



**PHOTO DENSITY
DUAL SPACED NEUTRON
GAMMA RAY**

COMPANY O'BRIEN ENERGY RESOURCES CORP.
 WELL PREEDY EAST #4-3
 FIELD BORCHERS NW
 COUNTY MEADE
 STATE U.S.A. / KANSAS
 LOCATION 1923' FNL & 371' FWL
 SE NW SW NW

SEC 3 TWP 33S RGE 29W Other Services
 Latitude 37.2077722540 ARRAY INDUCTION
 Longitude -100.469754245
 API Number 15-119-21470
 Permanent Datum GL, Elevation 2610 feet
 Log Measured From KB, 12.00 feet above Permanent Datum
 Drilling Measured From KB

Date	16-SEPT-2022	Elevations:	KB 2622.00
Run Number	ONE	DF 2621.00	GL 2610.00
Service Order	T1-220916WFT		
Depth Driller	6225.00	feet	
Depth Logger	6218.00	feet	
First Reading	6191.00	feet	
Last Reading	4000.00	feet	
Casing Driller	1530.00	feet	
Casing Logger	1525.00	feet	
Bit Size	7.875	inches	
Hole Fluid Type	WBM		
Density / Viscosity	9.30 lb/USg	55.00 sec/qt	
PH / Fluid Loss	11.00	8.00 ml/30Min	
Sample Source	FLOWLINE		
Rm @ Measured Temp	1.42 @ 75.0	ohm-m	
Rmf @ Measured Temp	1.065 @ 75.0	ohm-m	
Rmc @ Measured Temp	1.775 @ 75.0	ohm-m	
Source Rmf / Rmc	CALC	CALC	
Rm @ BHT	0.681 @129.0	ohm-m	
Time Since Circulation	4 HOURS		
Max Recorded Temp	129.00	deg F	
Equipment / Base	10001	OKC	
Recorded By	B. OETTING		
Witnessed By	RODNEY GONZALEZ		
RIG	DUKE RIG1		

BOREHOLE RECORD Last Edited: 16-SEP-2022 09:11

Bit Size inches	Depth From feet	Depth To feet
12.250	0.00	1530.00
7.875	1530.00	6225.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	1530.00	26.00

REMARKS

WLS VERSION 20.11

- TOOLSTRING:
 RUN 1 : TRIPLE COMBO FRESH

- HARDWARE USED:
 MAI: 0.5" STANDOFF
 MDN: DUAL ECCENTERED BOWSPRING

- 2.71 G/CC DENSITY MATRIX USED TO CALCULATE POROSITY.

- ANNULAR HOLE VOLUME WITH 4.5 INCH PRODUCTION CASING FROM TD TO INTERMEDIATE CASING

- LOGGING INTERVALS REQUESTED: TD - 5500 HI RES
 TD - 4000 DETAIL
 TD - SFC

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy of correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents, or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

In interpreting, communicating or providing information and/or making recommendations, either written or oral, as to logs or test or other data, type or amount of material, or Work or other service to be furnished, or manner of performance, or in predicting results to be obtained, the Contractor will give the Company the benefit of the Contractor's best judgment based on its experience and will perform all such Work in a good and workmanlike manner. Any interpretation of test or other data, and any recommendation or reservoir description based upon such interpretations, are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and assumptions are not infallible, and with respect to which professional engineers and analysts may differ. ACCORDINGLY ANY INTERPRETATION OR RECOMMENDATION RESULTING FROM THE SERVICES WILL BE AT THE SOLE RISK OF THE COMPANY, AND THE CONTRACTOR CANNOT AND DOES NOT WARRANT THE ACCURACY, CORRECTNESS OR COMPLETENESS OF ANY SUCH INTERPRETATION OR RECOMMENDATION, WHICH INTERPRETATIONS AND RECOMMENDATIONS SHOULD NOT, THEREFORE, UNDER ANY CIRCUMSTANCES BE RELIED UPON AS THE SOLE OR MAIN BASIS FOR ANY DRILLING, COMPLETION, WELL TREATMENT, PRODUCTION OR FINANCIAL DECISION, OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING ACTIVITY, DRILLING RIG OR ITS CREW OR ANY OTHER INDIVIDUAL. THE COMPANY HAS FULL RESPONSIBILITY FOR ALL DECISIONS CONCERNING THE SERVICES.

Powered by Weatherford tools, acquisition systems, and software

10 INCH HIGH RESOLUTION LIMESTONE PASS

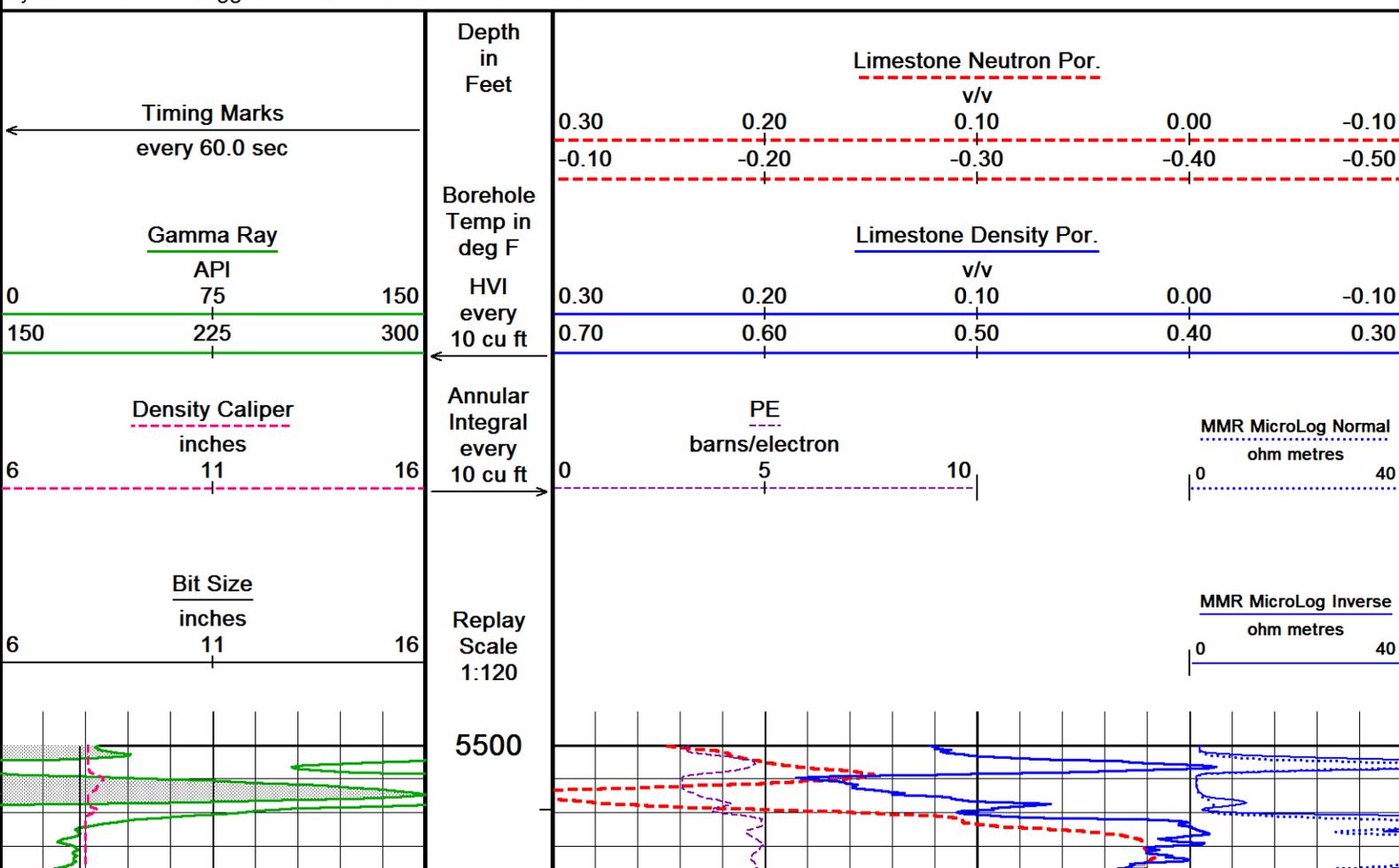
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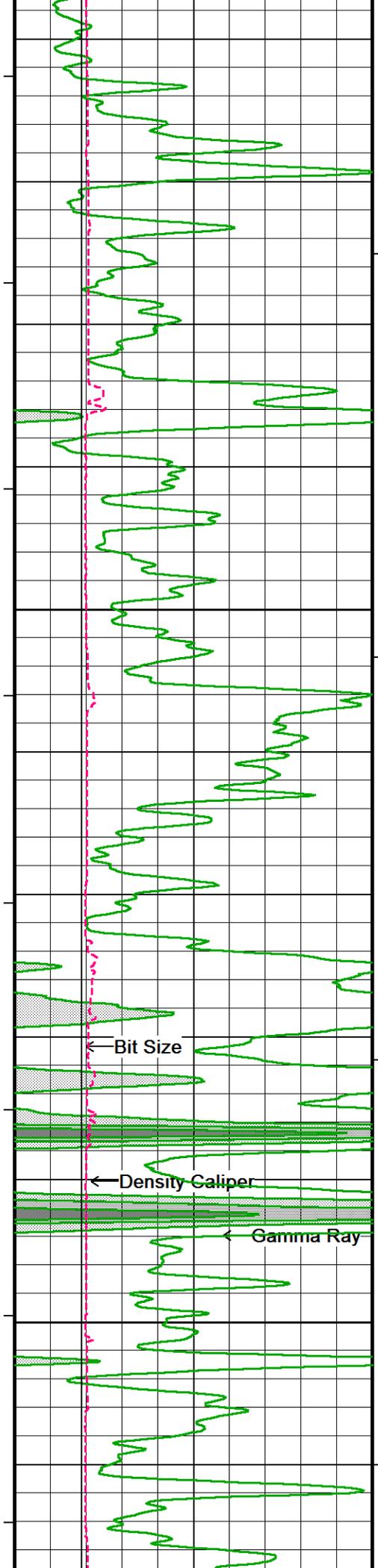
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Recorded on 16-SEP-2022 09:51

System Versions: Logged with 20.11.3980 Plotted with 20.11.3980



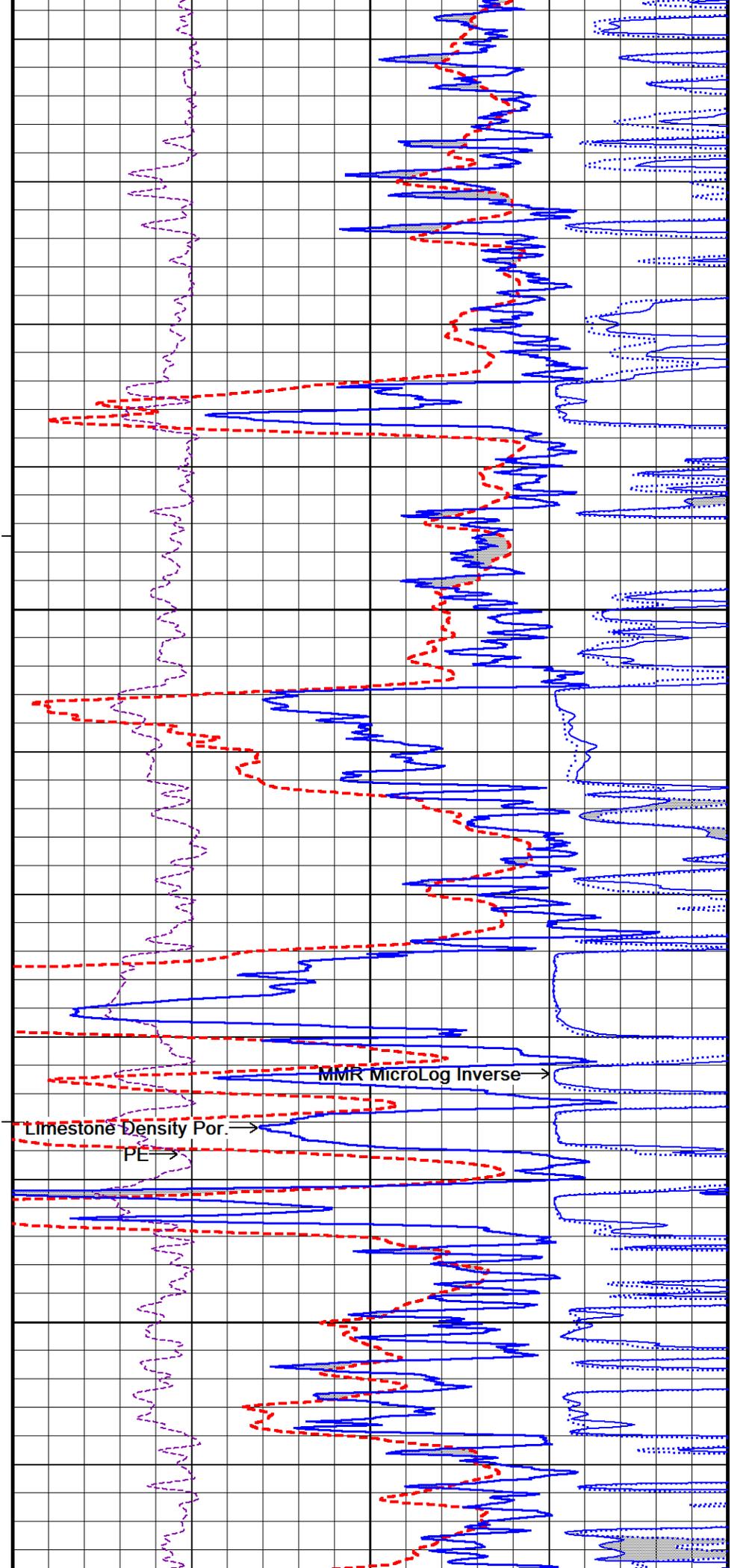


120°

5550

120°

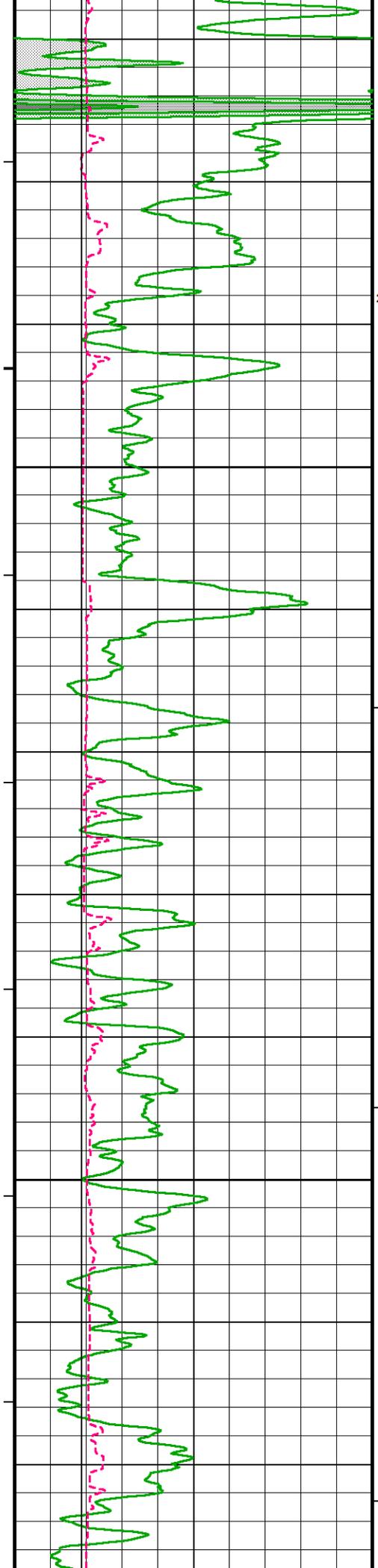
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MMR MicroLog Inverse →

