

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		
Date	04-11-2012		
Date/Time On Bottom	04-11-2012 15:15		
Depth to Fluid	0.0 Ft		
Salinity	0.000 PPM		
RMF@BHT	0.190 @ 138 F		
RMC@BHT	0.270 @ 138 F		

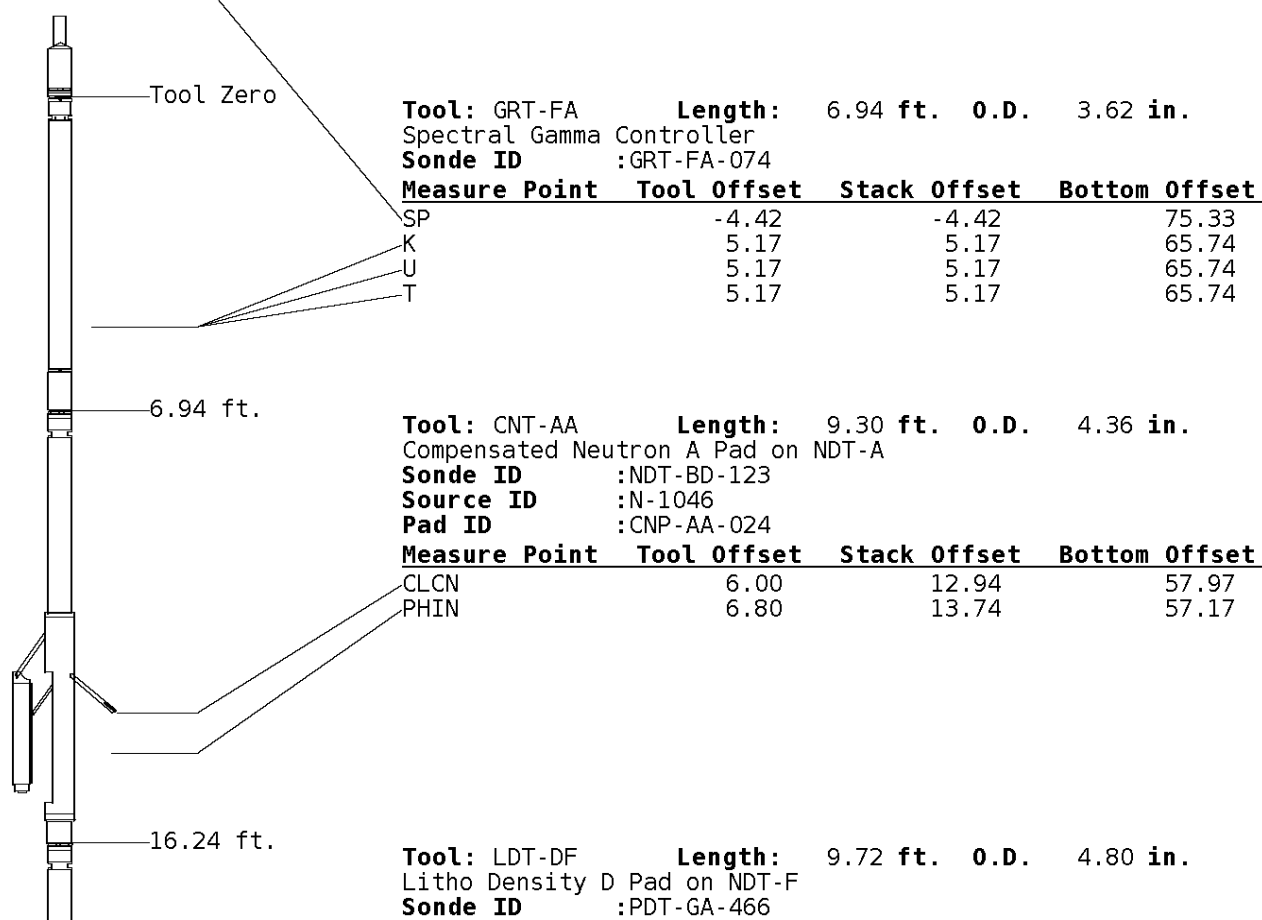
ALL PRESENTATIONS AS PER CUSTOMER REQUEST.
 SGT, CNT, LDT, MLT, CST, AND PIT RUN IN COMBINATION.
 CALIPERS ORIENTED ON X-Y AXIS.
 2.71 G/CC USED TO CALCULATED POROSITY.
 ANNULAR HOLE VOLUME CALCULATED USING 5.50" PRODUCTION CASING.
 PHIN IS CALIPER CORRECETD.

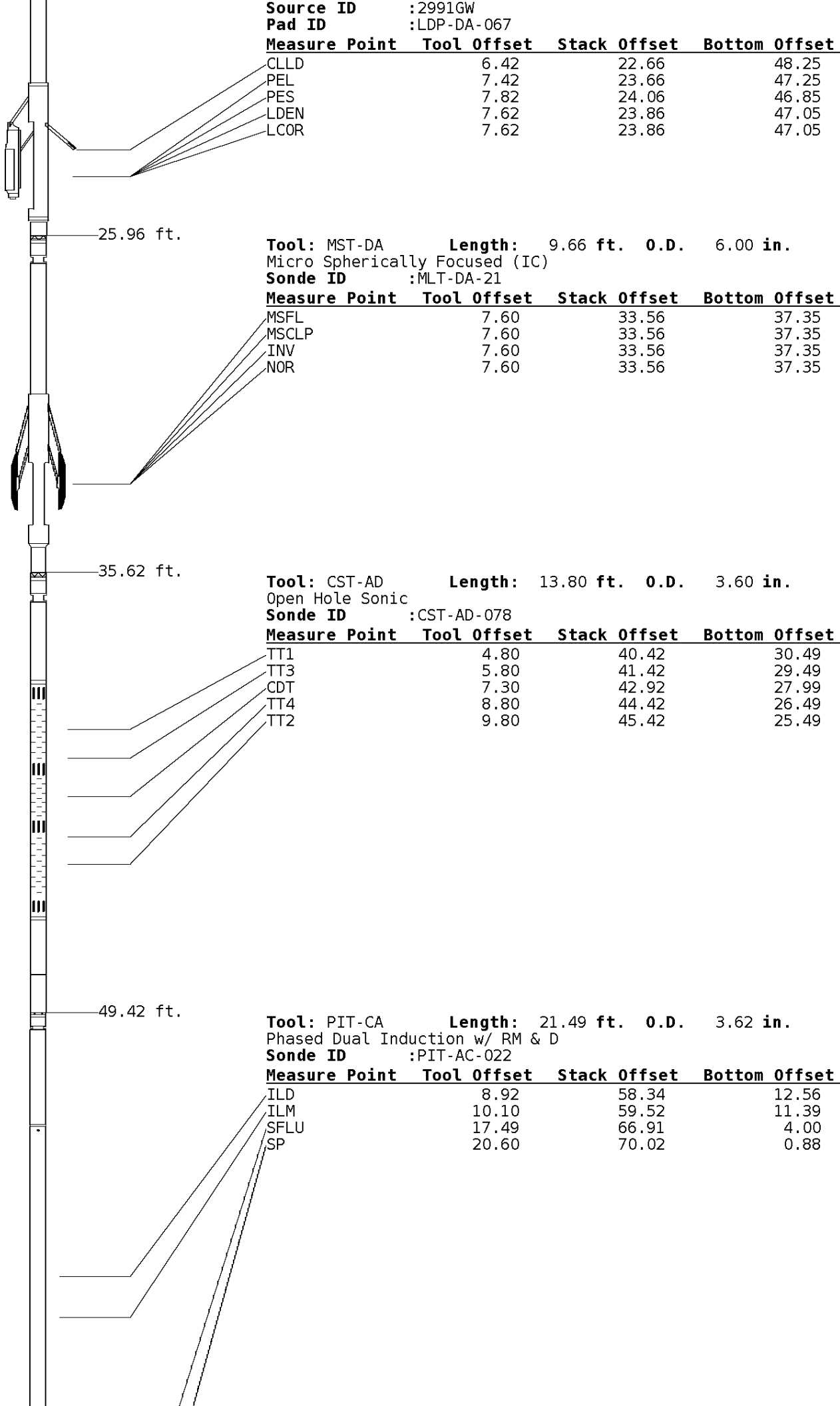
GRT: GRP, GRX, UFGRP, S-KK, S-TK, S-UK.
 CNT: PHIN, CLCNIN, PHXN,
 LDT: PORL, PXRL, LCORN, LCORNX, PECLN, PECLNX, LDENN, LDENNX, PORLLS, CLLDIN.
 MLT: NOR_RF, INV_RF, MSCLPIN.
 CST: PORL, CDTF, ITT, TT1PF, TT2PF, TT3PF, TT4PF.
 PIT: ILD, ILM, SPU, SFLAEC.

OPERATORS:
 N. LOYD
 B. STEPHENS

Tool String Schematic

Total Tool Length - 70.91 ft.
Maximum Outside diameter - 6.00 in.
Net Weight in Air - 1202.00 lbs.





LWT ————— 70.91 ft.

Well File: LBE WOL 15-1 APR 11_SGTQUINT

Scale: 1:600

Segment: V1.D1.S5 MAIN

Acquired: 2012-04/11 15:34 3.2.0-10367

Reference: 0

Processed: 2012-04/11 19:08 3.2.0-10367

RXO/RT

-160 ————— 40

TENSION
LBS

10000 ————— 0

SPONTANEOUS POTENTIAL
mV

→ | | ← 20

GAMMA RAY
API UNITS

150 0 300 150

SHALLOW FOCUSED RESISTIVITY
OHMM

0.0 ————— 500.0
0.0 ————— 50.0

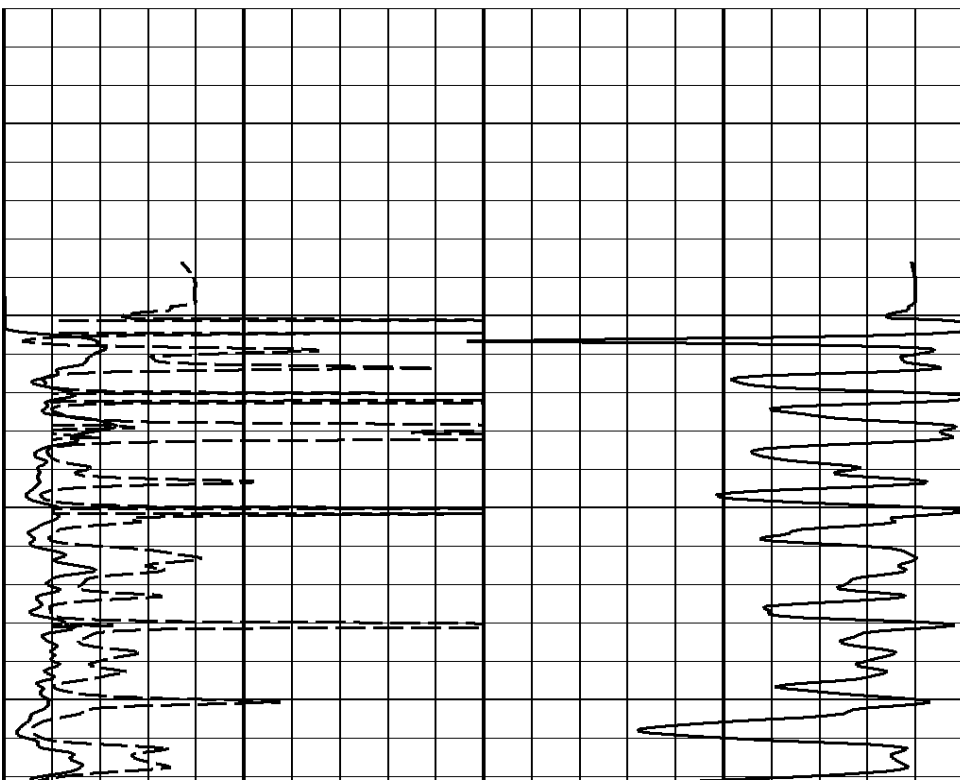
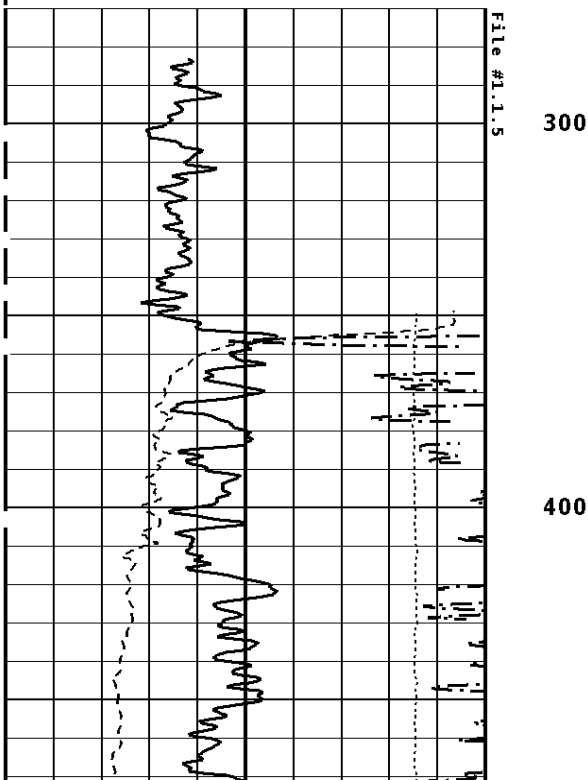
DEEP INDUCTION
OHMM

