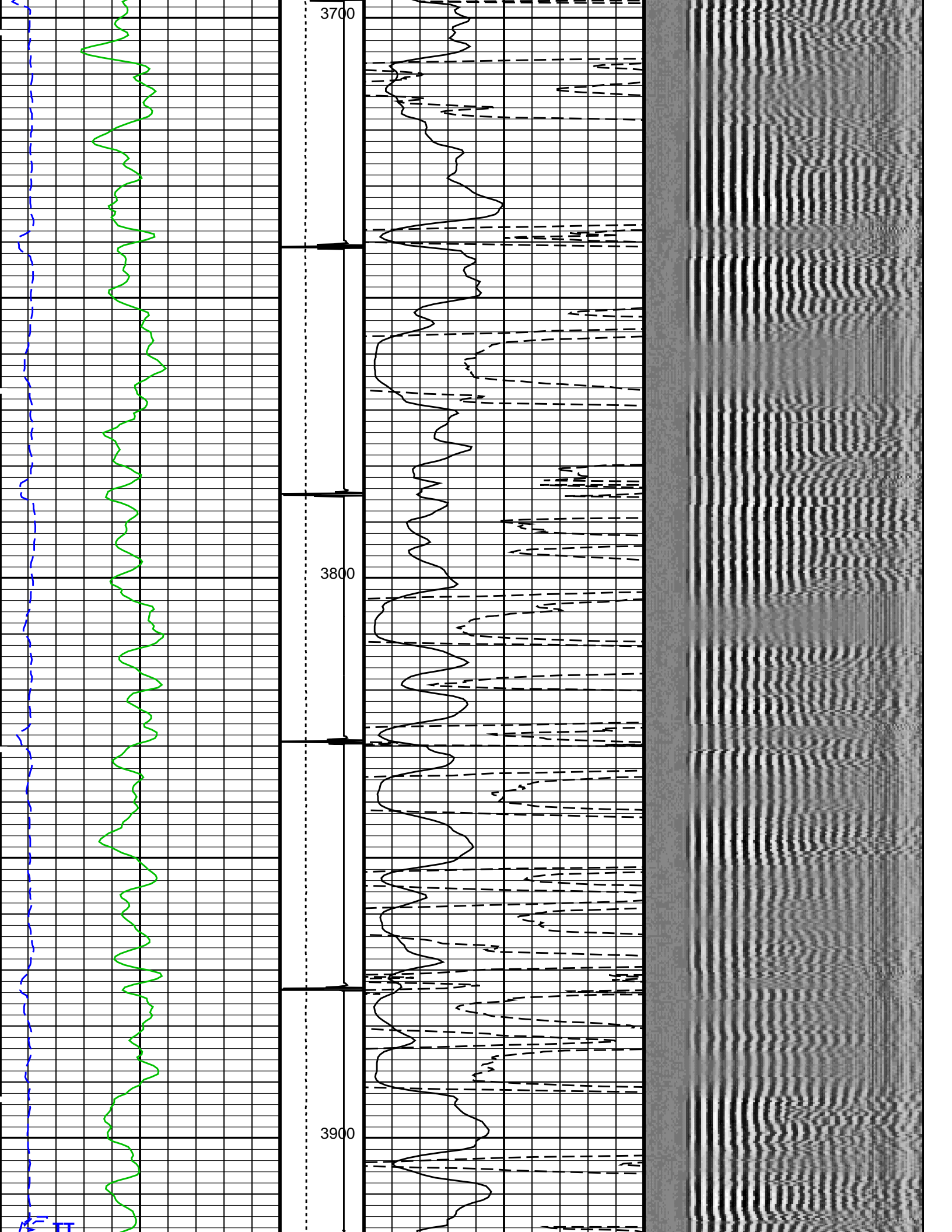


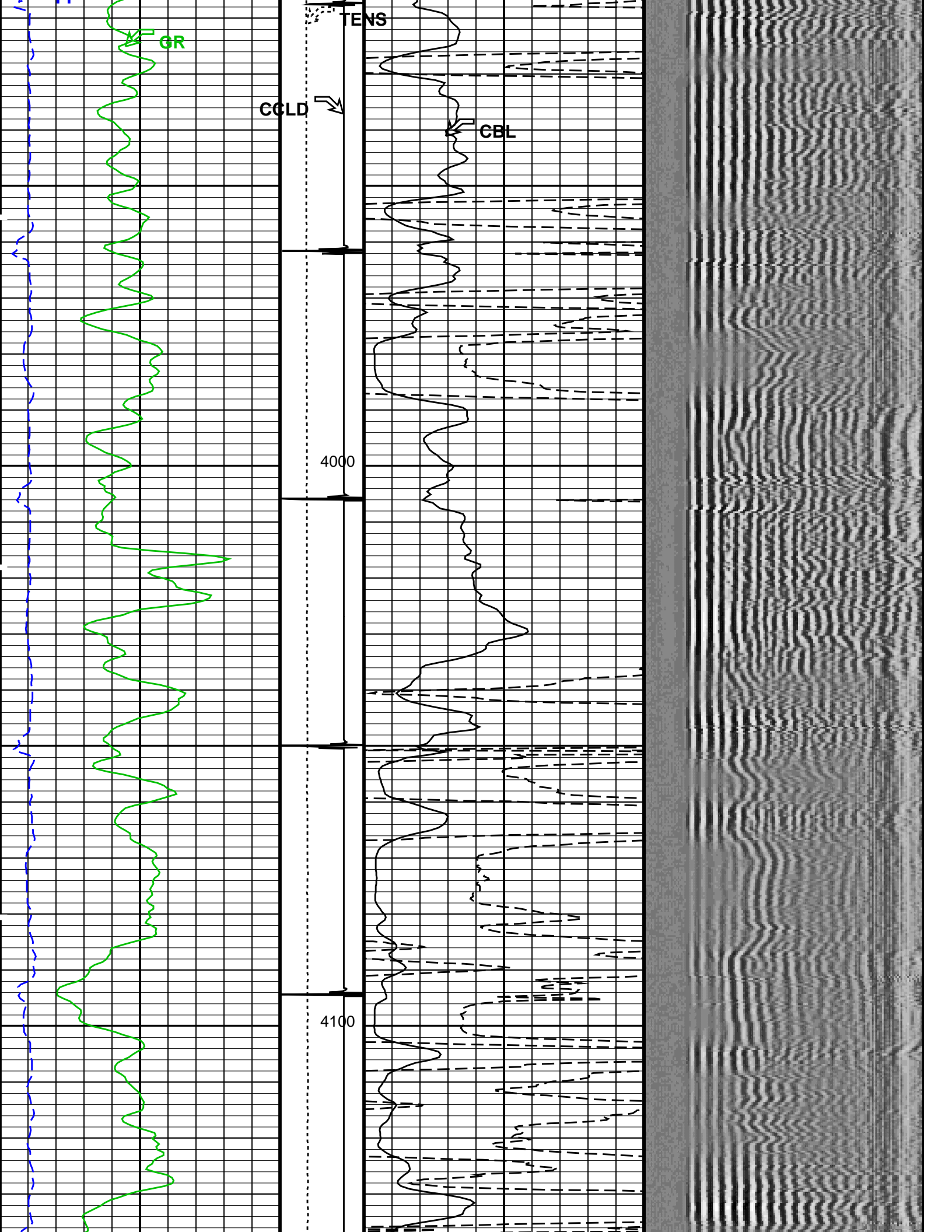


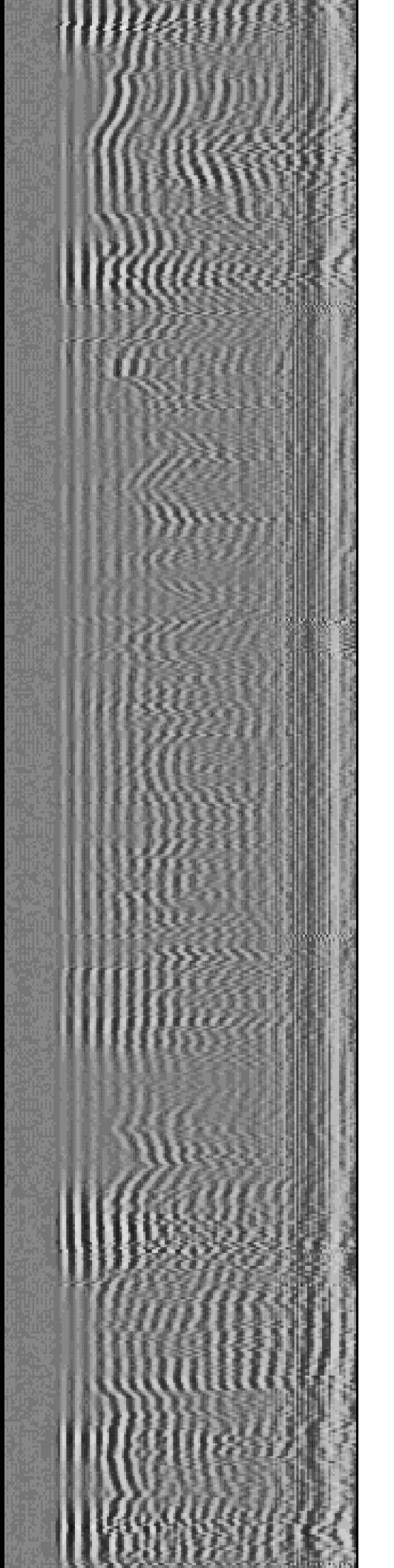
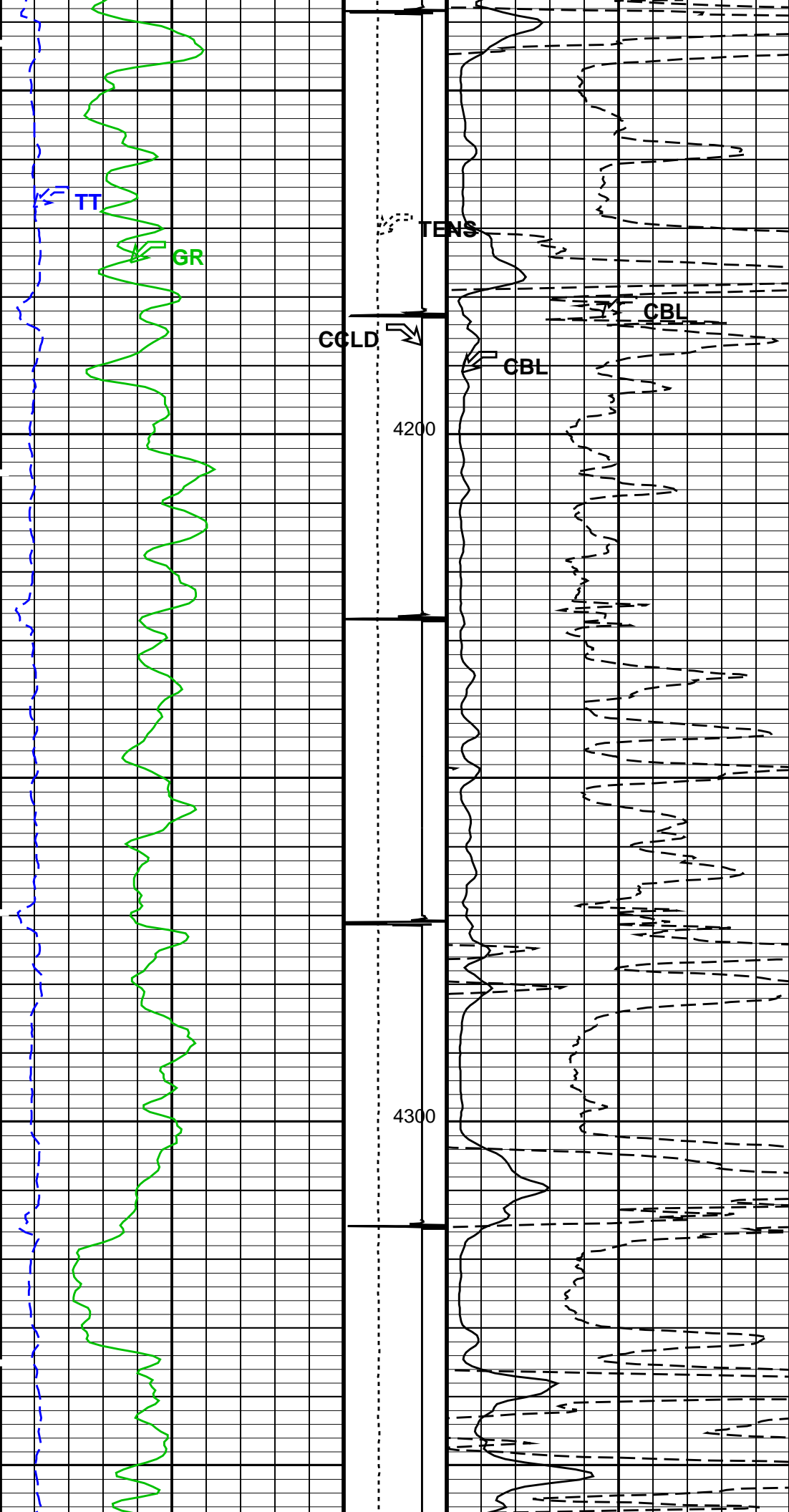


