

Tucker

BOREHOLE COMPENSATED
SONIC LOG
WIRELINE SERVICES

Company KINNEY OIL COMPANY Well HARTTER #1-34 Field County NEMAHA State KANSAS Country USA API No. 15-131-20220-00-00		File No : TUL56736 Company : KINNEY OIL COMPANY Well : HARTTER #1-34 Field : County : NEMAHA State : KANSAS Country : USA API No : 15-131-20220-00-00	
Location : 1051' FSL & 100' FWL NW NW SW SW		LSD : Sect : 34 Twp : 1S Rge : 14E	
Permanent Datum:	GL	Elevations:	Services:
Drilling Measured From:	KB	KB 1340.00	CNT CST
Log Measured From:	KB	DF 1339.00	PIT
Above Permanent Datum:	10.00 Ft	GL 1330.00	MLT
Date	2011-04-06		
Run Number	1		
Depth--Driller	3995.0 Ft		
Depth--Logger	3995.0 Ft		
First Reading	3971.0 Ft		
Last Reading	2700.0 Ft		
Casing--Driller	273.0 Ft		
Casing--Logger	272.0 Ft		
Bit Size	7.875 In		
Casing Size	8.625 In		
Hole Fluid Type	WBM		
Density	9.6 LBS/GAL		
Fluid Loss	5.8 CC		
PH/Viscosity	9.5 36.0 SEC		
Sample Source	MEASURED		
RMF@Measured Temp.	2.500 @ 76 F		
RMF@Measured Temp	2.000 @ 76 F		
RMC@Measured Temp.	3.000 @ 76 F		
Source RMF/RMC	CALCULATED/CALCULATED		
RM@BHT	1.742 @ 112 F		
Time Circulation Stopped	2011-04-06 14:02		
Max Recorded Temp.	112 F		
Equipment/Base	TRK 127 TULSA		
Recorded By	B. BAILEY		
Witnessed By	K. BAILEY		

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	3995.0	8.625	32.00	273.0

Run Number	1		
Date	2011-04-06		
Date/Time On Bottom	2011-04-06 19:00		
Depth to Fluid	0.0 Ft		
Salinity	0.000 PPM		
RMF@BHT	1.394 @ 112 F		
RMC@BHT	2.091 @ 112 F		

Run Number 1

Comments

ALL PRESENTATIONS AS PER CUSTOMER REQUEST

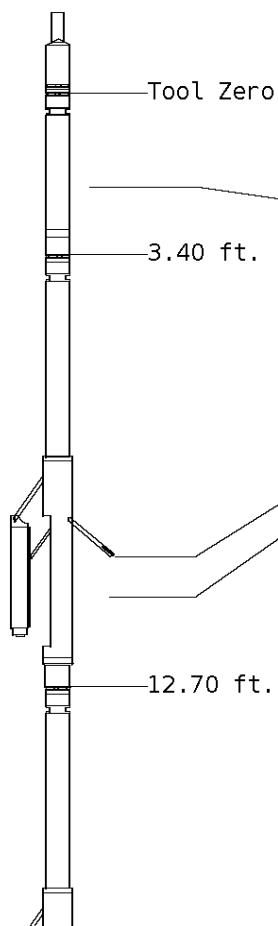
ALL PRESENTATIONS AS PER CUSTOMER REQUEST
 GRT, CNT, LDT, MLT, CST AND PIT RUN IN COMBINATION.
 CALIPERS ORIENTED ON X-Y AXIS.
 2.71 G/CC USED TO CALCULATED POROSITY.
 ANNULAR HOLE VOLUME CALCULATED UISING 5.500" PRODUCTION CASING.
 DETAIL PRESENTED FROM TD TO 2700' AS PER CUSTOMER REQUEST
 GRT, PIT AND CST TO SCG AS PER CUSTOMER REQUEST.

GRT: GRP.
 CNT: PHIN, CLCNIN
 LDT: PORL, LCORN, PECLN, LDENN, PORLLS, CLLDIN.
 MLT: NOR_R, INV_R, MSCLPIN.
 CST: PORS, ITT, TT1, TT3, DDCDTF
 PIT: ILD, ILM, SPU, SFLAEC

OPERATORS:
 R.AUSTIN
 M.BURKE
 J.THOMAS

Tool String Schematic

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



Tool: GRT-B **Length:** 3.40 ft. **O.D.** 3.60 in.
 Gamma Ray Controller

Sonde ID :GRT-BA-14

Measure Point	Tool Offset	Stack Offset	Bottom Offset
GRP	2.00	2.00	64.95

Tool: CNT-AA **Length:** 9.30 ft. **O.D.** 4.36 in.
 Compensated Neutron A Pad on NDT-A

Sonde ID :NDT-AB-400

Source ID :N-1044

Pad ID :CNP-AA-116

Measure Point	Tool Offset	Stack Offset	Bottom Offset
CLCN	6.00	9.40	57.55
PHIN	6.80	10.20	56.75

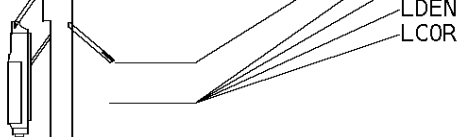
Tool: LDT-DA **Length:** 9.30 ft. **O.D.** 4.80 in.
 Litho Density D Pad on NDT-A

Sonde ID :PDT-GA-464

Source ID :CSV-587

Pad ID :LDP-DA-01

Measure Point	Tool Offset	Stack Offset	Bottom Offset
CLLD	6.00	18.70	48.25
PEL	7.00	19.70	47.25
PES	7.40	20.10	46.85

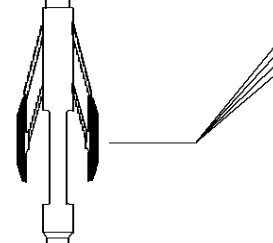


7.20	19.90	47.05
7.20	19.90	47.05

22.00 ft.

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

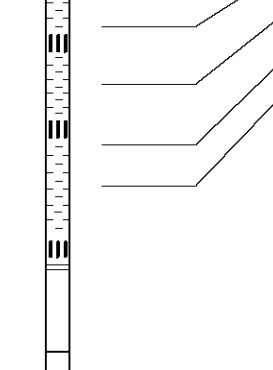
Measure Point	Tool Offset	Stack Offset	Bottom Offset
MSFL	7.60	29.60	37.35
MSCLP	7.60	29.60	37.35
INV	7.60	29.60	37.35
NOR	7.60	29.60	37.35



31.66 ft.

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



45.46 ft.

Tool: PIT-CA **Length:** 21.49 ft. **O.D.** 3.62 in.
 Phased Dual Induction w/ RM & D
Sonde ID :PIT-CA-074

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

LWT 66.95 ft.

Well File: KINNEY OIL COMPANY HARTTER-1-34 APR6 QUINT

Scale: 1:240

Segment: V1.D2.S8 Reprocess MAIN

Acquired: 2011-04/06 19:25 3.2.0-9453

Reference: 0

Processed: 2011-04/06 20:53 3.2.0-9453

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

TT3
uSEC

950 50

TT1
uSEC

950 50

COMPENSATED SONIC TRAVEL TIME
uSEC/FT

240 140 140 40

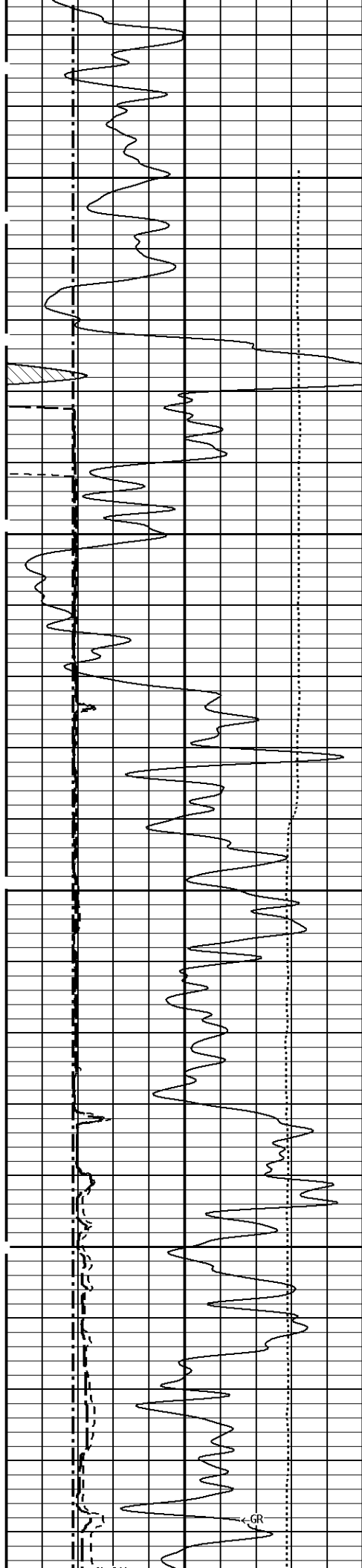
SONIC POROSITY
Percent

30 -10

1:240 MAIN SECTION

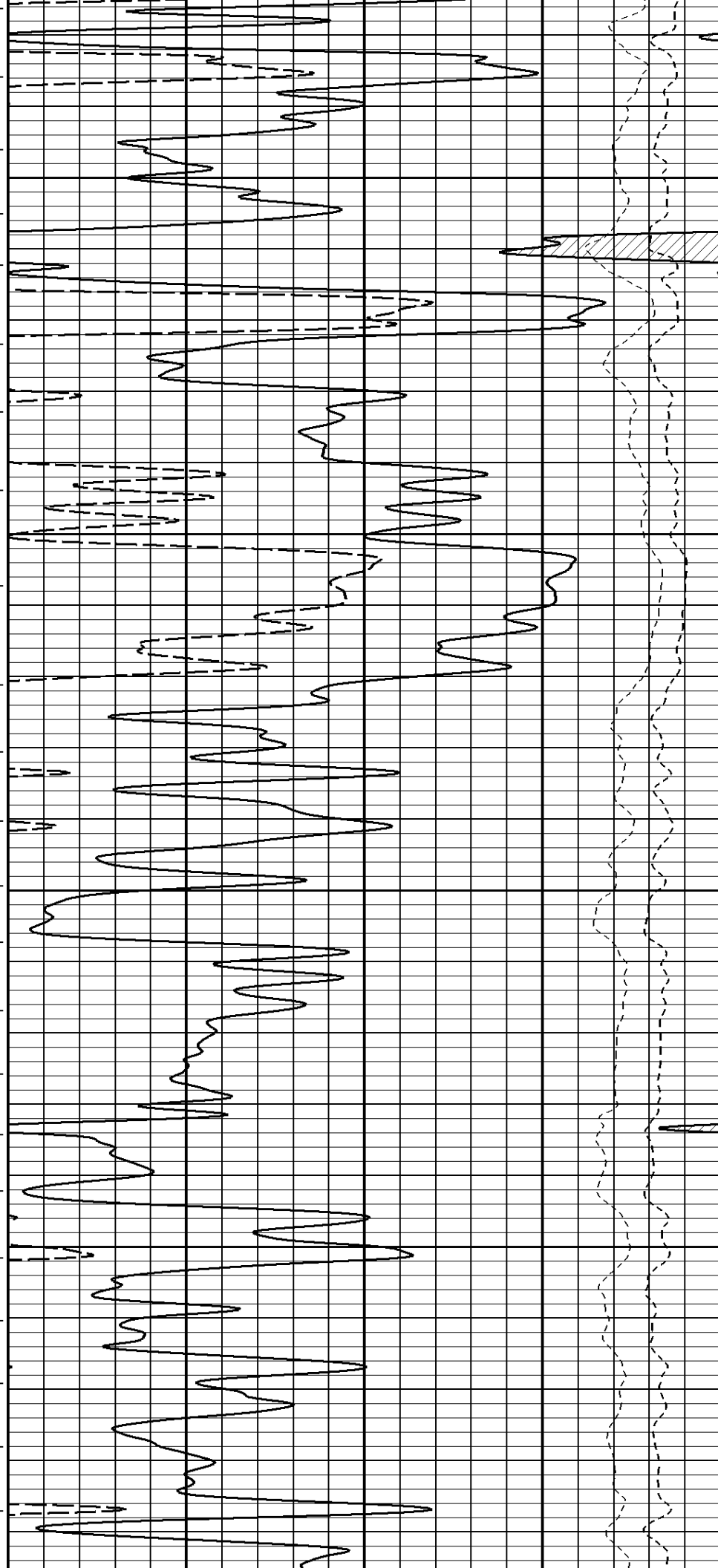
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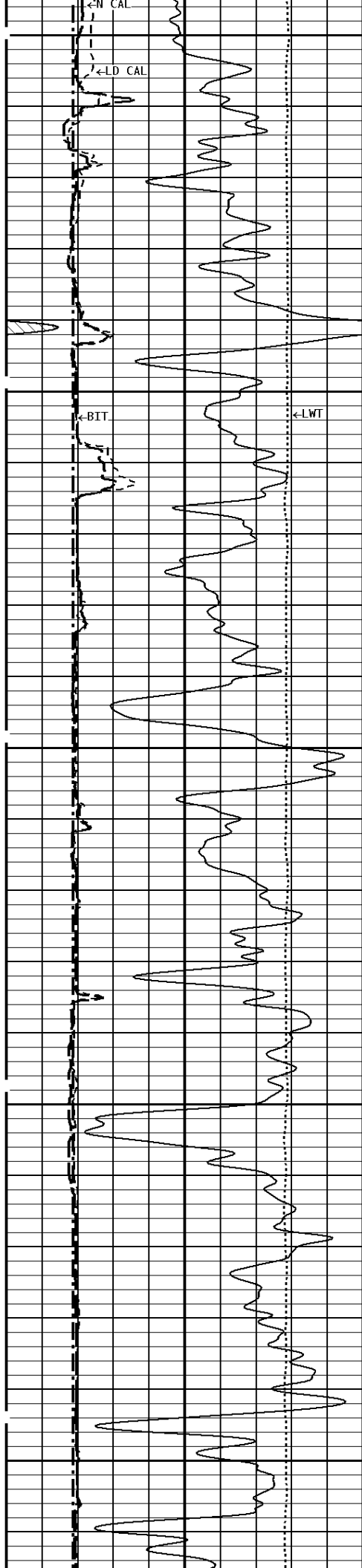
200



