

**Weatherford**[®]**CALIPER LOG**

COMPANY				CHACO ENERGY COMPANY			
WELL				SCHEETZ #4-21			
FIELD				WILDCAT			
PROVINCE/COUNTY				LOGAN			
COUNTRY/STATE				U.S.A. / KANSAS			
LOCATION				335' FNL & 2480' FEL SW NW NW NE			
SEC	TWP	RGE	Other Services				
21	13S	32W					
API Number		15-109-21158					
Permit Number							
Permanent Datum G.L., Elevation 3027 feet				Elevations:			
Log Measured From KB				KB 3036.00			
Drilling Measured From K.B.				DF 3035.00			
Date	09-FEB-2013			GL 3027.00			
Run Number	ONE						
Service Order	3537860						
Depth Driller	4730.00			feet			
Depth Logger	4727.00			feet			
First Reading	4693.00			feet			
Last Reading	237.00			feet			
Casing Driller	237.00			feet			
Casing Logger	237.00			inches			
Bit Size	7.875						
Hole Fluid Type	CHEMICAL			lb/USg			
Density / Viscosity	9.40 lb/USg			56.00			
PH / Fluid Loss	9.50			9.50			
Sample Source	FLOWLINE						
Rm @ Measured Temp	0.96 @ 84.0			ohm-m			
Rmf @ Measured Temp	0.77 @ 84.0			ohm-m			
Rmc @ Measured Temp	1.15 @ 84.0			ohm-m			
Source Rmf / Rmc	CALC	CALC					
Rm @ BHT	0.71 @114.0			ohm-m			
Time Since Circulation	5 HOURS						
Max Recorded Temp	114.00			deg F			
Equipment / Base	13057	LIB					
Recorded By	LYNN SCOTT						
Witnessed By	AUSTIN GARNER						
IOB#	LB13-038						

BOREHOLE RECORD

Last Edited: 08-FEB-2013 23:58

Bit Size inches	Depth From feet	Depth To feet
7.875	237.00	4730.00

CASING RECORD

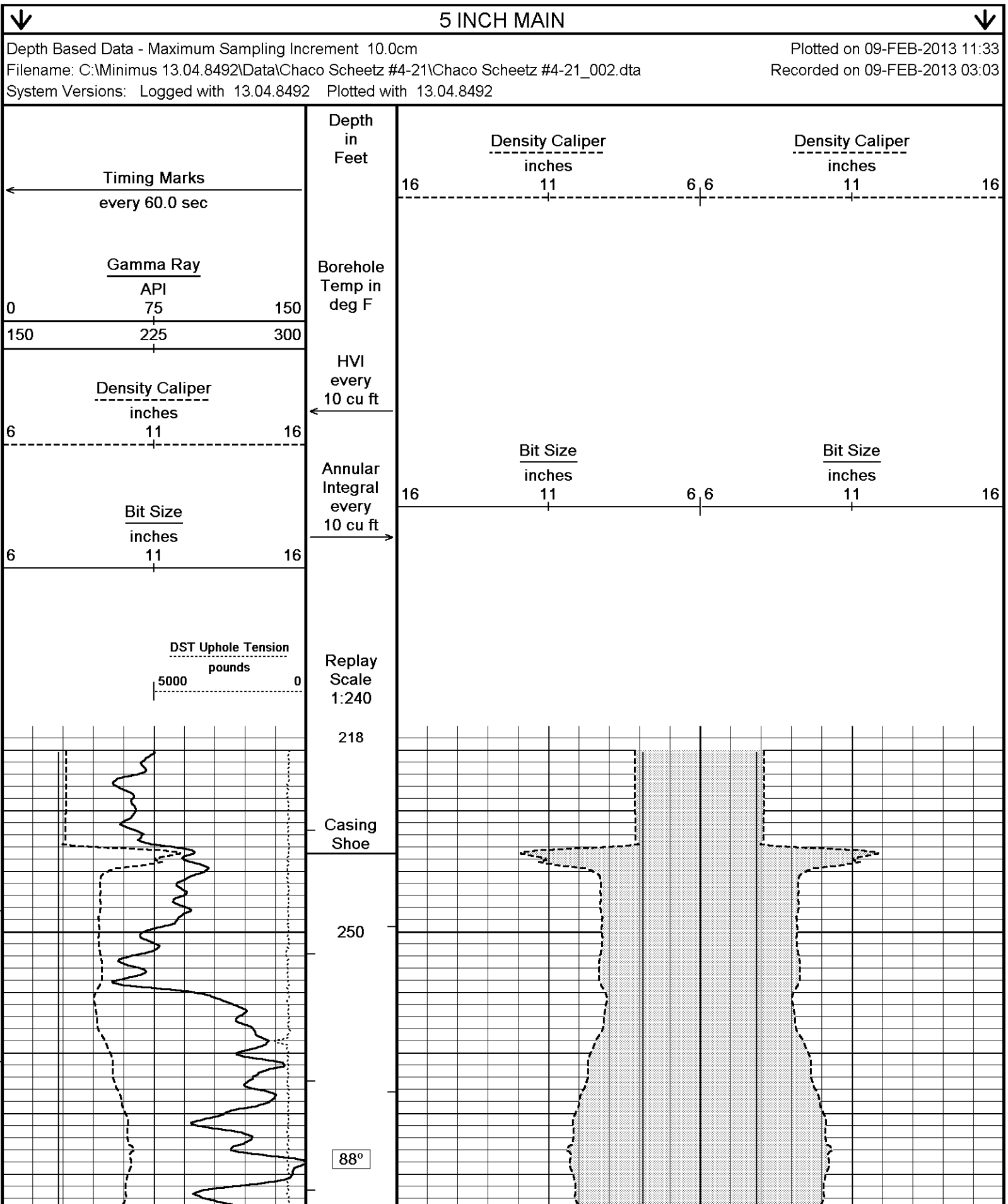
Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	237.00	24.00

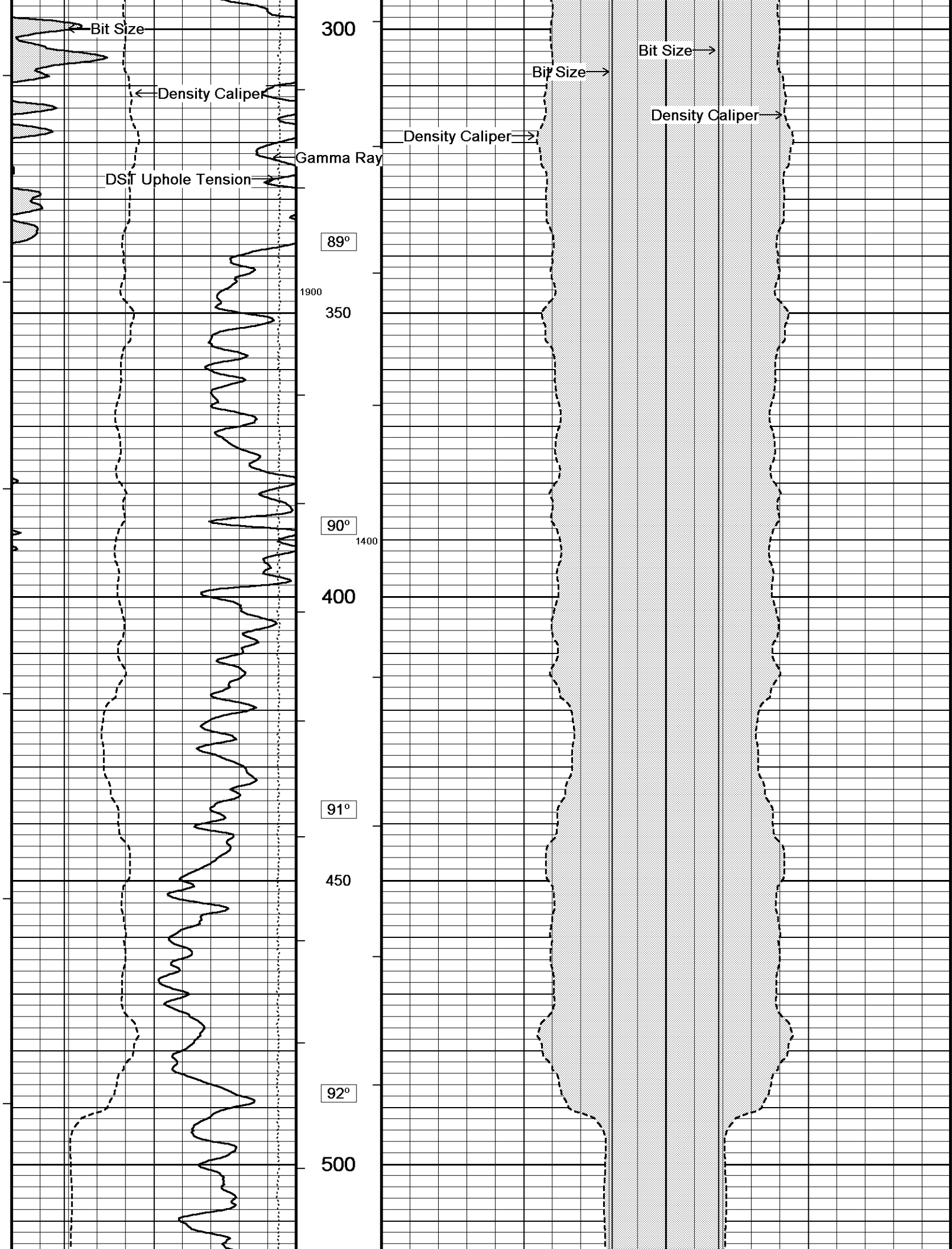
REMARKS

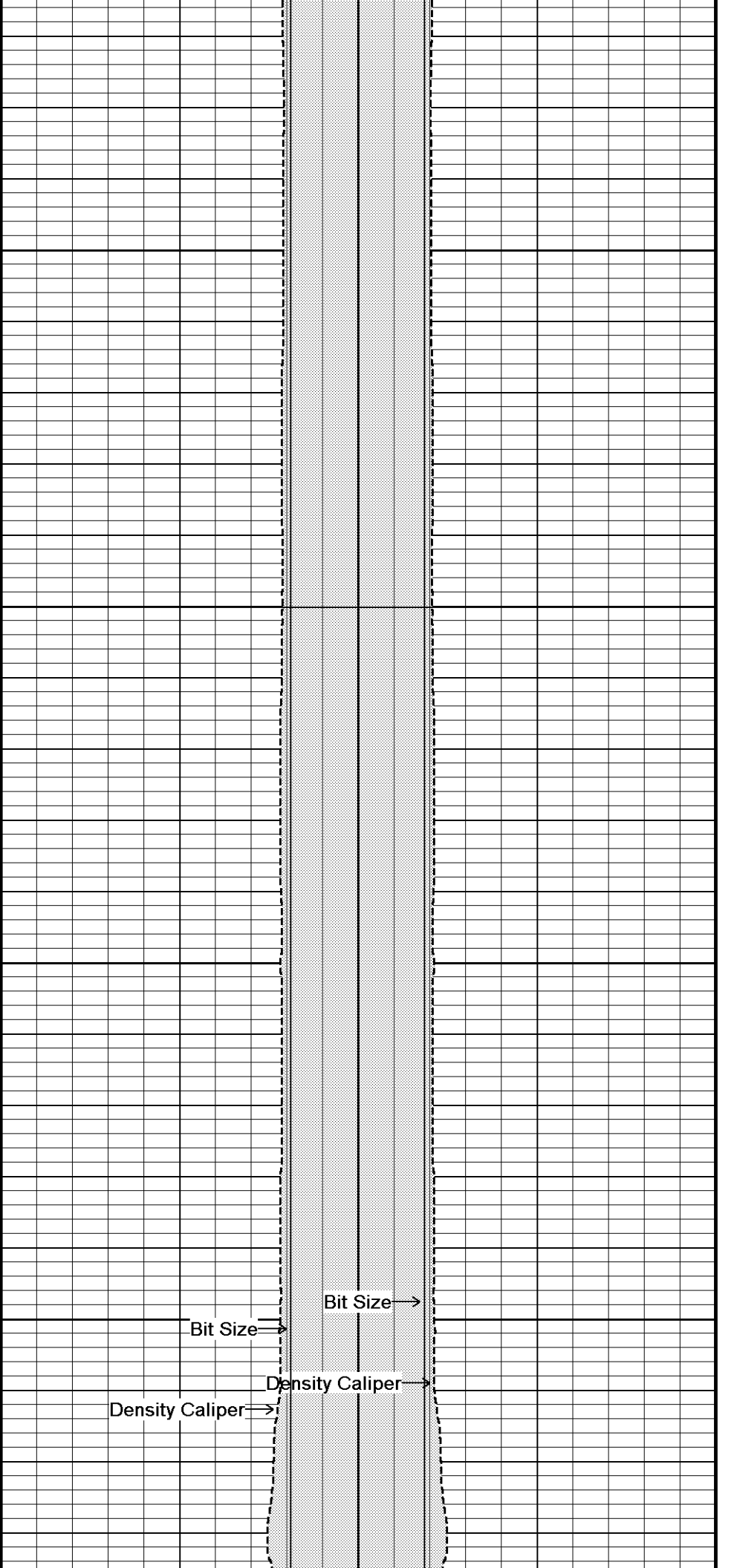
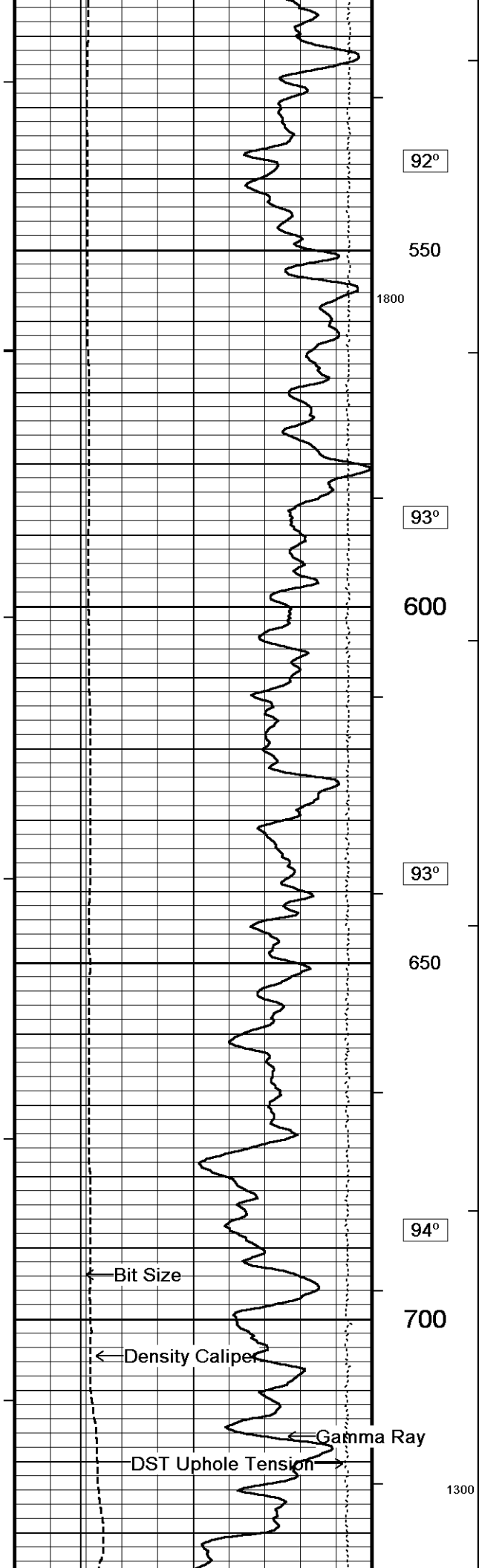
Tools Ran: MCG,MMR,MDN,MPD,MFE,MSS,MAI Ran in Combination
Hardware Used: MDN Dual Eccentralizer used. MPD 8 inch profile plate used.
MFE: 0.5 inch Standoff = 1
MAI: 0.5 inch Standoff = 1
MSS: 0.5 inch Standoffs = 2
2.71 g/cc Limestone Density Matrix used to calculate porosity.
Sonic porosity calculated using (47.5usec/ft) Limestone scale.
Tight pulls, washouts, and borehole rugosity will affect data quality.
All intervals logged and scaled per customer's request.
Annular volume with 4.5 inch production casing from TD to 3700= 266 cu. ft.
Total hole volume from TD to surface casing= 1958 cu. ft.
Service order: #3537860
Rig: H2 Drilling #3
Engineers: L. Scott
Operator(s): K. Rinehart

