



Tucker
ENERGY SERVICES

MICRO LOG

Company: QUAIL OIL & GAS, LC
Well: LEE #1-23
Field: MORRISON NORTHEAST
County: CLARK
State: KANSAS
Country: USA
API No.: 15-025-21574-00-00

File No.: TUL-59528
Company: QUAIL OIL & GAS, LC
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Field: MORRISON NORTHEAST
County: CLARK
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API No.: 15-025-21574-00-00

Location:
963' FNL & 1740' FEL
NW SE NW NE

LSD: Sect: 23 Twp: 32S Rge: 21W

Permanent Datum:	GL	Elevations:	KB 2031.00	Ft	Services:	CNT	PIT
Drilling Measured From:	KB	DF 2030.00	Ft	LDT	MLT		
Log Measured From:	KB	GL 2018.00	Ft				
Above Permanent Datum:	13.00	Ft					
Date:	03-12-2014						
Run Number	1						
Depth--Driller	6500.0	Ft					
Depth--Logger	6490.0	Ft					
First Reading	6457.0	Ft					
Last Reading	645.0	Ft					
Casing--Driller	645.0	Ft					
Casing--Logger	645.0	Ft					
Bit Size	7.875	In					
Casing Size	8.625	In					
Hole Fluid Type	CHEM-GEL						
Density	9.1	lbs/gal					
Fluid Loss	8.8	ml/30min					
PH/Viscosity	9.0	41.0 sec/qt					
Sample Source	MEASURED						
RM@Measured Temp.	0.650	@ 60 F					
RMF@Measured Temp	0.520	@ 60 F					
RMC@Measured Temp.	0.780	@ 60 F					
Source RMF/RMC	CALCULATED	CALCULATED					
RM@BHT	0.290	@ 145 F					
Time Circulation Stopped	03-12-2014 3:00 am						
Max Recorded Temp.	145	F					
Equipment/Base	TRK-123	TULSA					
Recorded By	J. ADAMS						
Witnessed By	D. GOULD						

The customer is hereby warned that by providing the log data herein, T. E. S. does not agree to provide any interpretation of log data, conversion of log data to physical rock parameters or recommendations. T. E. 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. E. 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. E. 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.

Bitsize Intervals		Casing Strings			
Size (In)	Bottom (Ft)	Size (In)	Weight (Lbs)	Bottom (Ft)	Top (Ft)
7.875	6500.00	8.625	32.00	645.00	0.00

Run Number	1	
Date	03-12-2014	
Date/Time On Bottom	03-12-2014 8:00 am	
Depth to Fluid	0.0 Ft	
Salinity	6600.000 ppm	
RMF@BHT	0.230 @ 145 F	
RMC@BHT	0.340 @ 145 F	

Run Number 1

Comments

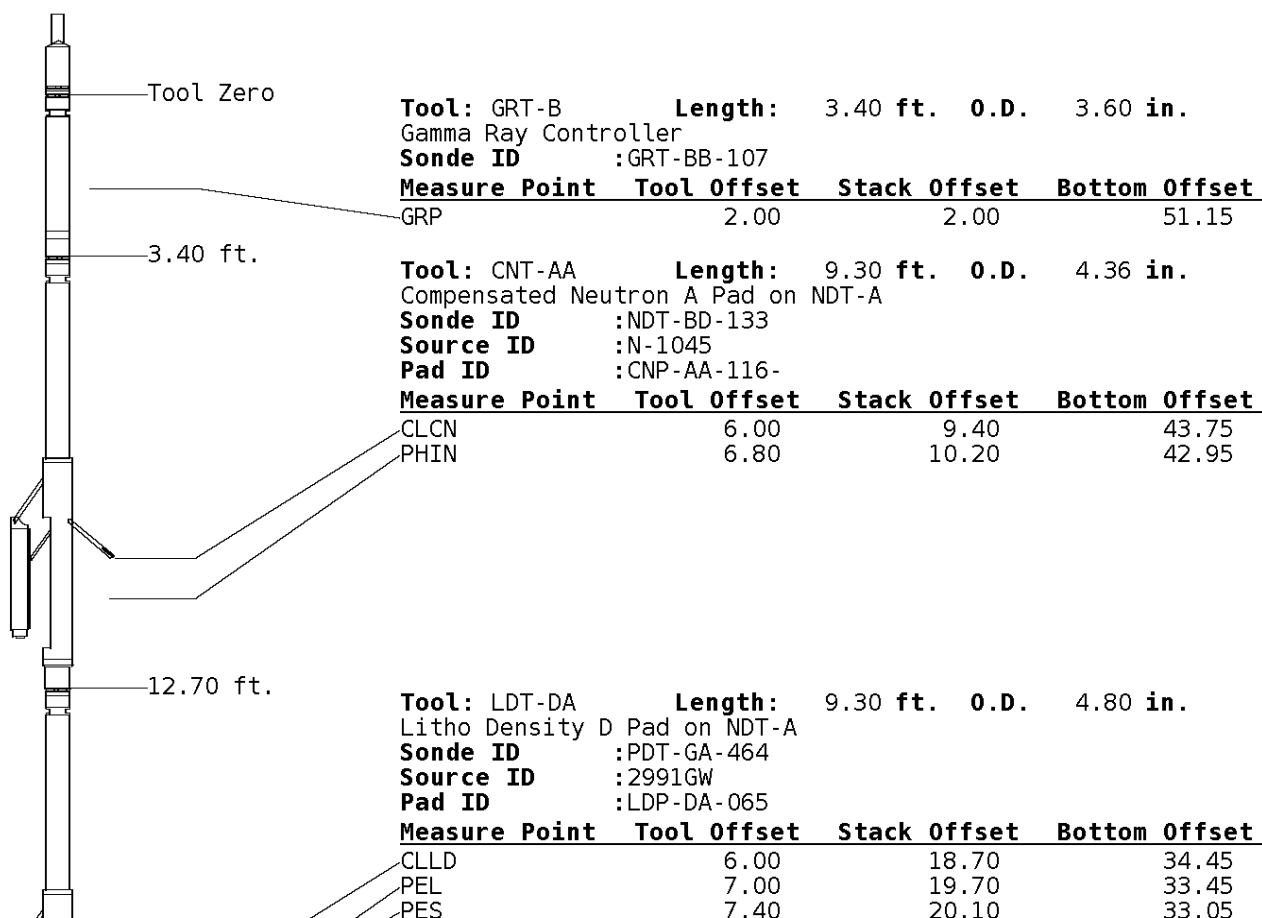
ALL PRESENTATION PER CUSTOMER REQUEST
 GRT,CNT,LDT,PIT RUN IN COMBINATION
 CALIPERS ORIENTED ON X-Y AXIS
 2.71 G/CC USED TO CALCULATE POROSITY
 ANNULAR & BOREHOLE VOLUME CALCULATED USING 5.5 PRODUCTION CASING
 PHIN IS CALIPER CORRECTED
 HIRES IS PRESENTED FROM TD TO 4000'
 INDUCTION READINGS IN TOP OF HOLE DUE TO ANHYDRITE SECTION

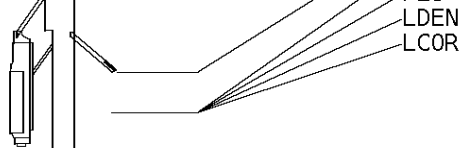
GRT; GRP, GRX
 CNT; PHIN, CLCNIN PHXN
 LDT; PORL, LCORN, PECLN, LDENN, CLLDIN PRXL, PECLX, LDENNX, LCORNX
 MLT; NOR.RF, INV.RF, MSCLPIN.
 PIT; ILD, ILM, SPU, SFLAEC, CIRD

OPERATORS;
 J. KLINE
 C. GONZALES

Tool String Schematic

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



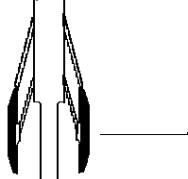


7.20	19.90	33.25
7.20	19.90	33.25

22.00 ft.

Tool: MST-DA **Length:** 9.66 ft. **O.D.** 6.00 in.
 Micro Spherically Focused (IC)
Sonde ID :MST-DA-057

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



31.66 ft.

Tool: PIT-CA **Length:** 21.49 ft. **O.D.** 3.62 in.
 Phased Dual Induction w/ RM & D
Sonde ID :PIT-AB-005

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



LWT 53.15 ft.

