

Tucker

BOREHOLE COMPENSATED
SONIC LOG
WIRELINE SERVICES

Company LB EXPLORATION, INC. Well STRONG #1 Field MEDICINE LODGE-BOGGS County BARBER State KANSAS Country USA API No. 15-007-23826-0000		File No : TUL-56026 Company : LB EXPLORATION, INC. Well : STRONG #1 Field : MEDICINE LODGE-BOGGS County : BARBER State : KANSAS Country : USA API No : 15-007-23826-0000	
Location : 2310' FSL & 540' FWL E/2 NW NW SW		LSD :	Sect : 35 Twp : 32S Rge : 13W
Permanent Datum:	GL	Elevations:	Services:
Drilling Measured From:	KB	KB 1692.00	CNT CST
Log Measured From:	KB	DF 1691.00	LDT PIT
Above Permanent Datum:	13.00 Ft	GL 1679.00	MLT SGT
Date	2012-01-17		
Run Number	1		
Depth--Driller	4944.0 Ft		
Depth--Logger	4942.0 Ft		
First Reading	4929.0 Ft		
Last Reading	344.0 Ft		
Casing--Driller	334.0 Ft		
Casing--Logger	344.0 Ft		
Bit Size	7.875 In		
Casing Size	8.625 In		
Hole Fluid Type	WBM		
Density	9.4 LBS/GAL		
Fluid Loss	8.8 CC		
PH/Viscosity	10.0	52.0 SEC	
Sample Source	MEASURED		
RM@Measured Temp.	10.000 @ 55 F		
RMF@Measured Temp	8.000 @ 55 F		
RMC@Measured Temp.	12.000 @ 55 F		
Source RMF/RMC	CALCULATED/CALCULATED		
RM@BHT	4.500 @ 130 F		
Time Circulation Stopped	2012-01-17 09:26		
Max Recorded Temp.	130 F		
Equipment/Base	TRK 127 TULSA		
Recorded By	S. TYLER B. BAILEY		
Witnessed By	S. PETERMANN		

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	4944.00	8.625	32.00	334.00

Run Number	1	
Date	2012-01-17	
Date/Time On Bottom	2012-01-17 11:26	
Depth to Fluid	0.0 Ft	
Salinity	0.000 PPM	
RMF@BHT	3.600 @ 130 F	
RMC@BHT	5.400 @ 130 F	

Run Number 1

Comments

ALL PRESENTATIONS AS PER CUSTOMER REQUEST

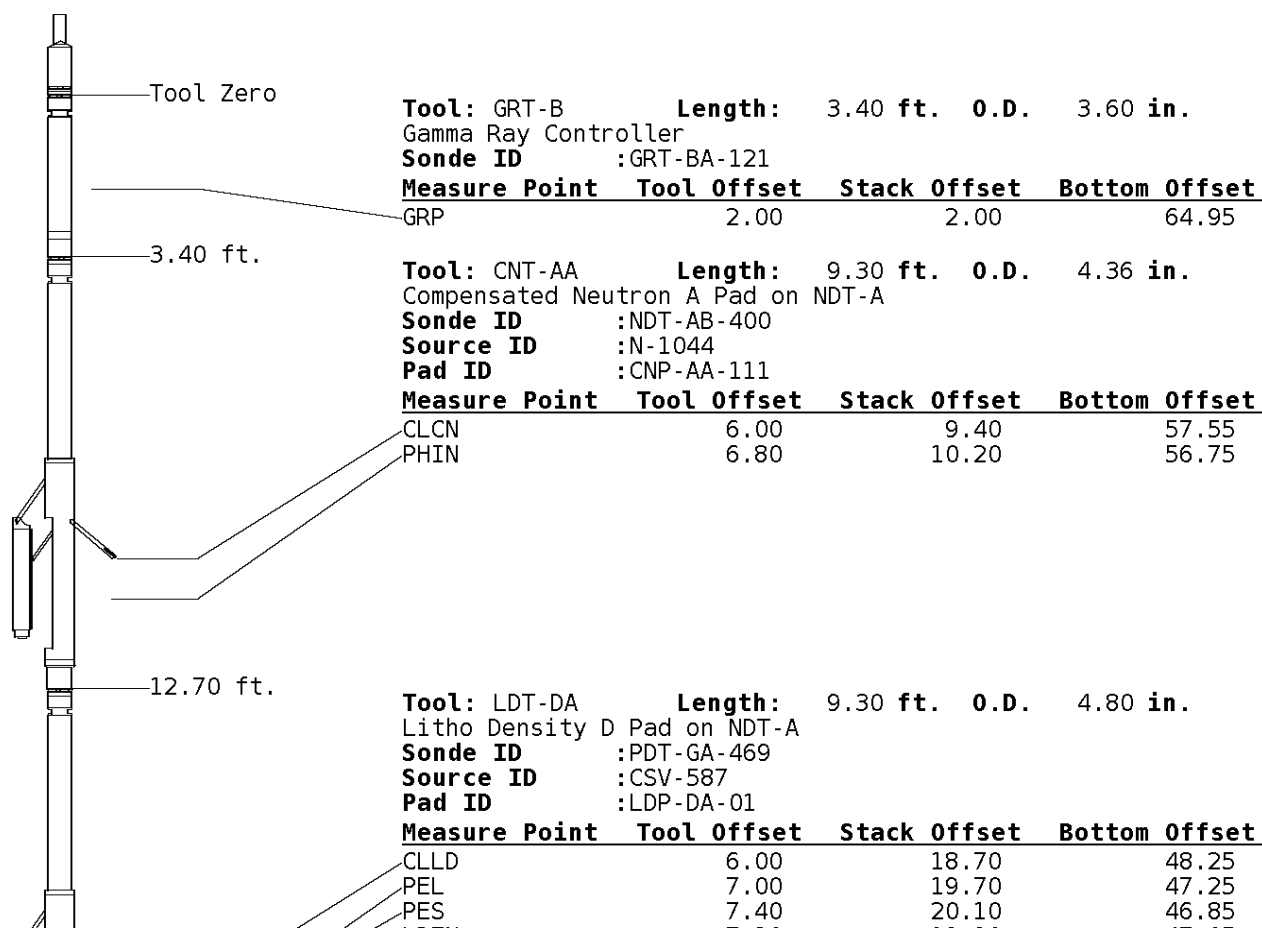
ALL PRESENTATIONS AS PER CUSTOMER REQUEST
 GRT, CNT, LDT, MLT, CST AND PIT RUN IN COMBINATION.
 CALIPERS ORIENTED ON X-Y AXIS.
 2.71 G/CC USED TO CALCULATED POROSITY.
 ANNULAR HOLE VOLUME CALCULATED UISING 5.500" PRODUCTION CASING.

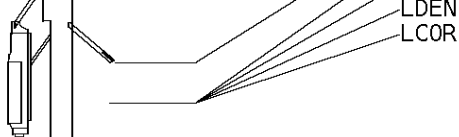
GRT: GRP.
 CNT: PHIN, CLCNIN
 LDT: PORL, LCORN, PECLN, LDENN, PORLLS, CLLDIN.
 MLT: NOR_RF, INV_RF, MSCLPIN.
 CST: PORS, DDCDTF, TT1PF, TT3PF, ITT.
 PIT: ILD, ILM, SPU, SFLAEC

OPERATORS:
 J.T.
 M.BURKE

Tool String Schematic

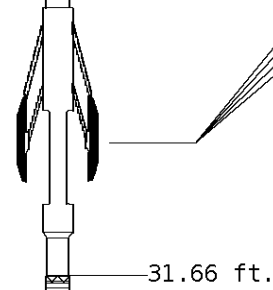
Total Tool Length - 66.95 ft.
Maximum Outside diameter - 6.00 in.
Net Weight in Air - 1171.00 lbs.





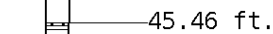
Tool: MST-DA **Length:** 9.66 ft. **O.D.** 6.00 in.
 Micro Spherically Focused (IC)
Sonde ID :MST-DA-36

Measure Point	Tool Offset	Stack Offset	Bottom Offset
MSFL	7.60	29.60	37.35
MSCLP	7.60	29.60	37.35
INV	7.60	29.60	37.35
NOR	7.60	29.60	37.35



Tool: CST-AD **Length:** 13.80 ft. **O.D.** 3.60 in.
 Open Hole Sonic
Sonde ID :CST-AB-38

Measure Point	Tool Offset	Stack Offset	Bottom Offset
TT1	4.80	36.46	30.49
TT3	5.80	37.46	29.49
CDT	7.30	38.96	27.99
TT4	8.80	40.46	26.49
TT2	9.80	41.46	25.49



Tool: PIT-CA **Length:** 21.49 ft. **O.D.** 3.62 in.
 Phased Dual Induction w/ RM & D
Sonde ID :PIT-AB-18

Measure Point	Tool Offset	Stack Offset	Bottom Offset
ILD	8.92	54.38	12.56
ILM	10.10	55.56	11.39
SFLU	17.49	62.95	4.00
SP	20.60	66.06	0.88



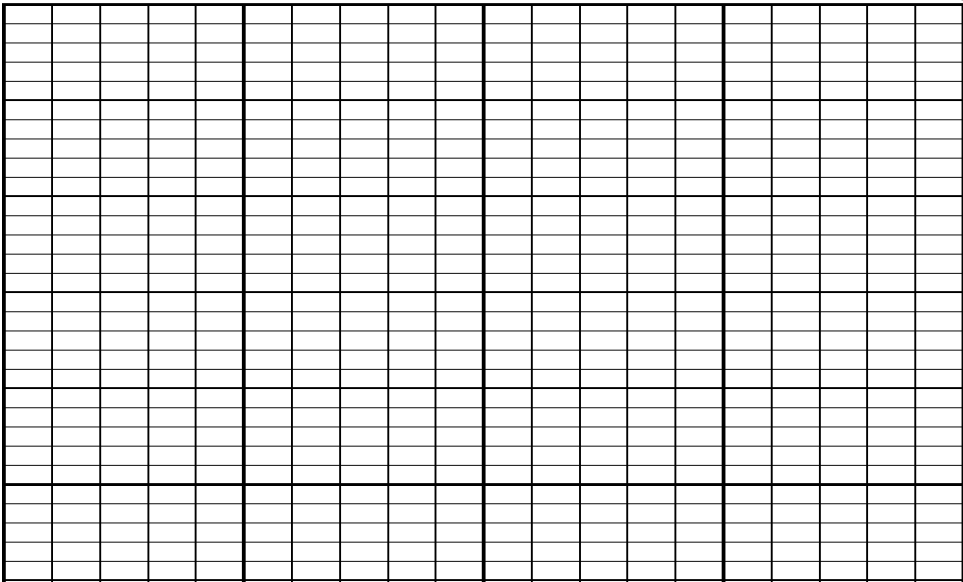
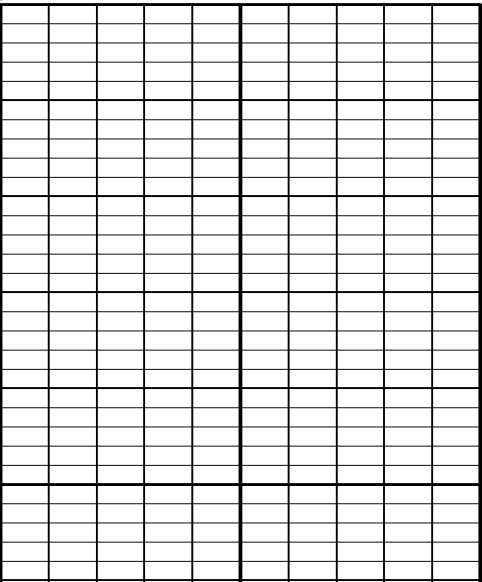
Well File: LB EXPOR STRONG 1 JAN17_QST-SGT Scale: 1:240
Segment: V4.D1.S6 DS MN Acquired: 2012-01/17 15:45 3.2.0-10367
Reference: 0 Processed: 2012-01/17 18:19 3.2.0-10367

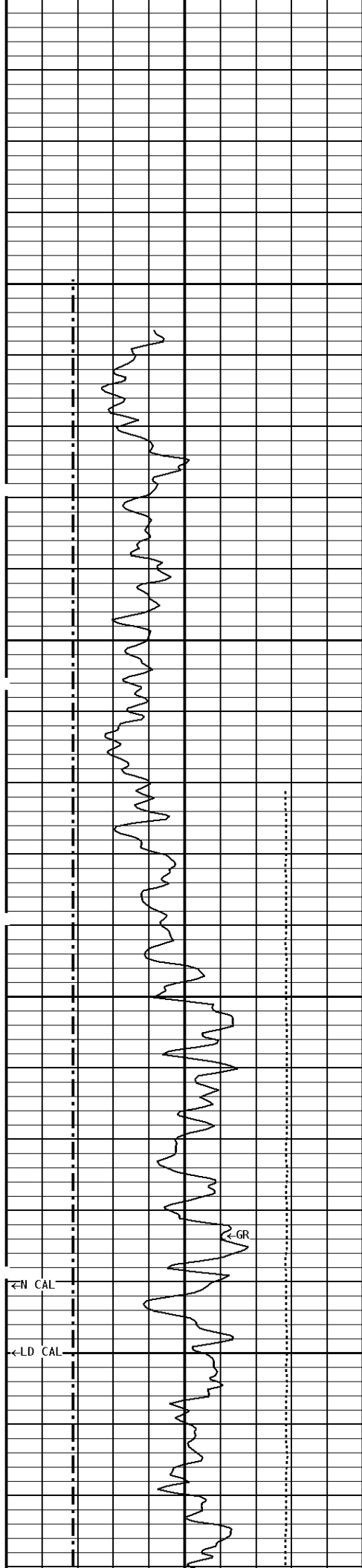
TENSION LBS	
10000	0
BIT SIZE INCHES (IN)	
6	16
DENSITY (X) CALIPER INCHES (IN)	
16	26
6	16
NEUTRON (Y) CALIPER INCHES (IN)	
16	26
6	16
GAMMA RAY API UNITS	
150	300
0	150