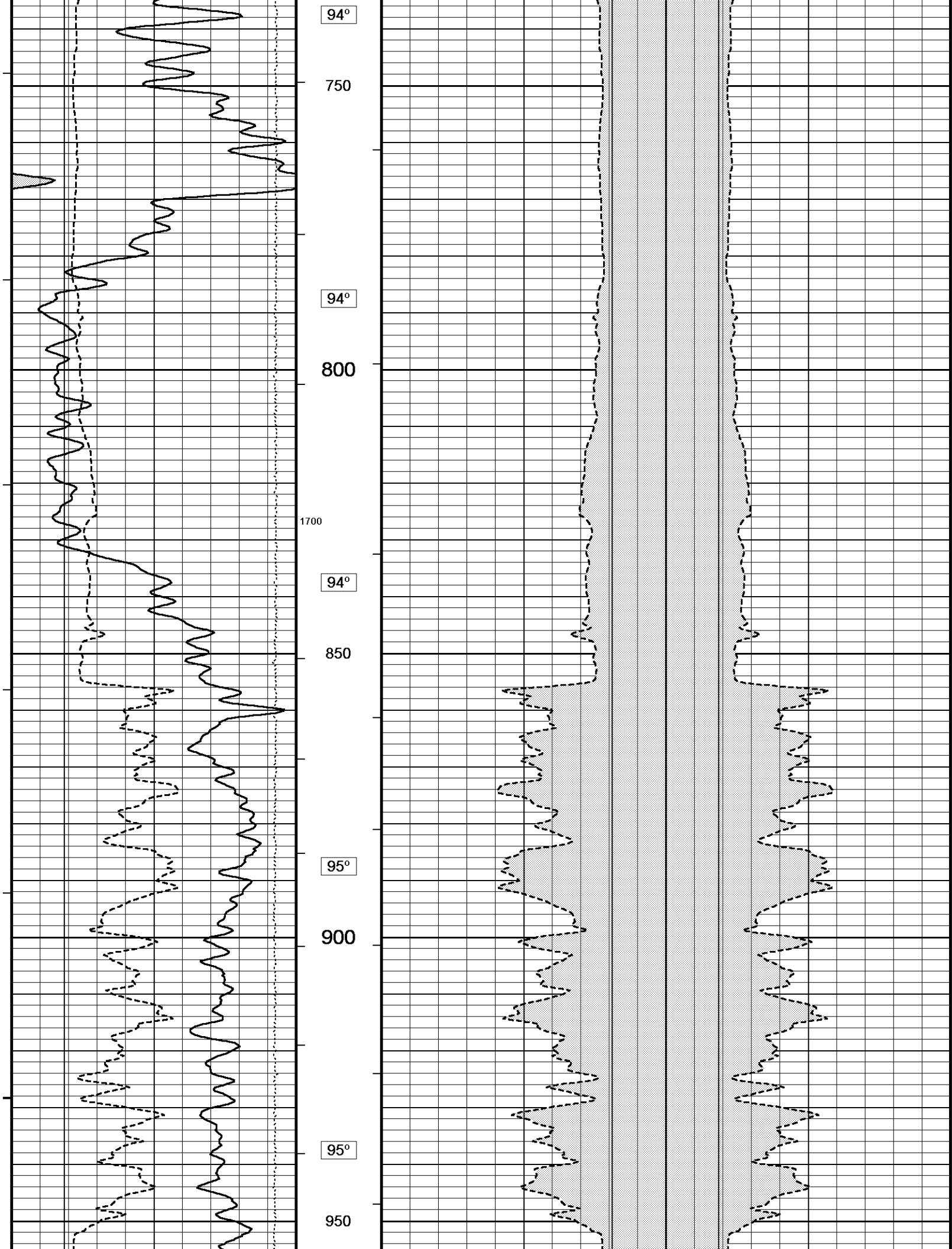
Software duplicates the pH value onto the fluid loss value. The fluid loss is 7.2.

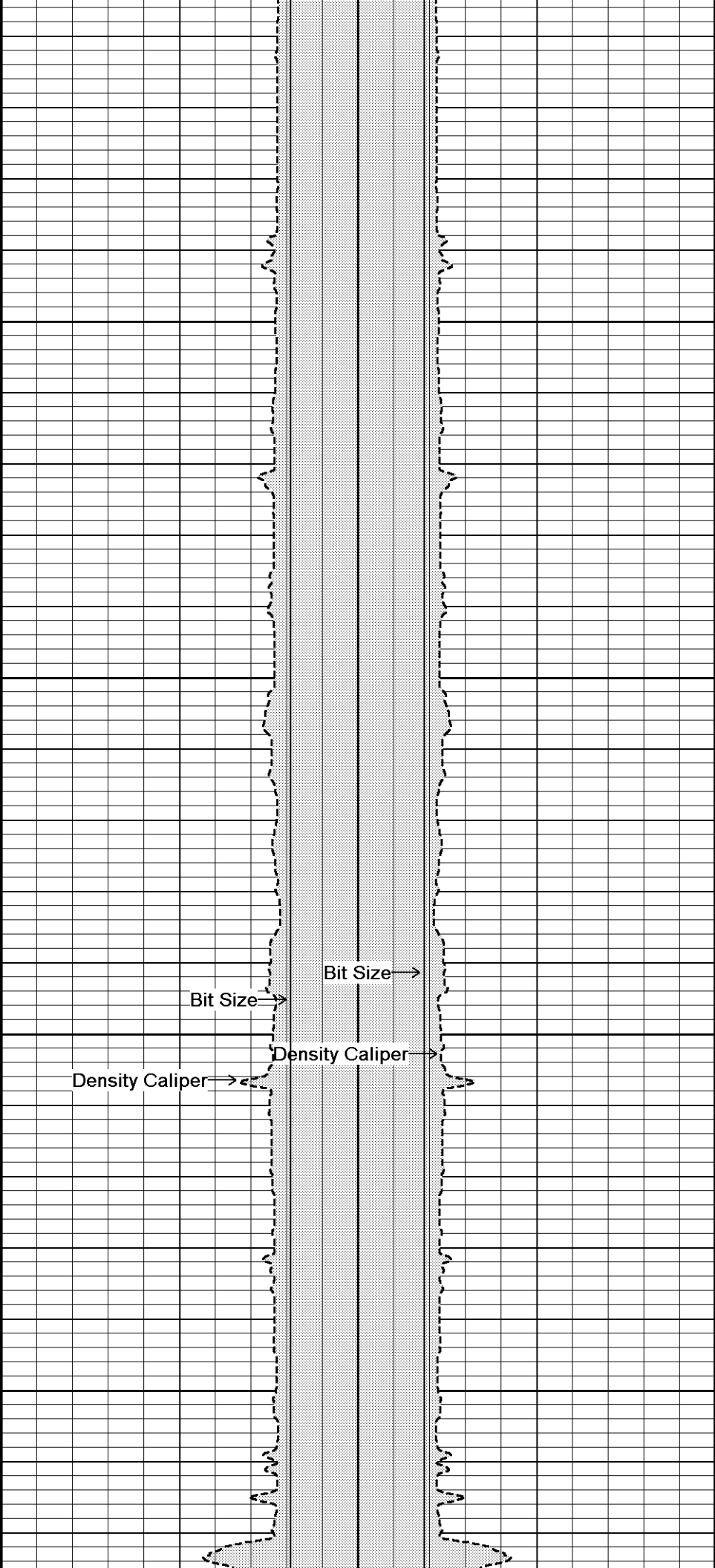
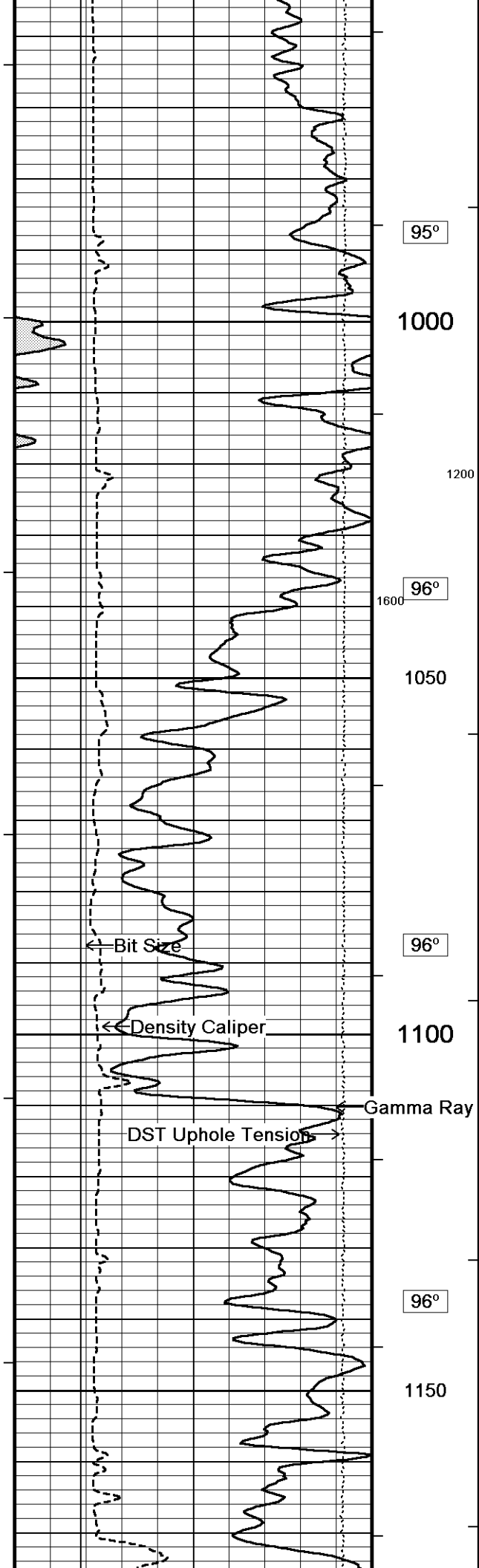
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

