Schlumberger

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

Well: **SHIDELER 30−8B (O19EB)**
Field: **MAMM CREEK**
County: **GARFIELD** State: **COLORADO**

SLIM CEMENT MAPPING LOG
CBL−VDL
GR−CCL

County: GARFIELD
Field: MAMM CREEK
Location: SHL: 597 FSL & 1627 FEL
Well: SHIDELER 30−8B (O19EB)
Company: ENCANA OIL & GAS (USA) INC

LOCATION

SHL: 597 FSL & 1627 FEL
BHL: 1546 FNL & 499 FEL

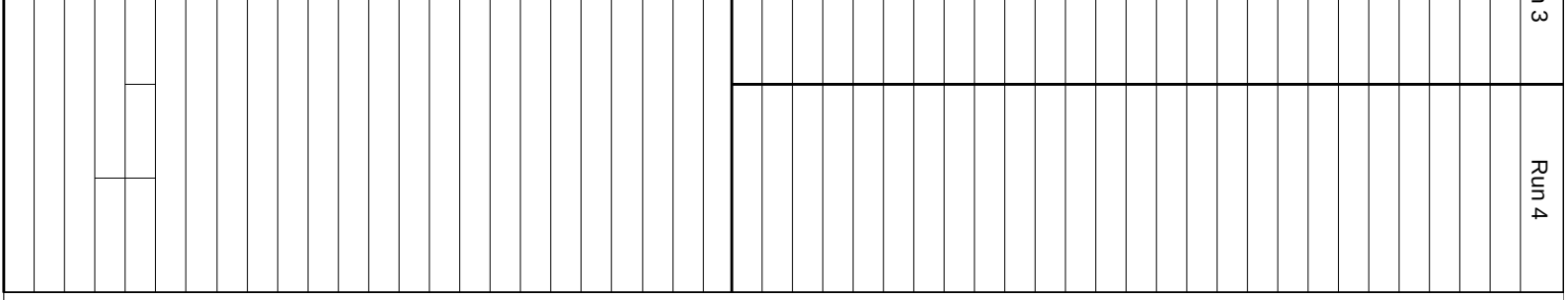
Elev.: K.B. 6531.00 ft
G.L. 6509.00 ft
D.F. 6530.00 ft

Permanent Datum: GROUND LEVEL Elev.: 6509.00 ft
Log Measured From: KELLY BUSHING 22.00 ft above Perm. Datum
Drilling Measured From: KELLY BUSHING

API Serial No.	Section	Township	Range
05−045−21837−0000	19	7S	92W

		Run 1	Run 2	Run
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		28−Apr−2013							Logging Date	
Run Number		1							Run Number	
Depth Driller		8100 ft							Depth Driller	
Schlumberger Depth		8020 ft							Schlumberger Depth	
Bottom Log Interval		8011 ft							Bottom Log Interval	
Top Log Interval		60 ft							Top Log Interval	
Casing Fluid Type		FRESH WATER							Casing Fluid Type	
Salinity									Salinity	
Density		8.4 lbm/gal							Density	
Fluid Level		60 ft							Fluid Level	
BIT/CASING/TUBING STRING									BIT/CASING/TUBING STRING	
Bit Size		7.875 in							Bit Size	
From		4683 ft							From	
To		8100 ft							To	
Casing/Tubing Size		4.500 in							Casing/Tubing Size	
Weight		11.6 lbm/ft							Weight	
Grade									Grade	
From		22 ft							From	
To		8078 ft							To	
Maximum Recorded Temperatures		224 degF							Maximum Recorded Temperatures	
Logger On Bottom	Time	28−Apr−2013		7:00					Logger On Bottom	Time
Unit Number	Location	391	GRAND JUNCTION						Unit Number	Location
Recorded By		KIRSTIE BUNTING							Recorded By	
Witnessed By		BILLY MYERS							Witnessed By	



DEPTH SUMMARY LISTING

Date Created: 14−MAR−2013 10:41:08

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:	24−APR−2012	Calibration Date:	20−FEB−201	Length:	19500 FT
Calibrator Serial Number:		Calibrator Serial Number:	174878		
Calibration Cable Type:	1−25ZT	Number of Calibration Points:	10	Conveyance Method:	Wireline
Wheel Correction 1:	−3	Calibration RMS:	4	Rig Type:	LAND
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 POLICIES APPLIED
2. IDW USED AS PRIMARY DEPTH REFERENCE
3. SWPT DRUM COUNTER USED AS SECONDARY DEPTH REFERENCE
4.
5.
6.

DISCLAIMER
THE USE OF AND RELIANCE UPON THIS RECORDED−DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED−DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED−DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED−DATA.

OTHER SERVICES1	OTHER SERVICES2
OS1: RESERVOIR SATURATION	OS1:
OS2: LOG	OS2:
OS3: SIGMA MODE	OS3:
OS4:	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
FIRST RUN IN HOLE CORRELATED TO DOWN LOG	
TOOL RAN AS PER TOOL SKETCH	
MAXIMUM RECORDED TEMPERATURE= 224 DEGF	
MAXIMUM RECORDED PRESSURE= 3138 PSIA	
ENTRANCE TIME= 06:15	

TIME ON BOTTOM= 07:00

EXIT TIME= 09:00

SHORT JOINTS: 5696 FT & 6685 FT

MAIN PASS LOGGED WITH ZERO SURFACE PRESSURE

EXPECTED CBL AMPLITUDE IN FREE PIPE IS 80MV

THANK YOU FOR CHOOSING E&P WIRELINE, A SCHLUMBERGR COMPANY

CREW: KBUNTING JBARRY KJOHNS JMANN

RUN 1		RUN 2	
SERVICE ORDER #:	CGF9−00052	SERVICE ORDER #:	
PROGRAM VERSION:	19C0−187	PROGRAM VERSION:	
FLUID LEVEL:	60 ft	FLUID LEVEL:	

LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

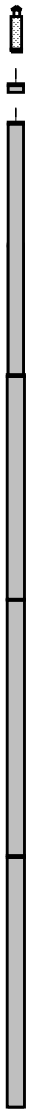
EQUIPMENT DESCRIPTION

RUN 1 RUN 2

SURFACE EQUIPMENT

WITM−A
PSC_16MHZ

DOWNHOLE EQUIPMENT



MH−22 53.4
MH−22

Detail MT
TelStatus
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CTEM 51.5
PSPT 51.5
PSC−A
PSPT−B
PSTC−A
PBMS−B 928
CQG_F_Mano
RTD_Thermometer
GR
CCL
PBMS

GR 47.8

Well_Temp 44.8
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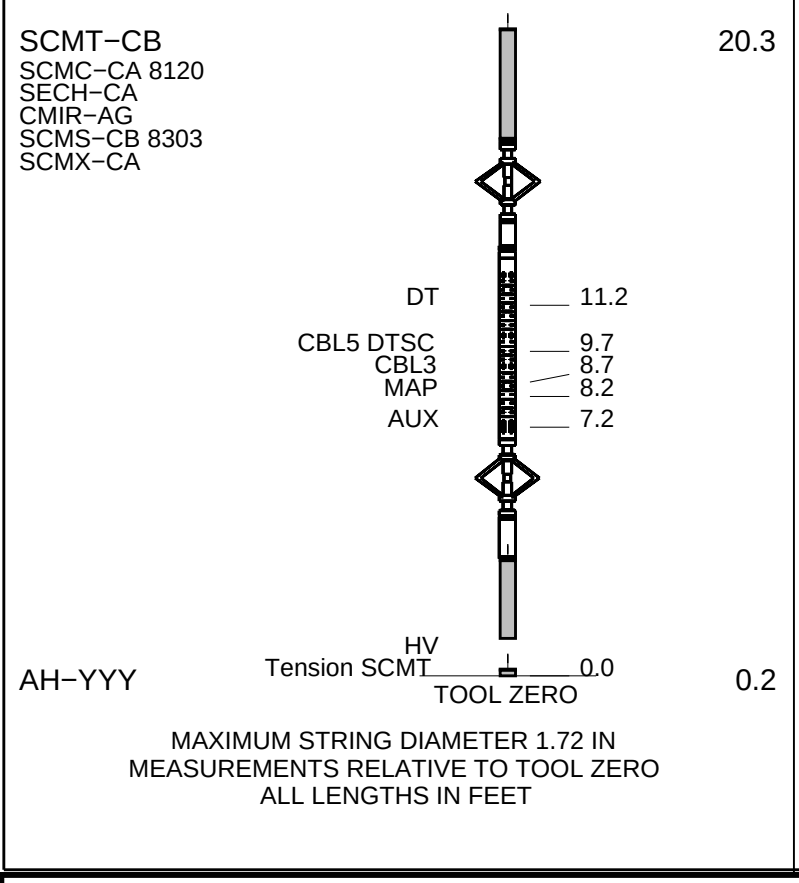


Schlumberger

MAIN PASS CBL VDL

MAXIS Field Log

Company: ENCANA OIL & GAS (USA) INC **Well: SHIDELER 30−8B (O19EB)**

Input DLIS Files

DEFAULT	**SCMT_RST_PSP_060LUP**	**FN:58**	**PRODUCER**	**28−Apr−2013 06:53**	**8023.5 FT**	**4.0 FT**

Output DLIS Files

DEFAULT	**SCMT_RST_PSP_063PUP**	**FN:61**	**PRODUCER**	**28−Apr−2013 09:03**	**8028.5 FT**	**−35.5 FT**

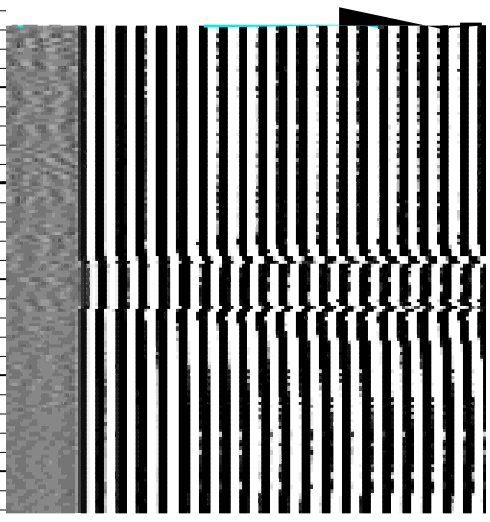
OP System Version: 19C0−187

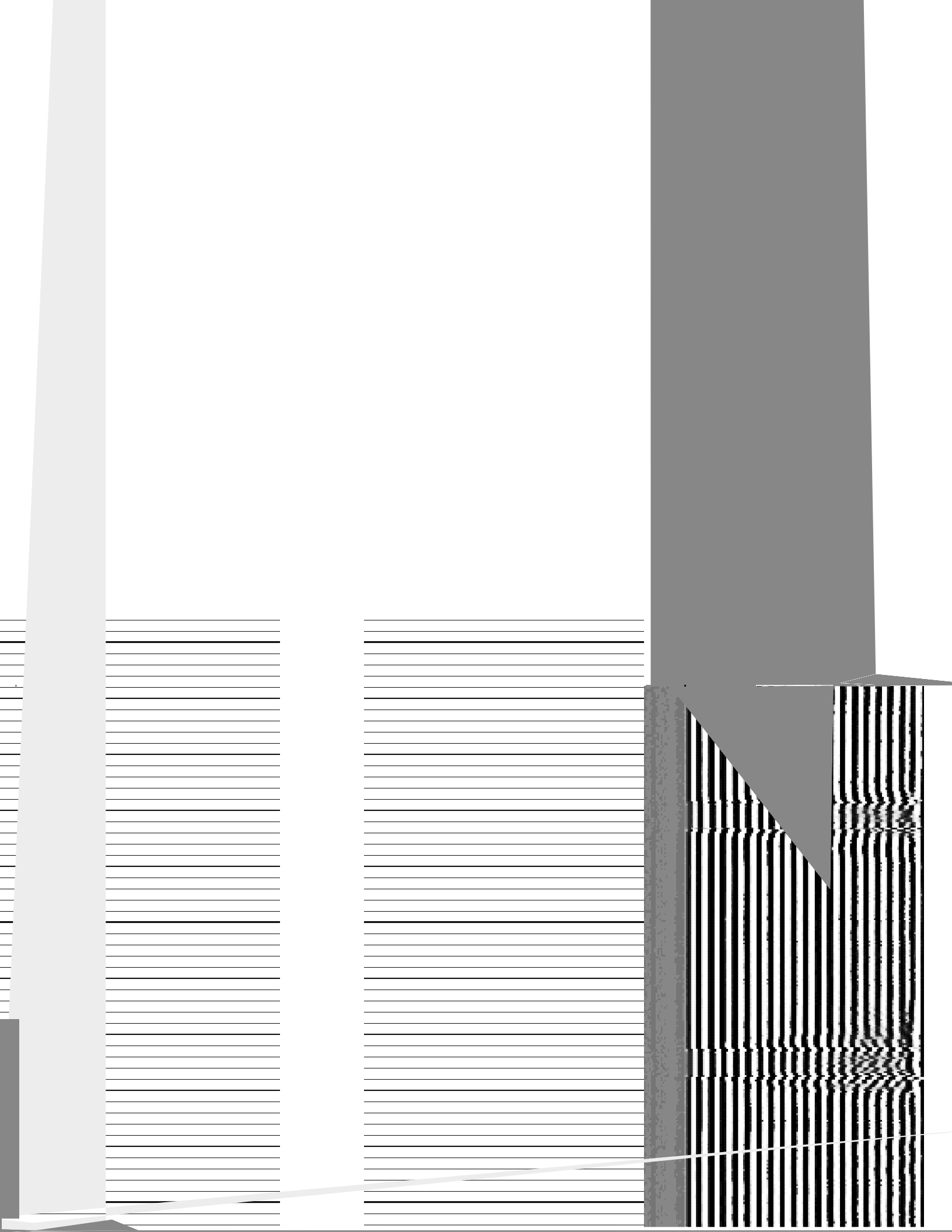
SCMT−CB	**SRPC−5214−H2−2012−OP1**	**RST−C**	**SRPC−5214−H2−2012−OP1**
PSPT	**SRPC−5214−H2−2012−OP1**		

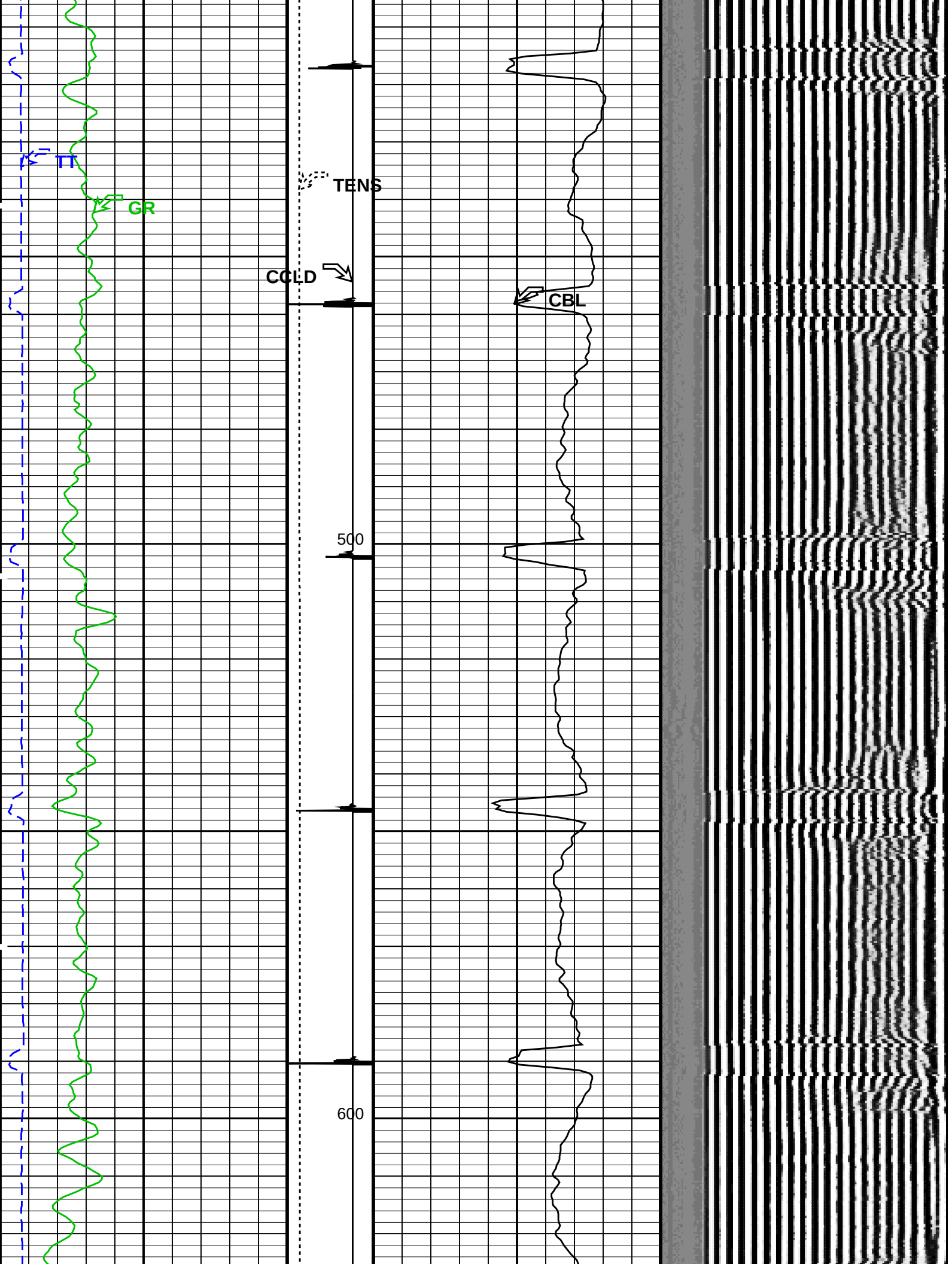
PIP SUMMARY

Time Mark Every 60 S

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



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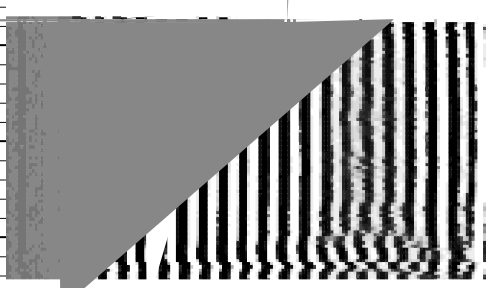

