

Tucker

ENERGY SERVICES

PHASED INDUCTION

SHALLOW FOCUS SP LOG

Company PICKRELL DRILLING CO. INC. Well YOUNG RR #1 Field BROADWAY County KINGMAN State KANSAS Country USA API No. 15-095-22297		File No : TUL-60673 Company : PICKRELL DRILLING CO. INC. Well : YOUNG RR #1 Field : BROADWAY County : KINGMAN State : KANSAS Country : USA API No : 15-095-22297	
Location : 660' FSL & 330' FEL E2 SE SE		LSD : Sect : 34 Twp : 27S Rge : 5W	
Permanent Datum:	GL	Elevations:	Services:
Drilling Measured From:	KB	KB 1443.00	CNT
Log Measured From:	KB	DF 1442.00	PIT
Above Permanent Datum:	10.00 Ft	GL 1433.00	MLT
Date	09-03-2015		
Run Number	1		
Depth--Driller	3910.0	Ft	
Depth--Logger	3910.0	Ft	
First Reading	3909.0	Ft	
Last Reading	211.0	Ft	
Casing--Driller	211.0	Ft	
Casing--Logger	211.0	Ft	
Bit Size	7.875	In	
Casing Size	8.625	In	
Hole Fluid Type	WBM		
Density	9.4		
Fluid Loss	9.0		
PH/Viscosity	10.0	49.0	
Sample Source	MEASURED		
RMF@Measured Temp.	0.800	@ 70 F	
RMF@Measured Temp	0.700	@ 70 F	
RMF@Measured Temp.	0.900	@ 70 F	
Source RMF/RMC	CALCULATED/CALCULATED		
RM@BHT	0.600	@ 114 F	
Time Circulation Stopped			
Max Recorded Temp.	116	F	
Equipment/Base	T-126	TULSA	
Recorded By	S.K. DAVIS		
Witnessed By	A. YOUNG		

The customer is hereby warned that by providing the log data herein, T. E. S. does not agree to provide any interpretation of log data, conversion of log data to physical rock parameters or recommendations. T. E. 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. E. 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. E. 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)	Top (Ft)
7.875	3910.00	8.625	20.00	211.00	0.00

Run Number	1	
Date	09-03-2015	
Date/Time On Bottom	09-03-2015 6:00 am	
Depth to Fluid	0.0 Ft	
Salinity	5000.000	
RMF@BHT	0.400 @ 114 F	
RMC@BHT	0.600 @ 114 F	

Run Number 1

Comments

ALL PRESENTATION PER CUSTOMER REQUEST
 GRT,CNT,LDT,PIT RUN IN COMBINATION
 CALIPERS ORIENTED ON X-Y AXIS
 2.71 G/CC USED TO CALCULATE POROSITY
 ANNULAR & BOREHOLE VOLUME CALCULATED USING 5.5 PRODUCTION CASING
 PHIN IS CALIPER CORRECTED
 DETAIL IS PRESENTED FROM TD TO 2400'
 ANHYDRITE / SALT SECTION FROM 950' TO 450'

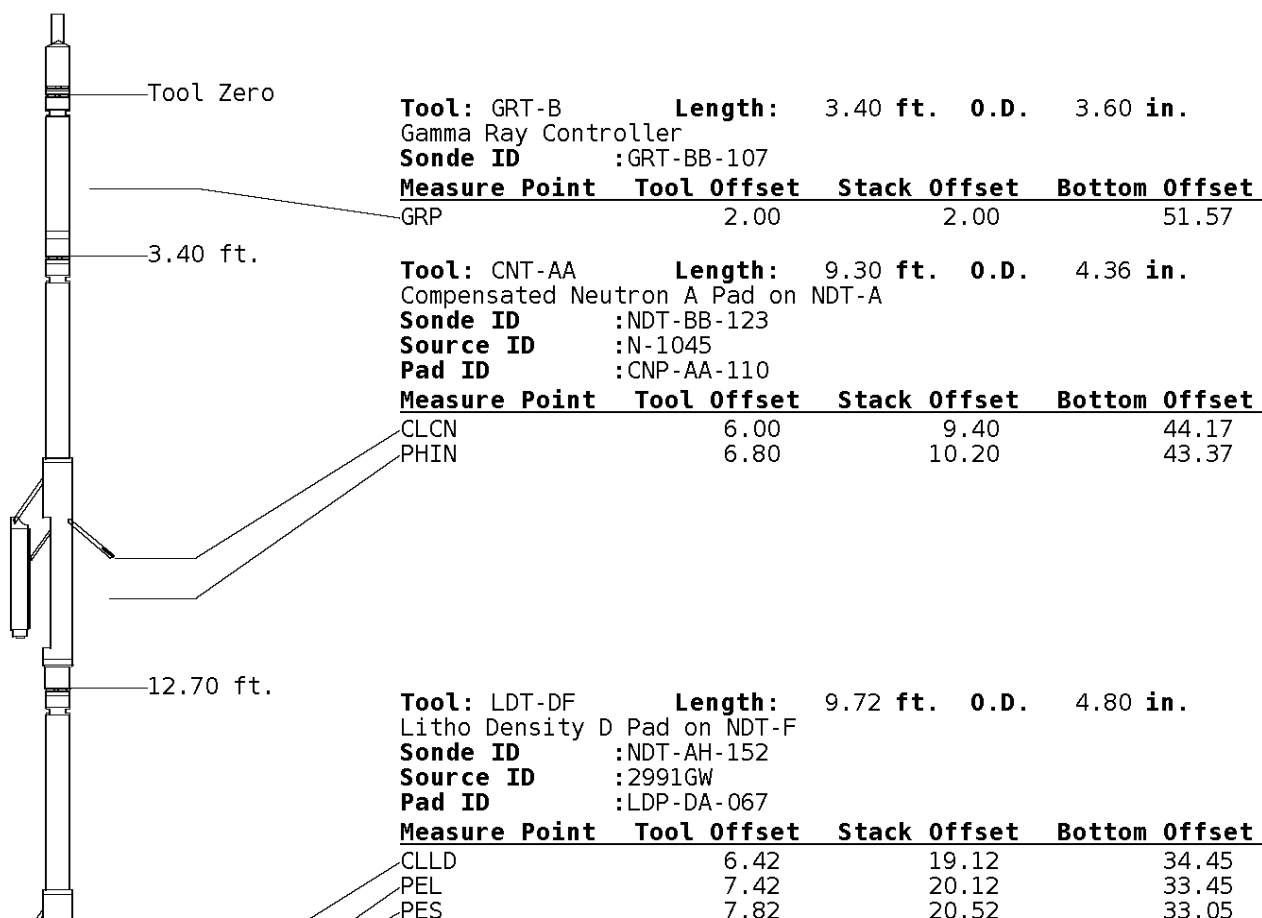
GRT; GRP,
 CNT; PHIN, CLCNIN
 LDT; PORL, LCORN, PECLN, LDENN, CLLDIN
 MLT; NOR.RF, INV.RF, MSCLPIN.
 PIT; ILD, ILM, SPU, SFLAEC, CIRD

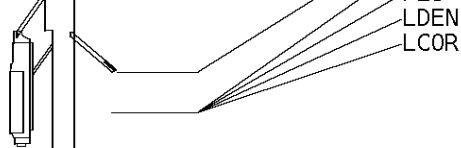
OPERATORS;

C. GONZALES
 J. KLINE

Tool String Schematic

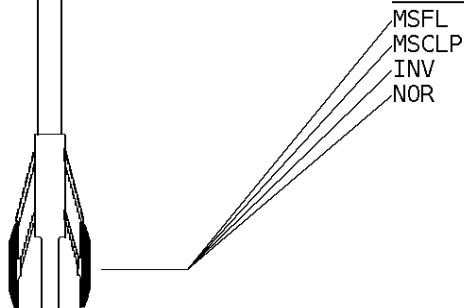
Total Tool Length - 53.57 ft.
Maximum Outside diameter - 6.00 in.
Net Weight in Air - 943.00 lbs.





Tool: MST-DA **Length:** 9.66 ft. **O.D.** 6.00 in.
 Micro Spherically Focused (IC)
Sonde ID :MST-DA-057

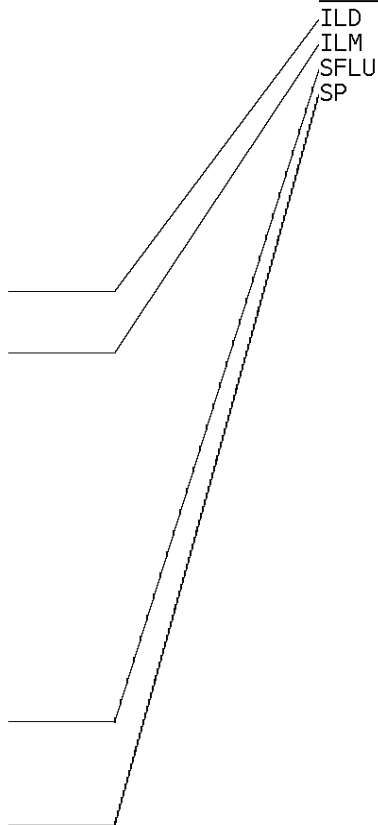
Measure Point	Tool Offset	Stack Offset	Bottom Offset
MSFL	7.60	30.02	23.55
MSCLP	7.60	30.02	23.55
INV	7.60	30.02	23.55
NOR	7.60	30.02	23.55



32.08 ft.

Tool: PIT-CA **Length:** 21.49 ft. **O.D.** 3.62 in.
 Phased Dual Induction w/ RM & D
Sonde ID :PIT-CA-077

Measure Point	Tool Offset	Stack Offset	Bottom Offset
ILD	8.92	41.00	12.56
ILM	10.10	42.18	11.39
SFLU	17.49	49.57	4.00
SP	20.60	52.68	0.88



LWT 53.57 ft.

Well File: pic-you-rr-1-mstk-sep-3

Scale: 1:600 **Format:** DIL-600

Segment: V1.D1.S8 AS-7 MAIN

Acquired: 2015-09/03 06:16 3.4.0-13525

Reference: 0

Processed: 2015-09/04 13:21 3.4.0-13534

RXO/RT

-160

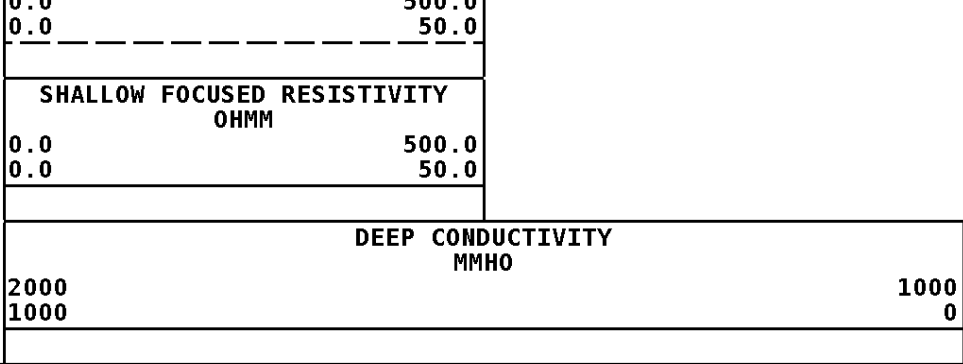
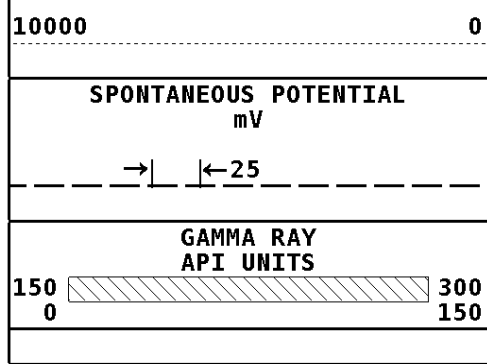
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**TENSION
LBS**

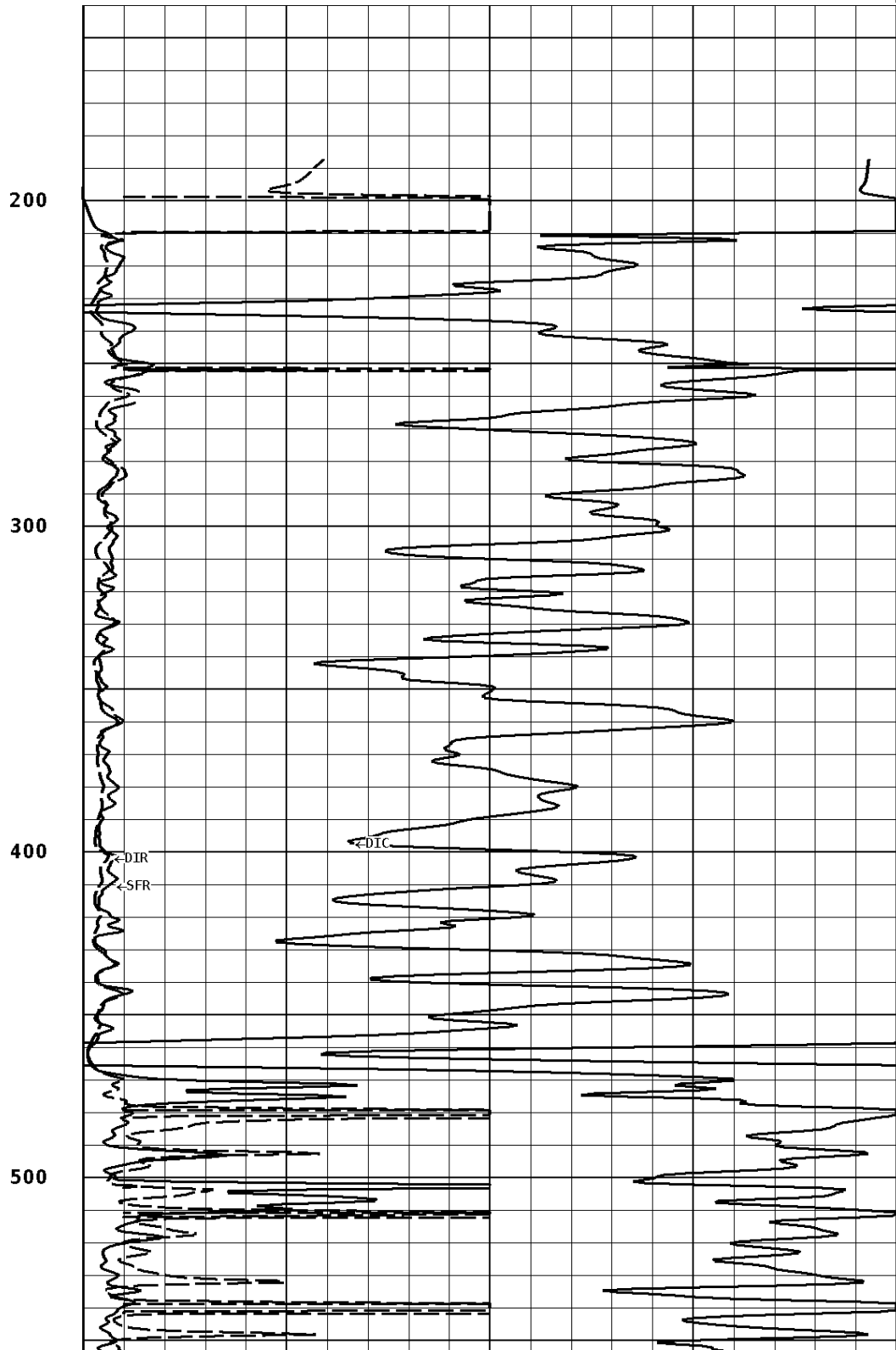
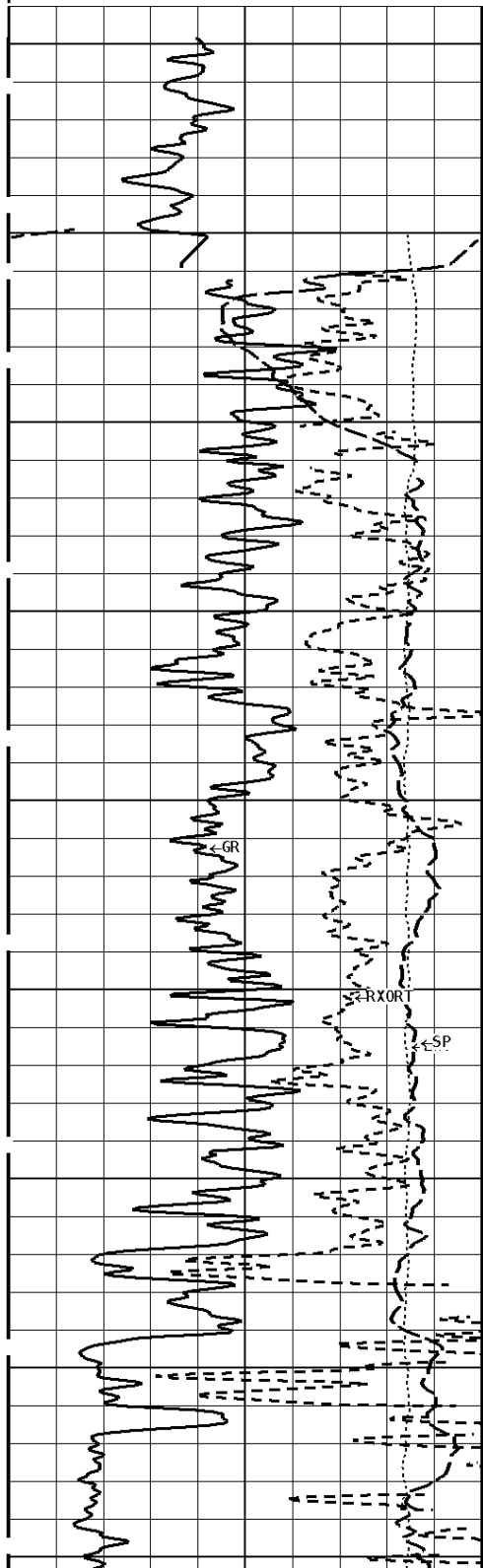
**DEEP INDUCTION
OHMM**

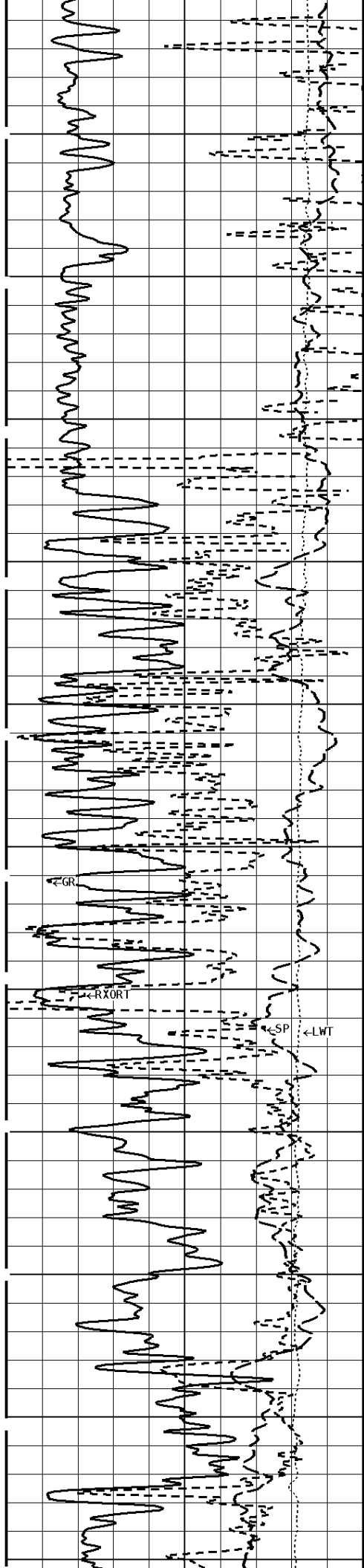
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500.0

