Weatherford

CALIPER LOG

COMPANY	PETROSANTANDER (USA), INC.
WELL	SCOTT #6-13
FIELD	CHRISTABELLE
PROVINCE/COUNTY	KEARNY
COUNTRY/STATE	U.S.A. / KANSAS
LOCATION	660' FNL & 330' FWL

SEC 13	TWP 21S	RGE 35W	Other Services
Latitude			
Longitude			
API Number	15-093-21924		

Permanent Datum GL, Elevation 3094 feet
Log Measured From KB
Drilling Measured From KB @ 12 FEET

Elevations:	feet
KB	3106.00
DF	3104.00
GL	3094.00

Date	13-AUG-2014			
Run Number	ONE			
Service Order	7606-95087167			
Depth Driller	5010.00	feet		
Depth Logger	5012.00	feet		
First Reading				
Last Reading				
Casing Driller	521.00	feet		
Casing Logger	523.00	feet		
Bit Size	7.875	inches		
Hole Fluid Type	CHEMICAL			
Density / Viscosity	9.15 lb/USg	50.00 CP		
PH / Fluid Loss	9.50	10.00 ml/30Min		
Sample Source	MUDPIT			
Rm @ Measured Temp	0.71 @ 75.0	ohm-m		
Rmf @ Measured Temp	0.57 @ 75.0	ohm-m		
Rmc @ Measured Temp	0.85 @ 75.0	ohm-m		
Source Rmf / Rmc	CALC	CALC		
Rm @ BHT	0.47 @116.0	ohm-m		
Time Since Circulation	4 HOURS			
Max Recorded Temp	116.00	deg F		
Equipment / Base	13057	LIB		
Recorded By	BEN WELDIN			
Witnessed By	WES HANSEN			
JOB #	LB14-232			

BOREHOLE RECORD

Last Edited: 13-AUG-2014 01:21

Bit Size inches	Depth From feet	Depth To feet
12.250	0.00	521.00
7.875	521.00	5010.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	521.00	24.00

REMARKS

- SOFTWARE ISSUE: WLS 13.08.2113.
- RUN ONE: MCG, MML, MDN, MPD, MFE, MAI RUN IN COMBINATION.
  - HARDWARE: DUAL BOWSPRING USED ON MDN.
  0.5 INCH STANDOFF USED ON MFE.
  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 SURFACE CASING: 2170 CU.FT.
- ANNULAR HOLE VOLUME WITH 5.5 INCH PRODUCTION CASING FROM TD TO SURFACE CASING: 1430 CU.FT.

- RIG: VAL RIG #1

- ENGINEER: BEN WELDIN

- OPERATOR: KEN RINEHART

In interpreting, communicating or providing information and/or making recommendations, either written or oral, as to logs or test or other data, type or amount of material, or Work or other service to be furnished, or manner of performance, or in predicting results to be obtained, the Contractor will give the Company the benefit of the Contractor's best judgment based on its experience and will perform all such Work in a good and workmanlike manner. Any interpretation of test or other data, and any recommendation or reservoir description based upon such interpretations, are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and assumptions are not infallible, and with respect to which professional engineers and analysts may differ. ACCORDINGLY ANY INTERPRETATION OR RECOMMENDATION RESULTING FROM THE SERVICES WILL BE AT THE SOLE RISK OF THE COMPANY, AND THE CONTRACTOR CANNOT AND DOES NOT WARRANT THE ACCURACY, CORRECTNESS OR COMPLETENESS OF ANY SUCH INTERPRETATION OR RECOMMENDATION, WHICH INTERPRETATIONS AND RECOMMENDATIONS SHOULD NOT, THEREFORE, UNDER ANY CIRCUMSTANCES BE RELIED UPON AS THE SOLE OR MAIN BASIS FOR ANY DRILLING, COMPLETION, WELL TREATMENT, PRODUCTION OR FINANCIAL DECISION, OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING ACTIVITY, DRILLING RIG OR ITS CREW OR ANY OTHER INDIVIDUAL. THE COMPANY HAS FULL RESPONSIBILITY FOR ALL DECISIONS CONCERNING THE SERVICES.

