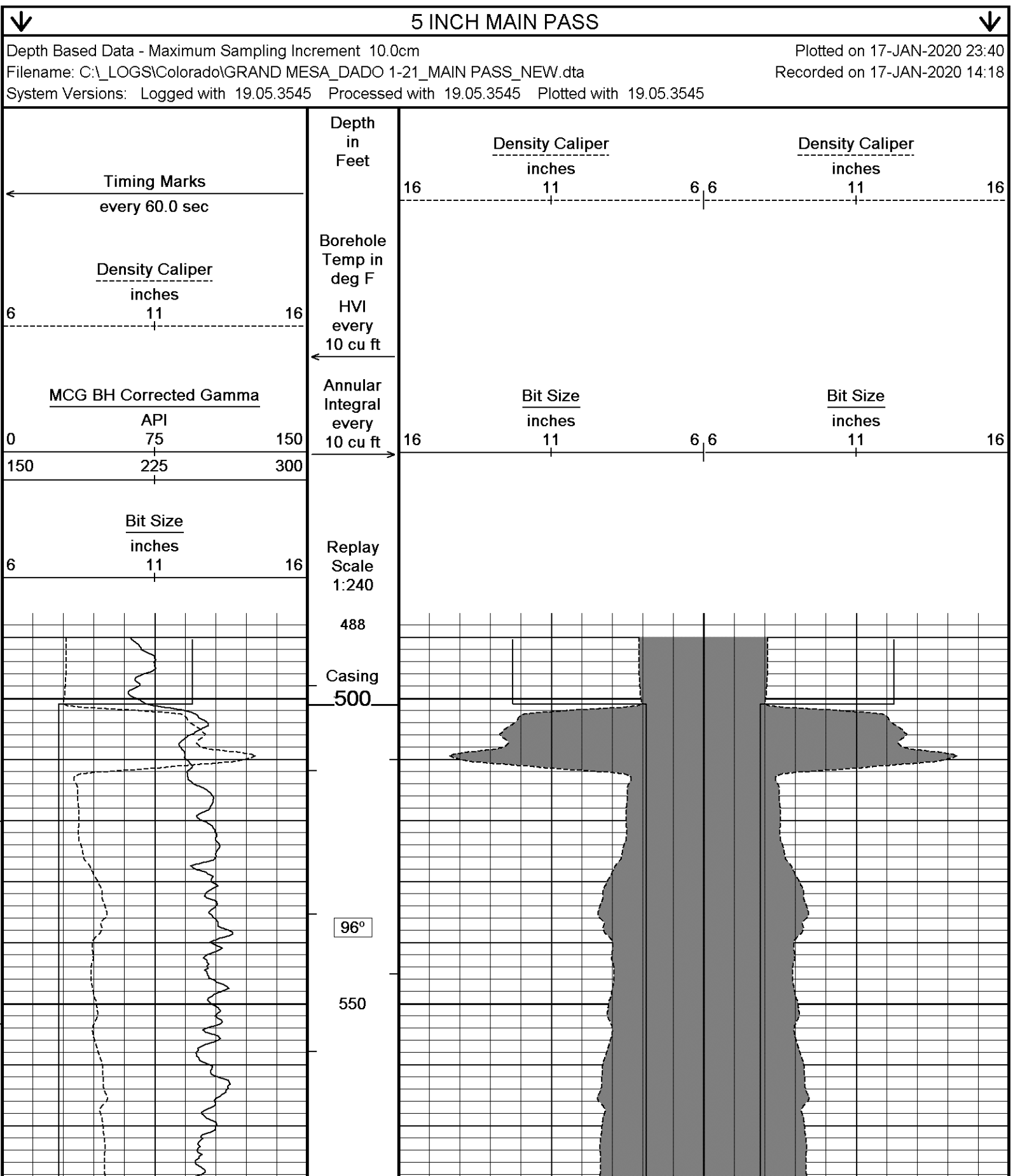
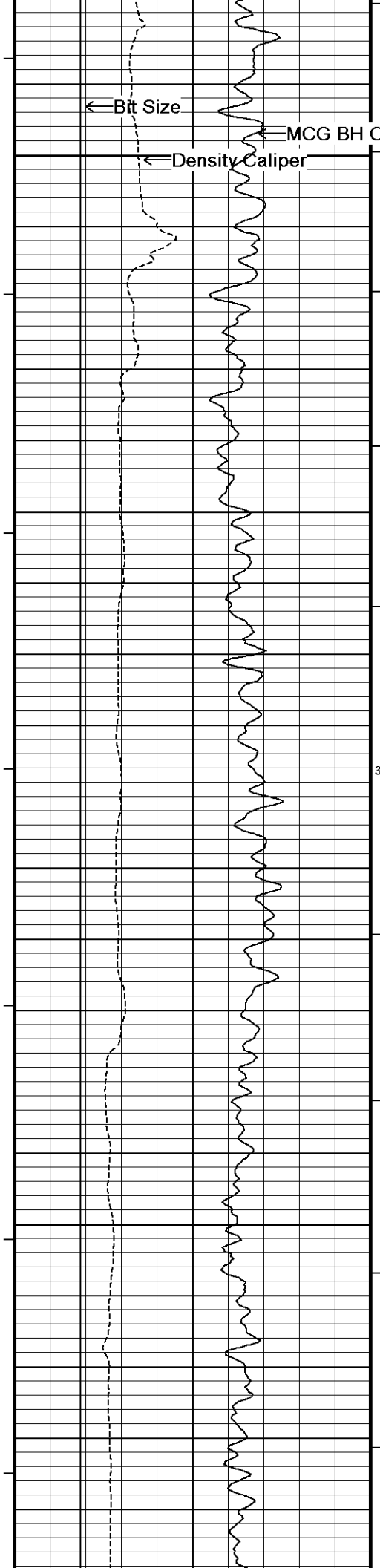


CALIPER LOG

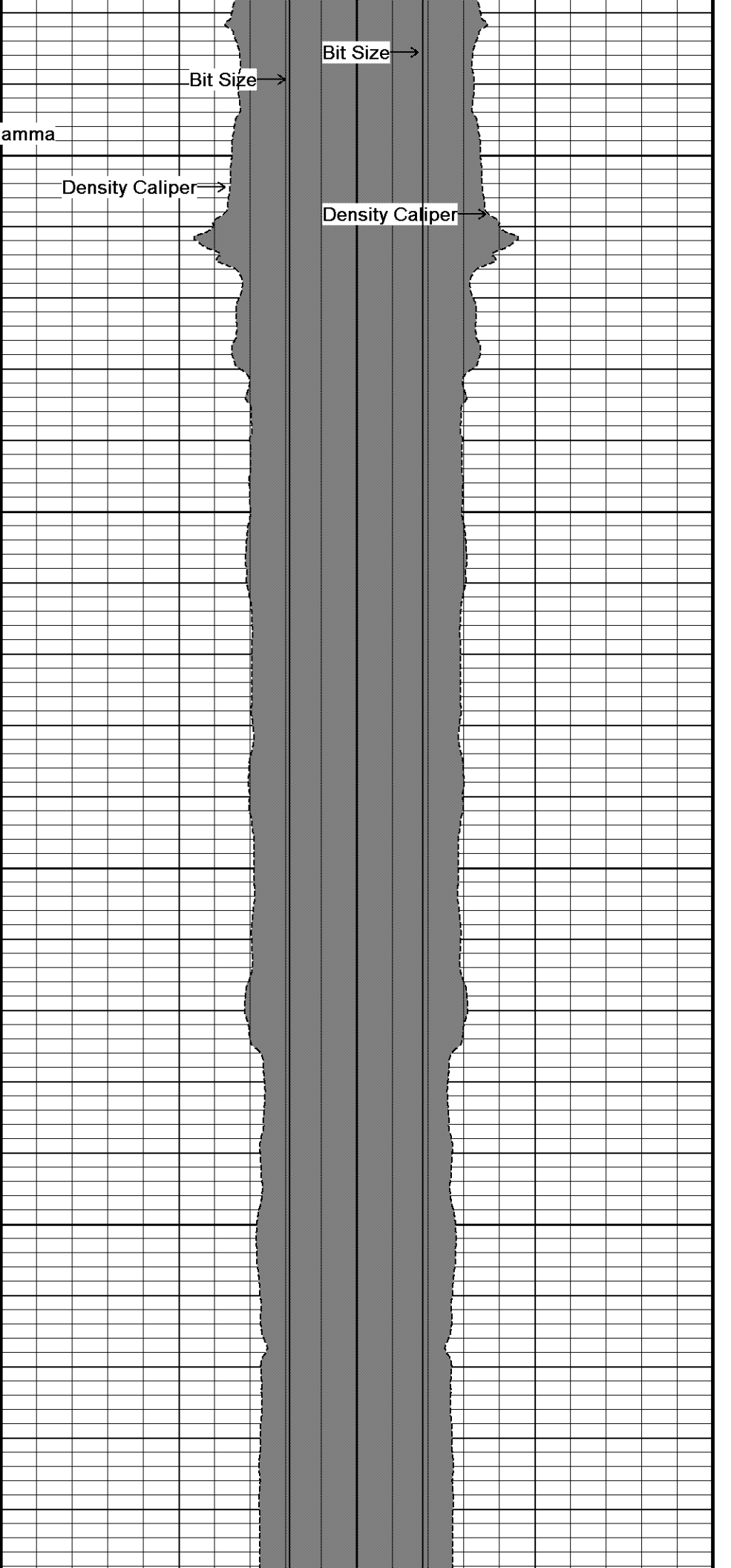
CALIPER LOG									
COMPANY			GRAND MESA OPERATING COMPANY						
WELL			DADO 1-21						
FIELD			GUTRU						
COUNTY			LINCOLN						
STATE			COLORADO						
LOCATION			1872' FNL & 614' FEL SEC. 21 TWP 7S-55W						
SEC 21	TWP 7S	RGE	Other Services						
Latitude		39.42739							
Longitude		-103.55015							
API Number		05-073-06772							
Permanent Datum GL, Elevation 5484 feet						Elevations: feet			
Log Measured From KB, 19.00 feet above Permanent Datum						KB 5503.00			
Drilling Measured From KB						DF 5502.00			
						GL 5484.00			
Date	17-JAN-2020								
Run Number	ONE								
Service Order	---								
Depth Driller	8655.00			feet					
Depth Logger	8660.00			feet					
First Reading	8618.00			feet					
Last Reading	501.00			feet					
Casing Driller	503.00			feet					
Casing Logger	501.00			feet					
Bit Size	7.875			inches					
Hole Fluid Type	WBM								
Density / Viscosity	9.30 lb/USg		64.00 sec/qt						
PH / Fluid Loss	10.50		7.20 ml/30Min						
Sample Source	FLOWLINE								
Rm @ Measured Temp	0.36 @ 52.0			ohm-m					
Rmf @ Measured Temp	0.27 @ 52.0			ohm-m					
Rmc @ Measured Temp	0.45 @ 52.0			ohm-m					
Source Rmf / Rmc	CALC		CALC						
Rm @ BHT	0.098 @207.0			ohm-m					
Time Since Circulation	19 HOURS								
Max Recorded Temp	207.00		deg F						
Equipment / Base	11008		---						
Recorded By	MICHAEL RATHS			ALEJANDRO DELA GARZA					
Witnessed By	GARET DINKEL								

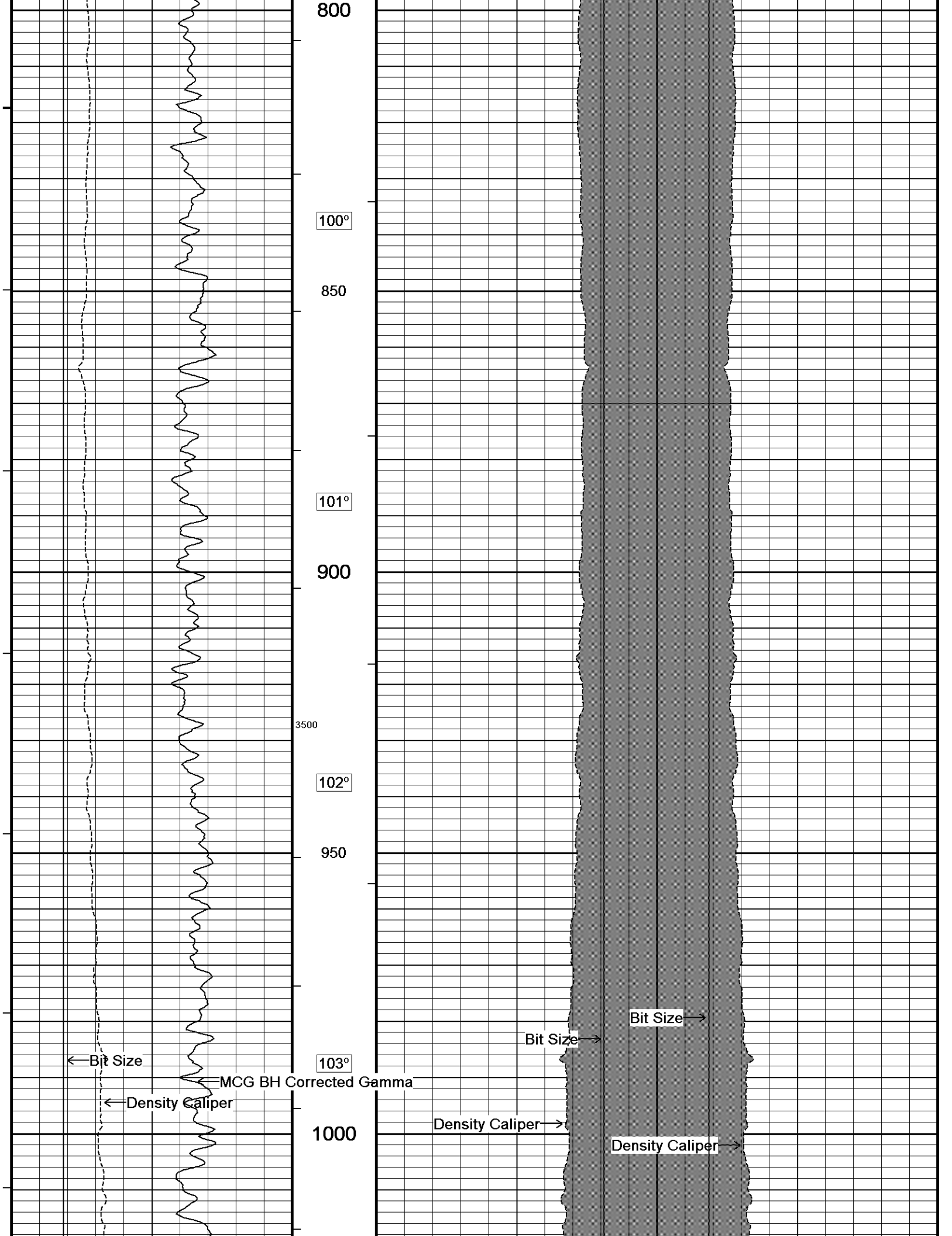
INTERPRETATION OR RECOMMENDATION RESULTING FROM THE SERVICES WILL BE AT THE SOLE RISK OF THE COMPANY, AND THE CONTRACTOR CANNOT AND DOES NOT WARRANT THE ACCURACY, CORRECTNESS OR COMPLETENESS OF ANY SUCH INTERPRETATION OR RECOMMENDATION, WHICH INTERPRETATIONS AND RECOMMENDATIONS SHOULD NOT, THEREFORE, 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.

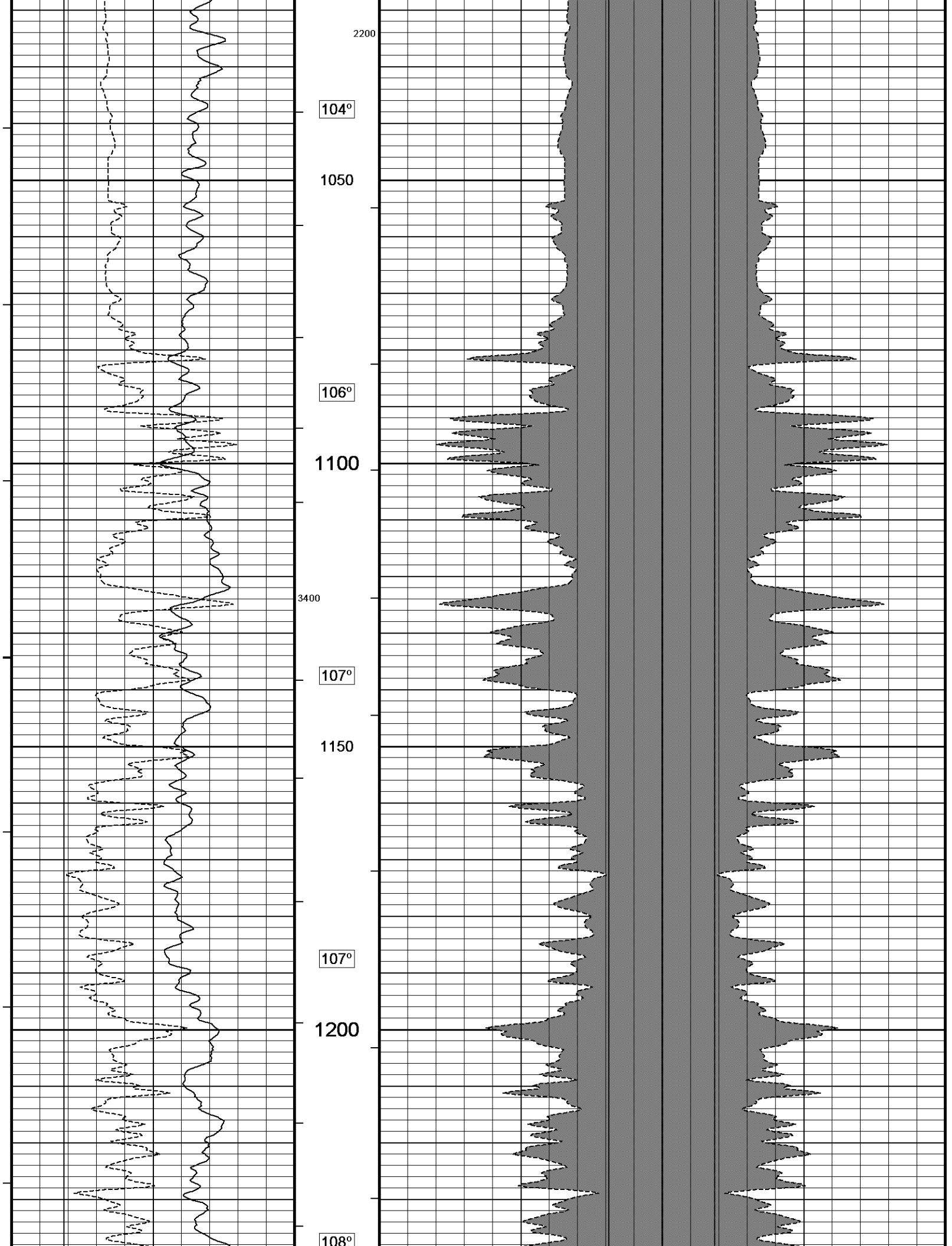


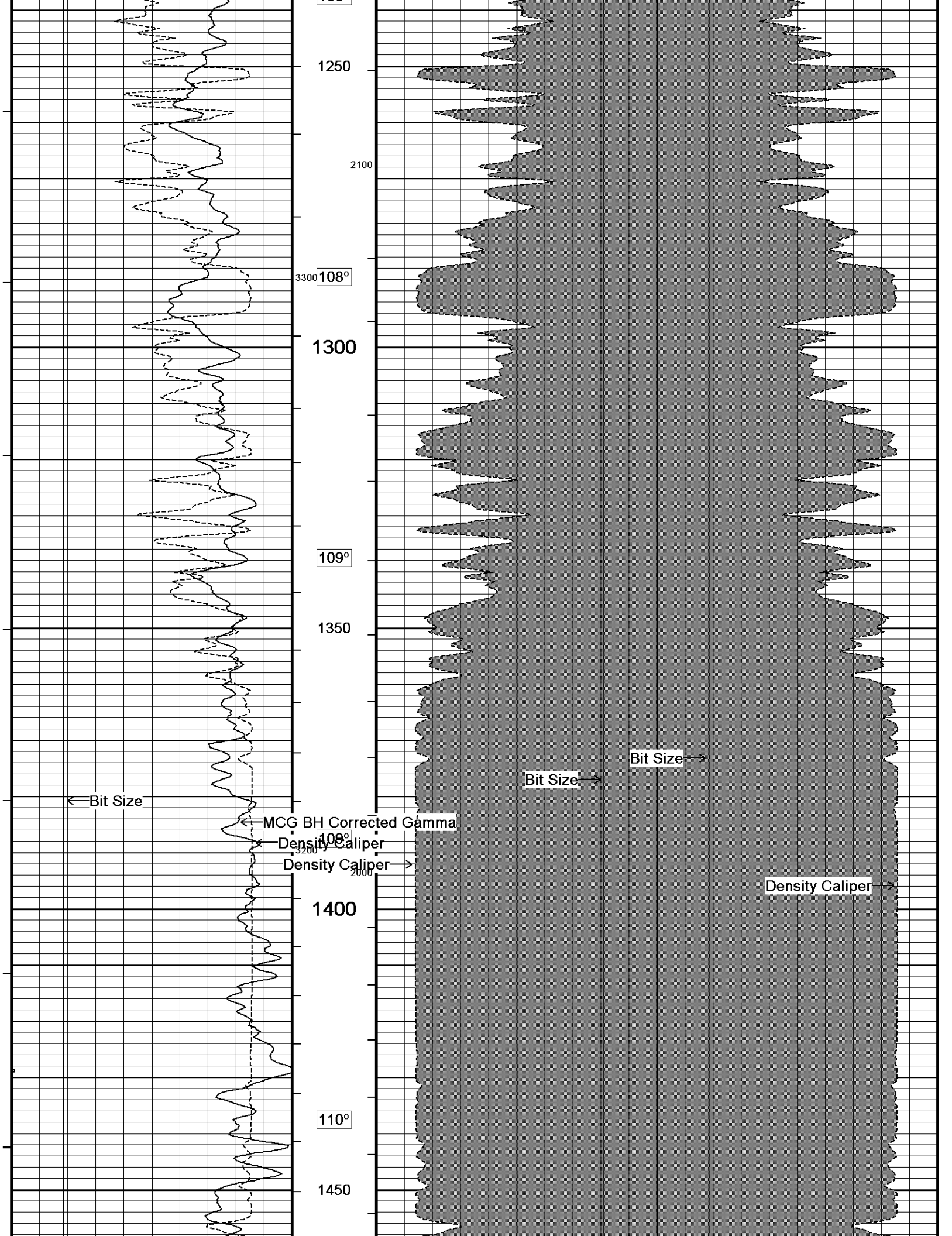


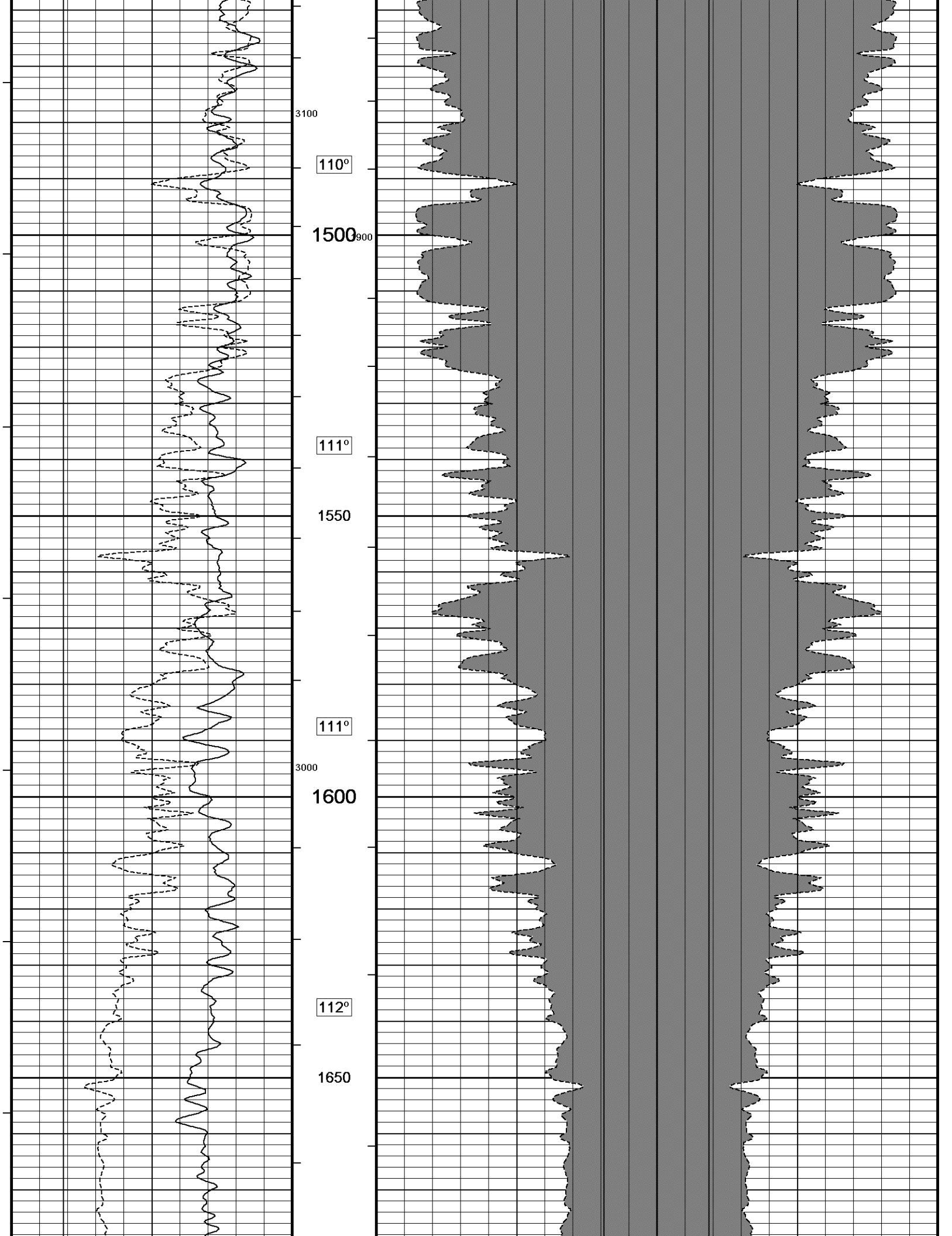
96°
600
97°
2300
650
3600
98°
700
98°
750
99°

