



## HOLE VOLUME CALIPER LOG

COMPANY				BILL BARRETT CORPORATION			
WELL				GGU MILLER 23C-32-691			
FIELD				GIBSON GULCH			
PROVINCE/COUNTY				GARFIELD			
COUNTRY/STATE				U.S.A. / COLORADO			
LOCATION				SHL: 1256' FSL & 2297' FWL			
				BHL: 2130' FSL & 1990' FWL			
SEC	TWP	RGE	Other Services		Elevations:		
32	6S	91W	MPD/MDN		KB	6144.00	
API Number		05-045-19430		MAI/MFE	DF	6143.00	
Permit Number					GL	6121.00	
Permanent Datum G.L., Elevation 6121 feet							
Log Measured From K.B. @ 23 FEET above Permanent Datum							
Drilling Measured From K.B.							
Date	8-DEC-2010						
Run Number	ONE						
Depth Driller	7333.00				feet		
Depth Logger	7335.00				feet		
First Reading	7311.00						
Last Reading	785.00						
Casing Driller	781.00				feet		
Casing Logger	785.00				feet		
Bit Size	7.880				inches		
Hole Fluid Type	LSND						
Density / Viscosity	10.60 lb/USg				58.00 CP		
PH / Fluid Loss	9.40				7.20 ml/30Min		
Sample Source	FLOW LINE						
Rm @ Measured Temp	2.45 @ 96.0				ohm-m		
Rmf @ Measured Temp	1.96 @ 96.0				ohm-m		
Rmc @ Measured Temp	2.94 @ 96.0				ohm-m		
Source Rmf / Rmc	CALC				CALC		
Rm @ BHT	1.25 @ 190.0				ohm-m		
Time Since Circulation	6 HOURS						
Max Recorded Temp	190.00				deg F		
Equipment Name	COMPACT						
Equipment / Base	13173				GD JCT		
Recorded By	M.RICHINS						
Witnessed By	C.CROW						

### BOREHOLE RECORD

Last Edited: 08-DEC-2010 19:31

Bit Size inches	Depth From feet	Depth To feet
8.750	781.00	5521.00
7.880	5521.00	7325.00

### CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	9.625	0.00	781.00	36.00

### REMARKS

TOOLS: SHA, MCG, MDN, MPD, SKJ, MFE AND MAI RAN IN COMBINATION.

HARDWARE: MPD: 8 INCH PROFILE PLATE USED.  
ONE 0.5 INCH STANDOFFS USED ON INDUCTION.  
ONE 0.5 INCH STANDOFFS USED ON MFE.  
DUAL BOWSPRING USED ON NEUTRON.

2.68 G/CC DENSITY MATRIX USED TO CALCULATE POROSITY.

ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST.

TIGHT PULLS, BOREHOLE SIZE, AND RUGOSITY WILL AFFECT REPEATABILITY AND DATA QUALITY.

CALIPER CHECK IN CASING PRESENTED, REFERENCE I.D. = 8.92" (9 5/8", 36 LB/FT CASING)

8.75 INCH BIT USED FROM SURFACE CASING TO 5521 FT.

TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 2600 CU.FT.

ANNULAR VOLUME WITH 4.5 INCH PRODUCTION CASING = 1880 CU.FT.

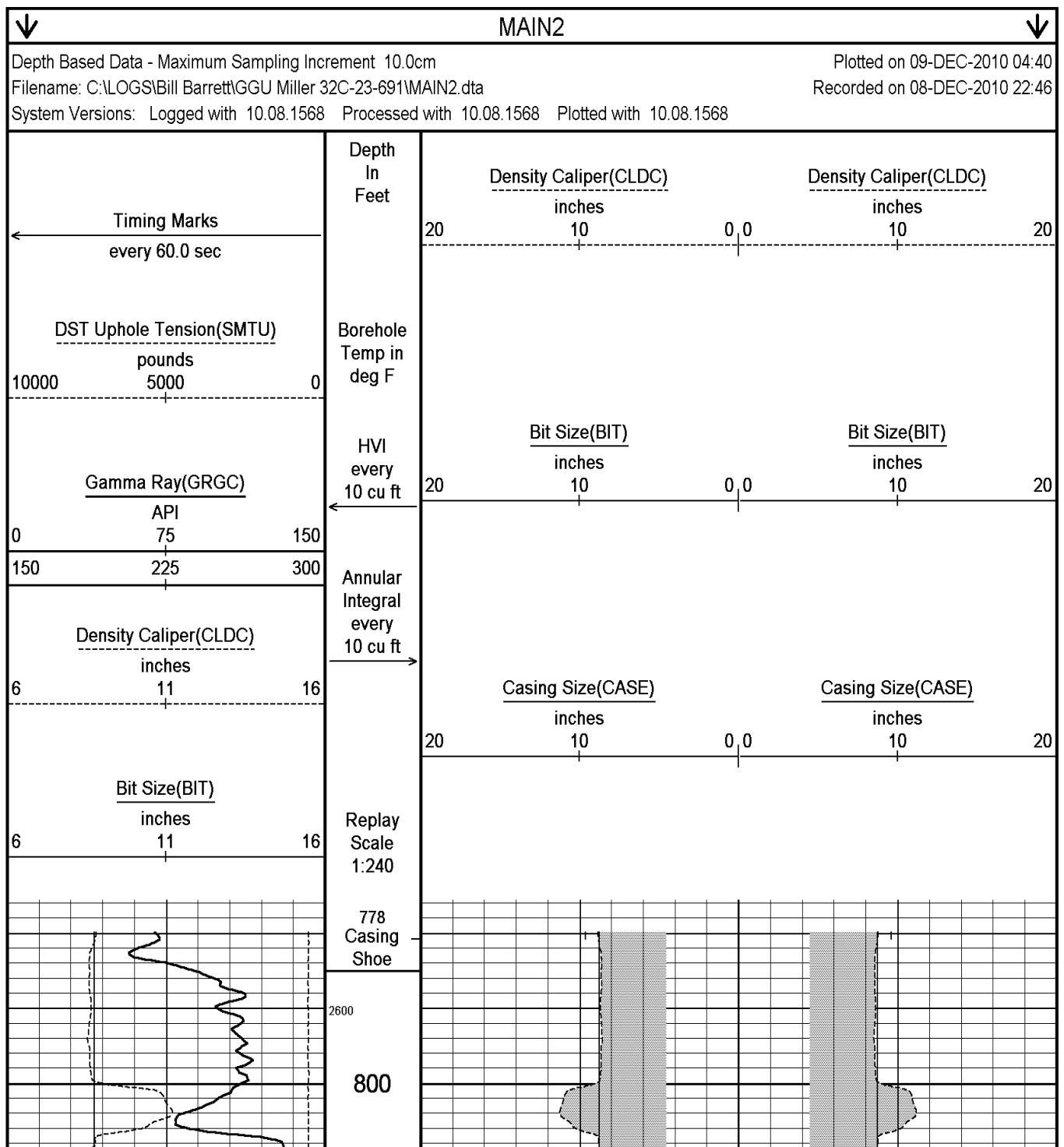
ENGINEER(S): M.RICHINS

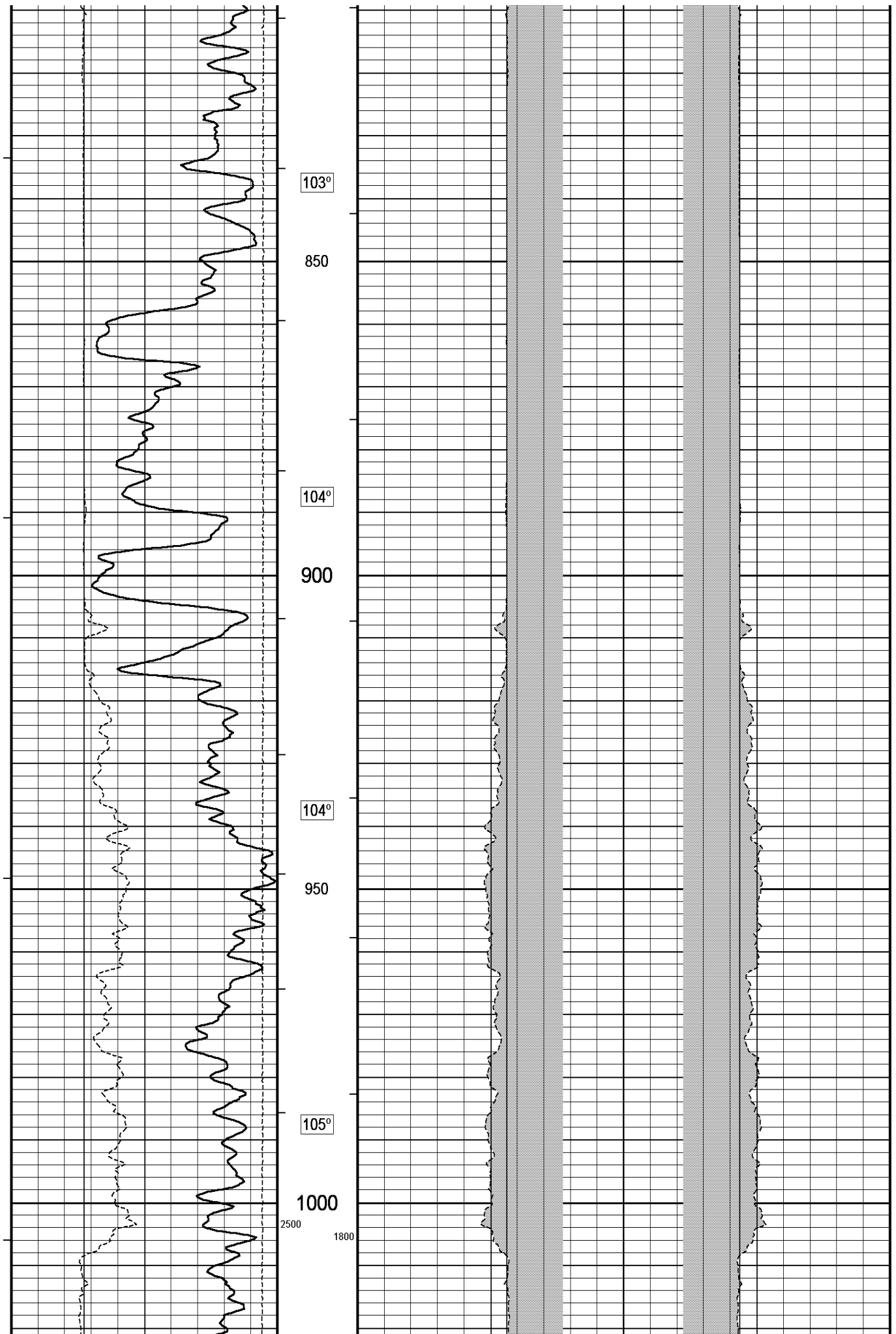
OPERATOR: K.BOBLITT, J.YOAKUM

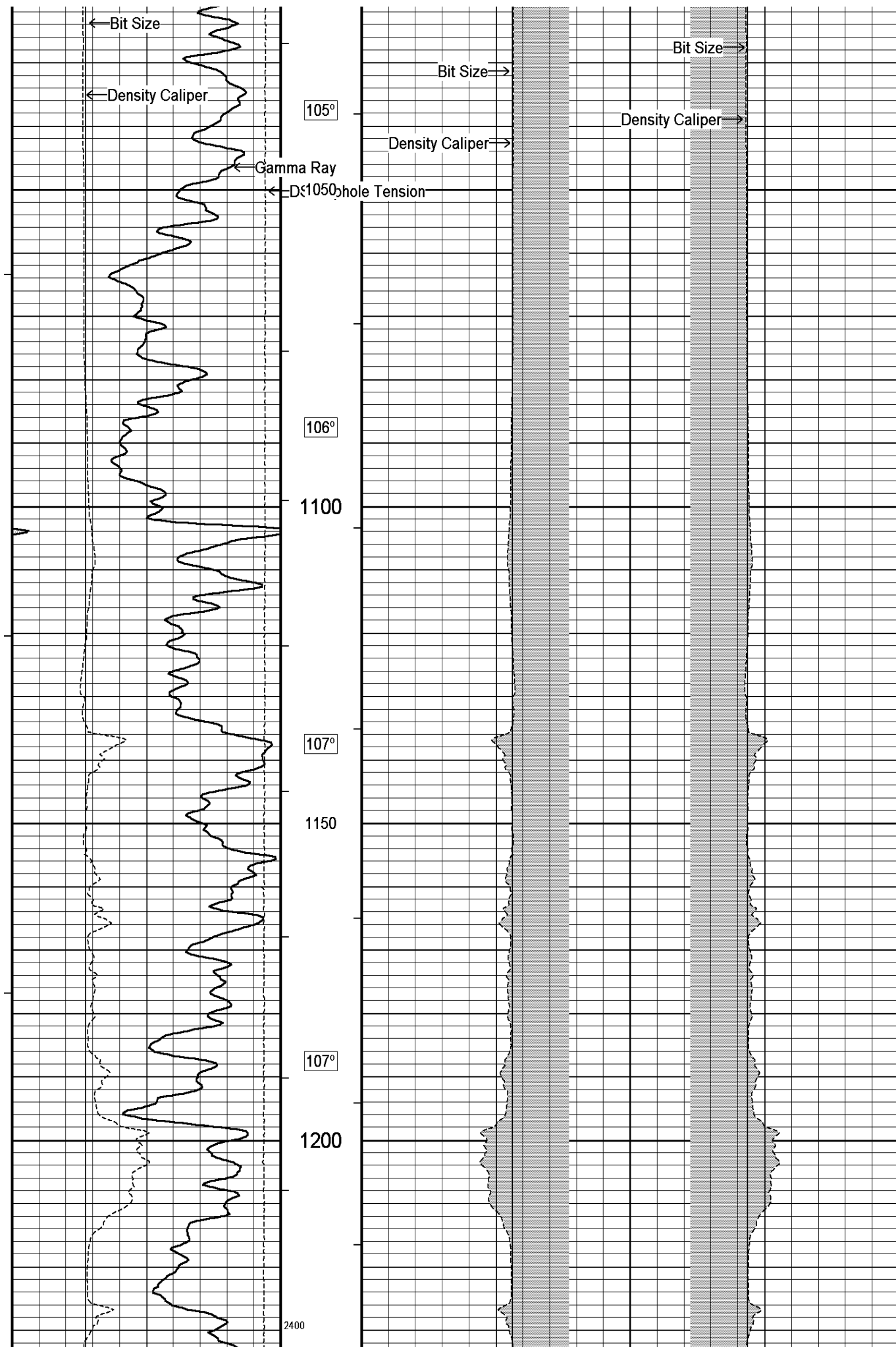
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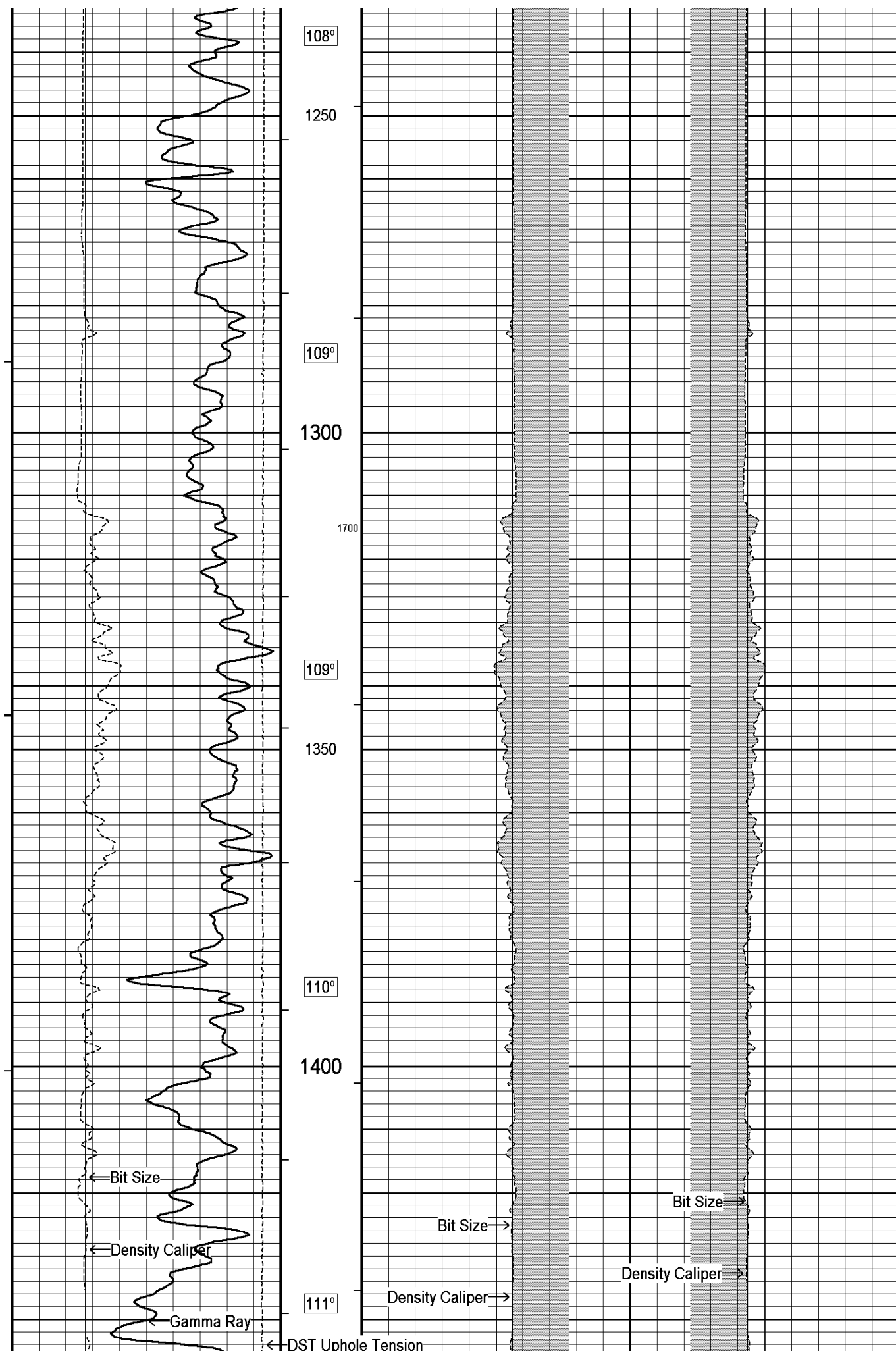
RIG: PATTERSON #307