Limestone Density Por. →

PE →

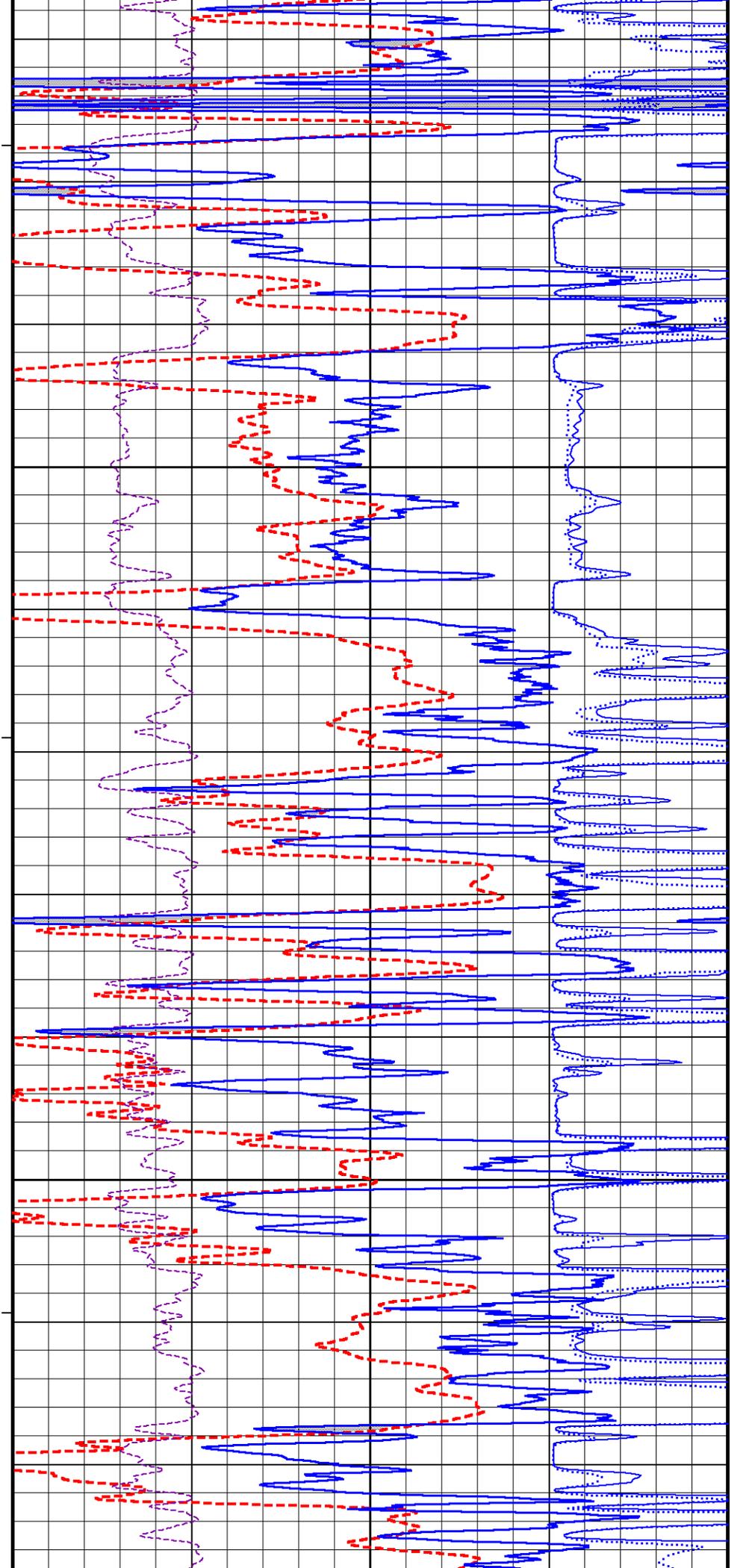


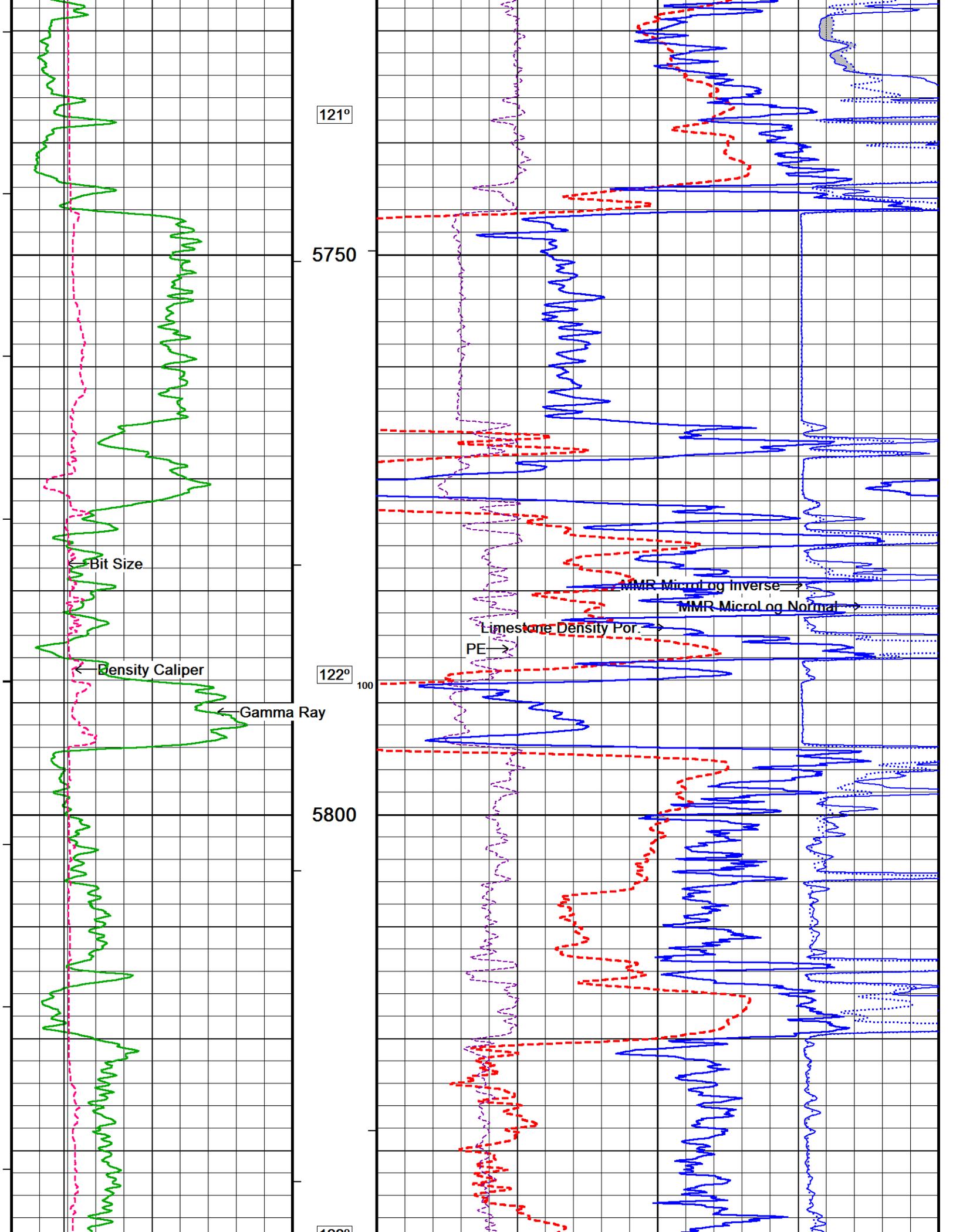
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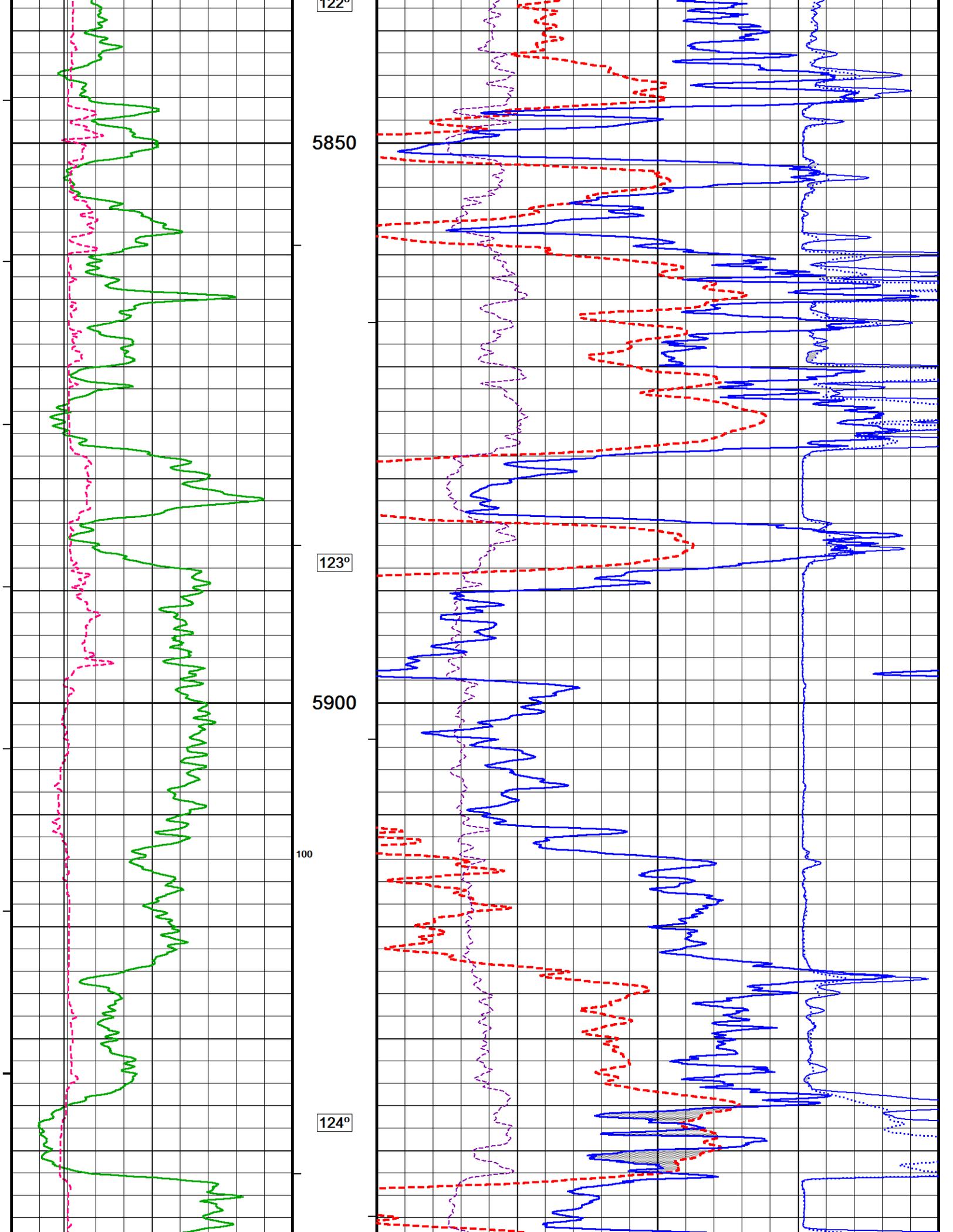
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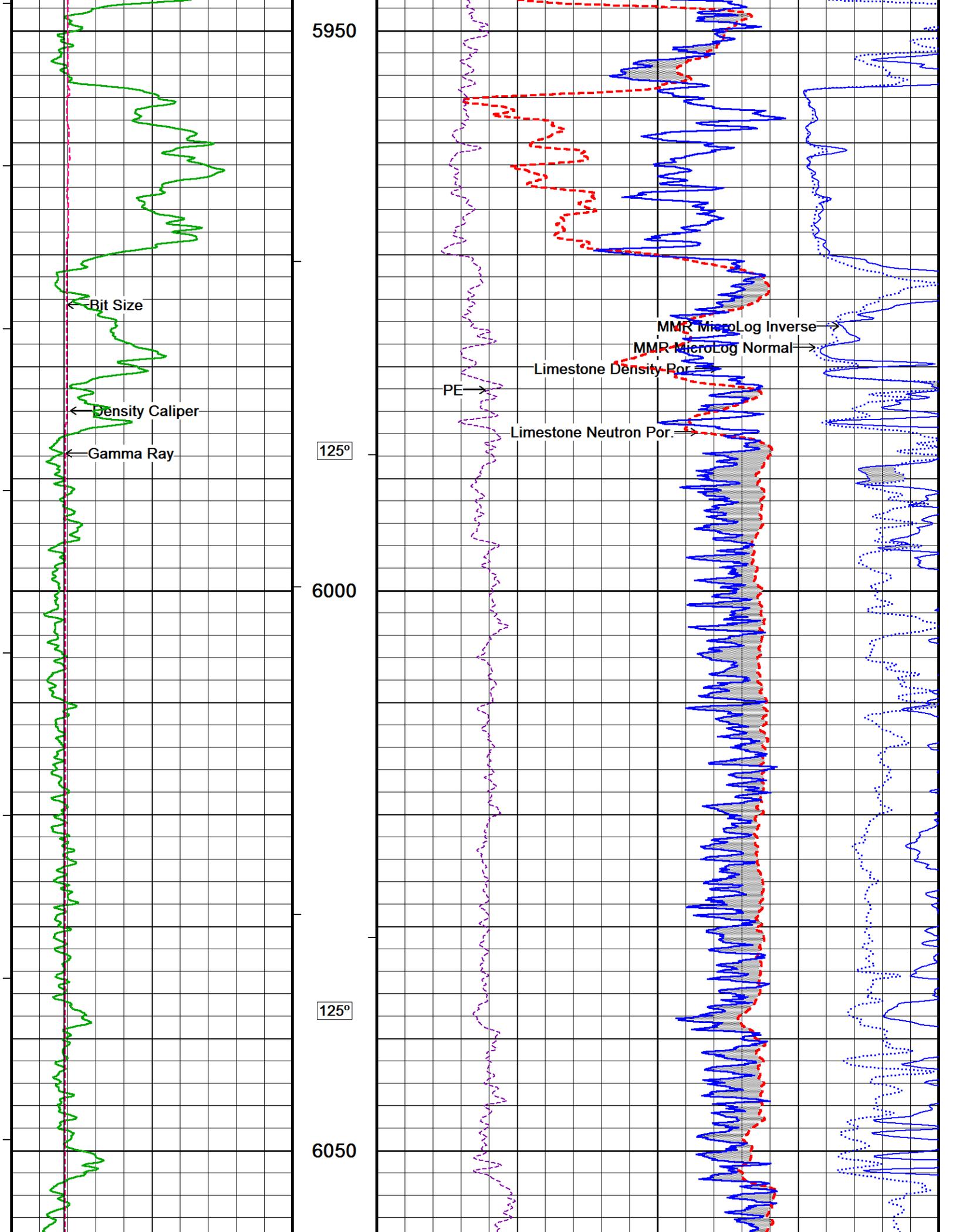
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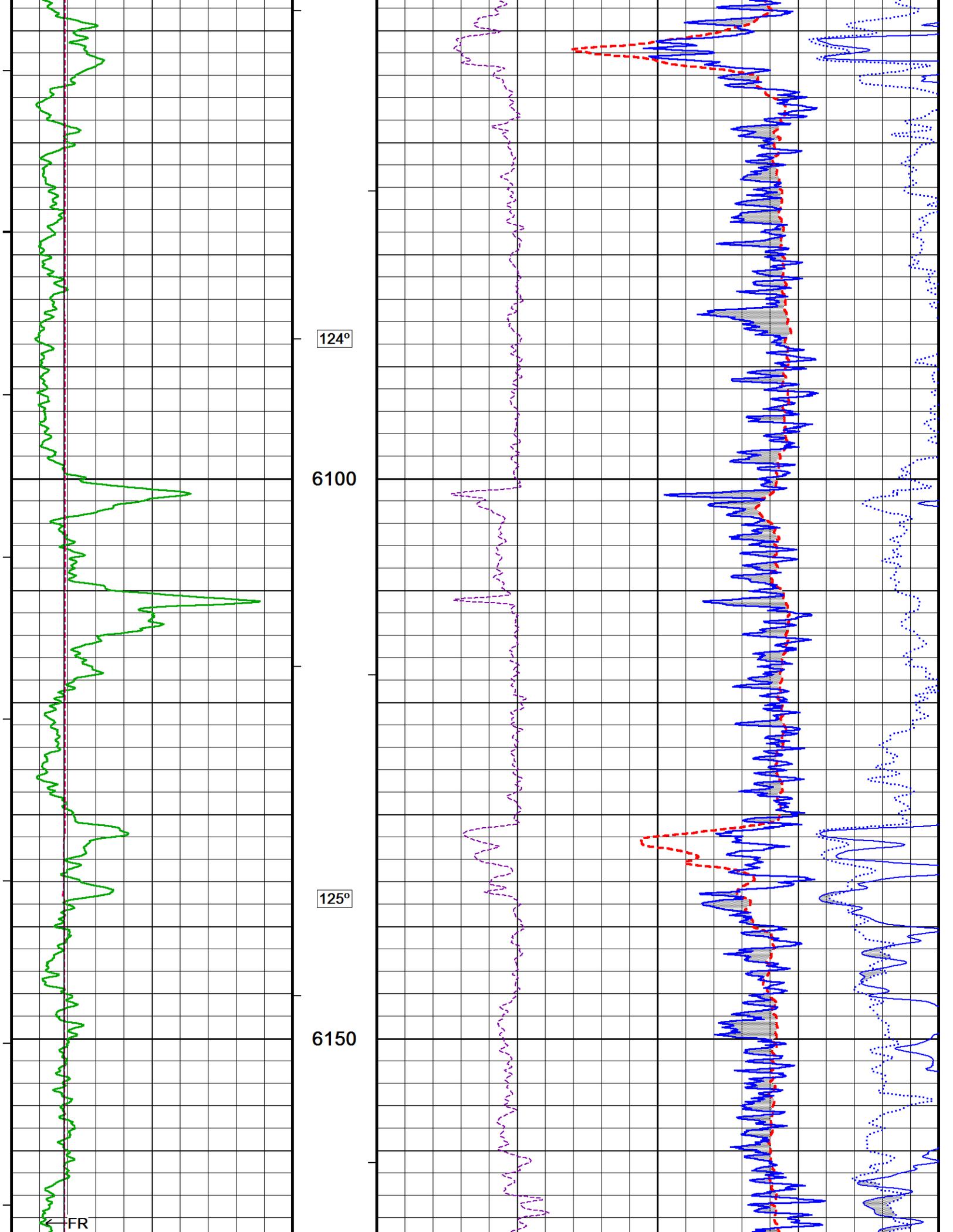
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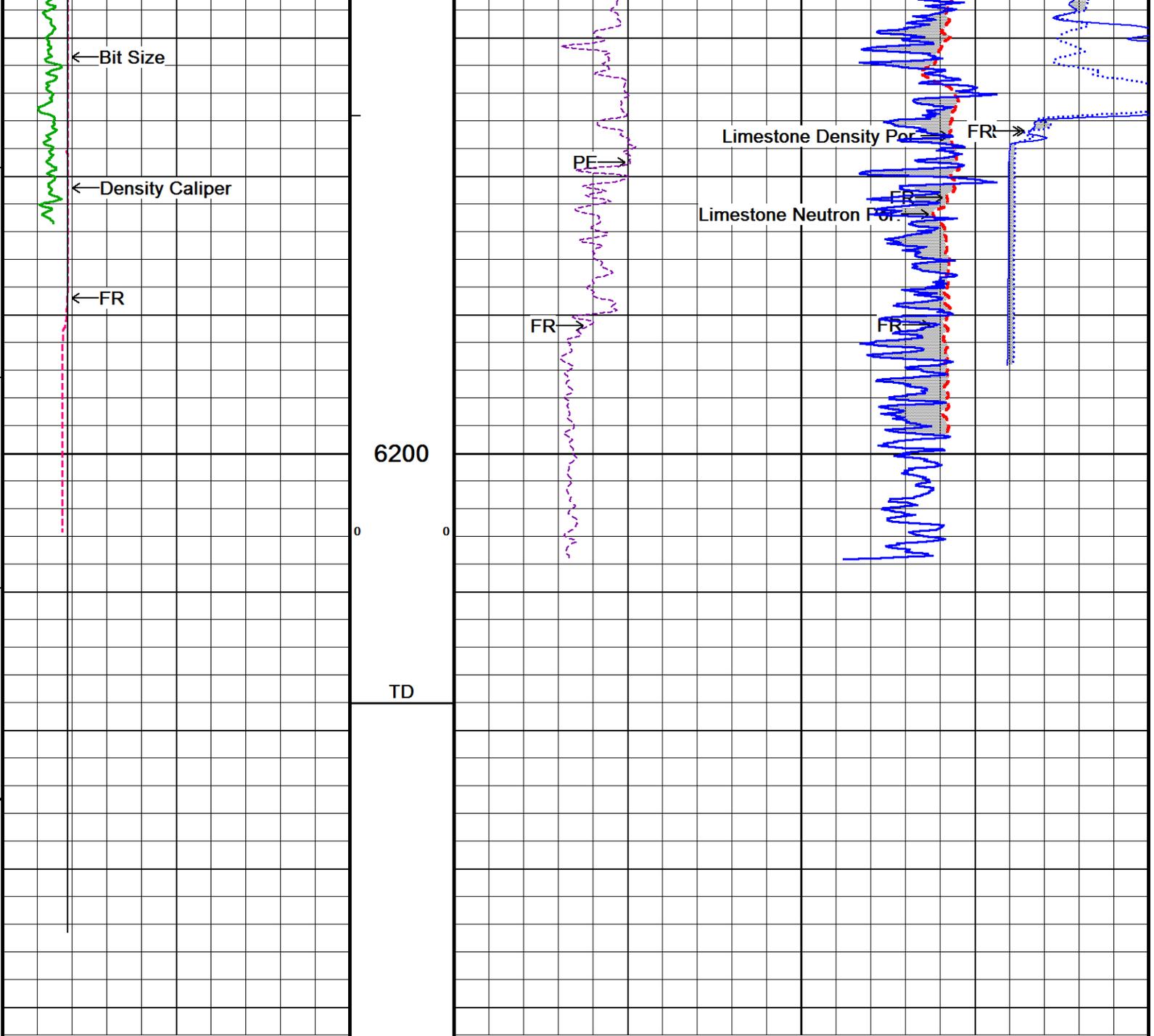








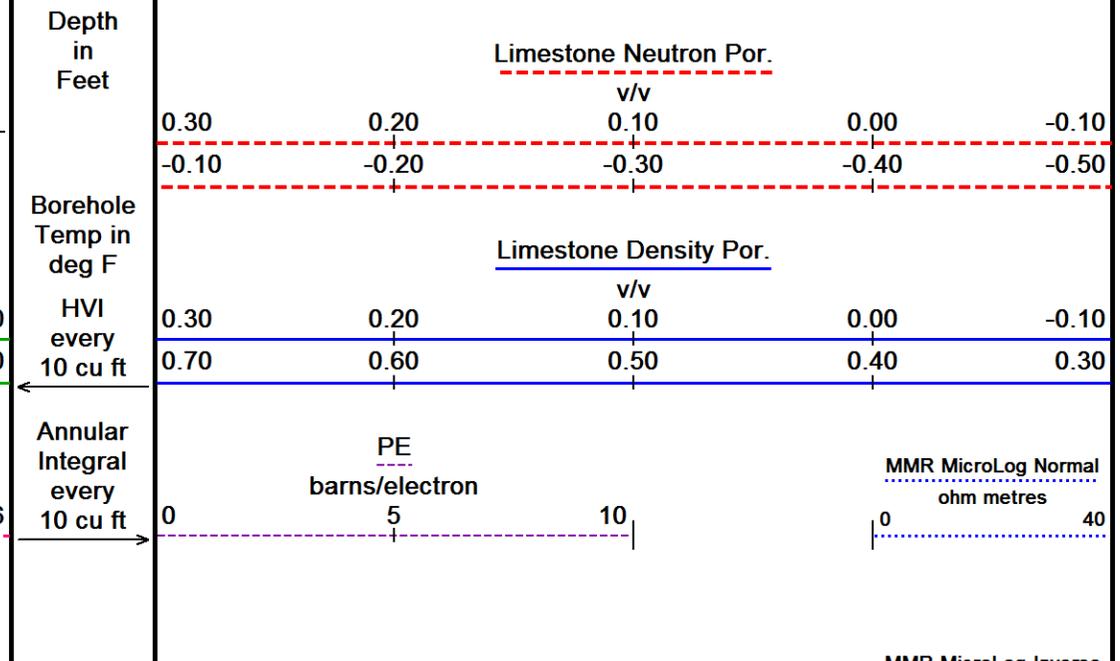
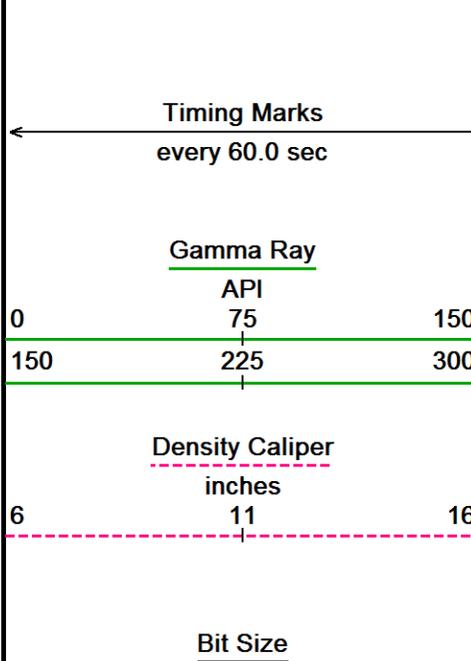


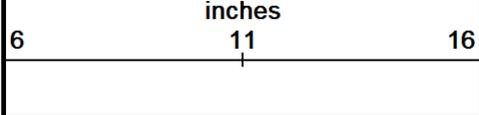


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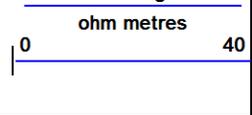
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TD