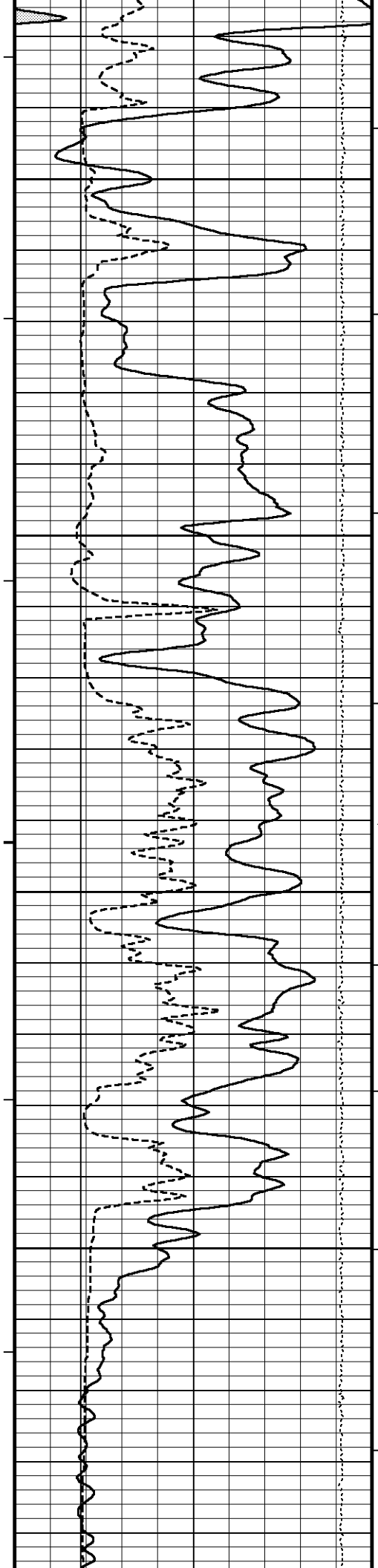












96°

1200

96°

1250

97°

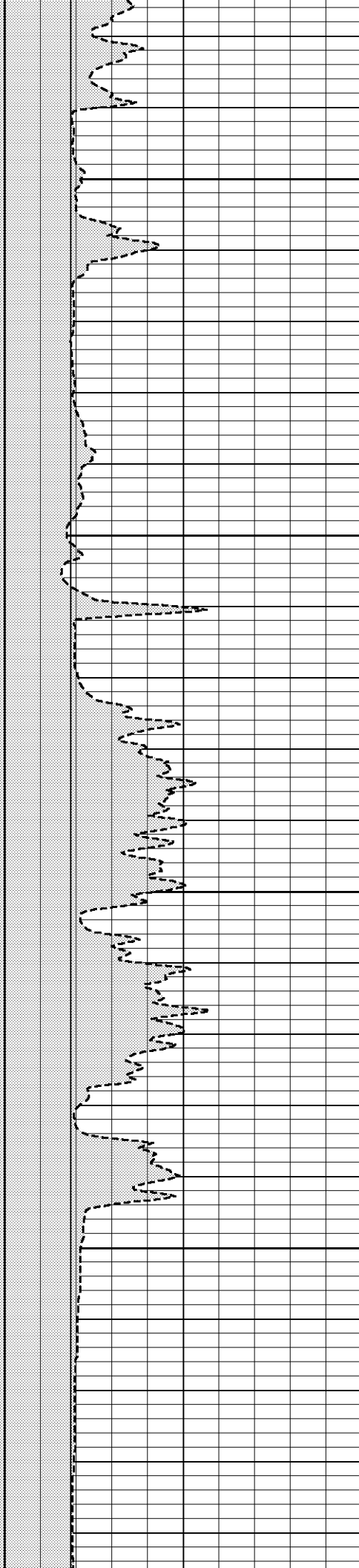
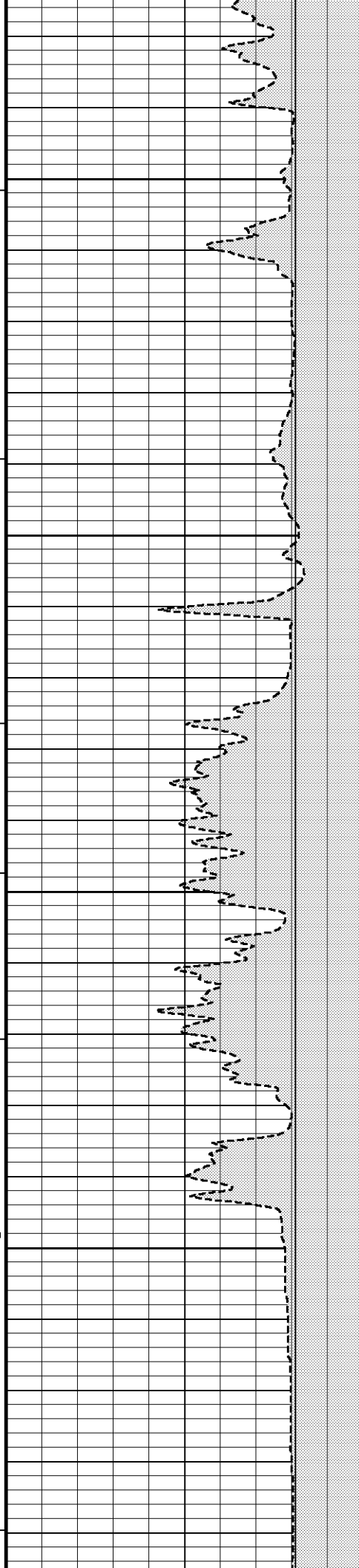
1500

