Tucker ENERGY SERVICES

PHASED INDUCTION

SHALLOW FOCUS SP LOG

Company DEXXON, INC.
Well REDWOOD ROYALTY #1
Field GRANT
County HARPER
State KANSAS
Country USA
API No. 15-077-22173

File No : TUL-61448
Company : DEXXON, INC.
Well : REDWOOD ROYALTY #1
Field : GRANT
County : HARPER
State : KANSAS
Country : USA
API No : 15-077-22173

Location :
330' FNL & 1320' FEL
N2 N2 NE

LSD : **Sect :** 29 **Twp :** 31S **Rge :** 07W

Permanent Datum:	GL	**Elevations:**		**Services:**	
Drilling Measured From:	GL	**KB** 1514.00	Ft	CNT	WOT
Log Measured From:	GL	**DF** 1513.00	Ft	LDT	PIT
Above Permanent Datum:	13.00 Ft	**GL** 1501.20	Ft	MLT	

Date	08-28-2018			
Run Number	1			
Depth--Driller	4860.0 Ft			
Depth--Logger	4865.0 Ft			
First Reading	4835.0 Ft			
Last Reading	2400.0 Ft			
Casing--Driller	250.0 Ft			
Casing--Logger	250.0 Ft			
Bit Size	8.750 In			
Casing Size	9.625 In			
Hole Fluid Type	WBM			
Density	9.5			
Fluid Loss	8.8			
PH/Viscosity	11.5	70.0		
Sample Source	MEASURED			
RM@Measured Temp.	0.580 @ 80 F			
RMF@Measured Temp	0.490 @ 80 F			
RMC@Measured Temp.	0.670 @ 80 F			
Source RMF/RMC	CALCULATED	CALCULATED		
RM@BHT	0.370 @ 130 F			
Time Circulation Stopped				
Max Recorded Temp.	130 F			
Equipment/Base	1022	TULSA		
Recorded By	R. FRANKLIN			
Witnessed By	G. PILGRIM			

Bitsize Intervals

Size (In)	Bottom (Ft)
8.750	4860.00

Casing Strings

Size (In)	Weight (Lbs)	Bottom (Ft)	Top (Ft)
9.625	0.00	250.00	0.00

Run Number	1		
Date	08-28-2018		
Date/Time On Bottom	08-28-2018 09:15		
Depth to Fluid	0.0 Ft		
Salinity	4500.000		
RMF@BHT	0.310 @ 130 F		
RMC@BHT	0.420 @ 130 F		

Run Number 1

Comments

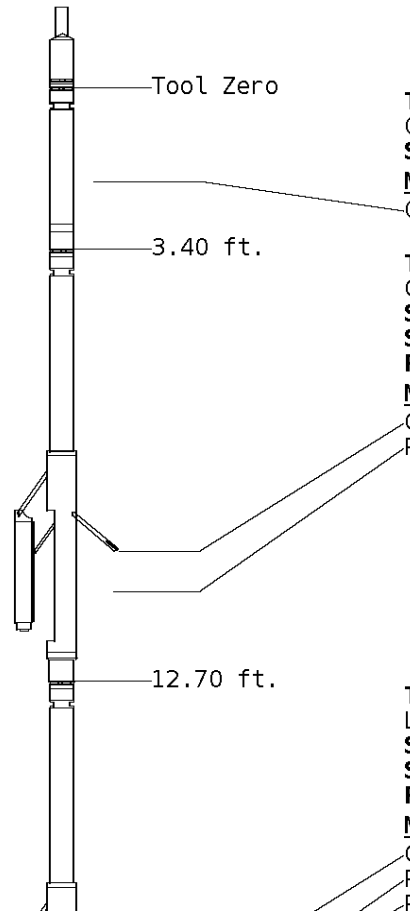
ALL PRESENTATIONS AS PER CUSTOMER REQUEST
GRT, CNT, LDT, MLT, NAV AND PIT RUN IN COMBINATION
CALIPERS ORIENTED ON X-Y AXIS
2.71 G/CC USED TO CALCULATE POROSITY
ANNULAR HOLE VOLUME CALCULATED USING 7.0" PRODUCTION CASING
PHIN IS CALIPER CORRECTED

GRT: GRP, GRX
CNT: PHIN, CLCNIN, PHXN
LDT: PORL, LCORN, PECLN, LDENN, PORLLS, CLLDIN, PRXL, PECLX, LDENNX, LCORX
MLT: NOR_RF, INV_RF, MSCLPIN
PIT: ILD, ILM, SPU, SFLAEC, CIRD
WOT: INC, AZM, RB

OPERATORS:
B. BROWN
K. WARREN

Tool String Schematic

Total Tool Length - 58.84 **ft.**
Maximum Outside diameter - 6.00 **in.**
Net Weight in Air - 1031.00 **lbs.**



Tool: GRT-B **Length:** 3.40 **ft.** **O.D.** 3.60 **in.**
Gamma Ray Controller
Sonde ID :GRT-BA-121

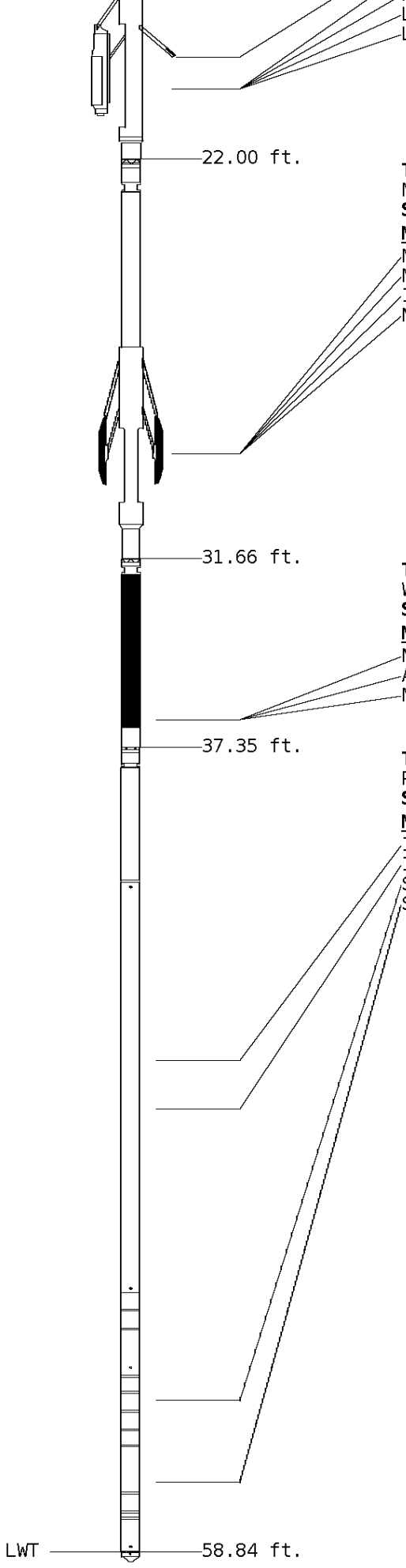
Measure Point	Tool Offset	Stack Offset	Bottom Offset
GRP	2.00	2.00	56.84

Tool: CNT-AA **Length:** 9.30 **ft.** **O.D.** 4.36 **in.**
Compensated Neutron A Pad on NDT-A
Sonde ID :NDT-BB-146
Source ID :N-1044
Pad ID :CNP-AA-115

Measure Point	Tool Offset	Stack Offset	Bottom Offset
CLCN	6.00	9.40	49.44
PHIN	6.80	10.20	48.64

Tool: LDT-DA **Length:** 9.30 **ft.** **O.D.** 4.80 **in.**
Litho Density D Pad on NDT-A
Sonde ID :NDT-FA-420
Source ID :63558B
Pad ID :LDP-DA-038

Measure Point	Tool Offset	Stack Offset	Bottom Offset
CLLD	6.00	18.70	40.14
PEL	7.00	19.70	39.14
PES	7.40	20.10	38.74



LDEN	7.20	19.90	38.94
LCOR	7.20	19.90	38.94

Tool: MST-DA **Length:** 9.66 **ft.** **O.D.** 6.00 **in.**
Micro Spherically Focused (IC)
Sonde ID :MST-DA-021

Measure Point	Tool Offset	Stack Offset	Bottom Offset
MSFL	7.60	29.60	29.24
MSCLP	7.60	29.60	29.24
INV	7.60	29.60	29.24
NOR	7.60	29.60	29.24

Tool: WOT-AE **Length:** 5.69 **ft.** **O.D.** 3.50 **in.**
Well Orientation Tool
Sonde ID :WOT-AE-018

Measure Point	Tool Offset	Stack Offset	Bottom Offset
NAVTEMPE	3.00	34.66	24.18
ACCXE, ACCYE, ACCZE	3.00	34.66	24.18
MAGXE, MAGYE, MAGZE	3.00	34.66	24.18

Tool: PIT-CA **Length:** 21.49 **ft.** **O.D.** 3.62 **in.**
Phased Dual Induction w/ RM & D
Sonde ID :PIT-CA-069

Measure Point	Tool Offset	Stack Offset	Bottom Offset
ILD	8.92	46.27	12.56
ILM	10.10	47.45	11.39
SFLU	17.49	54.84	4.00
SP	20.60	57.95	0.88

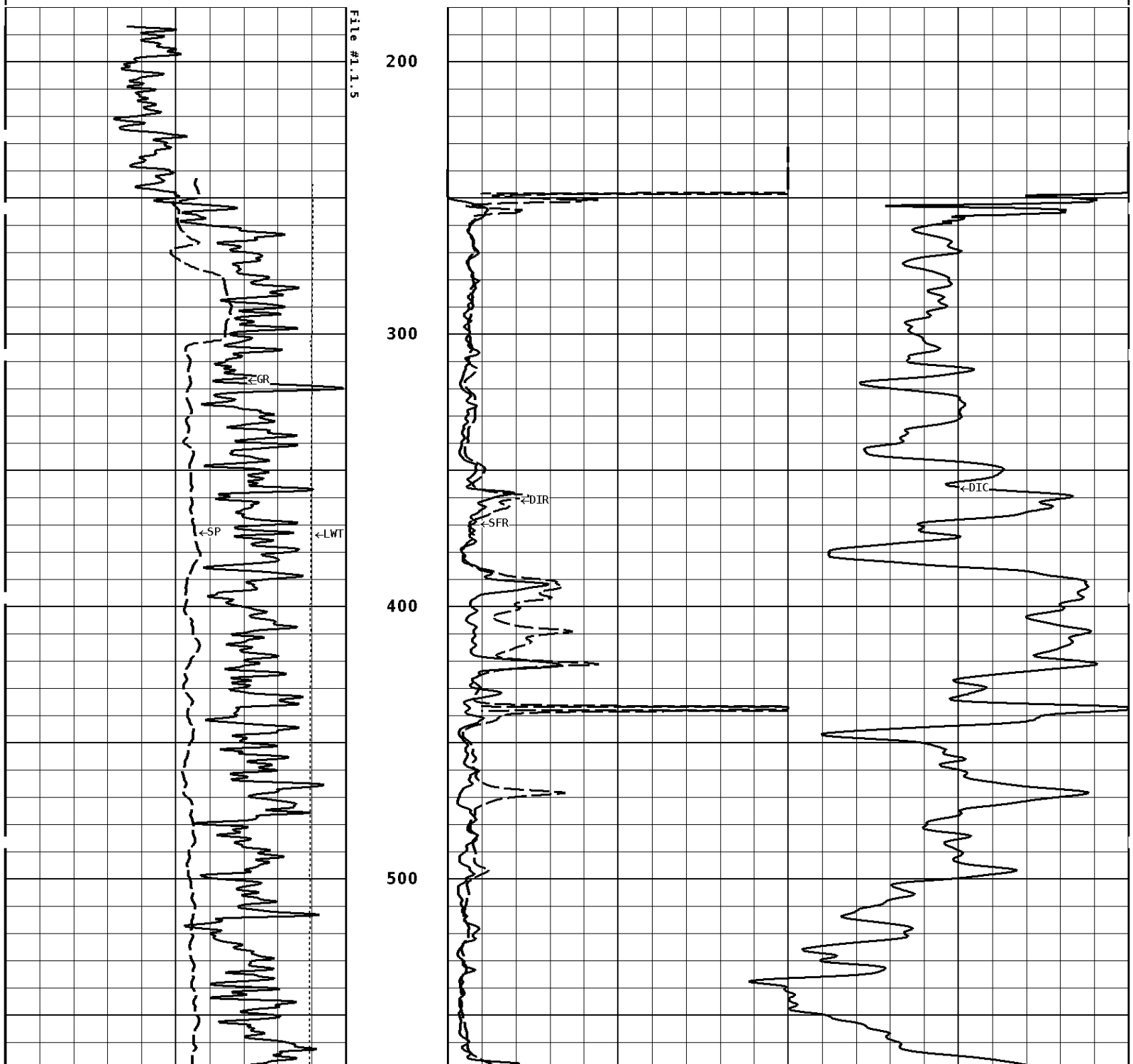
Reference: 0 **Processed:** 2018-08/28 11:04 3.4.0-13841

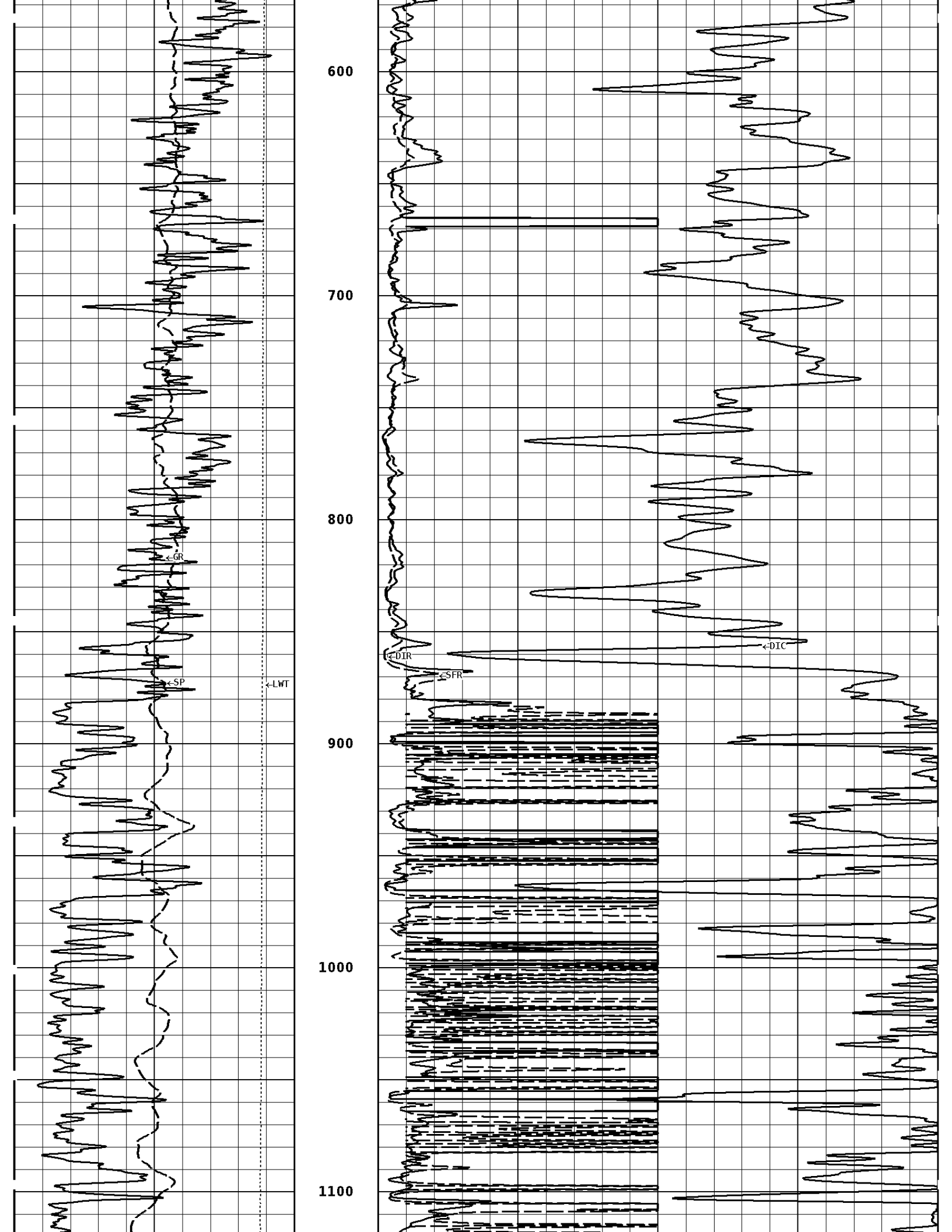
TENSION LBS		DEEP INDUCTION OHMM	
10000	0	0.0	500.0
		0.0	50.0