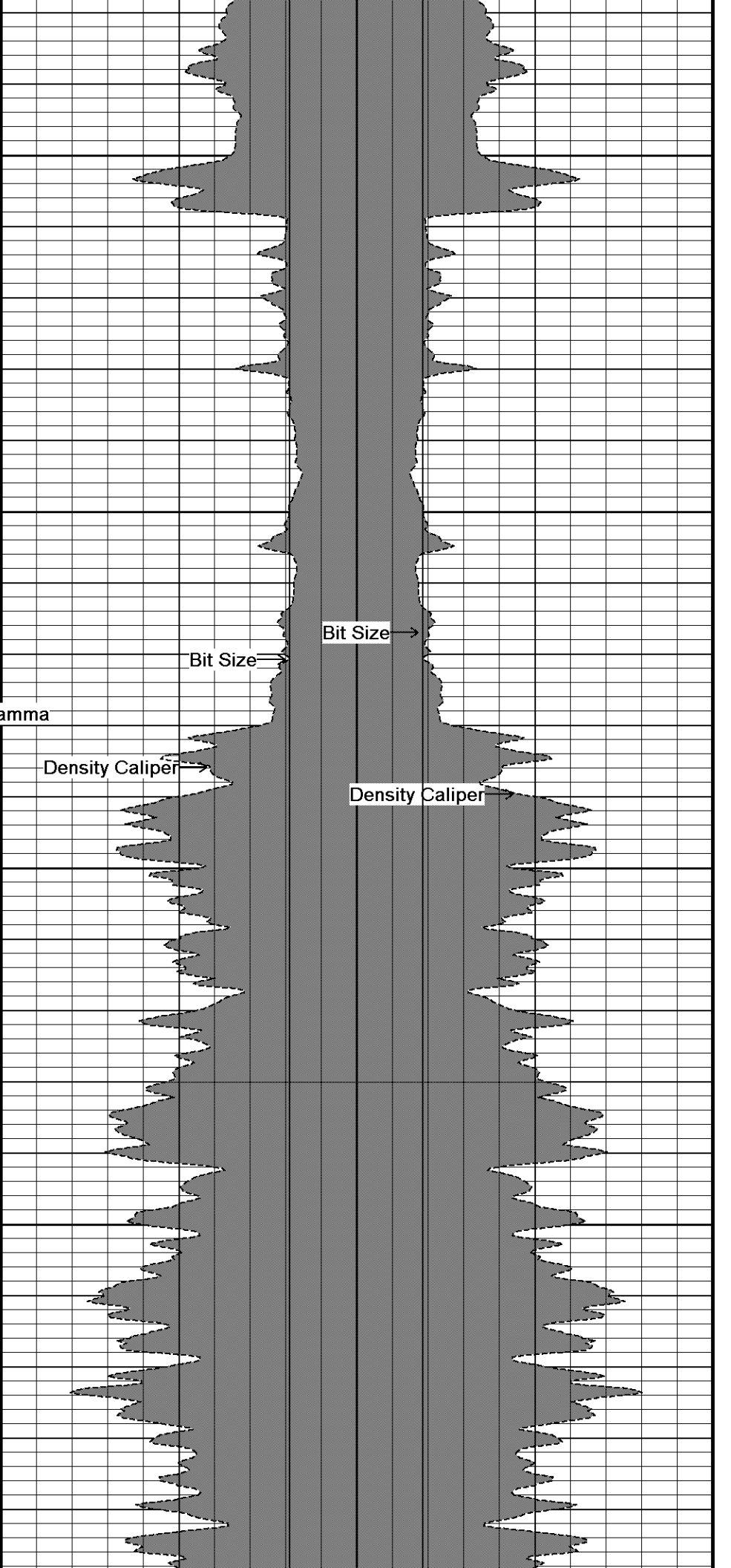
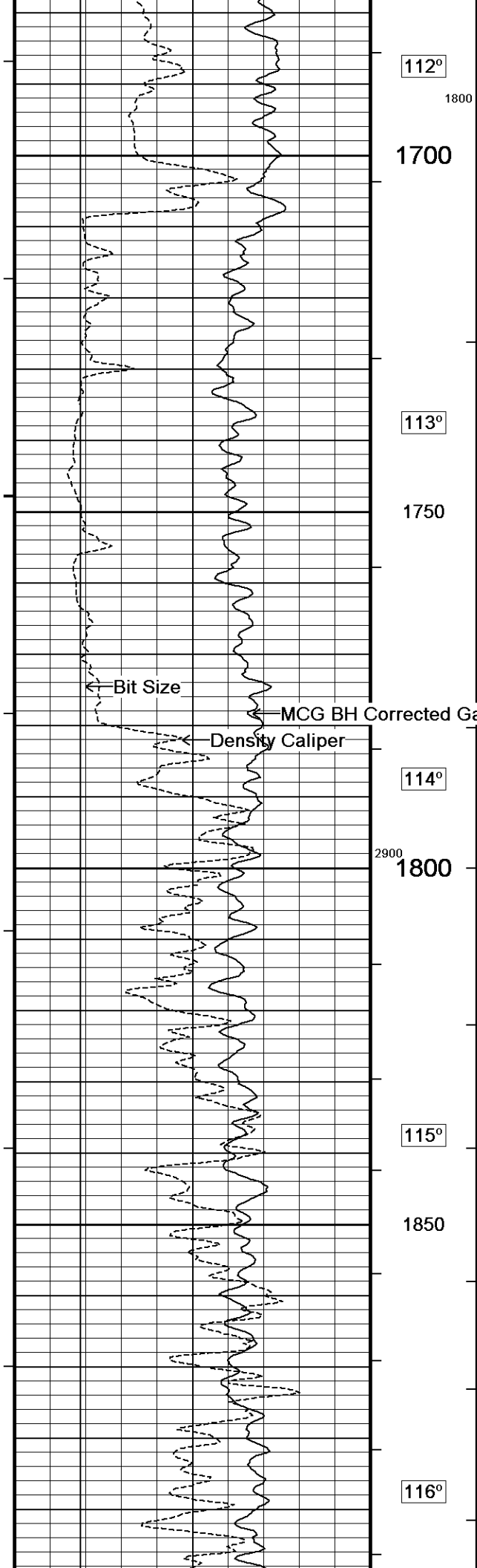


