

Tucker

BOREHOLE COMPENSATED
SONIC LOG
WIRELINER SERVICES

Company LB EXPLORATIONS INC. Well LARKIN #14-2 Field DEERHEAD NORTH County BARBER State KANSAS Country USA API No. 15-007-20258-00-01		File No : TUL-55923 Company : LB EXPLORATIONS INC. Well : LARKIN #14-2 Field : DEERHEAD NORTH County : BARBER State : KANSAS Country : USA API No : 15-007-20258-00-01	
Location : 1880' FSL & 2120' FWL NW SE		LSD :	Sect : 14 Twp : 32S Rge : 15E
Permanent Datum:	GL	Elevations:	Services:
Drilling Measured From:	KB	KB 2110.00	CNT
Log Measured From:	KB	DF 2009.00	CNT
Above Permanent Datum:	13.00 Ft	GL 1997.00	PIT
Date	Oct 10 2011		MLT
Run Number	1		
Depth--Driller	5400.0	Ft	
Depth--Logger	5393.0	Ft	
First Reading	5368.0	Ft	
Last Reading	257.0	Ft	
Casing--Driller	244.0	Ft	
Casing--Logger	257.0	Ft	
Bit Size	7.875	In	
Casing Size	8.625	In	
Hole Fluid Type	WBM		
Density	9.1	LBS/GAL	
Fluid Loss	11.2	CC	
PH/Viscosity	9.0	45.0 SEC	
Sample Source	MEASURED		
RM@Measured Temp.	0.780 @ 66 F		
RMF@Measured Temp	0.663 @ 66 F		
RMC@Measured Temp.	1.031 @ 66 F		
Source RMF/RMC	CALCULATED/CALCULATED		
RM@BHT	0.414 @ 130 F		
Time Circulation Stopped	Oct 09 2011 10:00		
Max Recorded Temp.	130	F	
Equipment/Base	TRK123	TULSA	
Recorded By	S. DAVIS / R. FRANKLIN		
Witnessed By	S. PETERMAN		

The customer is hereby warned that by providing the log data herein, T. W. S. does not agree to provide any interpretation of log data, conversion of log data to physical rock parameters or recommendations. T. W. S. does not guarantee or warrant either expressly or impliedly, the accuracy of any interpretation of log data, conversion of log data to physical rock parameters or recommendations which may be given by T. W. S. personnel. Any interpretation, conversion or recommendation is not part of the consideration for the agreement between the parties and is not part of any part of the charge by T. W. S. for its services. Any user of the log data is warned that said user is not entitled to rely on interpretations, conversions or recommendations as aforesaid.

Bitsize Intervals		Casing Strings		
Size (In)	Bottom (Ft)	Size (In)	Weight (Lbs)	Bottom (Ft)
7.875	5400.00	8.625	20.00	244.00

Run Number	1	
Date	Oct 10 2011	
Date/Time On Bottom	Oct 10 2011 03:30	
Depth to Fluid	0.0 Ft	
Salinity	0.000 PPM	
RMF@BHT	0.352 @ 130 F	
RMC@BHT	0.548 @ 130 F	

ALL PRESENTATIONS AS PER CUSTOMER REQUEST
 GRT, CNT, LDT, MLT, CST, AND PIT RUN IN COMBINATION.
 CALIPERS ORIENTED ON X-Y AXIS.
 2.71 G/CC USED TO CALCULATED POROSITY.
 ANNULAR HOLE VOLUME CALCULATED USING 5.50" PRODUCTION CASING.
 DETAIL PRESENTED FROM TD TO DETAIL 3500' PER CUSTOMER REQUEST.

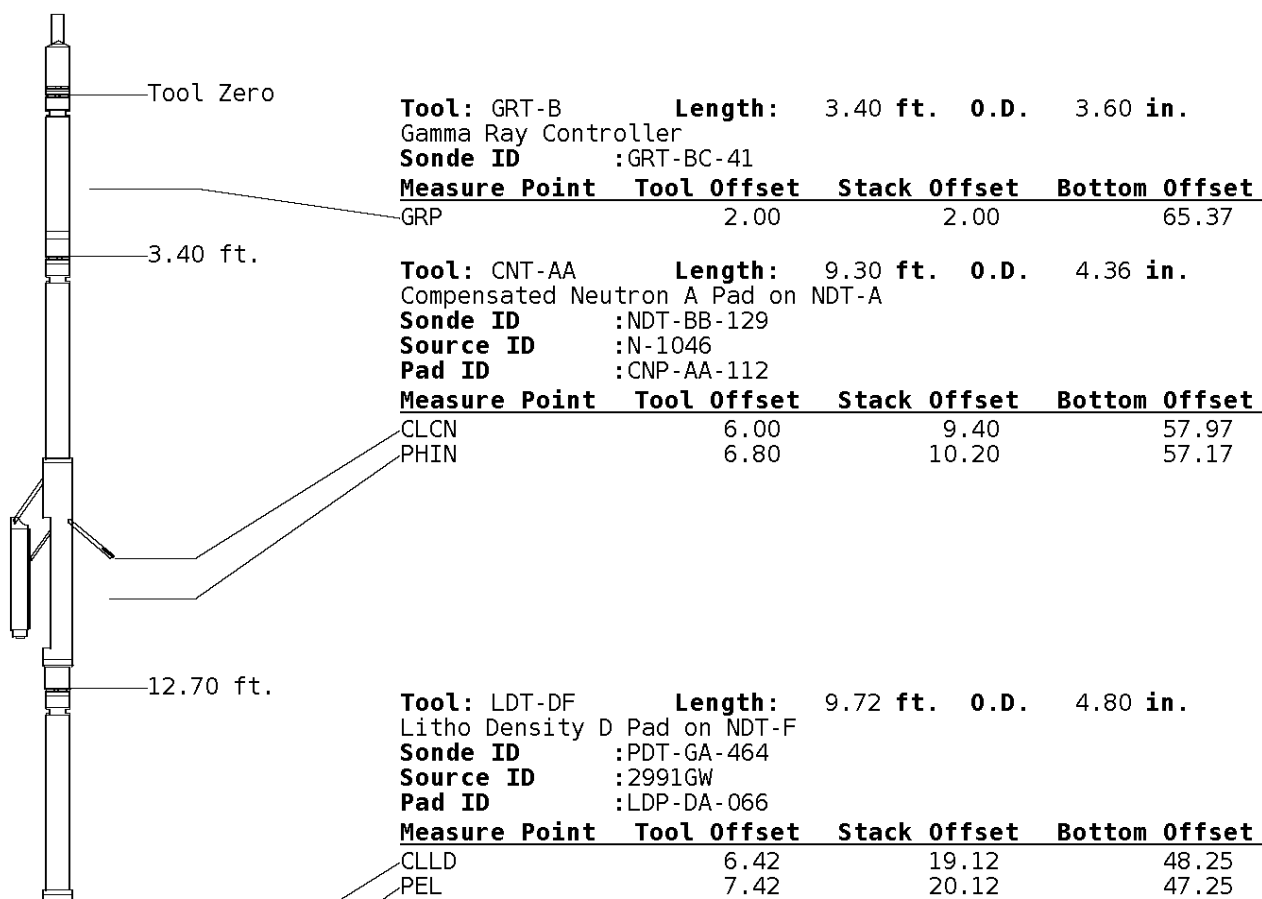
GRT: GRP, UFGRP, S-KK, S-UK, S-TK.
 CNT: PHIN, CLCNIN.
 LDT: PORL, LCORN, PECLN, LDENN, PORLLS, CLLDIN.
 MLT: NOR_RF, INV_RF, MSCLPIN.
 CST: PORS, ITT, CDTF, TT1, TT2, TT3, TT4.
 PIT: ILD, ILM, SPU, SFLAEC.

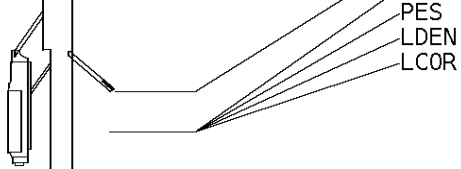
OPERATORS:

J. THOMAS
 S. DAVIS
 A. WARREN

Tool String Schematic

Total Tool Length - 67.37 ft.
Maximum Outside diameter - 6.00 in.
Net Weight in Air - 1171.00 lbs.

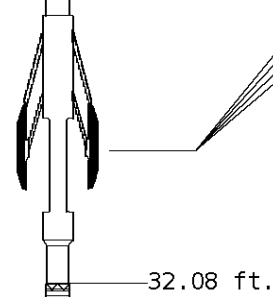




PES	7.82	20.52	46.85
LDEN	7.62	20.32	47.05
LCOR	7.62	20.32	47.05

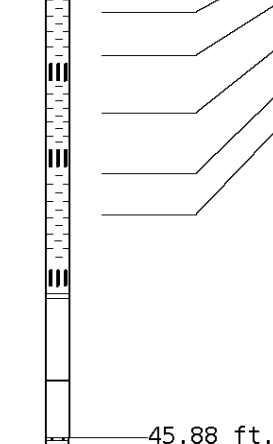
Tool: MST-DA **Length:** 9.66 ft. **O.D.** 6.00 in.
 Micro Spherically Focused (IC,D)
Sonde ID :MLT-DA-21

Measure Point	Tool Offset	Stack Offset	Bottom Offset
MSFL	7.60	30.02	37.35
MSCLP	7.60	30.02	37.35
INV	7.60	30.02	37.35
NOR	7.60	30.02	37.35



Tool: CST-AD **Length:** 13.80 ft. **O.D.** 3.60 in.
 Open Hole Sonic
Sonde ID :CST-AD-078

Measure Point	Tool Offset	Stack Offset	Bottom Offset
TT1	4.80	36.88	30.49
TT3	5.80	37.88	29.49
CDT	7.30	39.38	27.99
TT4	8.80	40.88	26.49
TT2	9.80	41.88	25.49



Tool: PIT-CA **Length:** 21.49 ft. **O.D.** 3.62 in.
 Phased Dual Induction w/ RM & D
Sonde ID :PIT-BA-20

Measure Point	Tool Offset	Stack Offset	Bottom Offset
ILD	8.92	54.80	12.56
ILM	10.10	55.98	11.39
SFLU	17.49	63.37	4.00
SP	20.60	66.48	0.88



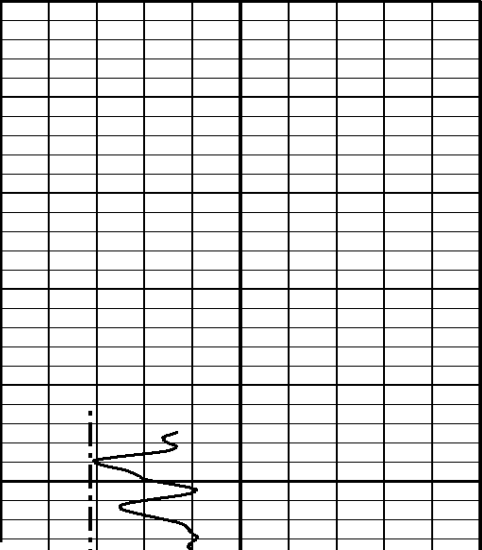
Well File: lb_exp_lar_14-2_oct_10_quint	Scale: 1:240
Segment: V1.D4.S1 MAIN	Acquired: Not Available
Reference: 0	Processed: Not Available

		TT4 uSEC	
		950	50
		TT3 uSEC	
		950	50
		TT2 uSEC	
		950	50
		TT1 uSEC	
		950	50

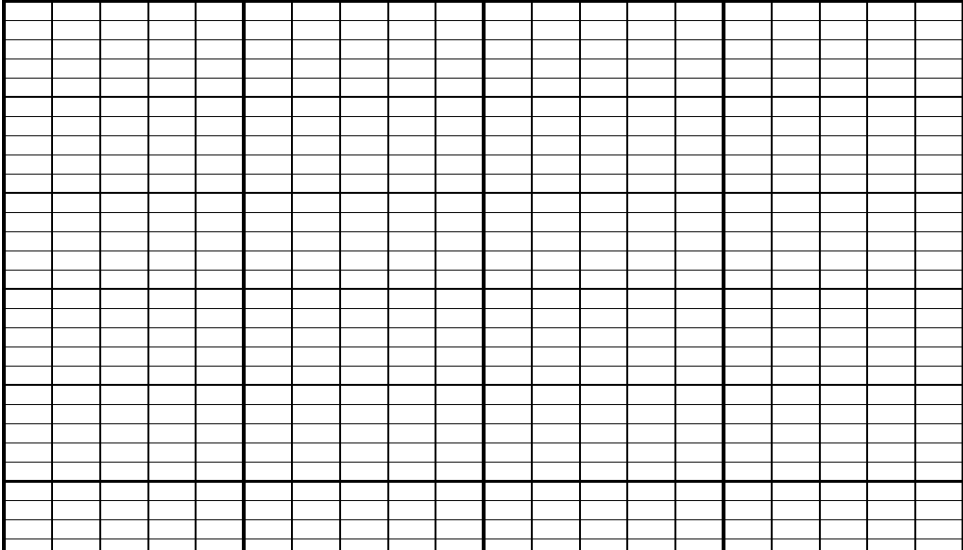
TENSION LBS	
10000	0
BIT SIZE INCHES (IN)	
6	16
DENSITY (X) CALIPER INCHES (IN)	
16	26
6	16
NEUTRON (Y) CALIPER INCHES (IN)	
16	26
6	16
GAMMA RAY API UNITS	
150	300
0	150

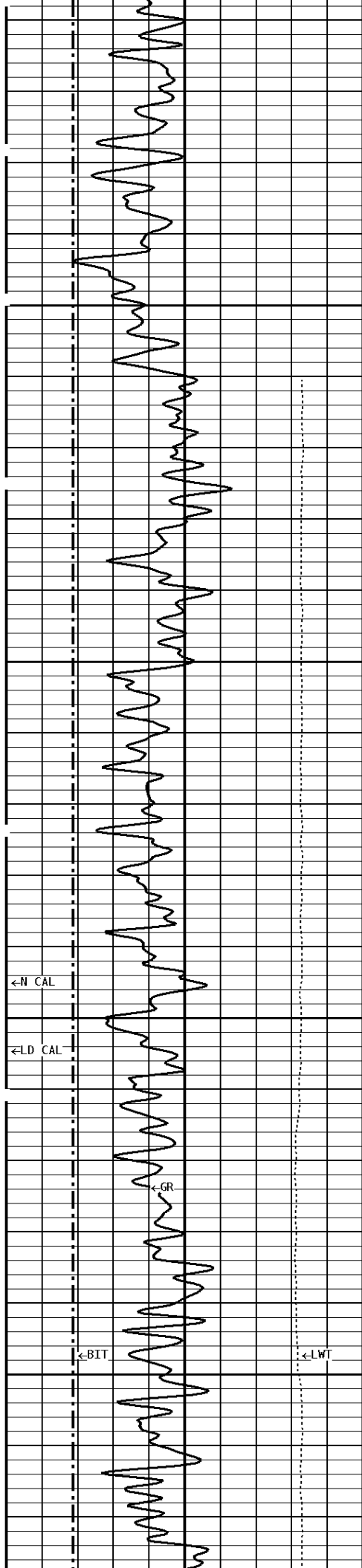
SONIC POROSITY Percent	
30	-10
COMPENSATED SONIC TRAVEL TIME uSEC/FT	
240	140
140	40

