

Tucker
WIRELINE SERVICES

DUAL INDUCTION
RESISTIVITY LOG

File No. : OKC-55481
Company : BRUNGARDT OIL & LEASING, INC.
Well : C. B. BEERY #6
Field : EMMERAN NE
County : ELLIS
State : KANSAS
Country : USA

Location : 2190' FNL & 2300' FEL
NE SW SW NE
Sect : 34 Twp : 12S Rge : 16W

Recorded By : T. MONTGOMERY
Witnessed By : G. BRUNGARDT

Date : NOV 30 2010
Run No. : 1
Permanent Datum : GL
Drilling Measured From : KB
Log Measured From : KB
Above Permanent Datum : 5.00 FT
Depth--Driller : 3508.0 FT
Depth--Logger : 3508.0 FT
Bottom Log Interval : 3507.0 FT
Top Log Interval : 225.0 FT
Casing Depth--Driller: 225.0 FT
Casing Depth--Logger : 225.0 FT
Casing Diameter : 8.625 IN
Bit Size : 7.875 IN
Unit No. : 125
Location : OKLAHOMA CITY

Elevations :
KB : 2041.00 FT
DF : 2040.00 FT
GL : 2036.00 FT

Additional Services

CNT
LDT
MLT
XYT

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.

Run Number 1

Depth To Fluid 0.0 FT
Fluid Type In Hole : WBM
Density : 9.000 LDS/GAL
Viscosity : 53.000 SEC/QT
pH : 10.500 KKPM
Fluid Loss : 7.600 CC
Salinity : 0.000

RM Source : MEASURED
RM : 1.100 OHMM at 60 F
RM at BHT : 0.722 OHMM at 128 F

RMF Source : CALCULATED
RMF : 0.825 OHMM at 60 F
RMF at BHT : 0.577 OHMM at 128 F

RMC Source : CALCULATED
RMC : 1.265 OHMM at 60 F
RMC at BHT : 0.722 OHMM at 128 F

RMC :	1.265	OHMM at	60	F
RMC at BHT :	0.866	OHMM at	128	F
Max Recorded Temp. :			128	F
Time Circulation Stopped :				
Operating Rig Time, Hrs. :			3.0	

- Source Serial Numbers -

Gamma	CSV-C2
Neutron	N-1043

- Sonde Serial Numbers -

GRTB	GRT-BC-43
CNT	CNP-AA-106
LDT	LDP-BA-20
MST	MST-CA-021
PIT	PIT-AB-14

Casing Strings

Size (IN)	Weight (LB/FT)	Bottom (FT)
8.625	32.00	225.00

- Comments -

ALL PRESENTATIONS AS PER CLIENT REQUEST.

GRT, CNT, LDT, MST, PIT RAN IN COMBINATION.
 2.71 G/CC DENSITY MATRIX USED TO CALCULATE POROSITY.
 5.50" PRODUCTION CASING USED TO CALCULATE AHV.
 NO STANDOFF DEPLOYED ON PIT TOOL.
 CALIPERS ORIENTED ON X-Y AXIS.
 PHIN IS CALIPER CORECTED.
 MLT, CNT AND LDT PRESENTED FROM TD TO 2900' AS PER CLIENT REQUEST.
 GR, AND PIT PRESENTED FROM TD TO SURFACE AS PER CLIENT REQUEST.
 GR ONLY RUN TWO

GRP - GRP
 CNT - PHIN, CLNIN
 LDT - LDEN, PECL, LCOR, PORL, CLLDIN
 MST - CLMRIN, MSFI, MSFN
 PIT - ILD, ILM, CIRD, SFLAEC, SPU

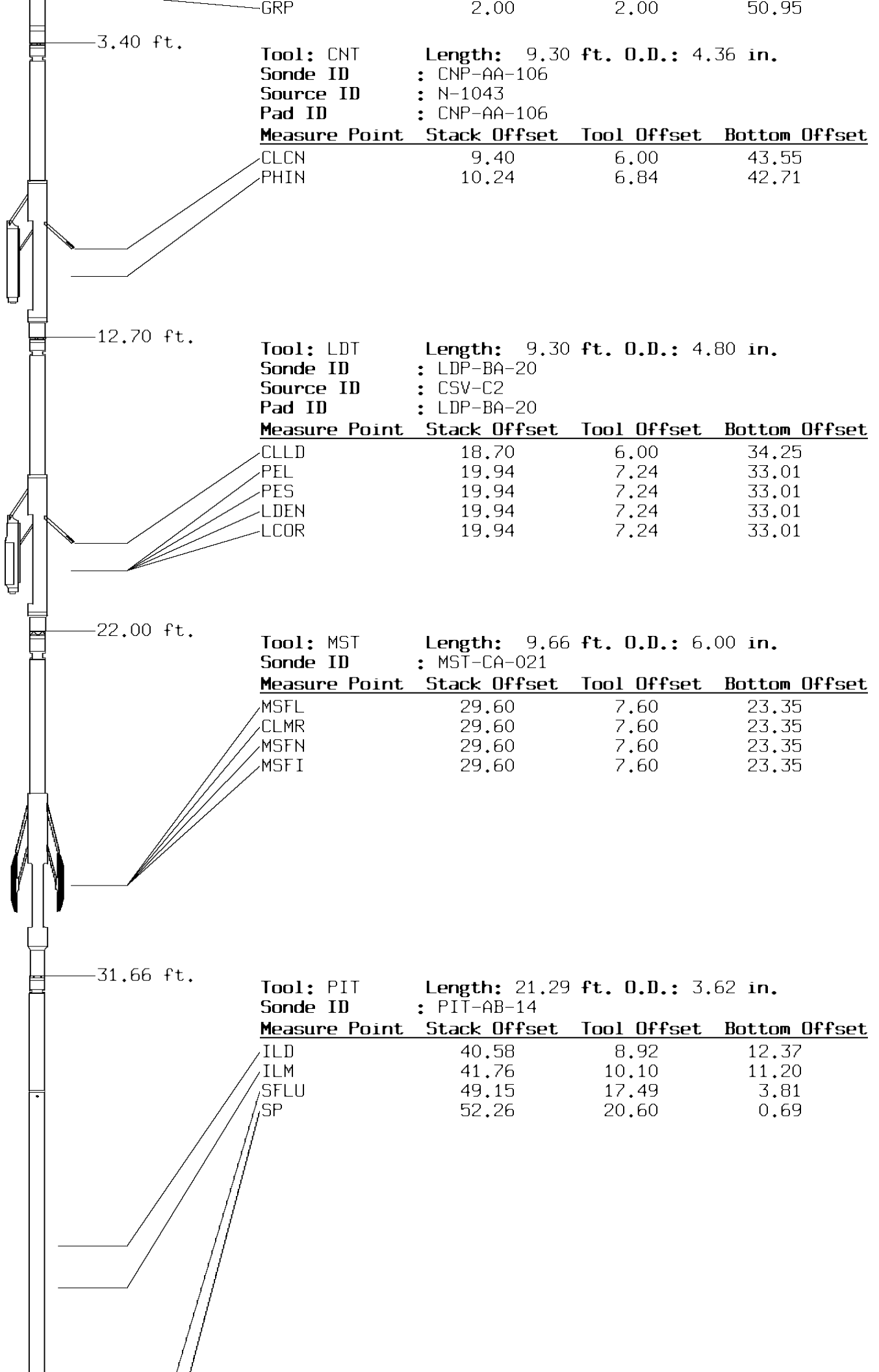
THANK YOU FOR USING TUCKER ENERGY SERVICES!
 OPERATORS.
 C.VANCE
 C. RADATZ

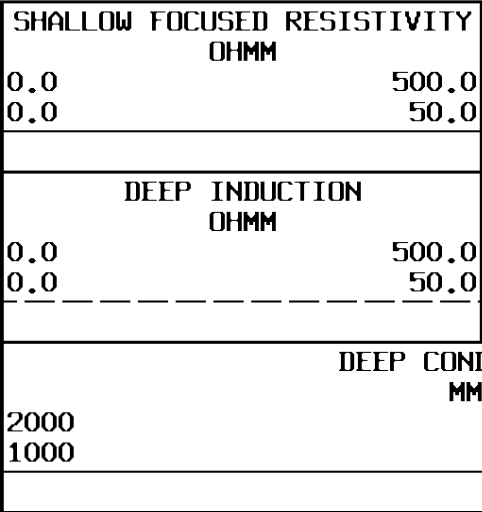
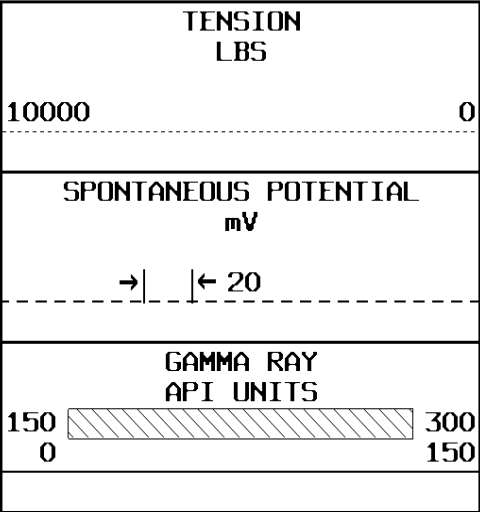
Tool String Schematic

Total Tool Length - 52.95 ft.
 Maximum Outside diameter - 6.00 in.
 Net Weight in Air - 943.00 lbs.

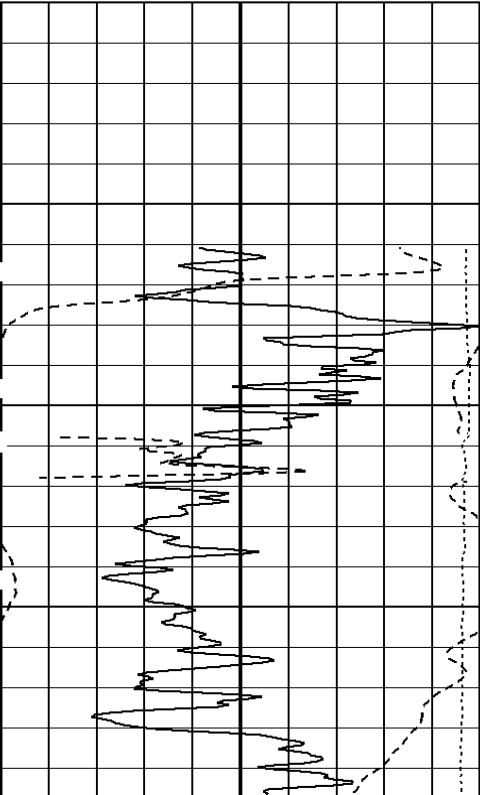


Tool: GRTB	Length: 3.40 ft.	O.D.: 3.60 in.
Sonde ID	: GRT-BC-43	
Measure Point	Stack Offset	Tool Offset Bottom Offset
GRTB	0.00	0.00 50.25



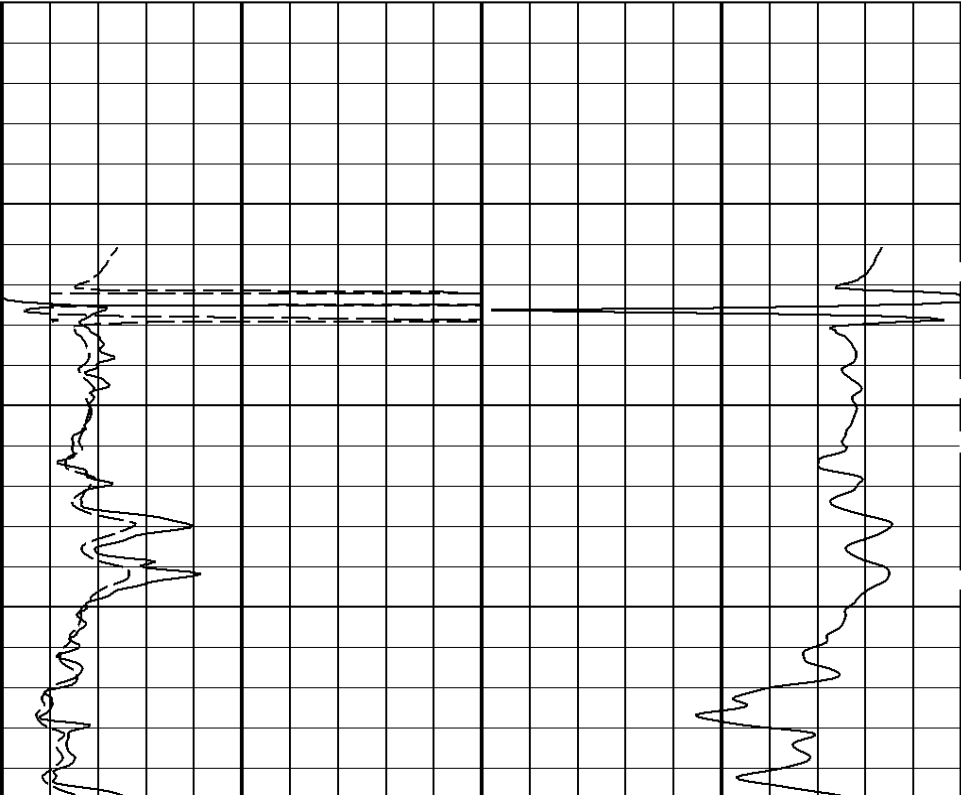


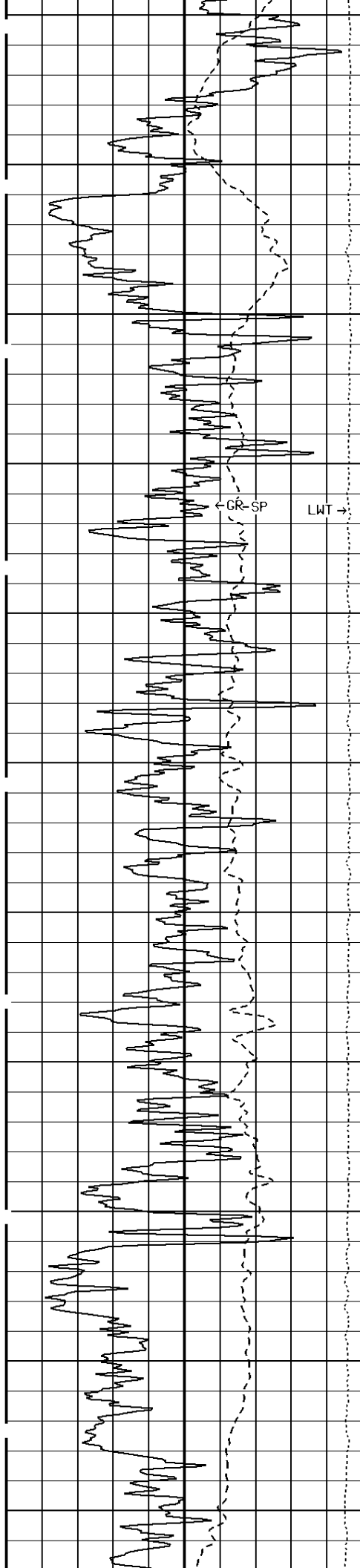
1:600 SECTION
2 INCH



200

300





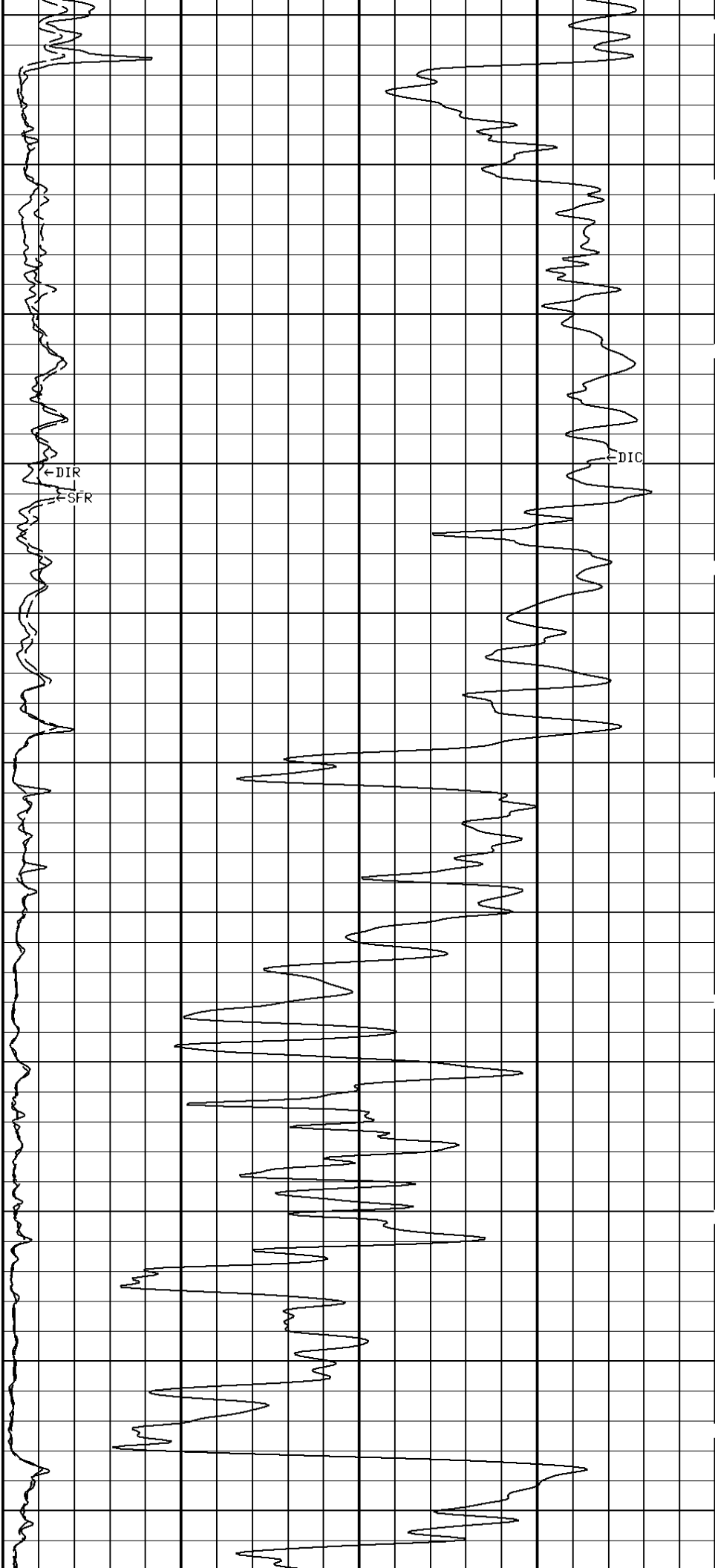
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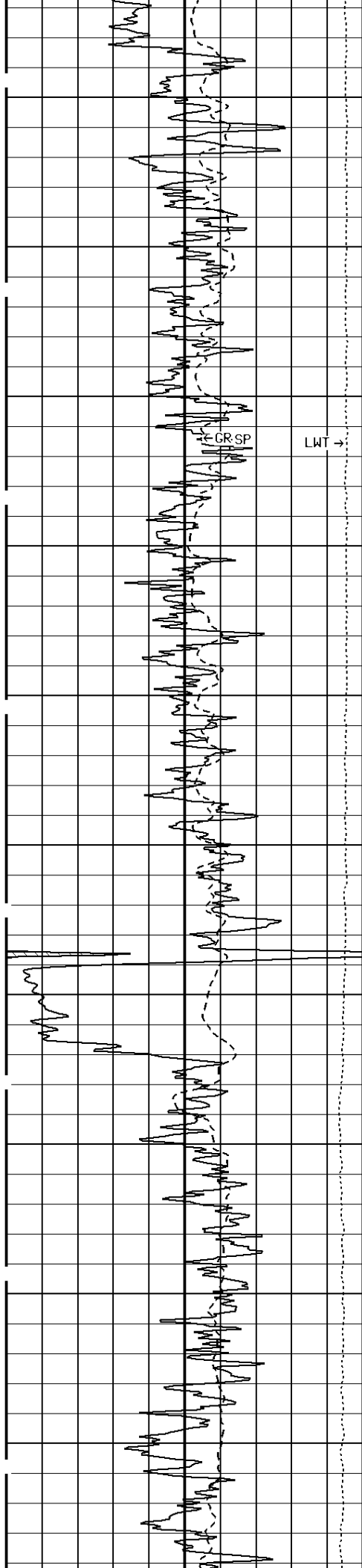
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600

