



Tucker

ENERGY SERVICES

PHASED INDUCTION

SHALLOW FOCUS SP LOG

Company VAL ENERGY, INC. Well WERNER #3-31 Field WILSON County COWLEY State KANSAS Country USA API No. 15-035-24652		File No : TUL-60794 Company : VAL ENERGY, INC. Well : WERNER #3-31 Field : WILSON County : COWLEY State : KANSAS Country : USA API No : 15-035-24652	
Location : 1980' FSL & 990' FEL W2 SE NE		LSD : Sect : 31 Twp : 32S Rge : 6E	
Permanent Datum:	GL	Elevations:	Services:
Drilling Measured From:	KB	KB 1316.00	CNT
Log Measured From:	KB	DF 1315.00	PIT
Above Permanent Datum:	8.00 Ft	GL 1308.00	MLT
Date	12-05-2015		
Run Number	1		
Depth--Driller	3455.0	Ft	
Depth--Logger	3455.0	Ft	
First Reading	3455.0	Ft	
Last Reading	345.0	Ft	
Casing--Driller	345.0	Ft	
Casing--Logger	345.0	Ft	
Bit Size	7.875	In	
Casing Size	8.625	In	
Hole Fluid Type	WBM		
Density	9.4		
Fluid Loss	9.6		
PH/Viscosity	9.5	36.0	
Sample Source	MEASURED		
RM@Measured Temp.	2.000	@ 50 F	
RMF@Measured Temp	1.700	@ 50 F	
RMG@Measured Temp.	2.300	@ 50 F	
Source RMF/RMC	CALCULATED/CALCULATED		
RM@BHT	99.999	@ 110 F	
Time Circulation Stopped			
Max Recorded Temp.	112	F	
Equipment/Base	T-126	TULSA	
Recorded By	S. DAVIS		
Witnessed By	J. BAKER		

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	3455.00	8.625	20.00	345.00	0.00

Run Number	1	
Date	12-05-2015	
Date/Time On Bottom	12-05-2015 1:30 pm	
Depth to Fluid	0.0 Ft	
Salinity	1800.000	
RMF@BHT	0.890 @ 110 F	
RMC@BHT	1.120 @ 110 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 1800'
 MICRO 0-80 SCALE

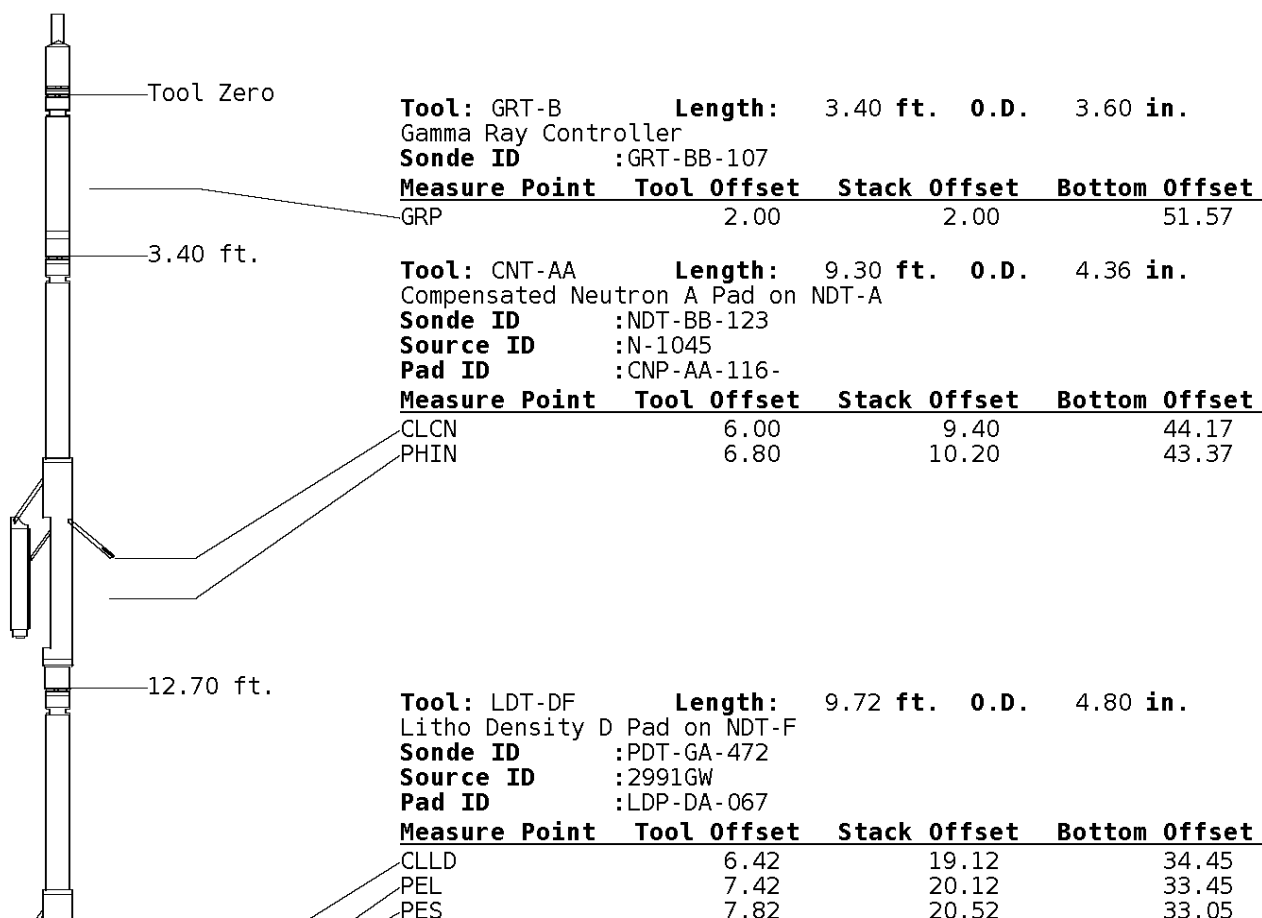
GRT; GRP,
 CNT; PHIN, CLCNIN
 LDT; PORL, LCORN, PECLN, LDENN, CLLDIN
 MLT; NOR.RF, INV.RF, MSCLPIN.
 PIT; ILD, ILM, SPU, SFLAEC, CIRD

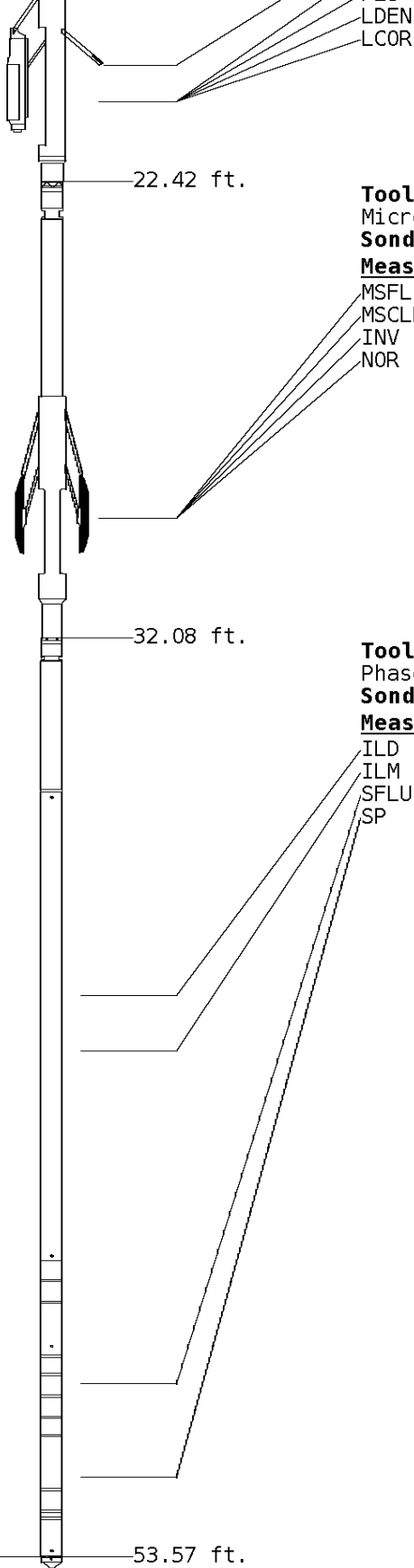
OPERATORS;

C. GONZALES
 D. CLARK

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

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

Well File: val-wer-3-31-mstk-dec-5

Scale: 1:600 Format: DIL-600

Segment: V1.D1.S5 MN

Acquired: 2015-12/05 13:41 3.4.0-13544

Reference: 0

Processed: 2015-12/05 14:50 3.4.0-13544

TENSION
LBS

10000

0

DEEP INDUCTION
OHMM

0.0

500.0

0.0

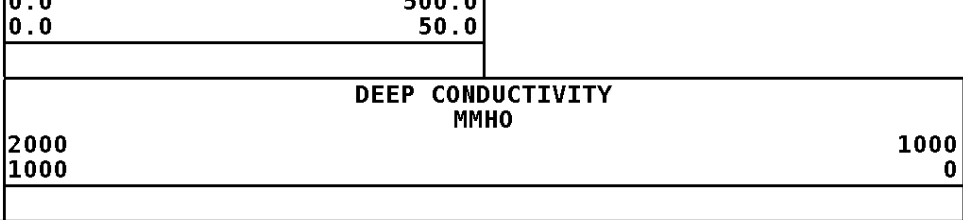
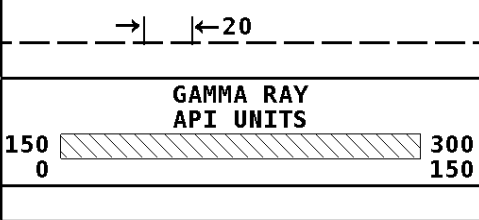
50.0

SPONTANEOUS POTENTIAL
mV

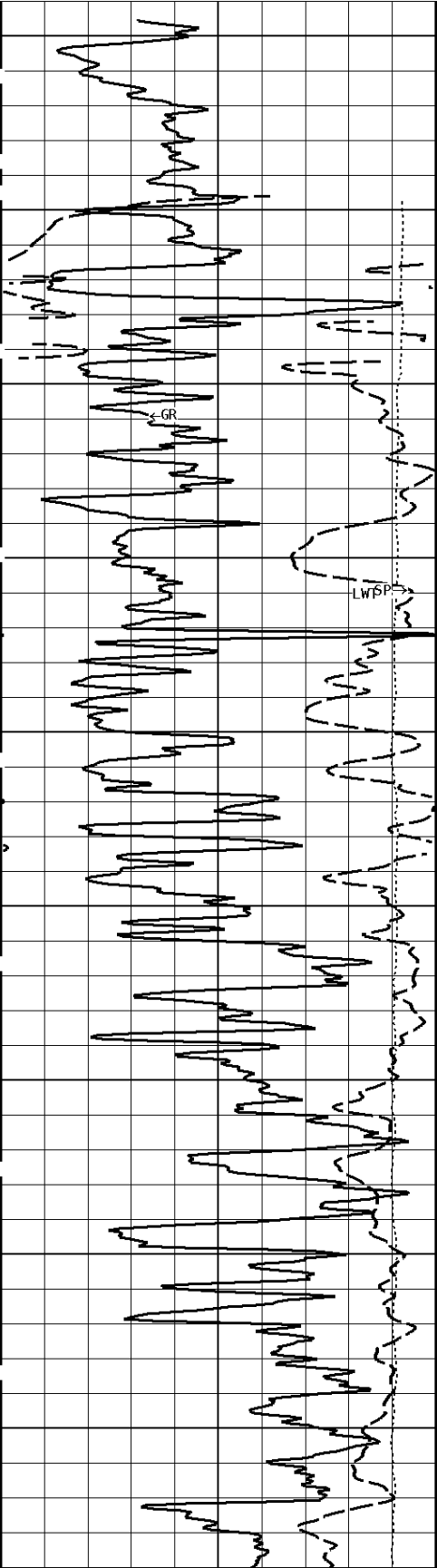
SHALLOW FOCUSED RESISTIVITY
OHMM

0.0

500.0



1:600 MAIN SECTION



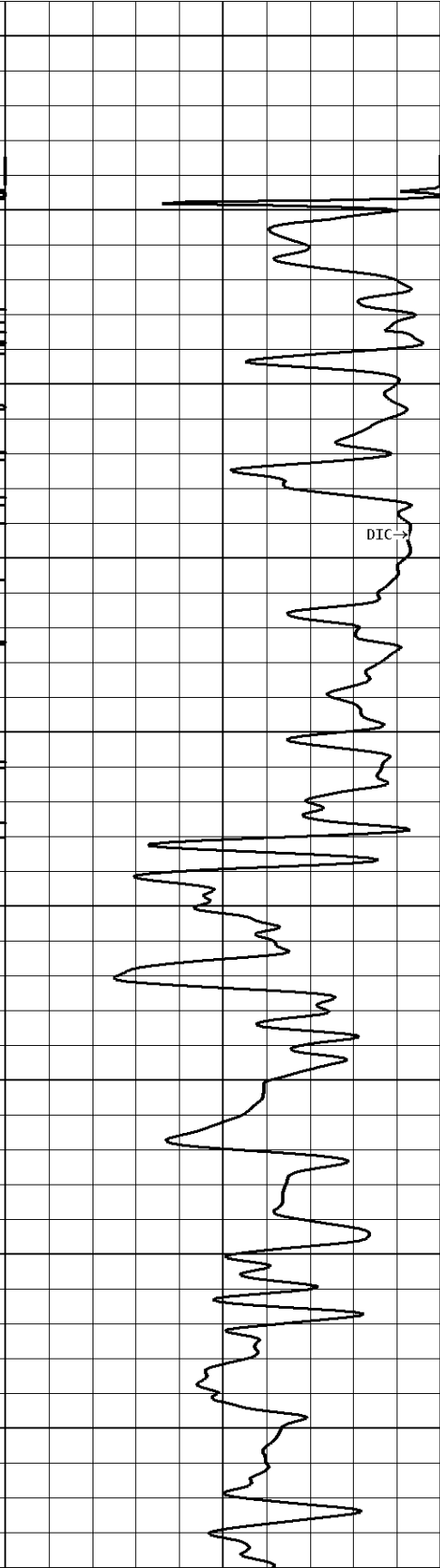
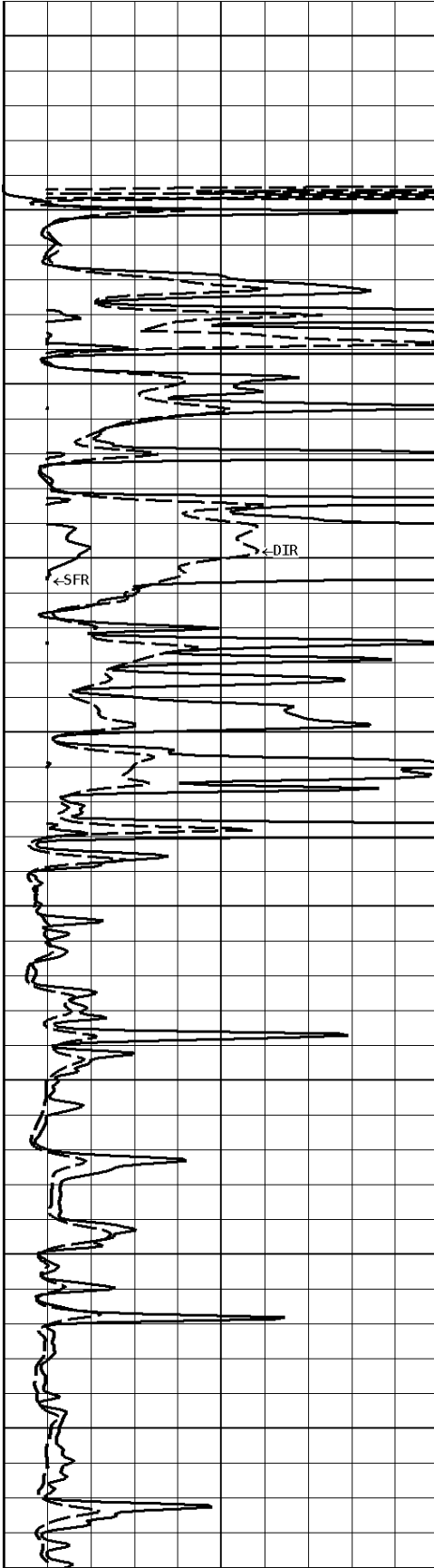
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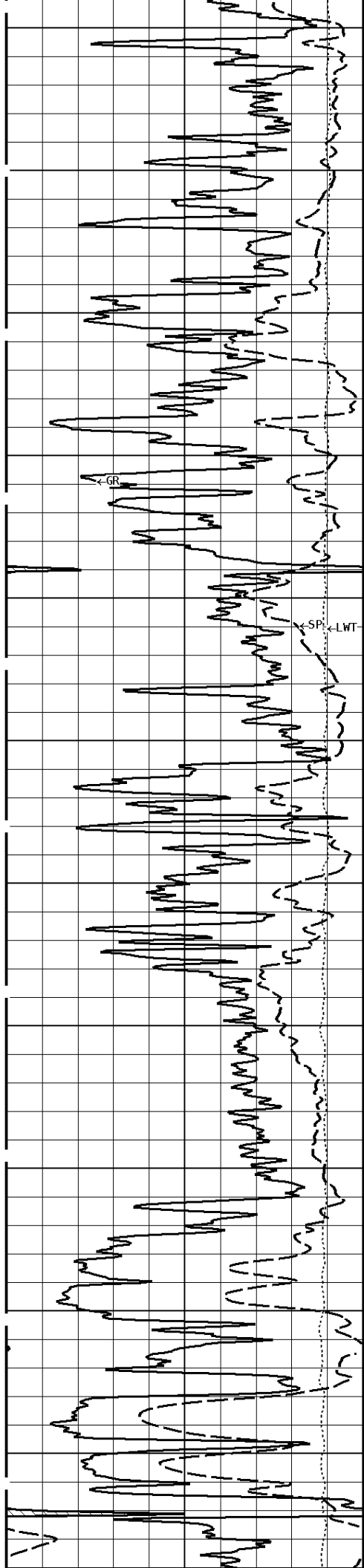
400

