Tucker ENERGY SERVICES

PHASED INDUCTION

SHALLOW FOCUS SP LOG

Company ANDERSON ENERGY INC
Well MACDONALD BONDY #1
Field WILDCAT
County ELLIS
State KANSAS
Country USA
API No. 15-051-26394

File No : TUL-57629
Company : ANDERSON ENERGY INC
Well : MACDONALD BONDY #1
Field : WILDCAT
County : ELLIS
State : KANSAS
Country : USA
API No : 15-051-26394

Location :
1370' FSL & 2300' FEL
SE SW NW SE/4

LSD : **Sect :** 18 **Twp :** 15S **Rge :** 20W

Permanent Datum:	GL	**Elevations:**		**Services:**	
Drilling Measured From:	KB	**KB**	2137.00 Ft	CNT	CST
Log Measured From:	KB	**DF**	2136.00 Ft	LDT	PIT
Above Permanent Datum:	9.00 Ft	**GL**	2128.00 Ft	MLT	

Date	2012-10-30						
Run Number	1						
Depth--Driller	4000.0	Ft					
Depth--Logger	3998.0	Ft					
First Reading	3998.0	Ft					
Last Reading	316.0	Ft					
Casing--Driller	316.0	Ft					
Casing--Logger	316.0	Ft					
Bit Size	0.078	In					
Casing Size	8.625	In					
Hole Fluid Type	WBM						
Density	9.1	LBS/GAL					
Fluid Loss	7.6	CC					
PH/Viscosity	10.5	53.0 SEC					
Sample Source	MEASURED						
RM@Measured Temp.	0.450 @ 70 F						
RMF@Measured Temp	0.380 @ 70 F						
RMC@Measured Temp.	0.520 @ 70 F						
Source RMF/RMC	CALCULATED	CALCULATED					
RM@BHT	0.280 @ 118 F						
Time Circulation Stopped							
Max Recorded Temp.	120	F					
Equipment/Base	TRK 119	TULSA					
Recorded By	S. DAVIS						
Witnessed By	P. BALTHAZOR						

Bitsize Intervals

Size (In)	Bottom (Ft)
0.078	3998.00

Casing Strings

Size (In)	Weight (Lbs)	Bottom (Ft)
8.625	20.00	316.00

Run Number	1
Date	2012-10-30
Date/Time On Bottom	2012-10-30 13:00
Depth to Fluid	0.0 Ft
Salinity	4600.000 PPM
RMF@BHT	0.240 @ 118 F
RMC@BHT	0.320 @ 118 F

Run Number 1

Comments

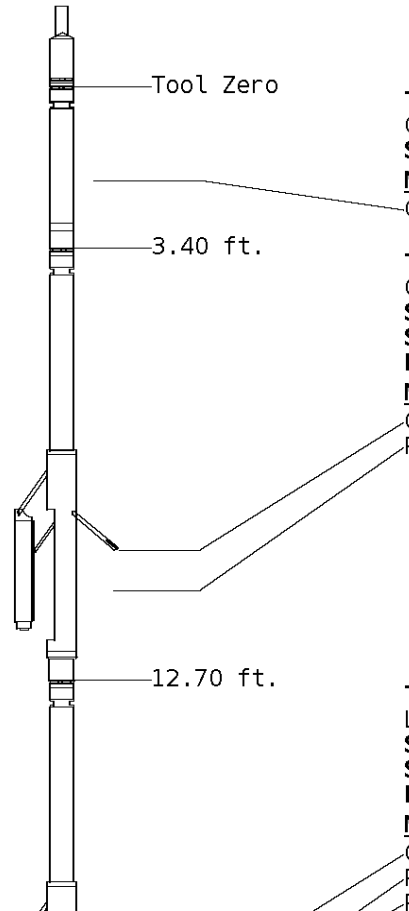
ALL PRESENTATIONS AS PER CUSTOMER REQUEST
GRT, CNT, LDT, MLT, CST, AND PIT RUN IN COMBINATION.
CALIPERS ORIENTED ON X-Y AXIS.
2.71 G/CC USED TO CALCULATED POROSITY.
ANNULAR HOLE VOLUME CALCULATED USING 5.50" PRODUCTION CASING.
DETAIL PRESENTED FROM TD TO SURFACE PER CUSTOMER REQUEST.
ANHYDRATE SECTION FROM 2030' TO 1810'

GRT: GRP.
CNT: PHIN, CLCNIN.
LDT: PORL, LCORN, PECLN, LDENN, PORLLS, CLLDIN.
MLT: NOR_RF, INV_RF, MSCLPIN.
CST: PORS, ITT, CDTF, TT1, TT2, TT3, TT4.
PIT: ILD, ILM, SPU, SFLAEC.

OPERATORS:
B. COLWILL
M. RUBY

Tool String Schematic

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



Tool: GRT-B **Length:** 3.40 **ft.** **O.D.** 3.60 **in.**
Gamma Ray Controller
Sonde ID :GRT-BA-14

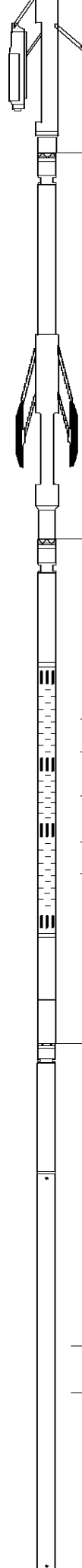
Measure Point	Tool Offset	Stack Offset	Bottom Offset
GRP	2.00	2.00	65.37

Tool: CNT-AA **Length:** 9.30 **ft.** **O.D.** 4.36 **in.**
Compensated Neutron A Pad on NDT-A
Sonde ID :NDT-BB-123
Source ID :N-1045
Pad ID :CNP-AA-024

Measure Point	Tool Offset	Stack Offset	Bottom Offset
CLCN	6.00	9.40	57.97
PHIN	6.80	10.20	57.17

Tool: LDT-DF **Length:** 9.72 **ft.** **O.D.** 4.80 **in.**
Litho Density D Pad on NDT-F
Sonde ID :PDT-GA-464
Source ID :2991GW
Pad ID :LDP-DA-065

Measure Point	Tool Offset	Stack Offset	Bottom Offset
CLLD	6.42	19.12	48.25
PEL	7.42	20.12	47.25
PES	7.82	20.52	46.85



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.

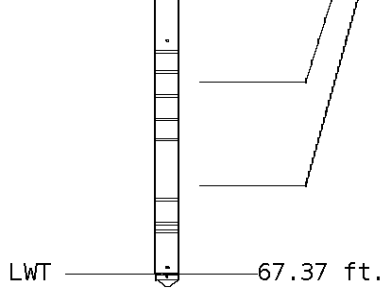
Tool: CST-AD **Length:** 13.80 **ft.** **O.D.** 3.60 **in.**
Open Hole Sonic
Sonde ID :CST-AD-078

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-AC-22

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



Well File: and-mac-bon-1-quint-dip-oct-30 **Scale:** 1:600
Segment: V1.D1.S9 MN **Acquired:** Not Available
Reference: 0 **Processed:** 2012-10/30 15:55 3.2.0-11087

