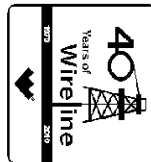


**Weatherford****HOLE VOLUME  
CALIPER LOG**

COMPANY **BILL BARRETT CORPORATION**  
WELL **KAUFMAN 23A-24-692**  
FIELD **MAMM CREEK**  
PROVINCE/COUNTY **GARFIELD**  
COUNTRY/STATE **U.S.A. / COLORADO**  
LOCATION **SHL: 1769' FSL & 2420' FEL**  
**BHL: 1469' FSL & 1970' FWL**



SEC 24 TWP 6S RGE 92W  
API Number 05-045-19651  
Permit Number  
Other Services  
MPD/MDN  
MAI/MFE

Permanent Datum Ground Level, Elevation 5843 feet  
Log Measured From KB  
Drilling Measured From KB @ 23 FT.  
Elevations:  
KB 5866.00  
DF  
GL 5843.00

Date	15-AUG-2011	
Run Number	ONE	
Depth Driller	7657.00	feet
Depth Logger	7658.00	feet
First Reading	7637.00	
Last Reading	810.00	
Casing Driller	835.00	feet
Casing Logger	839.00	feet
Bit Size	7.875	inches
Hole Fluid Type	LSND	
Density / Viscosity	10.50 lb/USg	55.00 CP
PH / Fluid Loss	9.80	4.20 ml/30Min
Sample Source	FLOW LINE	
Rm @ Measured Temp	1.92 @104.6	ohm-m
Rmf @ Measured Temp	1.46 @104.6	ohm-m
Rmc @ Measured Temp	2.69 @104.6	ohm-m
Source Rmf / Rmc	CALC	CALC
Rm @ BHT	1.07 @191.0	ohm-m
Time Since Circulation	5 HOURS	
Max Recorded Temp	191.00	deg F
Equipment Name	COMPACT	
Equipment / Base	13045	GD JCT
Recorded By	N. TAYLOR	
Witnessed By	C. CROW	

**BOREHOLE RECORD**

Last Edited: 15-AUG-2011 14:23

Bit Size inches	Depth From feet	Depth To feet
8.750	835.00	5689.00
7.875	5689.00	7657.00

**CASING RECORD**

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	9.625	0.00	835.00	36.00

**REMARKS**

LOGGING SOFTWARE USED: 11.03.4044

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

HARDWARE: MPD: 8 INCH PROFILE PLATE USED.  
TWO 0.5 INCH STANDOFFS USED ON INDUCTION.  
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.

3 REPEAT SECTIONS PULLED FOR NEUTRON/DENSITY. SECOND OVERLAY SHOWN FOR SECTION BETWEEN 7460-7490'.

CALIPER CHECK IN CASING PRESENTED, REFERENCE I.D. = 8.95" (9 5/8", 36 LB/FT CASING).

8.75 INCH BIT CHANGE AT 5689 FT.

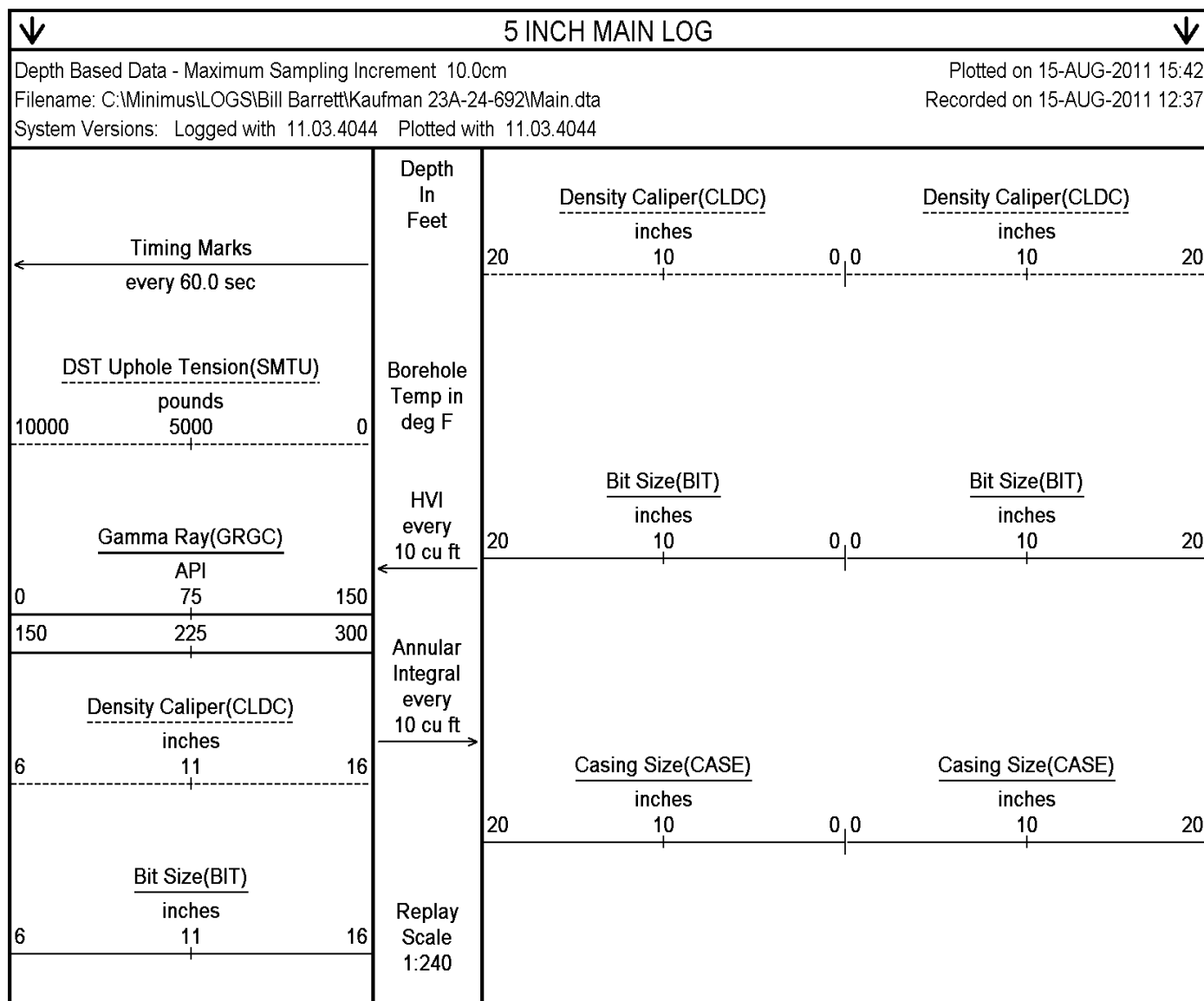
TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 2820 CU.FT.

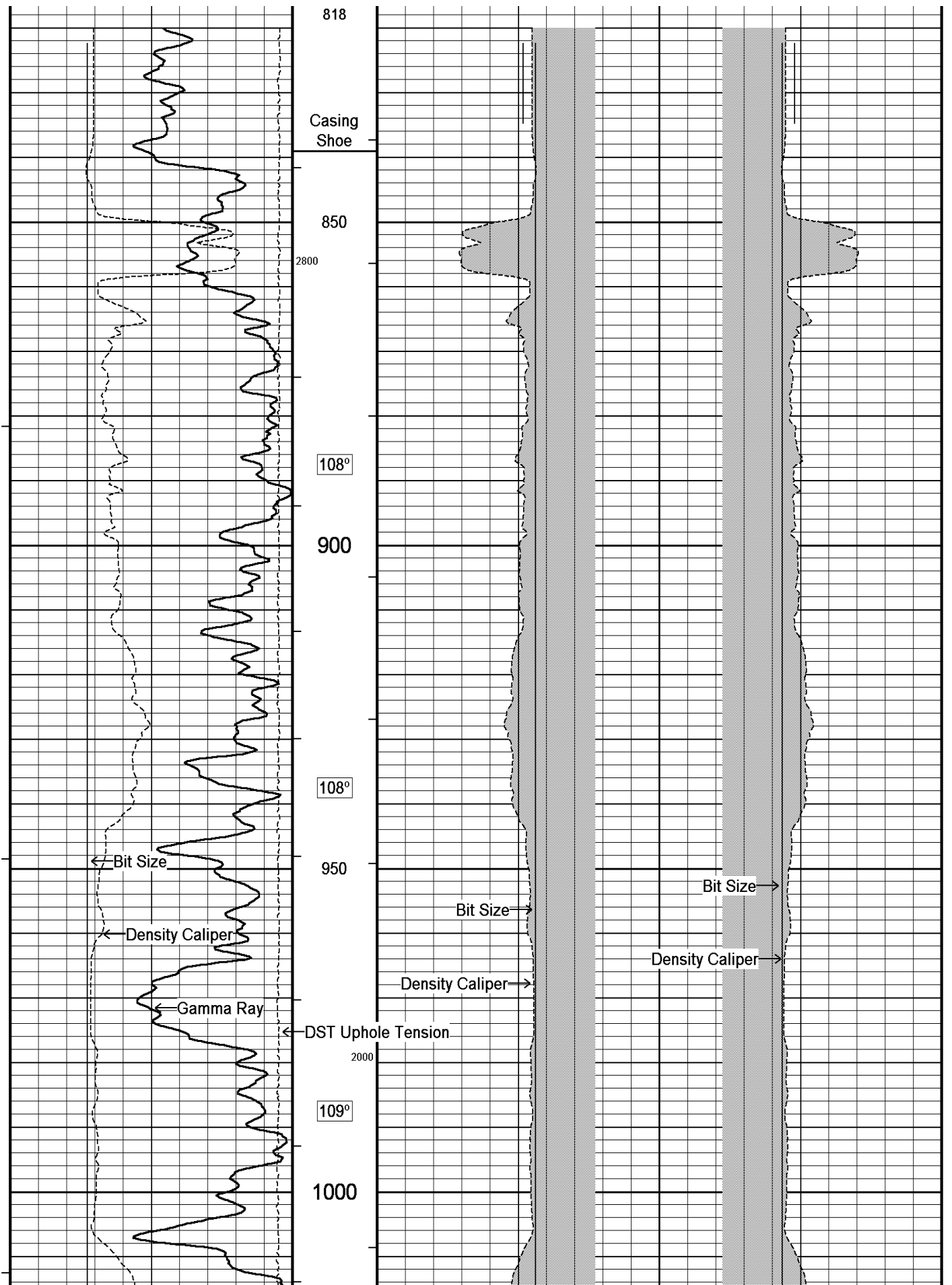
ANNULAR VOLUME WITH 4.5 INCH PRODUCTION CASING = 2060 CU.FT.

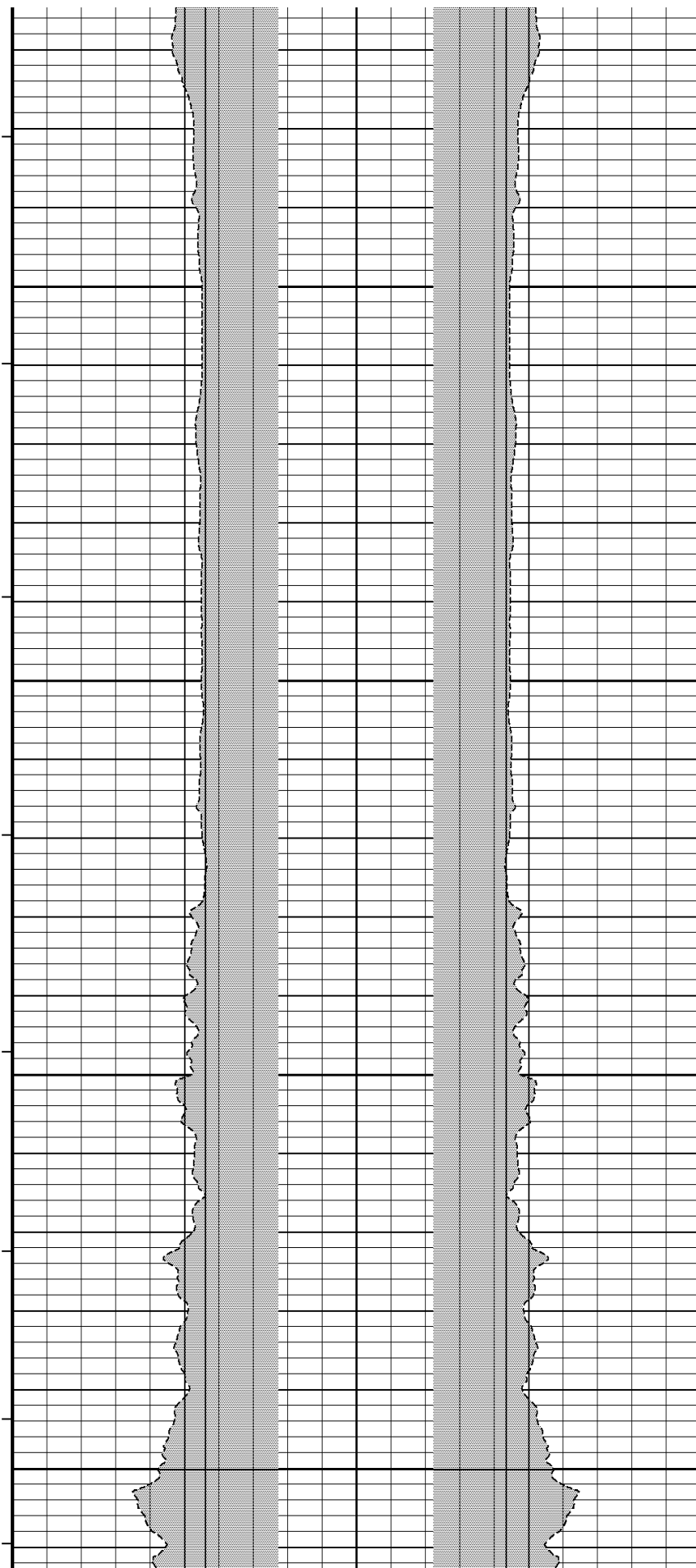
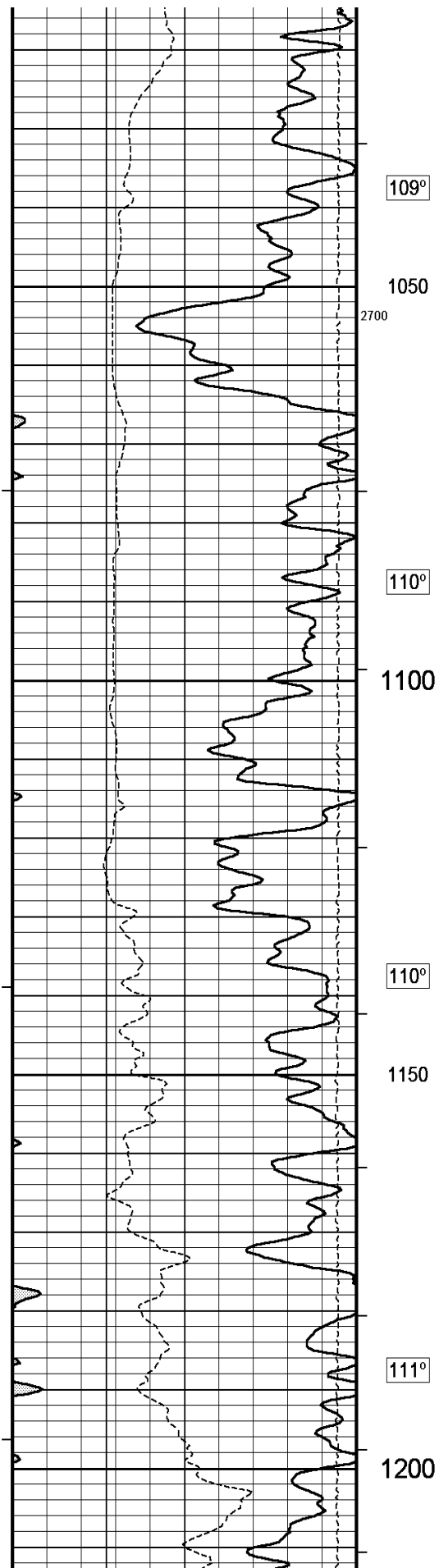
SERVICE ORDER: # 3524886

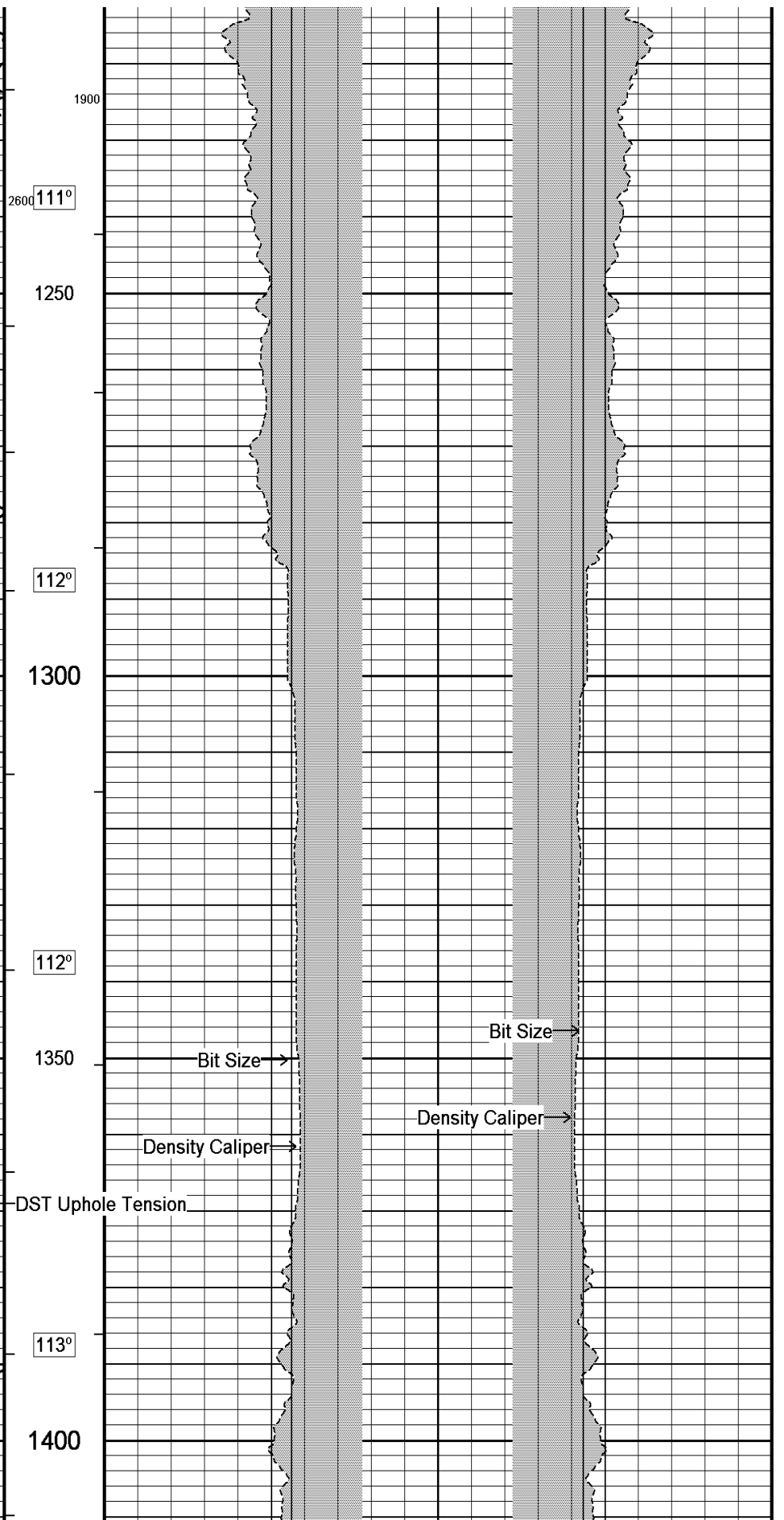
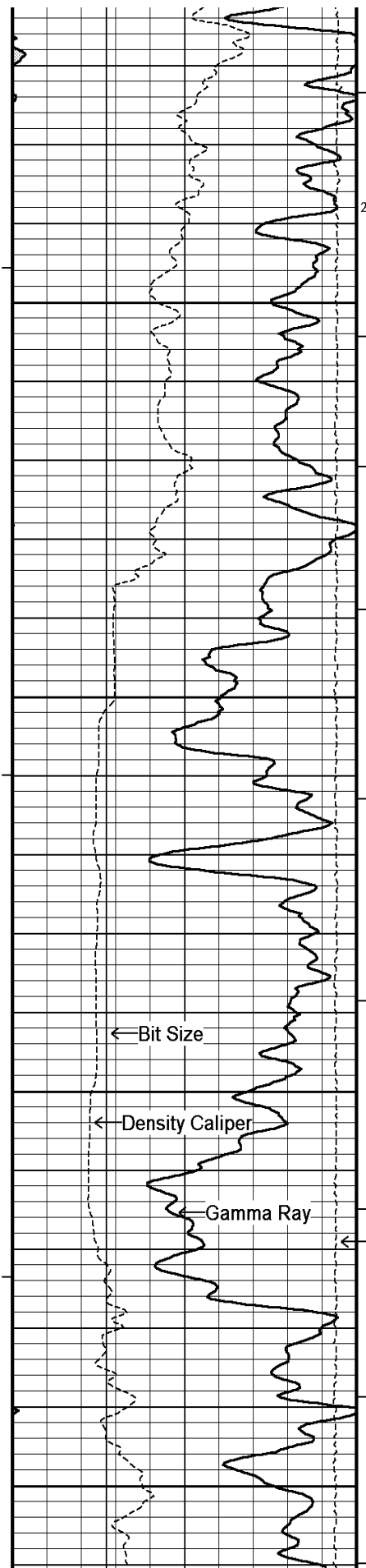
RIG: PATTERSON #307