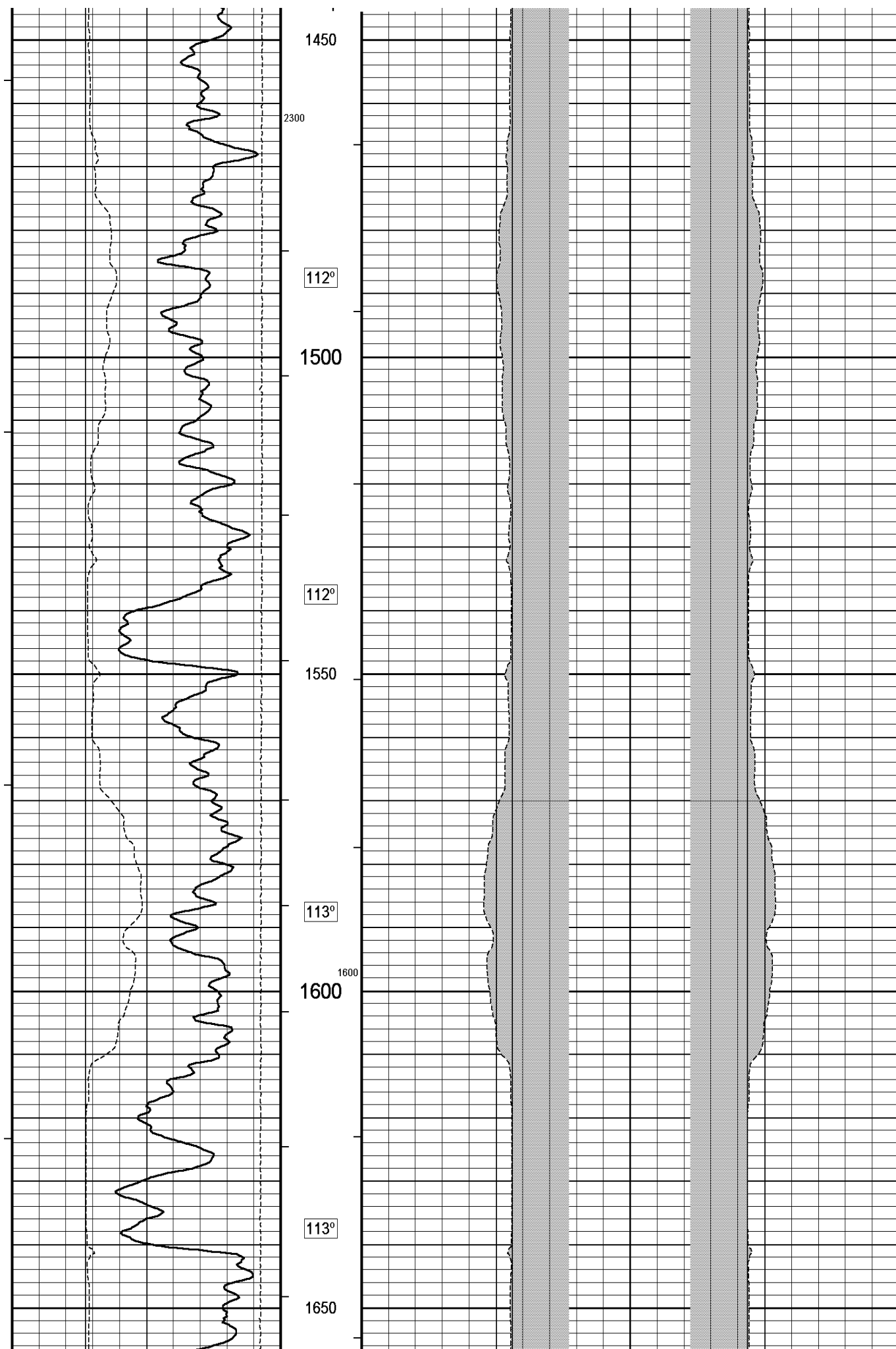
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, 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 in our price schedule.

