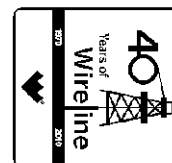




# Weatherford

## HOLE VOLUME CALIPER LOG

COMPANY **BILL BARRETT CORPORATION**  
WELL **GGU DALEY 31B-30-691**  
FIELD **GIBSON GULCH**  
PROVINCE/COUNTY **GARFIELD**  
COUNTRY/STATE **U.S.A. / COLORADO**  
LOCATION **SHL: 252' FSL & 2018' FWL**  
**BHL: 850 FNL & 1983 FEL**



SEC	TWP	RGE	Other Services	
19	6S	91W	MPD/MDN	
API Number	05-045-19583		MAI/MFE	
Permit Number				
Permanent Datum G.L., Elevation 5824 feet				Elevations: feet
Log Measured From K.B. @ 23 FEET above Permanent Datum				KB 5847.00
Drilling Measured From K.B.				DF 5847.00
				GL 5824.00
Date	19-APR-2011			
Run Number	ONE			
Depth Driller	7678.00	feet		
Depth Logger	7687.00	feet		
First Reading	7665.50			
Last Reading	849.00			
Casing Driller	849.00	feet		
Casing Logger	850.00	feet		
Bit Size	7.875	inches		
Hole Fluid Type	LSND			
Density / Viscosity	10.70 lb/USg	55.00 CP		
PH / Fluid Loss	8.90	6.00 ml/30Min		
Sample Source	FLOW LINE			
Rm @ Measured Temp	2.40 @ 99.0	ohm-m		
Rmf @ Measured Temp	1.92 @ 99.0	ohm-m		
Rmc @ Measured Temp	2.88 @ 99.0	ohm-m		
Source Rmf / Rmc	CALC	CALC		
Rm @ BHT	1.29 @ 186.0	ohm-m		
Time Since Circulation	5 HOURS			
Max Recorded Temp	186.00	deg F		
Equipment Name	COMPACT			
Equipment / Base	13173	GD JCT		
Recorded By	M.RICHINS			K. SALLER
Witnessed By	C.CROW			

Elevations:  
KB 5847.00  
DF 5847.00  
GL 5824.00

### BOREHOLE RECORD

Last Edited: 19-APR-2011 17:44

Bit Size inches	Depth From feet	Depth To feet
8.750	849.00	5386.00
7.875	5386.00	7678.00

### CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	9.625	0.00	849.00	36.00

### REMARKS

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 MAI.  
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.

VARIABILITY IN REPEAT SECTION DUE TO DIFFERENCE IN CALIPER AXIS ORIENTATION

CALIPER CHECK IN CASING PRESENTED, REFERENCE I.D. = 9.03" (9 5/8", 36 LB/FT CASING)

8.75 INCH BIT CHANGE AT 5386 FT.

TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 2950 CU.FT.

ANNULAR VOLUME WITH 4.5 INCH PRODUCTION CASING = 2200 CU.FT.

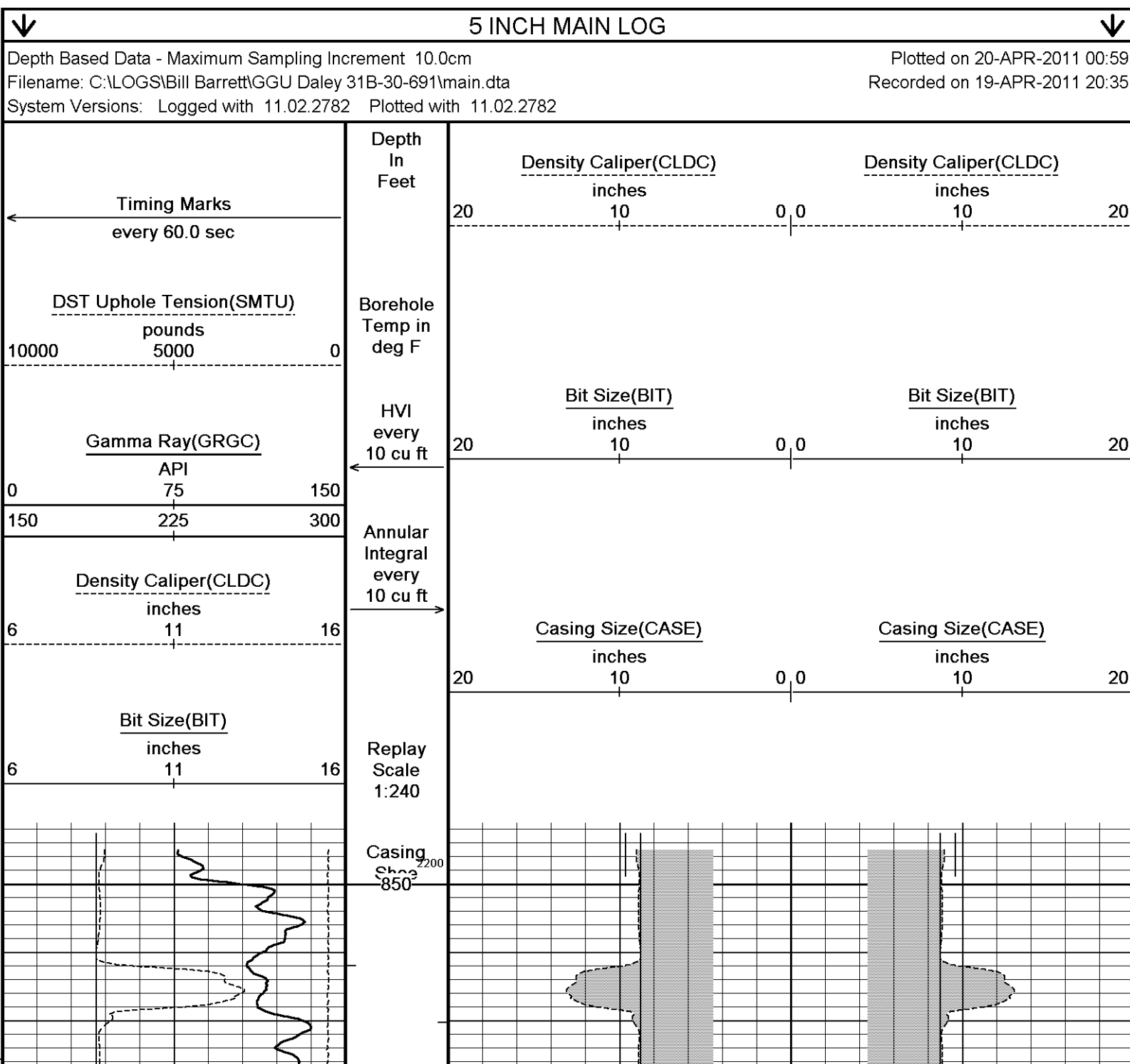
ENGINEER(S): M.RICHINS, O. GOYZUETA(JFE), K. SALLER (JFE)

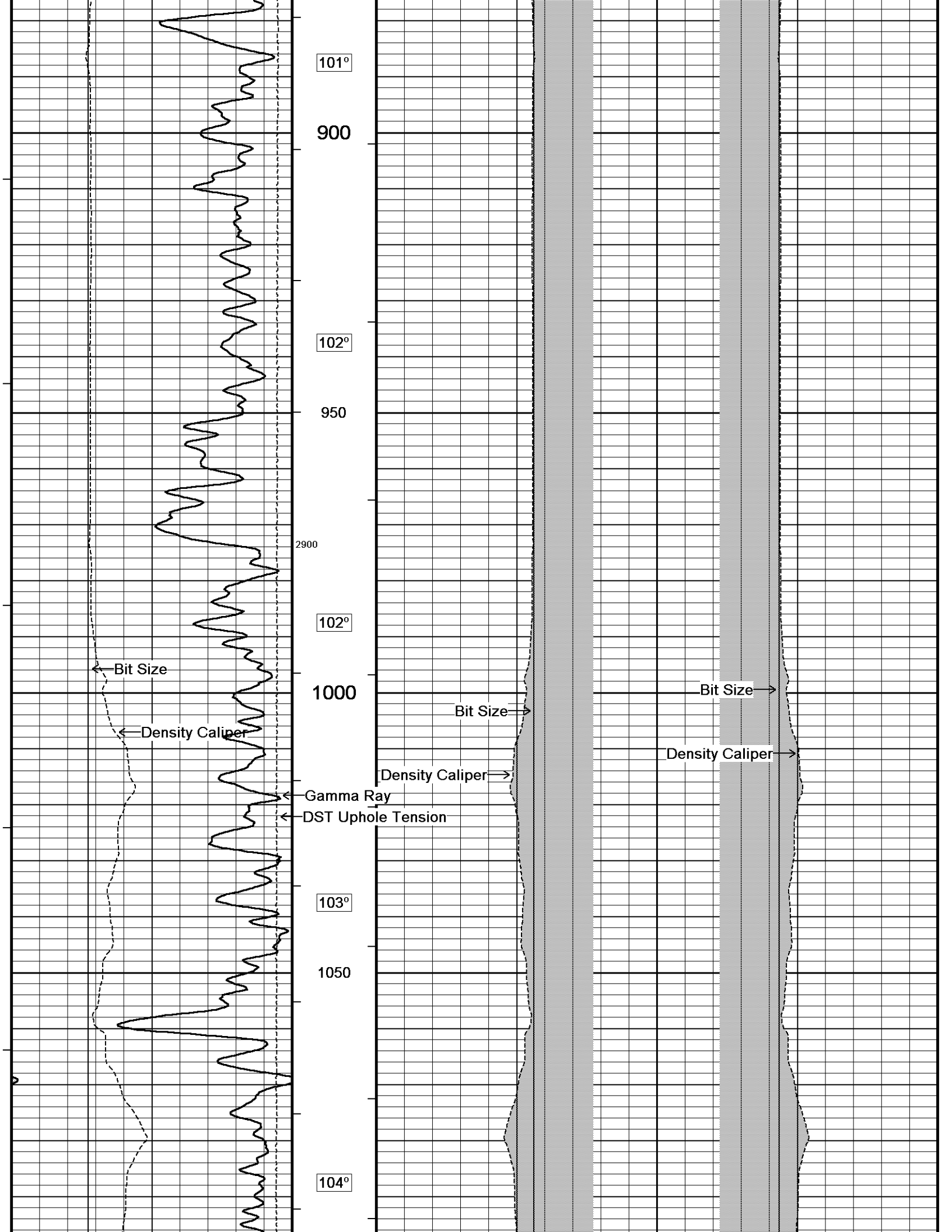
OPERATOR(S): D. DALEY, J. YOAKUM

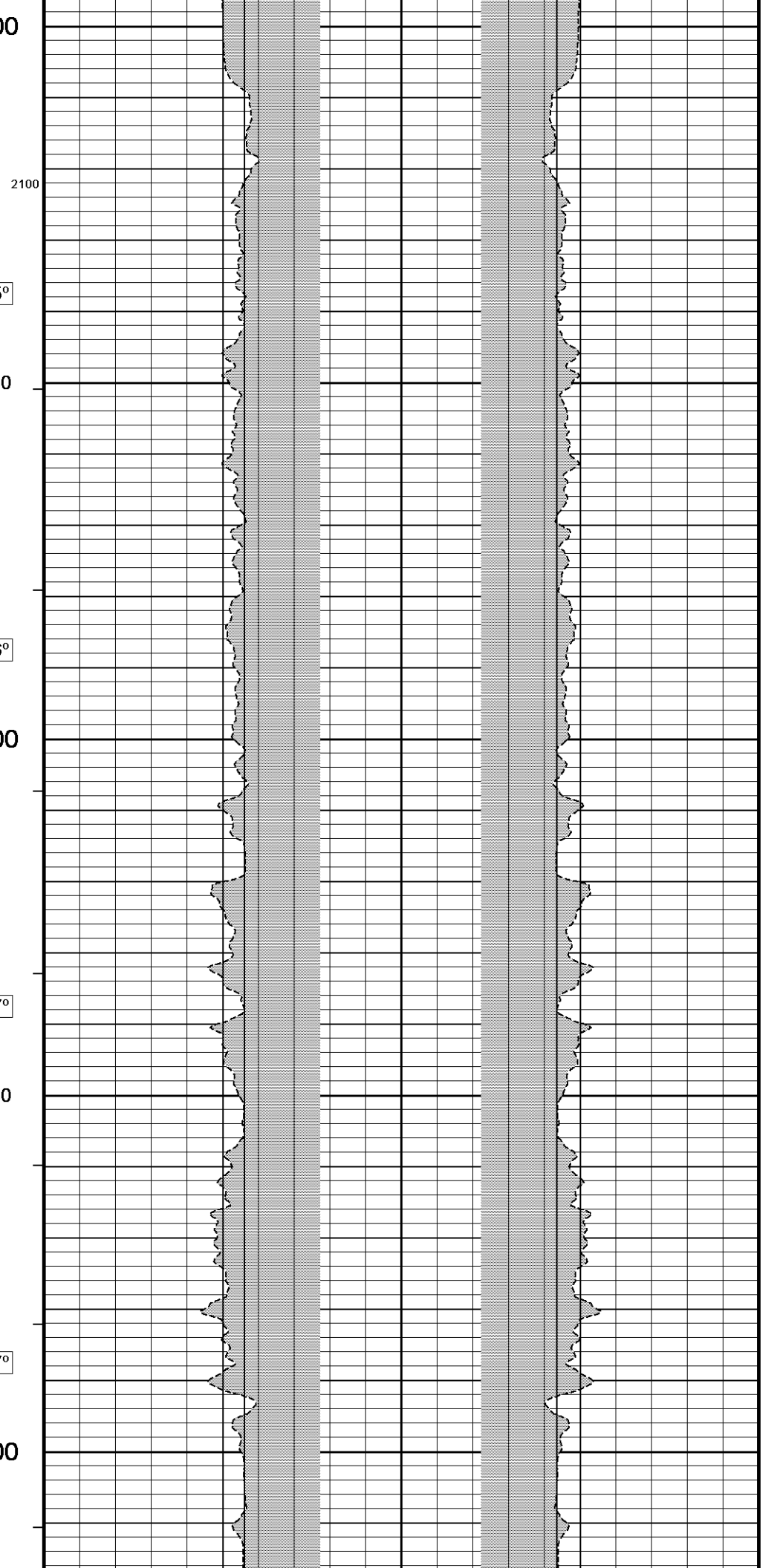
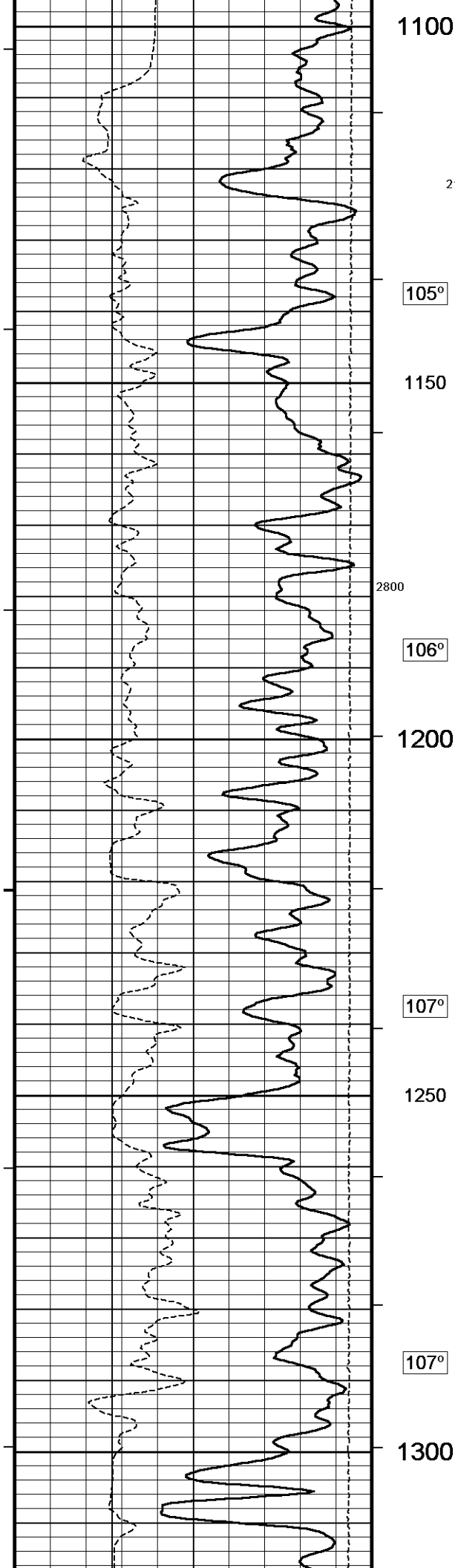
SERVICE ORDER: # 3524877