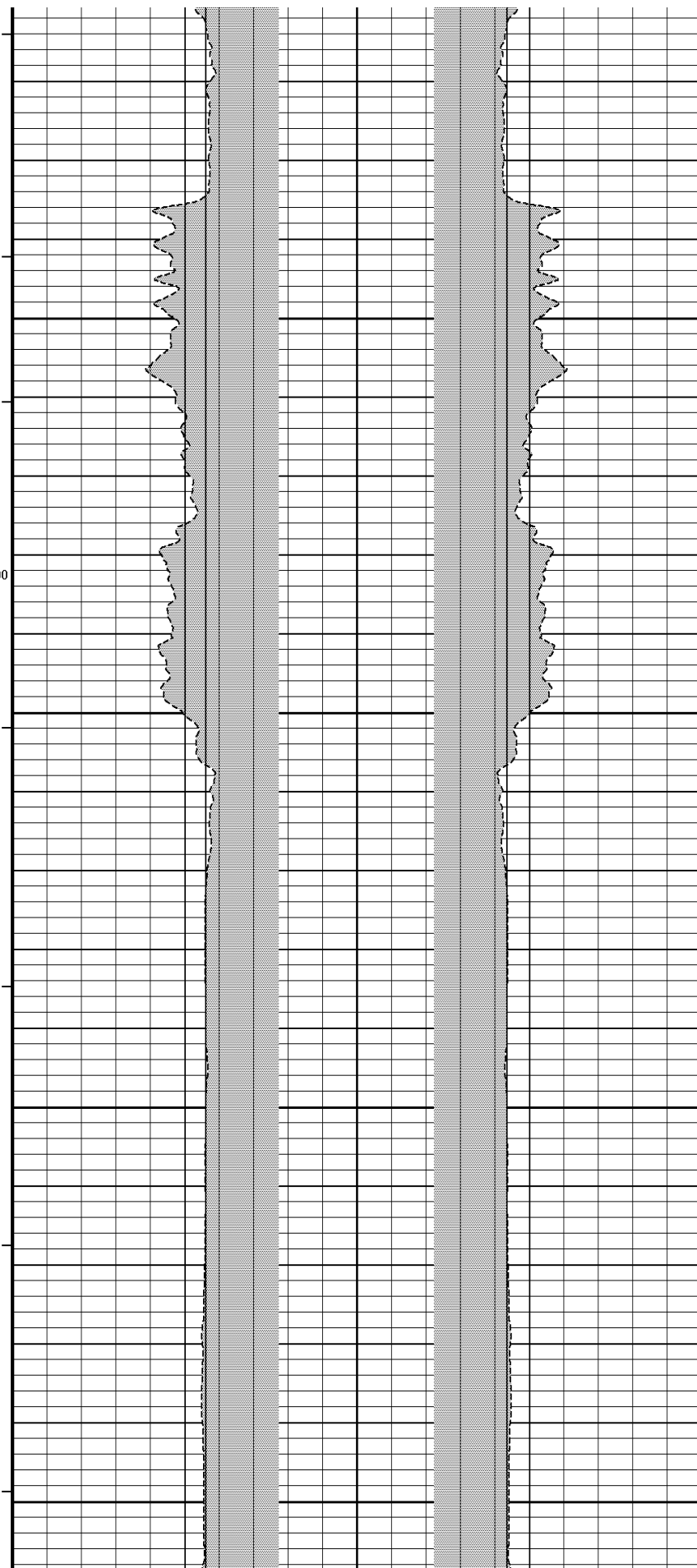
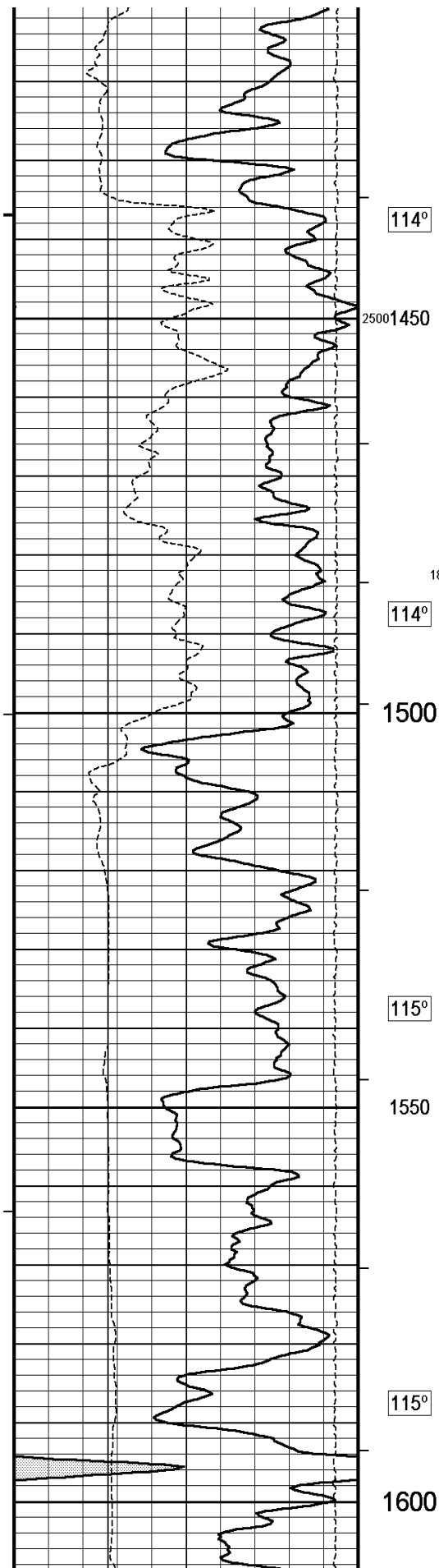
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

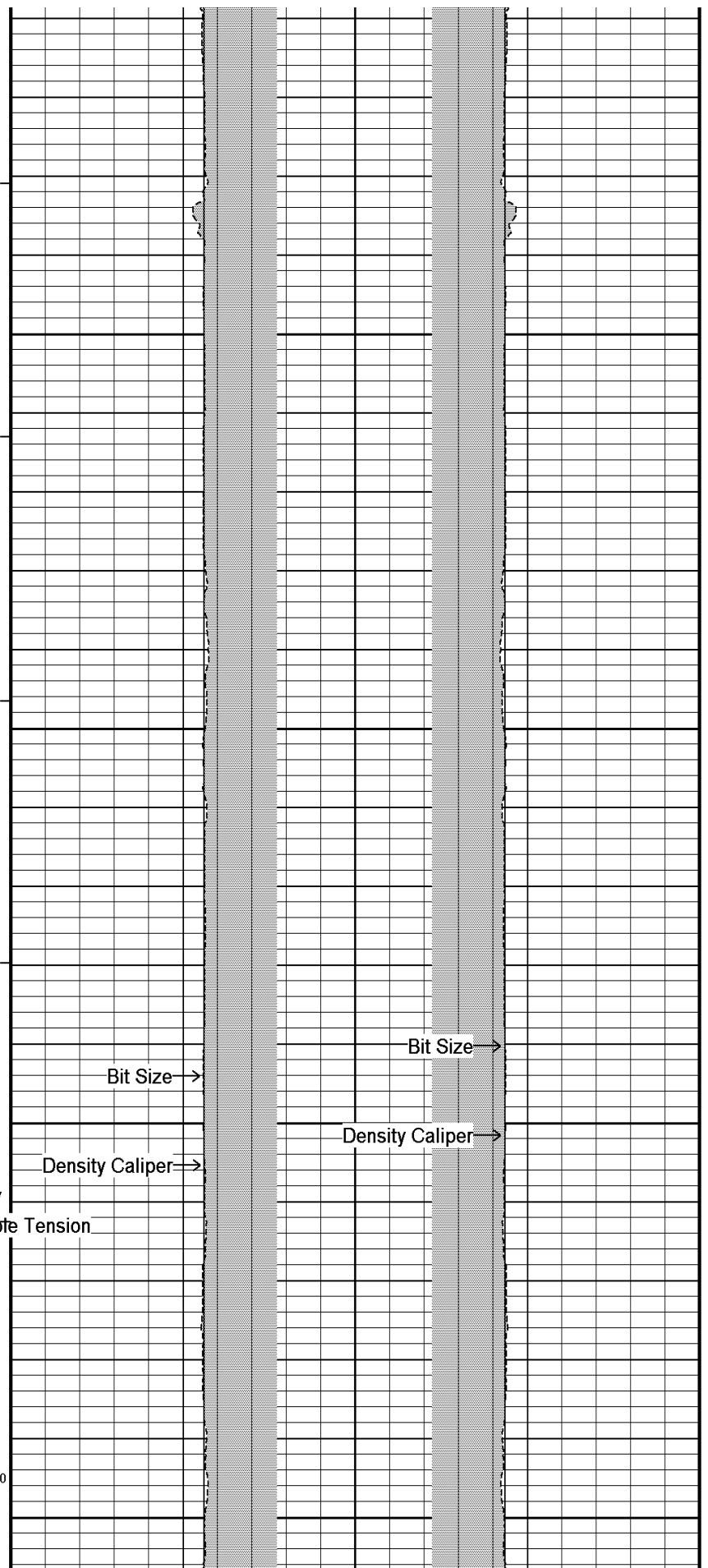
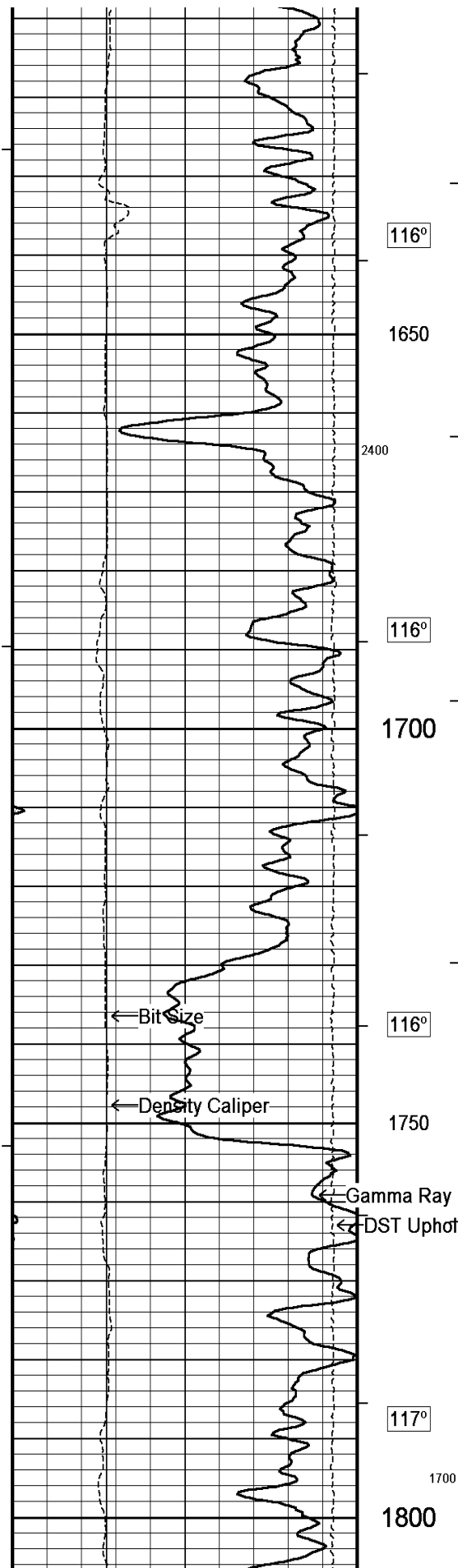


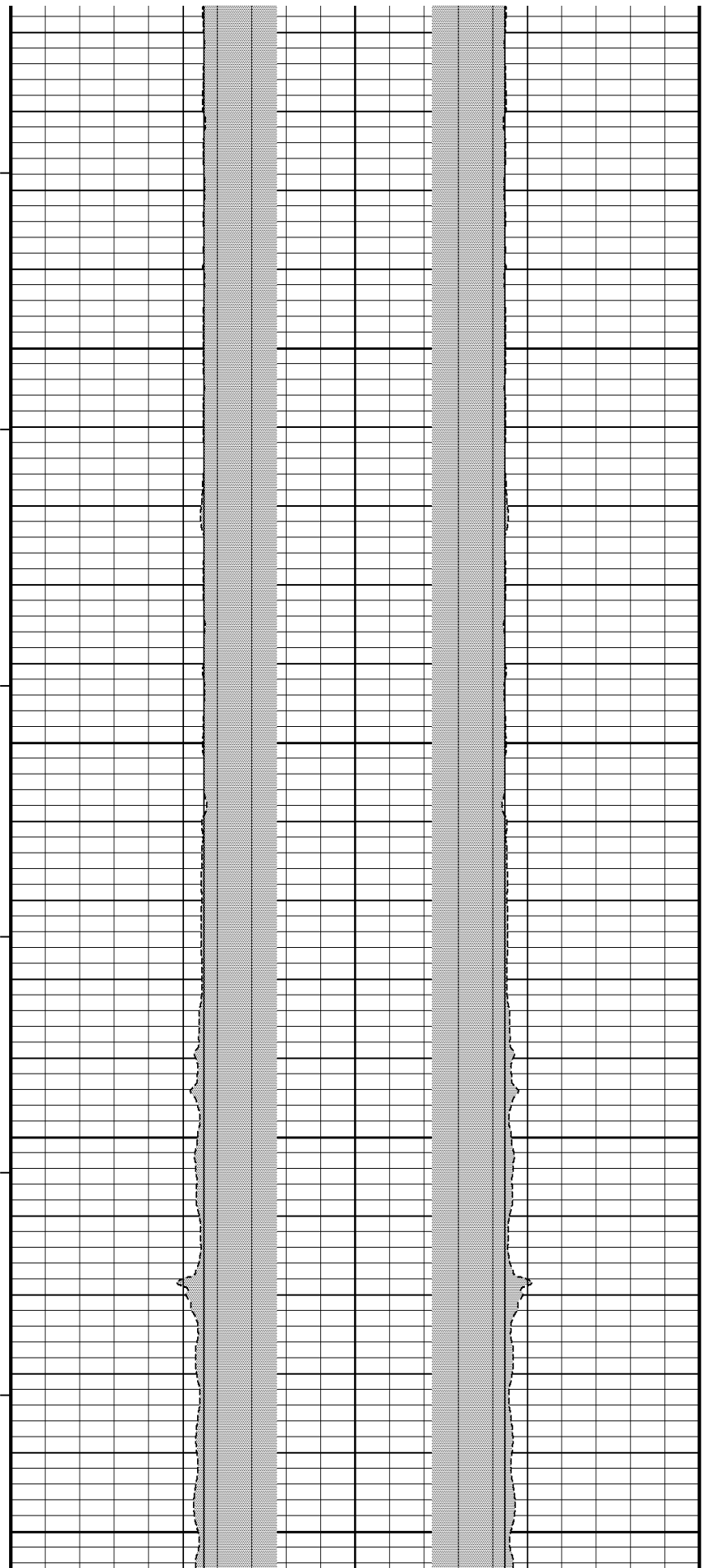
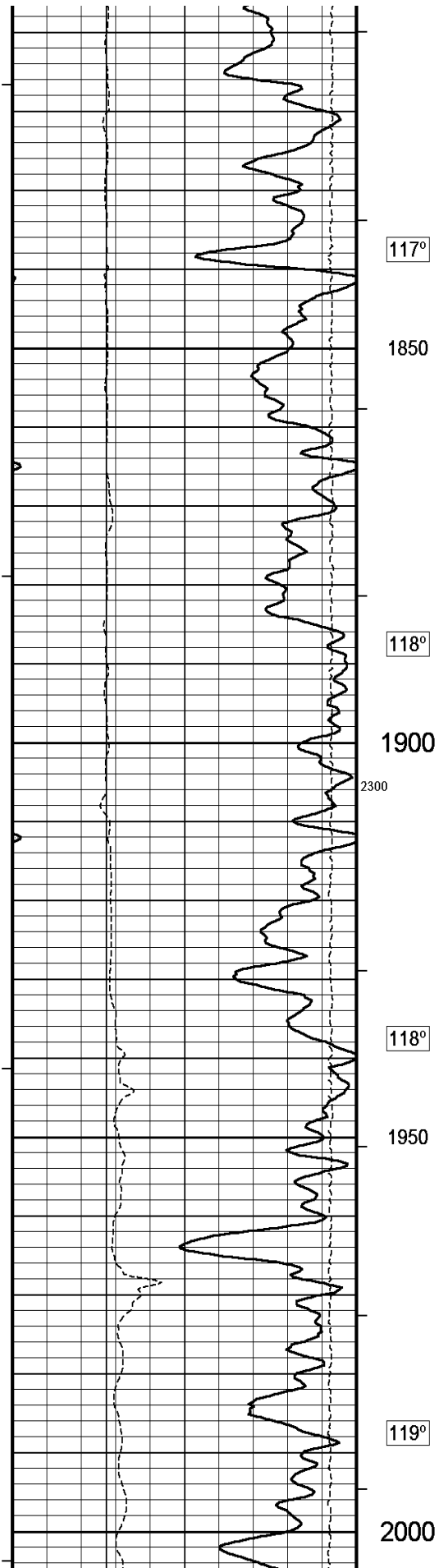