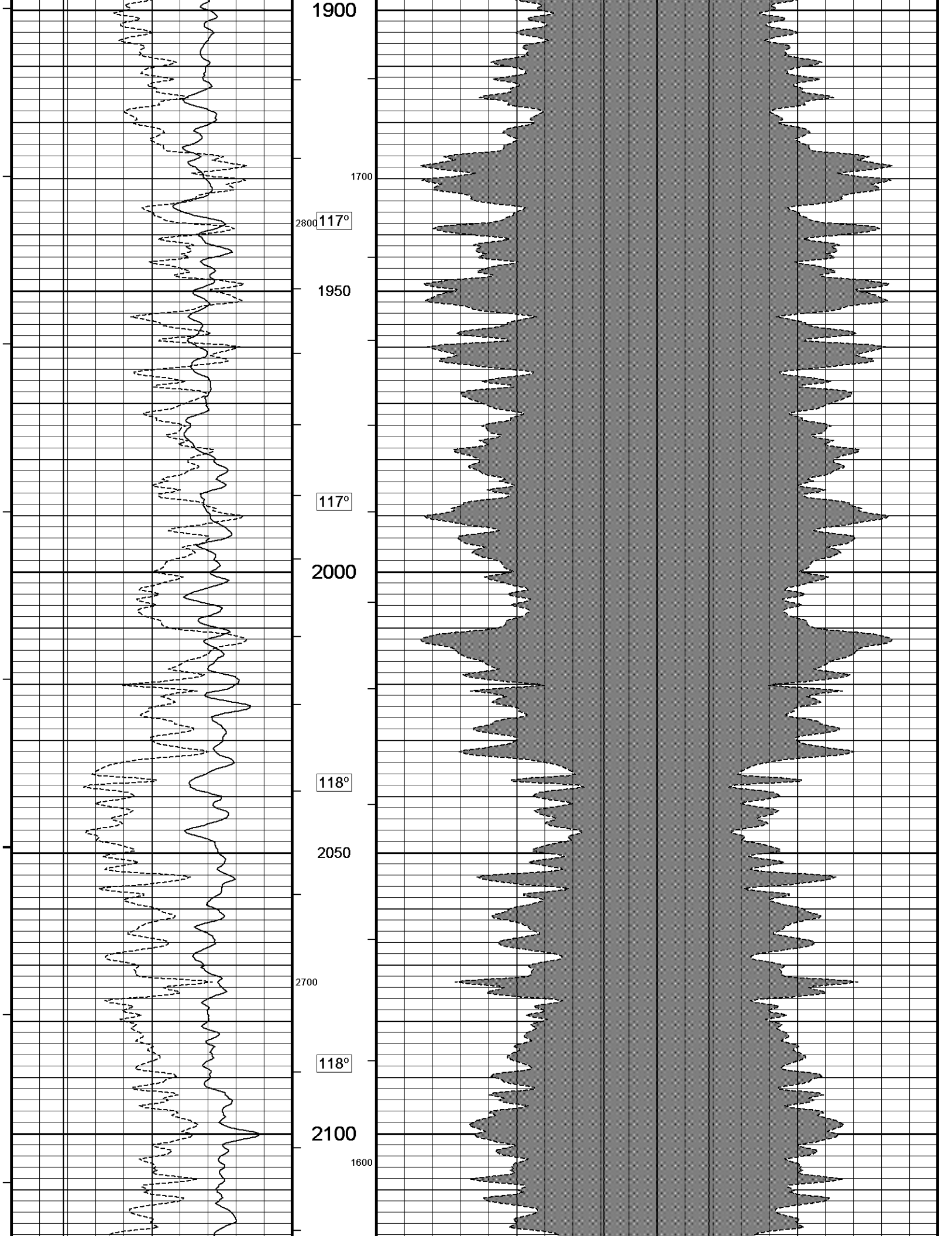


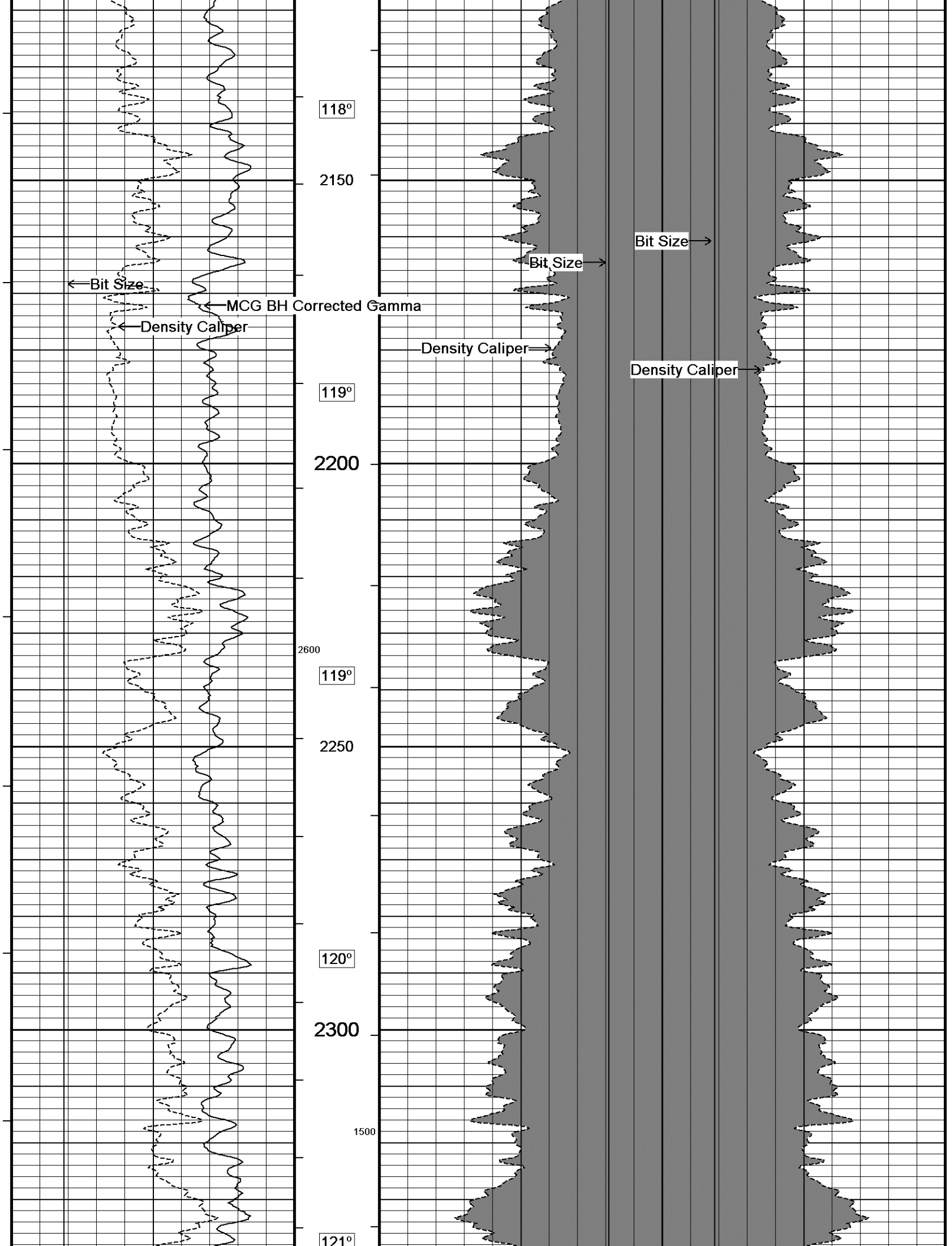


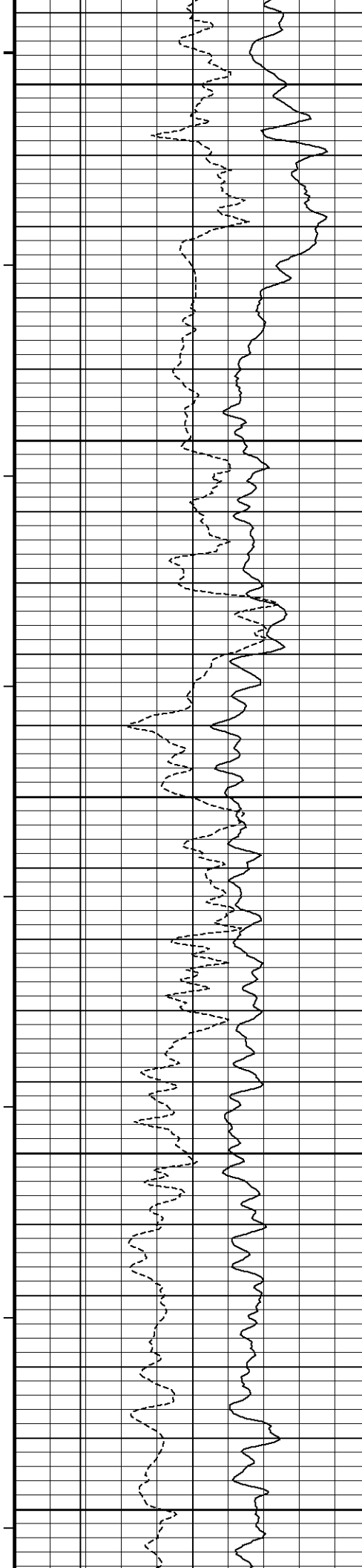




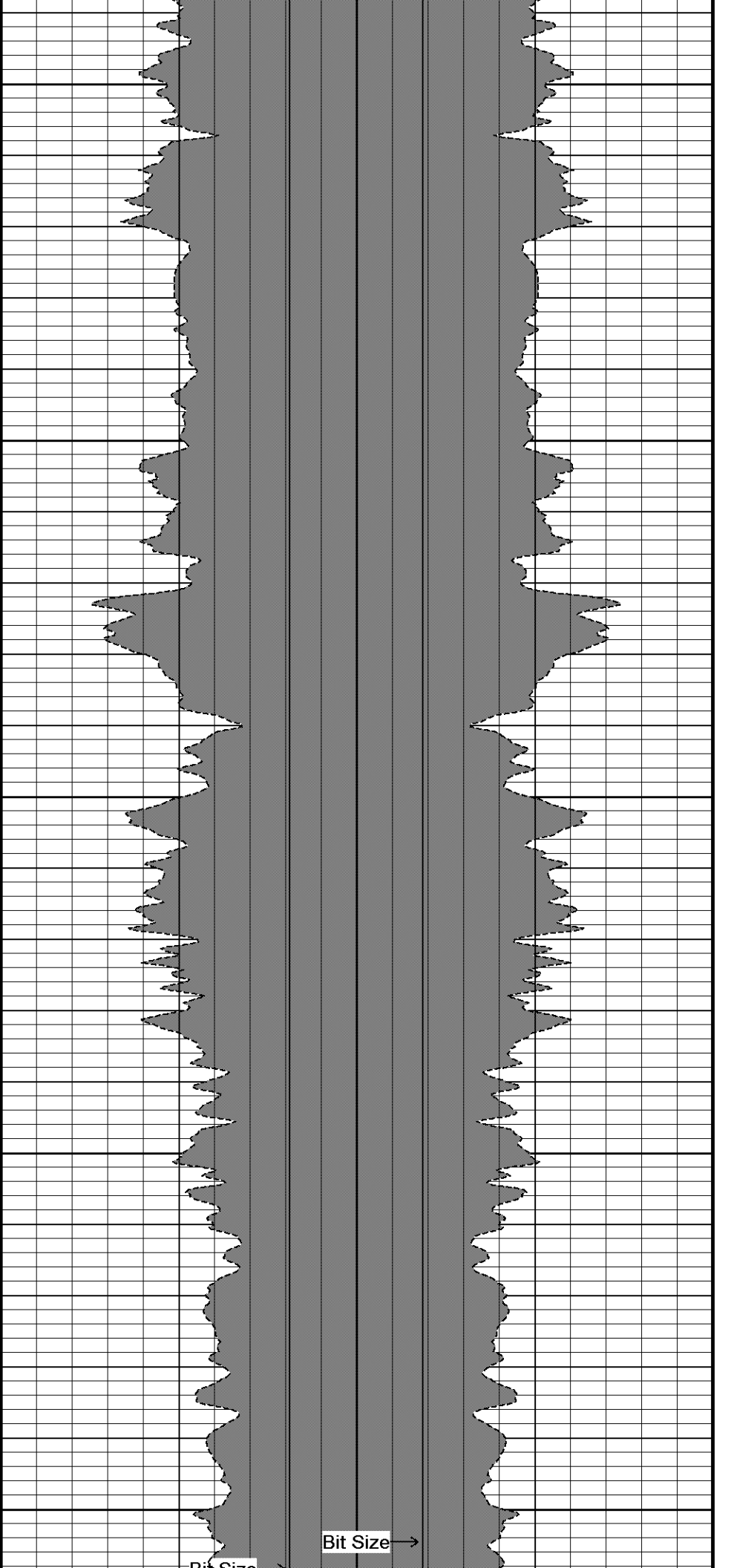






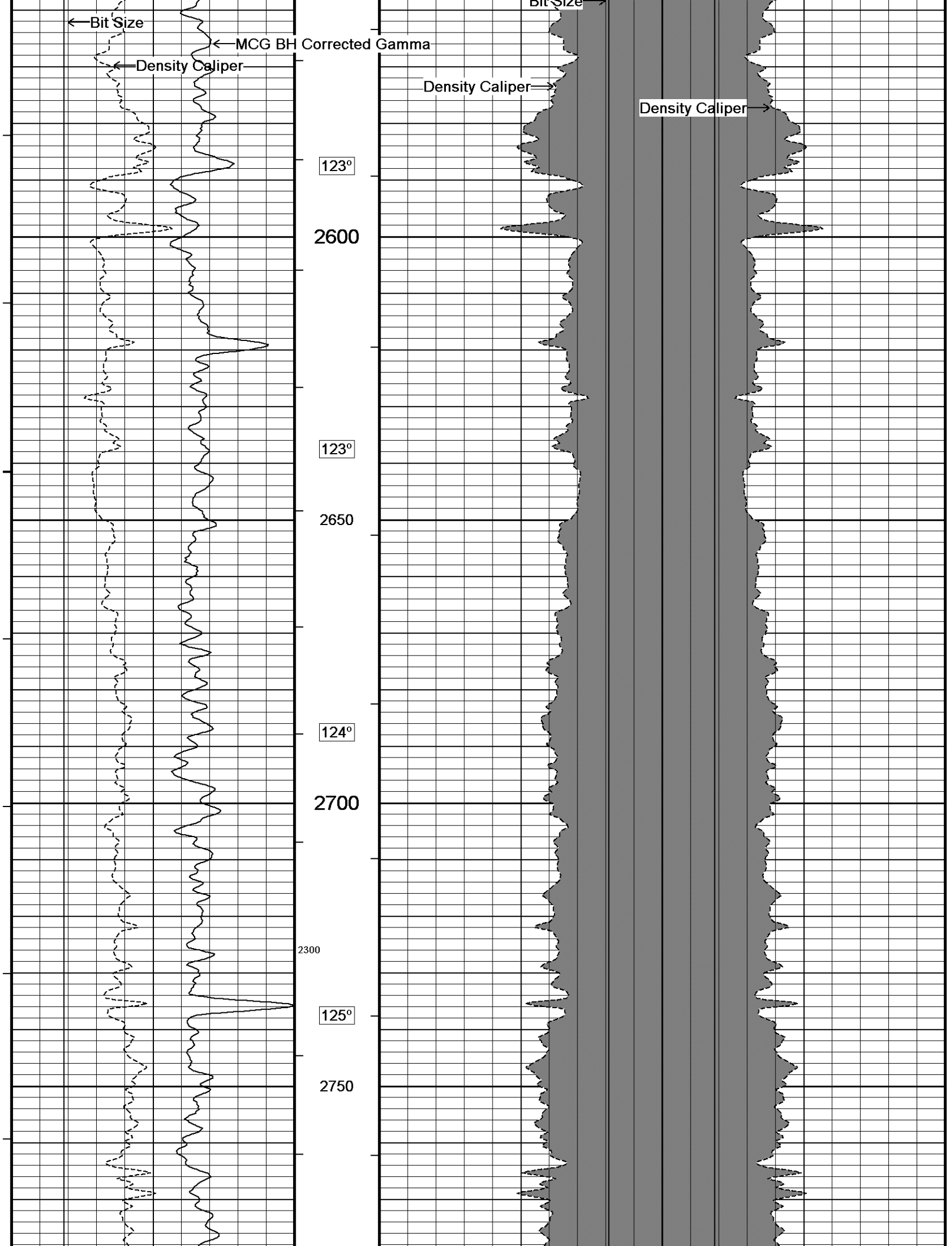


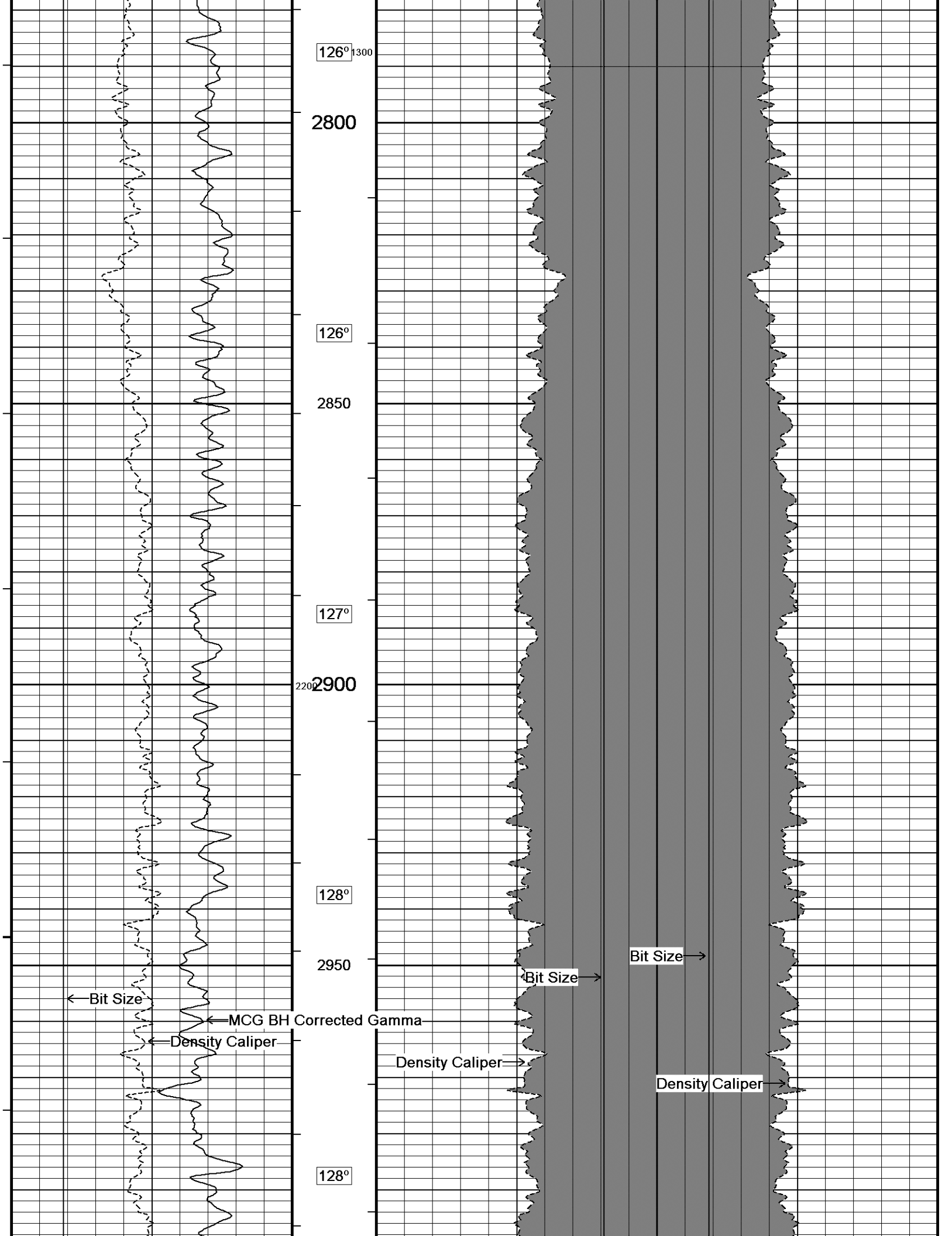
2350
2500
121°
2400
121°
2450
122°
2500
1400
2400
122°
2550

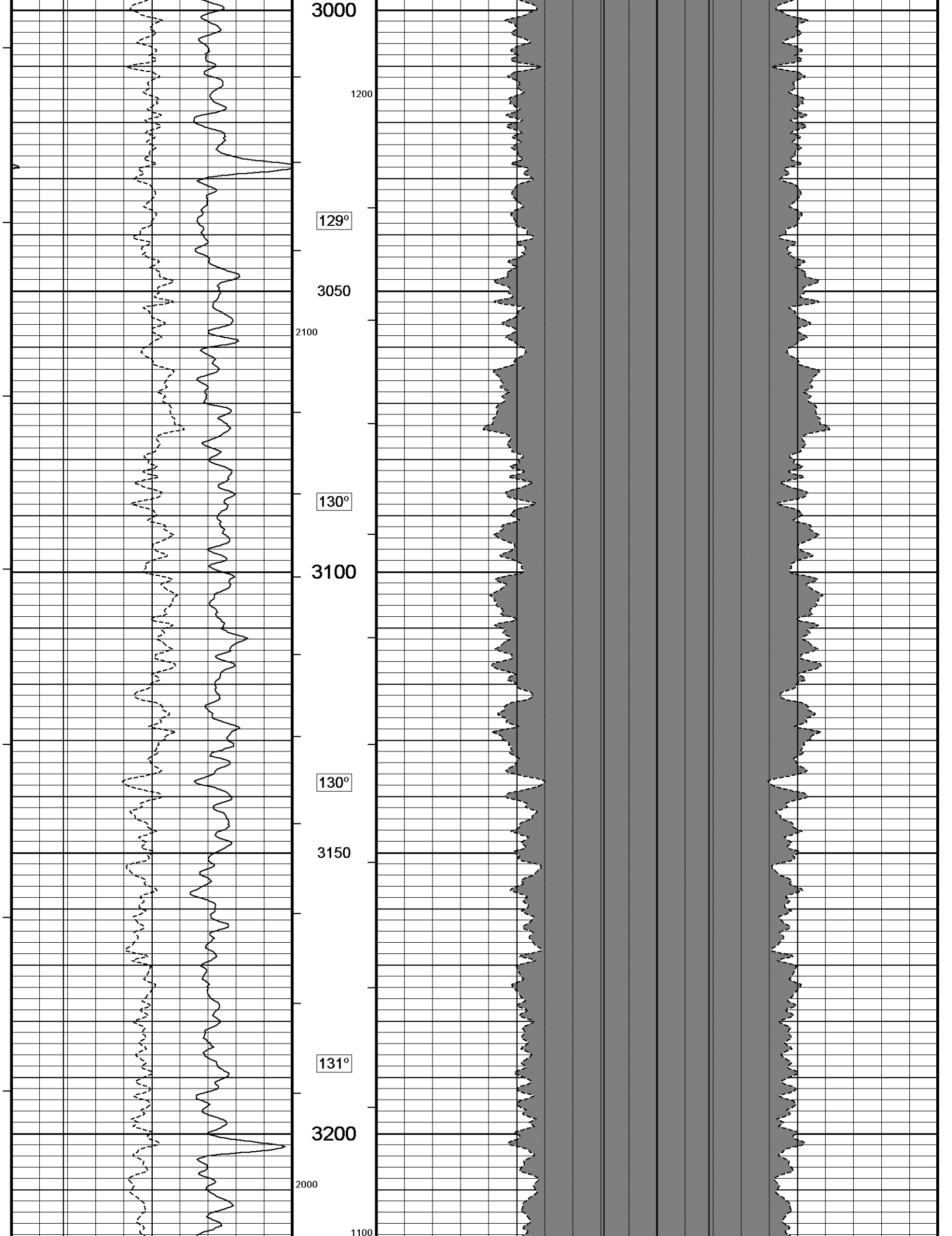


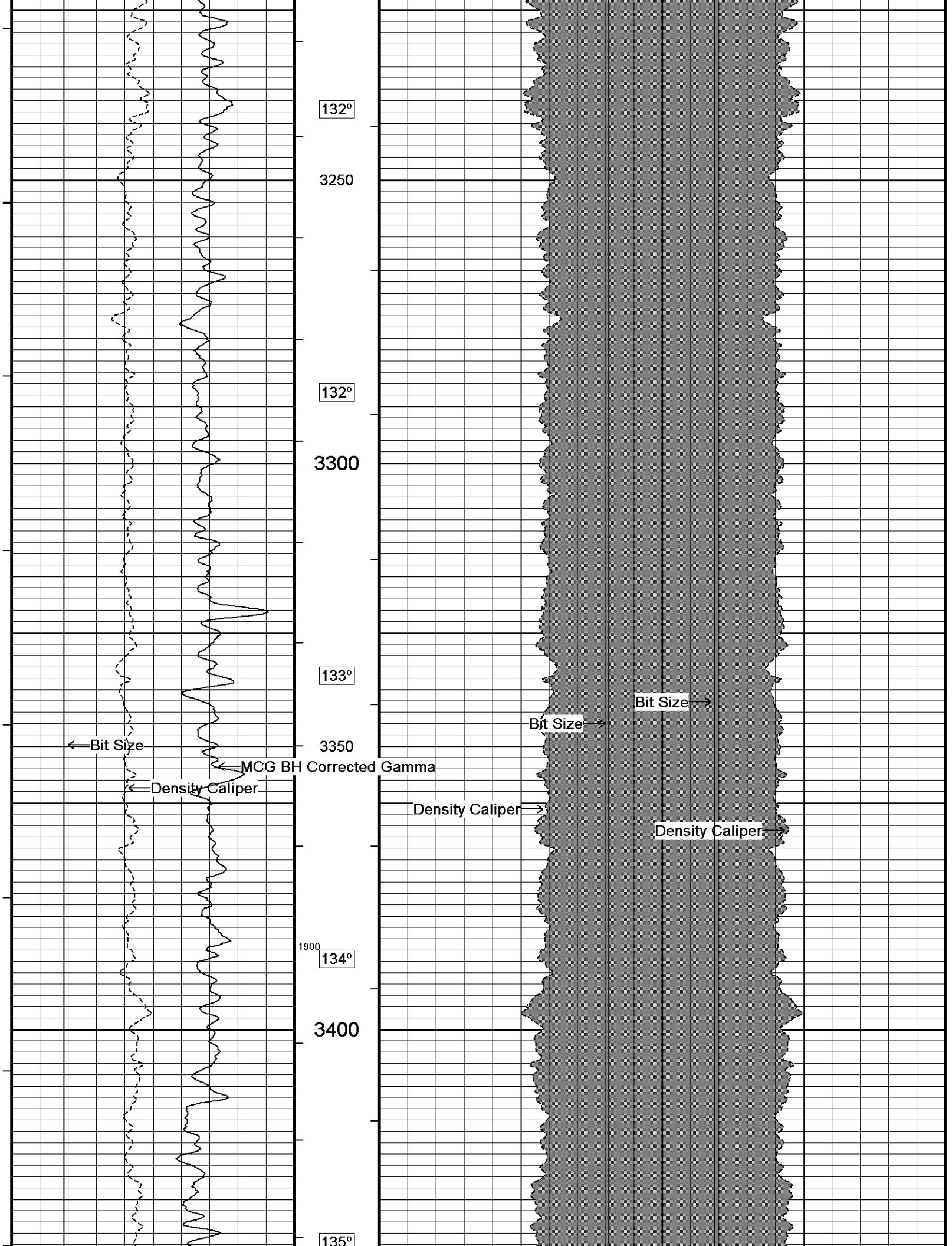
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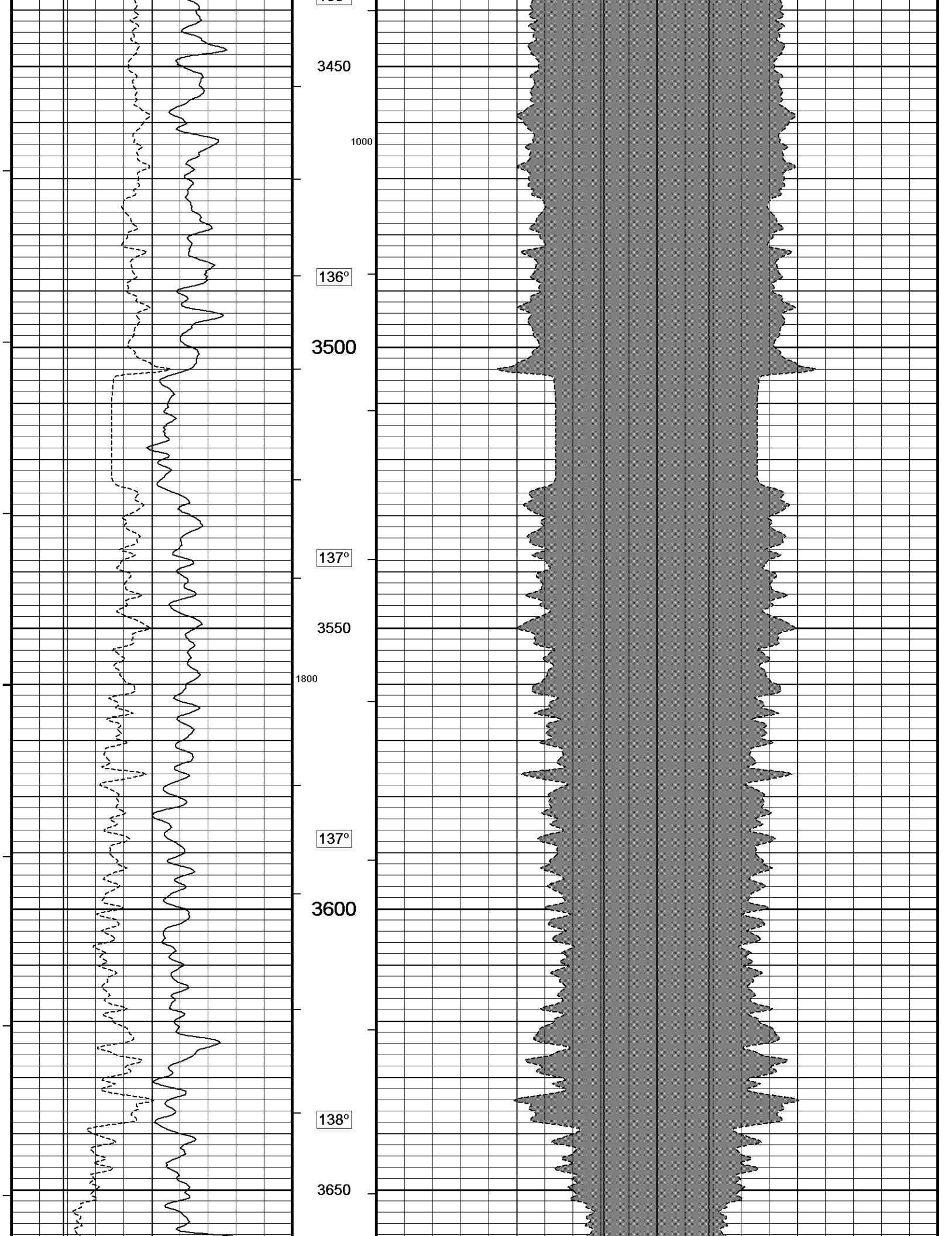
Bit Size →

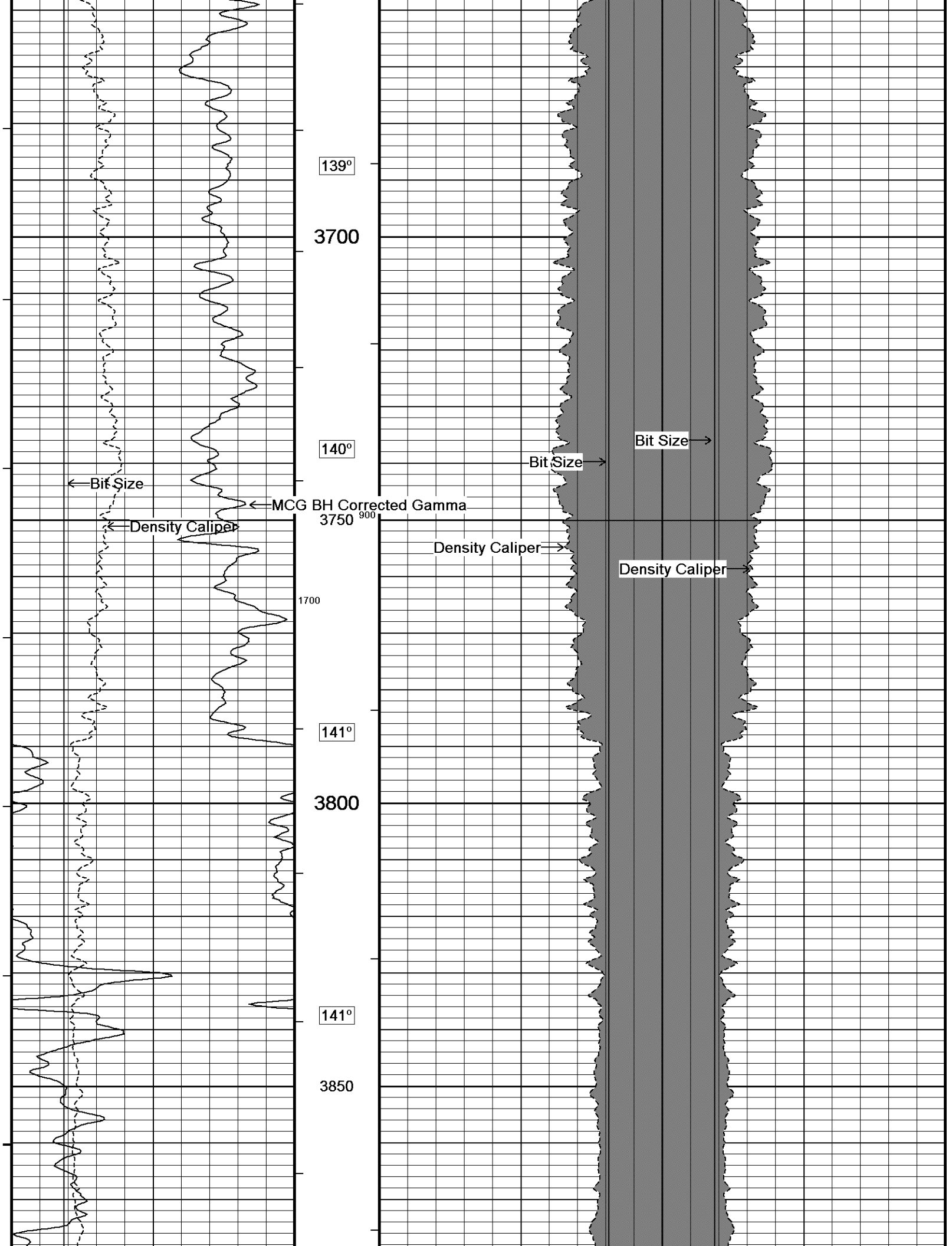


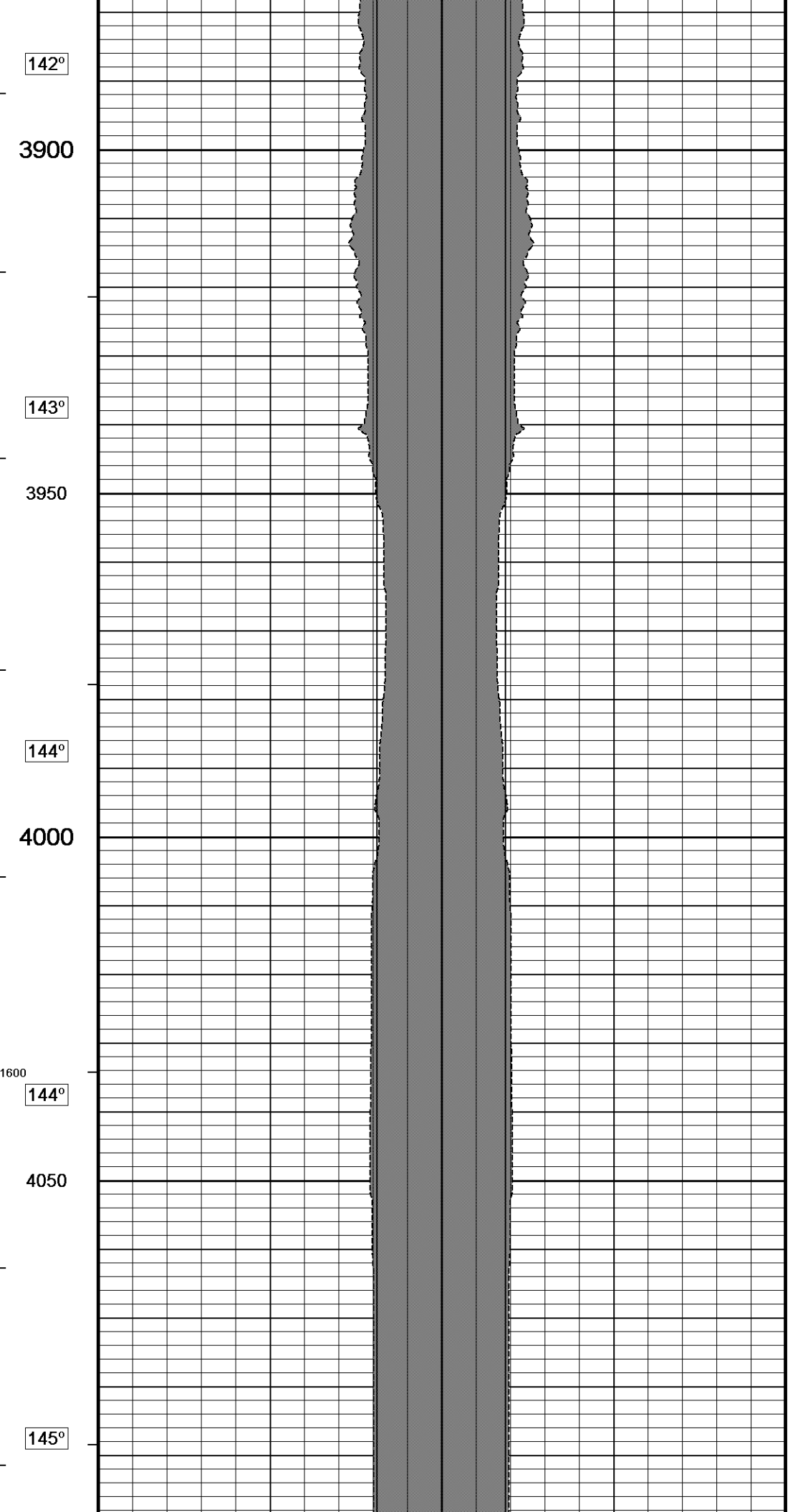
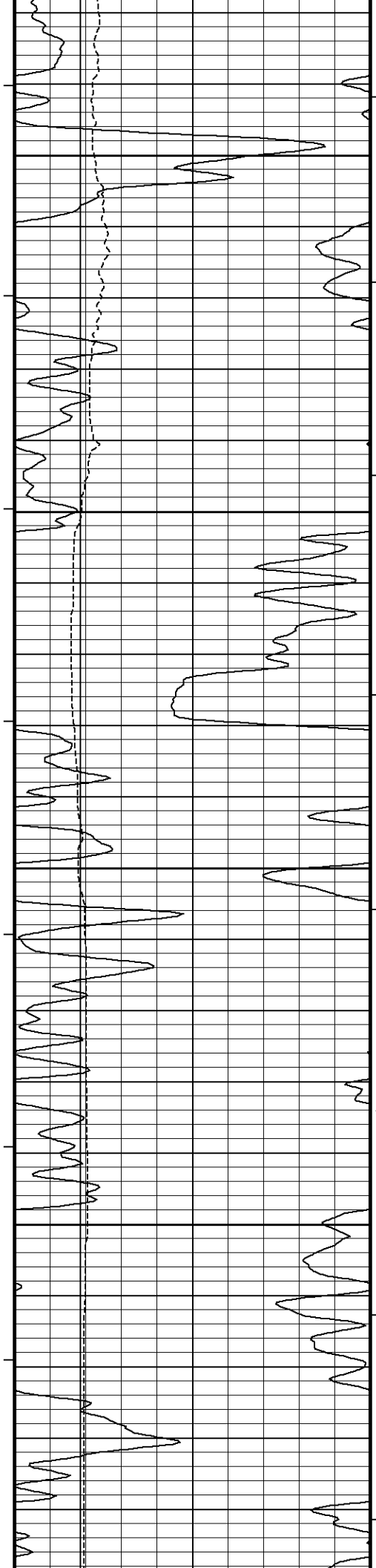