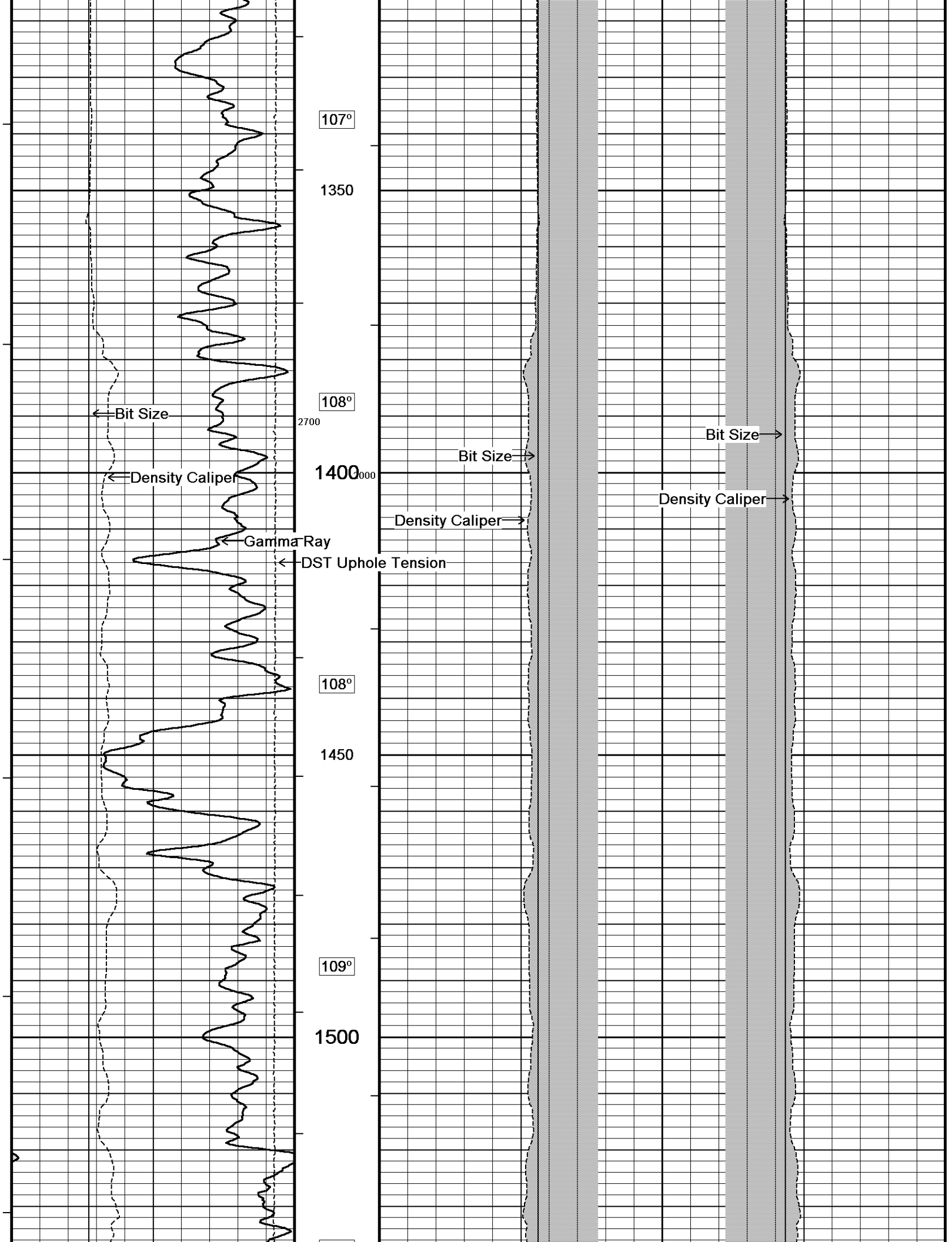
RIG: PATTERSON #307

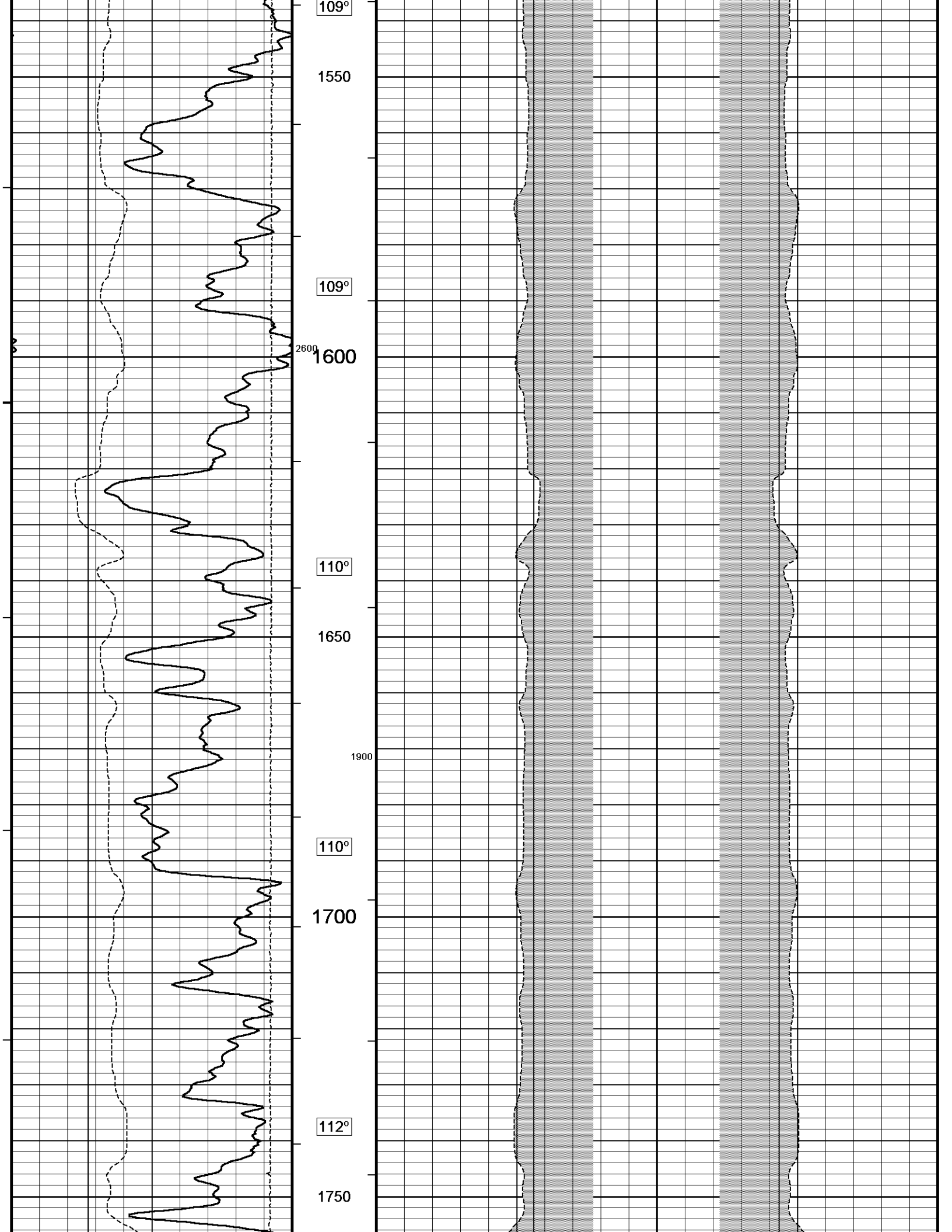
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

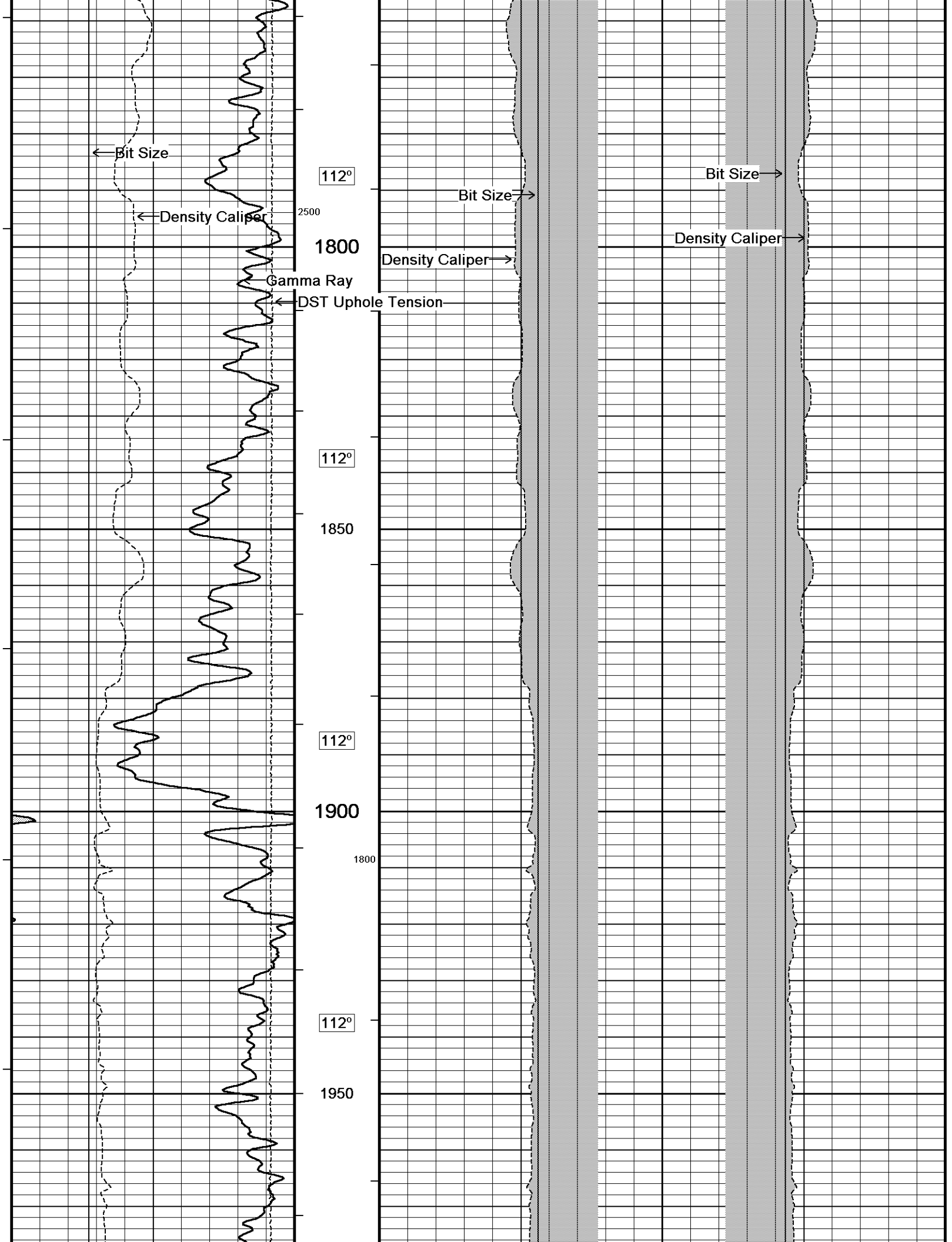


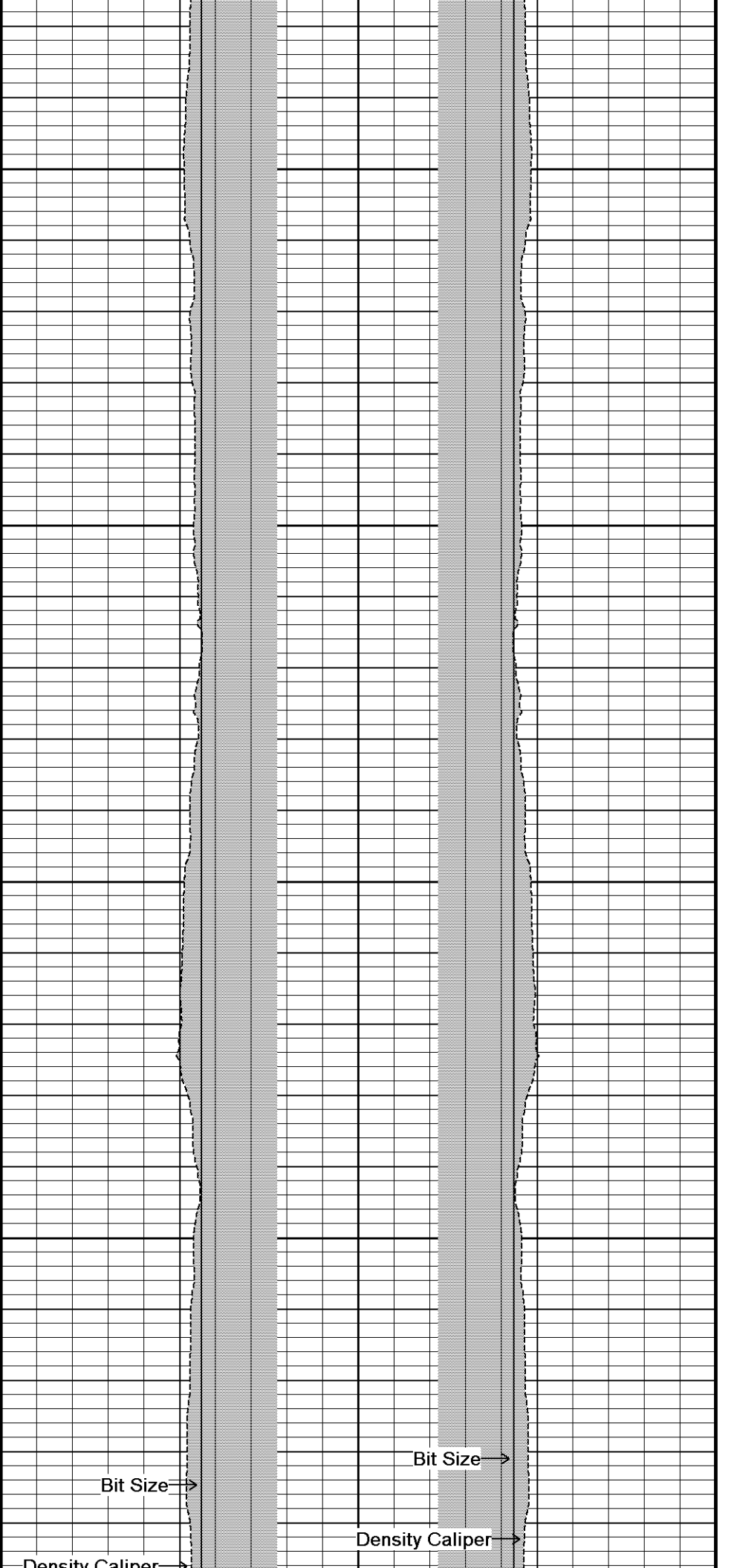
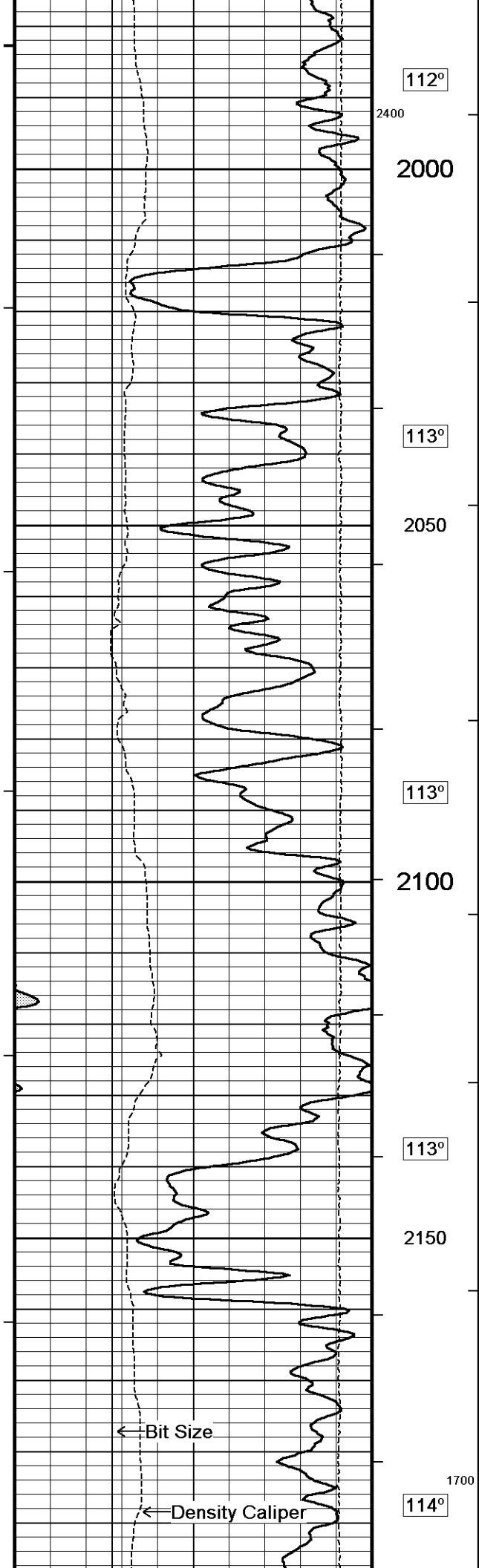