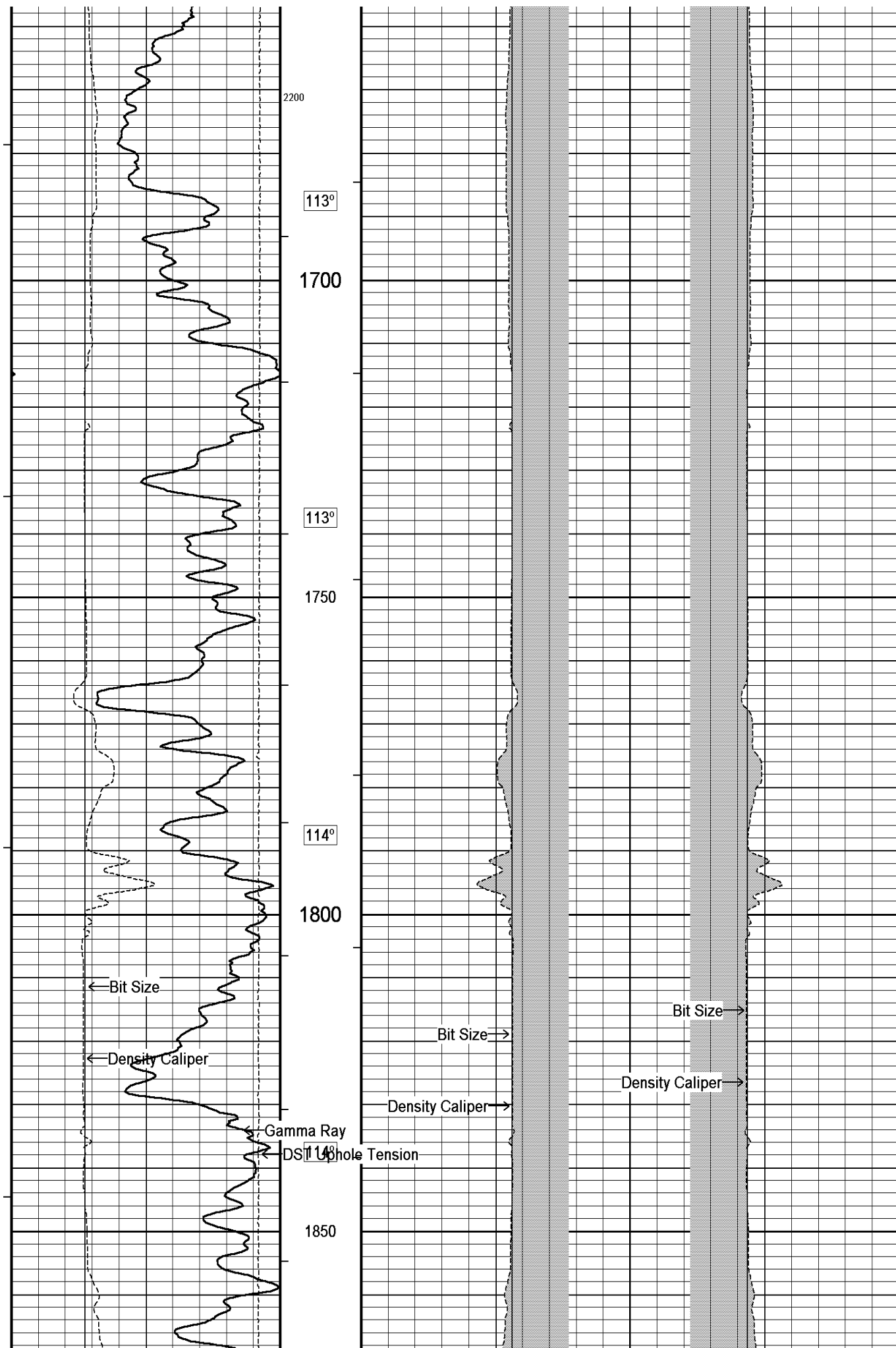


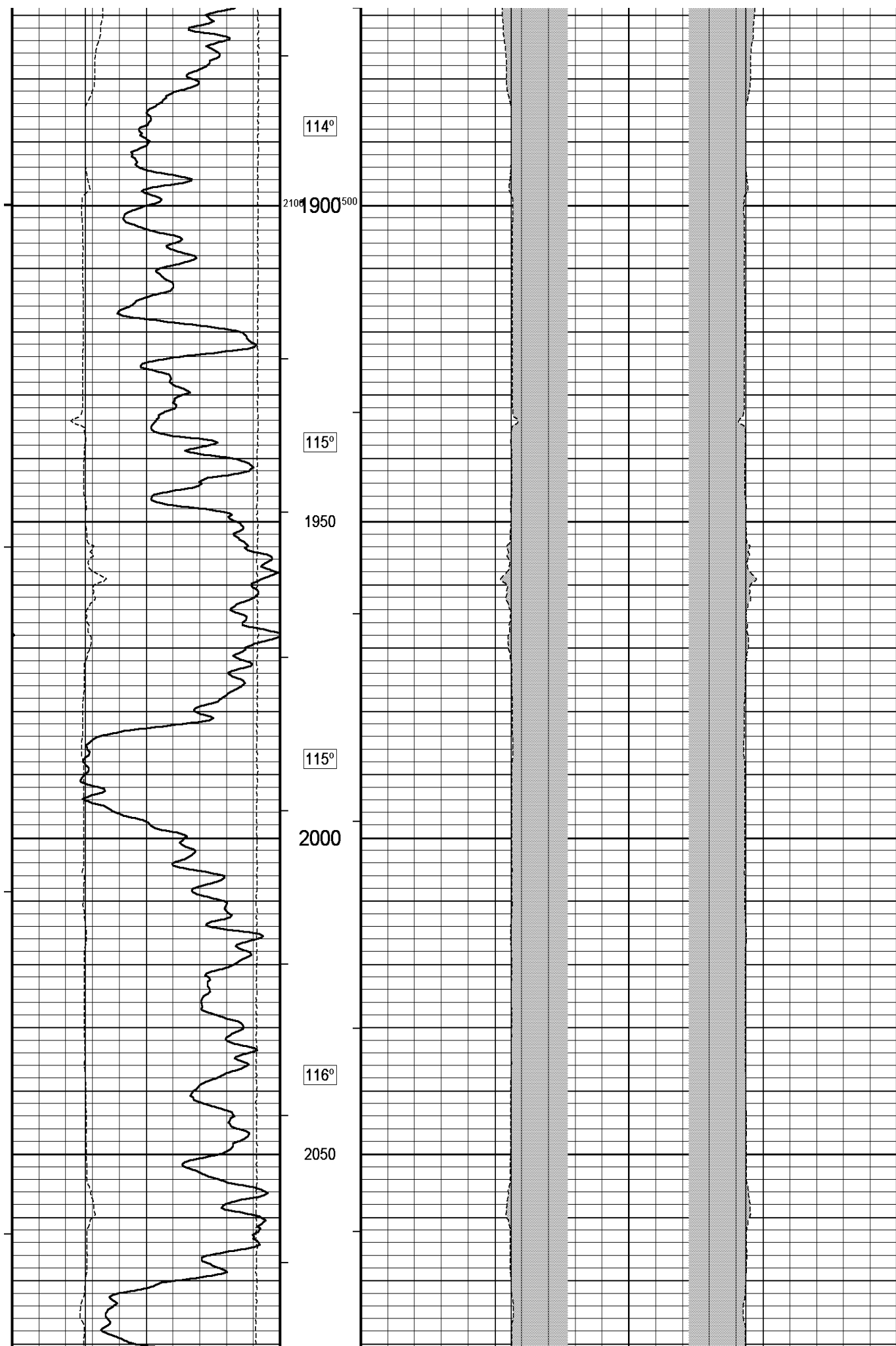




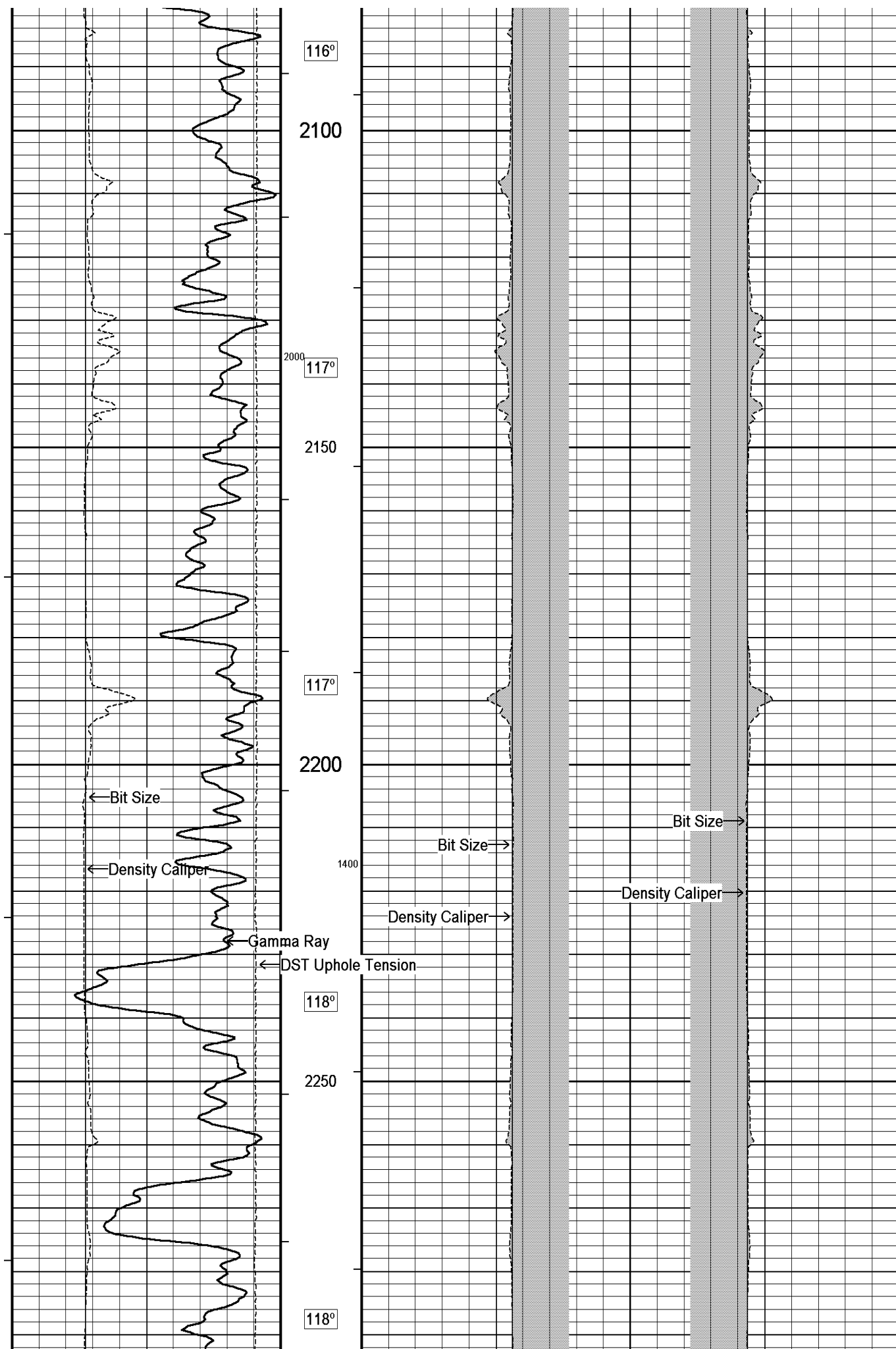


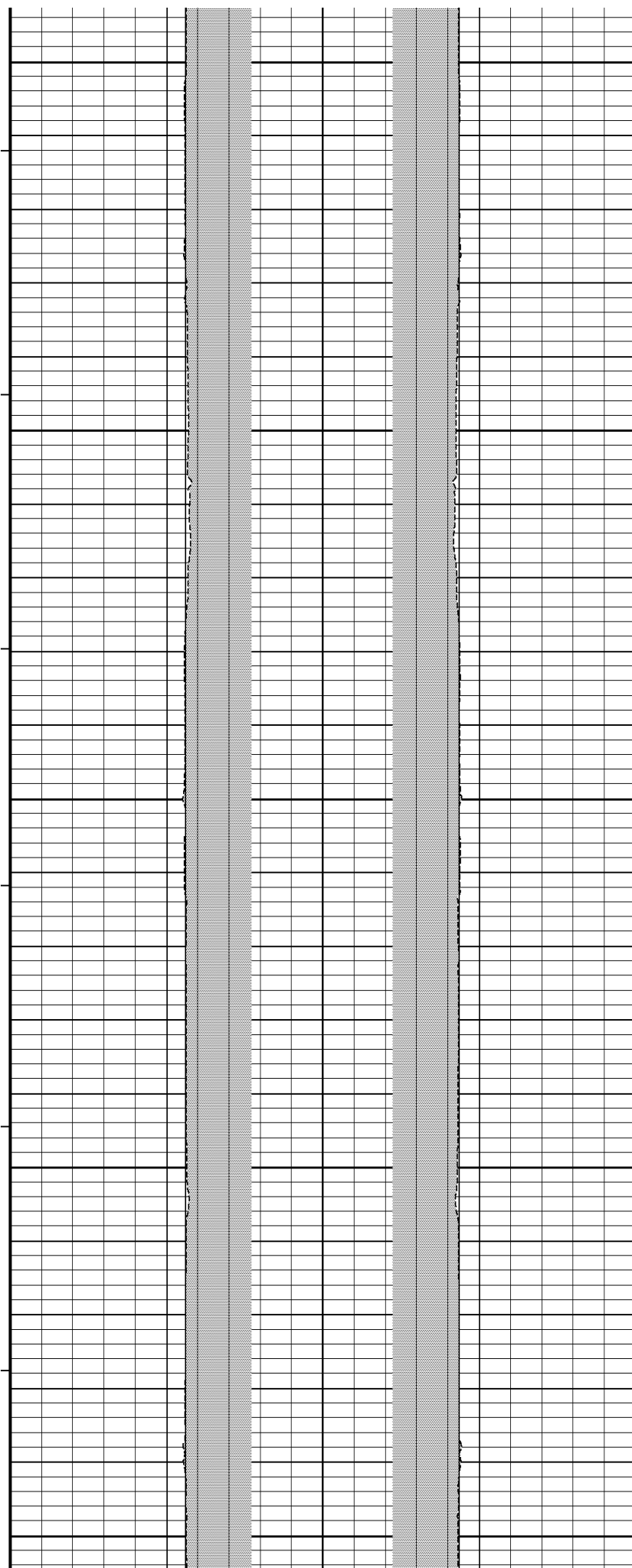
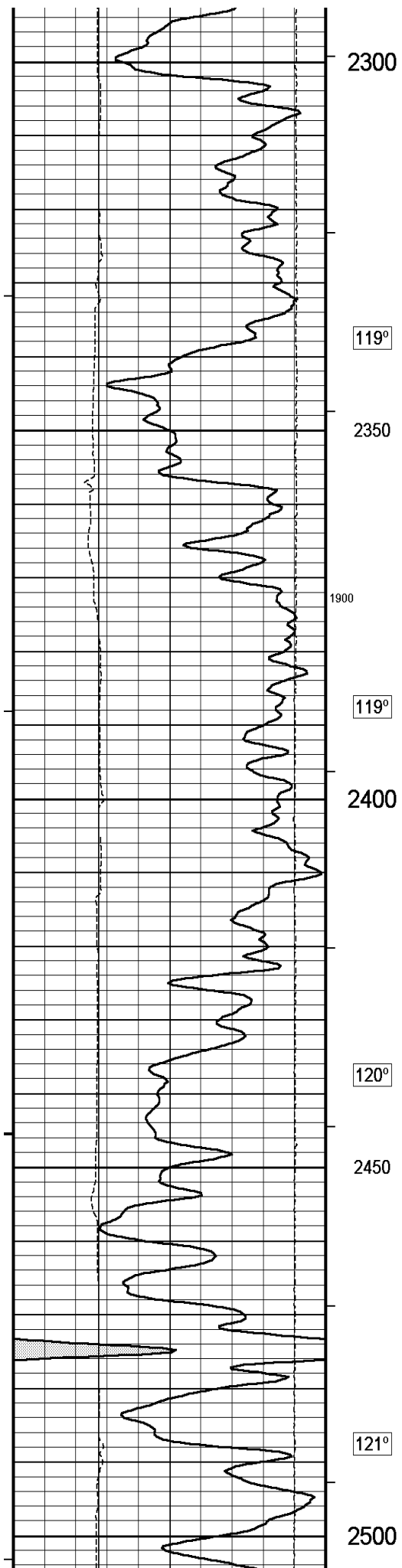