500

600

700





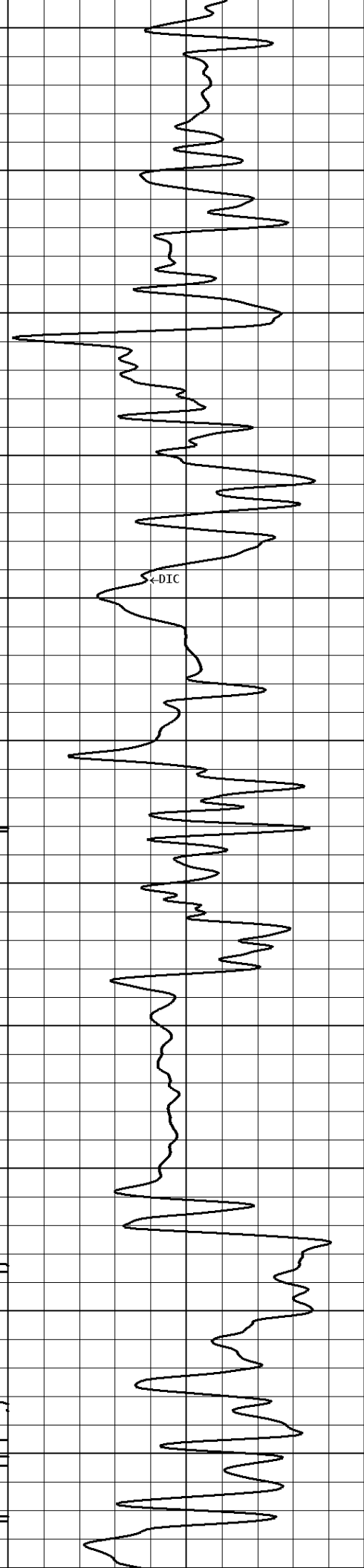
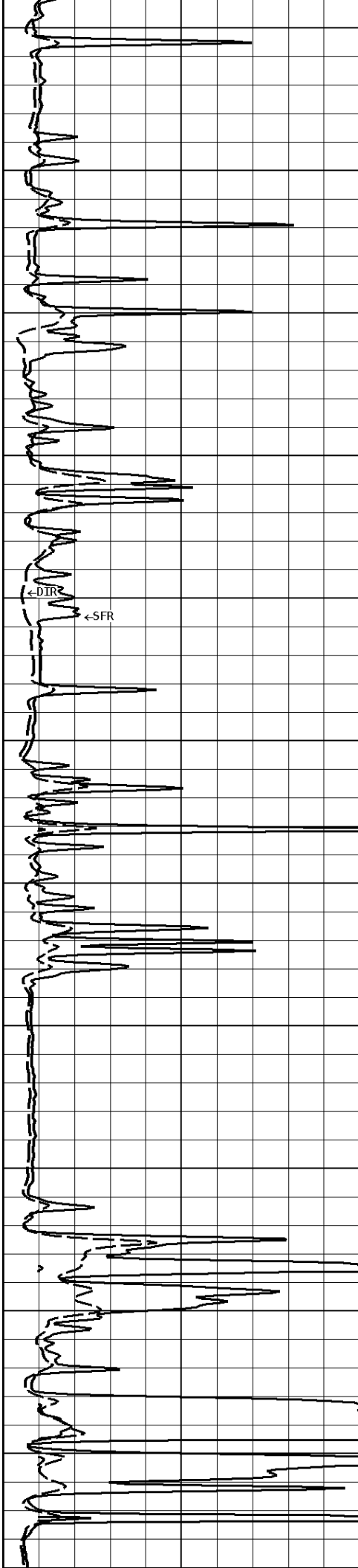
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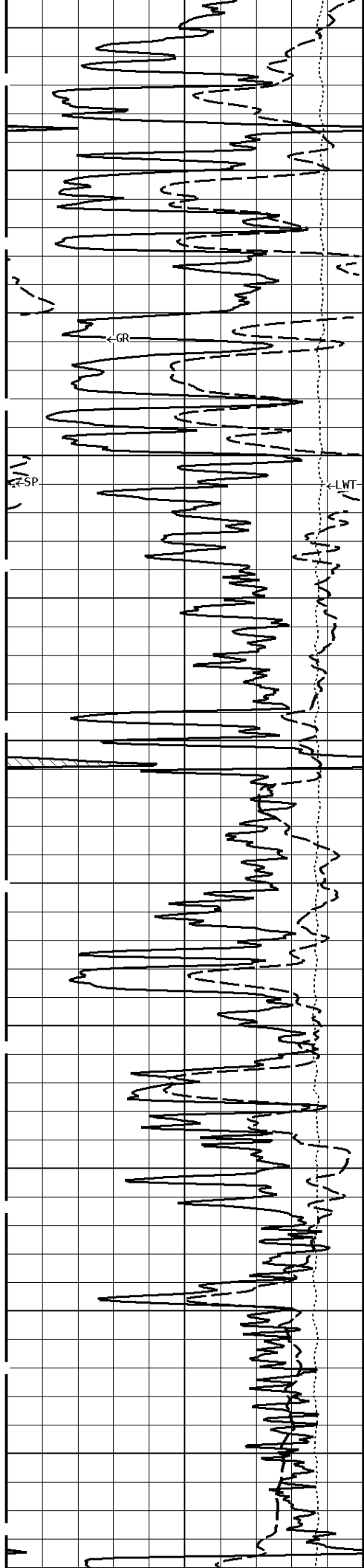
900

1000

1100

1200





1300

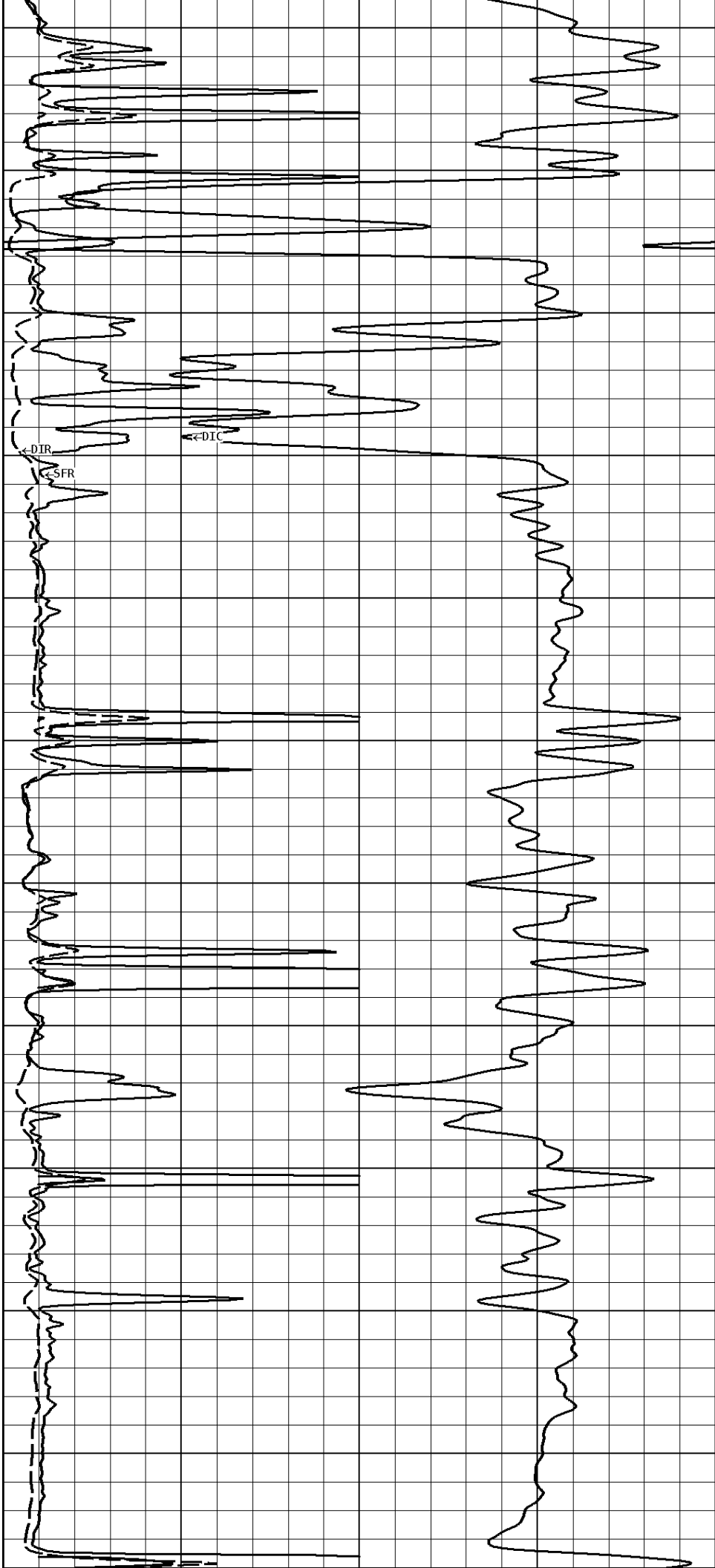
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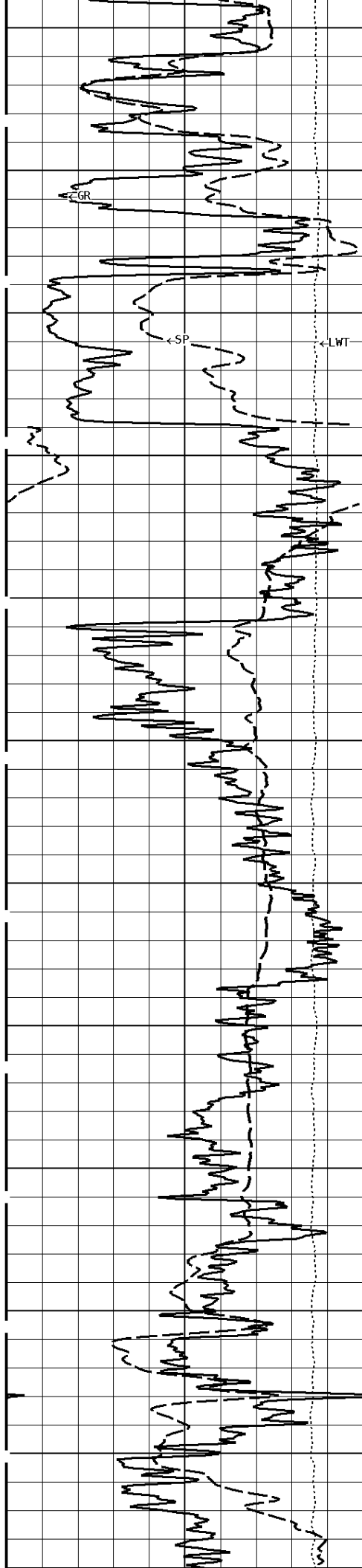
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1600

1700

1800





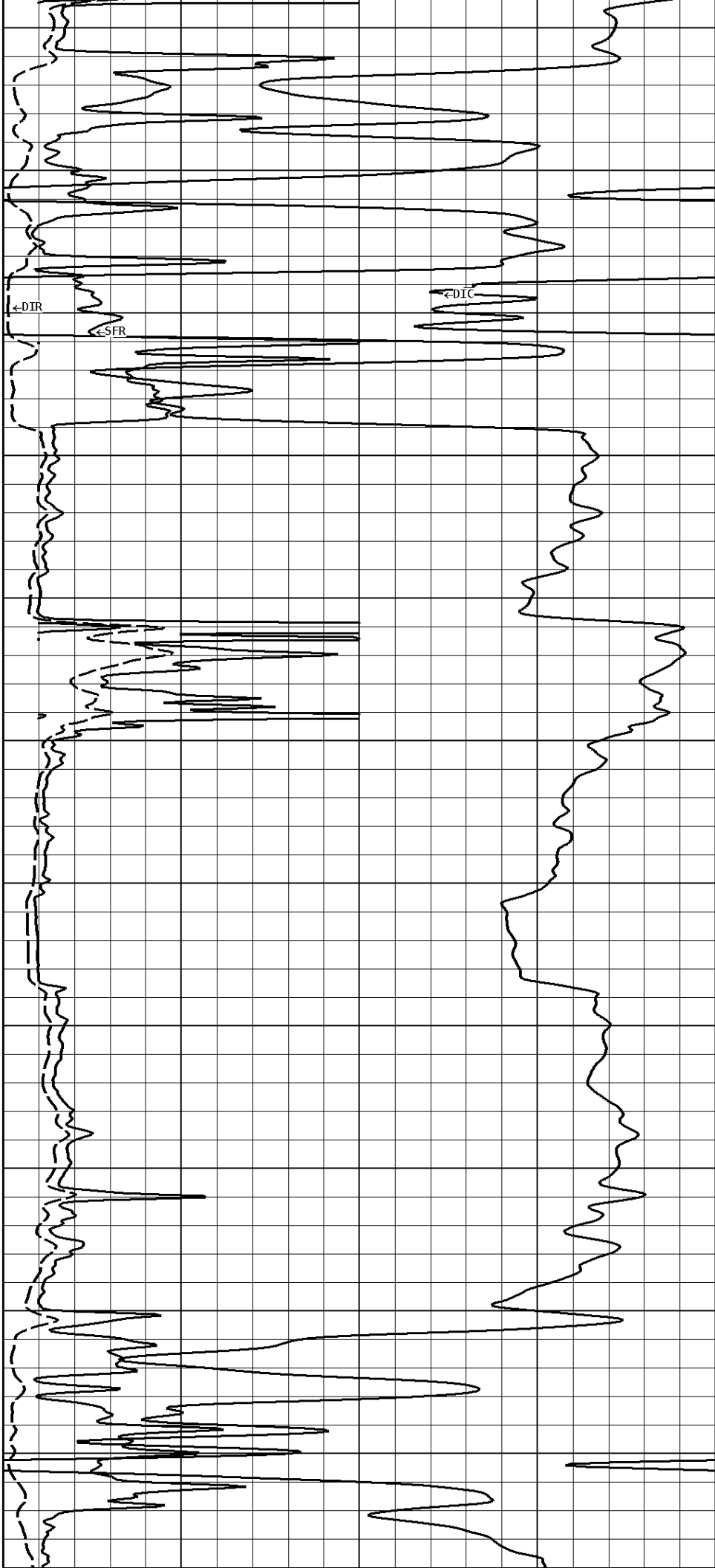
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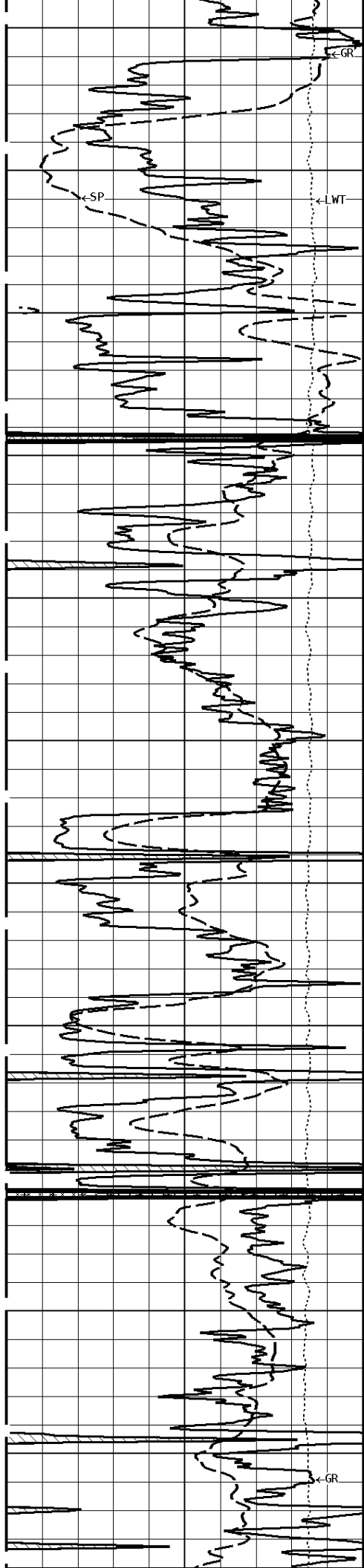
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2100

2200

2300





2400

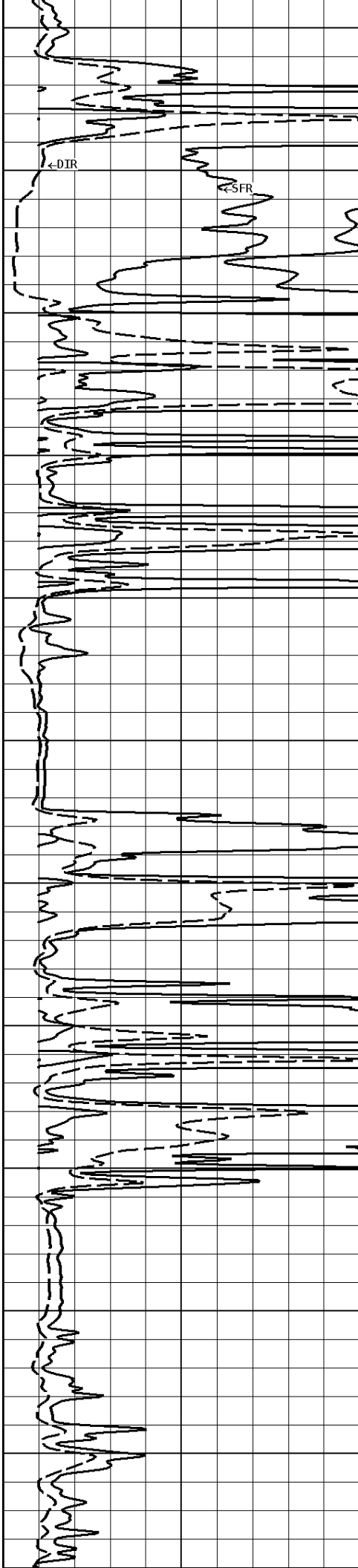
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2600

2700

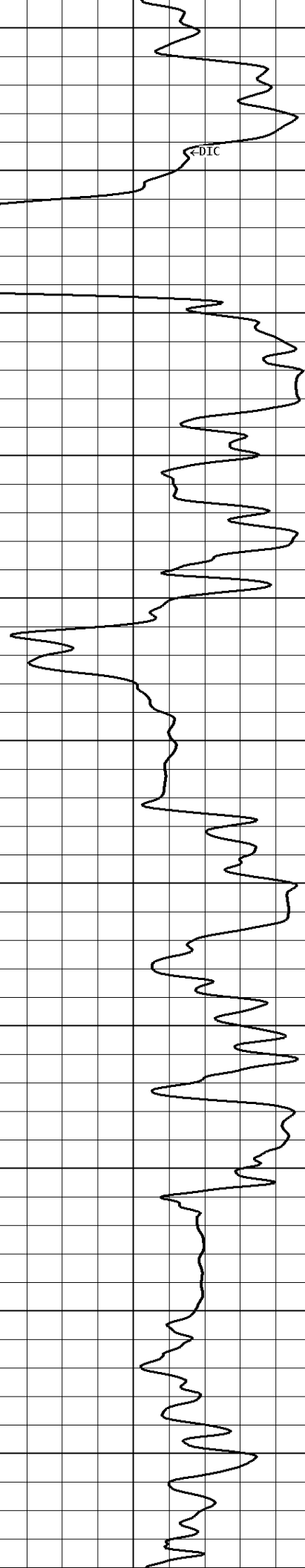
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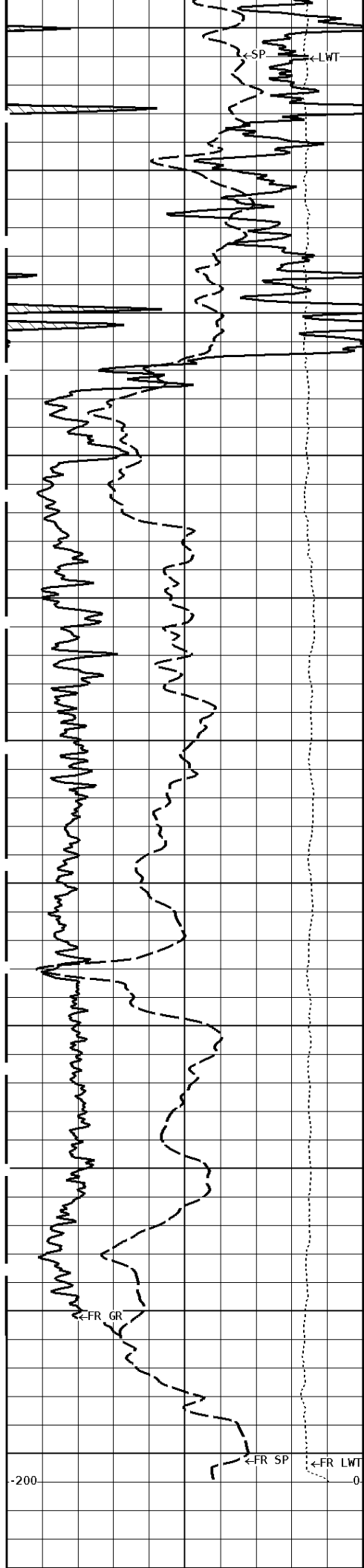