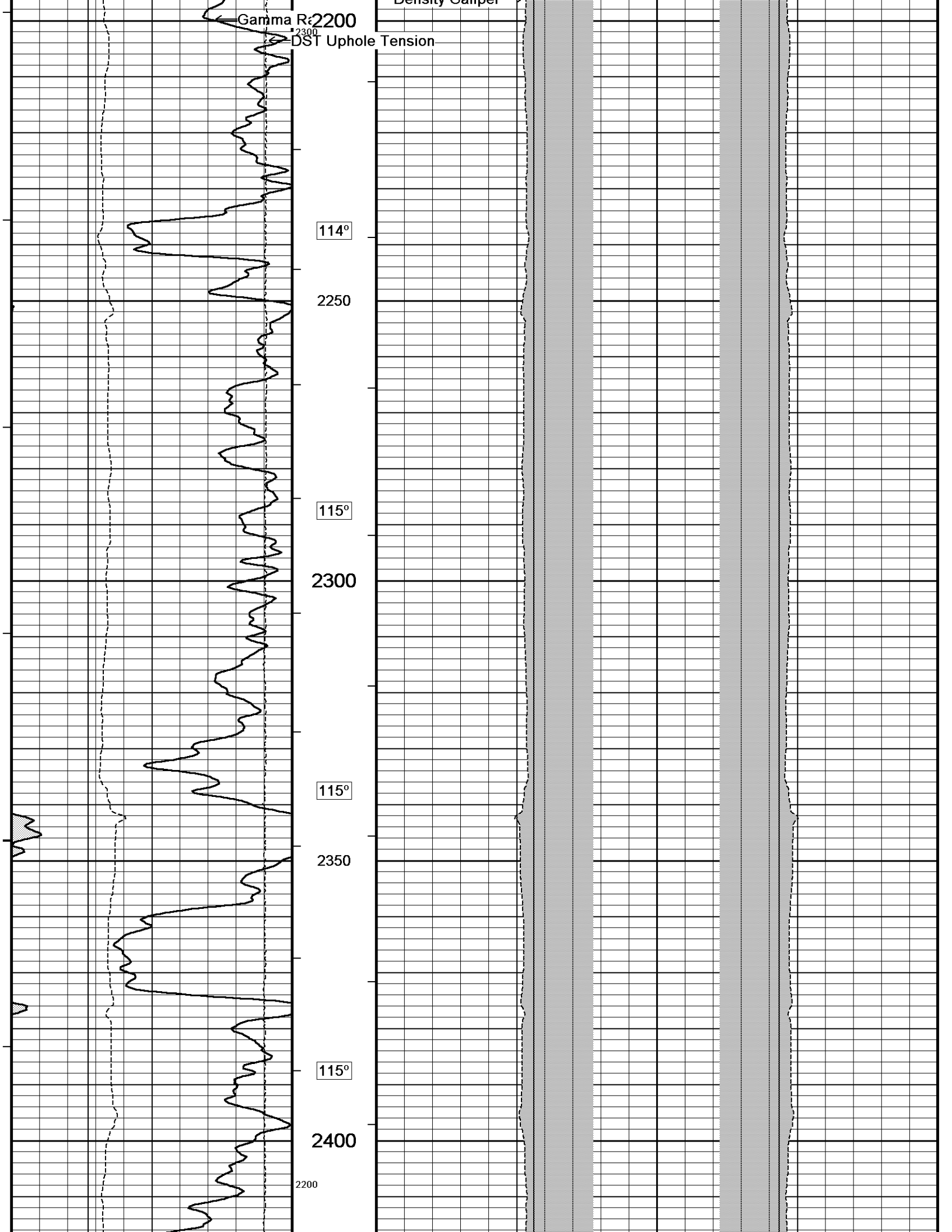


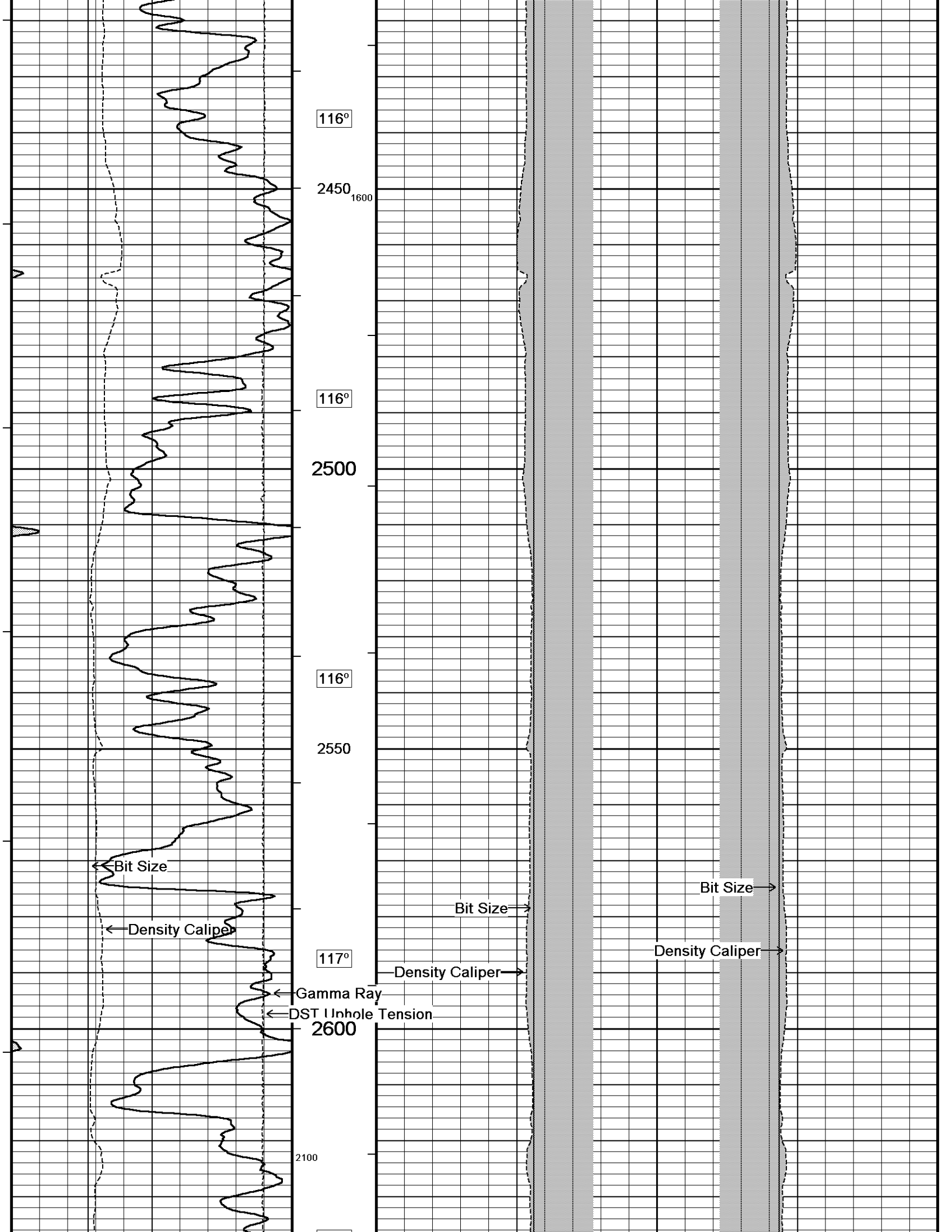


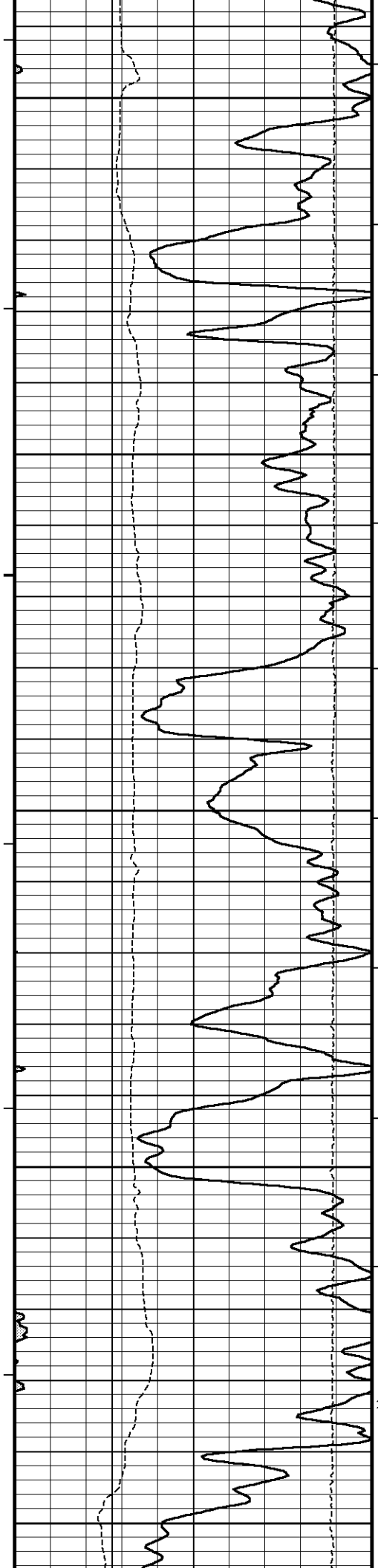




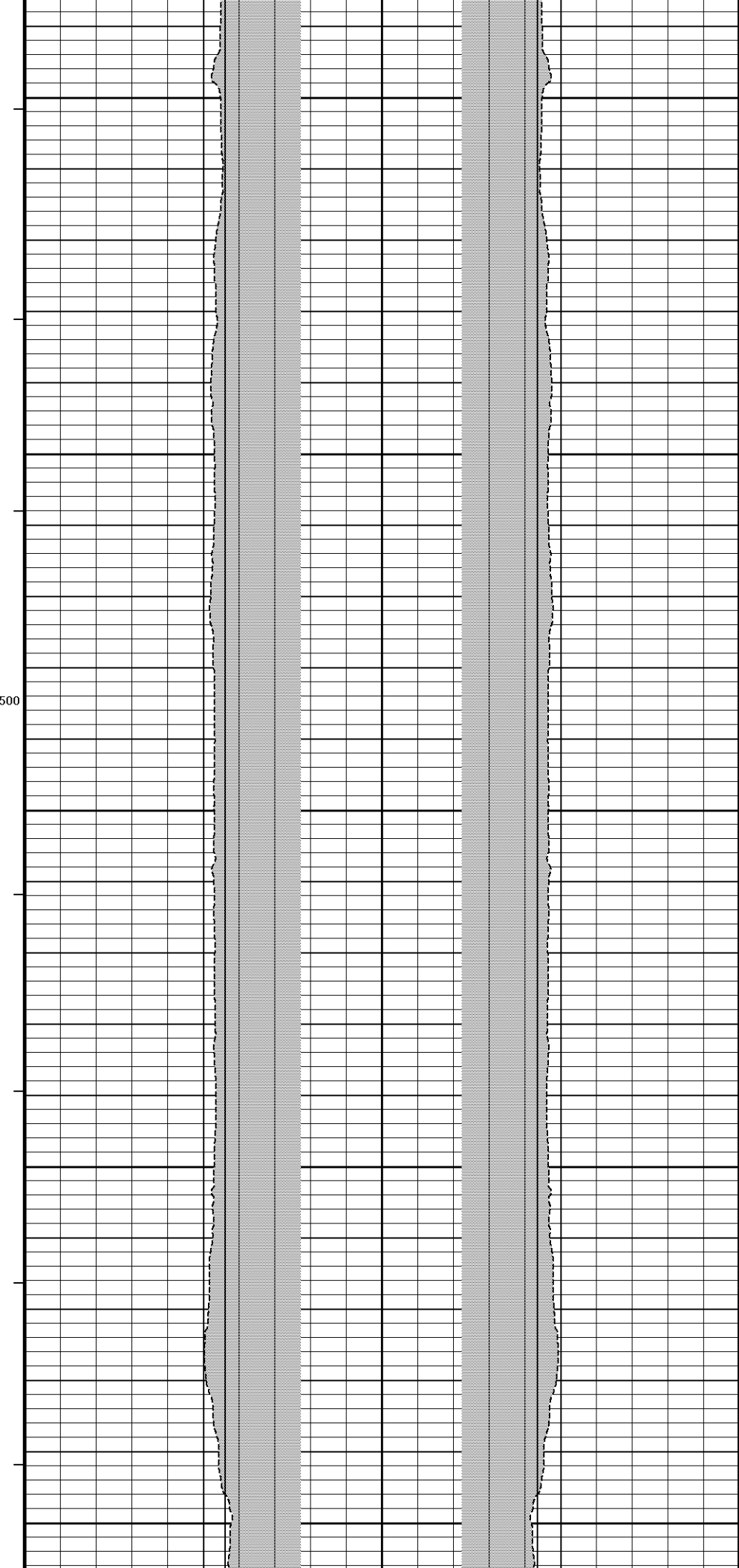


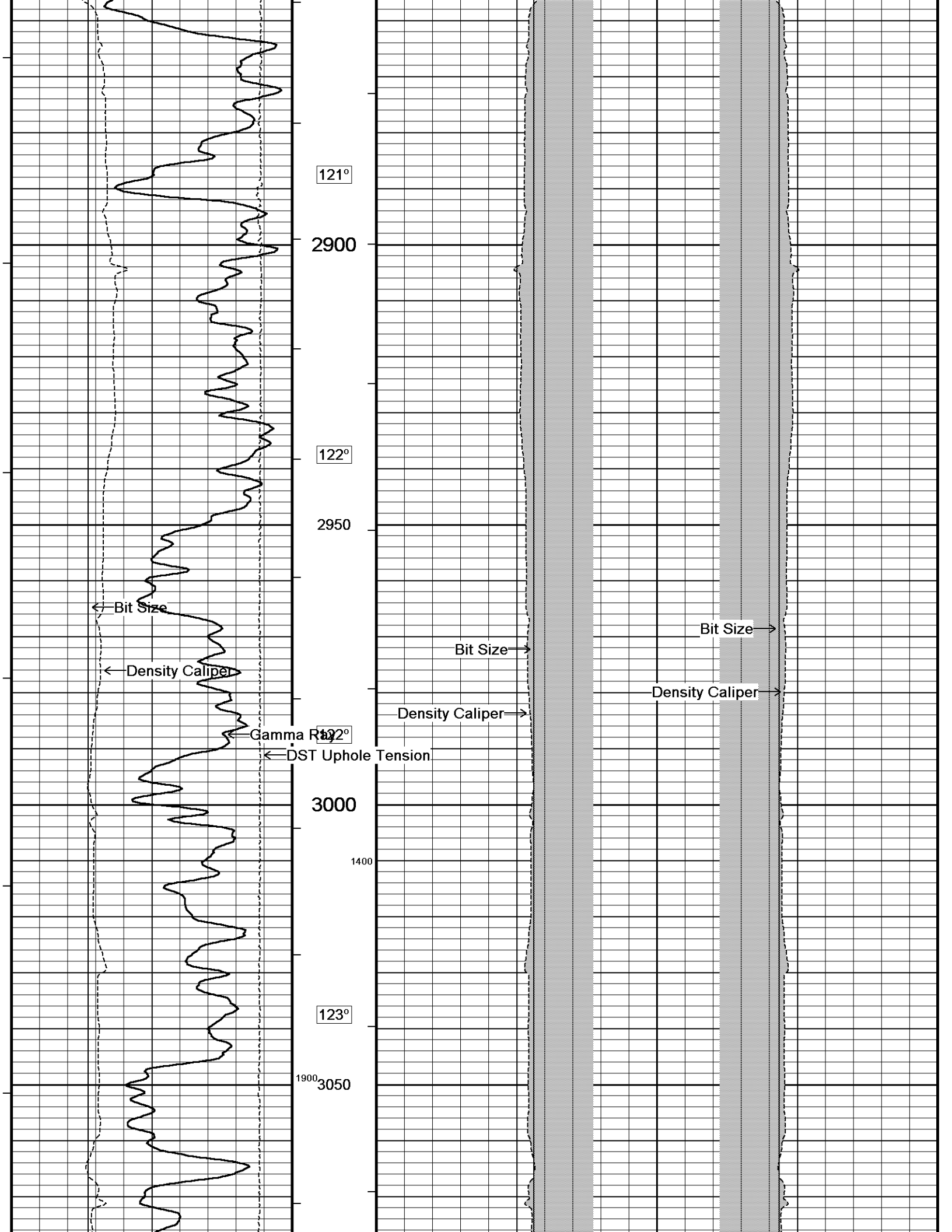


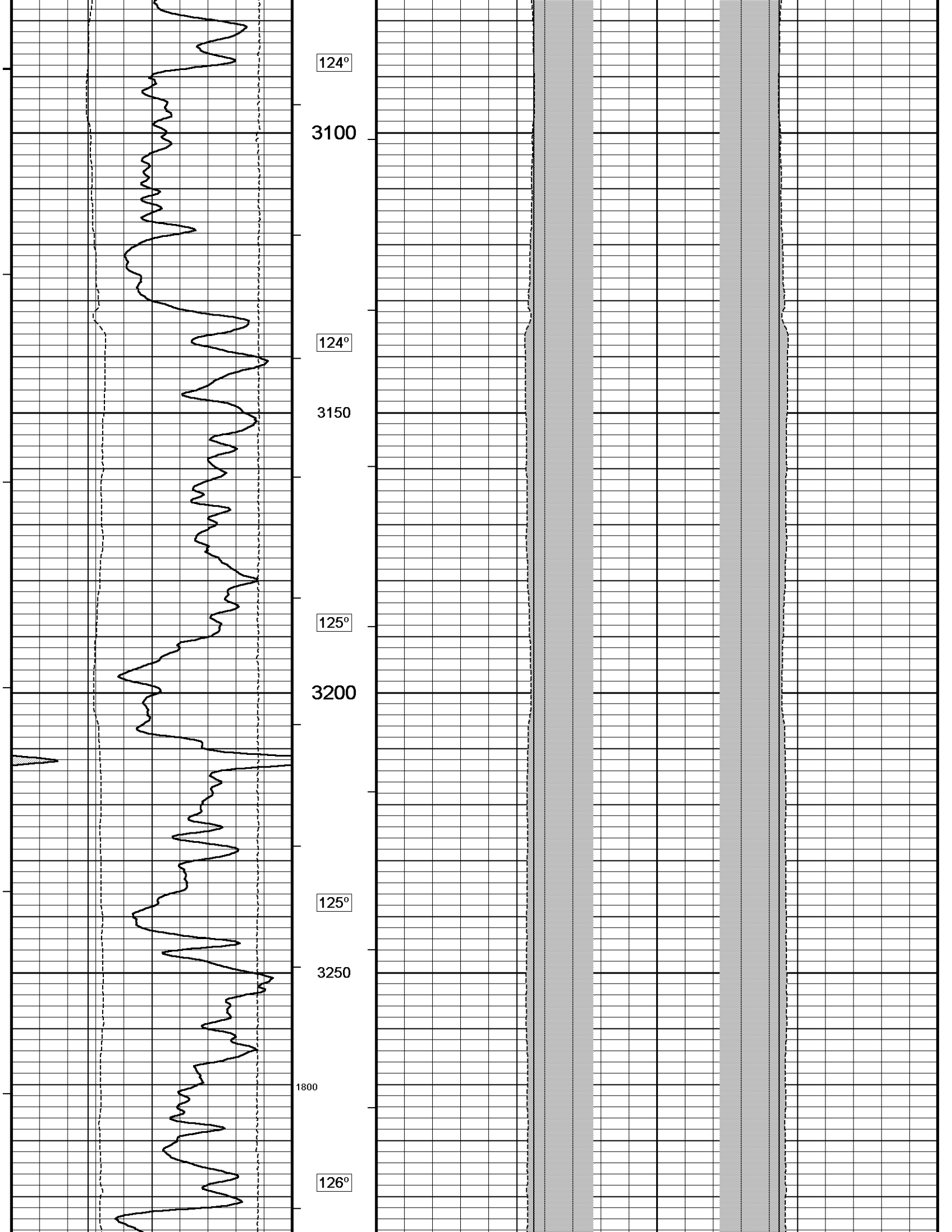


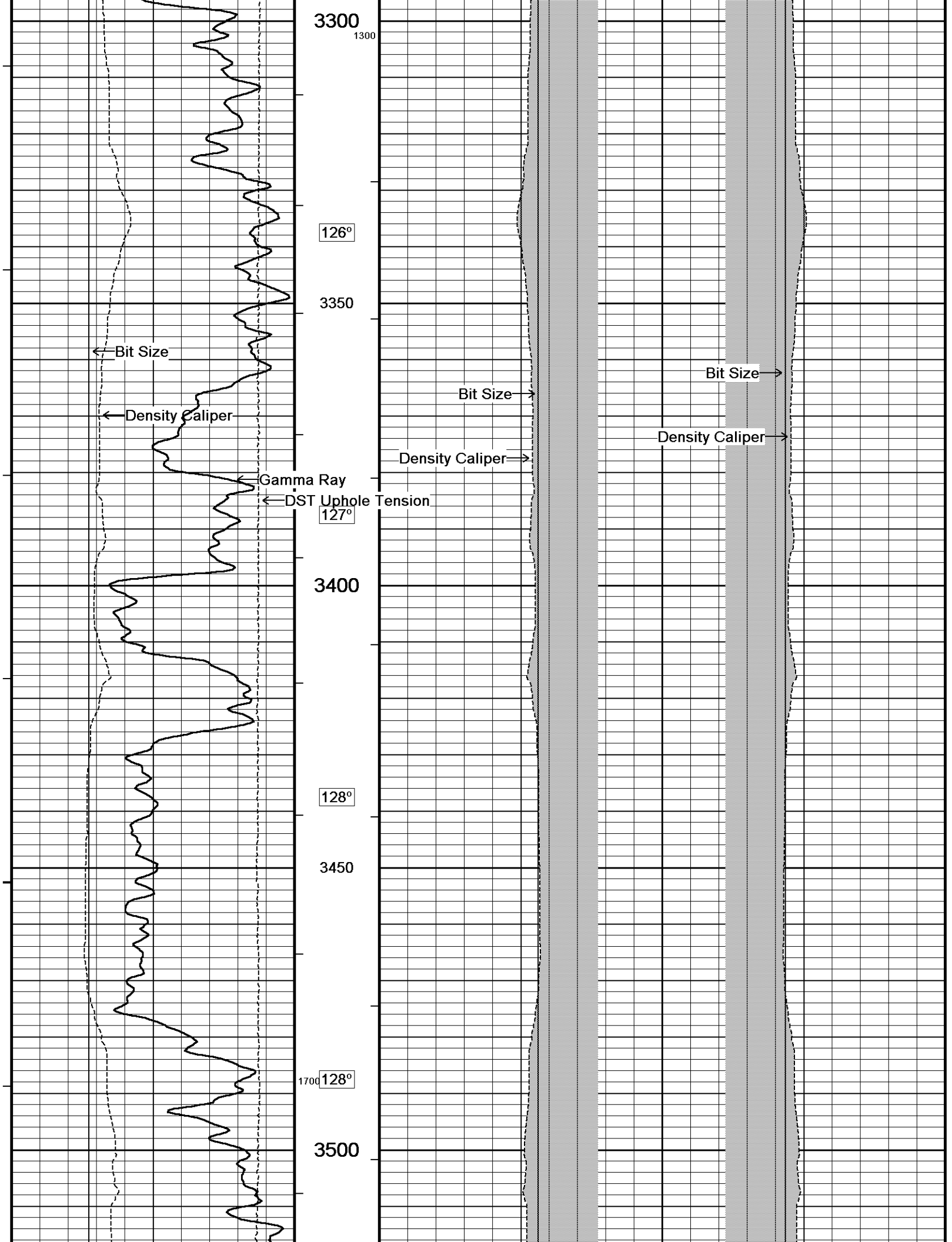


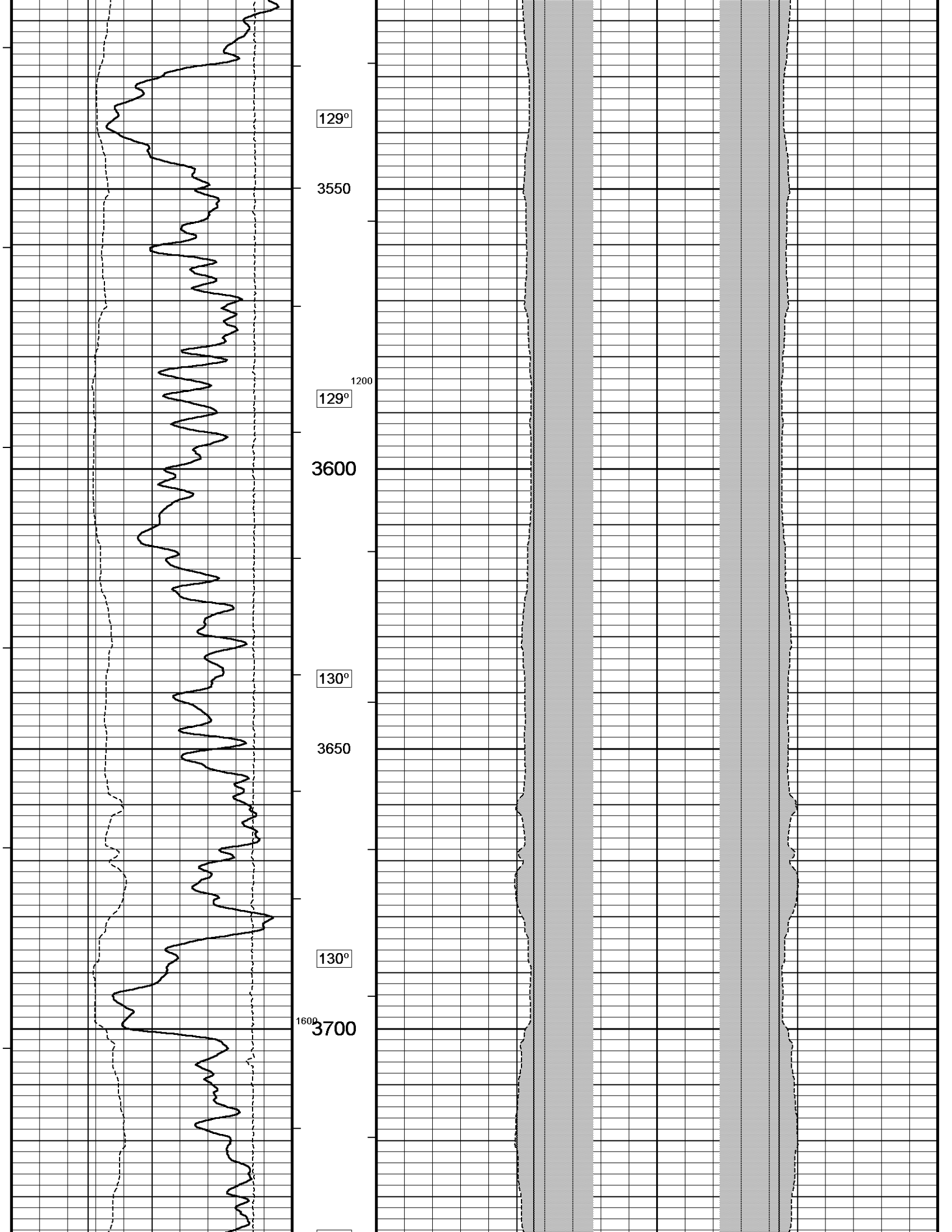
117°  
2650  
118°  
2700  
119°<sup>1500</sup>  
2750  
120°  
2800  
2000  
120°  
2850