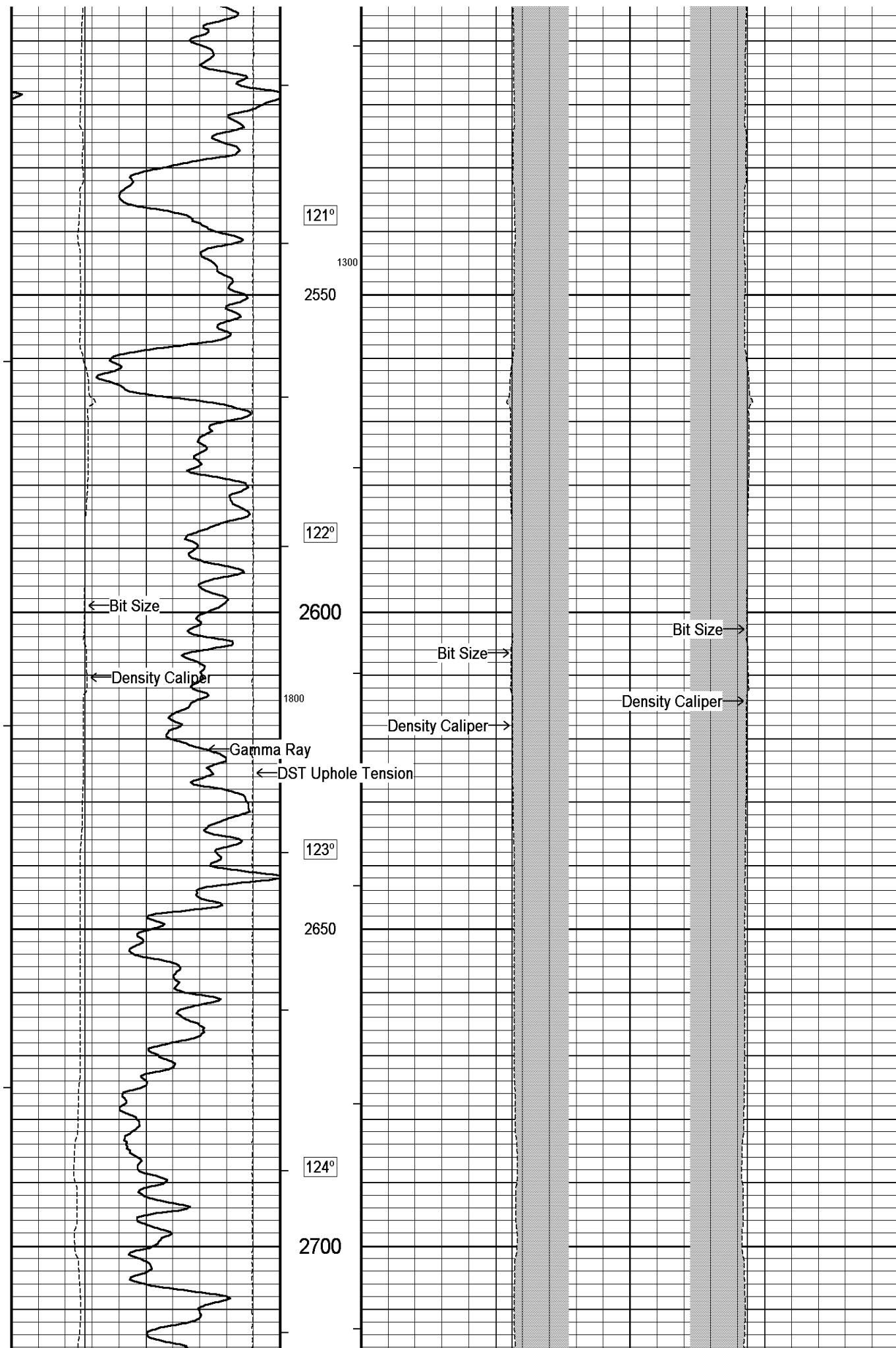


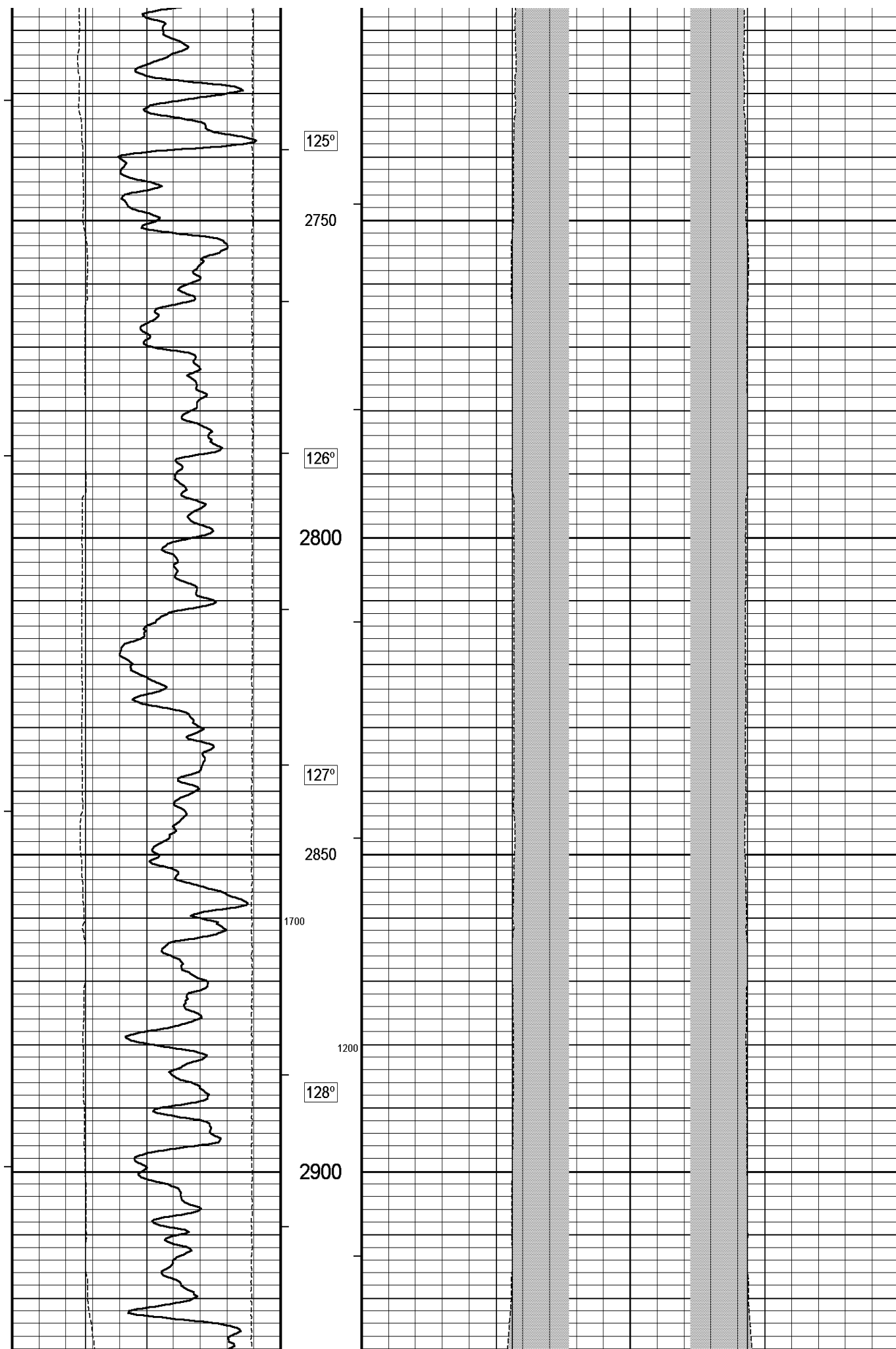


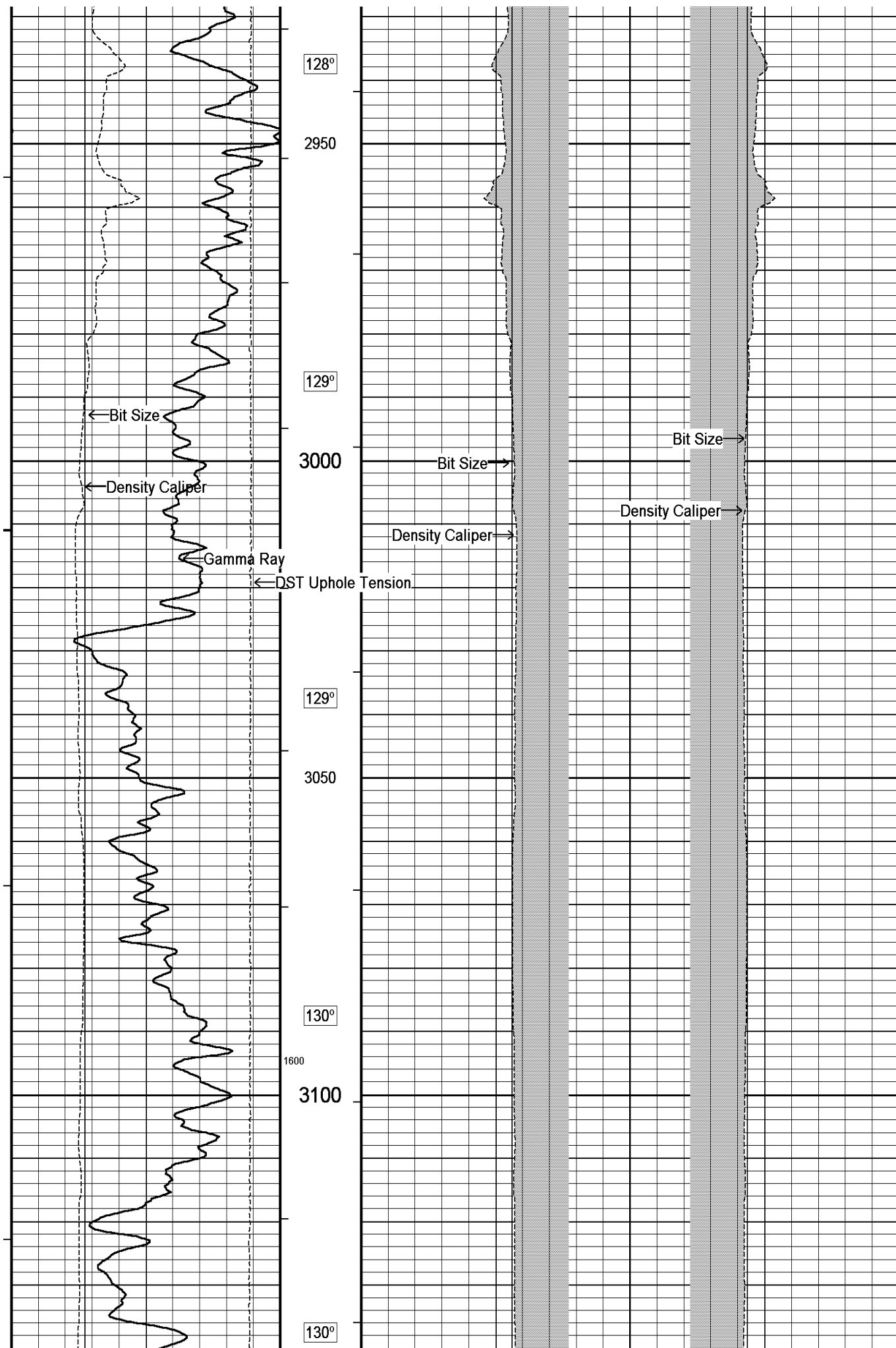


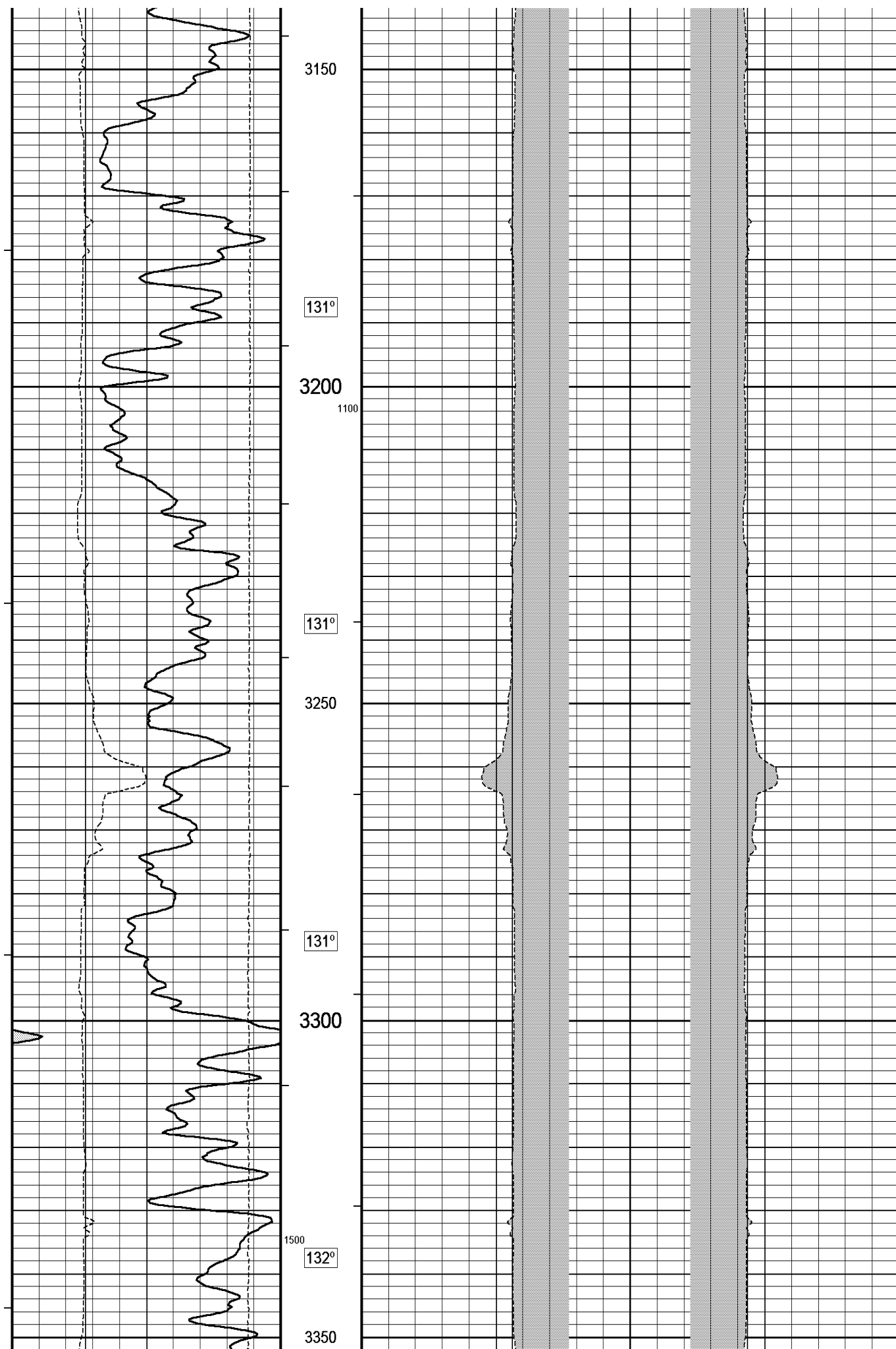


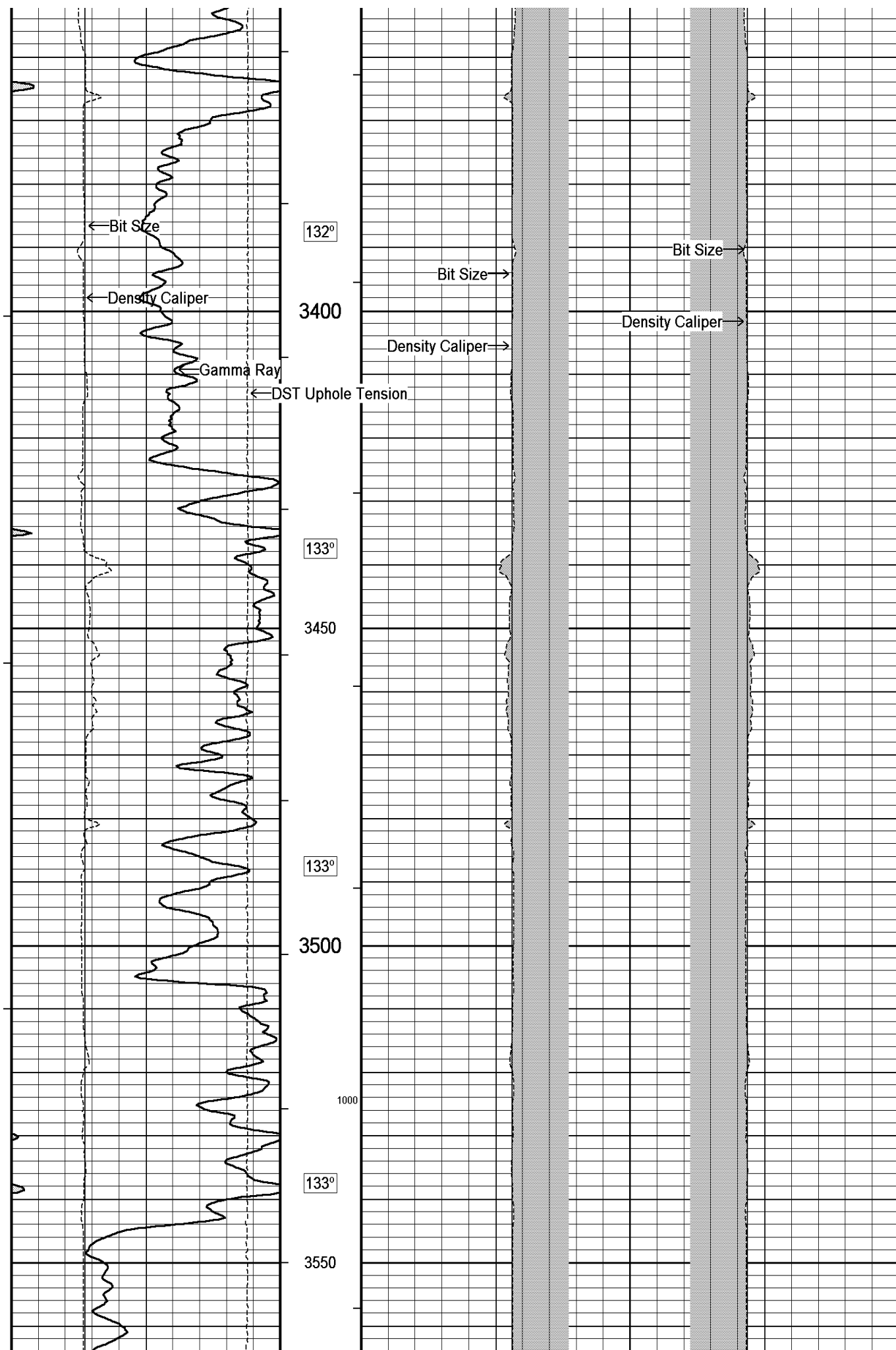


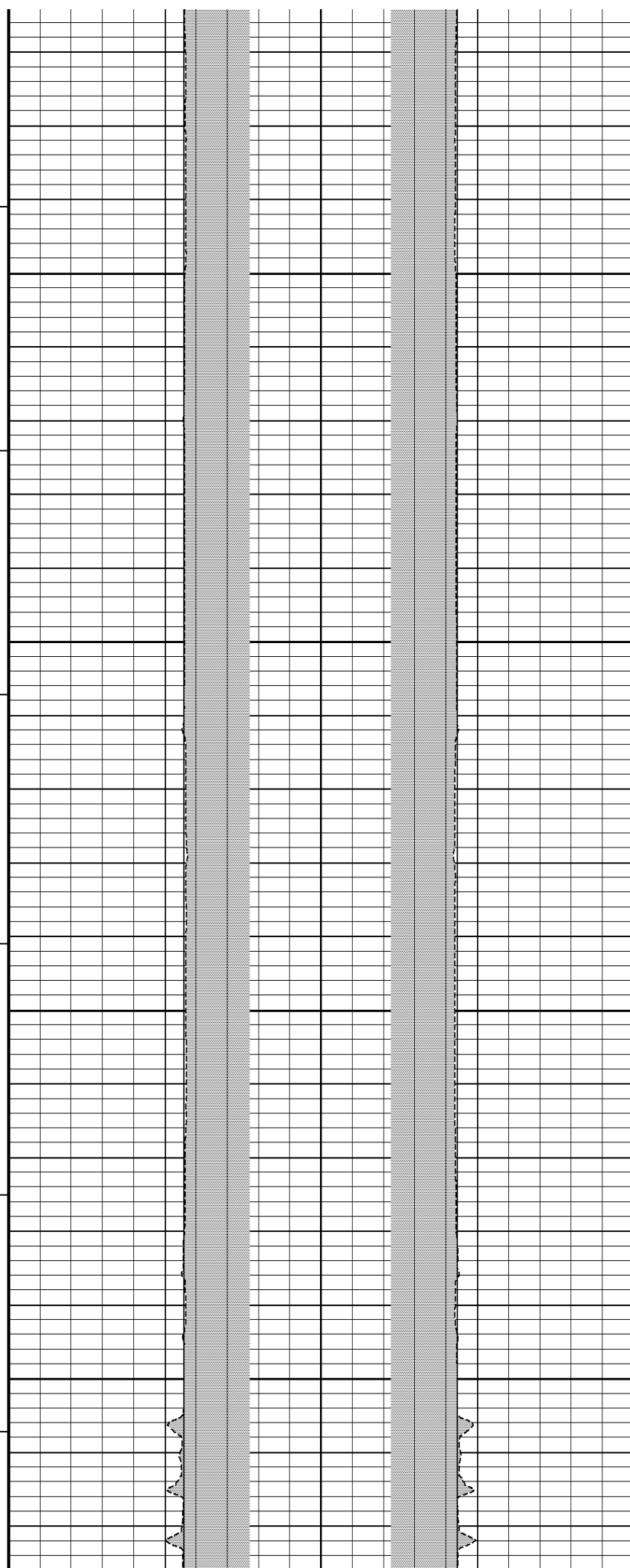
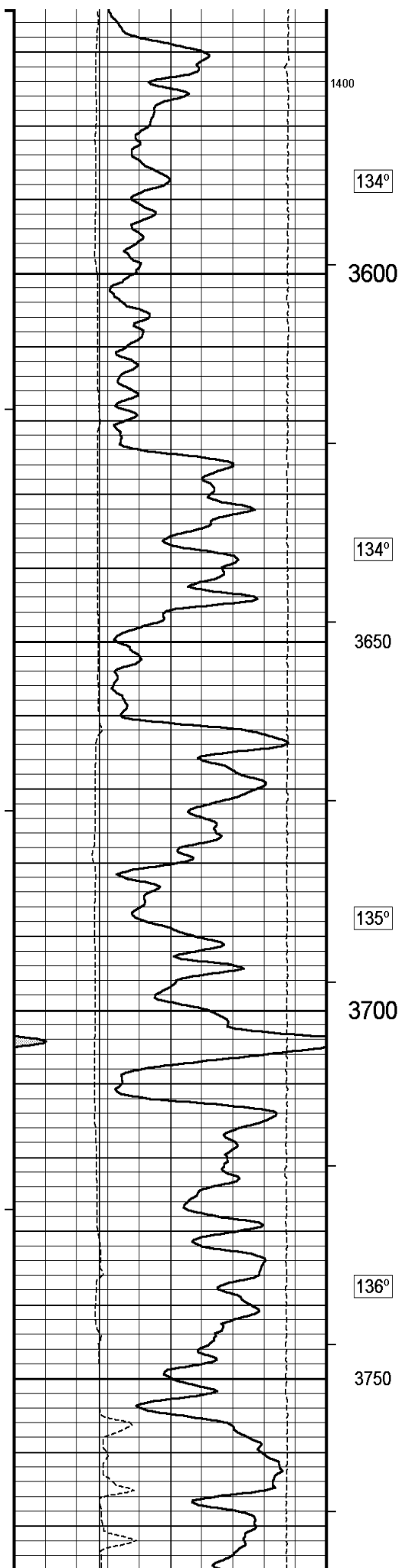