Well File: QUAIL LEE 1-23 MAR12 MSTK

Scale: 1:240 **Format:** MST-240

Segment: V1.D1.S5 AS FINAL MAIN

Acquired: 2014-03/12 08:10 3.3.0-12594

Reference: 0

Processed: 2014-03/12 10:22 3.3.0-12594

**BIT SIZE
INCHES (IN)**

6 16

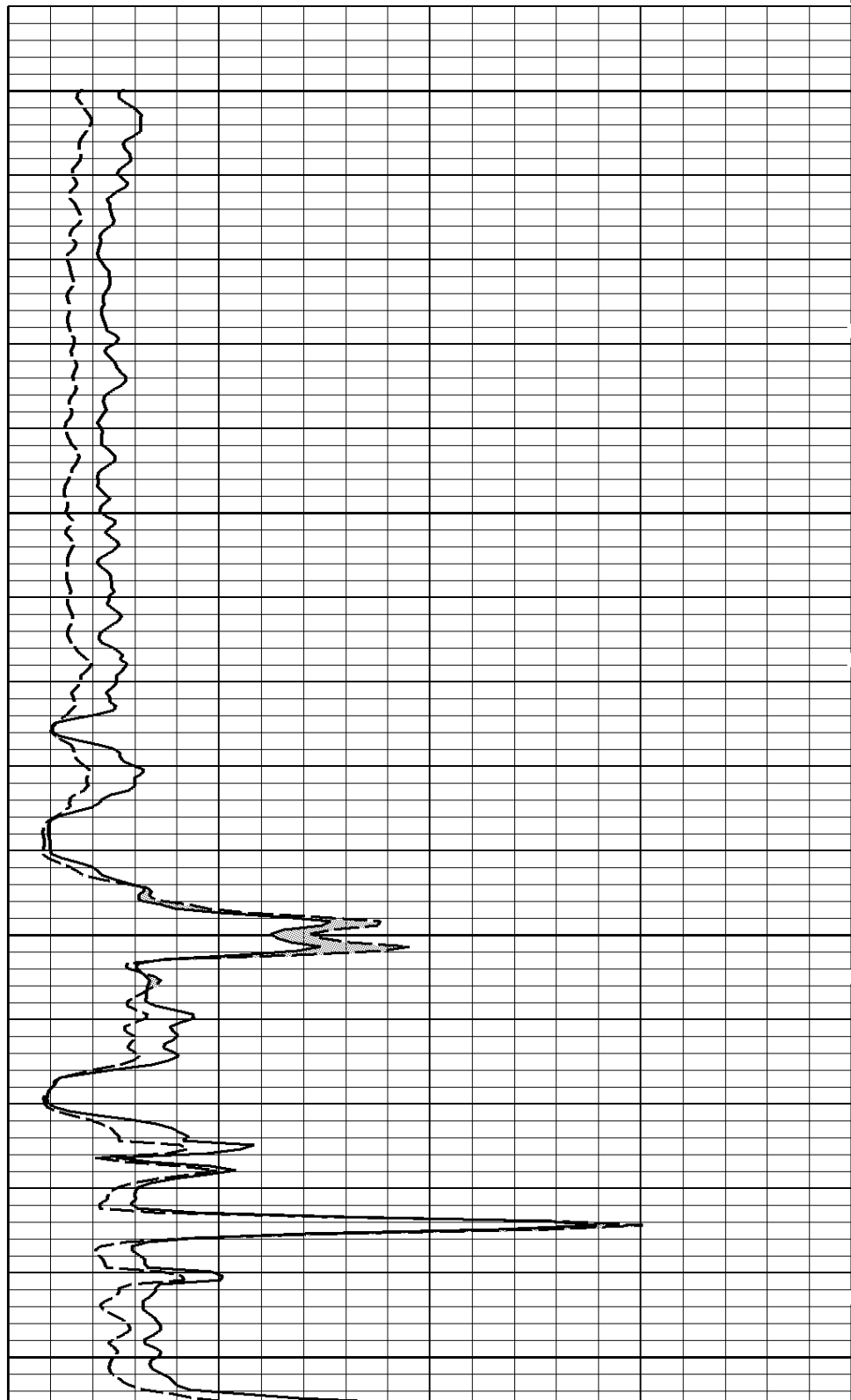
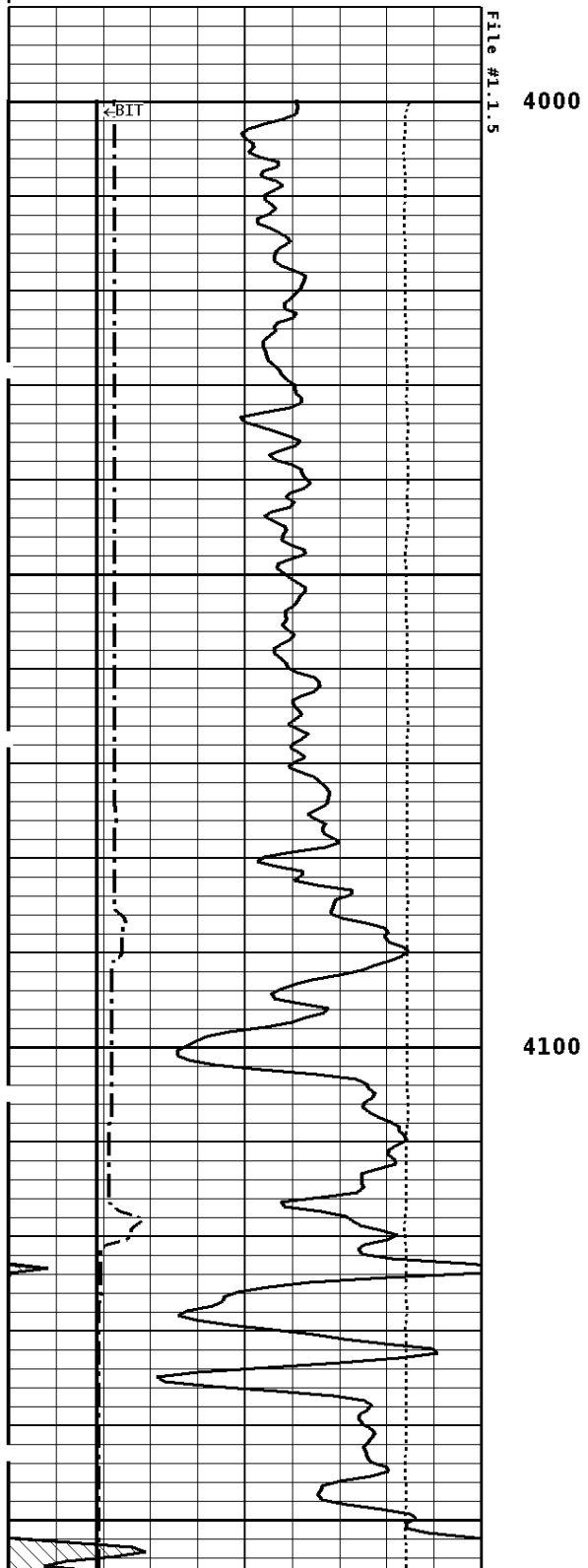
**CALIPER MICRO
INCHES (IN)**

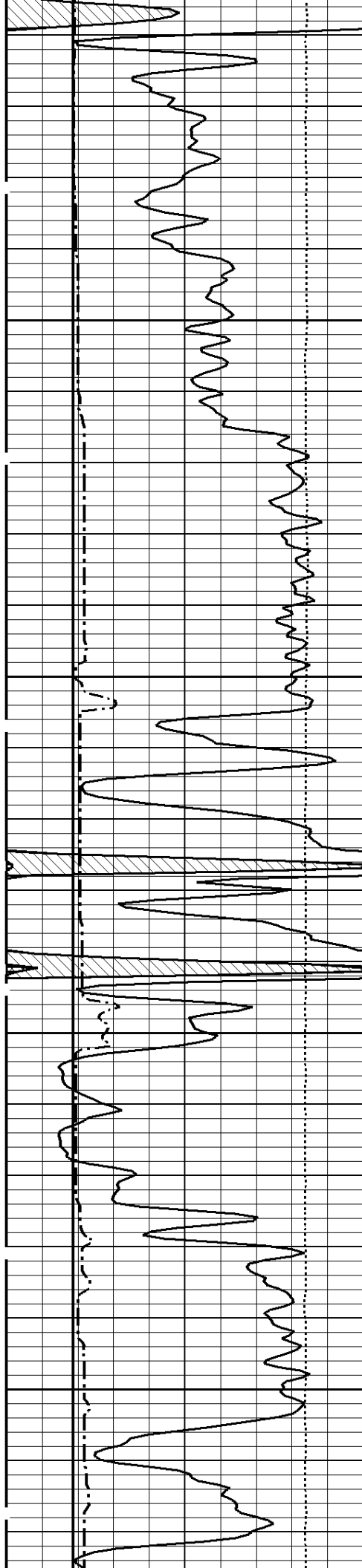
16 26

16	26
6	16
TENSION LBS	
10000	0
GAMMA RAY API UNITS	
150	300
0	150

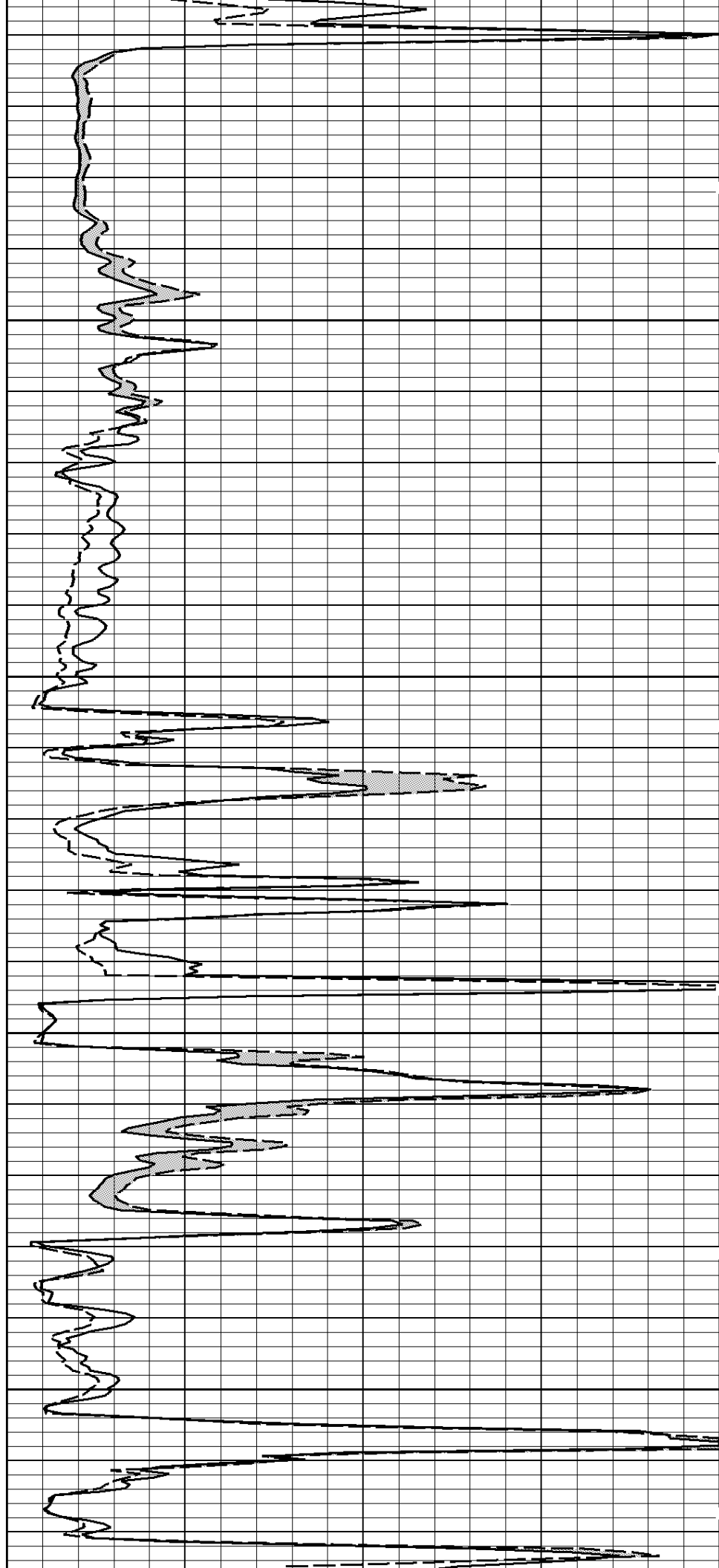
INVERSE OHMM	
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NORMAL OHMM	
0	40

