CALIPER LOG

COMPANY	O'BRIEN RESOURCES, LLC
WELL	SWART 21 #1
FIELD	WILDCAT
PROVINCE/COUNTY	GOVE
COUNTRY/STATE	U.S.A. / KANSAS
LOCATION	879' FNL & 483' FWL NE SW NW NW

SEC	TWP	RGE	Other Services
21	14S	30W	

API Number 15-063-22107
Permit Number

Permanent Datum GL, Elevation 2803 feet
Log Measured From KB
Drilling Measured From KB @ 10 FEET

Elevations:	feet
KB	2813.00
DF	2812.00
GL	2803.00

Date	03-JUNE-2013			
Run Number	0NE			
Service Order	3539062			
Depth Driller	4610.00	feet		
Depth Logger	4608.00	feet		
First Reading	4576.00	feet		
Last Reading	260.00	feet		
Casing Driller	255.00	feet		
Casing Logger	256.00	feet		
Bit Size	7.875	inches		
Hole Fluid Type	CHEMICAL			
Density / Viscosity	9.40 lb/USg	57.00 CP		
PH / Fluid Loss	10.00	8.00 ml/30Min		
Sample Source	FLOWLINE			
Rm @ Measured Temp	1.19 @ 85.0	ohm-m		
Rmf @ Measured Temp	0.96 @ 85.0	ohm-m		
Rmc @ Measured Temp	1.43 @ 85.0	ohm-m		
Source Rmf / Rmc	CALC	CALC		
Rm @ BHT	0.85 @119.0	ohm-m		
Time Since Circulation	4 HOURS			
Max Recorded Temp	119.00	deg F		
Equipment / Base	13057	LIB		
Recorded By	W. STAMBAUGH			
Witnessed By	SEAN DEENIHAN			
JOB #	LIB13-160			

BOREHOLE RECORD

Last Edited: 03-JUN-2013 17:17

Bit Size inches	Depth From feet	Depth To feet
7.880	256.00	4608.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	256.00	24.00

REMARKS

- SOFTWARE ISSUE: WLS 13.05.9583.
- RUN 1: MCG, MML, MDN, MPD, MFE, MSS, MAI RUN IN COMBINATION.
  - HARDWARE: DUAL ECCENTRALISER USED ON MDN
    0.5 INCH STANDOFF USED ON MFE.
    TWO 0.5 INCH STANDOFFS USED ON MSS.
    0.5 INCH STANDOFF USED ON MAI.
- 2.71 G/CC LIMESTONE DENSITY MATRIX USED TO CALCULATE POROSITY.
- BOREHOLE RUGOSITY, TIGHT PULLS, AND WASHOUTS WILL AFFECT DATA QUALITY.
- ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST.
- TOTAL HOLE VOLUME FROM TD TO 256 FEET: 1630 CU. FT.
- ANNULAR HOLE VOLUME WITH 4.5 INCH PRODUCTION CASING FROM TD TO 3500 FEET: 270 CU. FT.

- RIG: MAVERICK DRILLING #106

- ENGINEER: WILLIAM STAMBAUGH

- OPERATOR(S): BRIAN BALLINGER

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.

5 INCH MAIN

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 03-JUN-2013 17:40

Filename: C:\Minimus 13.05.9583\Logs\OBrien Res...\OBrien Resources LLC Swart #21-1-001_002.dta — Recorded on 03-JUN-2013 15:15

System Versions: Logged with 13.05.9583 Processed with 13.05.9583 Plotted with 13.05.9583

