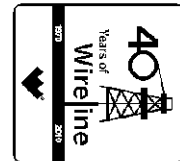




**Weatherford**<sup>®</sup>

**HOLE VOLUME  
CALIPER LOG**

**COMPANY** BILL BARRETT CORPORATION  
**WELL** GGU DALEY 21D-30-691  
**FIELD** GIBSON GULCH  
**PROVINCE/COUNTY** GARFIELD  
**COUNTRY/STATE** U.S.A. / COLORADO  
**LOCATION** SHL: 236' FSL & 2009' FWL  
BHL: 185' FNL & 1960' FWL



SEC	TWP	RGE	Other Services
30	6S	91W	MPD/MDN MA/MFE
API Number	05-045-19578		
Permit Number			
Permanent Datum G.L., Elevation 7290 feet			
Log Measured From K.B. @ 22 FEET above Permanent Datum			
Drilling Measured From K.B.			
Date	07-APR-2011		
Run Number	ONE		
Depth Driller	7310.00	feet	
Depth Logger	7313.00	feet	
First Reading	7291.00		
Last Reading	811.00		
Casing Driller	814.00	feet	
Casing Logger	811.00	feet	
Bit Size	7.880	inches	
Hole Fluid Type	LSND		
Density / Viscosity	10.60 lb/USg	54.00 CP	
PH / Fluid Loss	9.00	6.60 ml/30Min	
Sample Source	FLOW LINE		
Rm @ Measured Temp	2.90 @ 97.0	ohm-m	
Rmf @ Measured Temp	2.32 @ 97.0	ohm-m	
Rmc @ Measured Temp	3.48 @ 97.0	ohm-m	
Source Rmf / Rmc	CALC	CALC	
Rm @ BHT	1.62 @176.0	ohm-m	
Time Since Circulation	5 HOURS		
Max Recorded Temp	176.00	deg F	
Equipment Name	COMPACT		
Equipment / Base	13173	GJCT	
Recorded By	D. KUNTZ		
Witnessed By	J. BOYD		

Elevations:	feet
KB	7312.00
DF	7311.00
GL	7290.00

**BOREHOLE RECORD**

Last Edited: 07-APR-2011 08:25

Bit Size inches	Depth From feet	Depth To feet
8.750	811.00	5390.00
7.880	5390.00	7310.00

**CASING RECORD**

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	9.625	0.00	811.00	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 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.

MAIN LOG SPLICED AT 3120 FEET DUE TO INDUCTION AND SP RESPONSE WITH NO CHANGE IN DATA RESPONSE.

CALIPER CHECK IN CASING PRESENTED, REFERENCE I.D. = 8.99" (9 5/8", 36 LB/FT CASING)

8.75 INCH BIT CHANGE AT 5390 FT.

TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 2865 CU.FT.

ANNULAR VOLUME WITH 4.5 INCH PRODUCTION CASING = 2150 CU.FT.

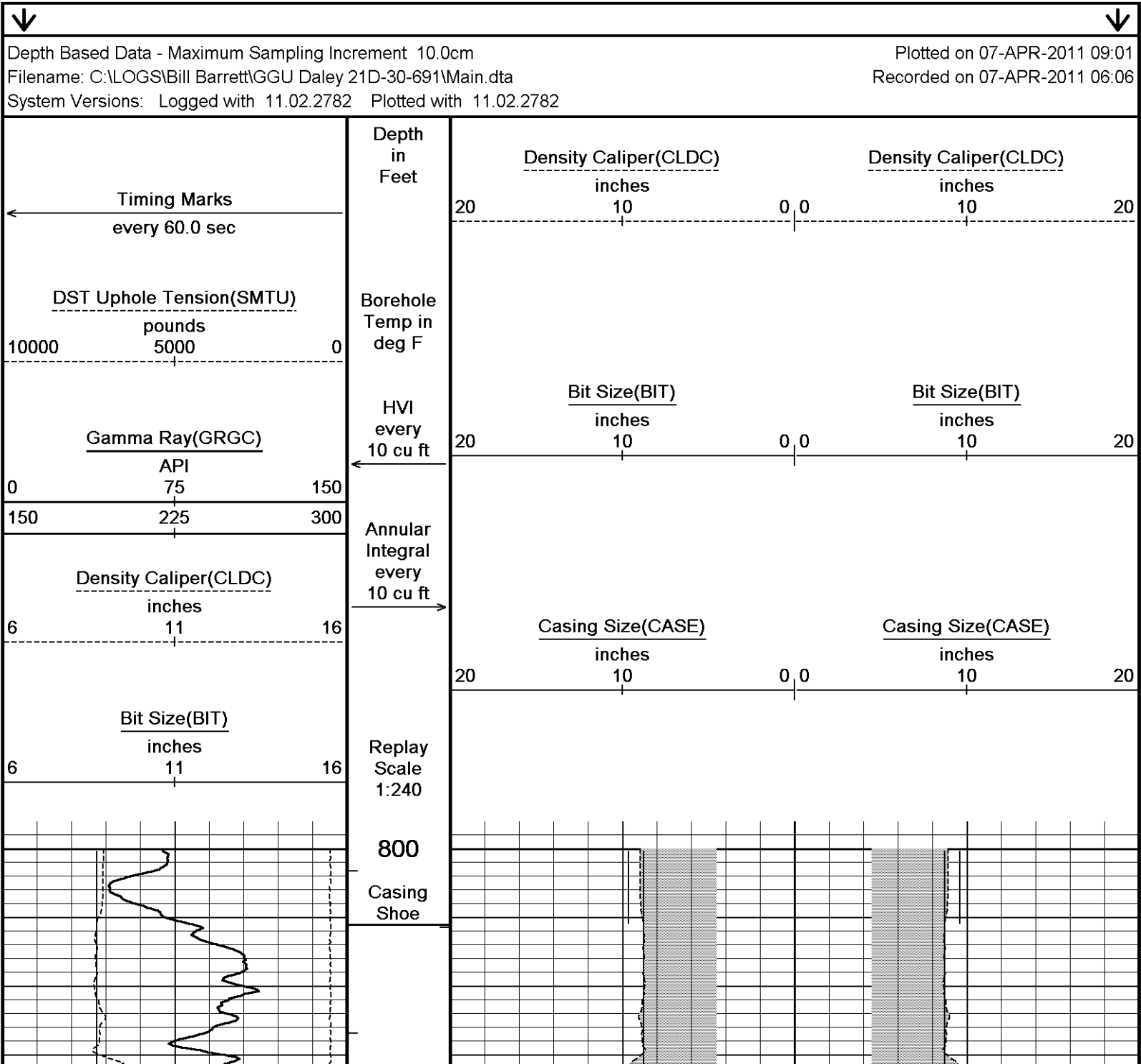
ENGINEER(S): D. KUNTZ, O. GOYZUETA(JFE)

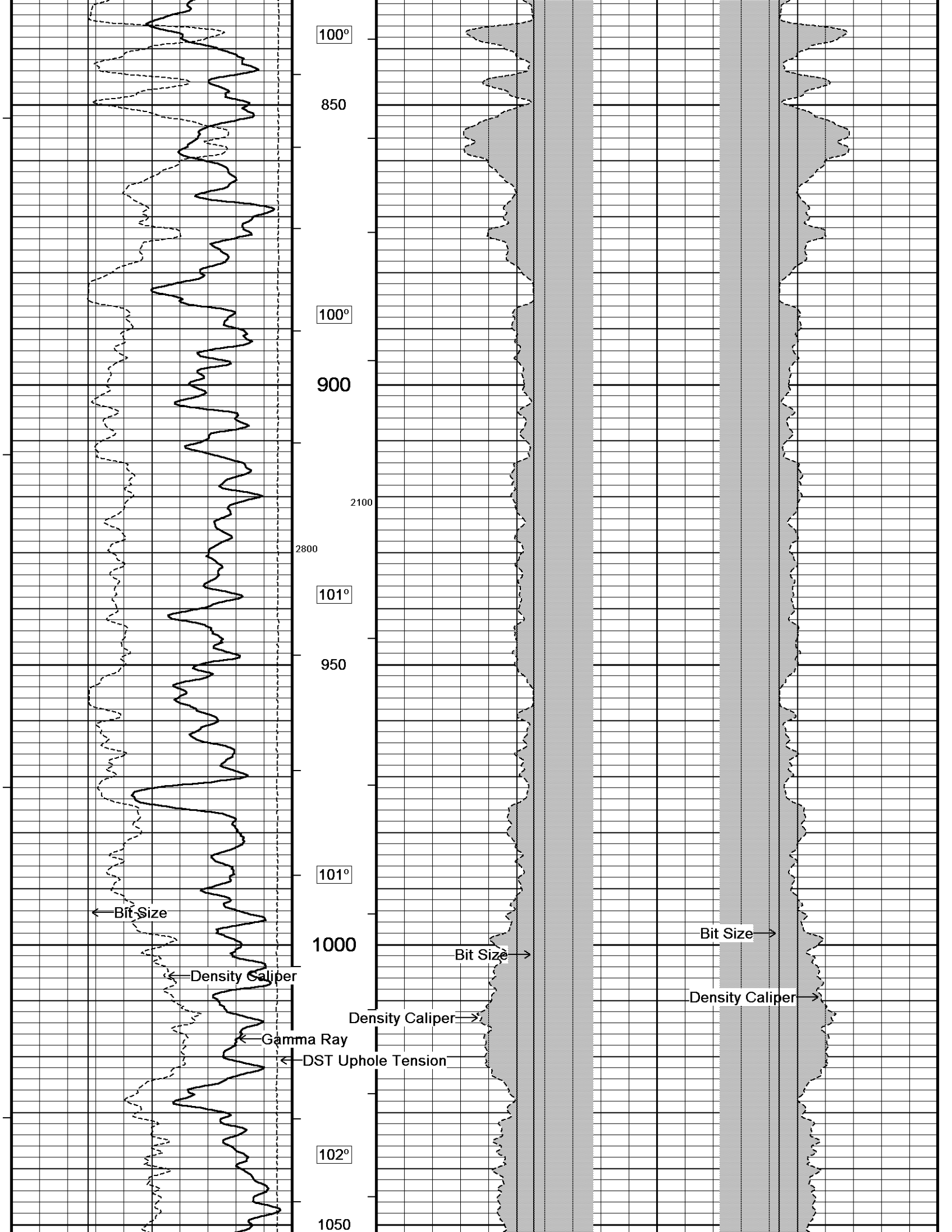
OPERATOR(S): J. YOAKUM, D. DALEY

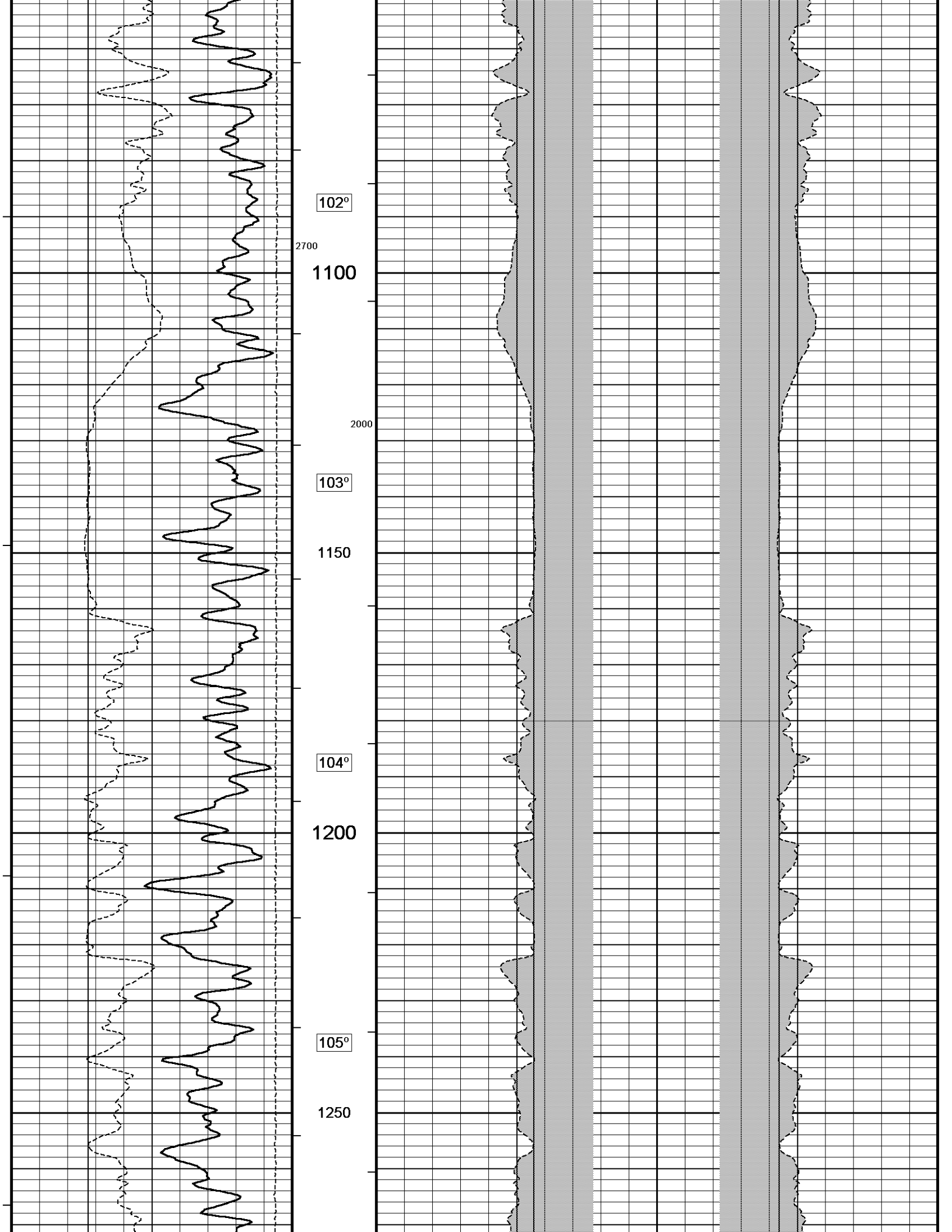
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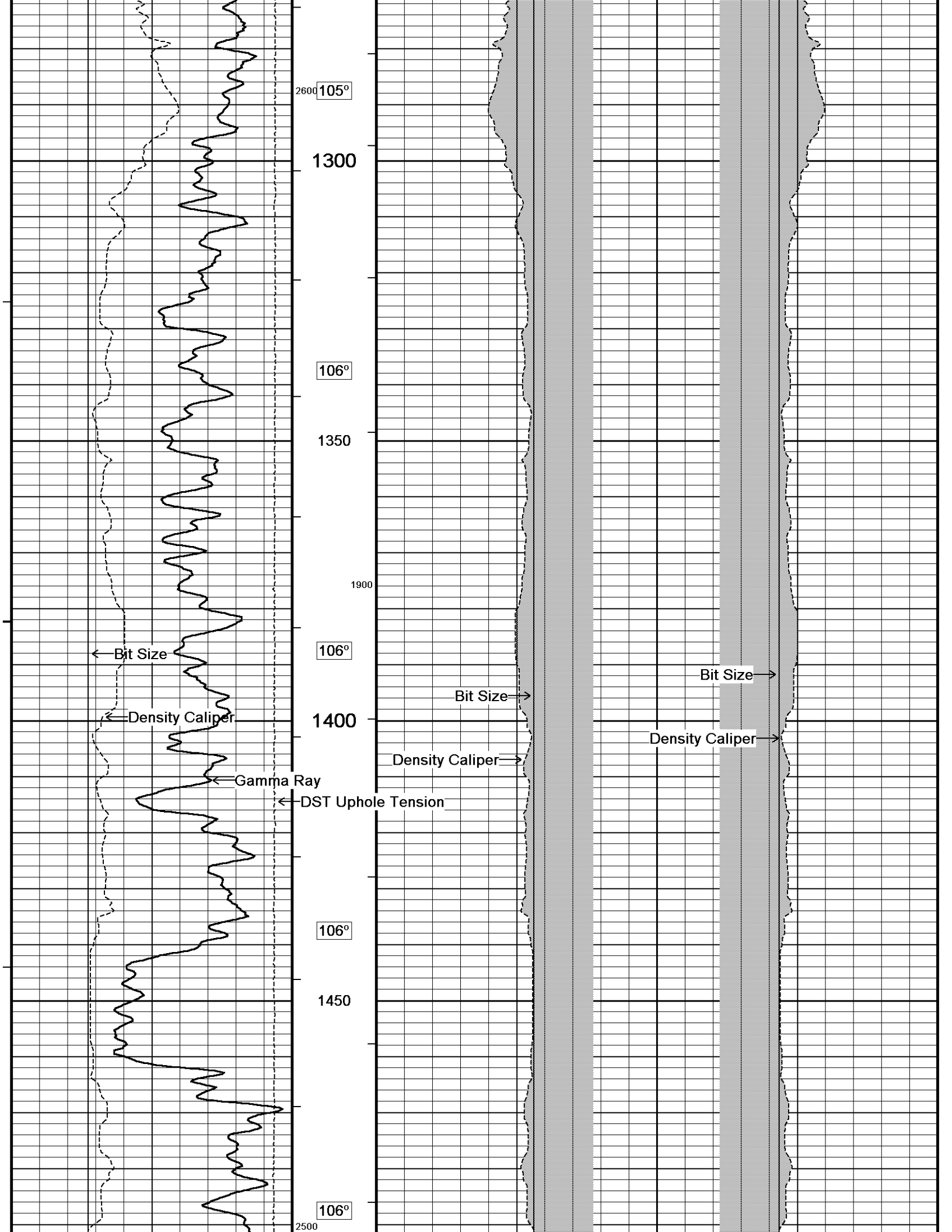
RIG: PATTERSON #307