Replay
Scale
1:120

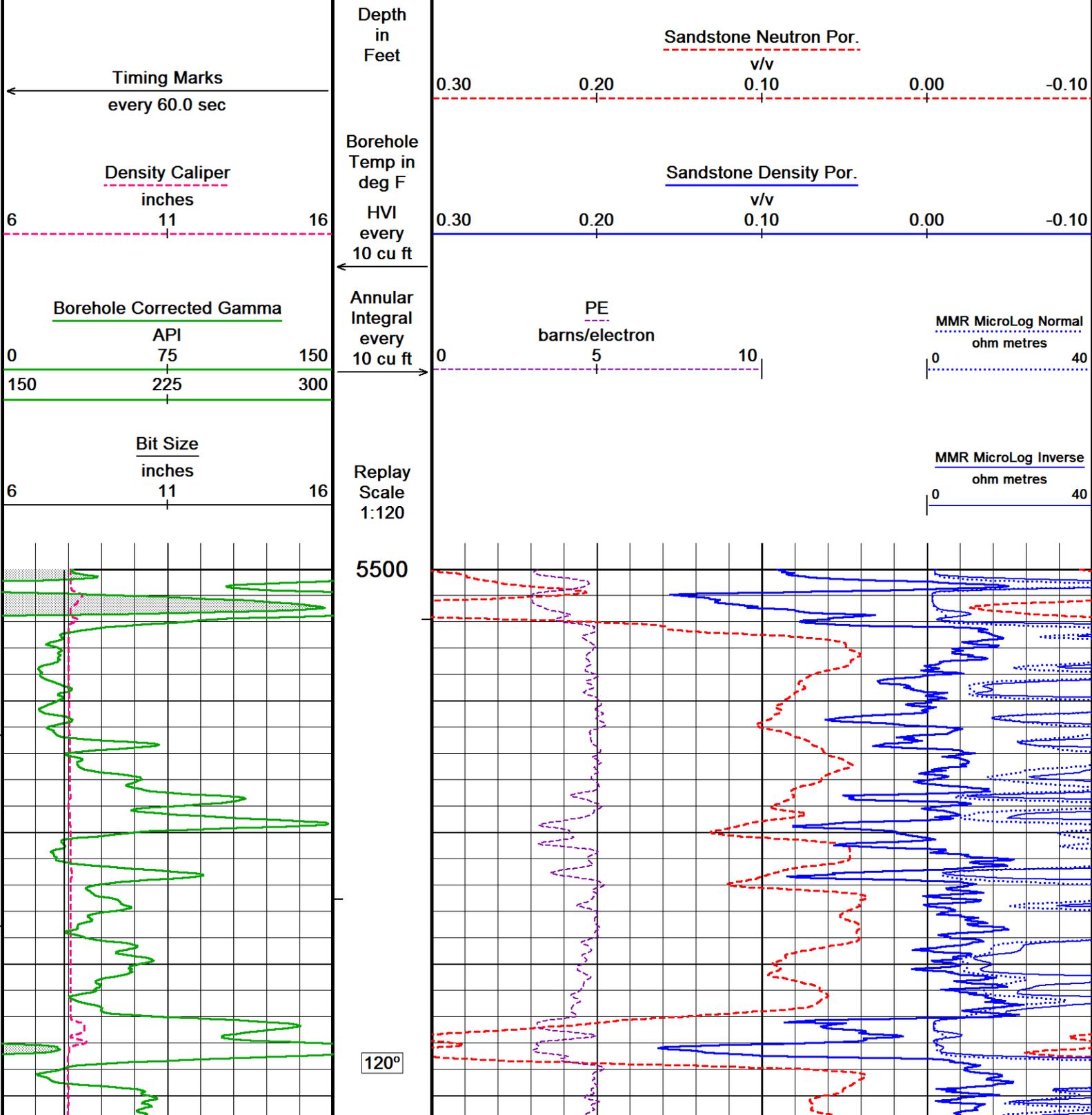


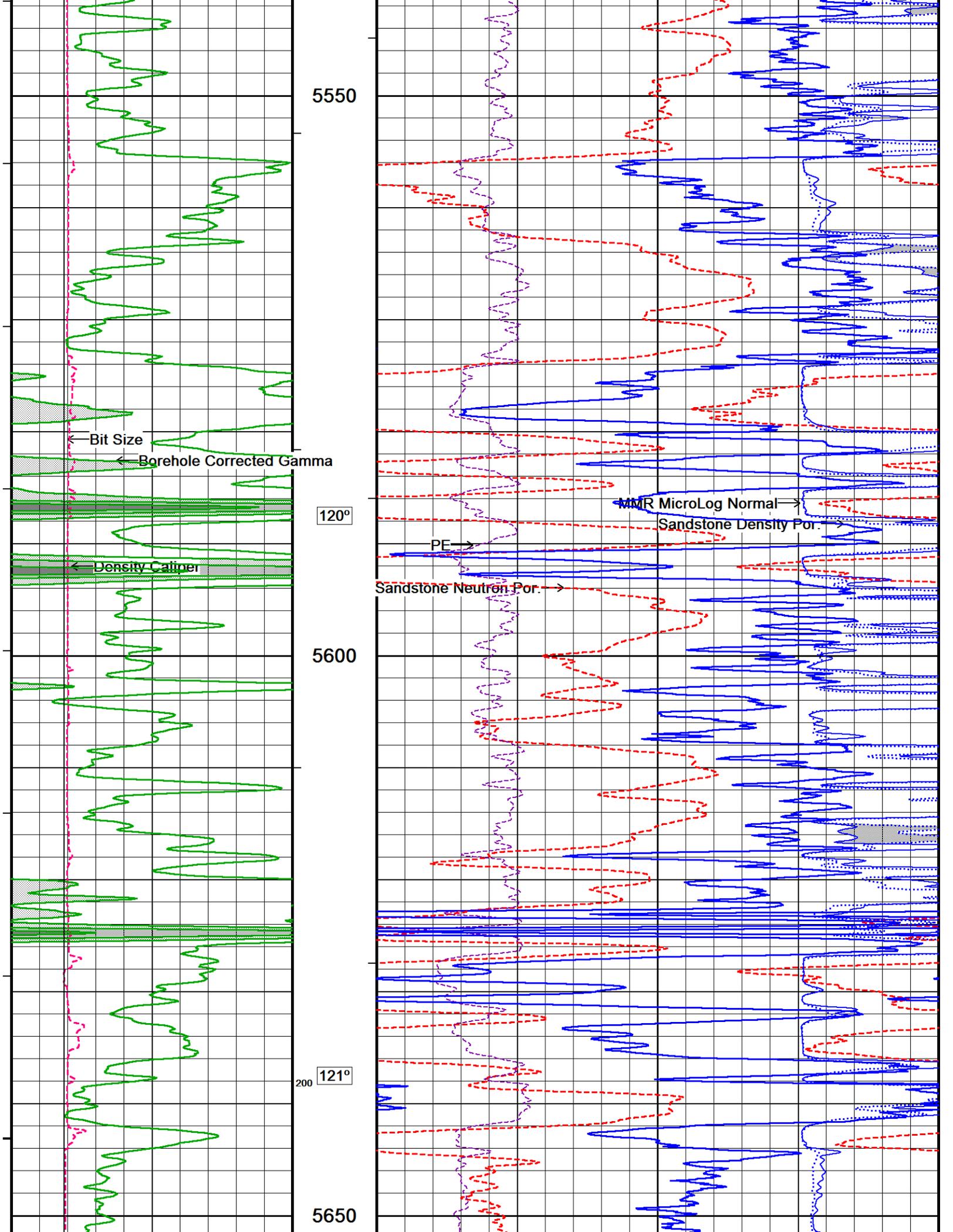
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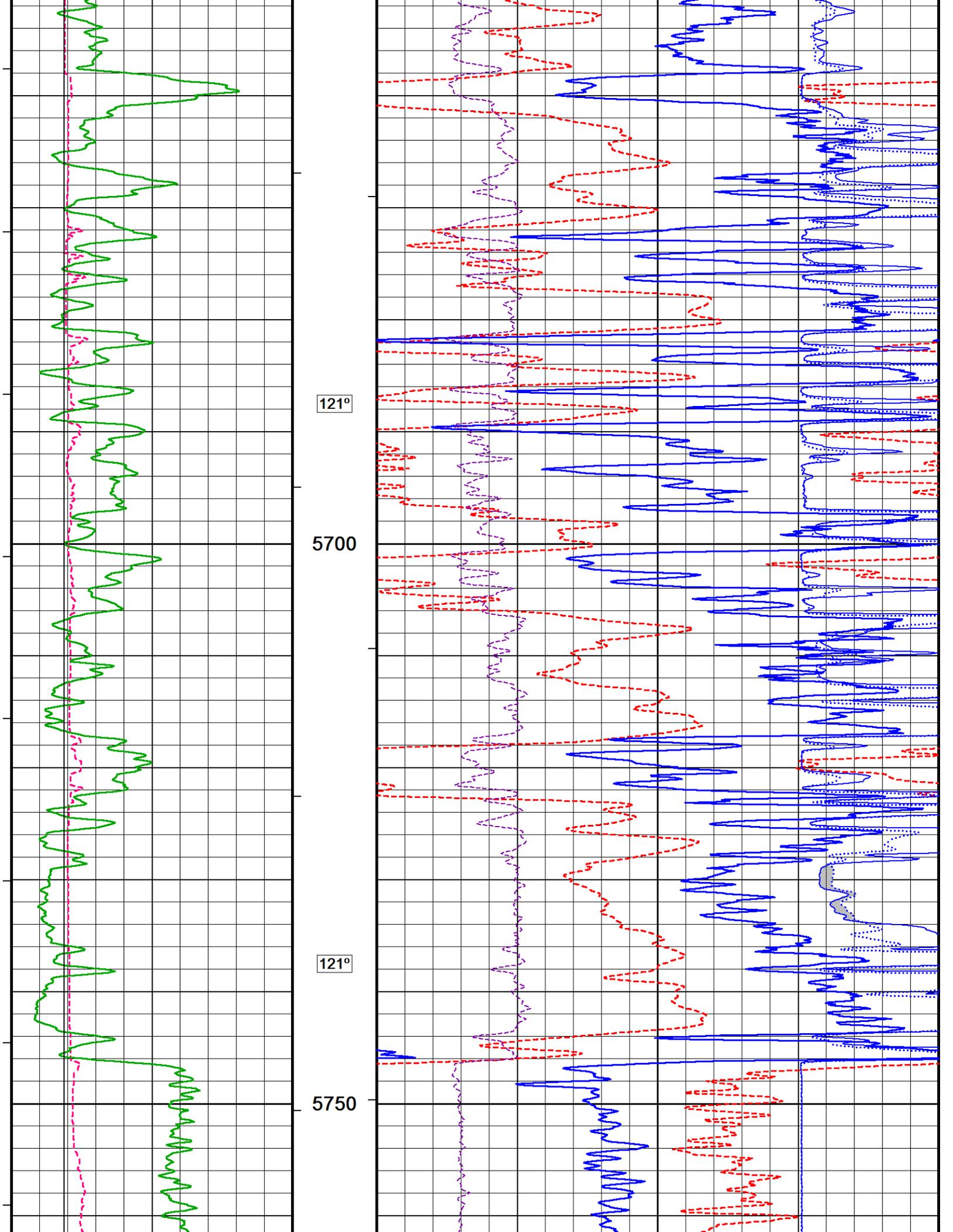
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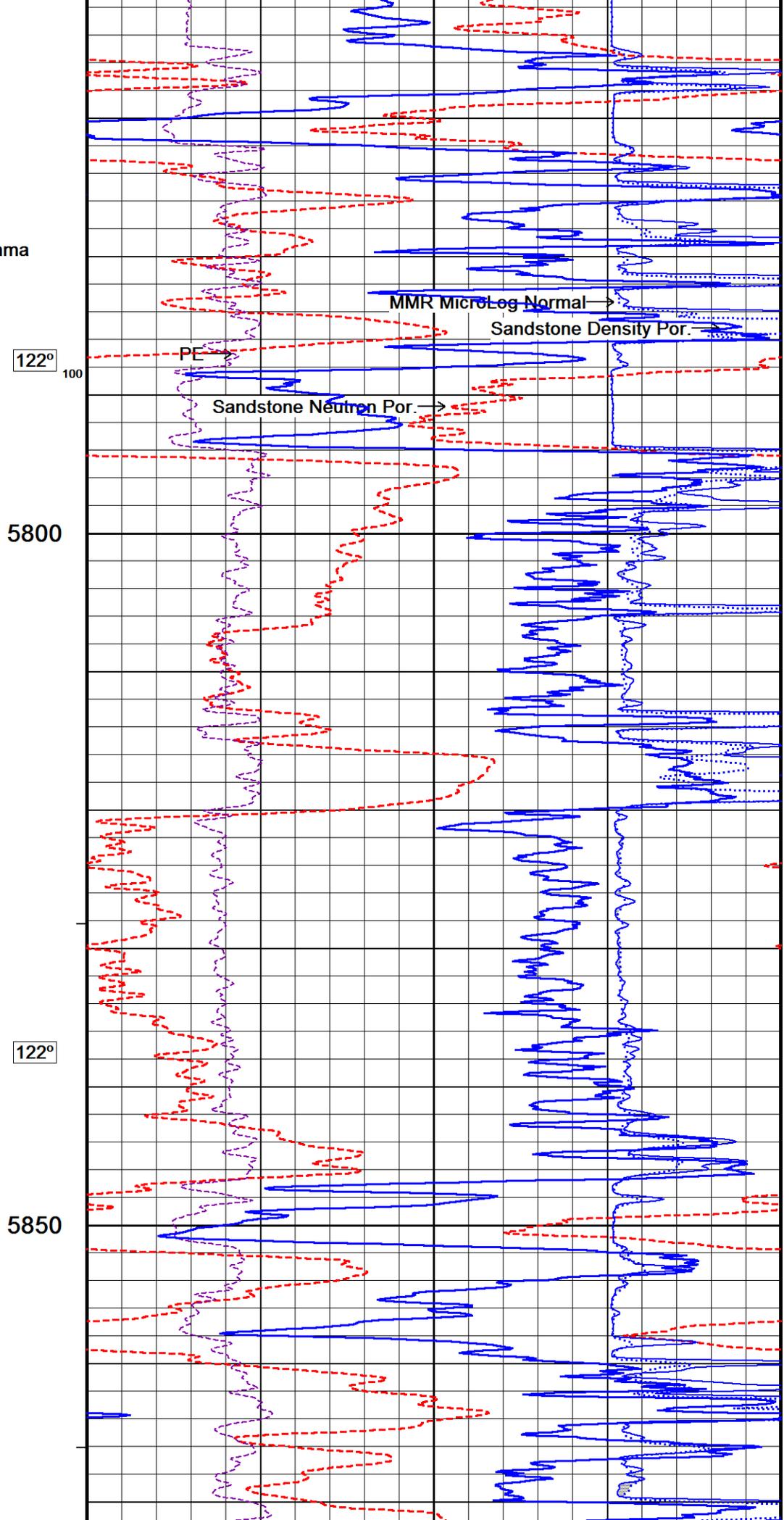
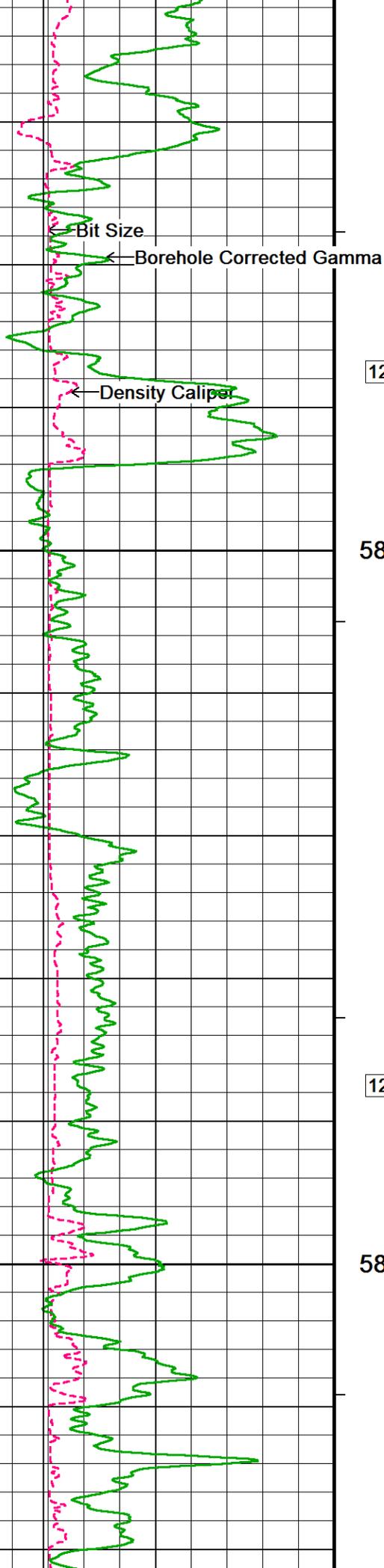
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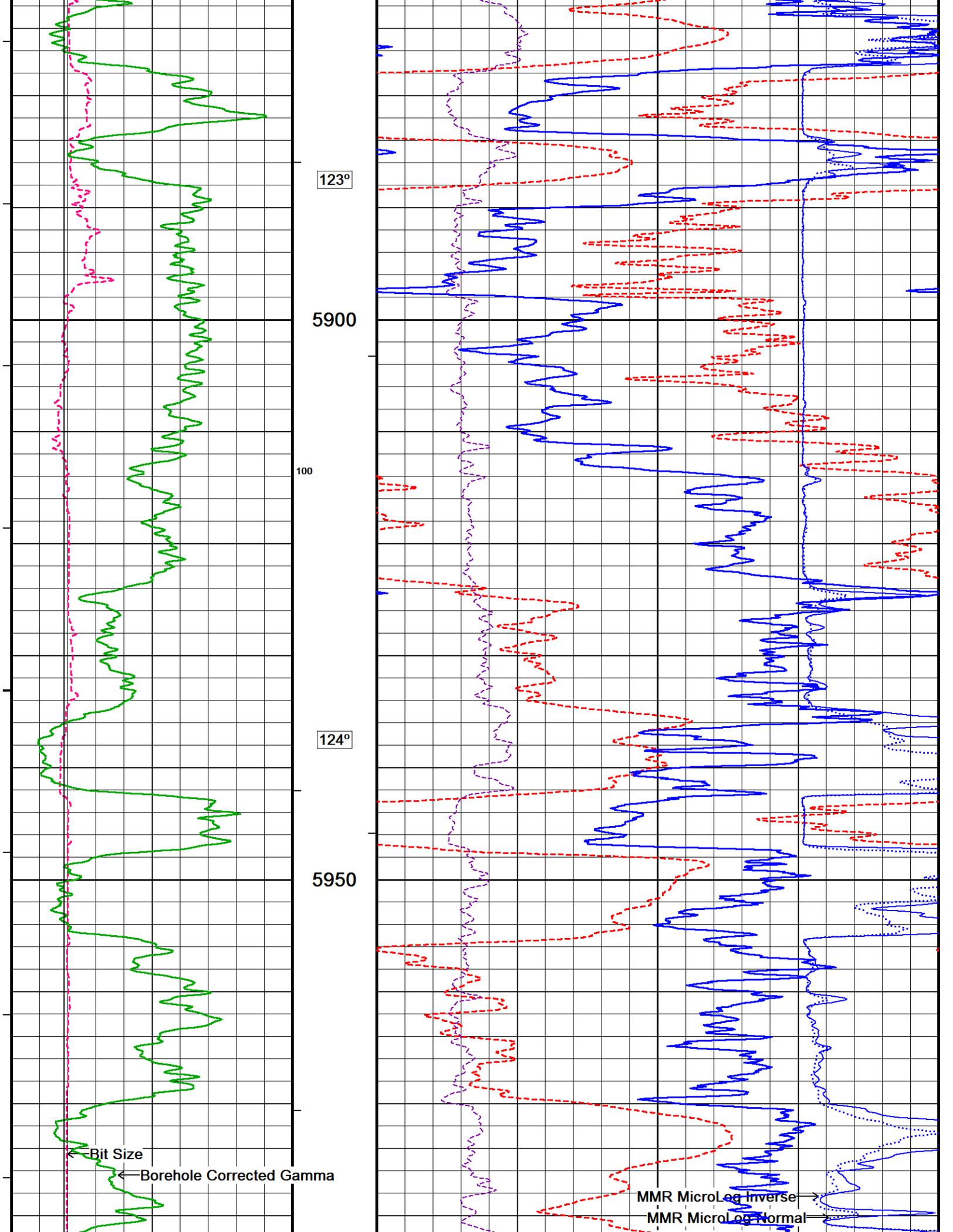
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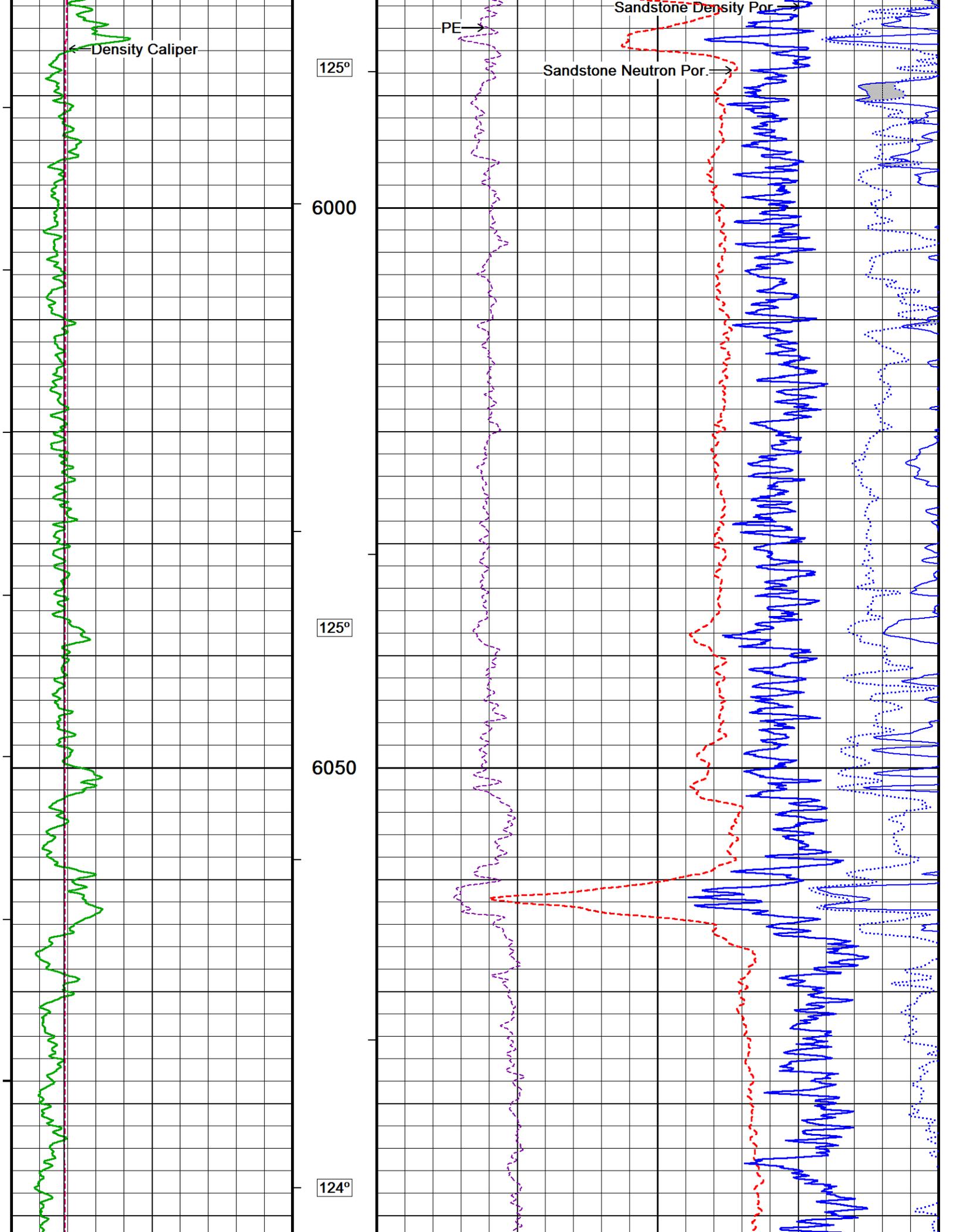


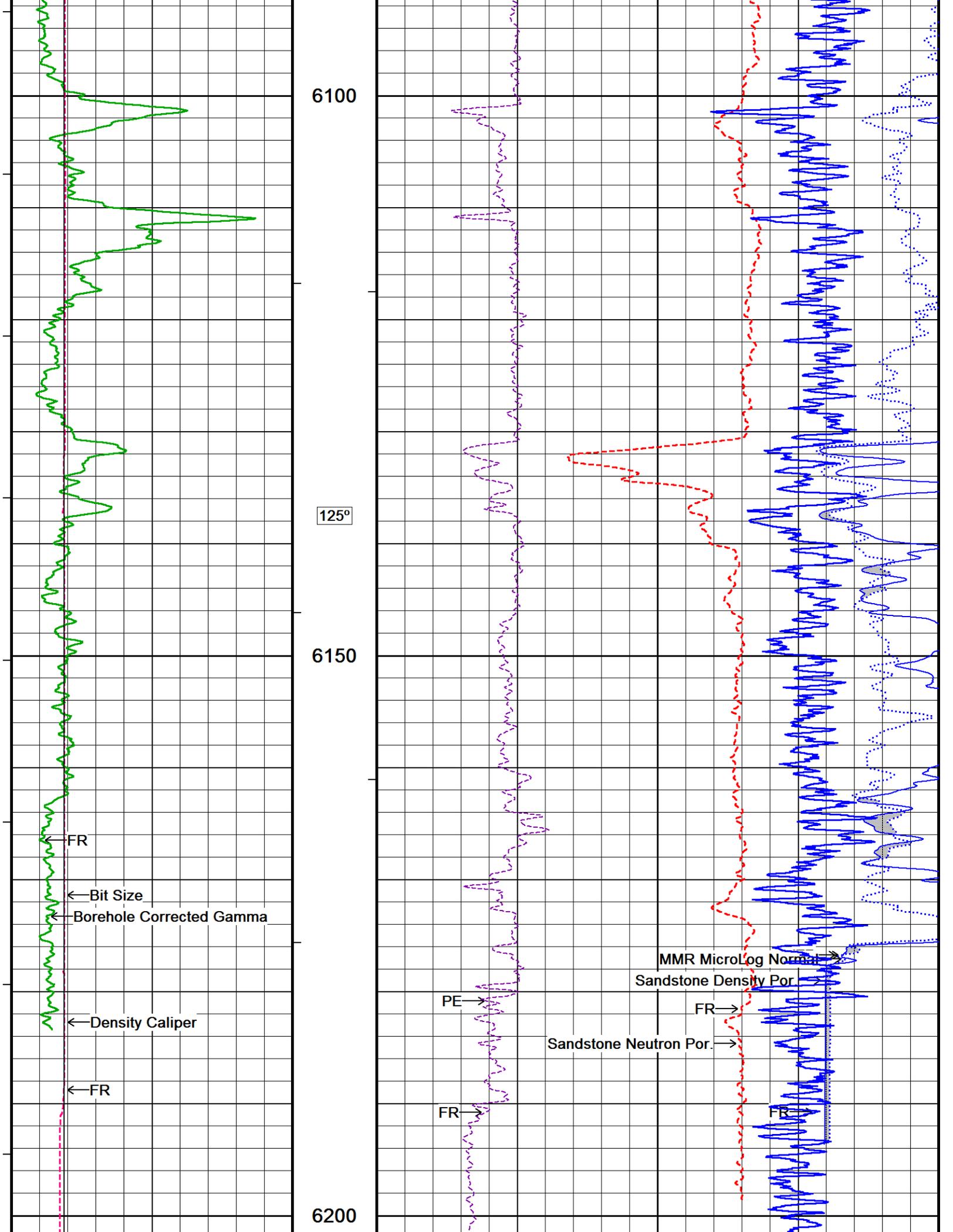


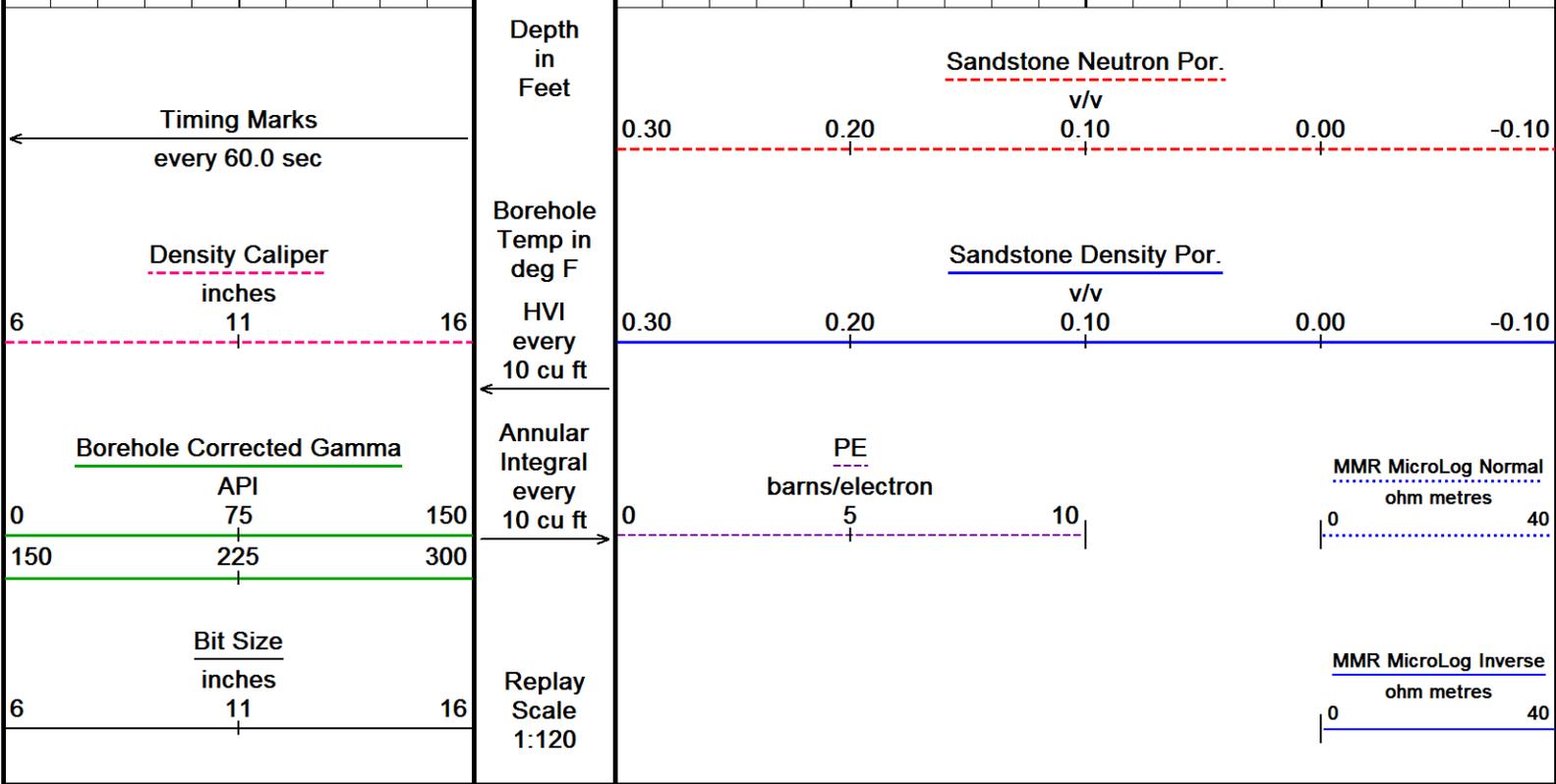
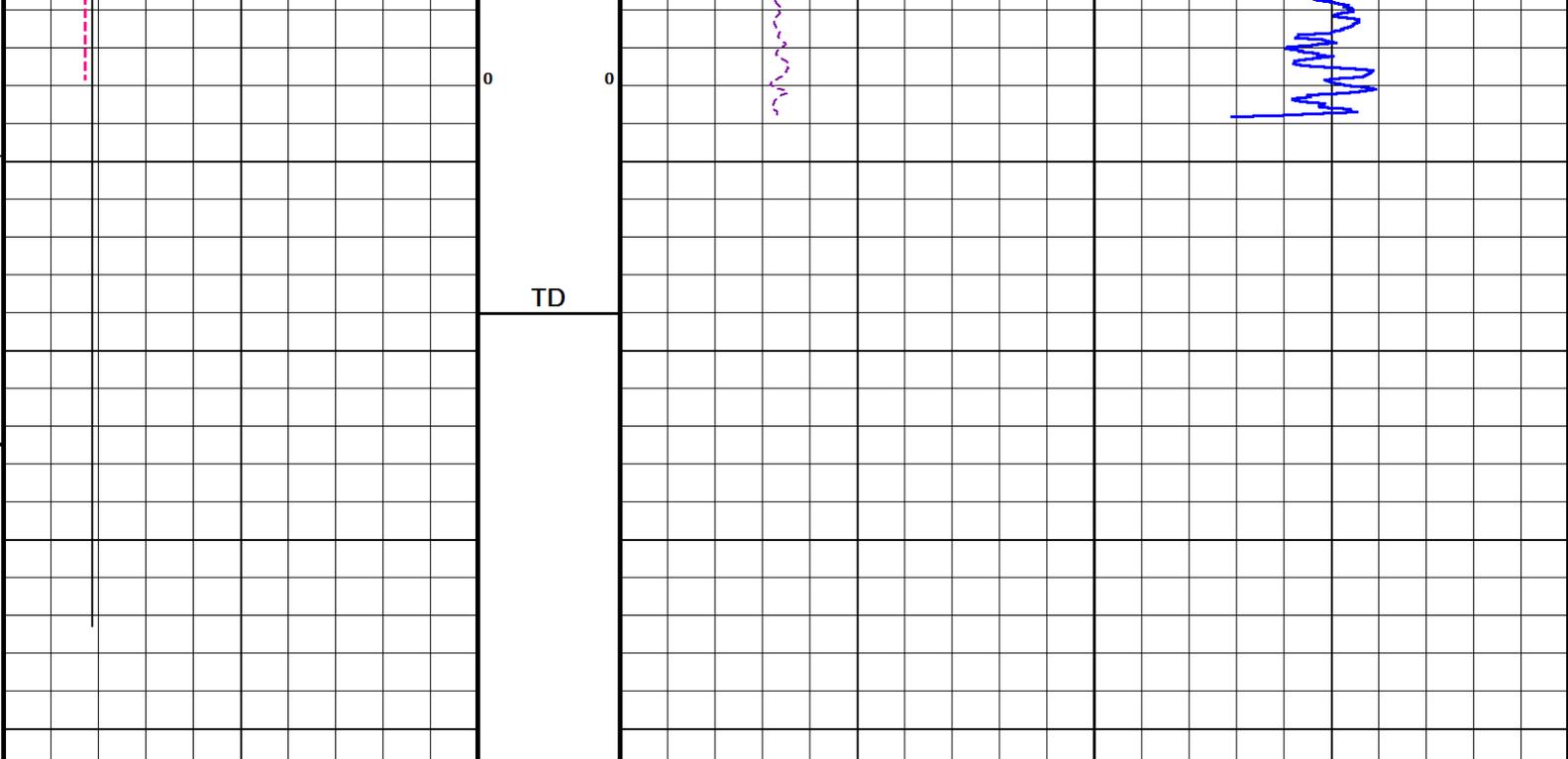