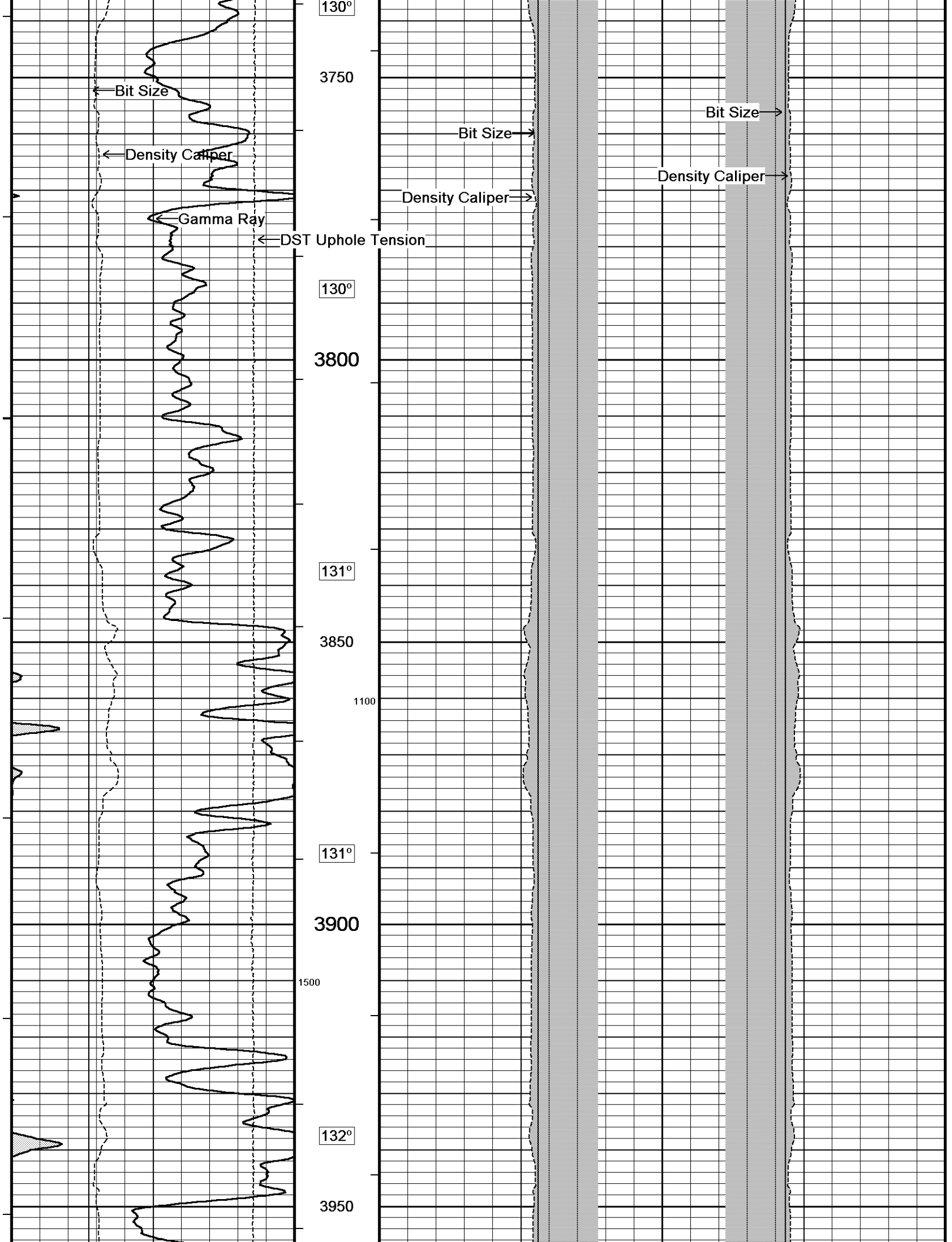




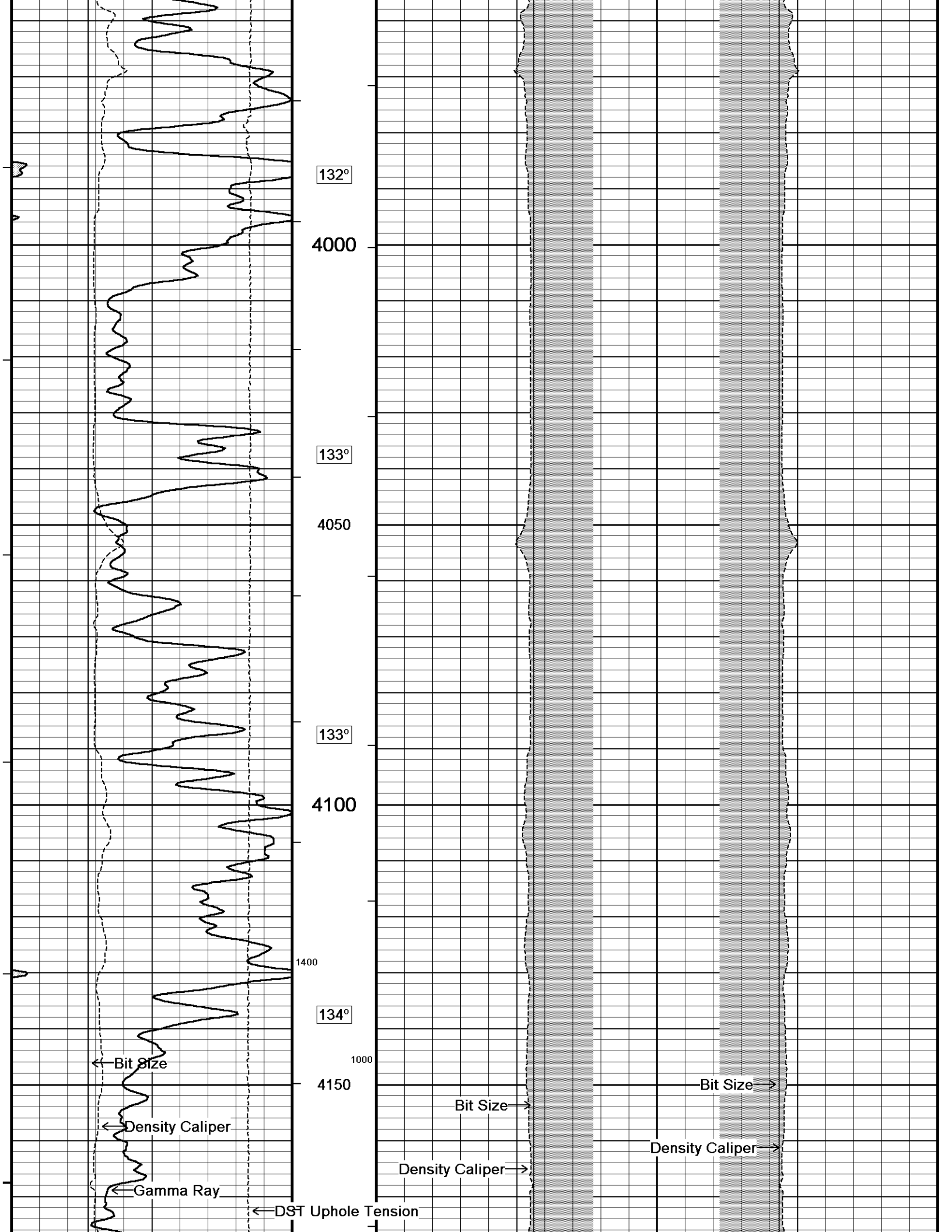


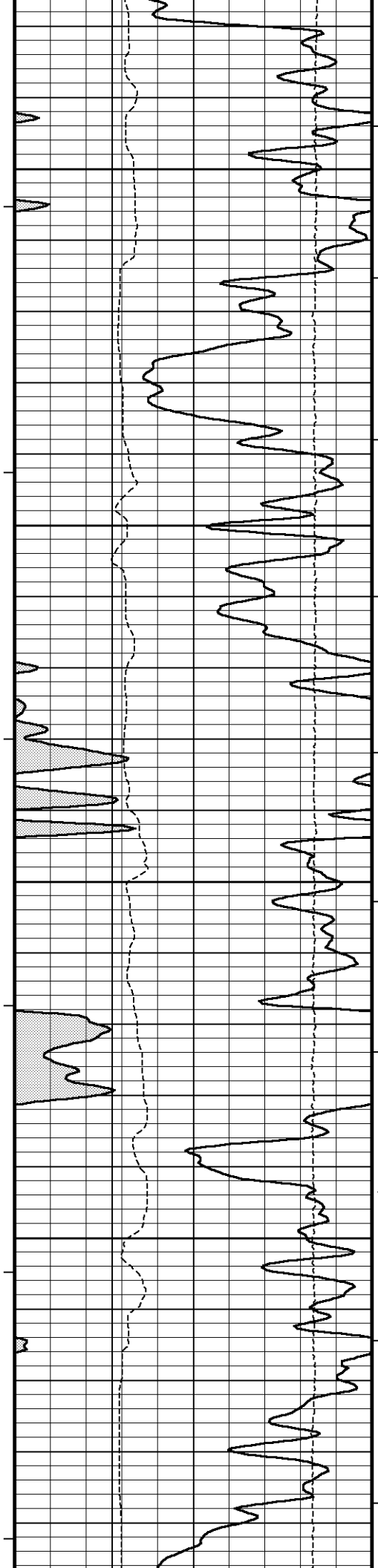












135°

4200

135°

4250

136°

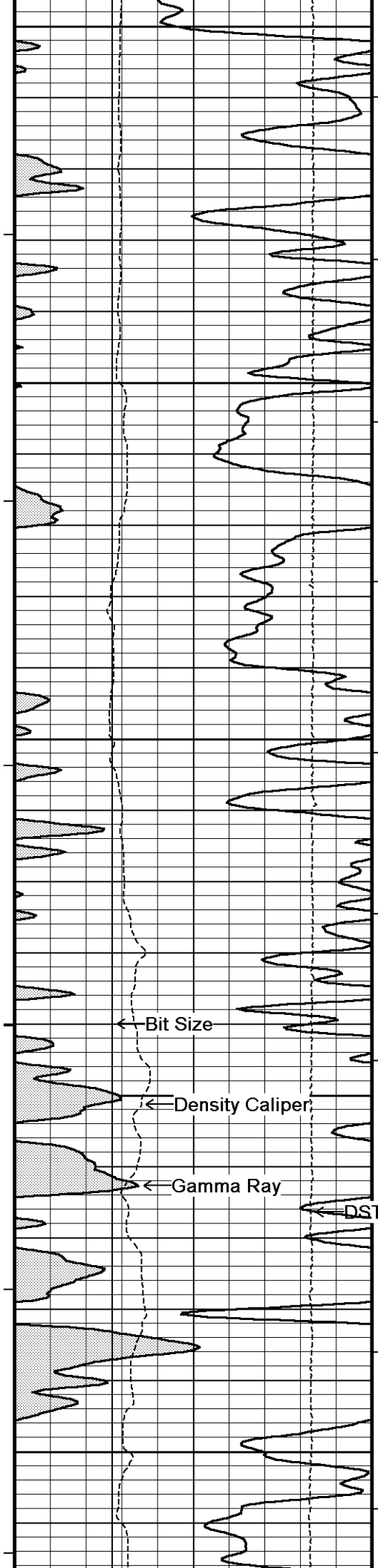
4300

136°

1300

4350

137°



4400

900

137°

4450

138°

4500

138°

4550

139°

4600

← Bit Size

← Density Caliper

← Gamma Ray

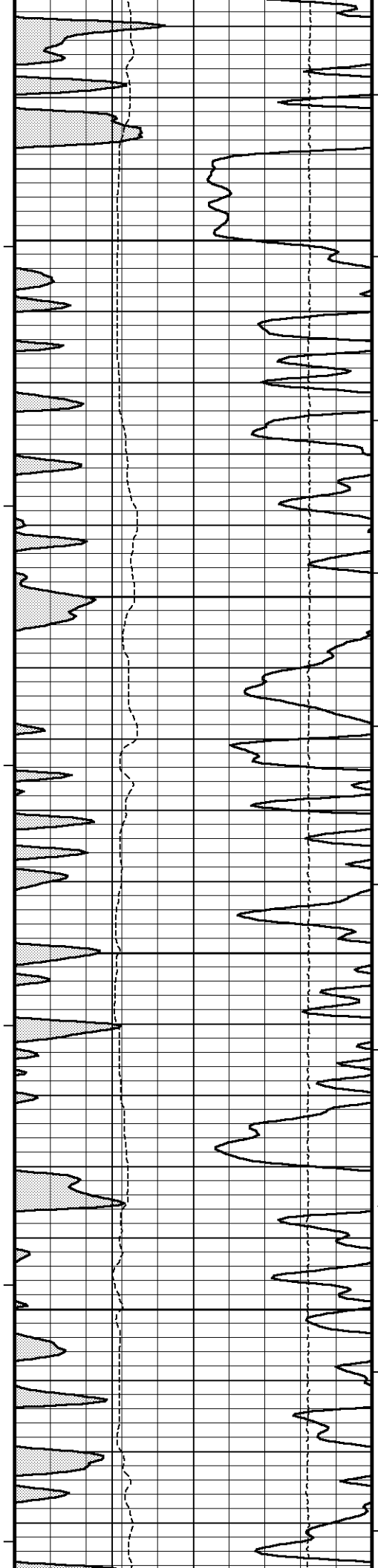
← DST<sup>20</sup> Uphole Tension

Bit Size →

Density Caliper →

Bit Size →

Density Caliper →



139°

4650

140°

4700