SPONTANEOUS POTENTIAL mV		SHALLOW FOCUSED RESISTIVITY OHMM	
→ |	|← 30	0.0	500.0
		0.0	50.0

GAMMA RAY API UNITS		DEEP CONDUCTIVITY MMHO	
150	300	2000	1000
0	150	1000	0

1:600 MAIN SECTION

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←SP
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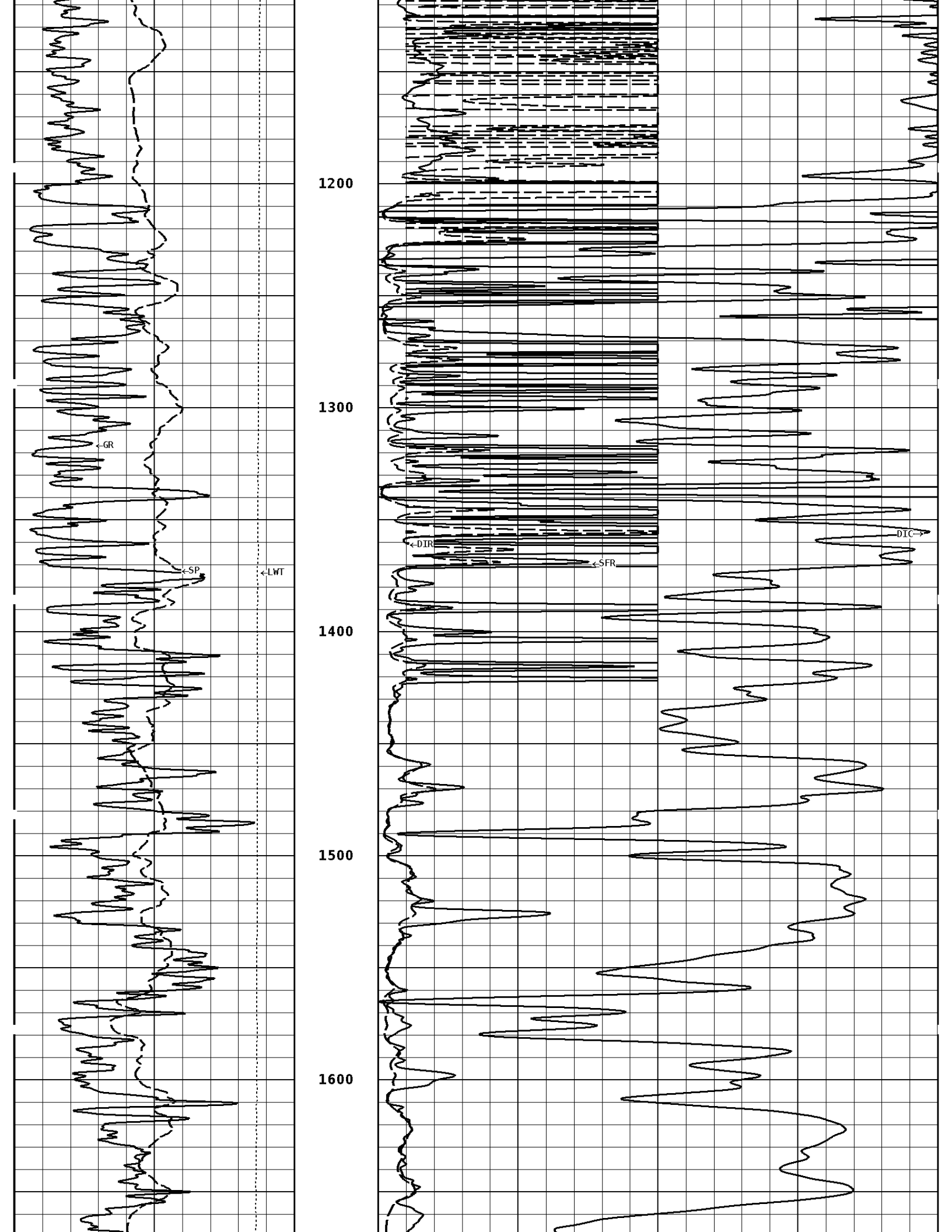
←DIC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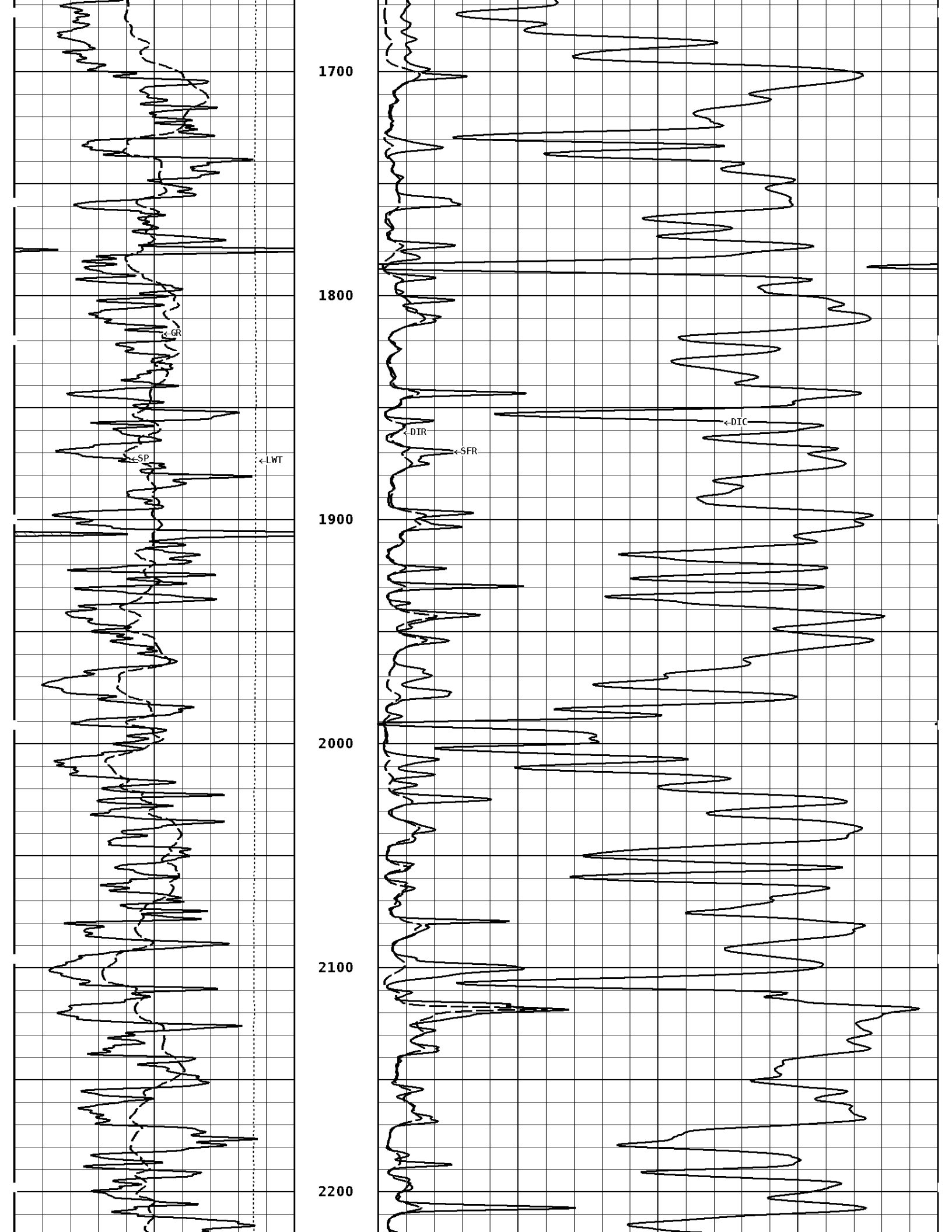
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SP
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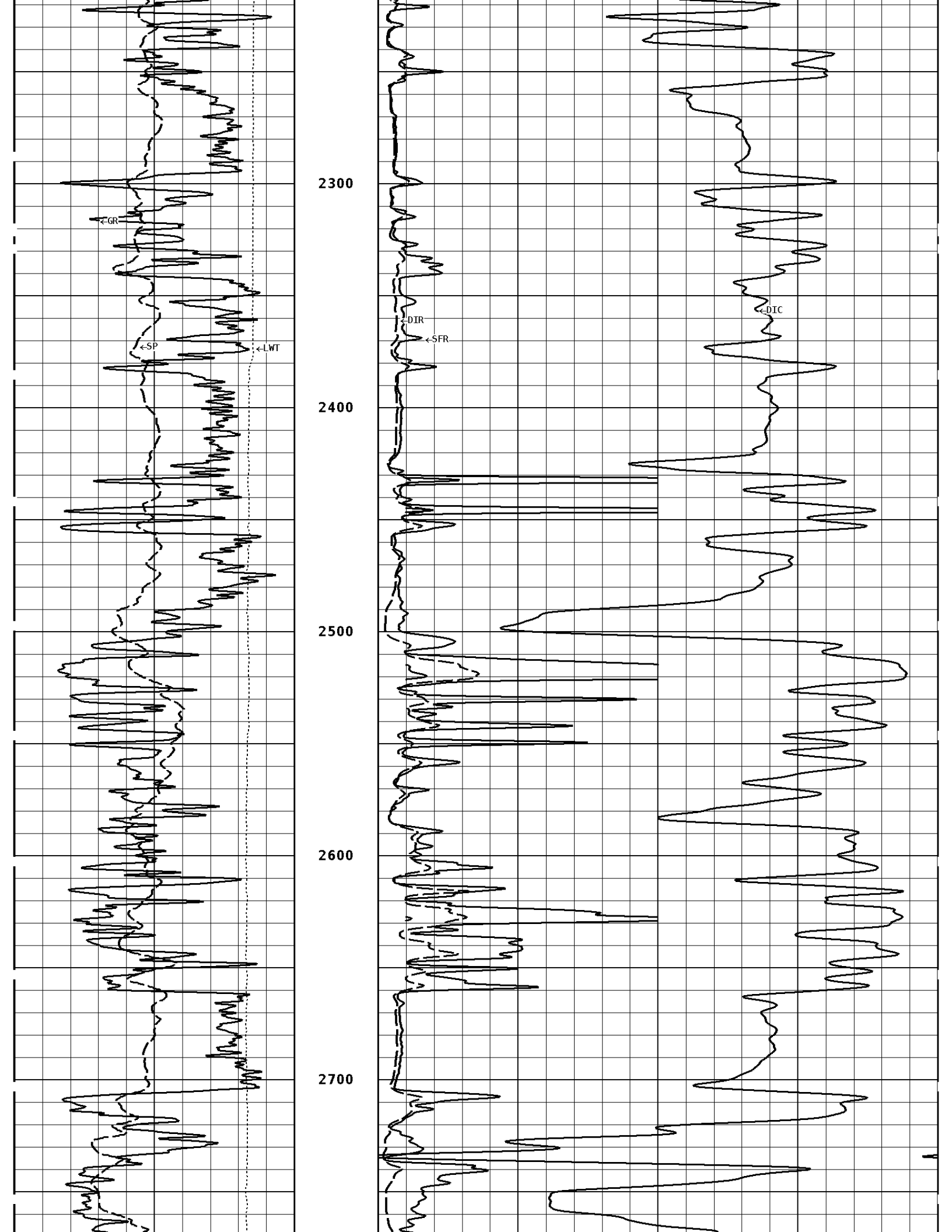
DIR
SFR
DIC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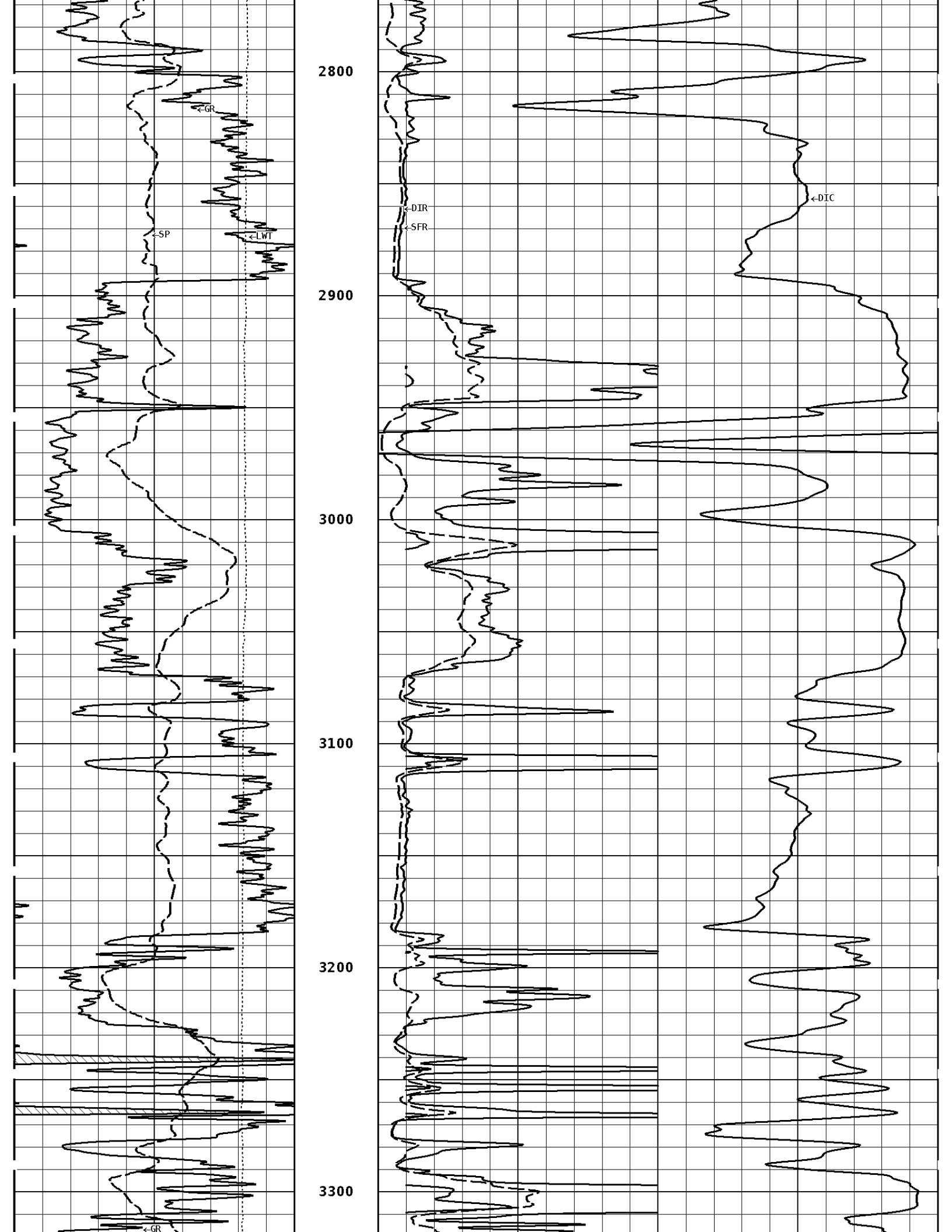
←LWT
←DIR
←SFR
←DIC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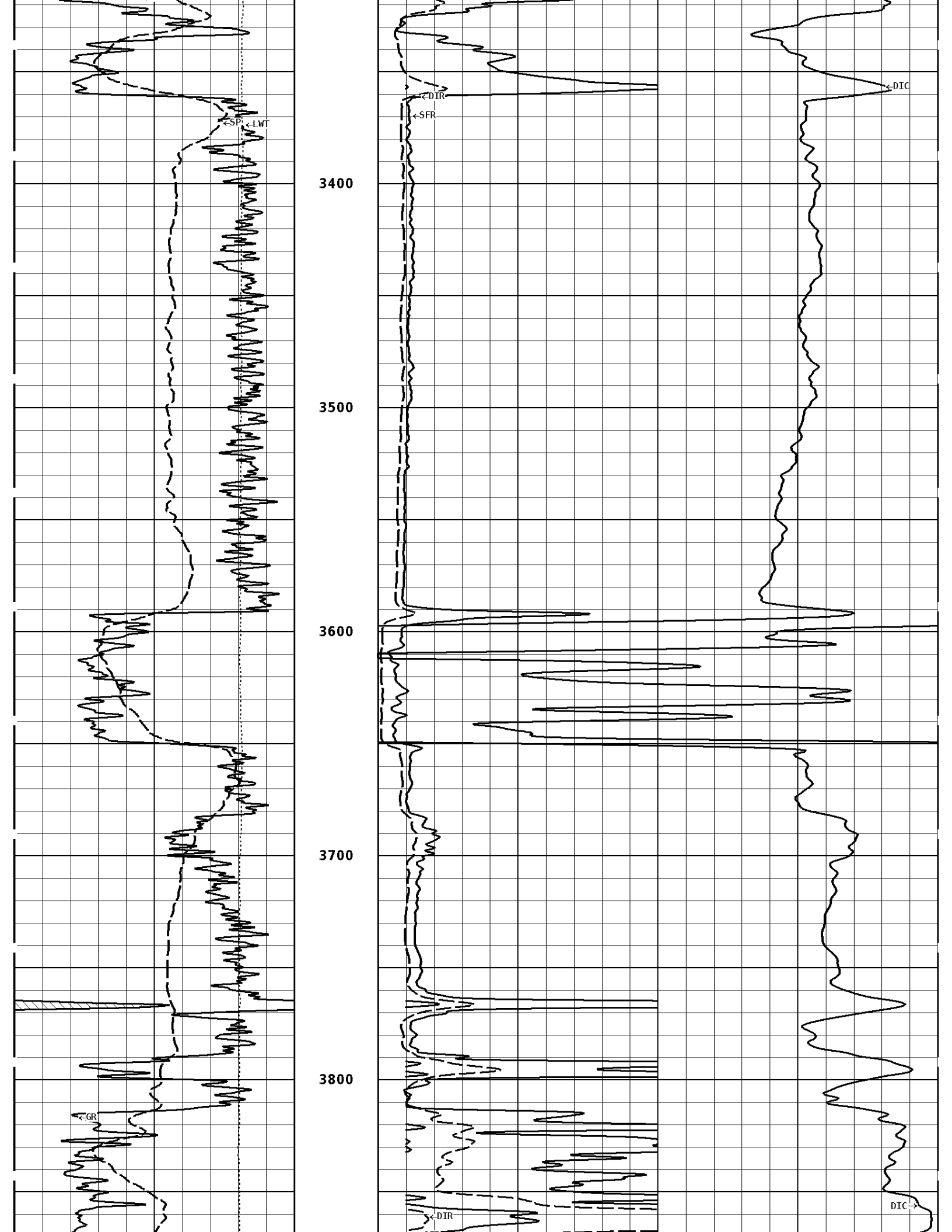
DIC
GR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GR
DIR
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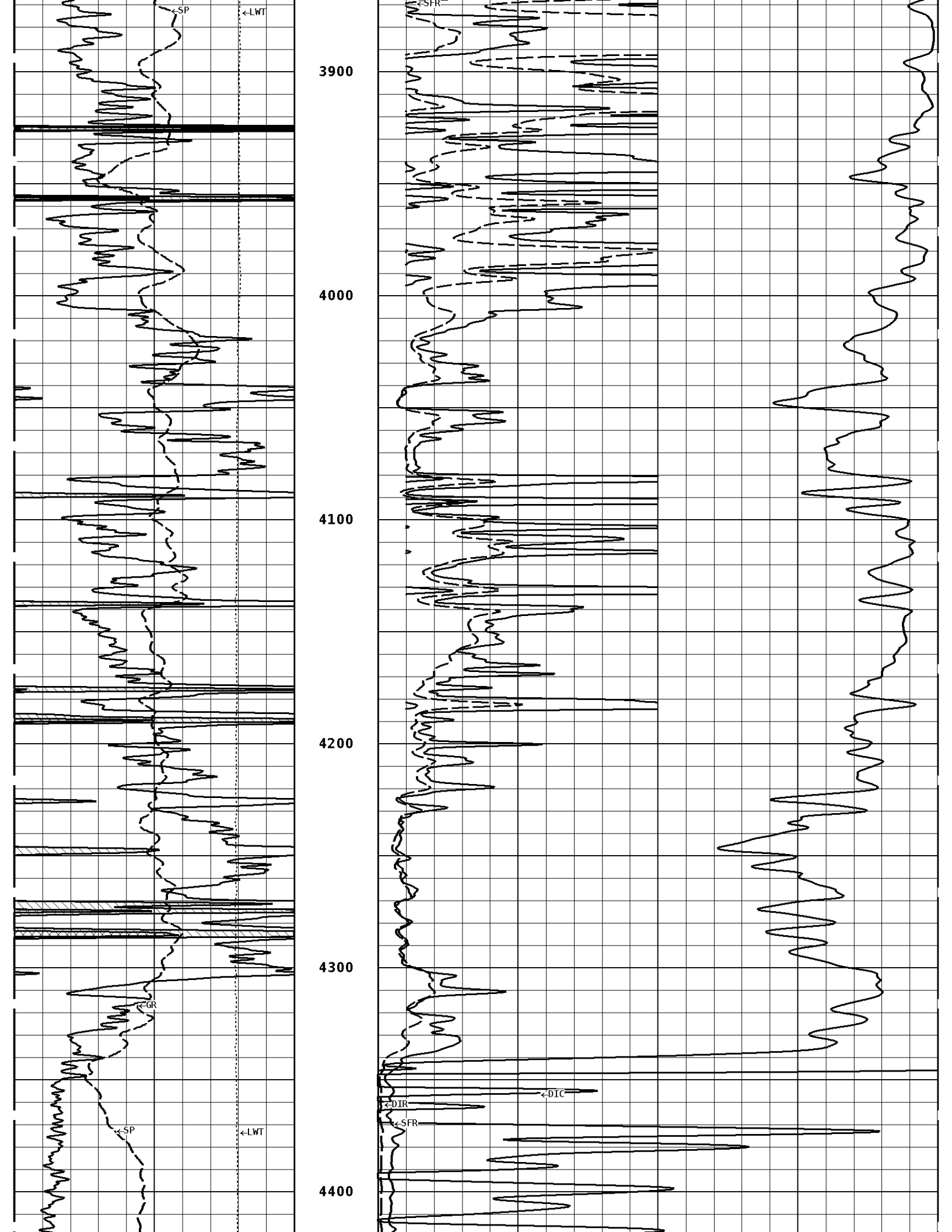
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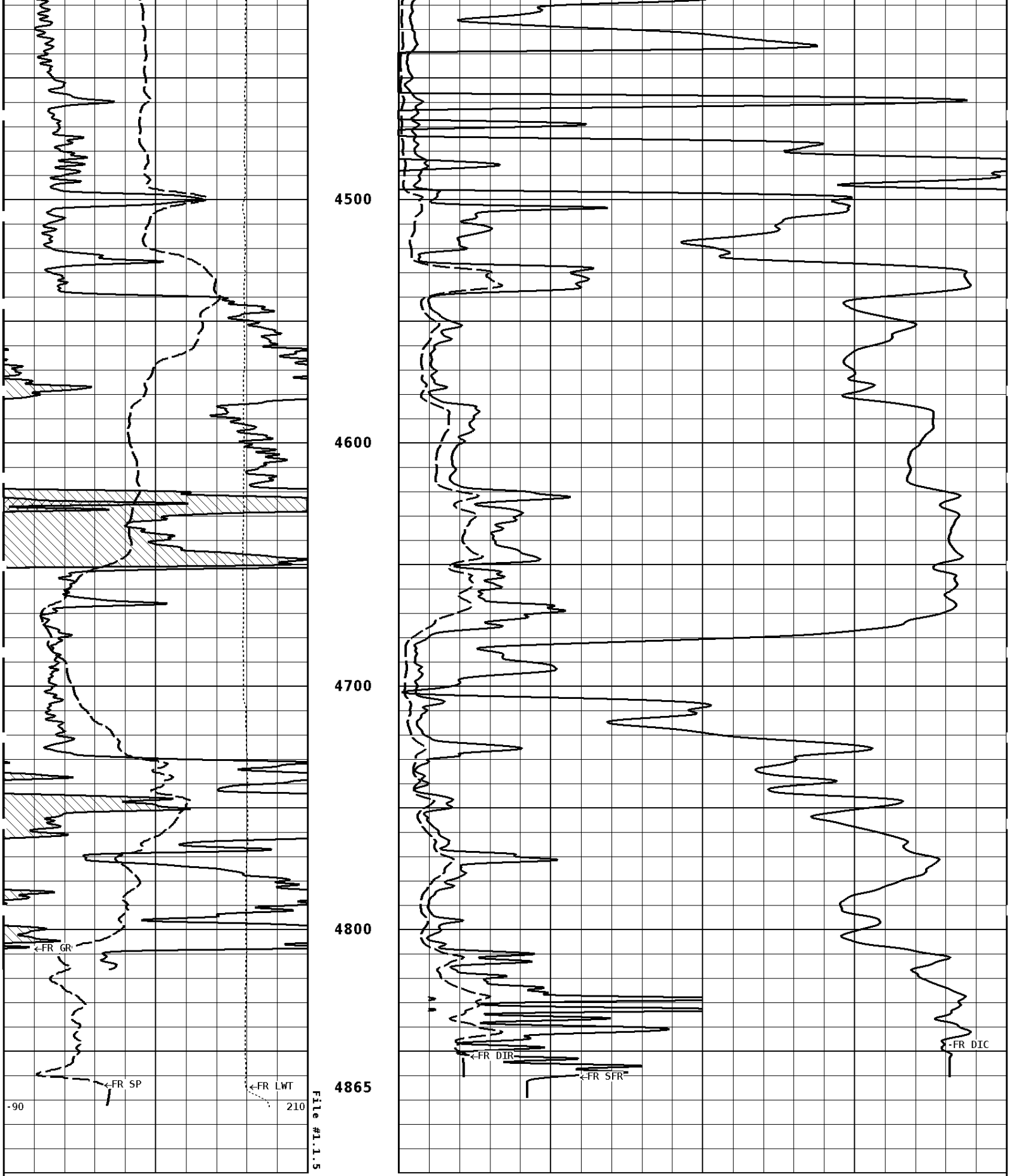
4400