1:240 MAIN SECTION

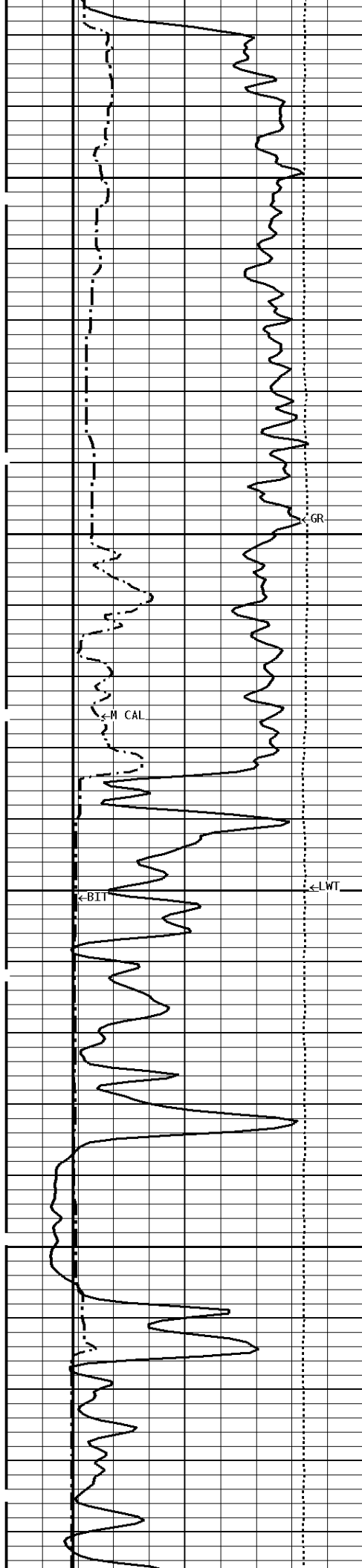




4200

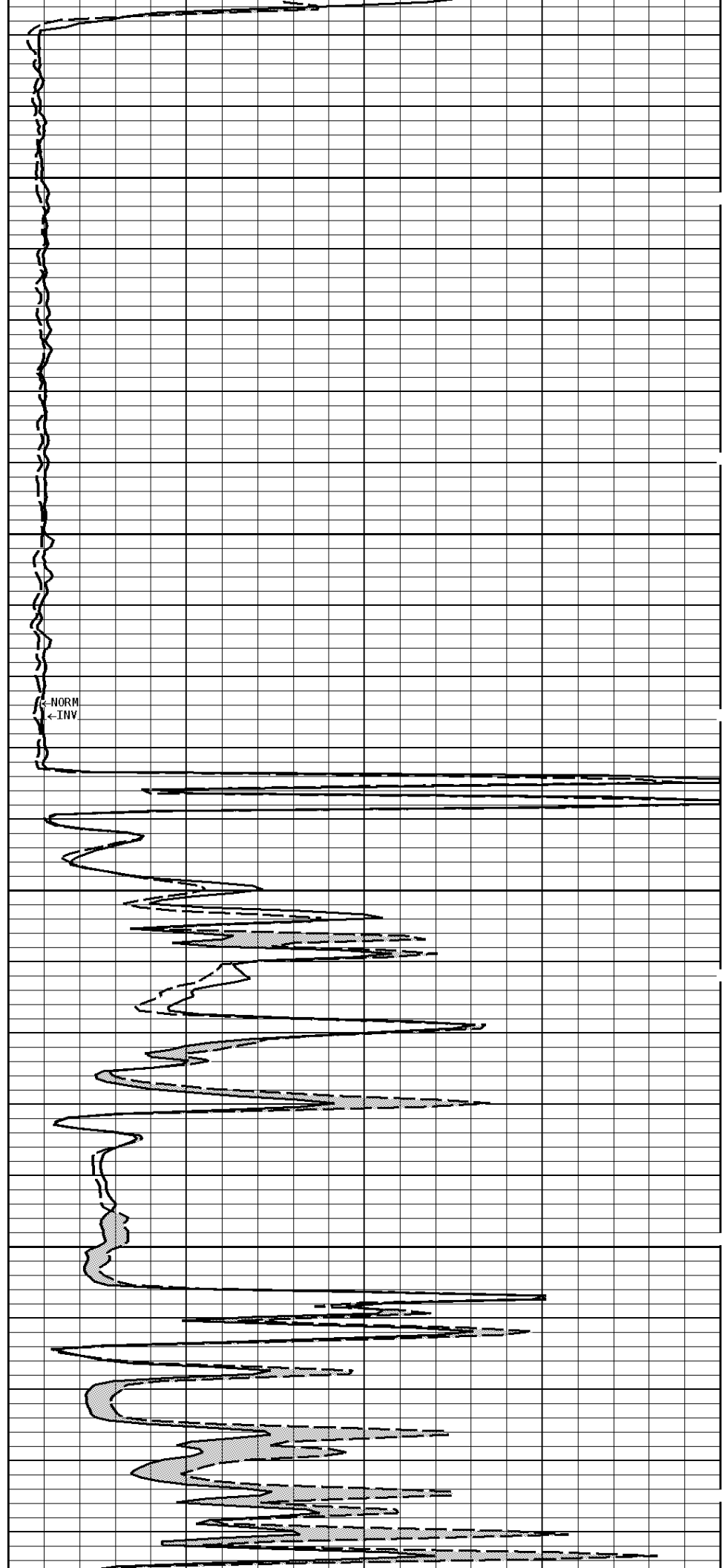


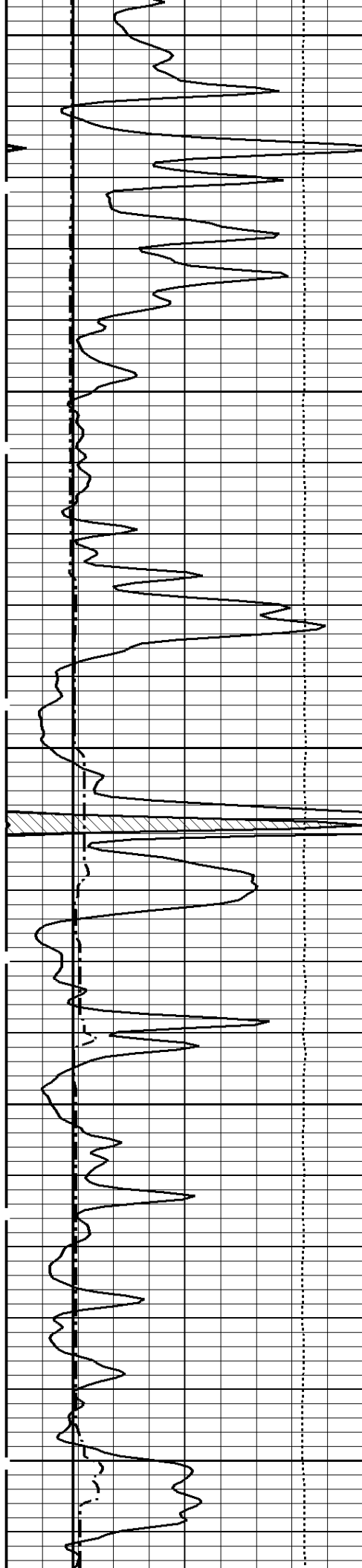
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4400