5 INCH MAIN

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 13-AUG-2014 09:00

Filename: C:\Minimus 13.08\Data\PetroSantander Scott #6-13\PetroSantander Scott #6-13 Main.dta — Recorded on 13-AUG-2014 05:16

System Versions: Logged with 13.08.2113 Plotted with 13.08.2113

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

508

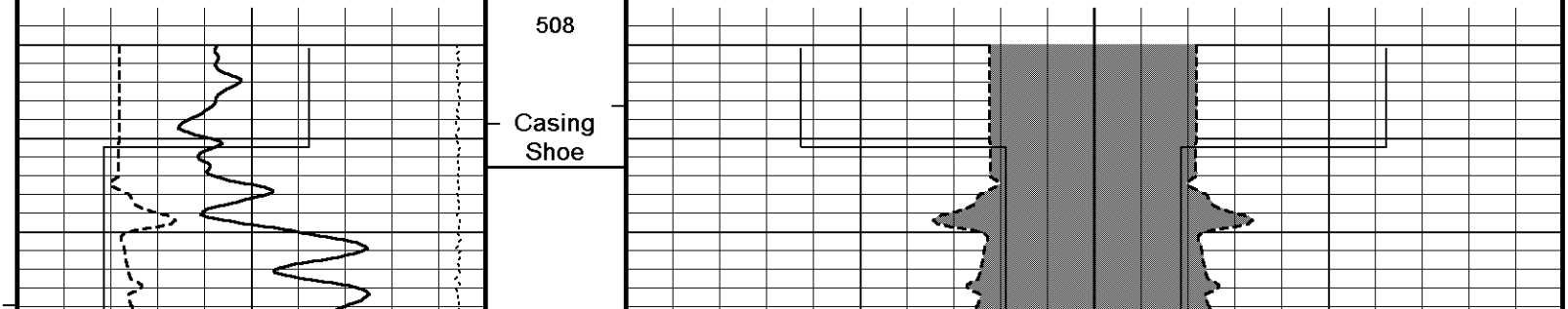