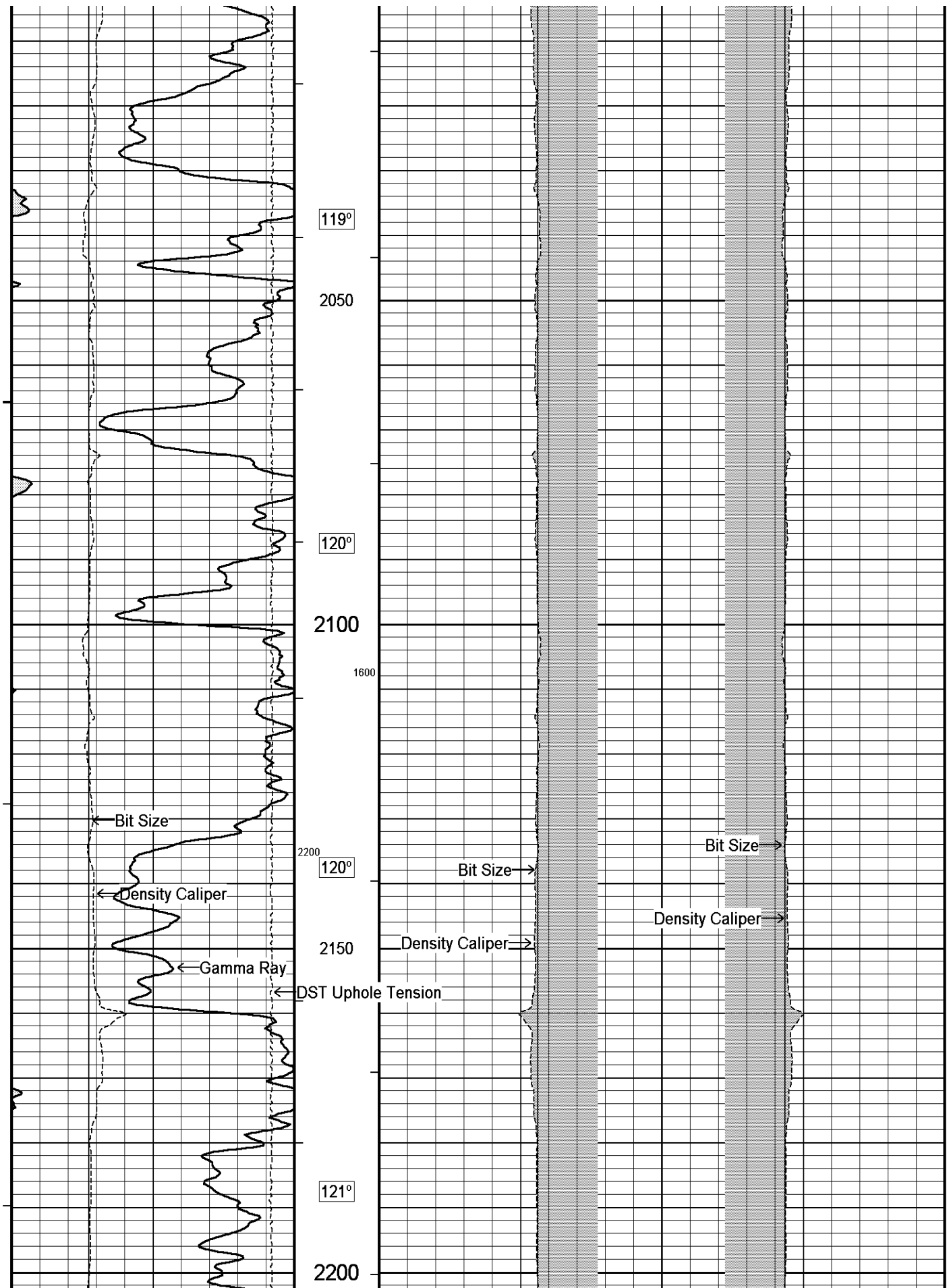


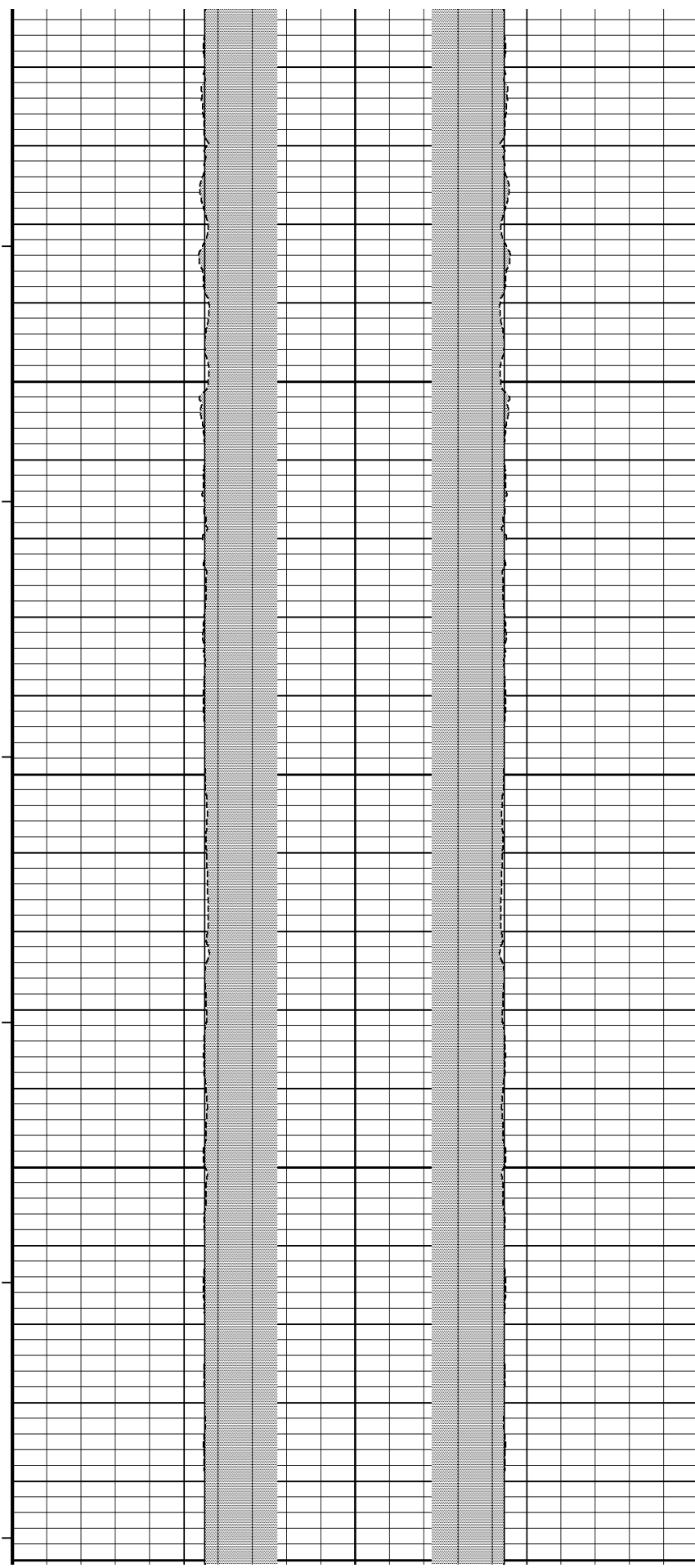
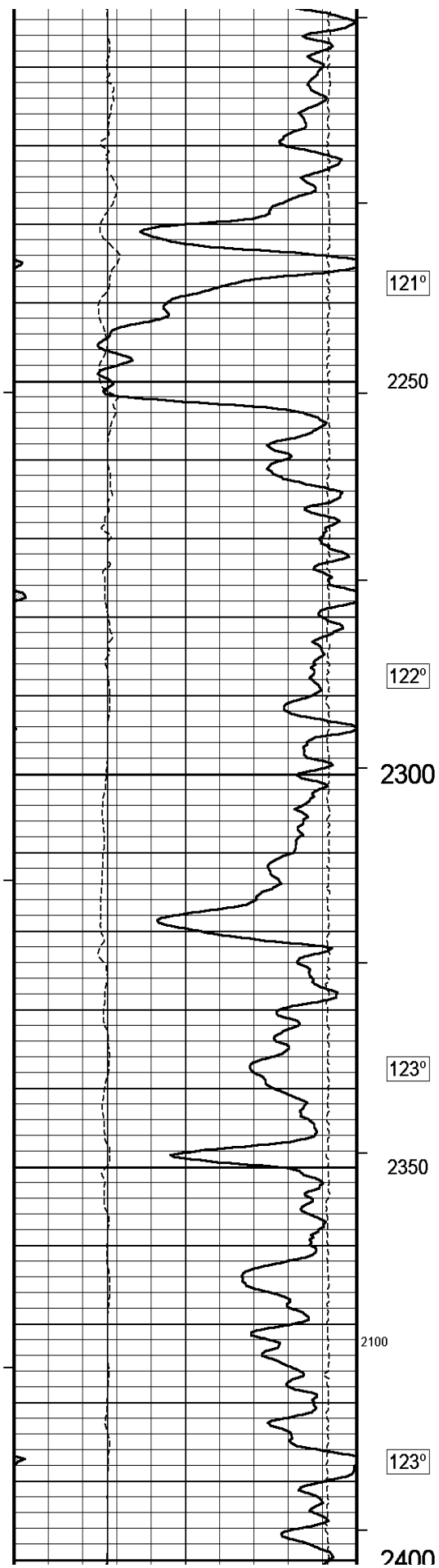