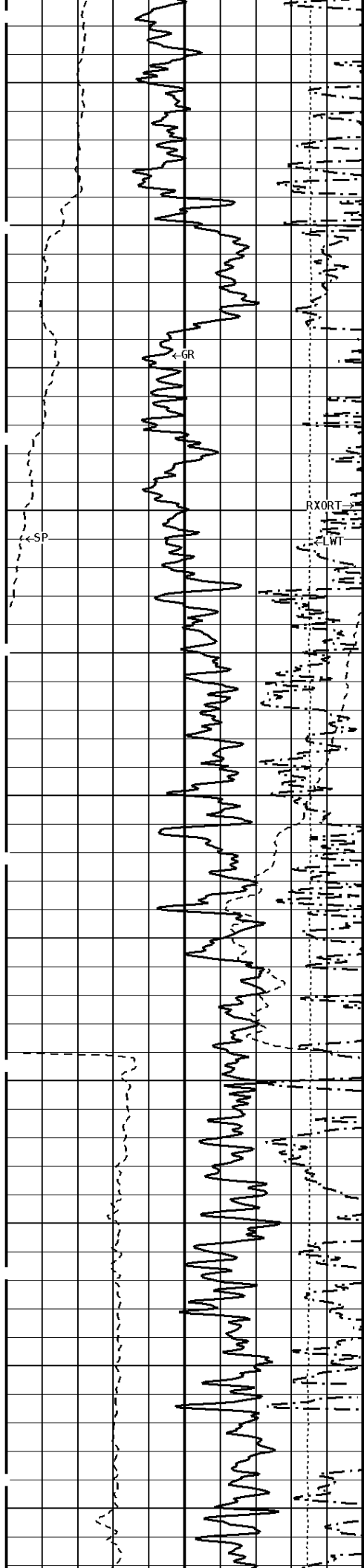
0.0 ————— 500.0
0.0 ————— 50.0

DEEP CONDUCTIVITY
MMHO

2000 ————— 1000
1000 ————— 0

1:600 SECTION





500

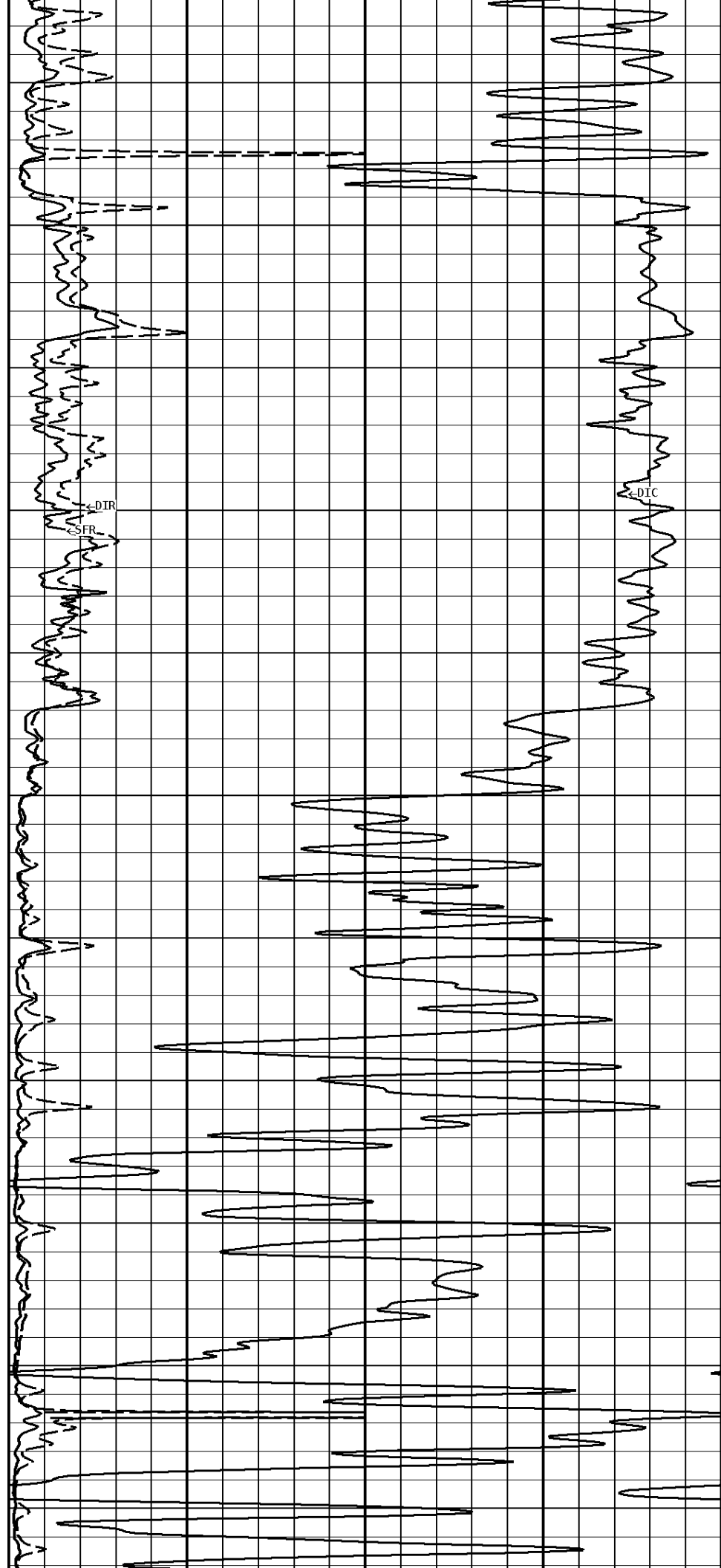
600

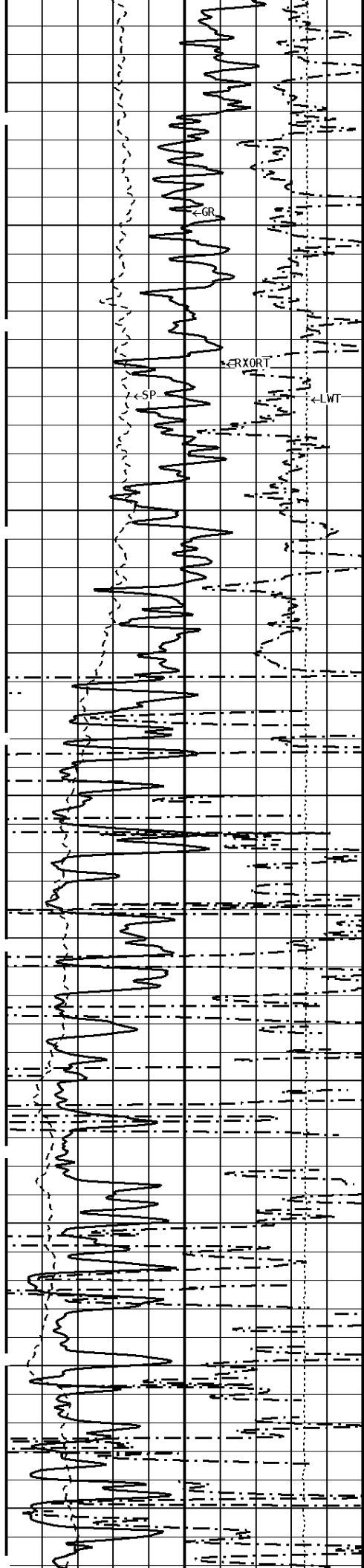
700

800

900

1000





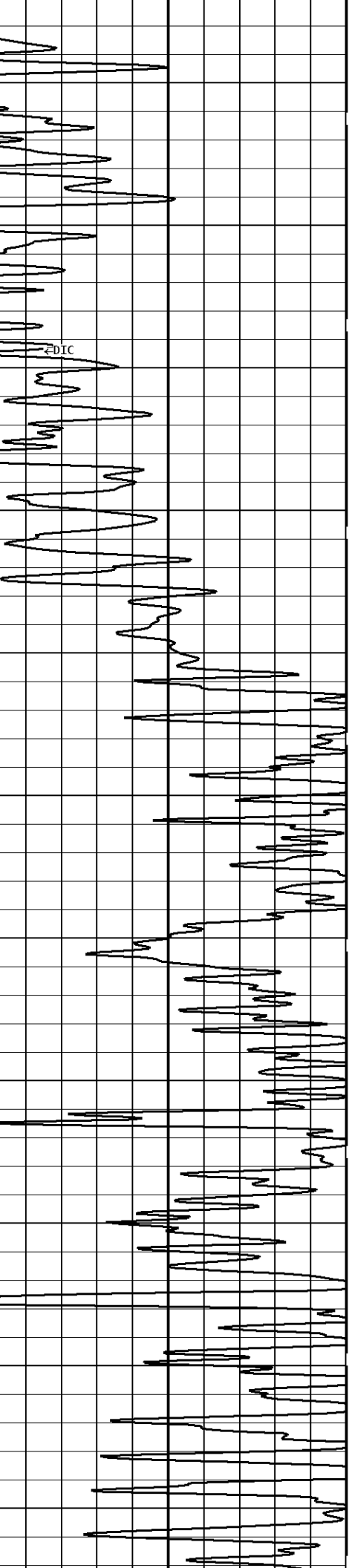
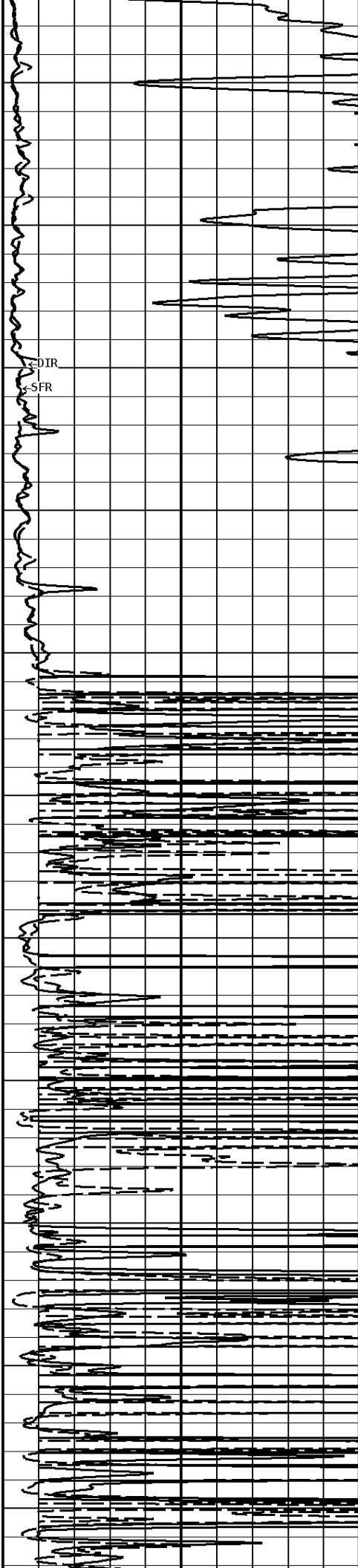
1100

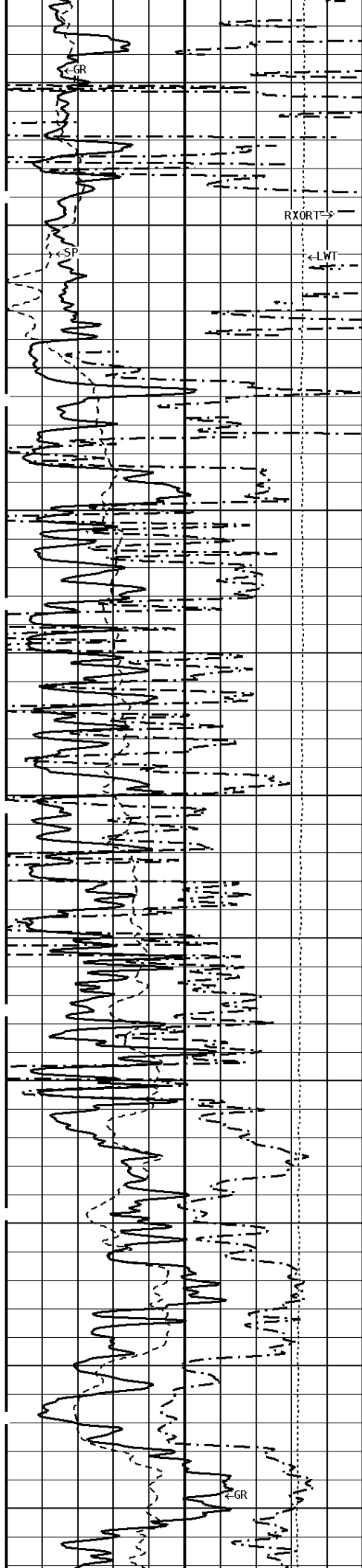
1200

1300

1400

1500





1600

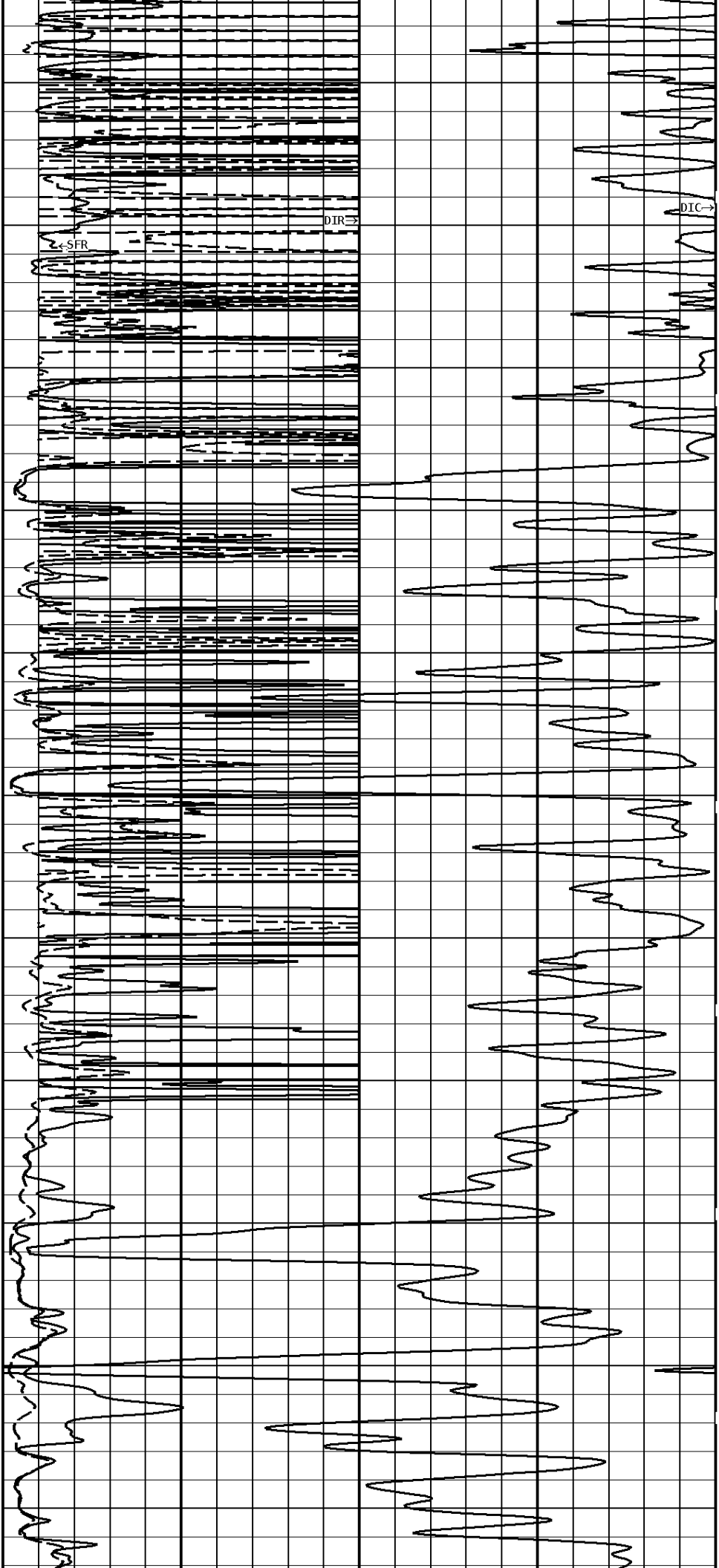
1700

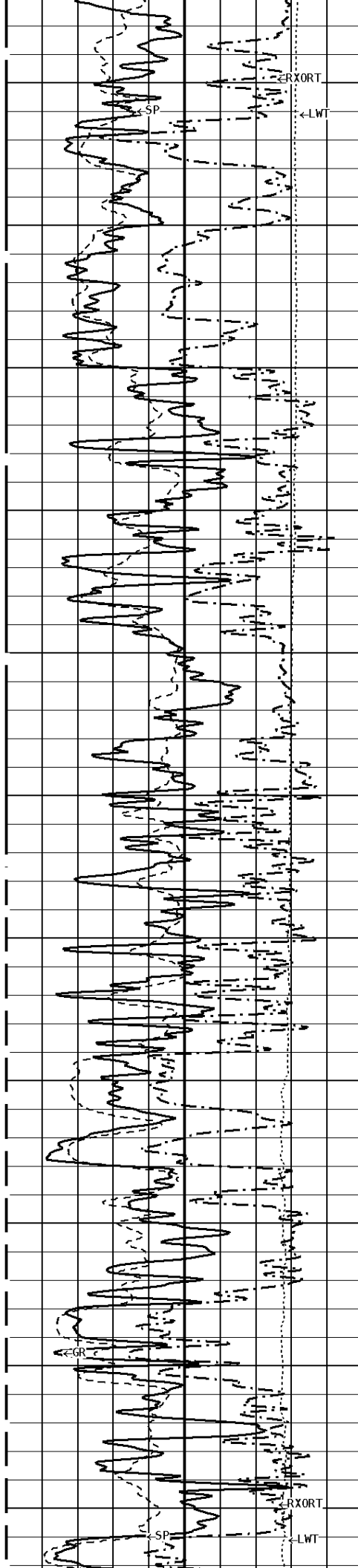
1800

1900

2000

2100





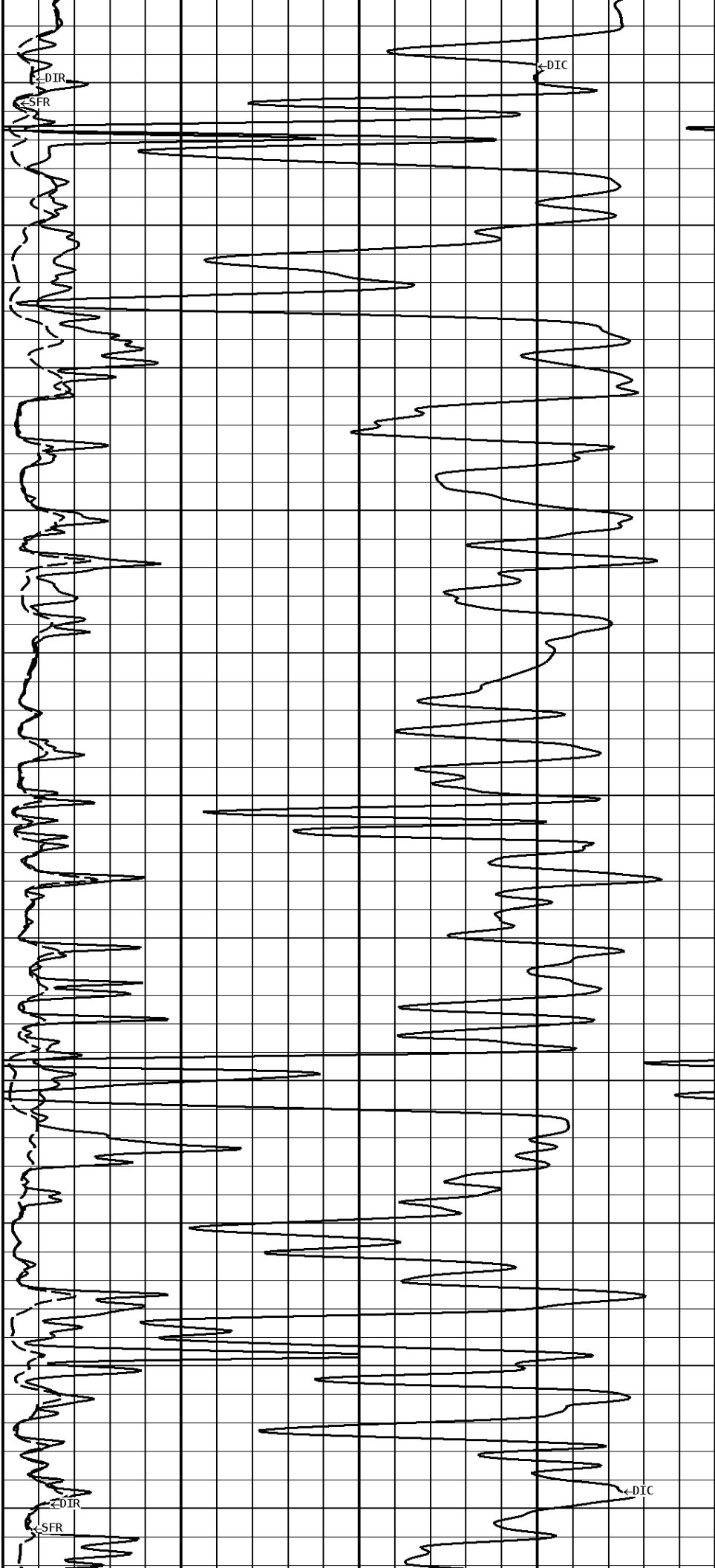
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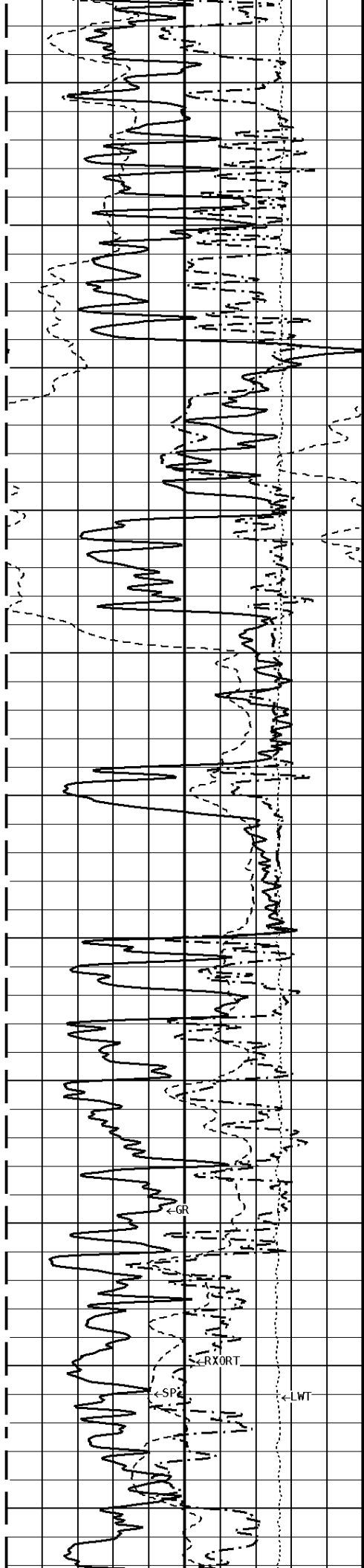
2300