TENSION
LBS
10000 0

SHALLOW FOCUSED RESISTIVITY
OHMM
0.0 500.0
0.0 50.0

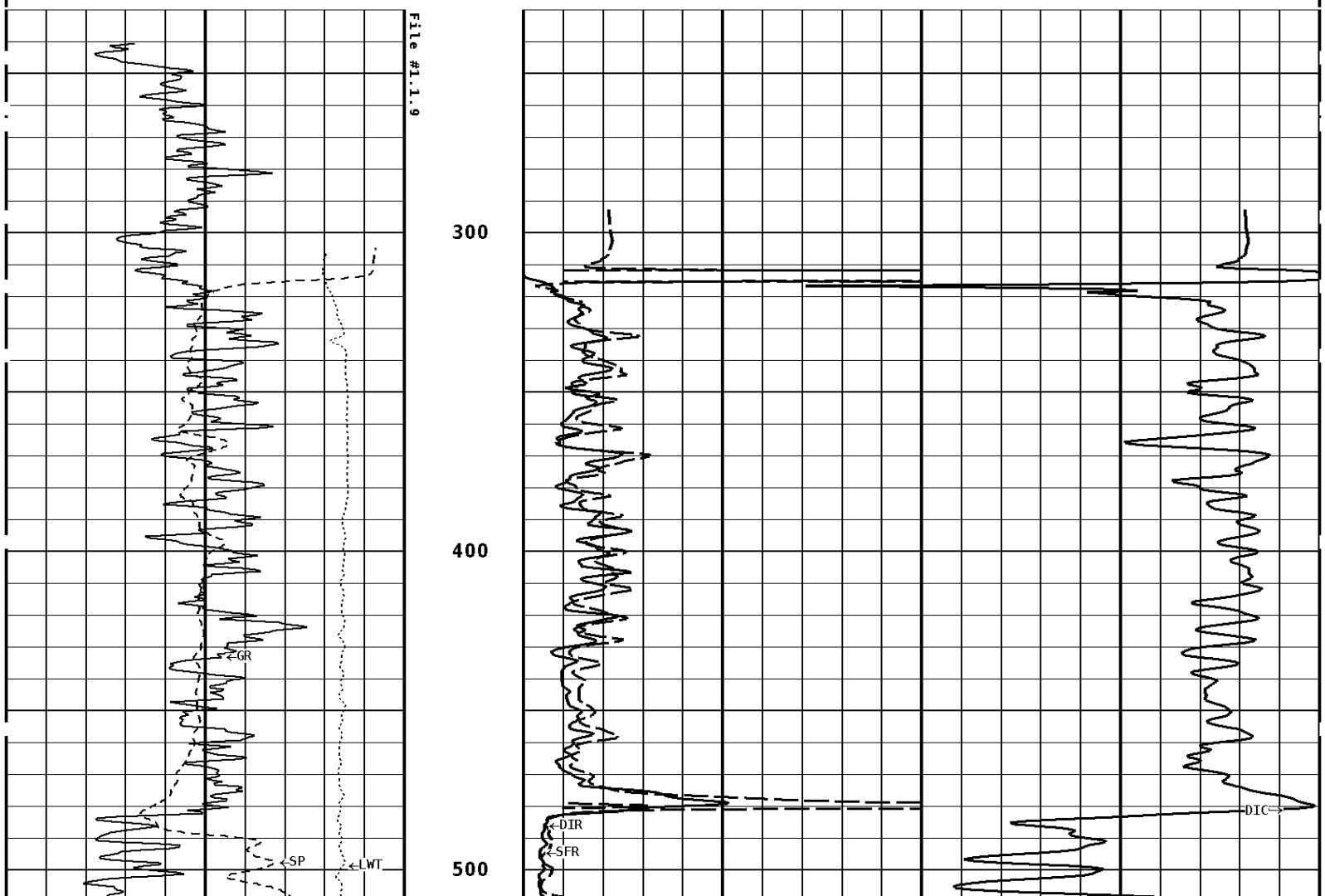
SPONTANEOUS POTENTIAL
mV
→| |←20

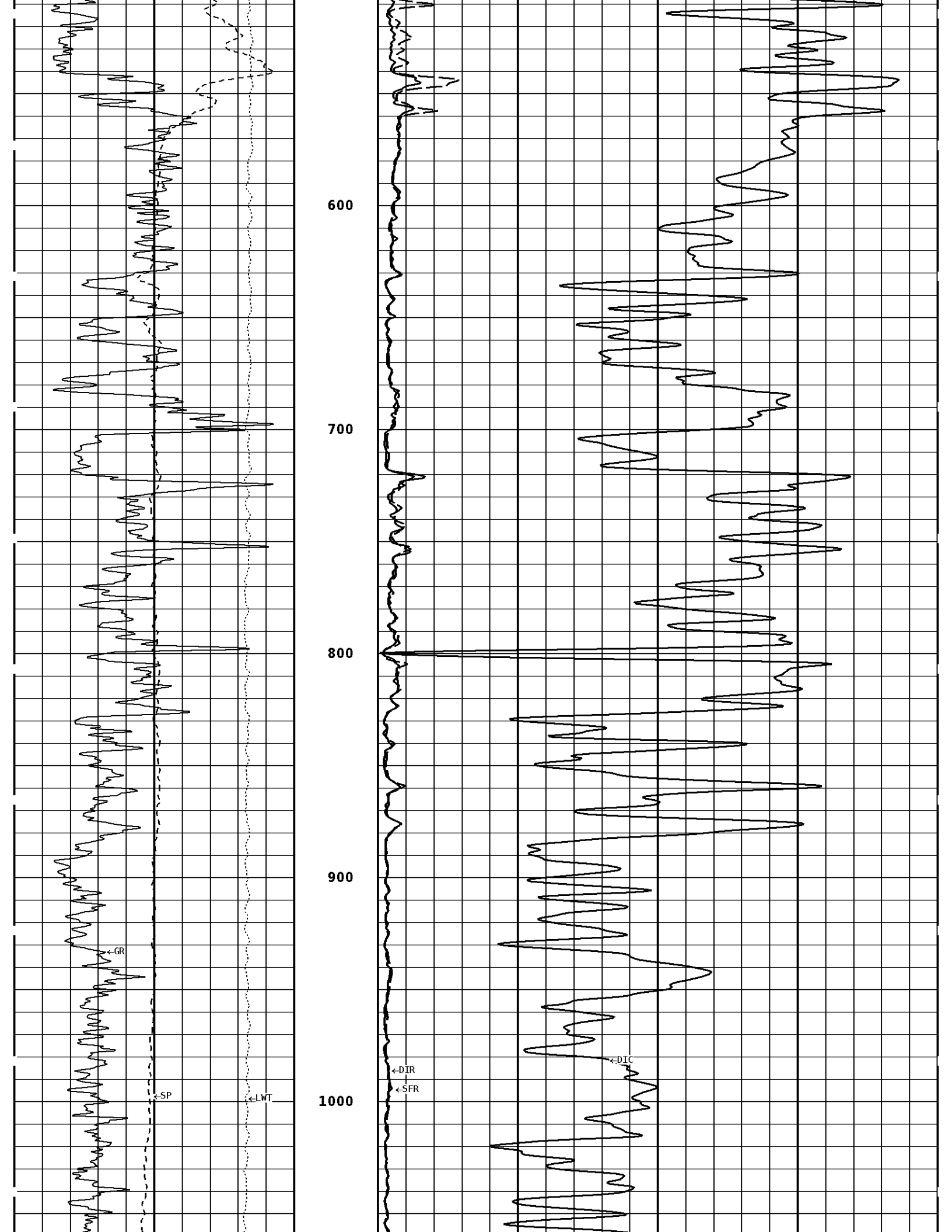
DEEP INDUCTION
OHMM
0.0 500.0
0.0 50.0

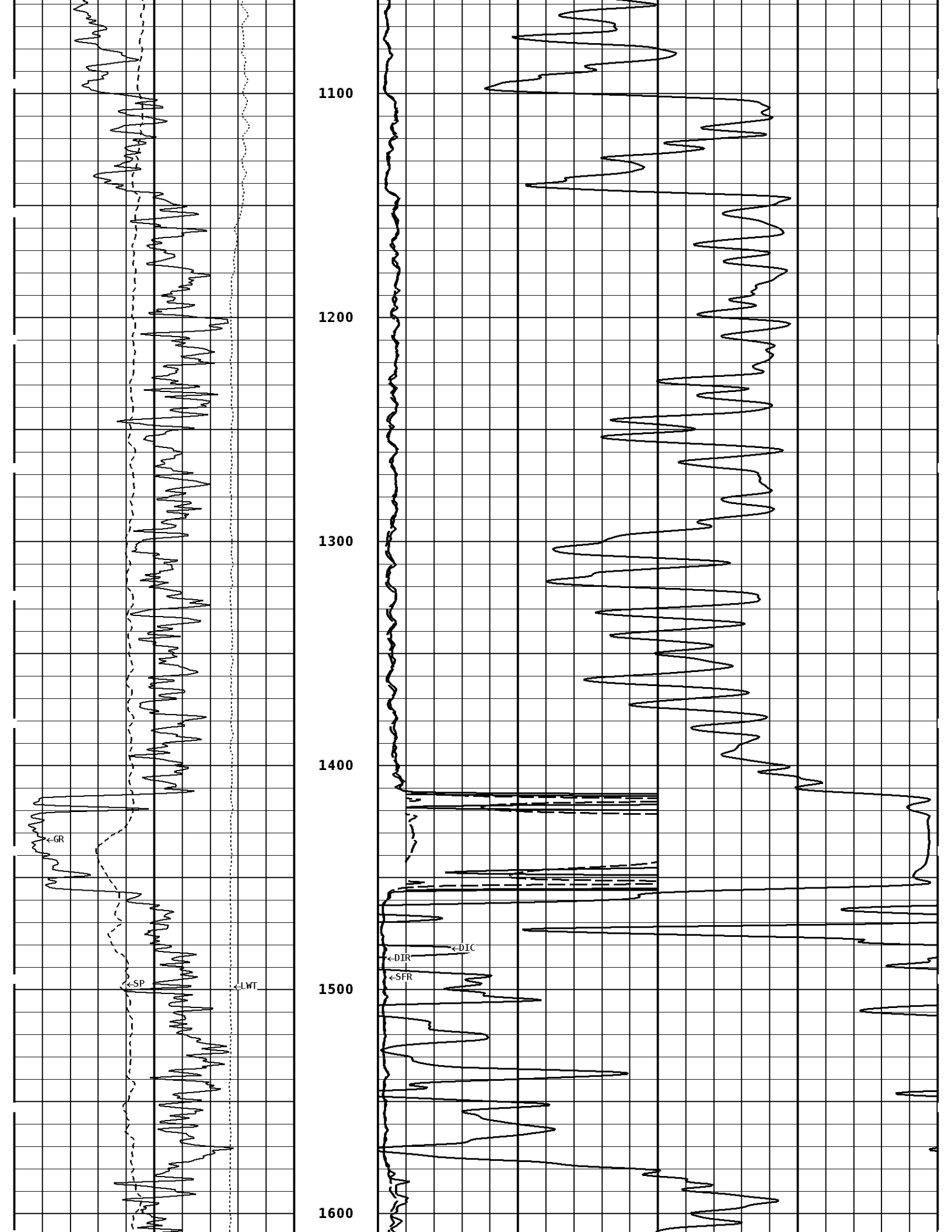
GAMMA RAY
API UNITS
150 300
0 150

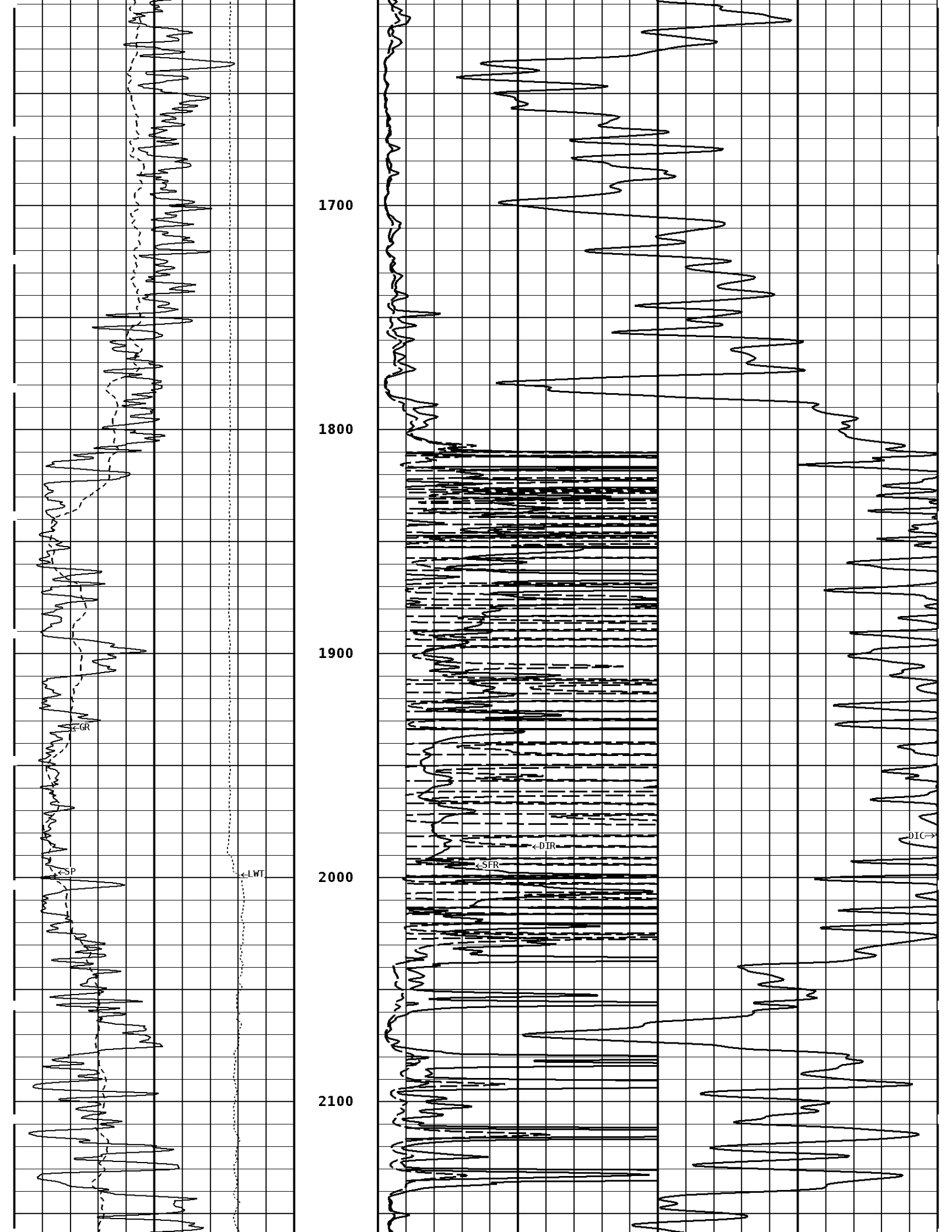
DEEP CONDUCTIVITY
MMHO
2000 1000
1000 0

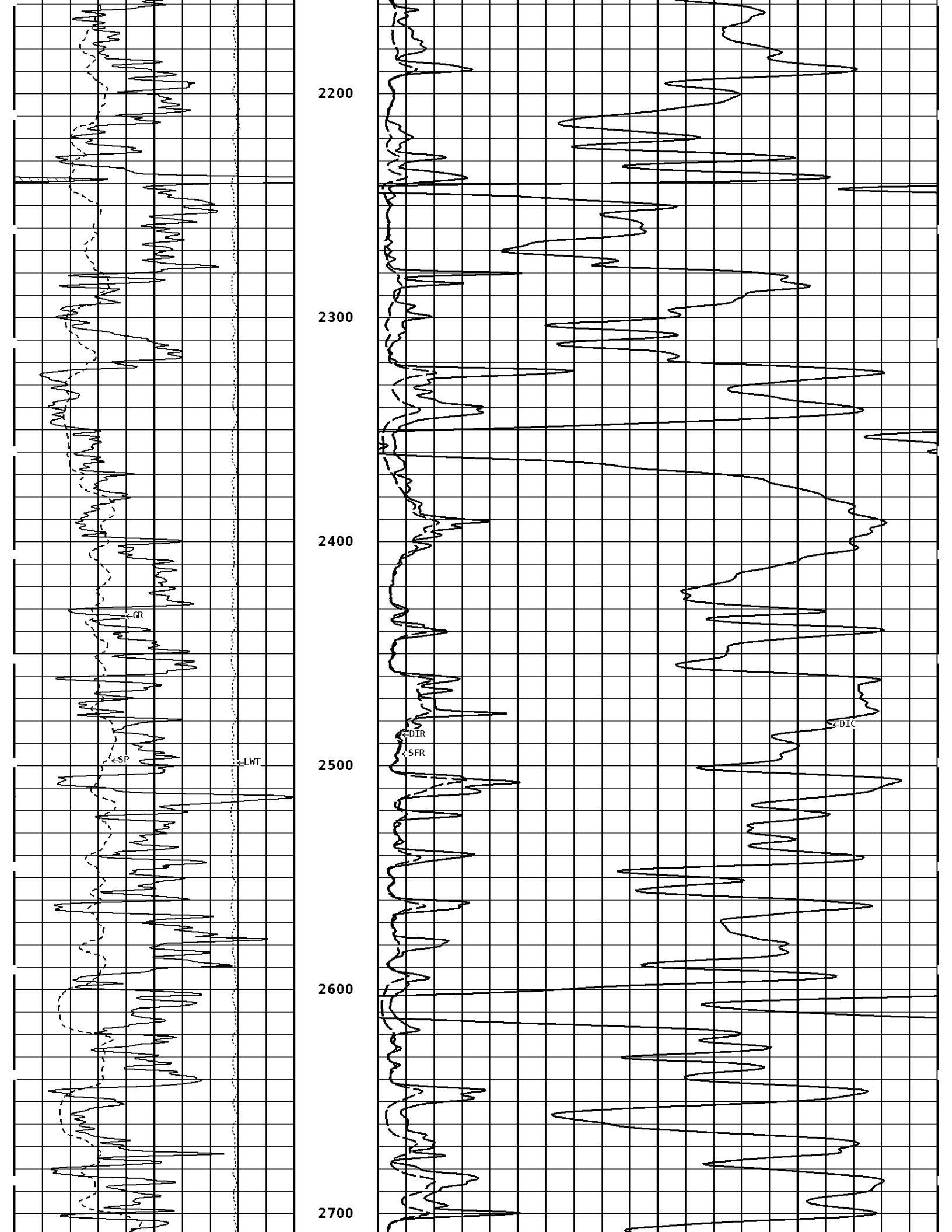
1:600 SECTION
2 INCH

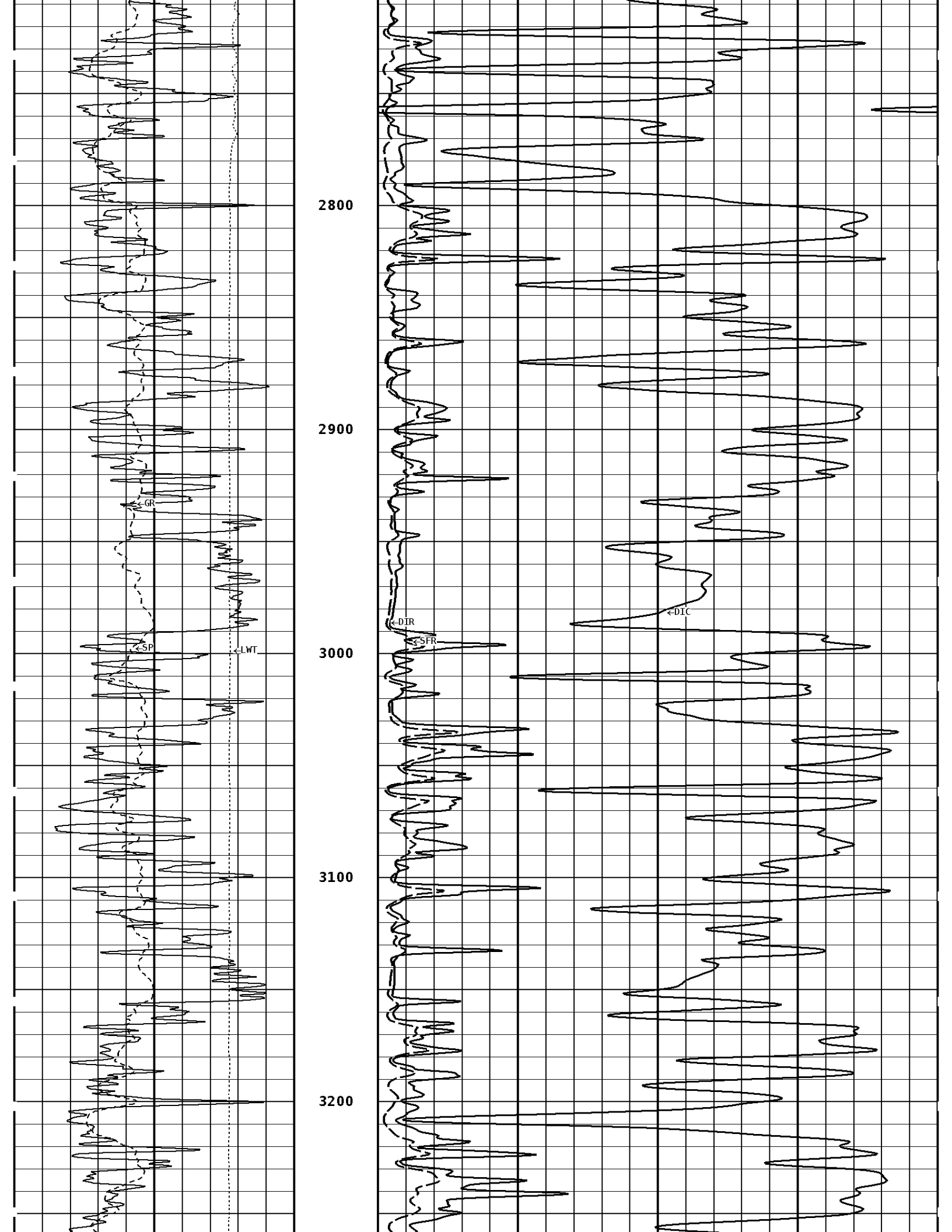


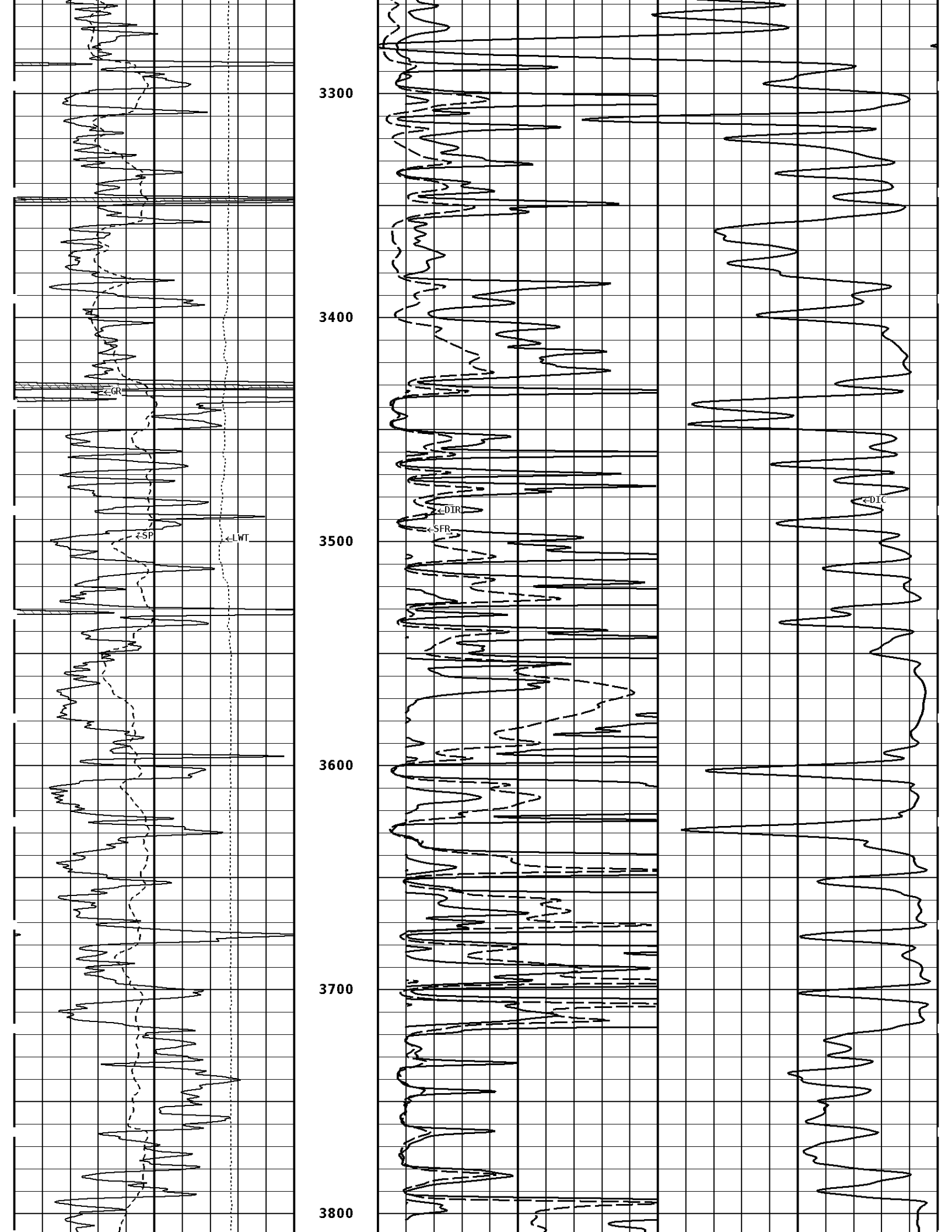

600
700
800
900
1000
←GR
←SP
←LWT
←DIR
←SFR
←DIC

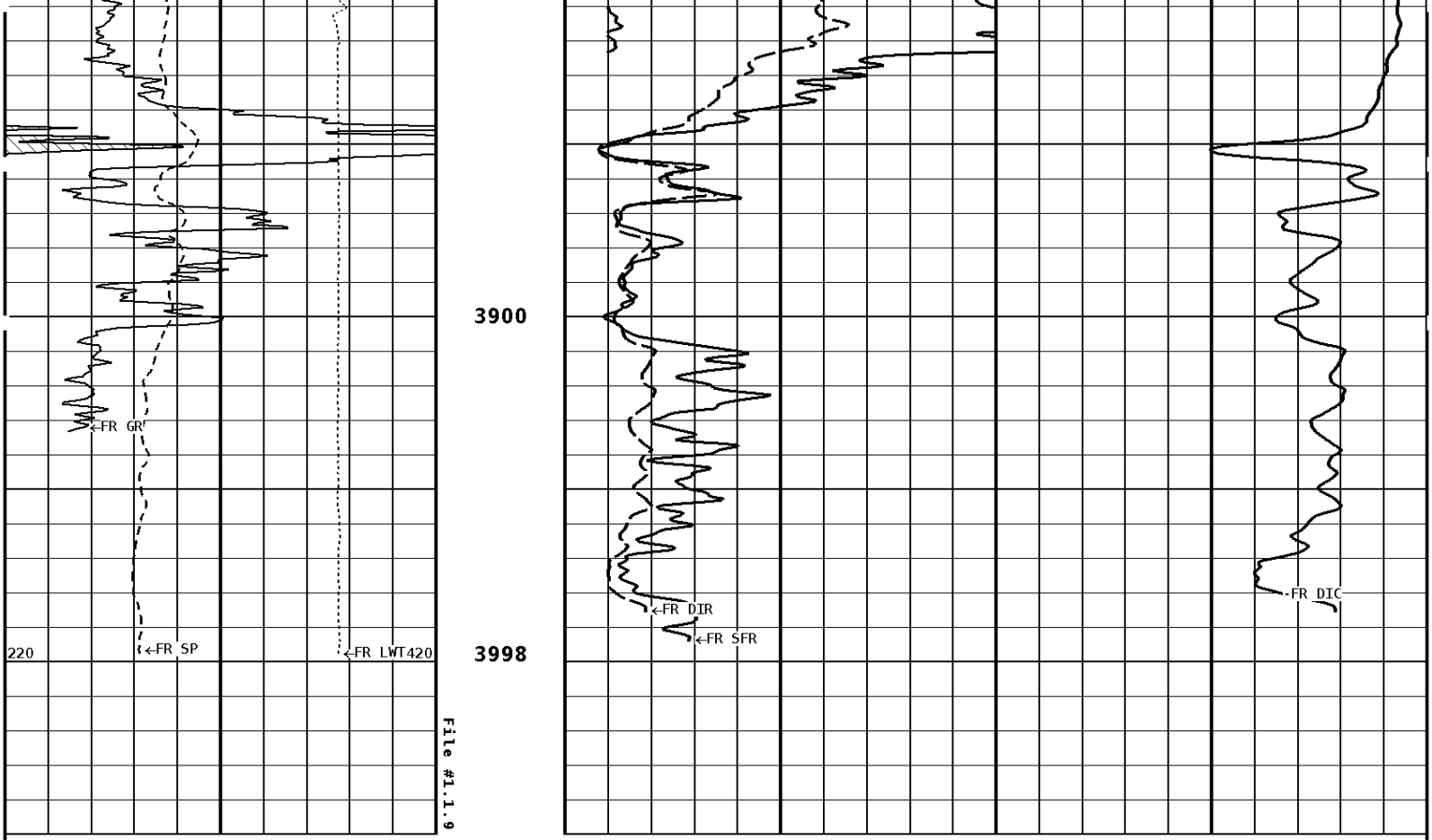

1100
1200
1300
1400
1500
1600
GR
SP
LWT
DIC
DIR
SFR


1700
1800
1900
2000
2100
GR
SP
LWT
DIR
SFR
DIC


2200
2300
2400
2500
2600
2700
GR
SP
LWT
DIR
SFR
DIC


2800
2900
3000
3100
3200
GR
SP
LWT
DIR
SFR
DIC


3300
3400
GR
DIR
DIC
SP
LWT
SFR
3500
3600
3700
3800



1:600 SECTION
2 INCH

GAMMA RAY
API UNITS
150 300
0 150

SPONTANEOUS POTENTIAL
mV
→| |←20

TENSION
LBS
10000 0

DEEP CONDUCTIVITY
MMHO
2000 1000
1000 0

DEEP INDUCTION
OHMM
0.0 500.0
0.0 50.0

SHALLOW FOCUSED RESISTIVITY
OHMM
0.0 500.0
0.0 50.0

Well File: and-mac-bon-1-quint-dip-oct-30
Segment: V1.D1.S9 MN
Reference: 0
Scale: 1:240
Acquired: Not Available
Processed: 2012-10/30 15:55 3.2.0-11087