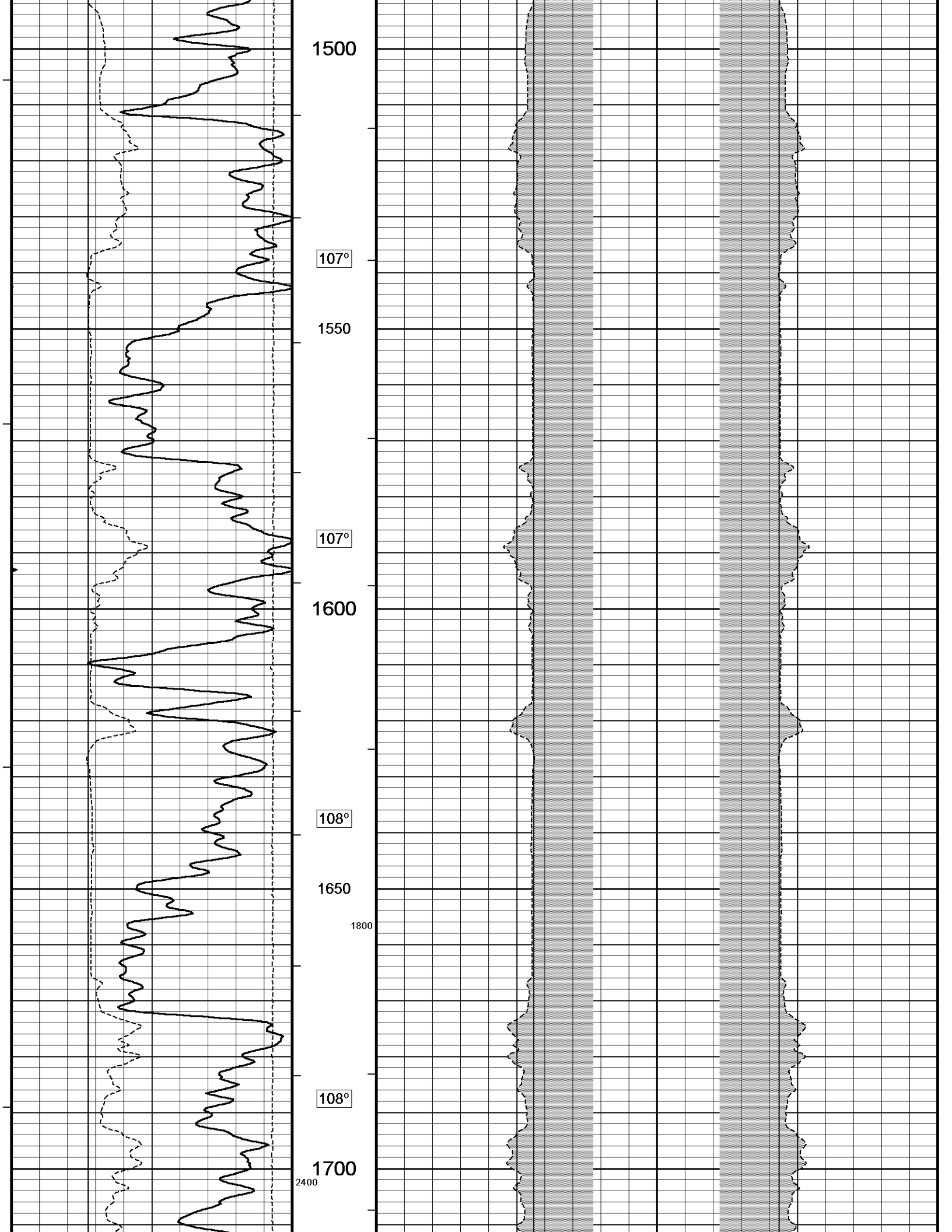
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