2400

2500

2600





2700

2800

2900

3000

3100

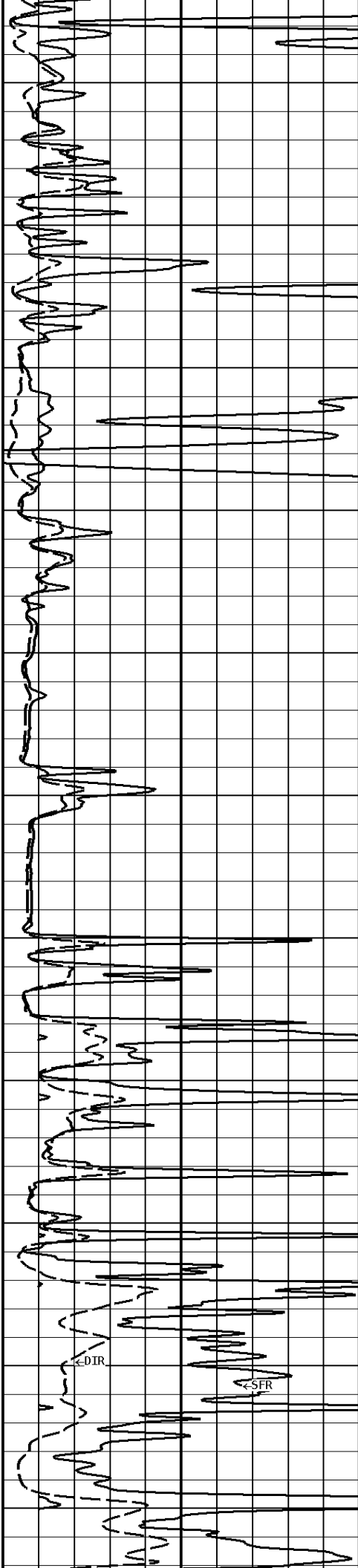
3200

GR

←RXORT

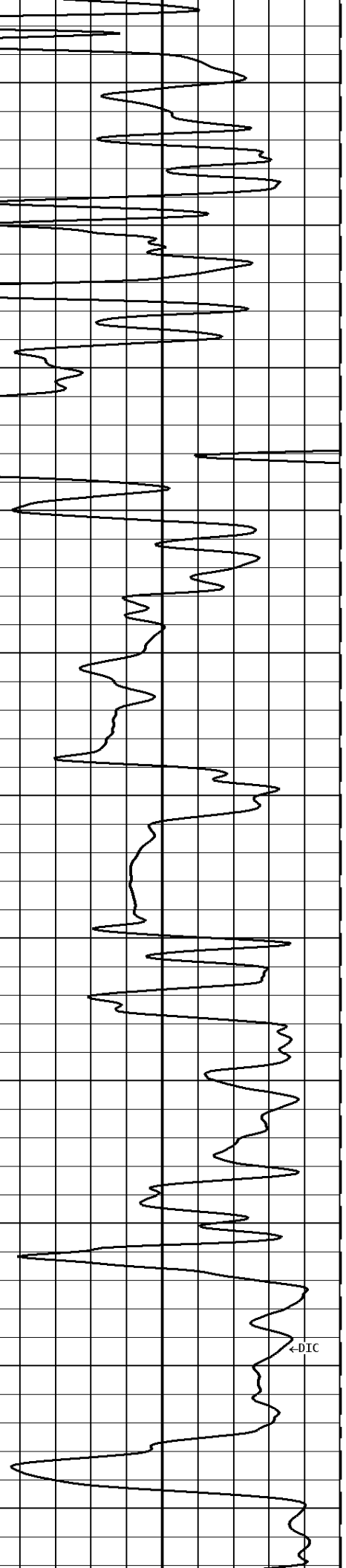
←SP

←LWT

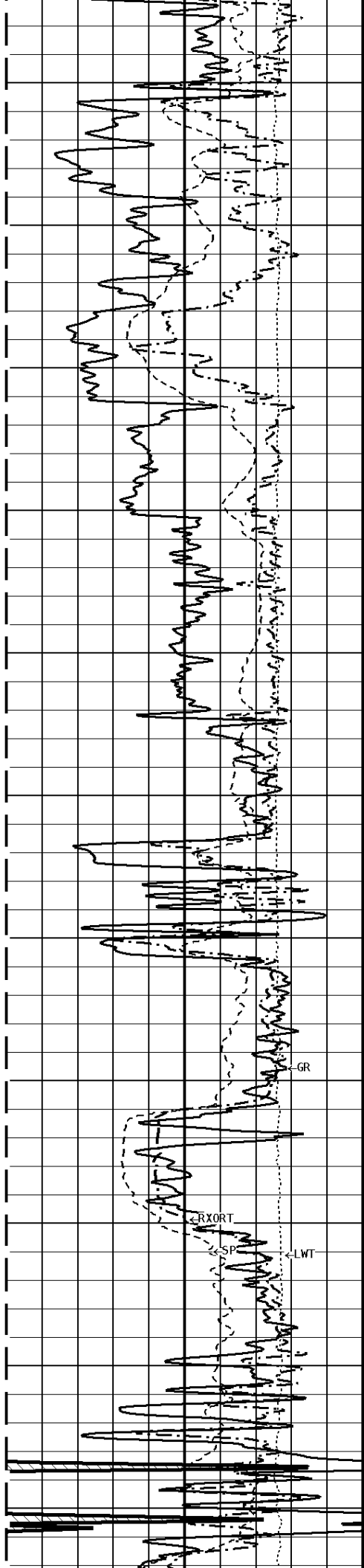


←DIR

←SFR



←DIC



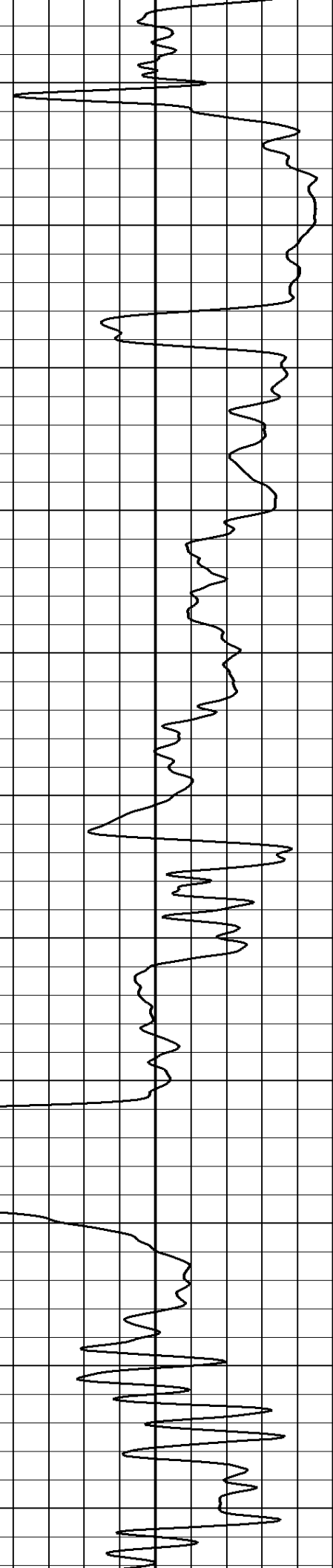
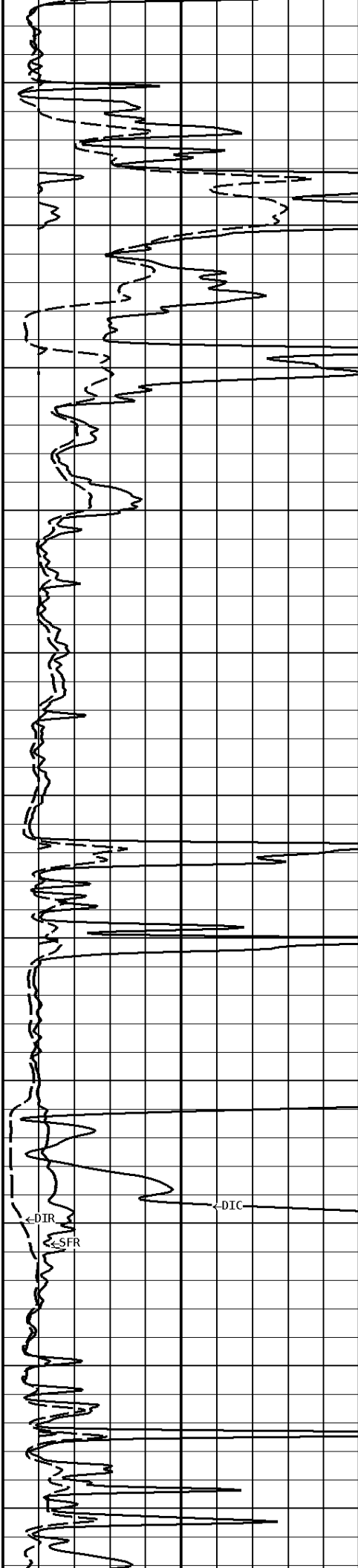
3300

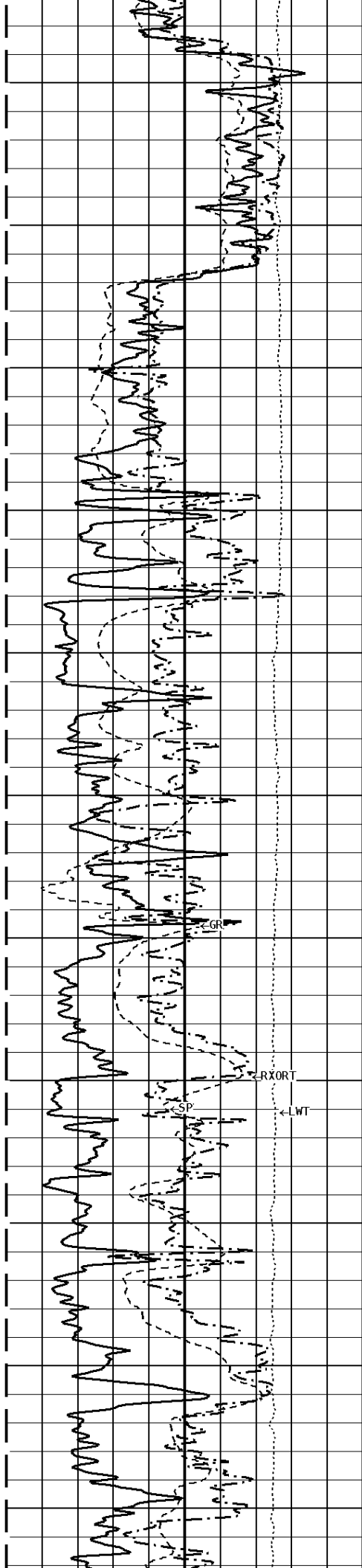
3400

3500

3600

3700





3800

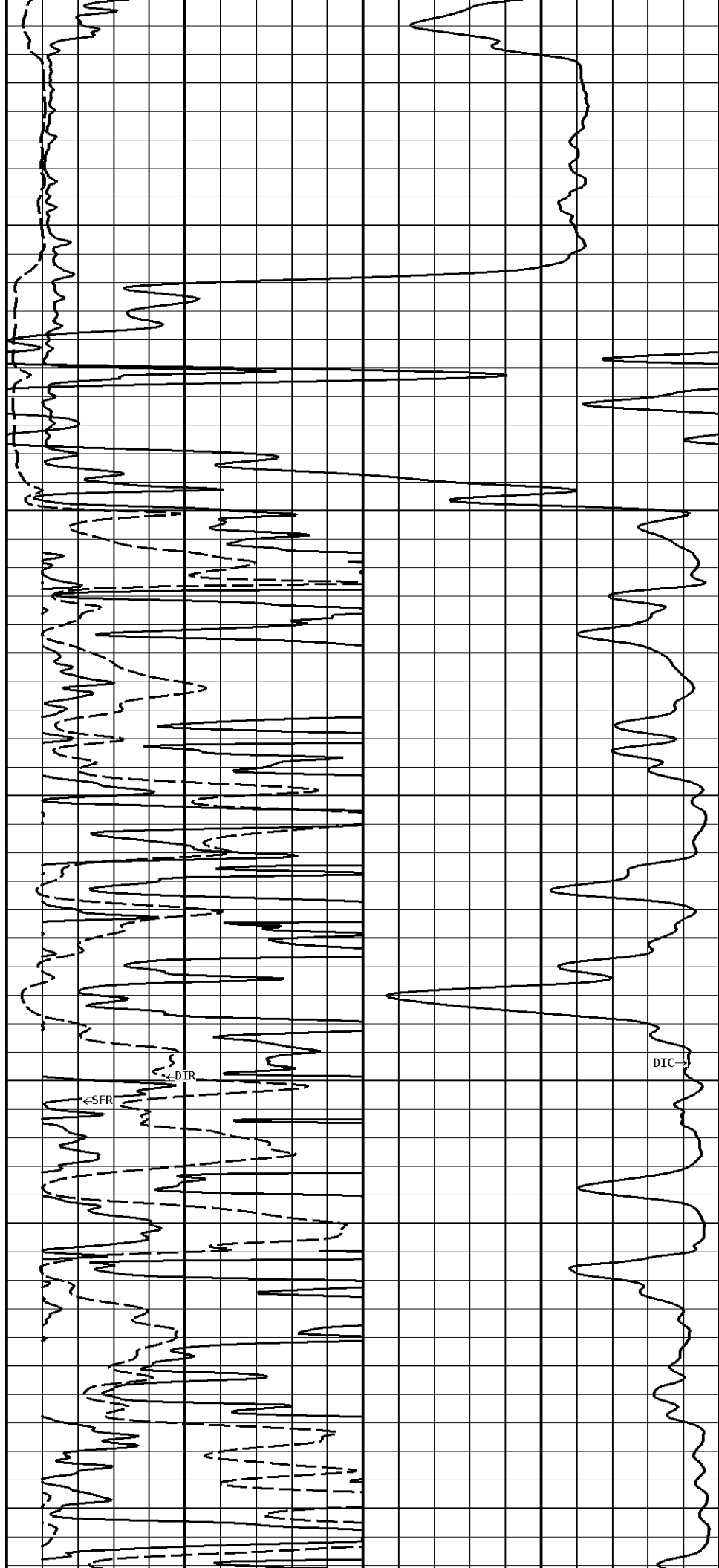
3900

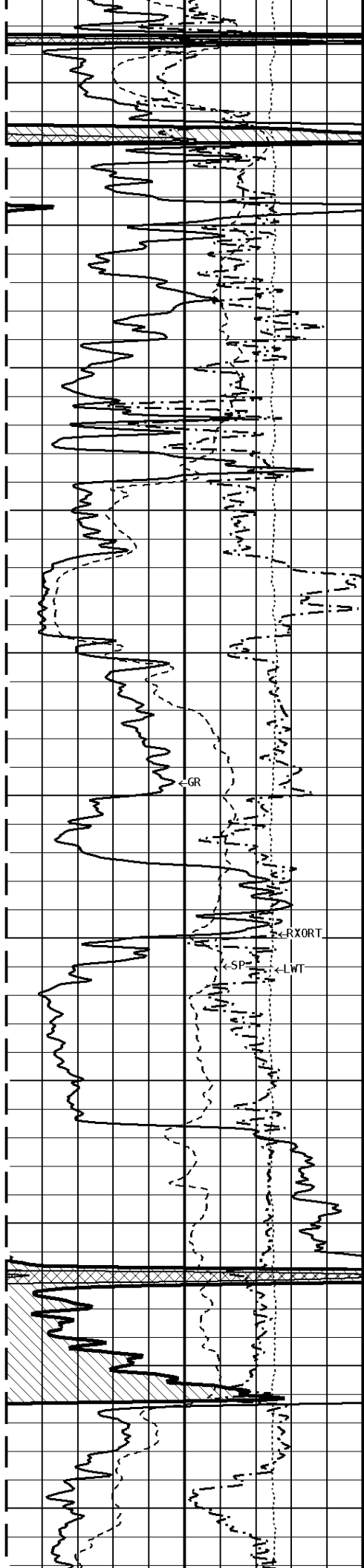
4000

4100

4200

4300





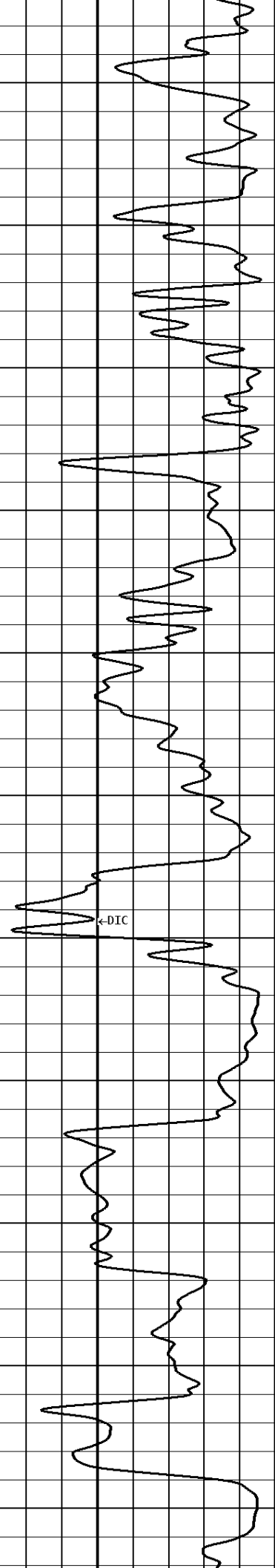
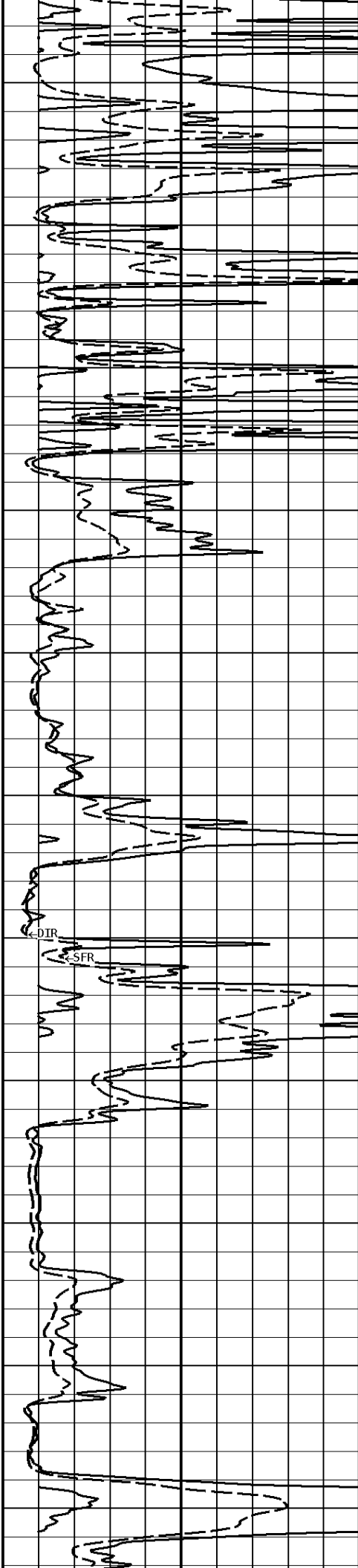
4400

