



Tucker

ENERGY SERVICES

PHASED INDUCTION

SHALLOW FOCUS SP LOG

Company PICKRELL DRILLING CO., INC.
Well HUSON TRUST "C" #1
Field MESSENGER
County KINGMAN
State KANSAS
Country USA
API No. 15-095-22295-00-00

File No : DEN-59069
Company : PICKRELL DRILLING CO., INC.
Well : HUSON TRUST "C" #1
Field : MESSENGER
County : KINGMAN
State : KANSAS
Country : USA
API No : 15-095-22295-00-00

Location :
1980' FSL & 1980' FWL
NE SW

LSD : **Sect** : 12 **Twp** : 30S **Rge** : 07W

Permanent Datum: GL
Drilling Measured From: KB
Log Measured From: KB
Above Permanent Datum: 10.00 Ft
Elevations: KB 1443.00 Ft
DF 1142.00 Ft
GL 1433.00 Ft
Services: GRT
CNT
LDT

Date	Jun 25 2015		
Run Number	1		
Depth--Driller	4220.0	Ft	
Depth--Logger	4224.0	Ft	
First Reading	4223.0	Ft	
Last Reading	210.0	Ft	
Casing--Driller	210.0	Ft	
Casing--Logger	210.0	Ft	
Bit Size	7.875	In	
Casing Size	8.625	In	
Hole Fluid Type	GEL/CHEM		
Density	9.2	LBS/GAL	
Fluid Loss	12.4	ml/30min	
PH/Viscosity	9.5	50.0 SEC/32oz	
Sample Source	MEASURED		
RM@Measured Temp.	0.400	@ 94 F	
RMF@Measured Temp	0.340	@ 94 F	
RM@Measured Temp.	0.460	@ 94 F	
Source RMF/RMC	CALCULATED	CALCULATED	
RM@BHT	0.326	@ 117 F	
Time Circulation Stopped	Jun 25 2015 14:00		
Max Recorded Temp.	117	F	
Equipment/Base	TRK 129	DENTON, TX	
Recorded By	Z. HICKMAN		
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	4220.00	8.625	24.00	0.00	0.00

Run Number	1	
Date	Jun 25 2015	
Date/Time On Bottom	Jun 25 2015 18:00	
Depth to Fluid	0.0 Ft	
Salinity	10500.000 Mg/L	
RMF@BHT	0.277 @ 117 F	
RMC@BHT	0.375 @ 117 F	

Run Number 1

Comments

ALL PRESENTATIONS AS PER CUSTOMER REQUEST.

GRT, CNT, LDT, MLT & PIT RUN IN COMBINATION.

2.71 G/CC DENSITY MATRIX USED TO CALCULATED DENSITY POROSITY.

5.50" PRODUCTION CASING USED TO CALCULATED ANNULAR HOLE VOLUME.

CALIPERS ORIENTED 90 DEGREES OUT OF PHASE.

NO STANDOFF DEPLOYED ON PIT TOOL.

PHIN IS CALIPER CORRECTED.

BOREHOLE RUGOSITY AND CHLORIDE LEVELS AFFECTED TOOL READINGS

POROSITY DETAIL PRESENTED FROM TD TO 2800'

GRT: GRP

CNT: PHIN, CLCNIN

LDT: LDENN, PECL, LCORN, PORL, CLLDIN

MLT: MSCLPIN, NOR_RF, INV_RF

PIT: ILD, ILM, SFLAEC, SPU, CIRD

THANK YOU FOR USING TUCKER WIRELINE SERVICES!

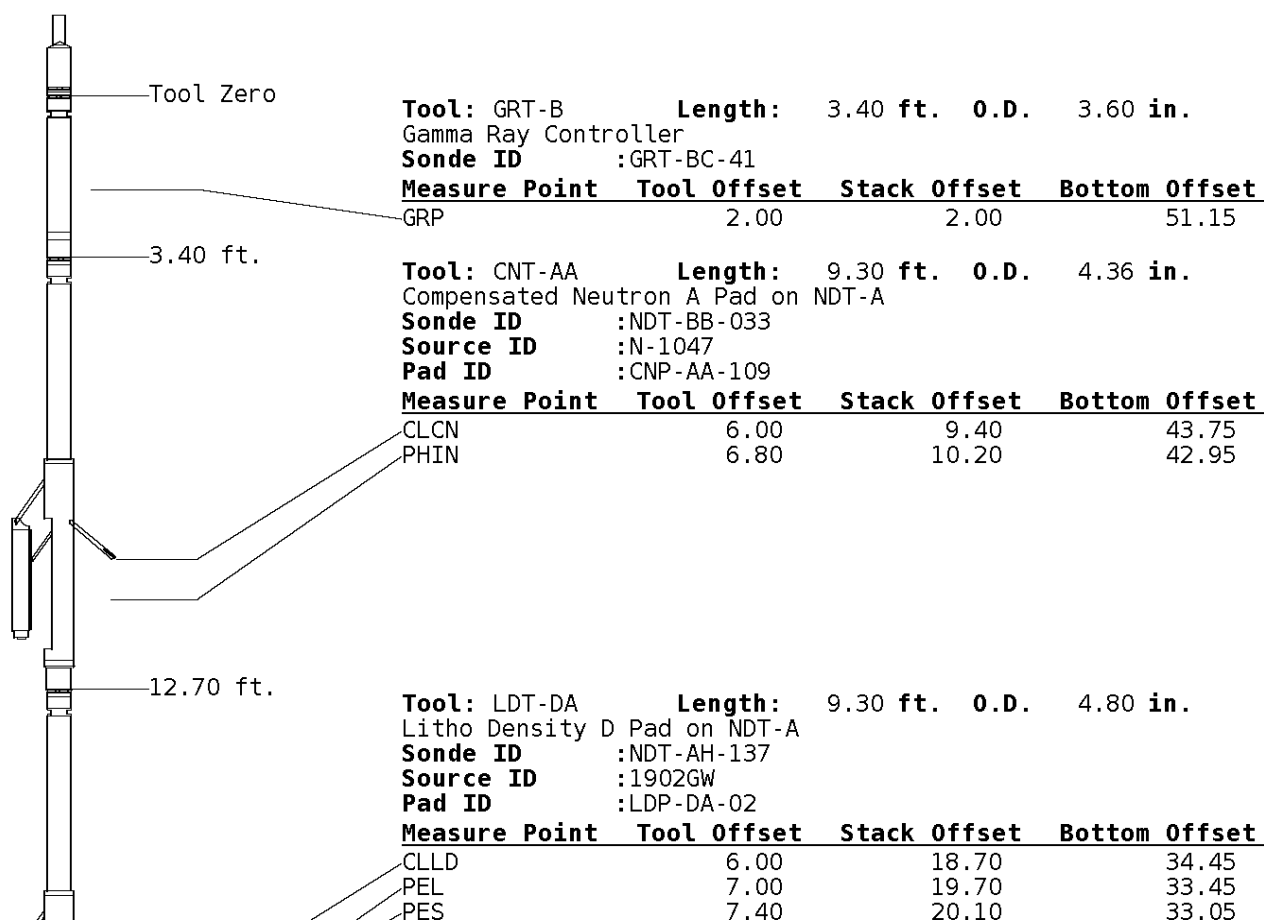
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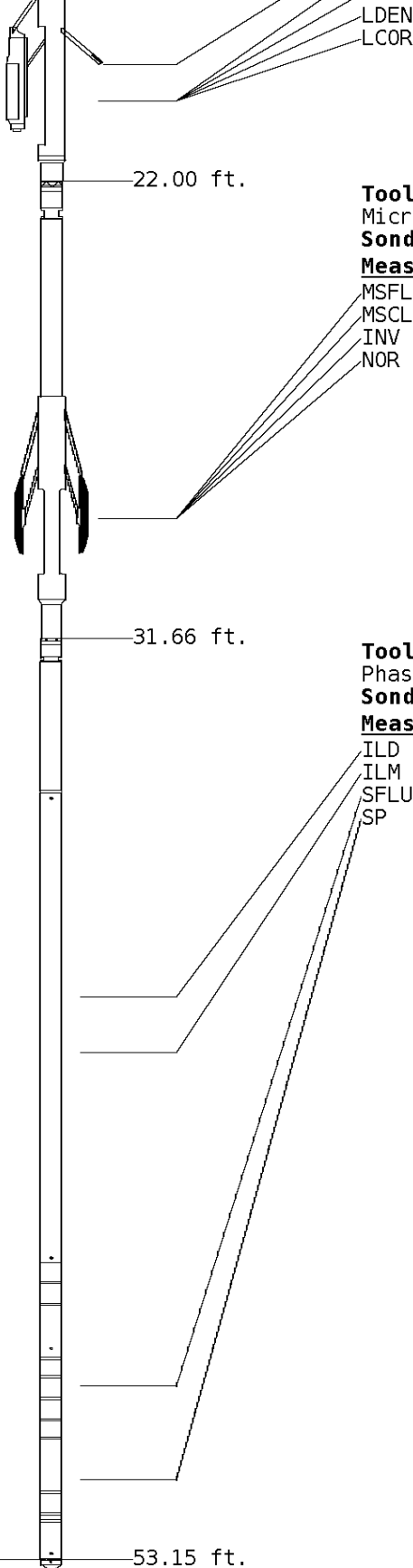
B. RICKARD

B. GOODE

Tool String Schematic

Total Tool Length - 53.15 ft.
Maximum Outside diameter - 6.00 in.
Net Weight in Air - 943.00 lbs.



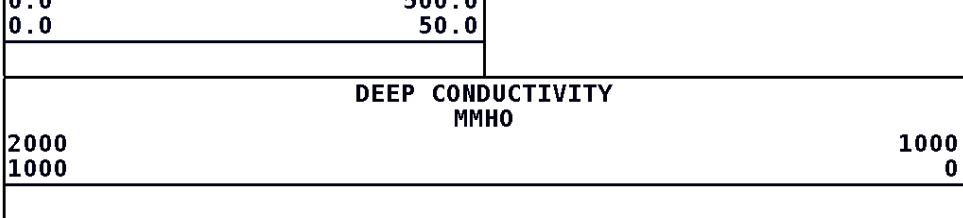
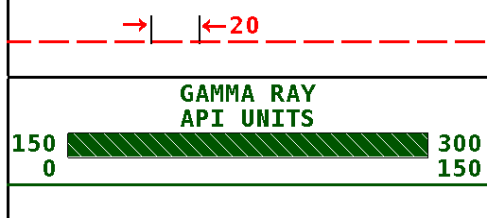


Measure	Point	Tool	Offset	Stack	Offset	Bottom	Offset
MSFL			7.60		29.60		23.55
MSCLP			7.60		29.60		23.55
INV			7.60		29.60		23.55
NOR			7.60		29.60		23.55

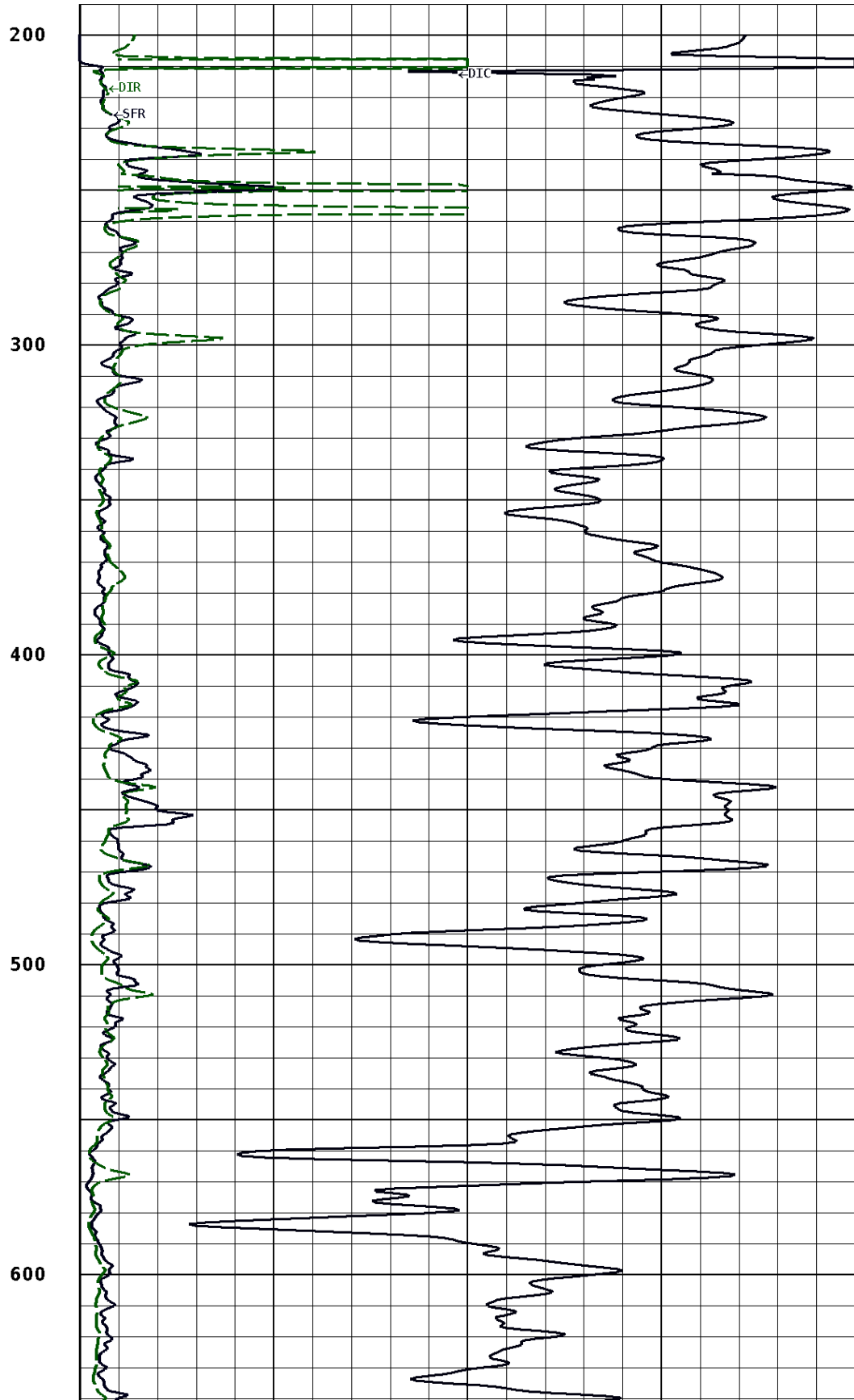
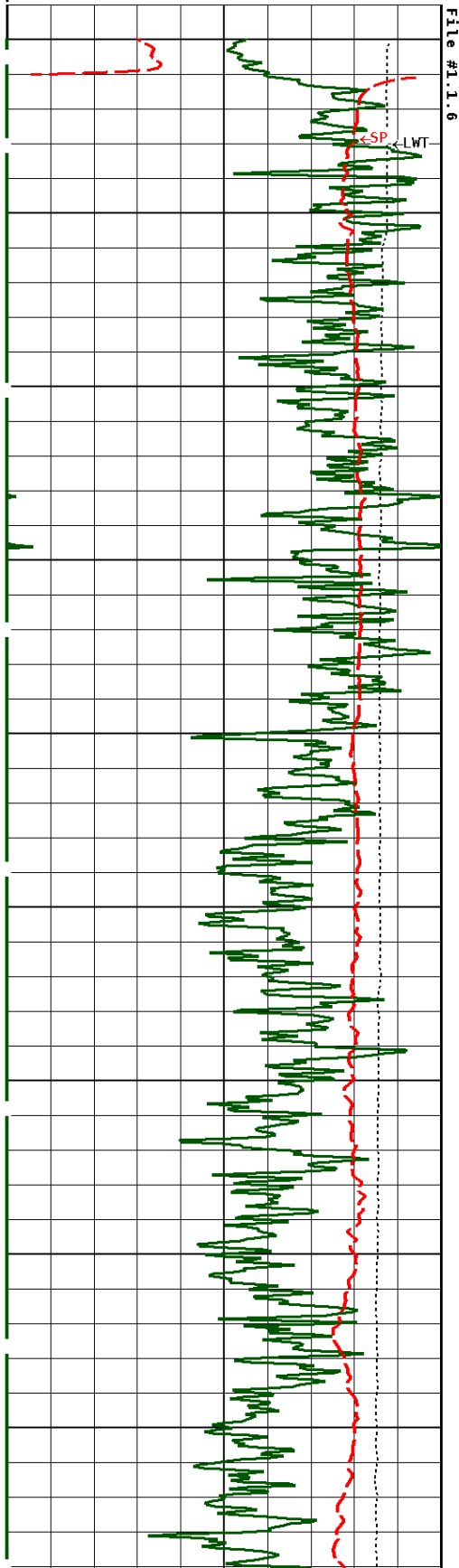
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ILD			8.92		40.58		12.56
ILM			10.10		41.76		11.39
SFLU			17.49		49.15		4.00
SP			20.60		52.26		0.88

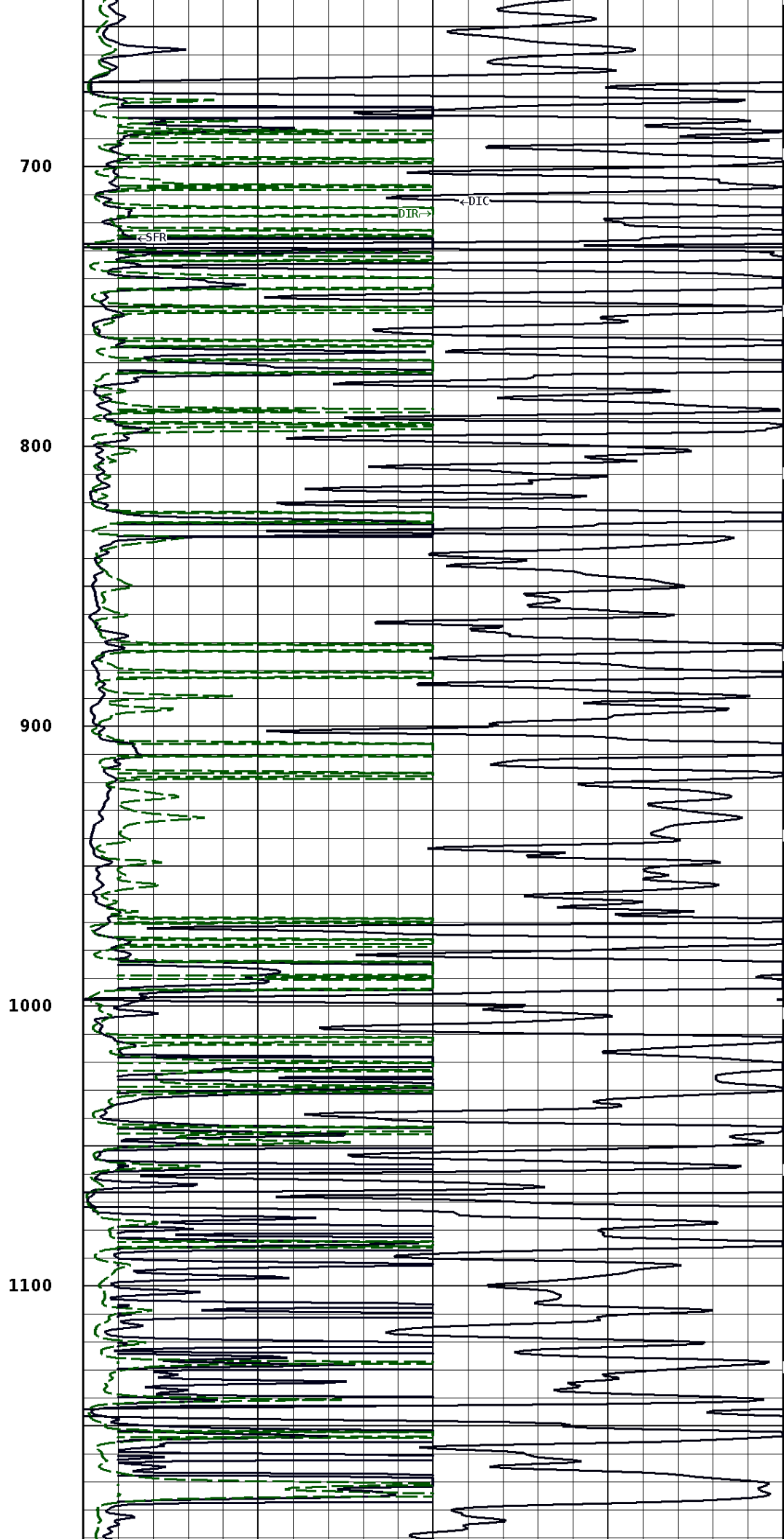
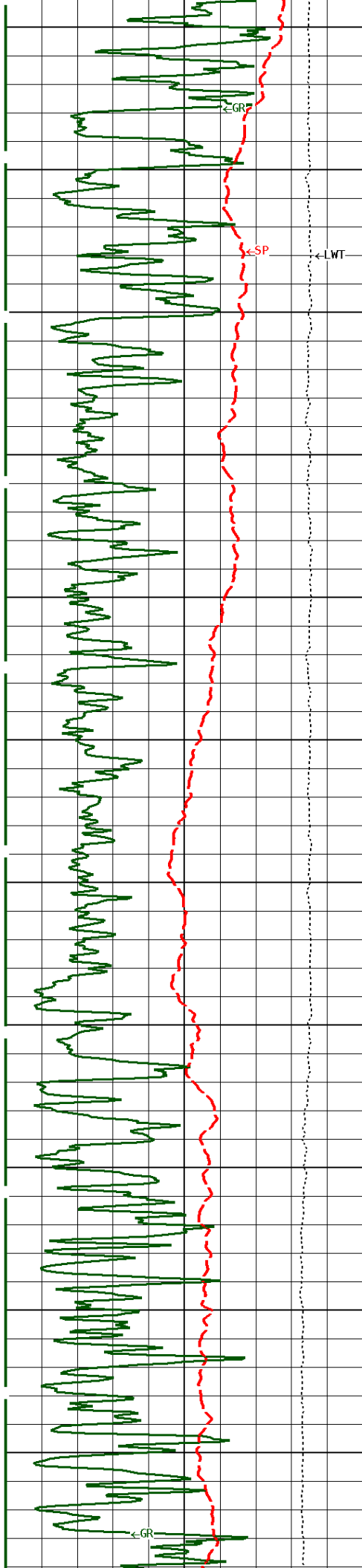
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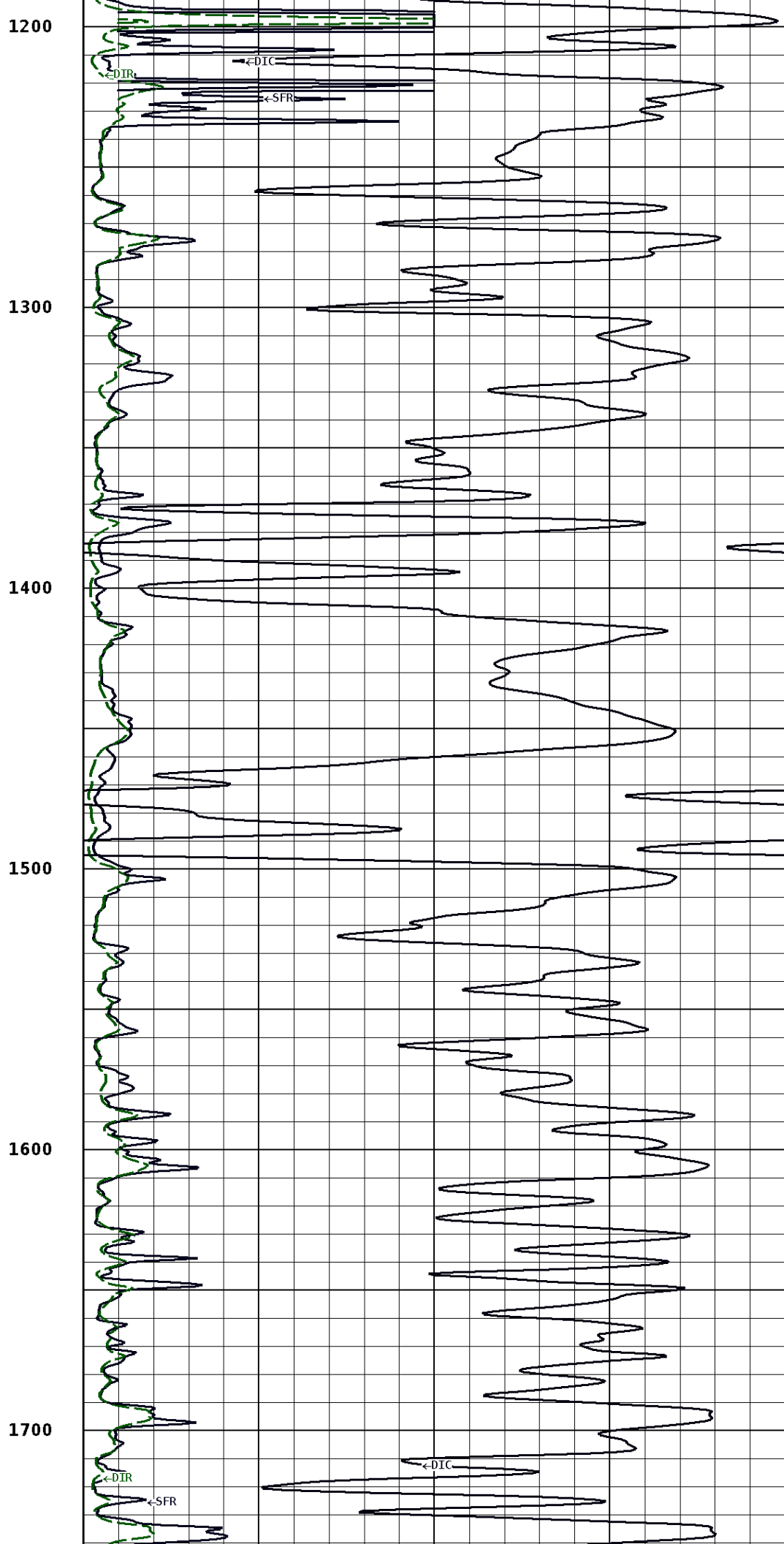
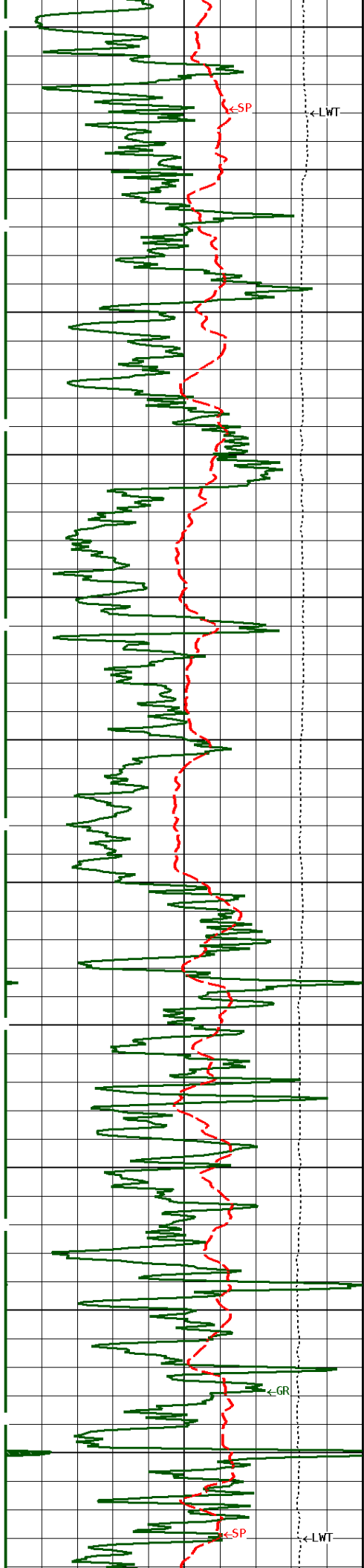
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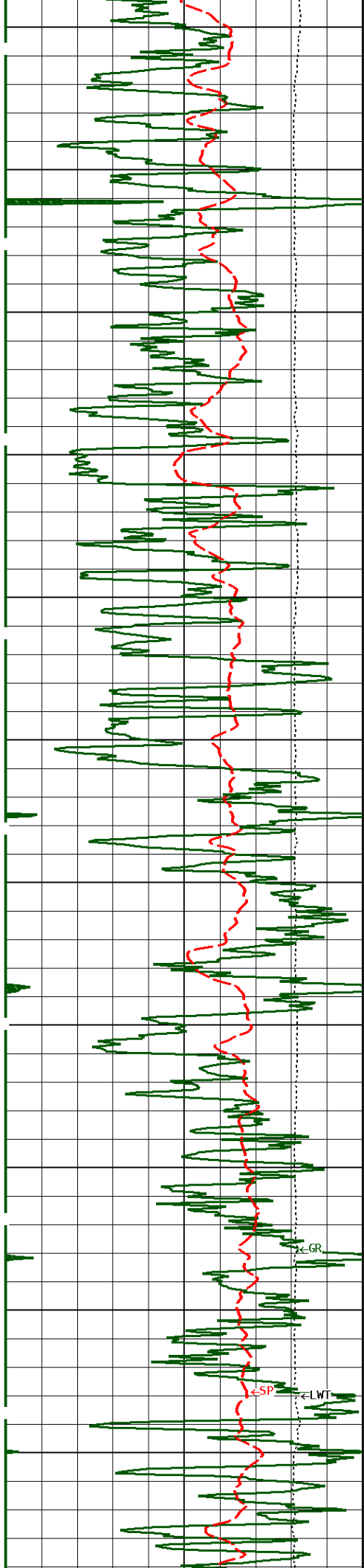


