Tucker ENERGY SERVICES

MICRO LOG

Company VAL ENERGY, INC
Well HAMMER D V3-4
Field WILSON
County COWLEY
State KANSAS
Country USA
API No. 15-035-24680

File No : TUL-61356
Company : VAL ENERGY, INC
Well : HAMMER D V3-4
Field : WILSON
County : COWLEY
State : KANSAS
Country : USA
API No : 15-035-24680

Location :
990' FSL & 660' FWL
N/2 SW SW

LSD : **Sect :** **Twp :** **Rge :**

Permanent Datum:	GL	**Elevations:**		**Services:**	
Drilling Measured From:	KB	**KB** 1346.00	Ft	CNT	PIT
Log Measured From:	KB	**DF** 1345.00	Ft	LDT	
Above Permanent Datum:	9.00 Ft	**GL** 1337.00	Ft	MLT	

Date	11-20-2017			
Run Number	0			
Depth--Driller	3585.0 Ft			
Depth--Logger	3584.0 Ft			
First Reading	3560.0 Ft			
Last Reading	304.0 Ft			
Casing--Driller	304.0 Ft			
Casing--Logger	304.0 Ft			
Bit Size	7.875 In			
Casing Size	8.625 In			
Hole Fluid Type	OBM			
Density	9.5			
Fluid Loss	6.1			
PH/Viscosity	9.5	49.0		
Sample Source	MEASUED			
RM@Measured Temp.	2.000 @ 65 F			
RMF@Measured Temp	1.700 @ 65 F			
RMC@Measured Temp.	2.300 @ 65 F			
Source RMF/RMC	CALCULATED	CALCULATED		
RM@BHT	1.180 @ 115 F			
Time Circulation Stopped	11-20-2017 11:00 am			
Max Recorded Temp.	115 F			
Equipment/Base	TRK-126	TULSA		
Recorded By	B.BAILEY			
Witnessed By	JOE BAKER			

Casing Strings

Size (In)	Weight (Lbs)	Bottom (Ft)	Top (Ft)
8.625	32.00	304.00	0.00

Bitsize Intervals

Size (In)	Bottom (Ft)
7.875	3585.00

Run Number	0
Date	11-20-2017
Date/Time On Bottom	11-20-2017 10:30 am
Depth to Fluid	0.0 Ft
Salinity	0.000
RMF@BHT	1.000 @ 115 F
RMC@BHT	1.380 @ 115 F

Run Number 0

Comments

ALL PRESENTATIONS AS PER CUSTOMER REQUEST.

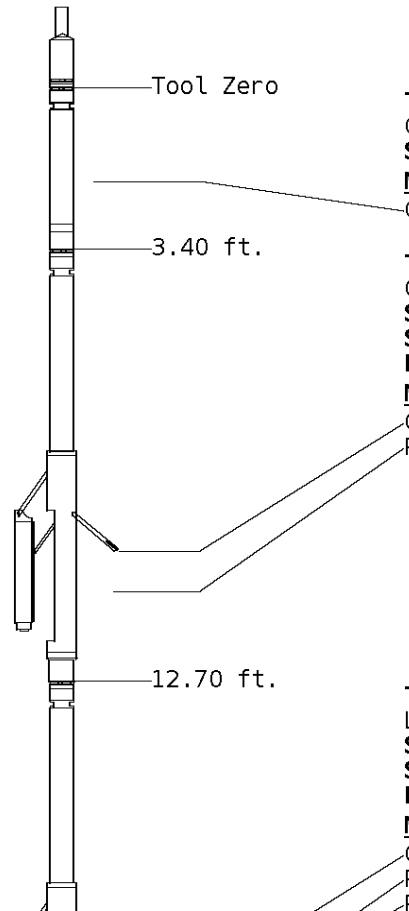
GRT, CNT, LDT, MLT, AND PIT RUN IN COMBINATION.
2.71 G/CC DENSITY MATRIX USED TO CALCULATE POROSITY.
5.50" PRODUCTION CASING USED TO CALCULATE ANNULAR HOLE VOLUME.
CALIPERS ORIENTED ON X-Y AXIS.
PHIN IS CALIPER CORRECTED

GRT: GRP
CNT: PHIN, PHINDOL, CLCNIN
LDT: PORL, PORLDOL, LCORN, LDENN, PECLN, CLLDIN
MLT: NOR_RF, INV_RF, MSCLPIN.
PIT: ILD, ILM, SFLAEC, SPU, CIRD

OPERATORS:
R.FRANKLIN
B.BROWN

Tool String Schematic

Total Tool Length - 53.15 **ft.**
Maximum Outside diameter - 6.00 **in.**
Net Weight in Air - 943.00 **lbs.**



Tool: GRT-B **Length:** 3.40 **ft.** **O.D.** 3.60 **in.**
Gamma Ray Controller
Sonde ID :GRT-BB-009

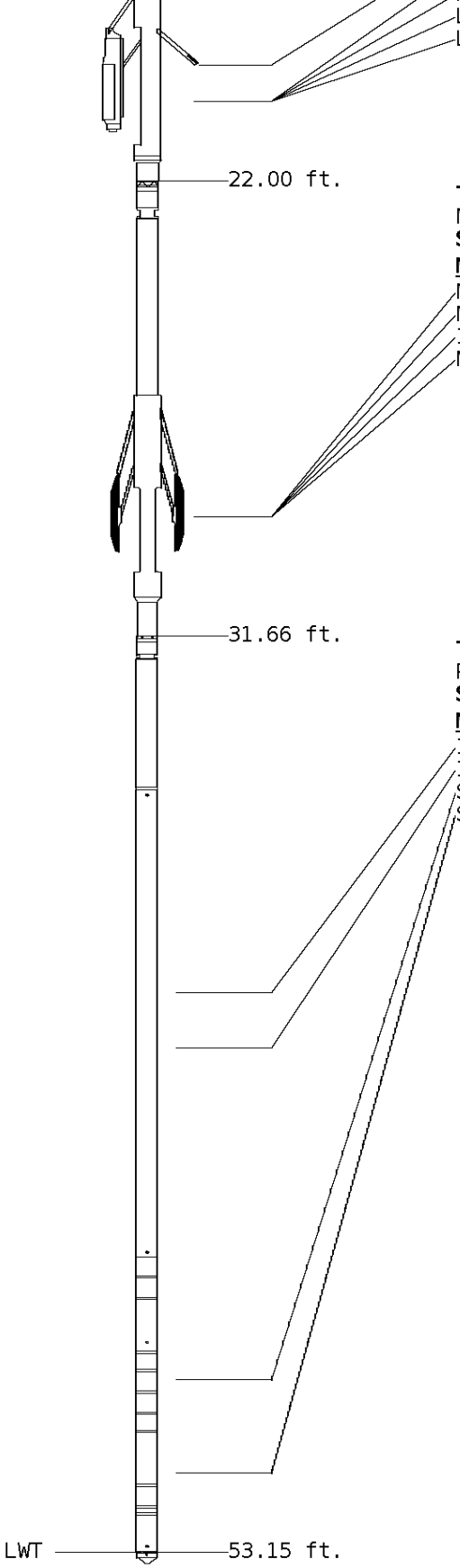
Measure Point	Tool Offset	Stack Offset	Bottom Offset
GRP	2.00	2.00	51.15

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-110

Measure Point	Tool Offset	Stack Offset	Bottom Offset
CLCN	6.00	9.40	43.75
PHIN	6.80	10.20	42.95

Tool: LDT-DA **Length:** 9.30 **ft.** **O.D.** 4.80 **in.**
Litho Density D Pad on NDT-A
Sonde ID :PDT-GA-426
Source ID :2991GW
Pad ID :LDP-DA-051

Measure Point	Tool Offset	Stack Offset	Bottom Offset
CLLD	6.00	18.70	34.45
PEL	7.00	19.70	33.45
PES	7.40	20.10	33.05



LDEN	7.20	19.90	33.25
LCOR	7.20	19.90	33.25

Tool: MST-DA **Length:** 9.66 **ft.** **O.D.** 6.00 **in.**
Micro Spherically Focused (IC,D)
Sonde ID :MST-DA-025

Measure Point	Tool Offset	Stack Offset	Bottom Offset
MSFL	7.60	29.60	23.55
MSCLP	7.60	29.60	23.55
INV	7.60	29.60	23.55
NOR	7.60	29.60	23.55

Tool: PIT-CA **Length:** 21.49 **ft.** **O.D.** 3.62 **in.**
Phased Dual Induction w/ RM & D
Sonde ID :PIT-AC-043

Measure Point	Tool Offset	Stack Offset	Bottom Offset
ILD	8.92	40.58	12.56
ILM	10.10	41.76	11.39
SFLU	17.49	49.15	4.00
SP	20.60	52.26	0.88

Well File: val_hammer_dv_3-4_nov-20_mst **Scale:** 1:240 **Format:** MST-240
Segment: V1.D1.S3 MAIN **Acquired:** 2017-11/20 15:20 3.4.0-13756
Reference: 0 **Processed:** 2017-11/20 16:25 3.4.0-13756

BIT SIZE
INCHES (IN)

6 **16**

CALIPER MICRO
INCHES (IN)