1:600 MAIN SECTION

GAMMA RAY
API UNITS
150 0 300 150

DEEP CONDUCTIVITY
MMHO
2000 1000 1000 0

SPONTANEOUS POTENTIAL
mV
→ ←30

TENSION
LBS
10000 0

SHALLOW FOCUSED RESISTIVITY
OHMM
0.0 500.0
0.0 50.0

DEEP INDUCTION
OHMM
0.0 500.0
0.0 50.0

Well File: DEXXON_REDWOOD_R_1_AUG_28_MSTKNAV **Scale:** 1:240 **Format:** DIL-240
Segment: V1.D1.S5 MAIN **Acquired:** 2018-08-28 09:39 3.4.0-13841
Reference: 0 **Processed:** 2018-08-28 11:04 3.4.0-13841

SPONTANEOUS POTENTIAL
mV
→ ←30

TENSION
LBS
10000 0

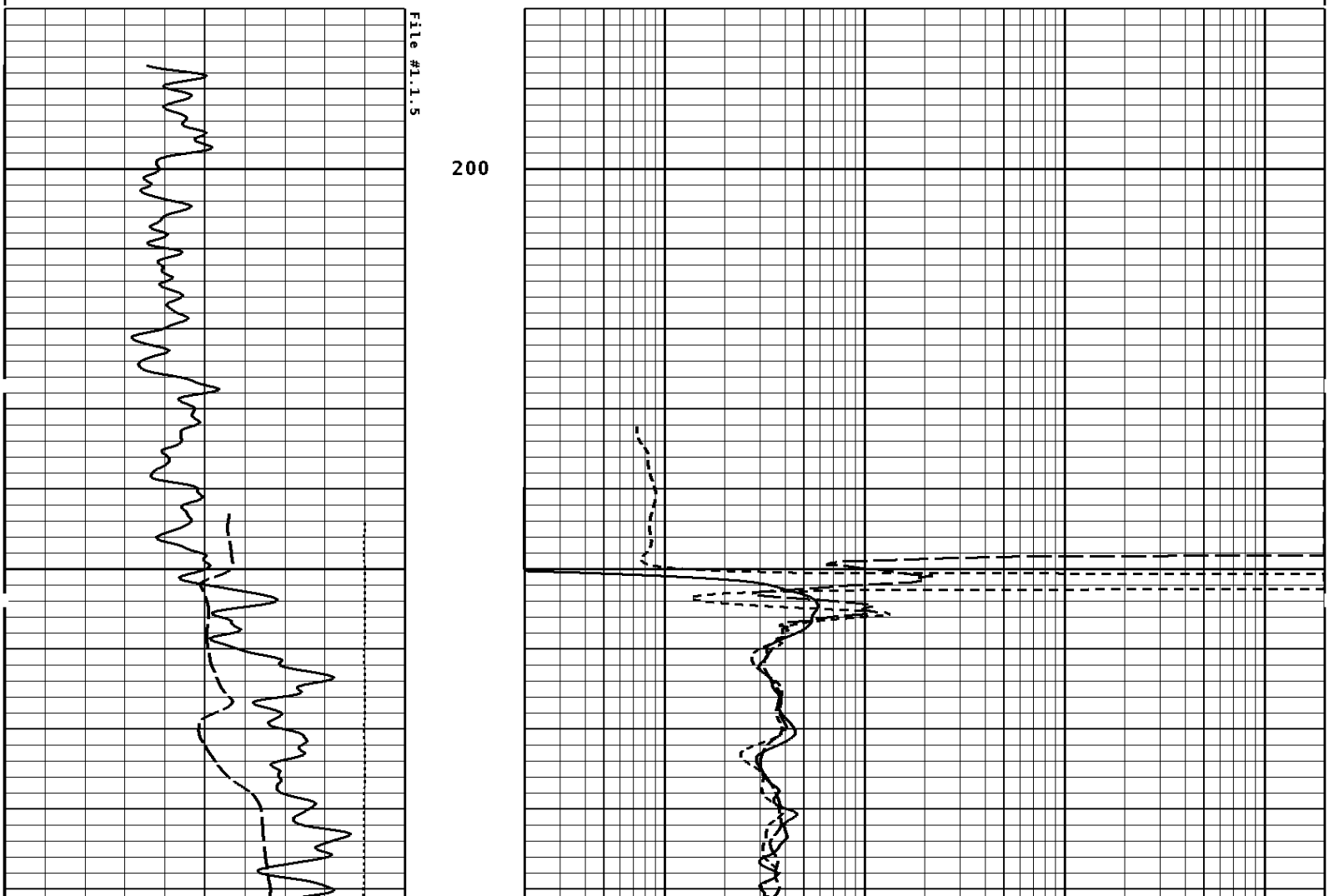
GAMMA RAY
API UNITS
150 300
0 150

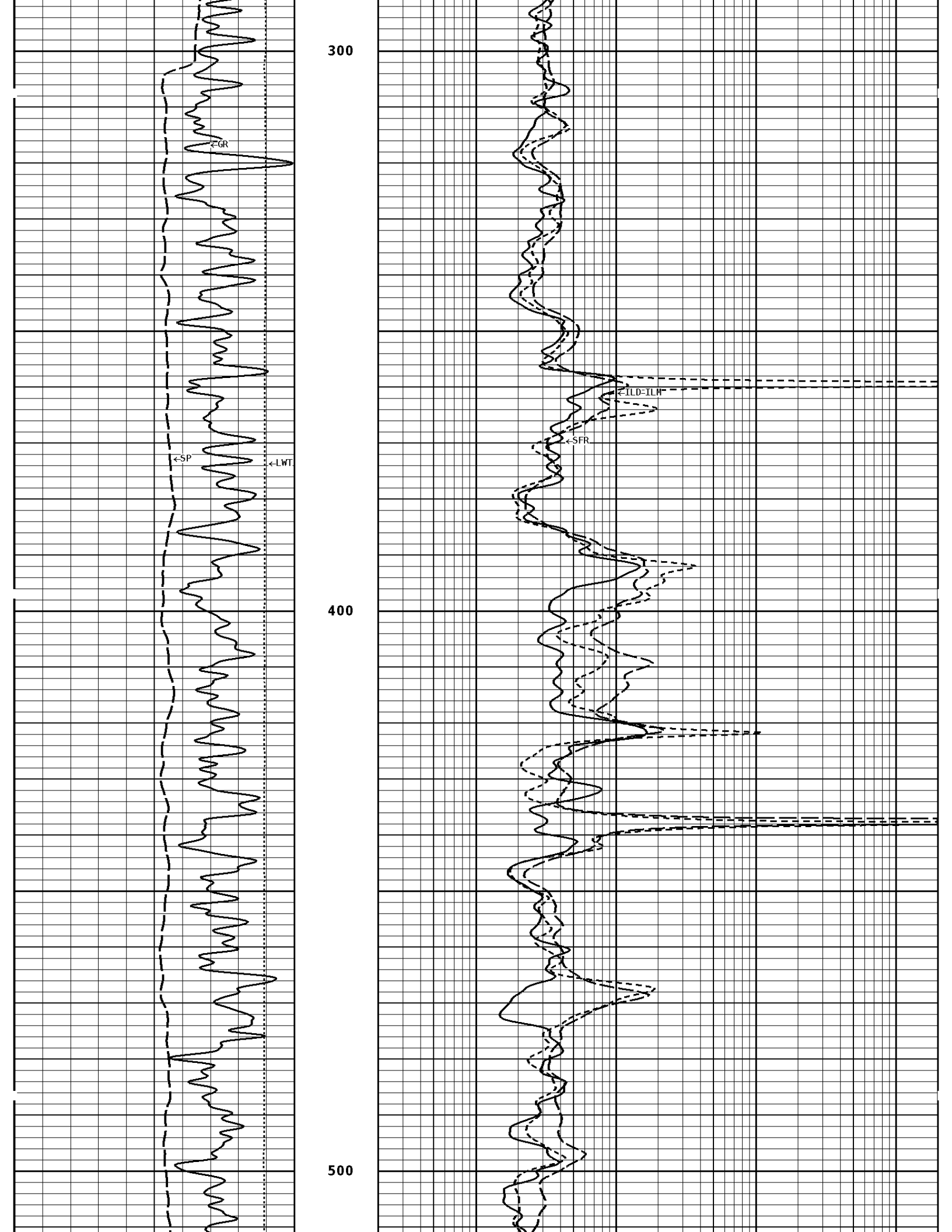
DEEP INDUCTION
OHMM
0.2 2000.0

MEDIUM INDUCTION
OHMM
0.2 2000.0

SHALLOW FOCUSED RESISTIVITY
OHMM
0.2 2000.0

1:240 MAIN SECTION

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←SP
←LWT
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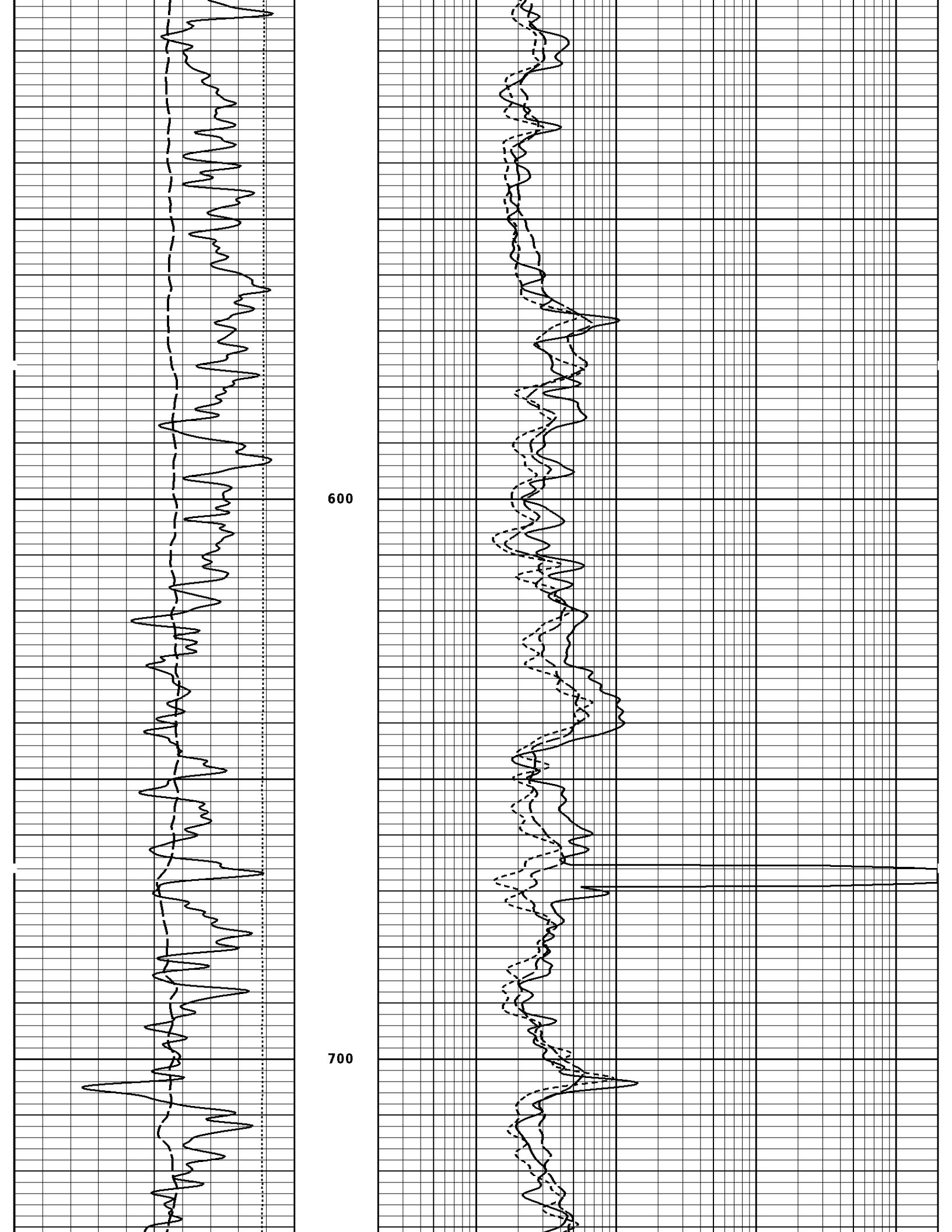
←SFR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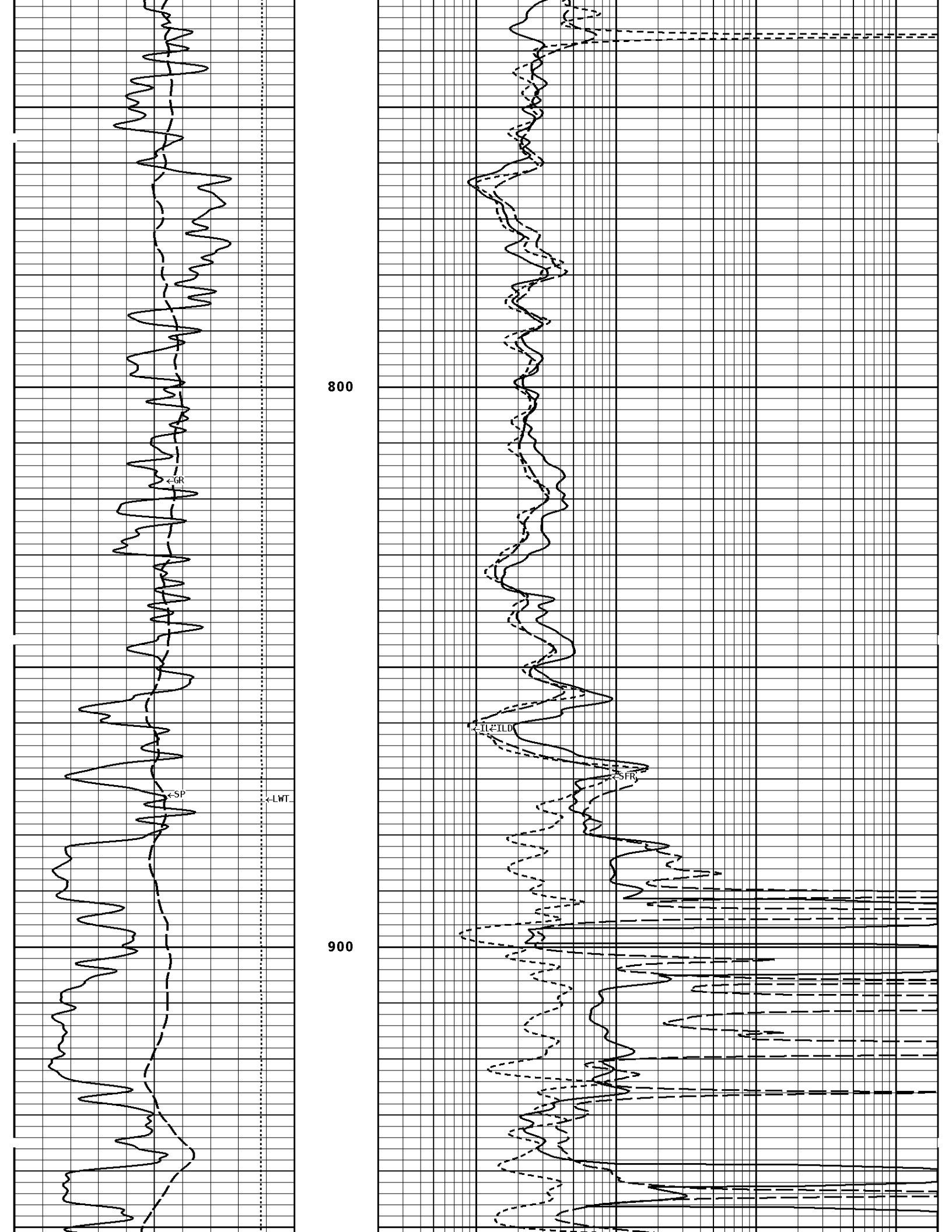
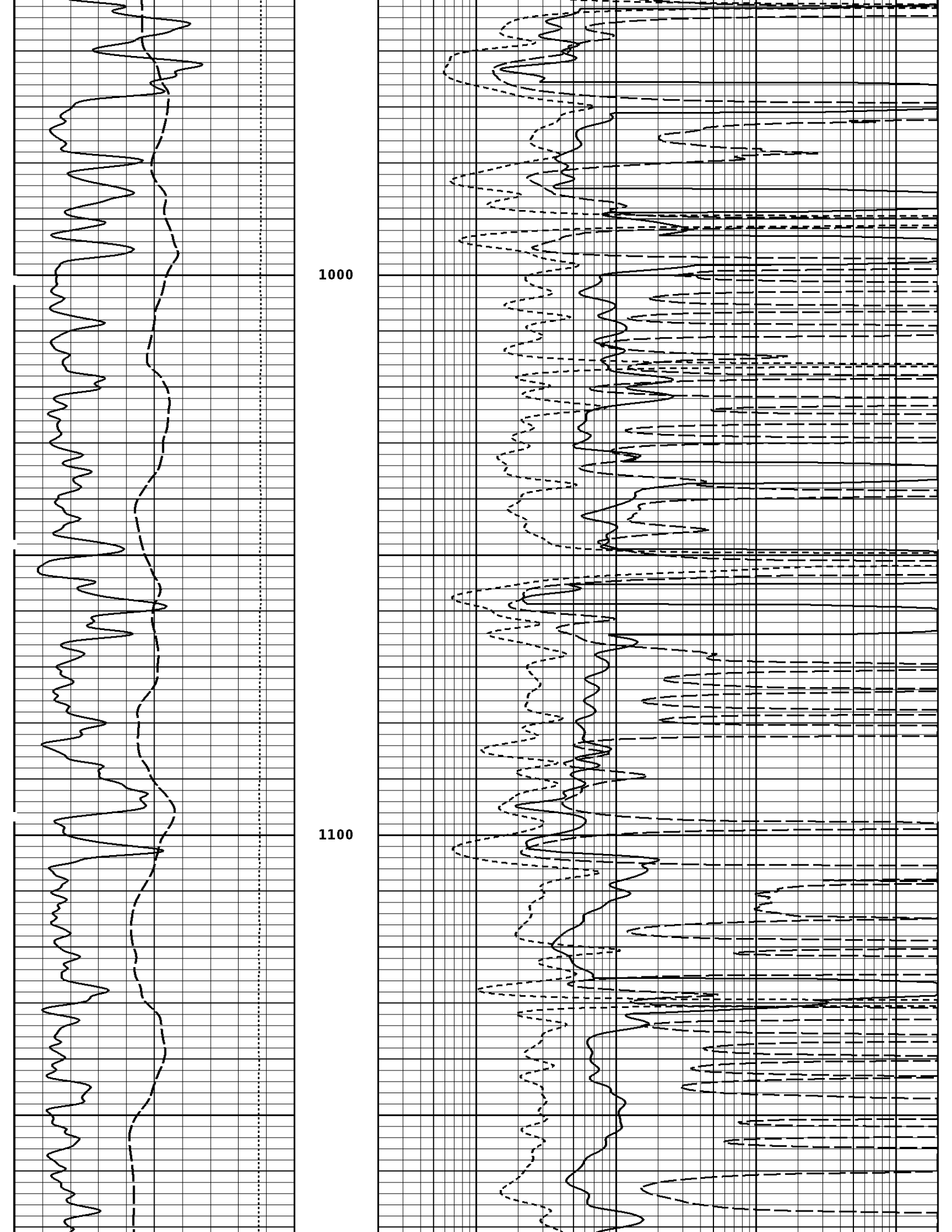