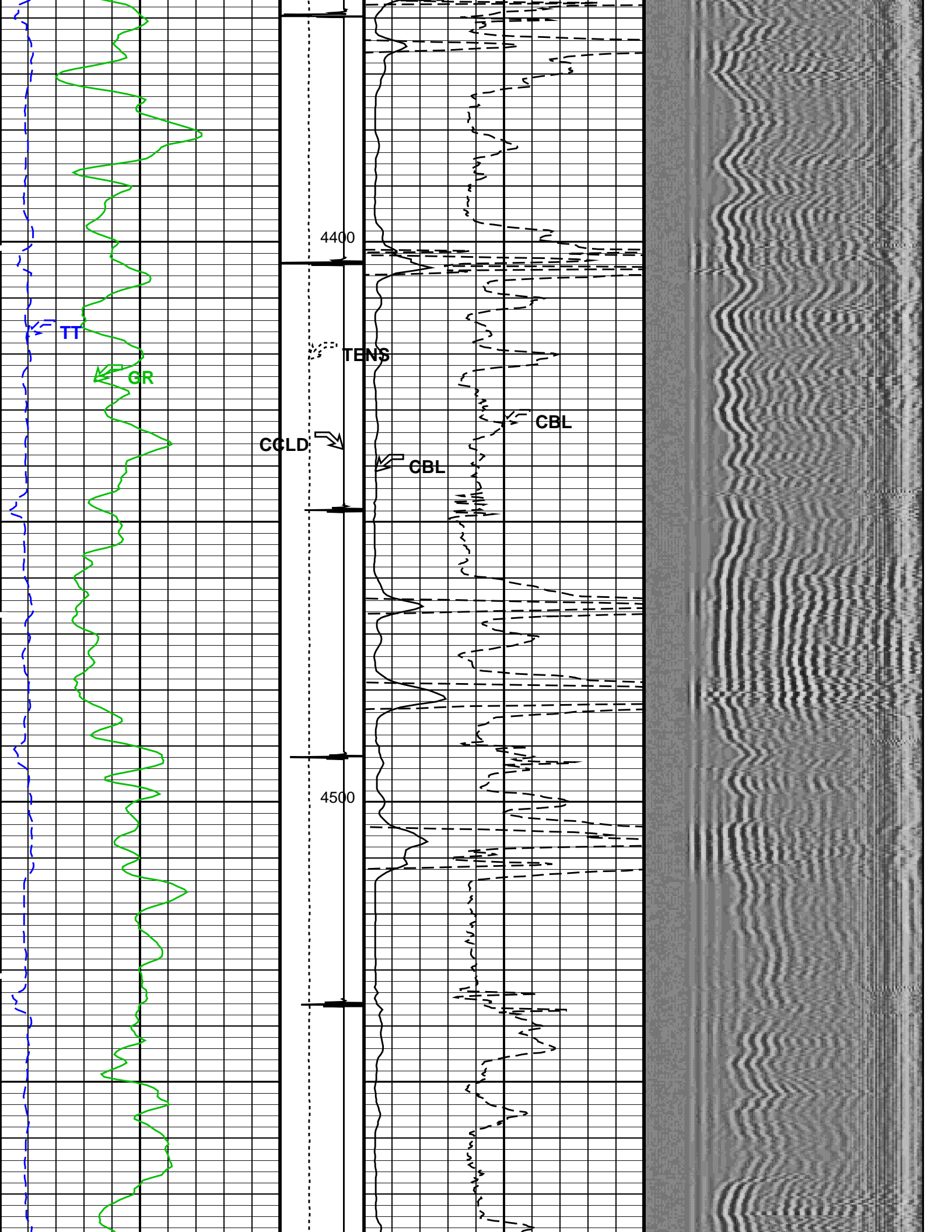


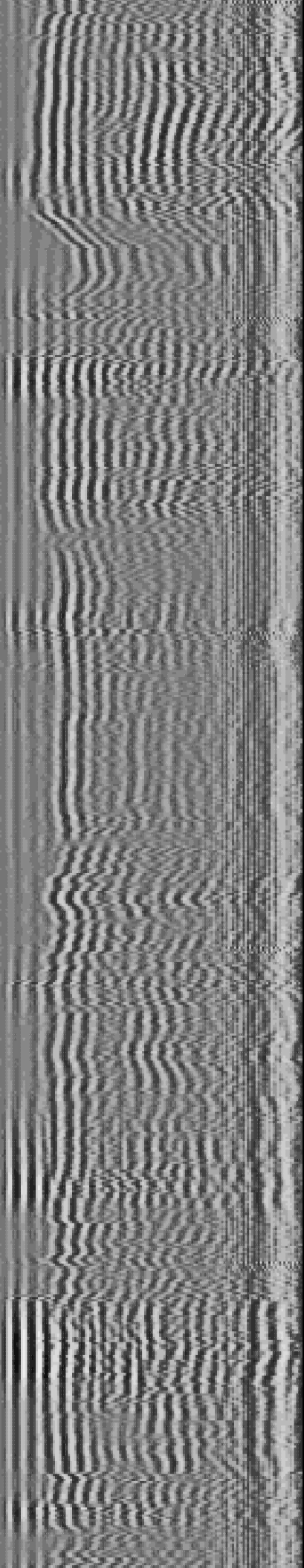
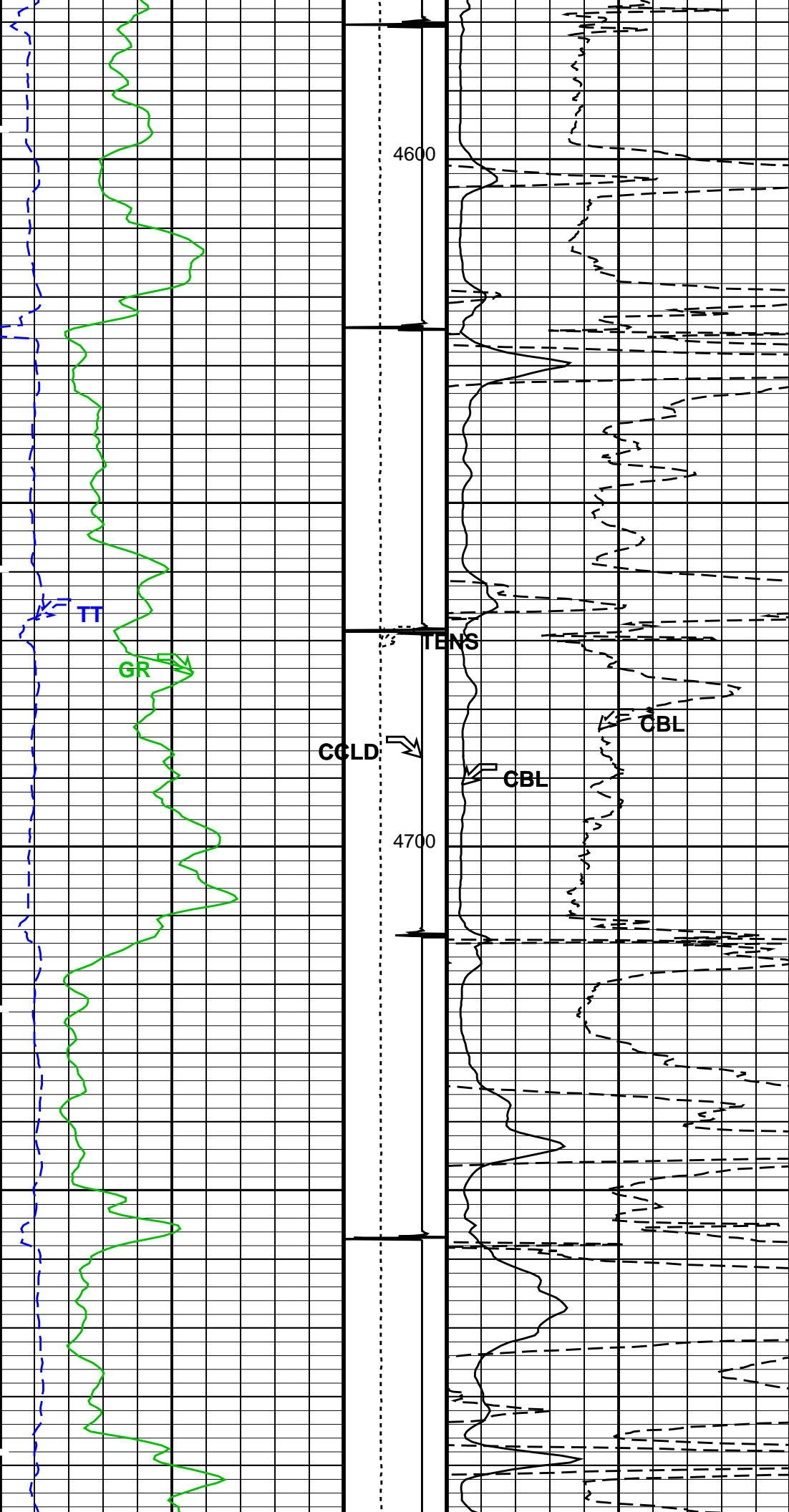