16 **26**

16 26
6 16

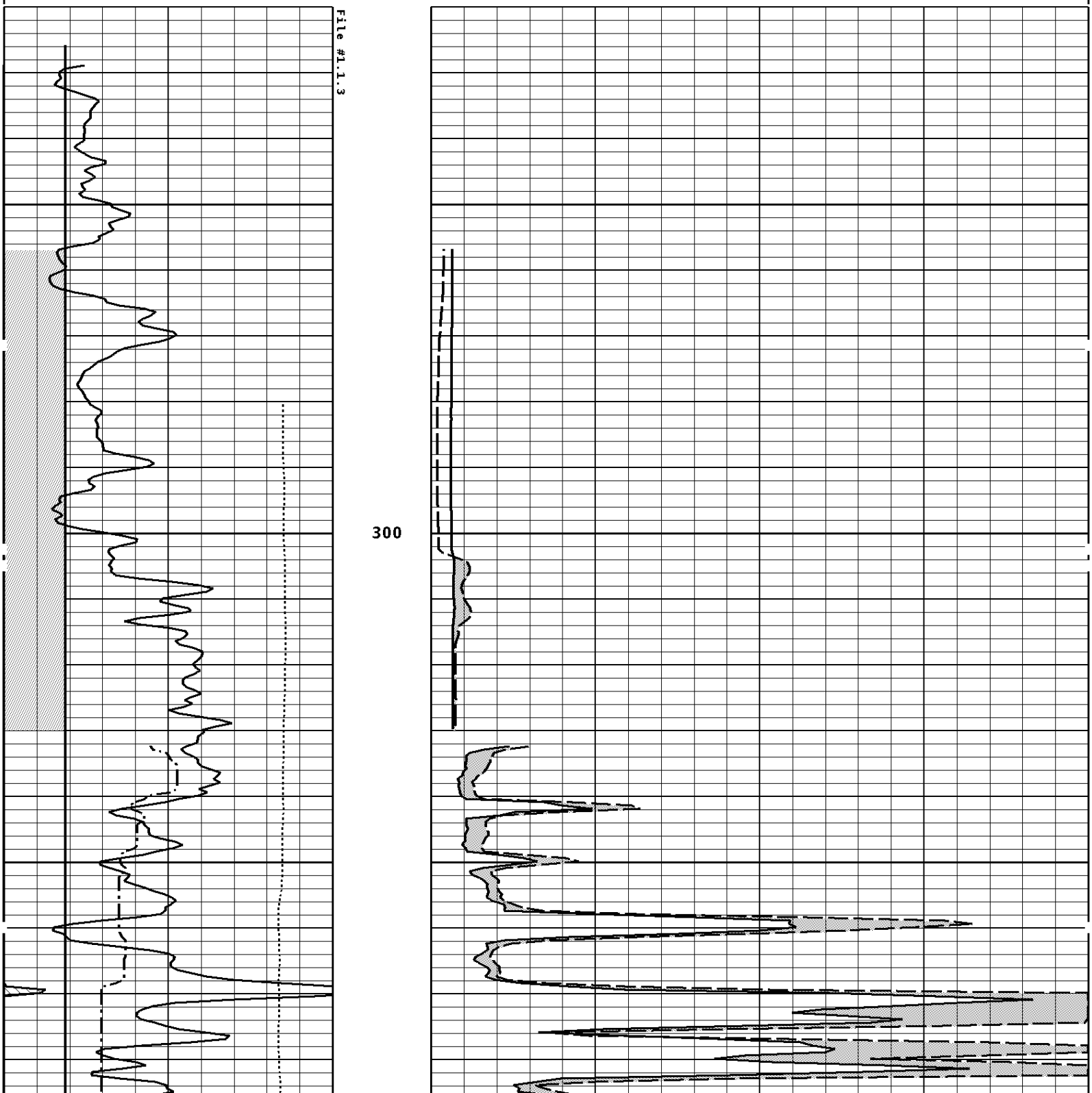
TENSION
LBS
10000 0

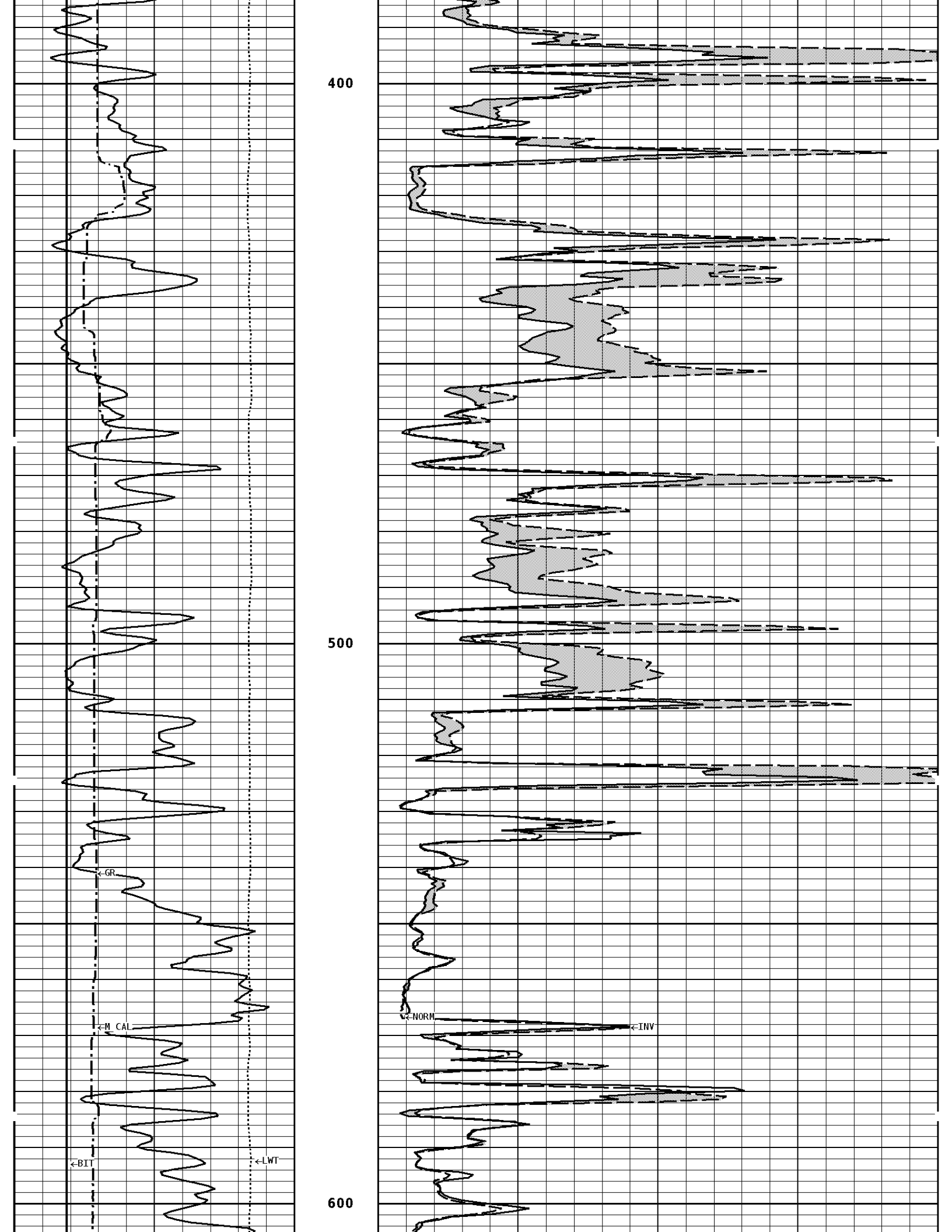
GAMMA RAY
API UNITS
150 300
0 150

INVERSE
OHMM
0 40

NORMAL
OHMM
0 40

1:240 MAIN SECTION

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