STEP energy services

COMPENSATED NEUTRON

PEL DENSITY MICRO LOG

Company	MERIT ENERGY COMPANY, LLC
Well	DANIELS #1-28
Field	WILDCAT
County	HASKELL
State	KANSAS
Country	USA
API No.	15-081-22216-0100

File No : HAYS-70398
Company : MERIT ENERGY COMPANY, LLC
Well : DANIELS #1-28
Field : WILDCAT
County : HASKELL
State : KANSAS
Country : USA
API No : 15-081-22216-0100

Location :
1879' FEL & 2288' FNL
SE/4 NE/4

LSD : **Sect :** 28 **Twp :** 27S **Rge :** 33W

Permanent Datum:	GL	**Elevations:**		**Services:**	
Drilling Measured From:	KB	**KB**	2985.00 Ft	GRT	MST
Log Measured From:	KB	**DF**	2984.00 Ft	CNT	PIT
Above Permanent Datum:	12.00 Ft	**GL**	2973.00 Ft	LDT	

Date	02-06-2020			
Run Number	1			
Depth--Driller	5616.0 Ft			
Depth--Logger	5604.0 Ft			
First Reading	5580.0 Ft			
Last Reading	1758.0 Ft			
Casing--Driller	1726.0 Ft			
Casing--Logger	1726.0 Ft			
Bit Size	7.875 In			
Casing Size	8.625 In			
Hole Fluid Type	WBM			
Density	9.0			
Fluid Loss	5.6			
PH/Viscosity	11.5	58.0		
Sample Source	MEASURED			
RM@Measured Temp.	1.900 @ 50 F			
RMF@Measured Temp	1.620 @ 50 F			
RMC@Measured Temp.	2.190 @ 50 F			
Source RMF/RMC	CALCULATED	CALCULATED		
RM@BHT	0.830 @ 124 F			
Time Circulation Stopped	02-06-2020 11:27			
Max Recorded Temp.	124 F			
Equipment/Base	TRK-137	HAYS		
Recorded By	B.BAILEY			
Witnessed By	MARTIN LANGE, AUSTIN GARNER			

Bitsize Intervals

Size (In)	Bottom (Ft)
7.875	5616.00

Casing Strings

Size (In)	Weight (Lbs)	Bottom (Ft)	Top (Ft)
8.625	17.00	1726.00	0.00

Run Number	1
Date	02-06-2020
Date/Time On Bottom	02-06-2020 16:00
Depth to Fluid	0.0 Ft
Salinity	625.000
RMF@BHT	0.710 @ 124 F
RMC@BHT	0.960 @ 124 F

Run Number 1

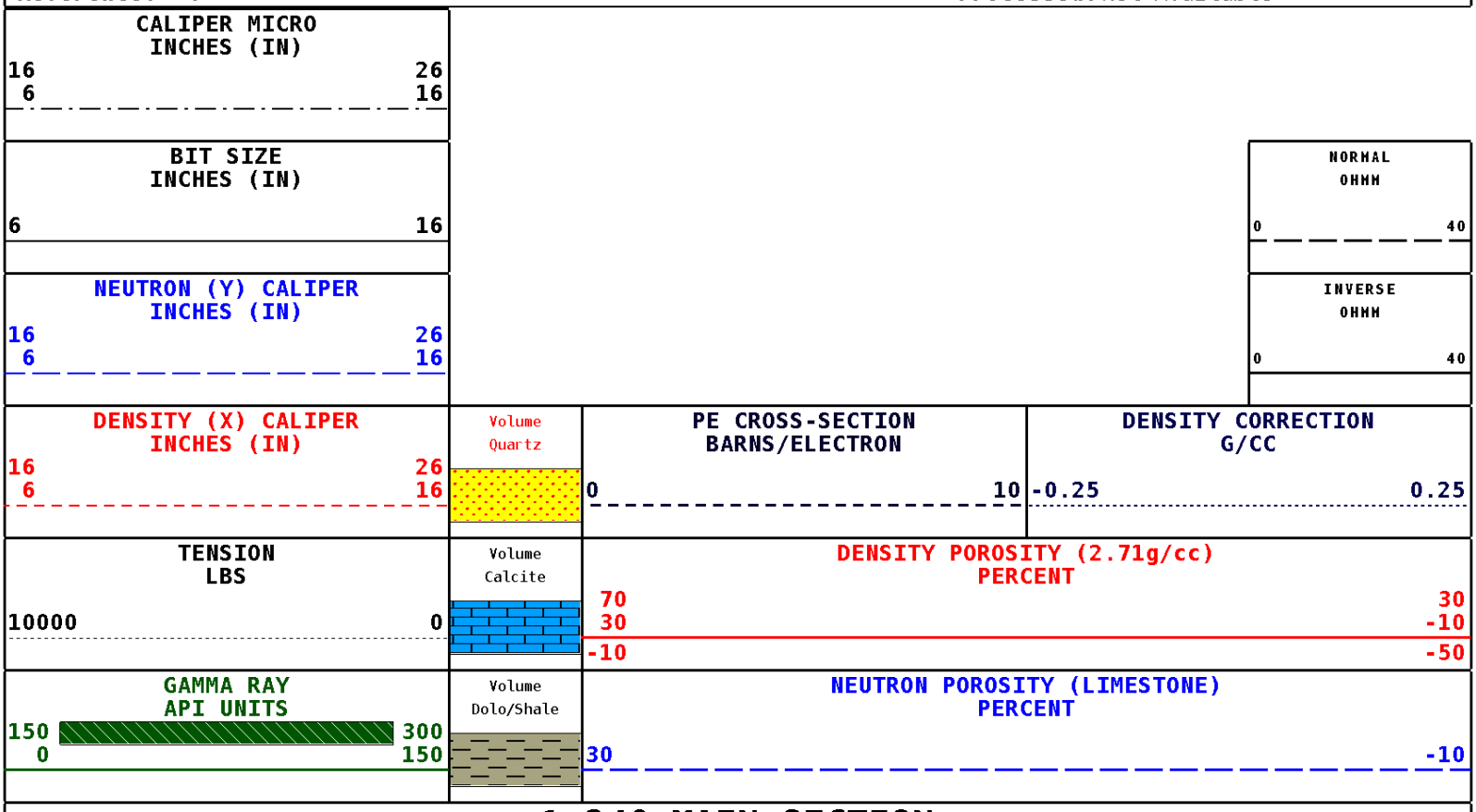
Comments

ALL PRESENTATIONS AS PER CUSTOMER REQUEST
GRT, CNT, LDT, CST, MLT AND PIT RUN IN COMBINATION
CALIPERS ORIENTED ON X-Y AXIS
2.71 G/CC USED TO CALCULATE POROSITY
ANNULAR HOLE VOLUME CALCULATED USING 5.5" PRODUCTION CASING
PHIN IS CALIPER CORRECTED

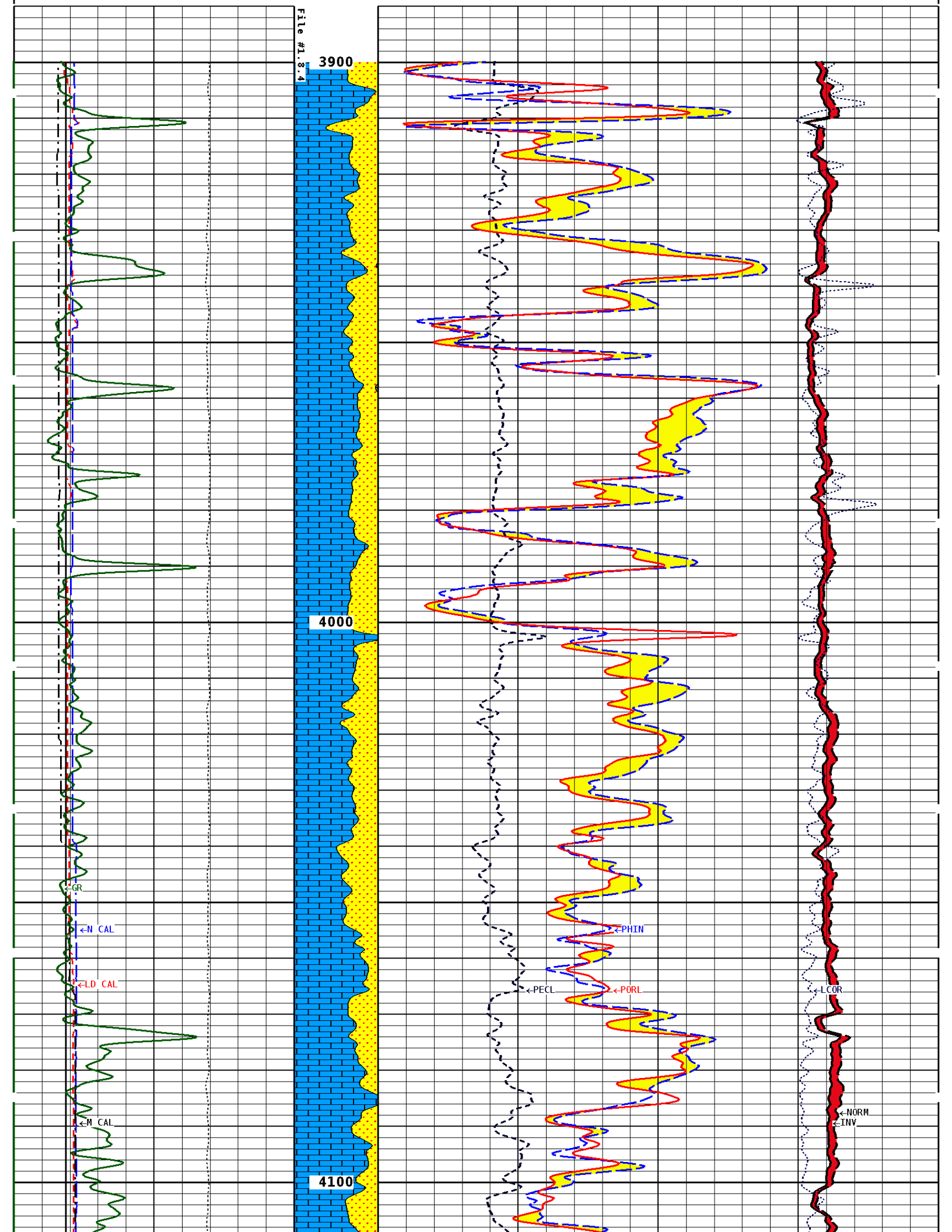
GRT: GRP
CNT: PHIN, CLCNIN,
LDT: PORL, LCORN, PECLN, LDENN, PORLLS, CLLDIN
CST: PORS, CDTF, TTIPF, TT2PF, TT3PF, TT4PF, ITT
MLT: NOR_RF, INV_RF, MSCLPIN
PIT: ILD, ILM, SPU, SFLAEC, CIRD

OPERATORS:
D. RAGSDALE
J. VAUGHN
D.LEGLEITER

Well File: MERIT_DANIELS_1-28_FEB-6_QST **Scale:** 1:240 **Format:** NLD-240
Segment: V1.D8.S4 MAIN FINAL **Acquired:** Not Available
Reference: 0 **Processed:** Not Available



