



Tucker

ENERGY SERVICES

PHASED INDUCTION

SHALLOW FOCUS SP LOG

Company ANDERSON ENERGY, INC Well HAY #1 Field SEDGWICK County KANSAS State USA Country 15-173-21024-00-00 API No.		File No : TUL-58234 Company : ANDERSON ENERGY, INC Well : HAY #1 Field : County : SEDGWICK State : KANSAS Country : USA API No : 15-173-21024-00-00	
Location : 2310' FNL & 2240' FEL		LSD : Sect : 14 Twp : 29S Rge : 01W	
Permanent Datum:	GL	Elevations:	Services:
Drilling Measured From:	KB	KB 1291.00	GRT
Log Measured From:	KB	DF 1289.00	CNT
Above Permanent Datum:	9.00 Ft	GL 1282.00	LDT
Date	2013-02-01		
Run Number	1		
Depth--Driller	3900.0	Ft	
Depth--Logger	3900.0	Ft	
First Reading	3899.0	Ft	
Last Reading	285.0	Ft	
Casing--Driller	285.0	Ft	
Casing--Logger	285.0	Ft	
Bit Size	7.875	In	
Casing Size	8.625	In	
Hole Fluid Type	WBM		
Density	9.4	LBS/GAL	
Fluid Loss	9.0	CC	
PH/Viscosity	8.5	49.0 SEC	
Sample Source	MEASURED		
RMF@Measured Temp.	1.700 @ 64 F		
RMF@Measured Temp	1.450 @ 64 F		
RMF@Measured Temp.	1.960 @ 64 F		
Source RMF/RMC	CALCULATED/CALCULATED		
RM@BHT	1.510 @ 107 F		
Time Circulation Stopped			
Max Recorded Temp.	107	F	
Equipment/Base	TRK 123	TULSA	
Recorded By	Z. HICKMAN		
Witnessed By	K. LEBLANC		

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)
7.875	3900.00	8.625	24.00	285.00

Run Number	1	
Date	2013-02-01	
Date/Time On Bottom	2013-02-01 05:30	
Depth to Fluid	0.0 Ft	
Salinity	0.000 PPM	
RMF@BHT	1.280 @ 107 F	
RMC@BHT	1.730 @ 107 F	

Run Number 1

Comments

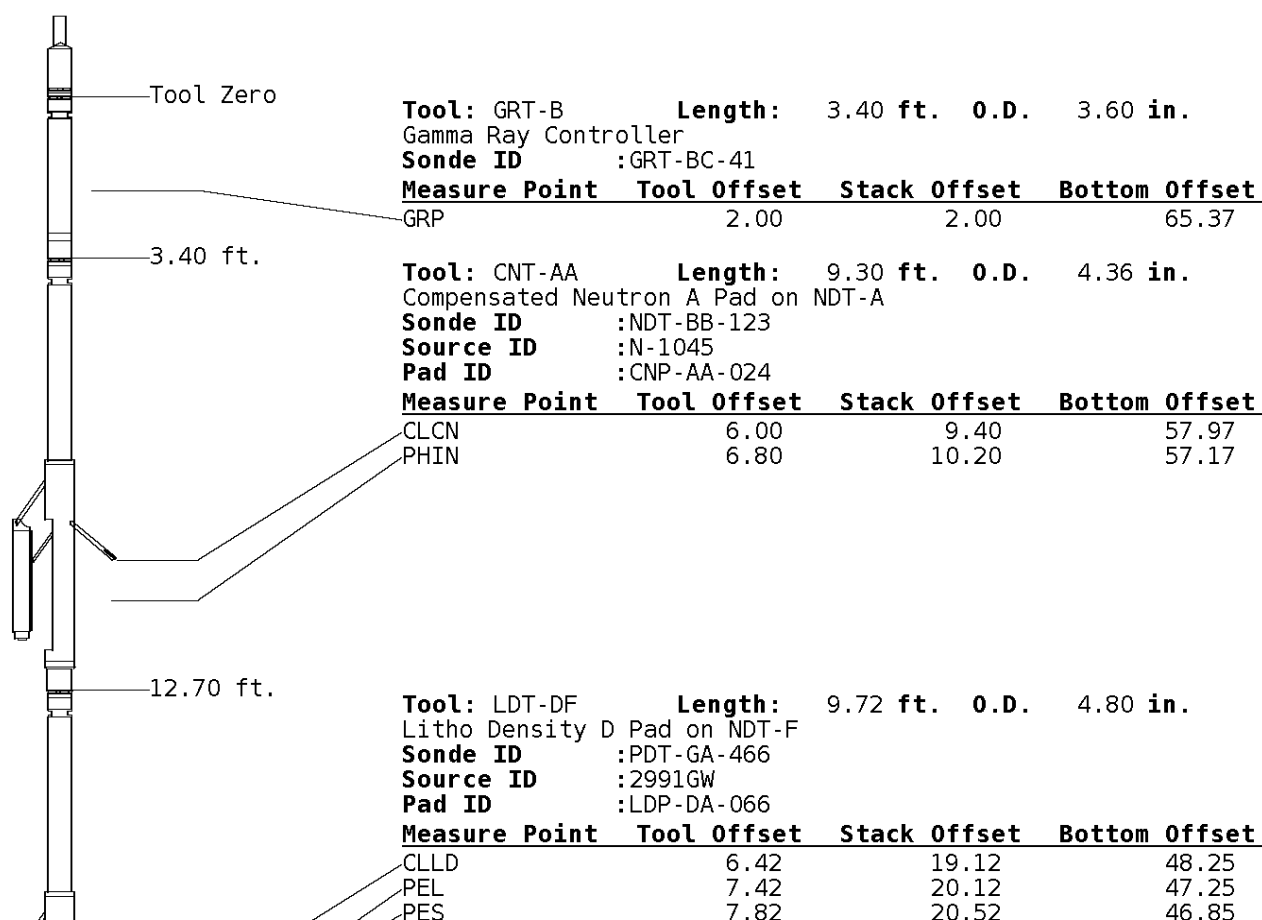
ALL PRESENTATIONS AS PER CUSTOMER REQUEST
 GRT, CNT, LDT, MLT, CST, AND PIT RUN IN COMBINATION.
 CALIPERS ORIENTED ON X-Y AXIS.
 2.71 G/CC USED TO CALCULATED POROSITY.
 ANNULAR HOLE VOLUME CALCULATED USING 5.50" PRODUCTION CASING.
 DETAIL PRESENTED FROM TD TO 2000'
 PHIN IS CALIPER CORRECTED

GRT: GRP, GRX.
 CNT: PHIN, CLCNIN, PHXN.
 LDT: PORL, PXRL, LCORN, LCORNX, PECLN, PECLNX, LDENN, LDENNX, PORLLS, CLLDIN.
 MLT: NOR_RF, INV_RF, MSCLPIN.
 CST: PORS, ITT, CDTF, TT1, TT3.
 PIT: ILD, ILM, SPU, SFLAEC, CIRD

OPERATORS:
 M. RUBY
 D. HOPPER

Tool String Schematic

Total Tool Length - 67.37 ft.
Maximum Outside diameter - 6.00 in.
Net Weight in Air - 1171.00 lbs.



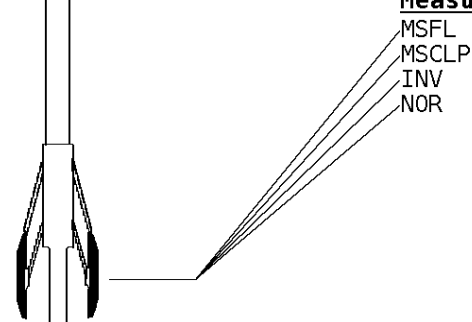


LDEN	7.62	20.32	47.05
LCOR	7.62	20.32	47.05

22.42 ft.

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

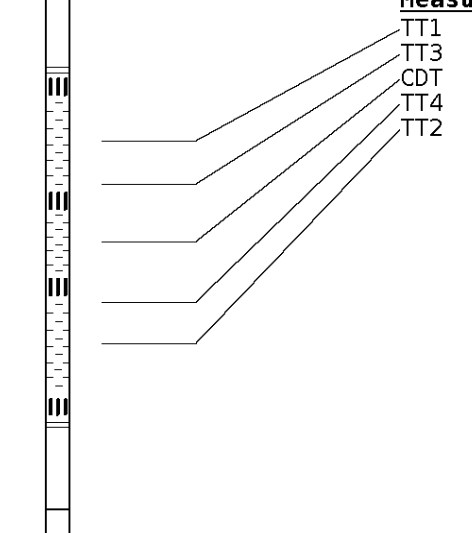
Measure Point	Tool Offset	Stack Offset	Bottom Offset
MSFL	7.60	30.02	37.35
MSCLP	7.60	30.02	37.35
INV	7.60	30.02	37.35
NOR	7.60	30.02	37.35



32.08 ft.

Tool: CST-AD **Length:** 13.80 ft. **O.D.** 3.60 in.
Open Hole Sonic
Sonde ID :CST-AB-25

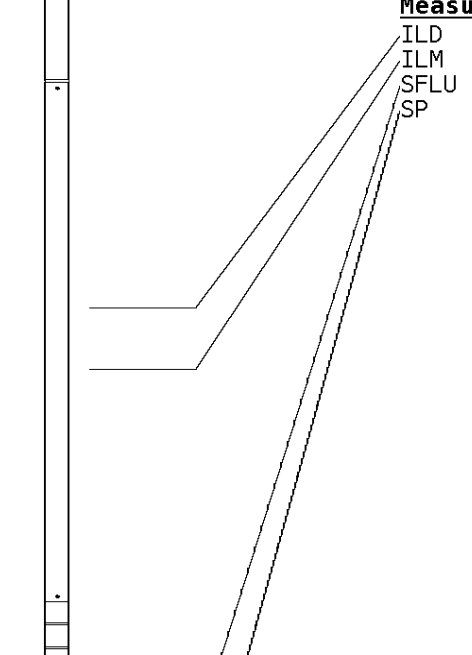
Measure Point	Tool Offset	Stack Offset	Bottom Offset
TT1	4.80	36.88	30.49
TT3	5.80	37.88	29.49
CDT	7.30	39.38	27.99
TT4	8.80	40.88	26.49
TT2	9.80	41.88	25.49



45.88 ft.

Tool: PIT-CA **Length:** 21.49 ft. **O.D.** 3.62 in.
Phased Dual Induction w/ RM & D
Sonde ID :PIT-AB-005

Measure Point	Tool Offset	Stack Offset	Bottom Offset
ILD	8.92	54.80	12.56
ILM	10.10	55.98	11.39
SFLU	17.49	63.37	4.00
SP	20.60	66.48	0.88



LWT 67.37 ft.

Well File: AND HAY 1 FEB 1 QUINT

Segment: V1.D1.S6 MAIN

Reference: 0

Scale: 1:600

Acquired: 2013-02/01 05:49 3.2.0-11401

Processed: 2013-02/01 07:48 3.2.0-11401

TENSION
LBS

10000

0

DEEP INDUCTION
OHMM

0.0

500.0

0.0

50.0

SPONTANEOUS POTENTIAL
mV

→

←20

SHALLOW FOCUSED RESISTIVITY
OHMM

0.0

500.0

0.0

50.0

GAMMA RAY
API UNITS

150

0

300

150

DEEP CONDUCTIVITY
MMHO

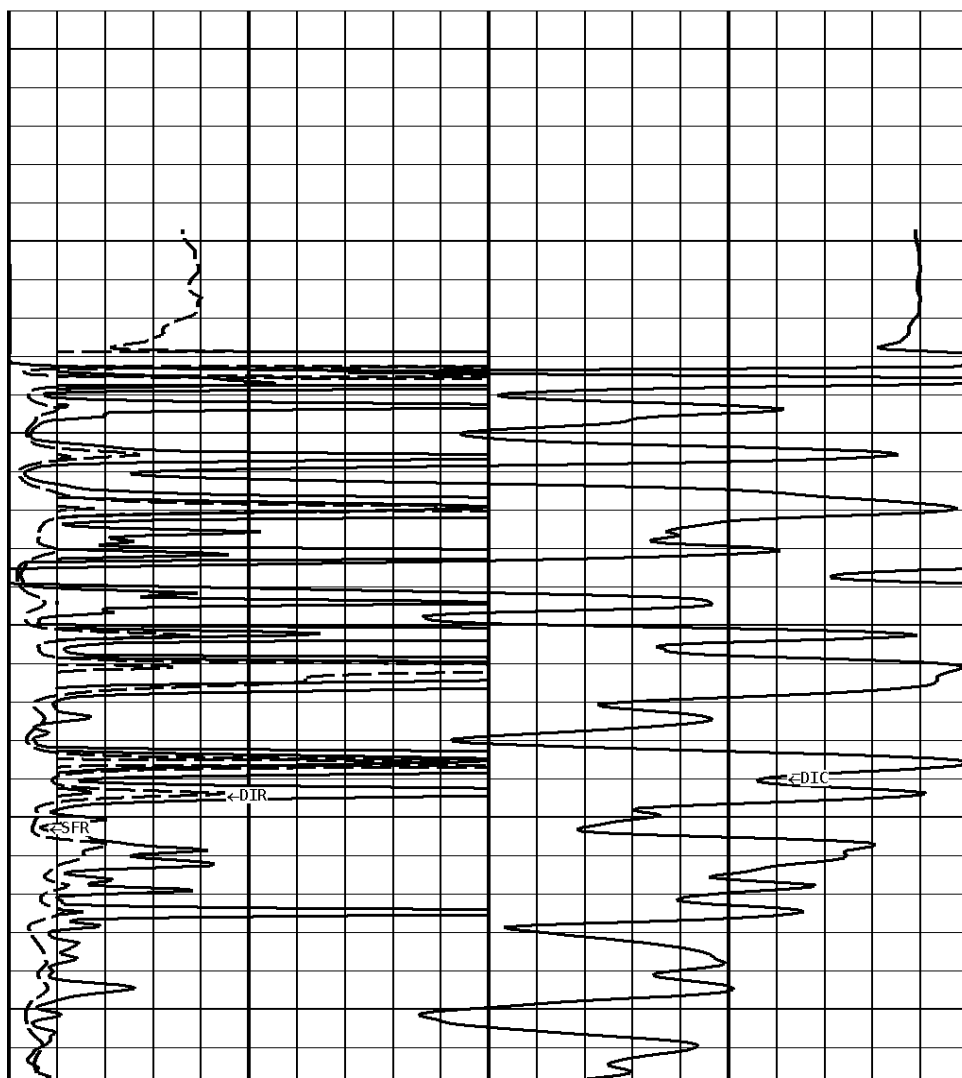
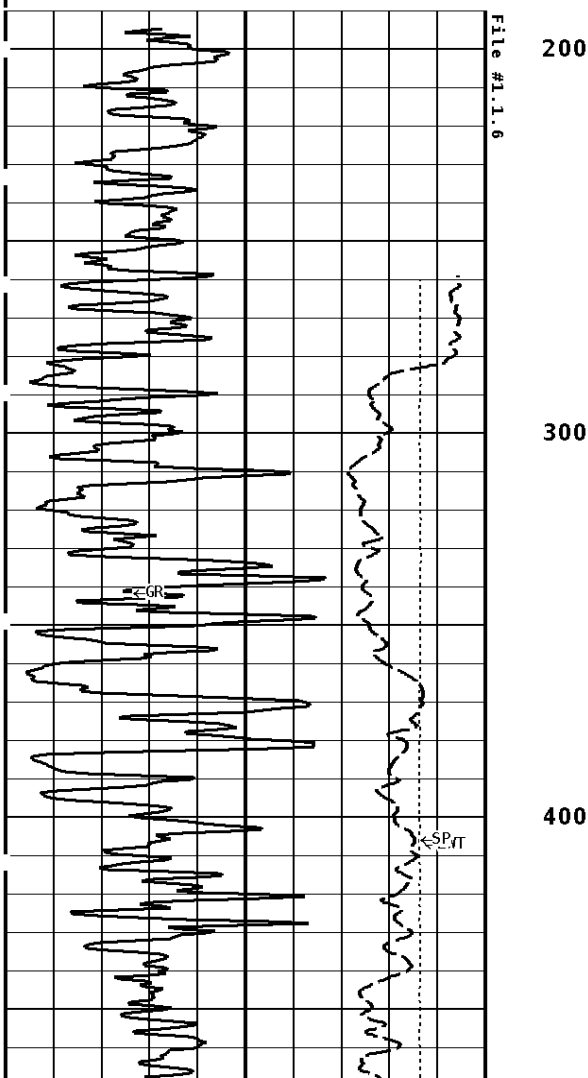
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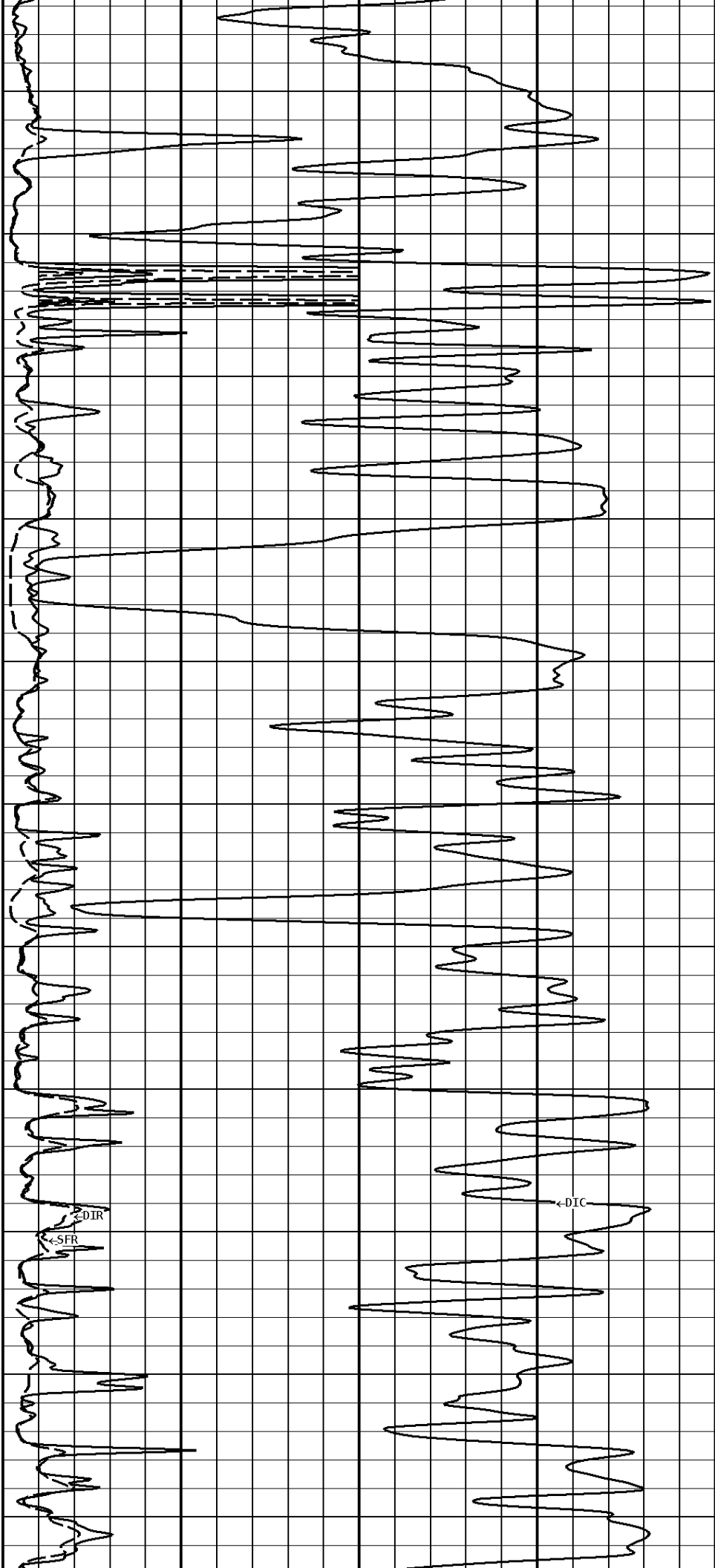
1000