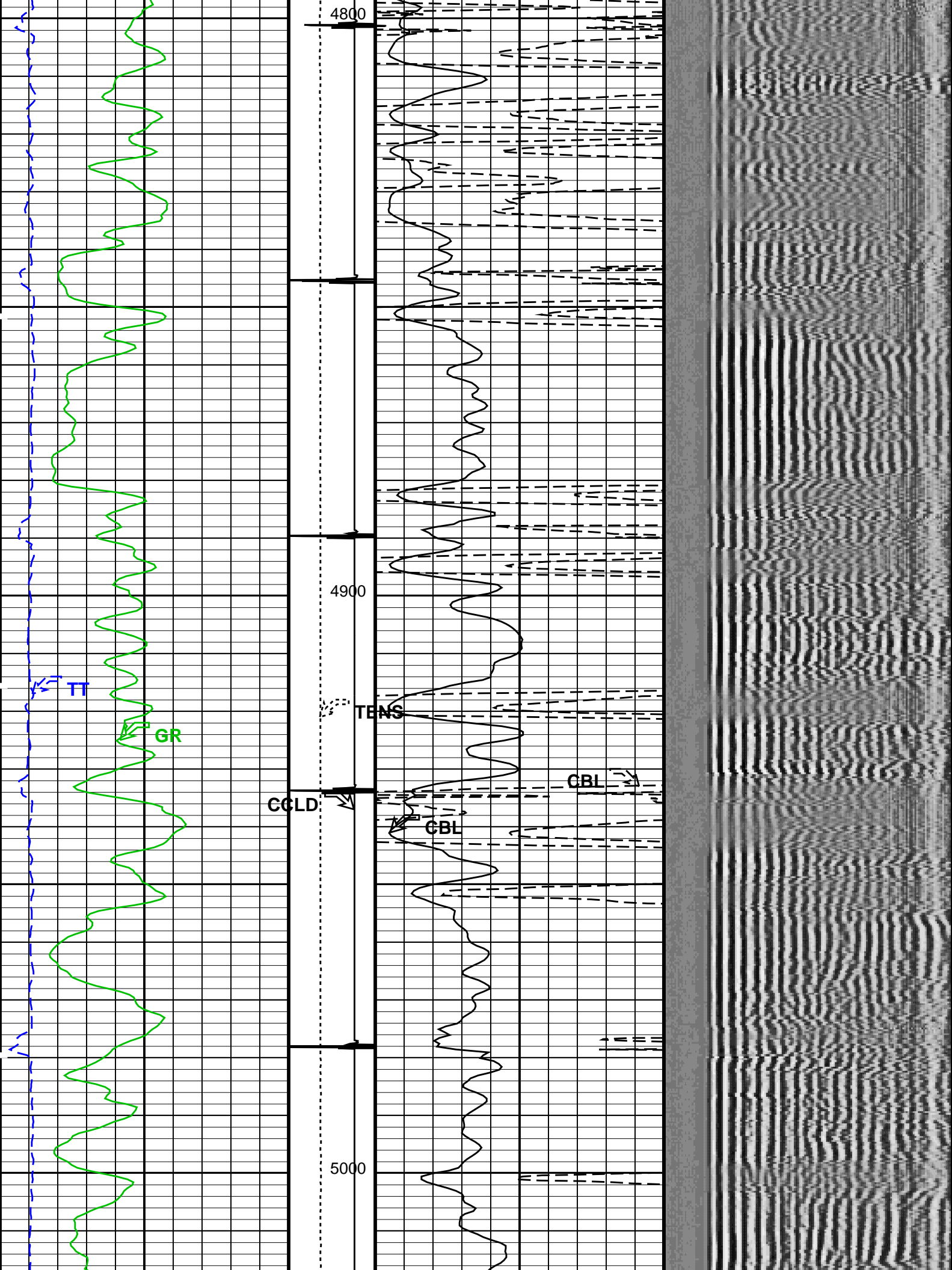


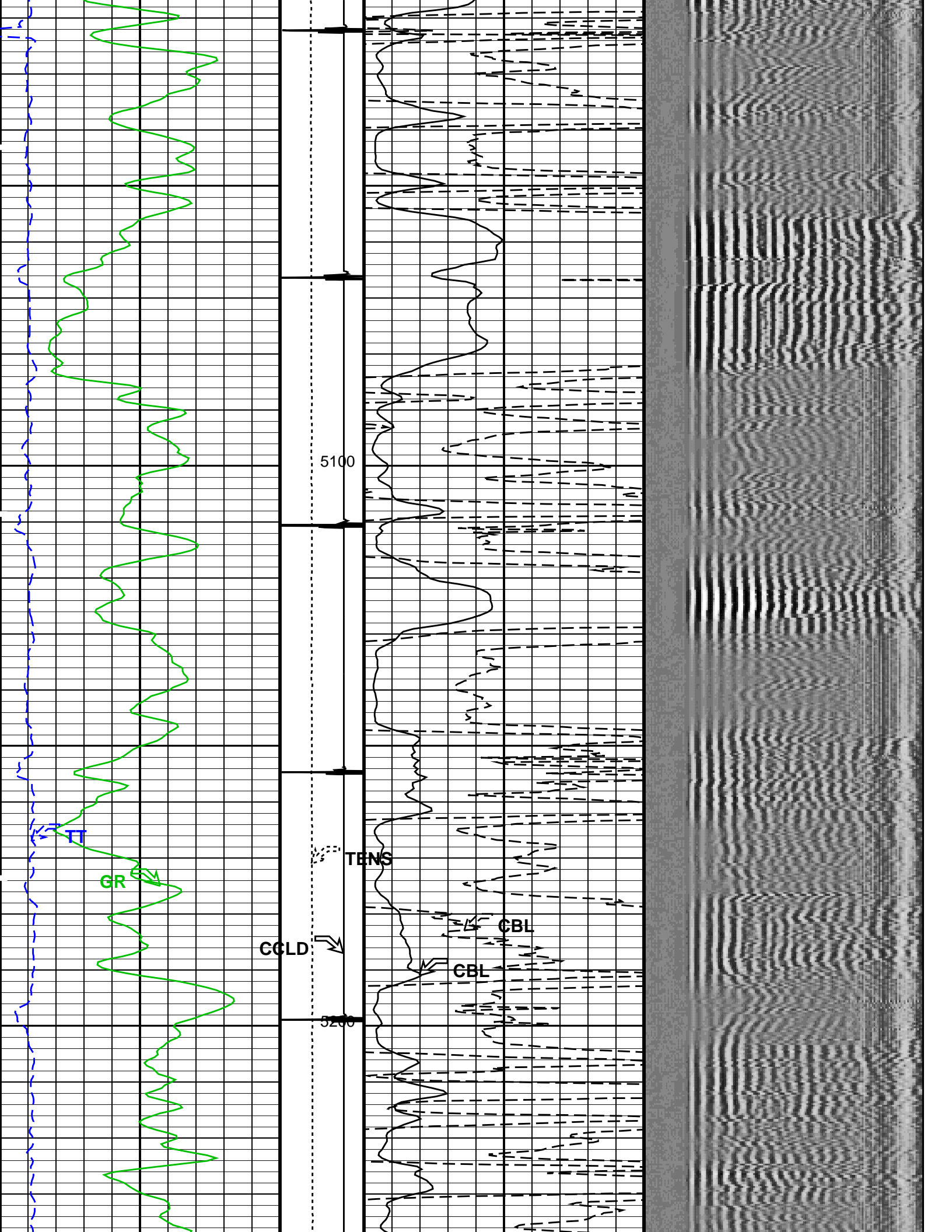


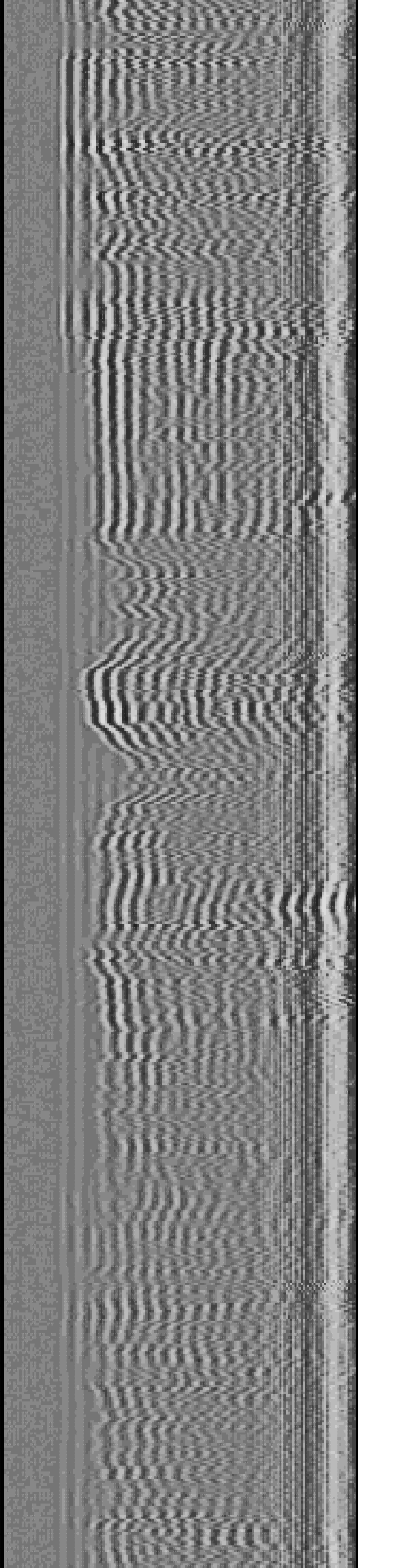
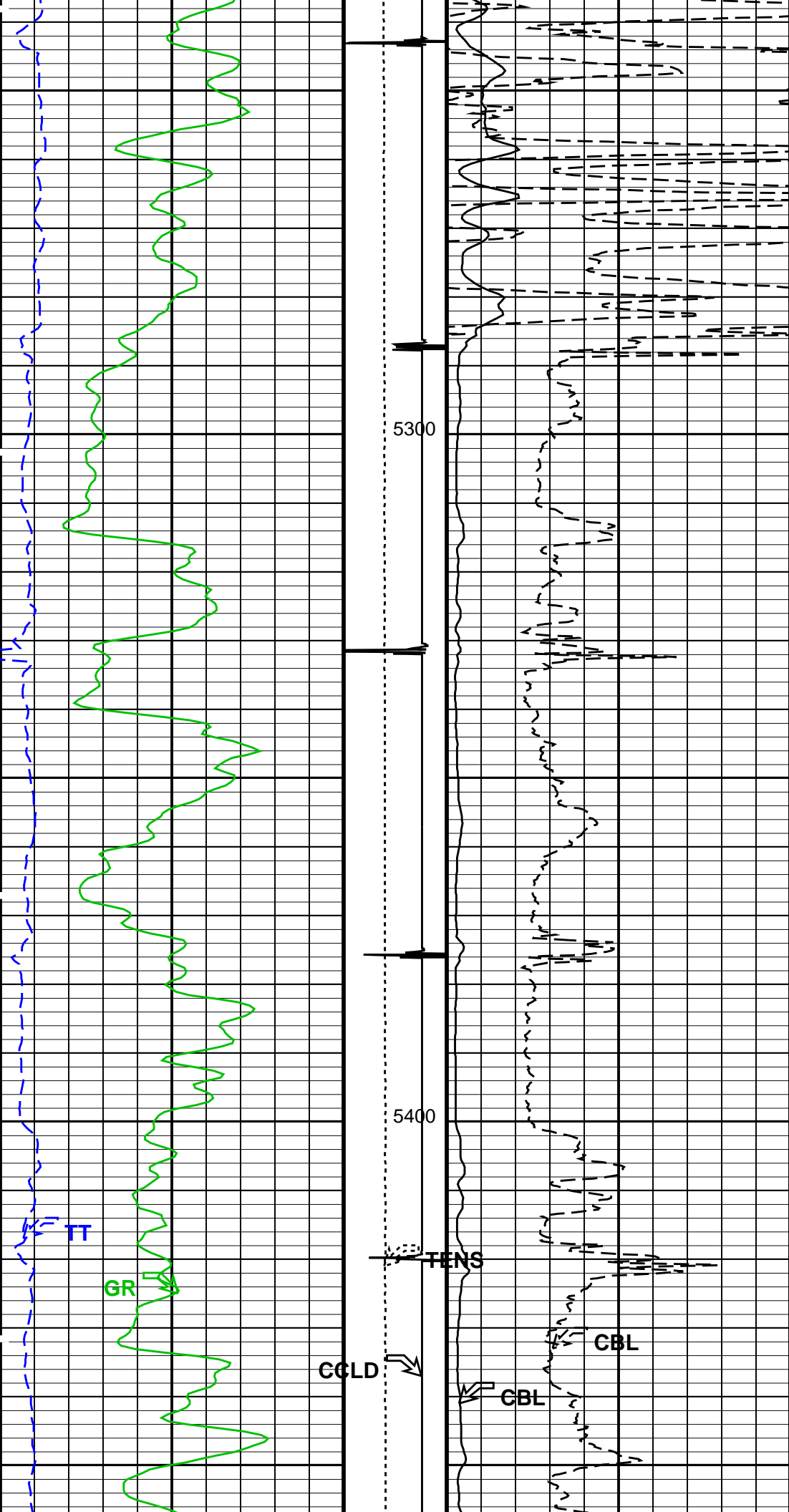