4500

4600

4700

4800

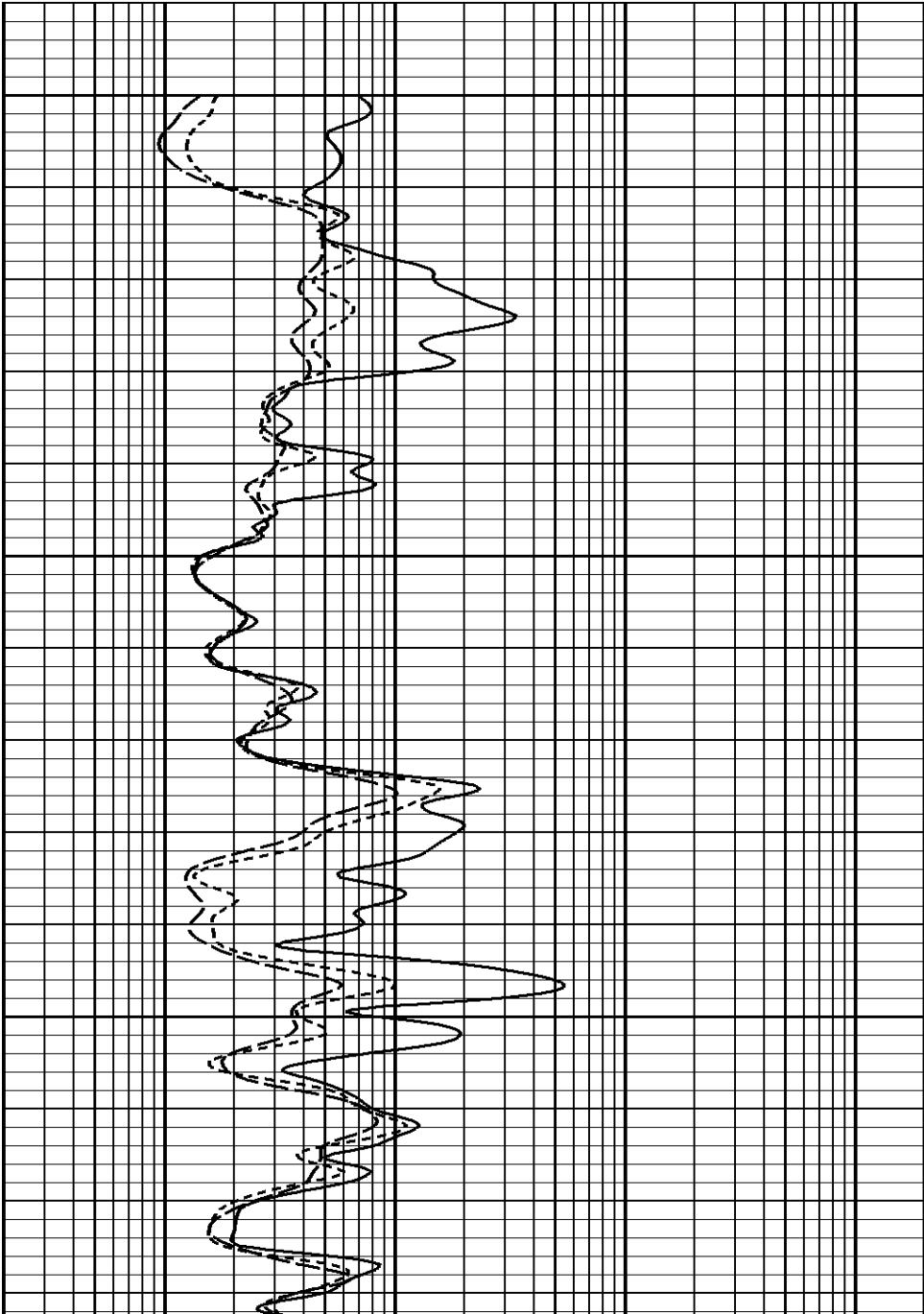
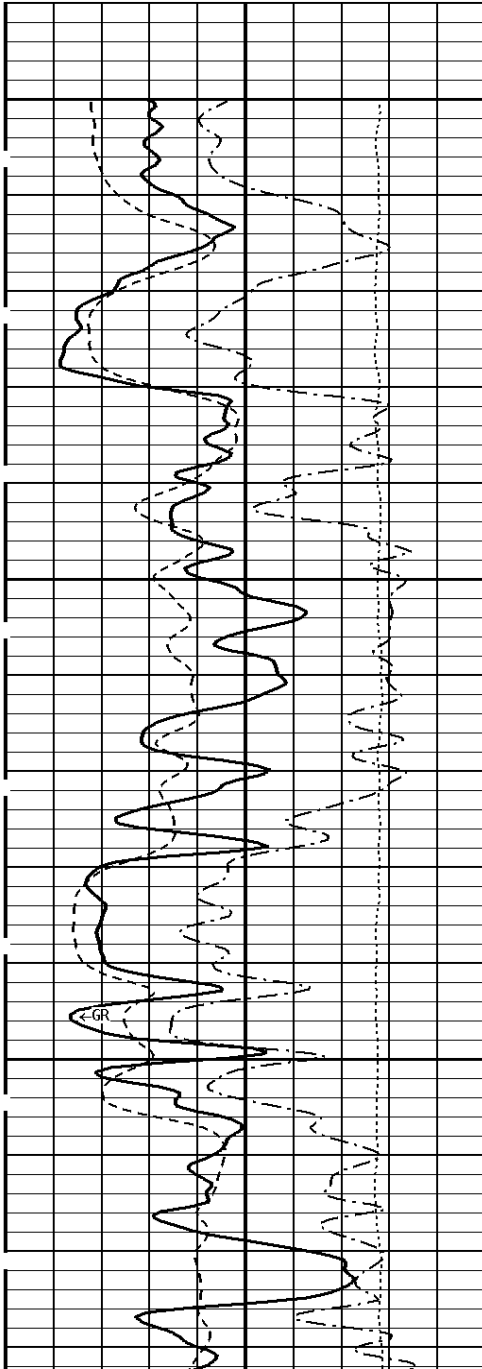


