Tucker ENERGY SERVICES

BOREHOLE COMPENSATED SONIC LOG

Company C&G DRILLING
Well HITE #1
Field DEBOIS
County SEGWICK
State KANSAS
Country USA
API No. 15-173-21014-0000

File No : TUL-58680
Company : C&G DRILLING
Well : HITE #1
Field : DEBOIS
County : SEGWICK
State : KANSAS
Country : USA
API No : 15-173-21014-0000

Location :
860' FNL & 1020' FEL
NW SW NE NE

LSD : **Sect :** 3 **Twp :** 25S **Rge :** 2E

Permanent Datum:	GL	**Elevations:**		**Services:**	
Drilling Measured From:	KB	**KB**	1361.00 Ft	CNT	CST
Log Measured From:	KB	**DF**	1360.00 Ft	LDT	PIT
Above Permanent Datum:	6.00 Ft	**GL**	1354.00 Ft	MLT	

Date	2012-08-28						
Run Number	1						
Depth--Driller	3290.0	Ft					
Depth--Logger	3290.0	Ft					
First Reading	3277.0	Ft					
Last Reading	200.0	Ft					
Casing--Driller	200.0	Ft					
Casing--Logger	200.0	Ft					
Bit Size	7.875	In					
Casing Size	8.625	In					
Hole Fluid Type	CHEM-GEL						
Density	9.3	LBS/GAL					
Fluid Loss	9.6	CC					
PH/Viscosity	8.8	56.0 SEC					
Sample Source	MEASURED						
RM@Measured Temp.	0.550	@ 80 F					
RMF@Measured Temp	0.440	@ 80 F					
RMC@Measured Temp.	0.660	@ 80 F					
Source RMF/RMC	CALCULATED	CALCULATED					
RM@BHT	0.410	@ 109 F					
Time Circulation Stopped	2012-08-28 02:33						
Max Recorded Temp.	109	F					
Equipment/Base	TRK 127	TULSA					
Recorded By	SHELDON TYLER						
Witnessed By	T. GULLICK						

Casing Strings

Size (In)	Weight (Lbs)	Bottom (Ft)
8.625	32.00	200.00

Bitsize Intervals

Size (In)	Bottom (Ft)
7.875	3290.00

Run Number	1
Date	2012-08-28
Date/Time On Bottom	2012-08-28 04:33
Depth to Fluid	0.0 Ft
Salinity	0.000 PPM
RMF@BHT	0.330 @ 109 F
RMC@BHT	0.500 @ 109 F

Run Number 1

Comments

ALL PRESENTATIONS AS PER CUSTOMER REQUEST

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 UISING 5.500" PRODUCTION CASING.

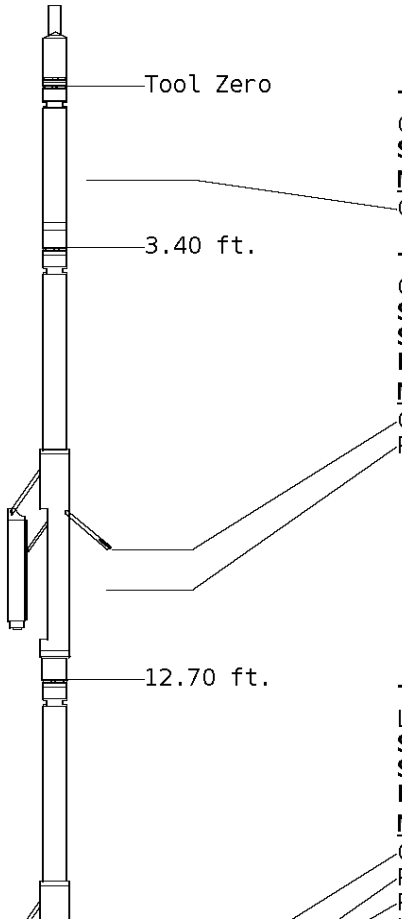
DETAIL 2300 CUSTOMER REQUEST

GRT: GRP.
CNT: PHIN, CLCNIN
LDT: PORL, LCORN, PECLN, LDENN, PORLLS, CLLDIN.
MLT: NOR_R, INV_R, MSCLPIN.
CST: PORS, DDCDTF, TT1PF, TT3PF, ITT.
PIT: ILD, ILM, SPU, SFLAEC

OPERATORS:
A.DJAHO
Z.HICKMAN
J.THOMAS

Tool String Schematic

Total Tool Length - 66.95 **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-BC-43

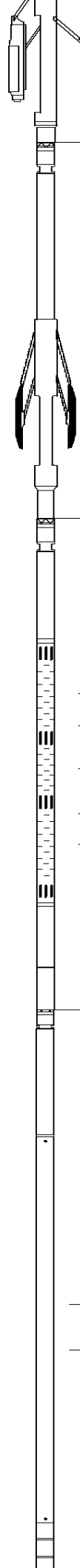
Measure Point	Tool Offset	Stack Offset	Bottom Offset
GRP	2.00	2.00	64.95

Tool: CNT-AA **Length:** 9.30 **ft.** **O.D.** 4.36 **in.**
Compensated Neutron A Pad on NDT-A
Sonde ID :NDT-BB-134
Source ID :N-1044
Pad ID :CNP-AE-42

Measure Point	Tool Offset	Stack Offset	Bottom Offset
CLCN	6.00	9.40	57.55
PHIN	6.80	10.20	56.75

Tool: LDT-DA **Length:** 9.30 **ft.** **O.D.** 4.80 **in.**
Litho Density D Pad on NDT-A
Sonde ID :PDT-GA-466
Source ID :CSV-587
Pad ID :LDP-DA-02

Measure Point	Tool Offset	Stack Offset	Bottom Offset
CLLD	6.00	18.70	48.25
PEL	7.00	19.70	47.25
PES	7.40	20.10	46.85



LDEN	7.20	19.90	47.05
LCOR	7.20	19.90	47.05

22.00 ft.

Tool: MST-DA **Length:** 9.66 **ft.** **O.D.** 6.00 **in.**
Micro Spherically Focused (IC)
Sonde ID :MLT-DA-21

Measure Point	Tool Offset	Stack Offset	Bottom Offset
MSFL	7.60	29.60	37.35
MSCLP	7.60	29.60	37.35
INV	7.60	29.60	37.35
NOR	7.60	29.60	37.35

31.66 ft.

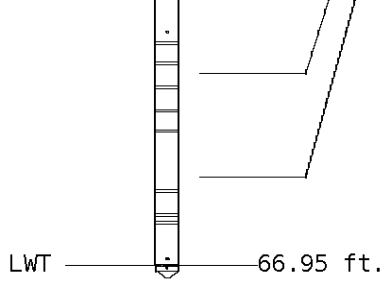
Tool: CST-AD **Length:** 13.80 **ft.** **O.D.** 3.60 **in.**
Open Hole Sonic
Sonde ID :CST-AB-38

Measure Point	Tool Offset	Stack Offset	Bottom Offset
TT1	4.80	36.46	30.49
TT3	5.80	37.46	29.49
CDT	7.30	38.96	27.99
TT4	8.80	40.46	26.49
TT2	9.80	41.46	25.49

45.46 ft.

Tool: PIT-CA **Length:** 21.49 **ft.** **O.D.** 3.62 **in.**
Phased Dual Induction w/ RM & D
Sonde ID :PIT-AC-13

Measure Point	Tool Offset	Stack Offset	Bottom Offset
ILD	8.92	54.38	12.56
ILM	10.10	55.56	11.39
SFLU	17.49	62.95	4.00
SP	20.60	66.06	0.88



Well File: CG_DRILLING_HITE_1_AUG28_QUINT
Segment: V1.D1.S8 Reprocess of CST
Reference: 0

Scale: 1:240
Acquired: 2012-08/28 05:40 3.2.0-11172
Processed: 2012-08/28 20:10 3.2.0-11087