800
GR
SP
LWT
900
IL
ILD
SFR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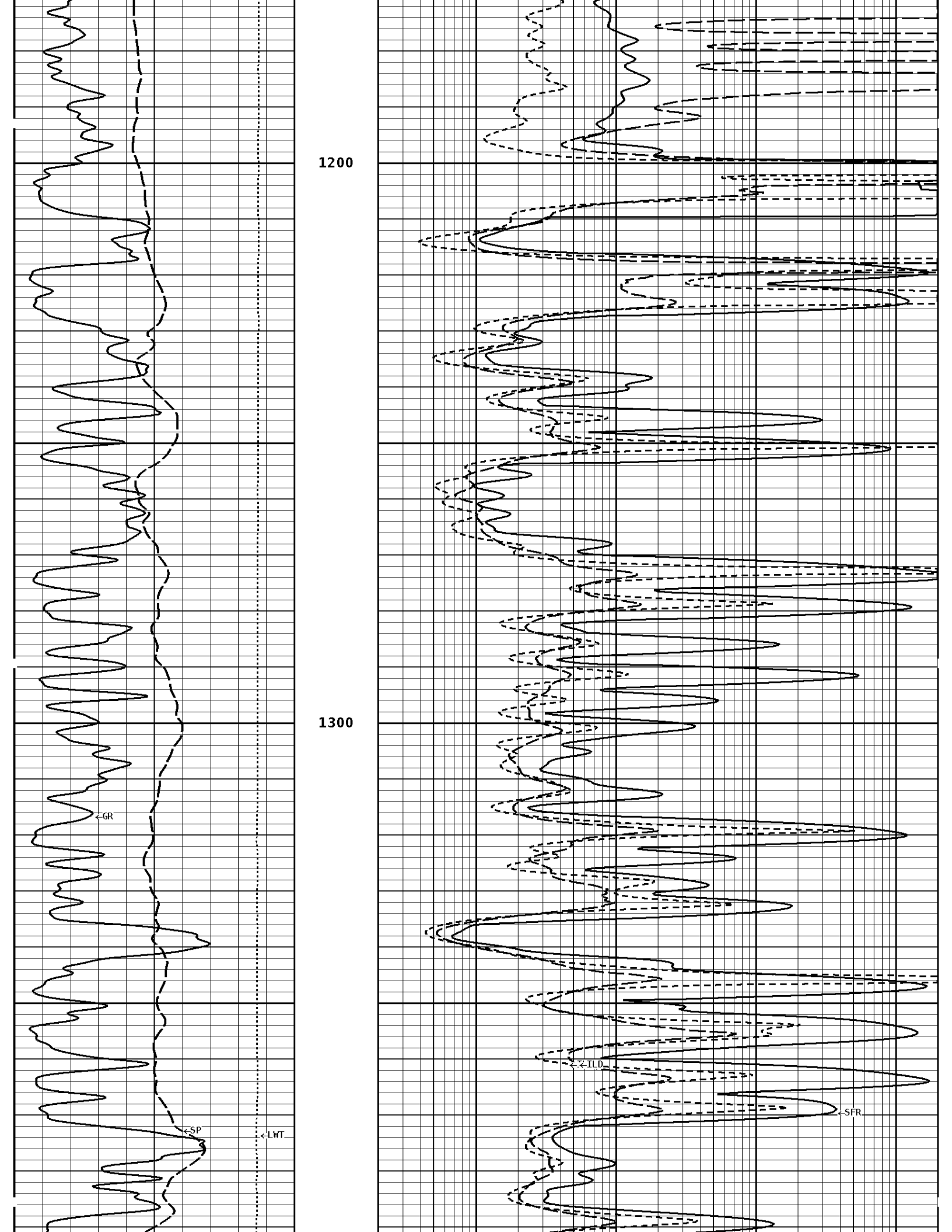
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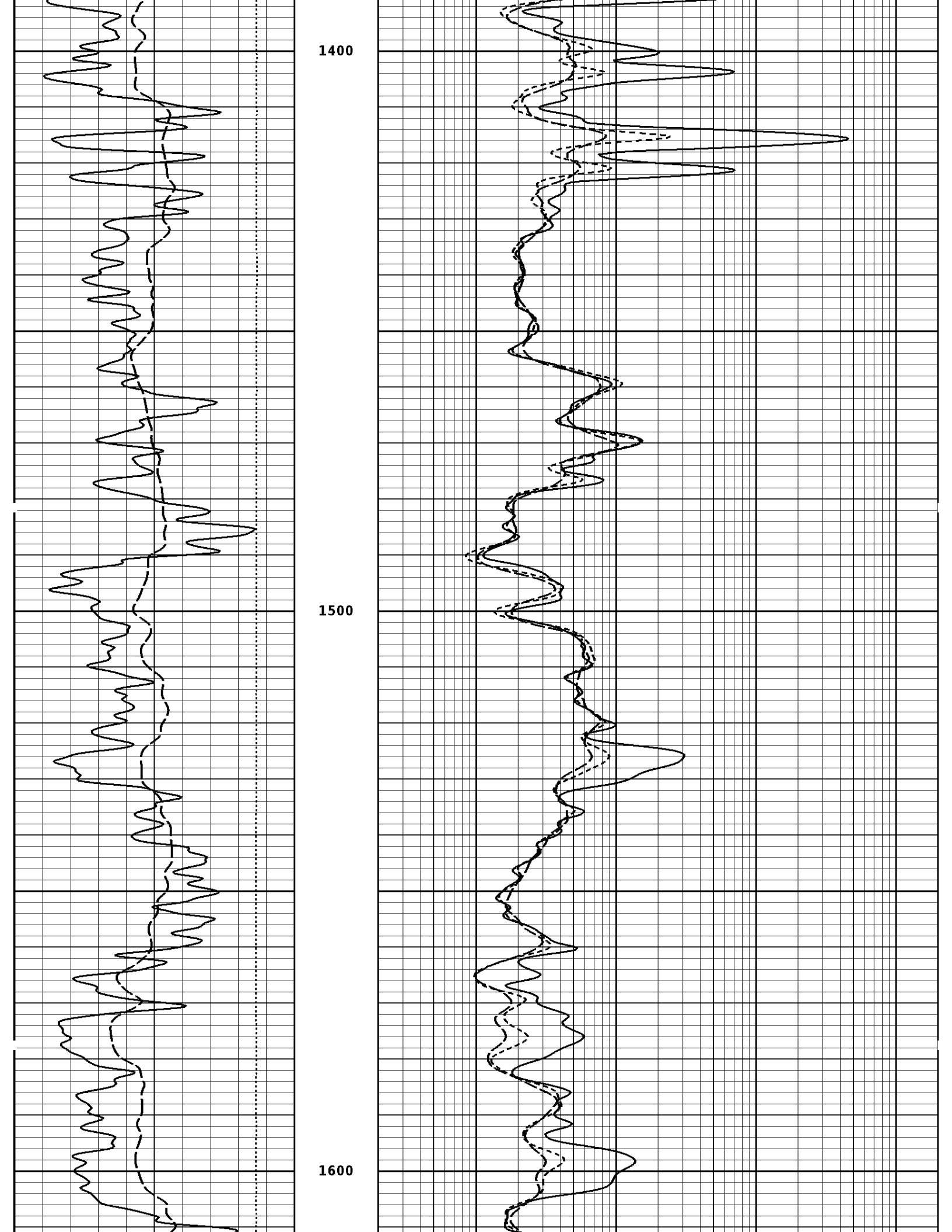
1300
←GR
←SP
←LWT
←ILD
←SFR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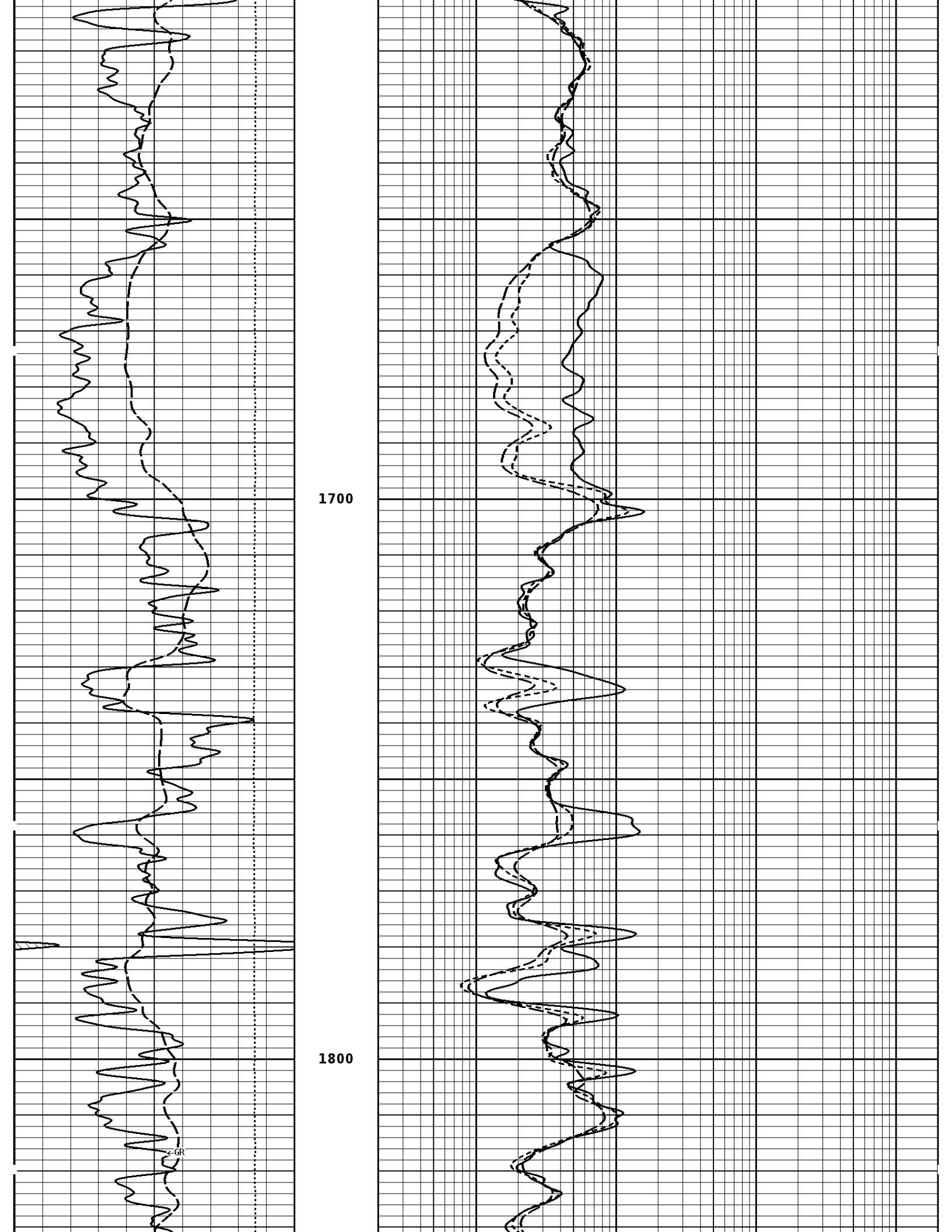
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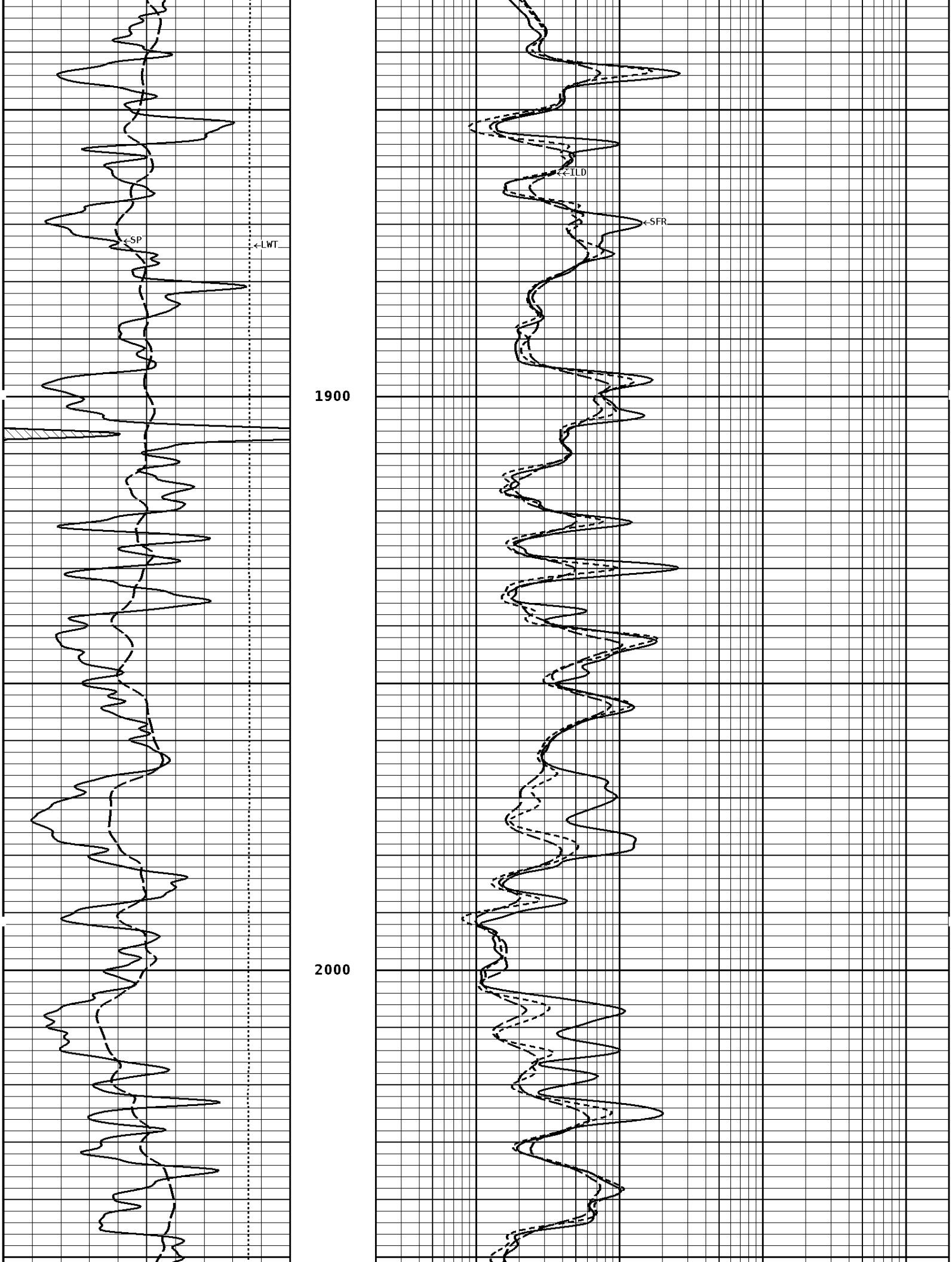
GR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LWT
ILD
SFR
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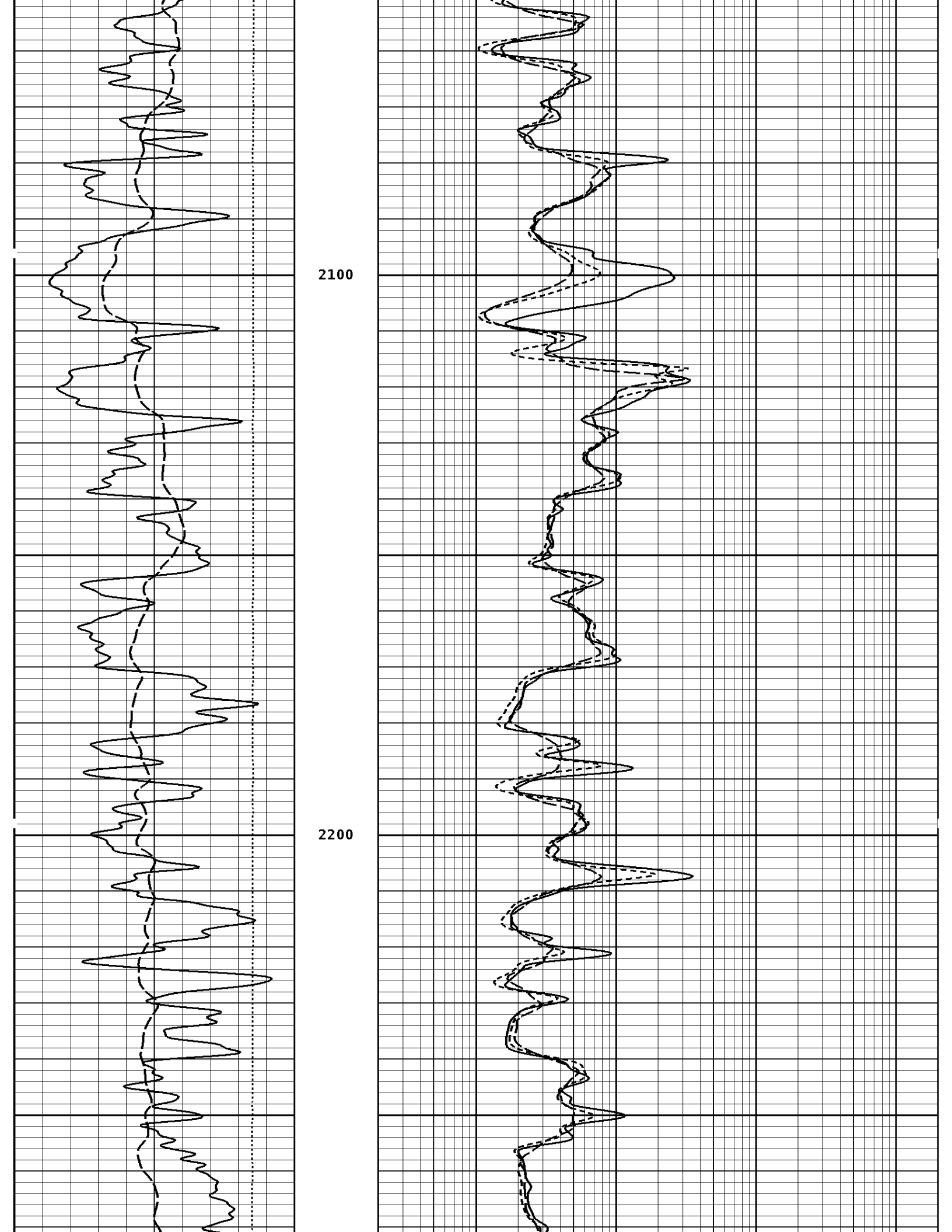
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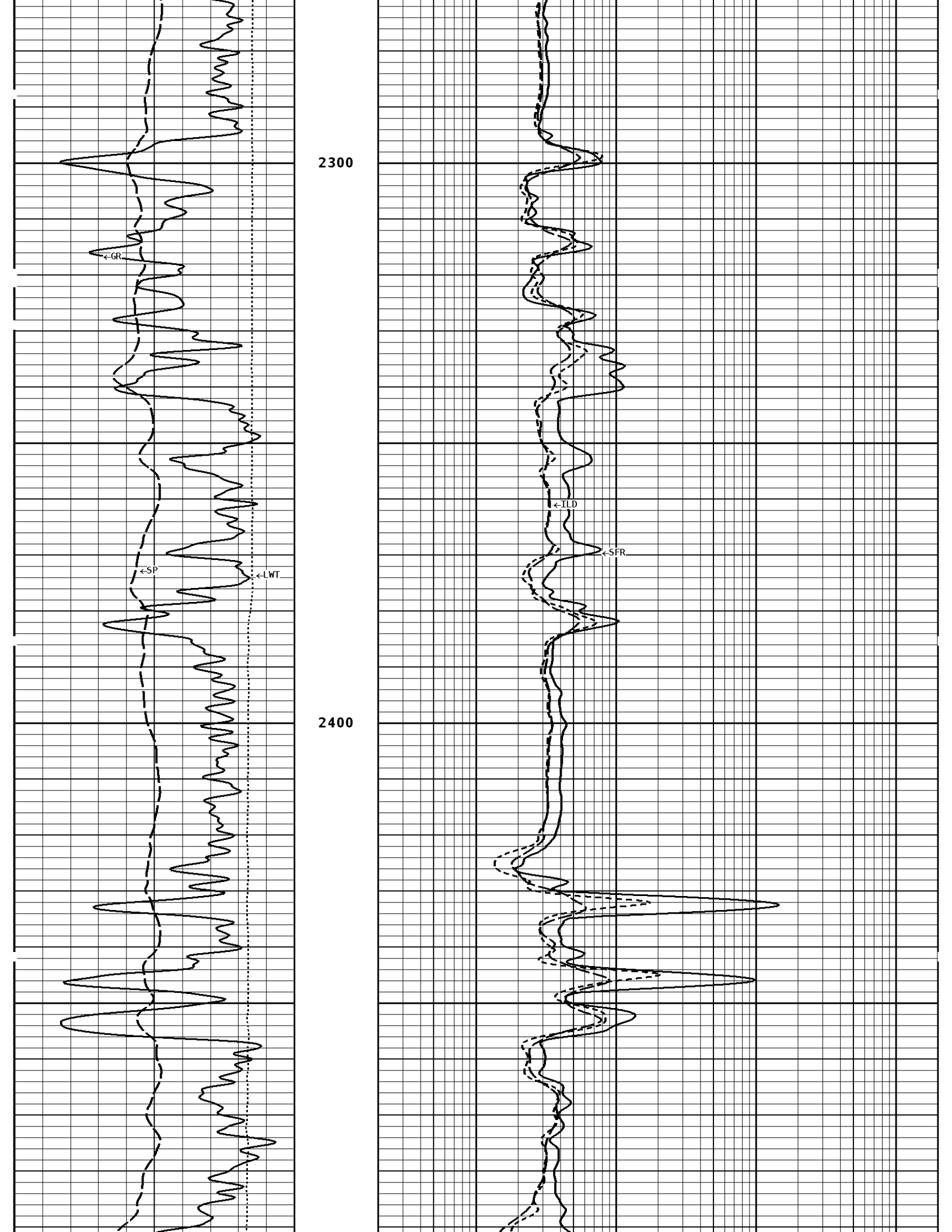
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←LWT