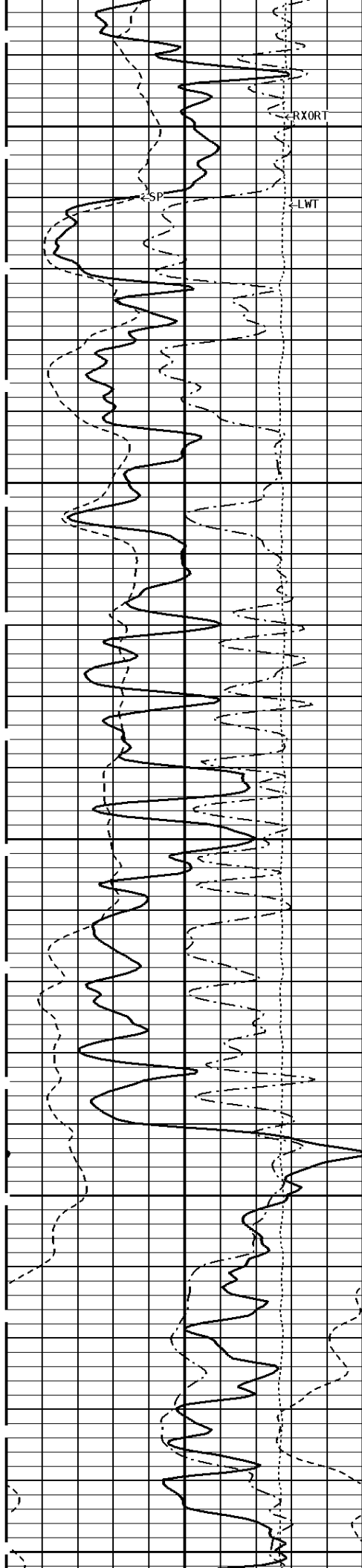
DIC

RXO/RT	
-160	40
TENSION LBS	
10000	0
SPONTANEOUS POTENTIAL mV	
→	←20
GAMMA RAY API UNITS	
150	300
0	150

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

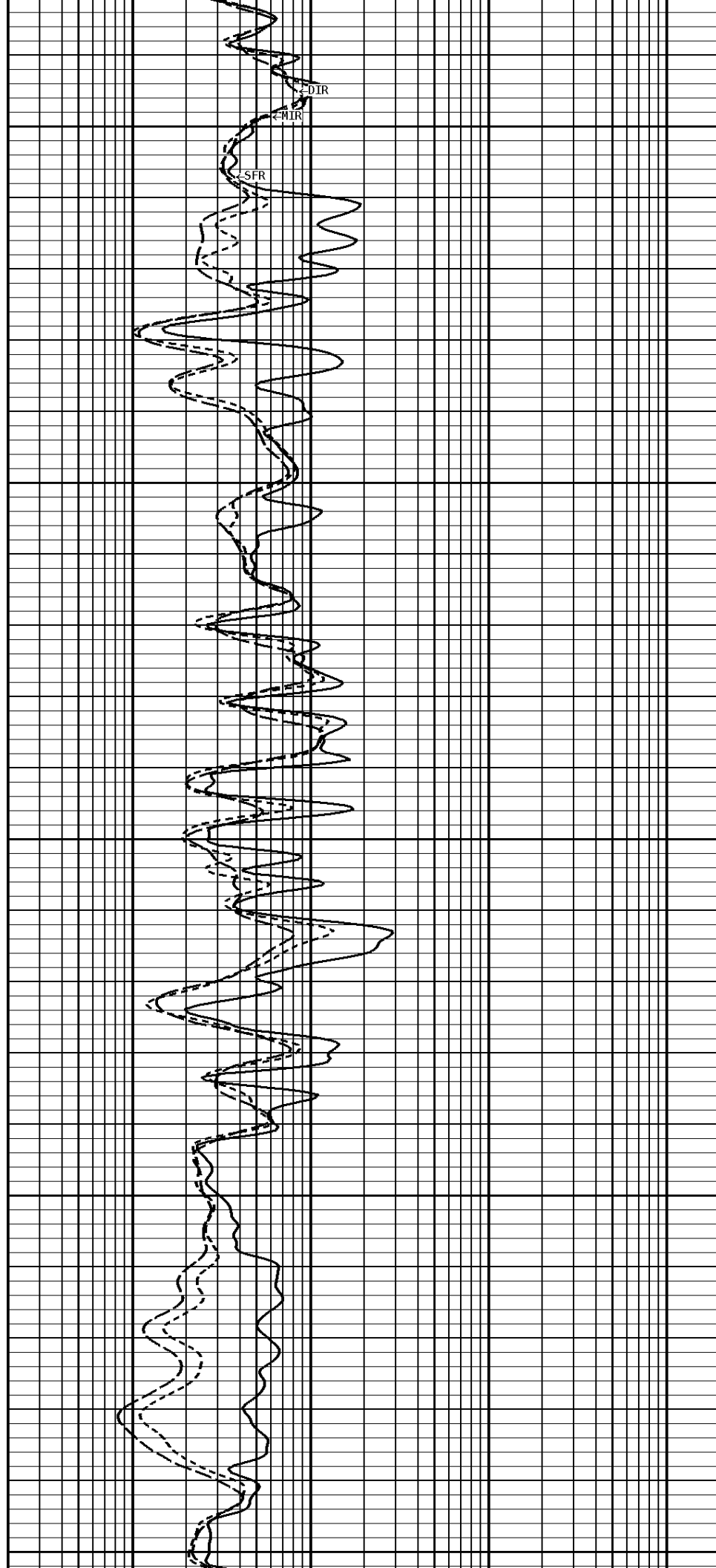
1:240 MAIN SECTION

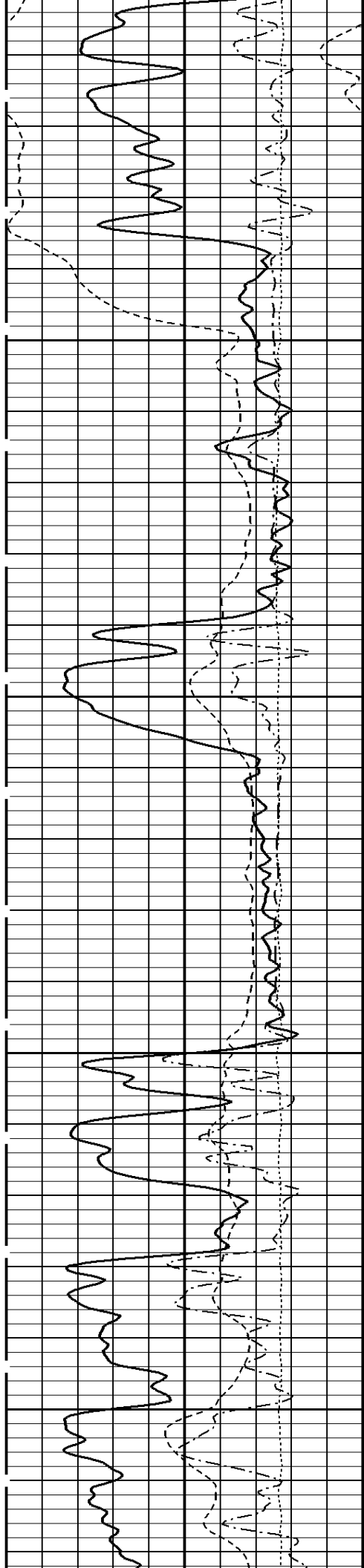




2700

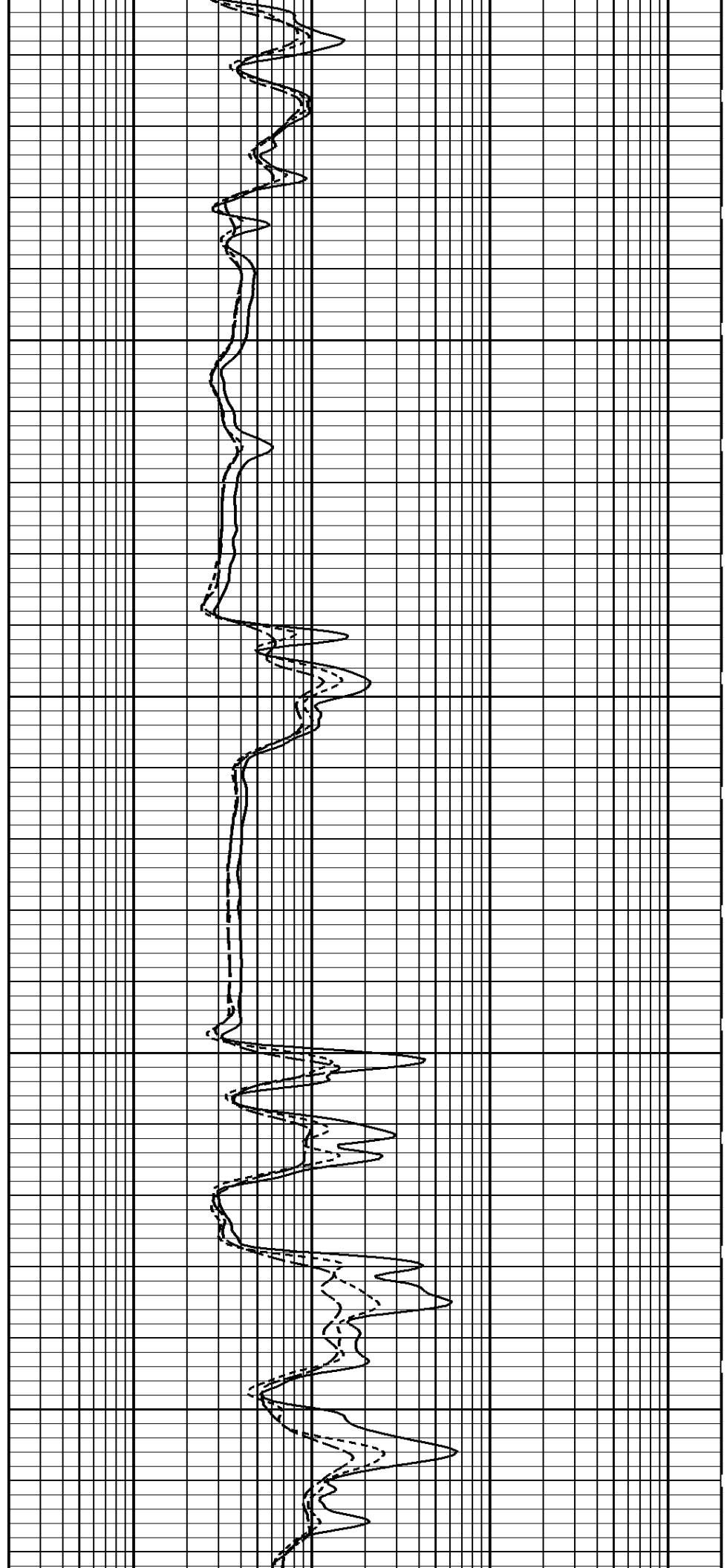
2800

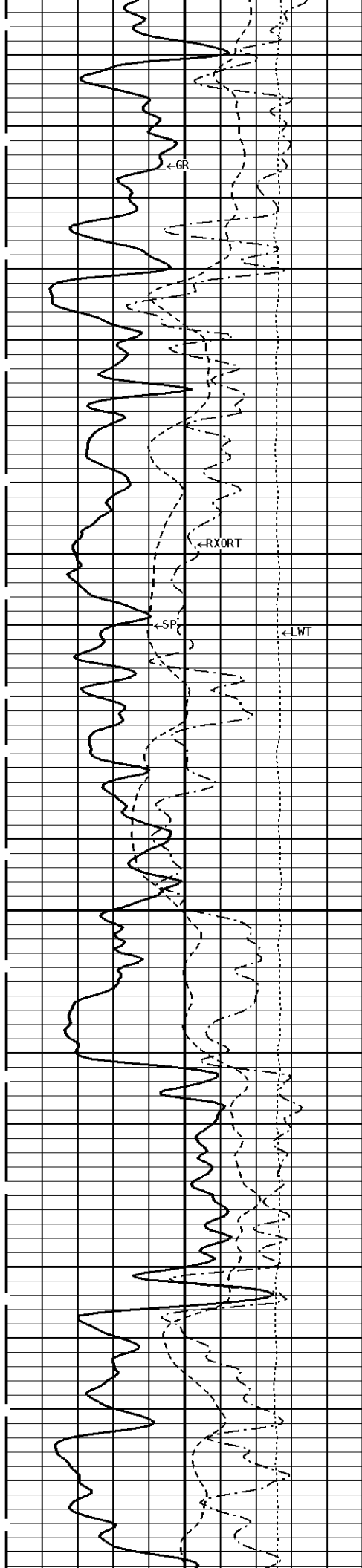




2900

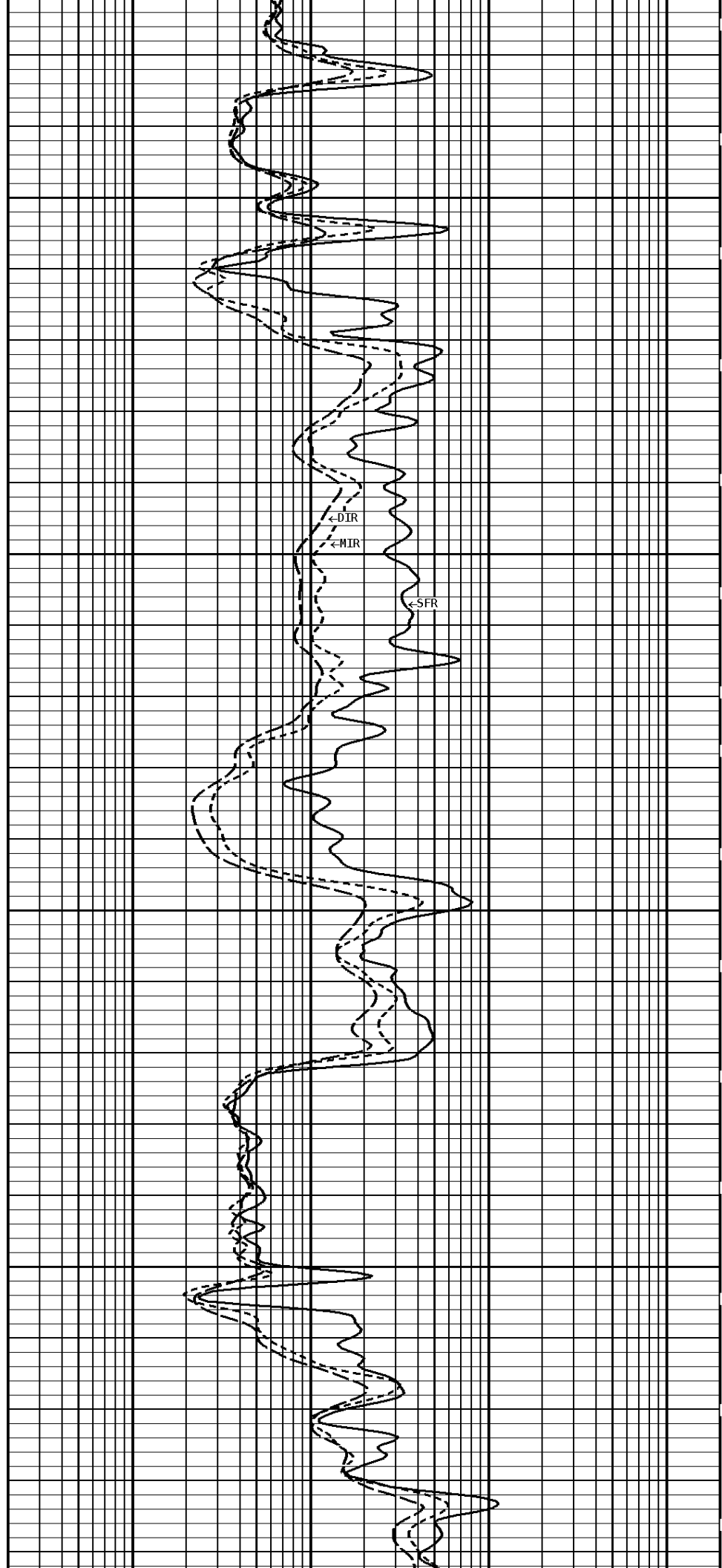
3000





3100

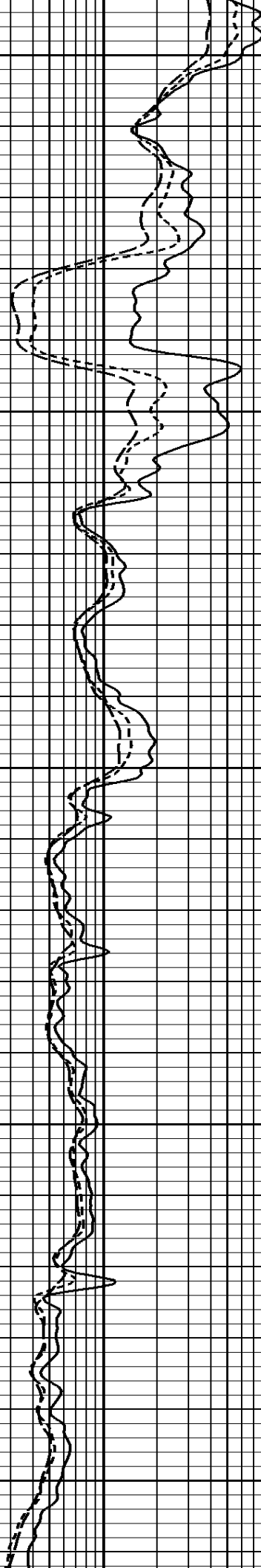
3200

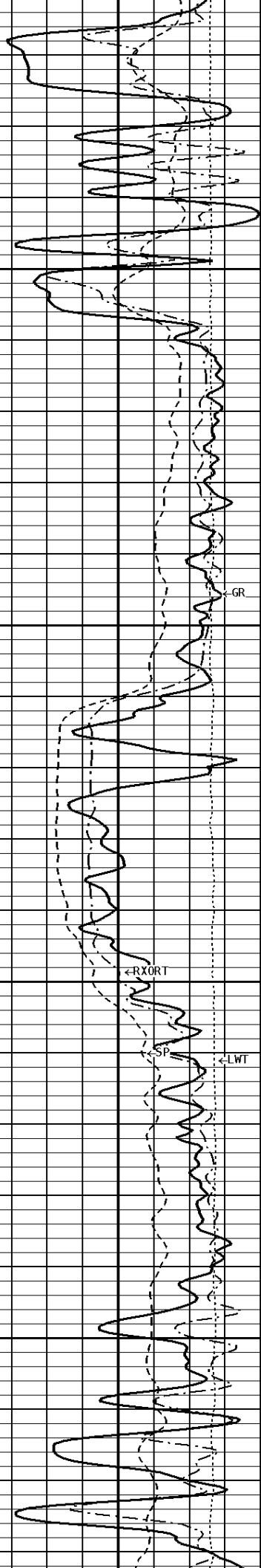


3300

3400