1:600 MAIN SECTION









1800

1900

2000

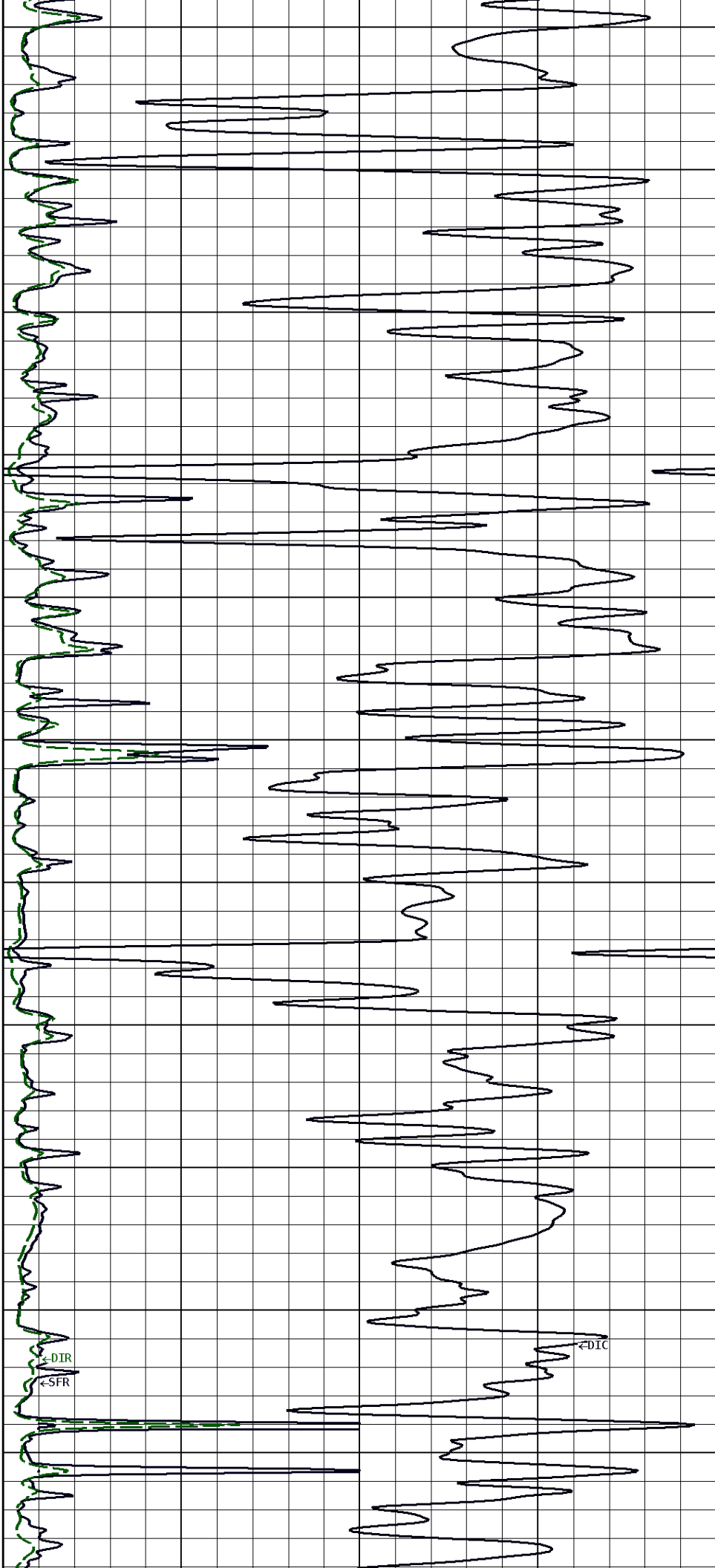
2100

2200

← GR

← SP

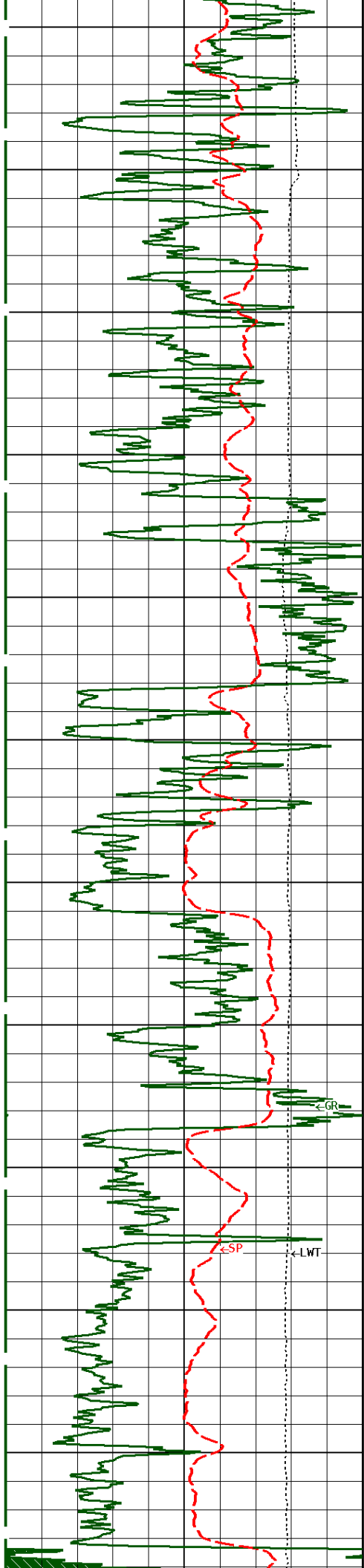
← LWT



← DIR

← SFR

← DIC



2300

2400

2500

2600

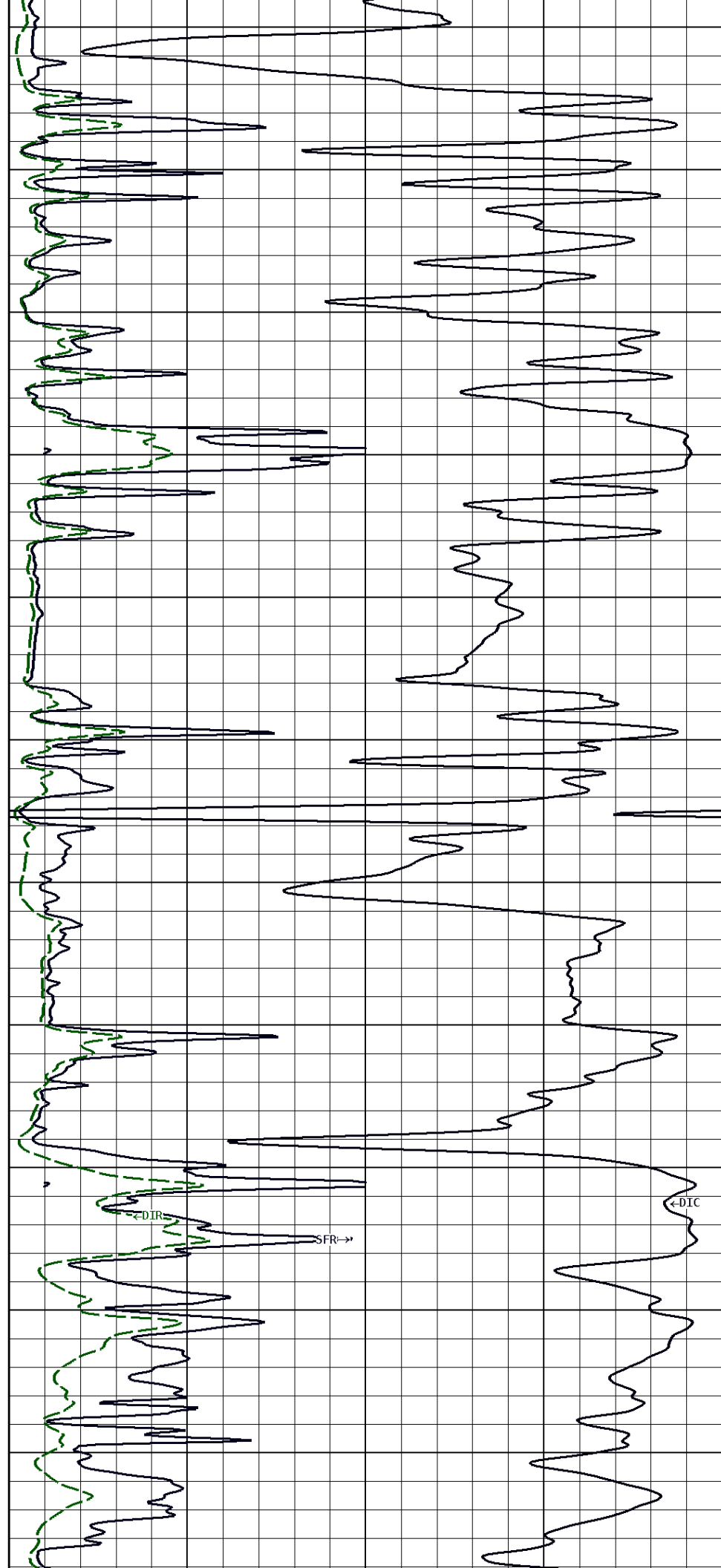
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2800

←SP

←LWT

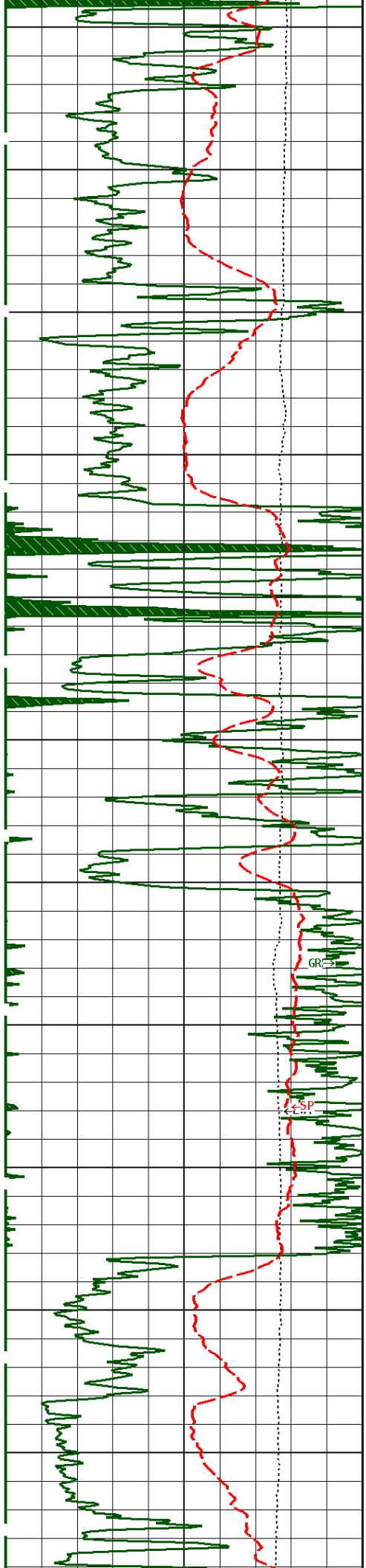
←GR



←DIR

SFR→

←DIC



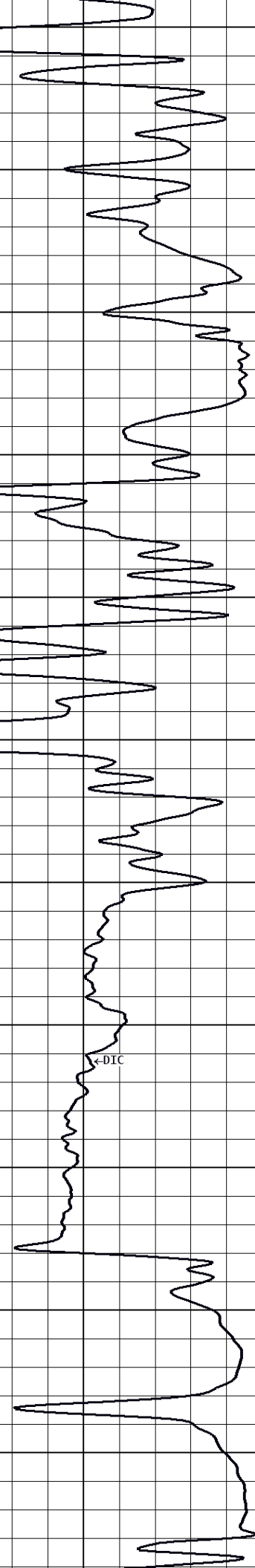
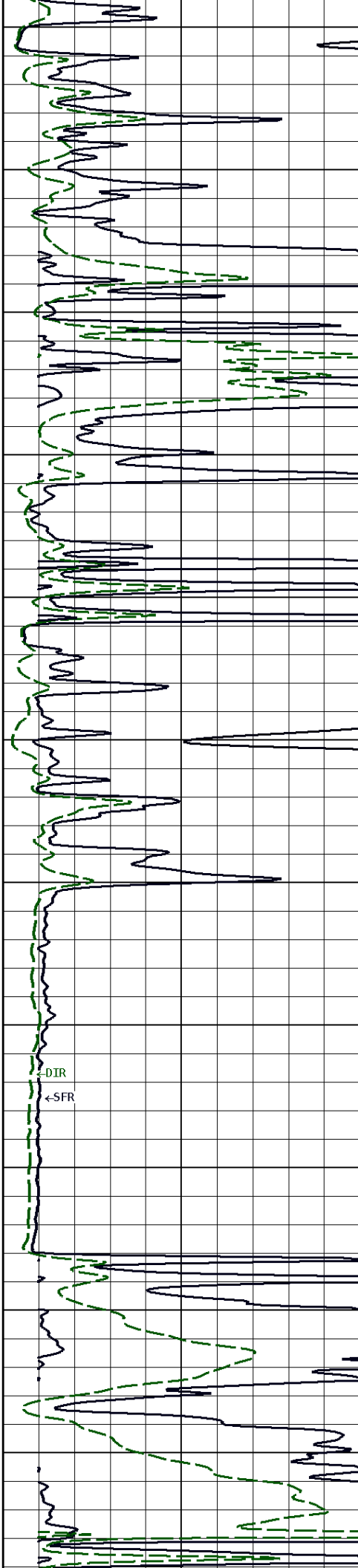
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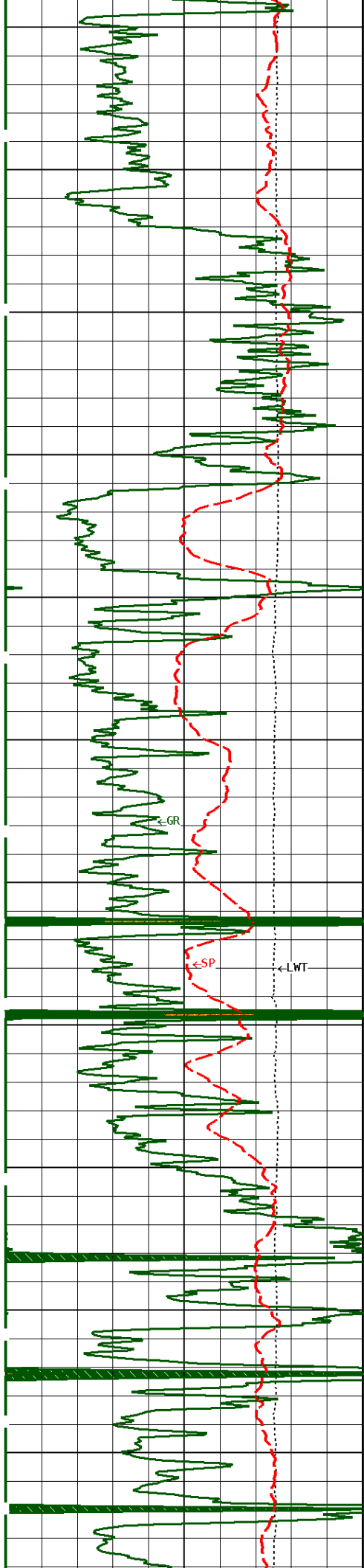
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3100

3200

3300





3400

3500

3600

3700

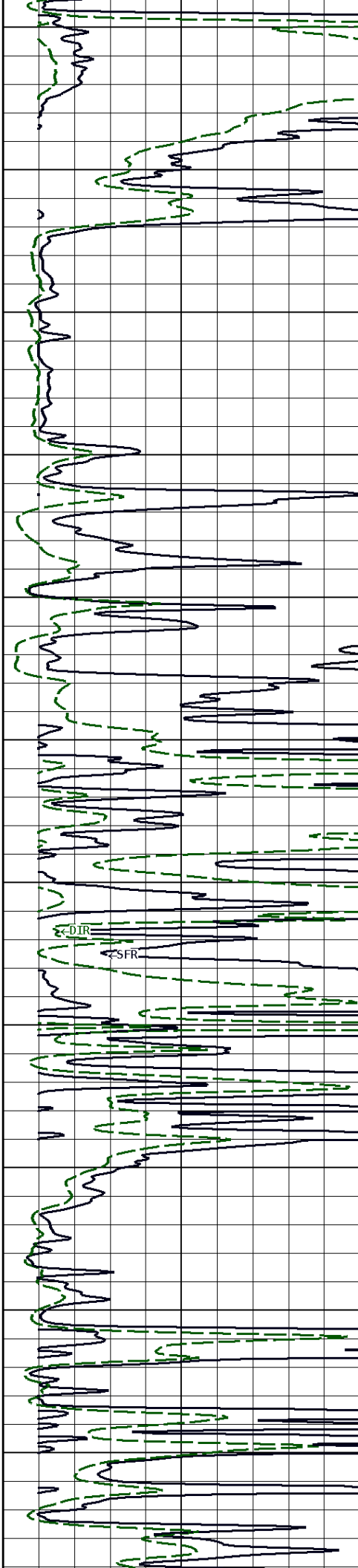
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3900