TENSION
LBS
10000 — 0

BIT SIZE
INCHES (IN)
6 — 16

DENSITY (X) CALIPER
INCHES (IN)
16 — 26
6 — 16

NEUTRON (Y) CALIPER
INCHES (IN)
16 — 26
6 — 16

GAMMA RAY
API UNITS
150 — 300
0 — 150

TT3
uSEC
950 — 50

TT1
uSEC
950 — 50

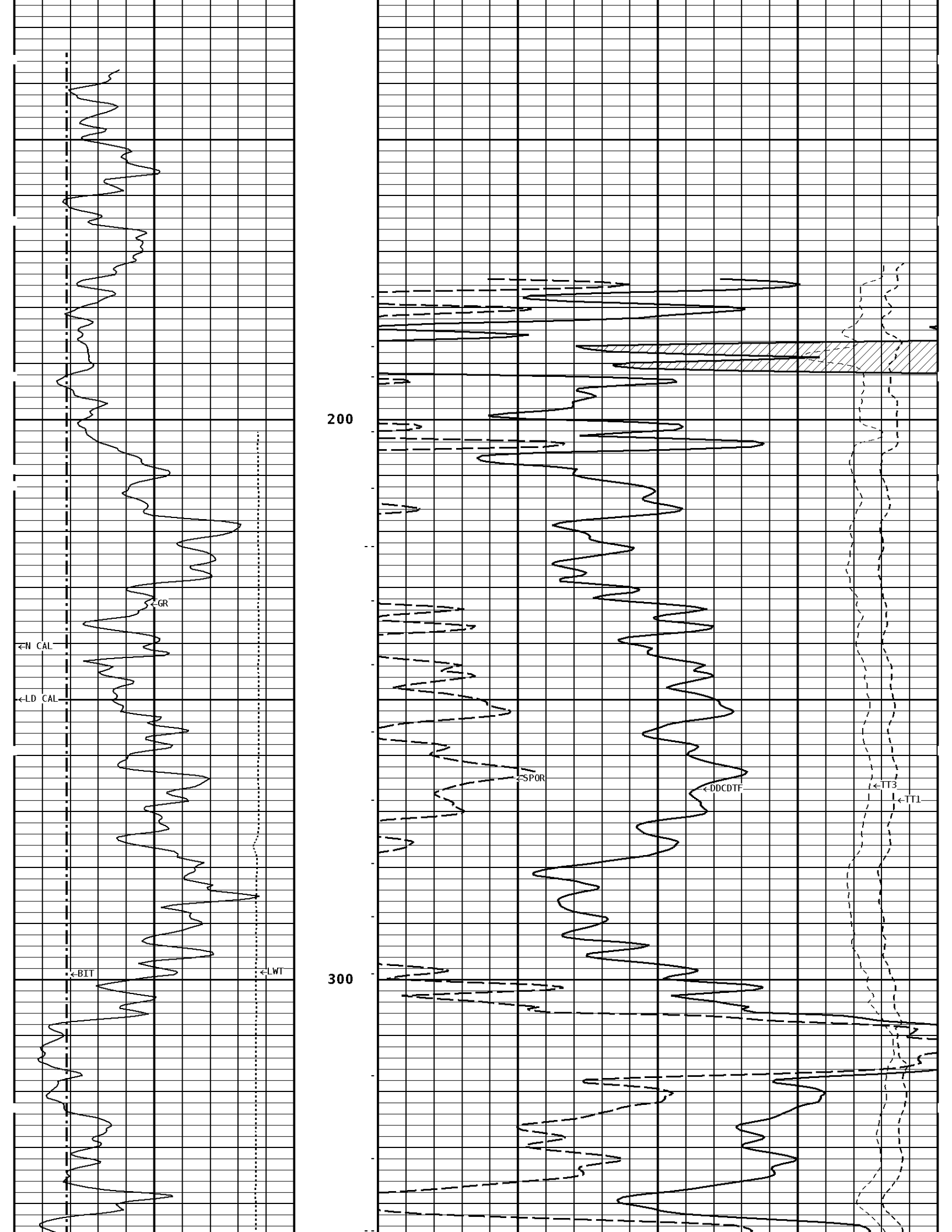
COMPENSATED SONIC TRAVEL TIME
uSEC/FT
240 — 140
140 — 40

SONIC POROSITY
Percent
30 — -10

1:240 MAIN SECTION

File #1.1.8