TENSION
LBS
10000 0

SPONTANEOUS POTENTIAL
mV
→| |←20

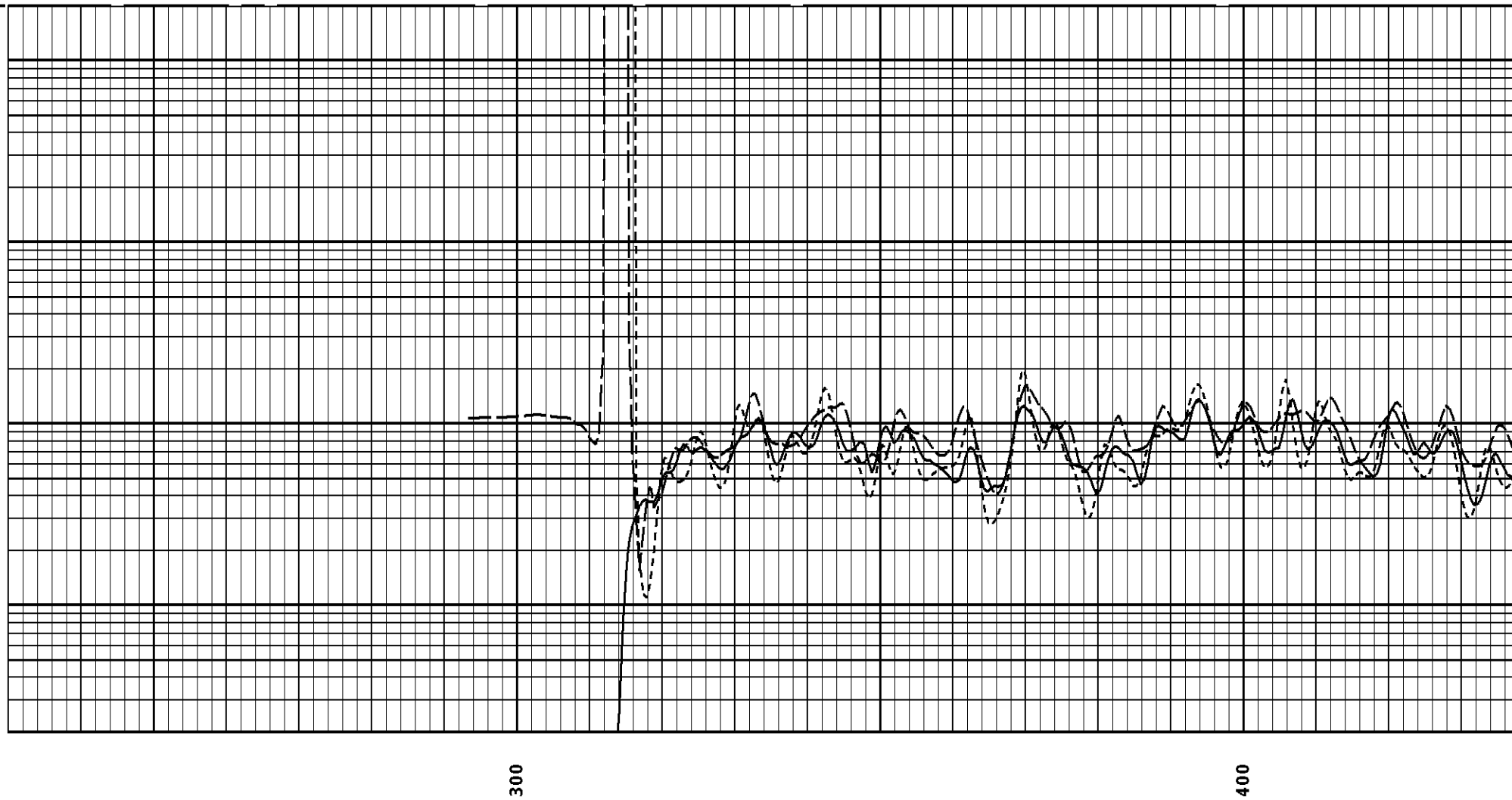
GAMMA RAY
API UNITS
150 300
0 150

SHALLOW FOCUSED RESISTIVITY
OHMM
0.2 2000.0

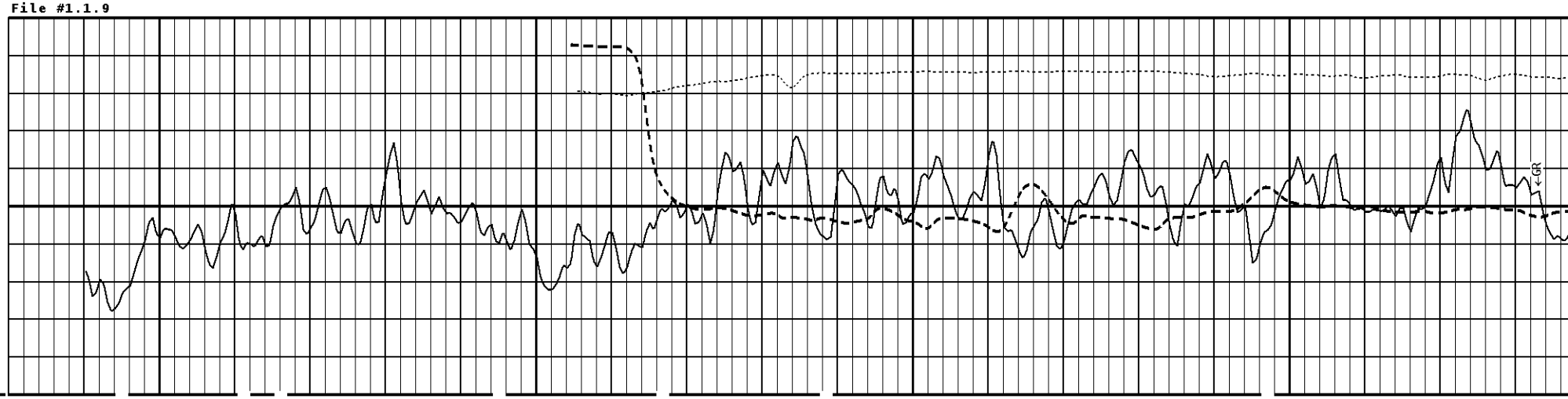
MEDIUM INDUCTION
OHMM
0.2 2000.0

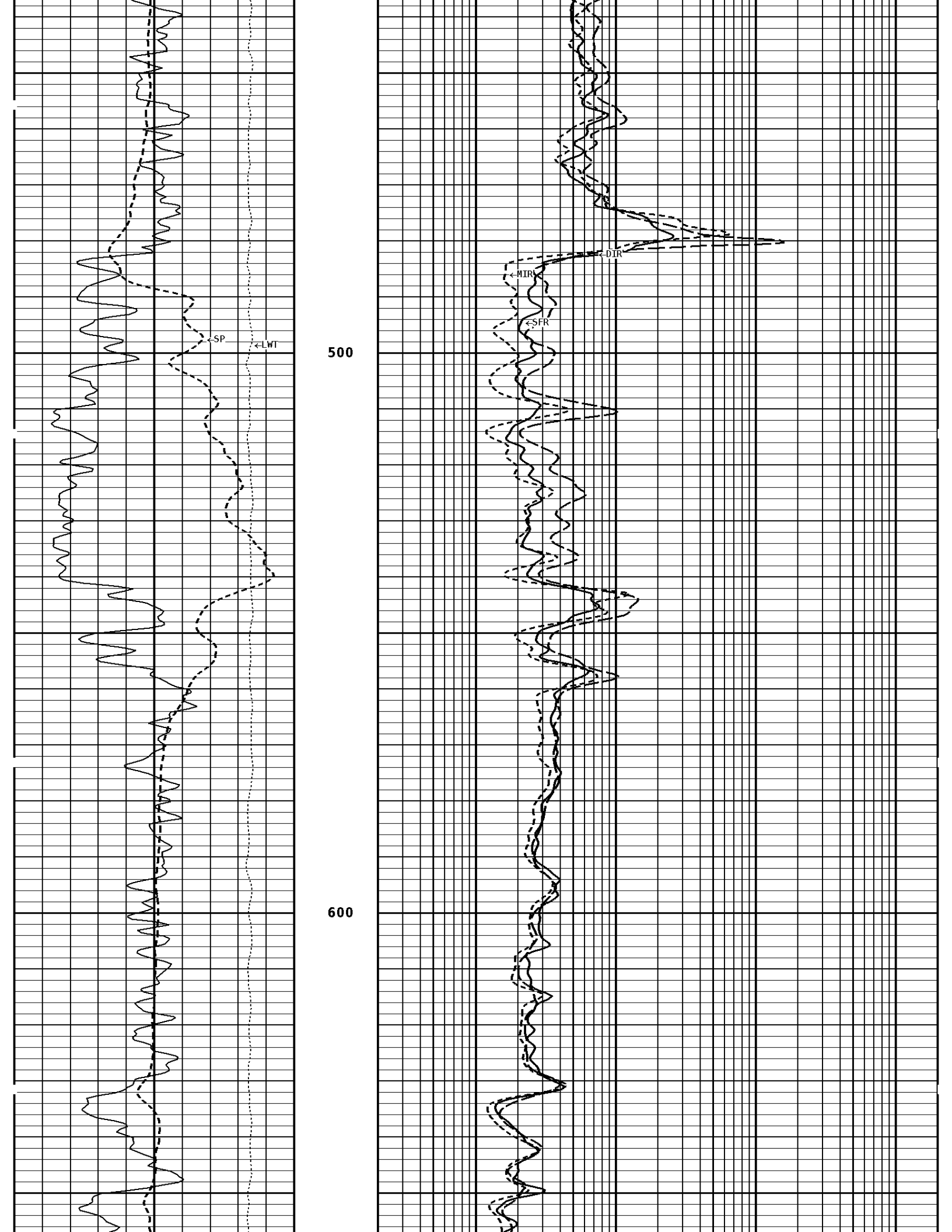
DEEP INDUCTION
OHMM
0.2 2000.0

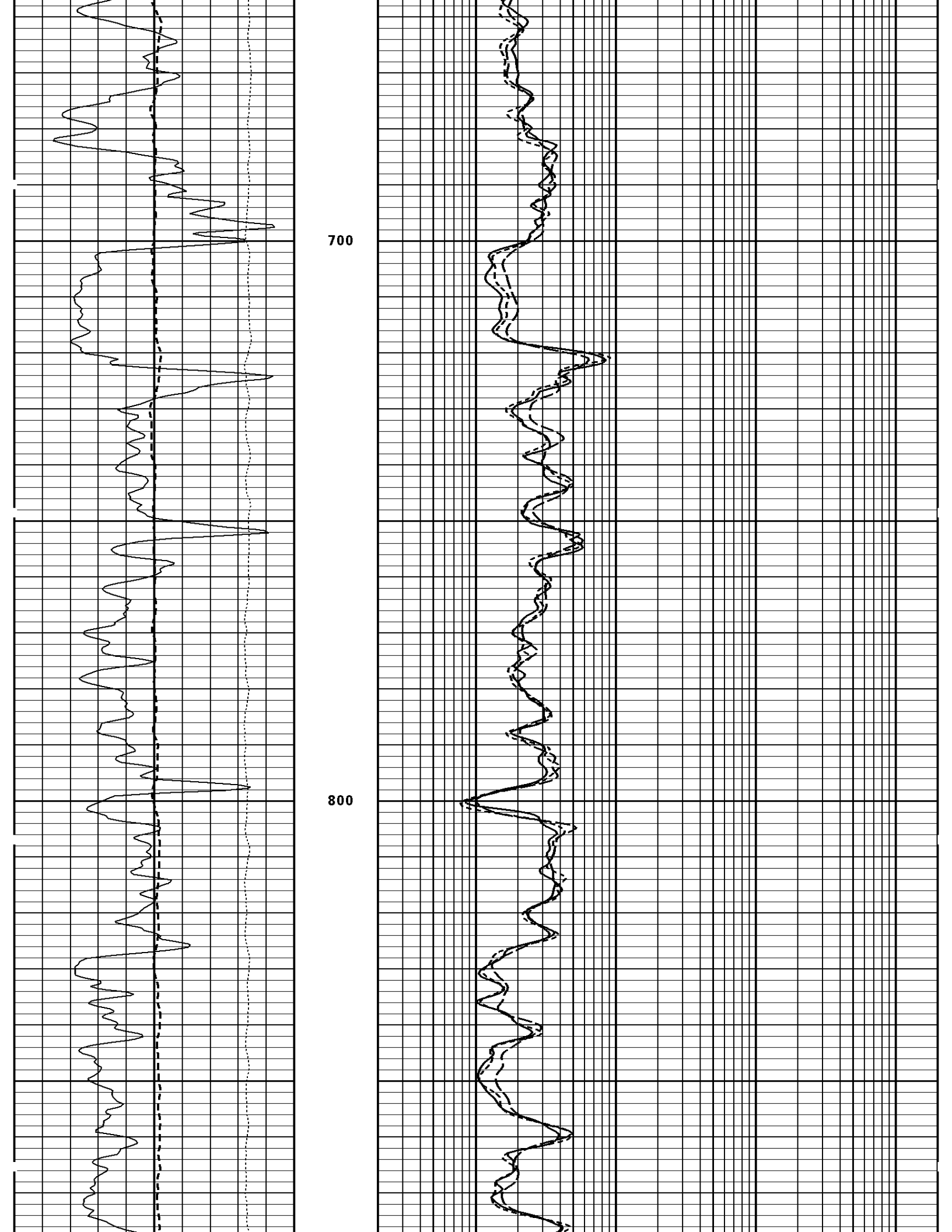
1:240 MAIN SECTION

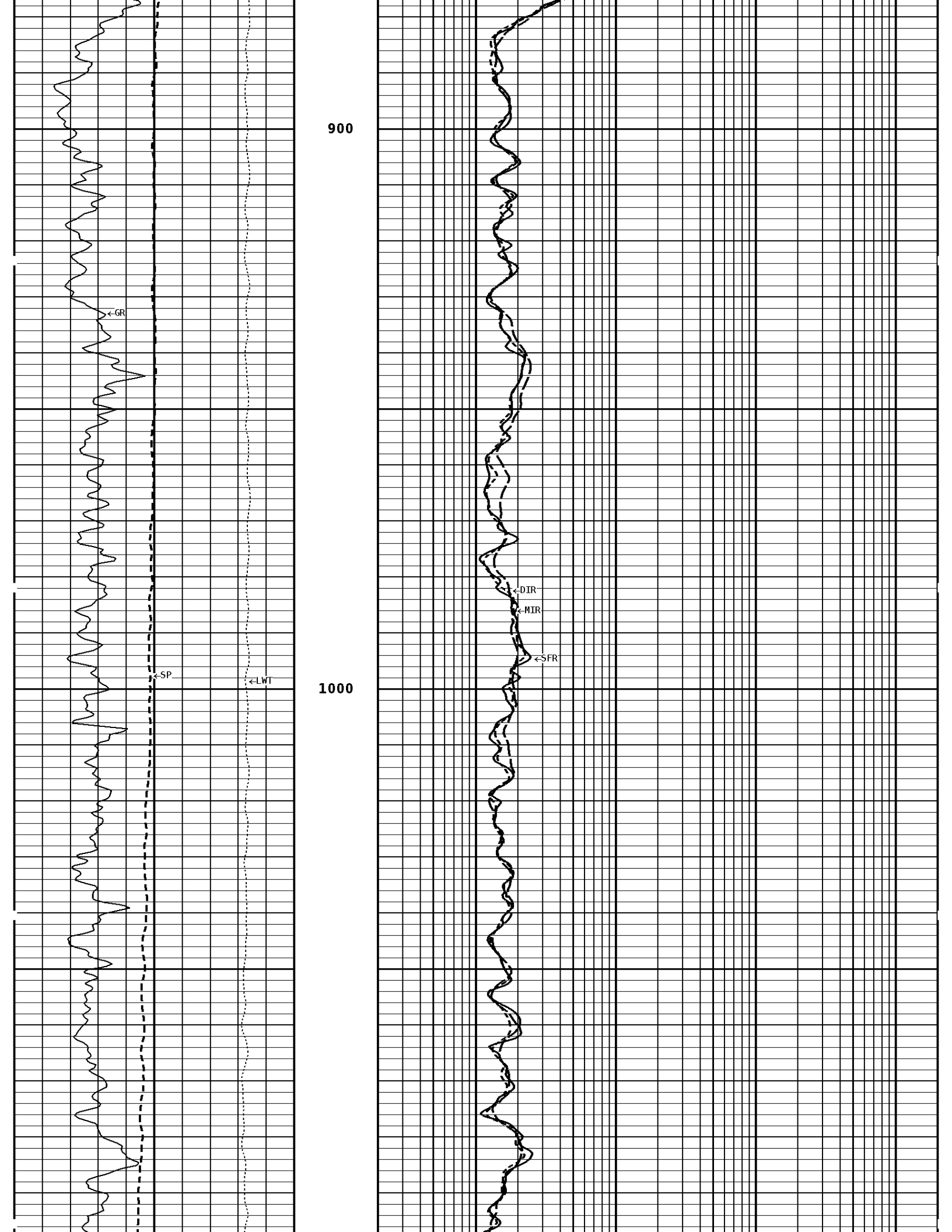


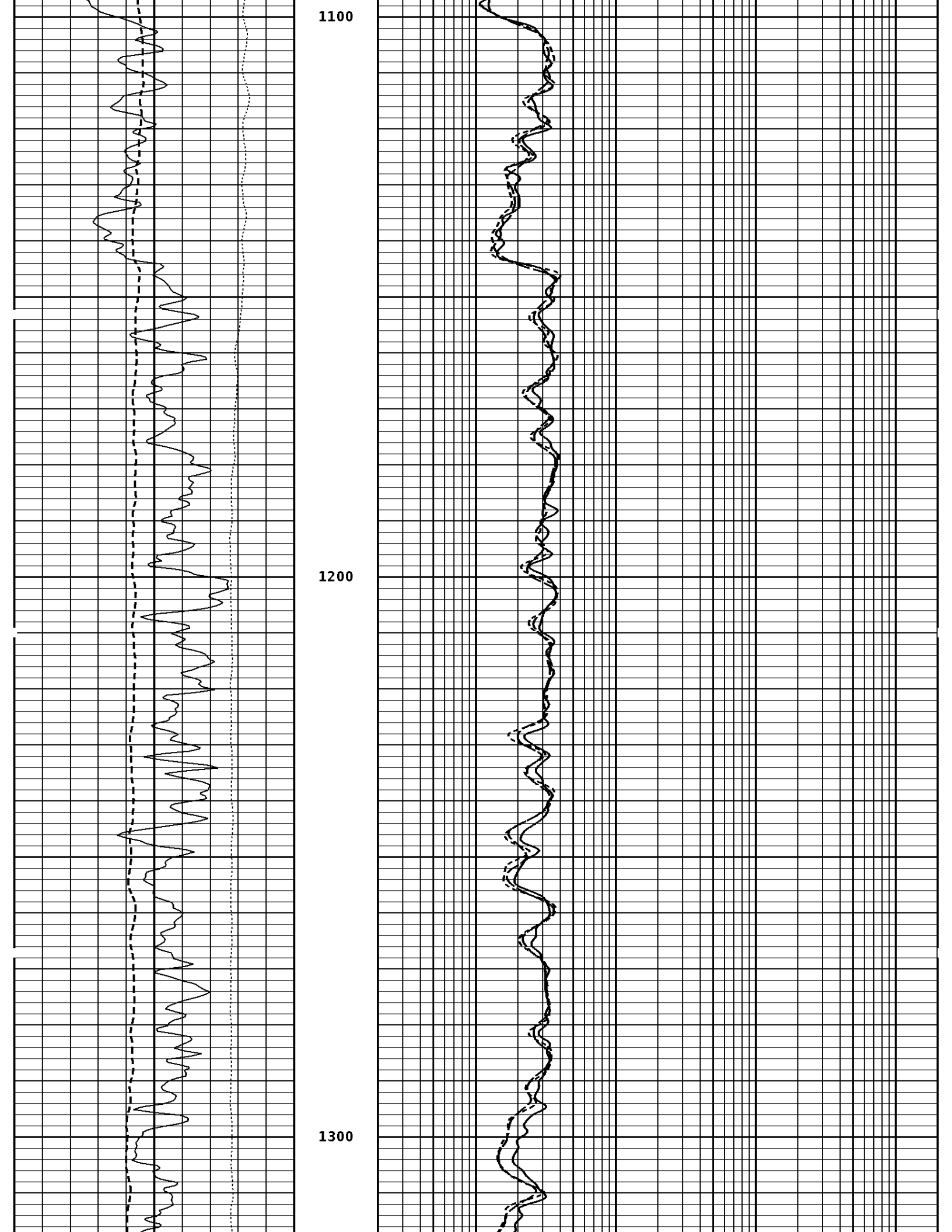
File #1.1.9

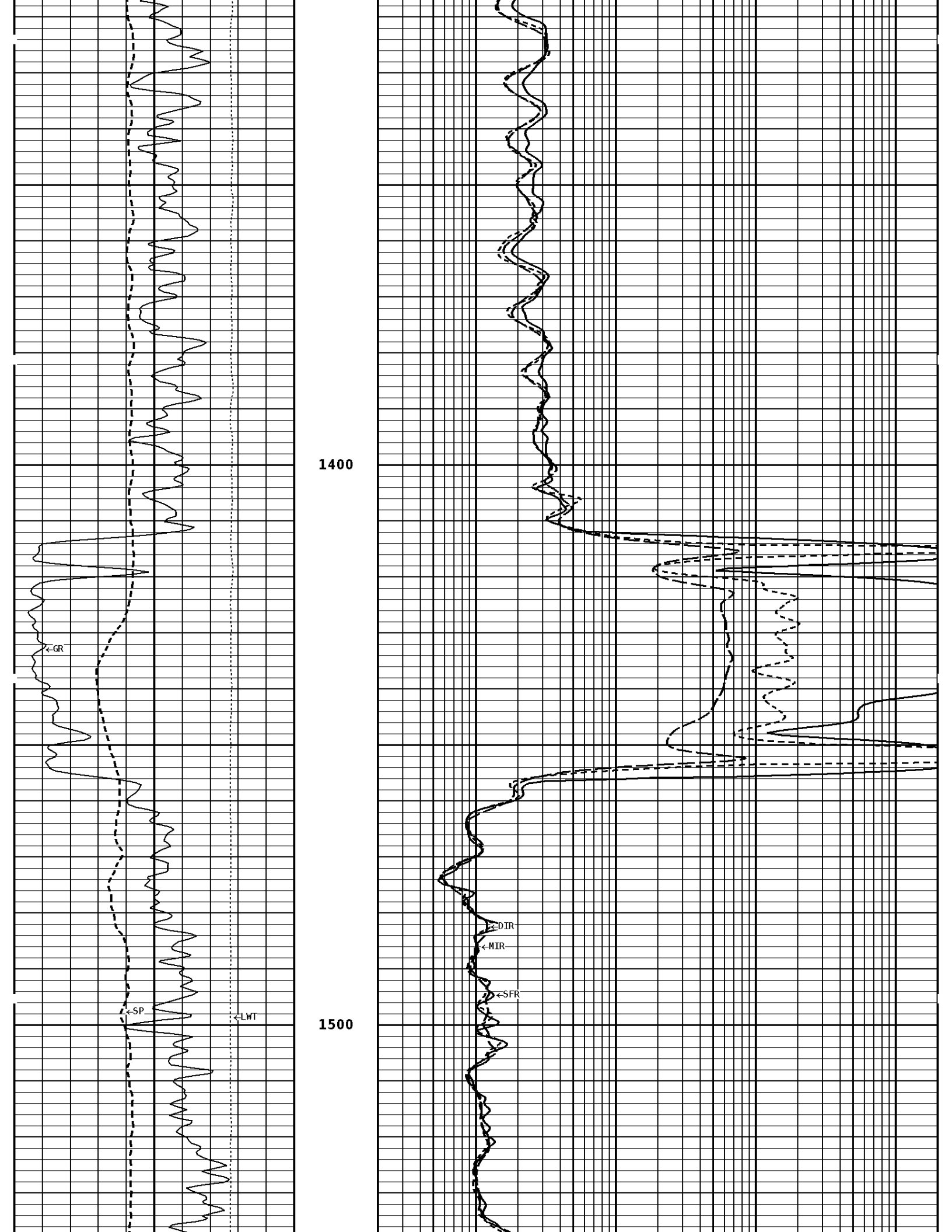


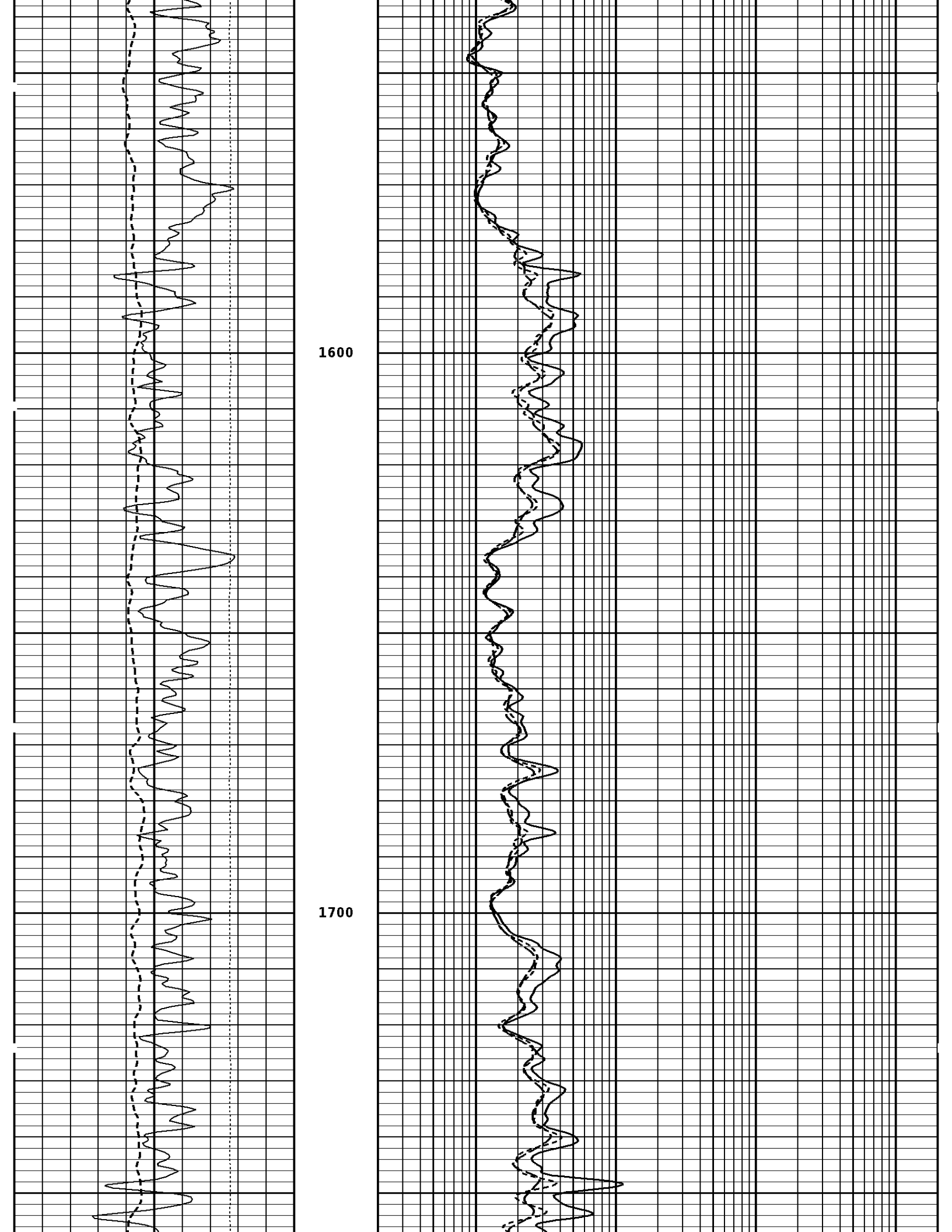

←SP
←LWT
500
600
←DIR
←MIR
←SFR

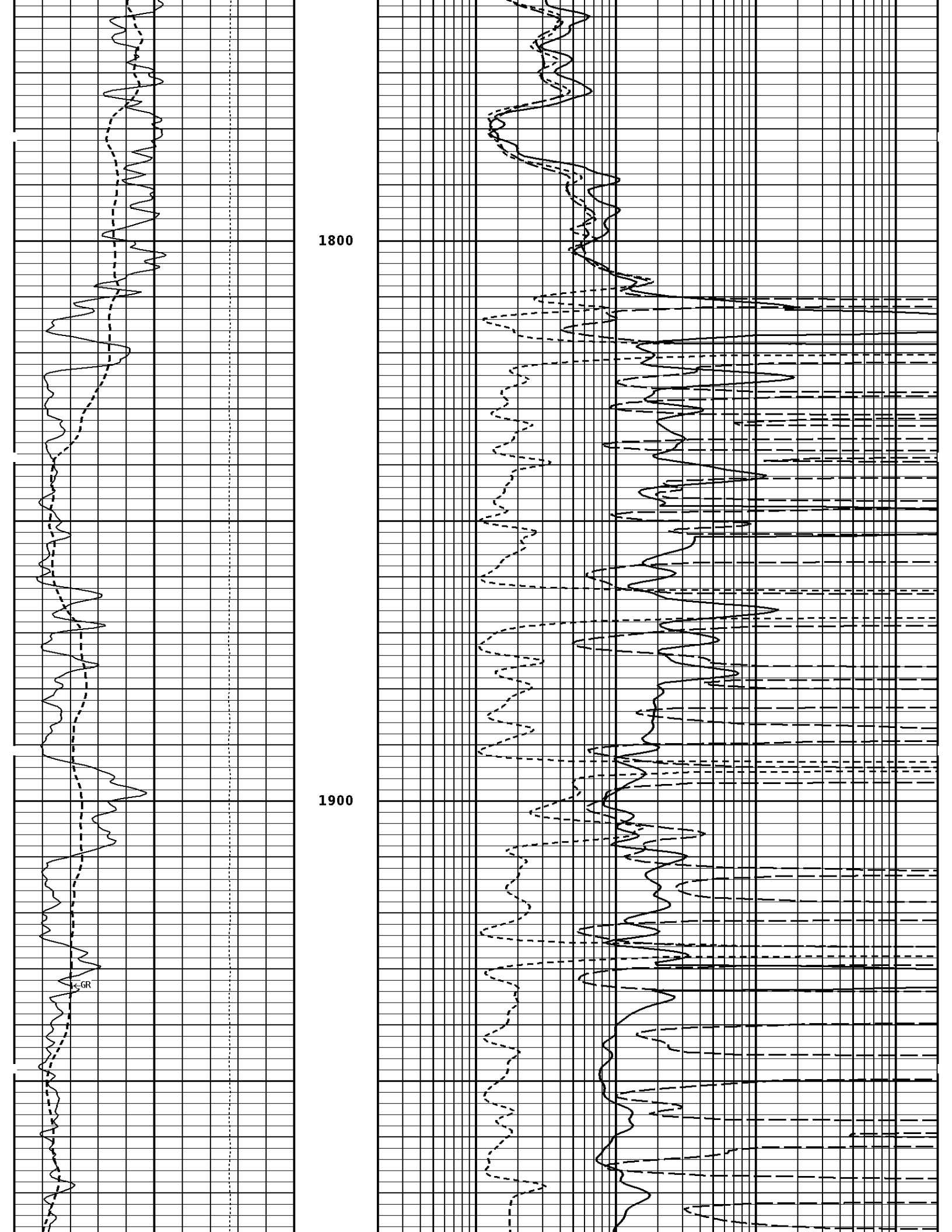

700
800

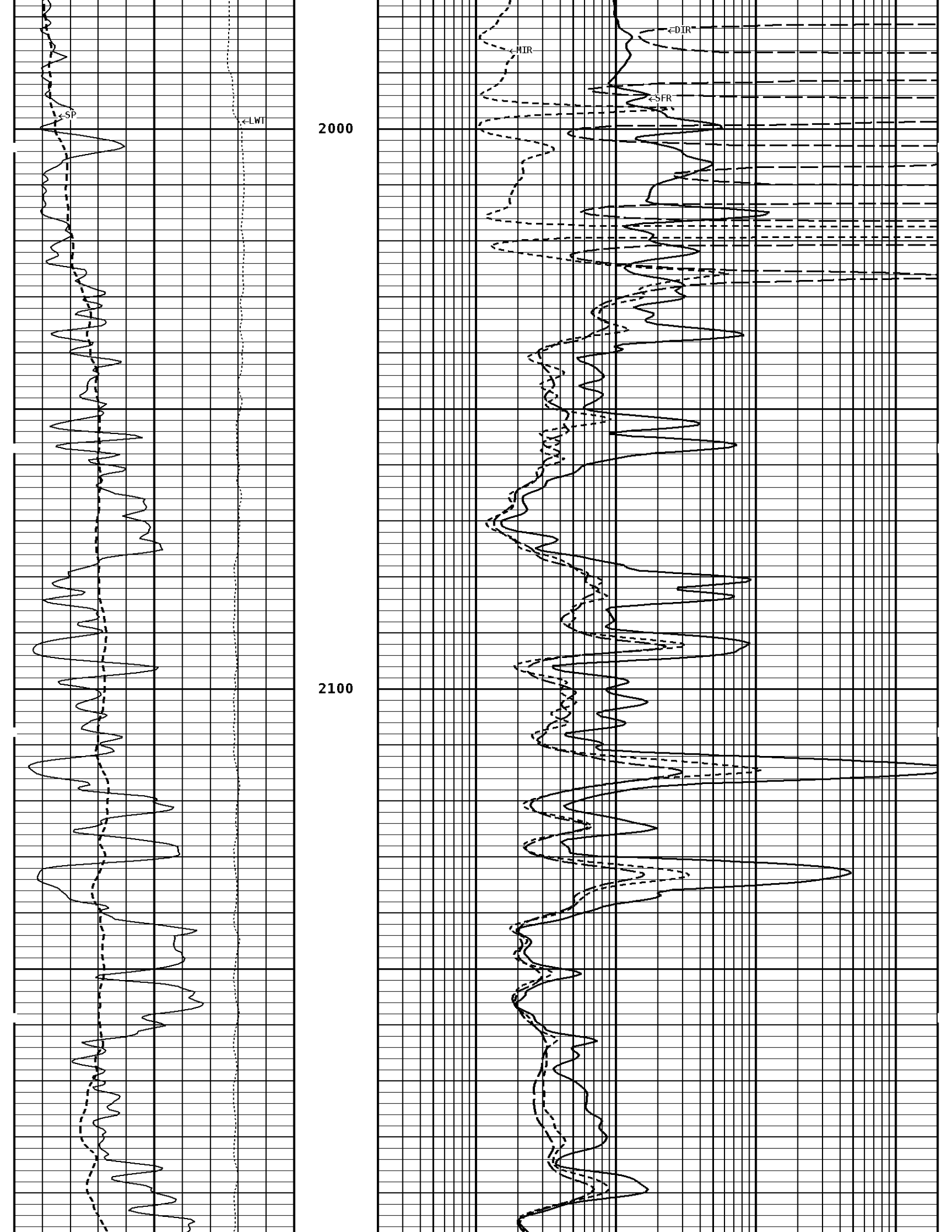

900