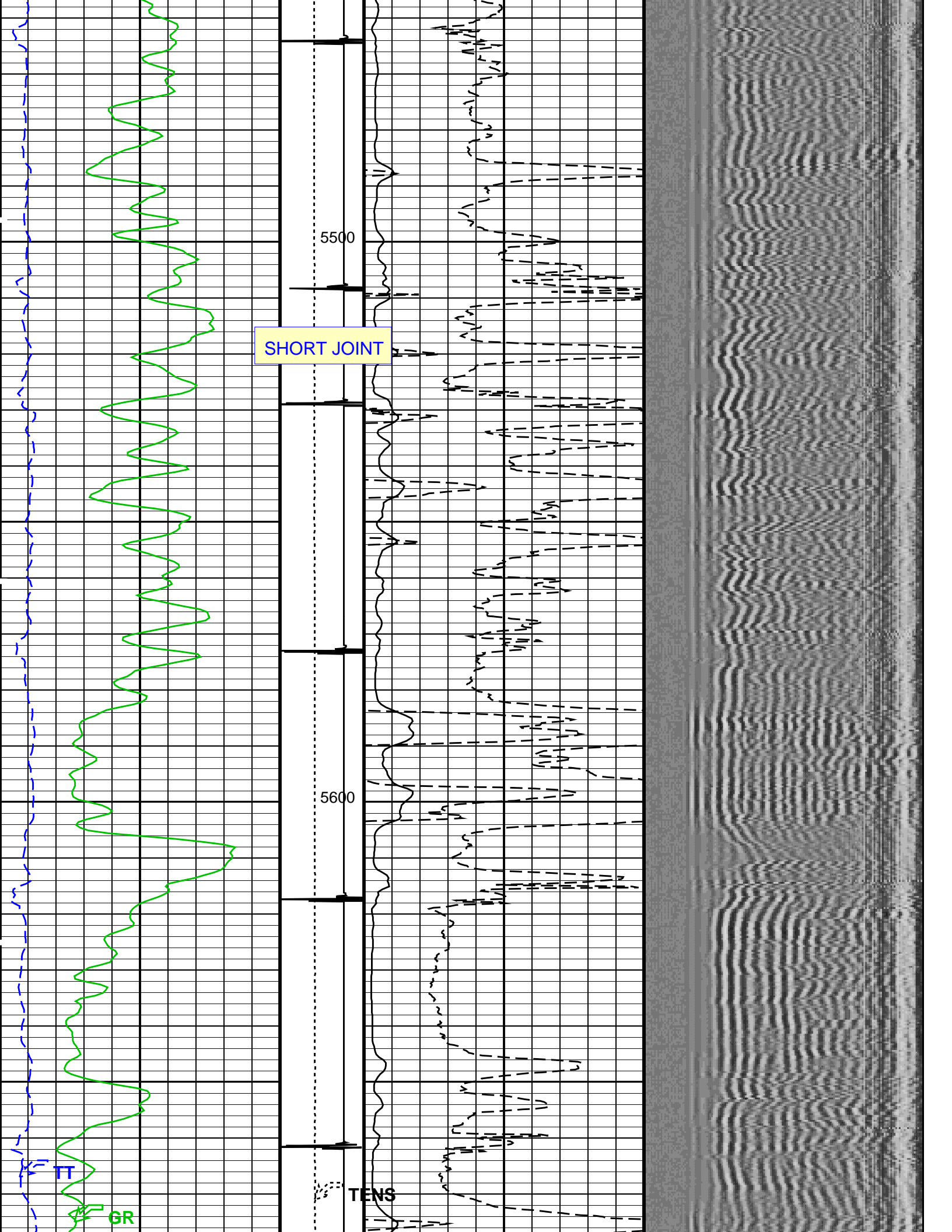


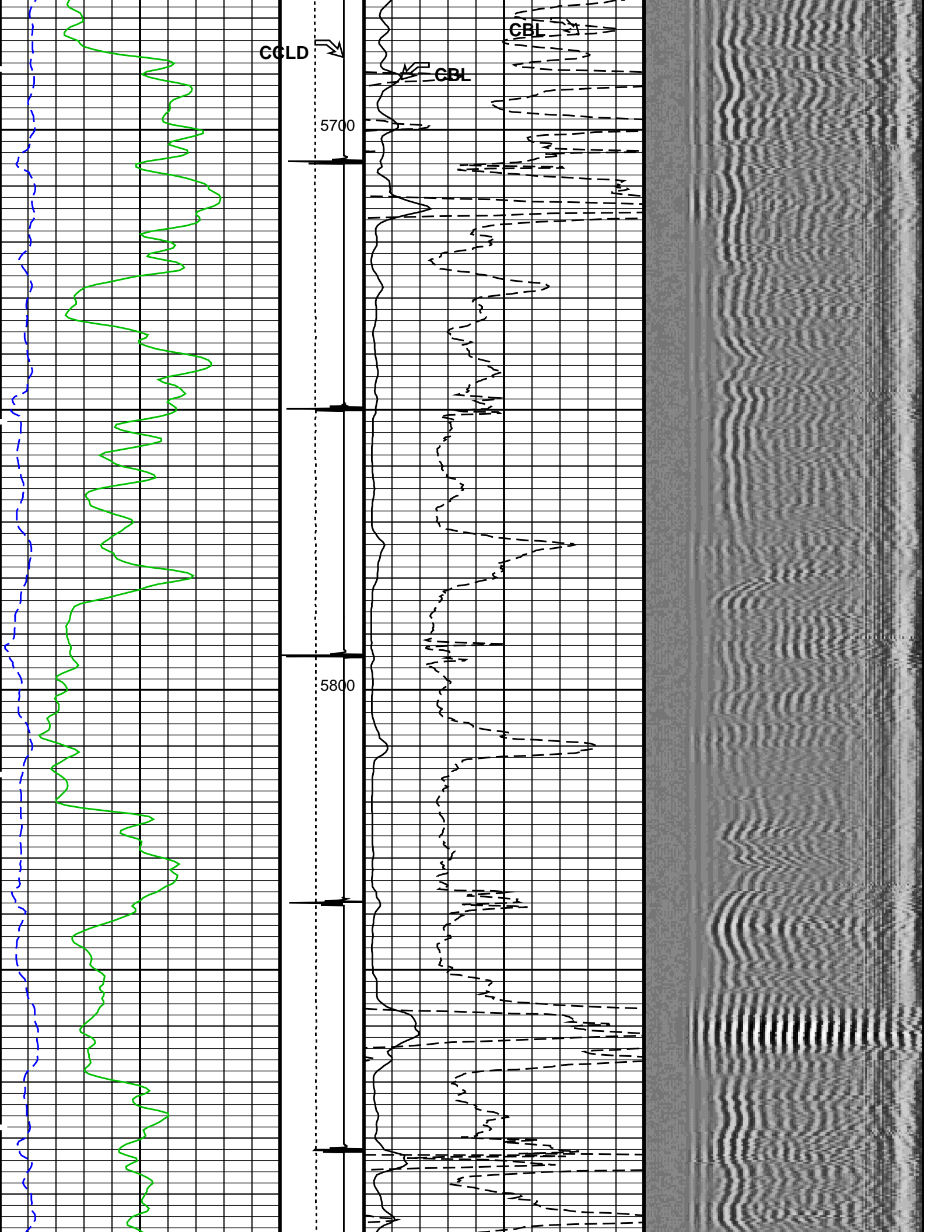


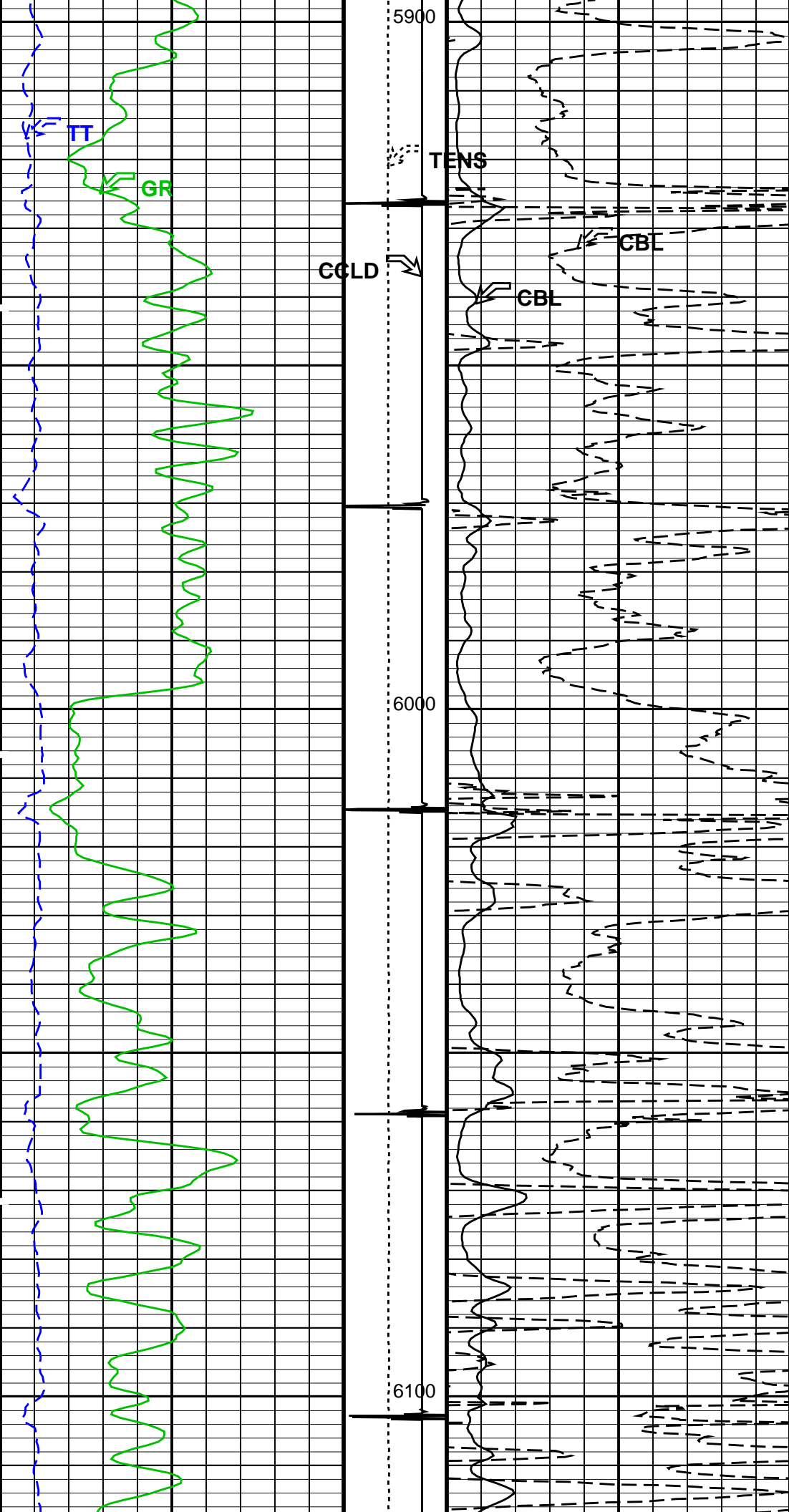


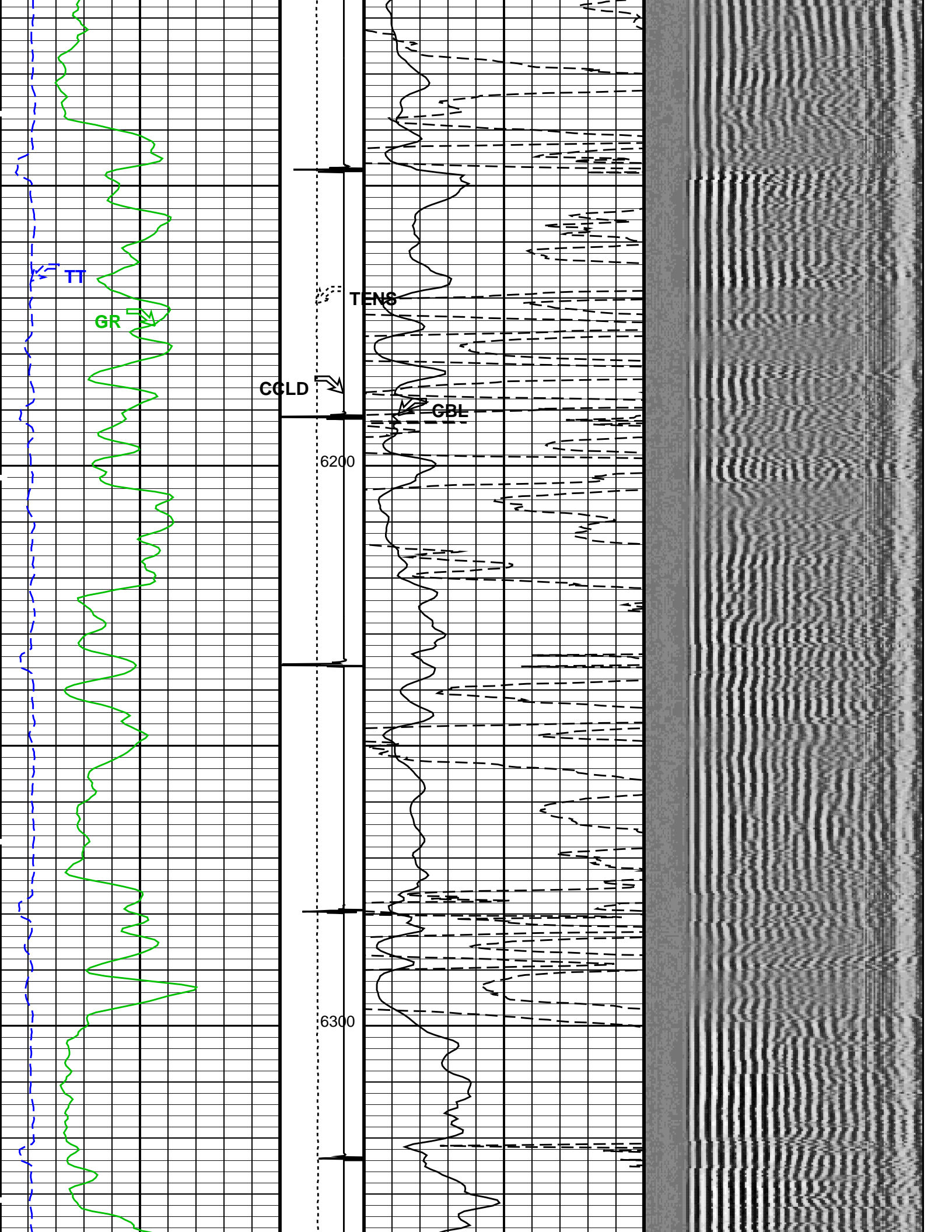