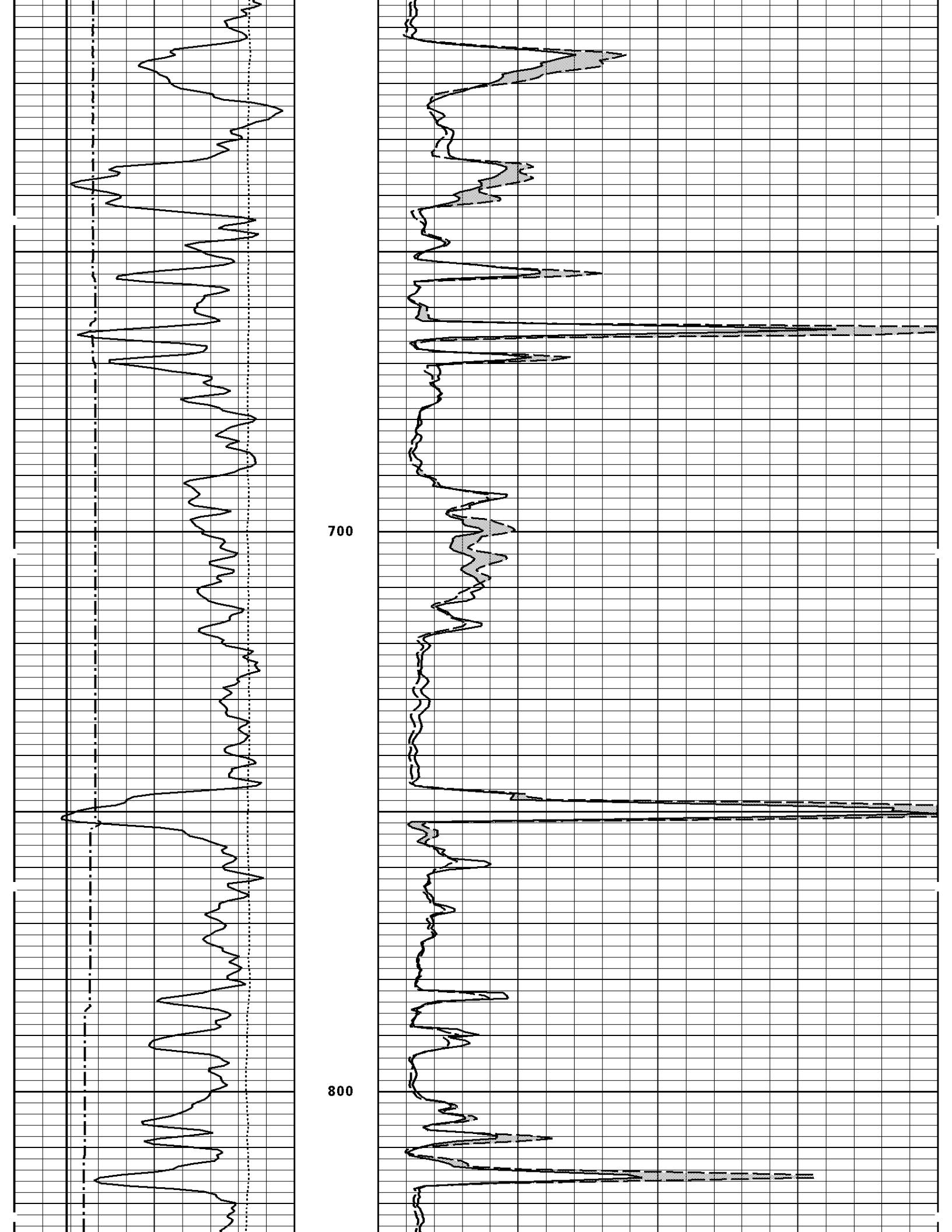
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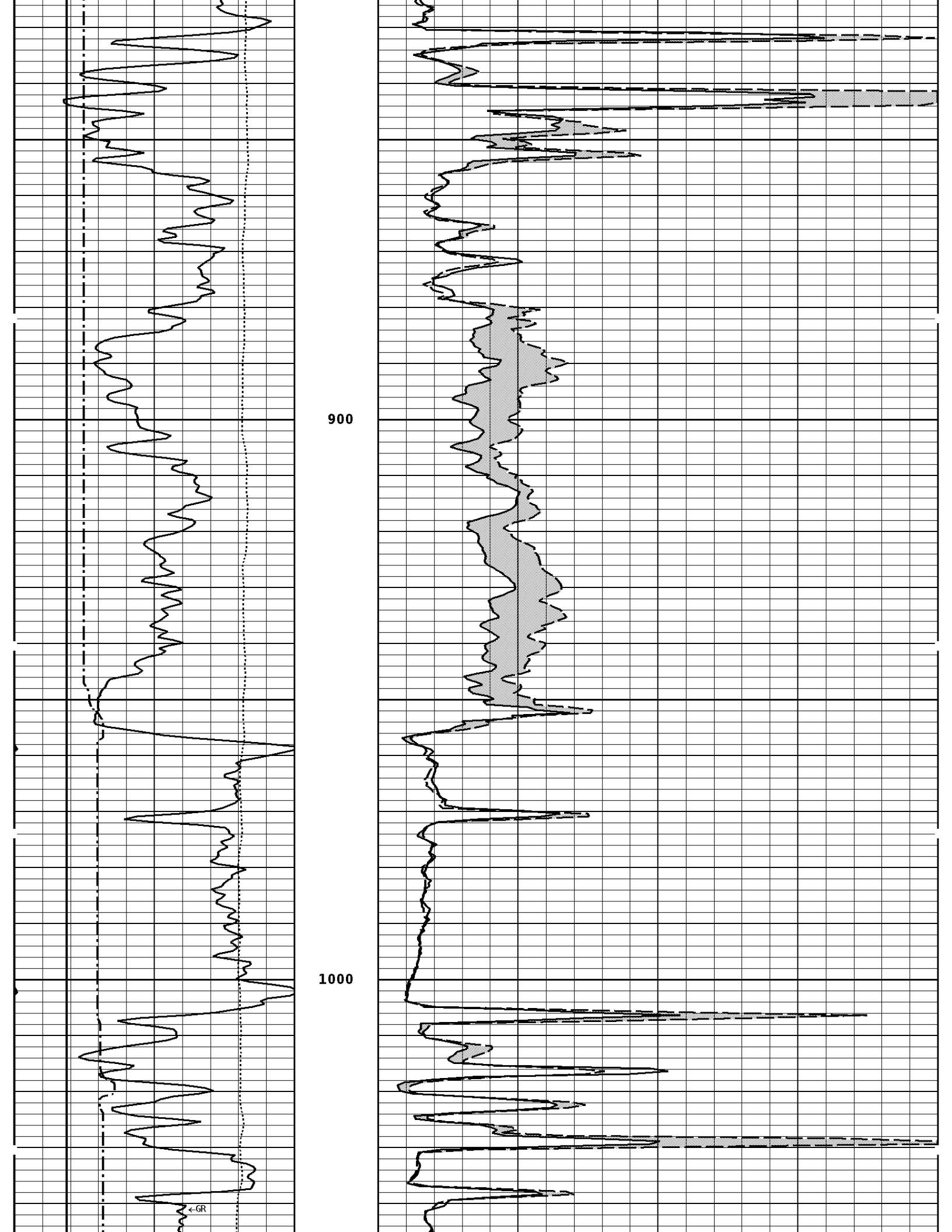
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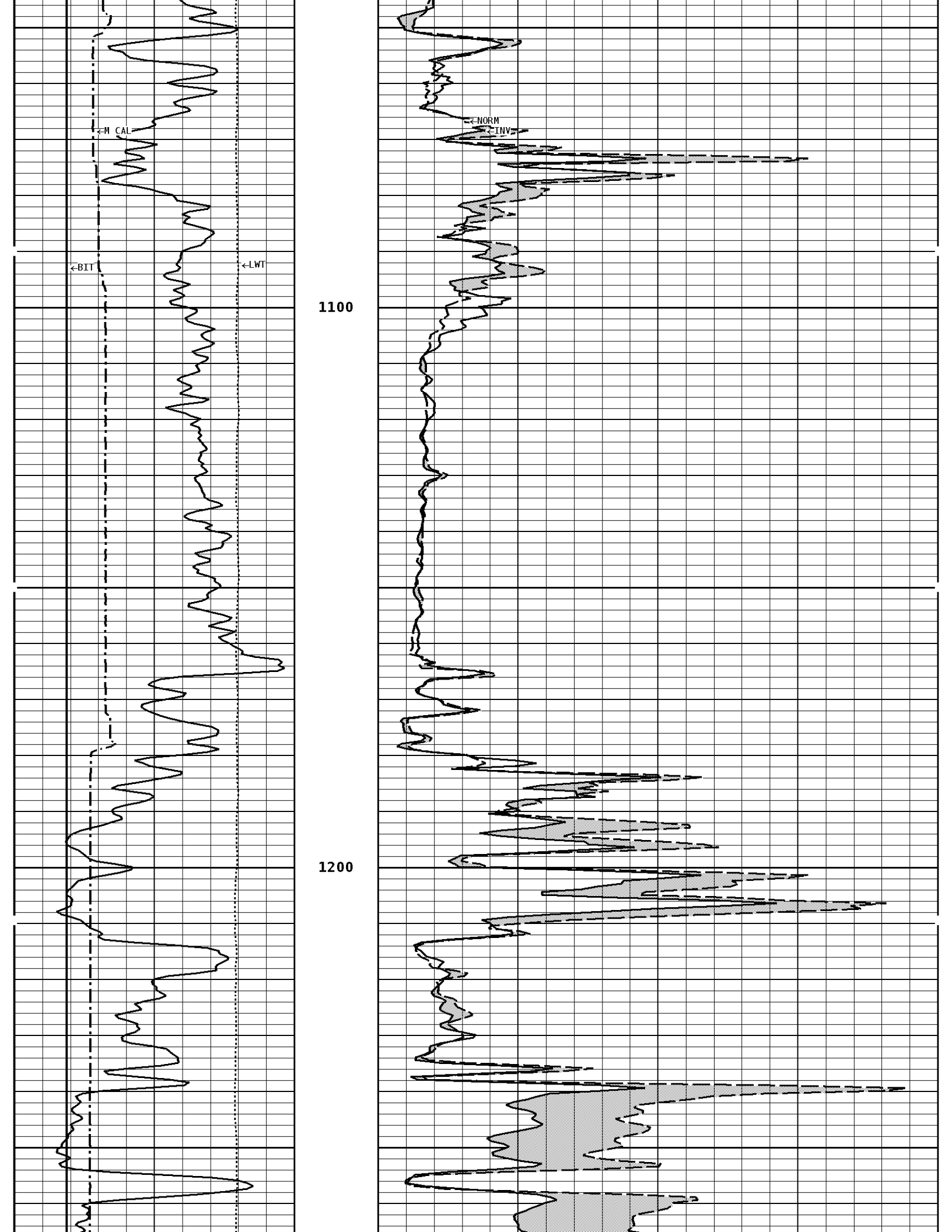