1000
GR
SP
LWT
DIR
MIR
SFR

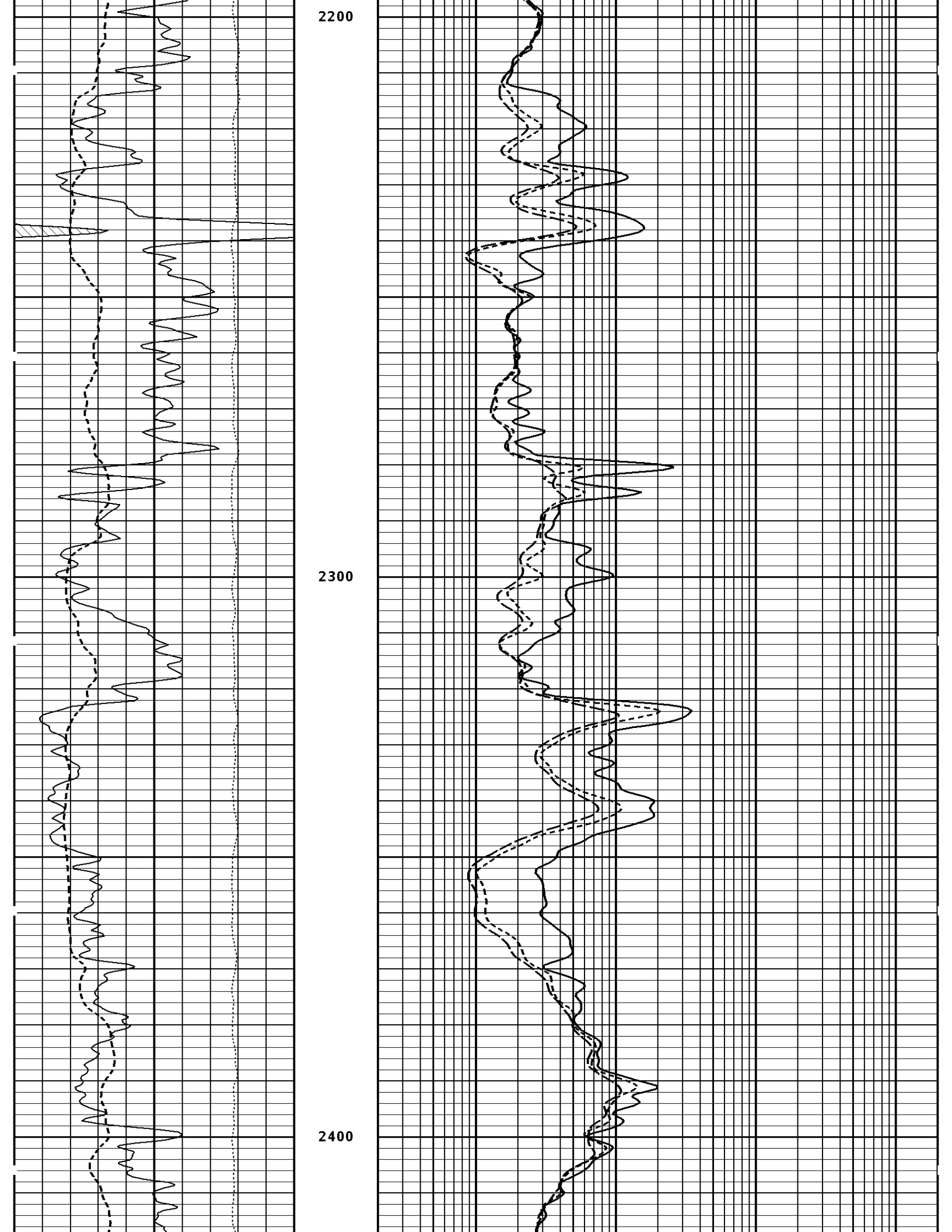

1100
1200
1300

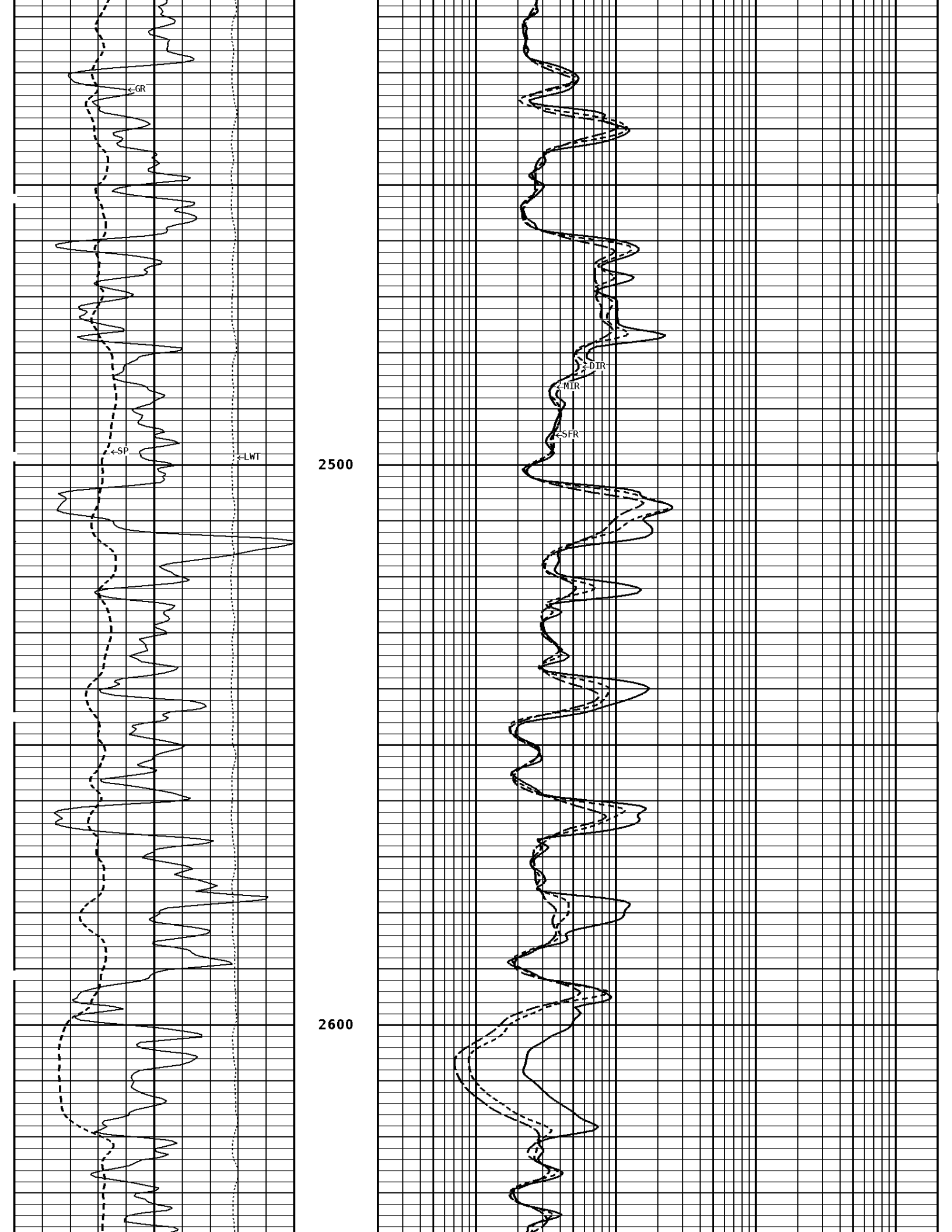

1400
GR
SP
LWT
DIR
MIR
SFR
1500

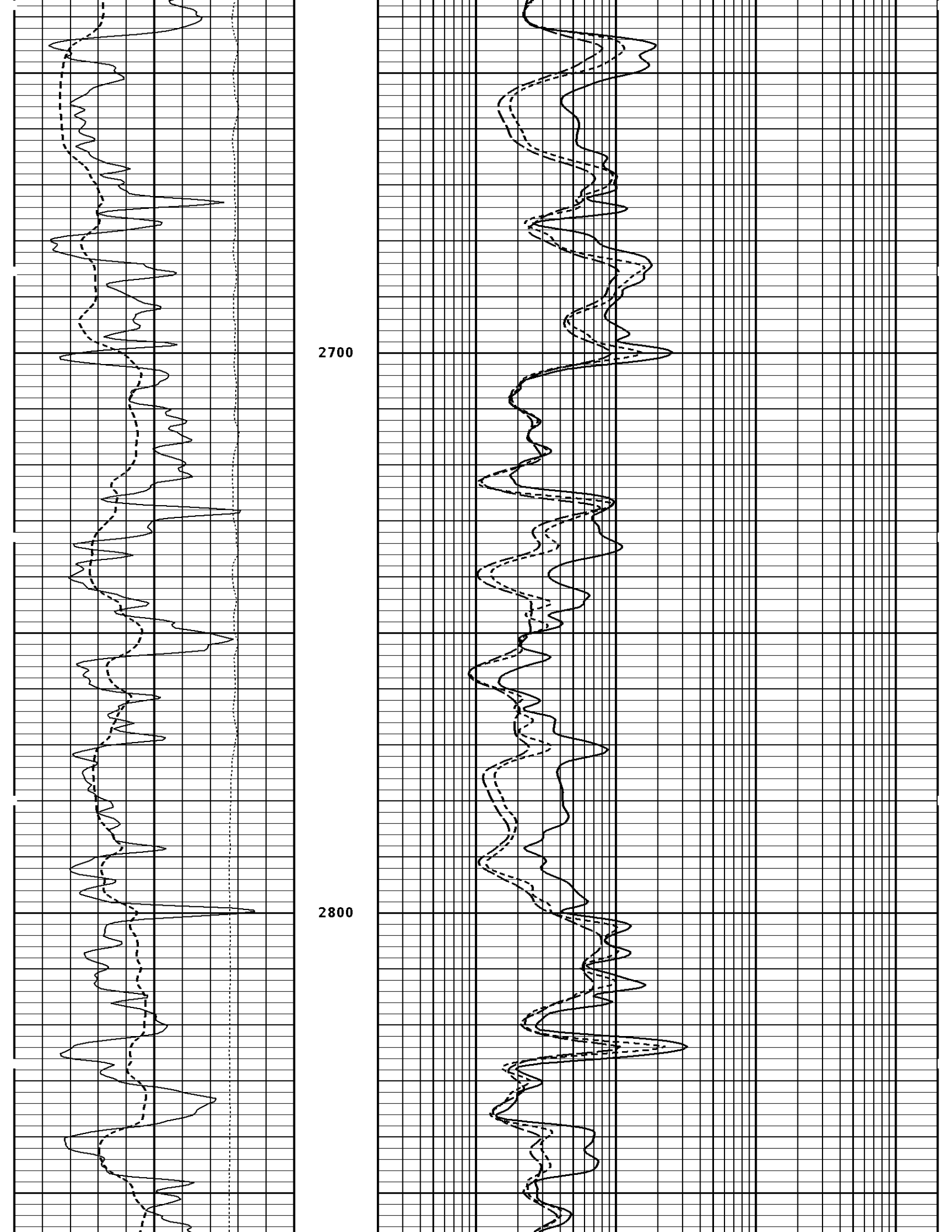

1600
1700

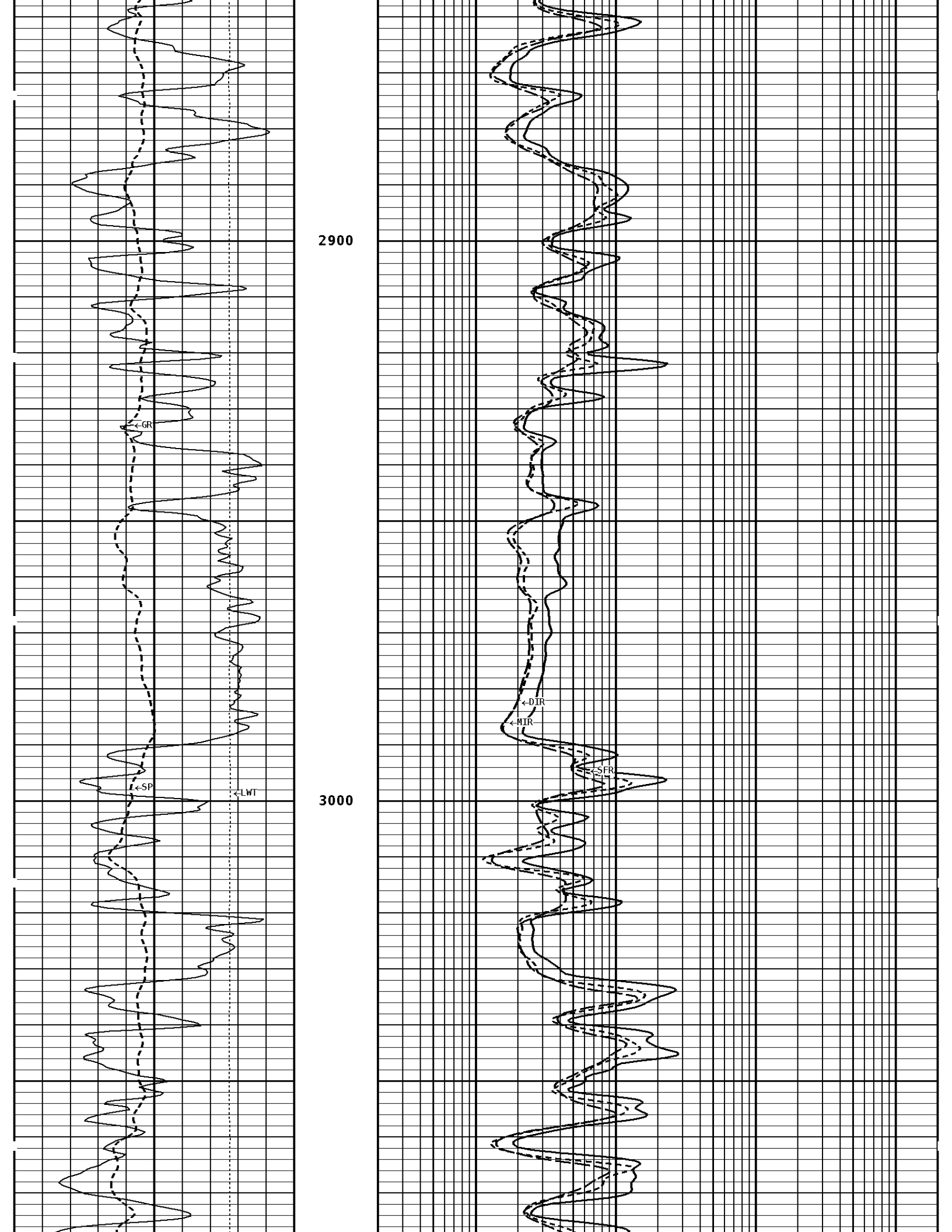

1800
1900
←GR

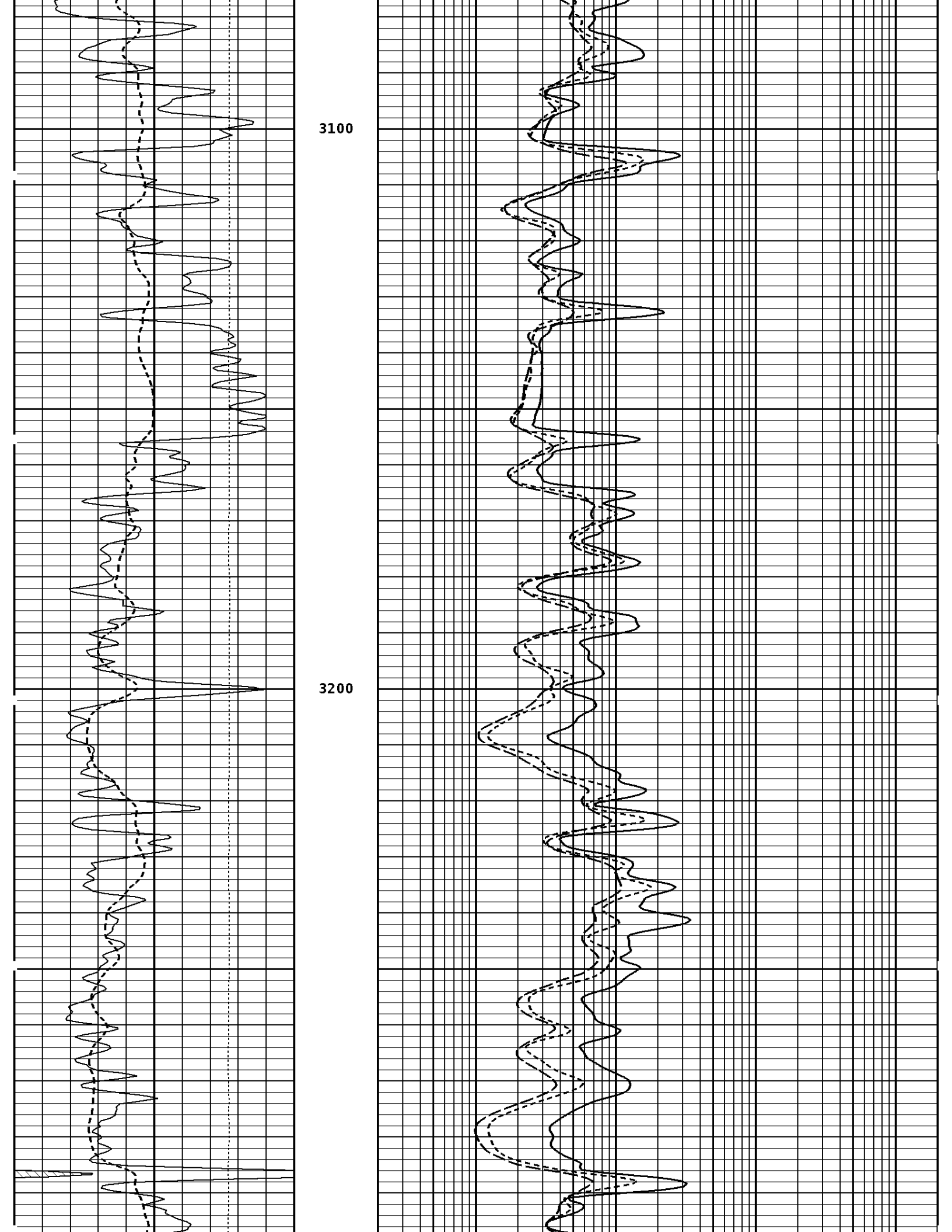

SP
LWT
2000
DIR
MIR
SFR
2100

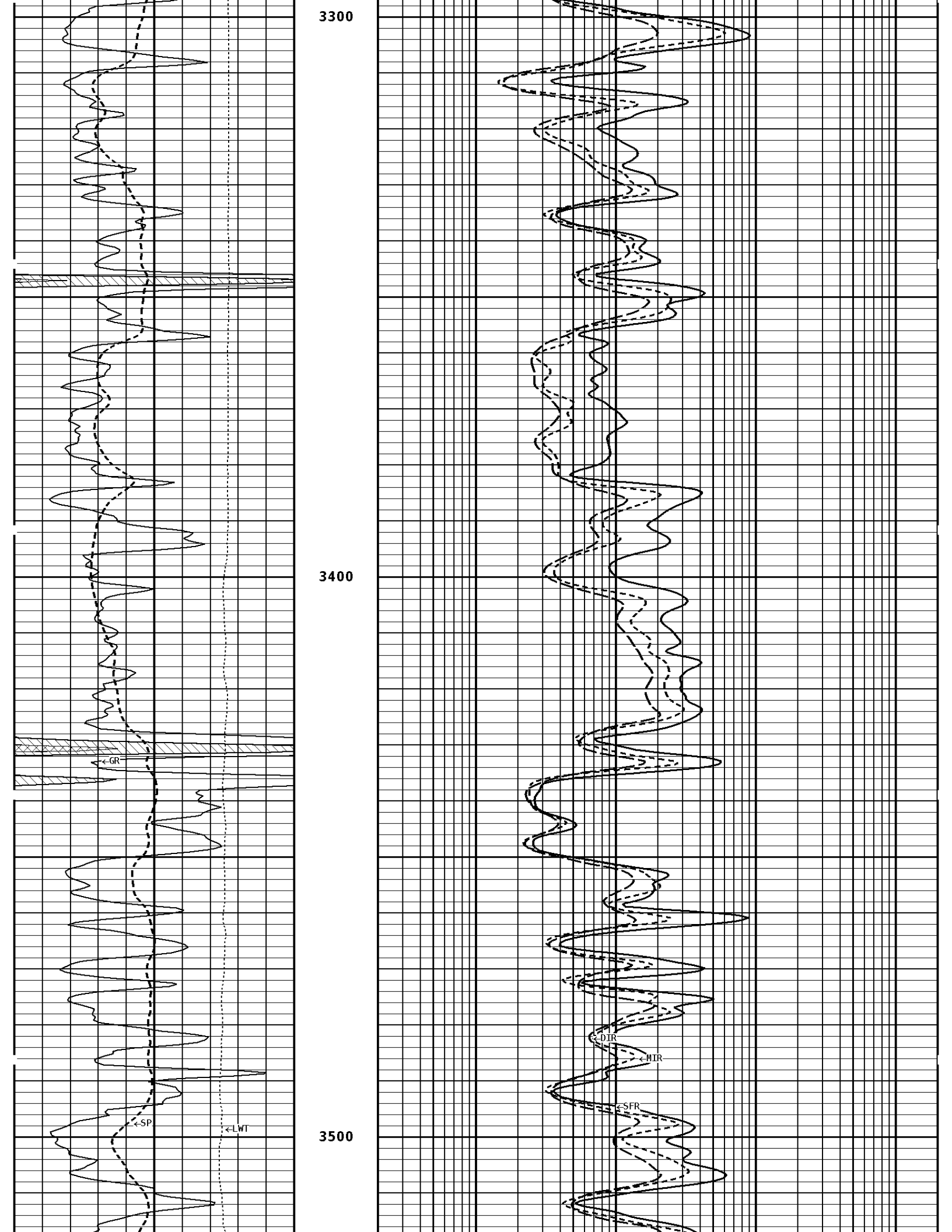

2200
2300
2400

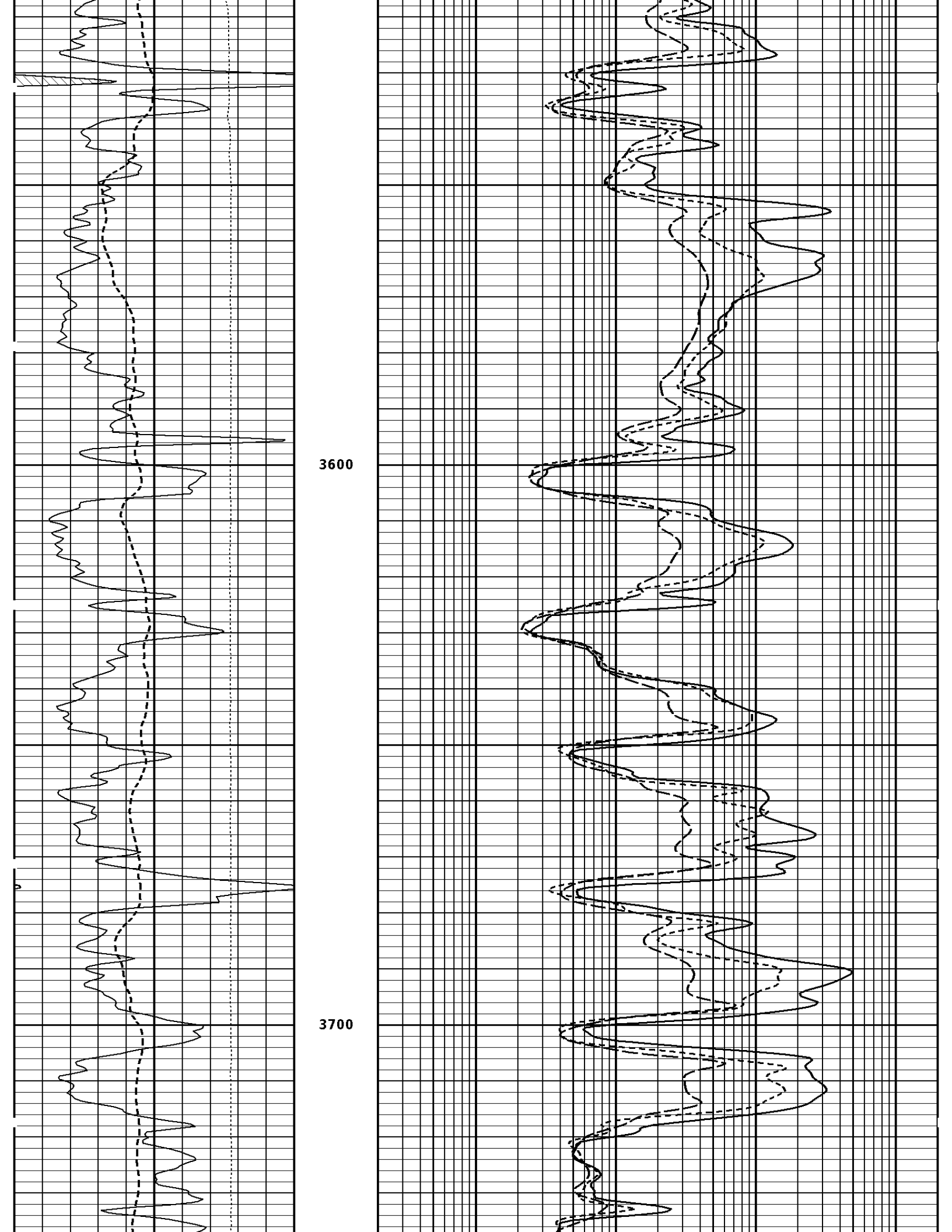

GR
SP
LWT
DIR
MIR
SFR
2500
2600

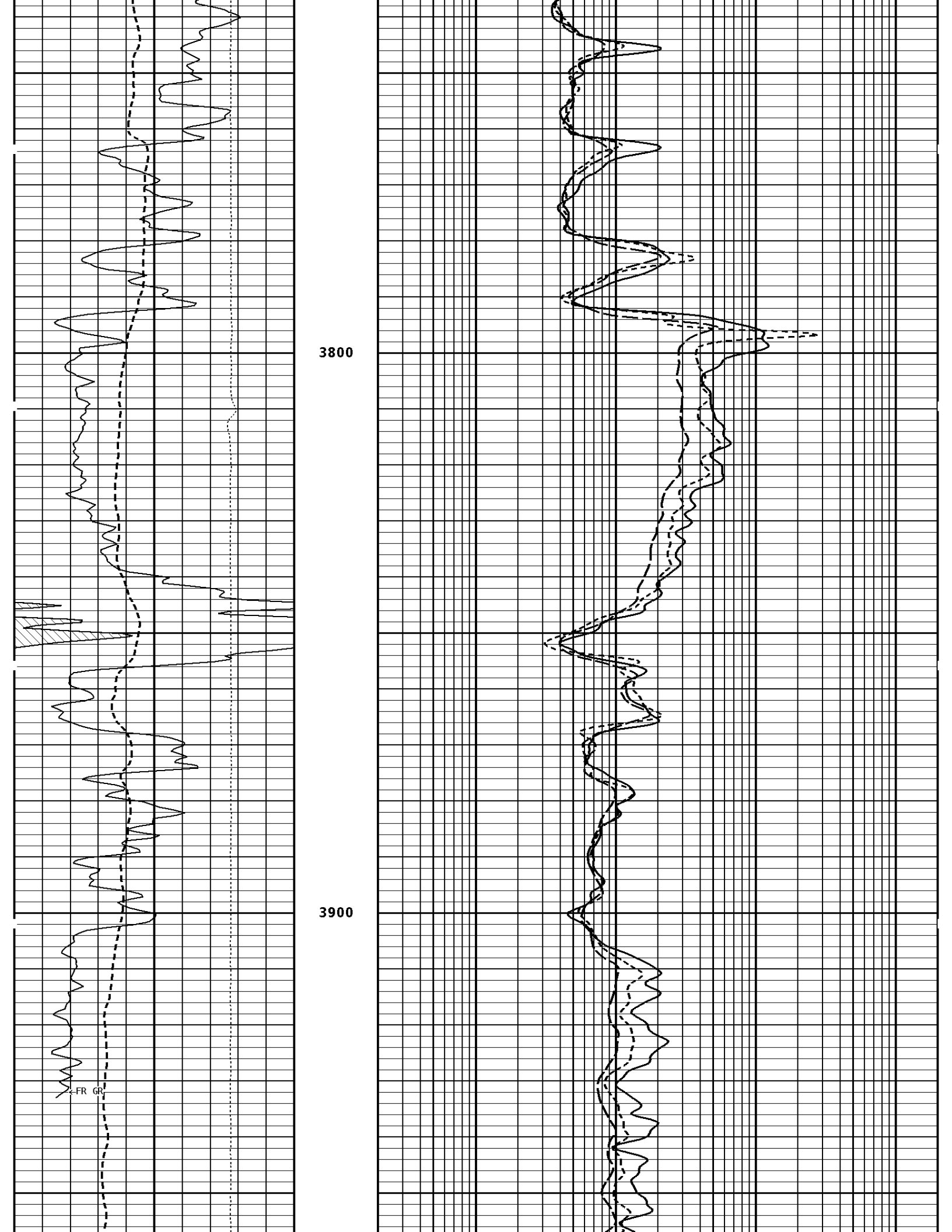

2700
2800

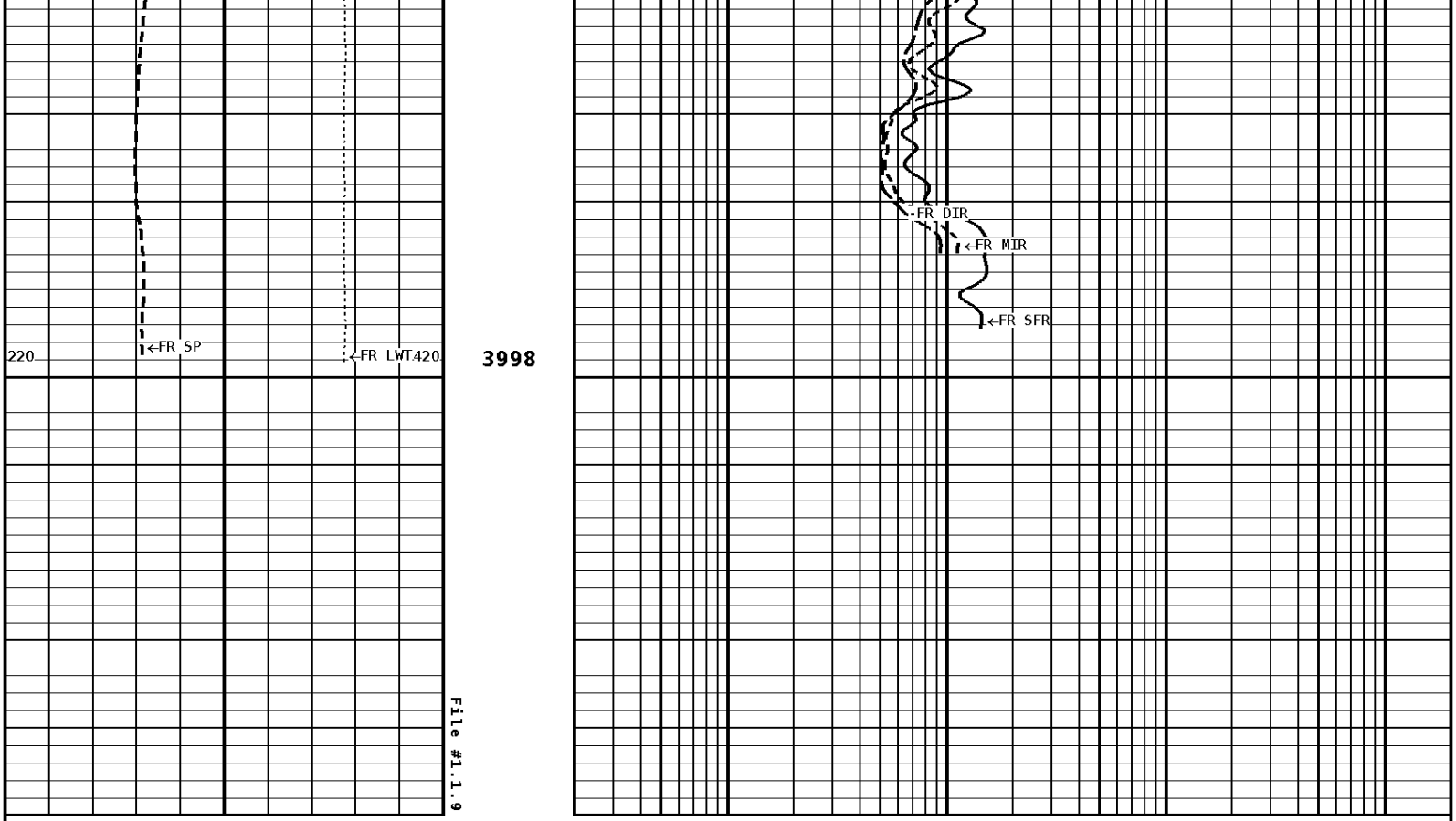

2900
3000
←GR
←SP
←LWT
←DIR
←MIR
←SFR


3100
3200


3300
3400
3500
GR
SP
LWT
DIR
MIR
SFR


3600
3700


3800
3900
FR GR