←DIR

←SFR



←DIC



3000

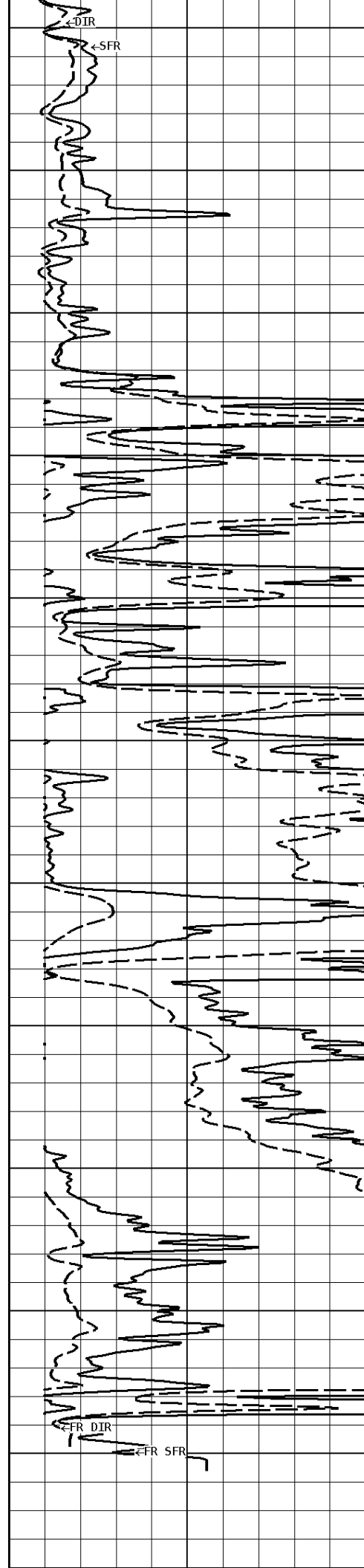
3100

3200

3300

3400

3455

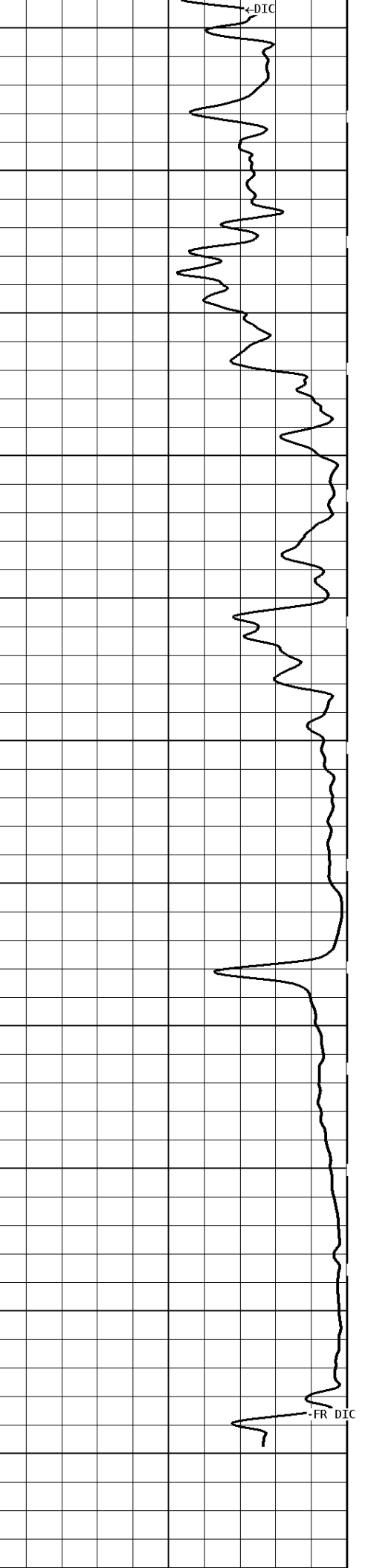


←DIR

←SFR

←FR DIR

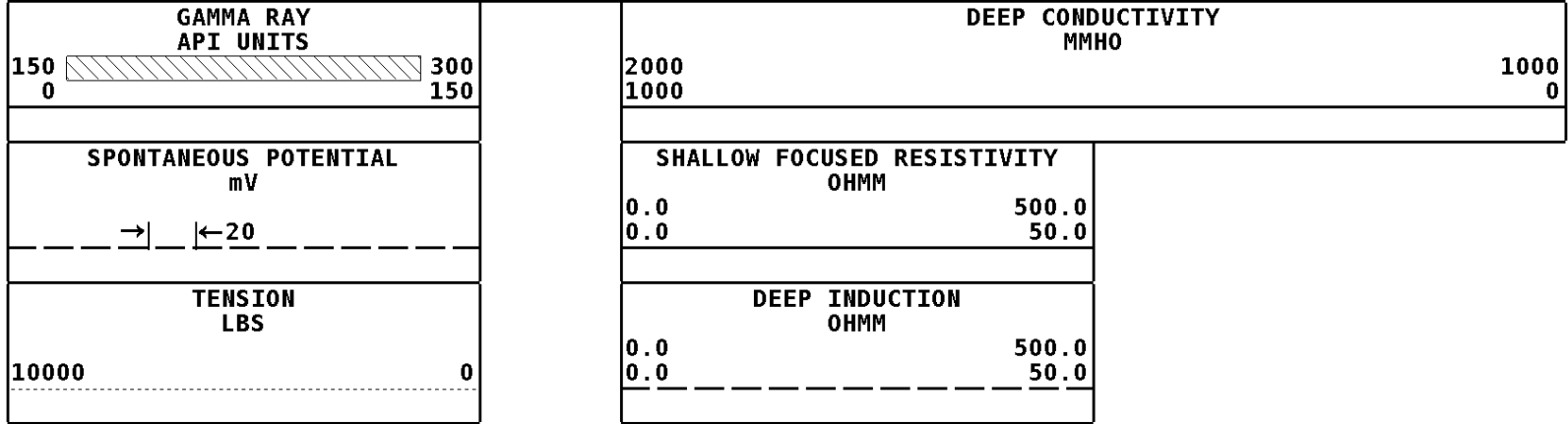
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←DIC

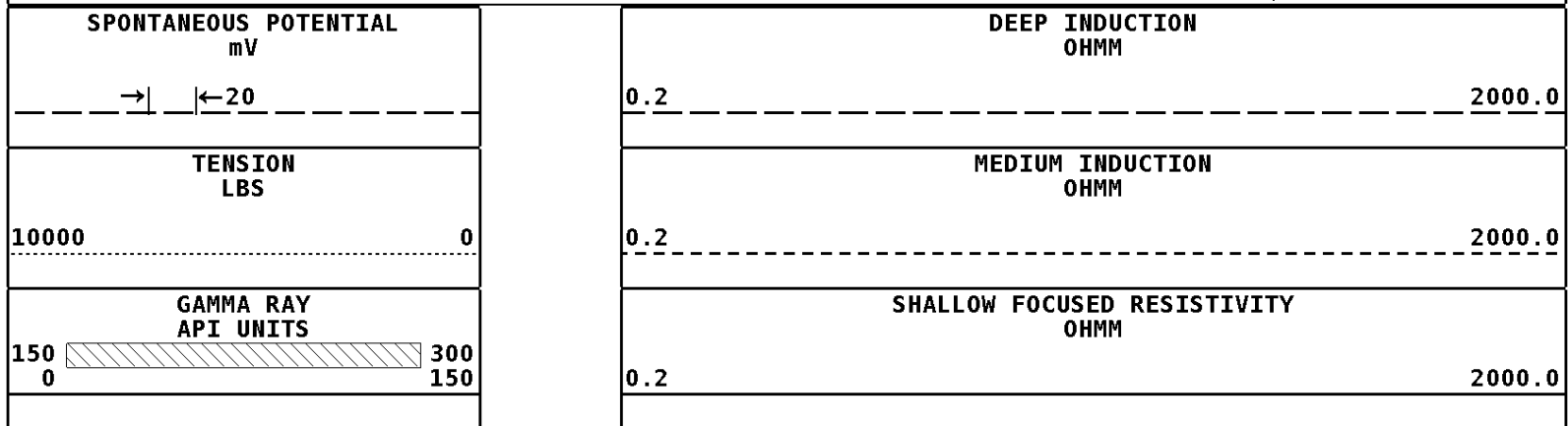
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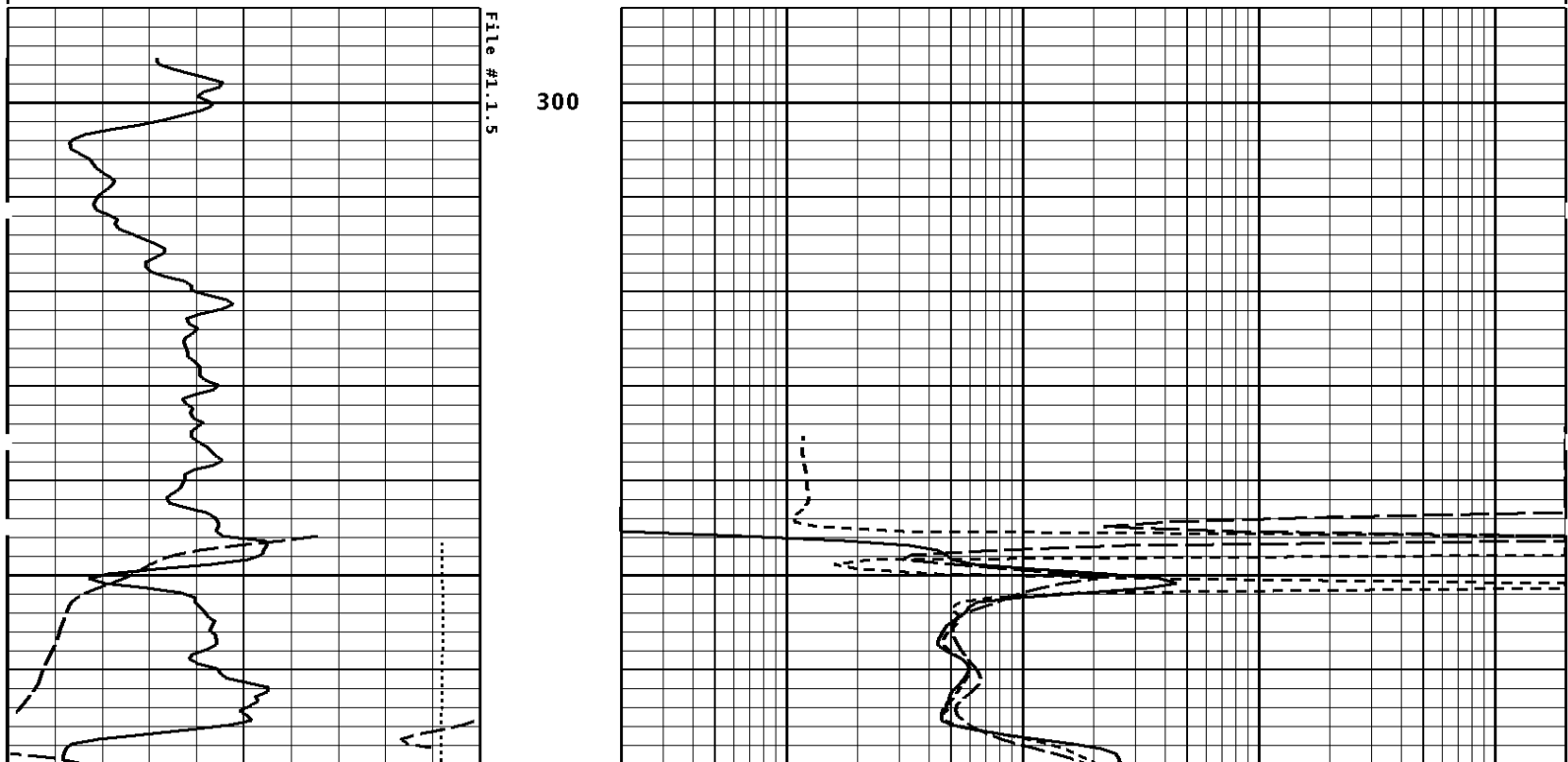


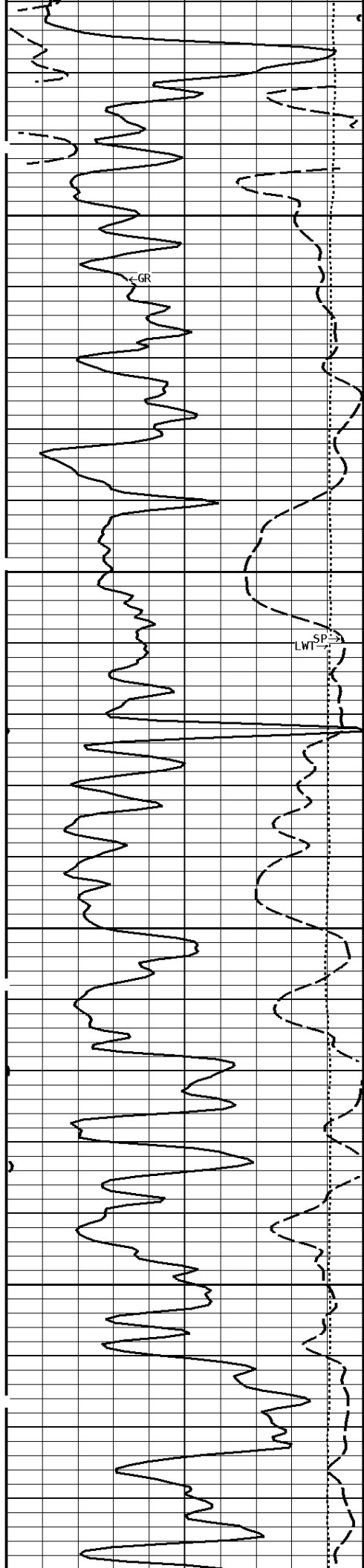
Well File: val-wer-3-31-mstk-dec-5
 Segment: V1.D1.S5 MN
 Reference: 0

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 Processed: 2015-12/05 14:50 3.4.0-13544