←GR

←SP

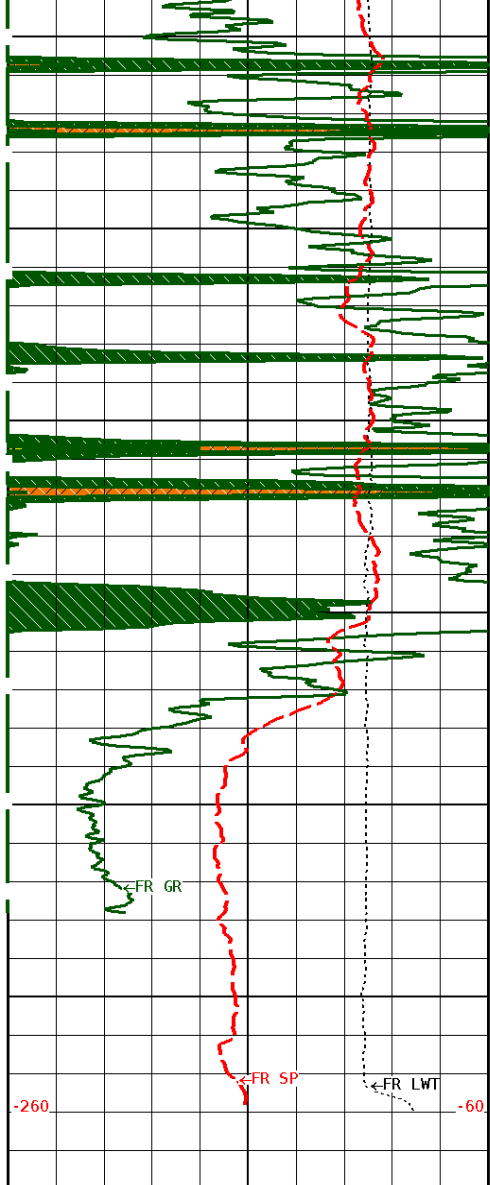
←LWT



←DIR

←SFR

→DIC



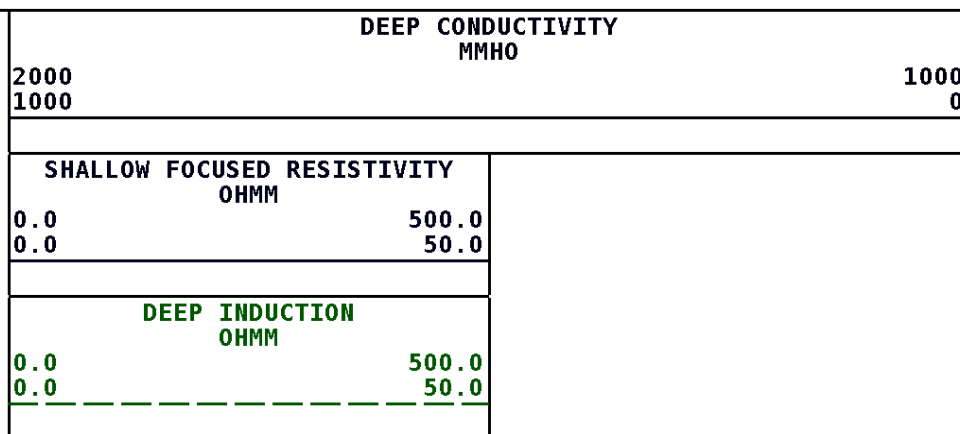
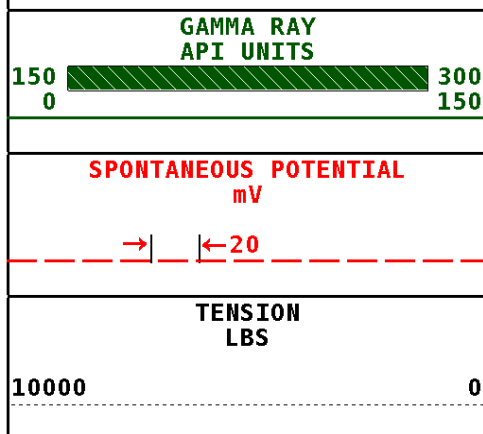
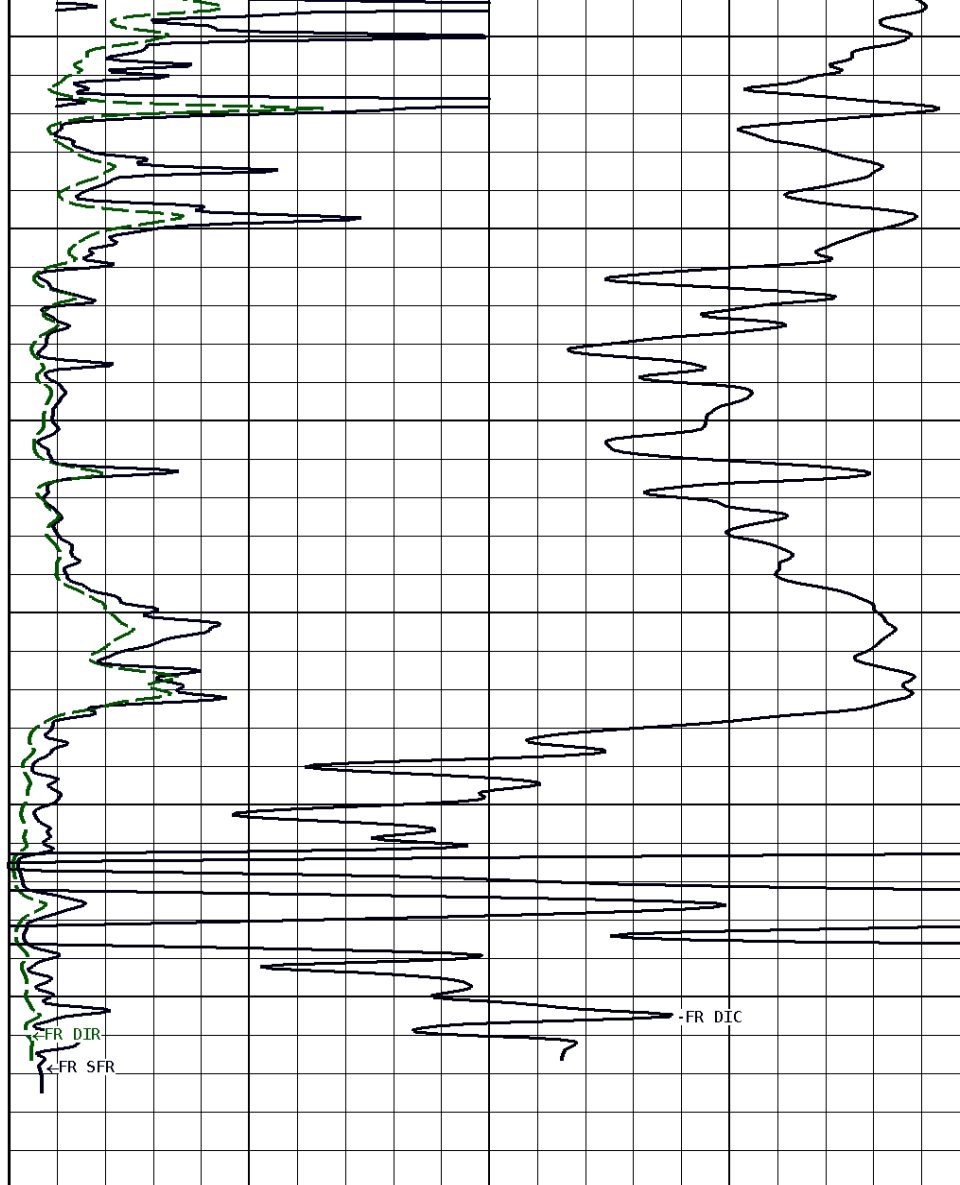
4000

4100

4200

4224

1:600 MAIN SECTION



Well File: PICKRELL_HUSON_1_JUNE_25_MSTK

Segment: V1.D1.S6 MAIN

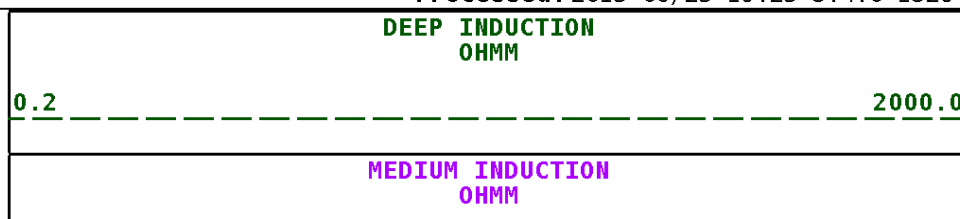
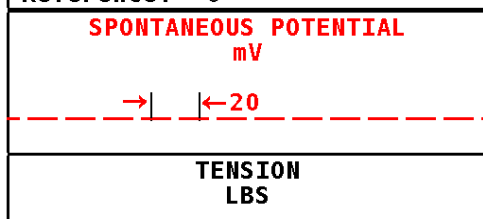
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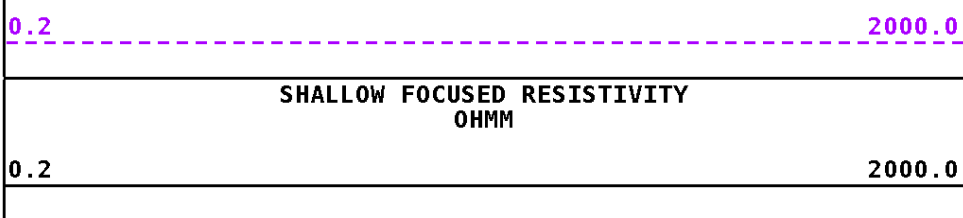
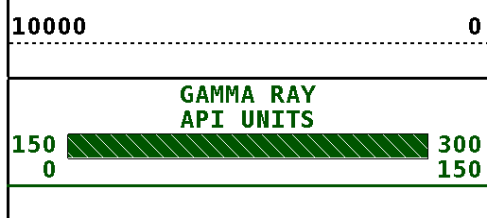
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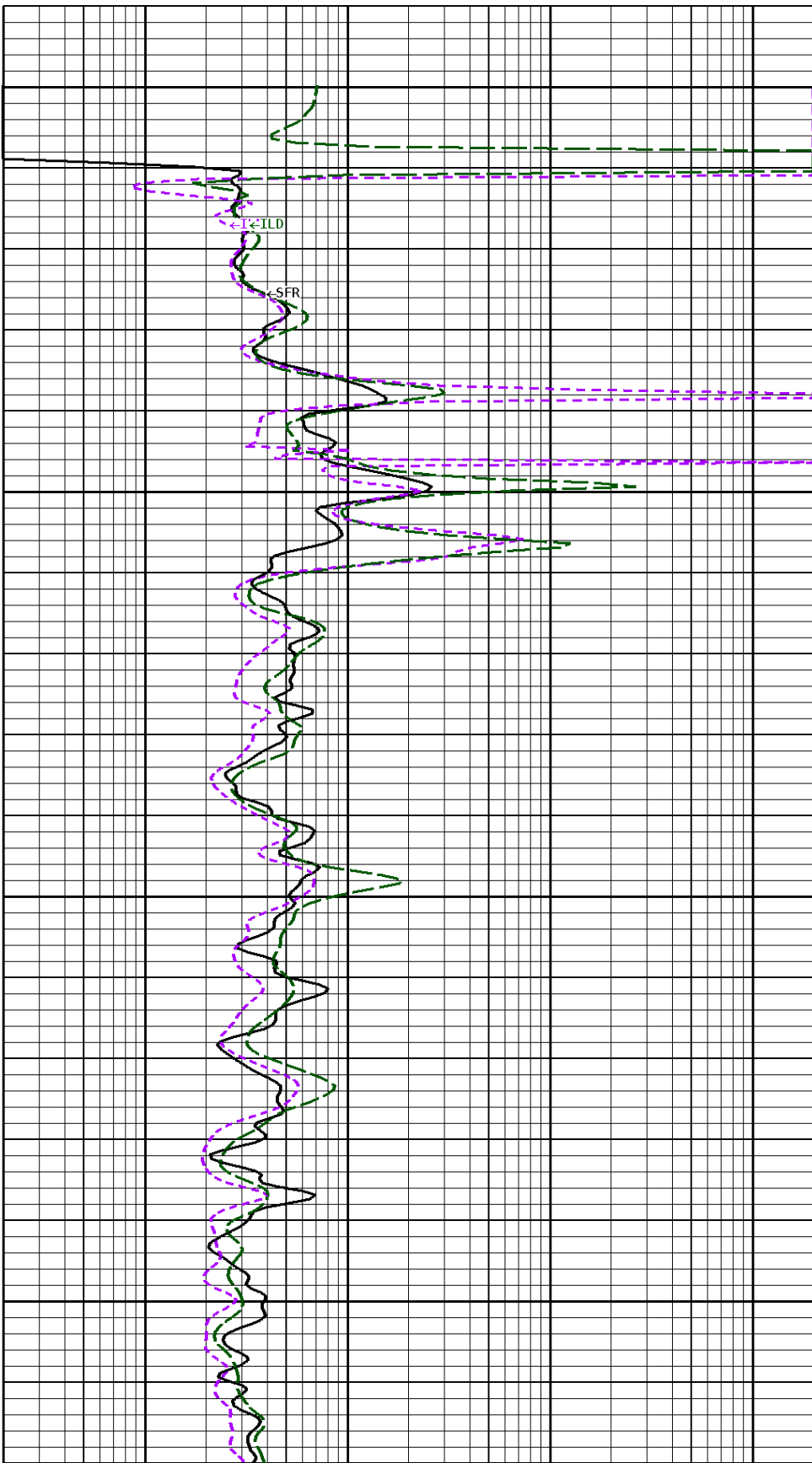
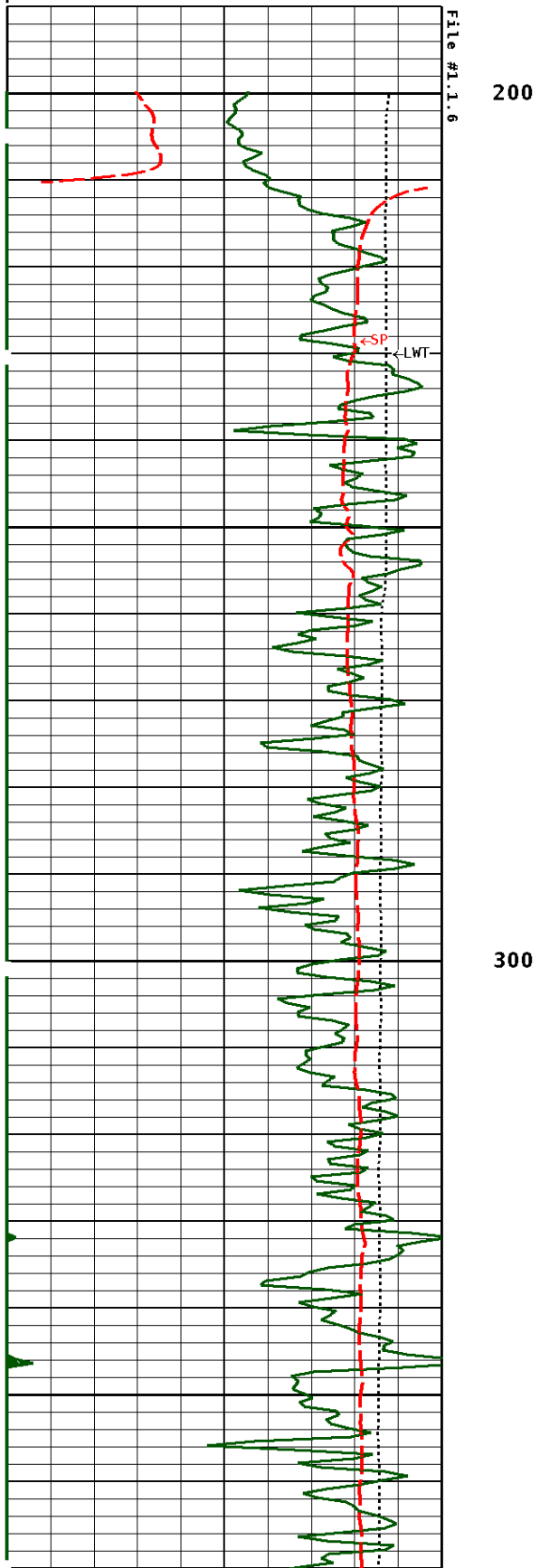
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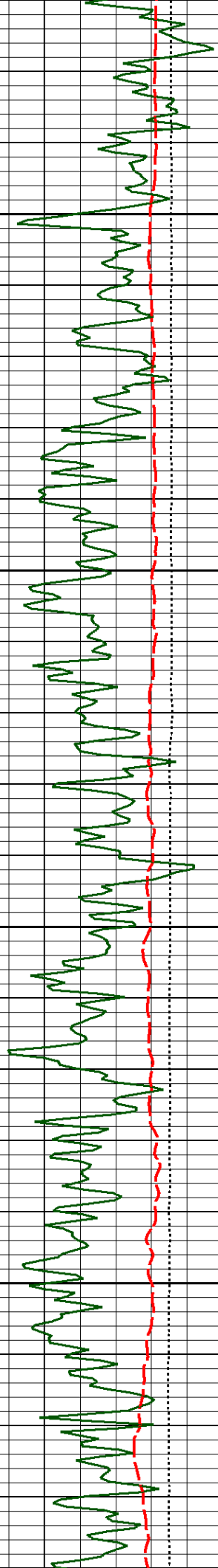
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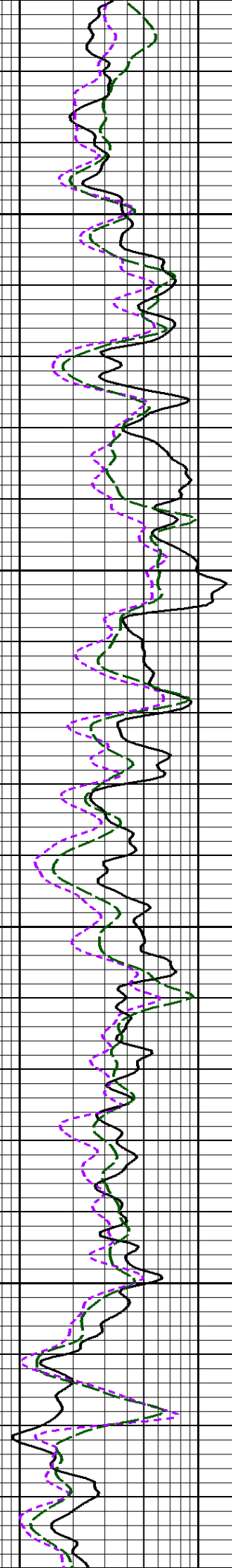
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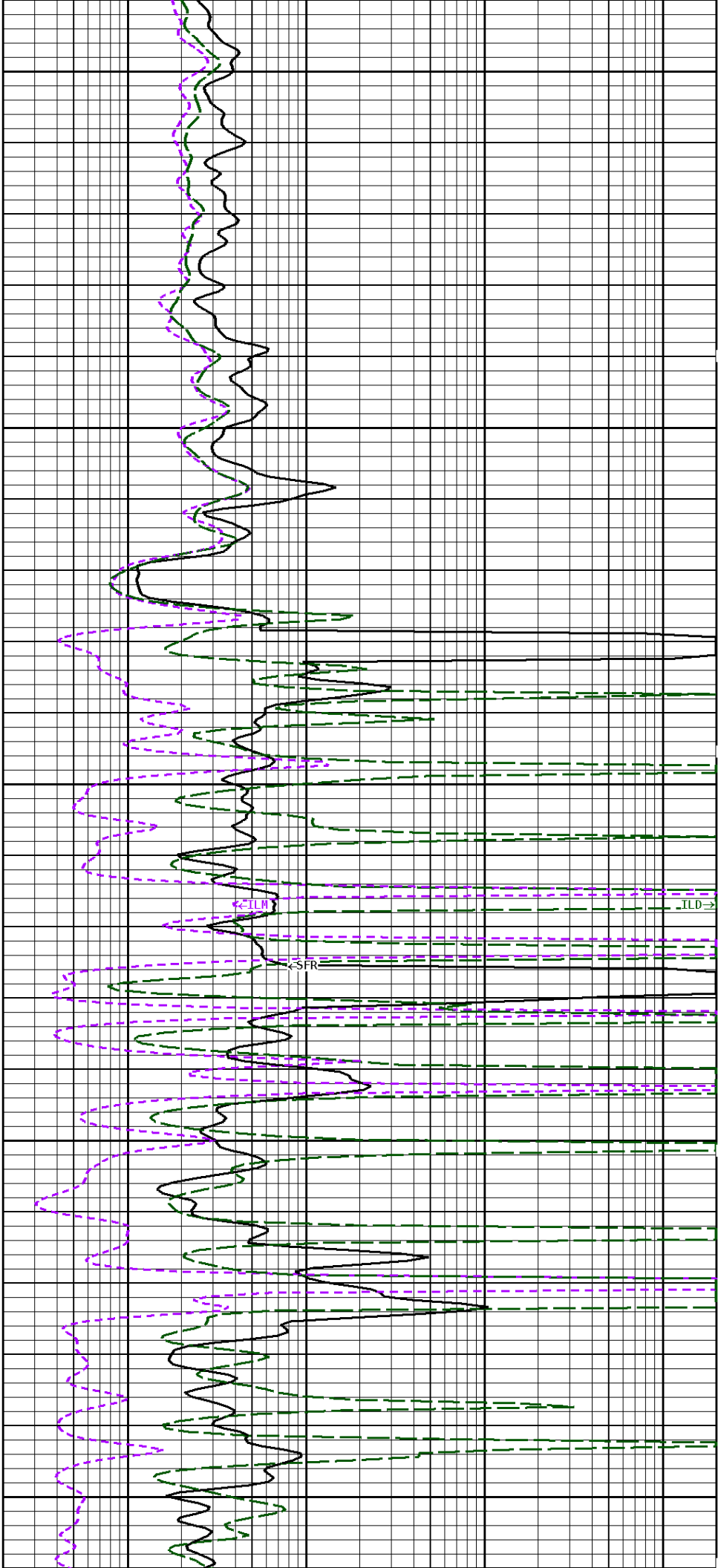
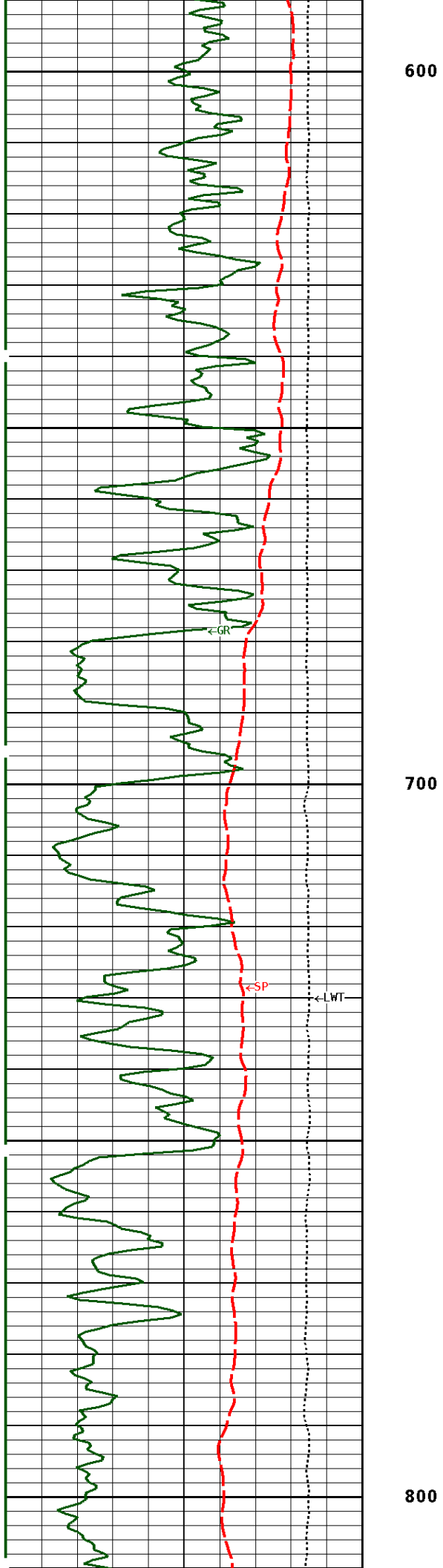