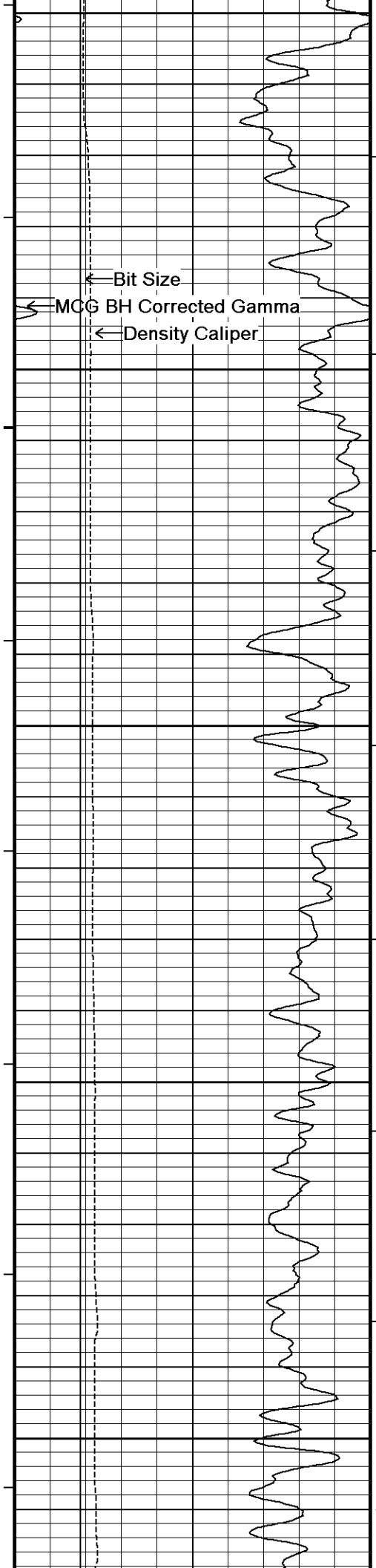












4100

146°

4150

147°

4200

147°

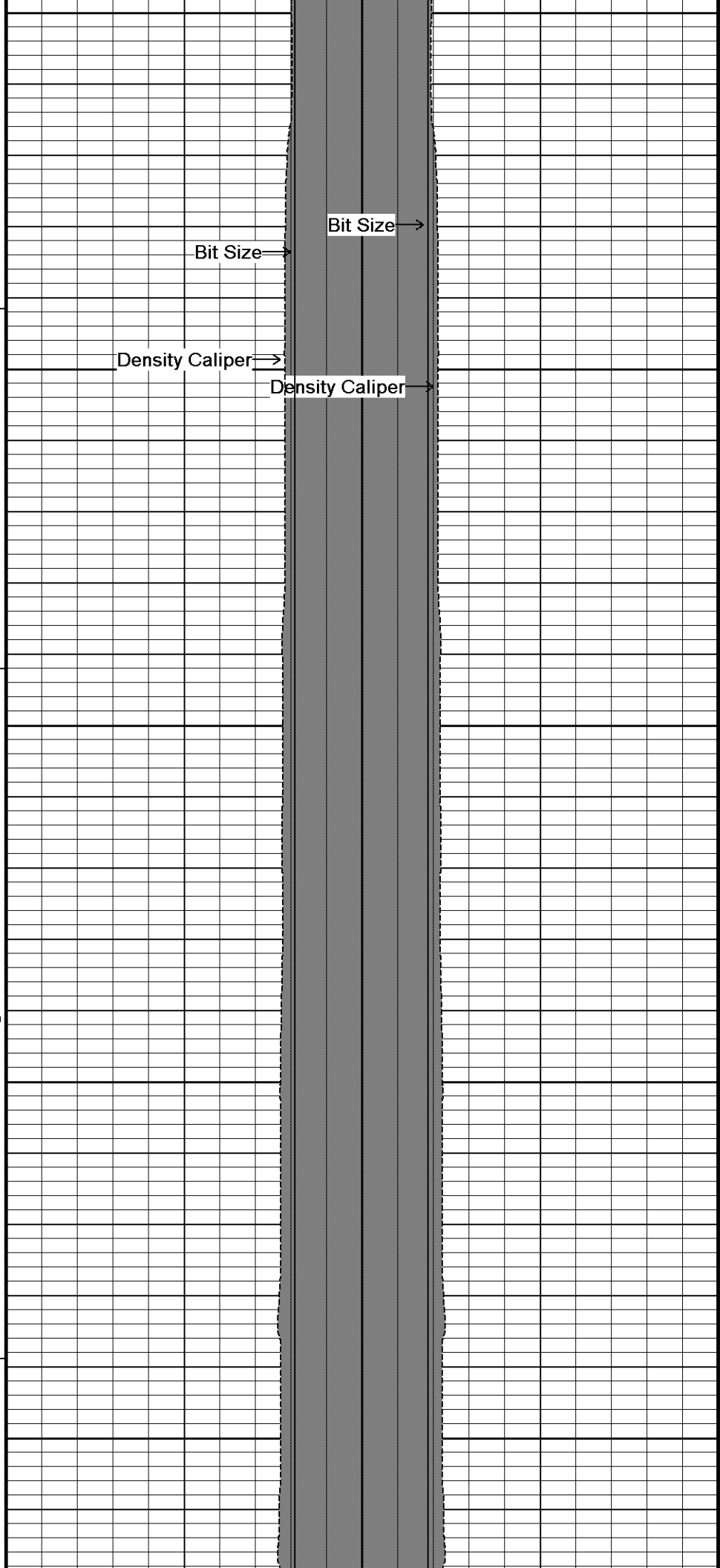
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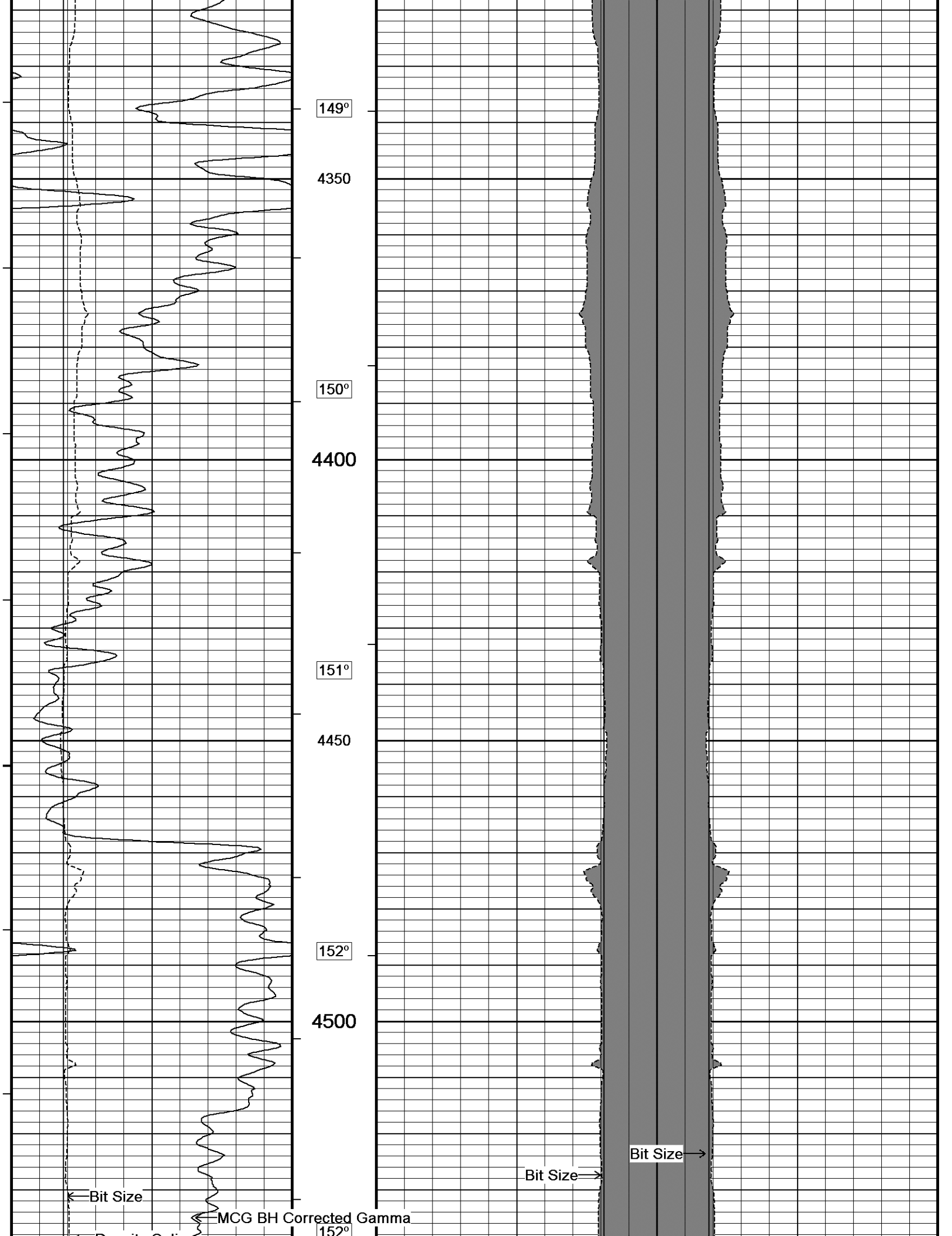
148°

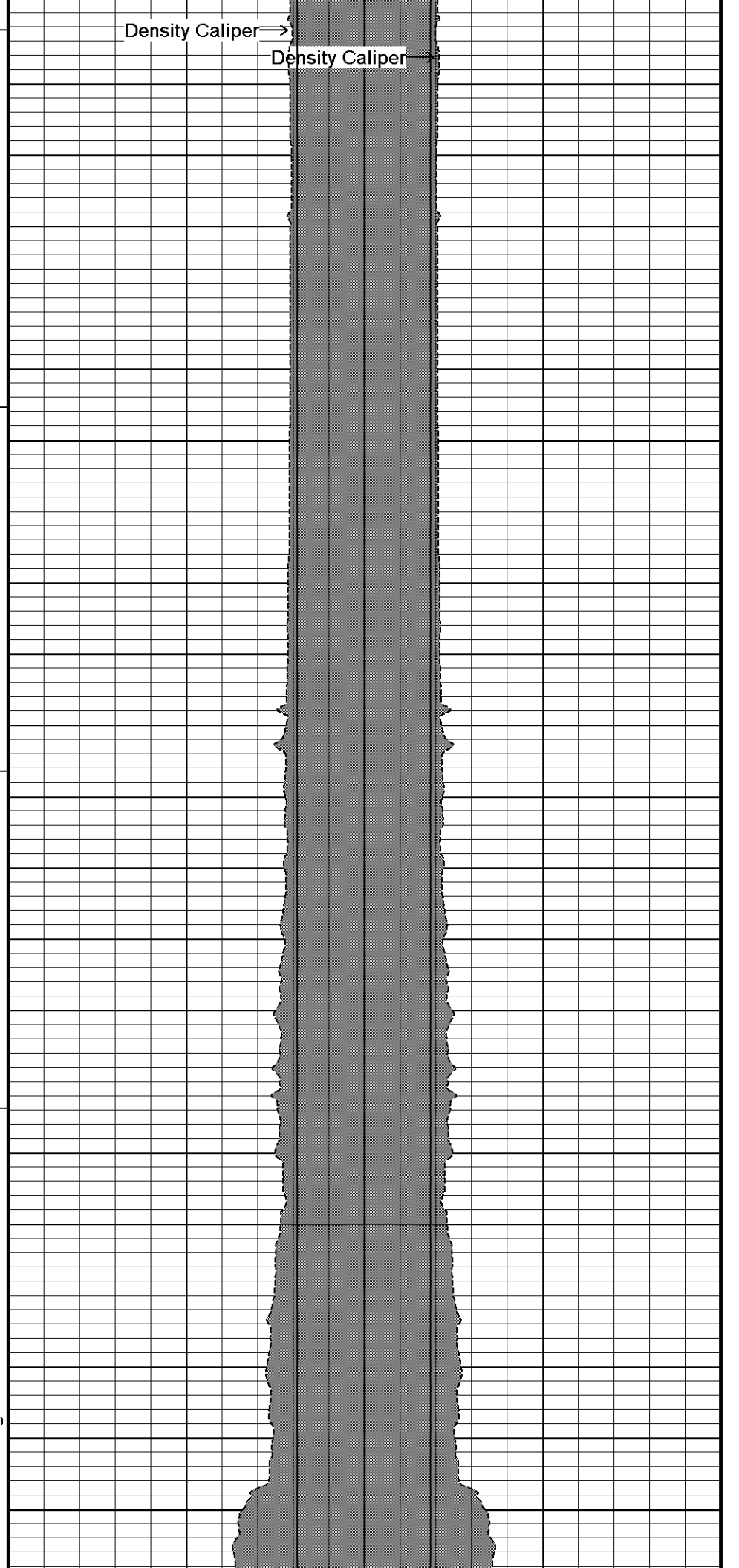
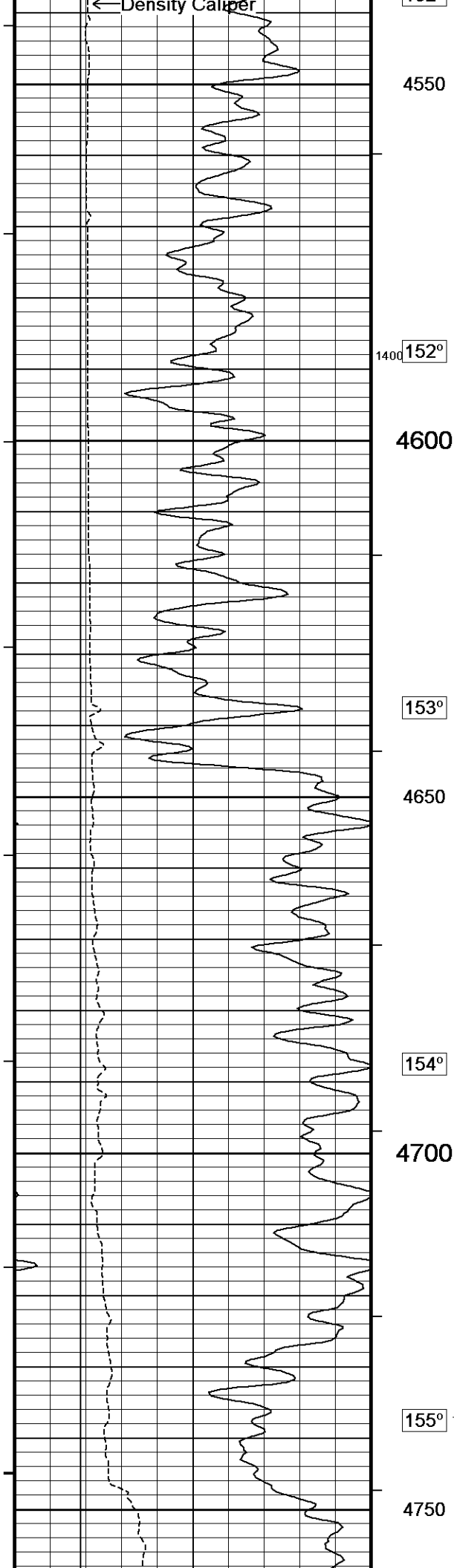
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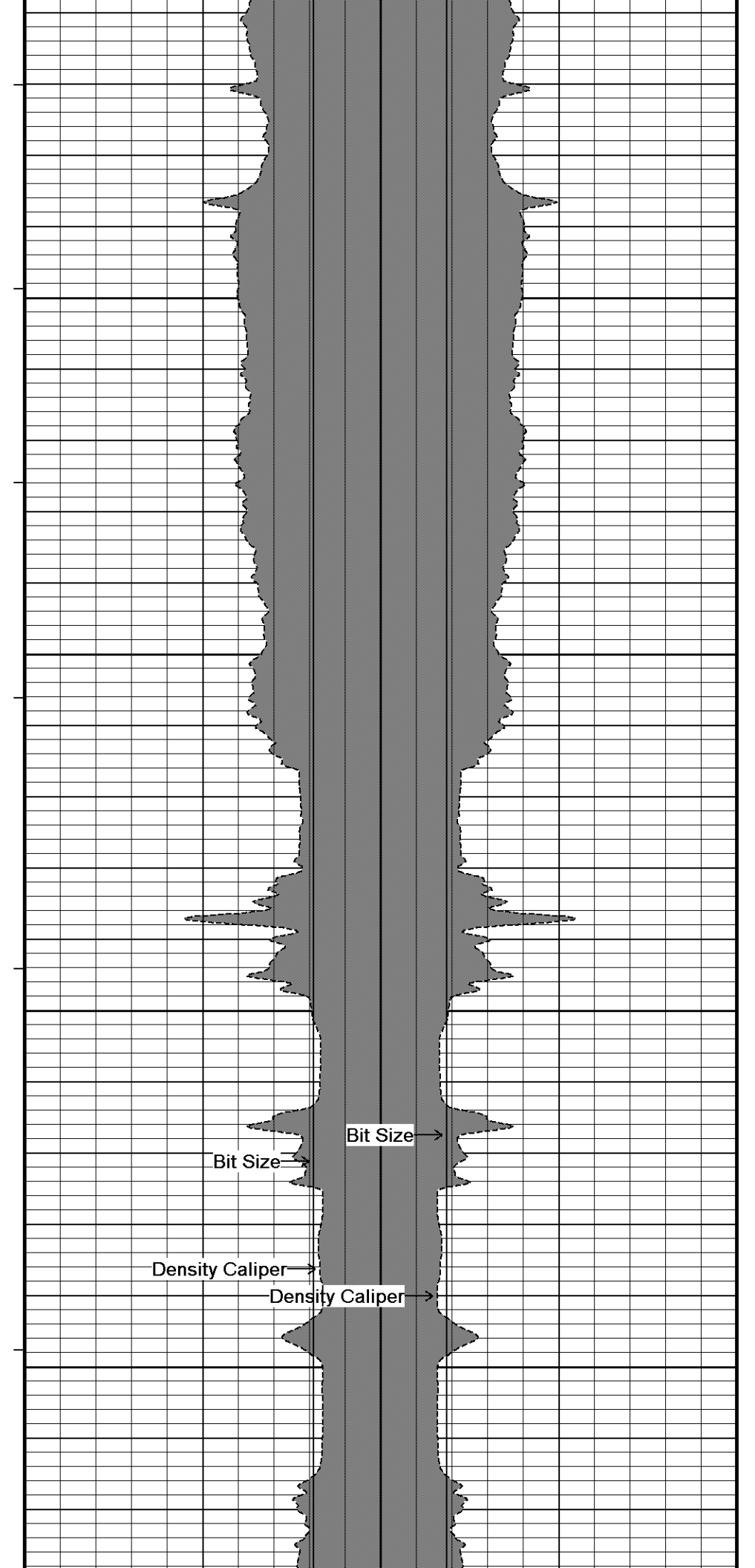
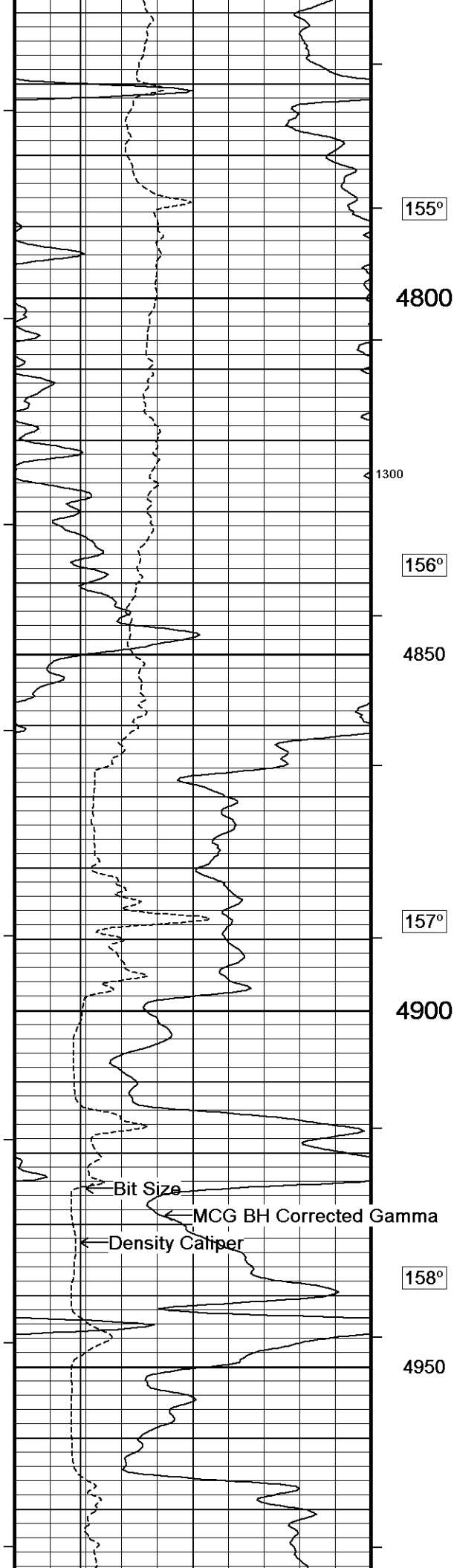
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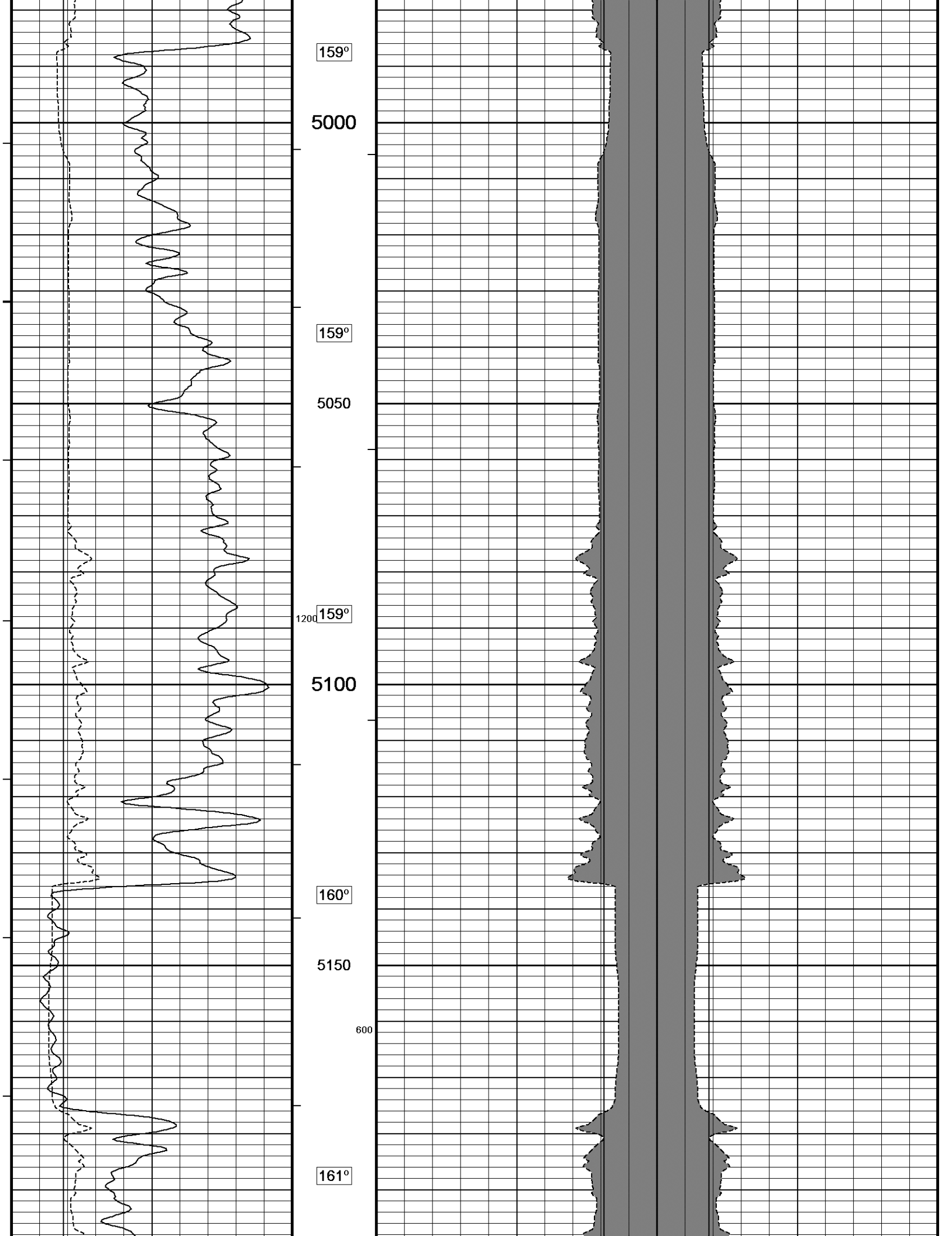
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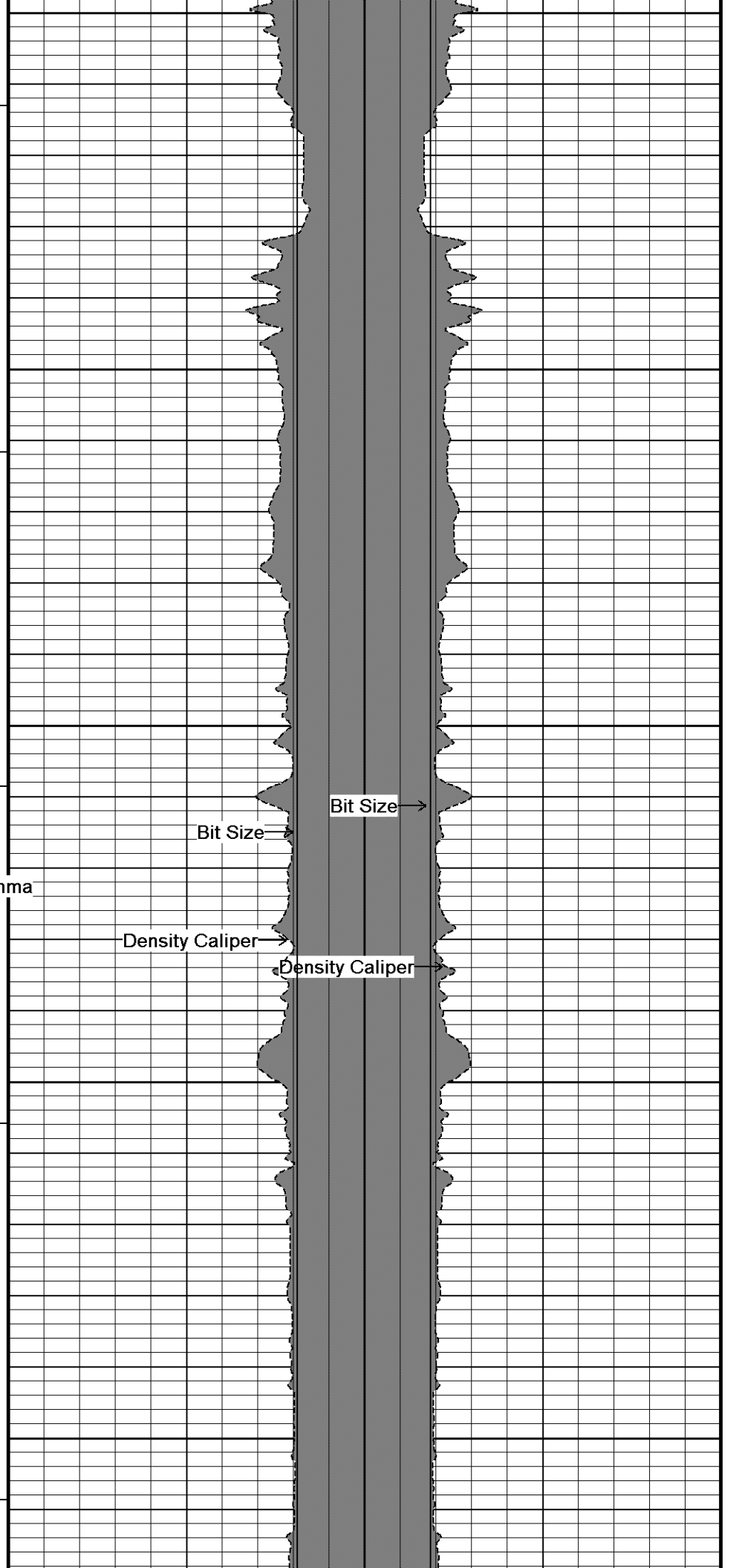
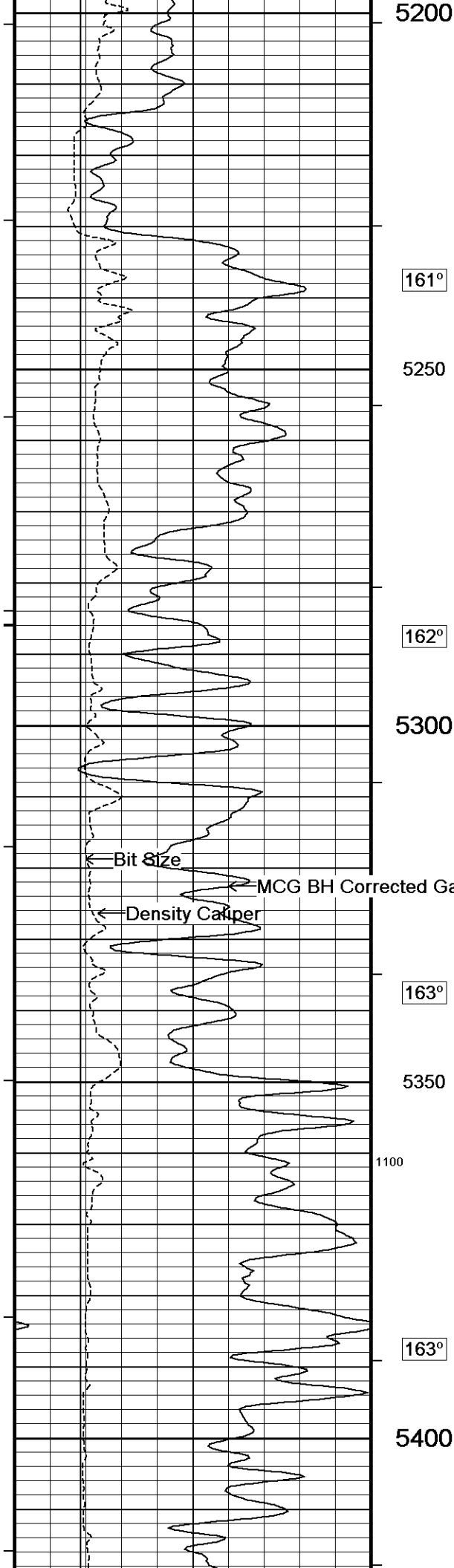