100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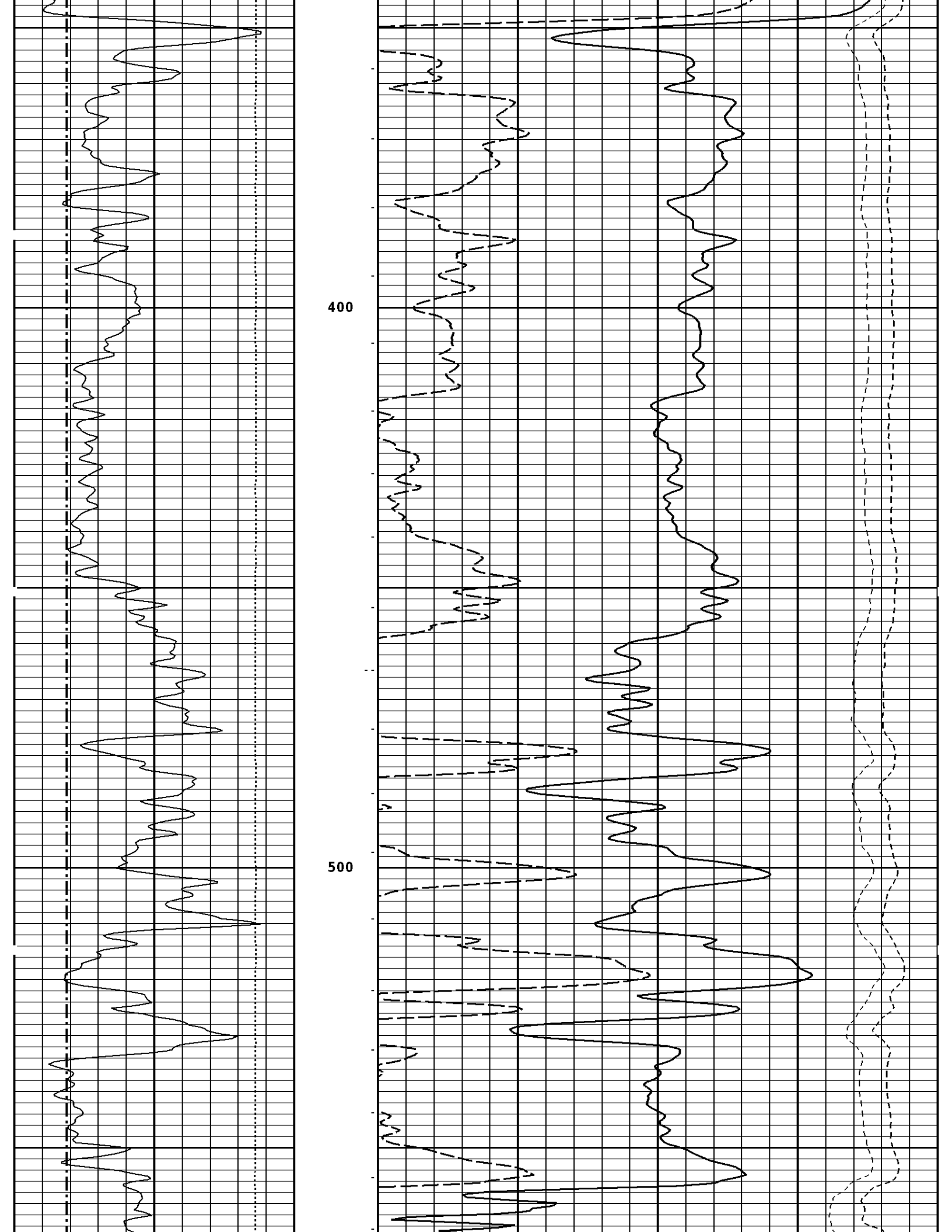
←LWT
←SPOR
←DDCDTF
←TT3
←TT1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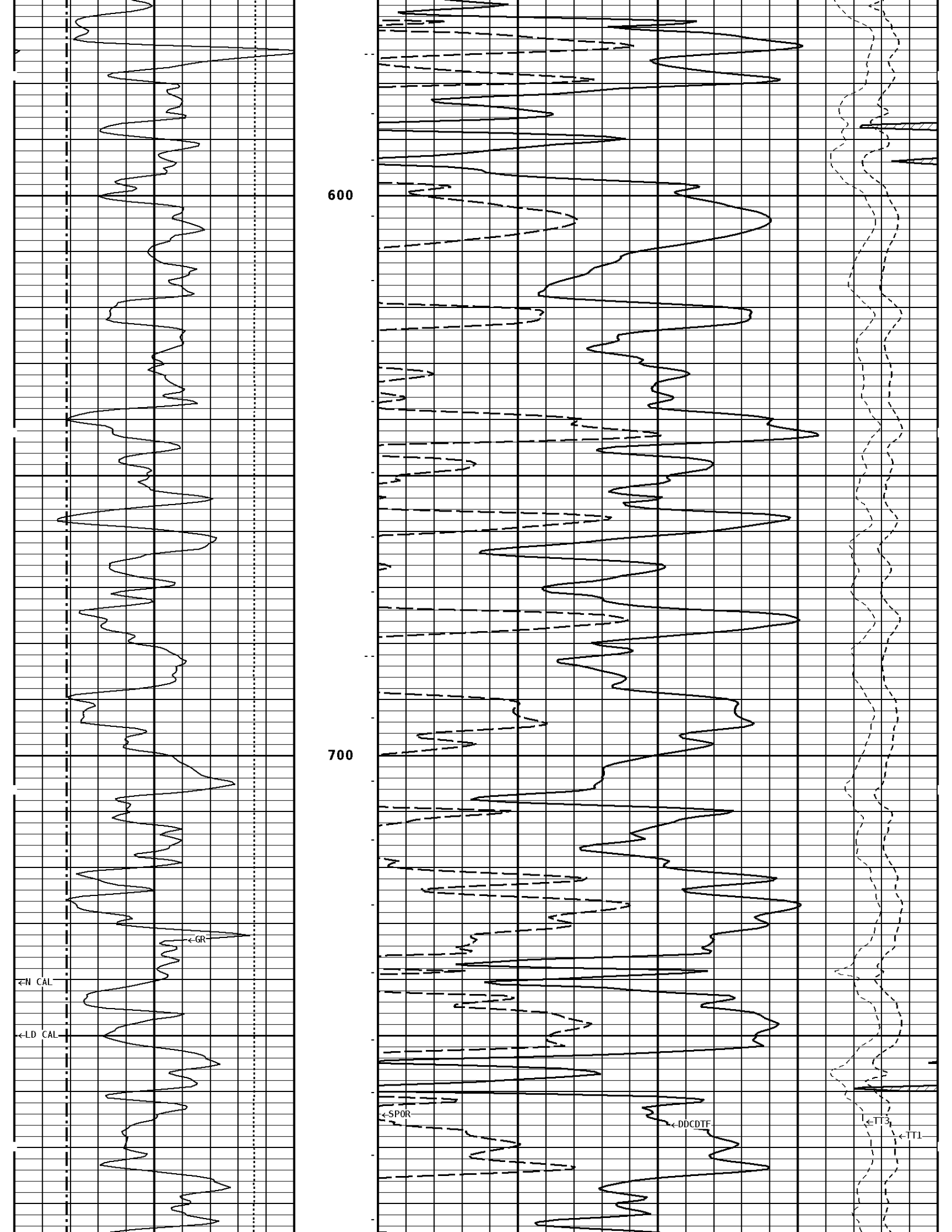
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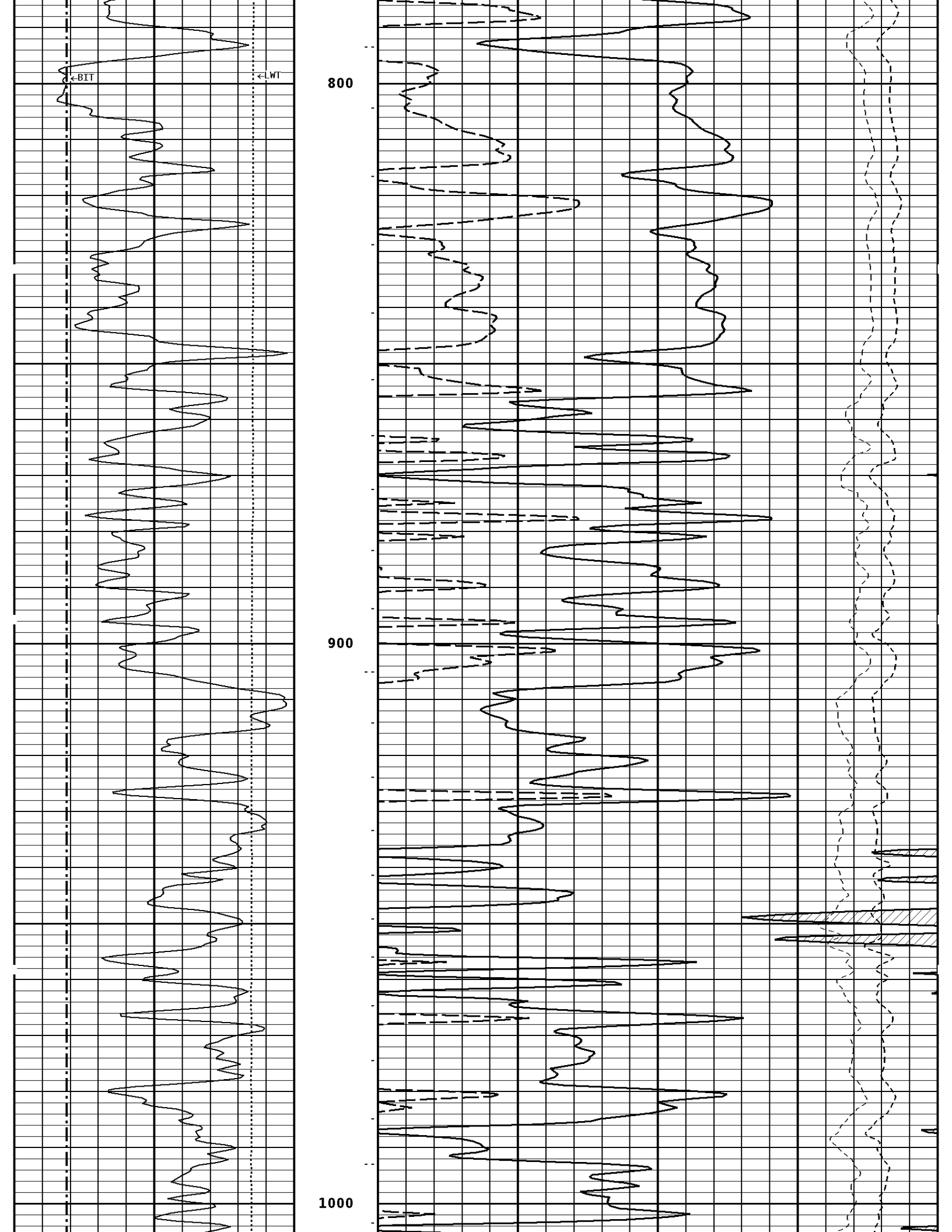
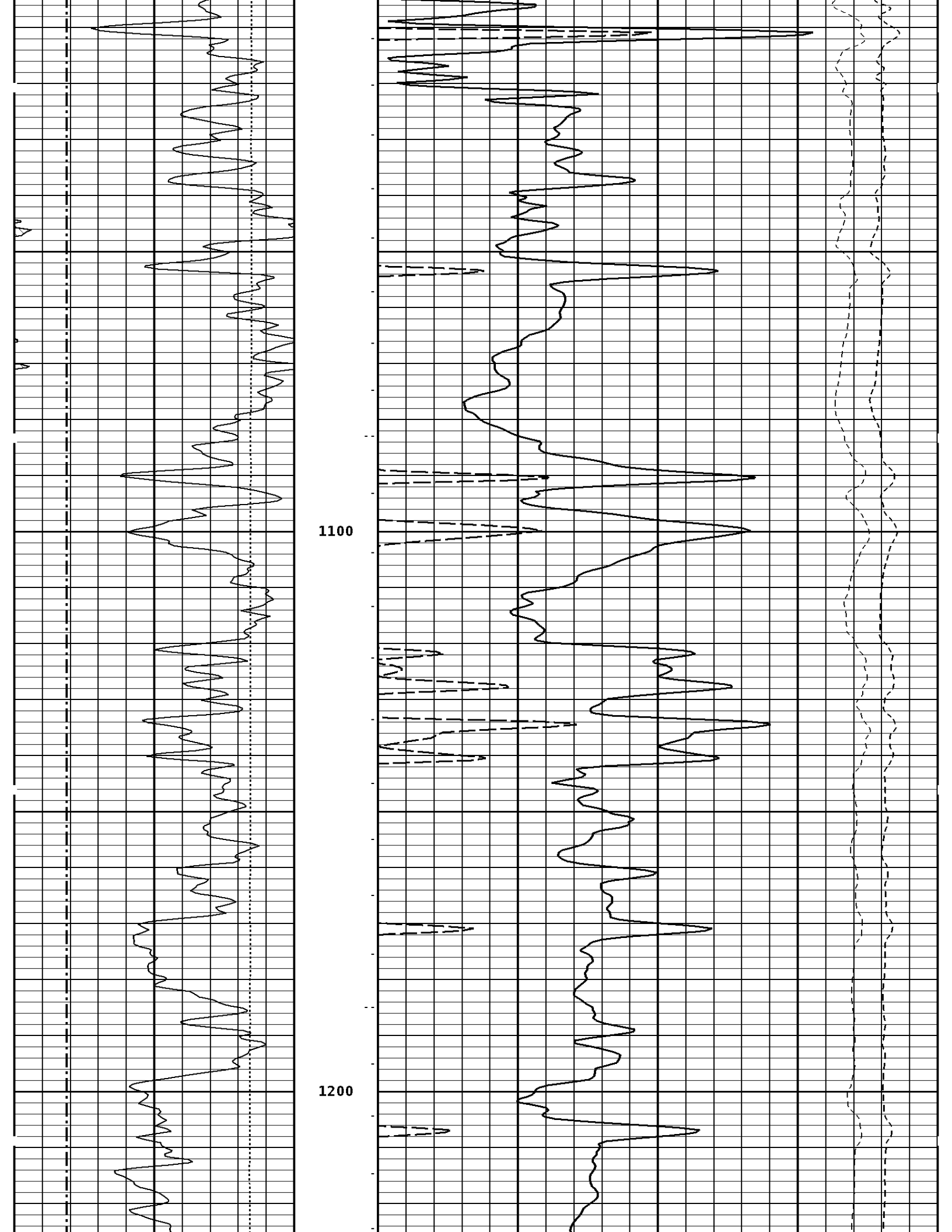
700
GR
N CAL
LD CAL
SPOR
DDCDTF
TT3
TT1