←ILD
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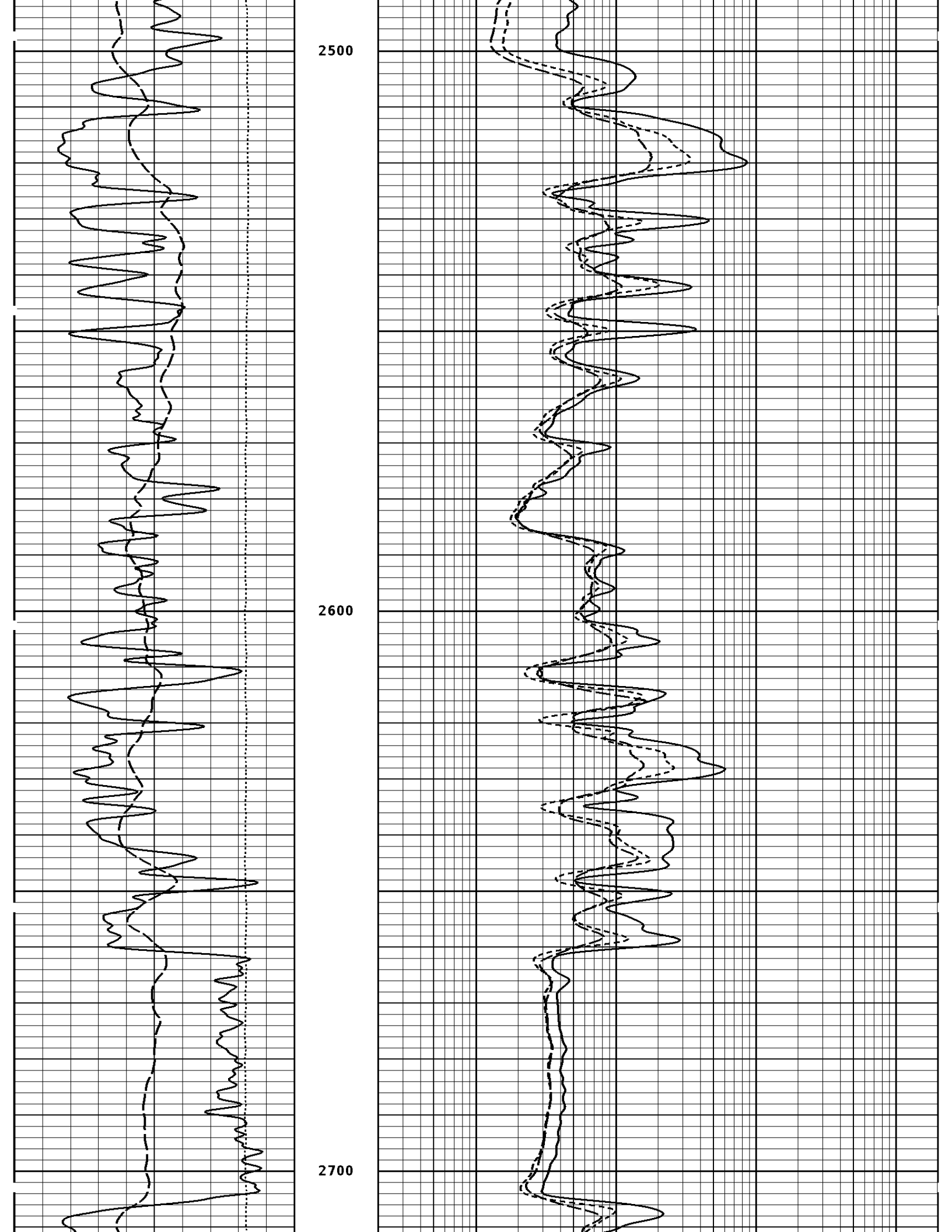
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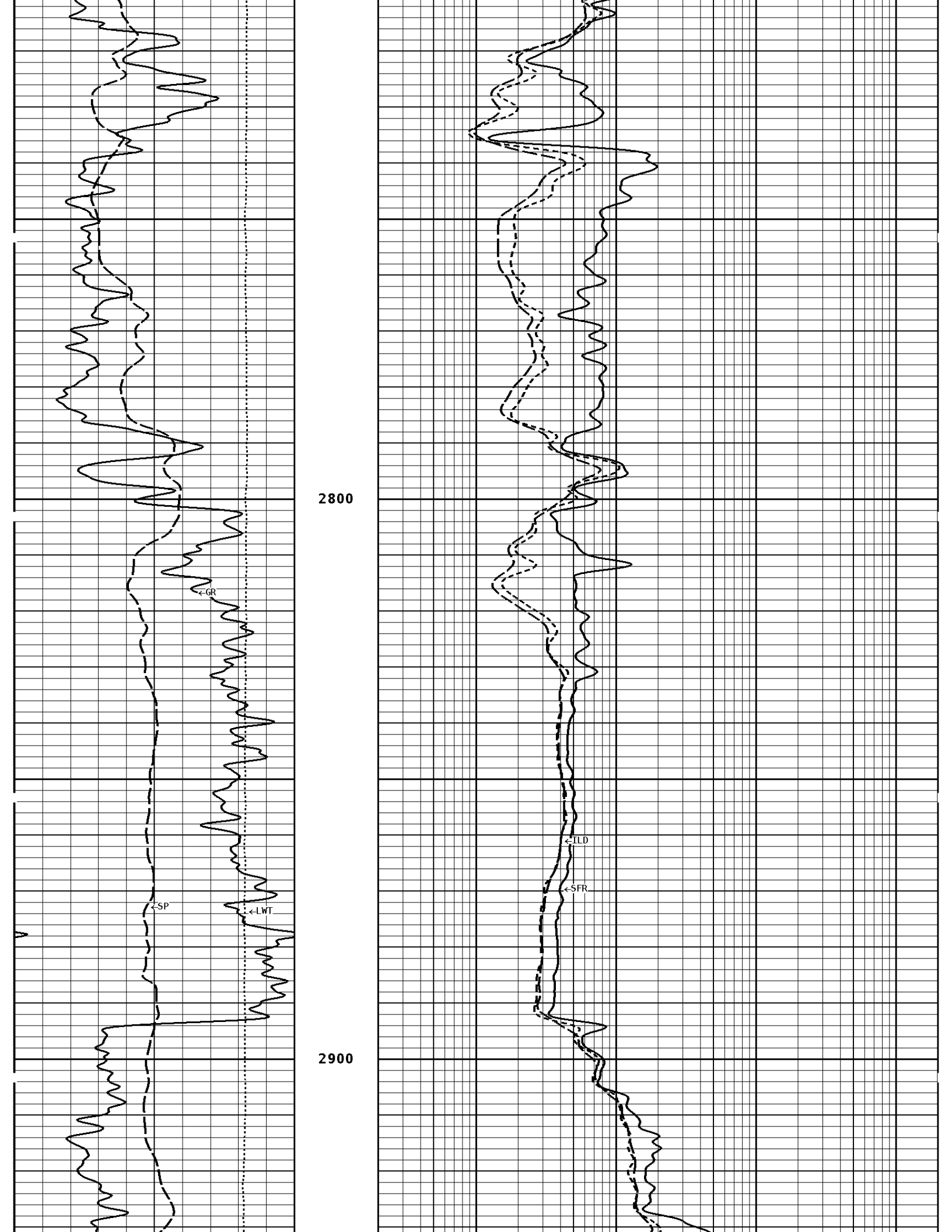
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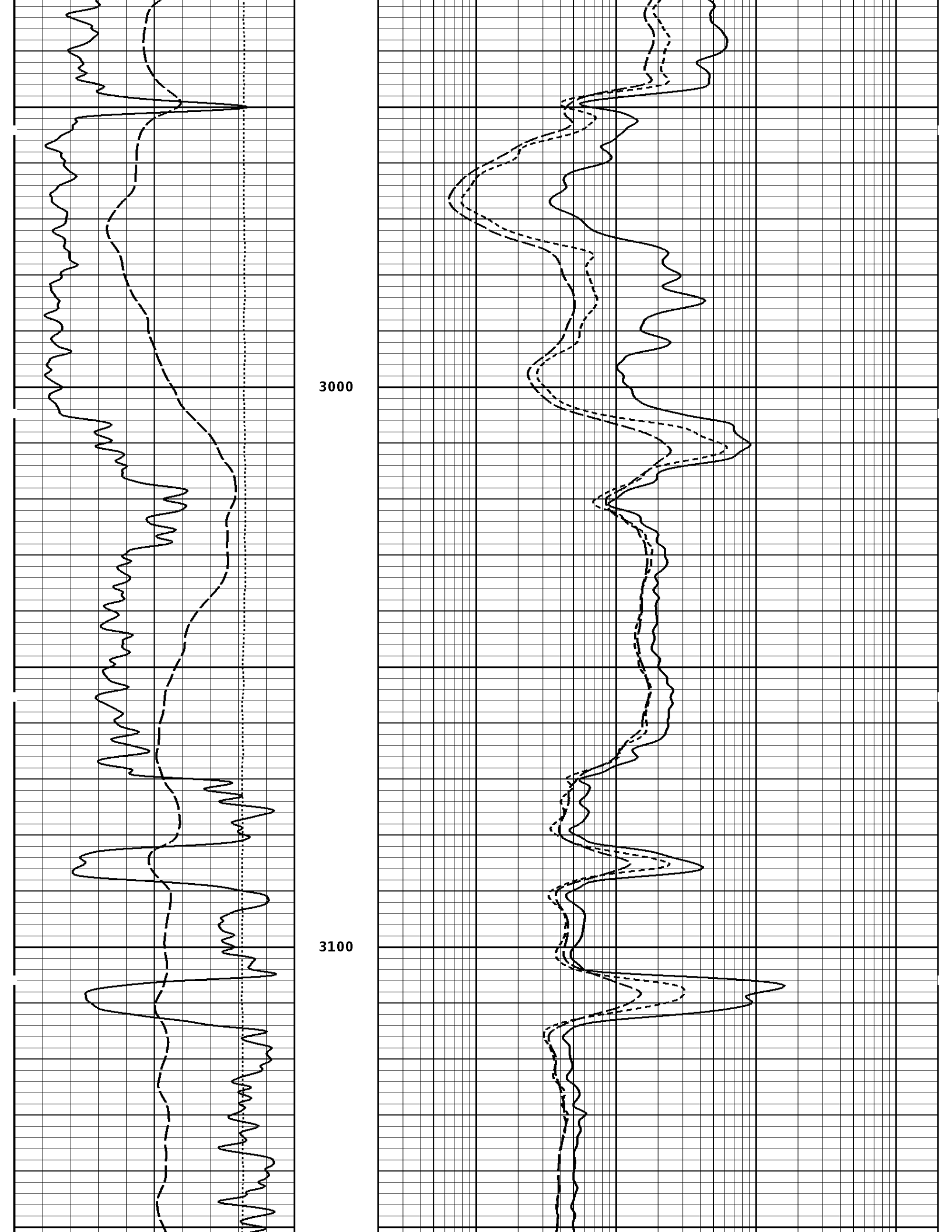
GR
SP
LWT
2900
ILD
SFR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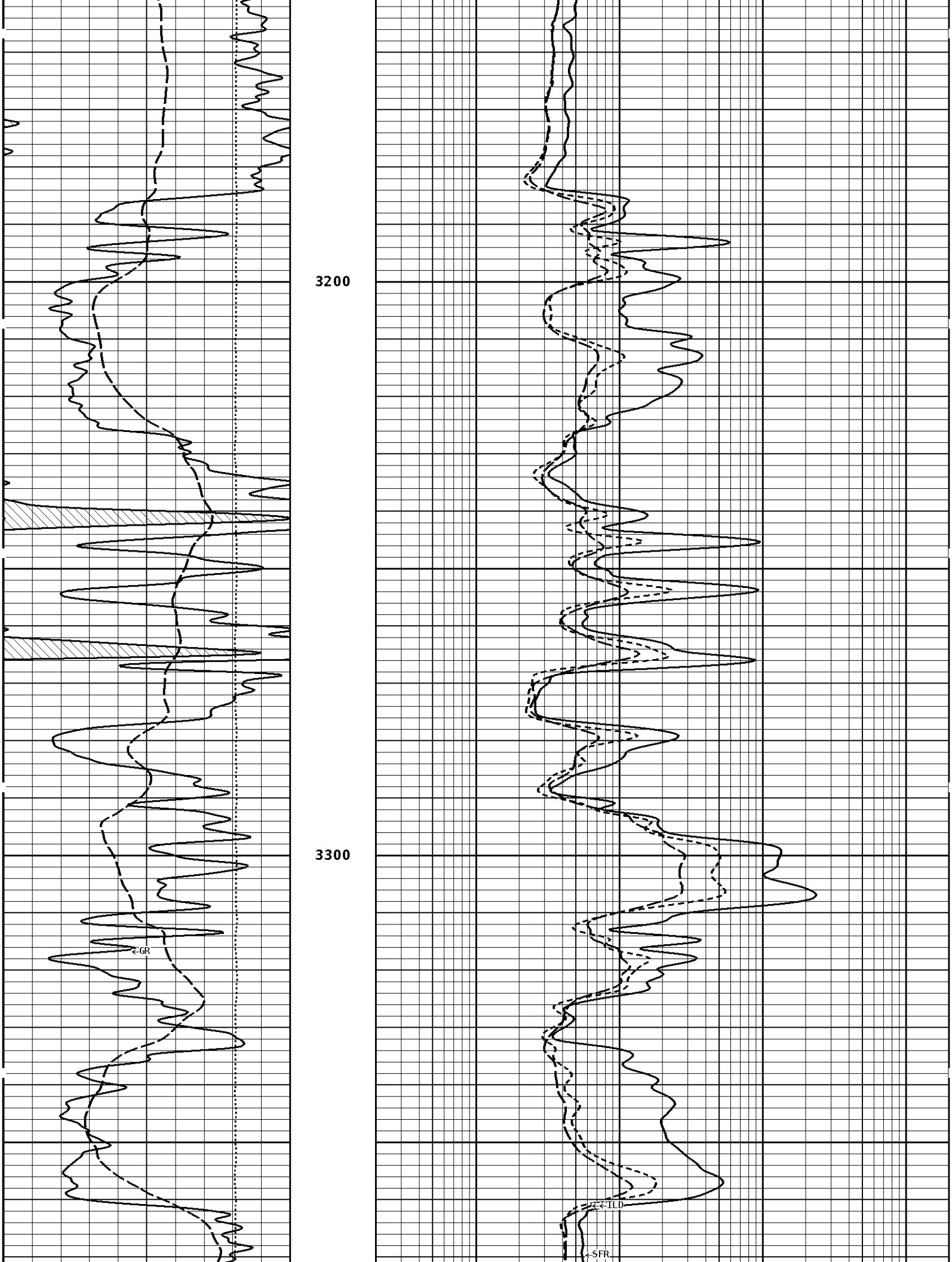
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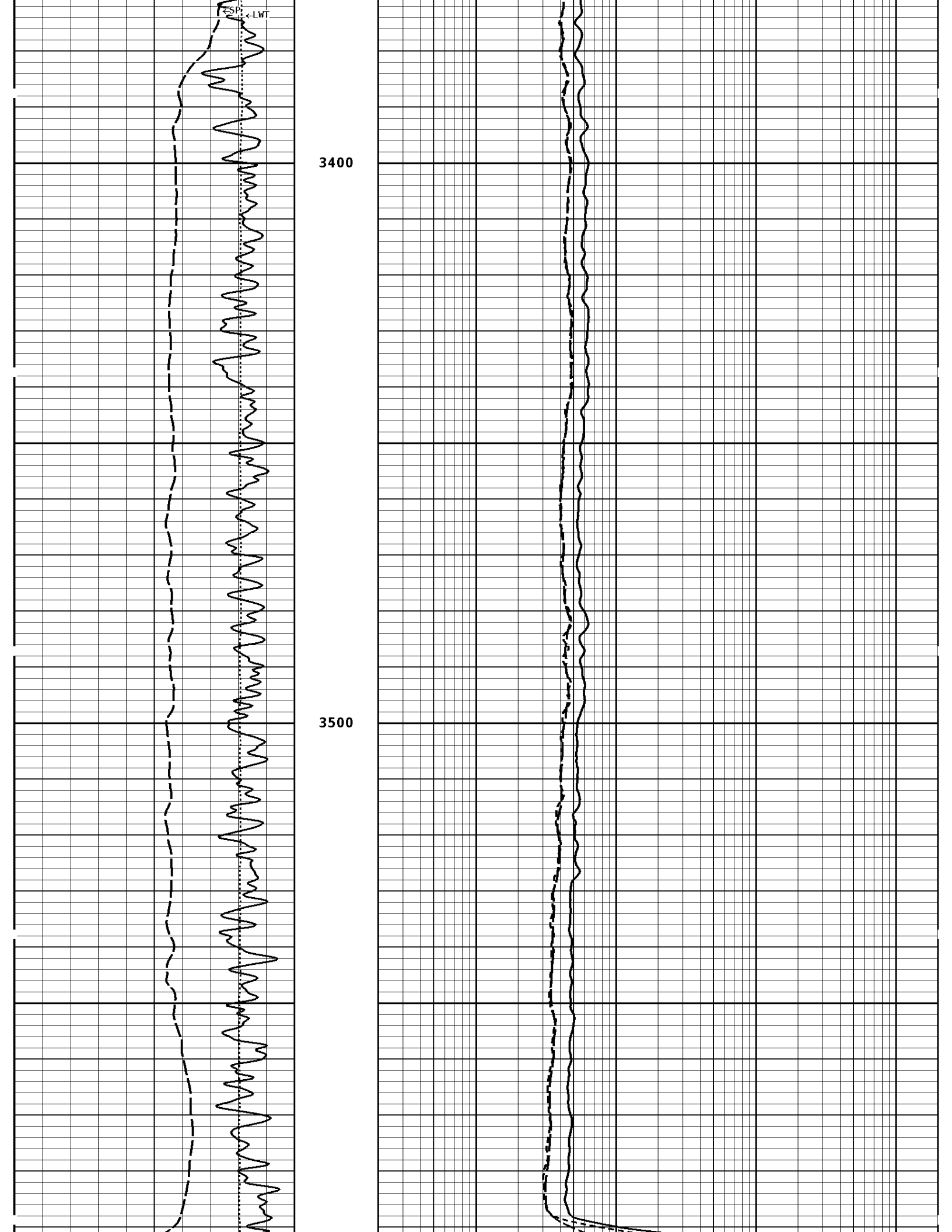
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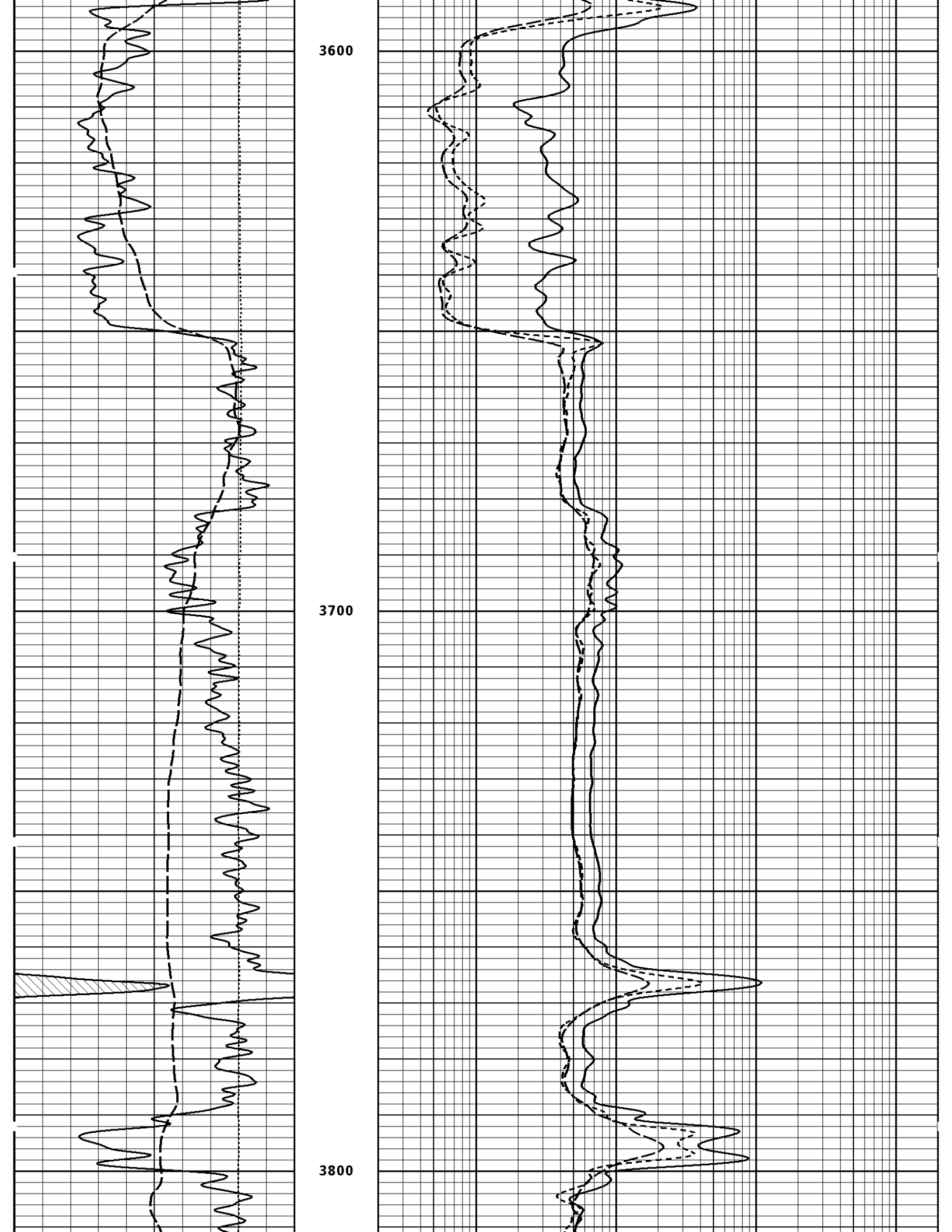
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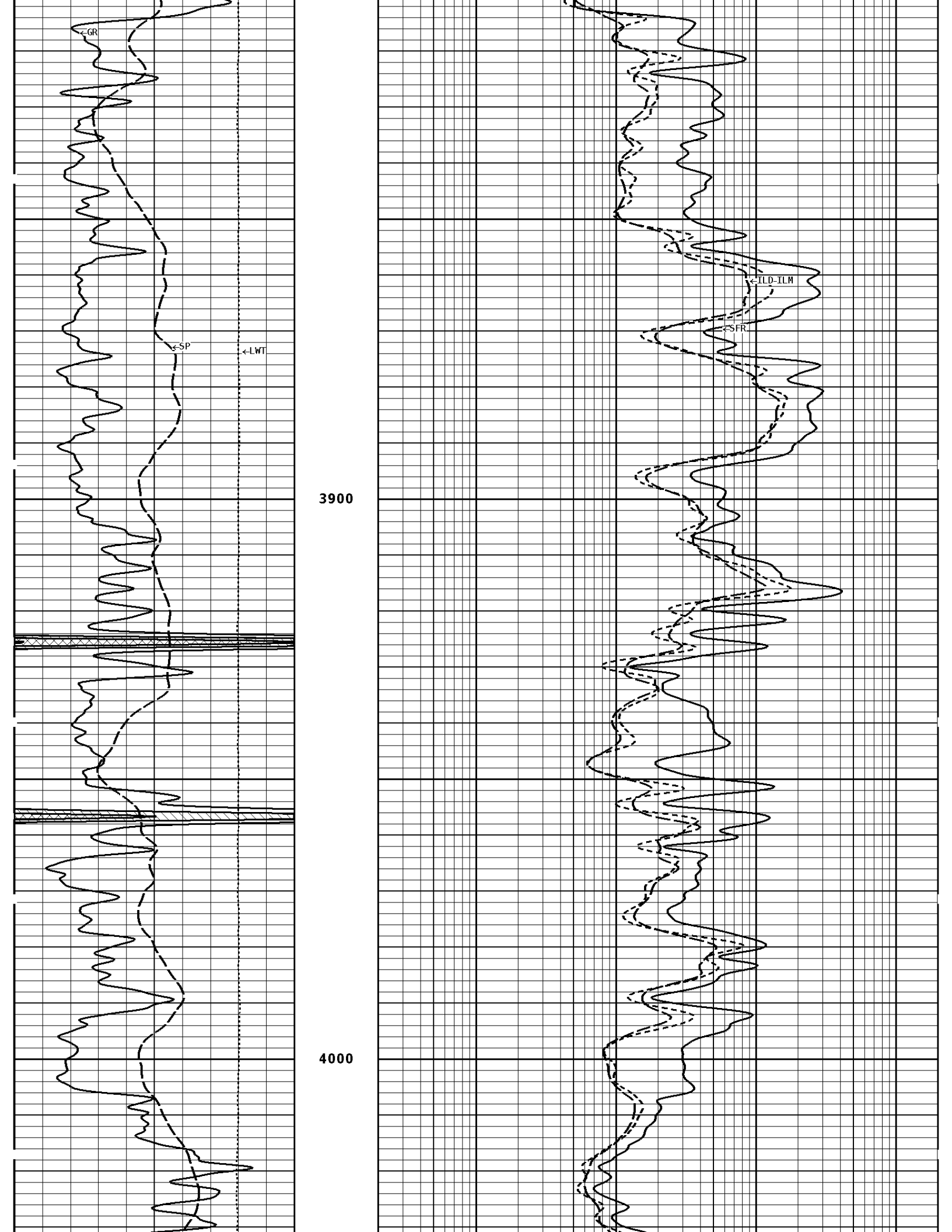
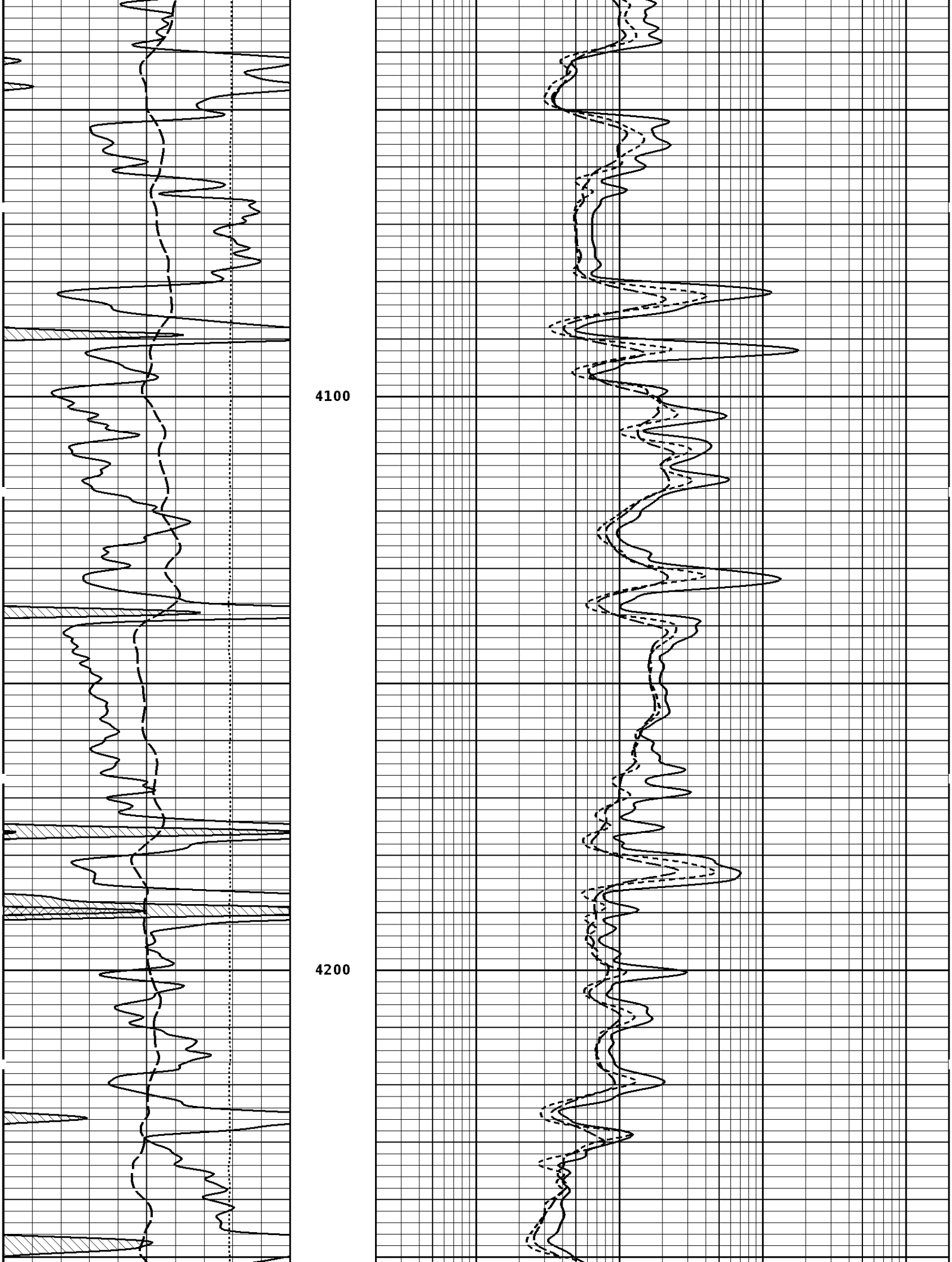