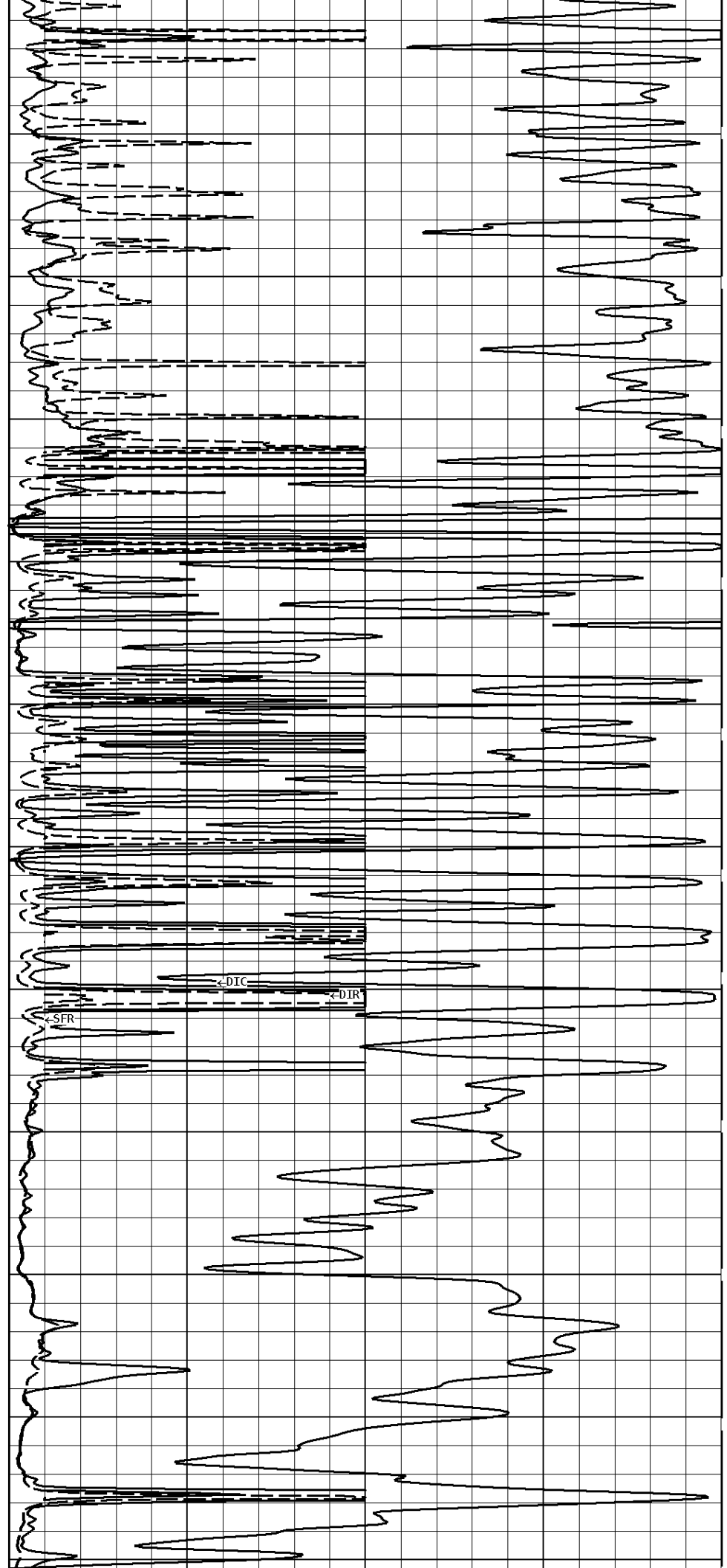


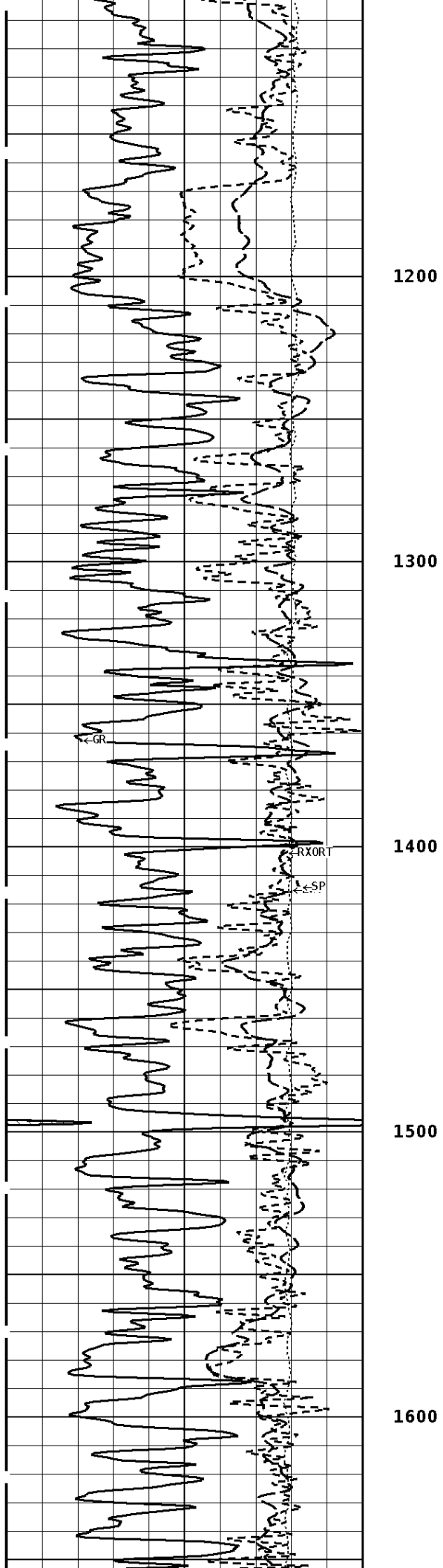
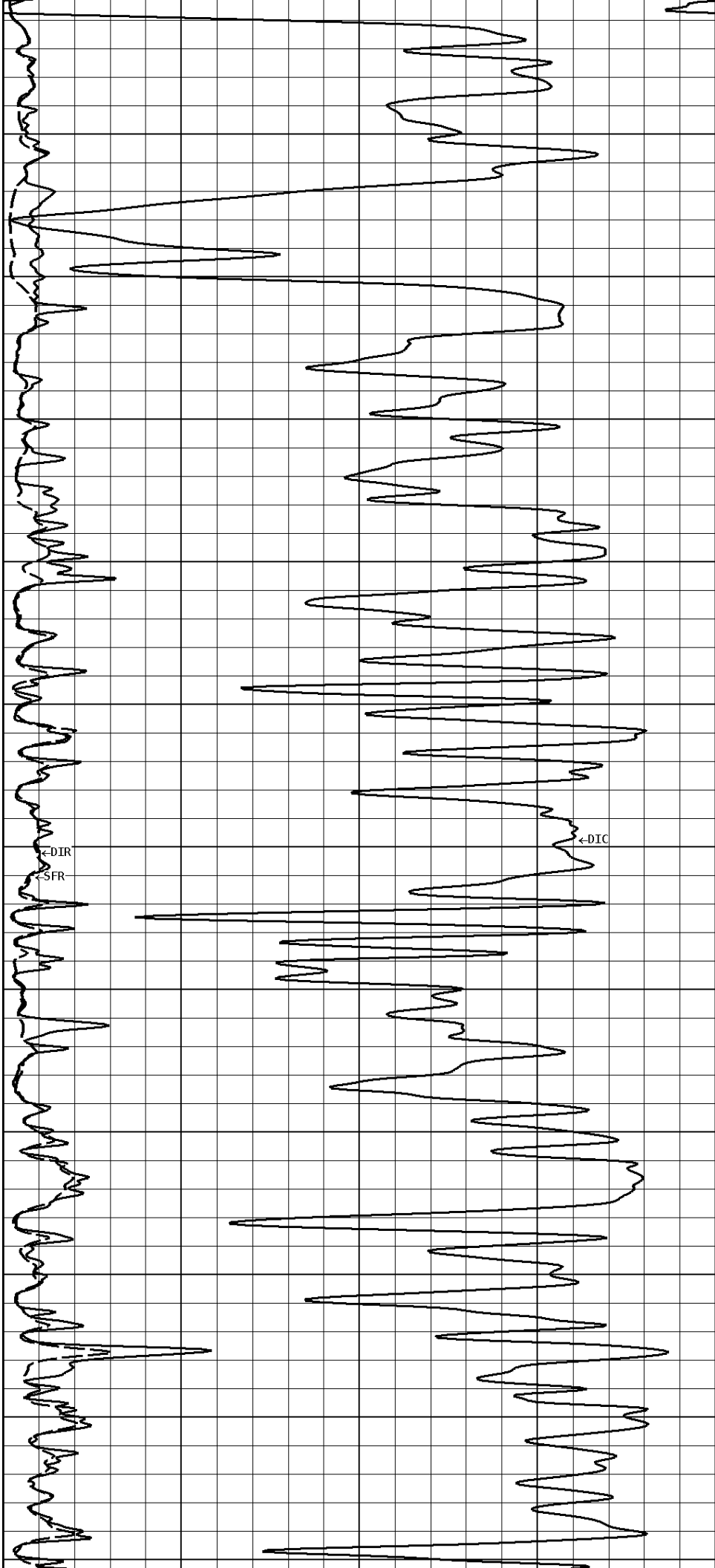
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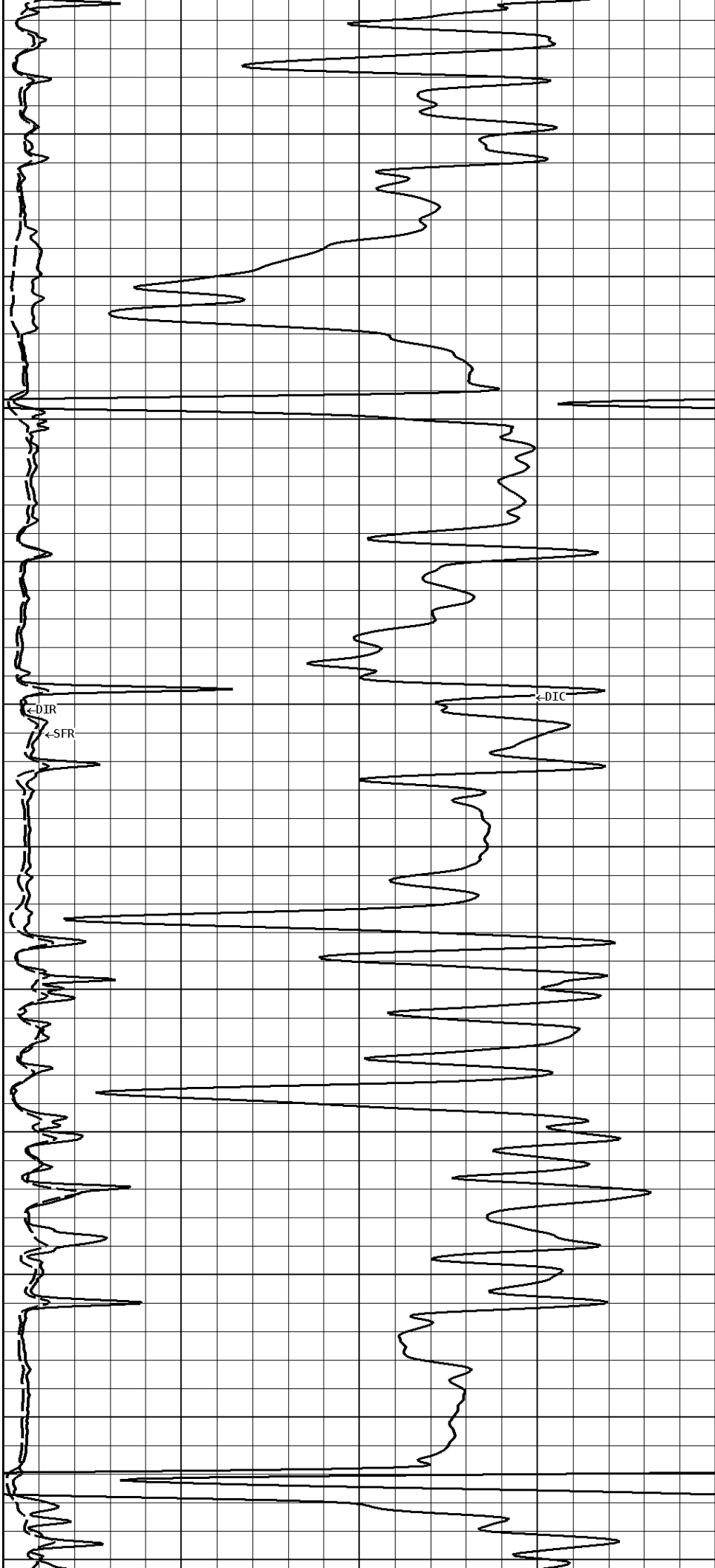
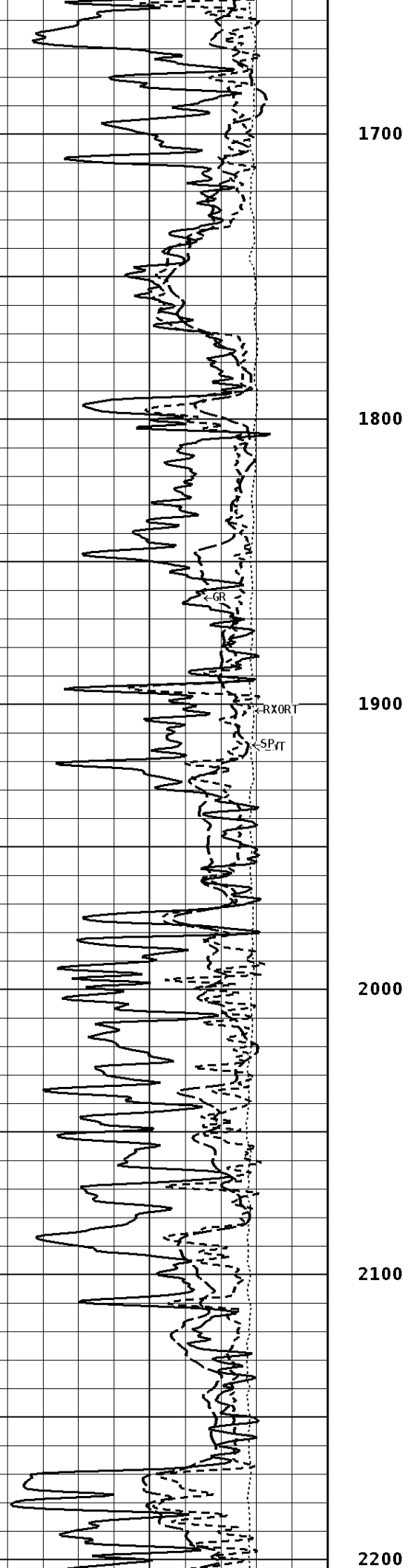


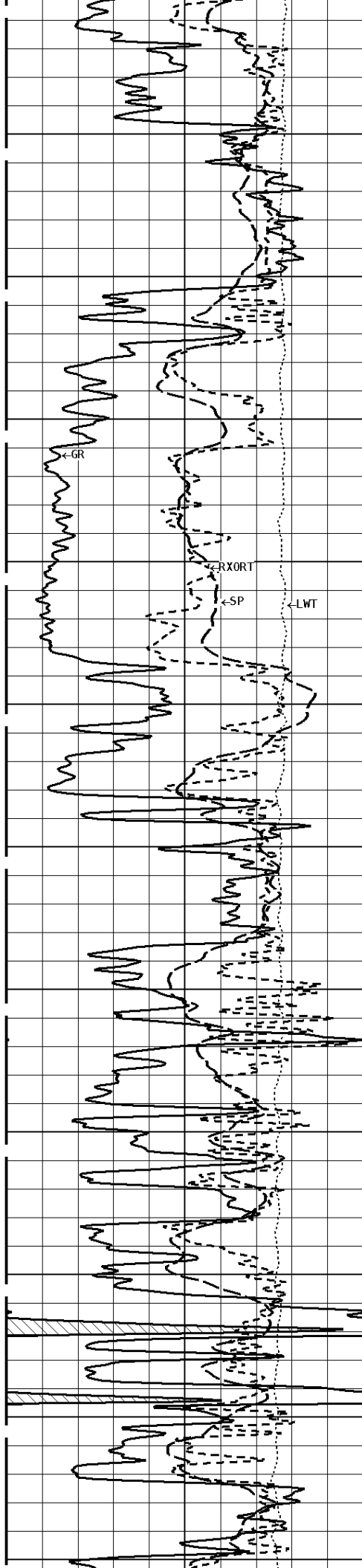


600
700
800
900
1000
1100









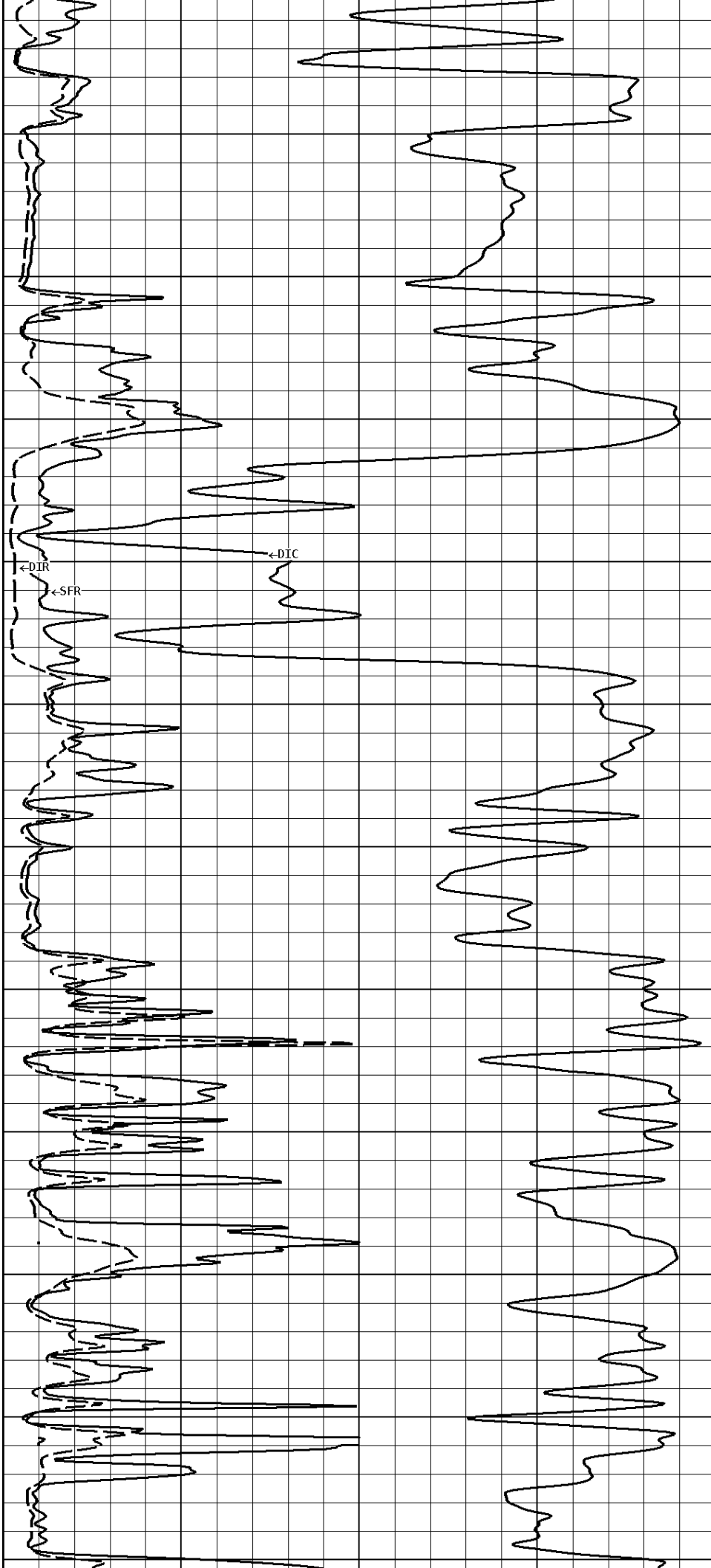
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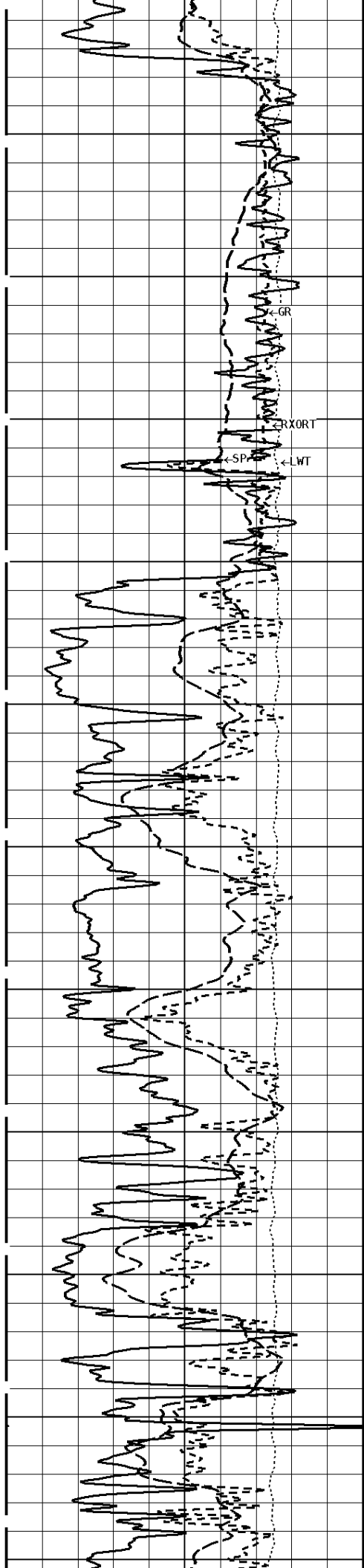
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2500

2600

2700





2800

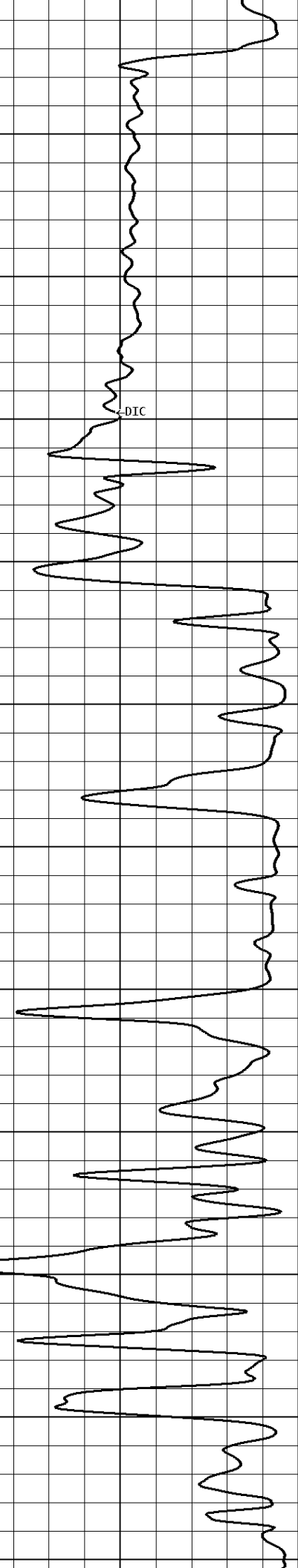
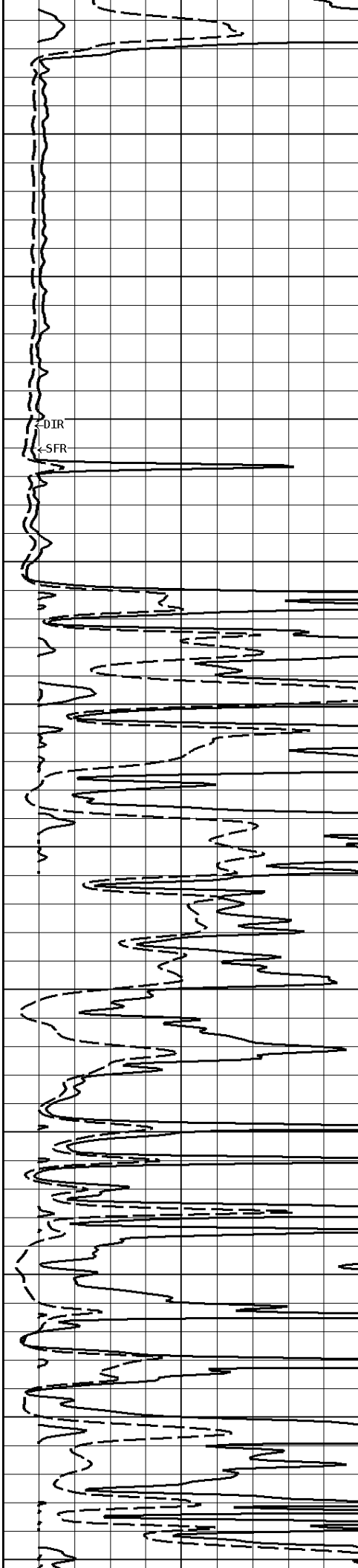
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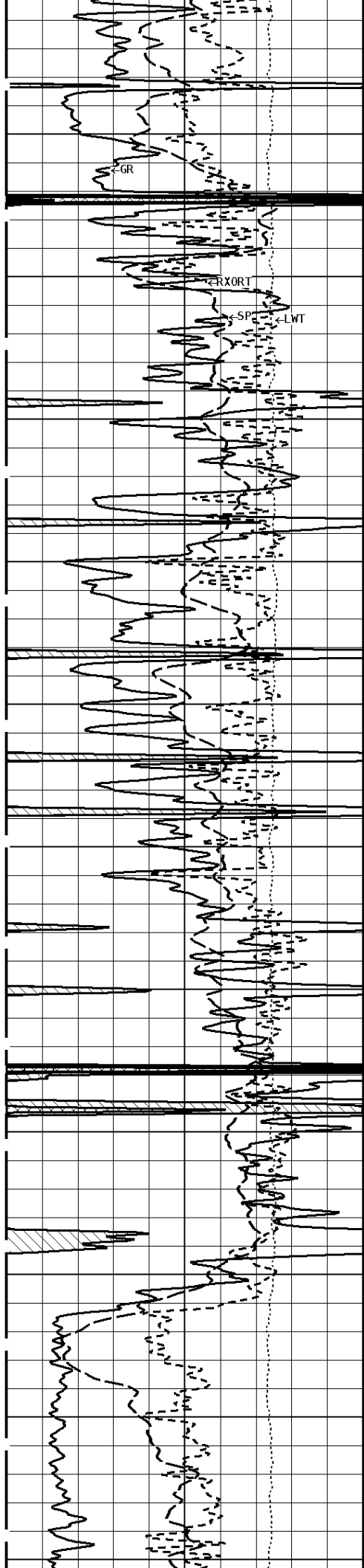
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3100