1000

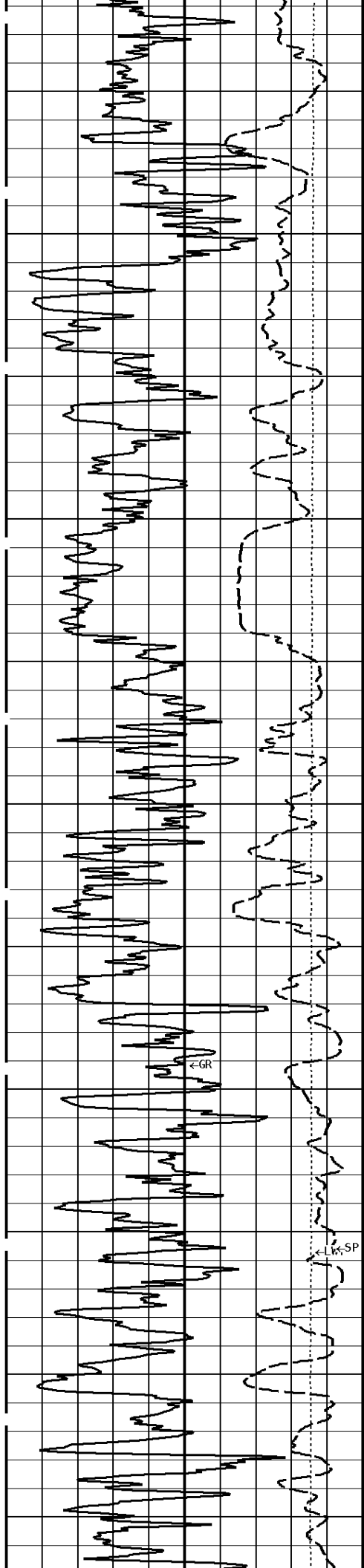
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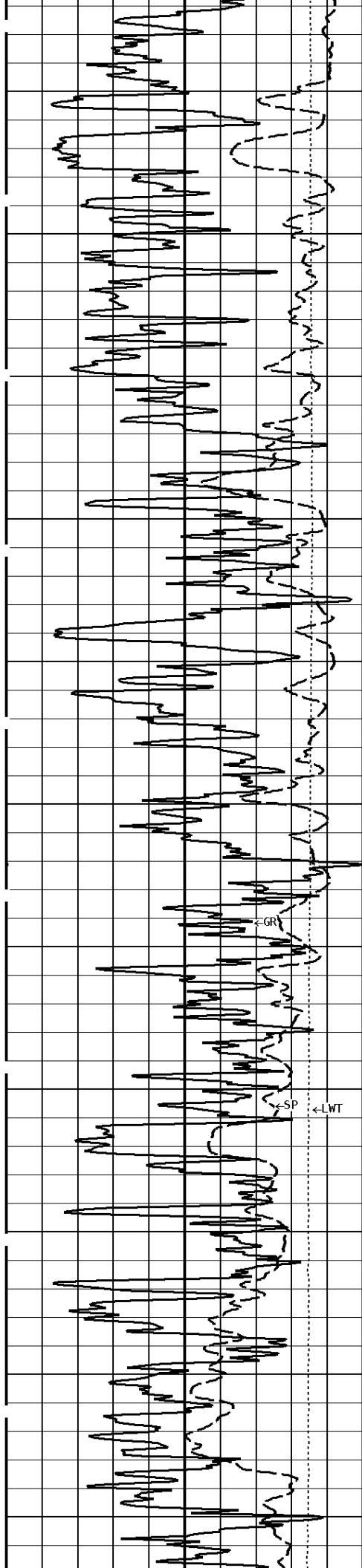
1:600 MAIN SECTION





500
600
700
800
900
1000





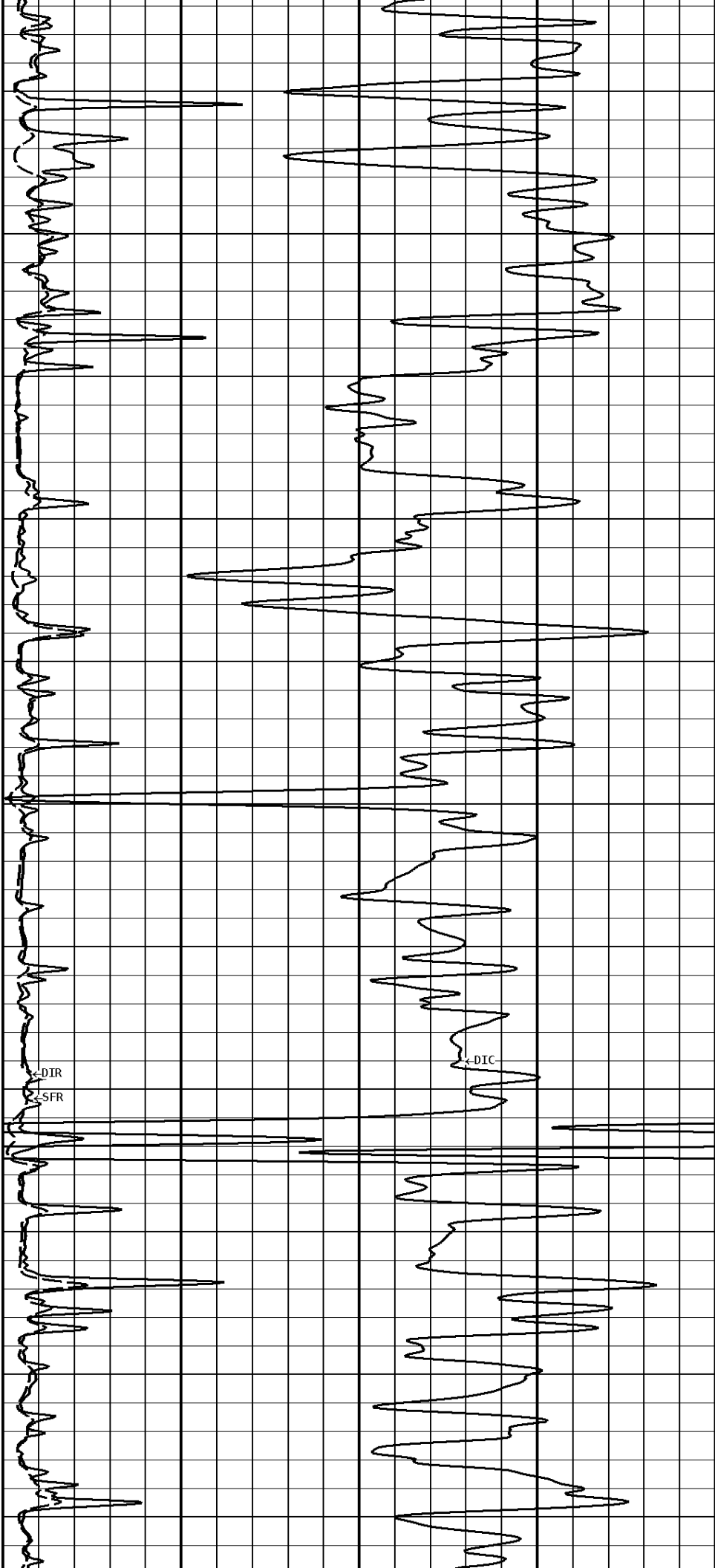
1100

1200

1300

1400

1500



1600

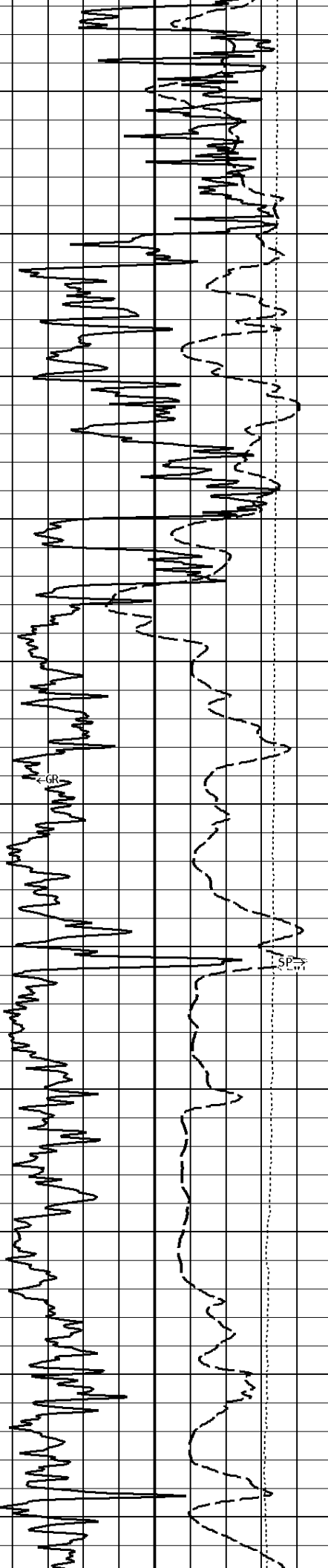
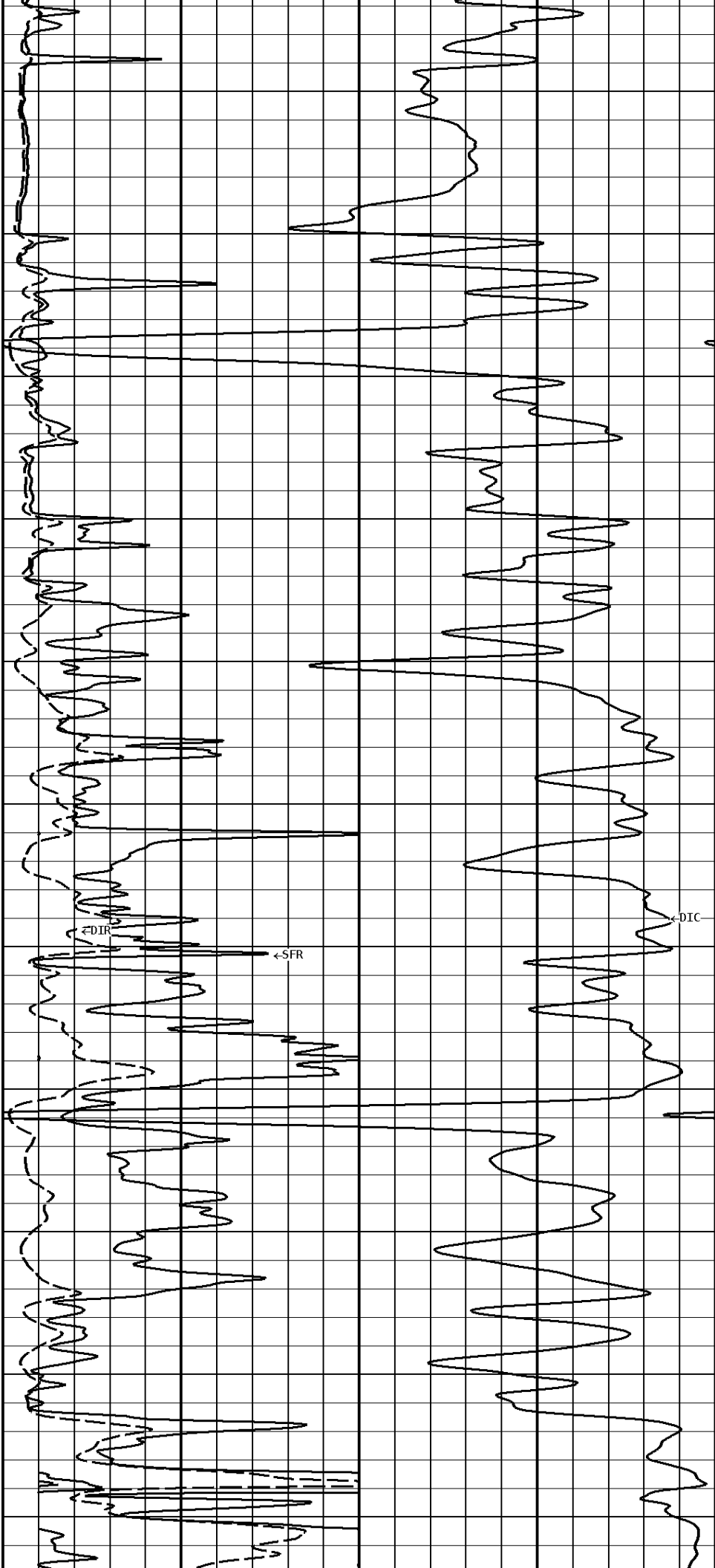
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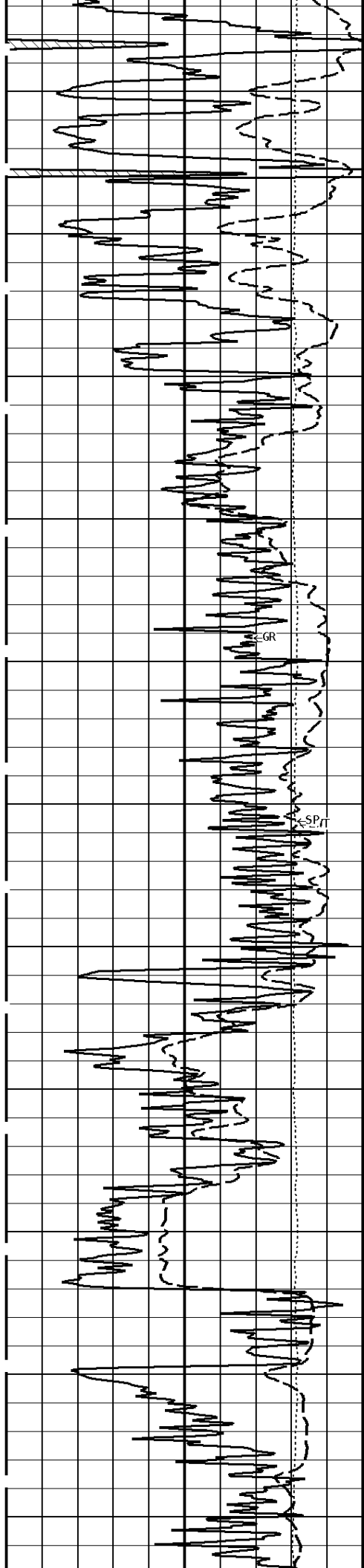
1800