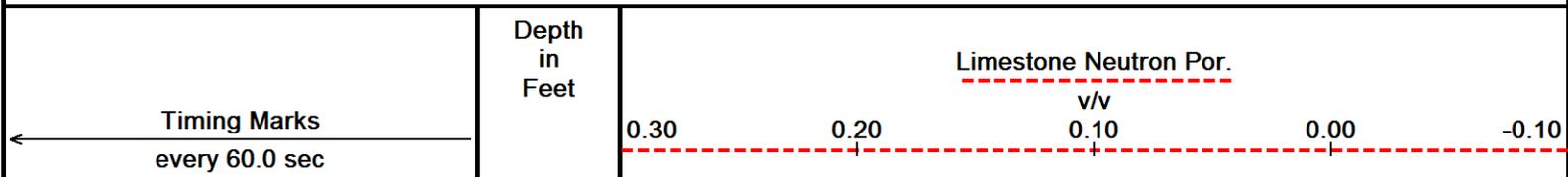


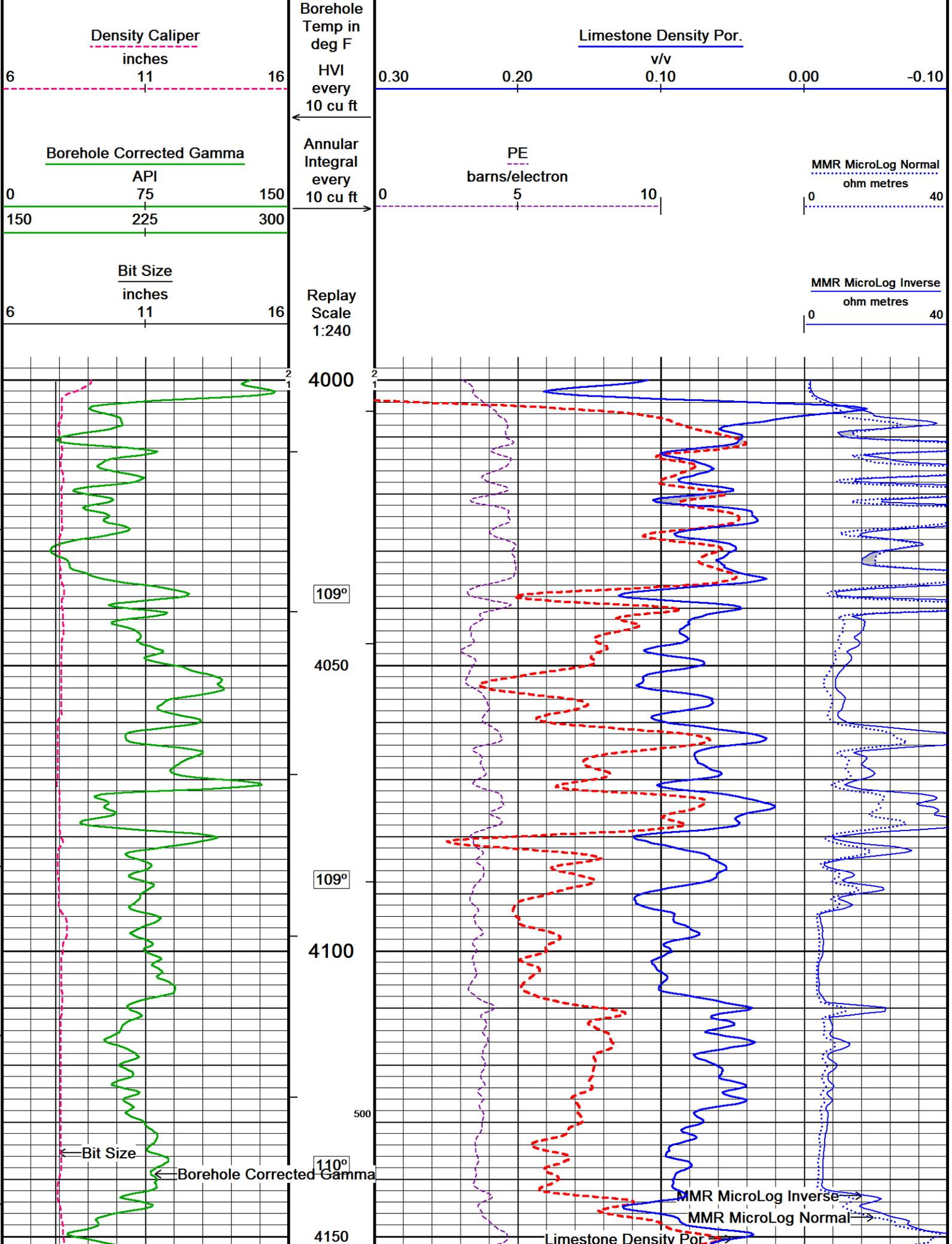
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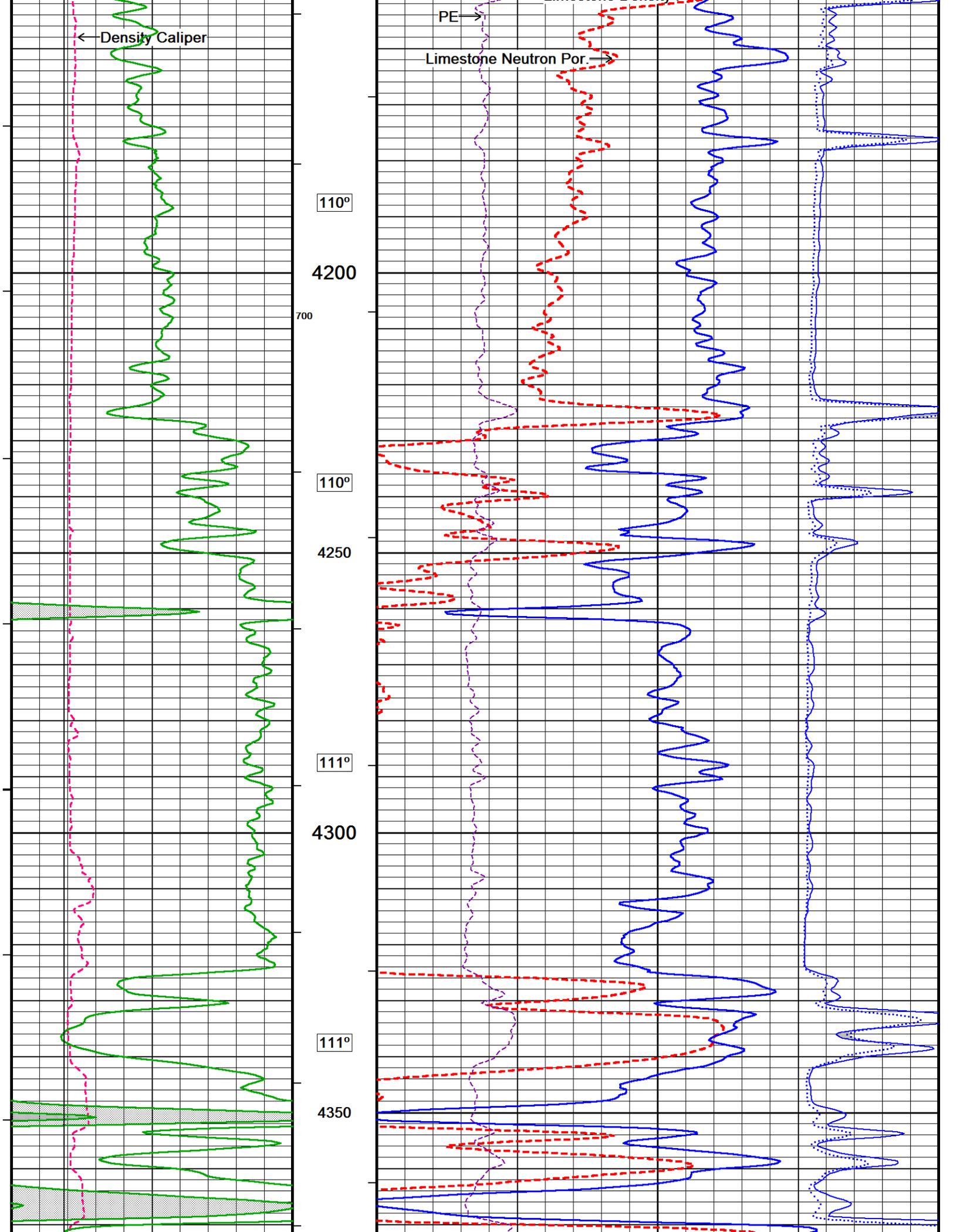
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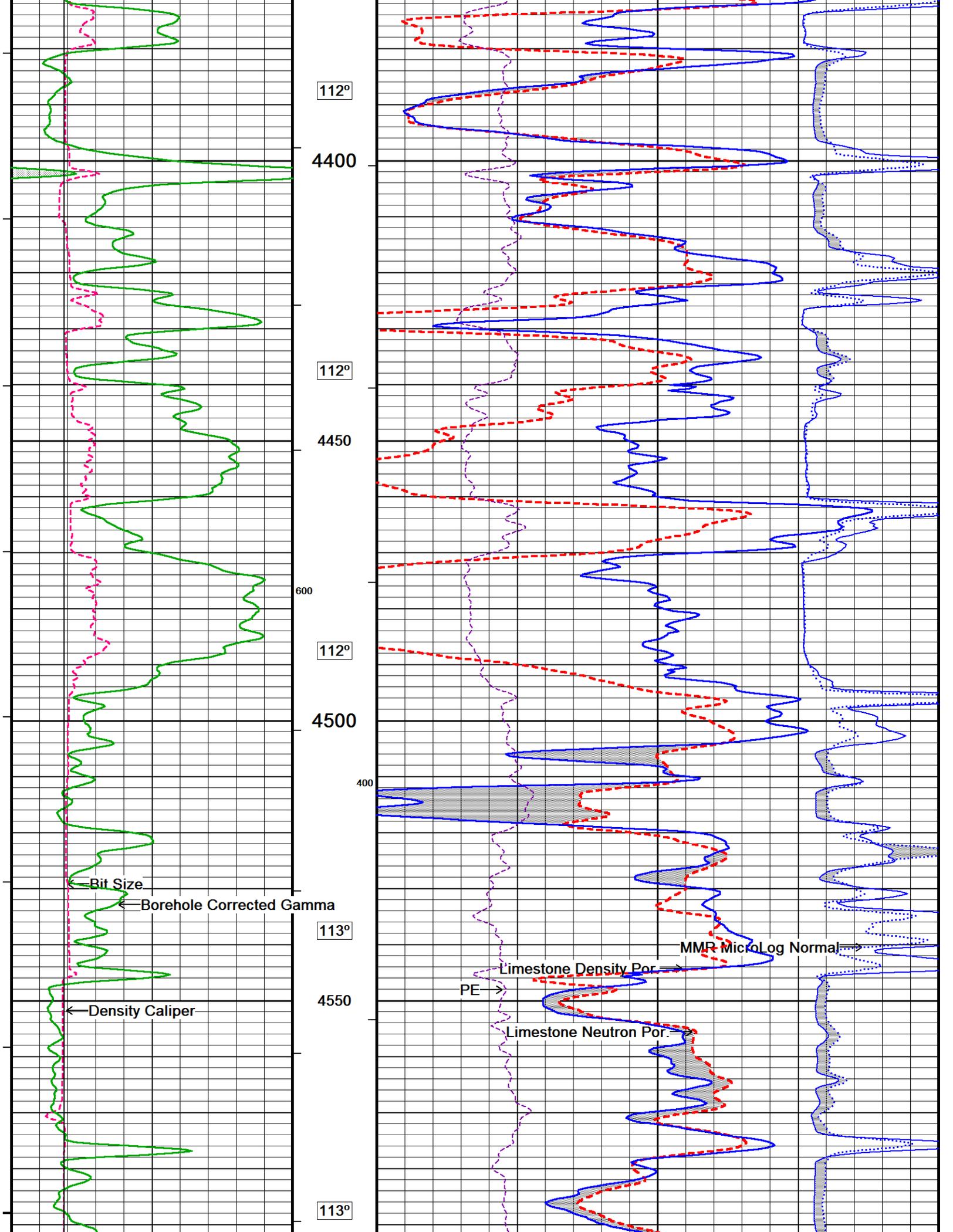
↓ 5 INCH MAIN PASS ↓

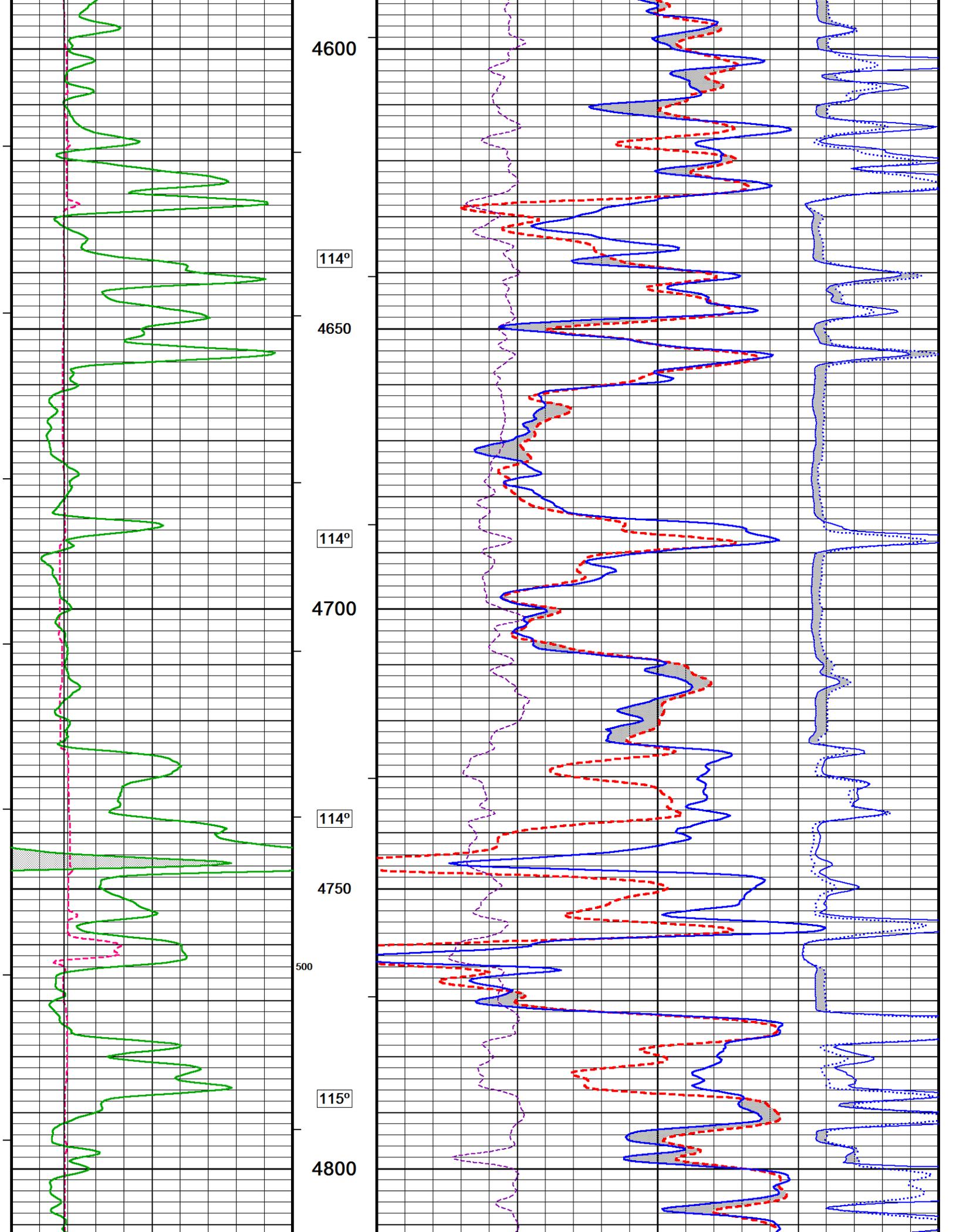
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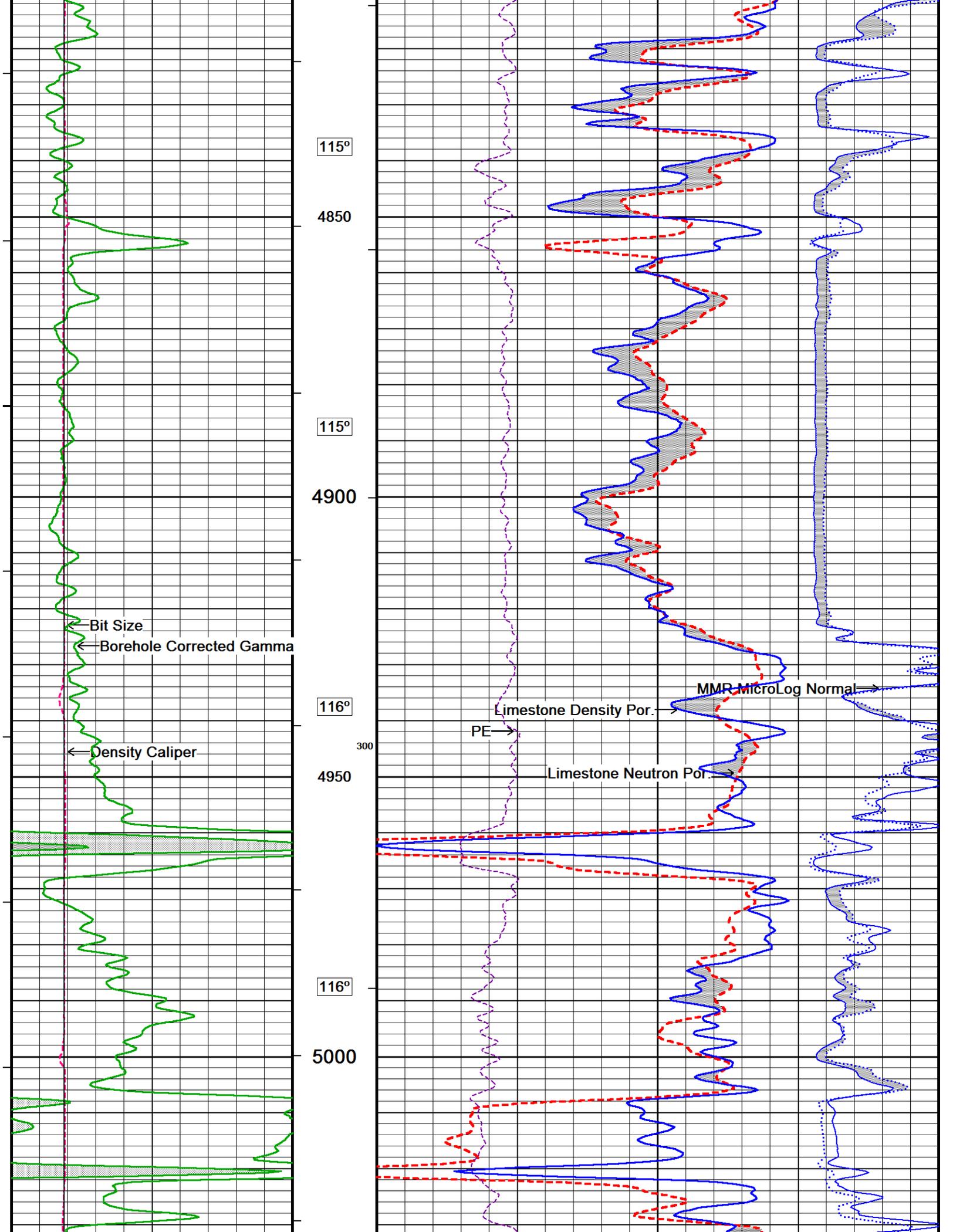