1:240 MAIN SECTION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4000
4100
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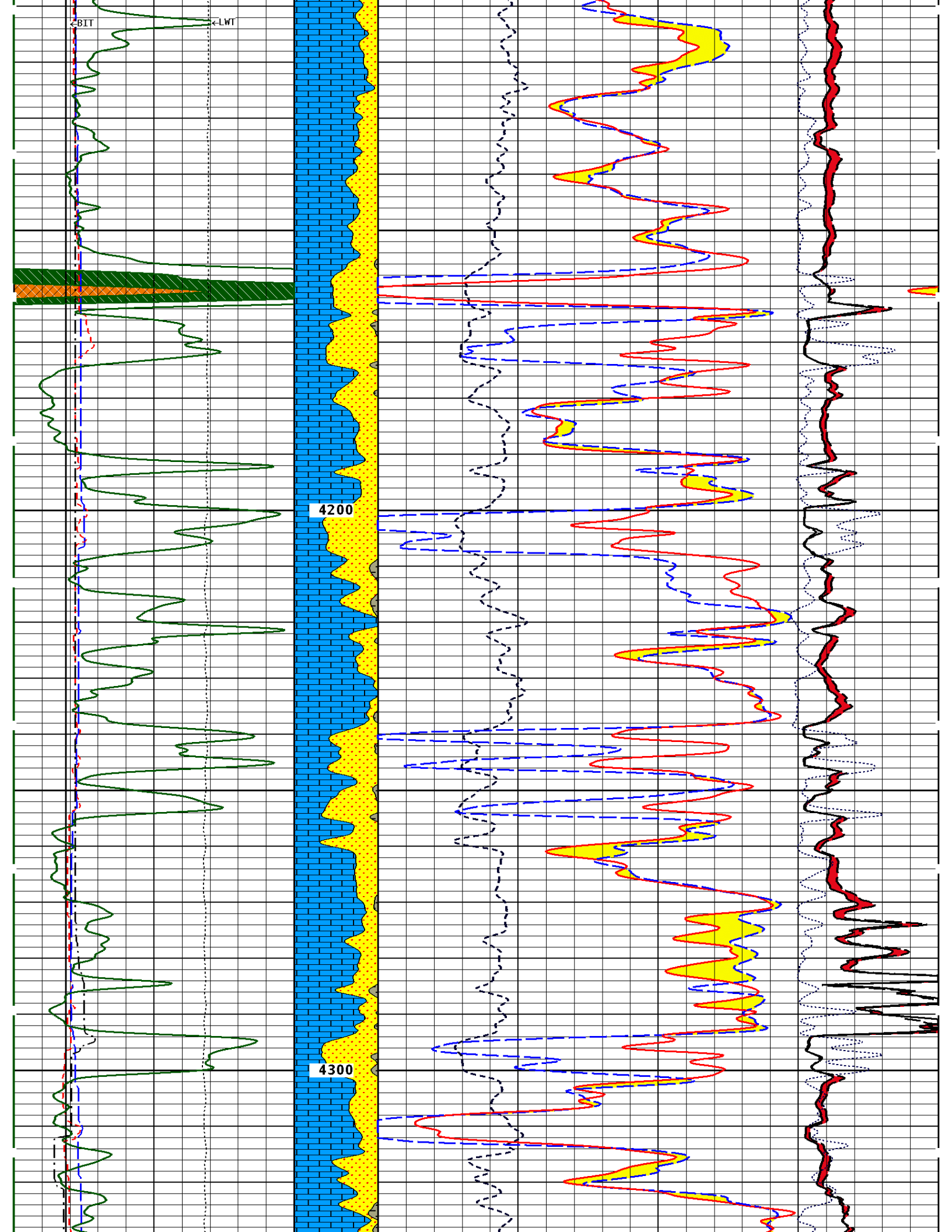
←LD CAL
←M CAL
←PHIN
←PECL
←PORL
←LCOR
←NORM
←INV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LWT
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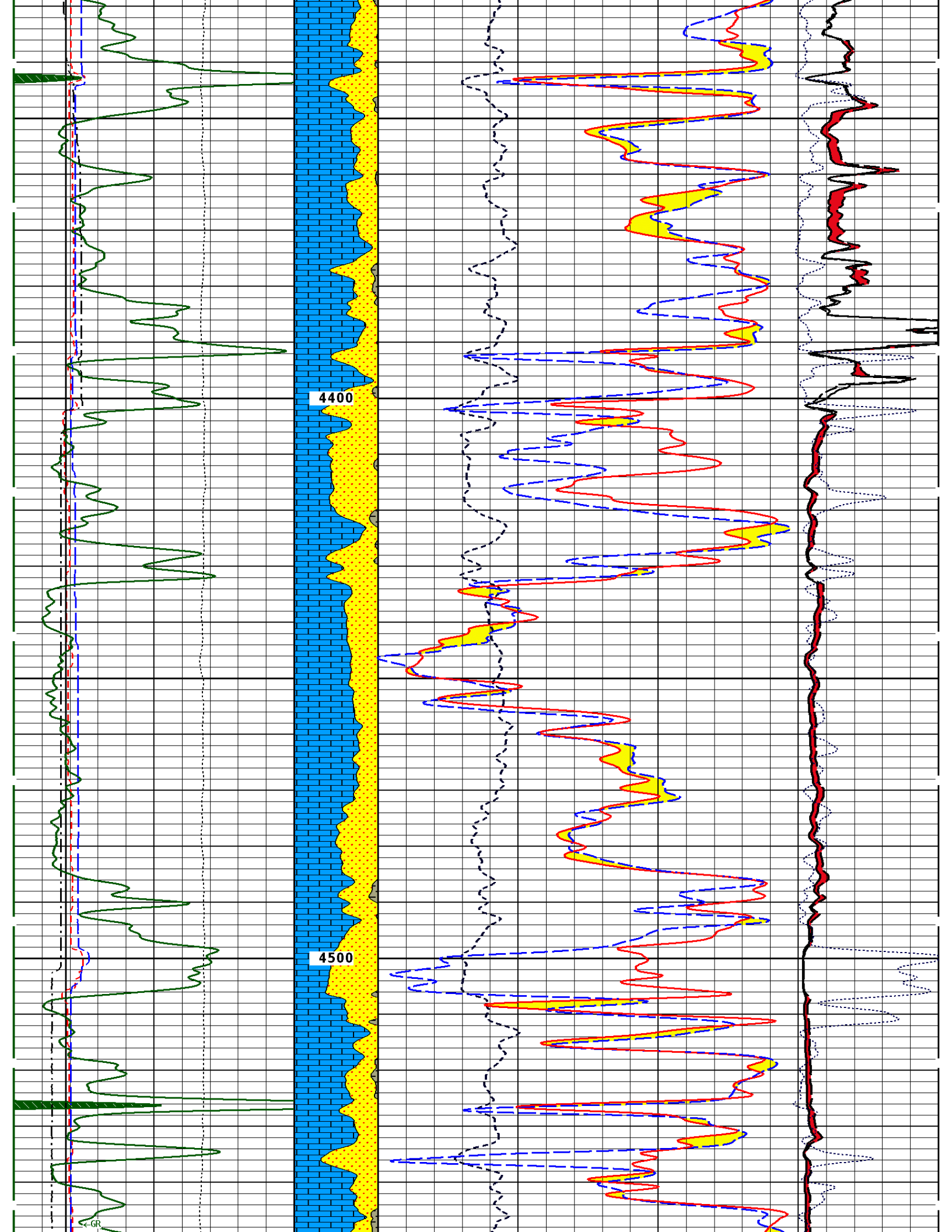
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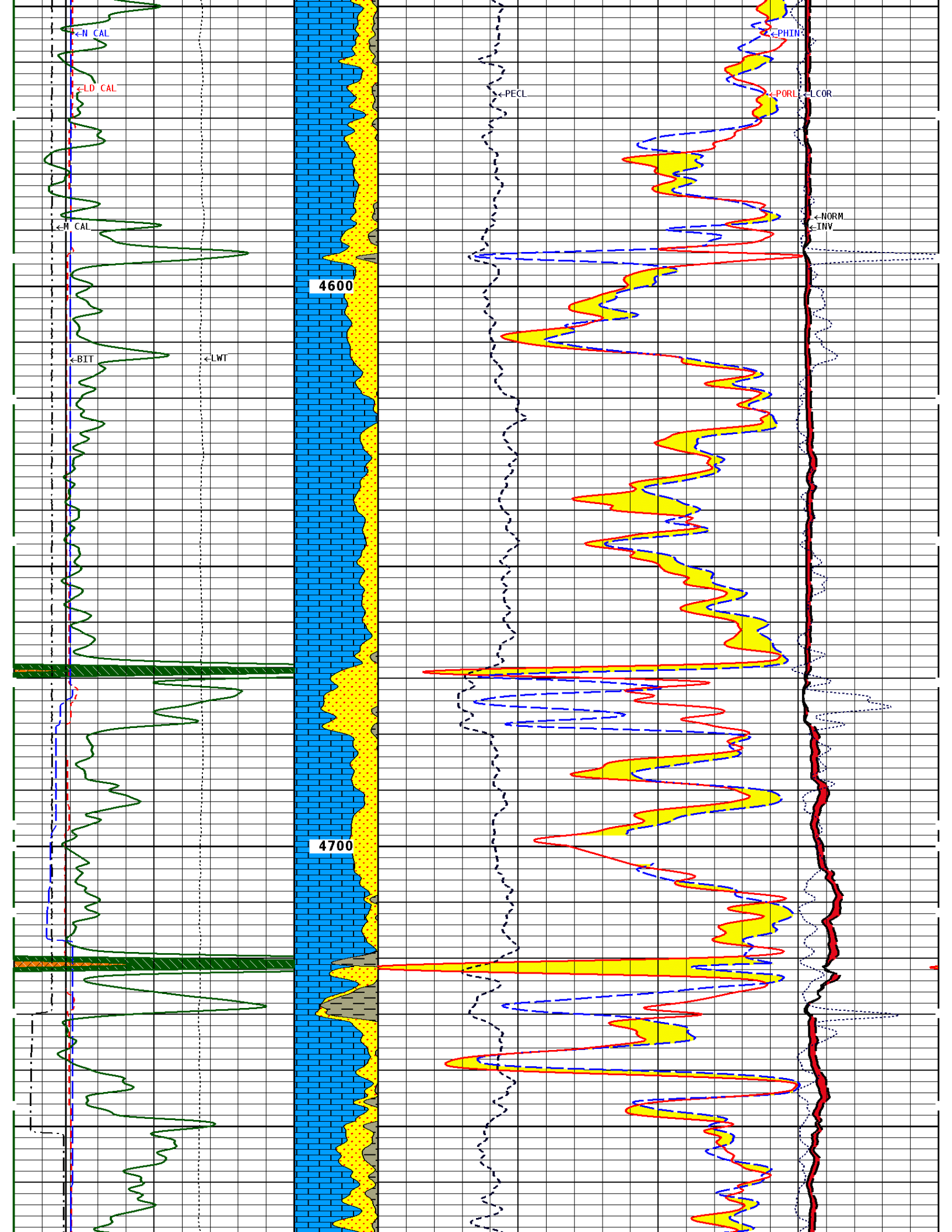
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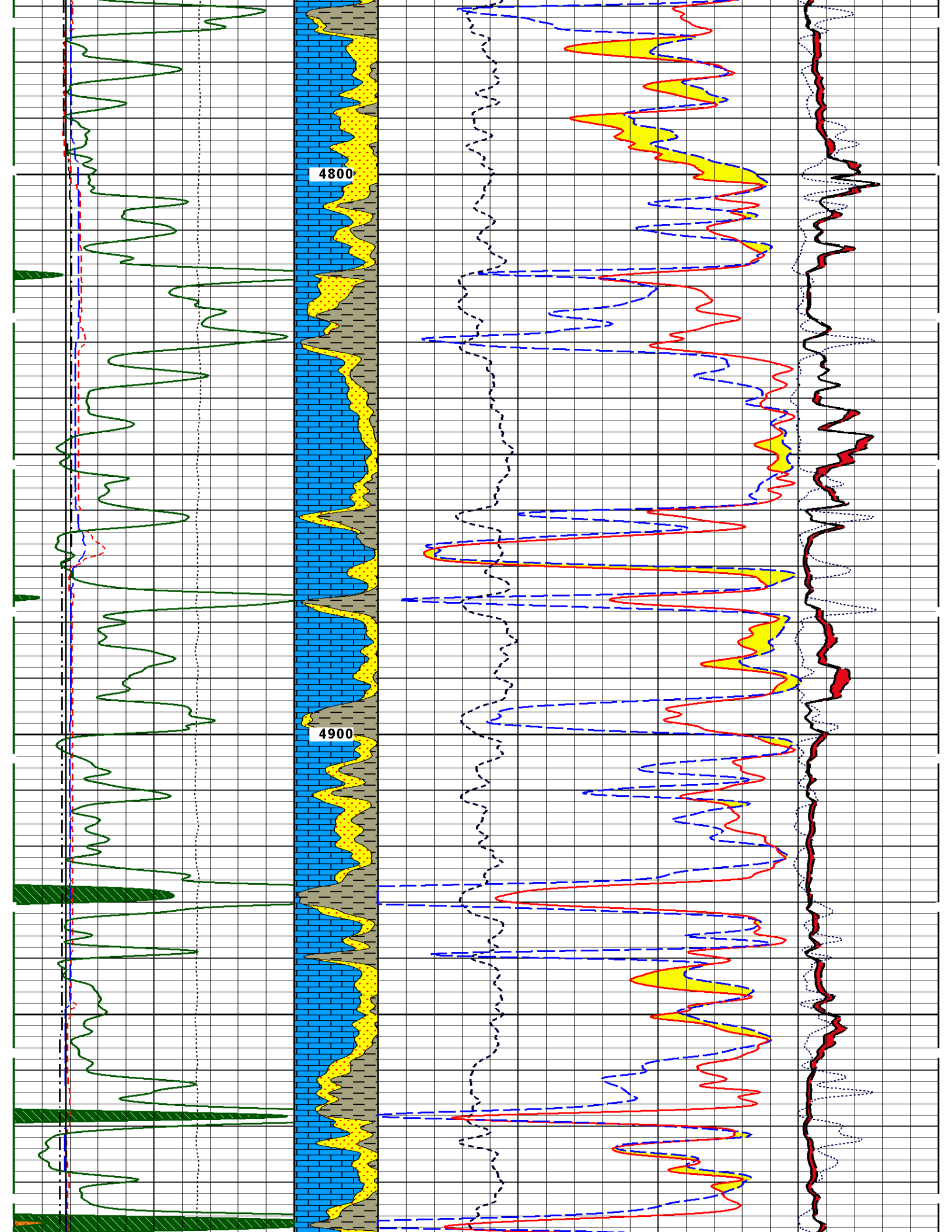
M CAL
BIT
LWT
4600
4700
PECL
PHIN
PORL
LCOR
NORM
INV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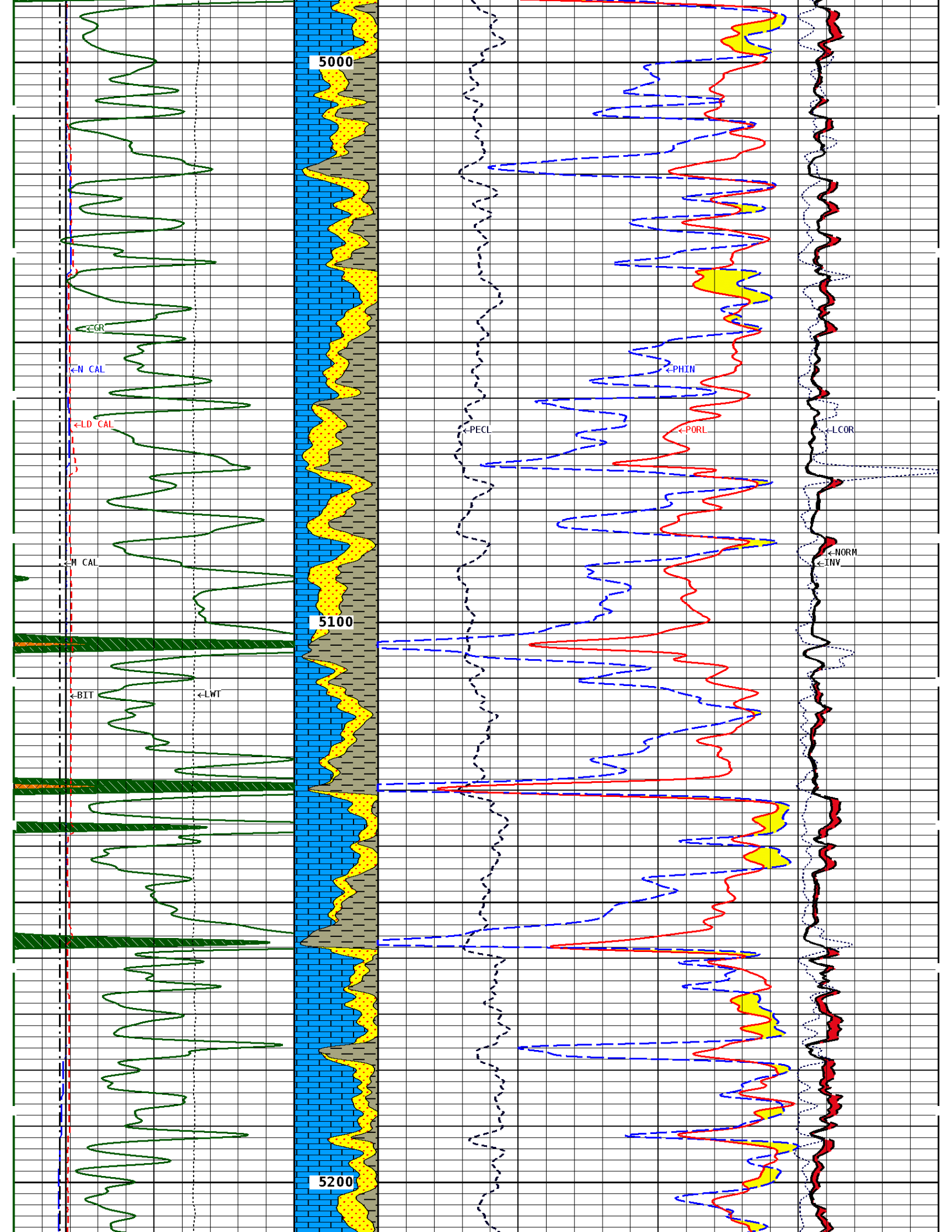
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←BIT
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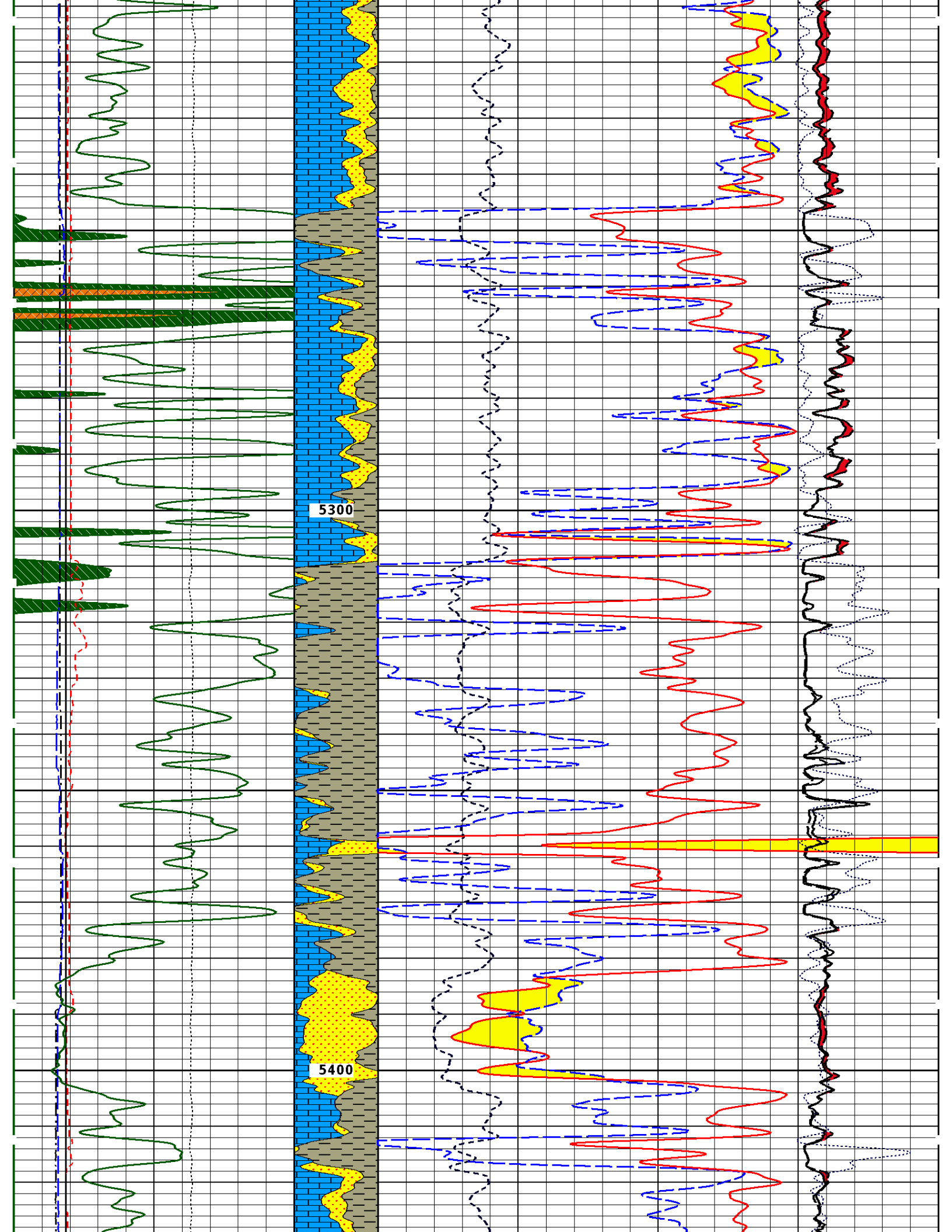
←PHIN
←PECL
←PORL
←LCOR
←NORM
←INV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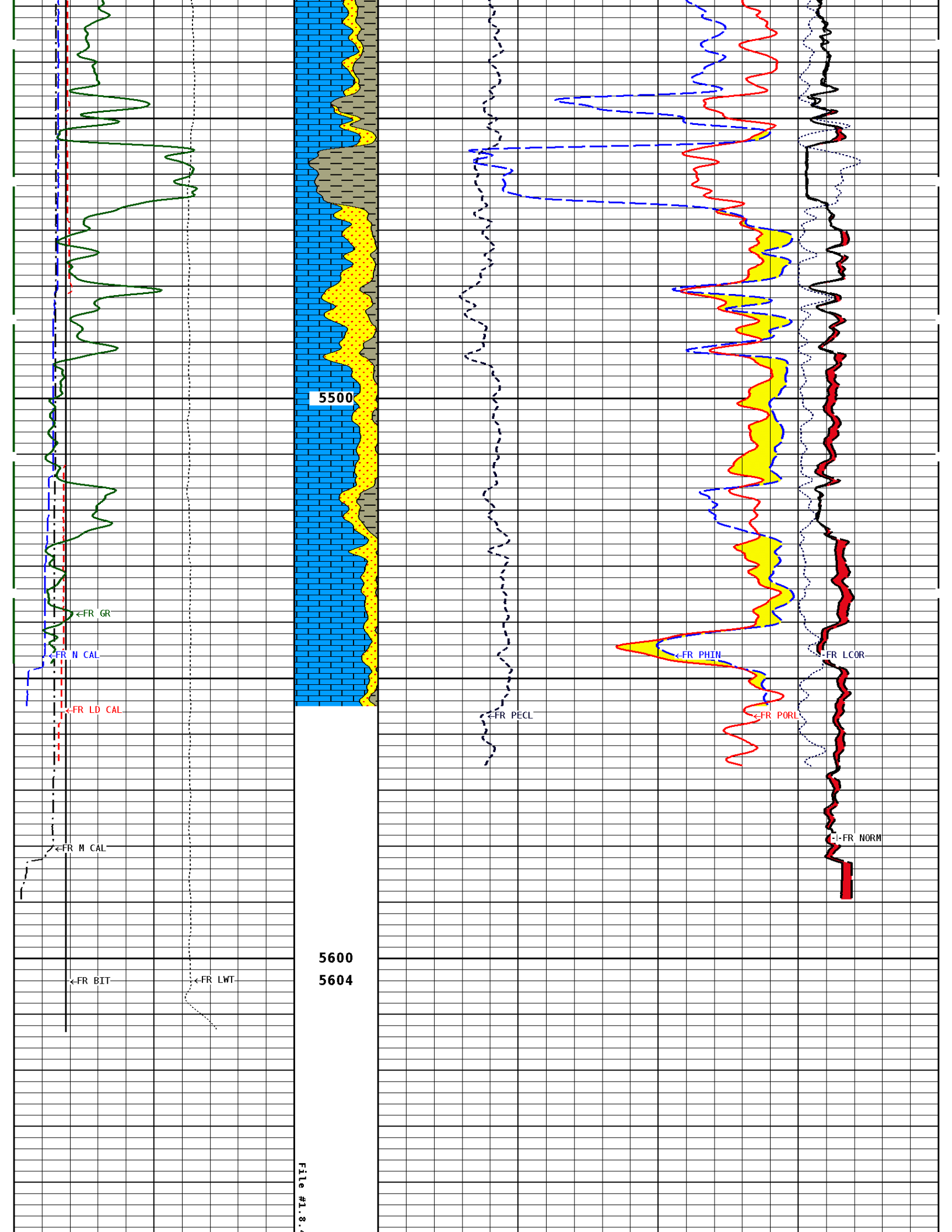
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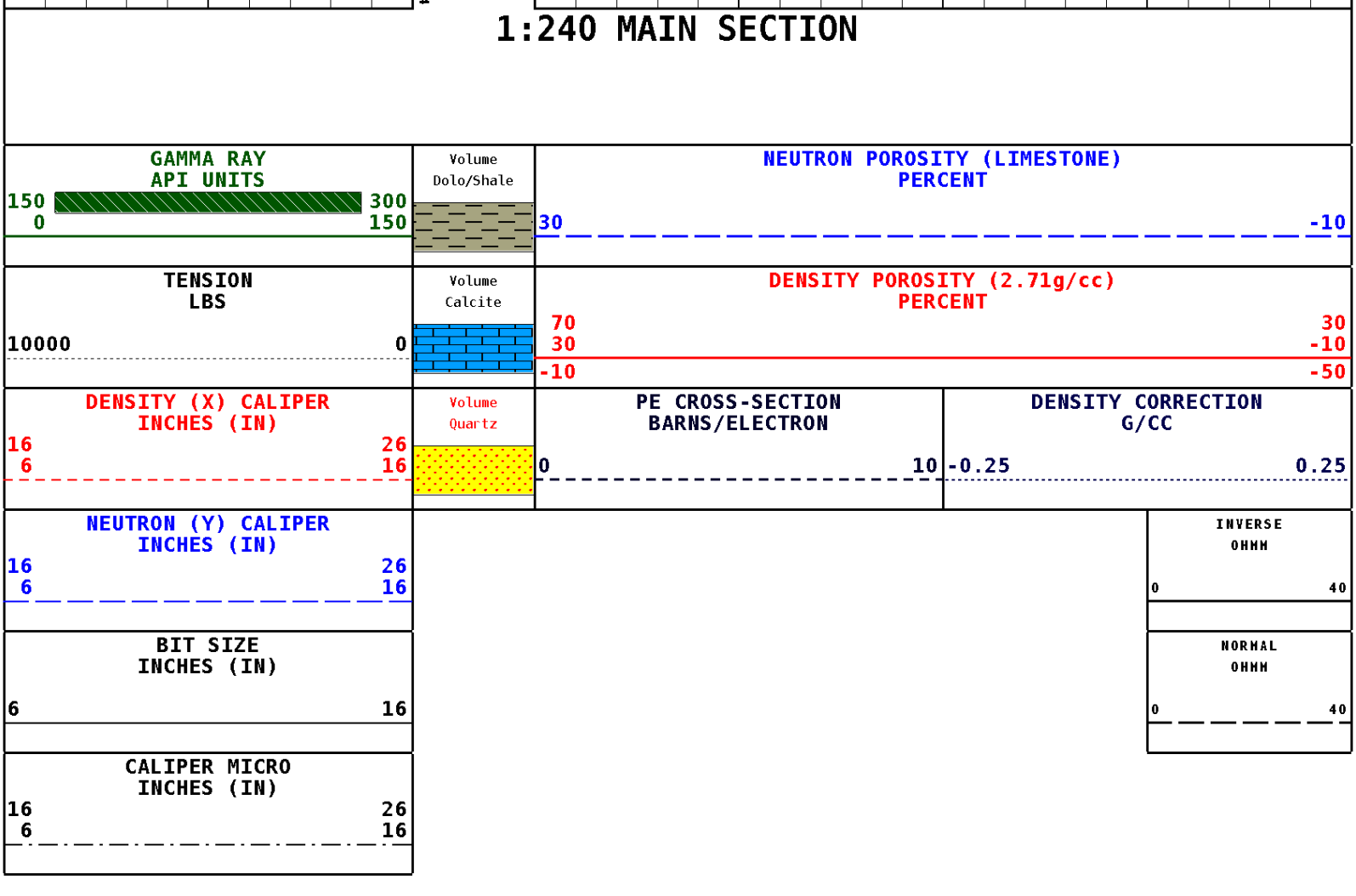
←FR PORL
←FR LCOR
←FR NORM
5600
5604
File #1.8.