1900

2000

2100





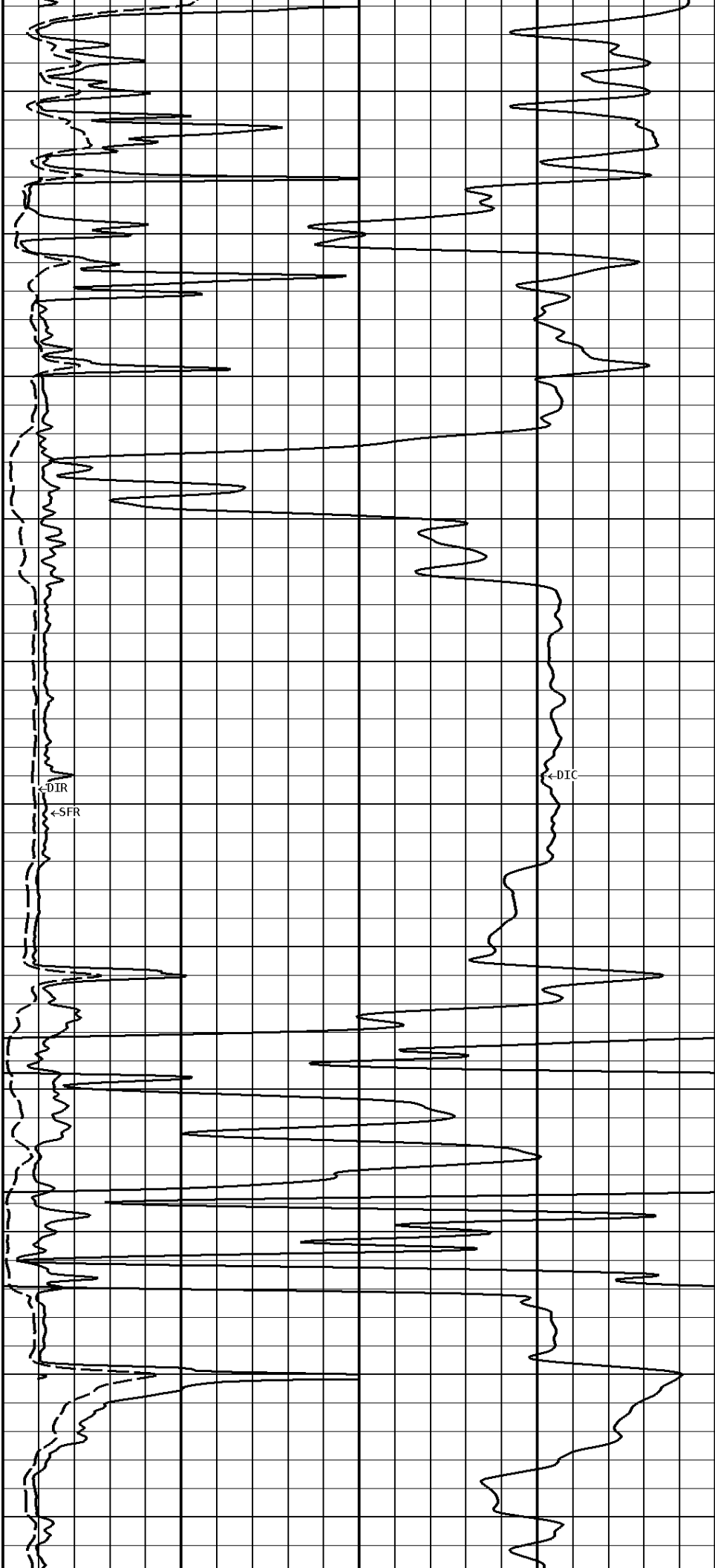
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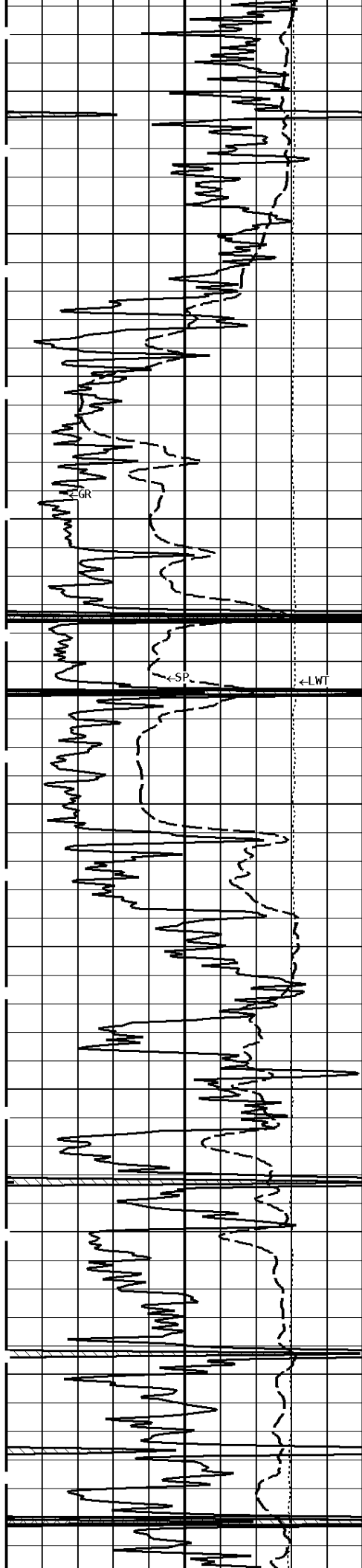
2300

2400

2500

2600





2700

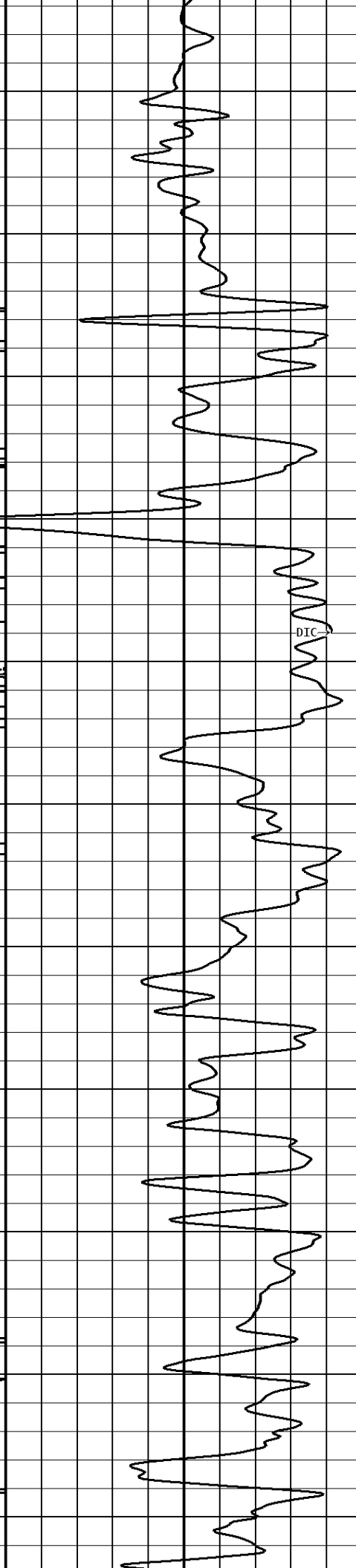
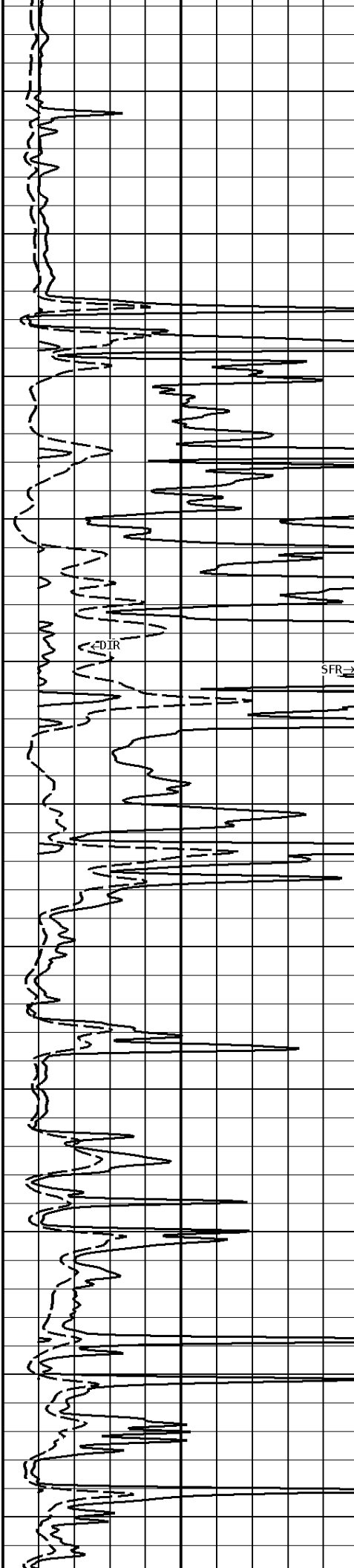
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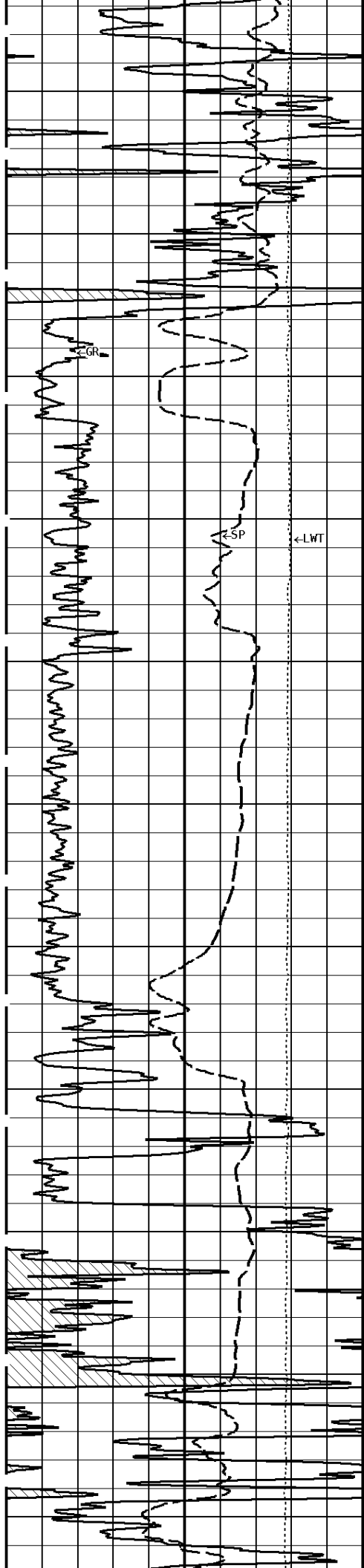
2900

3000

3100

3200





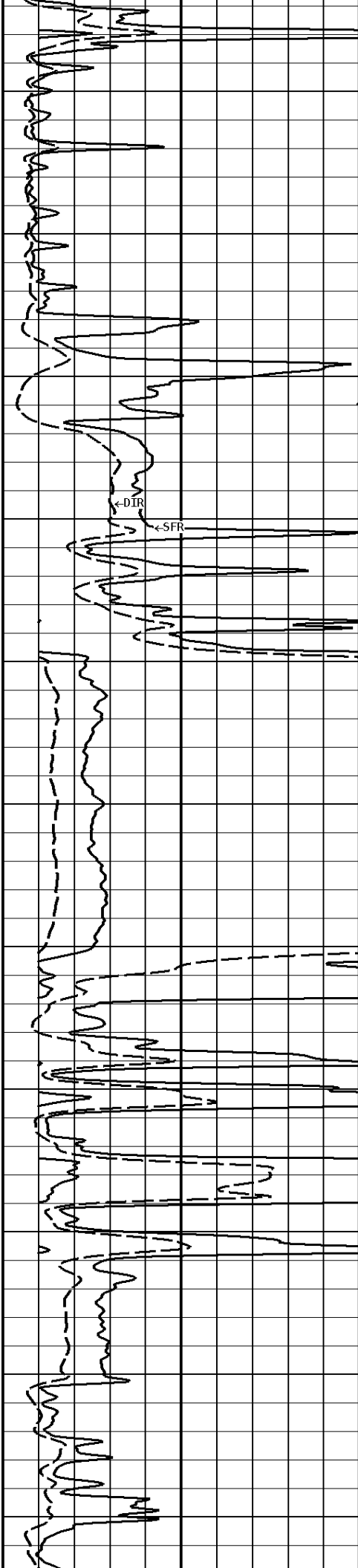
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3400

3500

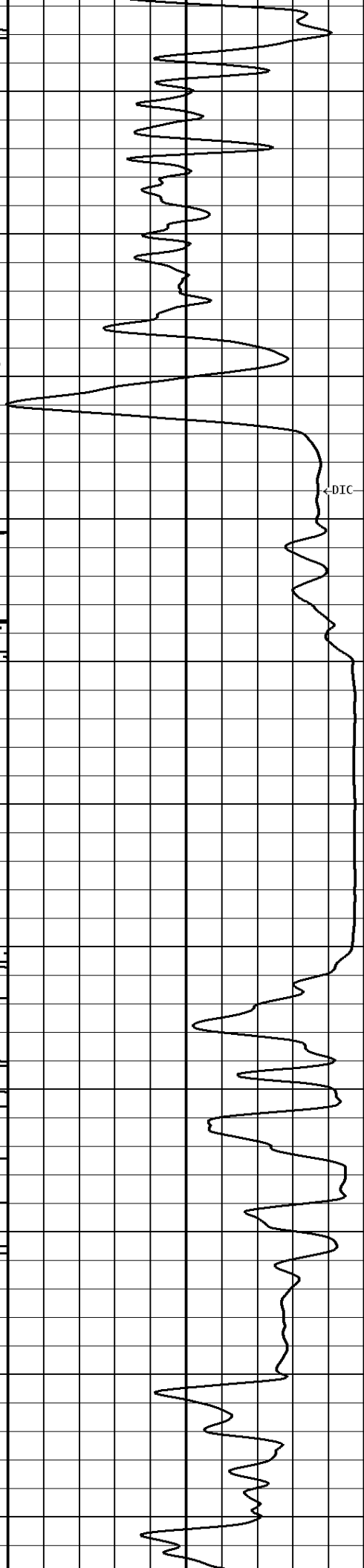
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3700