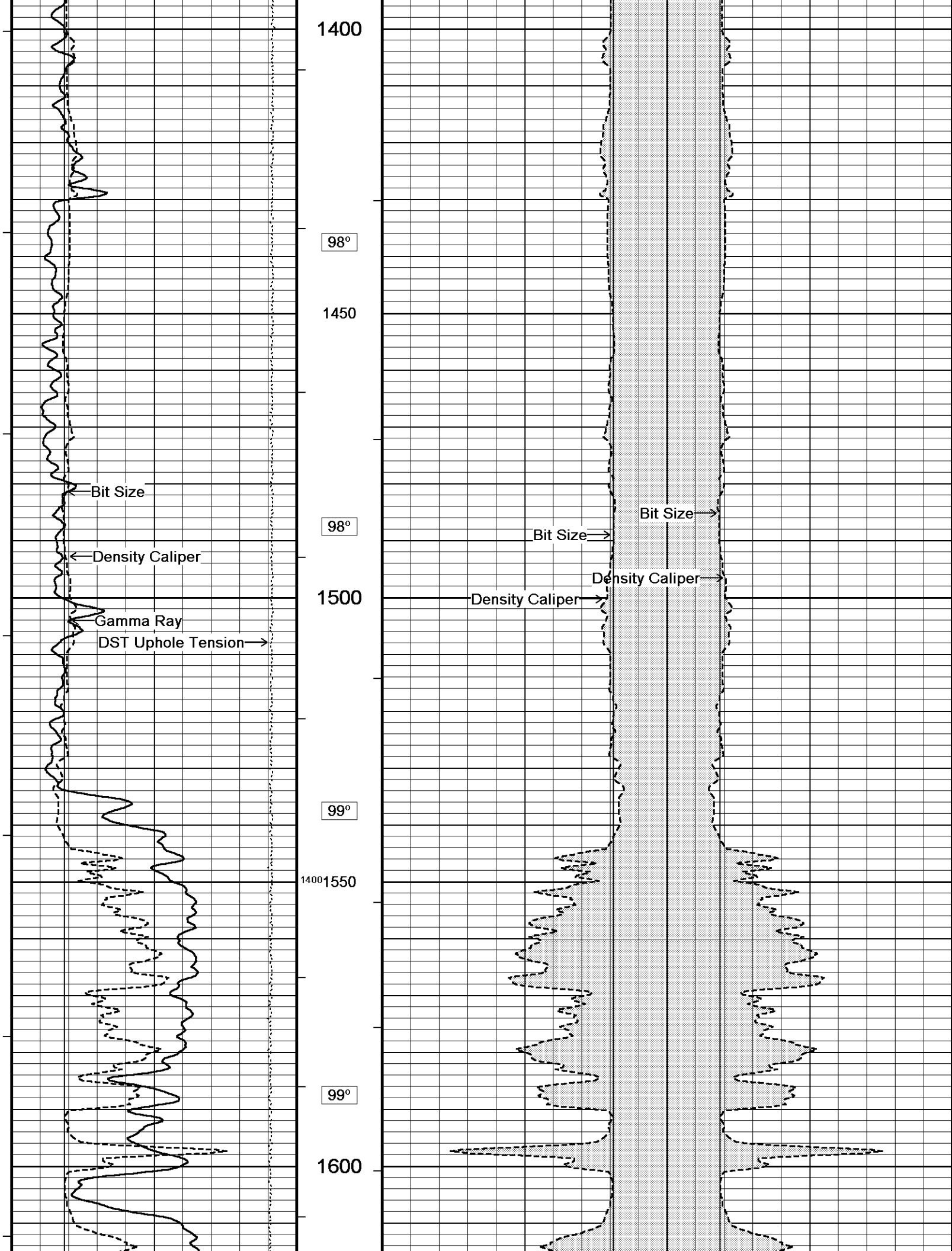
1300

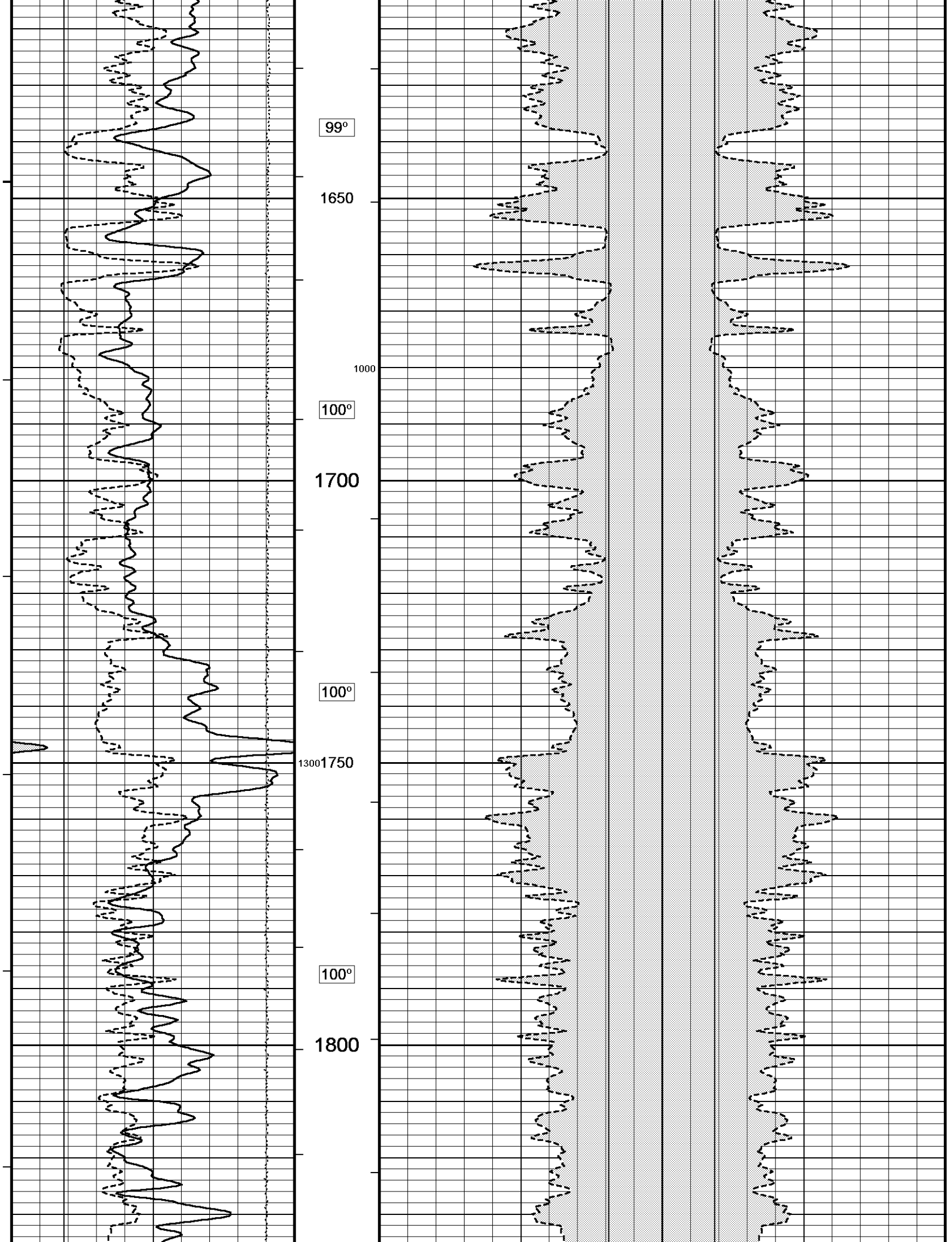
97°

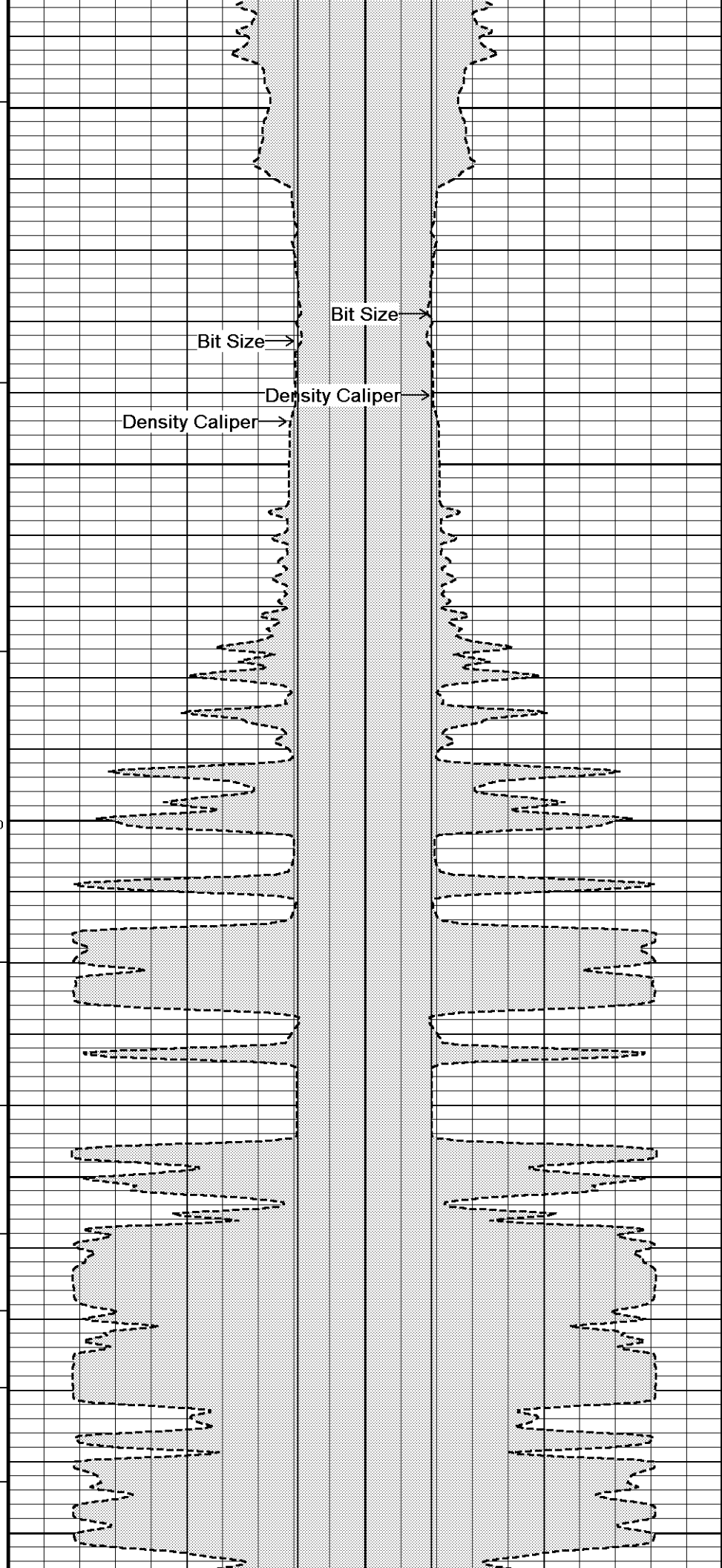
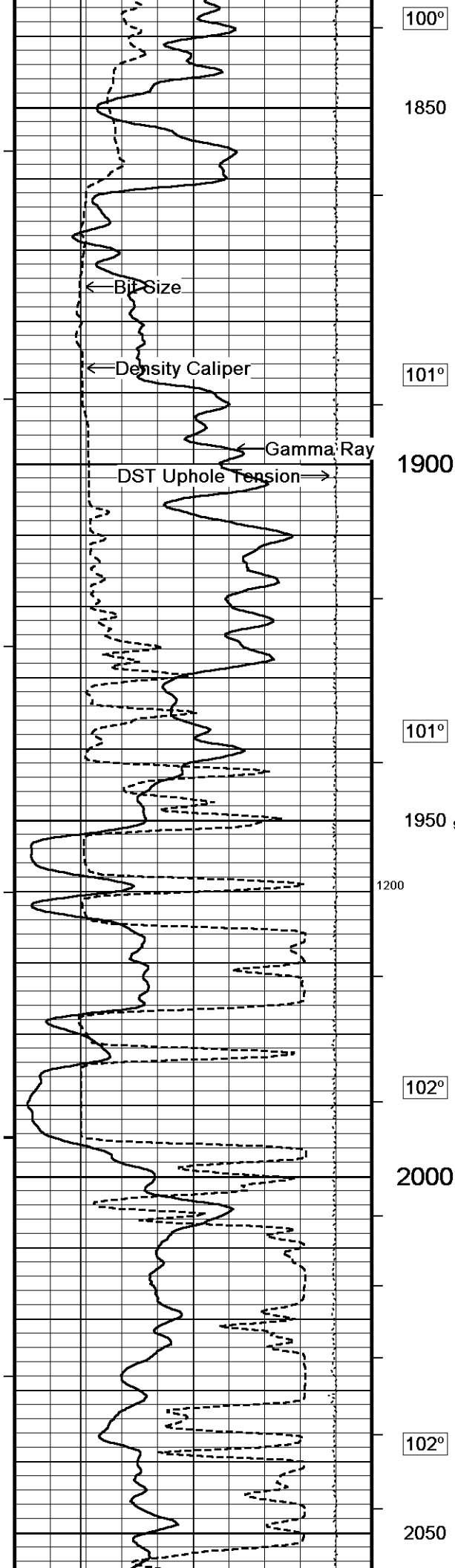
1350¹¹⁰⁰

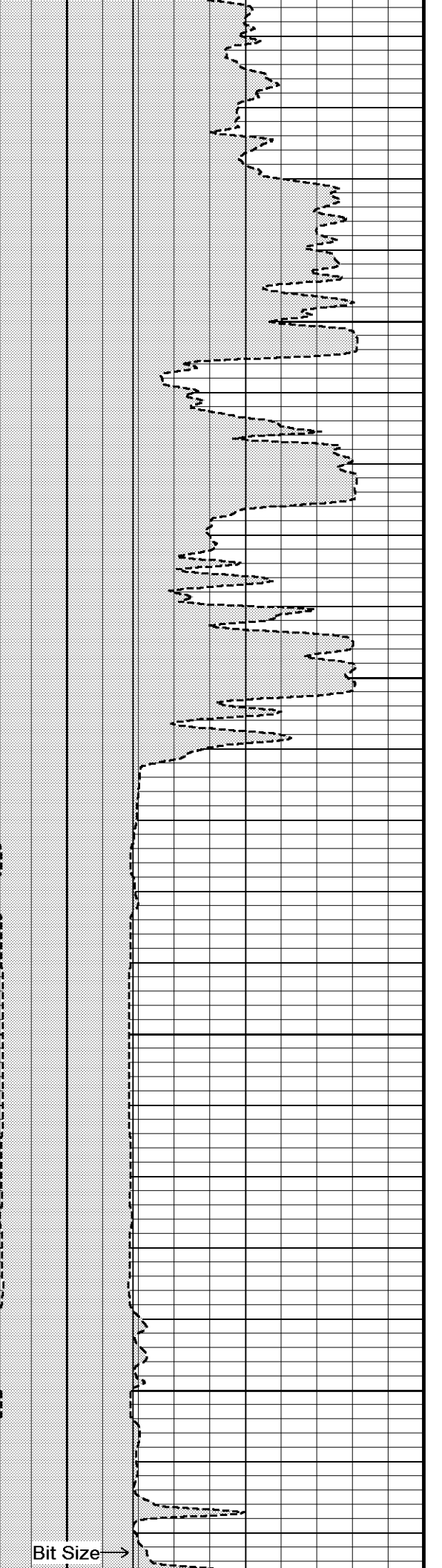
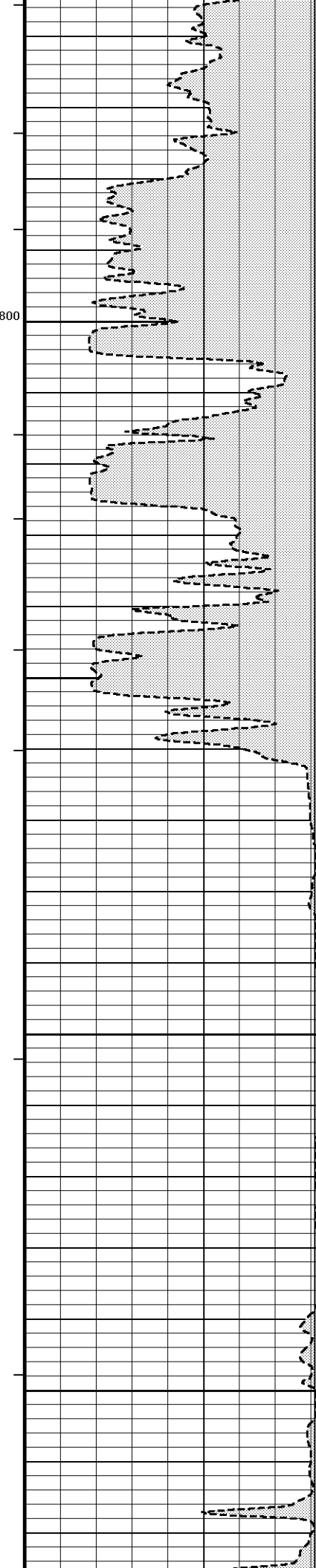
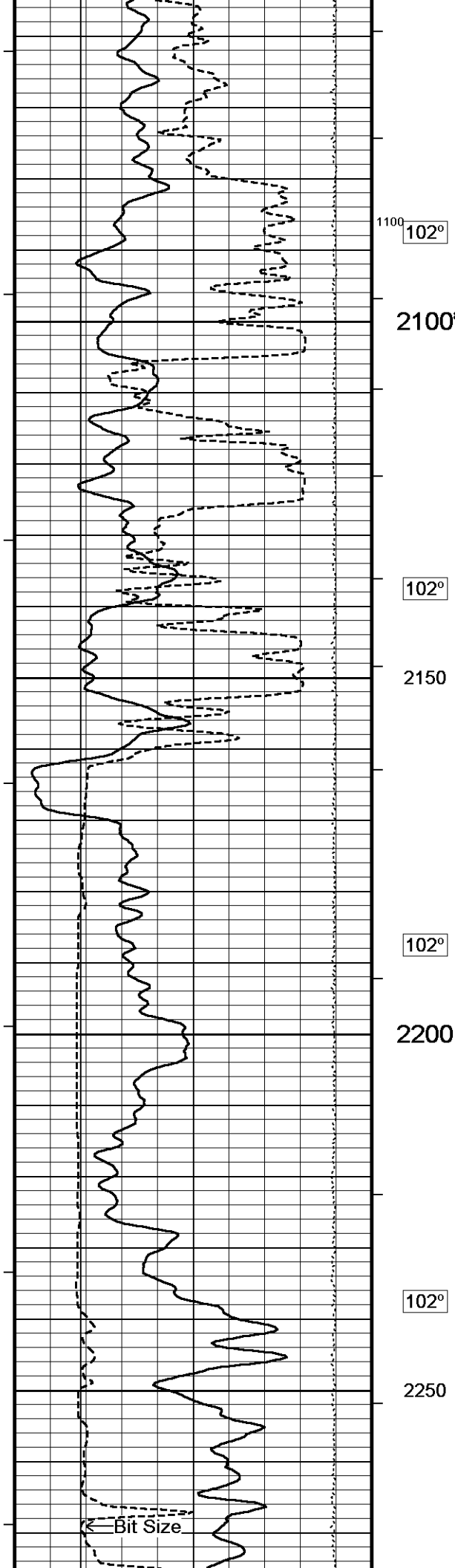
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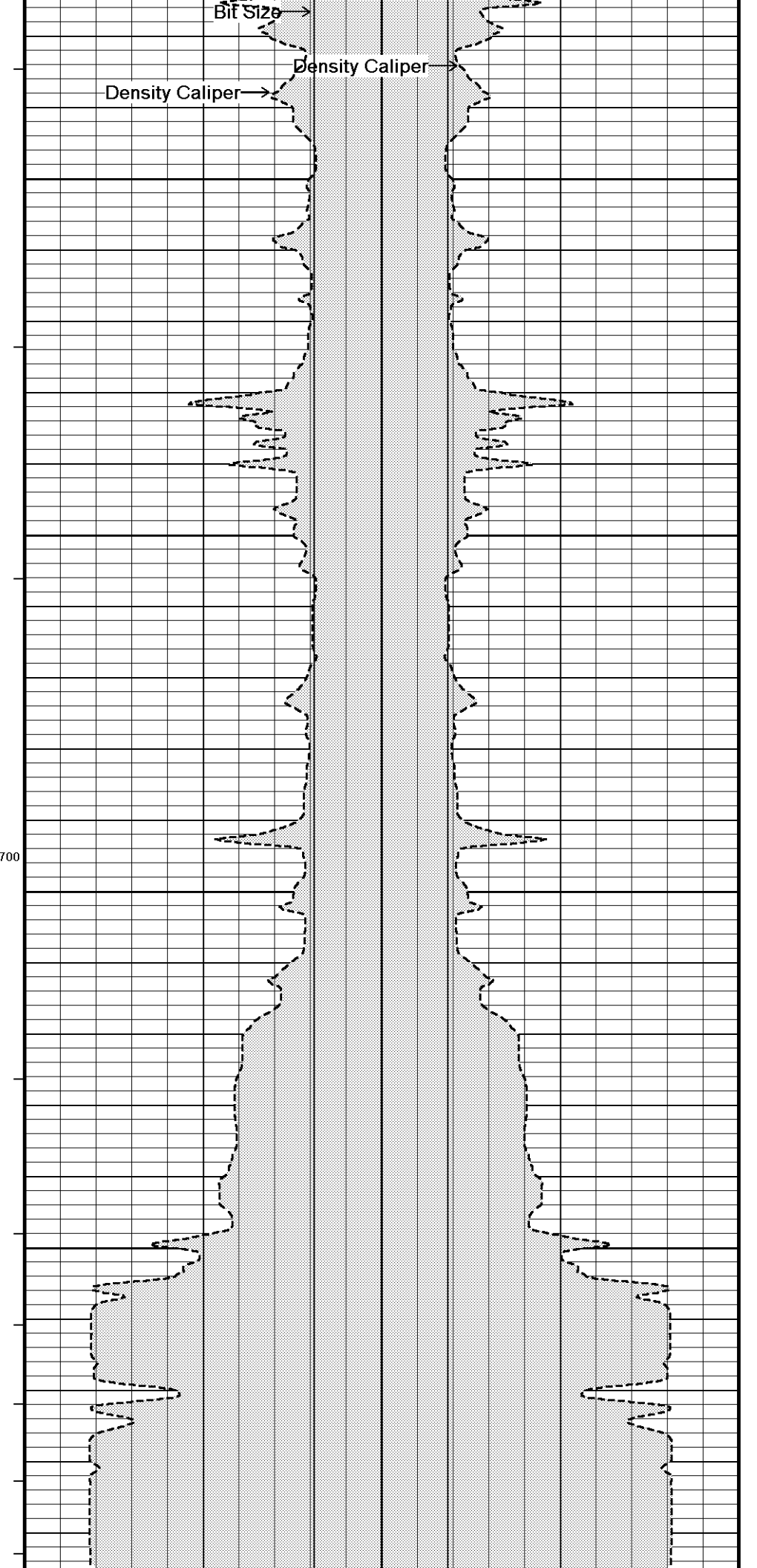
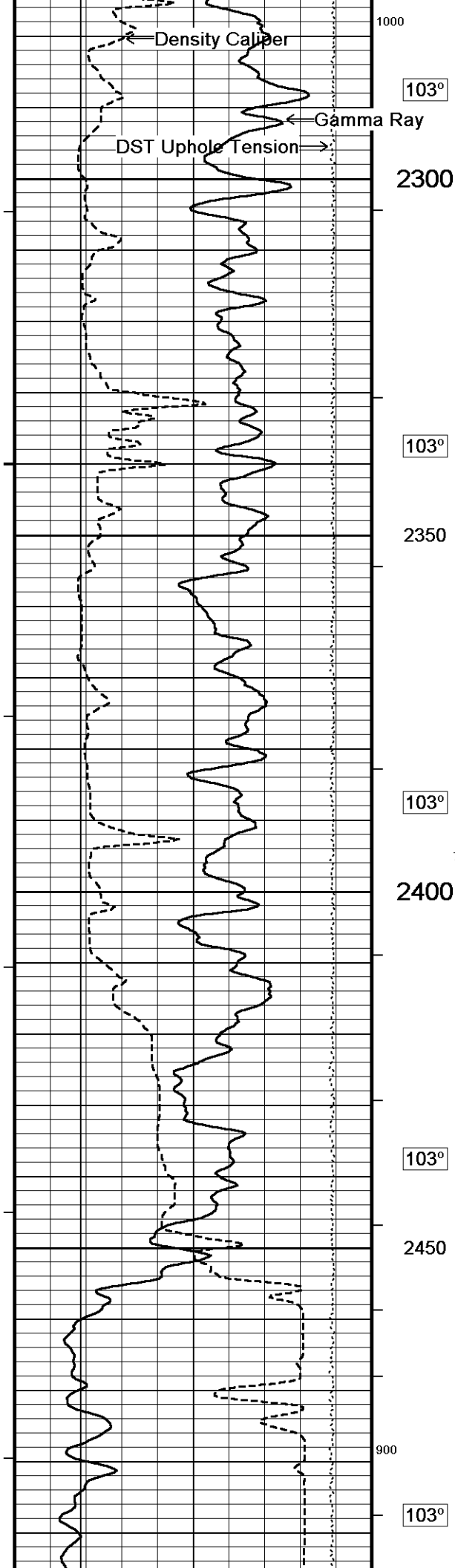