700

800





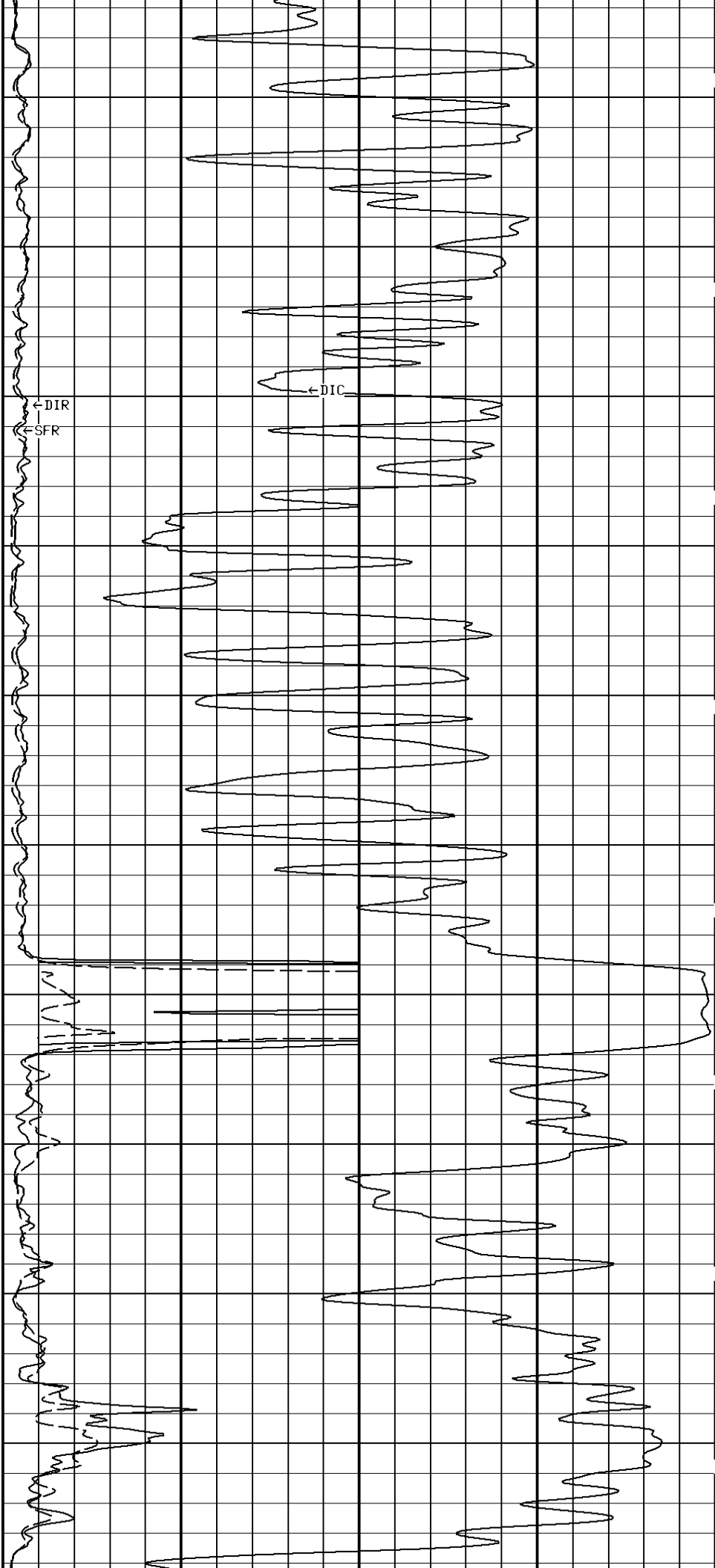
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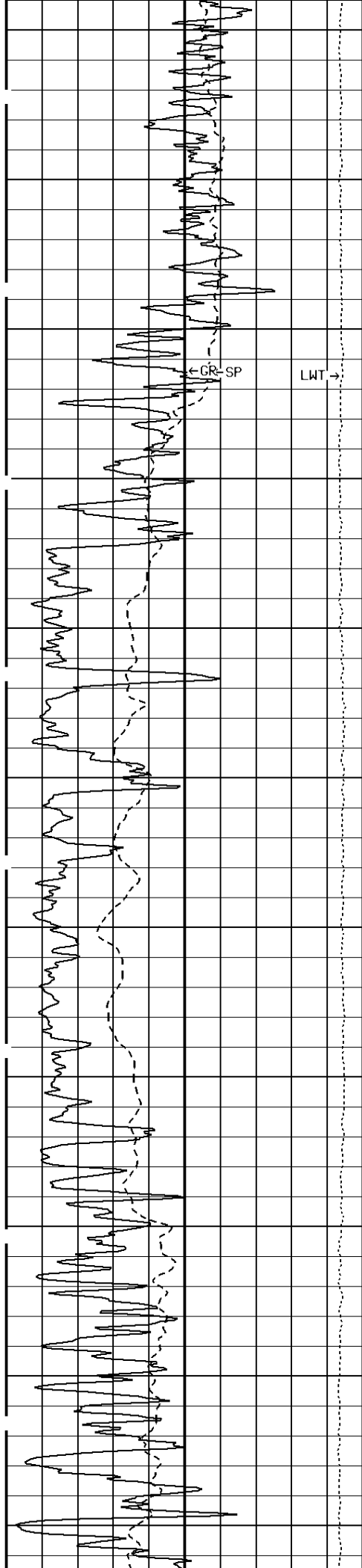
1000

1100

1200

1300





1400

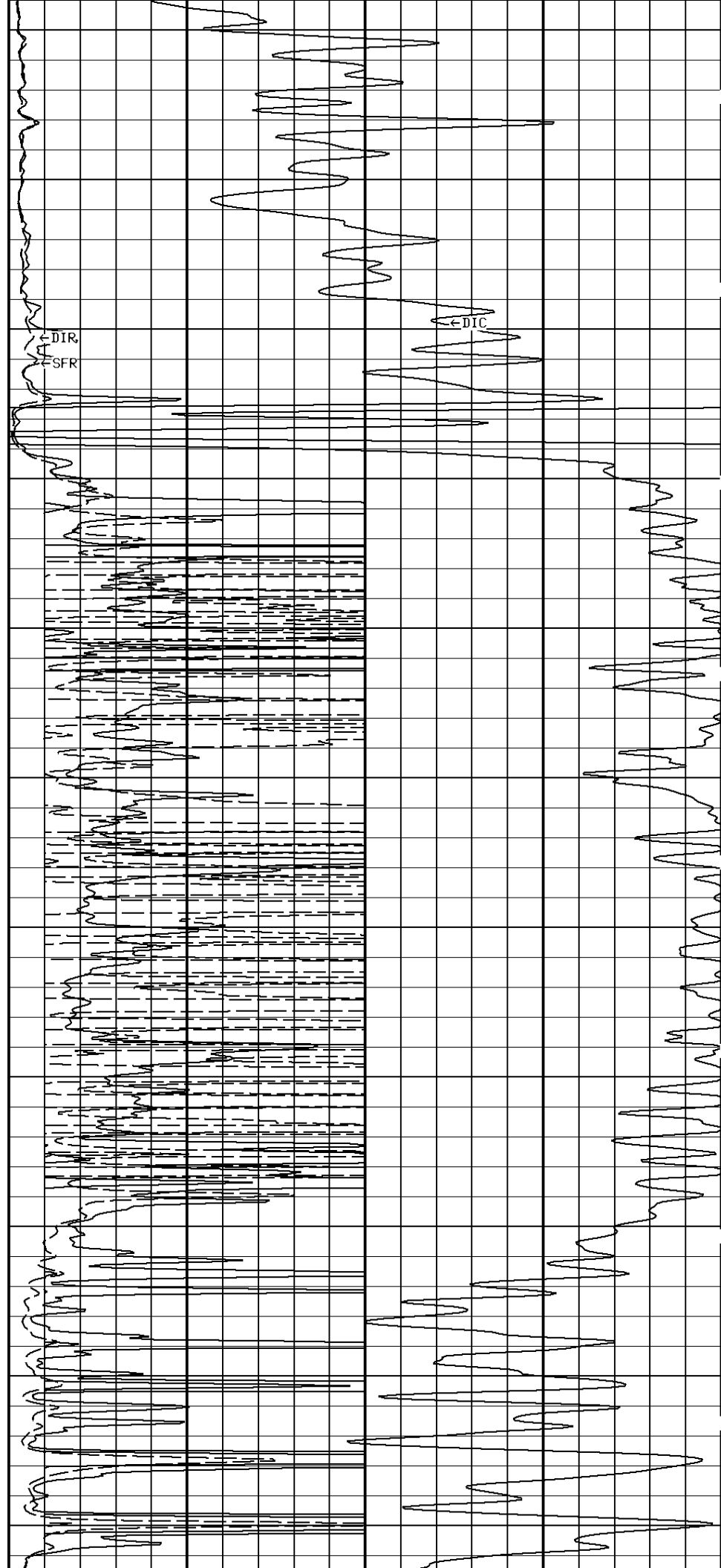
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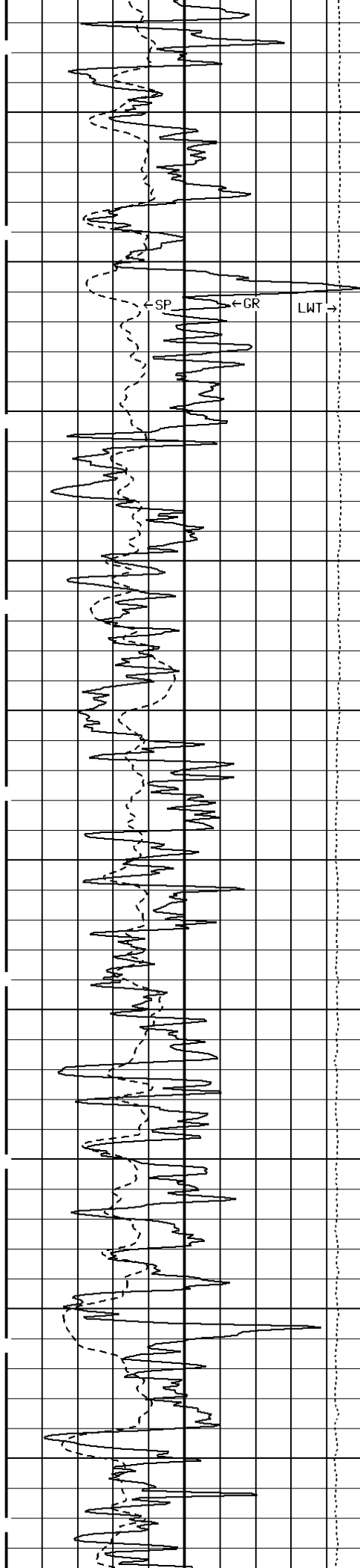
1600

1700

1800

1900





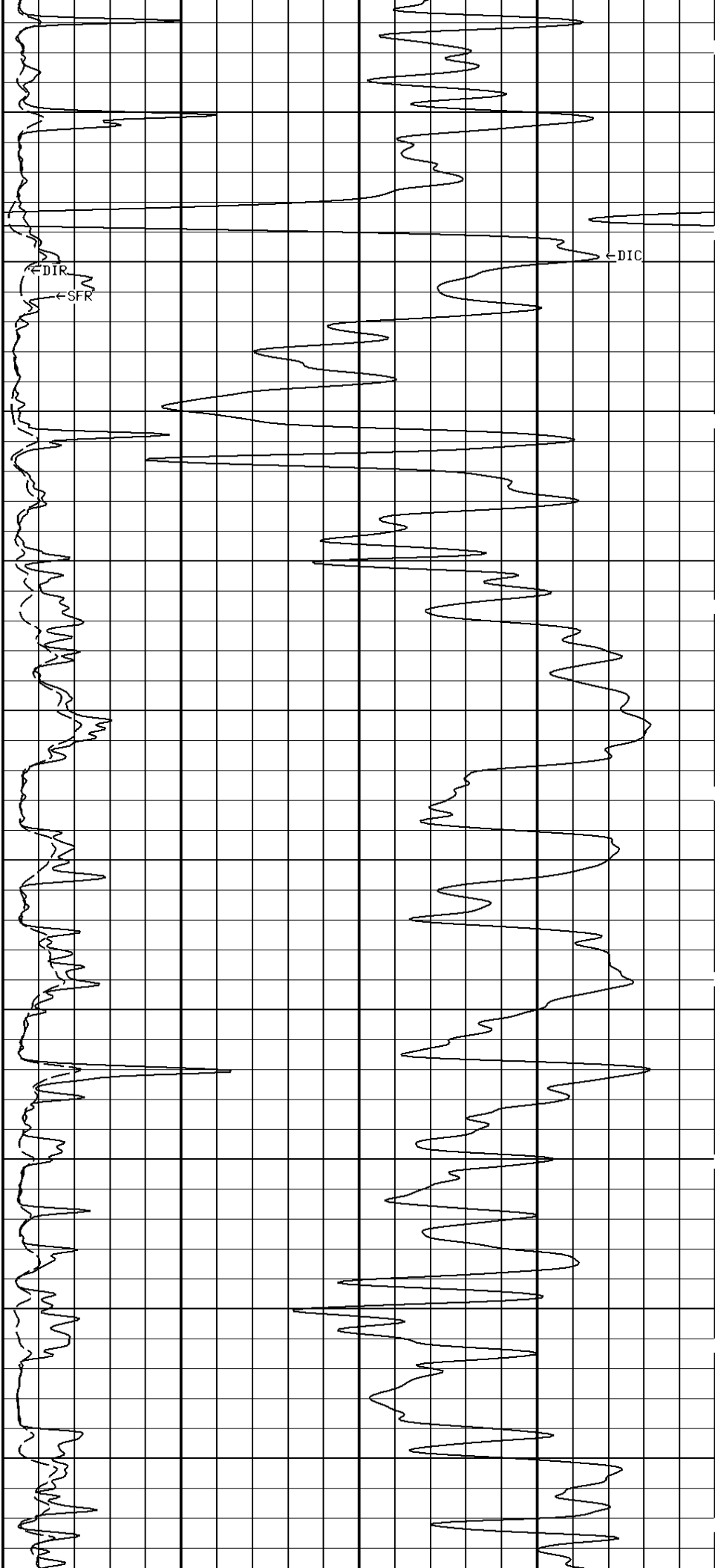
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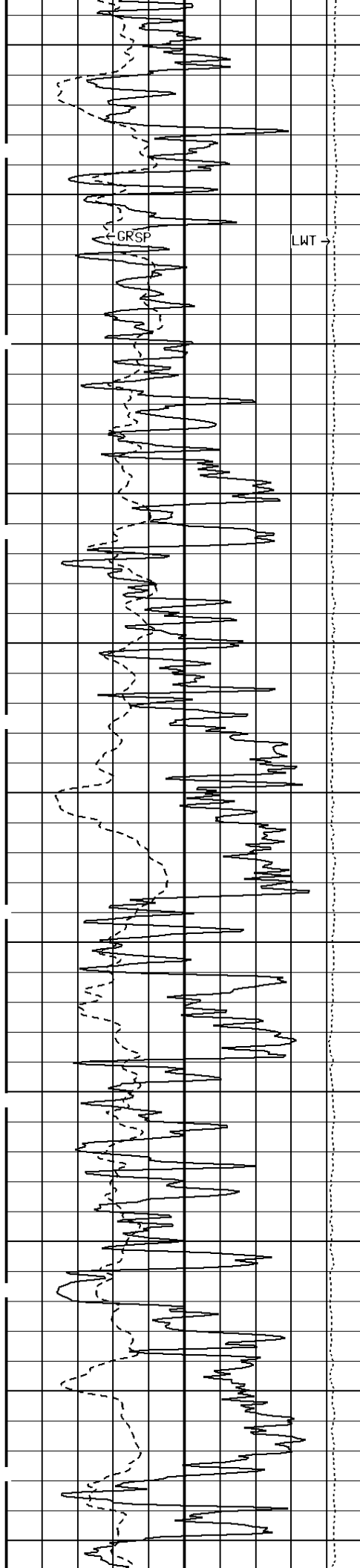
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2200

2300

2400





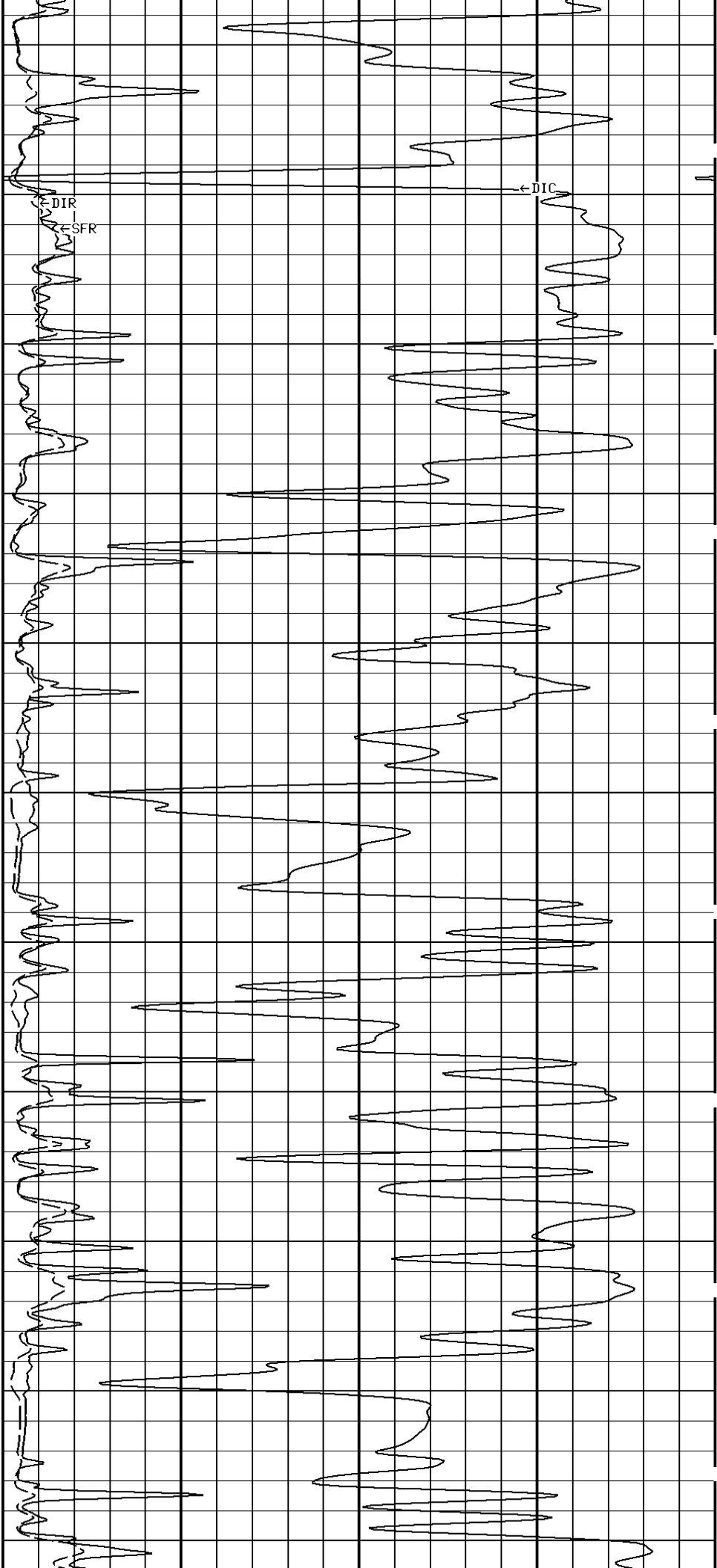
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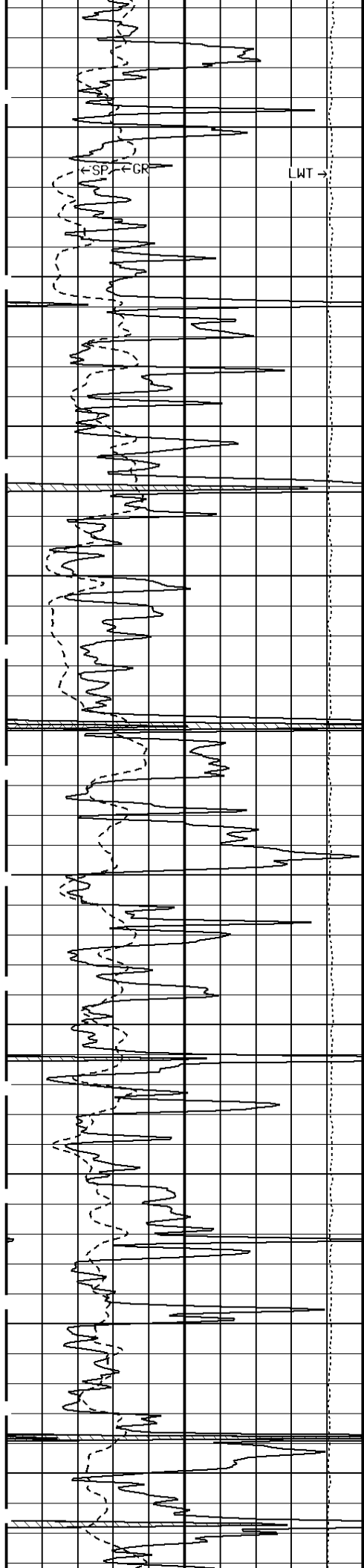
2600