Casing Shoe

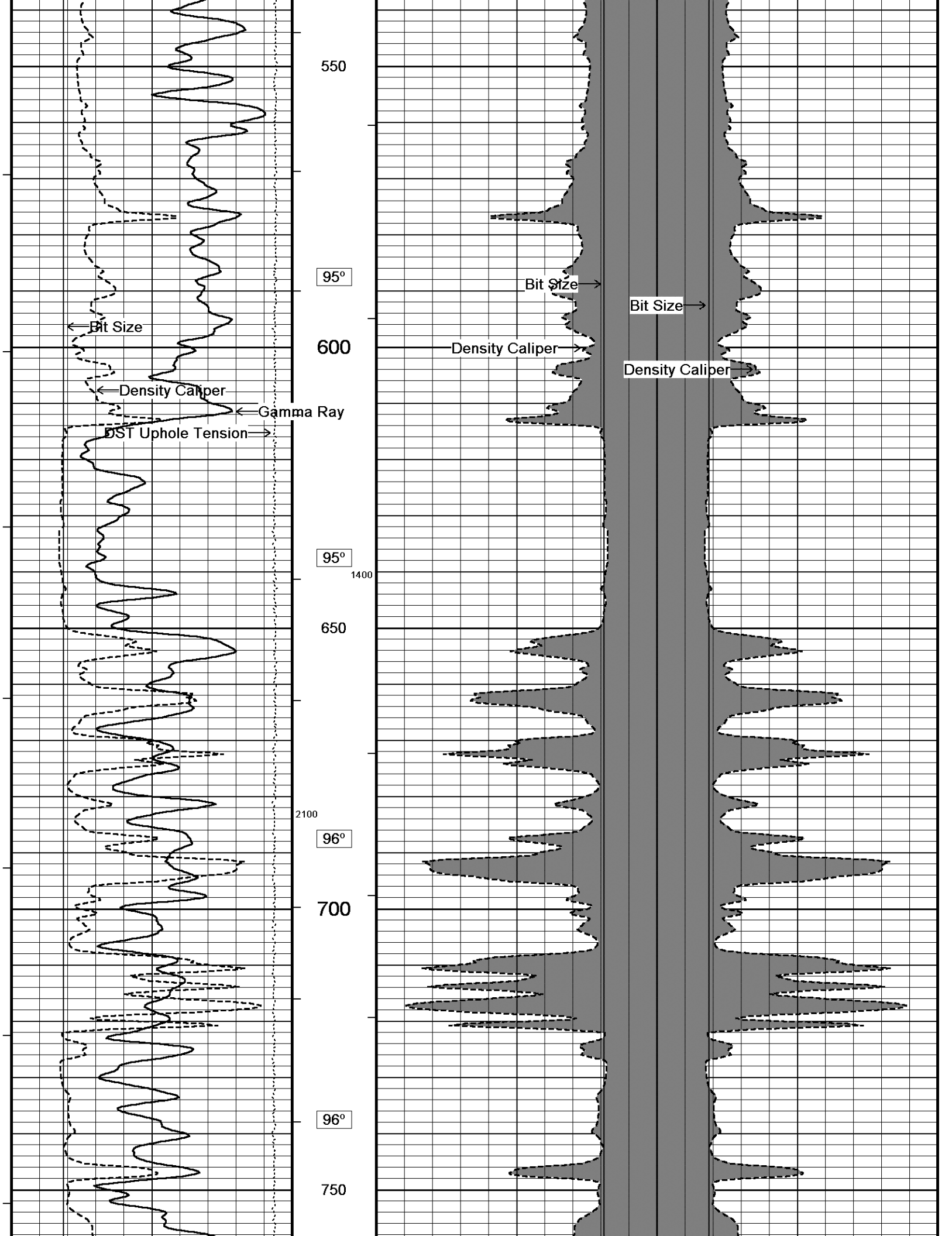
Density Caliper
inches
16 11 6 6 11 16

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

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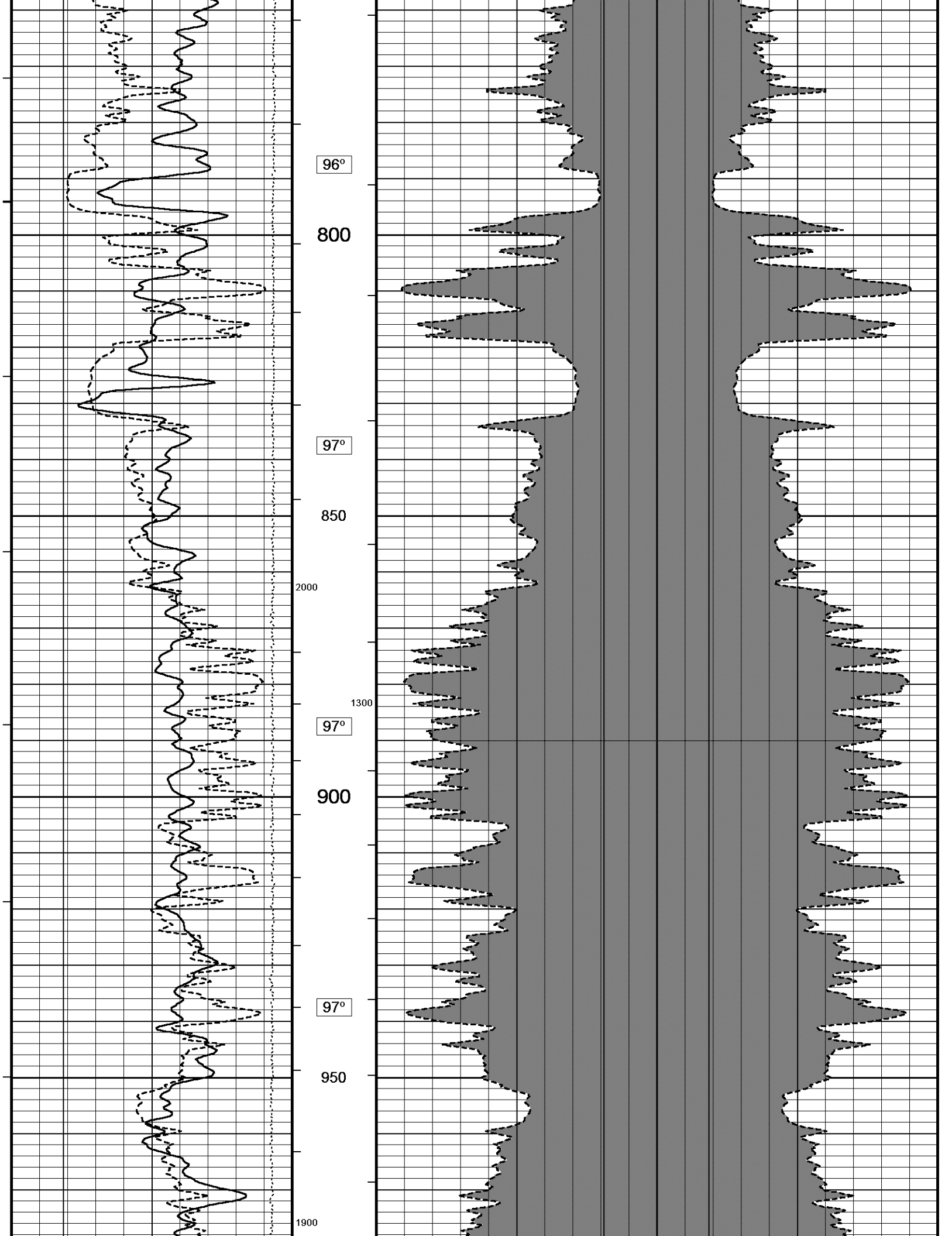
95°
Bit Size
600
Density Caliper
Gamma Ray
DST Uphole Tension
95°
650
2100
96°
700
96°
750
Bit Size
Bit Size