3200

3300





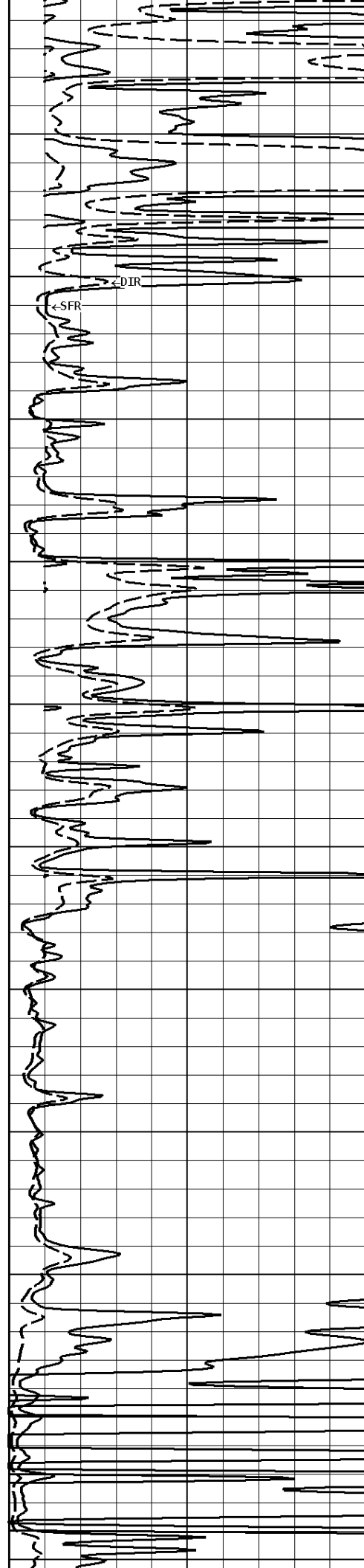
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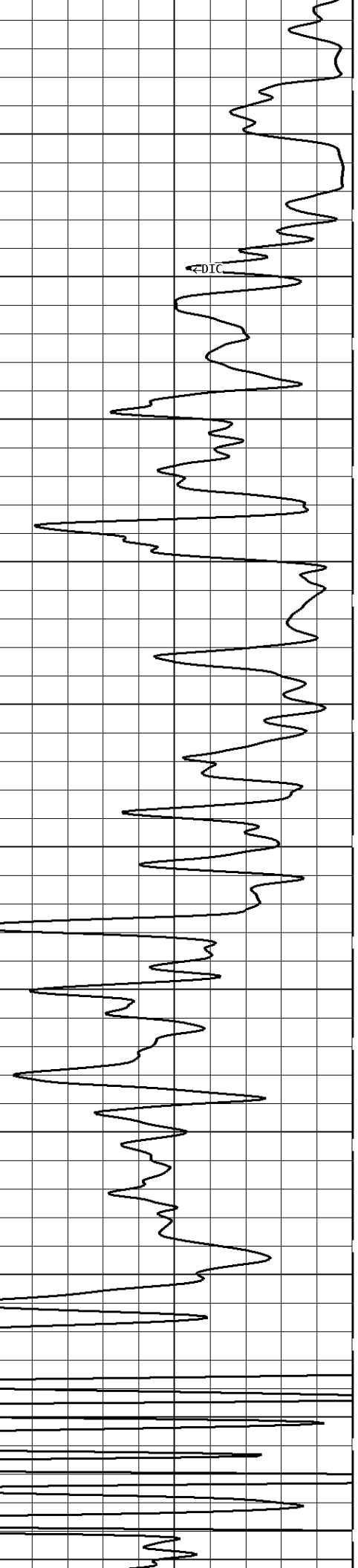
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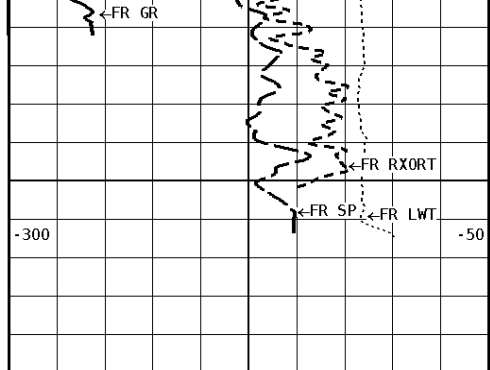
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3800

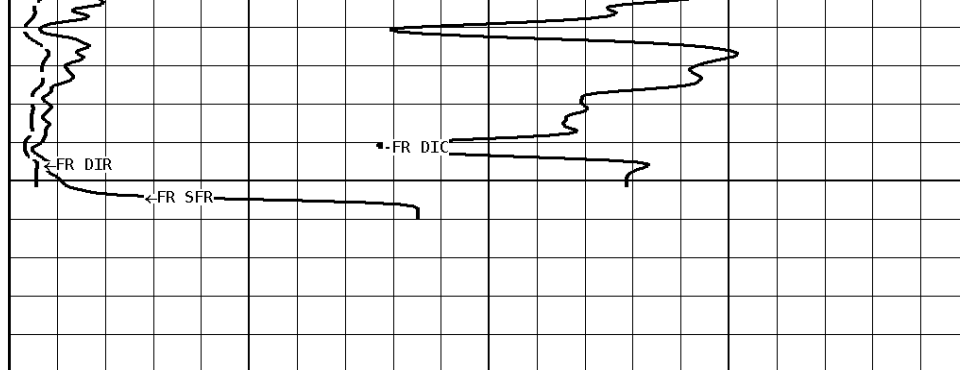


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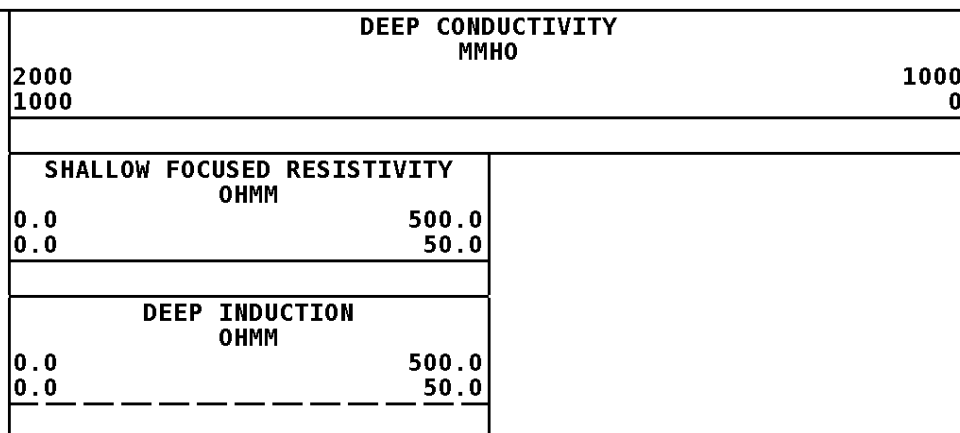
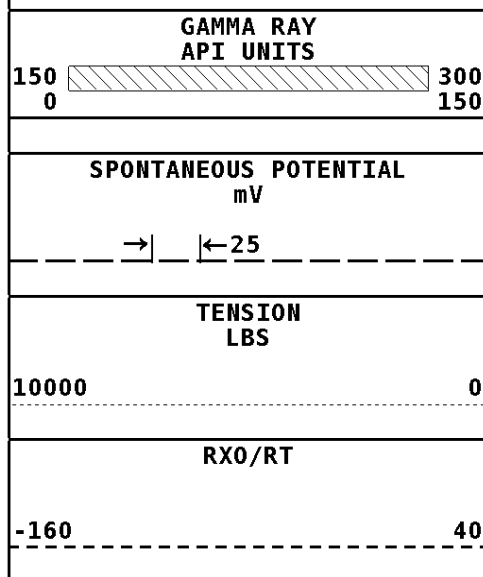




3900
3910



1:600 MAIN SECTION



Well File: pic-you-rr-1-mstk-sep-3

Segment: V1.D1.S8 AS-7 MAIN

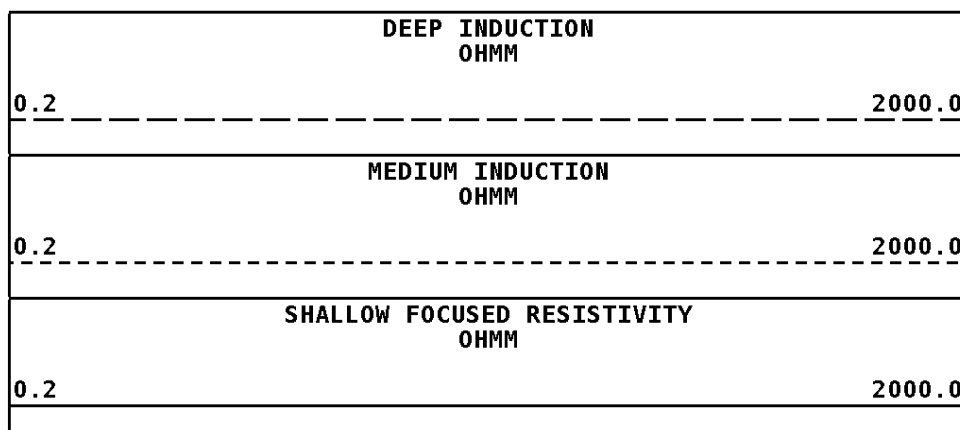
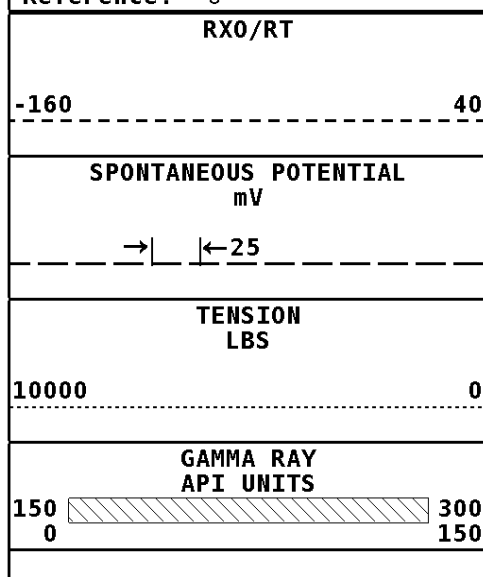
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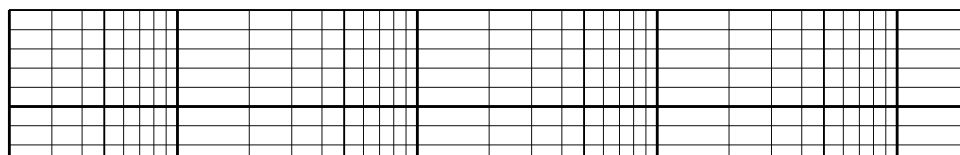
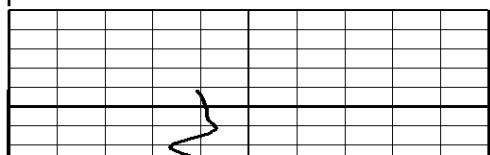
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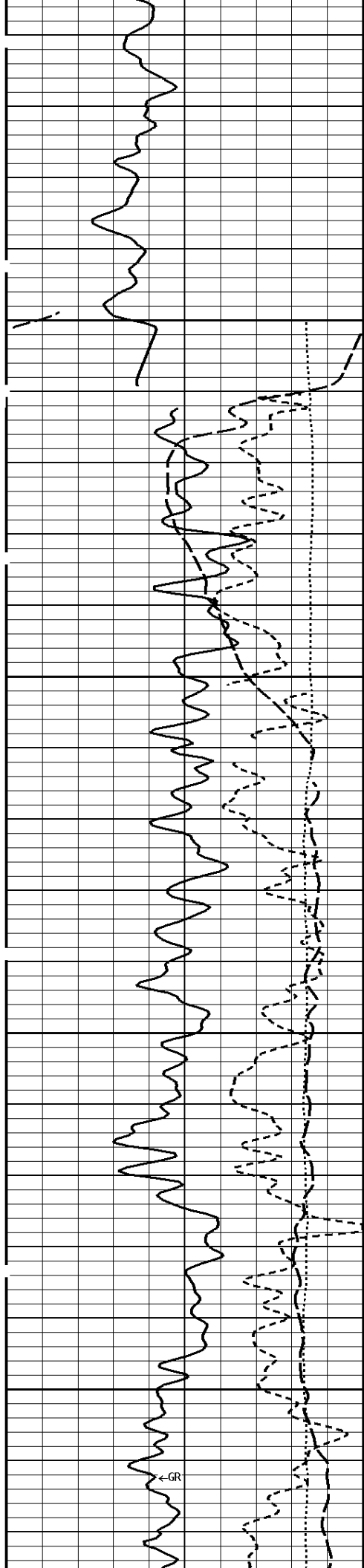
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Processed: 2015-09/04 13:21 3.4.0-13534



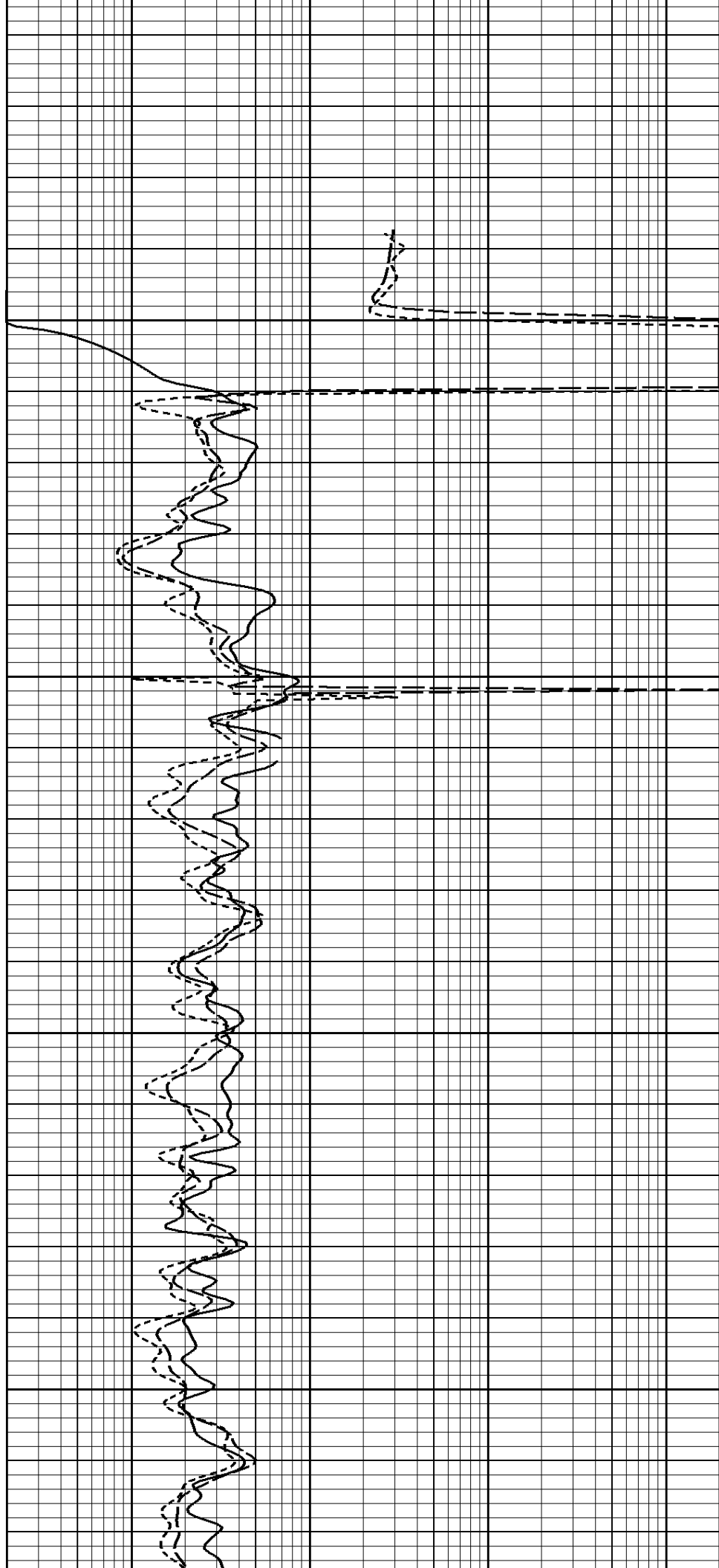
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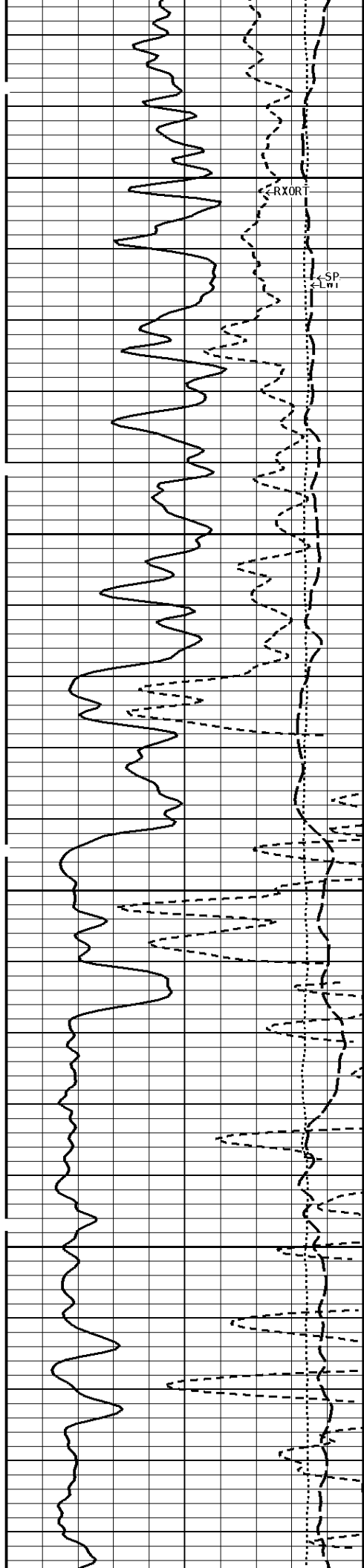




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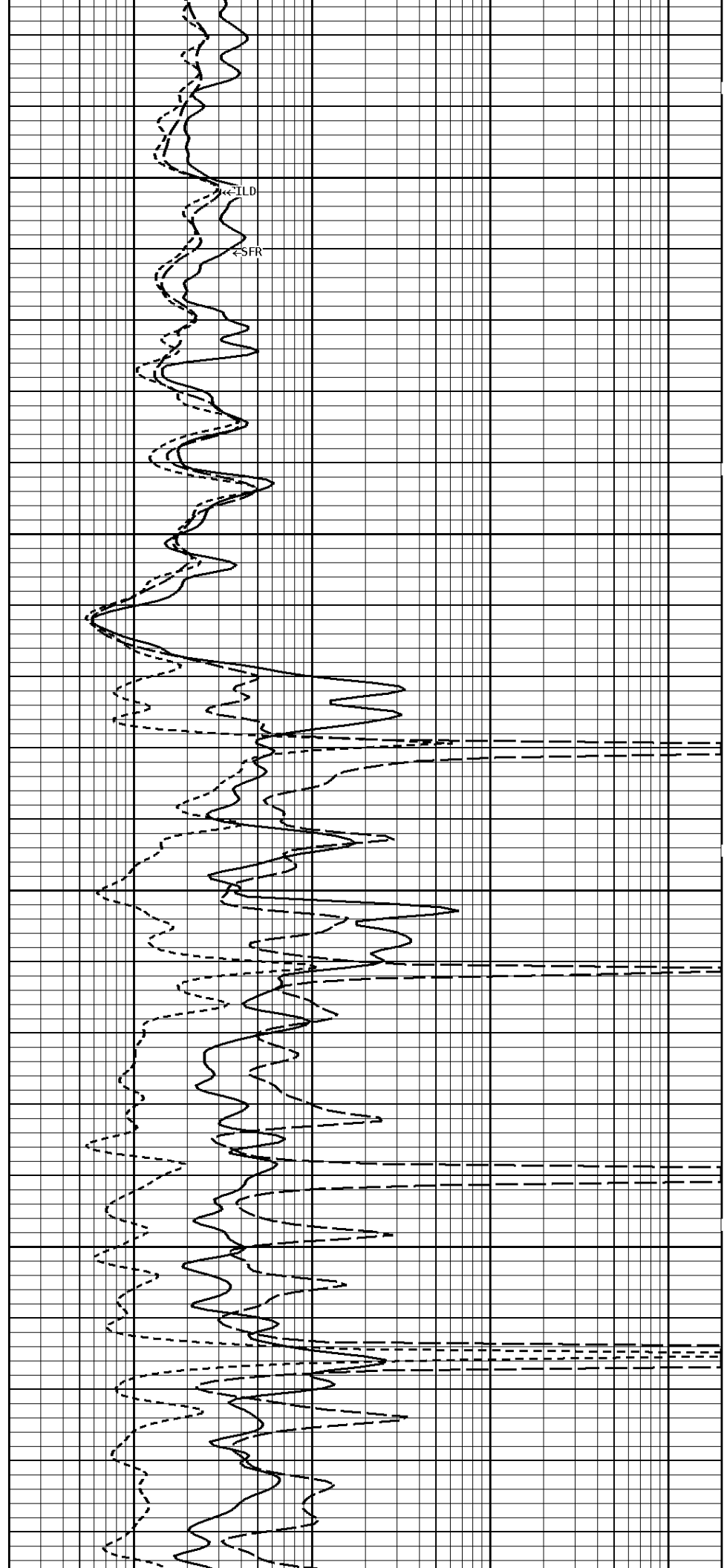
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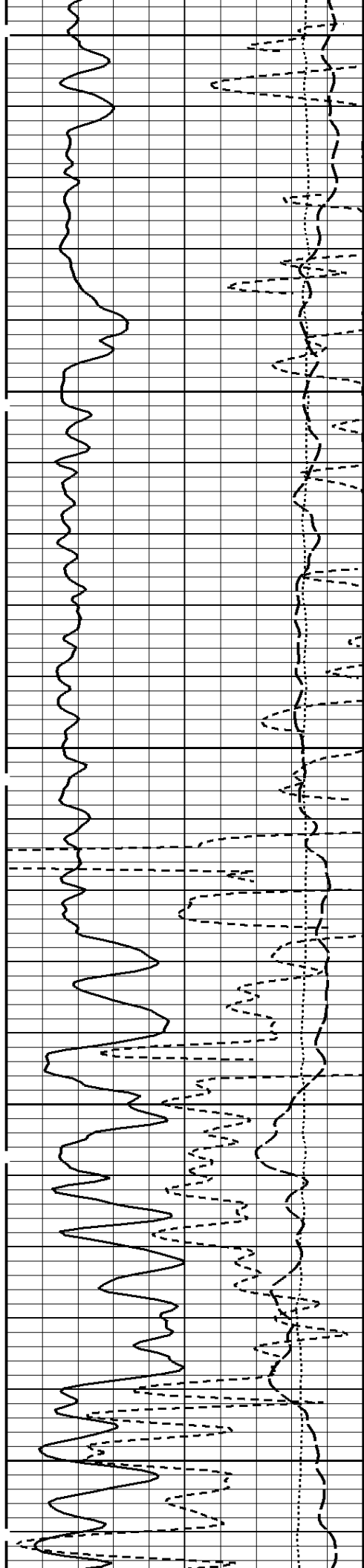