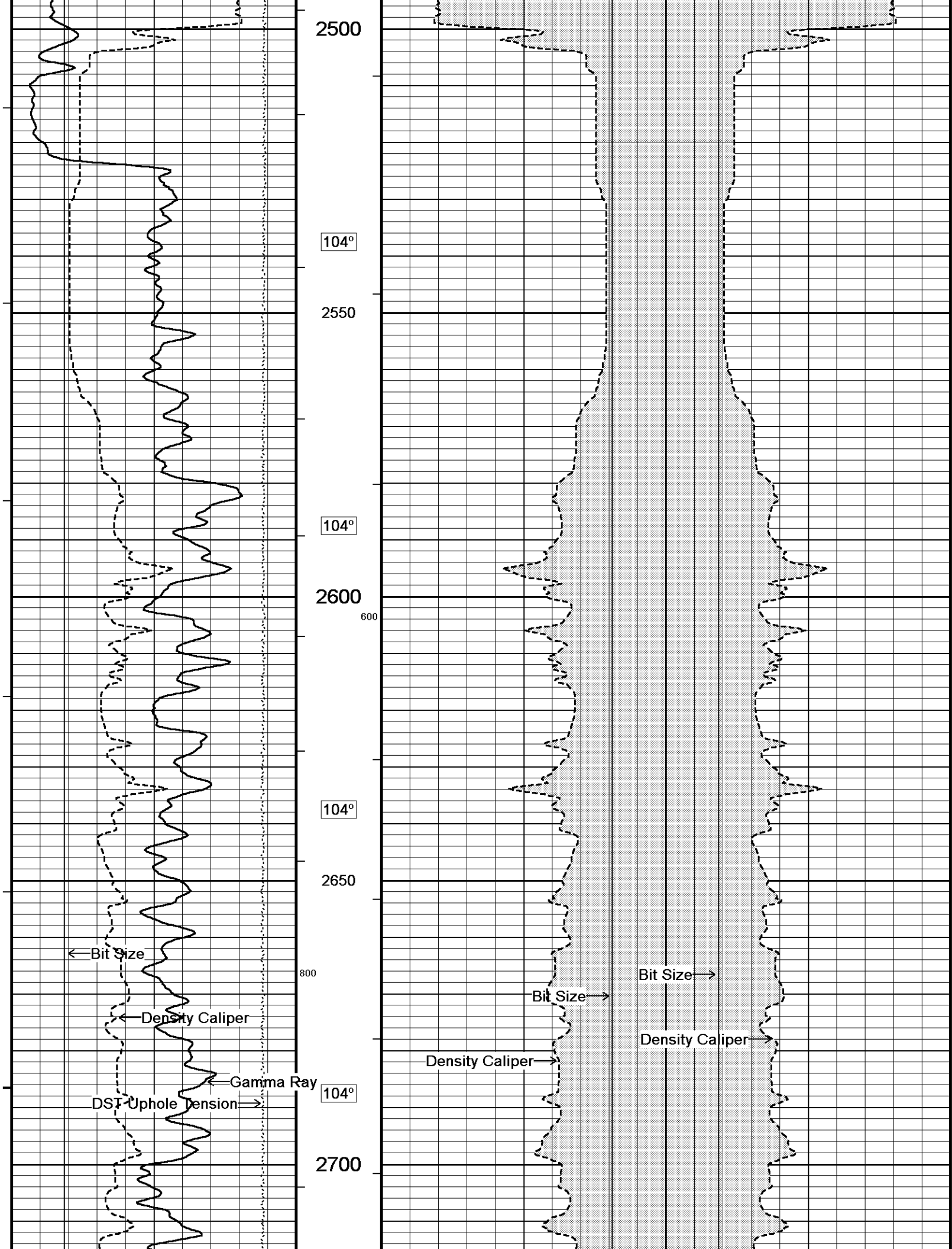


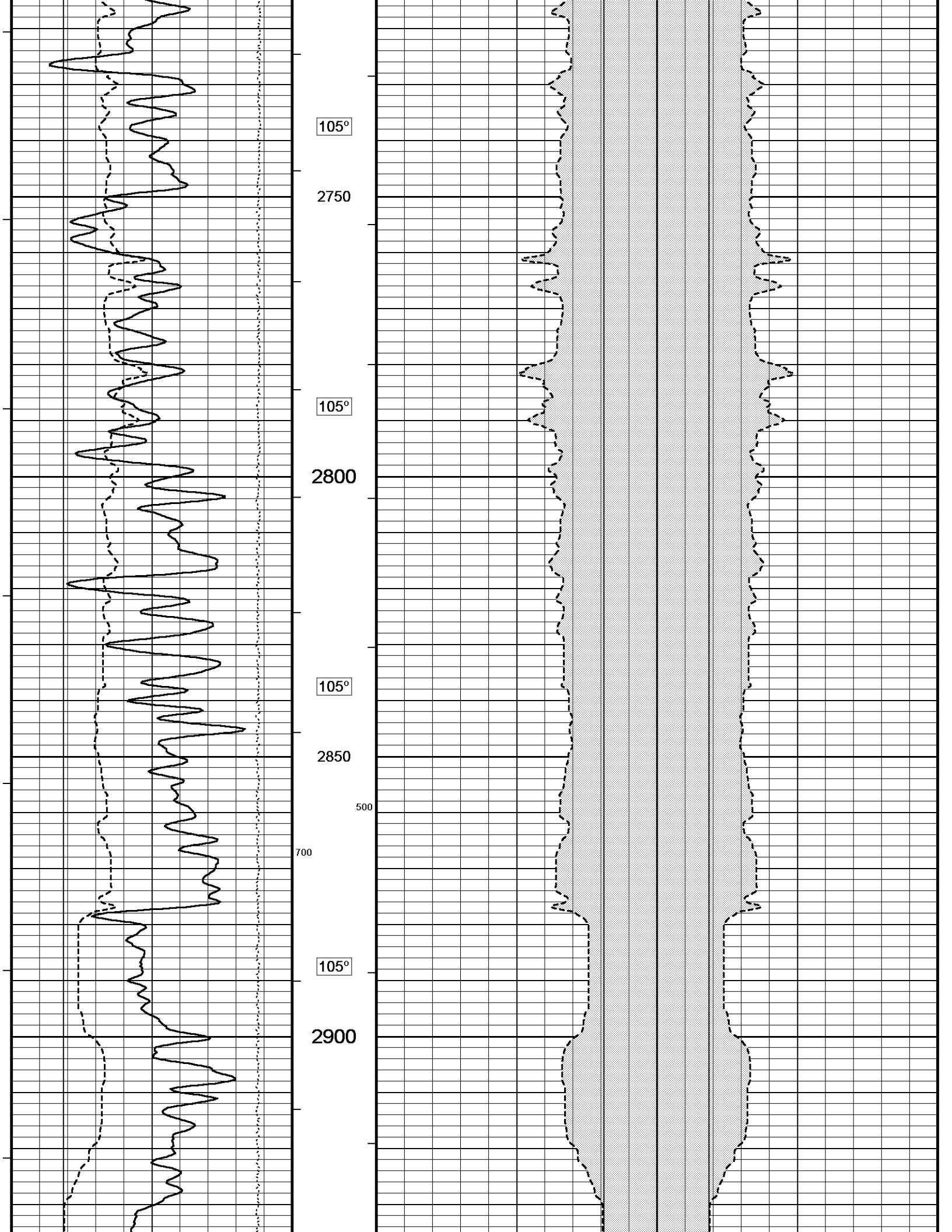


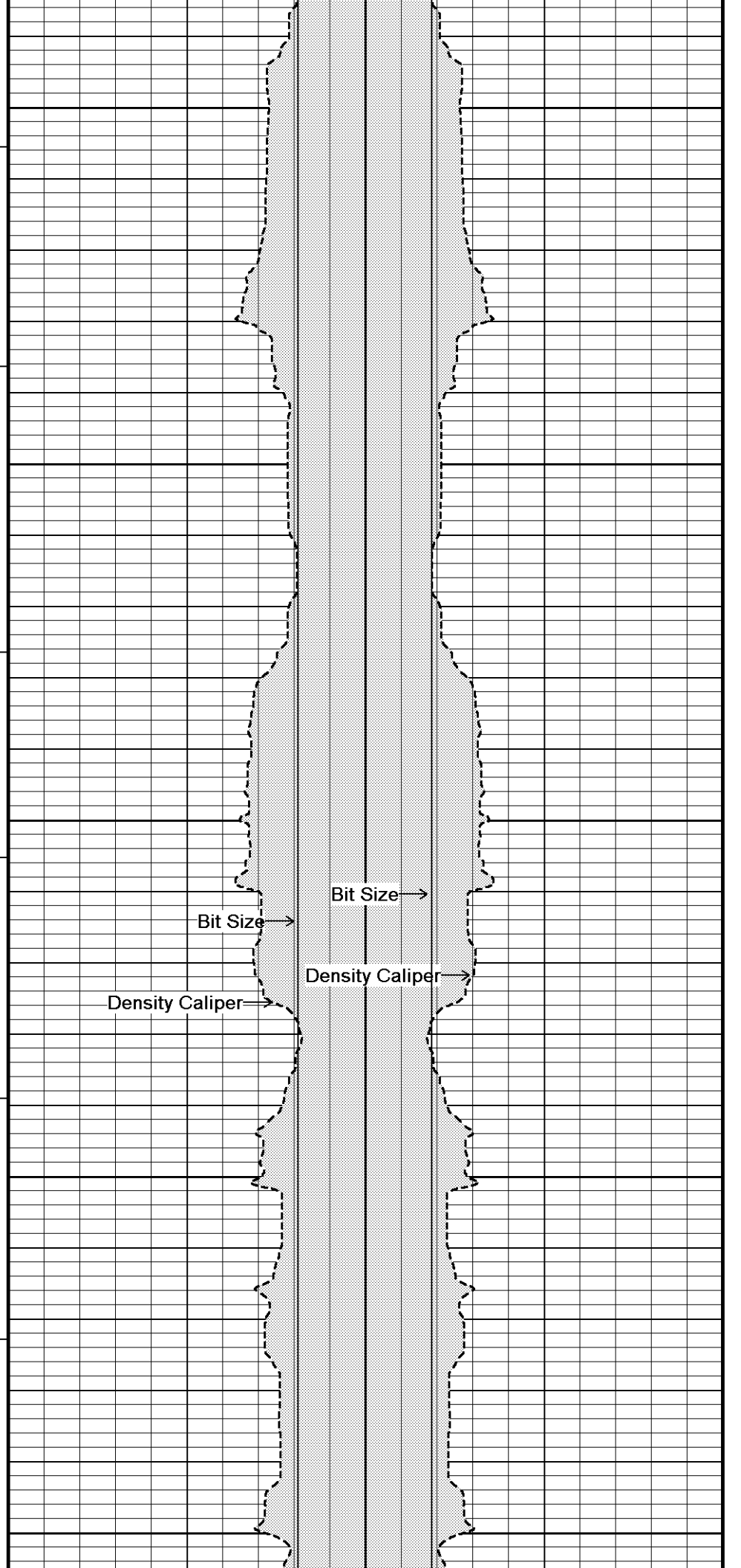
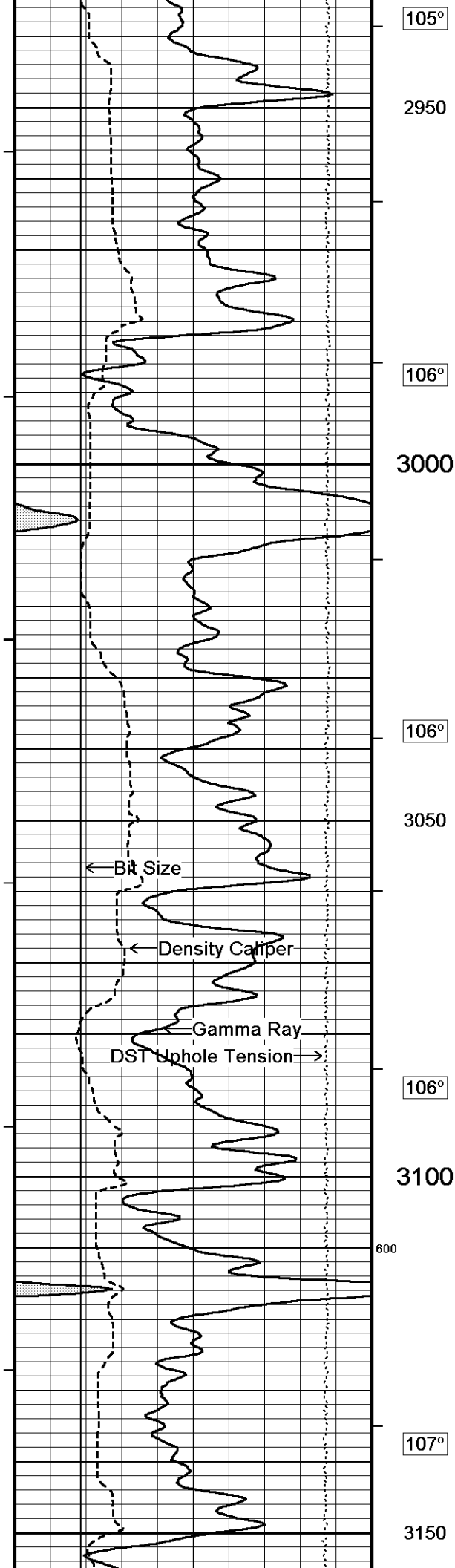