300

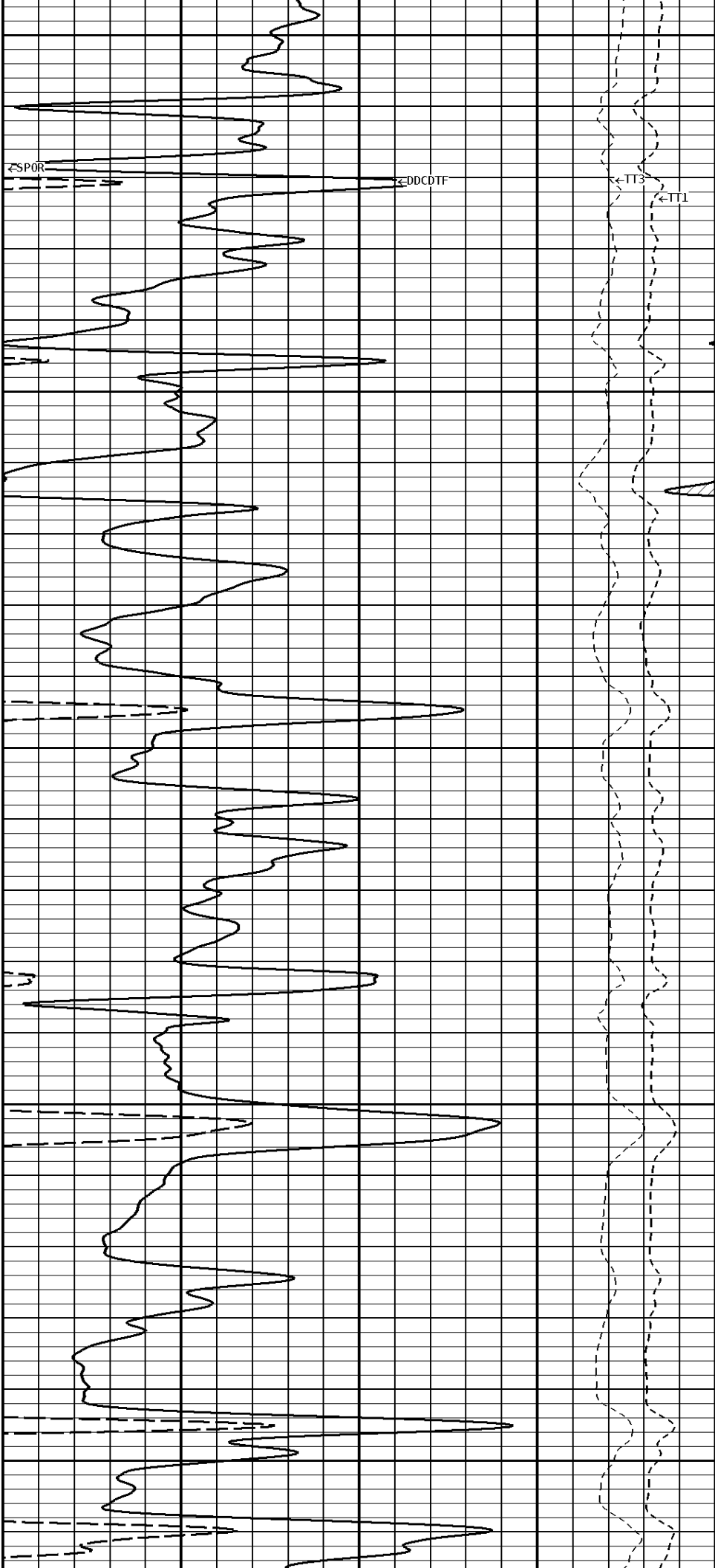
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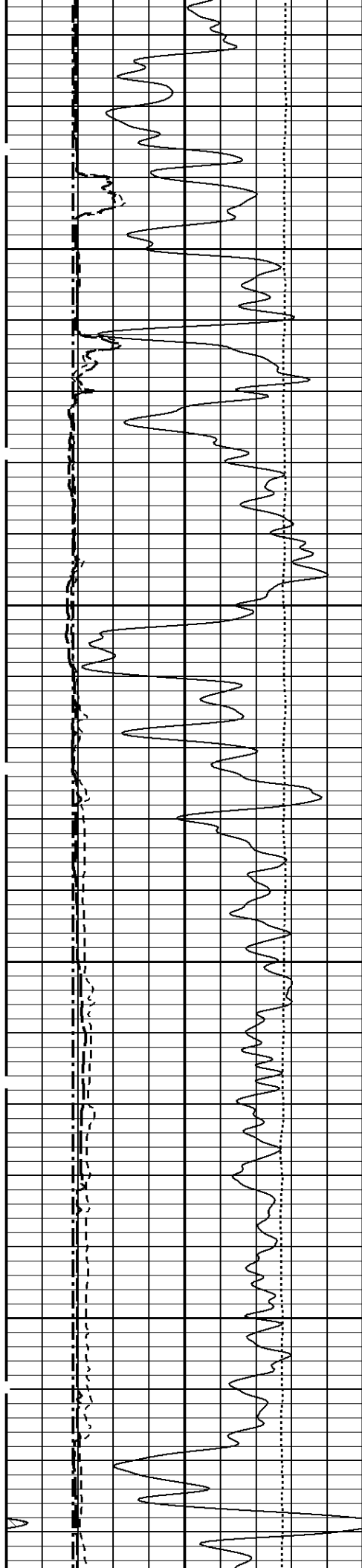




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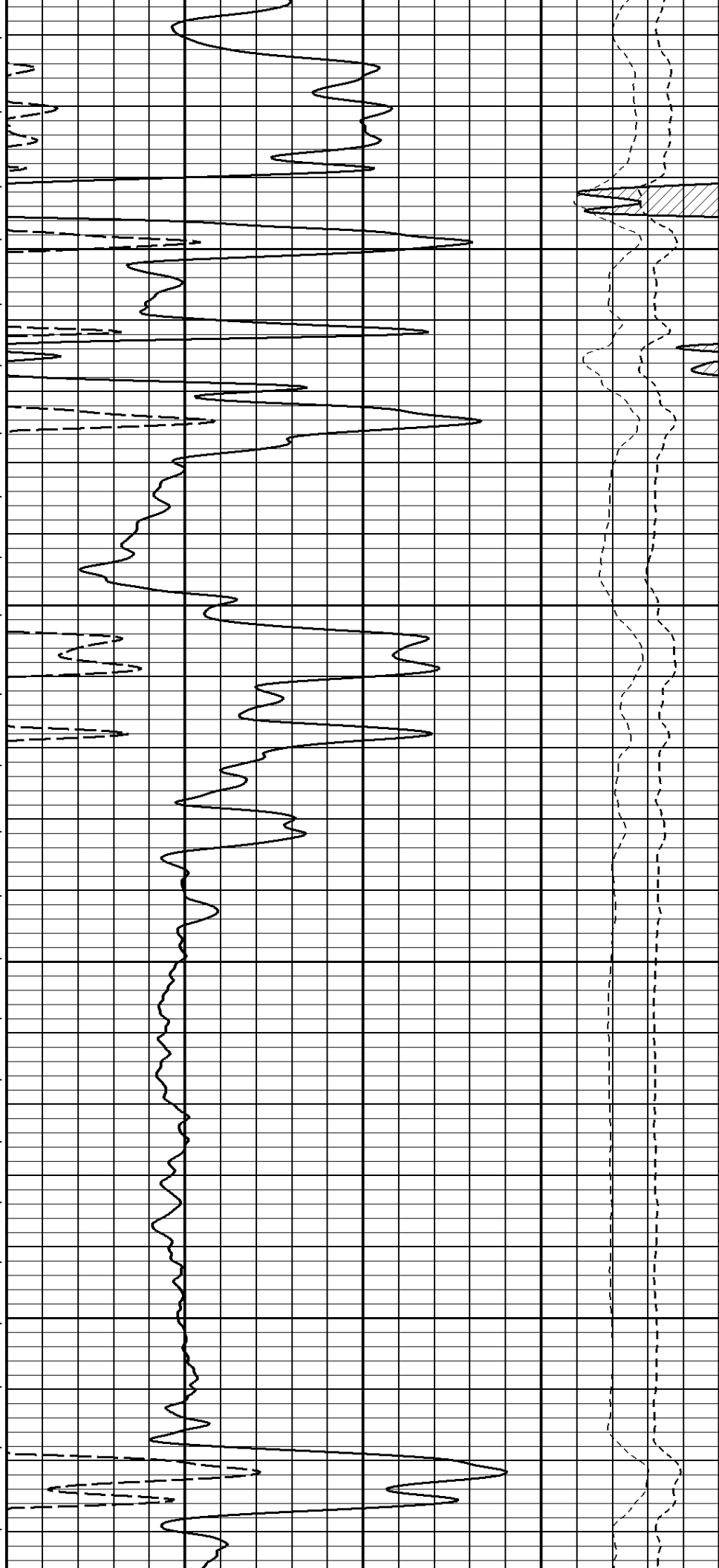
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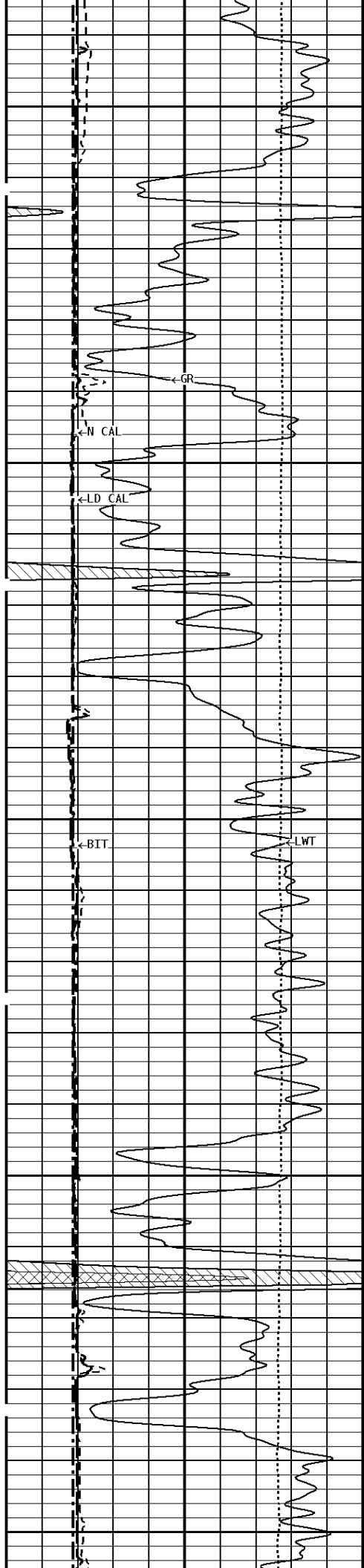




