

County: RIO BLANCO

# Schlumberger

Company: **EXXON MOBIL DEVELOPMENT COMPANY**

Well: **PCU 197-34B8**

Field: **PICEANCE CREEK UNIT**

County: **RIO BLANCO**

State: **COLORADO**

Company: **EXXON MOBIL DEVELOPMENT**

Field: PICEANCE CREEK UNIT  
 Location: SHL: 817' FSL & 955' FEL  
 Well: PCU 197-34B8

LOGGING DATE		26-Feb-2010	
Run Number	1	Section	34
Depth Driller	8684.5 ft	Township	1S
Schlumberger Depth	8688 ft	Range	97W
Bottom Log Interval	8687 ft		
Top Log Interval	200 ft		
Casing Fluid Type	MUD		
Fluid Density	11.6 lbm/gal		
Fluid Level	33 ft		
BIT/CASING/TUBING STRING			
Bit Size	9.875 in		
From	30.2 ft		
To	8684.5 ft		
Casing/Tubing Size	7.000 in		
Weight	11.6 lbm/ft		
Grade			
From	30.2 ft		
To	8684.5 ft		
Maximum Recorded Temperatures	202 degF		
Logger On Bottom	26-Feb-2010	Time	3:00
Unit Number	2105	Location	GRAND JUNCTION
Recorded By	IAN FLOYD		
Witnessed By	UNATTENDED		

	Run 1	Run 2	Run 3
PVT DATA			
Oil Density			
Water Salinity			
Gas Gravity			
Bo			
Bw			
1/Bg			
Bubble Point Pressure			
Bubble Point Temperature			
Solution GOR			
Maximum Deviation			
CEMENTING DATA			
Primary/Squeeze	Primary		
Casing String No			
Lead Cement Type			
Volume			
Density			
Water Loss			
Additives			
Tail Cement Type			
Volume			
Density			
Water Loss			
Additives			
Expected Cement Top			
Logging Date			
Run Number			
Depth Driller			
Schlumberger Depth			
Bottom Log Interval			
Top Log Interval			
Casing Fluid Type			
Salinity			
Density			
Fluid Level			
BIT/CASING/TUBING STRING			
Bit Size			
From			
To			
Casing/Tubing Size			
Weight			
Grade			
From			
To			
Maximum Recorded Temperatures			
Logger On Bottom			
Unit Number			
Recorded By			
Witnessed By			

## DEPTH SUMMARY LISTING

Date Created: 26-FEB-2010 2:48:33

### Depth System Equipment

Depth Measuring Device	Tension Device	Logging Cable
Type: IDW-B Serial Number: 6322 Calibration Date: 11-NOV-2009 Calibrator Serial Number: 33 Calibration Cable Type: 1-25P Wheel Correction 1: -3 Wheel Correction 2: -3	Type: CMTD-B/A Serial Number: 2105 Calibration Date: 23-FEB-2010 Calibrator Serial Number: 1159 Number of Calibration Points: 9 Calibration RMS: 29 Calibration Peak Error: 83	Type: 1-25ZT Serial Number: 2105 Length: 16000 FT <hr/> Conveyance Method: Wireline Rig Type: LAND

### Depth Control Parameters

Log Sequence:	First Log In the Well
Rig Up Length At Surface:	201.00 FT
Rig Up Length At Bottom:	200.00 FT
Rig Up Length Correction:	1.00 FT
Stretch Correction:	3.00 FT
Tool Zero Check At Surface:	0.50 FT

### Depth Control Remarks

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

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OTHER SERVICES1	OTHER SERVICES2
OS1: NONE	OS1:
OS2:	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
RUN NUMBER 1.	
TOOL STRING RAN PER TOOL SKETCH.	
TOOL RAN AT 6000FT/HR.	
PRESSURE AT TD 4168 PSI	
TEMP AT TD 202 DEGF	

TD FOUND AT 8688 FT					
AFE: DG 2009 42528.08					
SCHLUMBERGER					
RUN 1 SERVICE ORDER #: B7W1-00031 PROGRAM VERSION: 17C0-154 FLUID LEVEL: 33 ft	RUN 2 SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:				
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

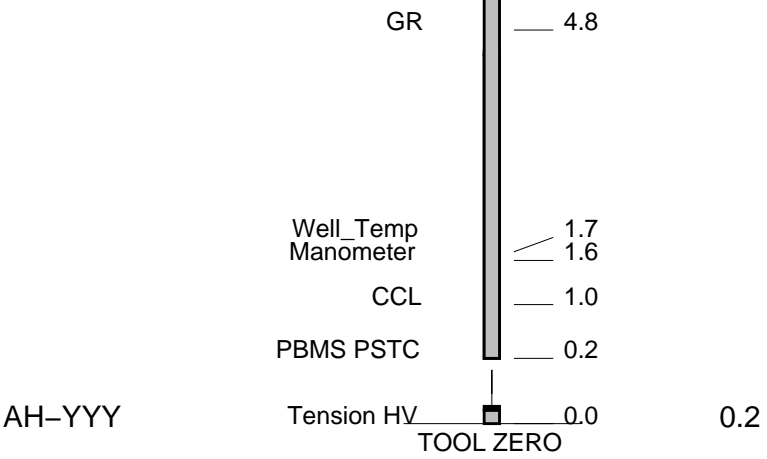
**EQUIPMENT DESCRIPTION**

RUN 1	RUN 2
SURFACE EQUIPMENT	
WITM-A PSC_16MHZ	

DOWNHOLE EQUIPMENT	
MH-22 MH-22	22.1
EQF-43 EQF-43	20.5
EQF-43 EQF-43	14.5
PSPT PSC-A 2782	8.5

Detail MT  
TelStatus  
CTEM

PSPT-A 2782  
 PSTC-A  
 PBMS-A  
 10k\_Sapphire\_Mano  
 RTD\_Thermometer  
 GR  
 CCL  
 PBMS



MAXIMUM STRING DIAMETER 1.69 IN  
 MEASUREMENTS RELATIVE TO TOOL ZERO  
 ALL LENGTHS IN FEET



**MAIN PASS 0 PSI**

MAXIS Field Log

Company: EXXON MOBIL DEVELOPMENT COMPANY Well: PCU 197-34B8

**Input DLIS Files**

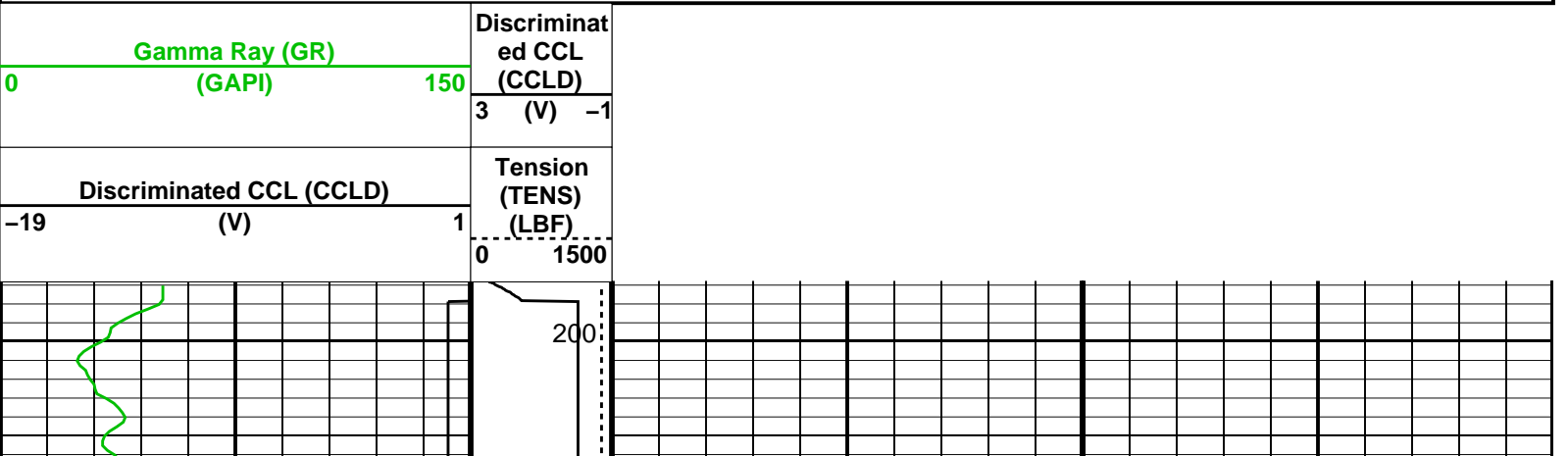
DEFAULT Flip\_PSP\_007LUP PRODUCER 26-Feb-2010 04:08 8705.5 FT 193.5 FT