←BIT
←LWT
800
900
1000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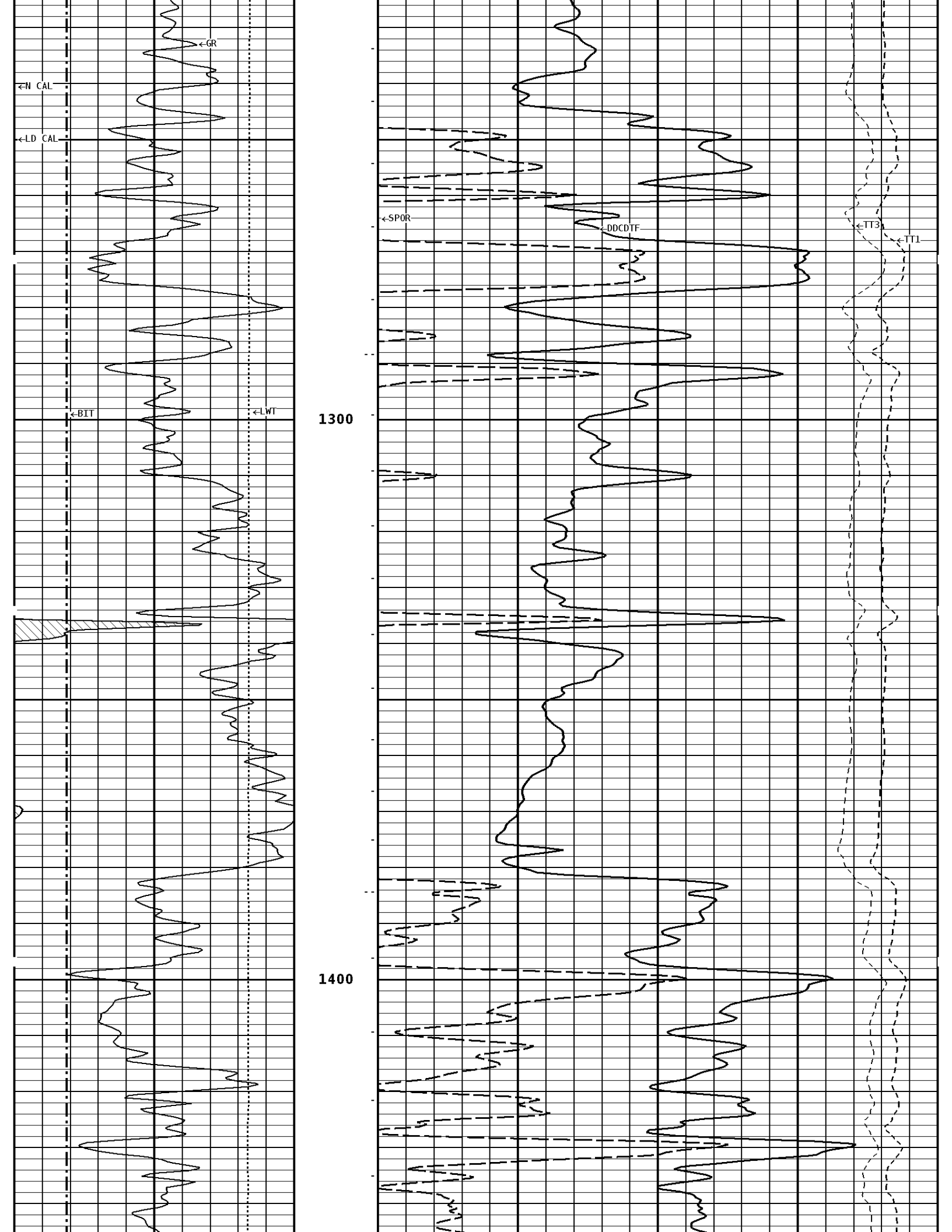
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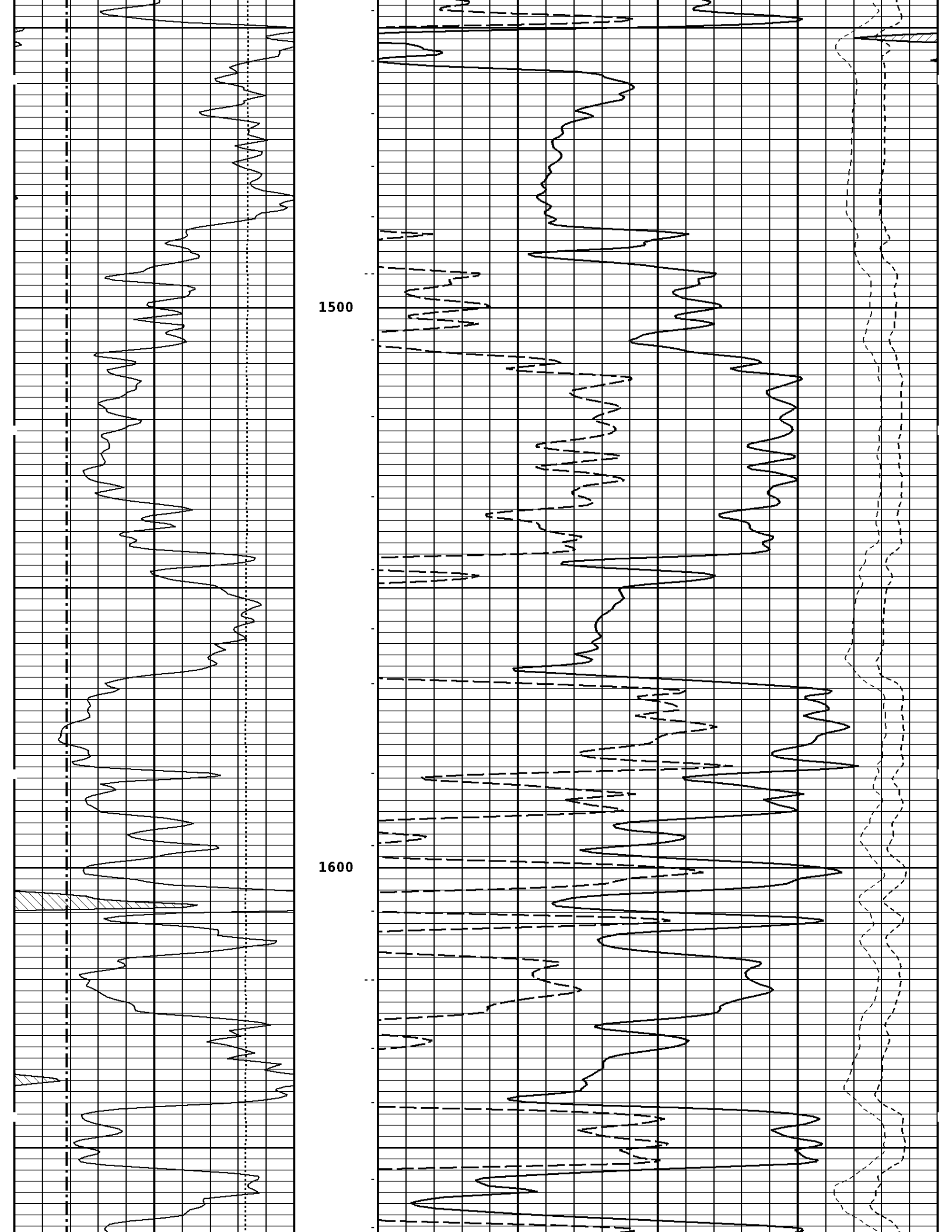
←LD CAL
←SPOR
←DDCDTF
←TT3
←TT1
←BIT
←LWT
1300