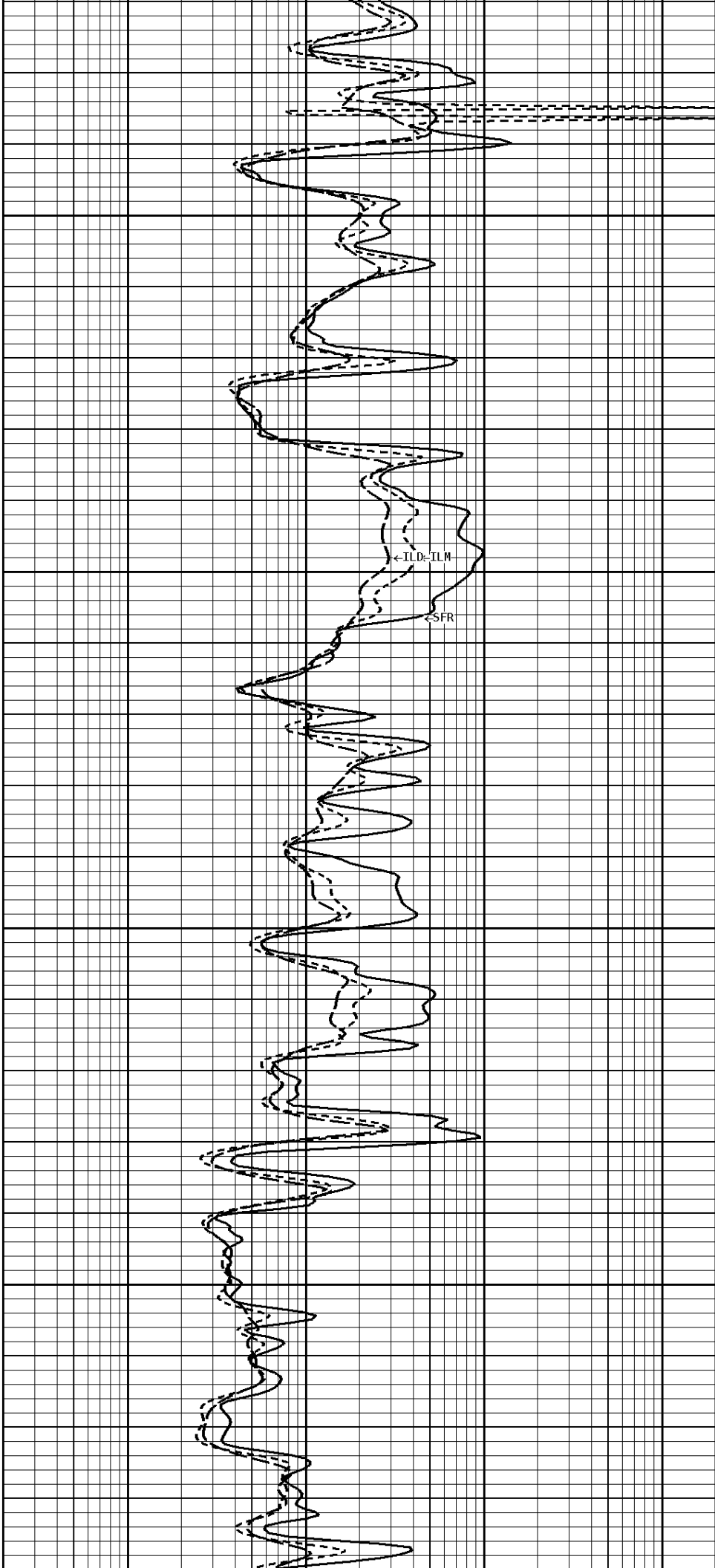
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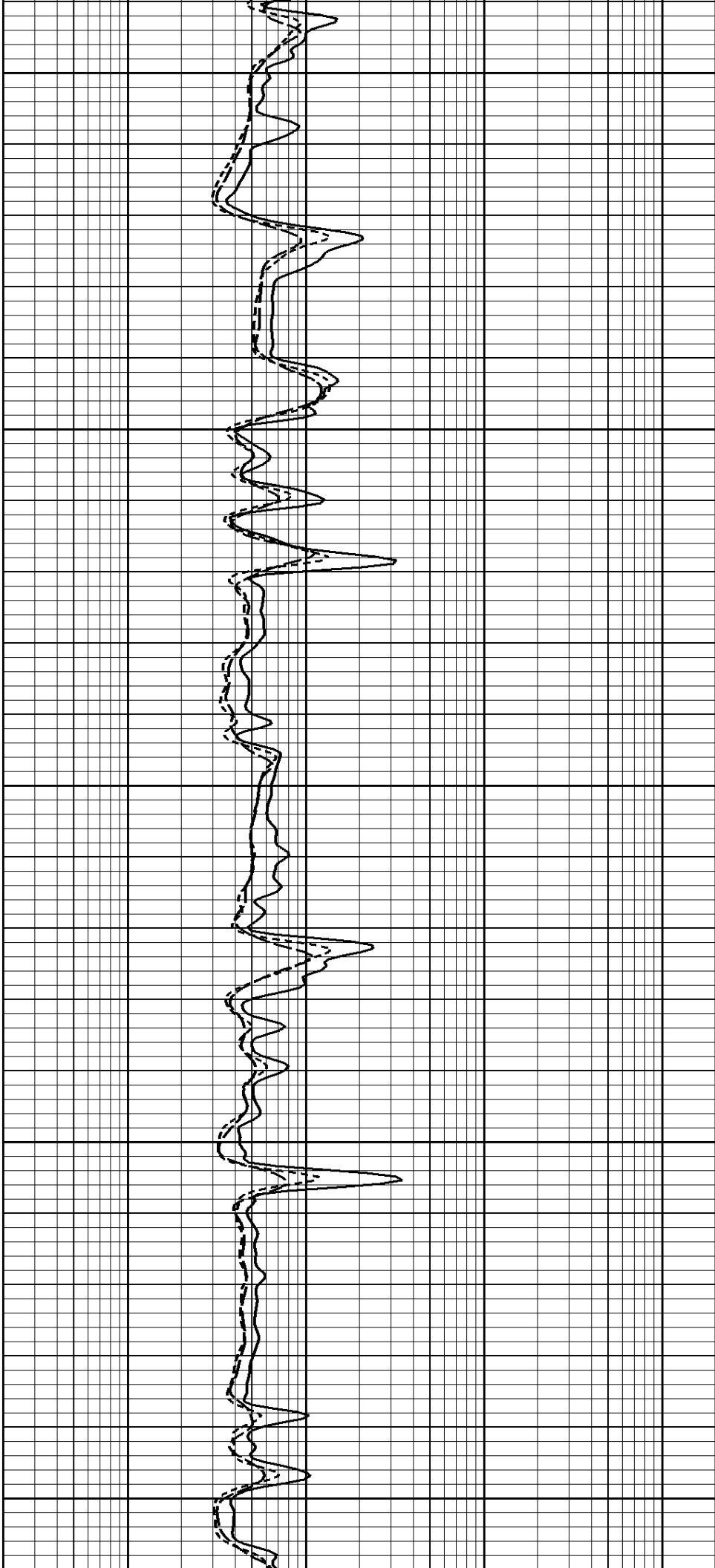
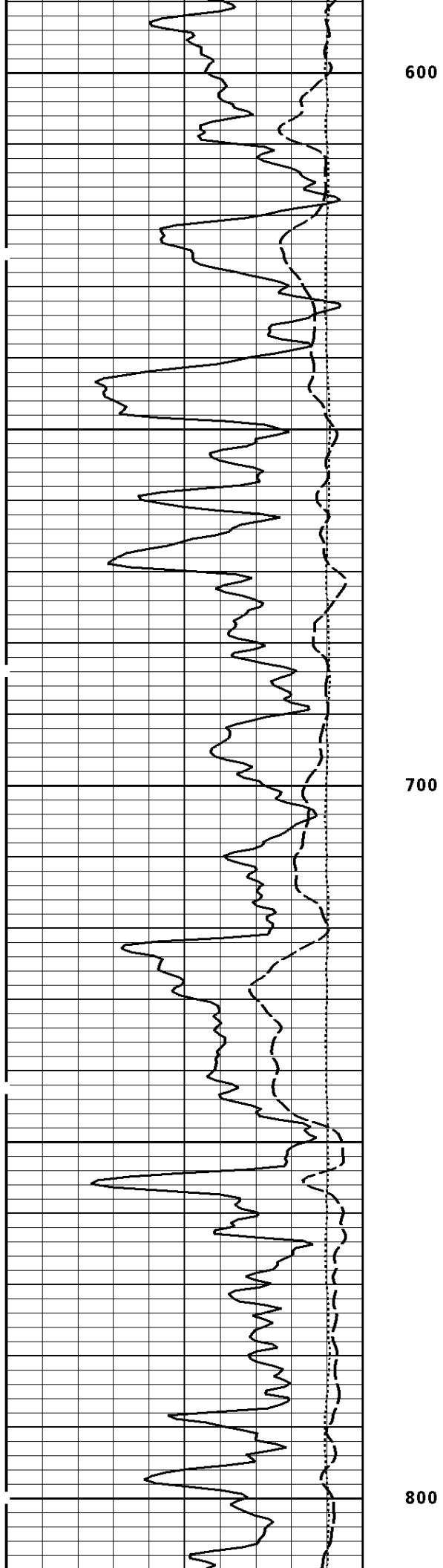


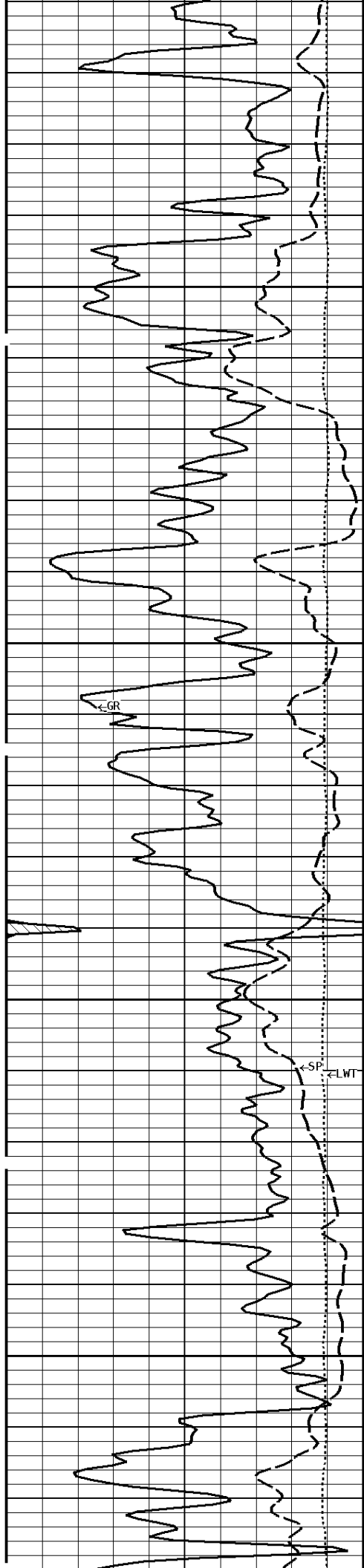


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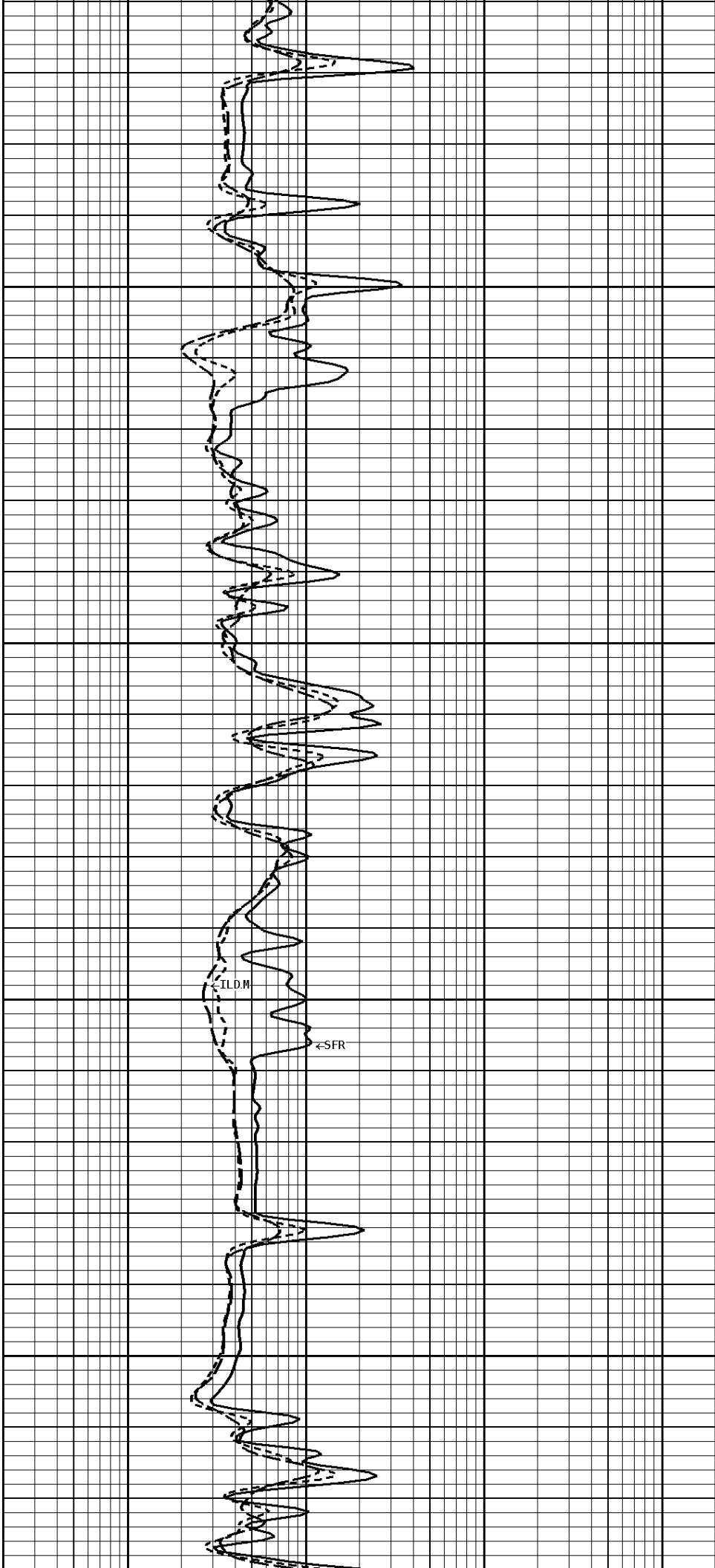


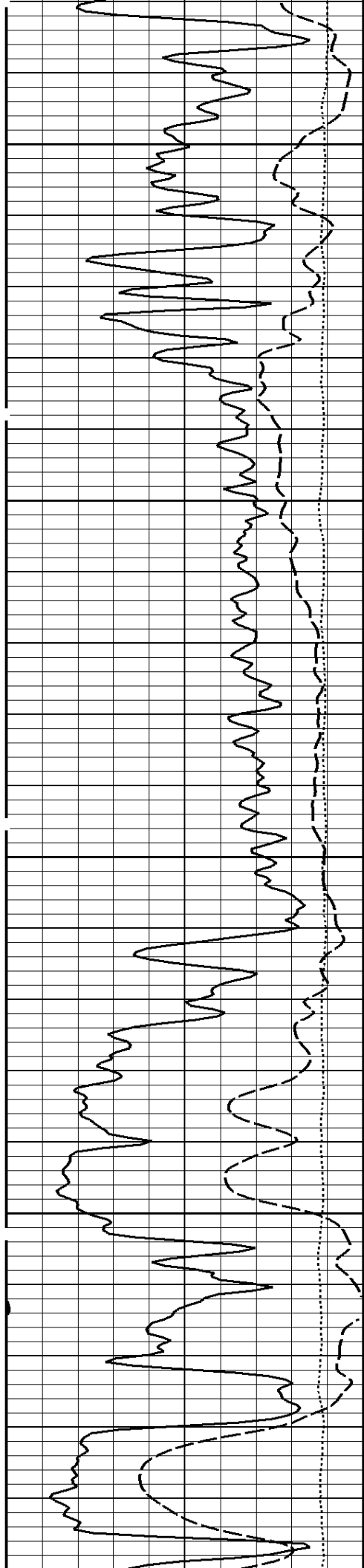




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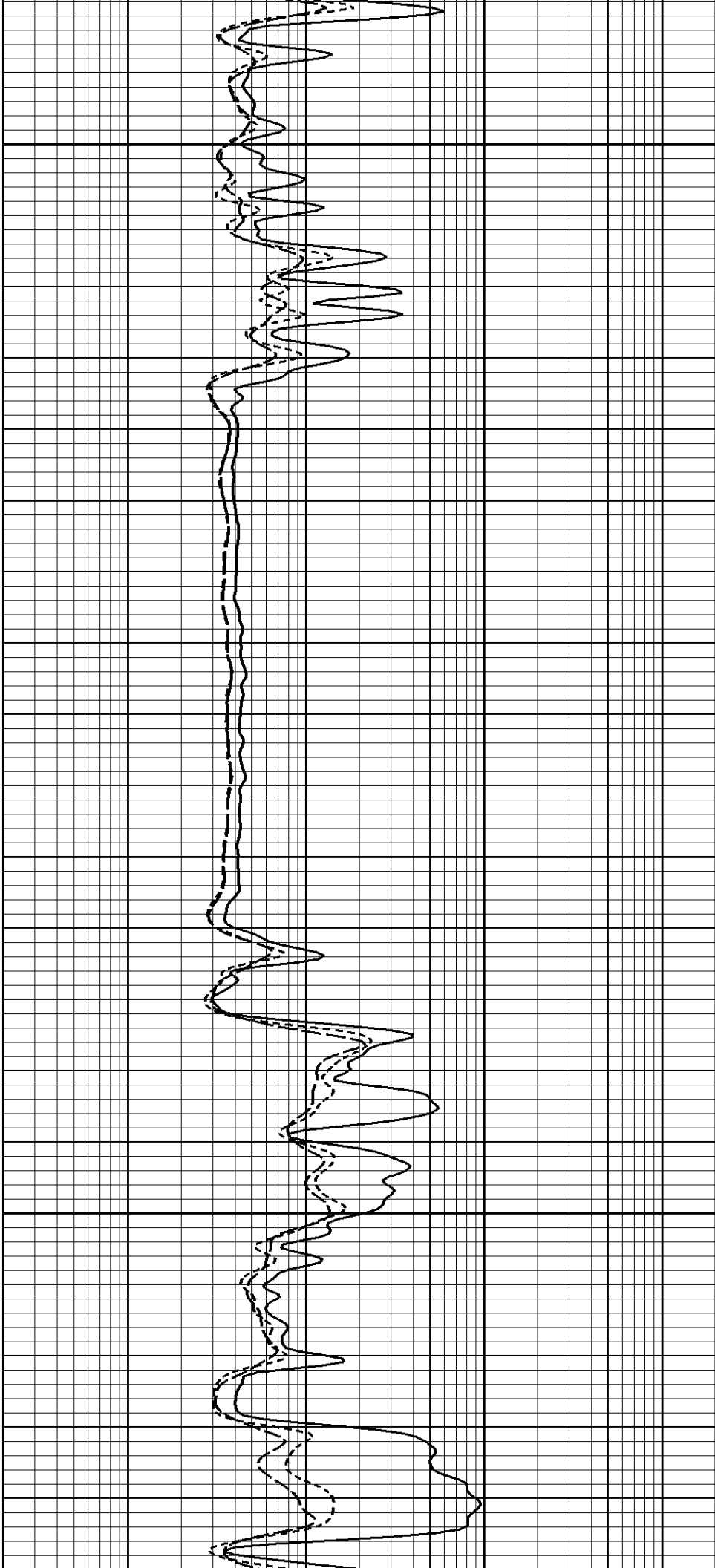
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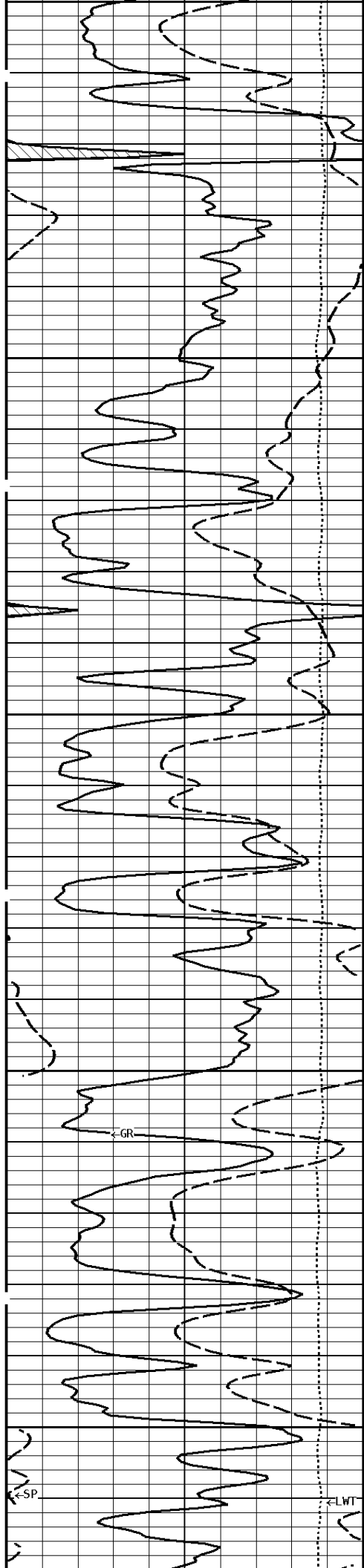