**Output DLIS Files**

DEFAULT PSP\_008PUP FN:6 PRODUCER 26-Feb-2010 04:12 8705.5 FT 193.5 FT

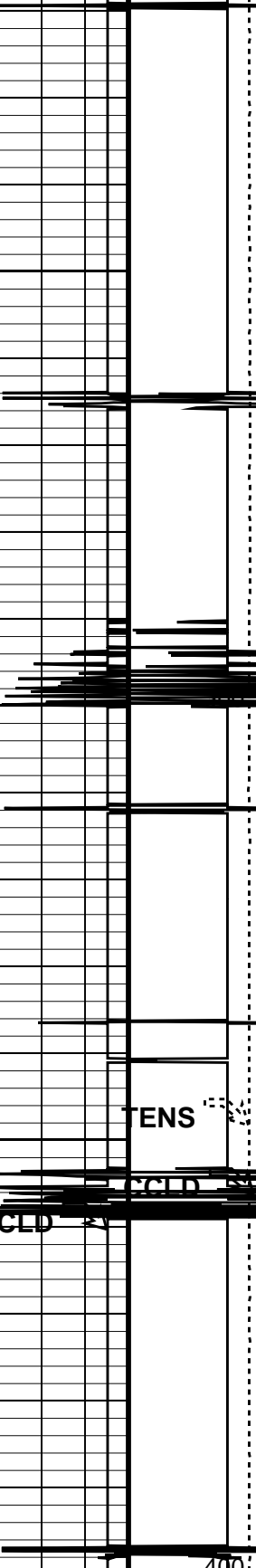
**OP System Version: 17C0-154**

PSPT SRPC-3870\_Q3\_2009\_OP17\_V3\_b





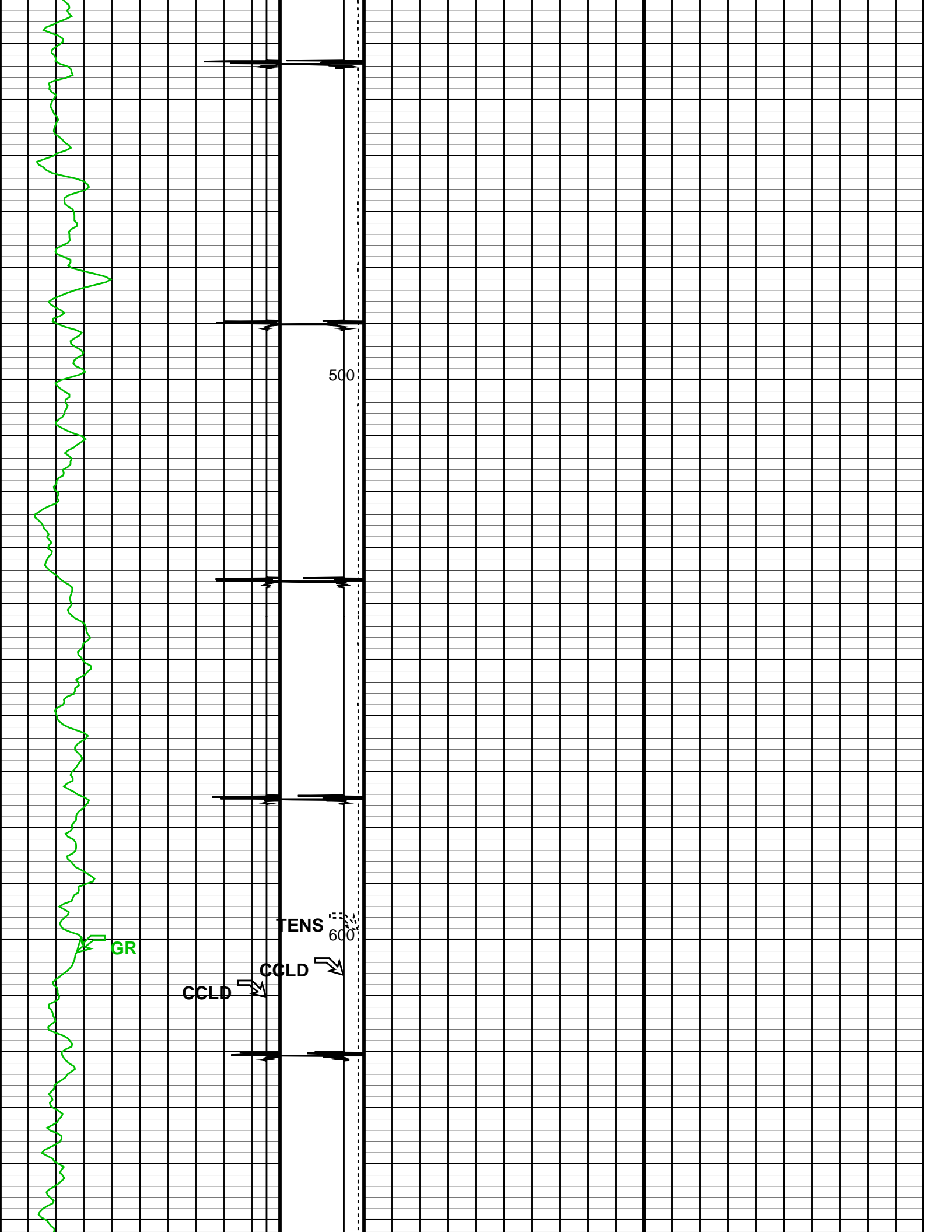
GR



TENS

CCLD

400



500

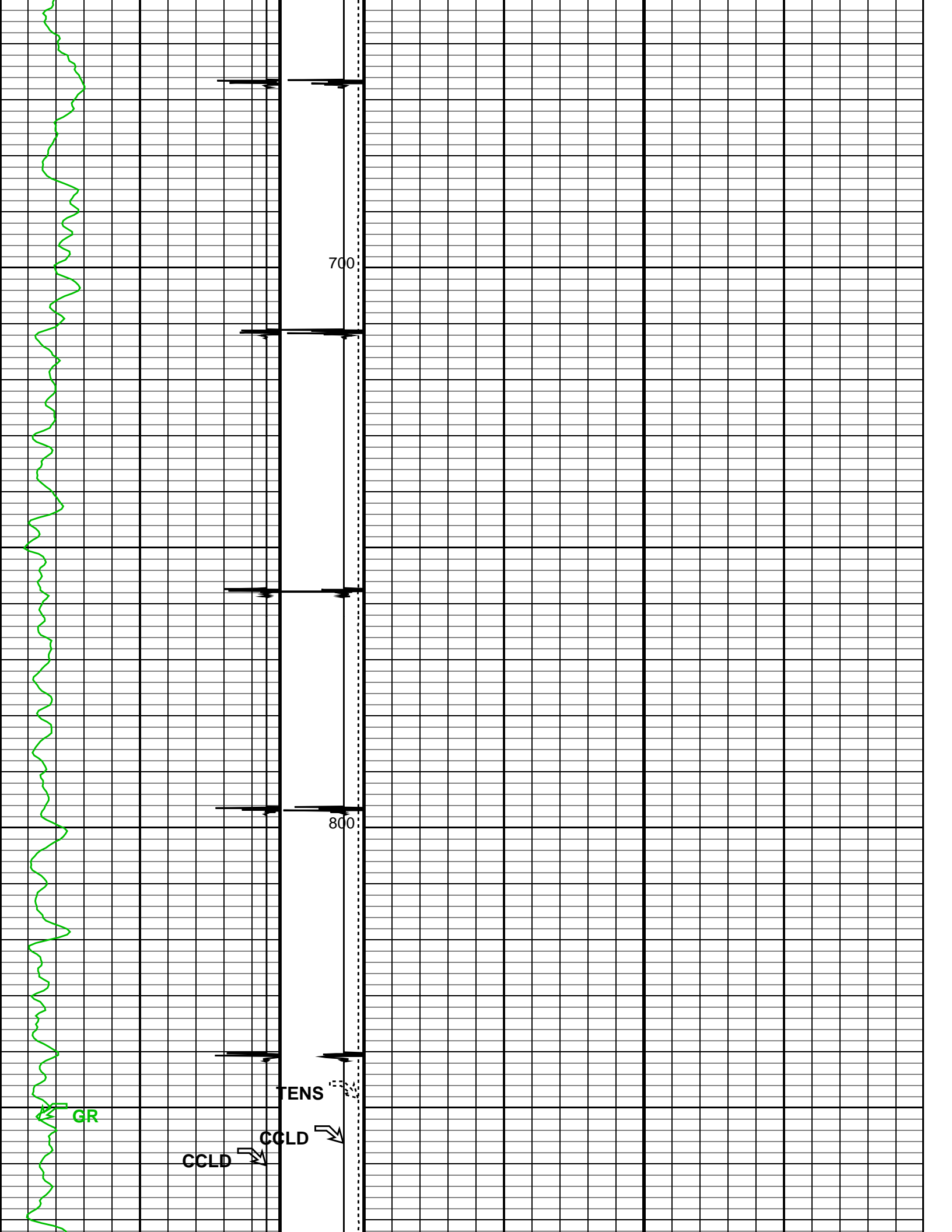
TENS

600

GR

CCLD

CCLD



700

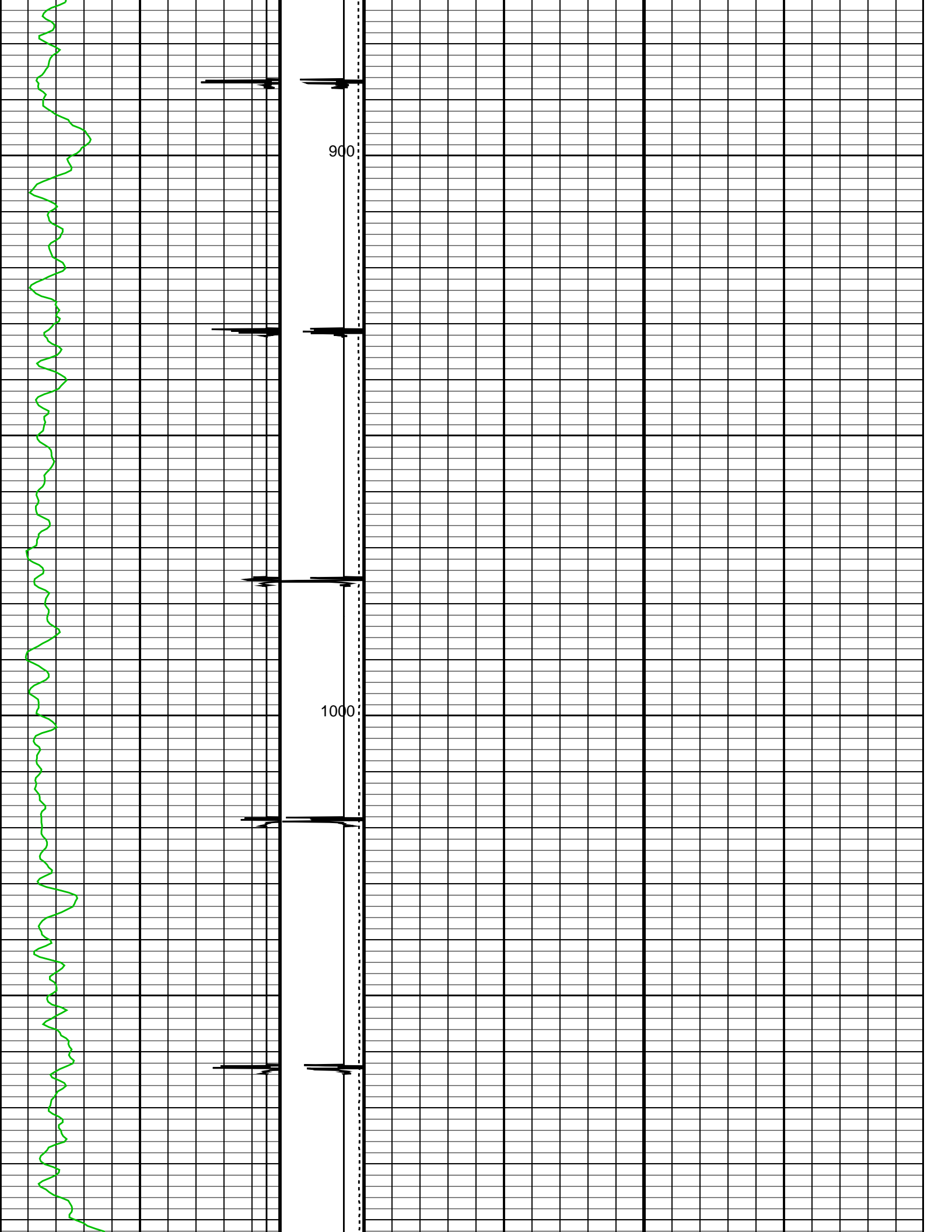
800