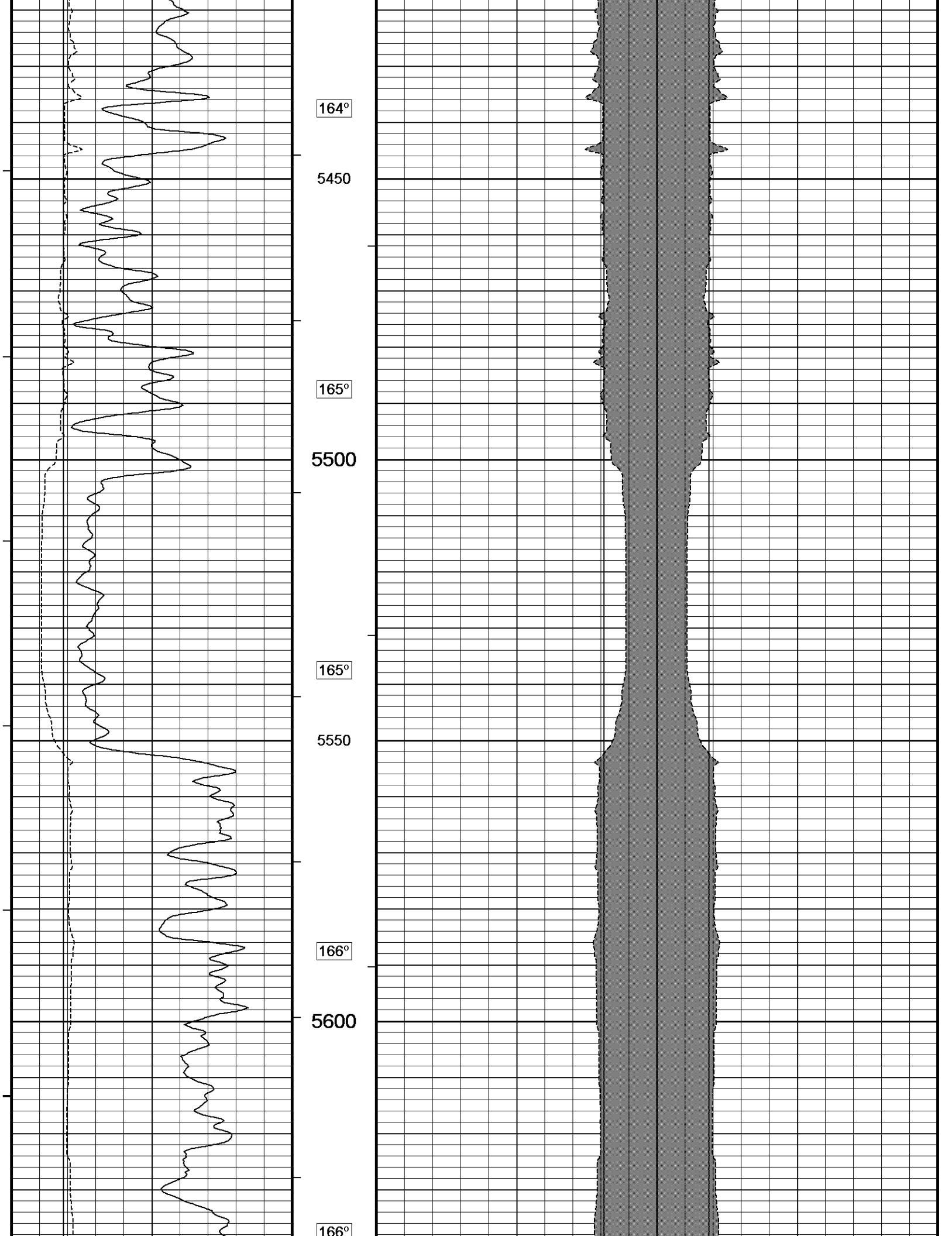


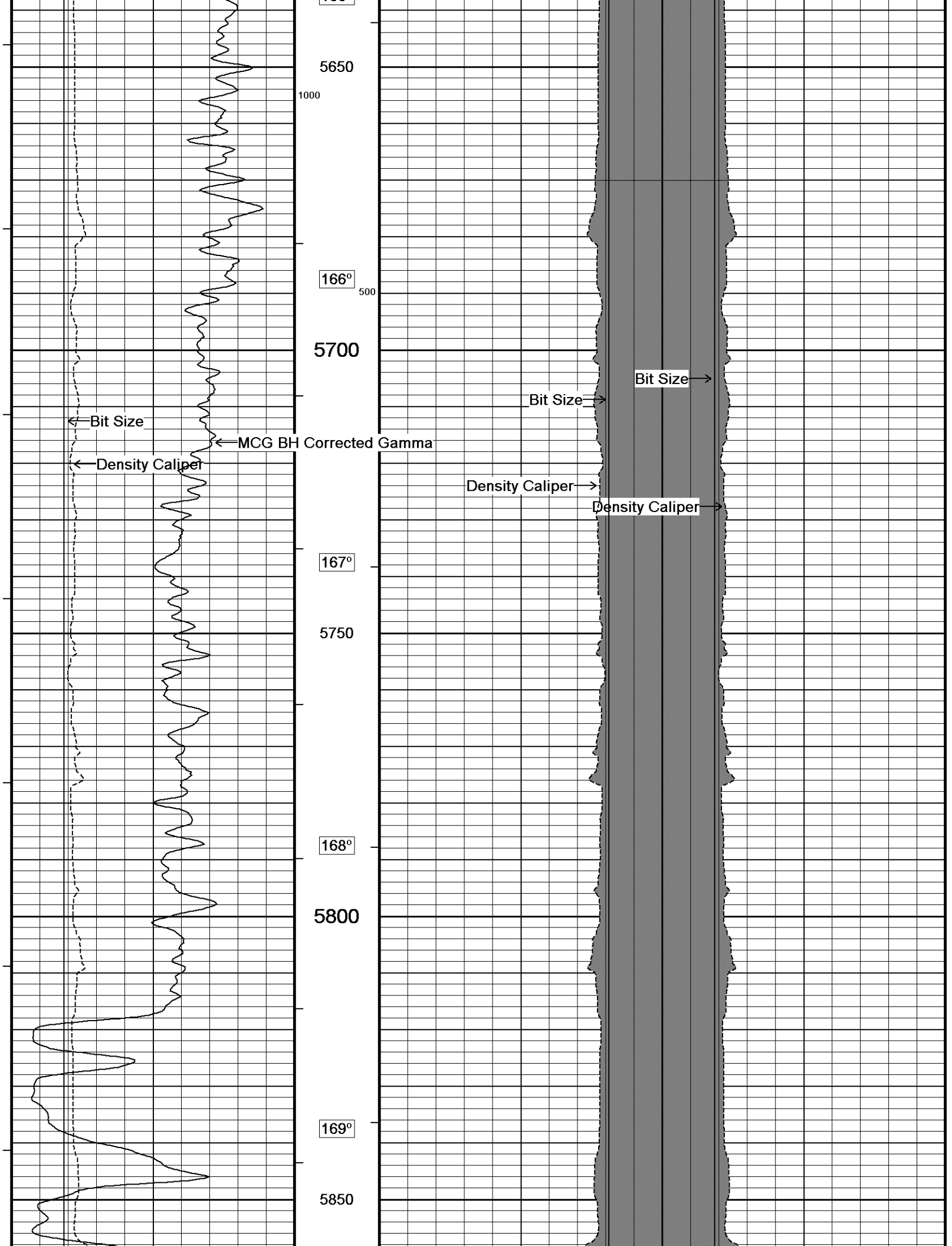


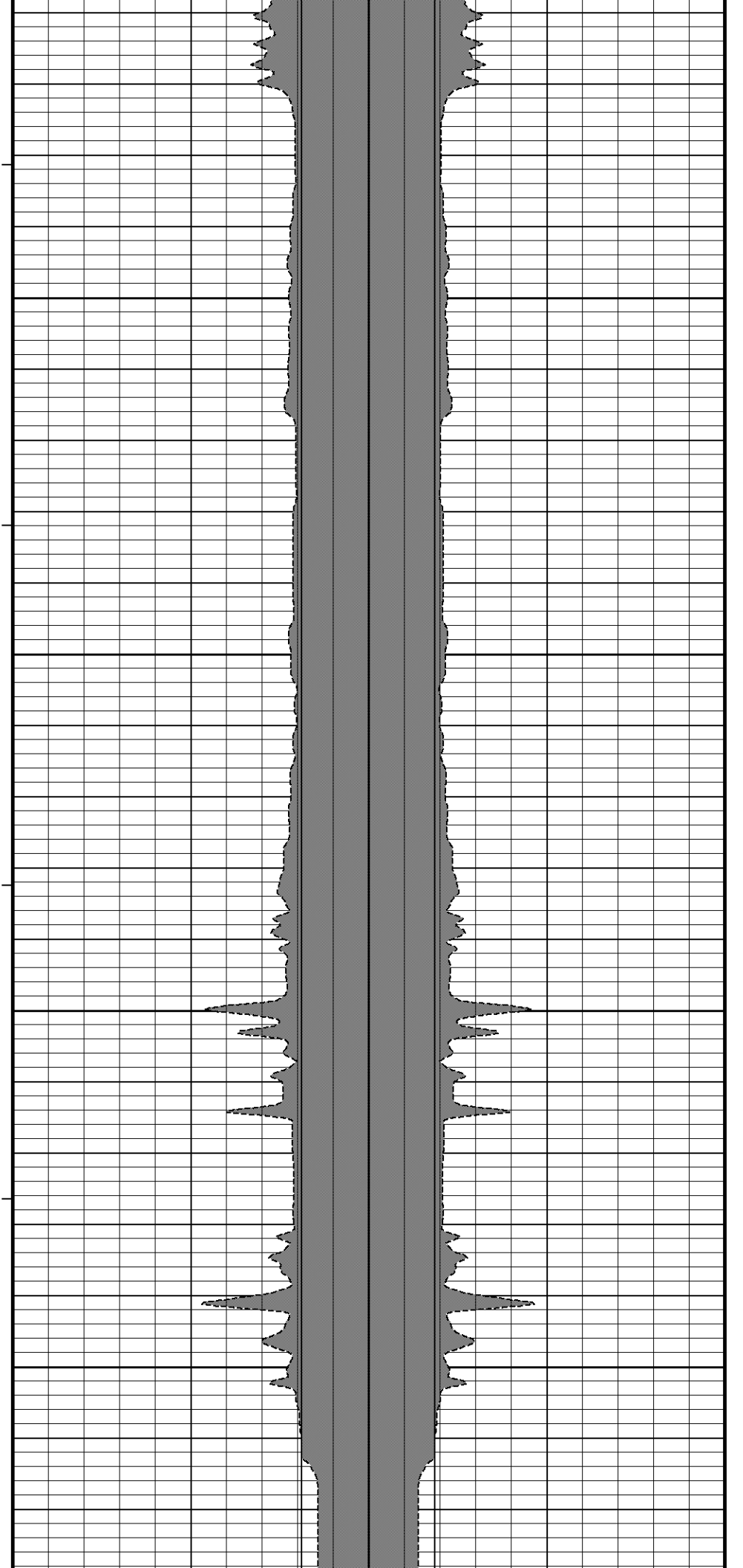
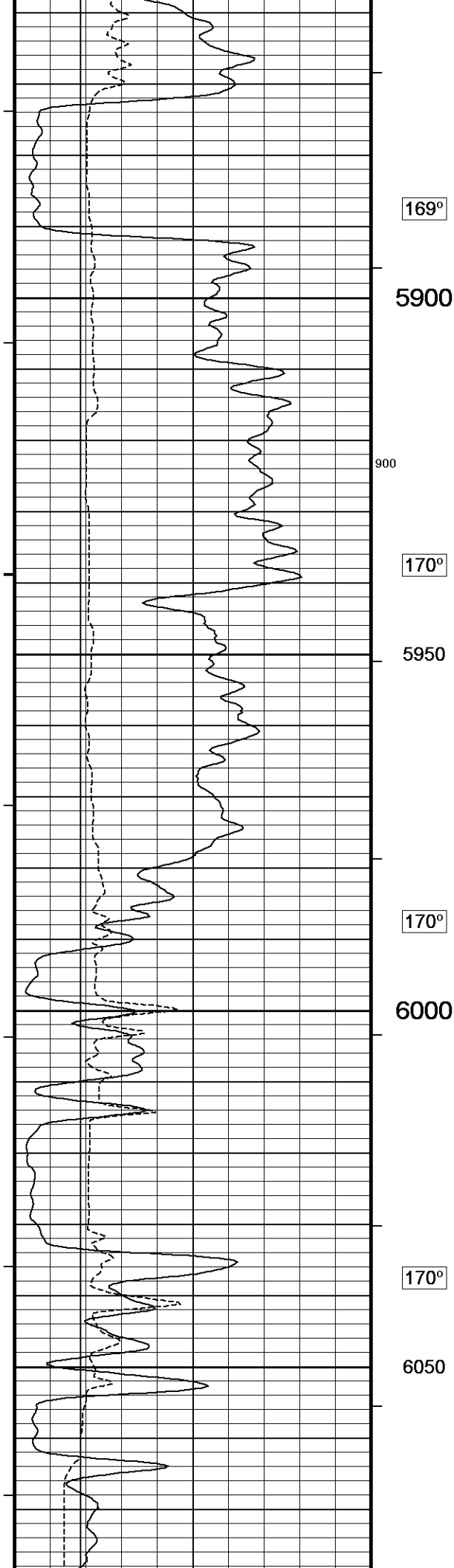