4500

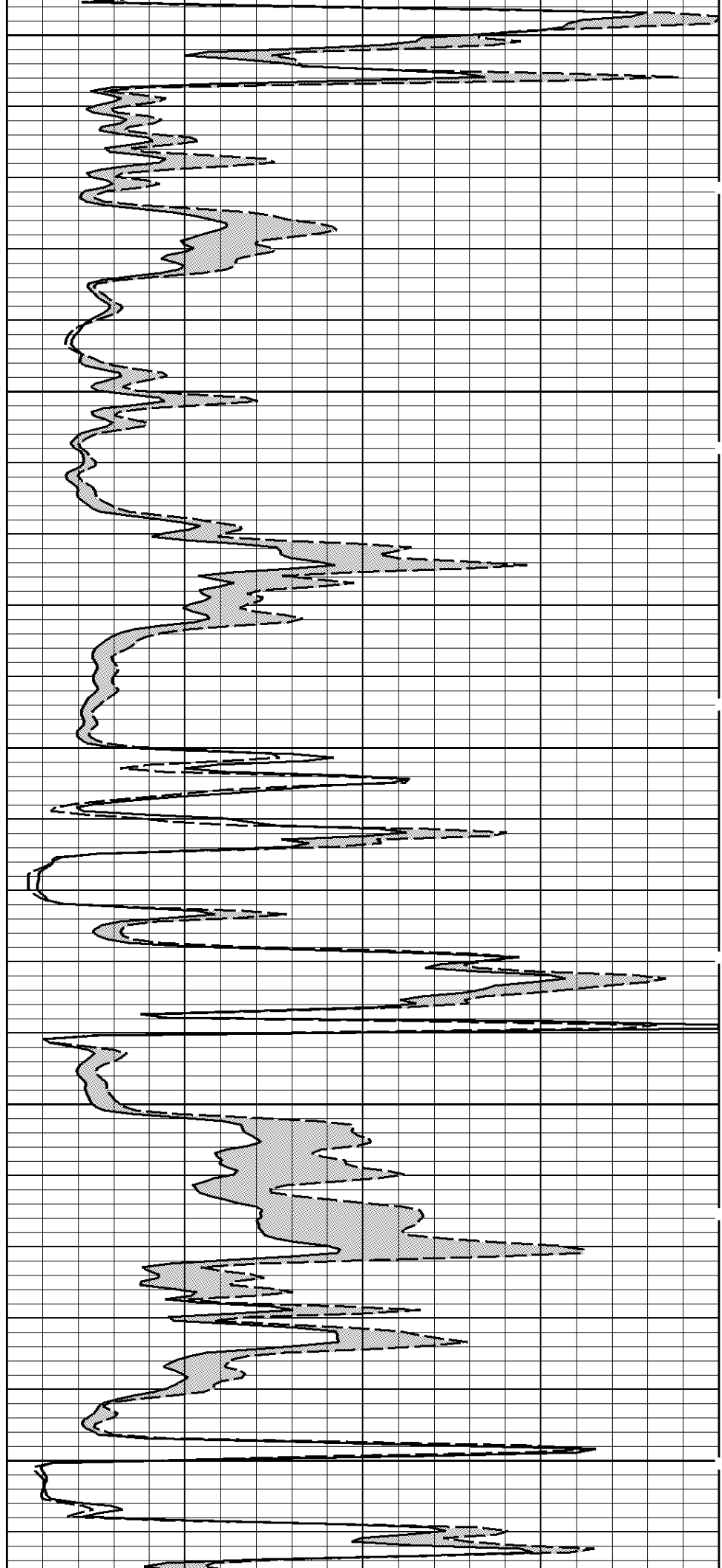


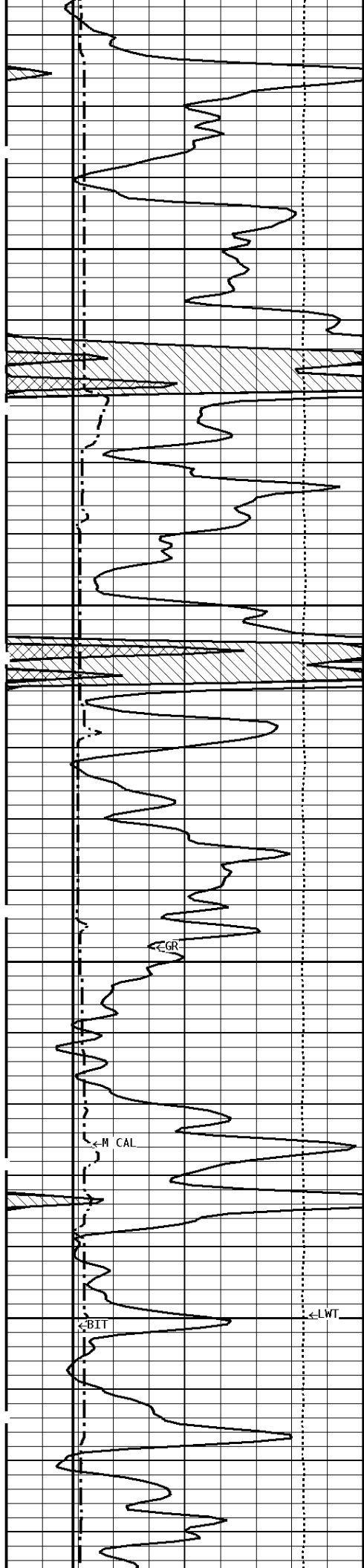


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4700

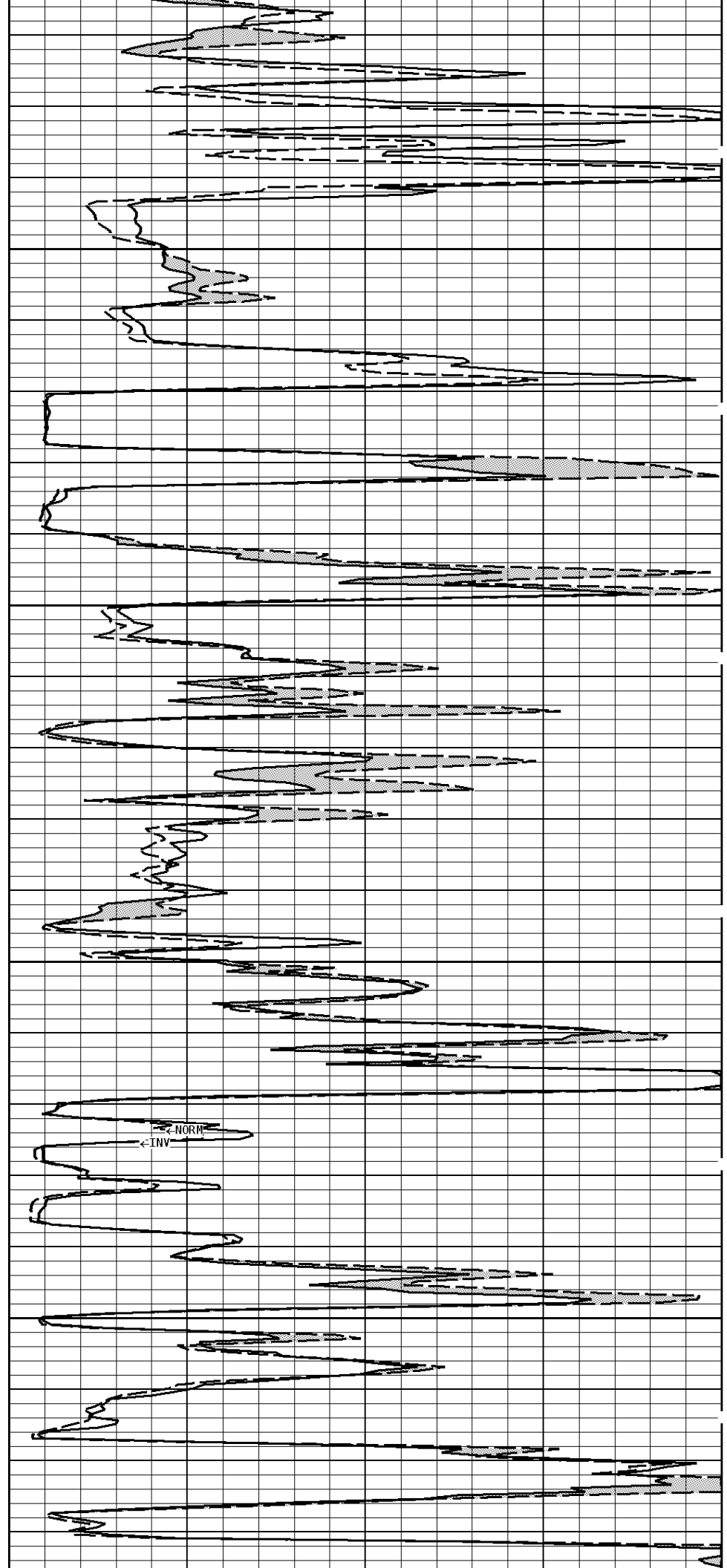
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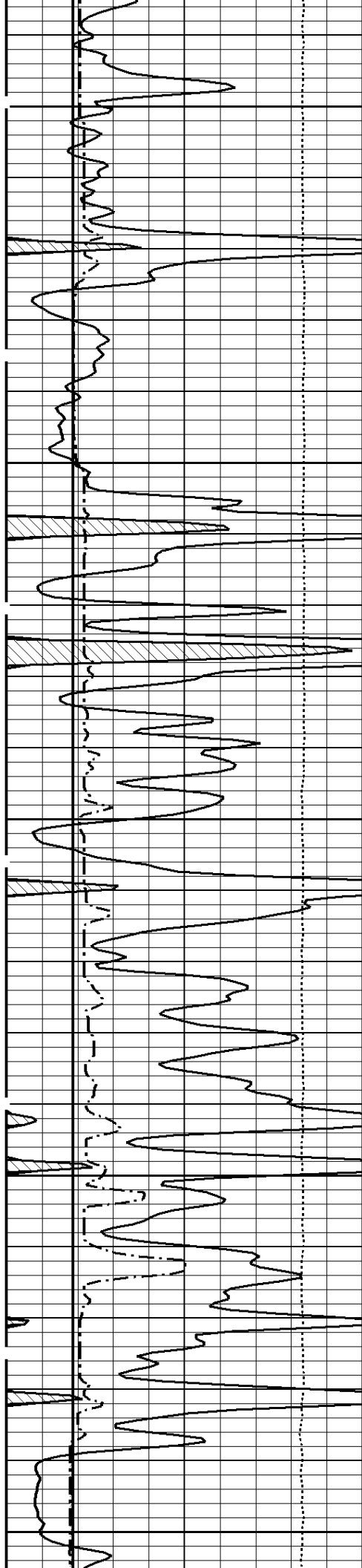




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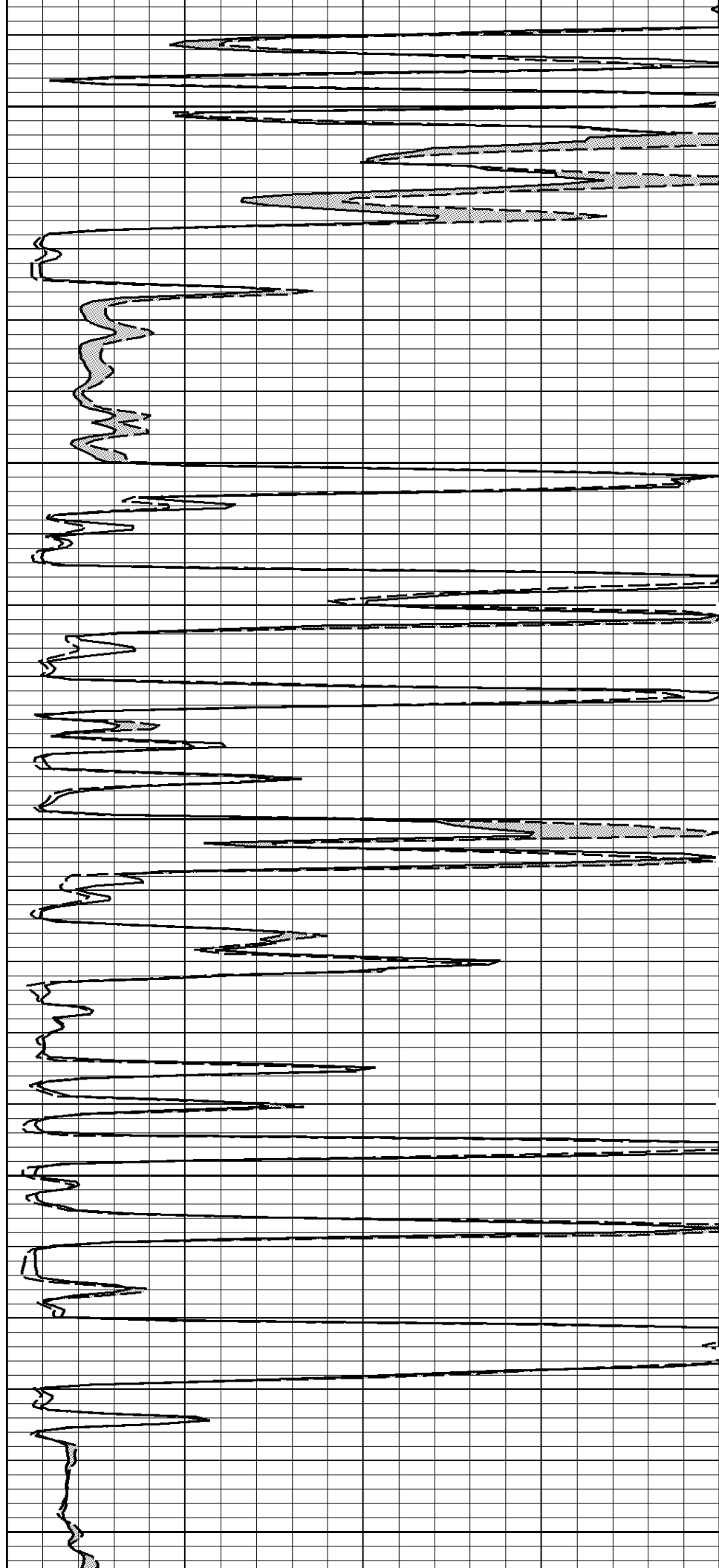
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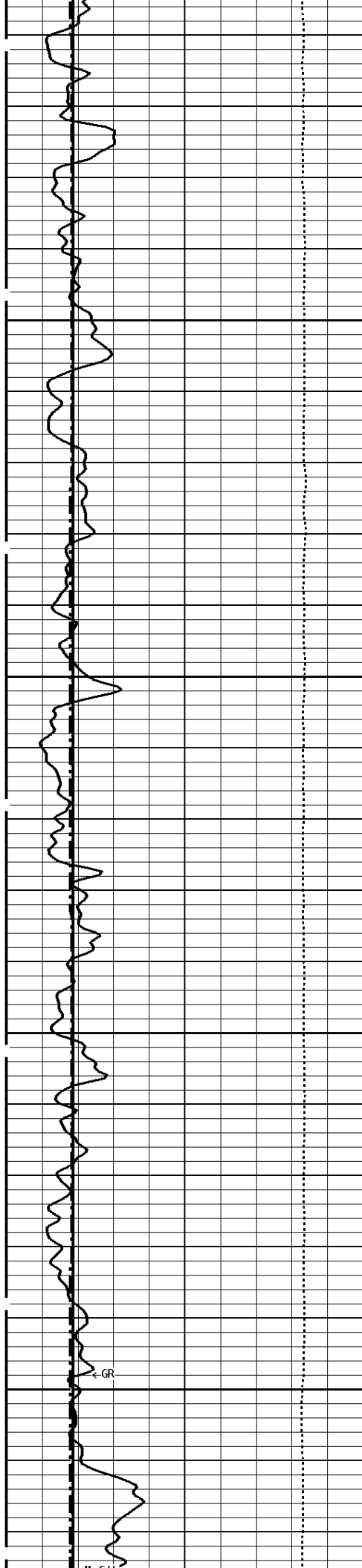