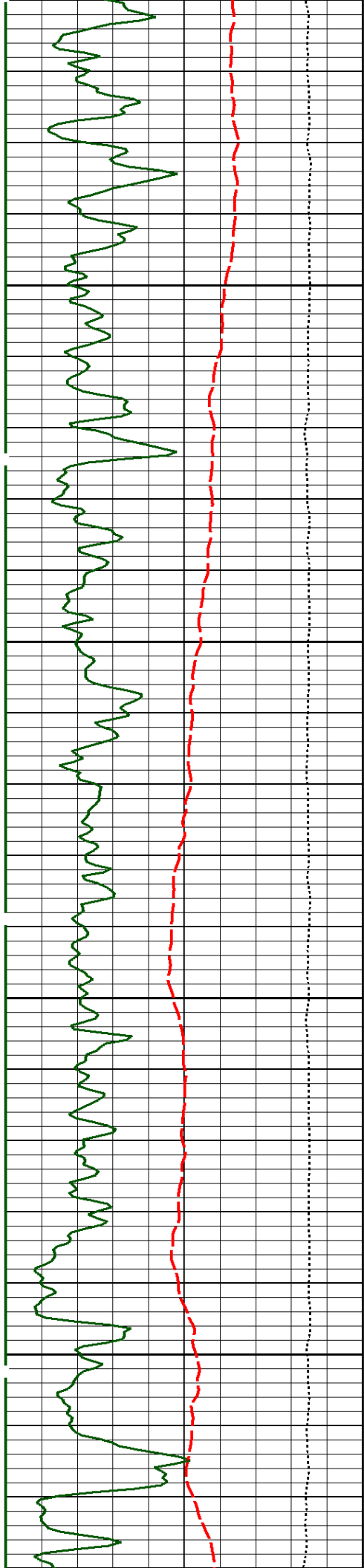


400

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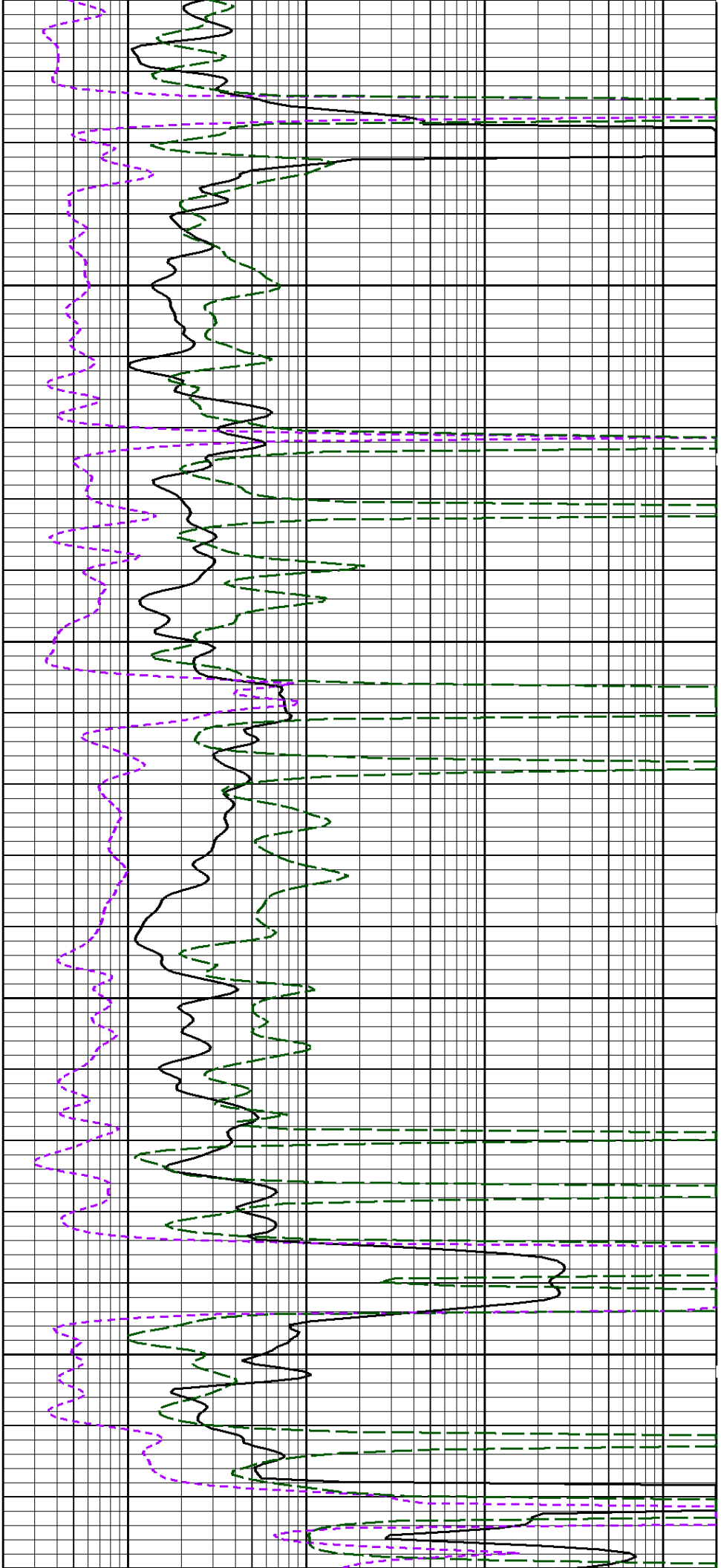


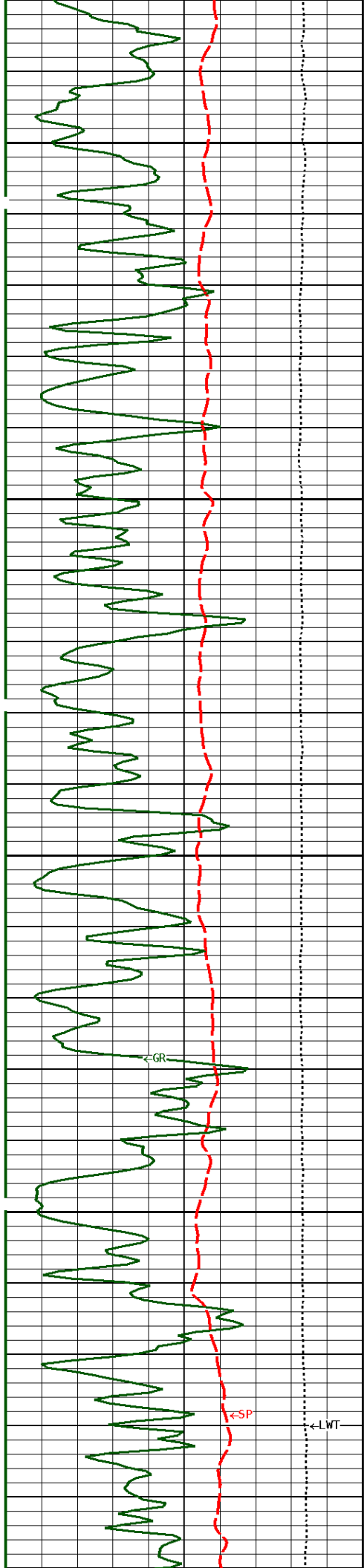




900

1000

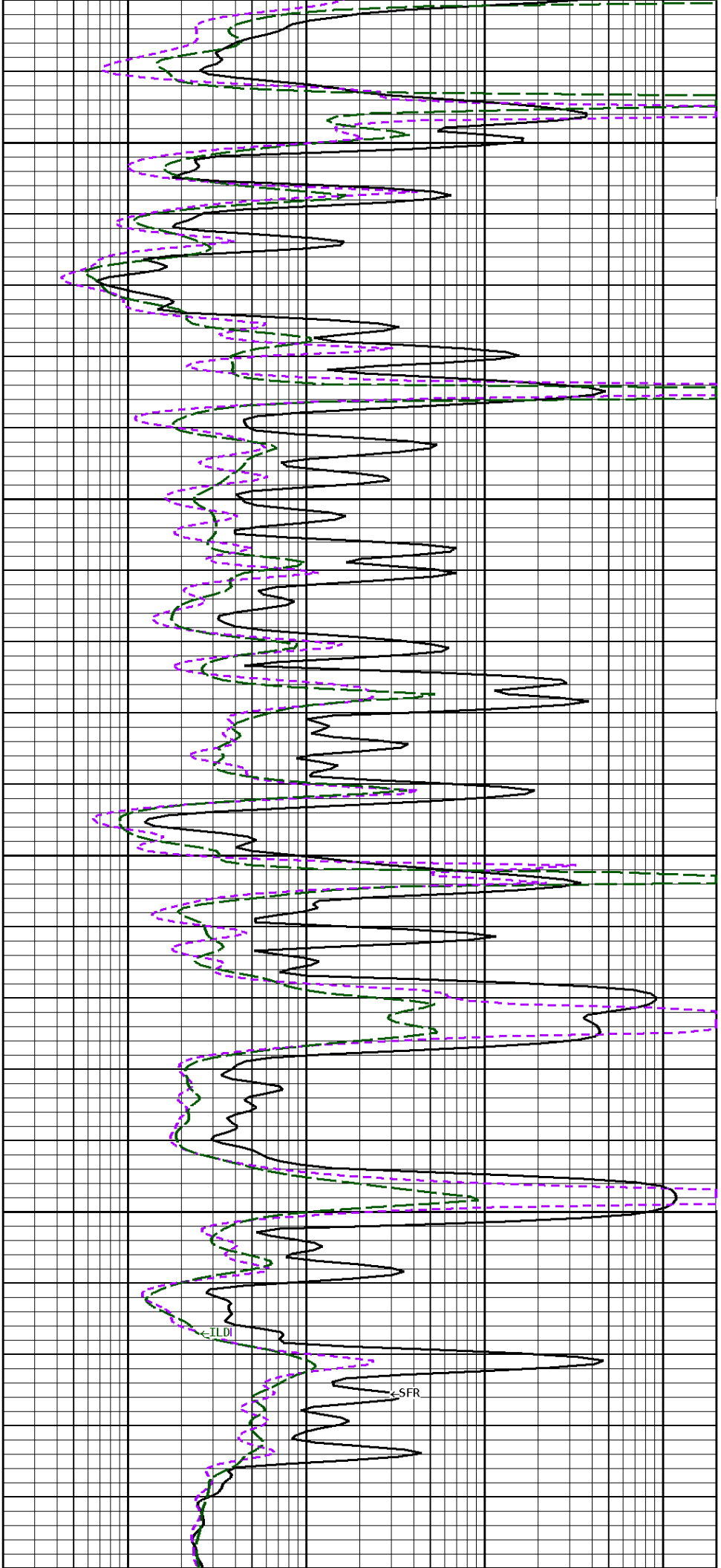


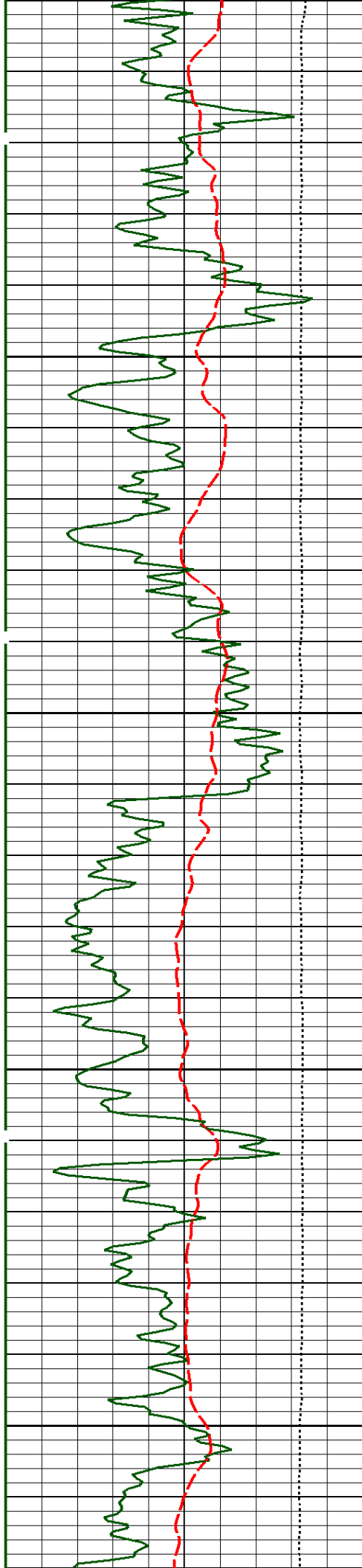


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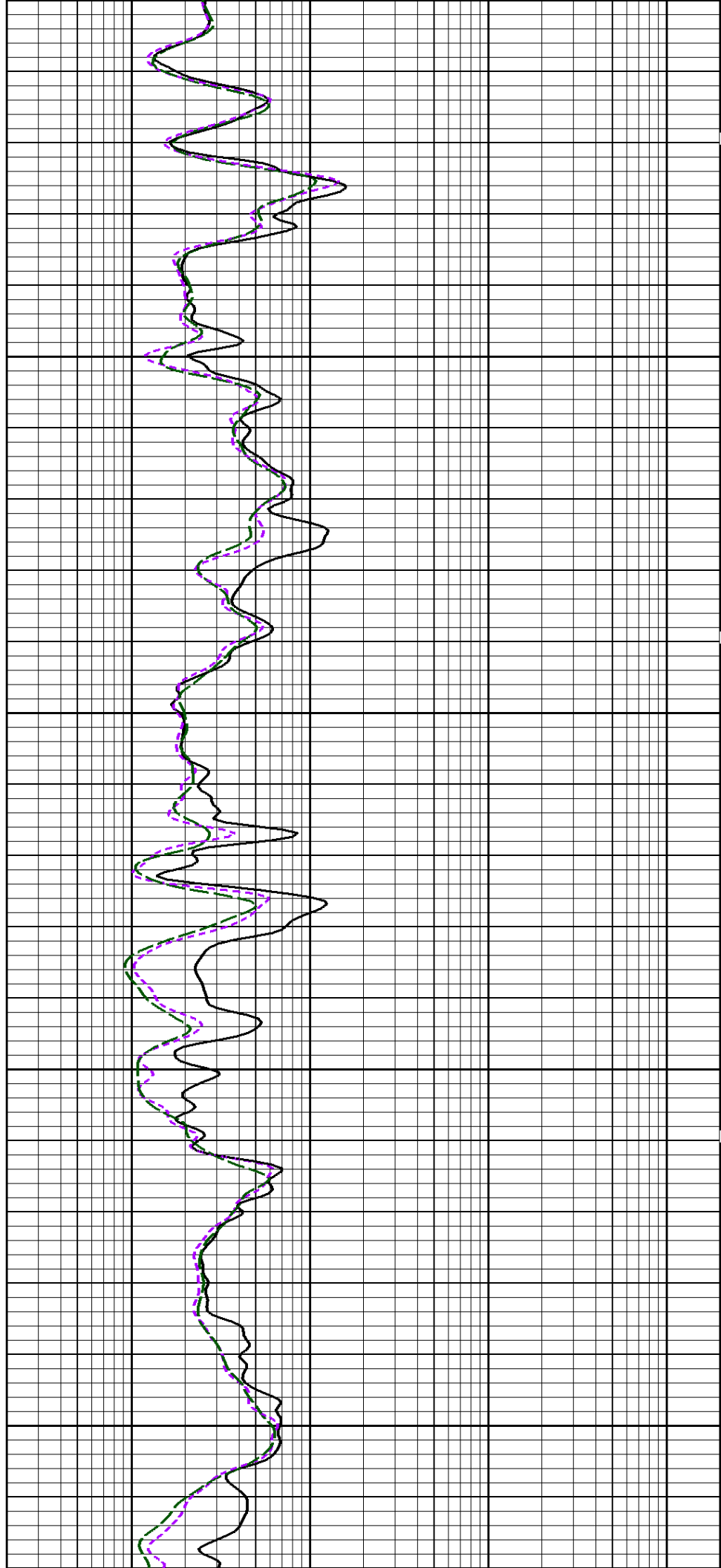
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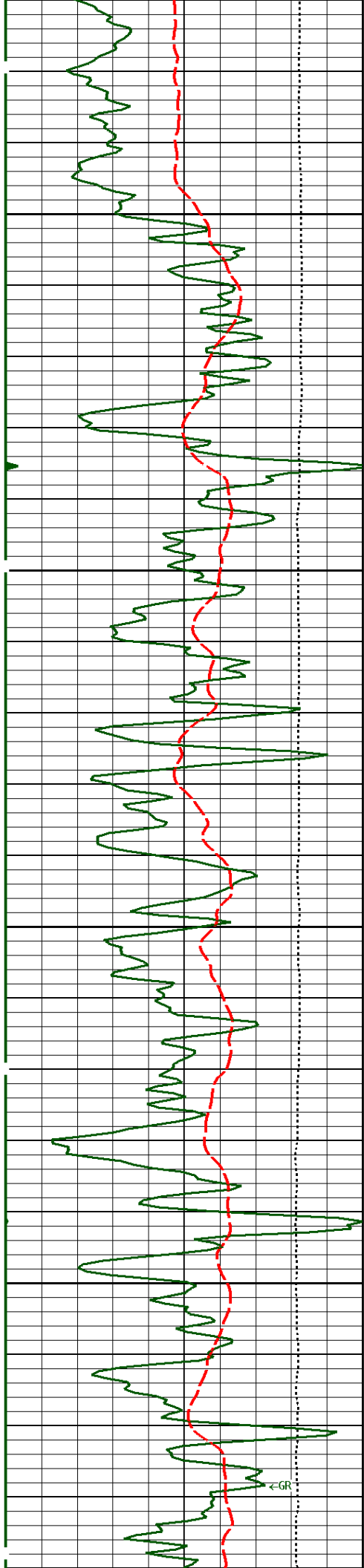




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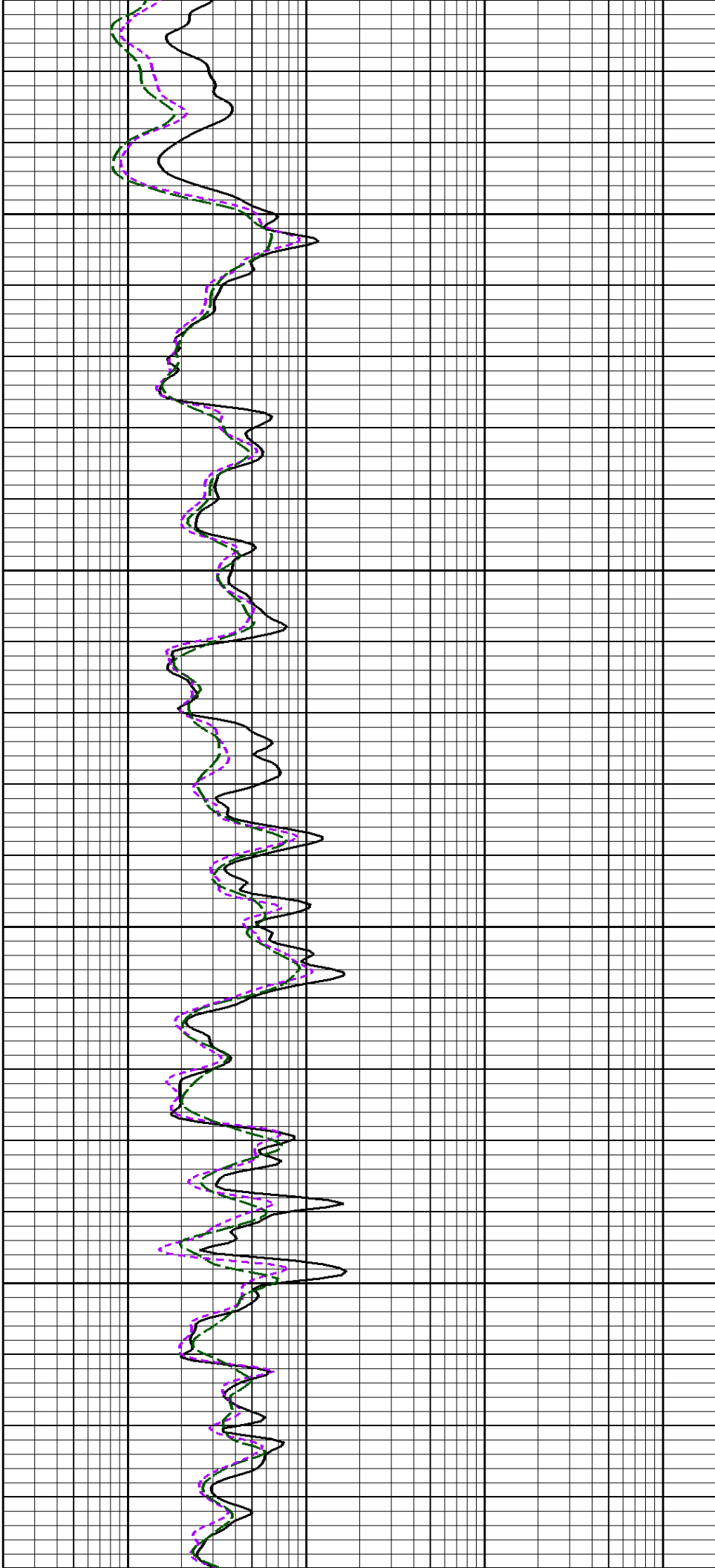
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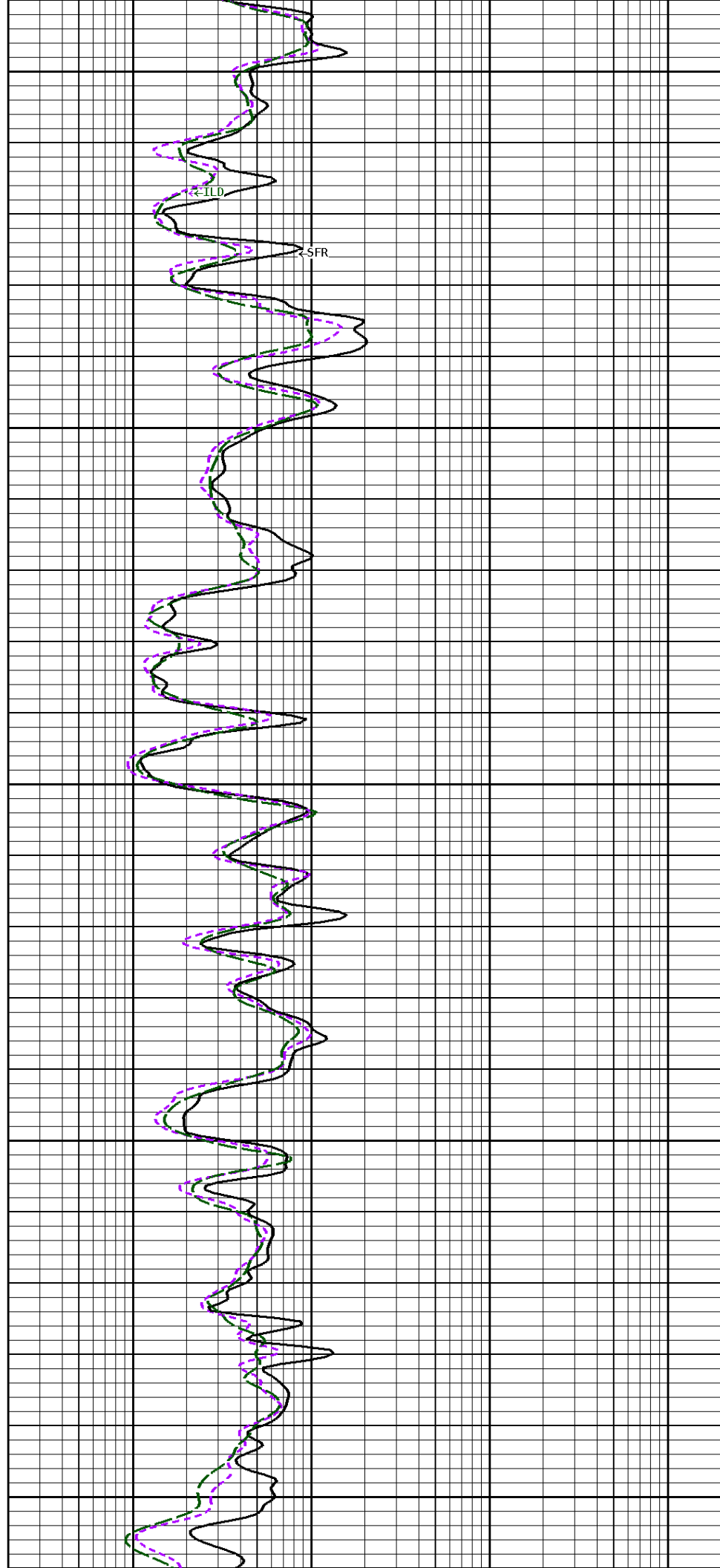
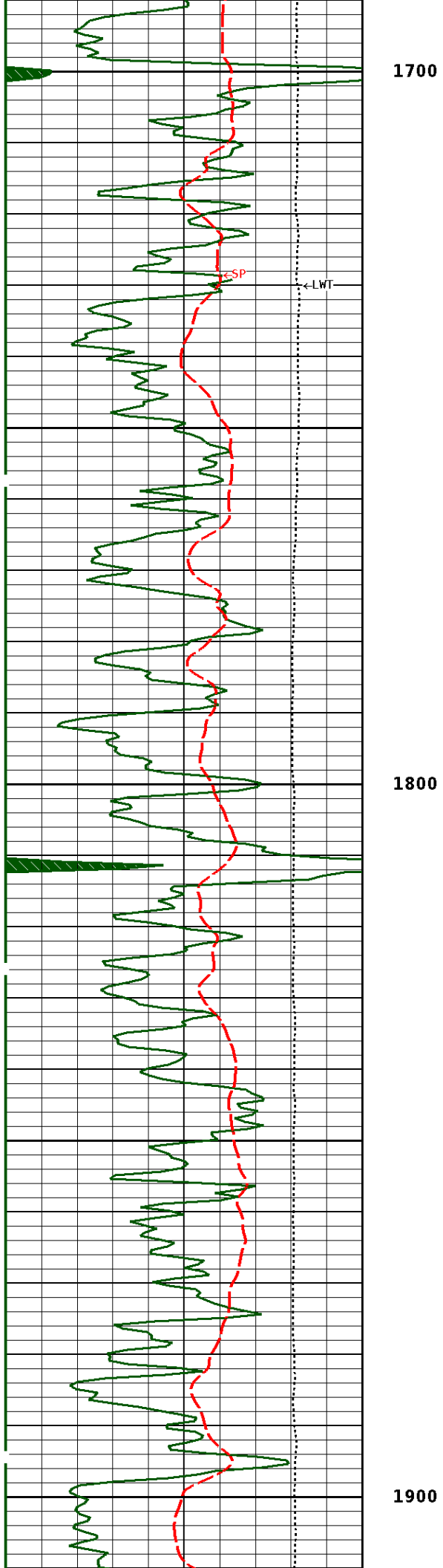