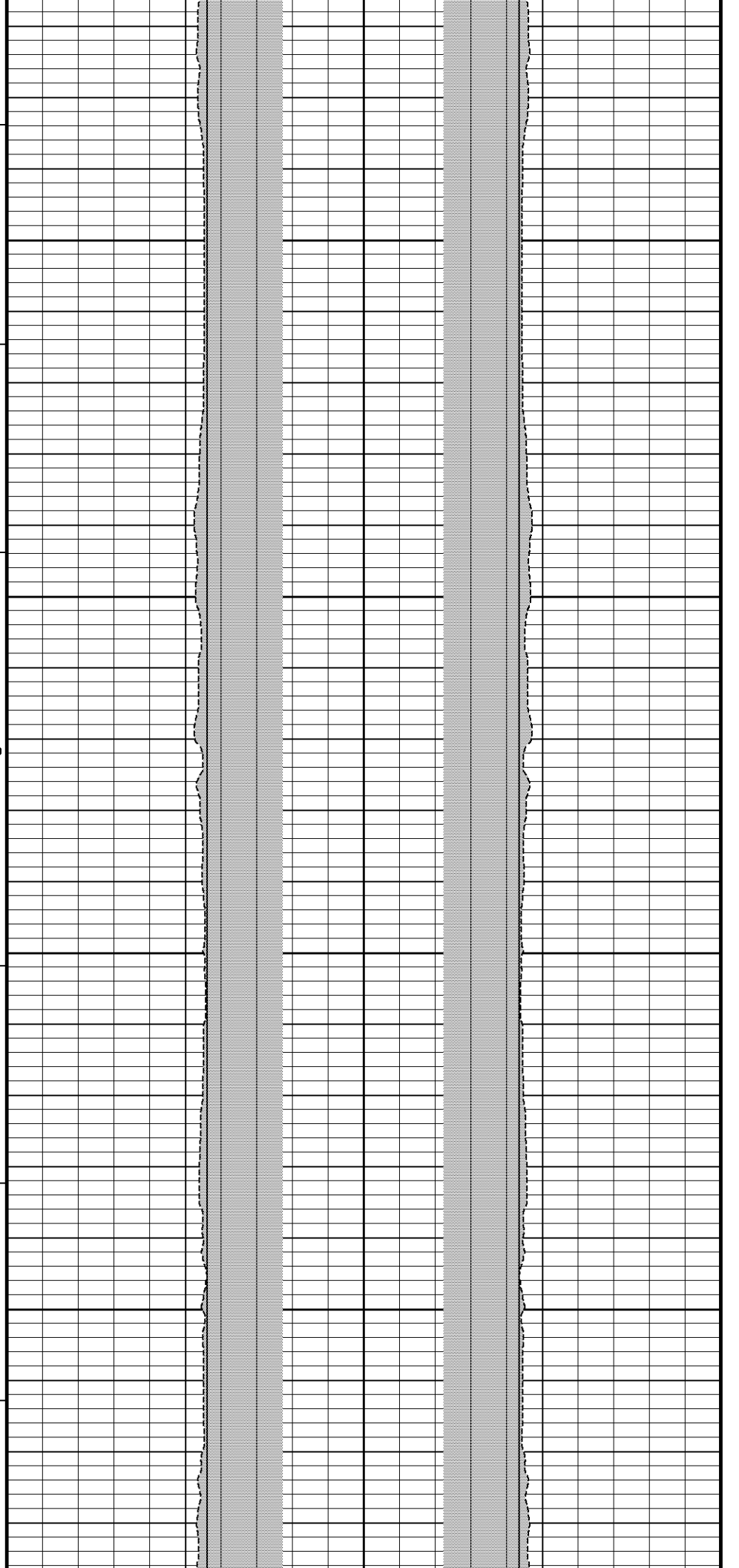
800

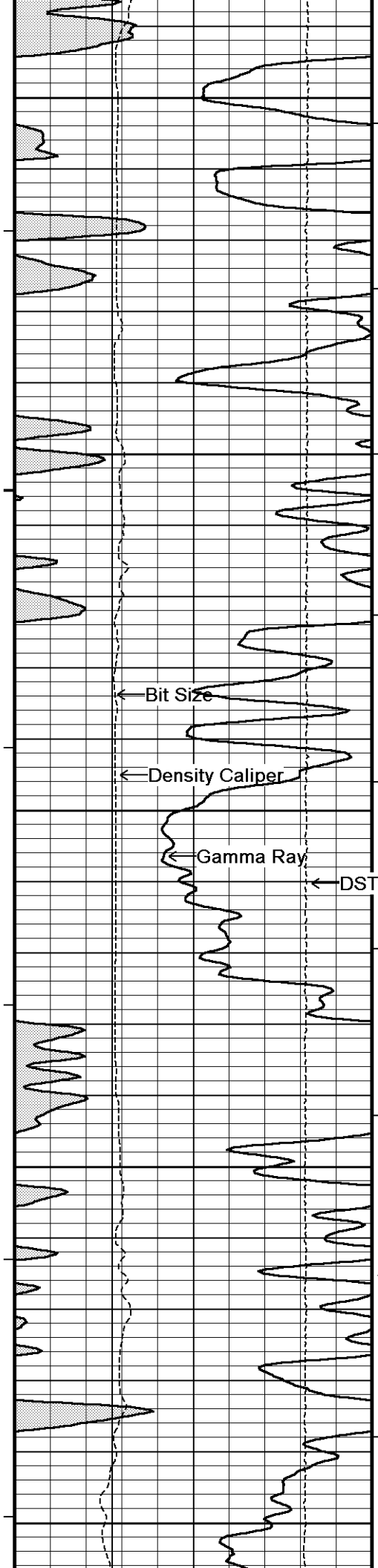
141°

4750

1100 141°

4800





142°

4850

142°

4900

143°

4950

143°

5000

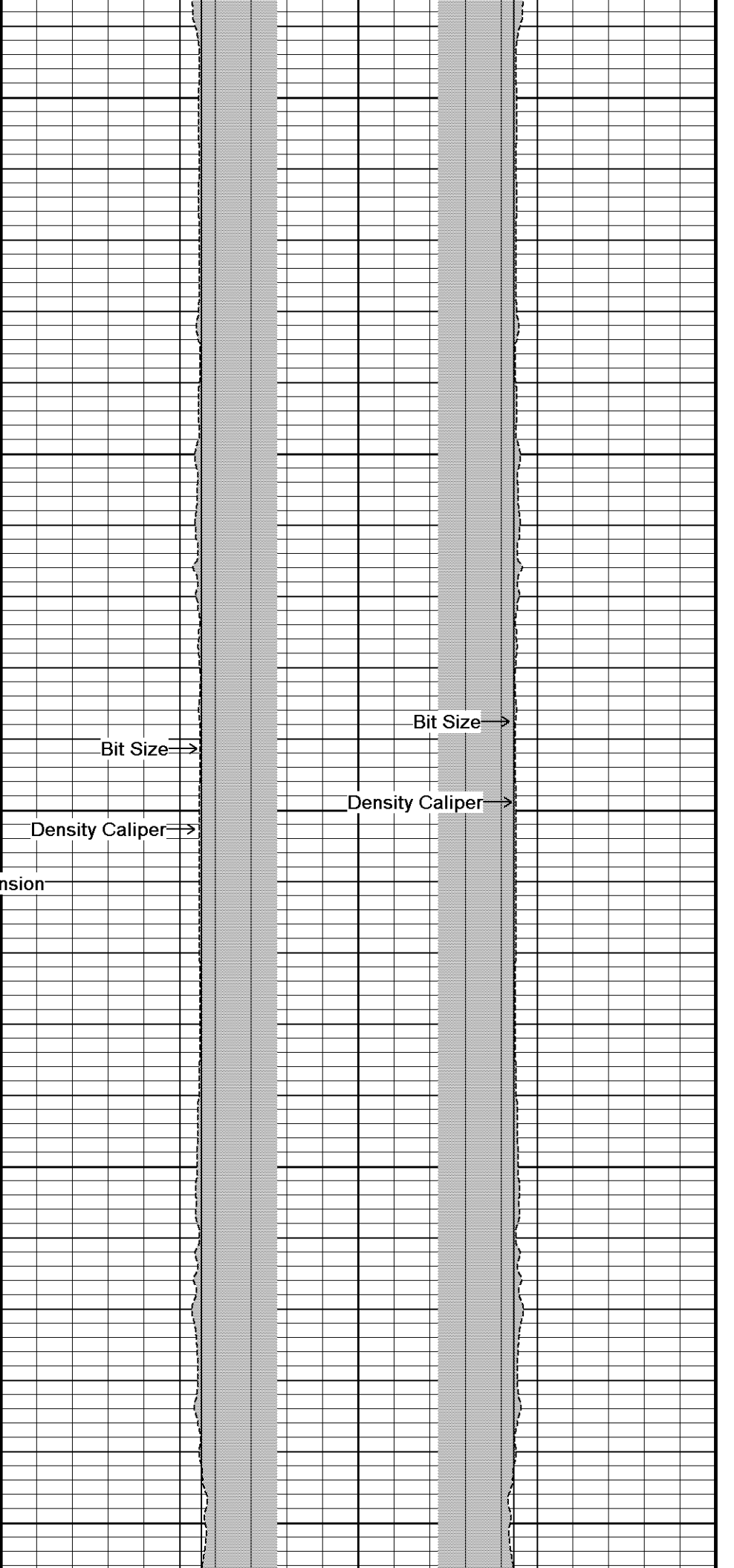
1000

144°

5050

DST Uphole Tension

700

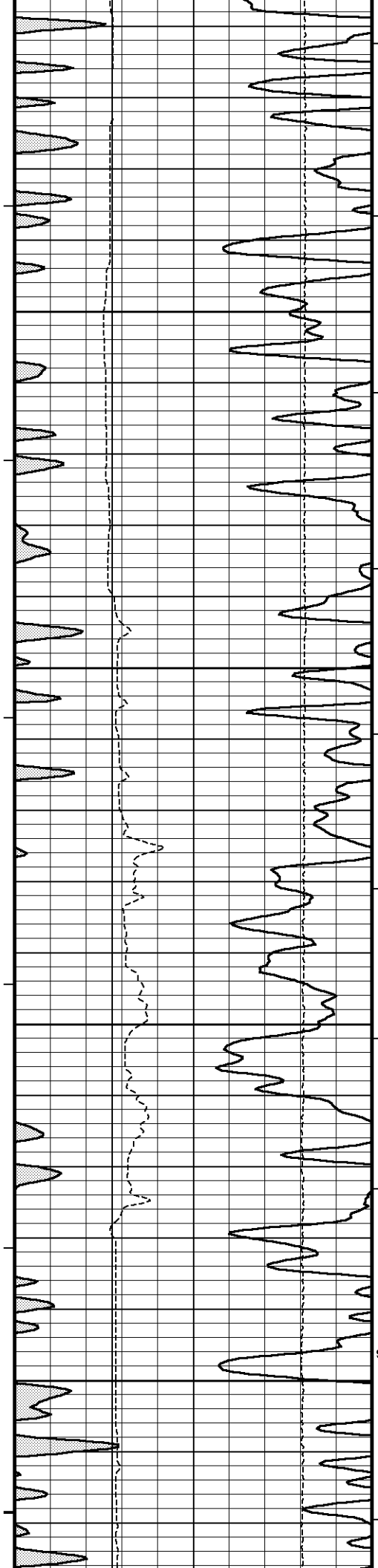


Bit Size

Density Caliper

Bit Size

Density Caliper



145°

5100

145°

5150

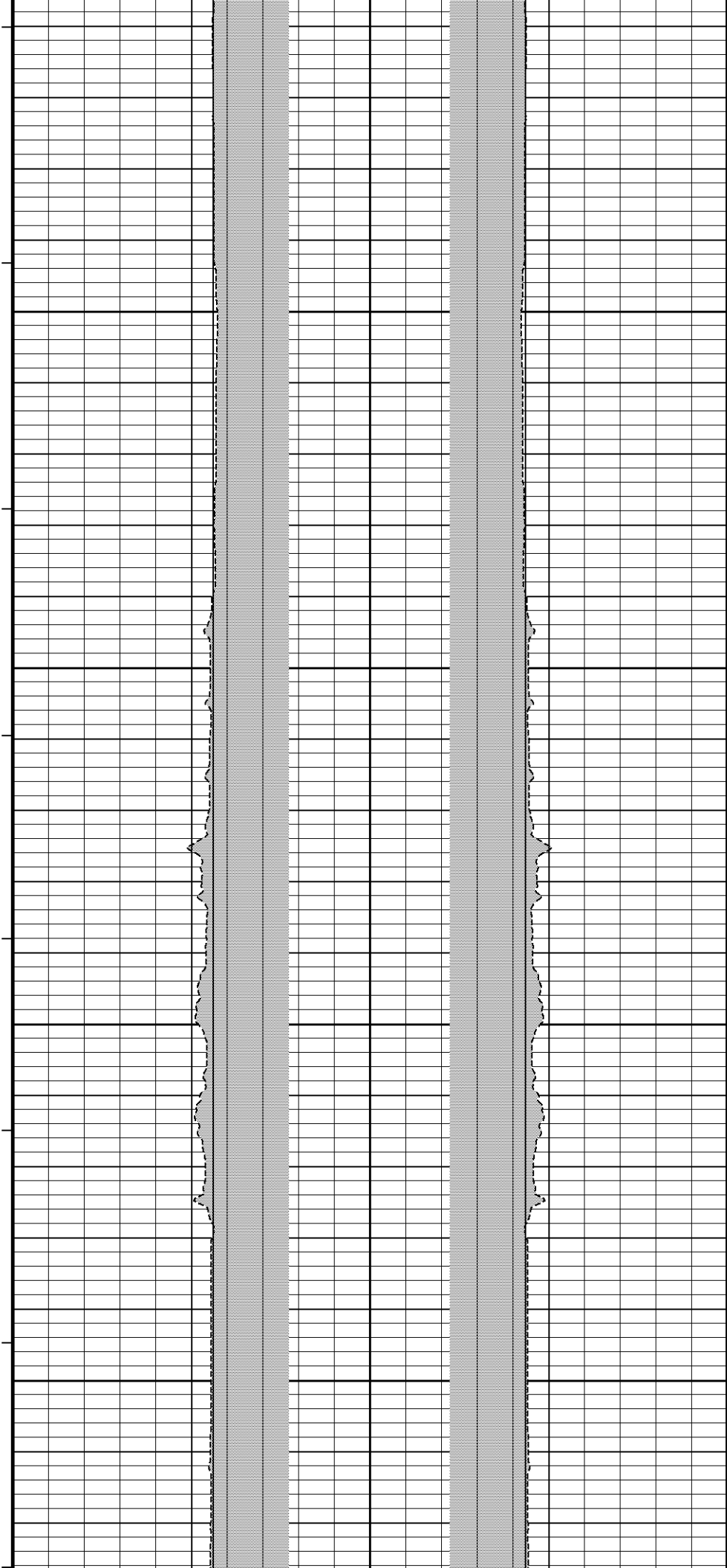
146°

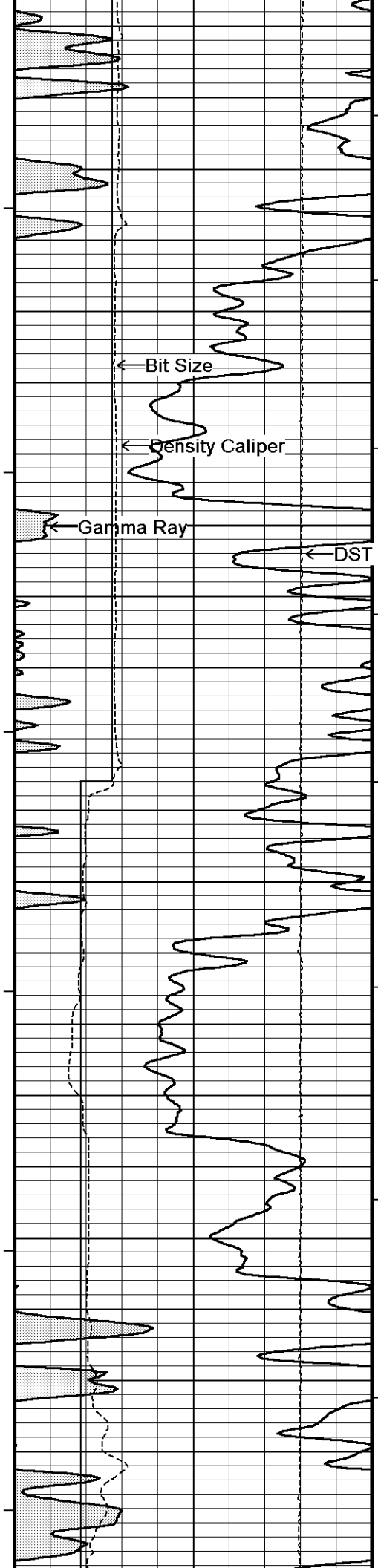
5200

146°

900

5250





147°

5300

← Bit Size

← Density Caliper

← Gamma Ray