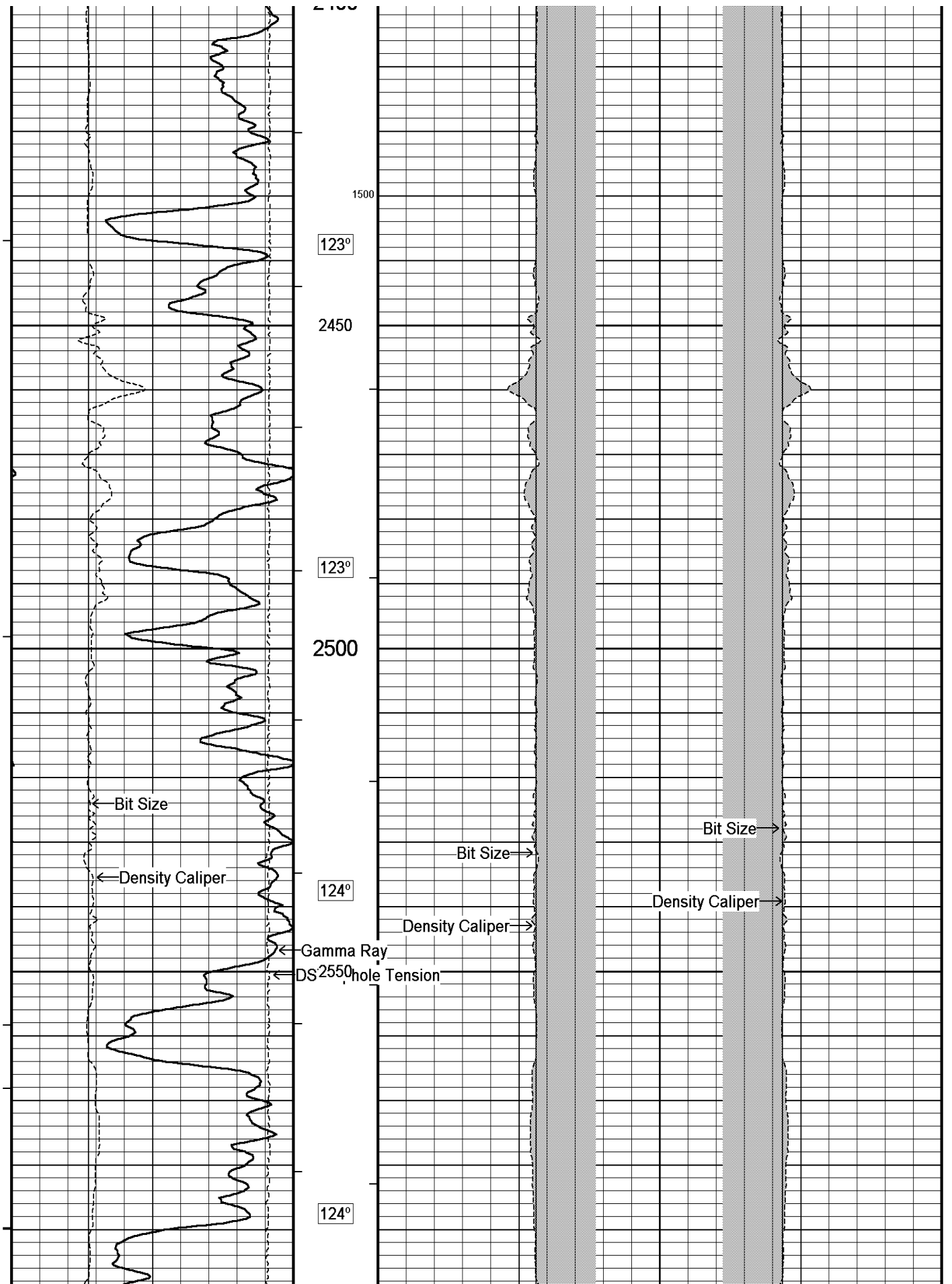


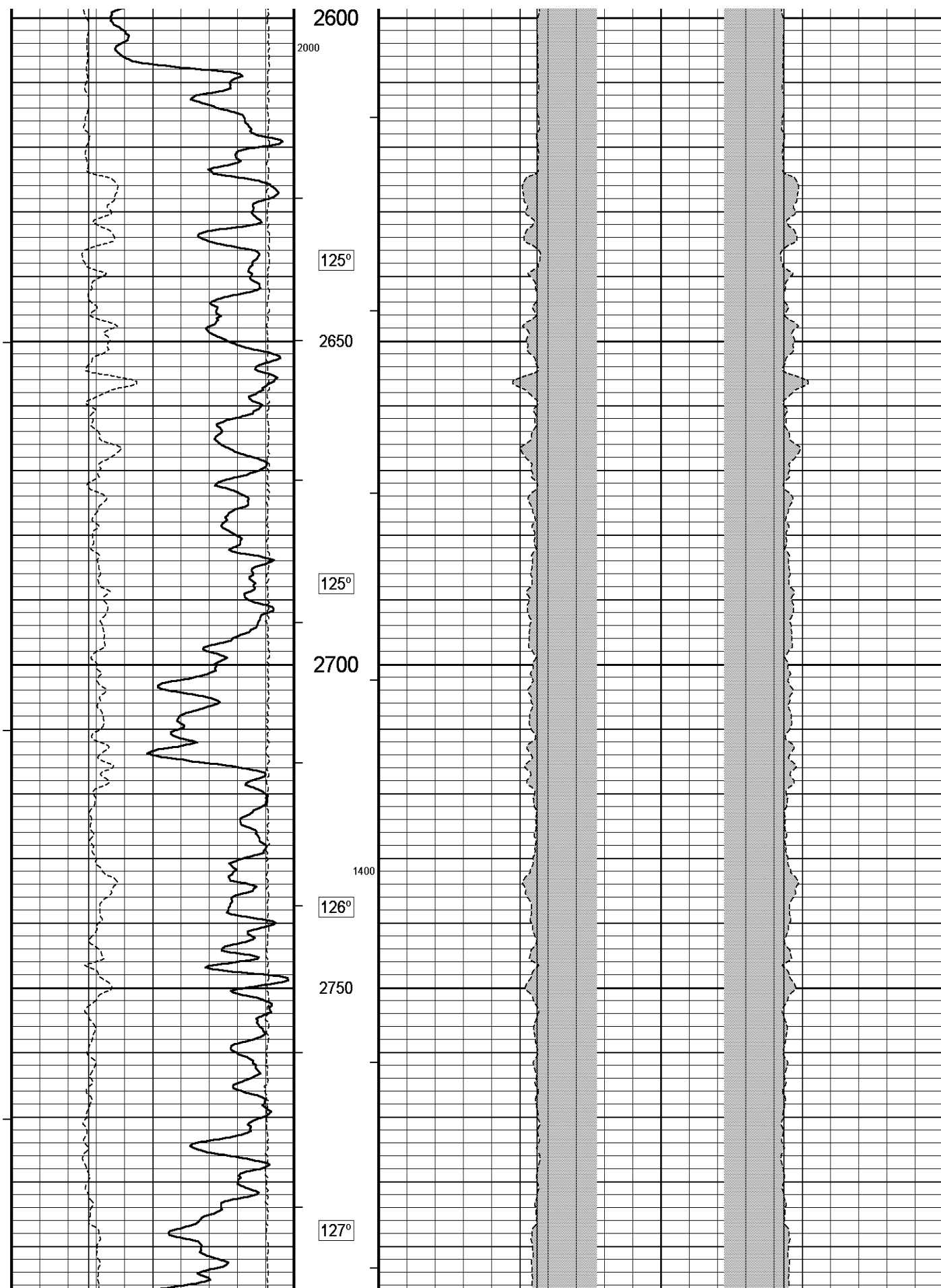


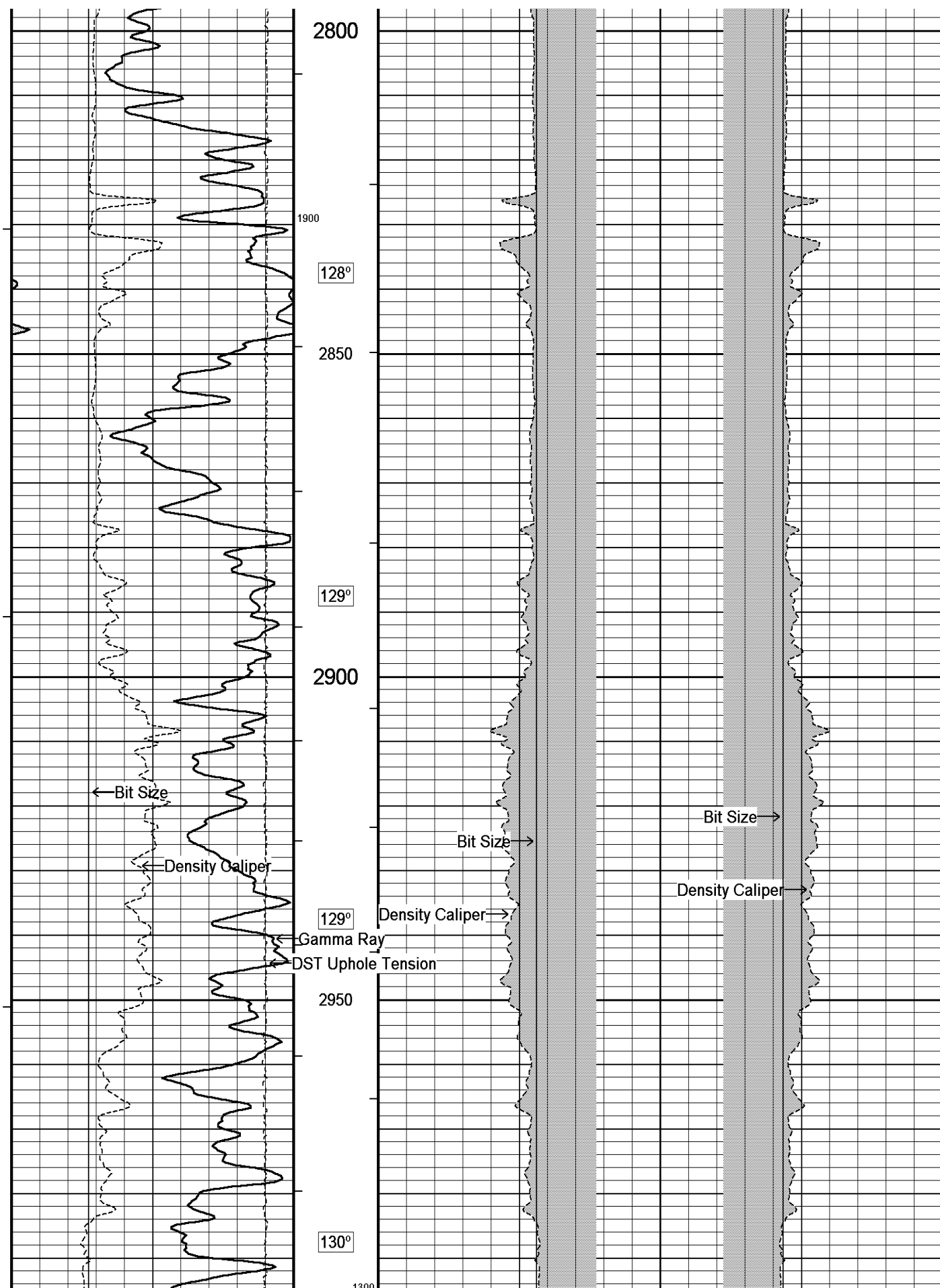


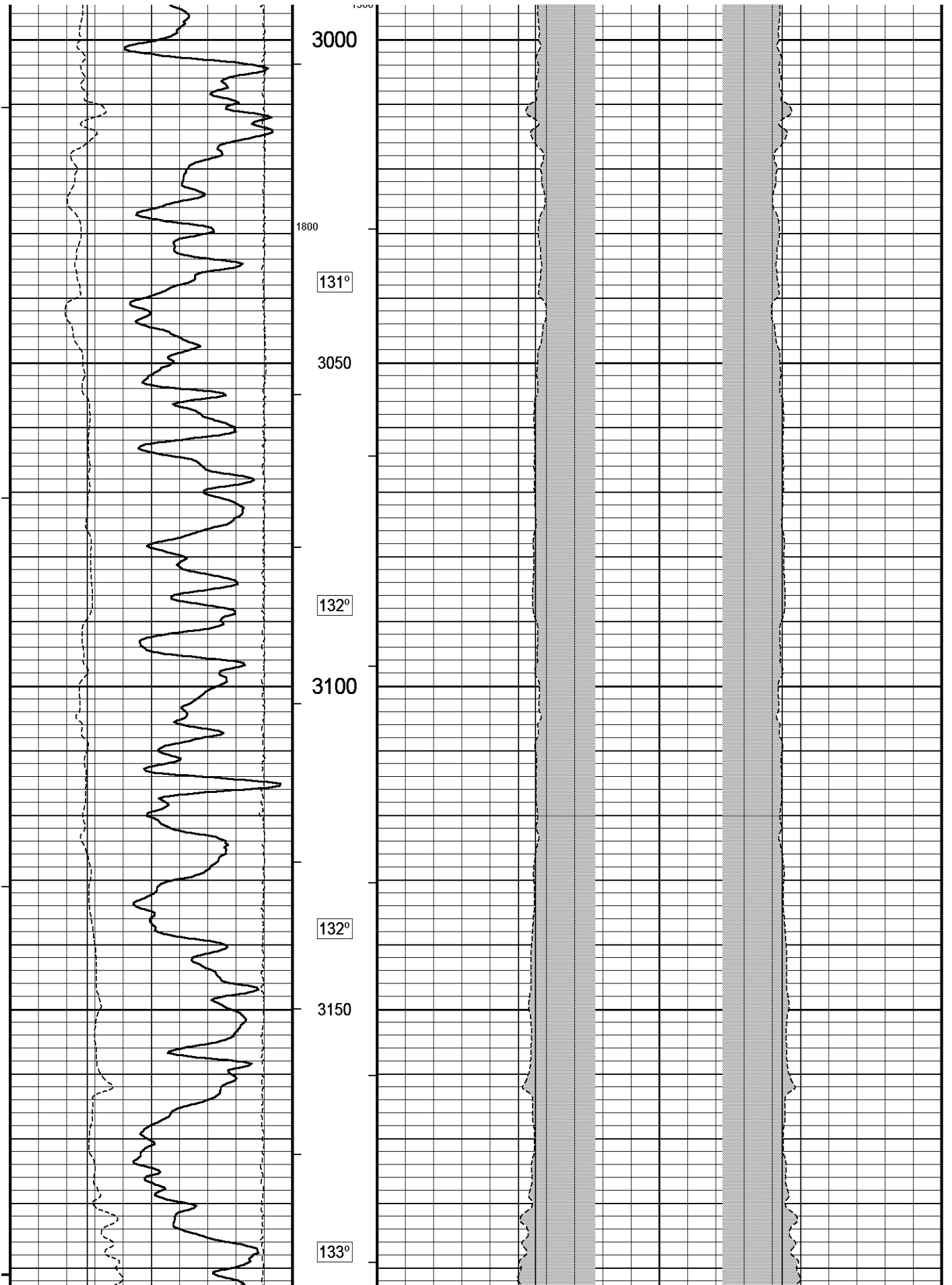


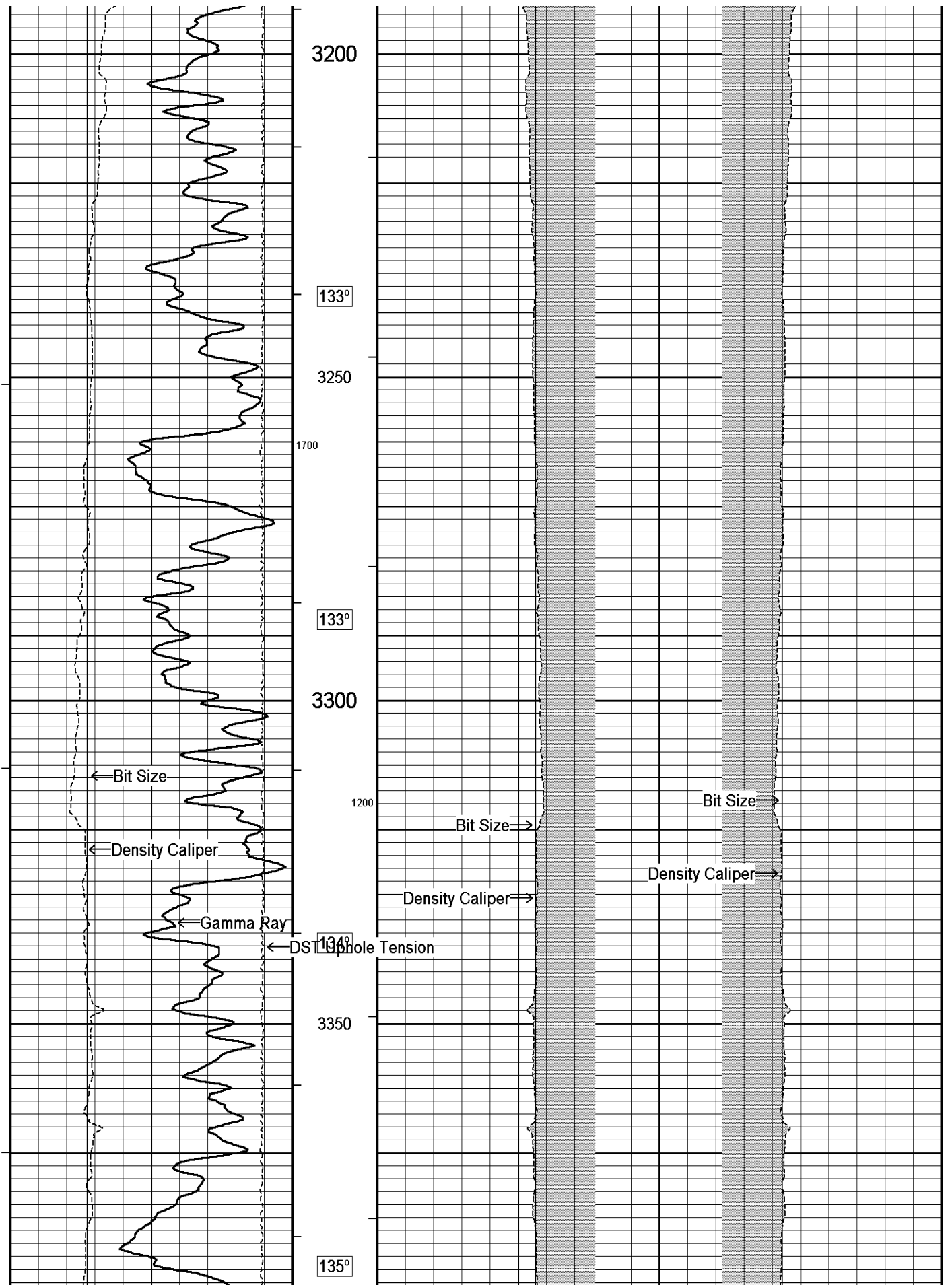


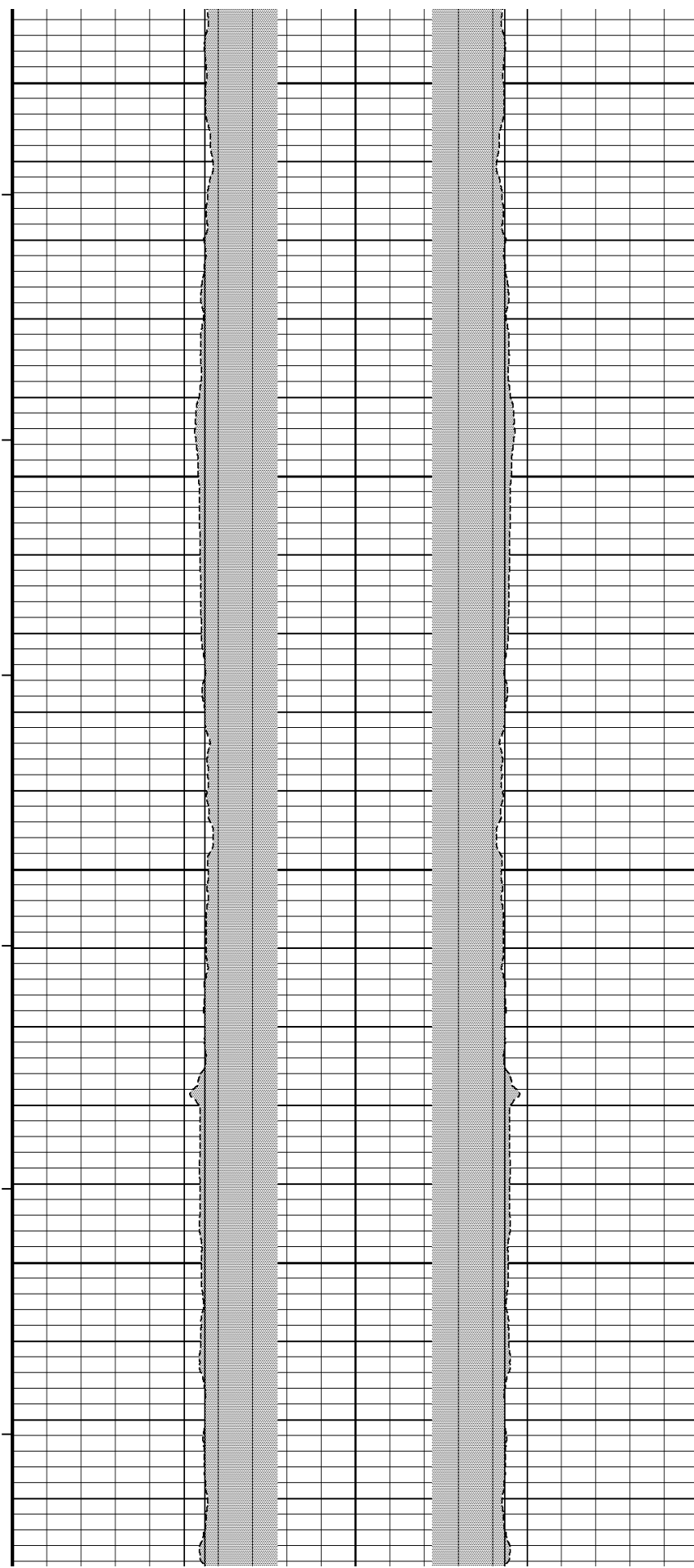
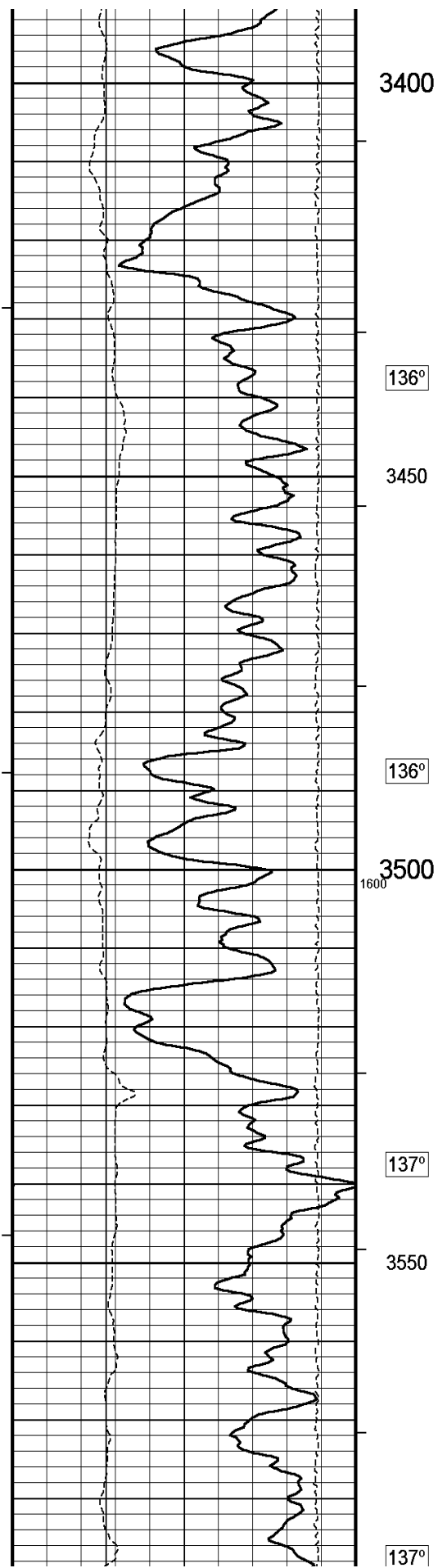




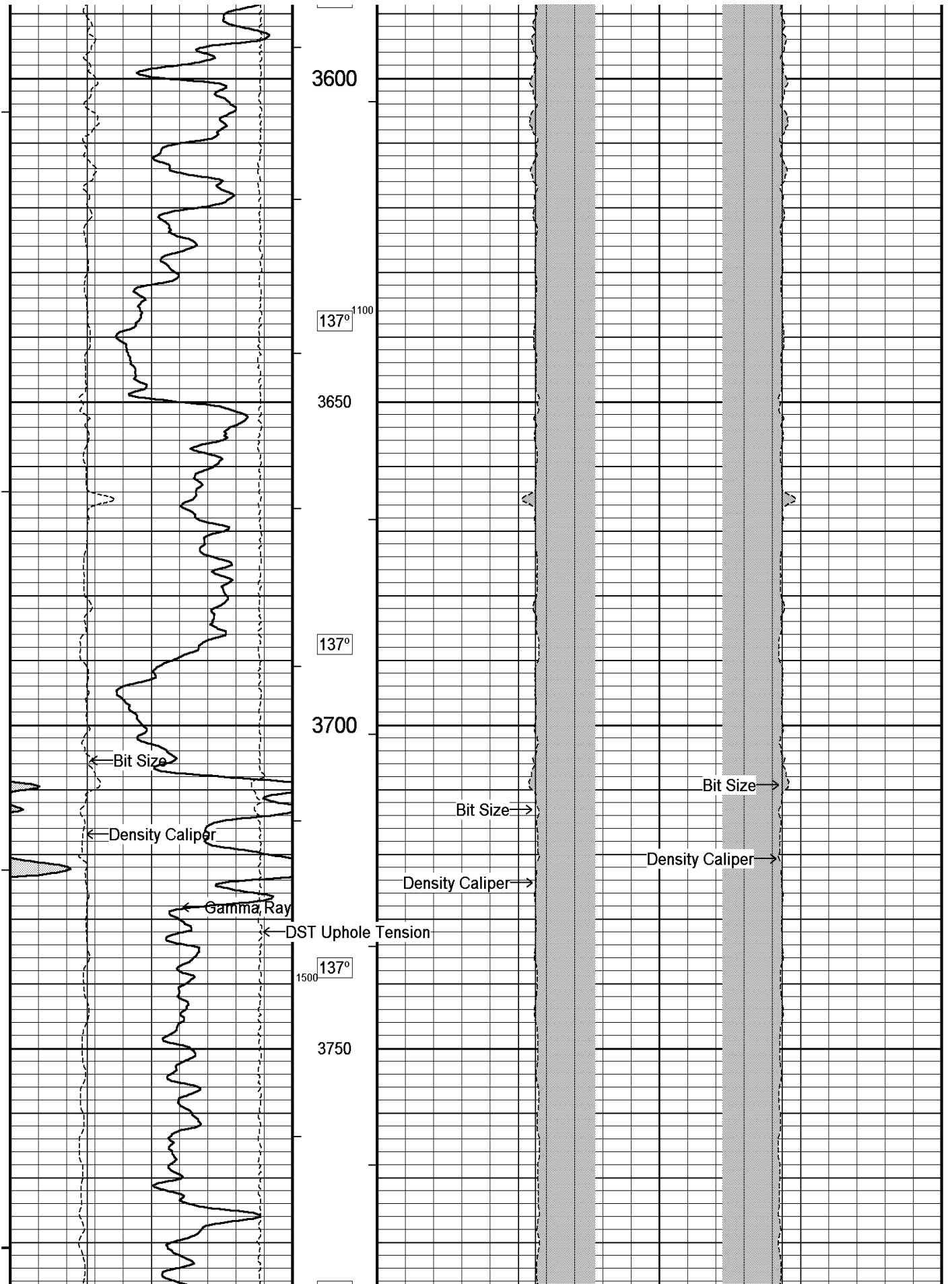


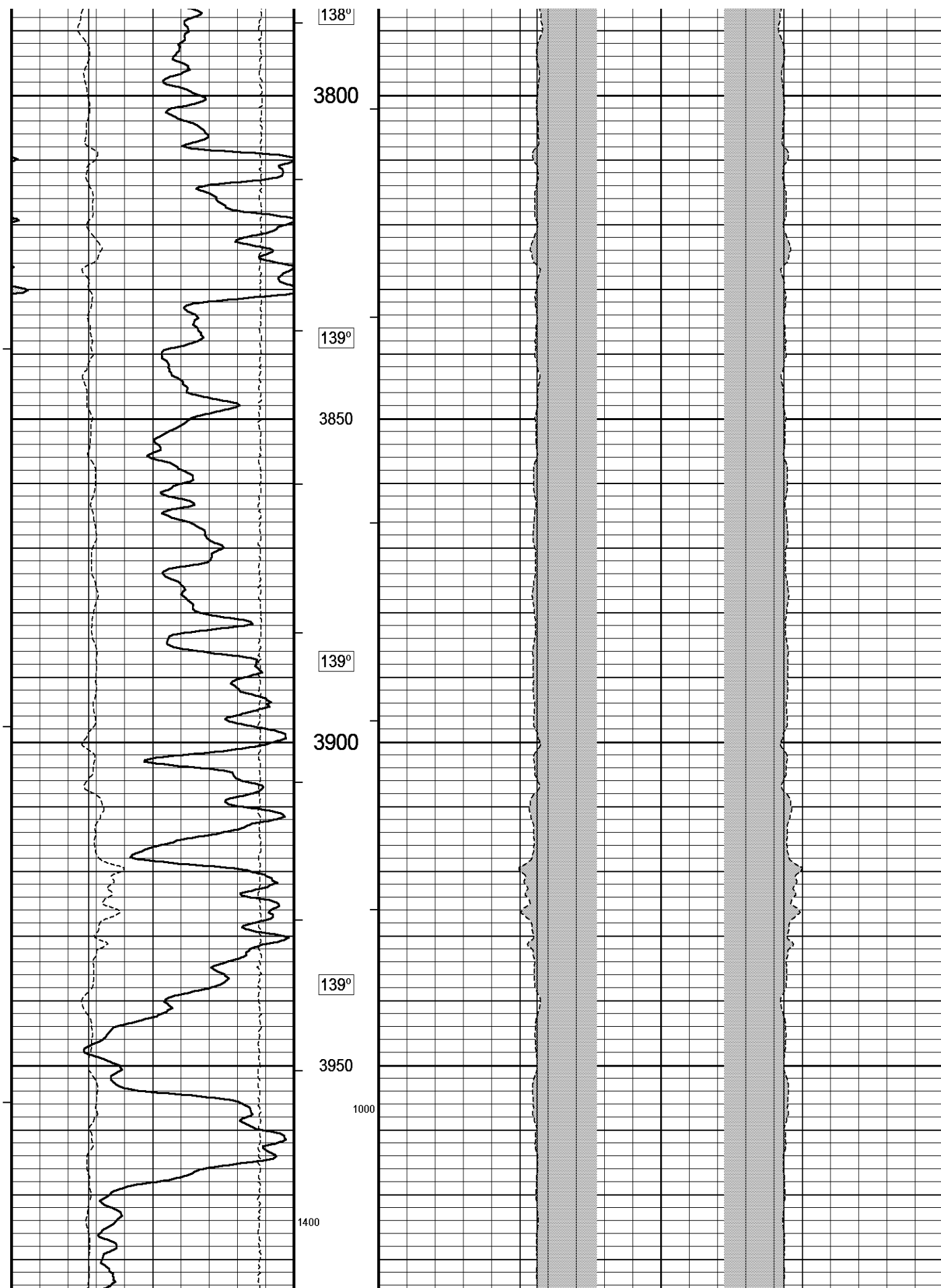


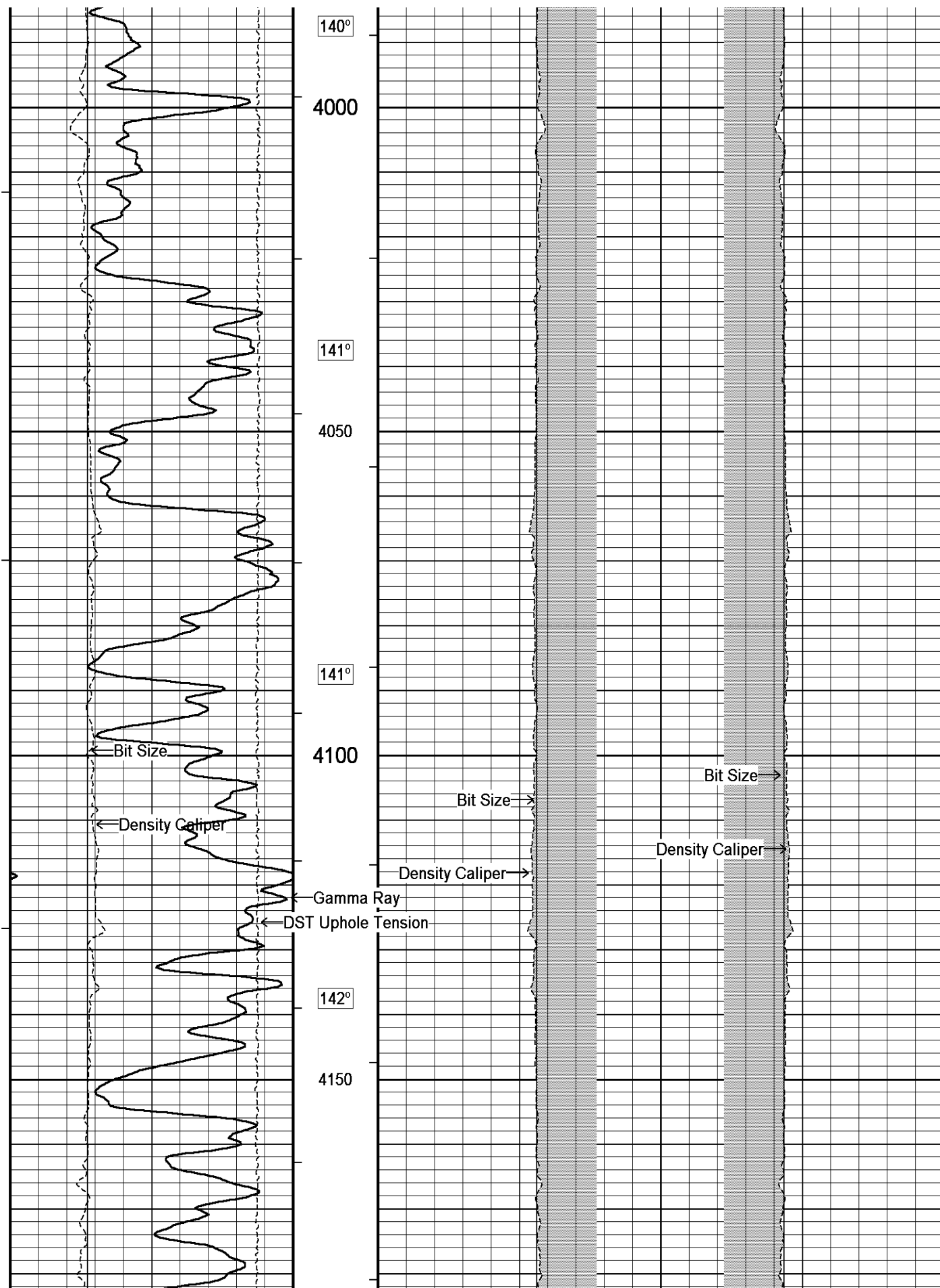


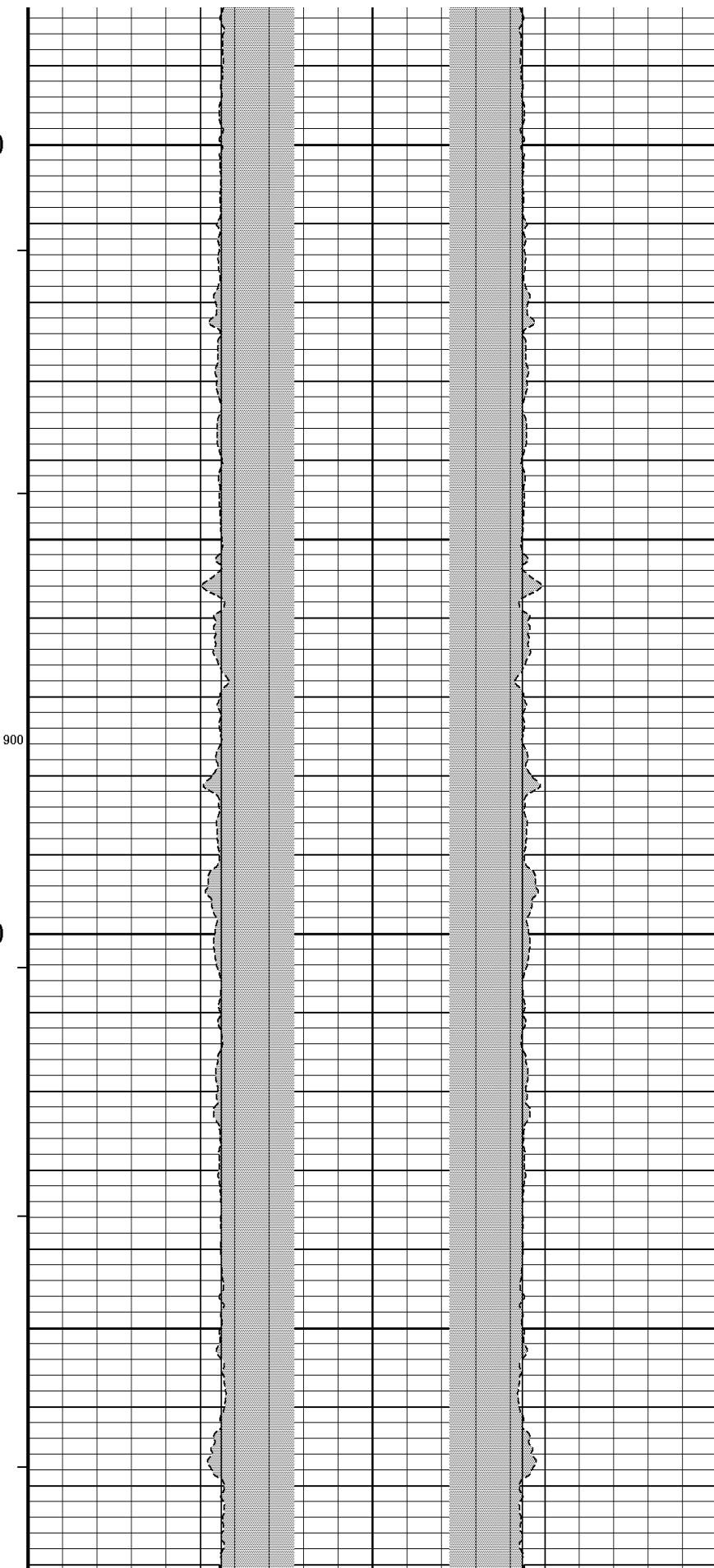
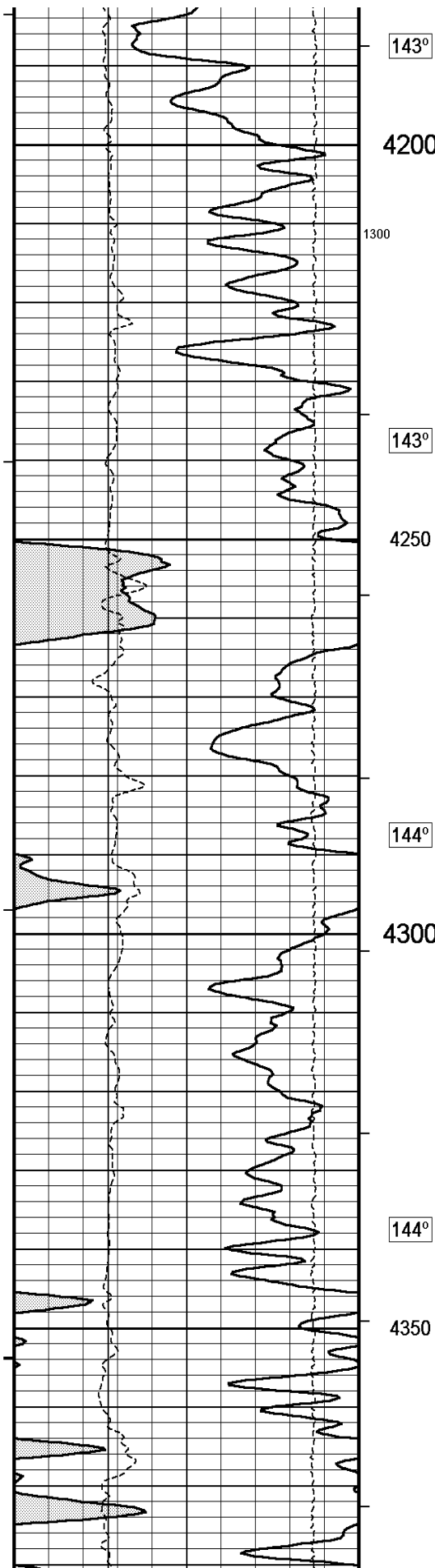