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

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

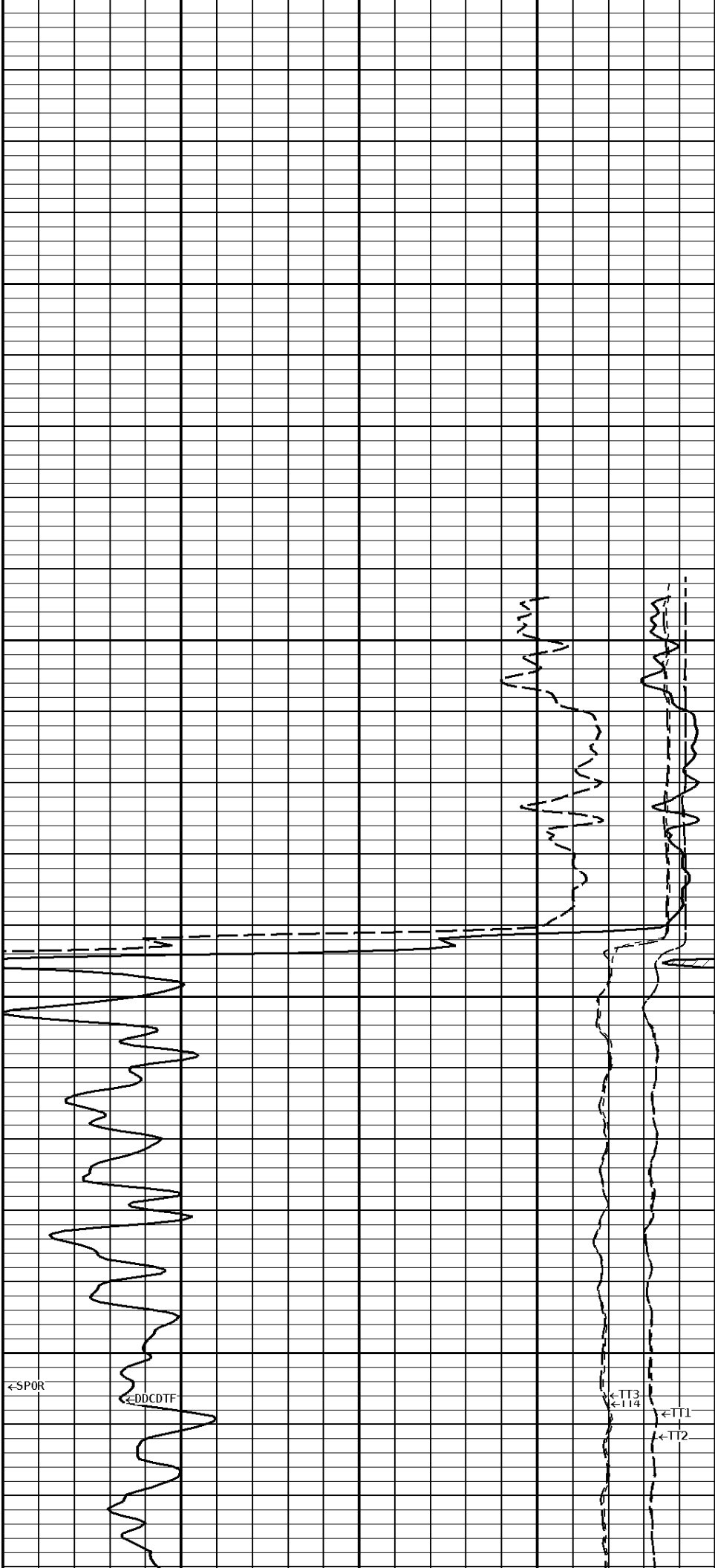
1:240 MAIN SECTION

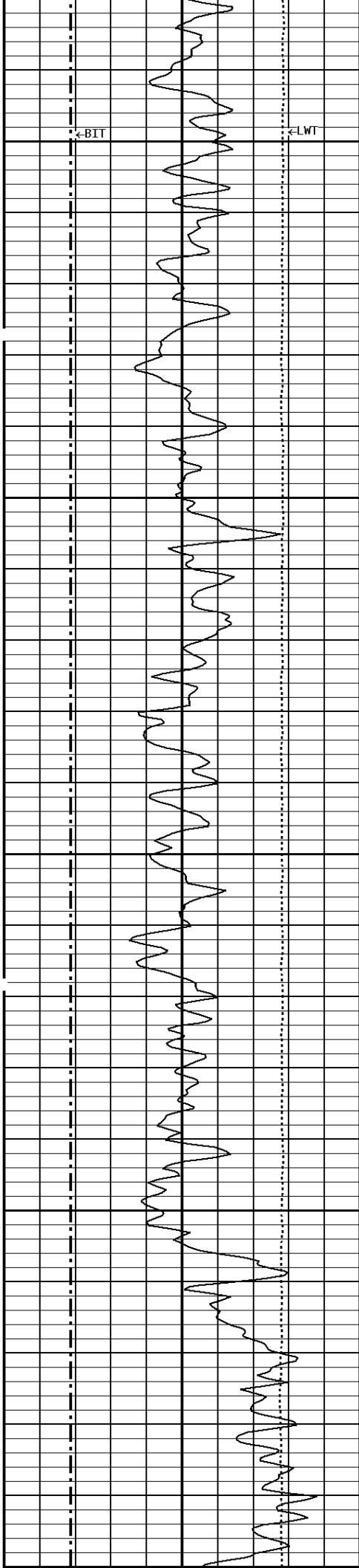




300

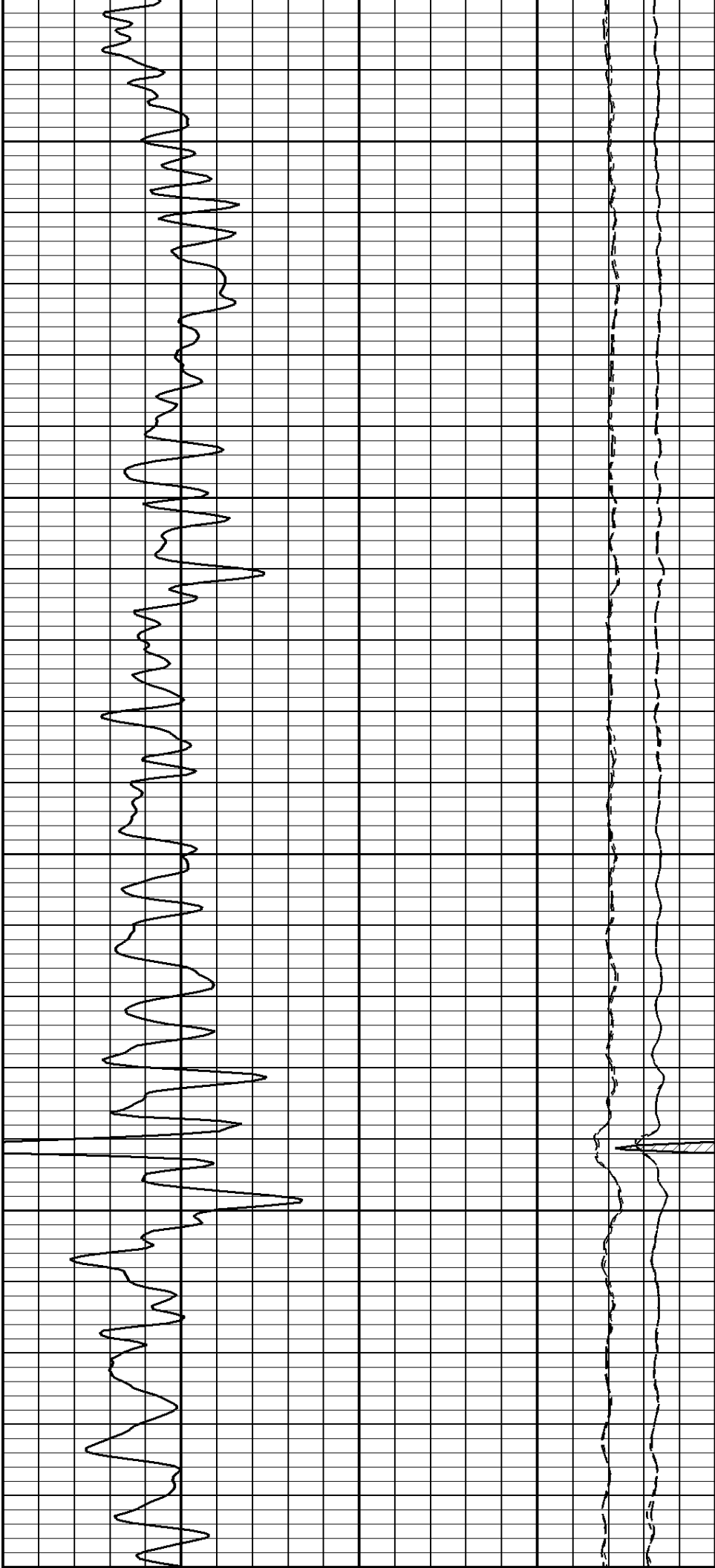
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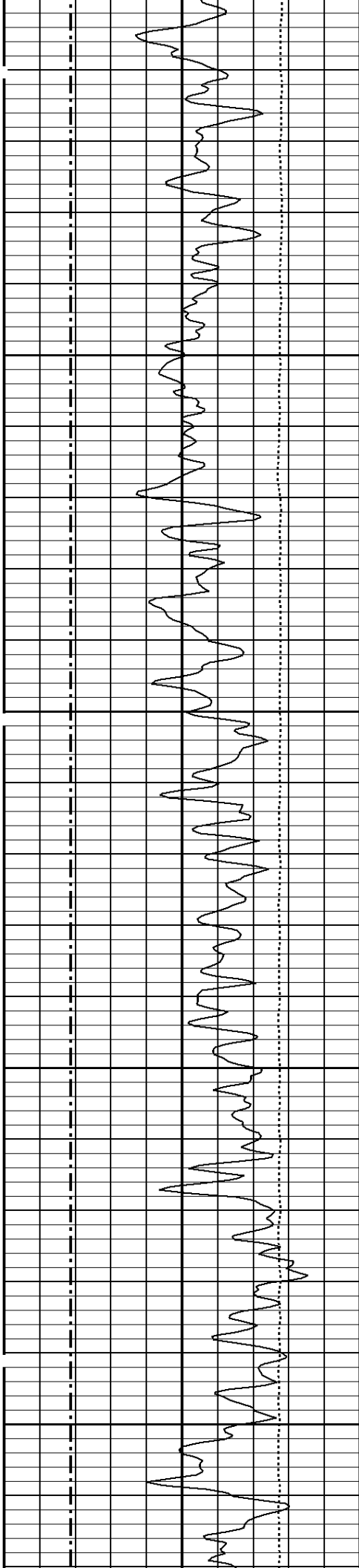




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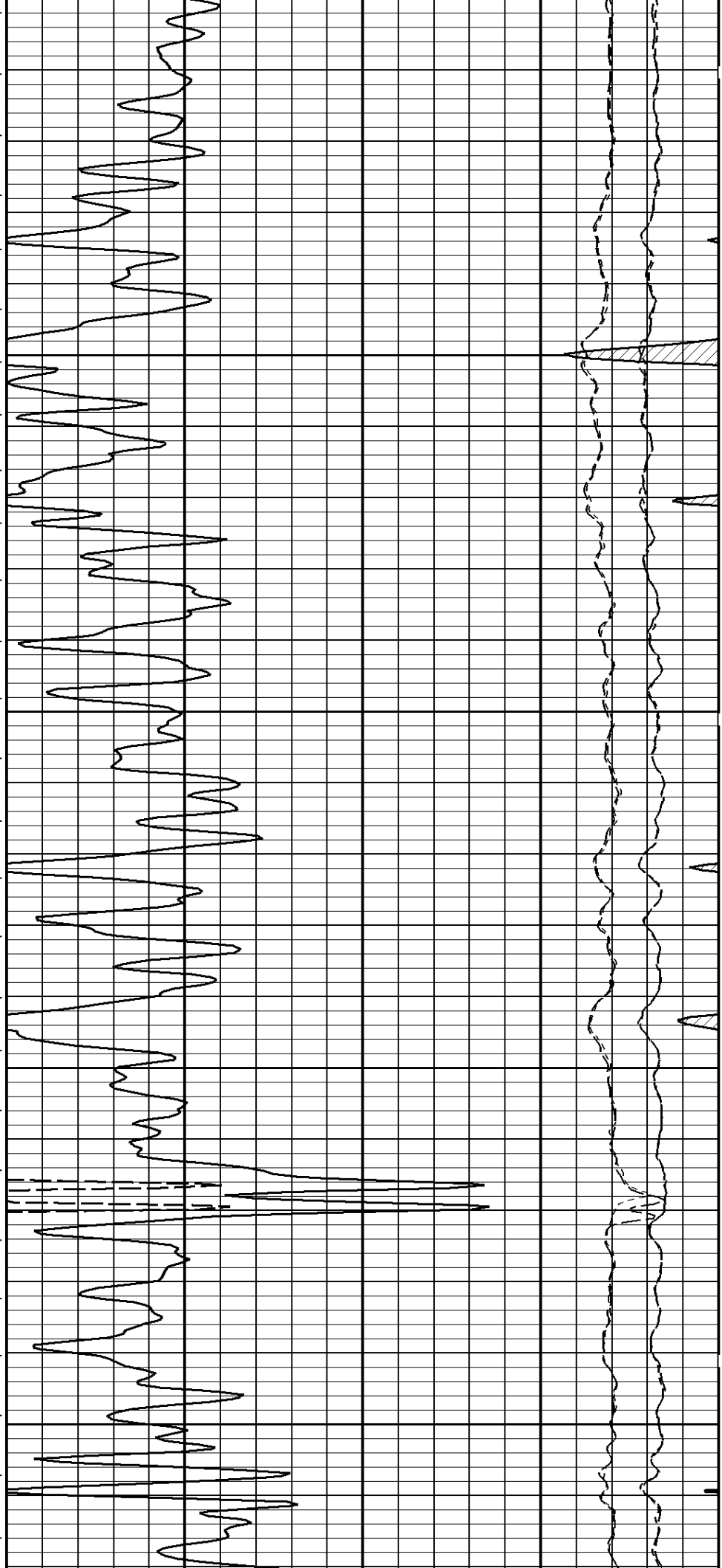
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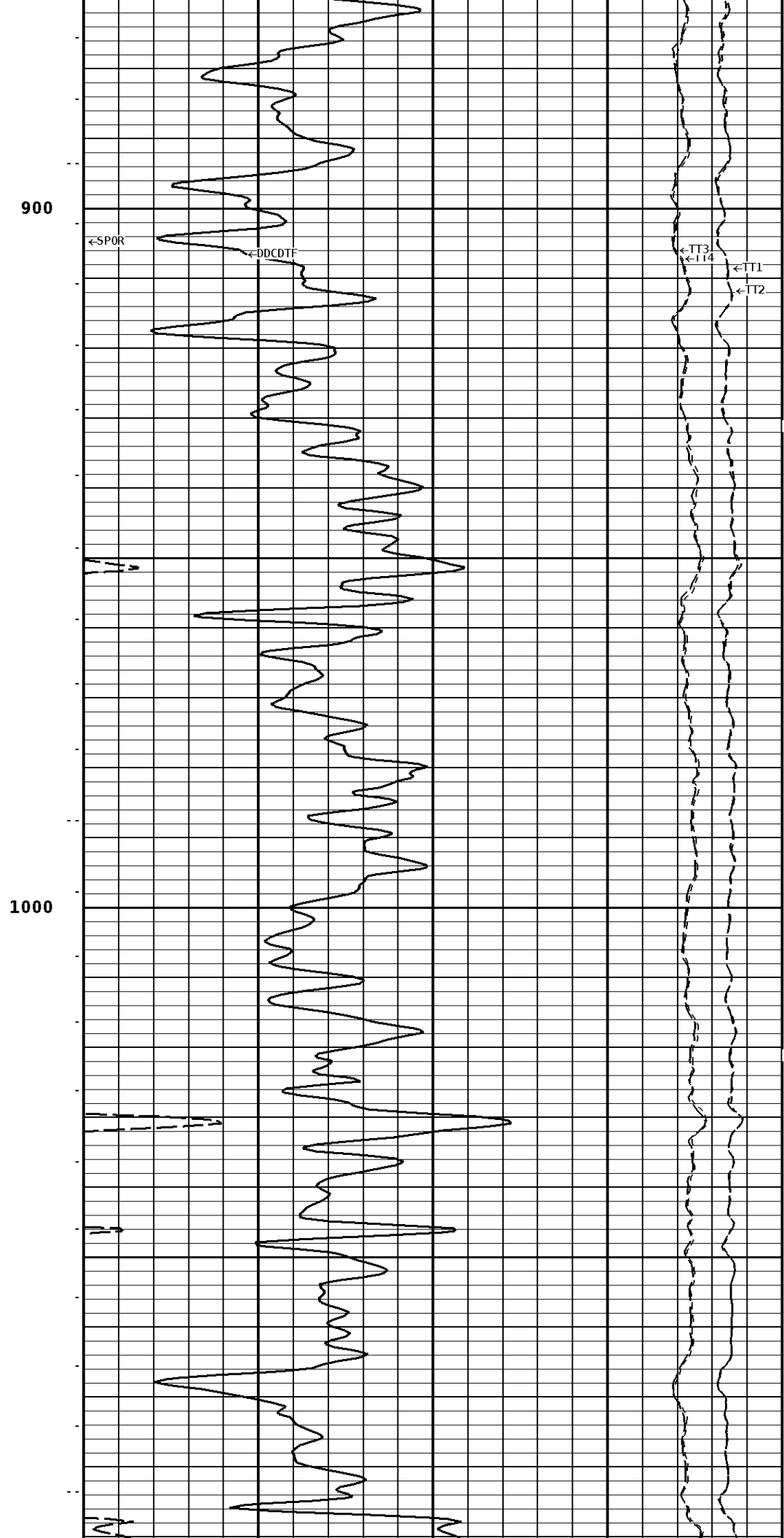
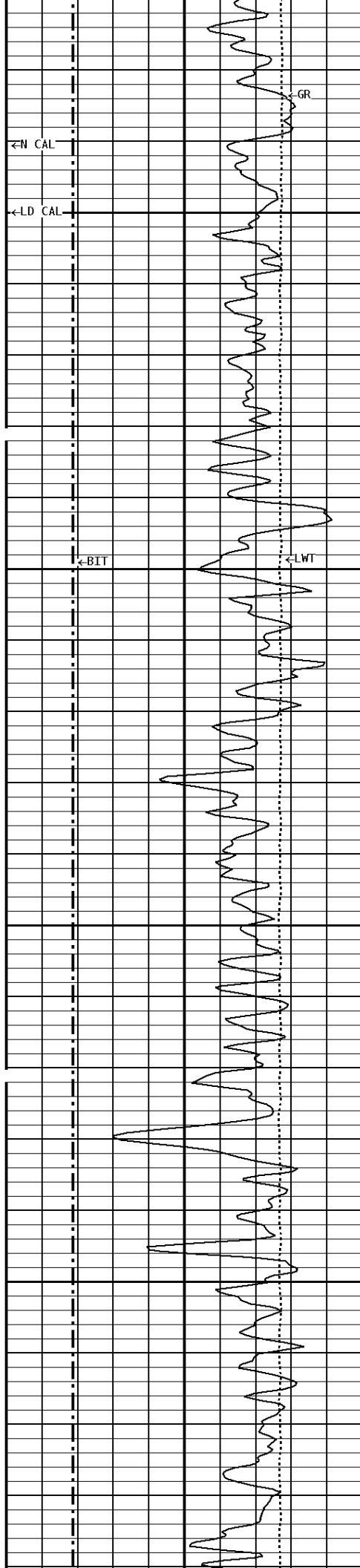