1:240 MAIN SECTION



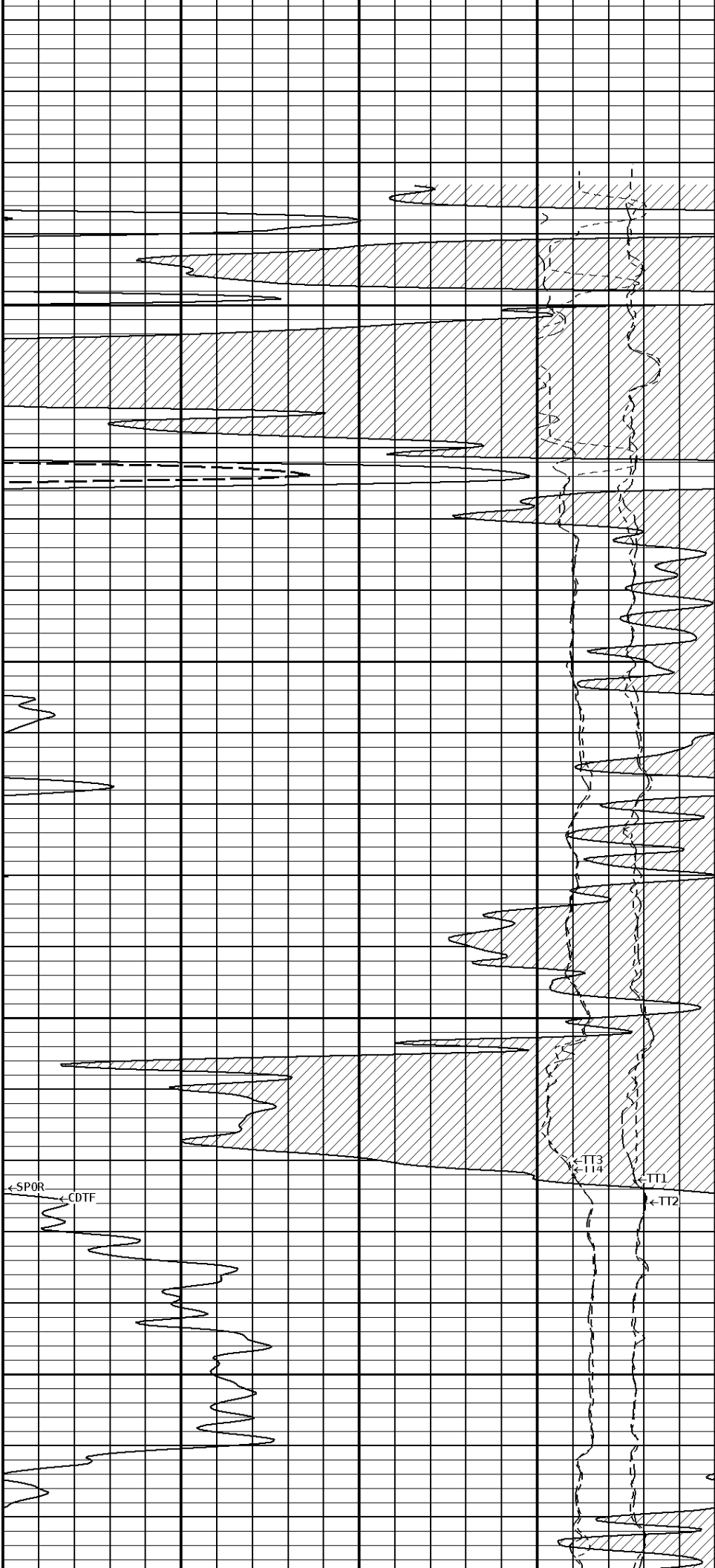
200

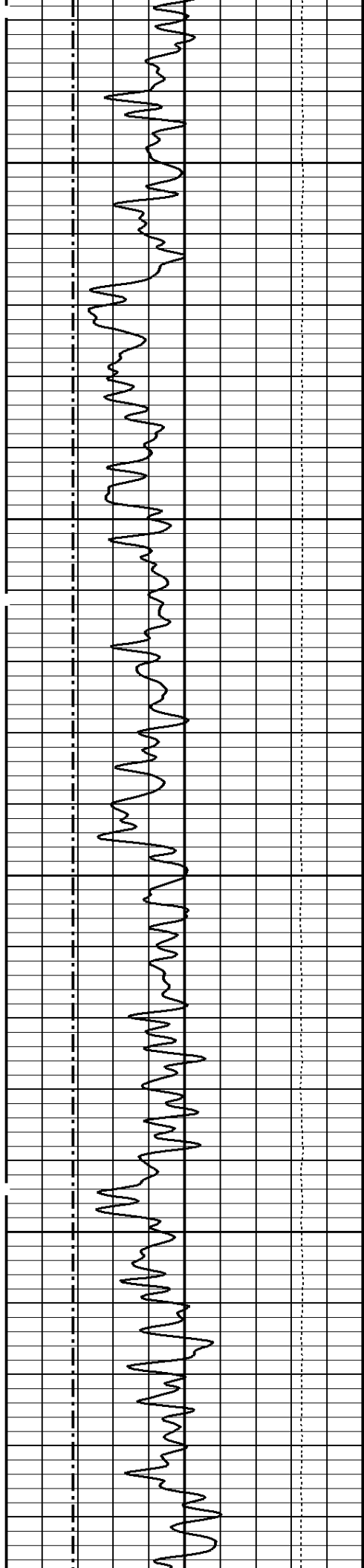




300

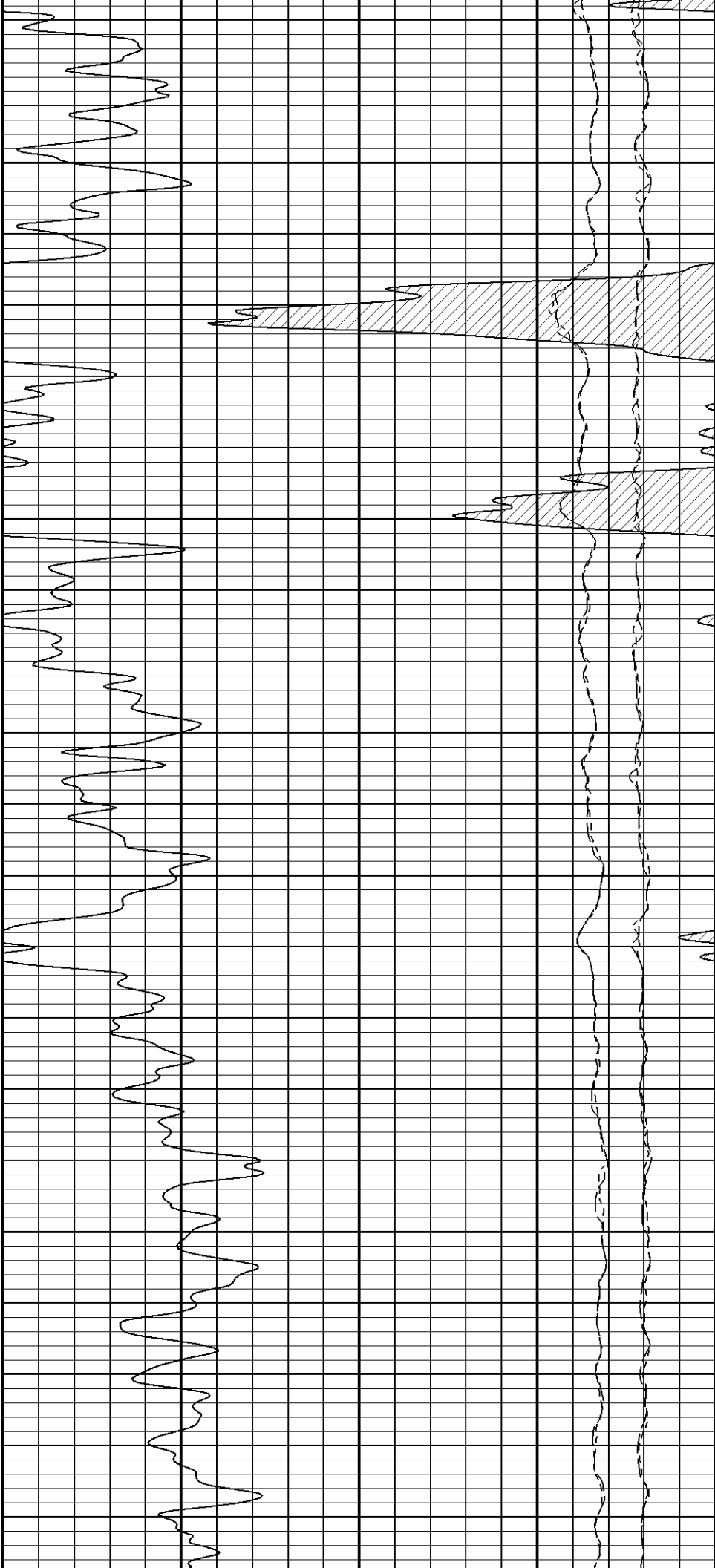
400

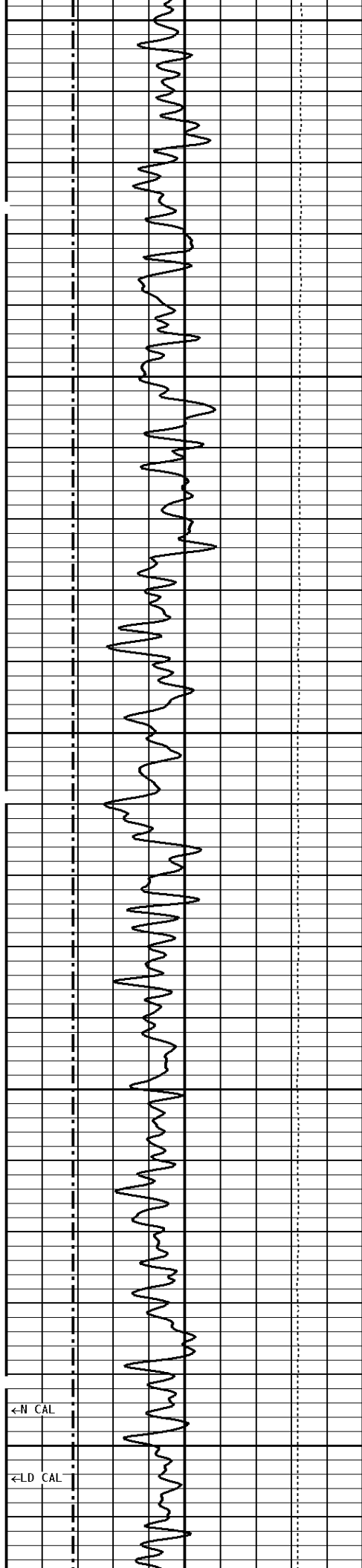




500

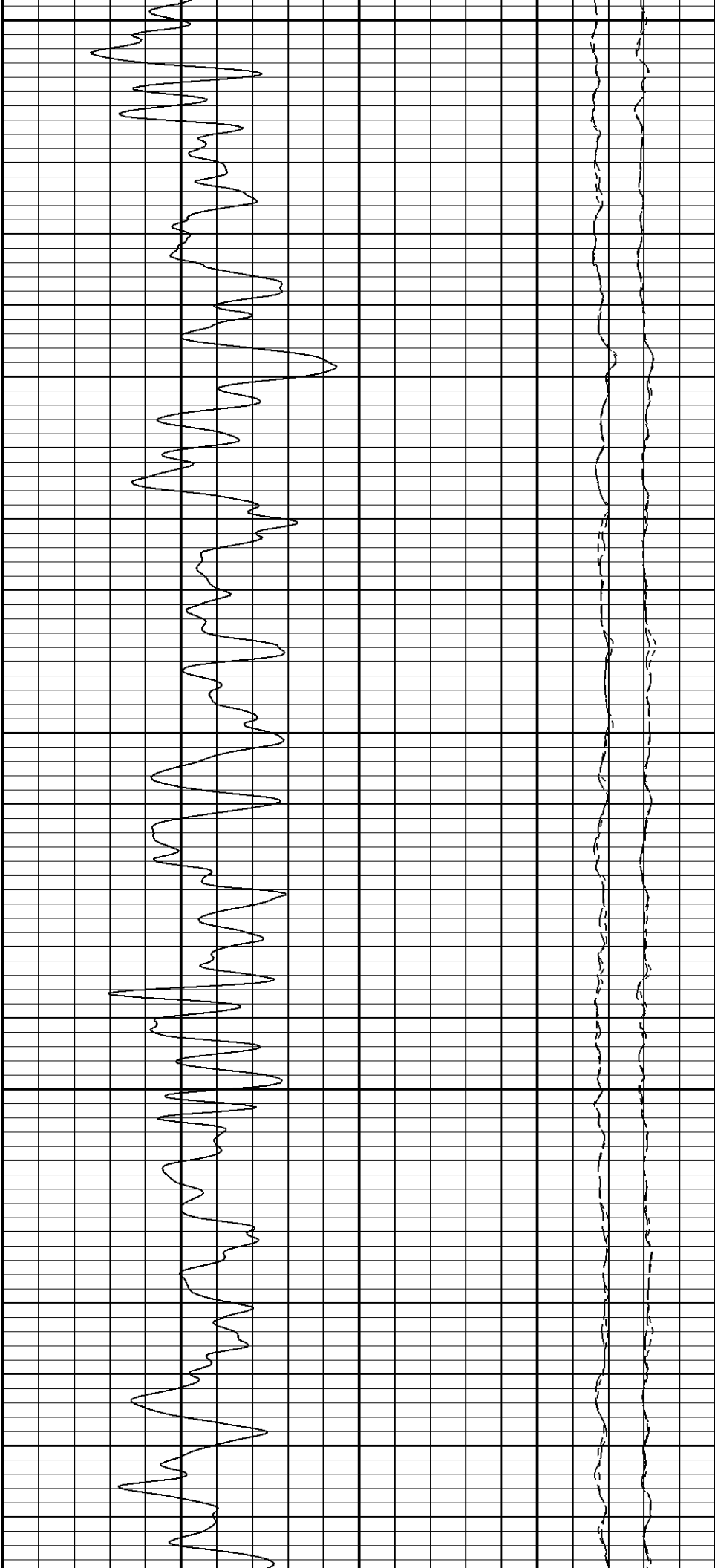
600





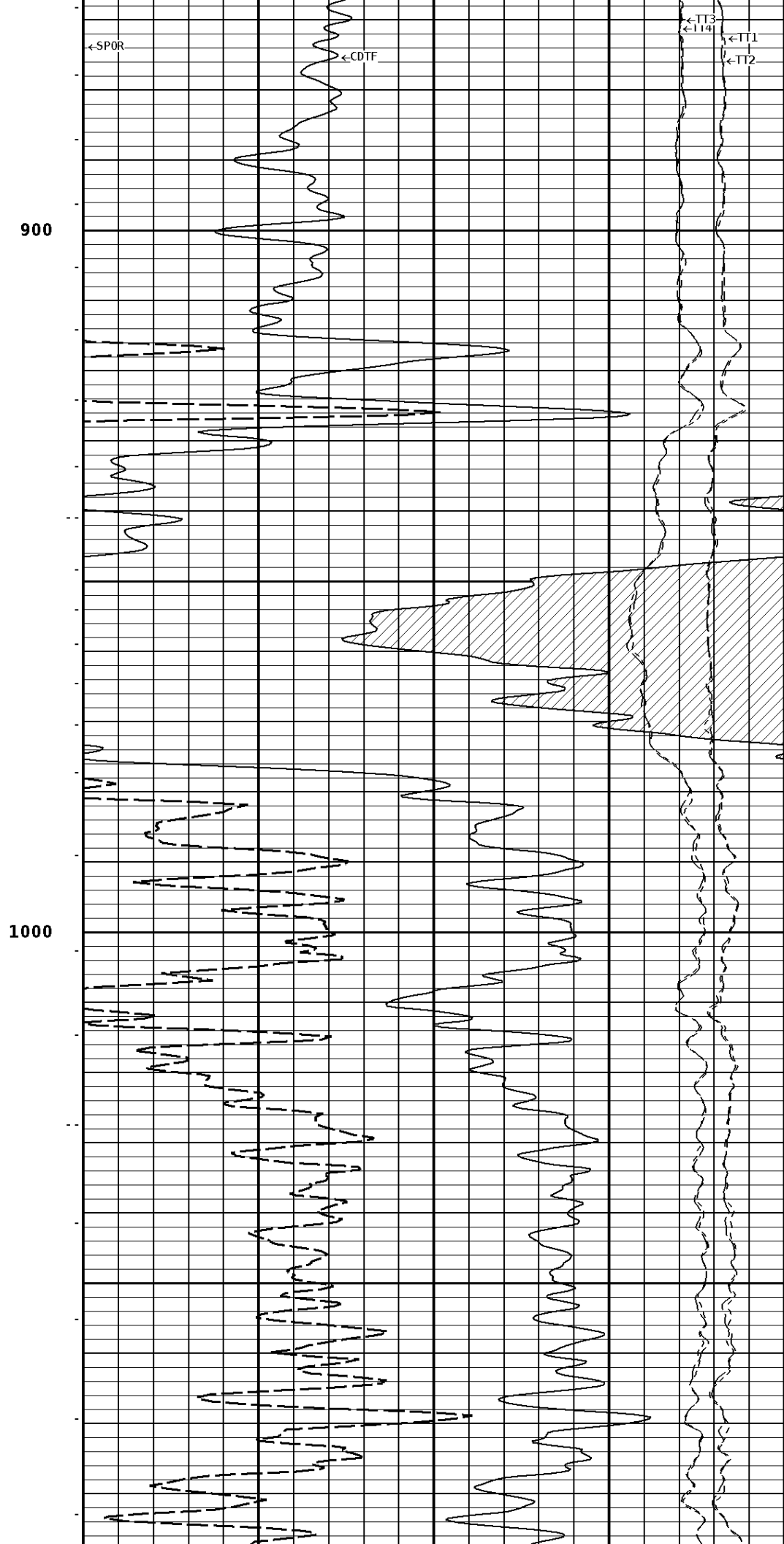
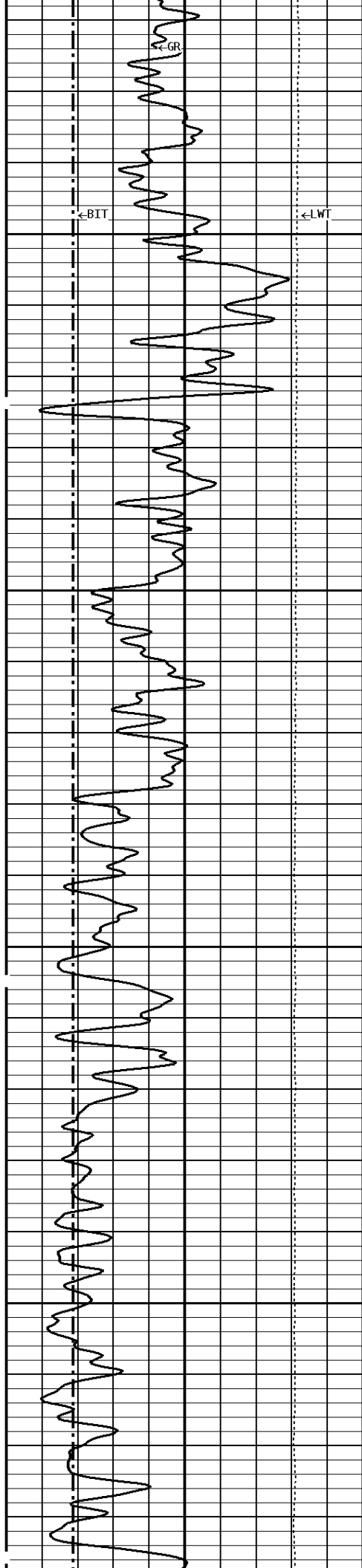
700