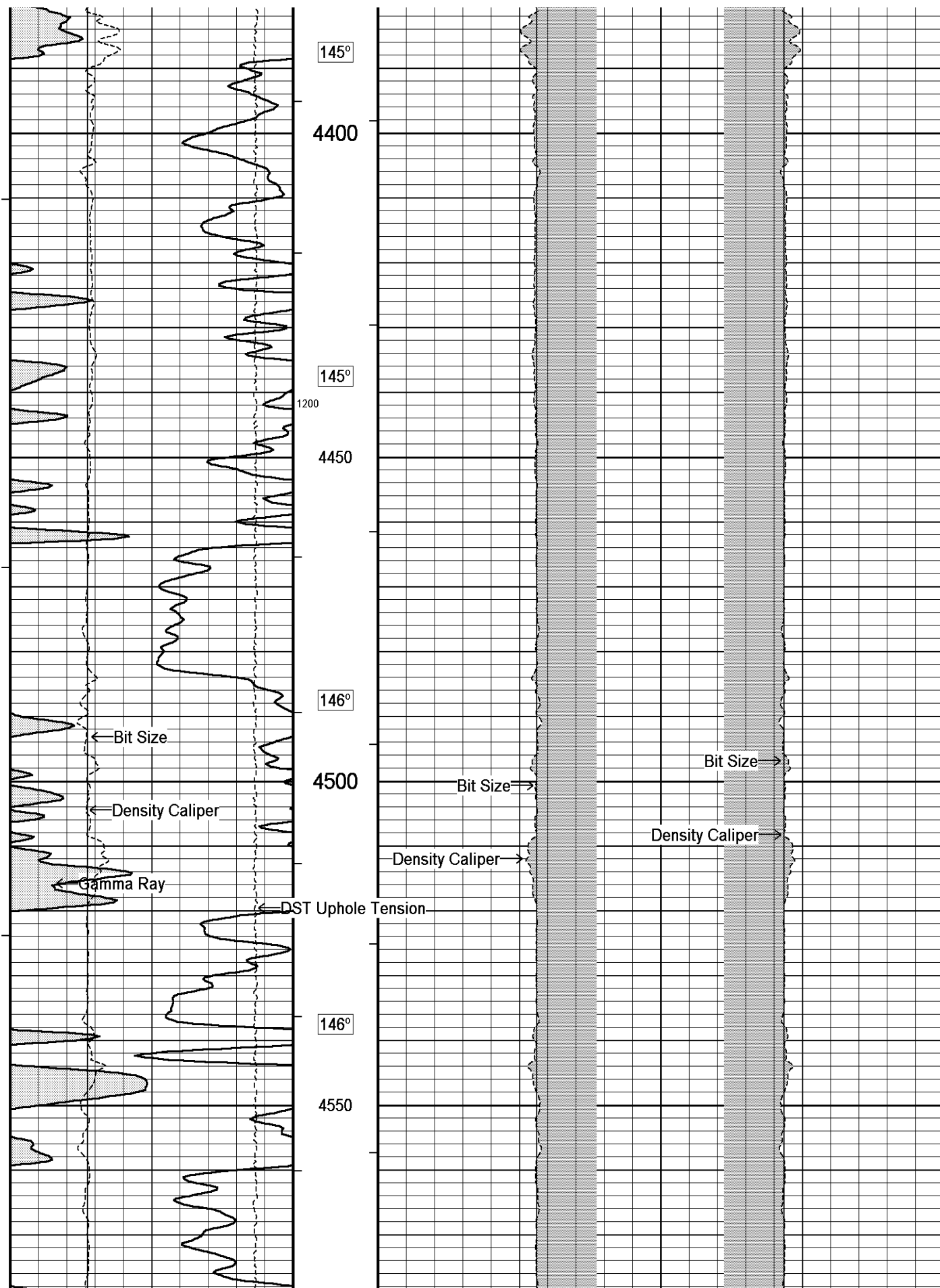


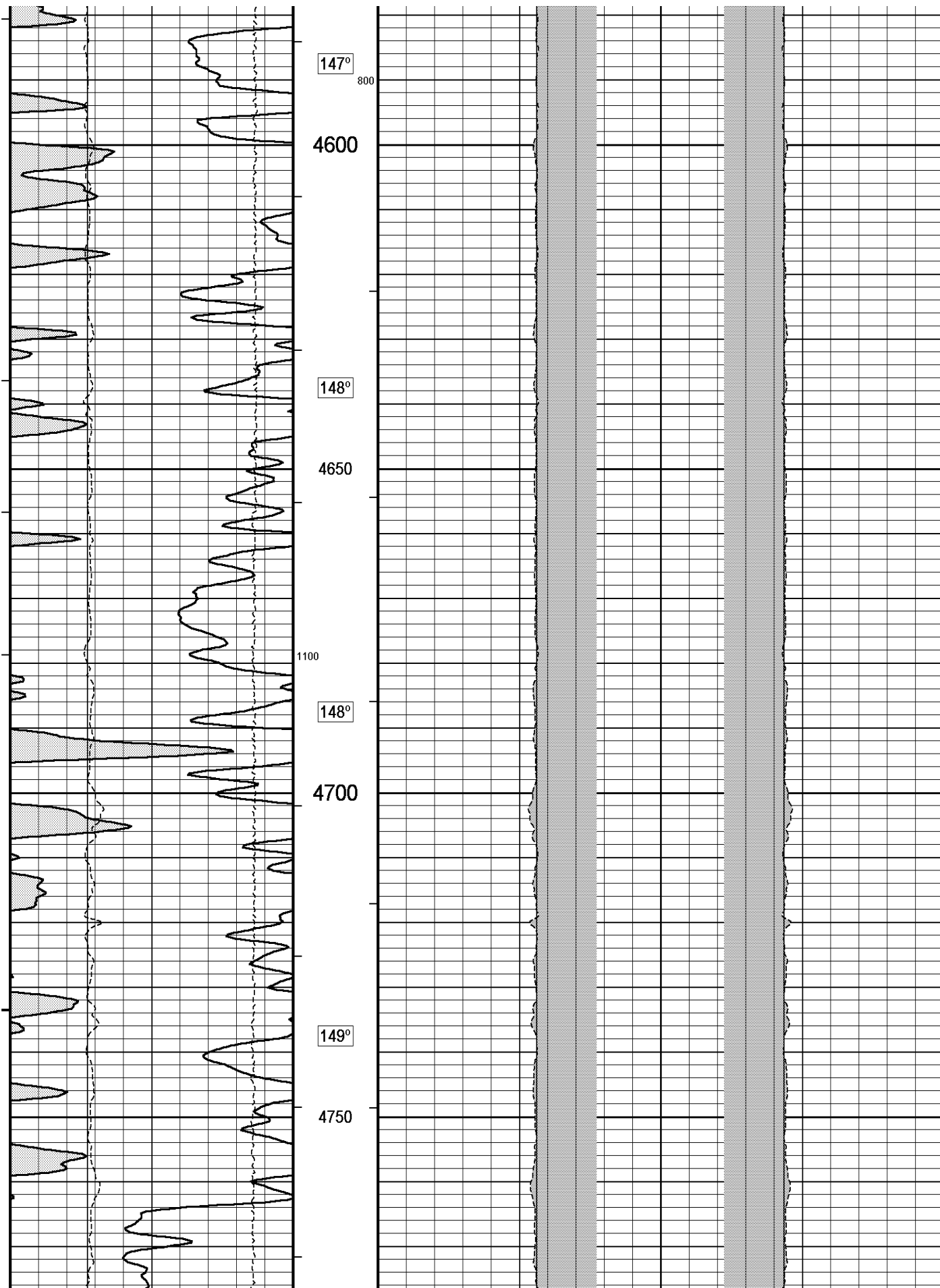


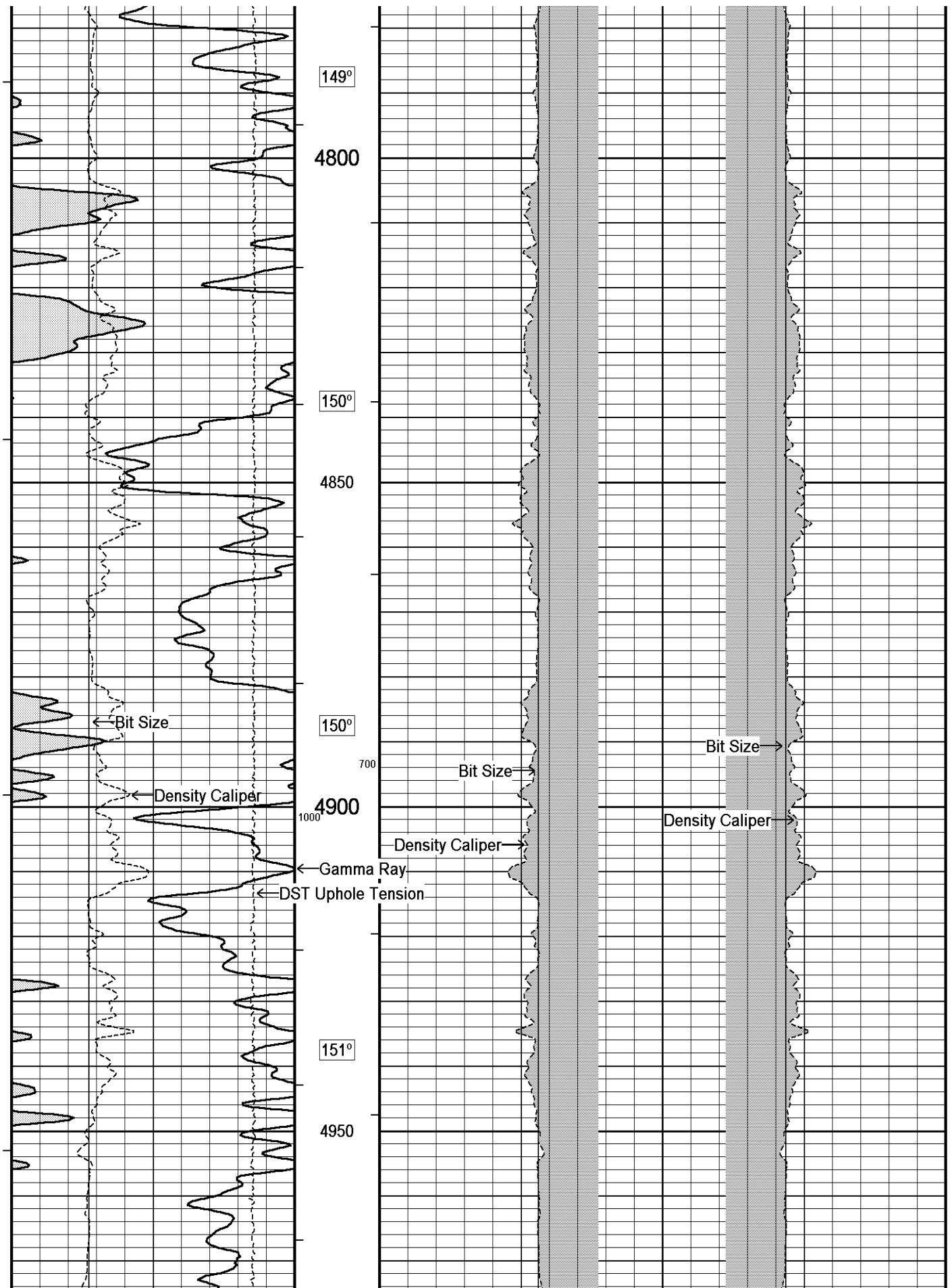


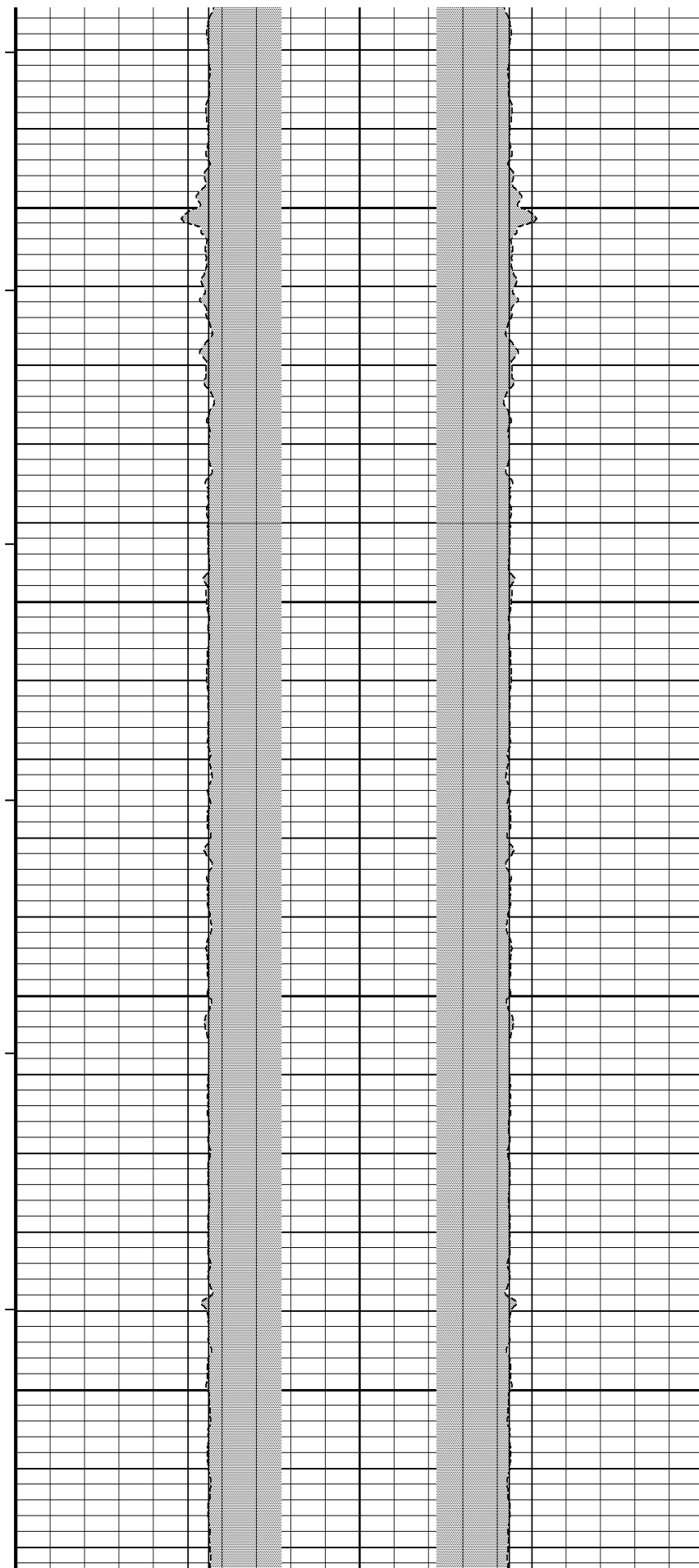
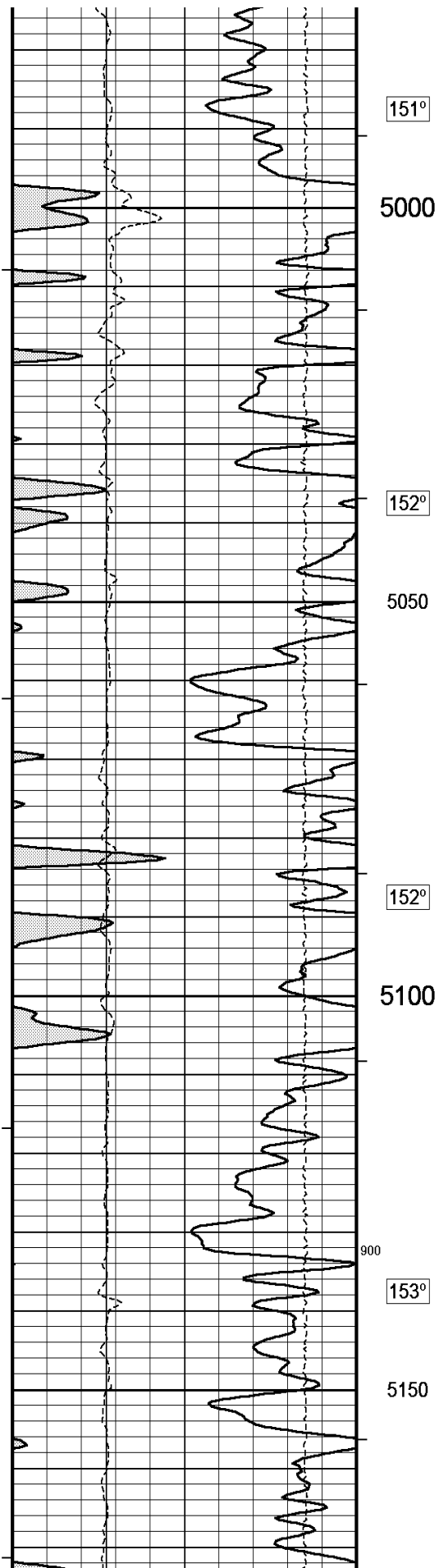