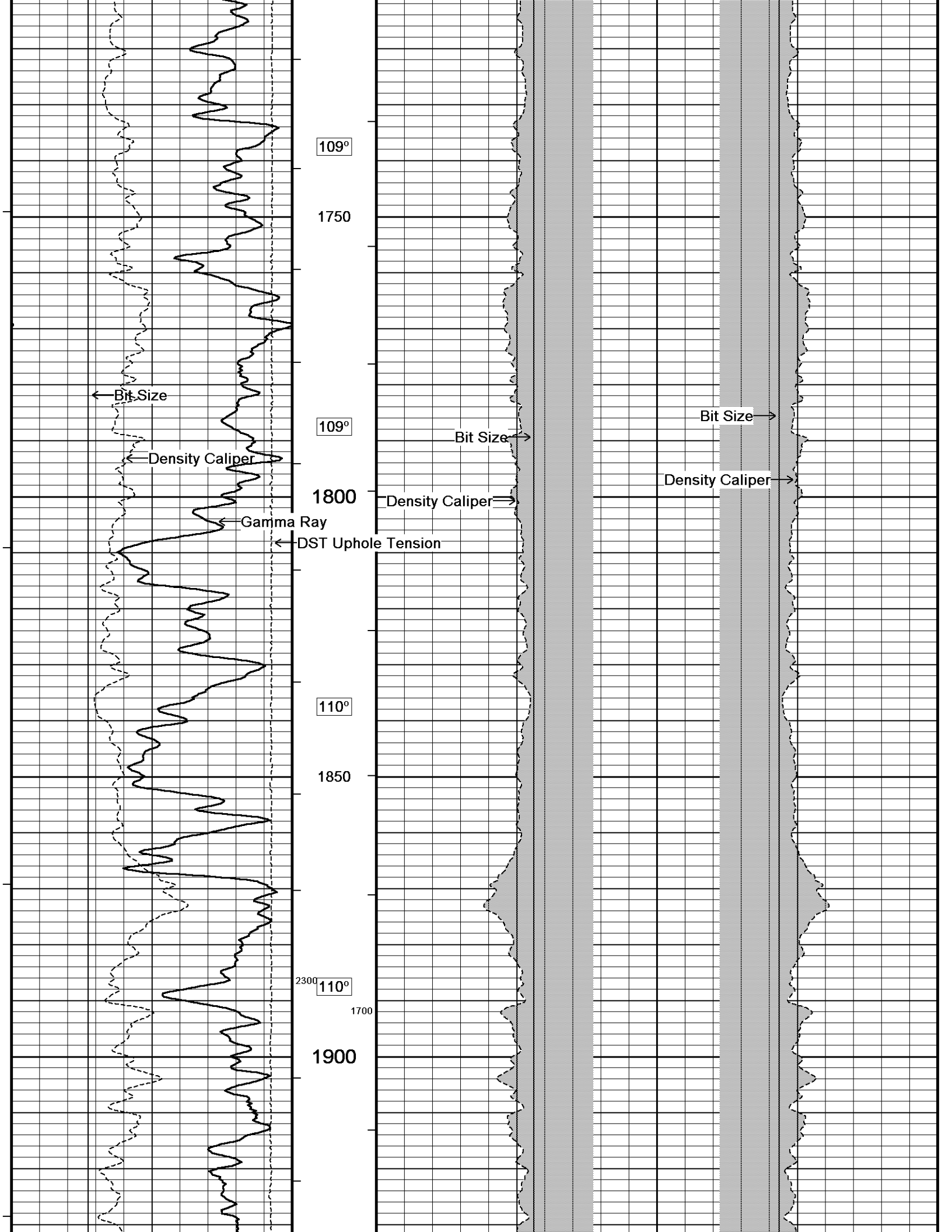


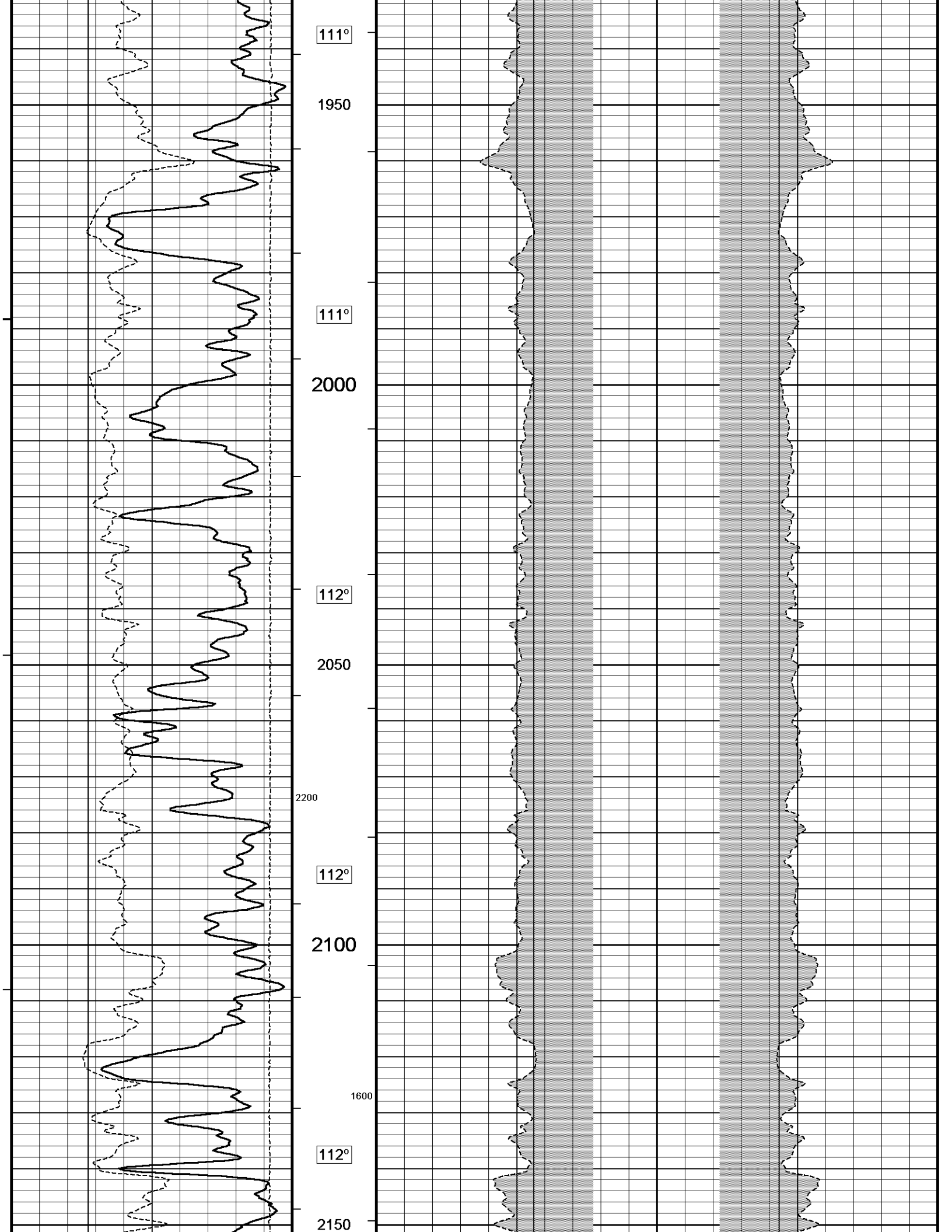


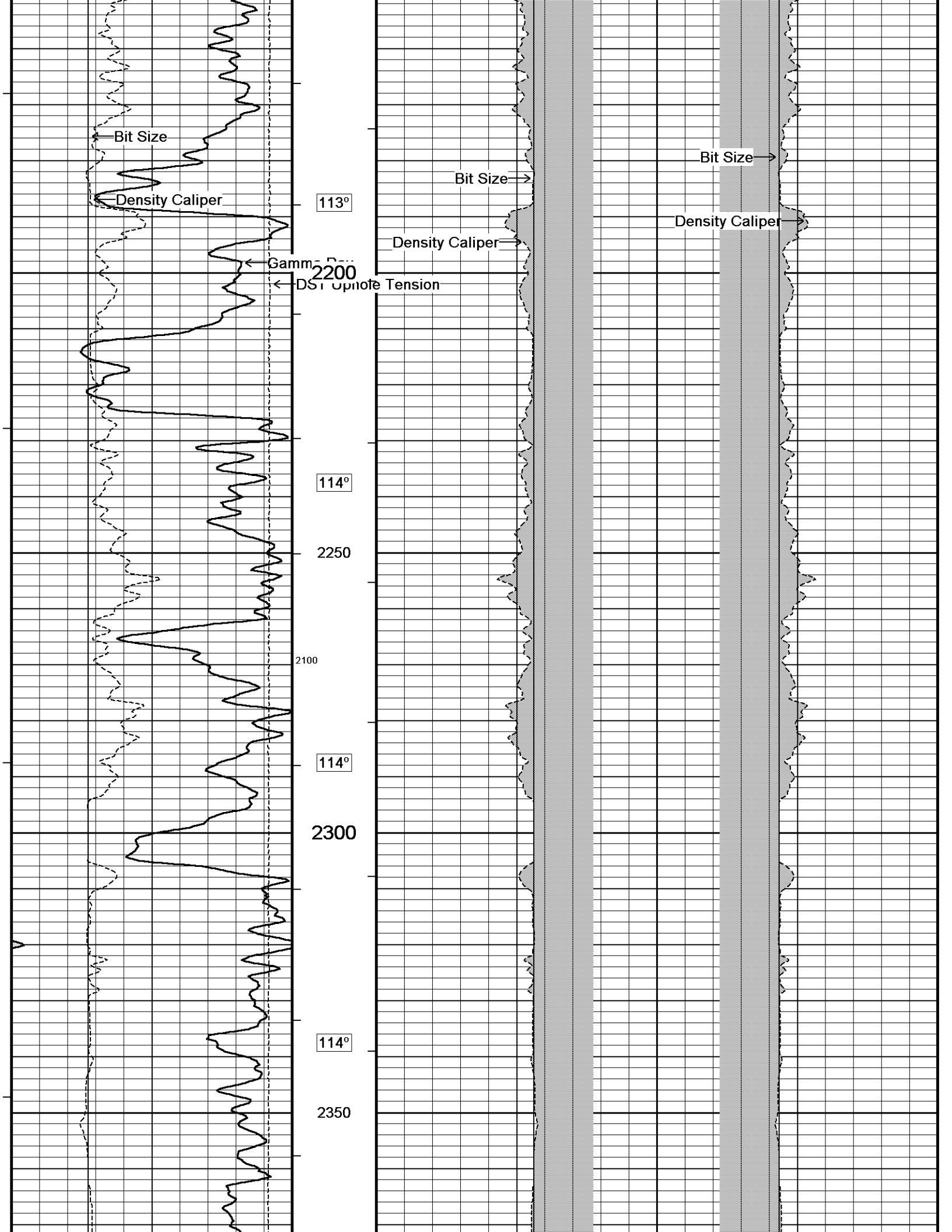


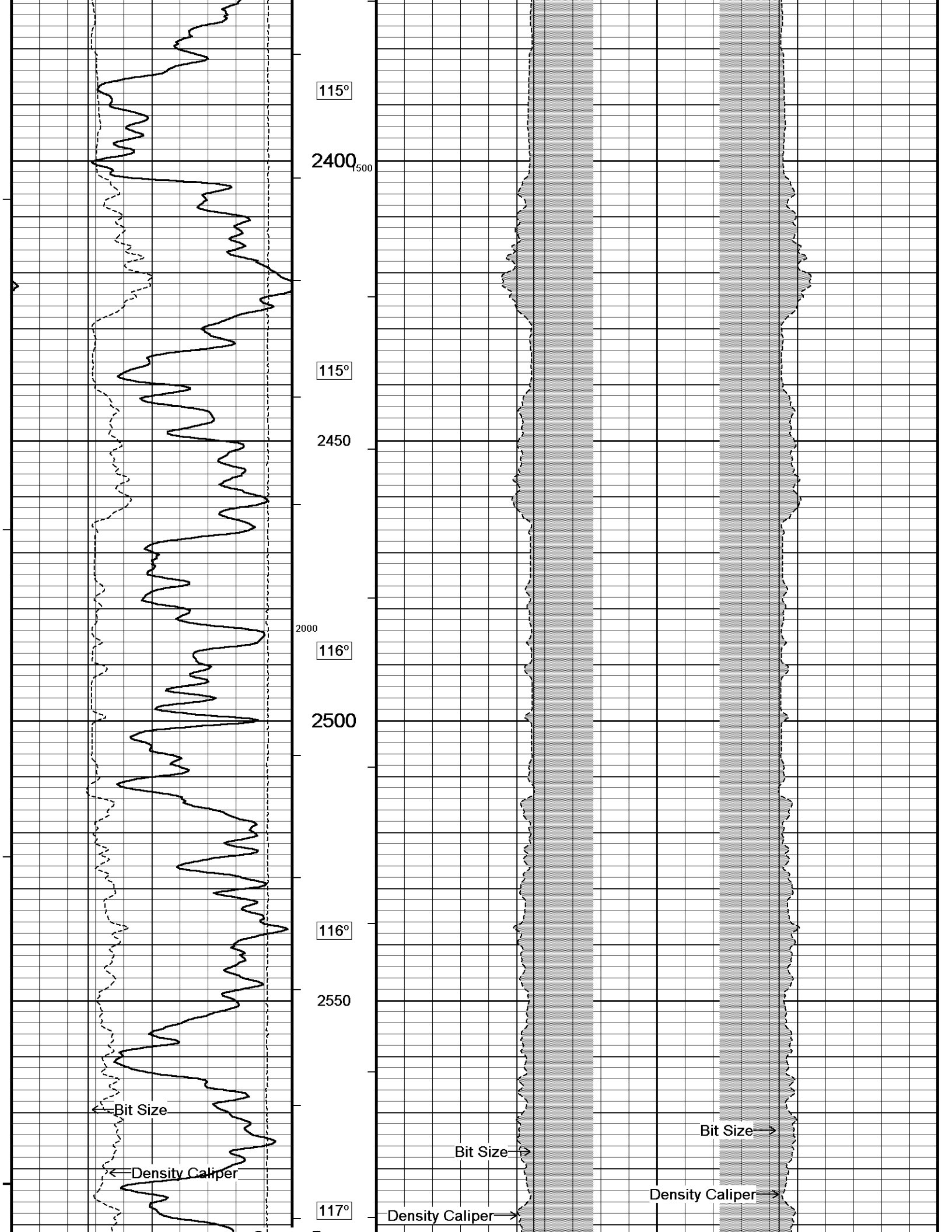


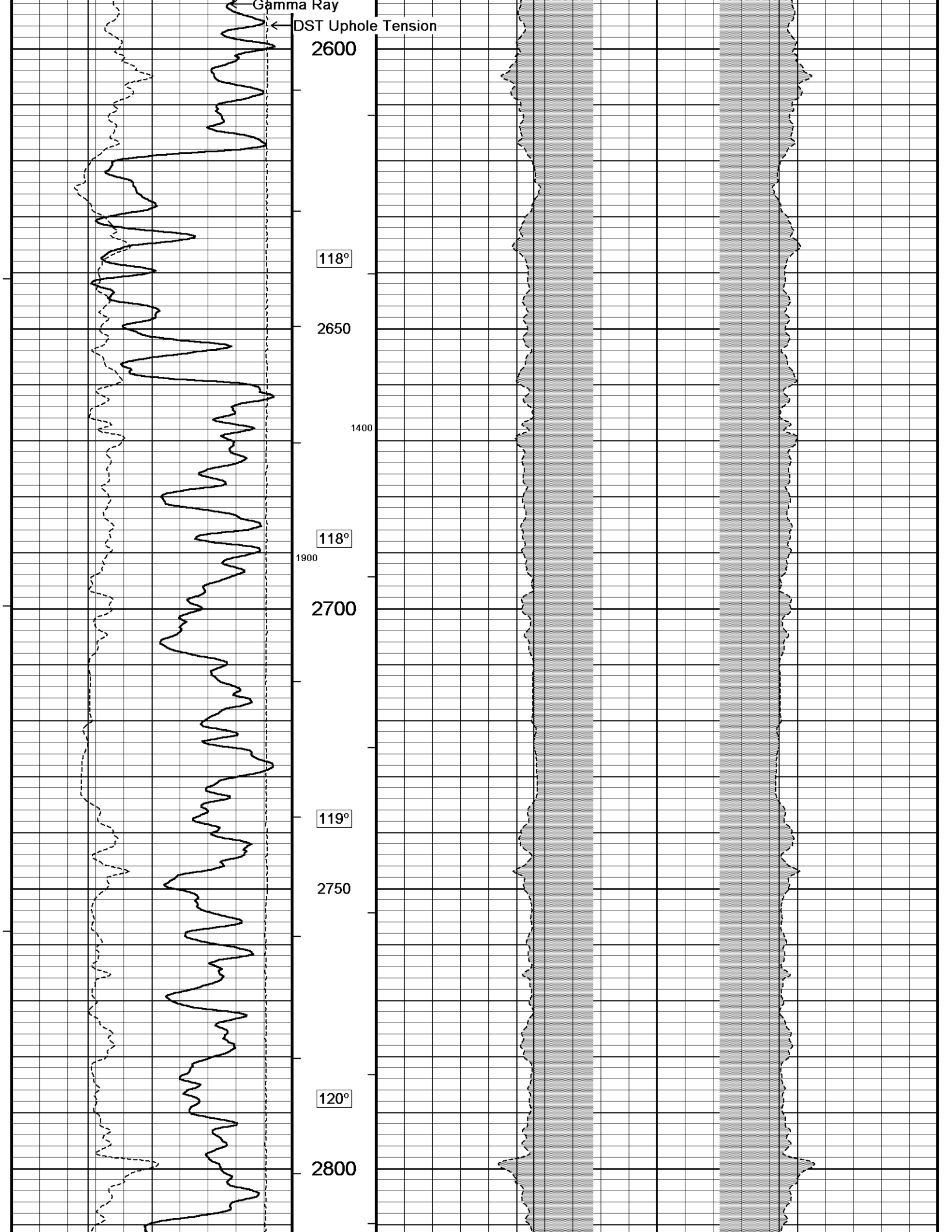


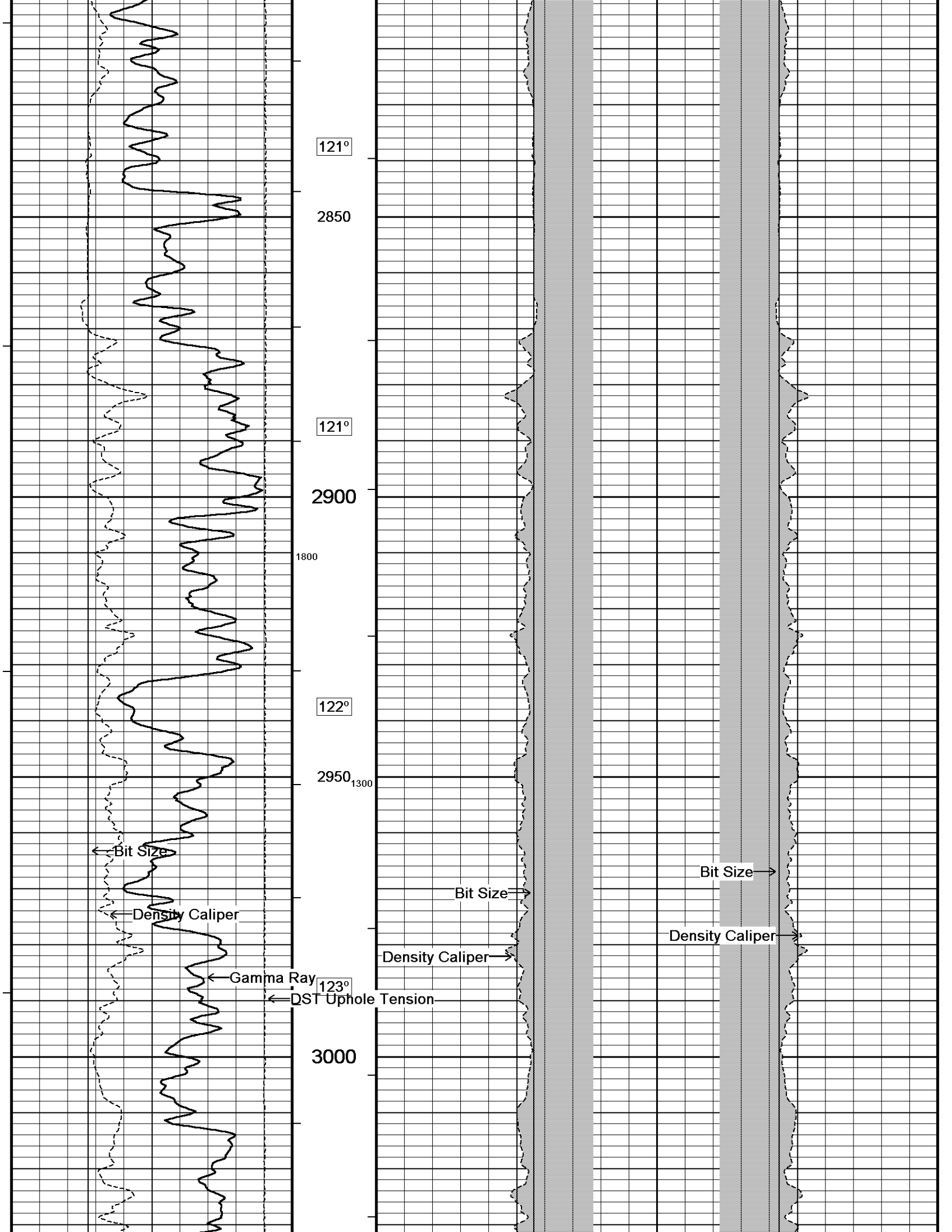


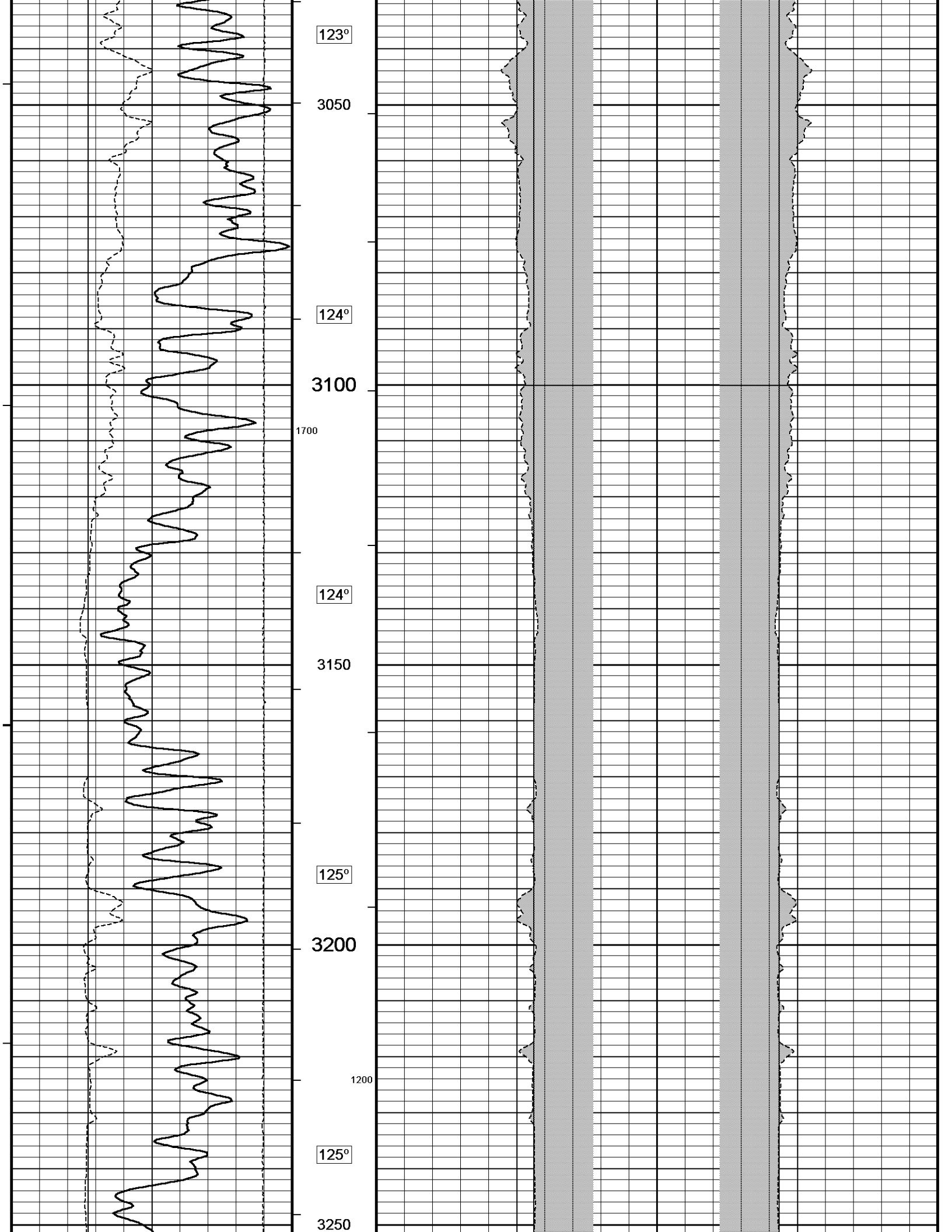


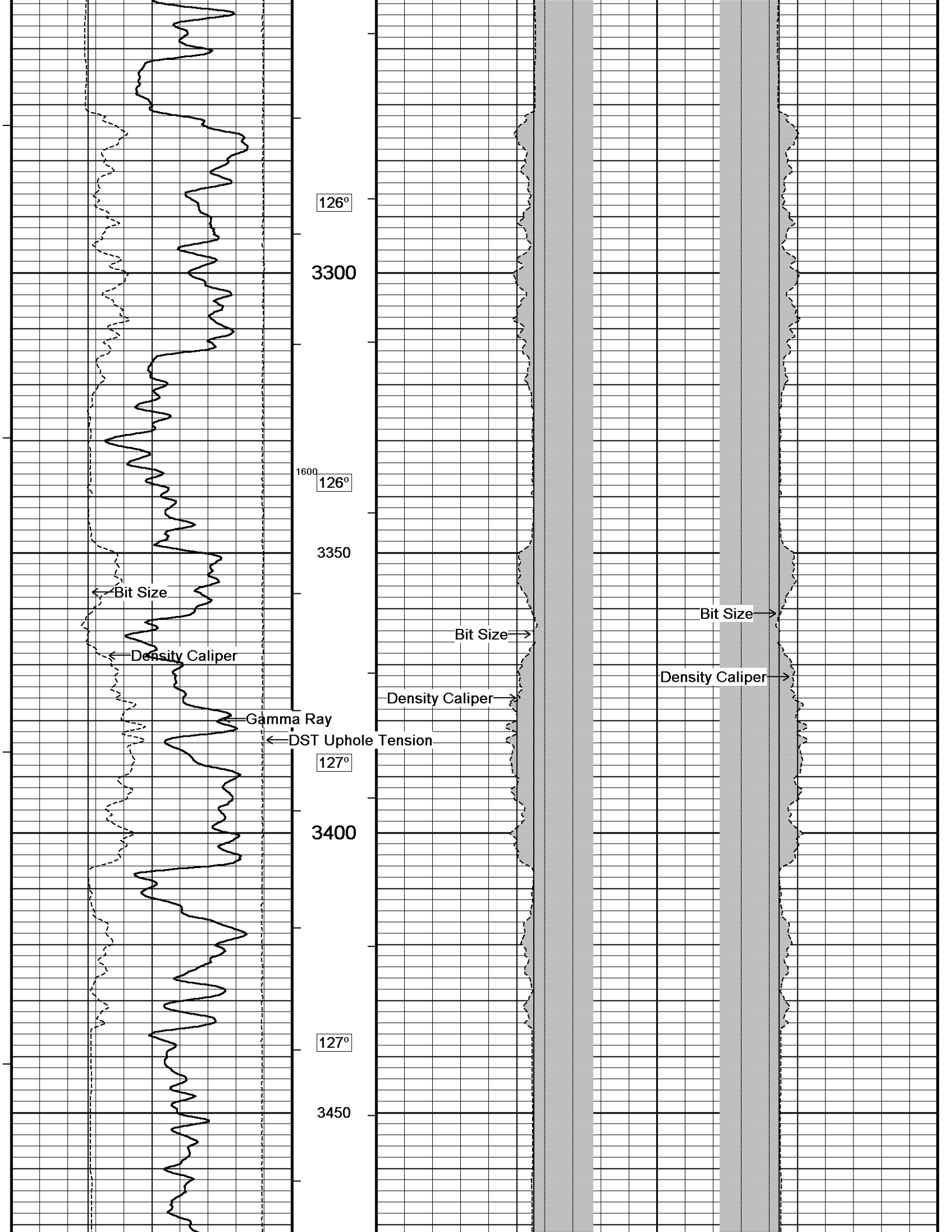


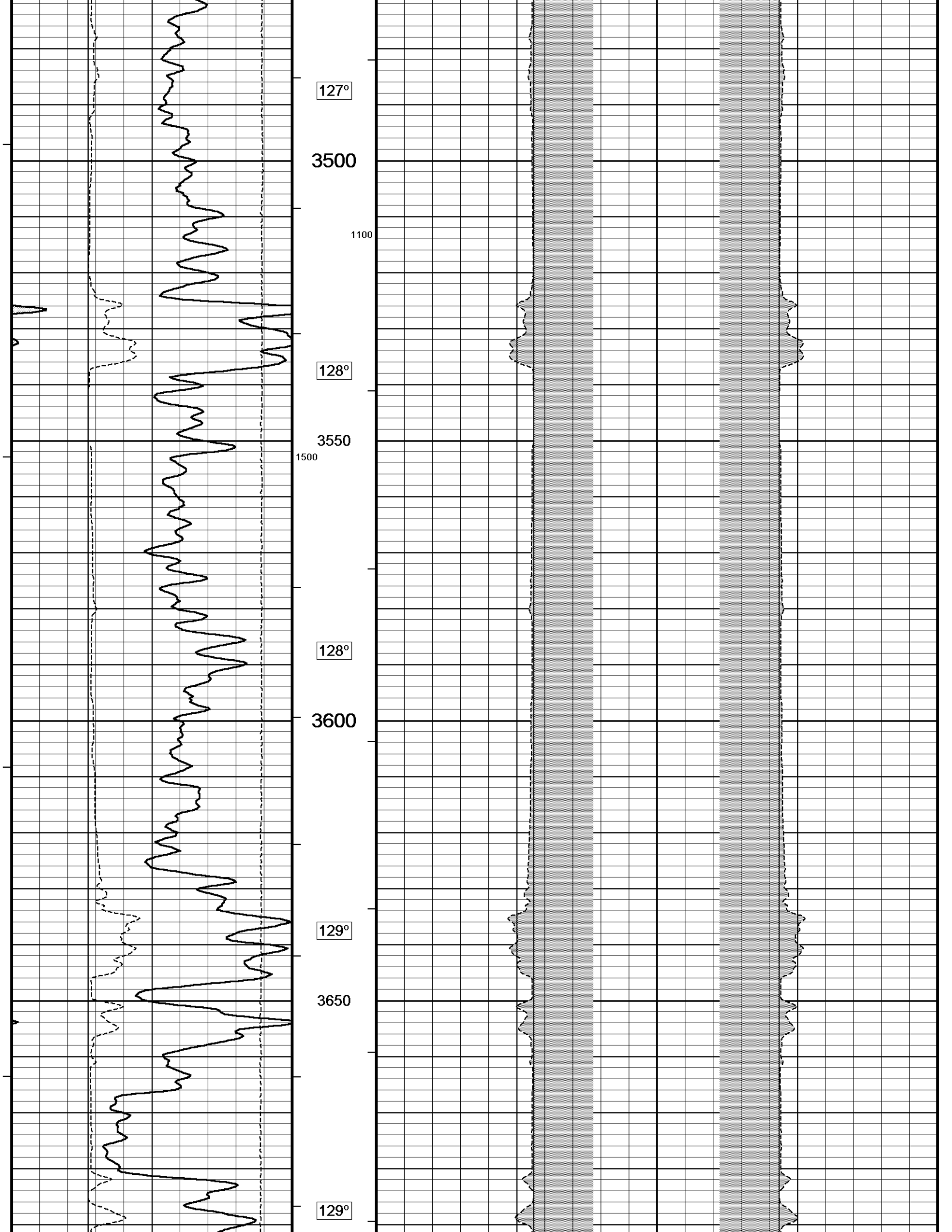


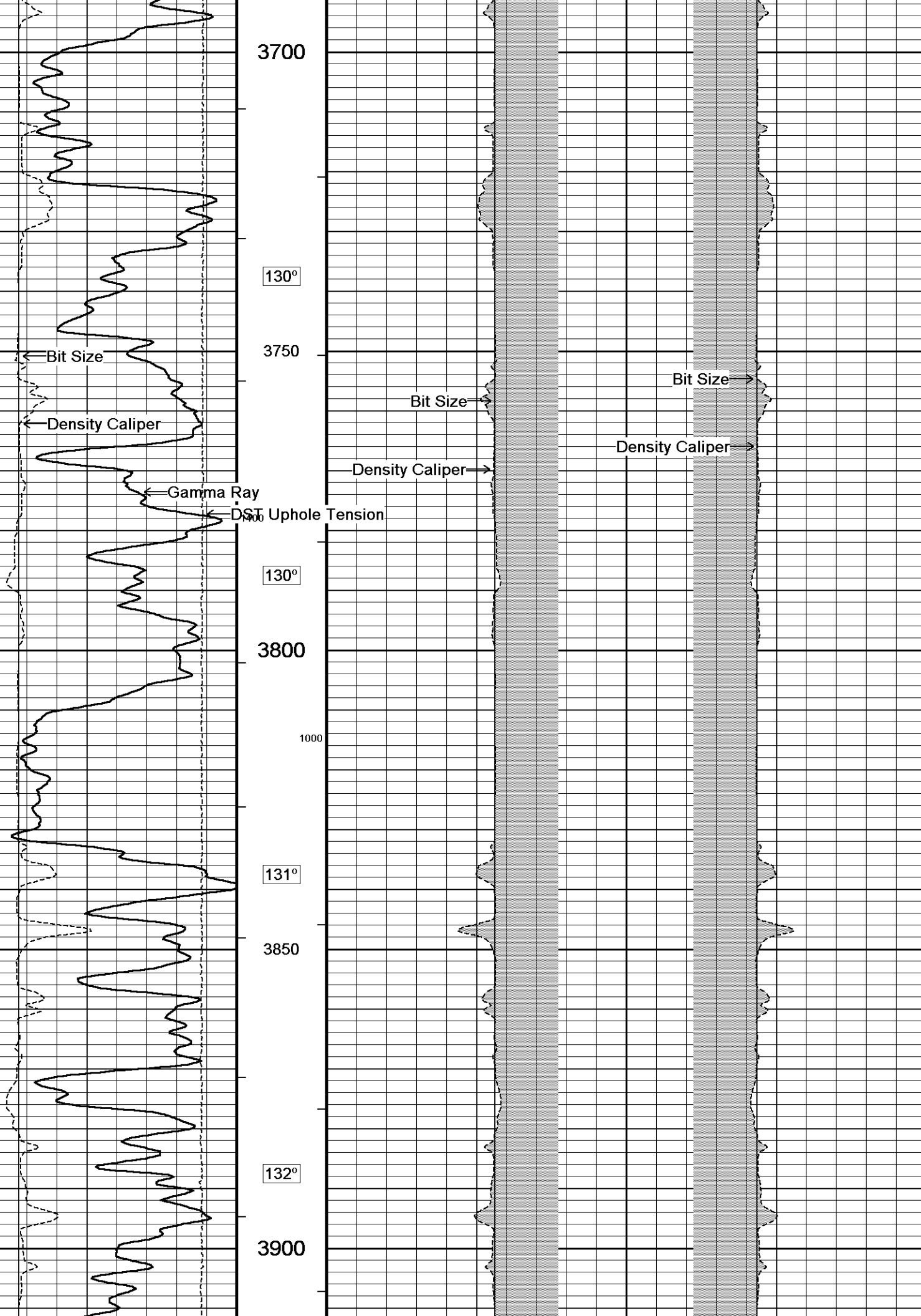


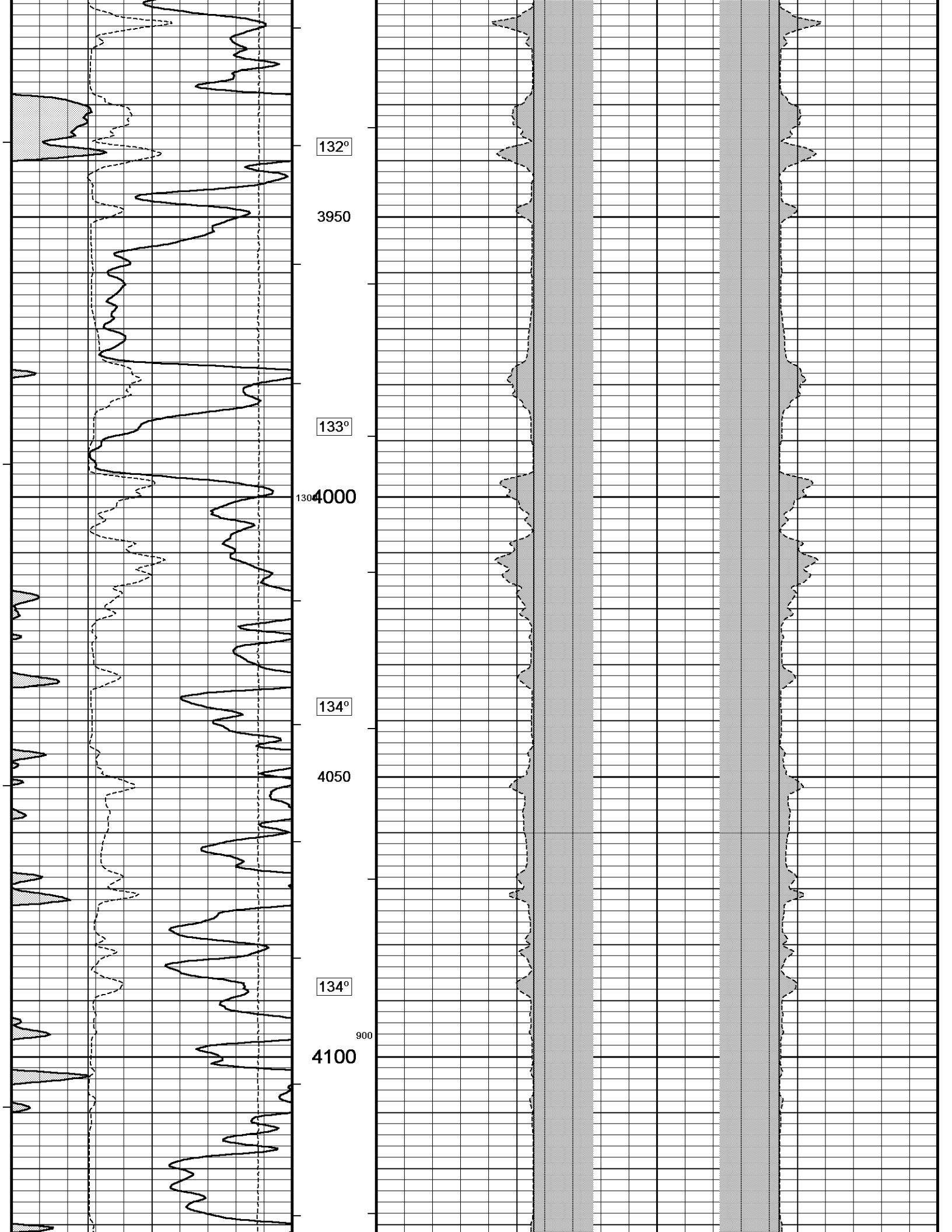


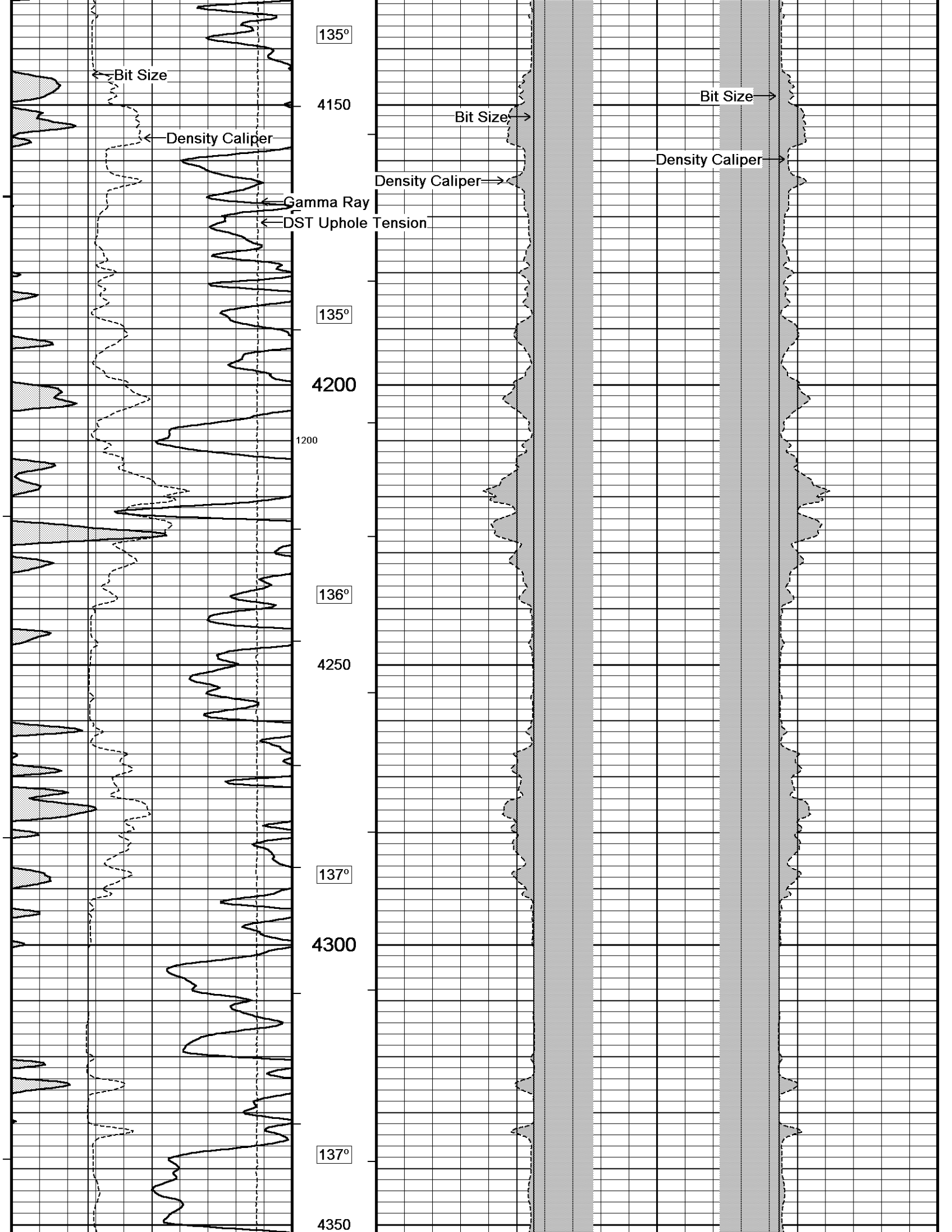


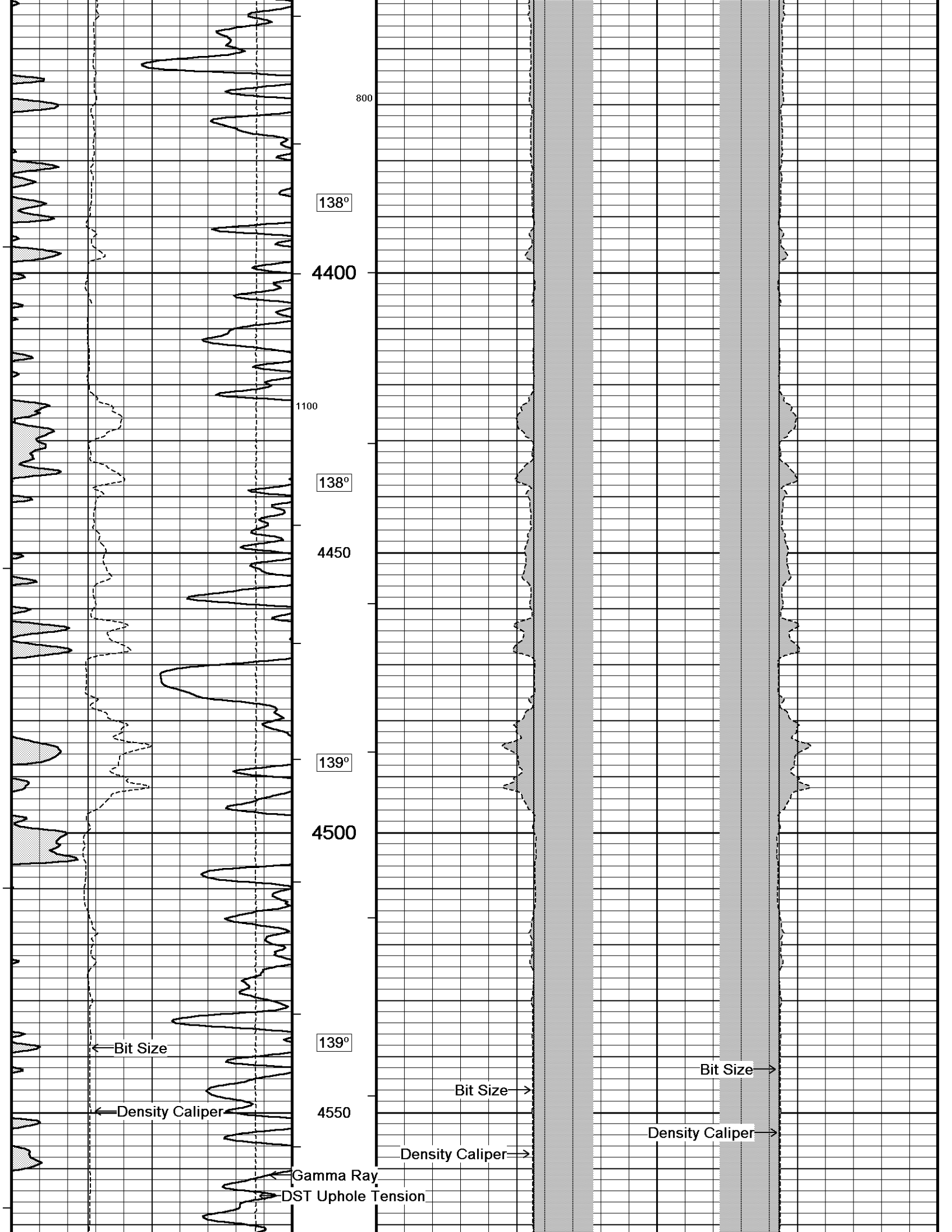


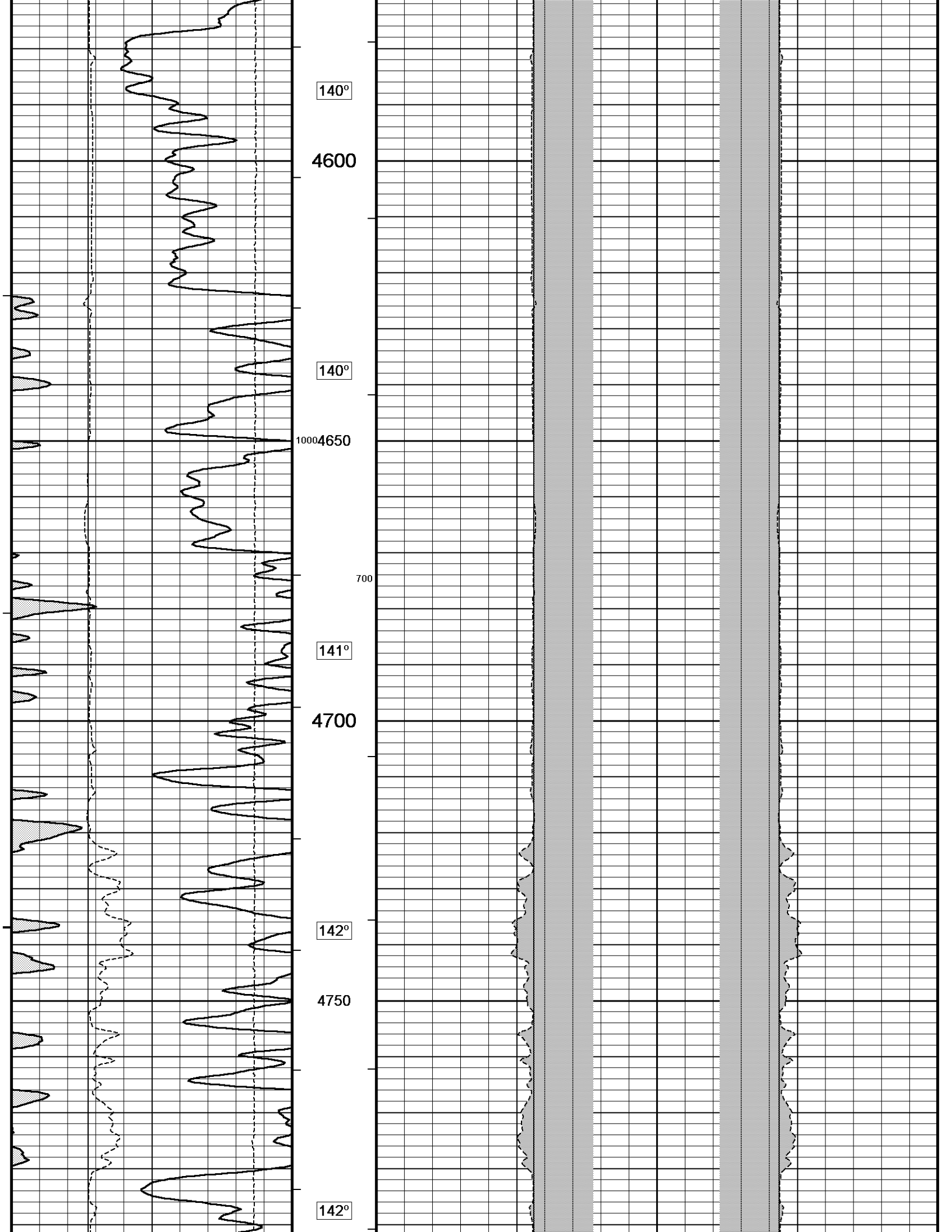