← DST Uphole Tension

148°

5350

148°

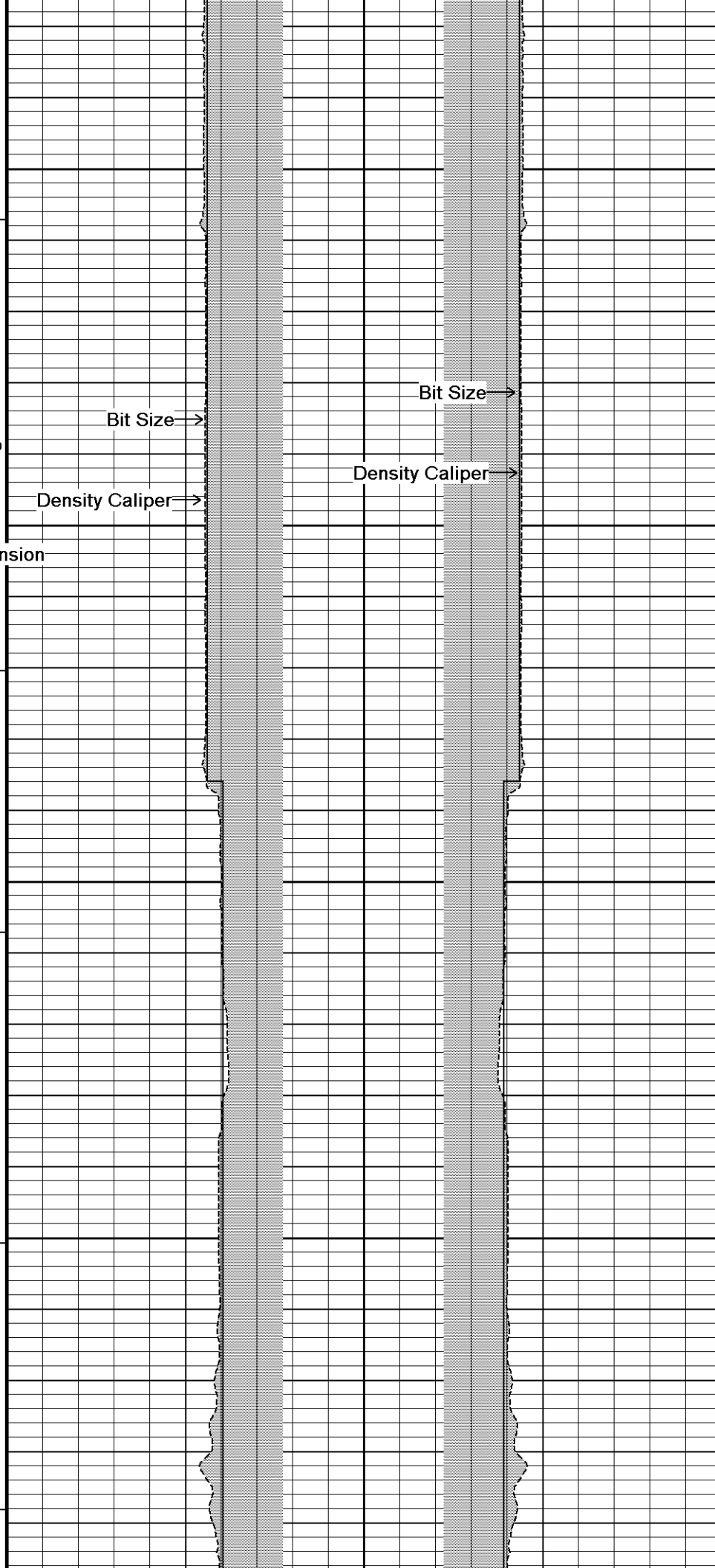
5400

149°

5450

149°

600

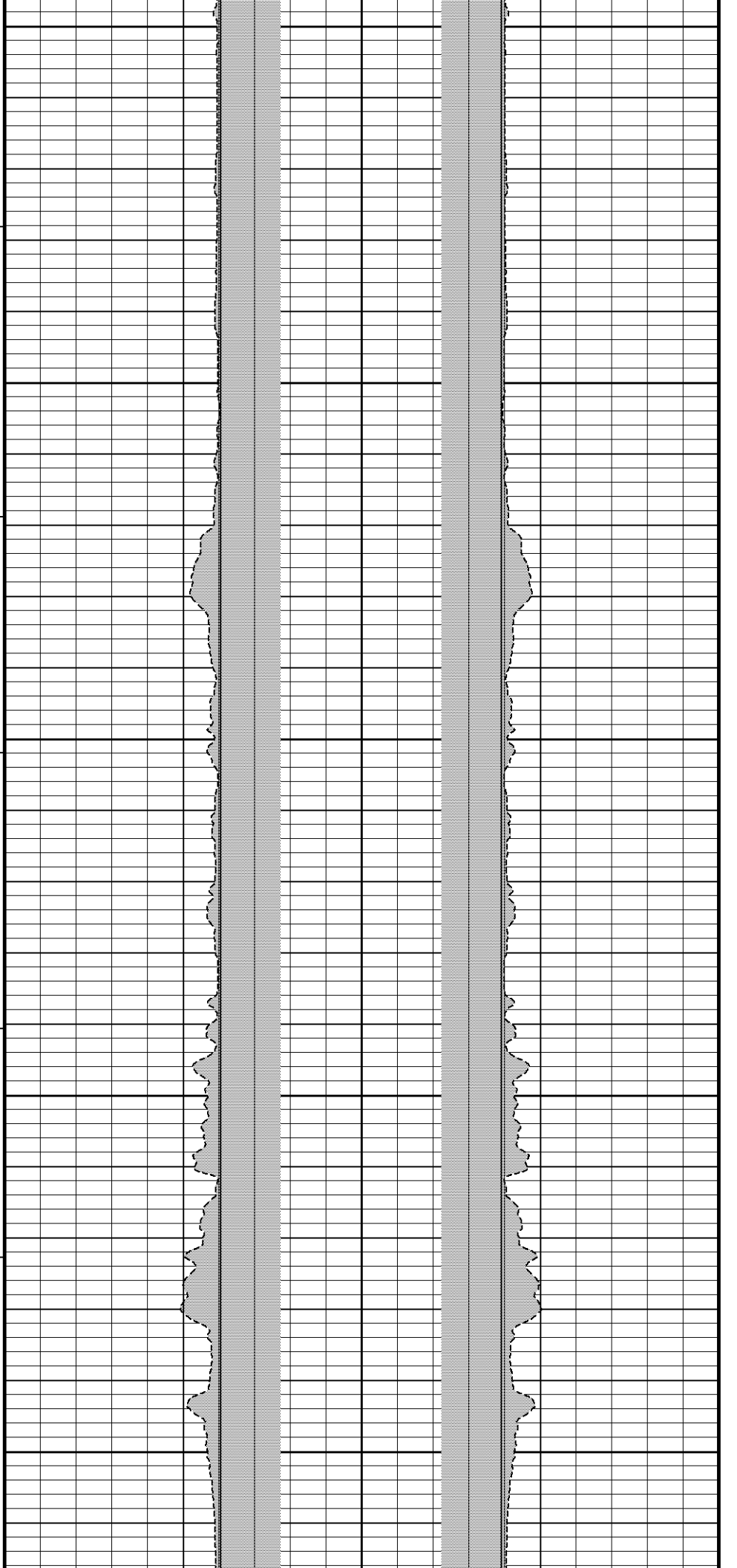
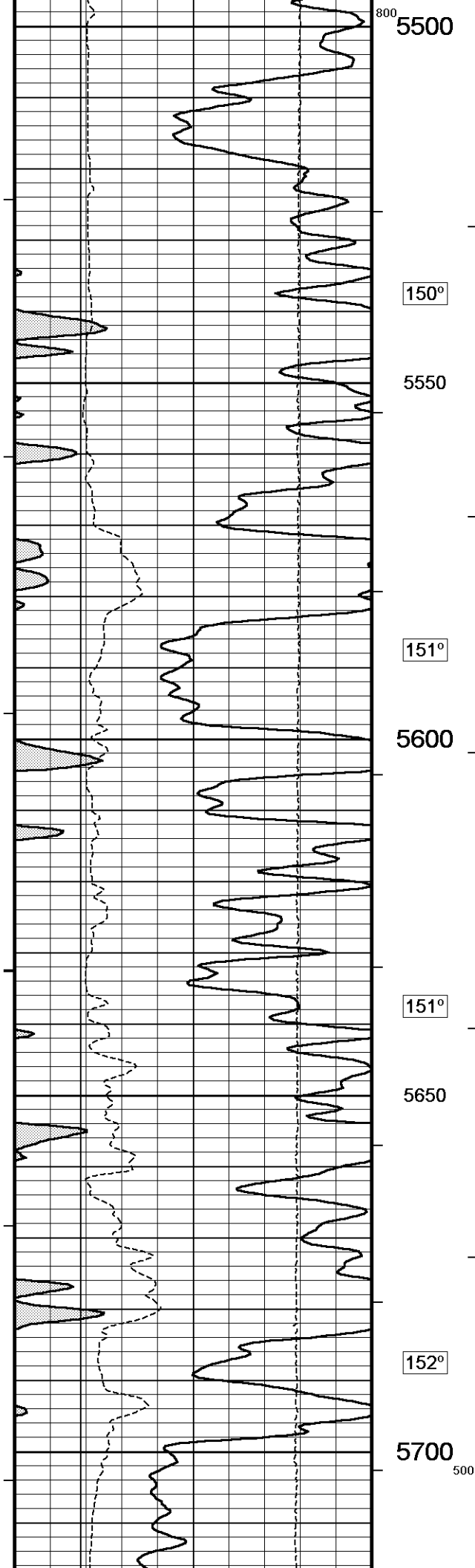


Bit Size →

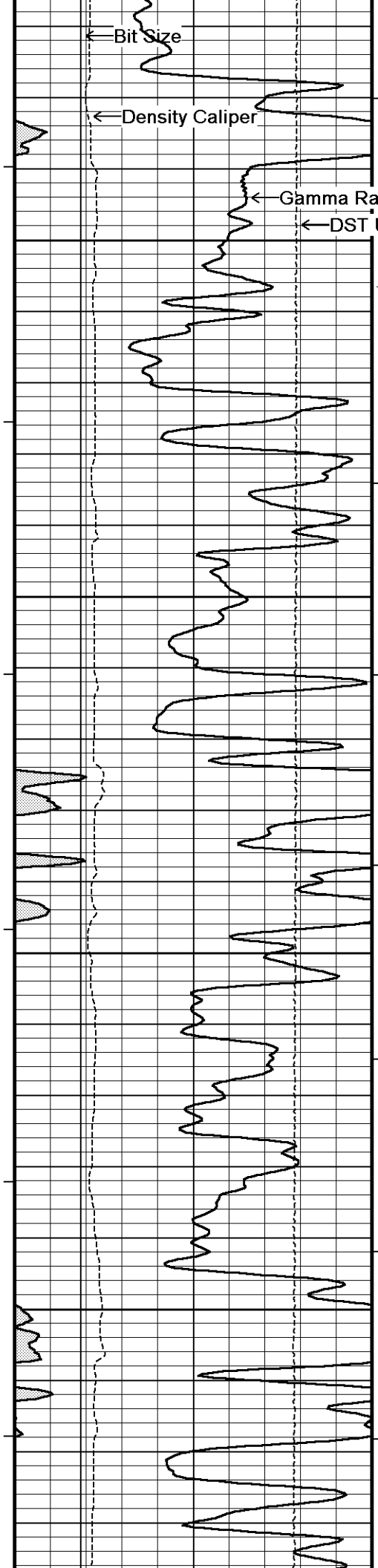
Density Caliper →

Bit Size →

Density Caliper →







153°

5750

700

153°

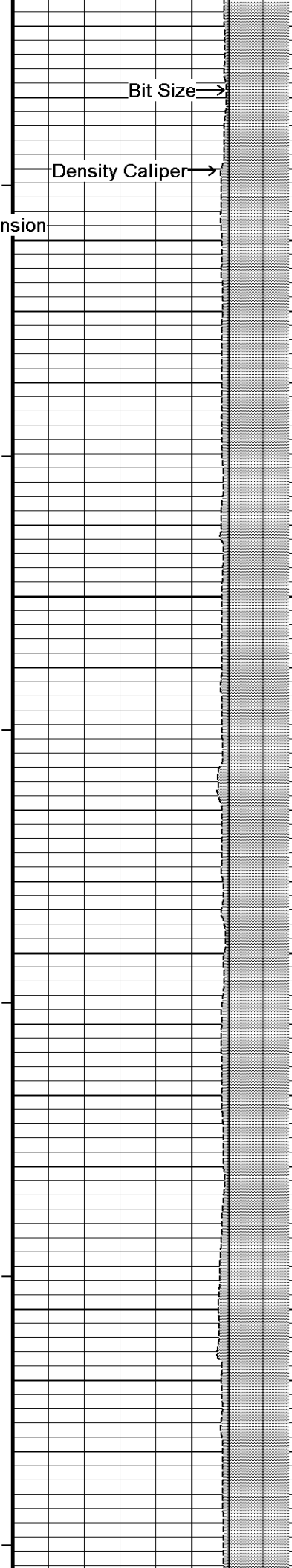
5800

154°

5850

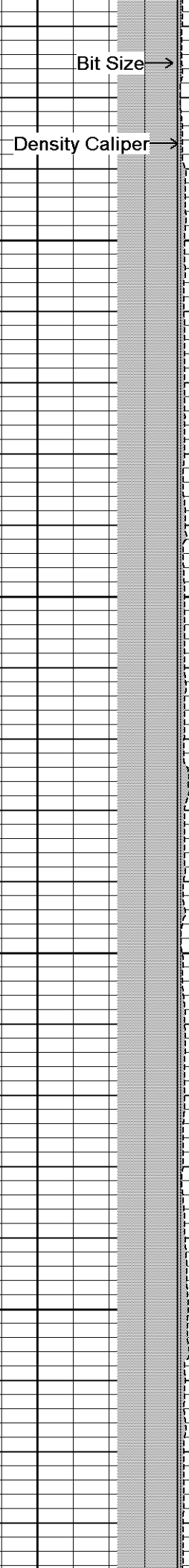
154°

5900



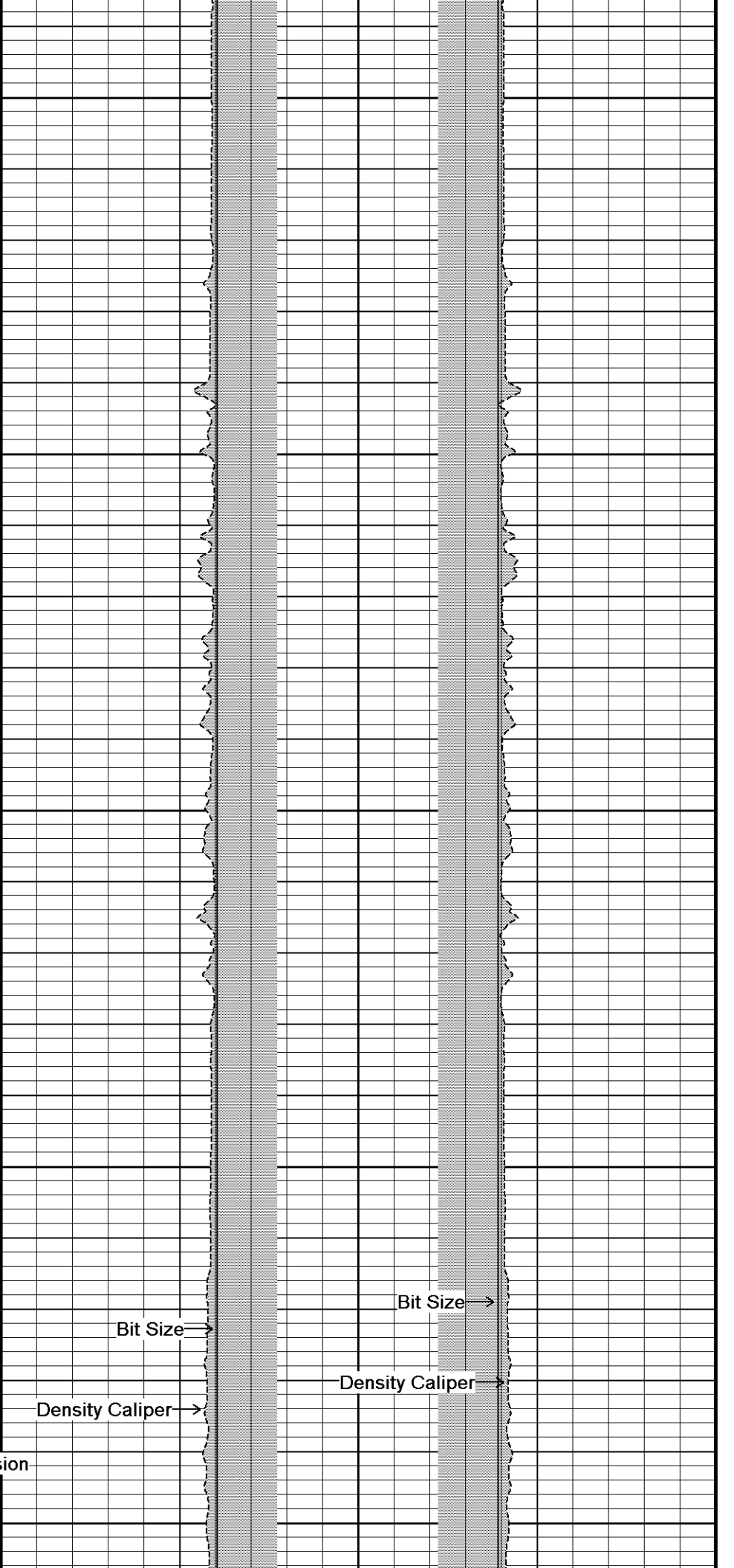
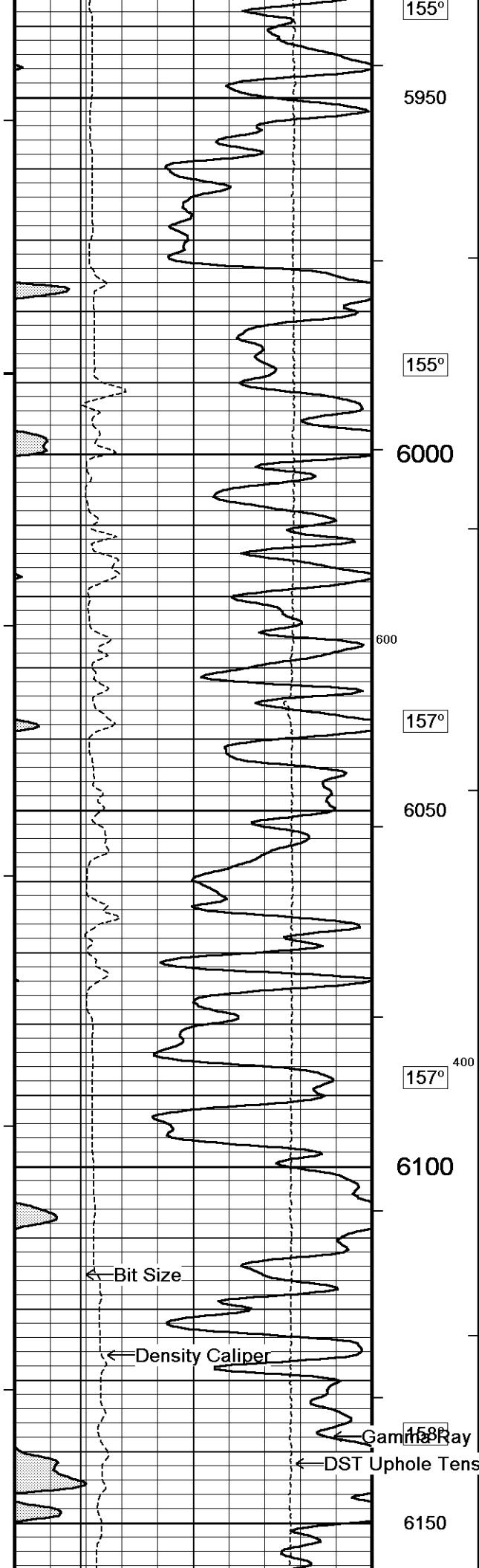
Bit Size →