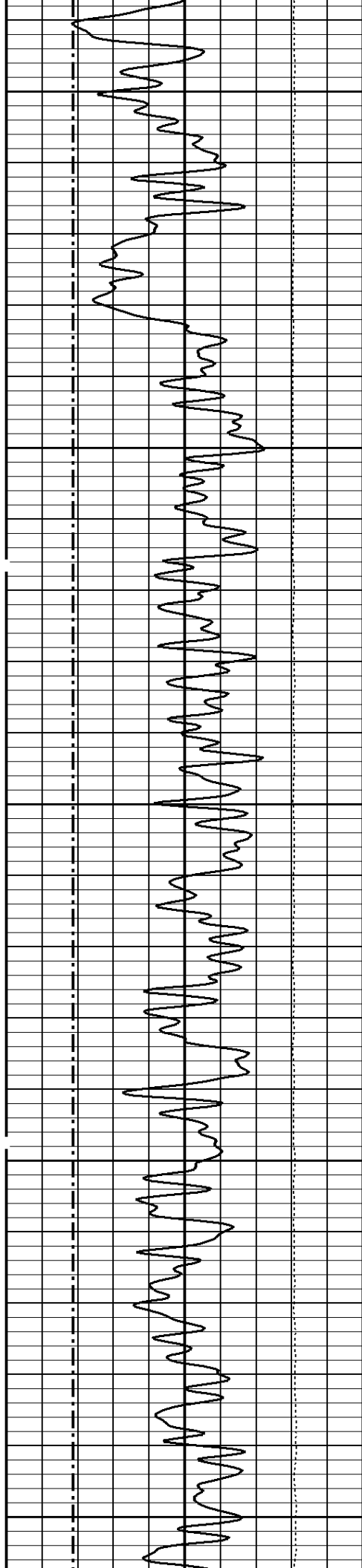
800



←N CAL

←LD CAL

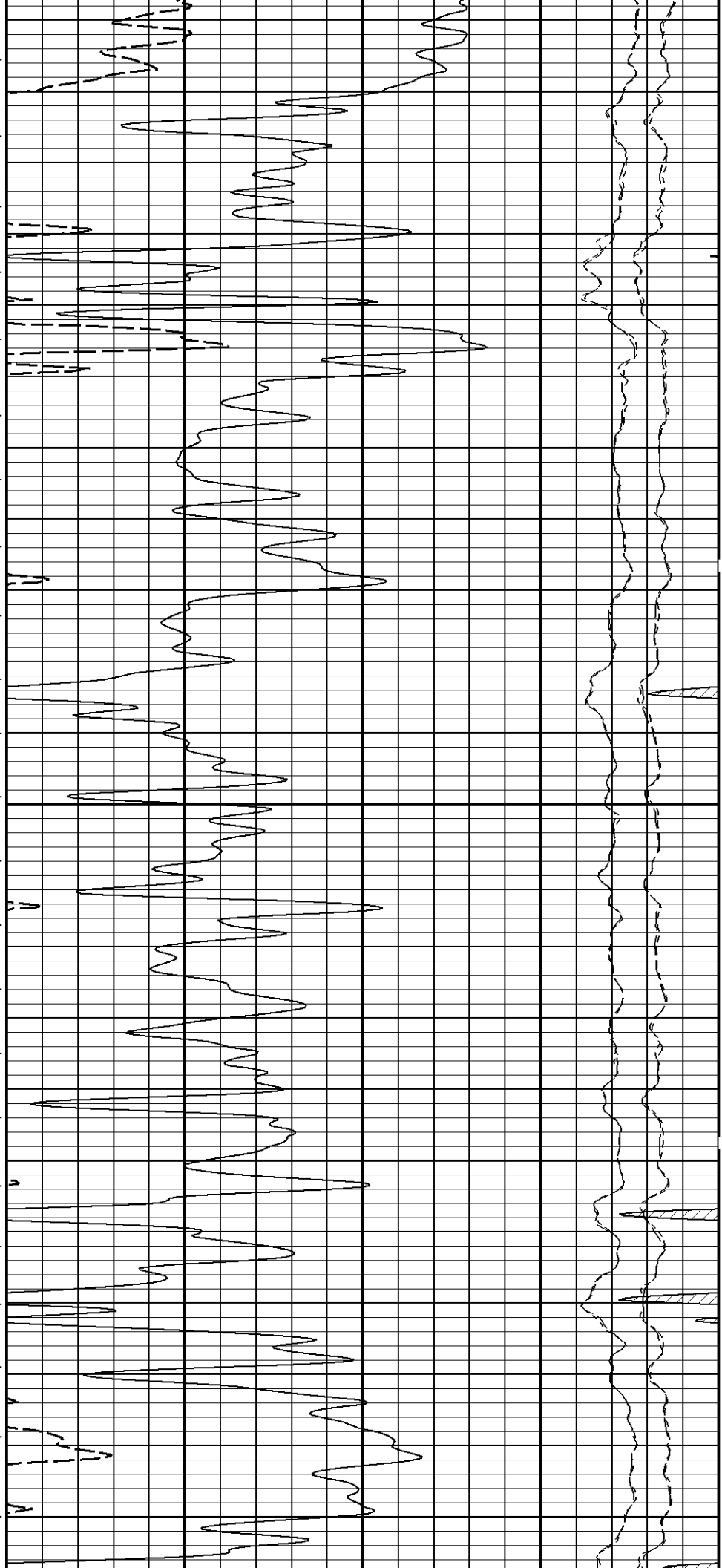


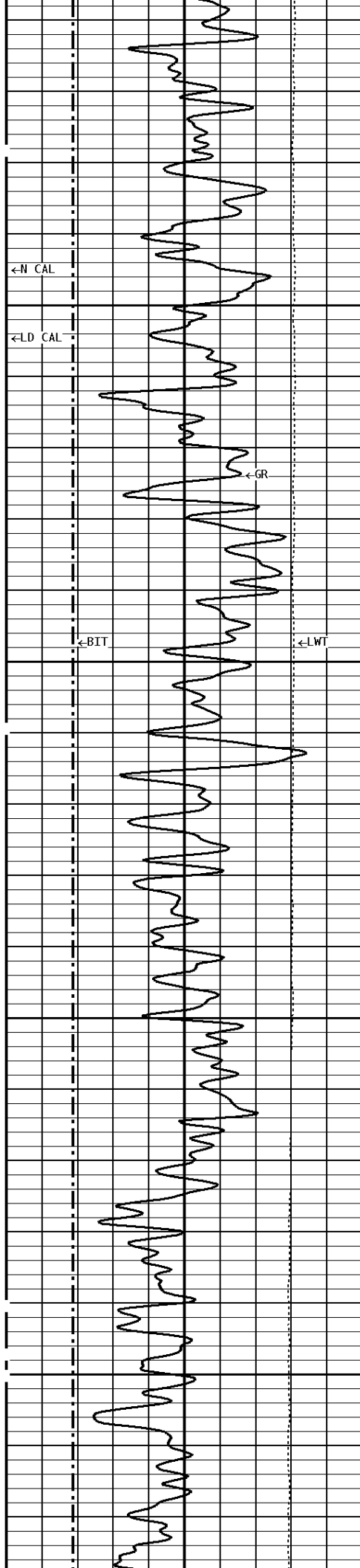


1100

1200

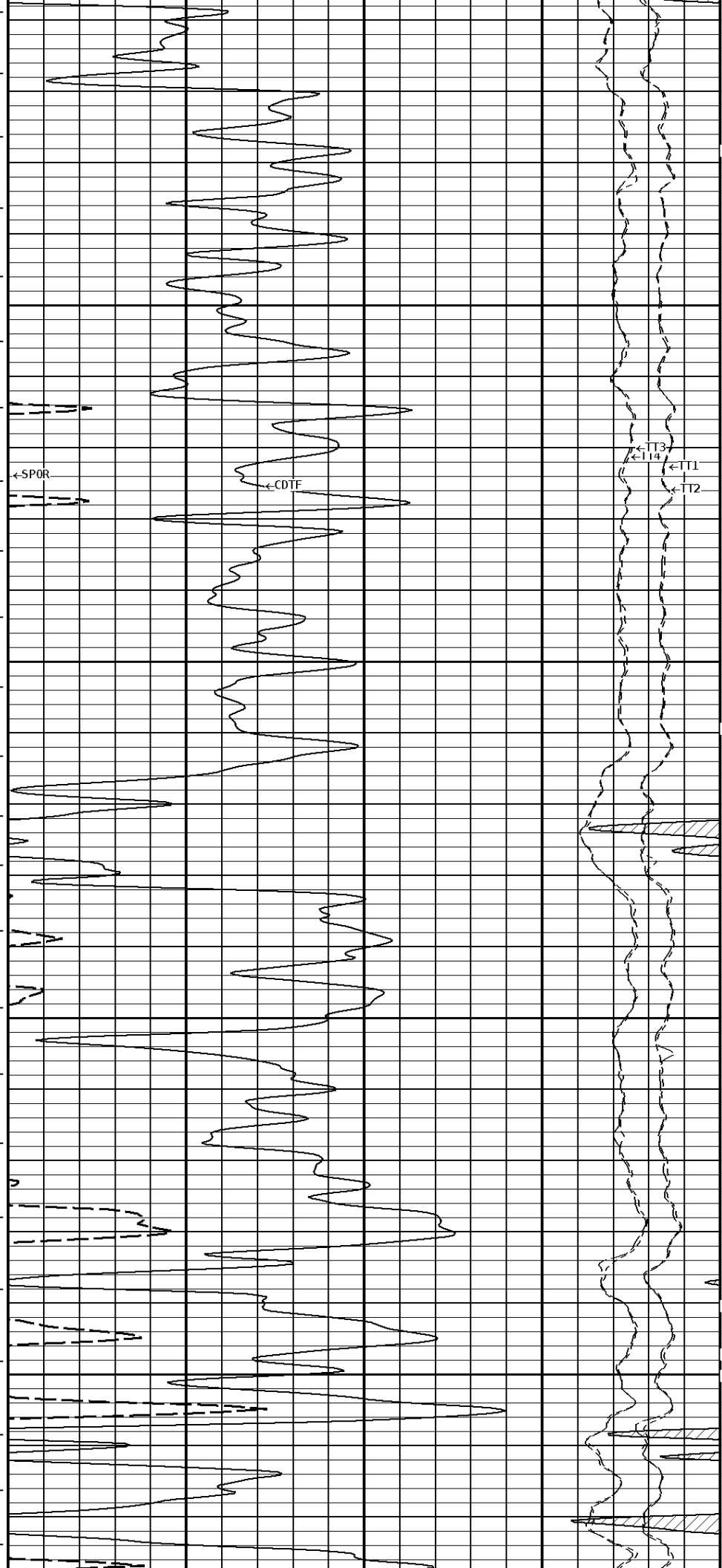
1300

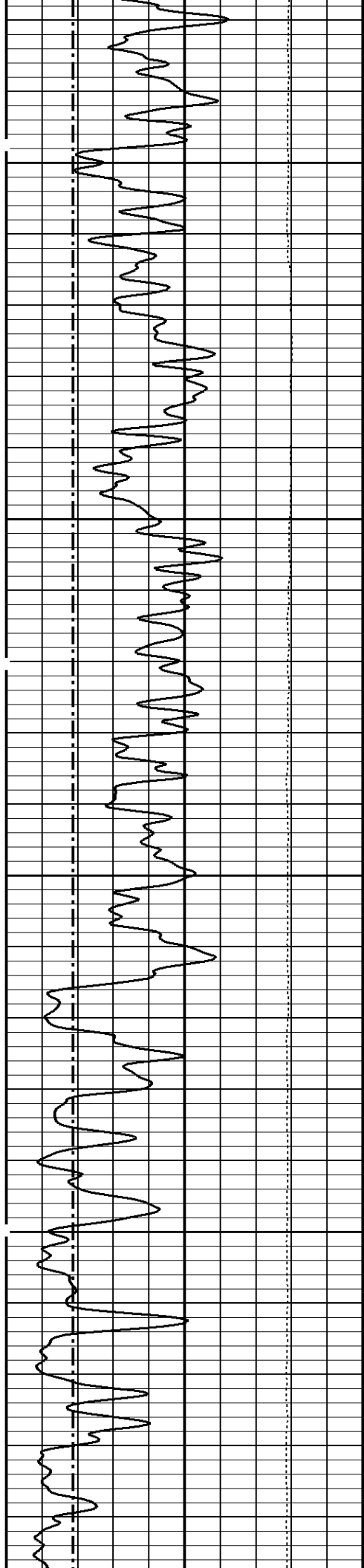




1400

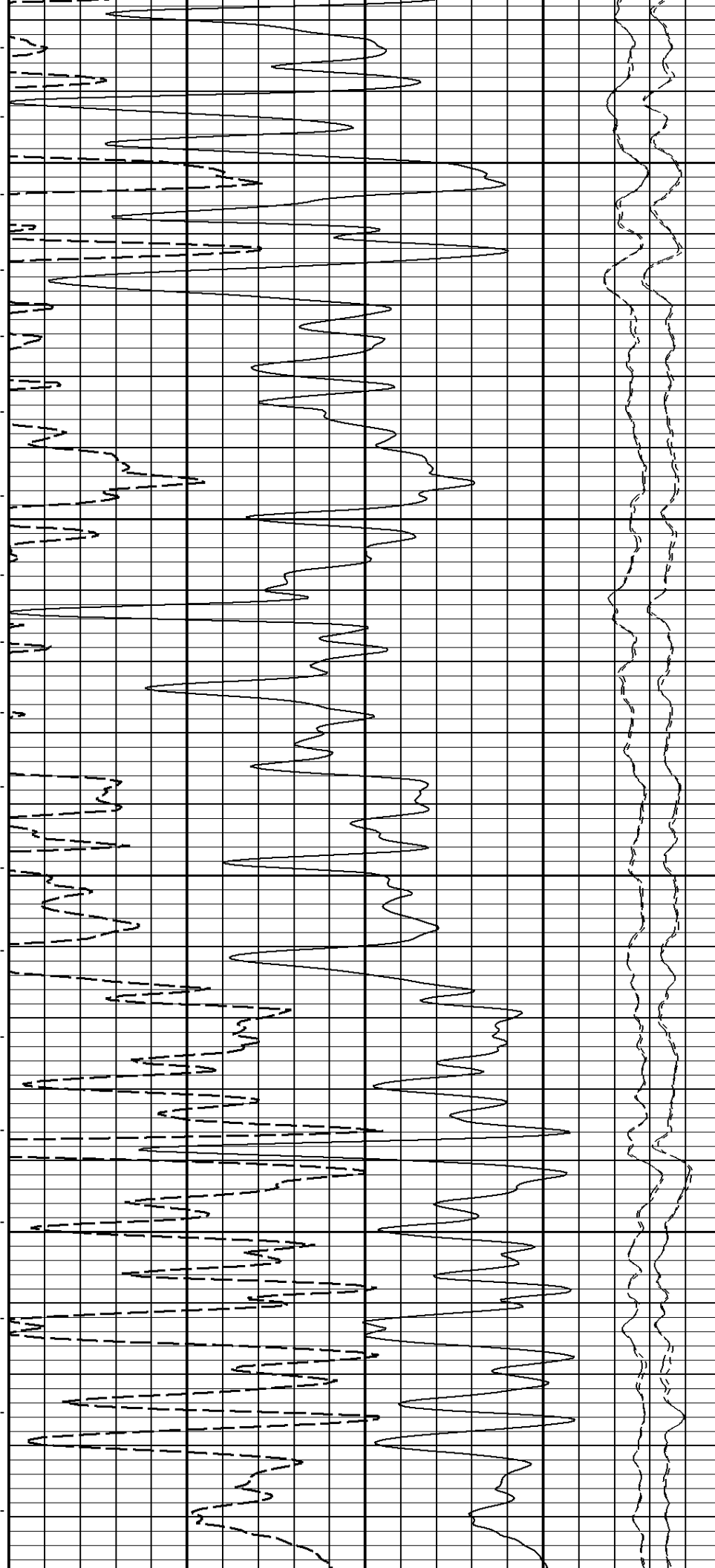
1500

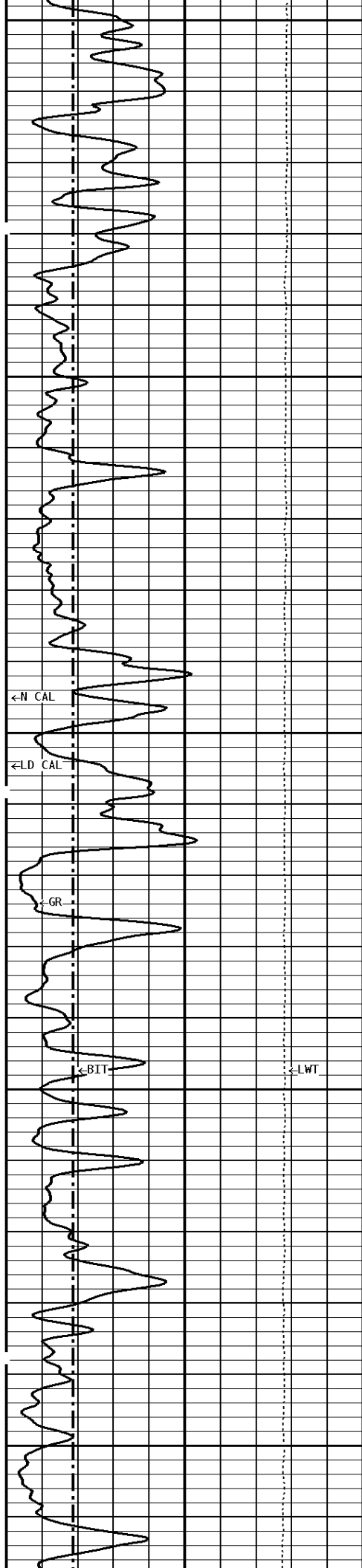




1600