700

800

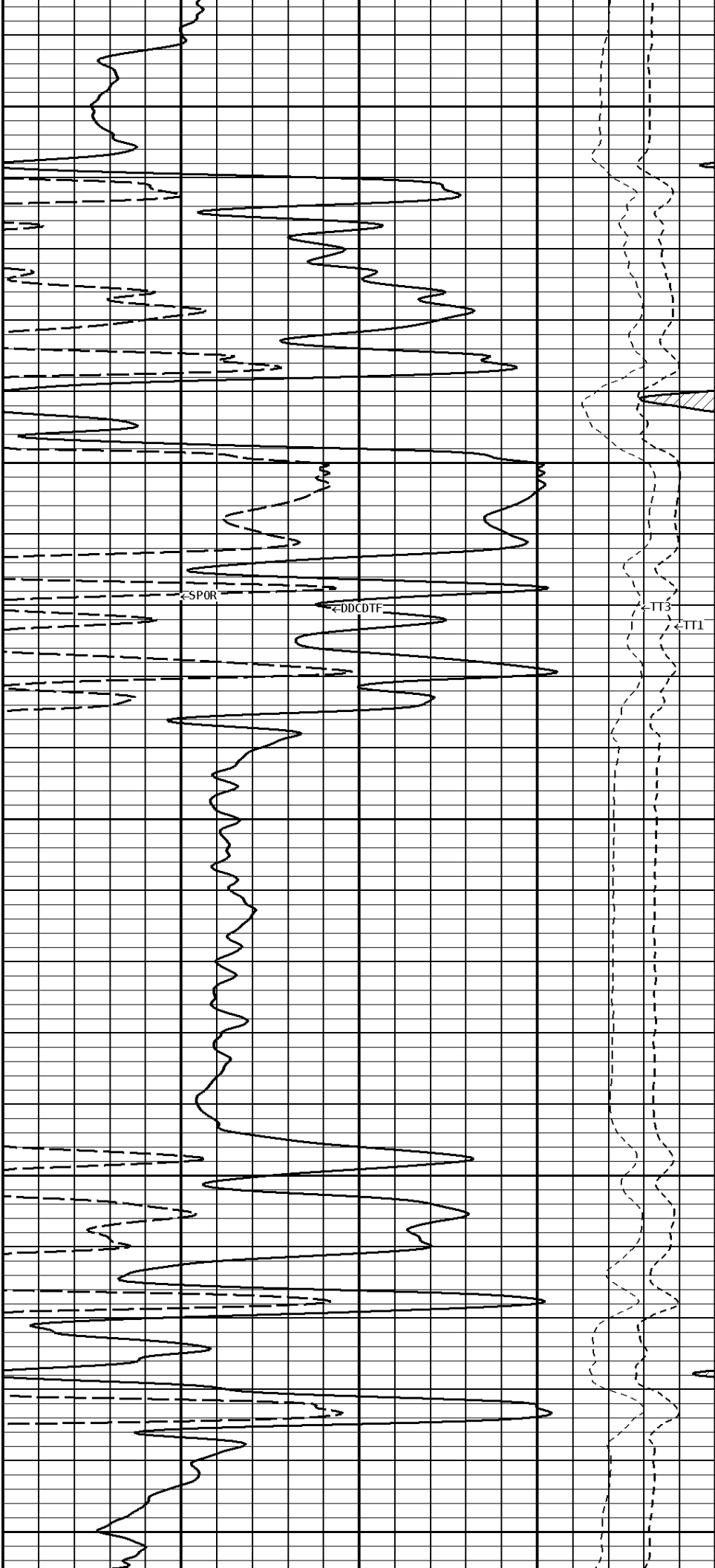


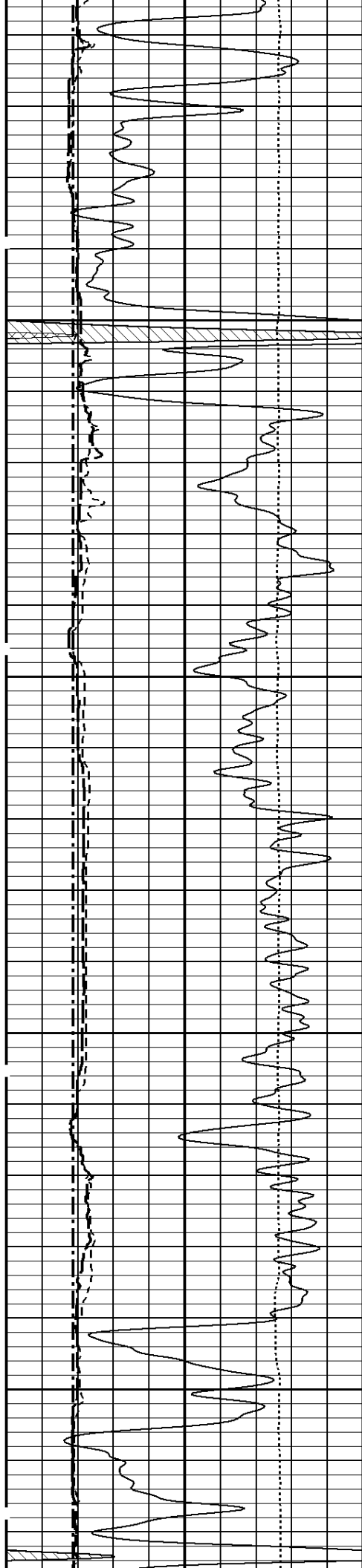


900

1000

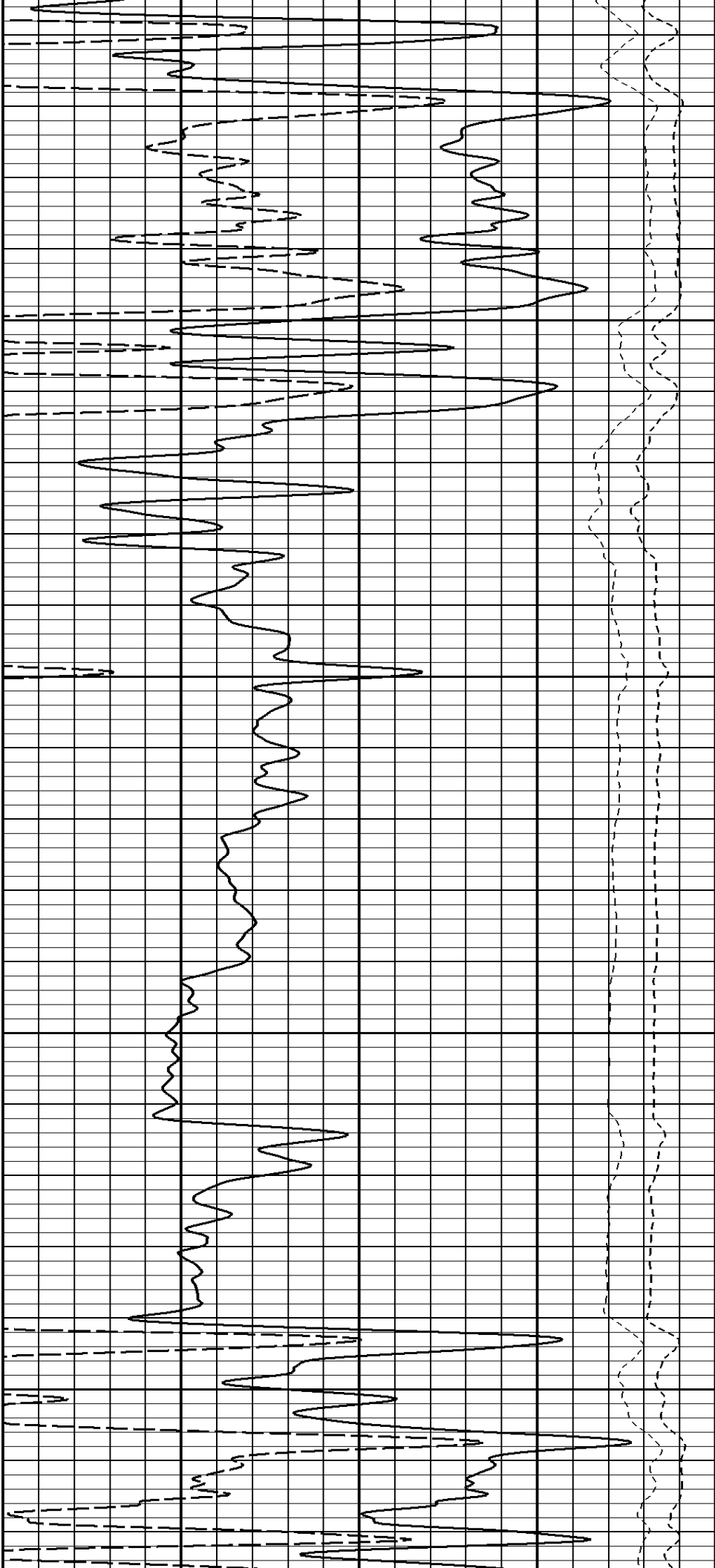
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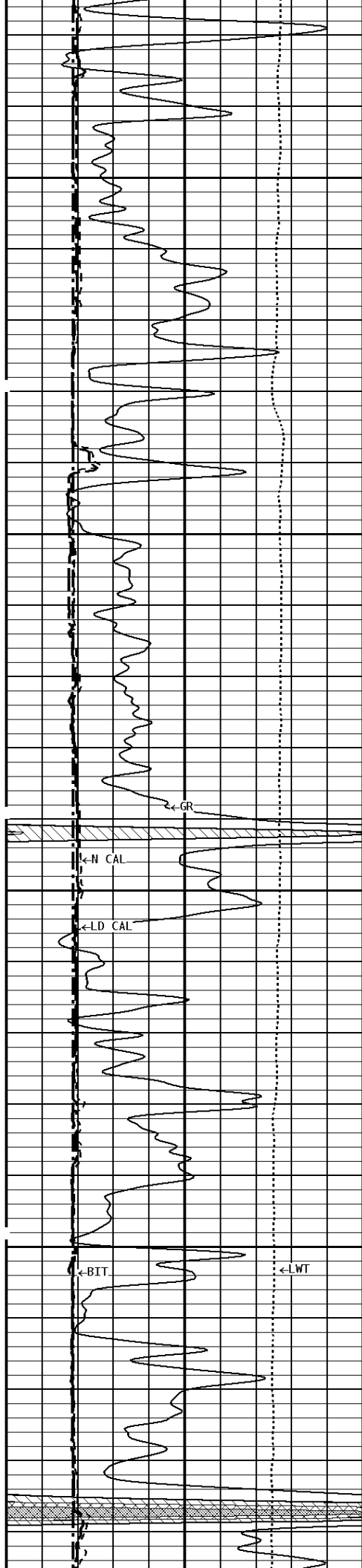




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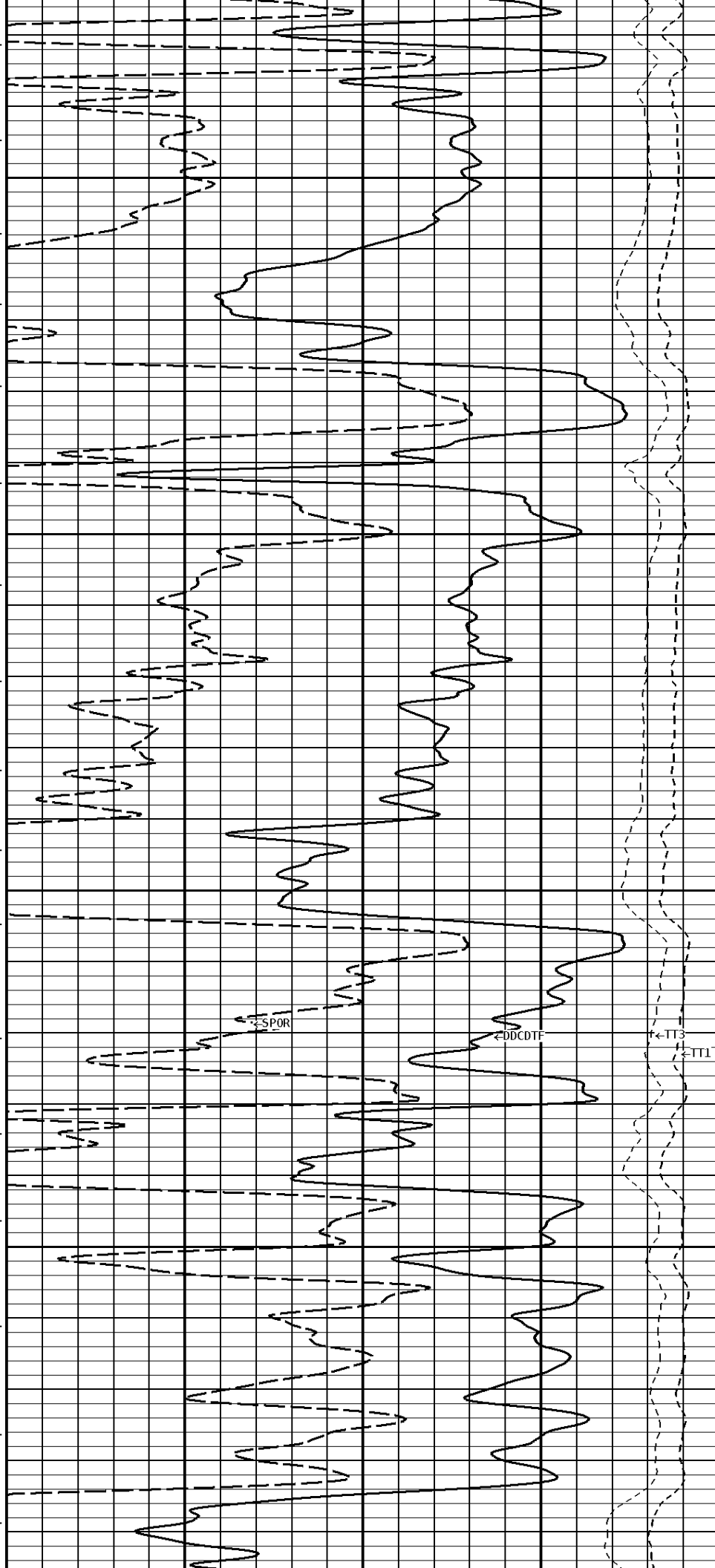
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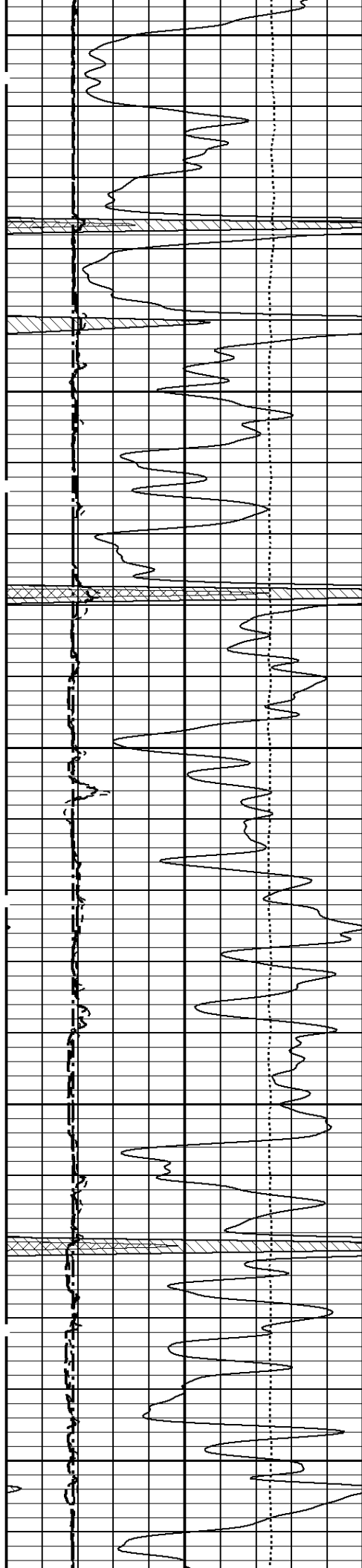