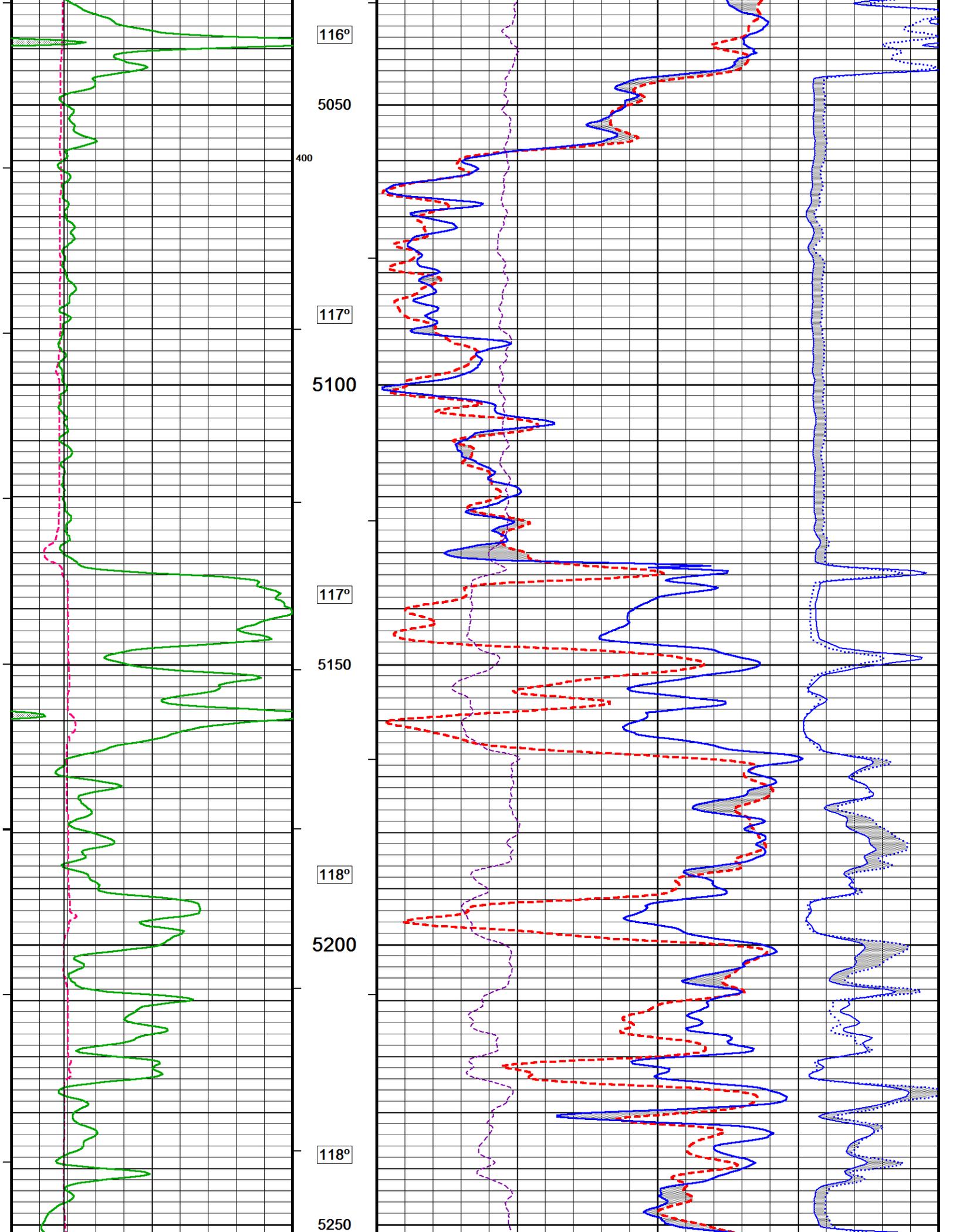


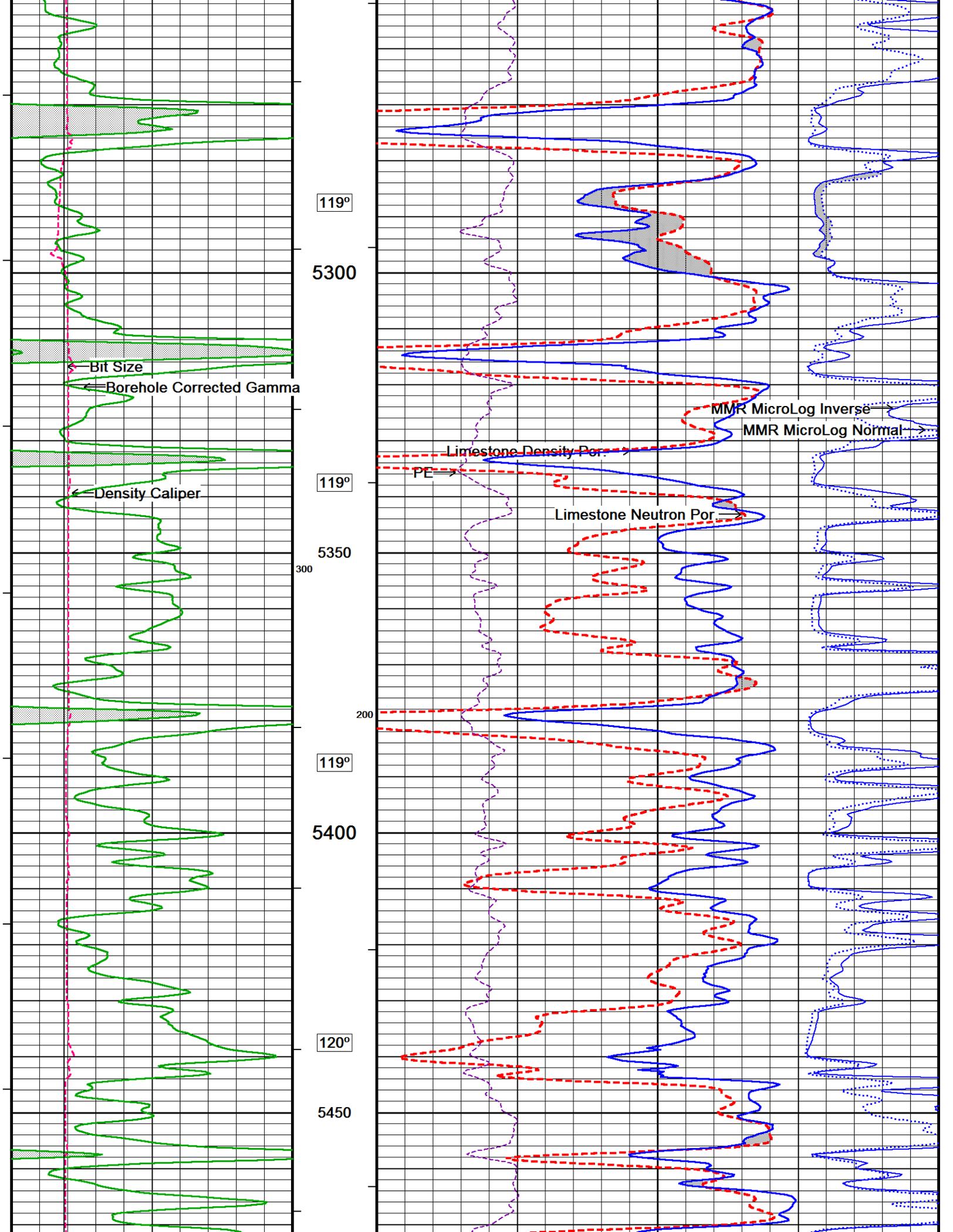


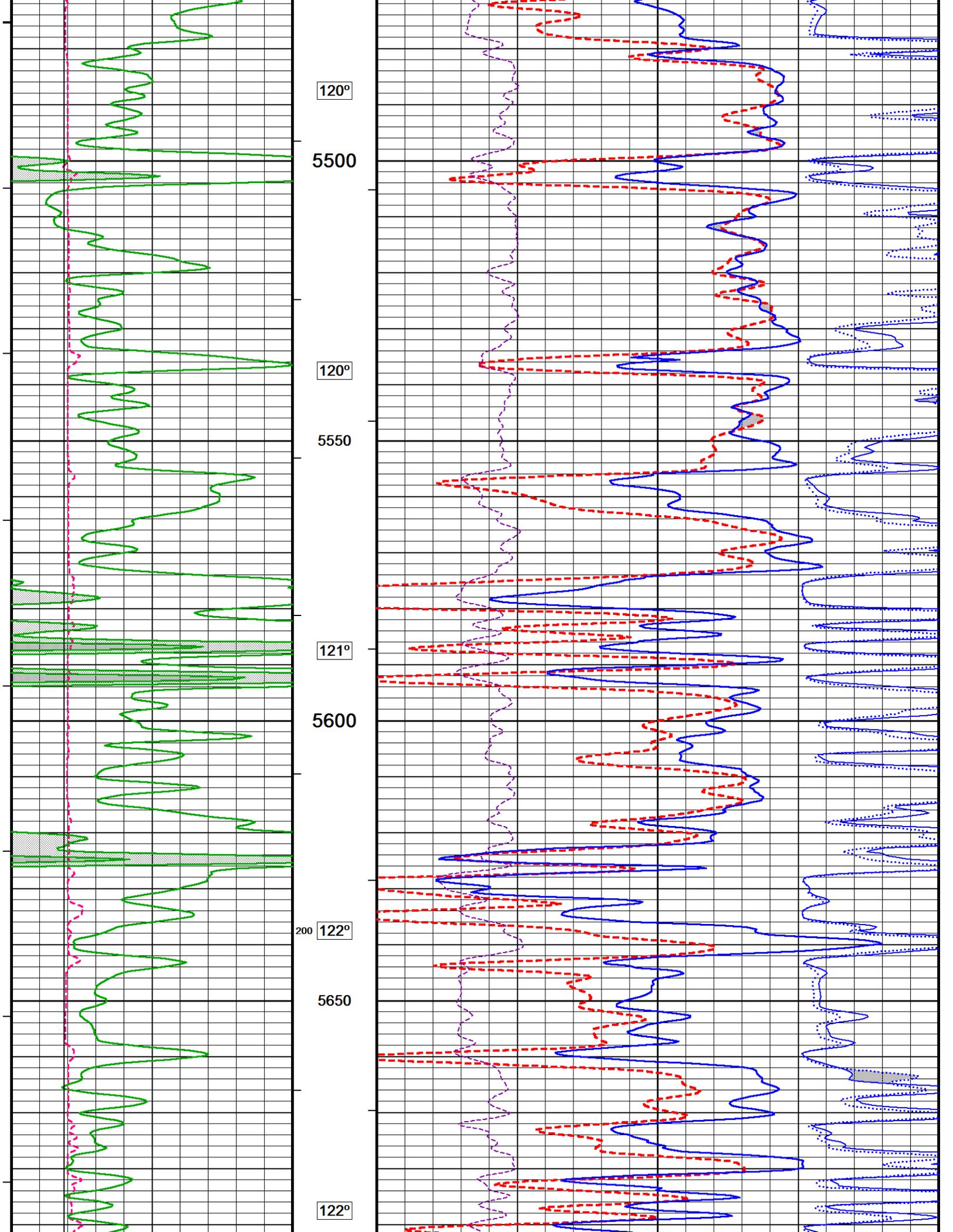


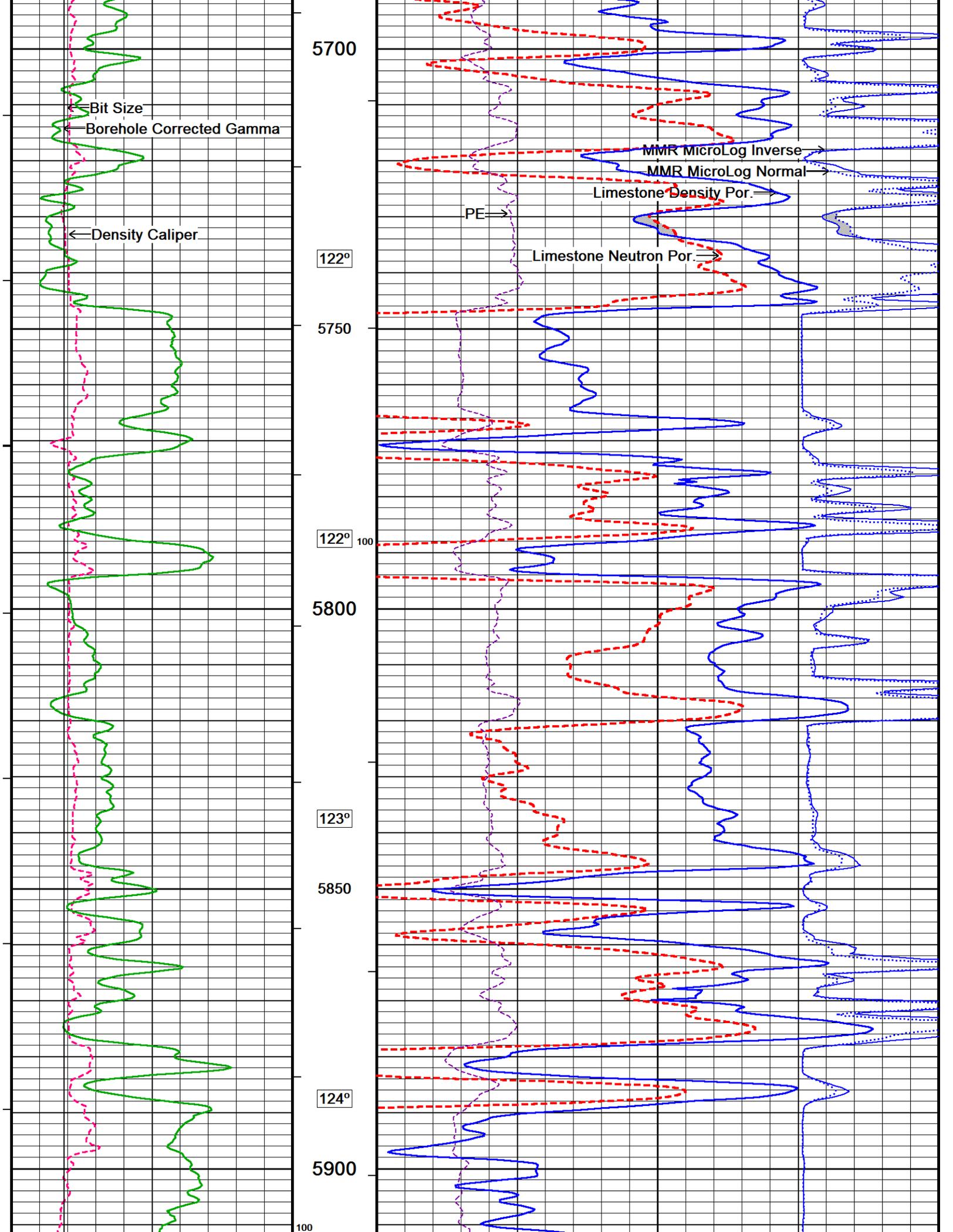


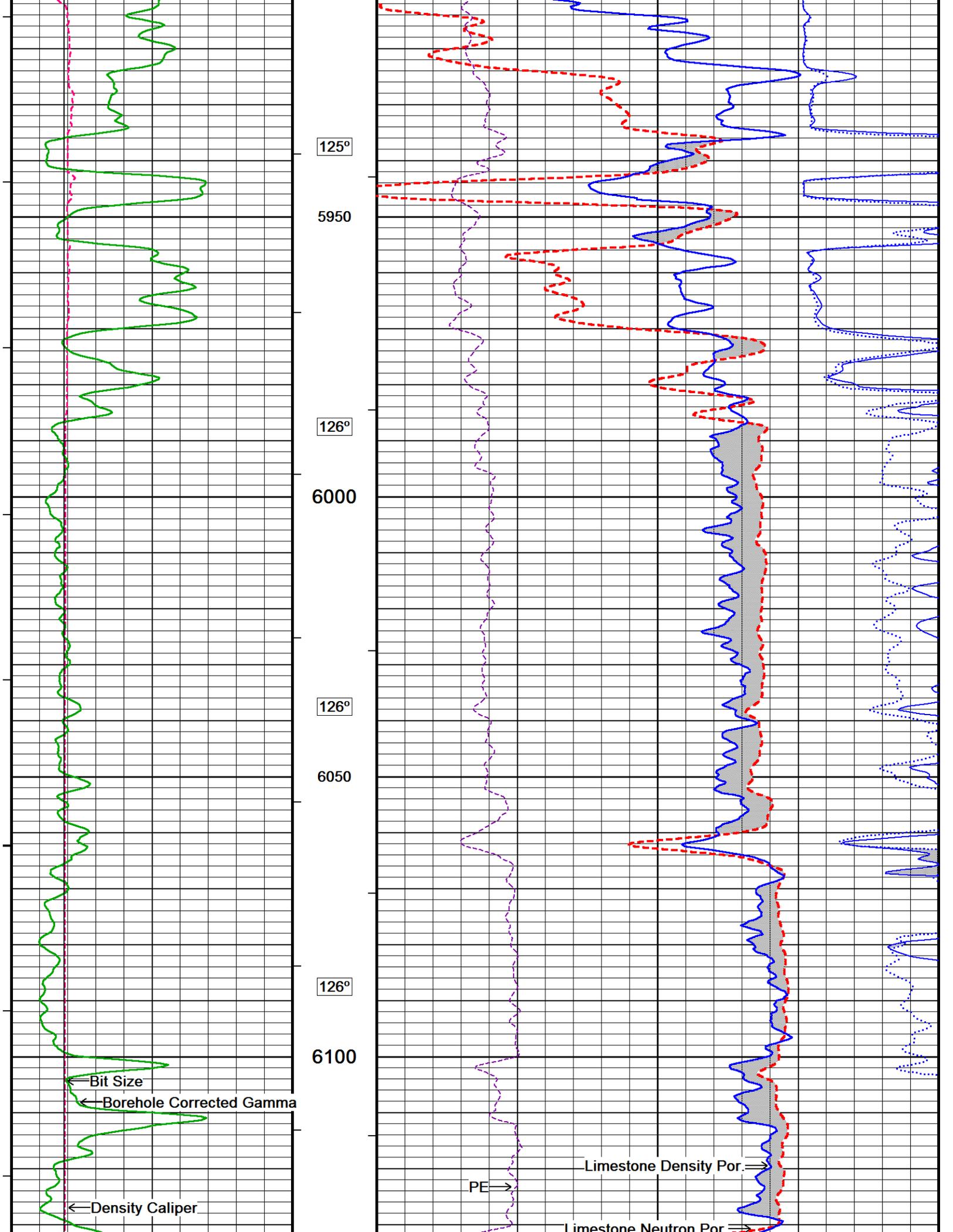












125°

5950

126°

6000

126°

6050

126°

6100

Bit Size

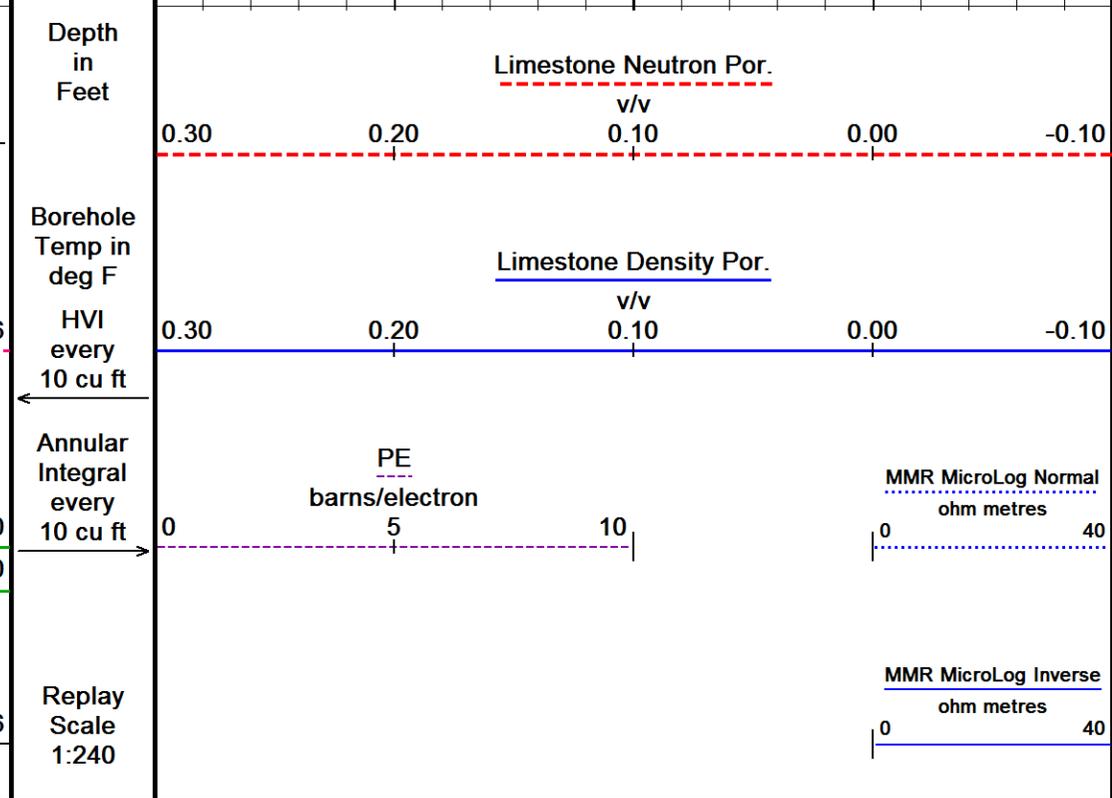
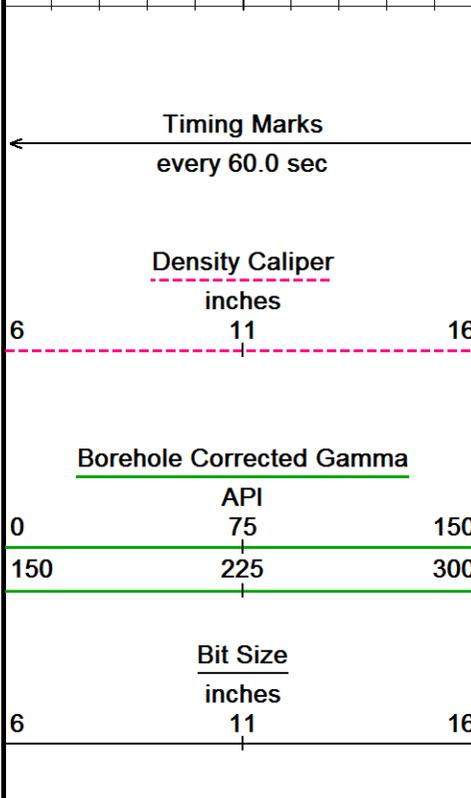
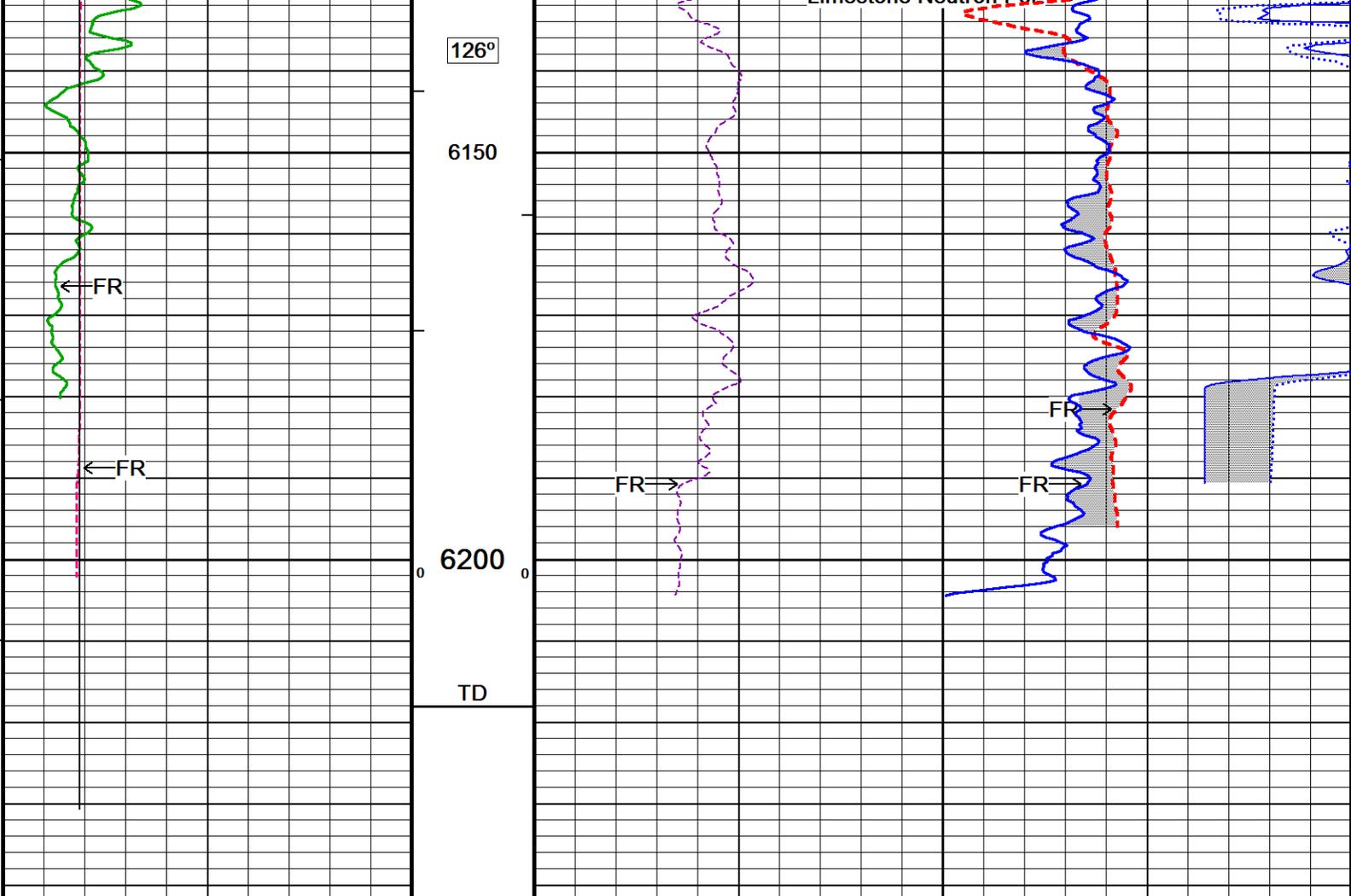
Borehole Corrected Gamma

Density Caliper

PE

Limestone Density Por.

Limestone Neutron Por.



Depth Based Data - Maximum Sampling Increment 10.0cm

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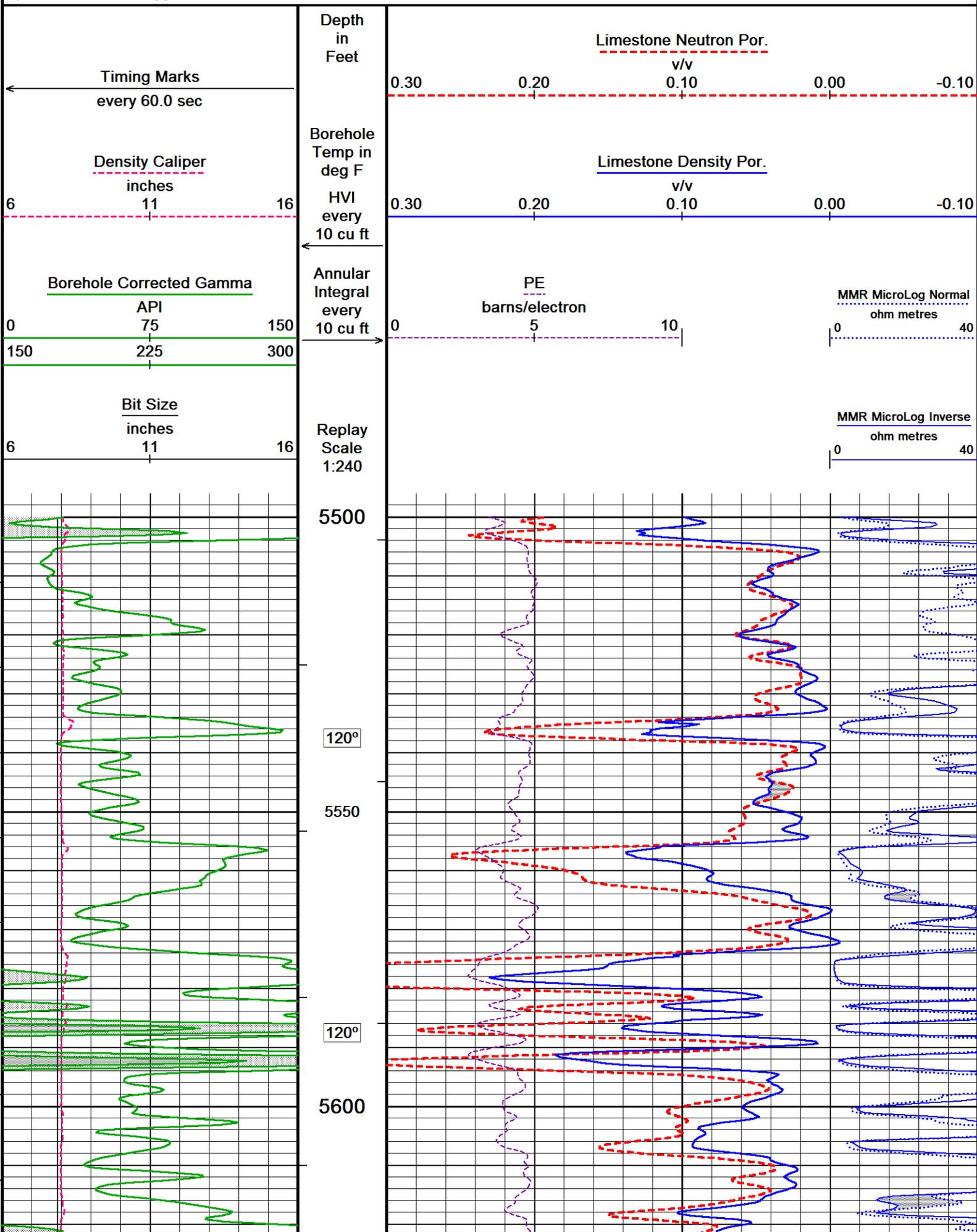
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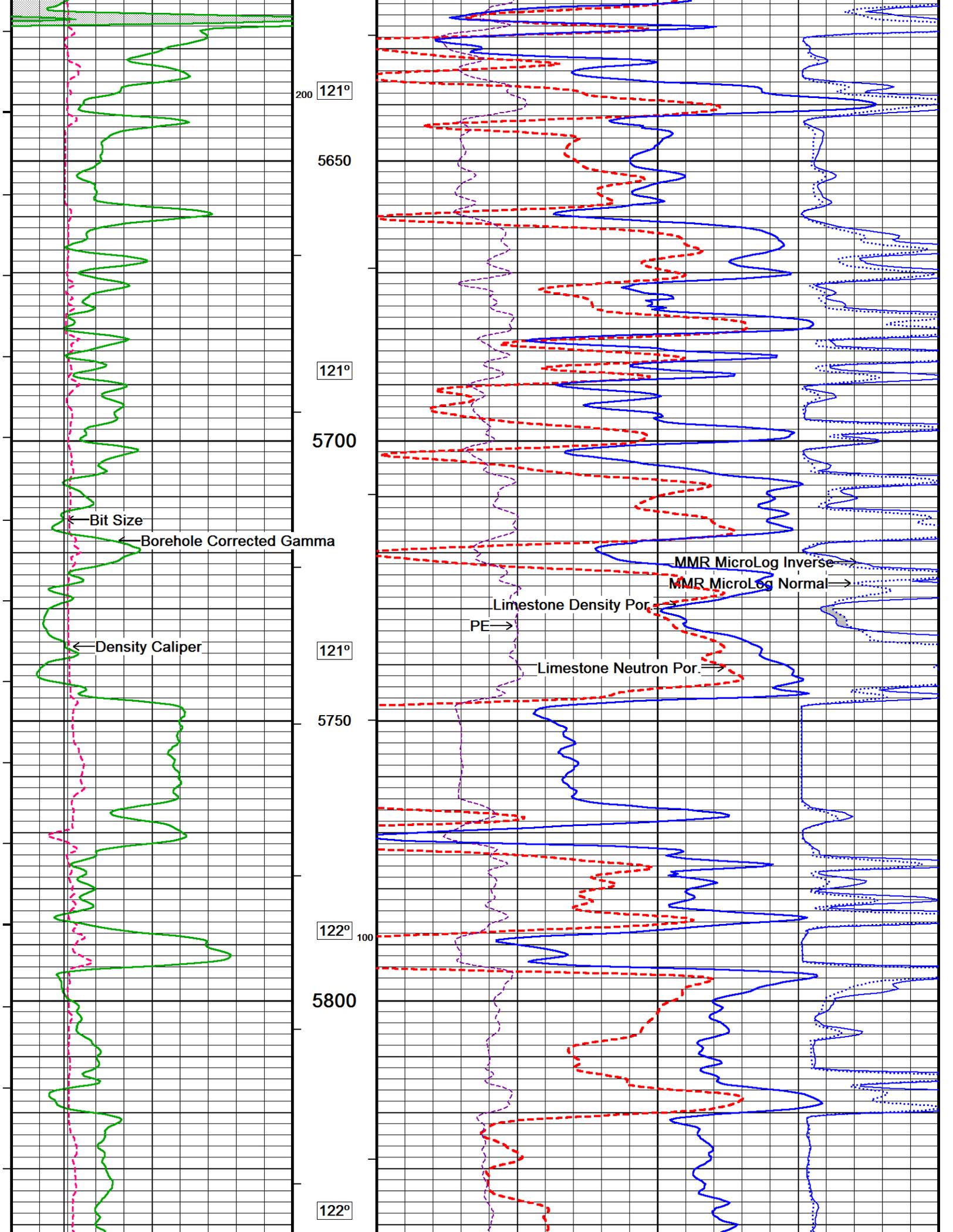
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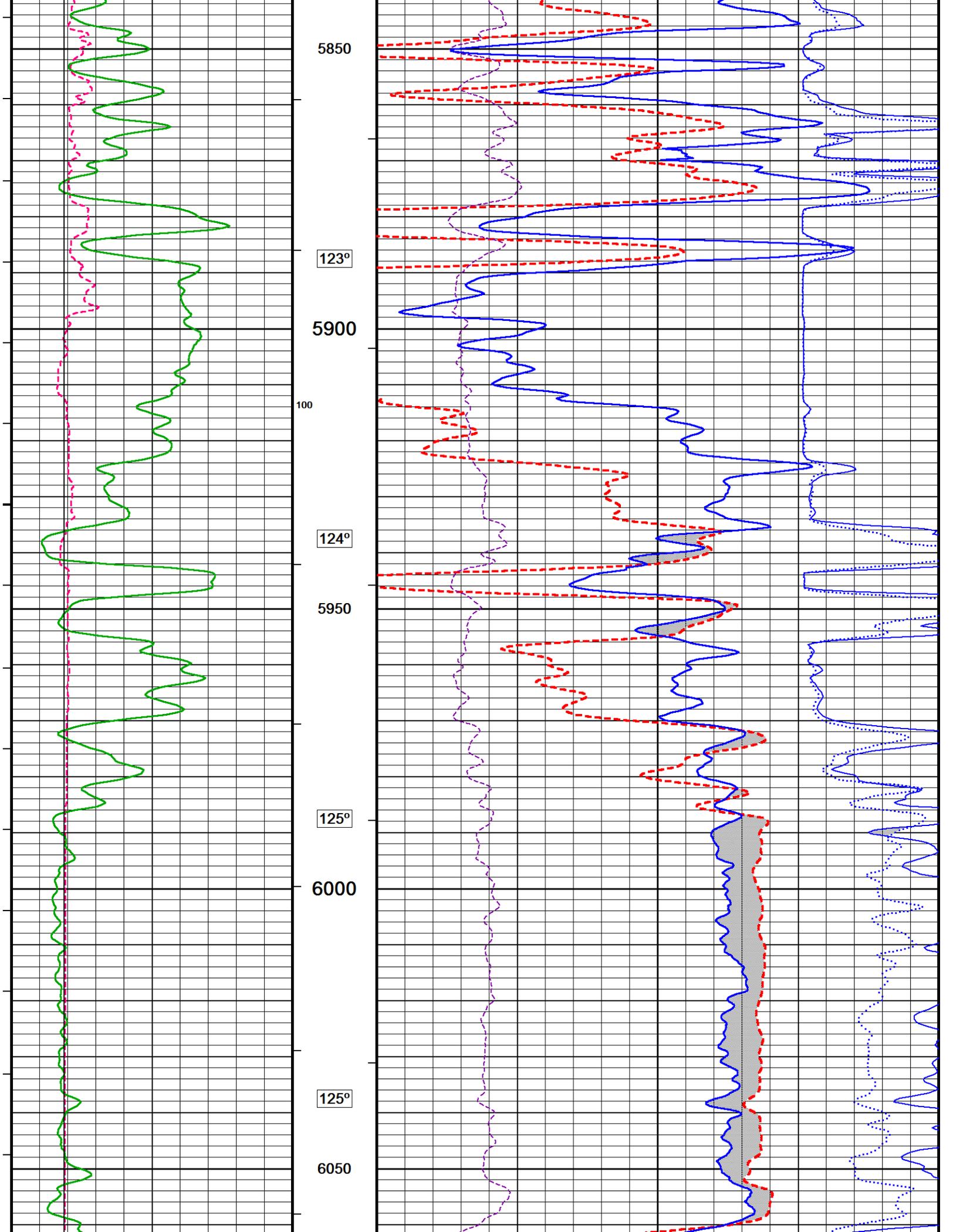
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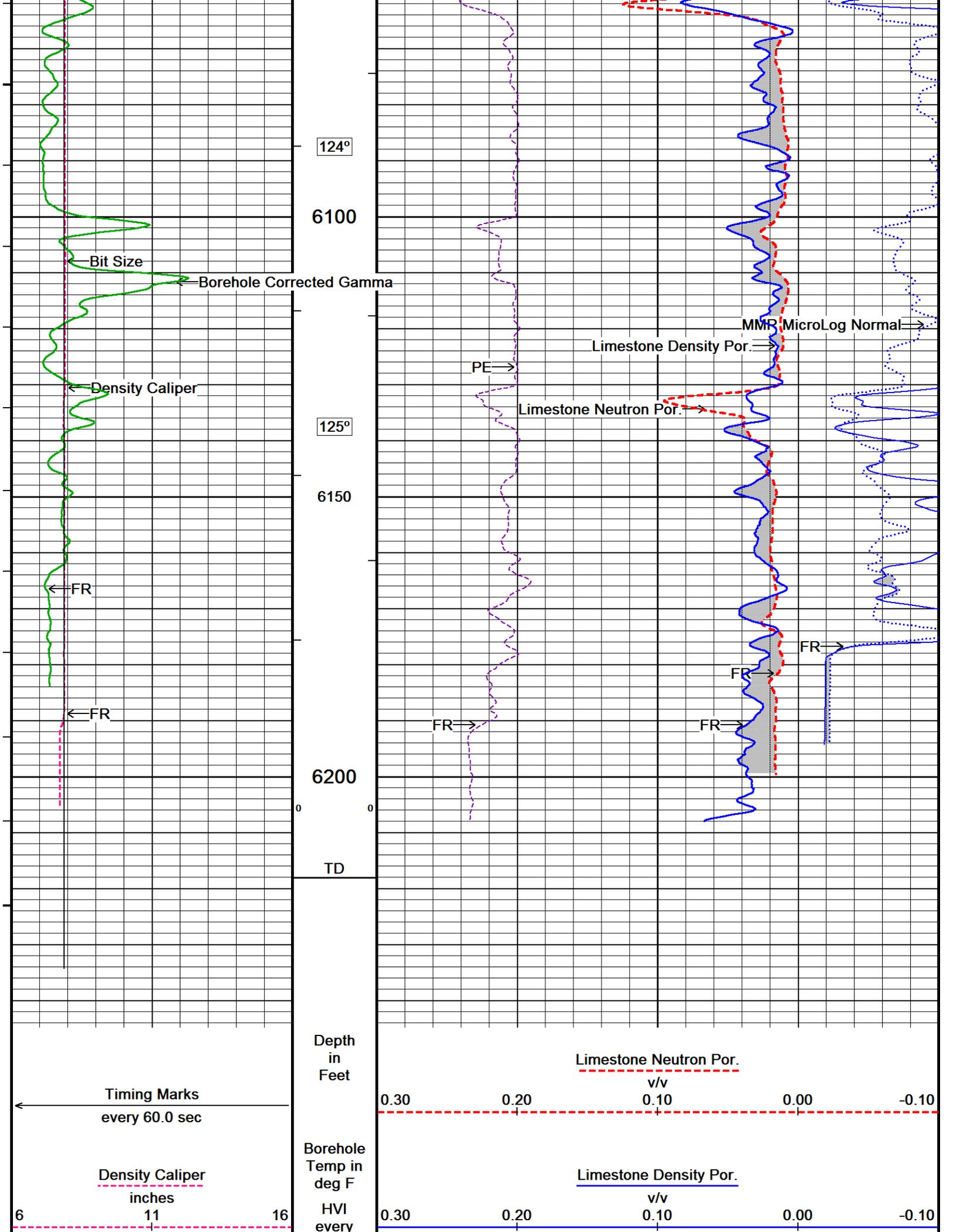
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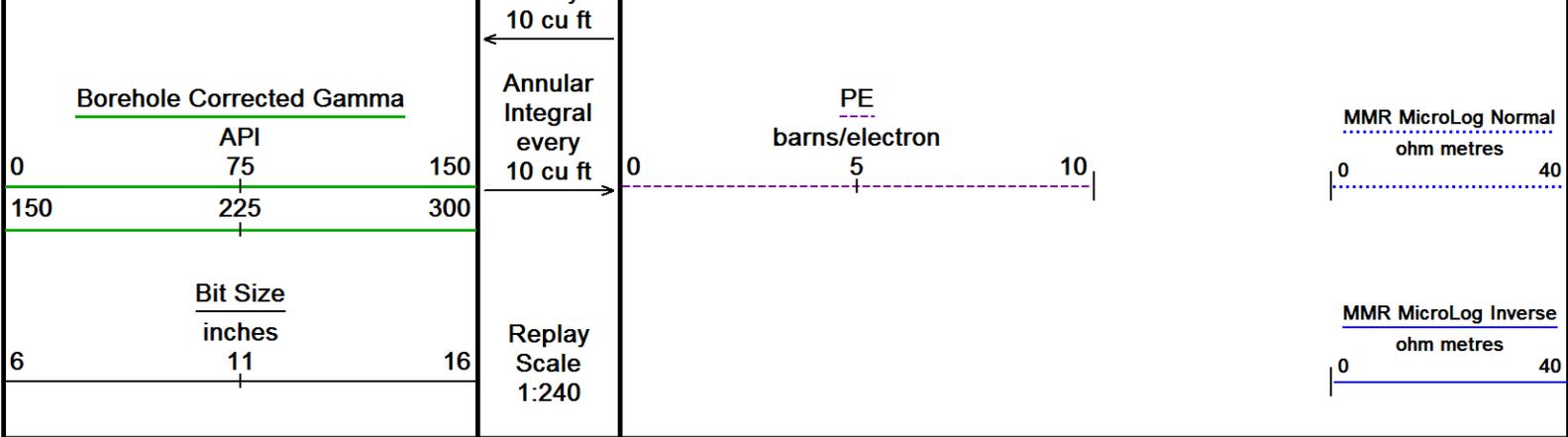
↓ 5 INCH REPEAT PASS ↓