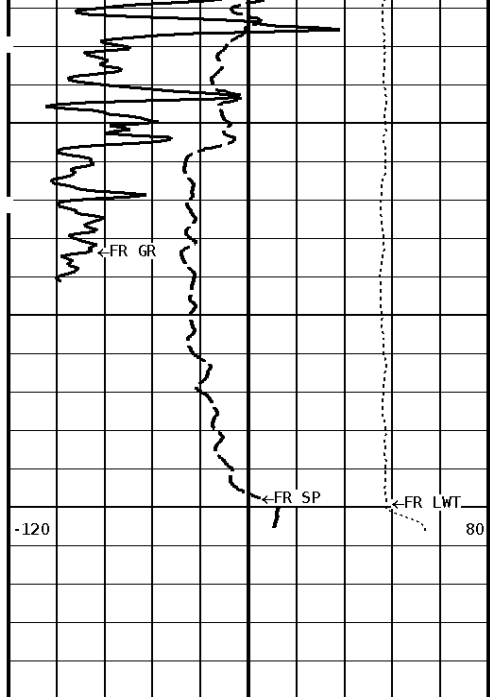


←DIR

←SFR



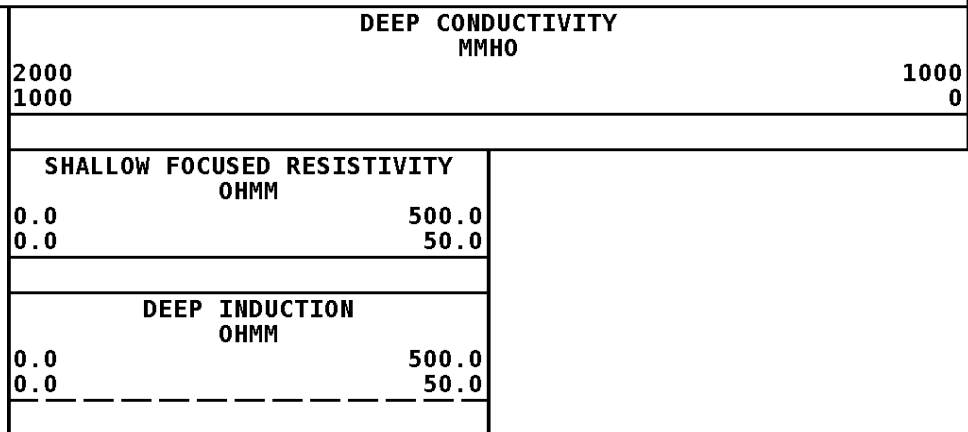
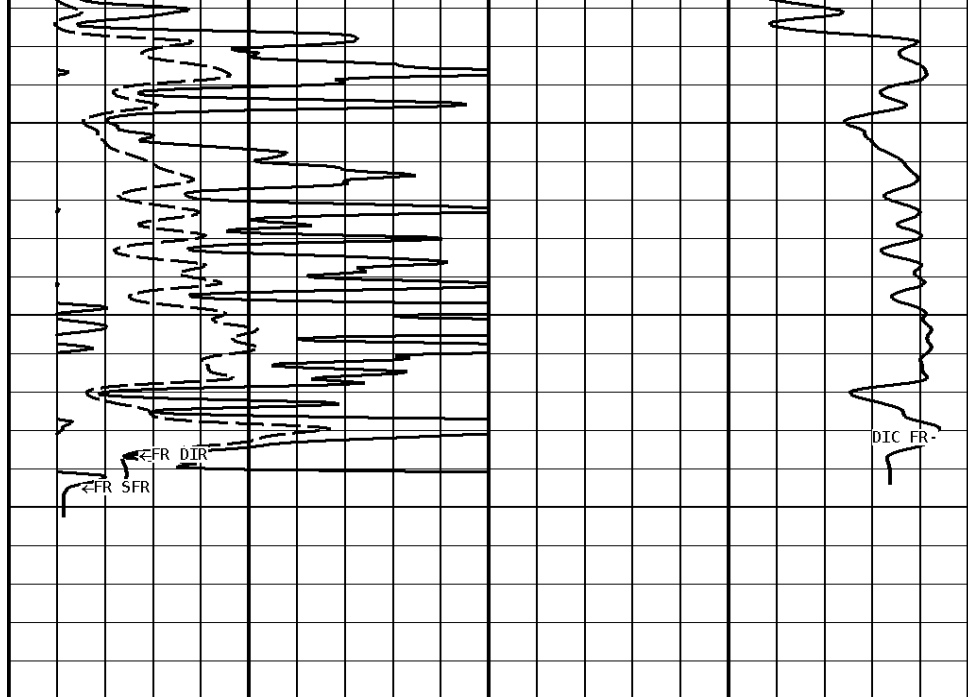
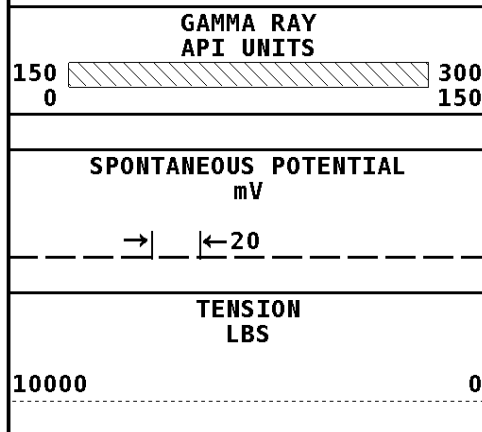
←DIC



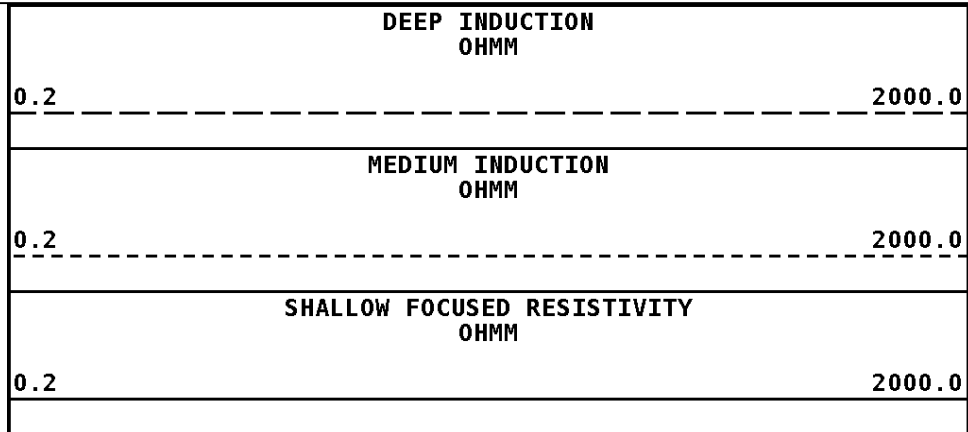
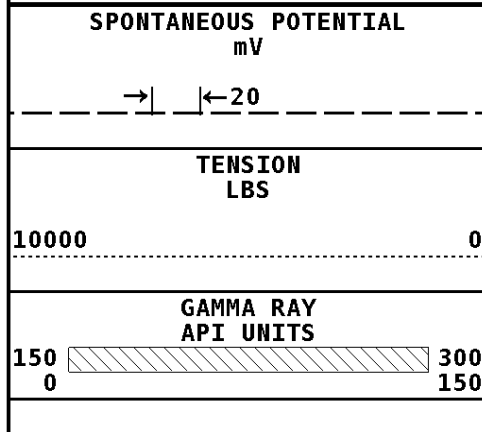
3800

3900

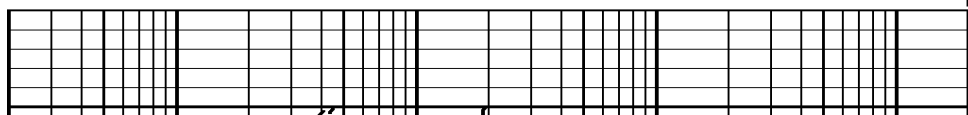
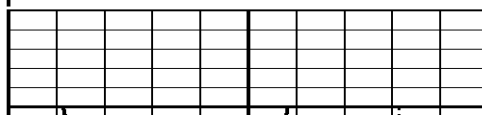
1:600 MAIN SECTION

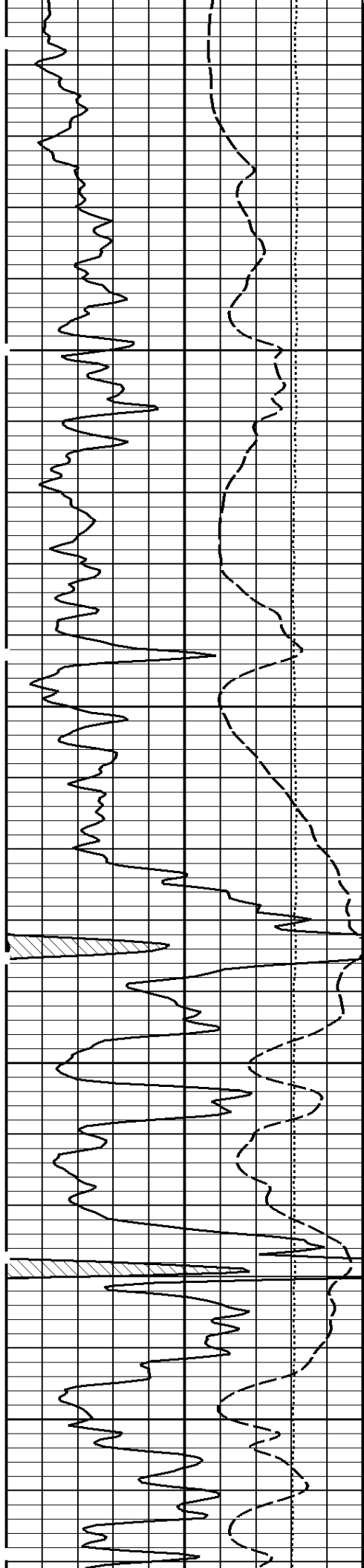


Well File: AND HAY 1 FEB 1 QUINT Scale: 1:240
Segment: V1.D1.S6 MAIN Acquired: 2013-02/01 05:49 3.2.0-11401
Reference: 0 Processed: 2013-02/01 07:48 3.2.0-11401



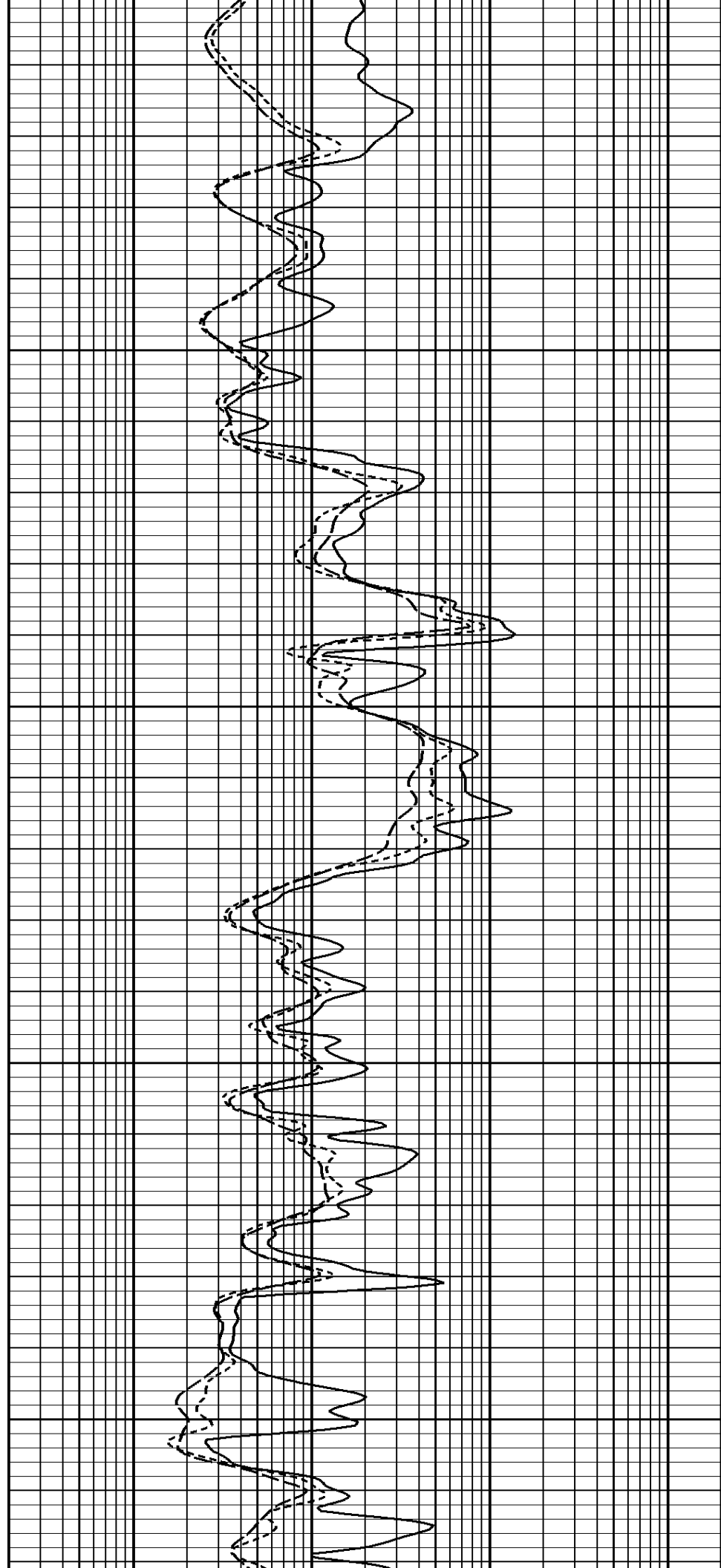
1:240 MAIN SECTION





2100

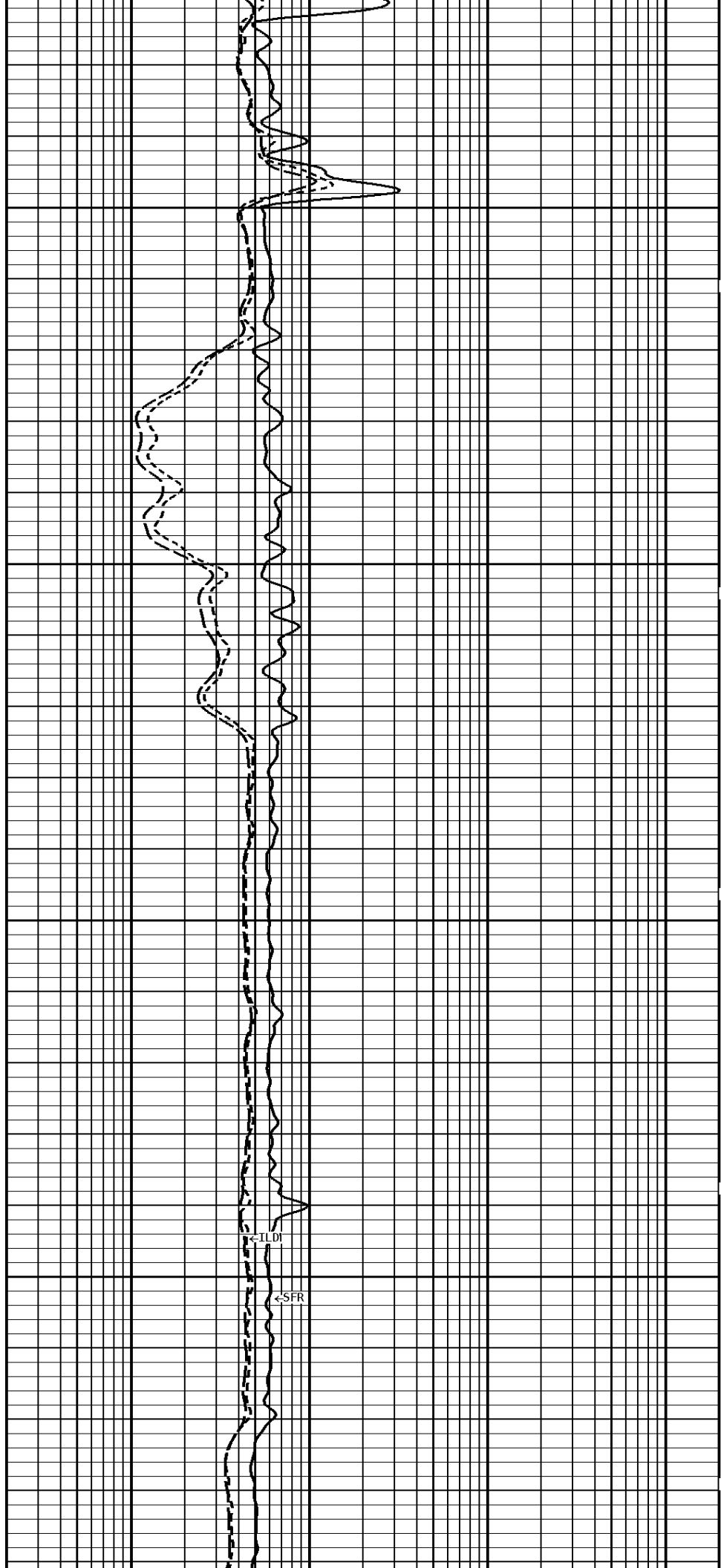
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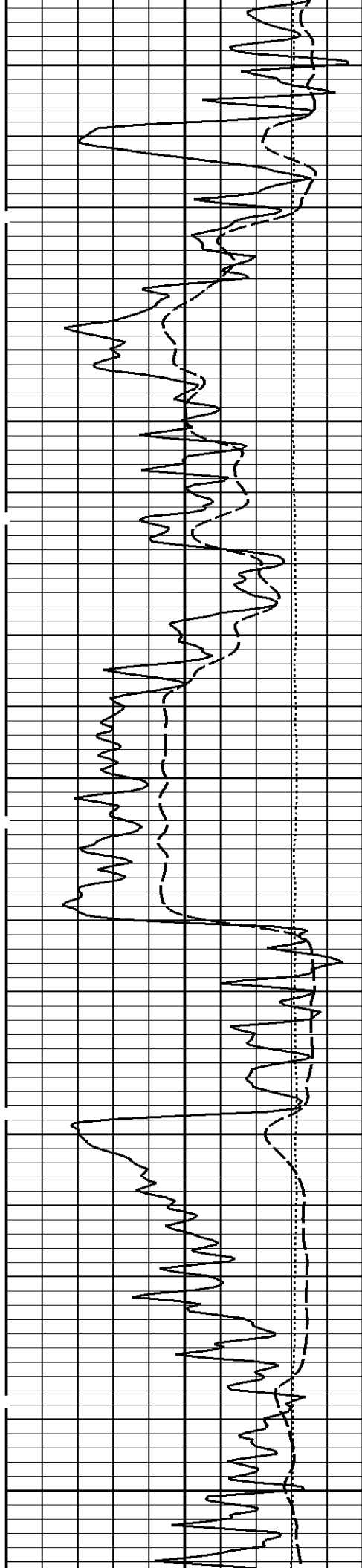