Timing Marks
every 60.0 sec

Gamma Ray
API
0 75 150
150 225 300

Density Caliper
inches
6 11 16

Bit Size
inches
6 11 16

DST Uphole Tension
pounds
5000 0

Depth in Feet

Borehole Temp in deg F

HVI every 10 cu ft

Annular Integral every 10 cu ft

Replay Scale 1:240

Density Caliper
inches
16 11 6 6 11 16

Density Caliper
inches
16 11 6 6 11 16

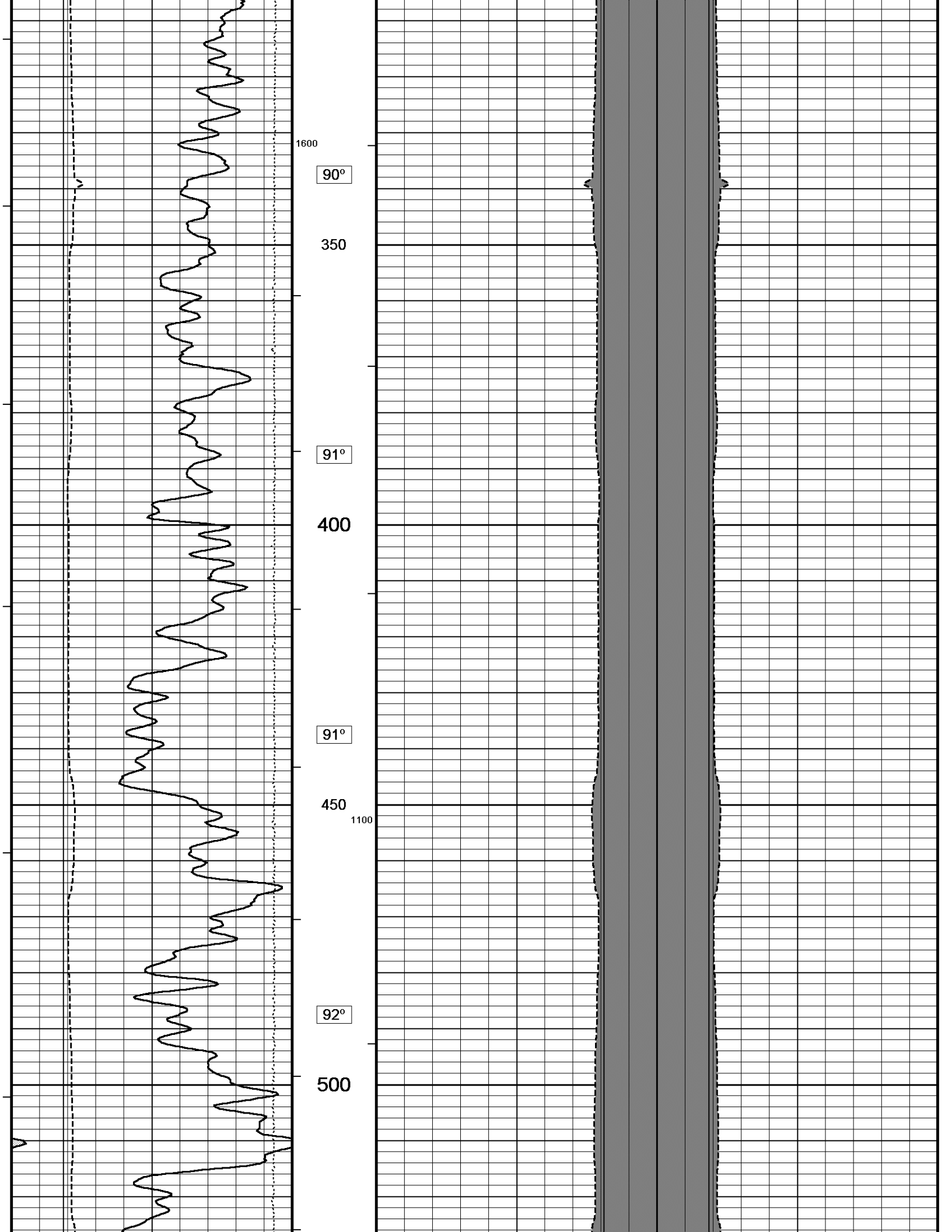
Bit Size
inches
16 11 6 6 11 16

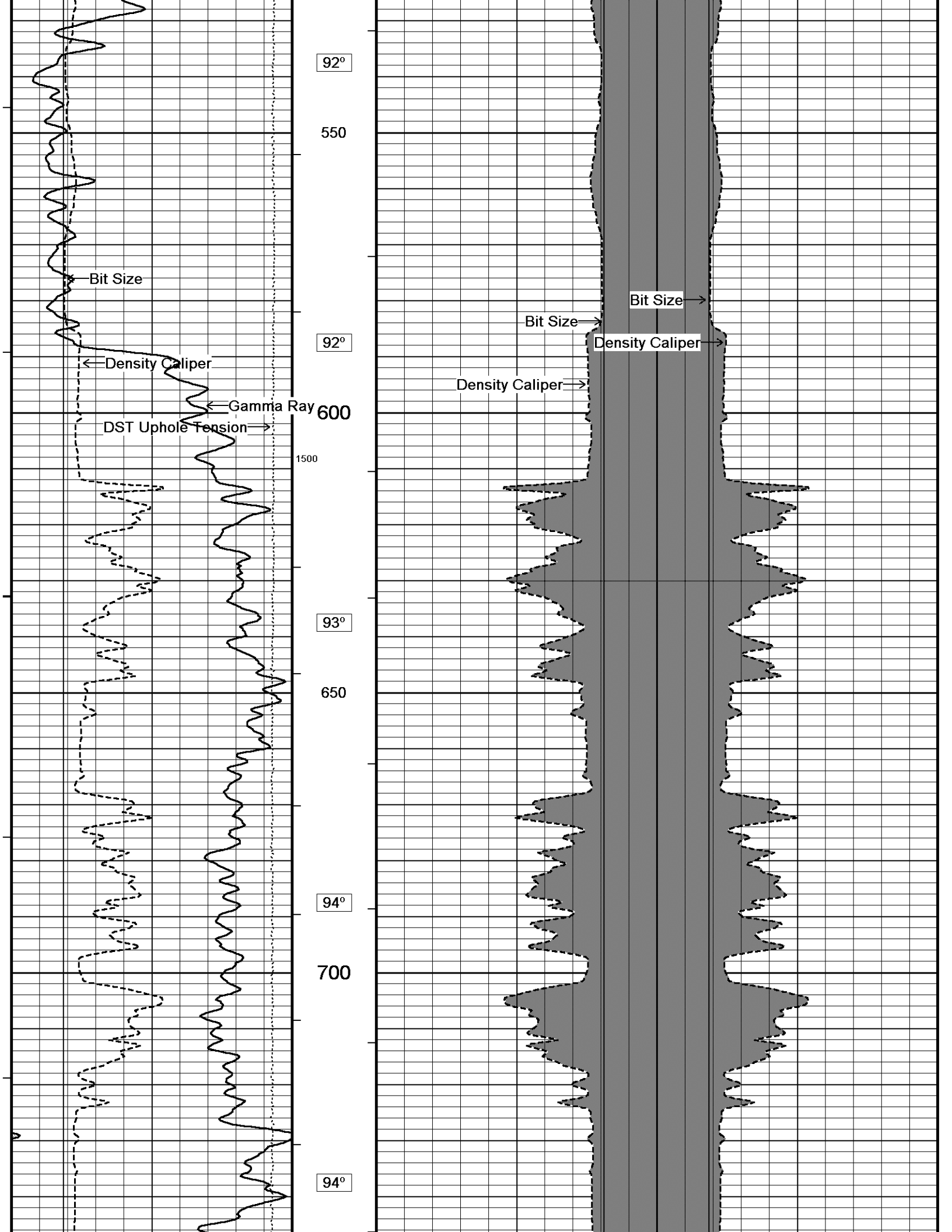