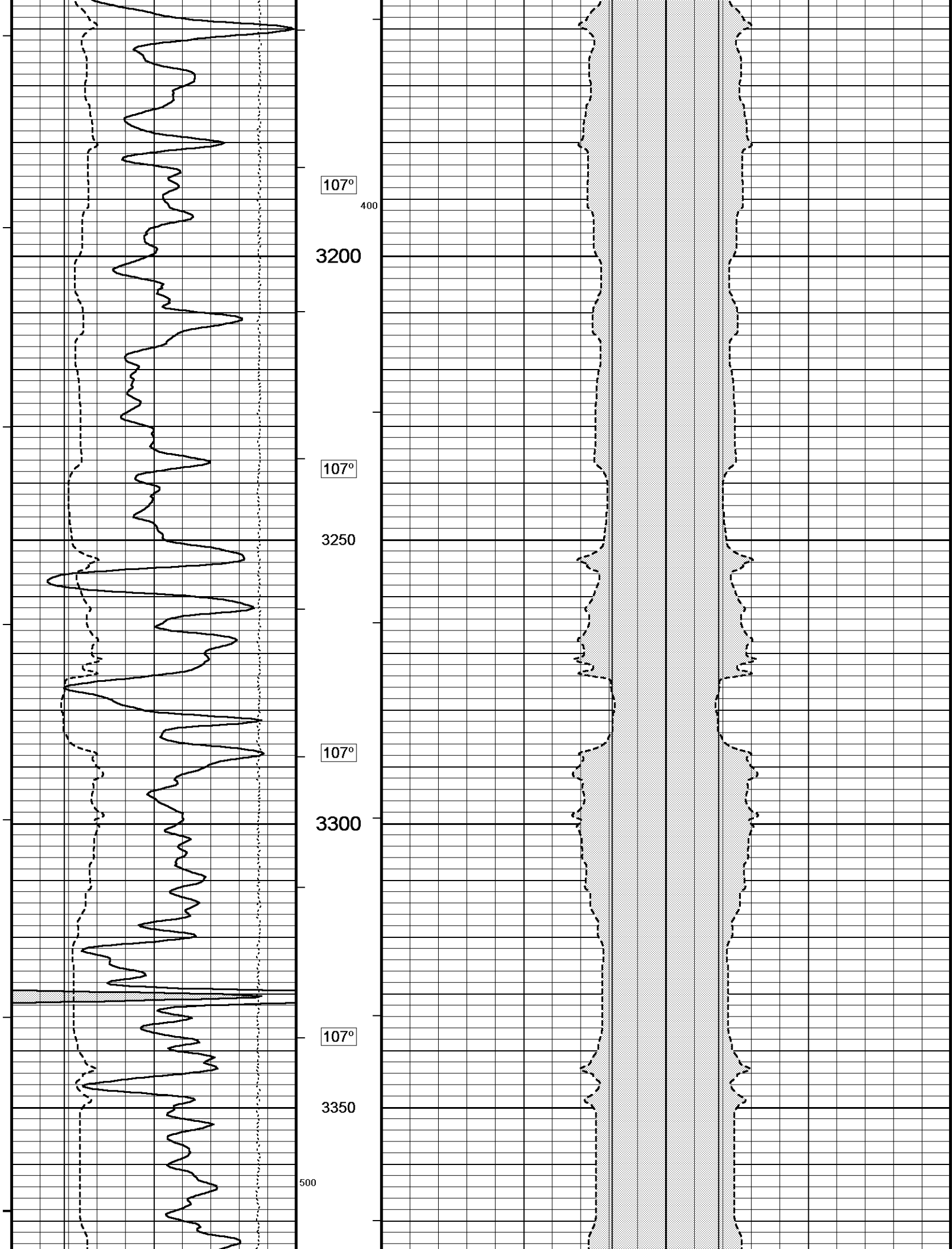


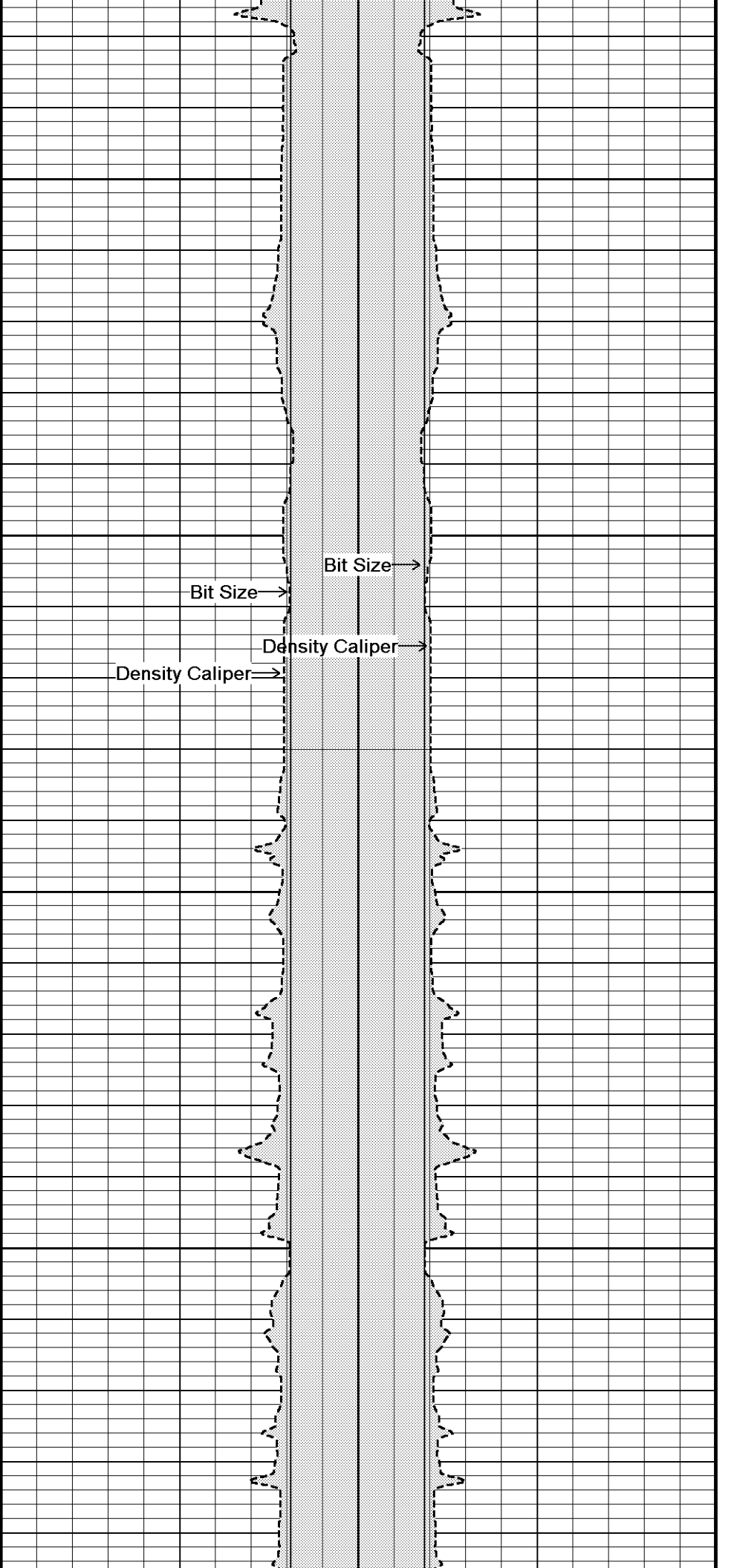
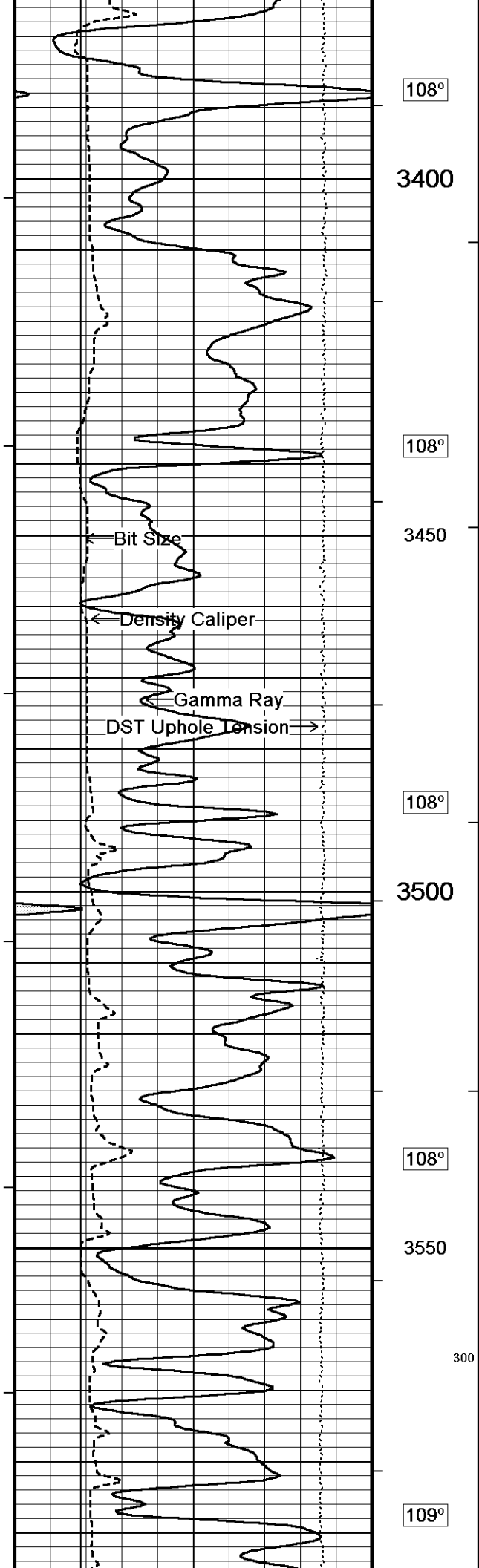