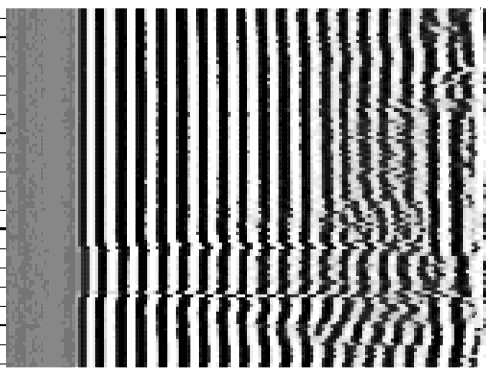

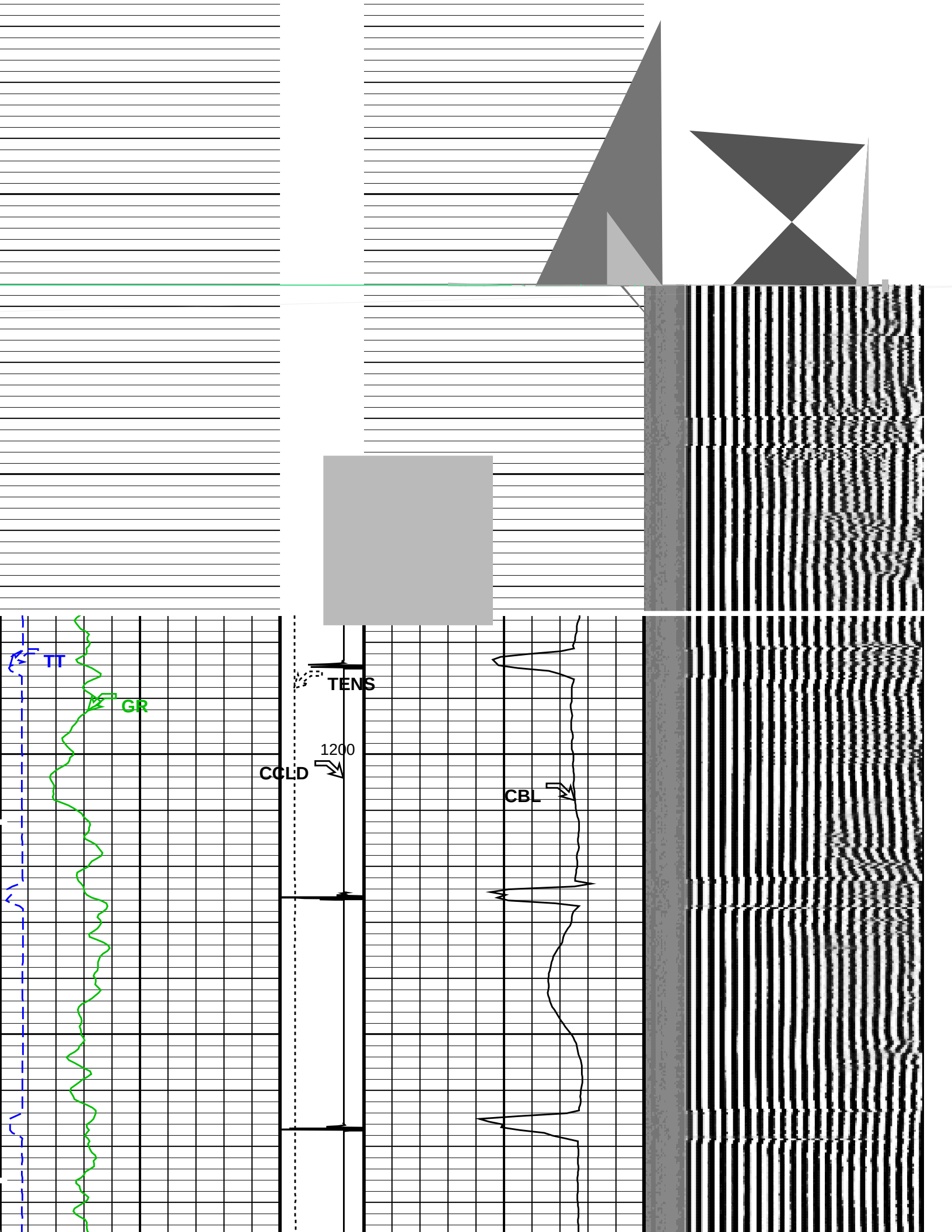
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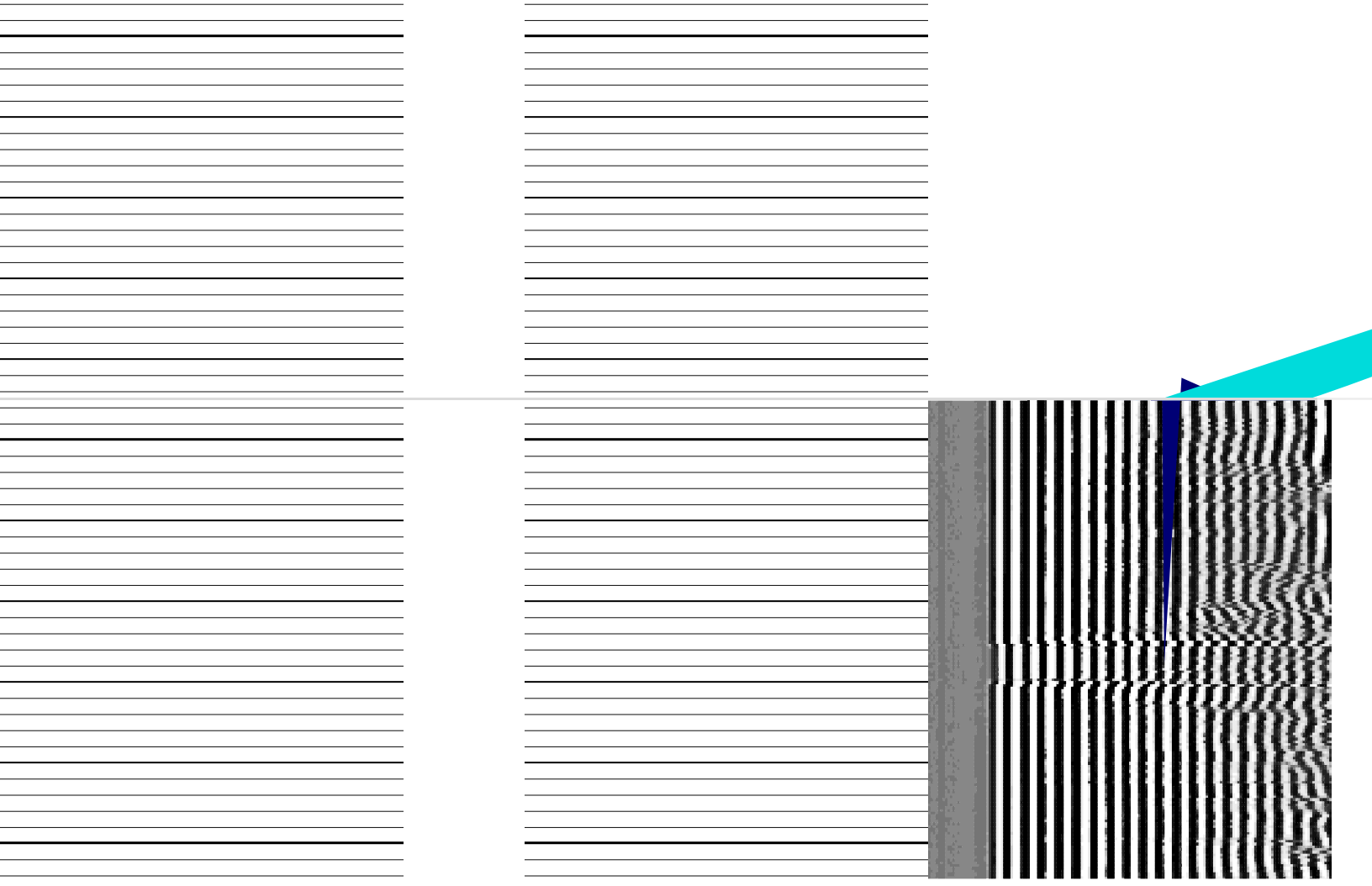