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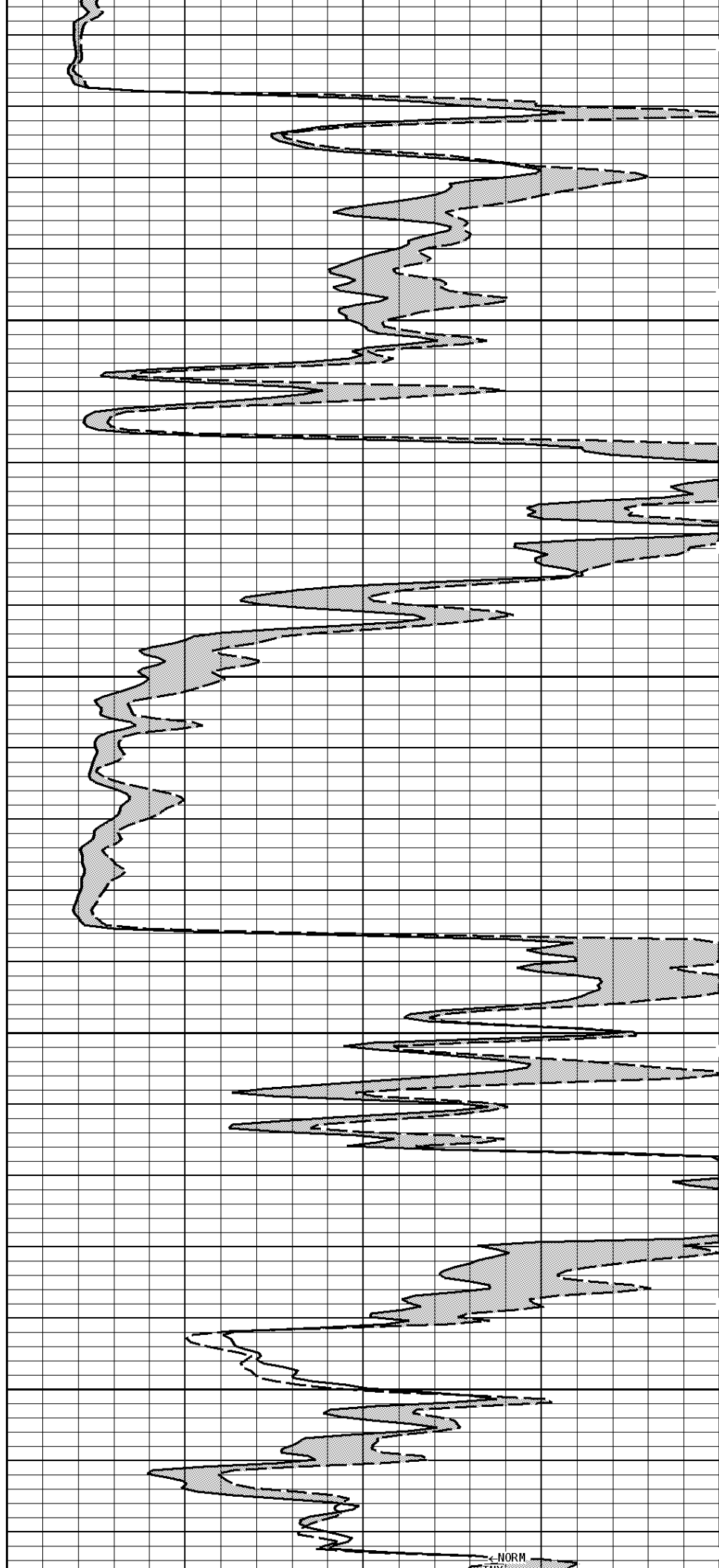
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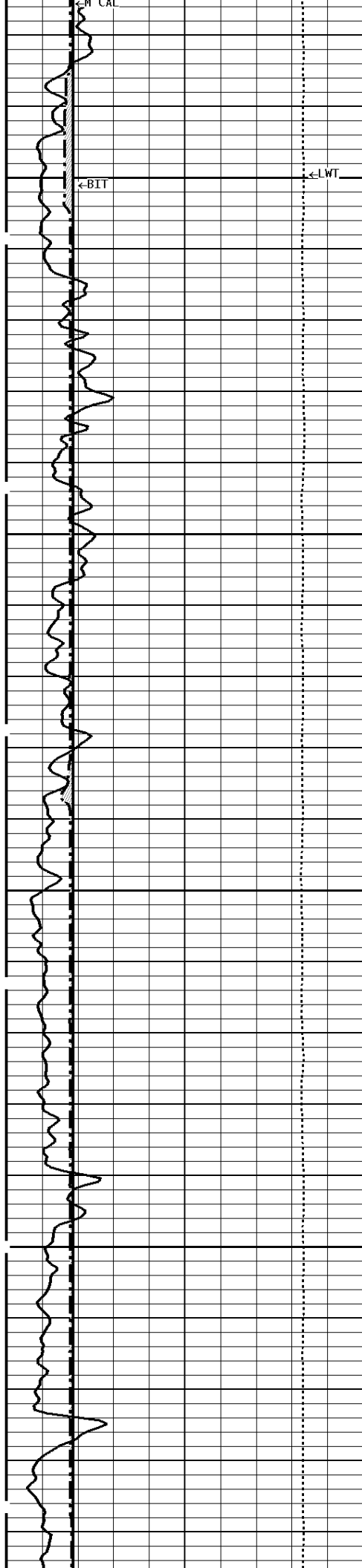




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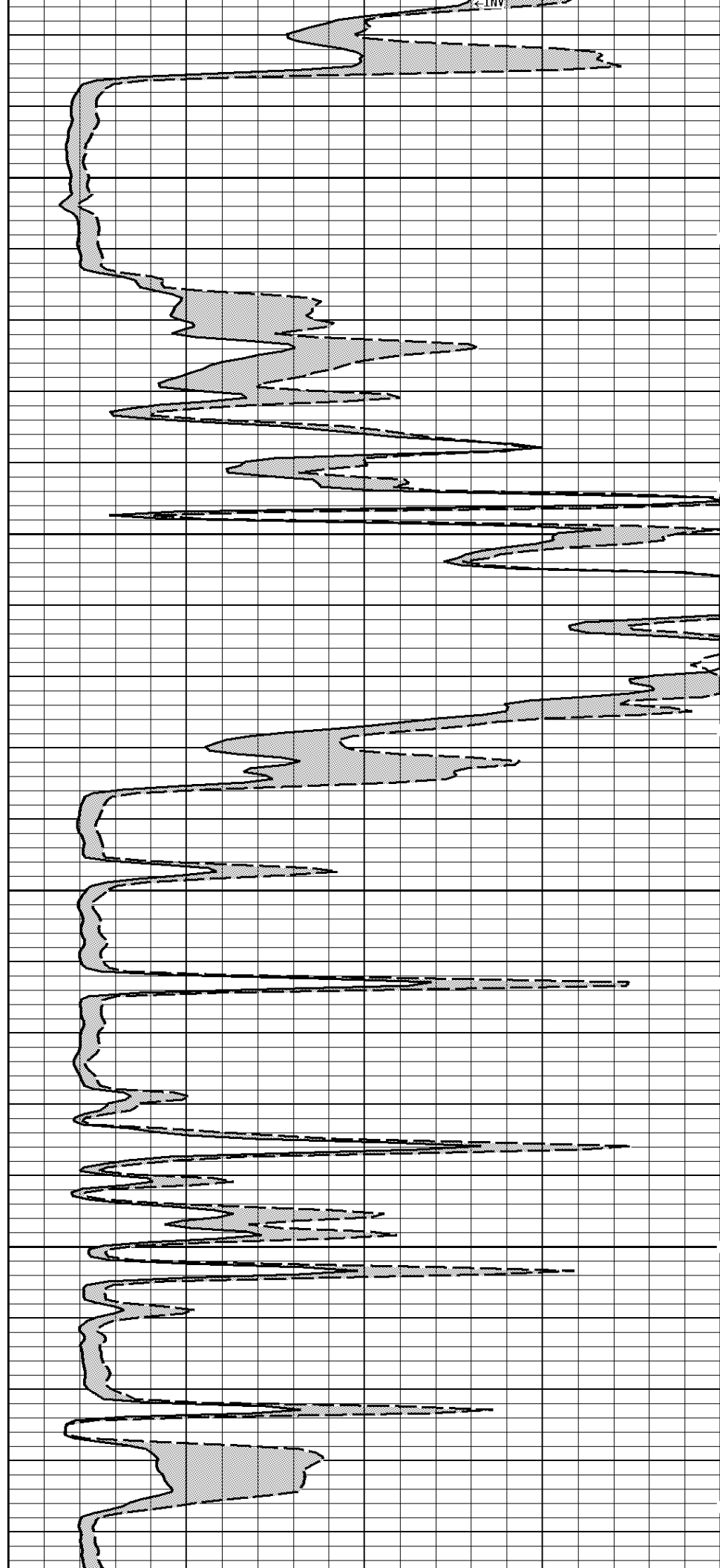
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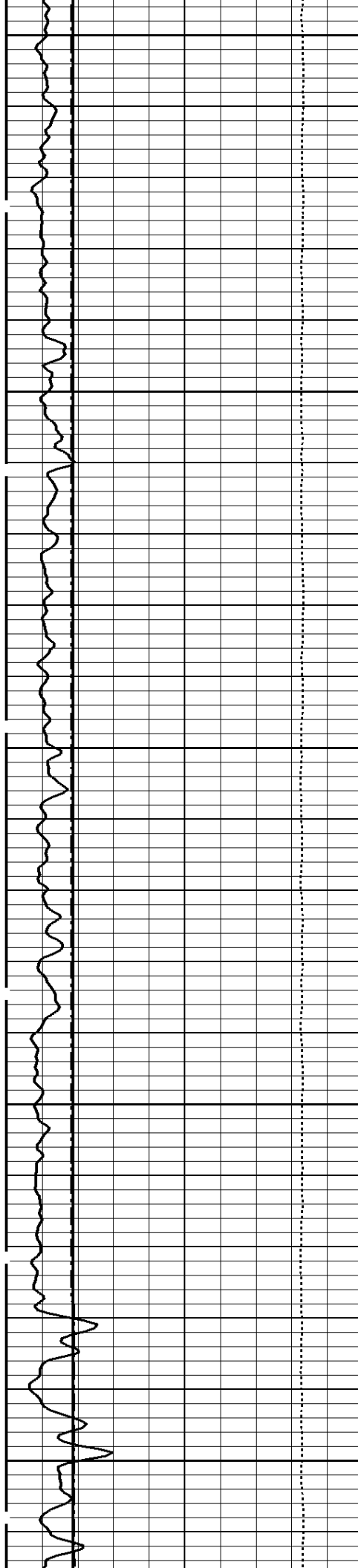