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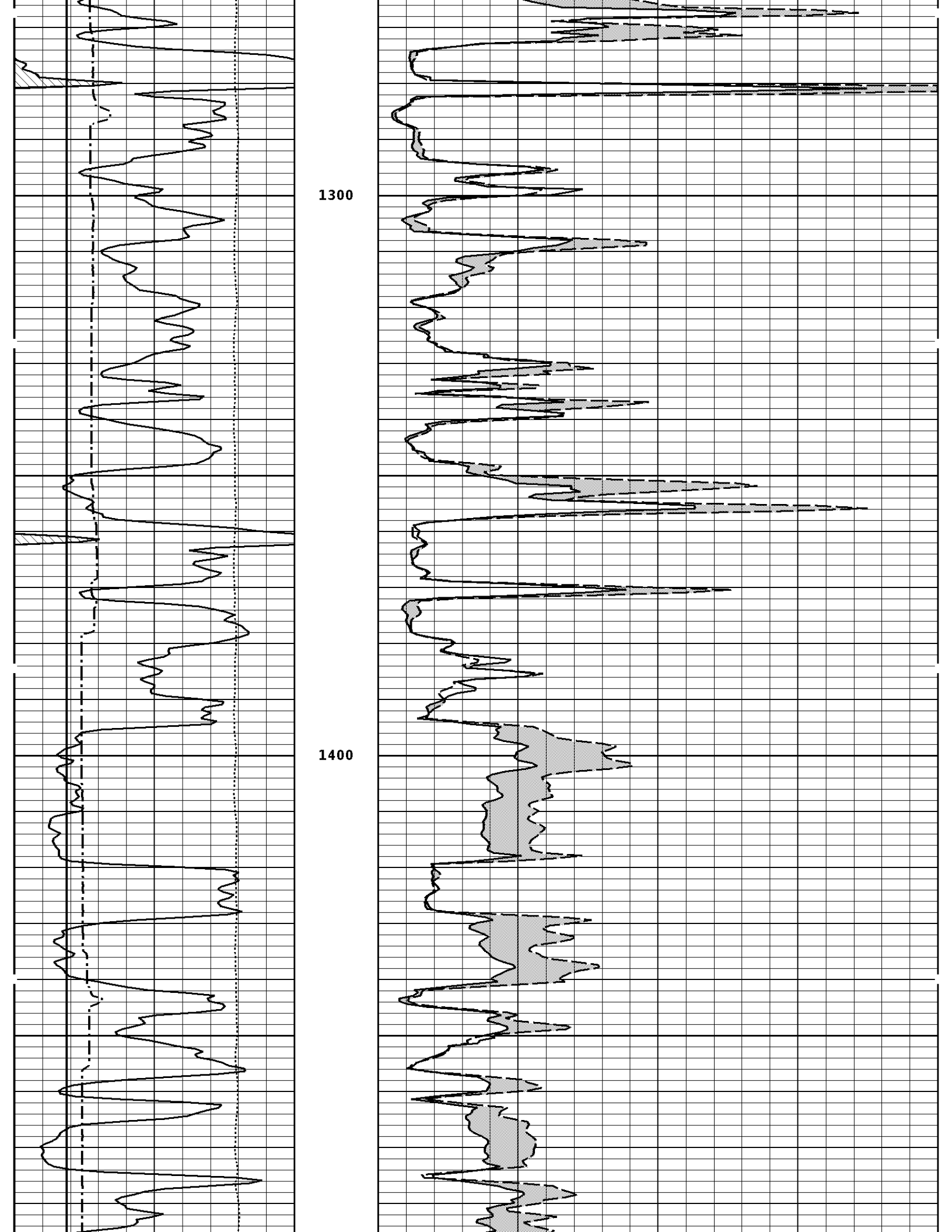
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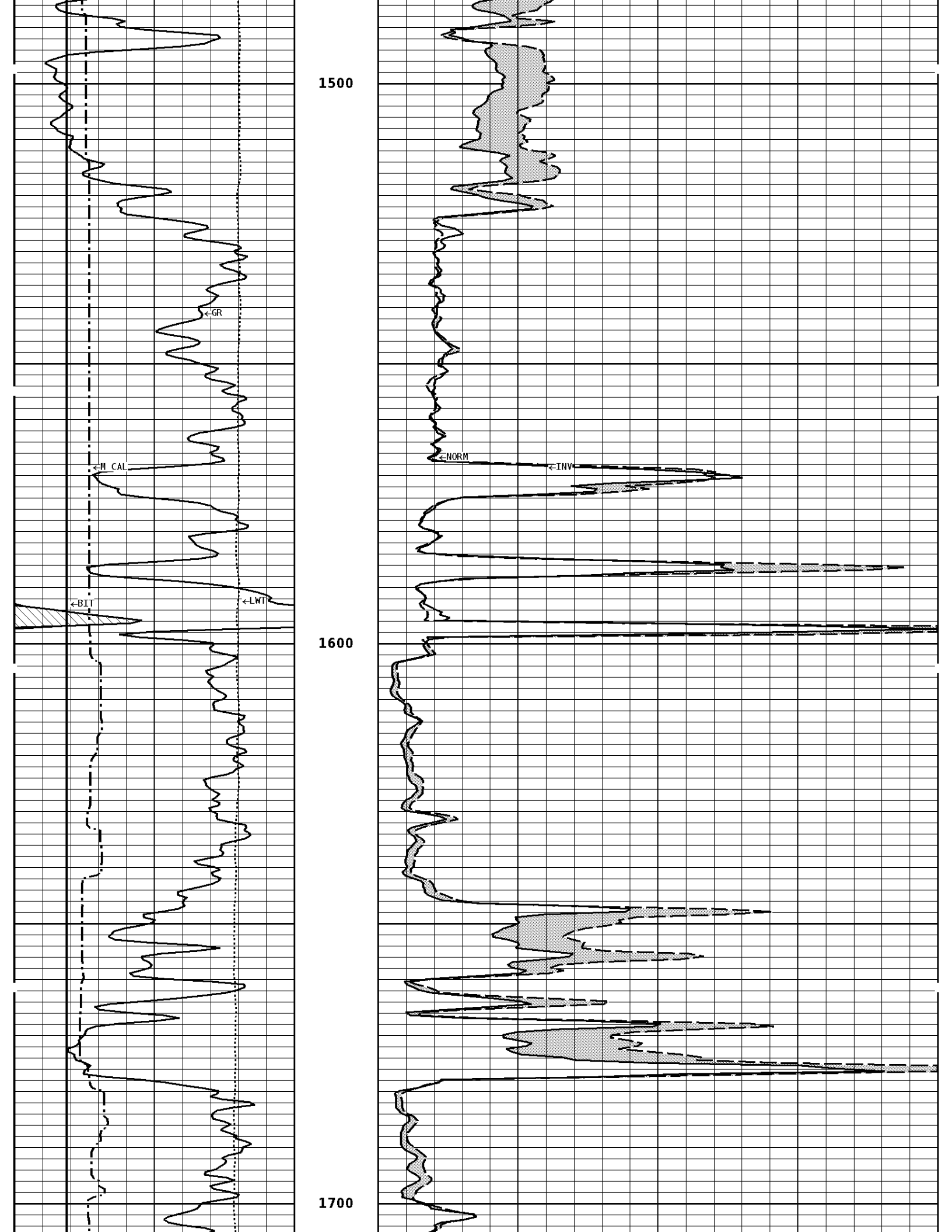
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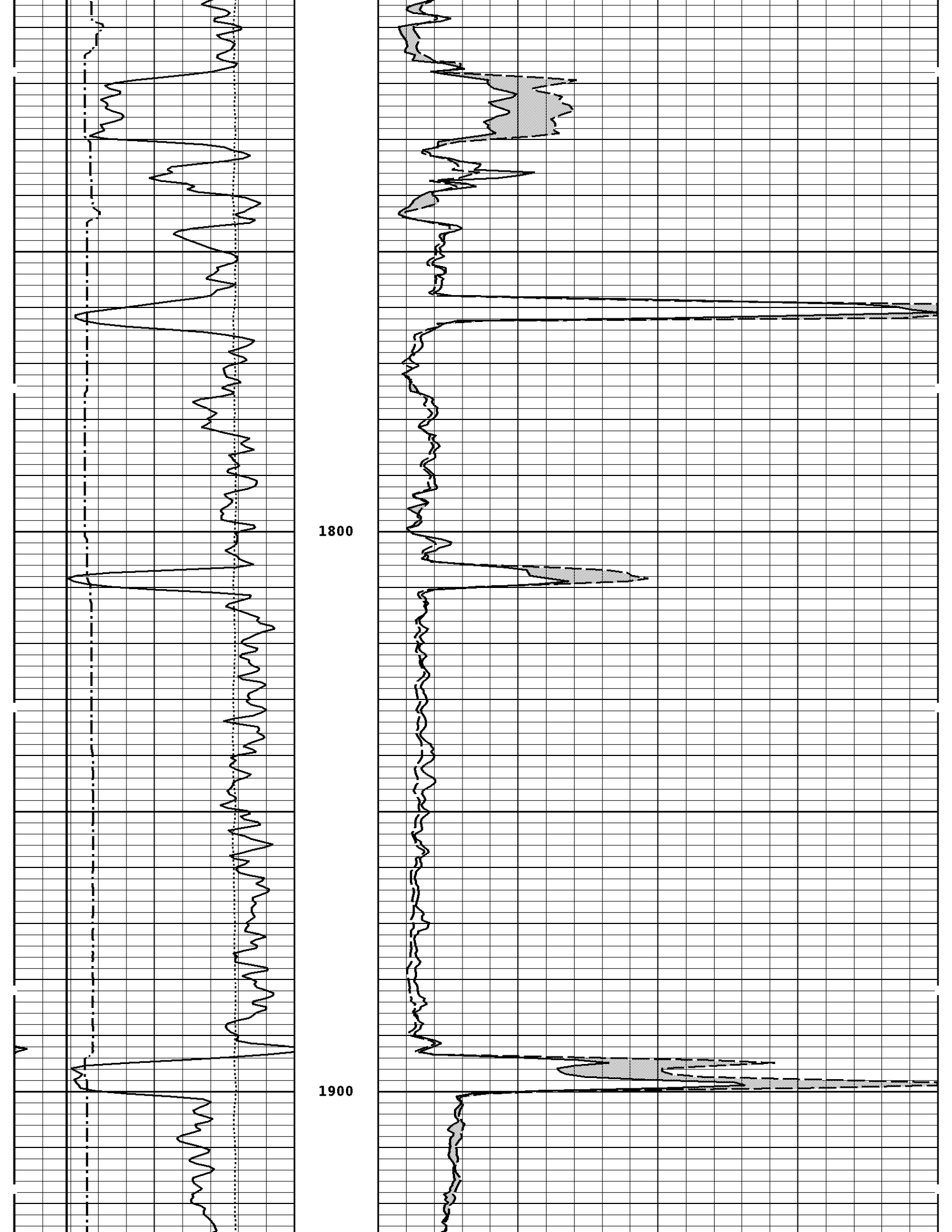