Bit Size
inches
16 11 6 6 11 16

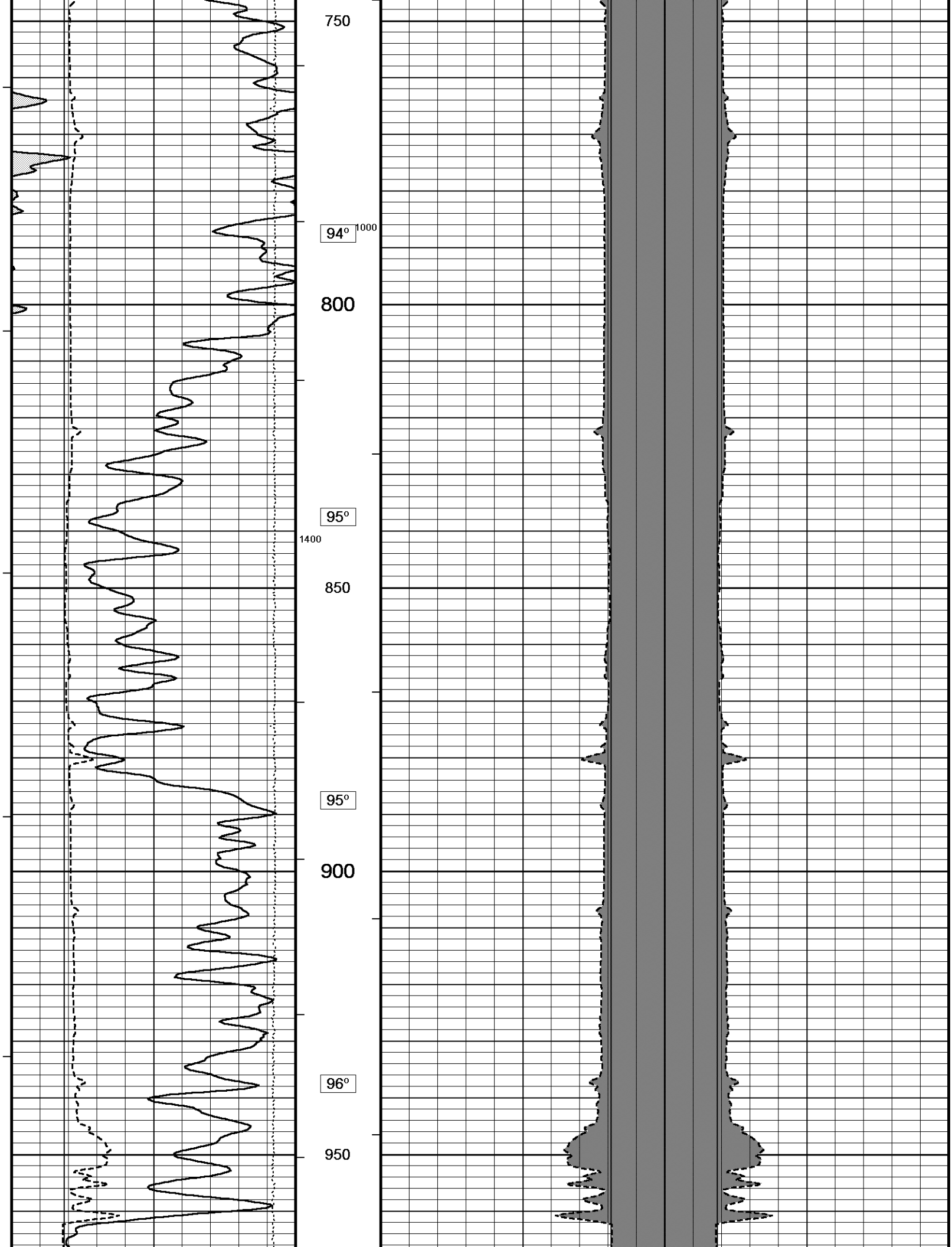
250
Casing Shoe

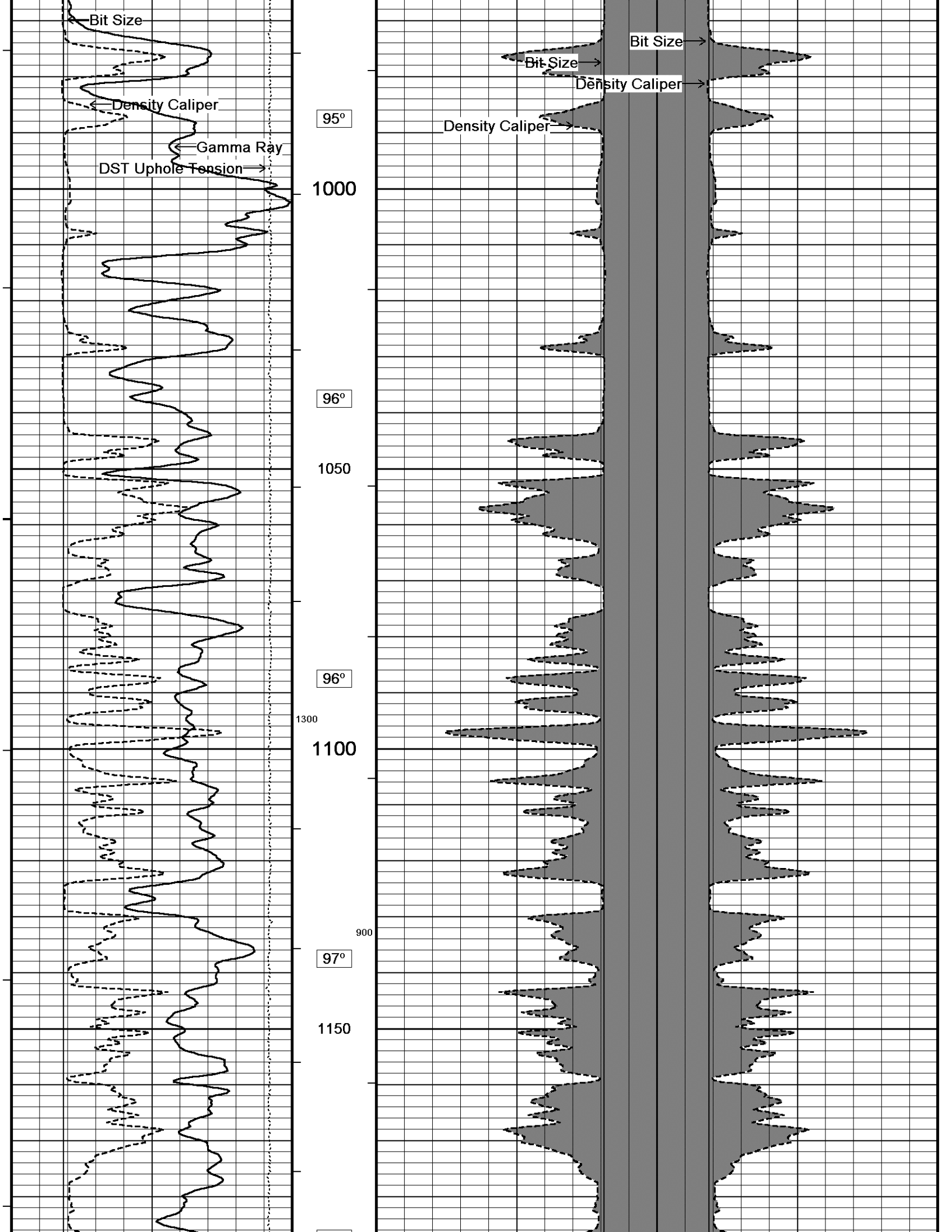
90°

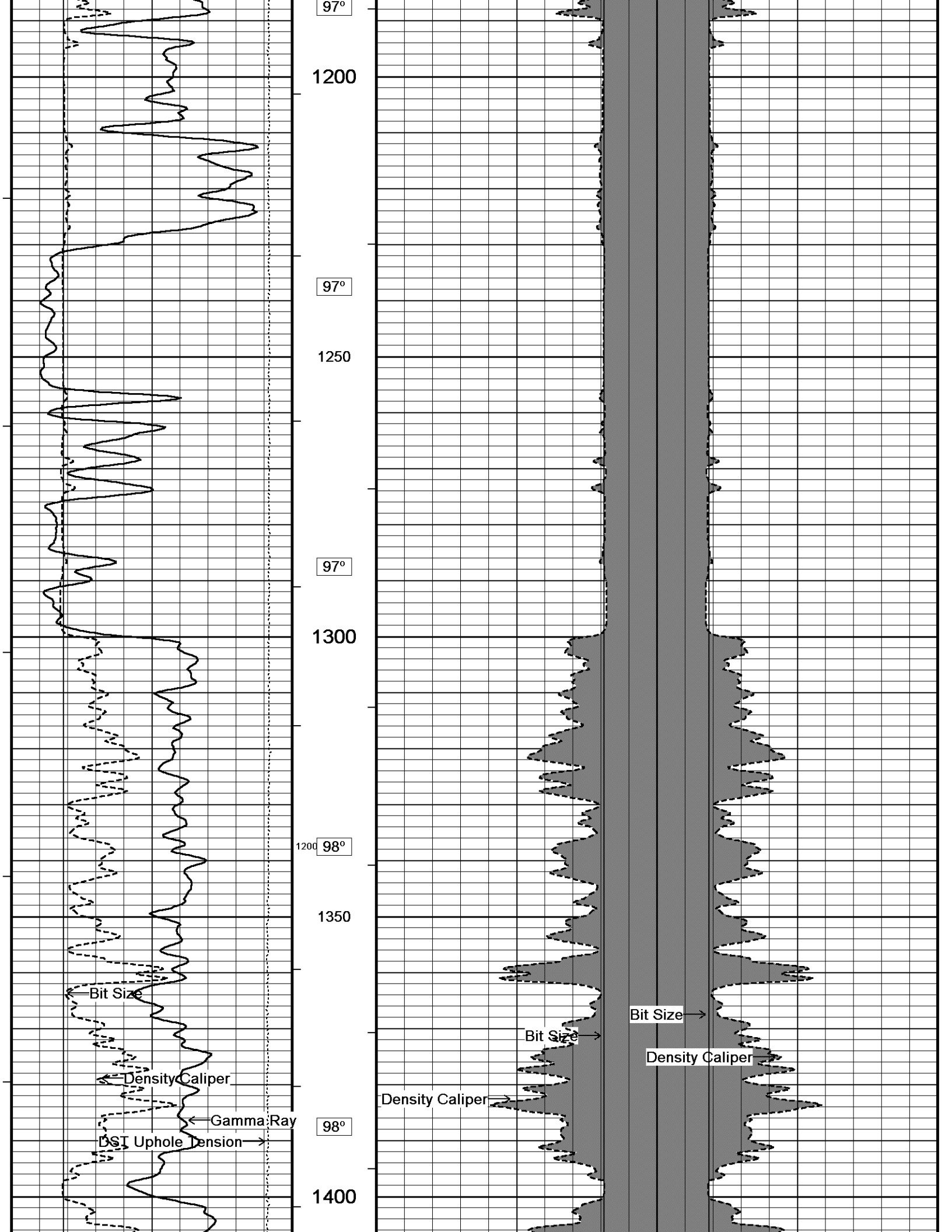
300

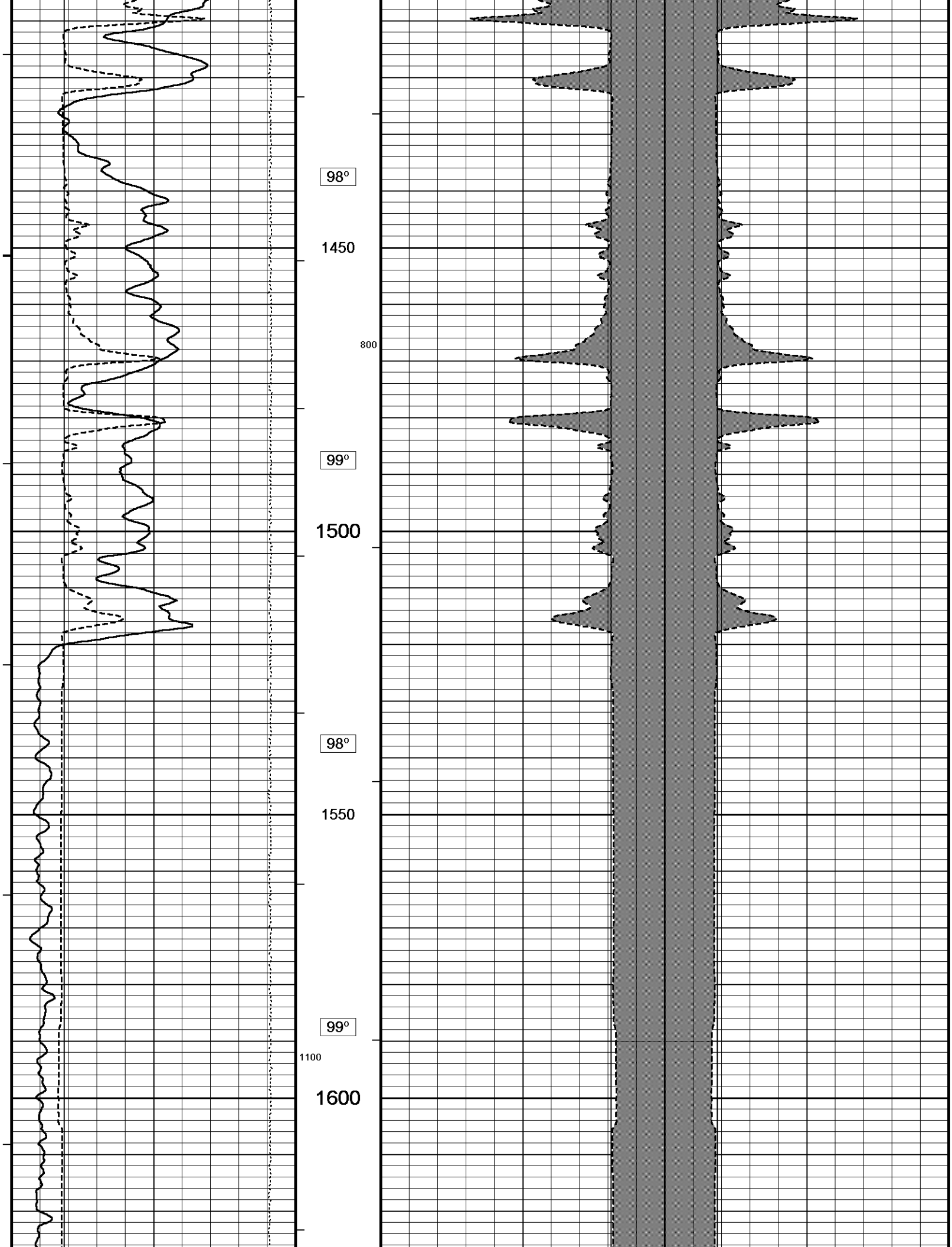

1600
90°
350
91°
400
91°
450
1100
92°
500

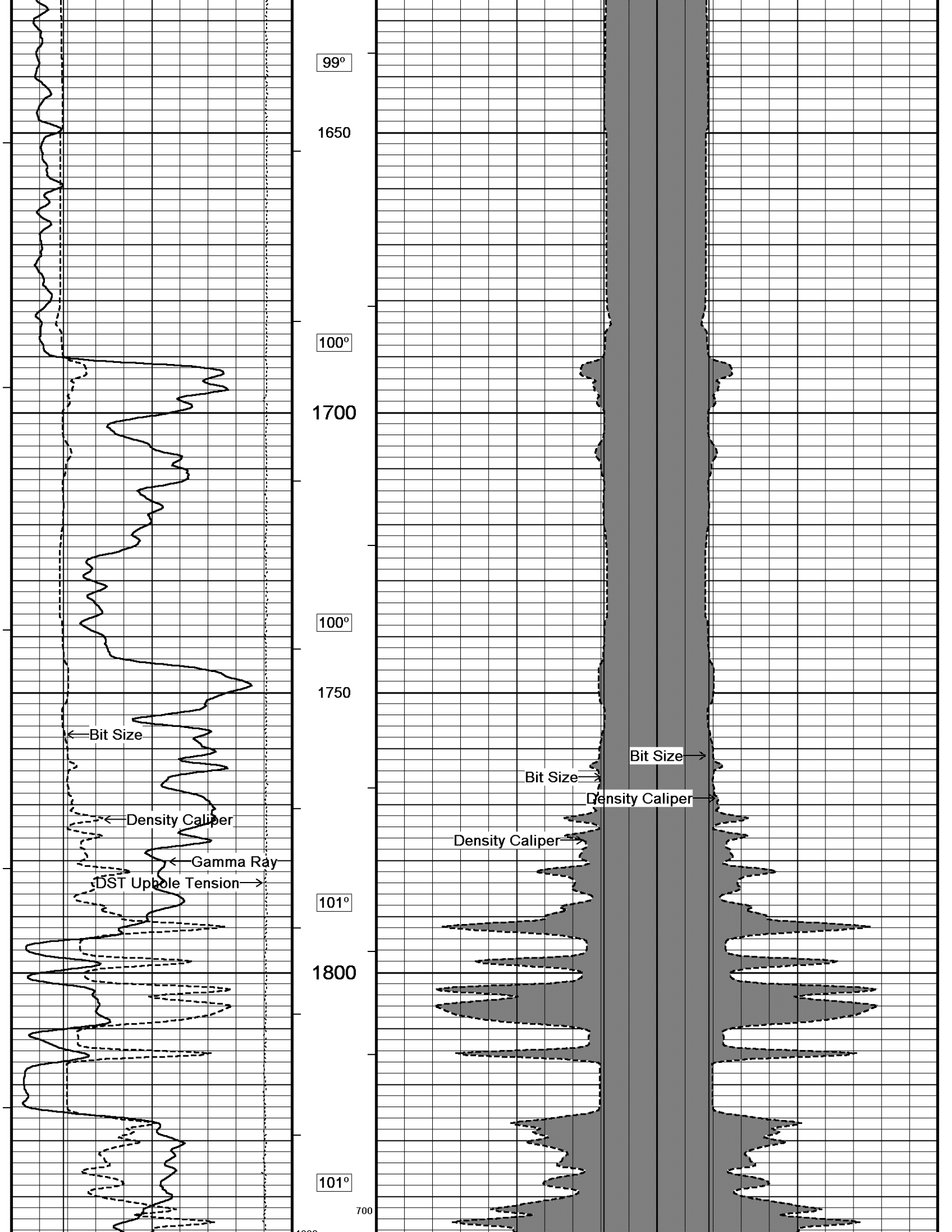

92°
550
Bit Size
92°
Density Caliper
Gamma Ray
600
DST Uphole Tension
1500
93°
650
94°
700
94°
Bit Size
Bit Size
Density Caliper
Density Caliper