GR
SP
LWT
ILD-ILM
SFR
3900
4000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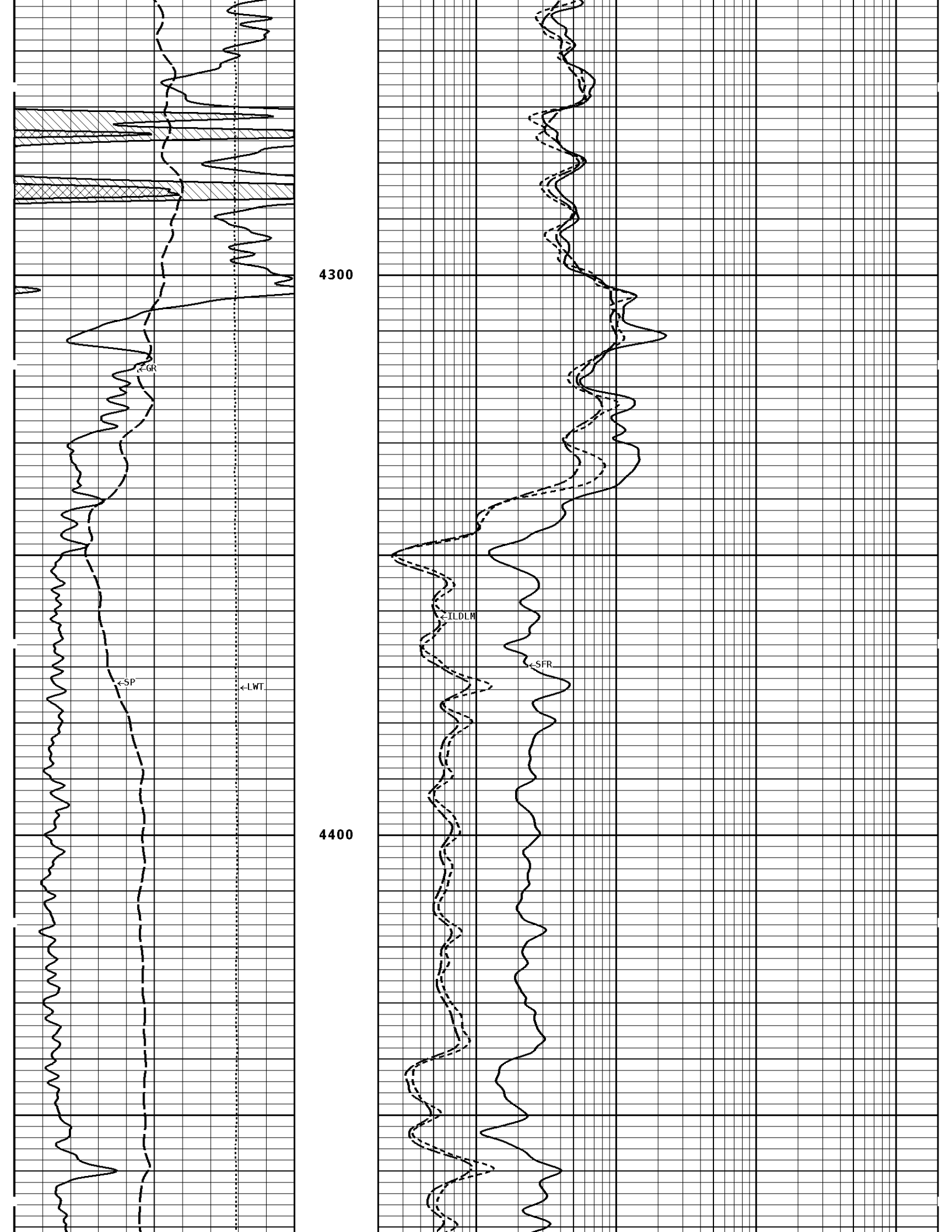
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ILDLM
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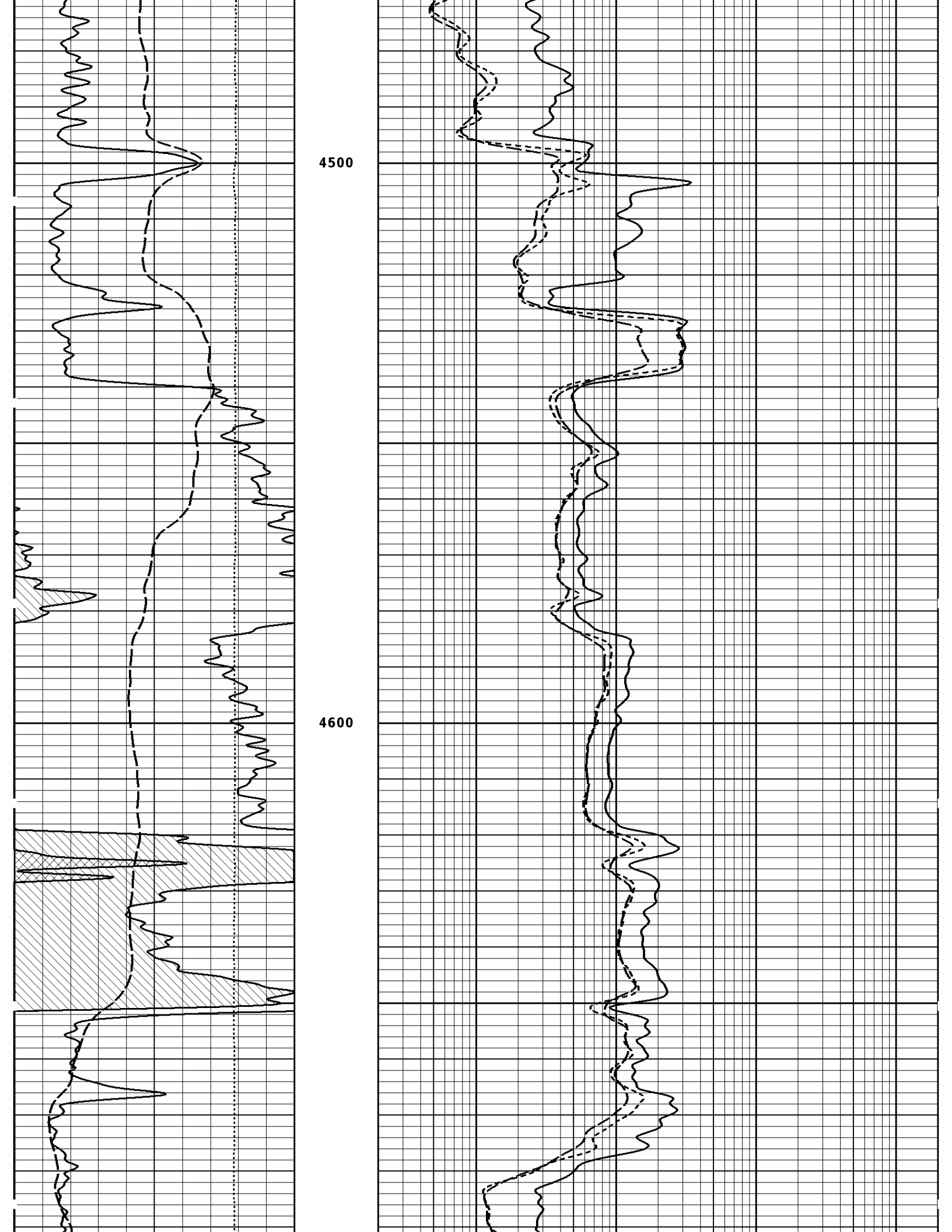
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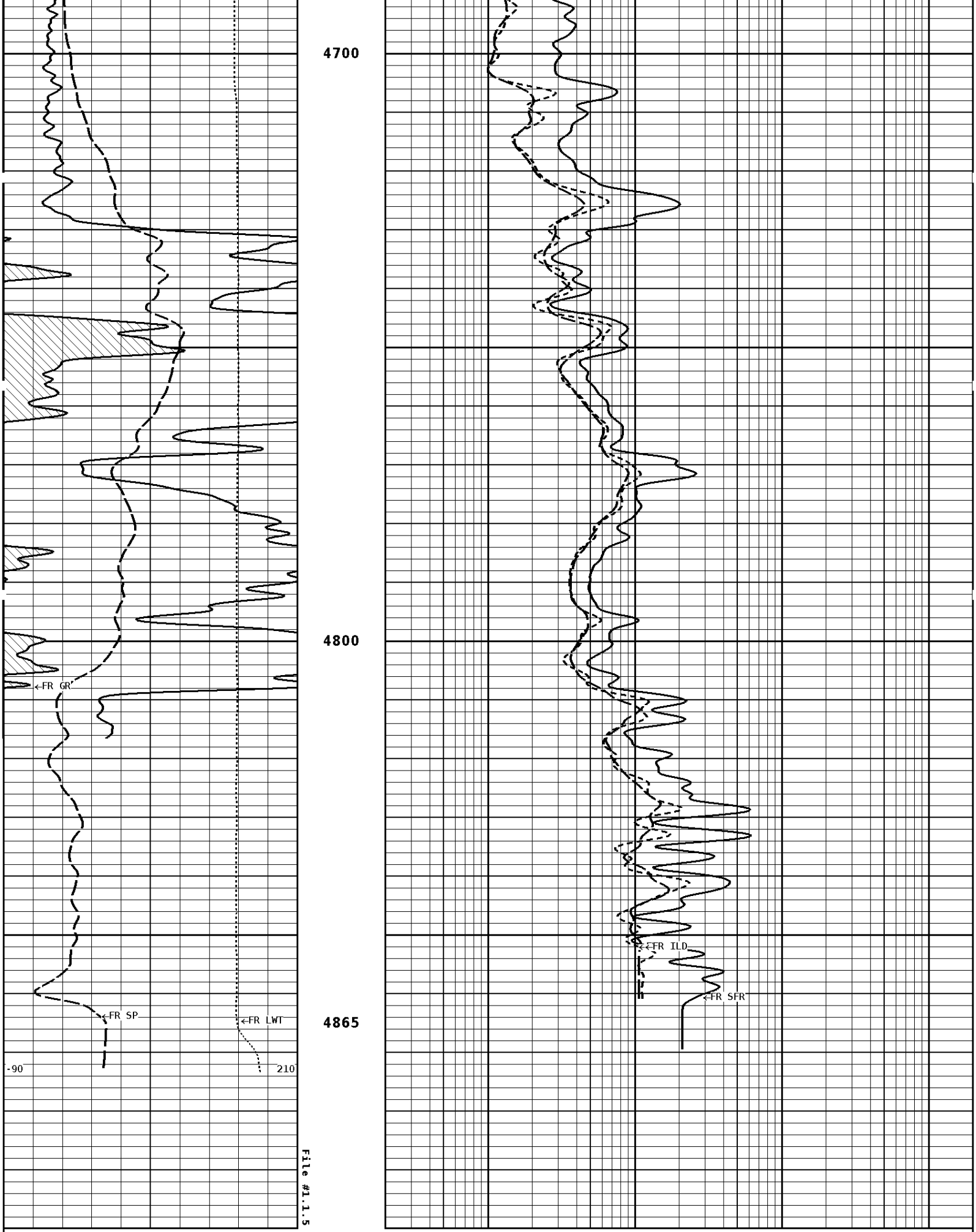