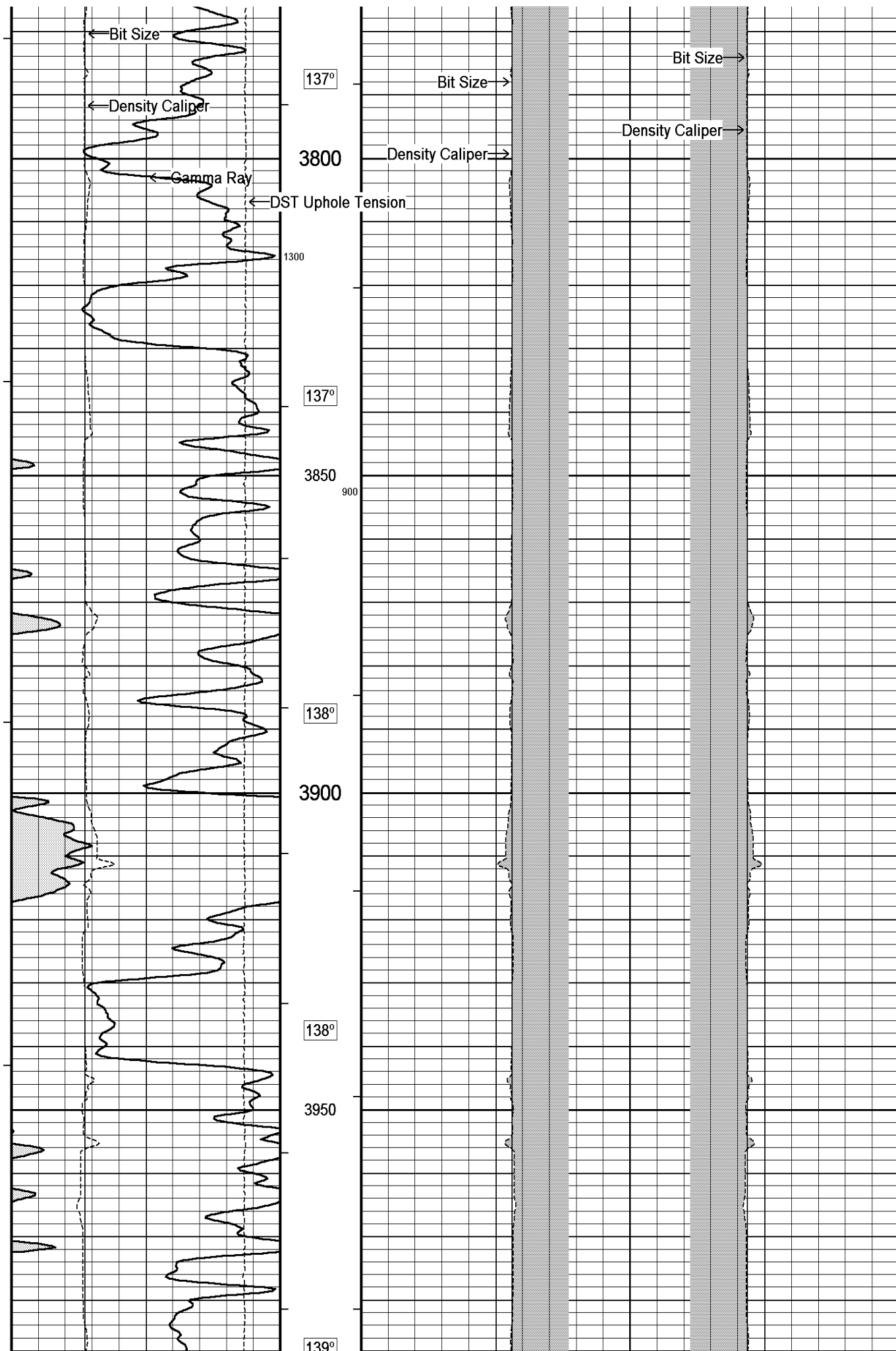


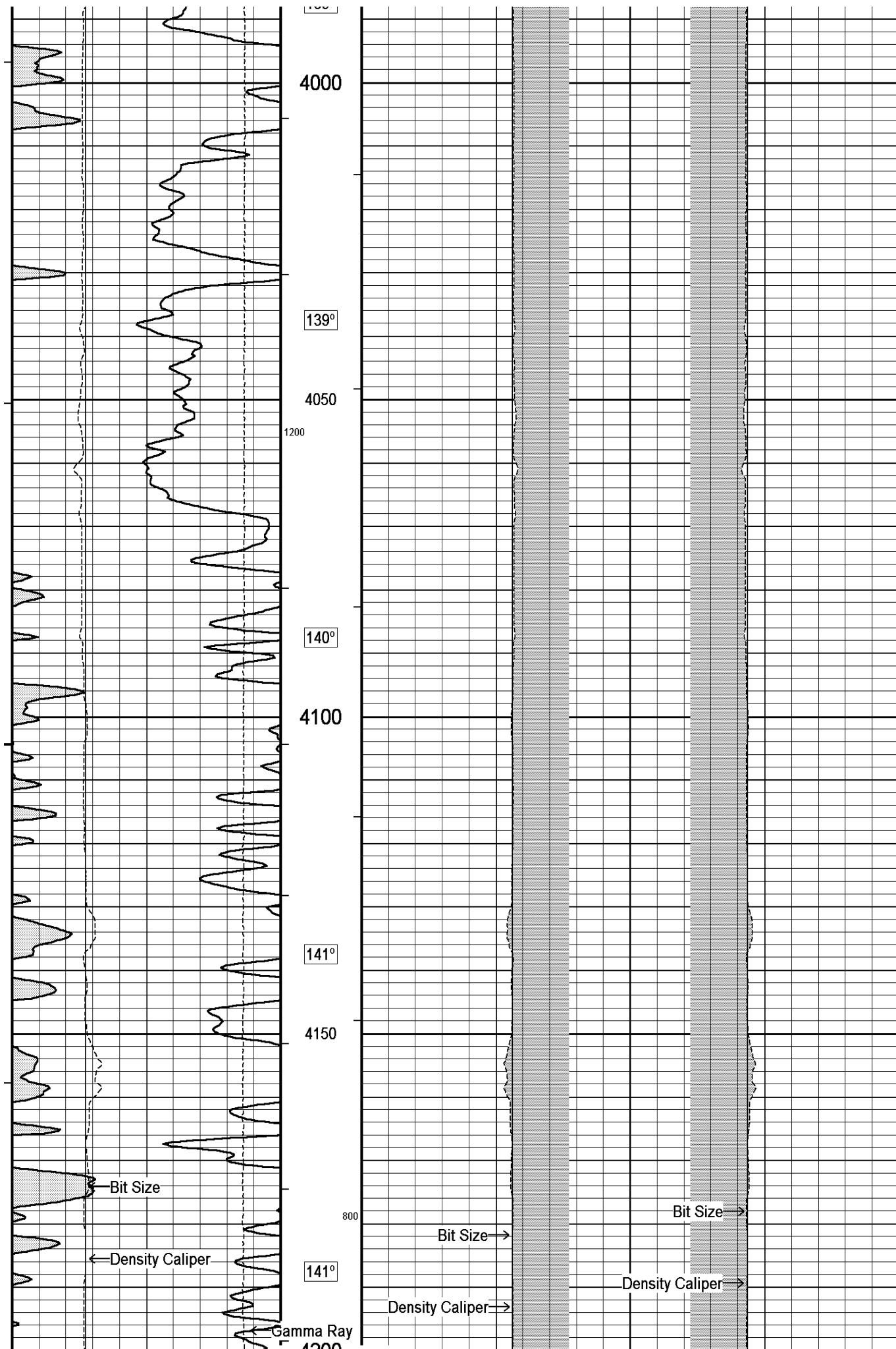


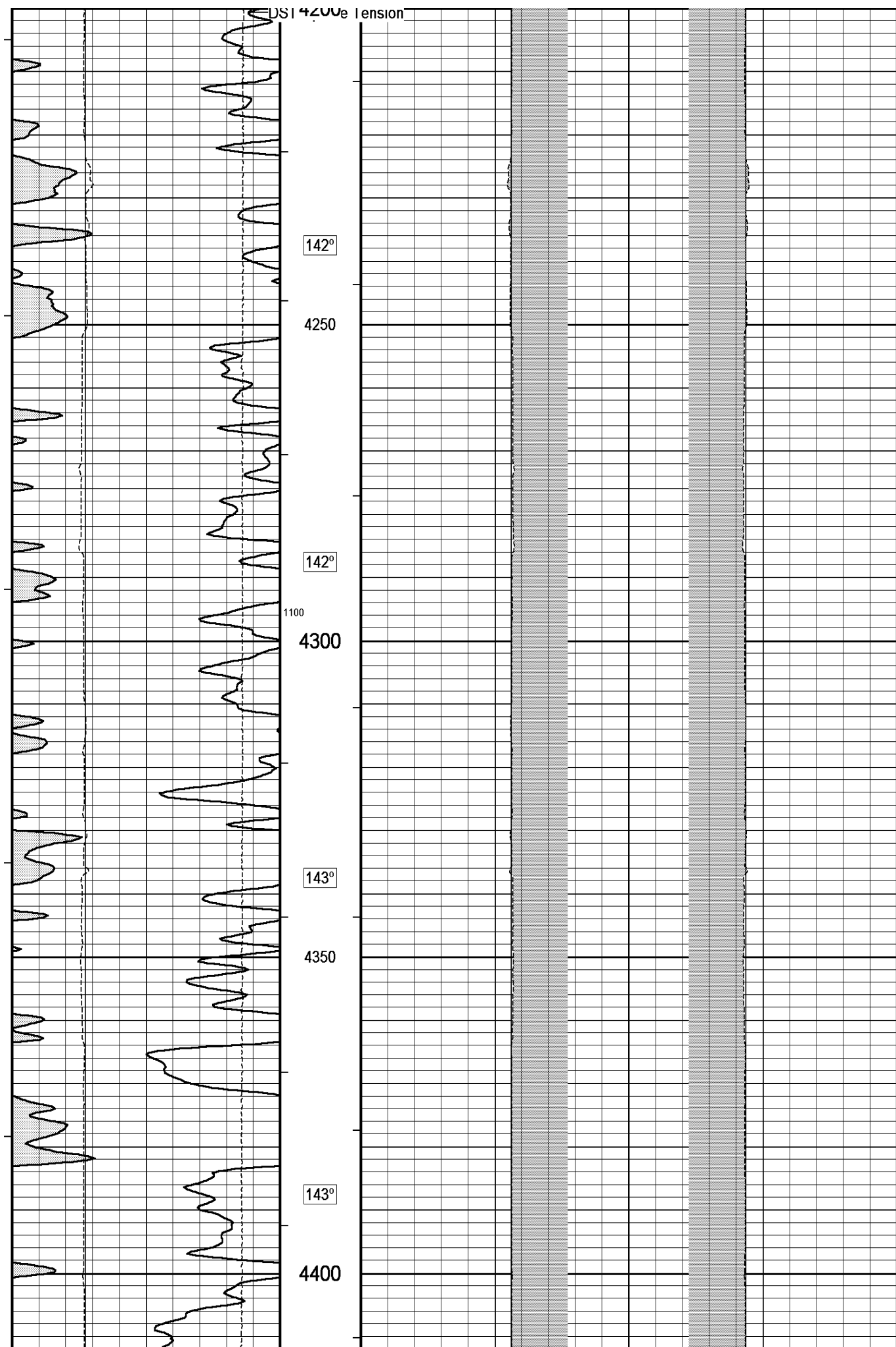


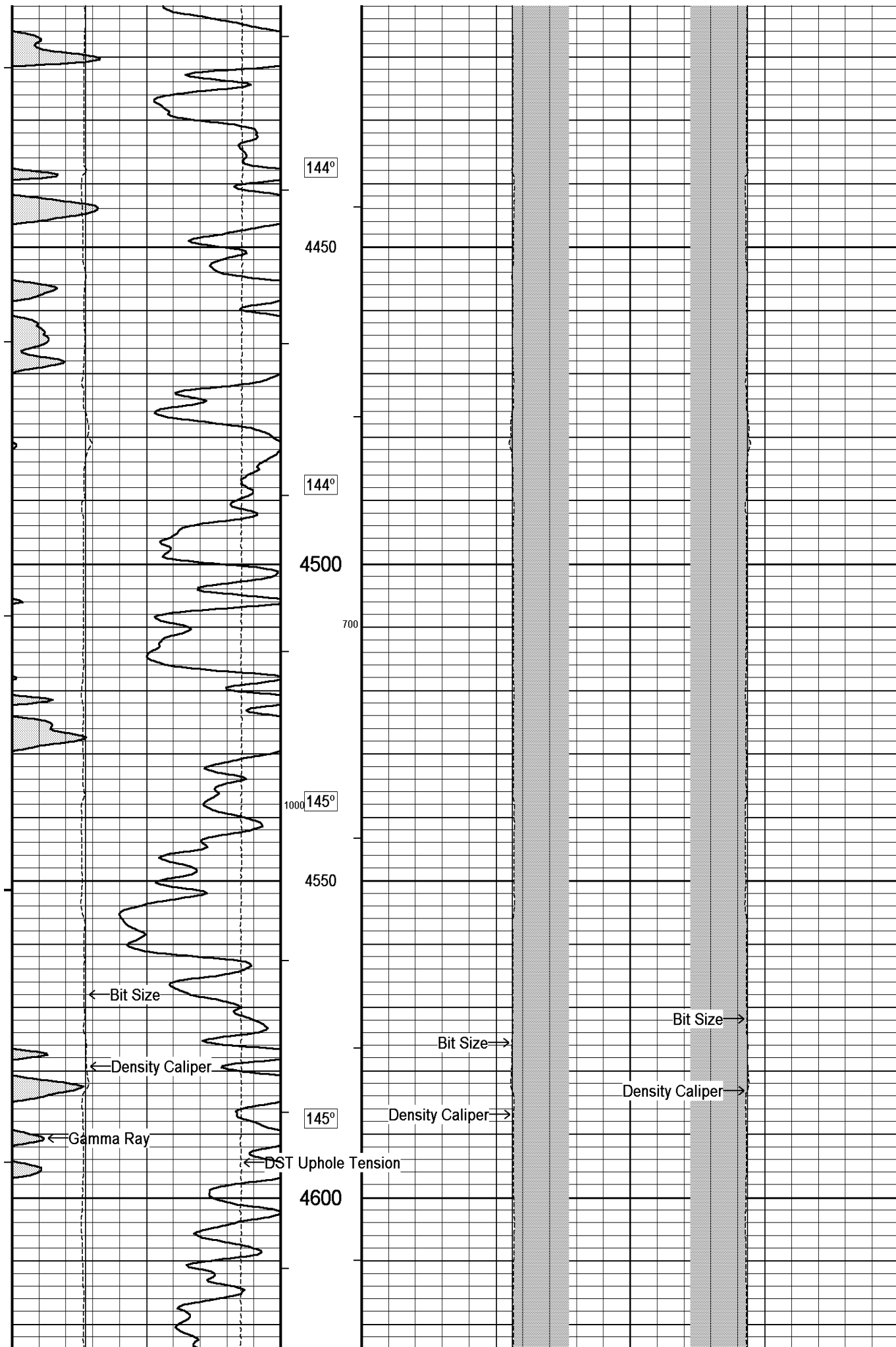


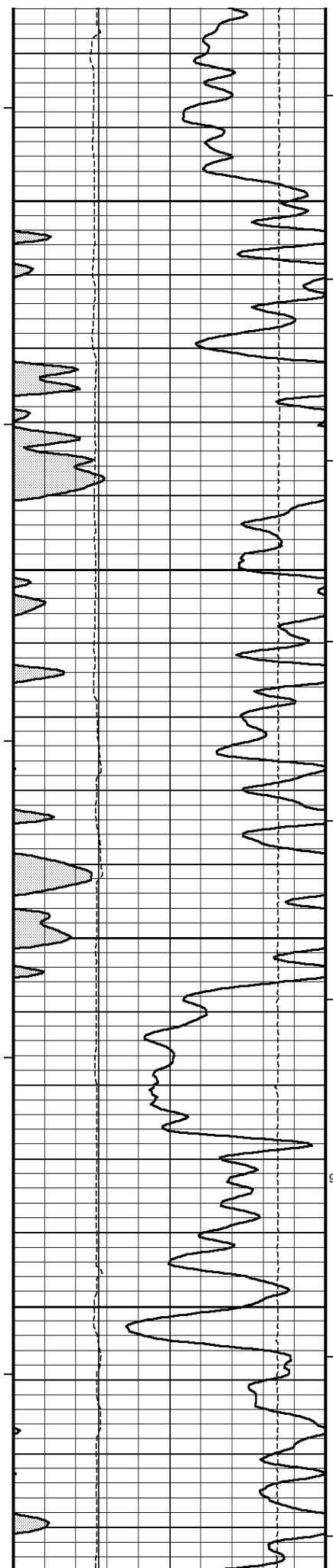












146°

4650

147°

4700

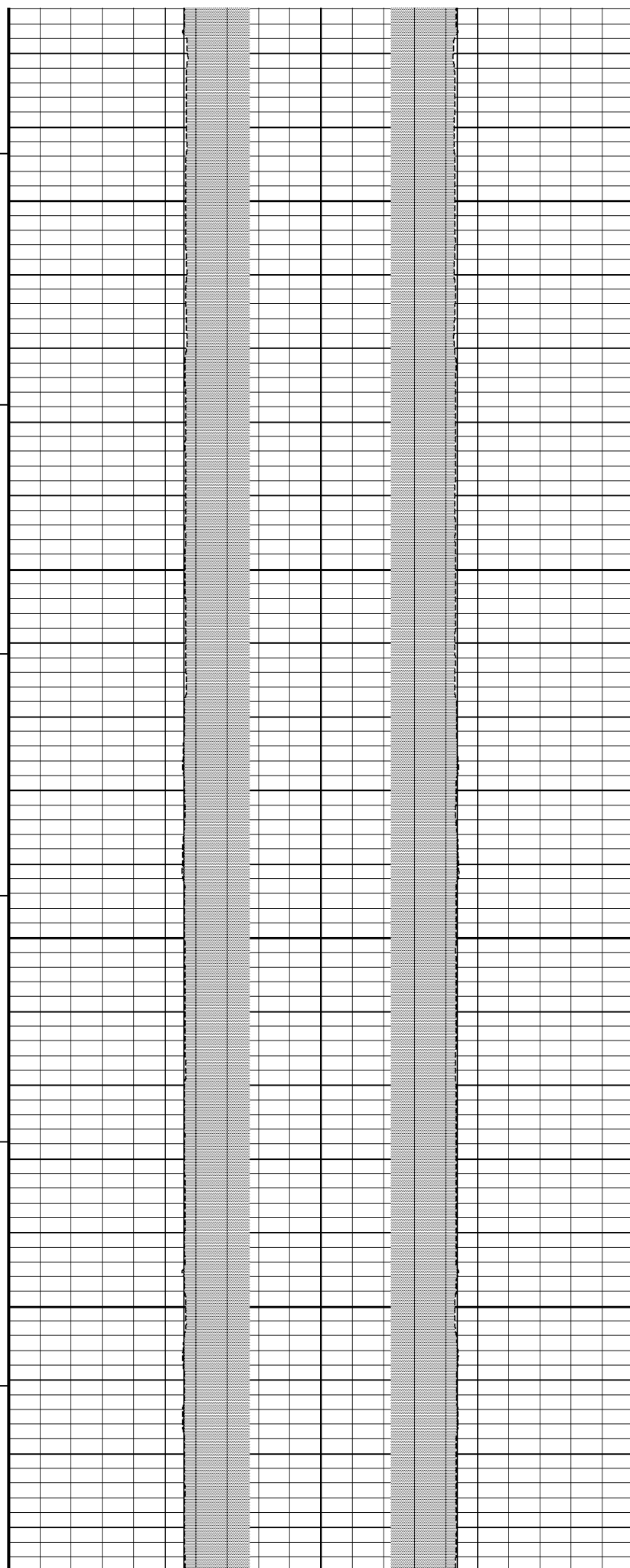
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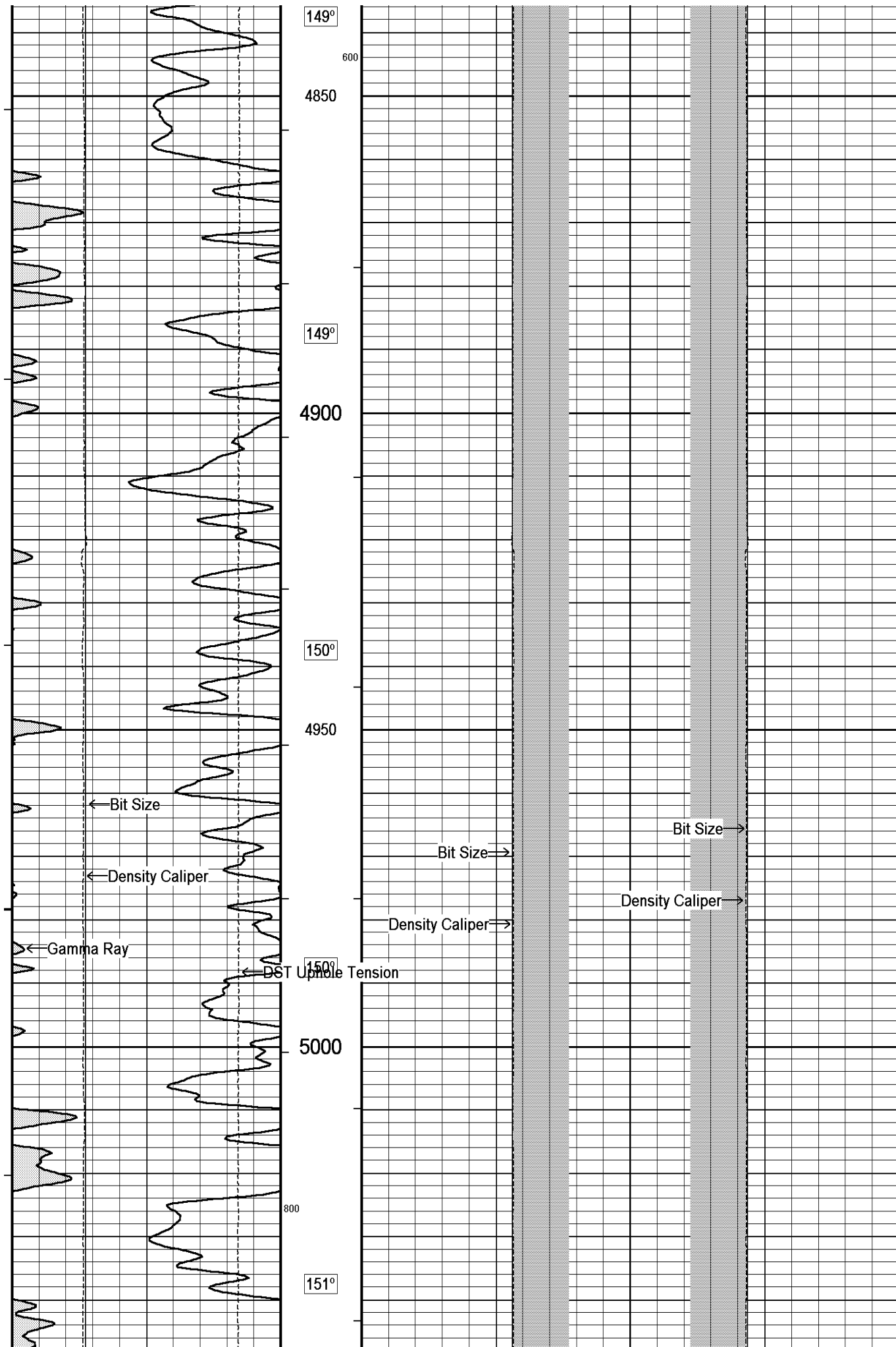
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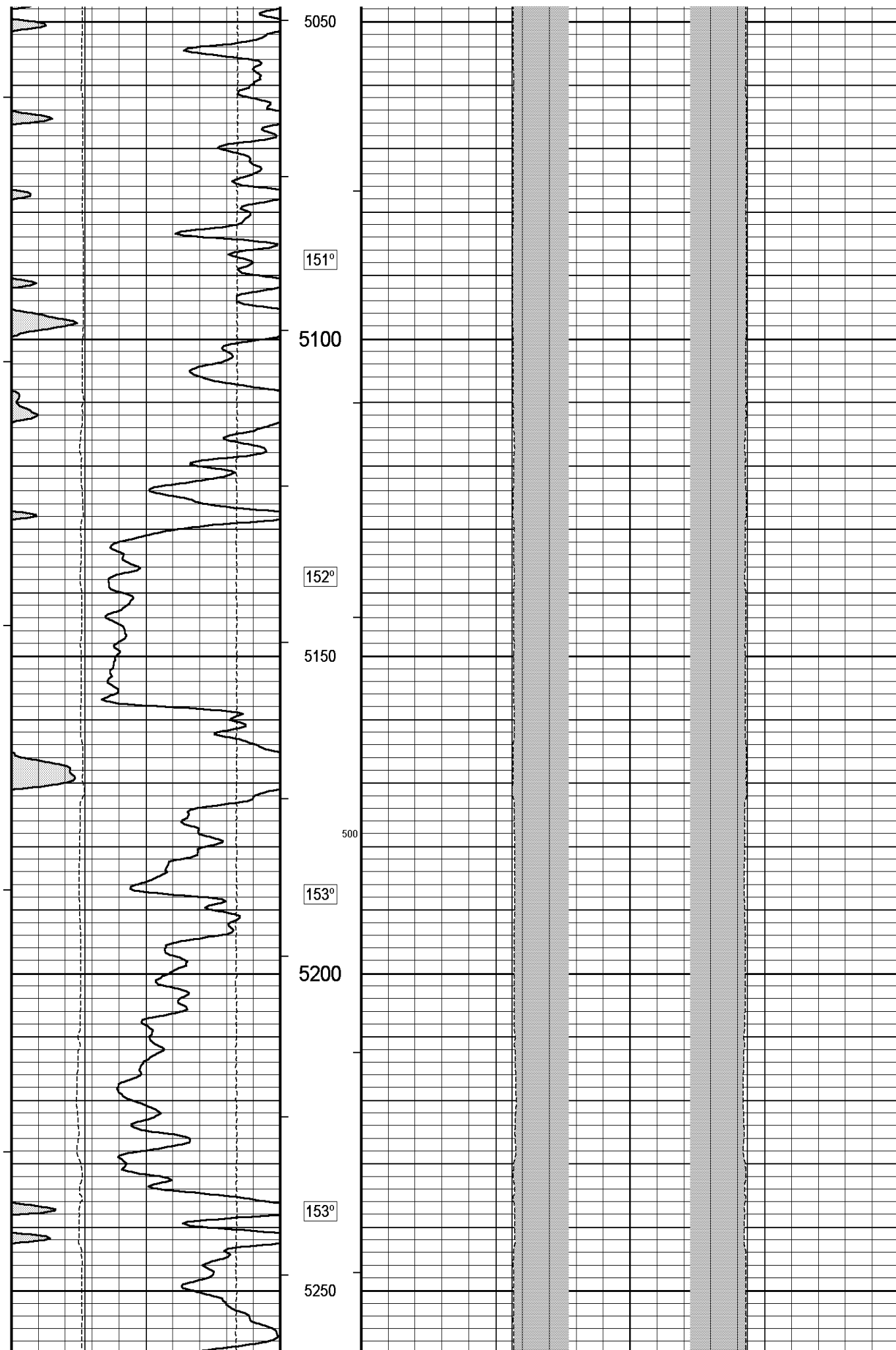
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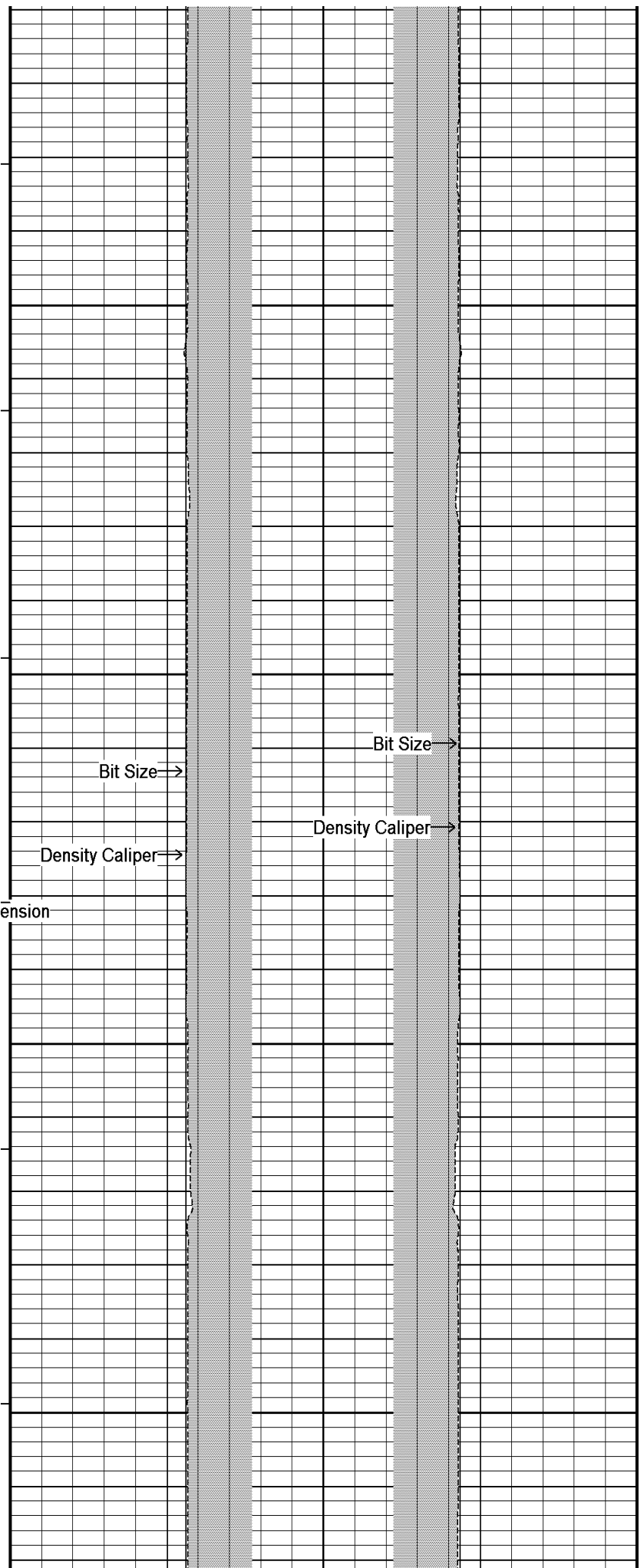
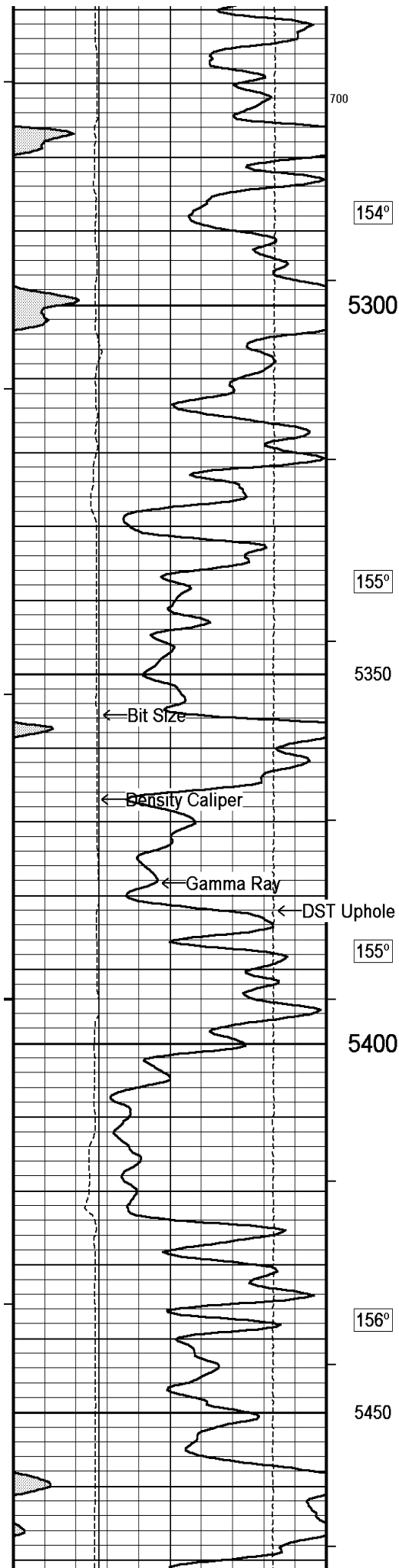
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4800