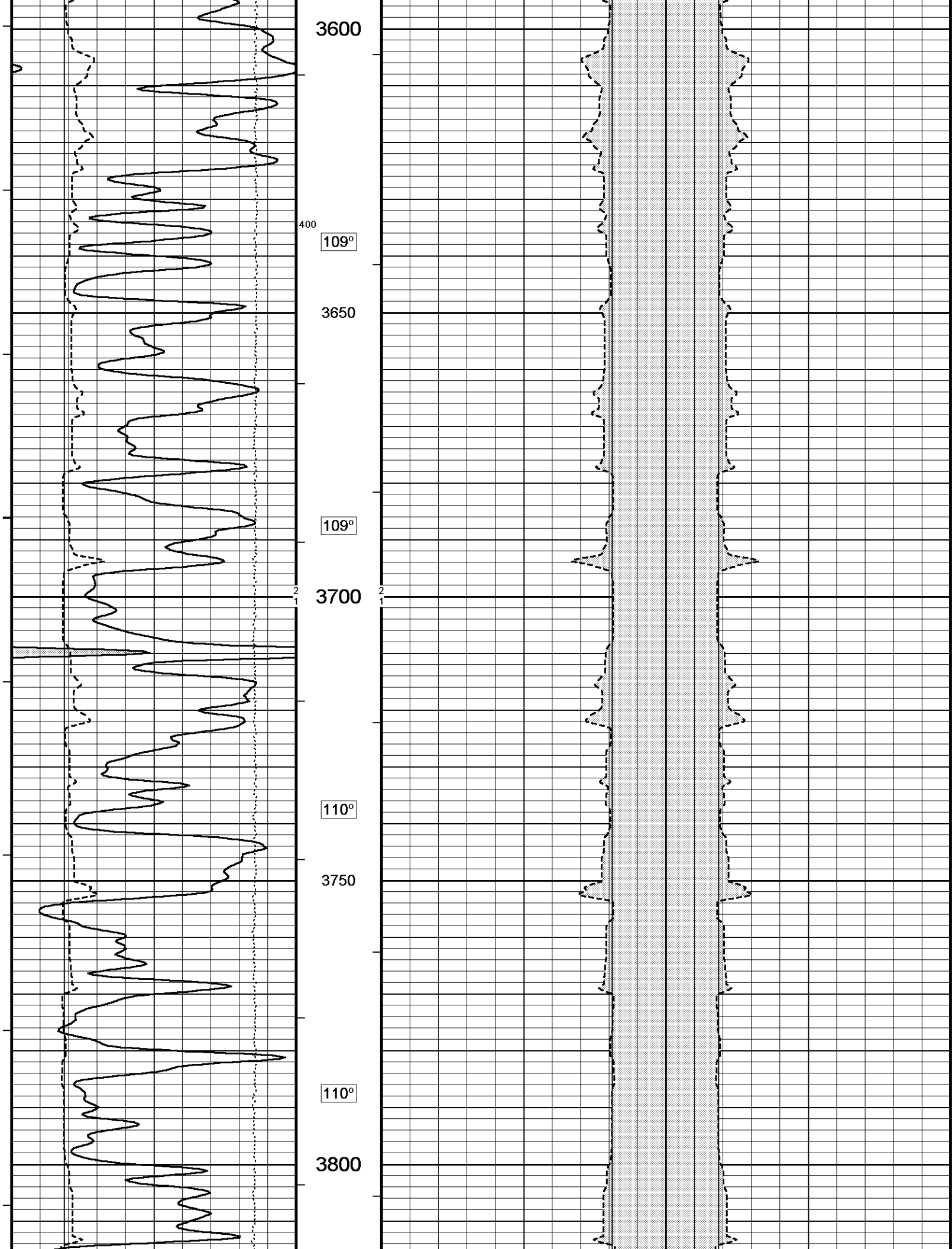


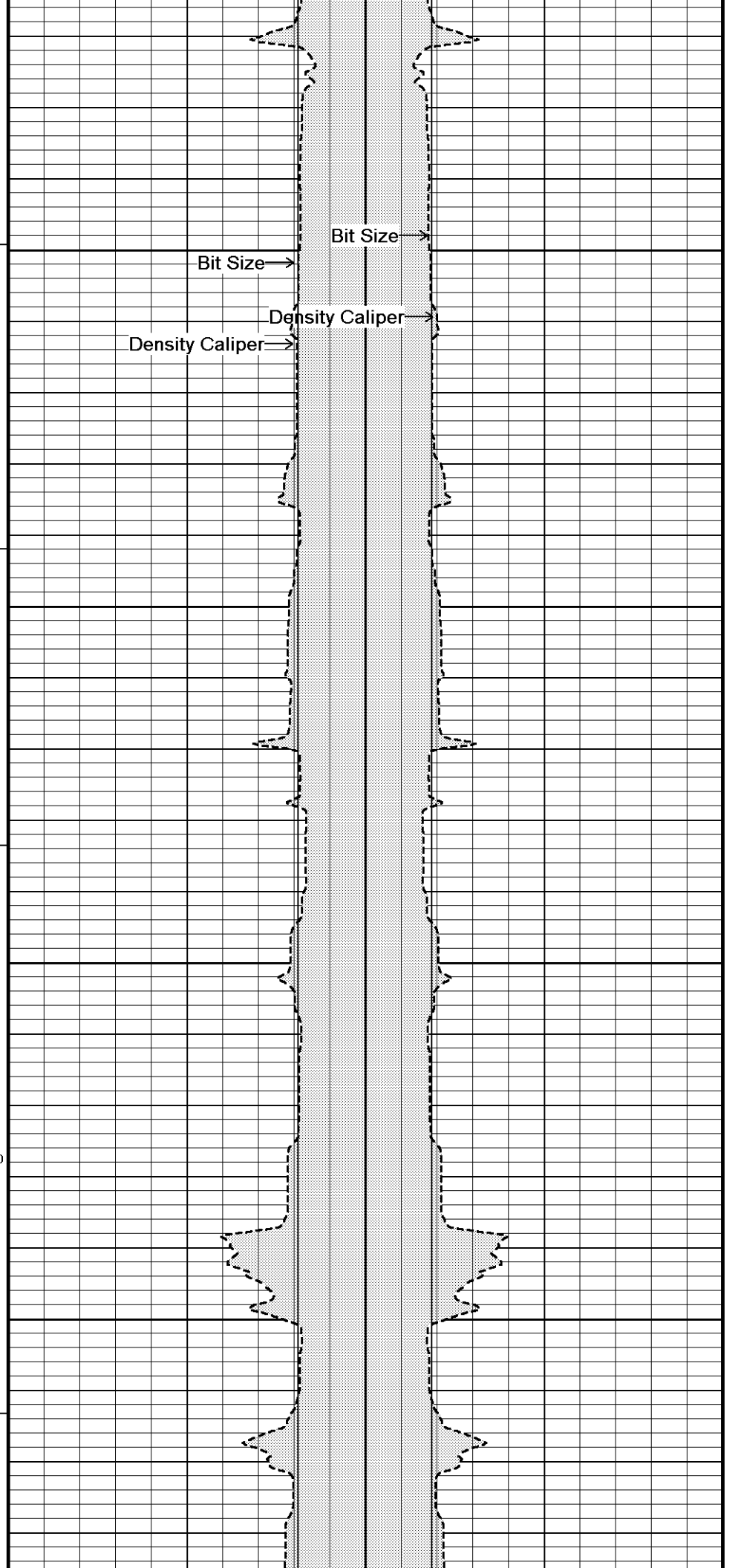
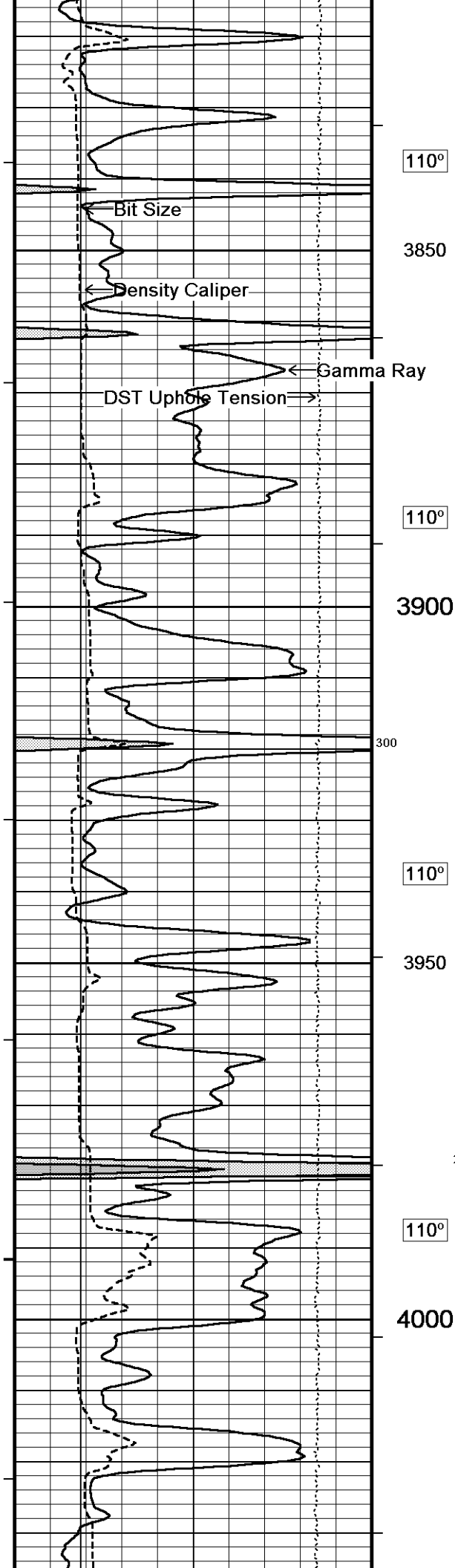


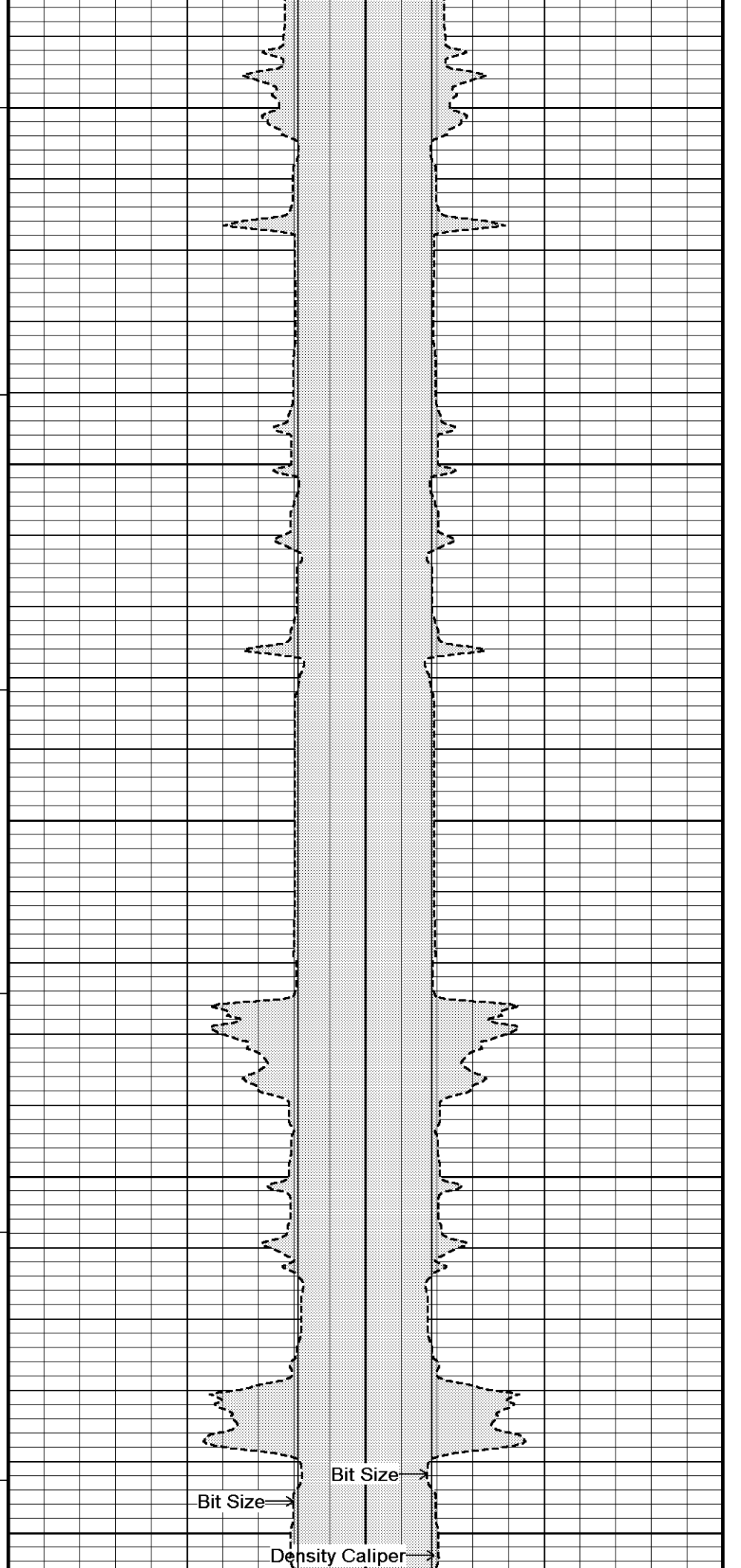
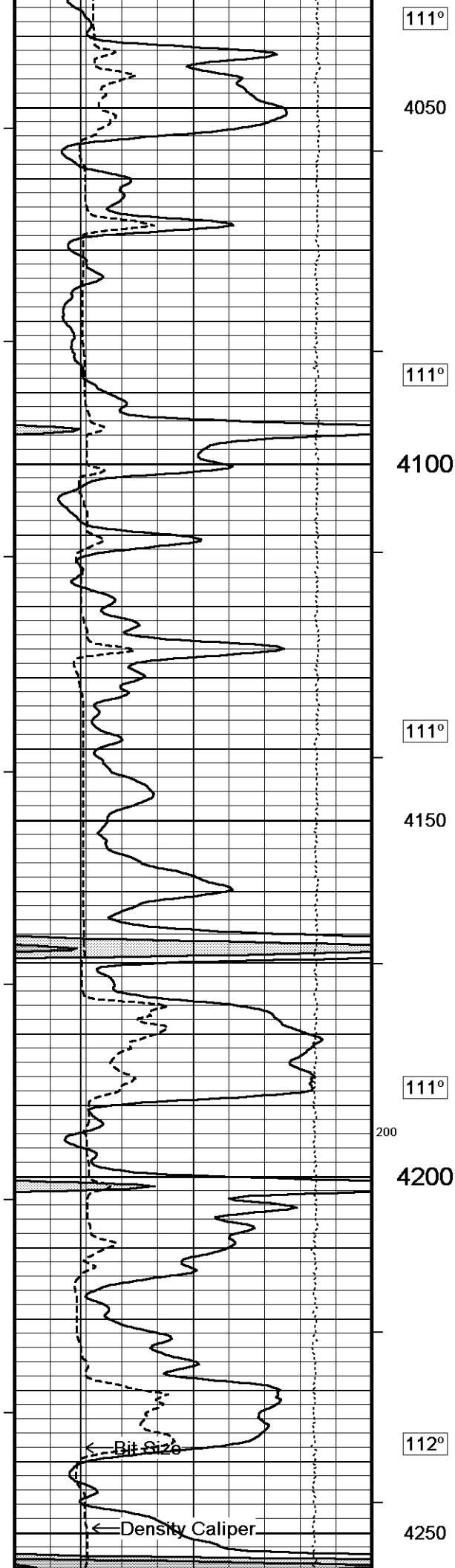