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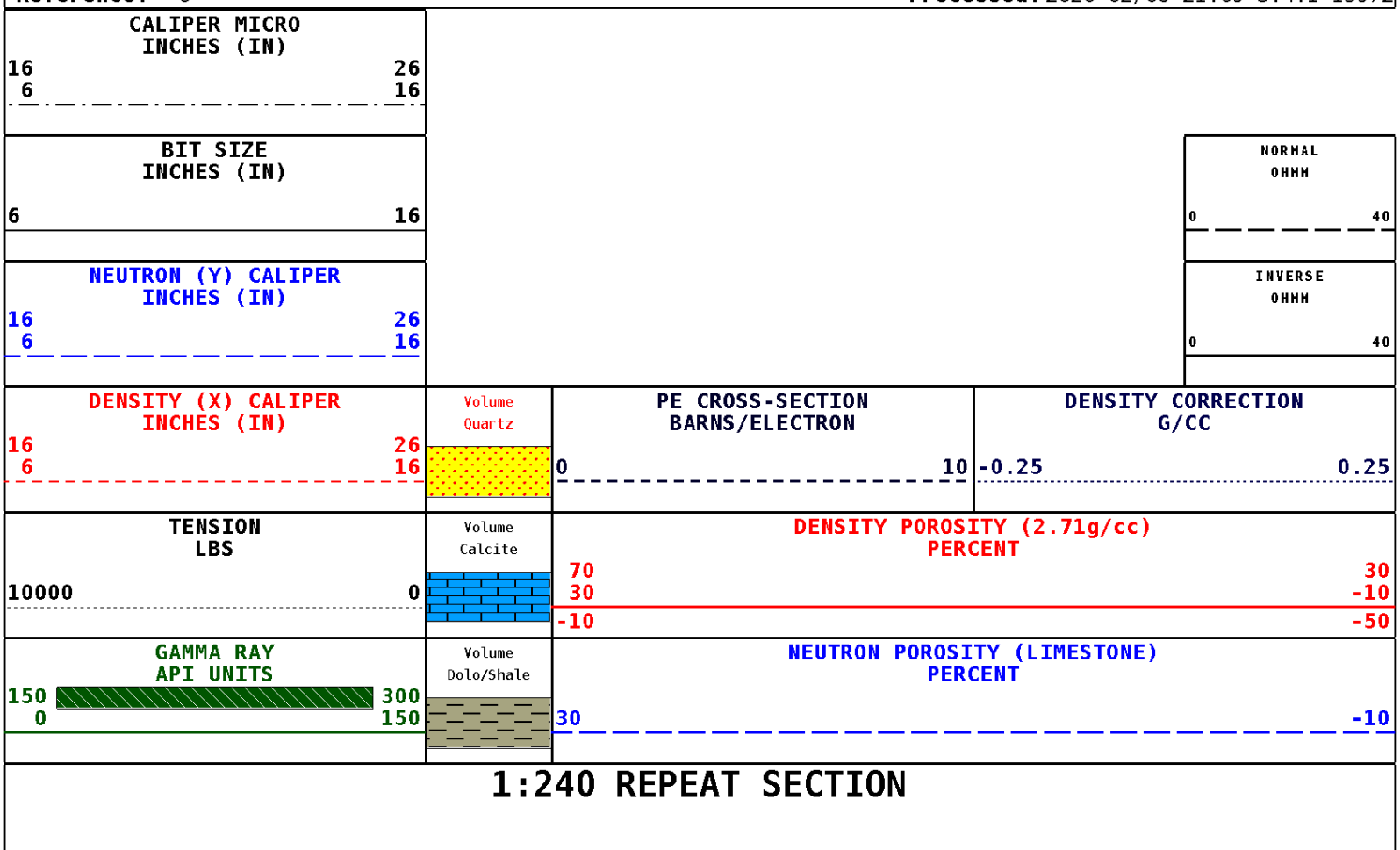
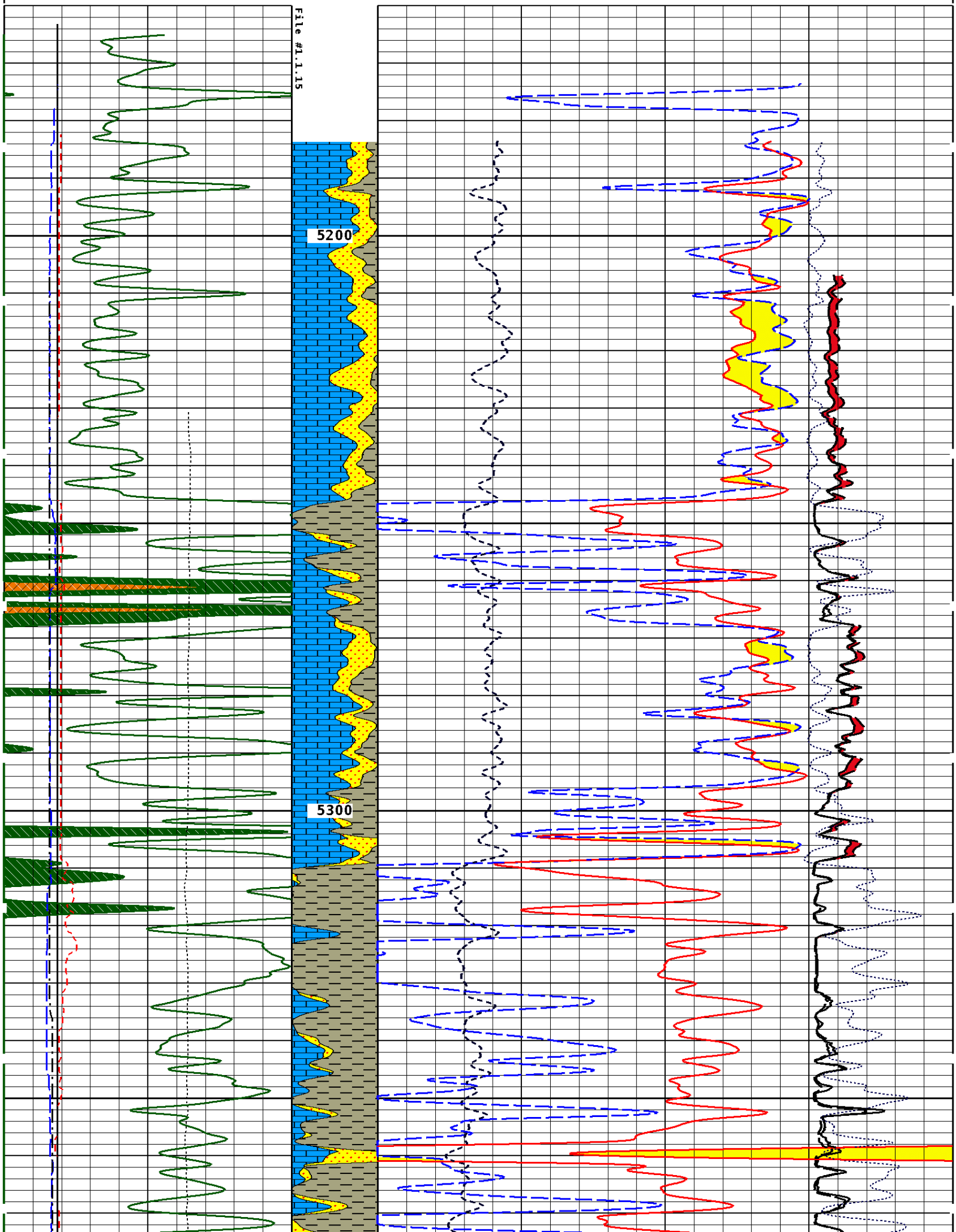
Reference: 0 **Processed:** 2020-02/06 21:09 3.4.1-13972