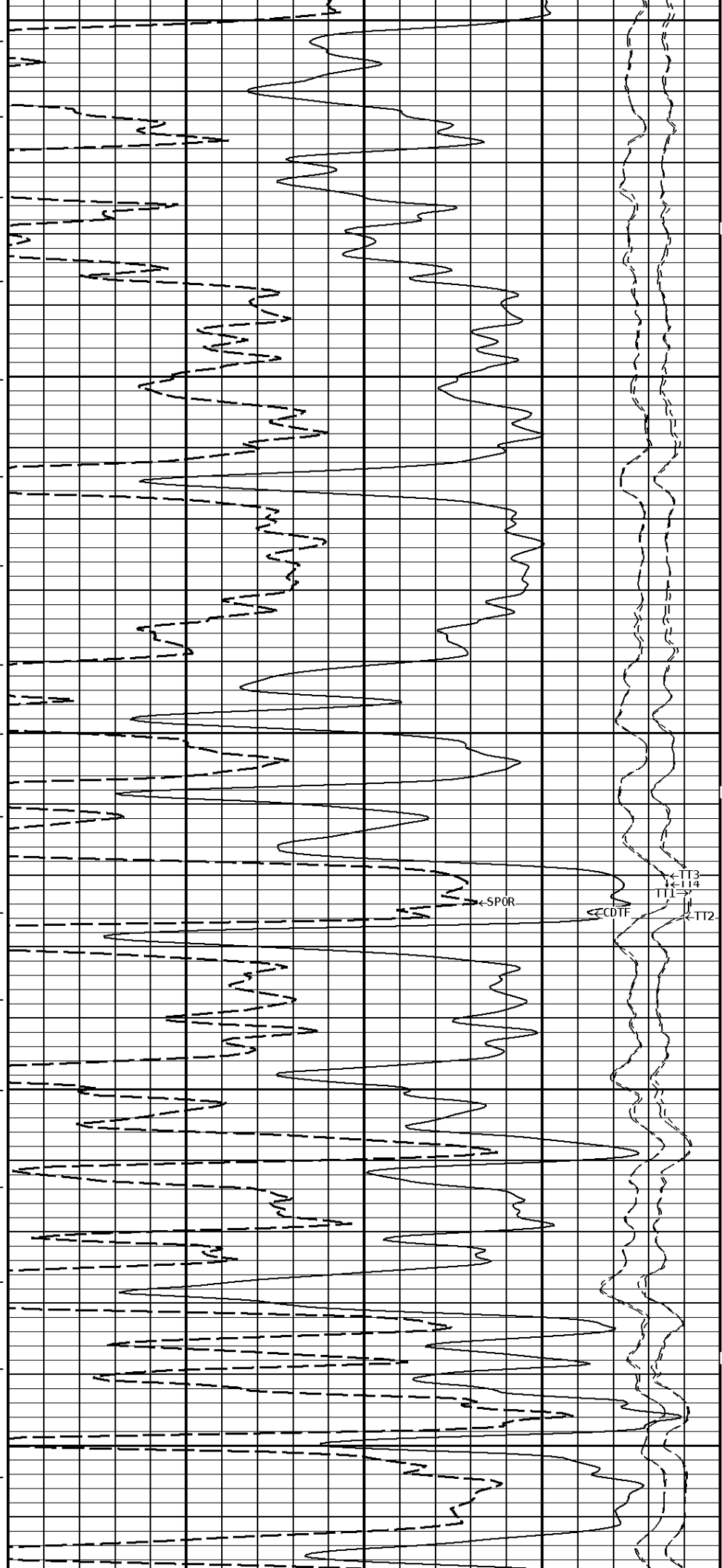
1700

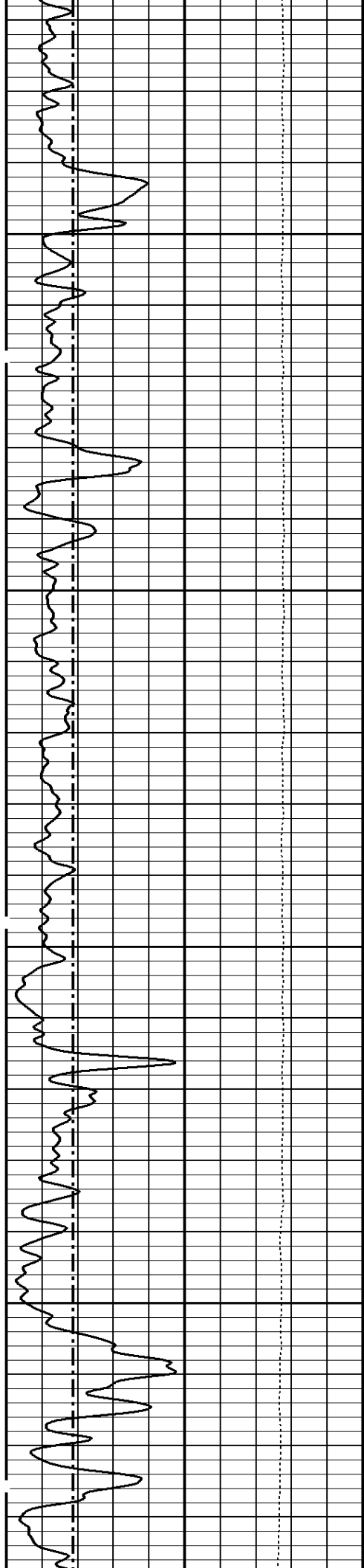




1800

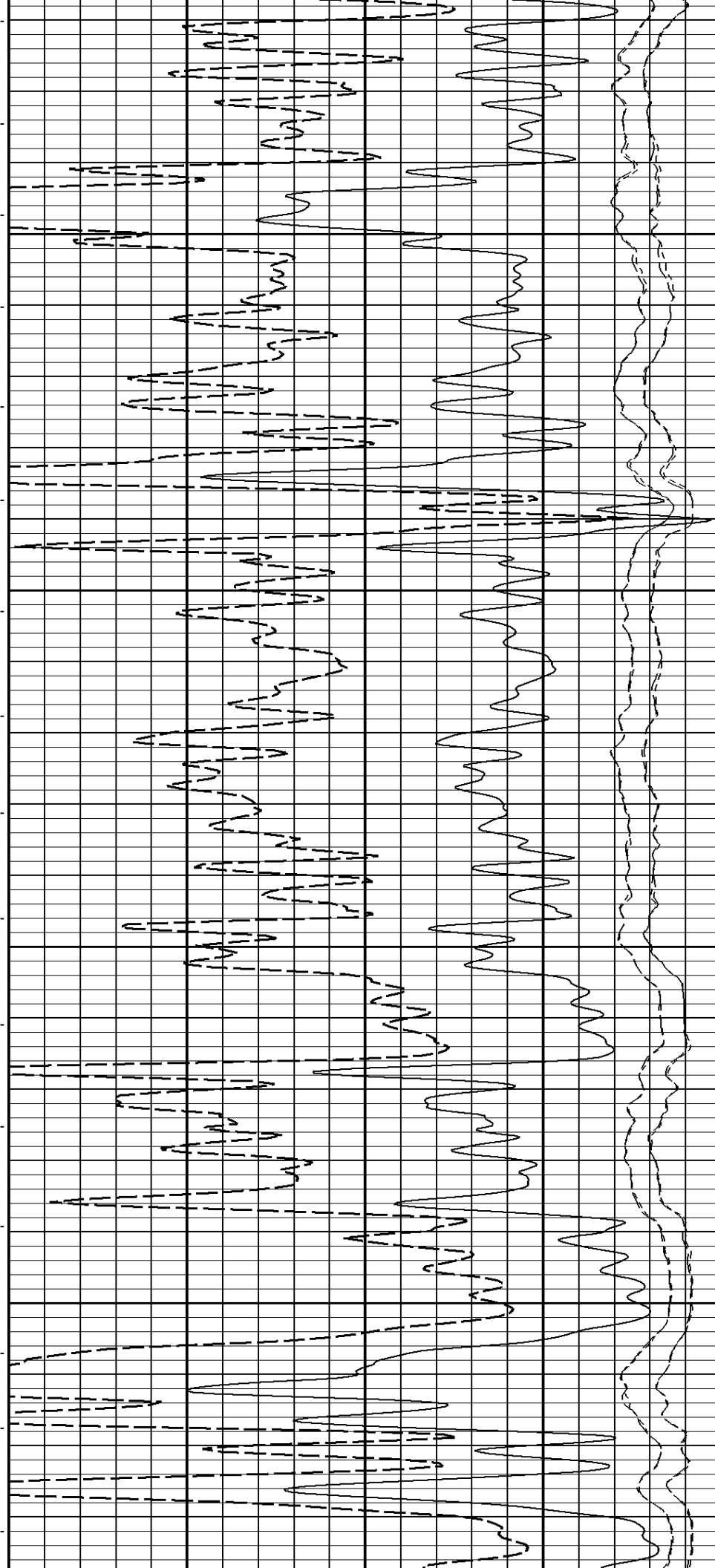
1900

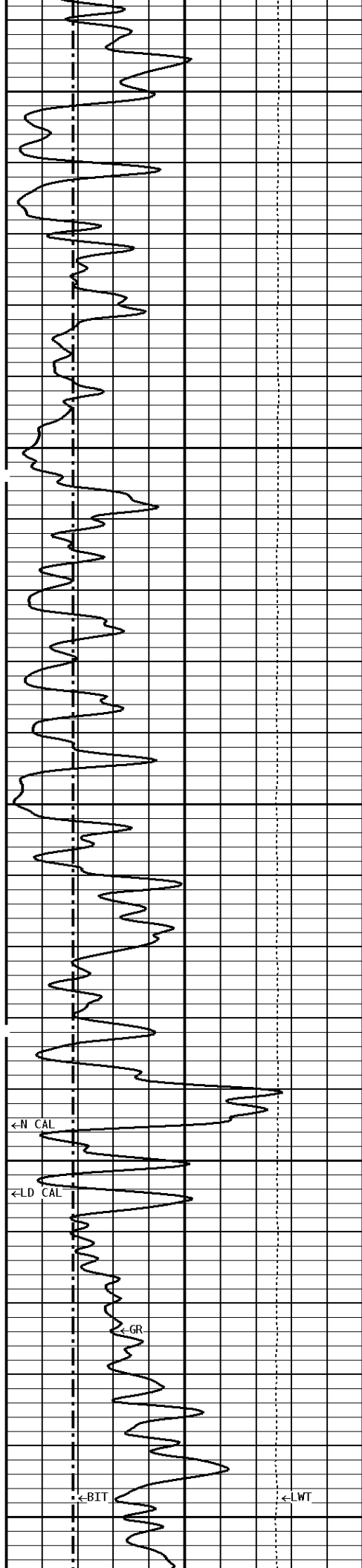




2000

2100

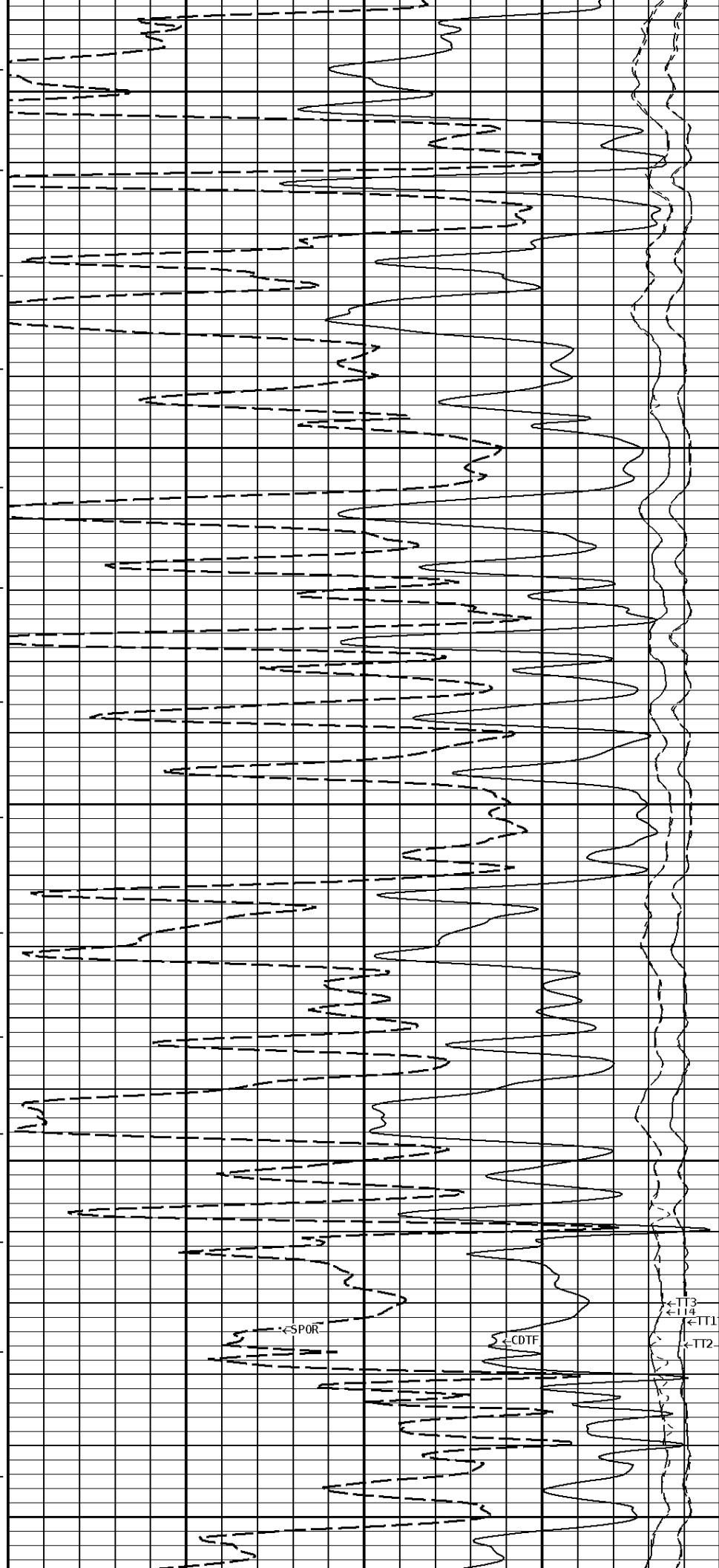


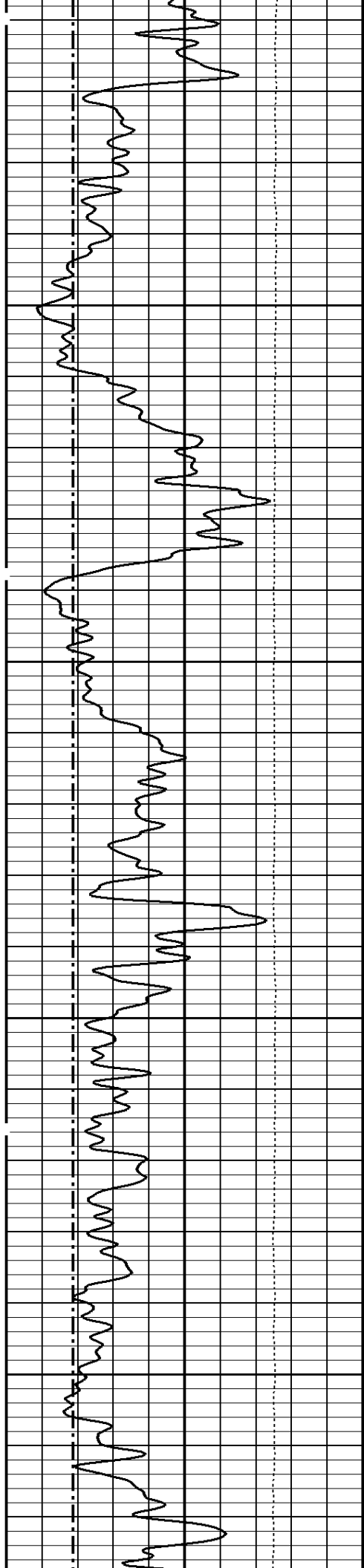


2200

2300

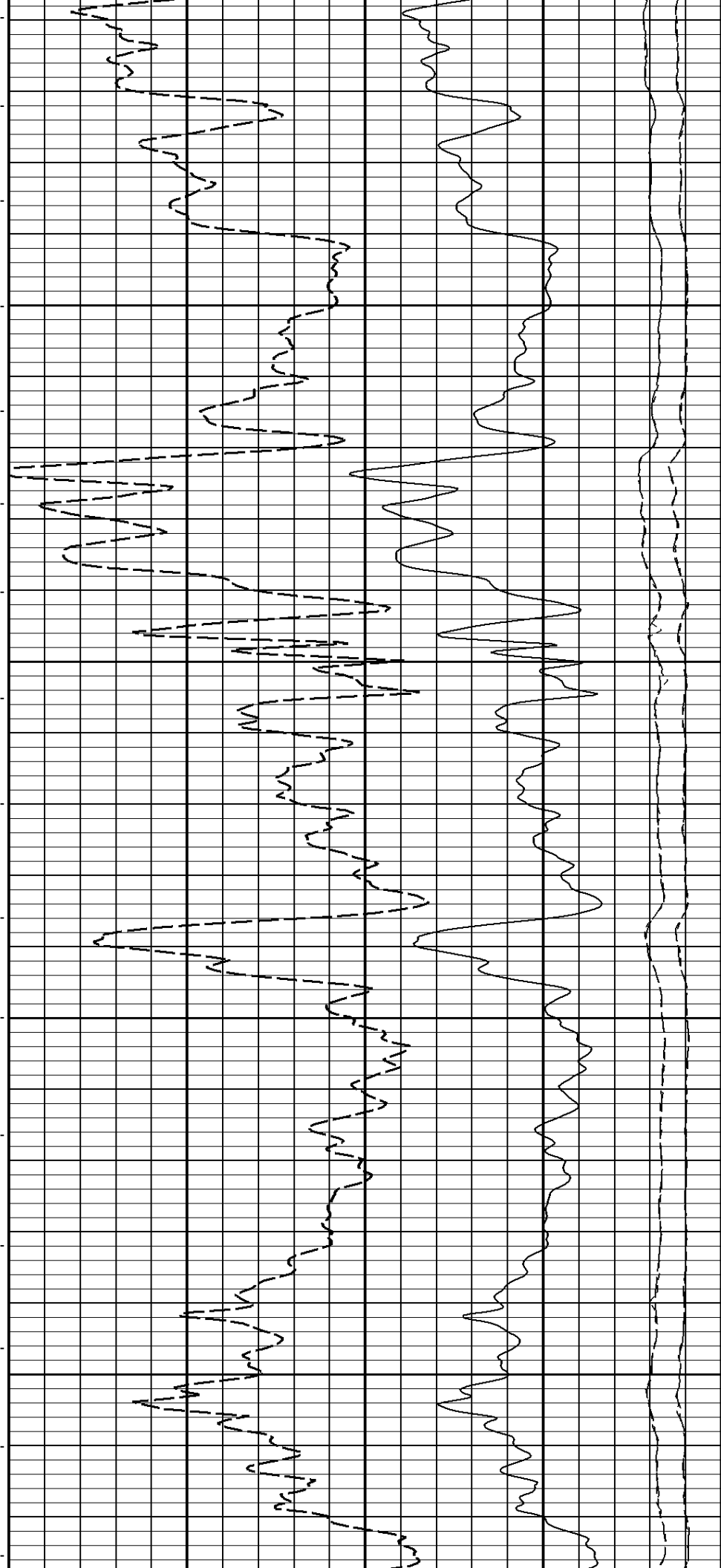
2400