2300

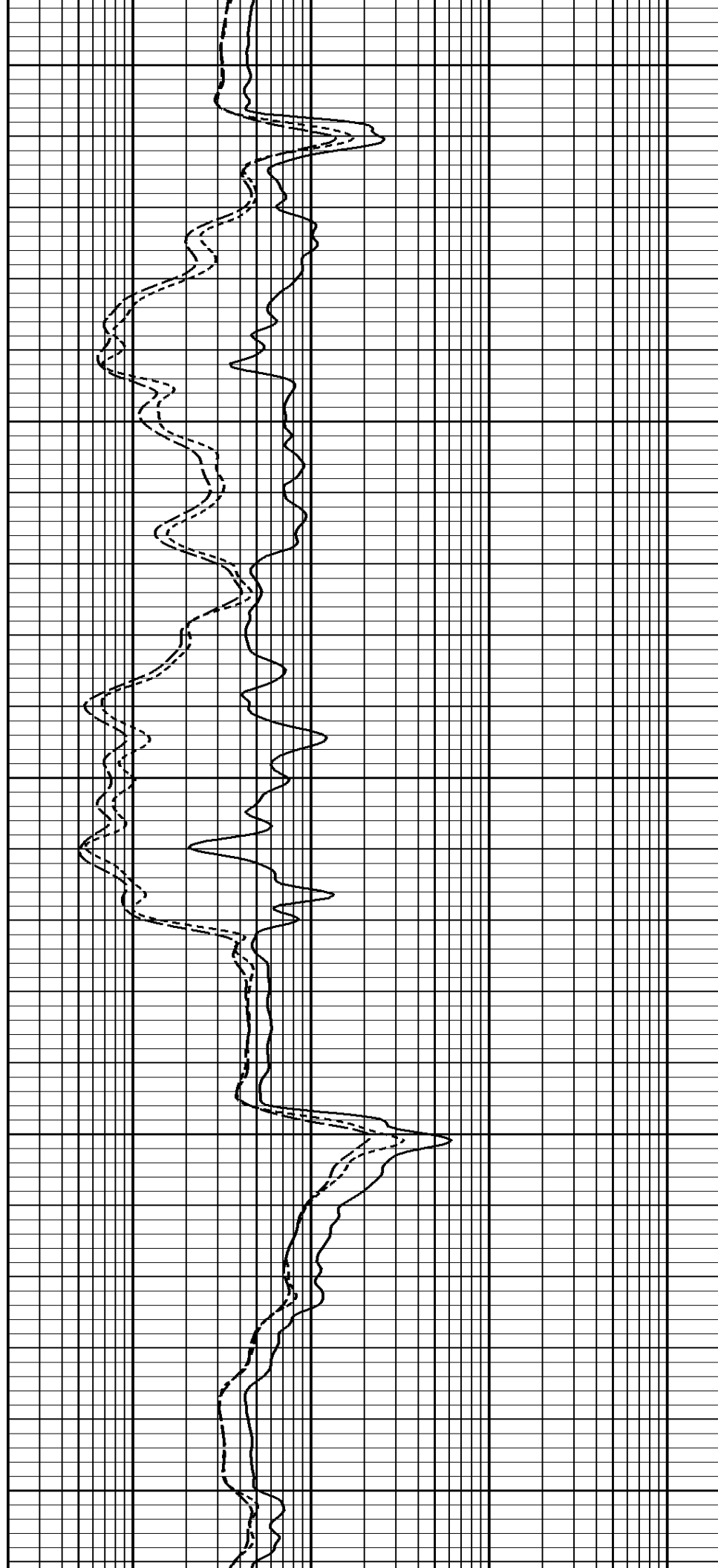
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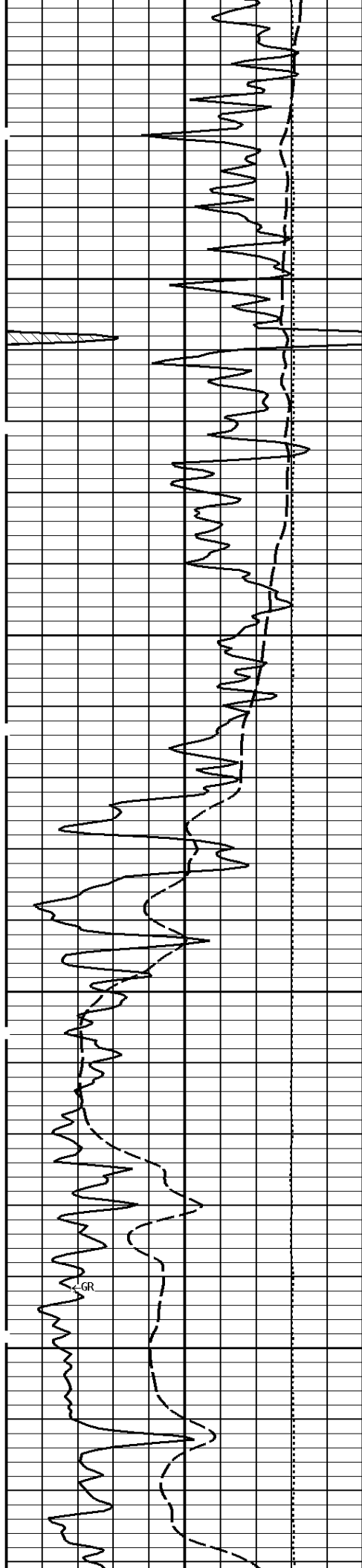




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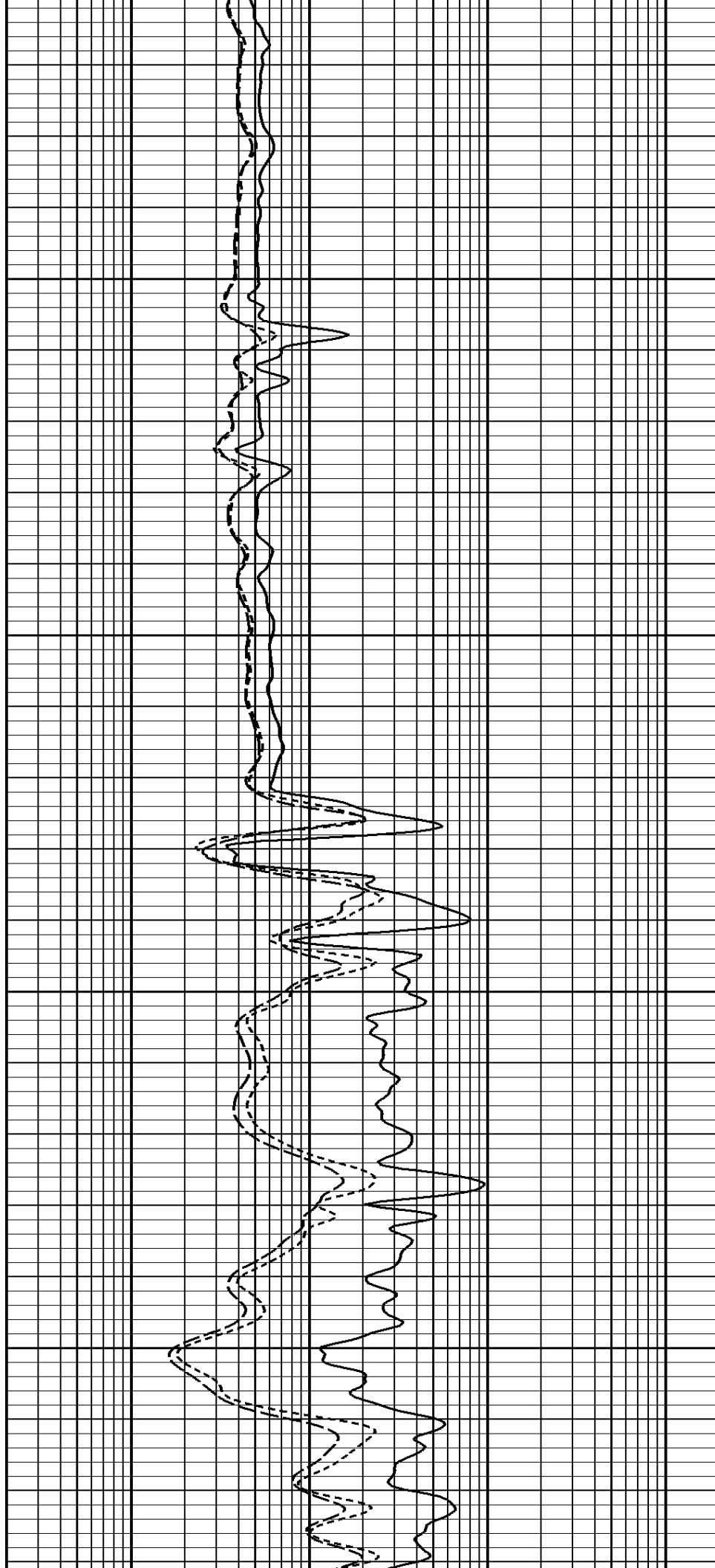
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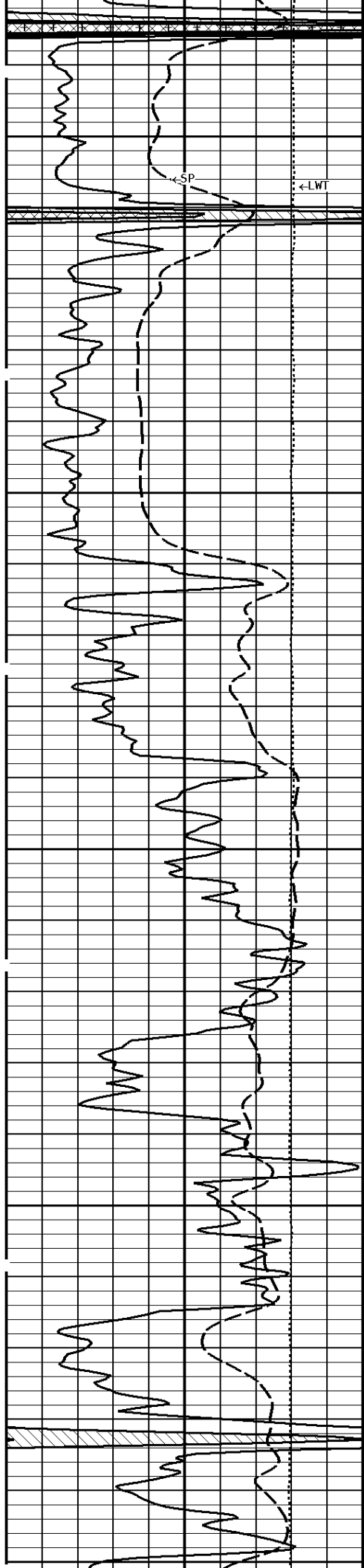