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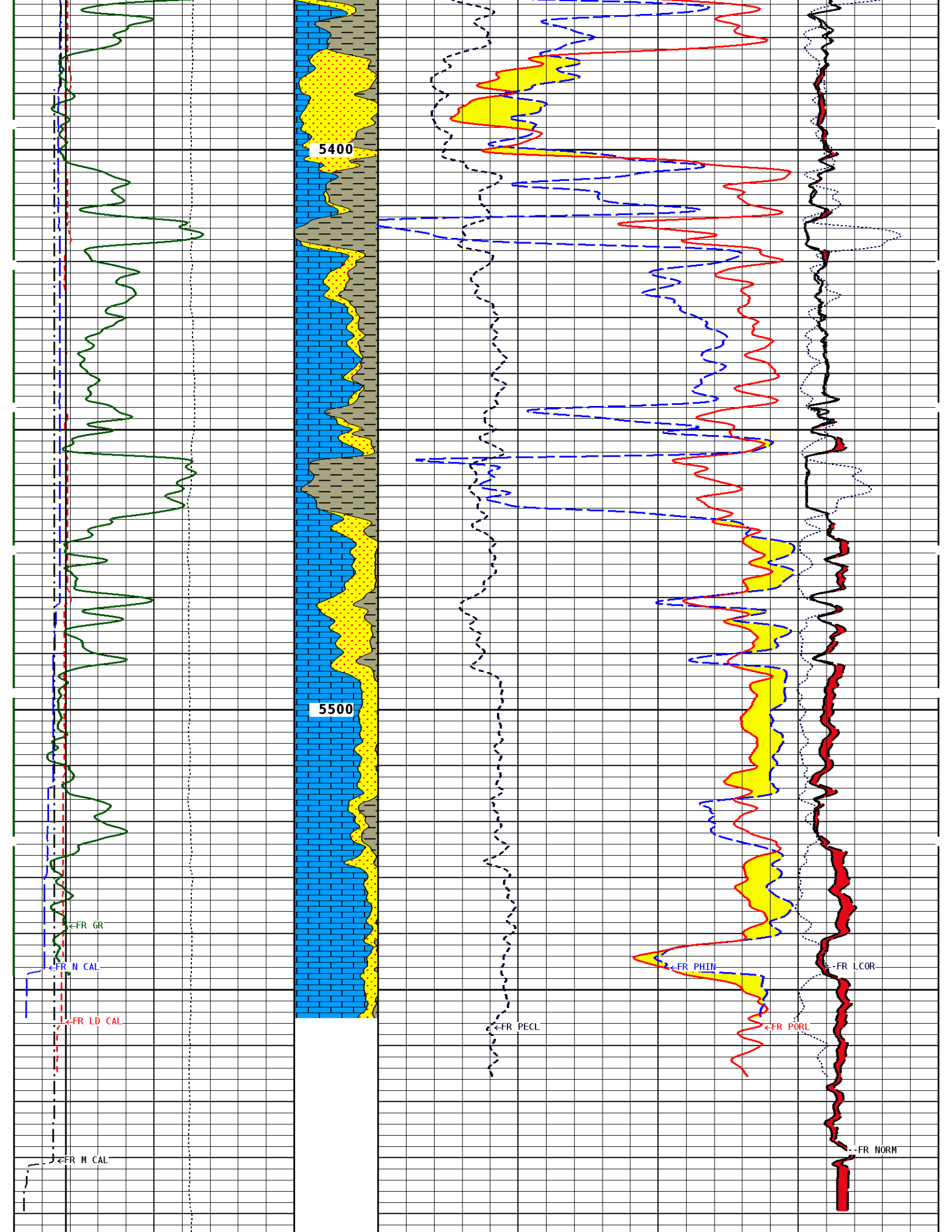
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5500
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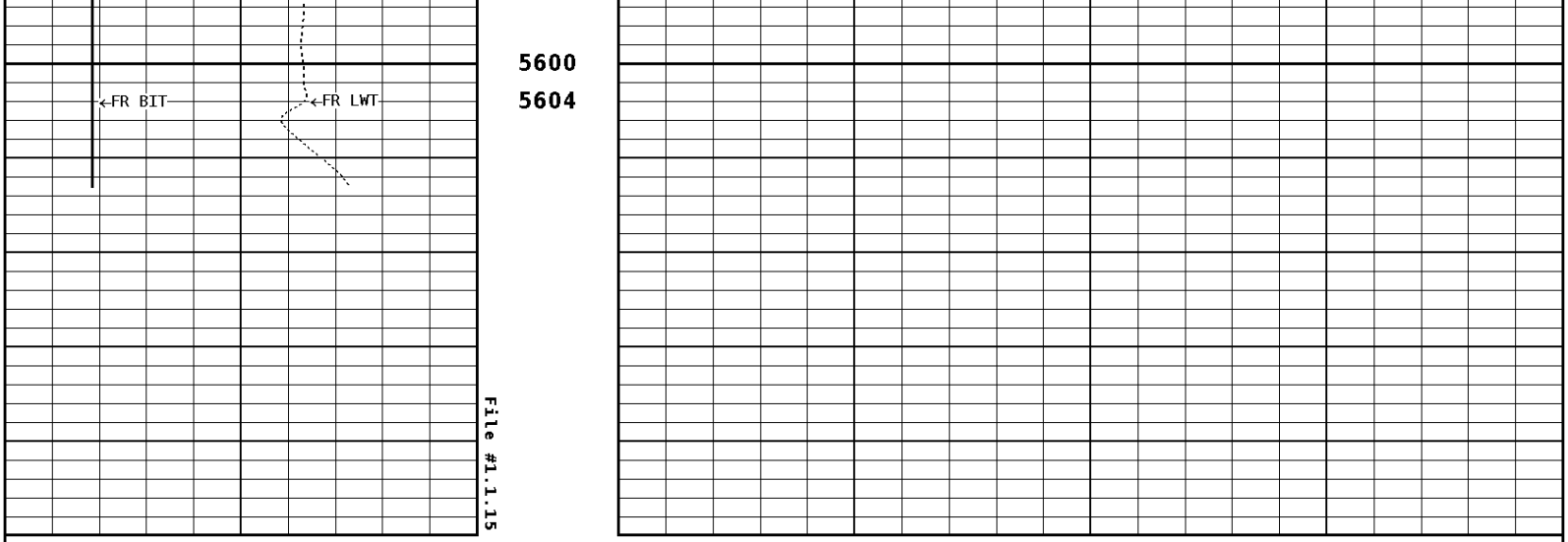
←FR PECL
←FR PHIN
←FR PORL
←FR LCOR
FR NORM