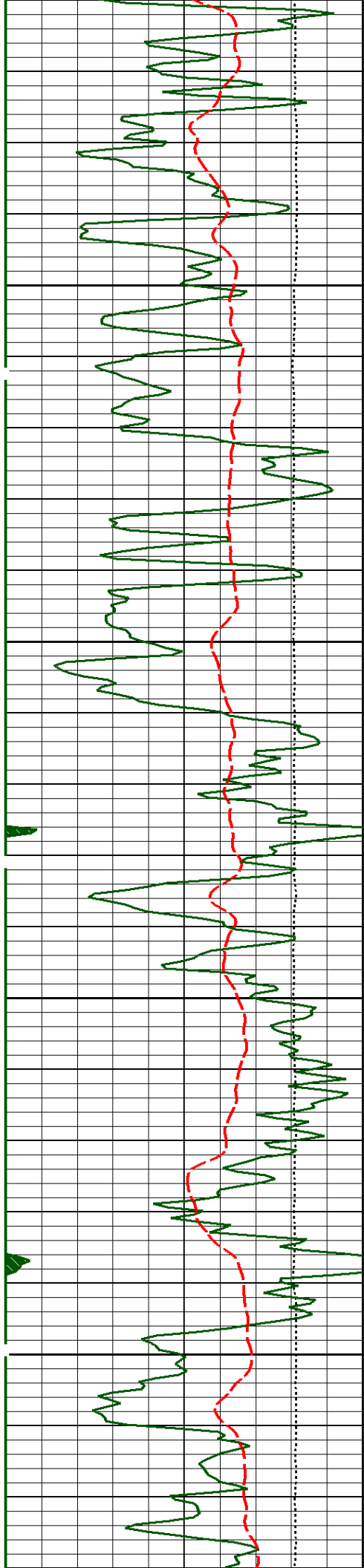


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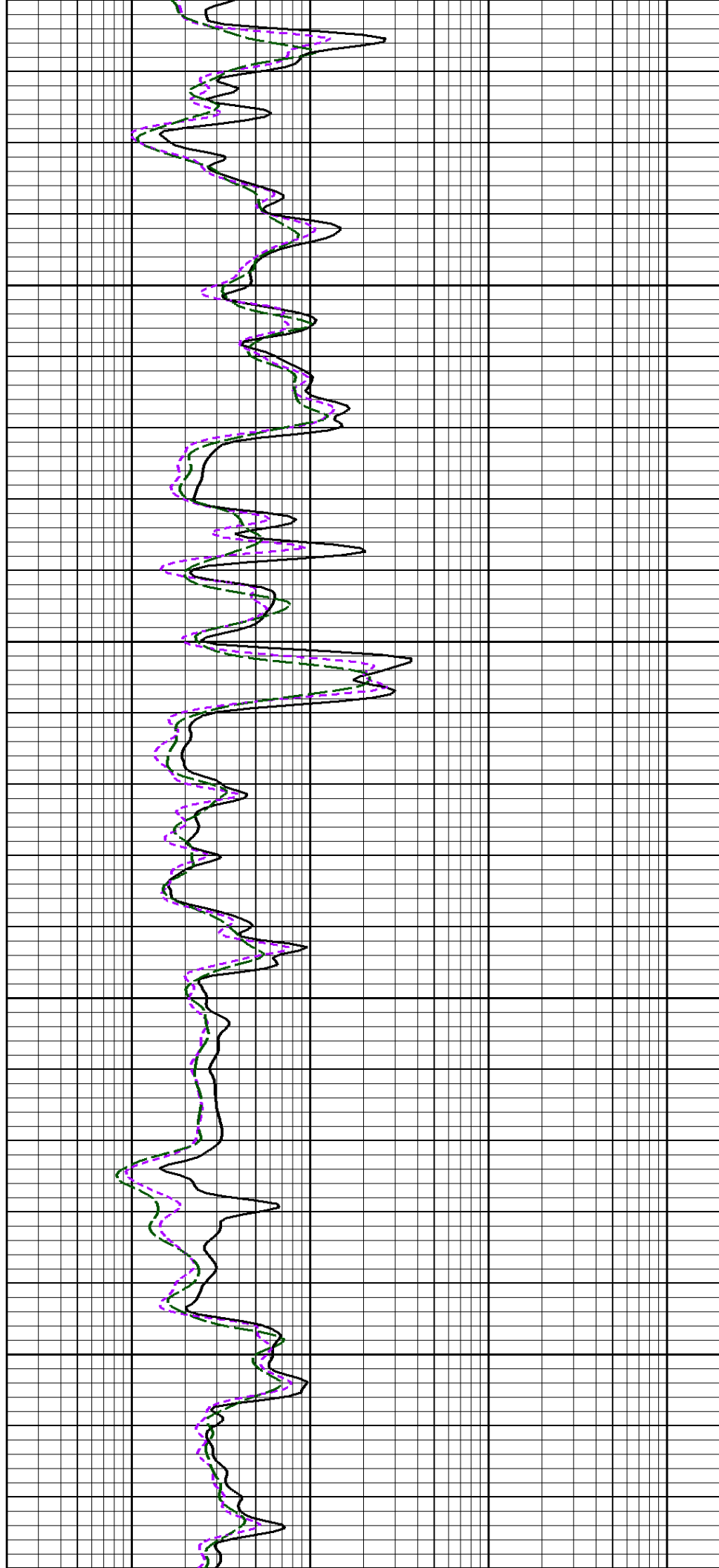


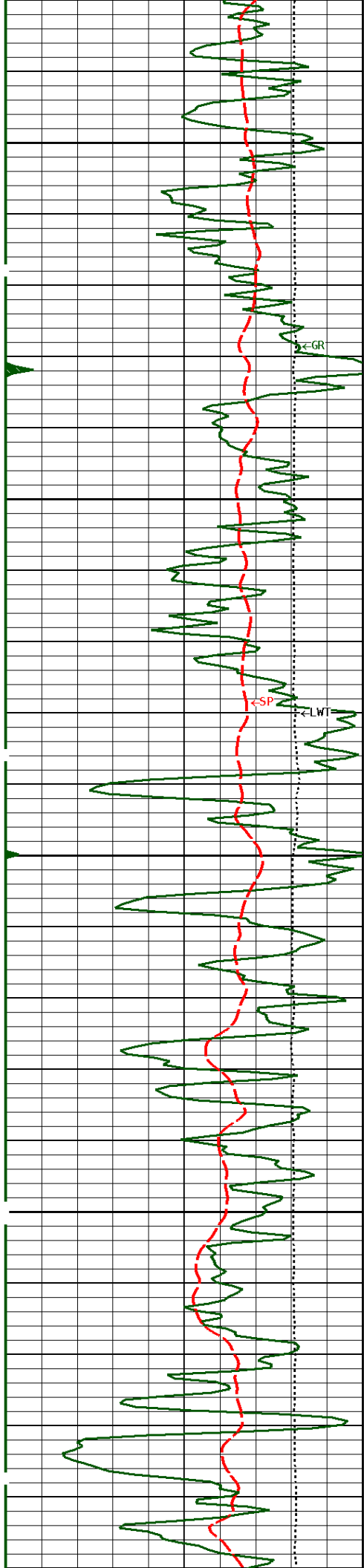




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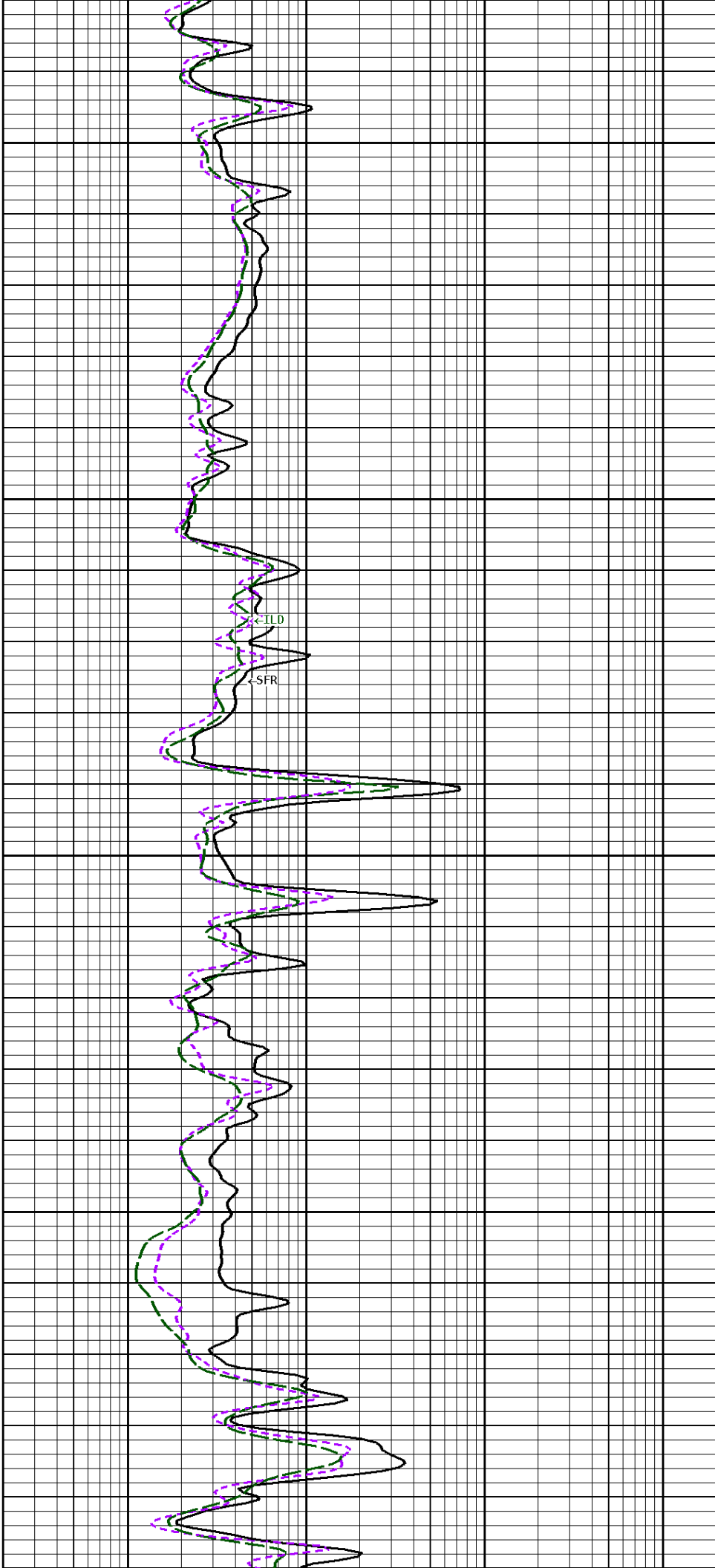
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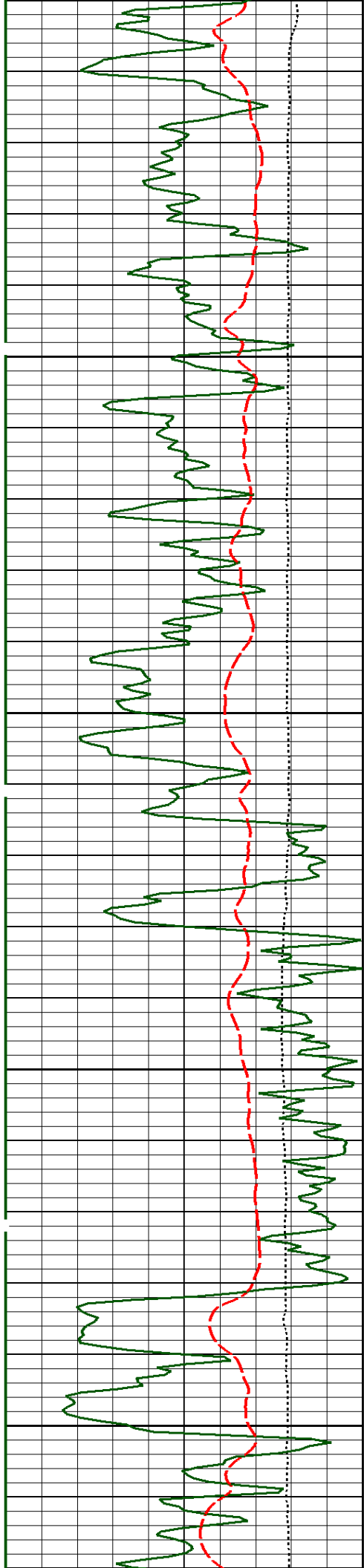




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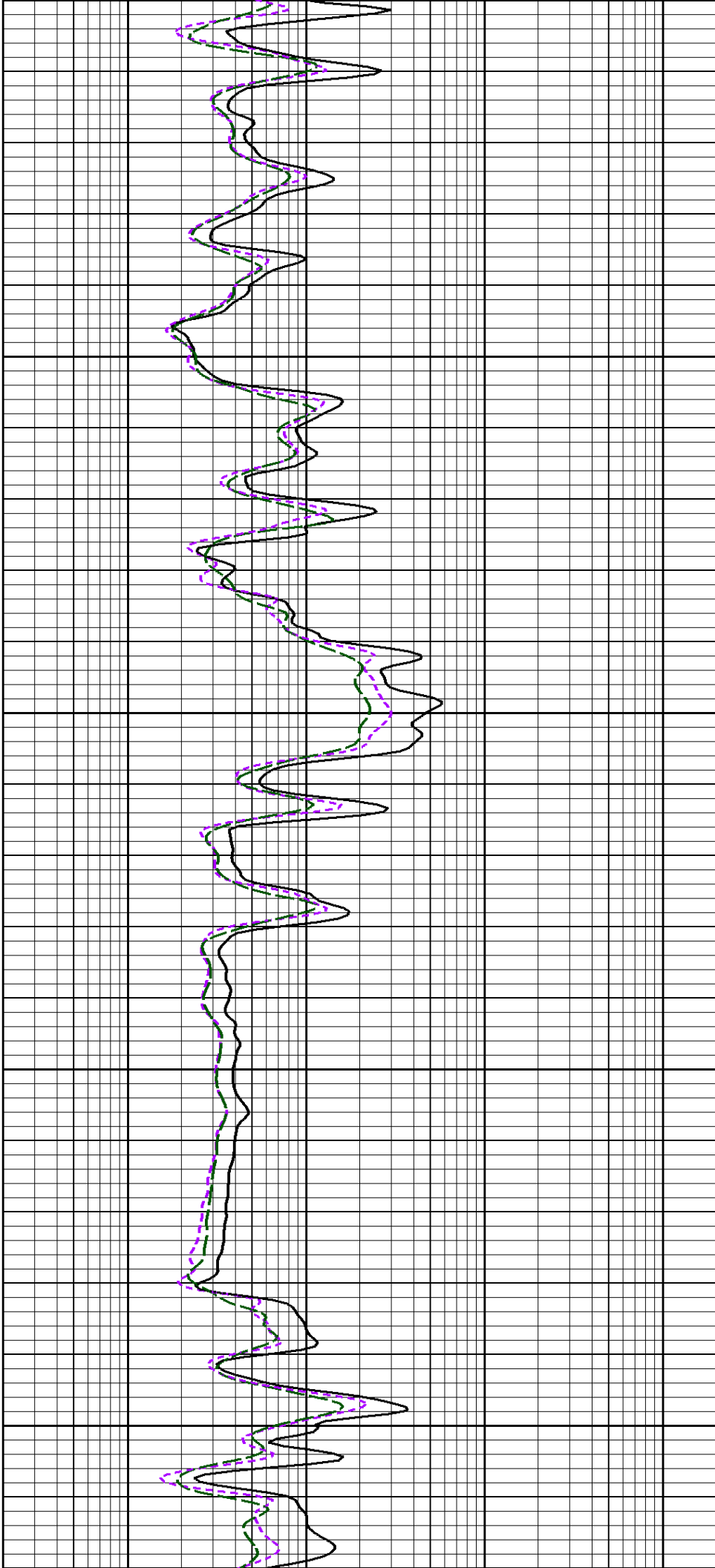
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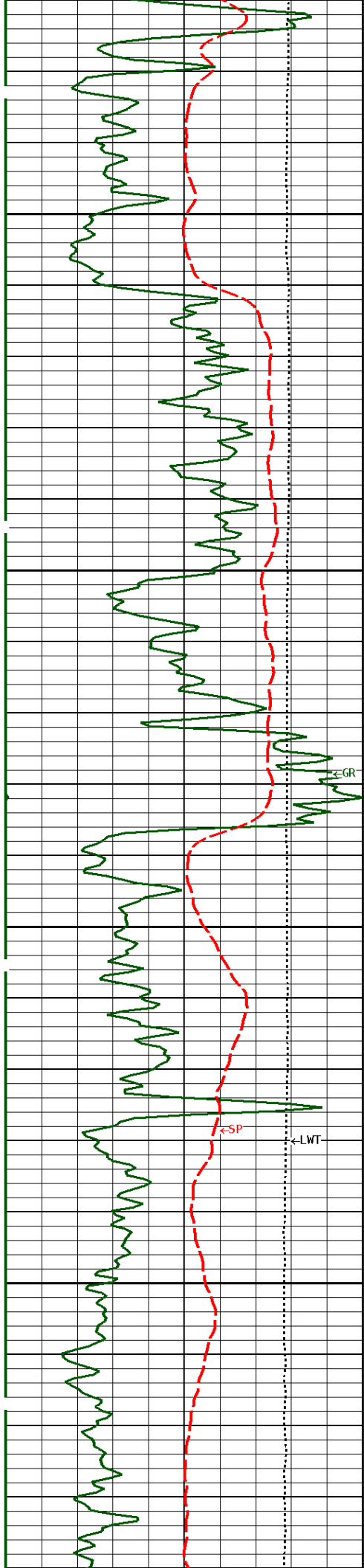




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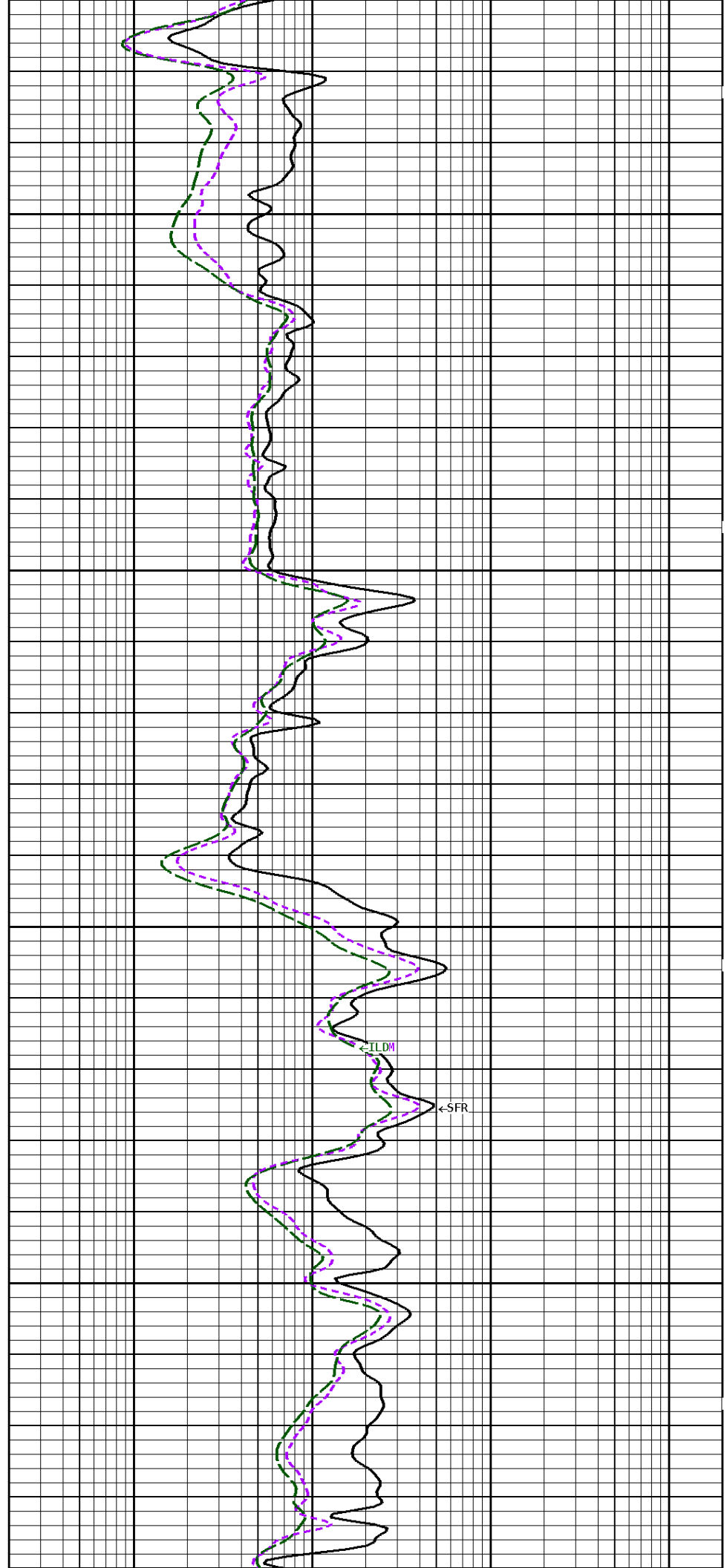
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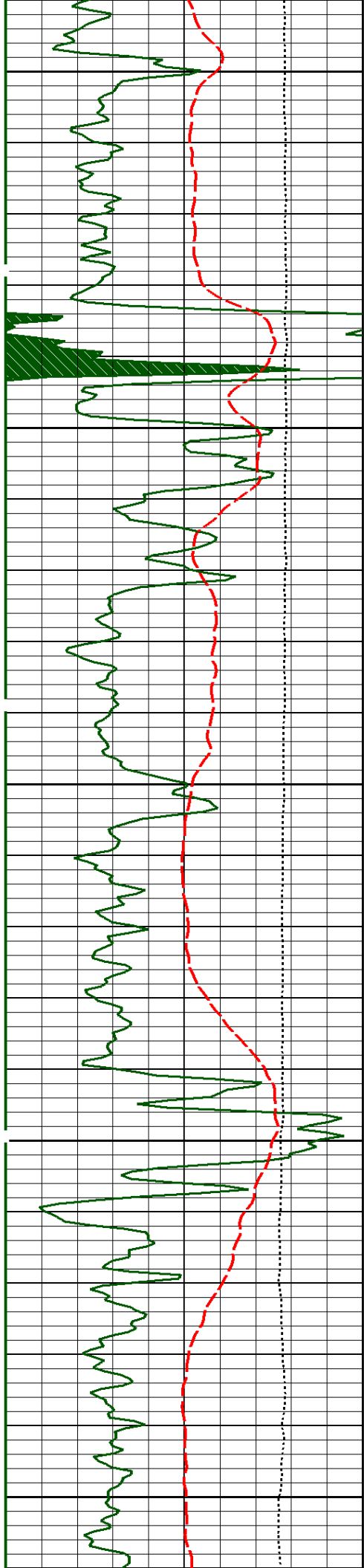