2700

2800

2900





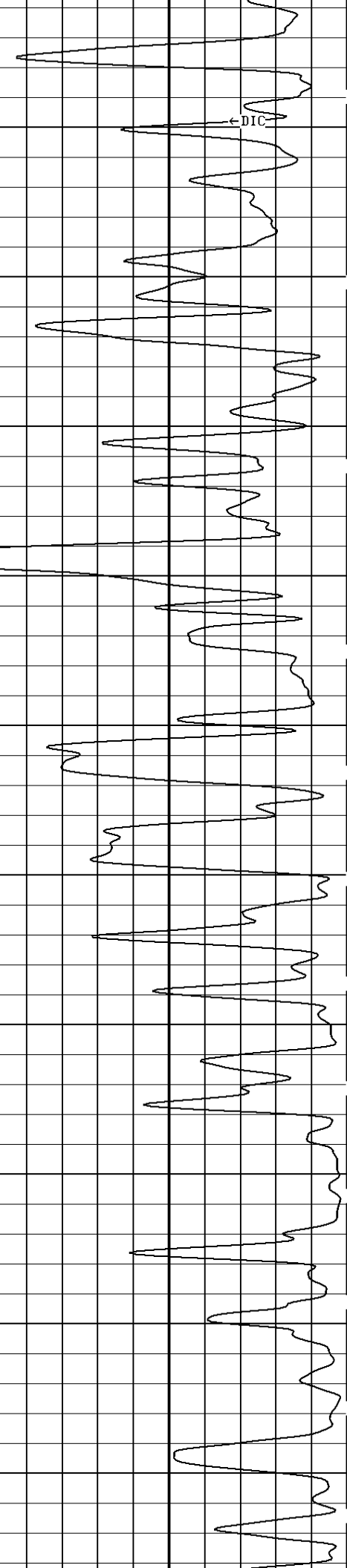
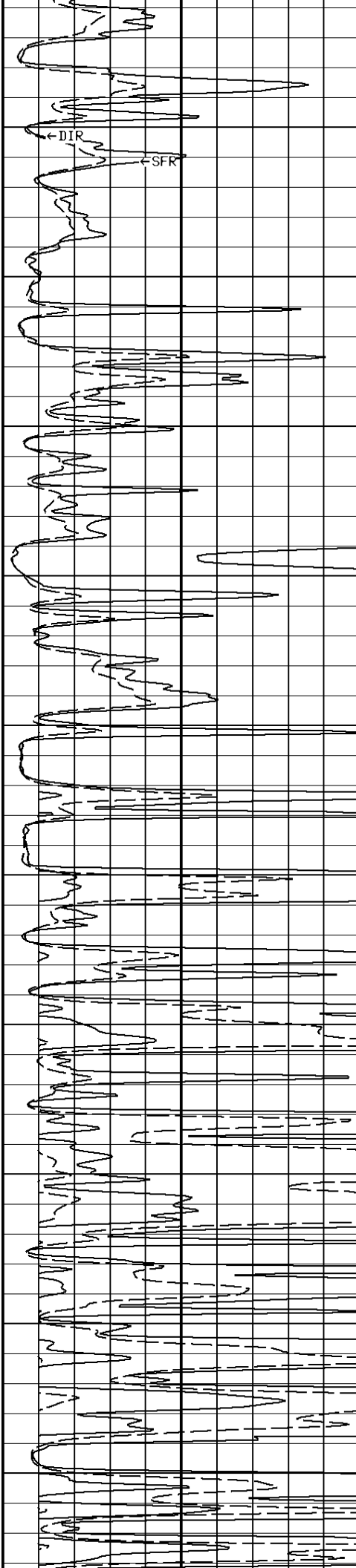
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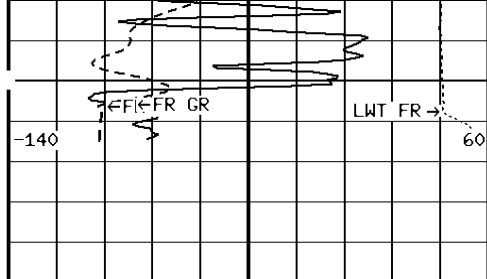
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3200

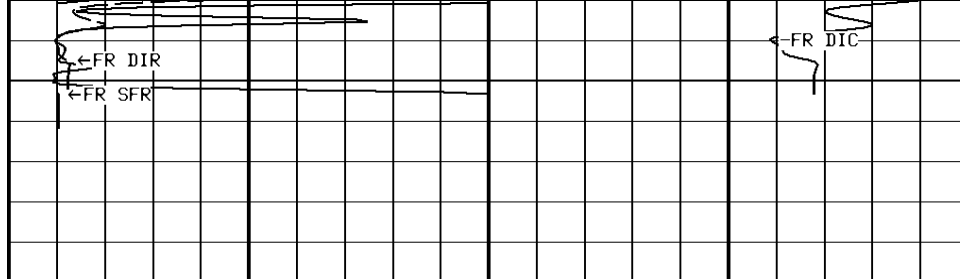
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3400

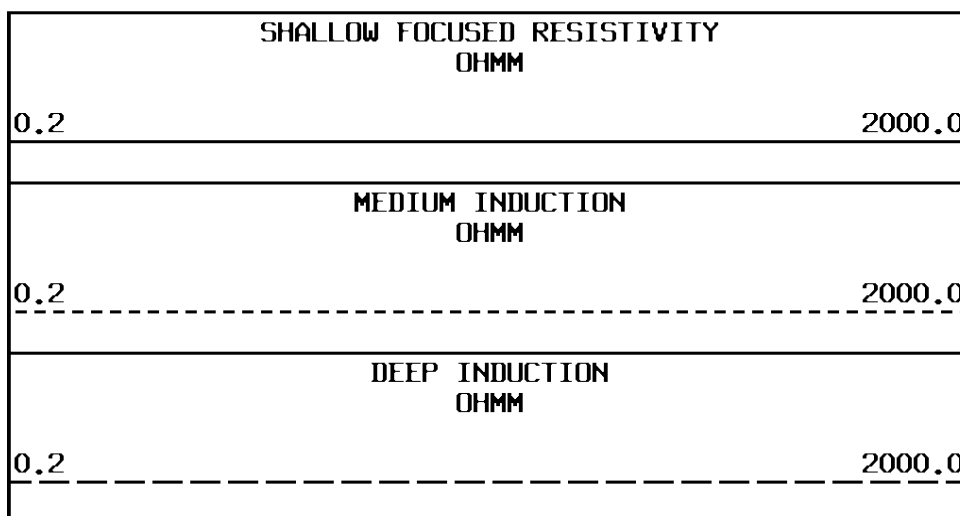
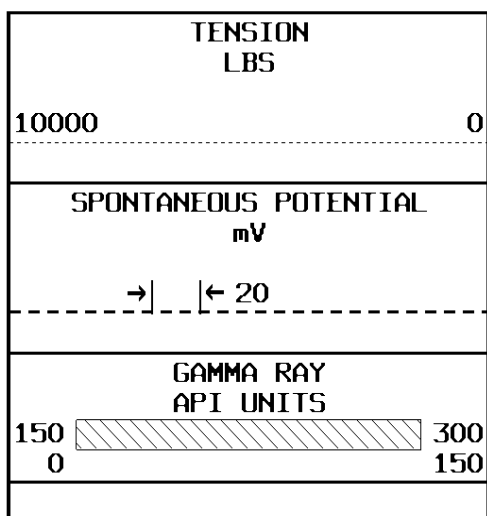
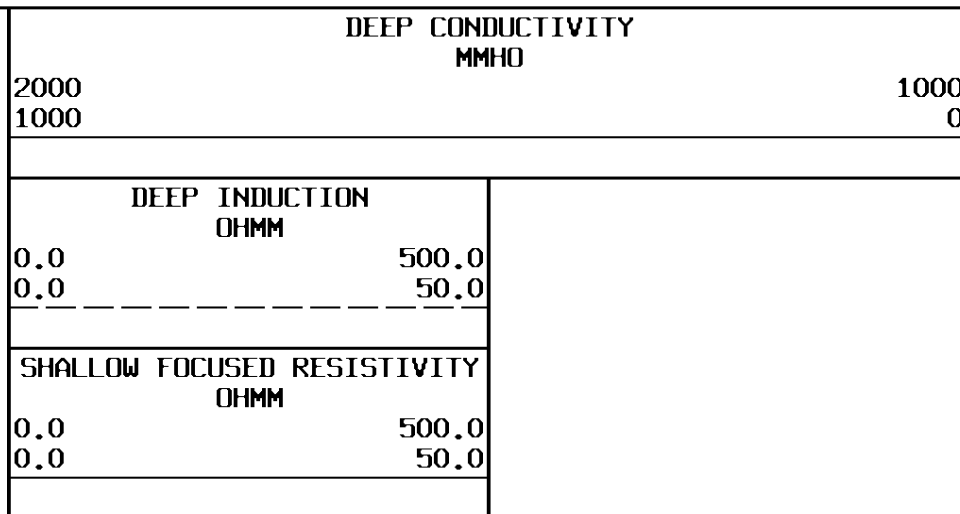
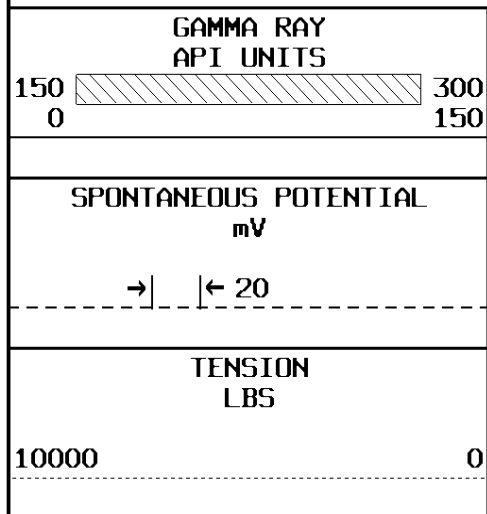