1400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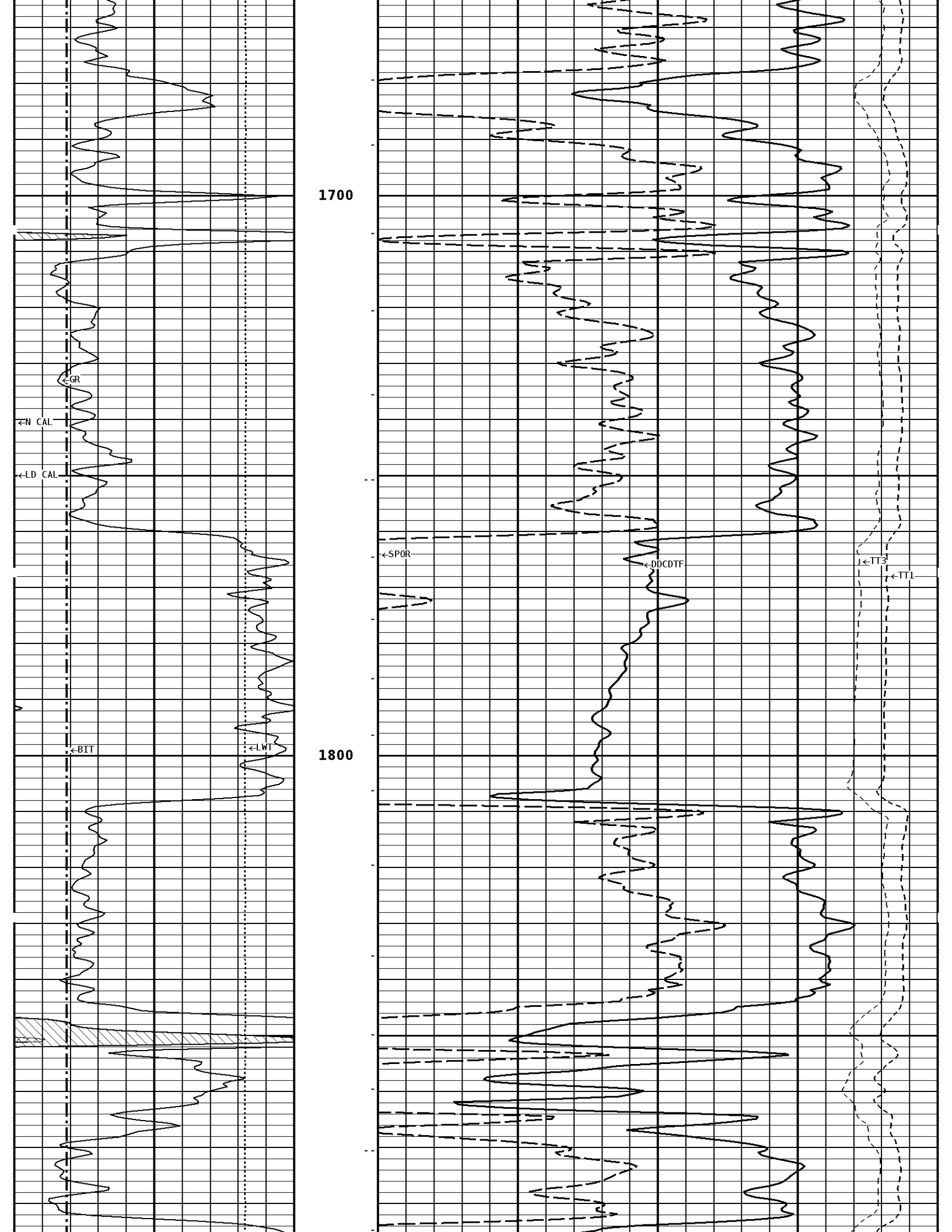
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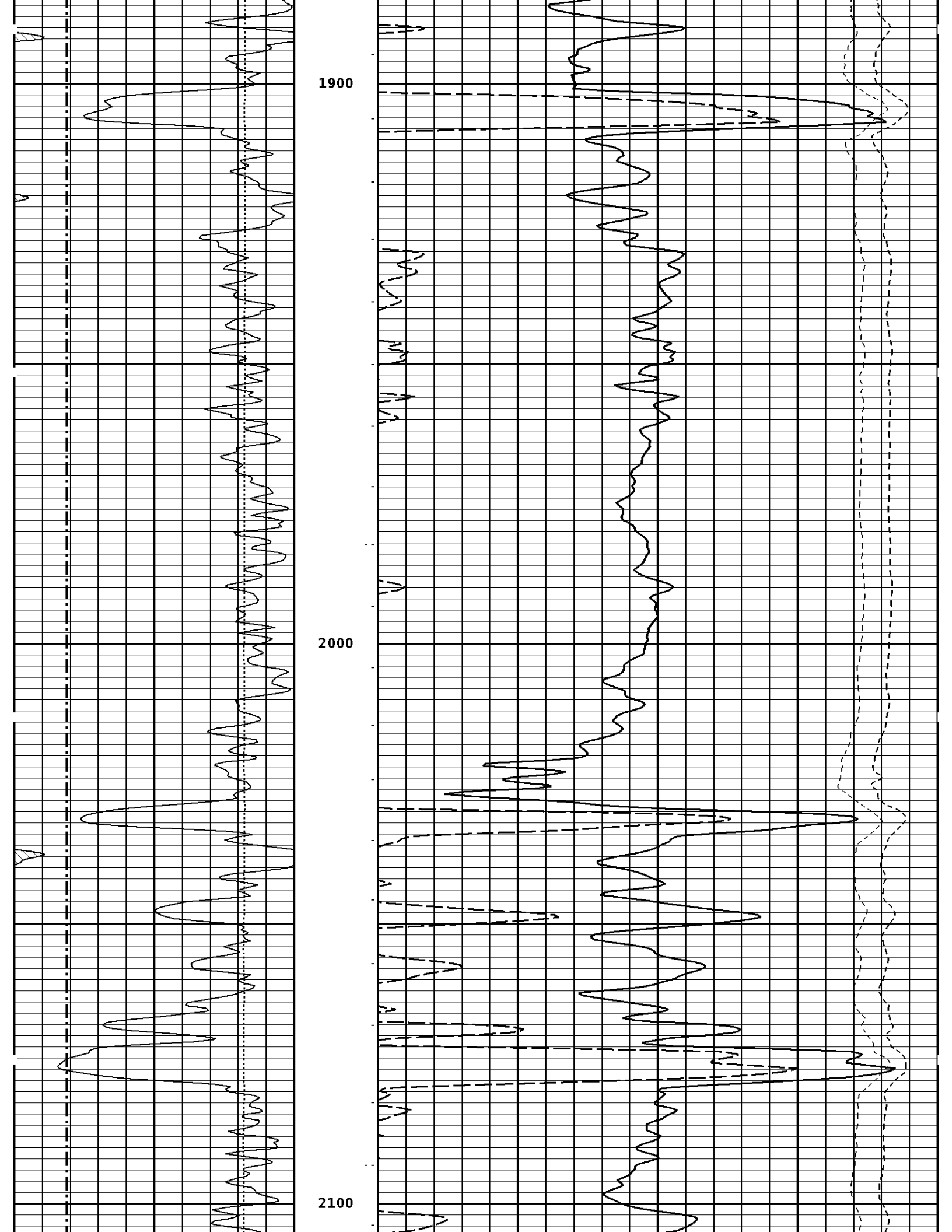
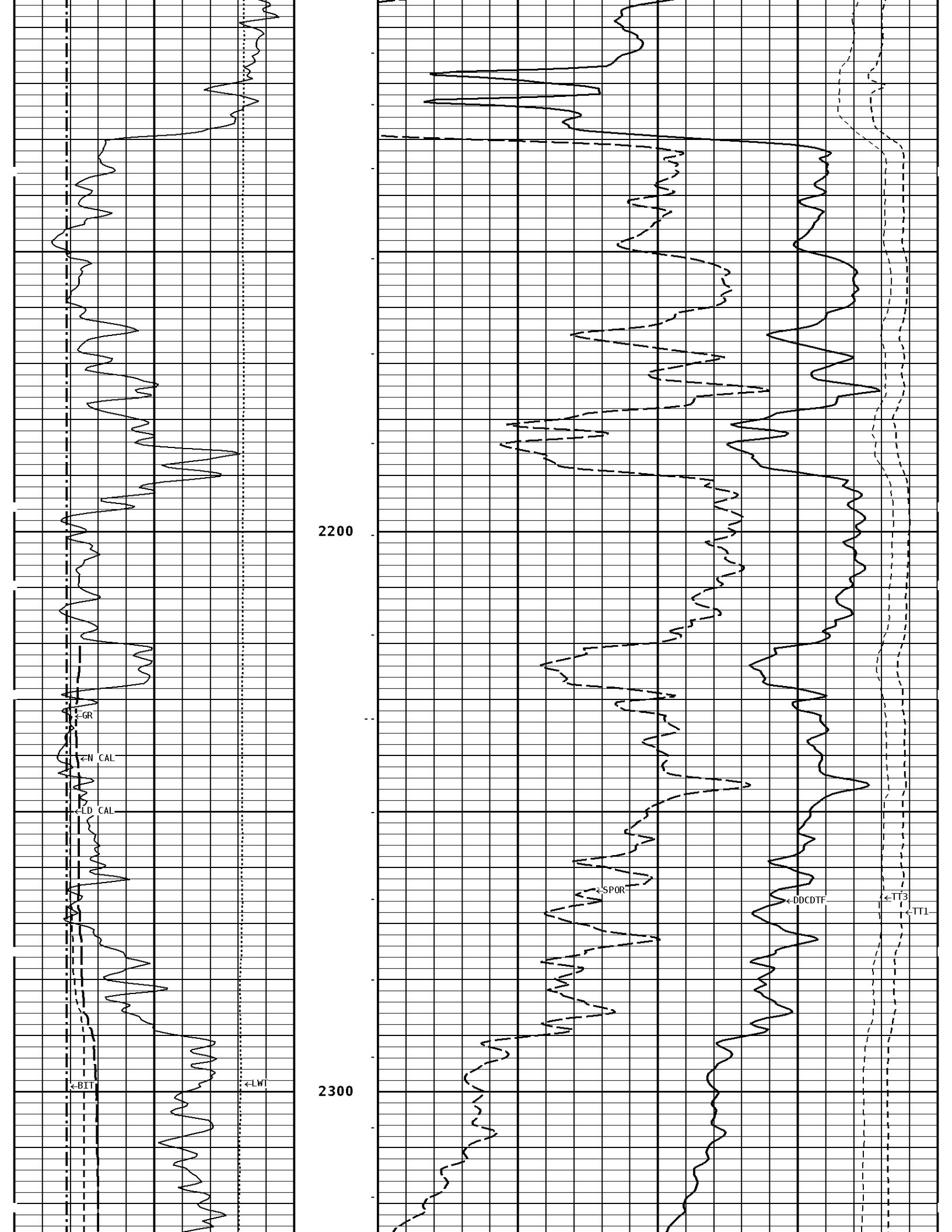
1800
GR
N CAL
LD CAL
BIT
LWT
SPOR
DDCDTF
TT3
TT1