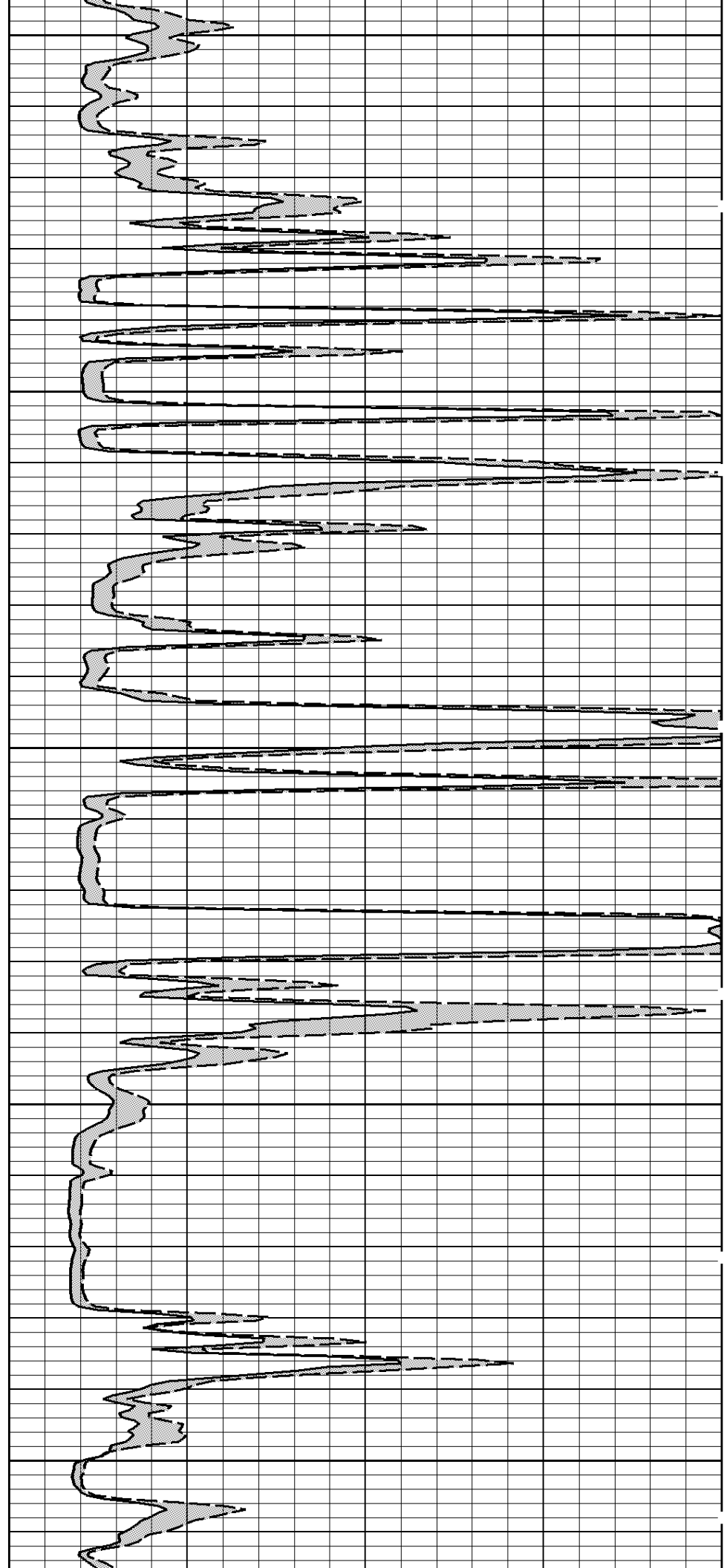
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5600