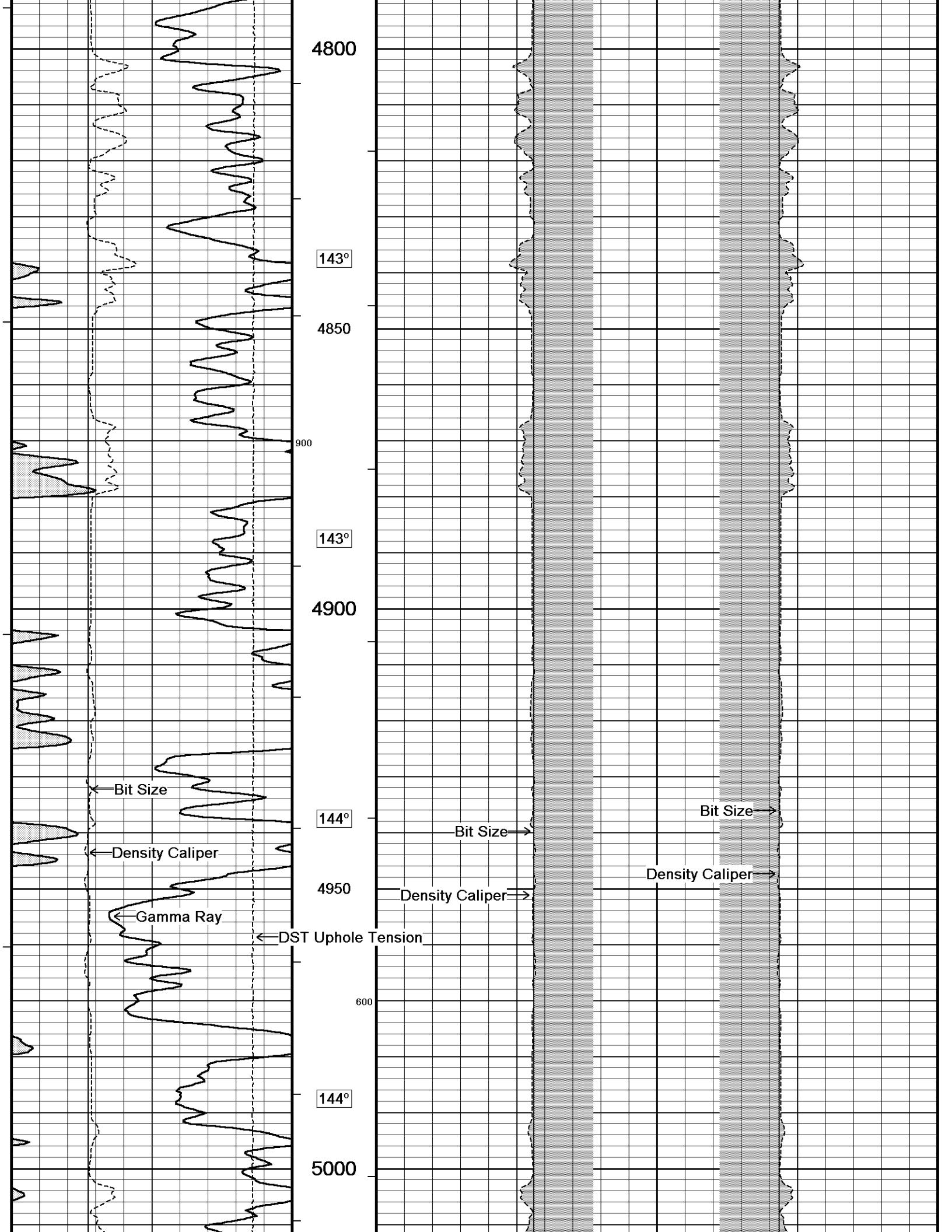


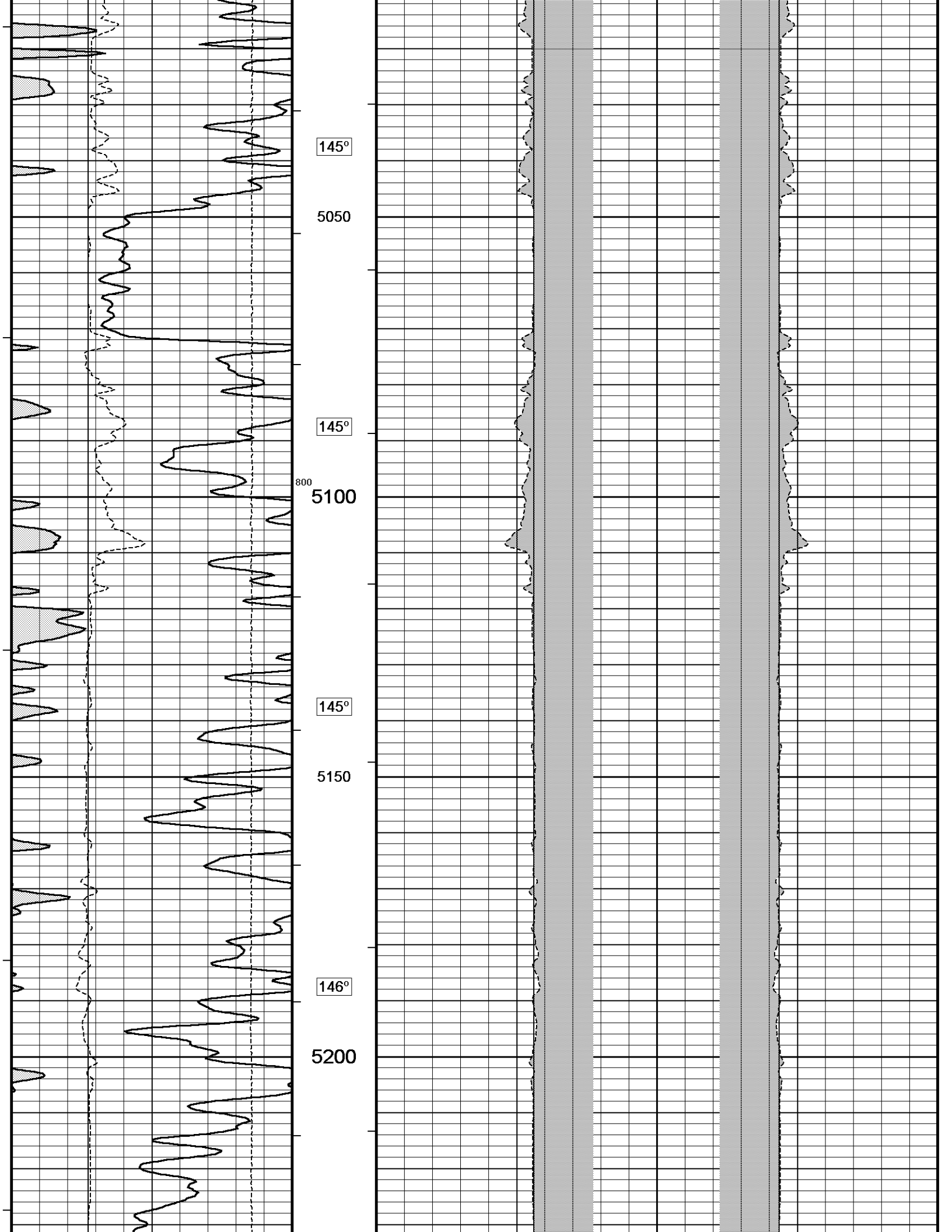


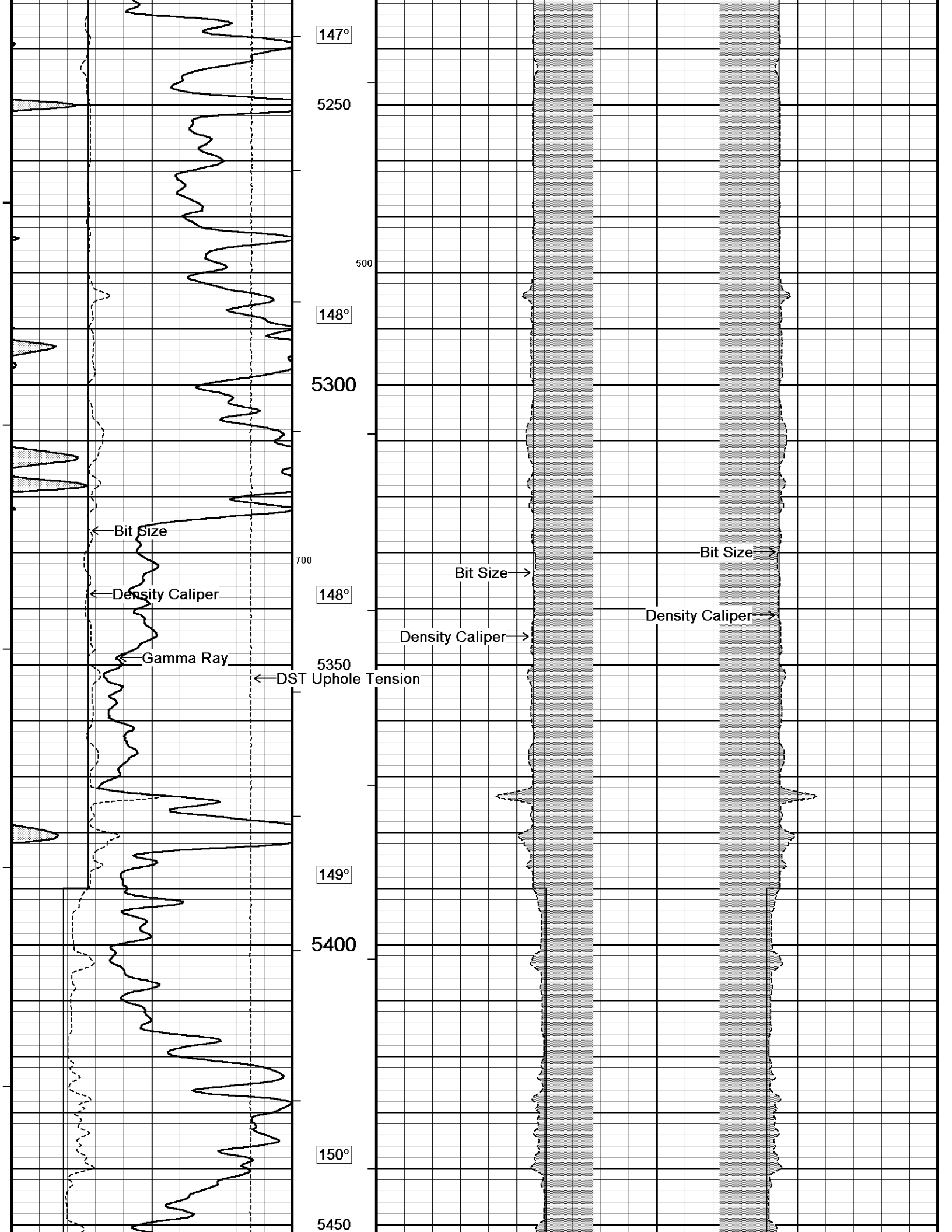


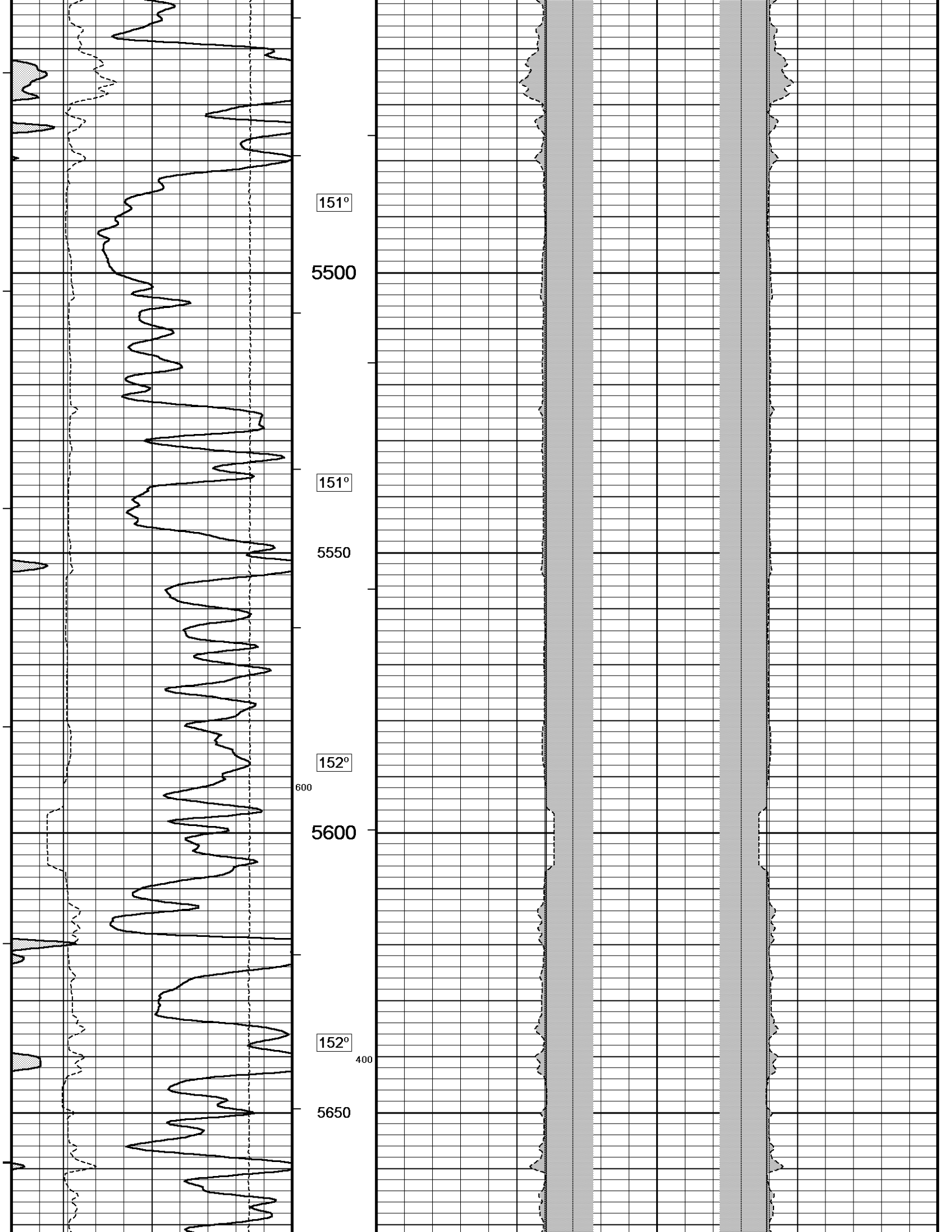


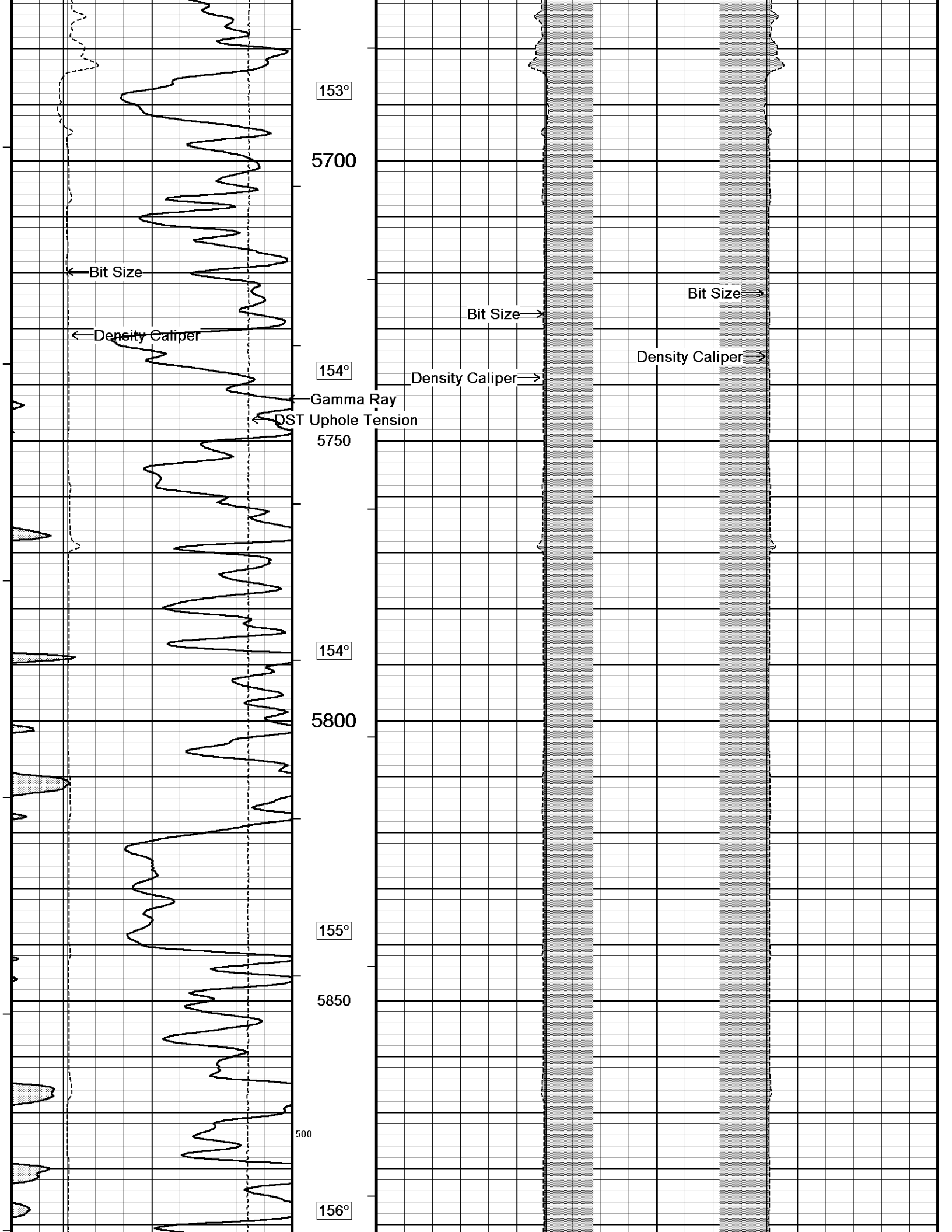


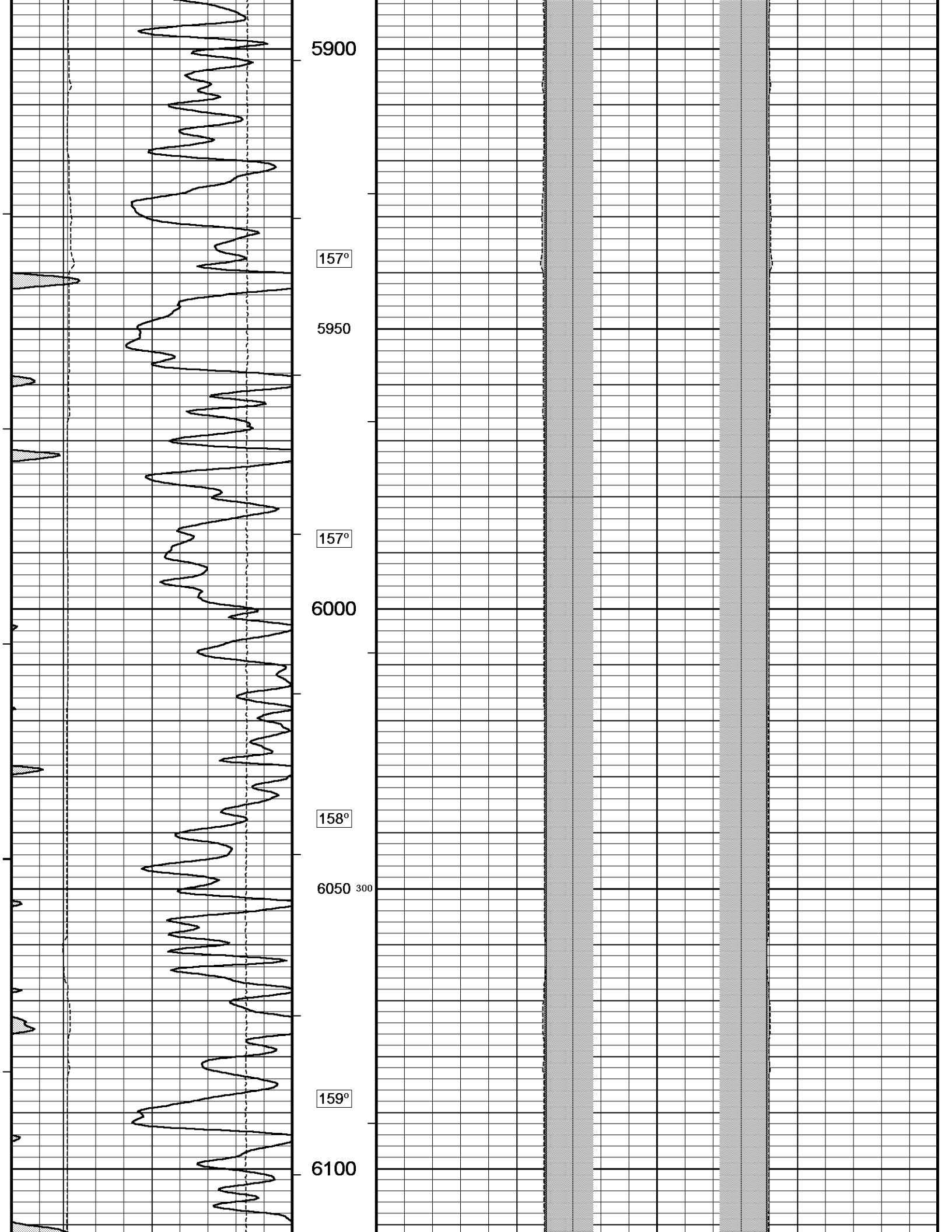


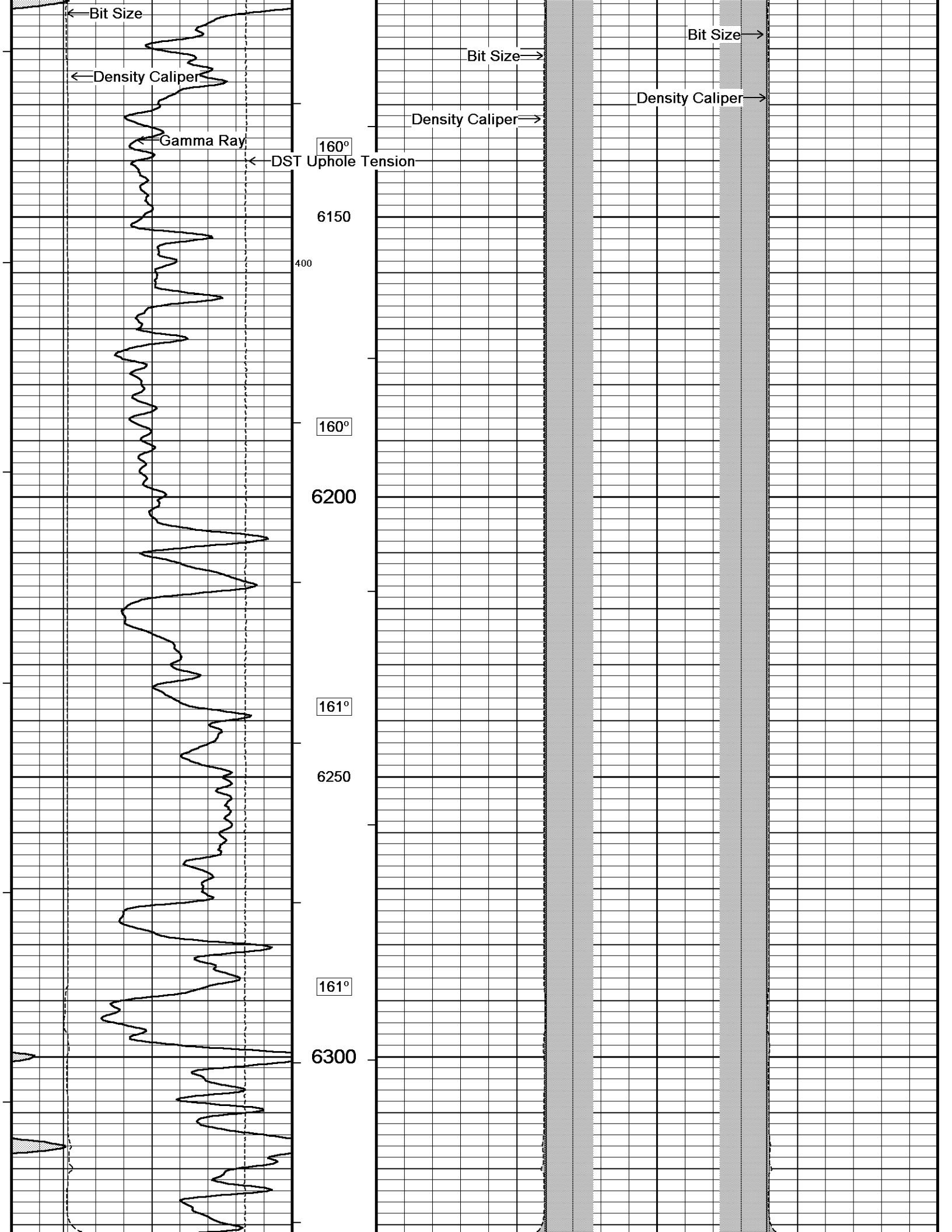


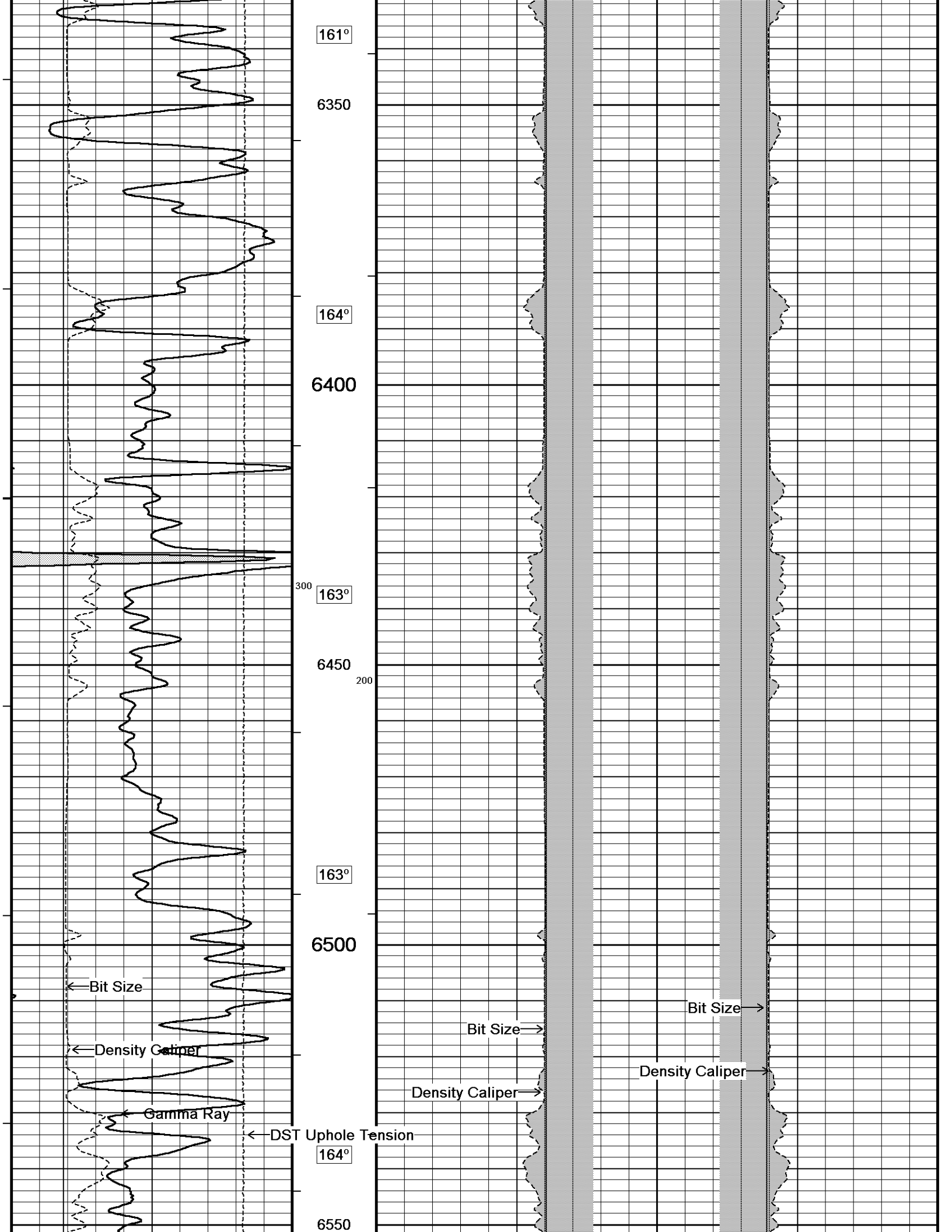


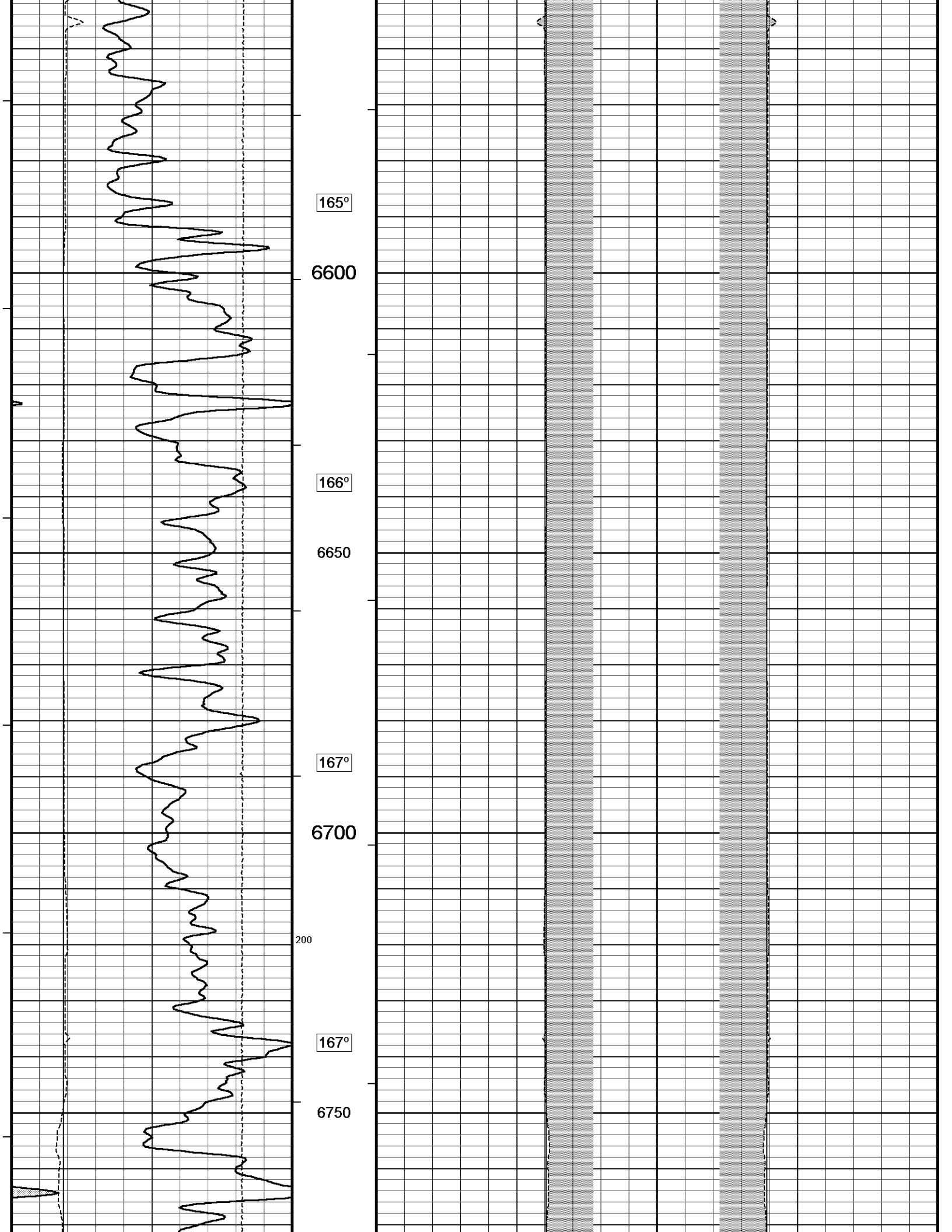


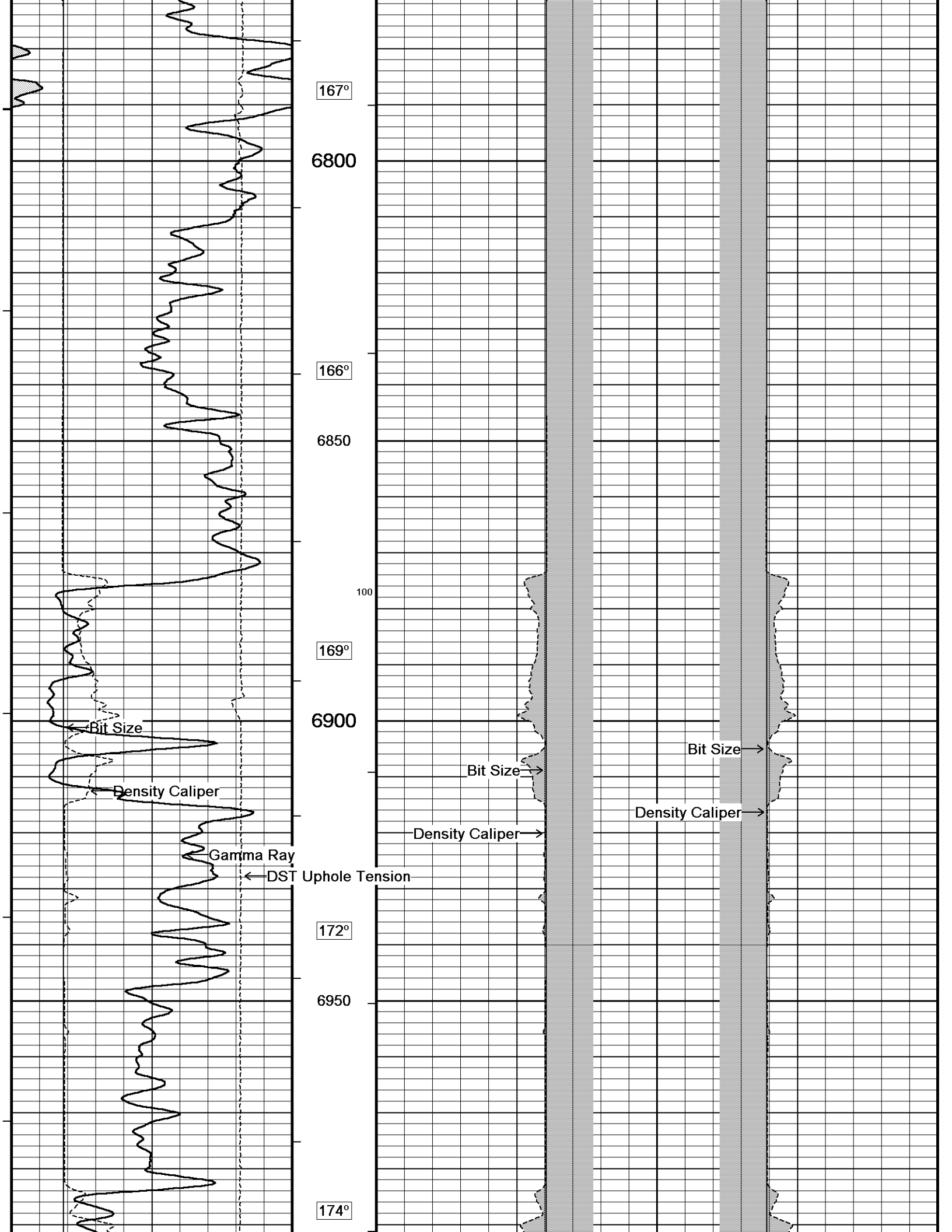












167°

6800

166°

6850

169°

6900

172°

6950

174°

100

Bit Size

Density Caliper

Gamma Ray

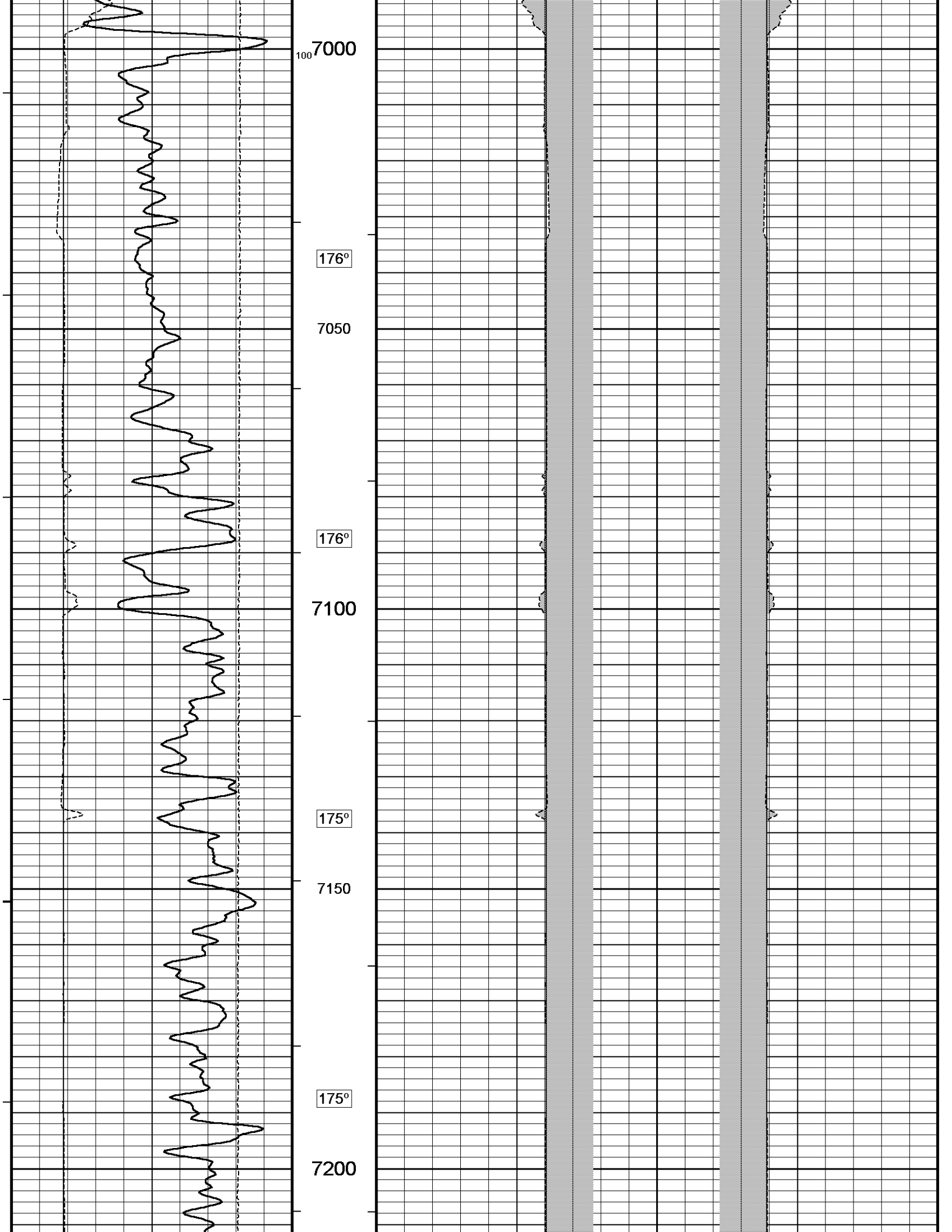