1:240 REPEAT SECTION

GAMMA RAY API UNITS	Volume Dolo/Shale	NEUTRON POROSITY (LIMESTONE) PERCENT
150 300 0 150		30 -10

TENSION LBS	Volume Calcite	DENSITY POROSITY (2.71g/cc) PERCENT
10000 0		70 30 30 -10 -10 -50

DENSITY (X) CALIPER INCHES (IN)	Volume Quartz	PE CROSS-SECTION BARNS/ELECTRON	DENSITY CORRECTION G/CC
16 26 6 16		0 10	-0.25 0.25

NEUTRON (Y) CALIPER INCHES (IN)	INVERSE OHMM
16 26 6 16	0 40

BIT SIZE INCHES (IN)	NORMAL OHMM
6 16	0 40

CALIPER MICRO INCHES (IN)
16 26 6 16

*** Borehole Zone Factors ***

Zone 1 99999.0 to 0.0 Feet

Matrix Density	2.71	g/cc
Fluid Density	1.00	g/cc
Formation Matrix	Limestone	
Drill Bit Size	7.875	in
Casing Diameter	5.500	in
Casing Thickness	0.250	in
Casing Correction (PHI N)	Disable	

Well File: MERIT_DANIELS_1-28_FEB-6_QST **Scale:** 1:240 **Format:** LDT-240
Segment: V1.D8.S4 MAIN FINAL **Acquired:** Not Available
Reference: 0 **Processed:** Not Available