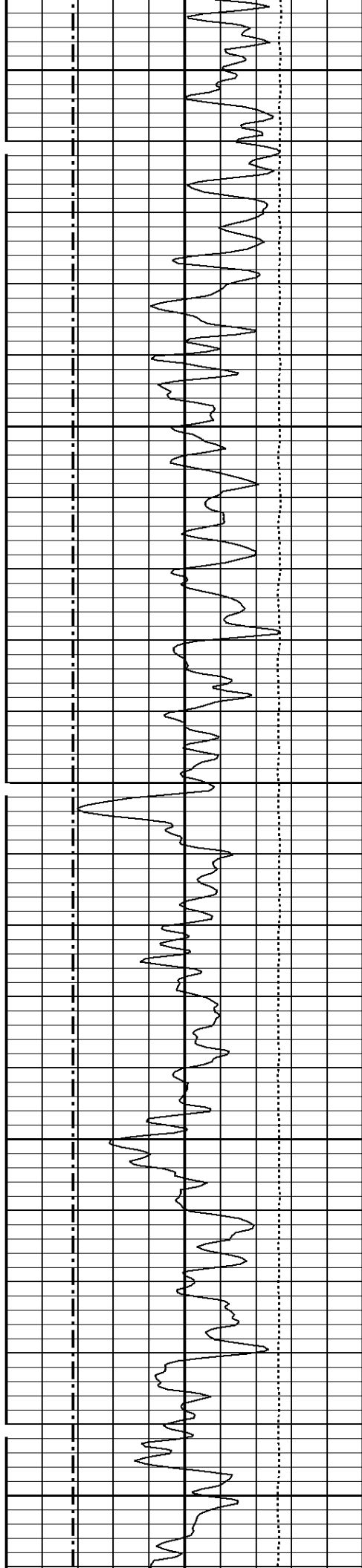


700

800



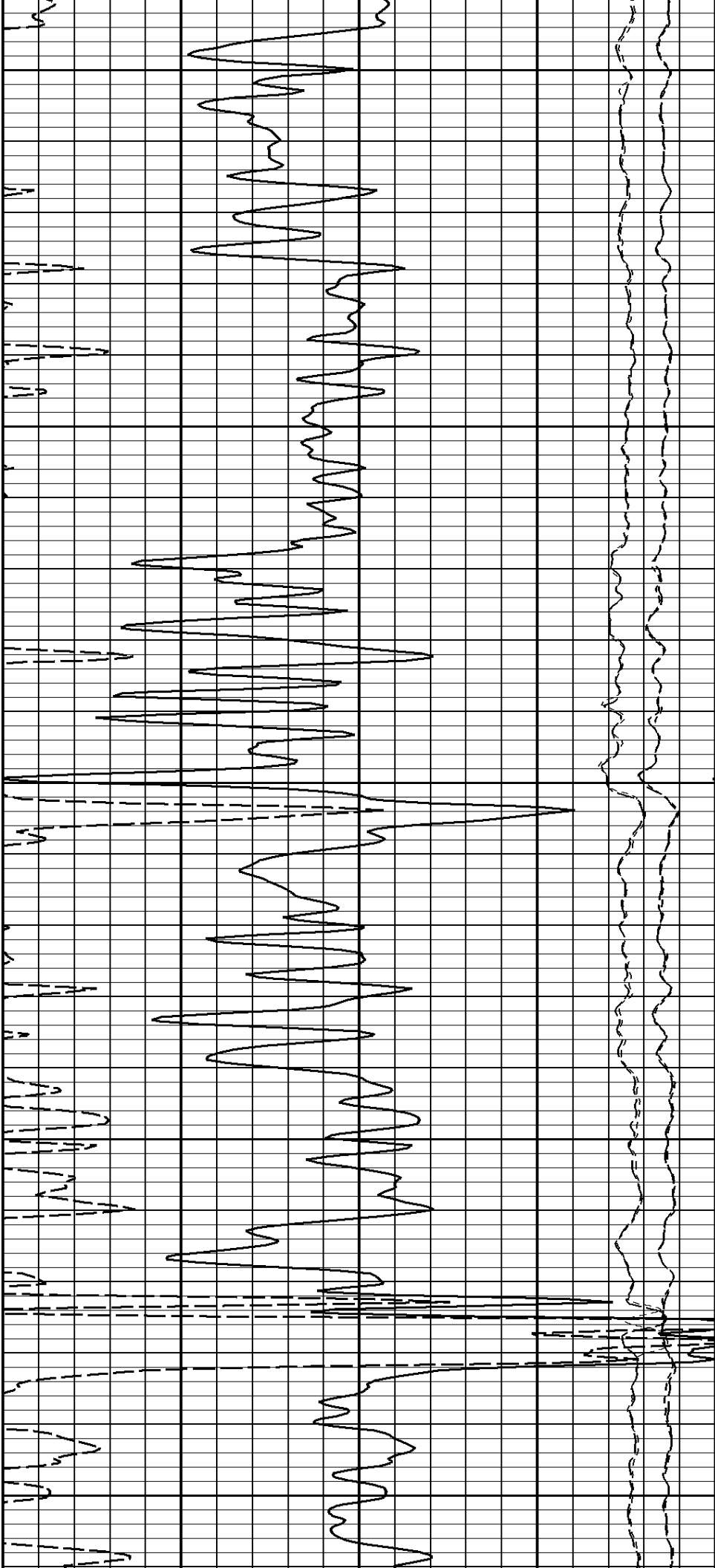


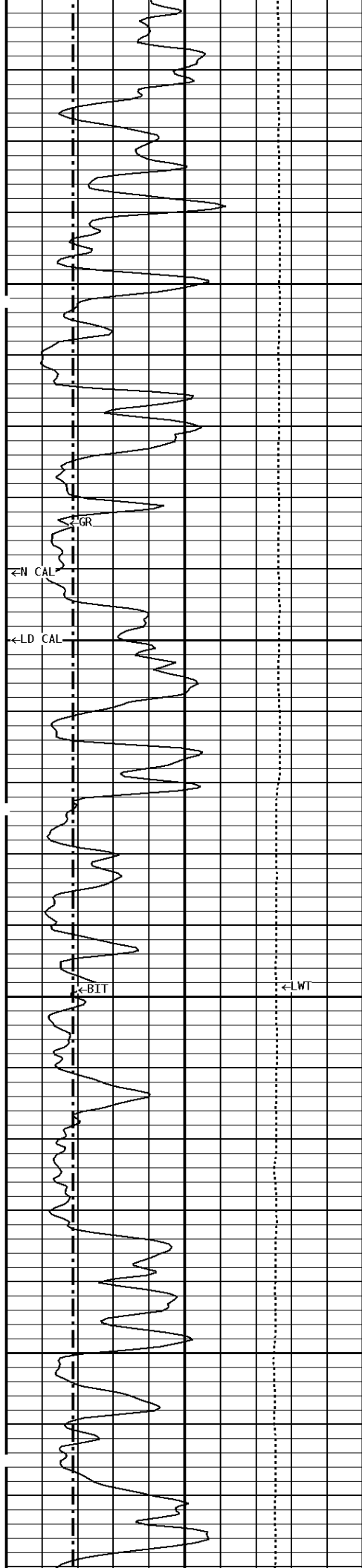


1100

1200

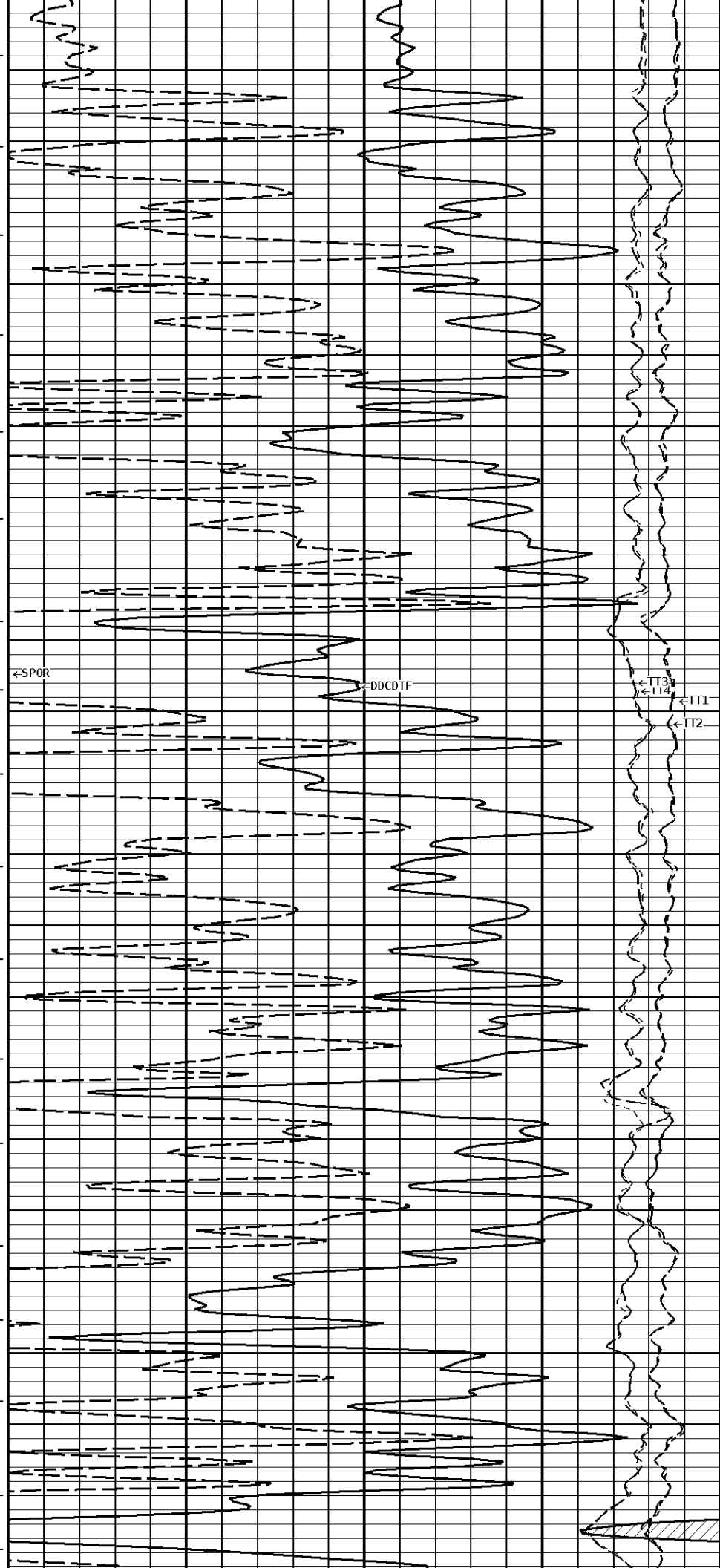
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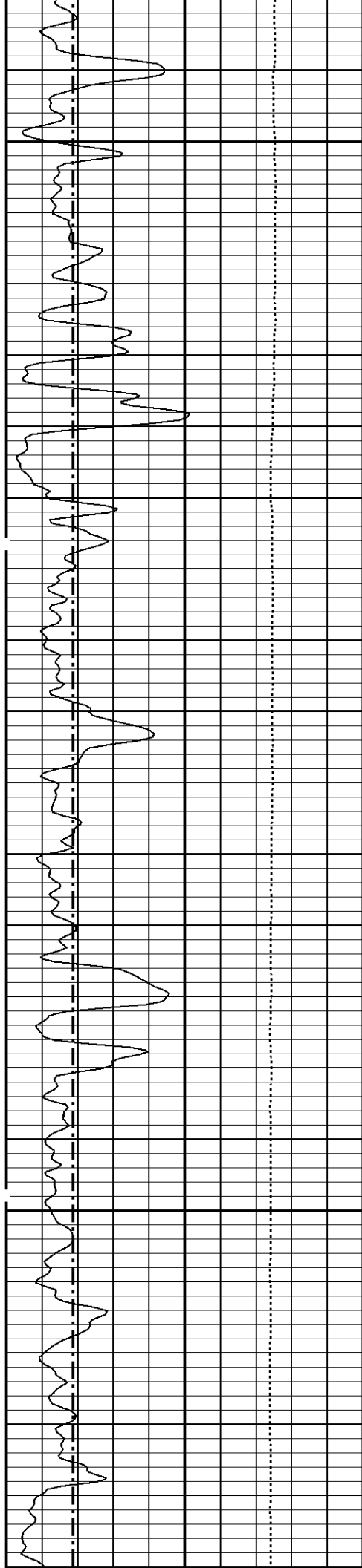




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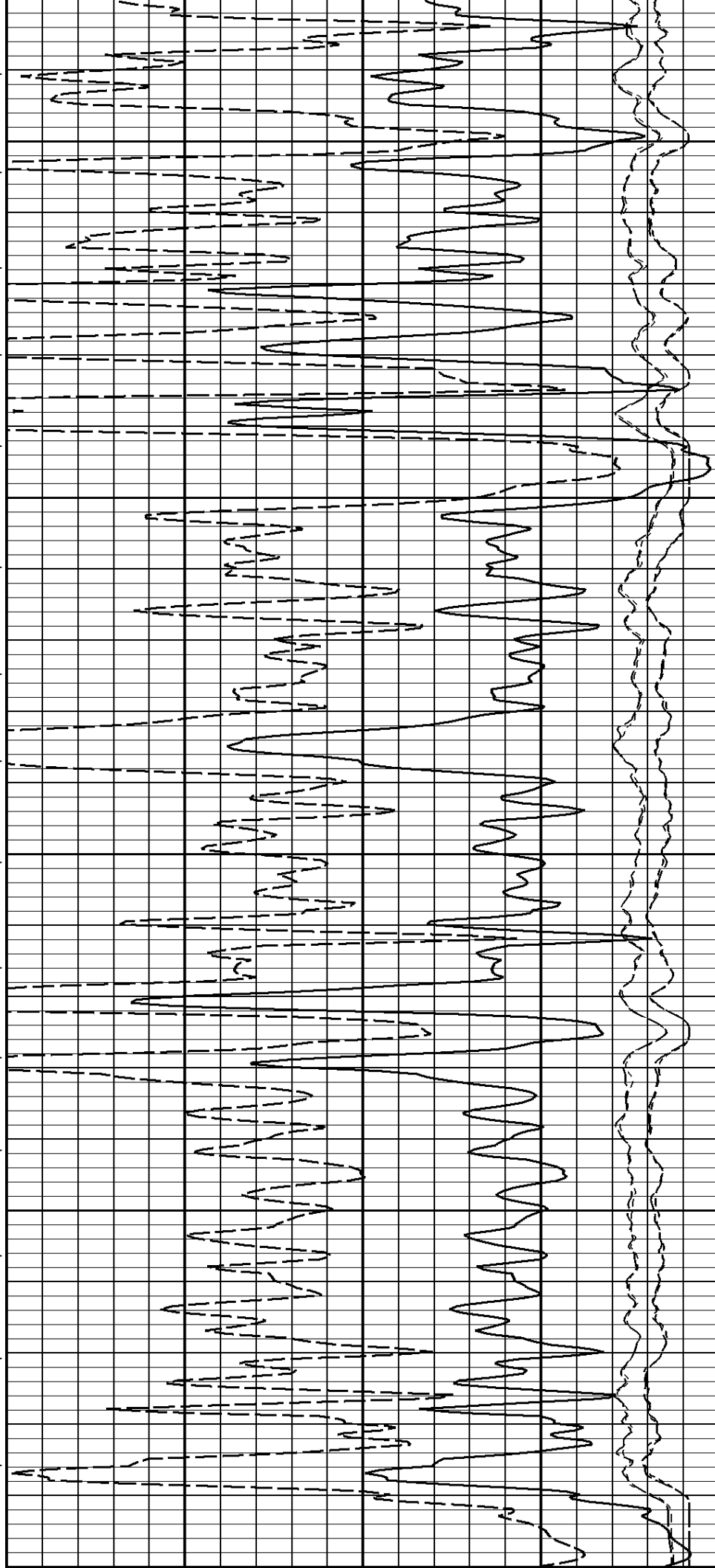
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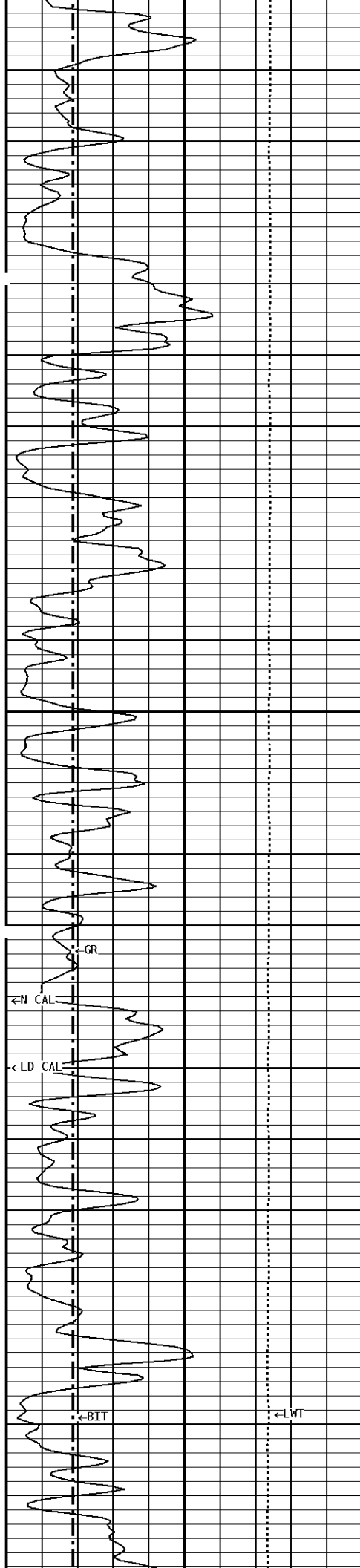