1:240 MAIN SECTION

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

*** Borehole Zone Factors ***

Zone 1 99999.0 to 0.0 Feet

Drill Bit Size	7.875	in
BHT Depth	3998.000	ft
Borehole Temperature	118.0	degF
Temperature Gradient	1.00	DFHF
Resistivity Of Mud	0.450	ohm/m
Resistivity Of Mud Temperature	70.00	degF

Well File: and-mac-bon-1-quint-dip-oct-30 **Scale:** 1:240
Segment: V1.D1.S6 RP **Acquired:** 2012-10/30 13:00 3.2.0-11087
Reference: 0 **Processed:** 2012-10/30 15:55 3.2.0-11087

TENSION LBS	SHALLOW FOCUSED RESISTIVITY OHMM
10000 0	0.2 2000.0
SPONTANEOUS POTENTIAL mV	**MEDIUM INDUCTION OHMM**

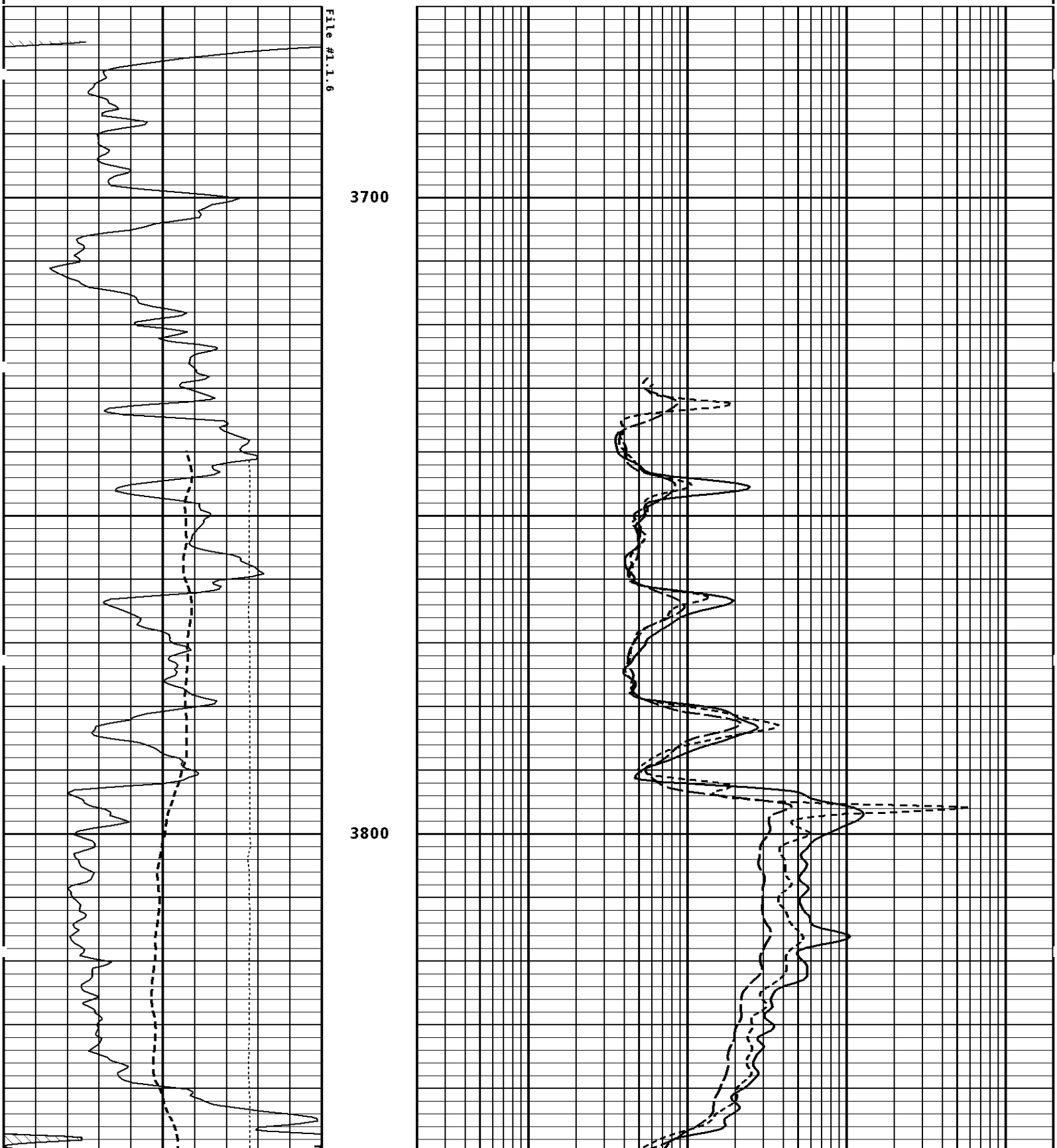
→| |←20

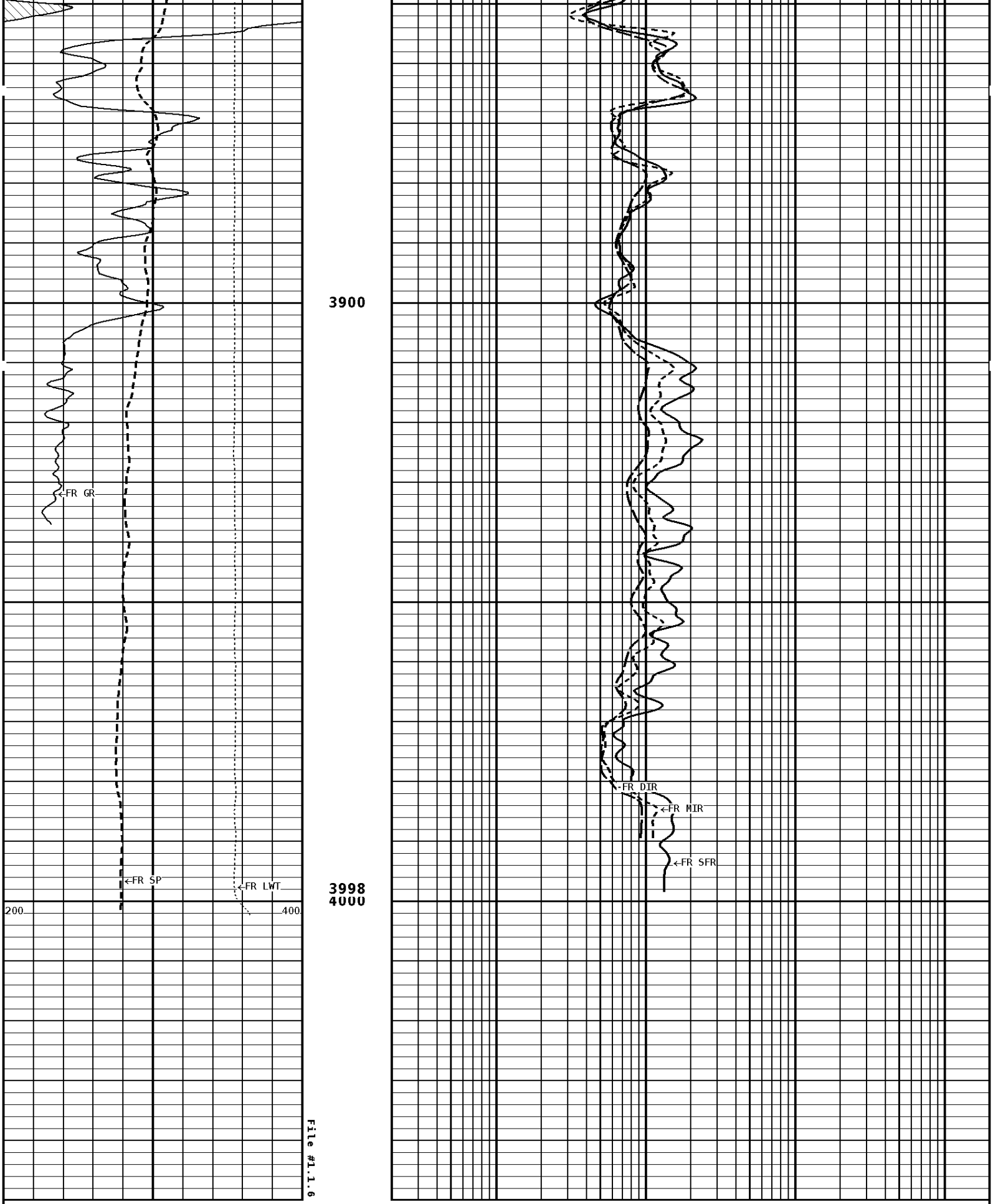