BIT SIZE INCHES (IN)
6 16

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

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

TENSION
LBS
10000 0

GAMMA RAY
API UNITS
150 300
0 150

PE CROSS-SECTION
BARNS/ELECTRON
0 10

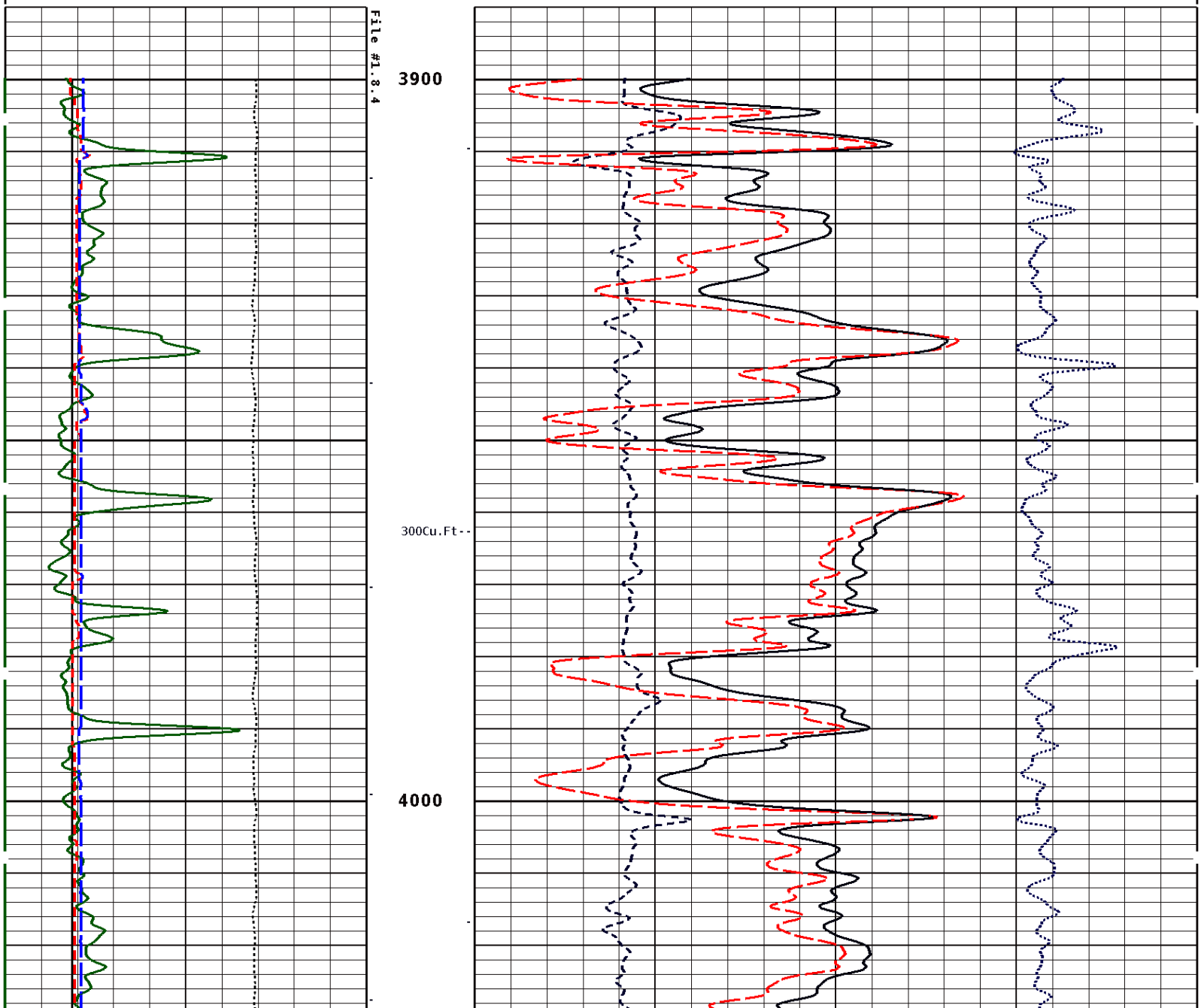
DENSITY CORRECTION
G/CC
-0.25 0.25

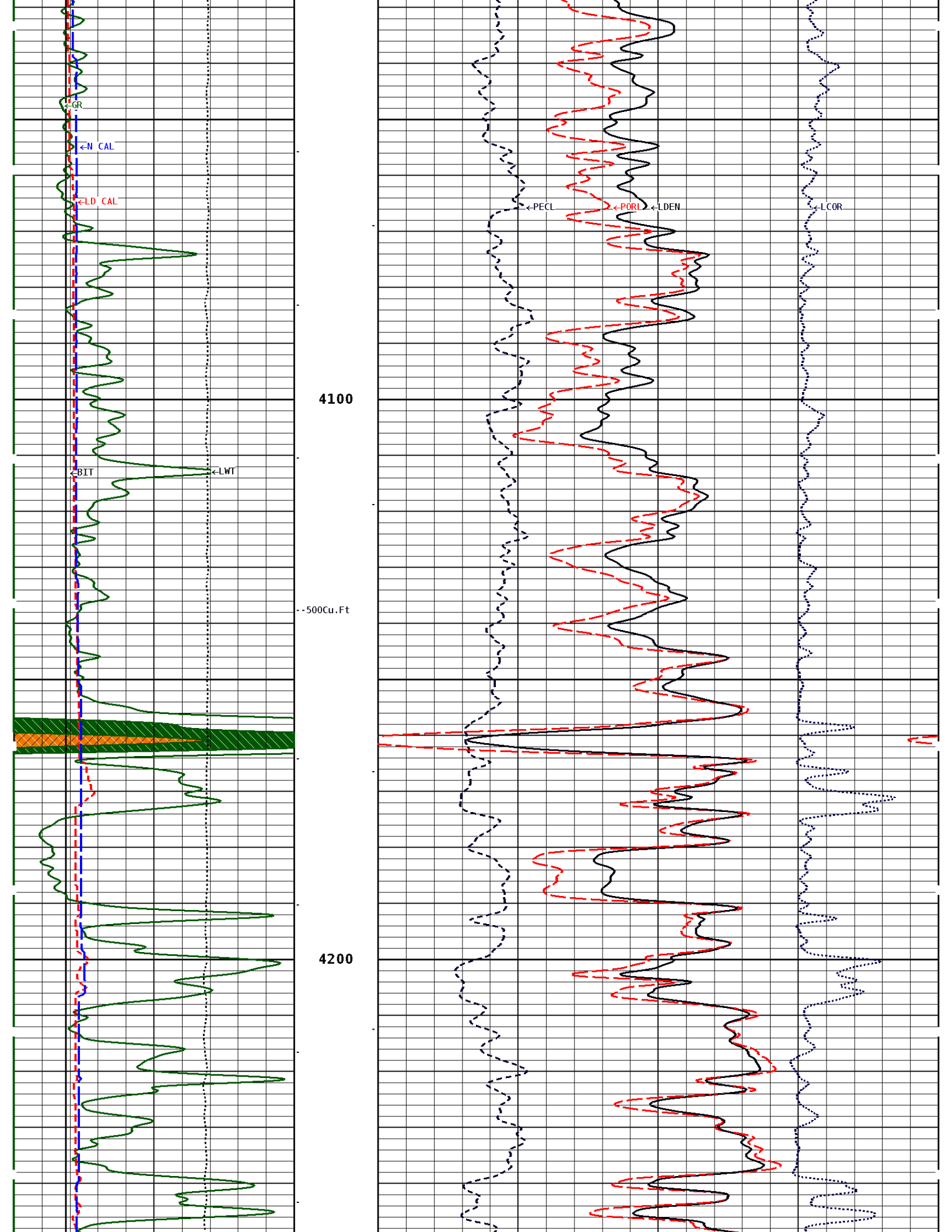
COMPENSATED BULK DENSITY
G/CC
3.0 4.0
2.0 3.0
1.0 2.0