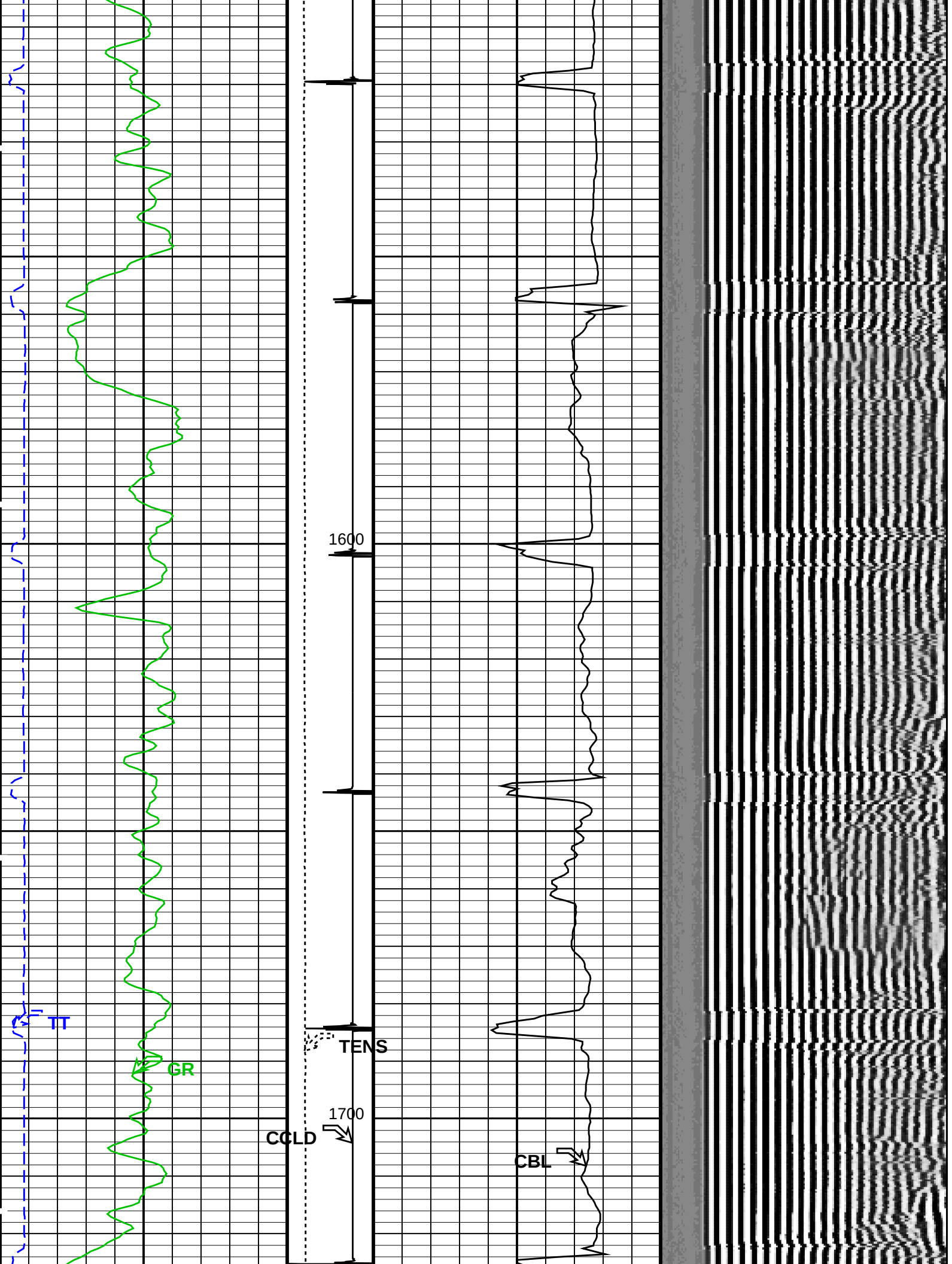
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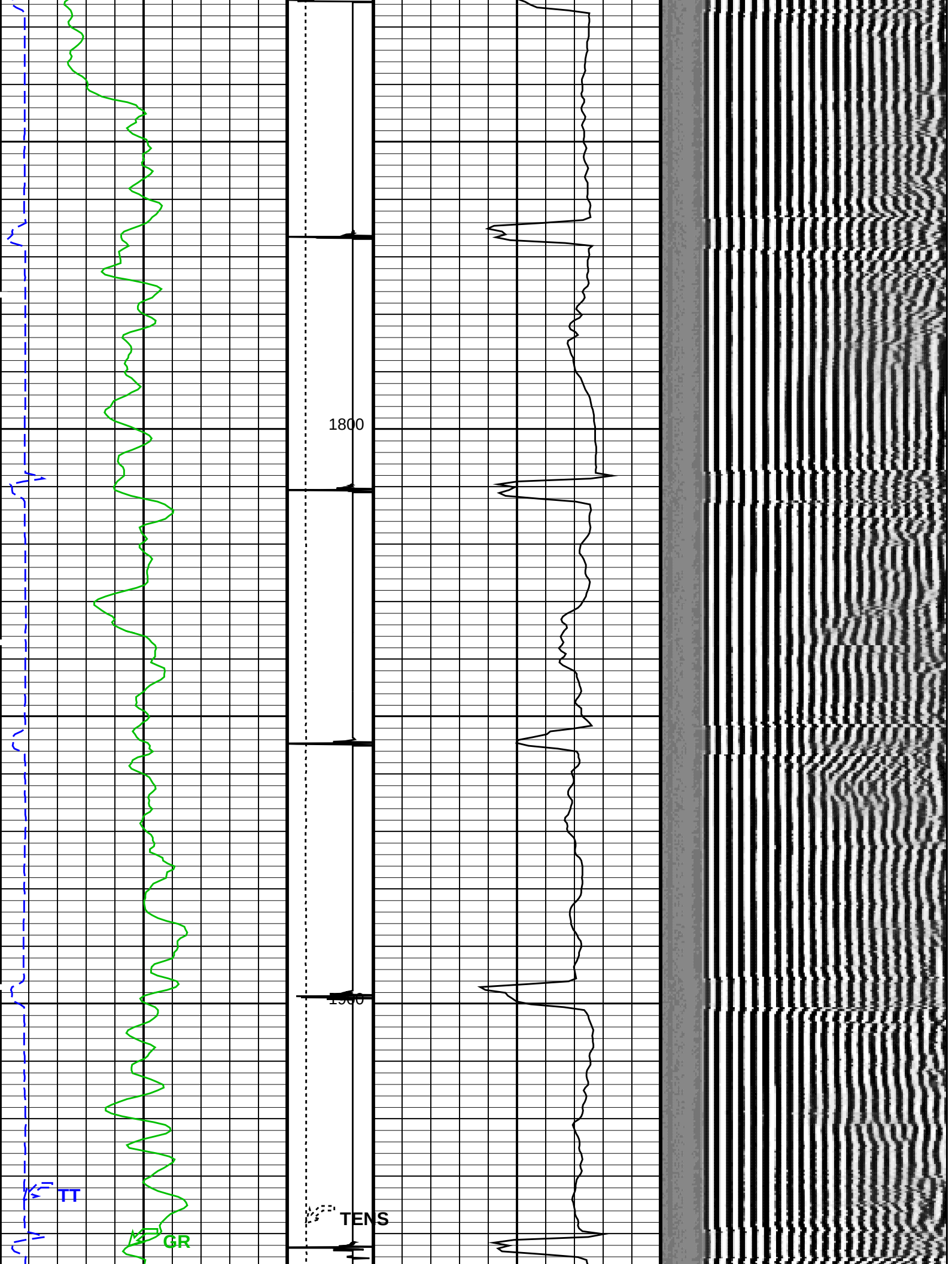
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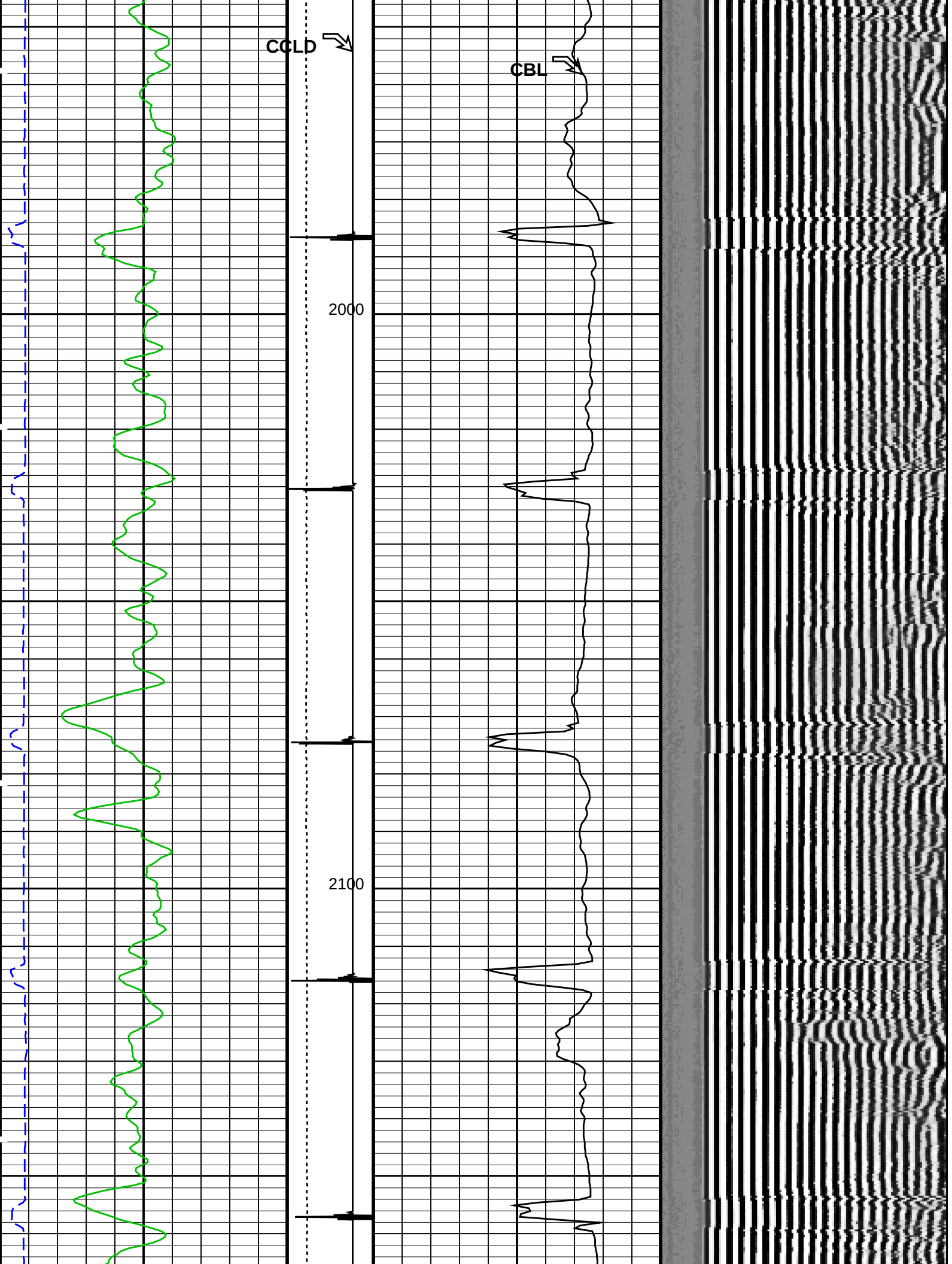
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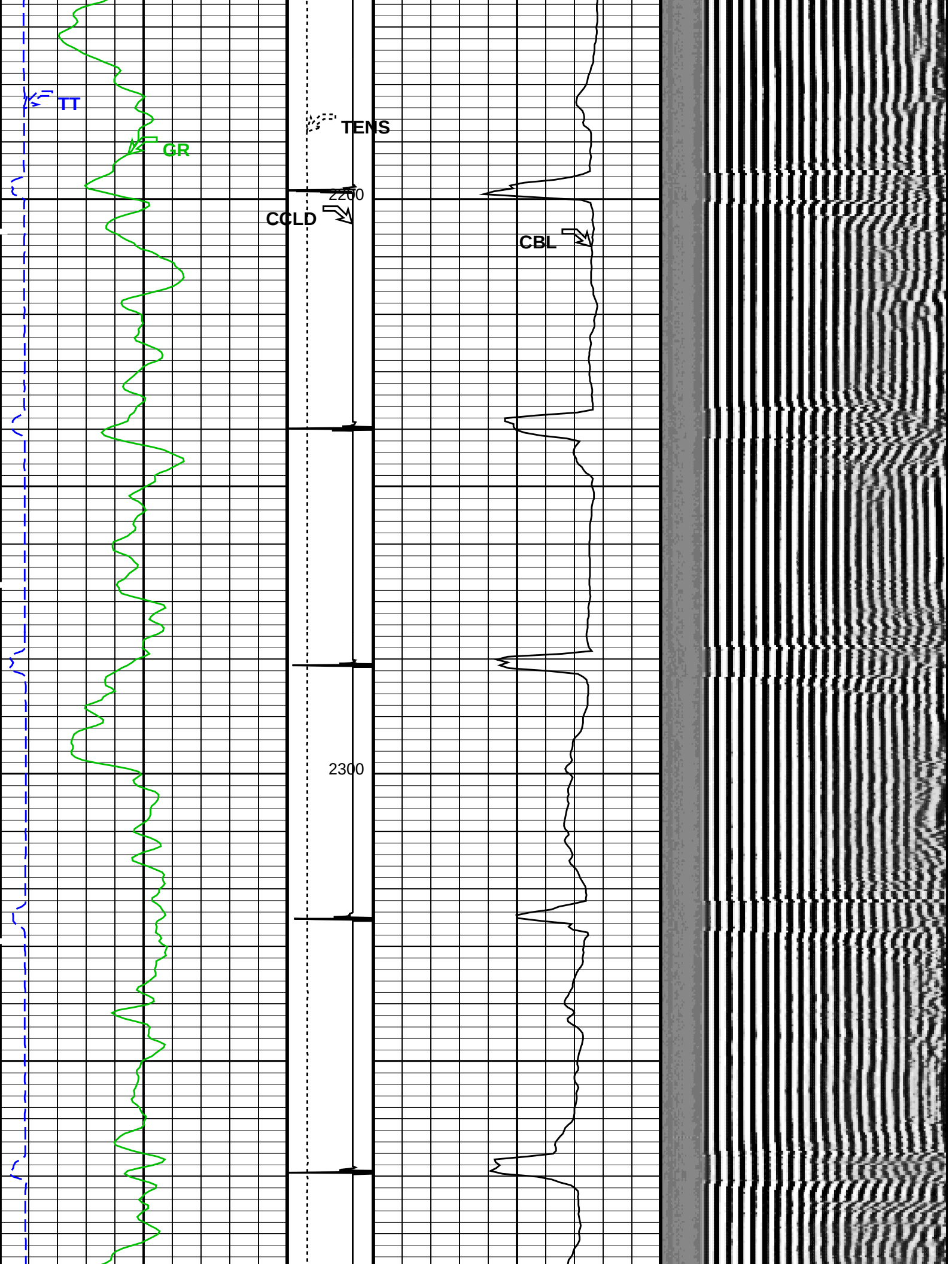
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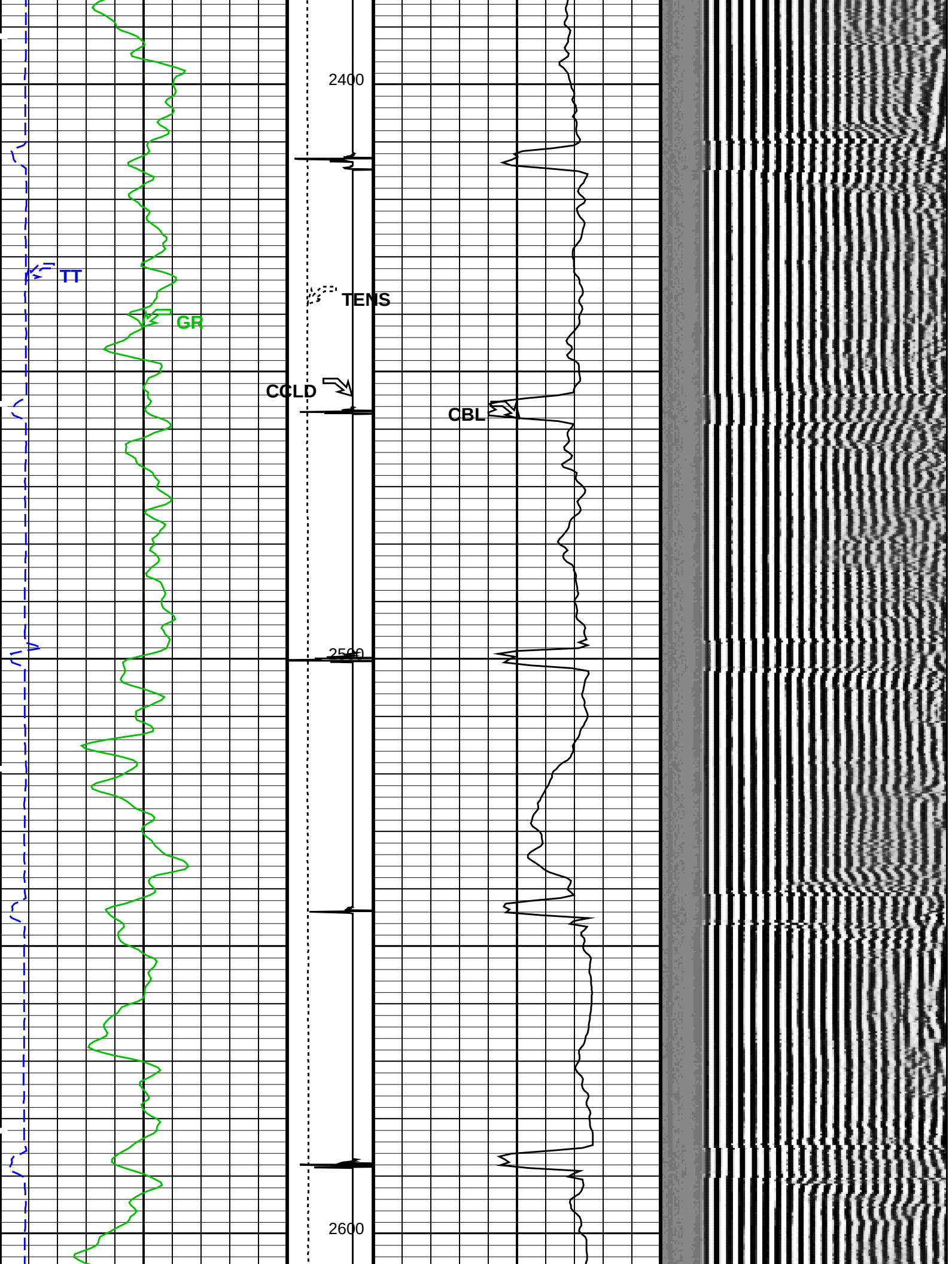
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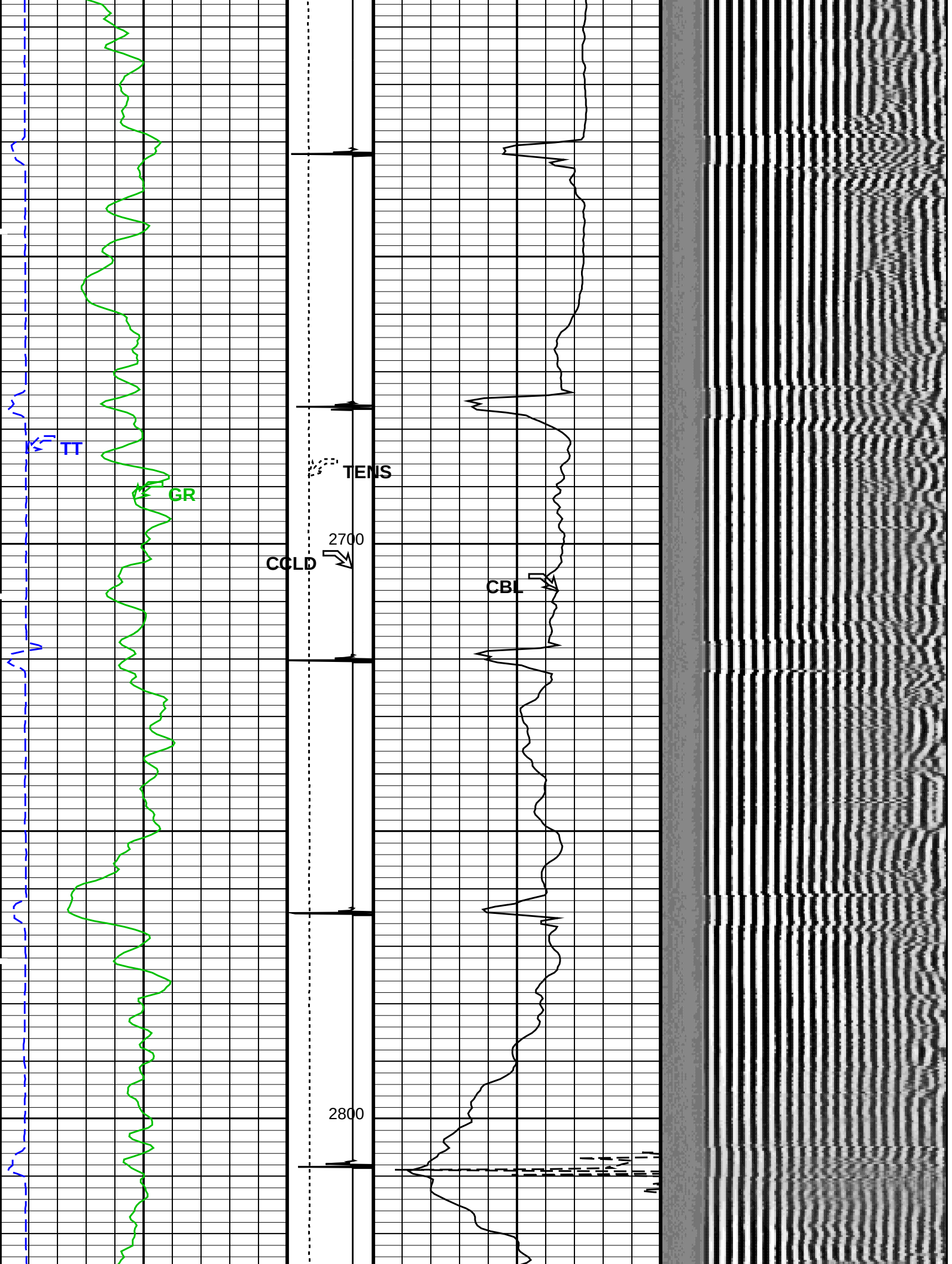
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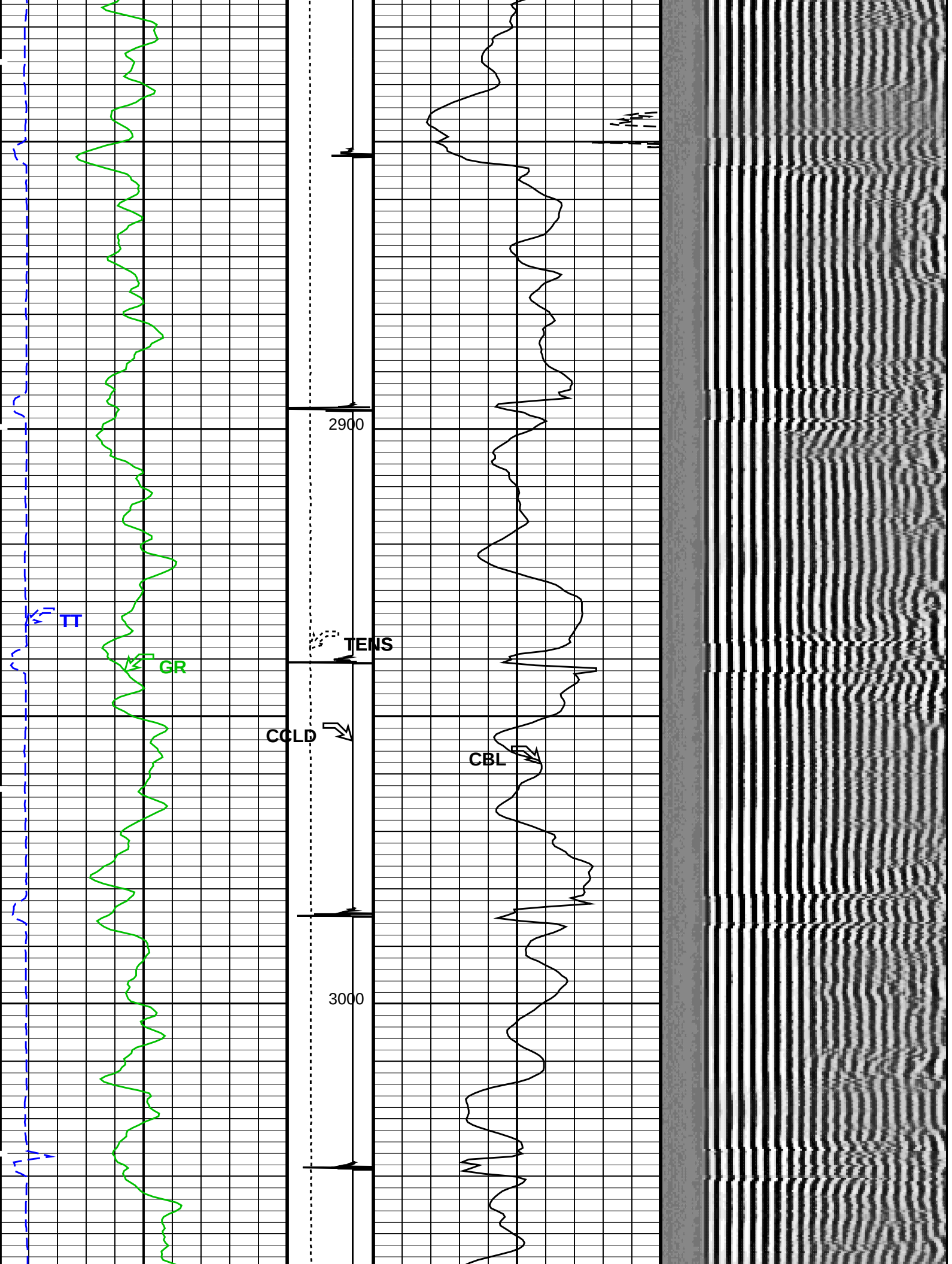
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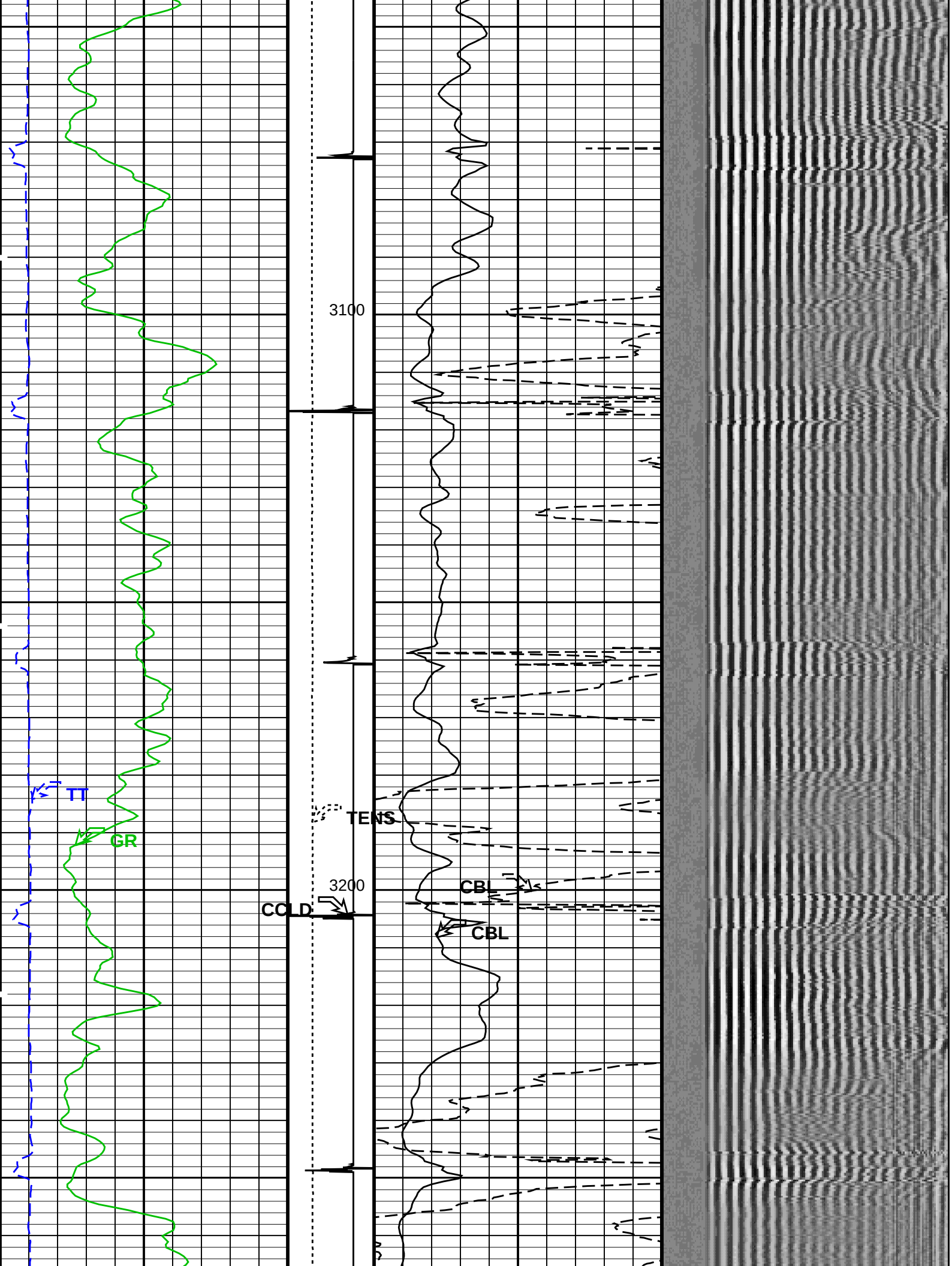