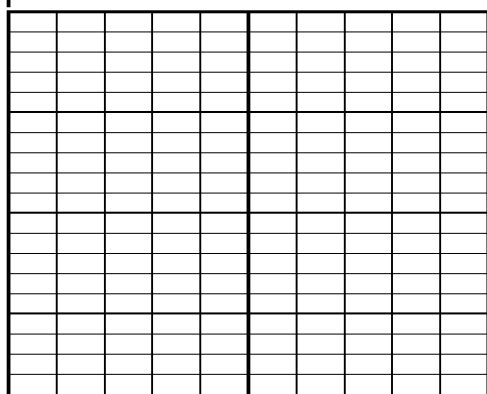
3500
3508



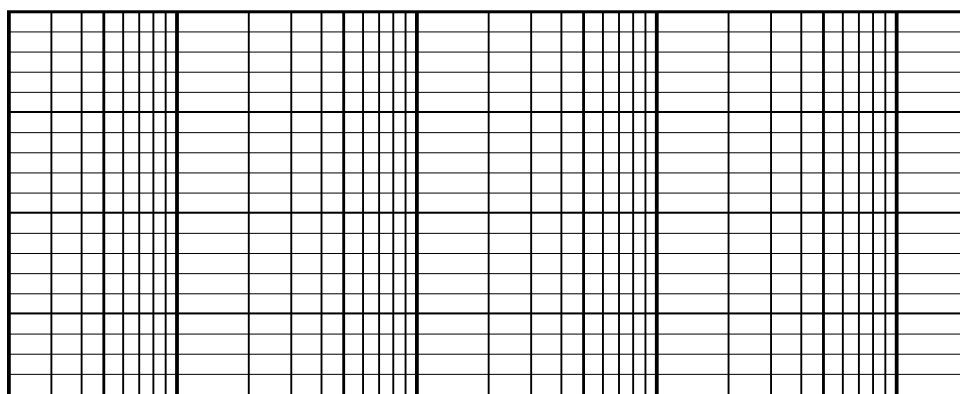
1:600 SECTION
2 INCH

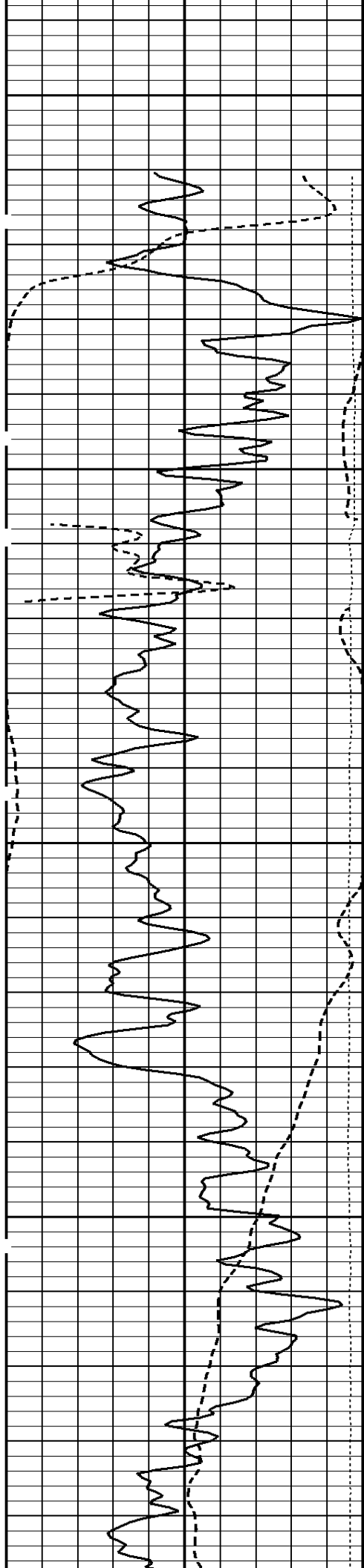


1:240 MAIN SECTION



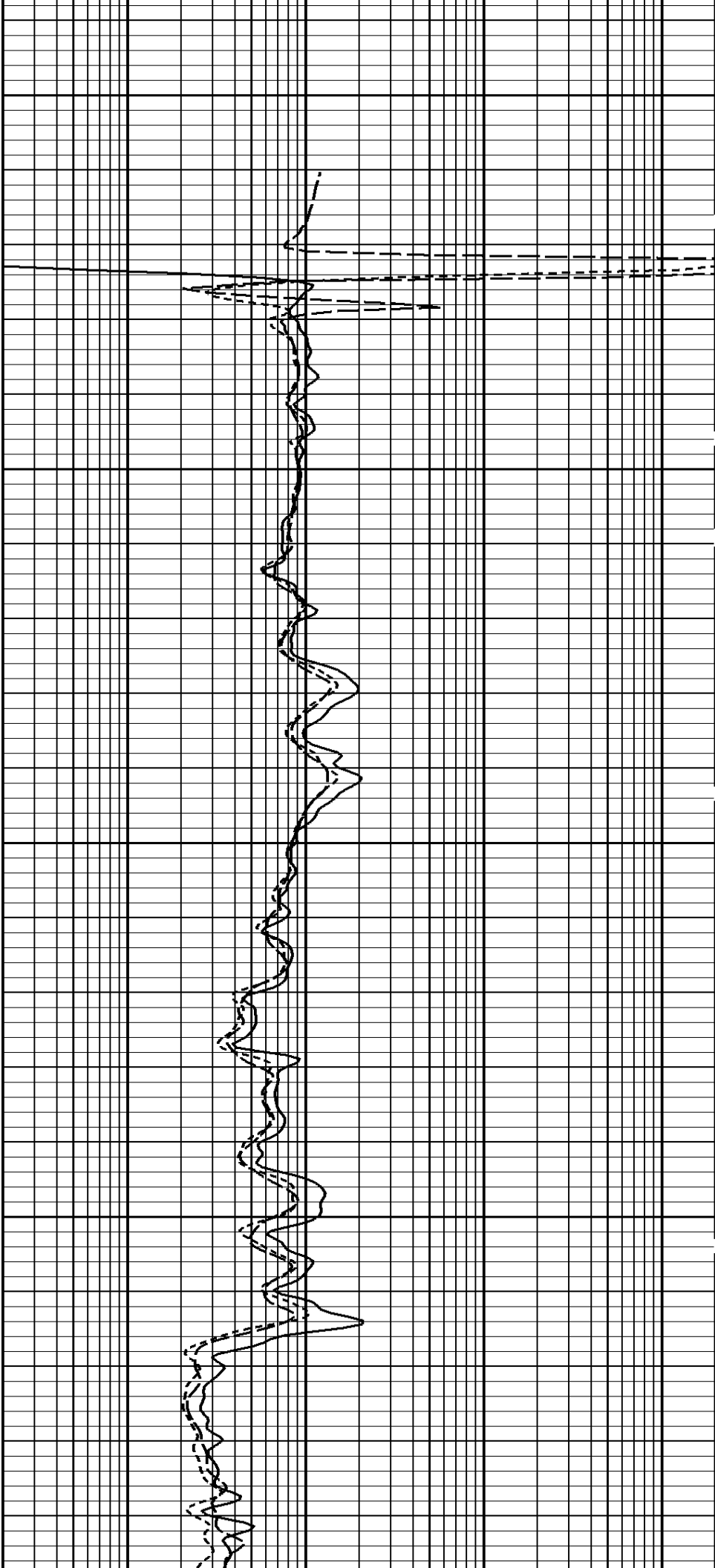
File #711

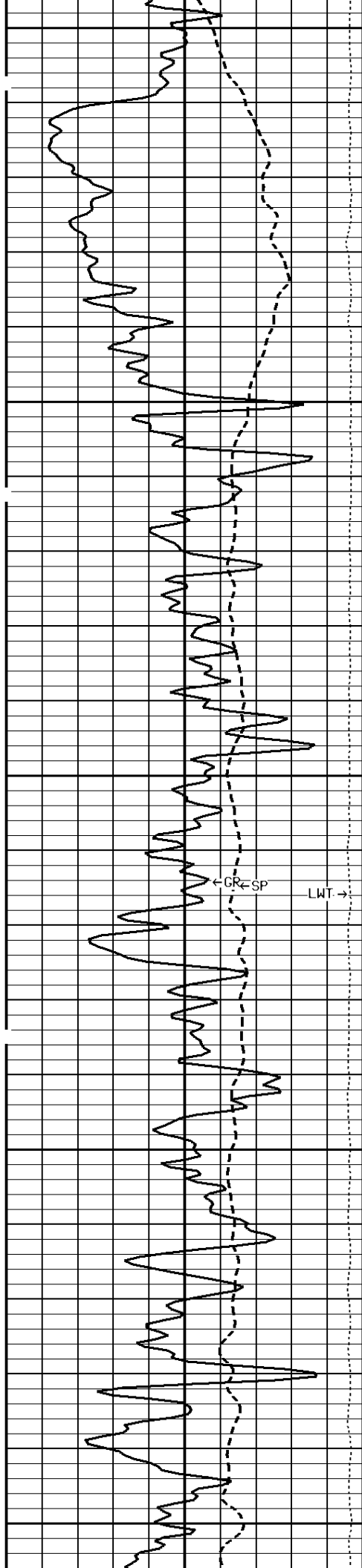




200

300

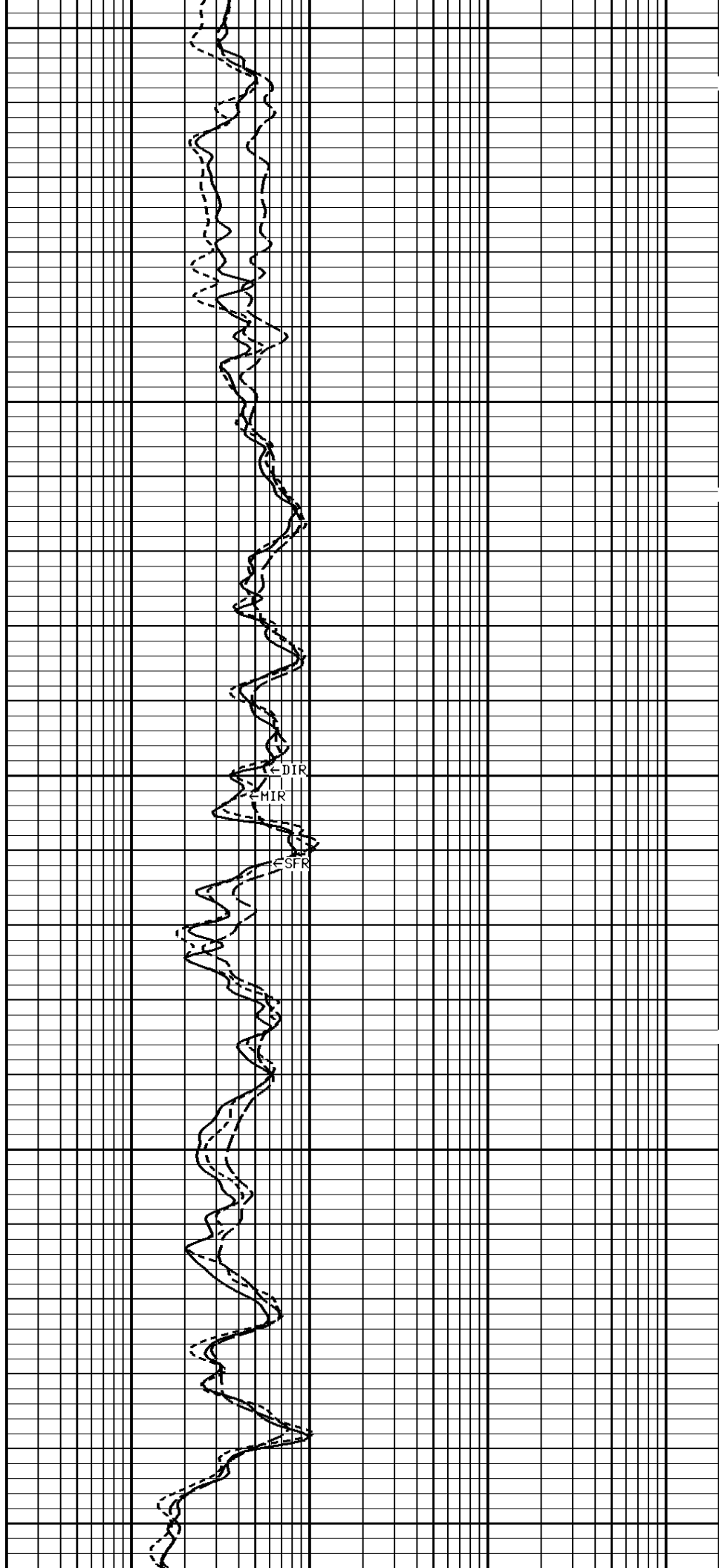


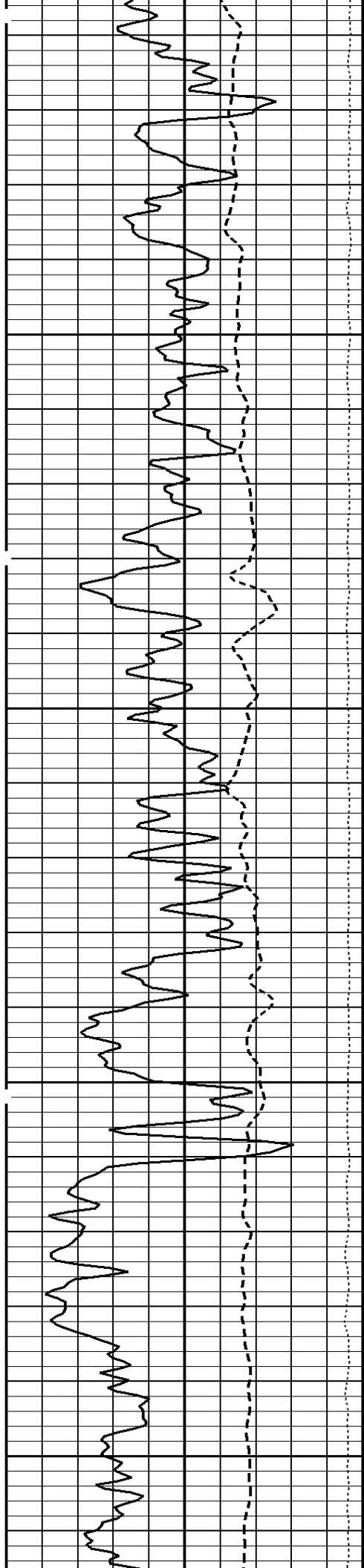


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500

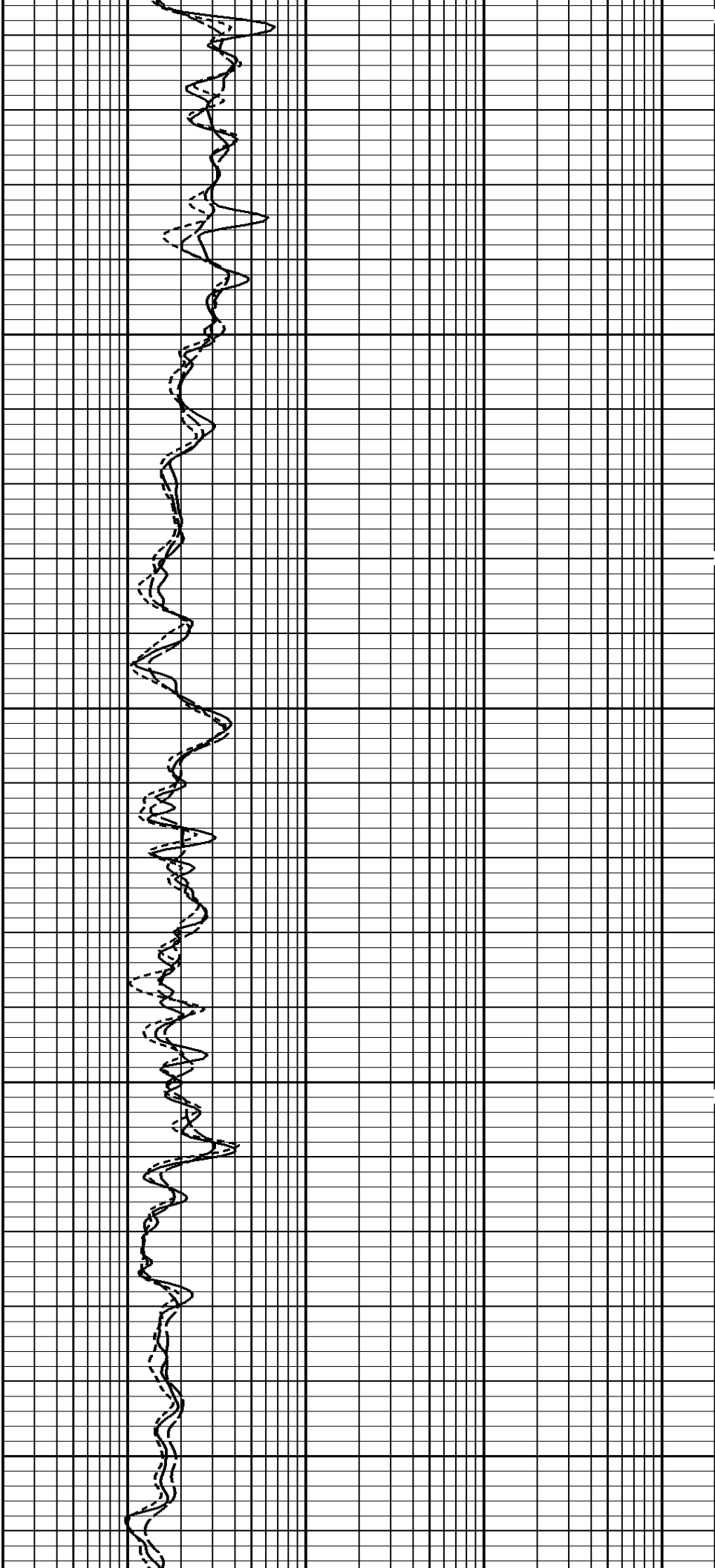
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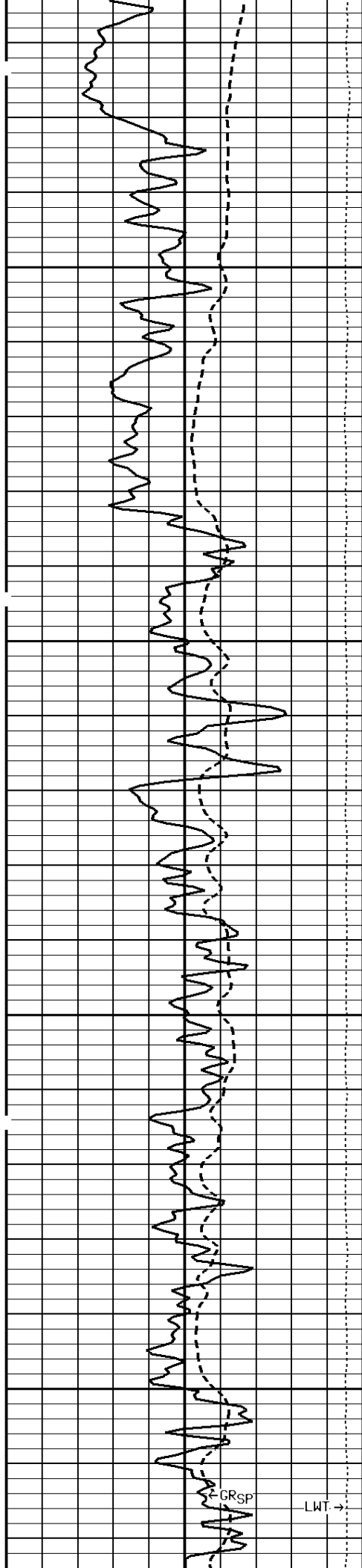




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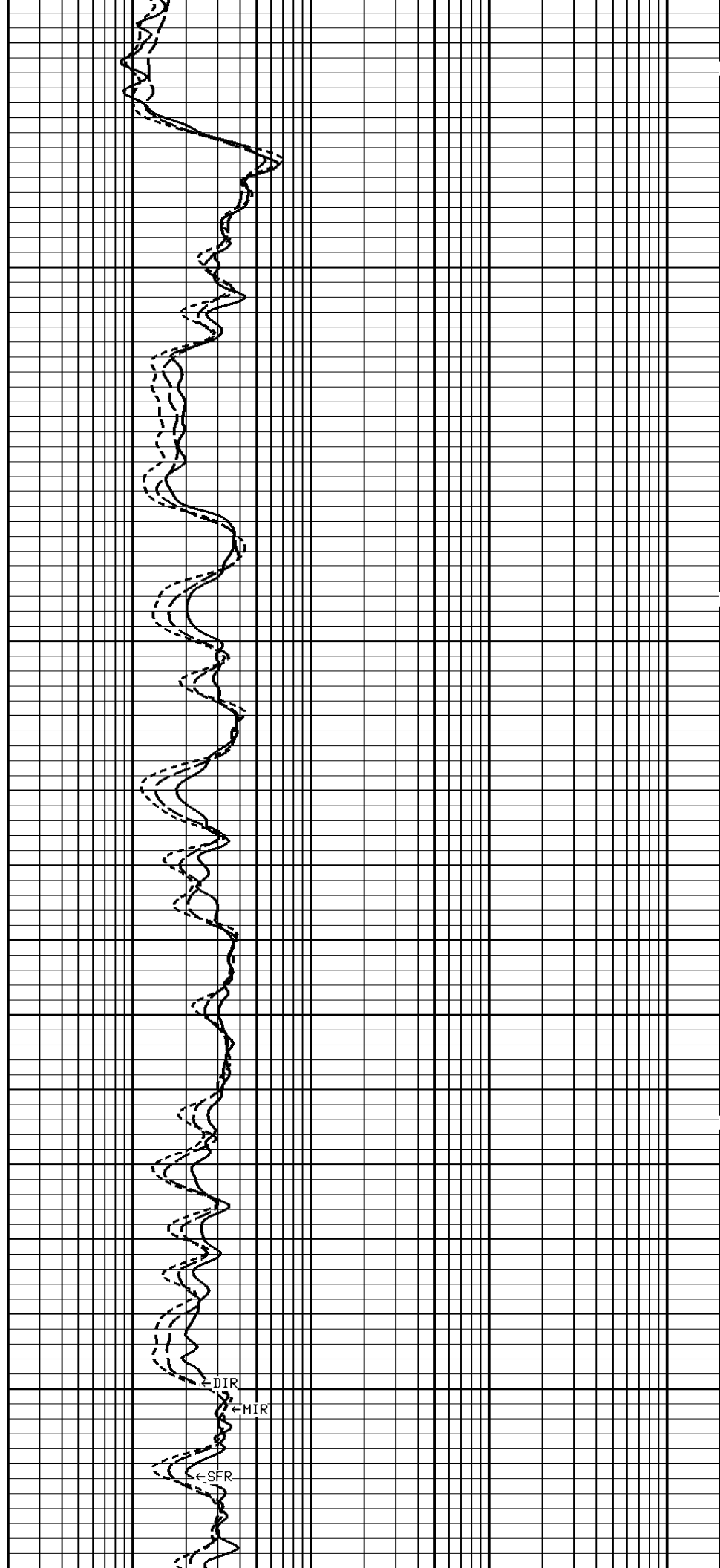
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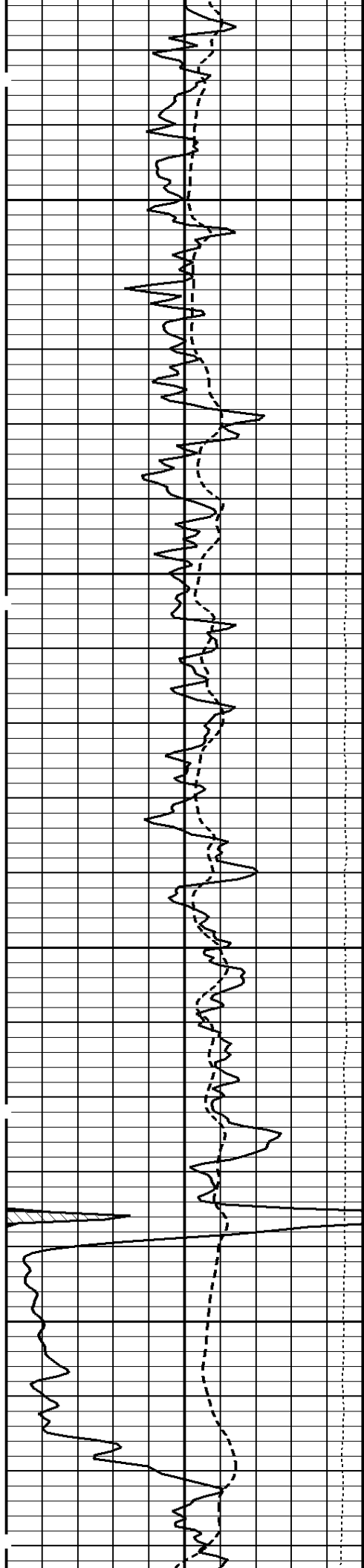




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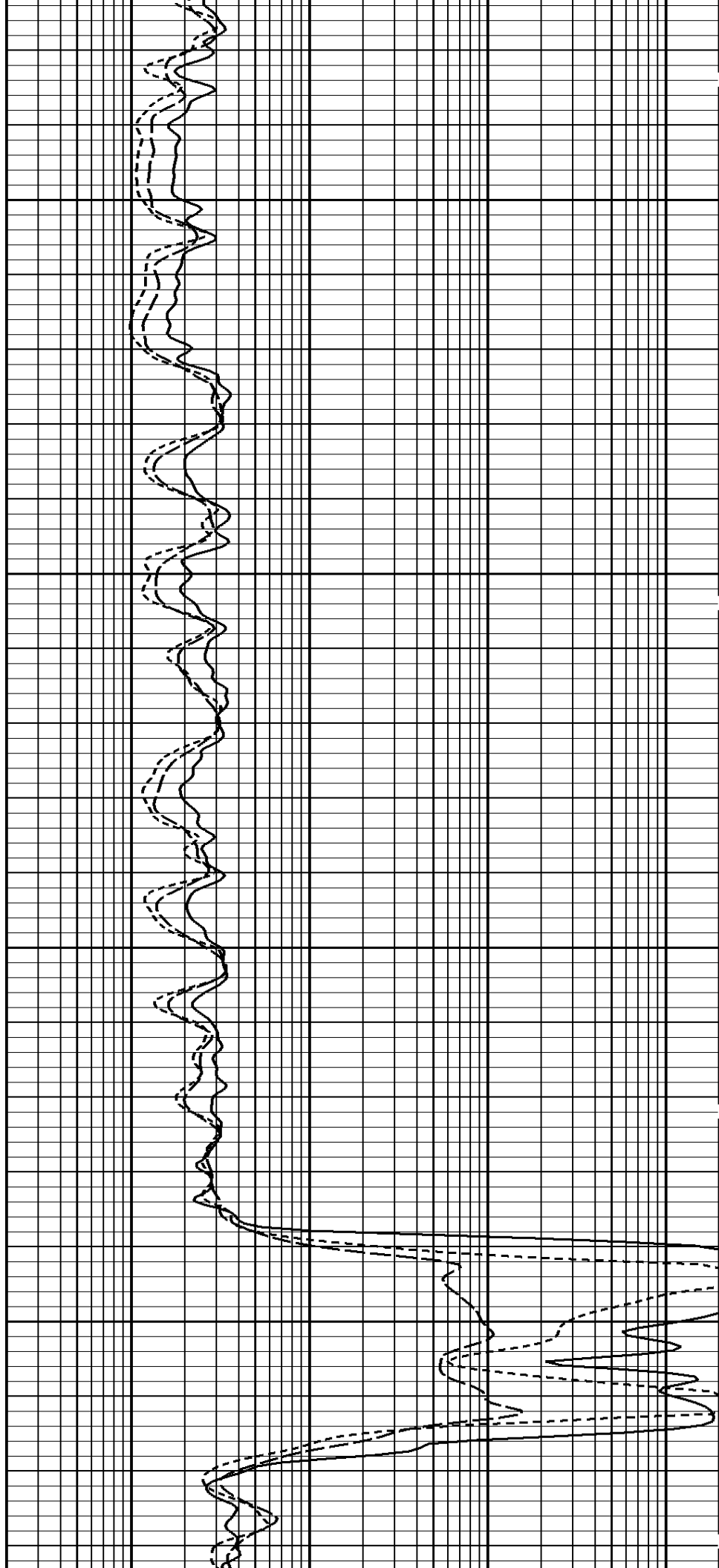
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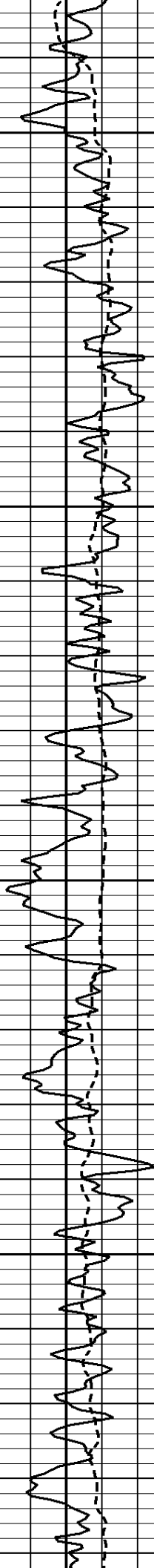




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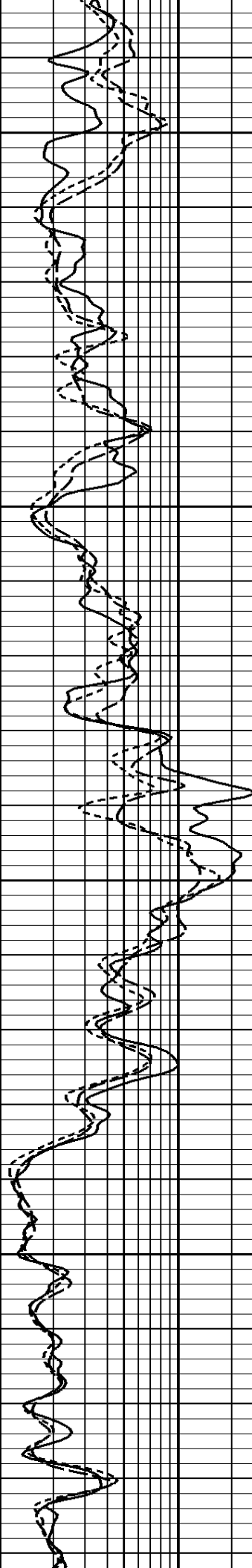
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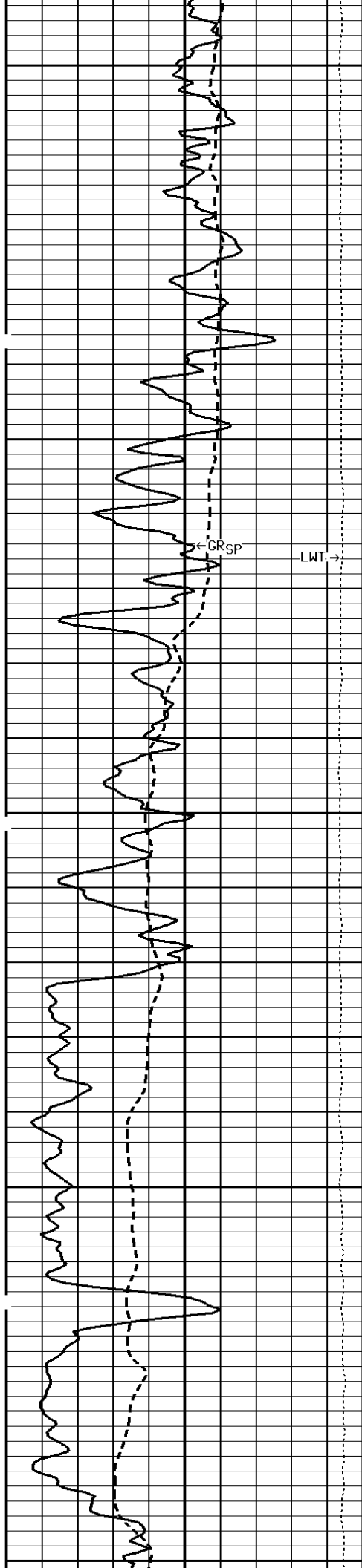