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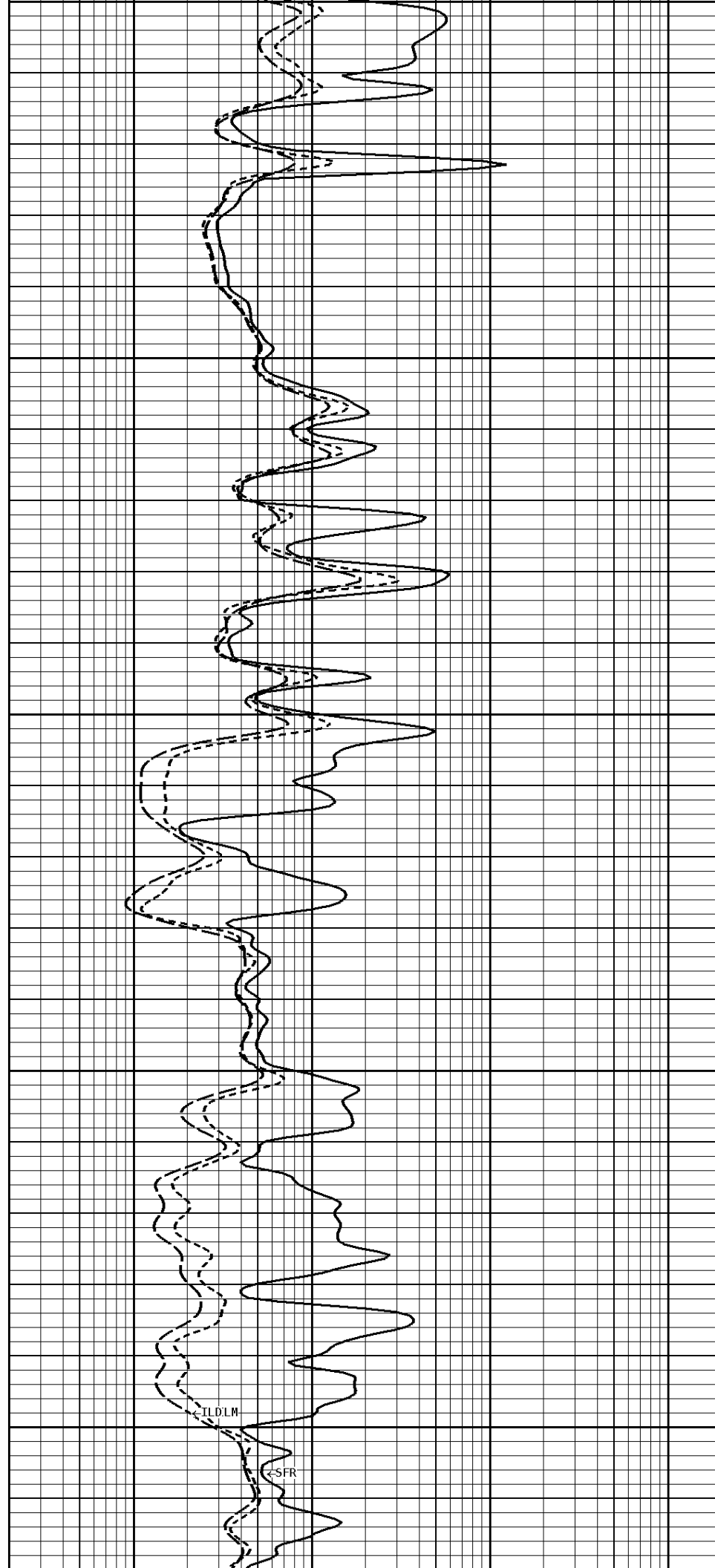
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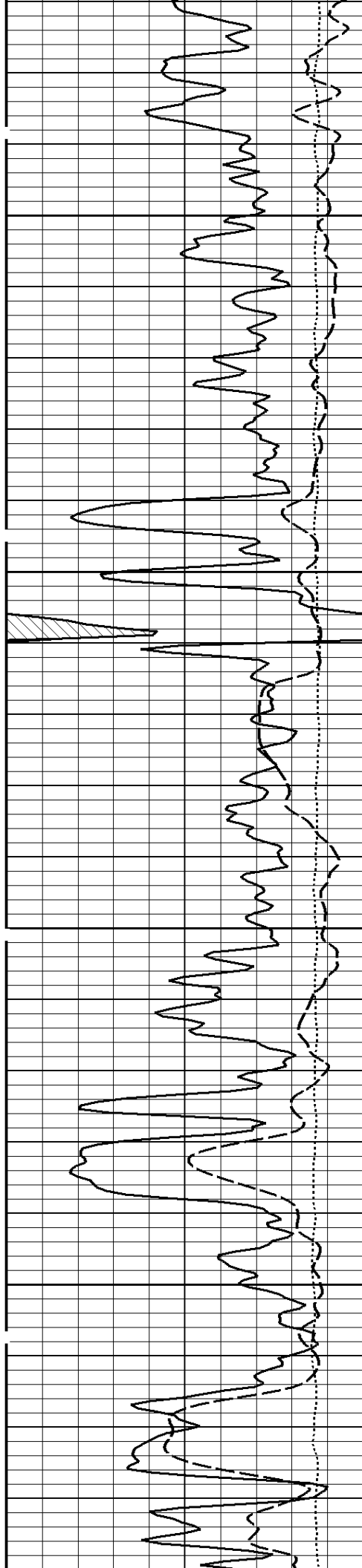




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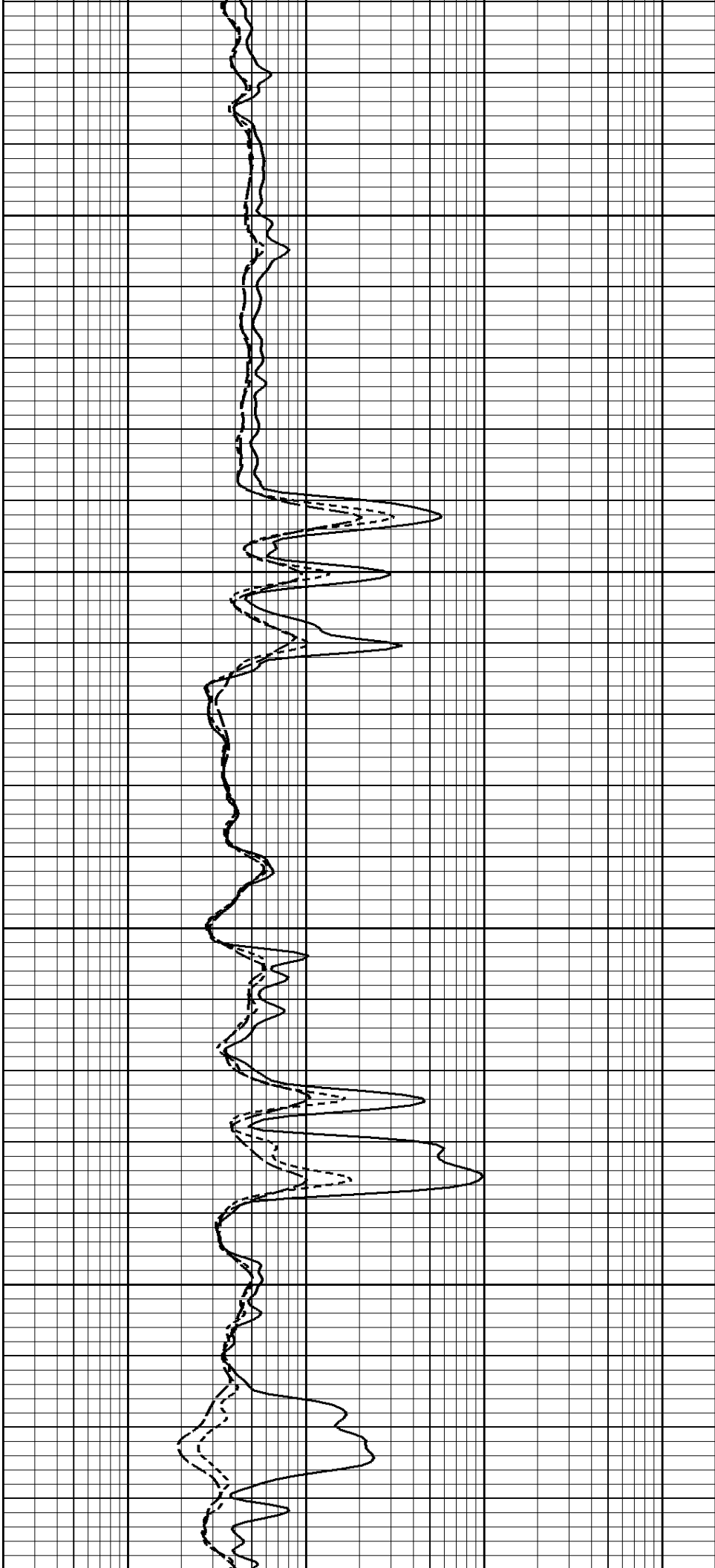
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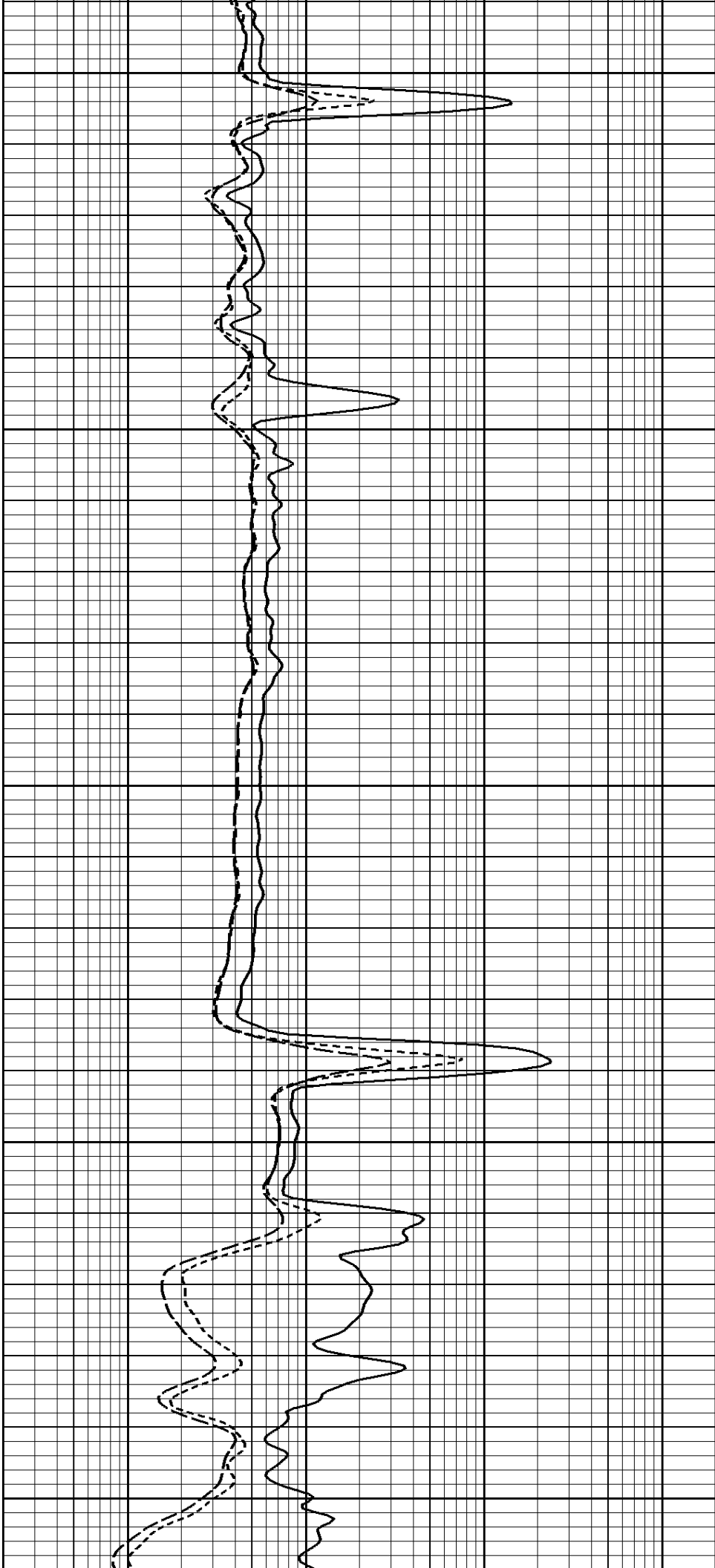
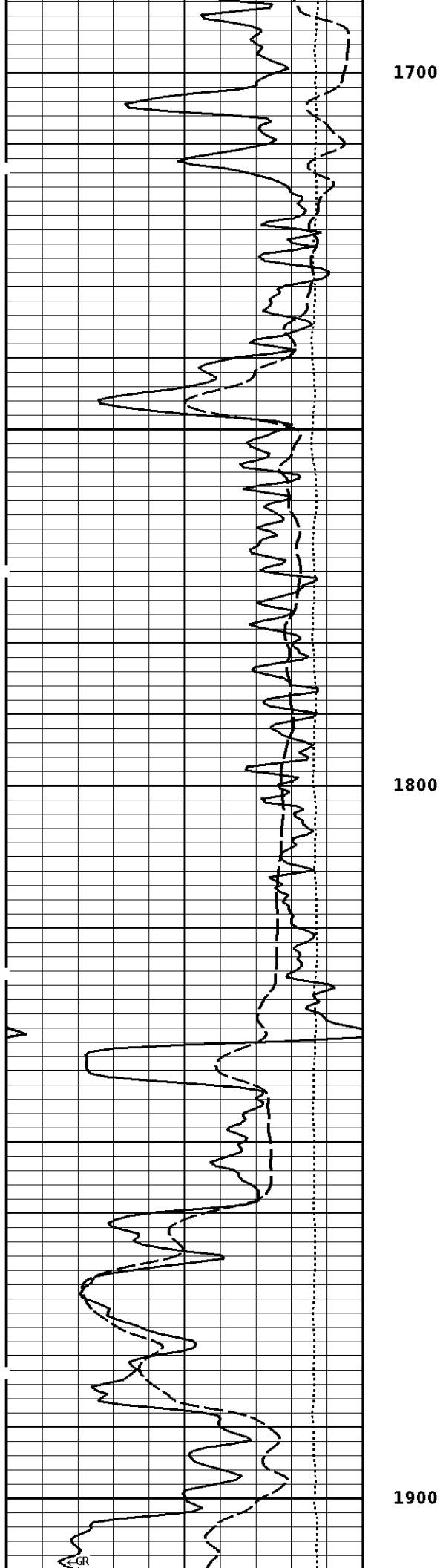