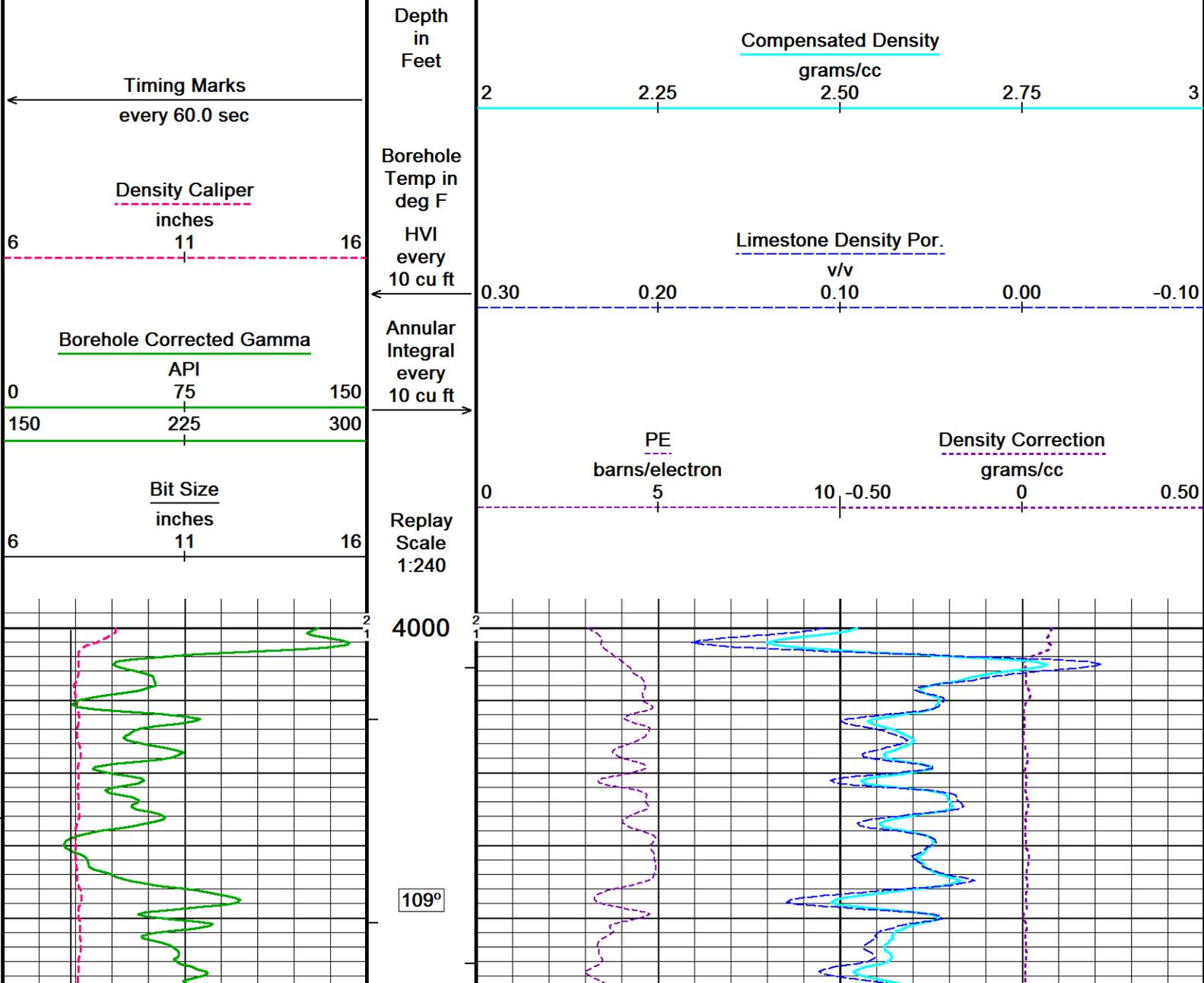


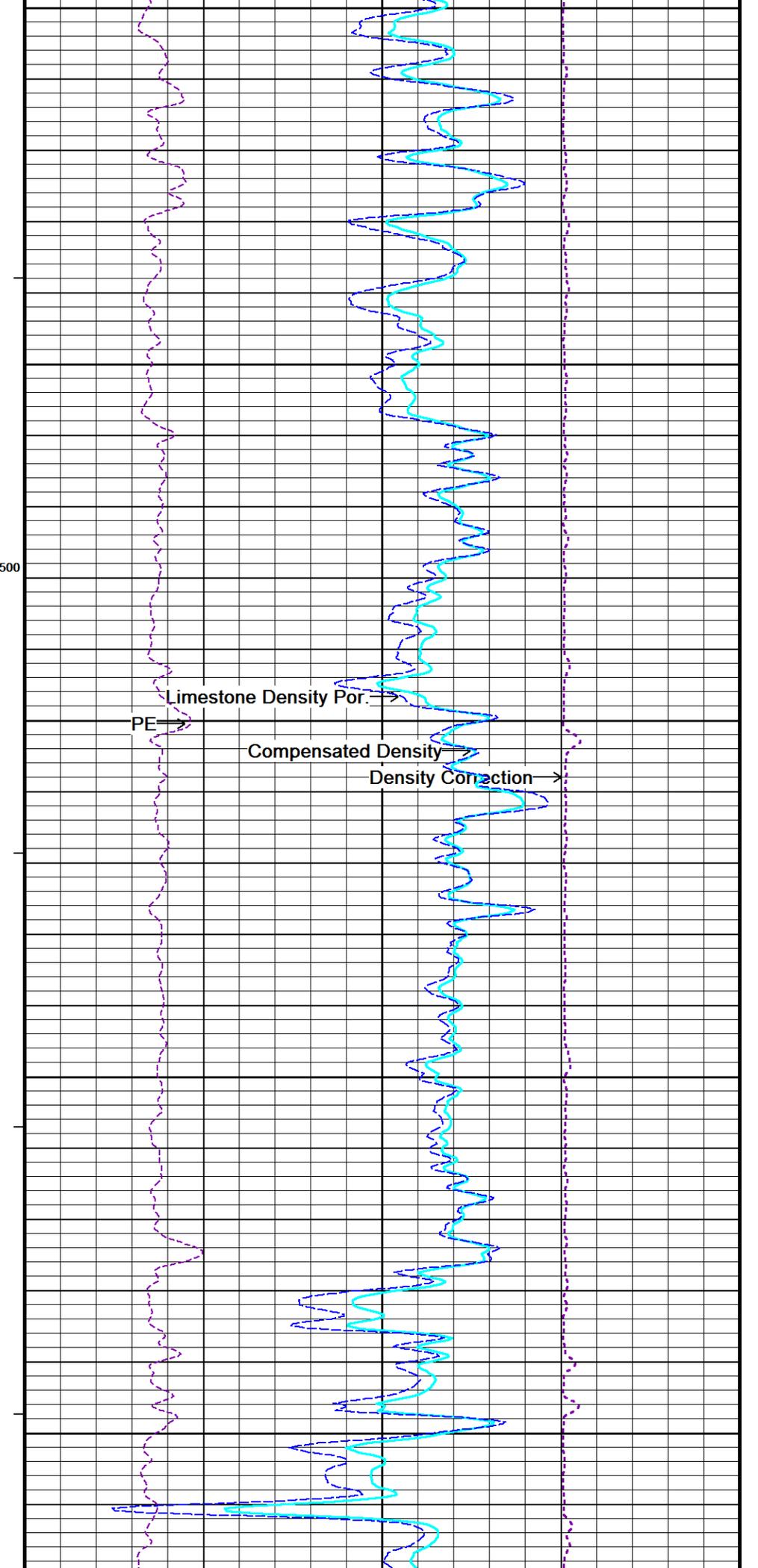
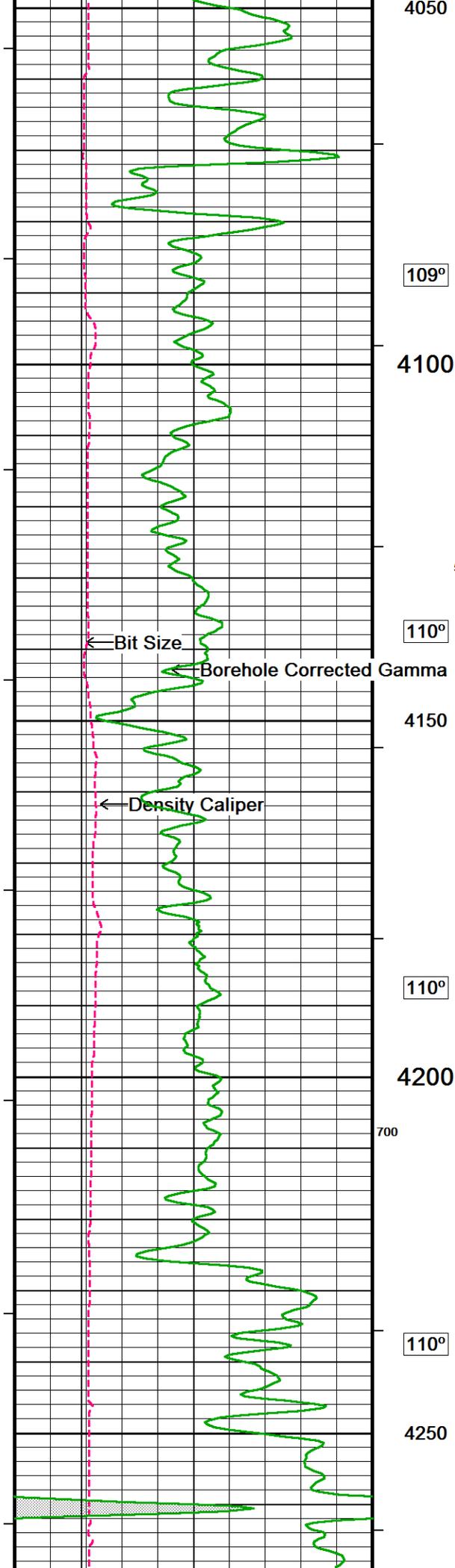
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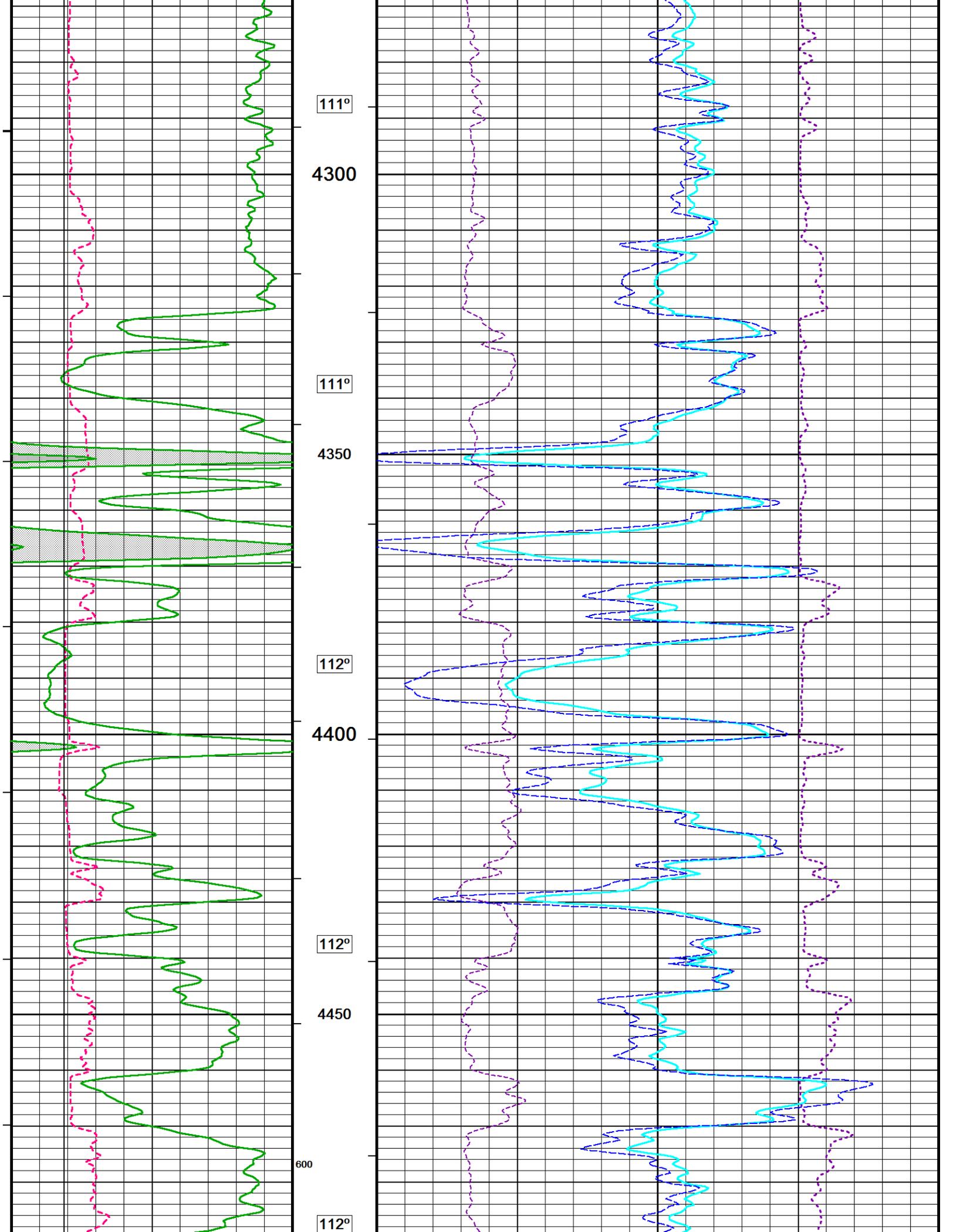
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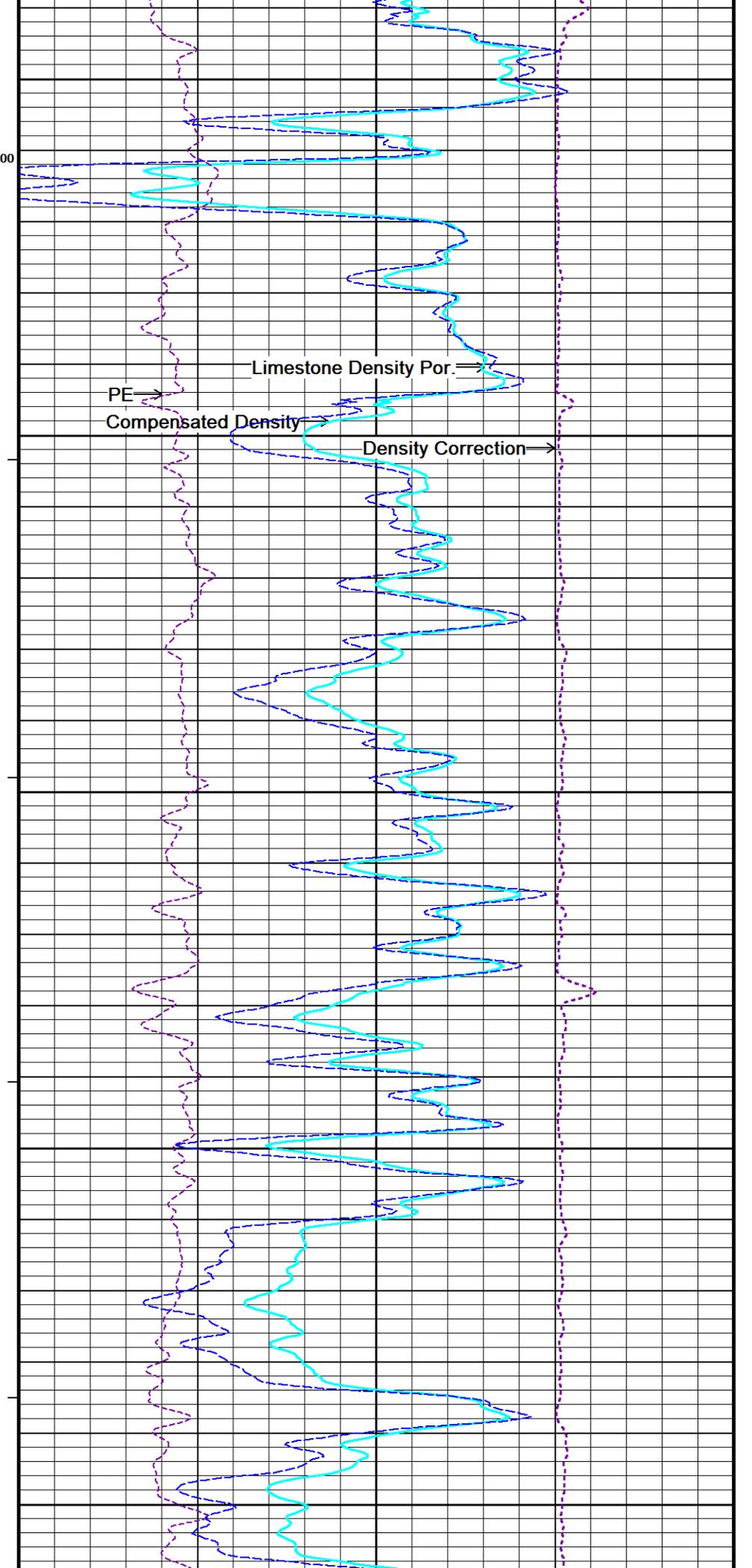
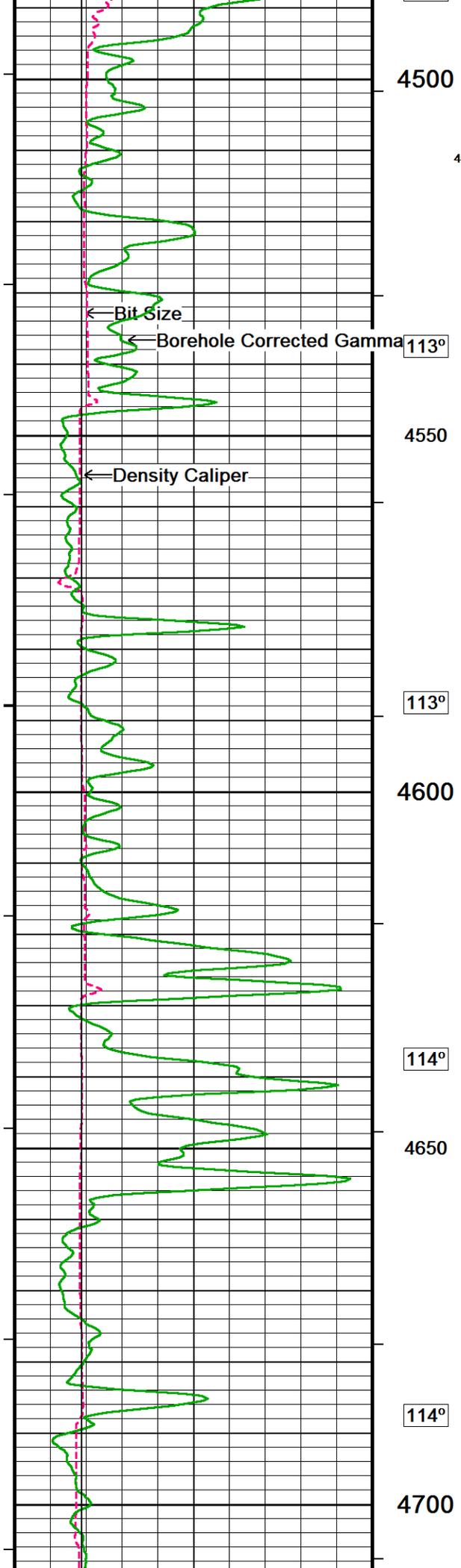
↓ **5 INCH MAIN PASS - BULK DENSITY** ↓

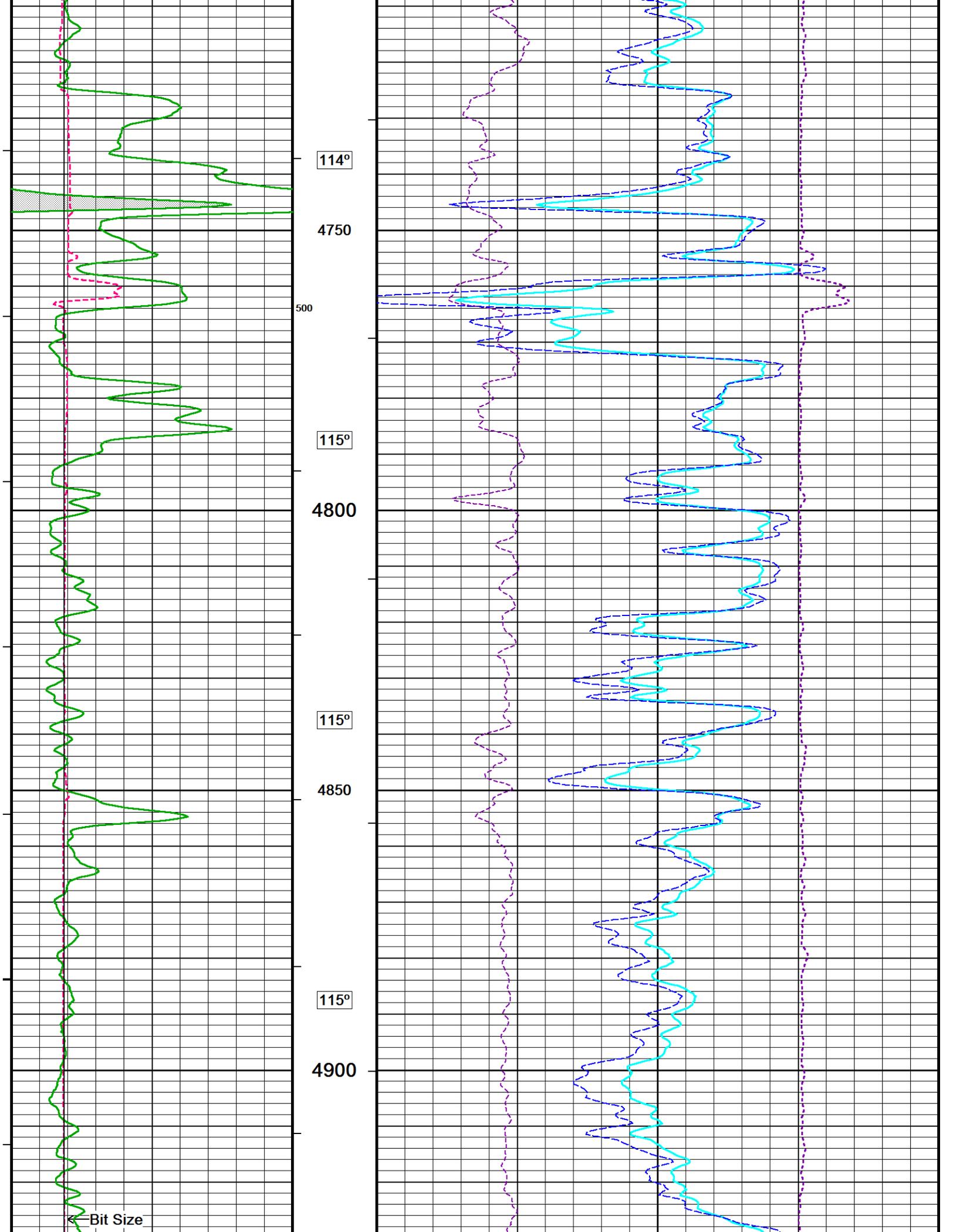
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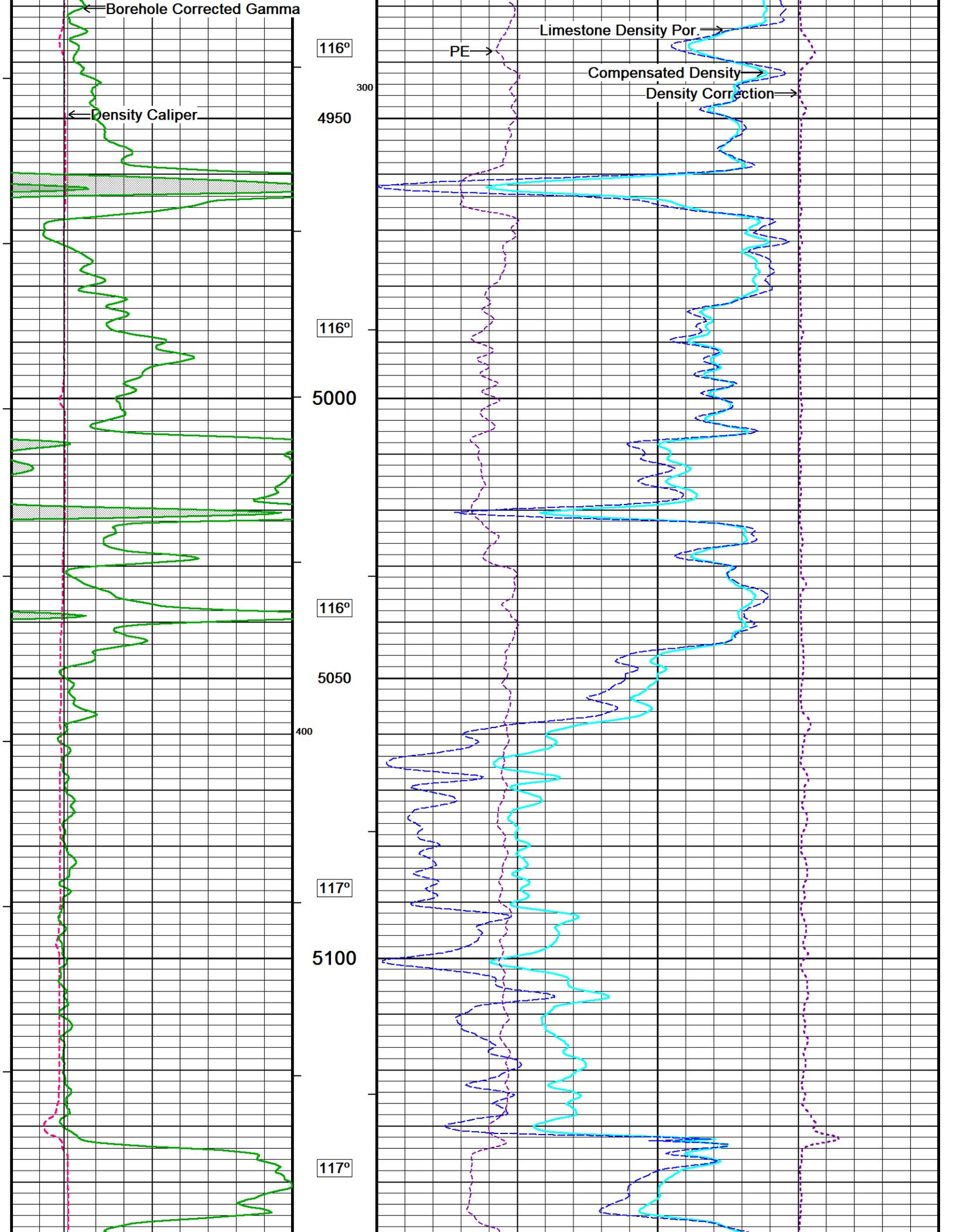