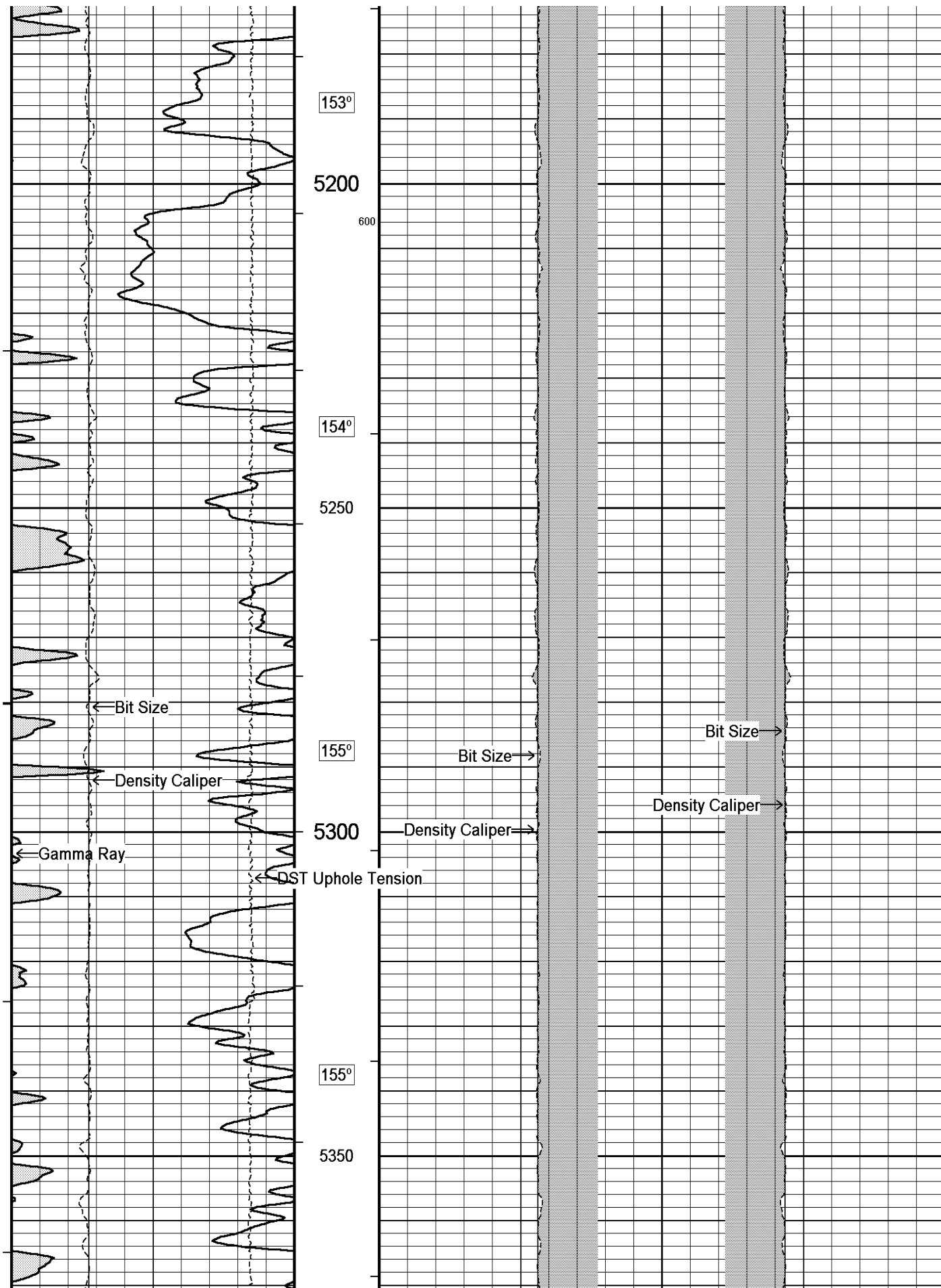


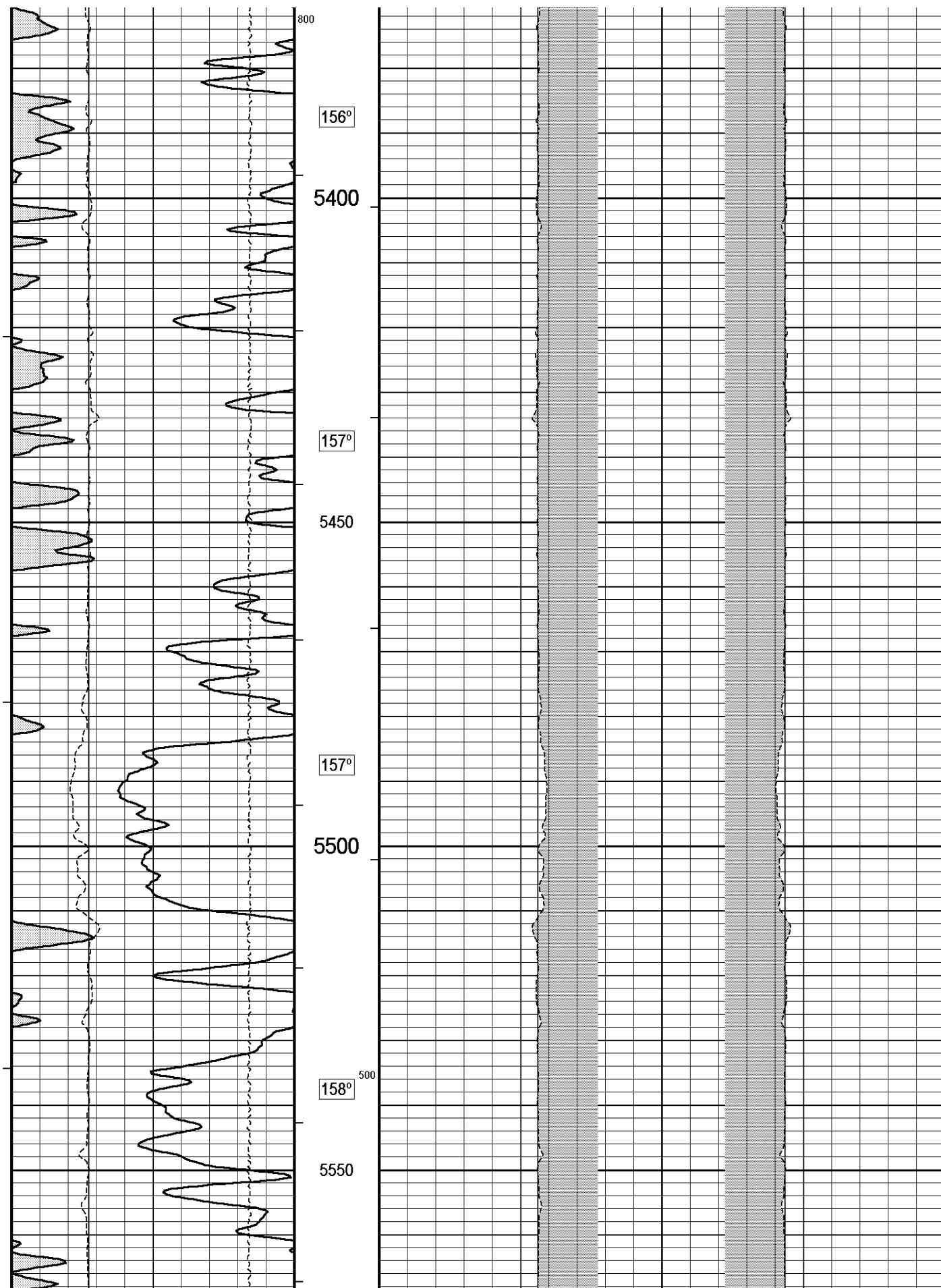


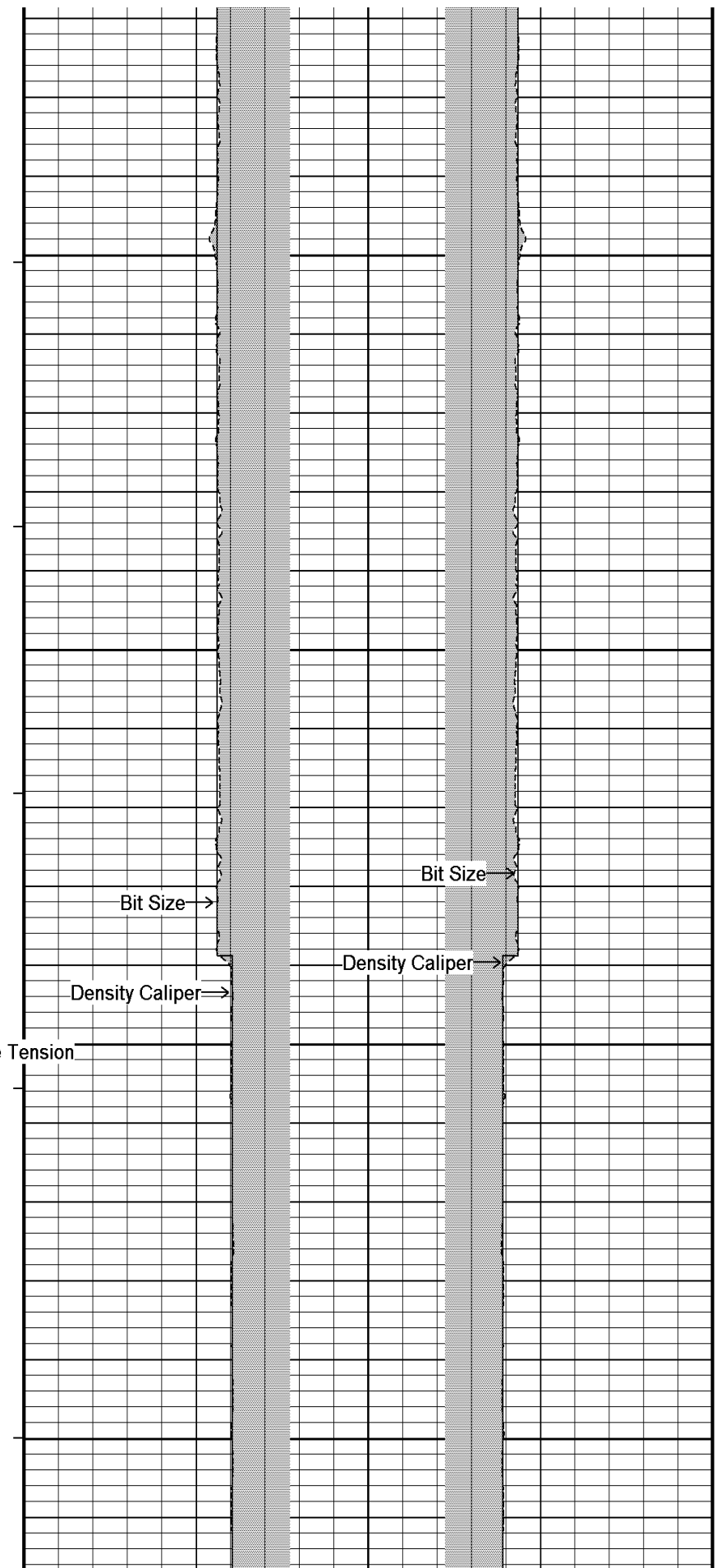
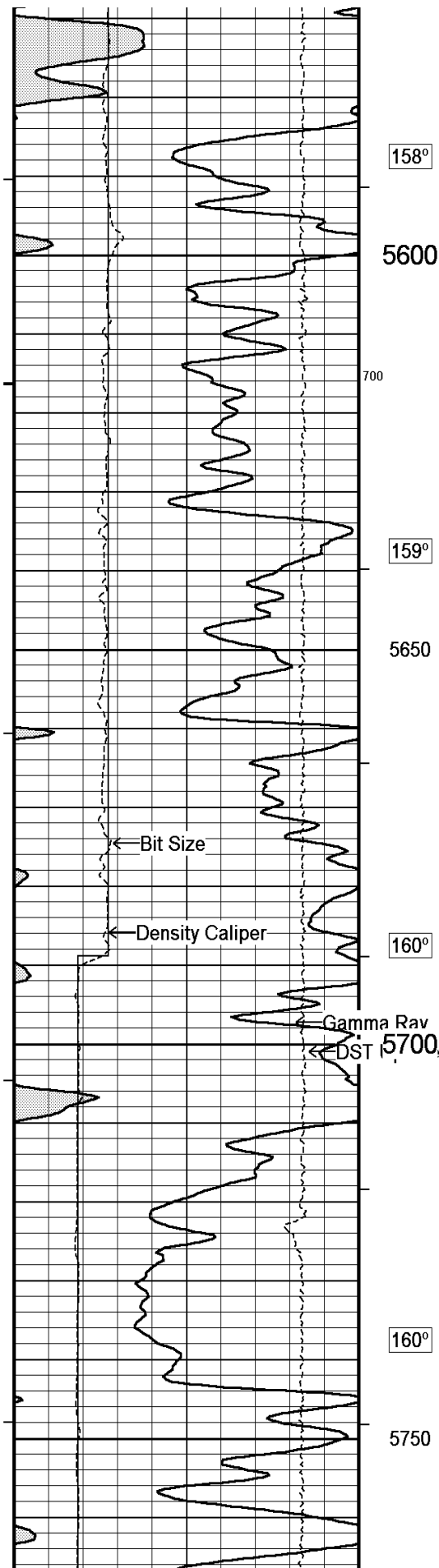


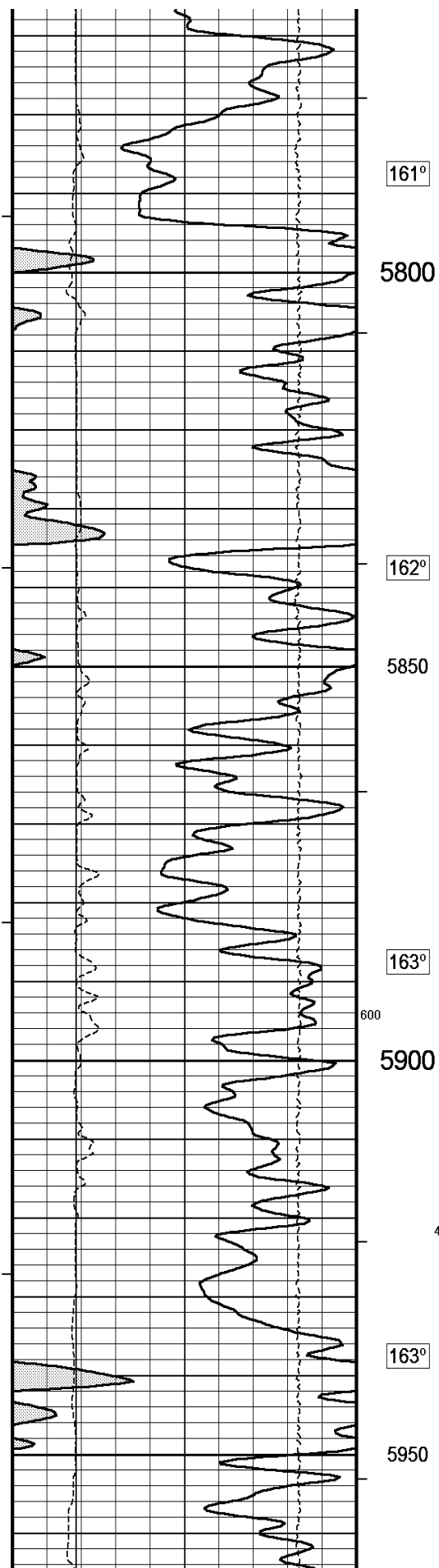












161°

5800

162°

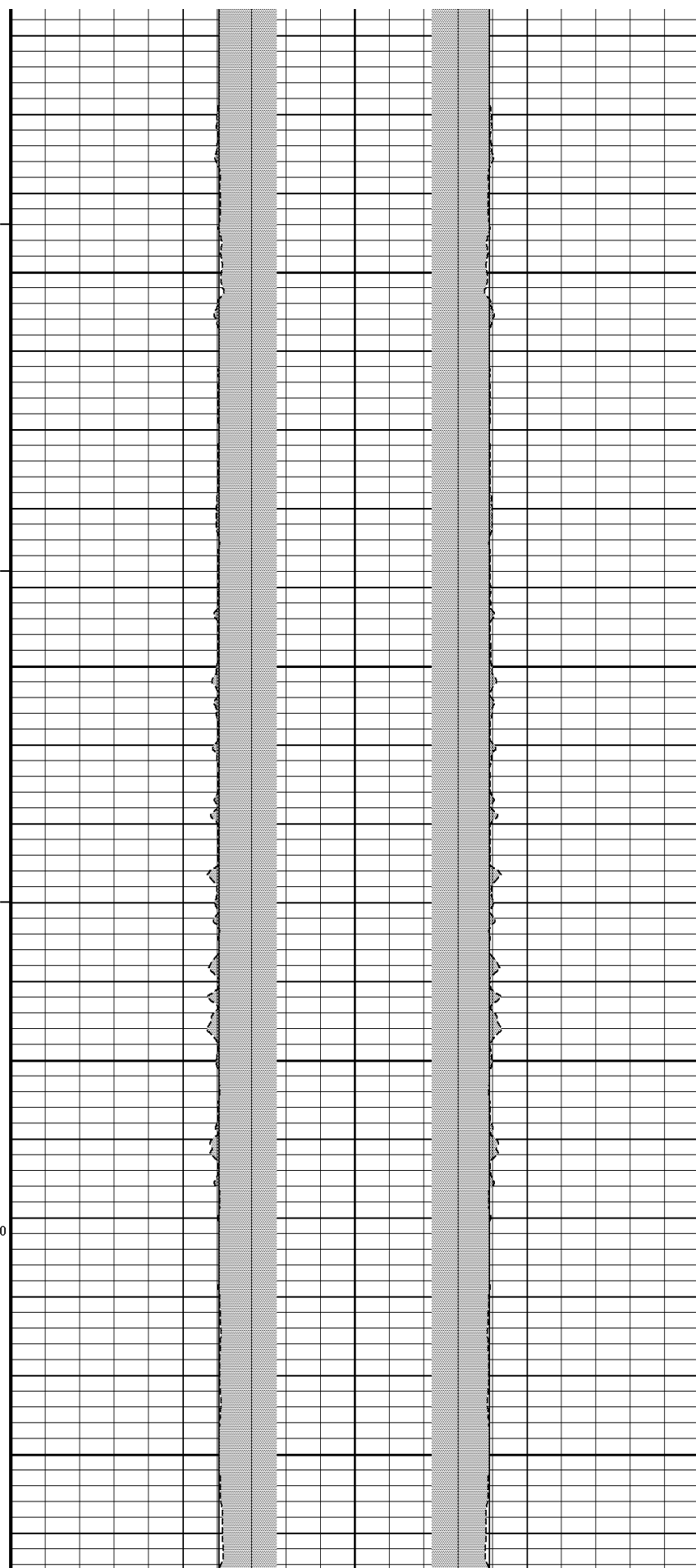
5850

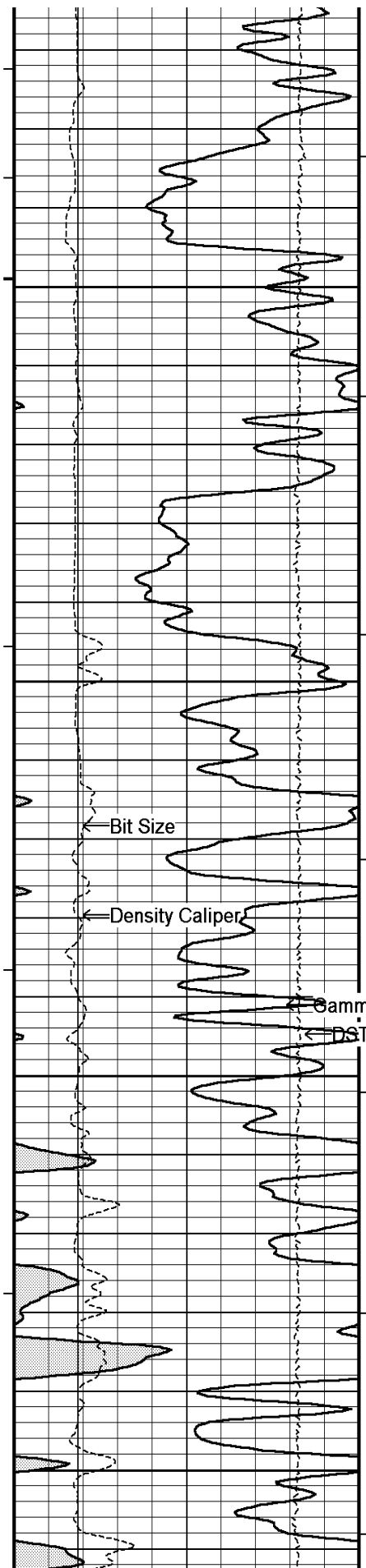
163°

5900

163°

5950





164°

6000

165°

6050

Bit Size

Density Caliper

Gamma Ray

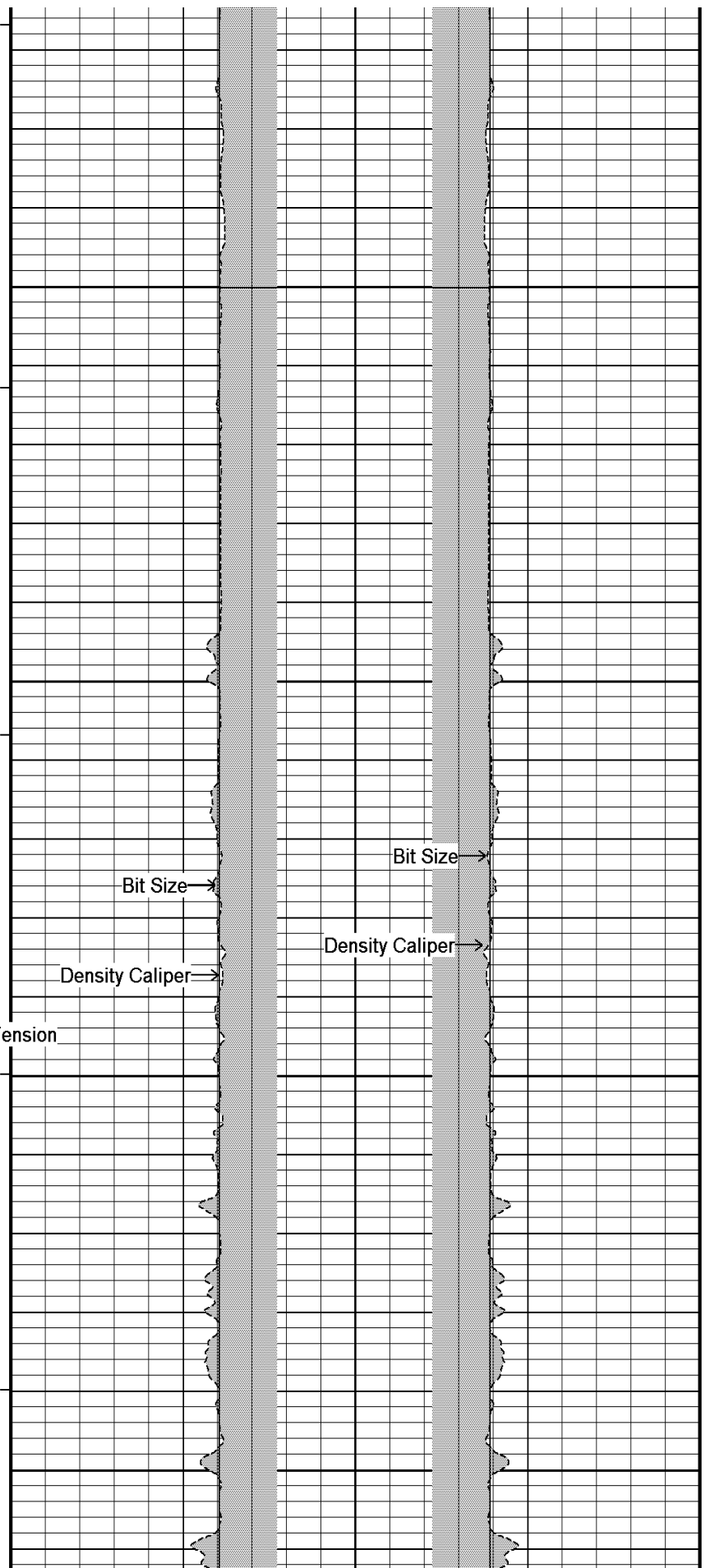
DST Uphole Tension

165°

6100

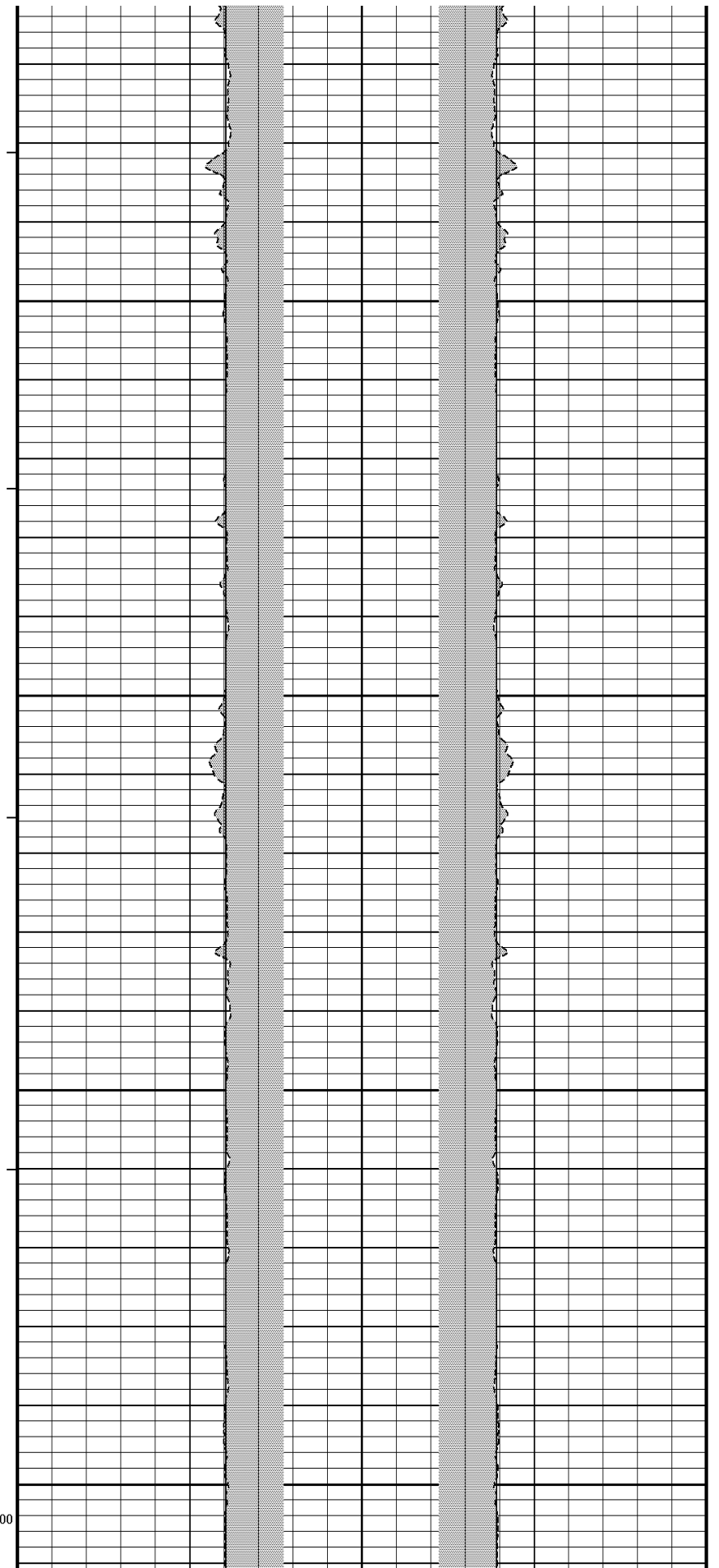
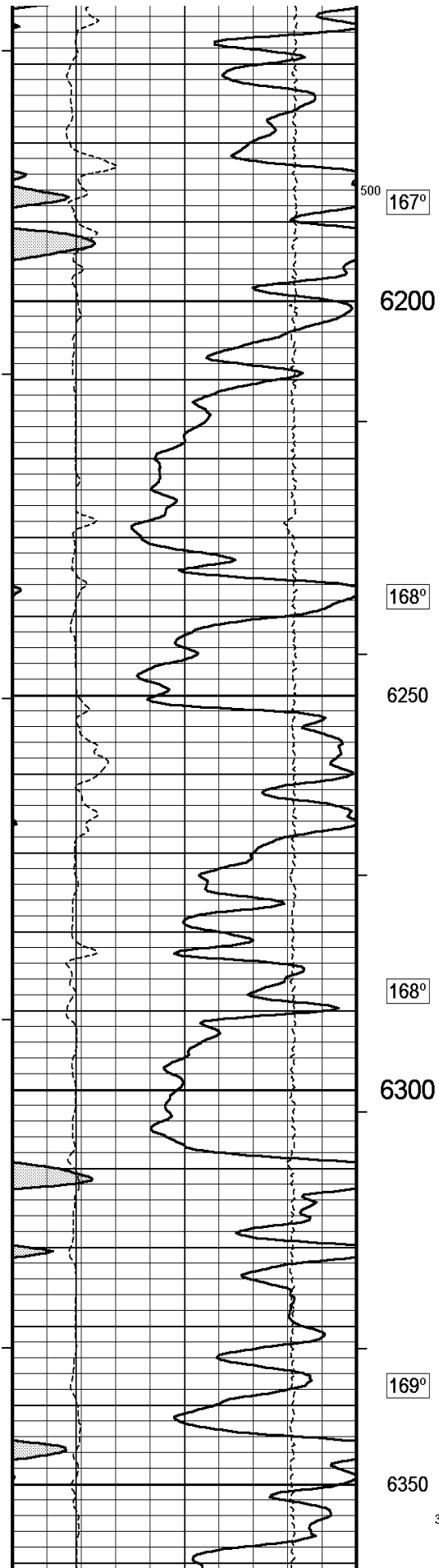
166°