1900
2000
2100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←N CAL
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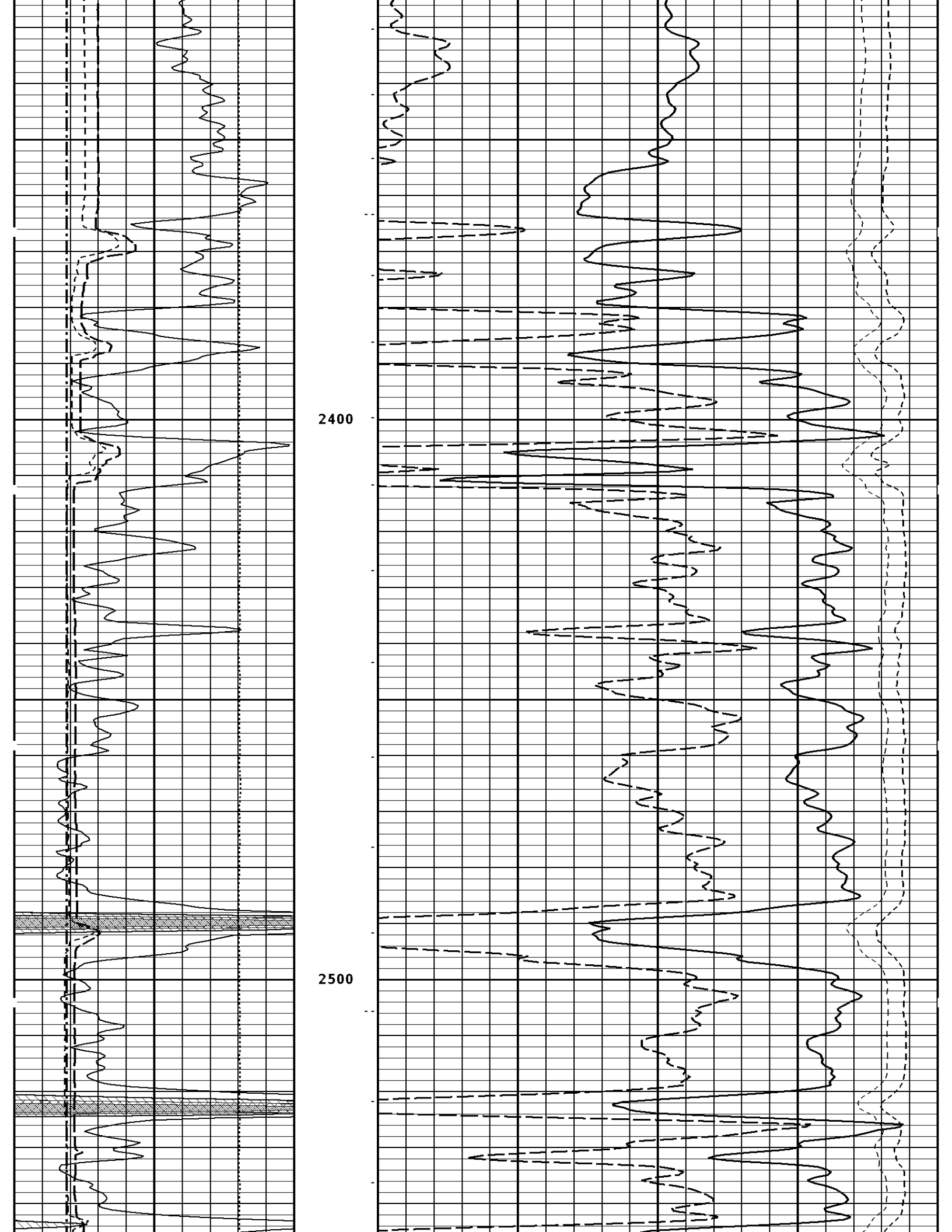
←BIT
←LWT
←SPOR
←DDCDTF
←TT3
←TT1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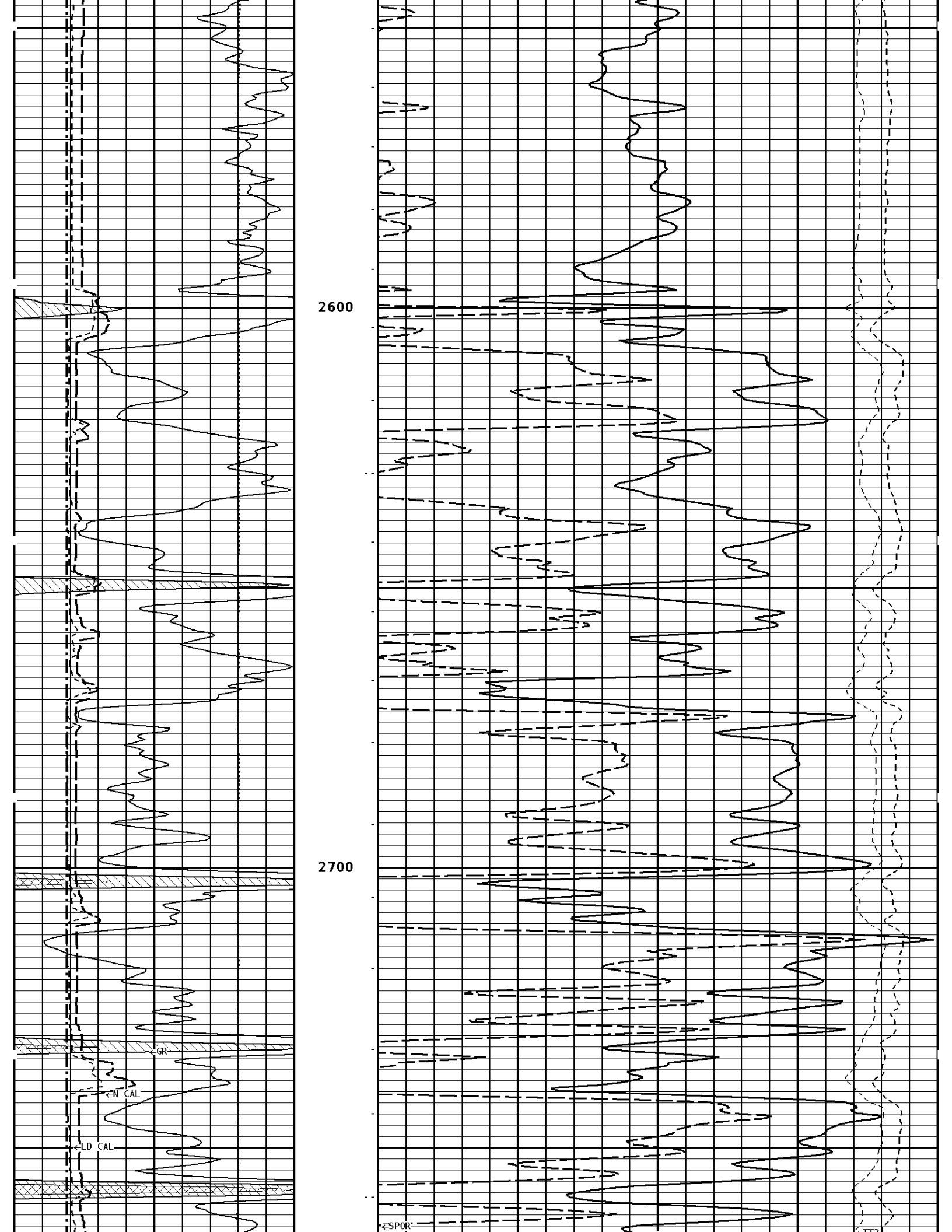
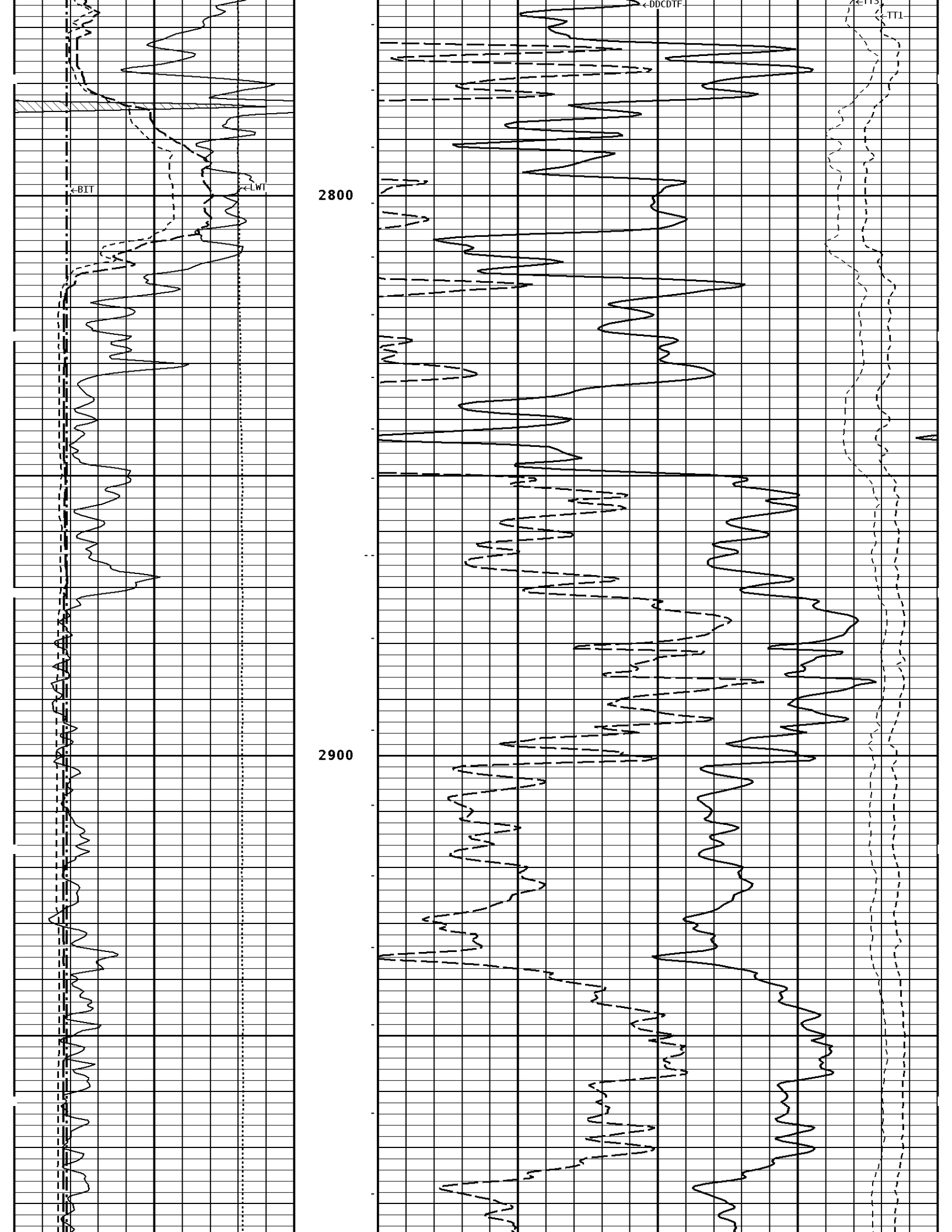
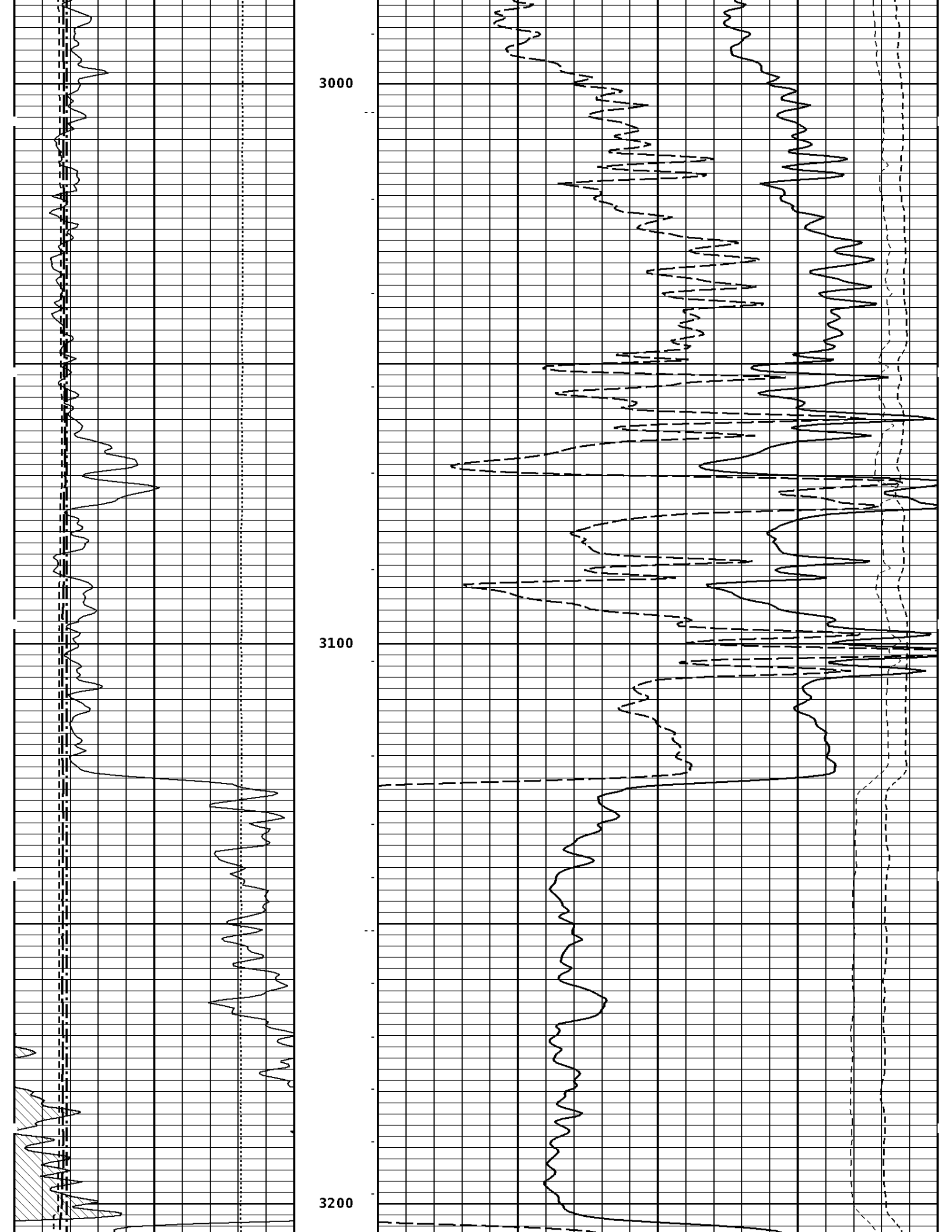
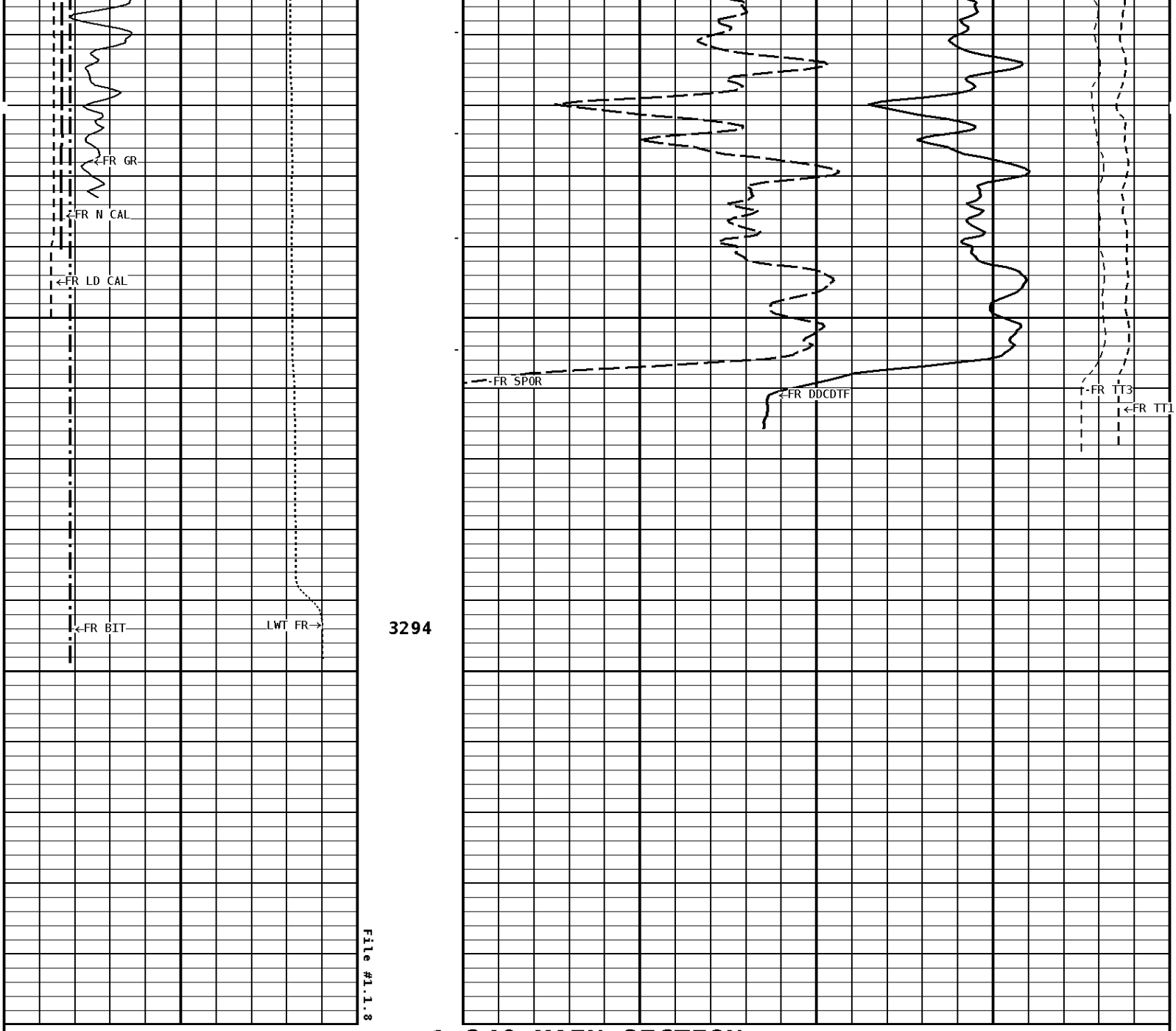
2500