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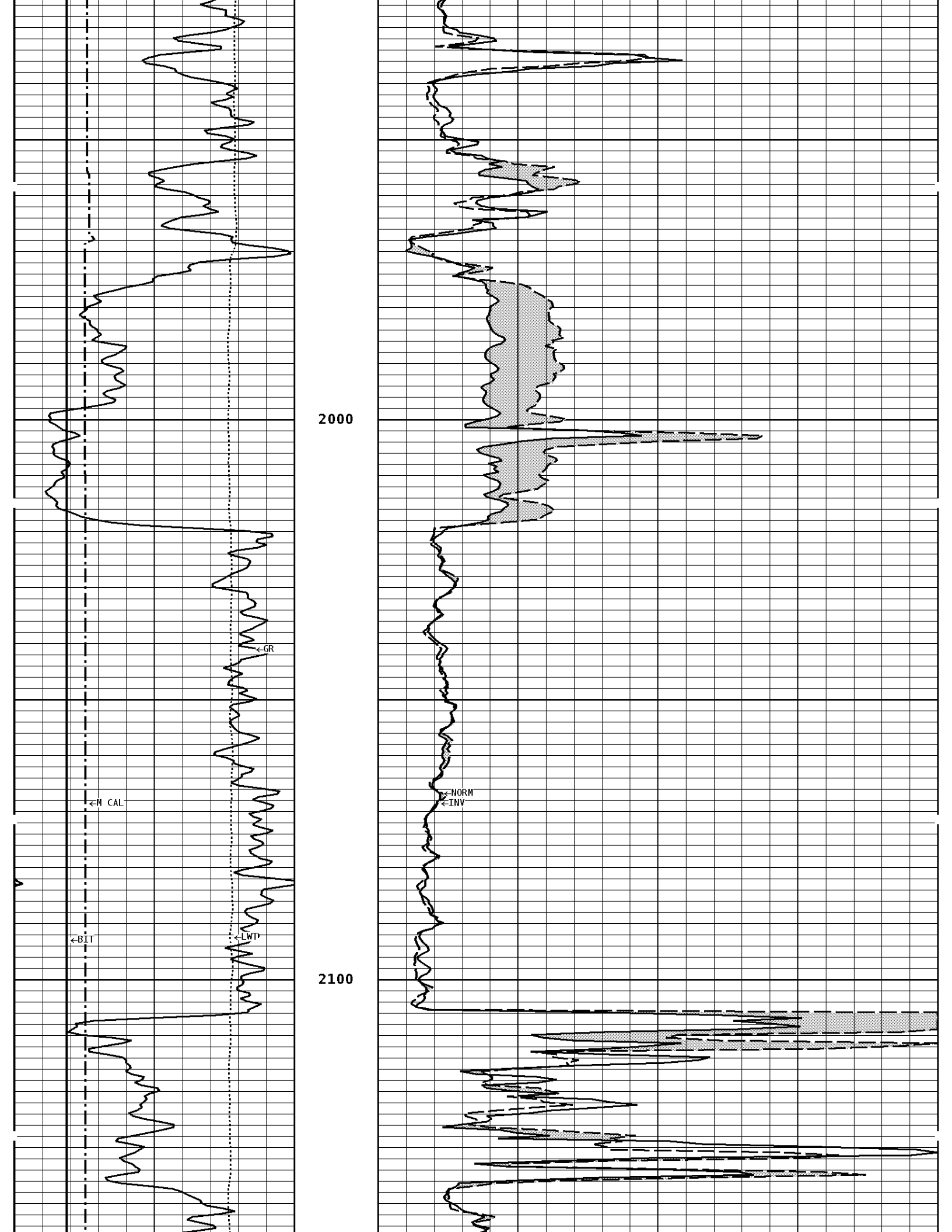
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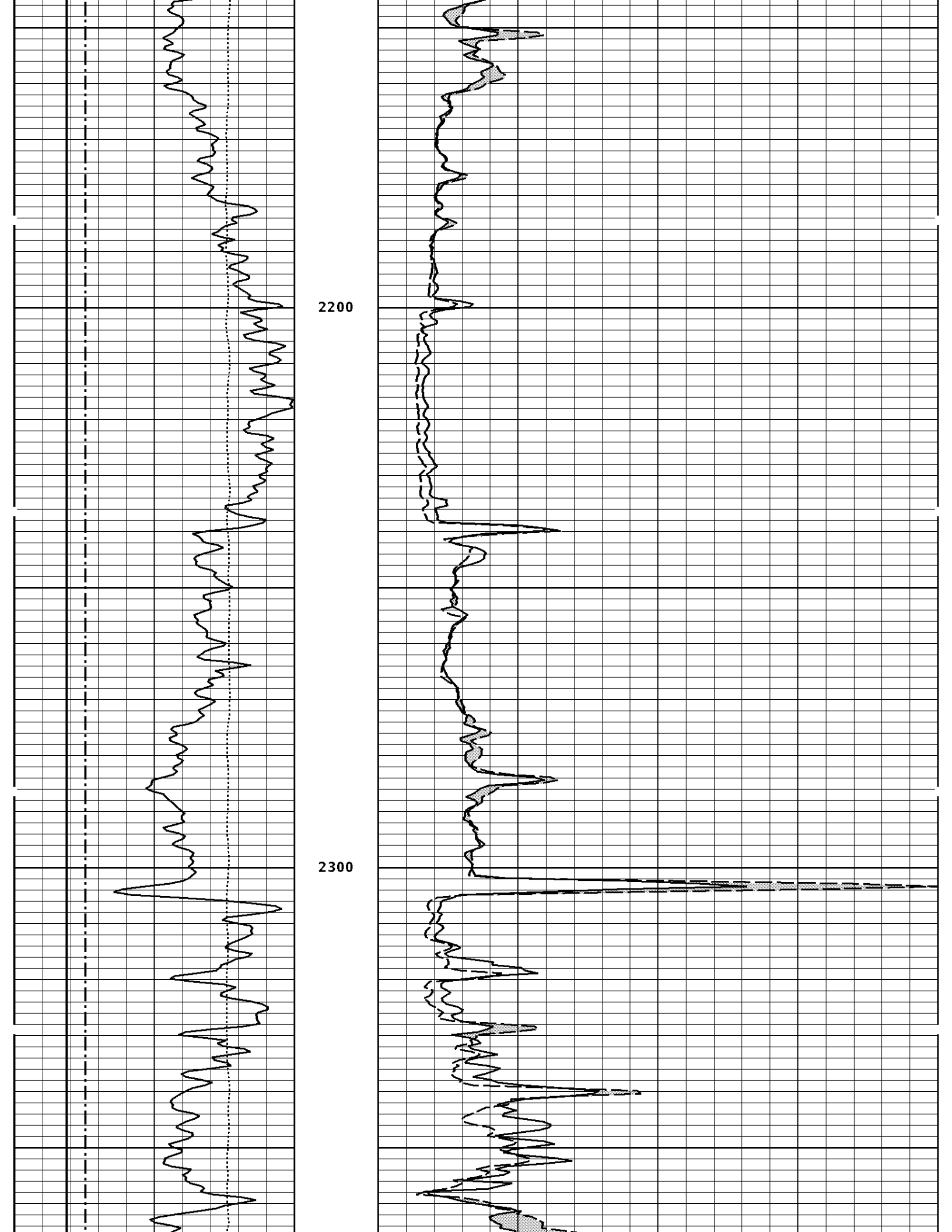
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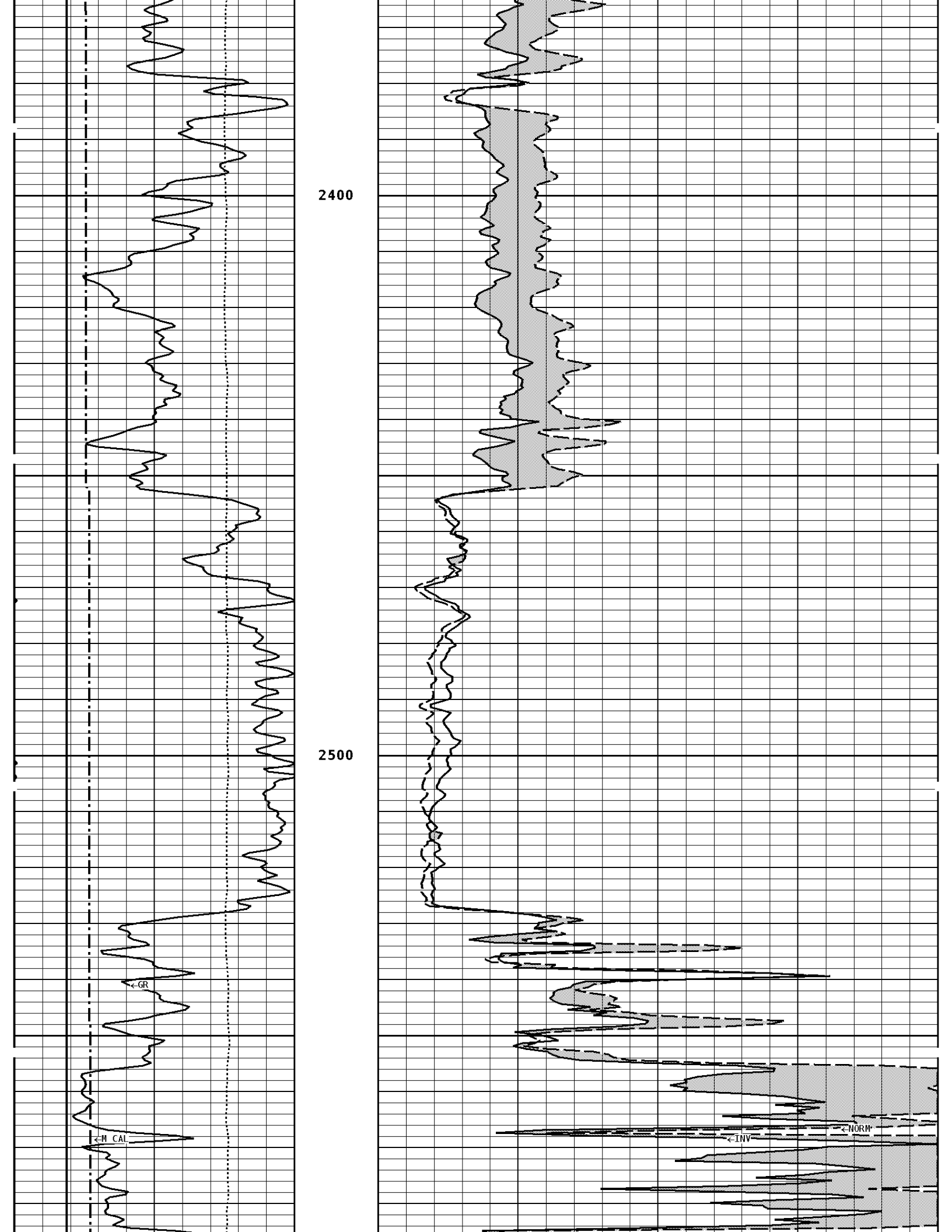