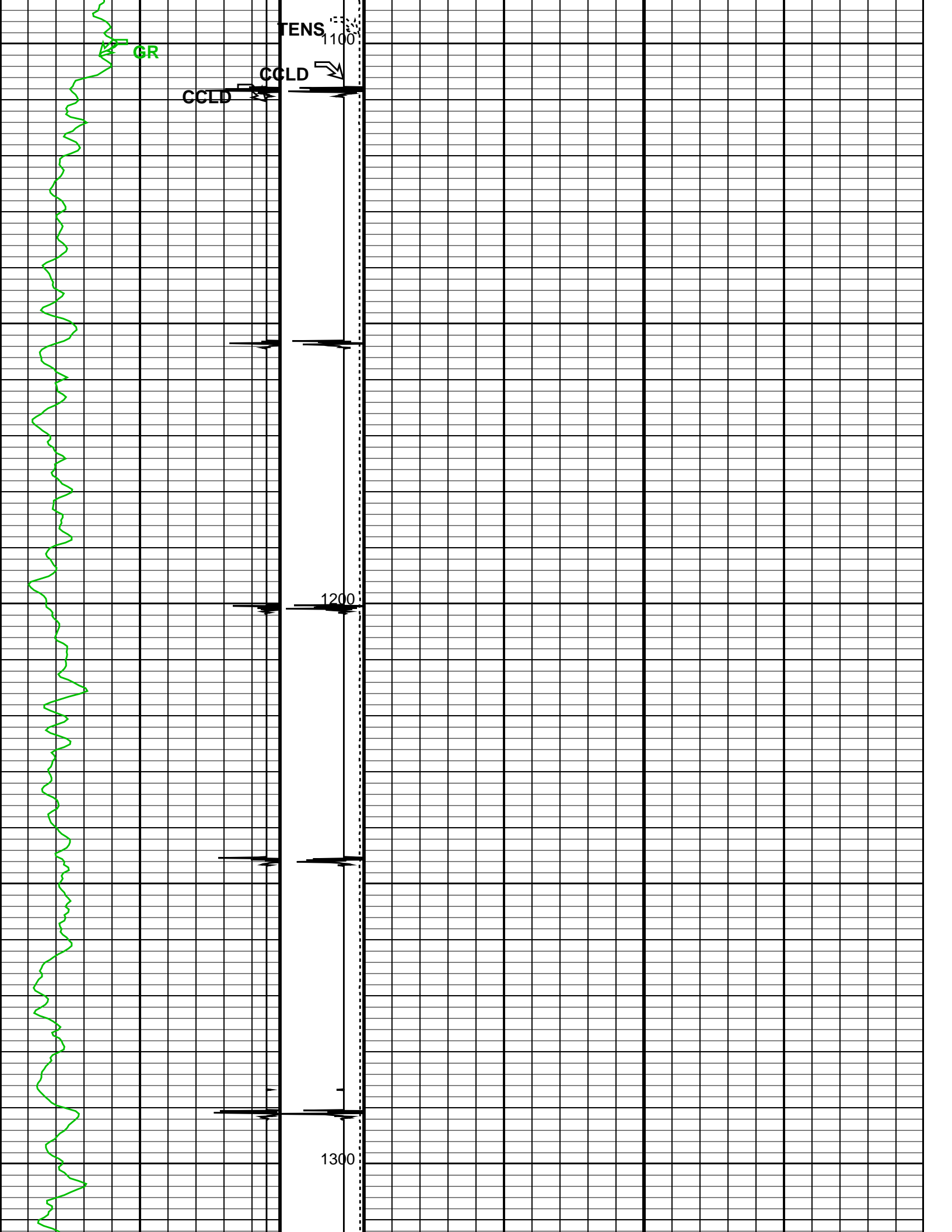
TENS

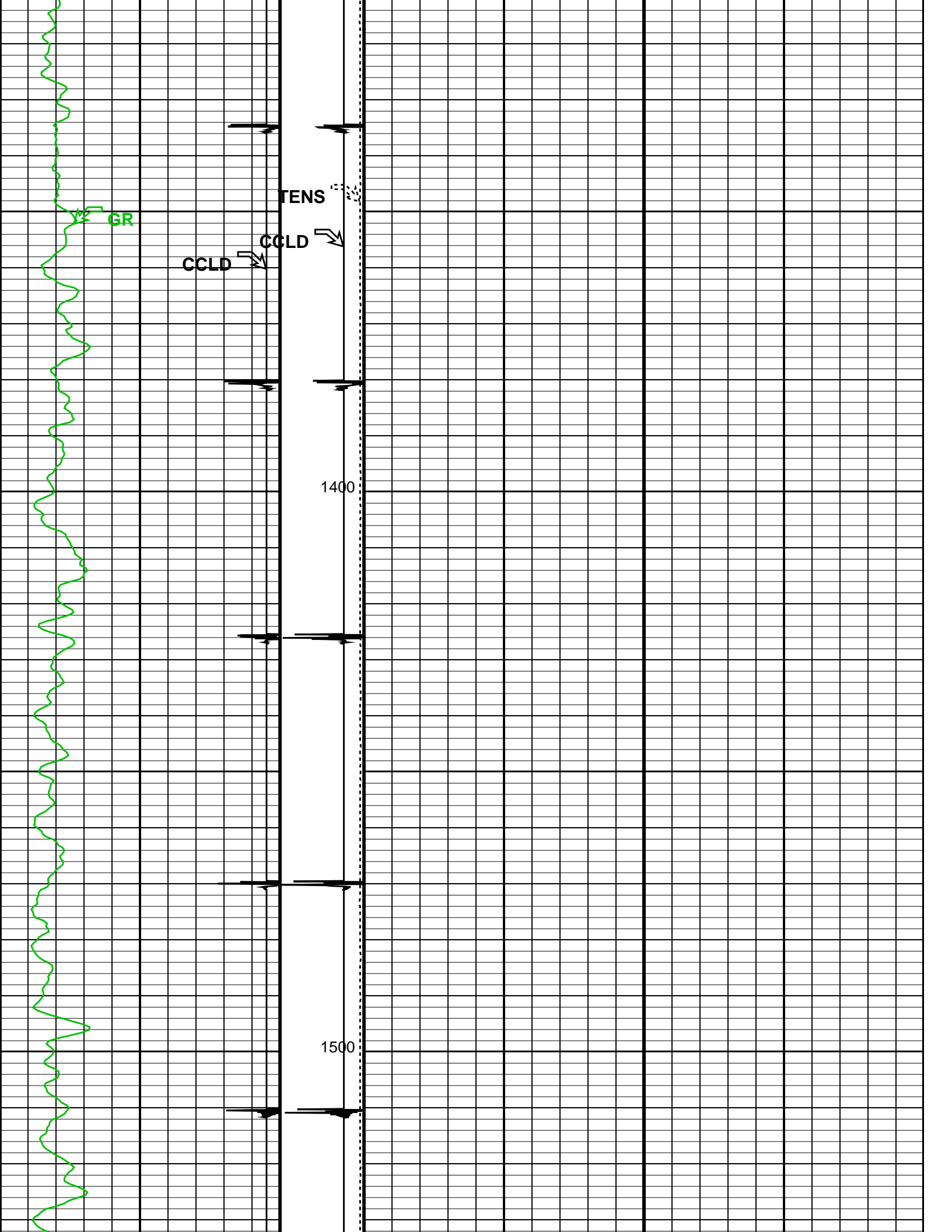
CCLD

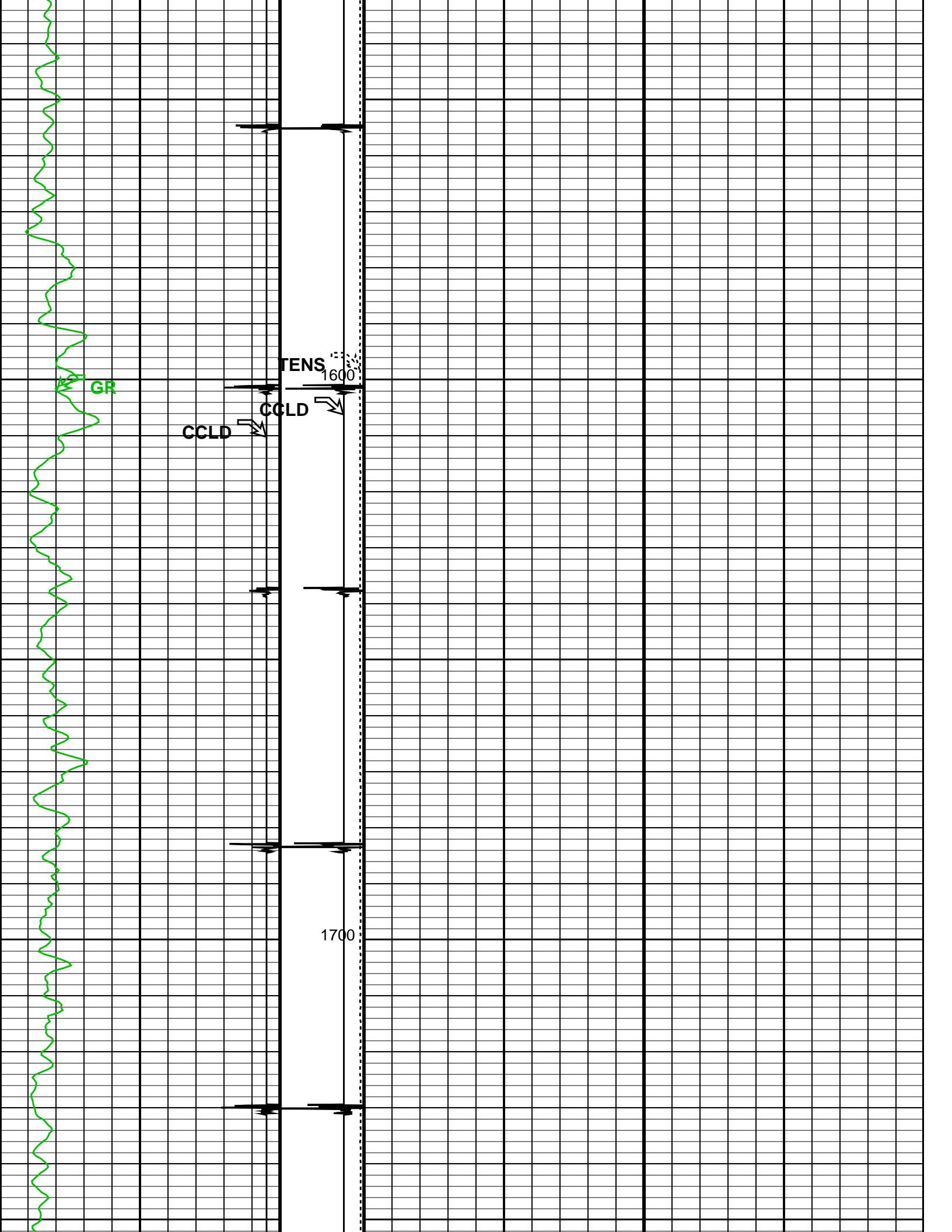
CCLD

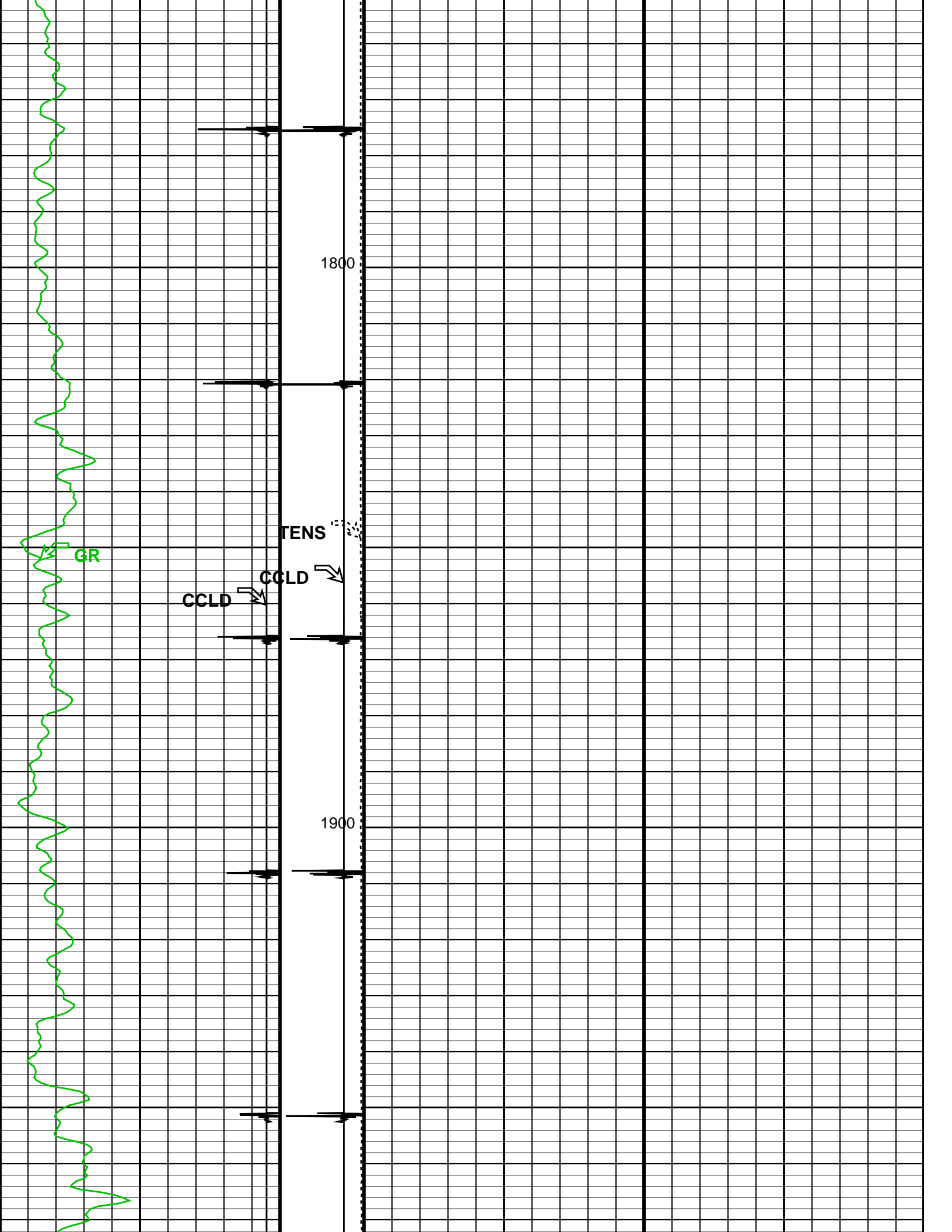
GR

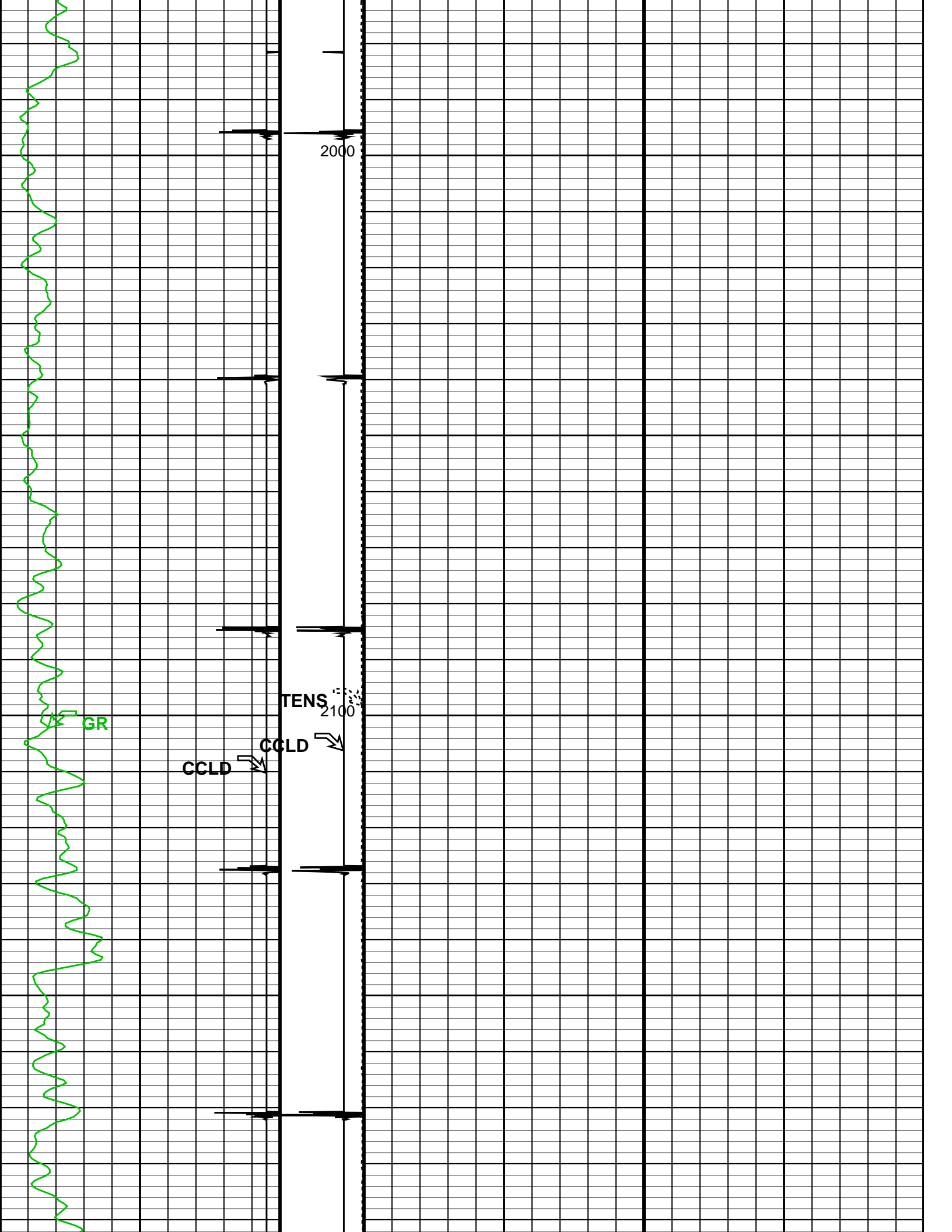


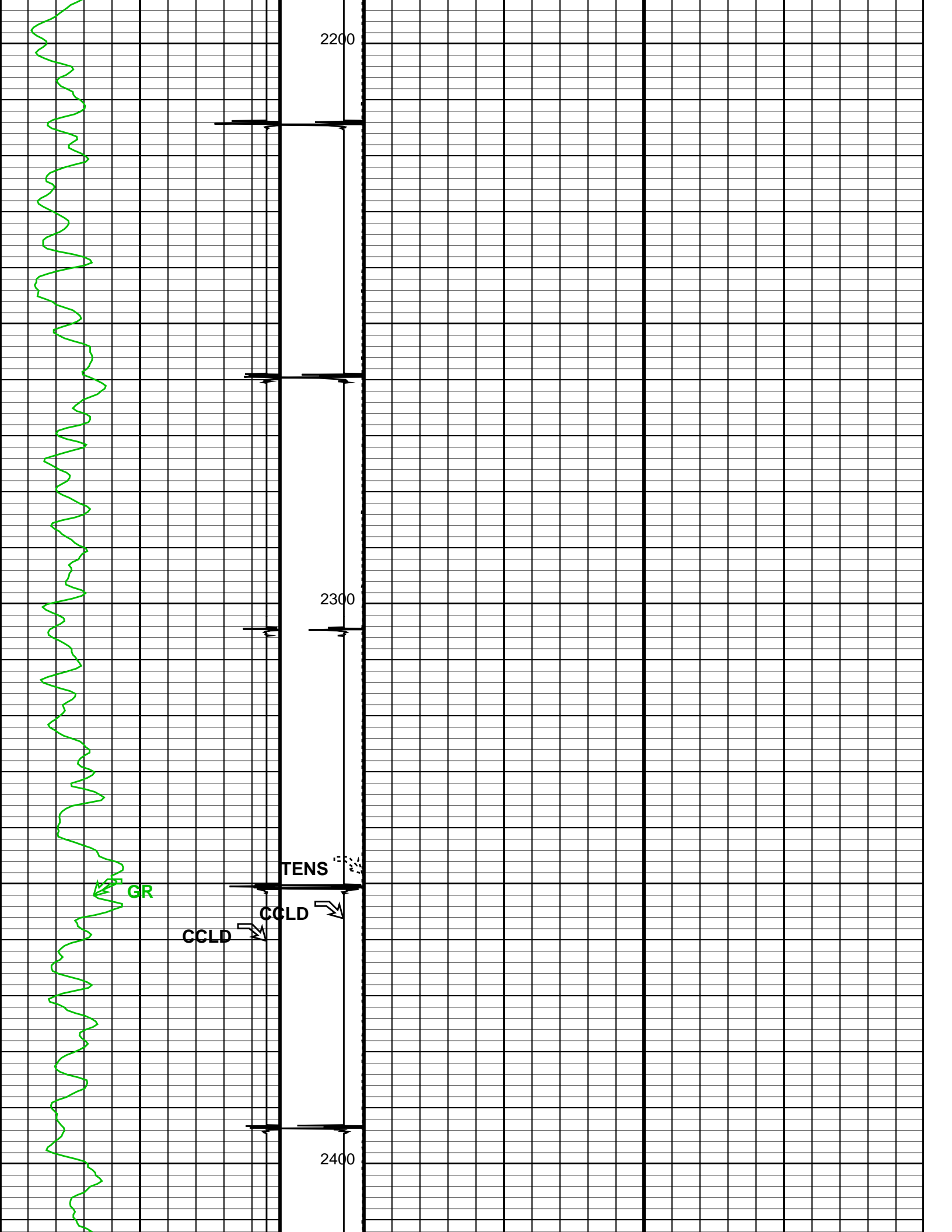


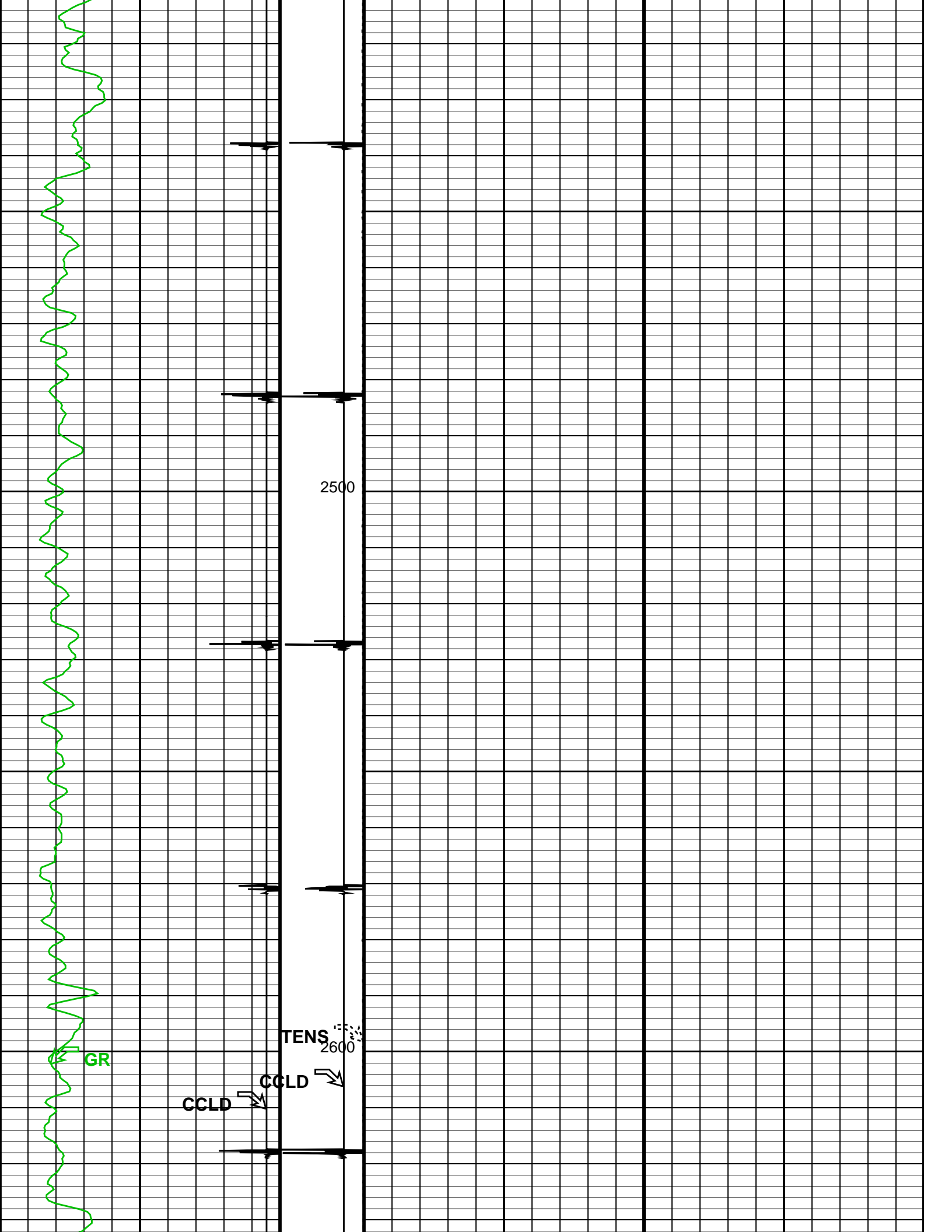


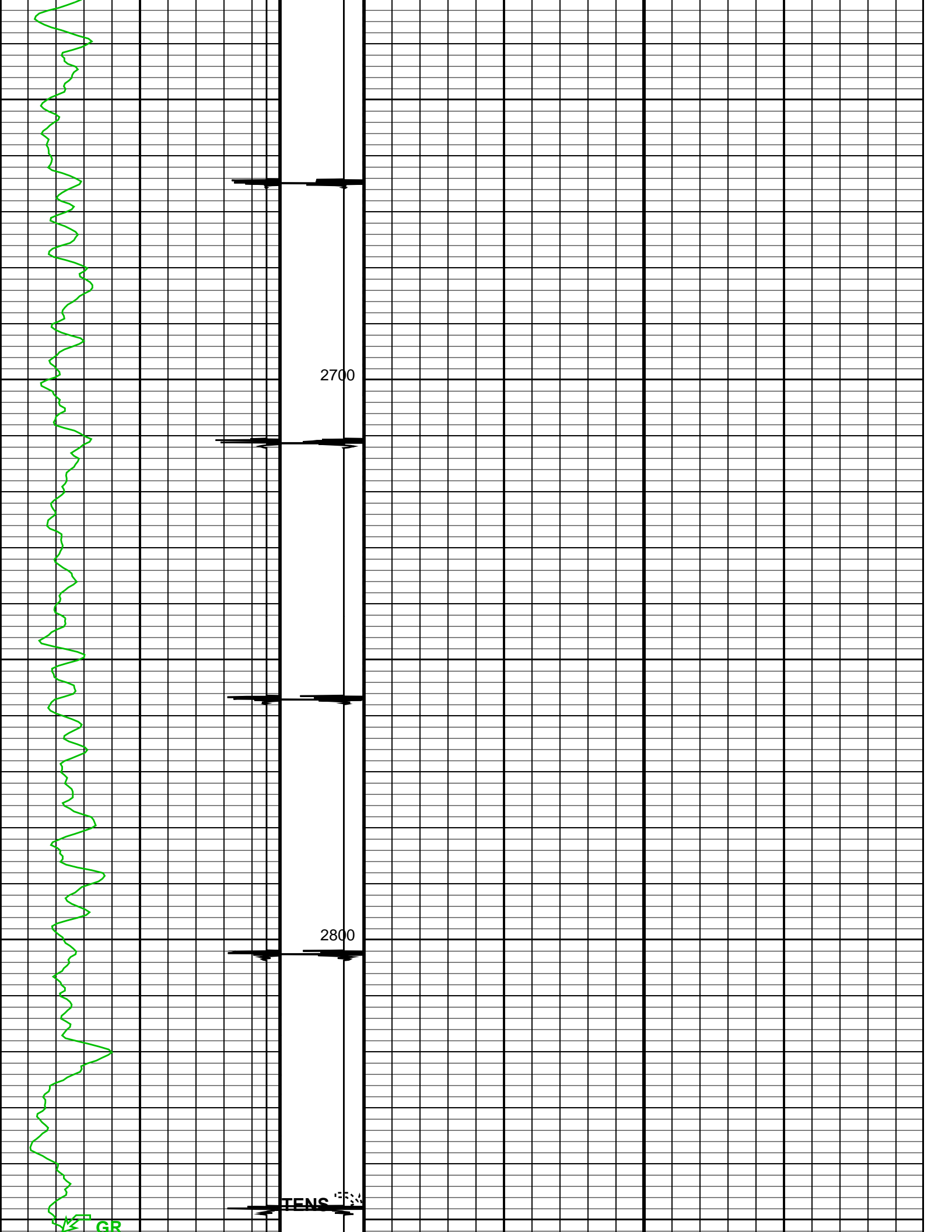


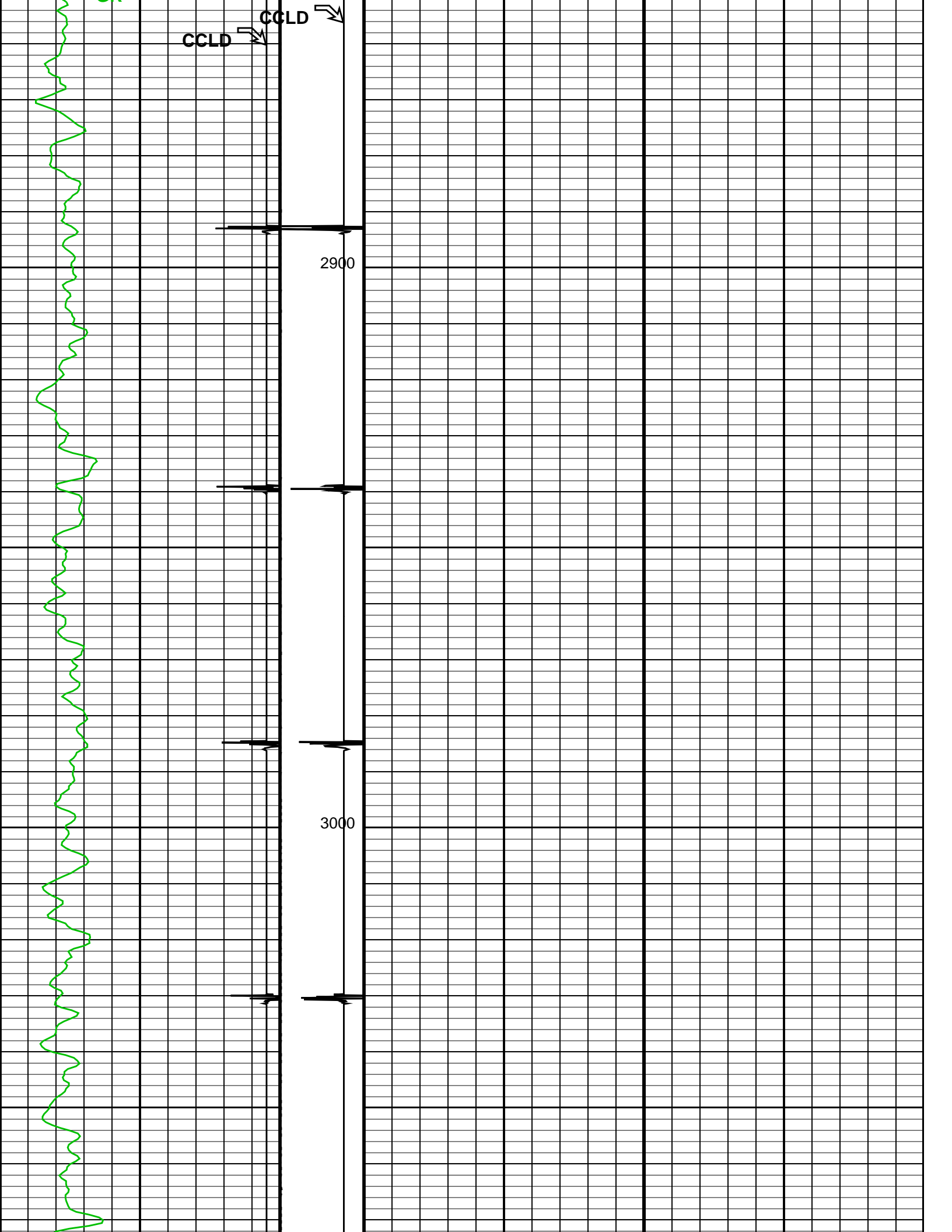


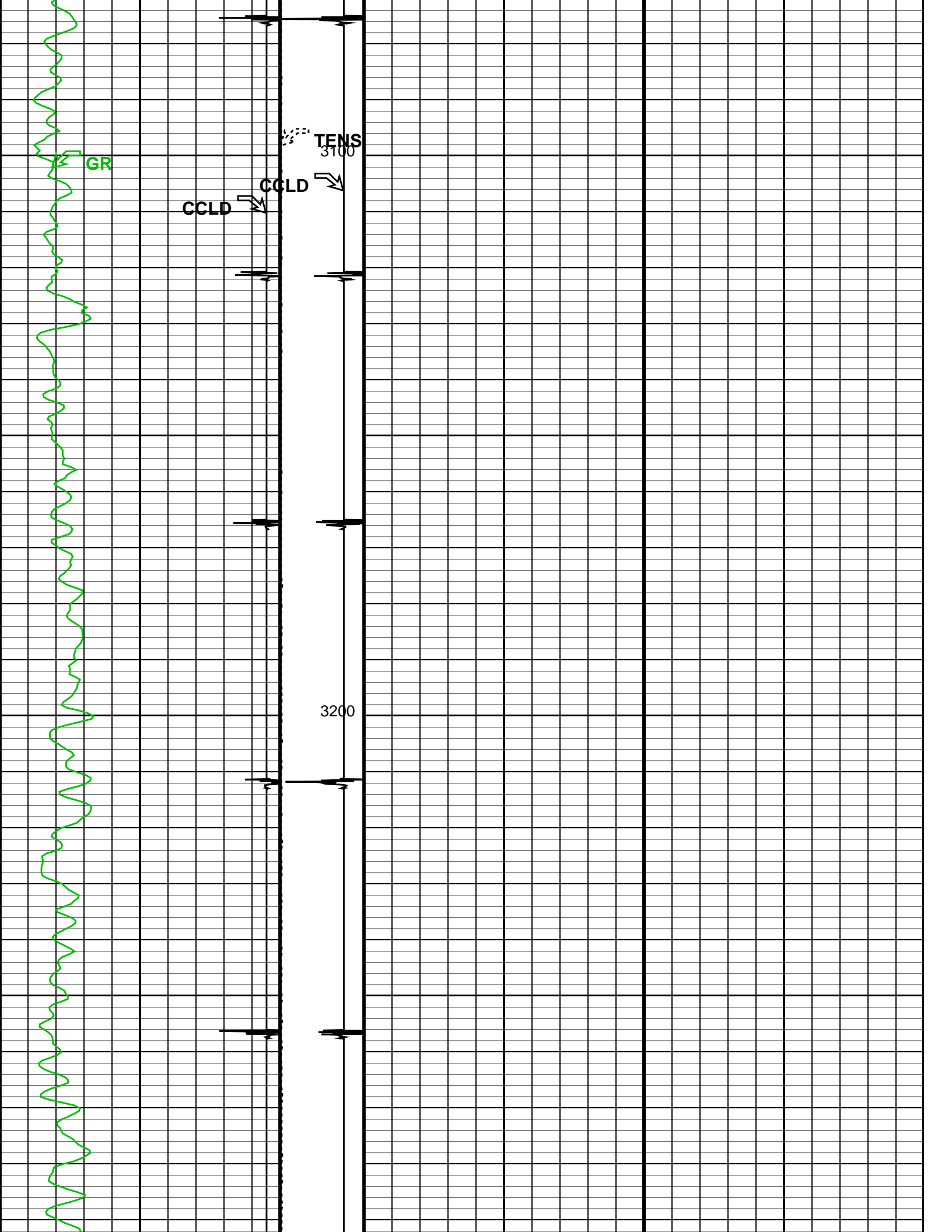