2600
2700
GR
CN CAL
LD CAL
SPOR


BIT
LWT
2800
DDCDTF
TT3
TT1
2900


3000
3100
3200



1:240 MAIN SECTION

GAMMA RAY
API UNITS
150 — 300
0 — 150

NEUTRON (Y) CALIPER
INCHES (IN)
16 — 26
6 — 16

DENSITY (X) CALIPER
INCHES (IN)
16 — 26
6 — 16

BIT SIZE
INCHES (IN)

SONIC POROSITY
Percent
30 — -10

COMPENSATED SONIC TRAVEL TIME
uSEC/FT
240 — 140
140 — 40

TT1
uSEC
950 — 50

TT3
uSEC

6 16

TENSION
LBS
10000 0

950 50

Well File: CG_DRILLING_HITE_1_AUG28_QUINT **Scale:** 1:240
Segment: V1.D1.S10 REPEAT CST **Acquired:** Not Available
Reference: 0 **Processed:** Not Available

TENSION
LBS
10000 0

BIT SIZE
INCHES (IN)
6 16

TT3
uSEC
950 50

DENSITY (X) CALIPER
INCHES (IN)
16 26
6 16

TT1
uSEC
950 50

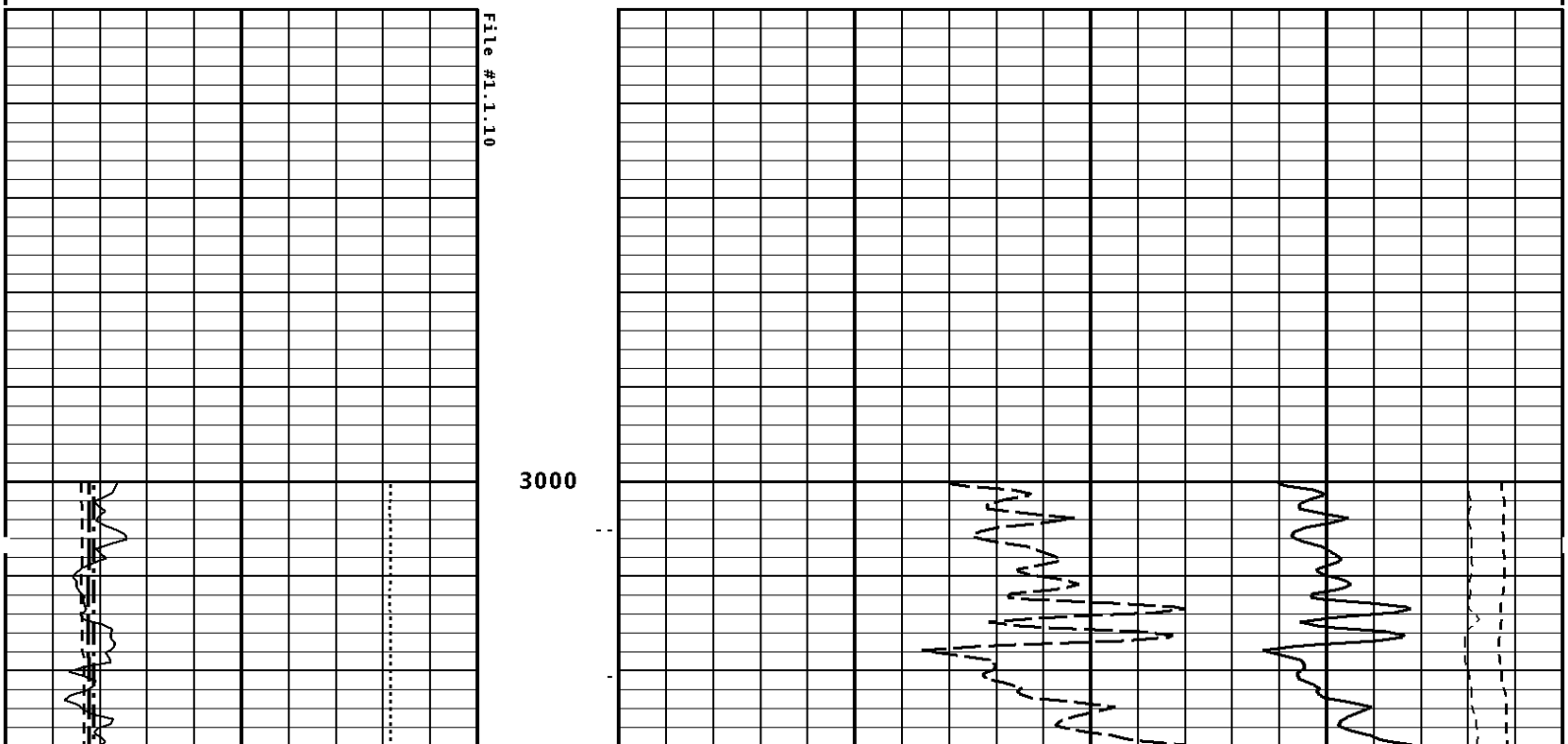
NEUTRON (Y) CALIPER
INCHES (IN)
16 26
6 16