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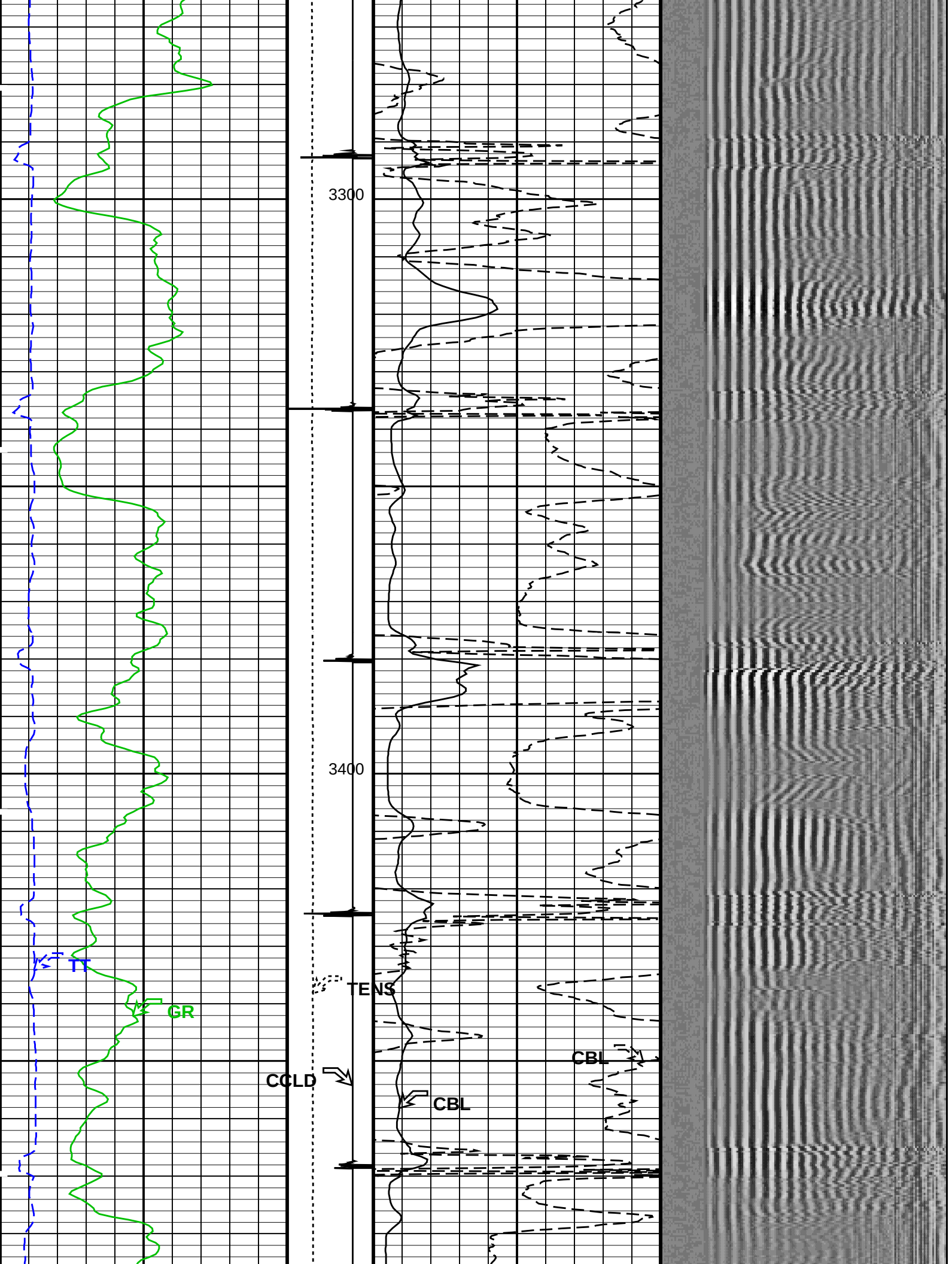
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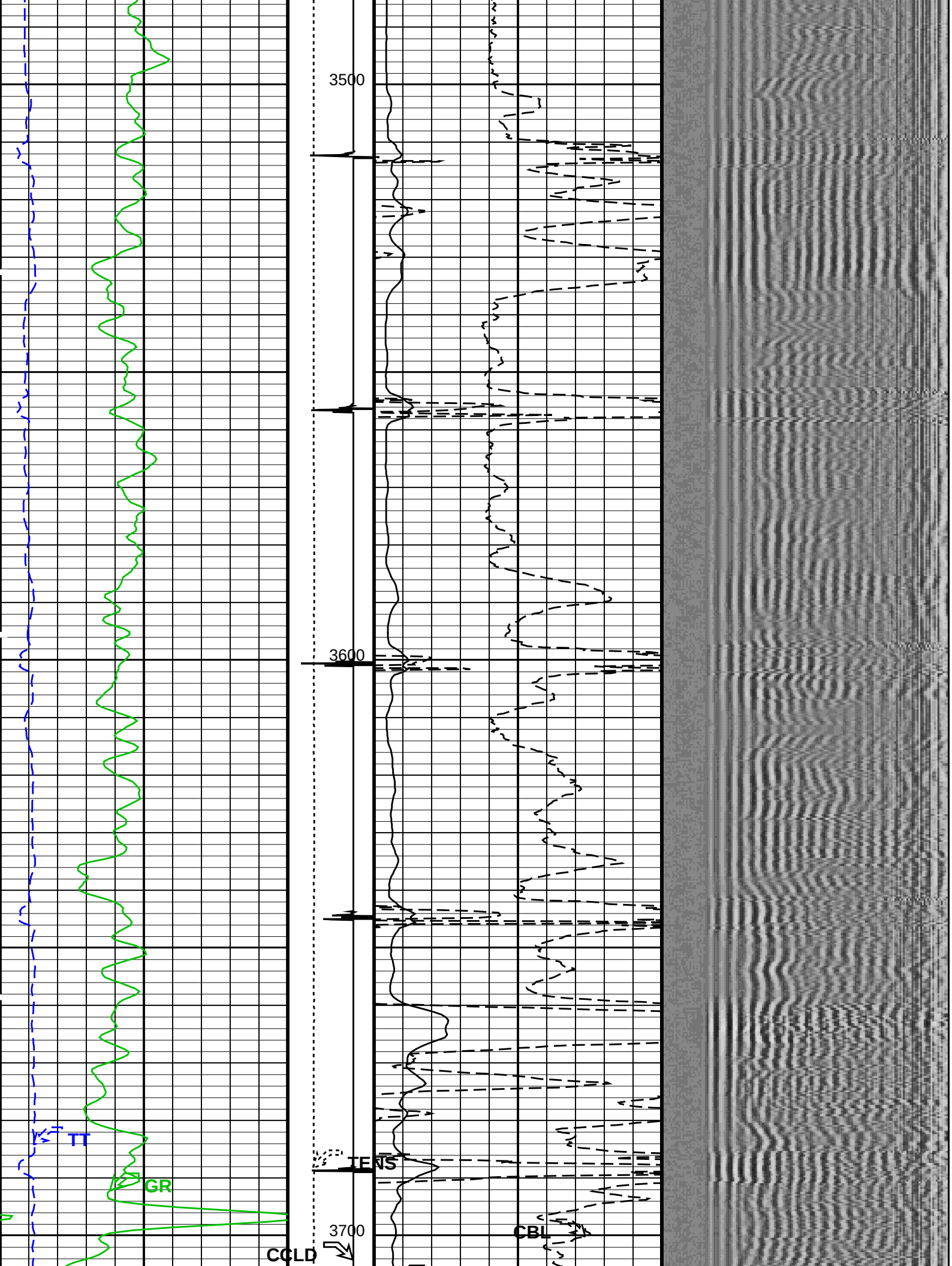
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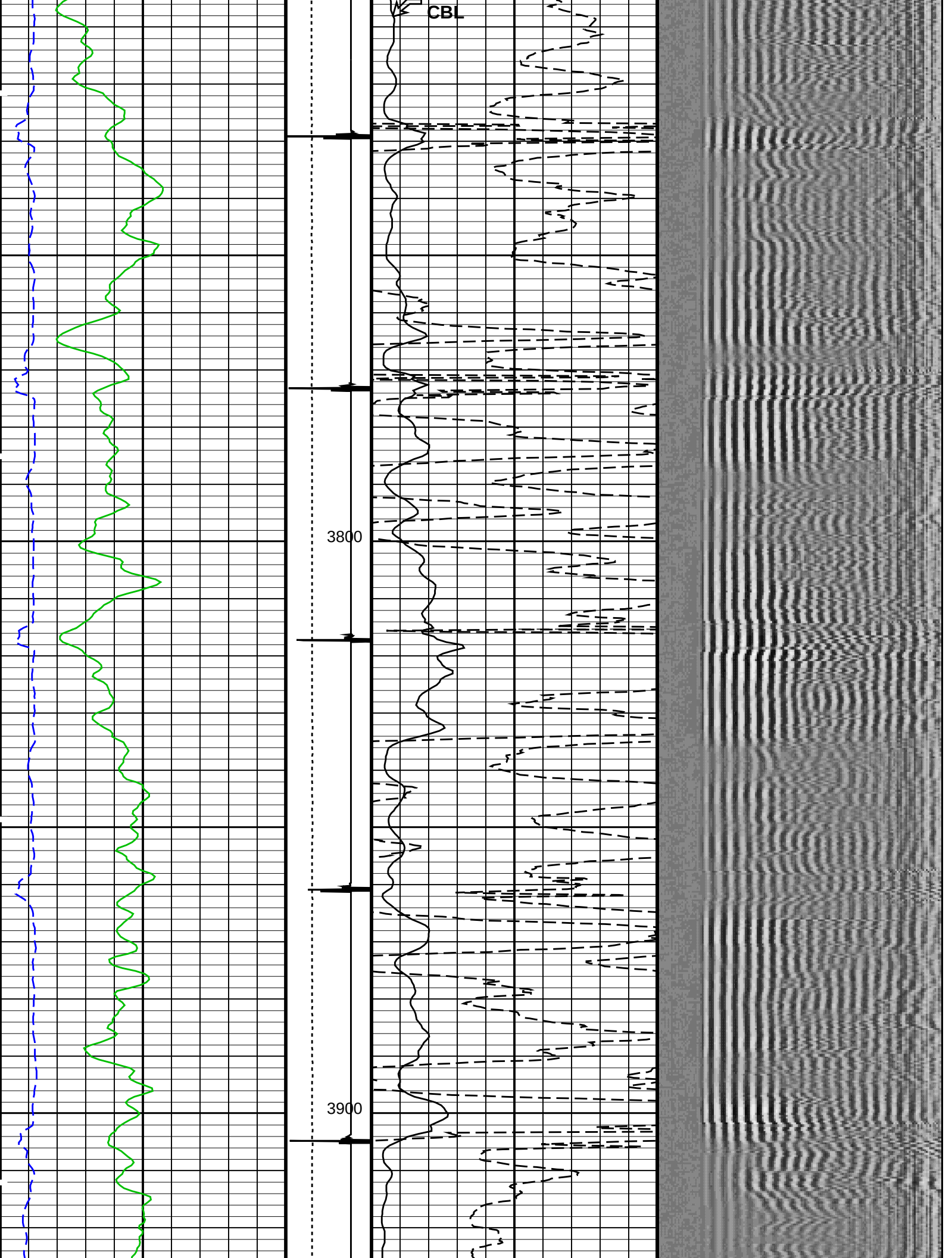
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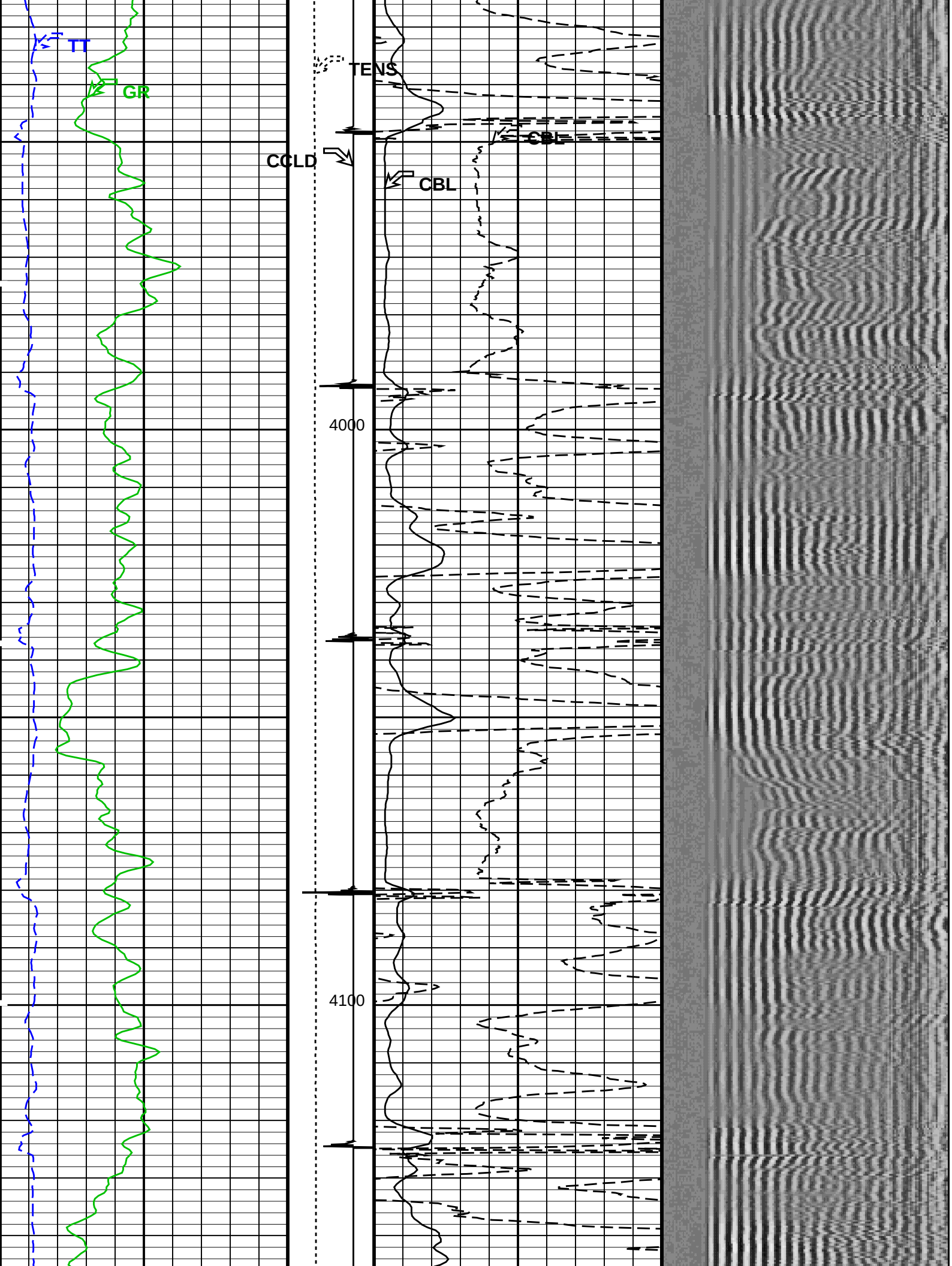
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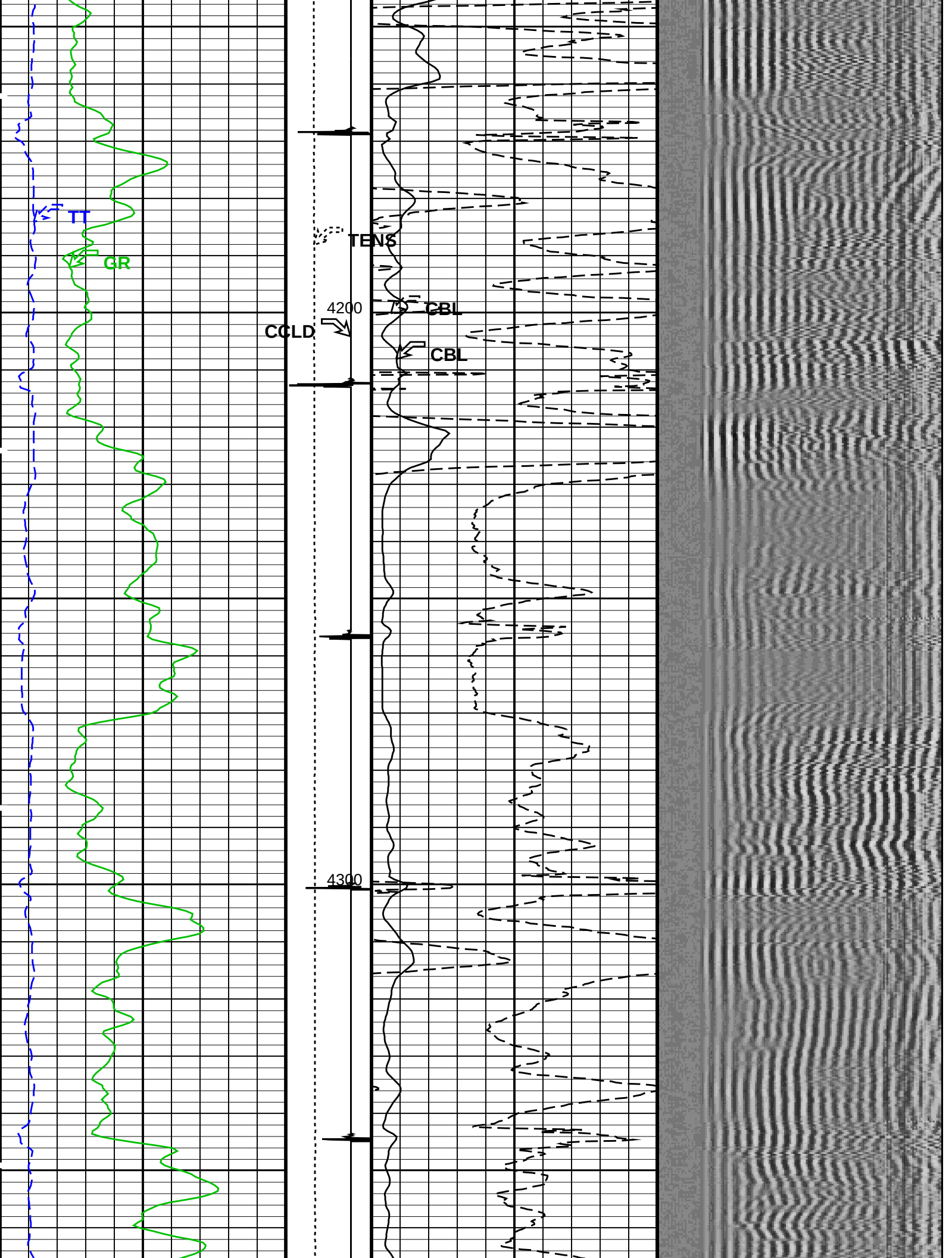
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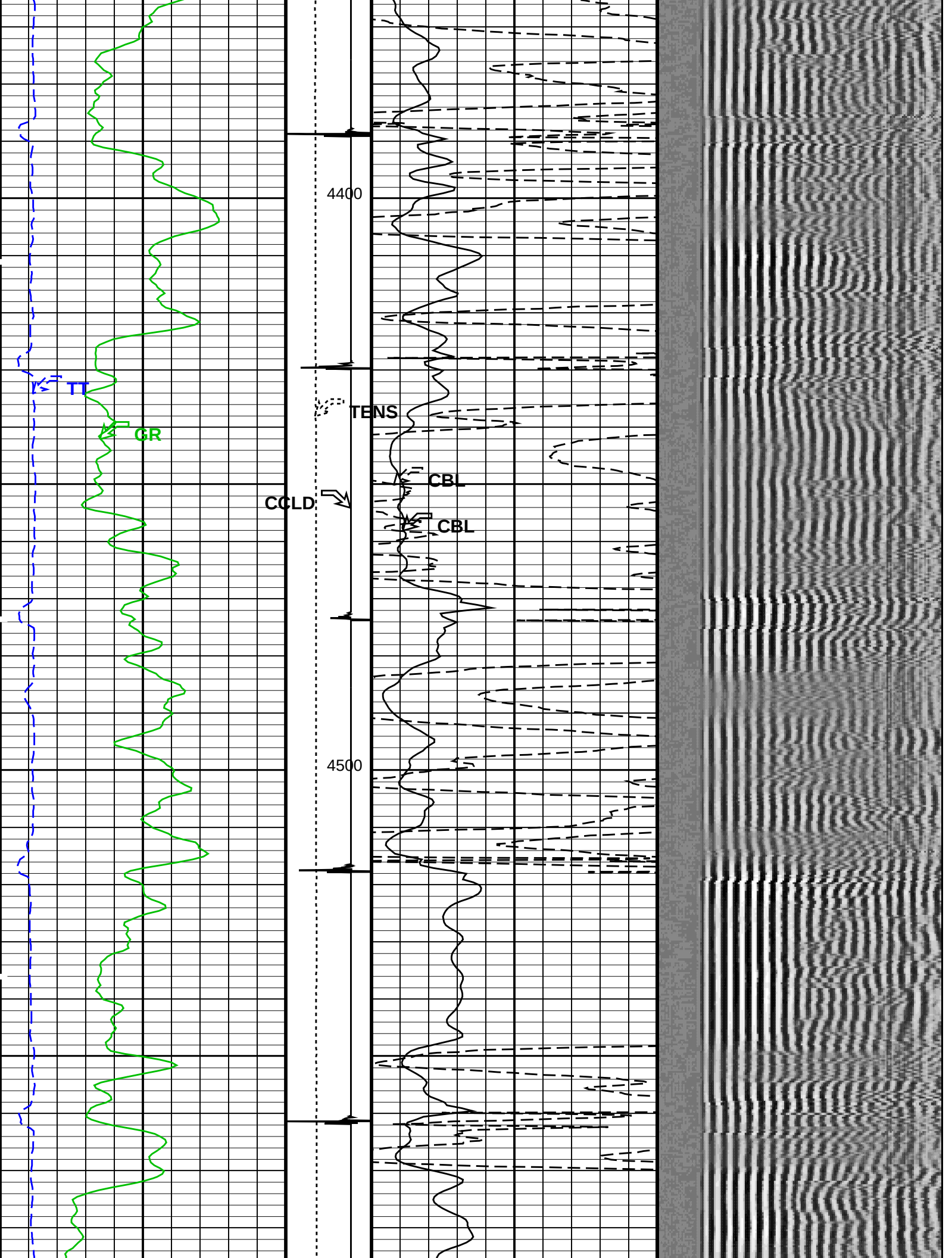
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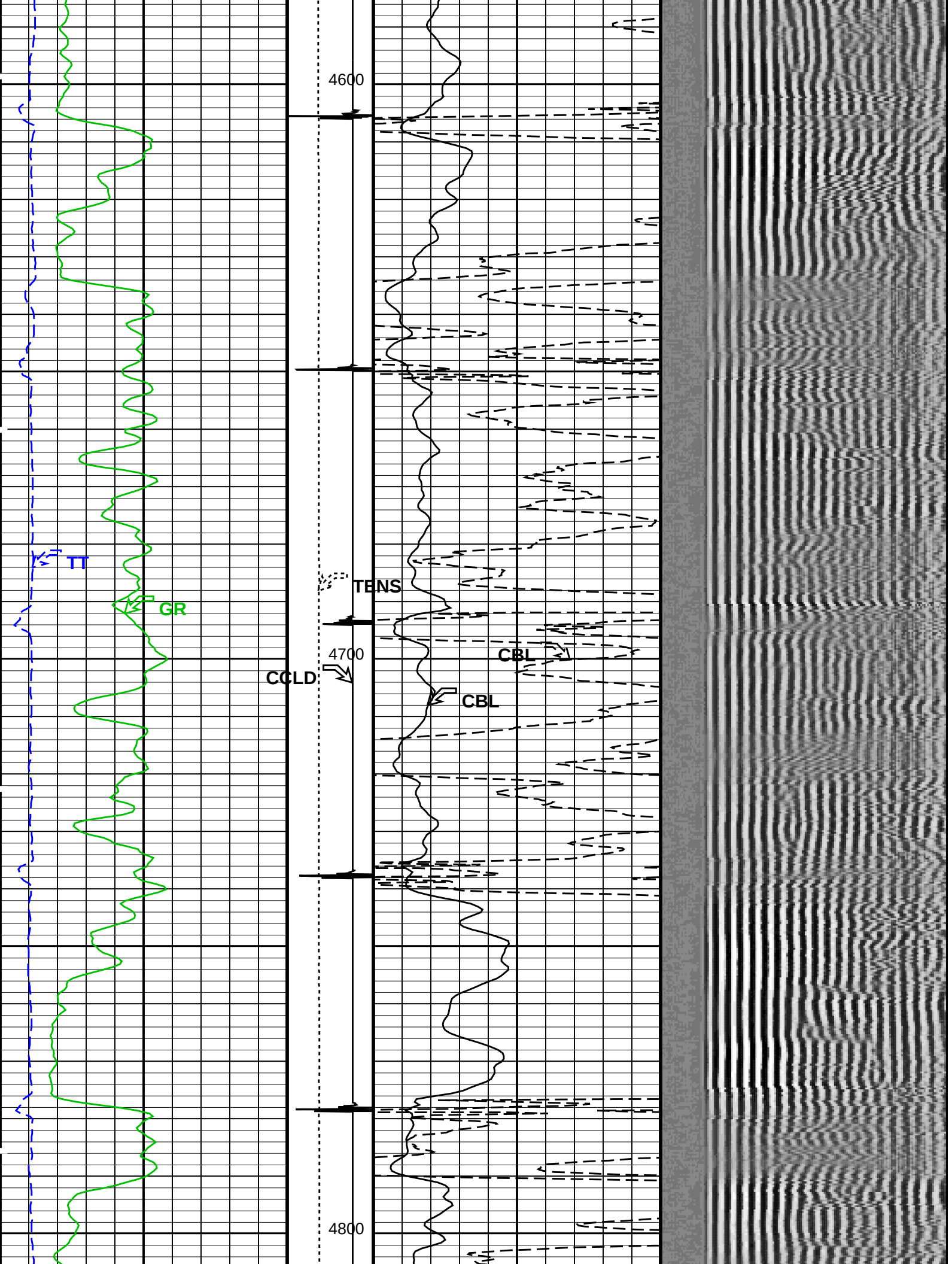