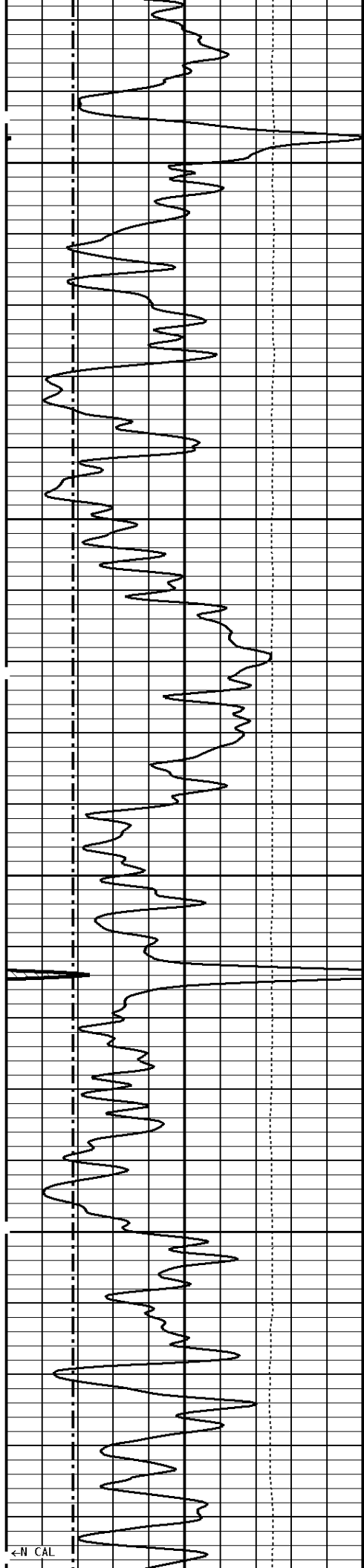




2500

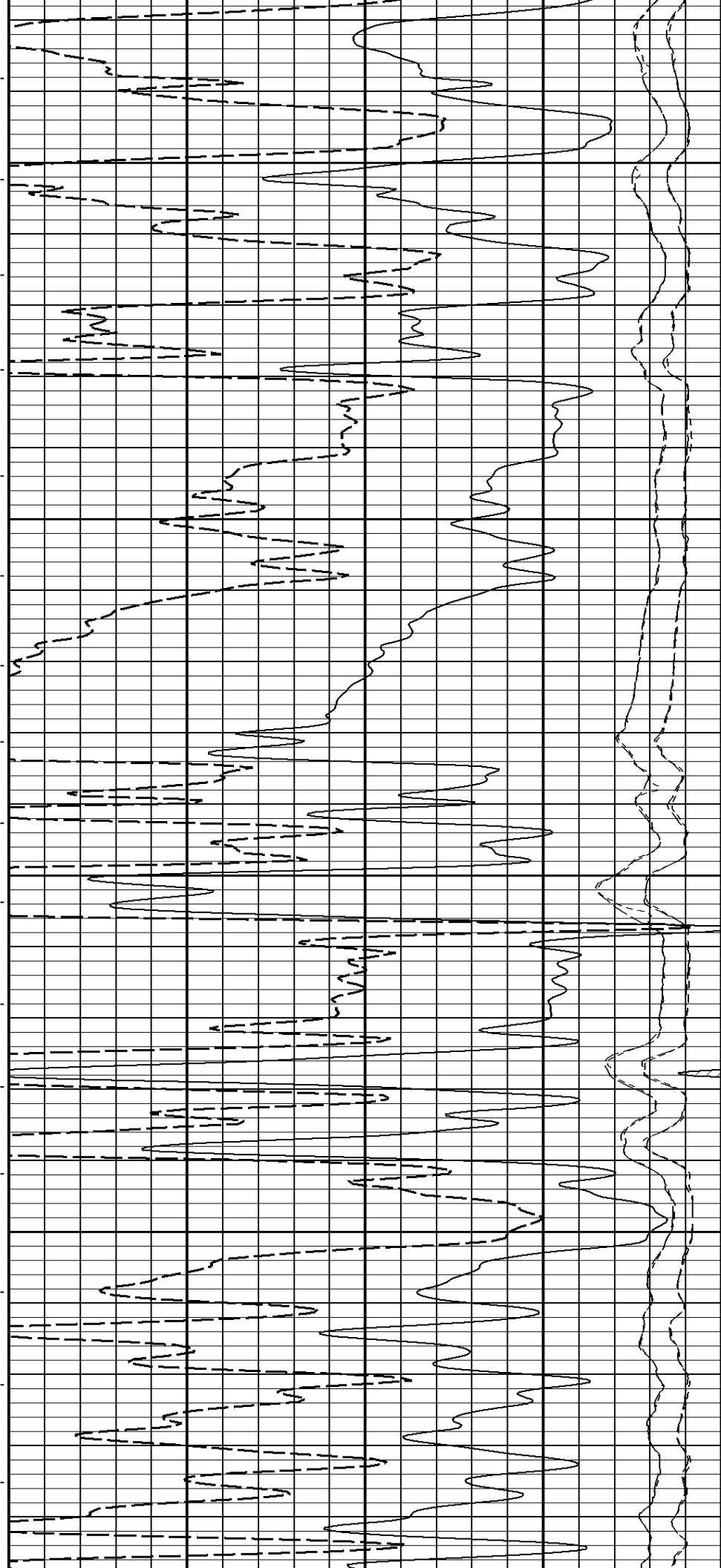
2600

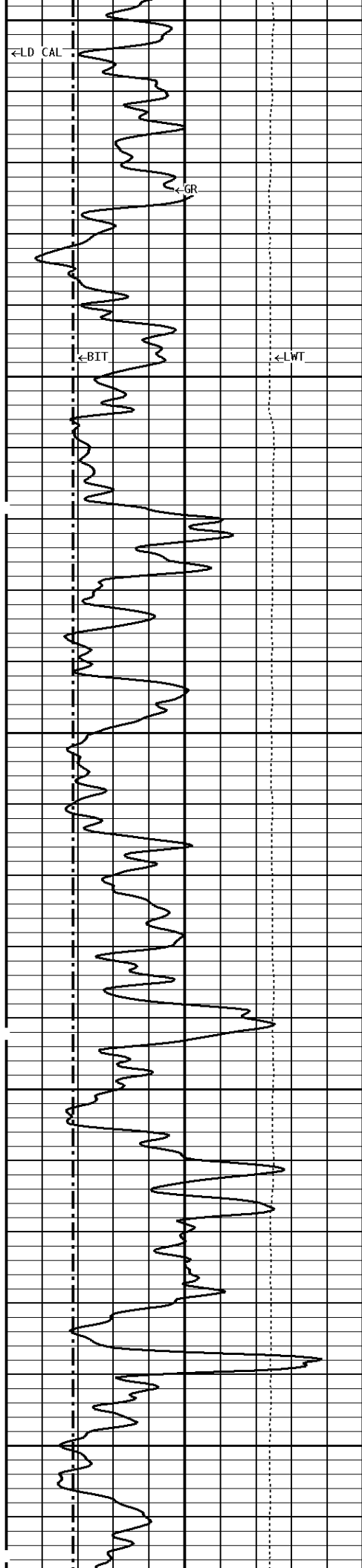




2700

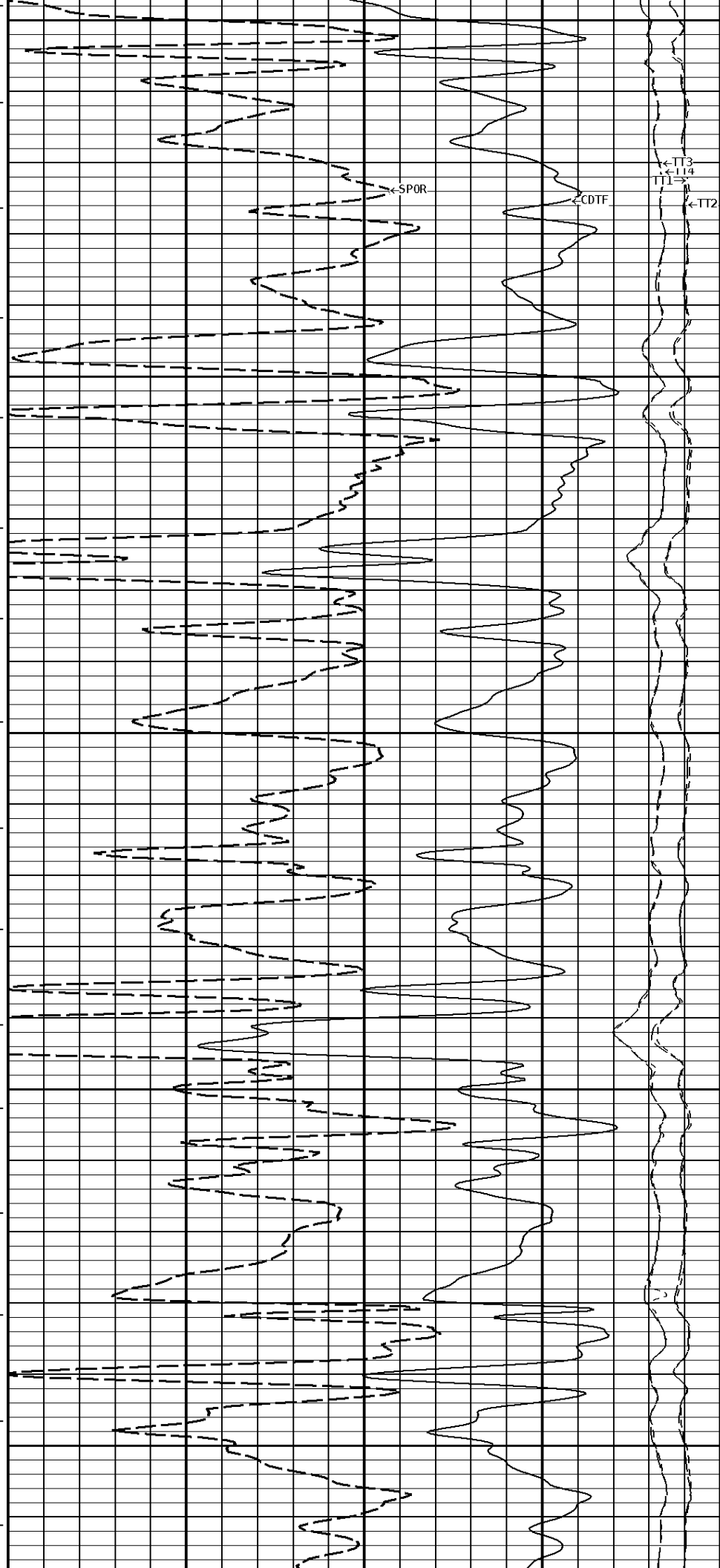
2800

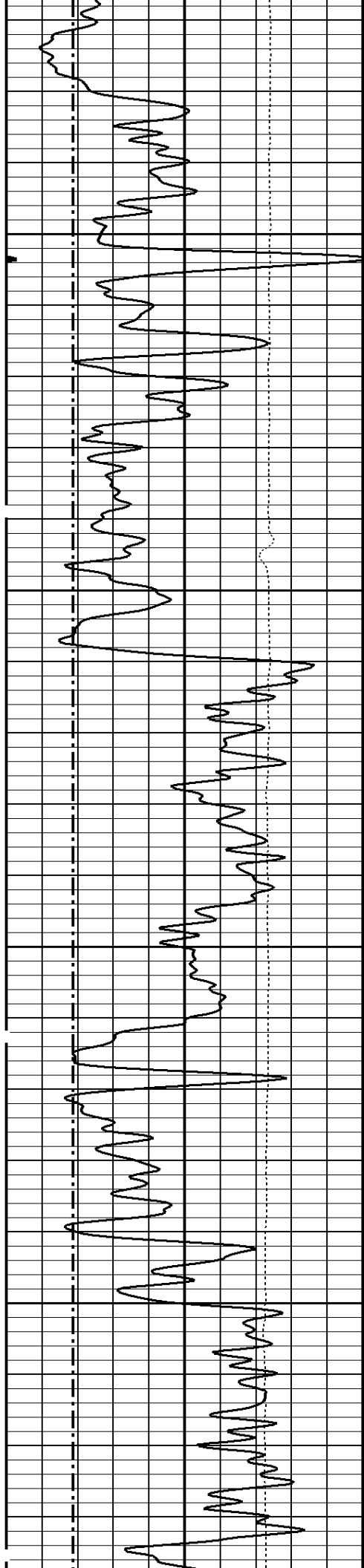




2900

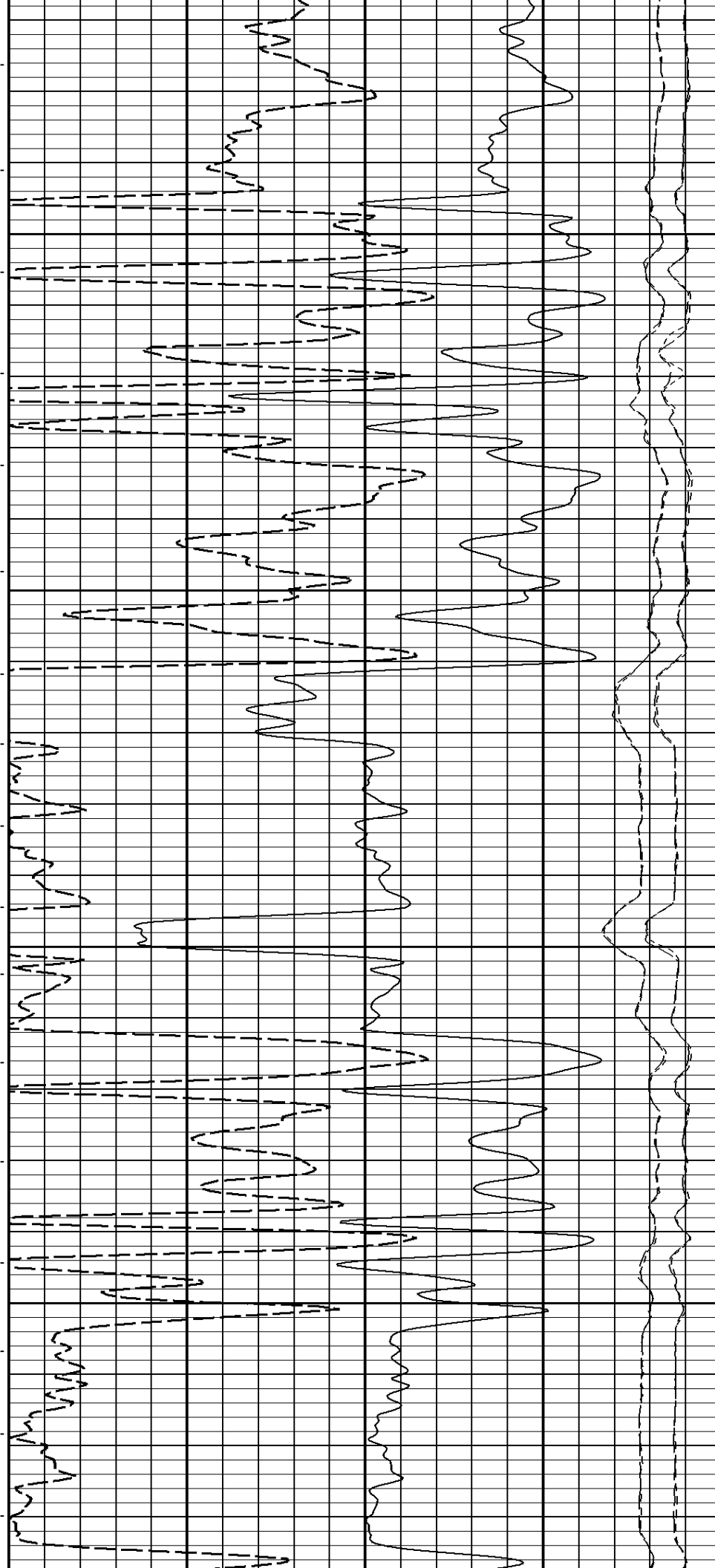
3000

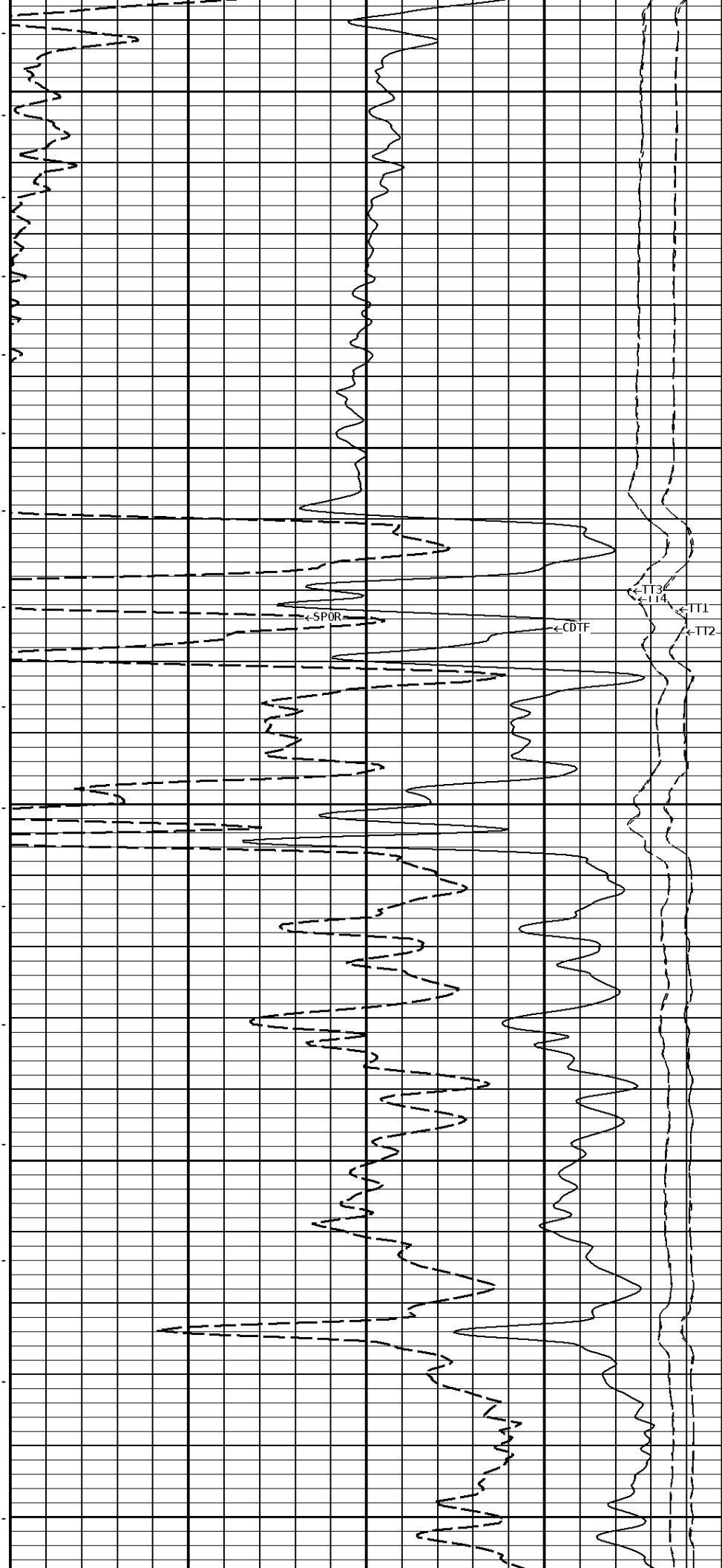
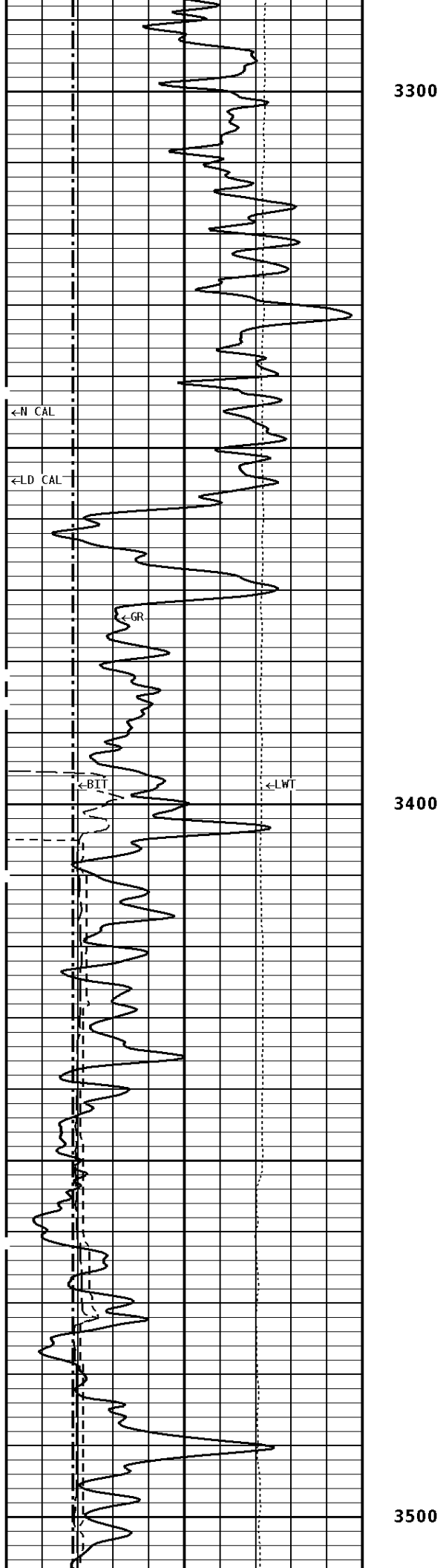