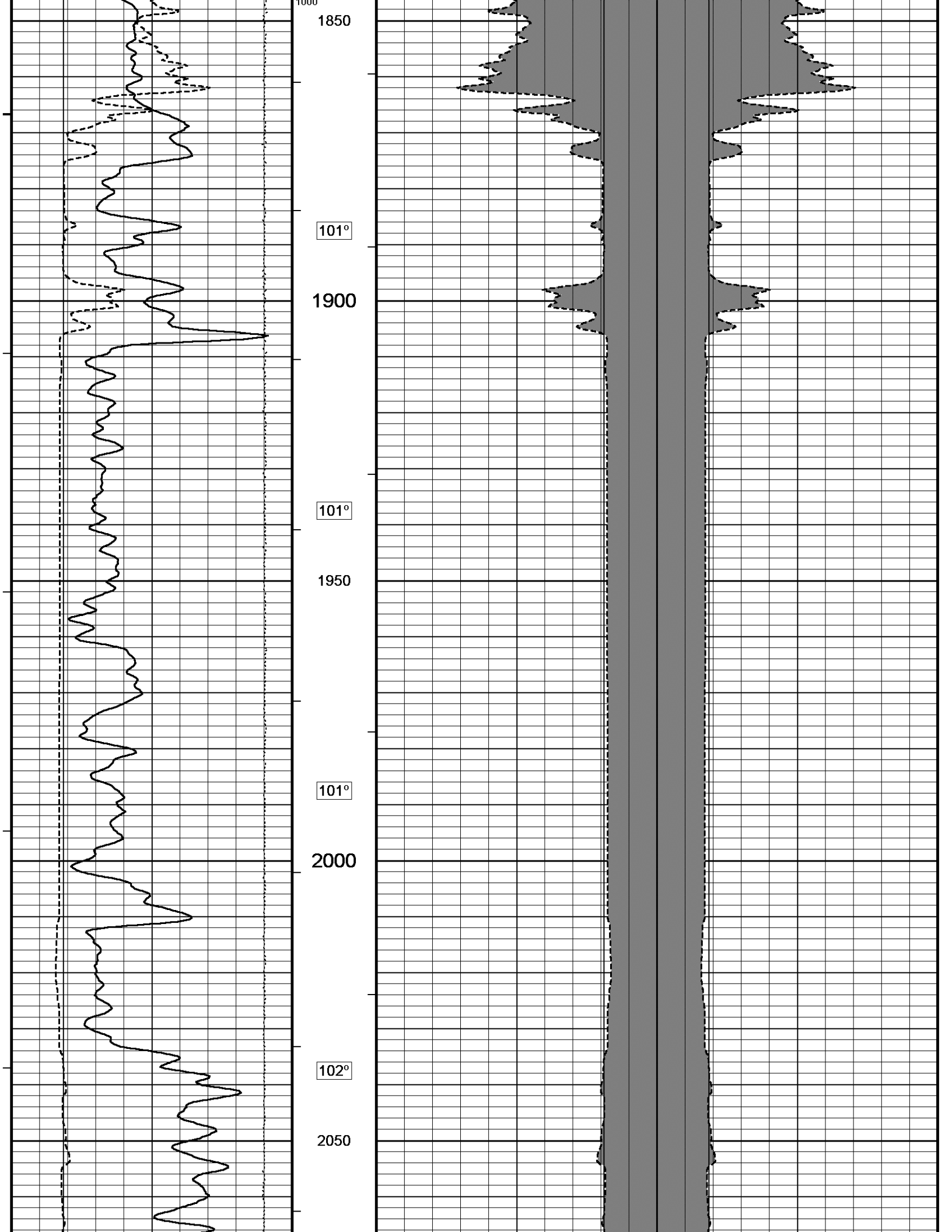

750
94°
1000
800
95°
1400
850
95°
900
96°
950

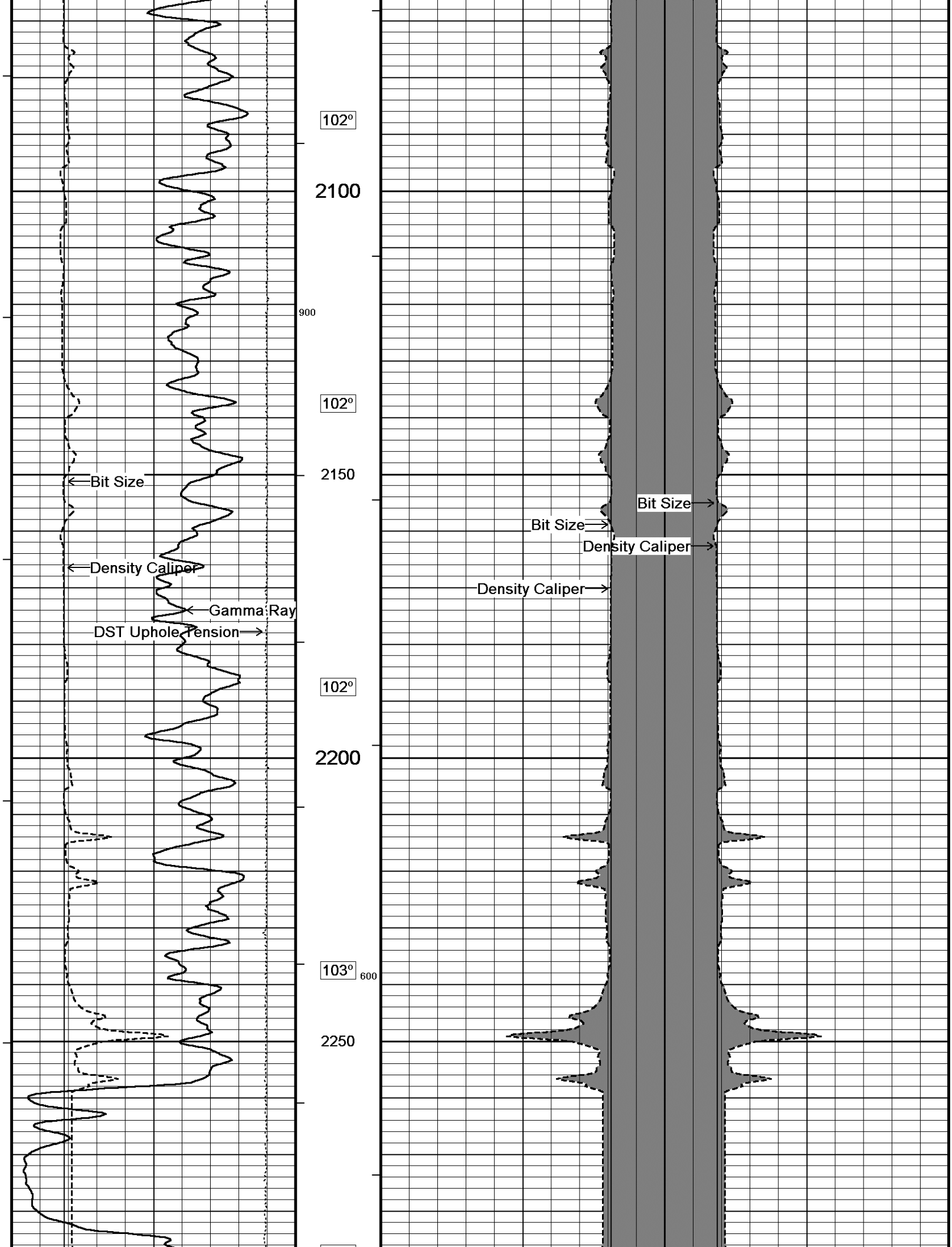

Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
95°
1000
96°
1050
96°
1300
1100
97°
1150
900
Bit Size
Bit Size
Density Caliper
Density Caliper

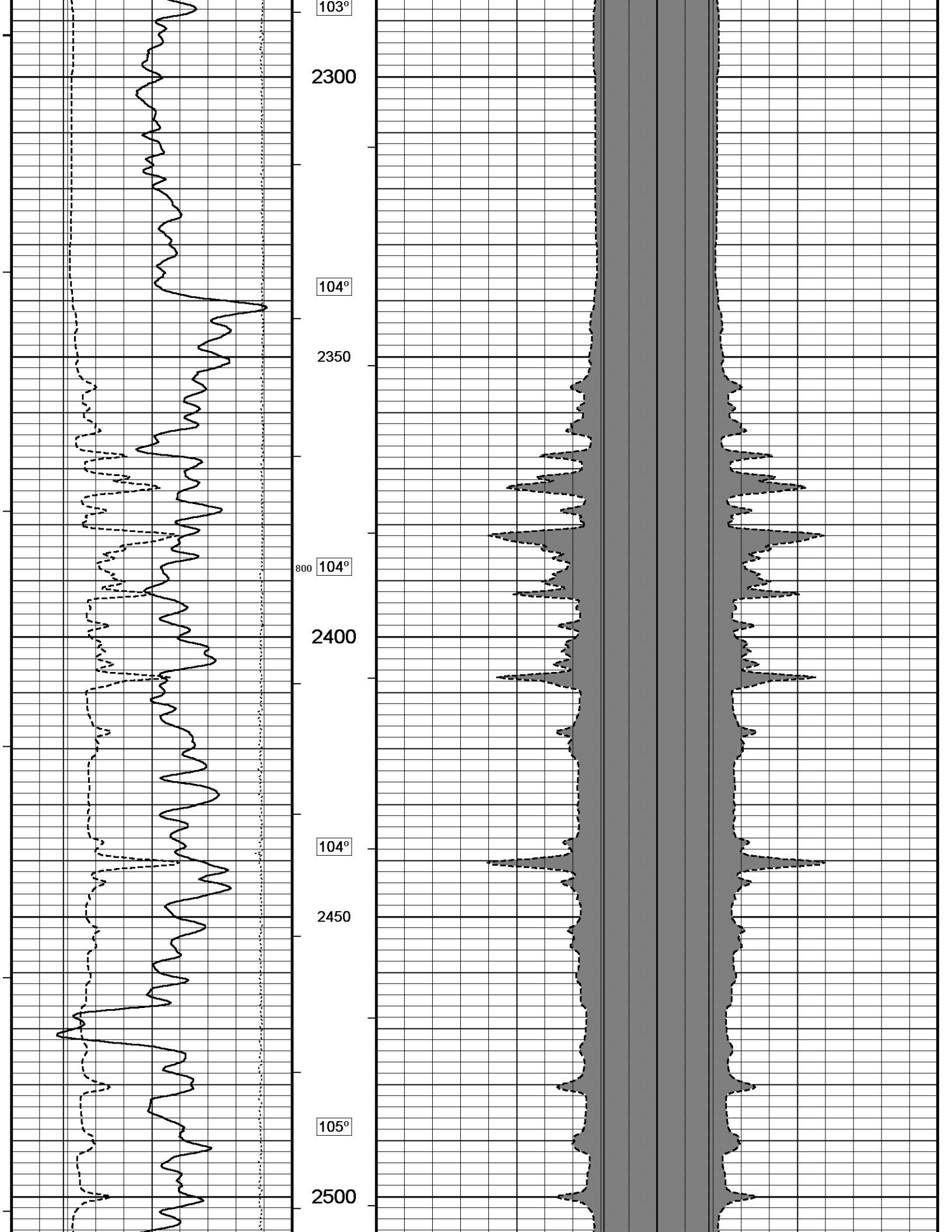

97°
1200
97°
1250
97°
1300
1200
98°
1350
Bit Size
Density Caliper
Gamma Ray
DSI Uphole Tension
98°
1400
Bit Size
Bit Size
Density Caliper
Density Caliper