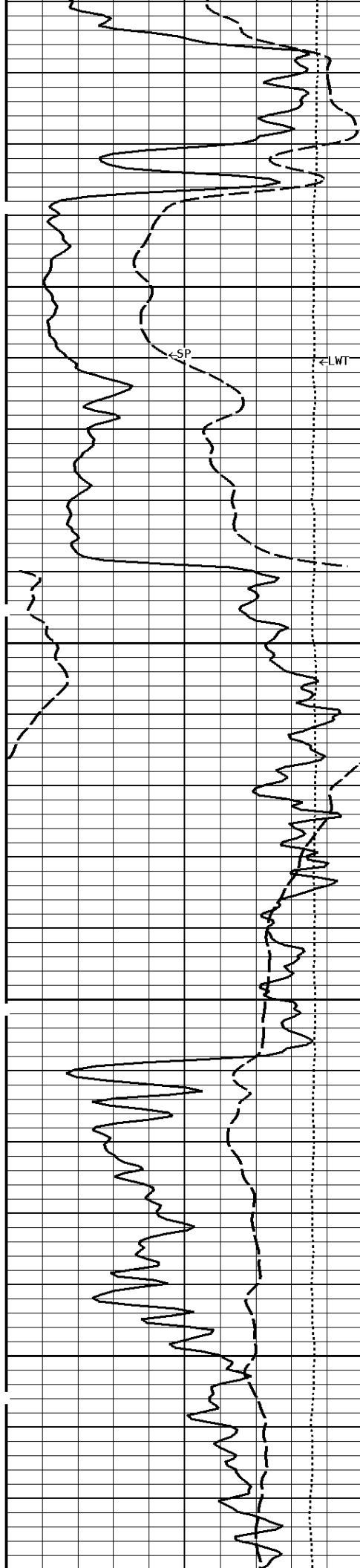


1500

1600

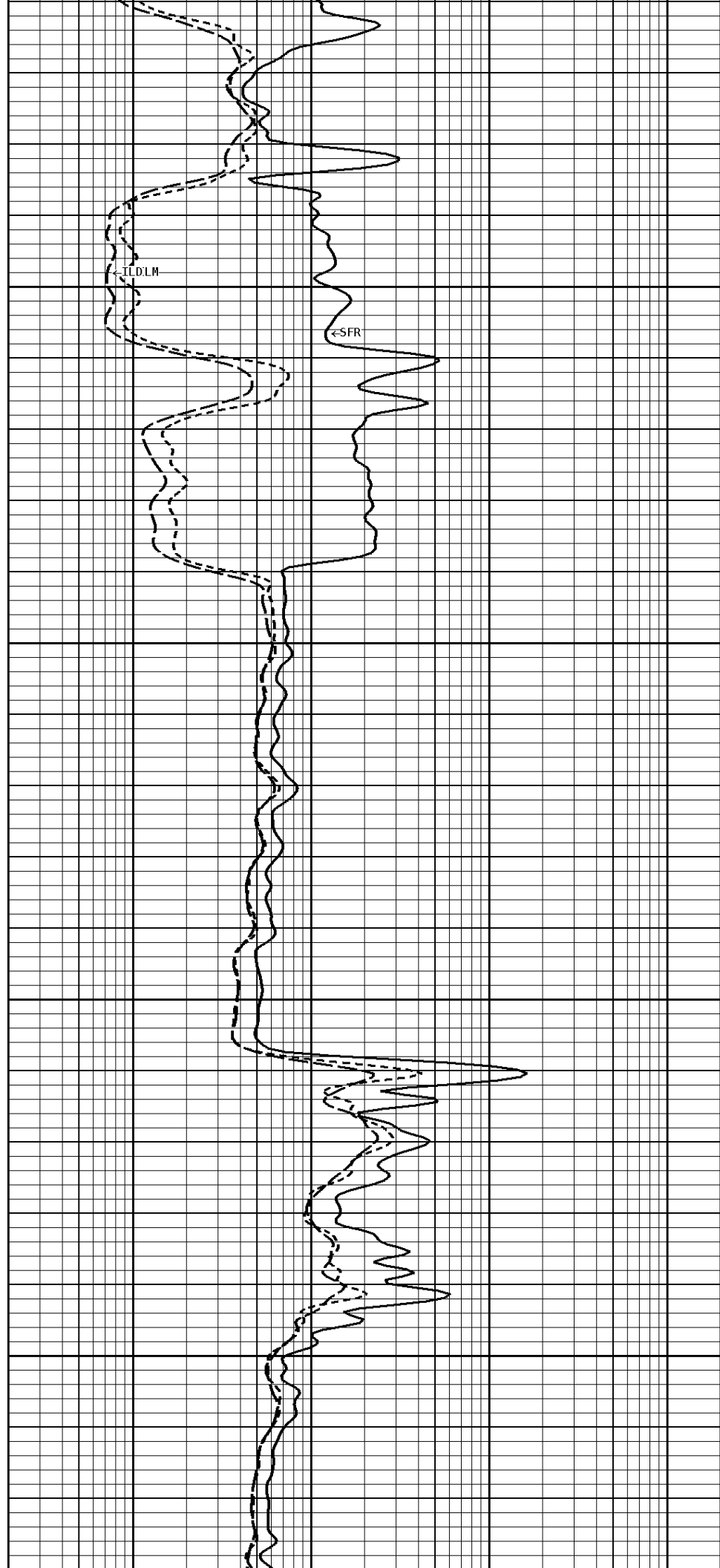


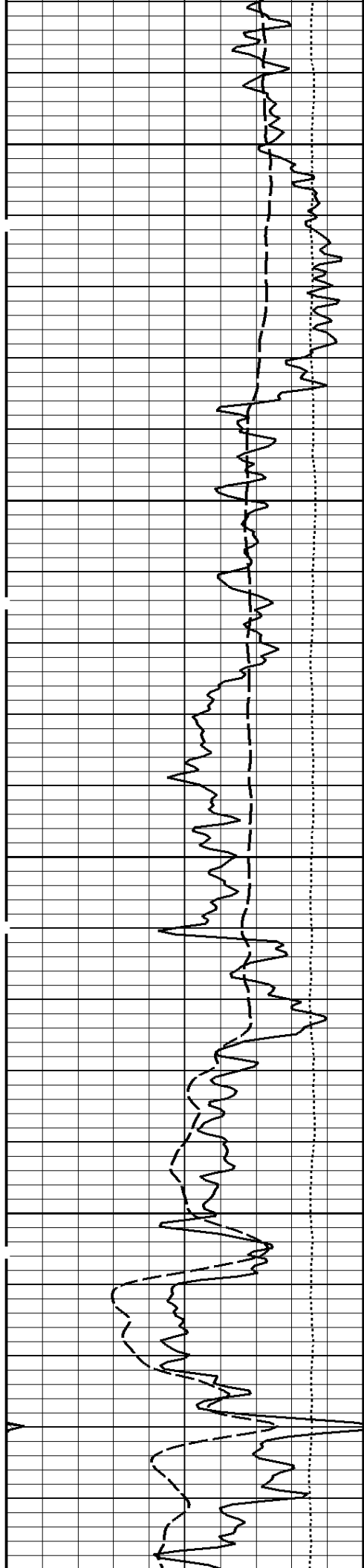




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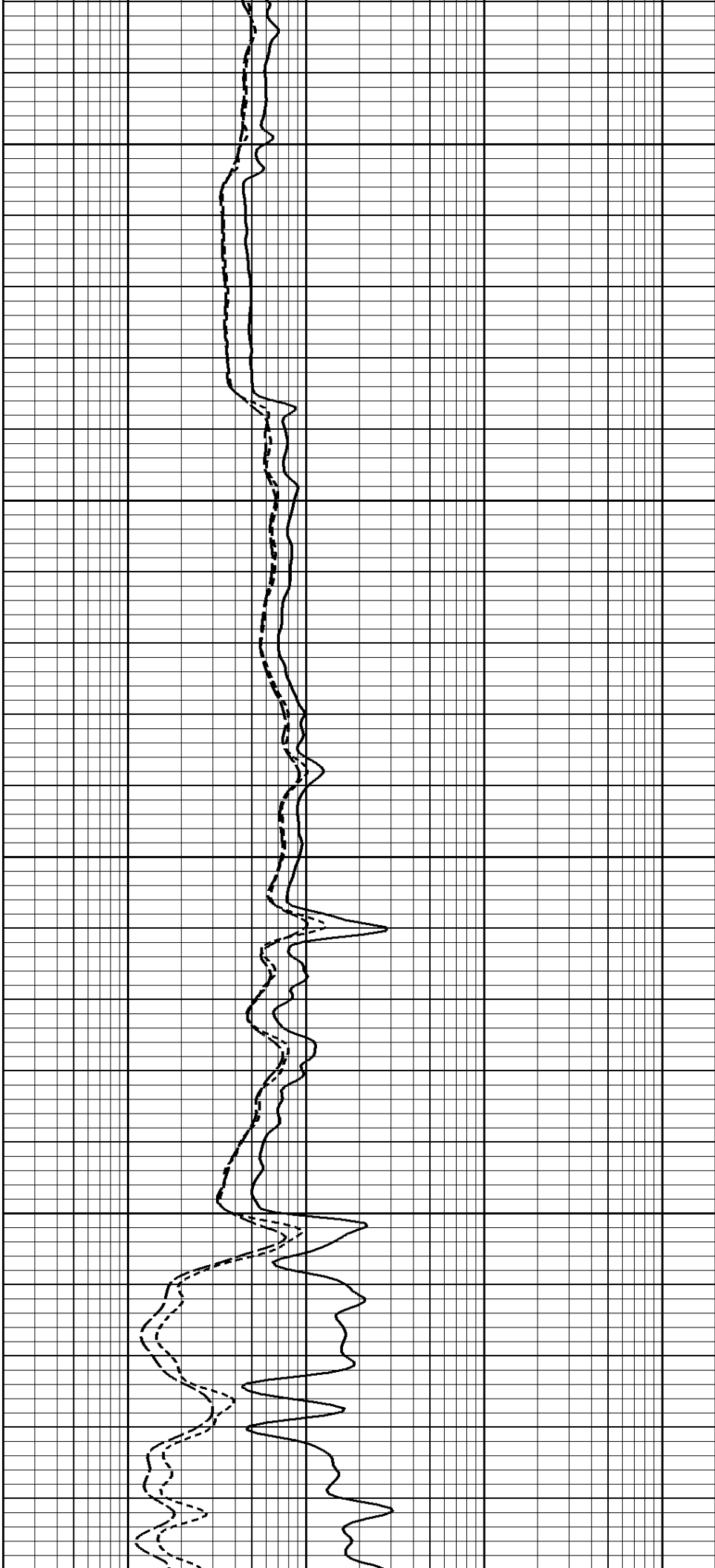
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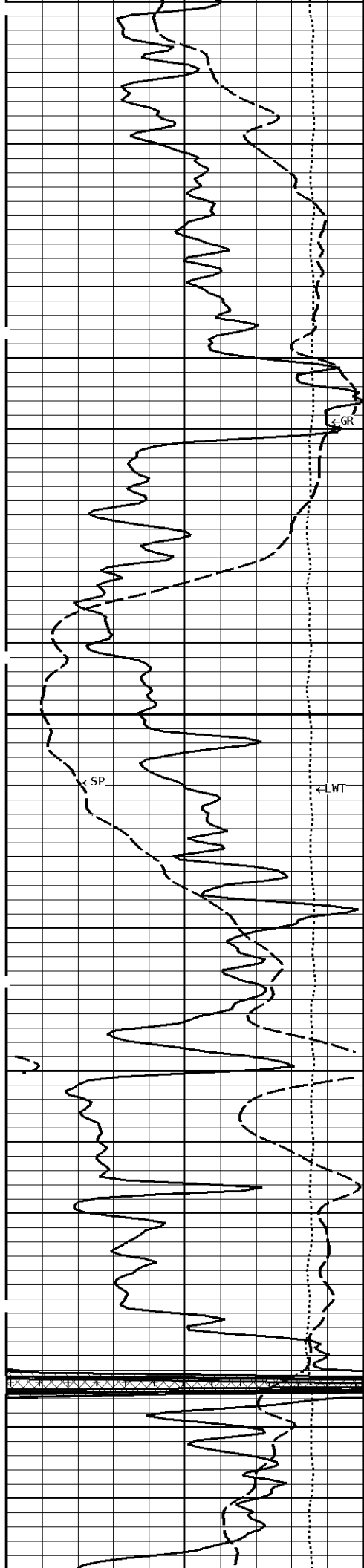




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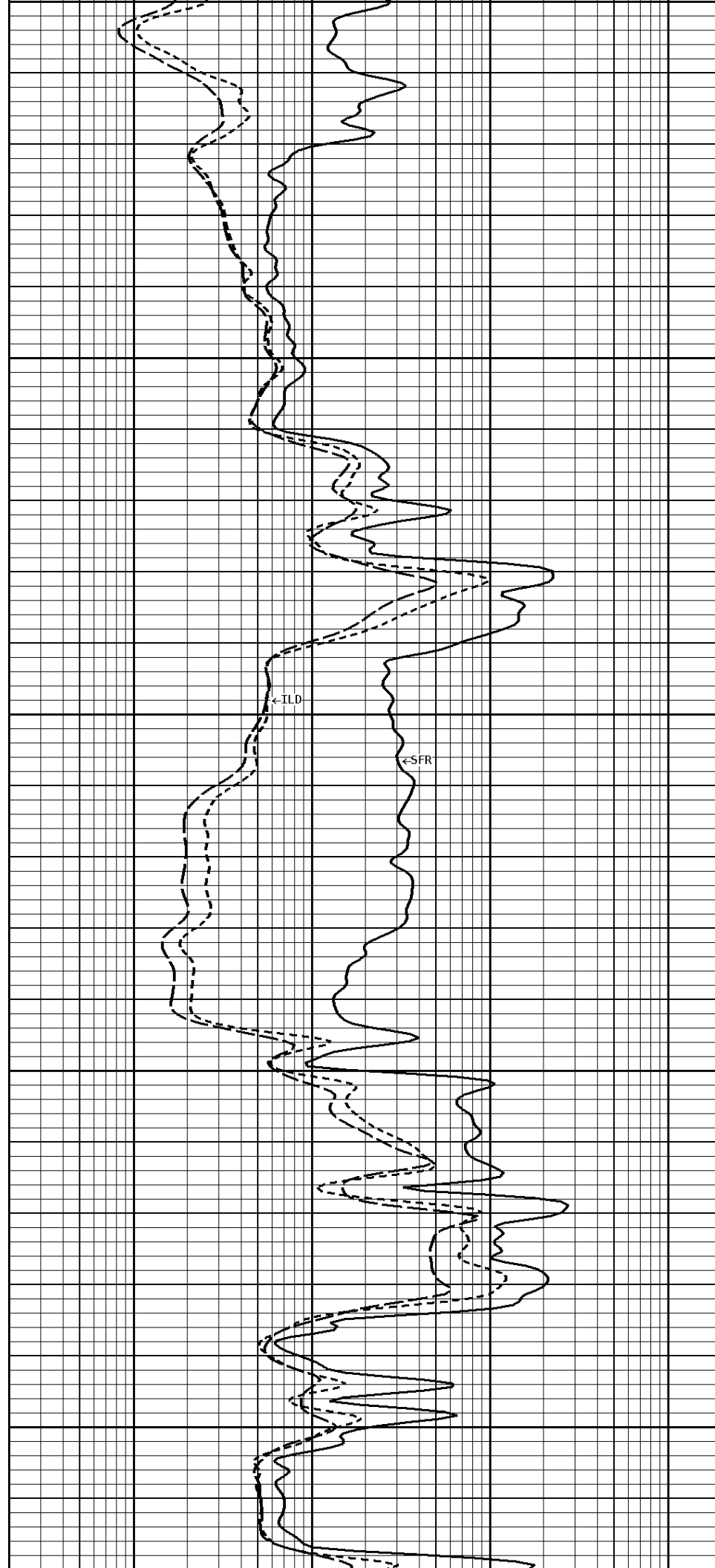
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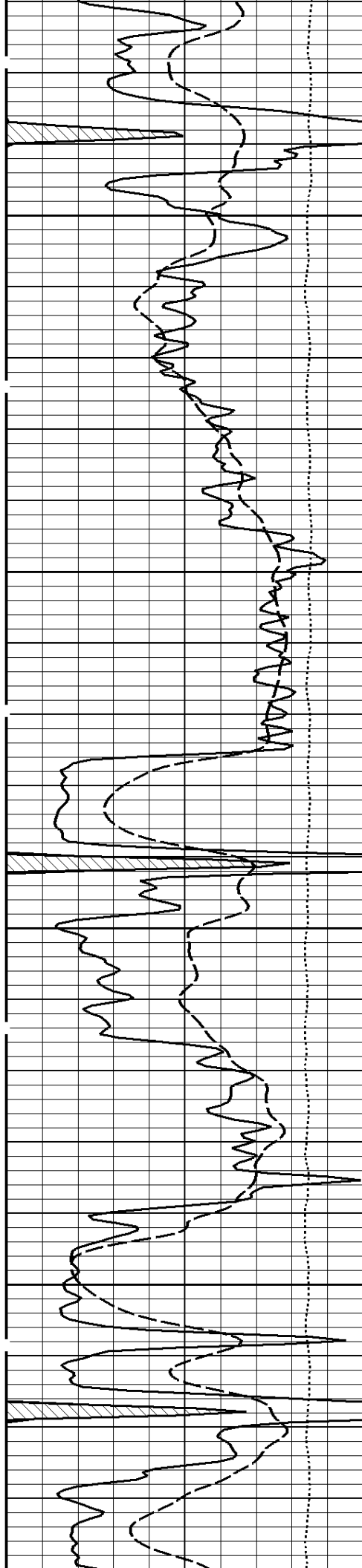
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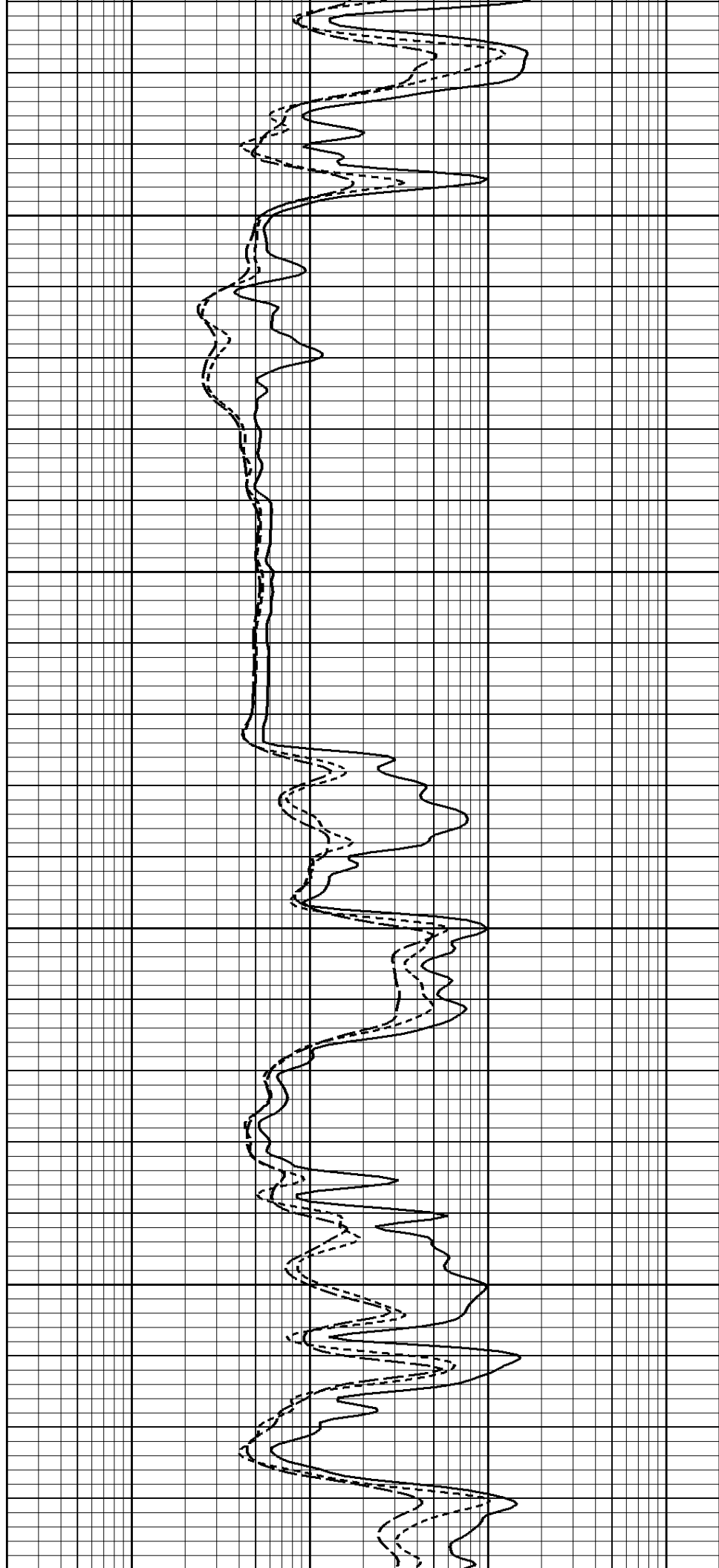
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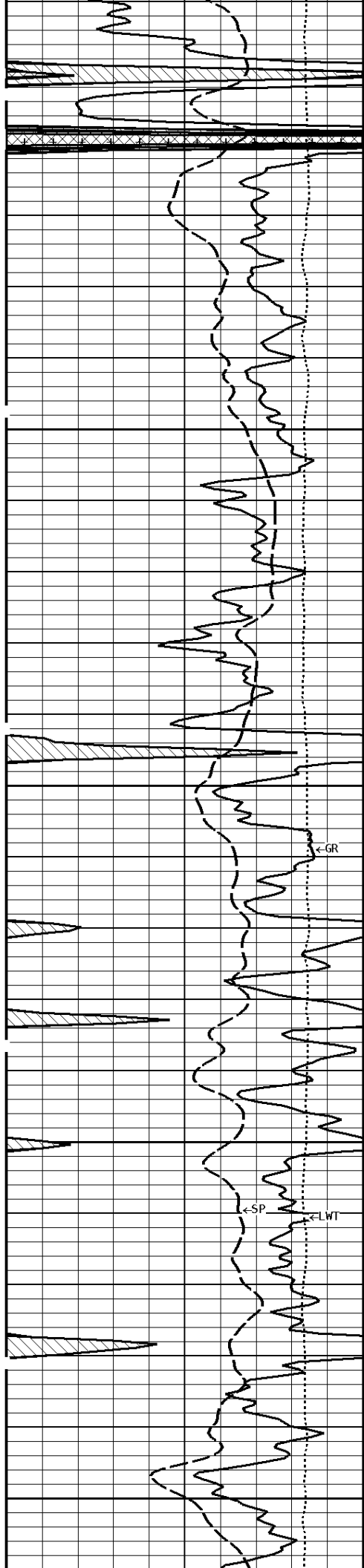
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2600