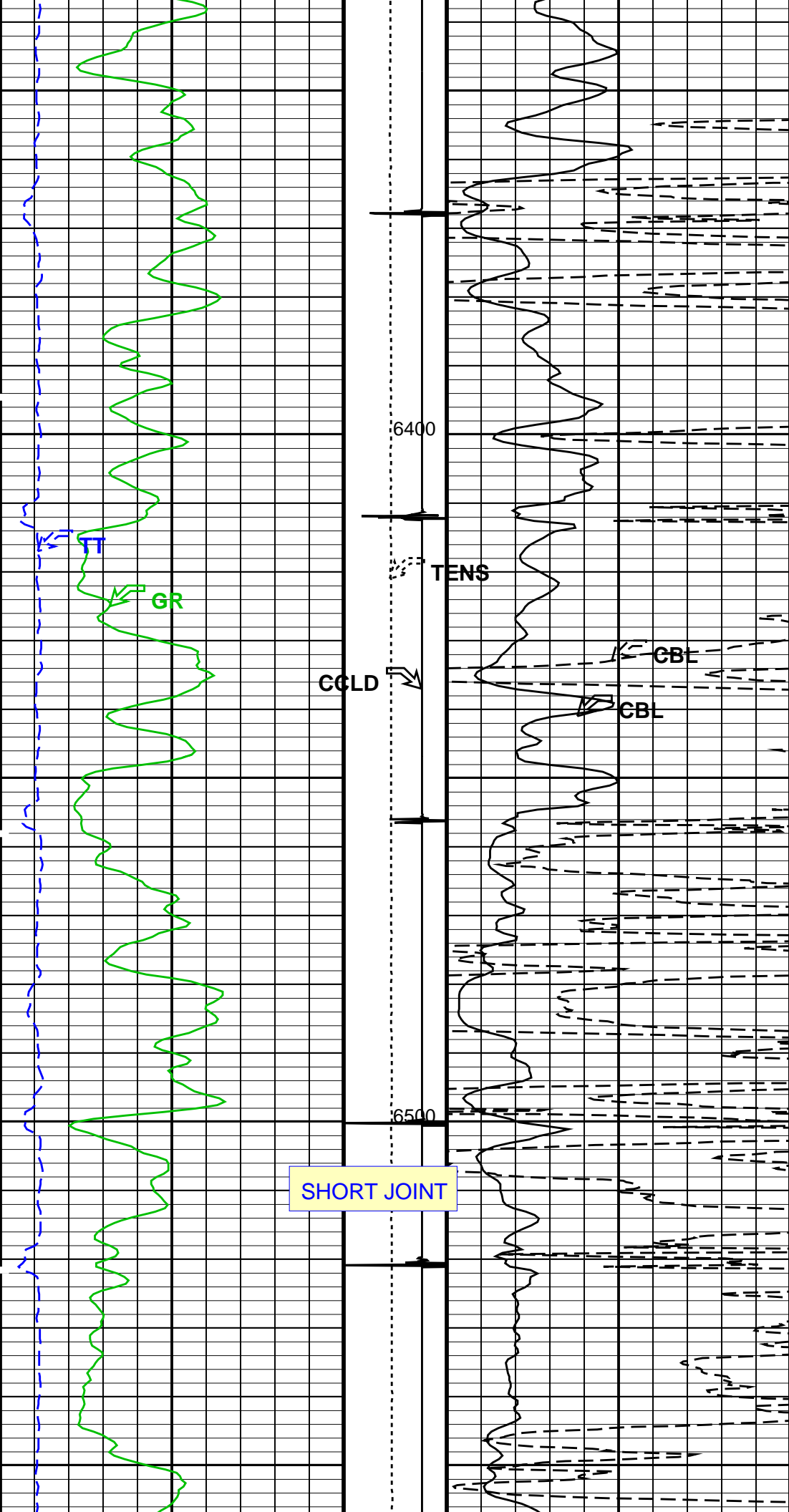


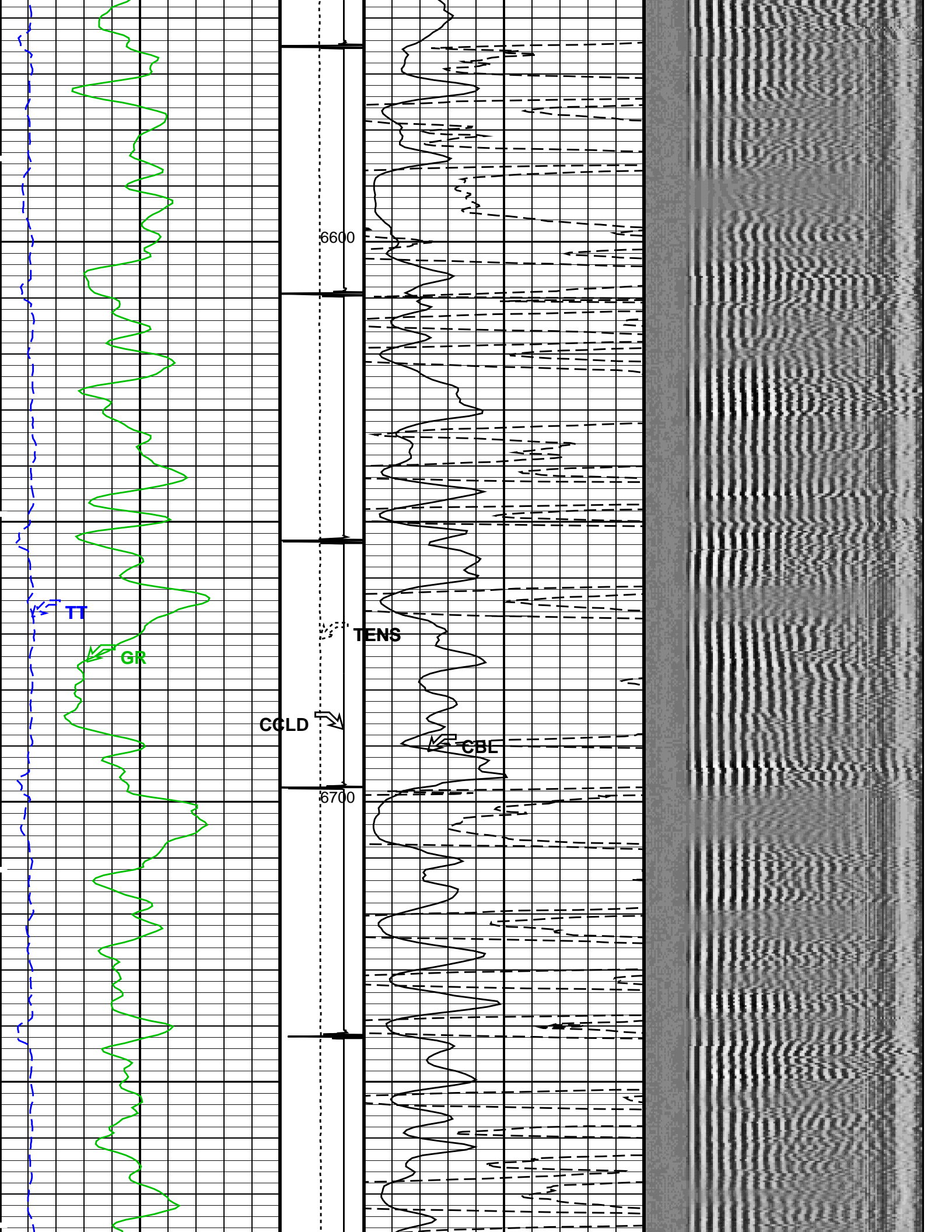


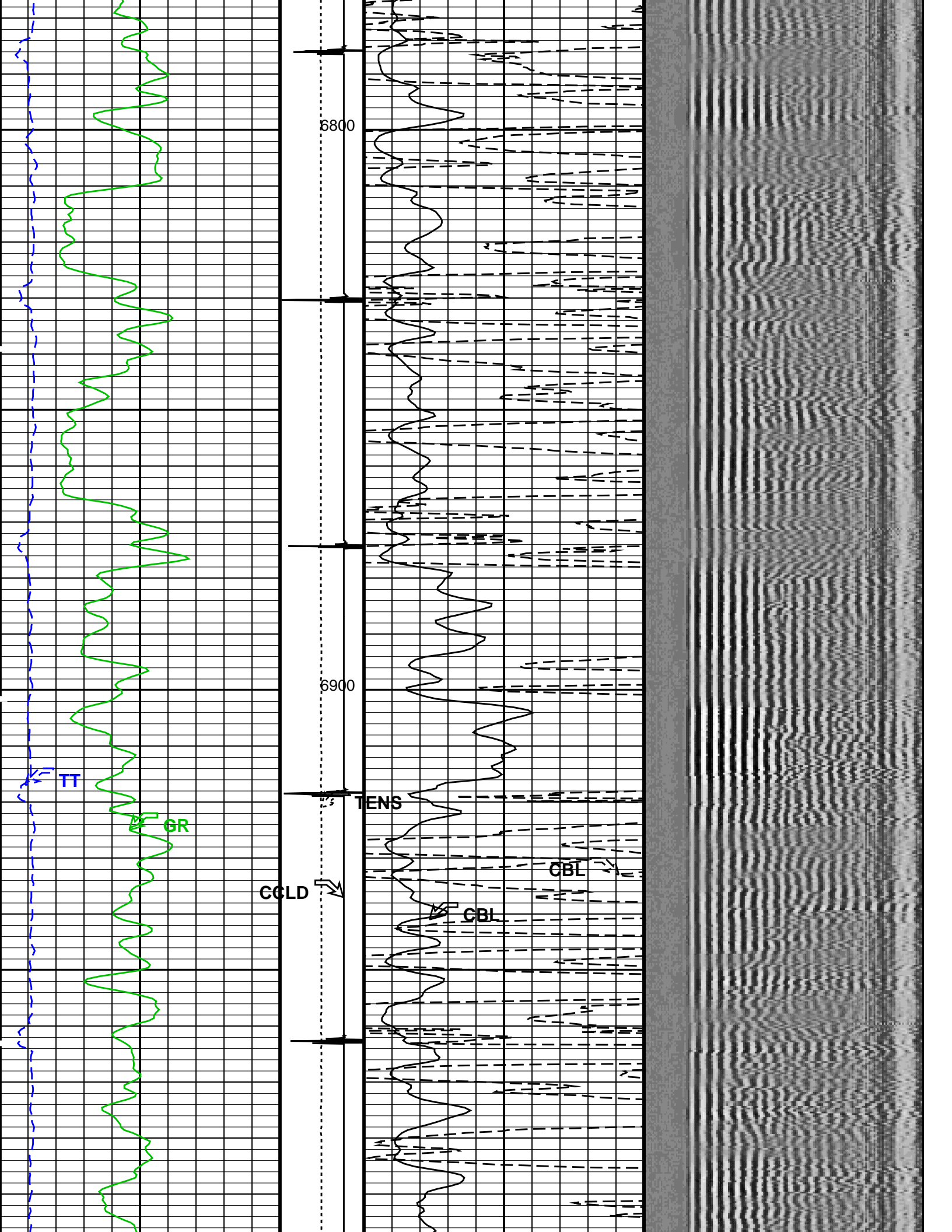