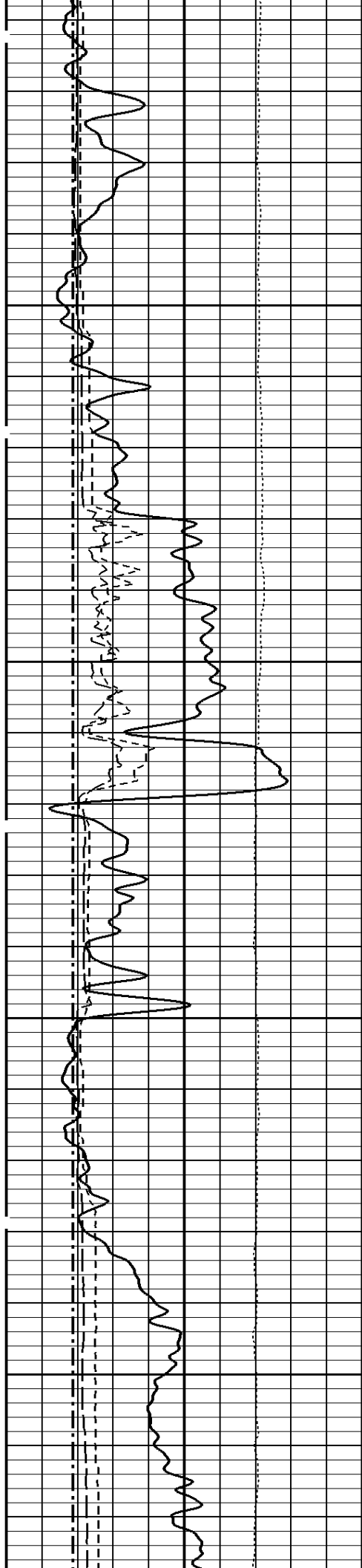


3100

3200

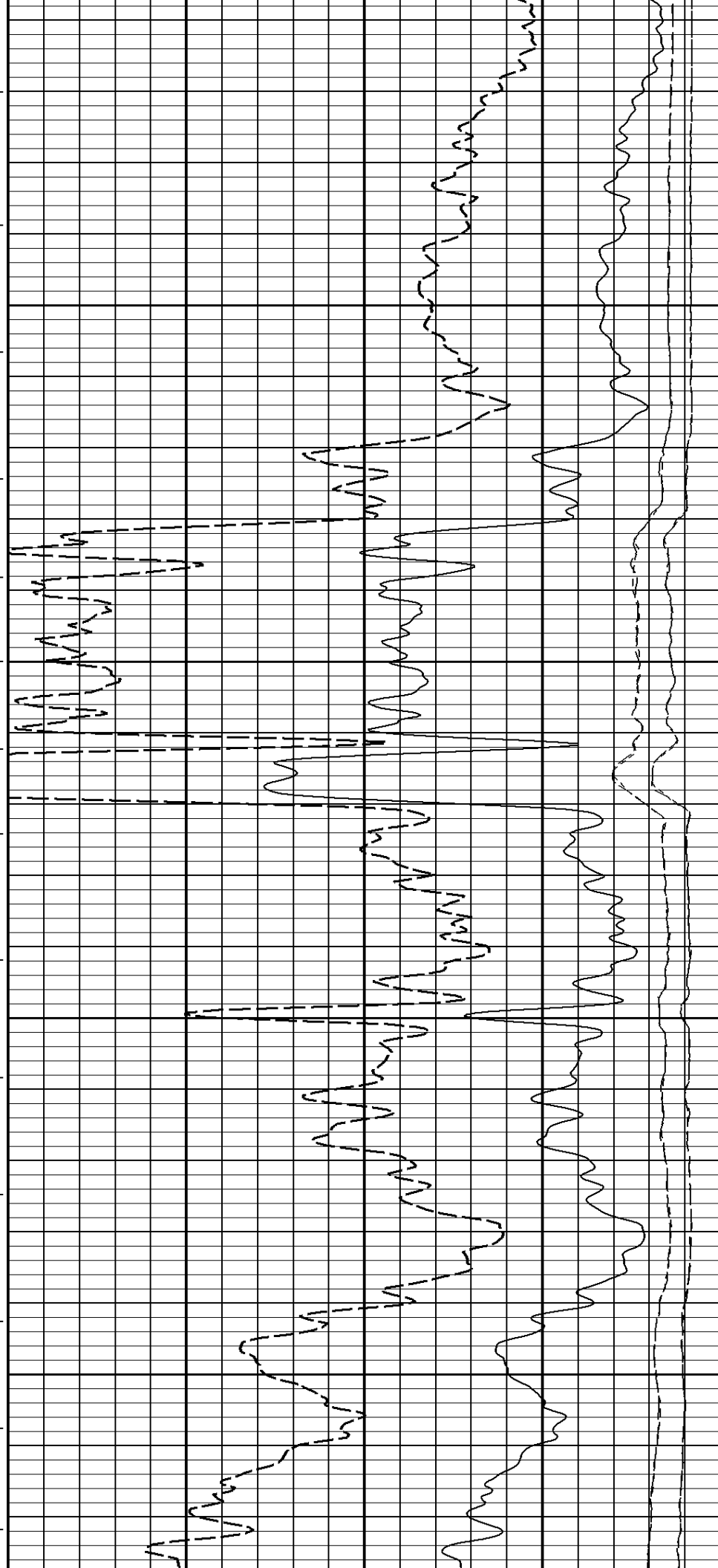


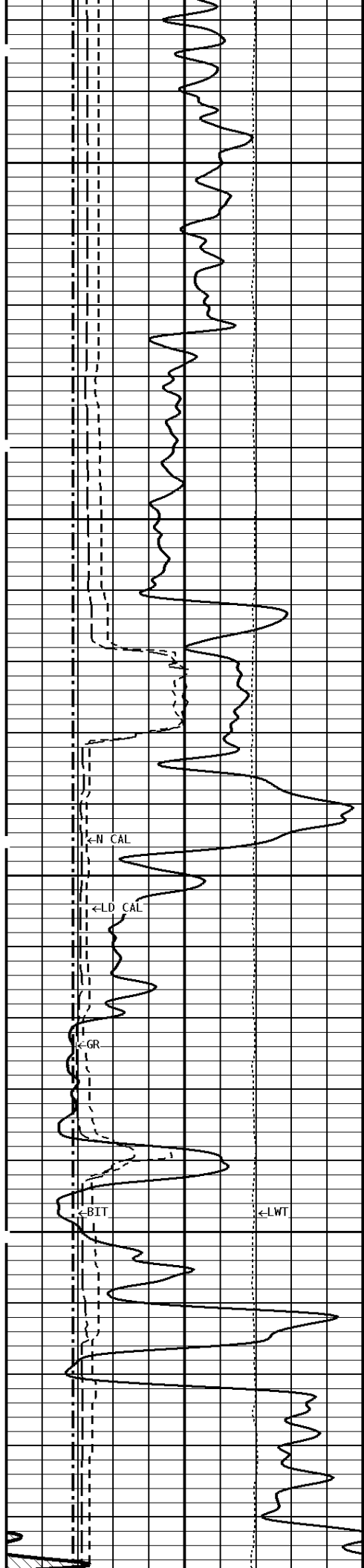




3600

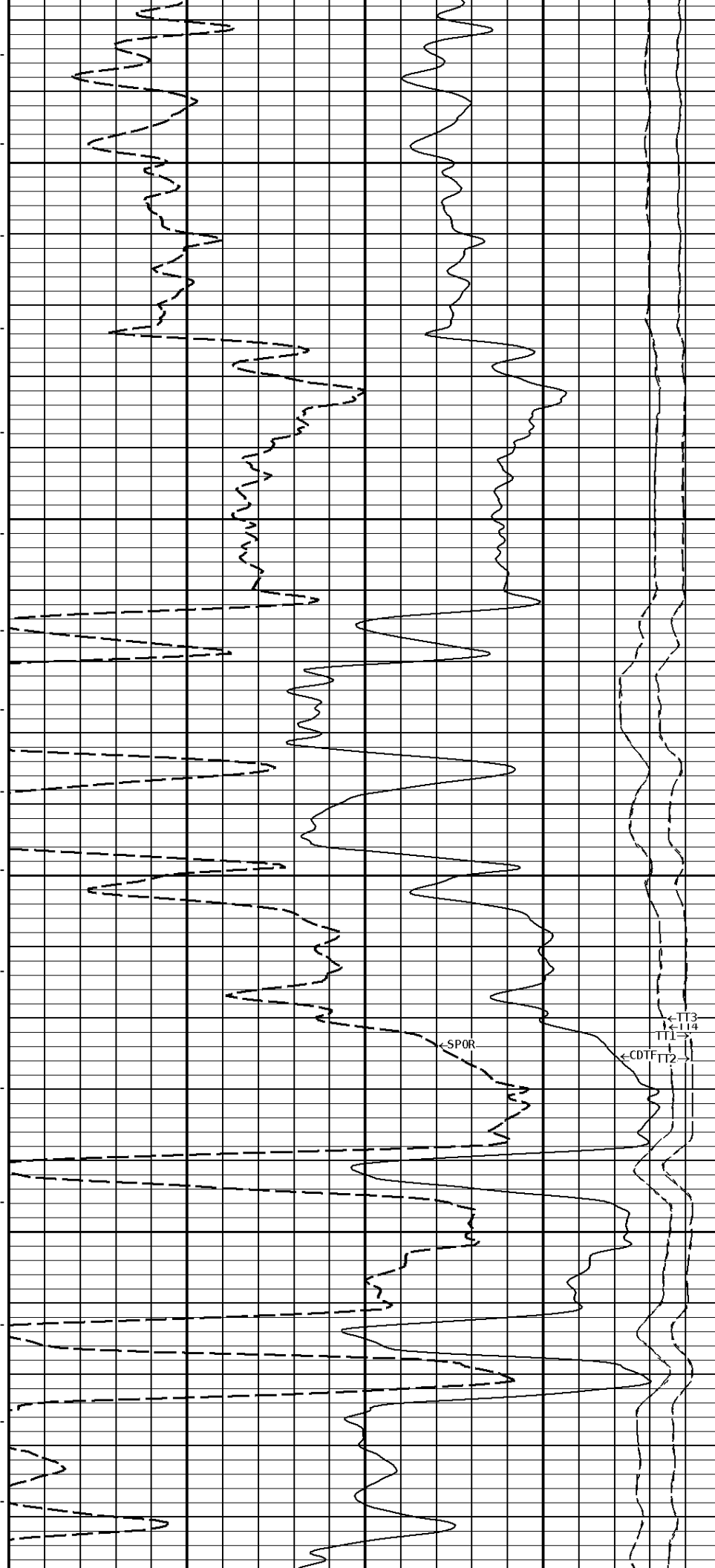
3700

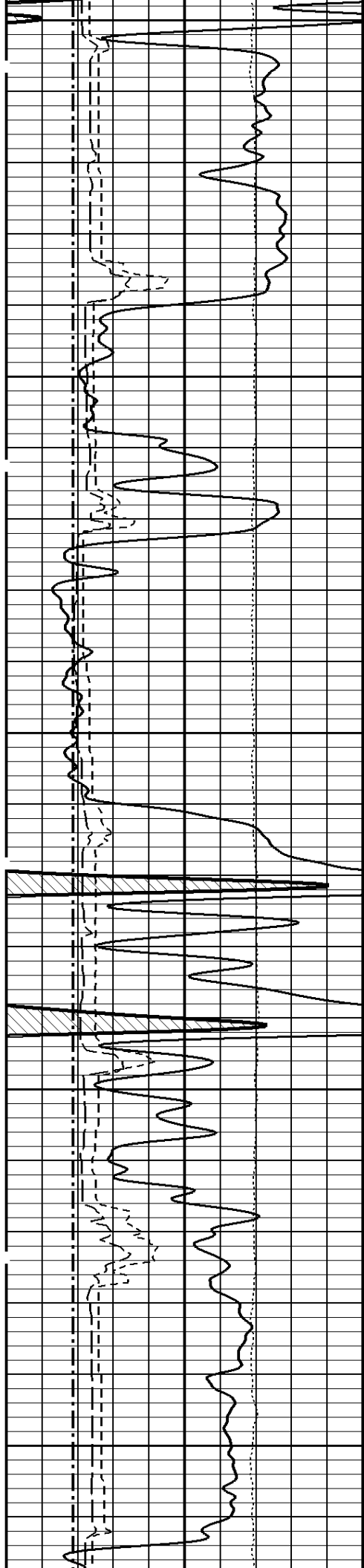




3800

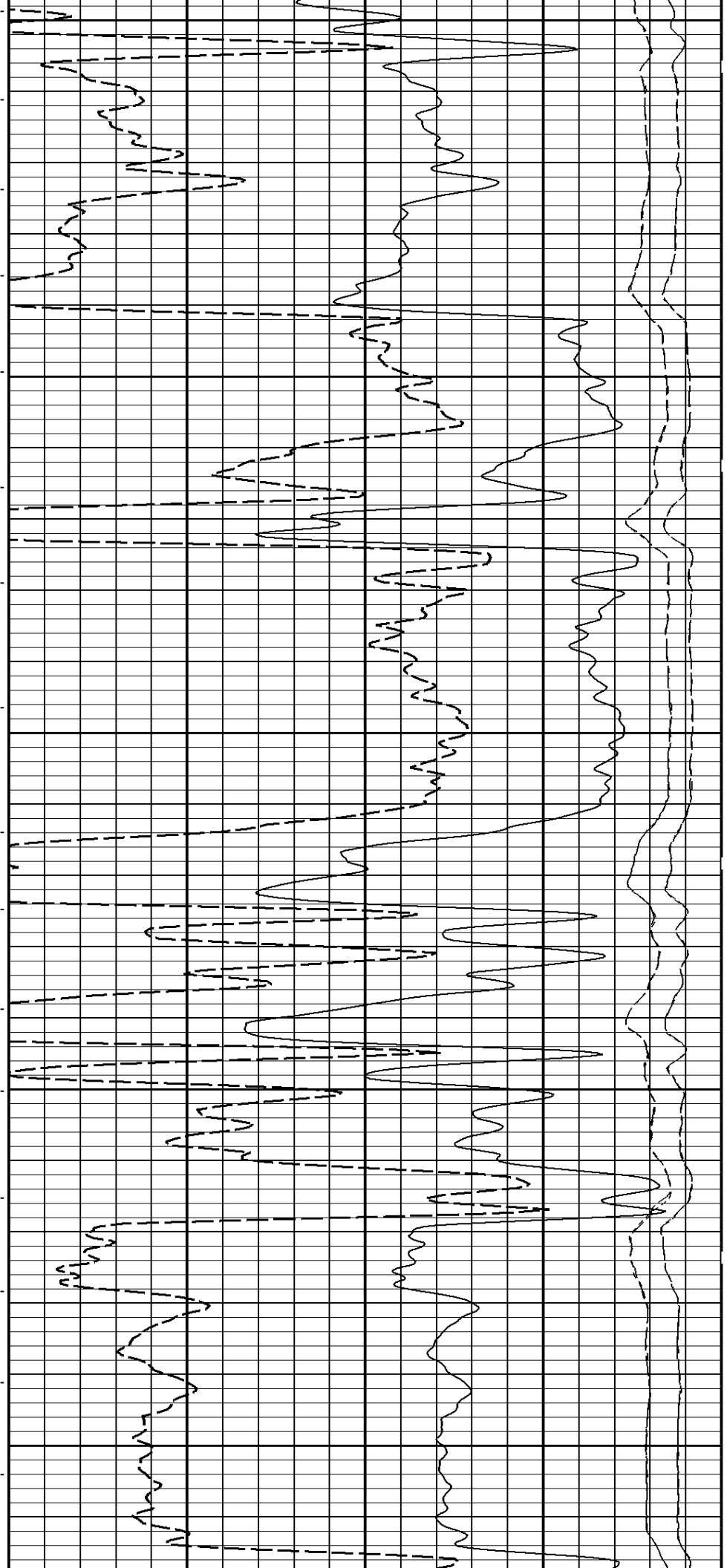
3900

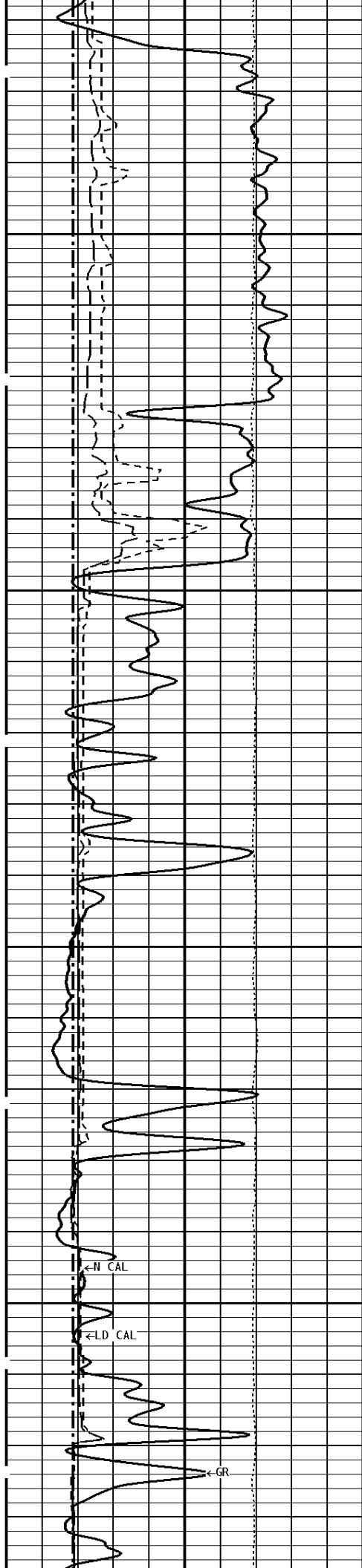




4000

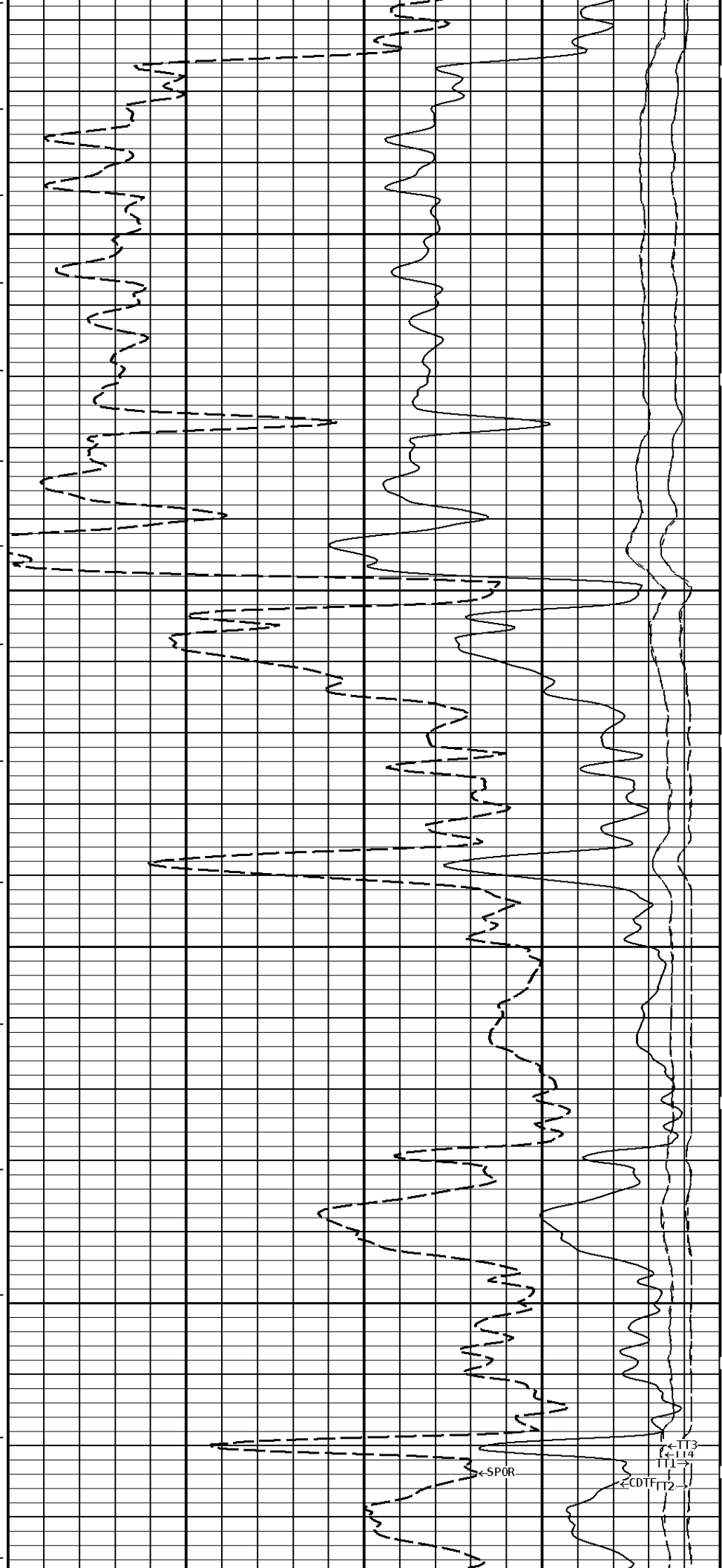
4100

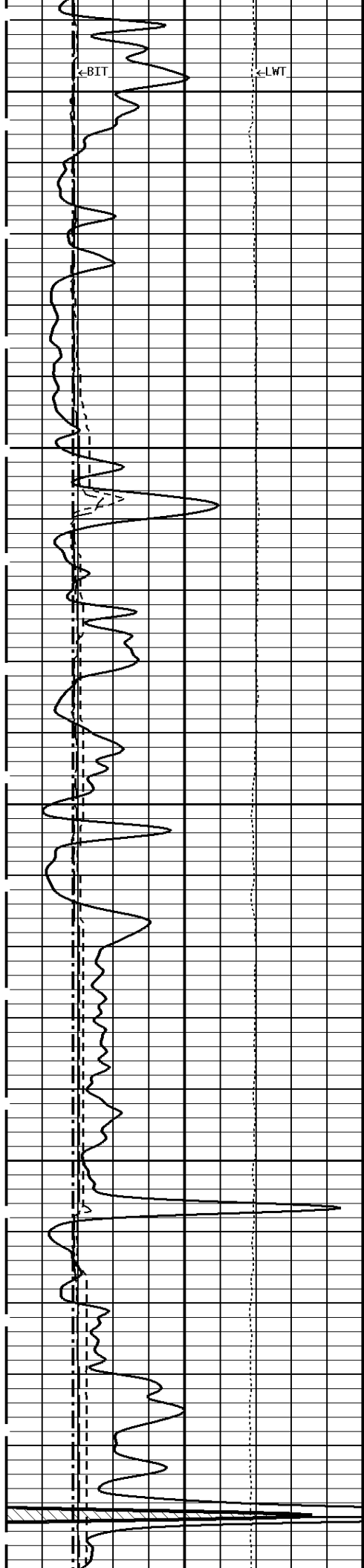




4200

4300

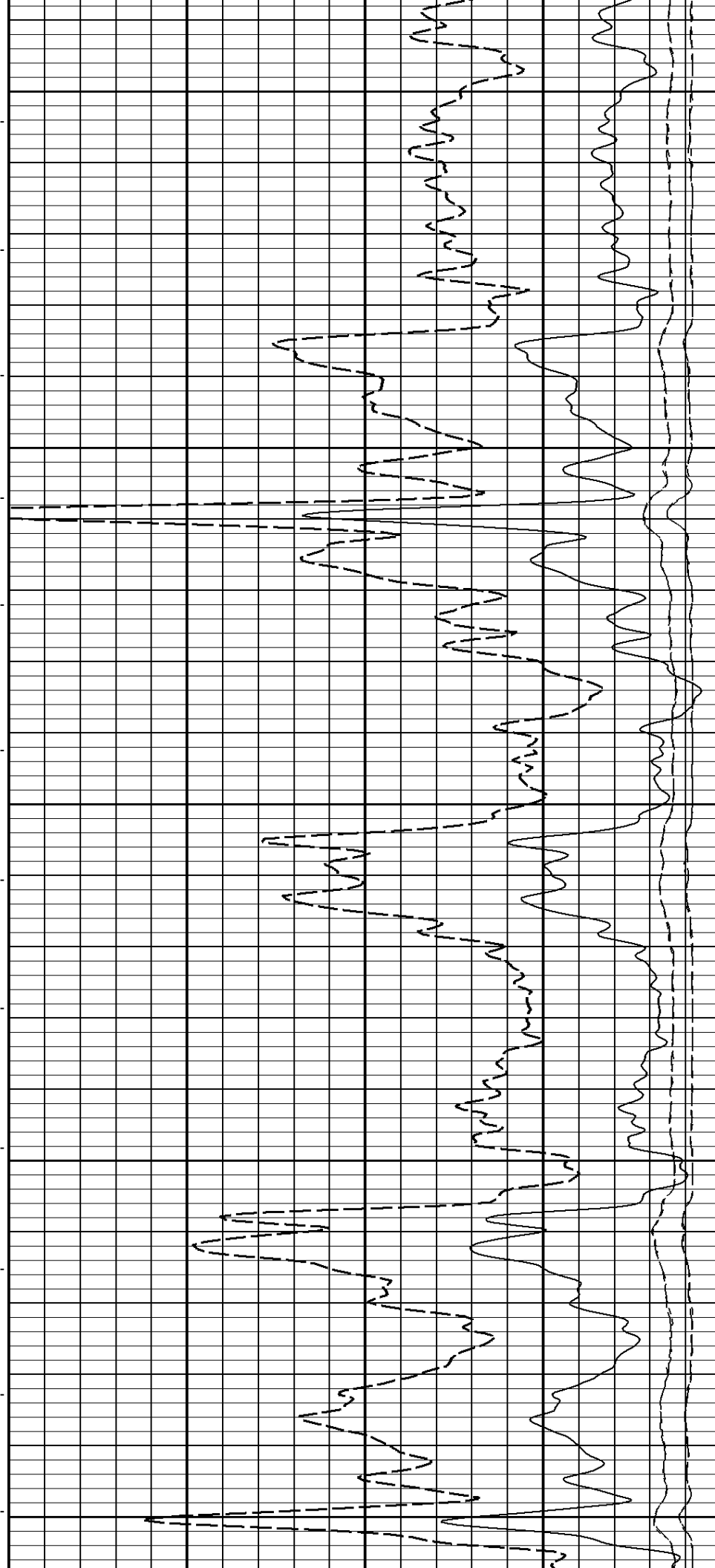


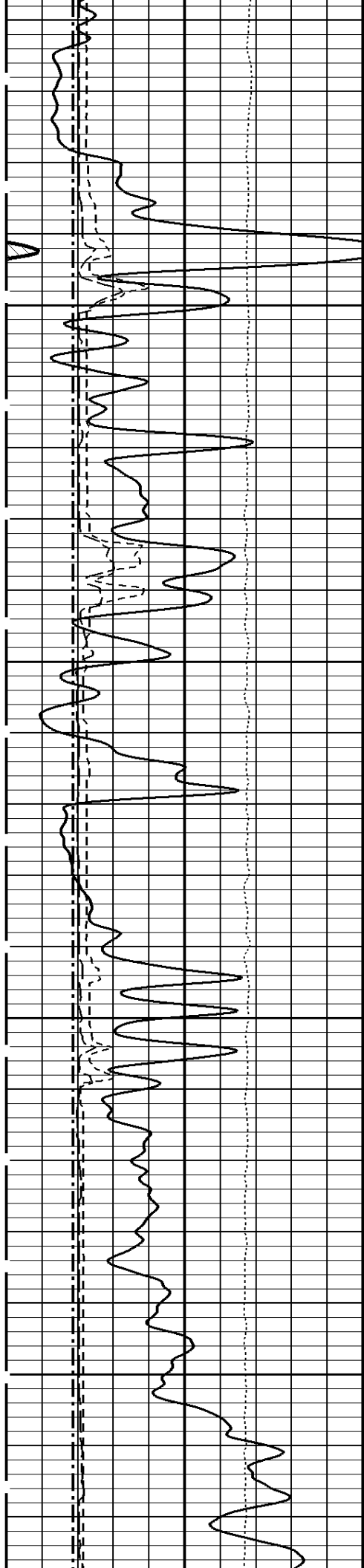


4400

4500

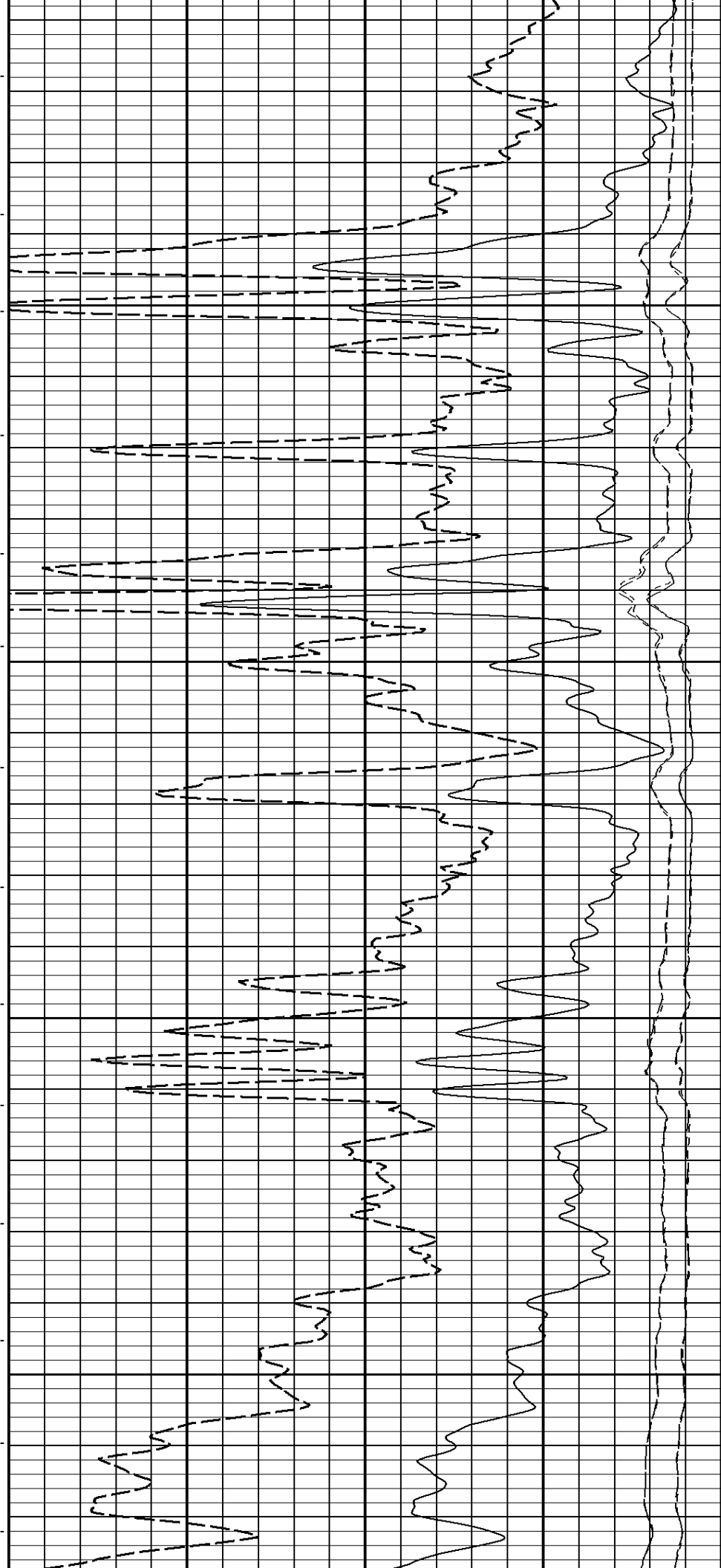
4600

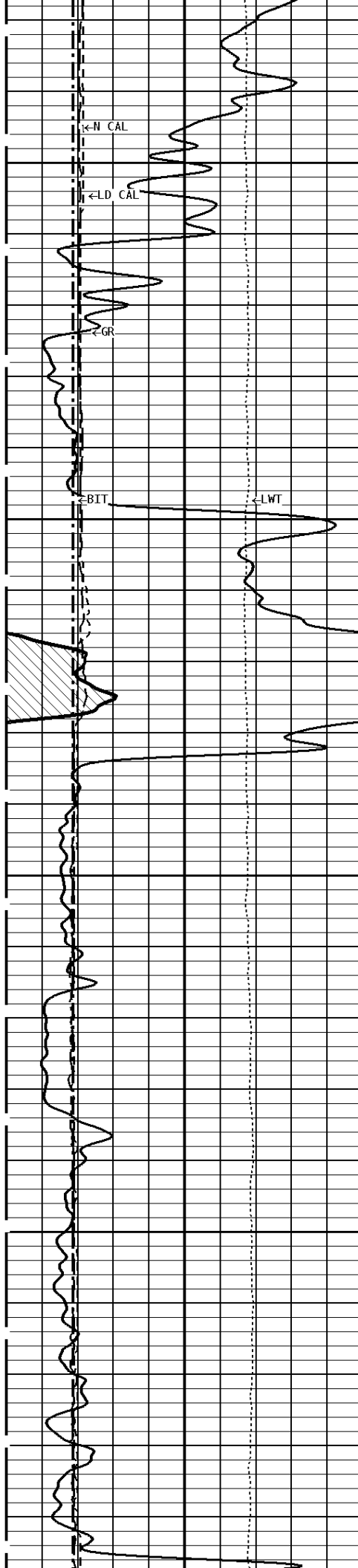




4700

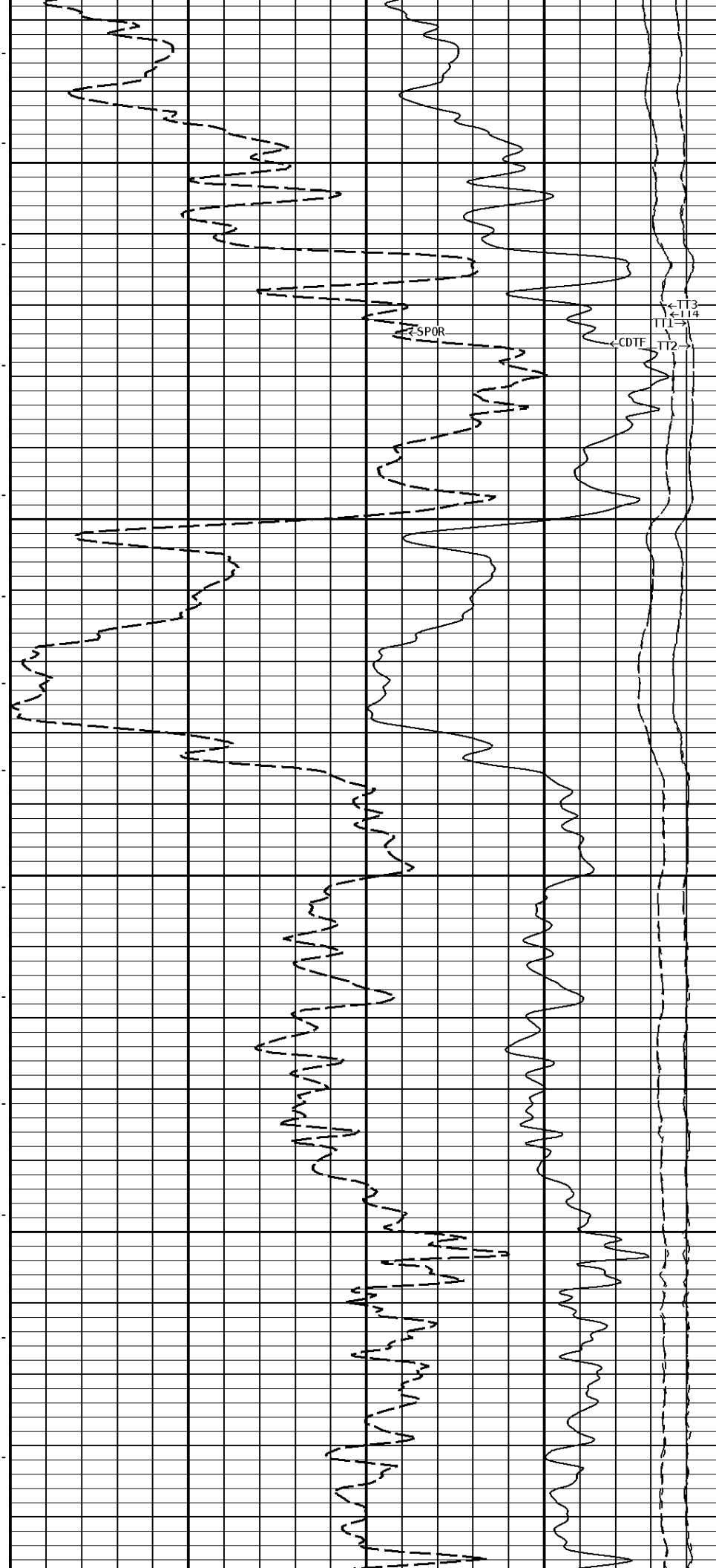
4800





4900

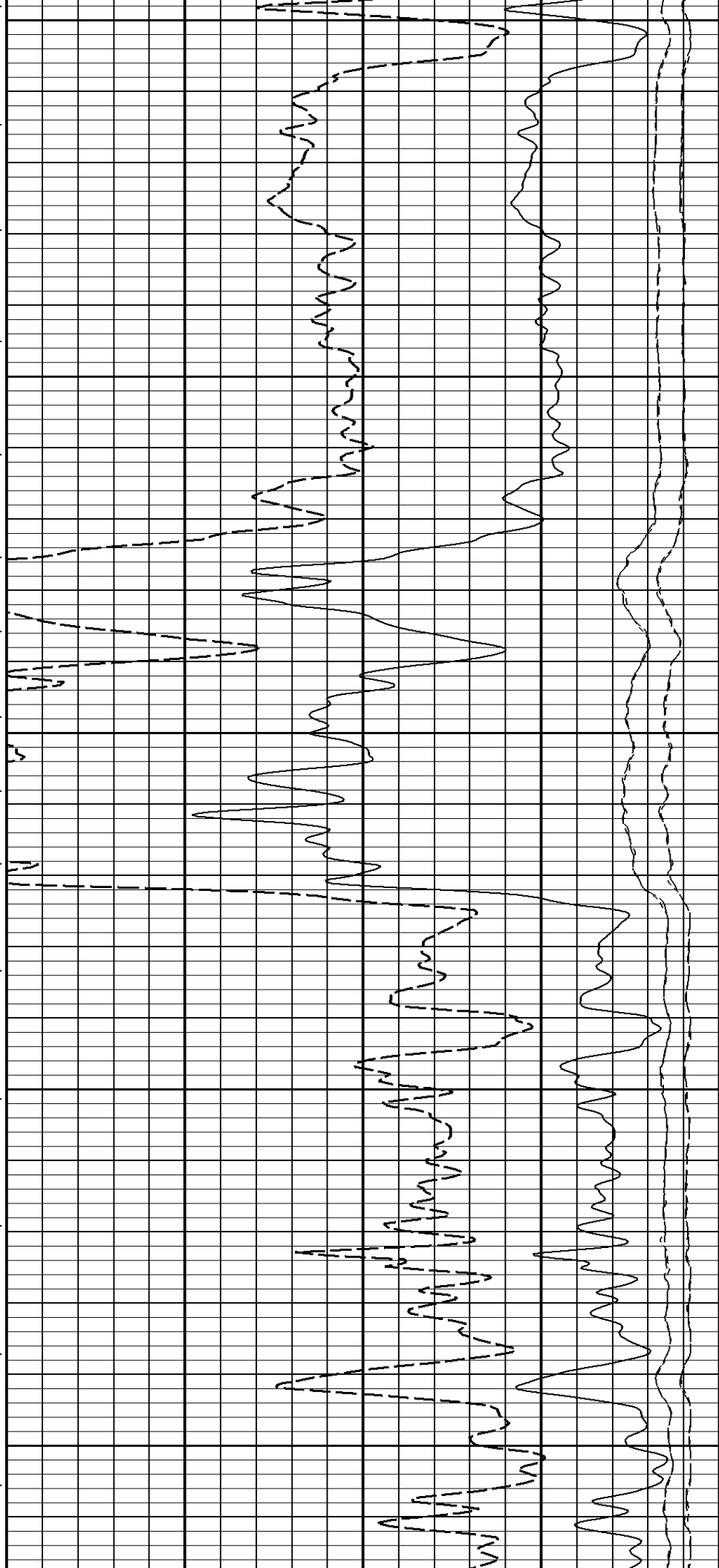
5000

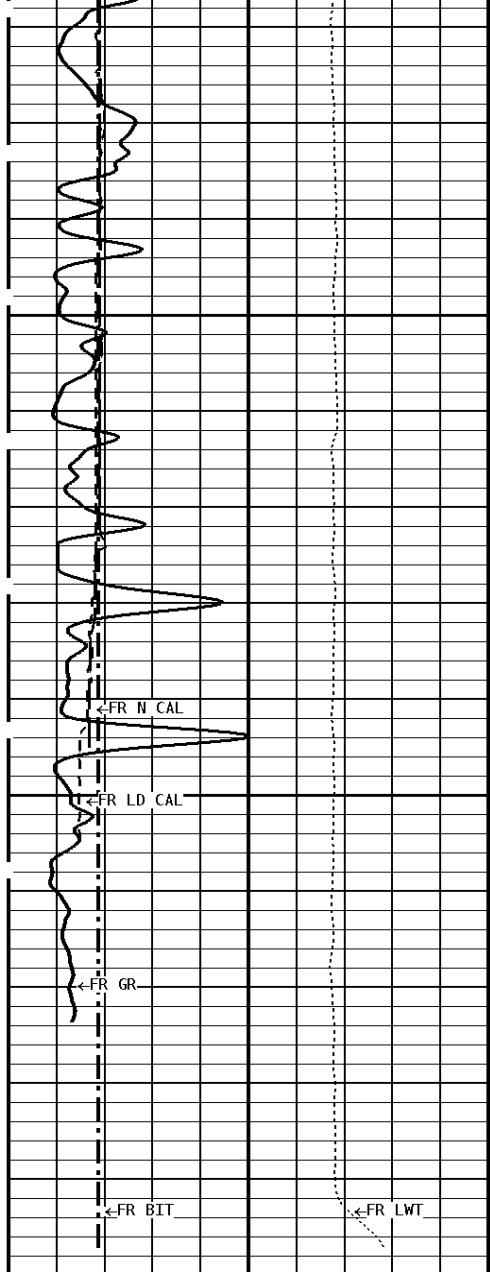




5100

5200



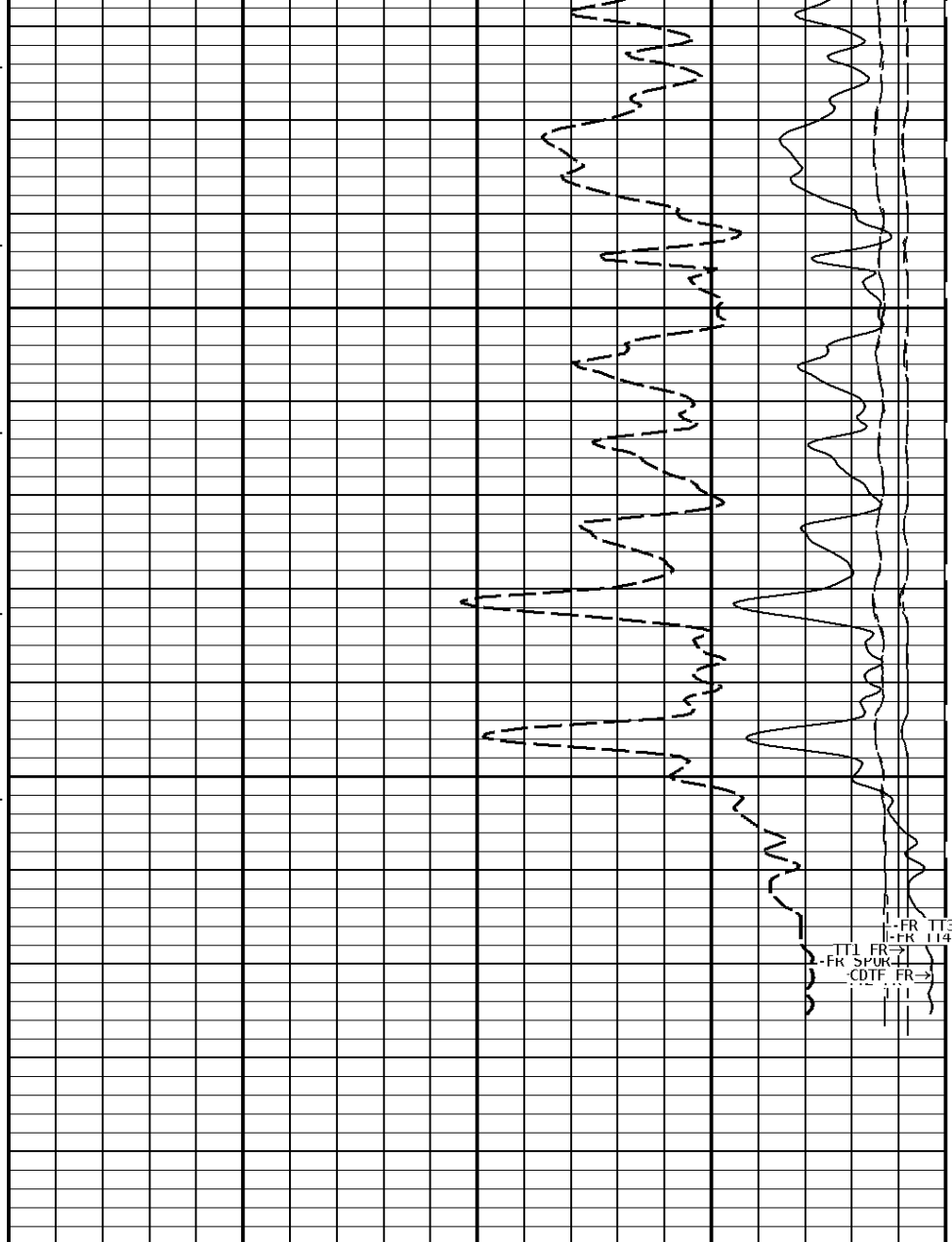


5300

5393

File #1.4.1

1:240 MAIN SECTION



TT1 FR
TT2 FR
TT3 FR
CDIF FR
LWT

GAMMA RAY API UNITS	
150	300
0	150
NEUTRON (Y) CALIPER INCHES (IN)	
16	26
6	16
DENSITY (X) CALIPER INCHES (IN)	
16	26
6	16
BIT SIZE INCHES (IN)	
6	16
TENSION	

COMPENSATED SONIC TRAVEL TIME uSEC/FT	