2700





2800

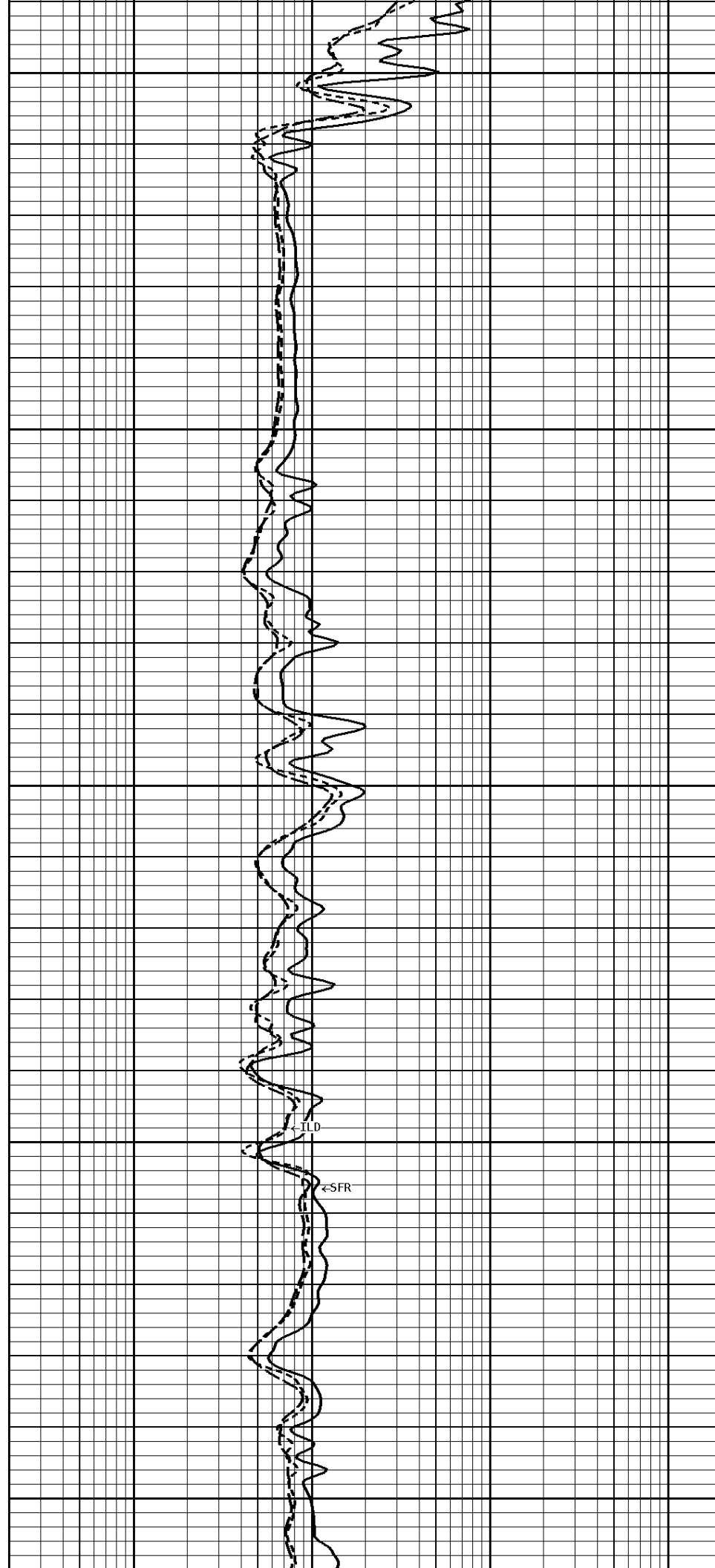
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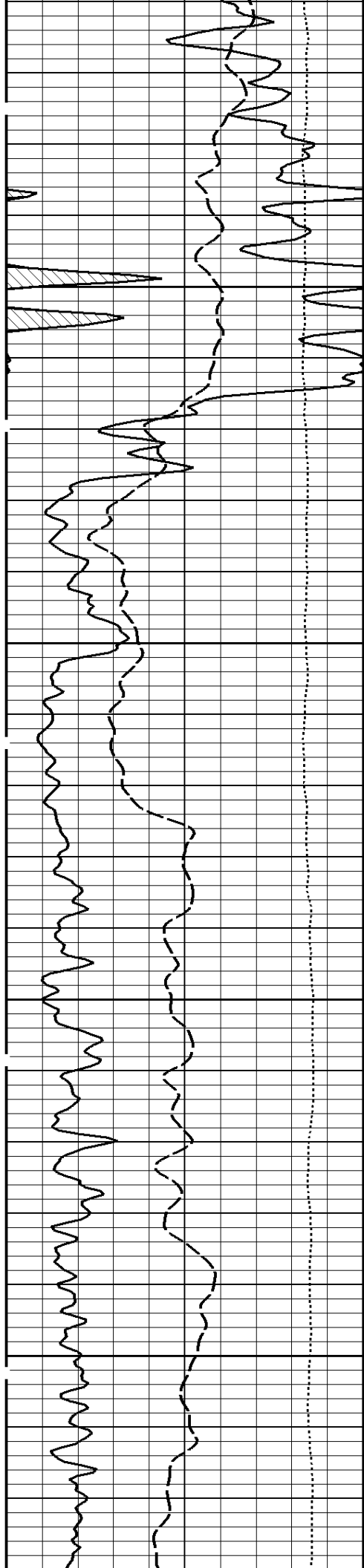
←LWT

←GR



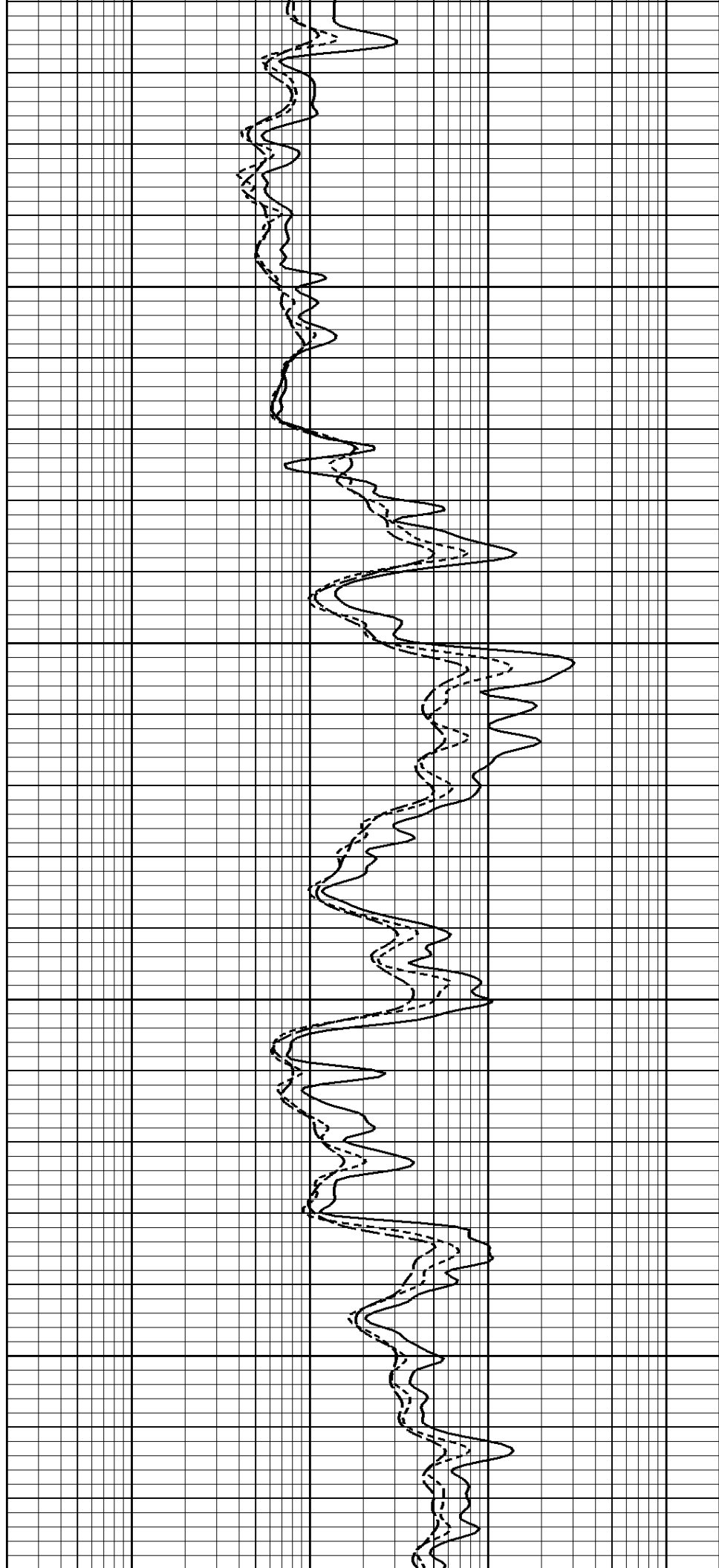
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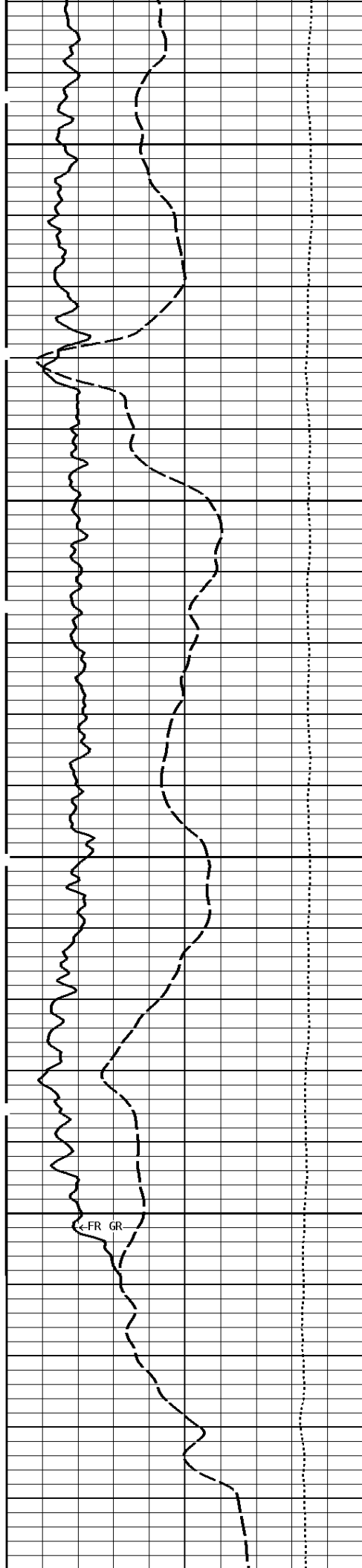
←SFR



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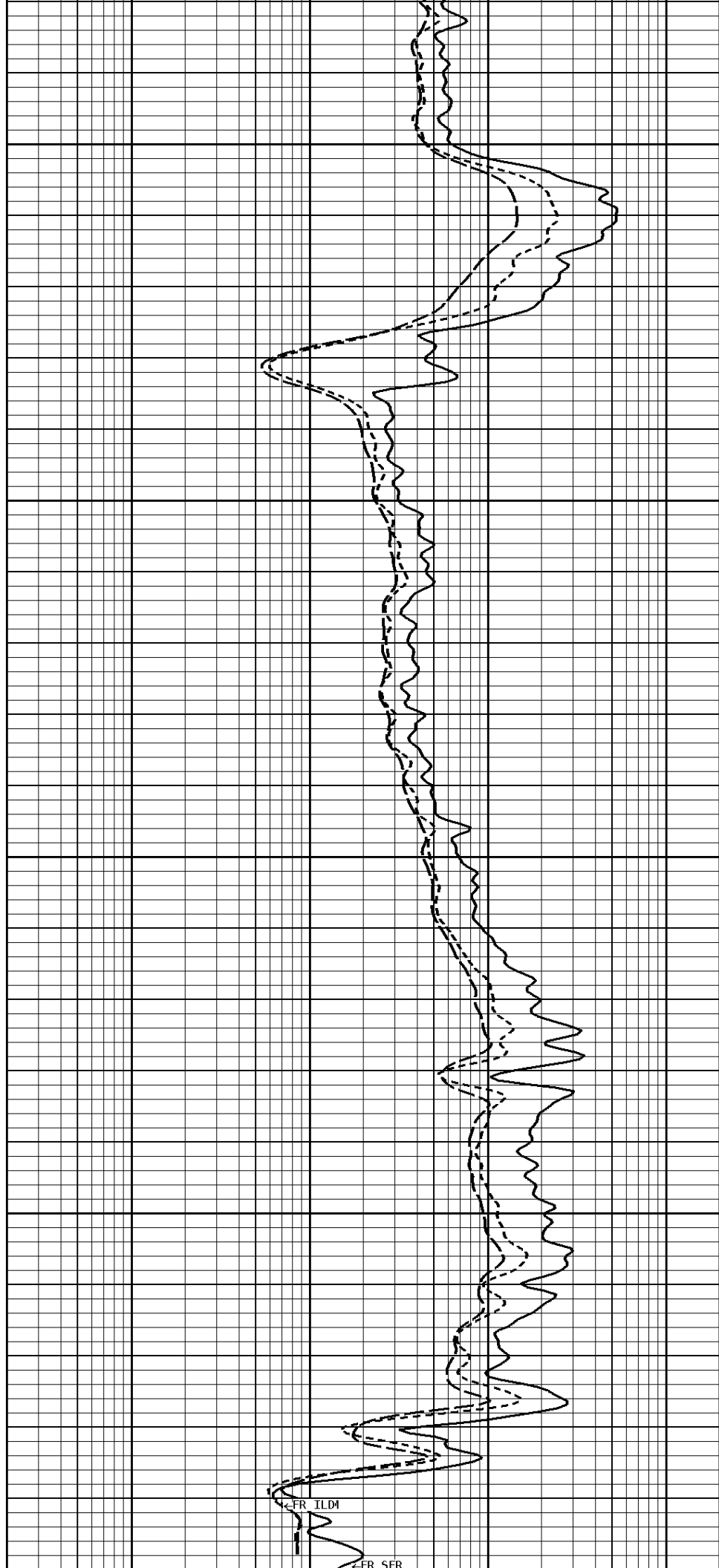
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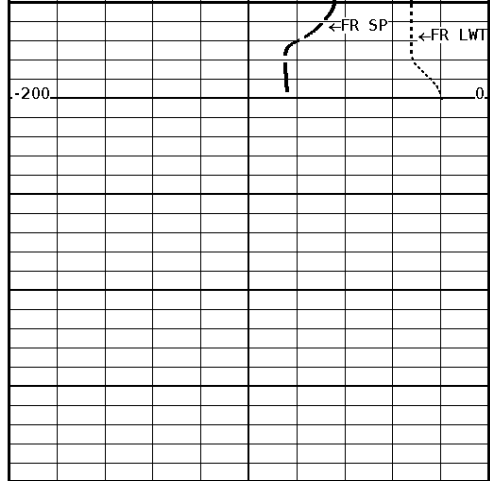




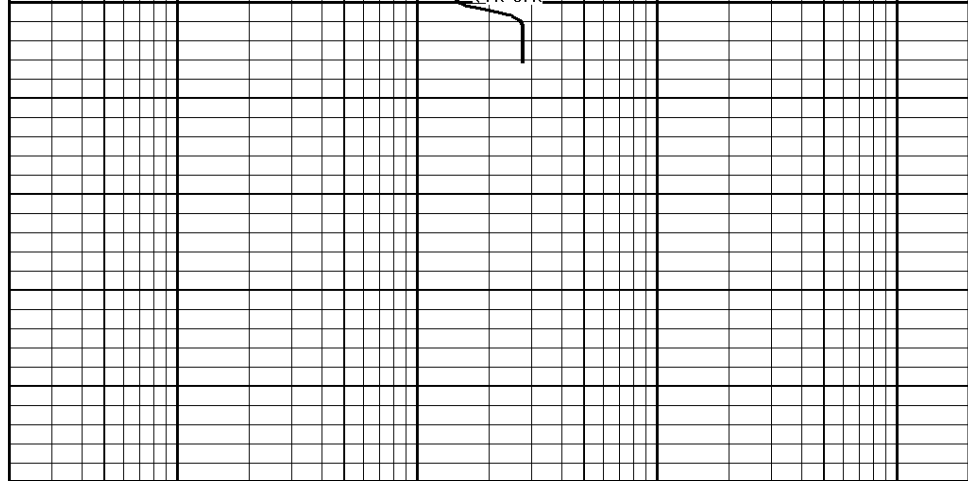
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3400

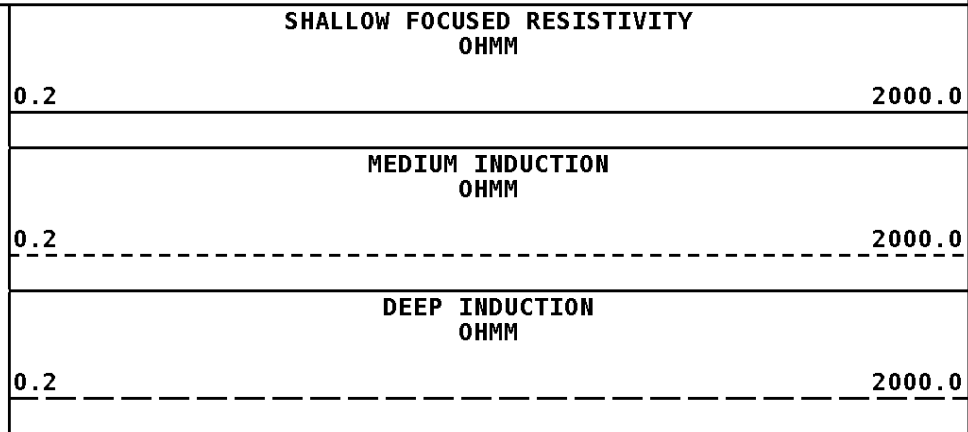
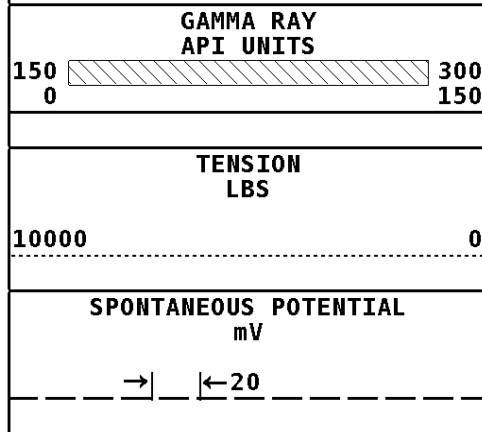




3455



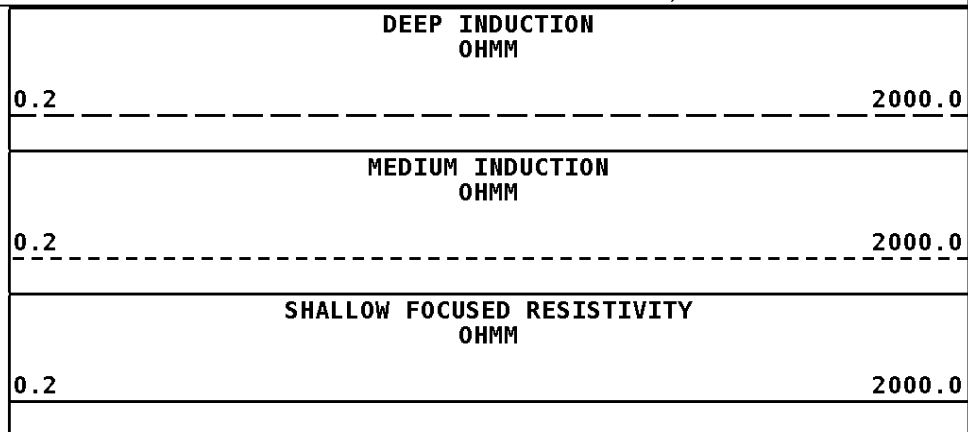
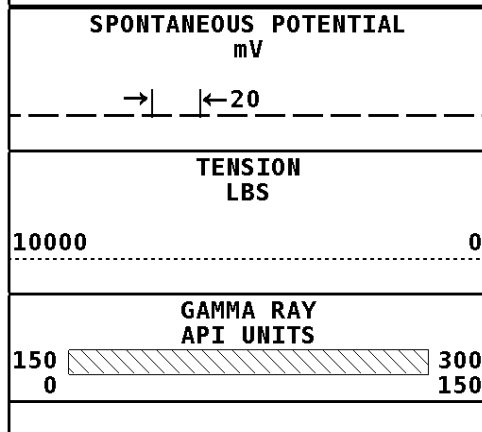
1:240 MAIN SECTION