400

500

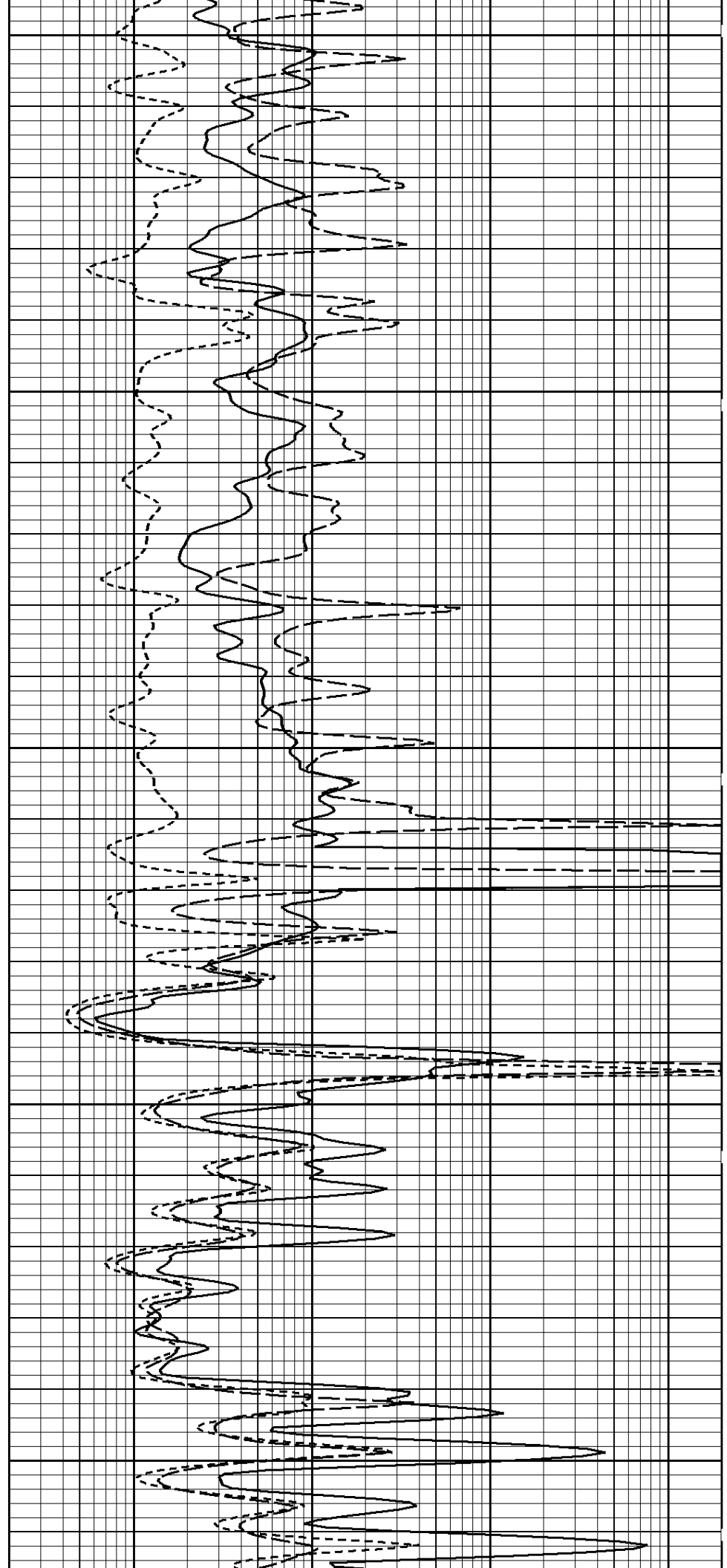


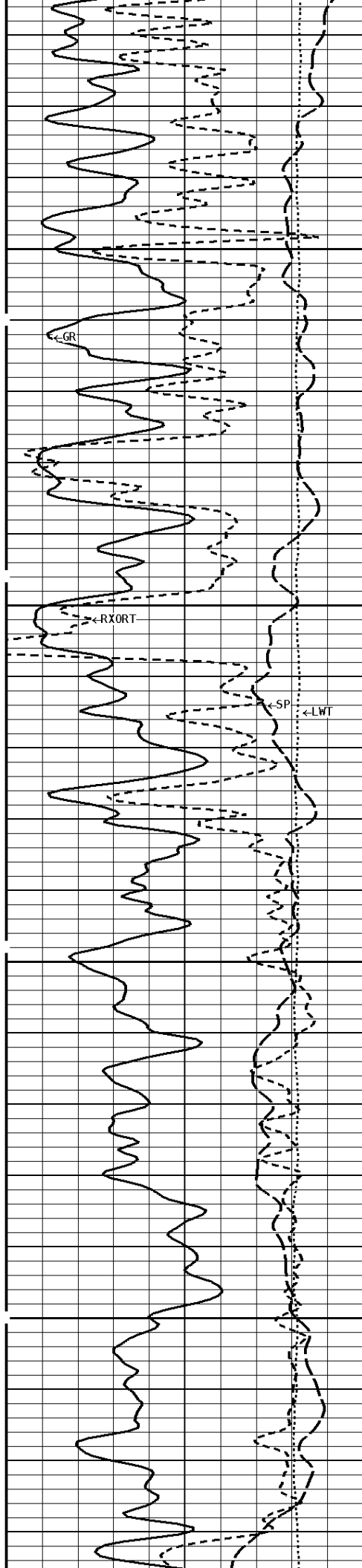


600

700

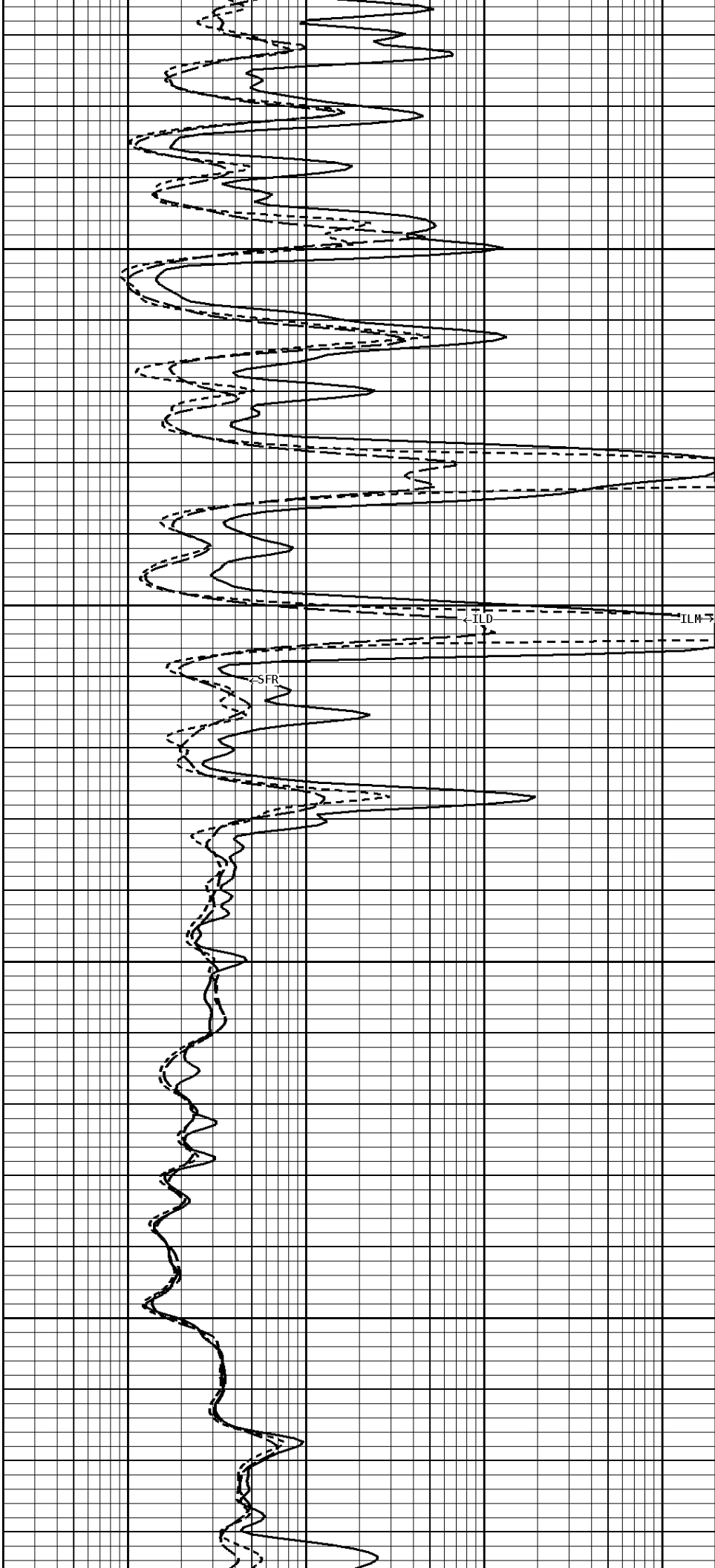
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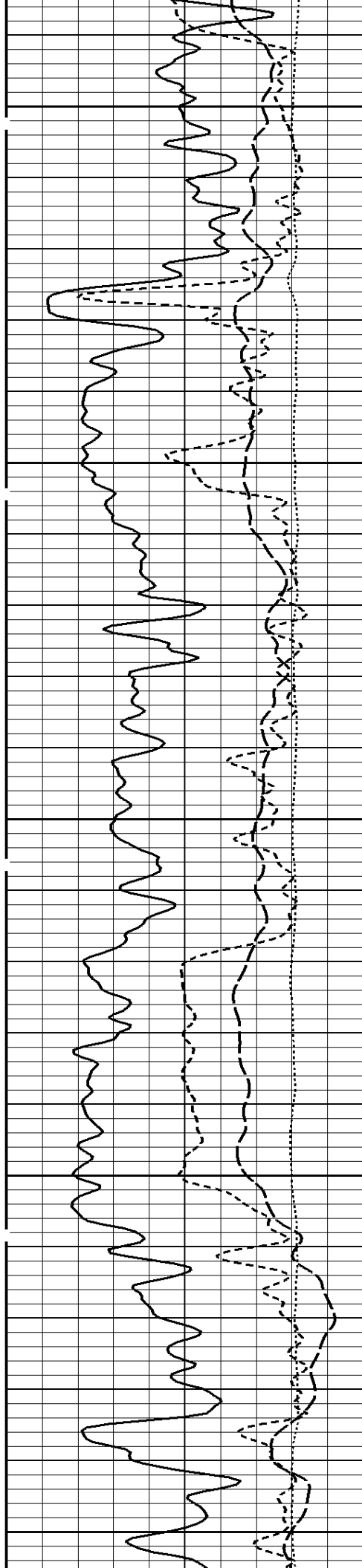




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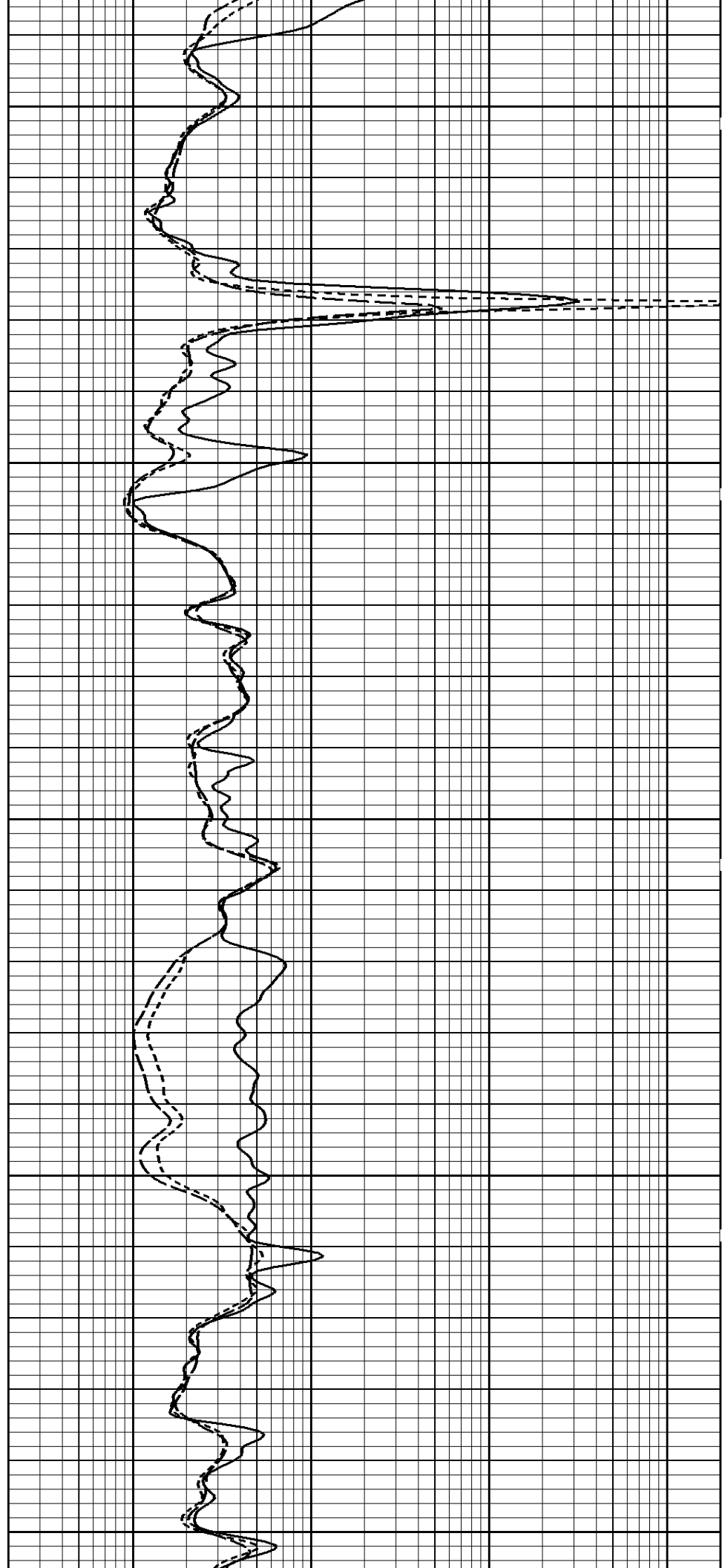
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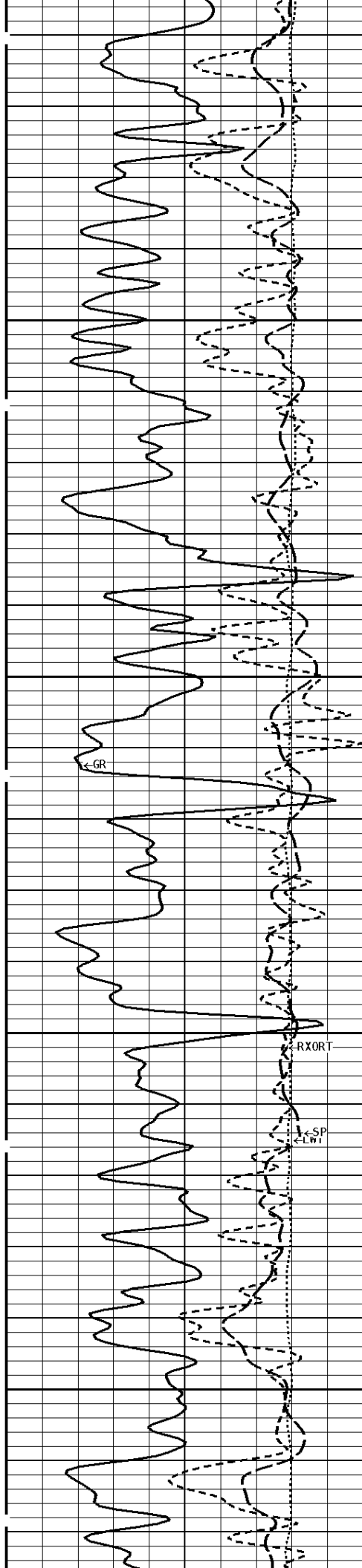




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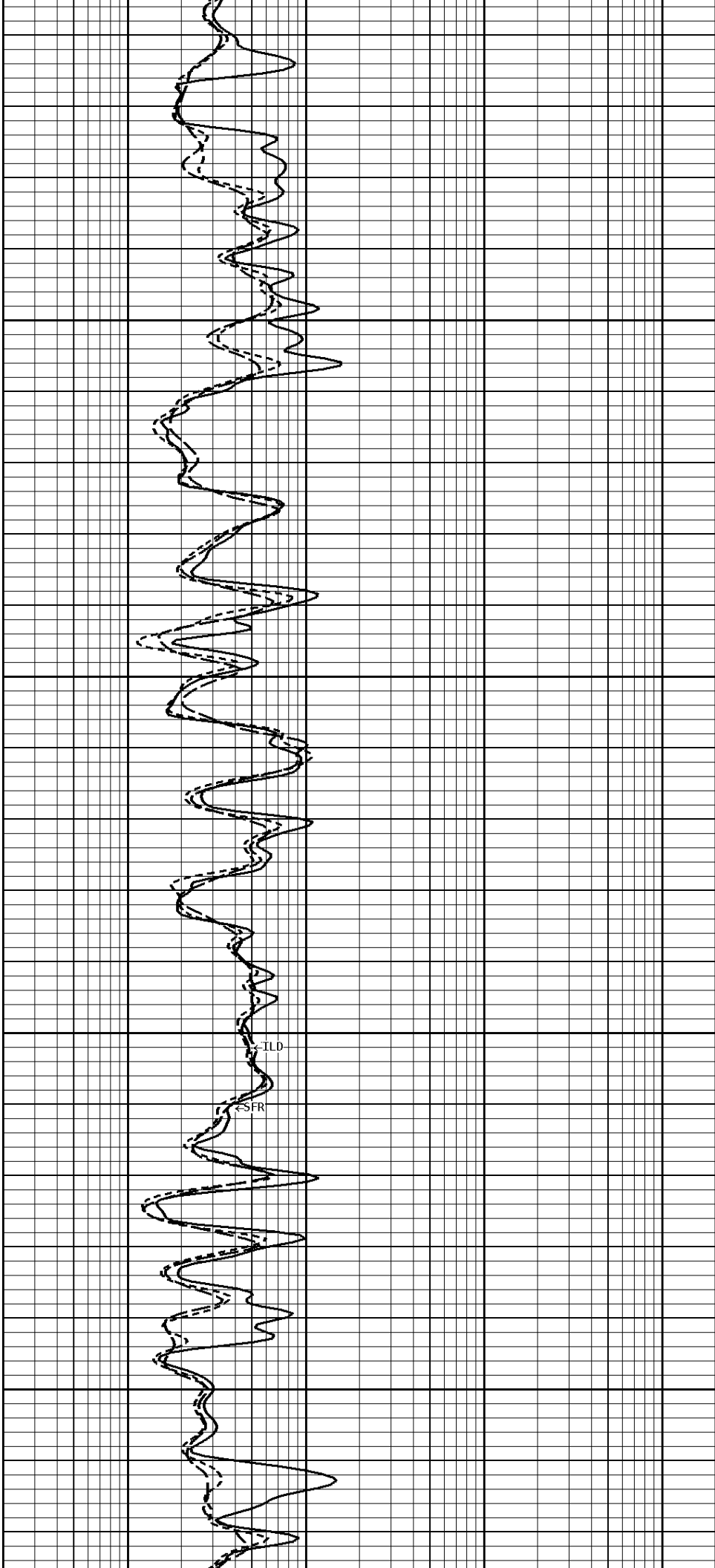
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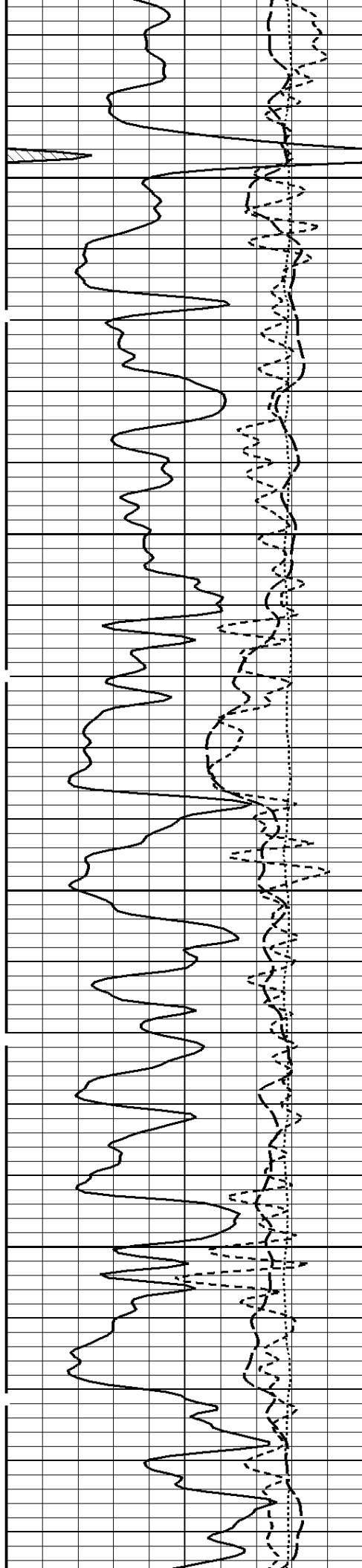