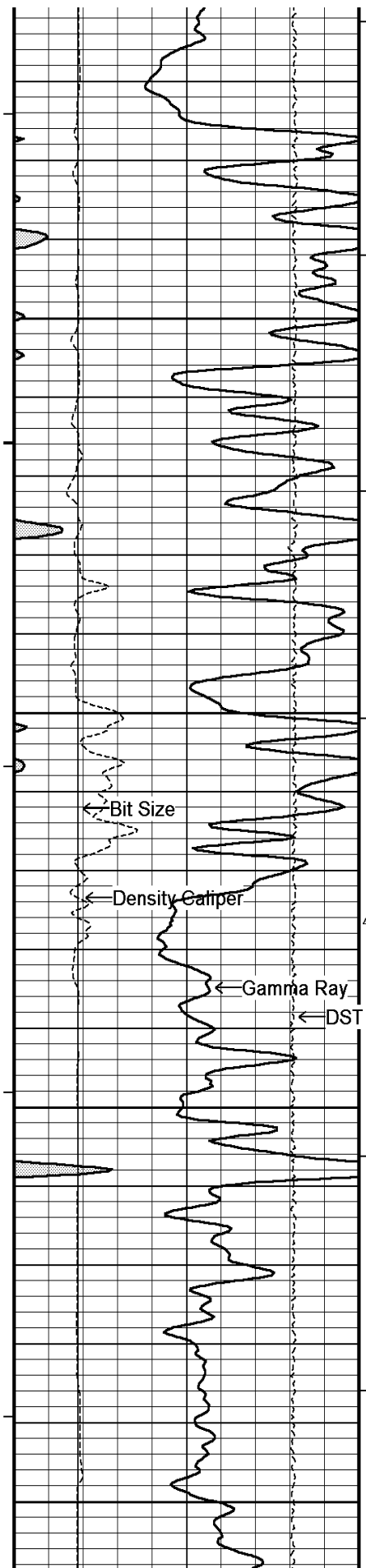
6150



Bit Size

Density Caliper





170°

6400

171°

6450

← Bit Size

← Density Caliper

← Gamma Ray

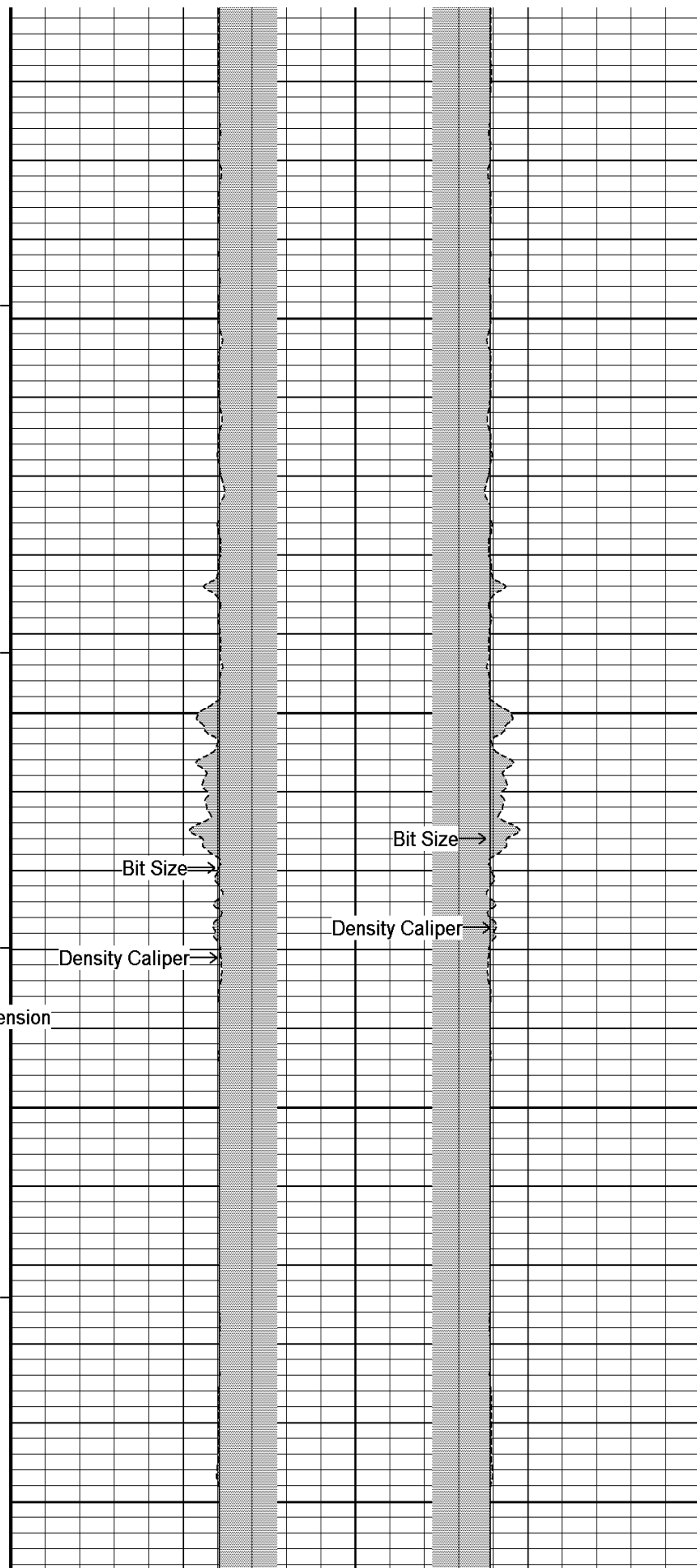
← DST Upflow Tension

400

6500

173°

6550

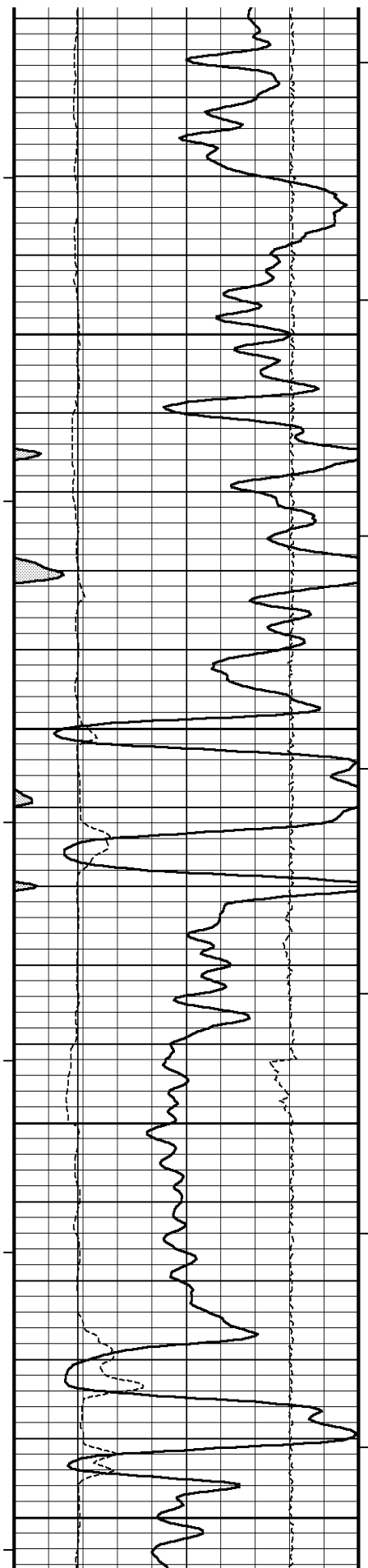


Bit Size →

Bit Size →

Density Caliper →

Density Caliper →



173°

6600

174°

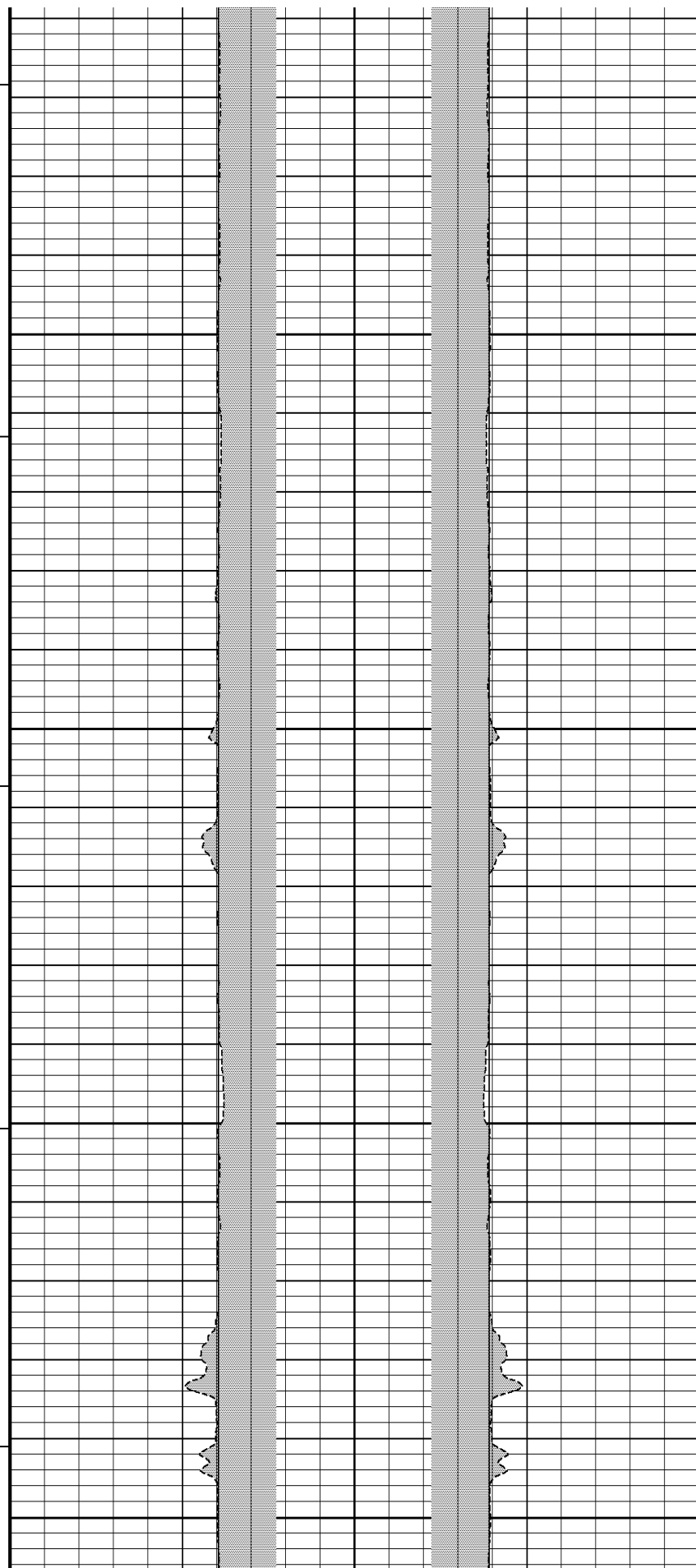
6650

175°

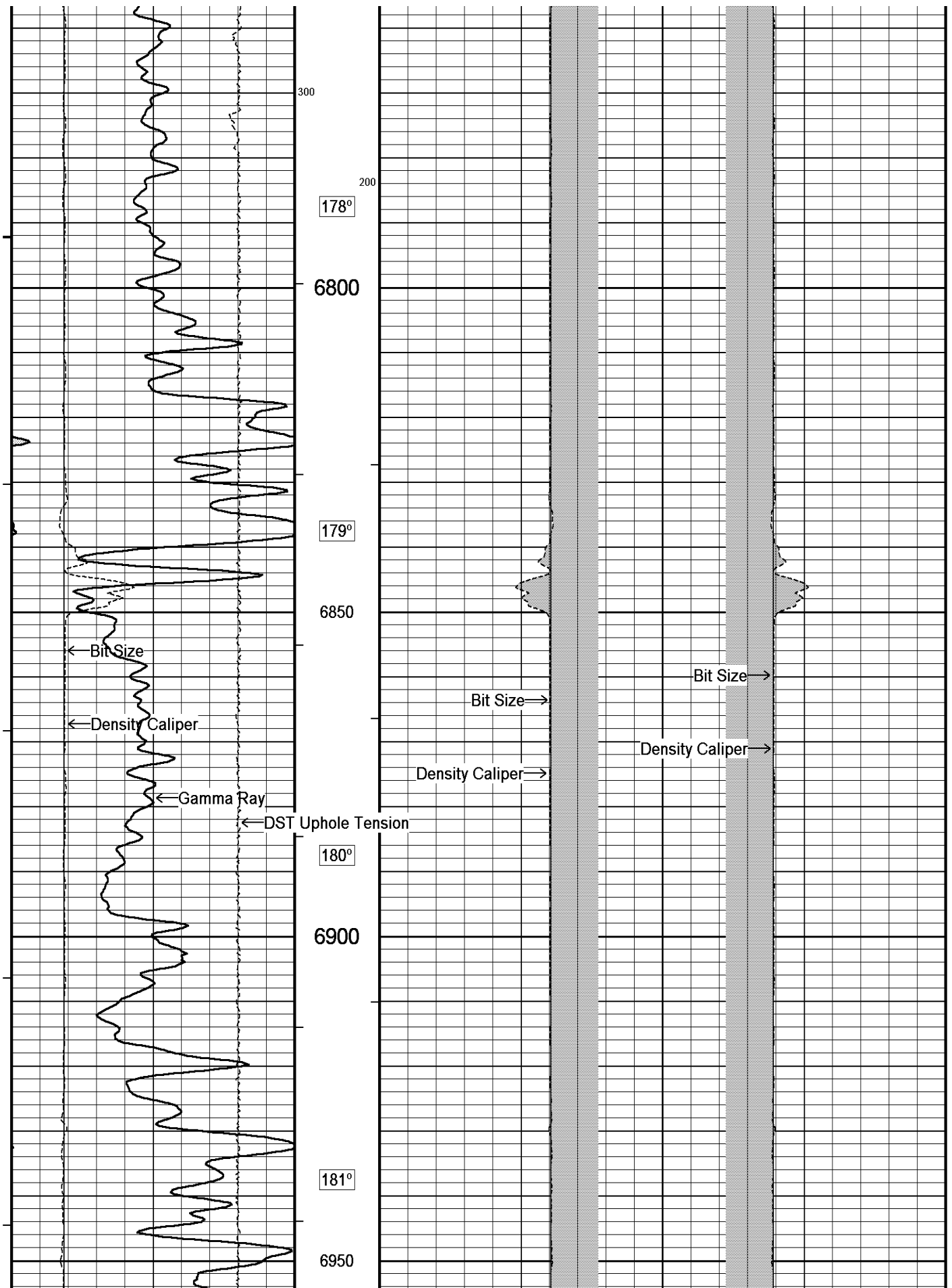
6700

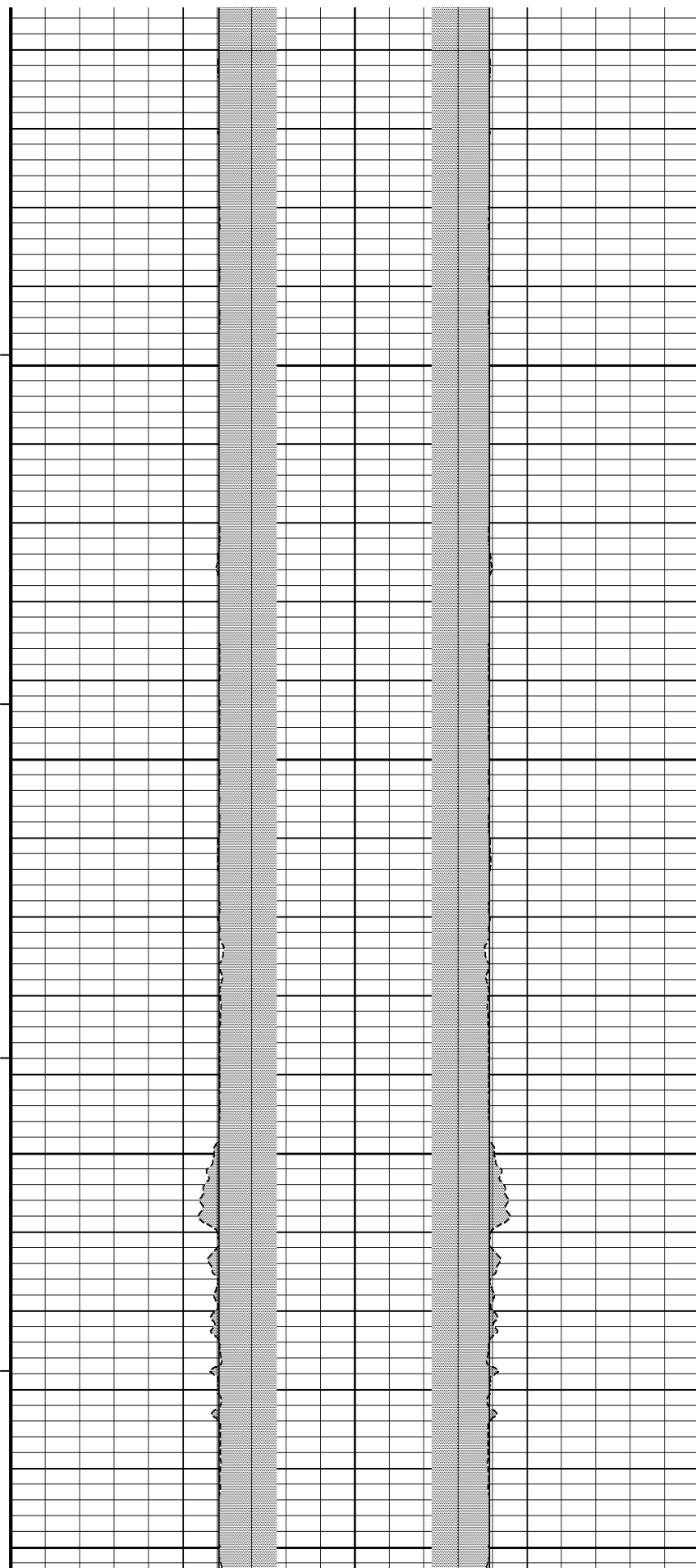
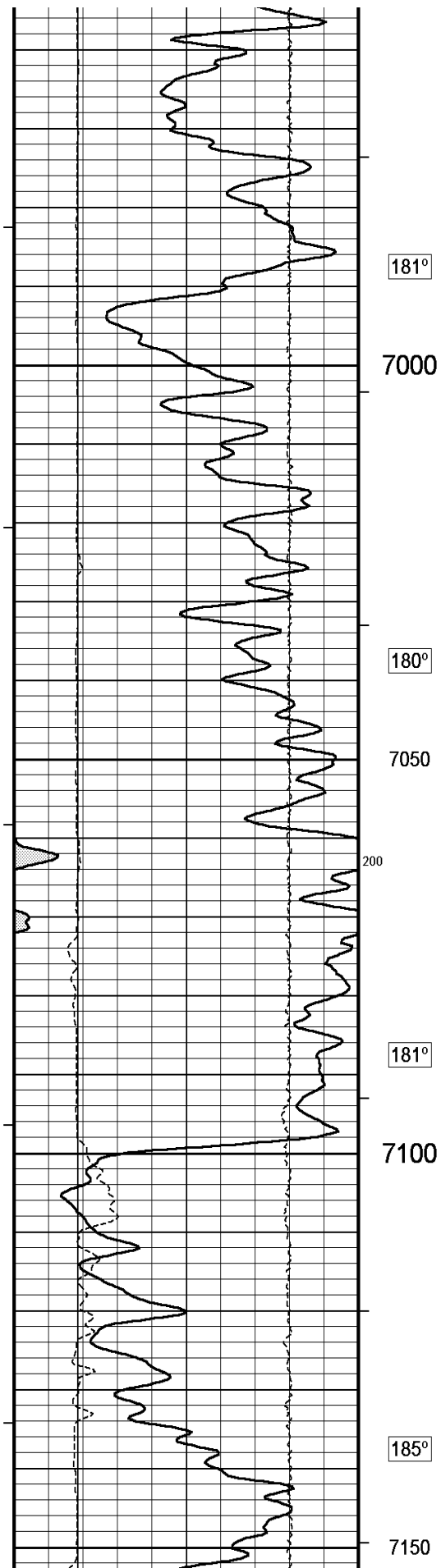
177°