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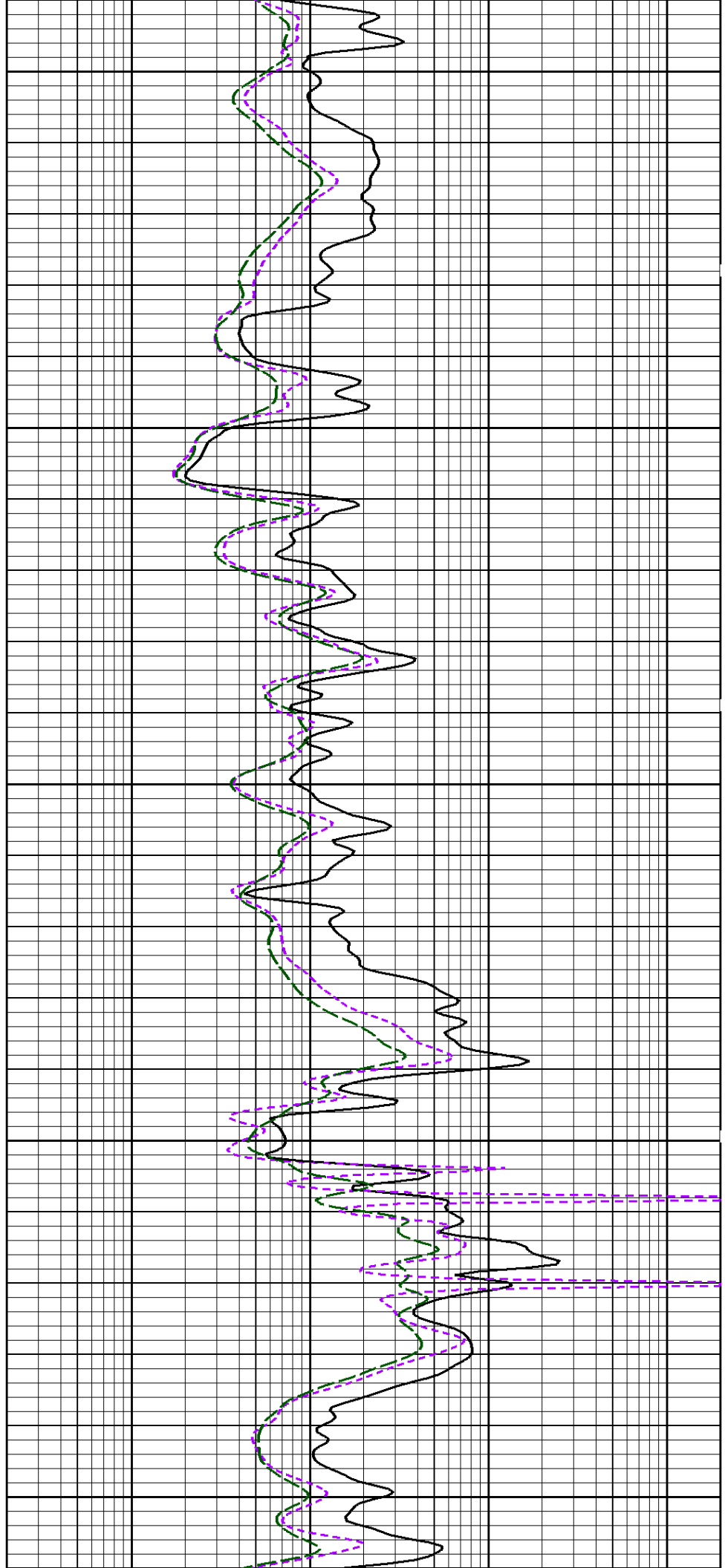


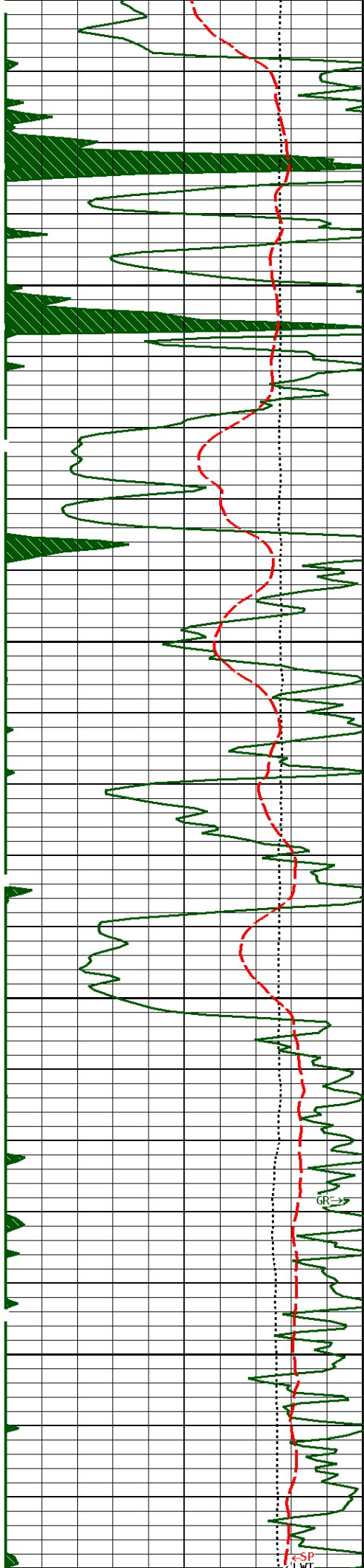


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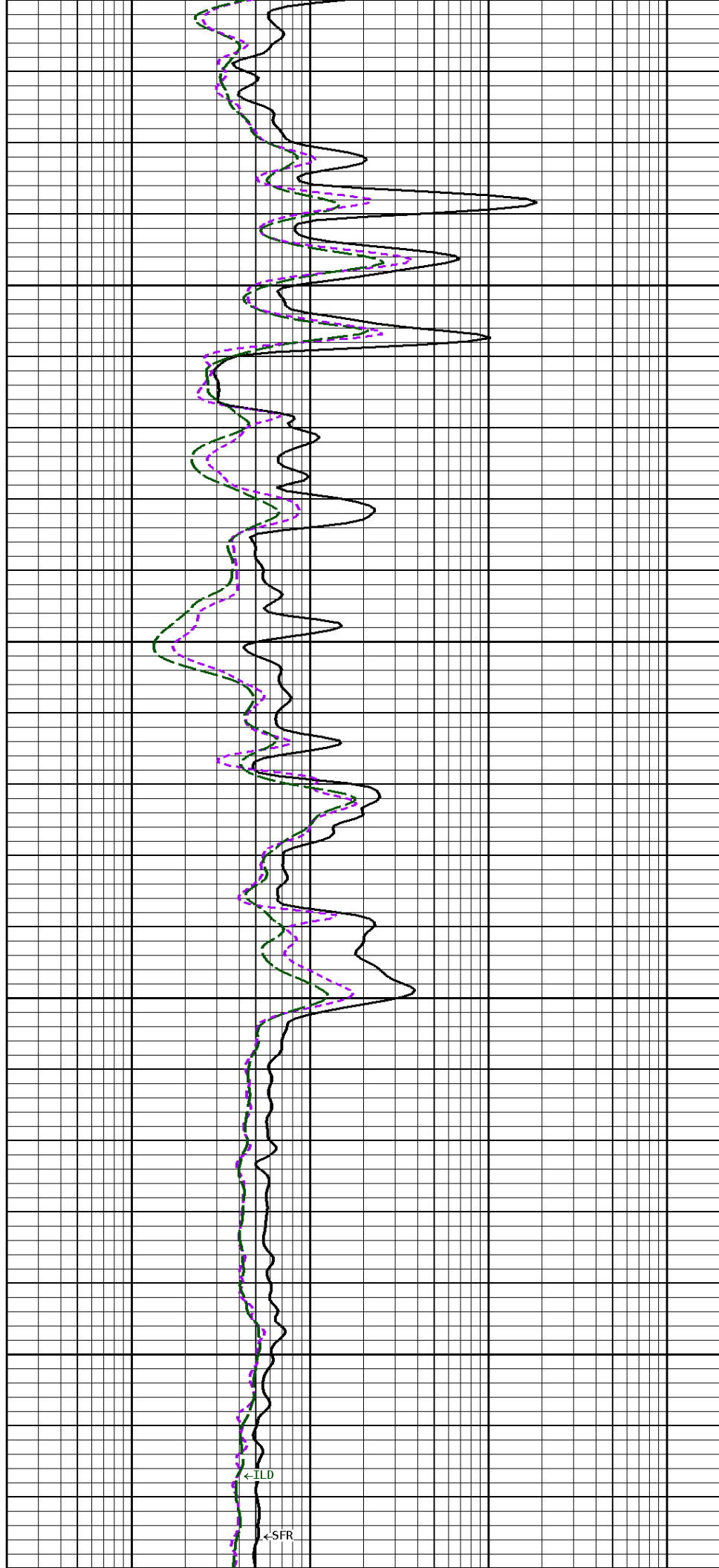
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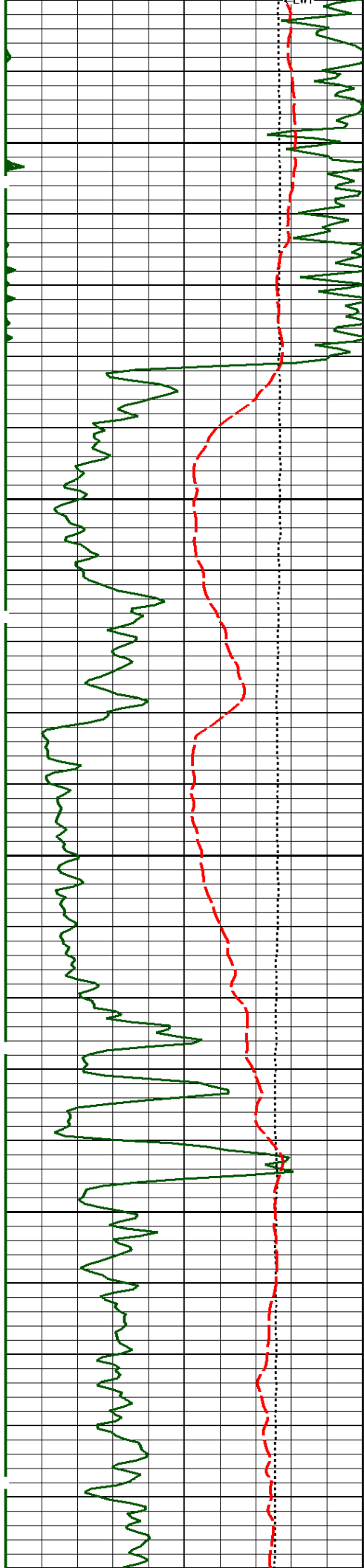




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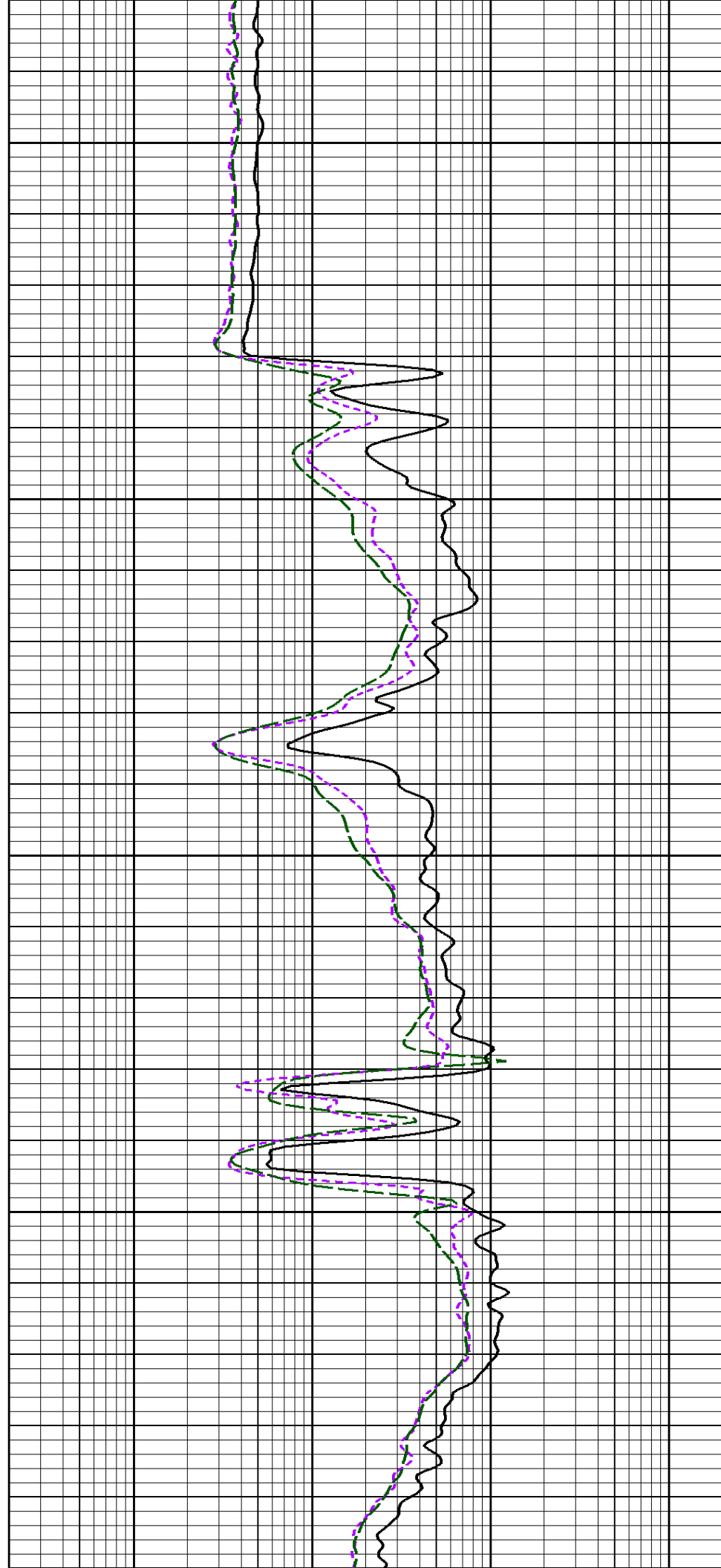
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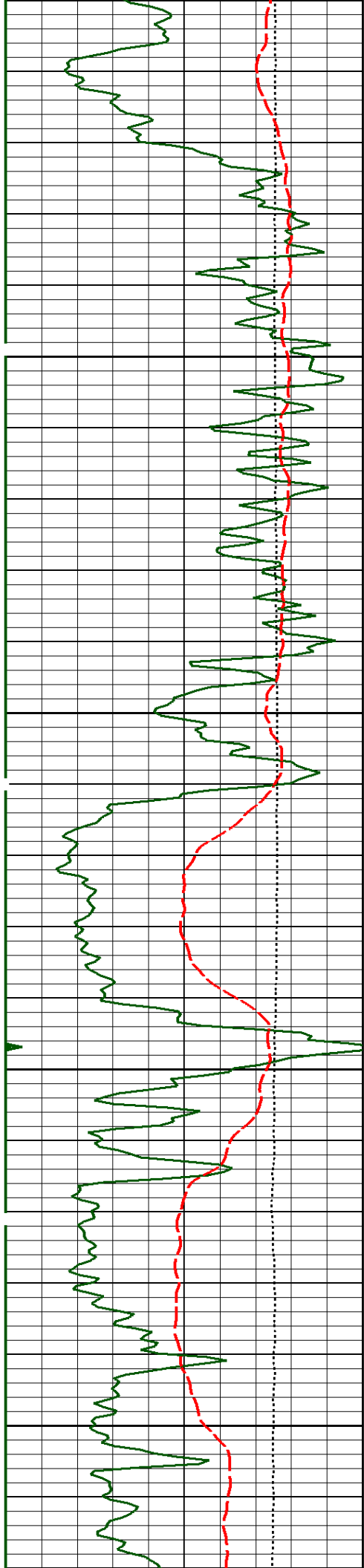




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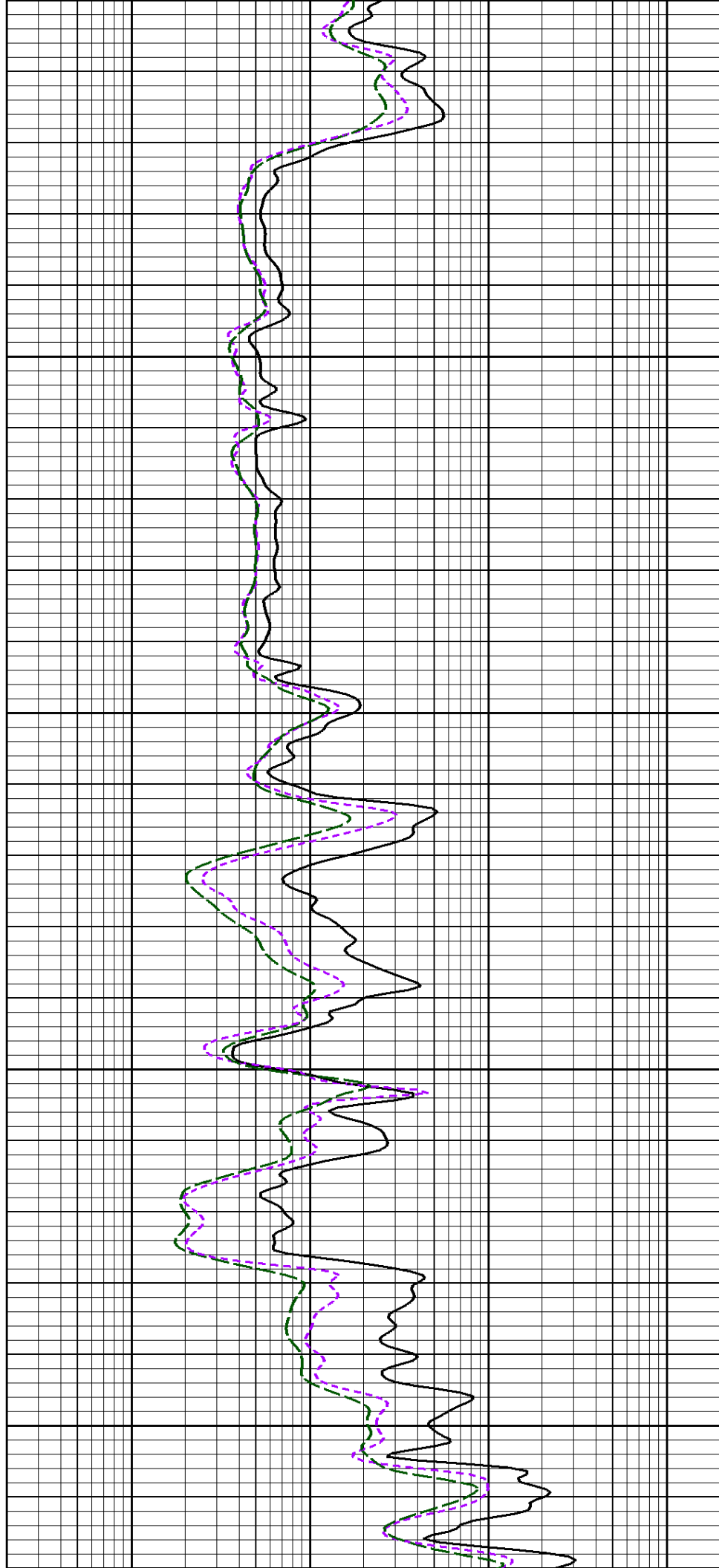
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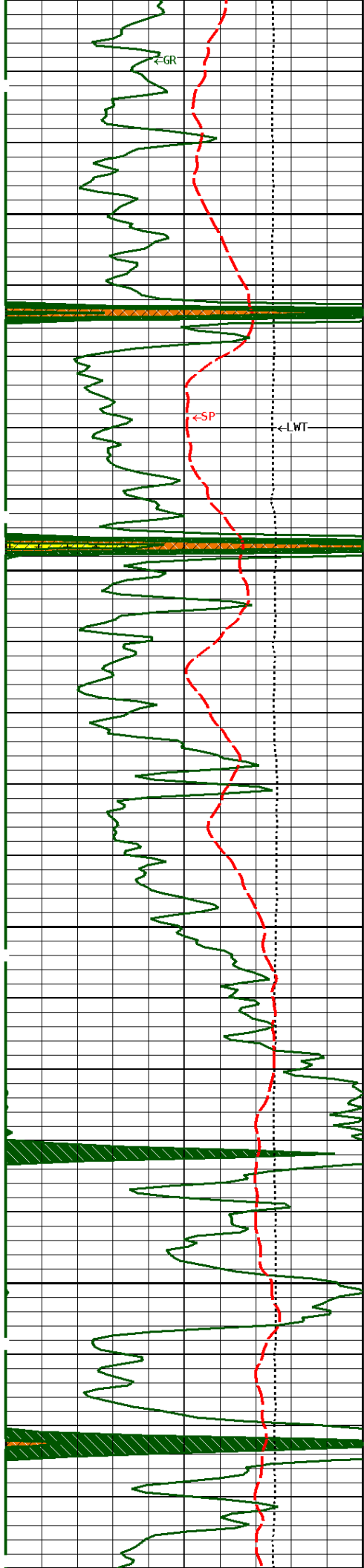