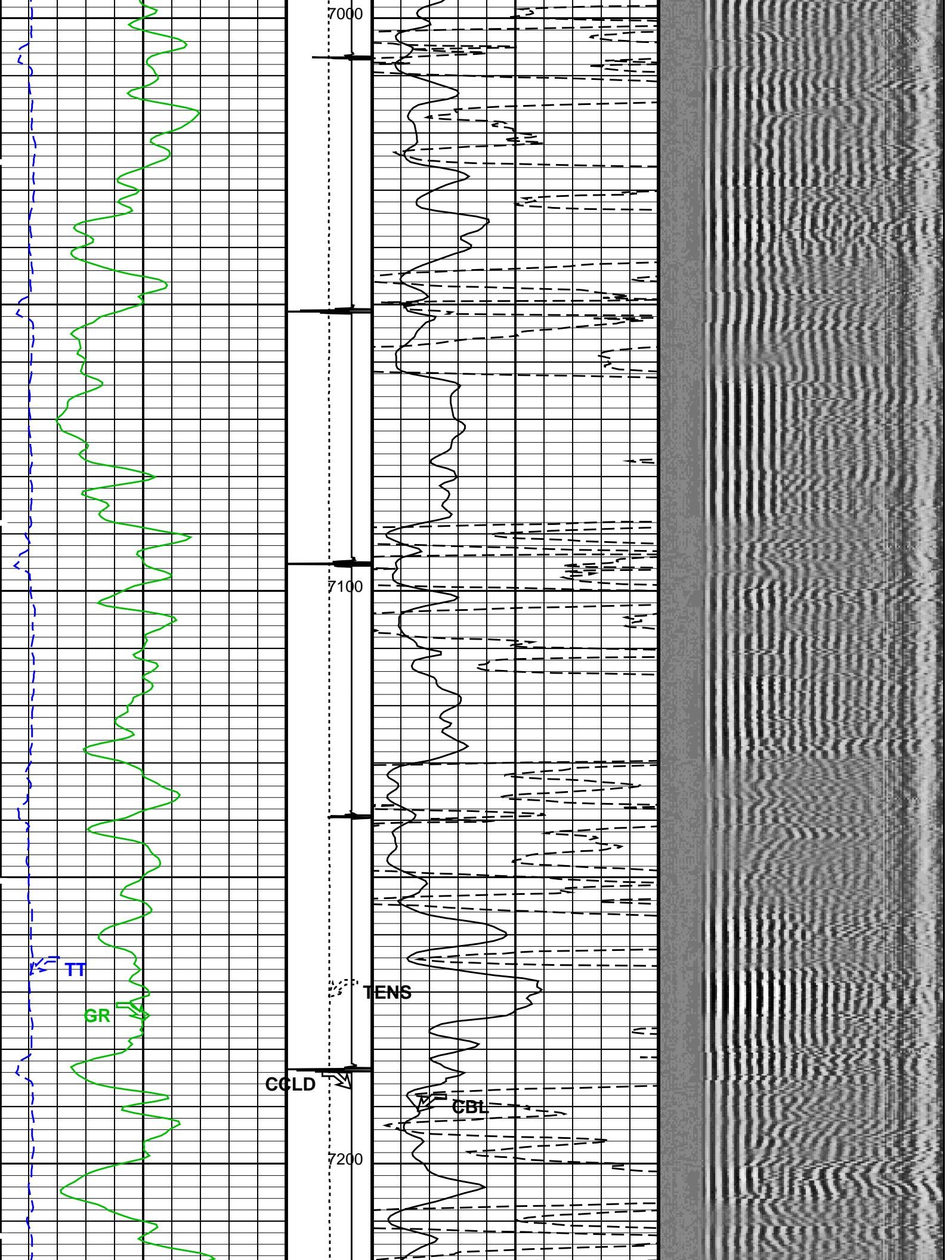


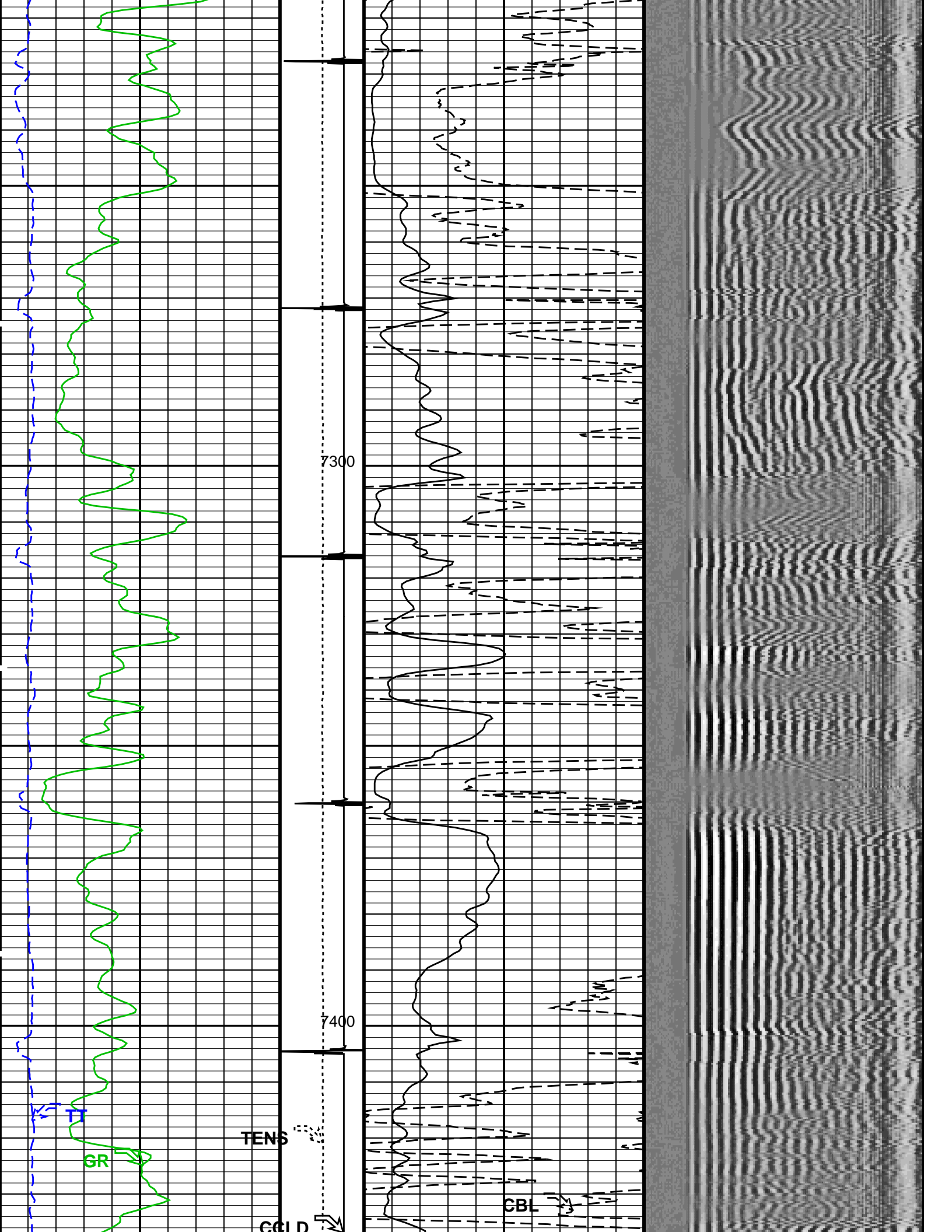


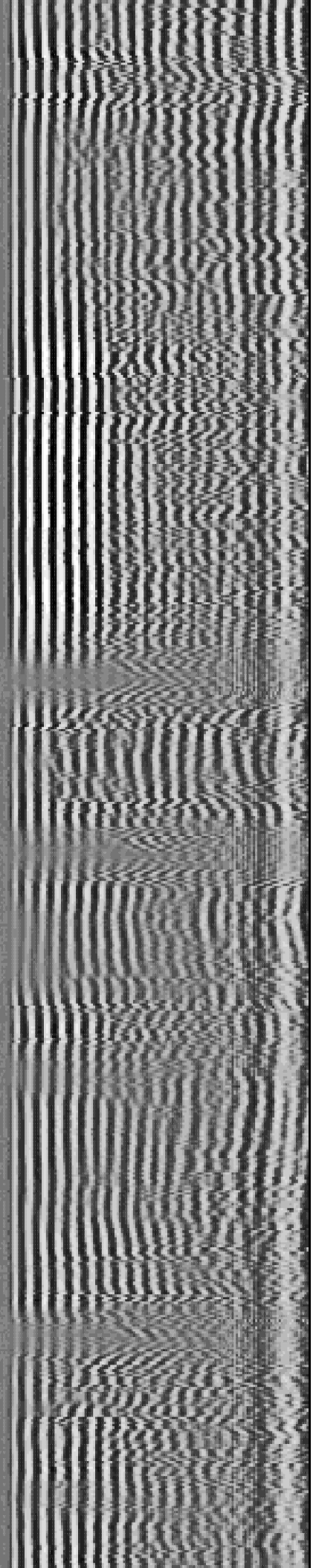
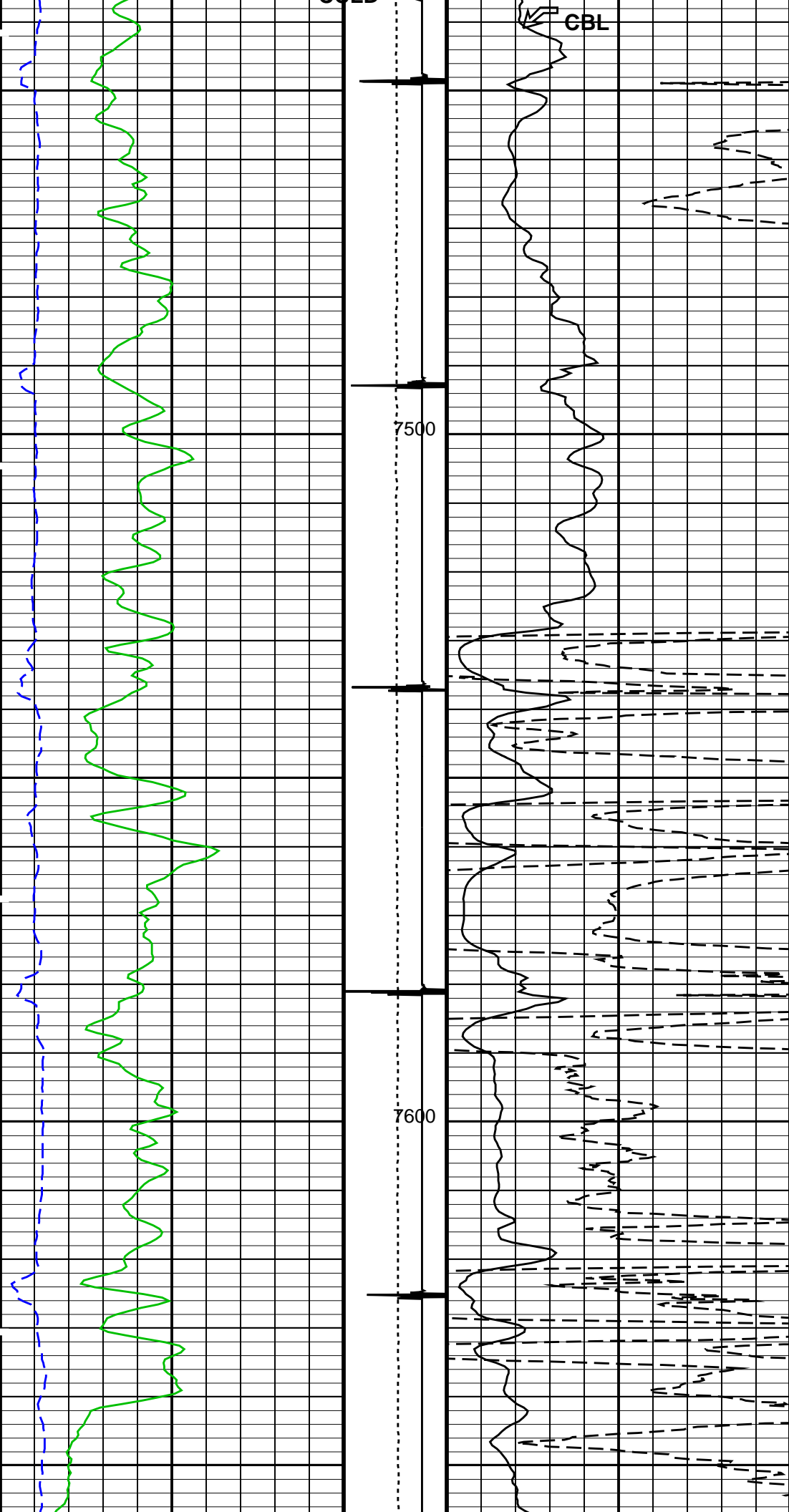