DST Uphole Tension

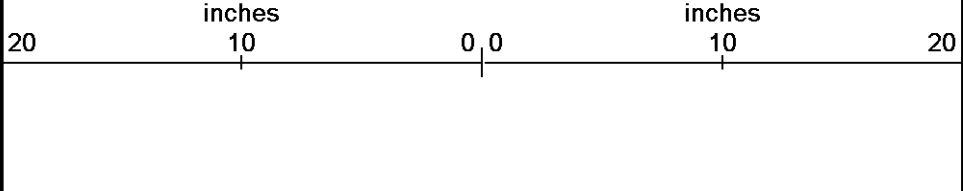
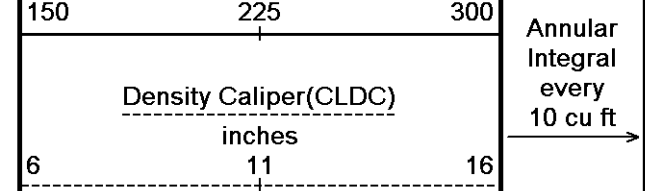
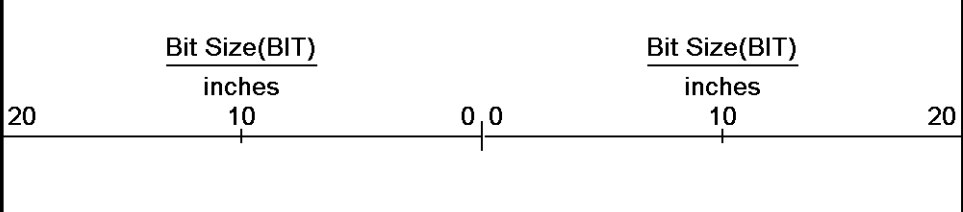
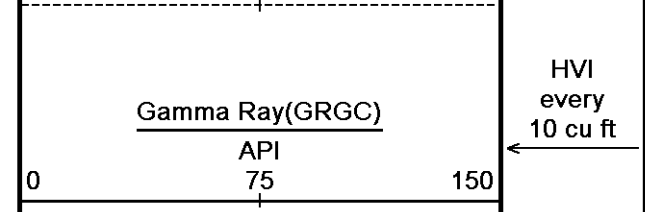
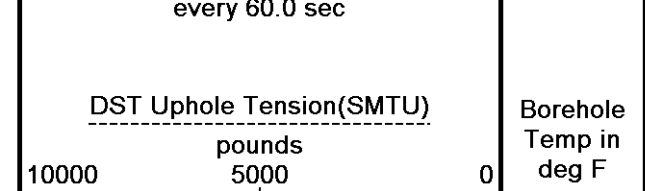
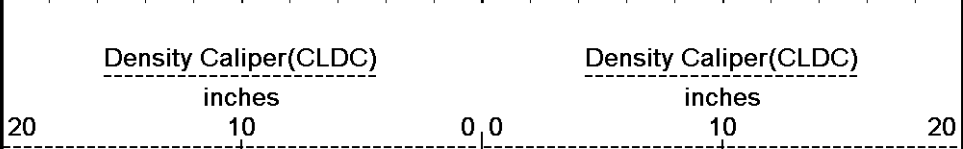
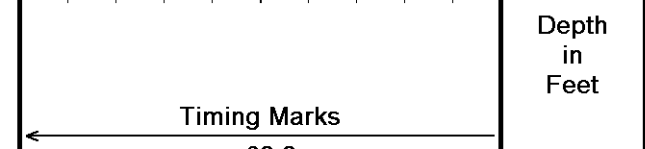
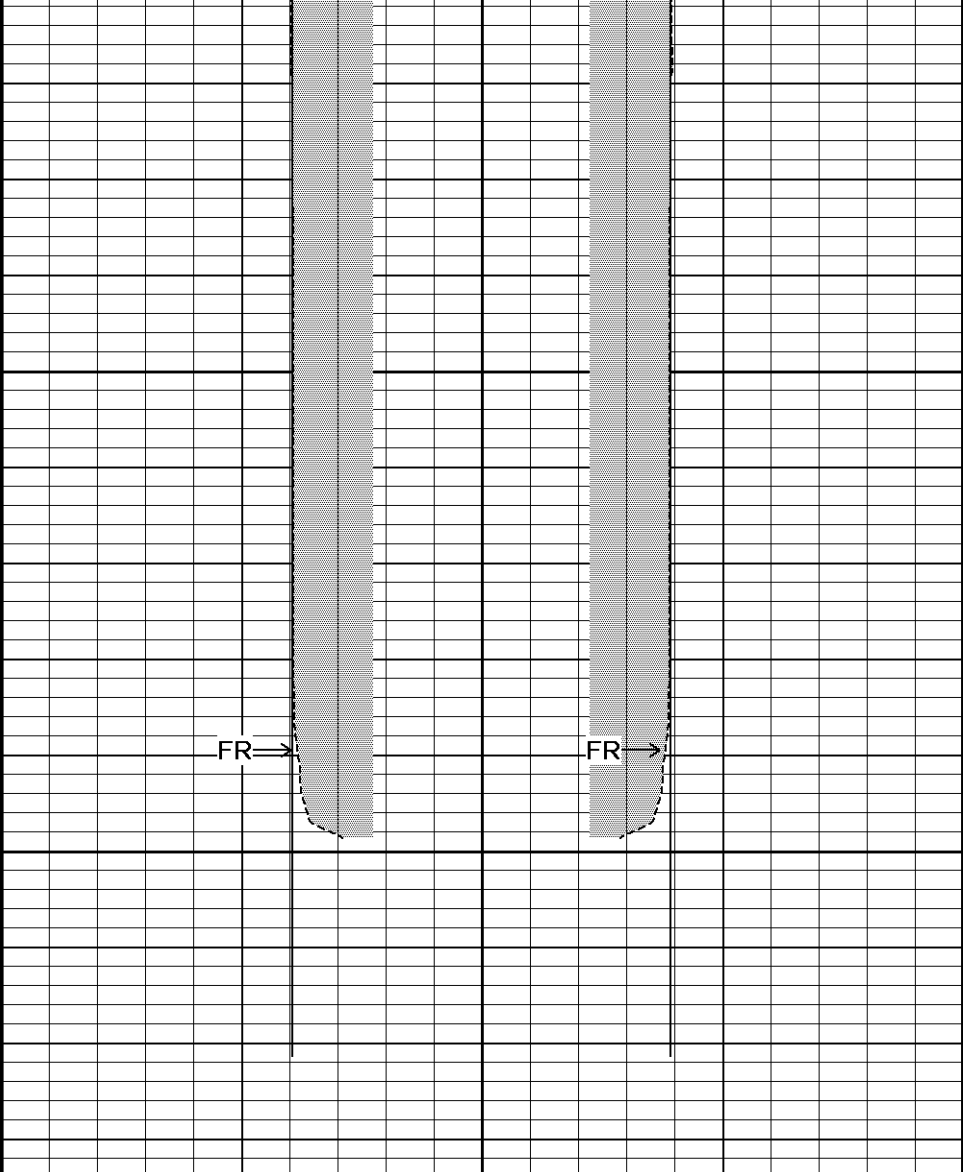
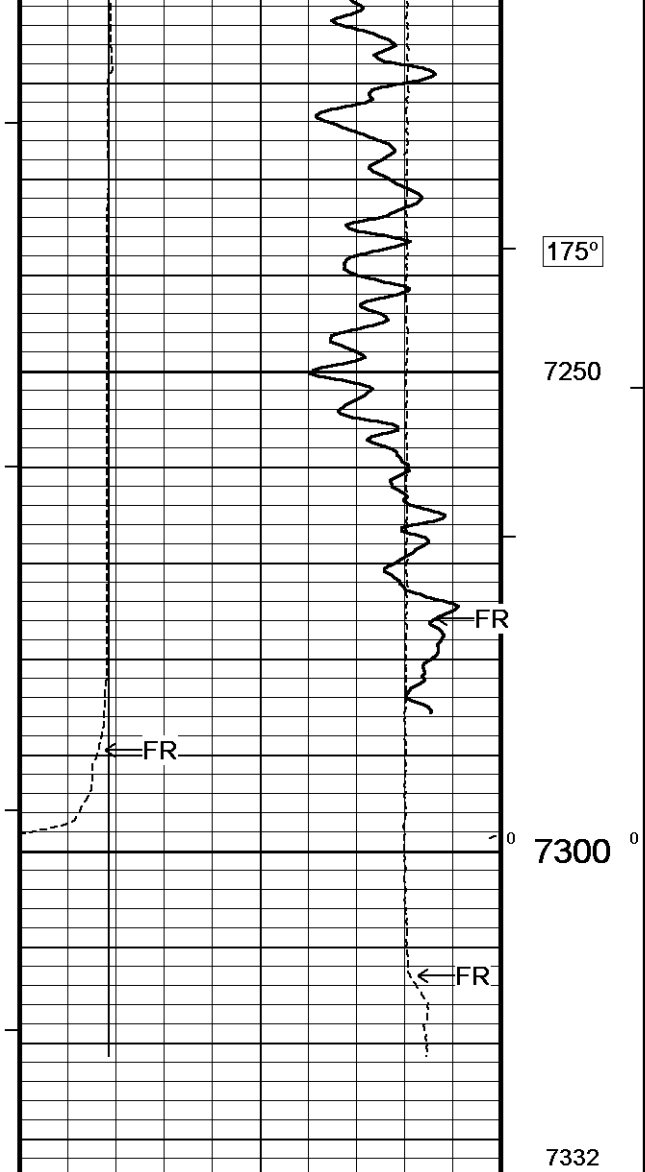
Bit Size

Density Caliper

Bit Size

Density Caliper





175°

7250

7300

7332  
Depth  
in  
Feet

Borehole  
Temp in  
deg F

HVI  
every  
10 cu ft

Annular  
Integral  
every  
10 cu ft

Replay  
Scale  