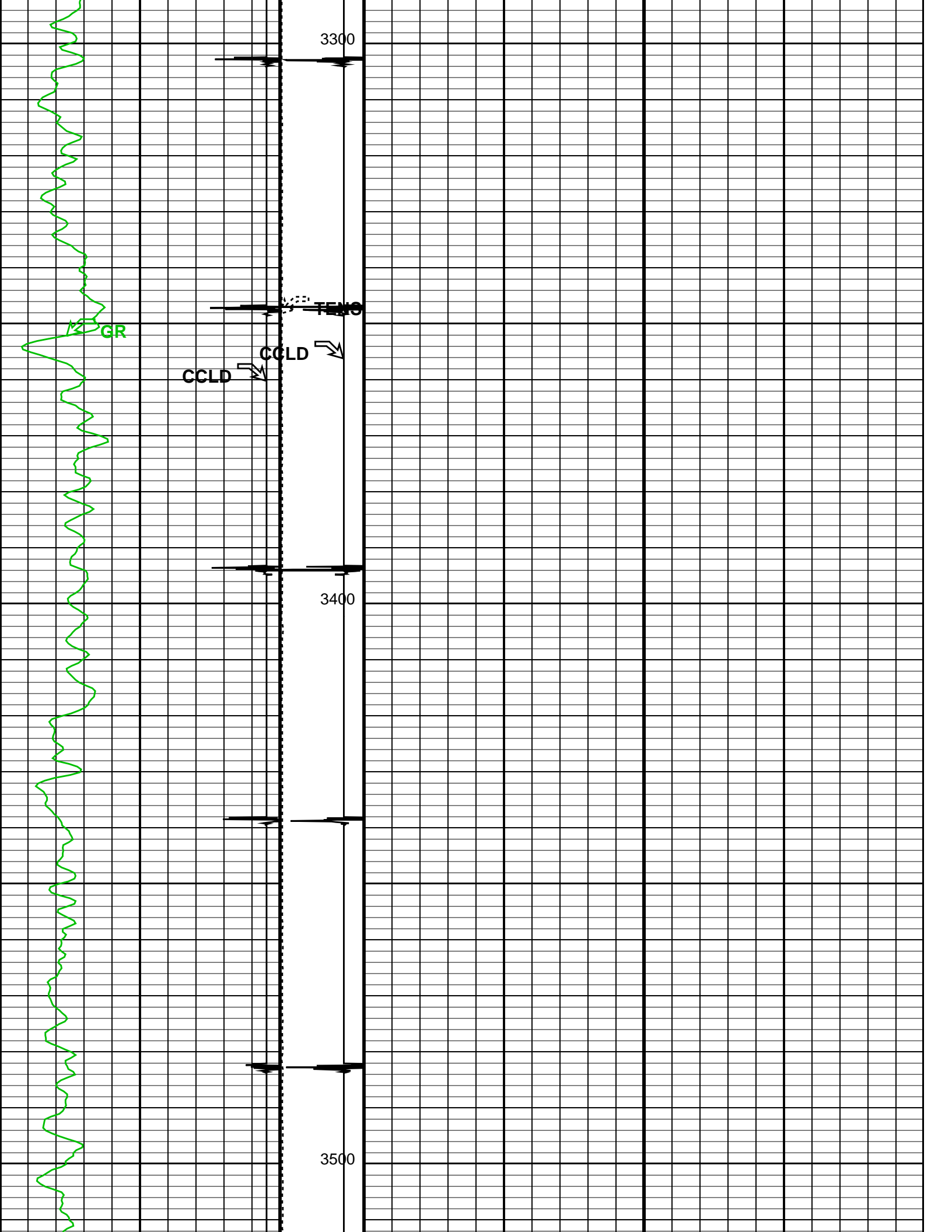
GR

TENS  
3100

CCLD

CCLD

3200



3300

3400

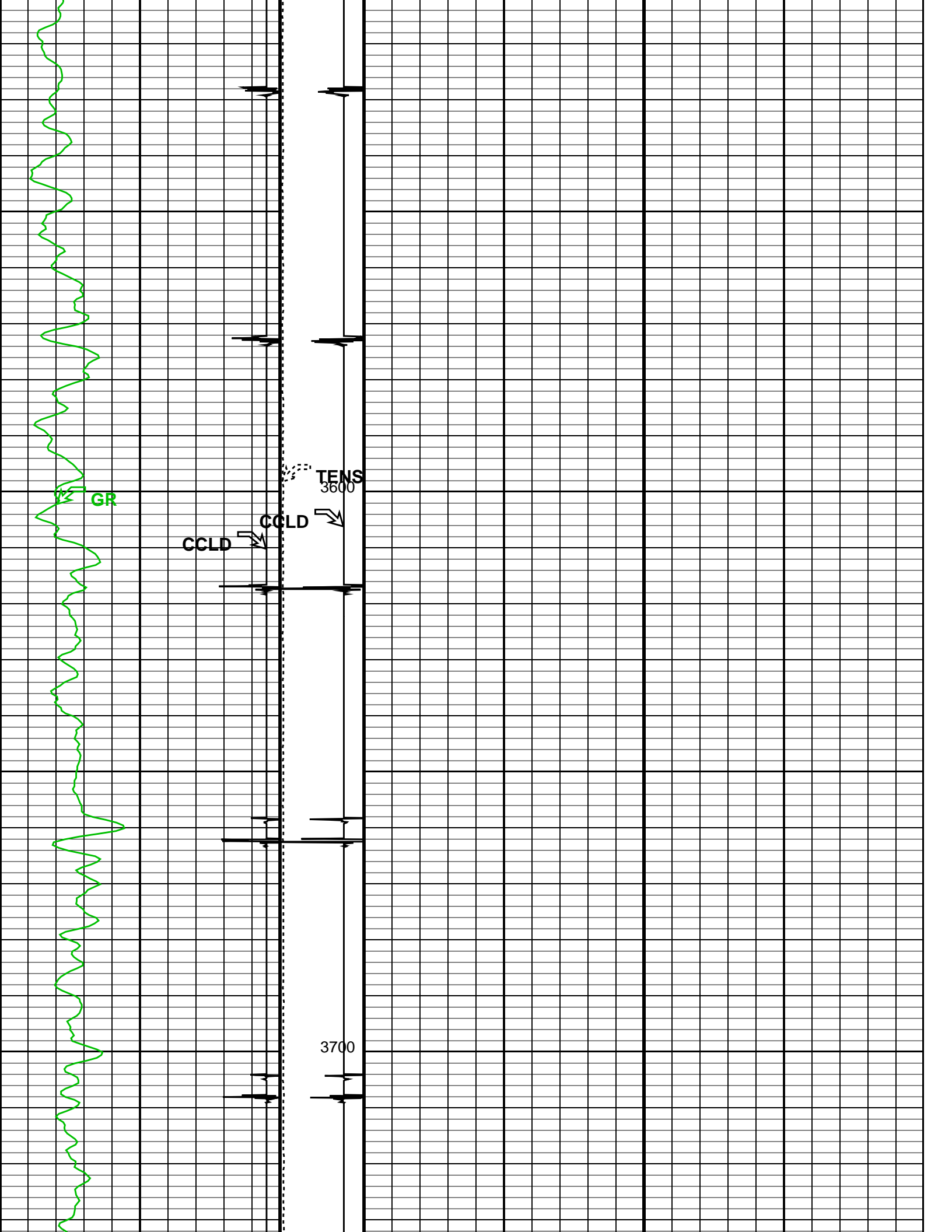
3500

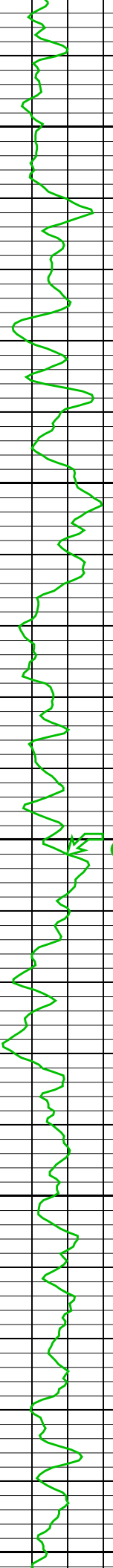
GR

CCLD

CCLD

TEMO





GR

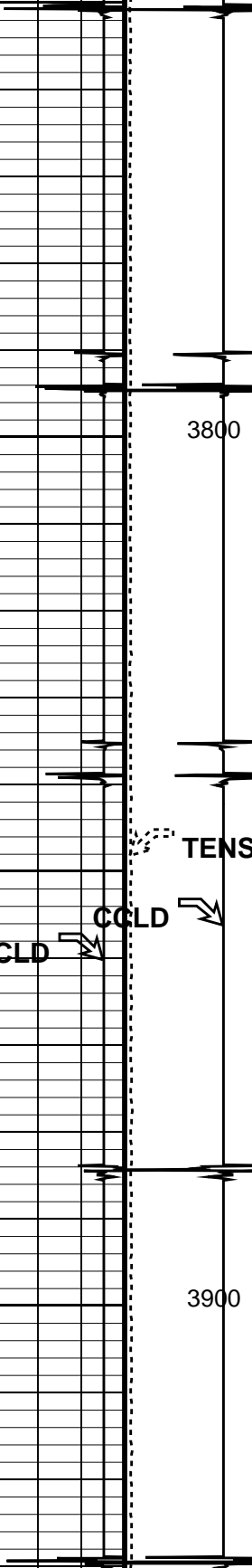
CCLD

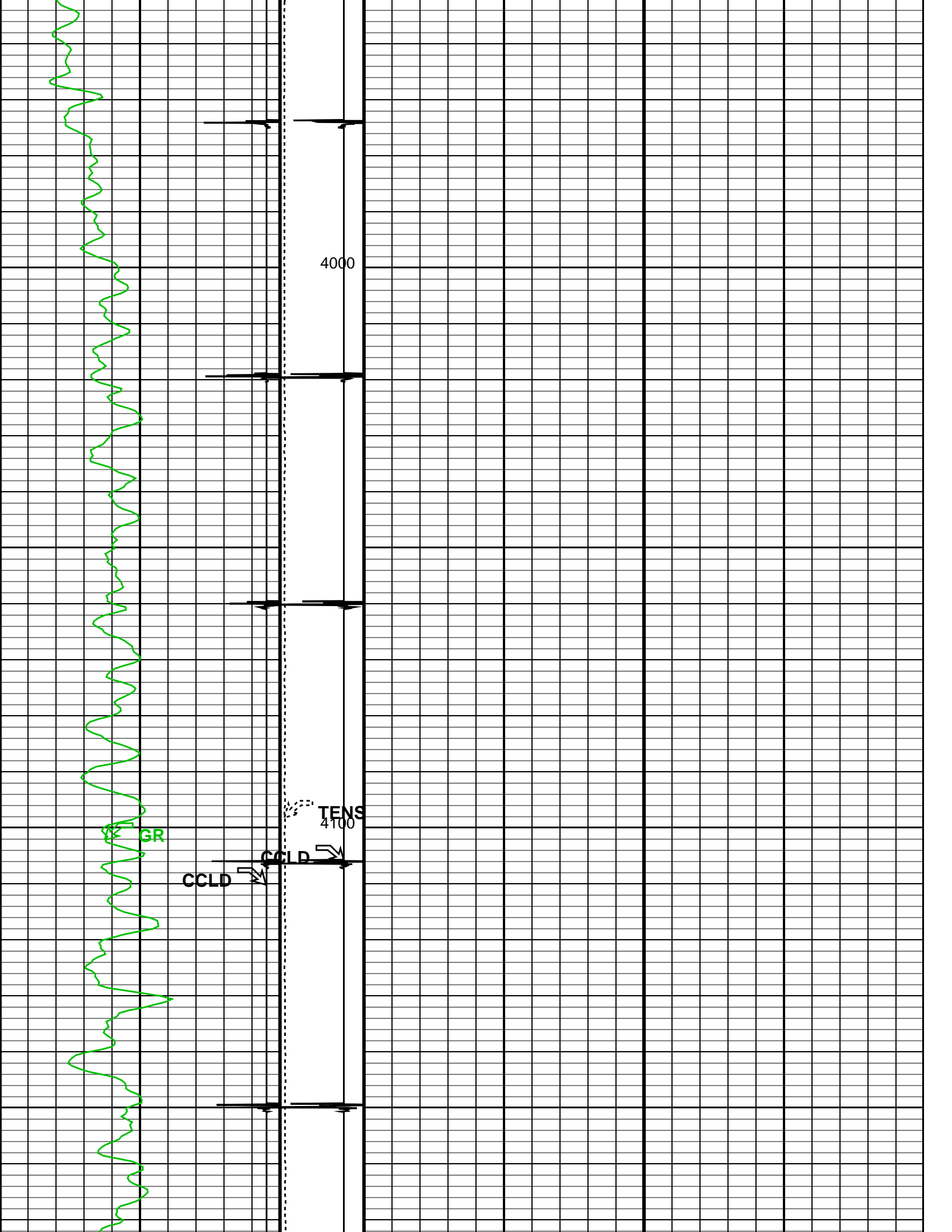
CCLD

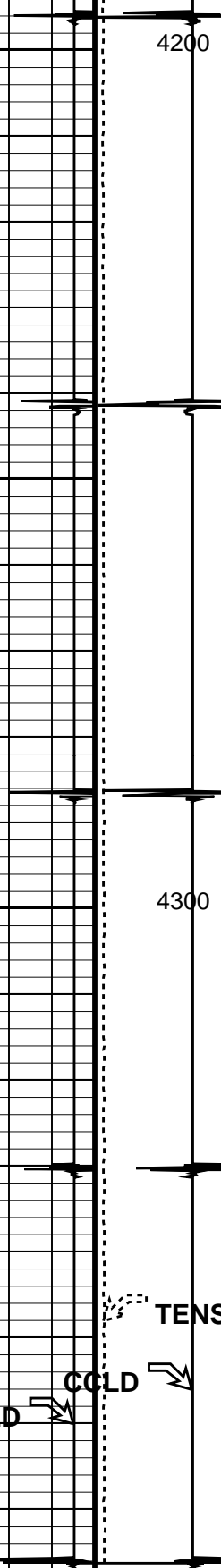
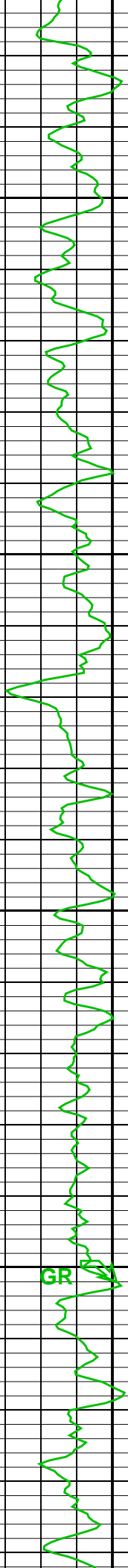
TENS