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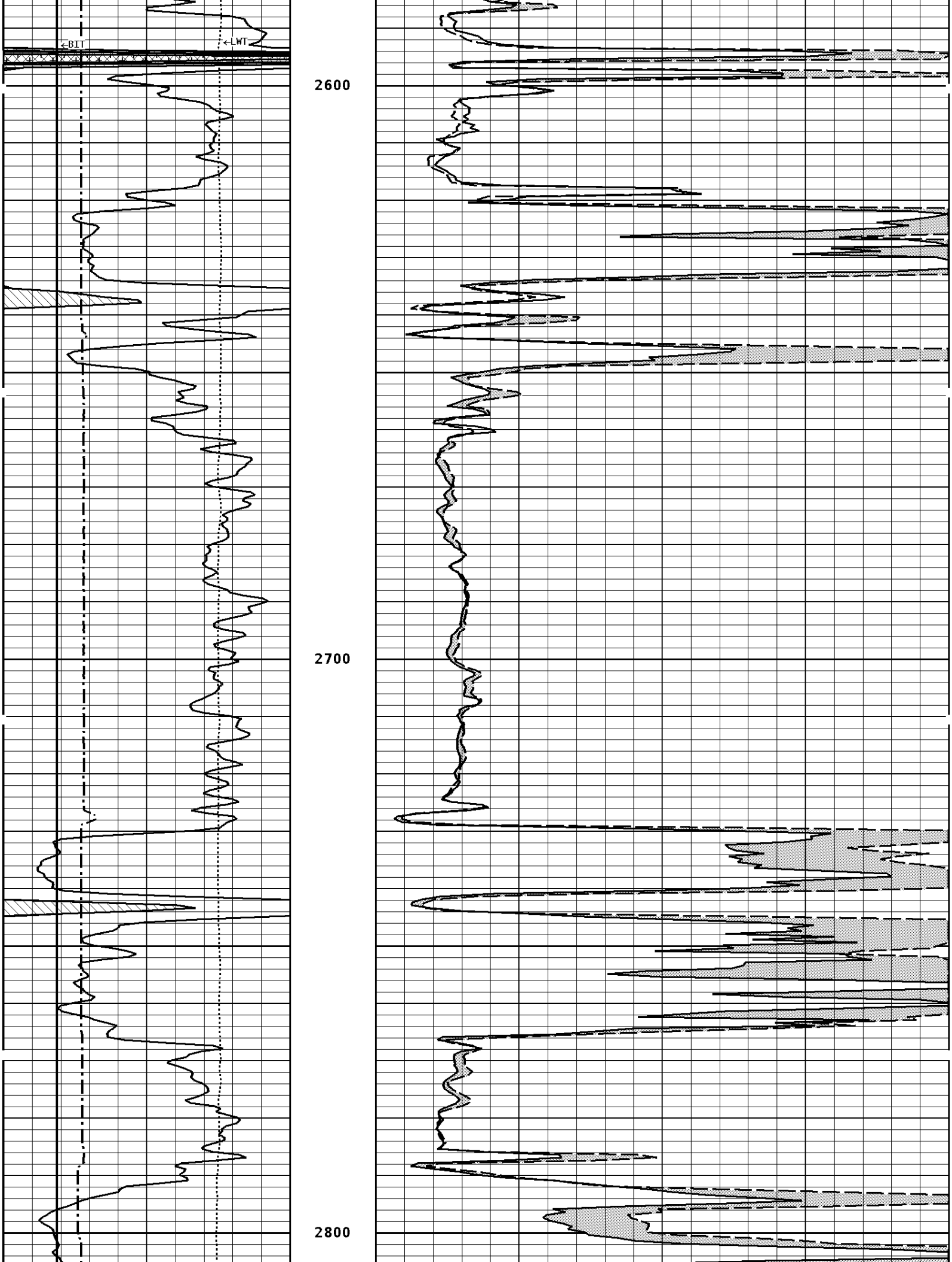
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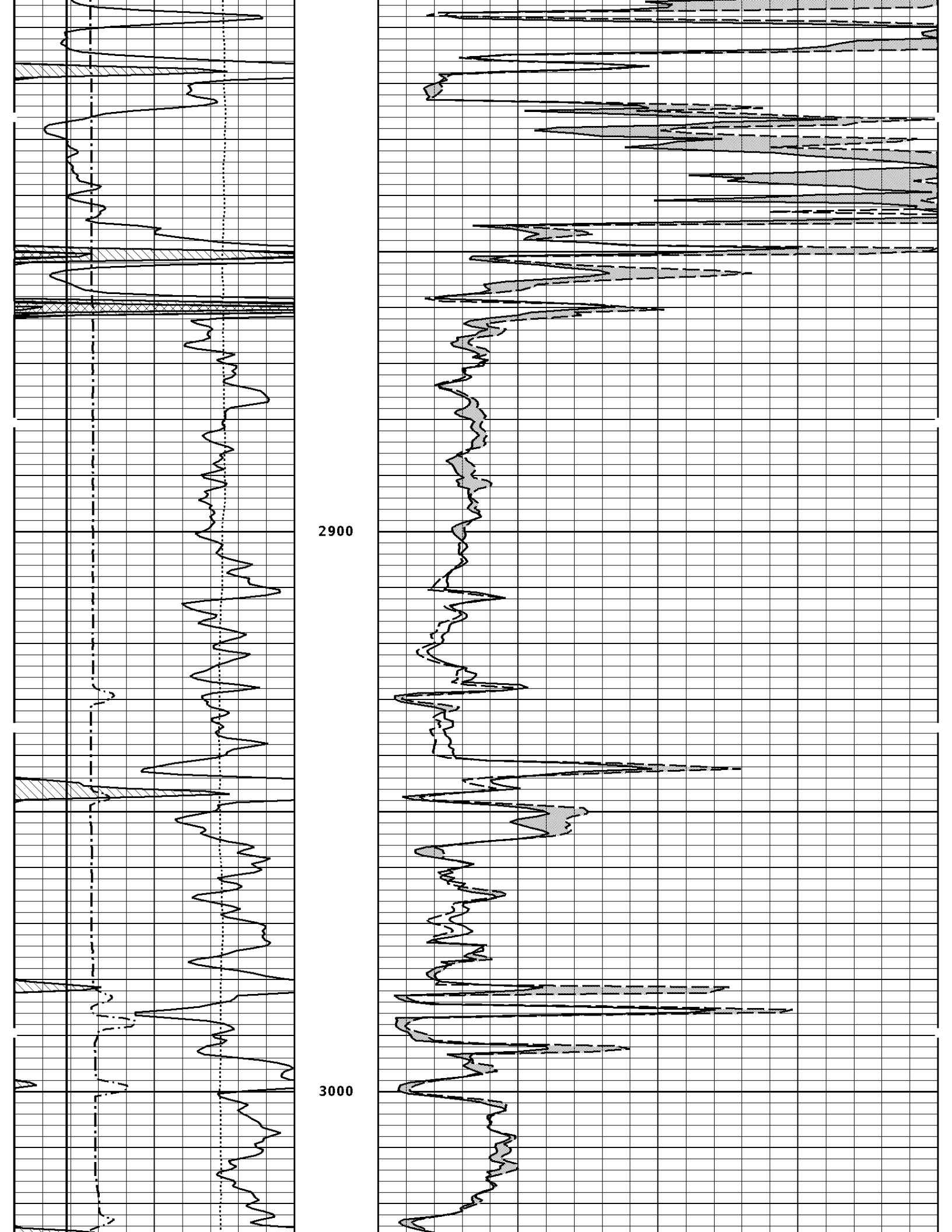
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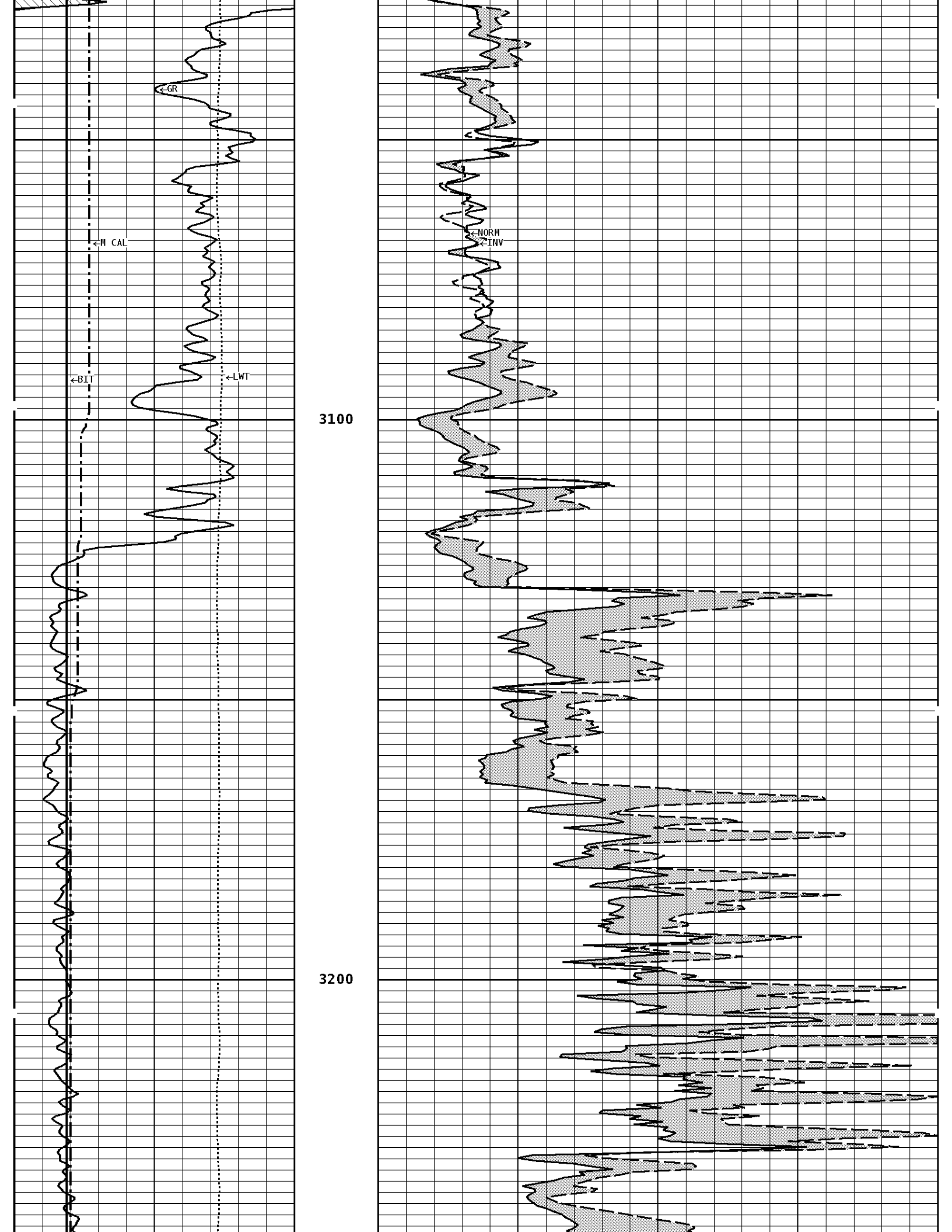