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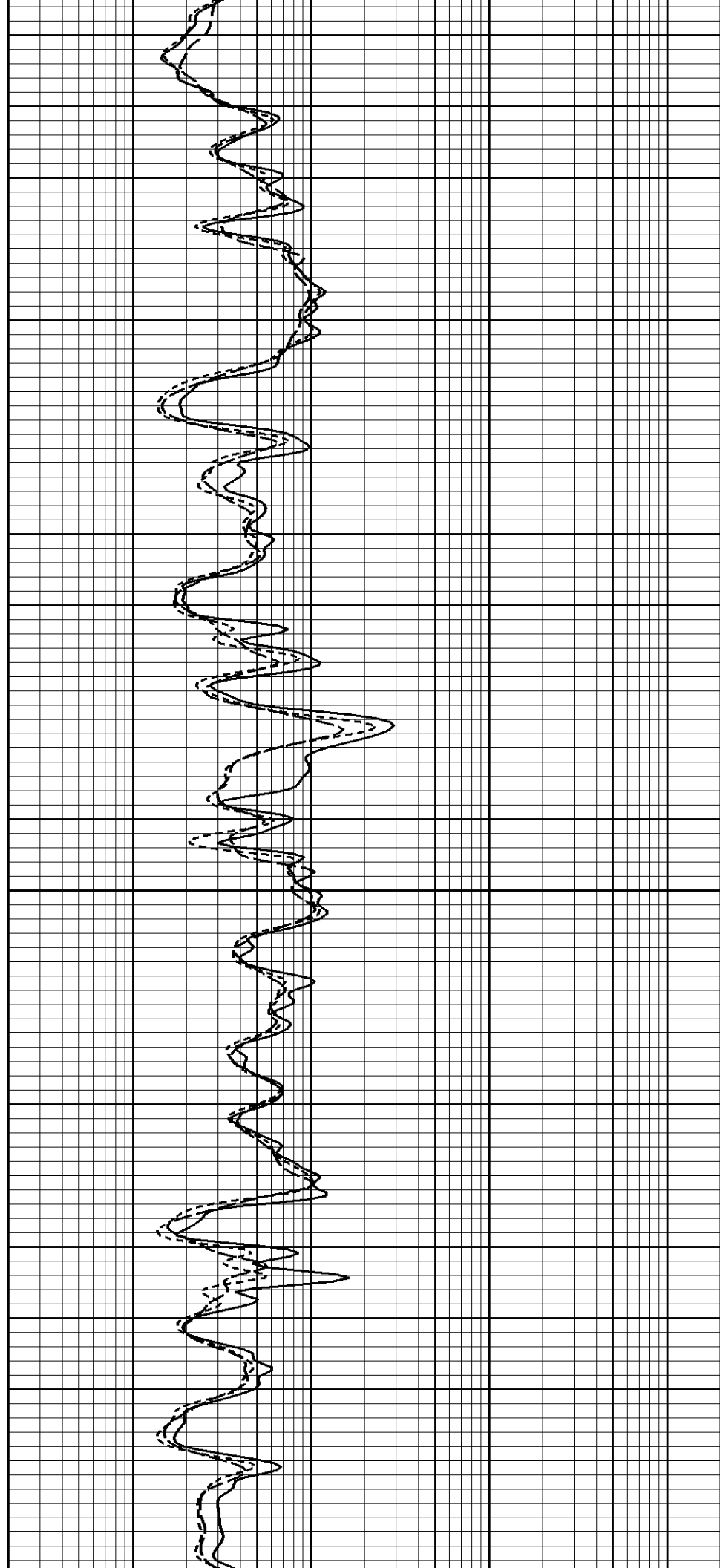
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1500

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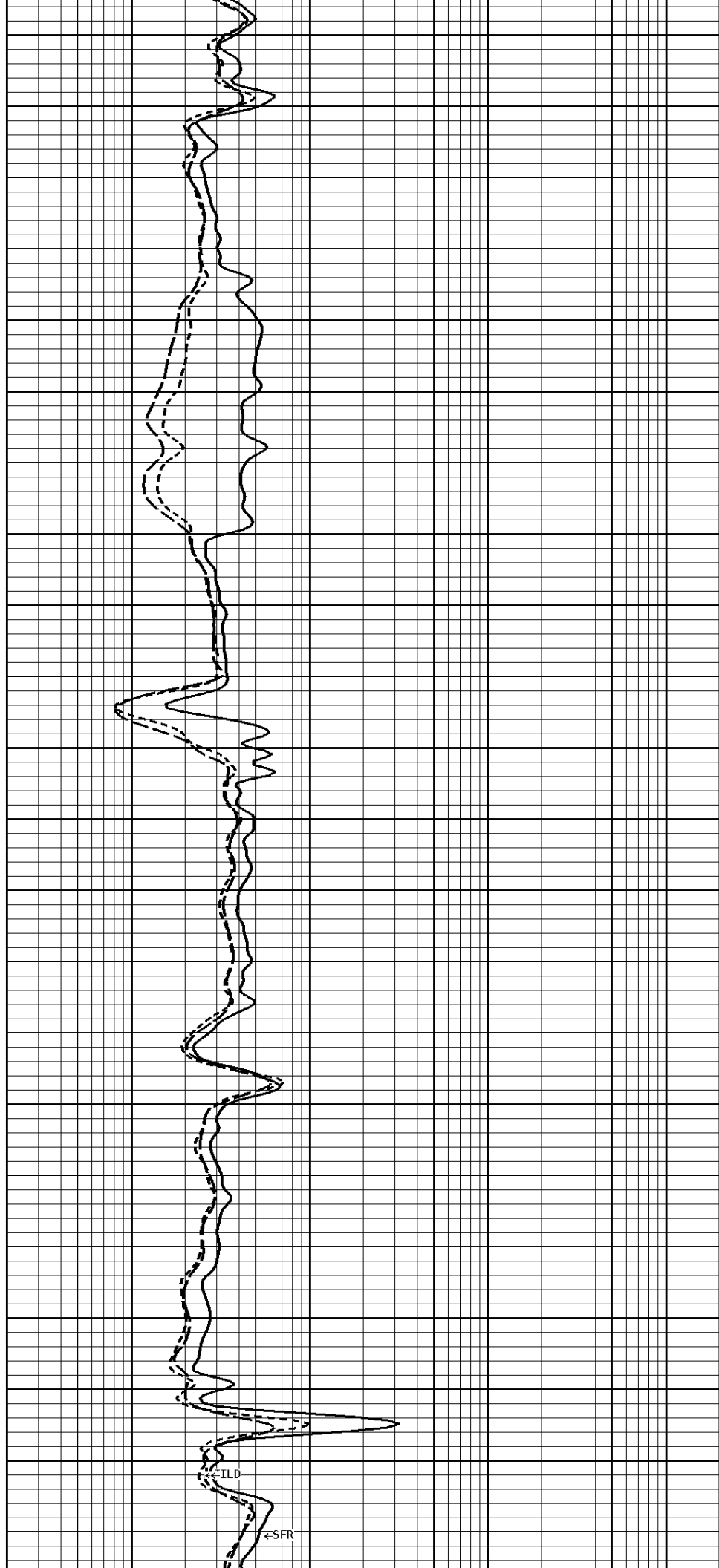


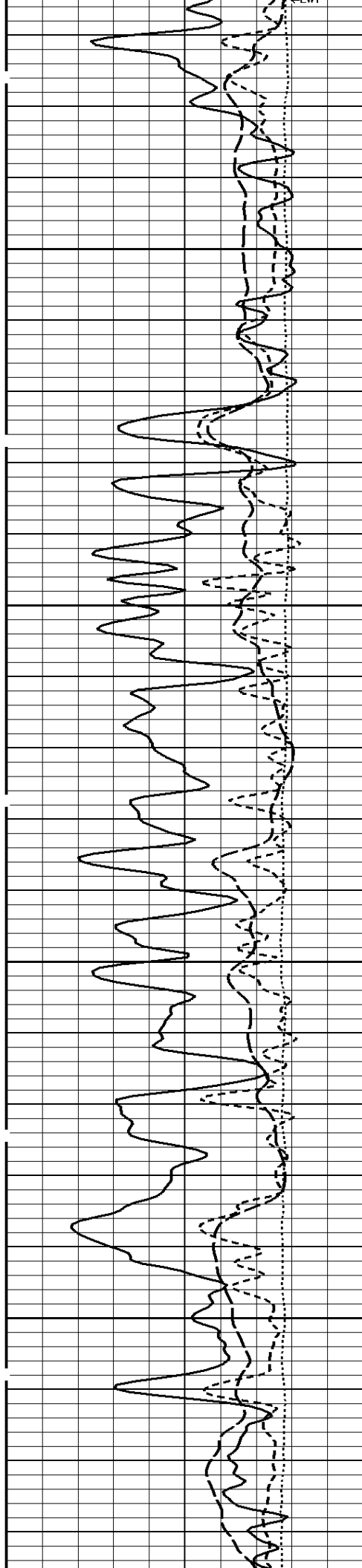


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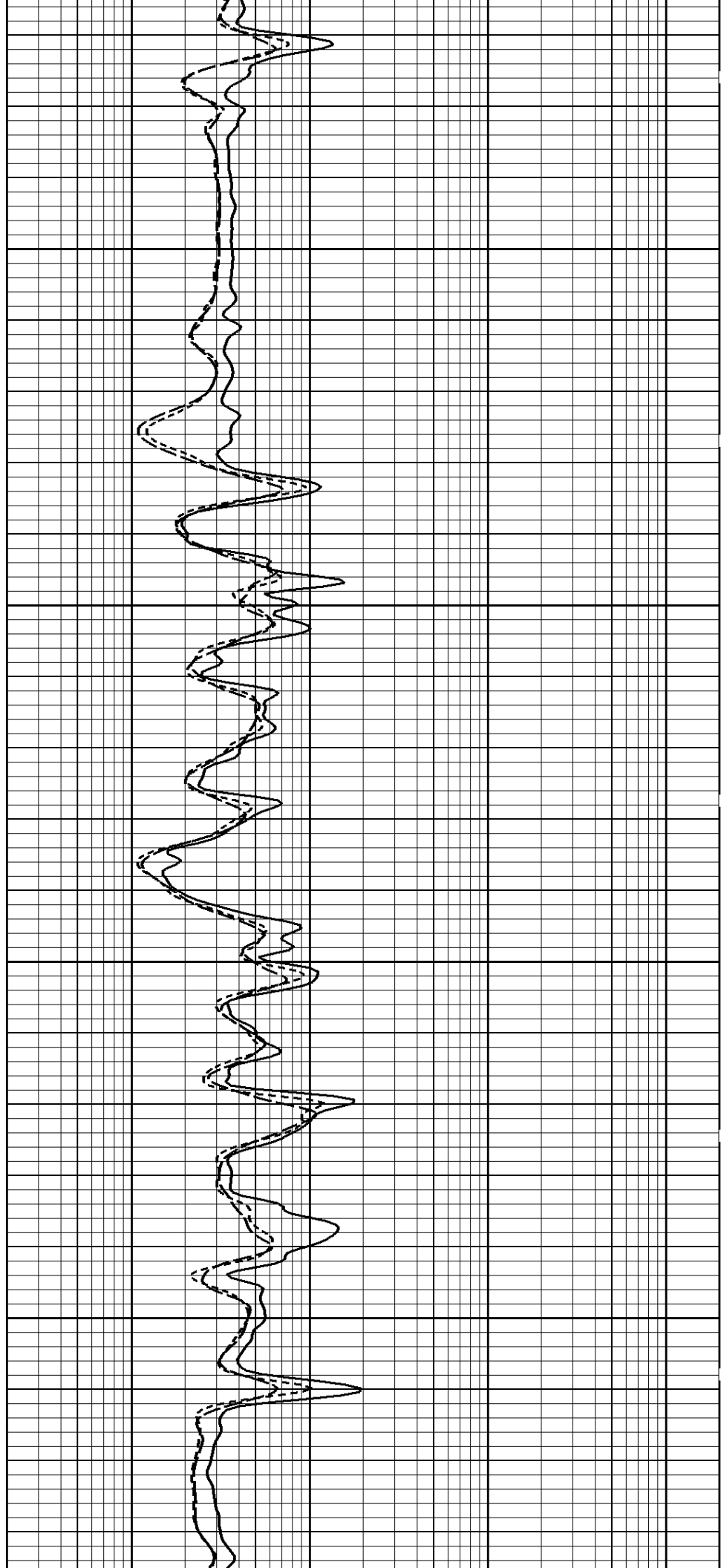
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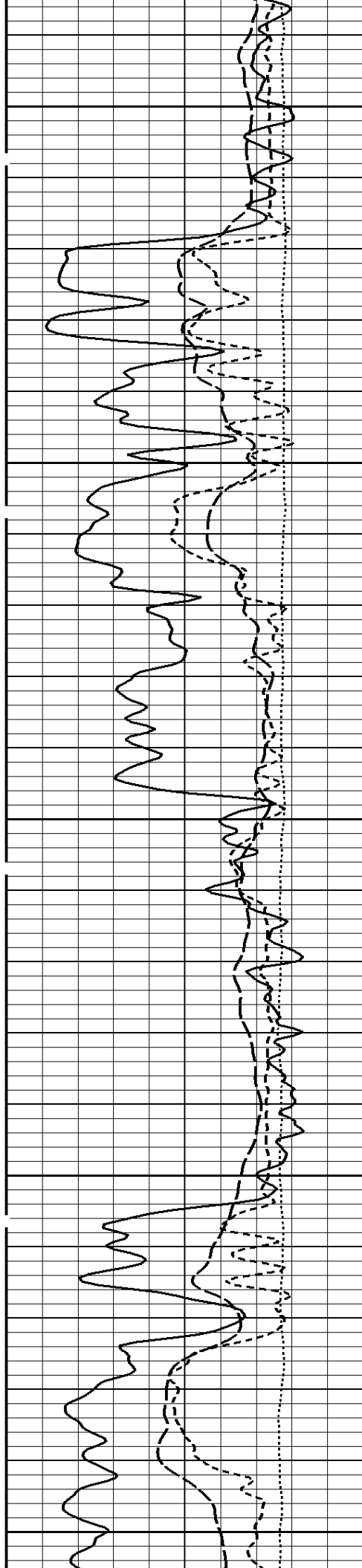




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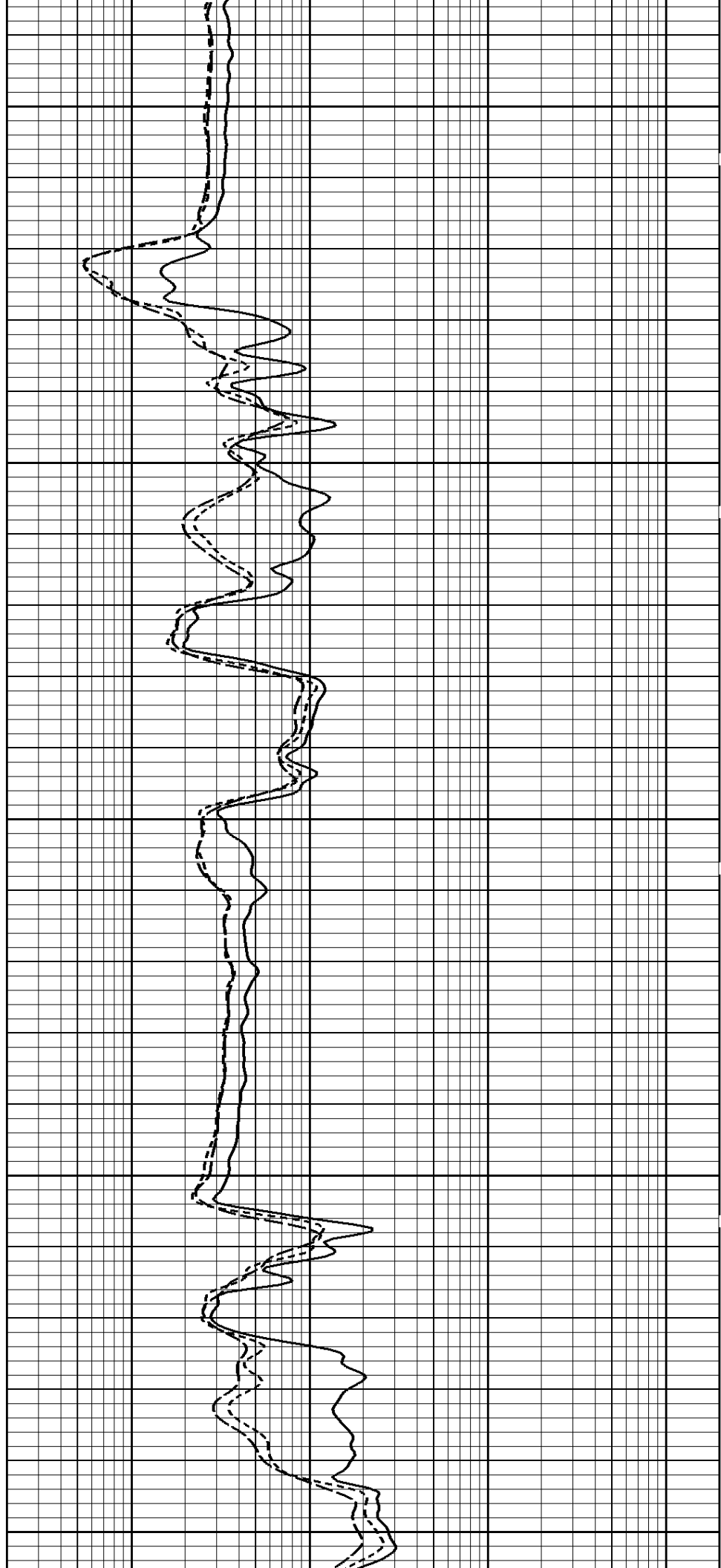
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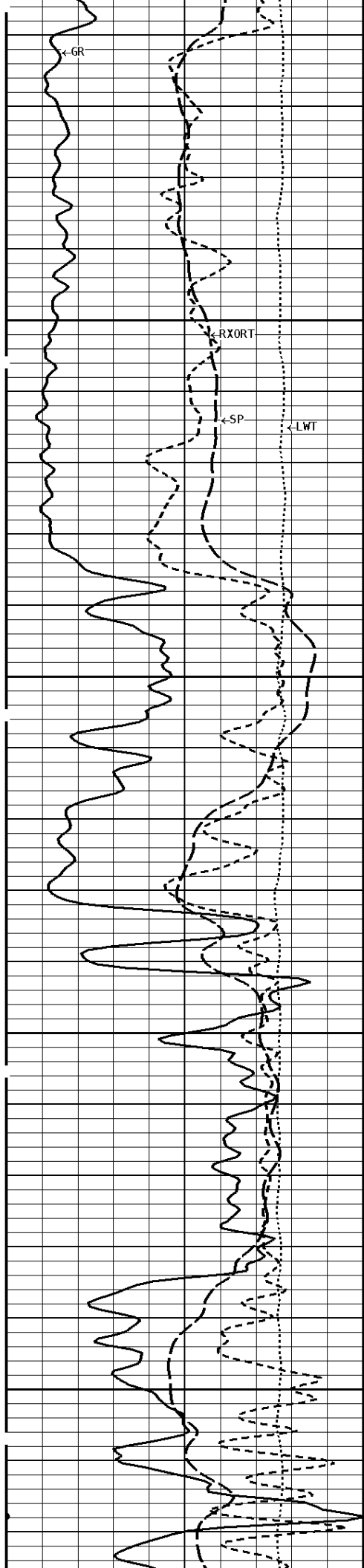




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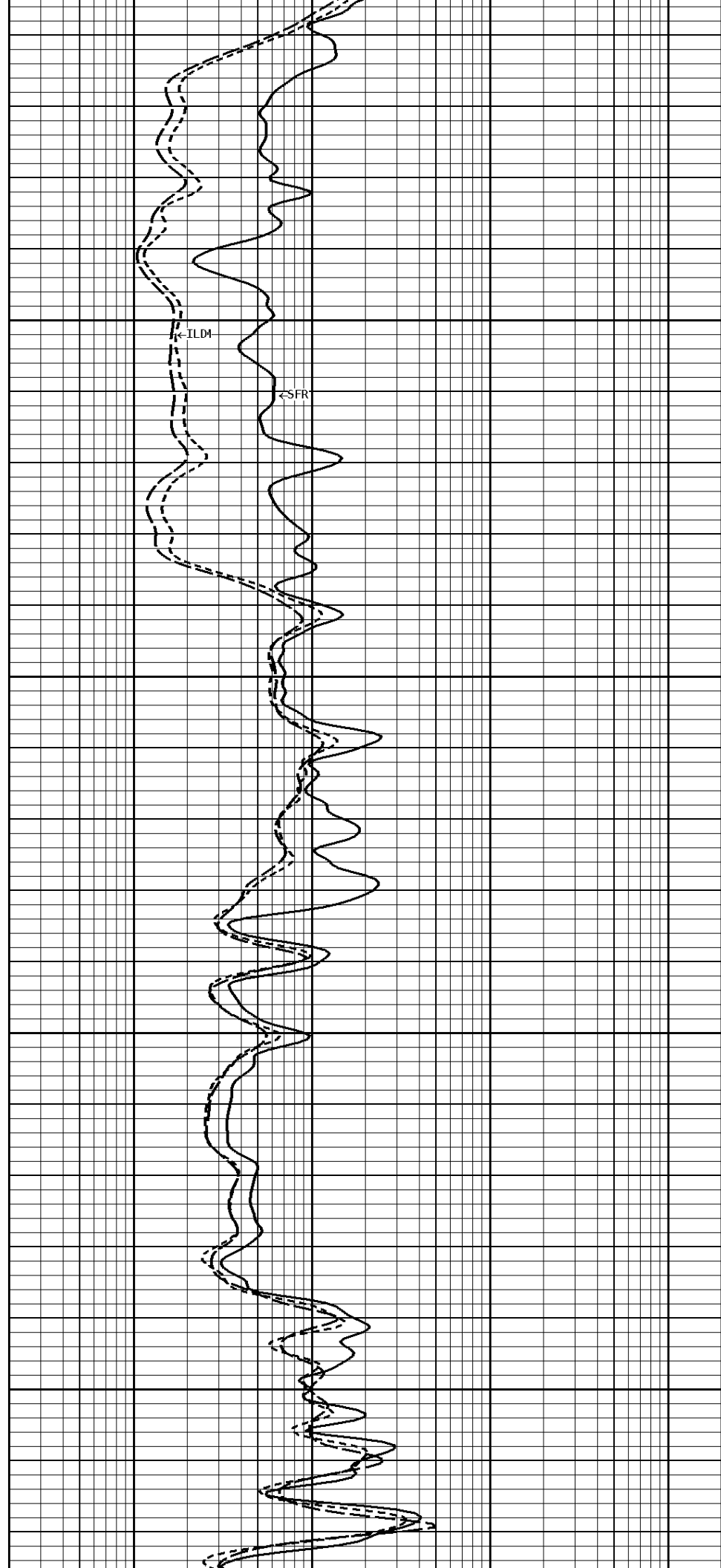
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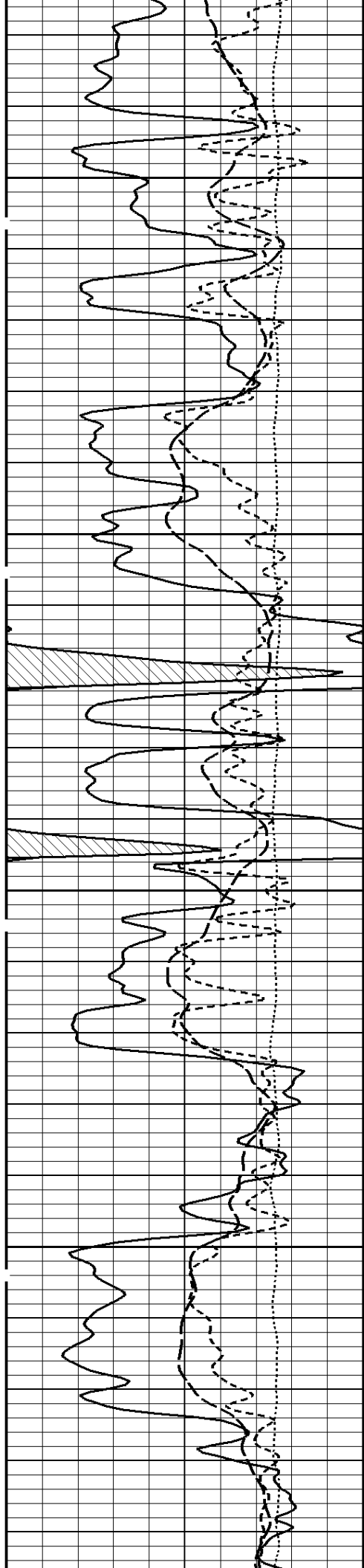