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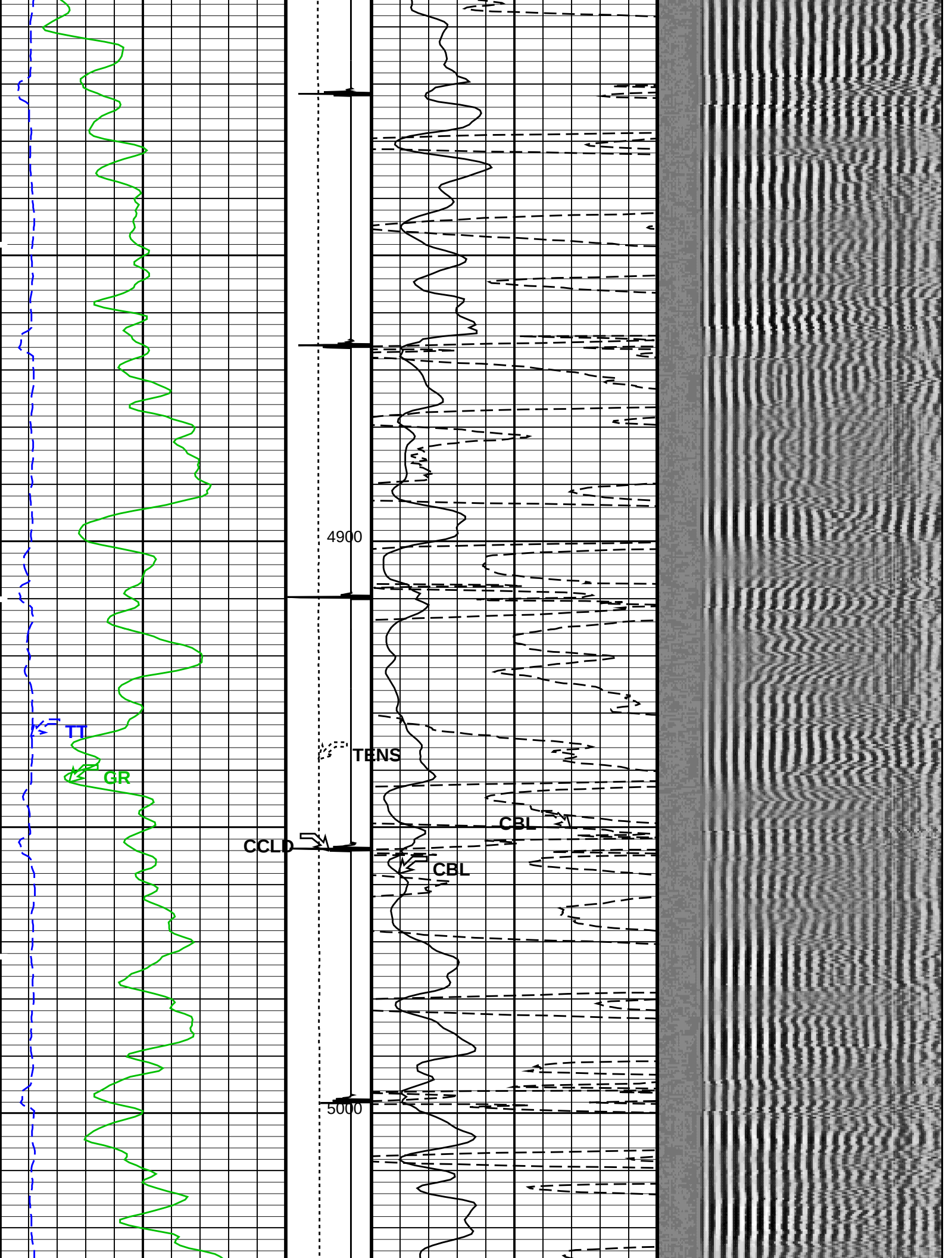
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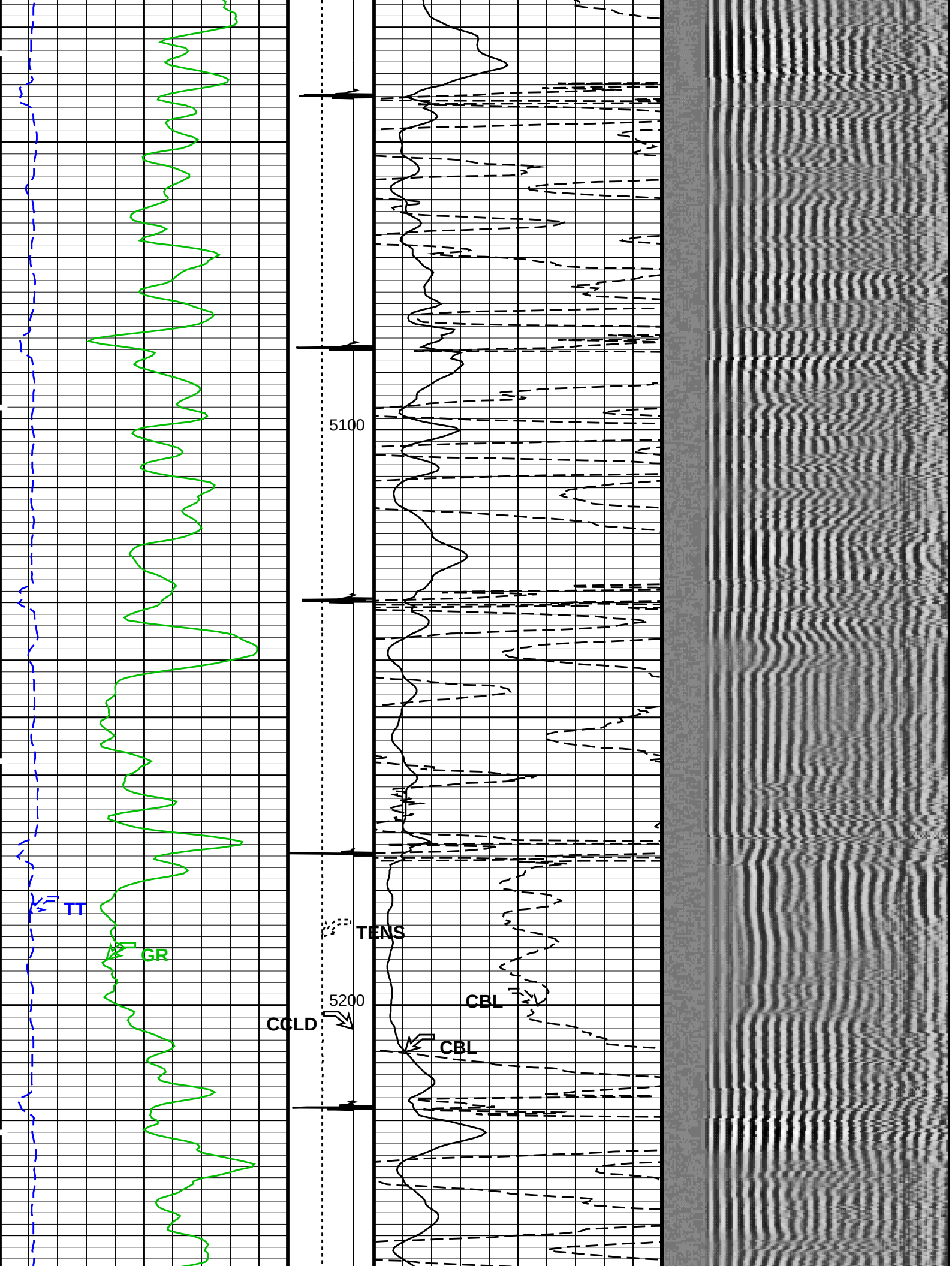
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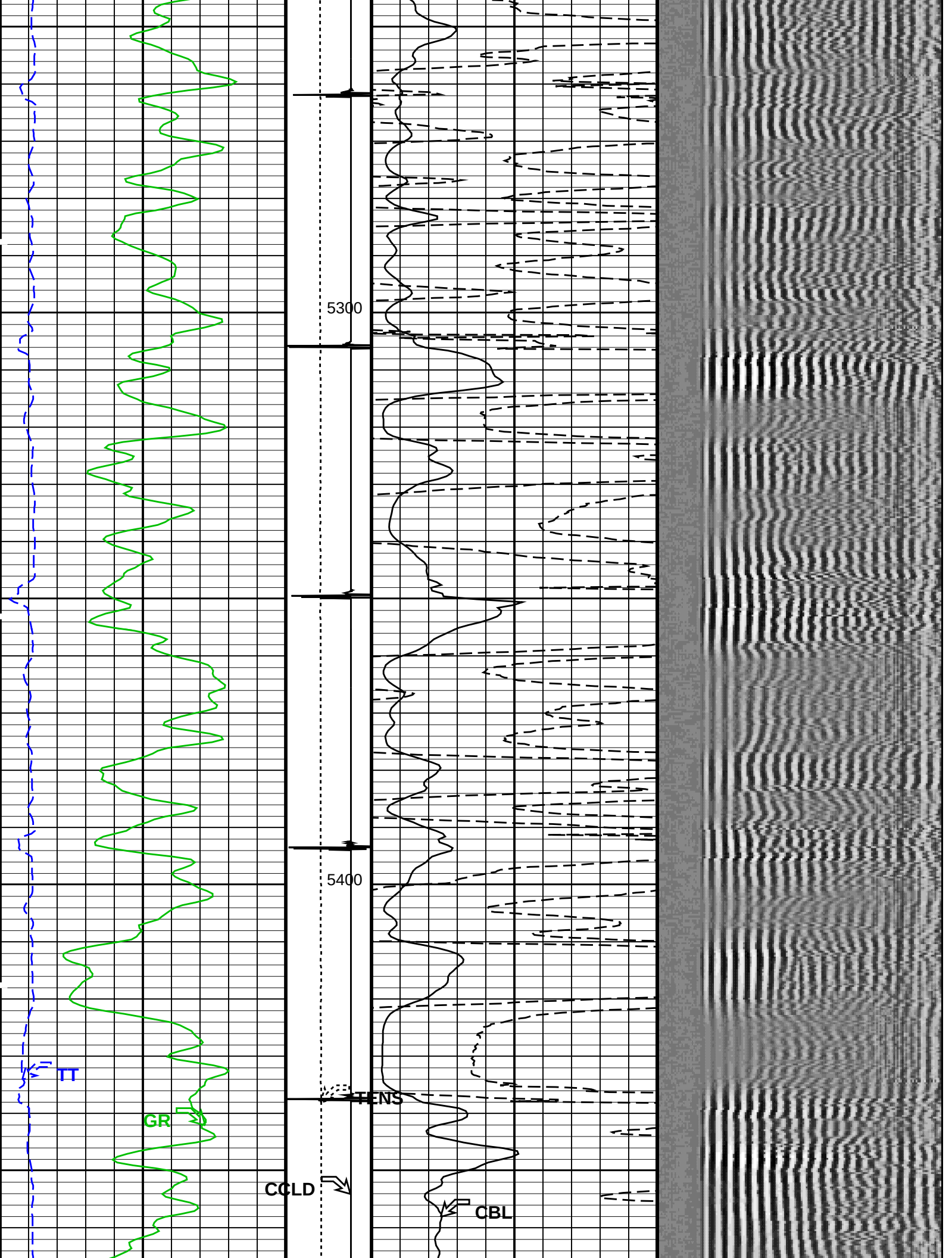
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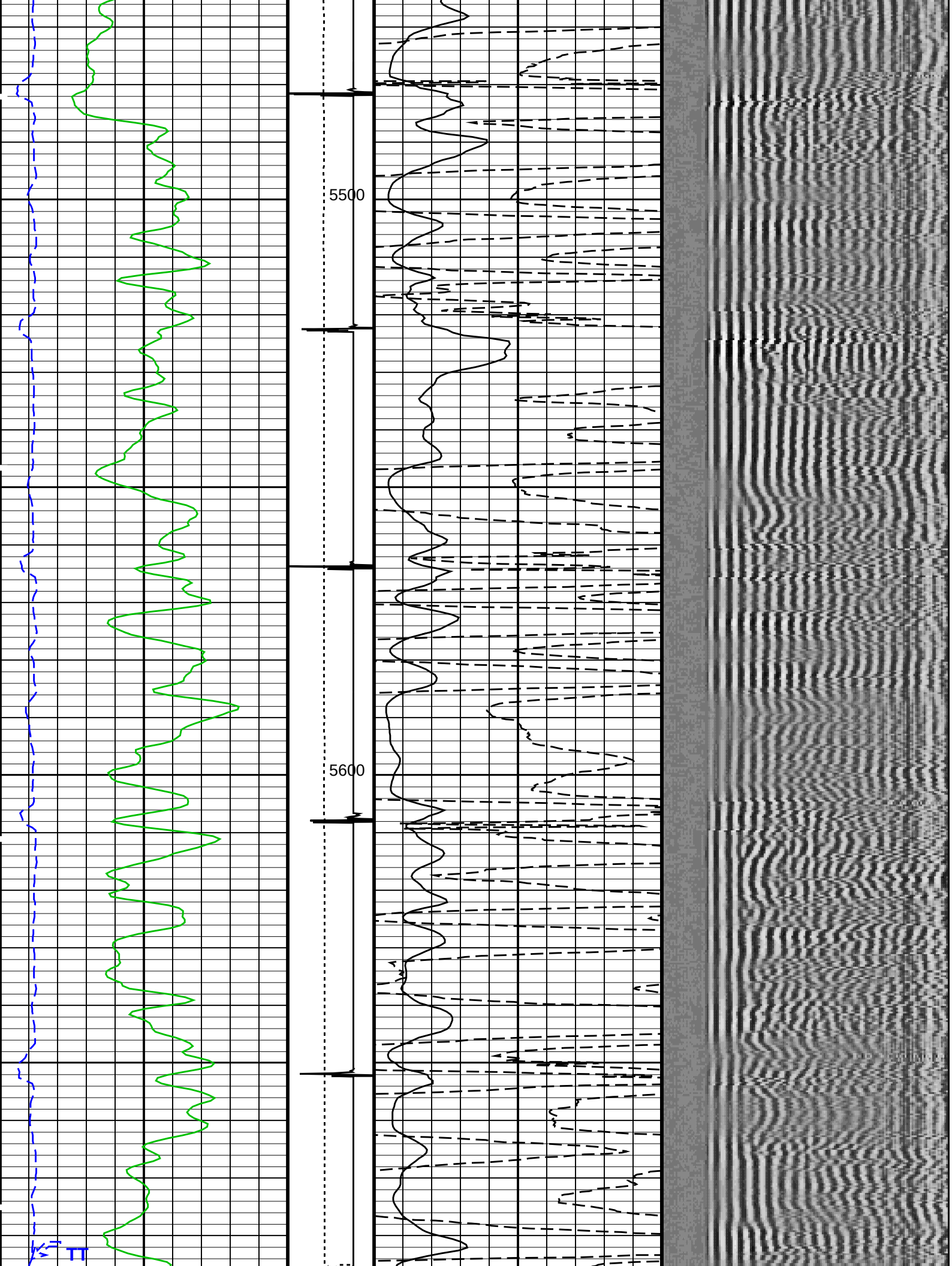
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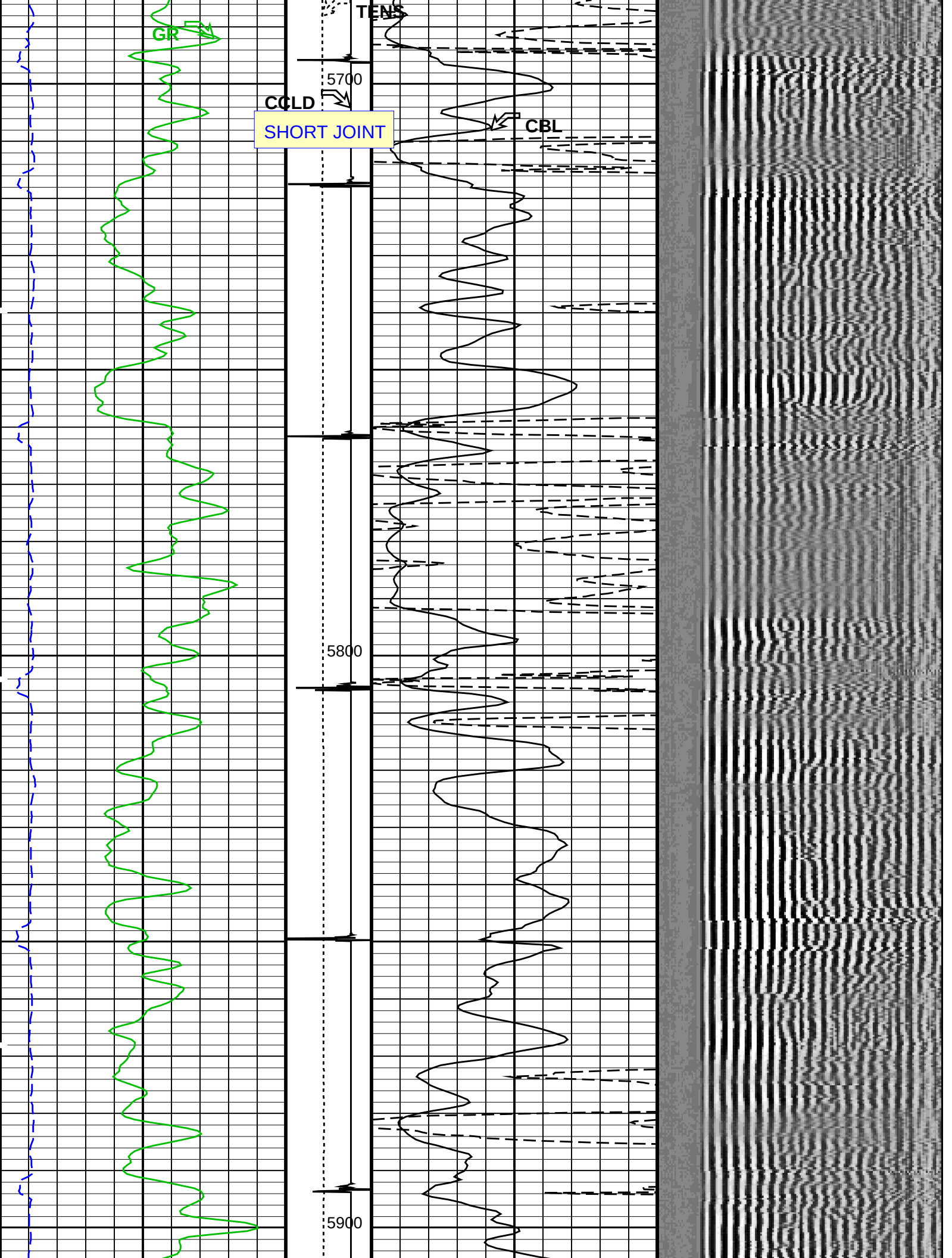
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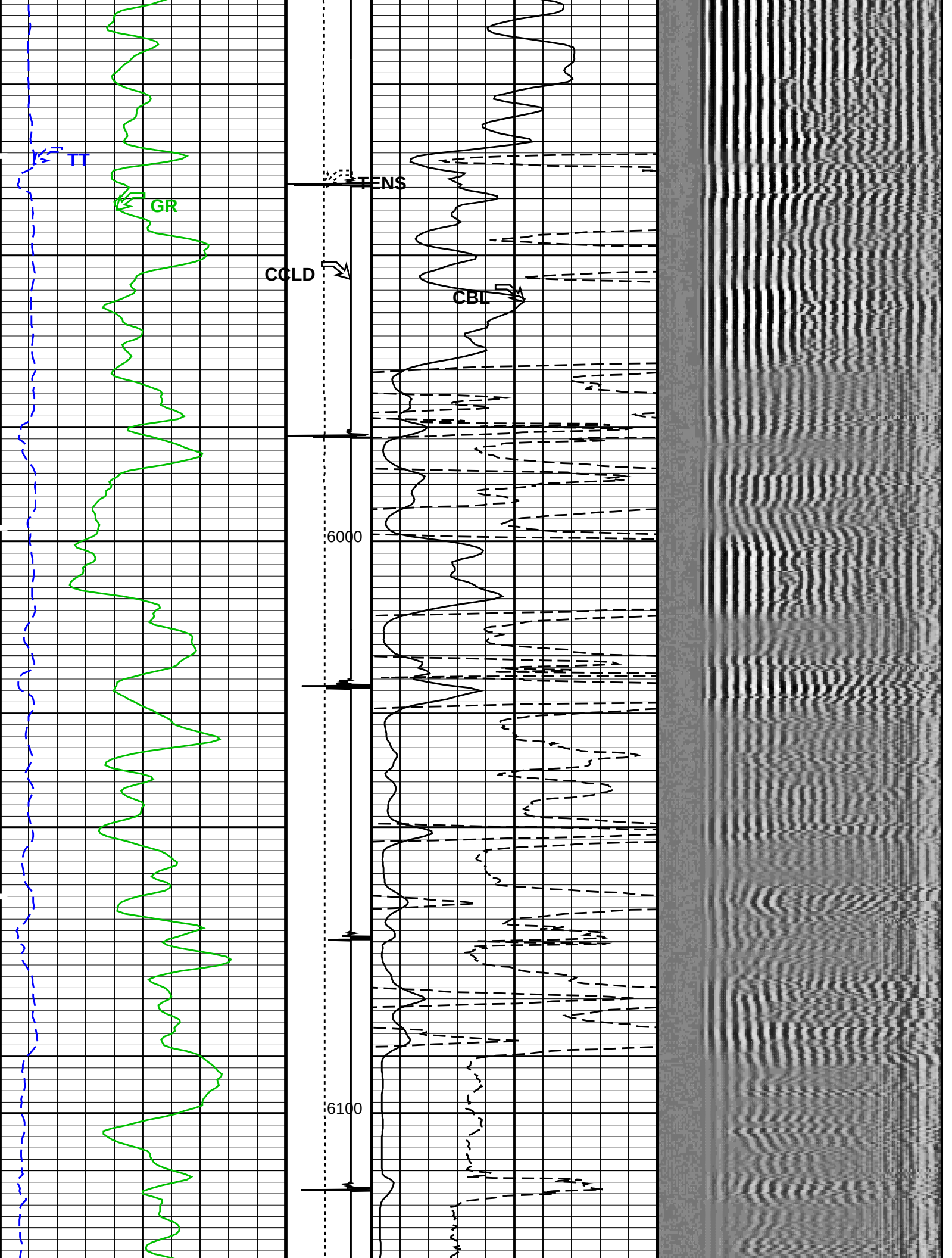