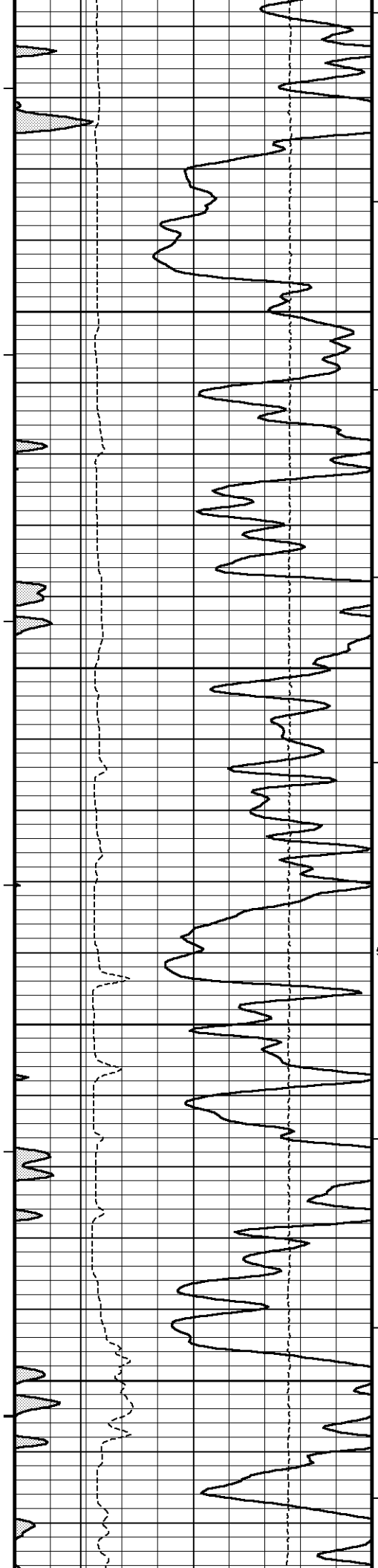
Density Caliper →



Bit Size →

Density Caliper →





159°

6200

160°

6250

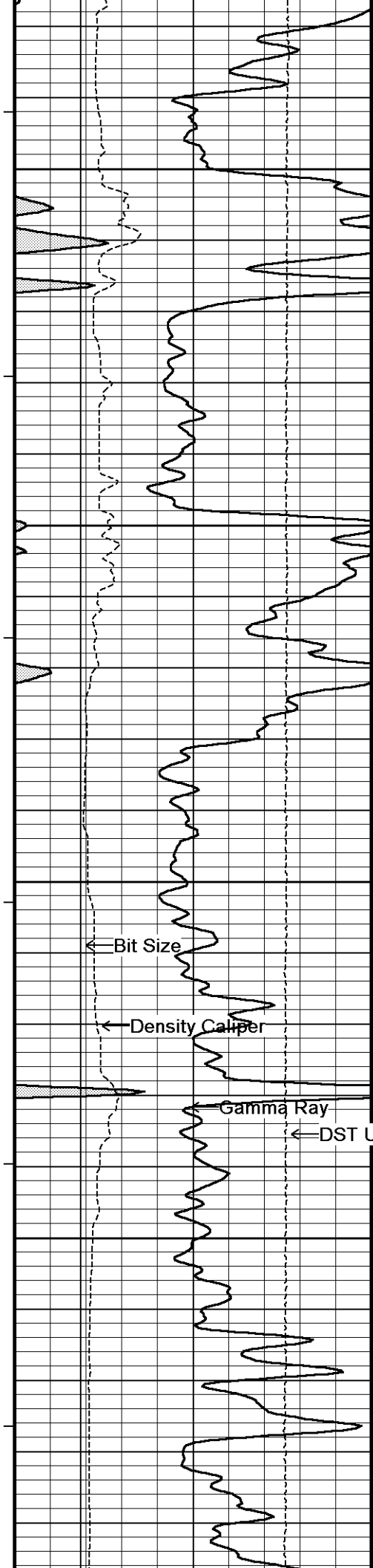
160°

500

6300

161°

6350



162°

6400

163°

6450

164°

6500

164°

6550

165°

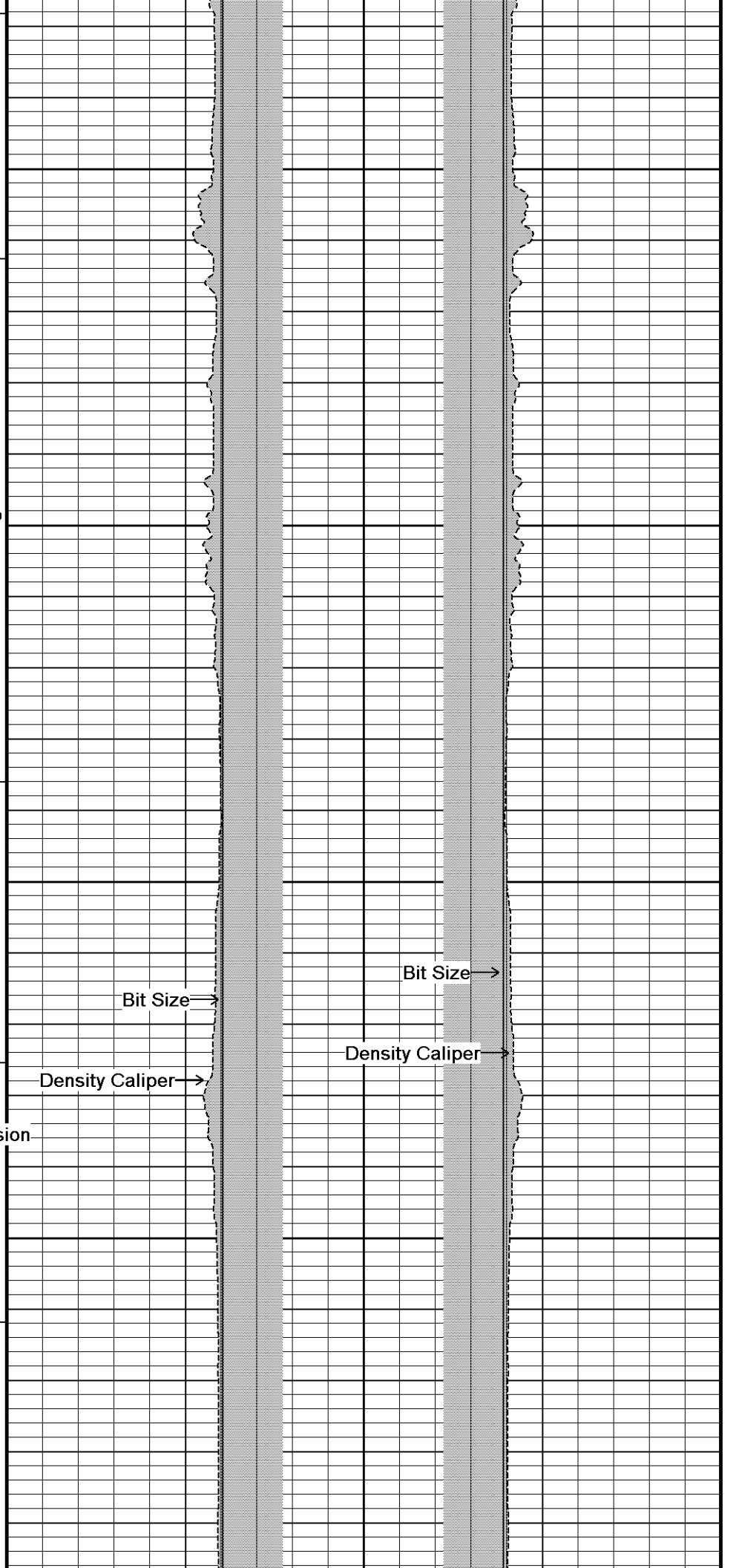
← Bit Size

← Density Caliper

← Gamma Ray

← DST Uphole Tension

400

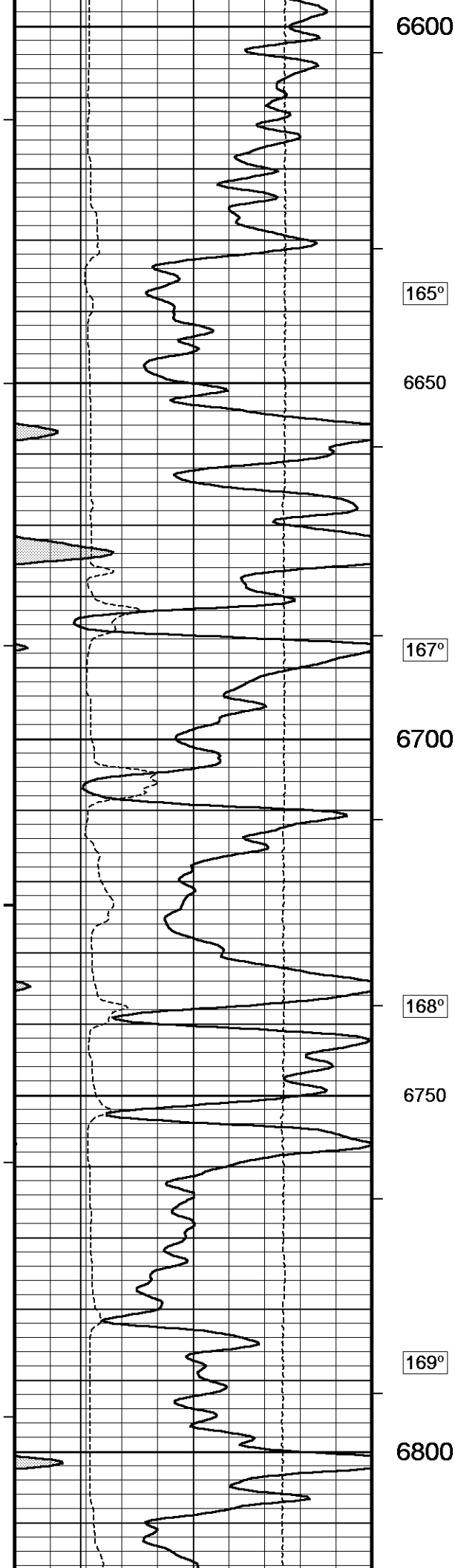


Bit Size →

Density Caliper →

Bit Size →

Density Caliper →



6600

165°

6650

167°

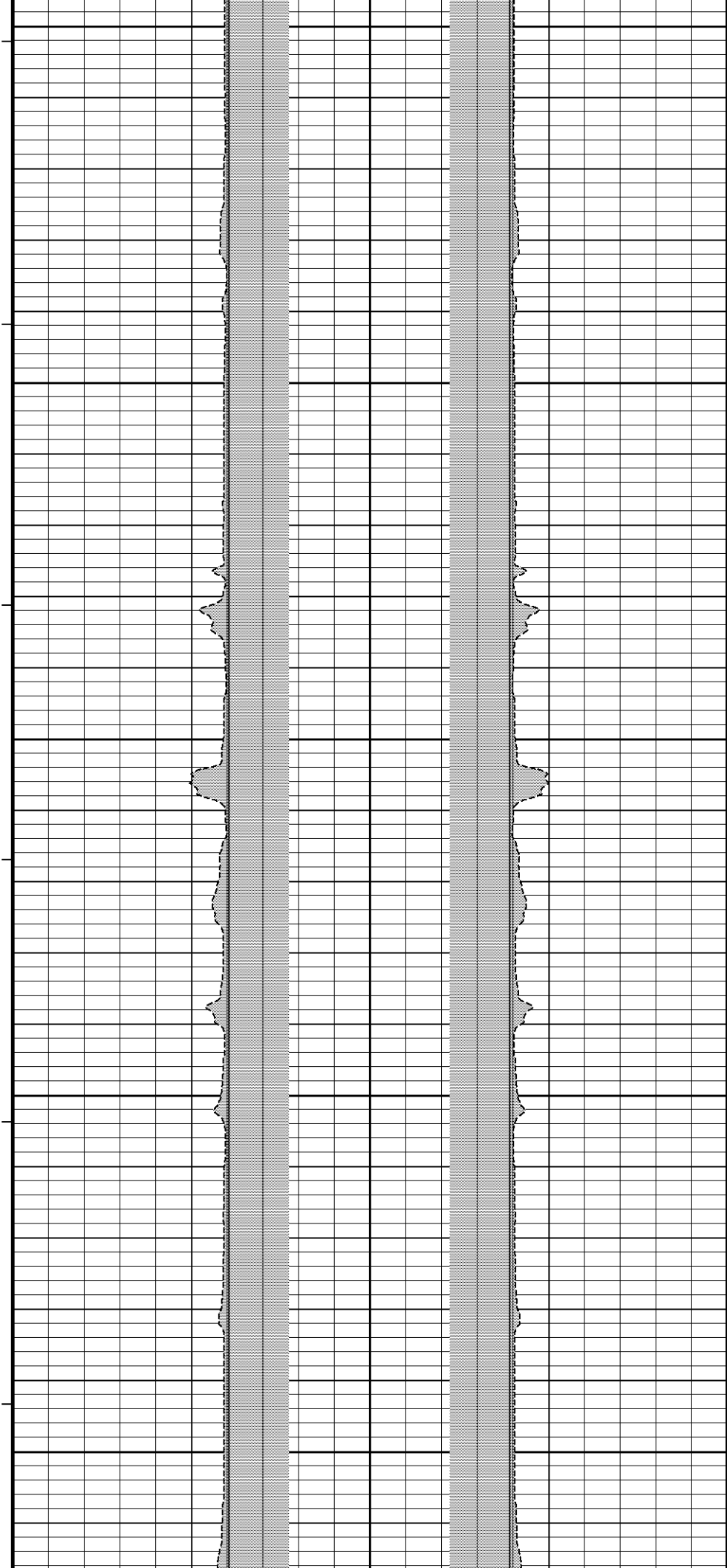
6700

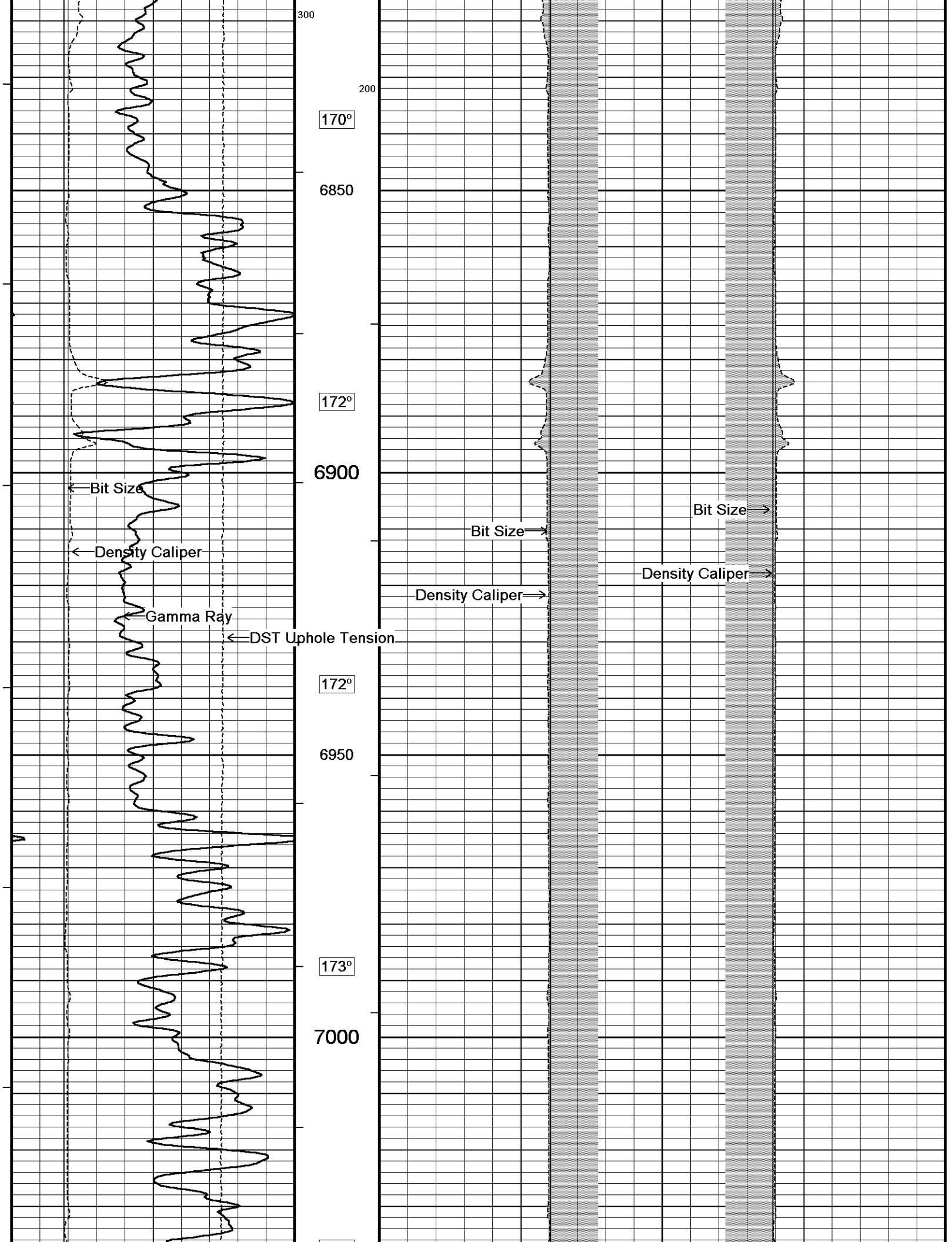
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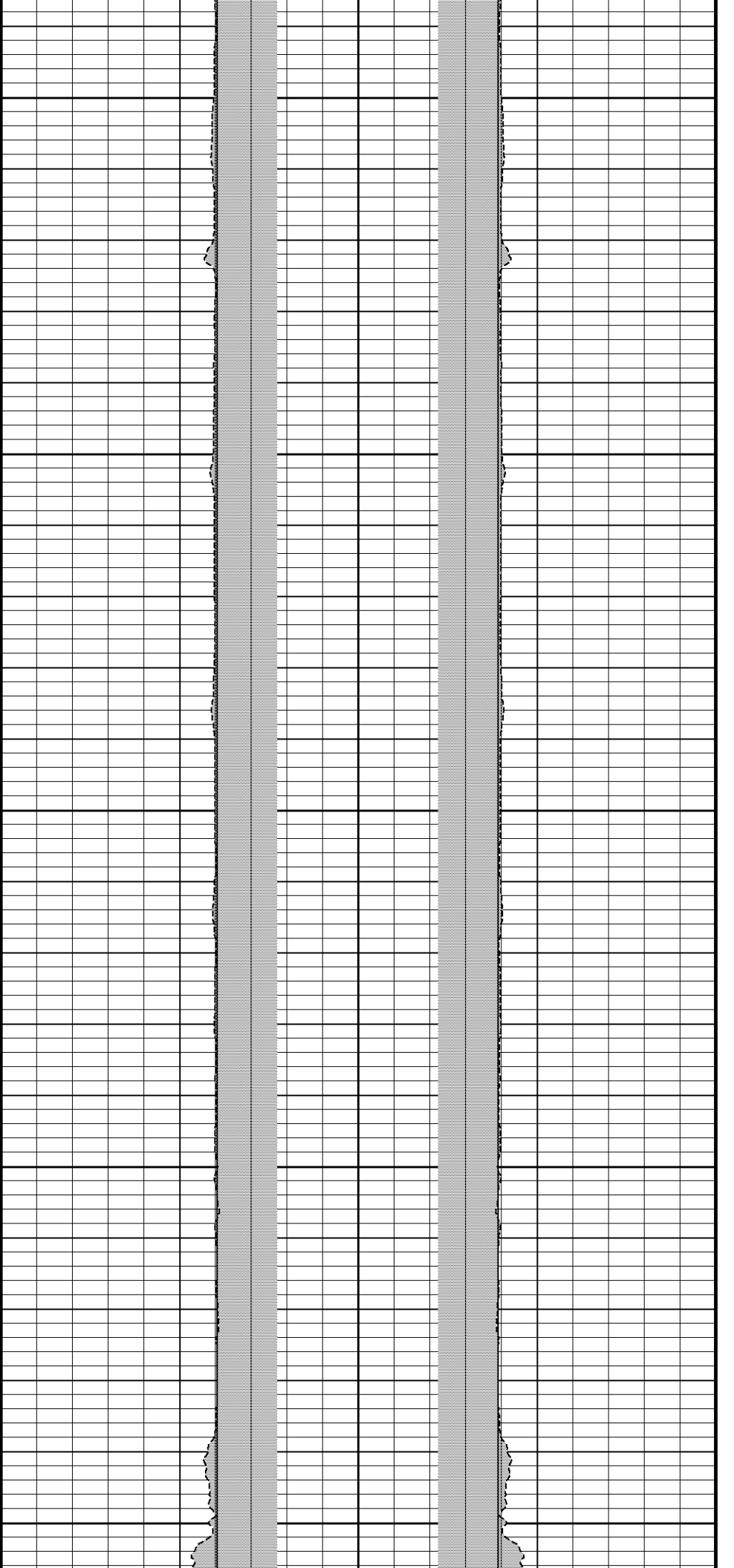
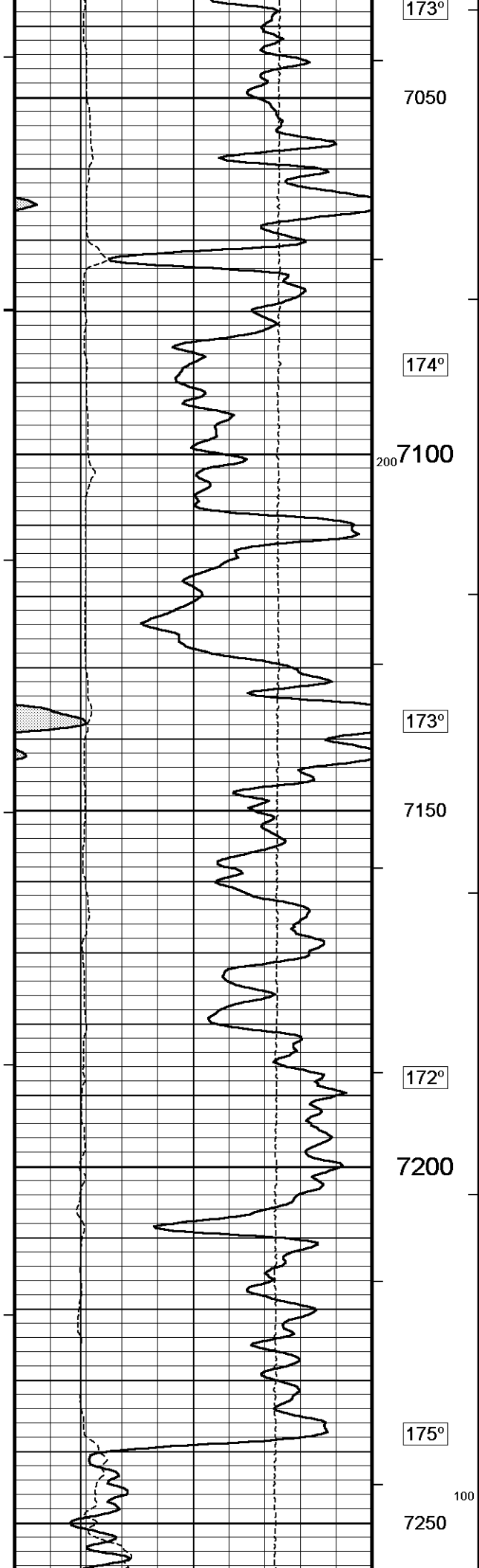
6750