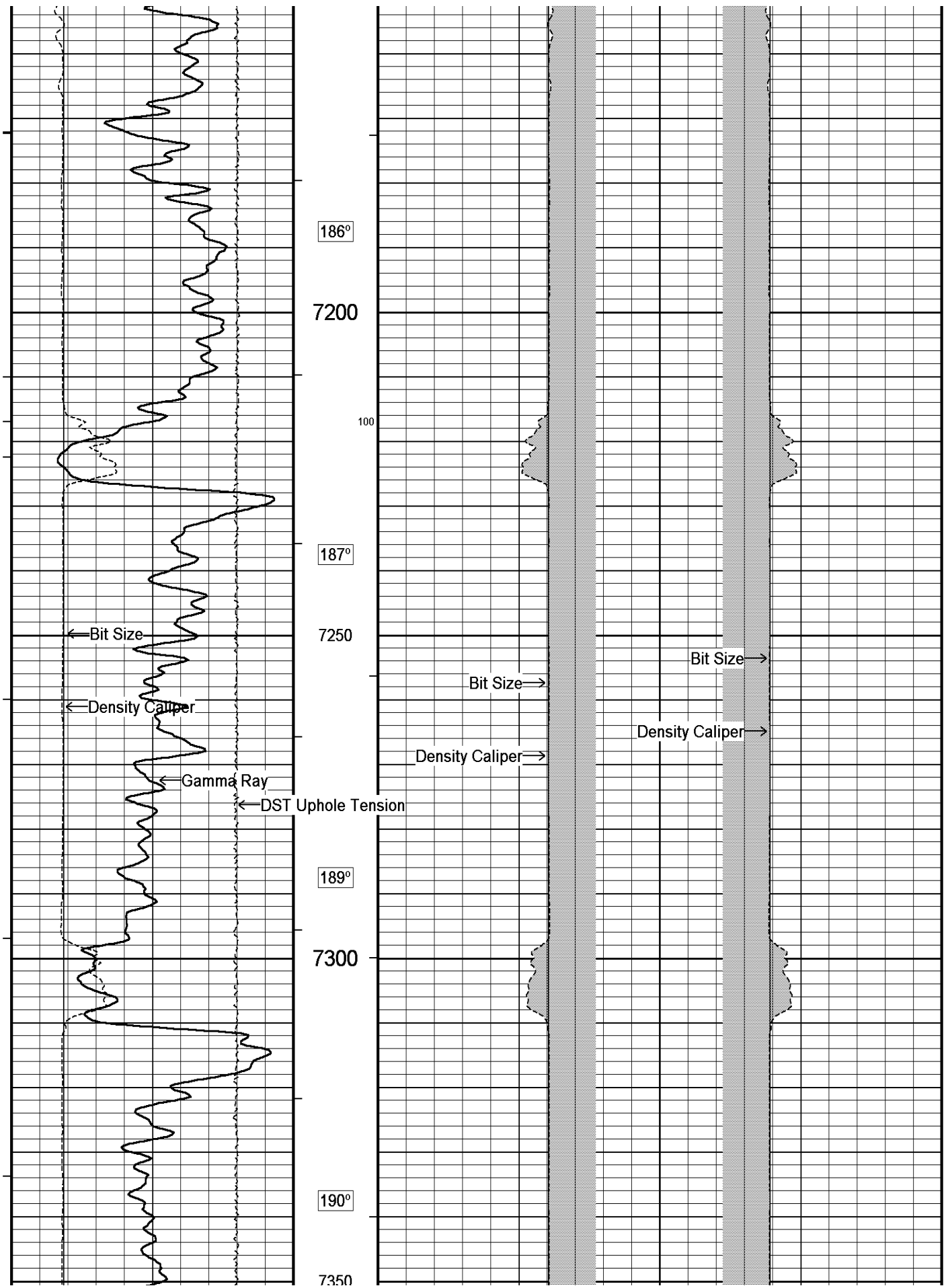
6750

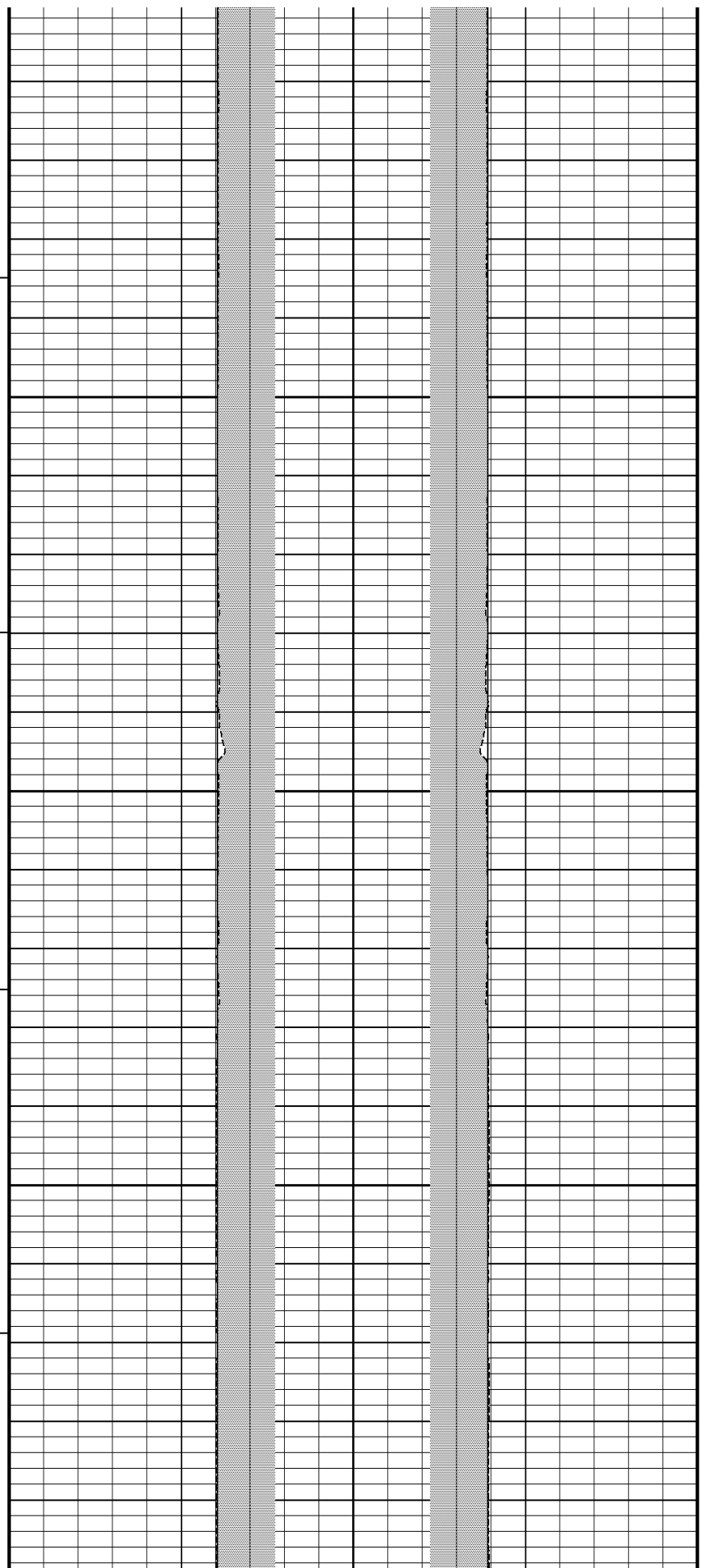
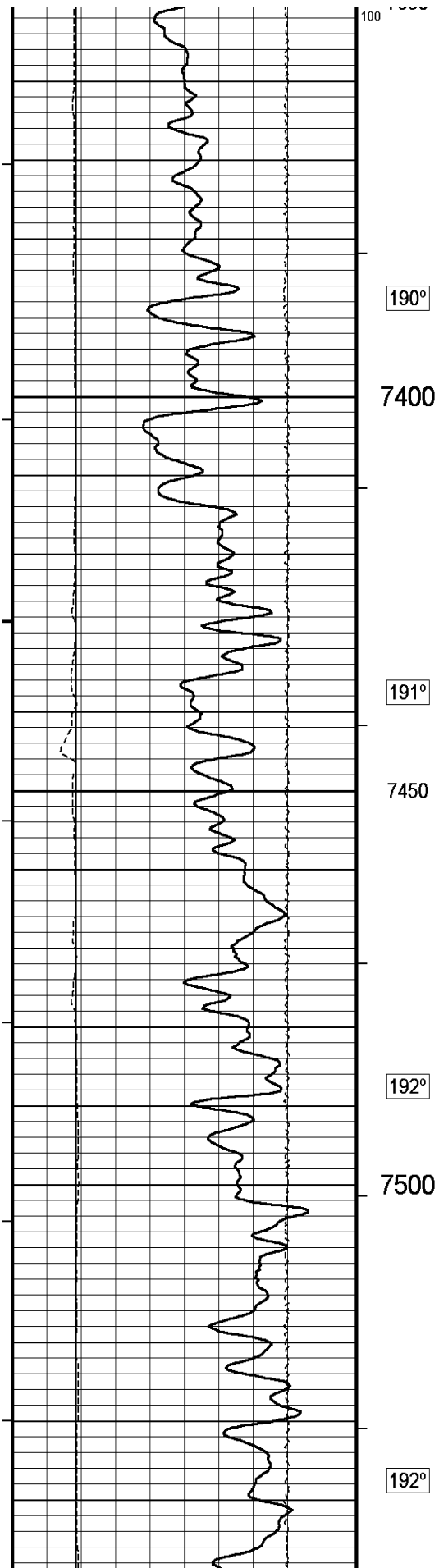


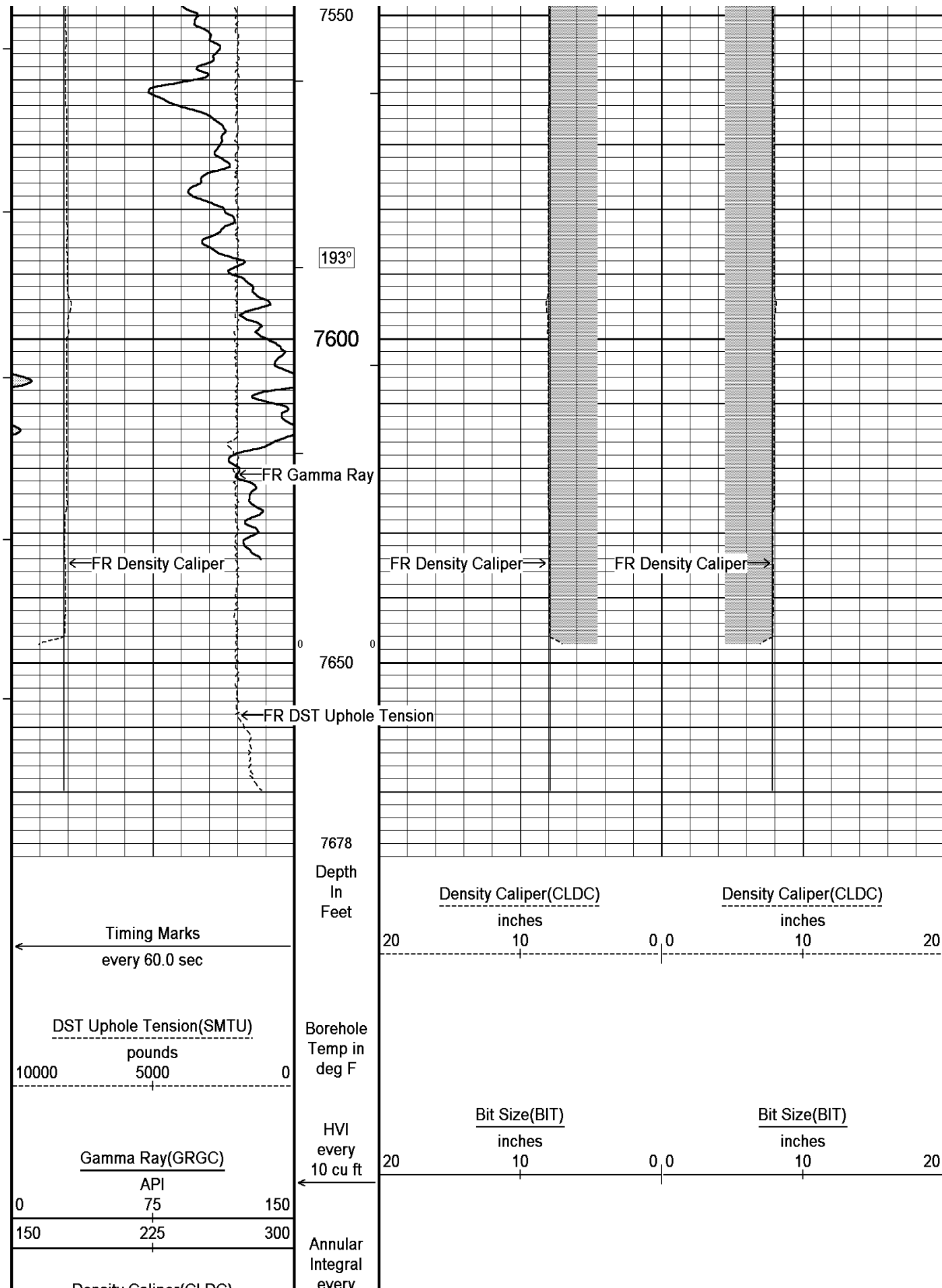


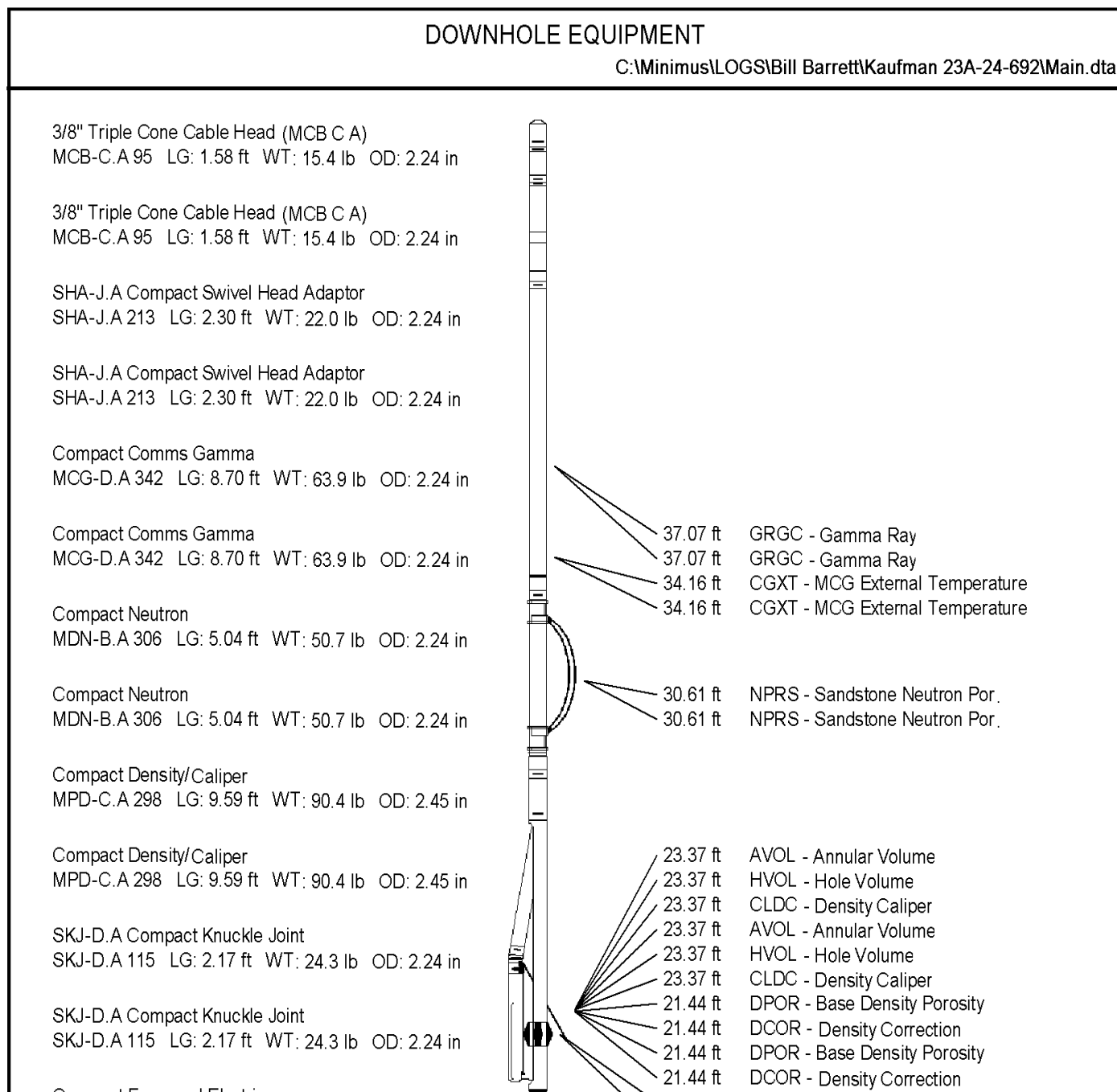
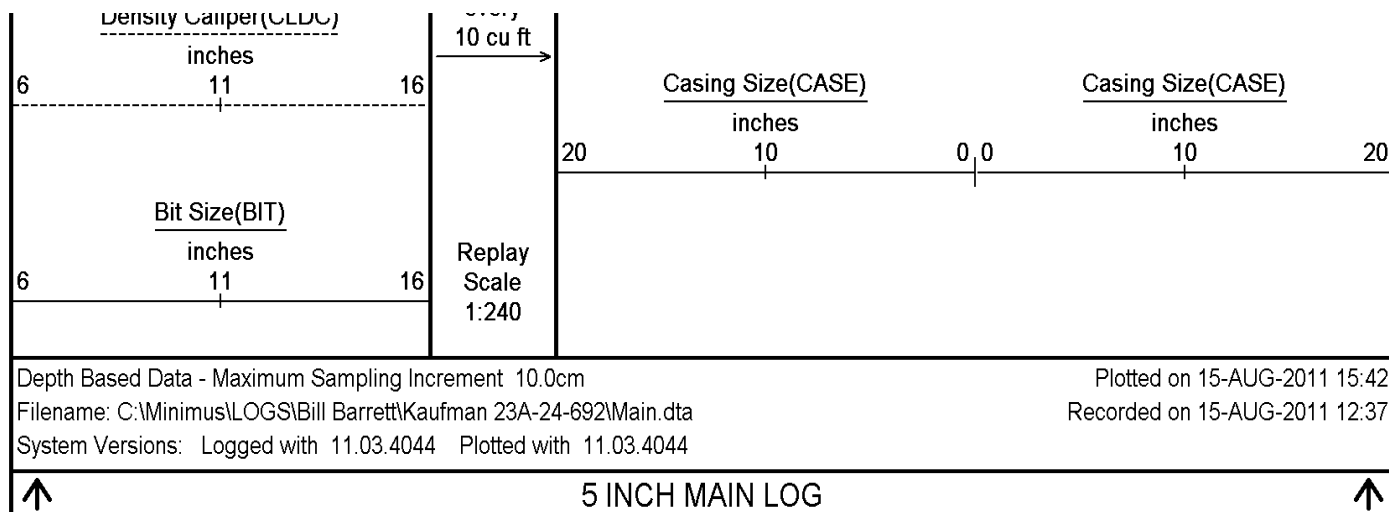












Compact Focussed Electric  
MFE-B.A 179 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

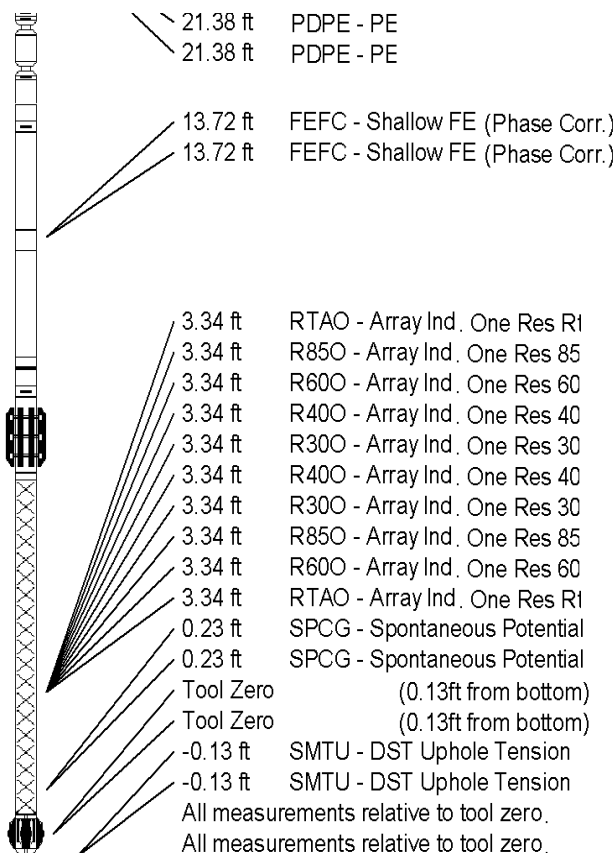
Compact Focussed Electric  
MFE-B.A 179 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Induction  
MAI-A.A 191 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Compact Induction  
MAI-A.A 191 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 46.23 ft Weight: 363.8 lb

Total Length: 46.23 ft Weight: 363.8 lb



COMPANY	BILL BARRETT CORPORATION
WELL	KAUFMAN 23A-24-692
FIELD	MAMM CREEK
PROVINCE/COUNTY	GARFIELD
COUNTRY/STATE	U.S.A. / COLORADO

Elevation Kelly Bushing	5866.00	feet	First Reading	7637.00
Elevation Drill Floor		feet	Depth Driller	7657.00 feet
Elevation Ground Level	5843.00	feet	Depth Logger	7658.00 feet



**Weatherford®**

HOLE VOLUME  
CALIPER LOG