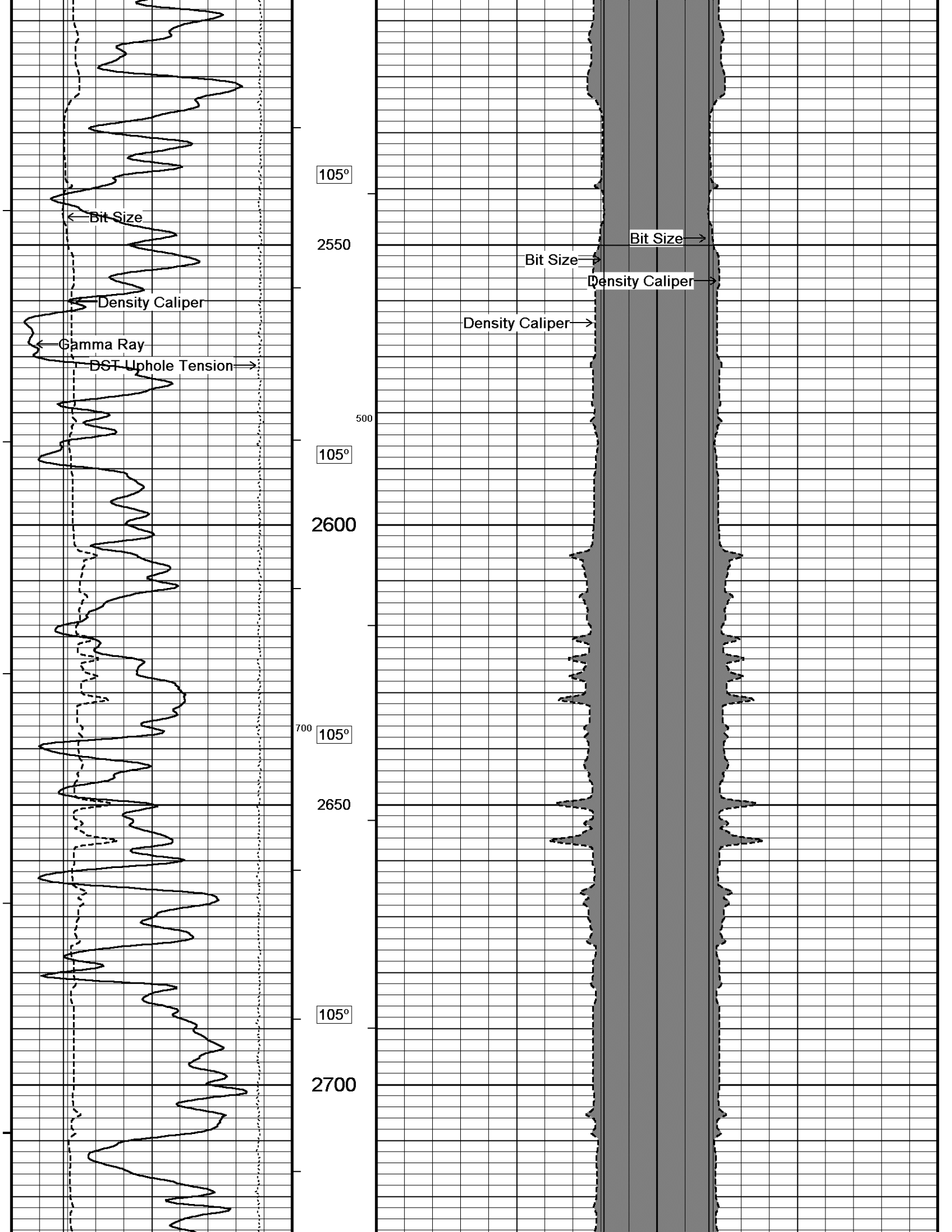

98°
1450
800
99°
1500
98°
1550
99°
1100
1600

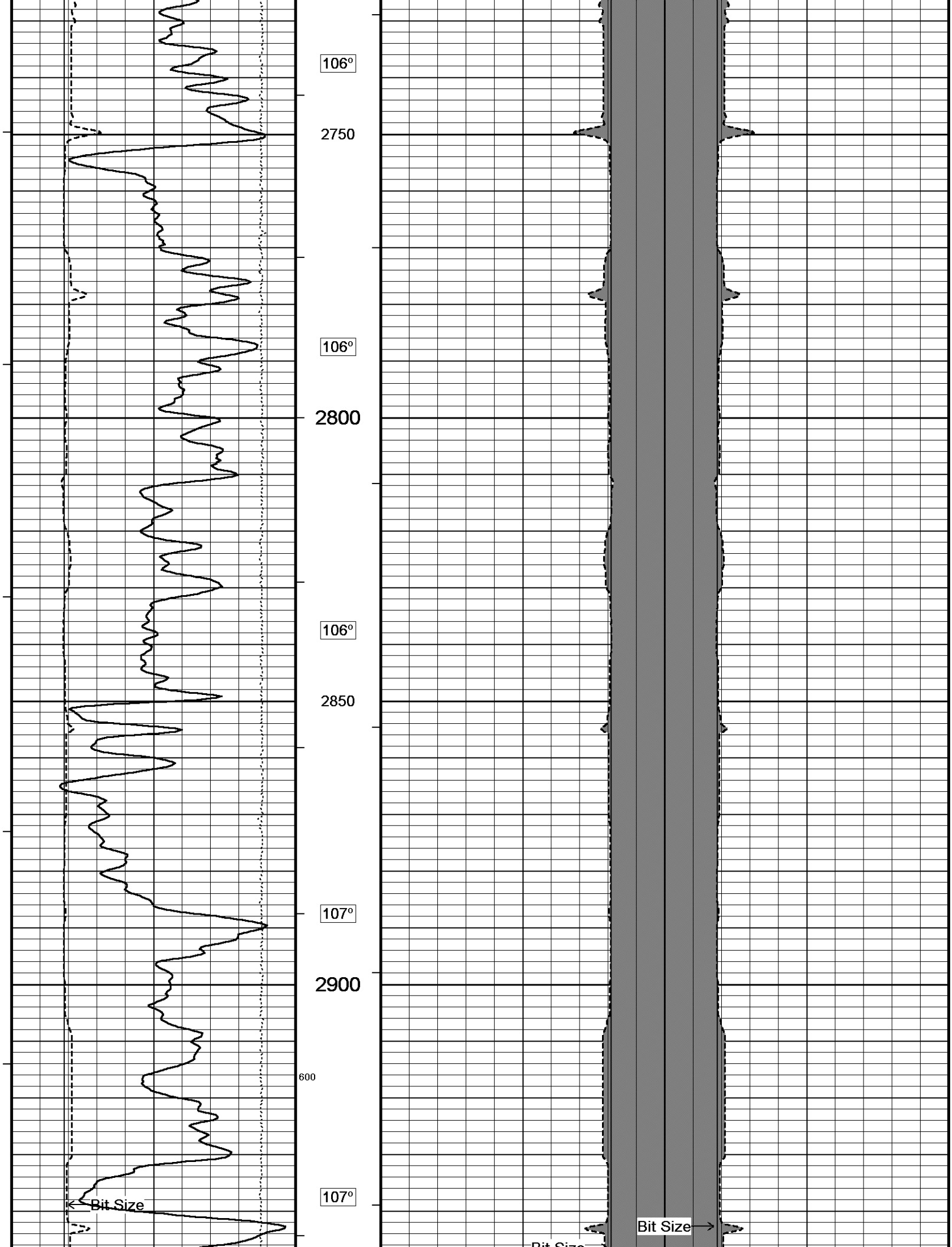

99°
1650
100°
1700
100°
1750
Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
101°
1800
101°
700
Bit Size
Bit Size
Density Caliper
Density Caliper