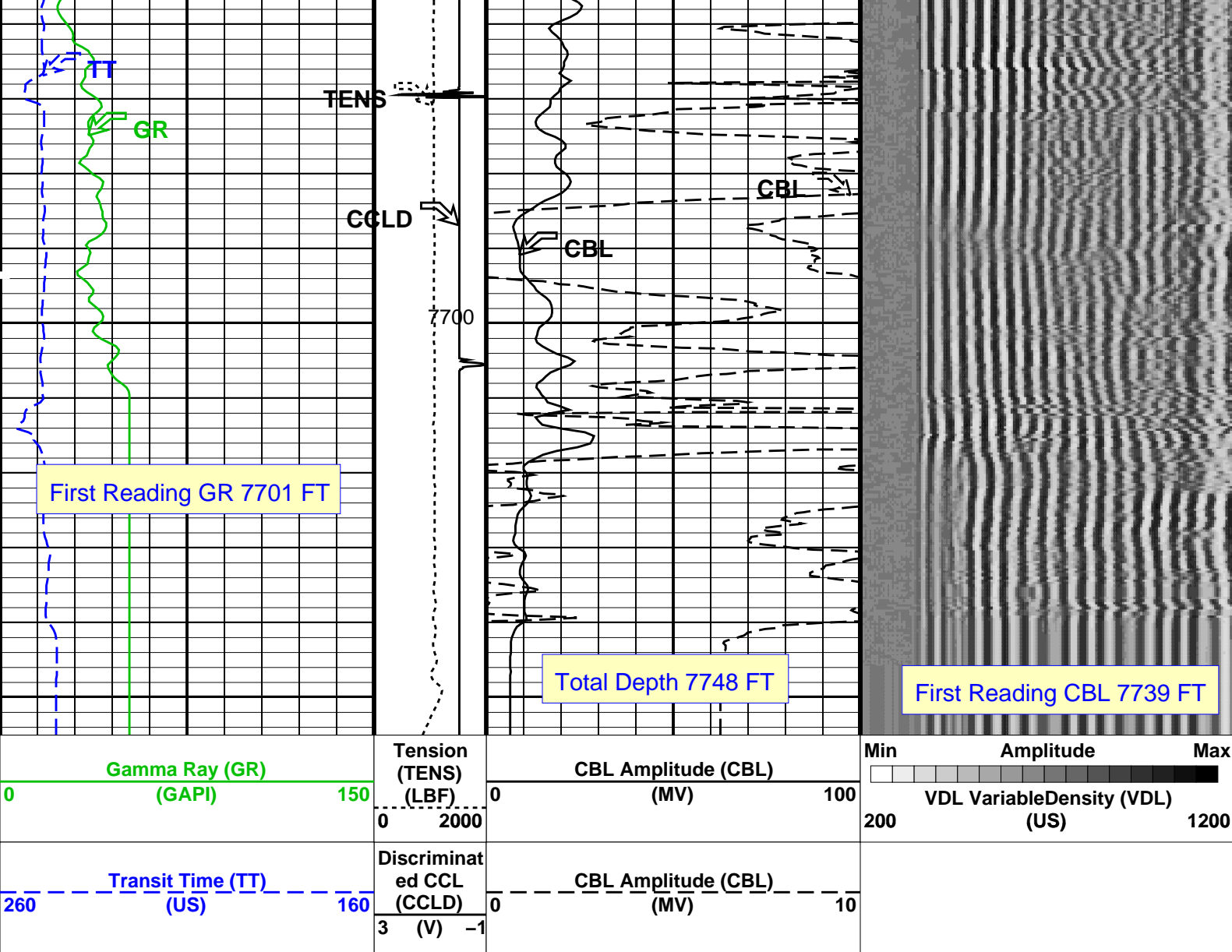












PIP SUMMARY

Time Mark Every 60 S

Format: CBL_VDL Vertical Scale: 5" per 100'

Graphics File Created: 22-Oct-2013 19:34

OP System Version: 19C0-187

SCMT-CB SRPC-5214-H2-2012-OP1 RST-C SRPC-5214-H2-2012-OP1
PSPT SRPC-5214-H2-2012-OP1

<<<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 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	7-SEP-2012		
CBL Correction Factor	0.0756720	CBL Adjustment Factor (CBAF)	1.0
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			
CSIZ	Current Casing Size	4.500	IN
DFD	Drilling Fluid Density	8.40	LB/G
DO	Depth Offset for Playback	3.0	FT
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	7748	FT

Input DLIS Files

DEFAULT	Splice_SCMT_RST_PSP_121CUP	FN:1	PRODUCER	22-Oct-2013 19:30	7760.0 FT	-25.5 FT
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Output DLIS Files

DEFAULT	SCMT_RST_PSP_123PUP	FN:114	PRODUCER	22-Oct-2013 19:34		
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REPEAT ANALYSIS CBL VDL

MAXIS Field Log

Input DLIS Files

DEFAULT	SCMT_RST_PSP_101LUP	FN:07	PRODUCER	22-Oct-2013 15:44	5604.5 FT	5246.0 FT
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DEFAULT	SCMT_RST_PSP_101LUP	FN:97	PRODUCER	22-Oct-2013 19:44	5694.5 FT	5346.0 FT
DEFAULT	SCMT_RST_PSP_123PUP	FN:114	PRODUCER	22-Oct-2013 19:34	7755.0 FT	-44.0 FT

Output DLIS Files

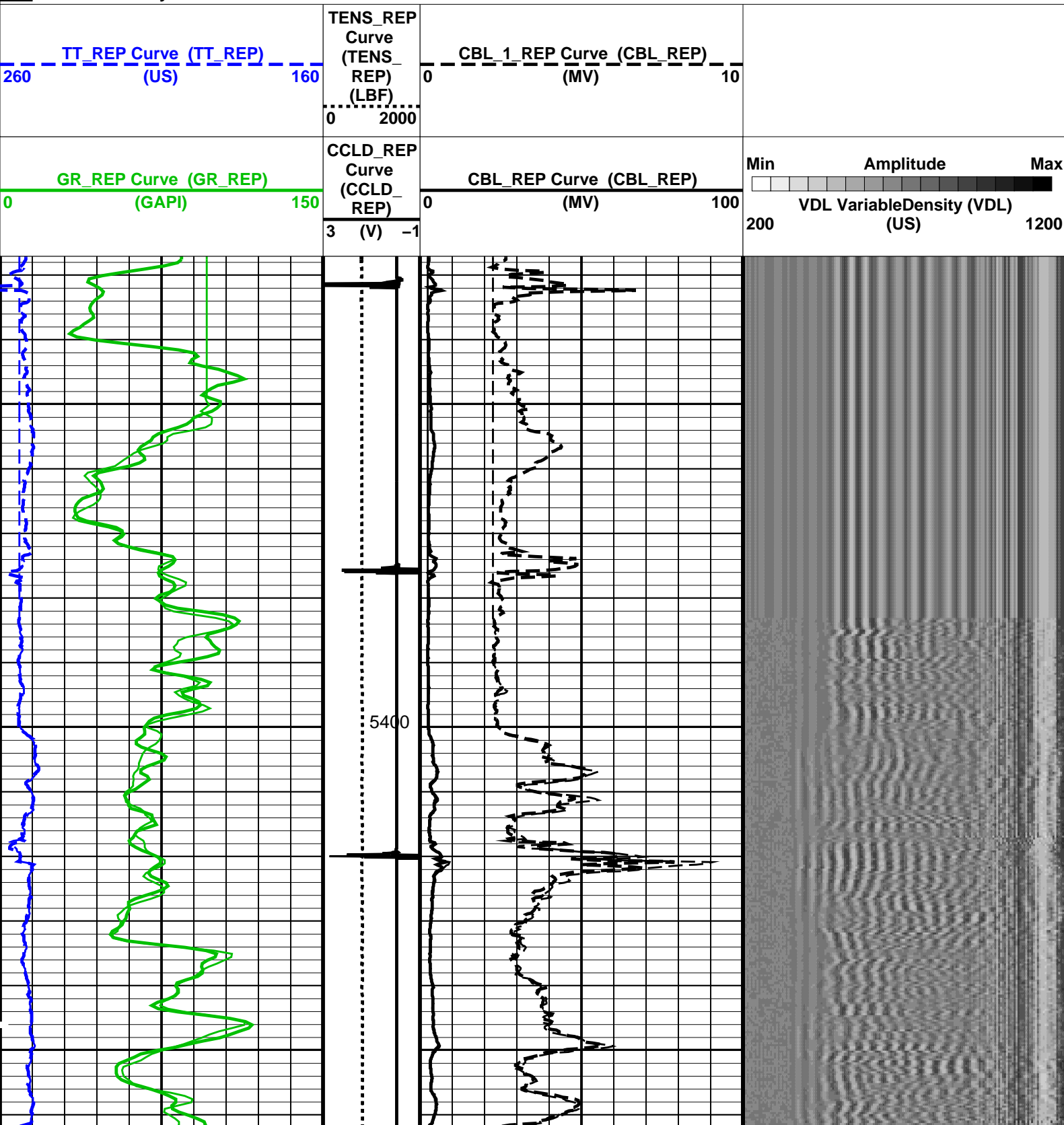
DEFAULT	SCMT_RST_PSP_124PUP	FN:115	PRODUCER	22-Oct-2013 19:43	5696.5 FT	5326.5 FT
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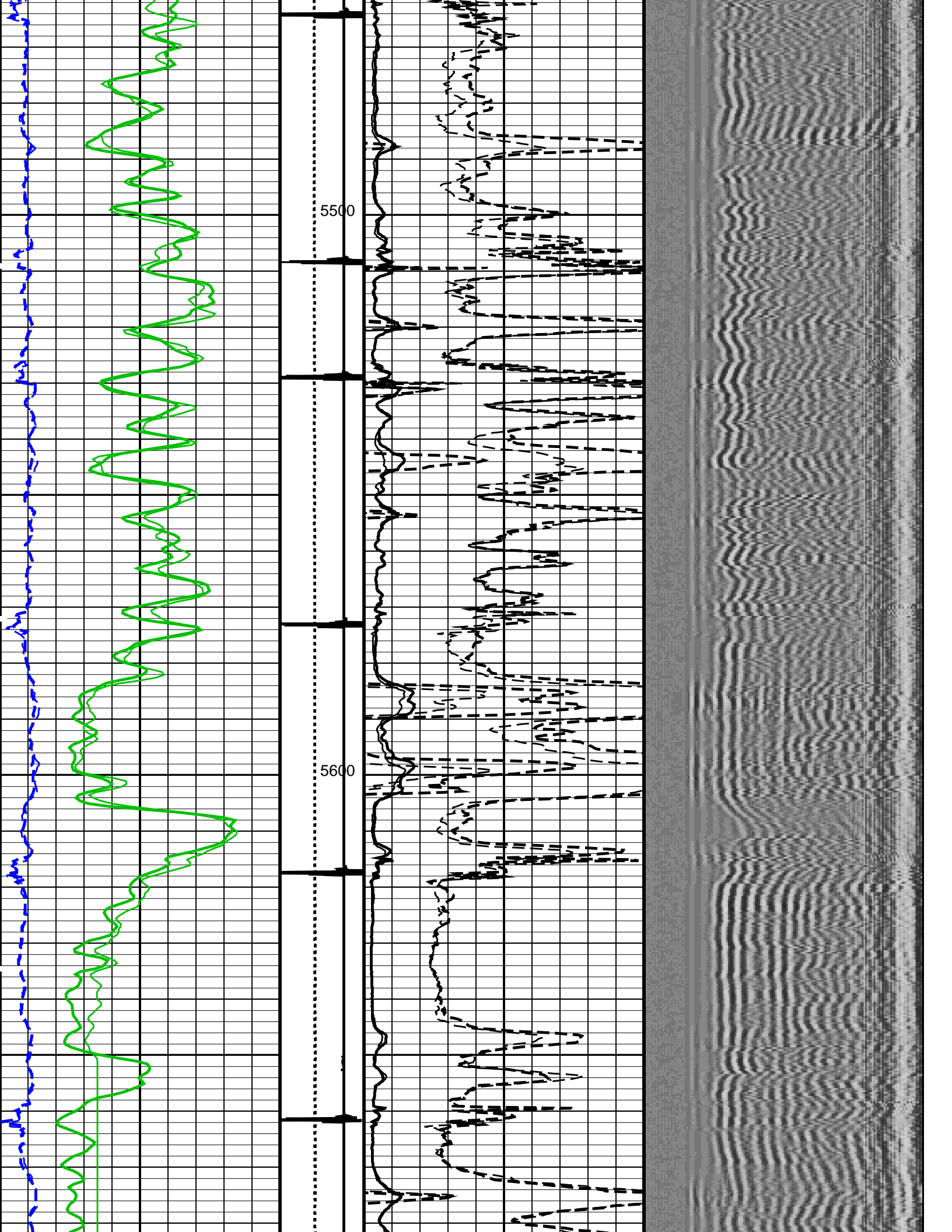
OP System Version: 19C0-187