2700

2800

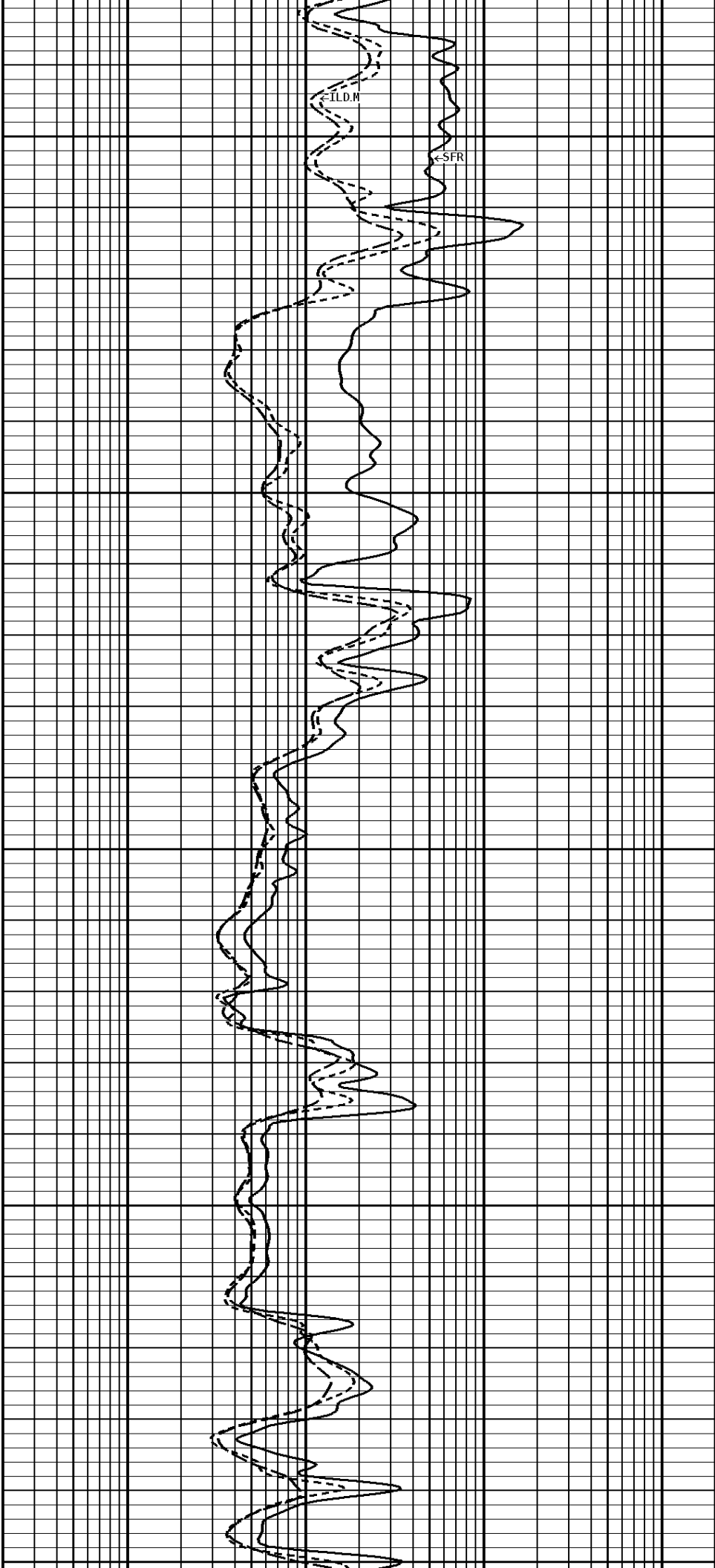


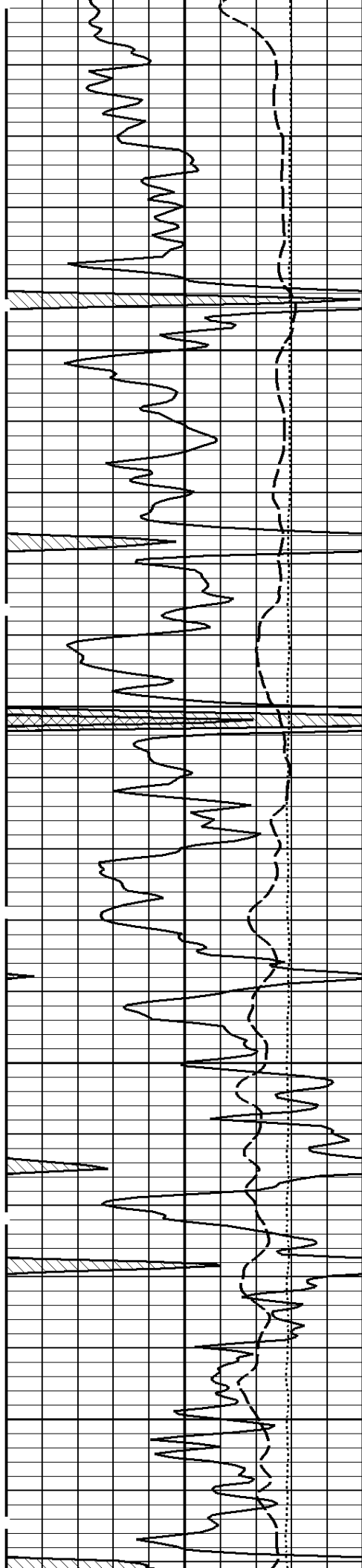


2900

3000

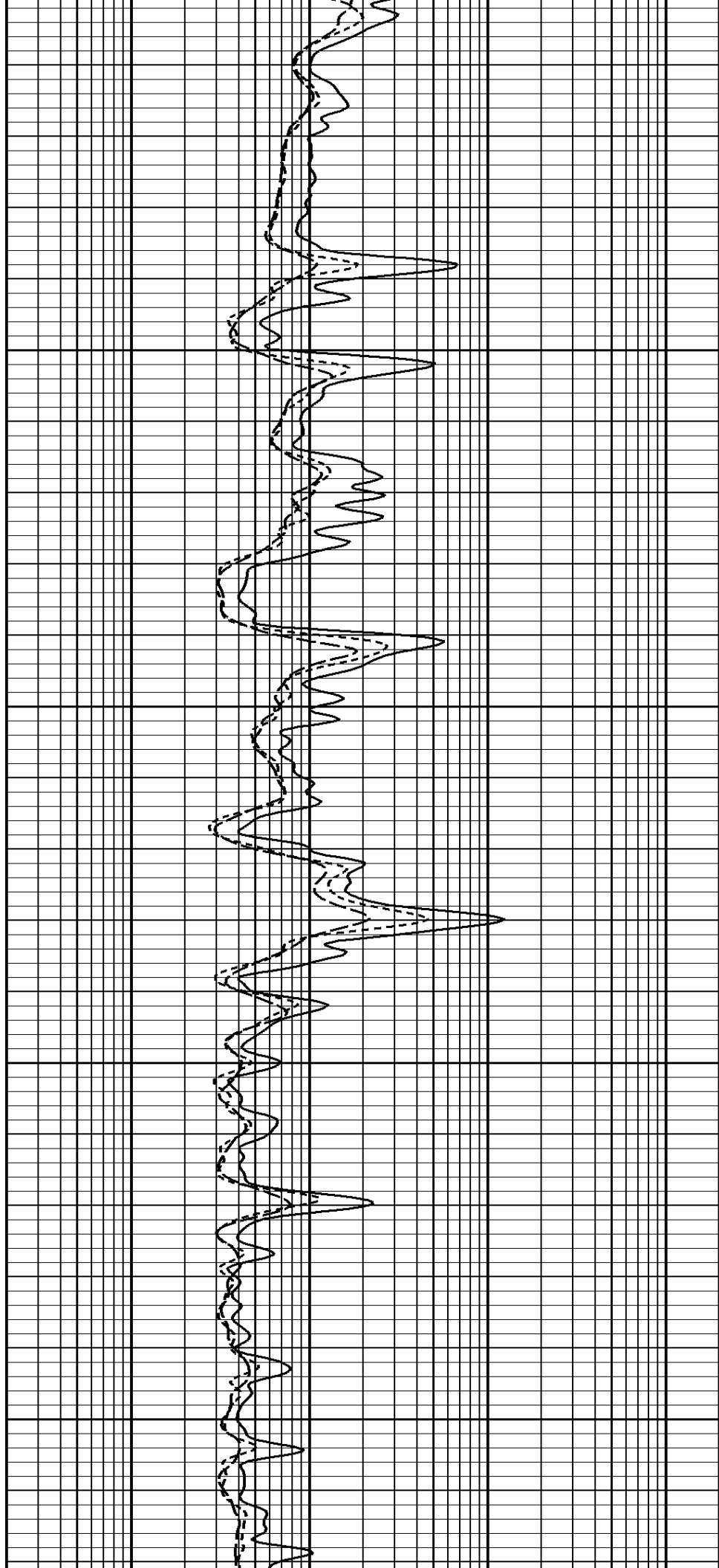
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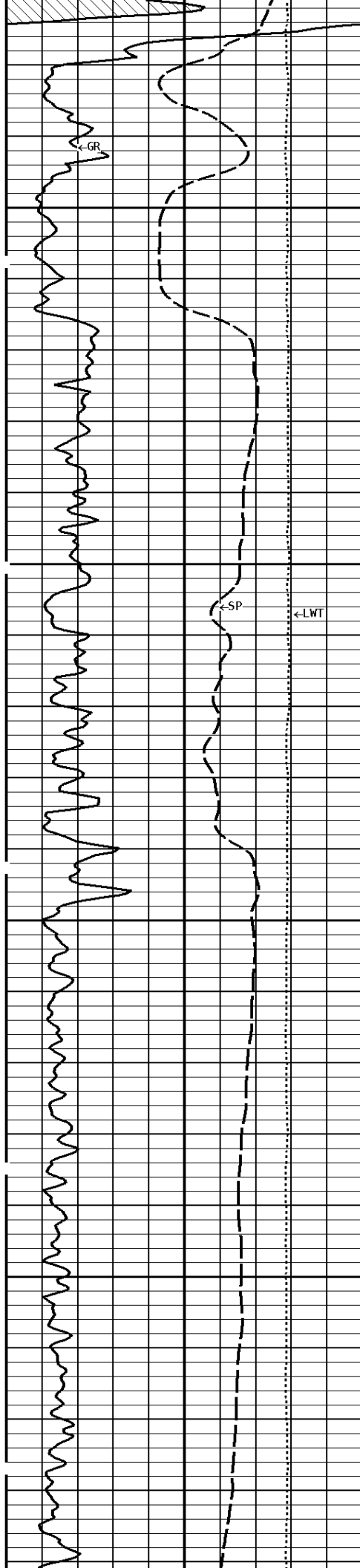




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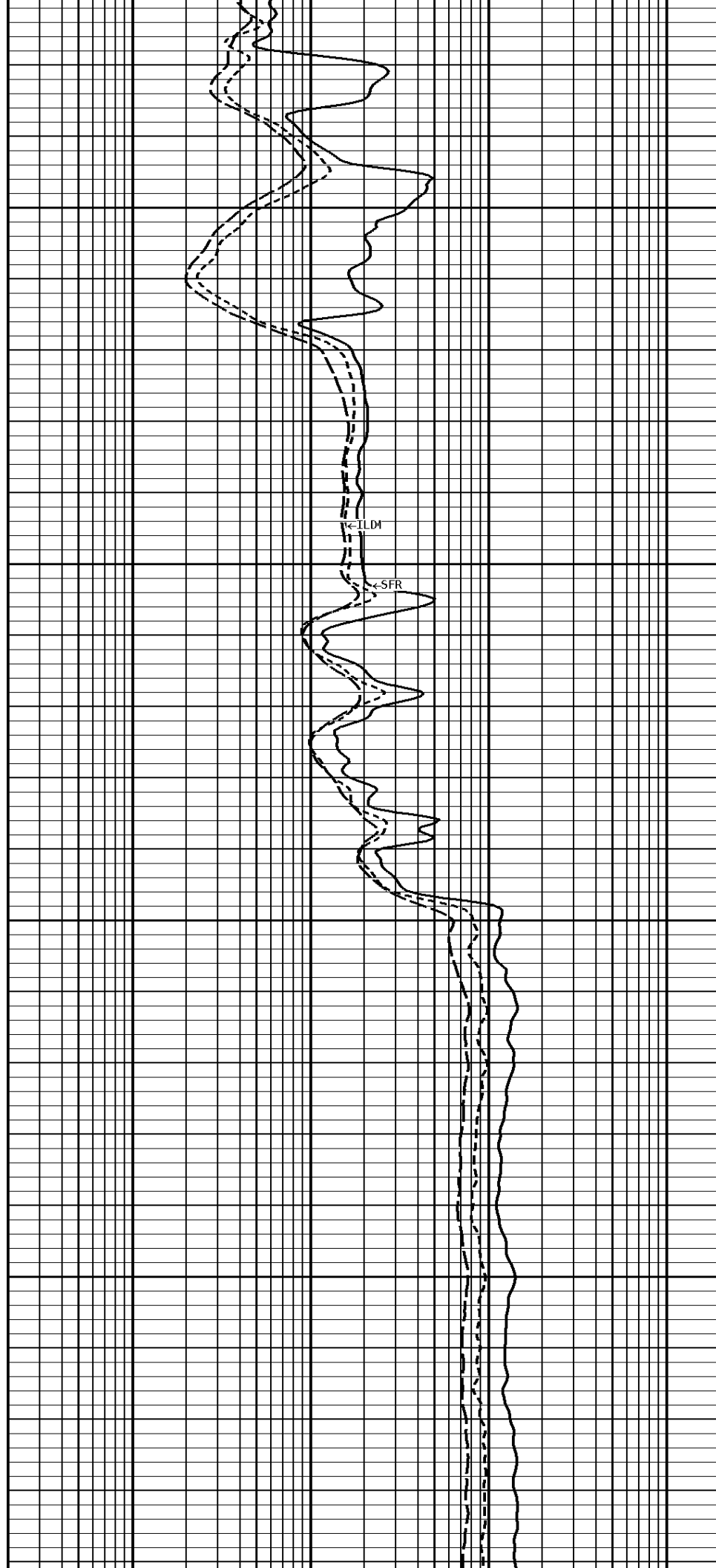
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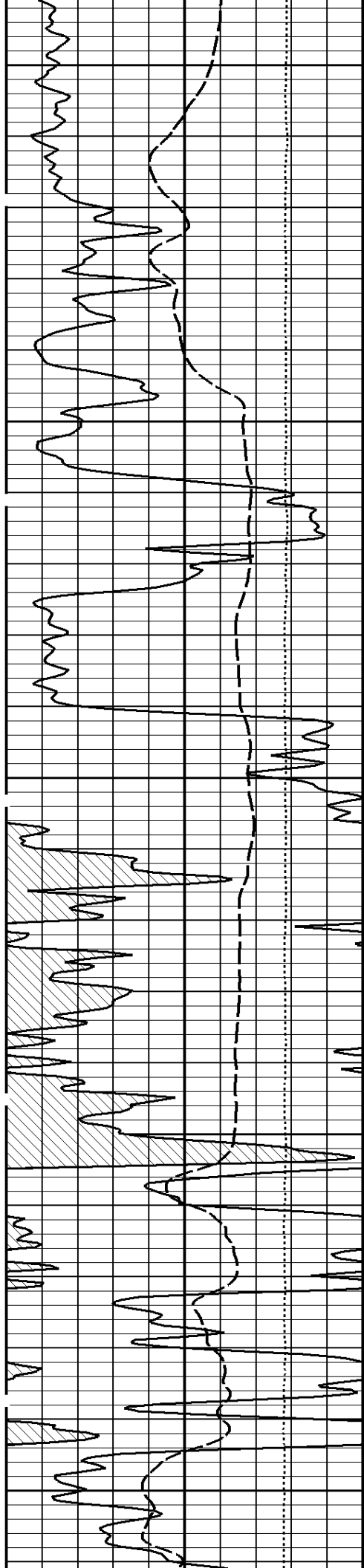




3400

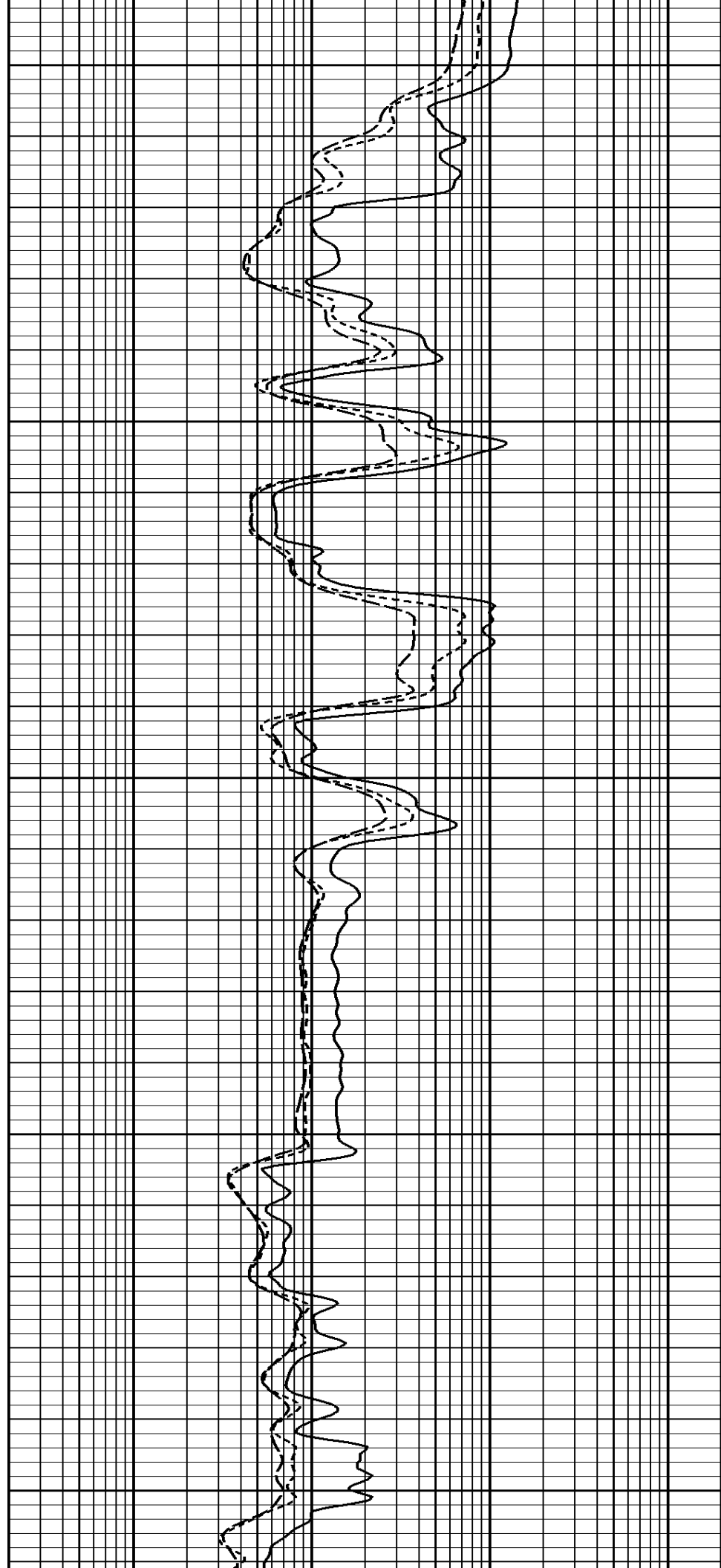
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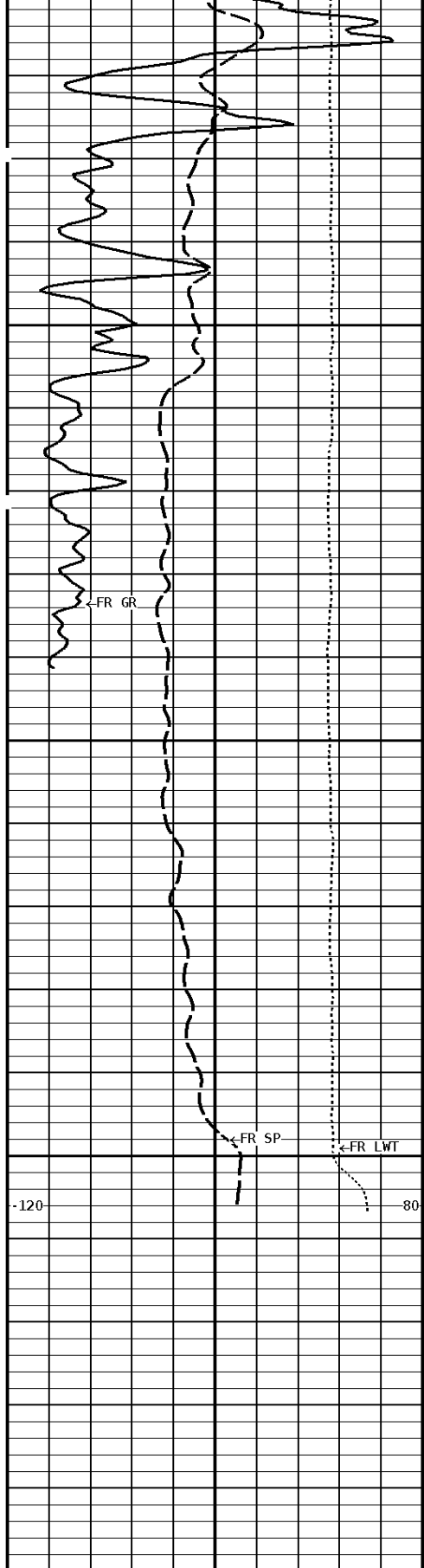