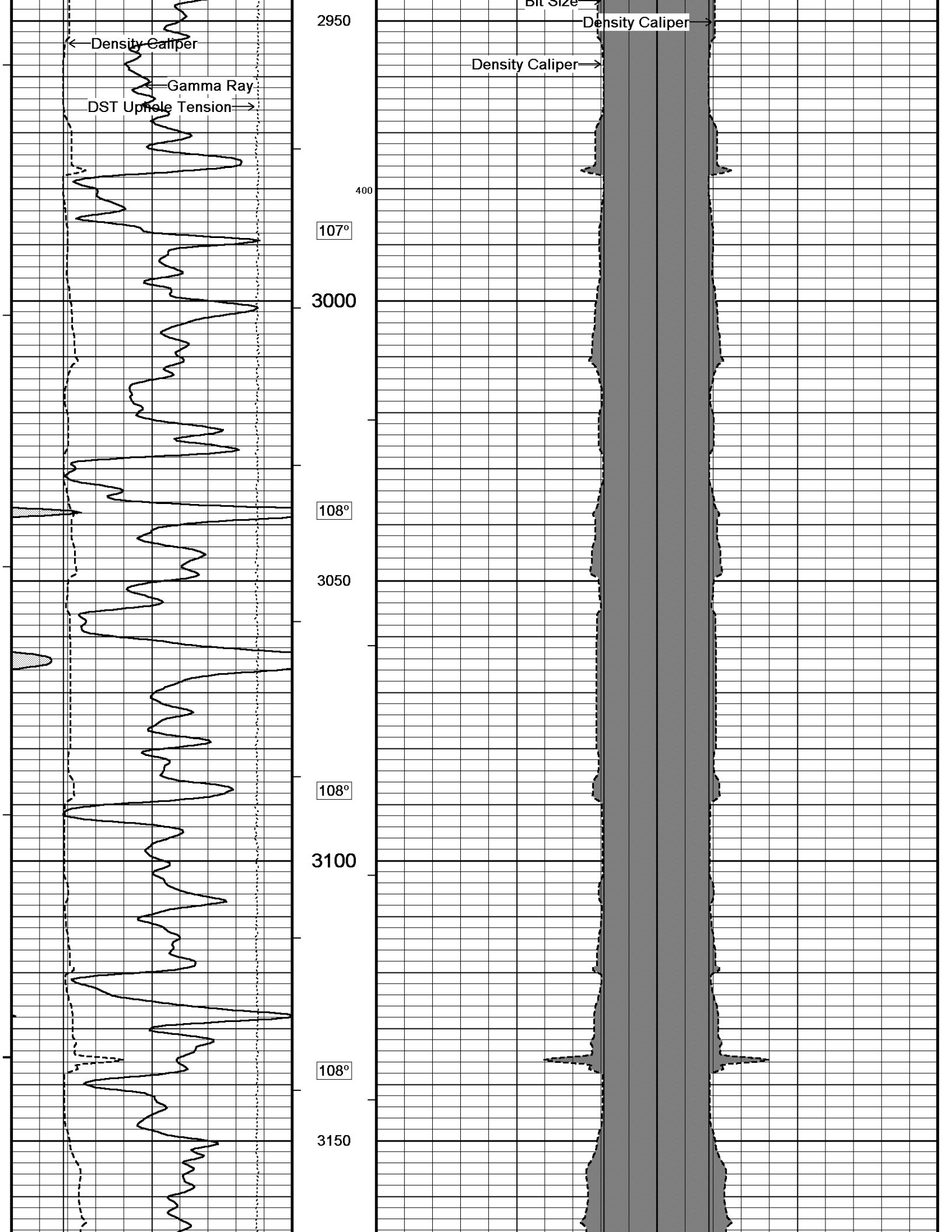

1000
1850
101°
1900
101°
1950
101°
2000
102°
2050

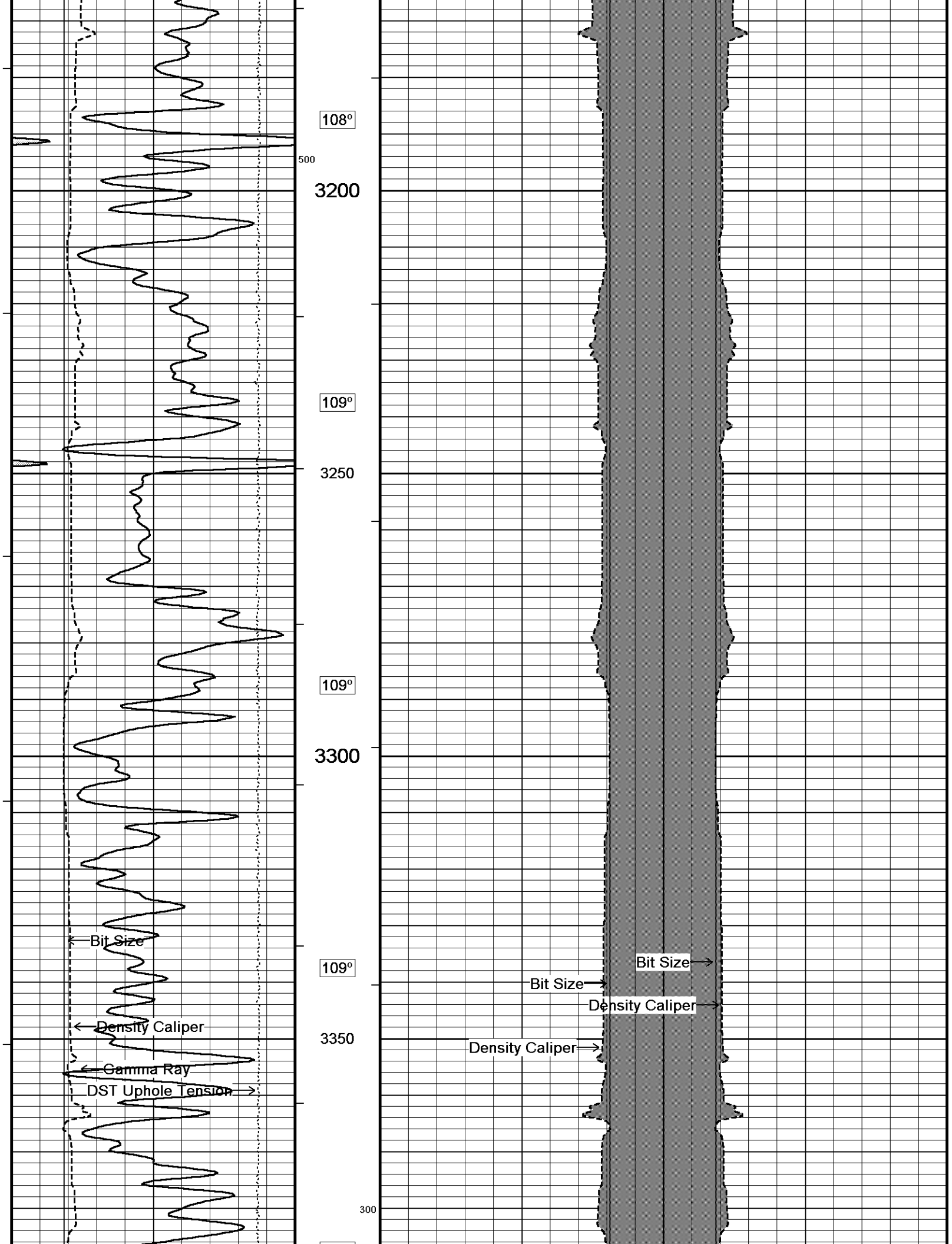

102°
2100
900
102°
2150
Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
102°
2200
103°
600
2250
Bit Size
Bit Size
Density Caliper
Density Caliper

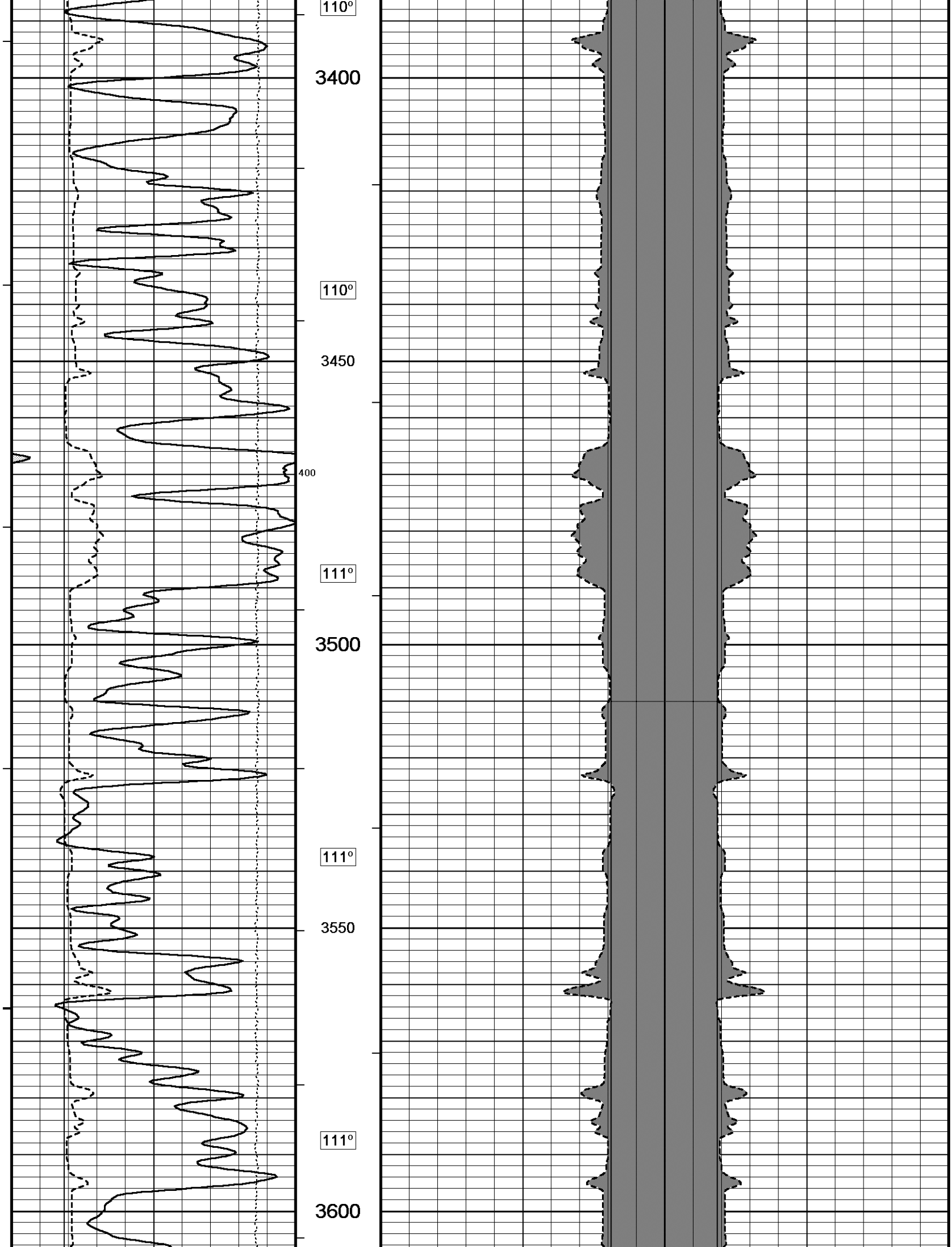

103°
2300
104°
2350
800
104°
2400
104°
2450
105°
2500

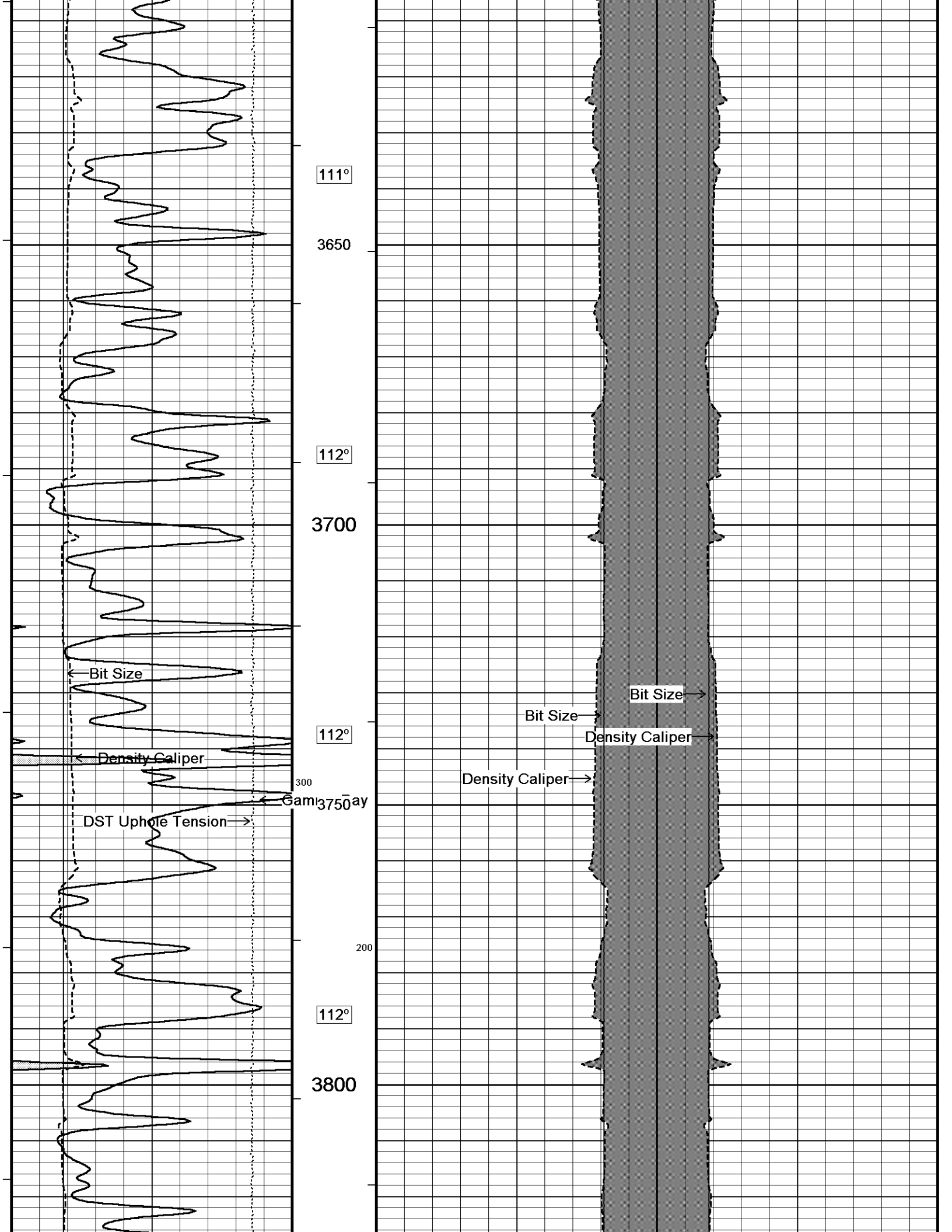

105°
Bit Size
2550
Density Caliper
Gamma Ray
DST Uphole Tension
500
105°
2600
700
105°
2650
105°
2700
Bit Size
Bit Size
Density Caliper
Density Caliper