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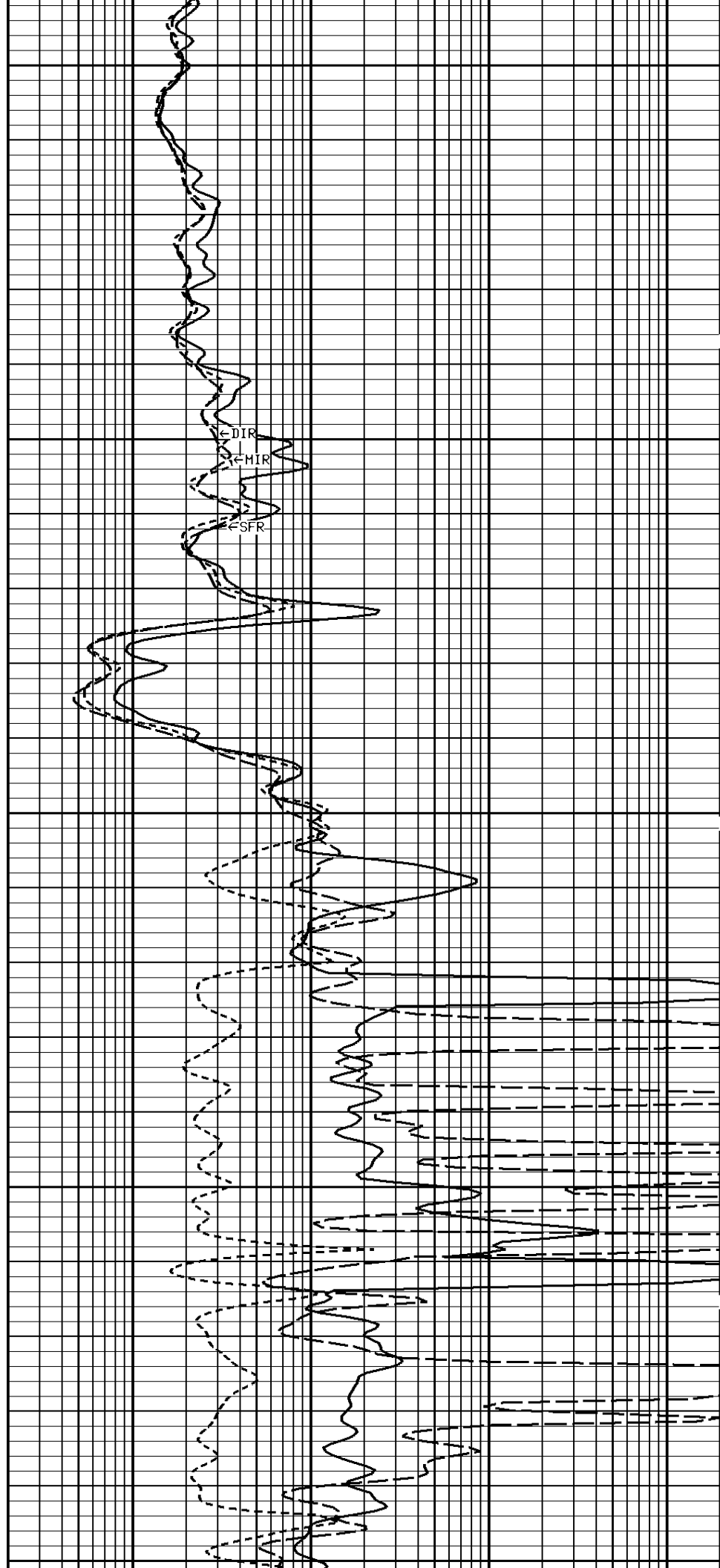
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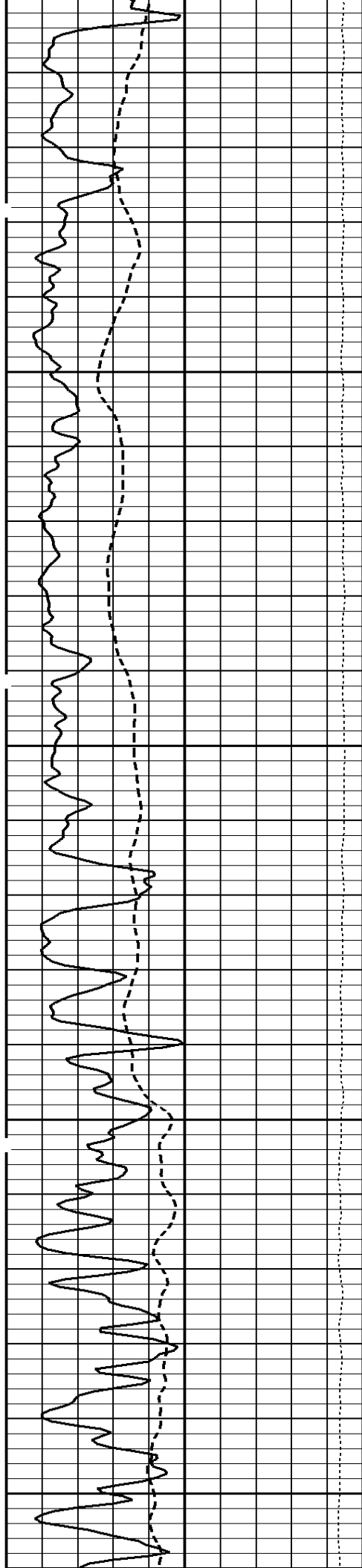




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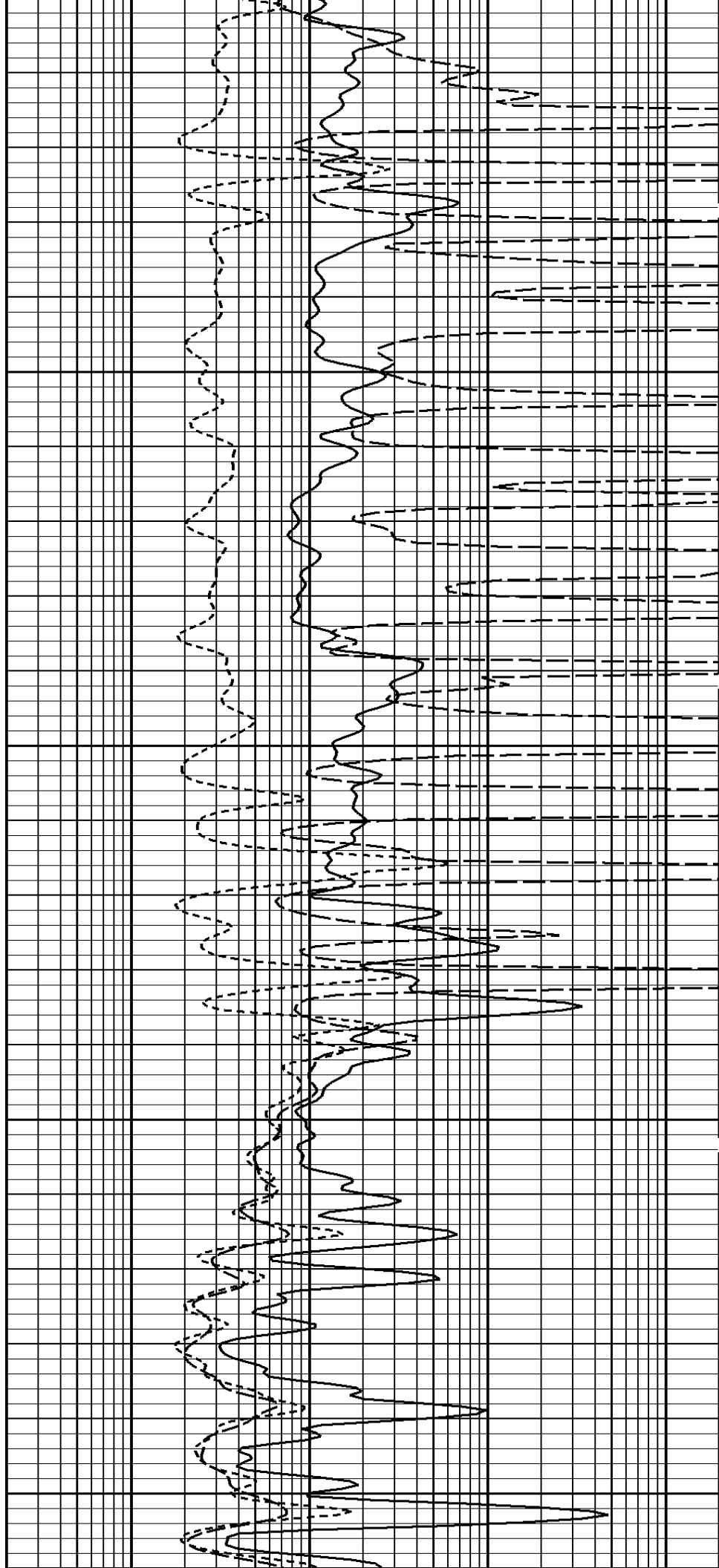
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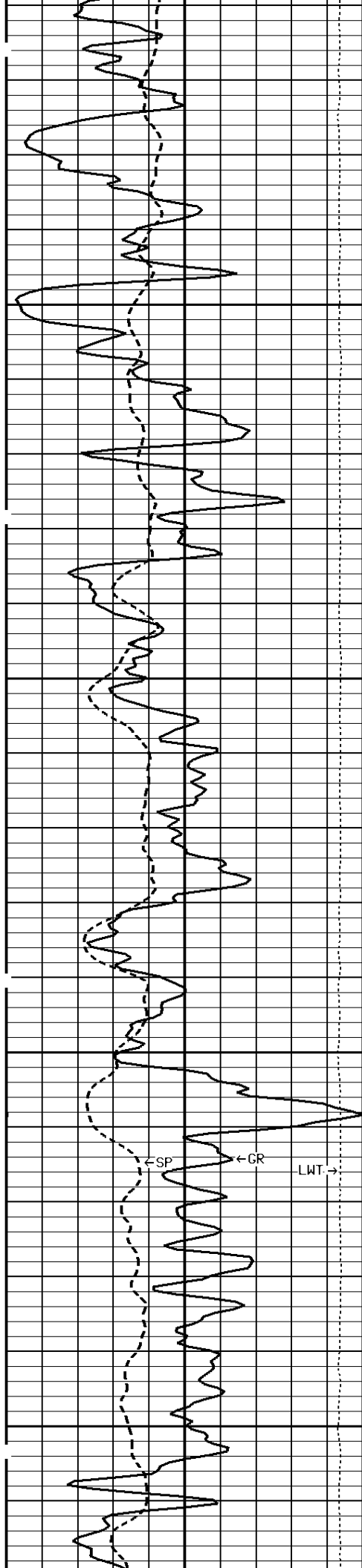




1700

1800





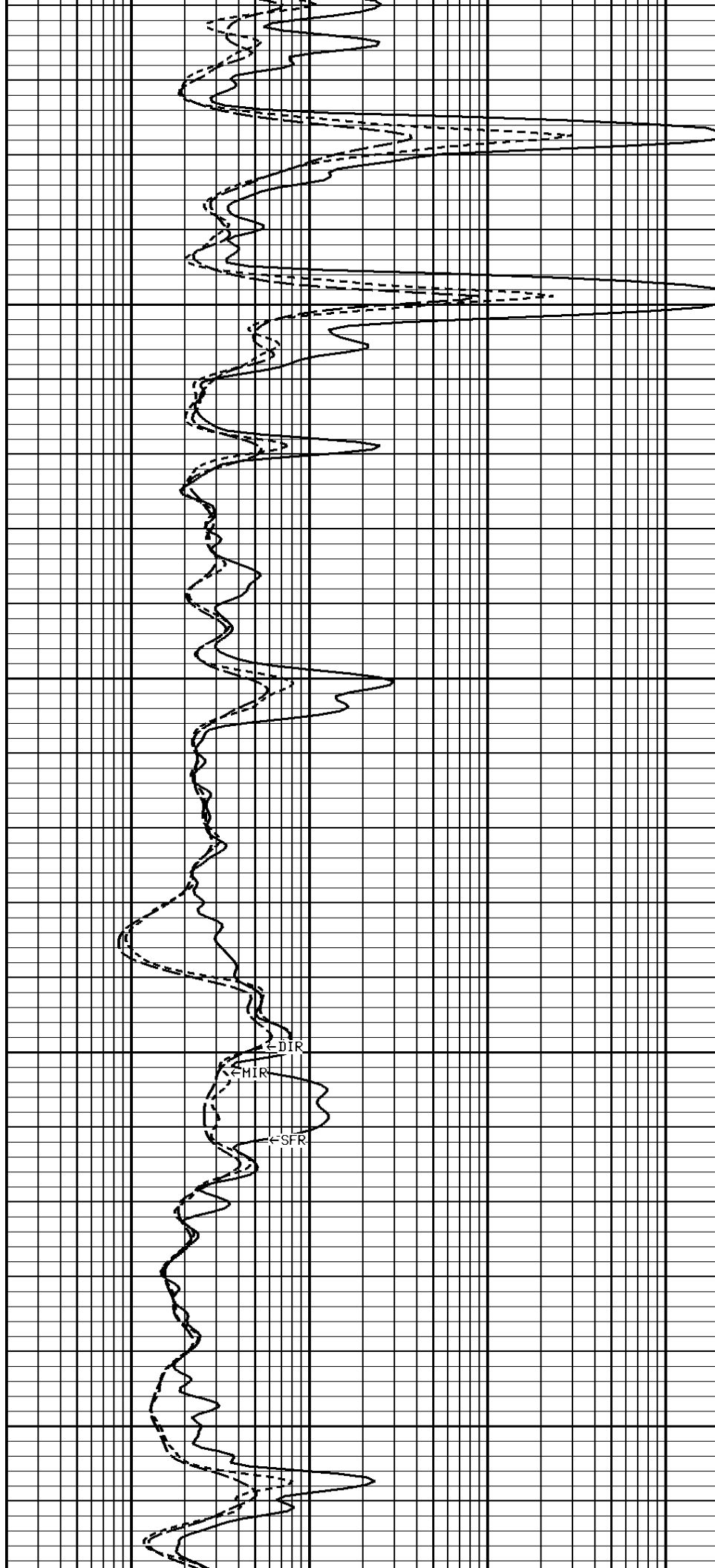
1900

2000

← SP

← GR

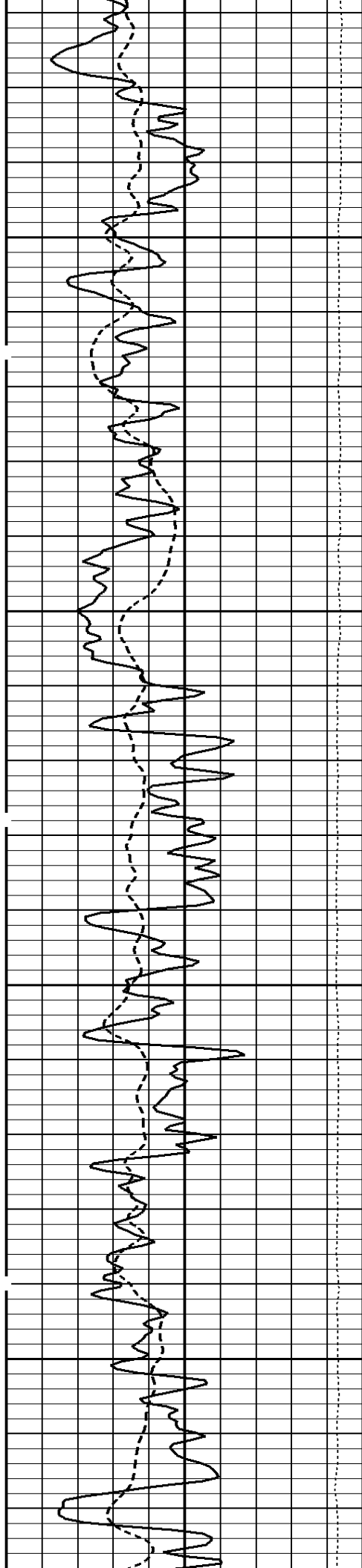
LWT →



← MIR

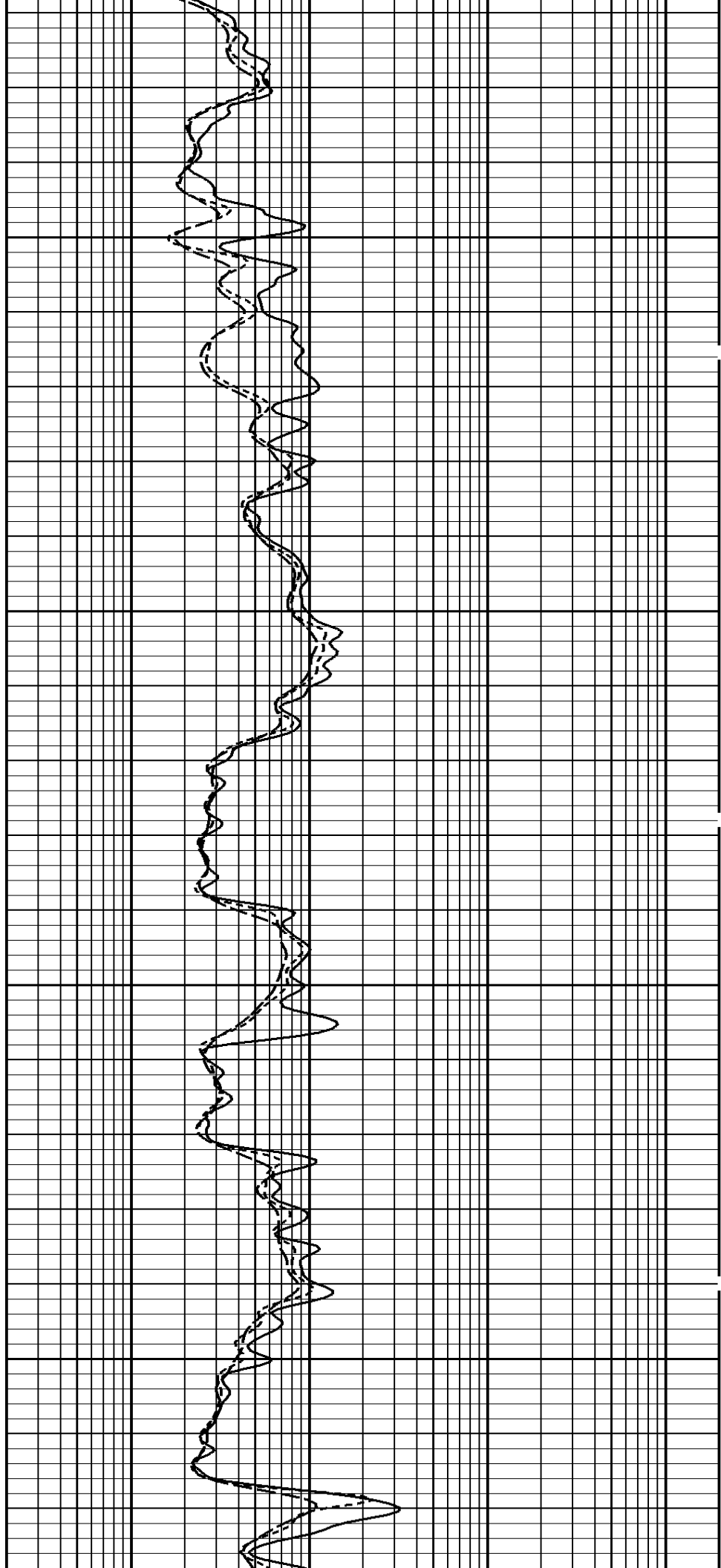
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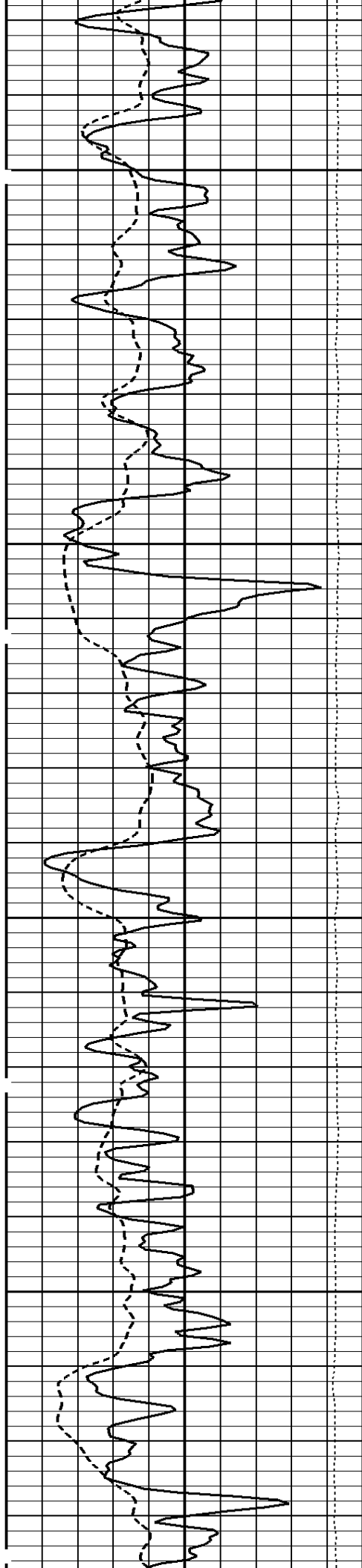
← SFR