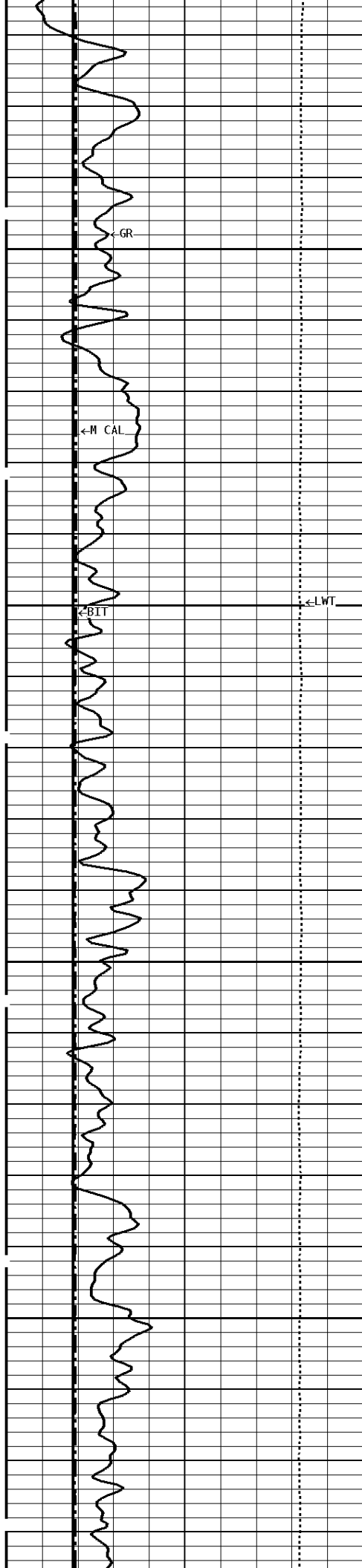


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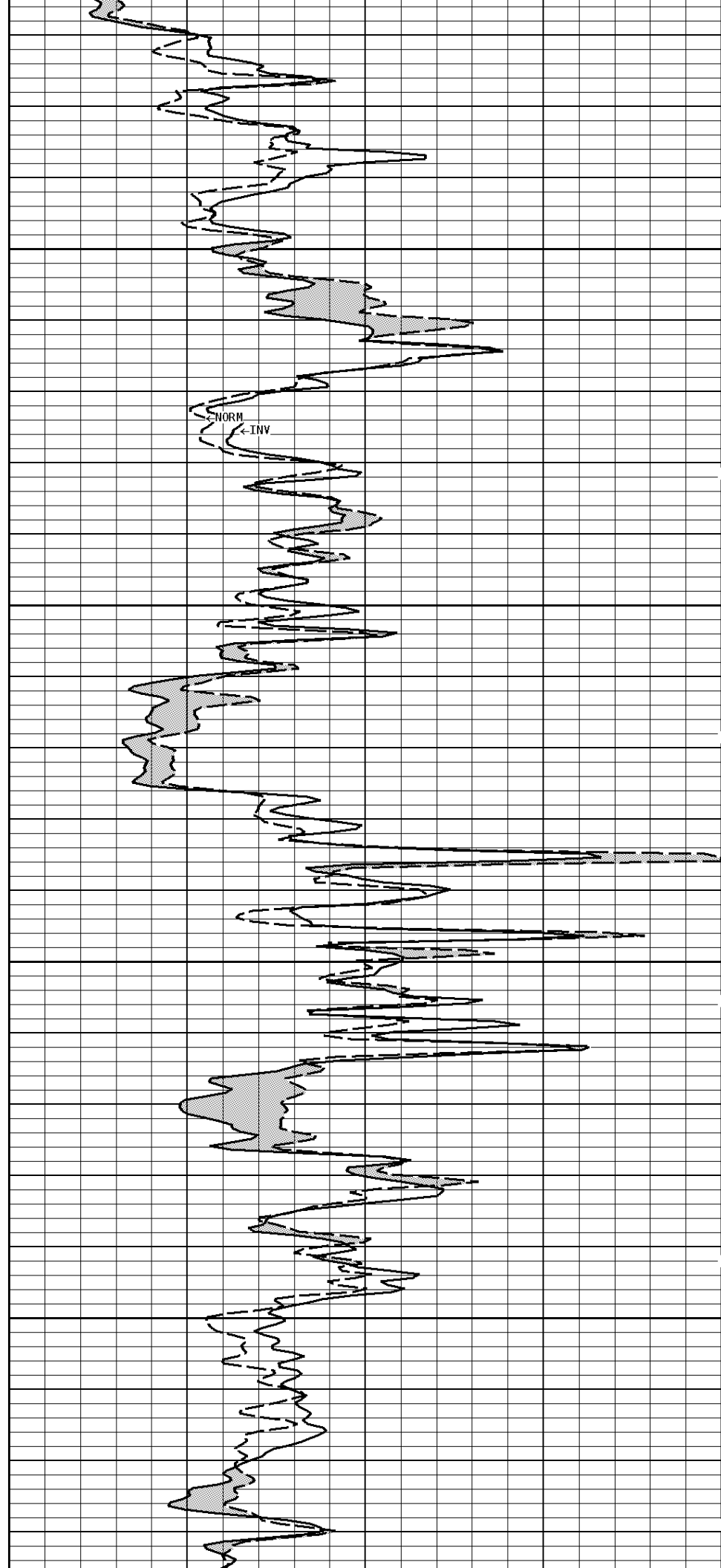
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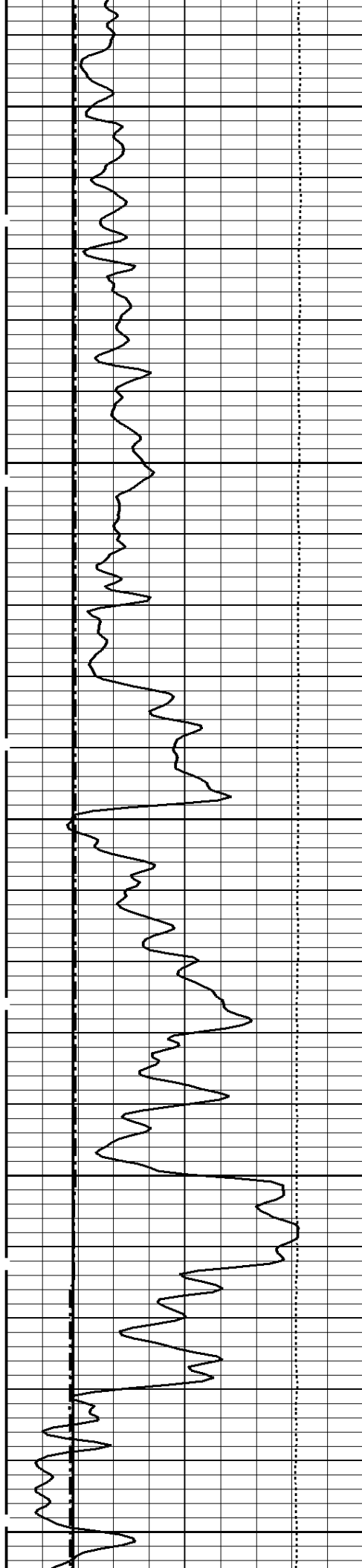
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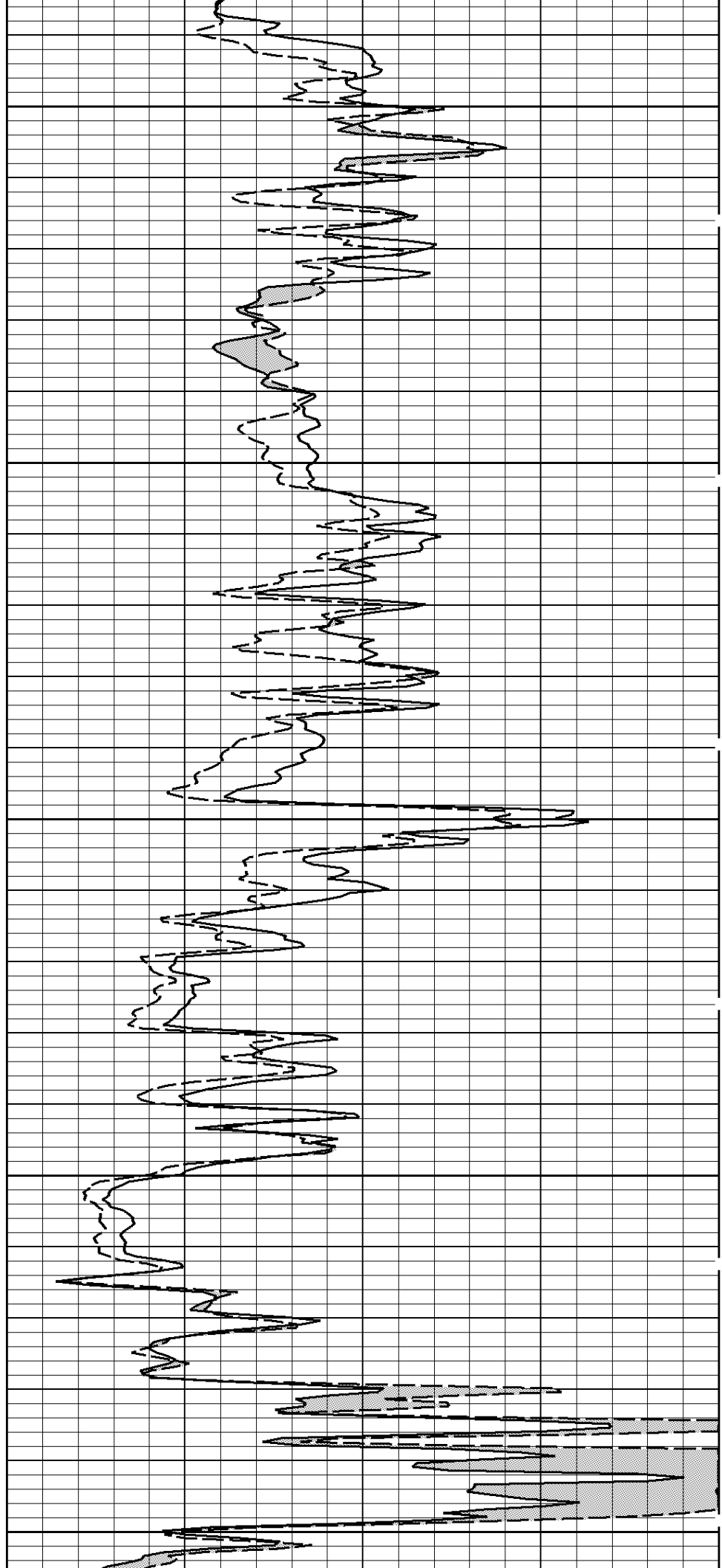
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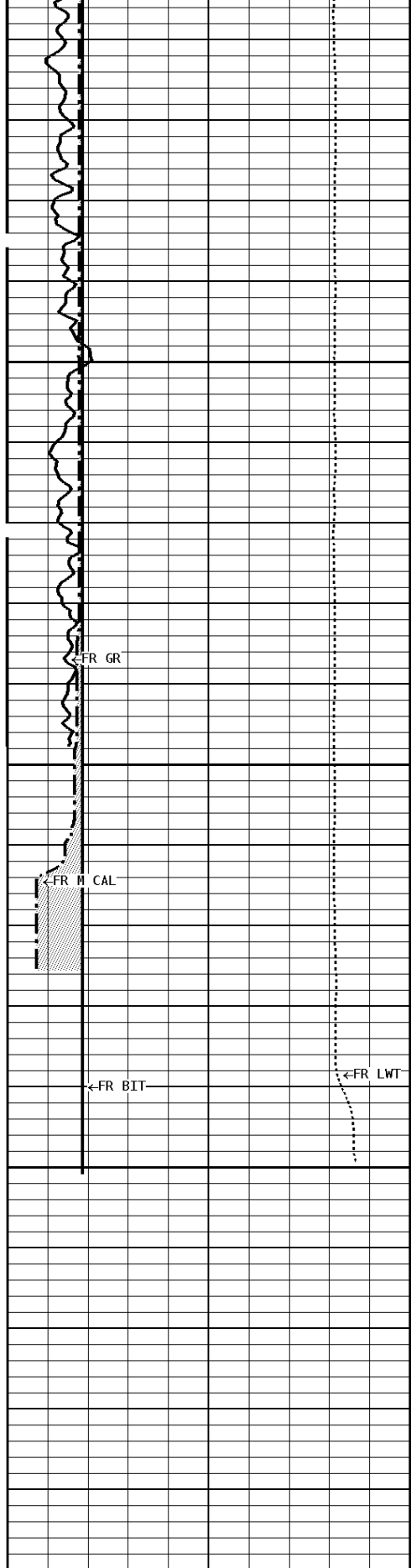