GAMMA RAY
API UNITS
150 300
0 150

0.2 2000.0

DEEP INDUCTION
OHMM
0.2 2000.0

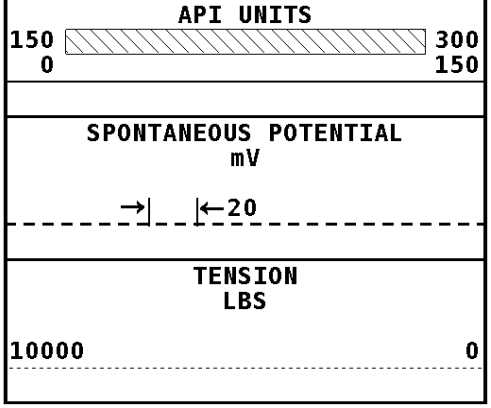
1:240 REPEAT SECTION

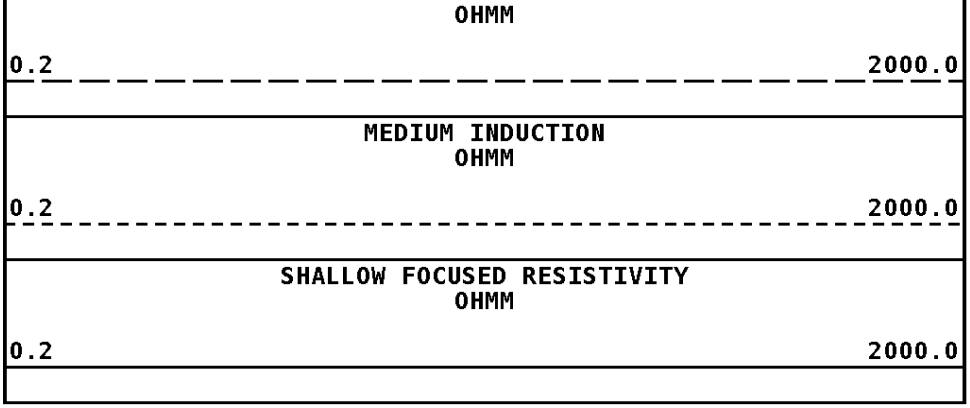




1:240 REPEAT SECTION

GAMMA RAY		DEEP INDUCTION





* Borehole Zone Factors *

Zone 1 99999.0 to 0.0 Feet

Drill Bit Size	7.875	in
BHT Depth	3998.000	ft
Borehole Temperature	118.0	degF
Temperature Gradient	1.00	DFHF
Resistivity Of Mud	0.450	ohm/m
Resistivity Of Mud Temperature	70.00	degF

* Calibration Summary *

Shop Calibration GRT-B

Performed : 23-Aug-2012 Time : 09:20
Sensor Suite : GR-GR5 ID : GRT-BA-14

	Measured Background	Measured Jig	Units	Calibrated Jig	Units
GR	52	368	CPS	175	GRAPI