3800

3900







4200

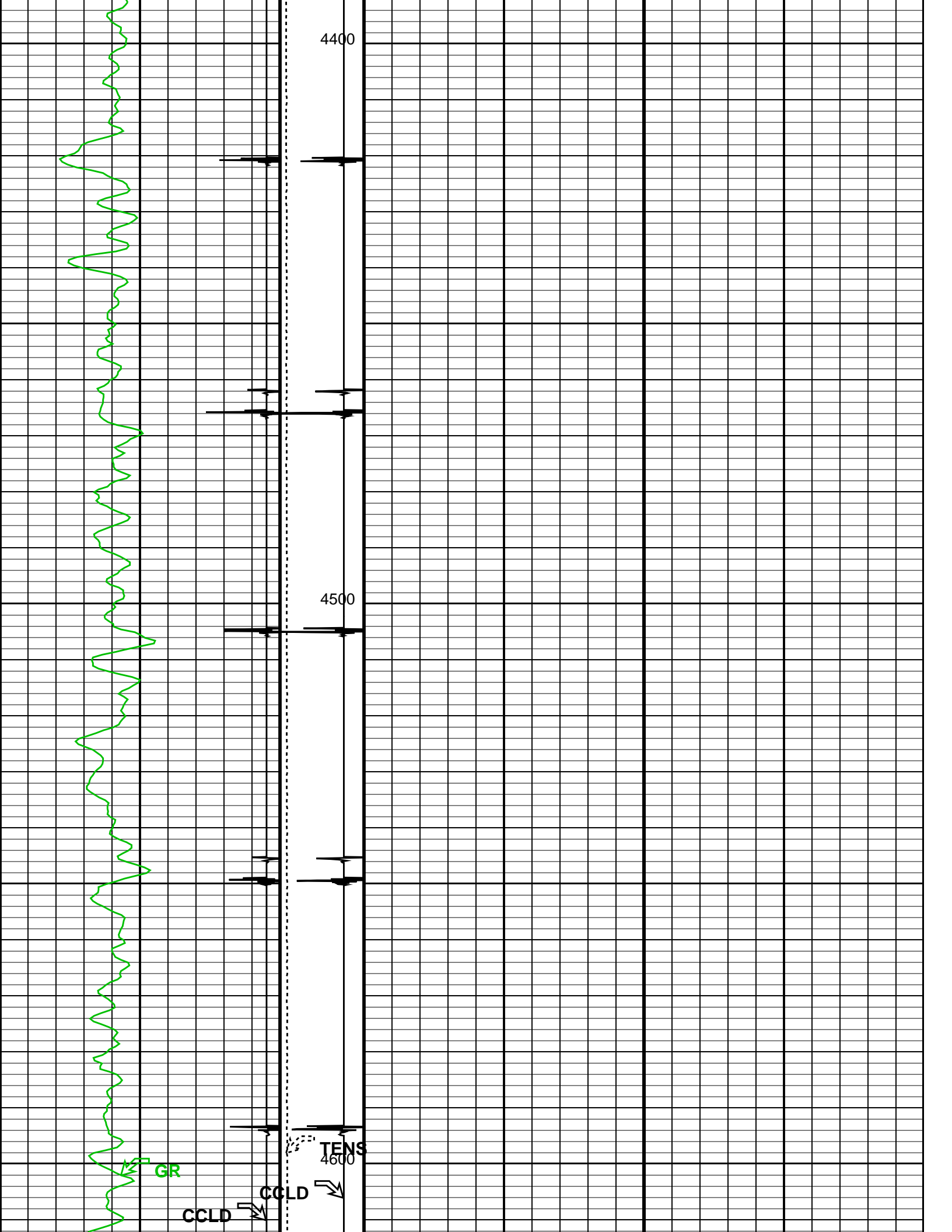
4300

GR

CCLD

CCLD

TENS



4400

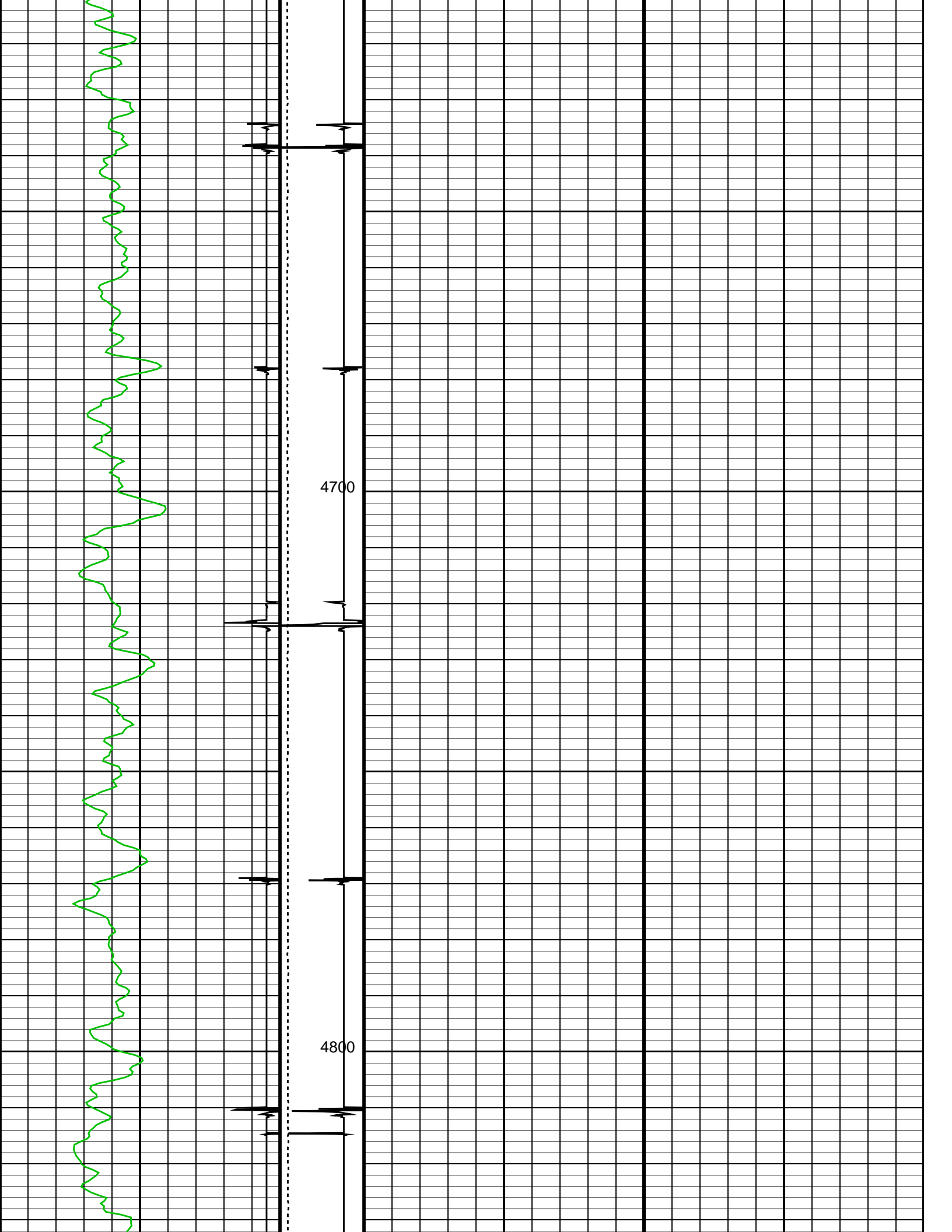
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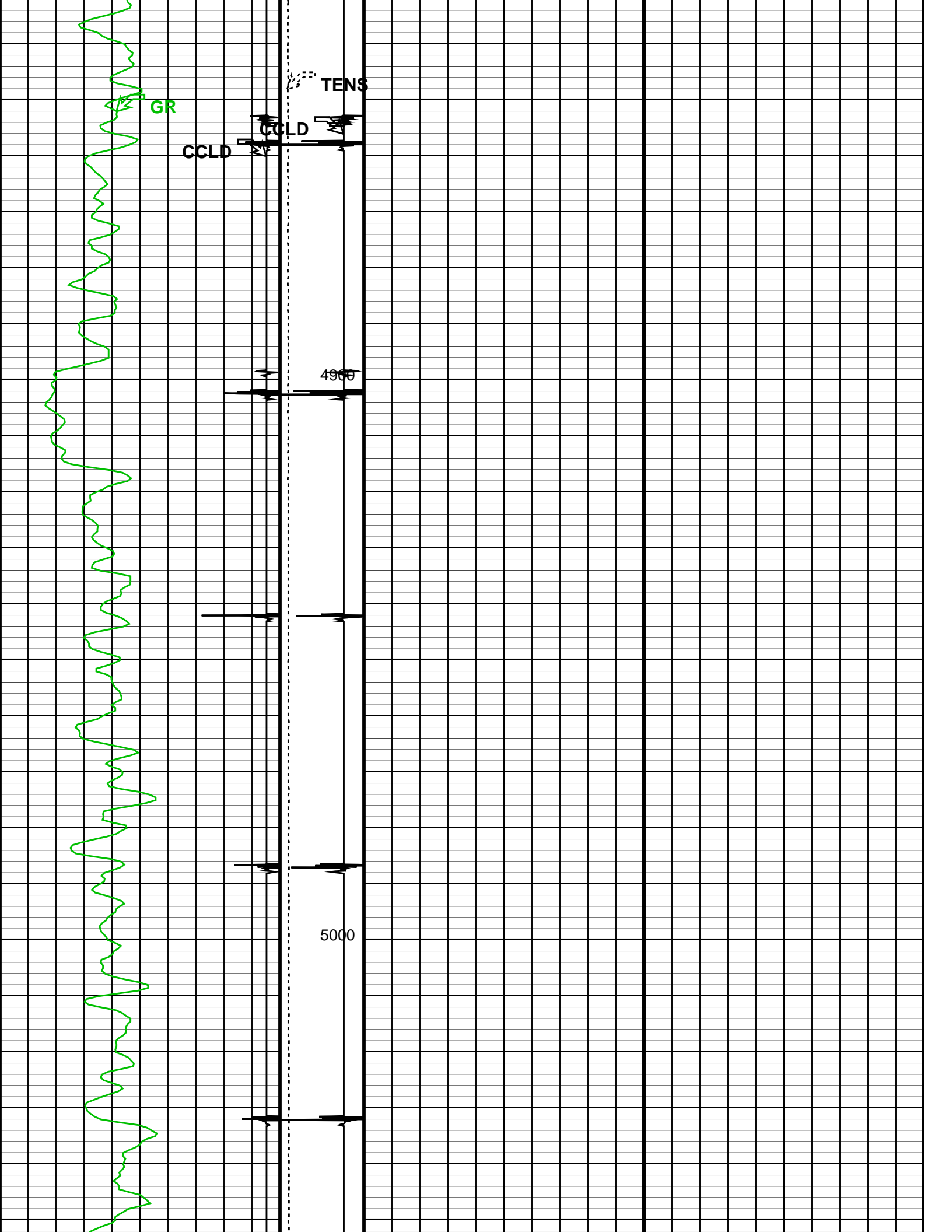
GR