* Borehole Zone Factors *

Zone 1 99999.0 to 0.0 Feet		
Drill Bit Size	7.875	in
Casing Diameter	5.500	in
BHT Depth	3455.000	ft
Borehole Temperature	113.0	degF
Temperature Gradient	1.00	DFHF
Resistivity Of Mud	2.000	ohmm
Standoff	1.5	
Resistivity Of Mud Temperature	50.00	degF

Well File: val-wer-3-31-mstk-dec-5	Scale: 1:240	Format: DIL-240
Segment: V1.D1.S4 RP	Acquired: 2015-12/05 13:29 3.4.0-13544	
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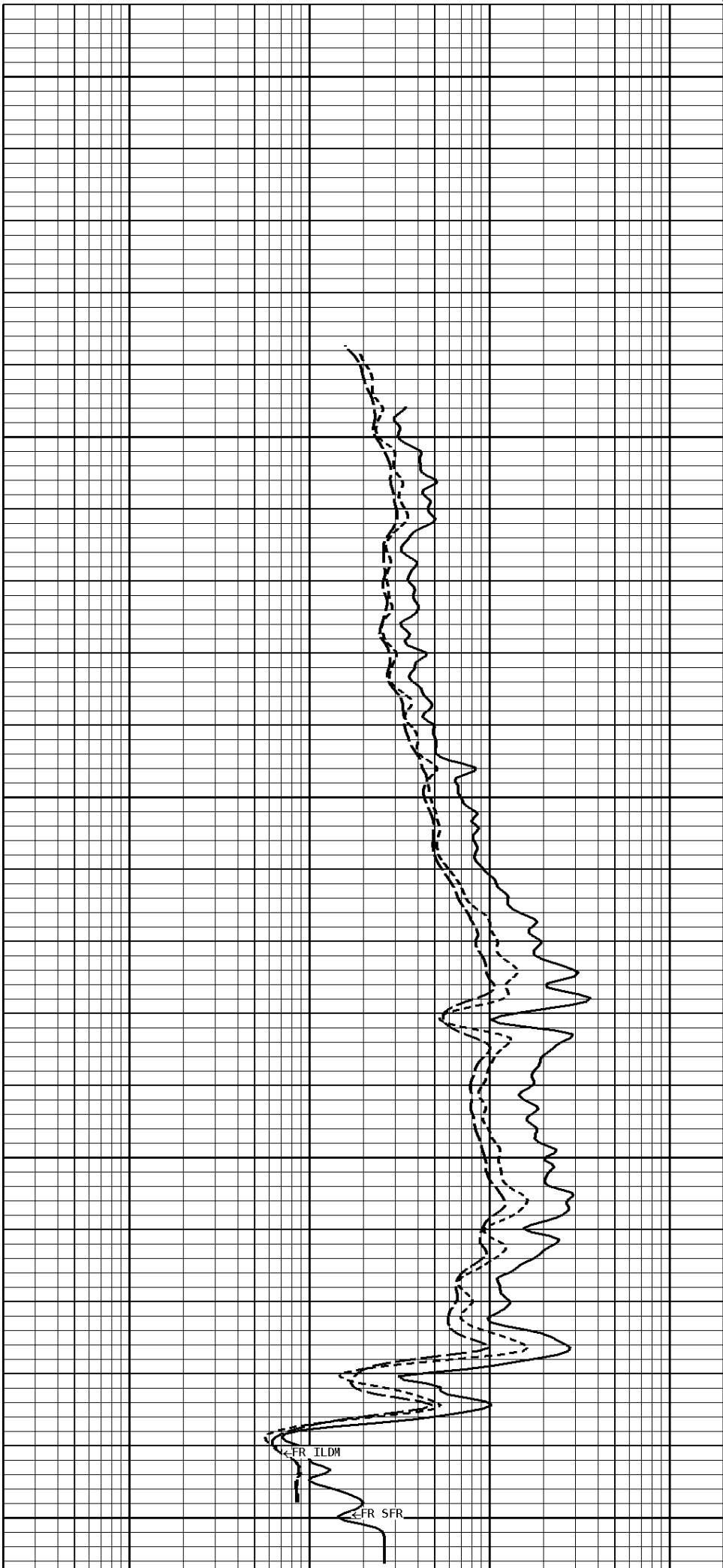
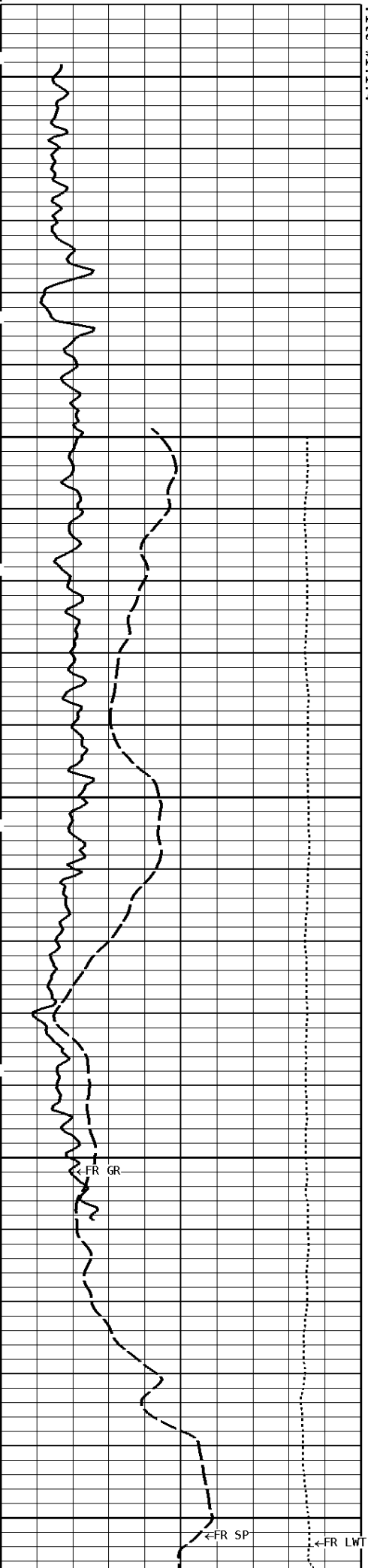


1:240 REPEAT SECTION

3300

3400

3455

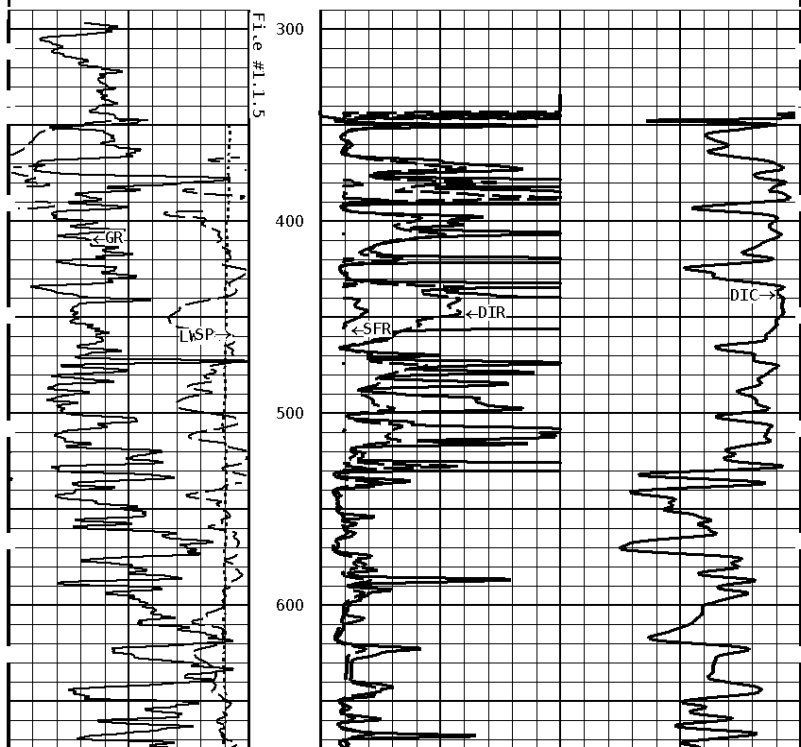


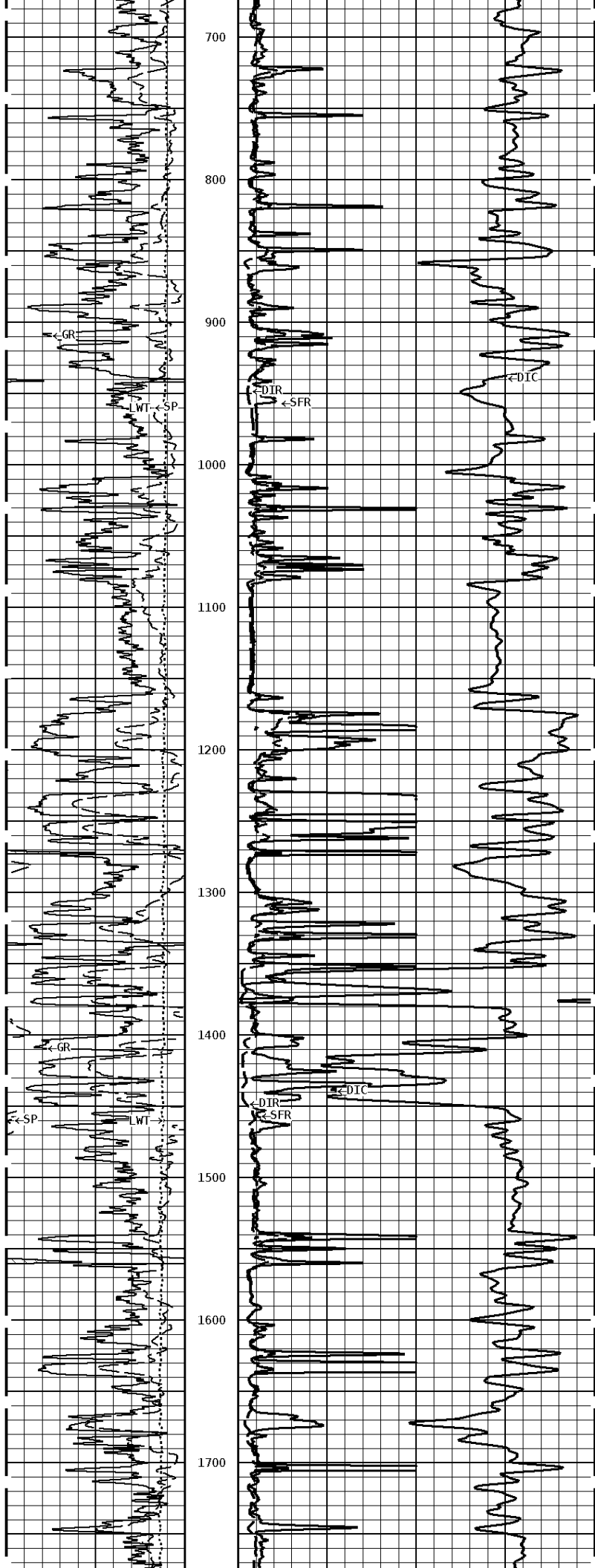
	R	X	R	X	Units
Air	130066	130185	0.2	-0.8	MMHOS
Zero	131063	131079	17.2	9.3	MMHOS
Reference	236755	238868	2017.2	2009.3	MMHOS
Loop	127770	222393	1667.7	1753.5	MMHOS
Sonde Error			-9.2	-4.7	MMHOS
Cond			2017.2	2009.3	MMHOS
Temperature					
	Measured		Calibrated		
	Low	High	Low	High	Units
	16980.0	56920.0	70.0	350.0	DEGF
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
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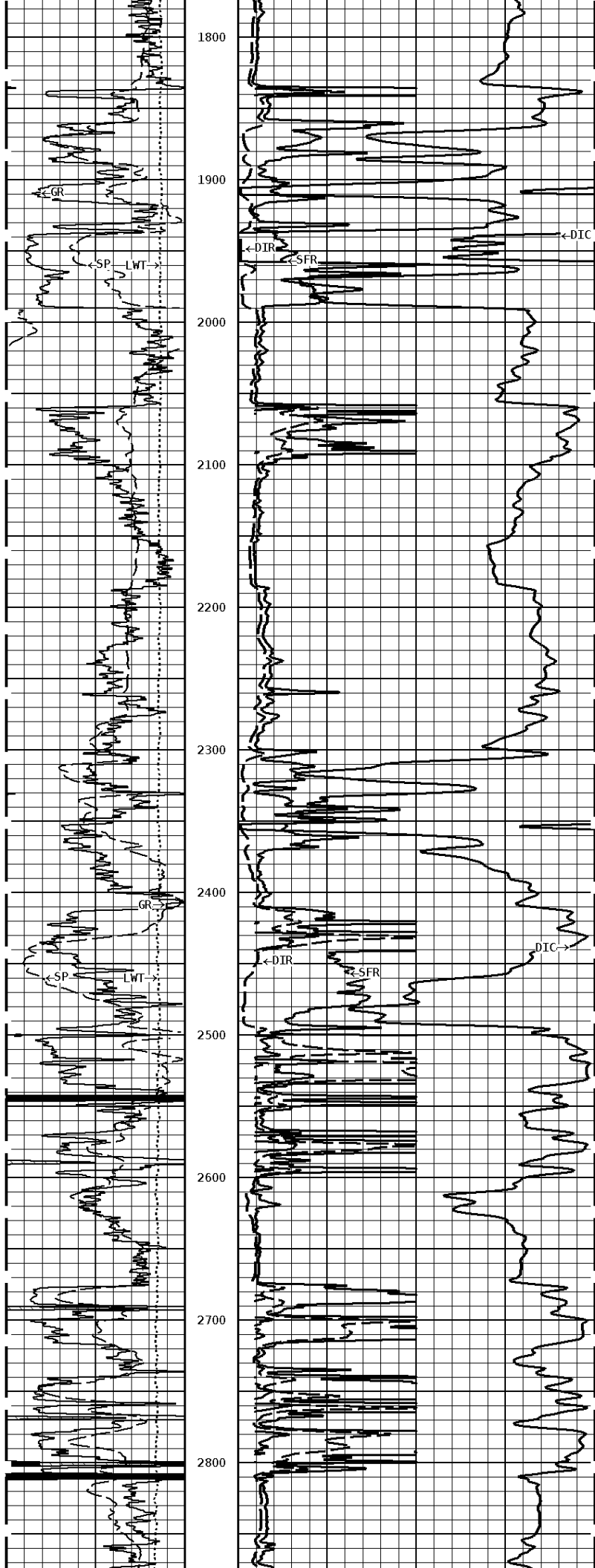
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Segment: V1.D1.S5 MN	Acquired: 2015-12/05 13:41 3.4.0-13544	
Reference: 0	Processed: 2015-12/05 14:50 3.4.0-13544	

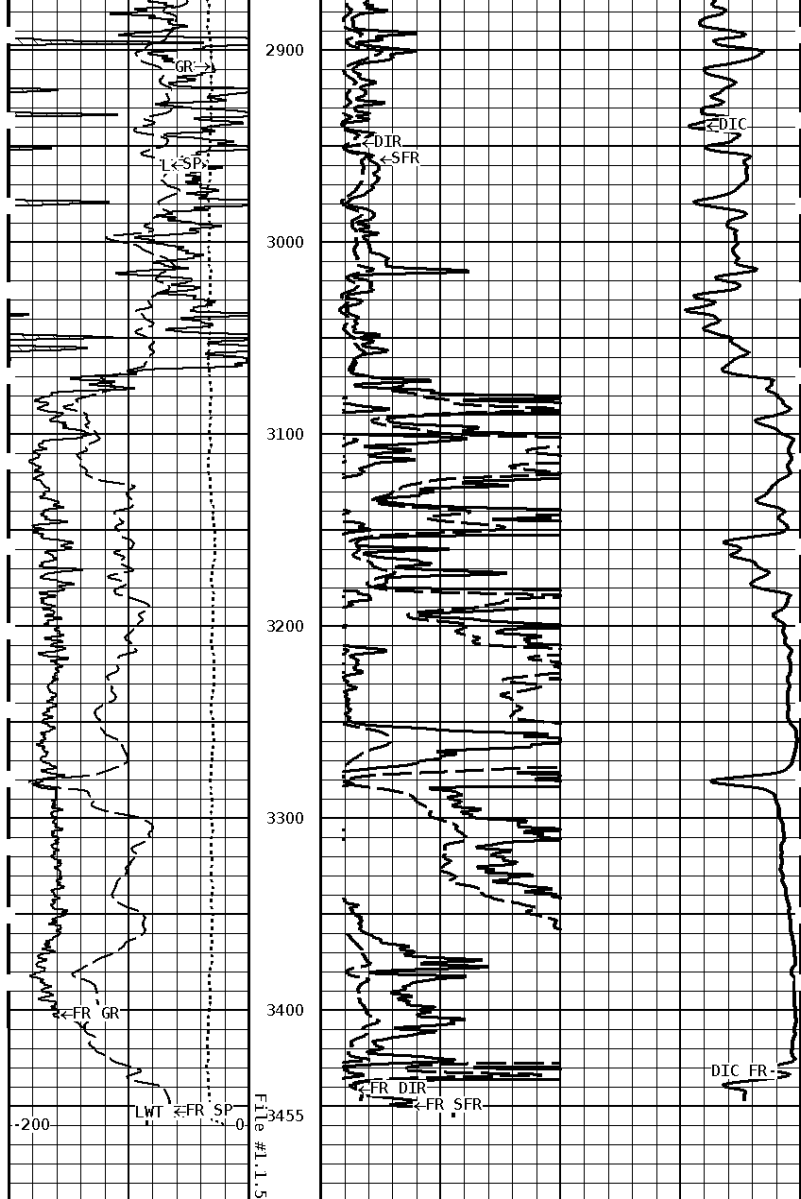
TENSION LBS 10000 ----- 0	DEEP INDUCTION OHMM 0.0 ----- 500.0 0.0 ----- 50.0
SPONTANEOUS POTENTIAL mV → ← 20	SHALLOW FOCUSED OHMM 0.0 ----- 500.0 0.0 ----- 50.0
GAMMA RAY API UNITS 150 0 300 150	DEEP CONDUCTIVITY MHMO 2000 ----- 1000 1000 ----- 0

1:1200 MAIN SECTION









GAMMA RAY API UNITS	
150	300
0	150
SPONTANEOUS POTENTIAL mV	
→	← 20
TENSION LBS	
10000	0

DEEP CONDUCTIVITY MHMO	
2000	1000
1000	0
SHALLOW FOCUSED OHMM	
0.0	500.0
0.0	50.0
DEEP INDUCTION OHMM	
0.0	500.0
0.0	50.0



Company: VAL ENERGY, INC.

Well: WERNER #3-31

Location: 1980' FSL & 990' FEL

Logged: 12-05-2015

K.B. Elev: 1316.0 Ft