1:240 MAIN SECTION

GAMMA RAY
API UNITS
150 300
0 150

SHALLOW FOCUSED RESISTIVITY
OHMM
0.2 2000.0

TENSION
LBS
10000 0

MEDIUM INDUCTION
OHMM
0.2 2000.0

SPONTANEOUS POTENTIAL
mV
→| |←30

DEEP INDUCTION
OHMM
0.2 2000.0

*** Borehole Zone Factors ***

Zone 1 99999.0 to 0.0 Feet

Drill Bit Size	8.750	in
Casing Diameter	7.000	in
BHT Depth	4865.000	ft
Borehole Temperature	130.0	degF
Temperature Gradient	1.00	DFHF
Resistivity Of Mud	0.580	ohmm
Resistivity Of Mud Temperature	80.00	degF

Well File: DEXXON_REDWOOD_R_1_AUG_28_MSTKNAV **Scale:** 1:240 **Format:** DIL-240
Segment: V1.D1.S4 REPEAT **Acquired:** 2018-08/28 09:25 3.4.0-13841
Reference: 0 **Processed:** 2018-08/28 11:04 3.4.0-13841

SPONTANEOUS POTENTIAL
mV
→| |←30

DEEP INDUCTION
OHMM
0.2 2000.0

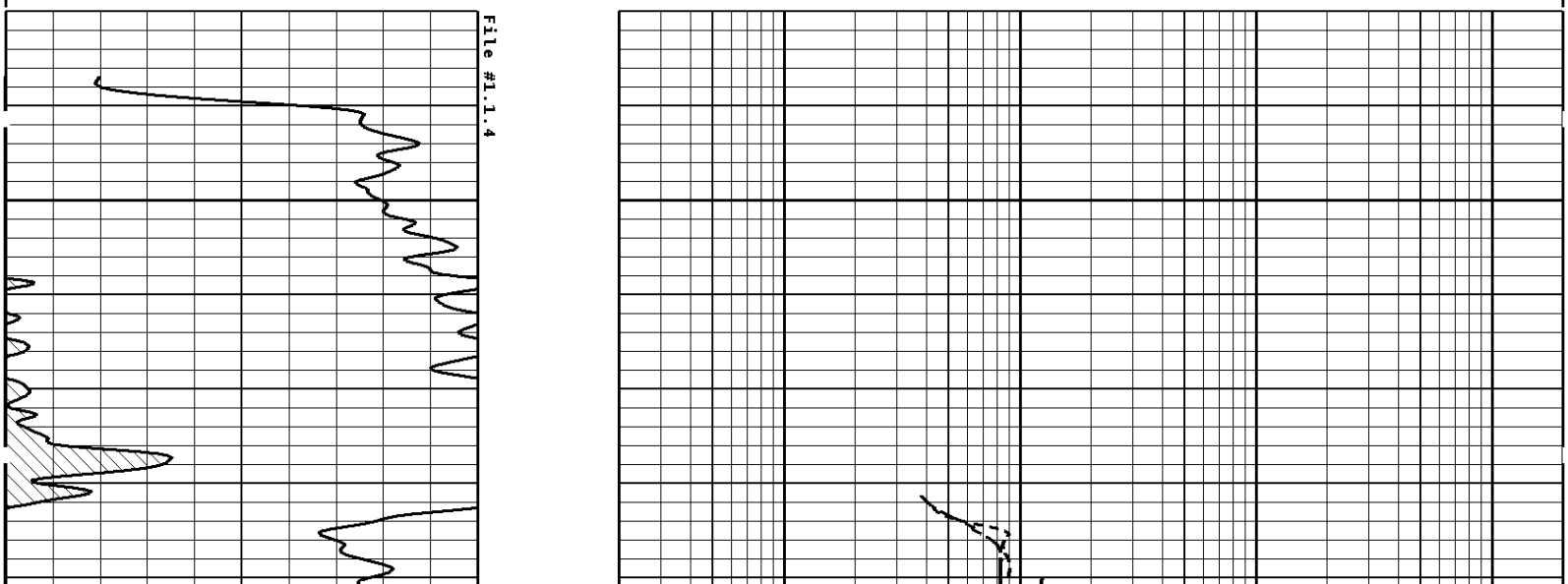
TENSION
LBS
10000 0

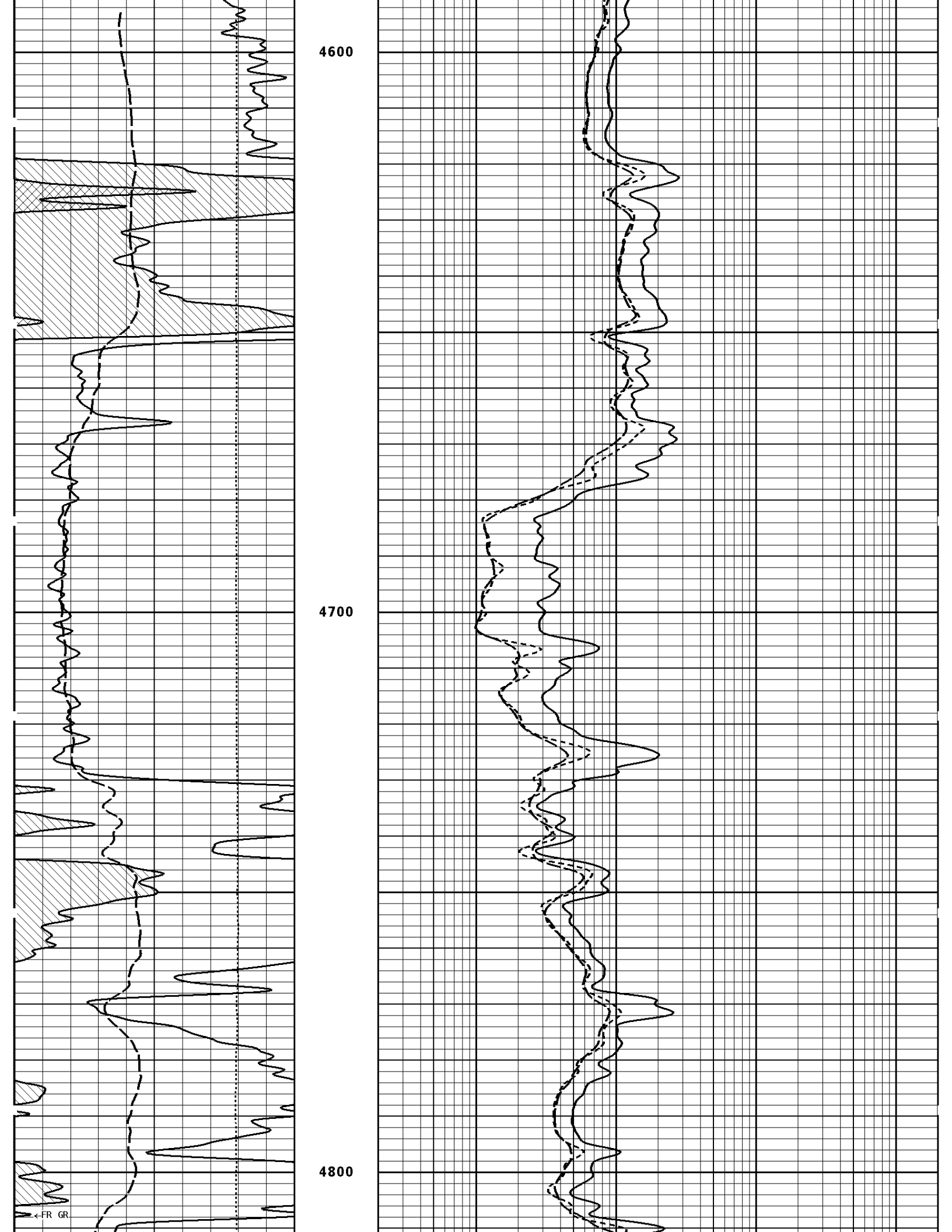
MEDIUM INDUCTION
OHMM
0.2 2000.0

GAMMA RAY
API UNITS
150 300
0 150

SHALLOW FOCUSED RESISTIVITY
OHMM
0.2 2000.0

1:240 REPEAT SECTION

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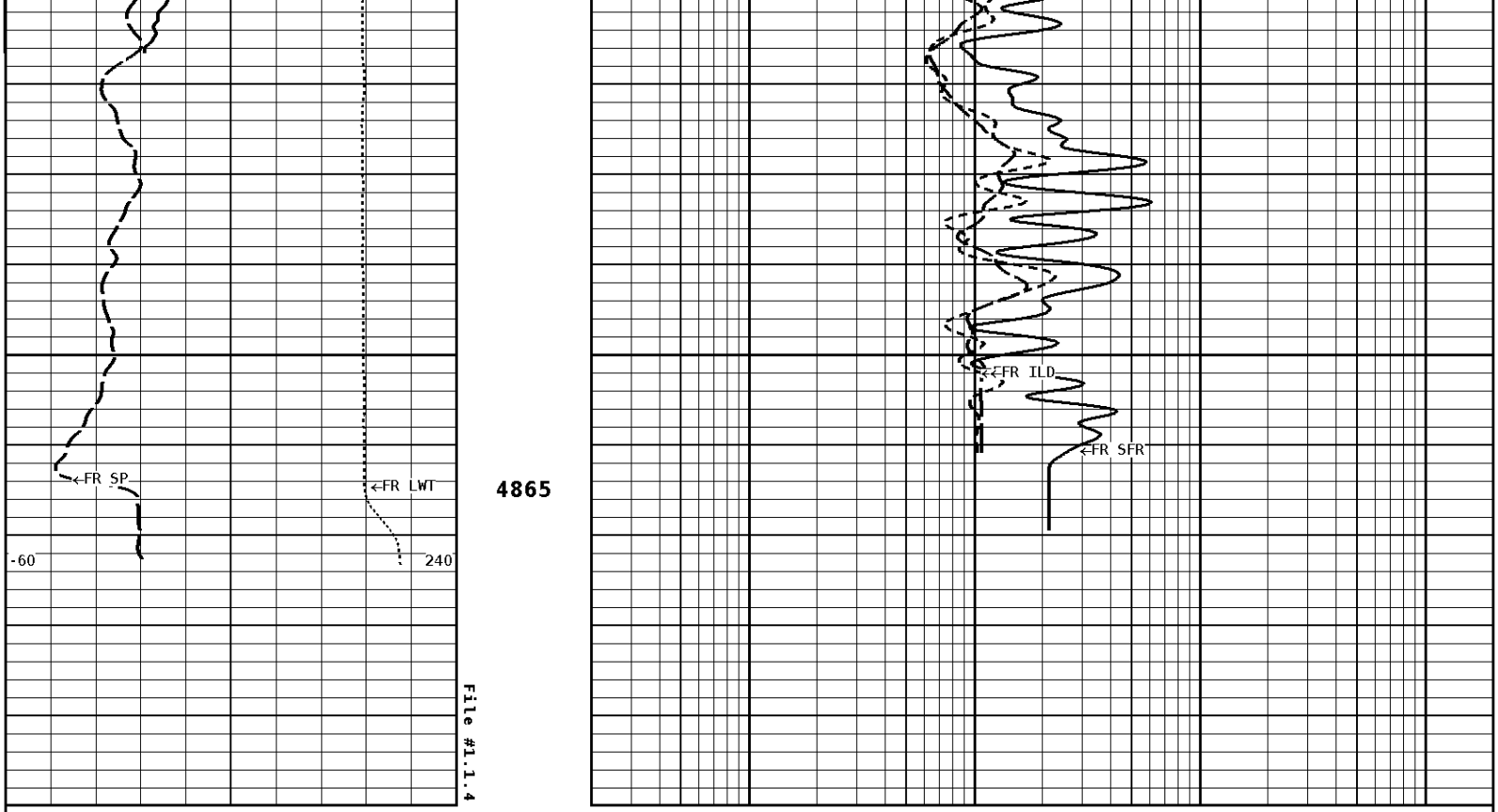