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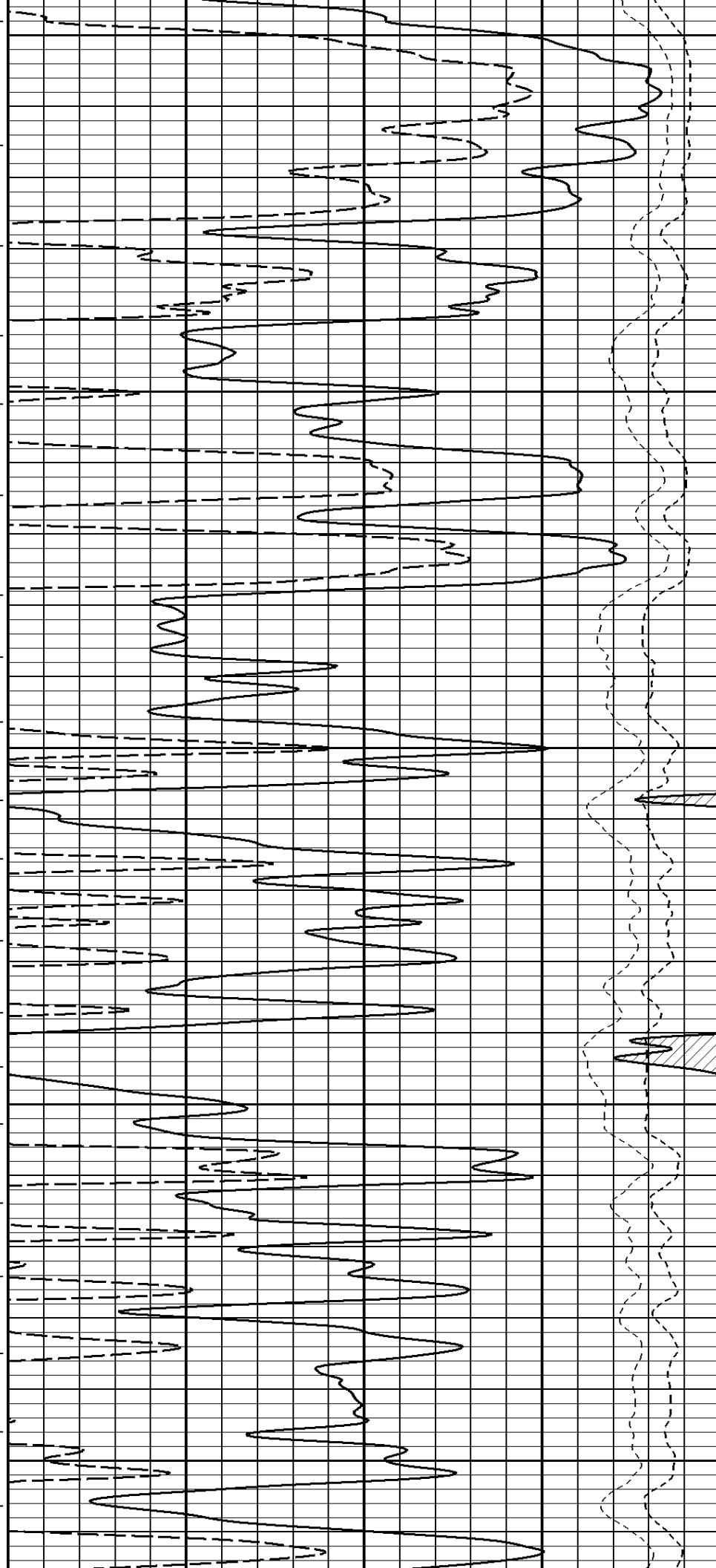
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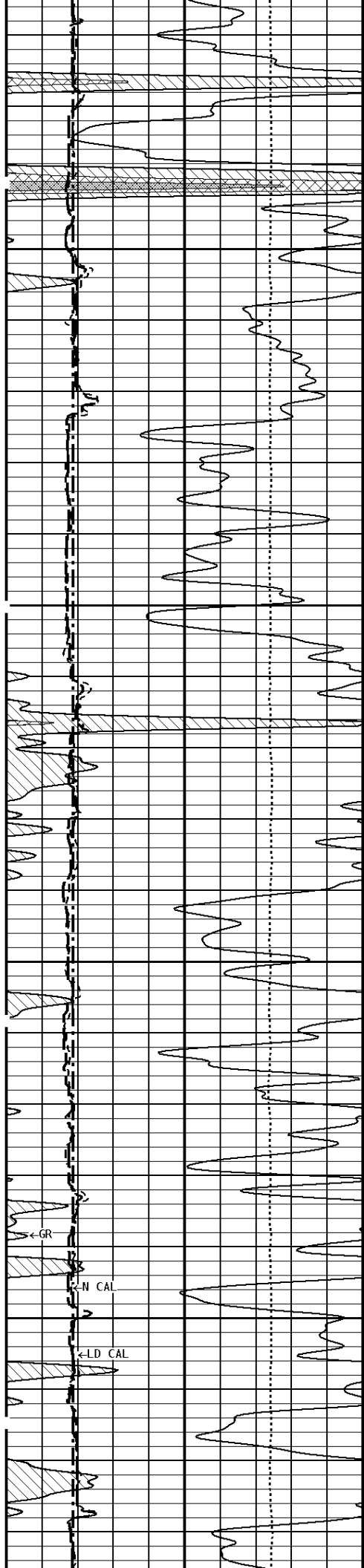




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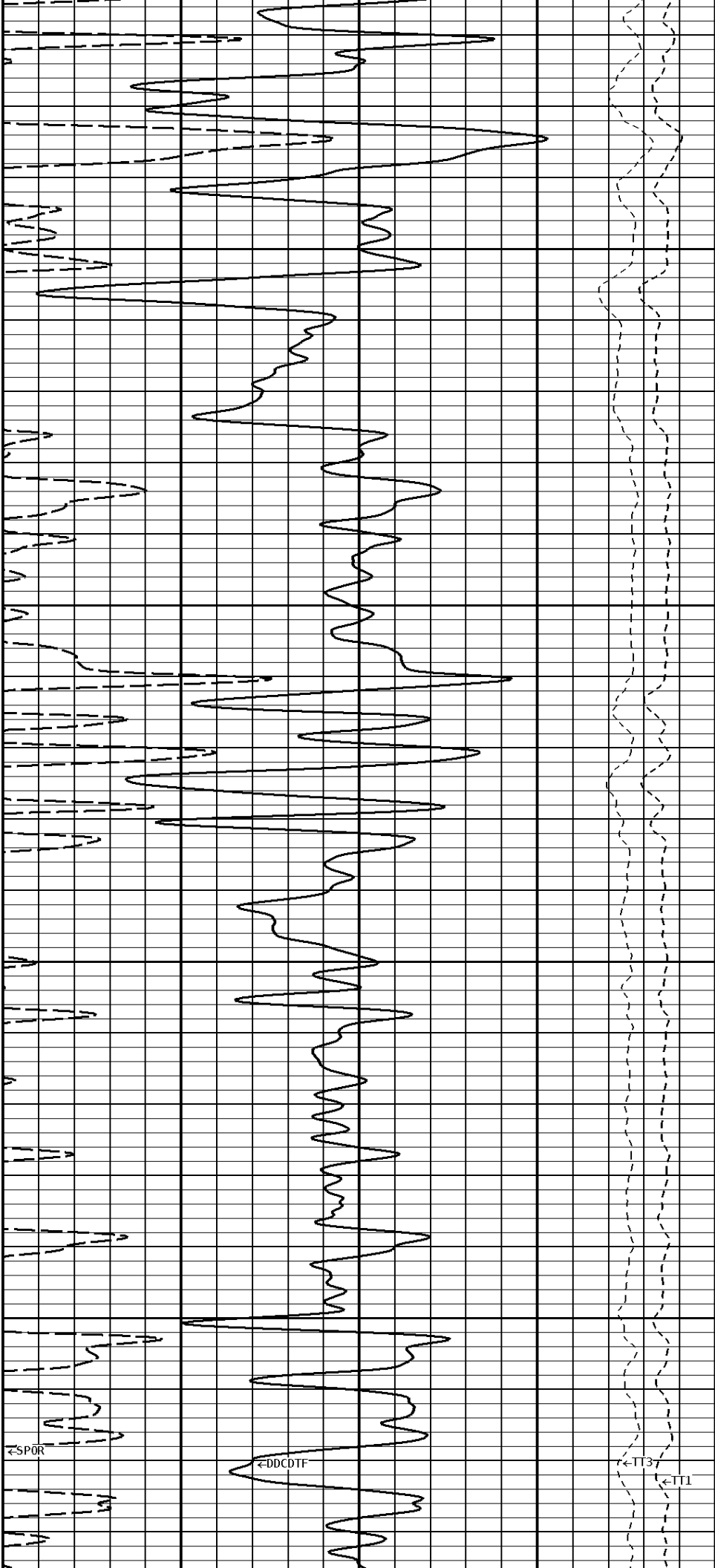
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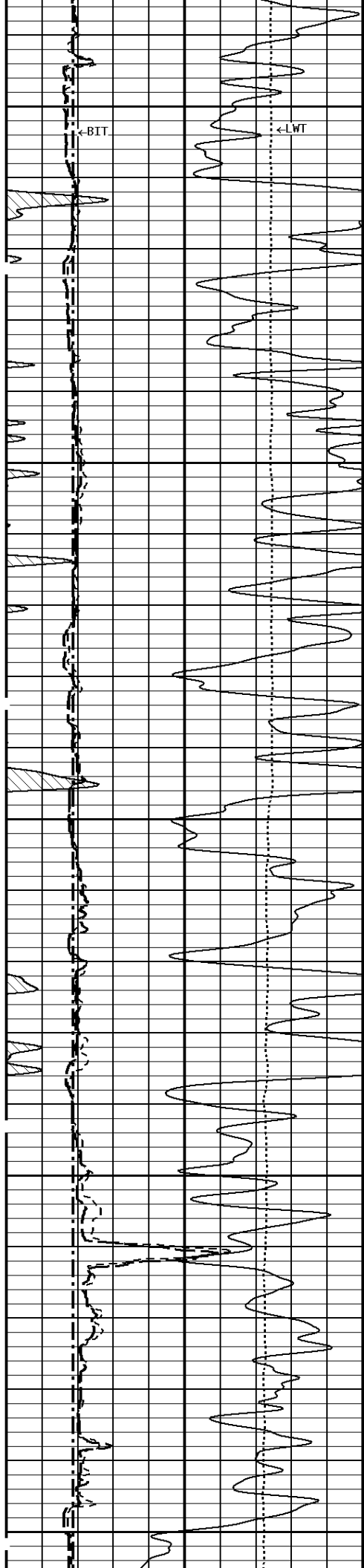