240	140
140	40
SONIC POROSITY Percent	
30	-10
TT1 uSEC	
950	50
TT2 uSEC	
950	50
TT3 uSEC	

LBS	
10000	0

uSEC	
950	50
TT4 uSEC	
950	50

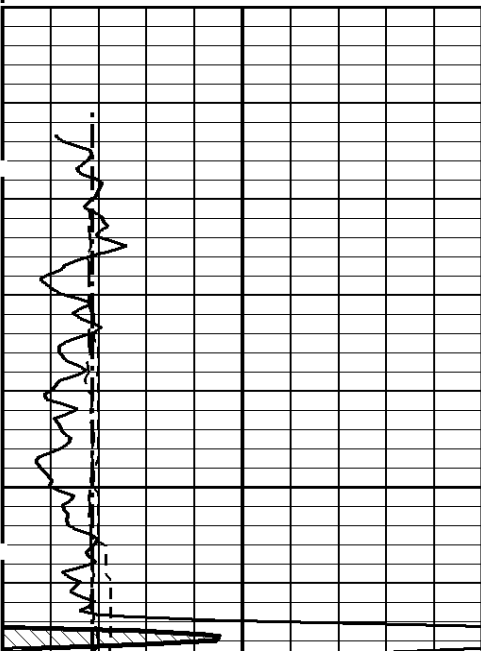
Well File: lb_exp_lar_14-2_oct_10 Quint	Scale: 1:240
Segment: V1.D1.S4 RP	Acquired: 2011-10/10 03:24 3.2.0-9963
Reference: 0	Processed: 2011-10/10 05:53 3.2.0-9963

TENSION LBS	
10000	0
BIT SIZE INCHES (IN)	
6	16
DENSITY (X) CALIPER INCHES (IN)	
16	26
6	16
NEUTRON (Y) CALIPER INCHES (IN)	
16	26
6	16
GAMMA RAY API UNITS	
150	300
0	150

TT4 uSEC	
950	50
TT3 uSEC	
950	50
TT2 uSEC	
950	50
TT1 uSEC	
950	50

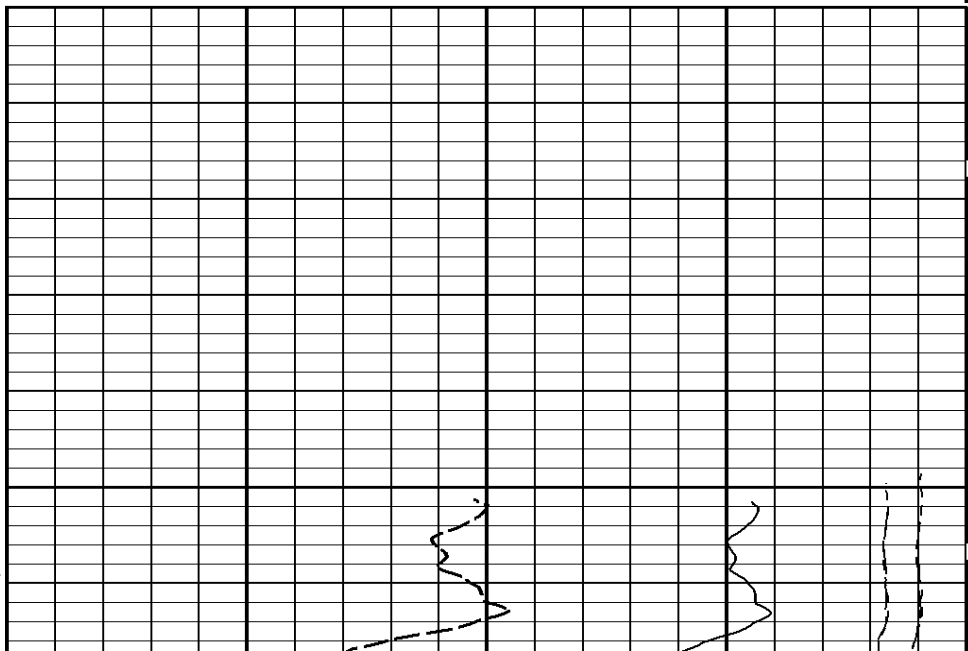
SONIC POROSITY Percent	
30	-10
COMPENSATED SONIC TRAVEL TIME uSEC/FT	
240	140
140	40

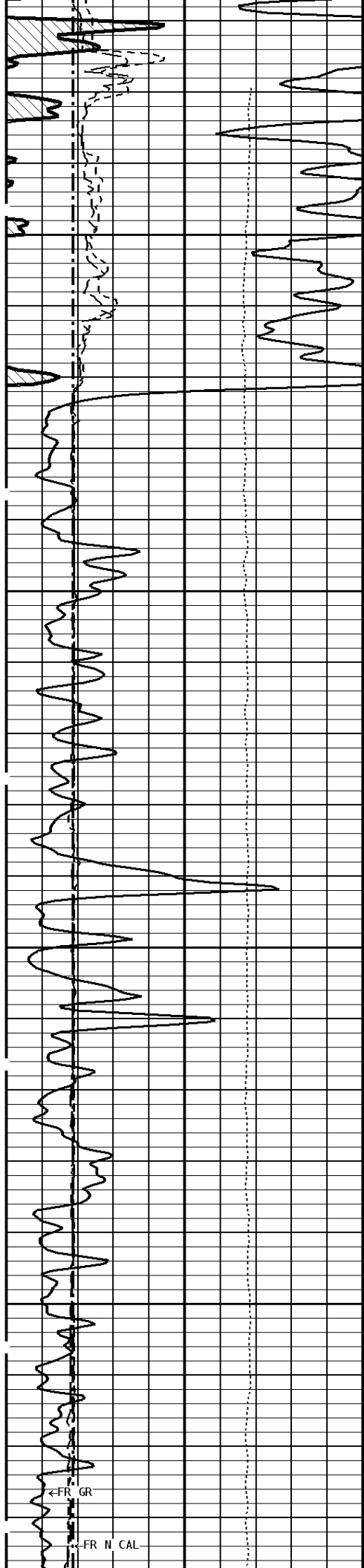
1:240 REPEAT SECTION



File #1.1.4

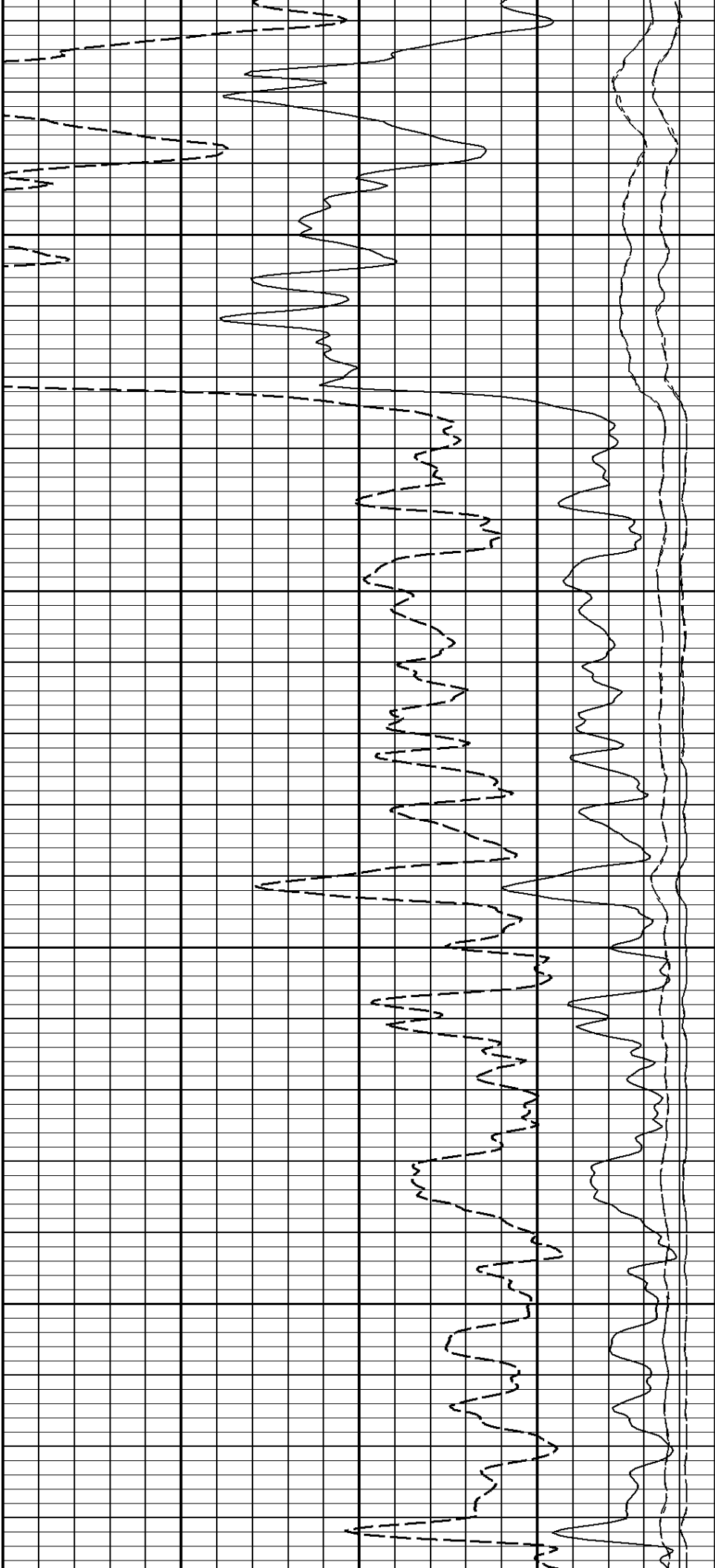
5100

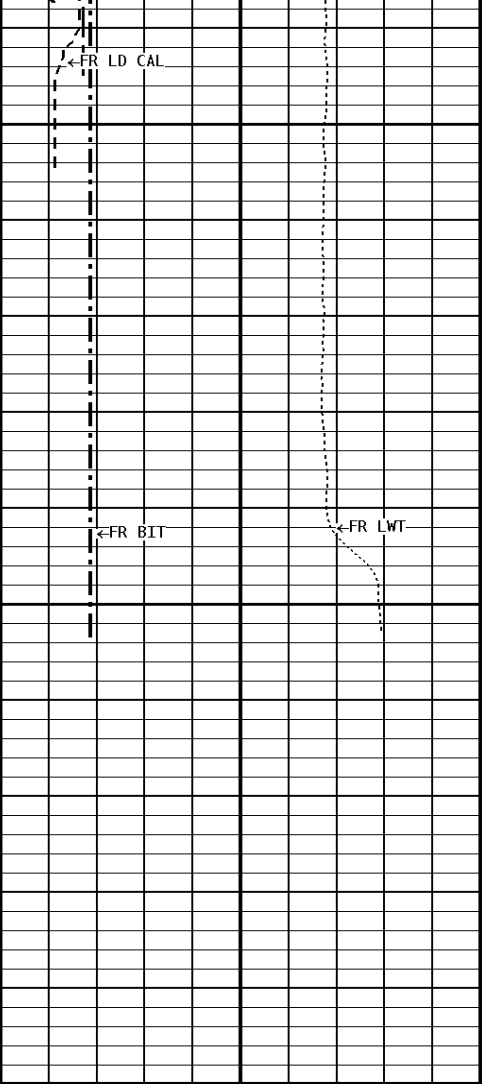




5200

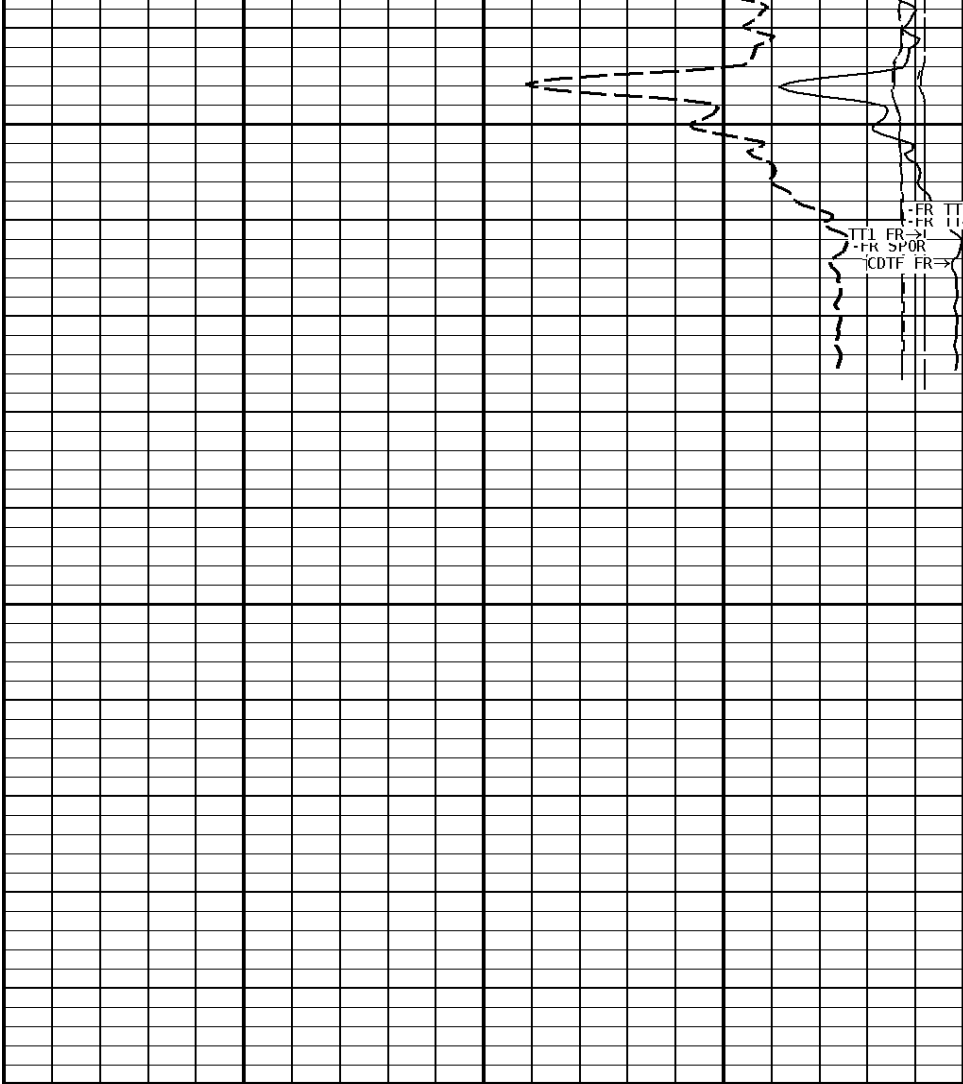
5300





File #1.1.4

5393
5400



TT1 FR
TT2 FR
TT3 FR
TT4 FR
CDTF FR

1:240 REPEAT SECTION

GAMMA RAY API UNITS	
150 0	300 150
NEUTRON (Y) CALIPER INCHES (IN)	
16 6	26 16
DENSITY (X) CALIPER INCHES (IN)	