3600

3700





3800

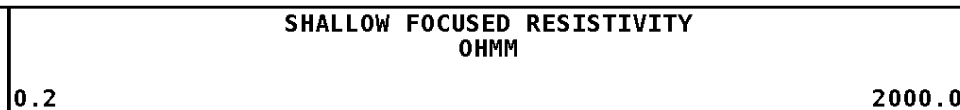
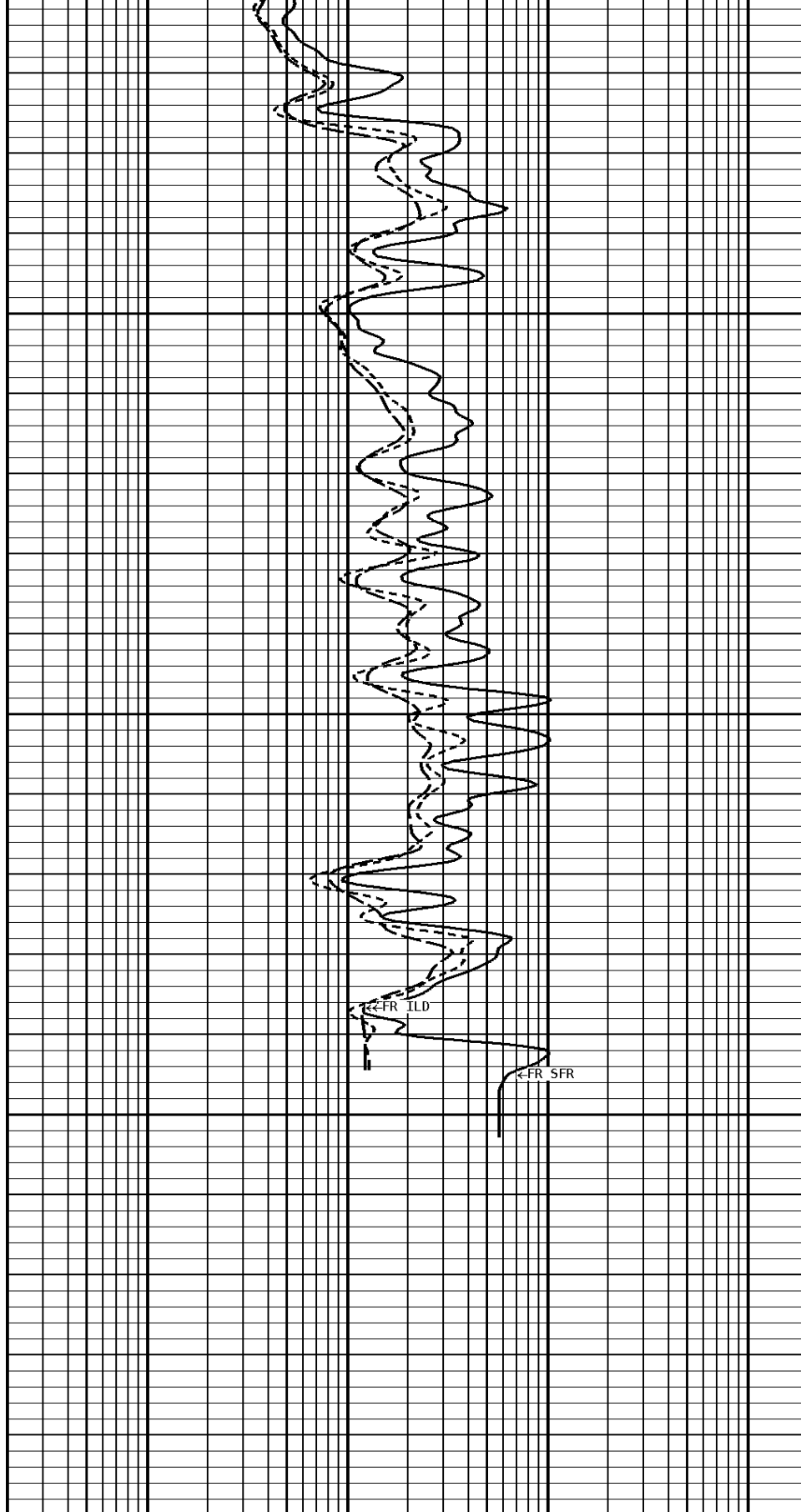
3900

120

80

File #1.1.6

1:240 MAIN SECTION



TENSION LBS	
10000	0
SPONTANEOUS POTENTIAL mV	
→	←20

MEDIUM INDUCTION OHMM	
0.2	2000.0
DEEP INDUCTION OHMM	
0.2	2000.0

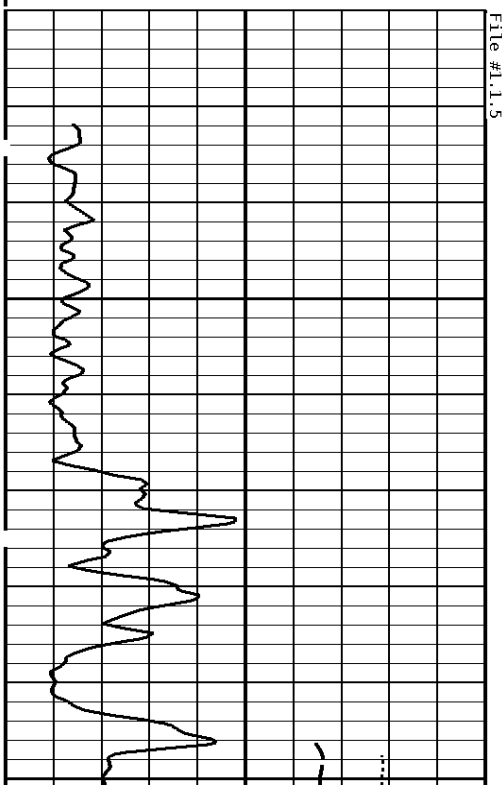
* Borehole Zone Factors *

Zone 1 99999.0 to 0.0 Feet	
Drill Bit Size	7.875 in
Casing Diameter	5.500 in
BHT Depth	3900.000 ft
Borehole Temperature	107.0 degF
Temperature Gradient	1.82 DCHM
Resistivity Of Mud	1.700 ohm/m
Resistivity Of Mud Temperature	64.00 degF

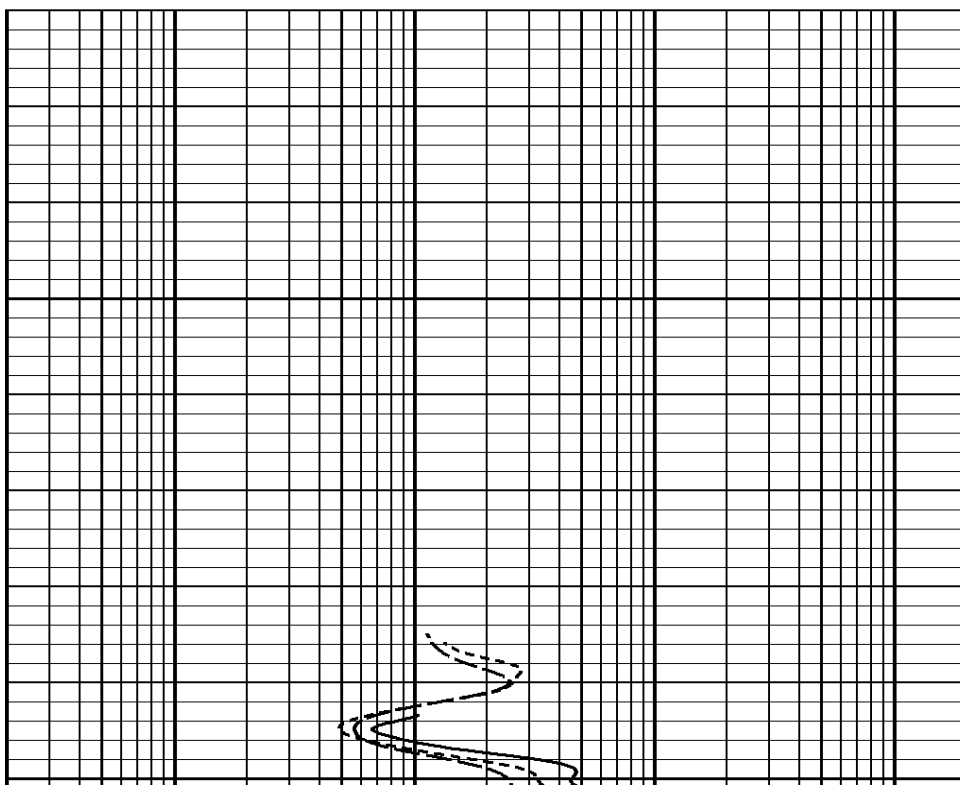
Well File: AND HAY 1 FEB 1 QUINT Scale: 1:240
 Segment: V1.D1.S5 REPEAT Acquired: 2013-02/01 05:30 3.2.0-11401
 Reference: 0 Processed: 2013-02/01 07:47 3.2.0-11401

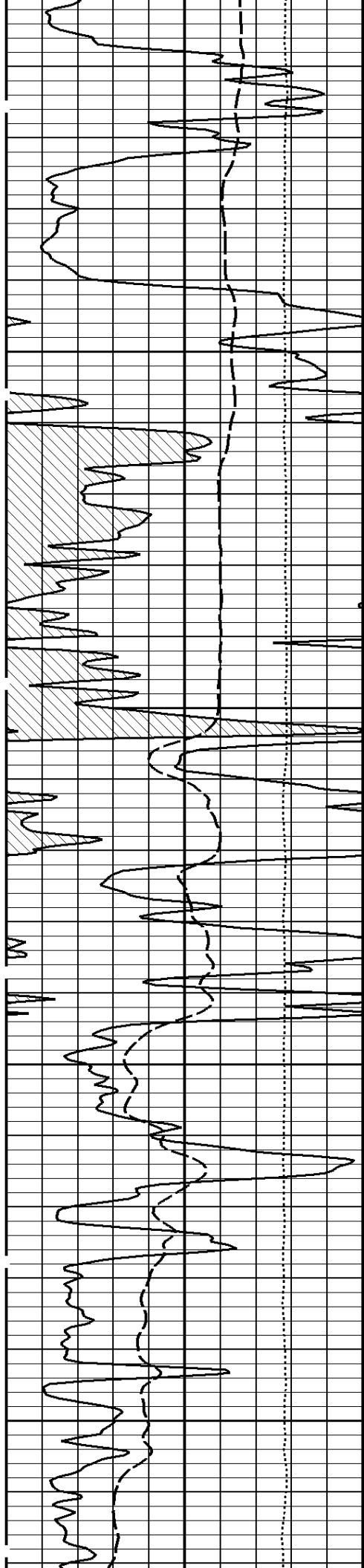
SPONTANEOUS POTENTIAL mV	DEEP INDUCTION OHMM
→ ←20	0.2 2000.0
TENSION LBS	MEDIUM INDUCTION OHMM
10000 0	0.2 2000.0
GAMMA RAY API UNITS	SHALLOW FOCUSED RESISTIVITY OHMM
150 0 300 150	0.2 2000.0

1:240 REPEAT SECTION



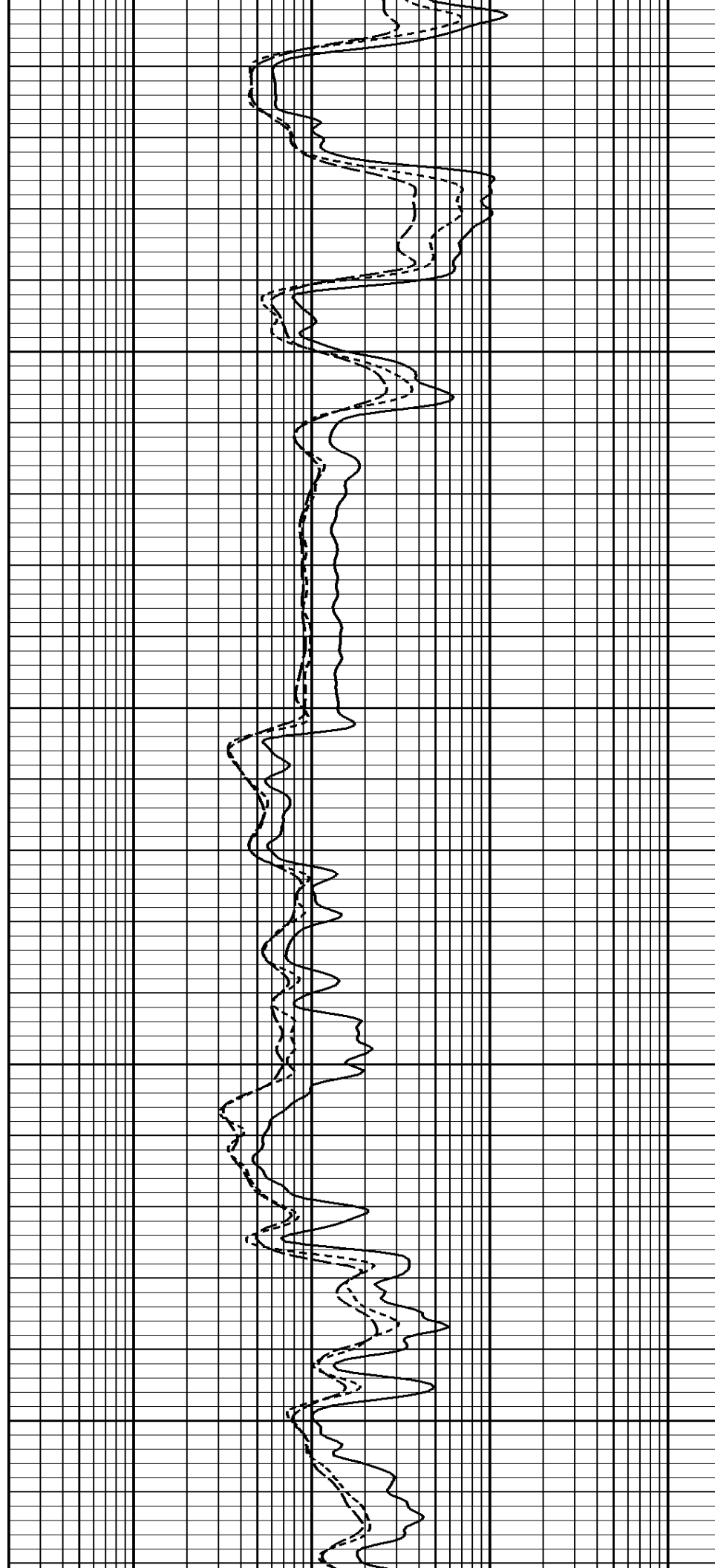
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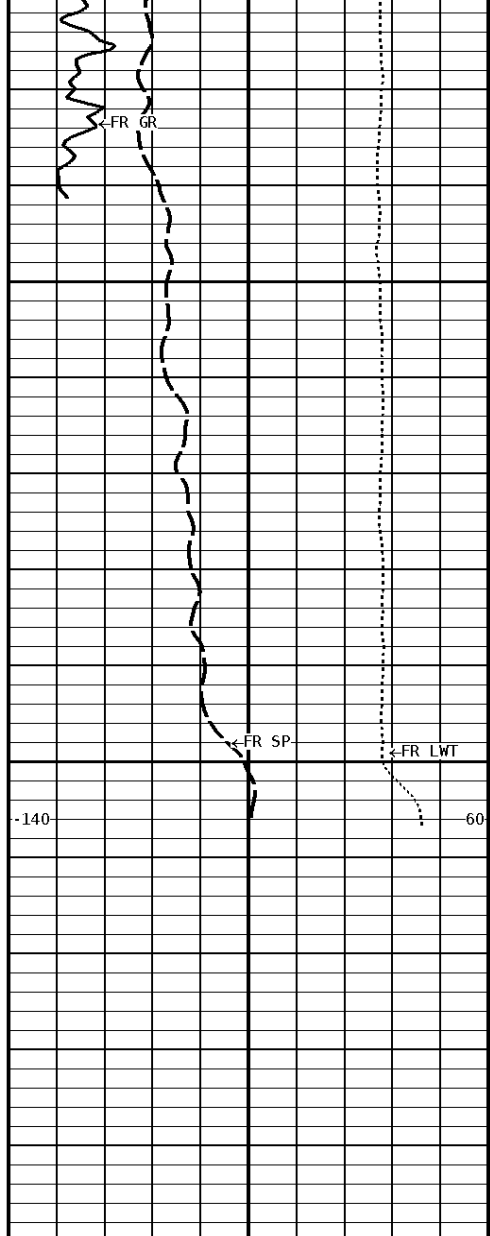