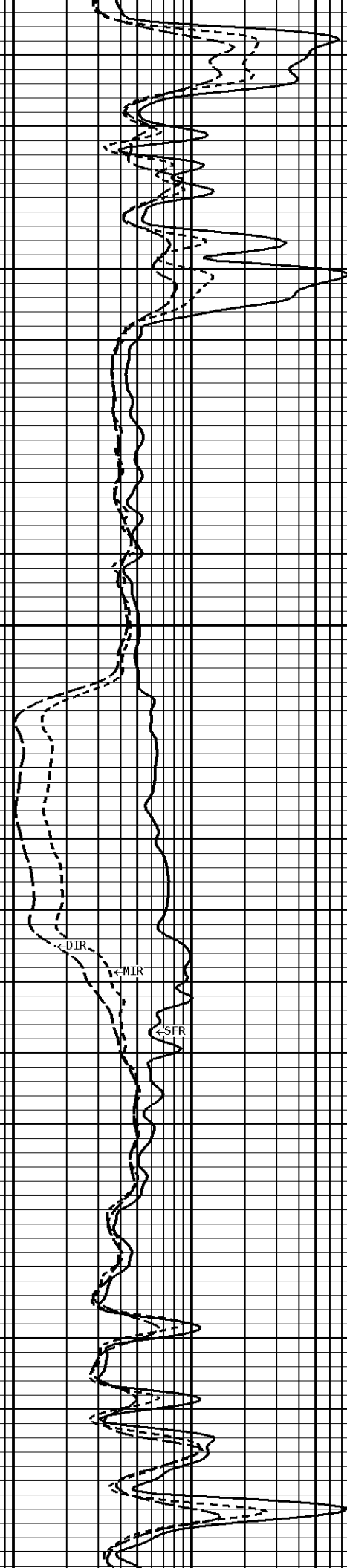
3500





3600

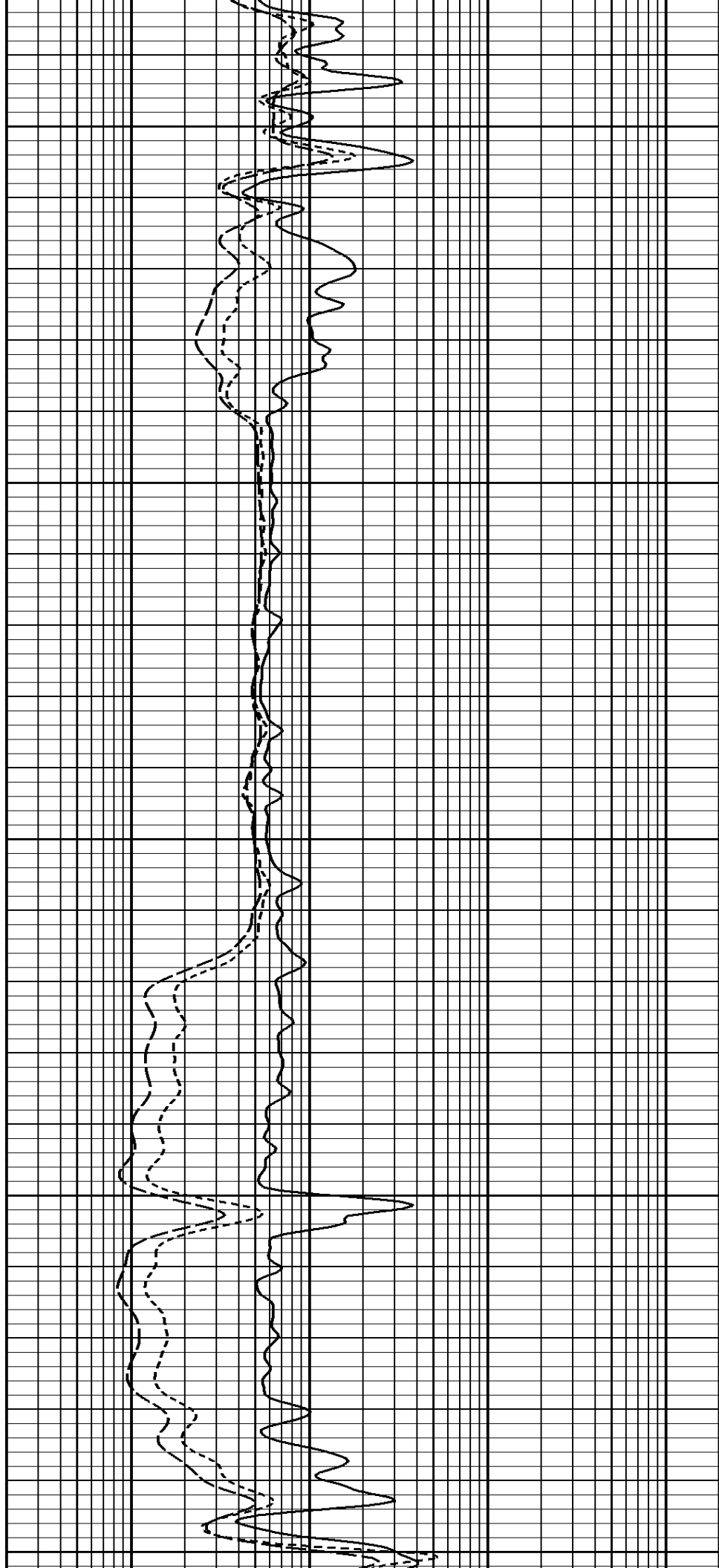
3700

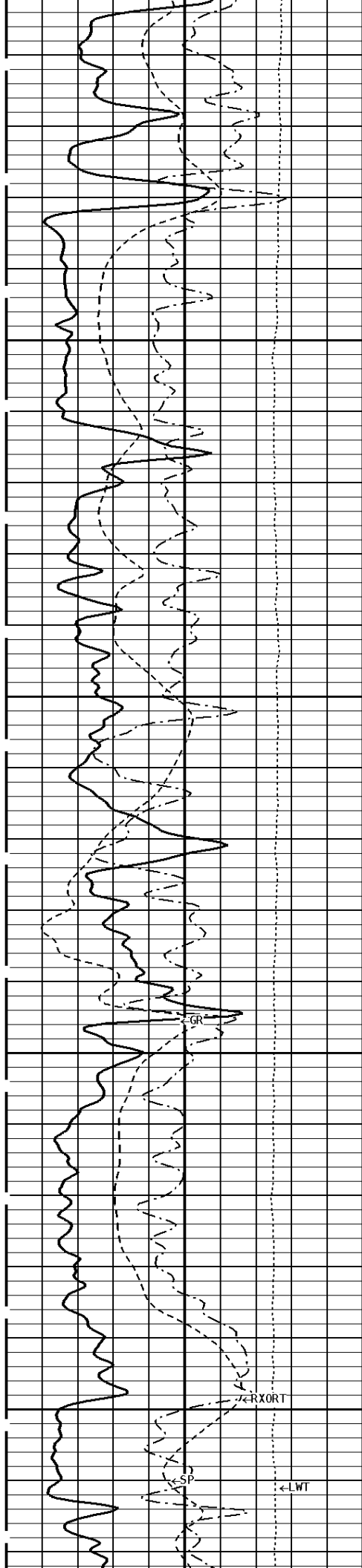




3800

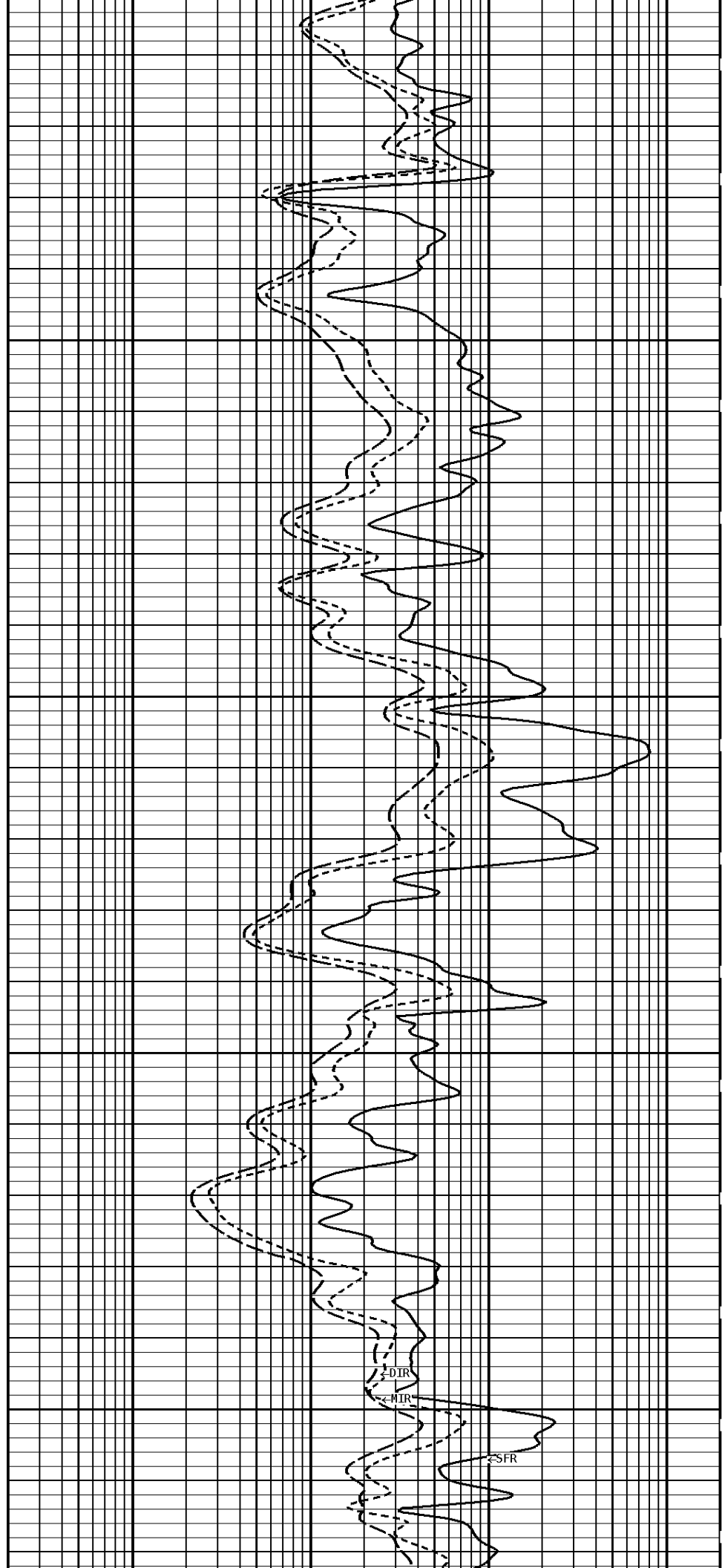
3900

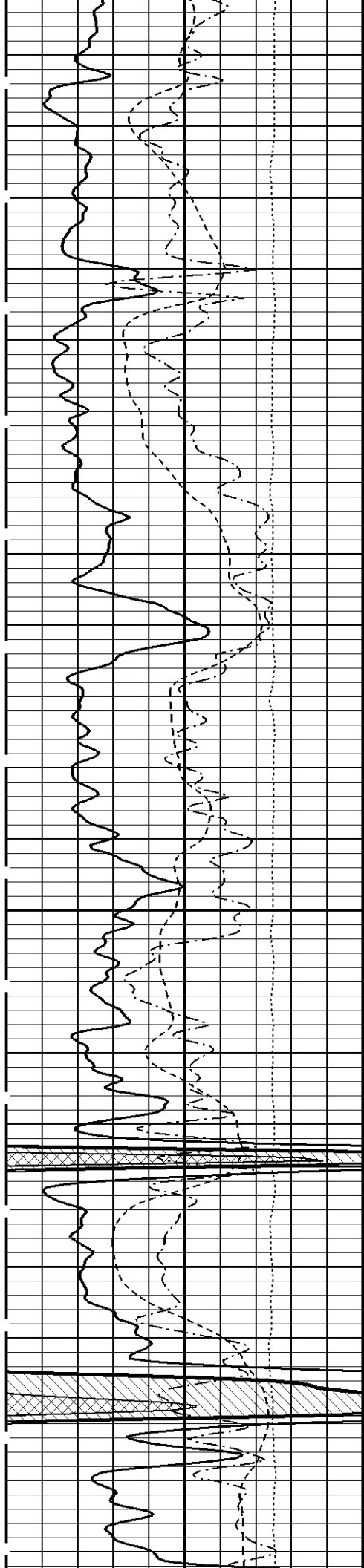




4000

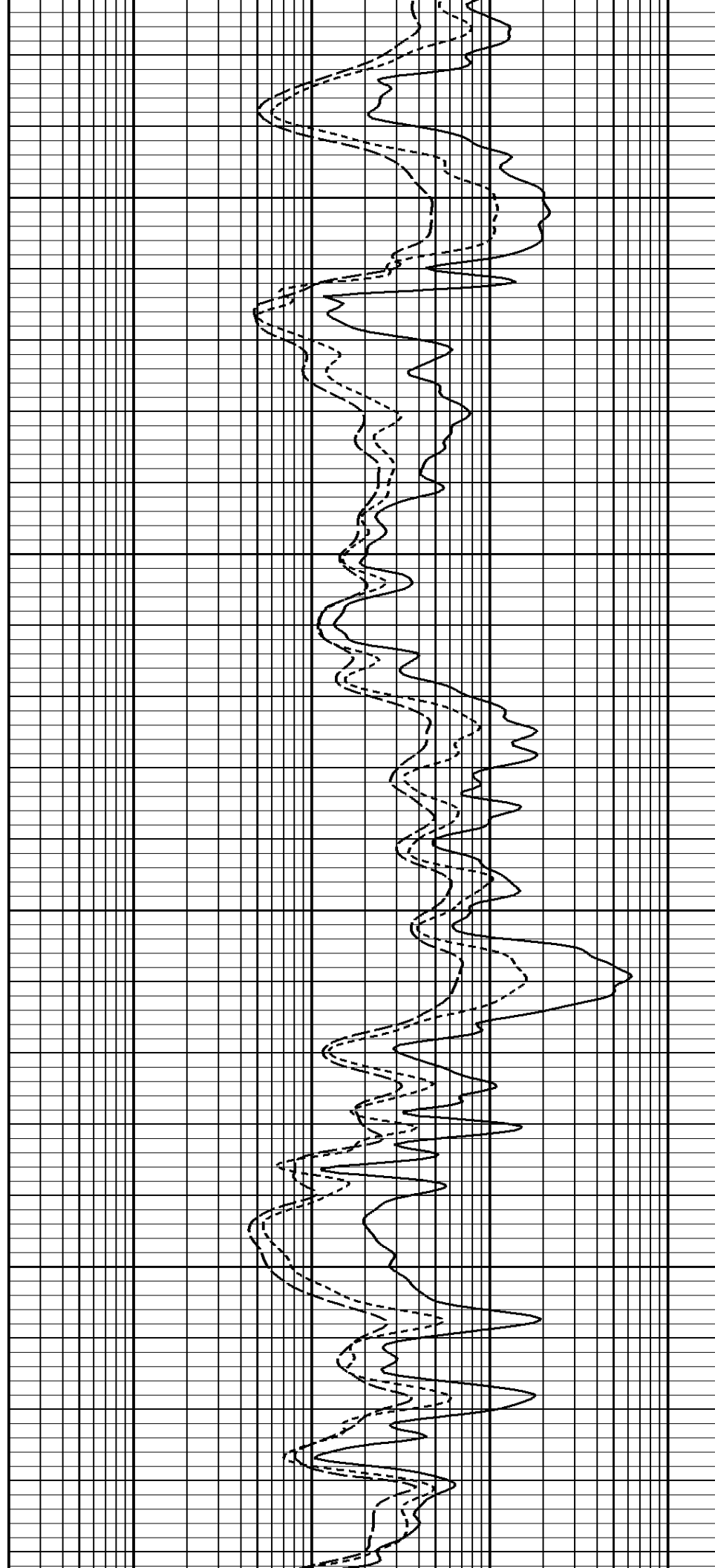
4100

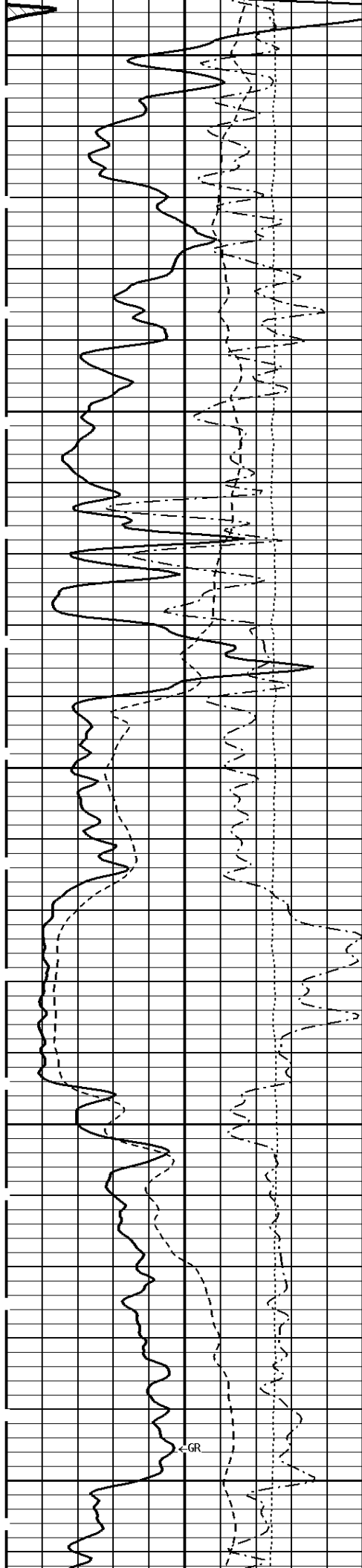




4200

4300

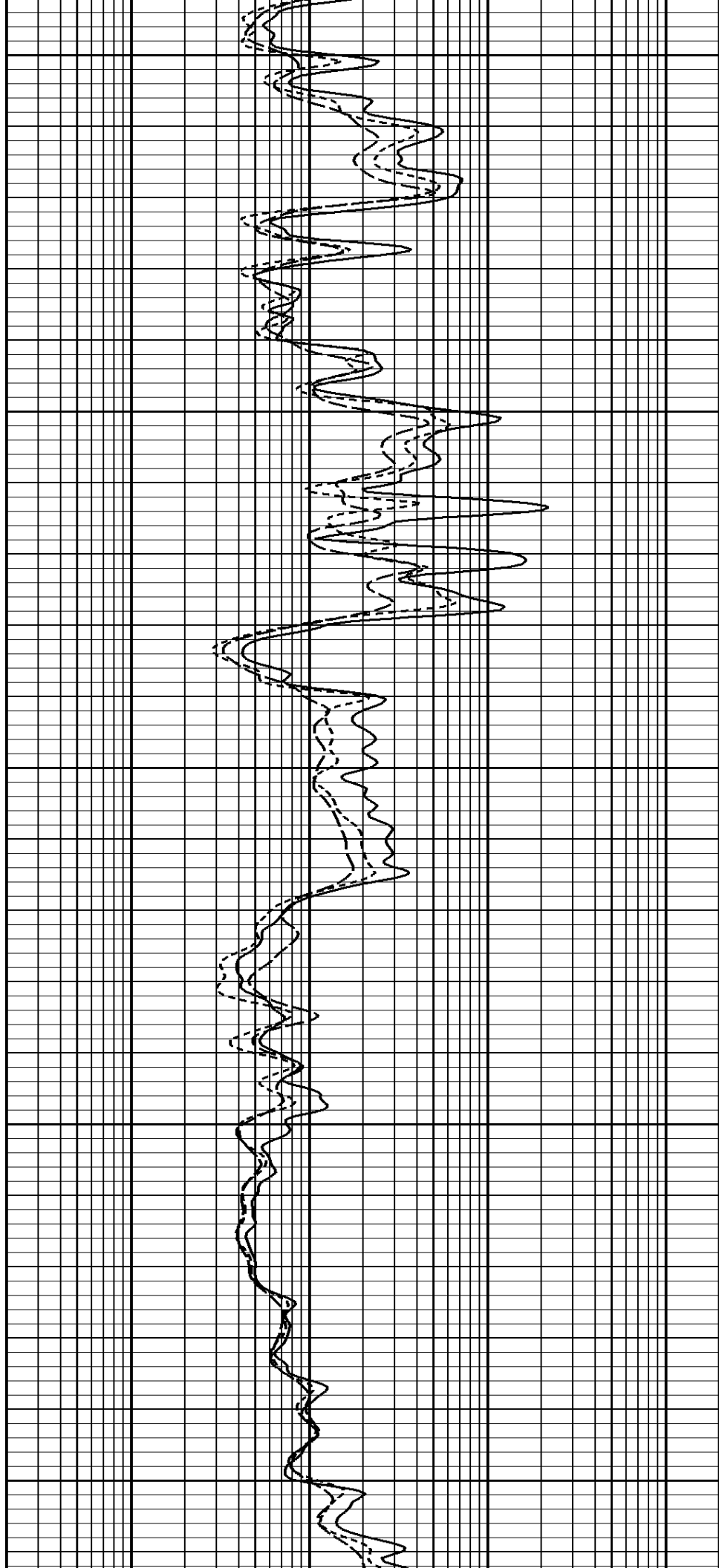


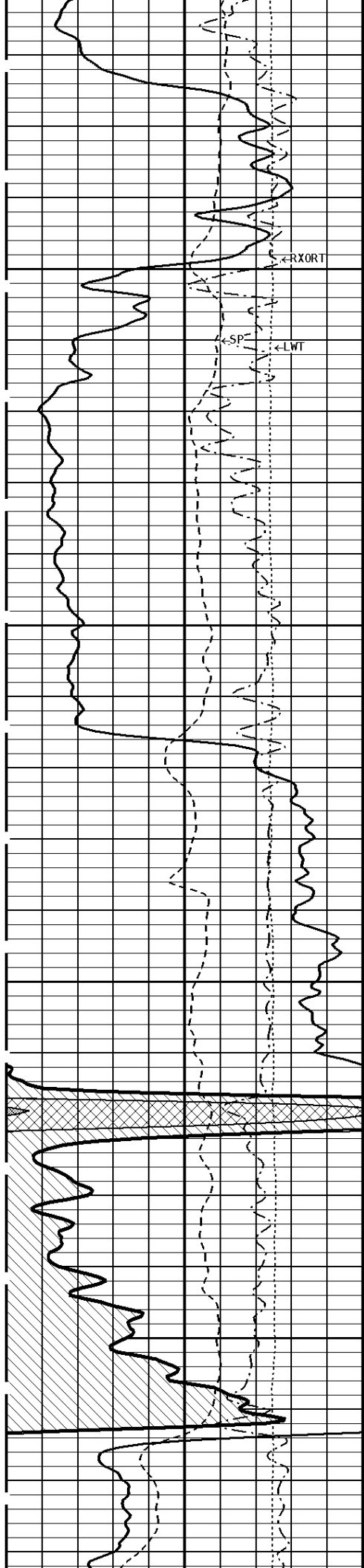


4400

4500

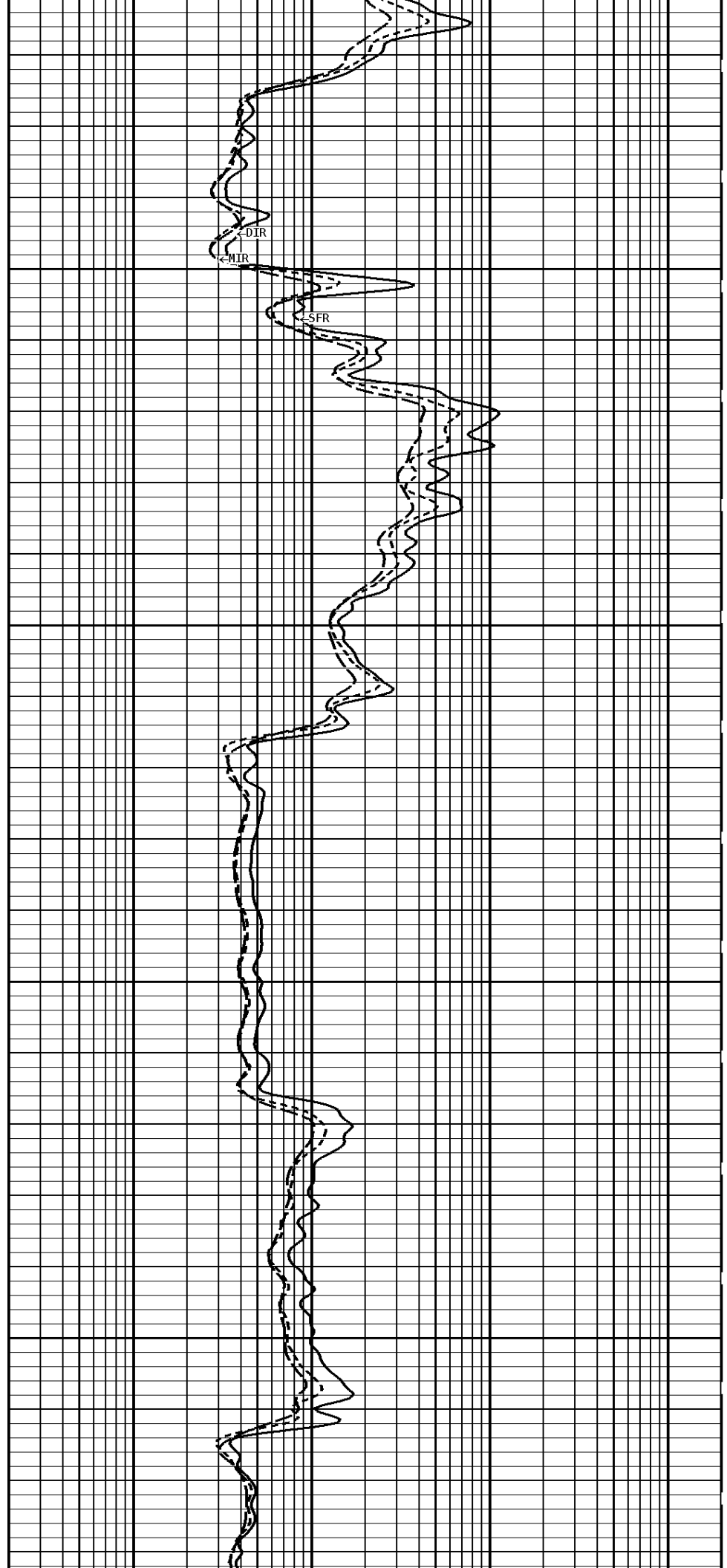
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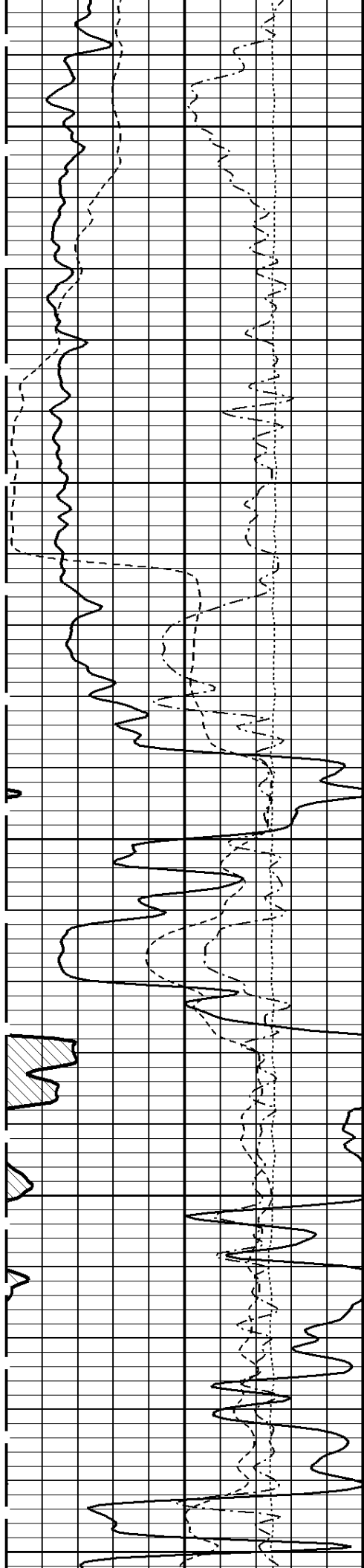