1600

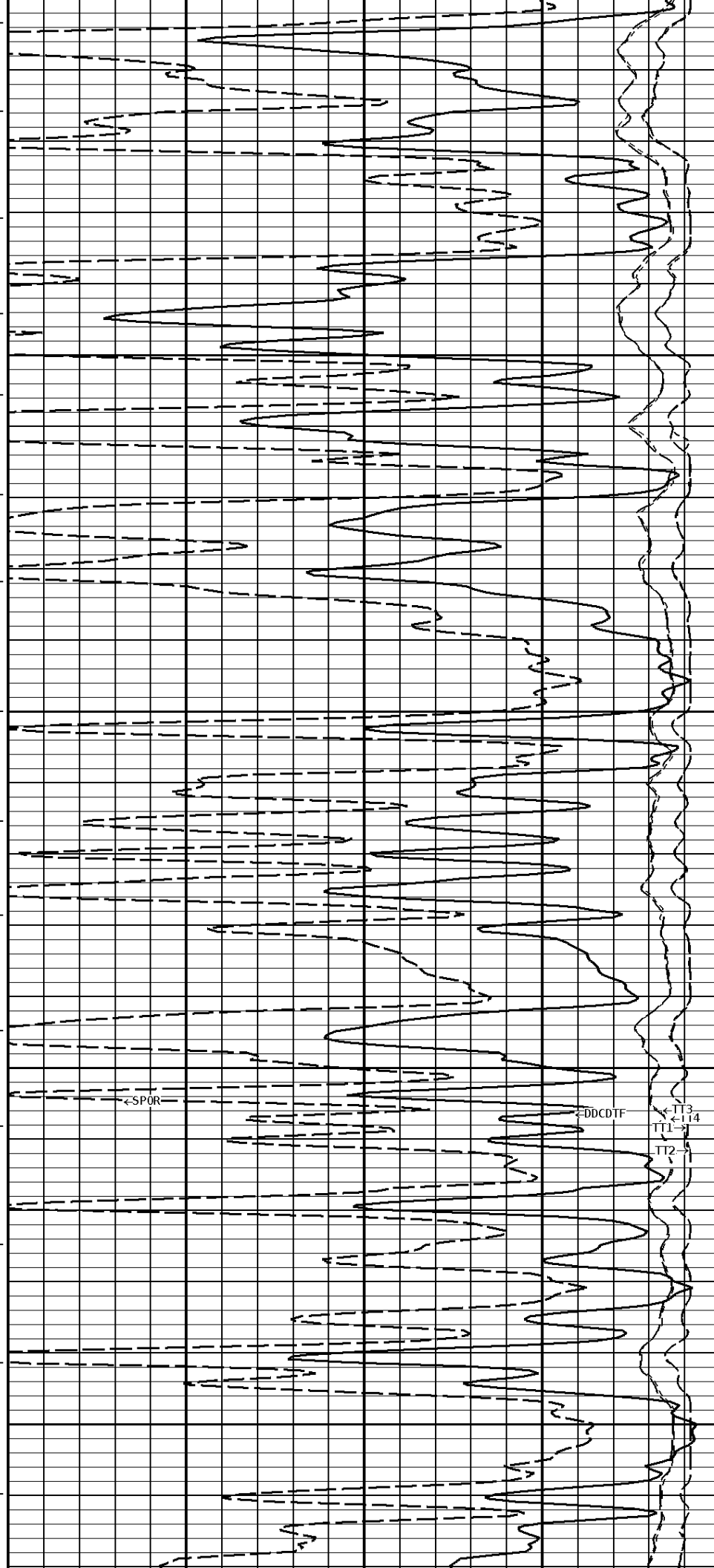
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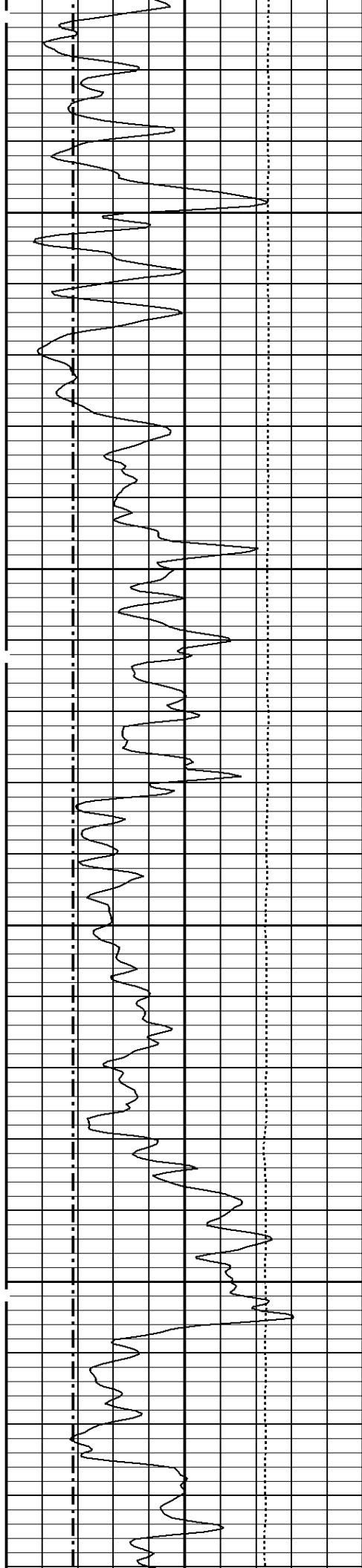




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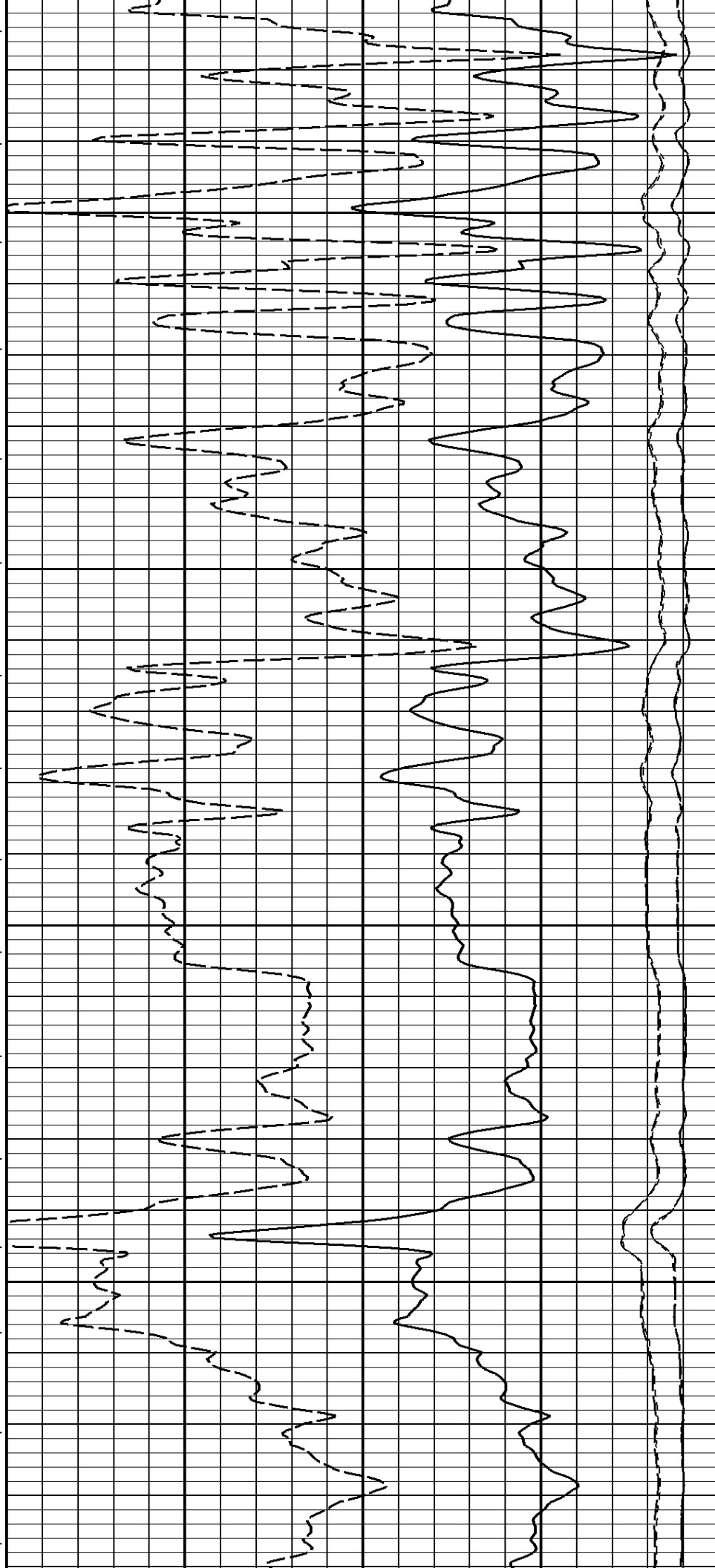
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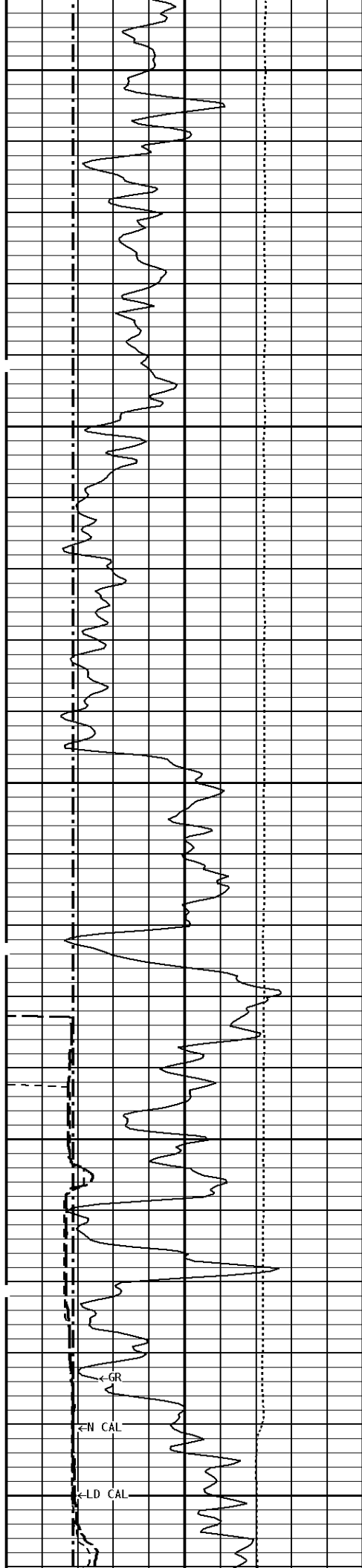




2000

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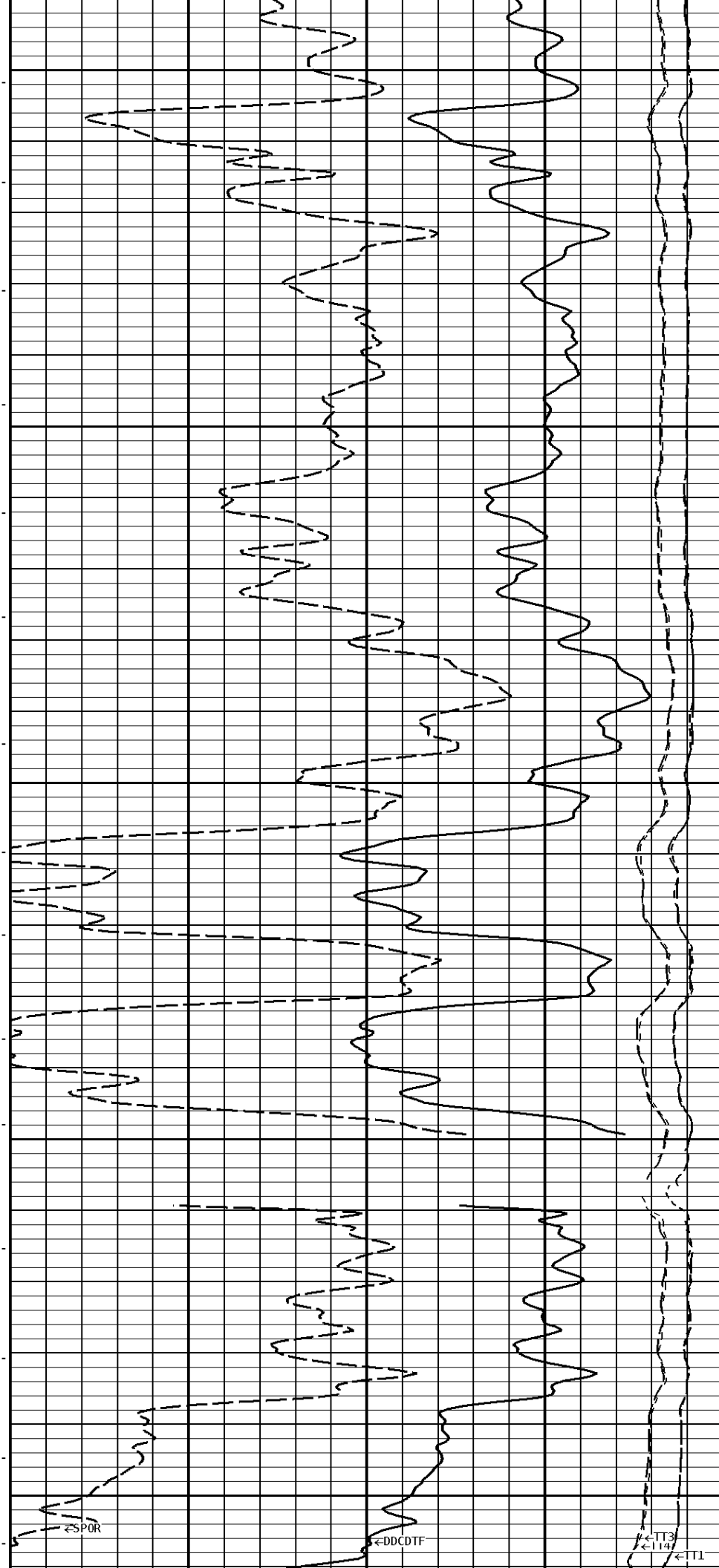


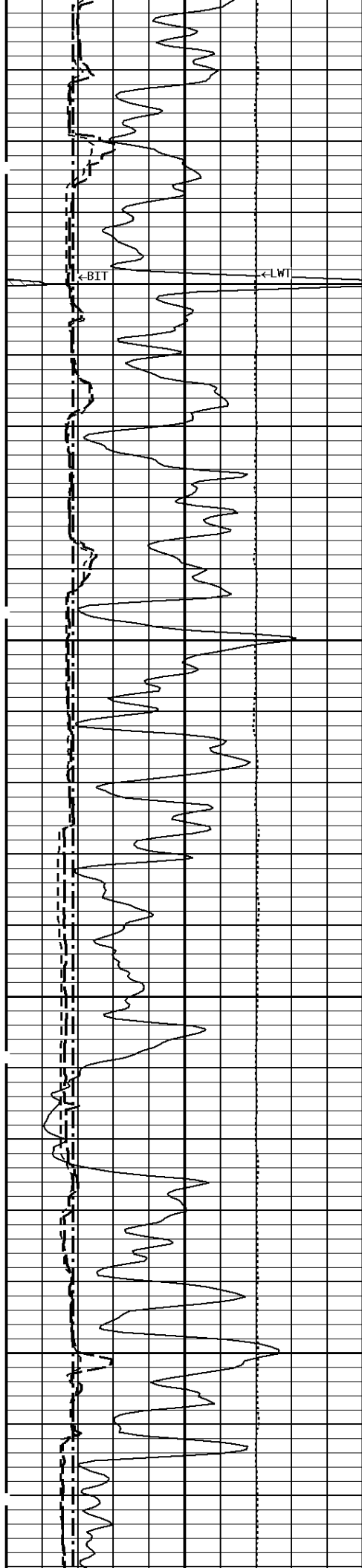


2200

2300

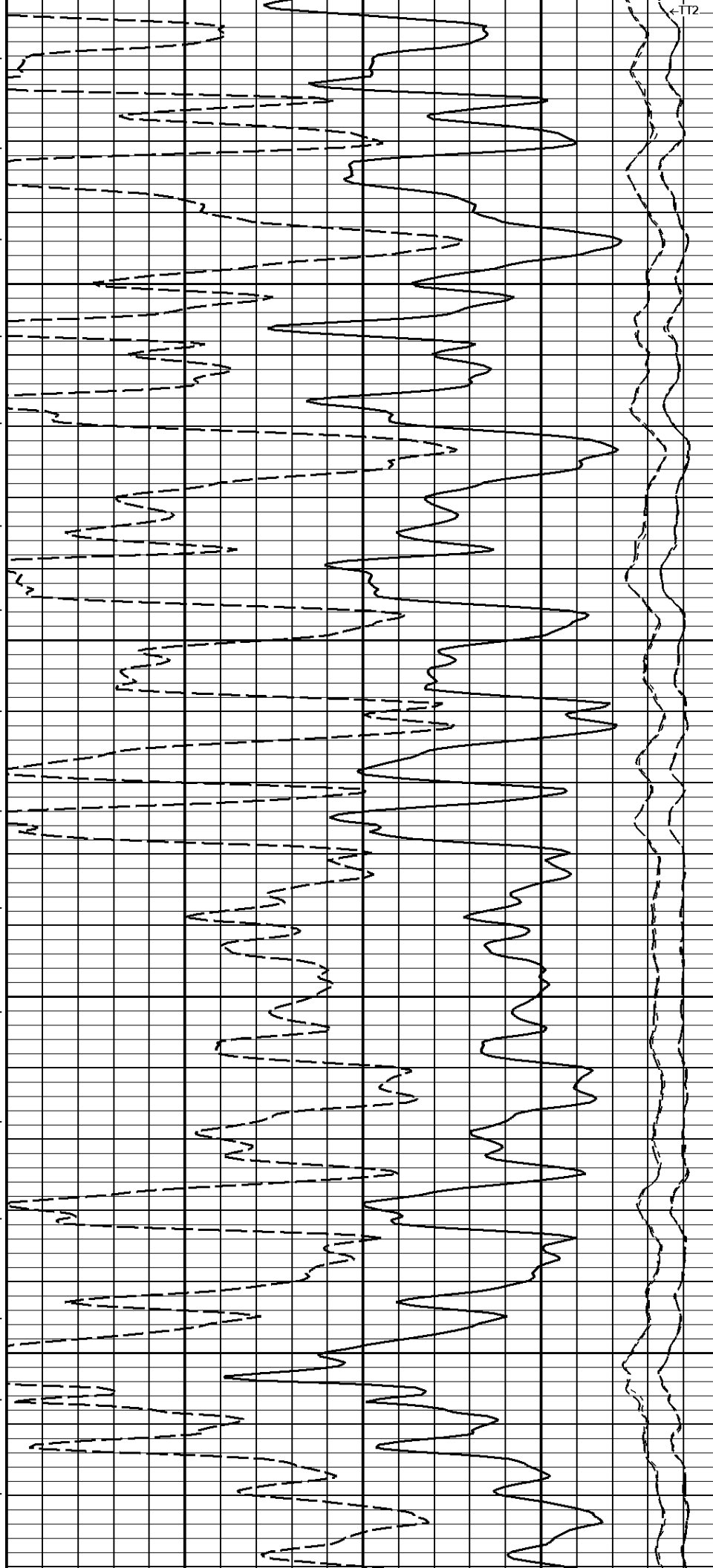
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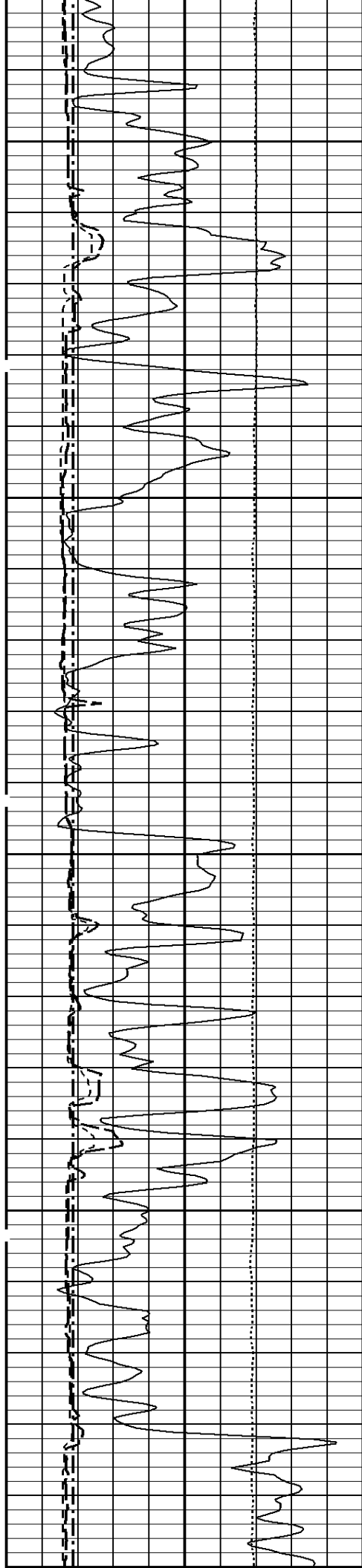