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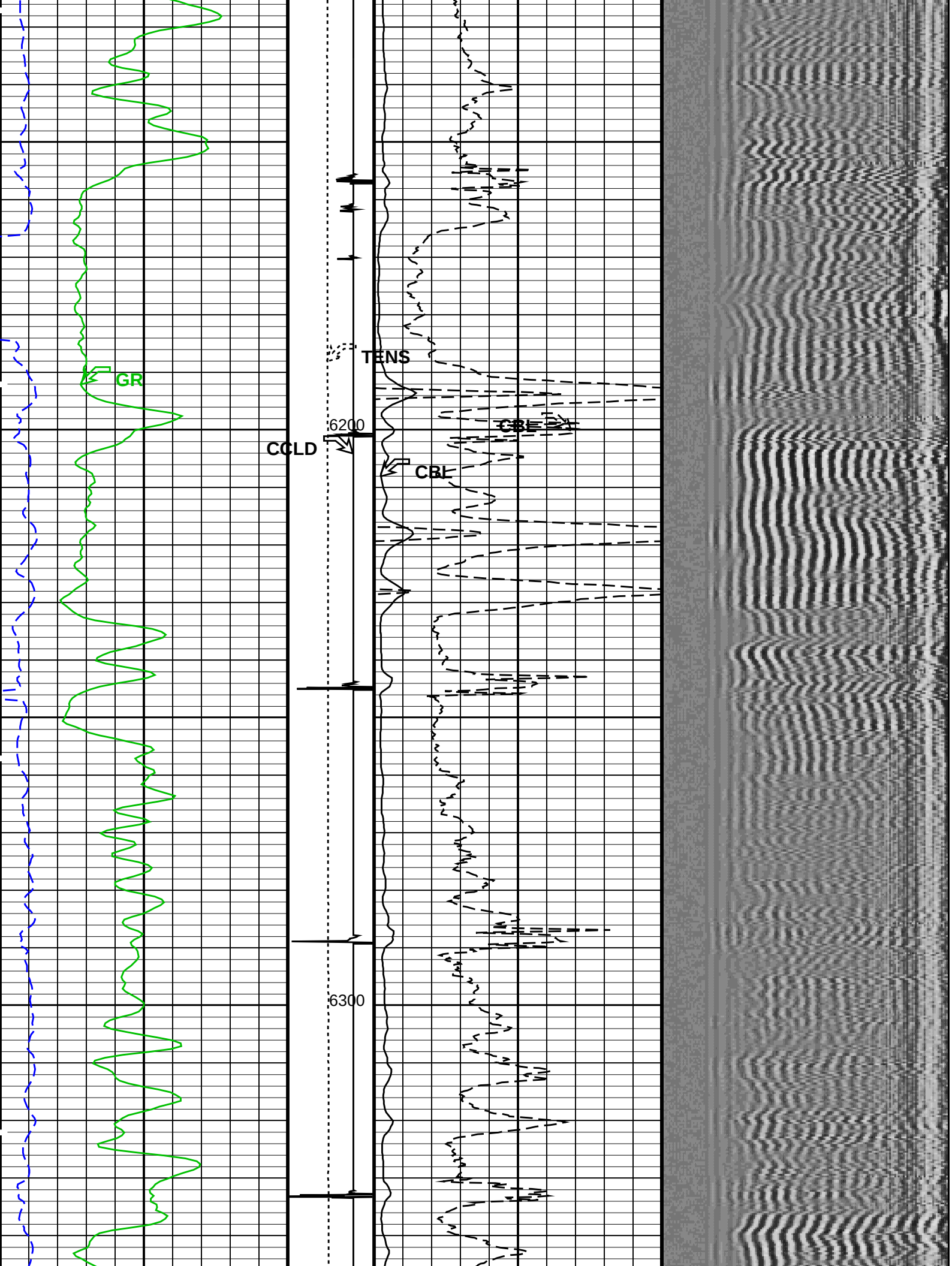
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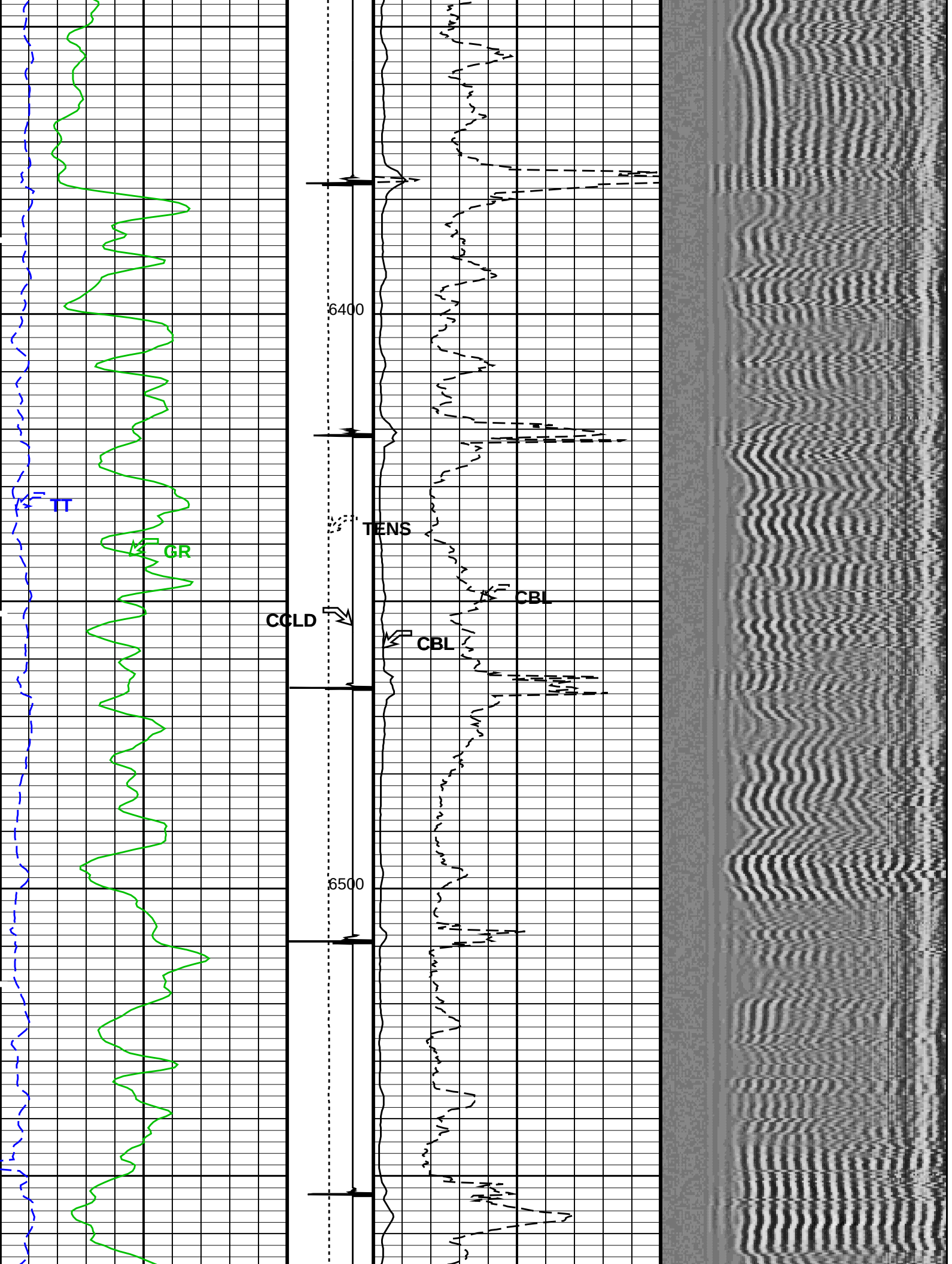
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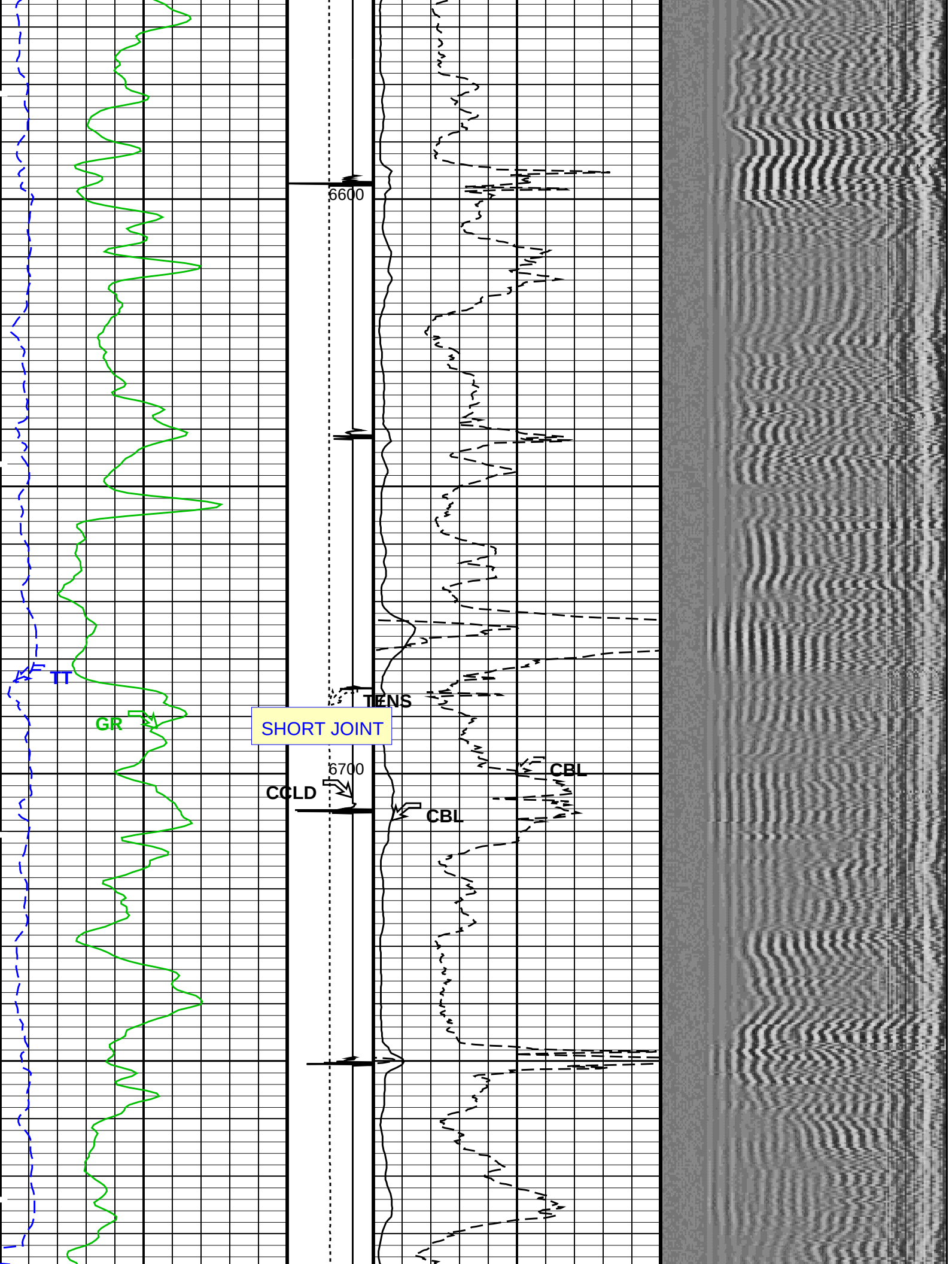
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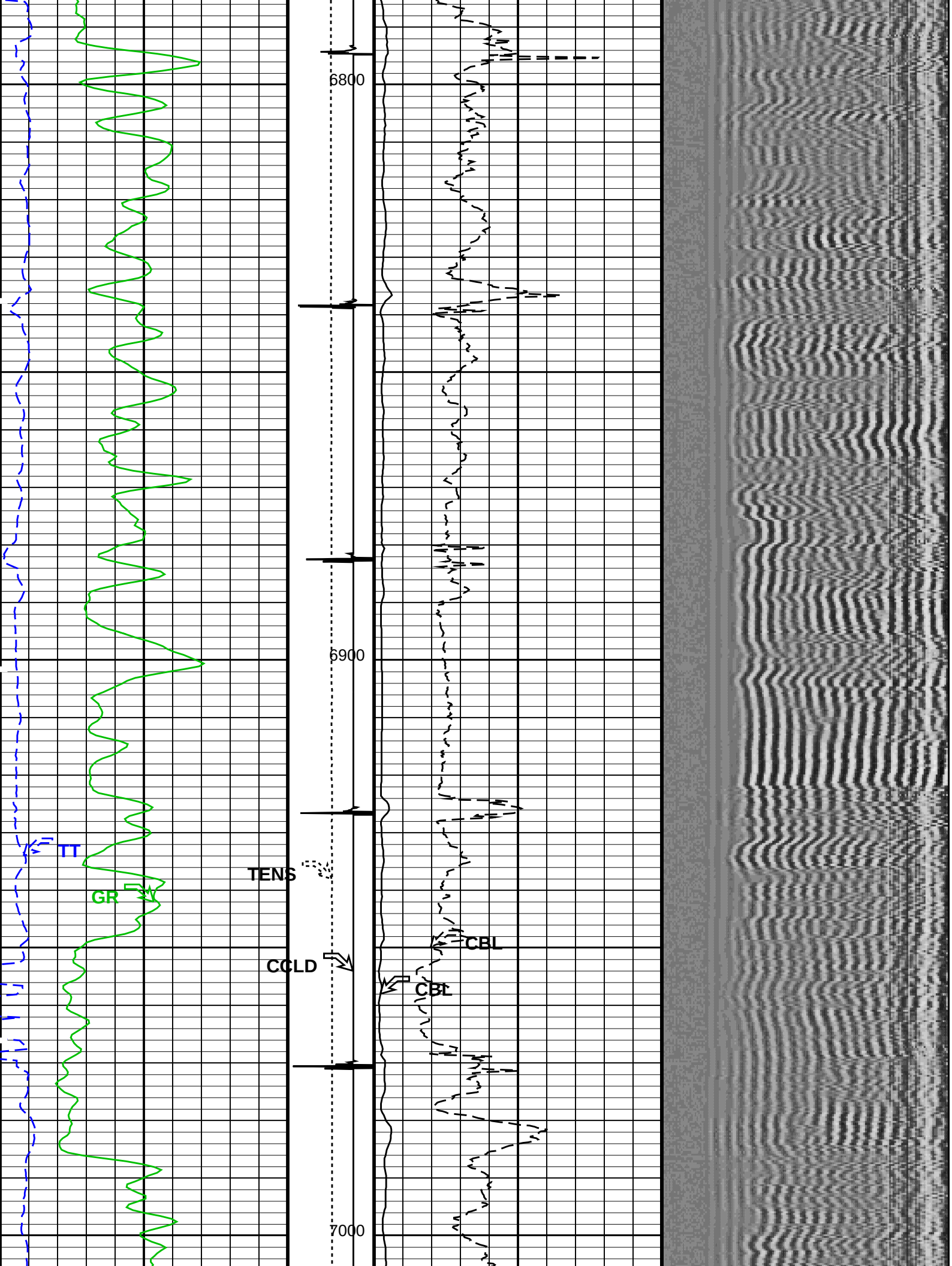
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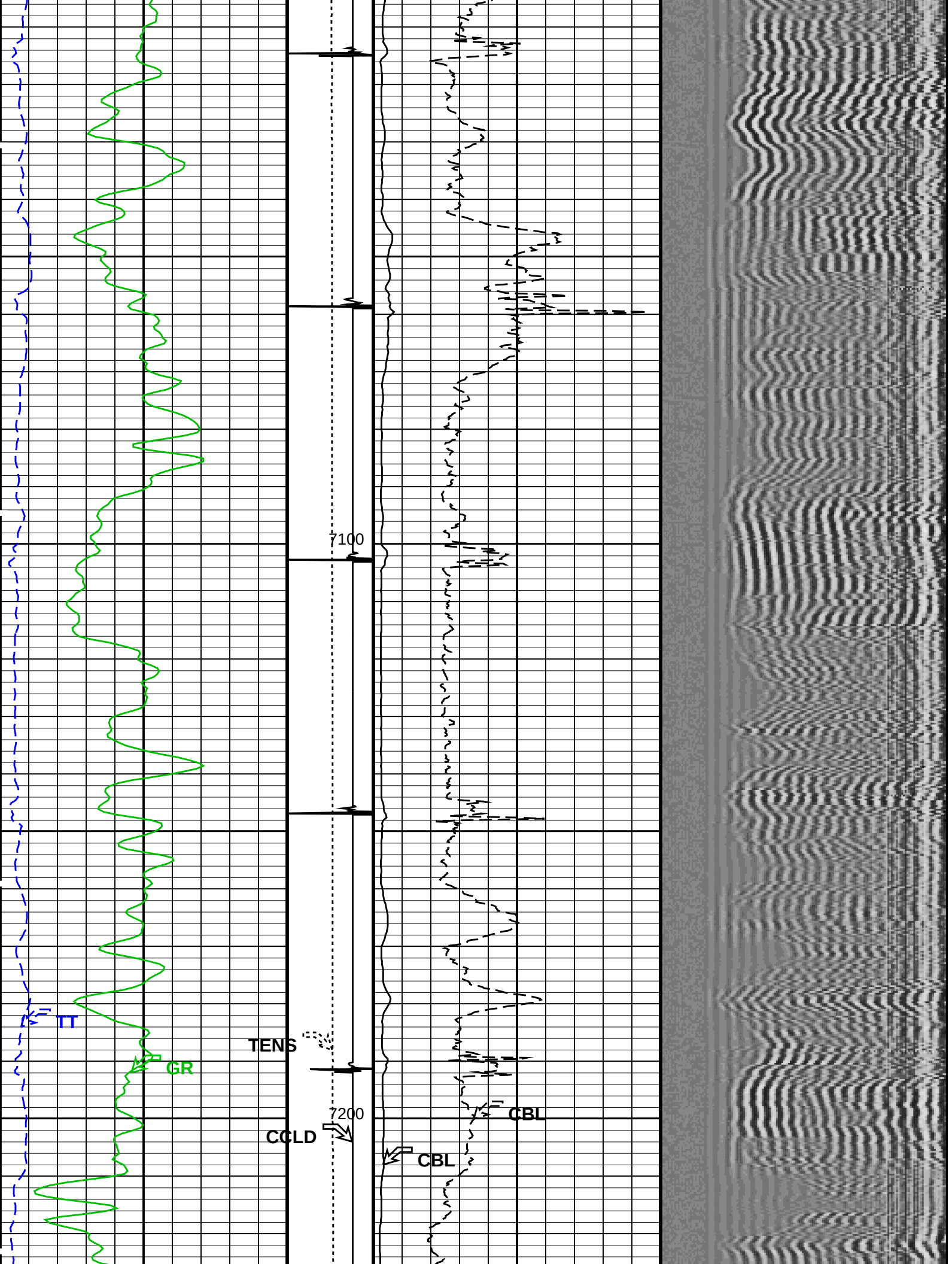
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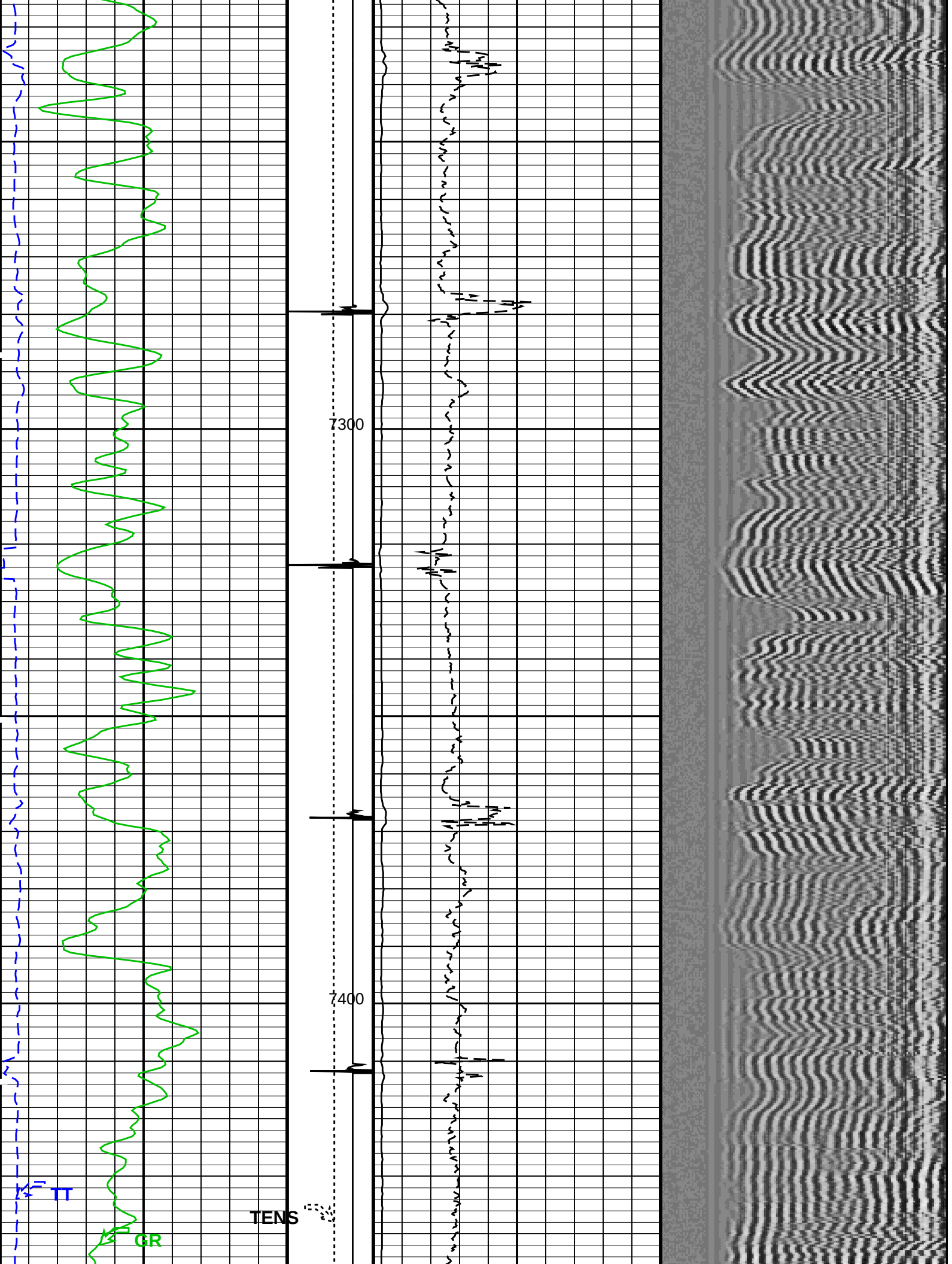
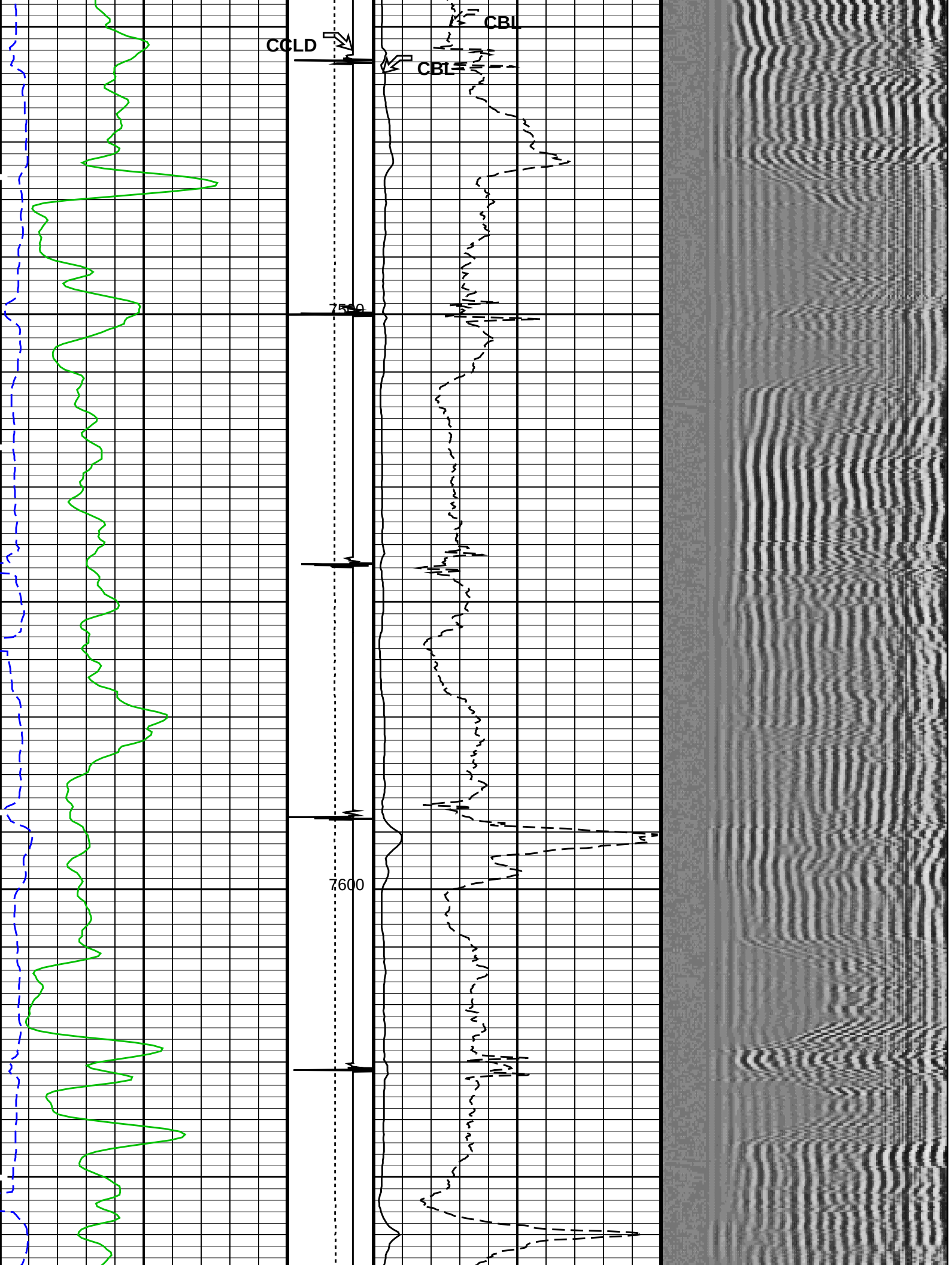
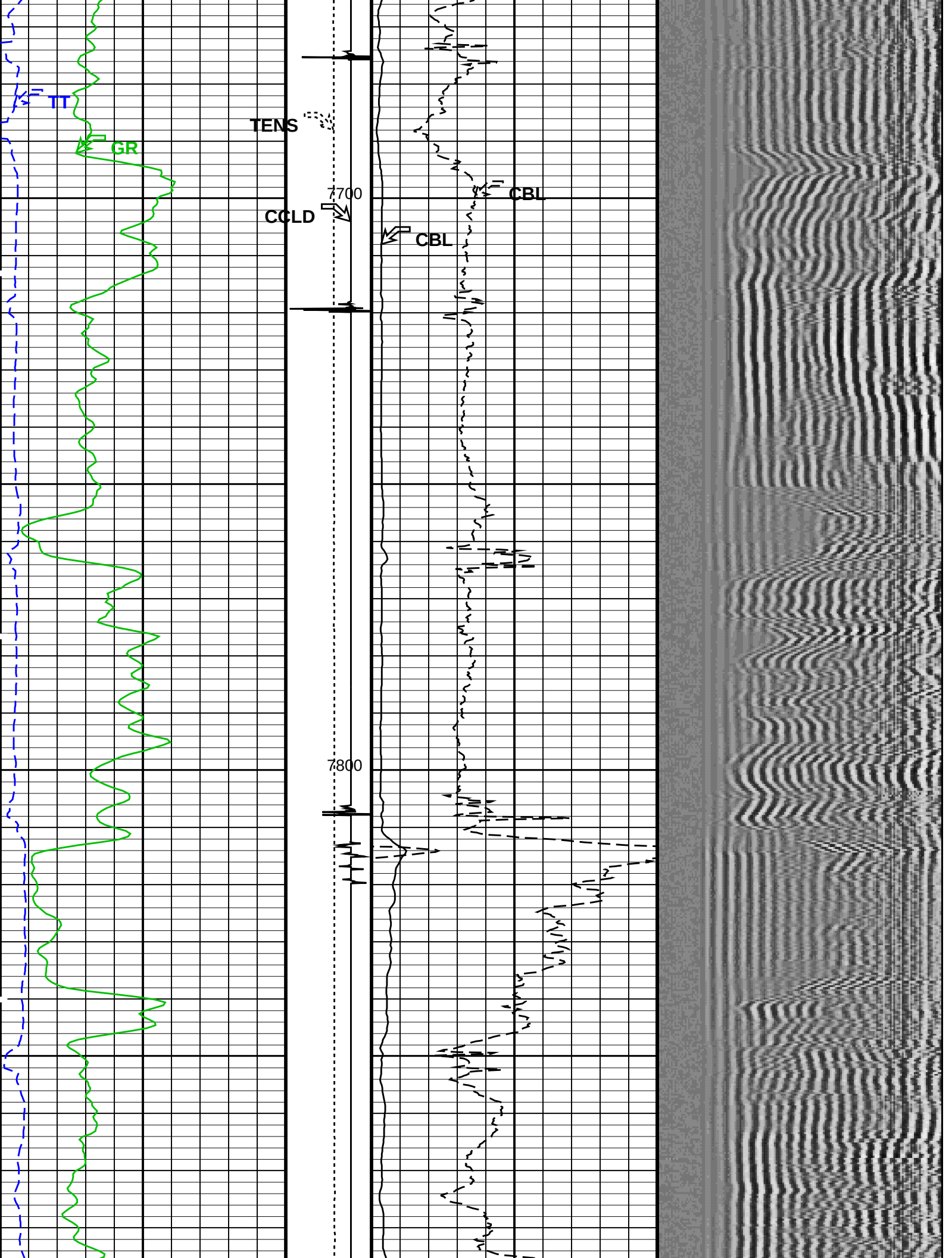
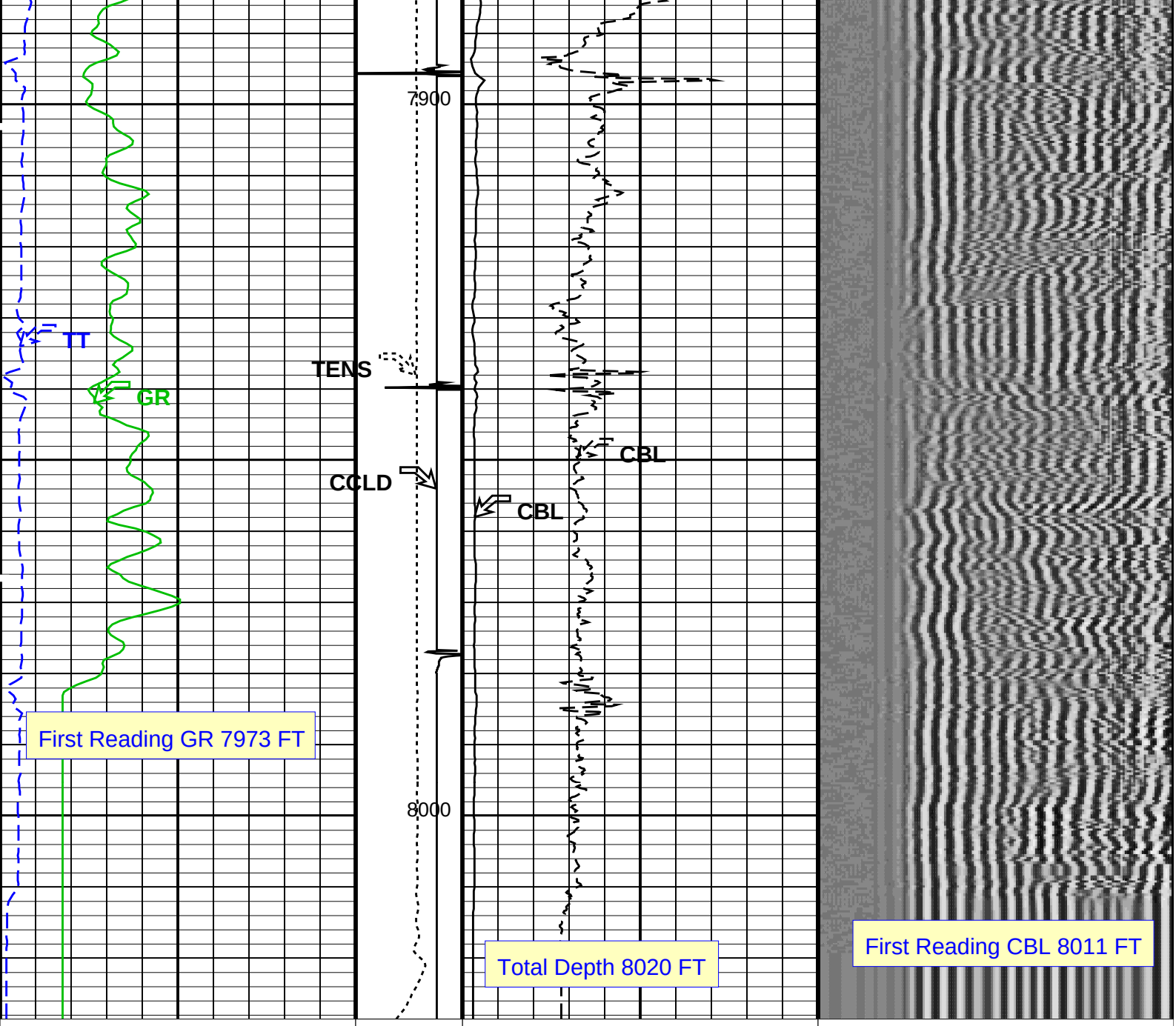
CCLD
CBL
CBL