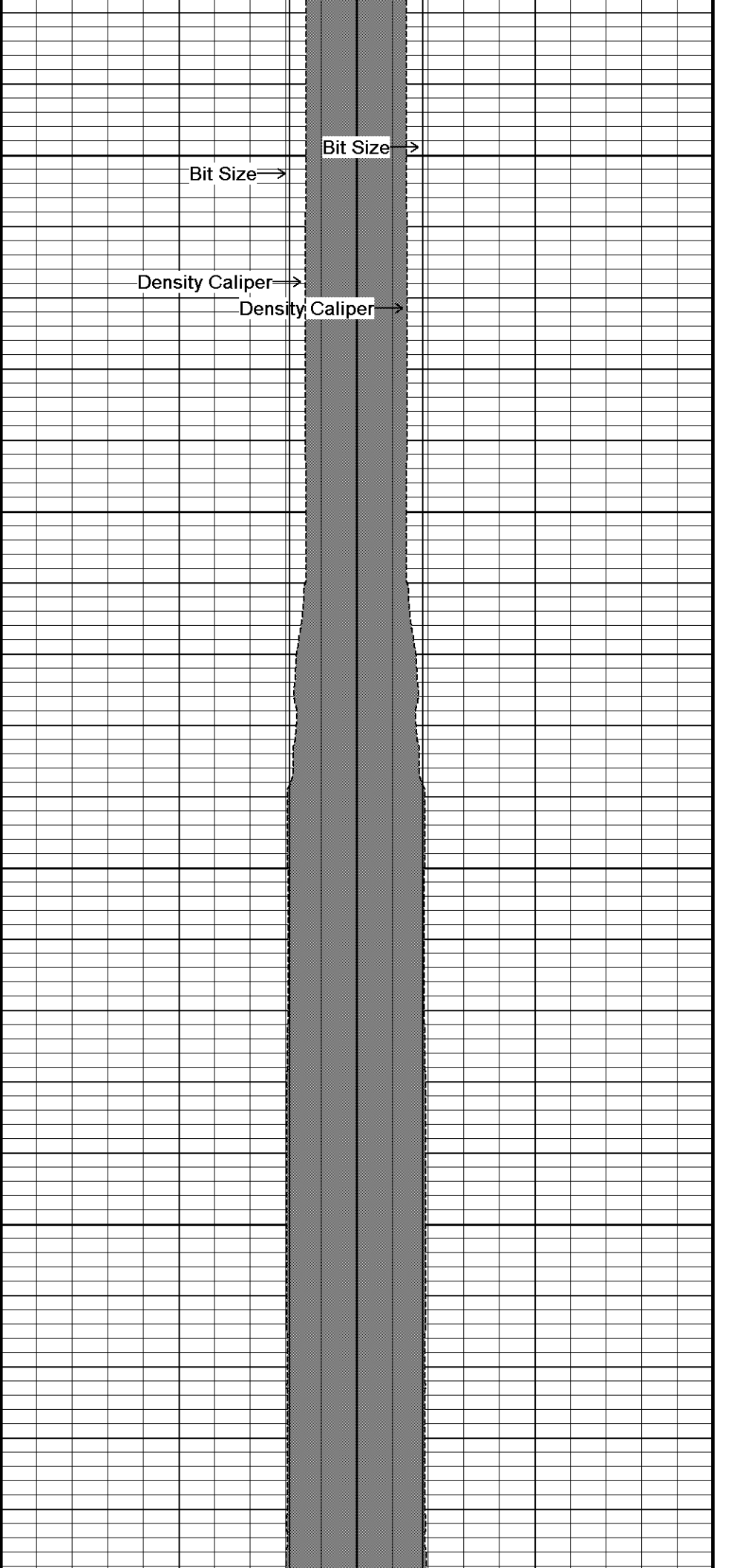
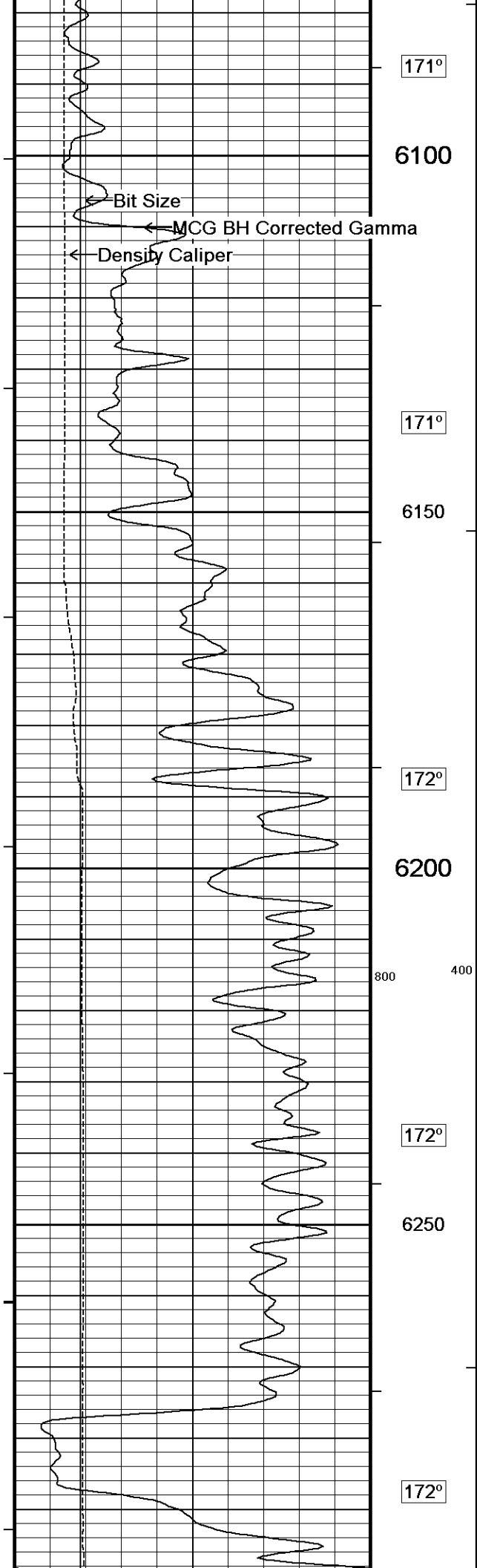


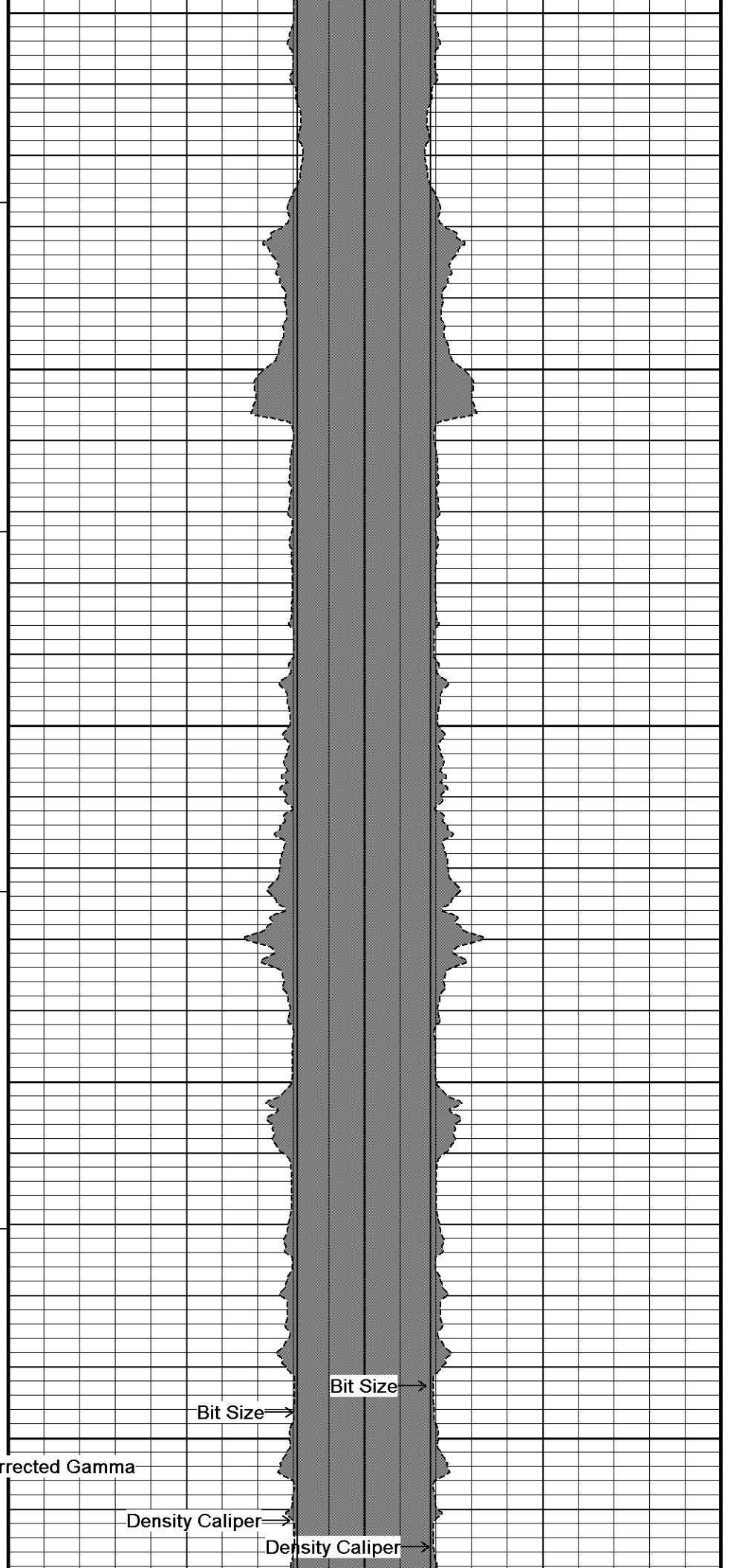
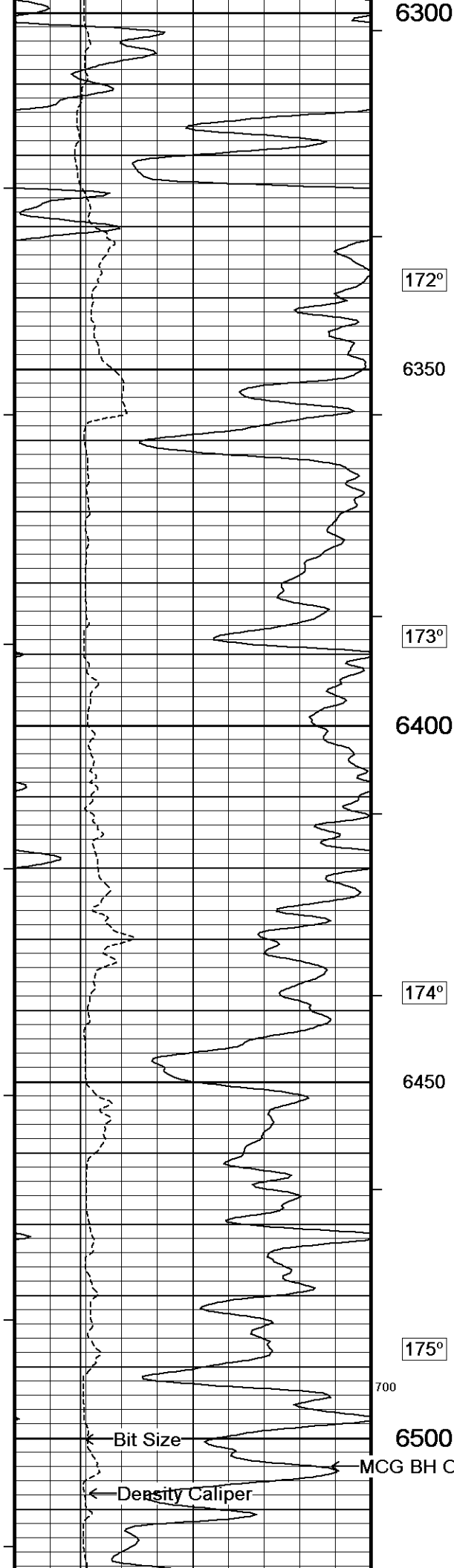