1800

1900

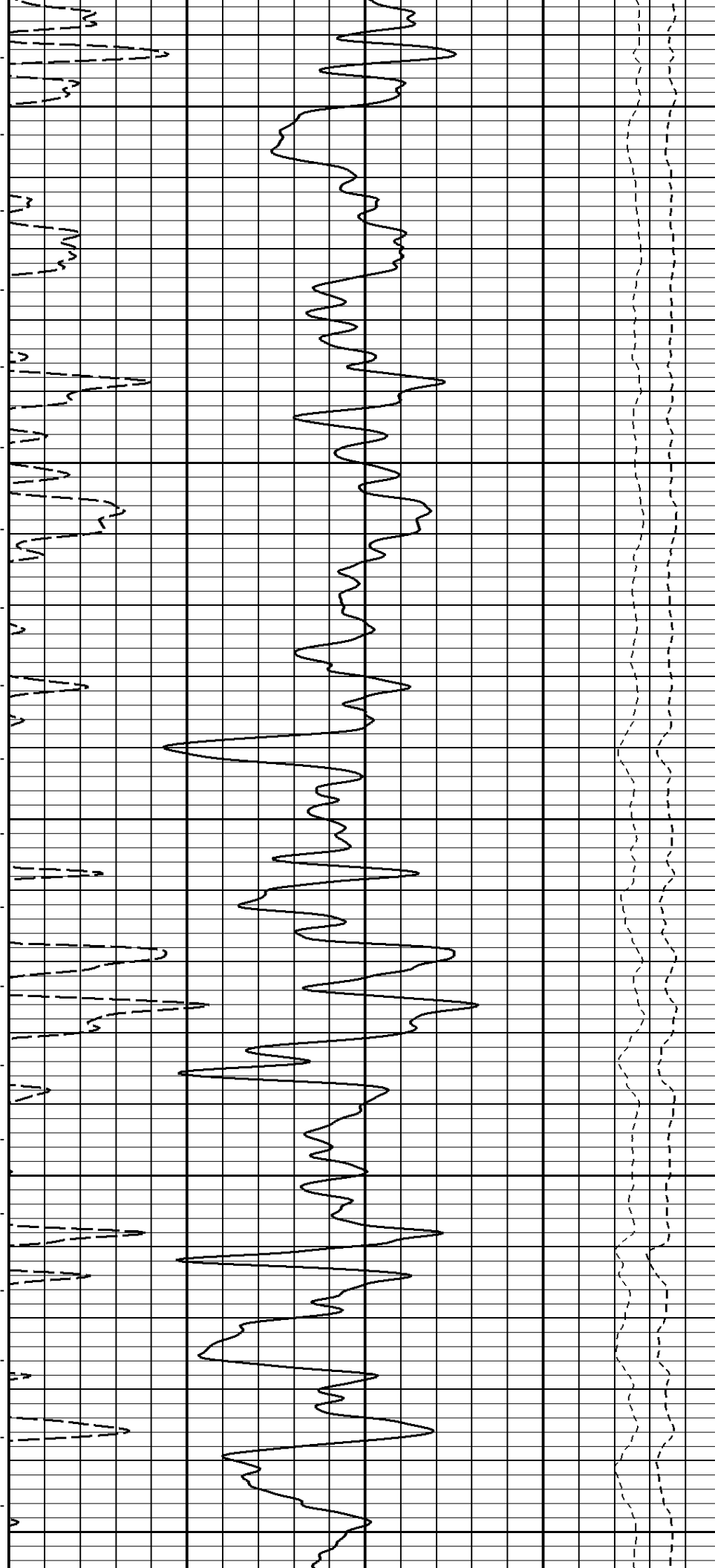


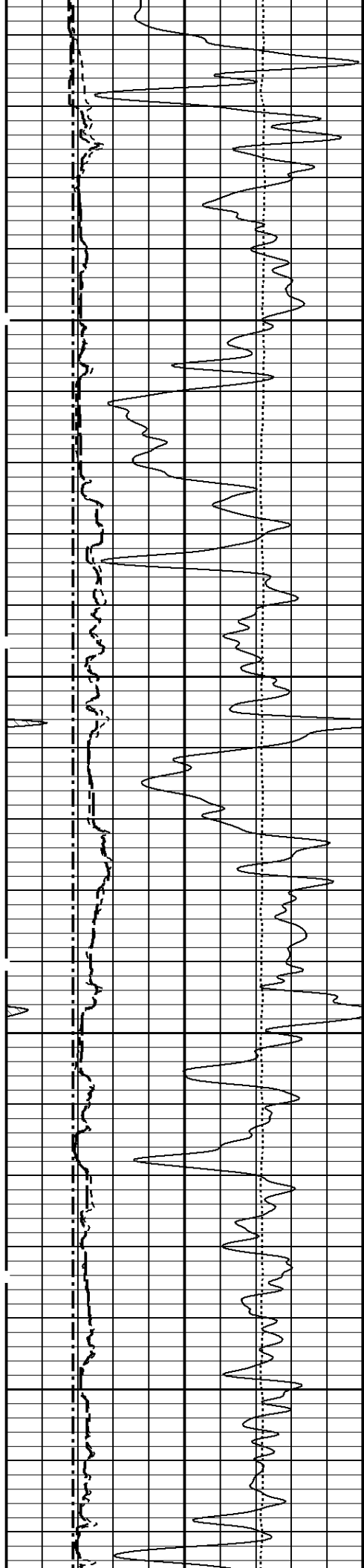


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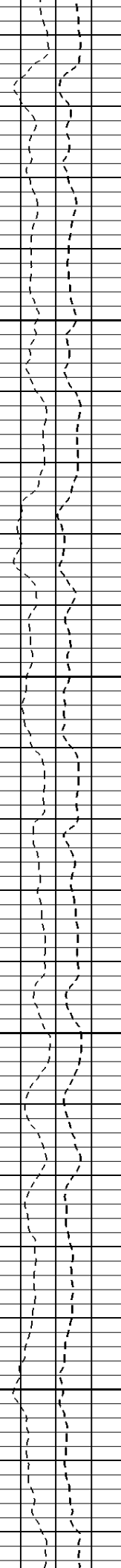
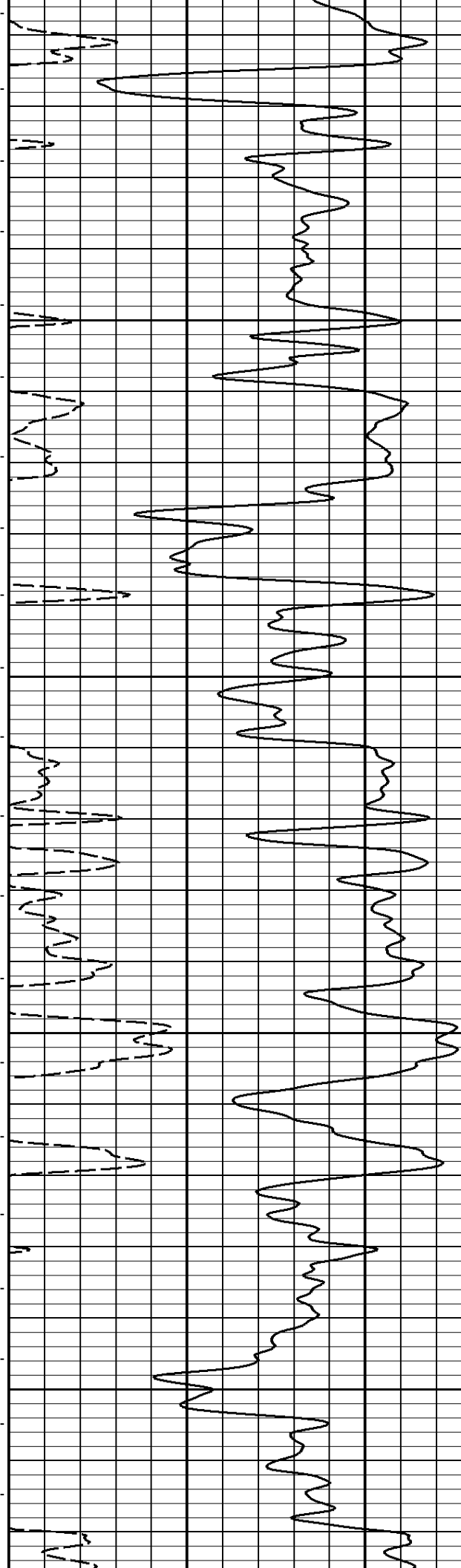
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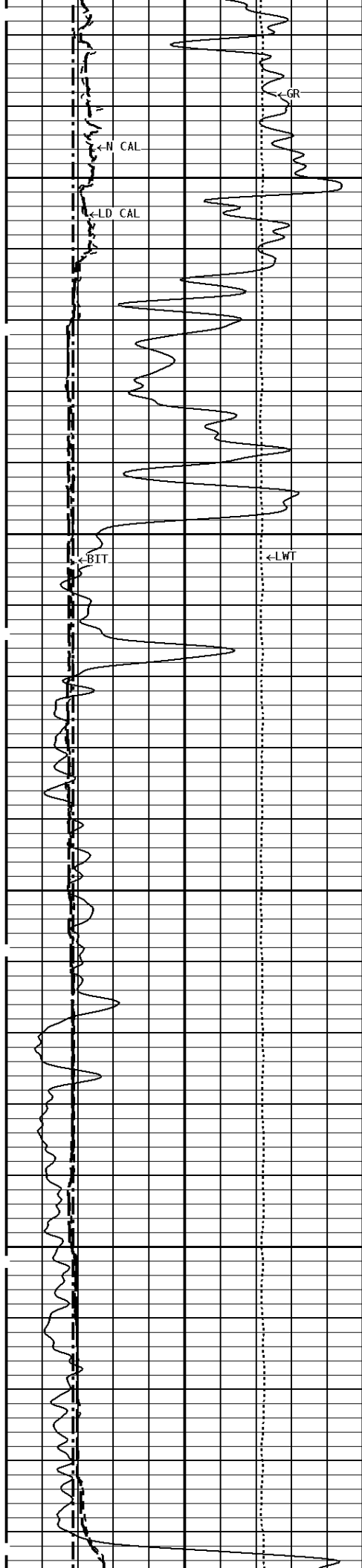




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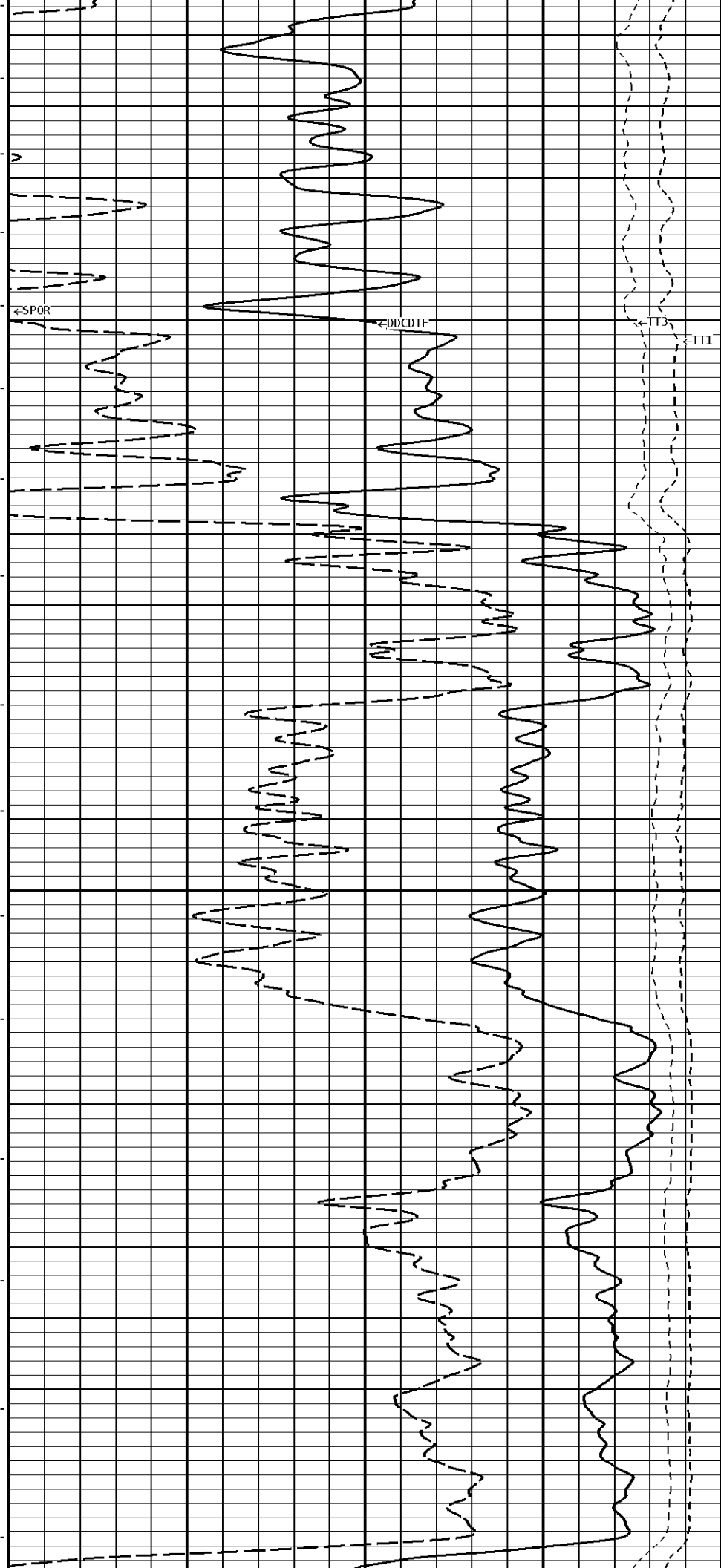
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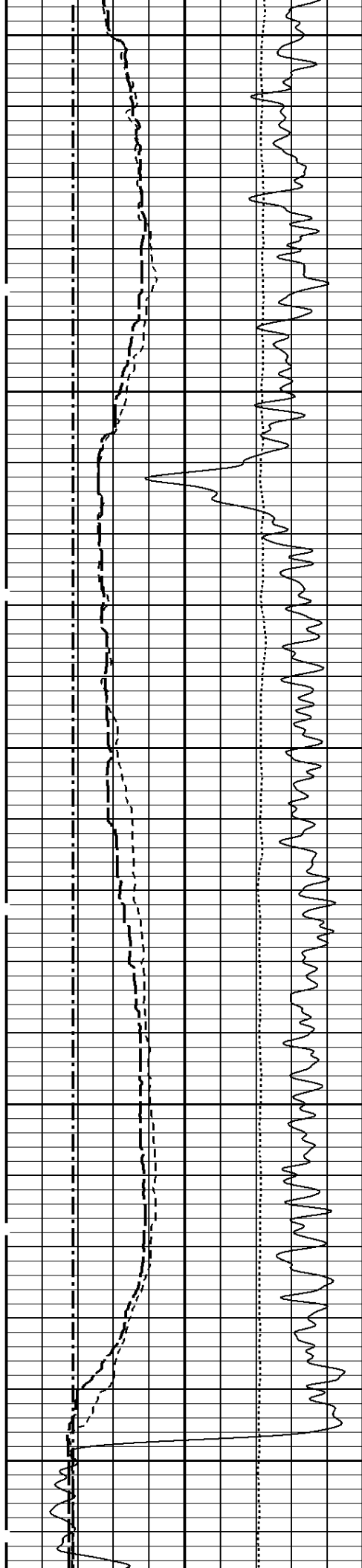




2500

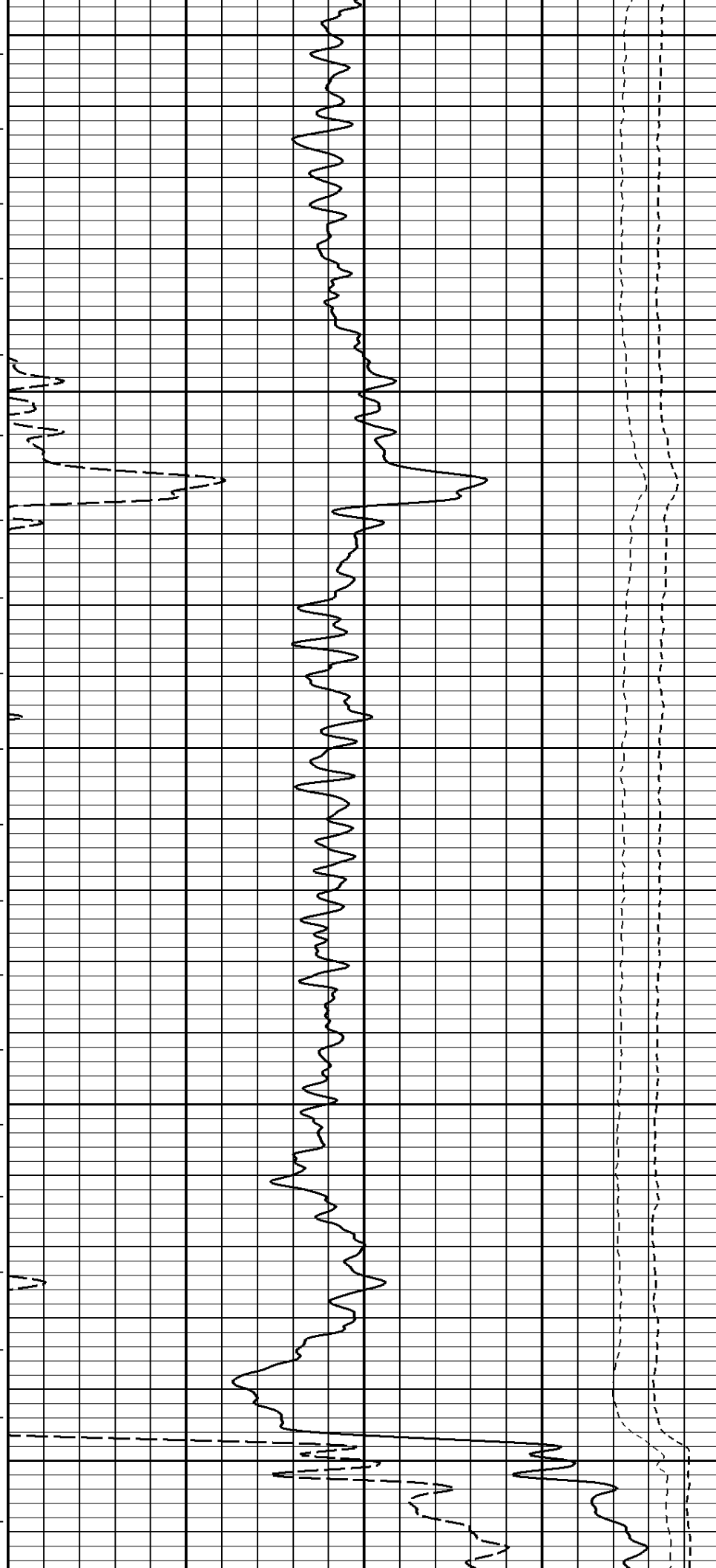
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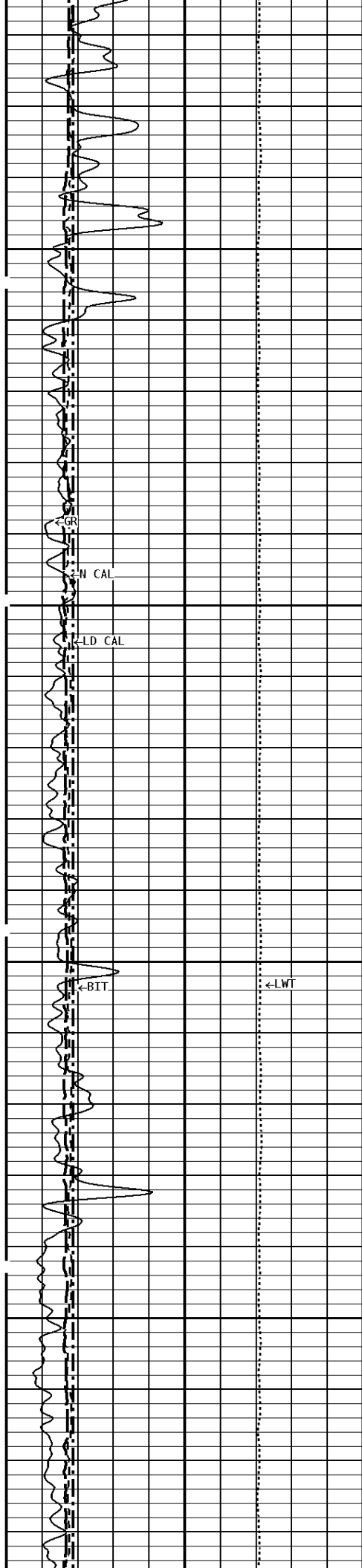