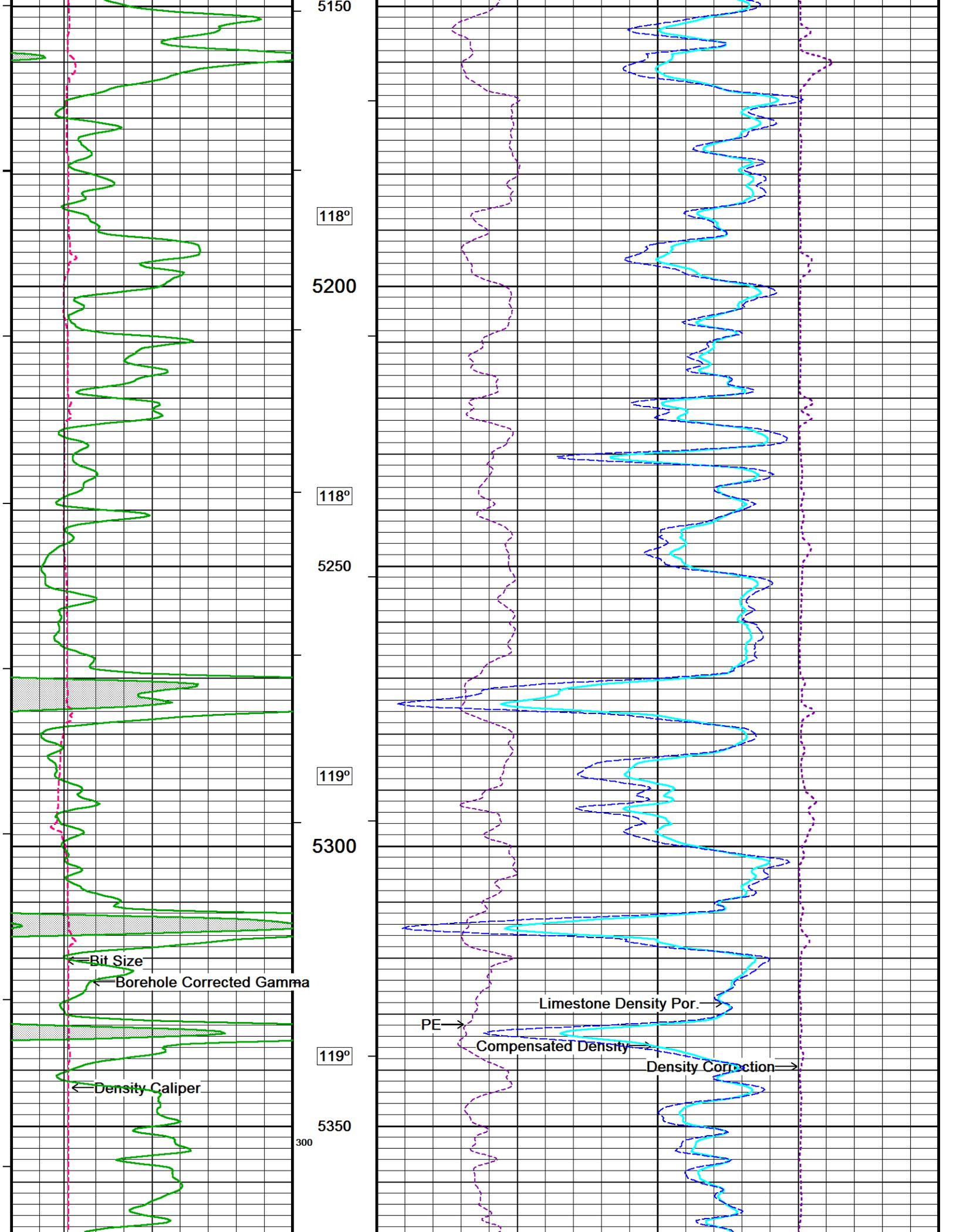


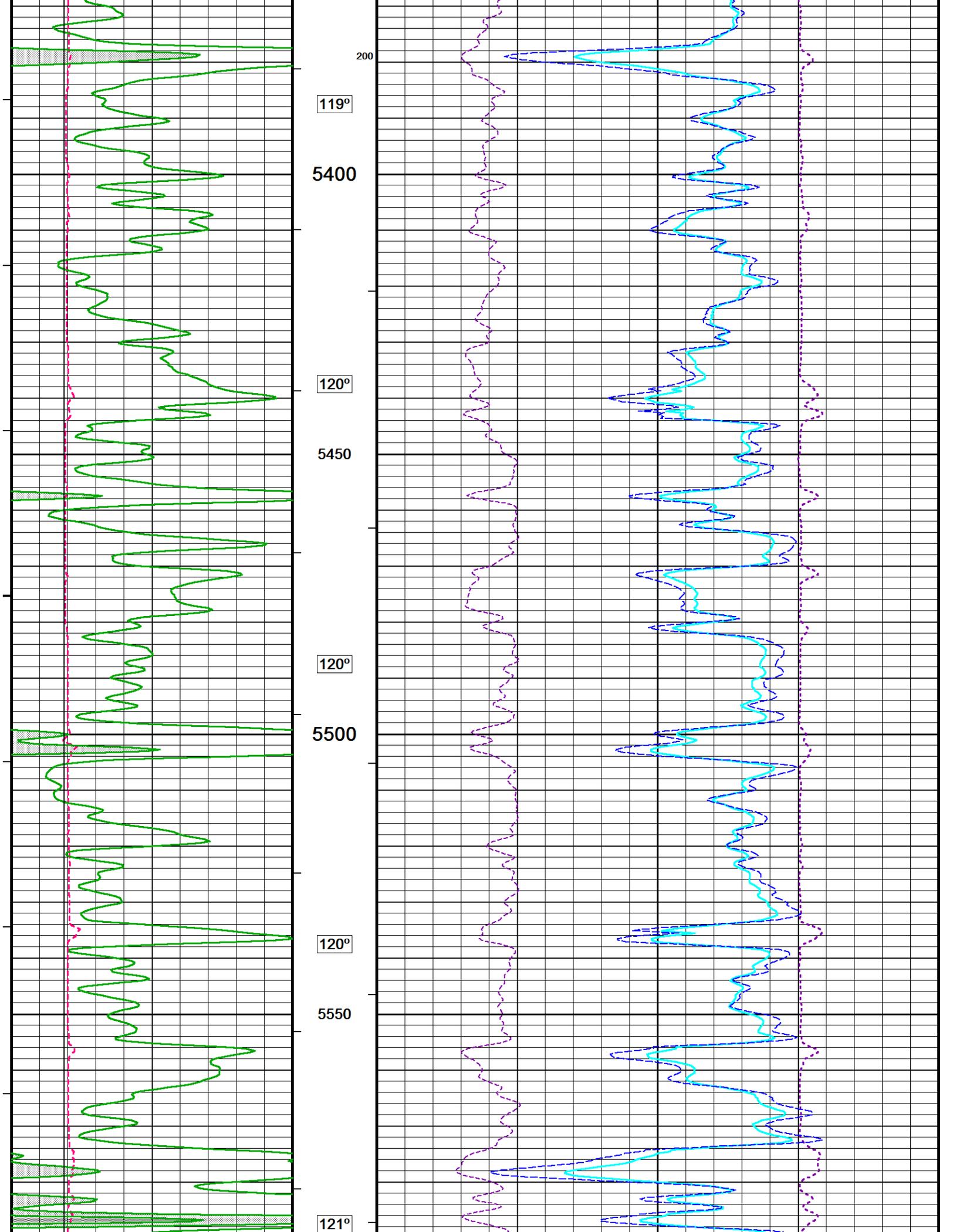


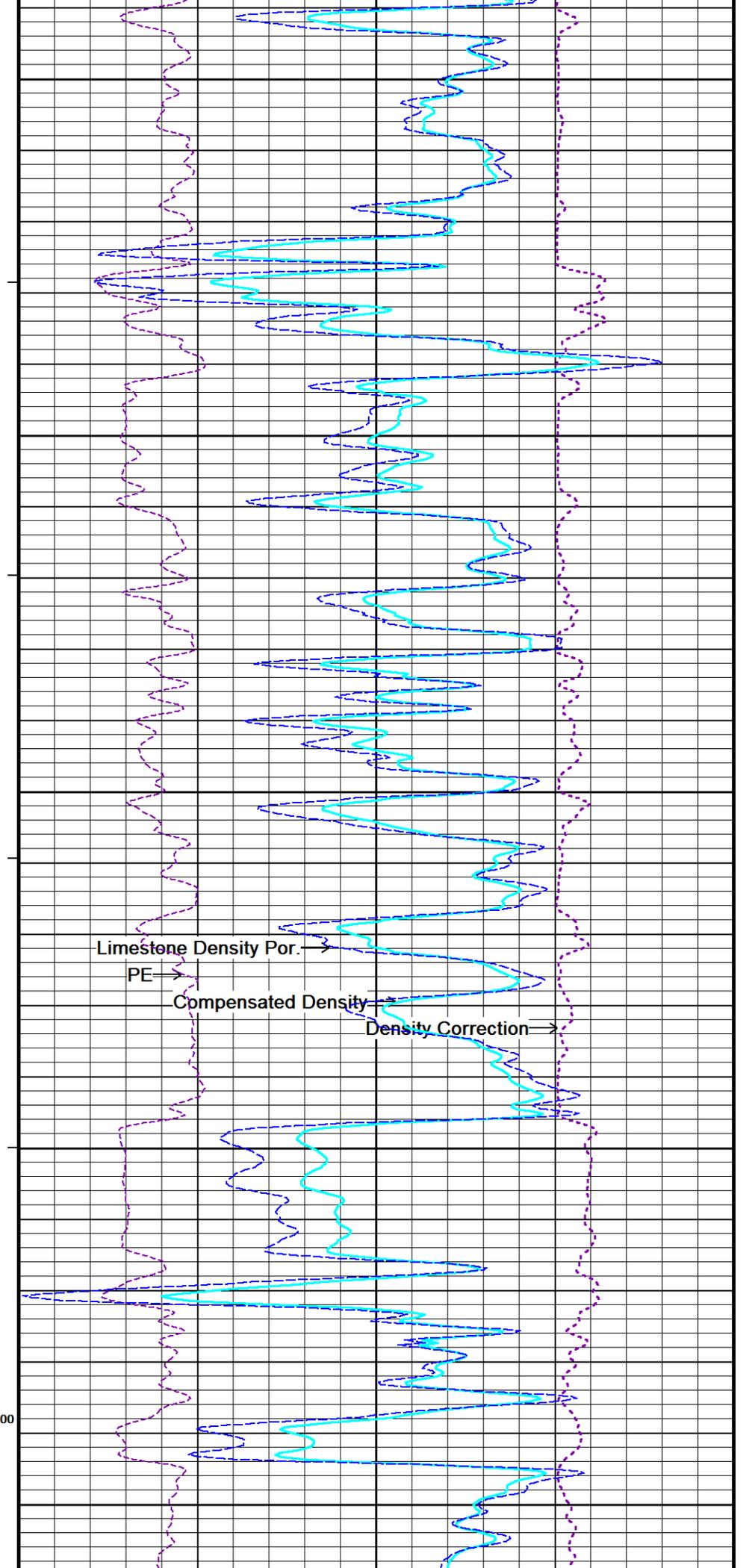
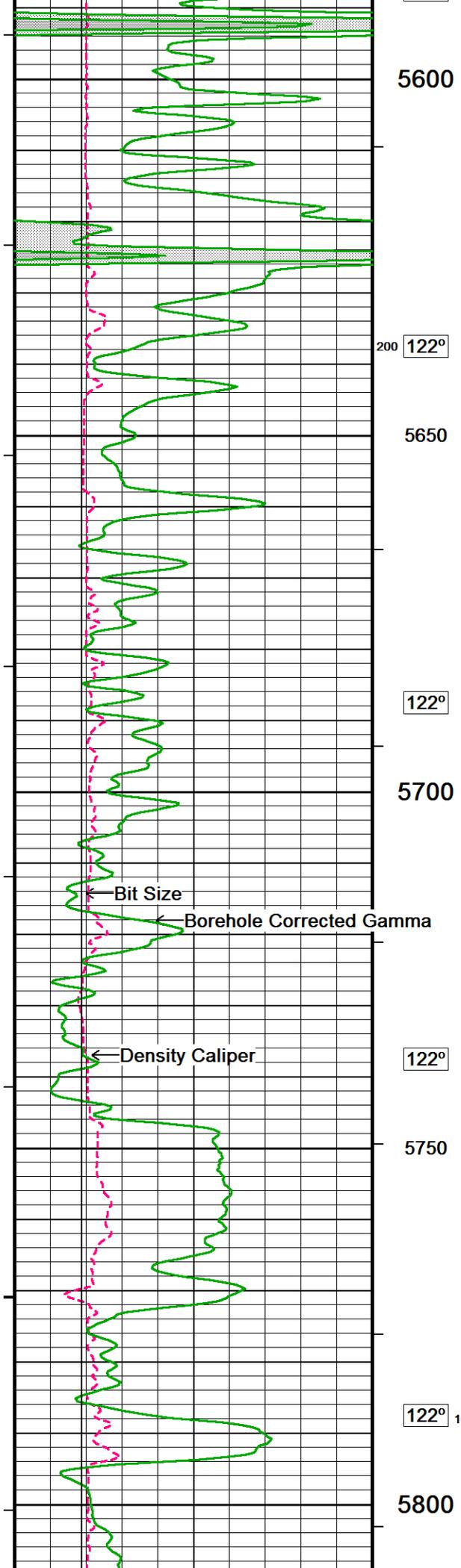