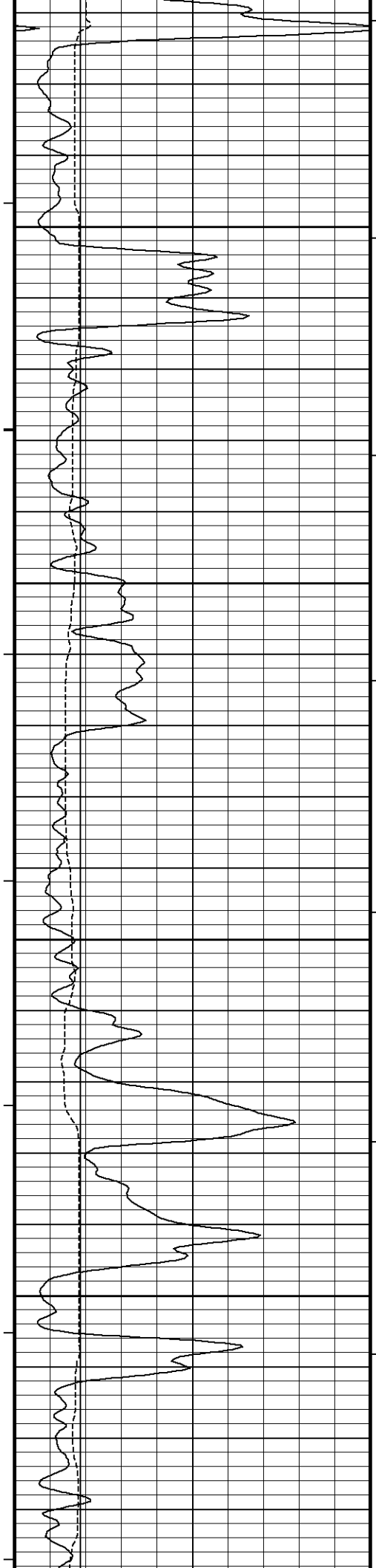












176°

6550

176°

6600

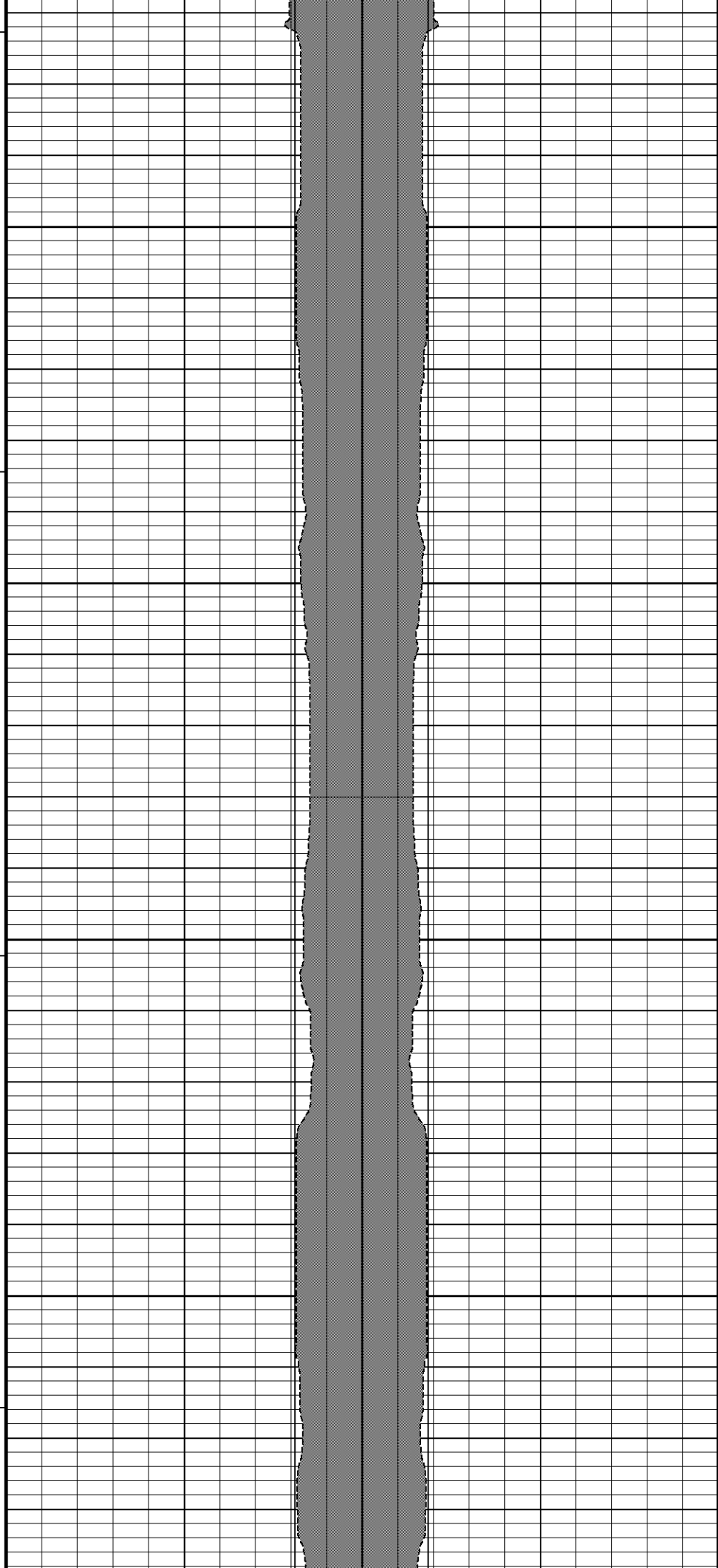
177°

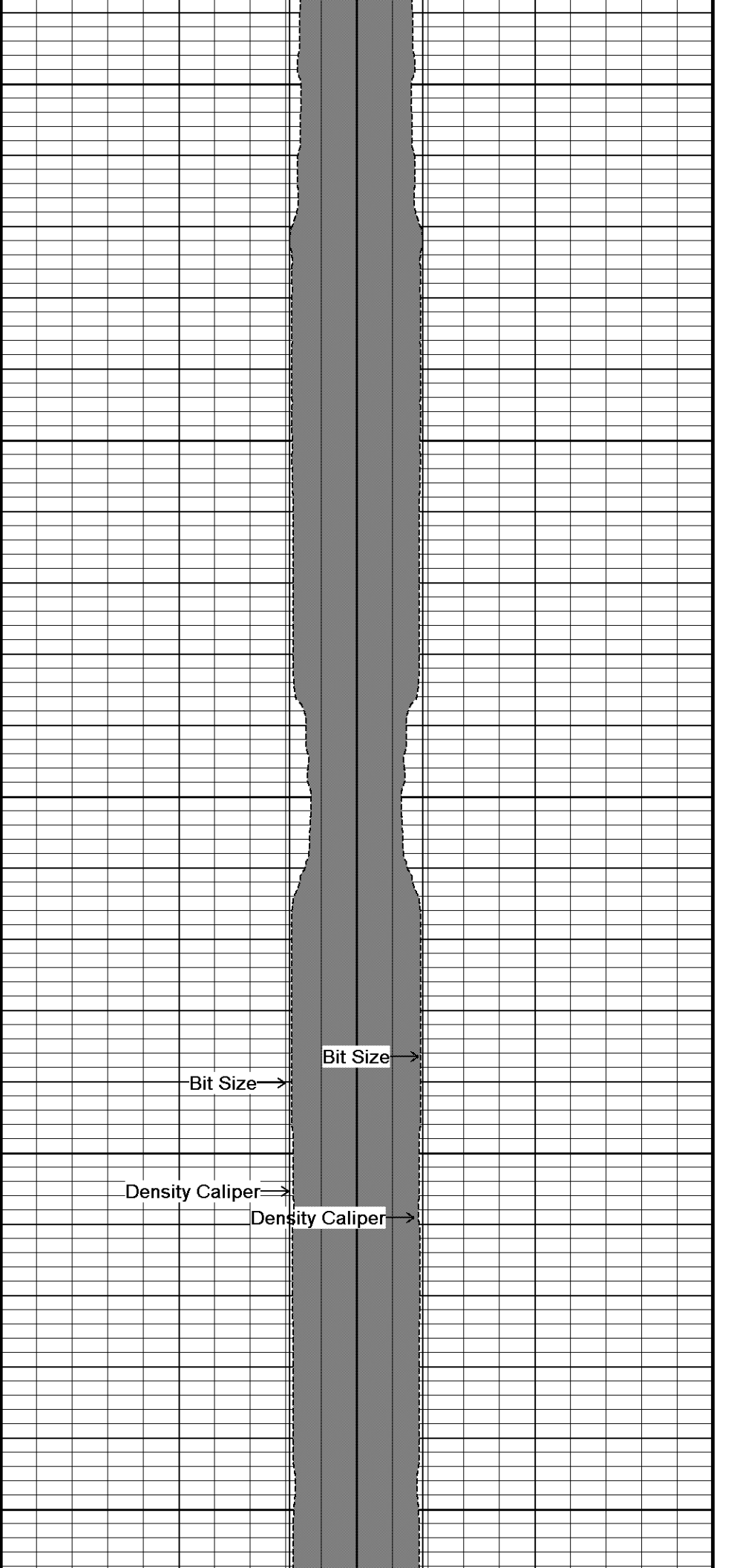
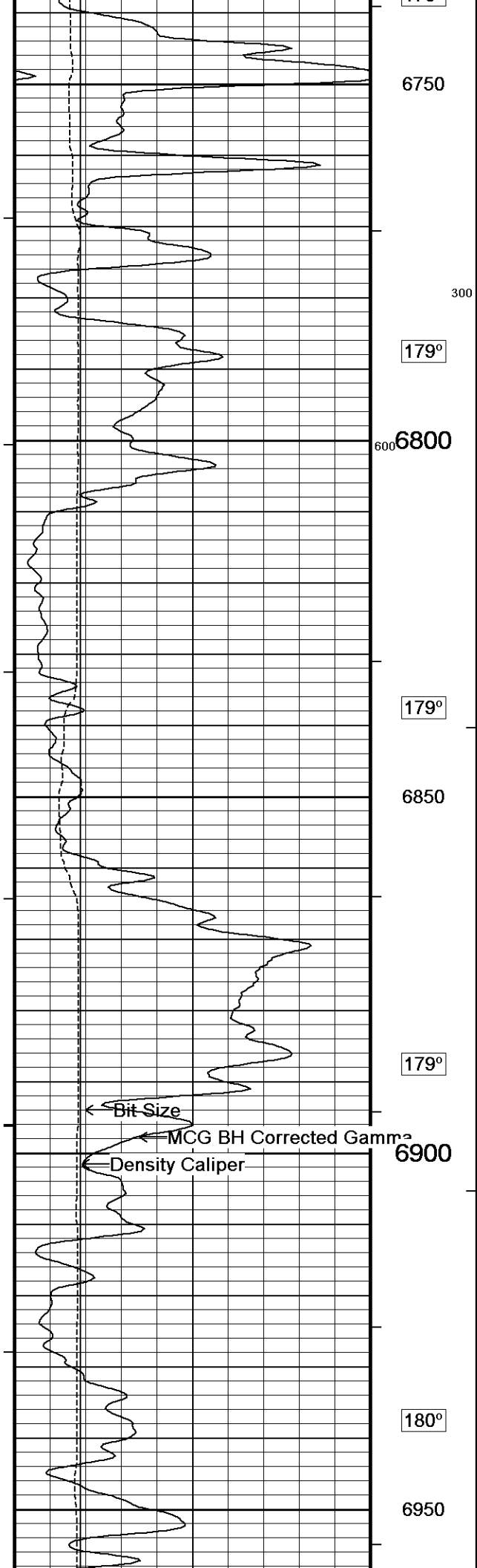
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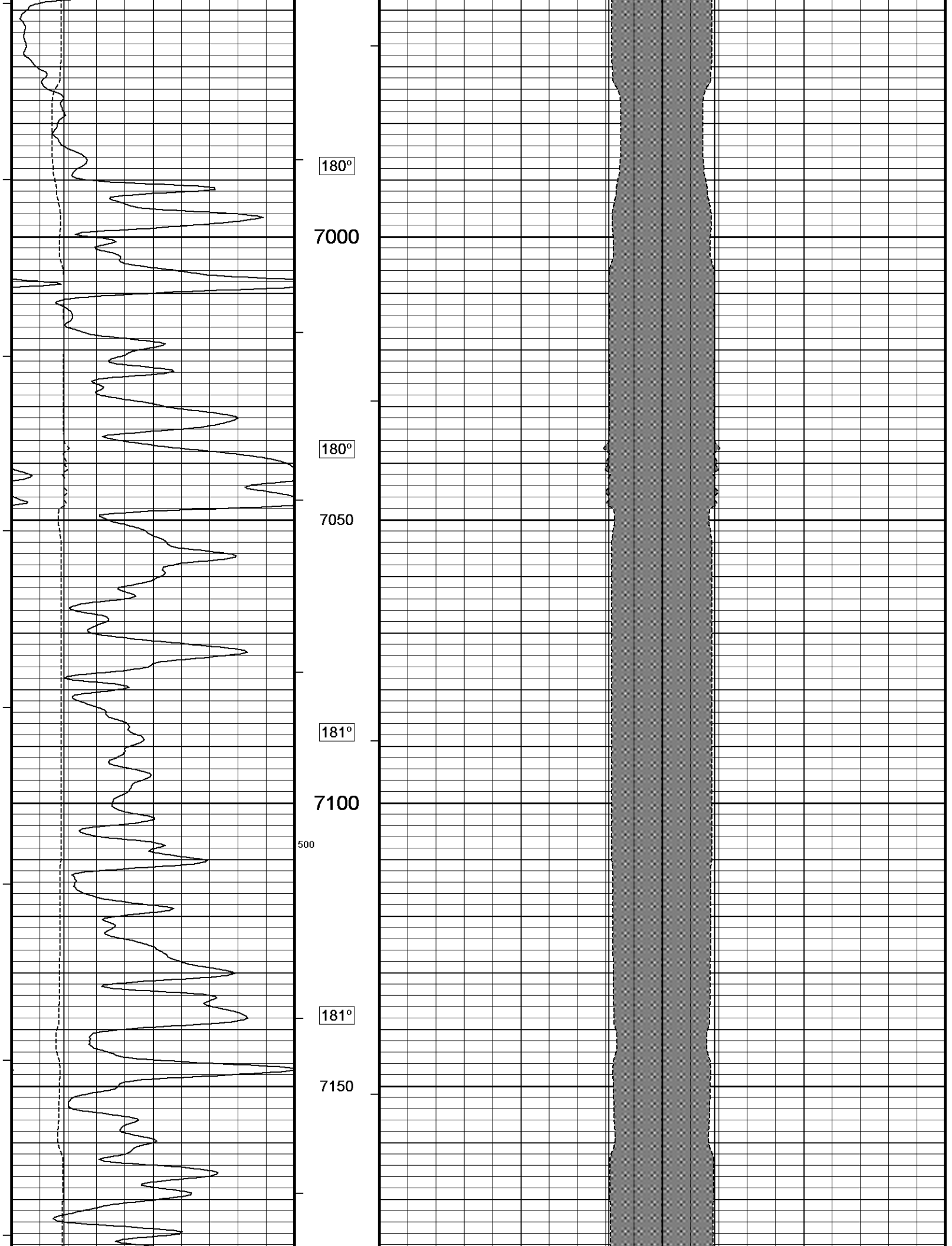
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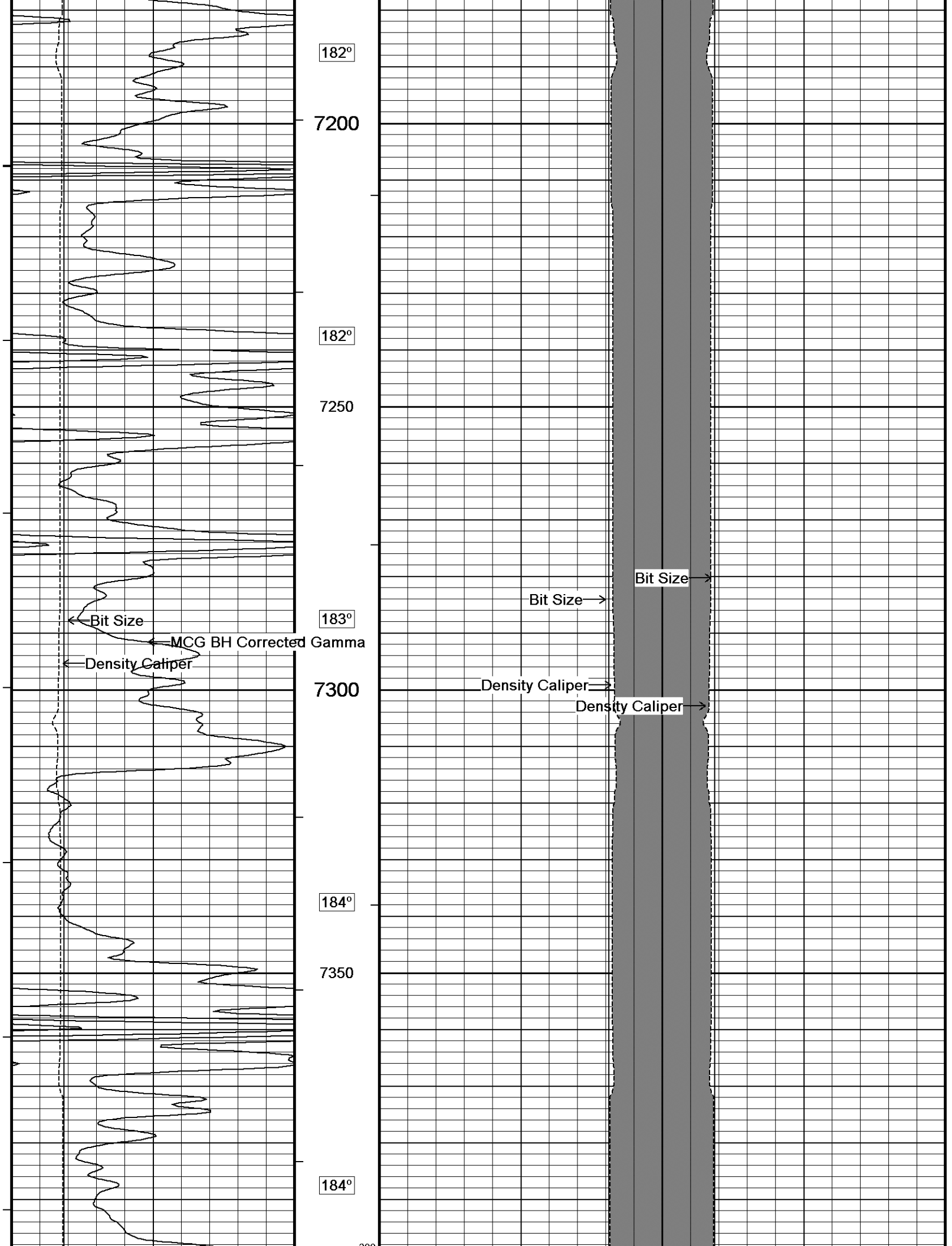
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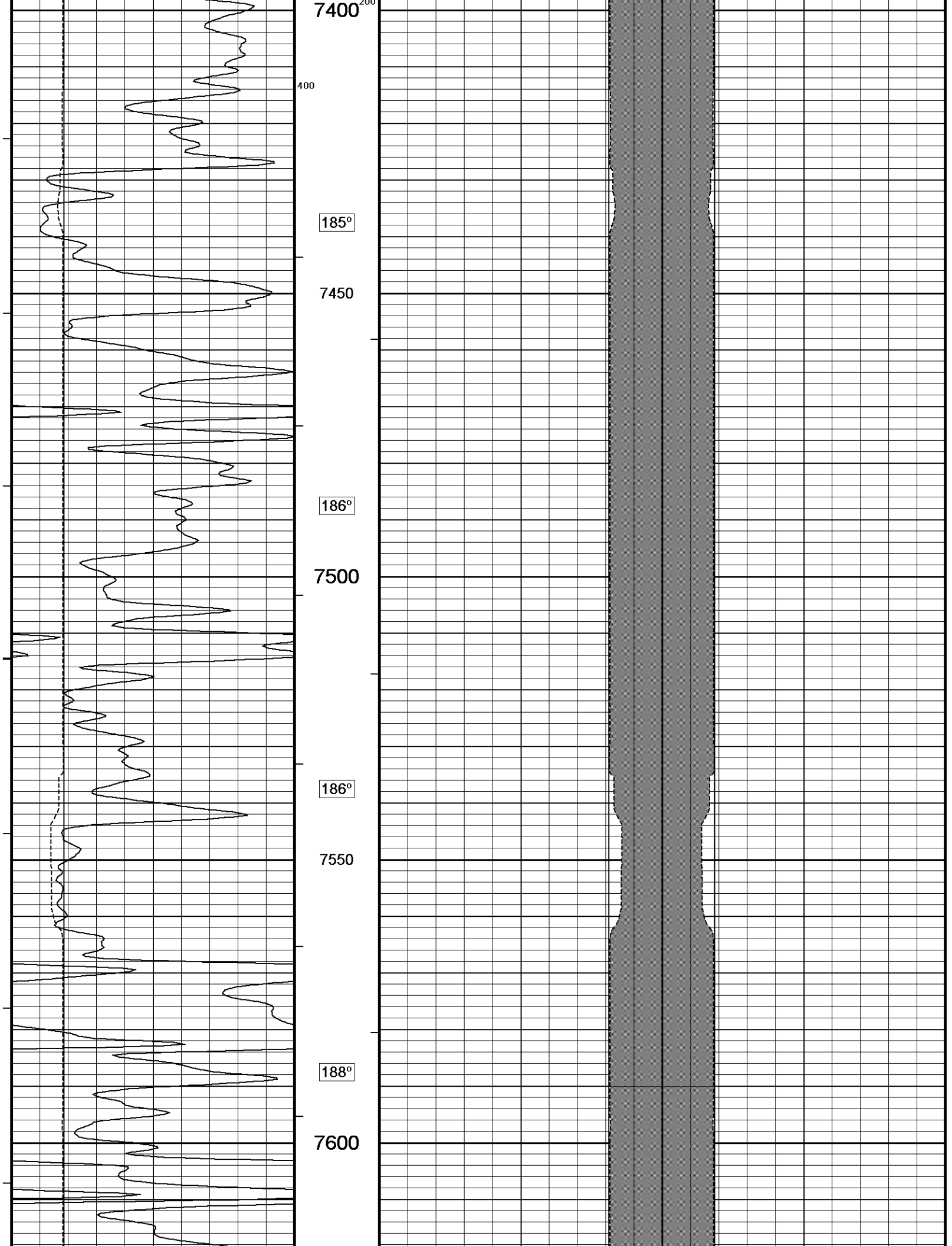
178°

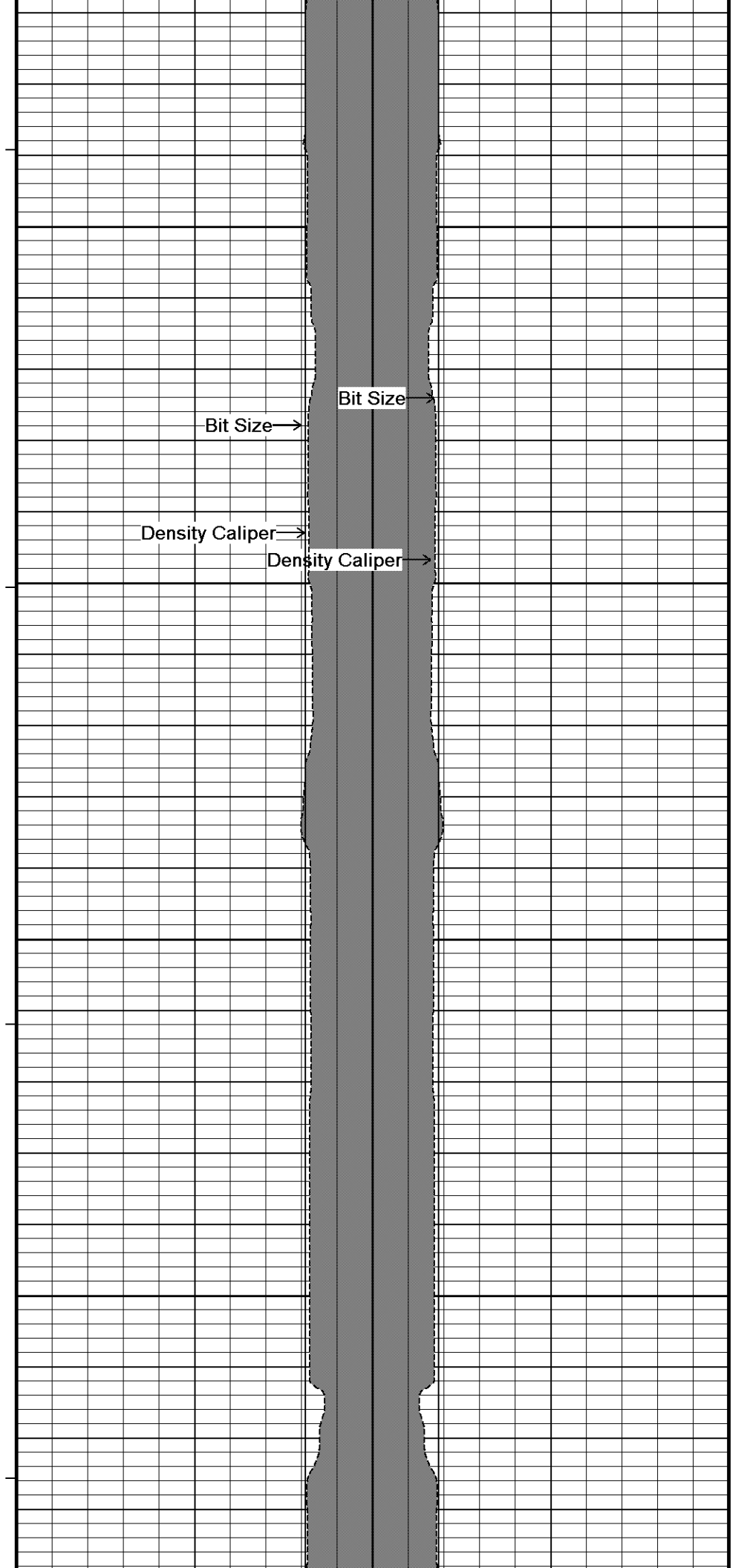
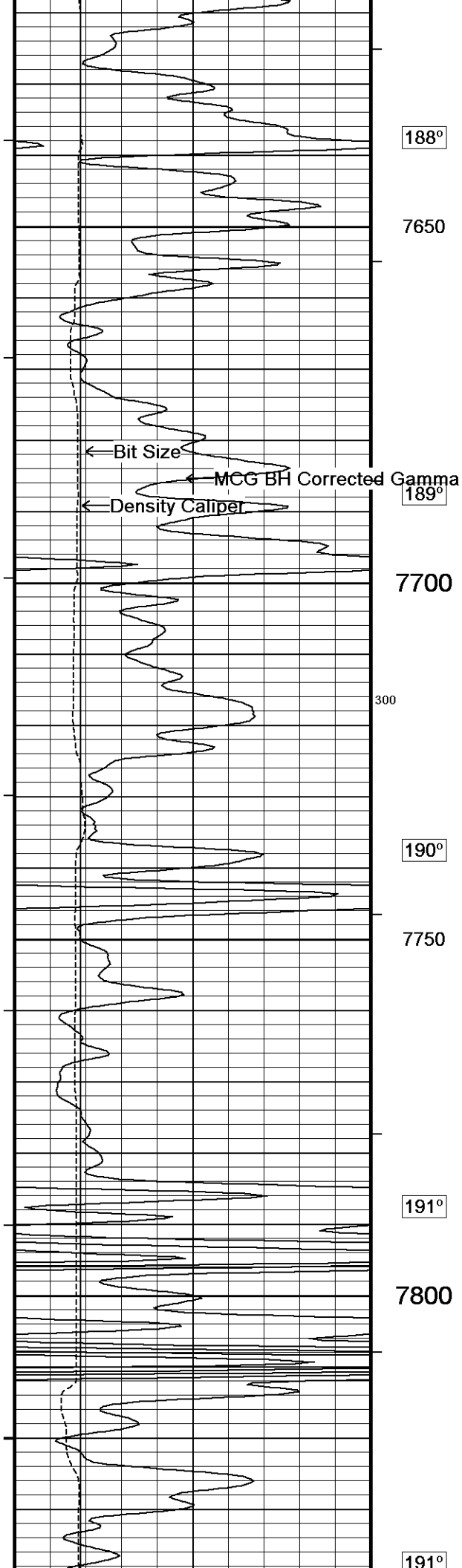


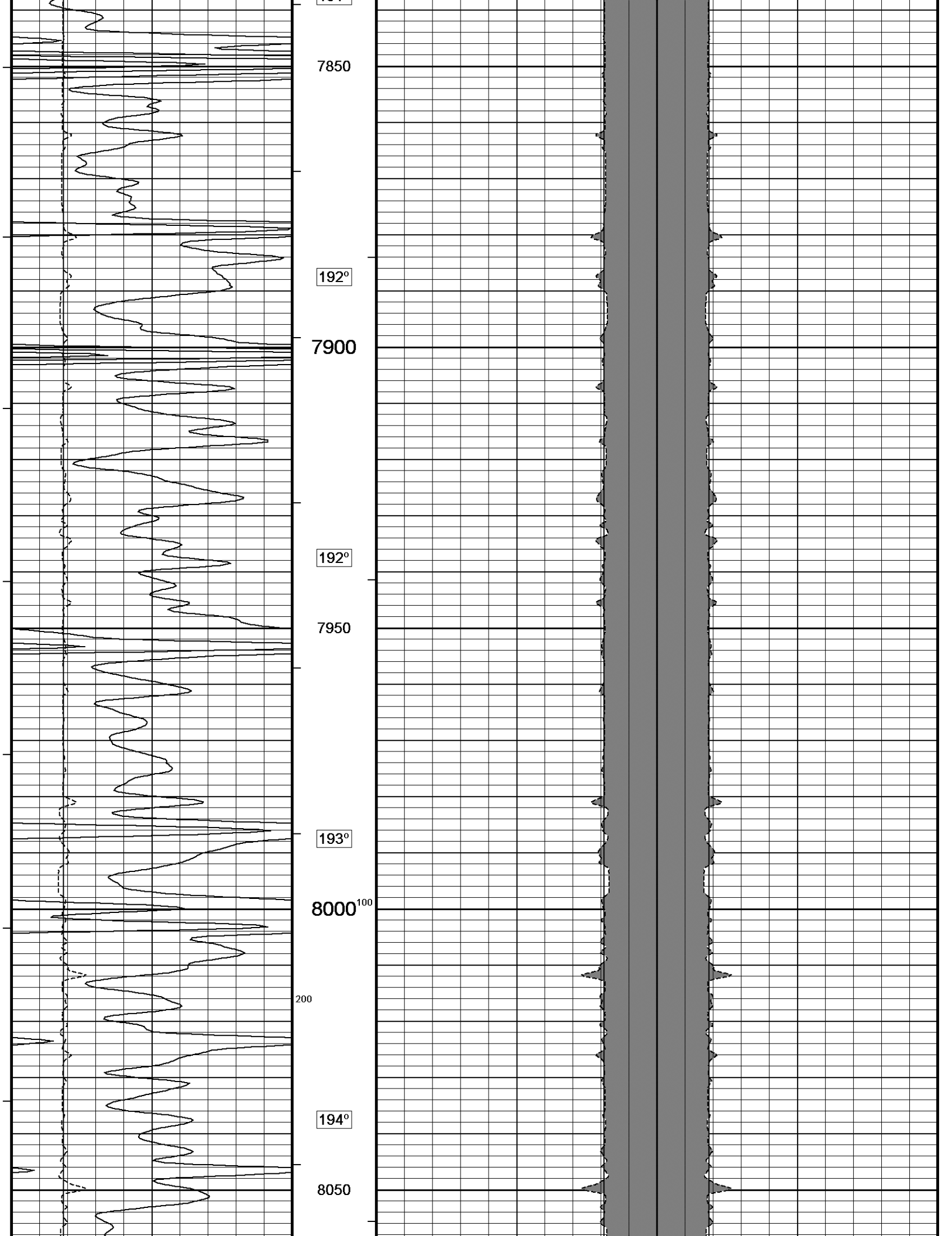


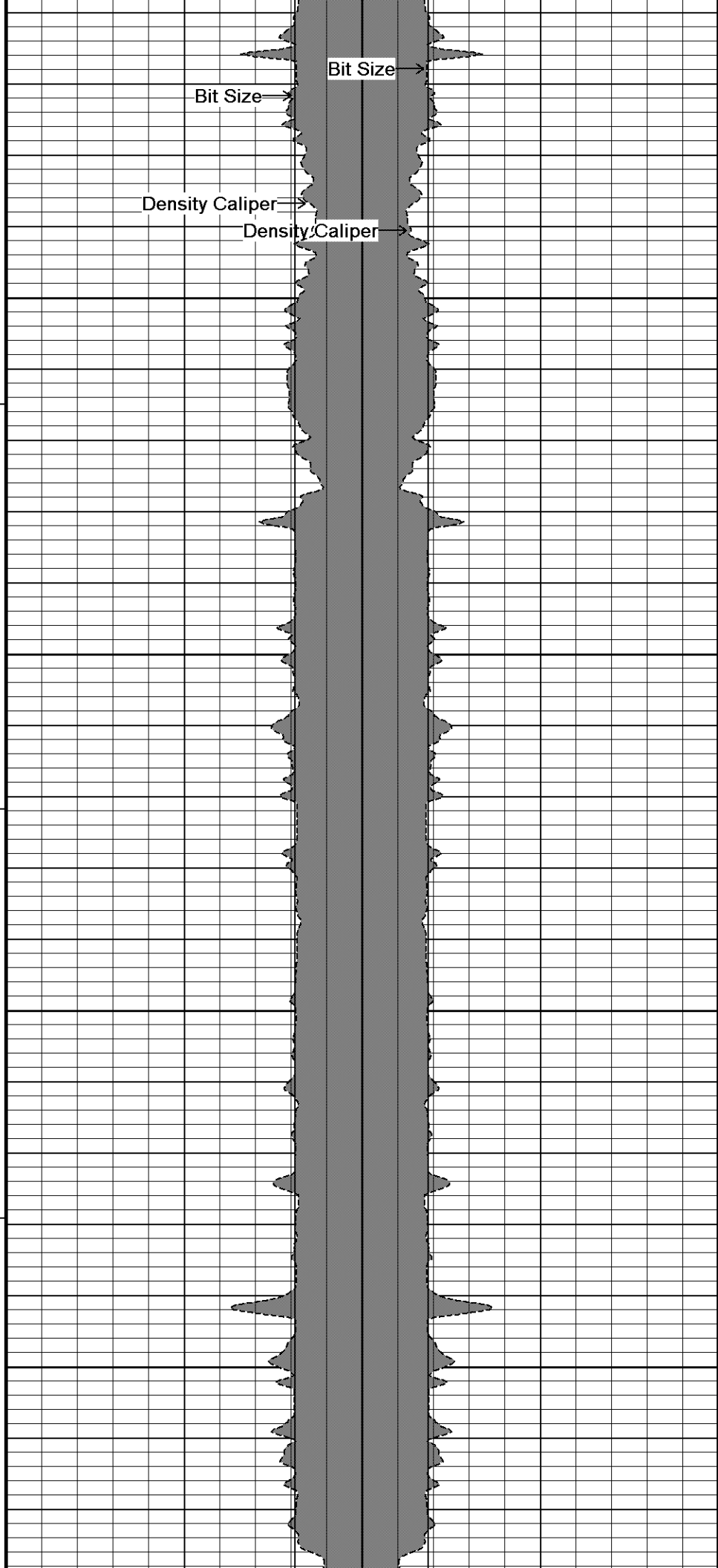
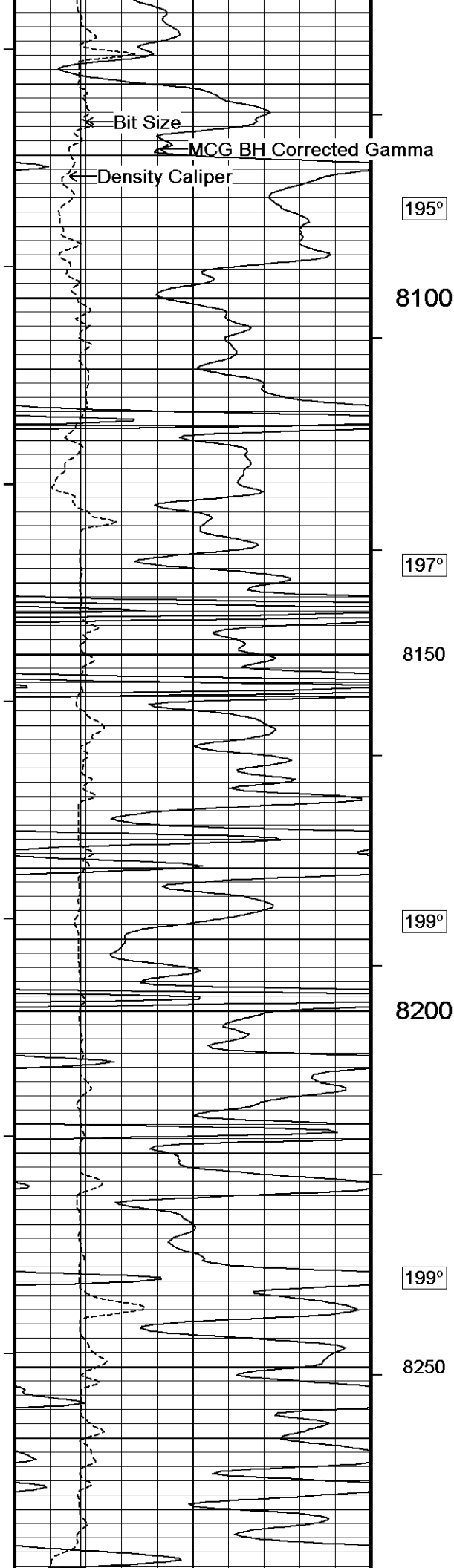