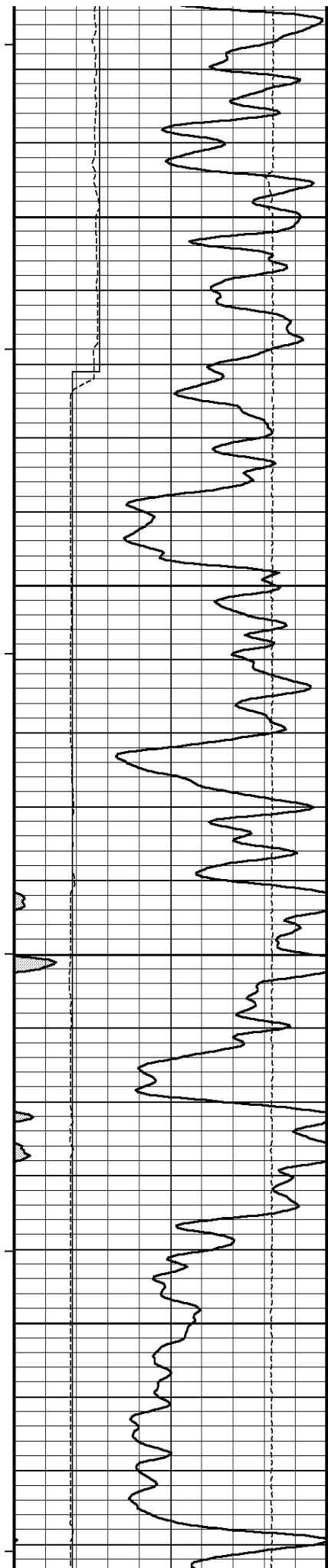












157°

5500

600

400

157°

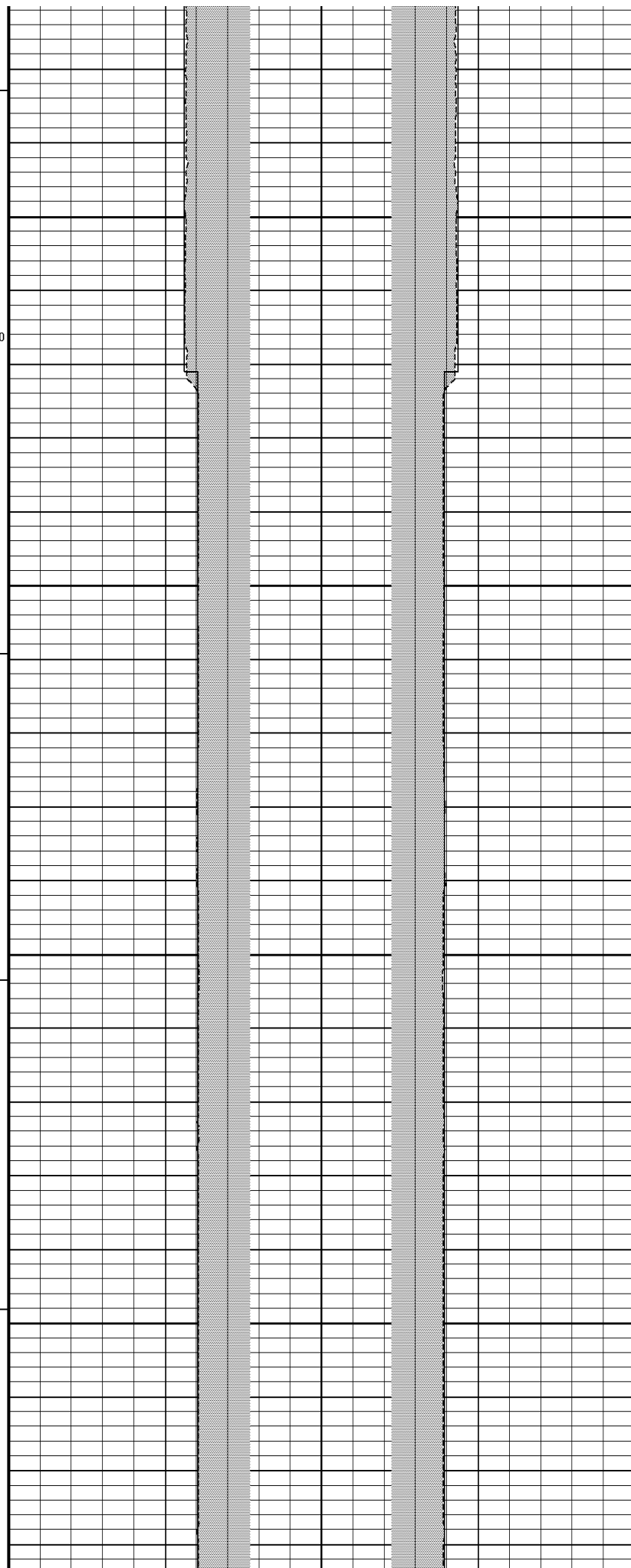
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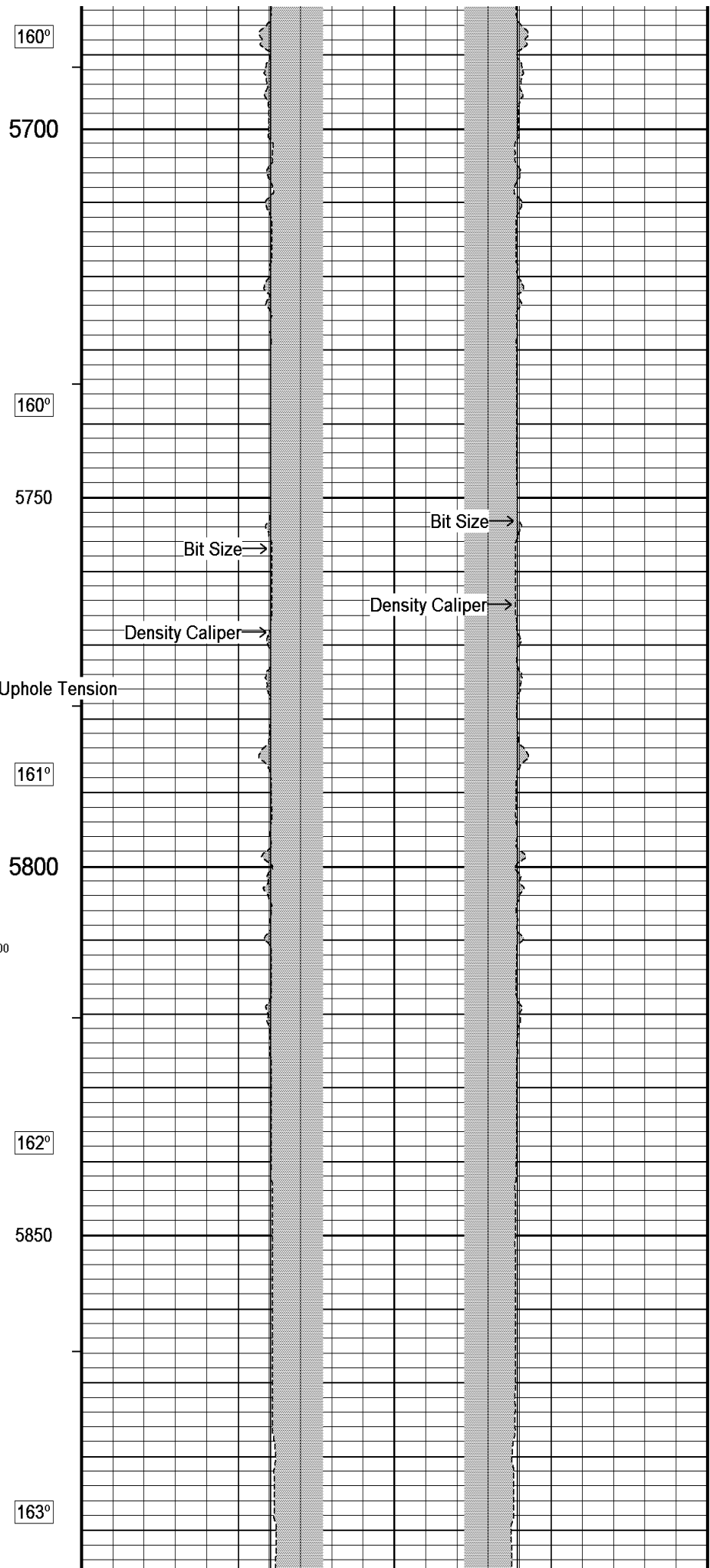
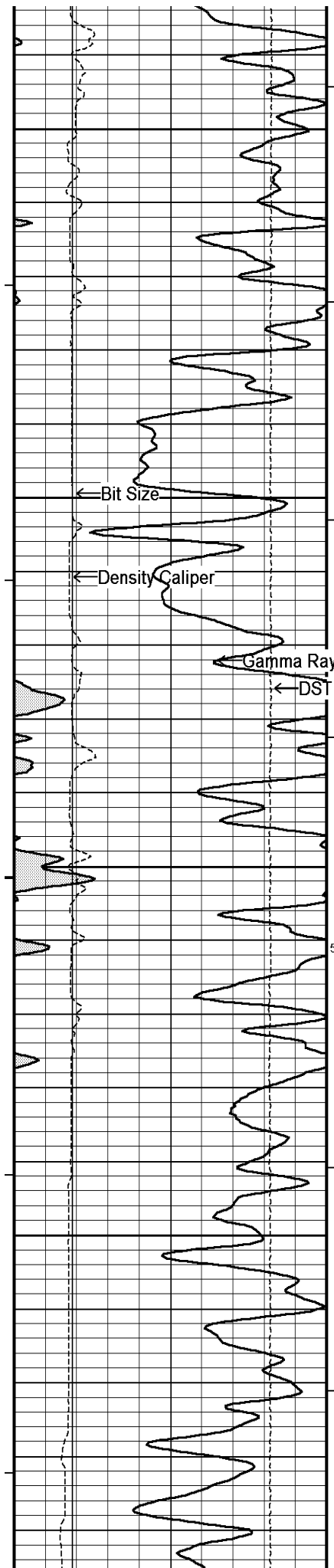
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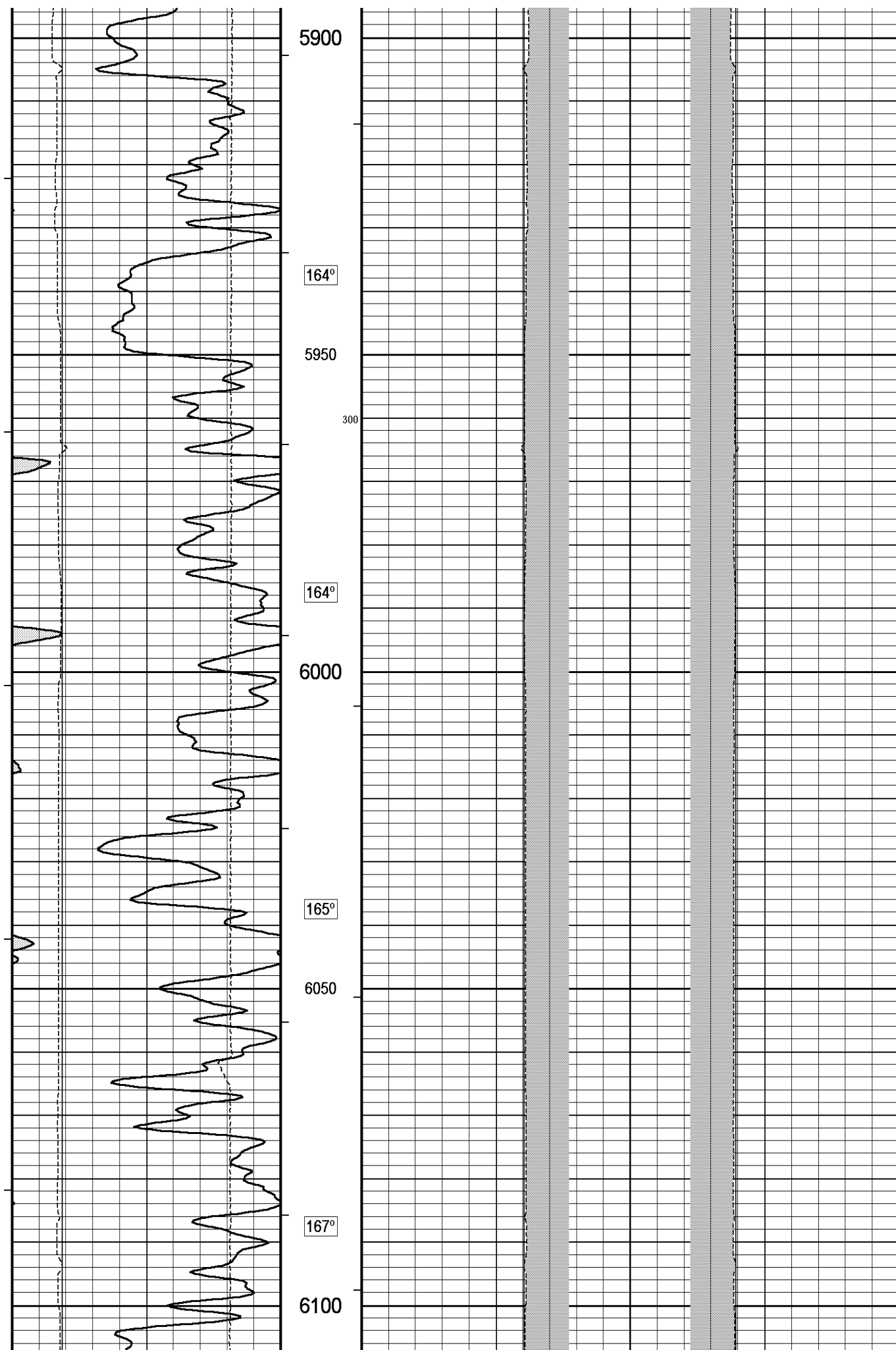
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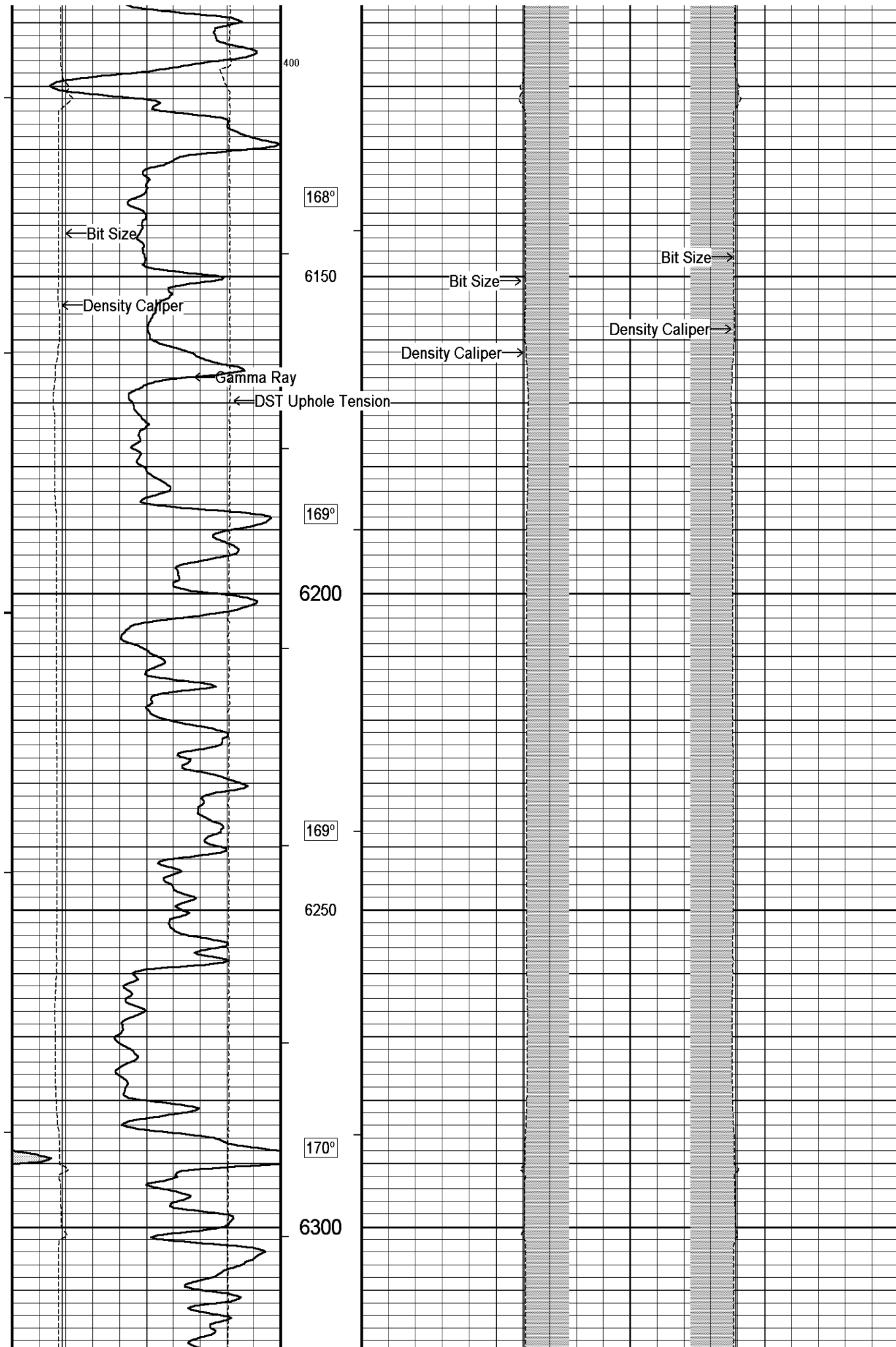
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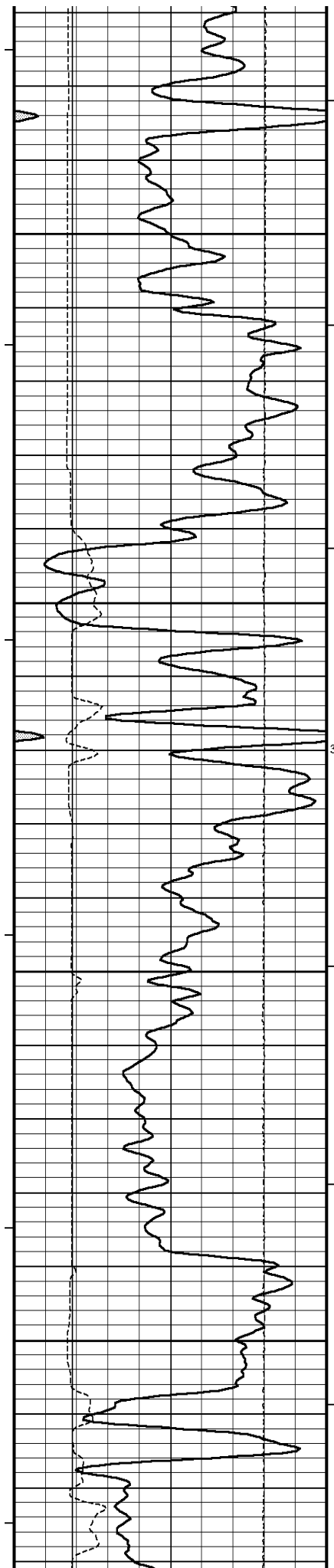
5650