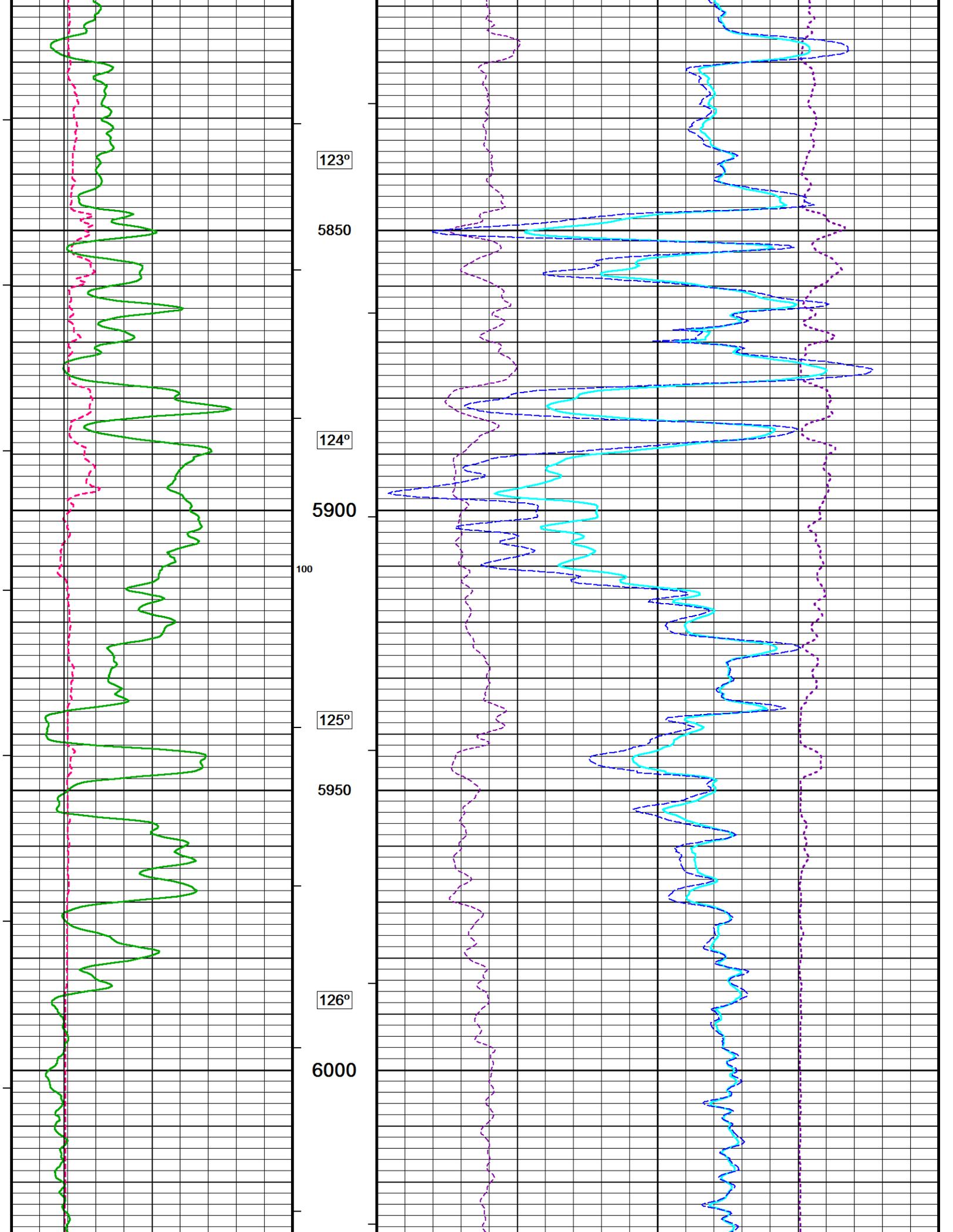


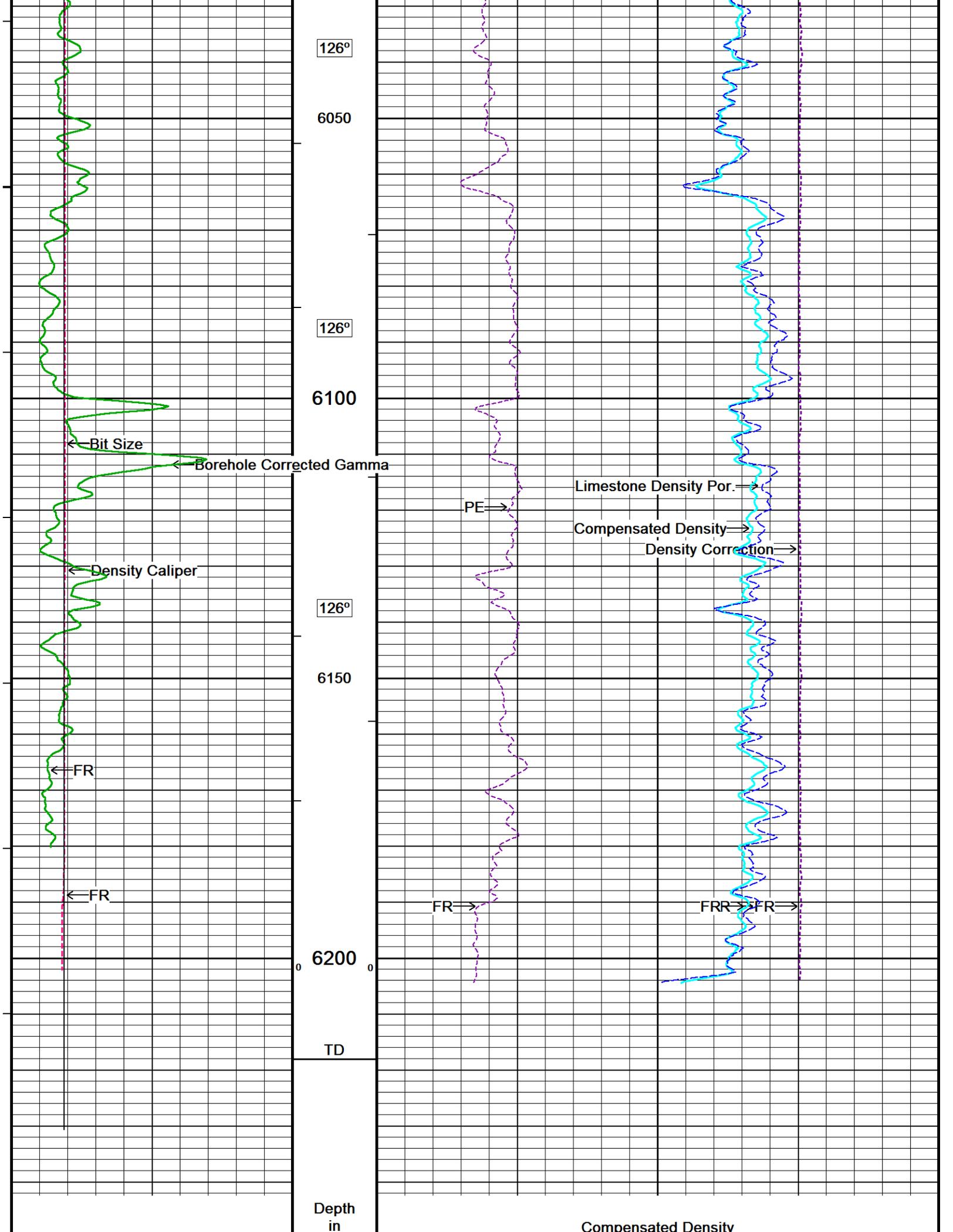


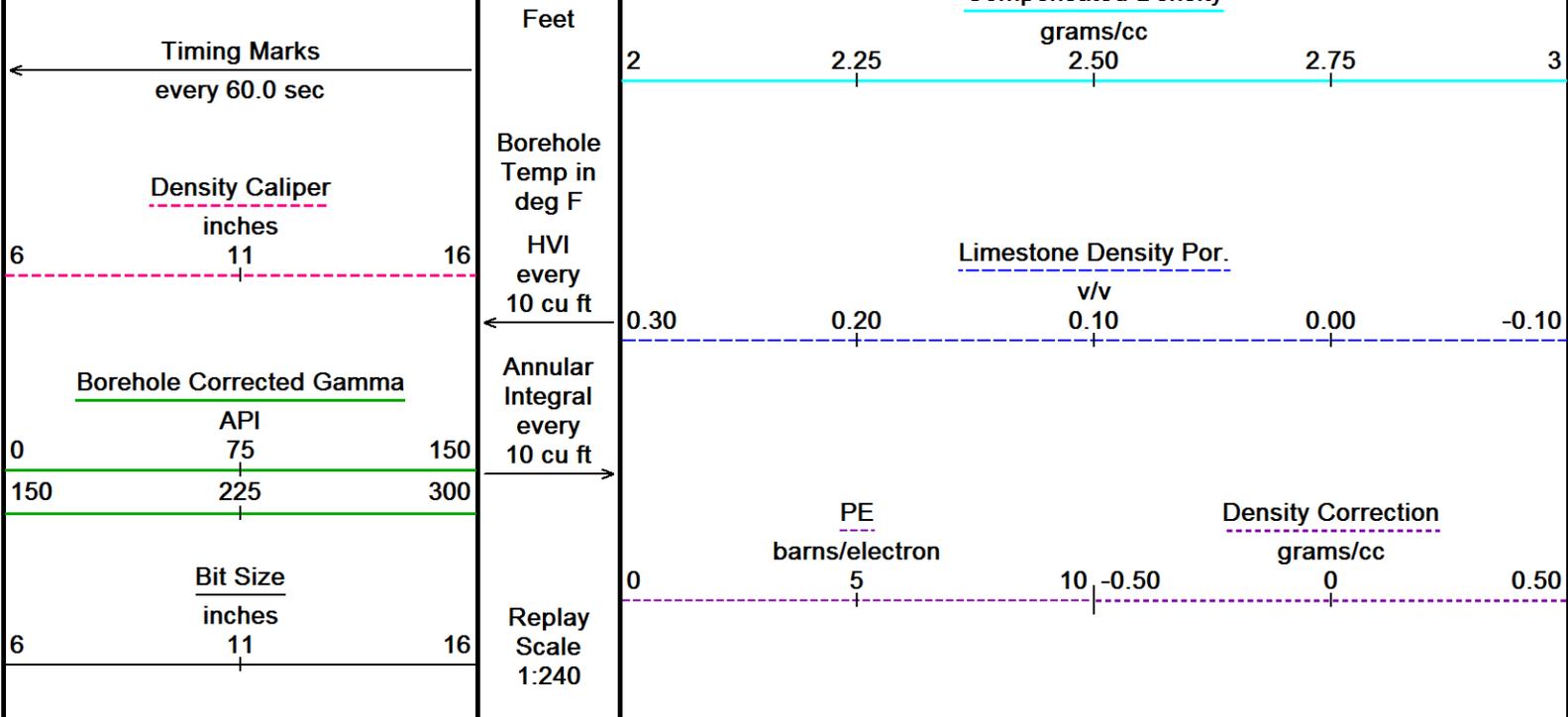








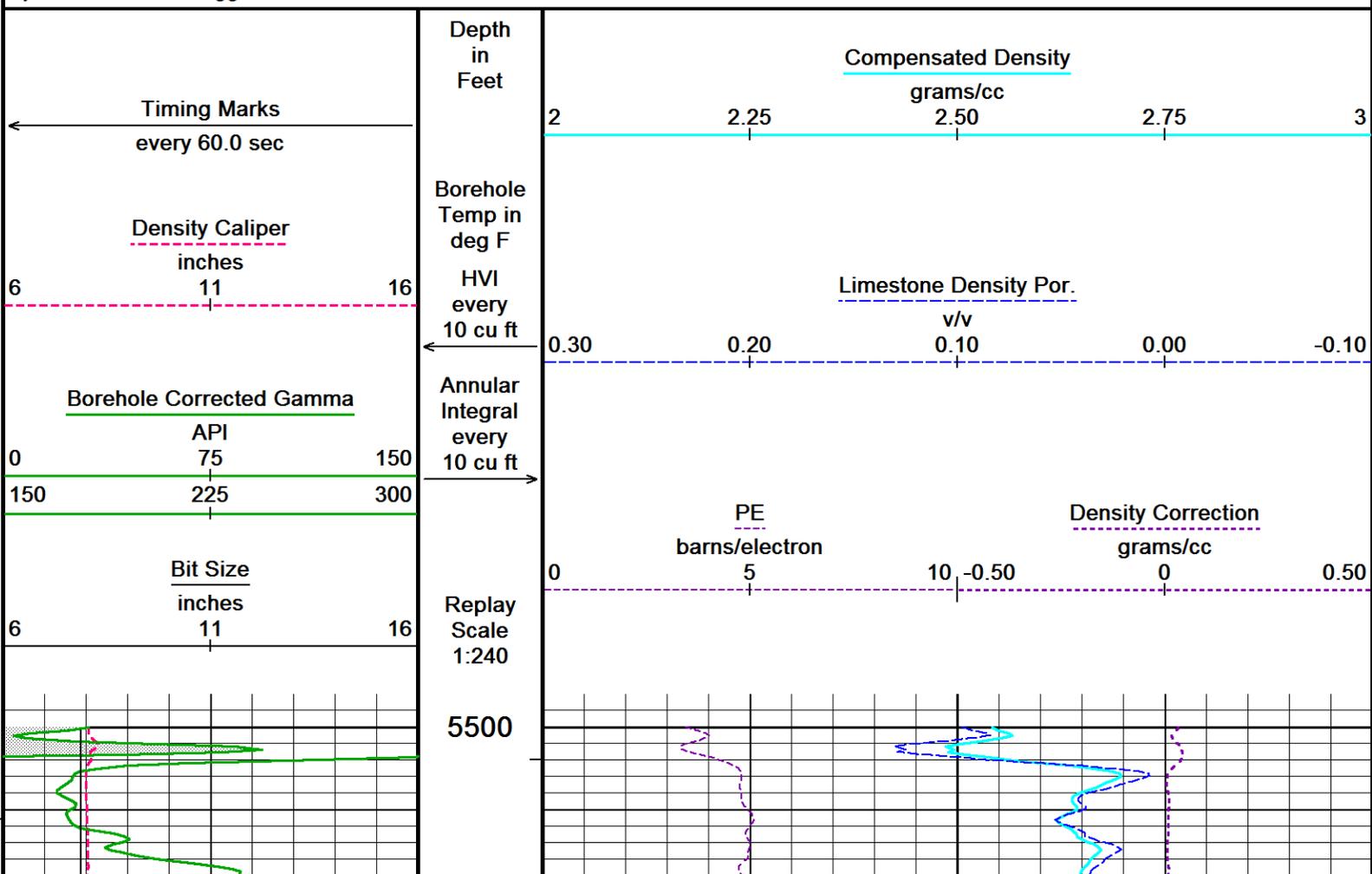


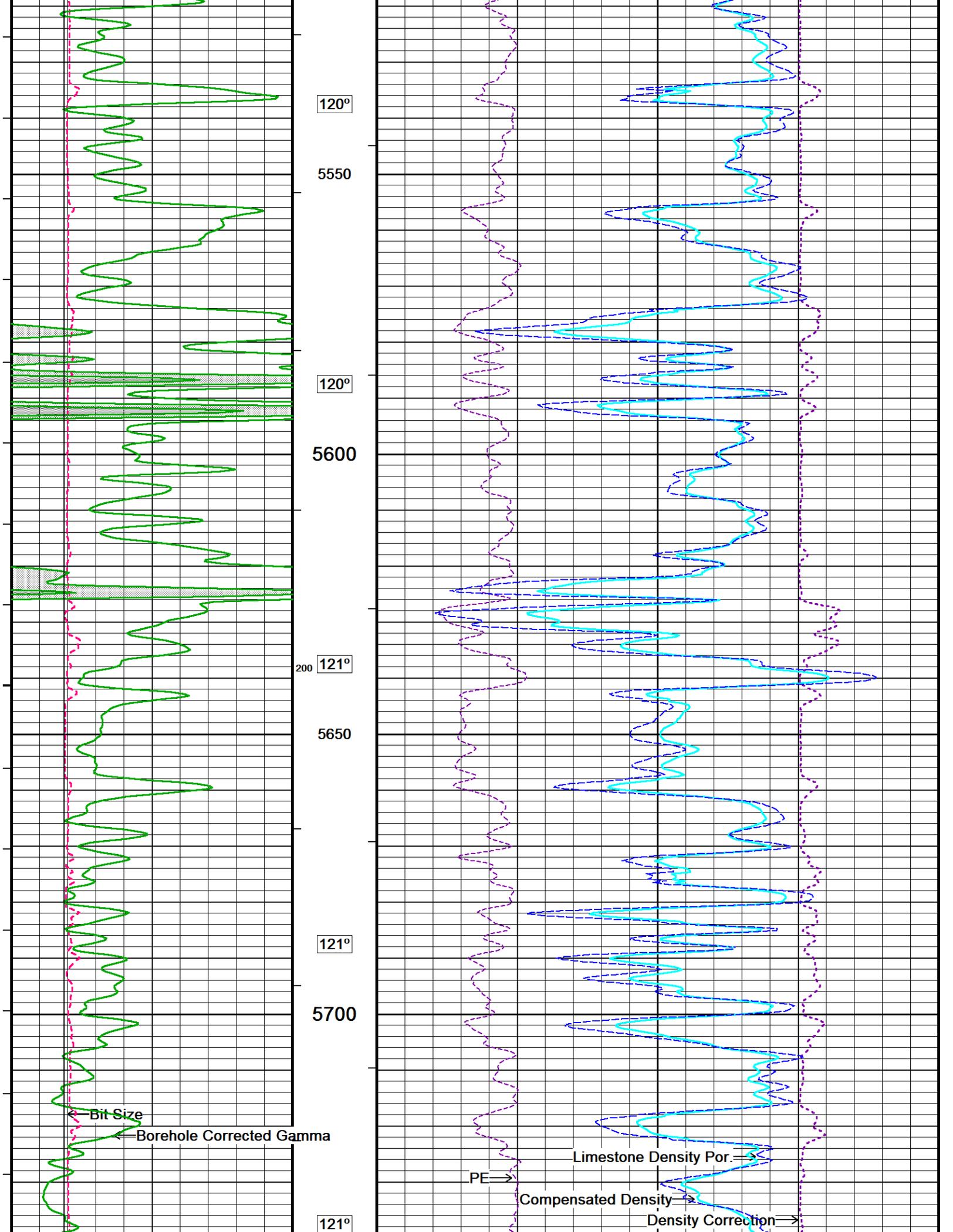


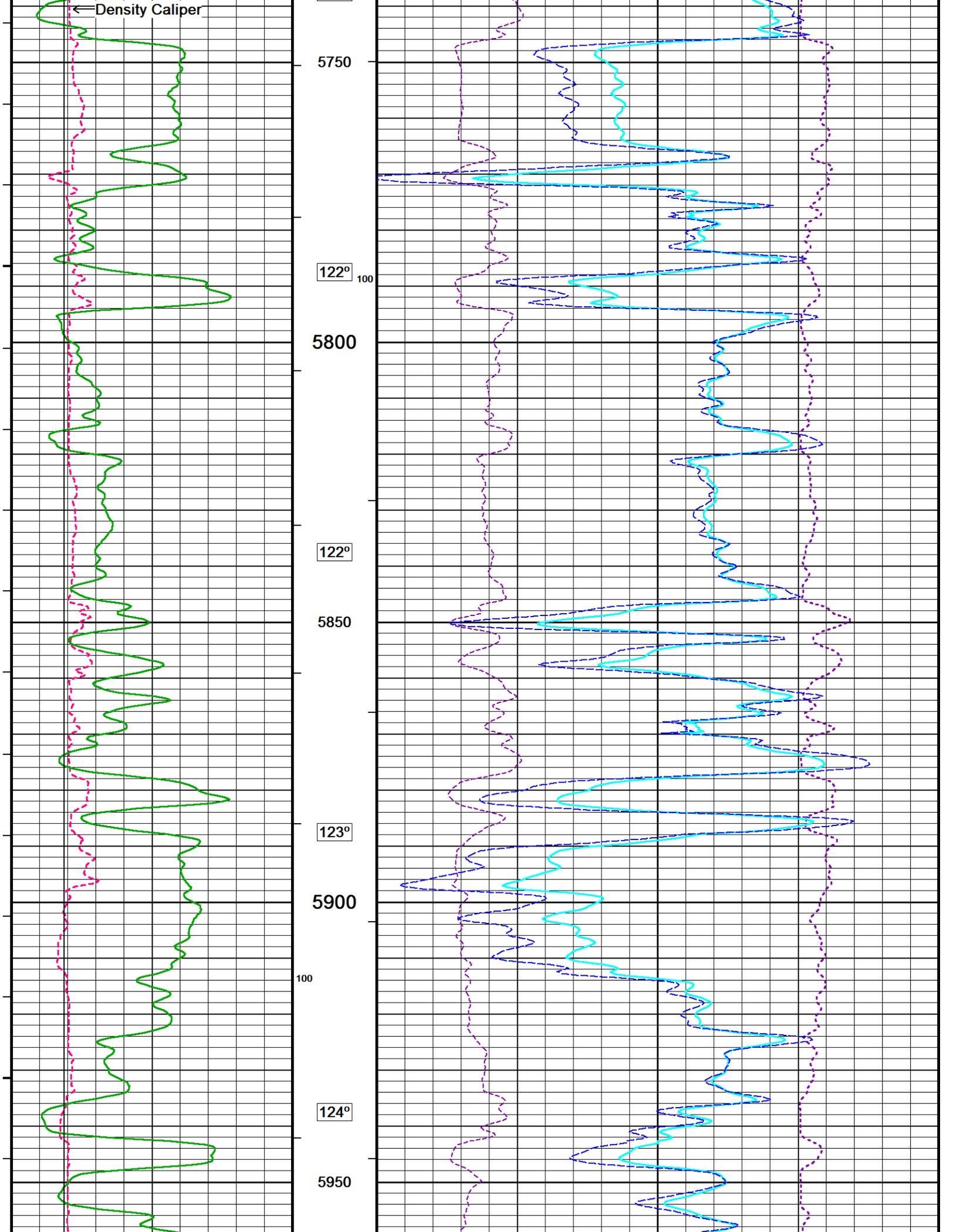
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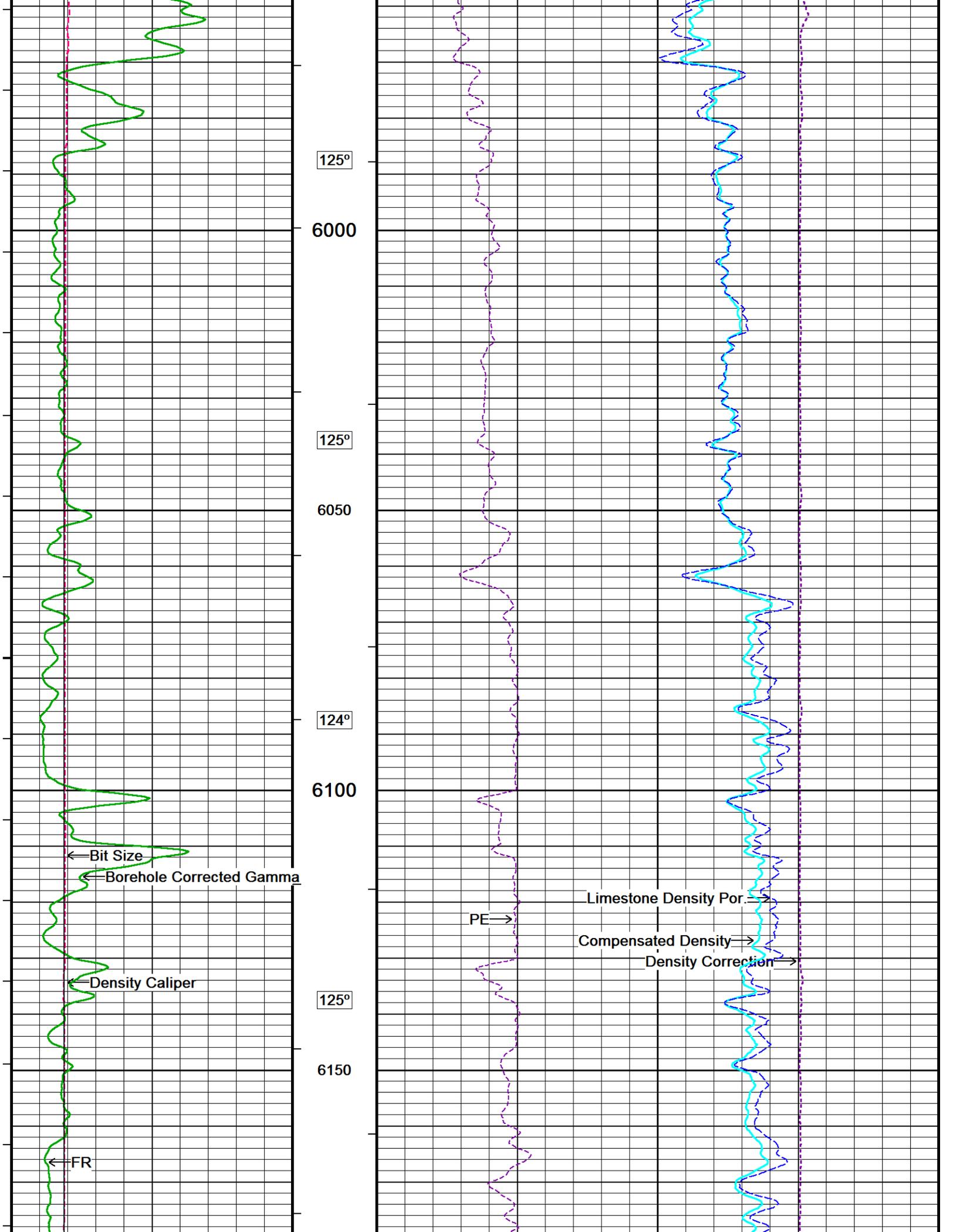
5 INCH MAIN PASS - BULK DENSITY

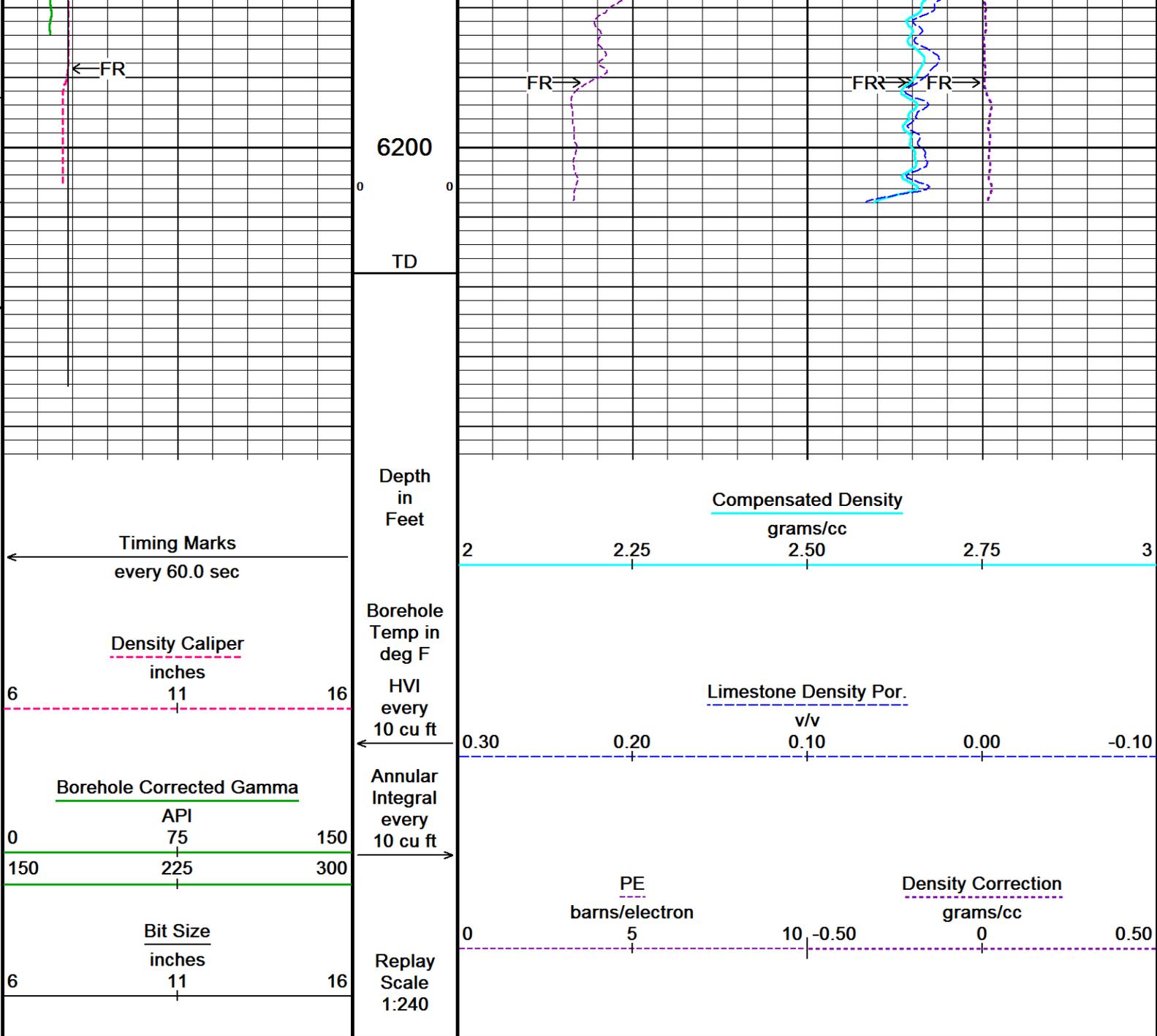
Depth Based Data - Maximum Sampling Increment 10.0cm
 Plotted on 16-SEP-2022 14:04
 Filename: C:\LOGS\O'Brien Energy Resources Corp\Preedy East #4-3\REPEAT.dta
 Recorded on 16-SEP-2022 09:51
 System Versions: Logged with 20.11.3980 Processed with 20.11.3980 Plotted with 20.11.3980











Depth Based Data - Maximum Sampling Increment 10.0cm
 Plotted on 16-SEP-2022 14:04
 Filename: C:_LOGS\O'Brien Energy Resources Corp\Preedy East #4-3\REPEAT.dta
 Recorded on 16-SEP-2022 09:51
 System Versions: Logged with 20.11.3980 Processed with 20.11.3980 Plotted with 20.11.3980

↑ 5 INCH REPEAT PASS - BULK DENSITY ↑

BEFORE SURVEY CALIBRATION
 C:_LOGS\O'Brien Energy Resources Corp\Preedy East #4-3\MAIN.dta

General Constants All 000 Last Edited on 16-SEP-2022,09:10

General Parameters
 Mud Resistivity 1.120 ohm-metres
 Mud Resistivity Temperature 96.000 degrees F
 Water Level 0.000 feet
 Borehole Fluid Processing Wet Hole

Hole/Annular Volume and Differential Caliper Parameters
 HVOL Method Single Caliper
 HVOL Caliper 1 Density Caliper
 HVOL Caliper 2 N/A
 Annular Volume Diameter 1.500 inches

Annular Volume Diameter 4.500 inches
 Caliper for Differential Caliper Density Caliper

Rwa Parameters
 Porosity used Limestone Density Por.
 Resistivity used Array Ind. One Res Rt
 RWA Constant A 1.000
 RWA Constant M 2.000
 SW/APOR Tool Source 0.000

High Resolution Temperature Constants MCG-E.A 552

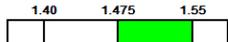
Pre-filter Length 11

Gamma Calibration MCG-E.A 552

Field Calibration on 27-APR-2022 12:29

	Measured	Calibrated (API)
Background	36	23
Calibrator (Gross)	862	556
Calibrator (Net)	826	533

Gamma Calibration Tolerances MCG-E.A 552

Ratio 1.549  Counts/API

Gamma Constants MCG-E.A 552

Last Edited on 16-SEP-2022,08:55

Gamma Calibrator Number	533	
GRC-M Calibrator Jig in Use?	NO	
Inactive Background Jig in Use?	NO	
Mud Density	1.11	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Potassium Equivalence	Chloride	
K Mud Concentration	0.00	%

Caliper Calibration MPD-C.J 438

Base Calibration on 28-JUL-2022 11:15
 Field Calibration on 28-JUL-2022 11:16

Base Calibration Reading No	Measured	Calibrator Size (in)
1	17084	4.01
2	25710	5.96
3	34480	7.97
4	42747	9.86
5	51875	11.88
6	N/A	N/A

Field Calibration	Measured Caliper (in)	Actual Caliper (in)
	7.94	7.97

Caliper Calibration Tolerances MPD-C.J 438

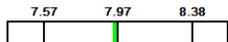
Long Arm Field Cal. 7.94  in

Photo Density Calibration MPD-C.J 438

Base Calibration on 28-JUL-2022 11:56
 Field Check on 28-JUL-2022 12:02

Density Calibration Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Background	998	1183		
Reference 1	44365	20830	59814	31141
Reference 2	18242	2137	24963	2524

Field Check at Base	997.9	1183.4
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Field Check	994.3	1212.7
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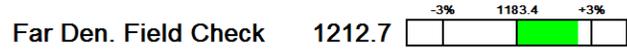
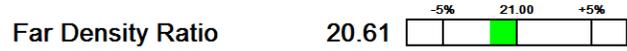
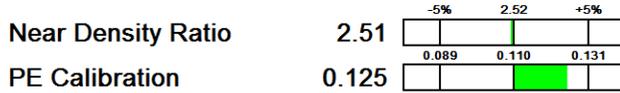
PE Calibration Base Calibration	Measured	Calibrated
WS	WH	Ratio

Background	185	889		
Reference 1	19021	44213	0.435	0.368
Reference 2	5452	18127	0.306	0.273

Field Check at Base
185.3 889.5

Field Check
184.5 885.6

Photo Density Calibration Tolerances MPD-C.J 438



Density Constants MPD-C.J 438

Last Edited on 16-SEP-2022,08:55

Density Source Id	H79956B	
Nylon Calibrator Number	DNCE 687	
Aluminium Calibrator Number	DACD 526	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.11	gm/cc
Mud Density Type	Non-Barite	
Mud Filtrate Density	1.00	gm/cc
Dry Hole Mud Filtrate Density	1.00	gm/cc
DNCT	0.00	gm/cc
CRCT	0.00	gm/cc
Density Z/A Correction	Hybrid	
Precision Enhanced Density Processing	Applied	
Matrix Density (gm/cc)	Depth (ft)	
2.71	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	

DOWNHOLE EQUIPMENT

C:_LOGS\O'Brien Energy Resources Corp\Preedy East #4-3\MAIN.dta

Cablehead, 11 pin
CBH-CA 229 LG: 2.40 ft WT: 24.3 lb OD: 2.244 in

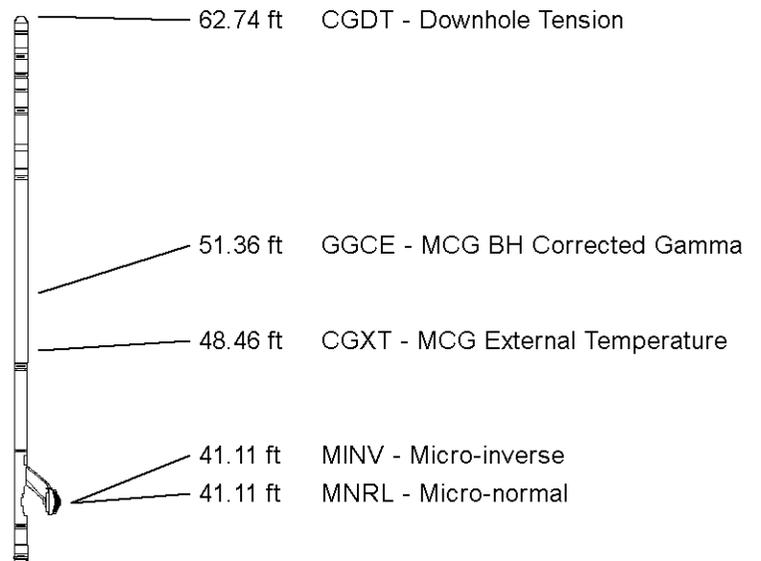
11C-11B Compact Tool Adaptor
MTA-K.B 341 LG: 1.53 ft WT: 13.2 lb OD: 2.240 in

Compact Swivel Head Adaptor
SHA-J.B 635 LG: 2.30 ft WT: 22.0 lb OD: 2.240 in

Compact Comms Gamma
MCG-E.A 552 LG: 8.70 ft WT: 63.9 lb OD: 2.244 in

Compact Micro-Resistivity
MMR-B.J 193 LG: 8.59 ft WT: 81.6 lb OD: 4.882 in

Compact Neutron



Compact Neutron
MDN-C.A 399 LG: 5.04 ft WT: 50.7 lb OD: 2.244 in

Compact Density/Caliper
MPD-C.J 438 LG: 9.59 ft WT: 90.4 lb OD: 2.449 in

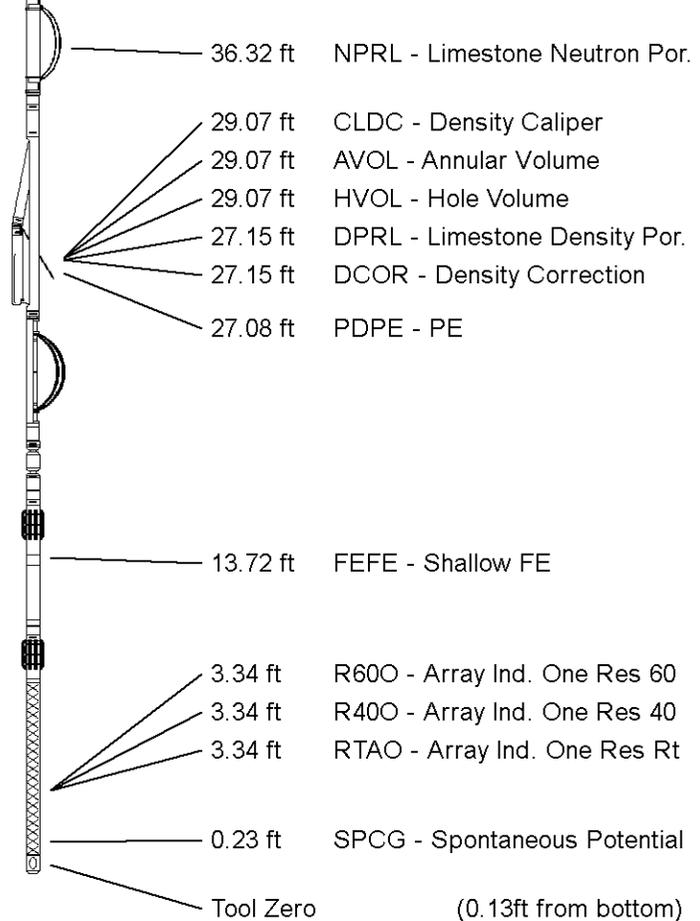
Compact Inline Bowspring sub
MIS-D.B 676 LG: 5.70 ft WT: 33.1 lb OD: 2.244 in

Compact Knuckle Joint
SKJ-E.B 617 LG: 2.17 ft WT: 24.3 lb OD: 2.244 in

Compact Focussed Electric
MFE-B.J 359 LG: 6.05 ft WT: 48.5 lb OD: 2.244 in

Compact Induction
MAI-C.A 490 LG: 10.81 ft WT: 48.5 lb OD: 2.244 in

Total Length: 62.87 ft Weight: 500.4 lb



All measurements relative to tool zero.

COMPANY O' BRIEN ENERGY RESOURCES CORP.
WELL PREEDY EAST #4-3
FIELD BORCHERS NW
PROVINCE/COUNTY MEADE
COUNTRY/STATE U.S.A. / KANSAS

Elevation Kelly Bushing	2622.00	feet	First Reading	6191.00	feet
Elevation Drill Floor	2621.00	feet	Depth Driller	6225.00	feet
Elevation Ground Level	2610.00	feet	Depth Logger	6218.00	feet

WIREFLINE
LOGGING
SOLUTIONS

PHOTO DENSITY
DUAL SPACED NEUTRON
GAMMA RAY