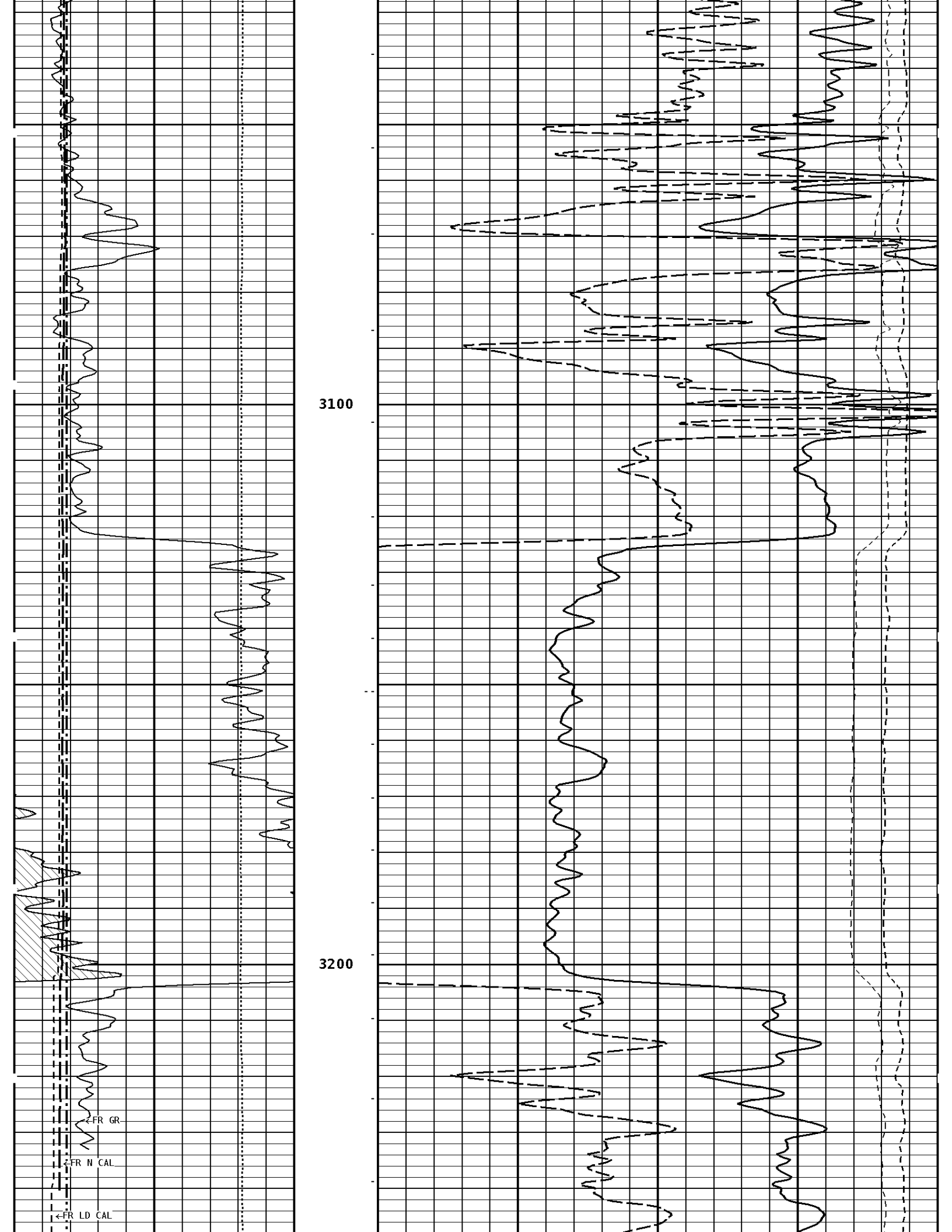
COMPENSATED SONIC TRAVEL TIME
uSEC/FT
240 140
140 40

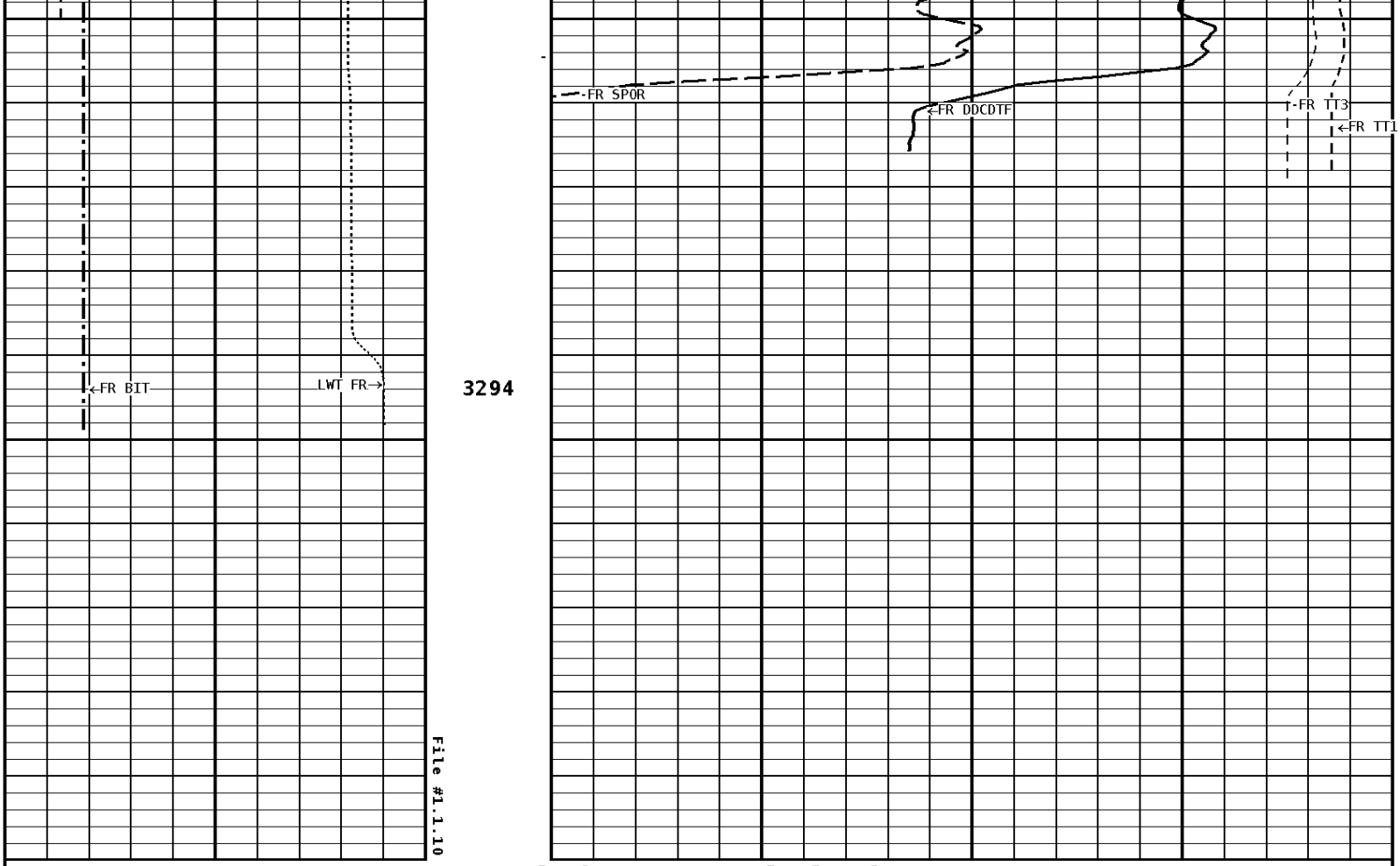
GAMMA RAY
API UNITS
150 300
0 150

SONIC POROSITY
Percent
30 -10

1:240 REPEAT SECTION




3100
3200
←FR GR
←FR N CAL
←FR LD CAL



1:240 REPEAT SECTION

GAMMA RAY
API UNITS
150 — 300
0 — 150

NEUTRON (Y) CALIPER
INCHES (IN)
16 — 26
6 — 16

DENSITY (X) CALIPER
INCHES (IN)
16 — 26
6 — 16

BIT SIZE
INCHES (IN)
6 — 16

TENSION
LBS
10000 — 0

SONIC POROSITY
Percent
30 — -10

COMPENSATED SONIC TRAVEL TIME
uSEC/FT
240 — 140
140 — 40

TT1
uSEC
950 — 50

TT3
uSEC
950 — 50

*** Calibration Summary ***

Shop Calibration
GRT-B
Performed : 12-Jul-2012 Time : 09:53

Sensor Suite : GR-GR5 ID : GRT-BC-43

	Measured Background	Measured Jig	Units	Calibrated Jig	Units
GR	46	309	CPS	175	GRAPI

Shop Calibration
CST-AD

Performed : 18-APR-2012 Time : 15:47
Sensor Suite : SON-ANA ID : CST-AB-38

Transit Time

T/R Pair	Measured	Calibrated	Units
T1R1	208.5	208.5	uS
T2R2	208.5	208.5	uS
T1R2	322.5	322.5	uS
T2R1	322.5	322.5	uS

Amplitude

T/R Pair	Measured	Calibrated	Units
T1R1	90.00	90.00	mV
T2R2	90.00	90.00	mV
T1R2	78.00	78.00	mV
T2R1	78.00	78.00	mV