171°

6350

172°

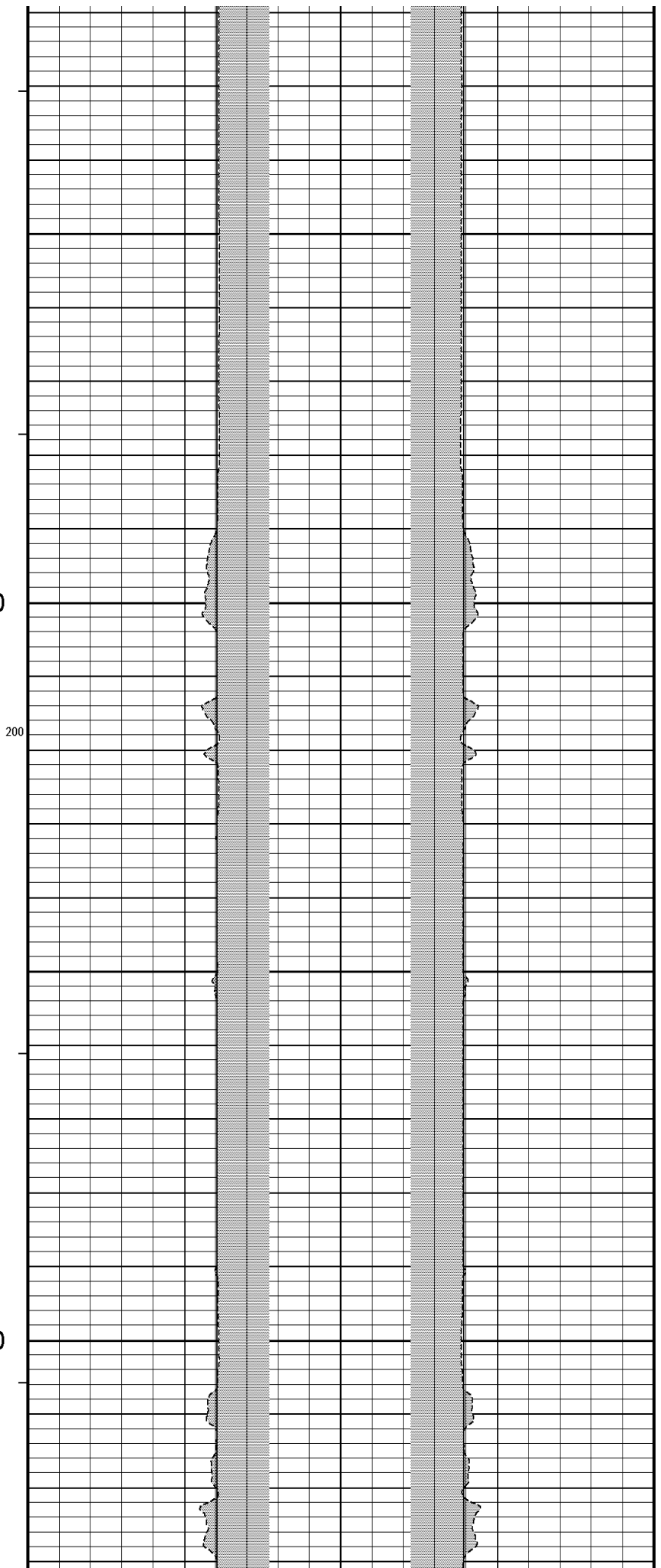
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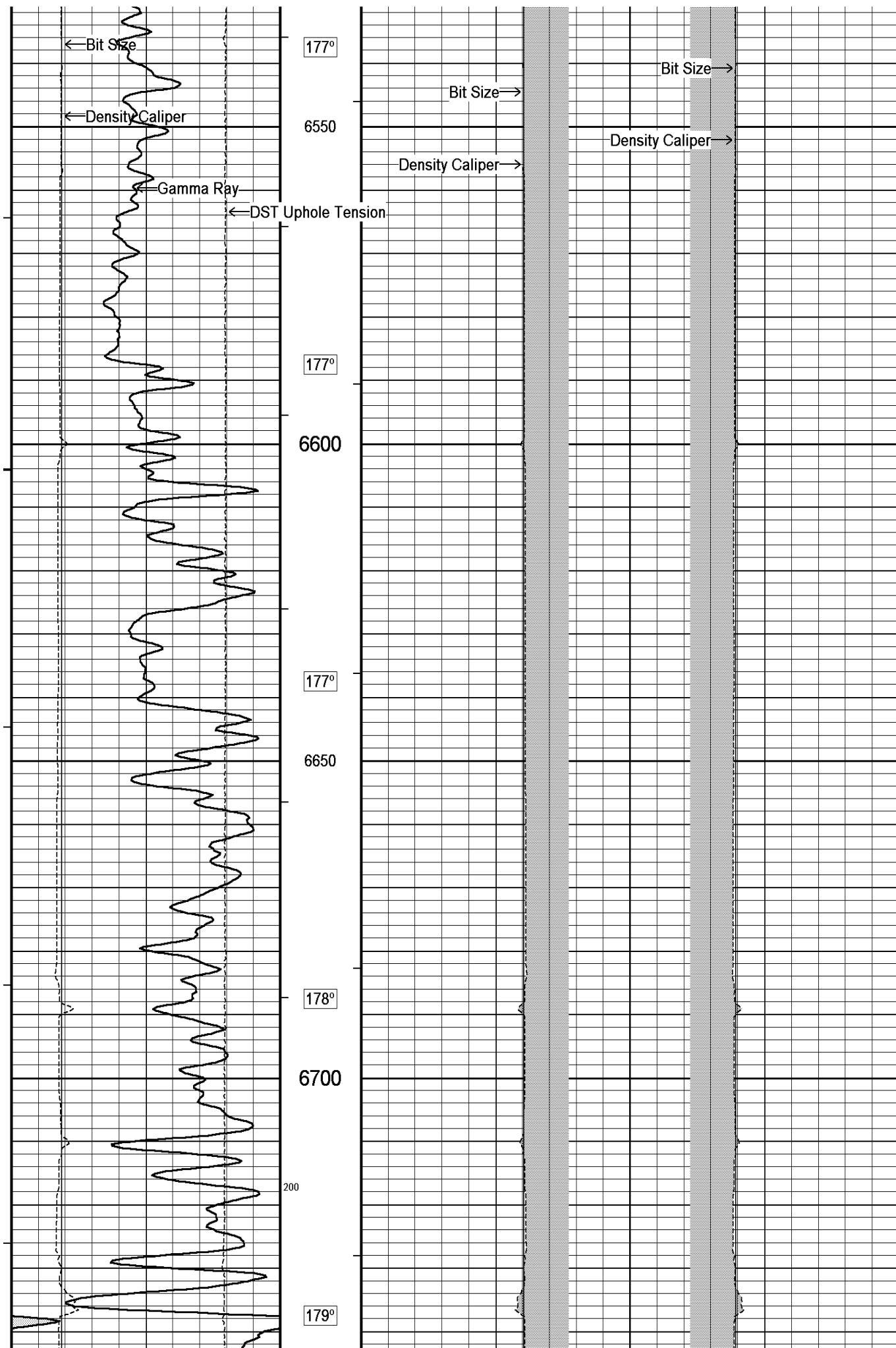
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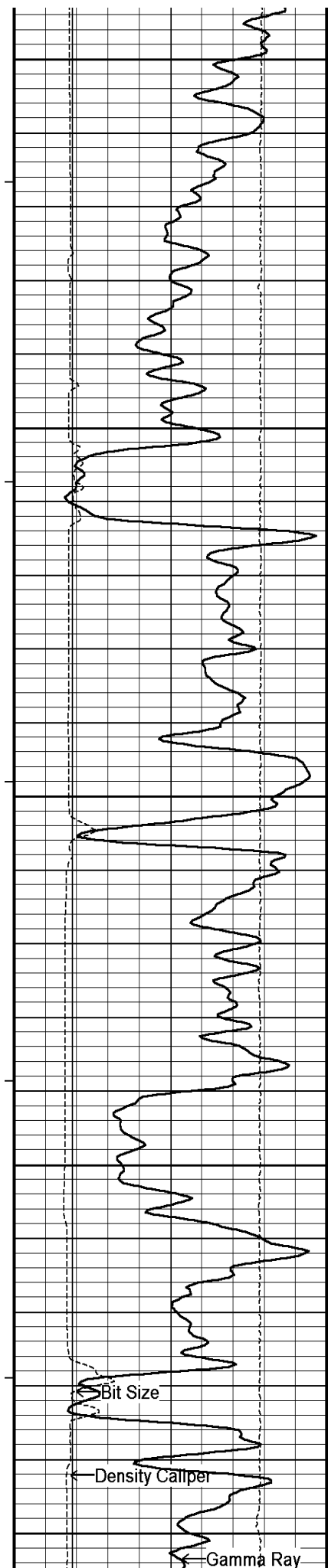
6450