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6300

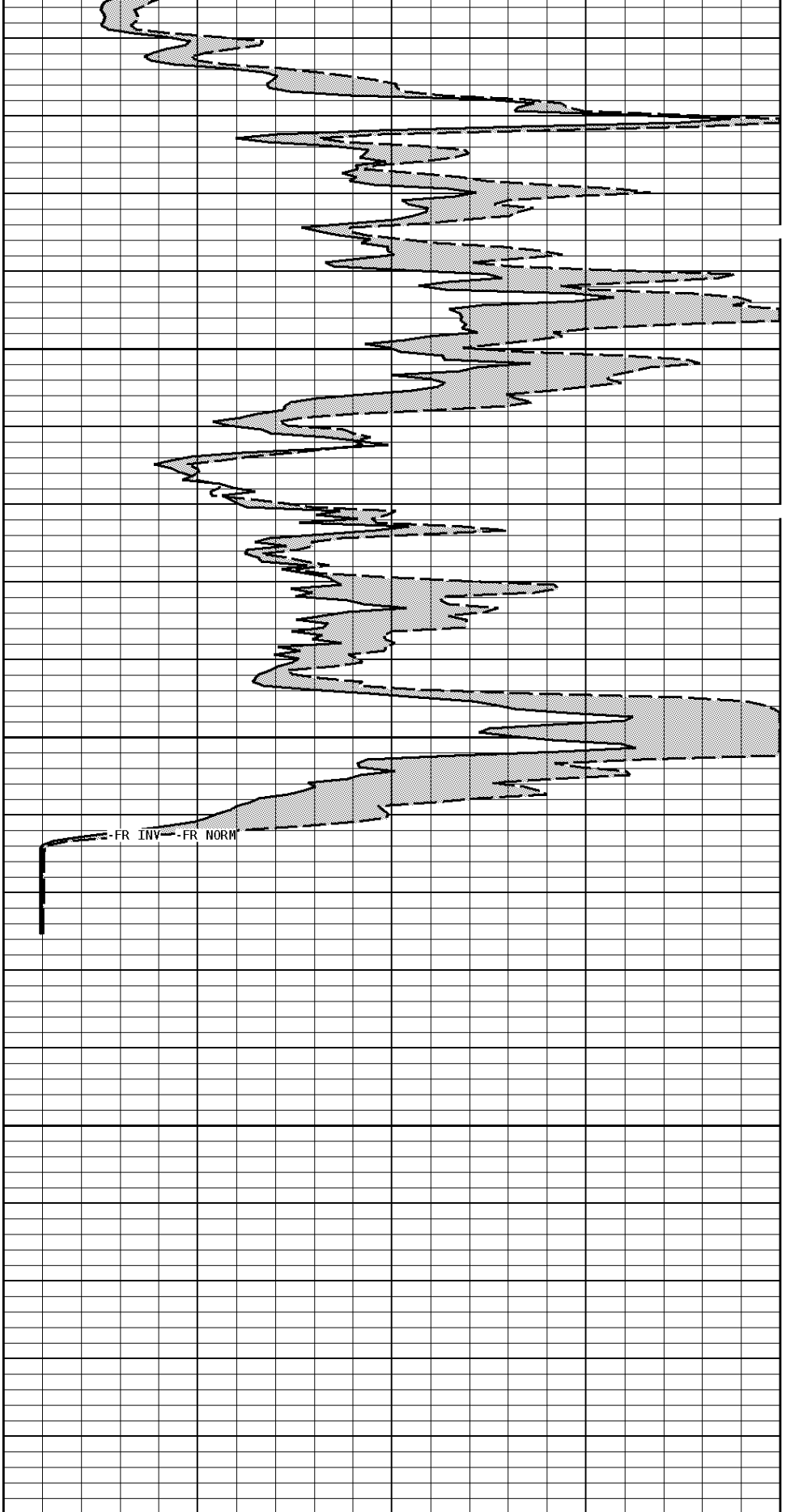




6400

6490

File #1.1.5



1:240 MAIN SECTION



0	150
TENSION LBS	
10000	0
CALIPER MICRO INCHES (IN)	
16 6	26 16
BIT SIZE INCHES (IN)	
6	16

0	40
INVERSE OHMM	
0	40

* Borehole Zone Factors *

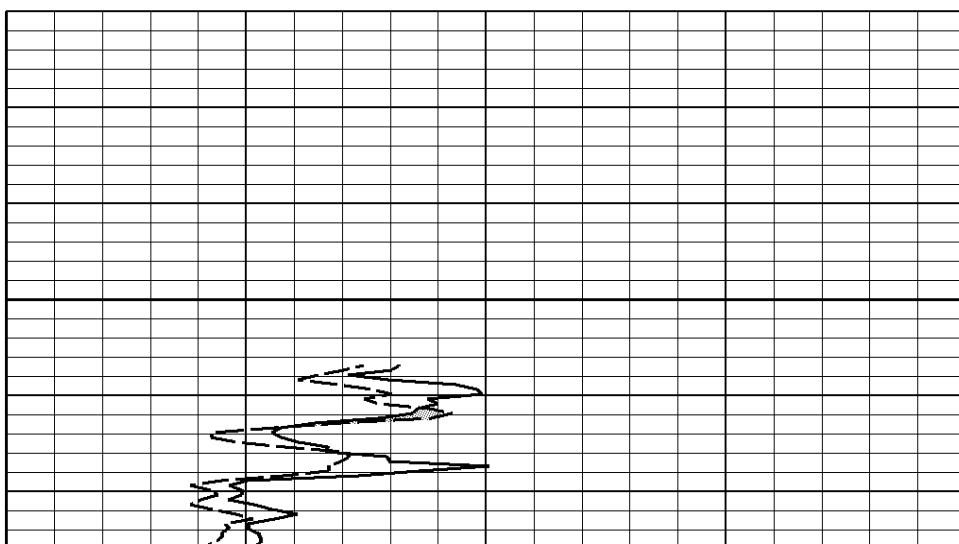
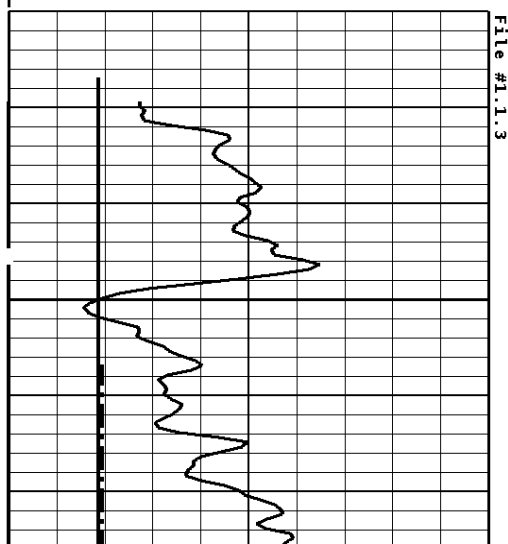
Zone 1	99999.0	to	0.0	Feet
Drill Bit Size			7.875	in
MSTNG Normal Correction			0.00	ohm/m
MSTNG Inverse Correction			1.00	ohm/m

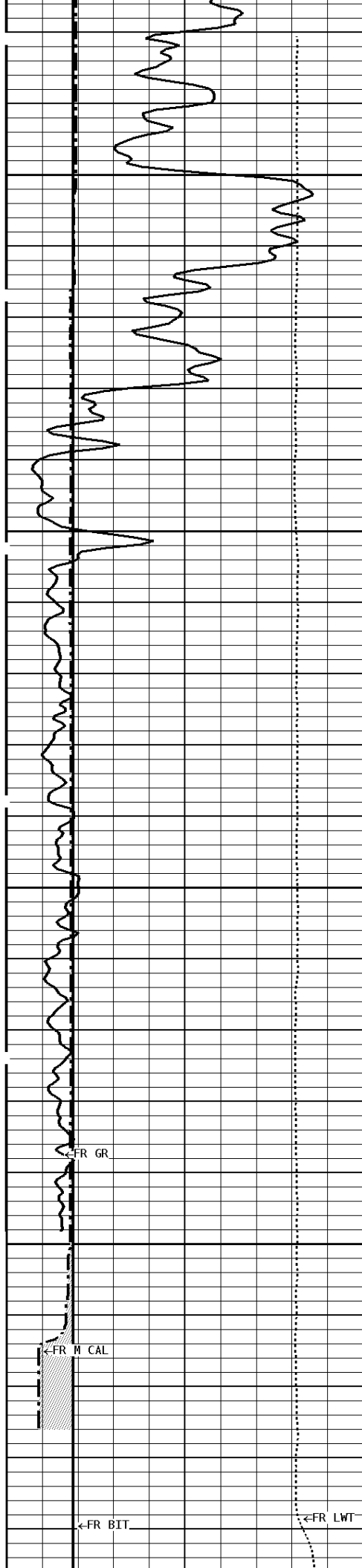
Well File: QUAIL LEE 1-23 MAR12 MSTK Scale: 1:240 Format: MST-240
 Segment: V1.D1.S3 Reprocess of REPEAT Acquired: 2014-03/12 07:55 3.3.0-12594
 Reference: 0 Processed: 2014-03/12 10:22 3.3.0-12594

BIT SIZE INCHES (IN)	
6	16
CALIPER MICRO INCHES (IN)	
16 6	26 16
TENSION LBS	
10000	0
GAMMA RAY API UNITS	
150 0	300 150

INVERSE OHMM	
0	40
NORMAL OHMM	
0	40

1:240 REPEAT SECTION

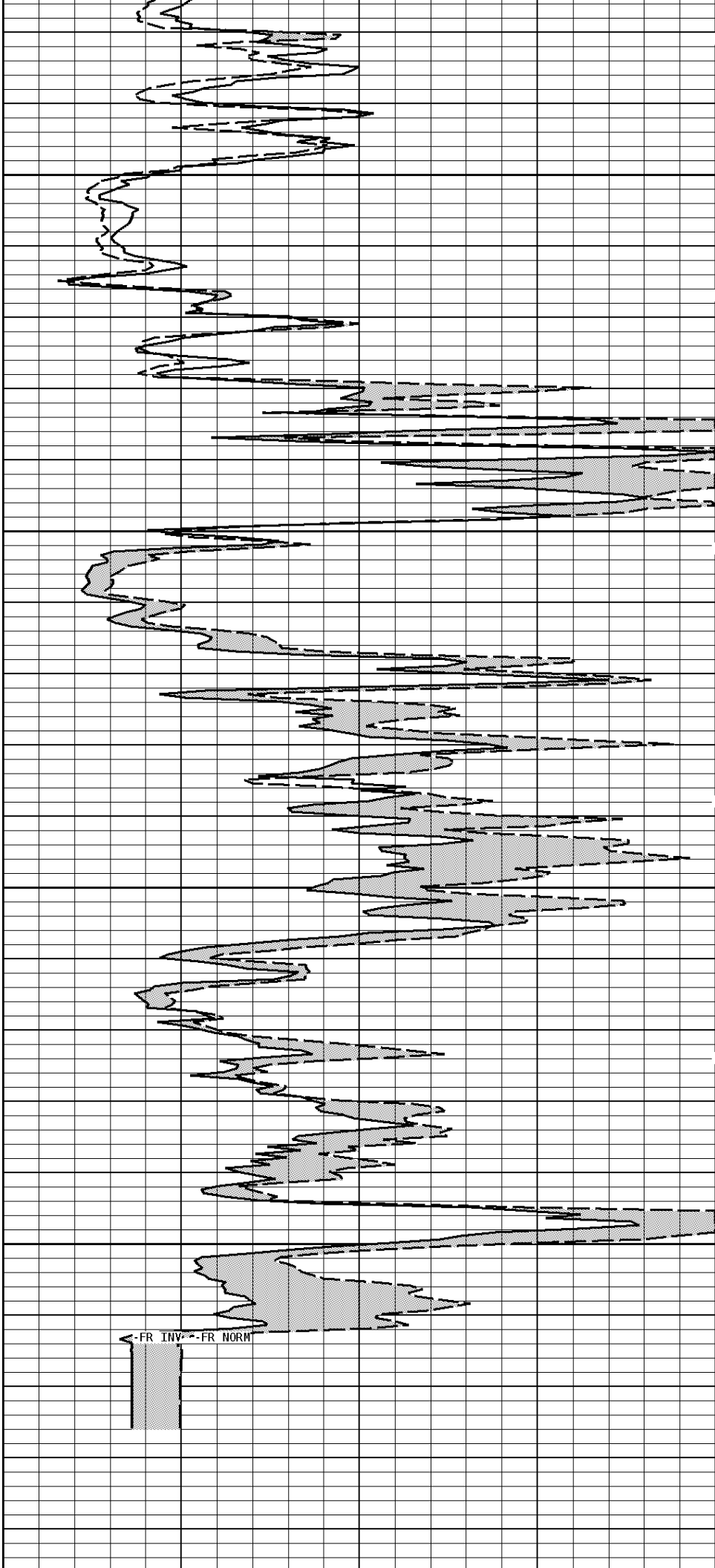




6300

6400

6490



		Internal				
		Measured	Units	Calibrated		Units
	Zero	Reference		Zero	Reference	
INV-V	285.8	30438.7		0.00	1536.00	MV
NOR-V	166.4	30373.5		0.00	1636.00	MV
IN-C	165.0	30672.7		0.00	15.46	UA
INV-R					32.14	OHMM
NOR-R					58.31	OHMM



Tucker
ENERGY SERVICES

Company: QUAIL OIL & GAS, LC

Well: LEE #1-23

Location: 963' FNL & 1740' FEL

Logged: 03-12-2014

K.B. Elev: 2031.0 Ft