2500

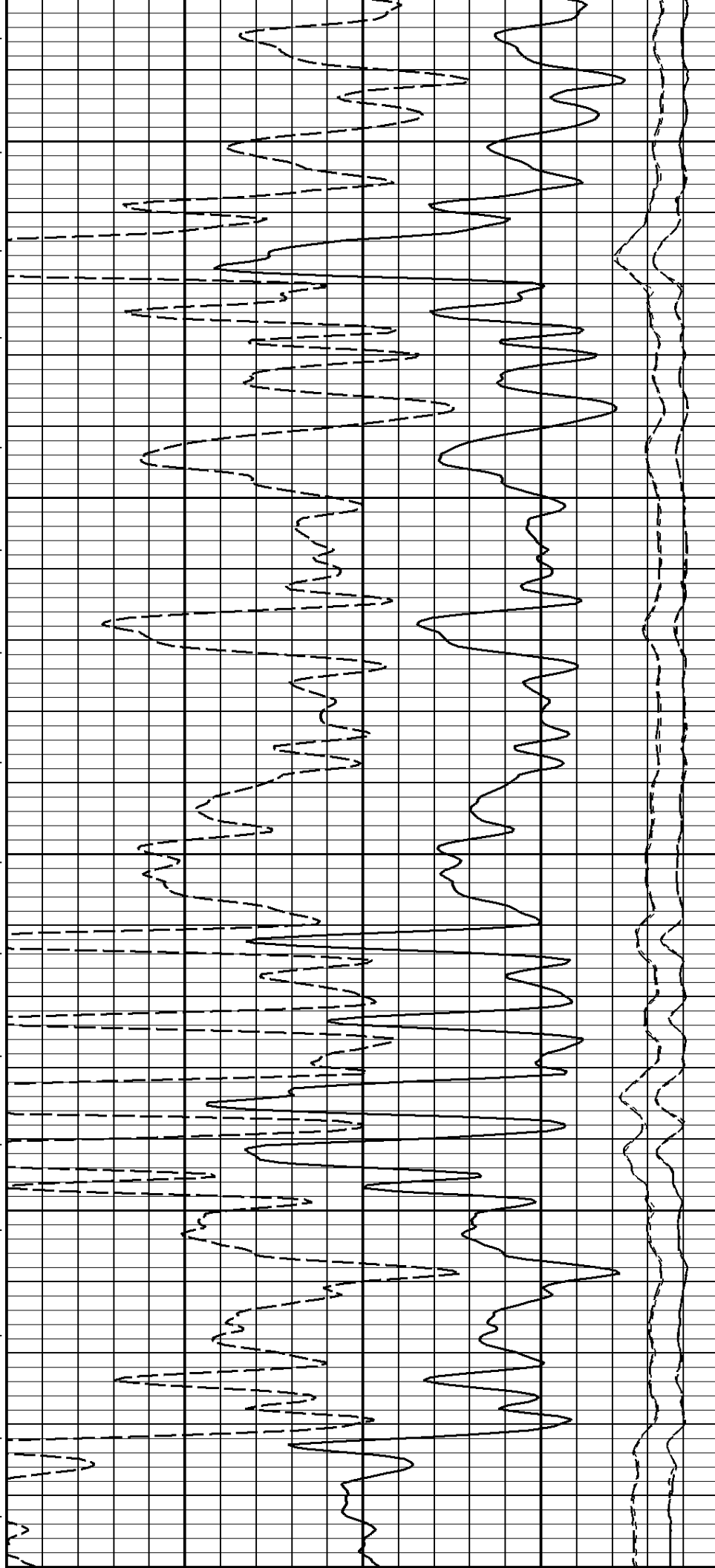
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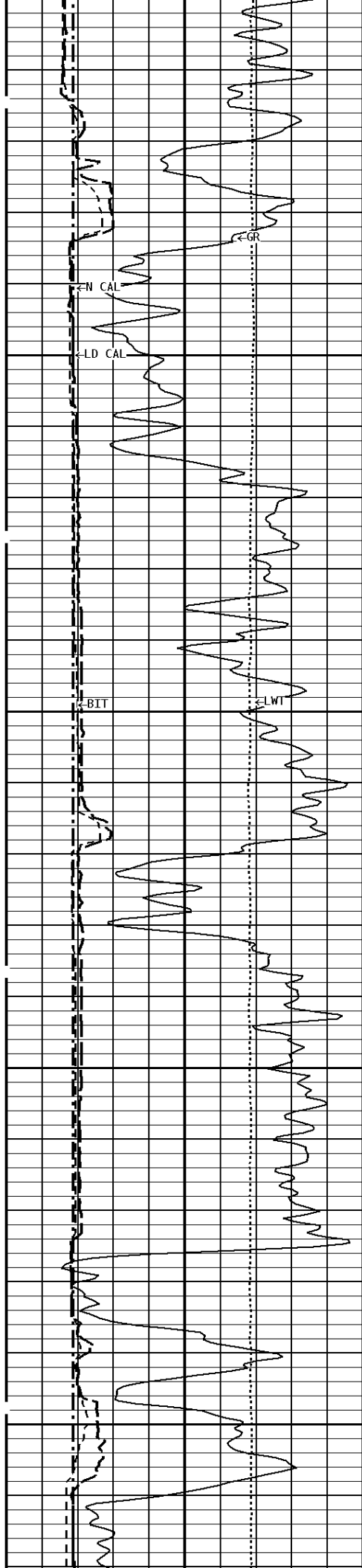




2700

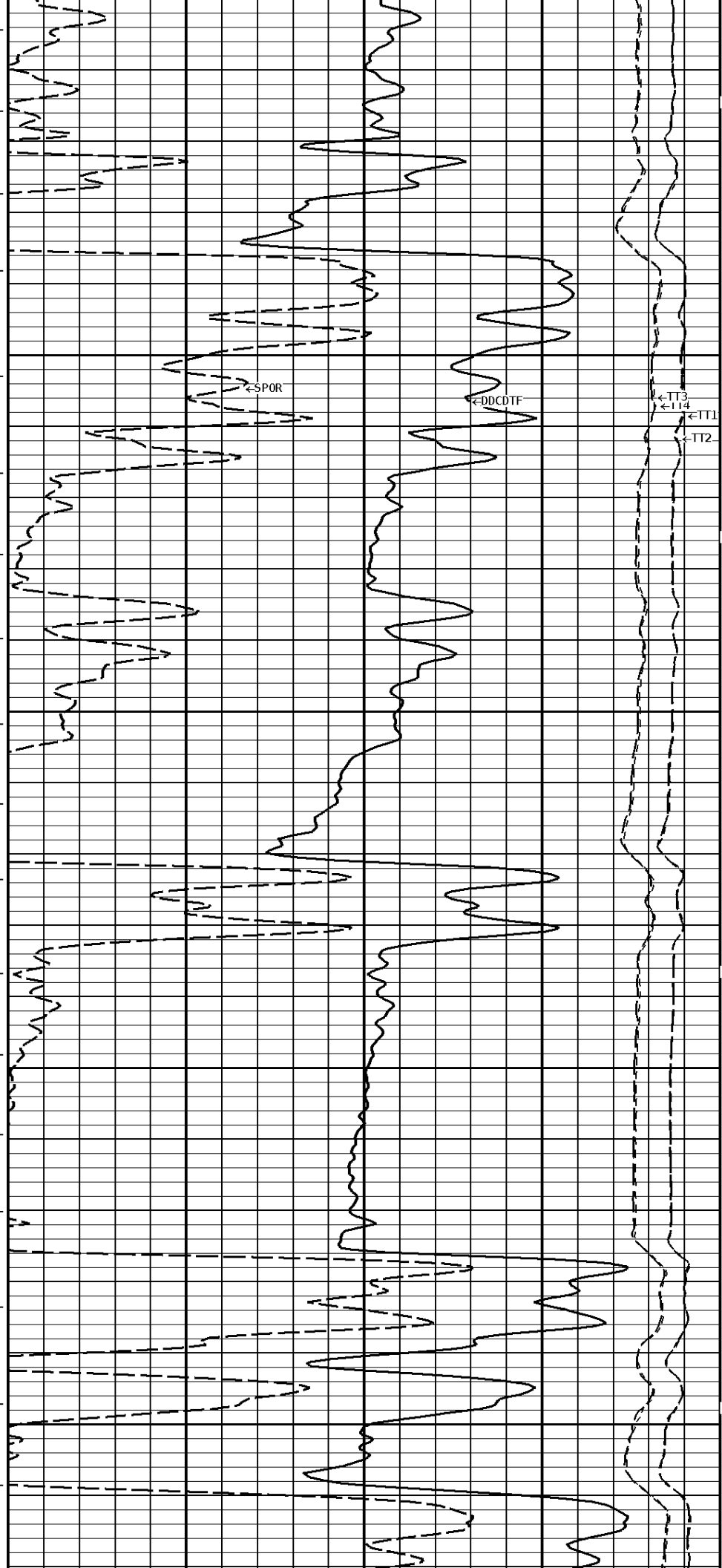
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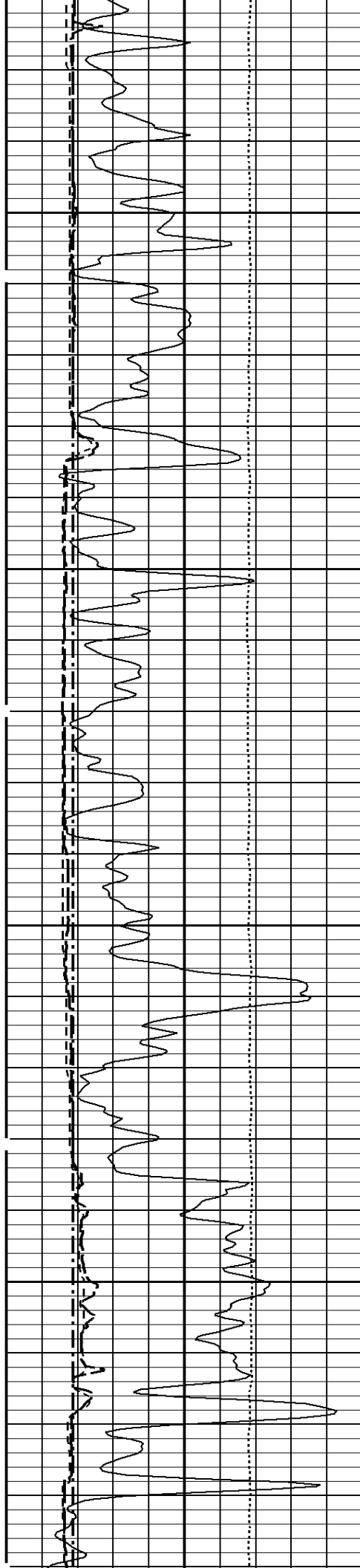




2900

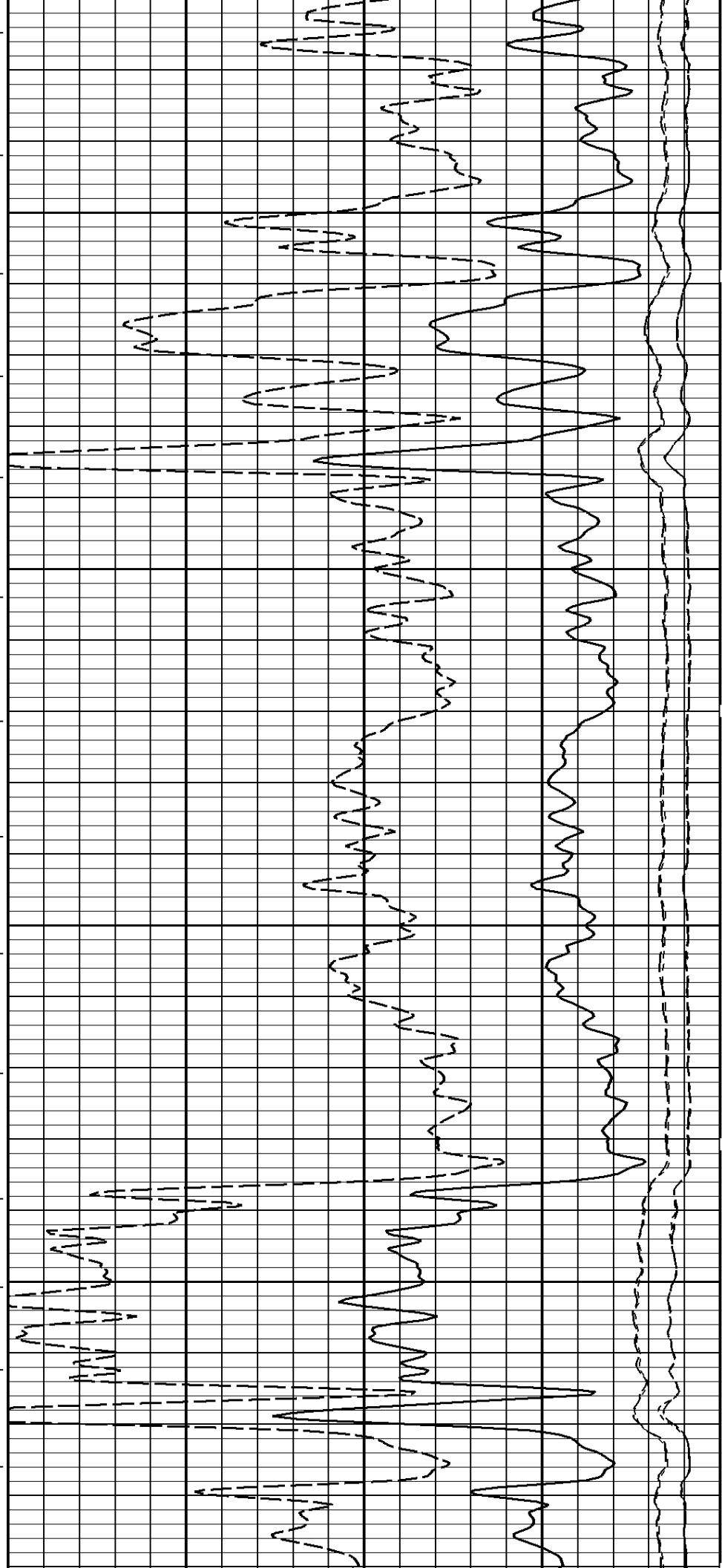
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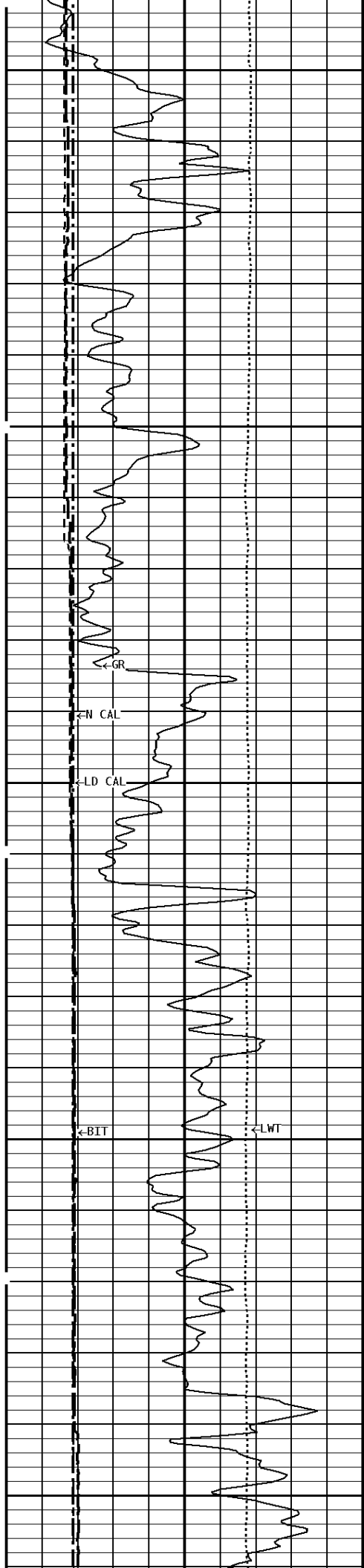