1:240 REPEAT SECTION

GAMMA RAY
API UNITS
150 300
0 150

TENSION
LBS
10000 0

SPONTANEOUS POTENTIAL
mV
→| |←30

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	8.750	in
Casing Diameter	7.000	in
BHT Depth	4865.000	ft
Borehole Temperature	130.0	degF
Temperature Gradient	1.00	DFHF
Resistivity Of Mud	0.580	ohmm
Resistivity Of Mud Temperature	80.00	degF

* Calibration Summary *

Shop Calibration
GRT-B

Performed : 12-Feb-2018 Time : 11:30
Sensor Suite : GR-GR5 ID : GRT-BA-121

	Measured Background	Measured Jig	Units	Calibrated Jig	Units
GR	44	309	CPS	160	GRAPI

Shop Calibration
PIT-CA

Performed : 02-Mar-2018 Time : 10:18
Sensor Suite : P-IND-T ID : PIT-CA-069

Medium

	Measured R	Measured X	Calibrated R	Calibrated X	Units
Air	130175	131167	-0.0	-0.0	MMHOS
Zero	131071	131067	42.2	-8.2	MMHOS
Reference	249263	248373	5042.2	4991.8	MMHOS
Loop	129045	219221	3705.4	3800.9	MMHOS
Sonde Error			0.4	-8.2	MMHOS
Cond			5042.2	4991.8	MMHOS

Deep

	Measured R	Measured X	Calibrated R	Calibrated X	Units
Air	128286	131989	0.0	0.0	MMHOS
Zero	131062	131069	56.4	-22.2	MMHOS
Reference	234731	233611	2056.4	1977.8	MMHOS
Loop	127367	223347	1764.1	1799.6	MMHOS
Sonde Error			-1.4	-7.2	MMHOS
Cond			2056.4	1977.8	MMHOS

Temperature

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

Performed : 02-Mar-2018 Time : 10:08
Sensor Suite : SFL ID : PIT-CA-069

Internal

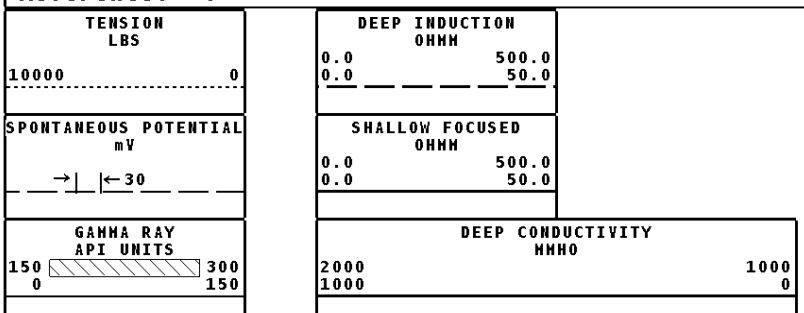
	Measured Zero	Measured Reference	Calibrated Zero	Calibrated Reference	Units
Im	32769.8	49558.8	0.0	7028.0	uA
Ib	32765.9	49862.4	0.0	1750.0	mA
MOM1	32785.1	59407.5	0.0	175.0	mV
Equivalent SFL				43.97	OHMM

Performed : 02-Mar-2018 Time : 10:05
Sensor Suite : P-SP ID : PIT-CA-069

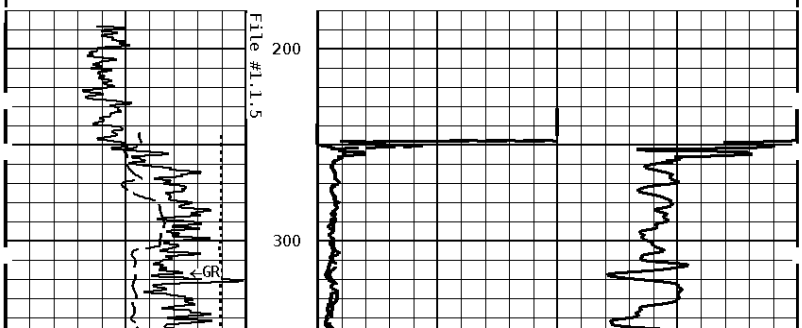
Internal

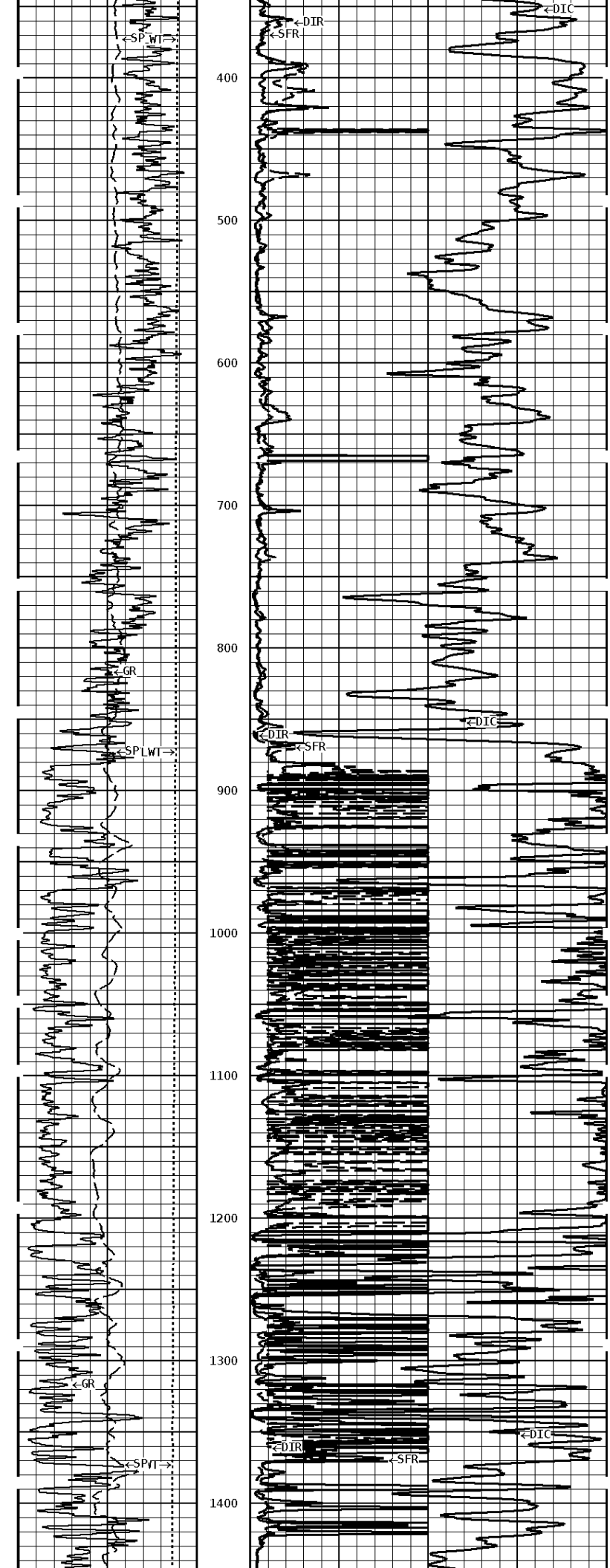
Measured Zero	Measured Reference	Calibrated Zero	Calibrated Reference	Units
32793.5	58829.7	0.0	1000.0	mV

Well File: DEXXON_REDWOOD_R_1_AUG_28_MSTKNAV **Scale:** 1:1200 **Format:** DIL1200
Segment: V1.D1.S5 MAIN **Acquired:** 2018-08/28 09:39 3.4.0-13841
Reference: 0 **Processed:** 2018-08/28 11:04 3.4.0-13841



1:1200 MAIN SECTION

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←DIR
←SFR
←DIC
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500
600
700
800
←GR
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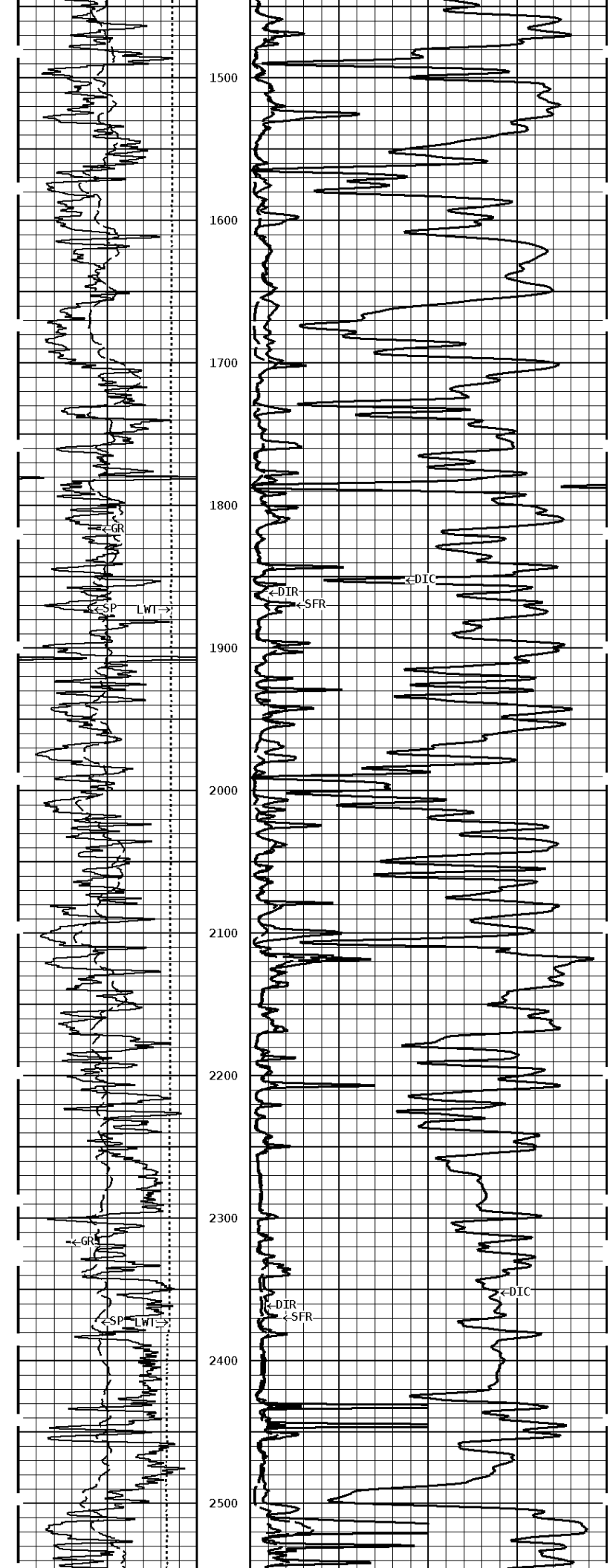
←SP_WT→
900
1000
1100
1200
1300
←GR
←DIC
←DIR
←SFR
←SP_WT→
1400


1500
1600
1700
1800
1900
2000
2100
2200
2300
2400
2500
←GR
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←DIC
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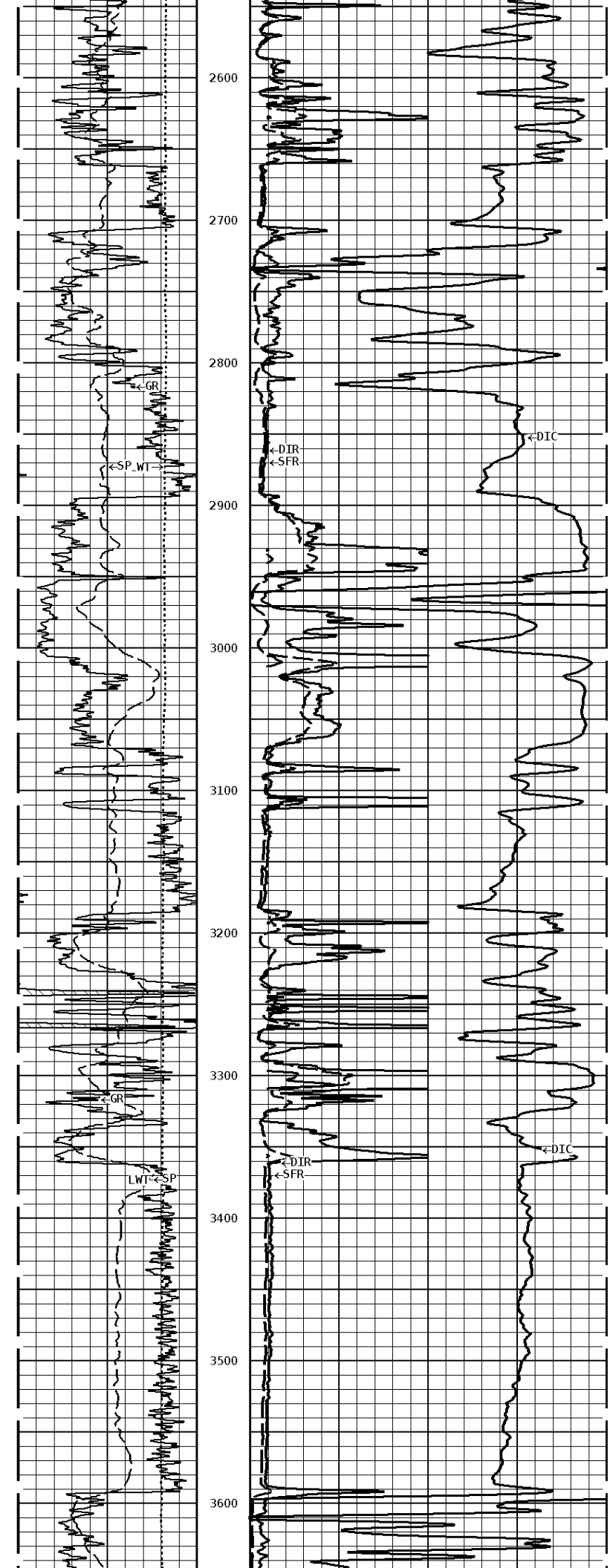
LWT→
←DIC
←DIR
←SFR


2600
2700
2800
2900
3000
3100
3200
3300
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3500
3600
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SP
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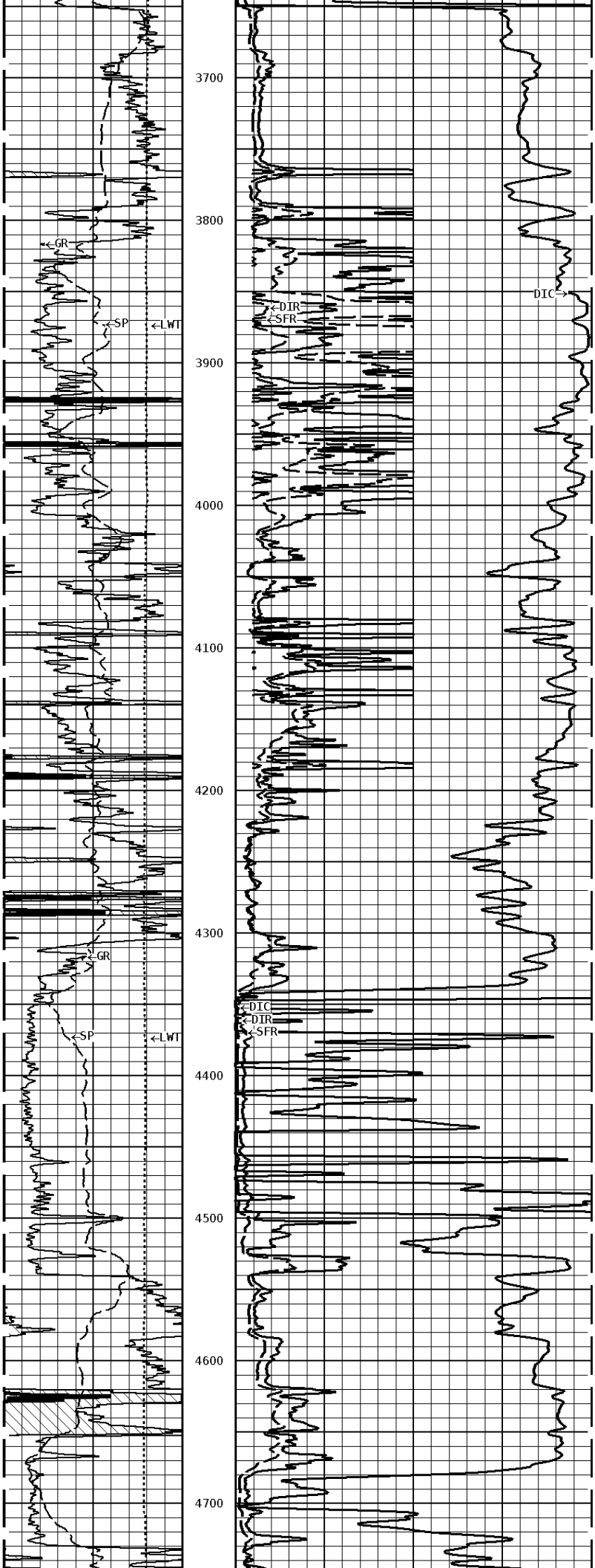
SFR
DIC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3800
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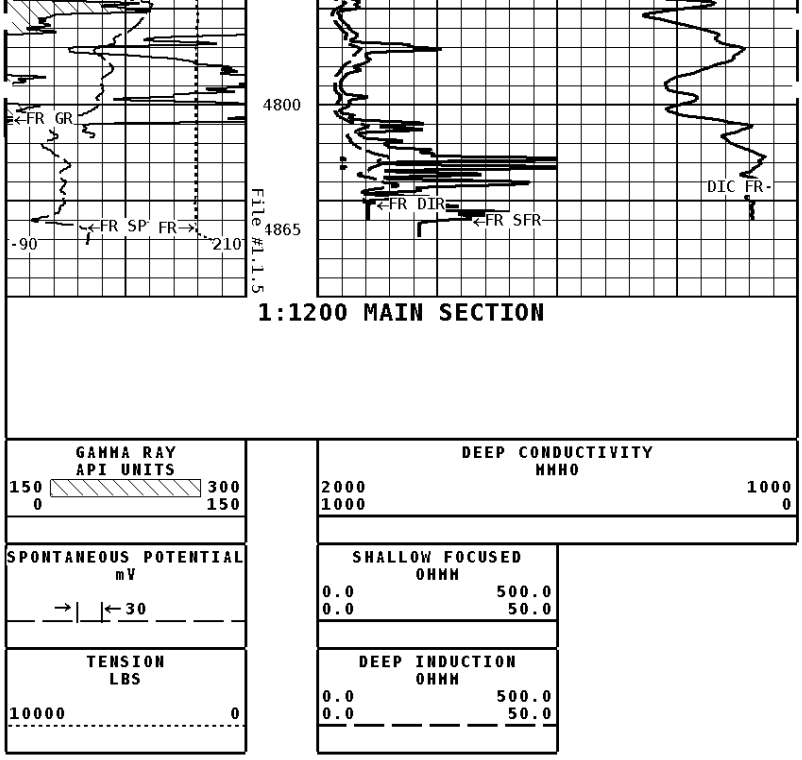

1:1200 MAIN SECTION

GAMMA RAY API UNITS		DEEP CONDUCTIVITY MMHO	
150	300	2000	1000
0	150	1000	0

SPONTANEOUS POTENTIAL mV		SHALLOW FOCUSED OHMM	
→ | | ← 30		0.0	500.0
		0.0	50.0

TENSION LBS		DEEP INDUCTION OHMM	
10000	0	0.0	500.0
		0.0	50.0

Tucker ENERGY SERVICES

Company:	DEXXON, INC.
Well:	REDWOOD ROYALTY #1
Location:	330' FNL & 1320' FEL
Logged:	08-28-2018
K.B. Elev:	1514.0 Ft