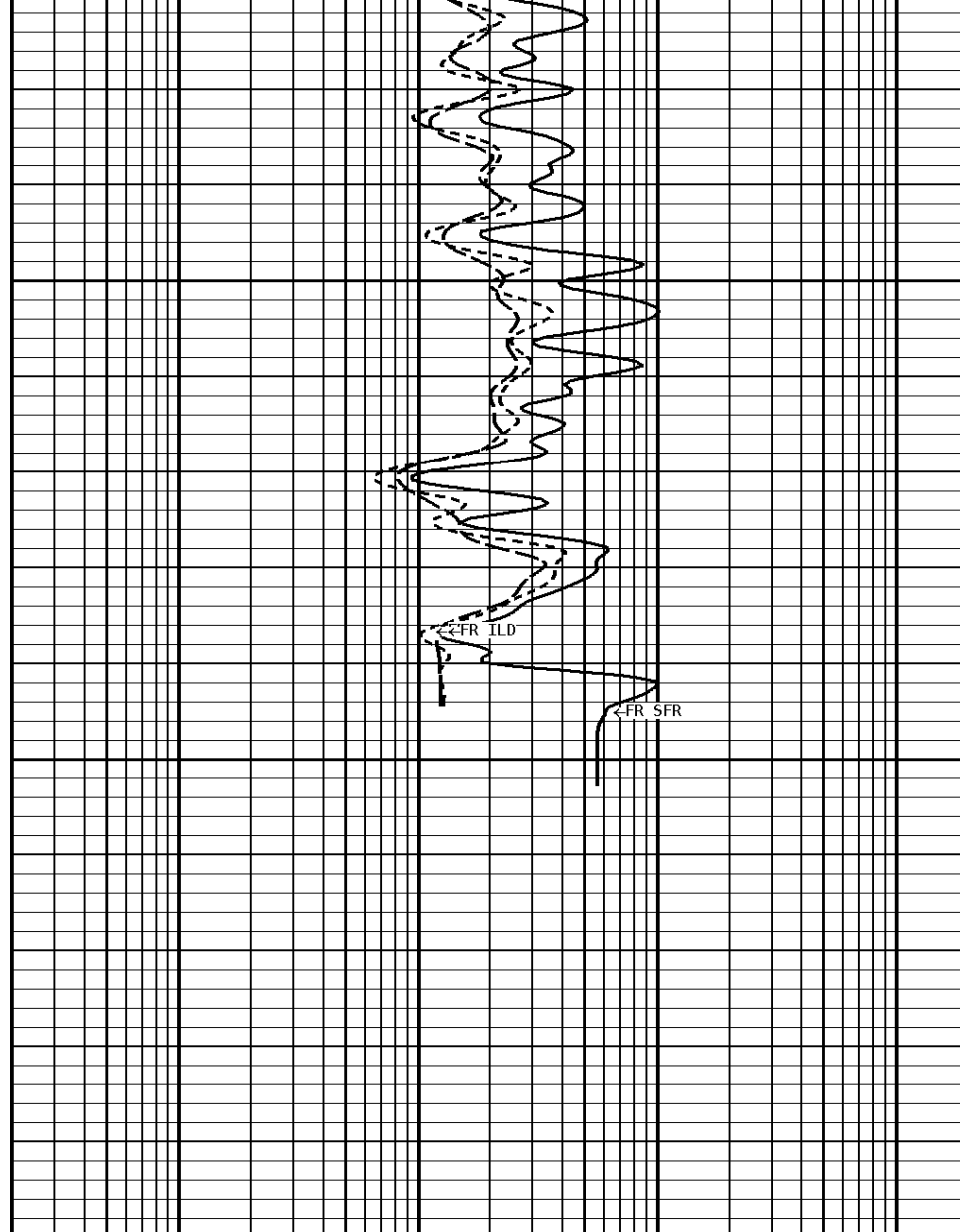
3700

3800





3900



1:240 REPEAT SECTION

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

SHALLOW FOCUSED RESISTIVITY OHMM	
0.2	2000.0
MEDIUM INDUCTION OHMM	
0.2	2000.0
DEEP INDUCTION OHMM	
0.2	2000.0

* Borehole Zone Factors *

Zone 1 99999.0 to 0.0 Feet		
Drill Bit Size	7.875	in
Casing Diameter	5.500	in
BHT Depth	3900.000	ft
Borehole Temperature	107.0	degF
Temperature Gradient	1.82	DCHM
Resistivity Of Mud	1.700	ohm/m

Resistivity Of Mud Temperature_____

64.00

degF

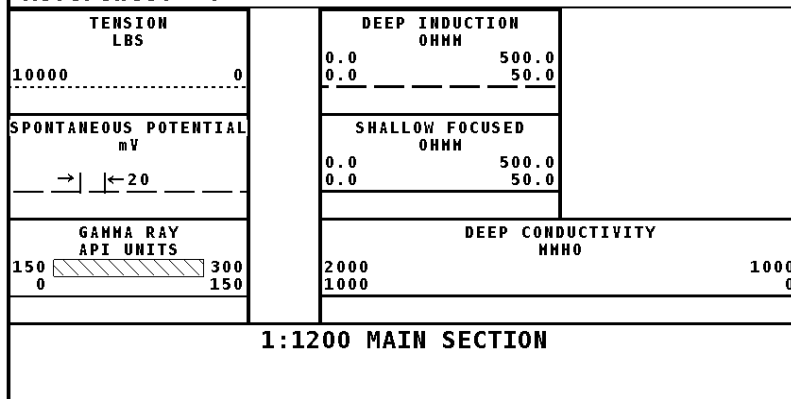
*** Calibration Summary ***

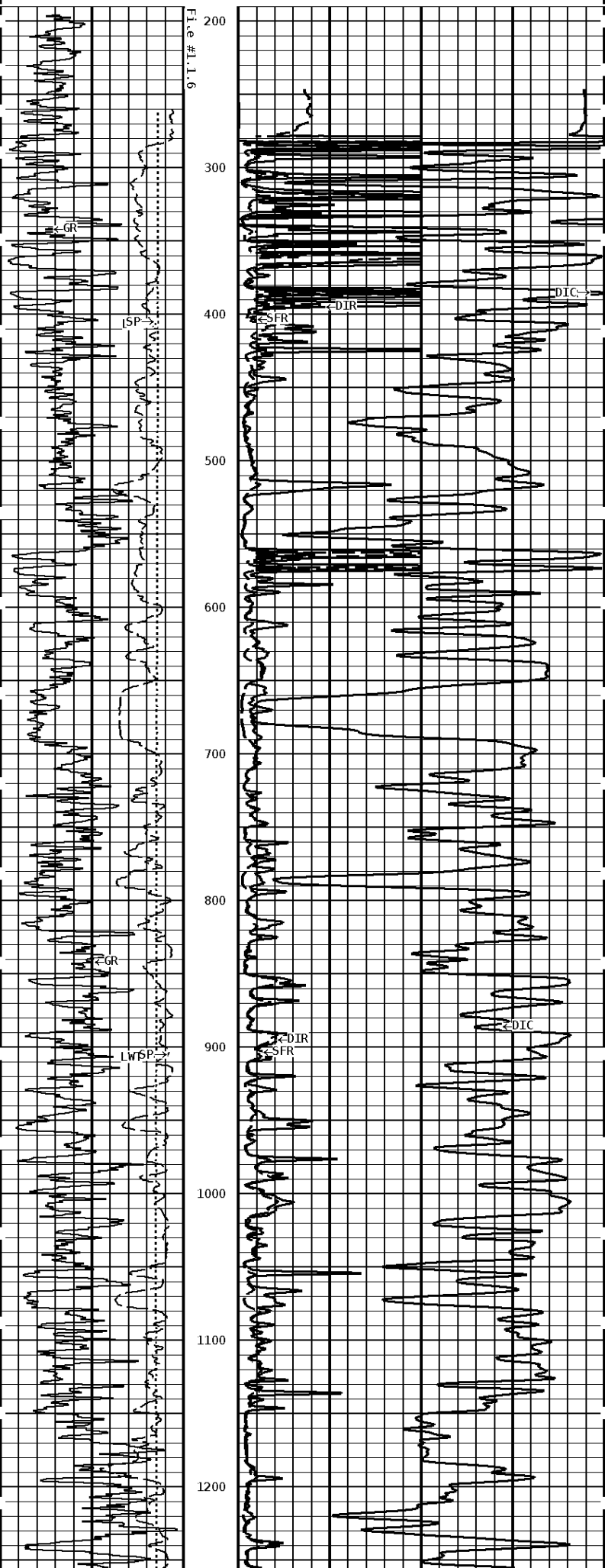
Shop Calibration						
GRT-B						
Performed : 04-SEP-2012				Time : 19:28		
Sensor Suite : GR-GR5				ID : GRT-BC-41		
	Measured		Units	Calibrated		Units
	Background	Jig		Jig		
GR	46	346	CPS	175		GRAPI

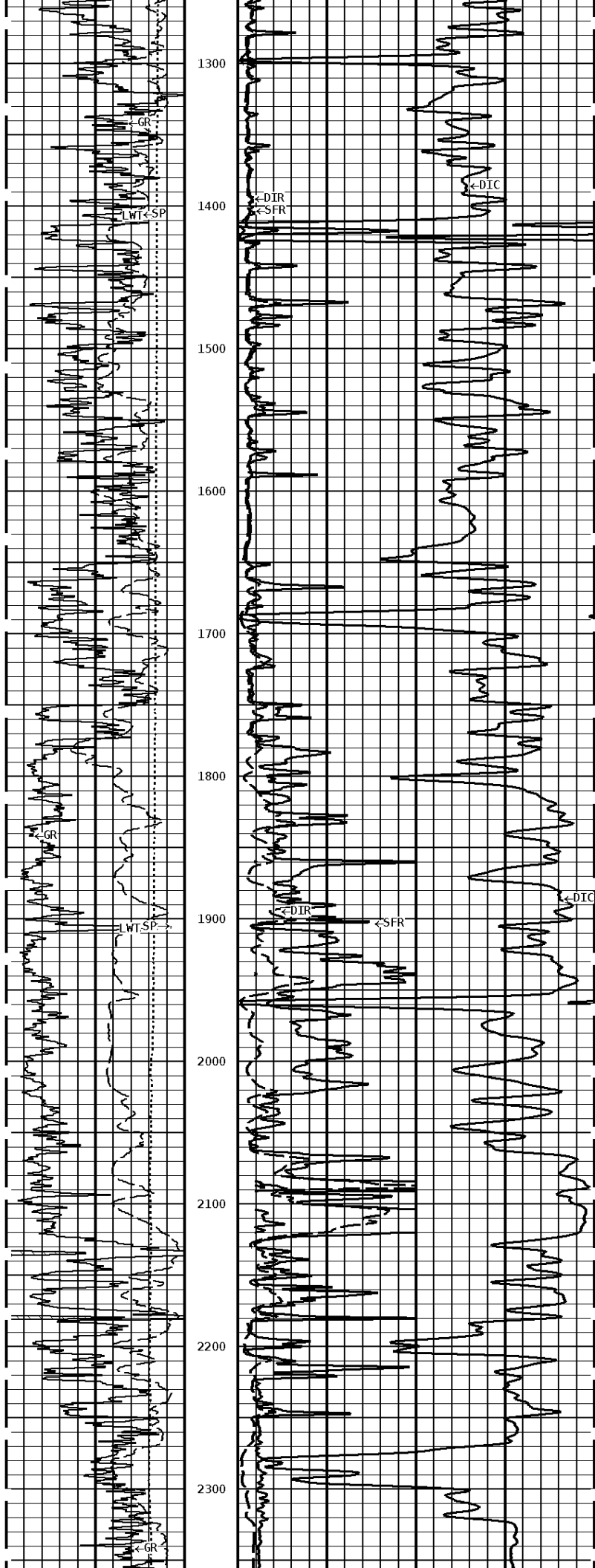
Shop Calibration						
PIT-CA						
Performed : 21-NOV-2012				Time : 14:36		
Sensor Suite : P-IND-T				ID : PIT-AB-005		
Medium						
	Measured			Calibrated		
	R	X		R	X	Units
Air	130351	131011		-0.2	-0.2	MMHOS
Zero	131064	131068		26.7	1.9	MMHOS
Reference	250174	250556		5026.7	5001.9	MMHOS
Loop	128308	218141		3560.1	3731.6	MMHOS
Sonde Error				-3.6	3.0	MMHOS
Cond				5026.7	5001.9	MMHOS
Deep						
	Measured			Calibrated		
	R	X		R	X	Units
Air	128932	131135		-0.1	-0.0	MMHOS
Zero	131084	131072		43.9	-7.2	MMHOS
Reference	233274	233952		2043.9	1992.8	MMHOS
Loop	126596	219999		1681.7	1773.2	MMHOS
Sonde Error				-4.1	-7.7	MMHOS
Cond				2043.9	1992.8	MMHOS
Temperature						
	Measured			Calibrated		
	Low	High		Low	High	Units
	16980.0	56920.0		70.0	350.0	DEGF

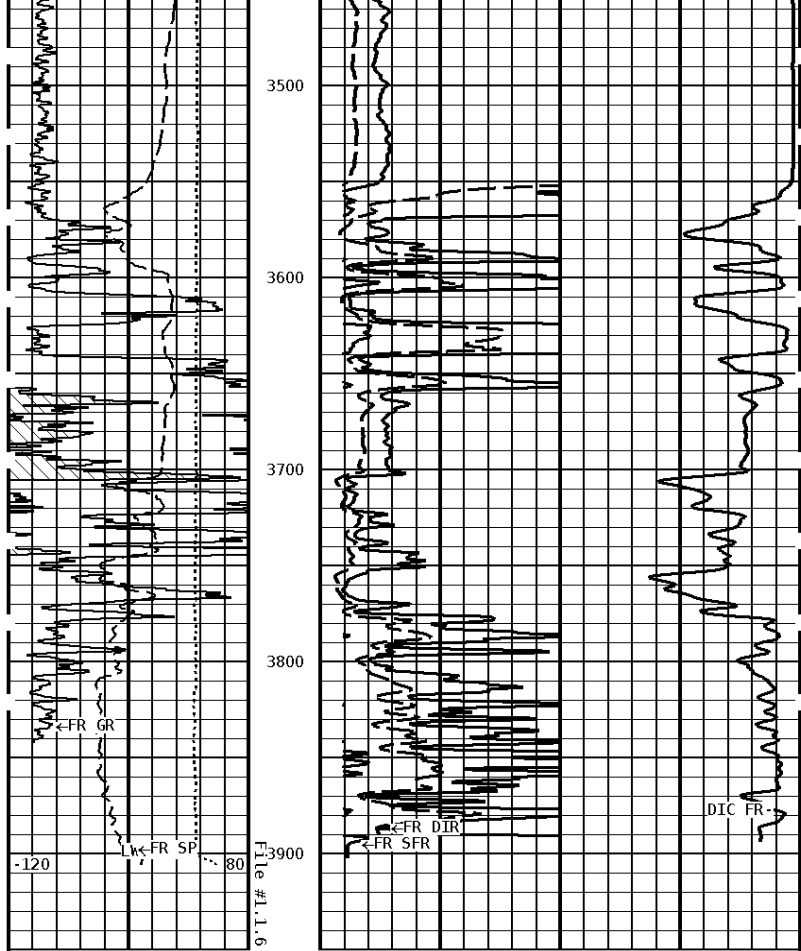
Performed : 21-Nov-2012				Time : 14:39		
Sensor Suite : SFL				ID : PIT-AB-005		
Internal						
	Measured			Calibrated		
	Zero	Reference		Zero	Reference	Units
Im	32765.9	49467.5		0.0	7028.0	uA
Ib	32769.2	48720.1		0.0	1750.0	mA
MOM1	32713.4	56534.1		0.0	175.0	mV
Equivalent SFL					43.97	OHMM

Performed : 21-NOV-2012				Time : 14:40		
Sensor Suite : P-SP				ID : PIT-AB-005		
Internal						
	Measured			Calibrated		
	Zero	Reference		Zero	Reference	Units
	32768.6	58921.2		0.0	1000.0	mV

Well File: AND HAY 1 FEB 1 QUINT**Scale:** 1:1200**Segment:** V1.D1.S6 MAIN**Acquired:** 2013-02/01 05:49 3.2.0-11401**Reference:** 0**Processed:** 2013-02/01 07:48 3.2.0-11401







1:1200 MAIN SECTION

GAMMA RAY API UNITS	
150	300
0	150

SPONTANEOUS POTENTIAL mV	
→	← 20

TENSION LBS	
10000	0

DEEP CONDUCTIVITY MHM	
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



Tucker
ENERGY SERVICES

Company: ANDERSON ENERGY, INC
Well: HAY #1
Location: 2310' FNL & 2240' FEL
Logged: 2013-02-01
K.B. Elev: 1291.0 Ft