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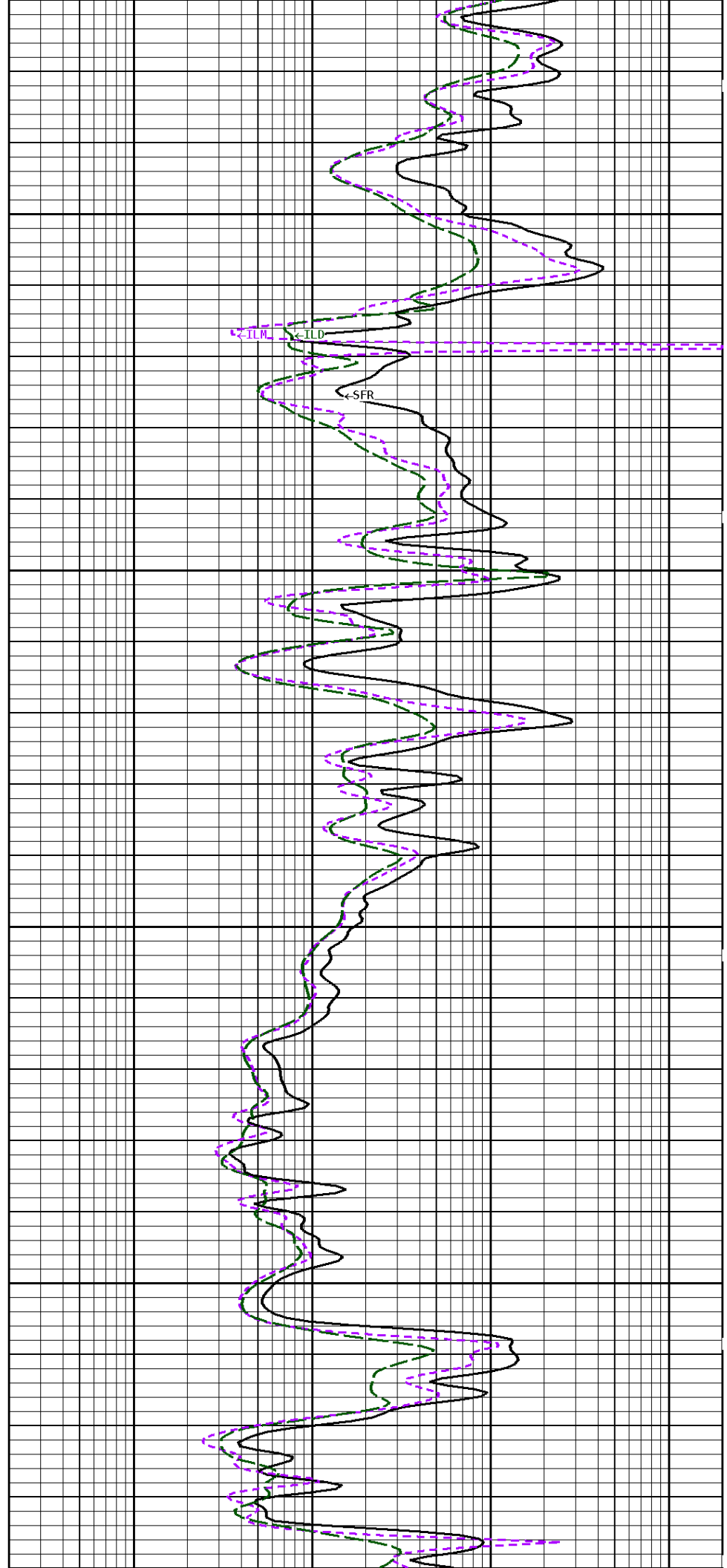
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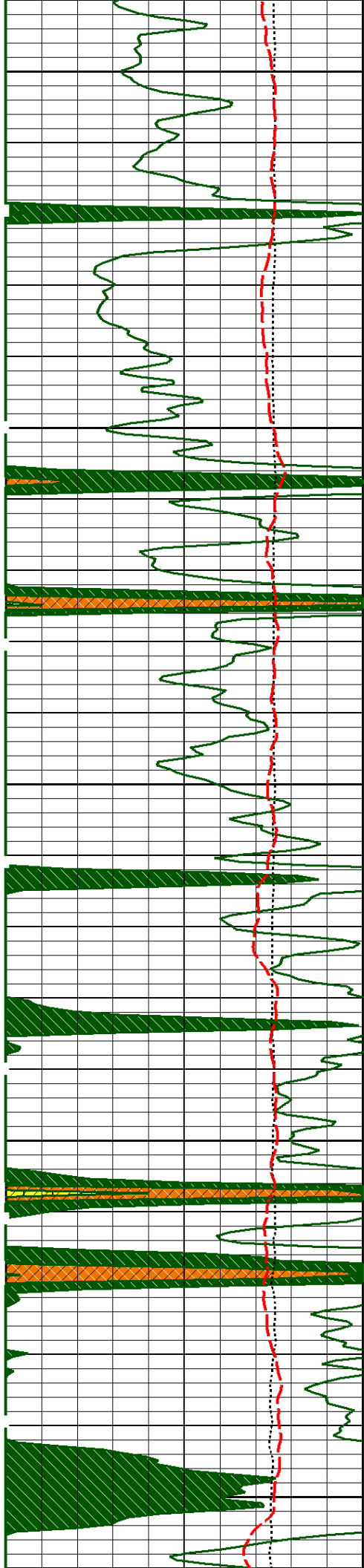




3700

3800

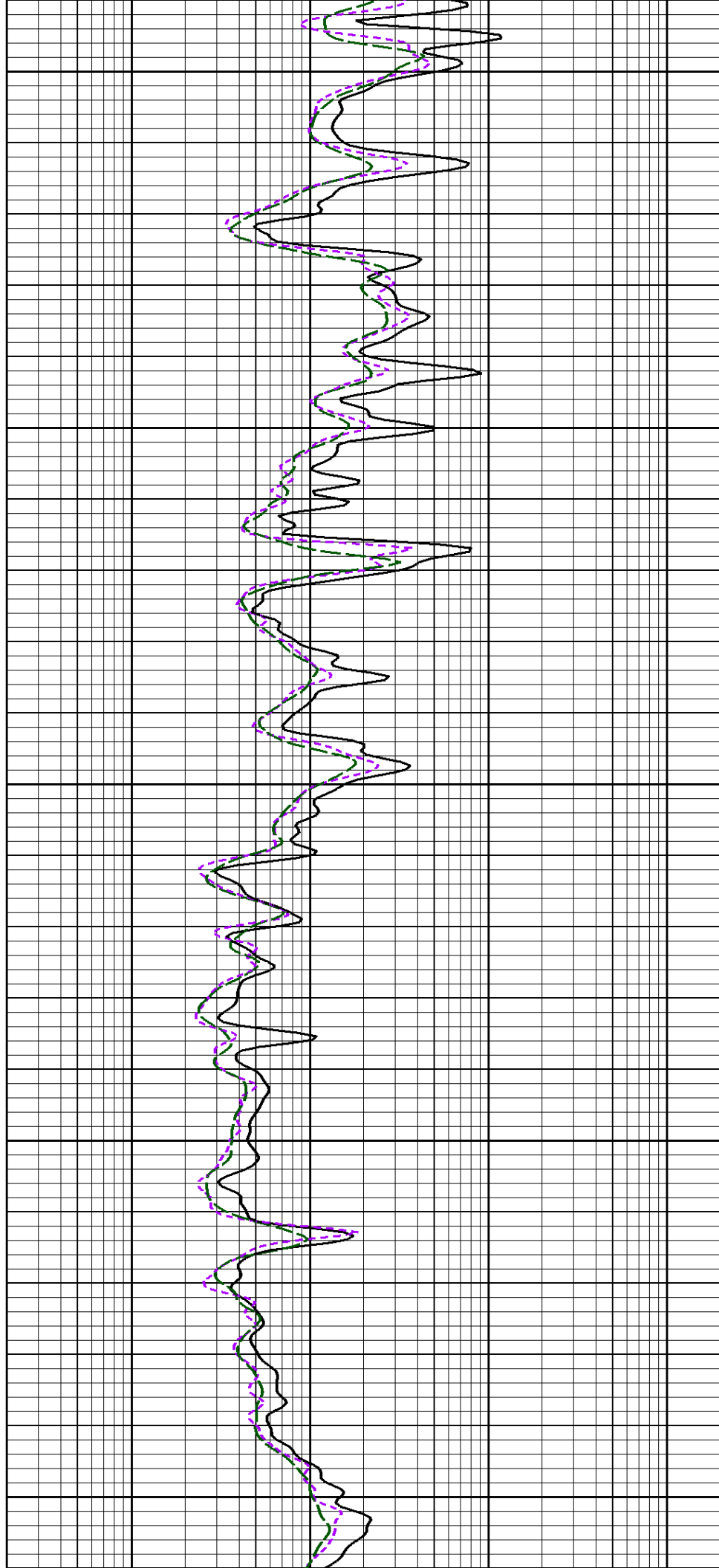


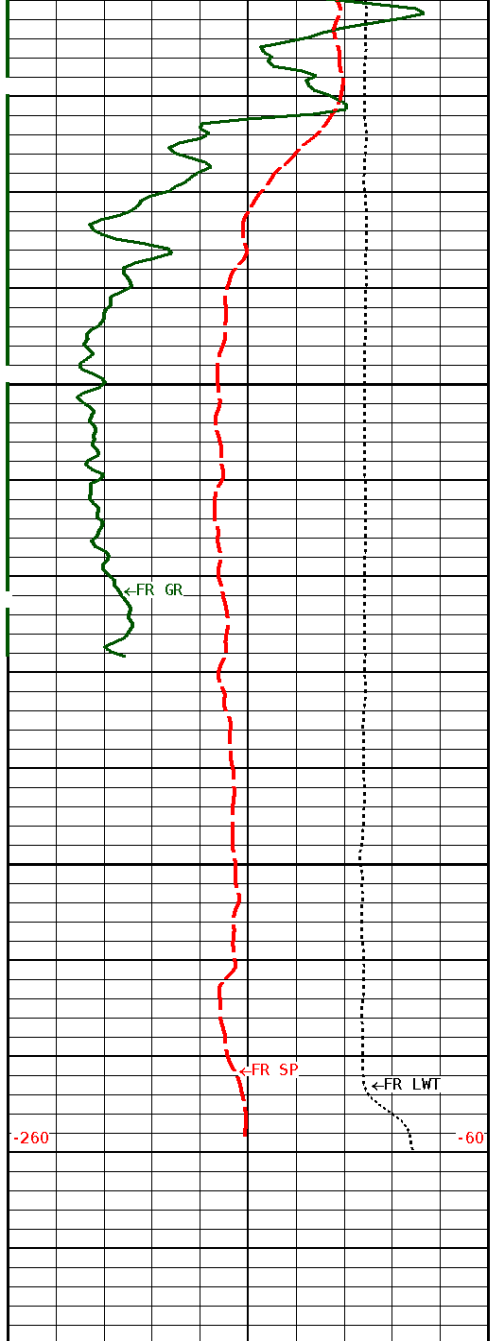


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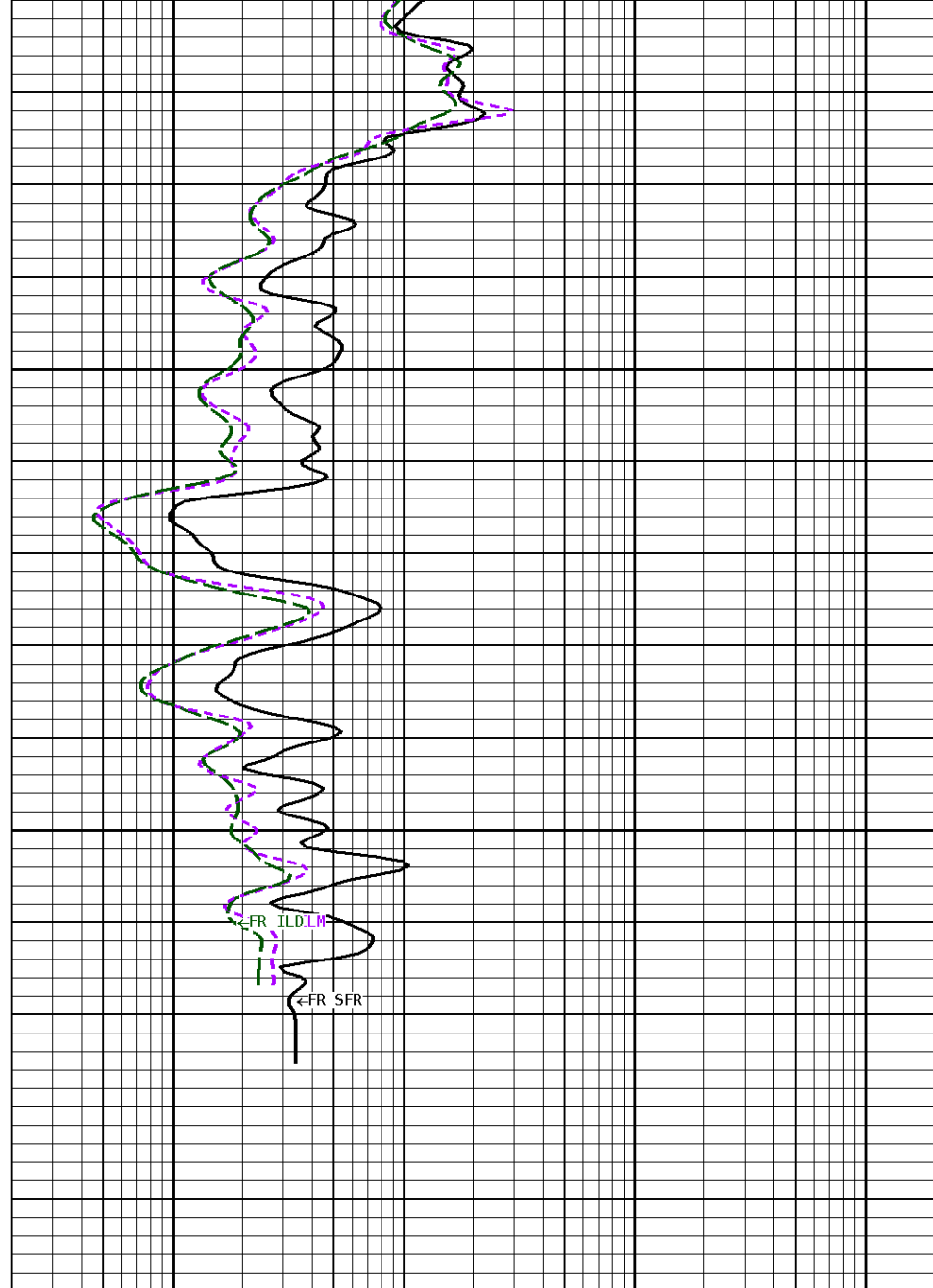




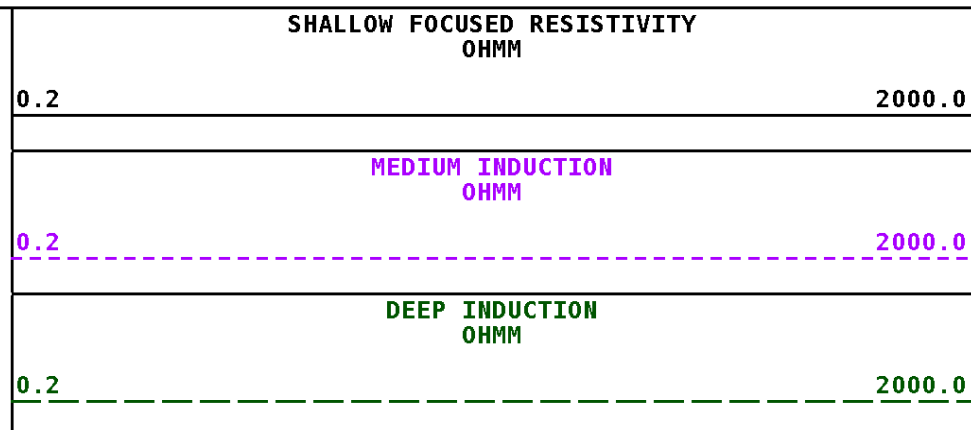
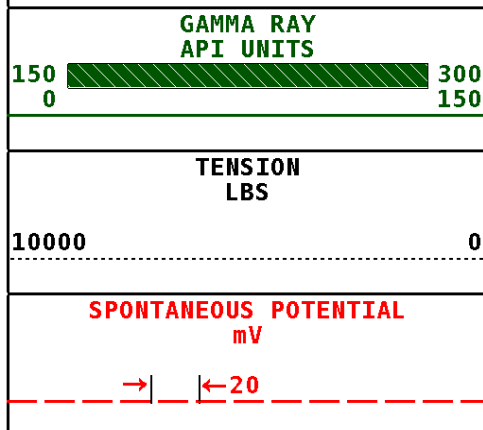
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4200

4224



1:240 MAIN SECTION



* Borehole Zone Factors *

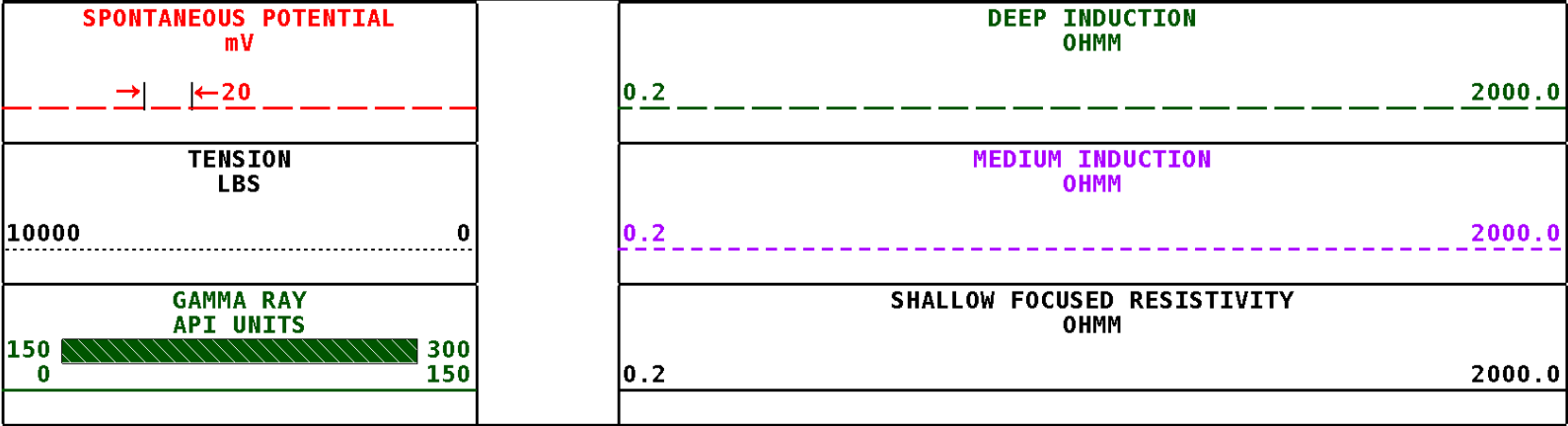
Zone 1	99999.0	to	0.0	Feet
Drill Bit Size				7.875 in
Casing Diameter				5.500 in

Logging Interval	_____	4224.000	ft
BHT Depth	_____	117.0	degF
Borehole Temperature	_____	1.00	DFHF
Temperature Gradient	_____	0.400	ohm/m
Resistivity Of Mud	_____	94.00	degF
Resistivity Of Mud Temperature	_____		

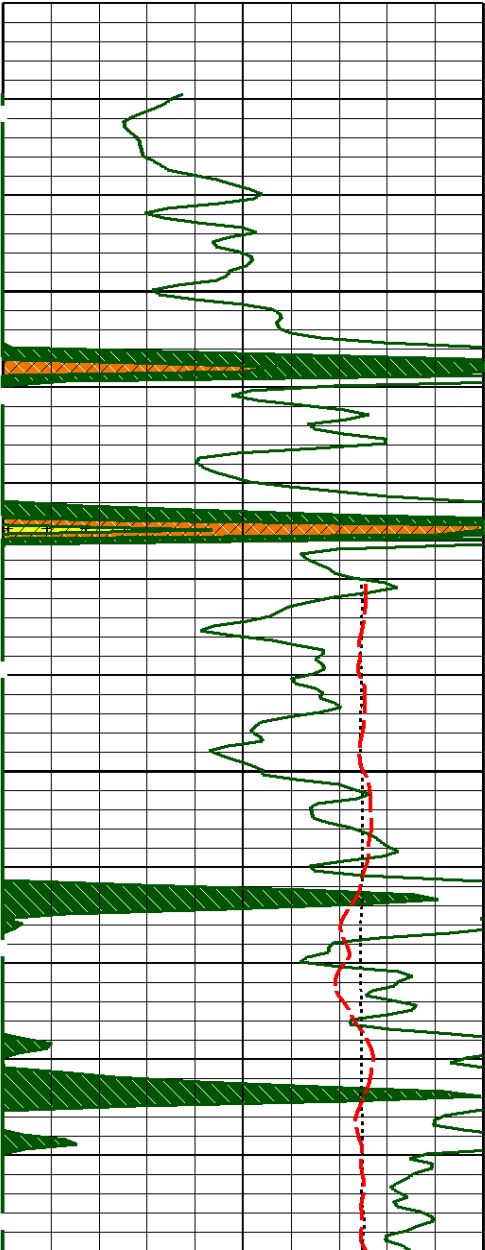
Well File: PICKRELL_HUSON_1_JUNE_25_MSTK
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Format: DIL-240

Segment: V1.D1.S5 REPEAT
Acquired: 2015-06/25 17:50 3.4.0-13284

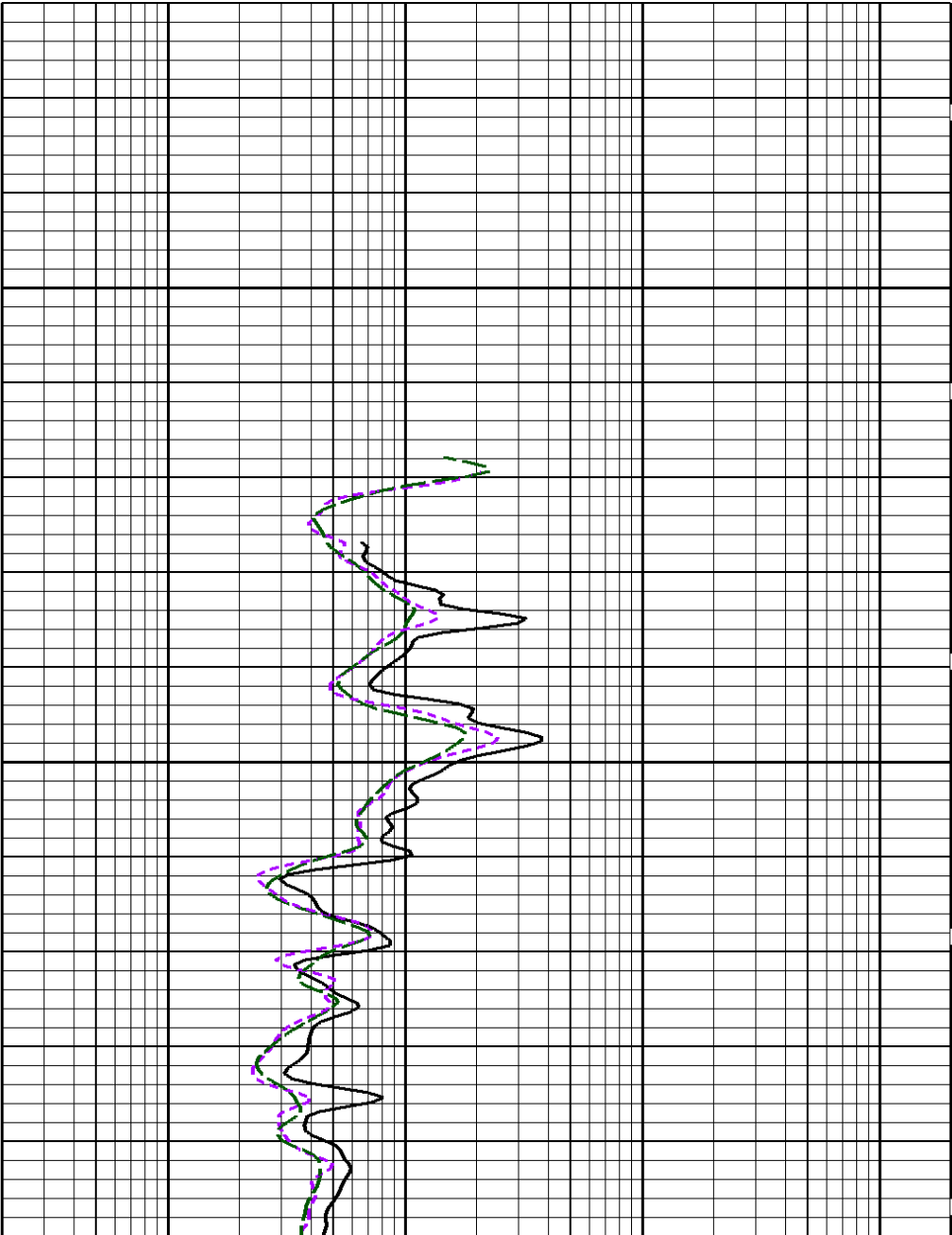
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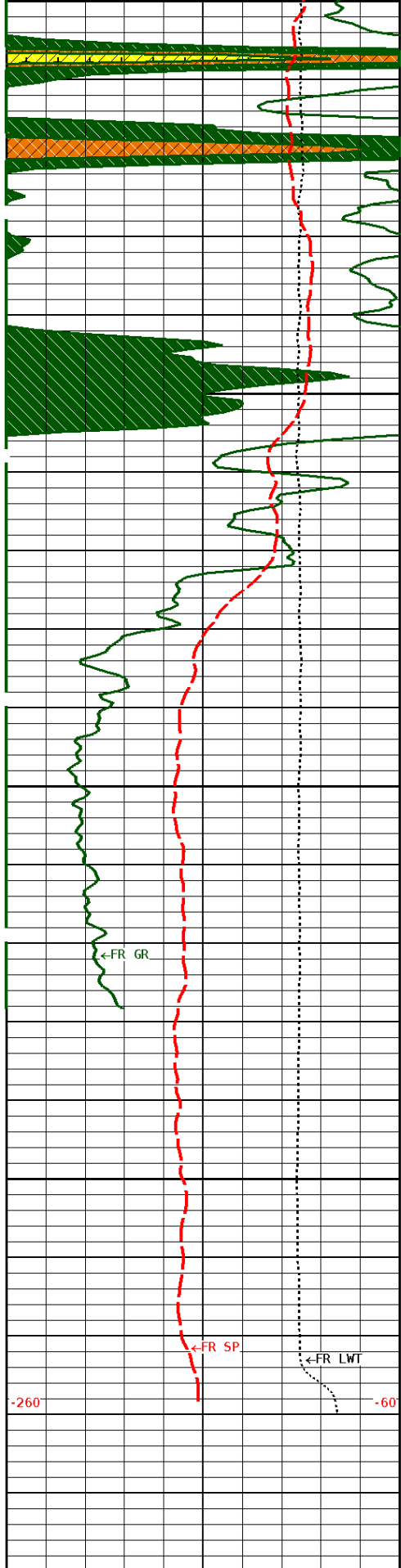