TENS  
4600

CCLD

CCLD





GR

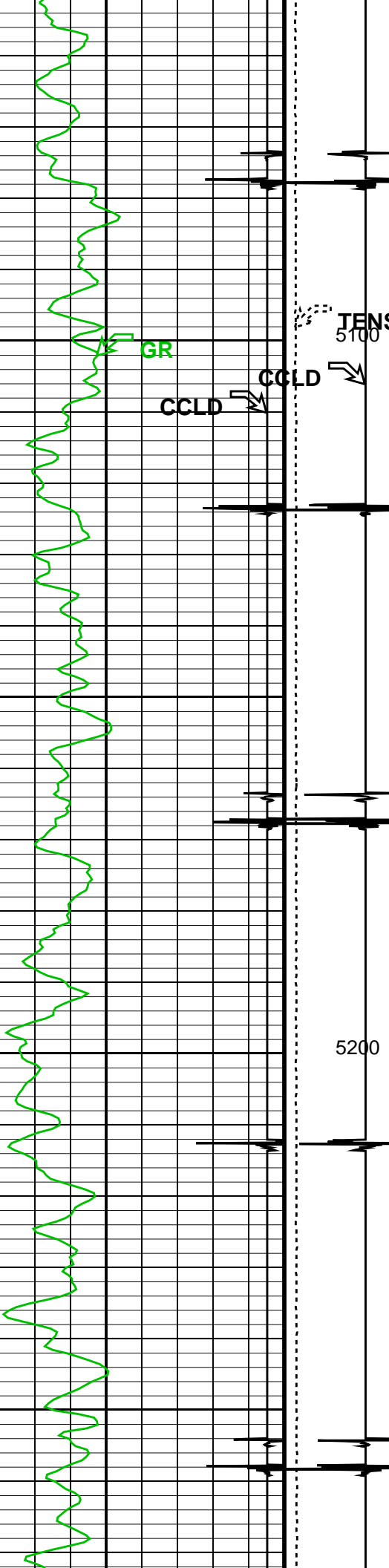
CCLD

CCLD

TENS

4900

5000



GR

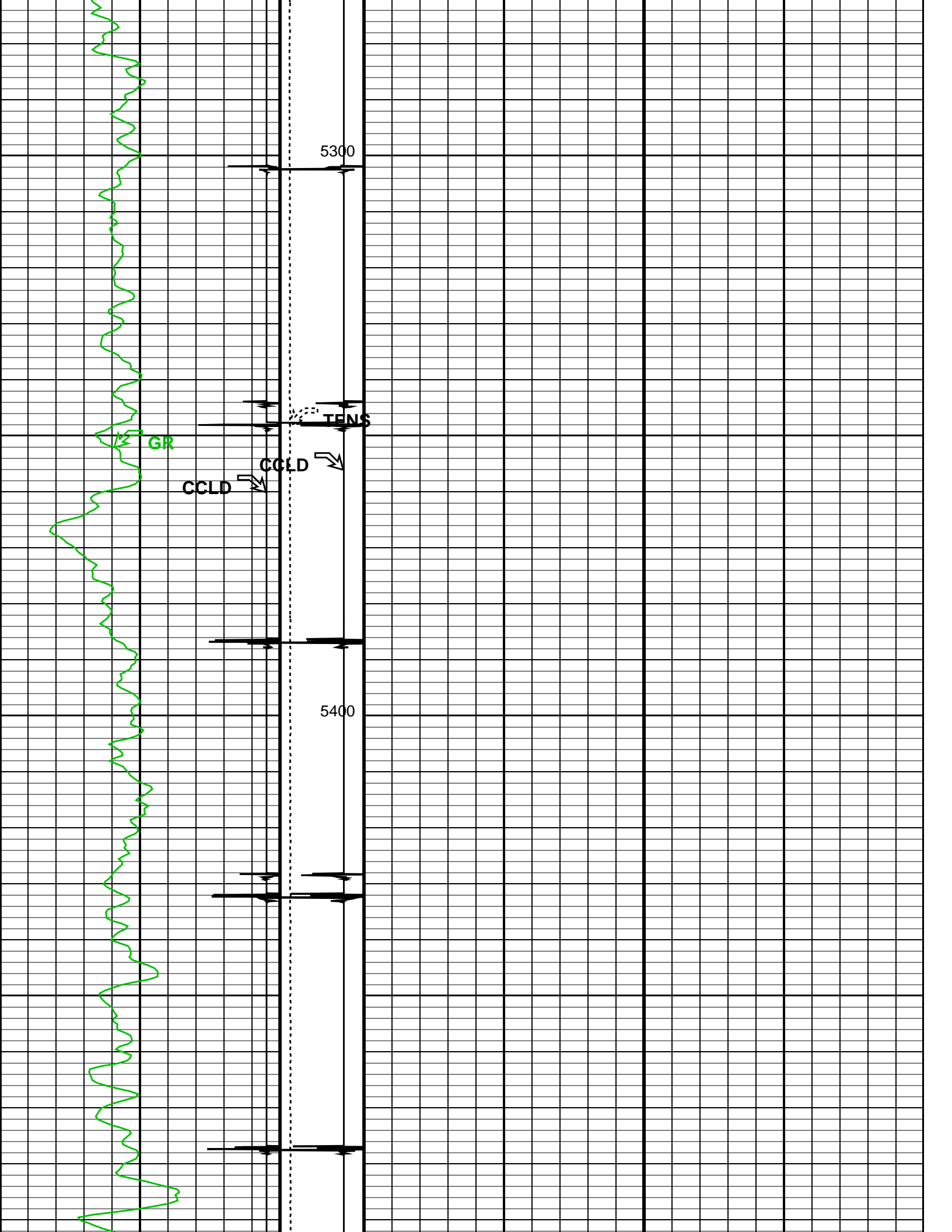
CCLD

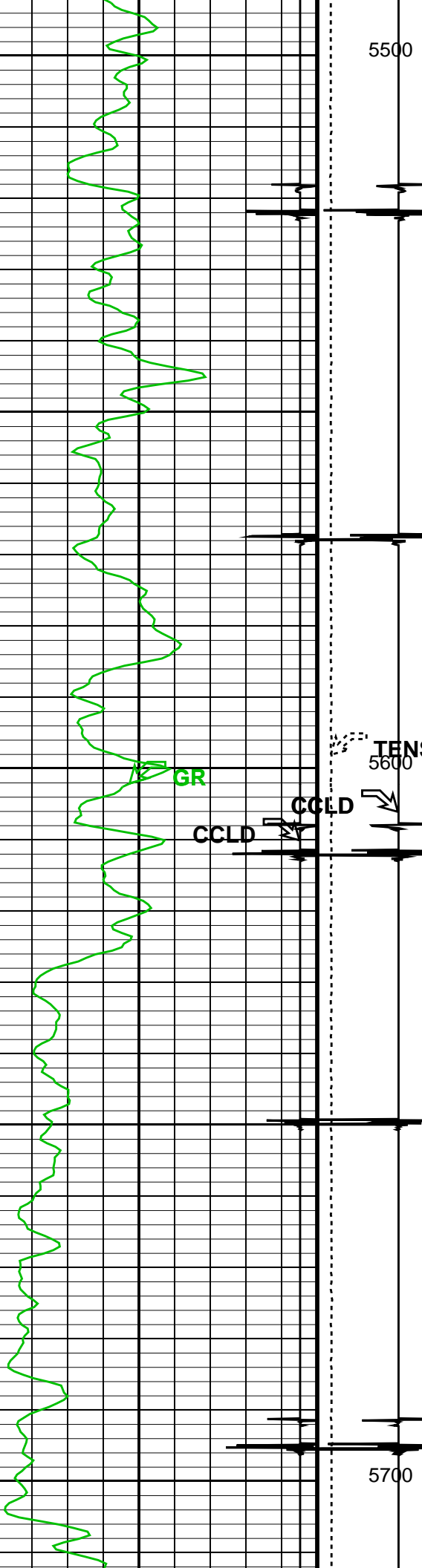
CCLD

TENS

5100

5200





5500

GR

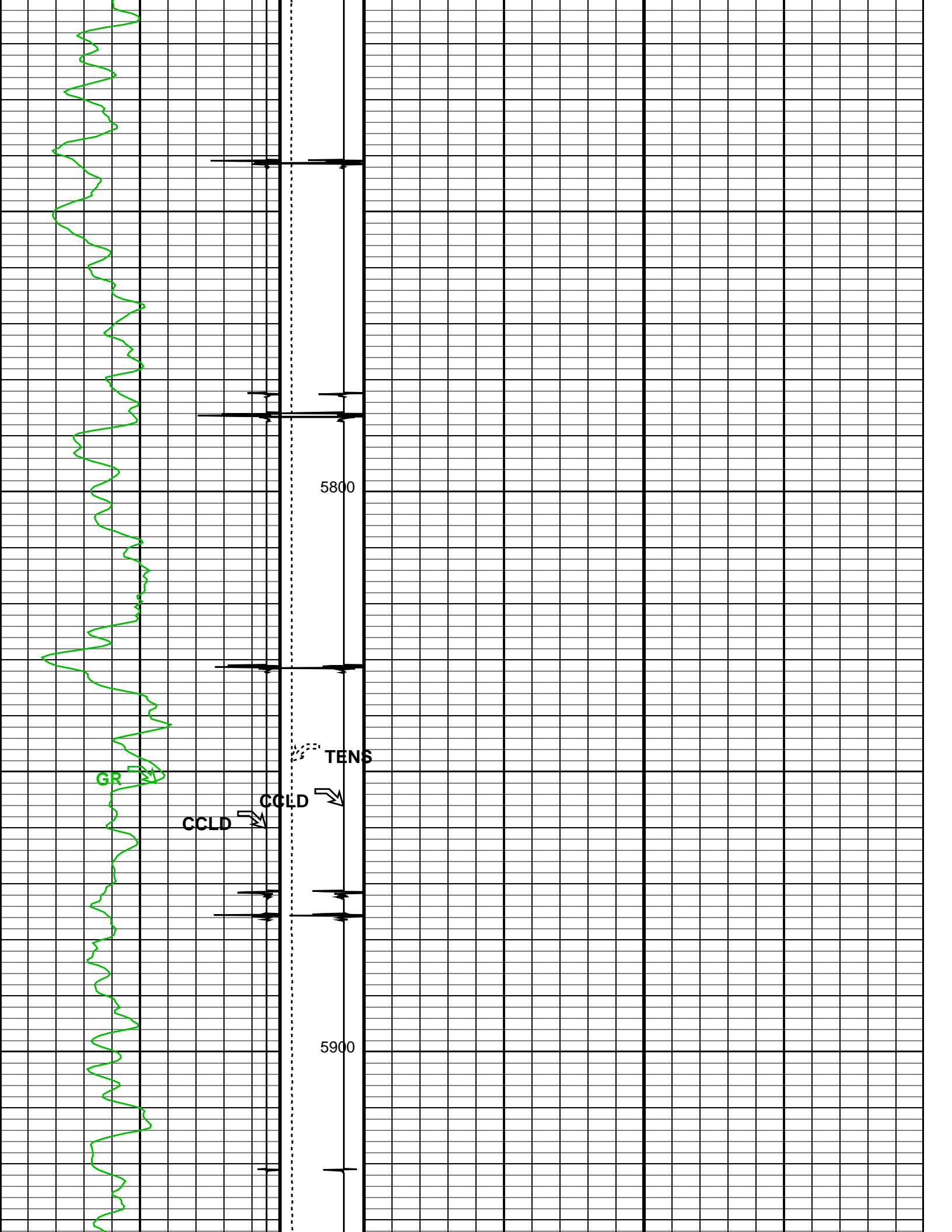
CCLD

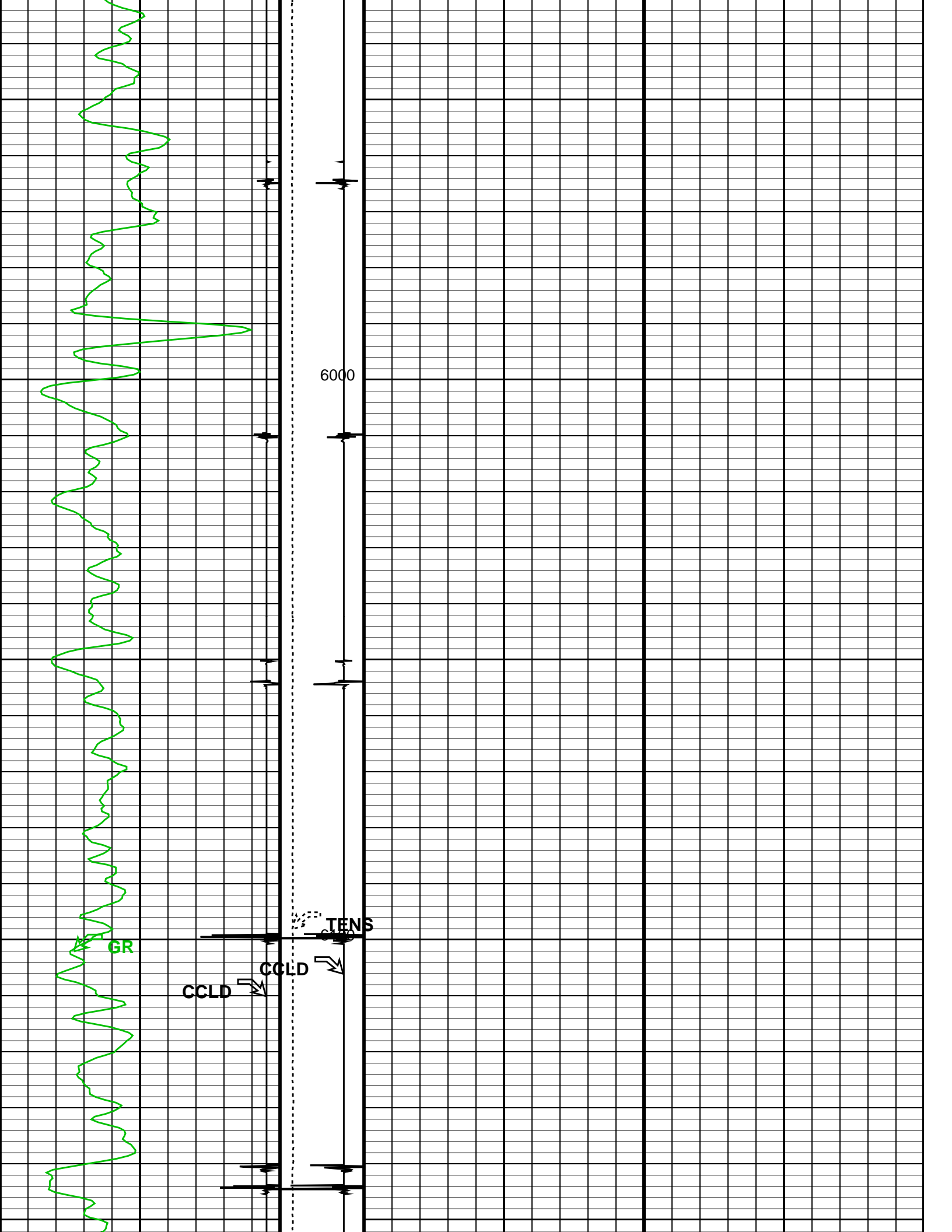
CCLD

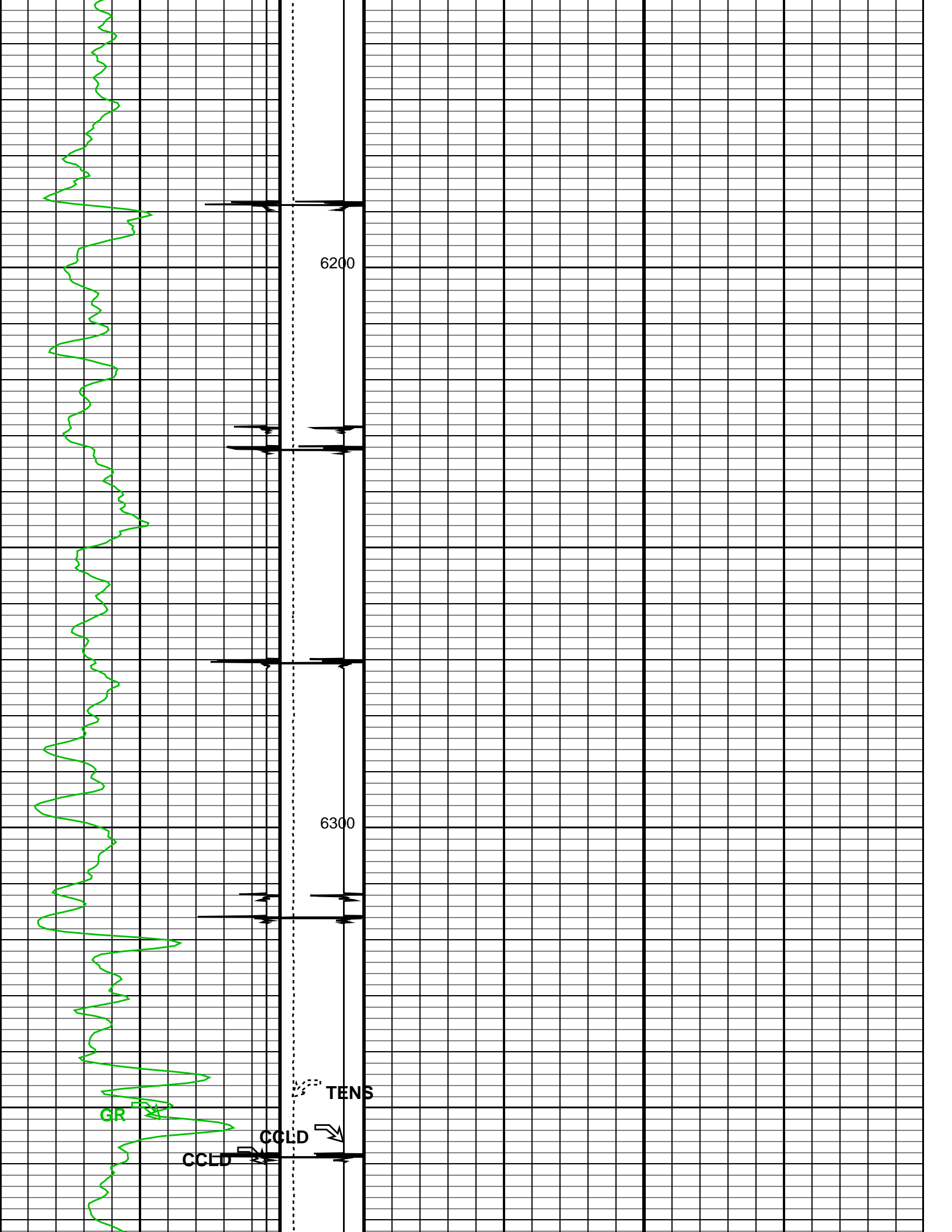
TENS

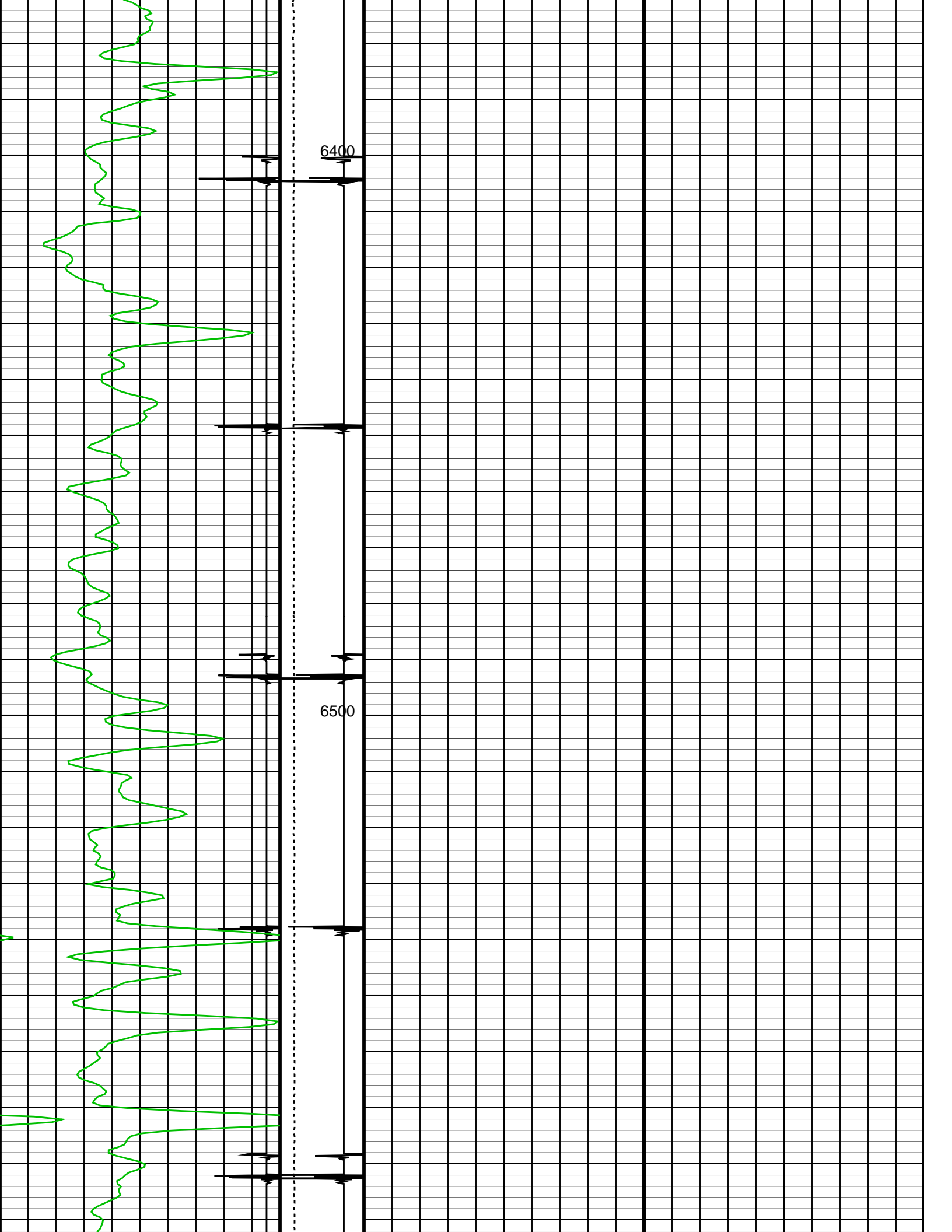
5600

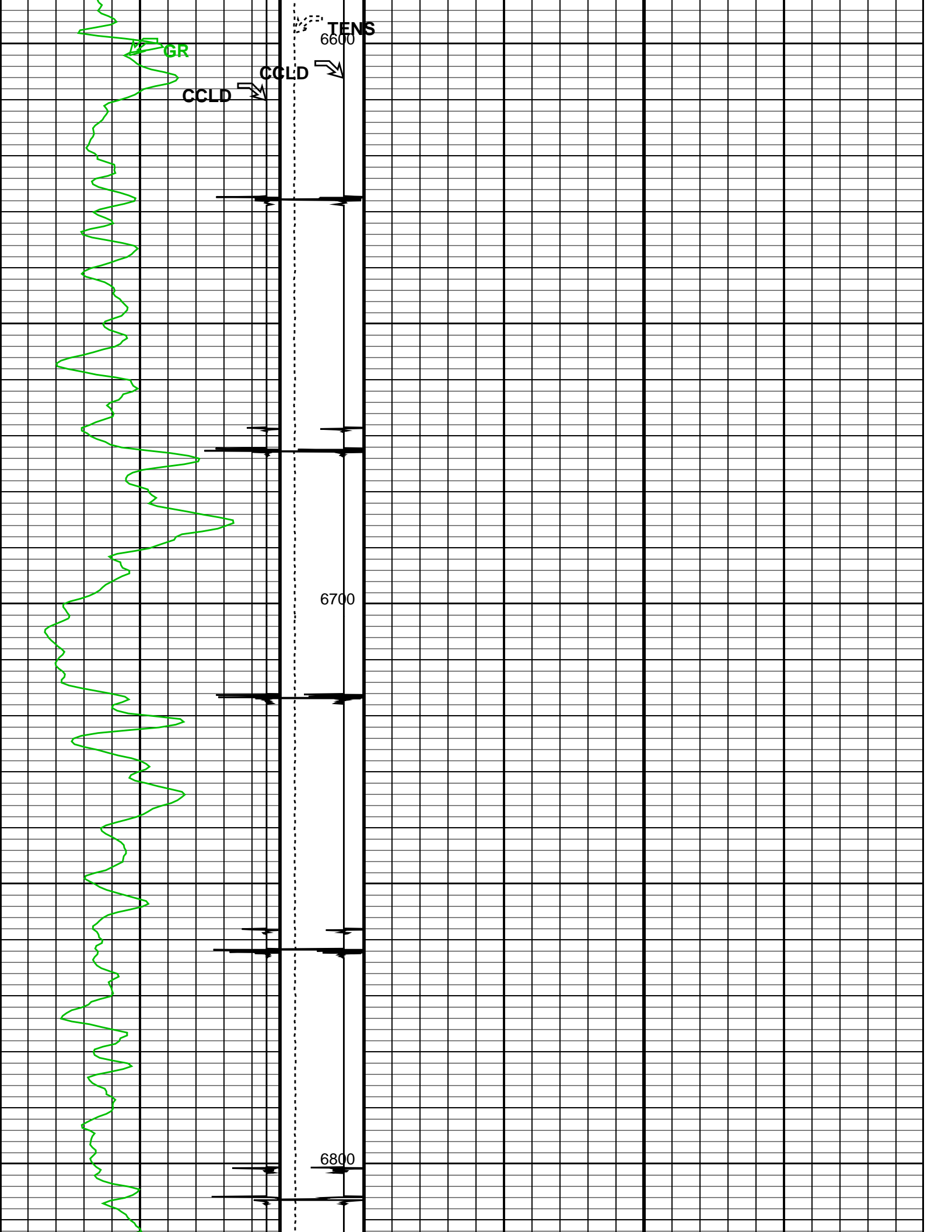
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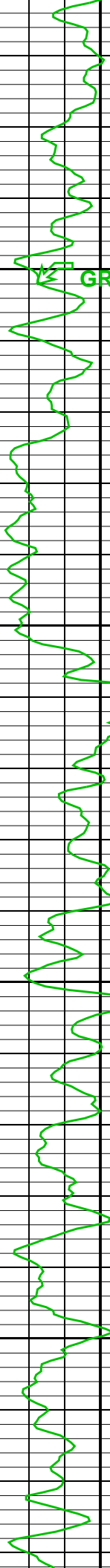












GR

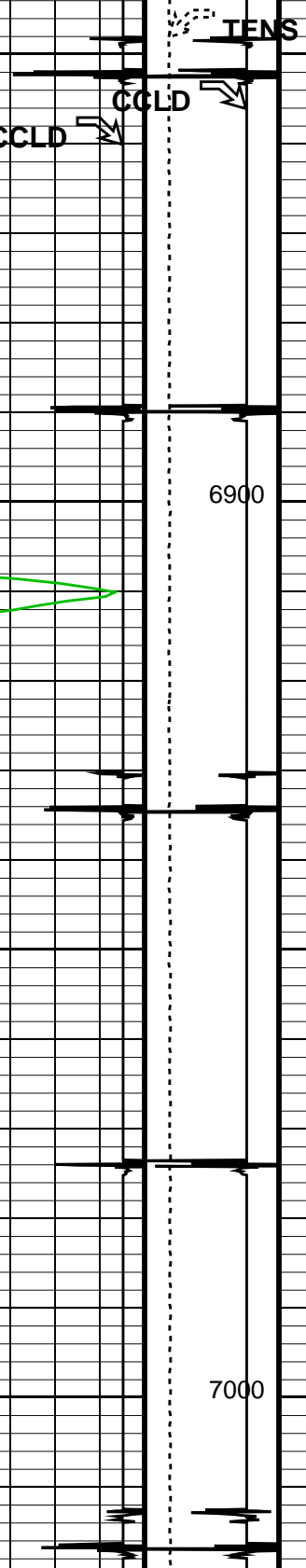
CCLD

CCLD

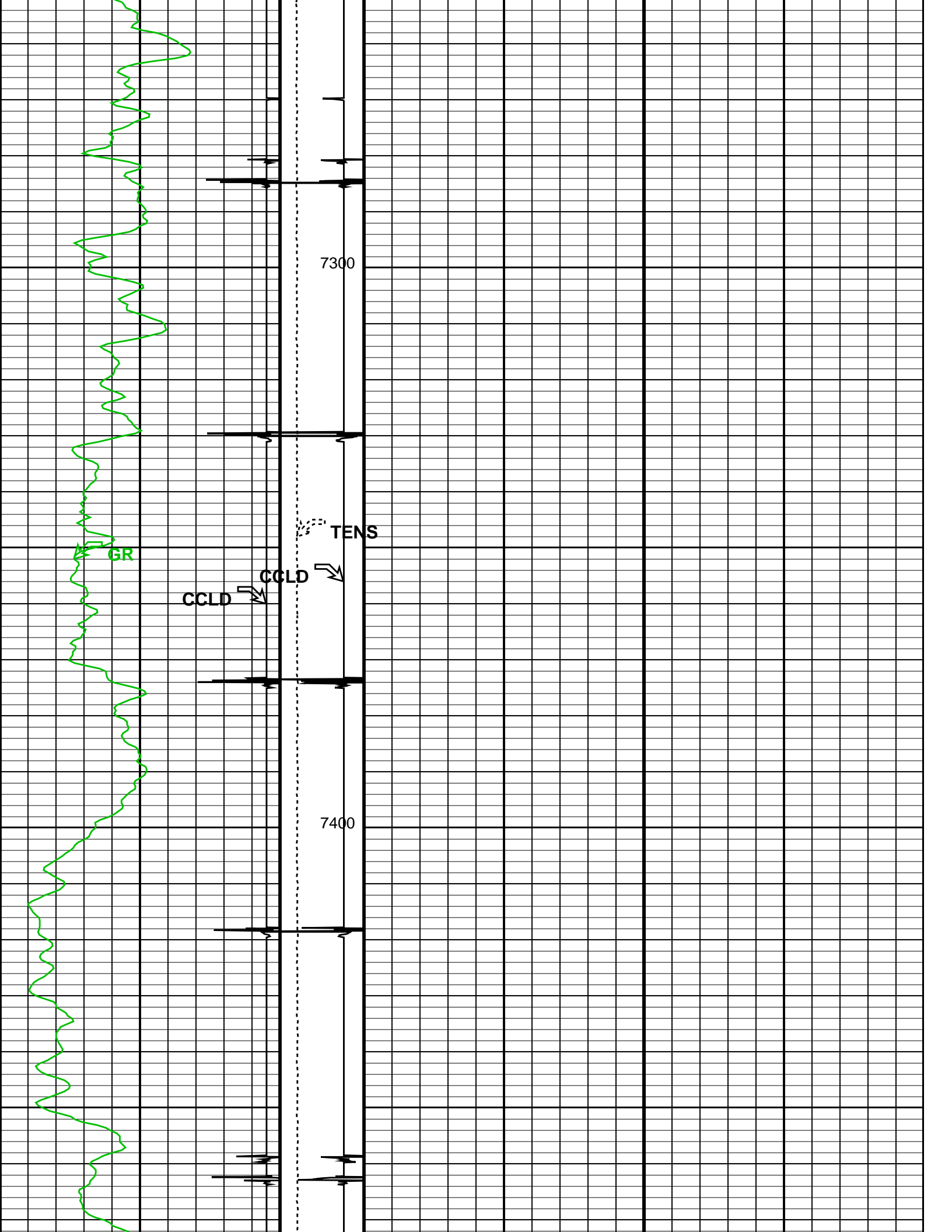
TENS

6900

7000







7300

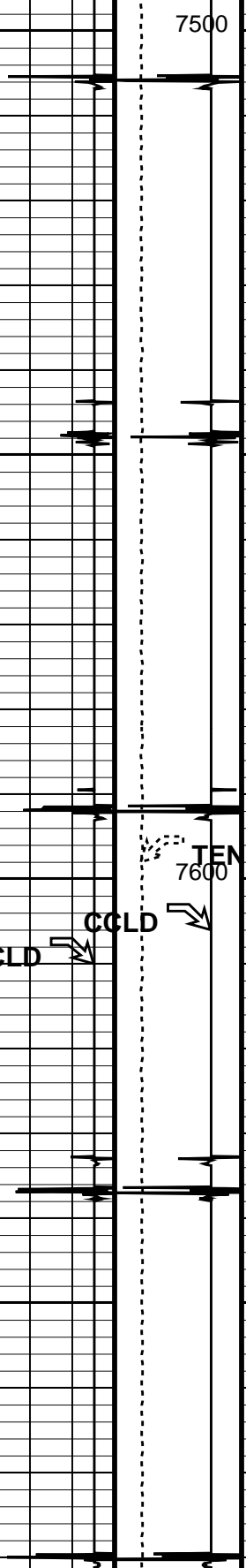
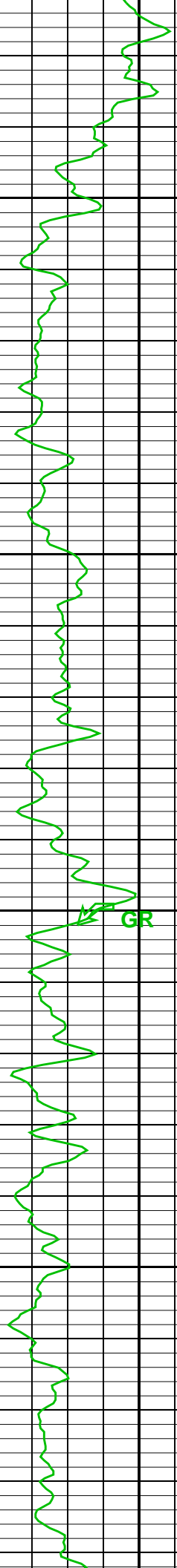
7400