7300
7400
TT
TENS
GR


CCLD
CBL
CBL
7600


TT
GR
TENS
7700
CCLD
CBL
CBL
7800



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

PIP SUMMARY

Time Mark Every 60 S

Format: CBL_VDL Vertical Scale: 5" per 100' Graphics File Created: 28−Apr−2013 09:04

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)	0.900000
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	5.0	FT
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	8020	FT

Input DLIS Files

DEFAULT	SCMT_RST_PSP_060LUP	FN:58	PRODUCER	28−Apr−2013 06:53	8023.5 FT	4.0 FT

Output DLIS Files

DEFAULT	SCMT_RST_PSP_063PUP	FN:61	PRODUCER	28−Apr−2013 09:03

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REPEAT ANALYSIS CBL VDL

MAXIS Field Log

Company: ENCANA OIL & GAS (USA) INC **Well: SHIDELER 30−8B (O19EB)**

Input DLIS Files

DEFAULT	SCMT_RST_PSP_058LUP	FN:56	PRODUCER	28−Apr−2013 06:39	5932.0 FT	5568.0 FT
DEFAULT	SCMT_RST_PSP_063PUP	FN:61	PRODUCER	28−Apr−2013 09:03	8028.5 FT	−35.5 FT

Output DLIS Files

DEFAULT	SCMT_RST_PSP_064PUP	FN:62	PRODUCER	28−Apr−2013 09:10	5934.0 FT	5525.5 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