Shop Calibration PIT-CA

Performed : 17-FEB-2012 Time : 10:55
Sensor Suite : P-IND-T ID : PIT-AC-22

Medium

	Measured R	Measured X	Calibrated R	Calibrated X	Units
Air	129390	131208	-0.3	-0.3	MMHOS
Zero	131066	131073	0.0	0.0	MMHOS
Reference	248788	249307	5000.0	5000.0	MMHOS
Loop	147423	174670	2603.6	1071.8	MMHOS
Sonde Error			-2.9	-5.7	MMHOS
Cond			5000.0	5000.0	MMHOS

Deep

	Measured R	Measured X	Calibrated R	Calibrated X	Units
Air	129579	130441	-0.3	0.1	MMHOS
Zero	131075	131074	0.0	0.0	MMHOS
Reference	238600	238508	2000.0	2000.0	MMHOS
Loop	148942	177007	1226.8	506.8	MMHOS
Sonde Error			-0.7	-9.0	MMHOS
Cond			2000.0	2000.0	MMHOS

Temperature

Measured Low	Measured High	Calibrated Low	Calibrated High	Units
16980.0	56920.0	70.0	350.0	DEGF

Performed : 17-FEB-2012 Time : 10:45
Sensor Suite : SFL ID : PIT-AC-22

Internal

	Measured Zero	Measured Reference	Calibrated Zero	Calibrated Reference	Units
Im	32773.9	50555.3	0.0	7028.0	uA
Ib	32767.2	50247.8	0.0	1750.0	mA
MOM1	32800.4	60269.7	0.0	175.0	mV
Equivalent SFL				43.97	OHMM

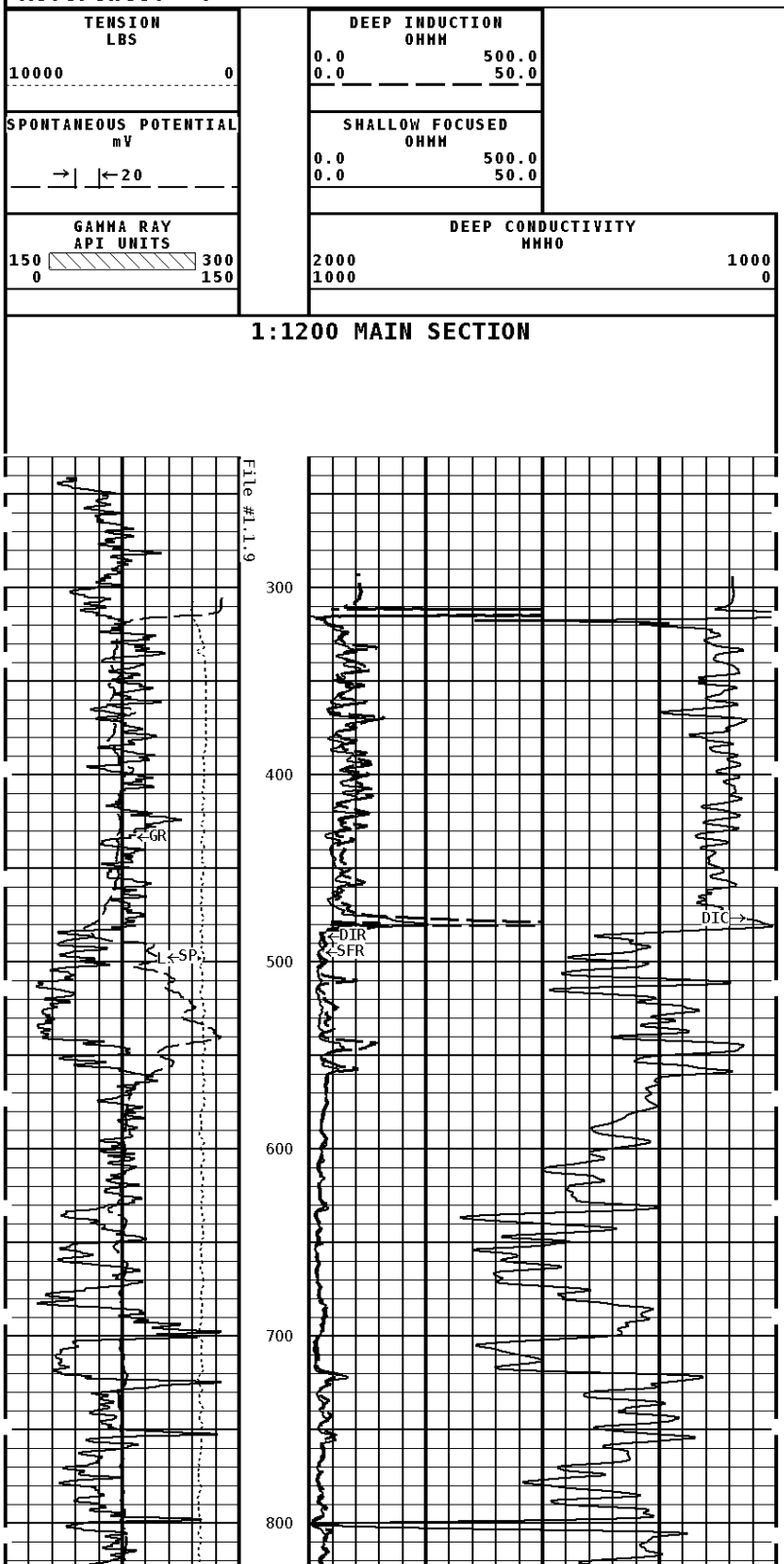
Performed : 17-FEB-2012 Time : 10:38
Sensor Suite : P-SP ID : PIT-AC-22

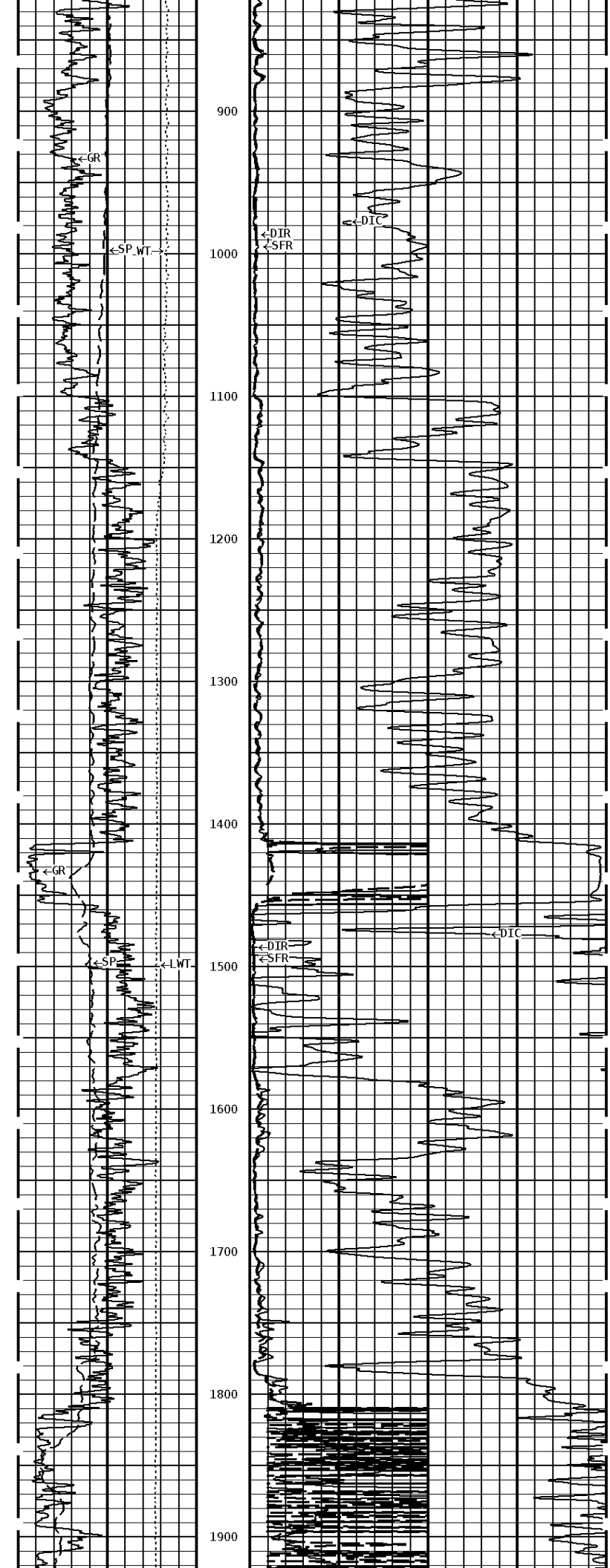
	Internal Measured Zero	Internal Measured Reference	Calibrated Zero	Calibrated Reference	Units
	32785.7	58911.1	0.0	1000.0	mV

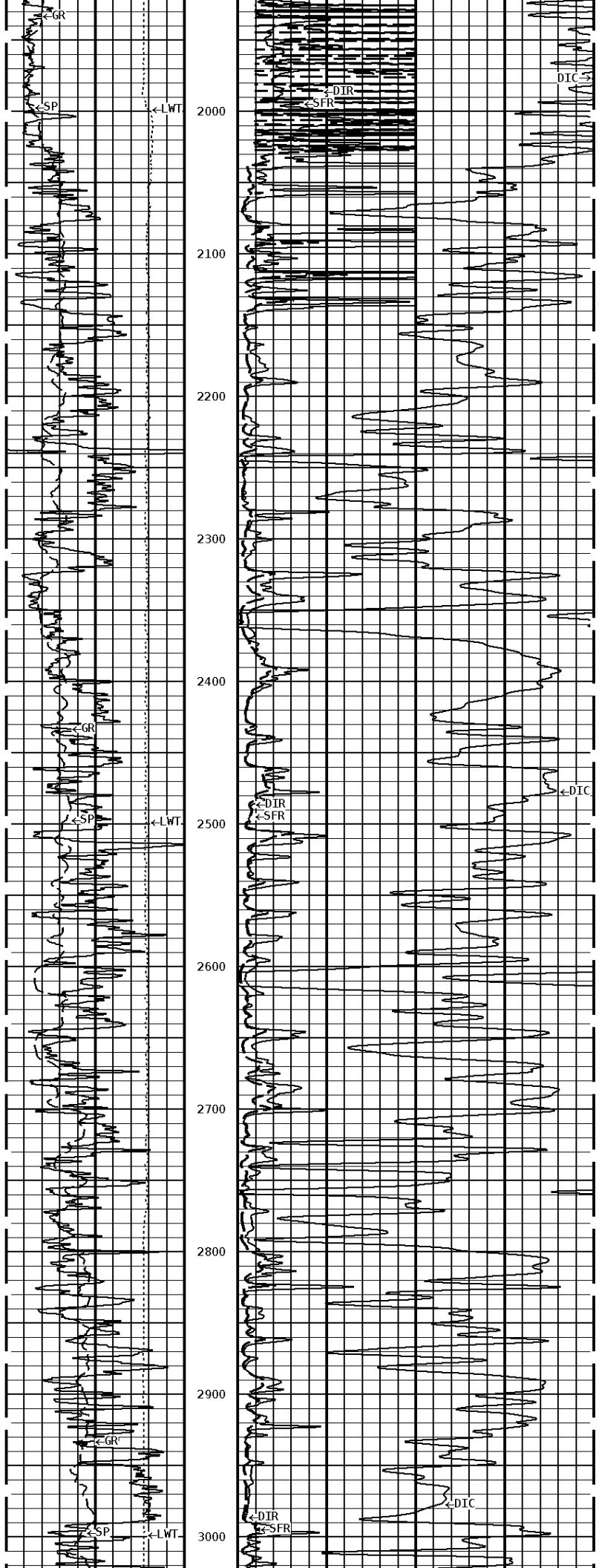
Performed : 17-FEB-2012 Time : 13:08
Sensor Suite : P-RMUD ID : PIT-AC-22

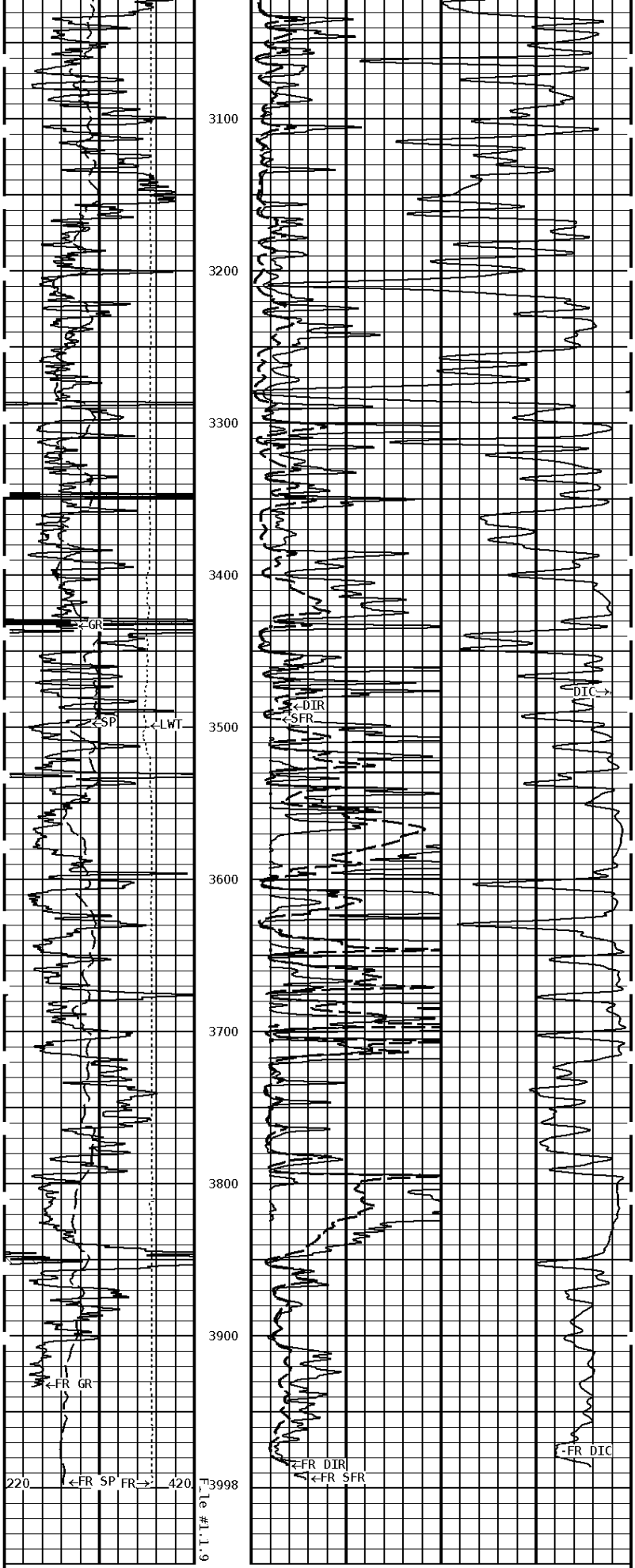
	Internal Measured Zero	Internal Measured Reference	Calibrated Zero	Calibrated Reference	Units
Rmi	5.0	54416.8	0.0	290.6	mA
Rmv	4.7	54228.6	0.0	290.6	mV
Equivalent Rm				0.9037	OHMM

Well File: and-mac-bon-1-quint-dip-oct-30 **Scale:** 1:1200
Segment: V1.D1.S9 MN **Acquired:** Not Available
Reference: 0 **Processed:** 2012-10/30 15:55 3.2.0-11087

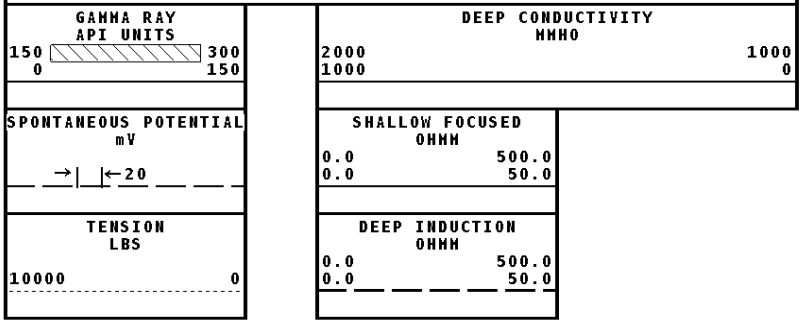



900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900
GR
SP_WT
DIC
DIR
SFR
GR
DIC
DIR
SFR
SP
LWT


GR
SP
LWT
DIR
SFR
DIC
2000
2100
2200
2300
2400
2500
2600
2700
2800
2900
3000



1:1200 MAIN SECTION


GAMMA RAY
API UNITS
150
300
0
150
DEEP CONDUCTIVITY
MMHO
2000
1000
1000
0
SPONTANEOUS POTENTIAL
mV
20
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