GR

CCLD

CCLD

TENS



7500

TENS  
7600

CCLD

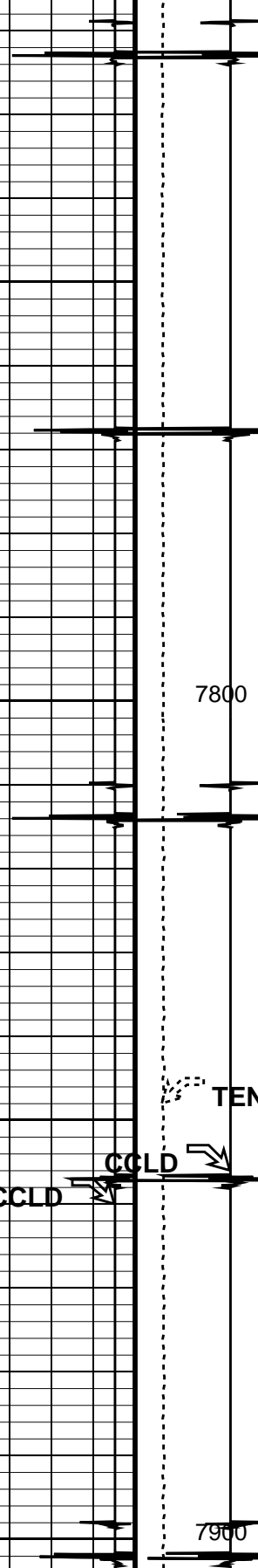
GR



7700

7800

7900

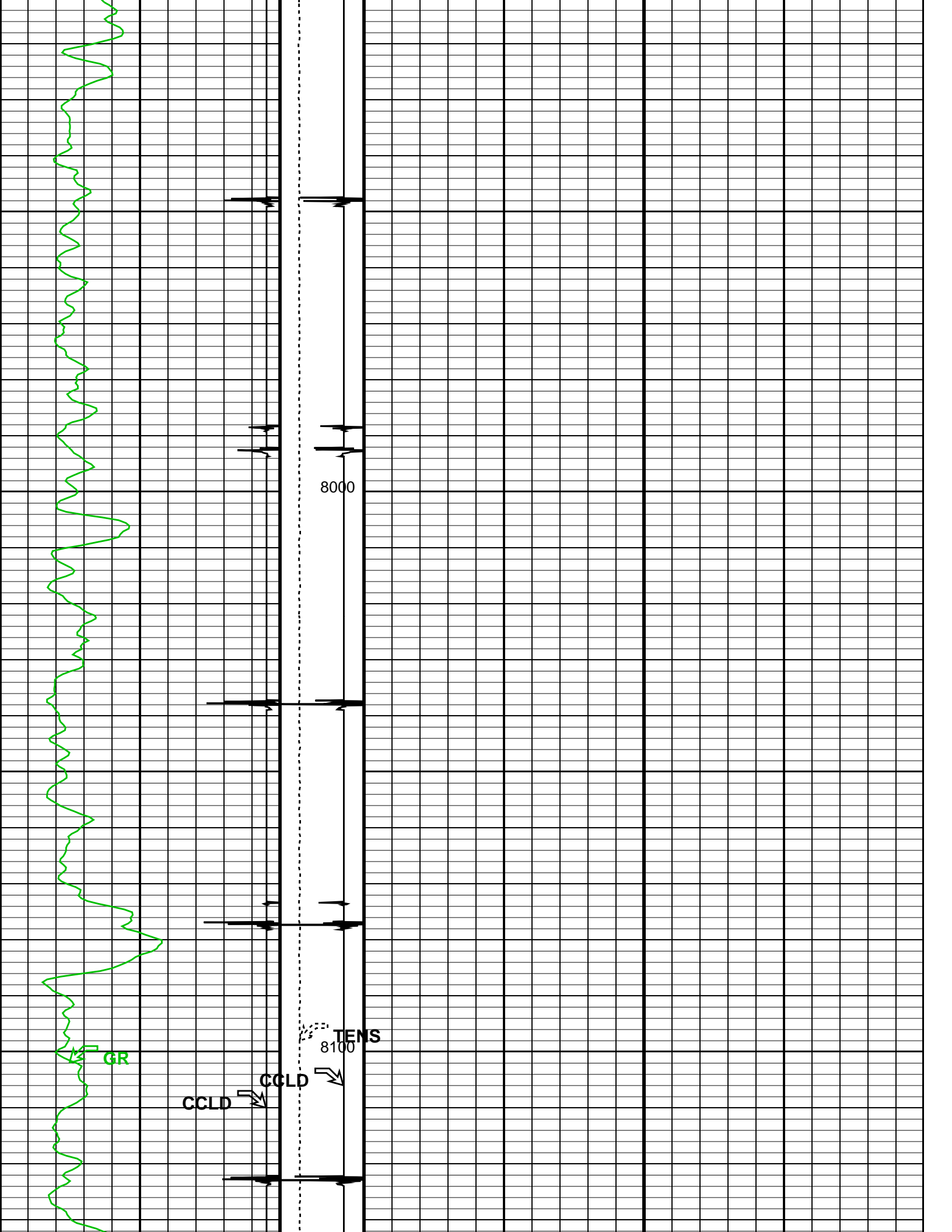


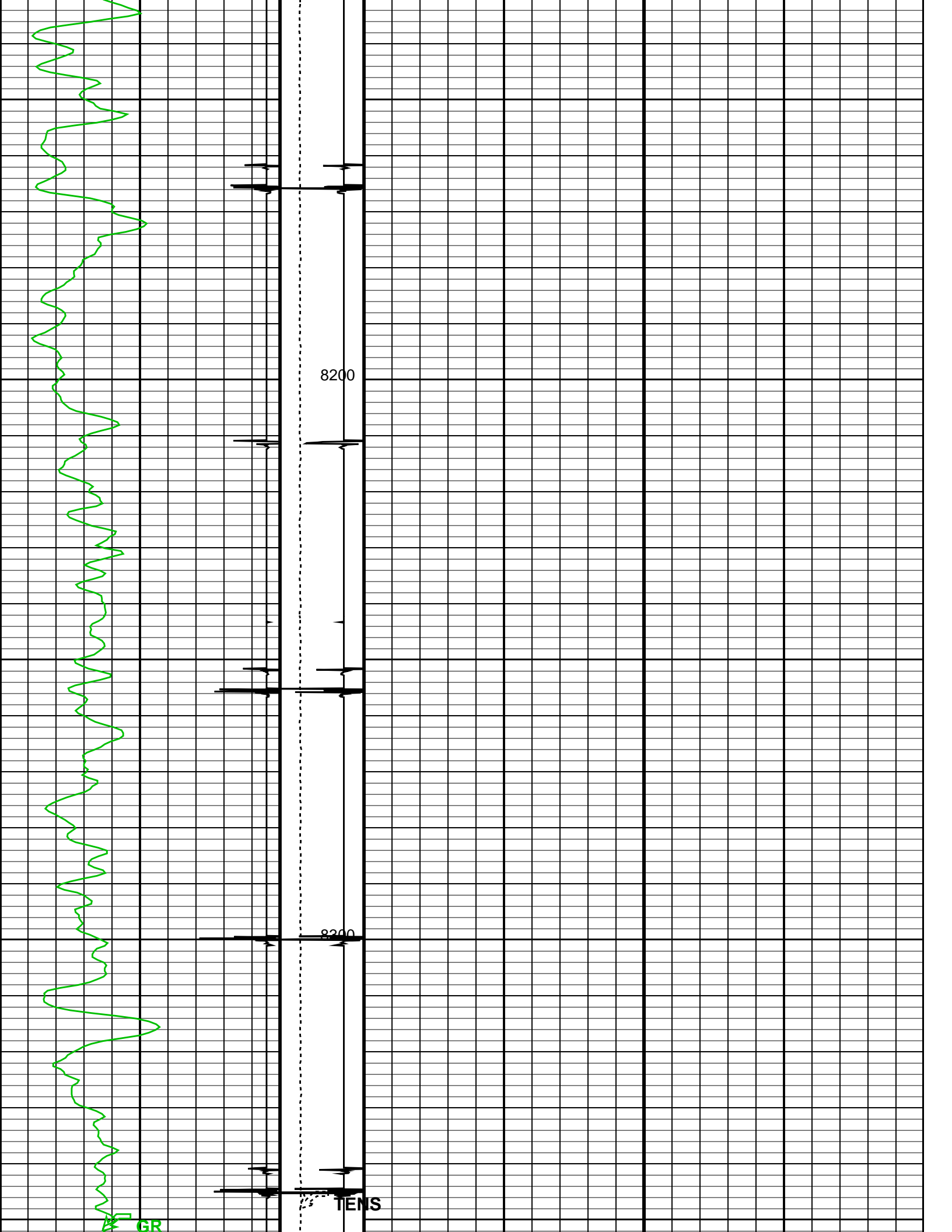
GR

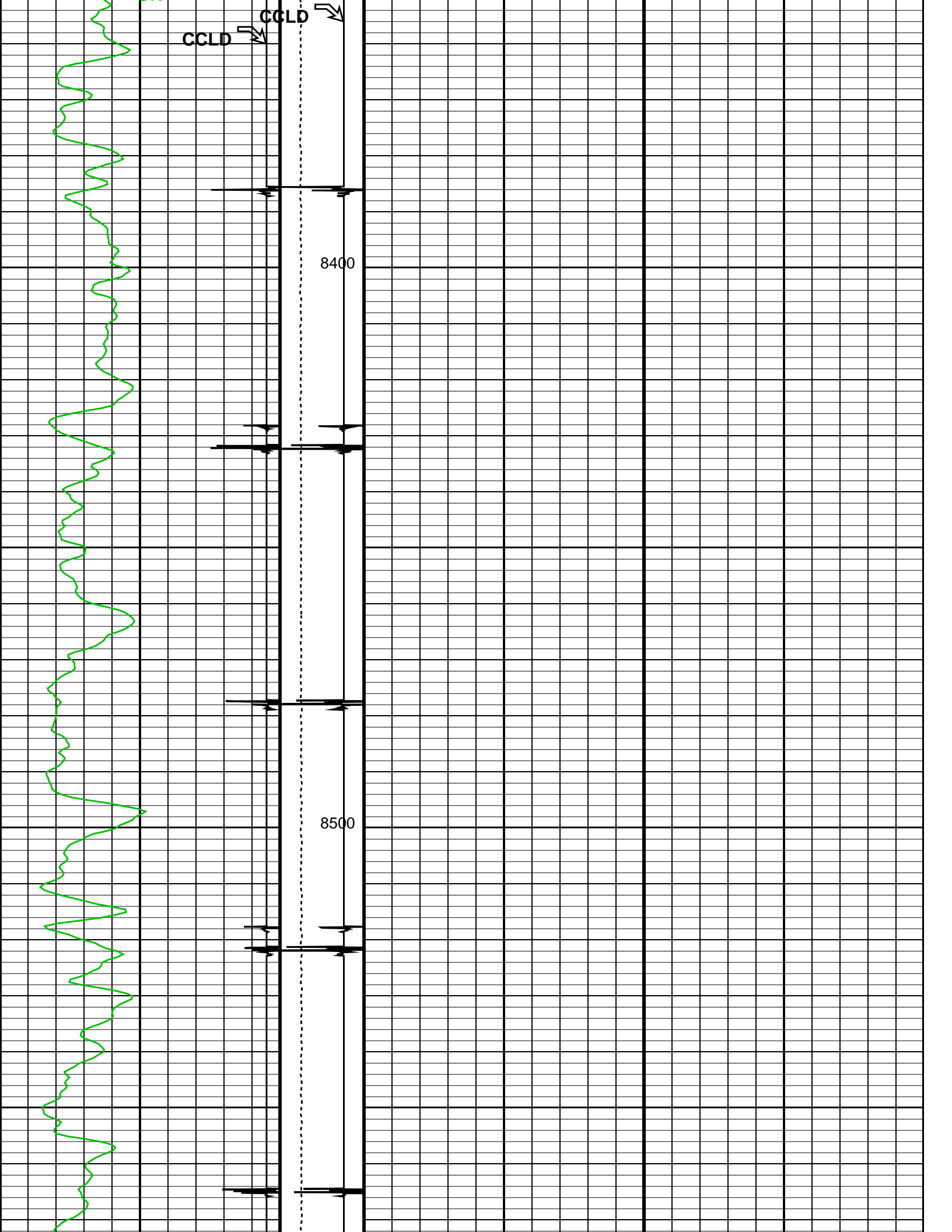
TENS

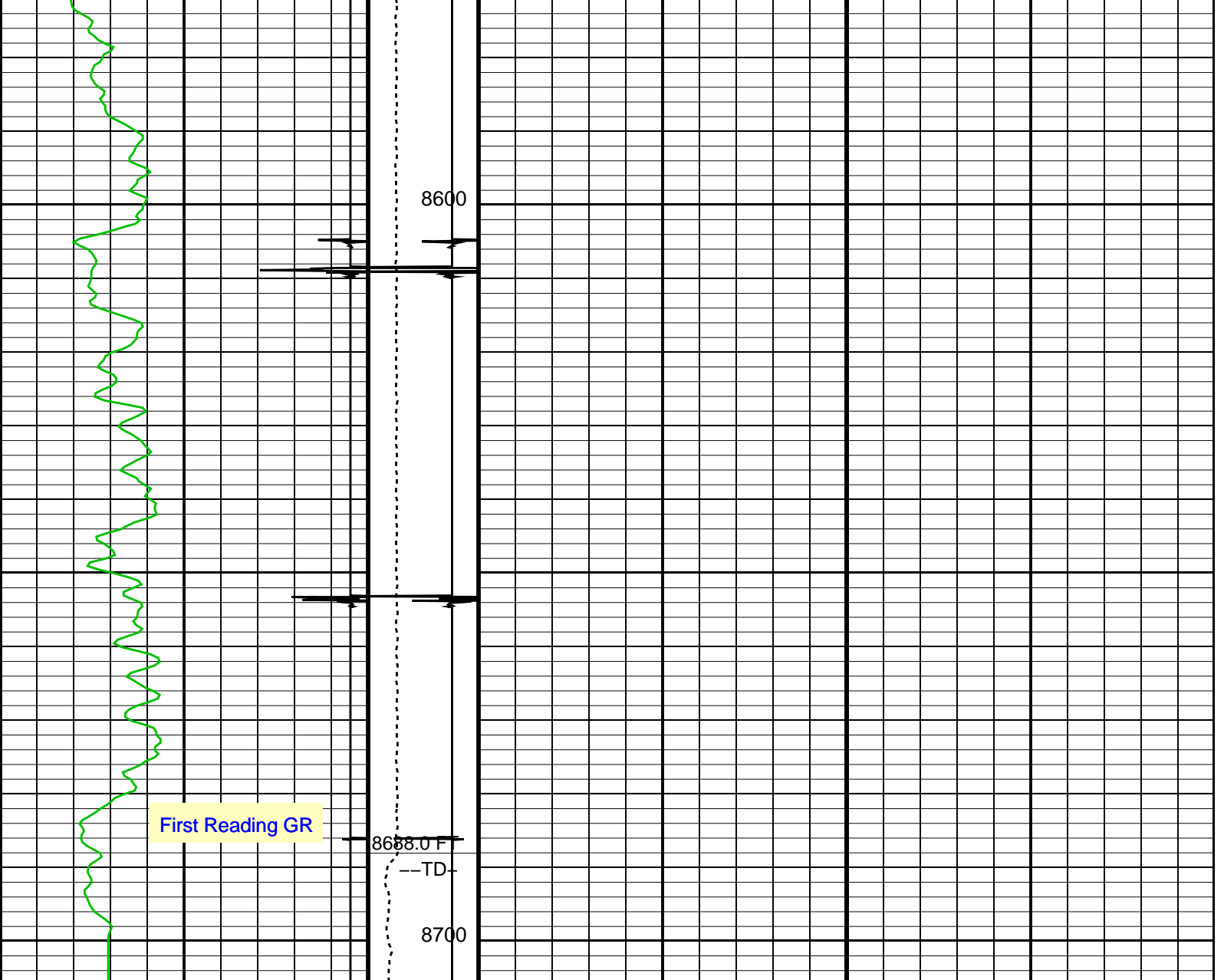
CCLD

CCLD









Discriminated CCL (CCLD) (V)	1	Tension (TENS) (LBF)	0 1500
Gamma Ray (GR) (GAPI)	150	Discriminat ed CCL (CCLD)	3 (V) -1

### Parameters

DLIS Name	Description	Value
DO PP	System and Miscellaneous Depth Offset for Playback Playback Processing	0.0 FT NORMAL

Format: TEMPERATURE\_S5    Vertical Scale: 5" per 100'    Graphics File Created: 26-Feb-2010 04:12