16 6	26 16
BIT SIZE INCHES (IN)	
6	16
TENSION LBS	
10000	0

COMPENSATED SONIC TRAVEL TIME uSEC/FT	
240 140	140 40
SONIC POROSITY Percent	
30	-10

TT1 uSEC	
950	50
TT2 uSEC	
950	50
TT3 uSEC	
950	50
TT4 uSEC	
950	50

* Calibration Summary *

Shop Calibration					
CNT-AA					
Performed : 29-Aug-2011			Time : 14:03		
Sensor Suite : BHC NEUT			ID : CNP-AA-112		
Source ID : N-1046					
	Tank		Verification		Units
	Measured	Calibrated	Jig		
N/F	4.0359	3.6893	3.6953		
Porosity	26.1	20.5	20.6		%

Shop Calibration					
LDT-DF					
Performed : 26-APR-2011			Time : 13:10		
Sensor Suite : CALI-LTH			ID : PDT-GA-464		
	Jig - Measured		Jig - Calibrated		Units
	Ring#1	Ring#2	Ring#1	Ring#2	
CL # 1	7.1	10.5	6.0	12.0	IN.

Shop Calibration					
CST-AD					
Performed : 15-AUG-2011			Time : 09:37		
Sensor Suite : SON-ANA			ID : CST-AD-078		
	Transit Time				
T/R Pair	Measured		Calibrated		Units
T1R1	208.5		208.5		uS
T2R2	208.5		208.5		uS
T1R2	322.5		322.5		uS
T2R1	322.5		322.5		uS
	Amplitude				
T/R Pair	Measured		Calibrated		Units
T1R1	90.00		90.00		mV
T2R2	90.00		90.00		mV
T1R2	78.00		78.00		mV
T2R1	78.00		78.00		mV