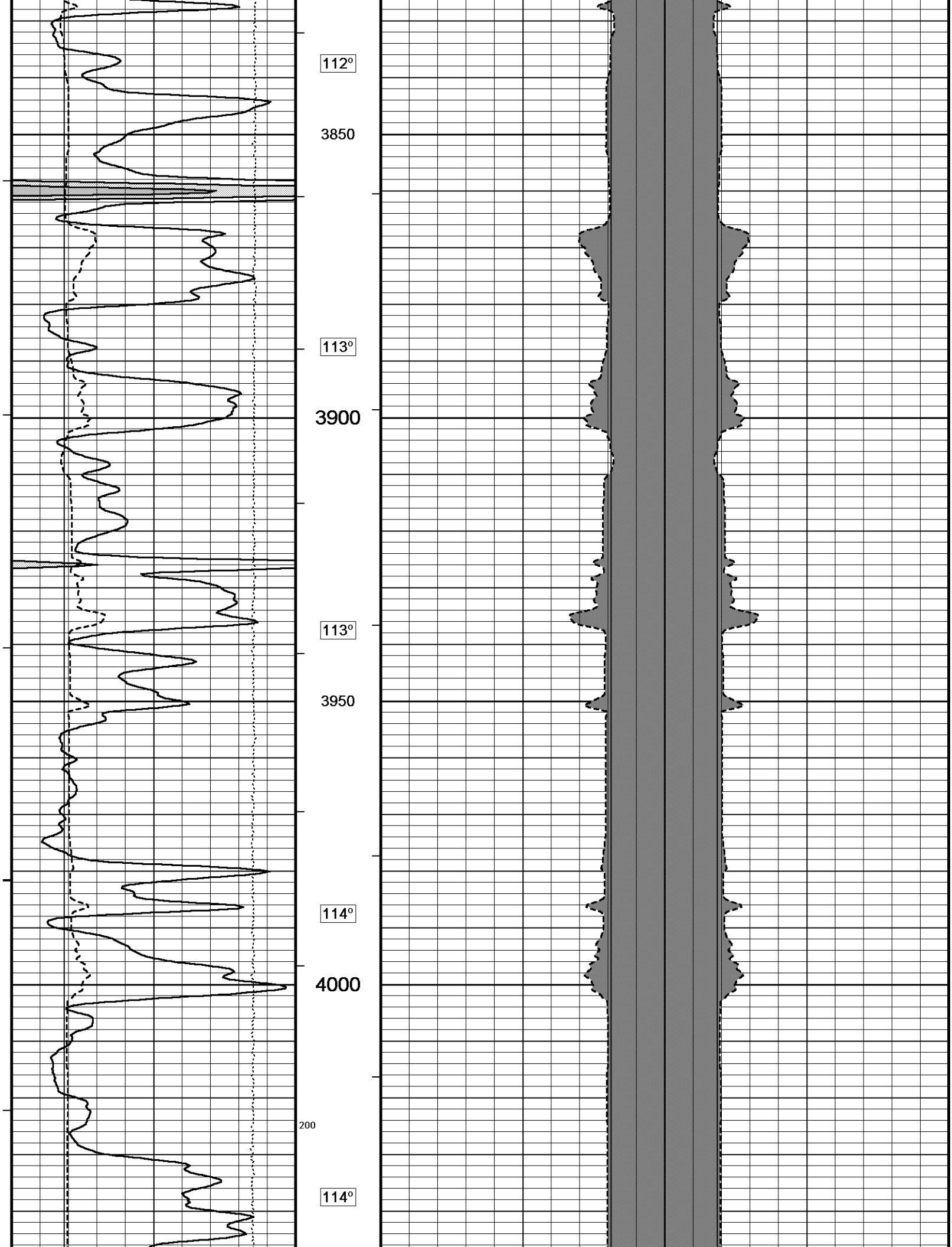

106°
2750
106°
2800
106°
2850
107°
2900
600
107°
Bit Size
Bit Size

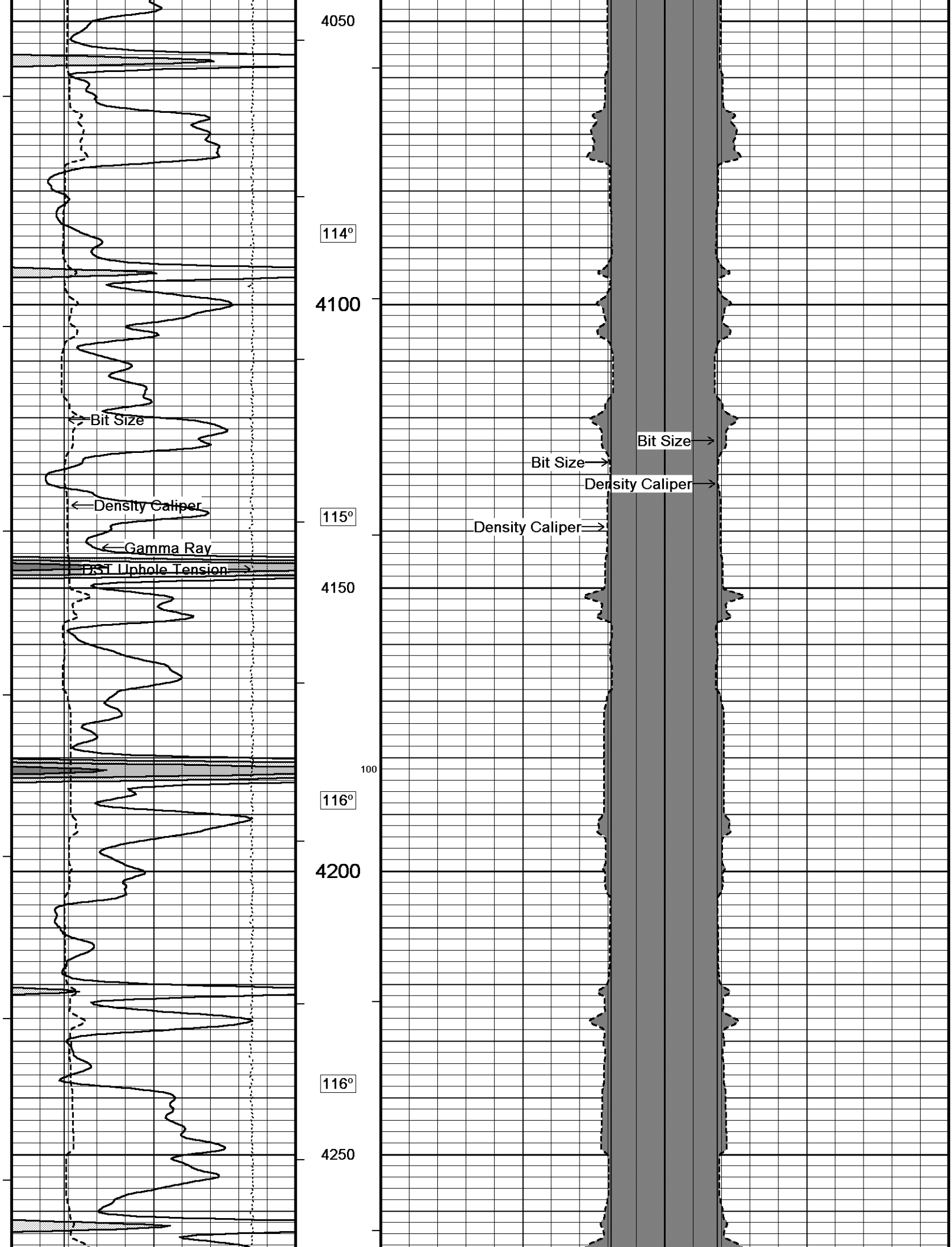

Density Caliper
Gamma Ray
DST Uphole Tension
2950
400
107°
3000
108°
3050
108°
3100
108°
3150
Bit Size
Density Caliper
Density Caliper

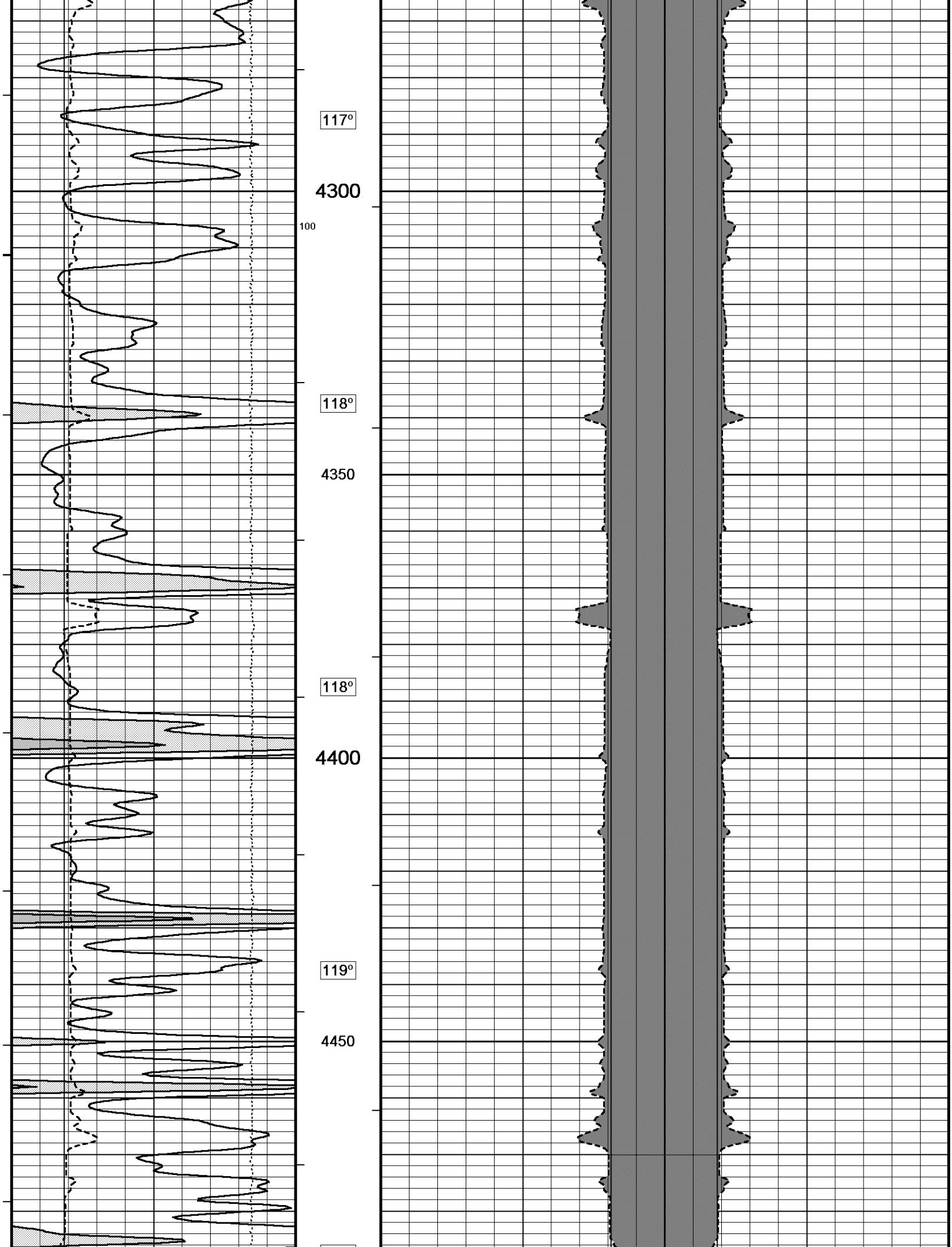

108°
500
3200
109°
3250
109°
3300
109°
3350
300
Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
Bit Size
Bit Size
Density Caliper
Density Caliper