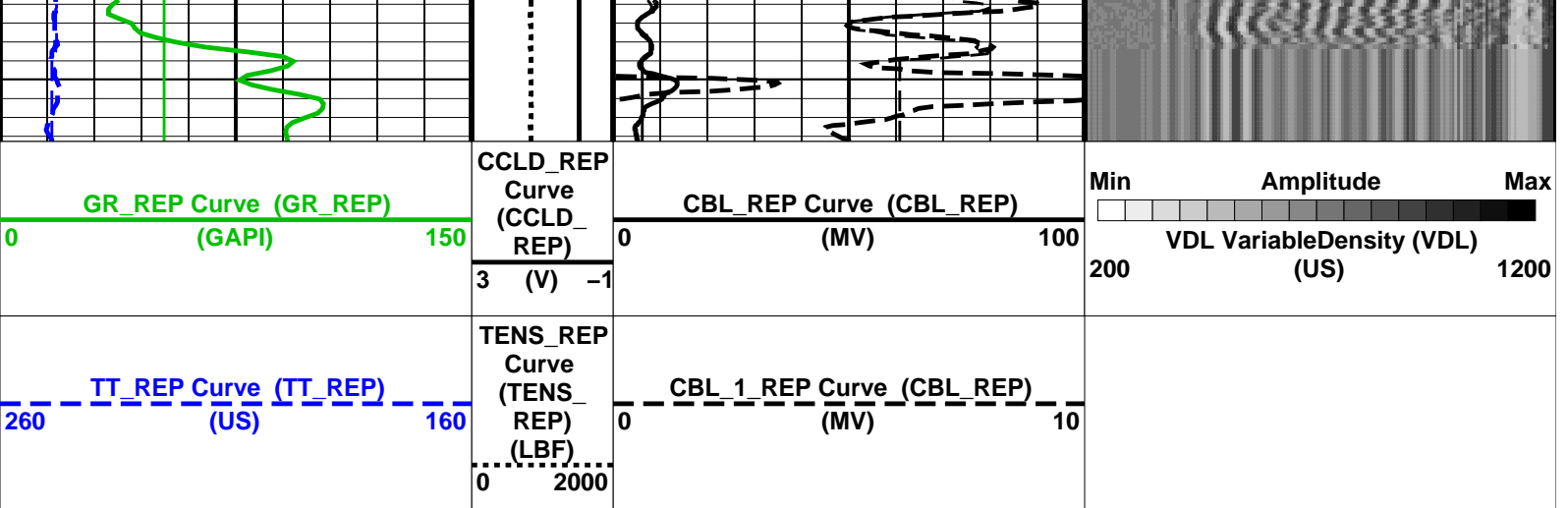
SCMT-CB PSPT	SRPC-5214-H2-2012-OP1; SRPC-5214-H2-2012-OP1;	RST-C	SRPC-5214-H2-2012-OP1;
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PIP SUMMARY

 Time Mark Every 60 S







PIP SUMMARY

Time Mark Every 60 S

Format: CBL_VDL_REP Vertical Scale: 5" per 100' Graphics File Created: 22-Oct-2013 19:43

OP System Version: 19C0-187

SCMT-CB PSPT	SRPC-5214-H2-2012-OP1! SRPC-5214-H2-2012-OP1!	RST-C	SRPC-5214-H2-2012-OP1!
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<<<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 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	7-SEP-2012		
CBL Correction Factor	0.0756720	CBL Adjustment Factor (CBAF)	1.0
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	
CMTM	SCMT Slow Channel Multiplexer Mode	SCAN	
CMTM	SCMT Operating Mode	LOG	

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
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	7748	FT

Input DLIS Files

DEFAULT	SCMT_RST_PSP_101LUP	FN:97	PRODUCER	22-Oct-2013 15:44	5694.5 FT	5346.0 FT
DEFAULT	SCMT_RST_PSP_123PUP	FN:114	PRODUCER	22-Oct-2013 19:34	7755.0 FT	-44.0 FT

Output DLIS Files

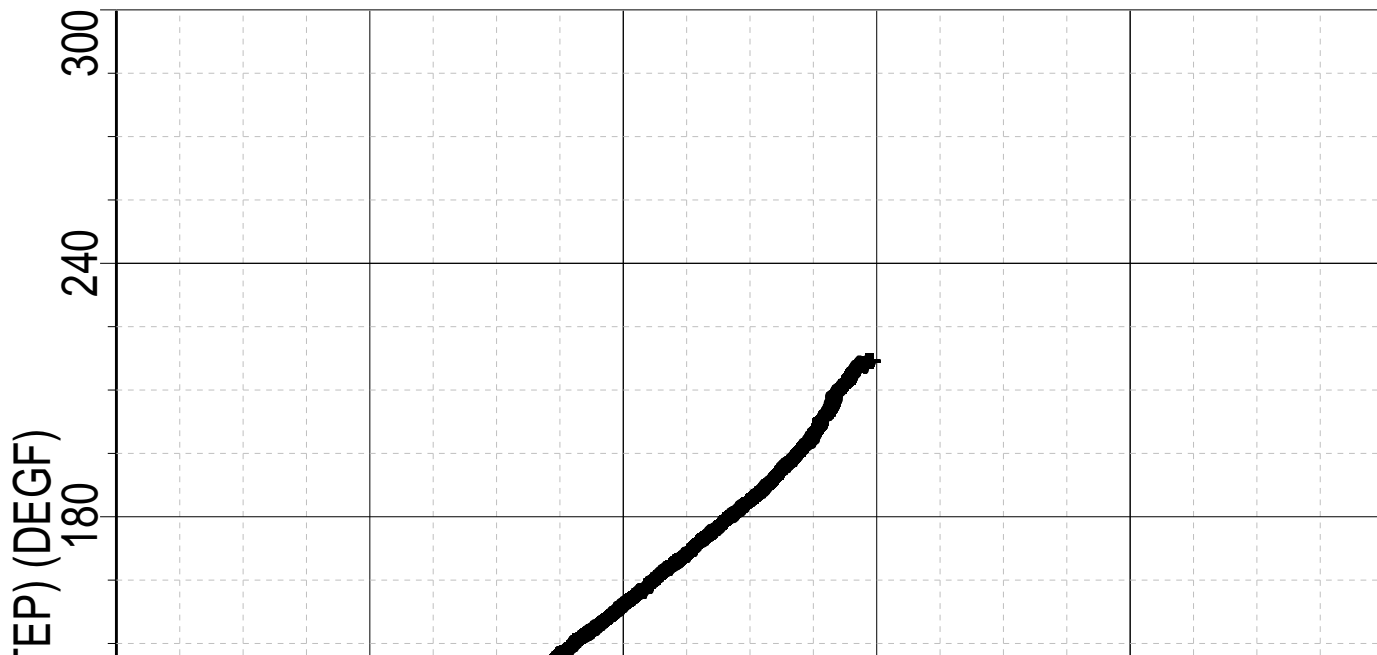
DEFAULT	SCMT_RST_PSP_124PUP	FN:115	PRODUCER	22-Oct-2013 19:43
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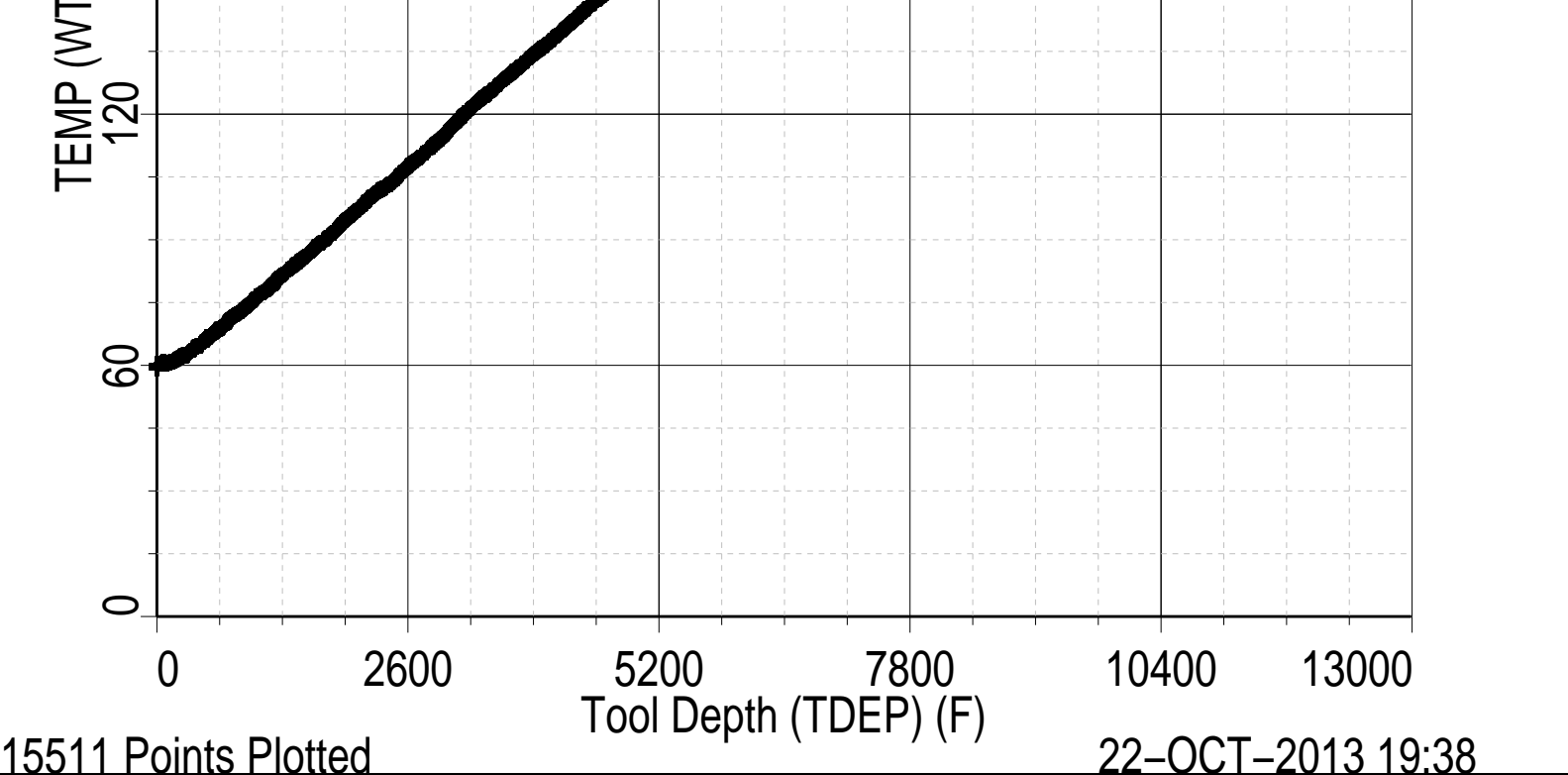
Schlumberger

TEMPERATURE PLOT

MAXIS Field Log

Index: 7755.0 – -44.0 FT





PBMS COEFFICIENTS

MAXIS Field Log

Client:	ENCANA OIL & GAS (USA) INC	Tool:	PSP
Field:	SOUTH PARACHUTE	Sub Type:	PBMS
Well:	HAGEN 22-3A (PC22)	Sensor:	GR
Run date:	22-Oct-2013		

PBMS Gamma Ray
Sonde Serial NB
Sensor Serial NB
Calib Date ddmmyy
Matrix Size
Coeff CRC

RESISTORS FOR GR SENSOR N.33223, TOOL PBMS-BA0928. SENSOR S/N:
33223
090800
12
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: SOUTH PARACHUTE

Well: HAGEN 22-3A (PC22)

Run date: 22-Oct-2013

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: SOUTH PARACHUTE

Well: HAGEN 22-3A (PC22)

Run date: 22-Oct-2013

Tool: PSP

Sub Type: PBMS

Sensor: CQG

PBMS Quartz Gauge type F

Sonde Serial NB

Sensor Serial NB

Calib Date ddmmyy

Matrix Size

COEFFICIENTS FOR CQG PBMS-B.928 S/N:

928

280612

66

Coeff CRC	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

Fb'-Fb'	0.0	0.0	0.0
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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

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MASTER CALIBRATION

MAXIS Field Log




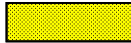





Slim Cement Mapping Tool, 1-11/16 OD / Equipment Identification

Primary Equipment:

Slim Cement Mapping Xmitter Electronics

SCMX - CA

0000

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: Calibration out of date 7–Sep–2012 16:30							

Company: **ENCANA OIL & GAS (USA) INC****Schlumberger**Well: **HAGEN 22-3A (PC22)**Field: **SOUTH PARACHUTE**County: **GARFIELD**State: **COLORADO**SLIM CEMENT MAPPING LOG
CBL-VDL
GR-CCL