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M CAL
BIT
LWT
NORM
INV
3100
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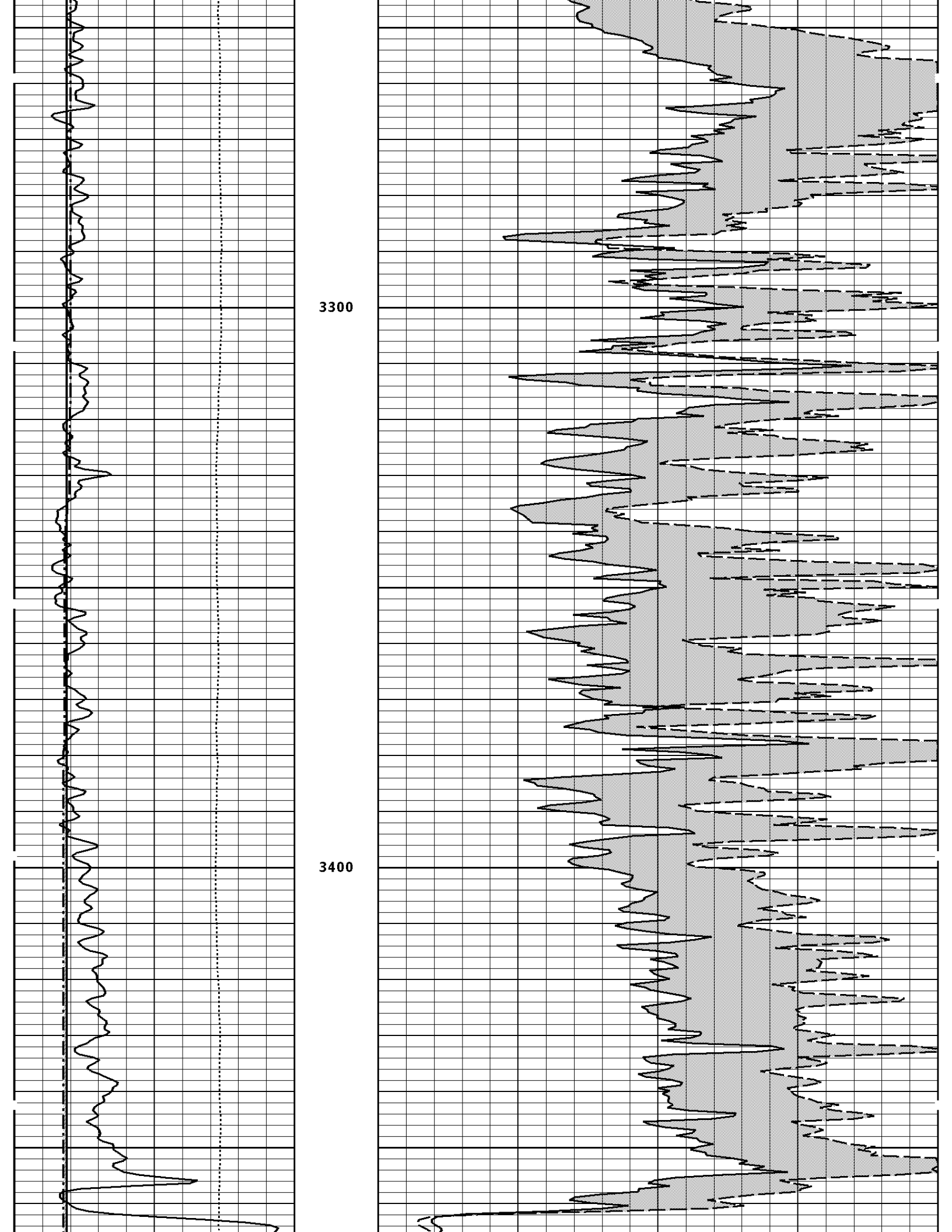
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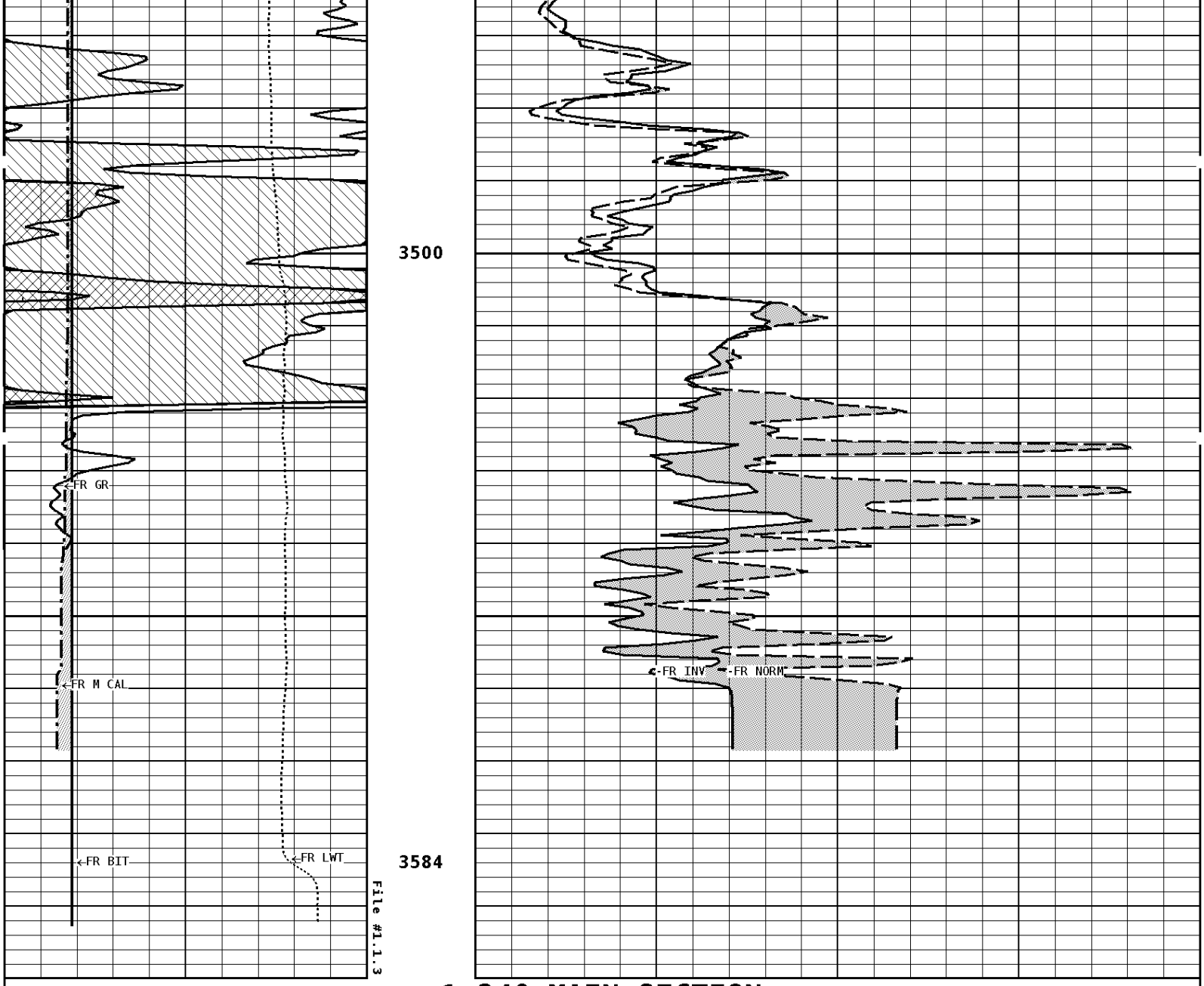