3100

3200

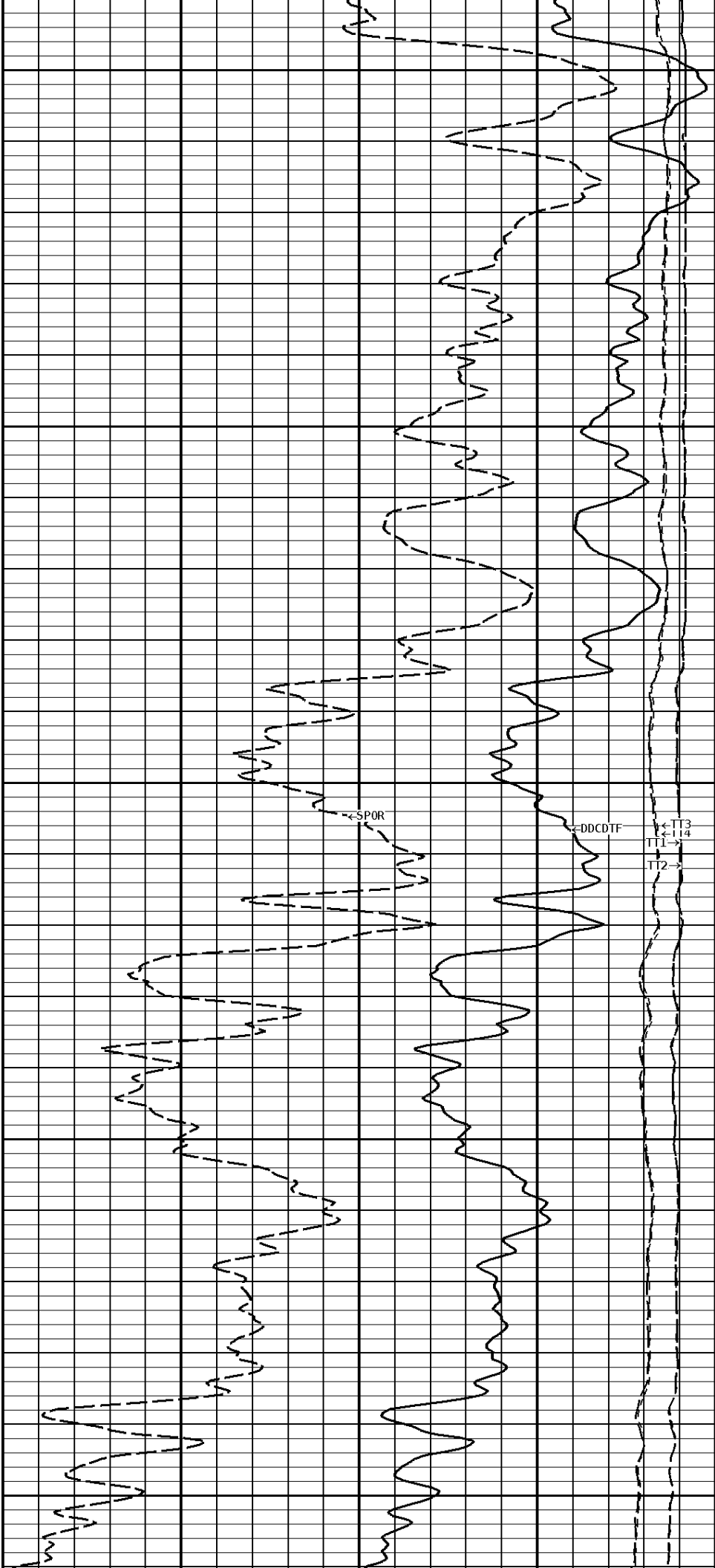


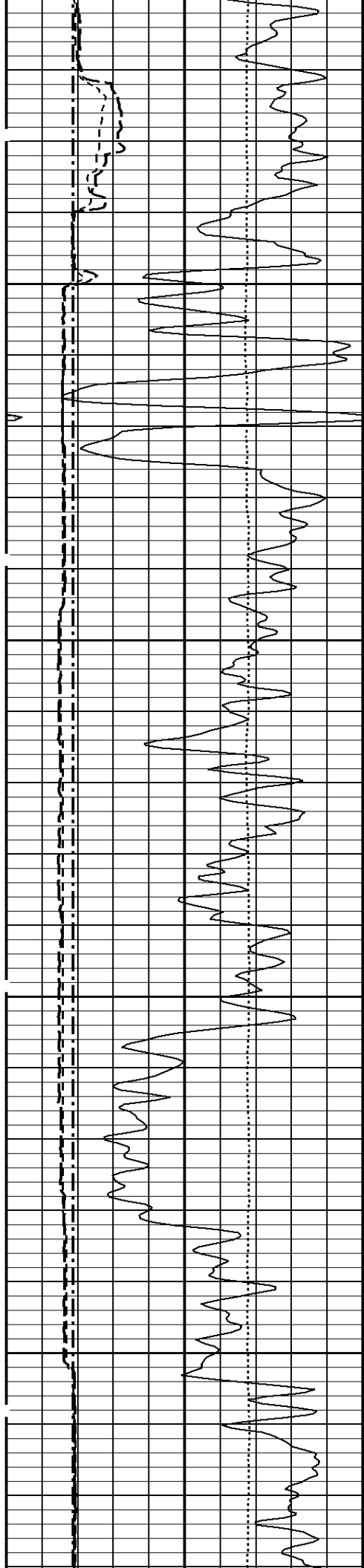


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3400

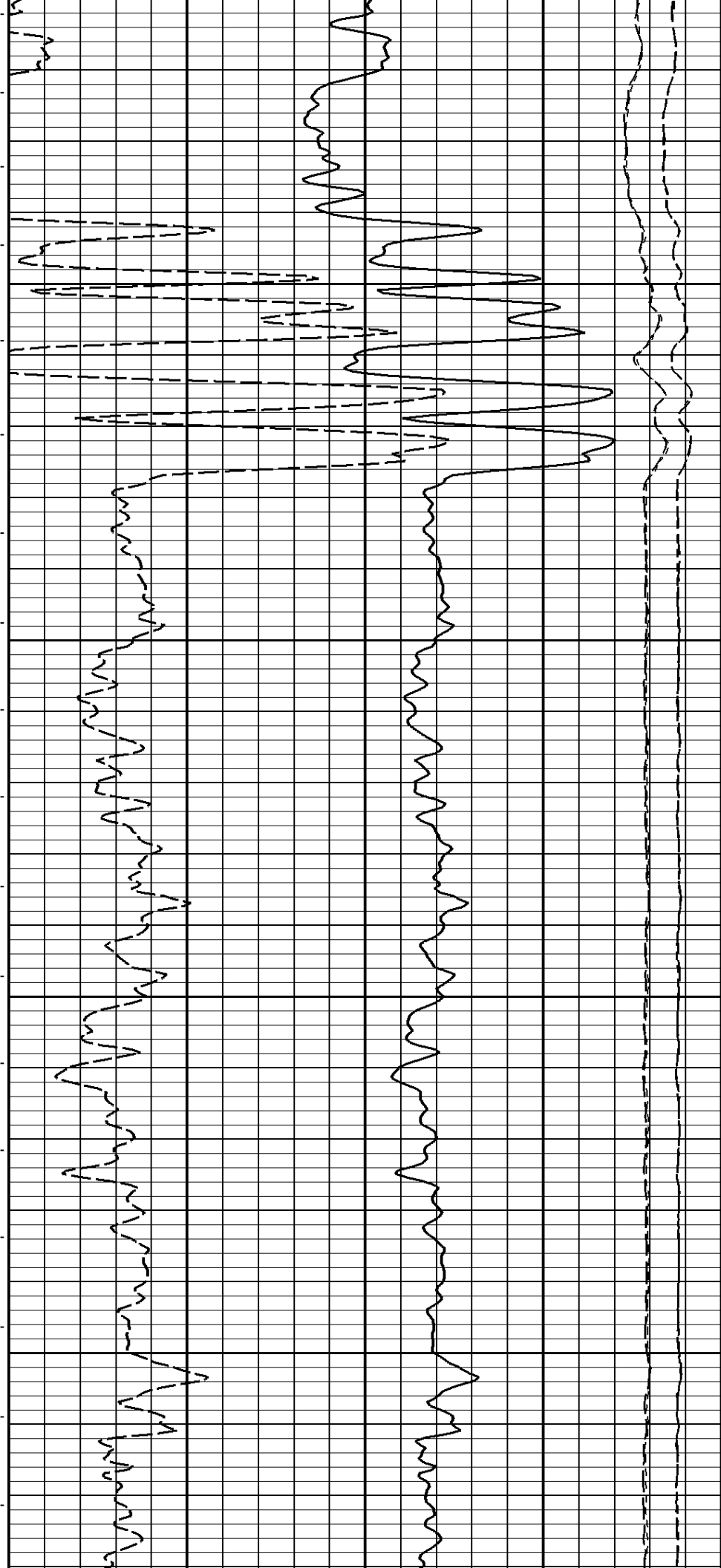
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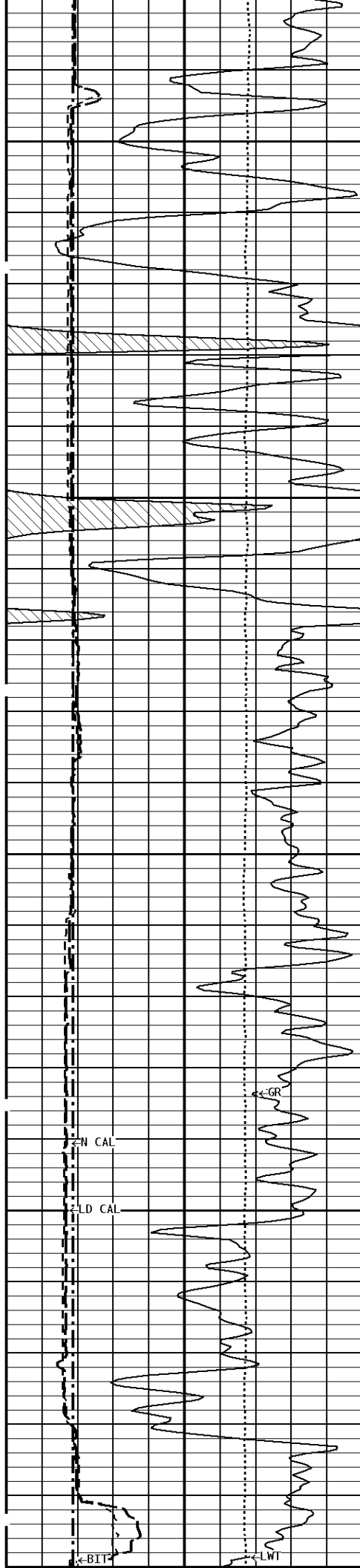




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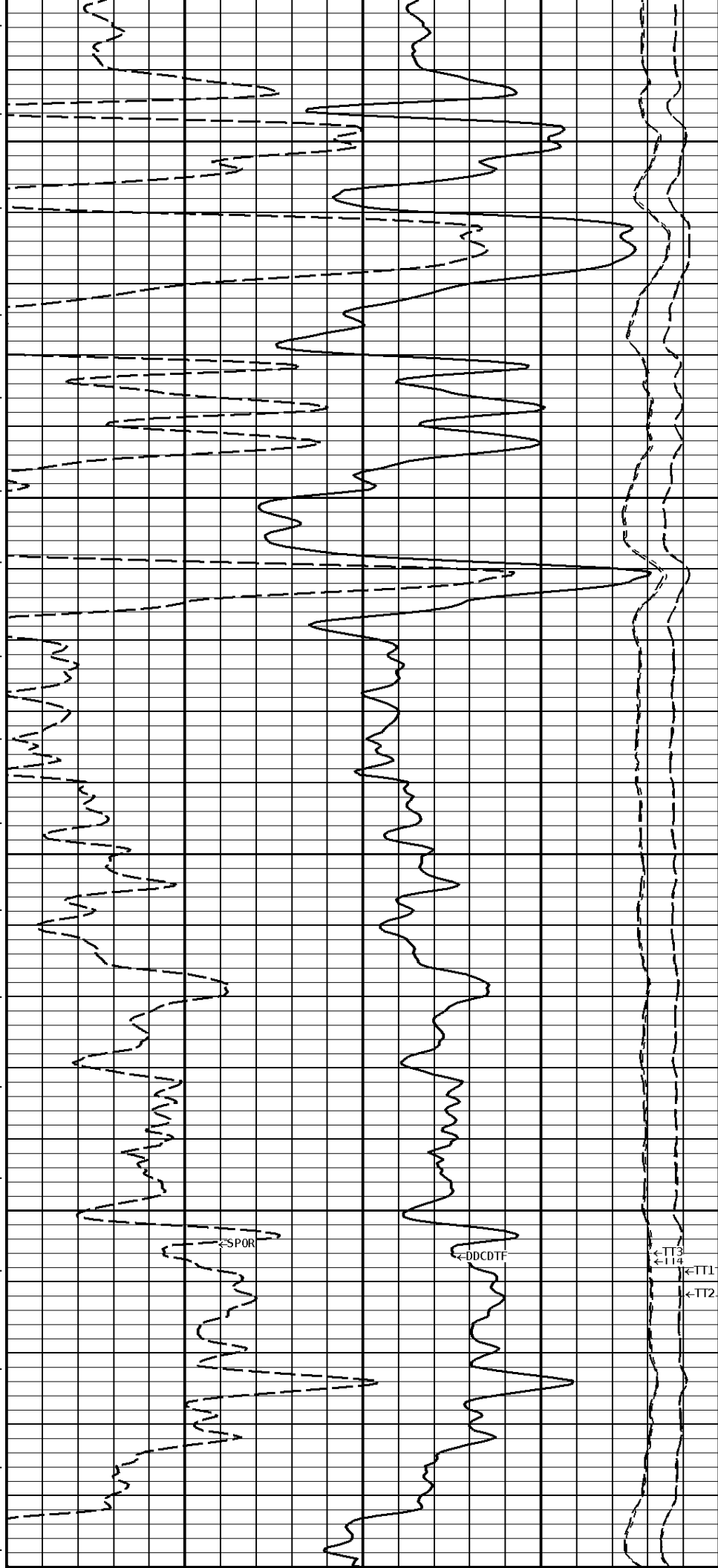
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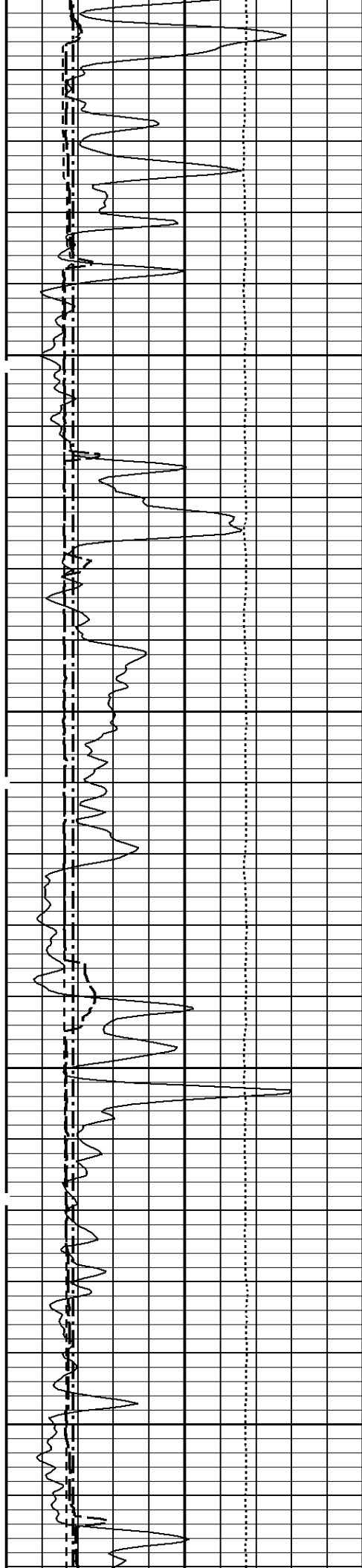