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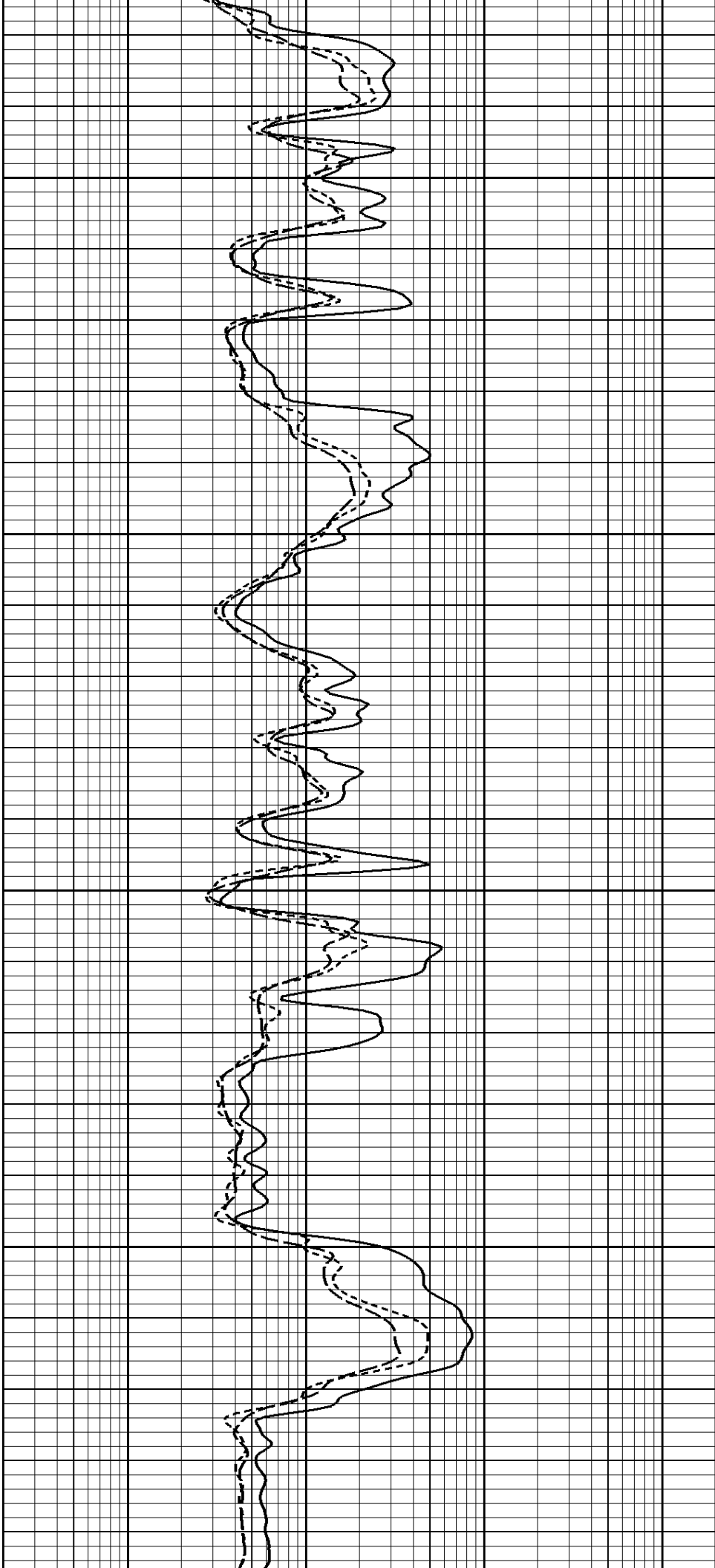
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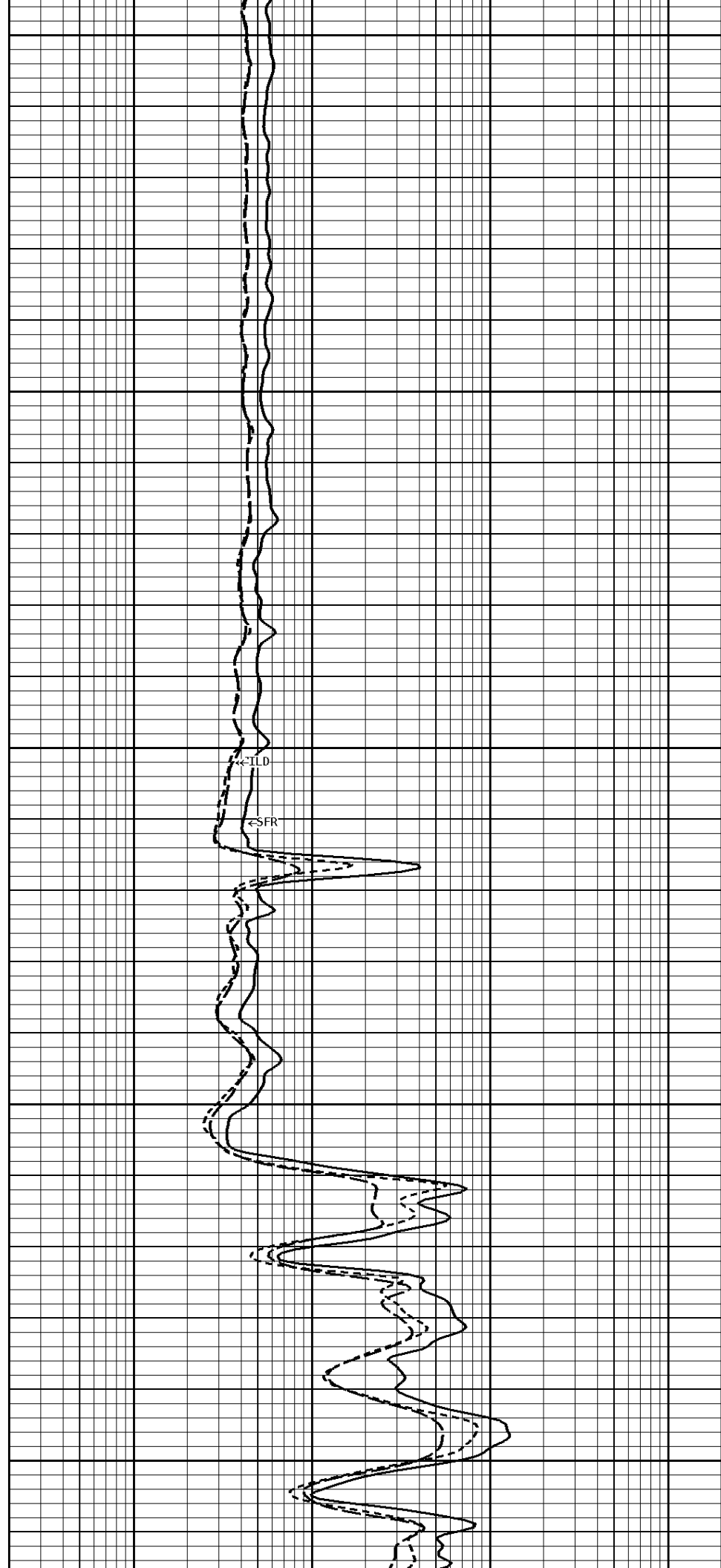
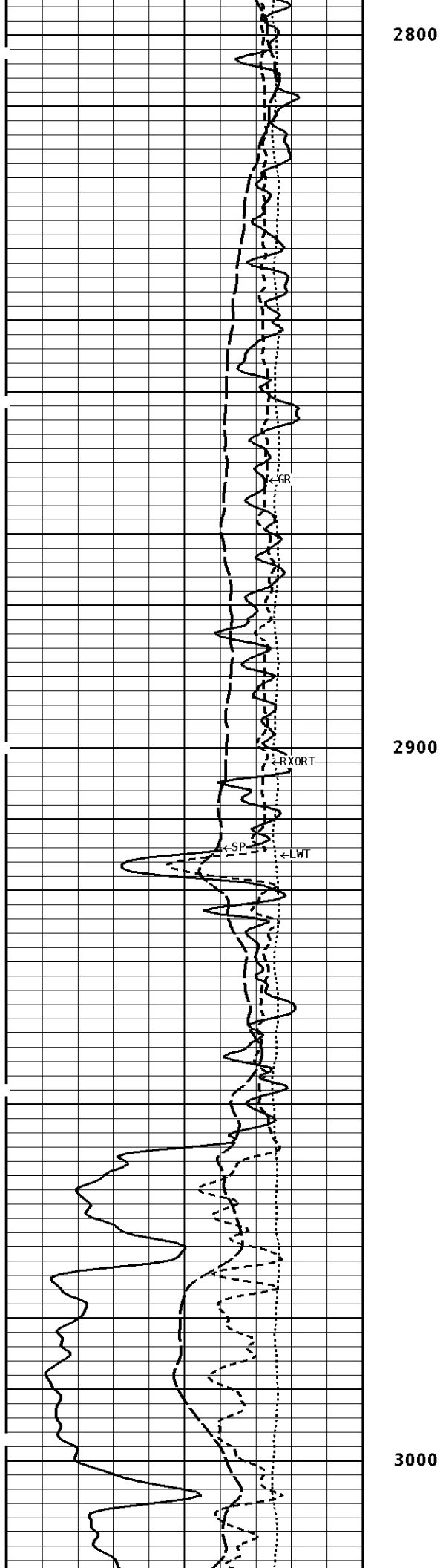


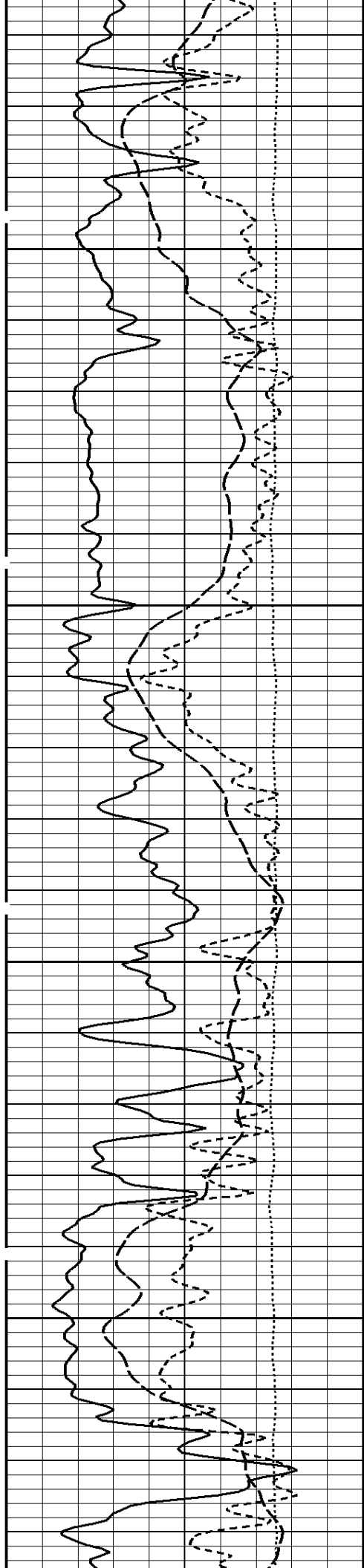


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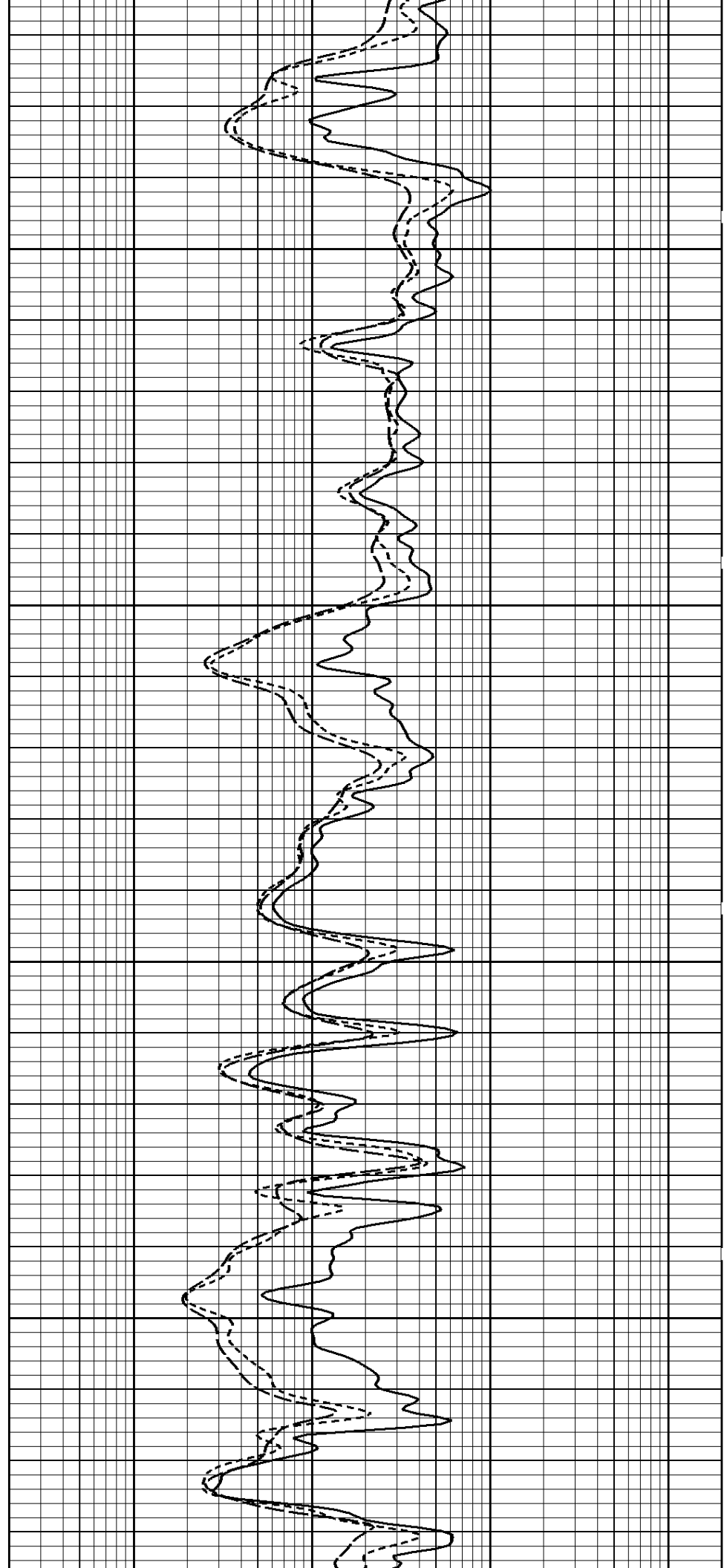


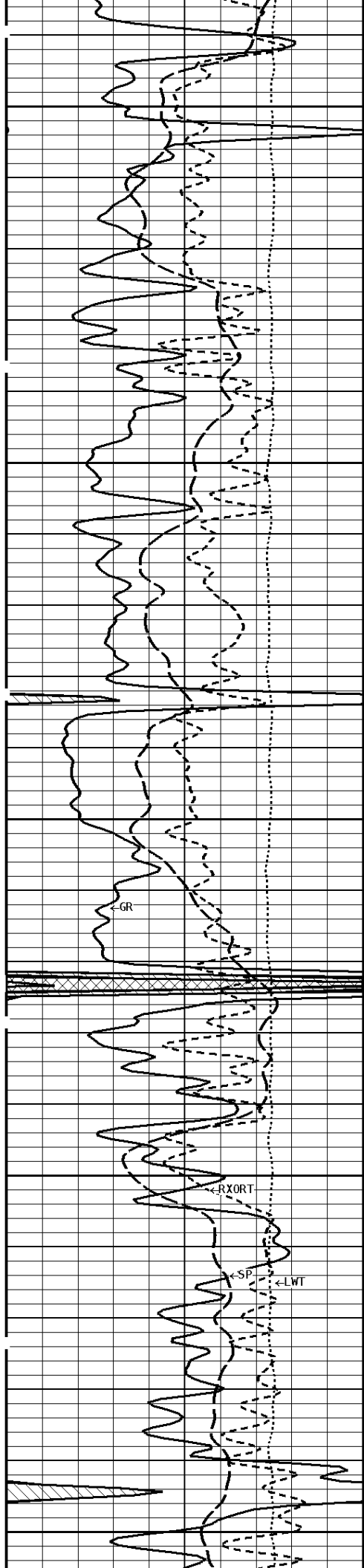




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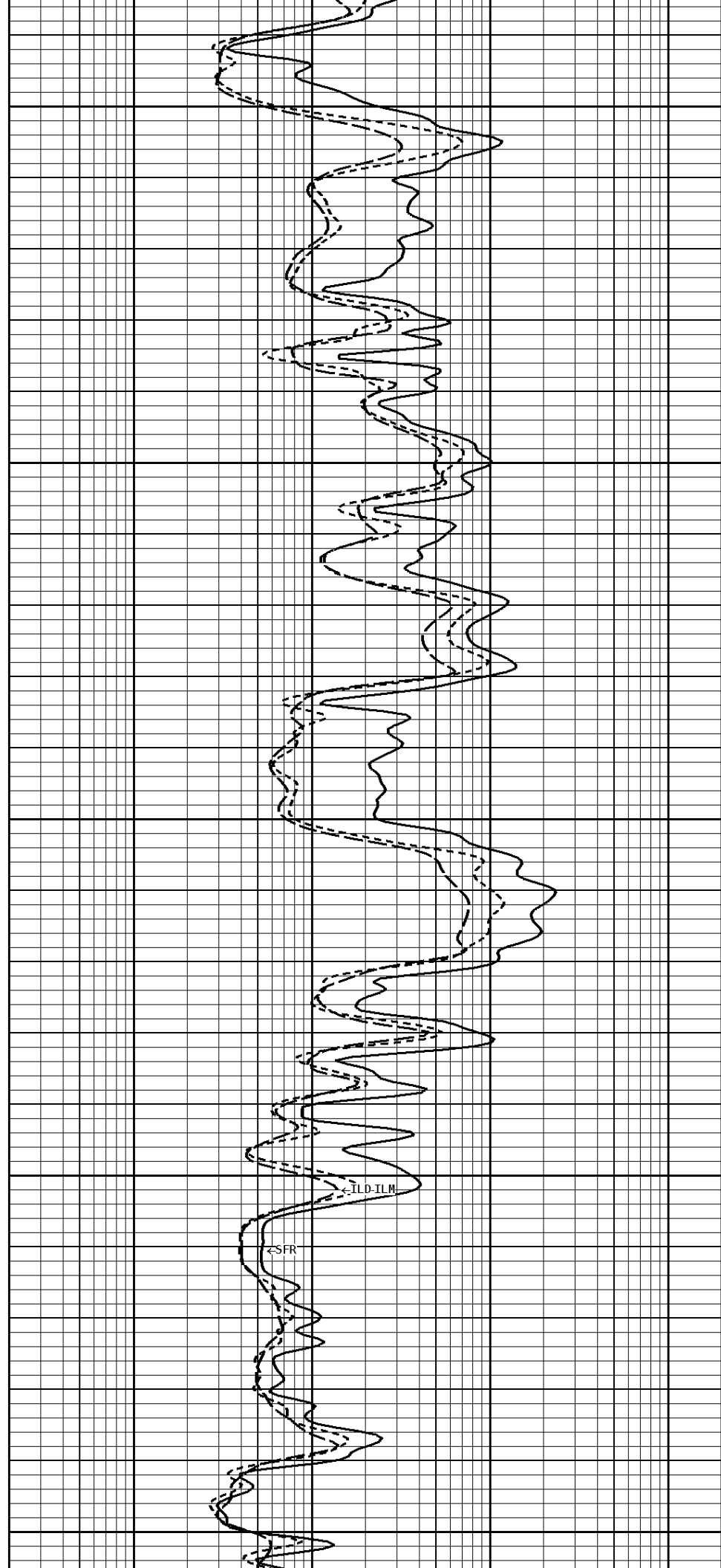
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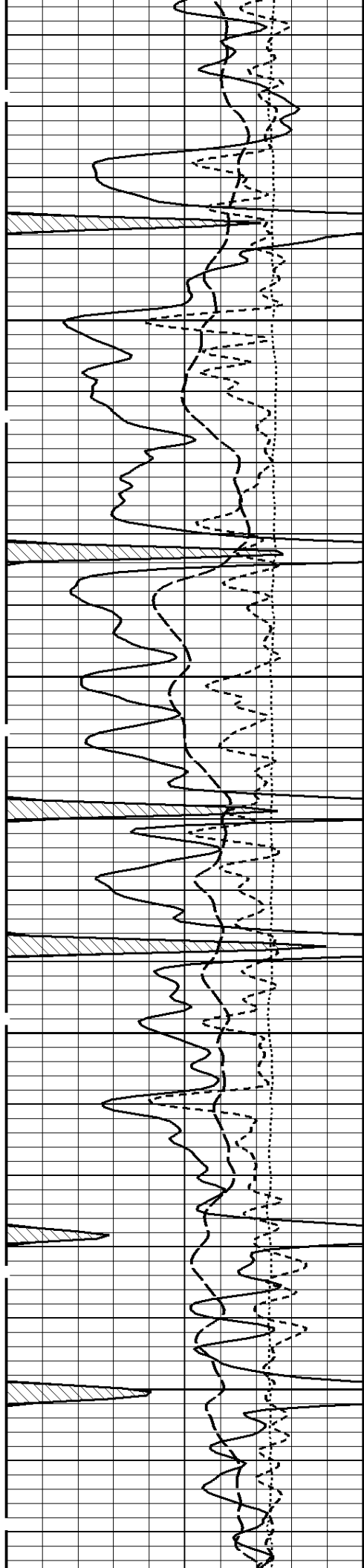