TT_REP Curve (TT_REP) 260 (US) 160

TENS_REP Curve (TENS_REP) (LBF) 0 2000

CBL_1_REP Curve (CBL_REP) 0 (MV) 10

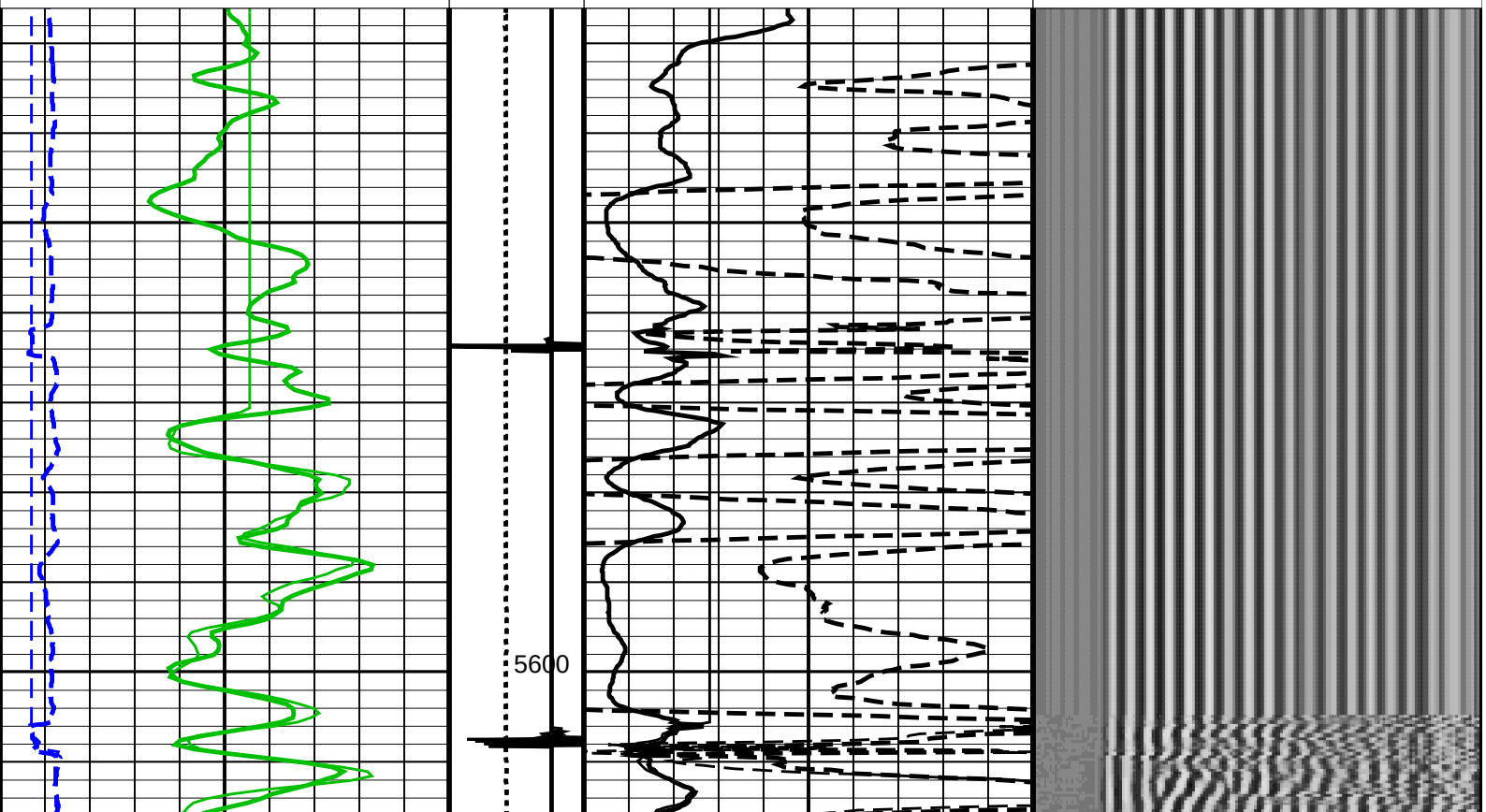
GR_REP Curve (GR_REP) 0 (GAPI) 150

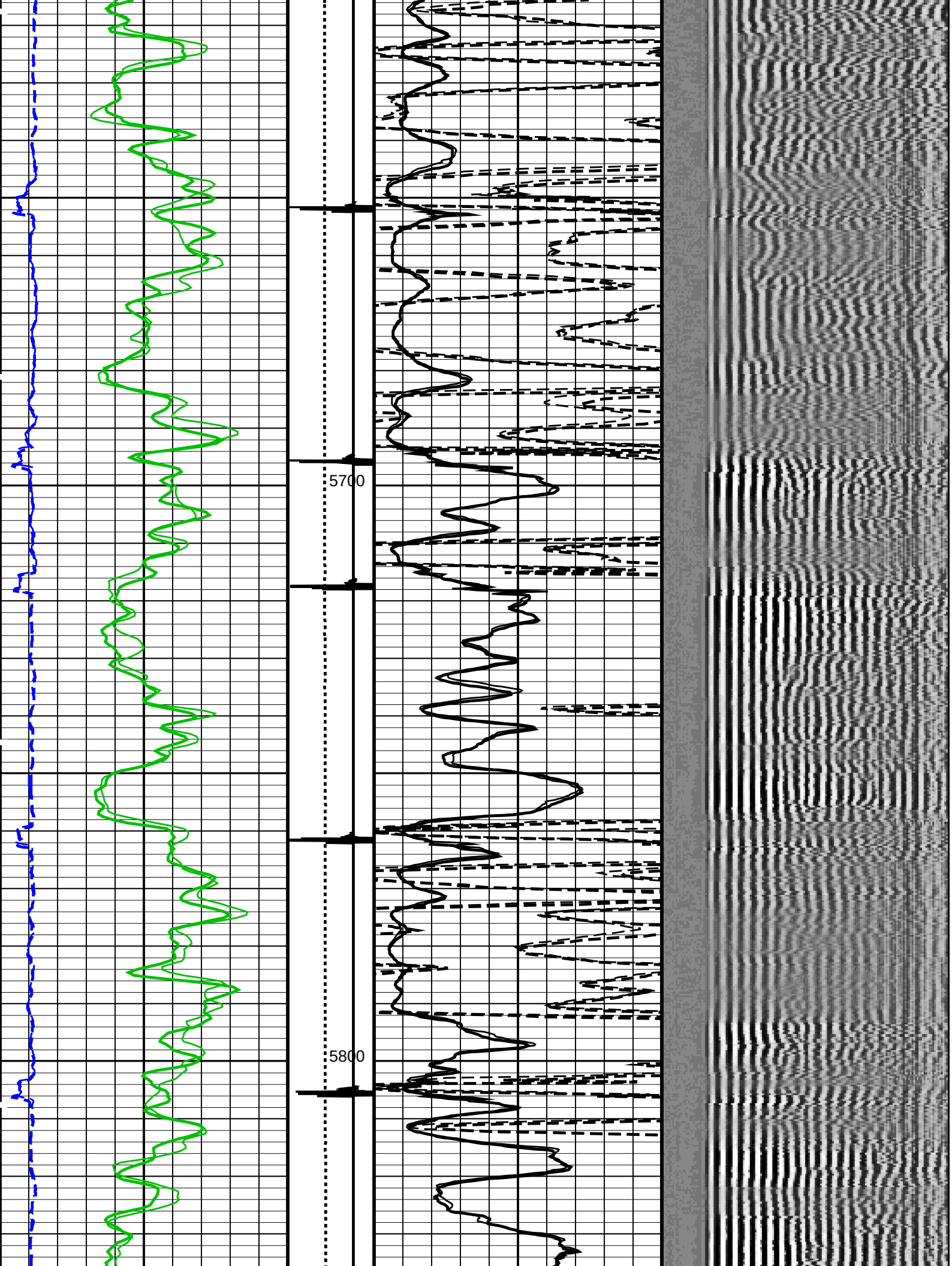
CCLD_REP Curve (CCLD_REP) 3 (V) −1

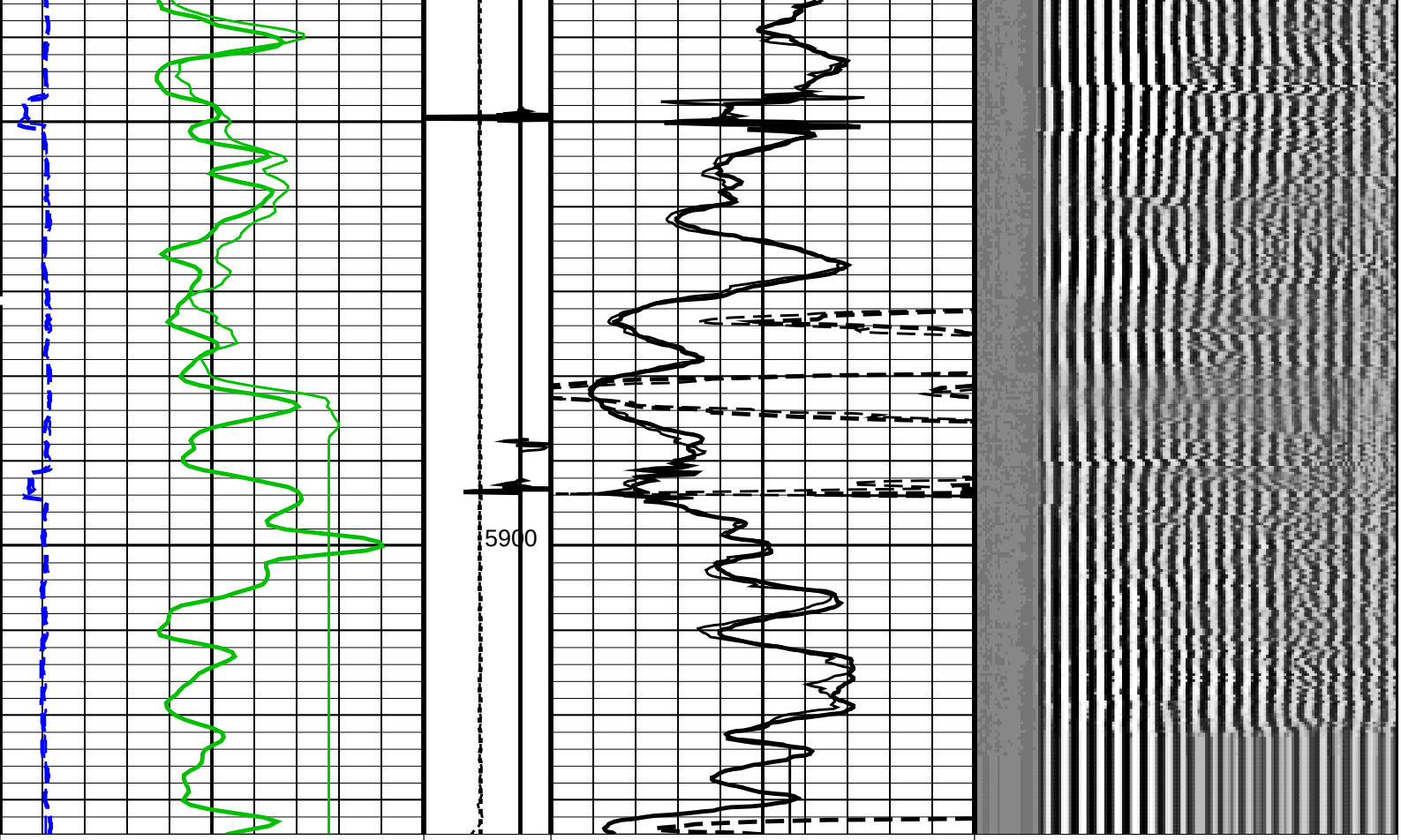
CBL_REP Curve (CBL_REP) 0 (MV) 100

Min Amplitude Max

VDL VariableDensity (VDL) 200 (US) 1200




5700
5800



GR_REP Curve (GR_REP) 0 (GAPI) 150	CCLD_REP Curve (CCLD_REP) 3 (V) −1	CBL_REP Curve (CBL_REP) 0 (MV) 100
Min Amplitude Max VDL VariableDensity (VDL) 200 (US) 1200		
TT_REP Curve (TT_REP) 260 (US) 160	TENS_REP Curve (TENS_REP) (LBF) 0 2000	CBL_1_REP Curve (CBL_REP) 0 (MV) 10

PIP SUMMARY

Time Mark Every 60 S

Format: CBL_VDL_REP Vertical Scale: 5" per 100' Graphics File Created: 28−Apr−2013 09:10

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)	0.000000

CBL Correction Factor	0.0756720	CBL Adjustment Factor (CBAF)	0.900000
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	8020	FT

Input DLIS Files

DEFAULT	SCMT_RST_PSP_058LUP	FN:56	PRODUCER	28−Apr−2013 06:39	5932.0 FT	5568.0 FT
DEFAULT	SCMT_RST_PSP_063PUP	FN:61	PRODUCER	28−Apr−2013 09:03	8028.5 FT	−35.5 FT

Output DLIS Files

DEFAULT	SCMT_RST_PSP_064PUP	FN:62	PRODUCER	28−Apr−2013 09:10

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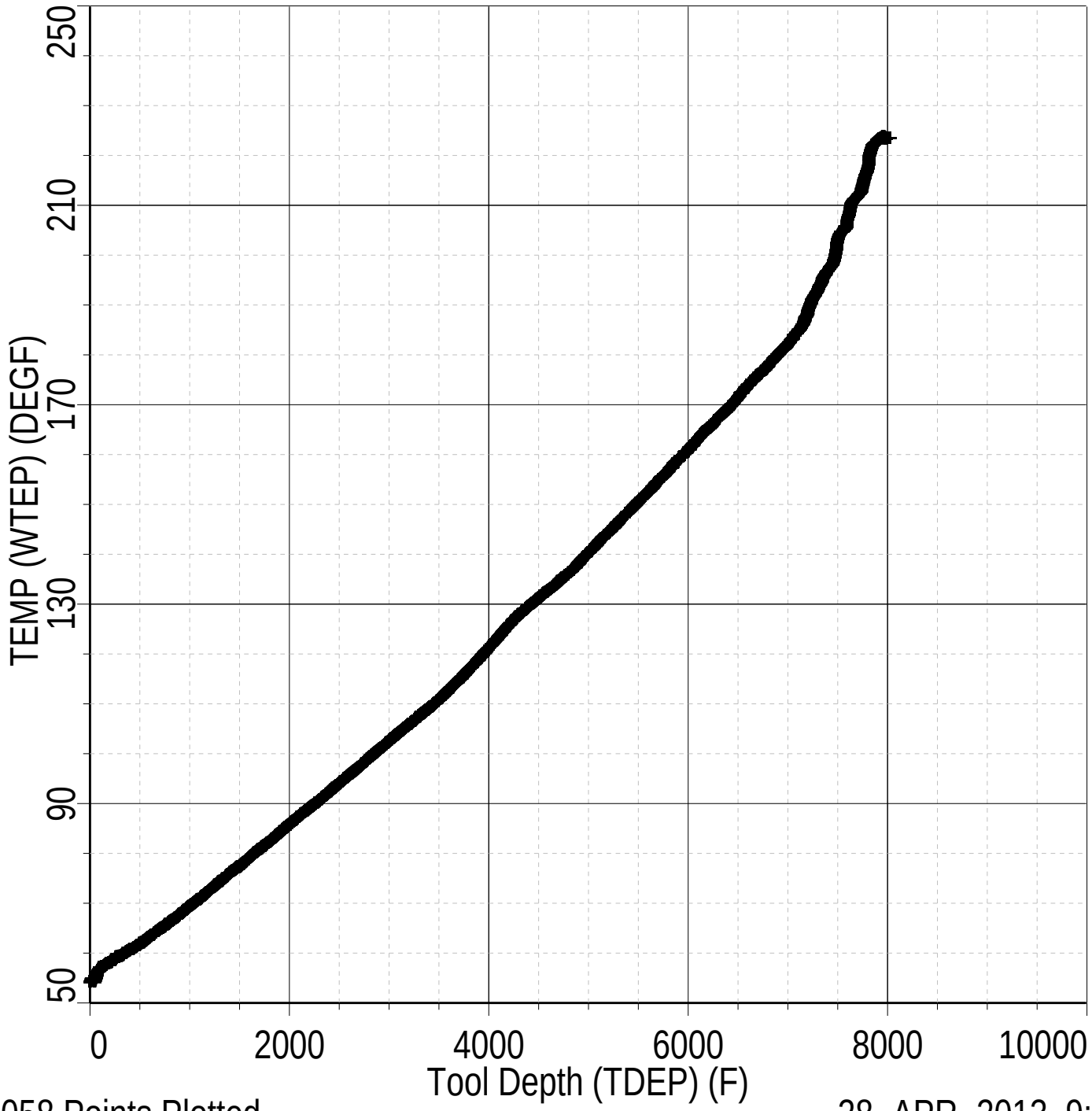
TEMPERATURE PLOT

MAXIS Field Log

Index: 8028.5 − −35.5 FT



16058 Points Plotted

28−APR−2013 9:09

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PBMS COEFFICIENTS

MAXIS Field Log

Client:	**ENCANA OIL & GAS (USA) INC**	**Tool:**	**PSP**
Field:	**MAMM CREEK**	**Sub Type:**	**PBMS**
Well:	**SHIDELER 30−8B (O19ER)**	**Sensor:**	**GR**

Well: SHIDELER 30−8B (O19EB) Sensor: GR
Run date: 28−Apr−2013

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 Tool: PSP
Field: MAMM CREEK Sub Type: PBMS
Well: SHIDELER 30−8B (O19EB) Sensor: WellTemp RTD
Run date: 28−Apr−2013

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**	**Tool:**	**PSP**
Field:	**MAMM CREEK**	**Sub Type:**	**PBMS**
Well:	**SHIDELER 30−8B (O19EB)**	**Sensor:**	**CQG**
Run date:	**28−Apr−2013**		

PBMS Quartz Gauge type F

Sonde Serial NB	**COEFFICIENTS FOR CQG PBMS−B.928 S/N:**
Sensor Serial NB	**928**
Calib Date ddmmyy	**280612**
Matrix Size	**66**
Coeff CRC	**9DC3**

Pres Coeff

	Fb0**	**Fb**1**	**Fb**2**
Fc0**	**+.714463802232E+04**	**+.183434658655E−01**	**−.156620073569E−06**
Fc1**	**−.100638308957E+01**	**−.119899563644E−04**	**−.912155899025E−10**
Fc2**	**+.936268101283E−06**	**+.423898071451E−10**	**+.958076371919E−15**
Fc3**	**+.185123362373E−11**	**+.203107925433E−15**	**0.0**
Fc4**	**0.0**	**0.0**	**0.0**
Fc5**	**0.0**	**0.0**	**0.0**

	Fb3**	**Fb**4**	**Fb**5**
Fc0**	**−.746577997611E−10**	**−.588773826860E−15**	**−.622250441458E−19**
Fc1**	**−.120636521092E−15**	**+.400325894750E−19**	**0.0**
Fc2**	**0.0**	**0.0**	**0.0**
Fc3**	**0.0**	**0.0**	**0.0**
Fc4**	**0.0**	**0.0**	**0.0**
Fc5**	**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

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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	
Slim Cement Mapping Sonde	SCMS − CB	8303
Slim Cement Mapping Cartridge	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
Master		876.9
500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)

Phase	MAP 2 Amplitude Plus MV	Value
Master		726.7
500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)

Phase	MAP 3 Amplitude Plus MV	Value
Master		954.5
500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)

Phase	MAP 4 Amplitude Plus MV	Value
Master		611.0
500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)

Phase	MAP 5 Amplitude Plus MV	Value
Master		812.5
500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)

Phase	MAP 6 Amplitude Plus MV	Value
Master		931.0
500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)

Phase	MAP 7 Amplitude Plus MV	Value
Master		795.9
500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)

Phase	MAP 8 Amplitude Plus MV	Value
Master		830.0
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

Well:	**SHIDELER 30−8B (O19EB)**
Field:	**MAMM CREEK**
County:	**GARFIELD**
State:	**COLORADO**

SLIM CEMENT MAPPING LOG
CBL−VDL
GR−CCL