2100

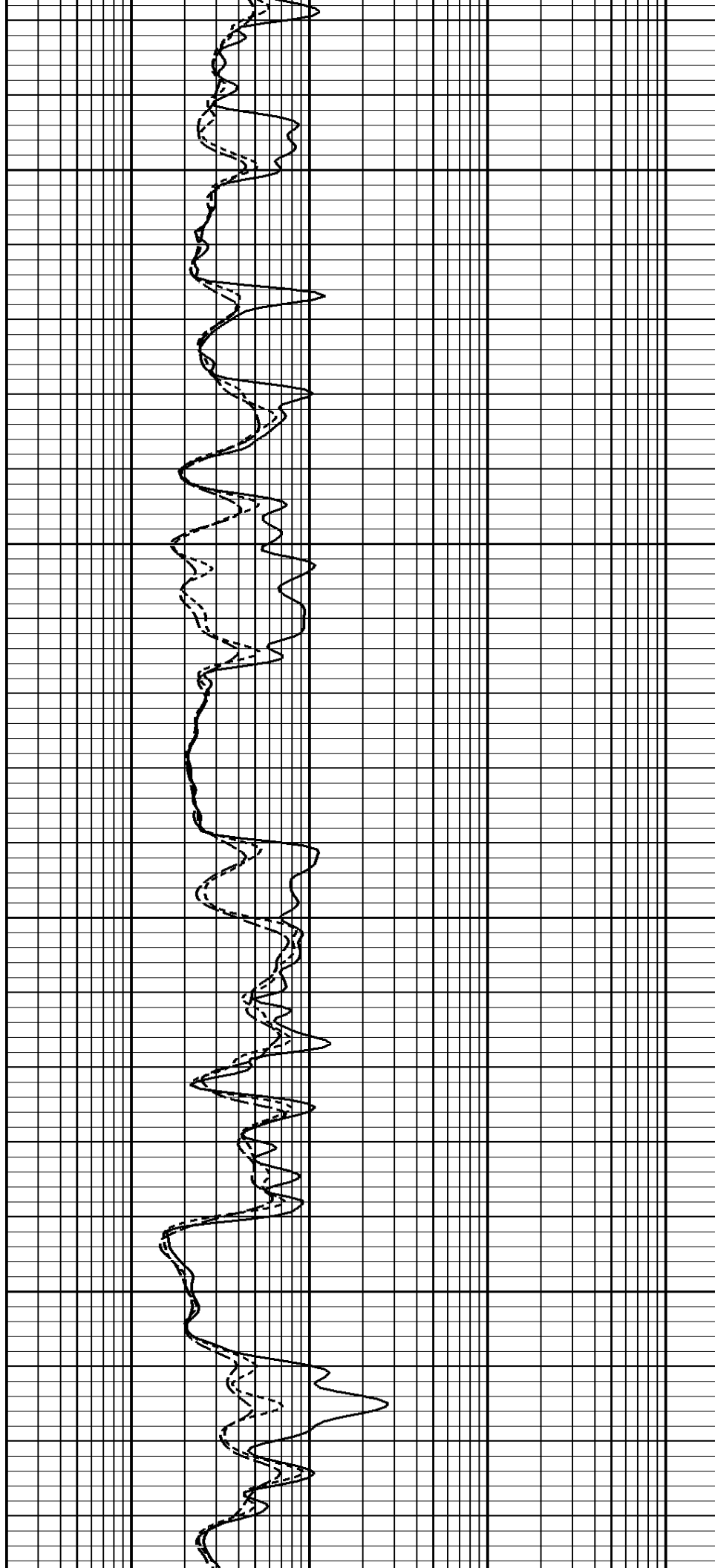
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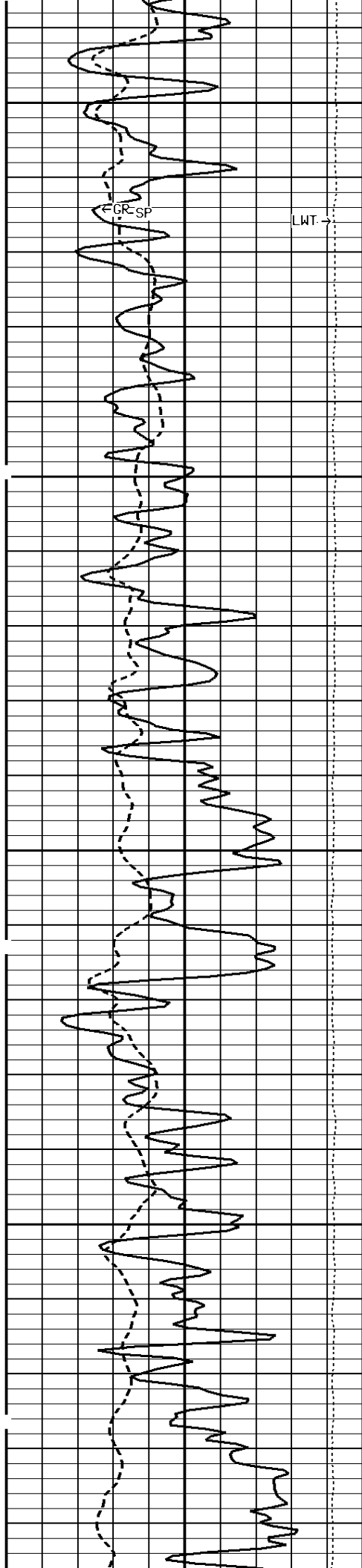




2300

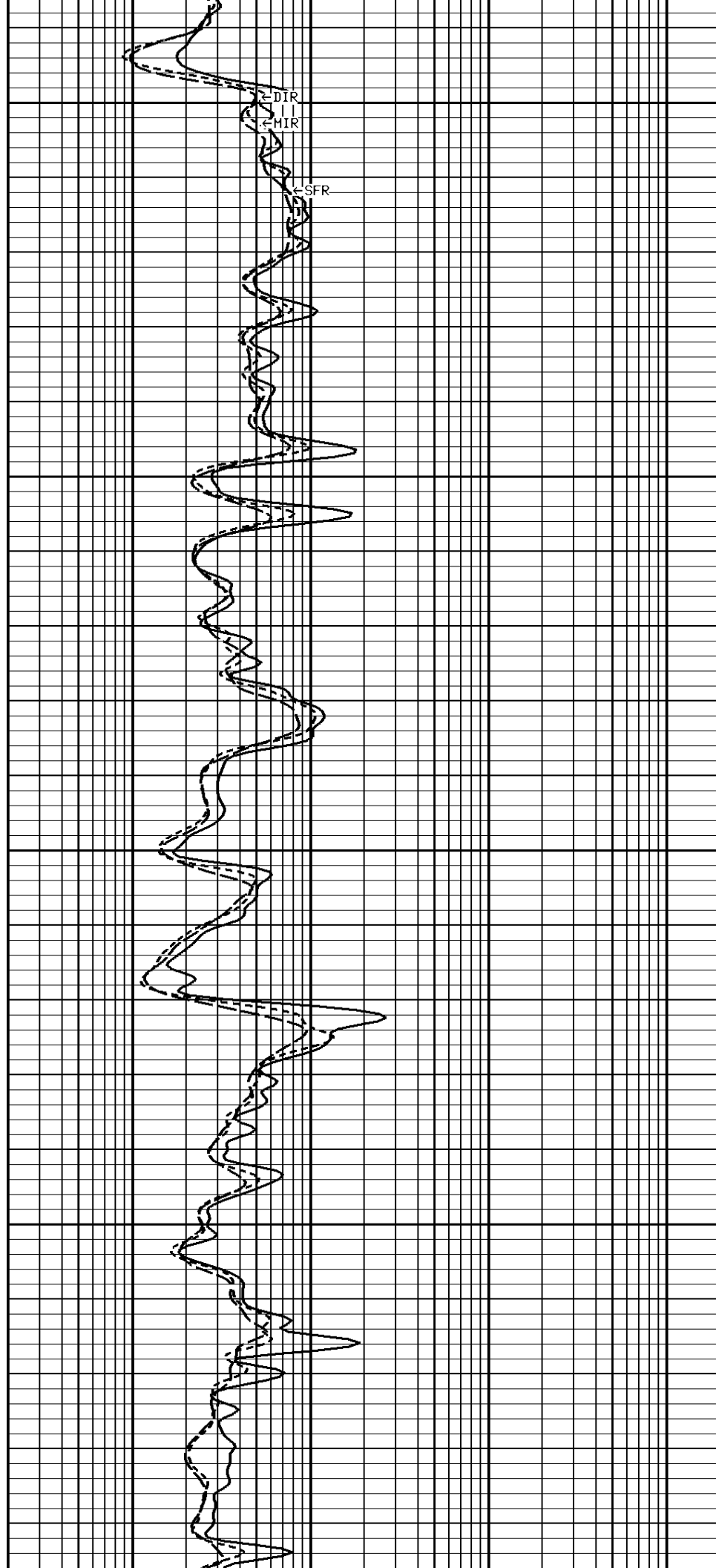
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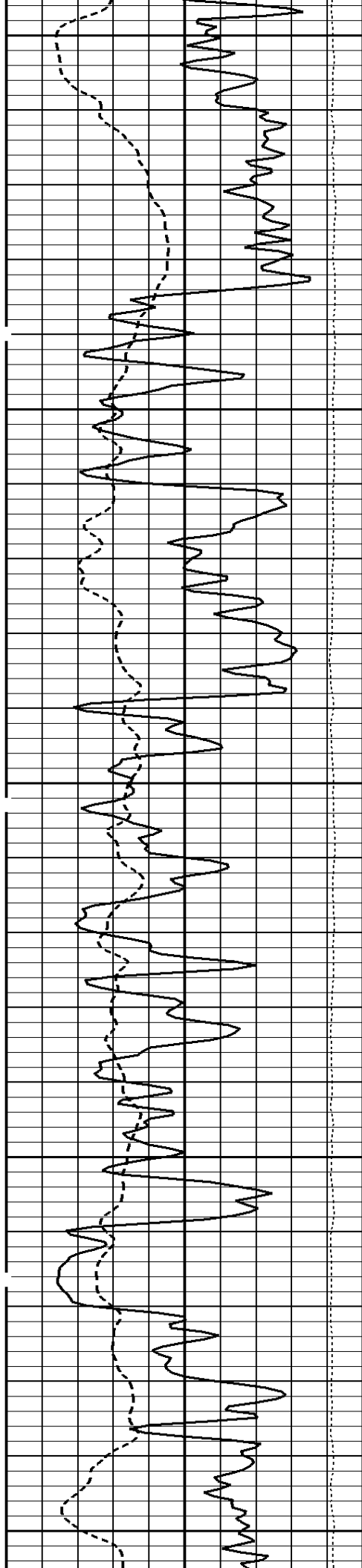




2500

2600

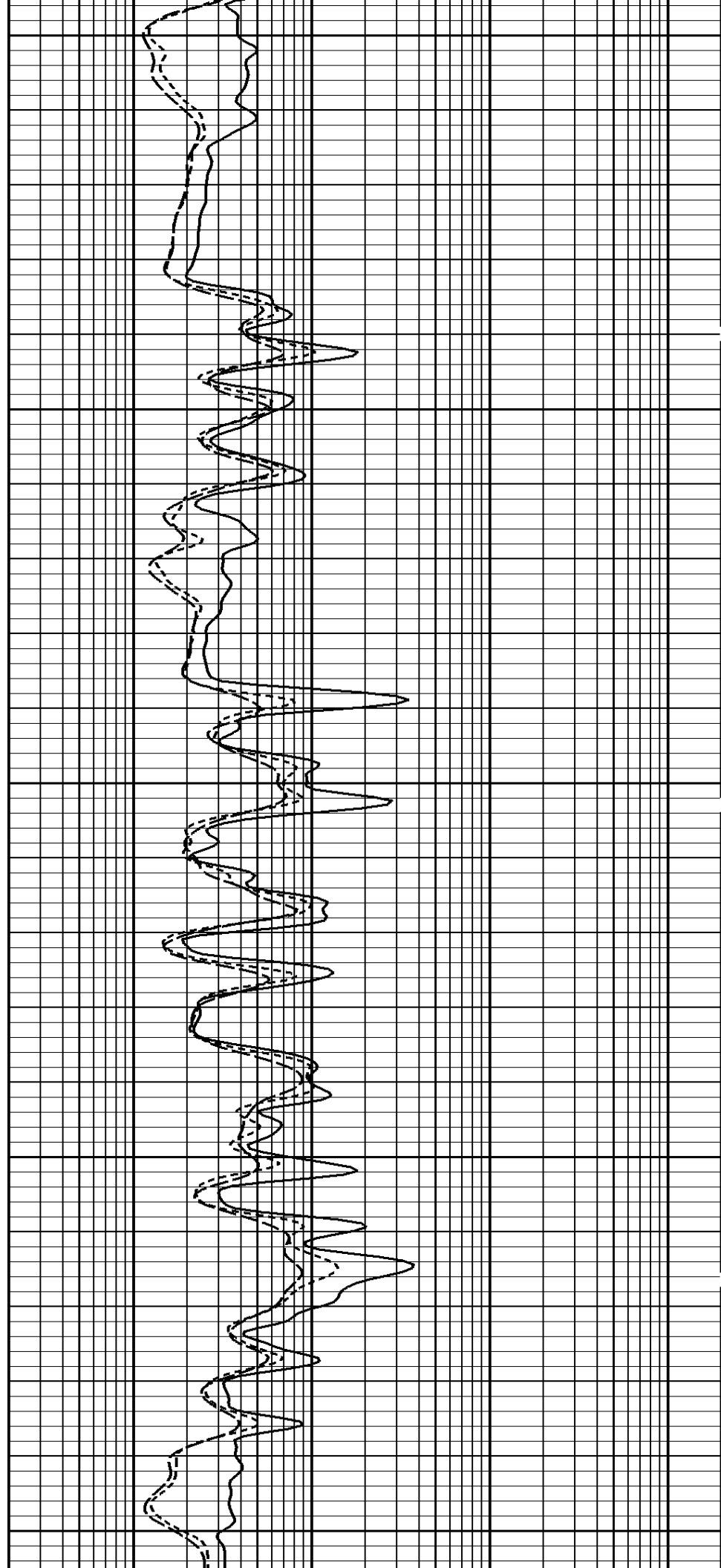


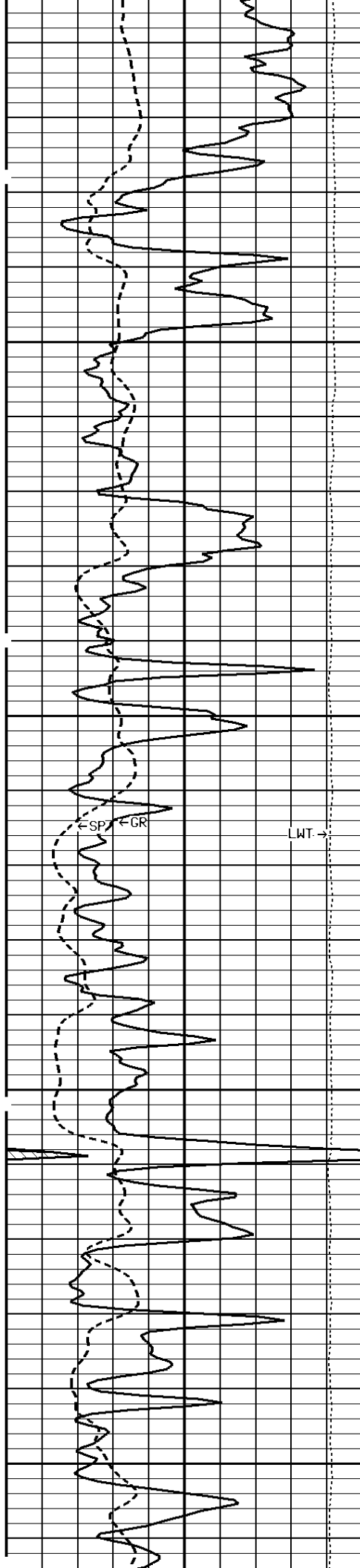


2700

2800

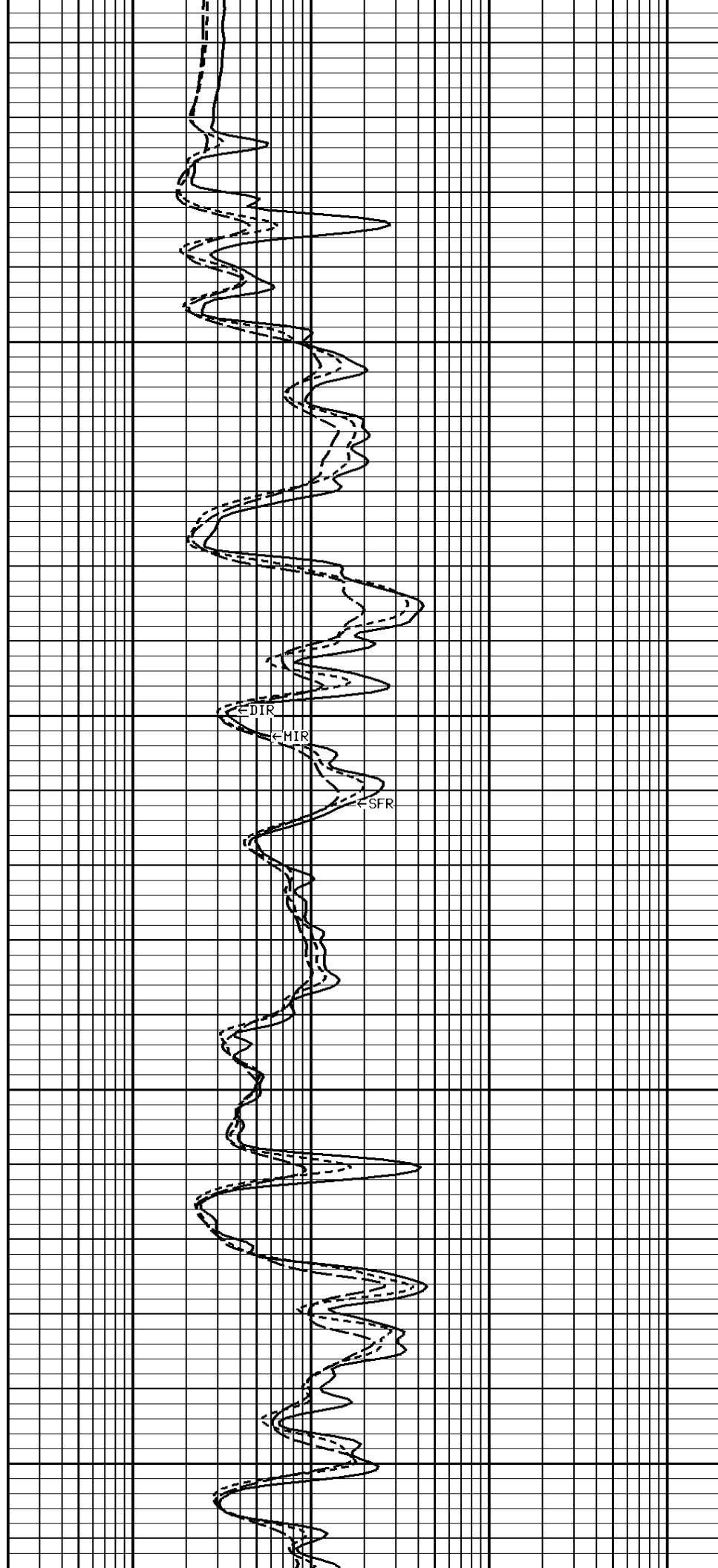
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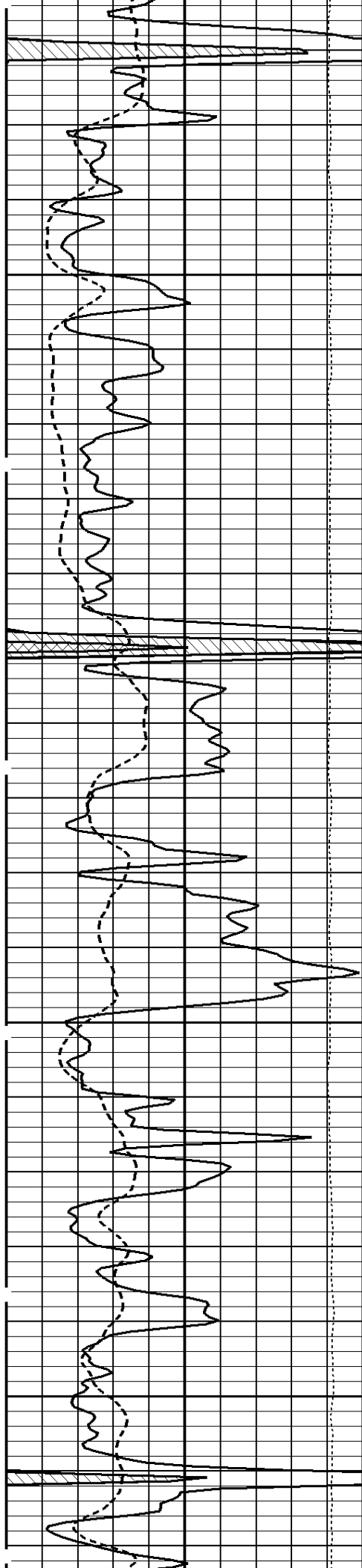