1:240 REPEAT SECTION



4000



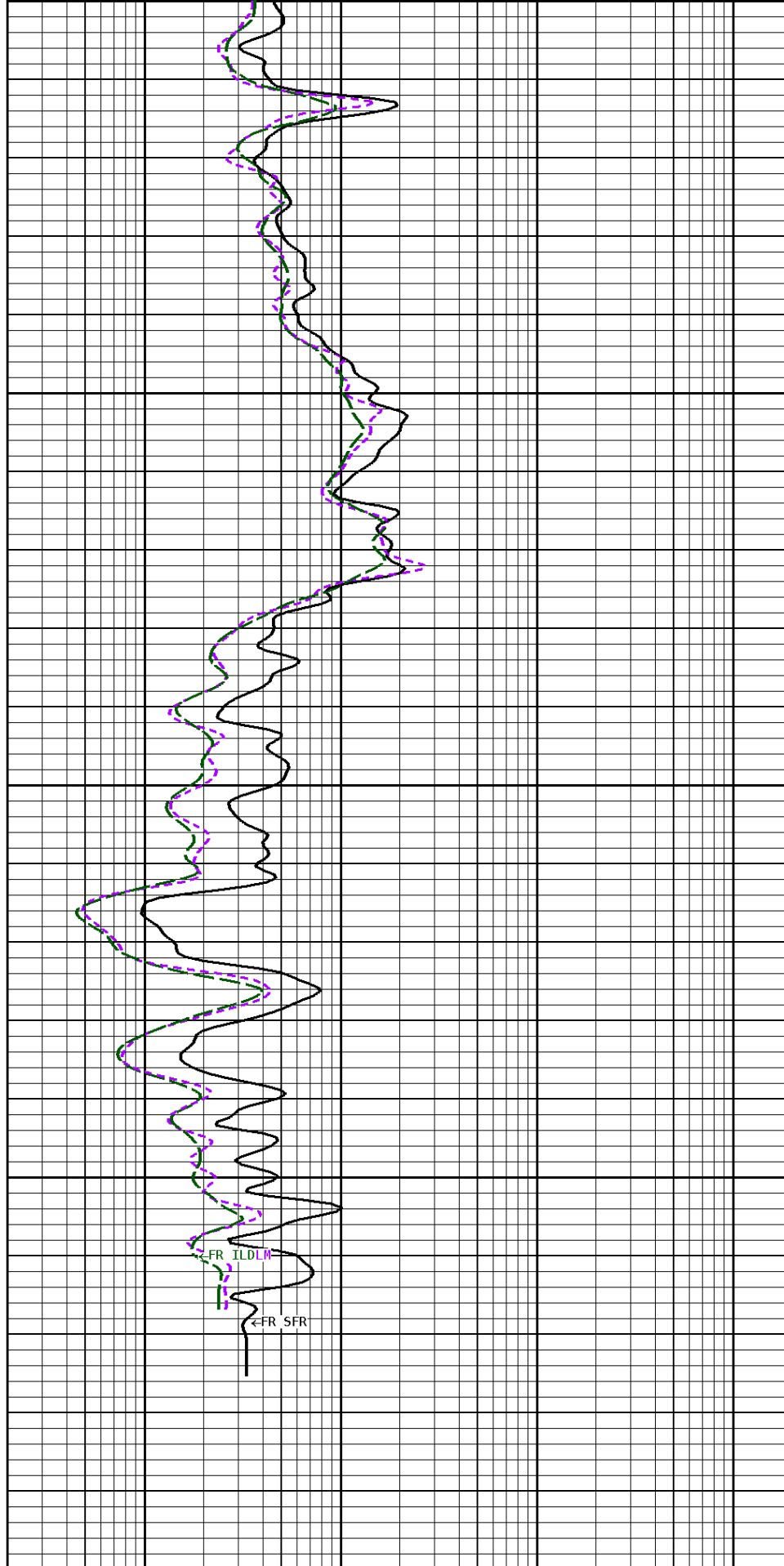


4100

4200

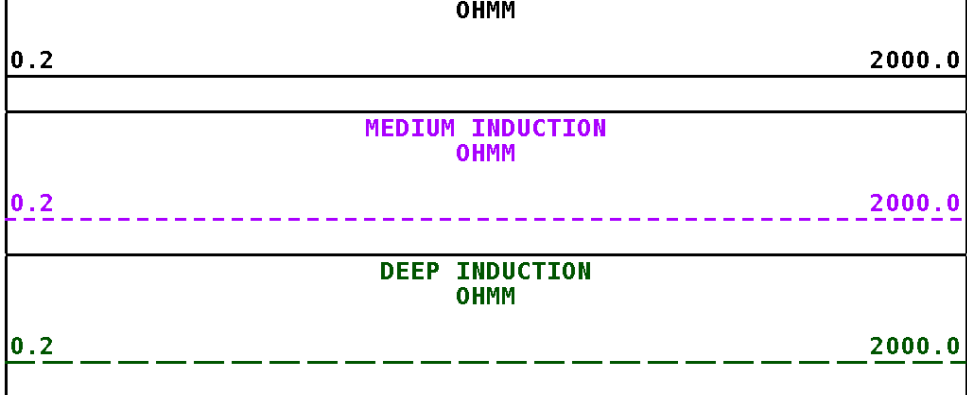
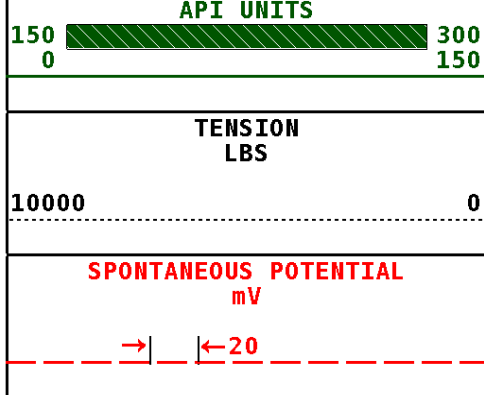
4224

1:240 REPEAT SECTION



SHALLOW FOCUSED RESISTIVITY

GAMMA RAY



*** Borehole Zone Factors ***

Zone 1	99999.0	to	0.0	Feet
Drill Bit Size			7.875	in
Casing Diameter			5.500	in
BHT Depth			4224.000	ft
Borehole Temperature			117.0	degF
Temperature Gradient			1.00	DFHF
Resistivity Of Mud			0.400	ohm/m
Resistivity Of Mud Temperature			94.00	degF

*** Calibration Summary ***

Shop Calibration GRT-B						
Performed : 06-May-2015			Time : 11:35			
Sensor Suite : GR-GR5			ID : GRT-BC-41			
	Measured	Units	Calibrated	Units		
	Background	Jig	Jig			
GR	43	271	CPS	165	GRAPI	

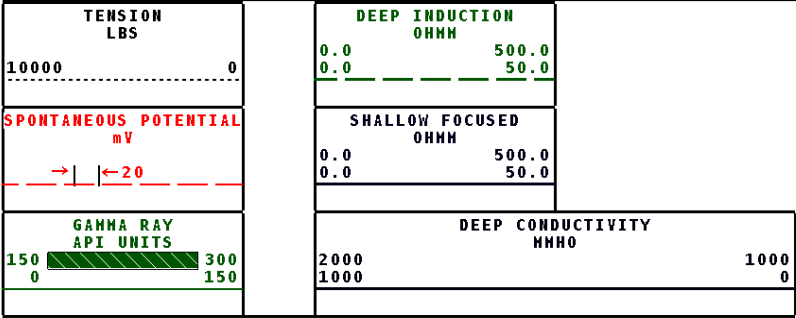
Shop Calibration PIT-CA						
Performed : 04-MAY-2015			Time : 14:15			
Sensor Suite : P-IND-T			ID : PIT-AB-16			
Medium						
	Measured		Calibrated		Units	
	R	X	R	X		
Air	130882	130493	0.6	1.8	MMHOS	
Zero	131064	131064	8.9	19.9	MMHOS	
Reference	248542	248861	5008.9	5019.9	MMHOS	
Loop	128625	216514	3555.8	3749.1	MMHOS	
Sonde Error			-3.9	-7.3	MMHOS	
Cond			5008.9	5019.9	MMHOS	
Deep						
	Measured		Calibrated		Units	
	R	X	R	X		
Air	128669	131412	0.5	0.6	MMHOS	
Zero	131070	131069	50.6	-10.9	MMHOS	
Reference	230754	231619	2050.6	1989.1	MMHOS	
Loop	126064	218351	1677.5	1782.2	MMHOS	
Sonde Error			-2.2	-7.1	MMHOS	
Cond			2050.6	1989.1	MMHOS	
Temperature						
	Measured		Calibrated		Units	
	Low	High	Low	High		
	16980.0	56920.0	70.0	350.0	DEGF	

Performed : 04-May-2015			Time : 14:02			
Sensor Suite : SFL			ID : PIT-AB-16			
Internal						
	Measured		Calibrated		Units	
	Zero	Reference	Zero	Reference		
Im	32761.4	49779.9	0.0	7028.0	uA	
Ib	32771.3	48991.0	0.0	1750.0	mA	
MOM1	32793.0	57437.7	0.0	175.0	mV	
Equivalent SFL				43.97	OHMM	

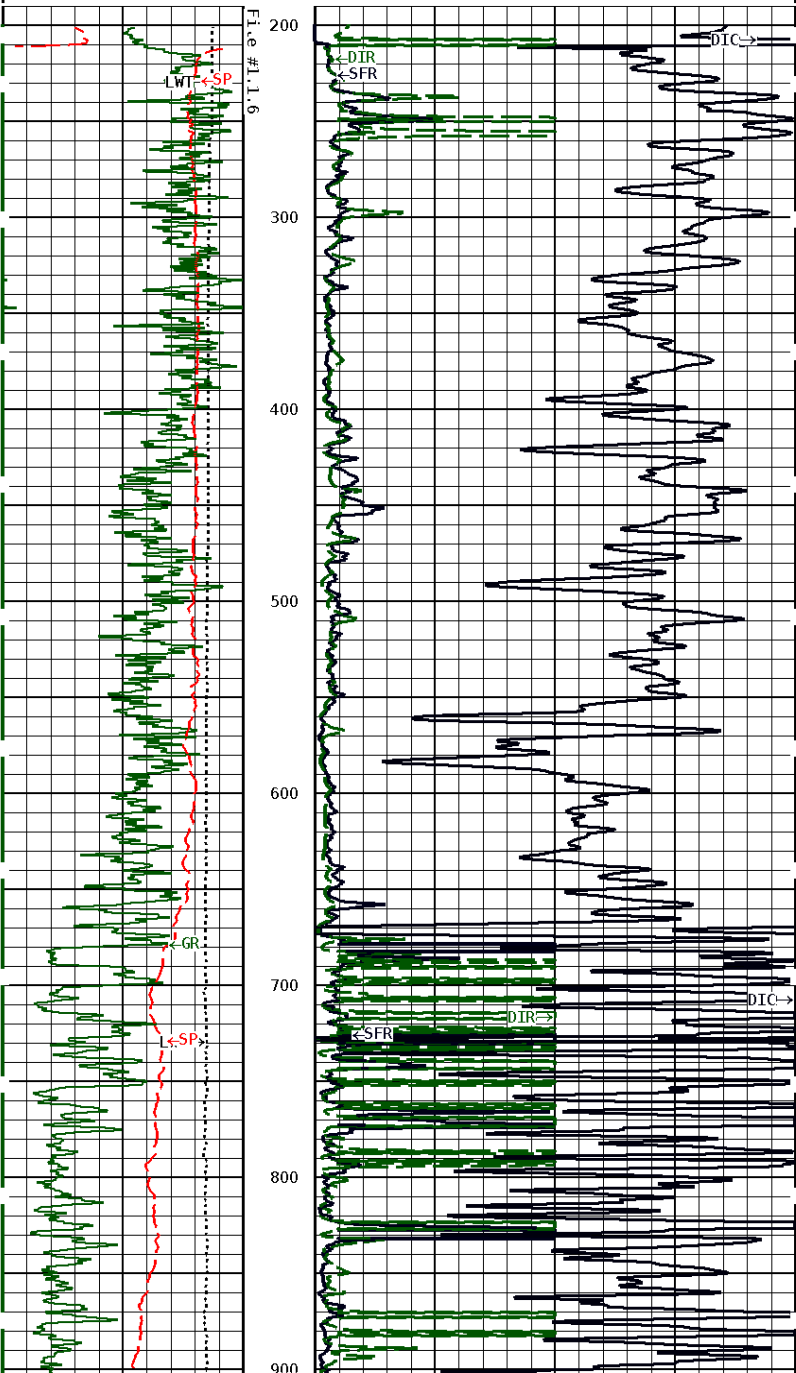
Performed : 04-May-2015			Time : 14:00			
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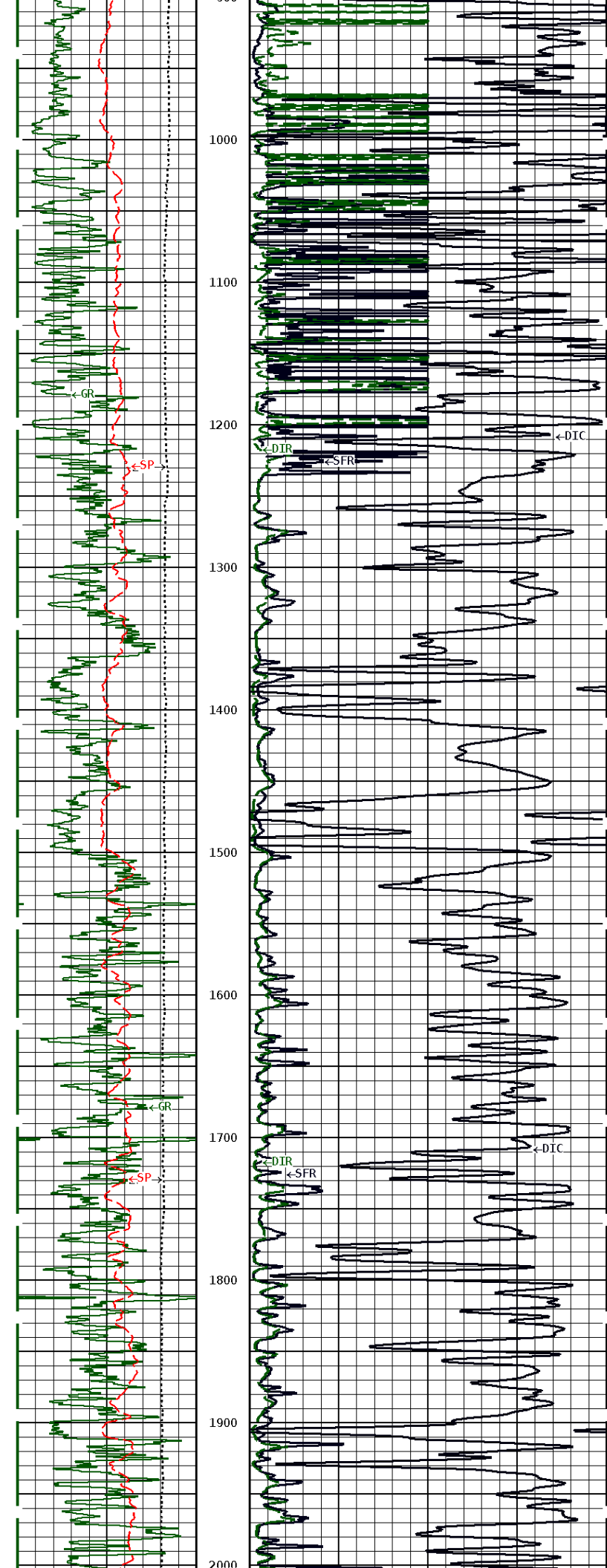
Measured		Internal		Calibrated		Units
Zero	Reference			Zero	Reference	
32790.0	58957.1			0.0	1000.0	

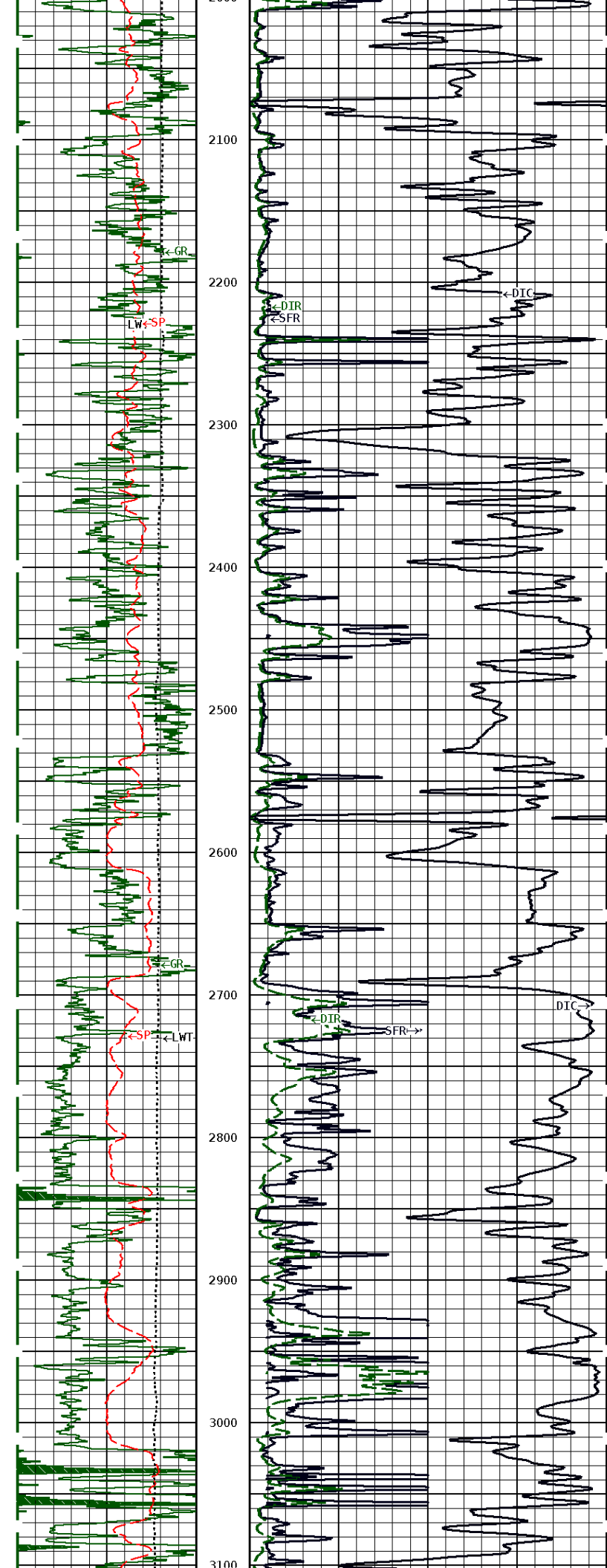
Well File: PICKRELL_HUSON_1_JUNE_25_MSTK	Scale: 1:1200	Format: DIL1200
Segment: V1.D1.S6 MAIN	Acquired: 2015-06/25 18:05 3.4.0-13284	
Reference: 0	Processed: 2015-06/25 19:25 3.4.0-13284	

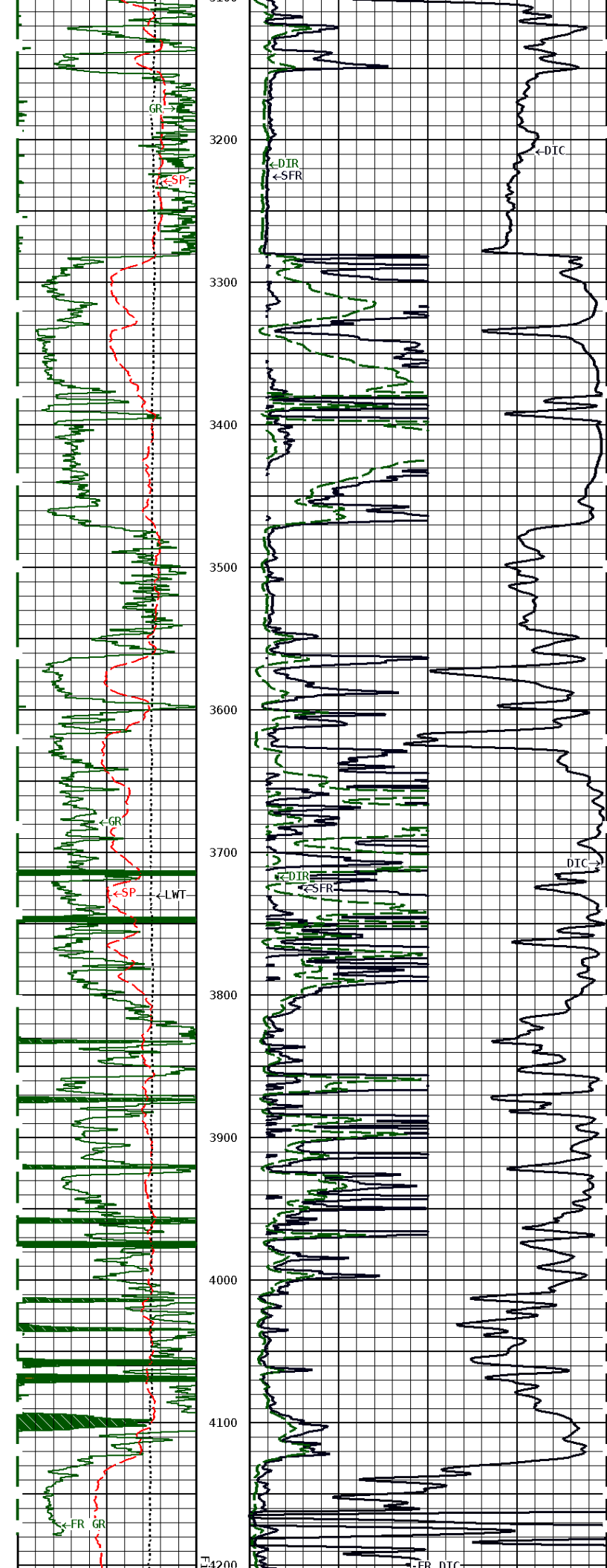


1:1200 MAIN SECTION

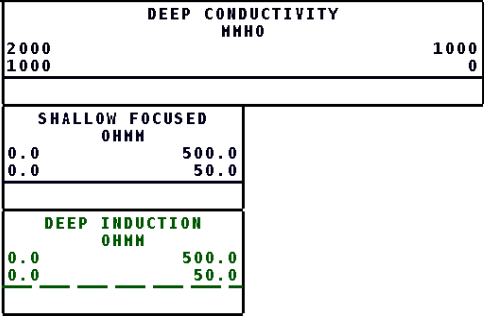
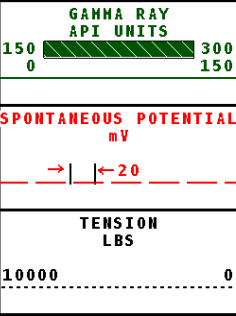








1:1200 MAIN SECTION



Company: PICKRELL DRILLING CO., INC.
Well: HUSON TRUST "C" #1
Location: 1980' FSL & 1980' FWL
Logged: Jun 25 2015
K.B. Elev: 1443.0 Ft