4700

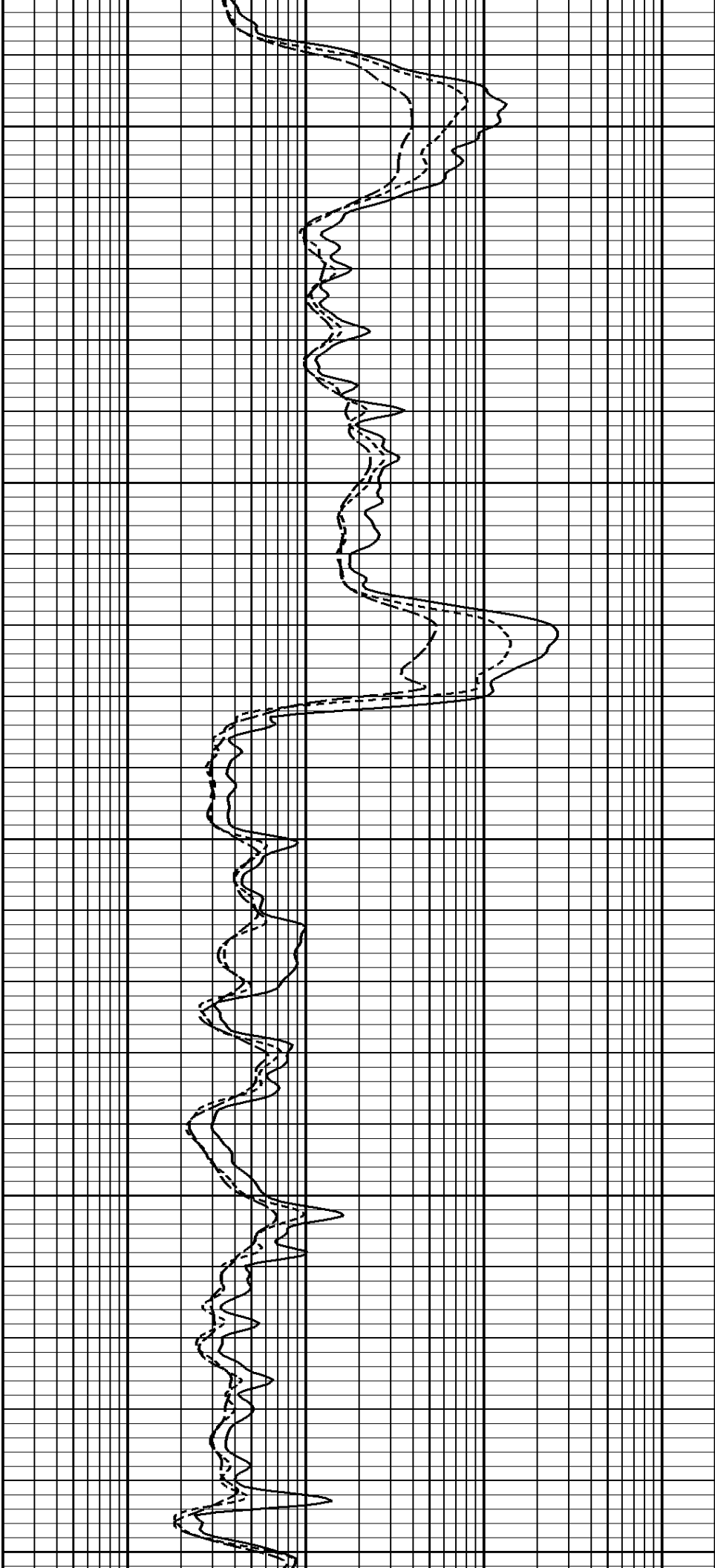
4800

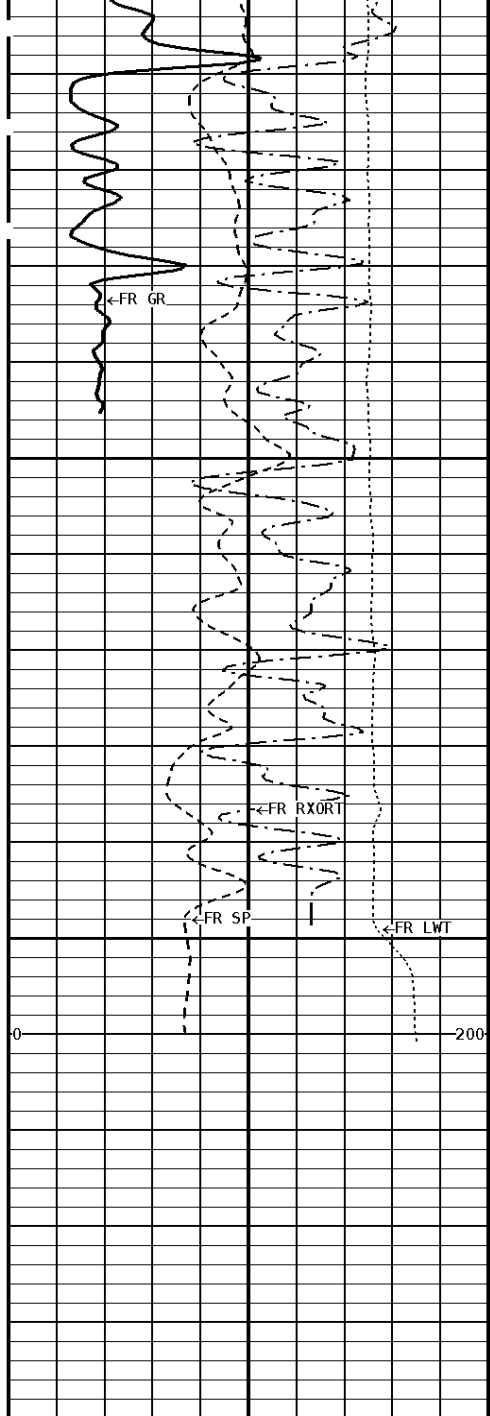




4900

5000

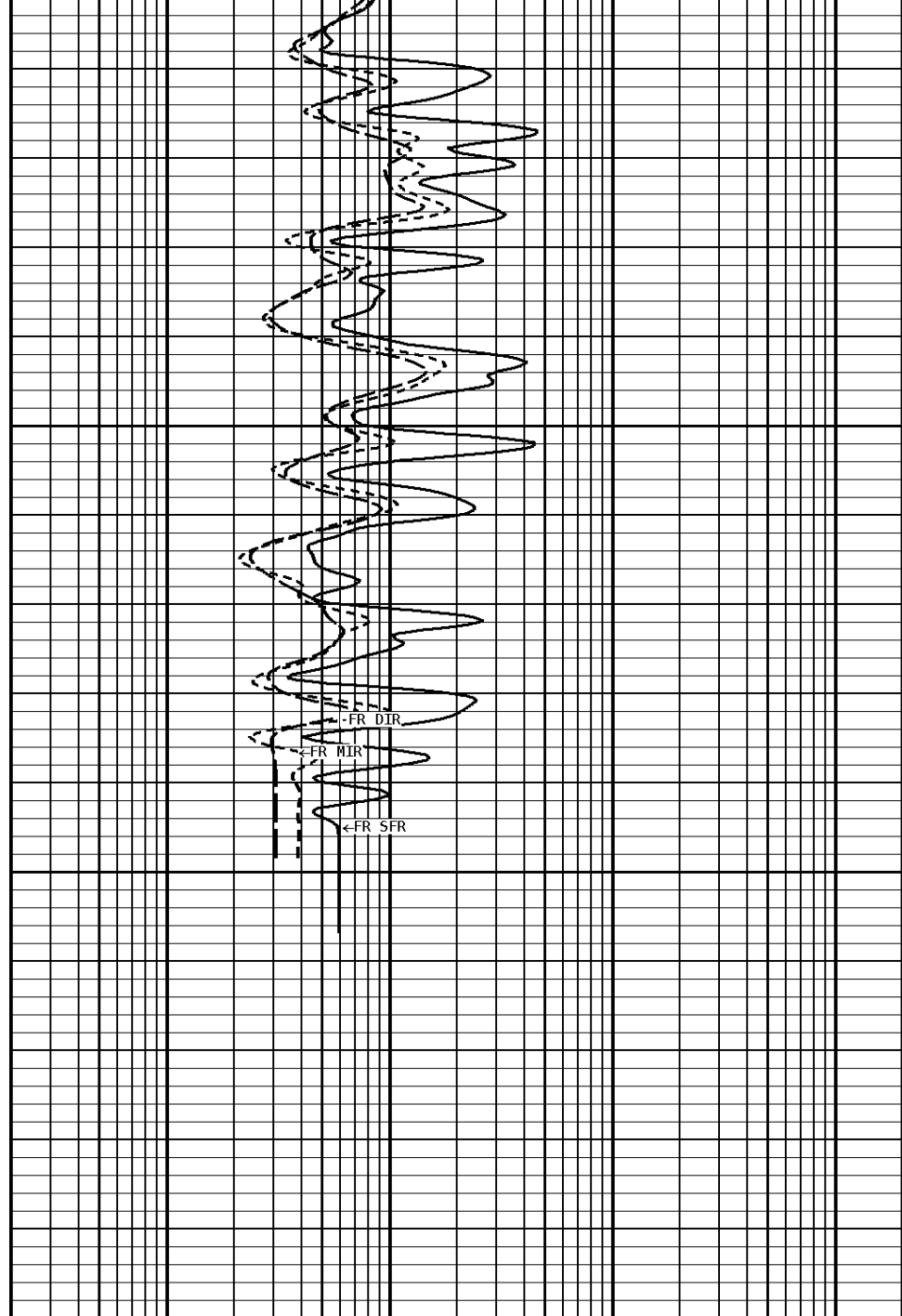




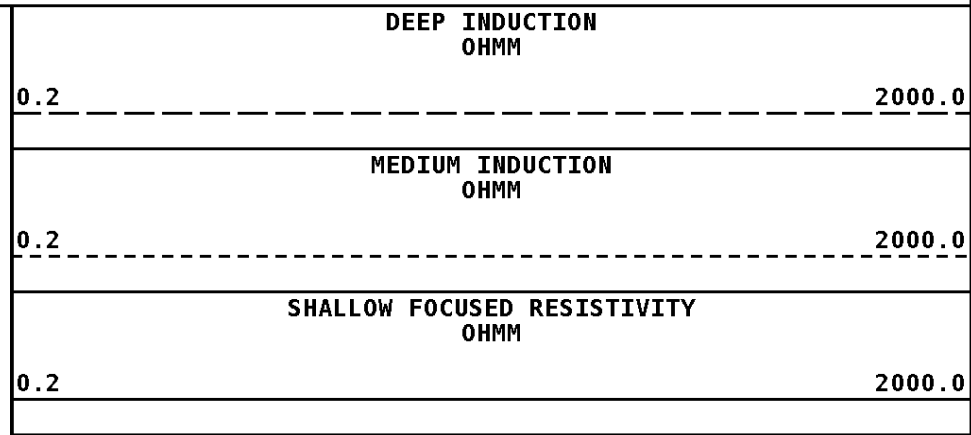
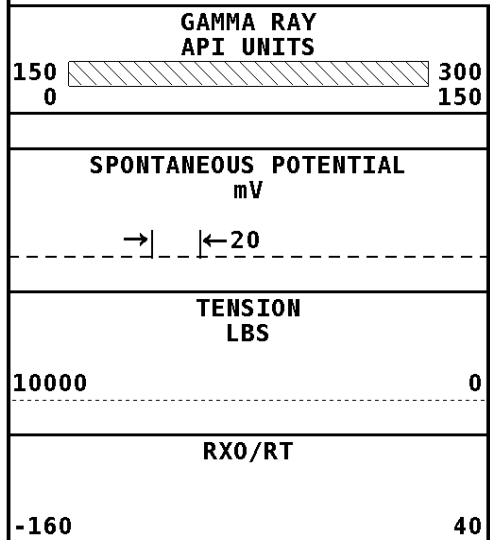
5100

5150

File #1.1.5



1:240 MAIN SECTION



*** Borehole Zone Factors ***

Zone 1 99999.0 to 0.0 Feet

Drill Bit Size	7.875	in
BHT Depth	5150.000	ft
Borehole Temperature	138.0	degF
Temperature Gradient	1.00	DFHF
Resistivity Of Mud	0.450	ohm/m
Resistivity Of Mud Temperature	68.00	degF

Well File: LBE WOL 15-1 APR 11_SGTQUINT

Scale: 1:240

Segment: V1.D1.S4 REPEAT

Acquired: 2012-04/11 15:14 3.2.0-10367

Reference: 0

Processed: 2012-04/11 19:08 3.2.0-10367

RXO/RT

-160 **40**

**TENSION
LBS**

10000 **0**

**SPONTANEOUS POTENTIAL
mV**

→ | ←20

**GAMMA RAY
API UNITS**

150 **300**
0 **150**

**SHALLOW FOCUSED RESISTIVITY
OHMM**

0.2 **2000.0**

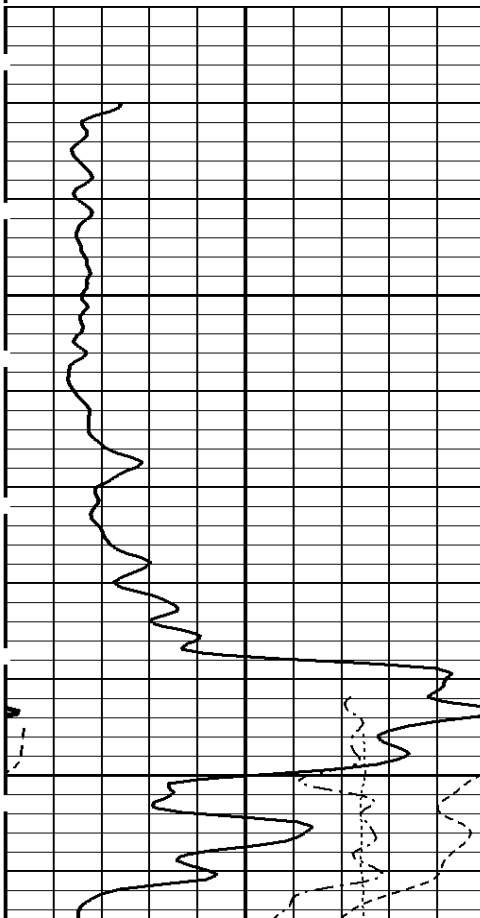
**MEDIUM INDUCTION
OHMM**

0.2 **2000.0**

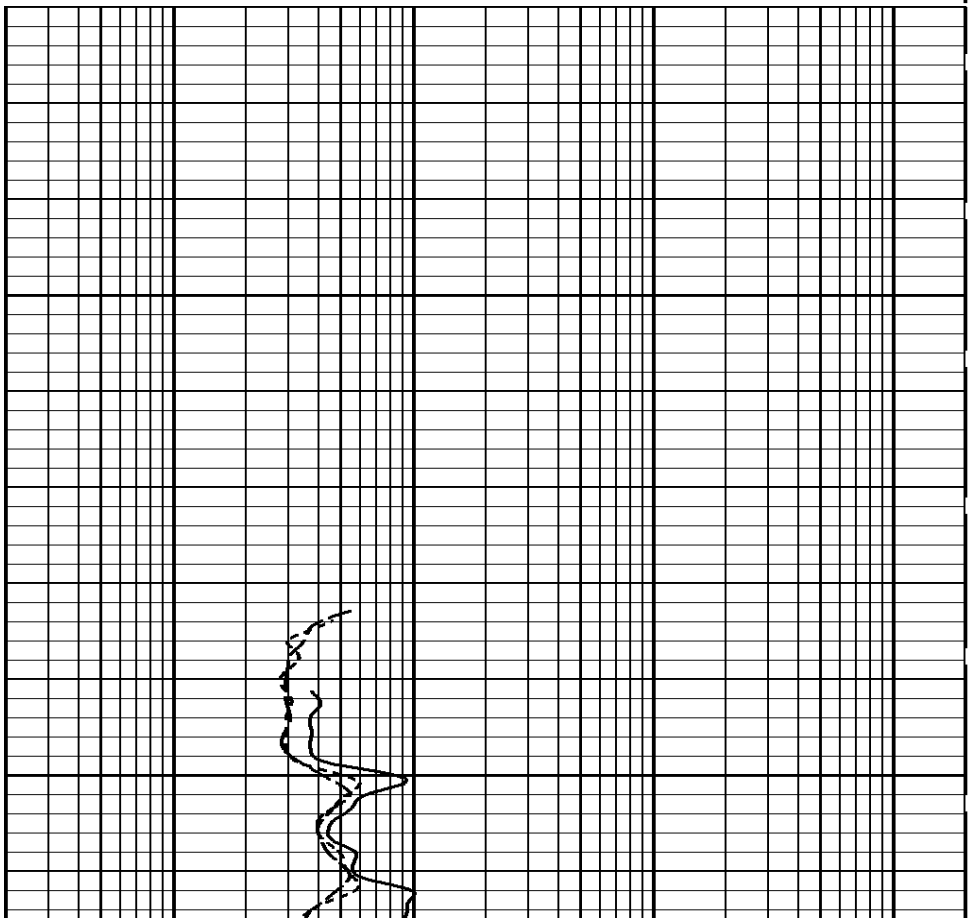
**DEEP INDUCTION
OHMM**

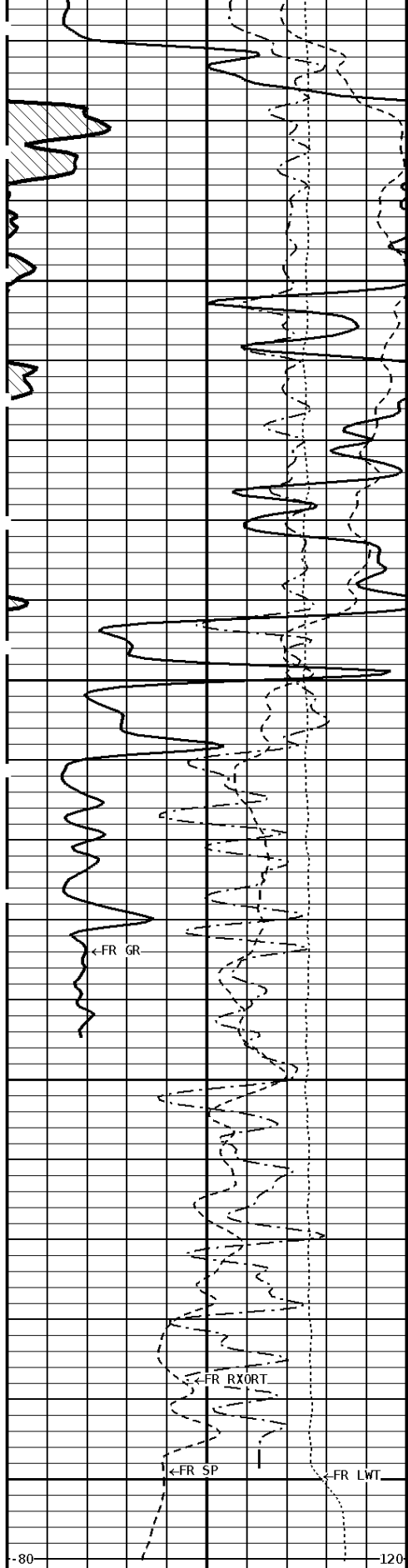
0.2 **2000.0**

1:240 REPEAT SECTION



4900

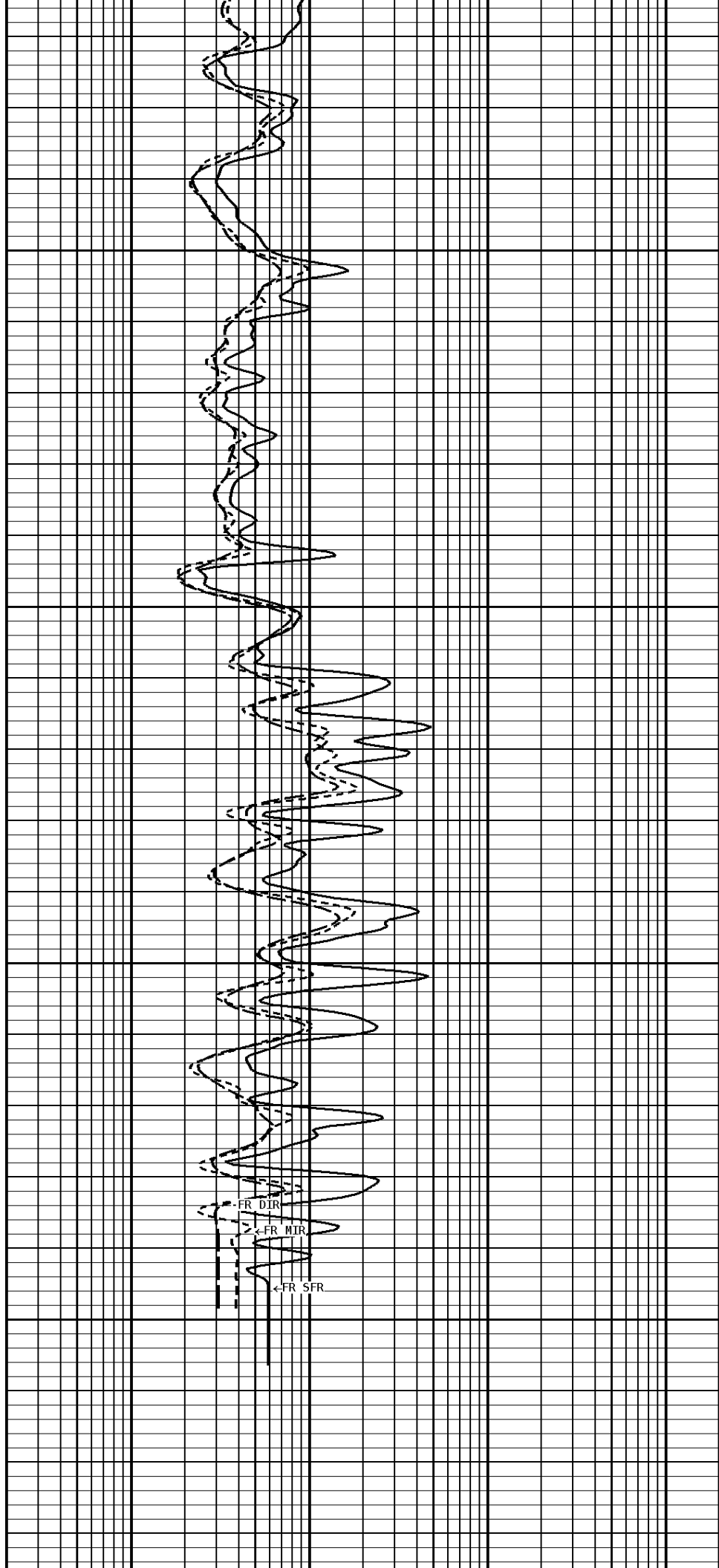




5000

5100

5150



1:240 REPEAT SECTION

GAMMA RAY
API UNITS

150 0 300 150

SPONTANEOUS POTENTIAL
mV

→ | ← 20

TENSION
LBS

10000 0

RXO/RT

-160 40

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 Feet

Drill Bit Size	7.875	in
BHT Depth	5150.000	ft
Borehole Temperature	138.0	degF
Temperature Gradient	1.00	DFHF
Resistivity Of Mud	0.450	ohm/m
Resistivity Of Mud Temperature	68.00	degF