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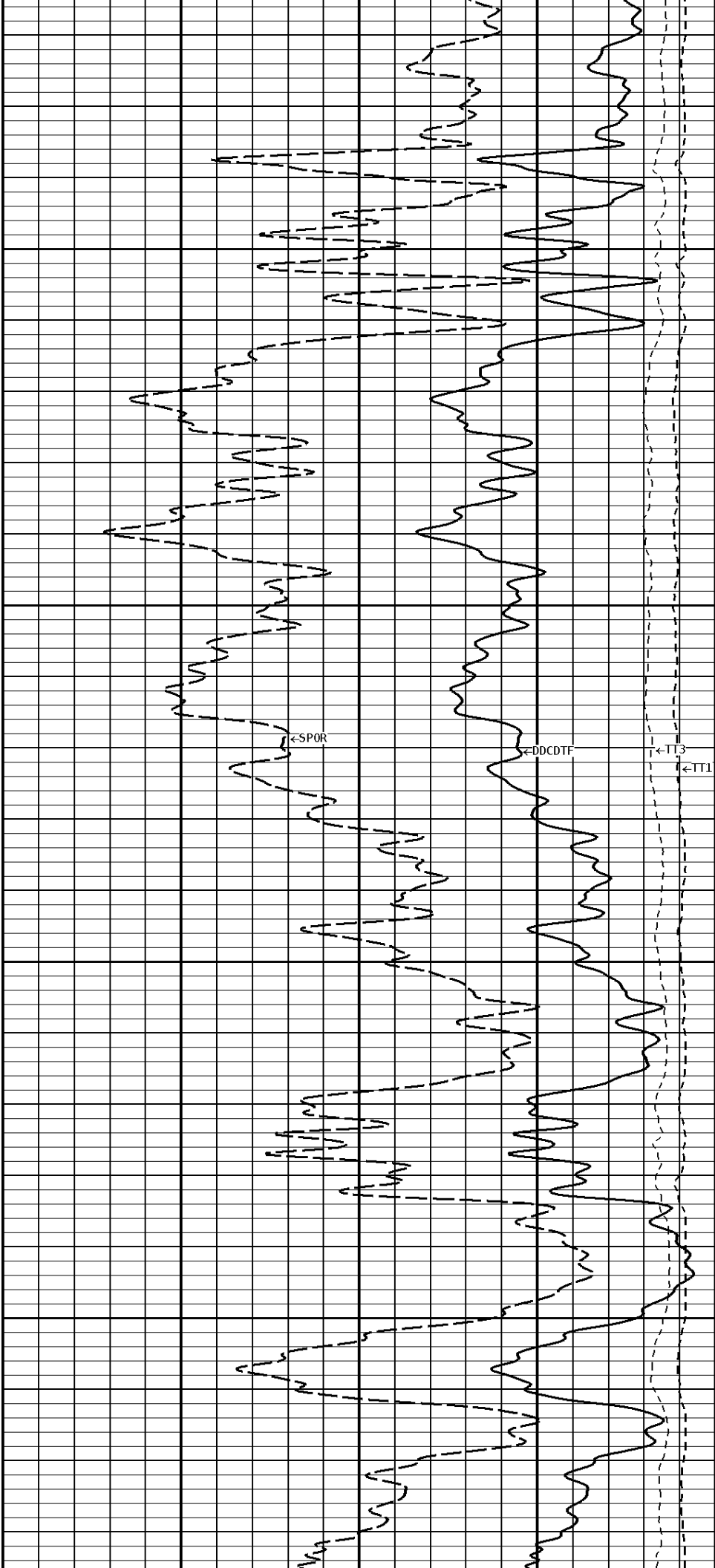
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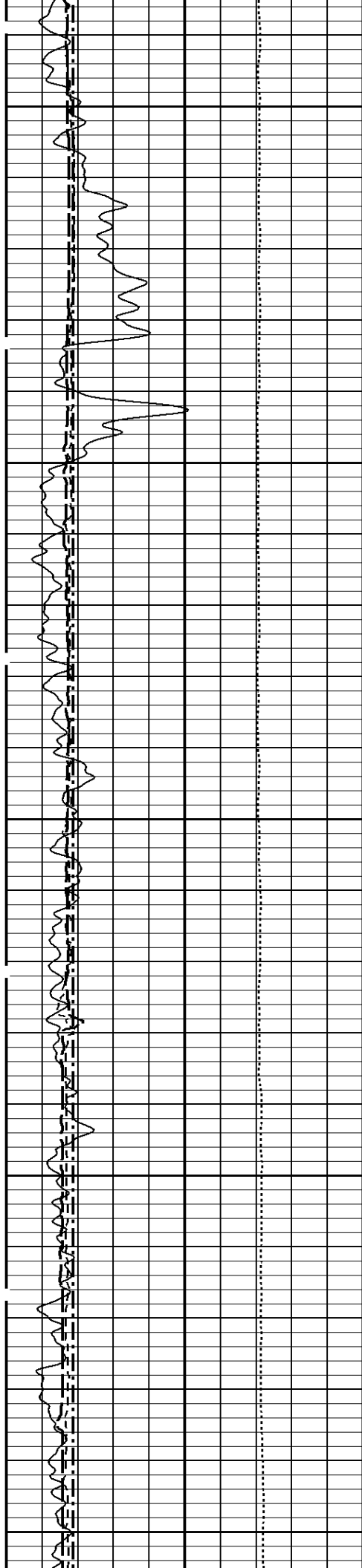




2900

3000

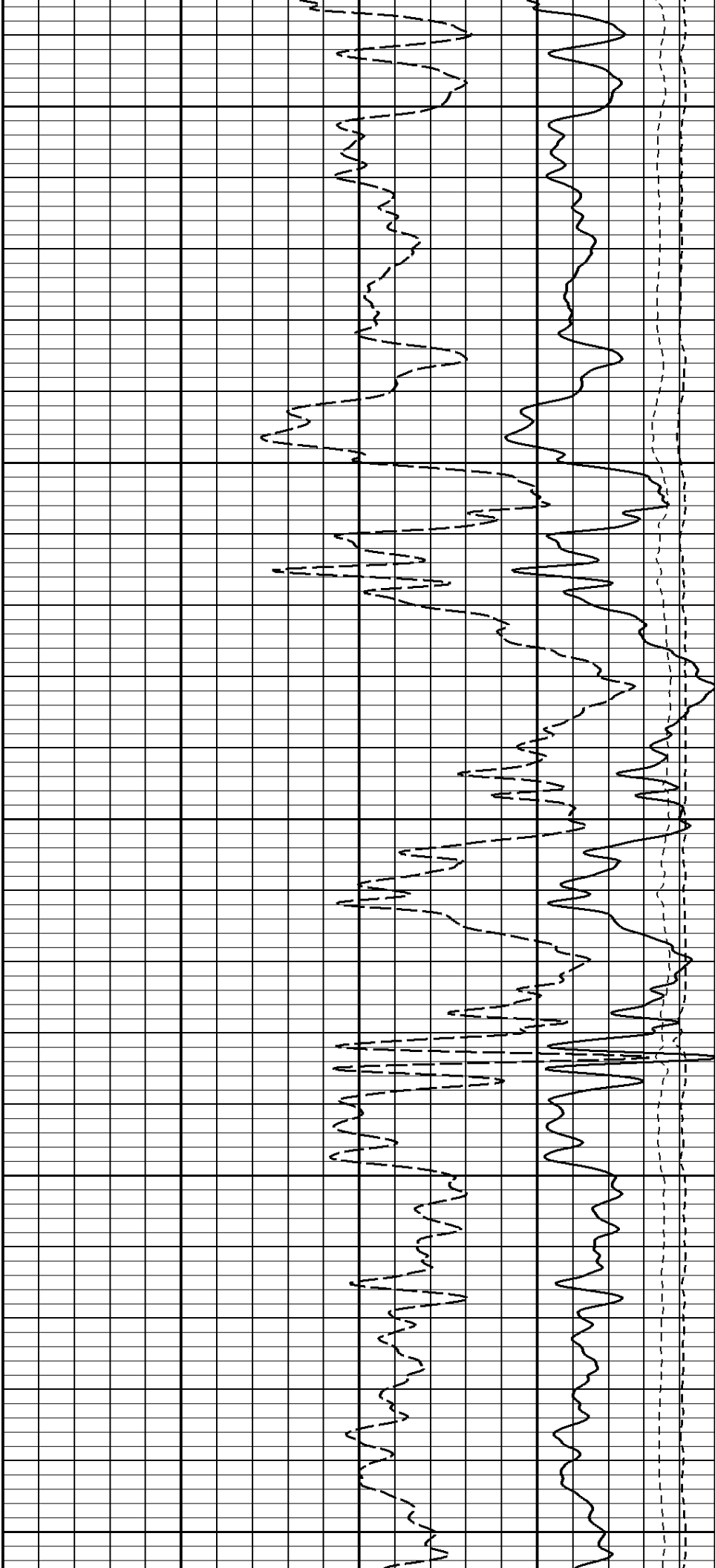


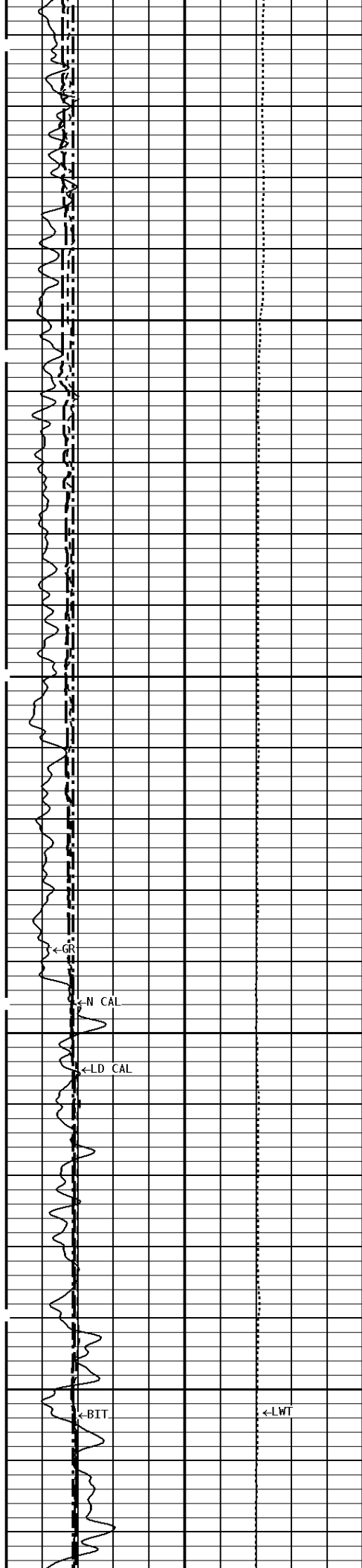


3100

3200

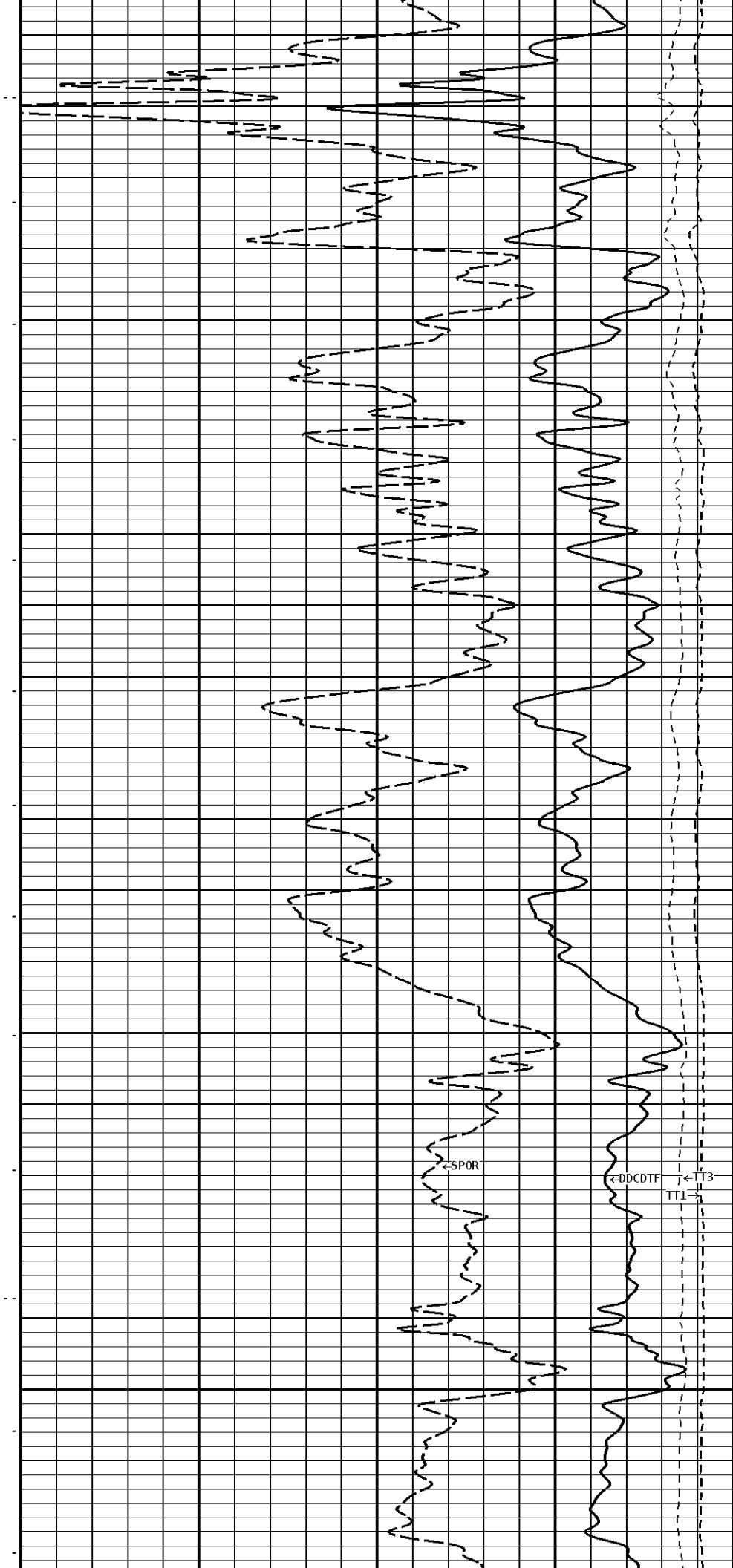
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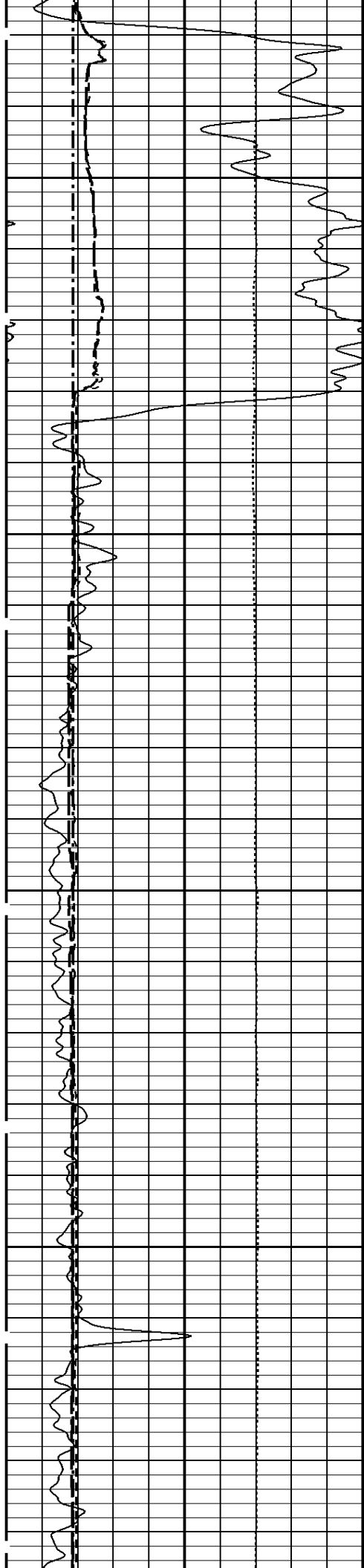