175°

6500







6750

179°

6800

181°

6850

100

182°

6900

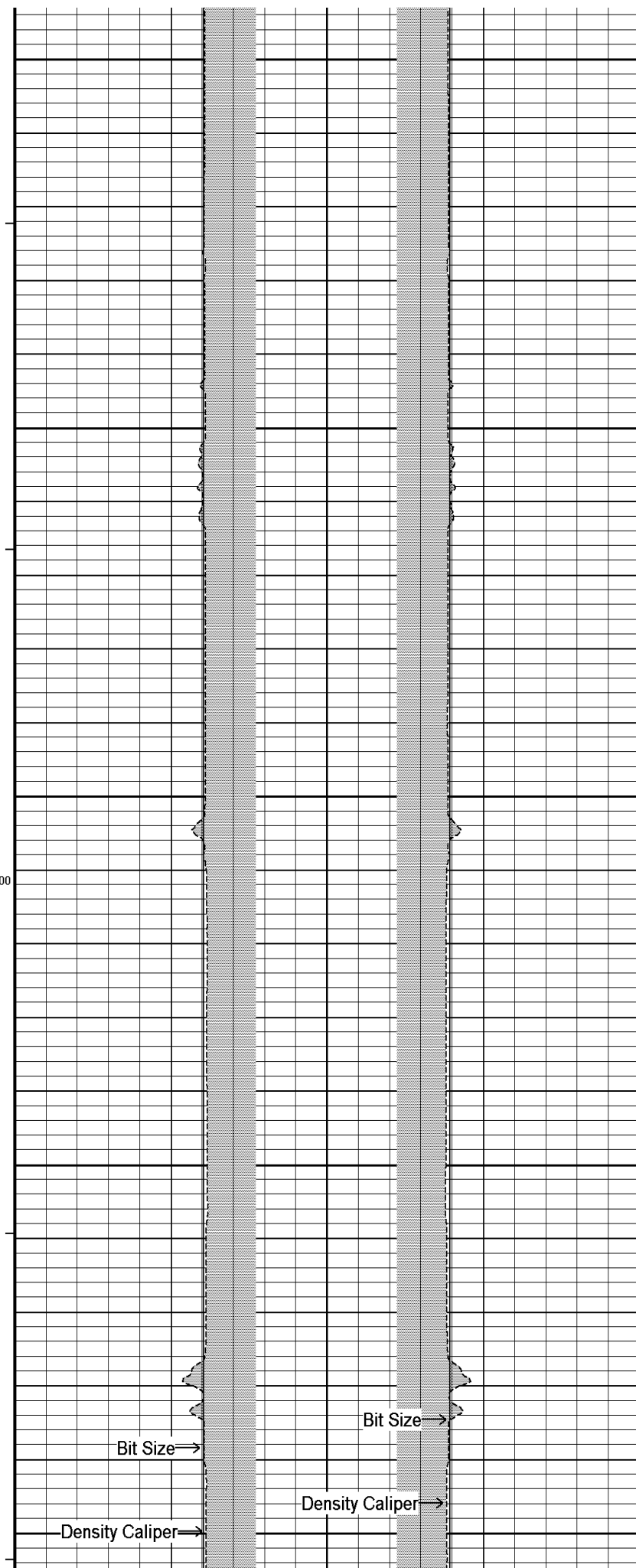
184°

6950

Bit Size

Density Caliper

Gamma Ray

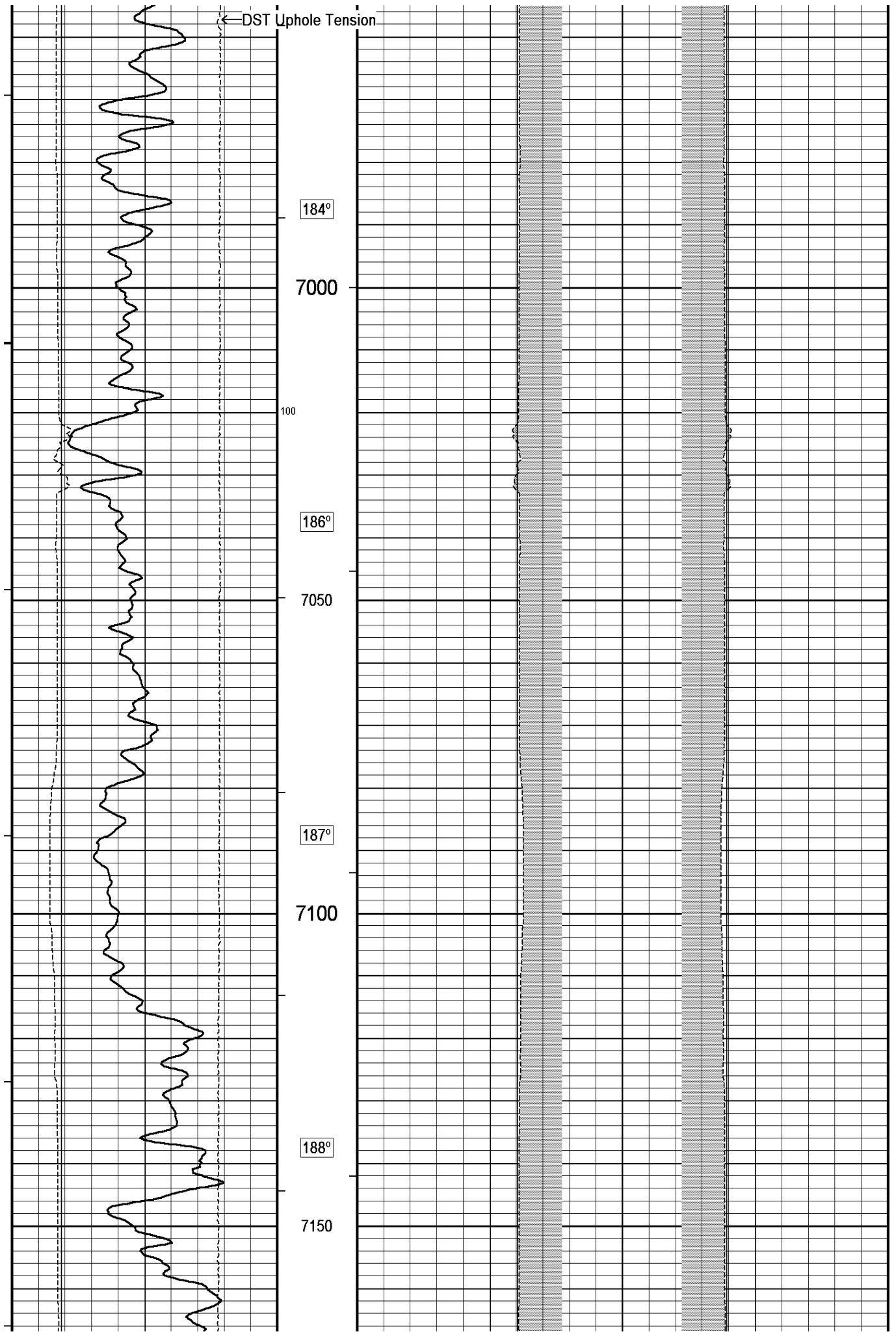


Bit Size

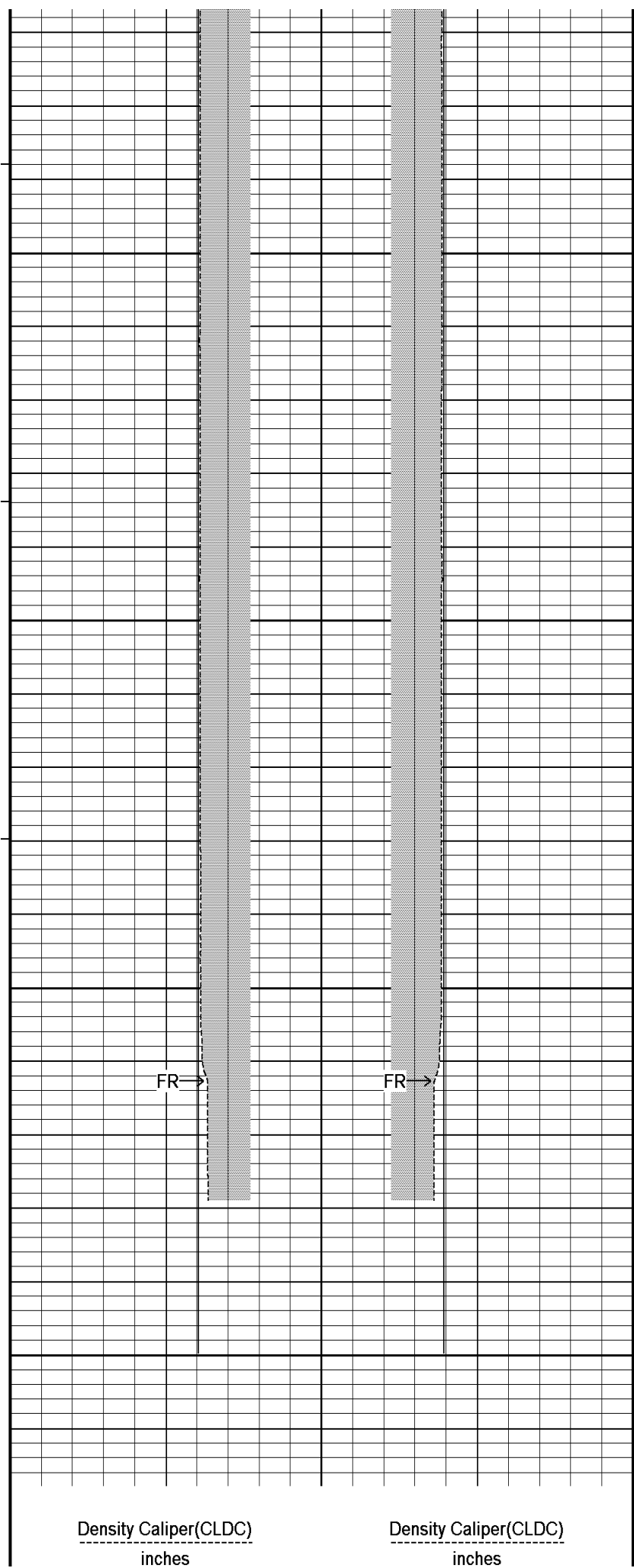
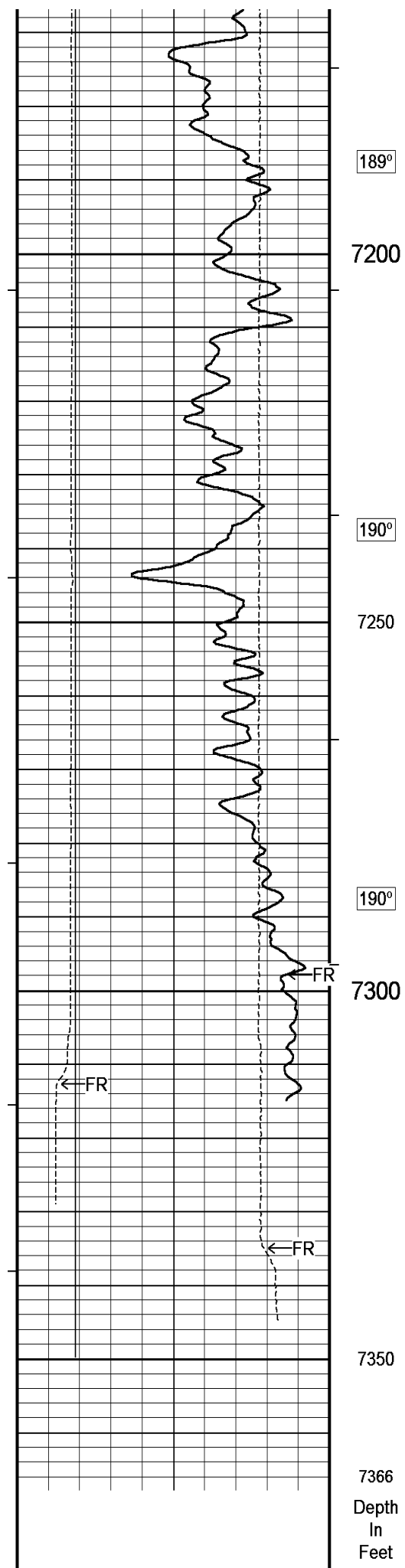
Density Caliper

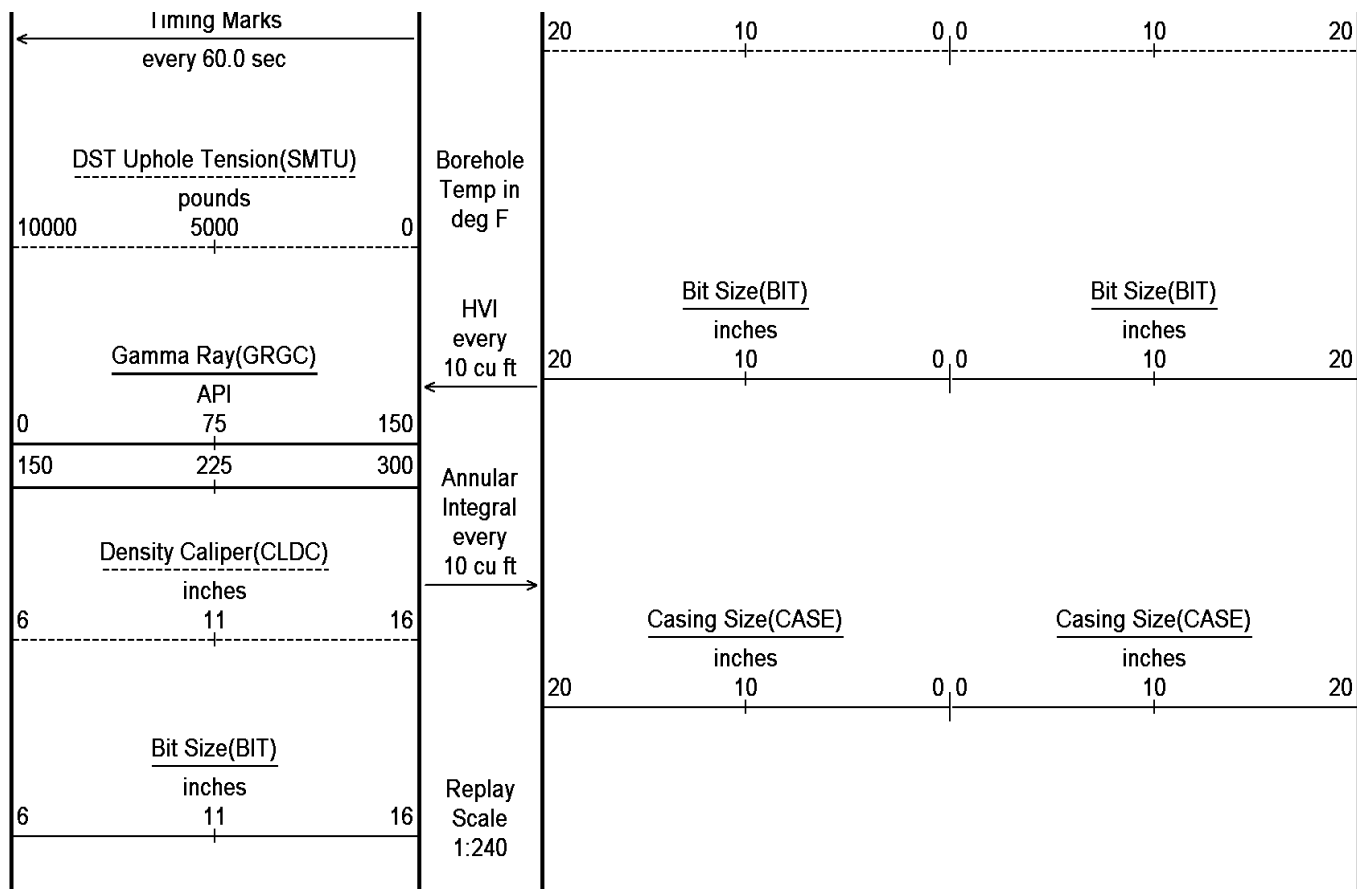
Bit Size

Density Caliper









Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 09-DEC-2010 04:41

Filename: C:\LOGS\Bill Barrett\GGU Miller 32C-23-691\MAIN2.dta

Recorded on 08-DEC-2010 22:46

System Versions: Logged with 10.08.1568 Processed with 10.08.1568 Plotted with 10.08.1568

↑ MAIN2 ↑

## DOWNHOLE EQUIPMENT

C:\LOGS\Bill Barrett\GGU Miller 32C-23-691\MAIN2.dta

MCB-A 11B Tension Cablehead

MCB 1 Length: 2.18 ft Weight: 19.8 lb

SHA-F Compact Swivel Head Adaptor

SHA 82 Length: 2.74 ft Weight: 26.5 lb

Compact Gamma

MCG 192 Length: 8.70 ft Weight: 63.9 lb

Compact Neutron

MDN 160 Length: 5.04 ft Weight: 50.7 lb

Compact Density/Caliper

MPD 167 Length: 9.59 ft Weight: 90.4 lb

SKJ-E.A Compact Knuckle Joint

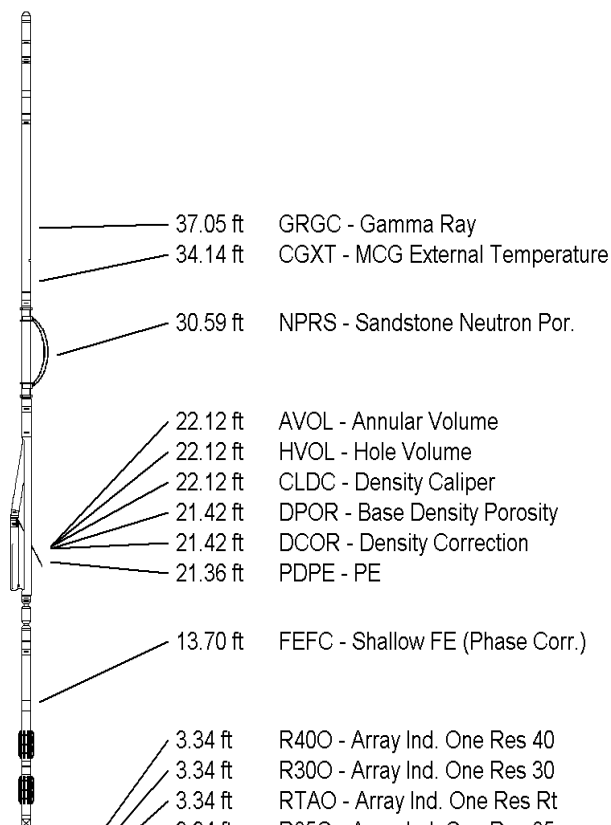
SKJ 114 Length: 2.17 ft Weight: 24.3 lb

Compact Focussed Electric

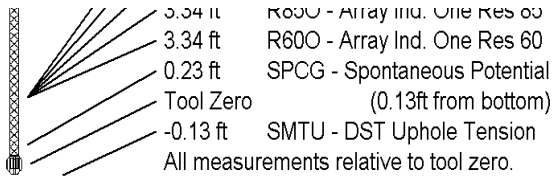
MFE 85 Length: 6.03 ft Weight: 48.5 lb

Compact Induction

MAI 213 Length: 10.81 ft Weight: 48.5 lb



Total Length: 47.25 ft Weight: 372.6 lb



COMPANY	BILL BARRETT CORPORATION
WELL	GGU MILLER 23C-32-691
FIELD	GIBSON GULCH
PROVINCE/COUNTY	GARFIELD
COUNTRY/STATE	U.S.A. / COLORADO

Elevation Kelly Bushing	6144.00	feet	First Reading	7311.00
Elevation Drill Floor	6143.00	feet	Depth Driller	7333.00 feet
Elevation Ground Level	6121.00	feet	Depth Logger	7335.00 feet



**Weatherford®**

HOLE VOLUME  
CALIPER LOG