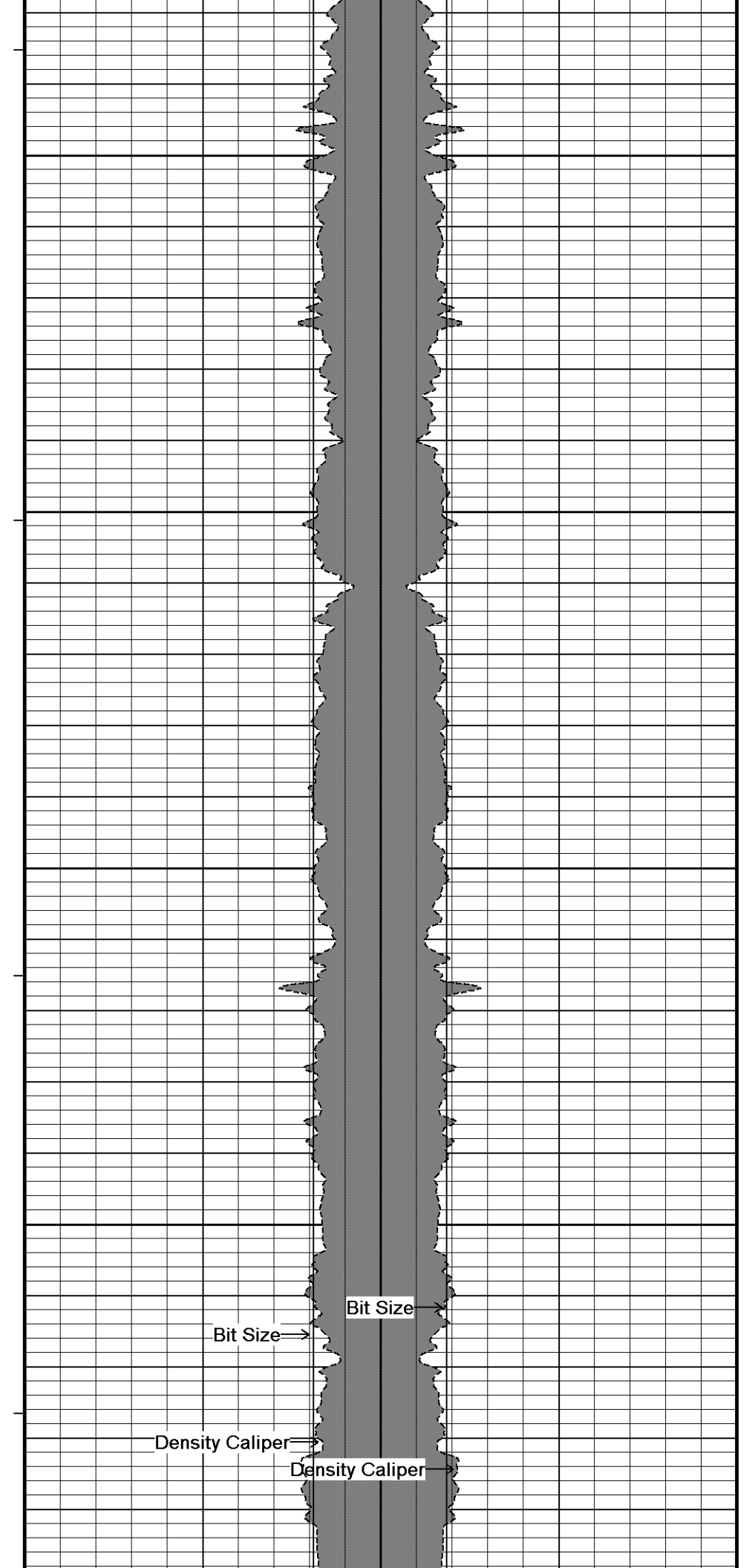
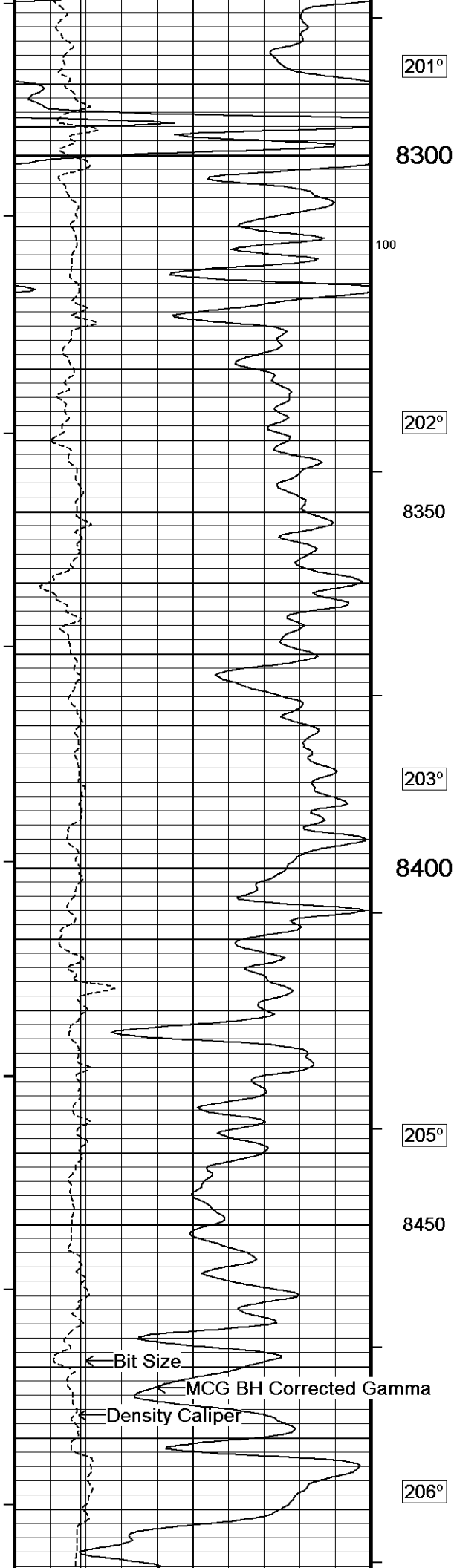


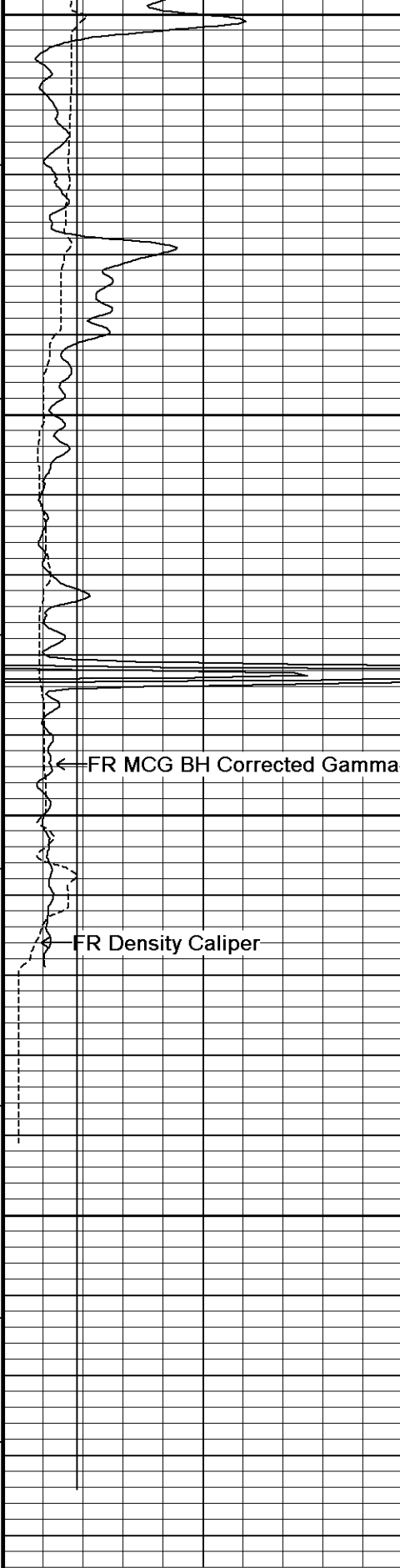




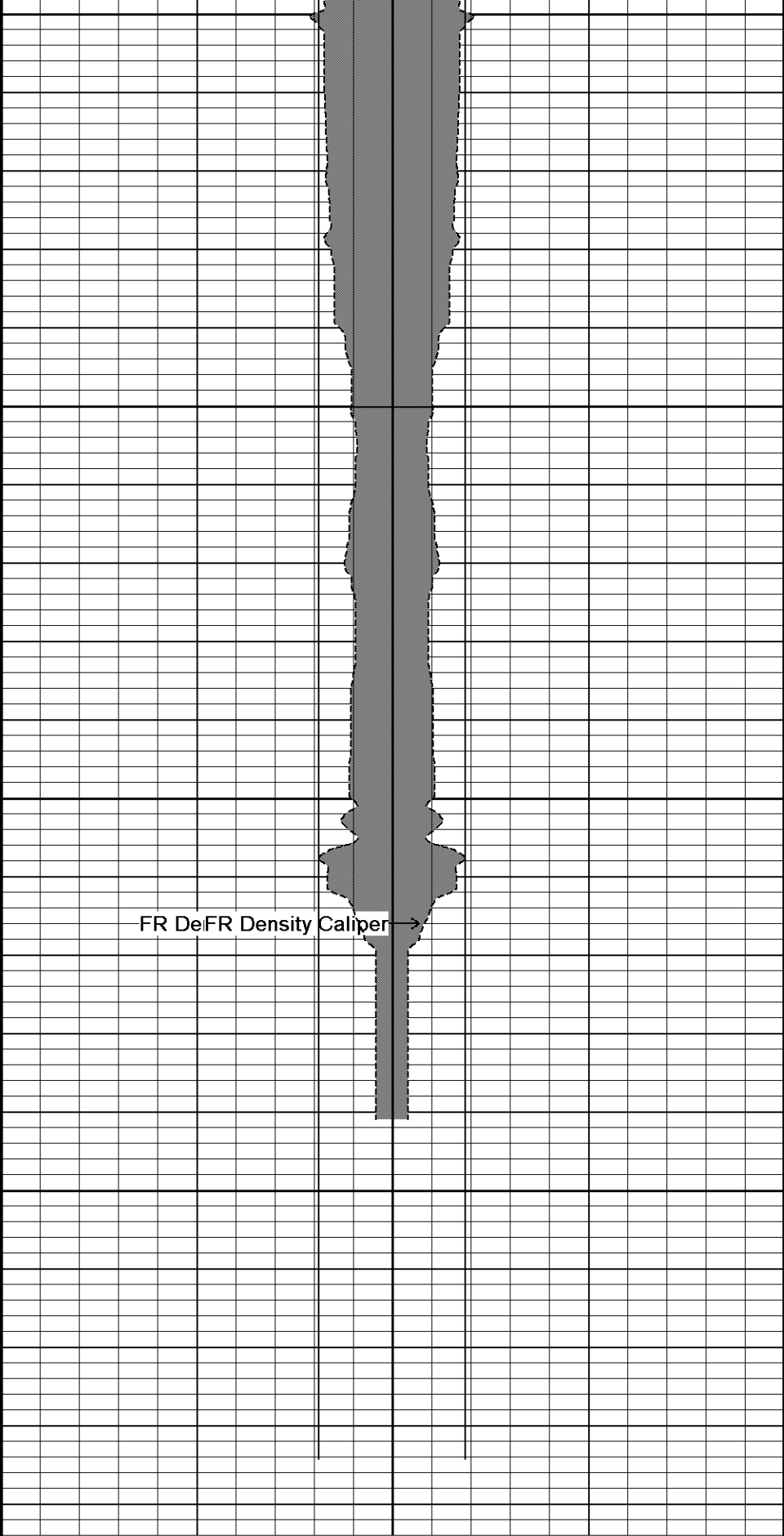








8500
207°
8550
207°
8600
0
8650
TD



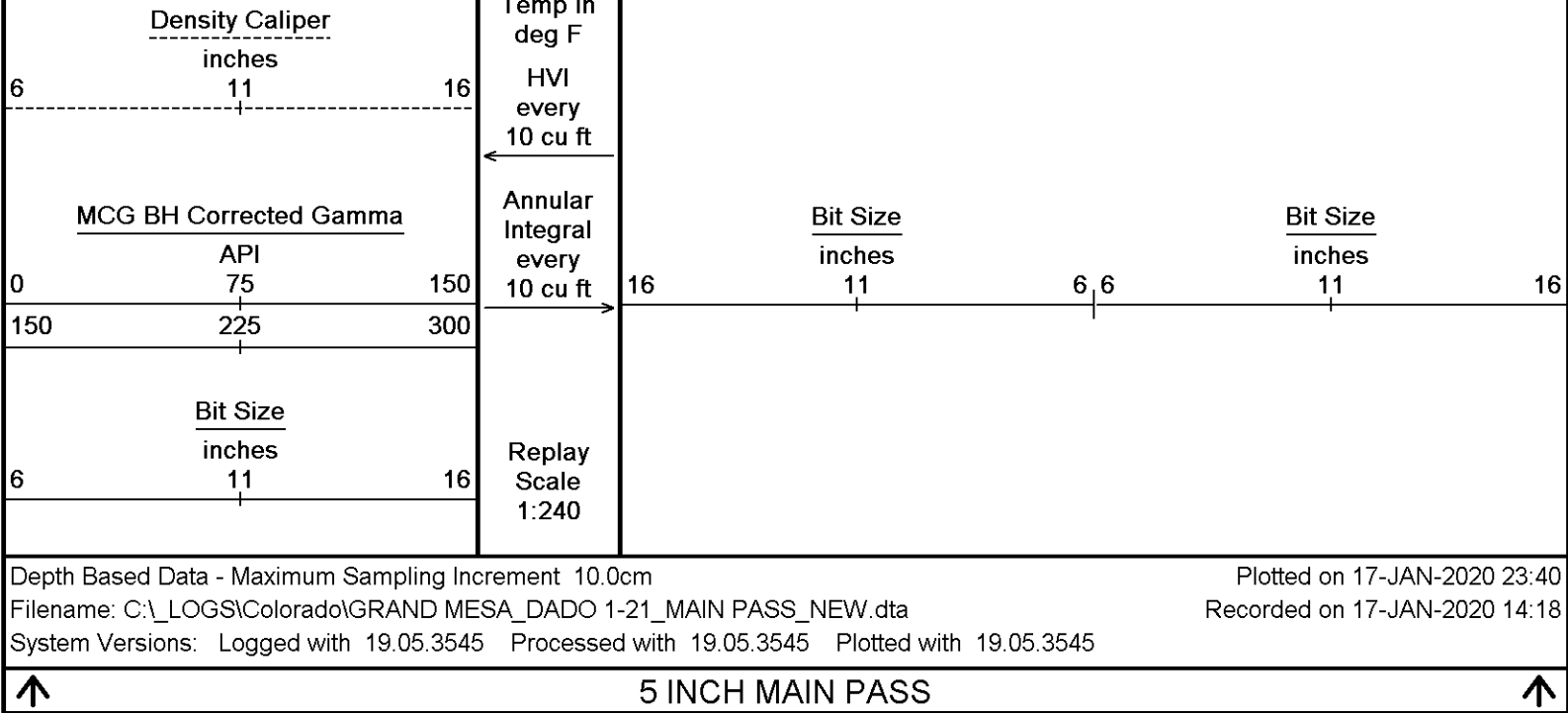
Density Caliper
inches

Density Caliper
inches

Timing Marks
every 60.0 sec

16 11 6 6 11 16

Borehole
Tool



BEFORE SURVEY CALIBRATION		
C:_LOGS\Colorado\GRAND MESA_DADO 1-21_MAIN PASS_NEW.dta		
General Constants All 000		Last Edited on 17-JAN-2020,20:55
General Parameters		
Mud Resistivity	0.780	ohm-metres
Mud Resistivity Temperature	97.000	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	5.500	inches
Caliper for Differential Caliper	Density Caliper	
Rwa Parameters		
Porosity used	Crossplot Porosity	
Resistivity used	Array Ind. One Res Rt	
RWA Constant A	0.620	
RWA Constant M	2.150	
SW/APOR Tool Source	0.000	

Gamma Calibration MCG-E.A 533		Field Calibration on 16-JAN-2020 11:29
	Measured	Calibrated (API)
Background	43	28
Calibrator (Gross)	864	561
Calibrator (Net)	821	533



Gamma Constants MCG-E.A 533		Last Edited on 17-JAN-2020,10:40
Gamma Calibrator Number MCGGRCC118		
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 %

High Resolution Temperature Calibration MCG-E.A 533

Field Calibration on 17-JAN-2020,10:39

	Measured	Calibrated(Deg F)
Lower	0.00	0.00
Upper	100.00	100.00

High Resolution Temperature Constants MCG-E.A 533

Last Edited on 17-JAN-2020,10:39

Pre-filter Length 11

Caliper Calibration MPD-D.A 474

Base Calibration on 16-JAN-2020 13:19

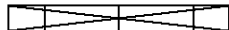
Base Calibration

Reading No	Measured	Calibrator Size (in)
1	15179	3.99
2	23769	5.97
3	32584	7.97
4	40649	9.86
5	50001	11.92
6	N/A	N/A

Field Calibration

Measured Caliper (in) Actual Caliper (in)

Caliper Calibration Tolerances MPD-D.A 474

Short Arm Field Cal. 0.00  in

DOWNHOLE EQUIPMENT

C:\LOGS\Colorado\GRAND MESA_DADO 1-21_MAIN PASS_NEW.dta

Cablehead, 11 pin
CBH-CA 172 LG: 2.40 ft WT: 24.3 lb OD: 2.244 in

11C-11B Compact Tool Adaptor
MTA-K.A 335 LG: 1.53 ft WT: 13.2 lb OD: 2.240 in

Compact Comms Gamma
MCG-E.A 533 LG: 8.70 ft WT: 63.9 lb OD: 2.244 in

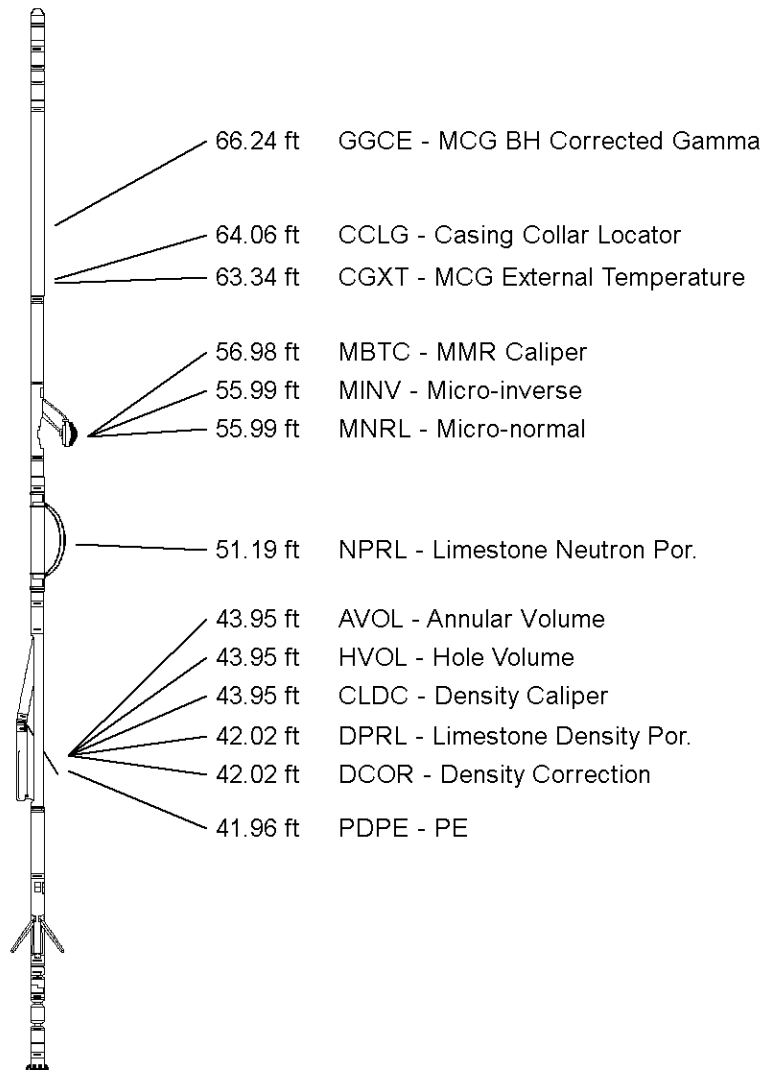
Compact Micro-Resistivity
MMR-C.A 230 LG: 8.59 ft WT: 81.6 lb OD: 4.882 in

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

Compact Density/Caliper
MPD-D.A 474 LG: 9.59 ft WT: 90.4 lb OD: 2.449 in

Compact Vee Arm Caliper
MVC-A.A 146 LG: 8.06 ft WT: 61.7 lb OD: 2.244 in

Compact Knuckle Joint
SKJ-E.B 659 LG: 2.17 ft WT: 24.3 lb OD: 2.244 in

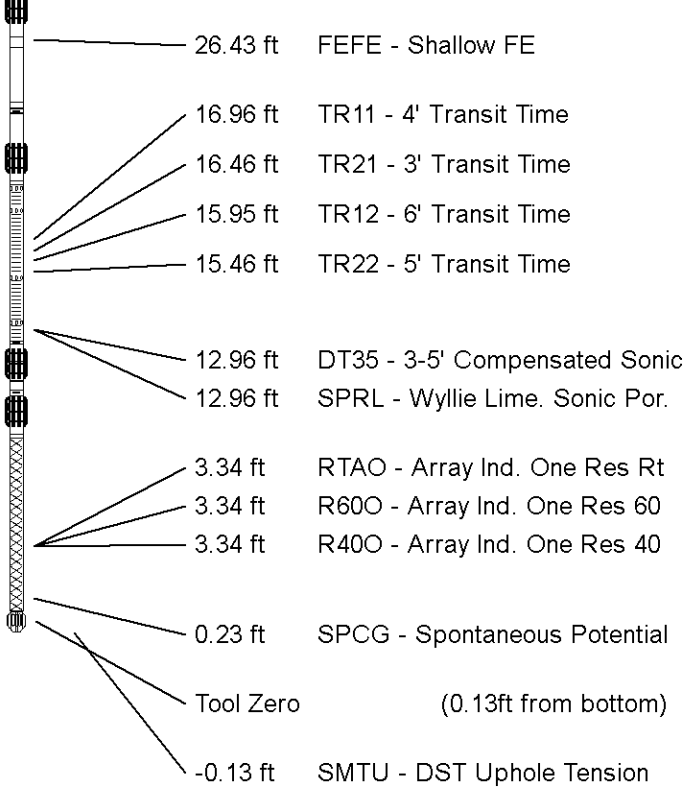


Compact Focussed Electric
MFE-C.A 399 LG: 6.05 ft WT: 48.5 lb OD: 2.244 in

Compact Sonic
MSS-D.A 398 LG: 12.52 ft WT: 72.8 lb OD: 2.244 in

Compact Induction
MAI-C.A 517 LG: 10.81 ft WT: 48.5 lb OD: 2.244 in

Total Length: 75.45 ft Weight: 579.8 lb



All measurements relative to tool zero.

COMPANY	GRAND MESA OPERATING COMPANY
WELL	DADO 1-21
FIELD	GUTRU
PROVINCE/COUNTY	LINCOLN
COUNTRY/STATE	COLORADO

Elevation Kelly Bushing	5503	feet	First Reading	8618.00	feet
Elevation Drill Floor	5502	feet	Depth Driller	8655.00	feet
Elevation Ground Level	5484	feet	Depth Logger	8660.00	feet

CALIPER LOG