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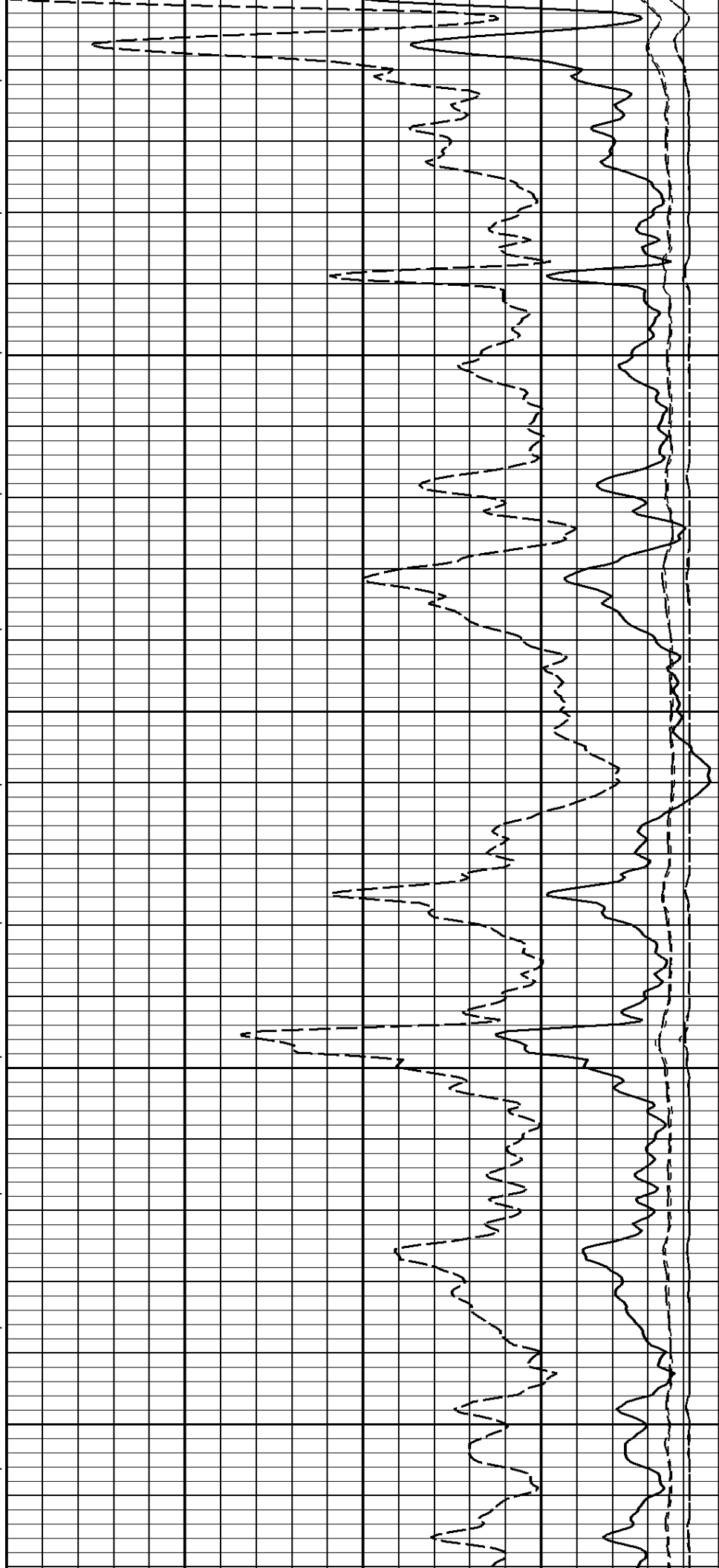
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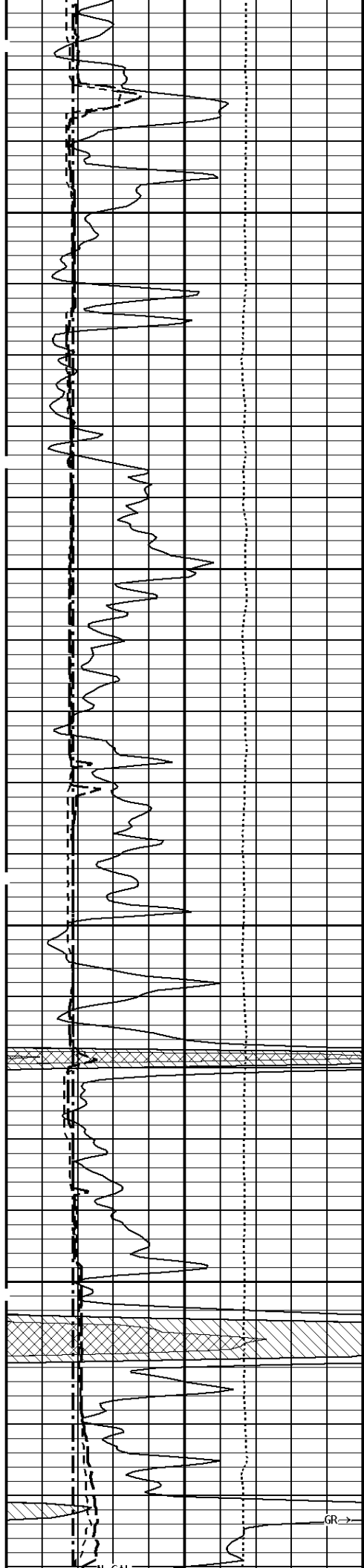




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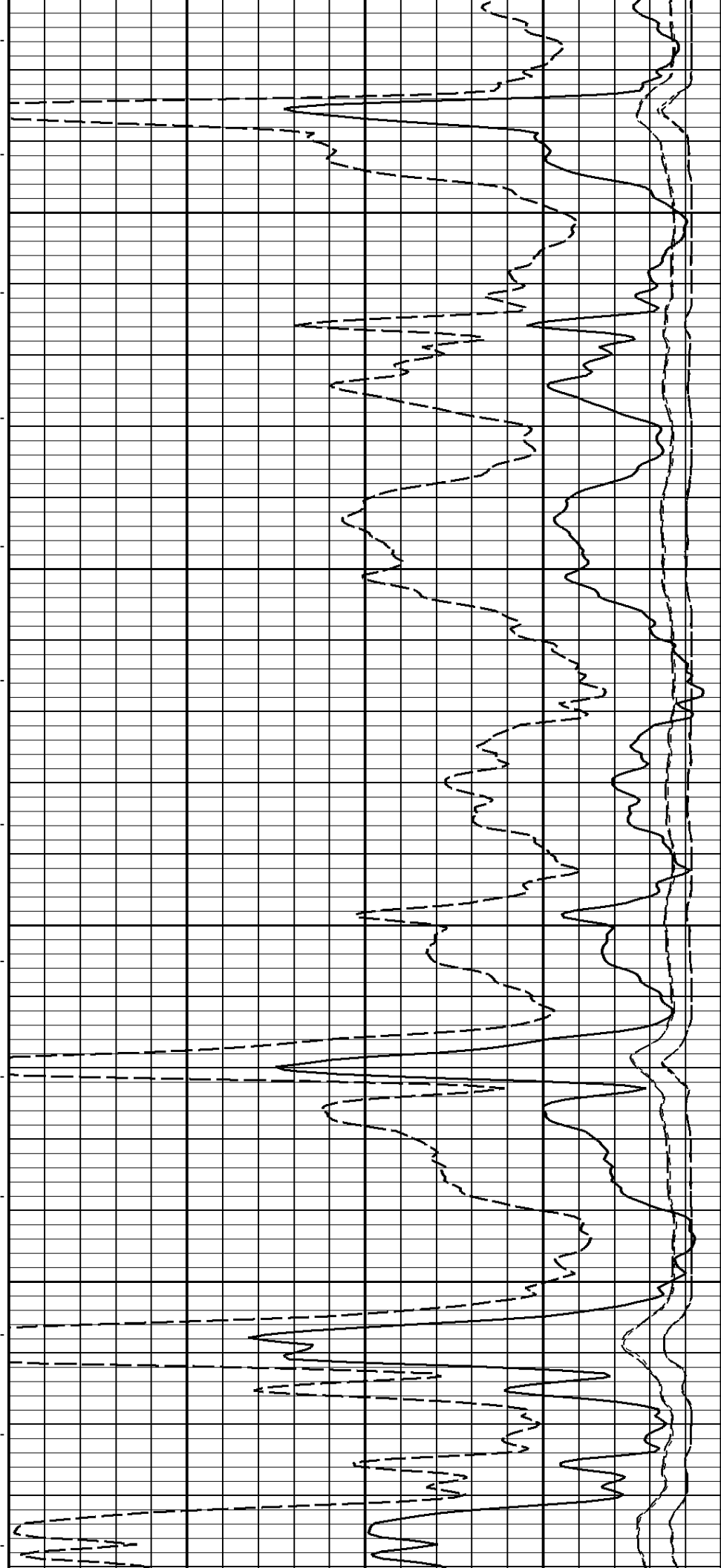
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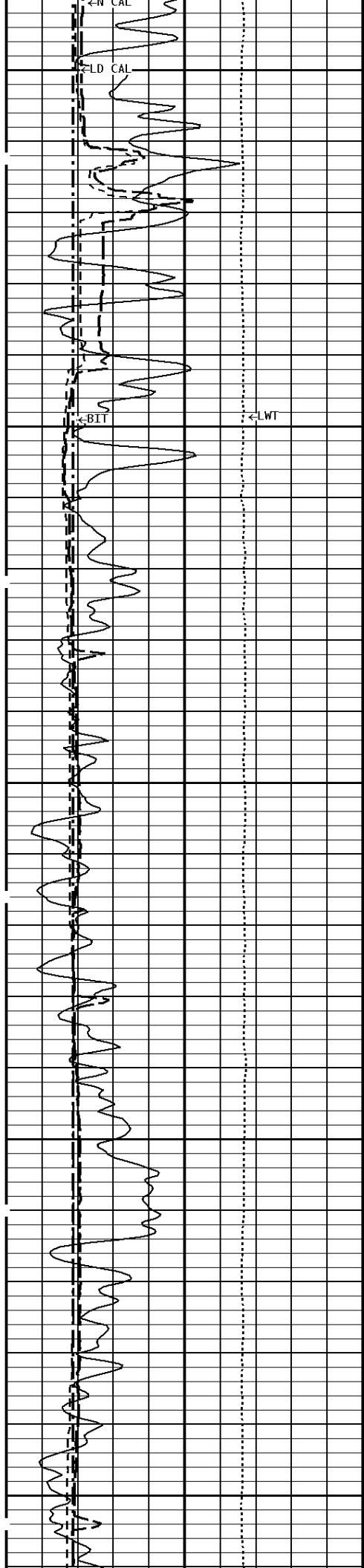




4200

4300

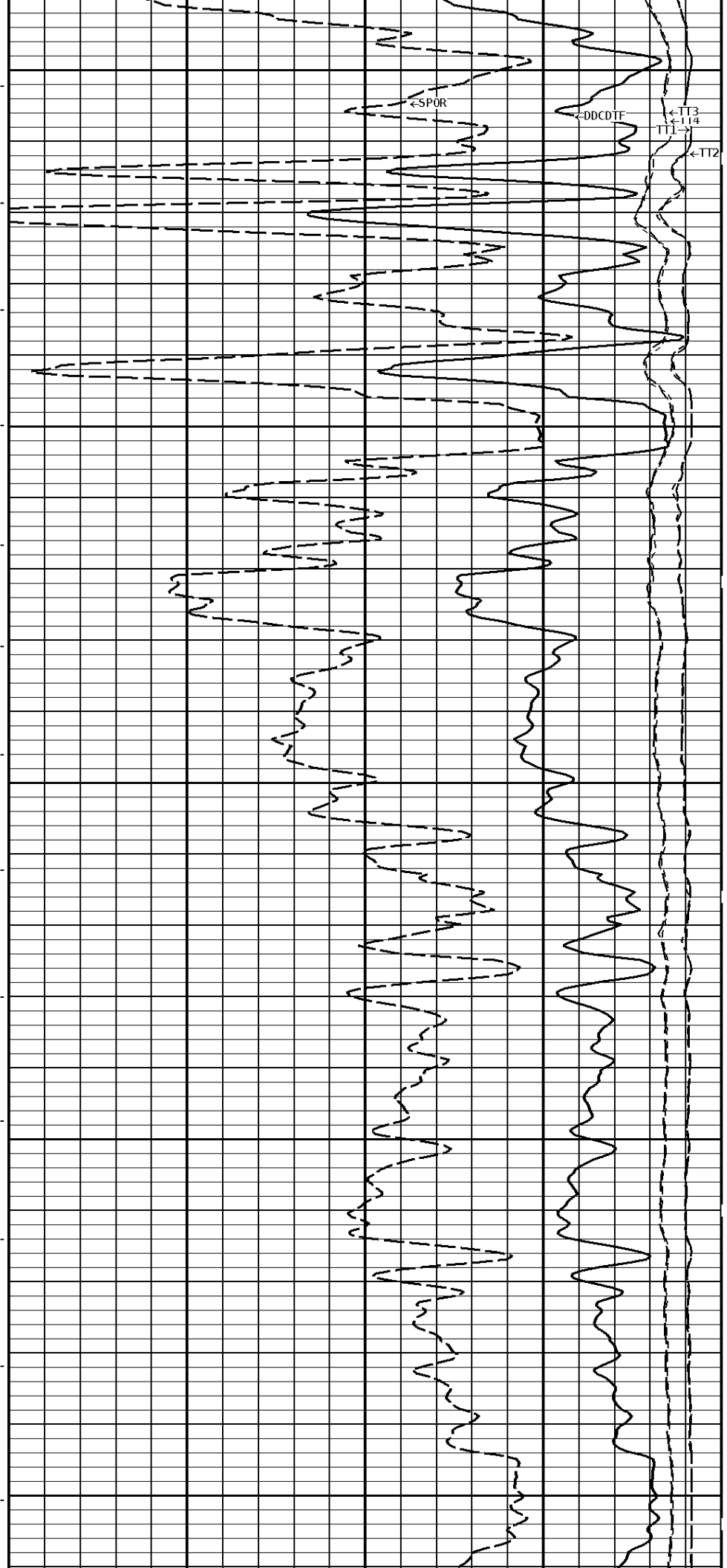


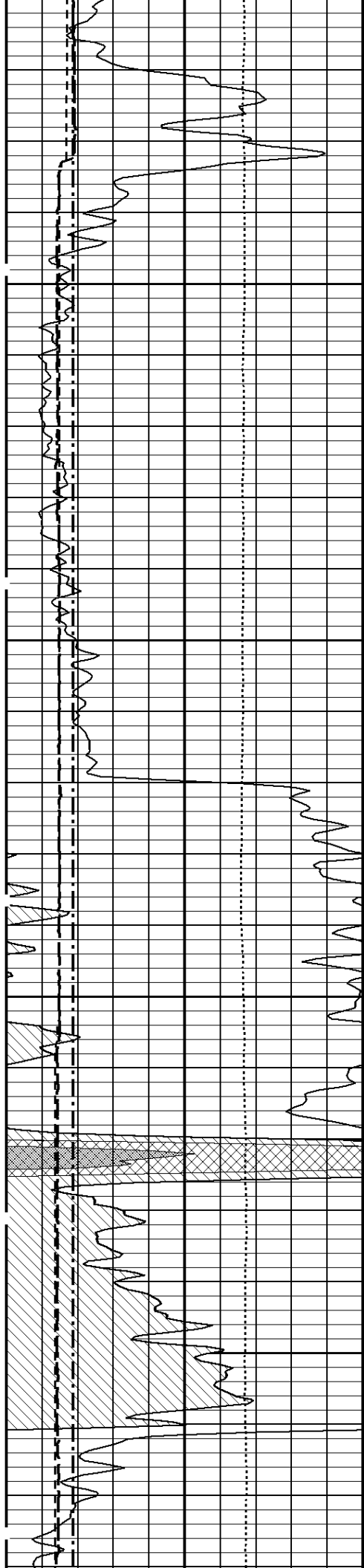


4400

4500

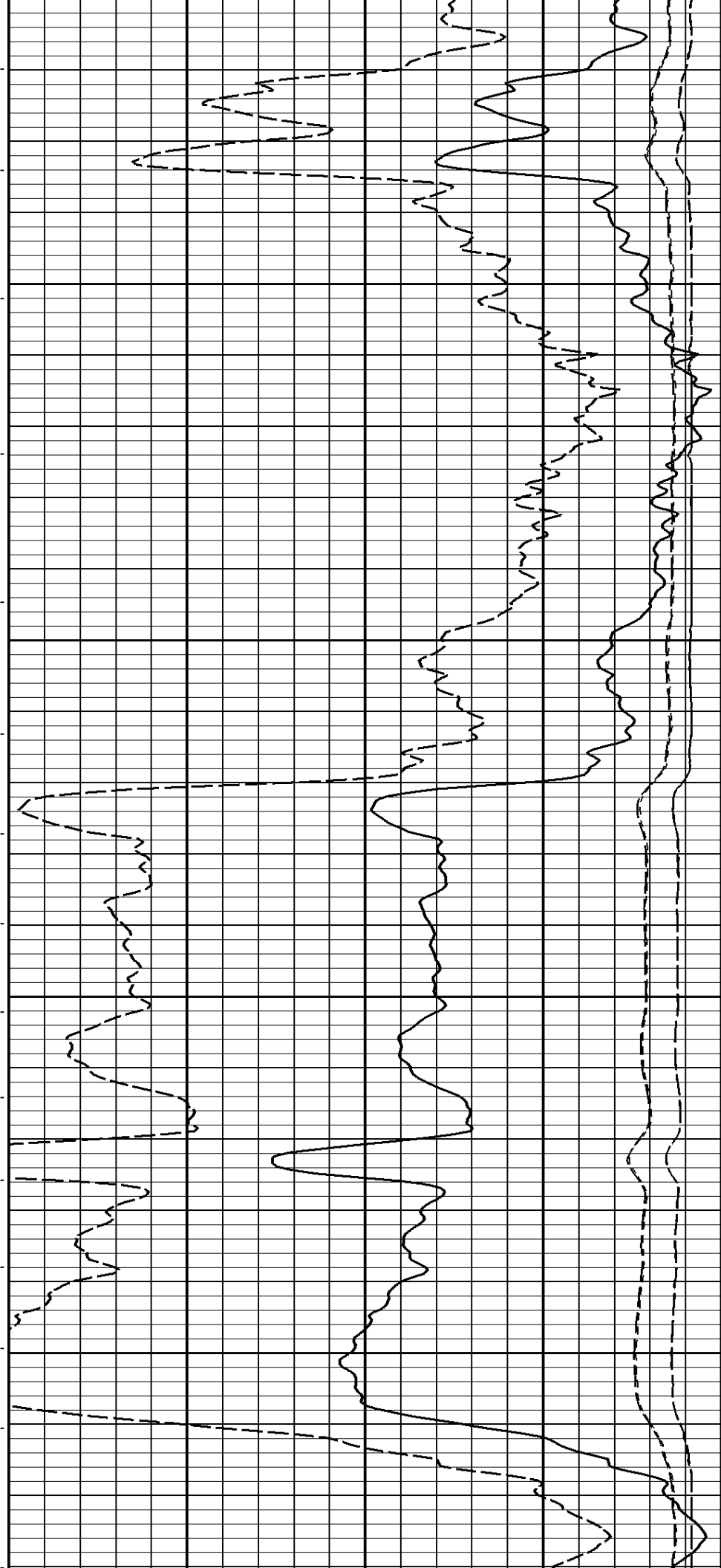
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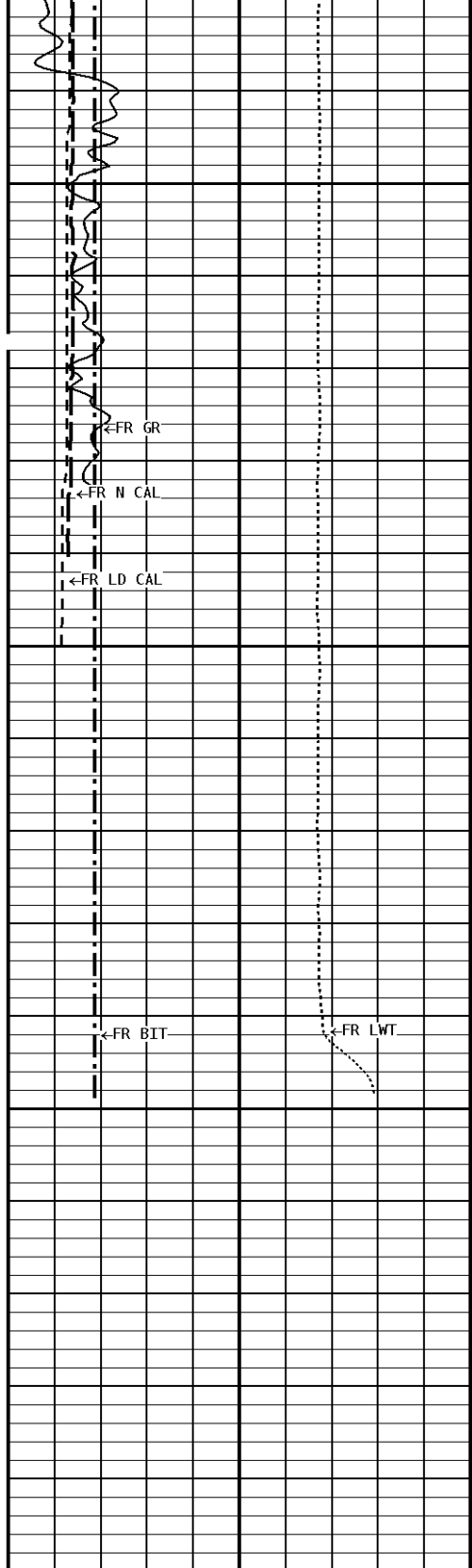