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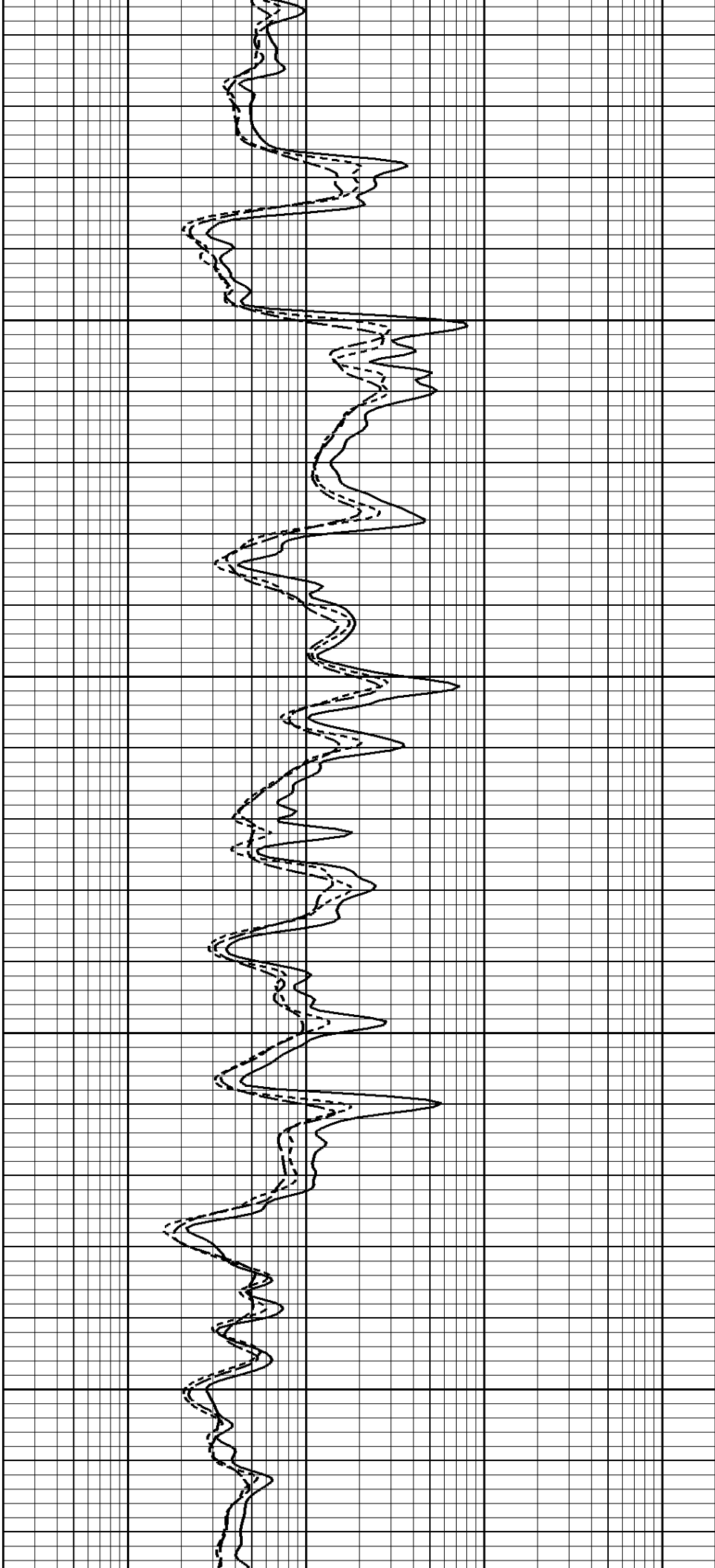
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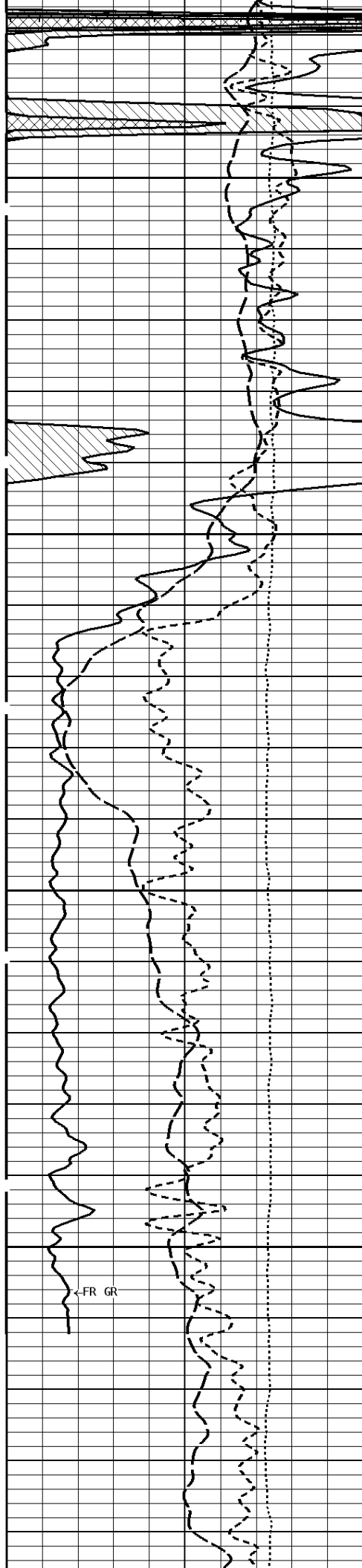




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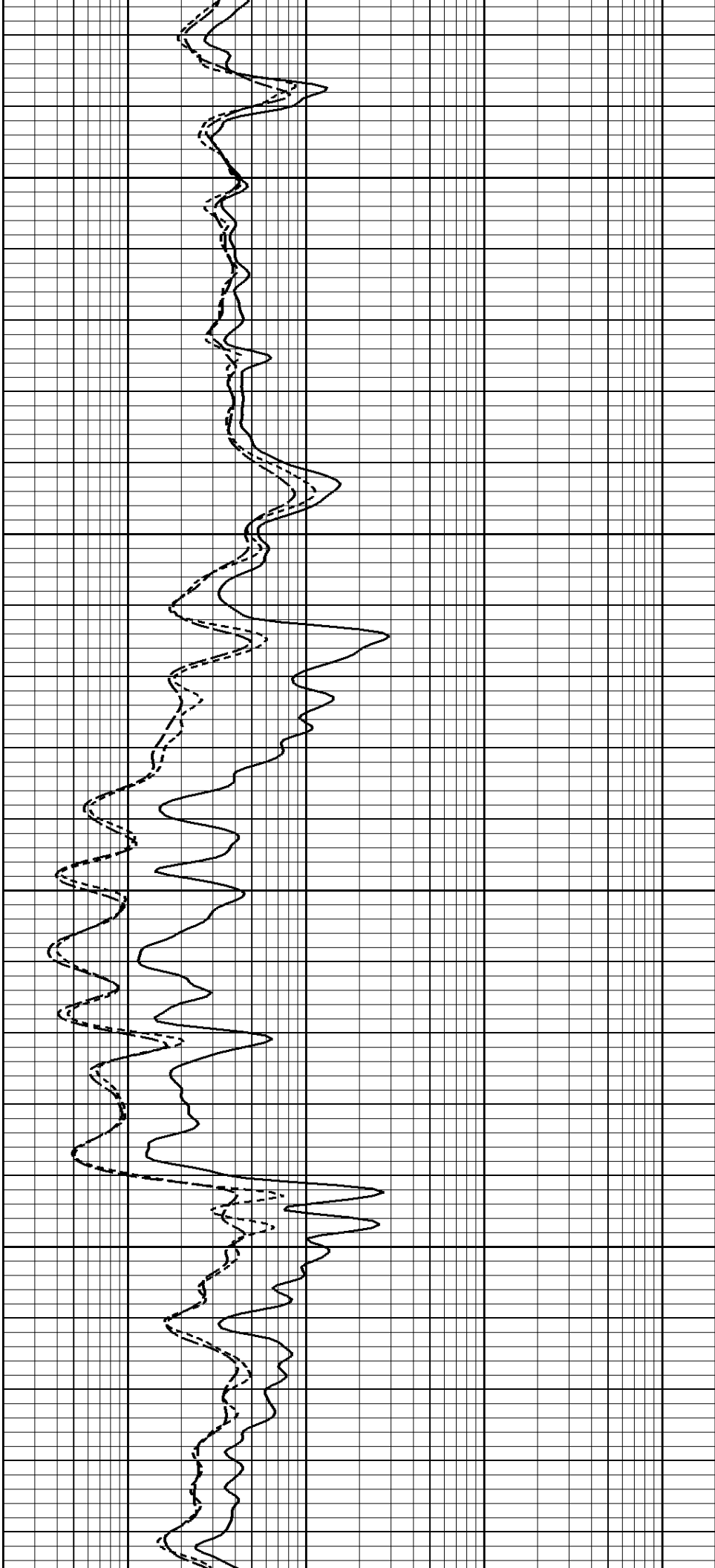
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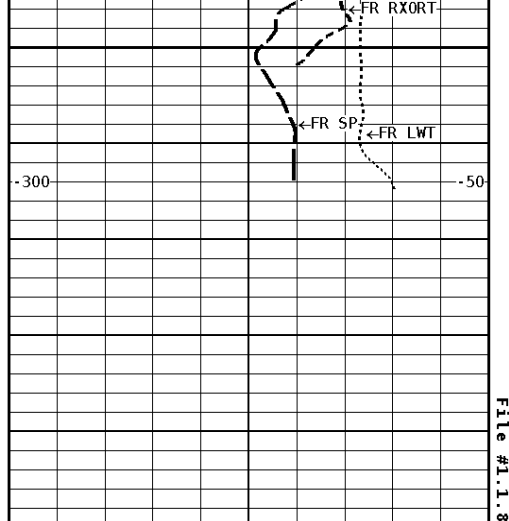




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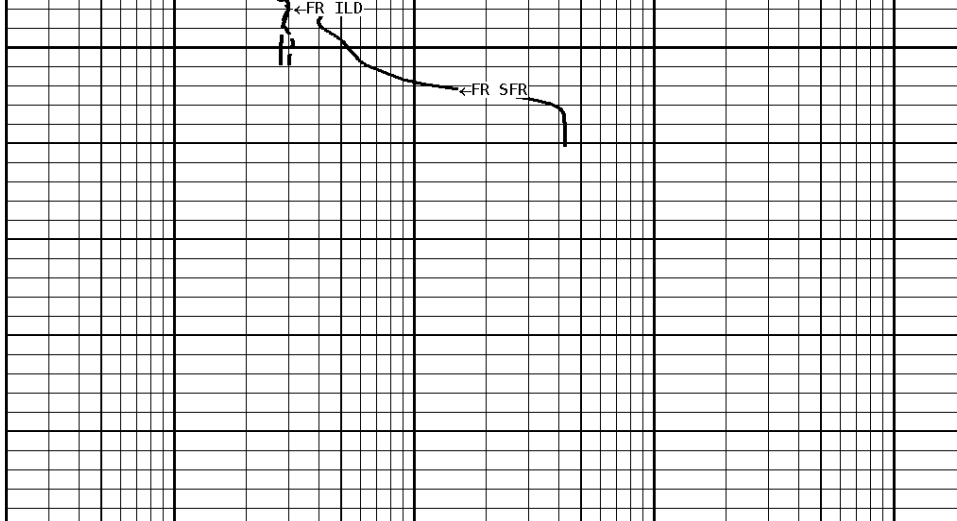
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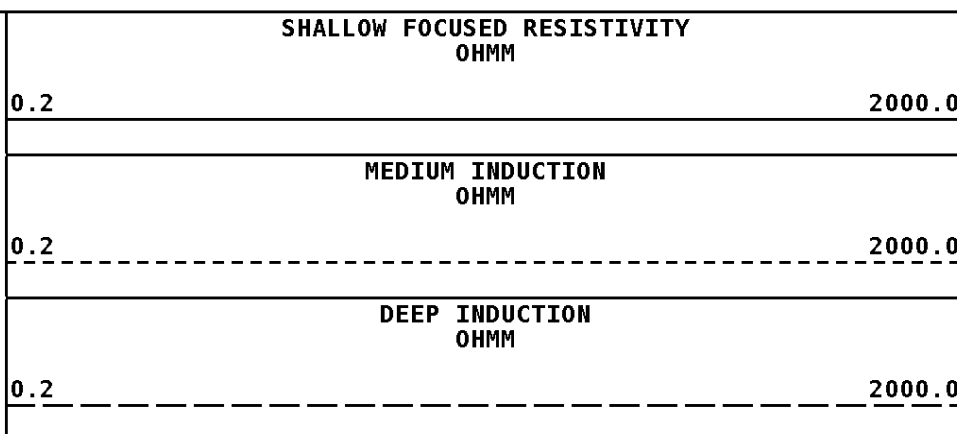
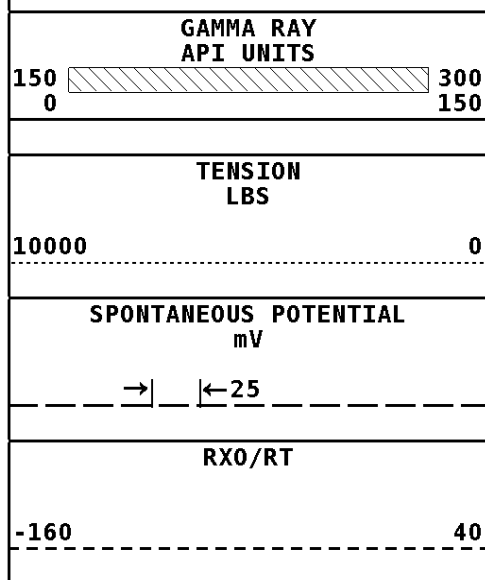


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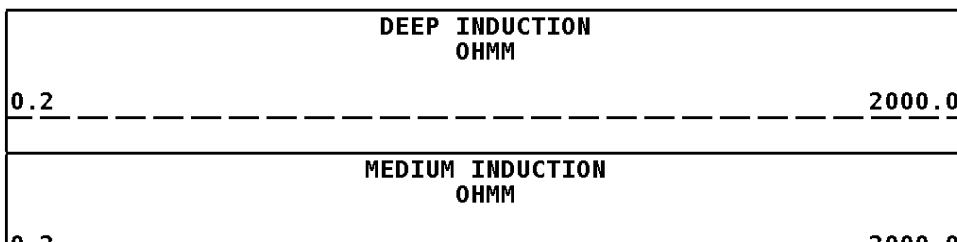
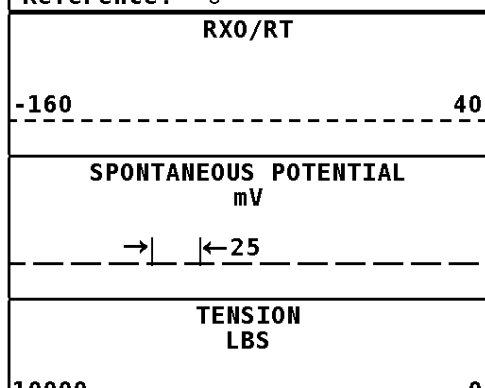
1:240 MAIN SECTION

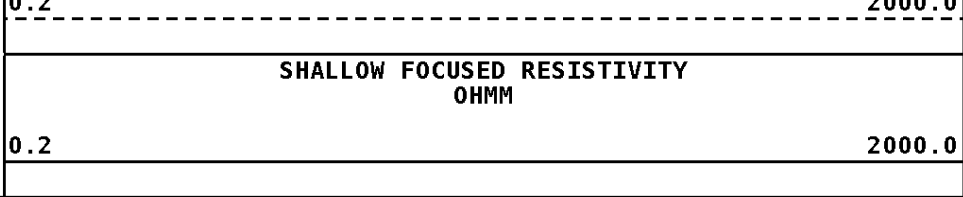
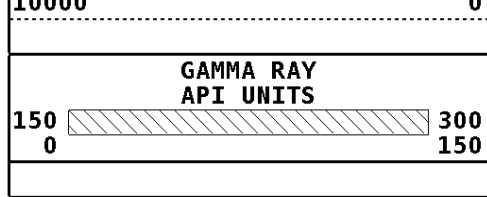


* Borehole Zone Factors *

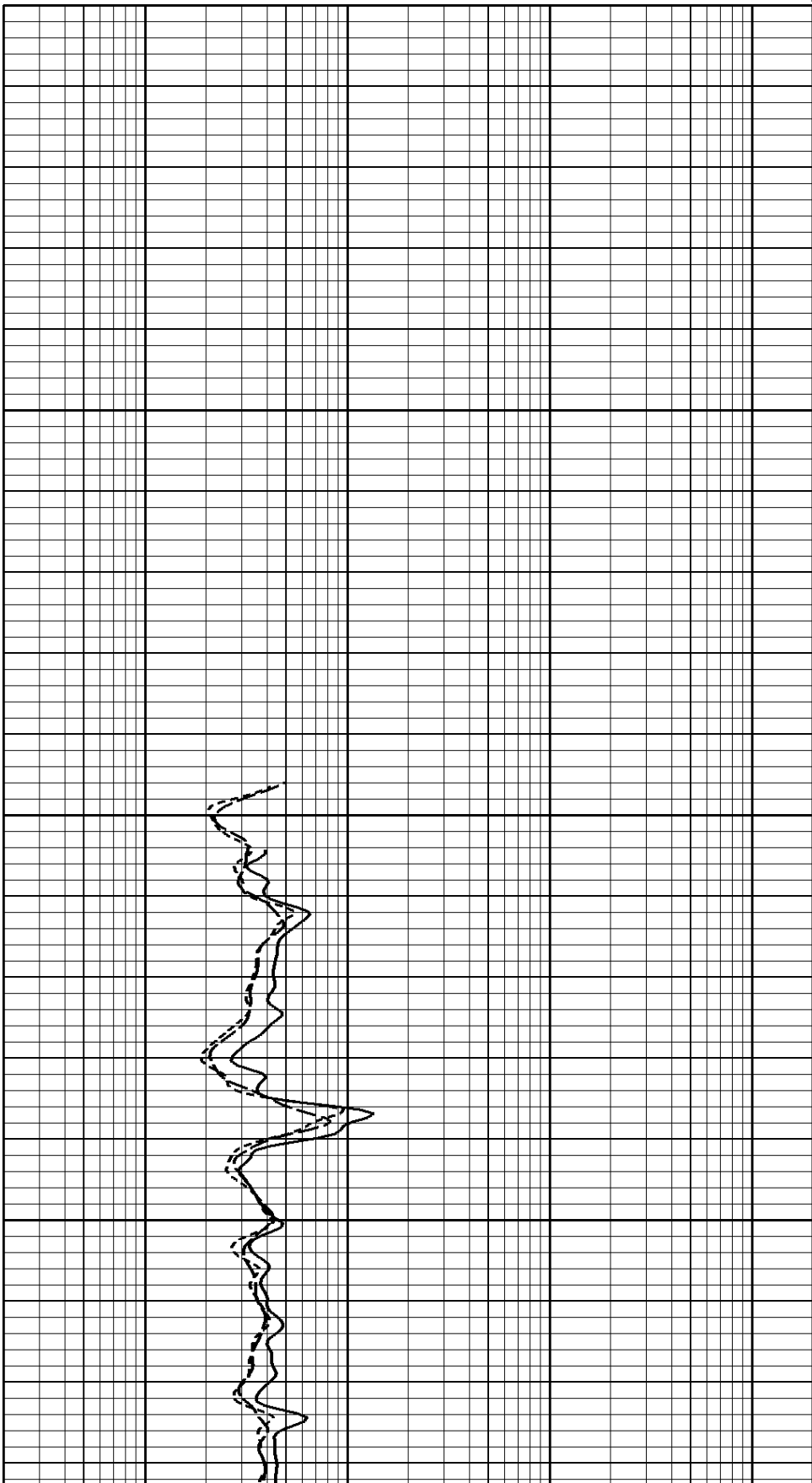
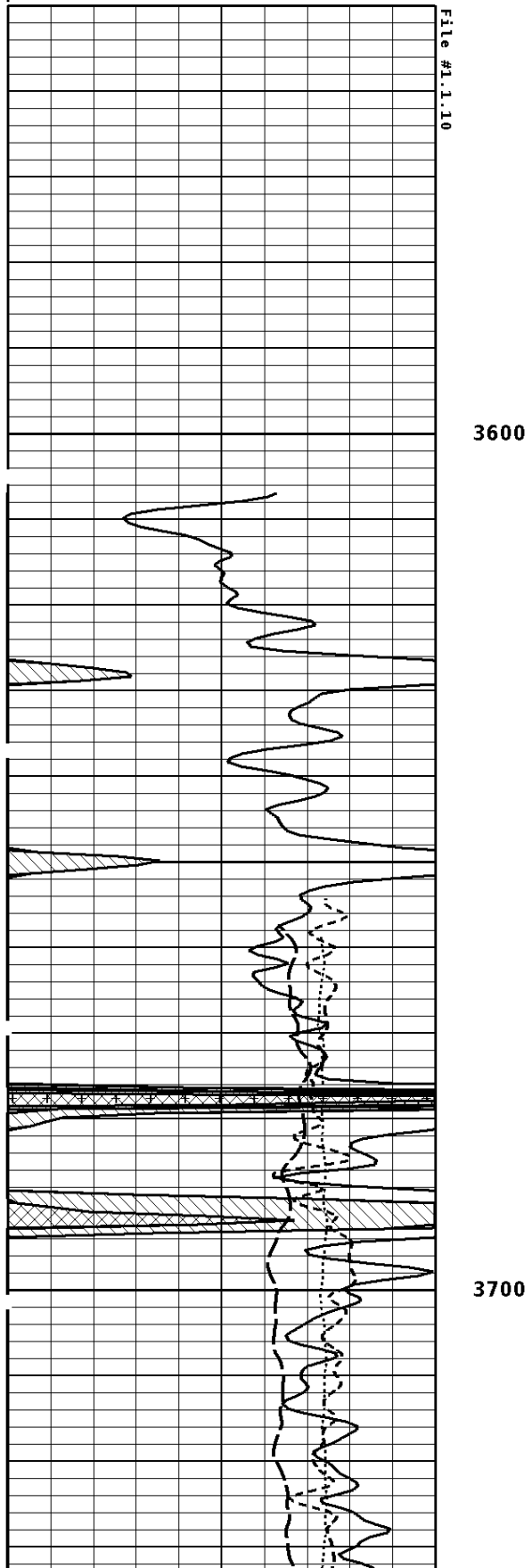
Zone 1	99999.0	to	0.0	Feet
Drill Bit Size				7.875 in
Casing Diameter				5.500 in
BHT Depth				3910.000 ft
Borehole Temperature				116.0 degF
Temperature Gradient				1.00 DFHF
Resistivity Of Mud				0.800 ohm/m
Standoff				1.5
Resistivity Of Mud Temperature				70.00 degF