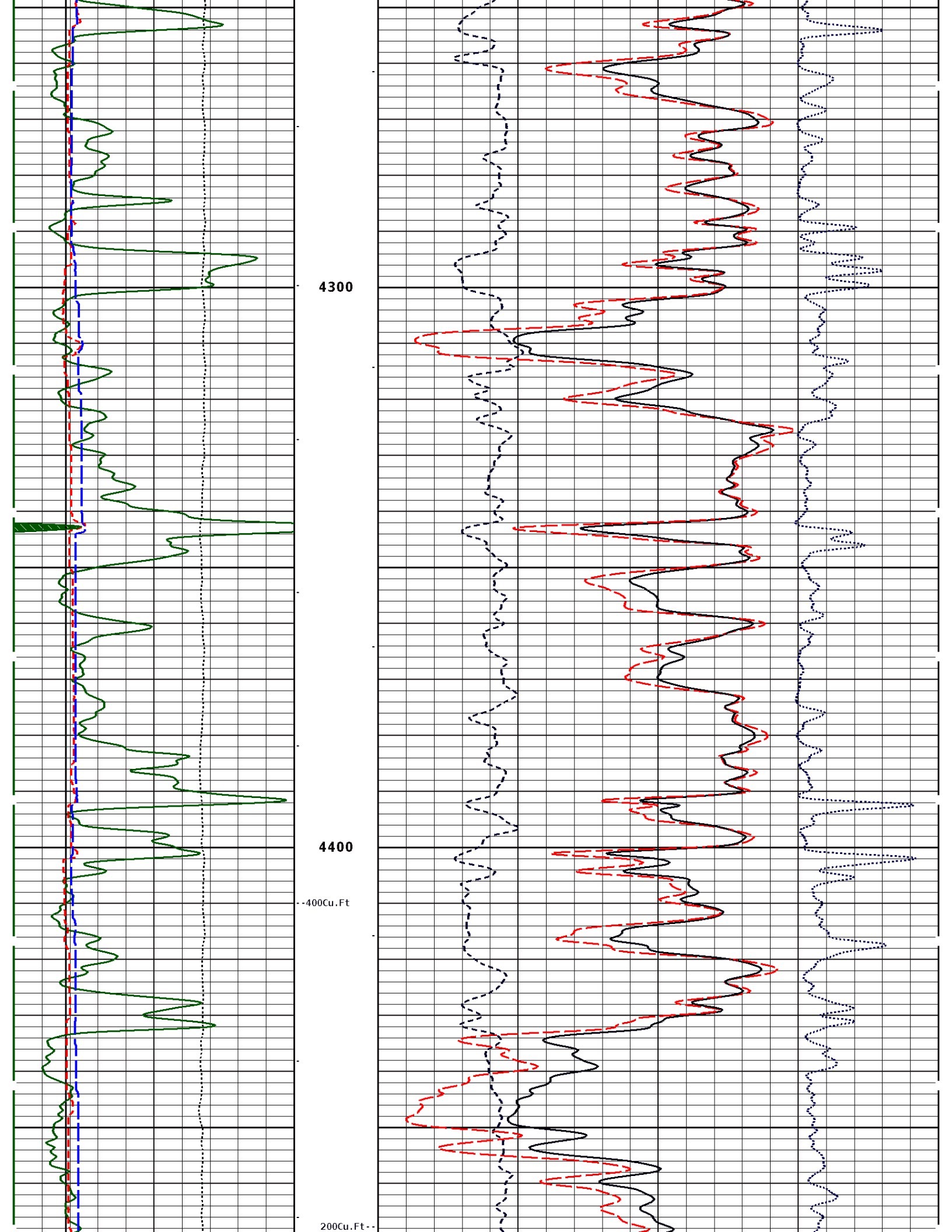
-BHV AHV-
CU.FT

DENSITY POROSITY (2.71g/cc)
PERCENT
70 30
30 -10
-10 -50

1:240 MAIN SECTION
BULK DENSITY




GR
N CAL
LD CAL
BIT
LWT
PECL
PORL
LDEN
LCOR
4100
--500Cu.Ft
4200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4400
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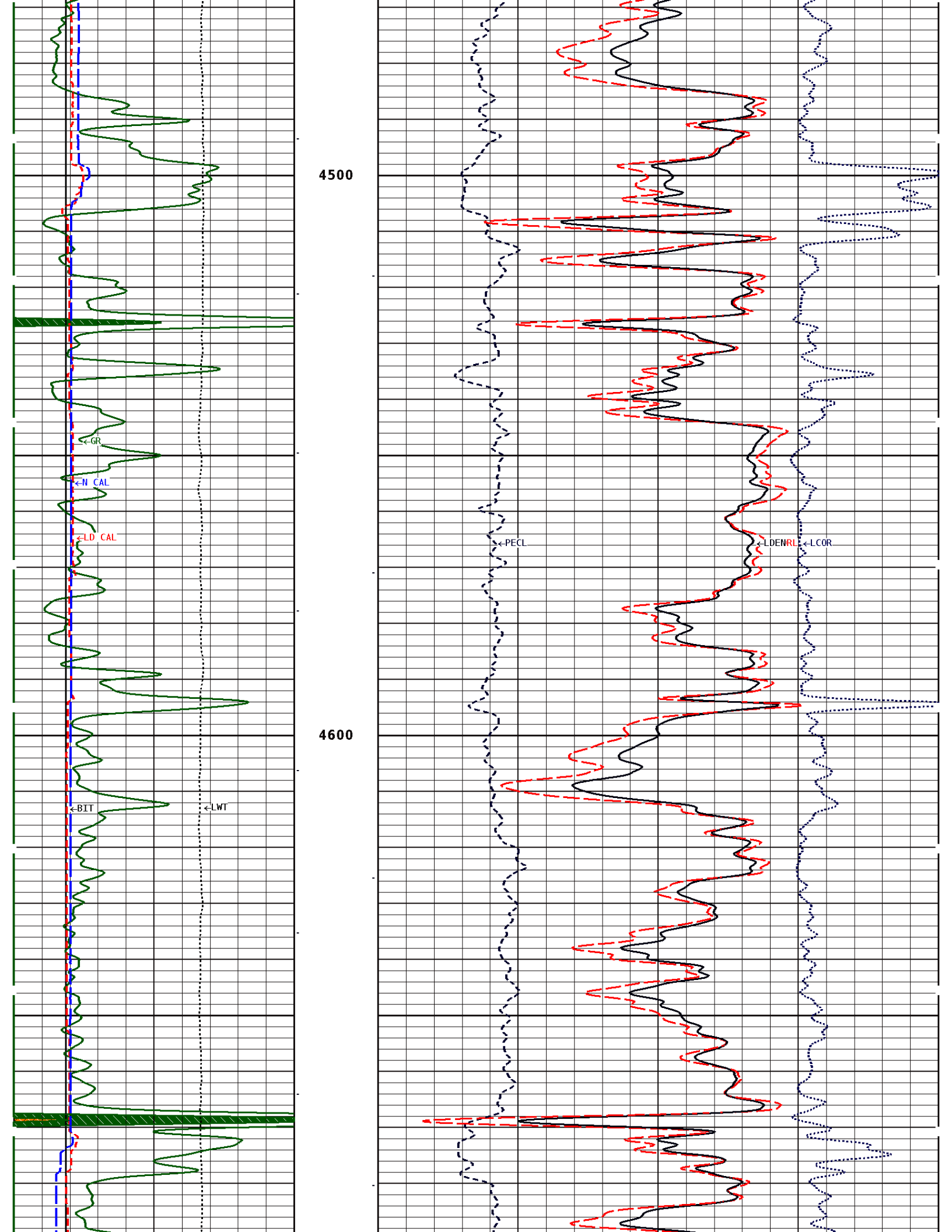
200Cu.Ft--