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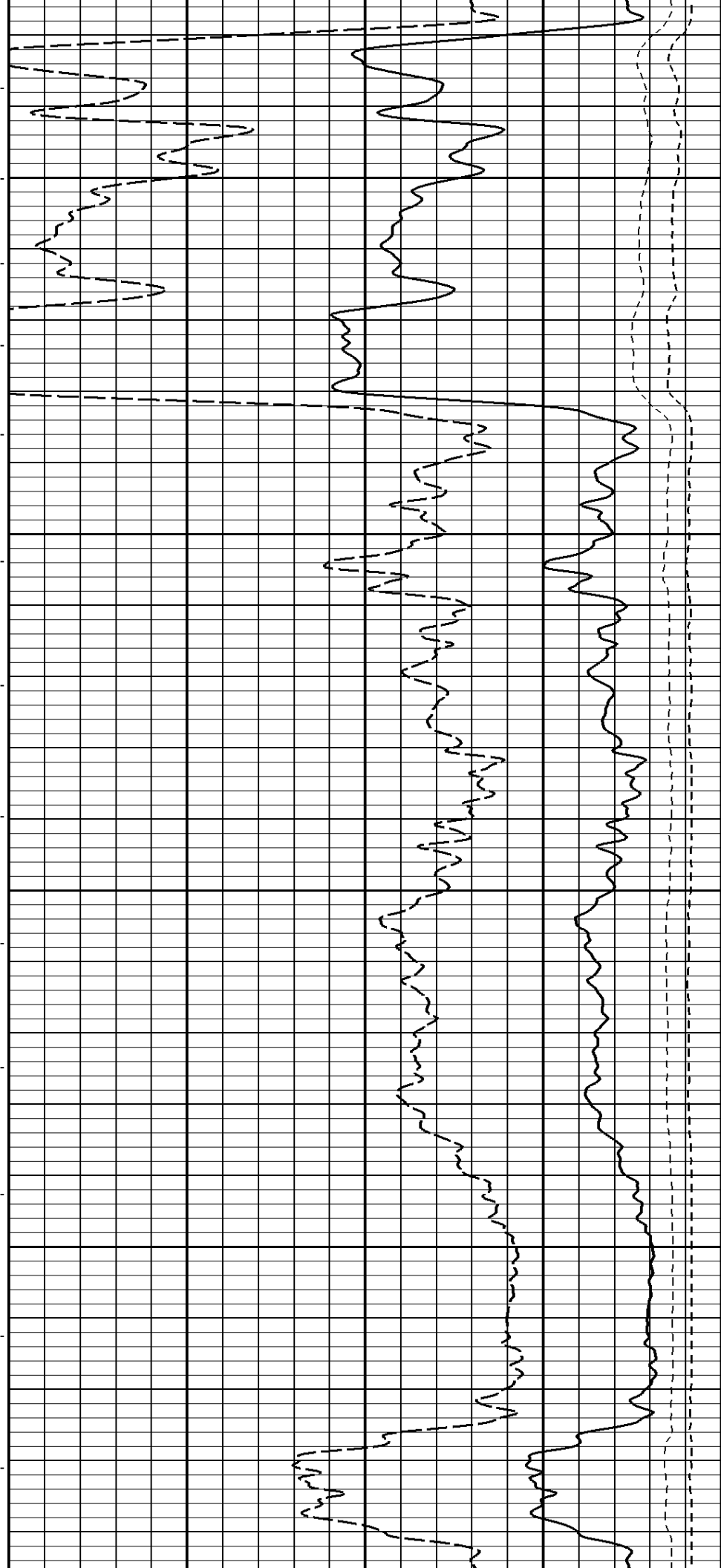
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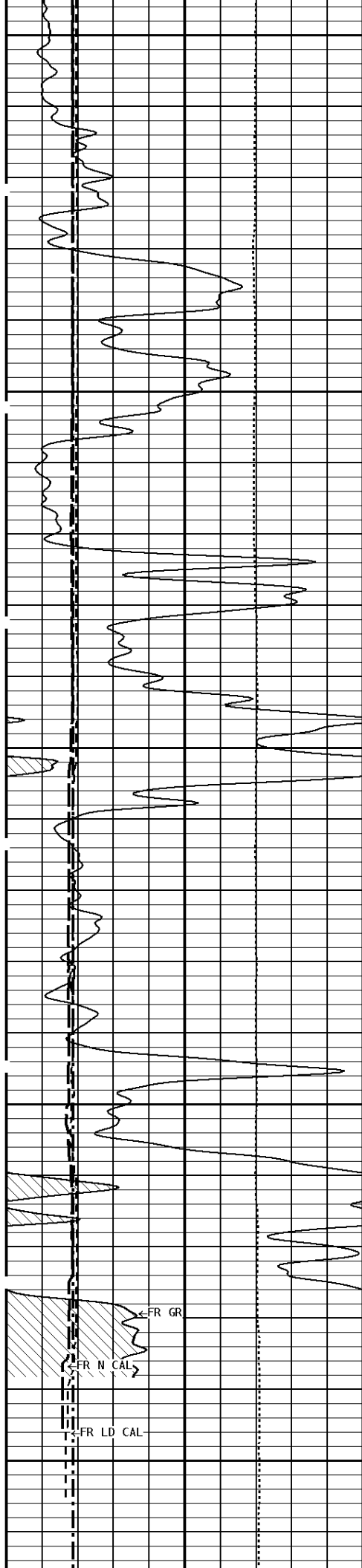




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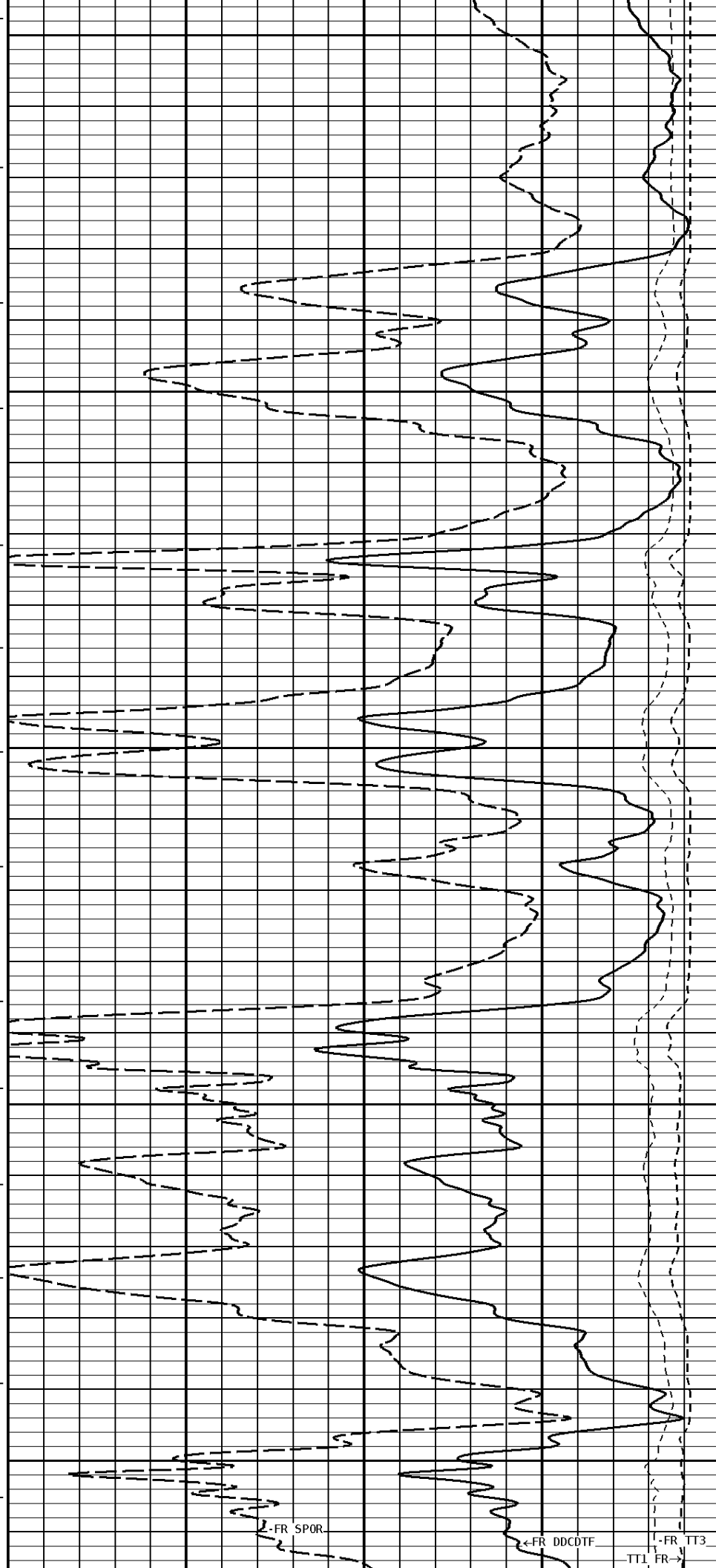
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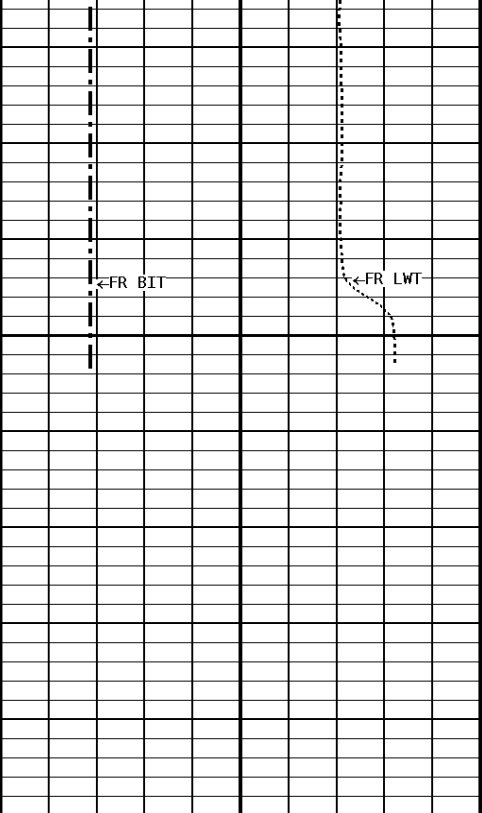




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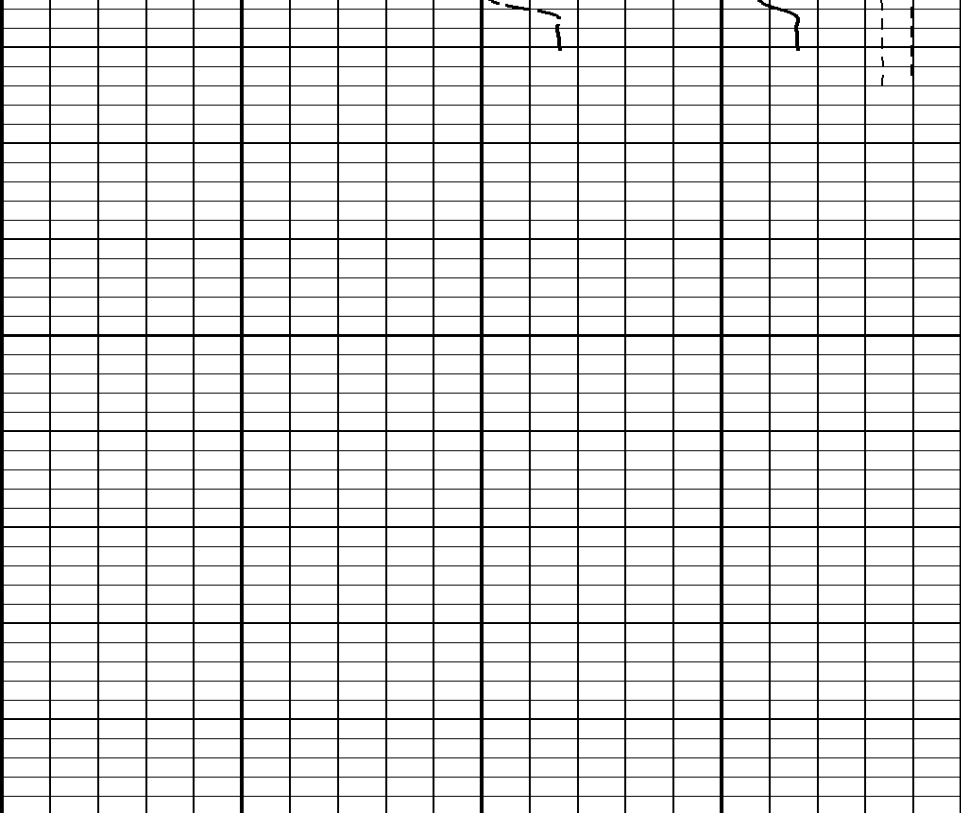
3900