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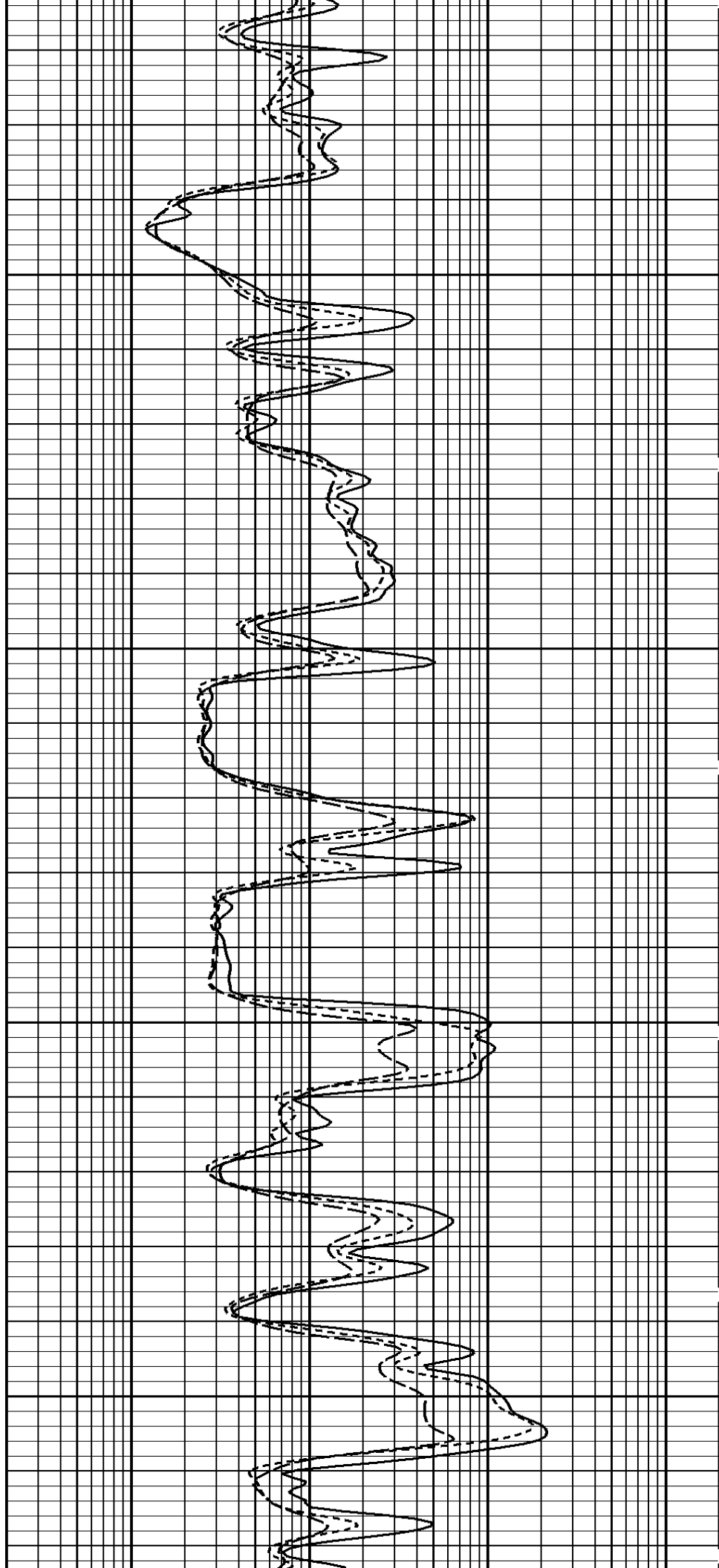
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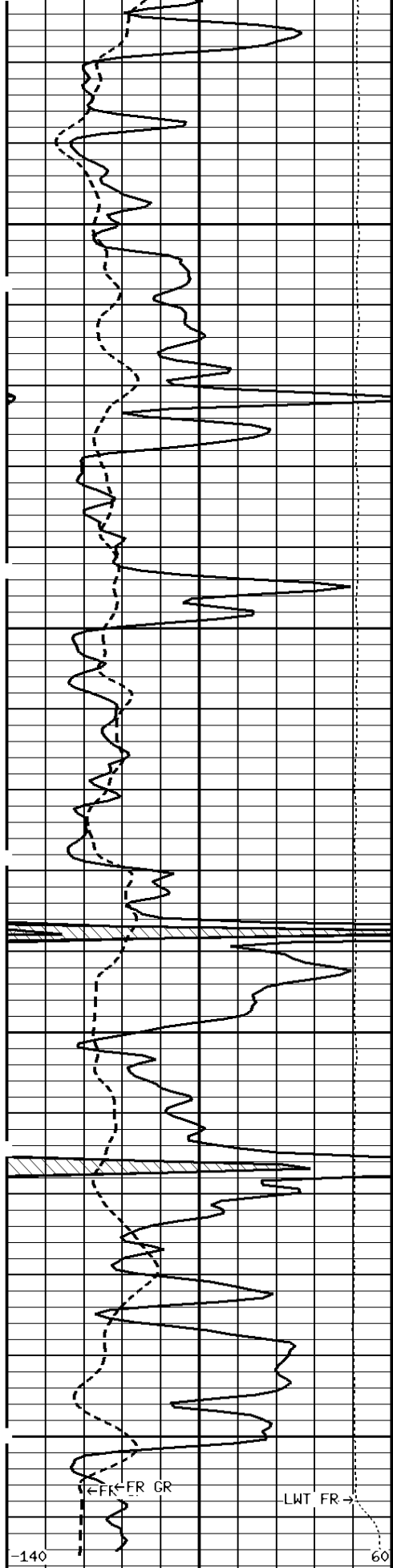




3200

3300

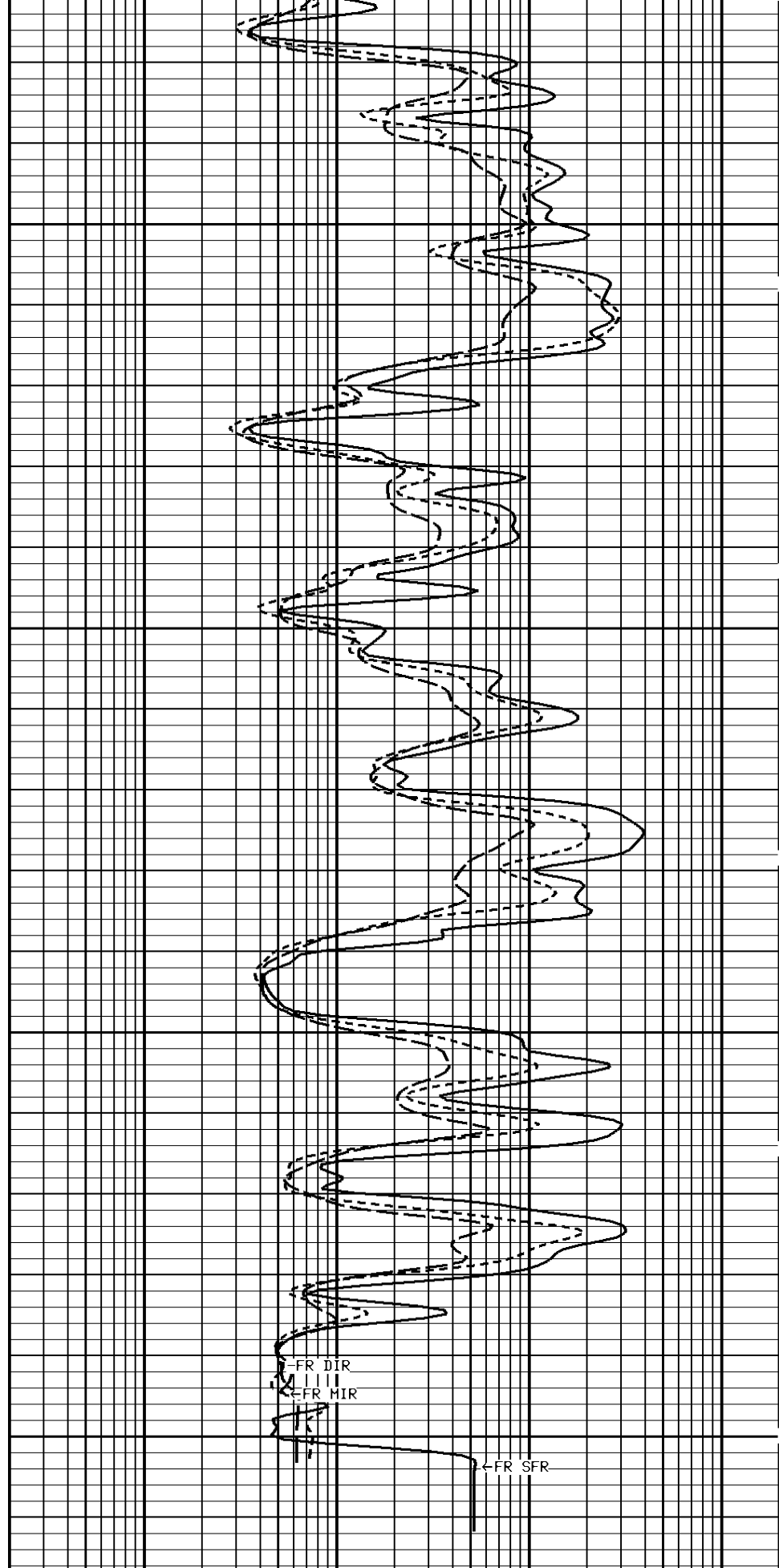




3400

3500

3508



File #711

1:240 MAIN SECTION

GAMMA RAY
API UNITS

150 0 300 150

SPONTANEOUS POTENTIAL
mV

→ | | ← 20

TENSION
LBS

10000 0

DEEP INDUCTION
OHMM

0.2 2000.0

MEDIUM INDUCTION
OHMM

0.2 2000.0

SHALLOW FOCUSED RESISTIVITY
OHMM

0.2 2000.0

* Borehole Zone Factors *

Zone 1 99999.0 to 0.0 F

Drill Bit Size_____ 7.875 IN
 BHT Depth_____ 3508.000 F
 Borehole Temperature_____ 73.0 DEGF
 Temperature Gradient_____ 1.00 DFHF
 Resistivity Of Mud_____ 1.10 OHMM
 Standoff_____ 1.5
 Resistivity Of Mud Temperature_____ 60.00 DEGF

TENSION
LBS

10000 0

SPONTANEOUS POTENTIAL
mV

→ | | ← 20

GAMMA RAY
API UNITS

150 0 300 150

SHALLOW FOCUSED RESISTIVITY
OHMM

0.2 2000.0

MEDIUM INDUCTION
OHMM

0.2 2000.0

DEEP INDUCTION
OHMM

0.2 2000.0

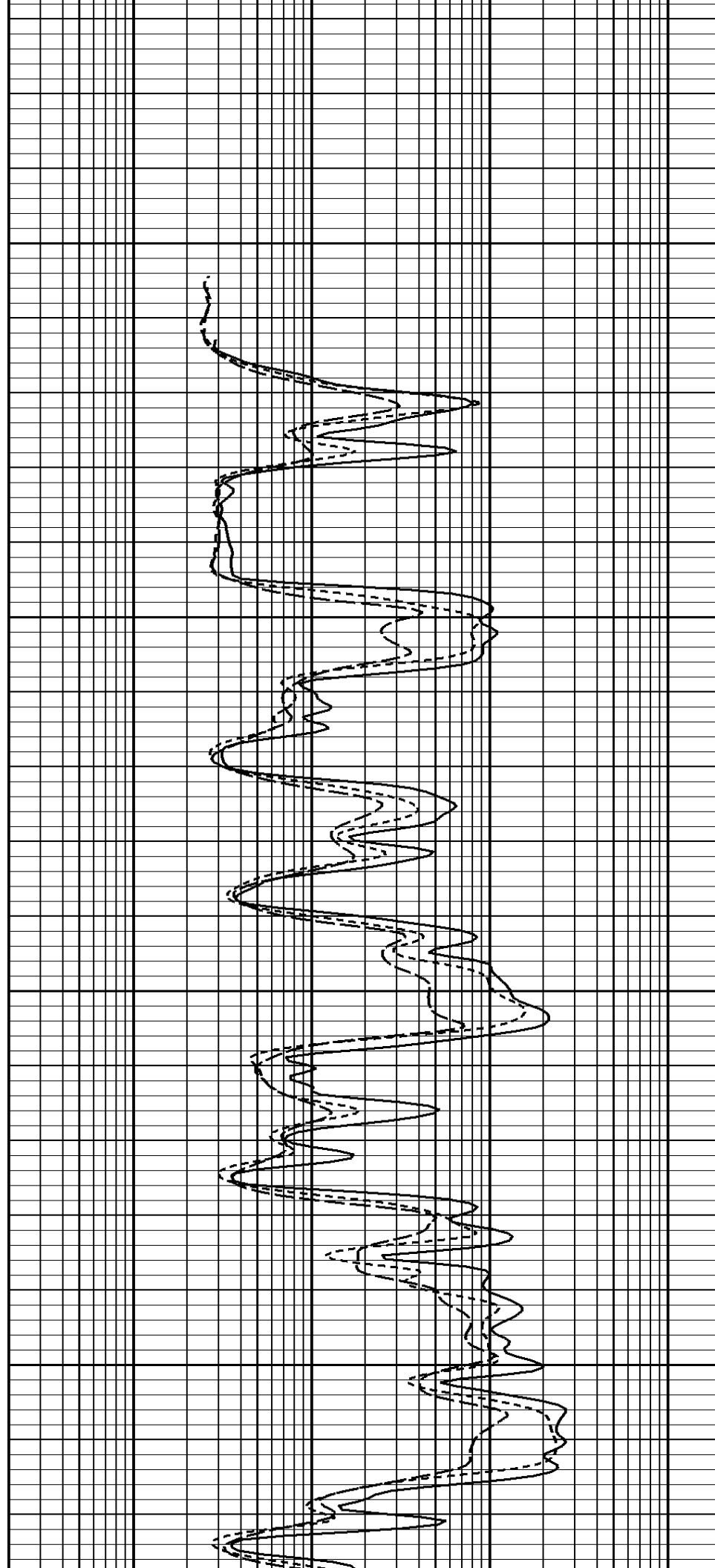
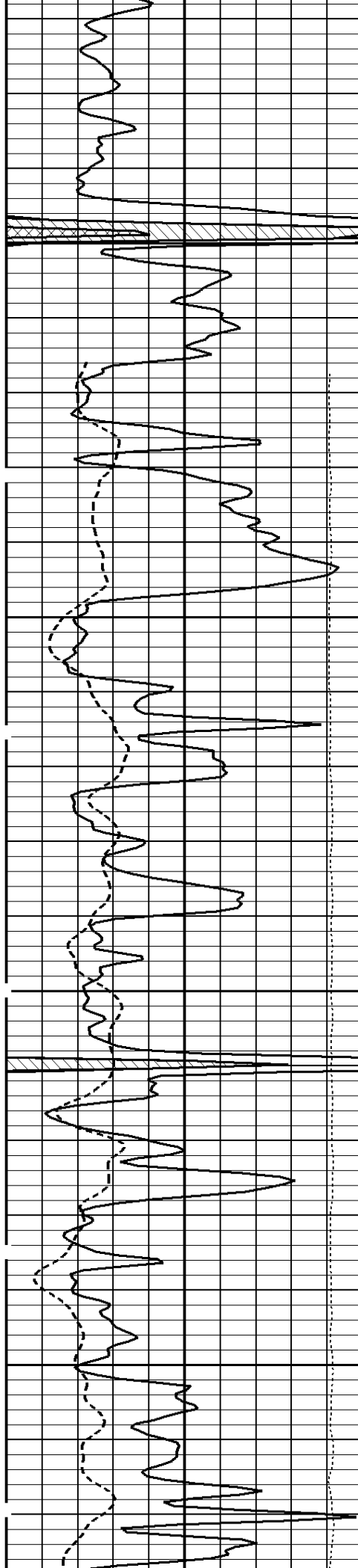
1:240 REPEAT SECTION