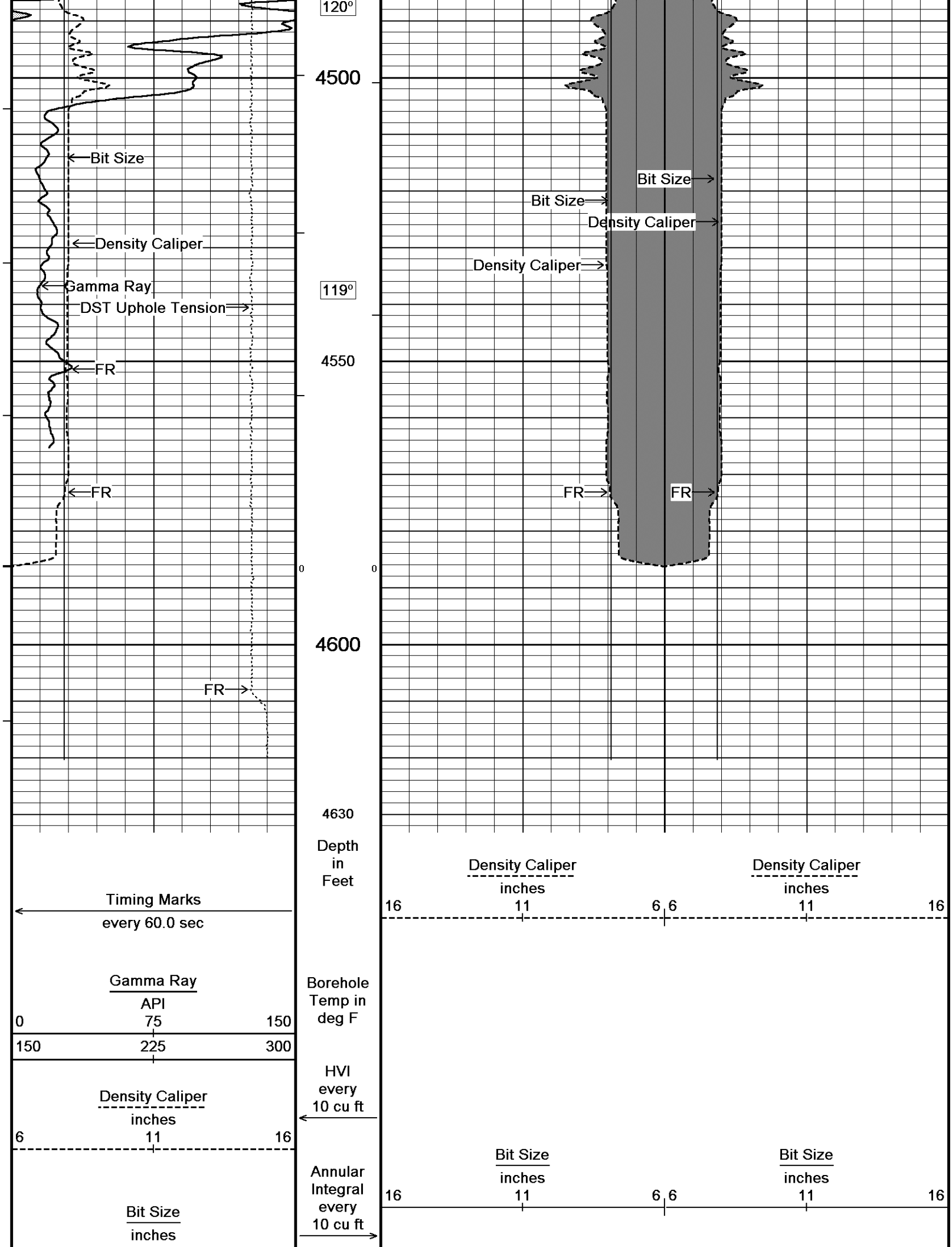

110°
3400
110°
3450
400
111°
3500
111°
3550
111°
3600


111°
3650
112°
3700
Bit Size
112°
Density Caliper
300
Gamma Ray
3750
DST Uphole Tension
200
112°
3800
Bit Size
Bit Size
Density Caliper
Density Caliper


112°
3850
113°
3900
113°
3950
114°
4000
200
114°


4050
114°
4100
Bit Size
Density Caliper
115°
Gamma Ray
DST Uphole Tension
4150
100
116°
4200
116°
4250
Bit Size
Bit Size
Density Caliper
Density Caliper


117°
4300
100
118°
4350
118°
4400
119°
4450


120°
4500
Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
FR
119°
4550
FR
0
0
4600
FR
4630
Bit Size
Bit Size
Density Caliper
Density Caliper
FR
FR
Depth
in
Feet
Density Caliper
inches
16
11
6
6
11
16
Density Caliper
inches
Timing Marks
every 60.0 sec
Gamma Ray
API
0
75
150
150
225
300
Borehole
Temp in
deg F
HVI
every
10 cu ft
Density Caliper
inches
6
11
16
Bit Size
inches
16
11
6
6
11
16
Bit Size
inches
Annular
Integral
every
10 cu ft
Bit Size
inches

6 11 16

DST Uphole Tension
pounds
5000 0

Replay Scale 1:240

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 03-JUN-2013 17:40
Filename: C:\Minimus 13.05.9583\Logs\OBrien Res...\OBrien Resources LLC Swart #21-1-001_002.dta
Recorded on 03-JUN-2013 15:15
System Versions: Logged with 13.05.9583 Processed with 13.05.9583 Plotted with 13.05.9583

5 INCH MAIN

DOWNHOLE EQUIPMENT

C:\Minimus 13.05.9583\Logs\OBrien Resources LLC Swart #21-1\OBrien Resources LLC Swart #21-1.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

Compact Comms Gamma
MCG-D.K 442 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Micro-log
MML-A 16 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

Compact Neutron
MDN-A.B 65 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

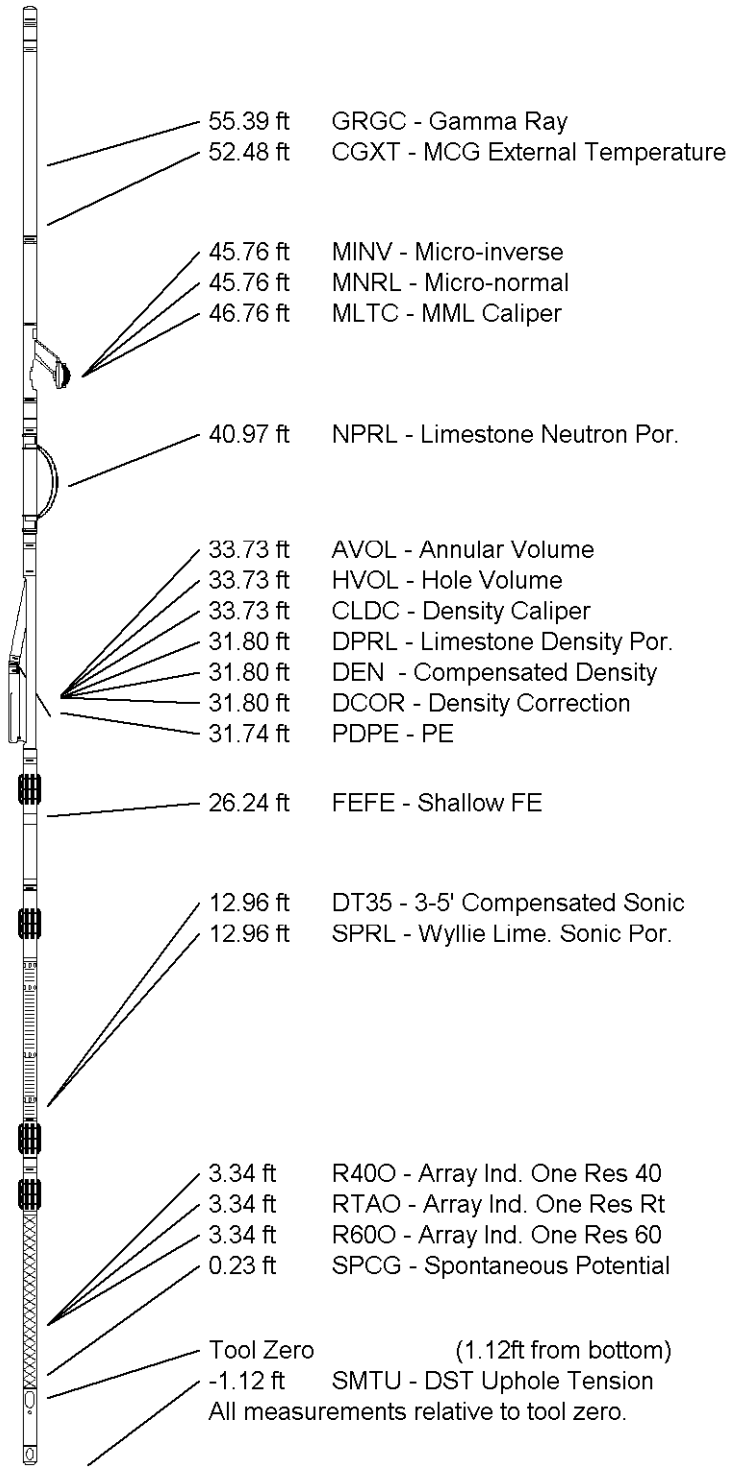
Compact Density/Caliper
MPD-B 31 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

Compact Focussed Electric
MFE-B.J 352 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Sonic
MSS-C.A 156 LG: 12.52 ft WT: 72.8 lb OD: 2.24 in

Compact Induction
MAI-A.A 45 LG: 11.79 ft WT: 48.5 lb OD: 2.24 in

Total Length: 63.24 ft Weight: 471.8 lb



55.39 ft	GRGC - Gamma Ray
52.48 ft	CGXT - MCG External Temperature
45.76 ft	MINV - Micro-inverse
45.76 ft	MNRL - Micro-normal
46.76 ft	MLTC - MML Caliper
40.97 ft	NPRL - Limestone Neutron Por.
33.73 ft	AVOL - Annular Volume
33.73 ft	HVOL - Hole Volume
33.73 ft	CLDC - Density Caliper
31.80 ft	DPRL - Limestone Density Por.
31.80 ft	DEN - Compensated Density
31.80 ft	DCOR - Density Correction
31.74 ft	PDPE - PE
26.24 ft	FEFE - Shallow FE
12.96 ft	DT35 - 3-5' Compensated Sonic
12.96 ft	SPRL - Wyllie Lime. Sonic Por.
3.34 ft	R40O - Array Ind. One Res 40
3.34 ft	RTAO - Array Ind. One Res Rt
3.34 ft	R60O - Array Ind. One Res 60
0.23 ft	SPCG - Spontaneous Potential
Tool Zero	(1.12ft from bottom)
-1.12 ft	SMTU - DST Uphole Tension

All measurements relative to tool zero.

COMPANY	O'BRIEN RESOURCES, LLC
WELL	SWART 21 #1
FIELD	WILDCAT
PROVINCE/COUNTY	GOVE
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	2813.00	feet	First Reading	4576.00	feet
Elevation Drill Floor	2812.00	feet	Depth Driller	4610.00	feet
Elevation Ground Level	2803.00	feet	Depth Logger	4608.00	feet



Weatherford®

CALIPER LOG