* Calibration Summary *

Shop Calibration
GRT-FA

Performed : 22-Jul-2010 Time : 18:02
Sensor Suite : SPGCGR ID : GRT-FA-074

	Measured	Units	Calibrated	Units
GR	Background Jig		Jig	
	123 1040	CPS	160	GRAPI

Shop Calibration
PIT-CA

Performed : 09-MAR-2012 Time : 15:54
Sensor Suite : P-IND-T ID : PIT-AC-022

Medium

	Measured		Calibrated		Units
	R	X	R	X	
Air	129413	131202	-7.0	-7.0	MMHOS
Zero	131066	131071	65.6	-17.0	MMHOS
Reference	248746	249346	5065.6	4983.0	MMHOS
Loop	147468	174966	2610.2	1076.0	MMHOS
Sonde Error			-2.1	-6.8	MMHOS
Cond			5065.6	4983.0	MMHOS

Deep

	Measured		Calibrated		Units
	R	X	R	X	
Air	129586	130432	0.0	0.0	MMHOS
Zero	131077	131073	31.9	6.9	MMHOS
Reference	238783	239471	2031.9	2006.9	MMHOS
Loop	148920	177248	1222.8	504.8	MMHOS
Sonde Error			-0.8	-9.2	MMHOS
Cond			2031.9	2006.9	MMHOS

Temperature					
Measured			Calibrated		Units
Low	High		Low	High	
16980.0	56920.0		70.0	350.0	DEGF
Performed : 30-Jan-2012			Time : 11:24		
Sensor Suite : SFL			ID : PIT-AC-022		
Internal					
Measured			Calibrated		Units
Zero	Reference		Zero	Reference	
Im	32763.2	50516.1	0.0	7028.0	uA
Ib	32769.0	50217.9	0.0	1750.0	mA
MOM1	32796.4	60221.5	0.0	175.0	mV
Equivalent SFL				43.97	OHMM
Performed : 30-Jan-2012			Time : 11:26		
Sensor Suite : P-SP			ID : PIT-AC-022		
Internal					
Measured			Calibrated		Units
Zero	Reference		Zero	Reference	
32785.2	58904.5		0.0	1000.0	mV

Well File: LBE WOL 15-1 APR 11 SGTQUINT

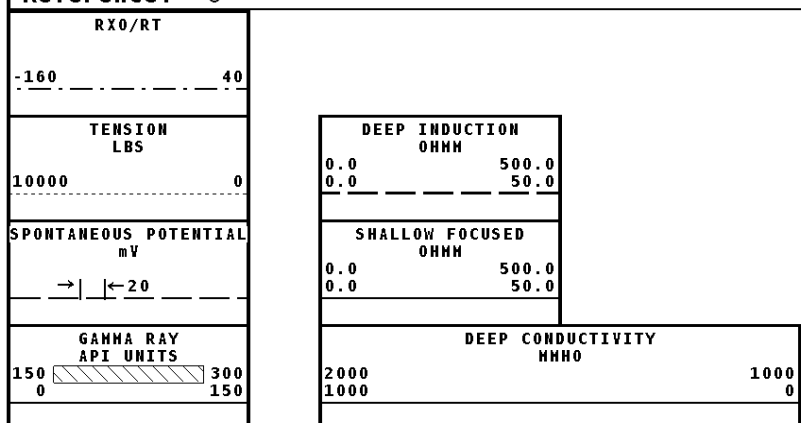
Scale: 1:1200

Segment: V1.D1.S5 MAIN

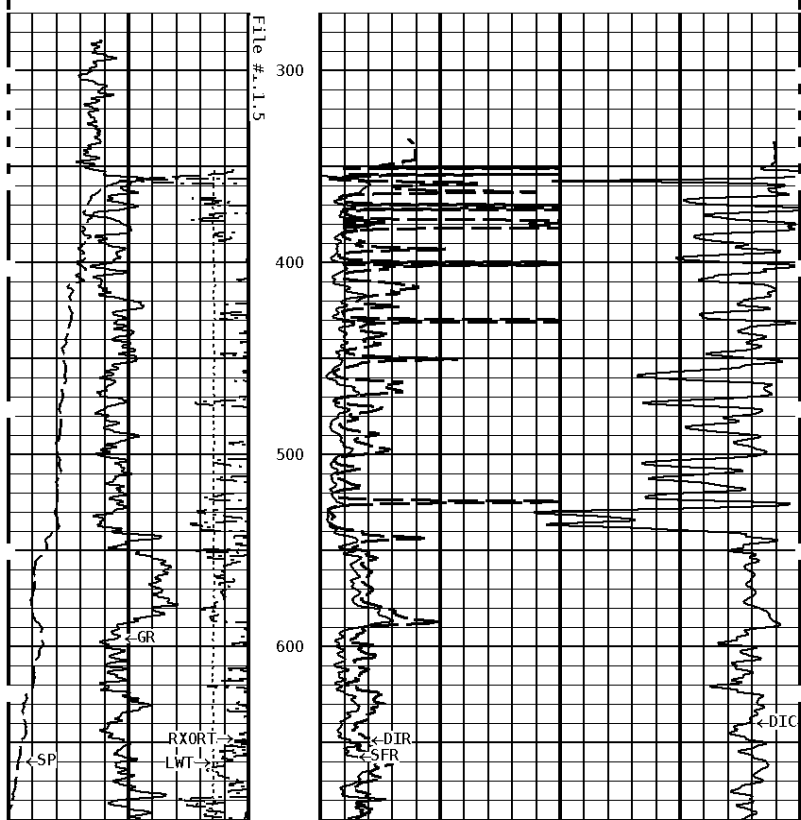
Acquired: 2012-04/11 15:34 3.2.0-10367

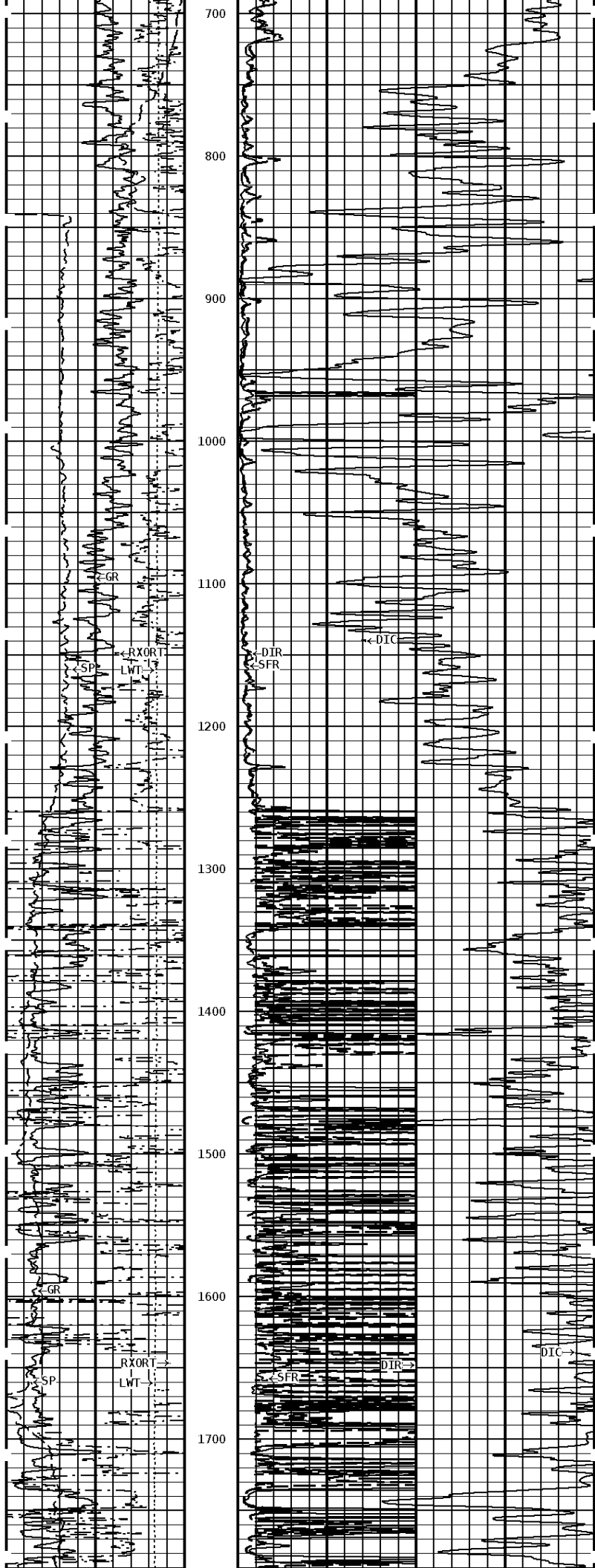
Reference: 0

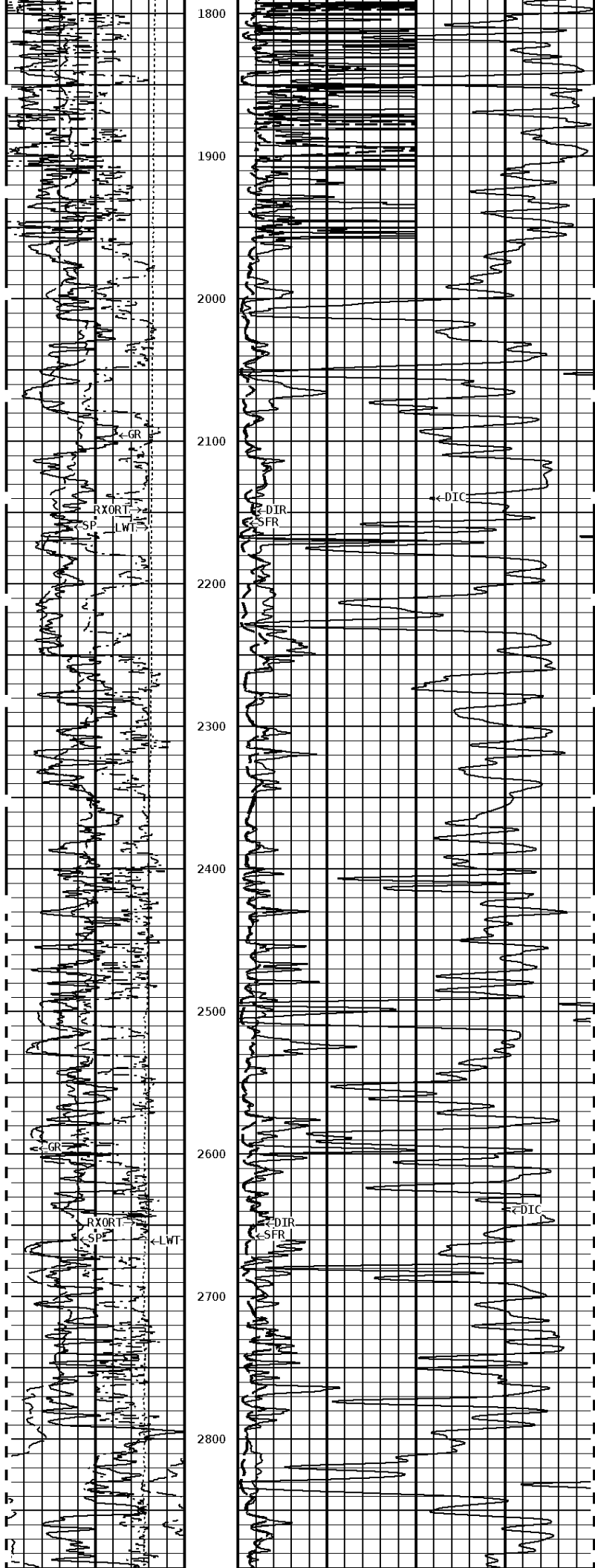
Processed: 2012-04/11 19:08 3.2.0-10367

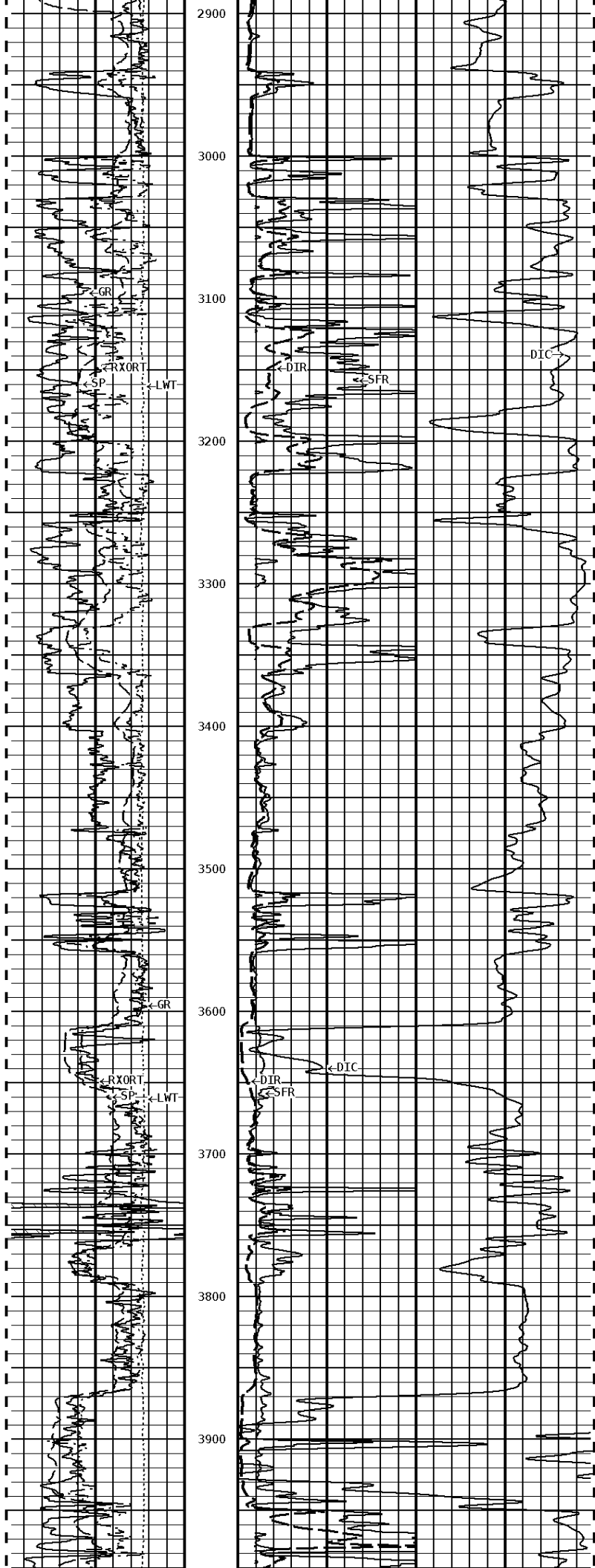


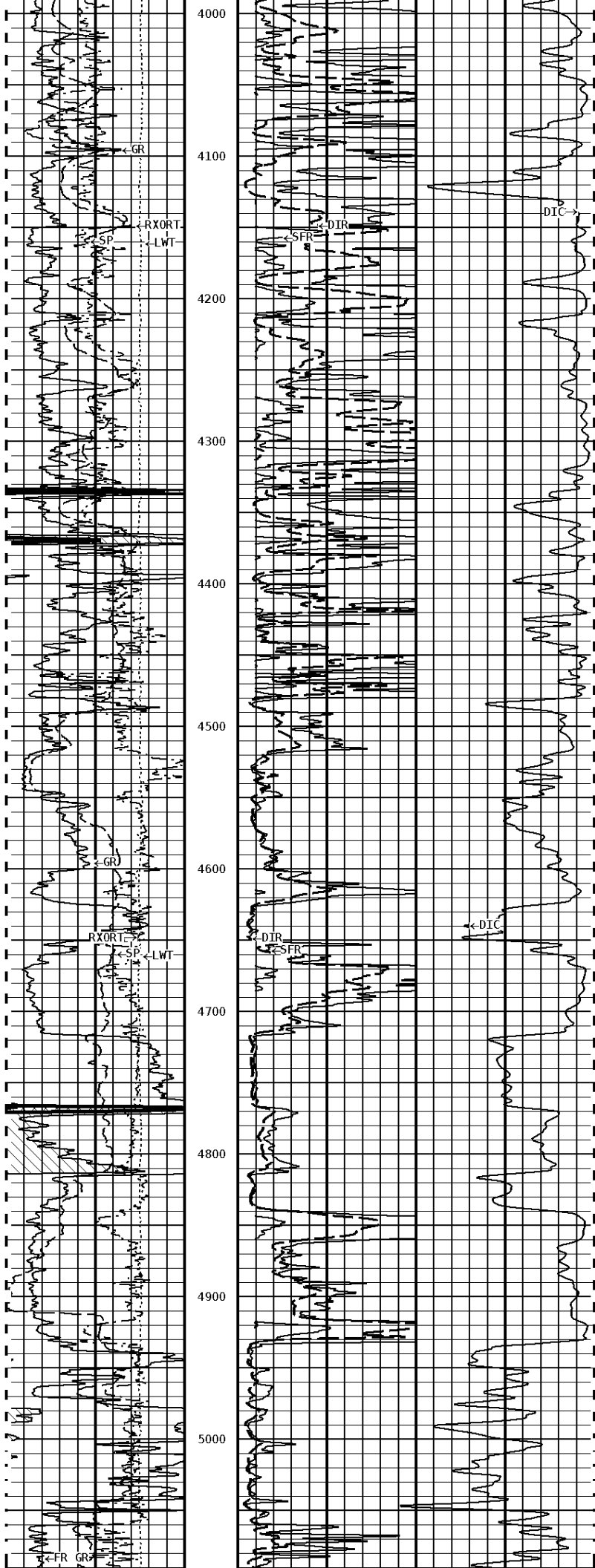
1:1200 MAIN SECTION

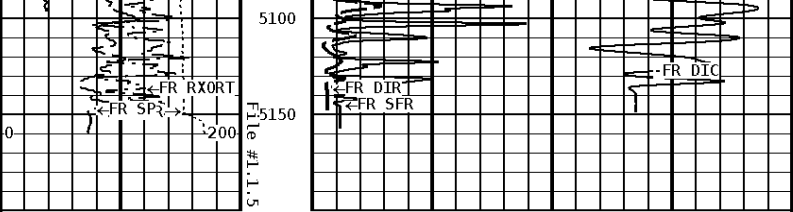












1:1200 MAIN SECTION

GAMMA RAY API UNITS 1500300 0150	DEEP CONDUCTIVITY MHMO 20001000 10000
SPONTANEOUS POTENTIAL mV → ←20	SHALLOW FOCUSED OHMM 0.0500.0 0.050.0
TENSION LBS 100000	DEEP INDUCTION OHMM 0.0500.0 0.050.0
RX0/RT -16040	