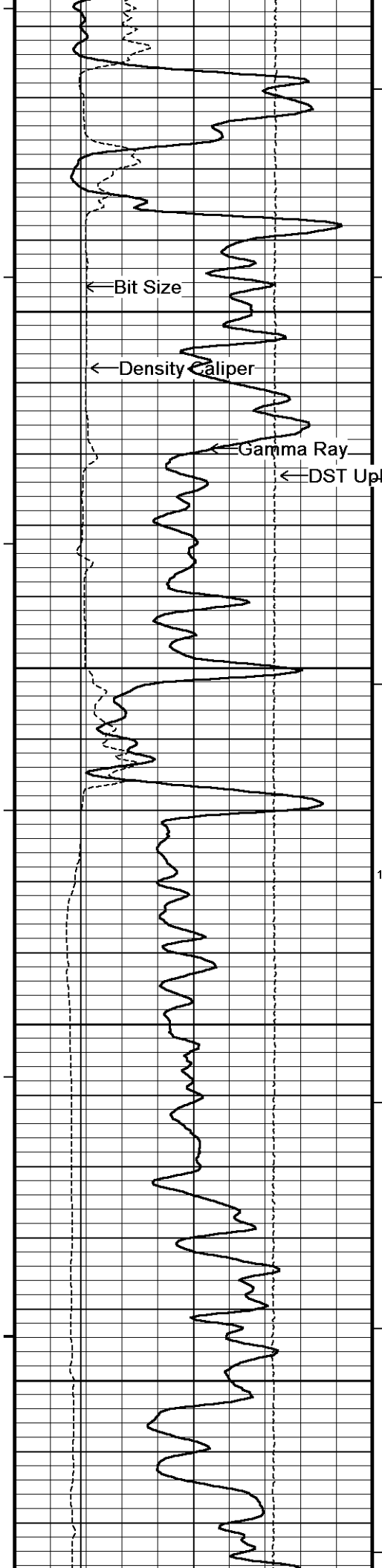
169°

6800









179°

7300

178°

7350

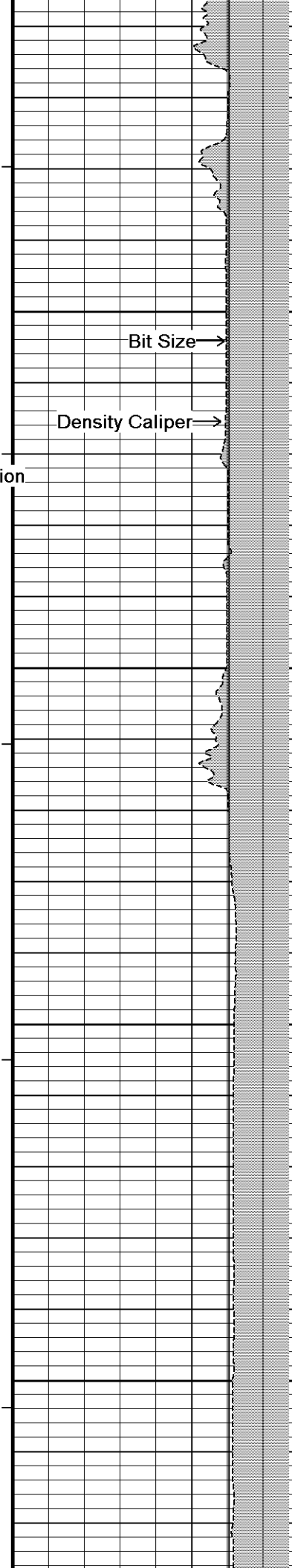
100

182°

7400

183°

7450



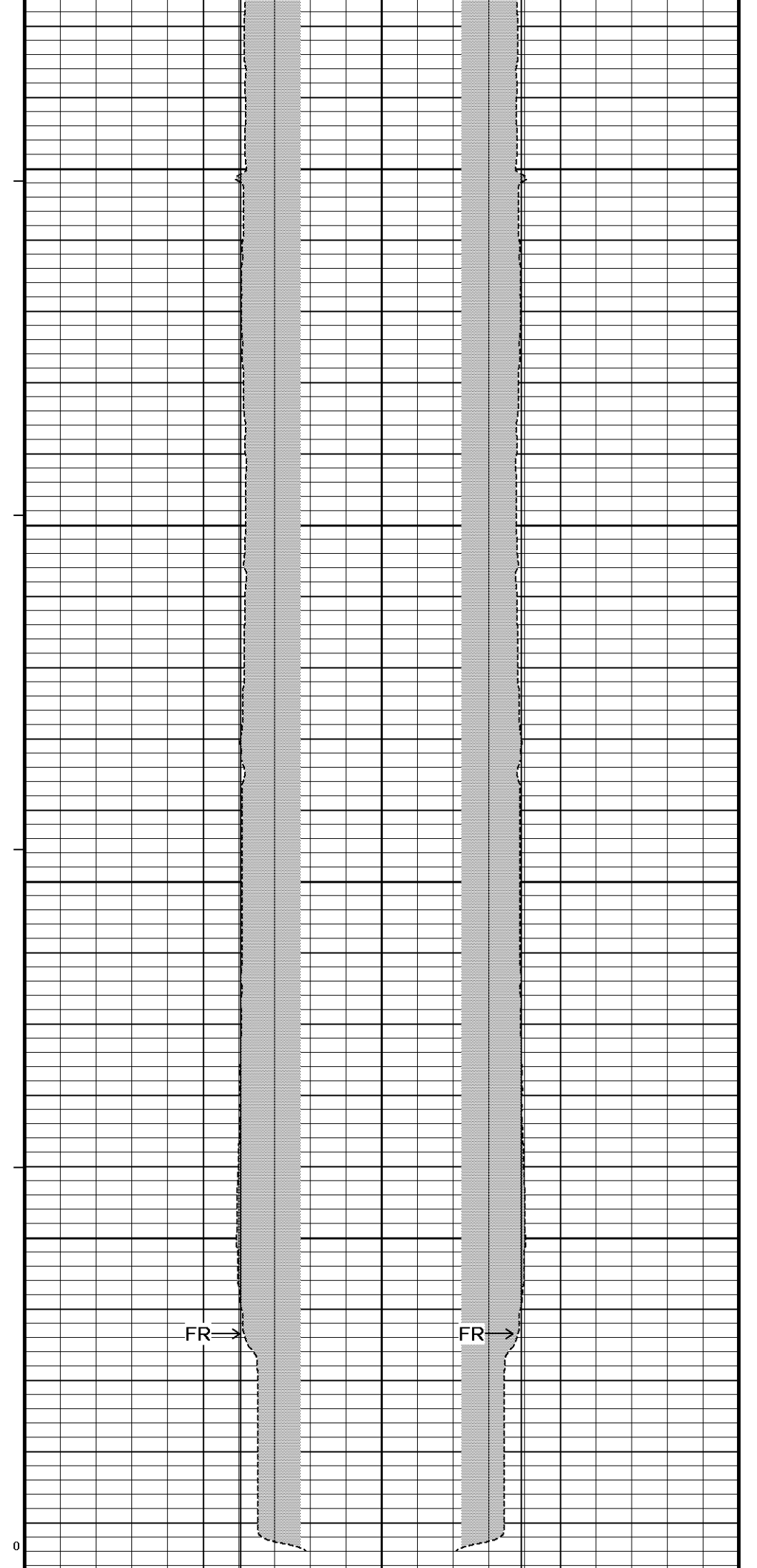
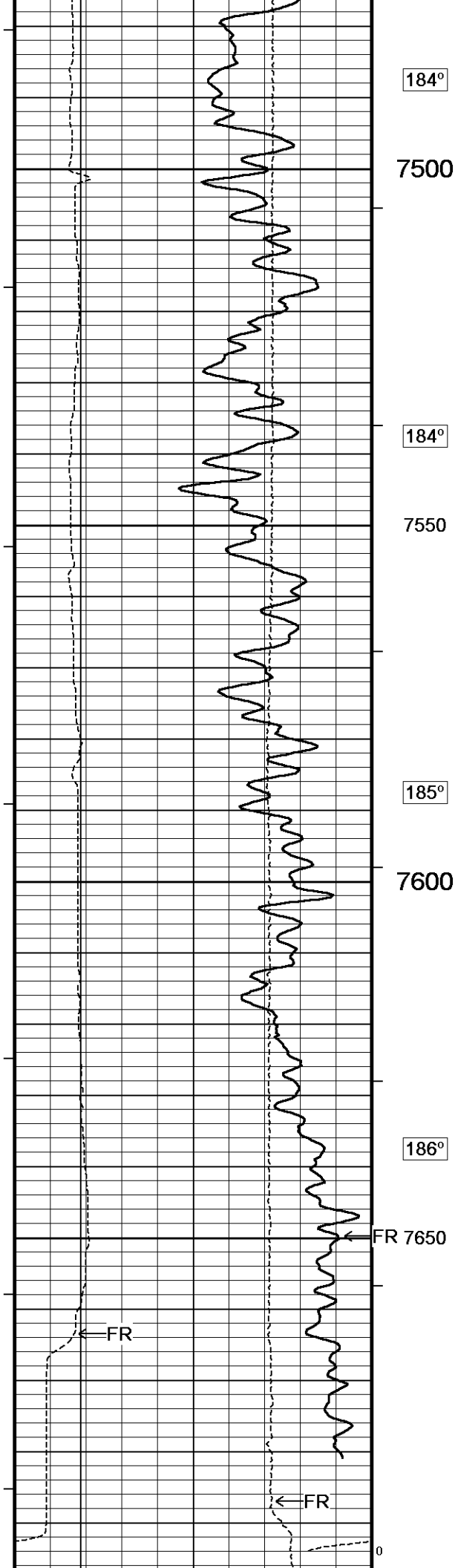
Bit Size

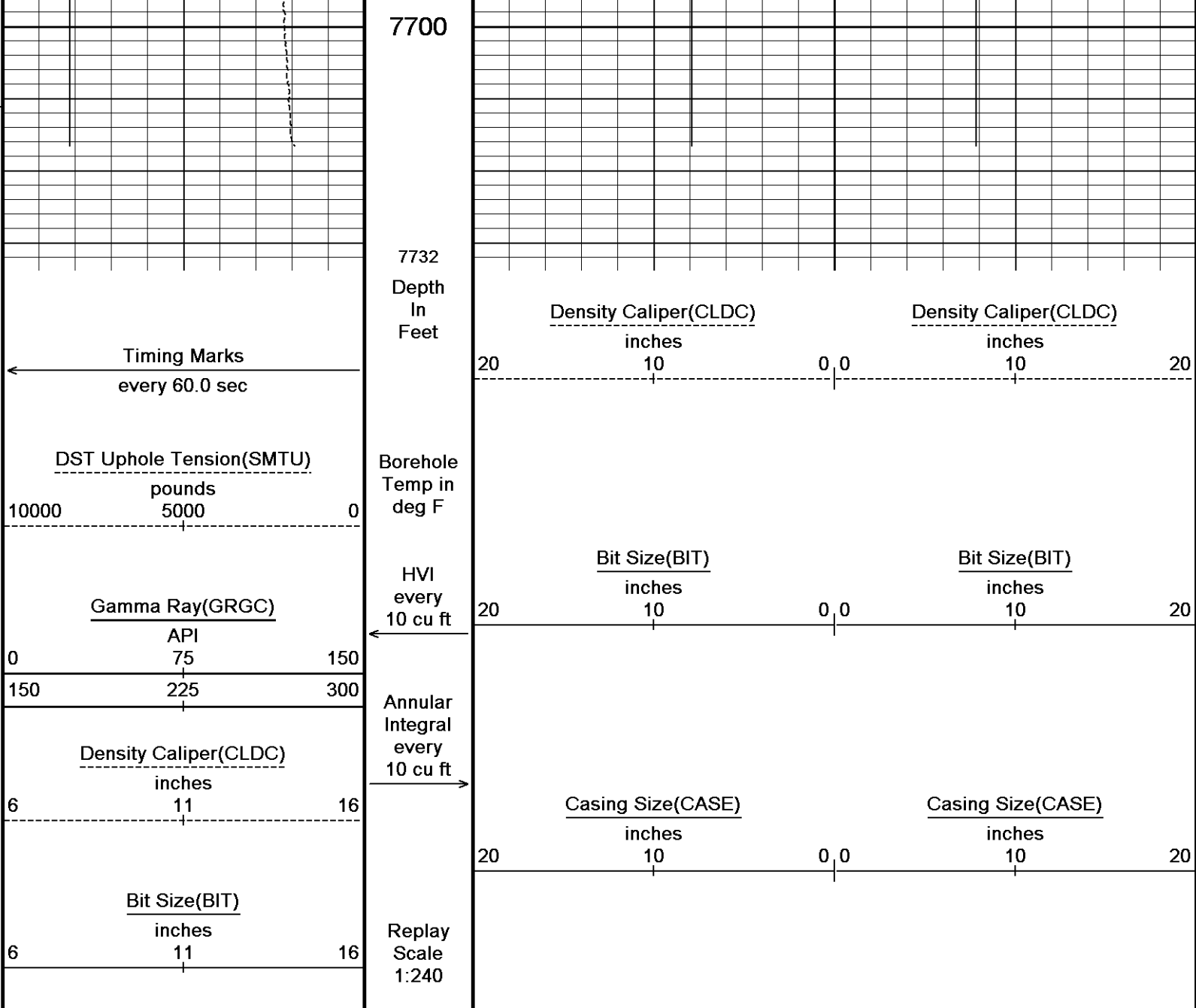
Density Caliper

182°

183°



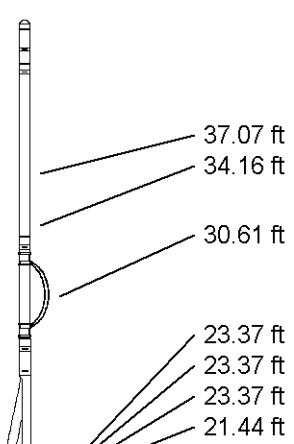




Depth Based Data - Maximum Sampling Increment 10.0cm	Plotted on 20-APR-2011 00:59
Filename: C:\LOGS\Bill Barrett\GGU Daley 31B-30-691\main.dta	Recorded on 19-APR-2011 20:35
System Versions: Logged with 11.02.2782 Plotted with 11.02.2782	

DOWNHOLE EQUIPMENT

C:\LOGS\Bill Barrett\GGU Daley 31B-30-691\main.dta

MCB-A 11B Tension Cablehead MCB-A 1 LG: 2.18 ft WT: 19.8 lb OD: 2.24 in		37.07 ft GRGC - Gamma Ray
Compact Comms Gamma MCG-C 192 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in		34.16 ft CGXT - MCG External Temperature
Compact Neutron MDN-A.B 160 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in		30.61 ft NPRS - Sandstone Neutron Por.
Compact Density/Caliper MPD-B 167 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in		23.37 ft AVOL - Annular Volume
SKJ-E.A Compact Knuckle Joint		23.37 ft HVOL - Hole Volume
		23.37 ft CLDC - Density Caliper
		21.44 ft DPOR - Base Density Porosity

SKJ-E.A 114 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

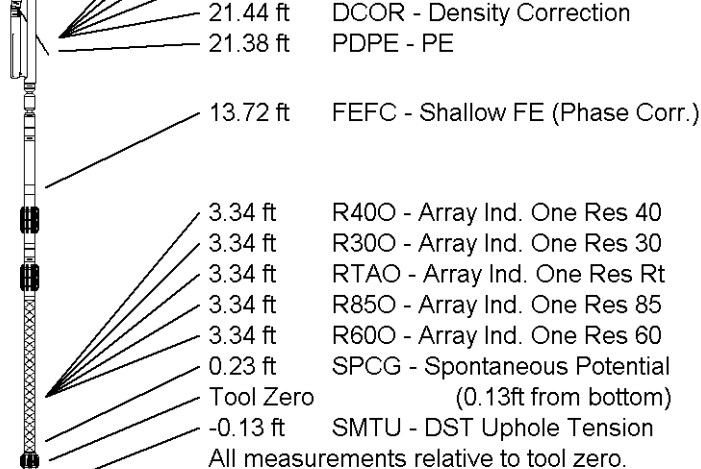
Compact Focussed Electric

MFE-A.A 85 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Induction

MAI-B.A 213 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 44.53 ft Weight: 346.1 lb



COMPANY

BILL BARRETT CORPORATION

WELL

GGU DALEY 31B-30-691

FIELD

GIBSON GULCH

PROVINCE/COUNTY

GARFIELD

COUNTRY/STATE

U.S.A. / COLORADO

Elevation Kelly Bushing	5847.00	feet
Elevation Drill Floor	5847.00	feet
Elevation Ground Level	5824.00	feet

First Reading	7665.50
Depth Driller	7678.00 feet
Depth Logger	7687.00 feet



**Weatherford®**

HOLE VOLUME  
CALIPER LOG