### OP System Version: 17C0-154

PSPT    SRPC-3870\_Q3\_2009\_OP17\_V3\_b

### Input DLIS Files

DEFAULT	Flip_PSP_007LUP	PRODUCER	26-Feb-2010 04:08	8705.5 FT	193.5 FT
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# Output DLIS Files

DEFAULT

PSP\_008PUP

FN:6

PRODUCER

26-Feb-2010 04:12



## REPEATPASS 0 PSI

MAXIS Field Log

Company: EXXON MOBIL DEVELOPMENT COMPANY

Well: PCU 197-34B8

### Input DLIS Files

DEFAULT

PSP\_009PUP

FN:7

PRODUCER

26-Feb-2010 04:16

8710.0 FT

8151.0 FT

### Output DLIS Files

DEFAULT

PSP\_010PUP

FN:8

PRODUCER

26-Feb-2010 04:21

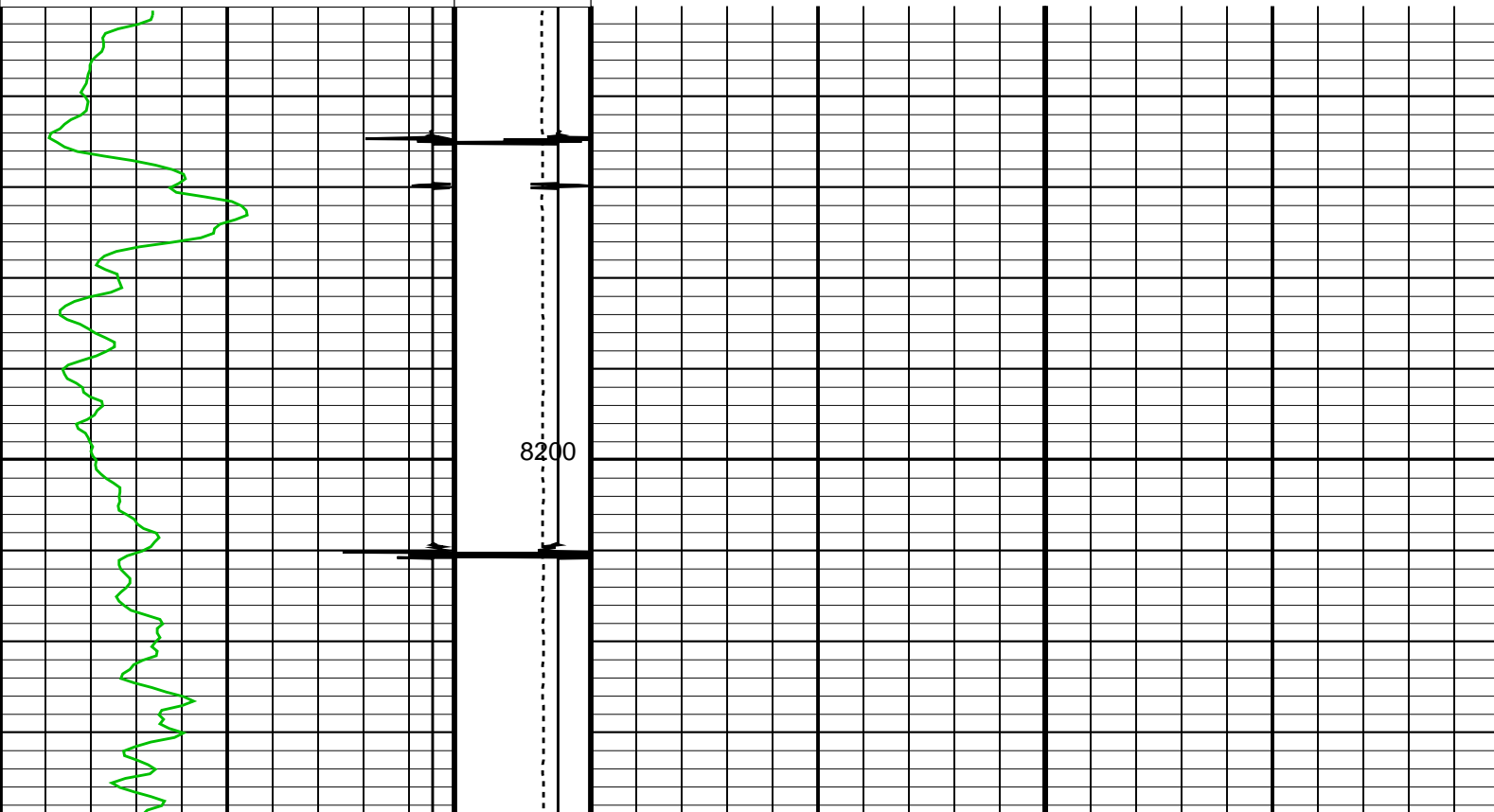
8709.0 FT

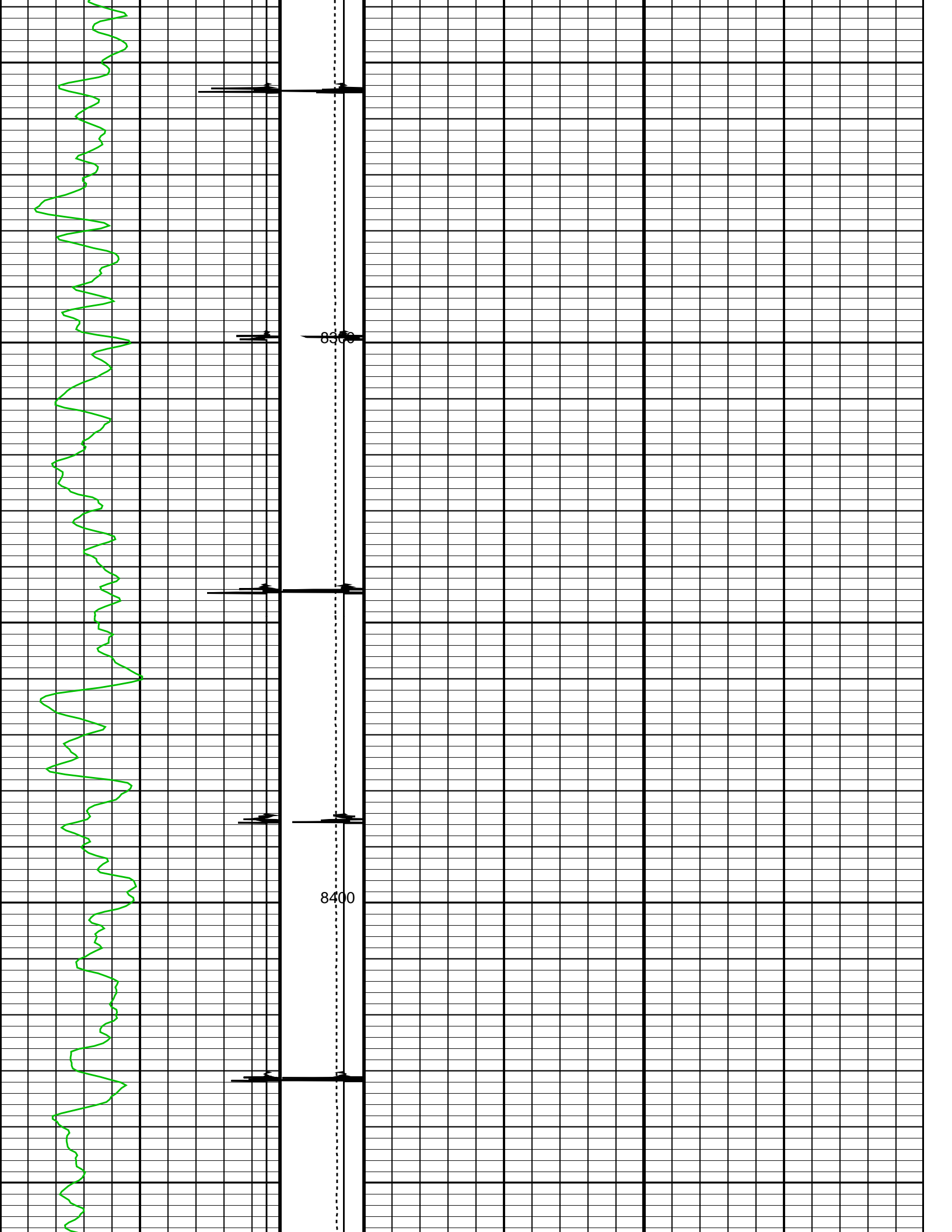
8150.0 FT

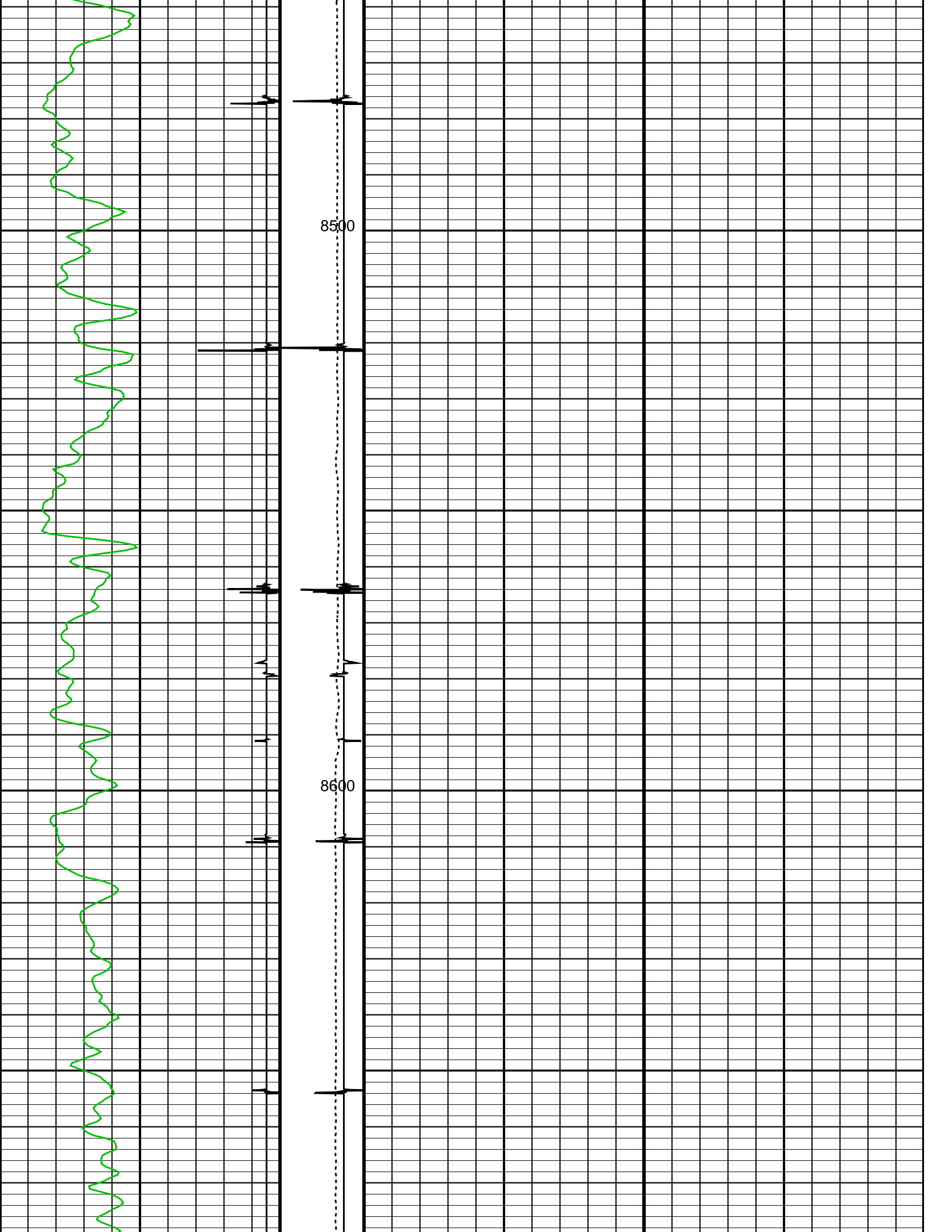
## OP System Version: 17C0-154

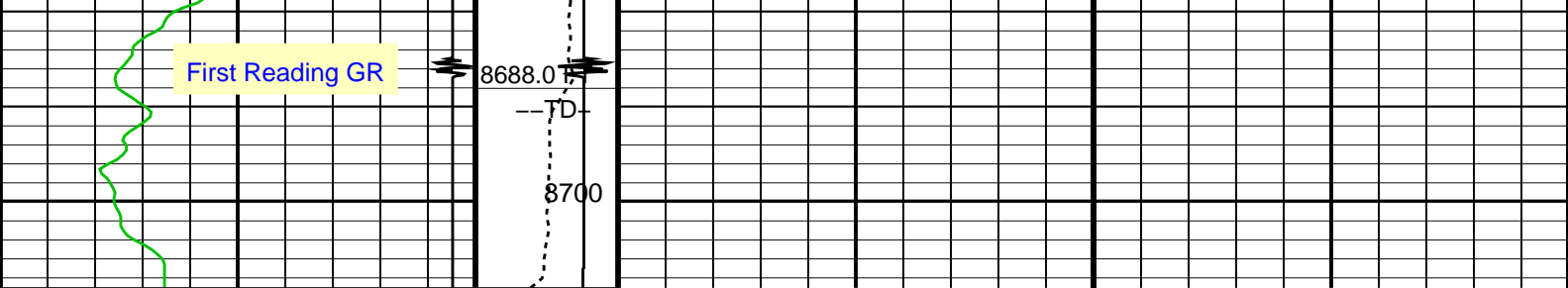
PSPT SRPC-3870\_Q3\_2009\_OP17\_V3\_b

<b>Gamma Ray (GR) (GAPI)</b>	<b>Discriminat ed CCL (CCLD)</b>
0 150	3 (V) -1
<b>Discriminated CCL (CCLD)</b>	<b>Tension (TENS) (LBF)</b>
-19 (V) 1	0 1500









Discriminated CCL (CCLD) (V)	1	Tension (TENS) (LBF)	0 1500
Gamma Ray (GR) (GAPI)	150	Discriminat ed CCL (CCLD)	3 (V) -1

Parameters		
DLIS Name	Description	Value
DO PP	System and Miscellaneous Depth Offset for Playback Playback Processing	-1.0 FT NORMAL

Format: TEMPERATURE\_S5    Vertical Scale: 5" per 100'    Graphics File Created: 26-Feb-2010 04:21

**OP System Version: 17C0-154**

PSPT                    SRPC-3870\_Q3\_2009\_OP17\_V3\_b

Input DLIS Files					
DEFAULT	PSP_009PUP	FN:7	PRODUCER	26-Feb-2010 04:16	8710.0 FT    8151.0 FT
Output DLIS Files					
DEFAULT	PSP_010PUP	FN:8	PRODUCER	26-Feb-2010 04:21	



## COEFFICIENTS

MAXIS Field Log

Client: EXXON MOBIL DEVELOPMENT COMPANY	Tool: PSP
Field: PICEANCE CREEK UNIT	Sub Type: PBMS
Well: PCU 197-34B8	Sensor: GR
Run date: 26-Feb-2010	

PBMS Gamma Ray  
 Sonde Serial NB                    RESISTORS FOR GR SENSOR N.33987, TOOL PBMS-AA2782. SENSOR S/N:  
 Sensor Serial NB                    33987  
 Calib Date ddmmyy                    211004

Calib Date ddmmyy 211004  
Matrix Size 12  
Coeff CRC 8EB5

GR HV Rt

Rt\*\*0

Rt\*\*1

Rt\*\*0

+.200000000000e+04	+.248000000000e+04
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Client: EXXON MOBIL DEVELOPMENT COMPANY  
Field: PICEANCE CREEK UNIT  
Well: PCU 197-34B8  
Run date: 26-Feb-2010

Tool: PSP  
Sub Type: PBMS  
Sensor: WellTemp RTD

PBMS RTD Well Thermometer

Sonde Serial NB COEFFICIENTS FOR RTD THERMOMETER PBMS-A.2782 S/N:  
Sensor Serial NB 2782  
Calib Date ddmmyy 240605  
Matrix Size 16  
Coeff CRC C2EB

WTemp Coeff

Tt\*\*0

Tt\*\*1

Tt\*\*2

Tt\*\*0

-.336377203490E+03	+.100503331561E+03	-.168939222789E+01
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Tt\*\*3

Tt\*\*4

Tt\*\*5

Tt\*\*0

+.615701359053E+00	-.339551184977E-01	0.0
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Client: EXXON MOBIL DEVELOPMENT COMPANY  
 Field: PICEANCE CREEK UNIT  
 Well: PCU 197-34B8  
 Run date: 26-Feb-2010

Tool: PSP  
 Sub Type: PBMS  
 Sensor: Sapphire

**PBMS Sapphire 10kPsi Gauge**

Sonde Serial NB COEFFICIENTS FOR SAPPHIRE PBMS-A.2782 S/N:  
 Sensor Serial NB 2782  
 Calib Date ddmmyy 240605  
 Matrix Size 66  
 Coeff CRC 5016

**Pres Coeff**

	Tt**0	Tt**1	Tt**2
Tp**0	-.292008348200E+05	+.190700008535E+05	-.552607792066E+04
Tp**1	+.191735506444E+05	-.122664241030E+05	+.370487321348E+04
Tp**2	-.158767828189E+03	+.564425247711E+02	-.524780331245E+01
Tp**3	+.318153963394E+01	-.690393229720E+00	0.0
Tp**4	0.0	0.0	0.0
Tp**5	0.0	0.0	0.0

	Tt**3	Tt**4	Tt**5
Tp**0	+.767758857725E+03	-.417614140741E+02	0.0
Tp**1	-.531769713259E+03	+.297277375298E+02	0.0
Tp**2	0.0	0.0	0.0
Tp**3	0.0	0.0	0.0
Tp**4	0.0	0.0	0.0
Tp**5	0.0	0.0	0.0

**PBMS Sapphire 10kPsi Gauge**

Sonde Serial NB :  
 Sensor Serial NB 2782  
 Calib Date ddmmyy 240605  
 Matrix Size 66  
 Coeff CRC 68BA

**Temp Coeff**

	Tp**0	Tp**1	Tp**2
Tt**0	+.212115813835E+04	-.792348397899E+00	-.133380624629E+01
Tt**1	-.118264134380E+04	+.147782832041E+01	+.337767349271E+00
Tt**2	+.231778903261E+03	-.469460605114E+00	-.215145812317E-01
Tt**3	-.160255480049E+02	+.430100208050E-01	0.0

Tt**4	0.0	0.0	0.0
Tt**5	0.0	0.0	0.0
	<b>Tp**3</b>	<b>Tp**4</b>	<b>Tp**5</b>
Tt**0	+277164183976E+00	-.282120115468E-01	0.0
Tt**1	-.476794038309E-01	+504303761798E-02	0.0
Tt**2	0.0	0.0	0.0
Tt**3	0.0	0.0	0.0
Tt**4	0.0	0.0	0.0
Tt**5	0.0	0.0	0.0

Company: **EXXON MOBIL DEVELOPMENT COMPANY**

**Schlumberger**

Well: **PCU 197-34B8**  
 Field: **PICEANCE CREEK UNIT**  
 County: **RIO BLANCO**  
 State: **COLORADO**

GAMMA RAY / CCL LOG