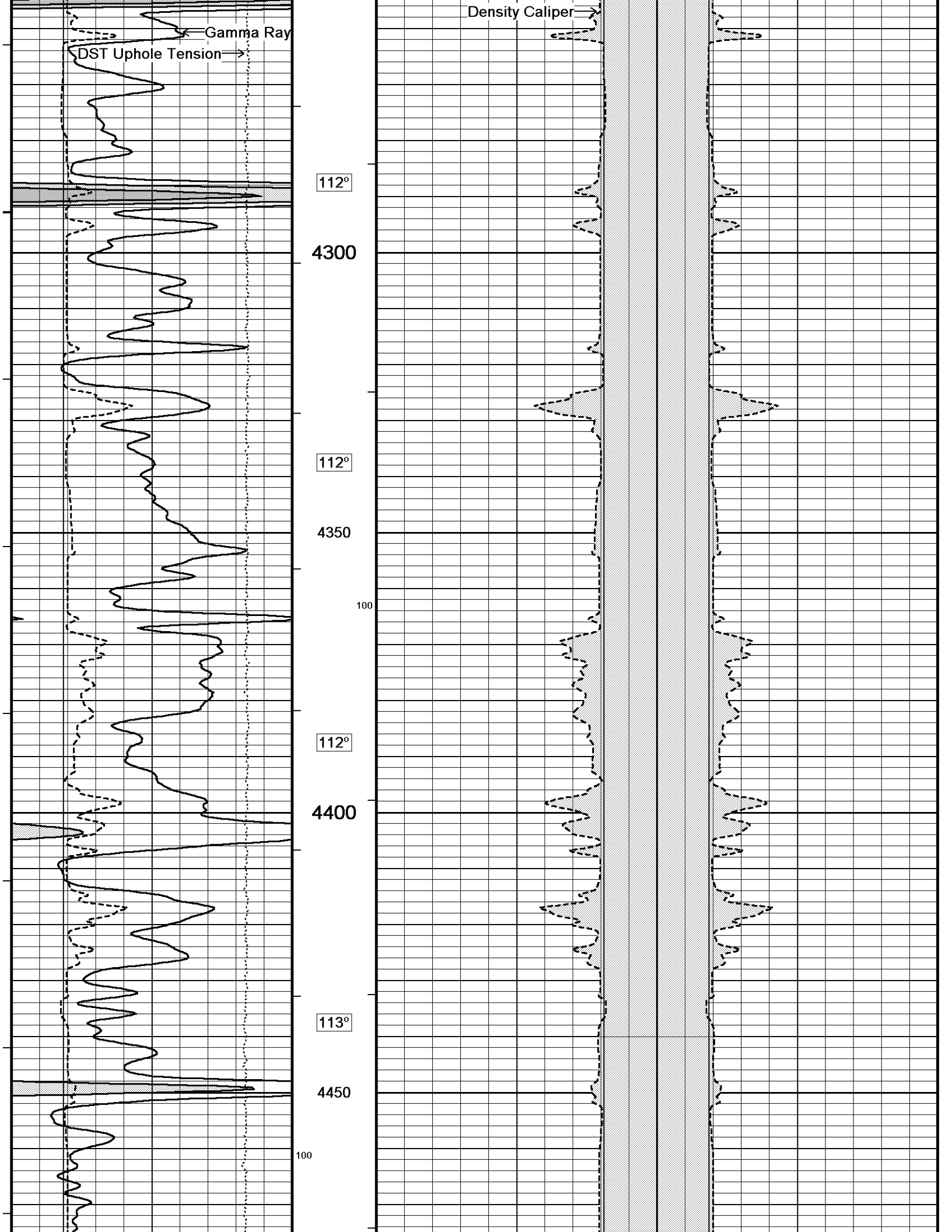


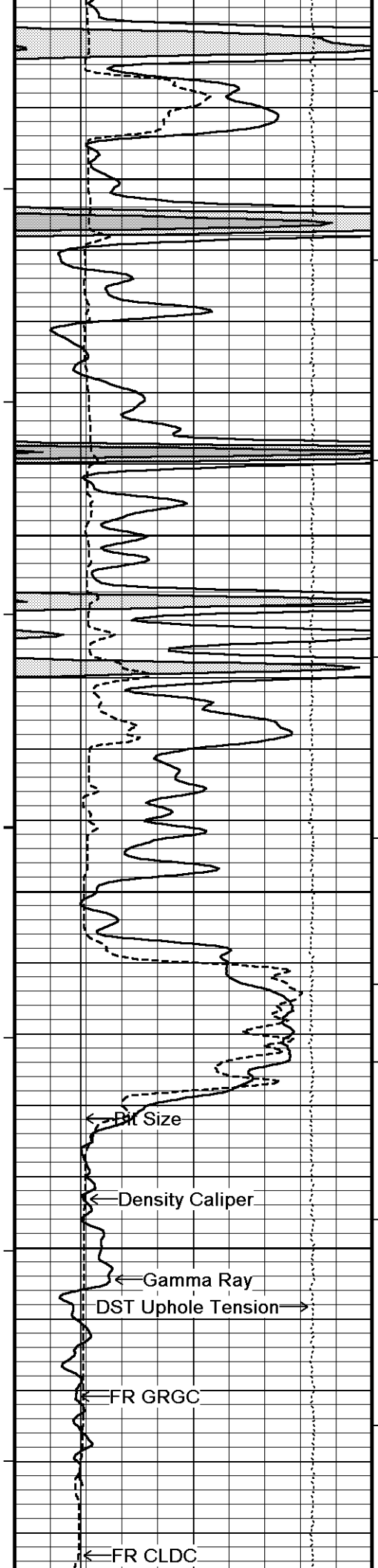












113°

4500

113°

4550

113°

4600

114°

4650

Bit Size

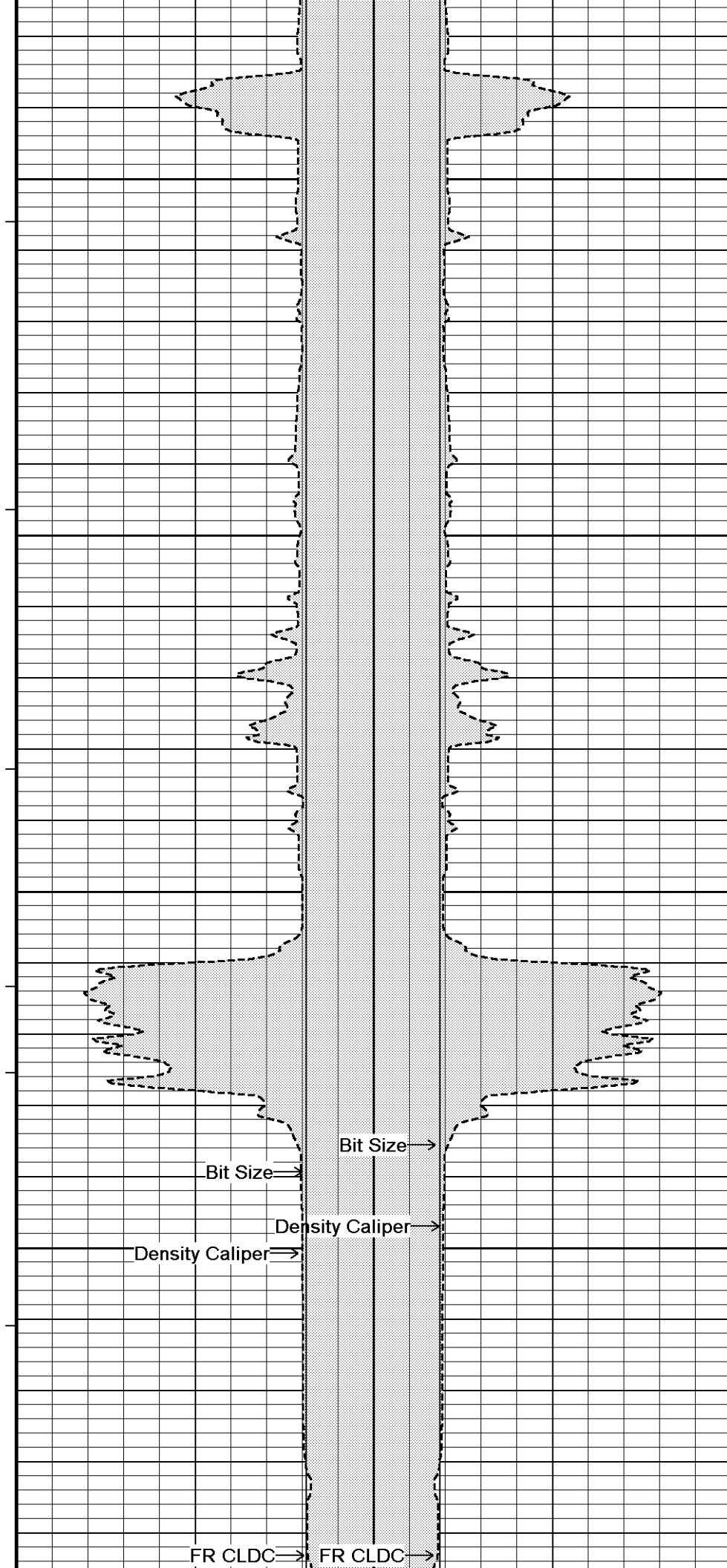
Density Caliper

Gamma Ray

DST Uphole Tension

FR GRGC

FR CLDC



Bit Size

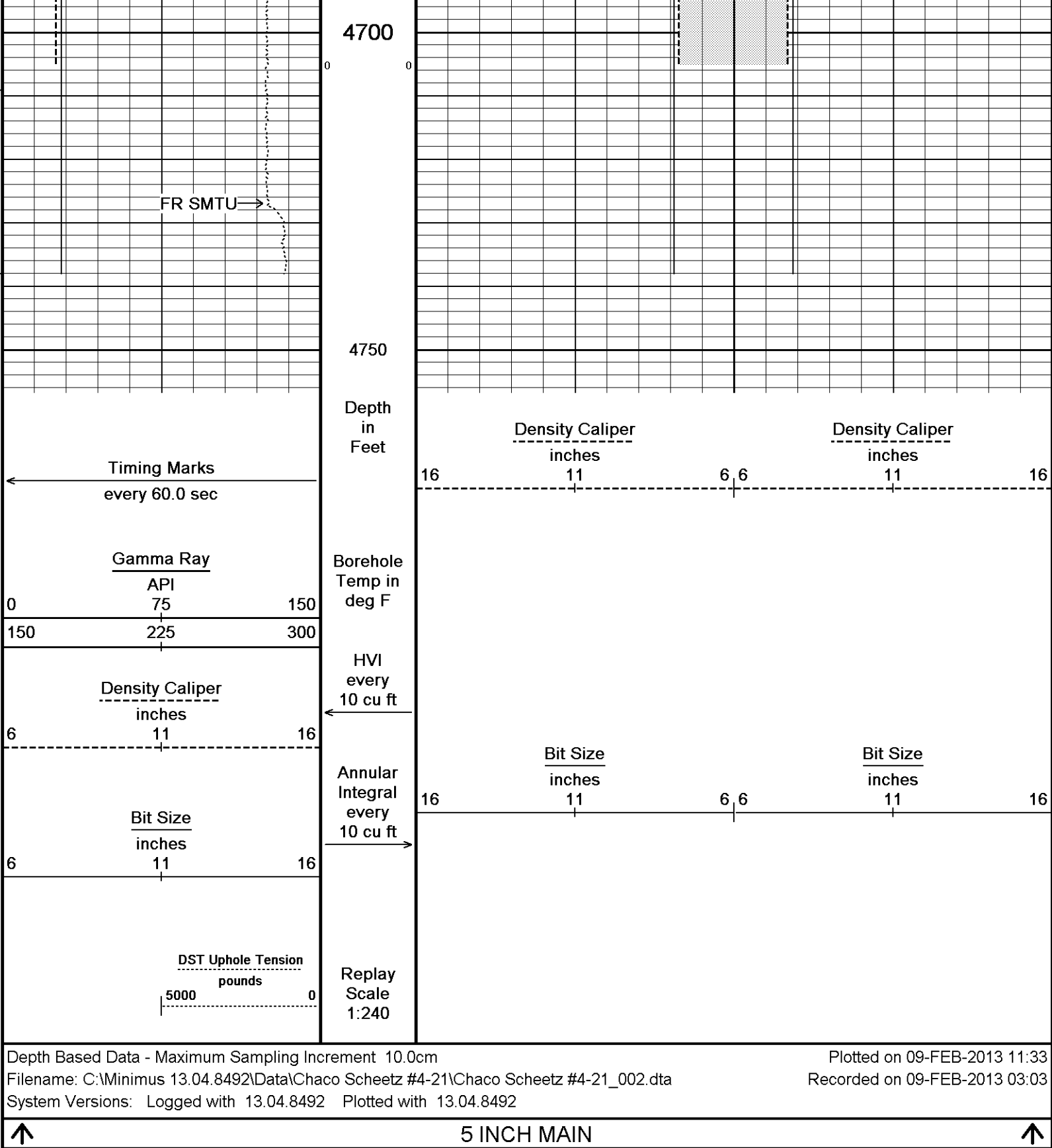
Bit Size

Density Caliper

Density Caliper

FR CLDC

FR CLDC



COMPANY	CHACO ENERGY COMPANY		
WELL	SCHEETZ #4-21		
FIELD	WILDCAT		
PROVINCE/COUNTY	LOGAN		
COUNTRY/STATE	U.S.A. / KANSAS		
Elevation Kelly Bushing	3036.00	feet	First Reading 4693.00 feet
Elevation Drill Floor	3035.00	feet	Depth Driller 4730.00 feet

Elevation Ground Level 3027.00 feet

Depth Logger 4727.00 feet



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