1:240 MAIN SECTION

GAMMA RAY
API UNITS
150 — 300
0 — 150

TENSION
LBS
10000 — 0

CALIPER MICRO
INCHES (IN)
16 — 26
6 — 16

BIT SIZE
INCHES (IN)
6 — 16

NORMAL
OHMM
0 — 40

INVERSE
OHMM
0 — 40

*** Borehole Zone Factors ***

Zone 1	99999.0	to	0.0	Feet

Drill Bit Size	7.875	in
MSTNG Normal Correction	-0.50	ohmm
MSTNG Inverse Correction	0.00	ohmm

Well File: val_hammer_dv_3-4_nov-20_mst
Segment: V1.D1.S4 CRE REPEAT
Reference: 0

Scale: 1:240 **Format:** MST-240
Acquired: Not Available
Processed: 2017-11/20 16:26 3.4.0-13756

BIT SIZE
INCHES (IN)
6 — 16

CALIPER MICRO
INCHES (IN)
16 — 26
6 — 16

TENSION
LBS
10000 — 0

GAMMA RAY
API UNITS
150 — 300
0 — 150

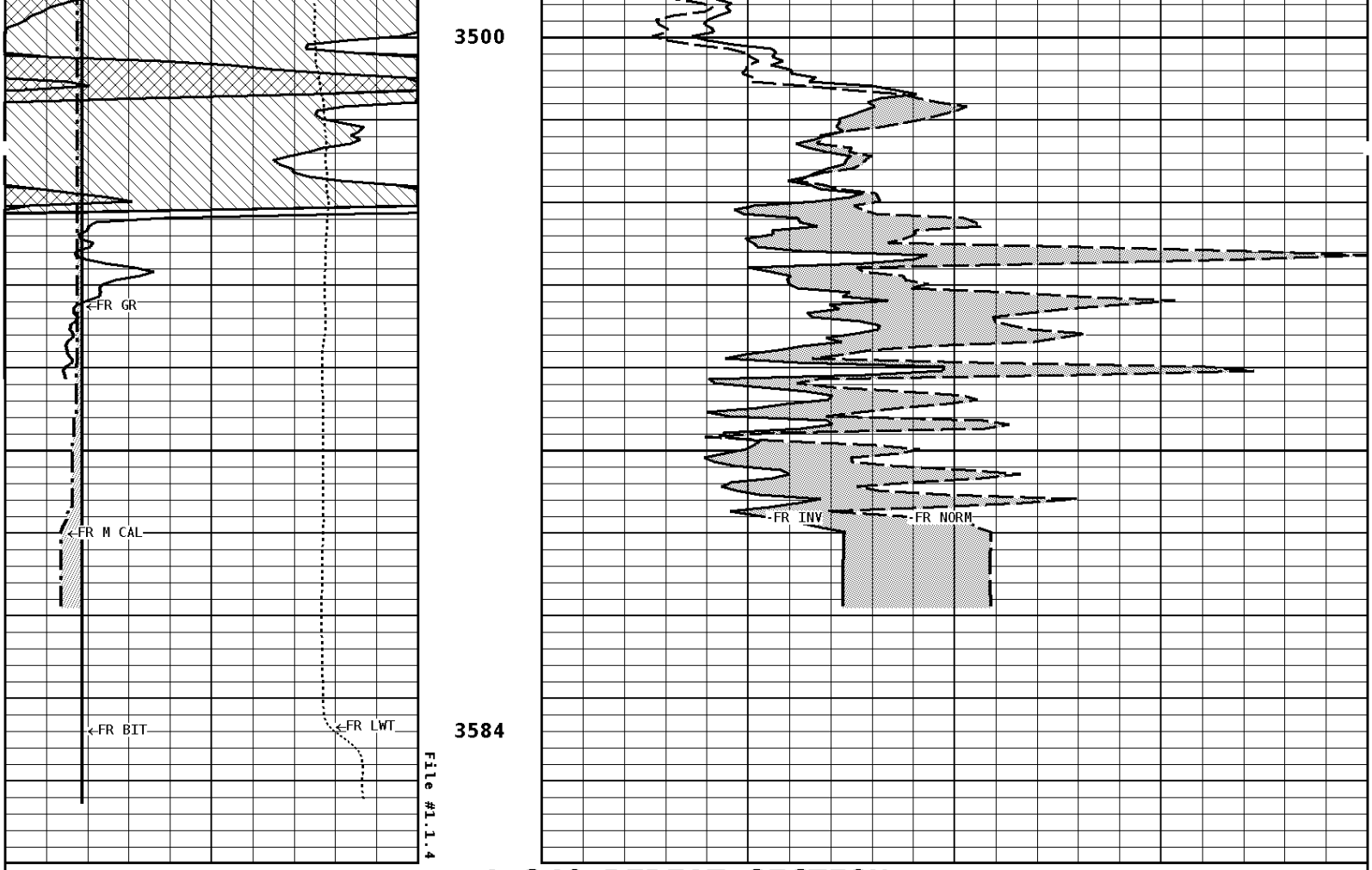
INVERSE
OHMM
0 — 40

NORMAL
OHMM
0 — 40

1:240 REPEAT SECTION

File #1.1.4

3400



1:240 REPEAT SECTION

GAMMA RAY
API UNITS
150 300
0 150

TENSION
LBS
10000 0

CALIPER MICRO
INCHES (IN)
16 26
6 16

BIT SIZE
INCHES (IN)
6 16

NORMAL
OHMM
0 40

INVERSE
OHMM
0 40

* Borehole Zone Factors *

Zone 1 99999.0 to 0.0 Feet

Drill Bit Size	7.875	in
MSTNG Normal Correction	-0.50	ohmm
MSTNG Inverse Correction	0.00	ohmm

* Calibration Summary *

Shop Calibration
GRI-B

GRT-B

Performed : 02-OCT-2017 Time : 10:27
Sensor Suite : GR-GR5 ID : GRT-BB-009

	Measured Background	Measured Jig	Units	Calibrated Jig	Units
GR	46	362	CPS	175	GRAPI

Shop Calibration
MST-DA

Performed : 02-MAY-2017 Time : 10:17
Sensor Suite : CALI-MSN ID : MST-DA-025

	Jig - Measured Ring#1	Jig - Measured Ring#2	Jig - Calibrated Ring#1	Jig - Calibrated Ring#2	Units
CL # 1	7.9	13.2	6.0	12.0	IN.

Performed : 02-May-2017 Time : 10:11
Sensor Suite : MSTDA-NI ID : MST-DA-025

Internal

	Measured Zero	Measured Reference	Units	Calibrated Zero	Calibrated Reference	Units
INV-V	0.0	30518.3		0.00	1546.00	MV
NOR-V	2.7	30492.5		0.00	1546.00	MV
IN-C	1.6	58932.3		0.00	15.46	UA
INV-R					32.34	OHMM
NOR-R					55.11	OHMM

Tucker ENERGY SERVICES

Company: VAL ENERGY, INC

Well: HAMMER D V3-4

Location: 990' FSL & 660' FWL

Logged: 11-20-2017

K.B. Elev: 1346.0 Ft