4700

4800

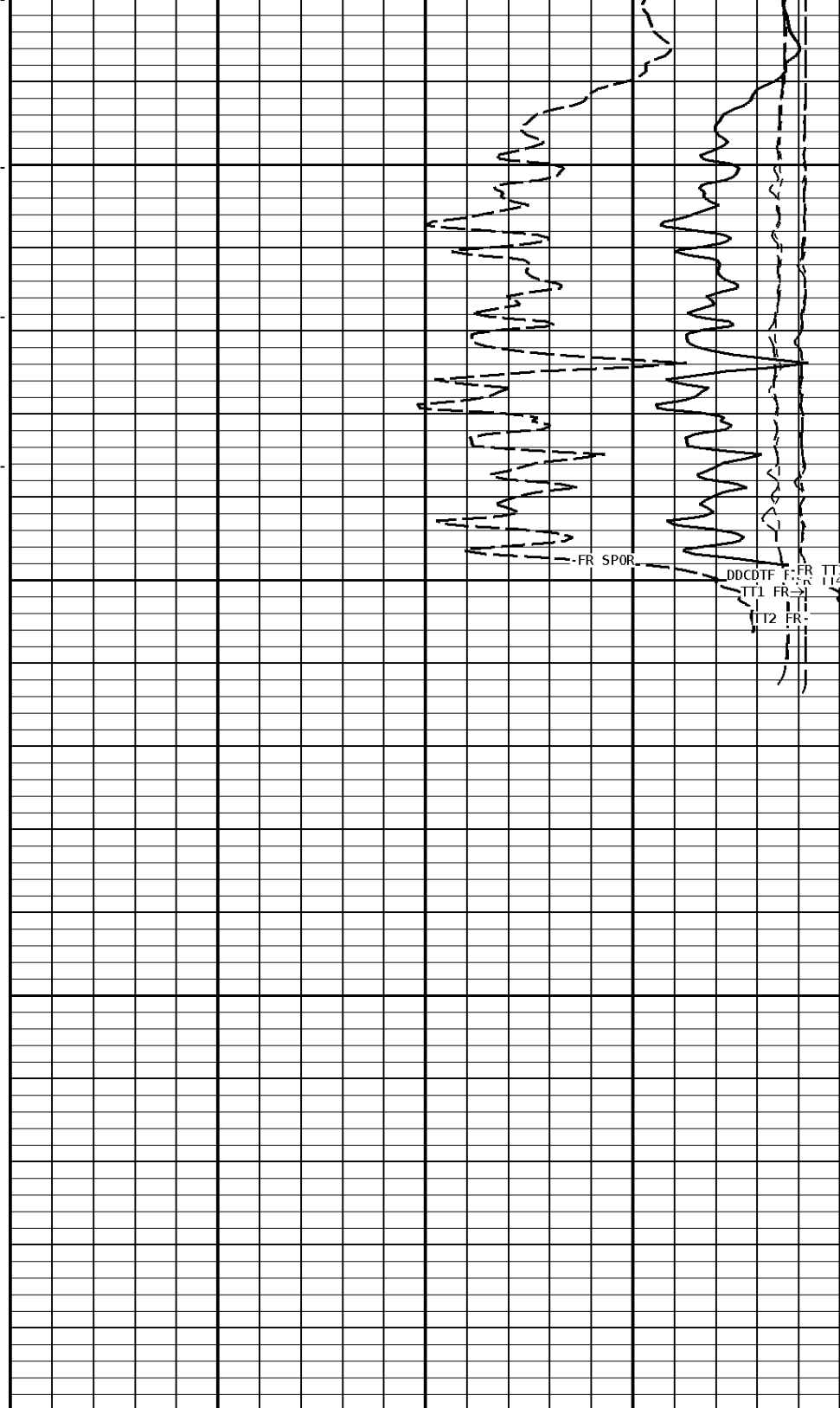




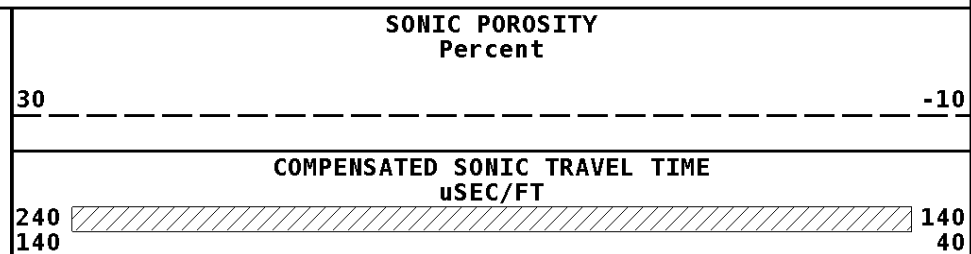
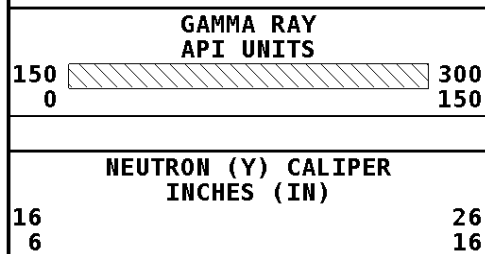
4900

4942

File #4.1.6



1:240 MAIN SECTION



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

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

COMPENSATED SONIC TRAVEL TIME
uSEC/FT

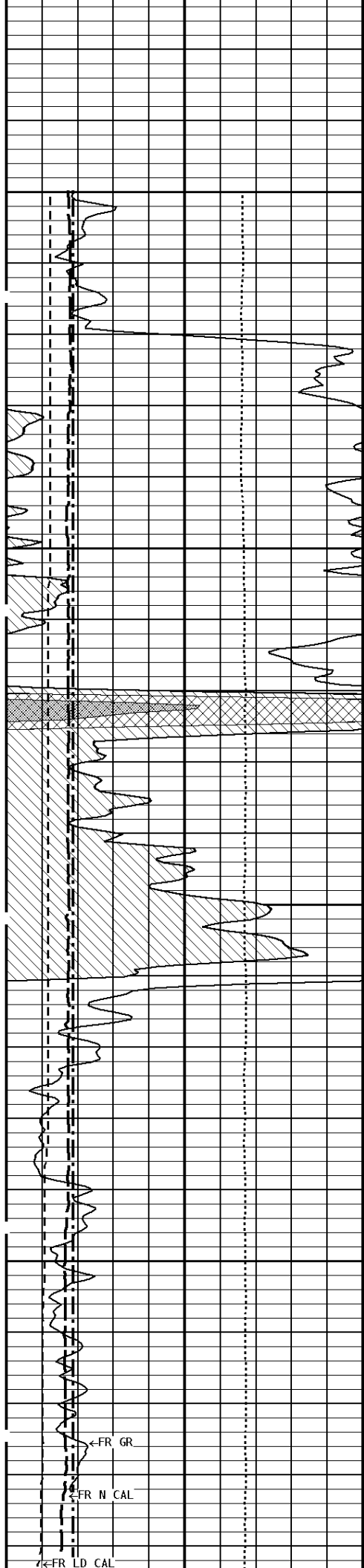
240 140

SONIC POROSITY
Percent

30 -10

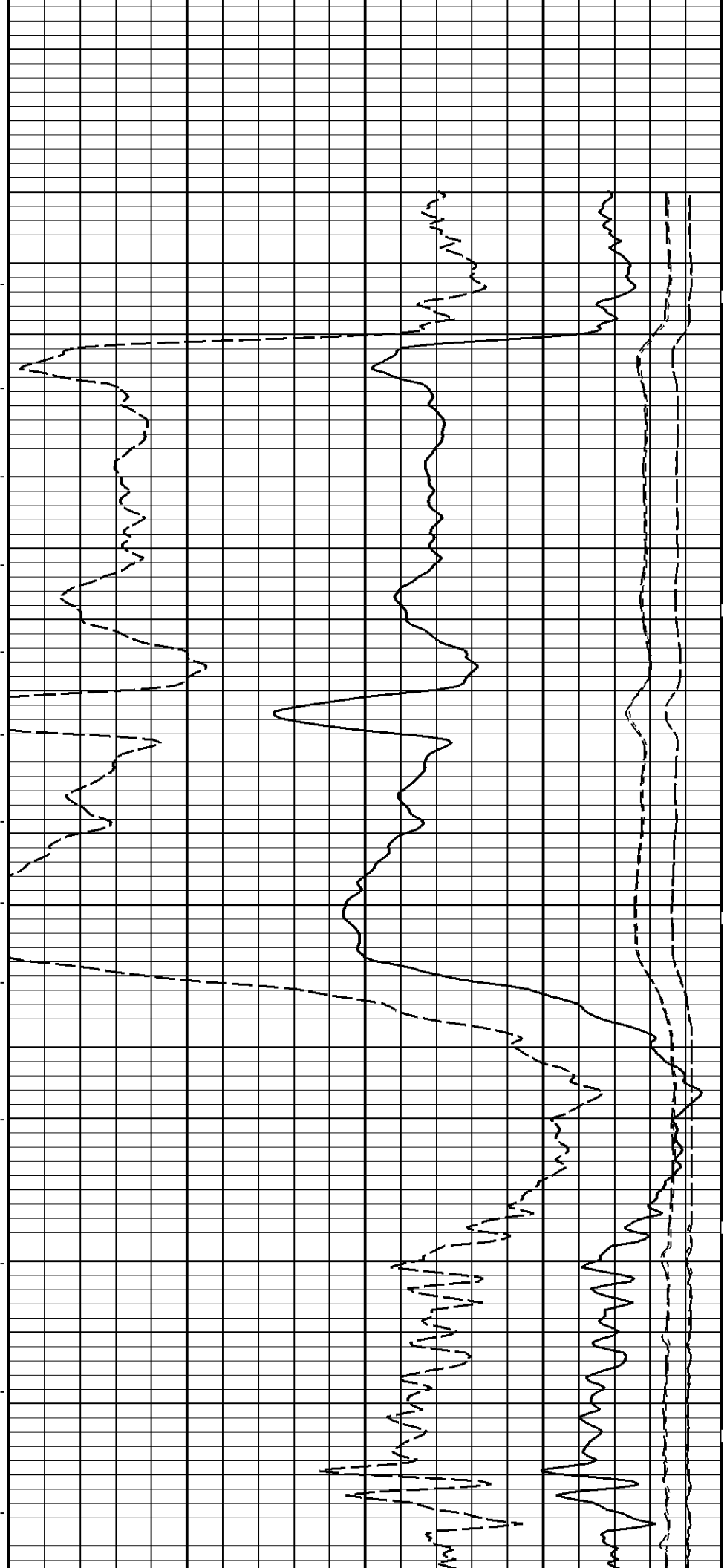
1:240 REPEAT SECTION

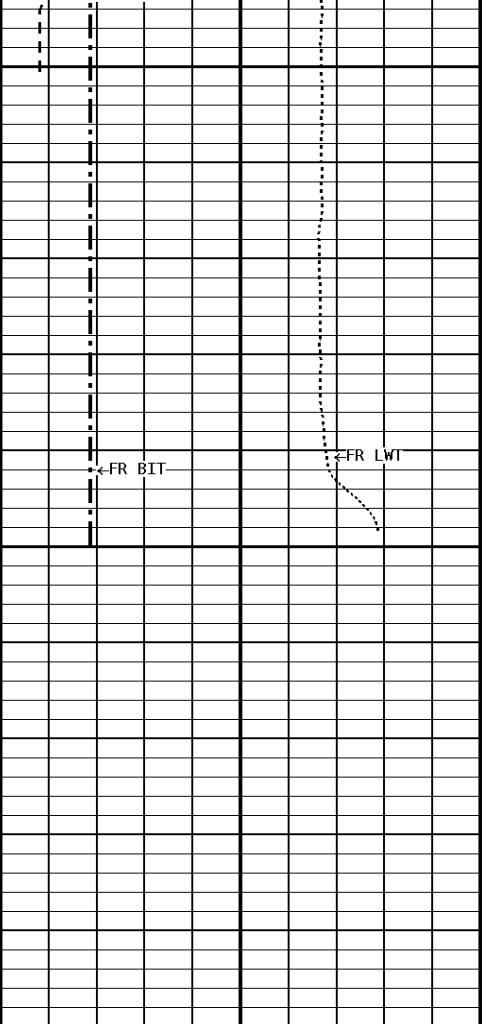
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4700

4800

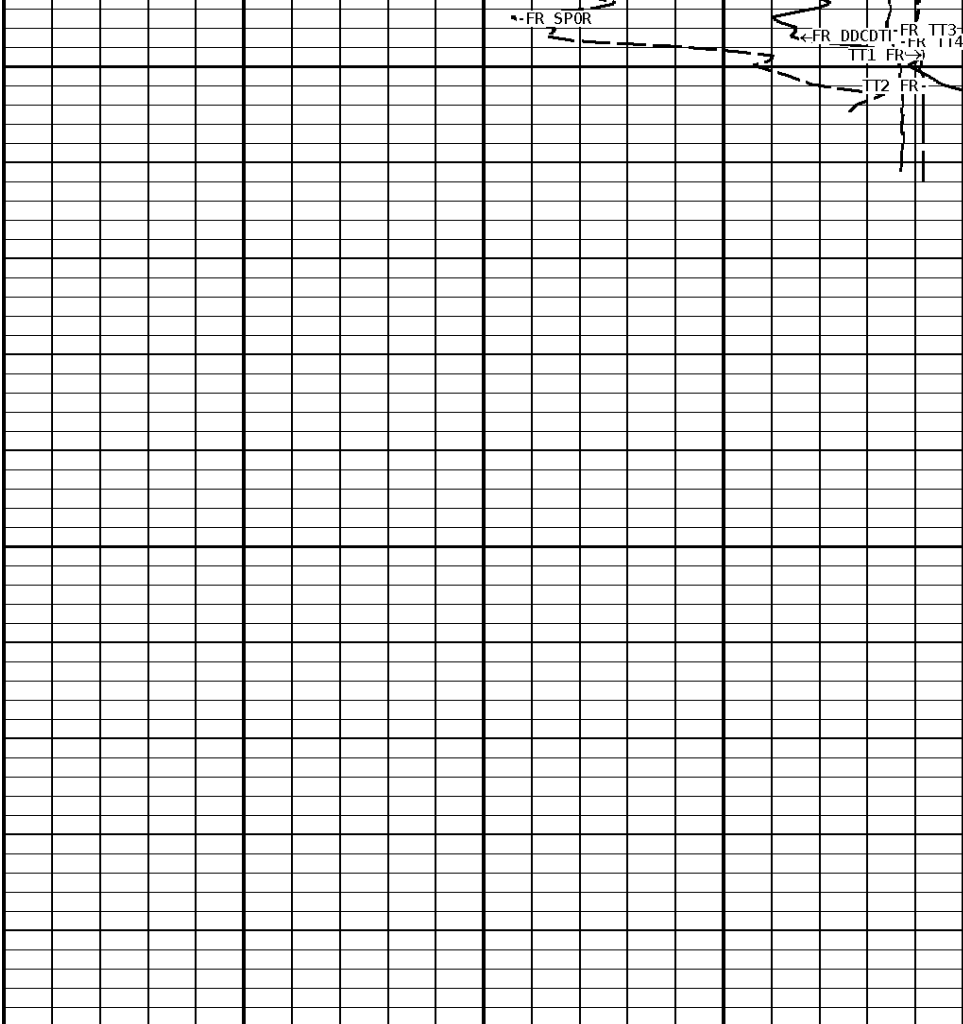




4900

4942

File #4.1.7



1:240 REPEAT SECTION

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 LBS		
10000		0

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

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

*** Calibration Summary ***

Shop Calibration					
GRT-B					
Performed : 16-May-2011			Time : 10:12		
Sensor Suite : GR-GR5			ID : GRT-BA-121		
	Measured	Units	Calibrated	Units	
	Background	Jig	Jig		
GR	51	355	175	GRAPI	
	CPS				
Shop Calibration					
CST-AD					
Performed : 30-DEC-2010			Time : 13:12		
Sensor Suite : SON-ANA			ID : CST-AB-38		
	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		