1:240



### DOWNHOLE EQUIPMENT

C:\LOGS\Bill Barrett\GGU Daley 21D-30-691\Main.dta

3/8" Triple Cone Cable Head (MCB C A)  
 MCB-C.A 5 LG: 1.58 ft WT: 15.4 lb OD: 2.24 in

SHA-J.A Compact Swivel Head Adaptor  
 SHA-J.A 314 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

Compact Comms Gamma  
 MCG-C 192 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Neutron  
 MDN-A.B 160 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper  
 MPD-B 167 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

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

Compact Focused 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: 46.23 ft Weight: 363.8 lb



- 37.07 ft GRGC - Gamma Ray
  - 34.16 ft CGXT - MCG External Temperature
  - 30.61 ft NPRS - Sandstone Neutron Por.
  - 23.37 ft AVOL - Annular Volume
  - 23.37 ft HVOL - Hole Volume
  - 23.37 ft CLDC - Density Caliper
  - 21.44 ft DPOR - Base Density Porosity
  - 21.44 ft DCOR - Density Correction
  - 21.38 ft PDPE - PE
  - 13.72 ft FEFC - Shallow FE (Phase Corr.)
  - 3.34 ft R400 - Array Ind. One Res 40
  - 3.34 ft R300 - Array Ind. One Res 30
  - 3.34 ft RTAO - Array Ind. One Res Rt
  - 3.34 ft R850 - Array Ind. One Res 85
  - 3.34 ft R600 - Array Ind. One Res 60
  - 0.23 ft SPCG - Spontaneous Potential
  - Tool Zero (0.13ft from bottom)
  - 0.13 ft SMTU - DST Uphole Tension
- All measurements relative to tool zero.

COMPANY	BILL BARRETT CORPORATION
WELL	GGU DALEY 21D-30-691
FIELD	GIBSON GULCH
PROVINCE/COUNTY	GARFIELD
COUNTRY/STATE	U.S.A. / COLORADO

Elevation Kelly Bushing	7312.00	feet	First Reading	7291.00	
Elevation Drill Floor	7311.00	feet	Depth Driller	7310.00	feet
Elevation Ground Level	7290.00	feet	Depth Logger	7313.00	feet



**Weatherford**<sup>®</sup>

HOLE VOLUME  
 CALIPER LOG