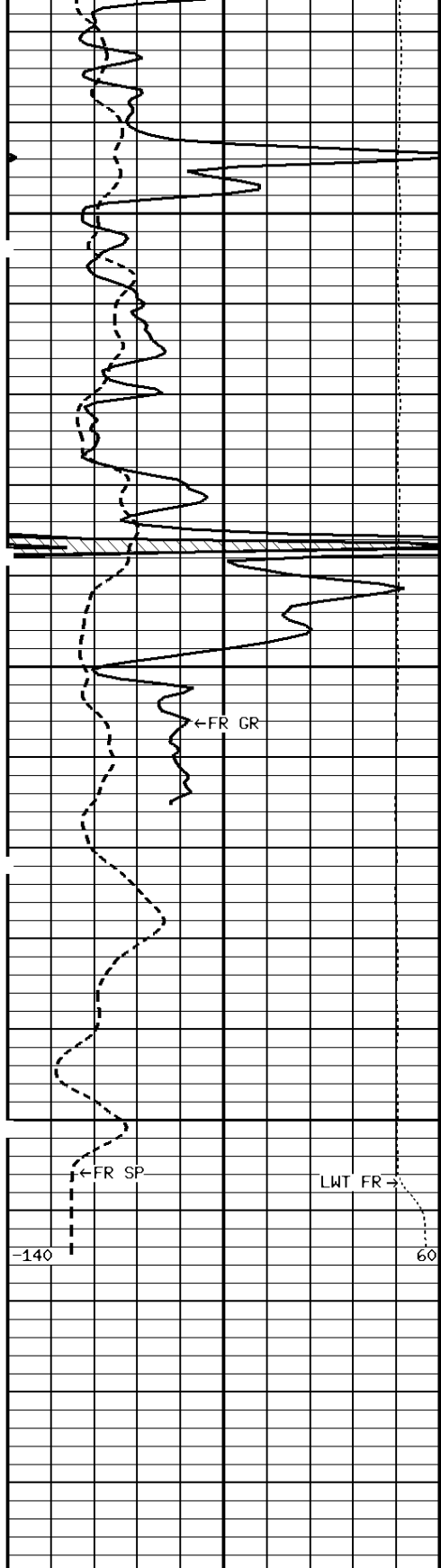
File #

#217

3200

3300





3400

←FR GR

3500

←FR SP

LWT FR →

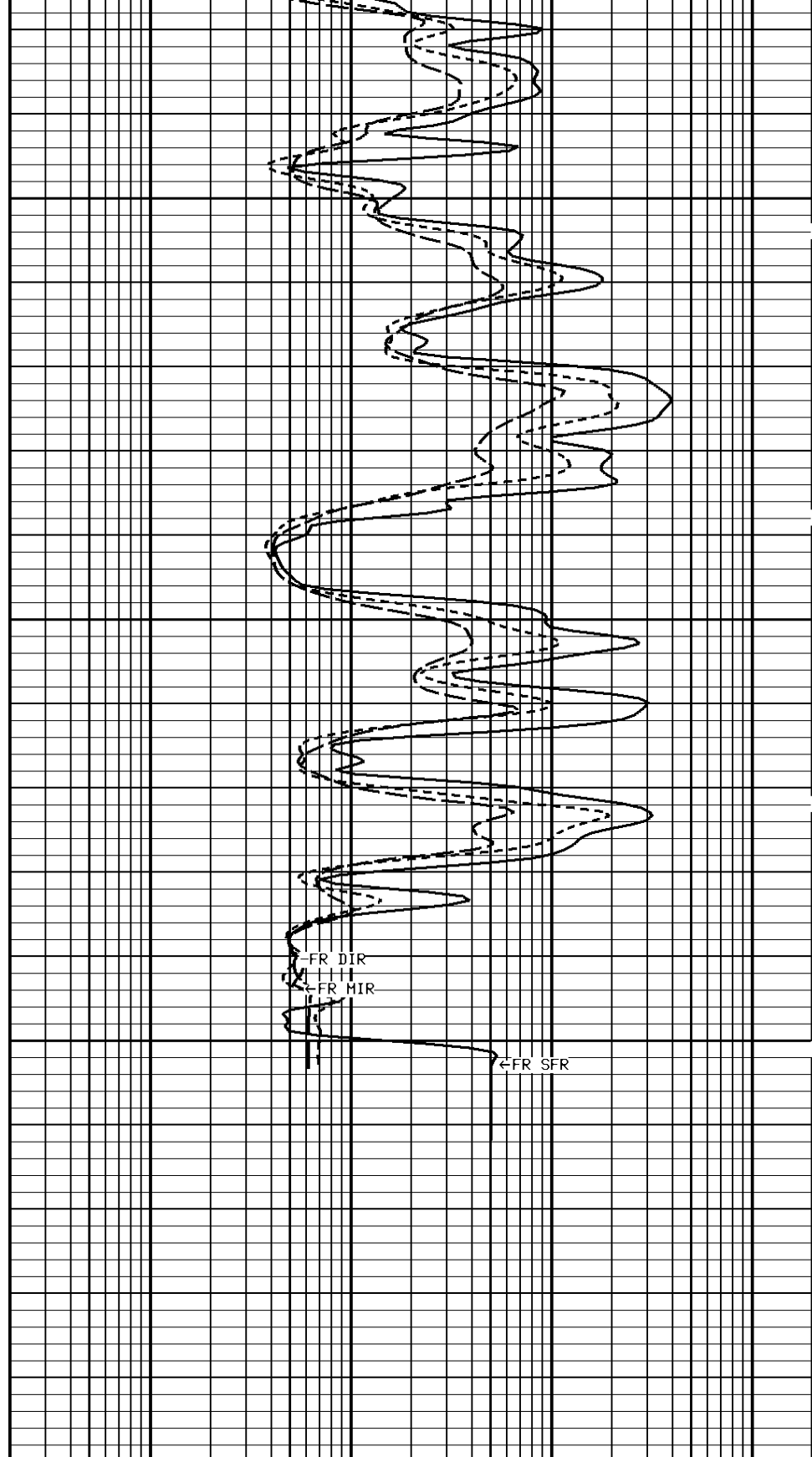
3508

-140

60

File #717

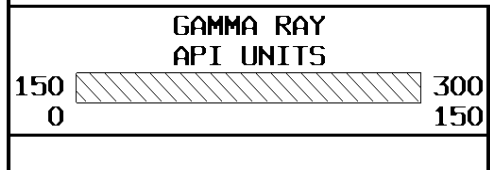
1:240 REPEAT SECTION



←FR DIR

←FR MIR

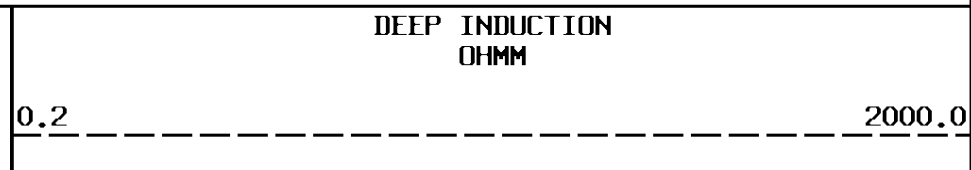
←FR SFR



GAMMA RAY
API UNITS

150
0

300
150



DEEP INDUCTION
OHMM

0.2

2000.0

SPONTANEOUS POTENTIAL mV	
→	← 20
TENSION LBS	
10000	0

MEDIUM INDUCTION OHMM	
0.2	2000.0
SHALLOW FOCUSED RESISTIVITY OHMM	
0.2	2000.0

*** Borehole Zone Factors ***

Zone 1 99999.0 to 0.0 F		
Drill Bit Size_____	7.875	IN
BHT Depth_____	3508.000	F
Borehole Temperature_____	91.0	DEGF
Temperature Gradient_____	1.00	DFHF
Resistivity Of Mud_____	1.10	OHMM
Standoff_____	1.5	
Resistivity Of Mud Temperature_____	60.00	DEGF

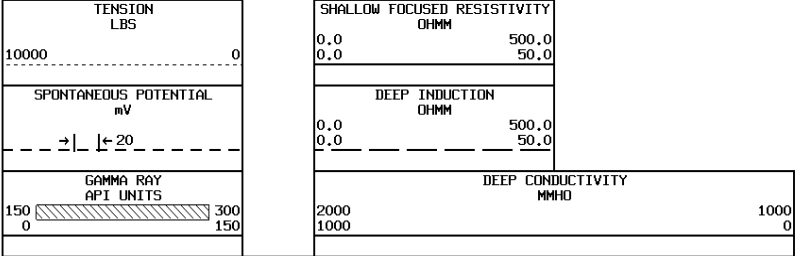
*** Calibration Summary ***

Shop Calibration						
GRTB						
Performed : 01-NOV-2010			Time : 02:32			
Sensor Suite : GR-GR5			ID : GRT-BC-43			
	Measured		Units	Calibrated		Units
	Background	Jig		Jig		
GR	41	314	CPS	175		GRAPI

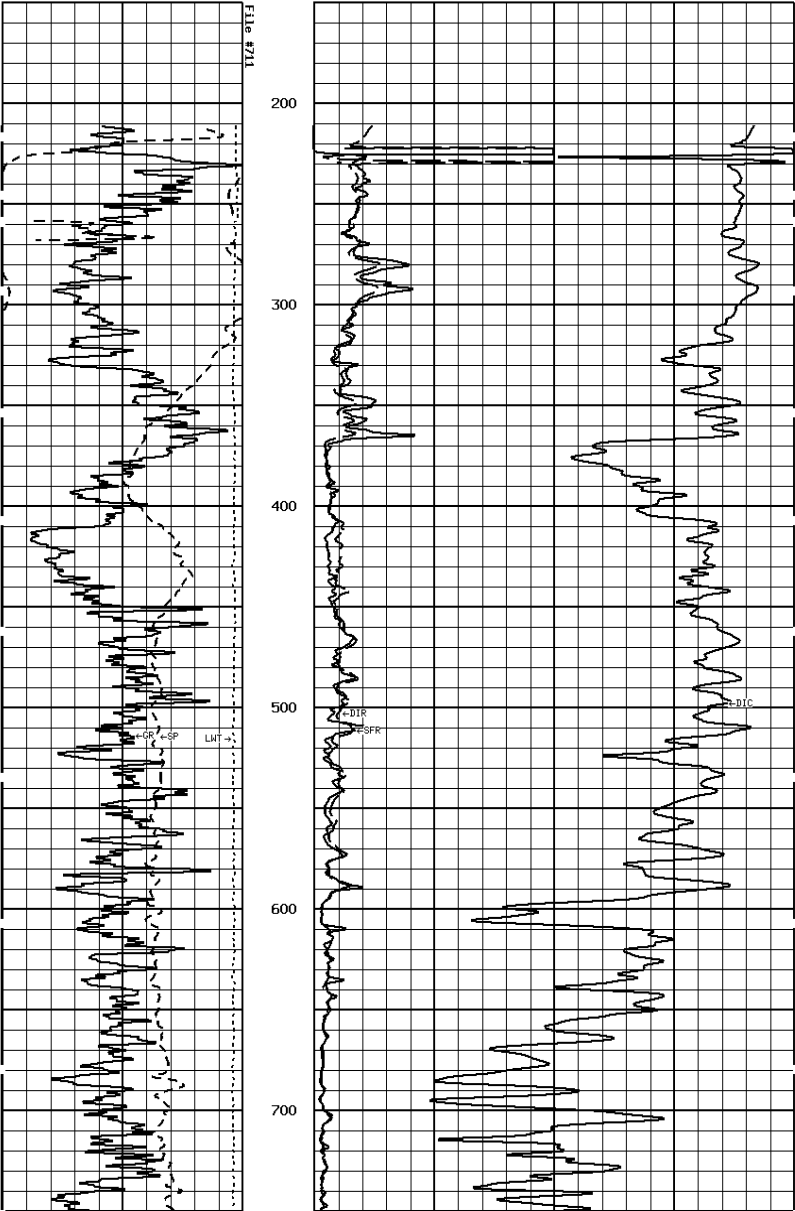
Shop Calibration					
PIT					
Performed : 26-Oct-2010			Time : 15:25		
Sensor Suite : P-IND-T			ID : PIT-AB-14		
Medium					
	Measured		Calibrated		
	R	X	R	X	Units
Air	131258	130225	0.2	0.5	MMHOS
Zero	131068	131068	0.0	0.0	MMHOS
Reference	247800	248027	5000.0	5000.0	MMHOS
Loop	151203	173390	2699.8	991.5	MMHOS
Sonde Error			-1.8	-1.8	MMHOS
Cond			5000.0	5000.0	MMHOS
Deep					
	Measured		Calibrated		
	R	X	R	X	Units
Air	128926	131285	0.1	0.0	MMHOS
Zero	131079	131071	0.0	0.0	MMHOS
Reference	231359	231399	2000.0	2000.0	MMHOS
Loop	149015	174621	1264.6	463.2	MMHOS
Sonde Error			-4.3	1.6	MMHOS
Cond			2000.0	2000.0	MMHOS
Temperature					
	Measured		Calibrated		
	Low	High	Low	High	Units
	16980.0	56920.0	70.0	350.0	DEGF

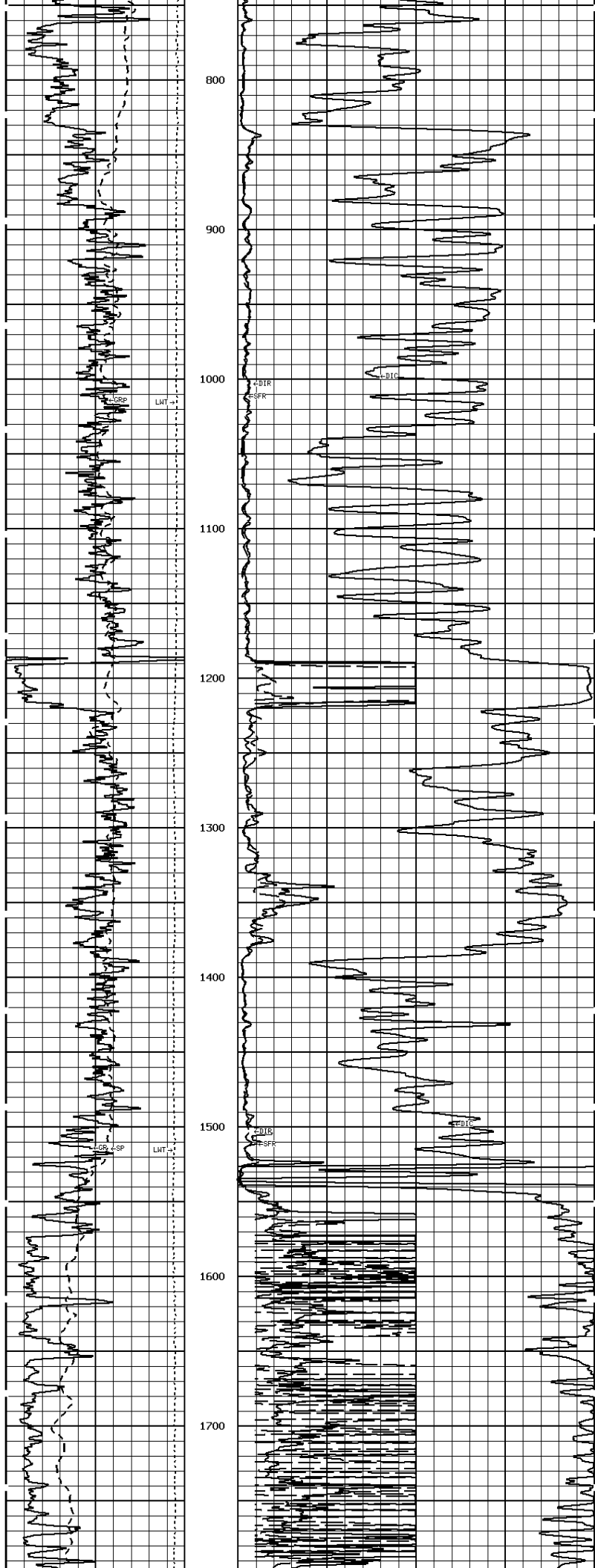
Performed : 26-Oct-2010			Time : 15:22		
Sensor Suite : SFL			ID : PIT-AB-14		

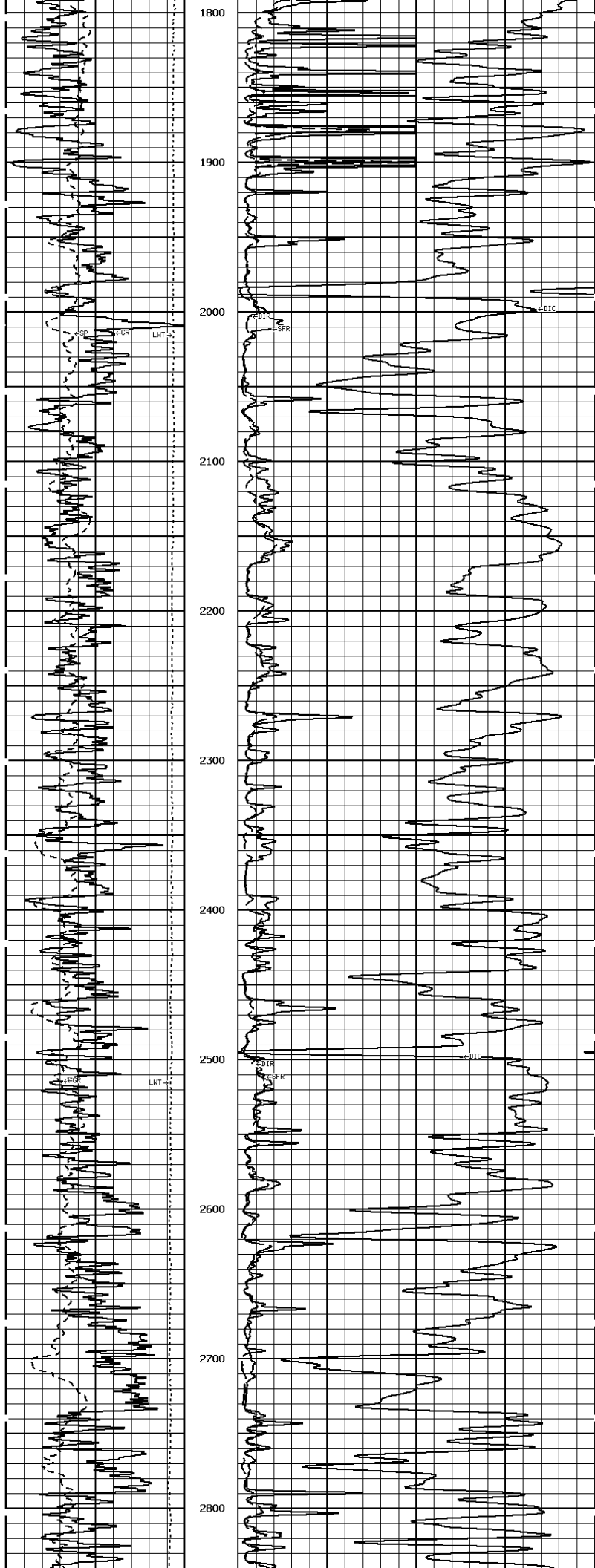
Internal					
	Measured		Calibrated		
	Zero	Reference	Zero	Reference	Units
Im	32767.0	49666.0	0.0	7028.0	uA
Ib	32769.0	48864.3	0.0	1750.0	mA
MOM1	32805.5	57256.6	0.0	175.0	mV
Equivalent SFL				43.97	OHMM
Performed : 26-Oct-2010 Sensor Suite : P-SP Time : 15:15 ID : PIT-AB-14					
Internal					
	Measured		Calibrated		
	Zero	Reference	Zero	Reference	Units
	32789.6	58948.1	0.0	1000.0	mV

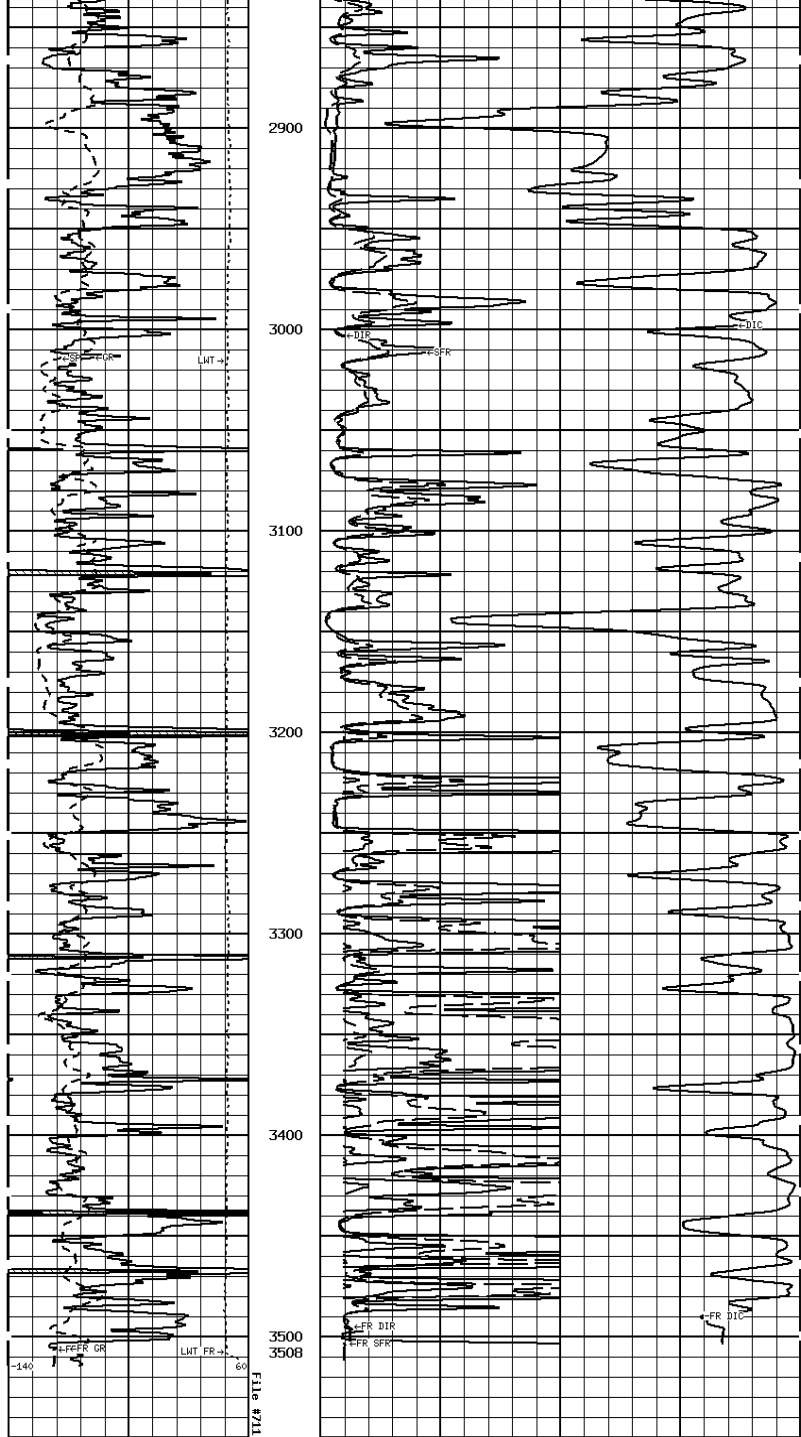


1:1200 SECTION
1 INCH









1:1200 SECTION
1 INCH