4500
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←GR
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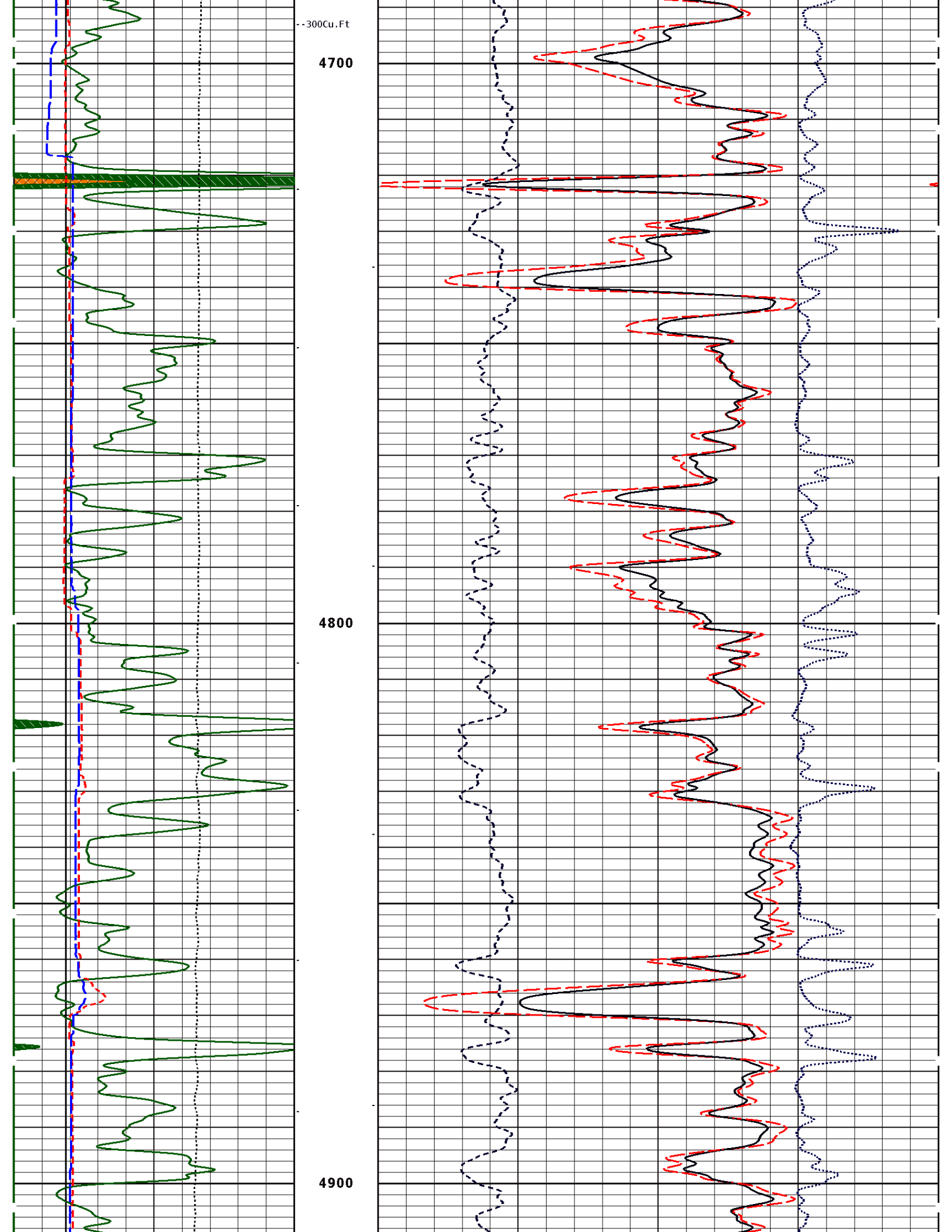
←LD CAL
←BIT
←LWT
←PECL
←LDENRL
←LCOR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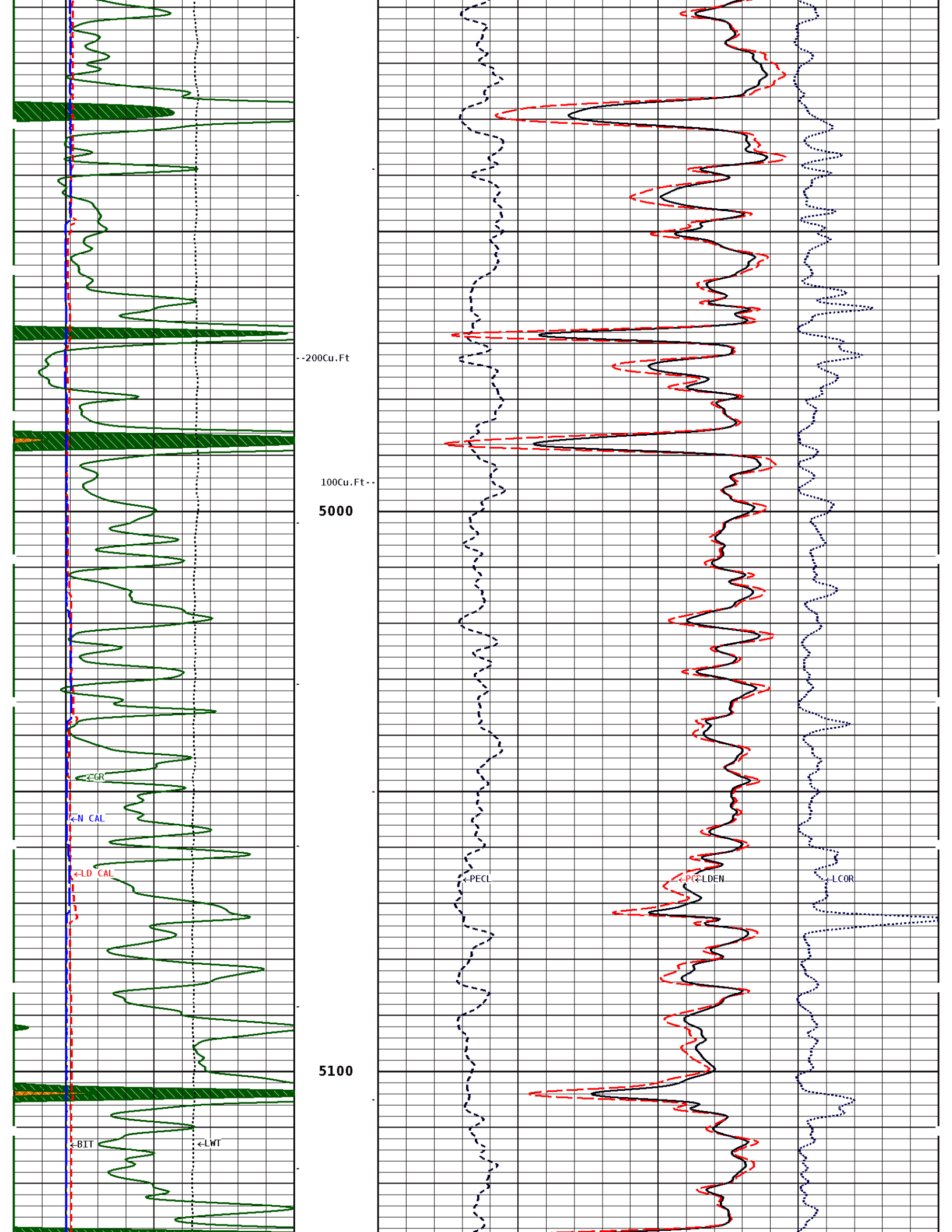
4700
4800
4900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←PCLDEN
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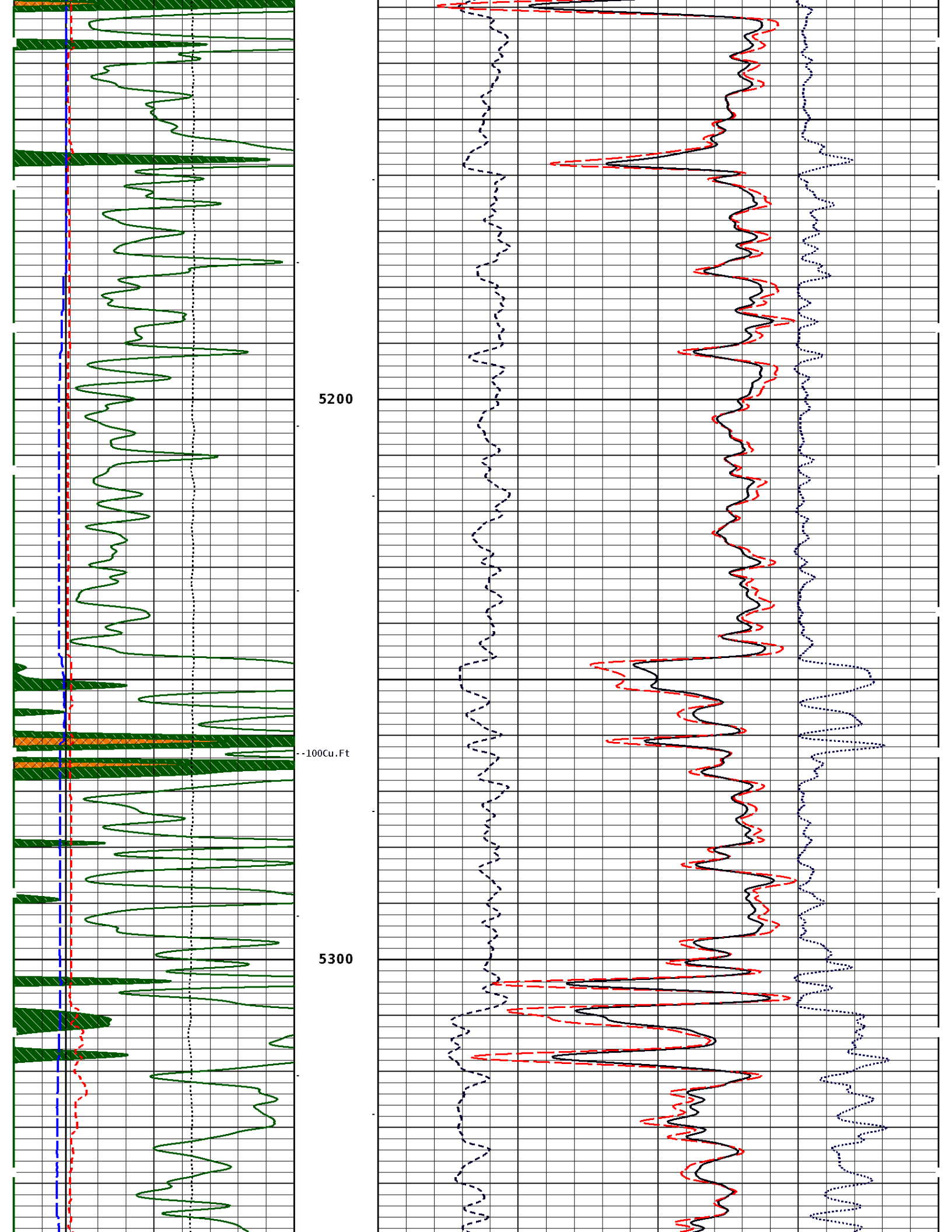
←LWT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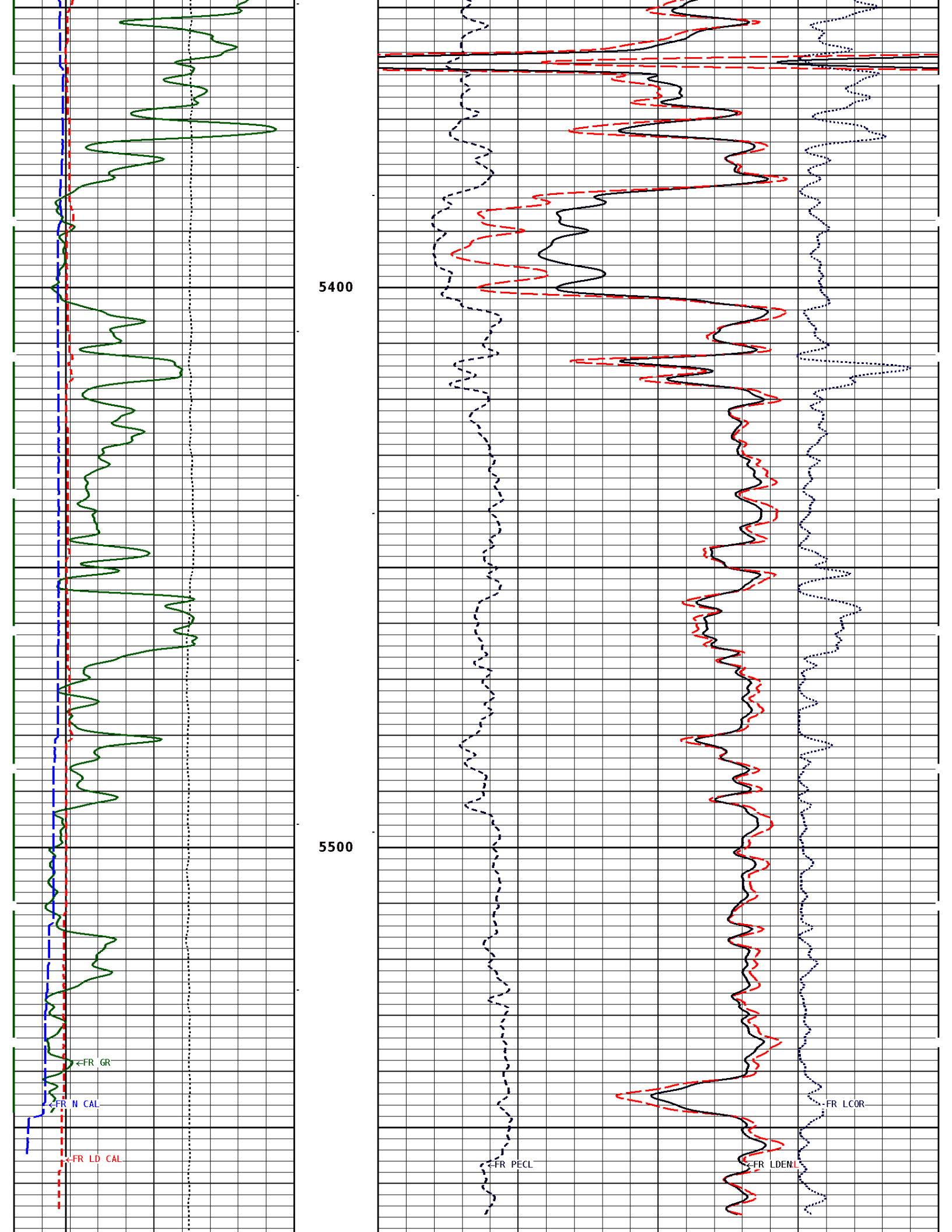
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5500
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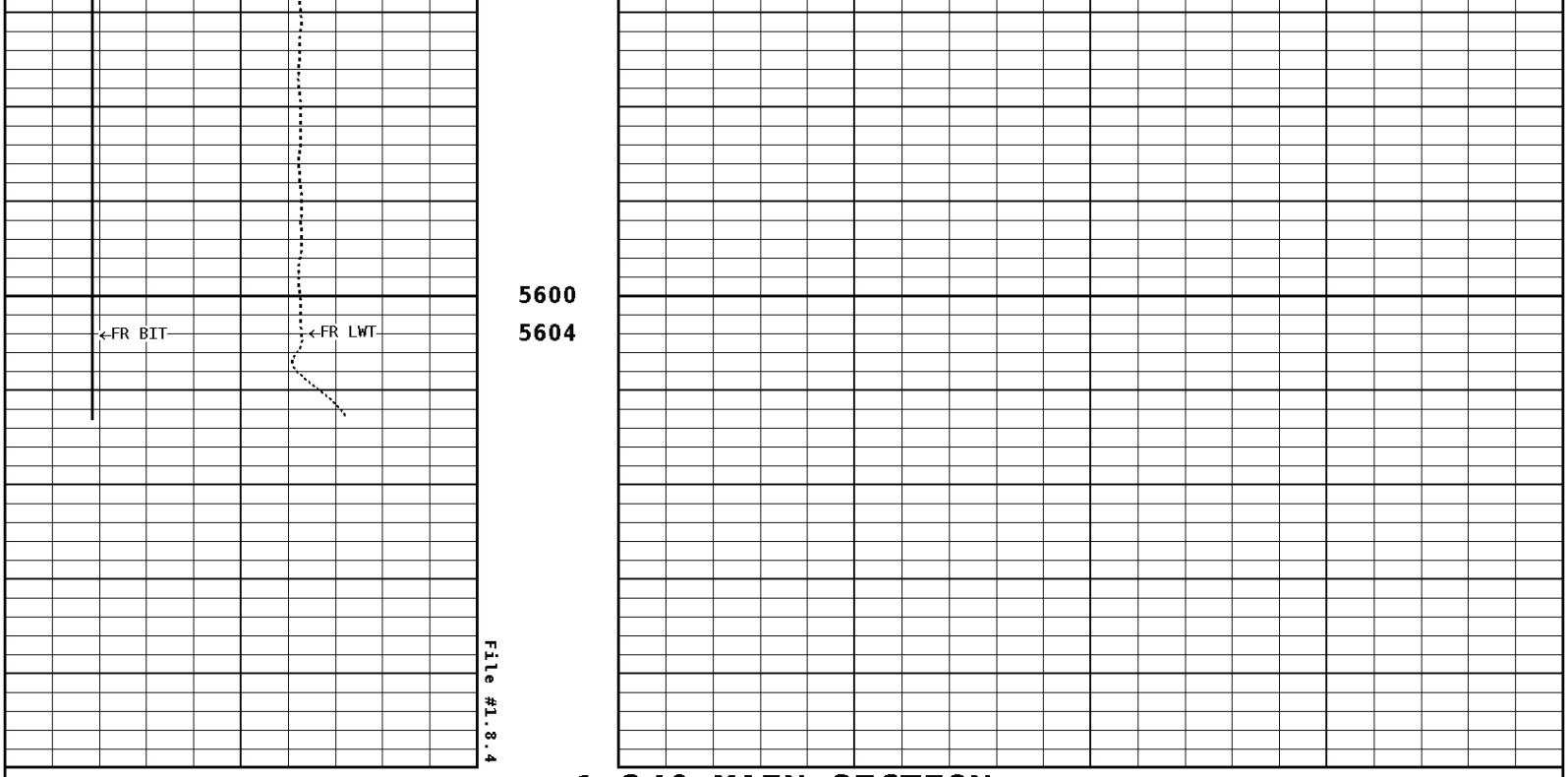
←FR LDENL



1:240 MAIN SECTION

BULK DENSITY

GAMMA RAY **API UNITS** 150 — 300 0 — 150	-BHV AHV- CU.FT	**DENSITY POROSITY (2.71g/cc)** **PERCENT** 70 — 30 30 — -10 -10 — -50
TENSION **LBS** 10000 — 0		**COMPENSATED BULK DENSITY** **G/CC** 3.0 — 4.0 2.0 — 3.0 1.0 — 2.0
DENSITY (X) CALIPER **INCHES (IN)** 16 — 26 6 — 16		**PE CROSS-SECTION** **BARNS/ELECTRON** 0 — 10
NEUTRON (Y) CALIPER **INCHES (IN)** 16 — 26 6 — 16		**DENSITY CORRECTION** **G/CC** -0.25 — 0.25
BIT SIZE **INCHES (IN)** 6 — 16		

STEP energy services

Company: MERIT ENERGY COMPANY, LLC

Well: DANIELS #1-28

Location: 1879' FEL & 2288' FNL

Logged: 02-06-2020

K.B. Elev: 2985.0 Ft