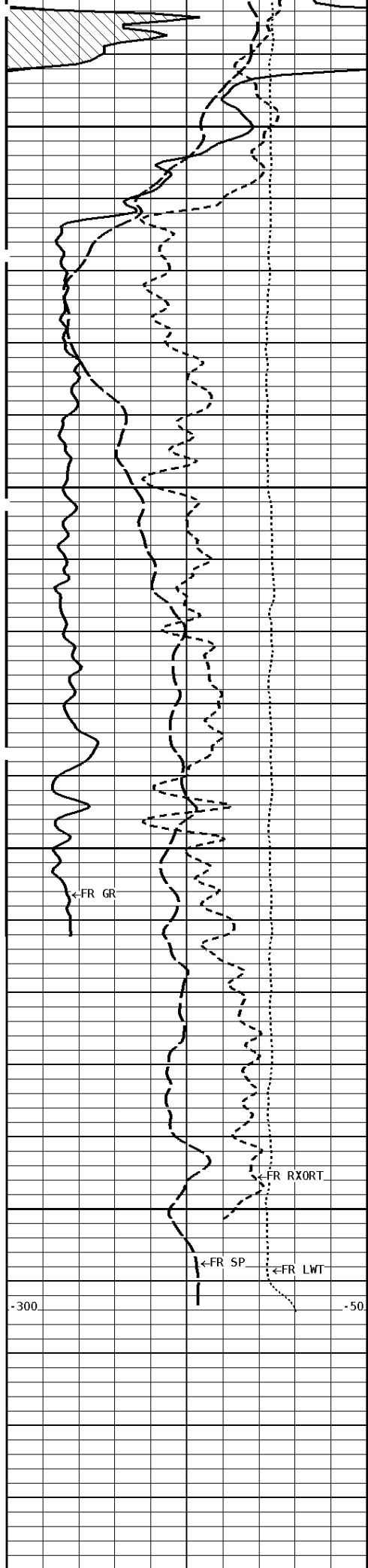
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 Segment: V1.D1.S10 AS-7 REPEAT Acquired: 2015-09/03 05:55 3.4.0-13525
 Reference: 0 Processed: 2015-09/04 13:21 3.4.0-13534





1:240 REPEAT SECTION





3800

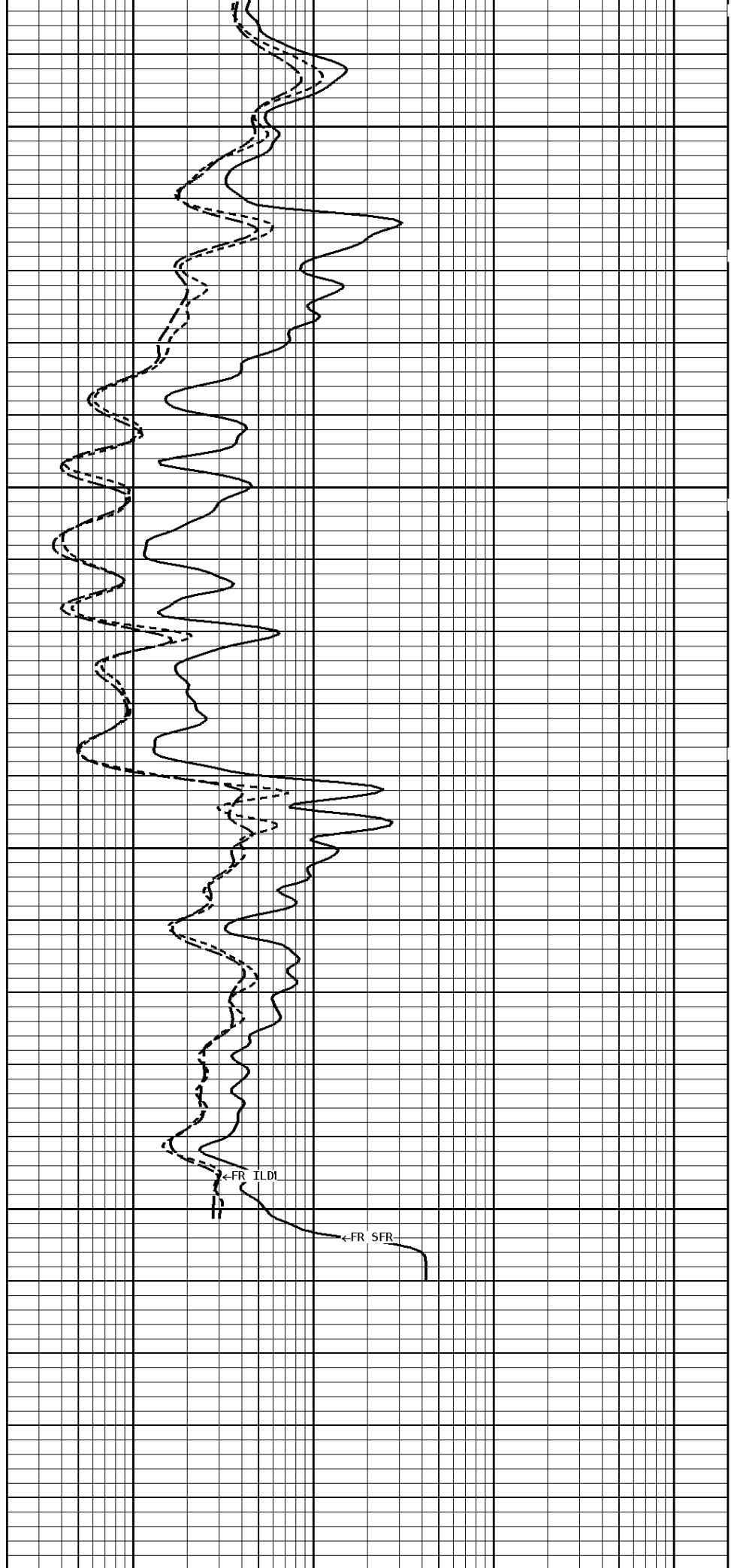
3900

3910

-300

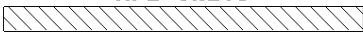
-50

File #1.1.10



1-240 REPEAT SECTION

1.240 REPEAT SECTION

GAMMA RAY API UNITS 150  300 0 150		SHALLOW FOCUSED RESISTIVITY OHMM 0.2 2000.0	
TENSION LBS 10000 0		MEDIUM INDUCTION OHMM 0.2 2000.0	
SPONTANEOUS POTENTIAL mV → ← 25		DEEP INDUCTION OHMM 0.2 2000.0	
RXO/RT -160 40			

* Borehole Zone Factors *

Zone 1 99999.0 to 0.0 Feet			
Drill Bit Size		7.875	in
Casing Diameter		5.500	in
BHT Depth		3910.000	ft
Borehole Temperature		116.0	degF
Temperature Gradient		1.00	DFHF
Resistivity Of Mud		0.800	ohm/m
Standoff		1.5	
Resistivity Of Mud Temperature		70.00	degF

* Calibration Summary *

Shop Calibration						
GRT-B						
Performed : 24-Aug-2015			Time : 10:01			
Sensor Suite : GR-GR5			ID : GRT-BB-107			
	Measured		Units	Calibrated		Units
	Background	Jig		Jig		
GR	61	370	CPS	175		GRAPI

Shop Calibration						
PIT-CA						
Performed : 01-Sep-2015			Time : 10:52			
Sensor Suite : P-IND-T			ID : PIT-CA-077			
Medium						
	Measured		Calibrated			
	R	X	R	X	Units	
Air	130255	130731	-2.9	-3.6	MMHOS	
Zero	131075	131068	26.5	4.6	MMHOS	
Reference	257436	259660	5026.5	5004.6	MMHOS	
Loop	127852	223481	3508.4	3697.9	MMHOS	
Sonde Error			-7.7	-3.0	MMHOS	
Cond			5026.5	5004.6	MMHOS	
Deep						
	Measured		Calibrated			
	R	X	R	X	Units	
Air	130066	130185	0.2	-0.8	MMHOS	
Zero	131063	131079	17.2	9.3	MMHOS	
Reference	236755	238868	2017.2	2009.3	MMHOS	
Loop	127770	222393	1667.7	1753.5	MMHOS	
Sonde Error			-9.2	-4.7	MMHOS	
Cond			2017.2	2009.3	MMHOS	
Temperature						
	Measured		Calibrated			
	Low	High	Low	High	Units	
	16980.0	56920.0	70.0	350.0	DEGE	

Performed : 01-Sep-2015 Time : 10:42
Sensor Suite : SFL ID : PIT-CA-077

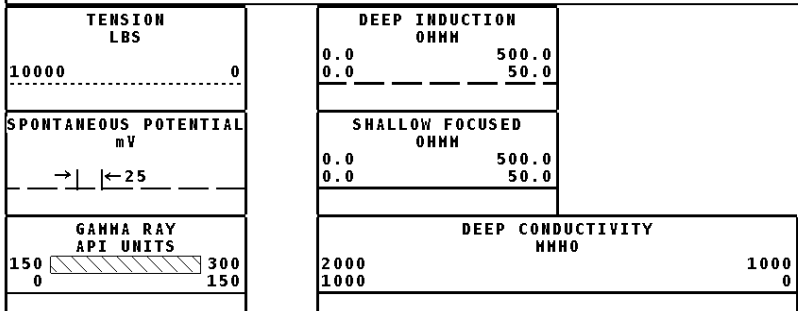
Internal					
Measured			Calibrated		
	Zero	Reference	Zero	Reference	Units
Im	32797.0	48922.0	0.0	7028.0	uA
Ib	32771.0	49369.2	0.0	1750.0	mA
MOM1	32800.3	57385.8	0.0	175.0	mV
Equivalent SFL				43.97	OHMM

Performed : 01-Sep-2015 Time : 10:39
Sensor Suite : P-SP ID : PIT-CA-077

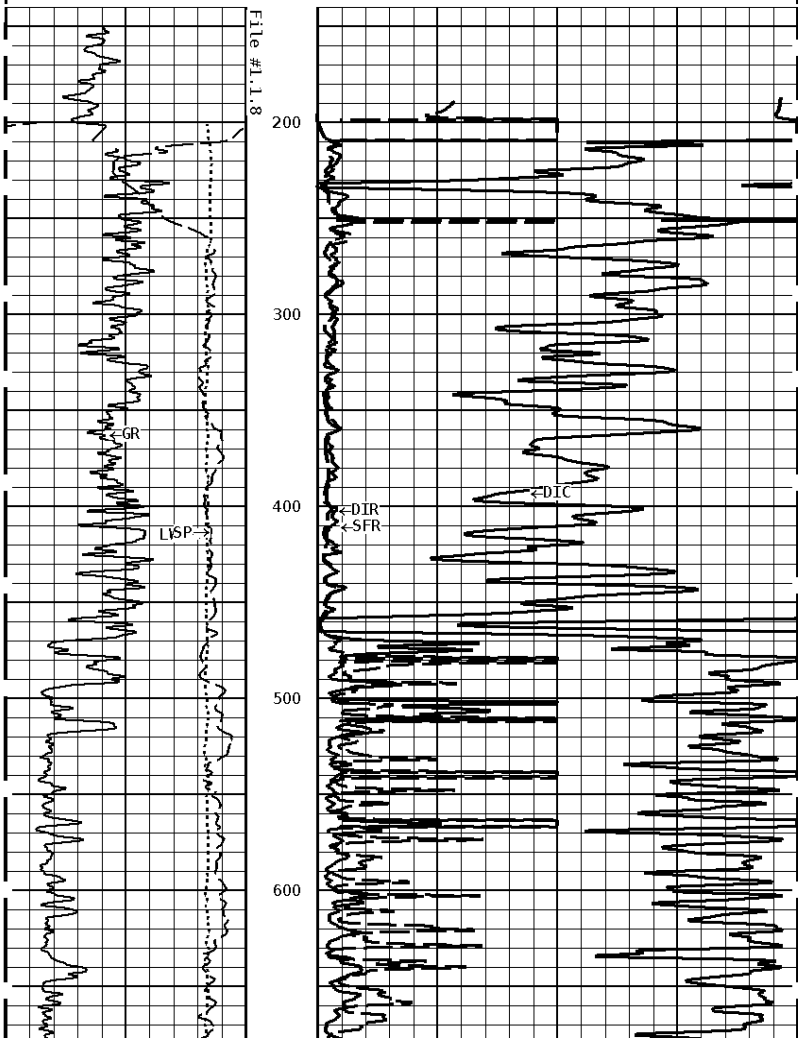
Internal					
Measured			Calibrated		
	Zero	Reference	Zero	Reference	Units
	32767.0	58954.1	0.0	1000.0	mV

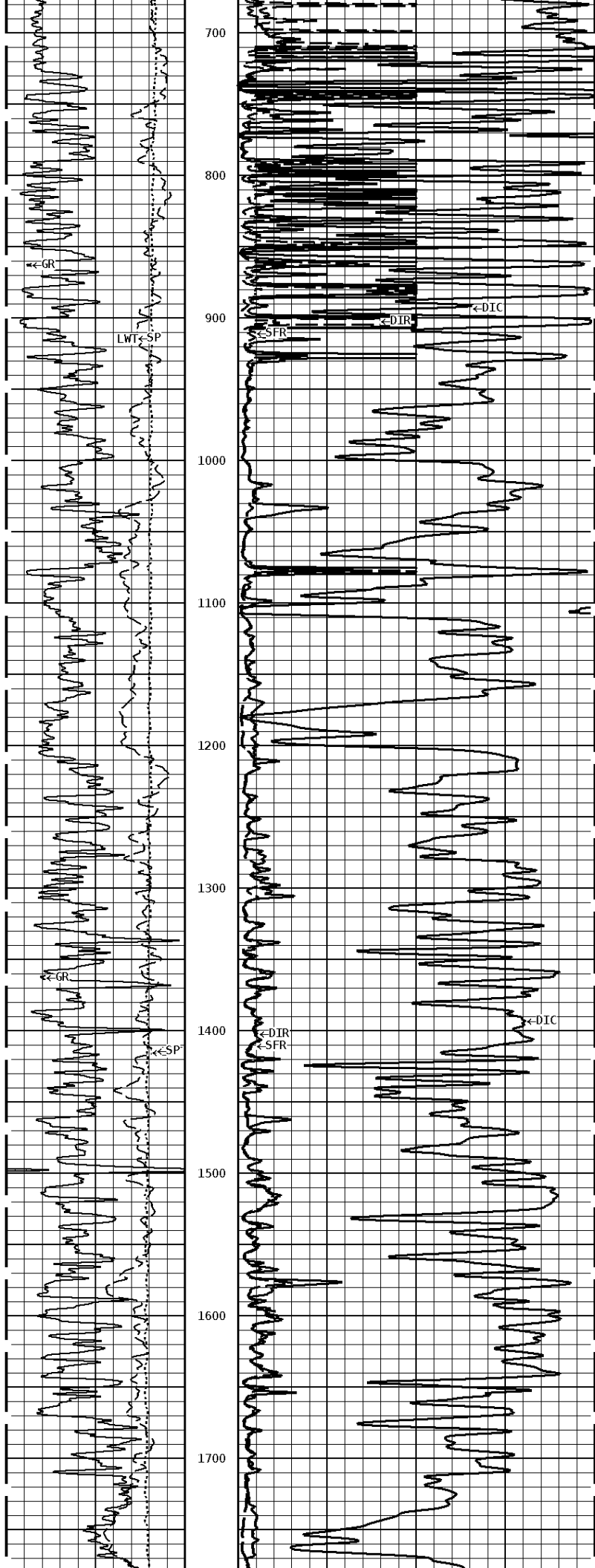
Well File: pic-you-rr-1-mstk-sep-3
Segment: V1.D1.S8 AS-7 MAIN
Reference: 0

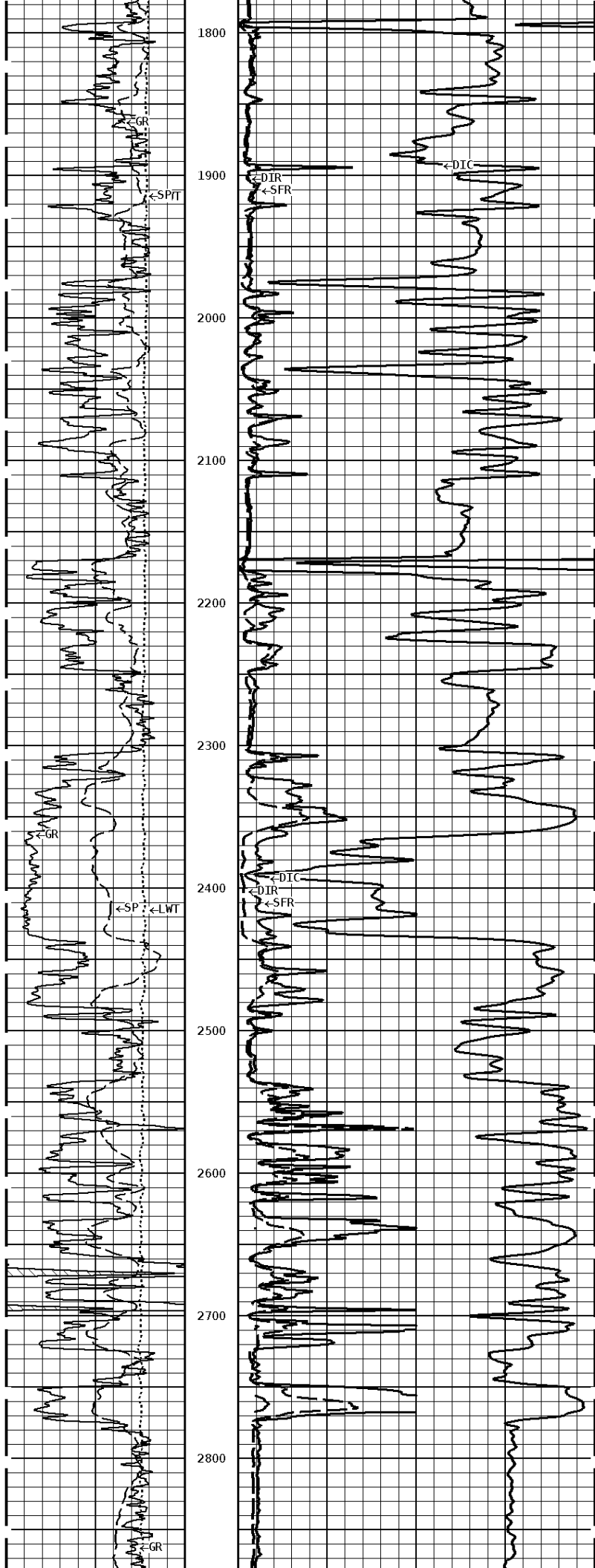
Scale: 1:1200 Format: DIL1200
Acquired: 2015-09/03 06:16 3.4.0-13525
Processed: 2015-09/04 13:21 3.4.0-13534

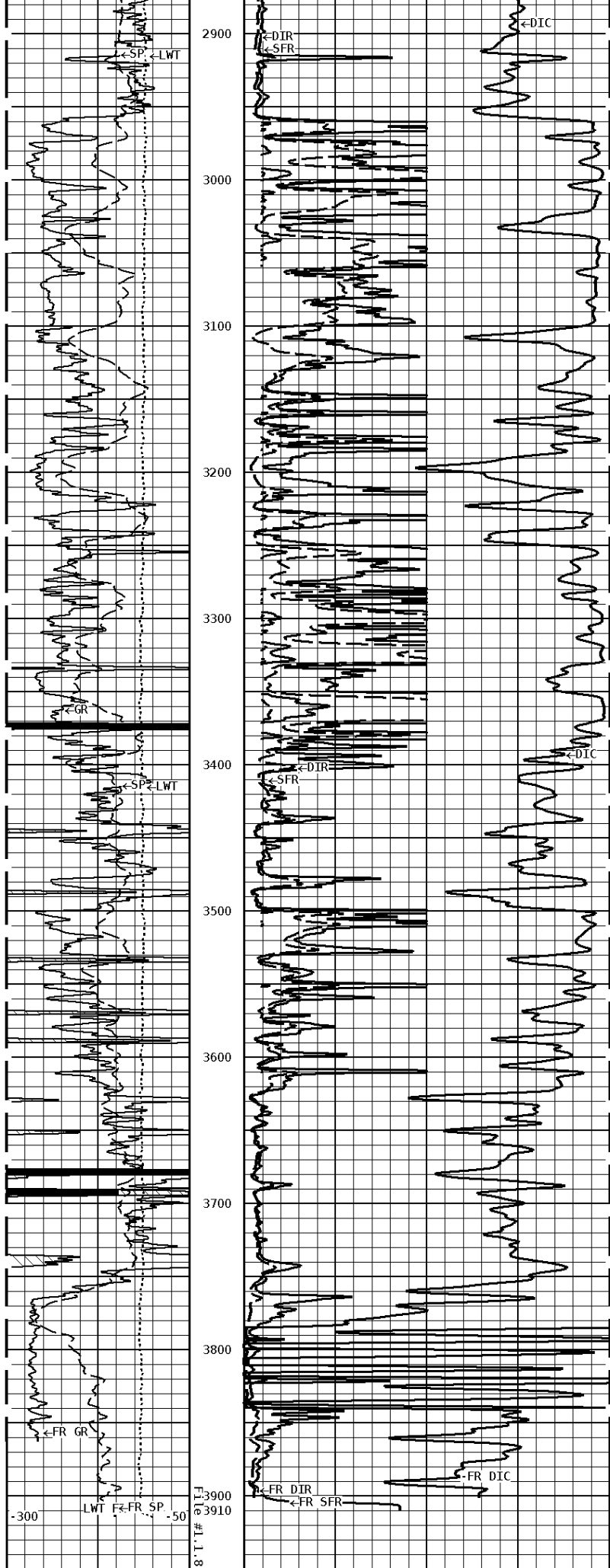


1:1200 MAIN SECTION









1:1200 MAIN SECTION

GAMMA RAY API UNITS 150  300 0 150		DEEP CONDUCTIVITY MMHO 2000 1000 1000 0	
SPONTANEOUS POTENTIAL mV → ← 25		SHALLOW FOCUSED OHMM 0.0 500.0 0.0 50.0	
TENSION LBS 10000 0		DEEP INDUCTION OHMM 0.0 500.0 0.0 50.0	

 Tucker ENERGY SERVICES	Company:	PICKRELL DRILLING CO. INC.
	Well:	YOUNG RR #1
	Location:	660' FSL & 330' FEL
	Logged:	09-03-2015
	K.B. Elev:	1443.0 Ft