File #1.2.8

3995
4000



1:240 MAIN 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

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

Well File: KINNEY OIL COMPANY HARTTER-1-34 APR6 QUINT	Scale: 1:240
Segment: V1.D2.S7 Reprocess REPEAT	Acquired: 2011-04/06 19:10 3.2.0-9453
Reference: 0	Processed: 2011-04/06 20:53 3.2.0-9453

TENSION LBS	
10000	0
BIT SIZE	

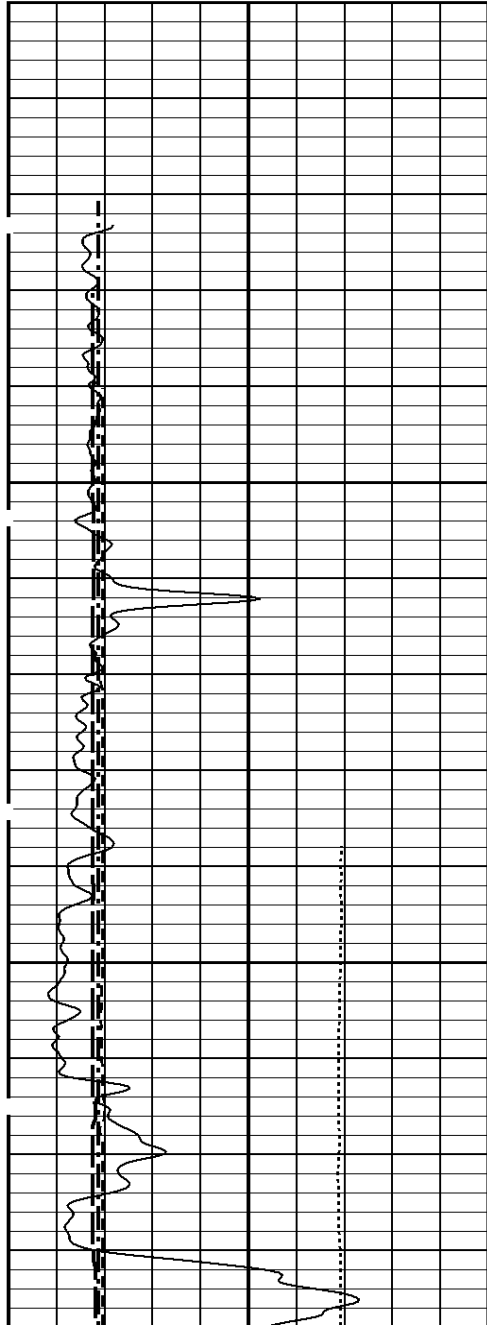
TT3	
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BIT SIZE INCHES (IN)	
6	16
DENSITY (X) CALIPER INCHES (IN)	
16 6	26 16
NEUTRON (Y) CALIPER INCHES (IN)	
16 6	26 16
GAMMA RAY API UNITS	
150 0	300 150

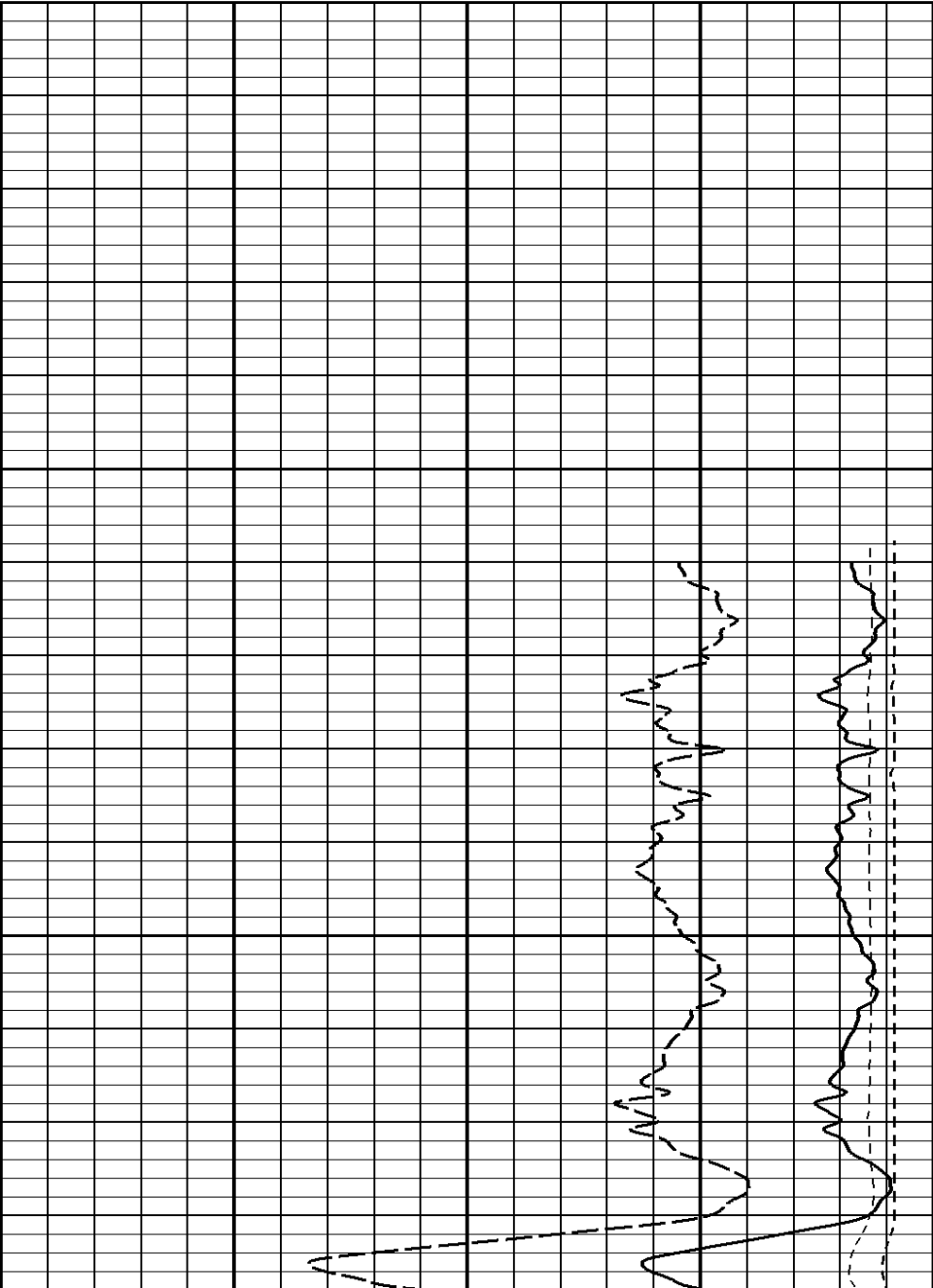
TT1 uSEC	
950	50
TT1 uSEC	
950	50

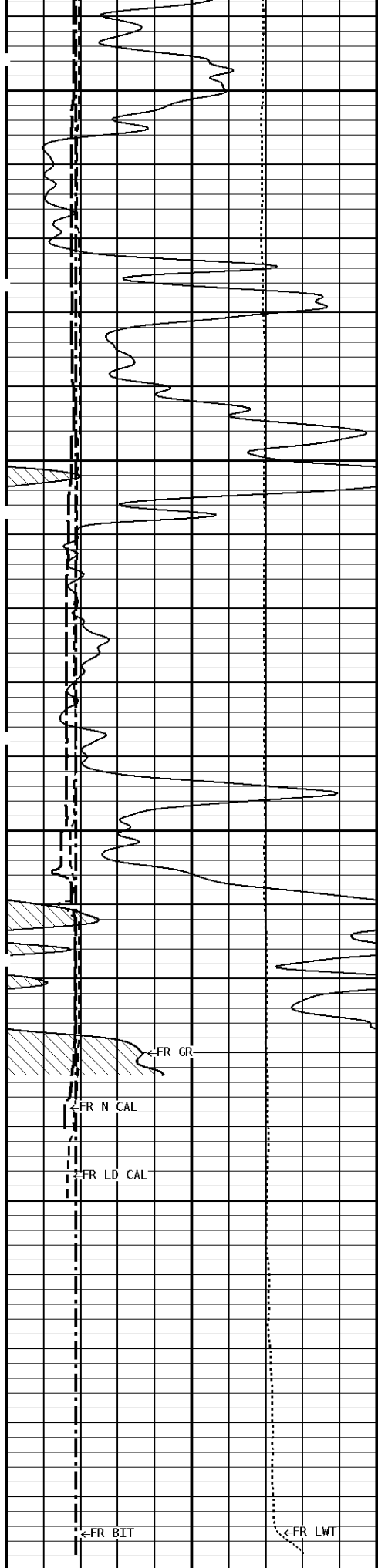
COMPENSATED SONIC TRAVEL TIME uSEC/FT	
240 140	140 40
SONIC POROSITY Percent	
30	-10

1:240 REPEAT SECTION



3700



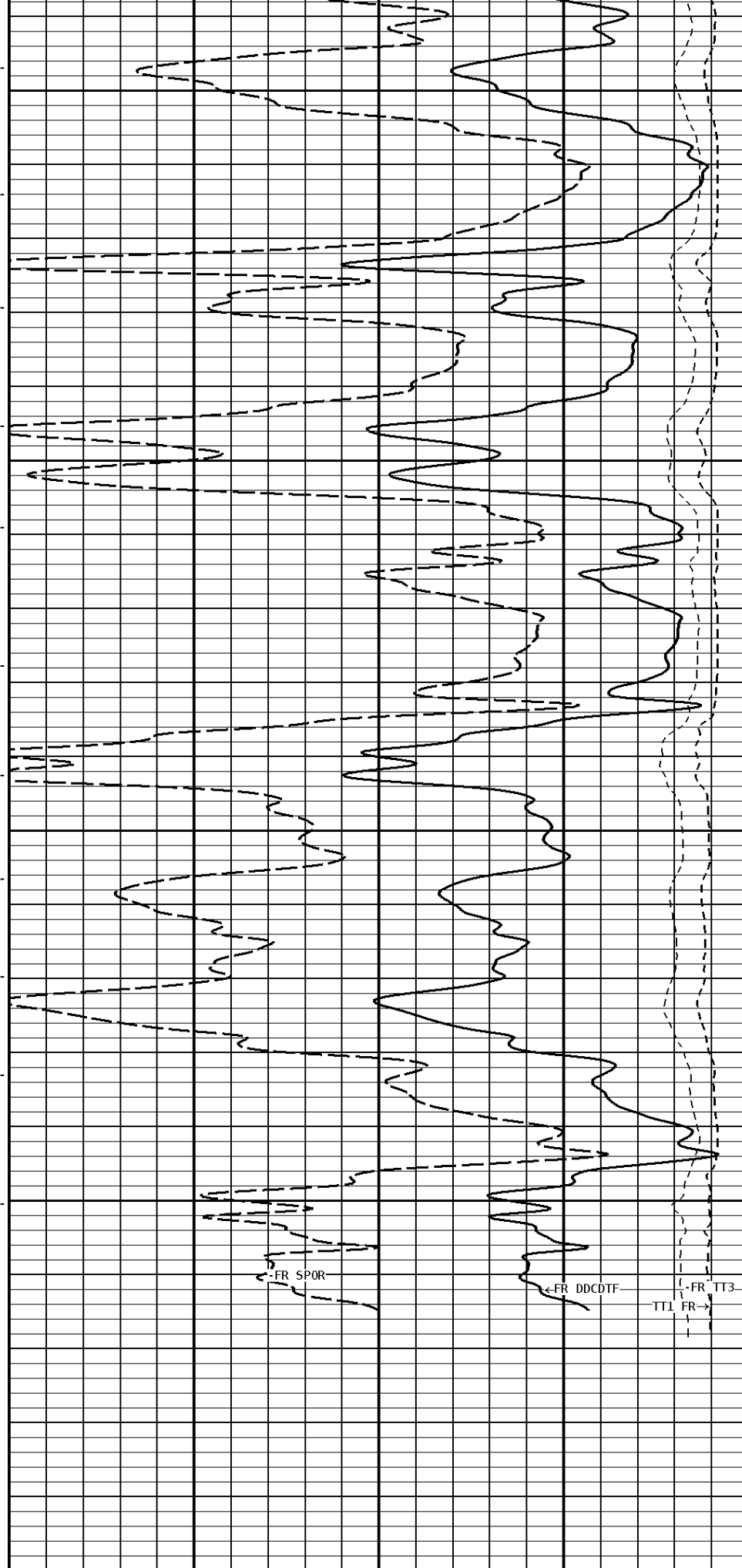


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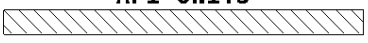
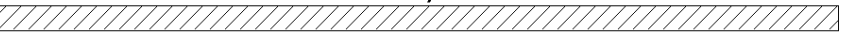
3800

3900

3995



1:240 REPEAT SECTION

GAMMA RAY API UNITS 150  300 0 150		SONIC POROSITY Percent 30 ----- -10	
NEUTRON (Y) CALIPER INCHES (IN) 16 26 6 16		COMPENSATED SONIC TRAVEL TIME uSEC/FT 240  140 140 40	
DENSITY (X) CALIPER INCHES (IN) 16 26 6 16		TT1 uSEC 950 ----- 50	
BIT SIZE INCHES (IN) 6 ----- 16		TT3 uSEC 950 ----- 50	
TENSION LBS 10000 ----- 0			

*** Calibration Summary ***

Shop Calibration						
GRT-B						
Performed : 21-Aug-2009			Time : 15:26			
Sensor Suite : GR-GR5			ID : GRT-BA-14			
	Measured	Units	Calibrated	Units		
	Background	Jig	Jig			
GR	49	347	CPS	175	GRAPI	

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			