Density Caliper
Density Caliper
1400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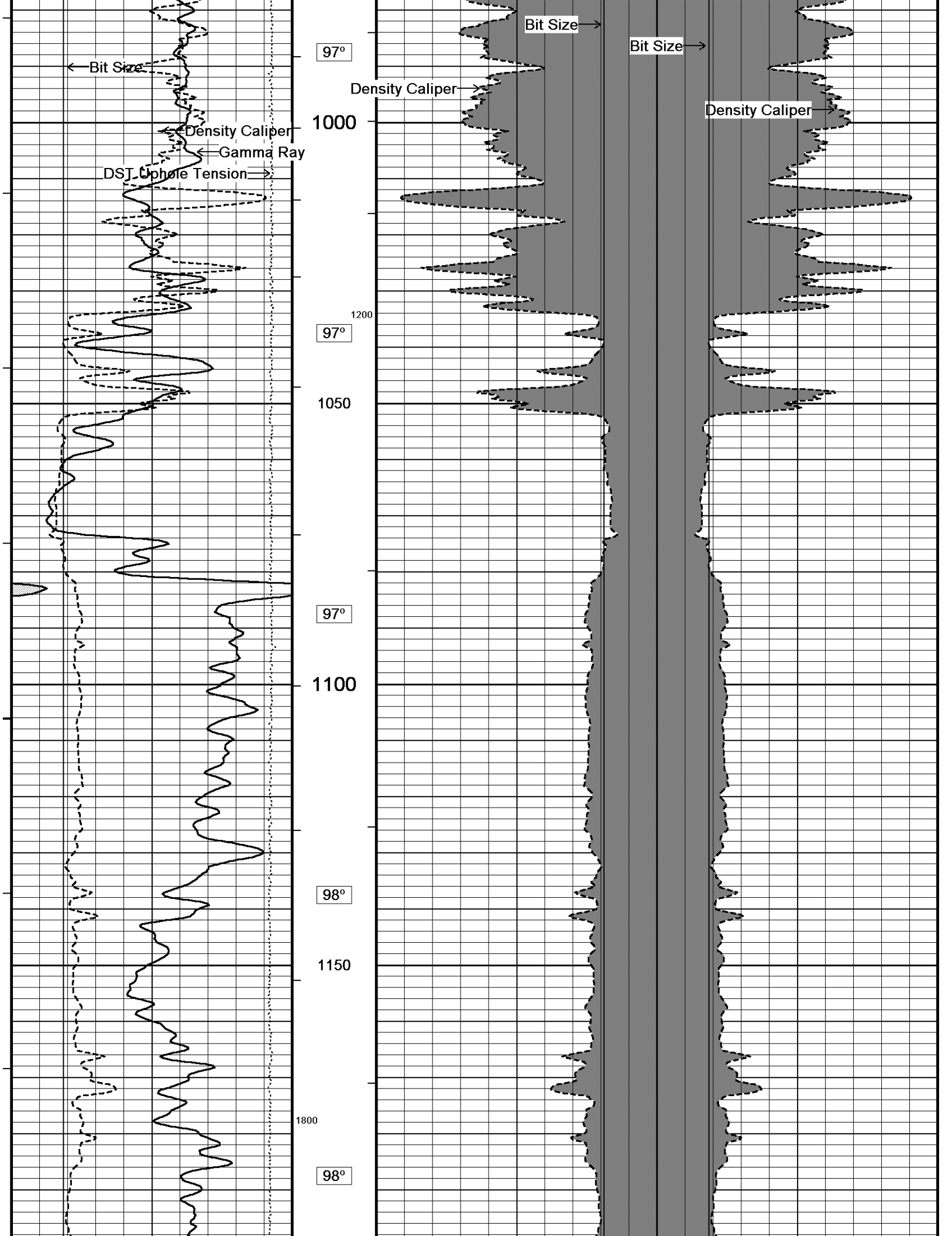
97°
850
2000
1300
97°
900
97°
950
1900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Density Caliper
Gamma Ray
DSJ Uphole Tension
Bit Size
Density Caliper
Bit Size
Density Caliper
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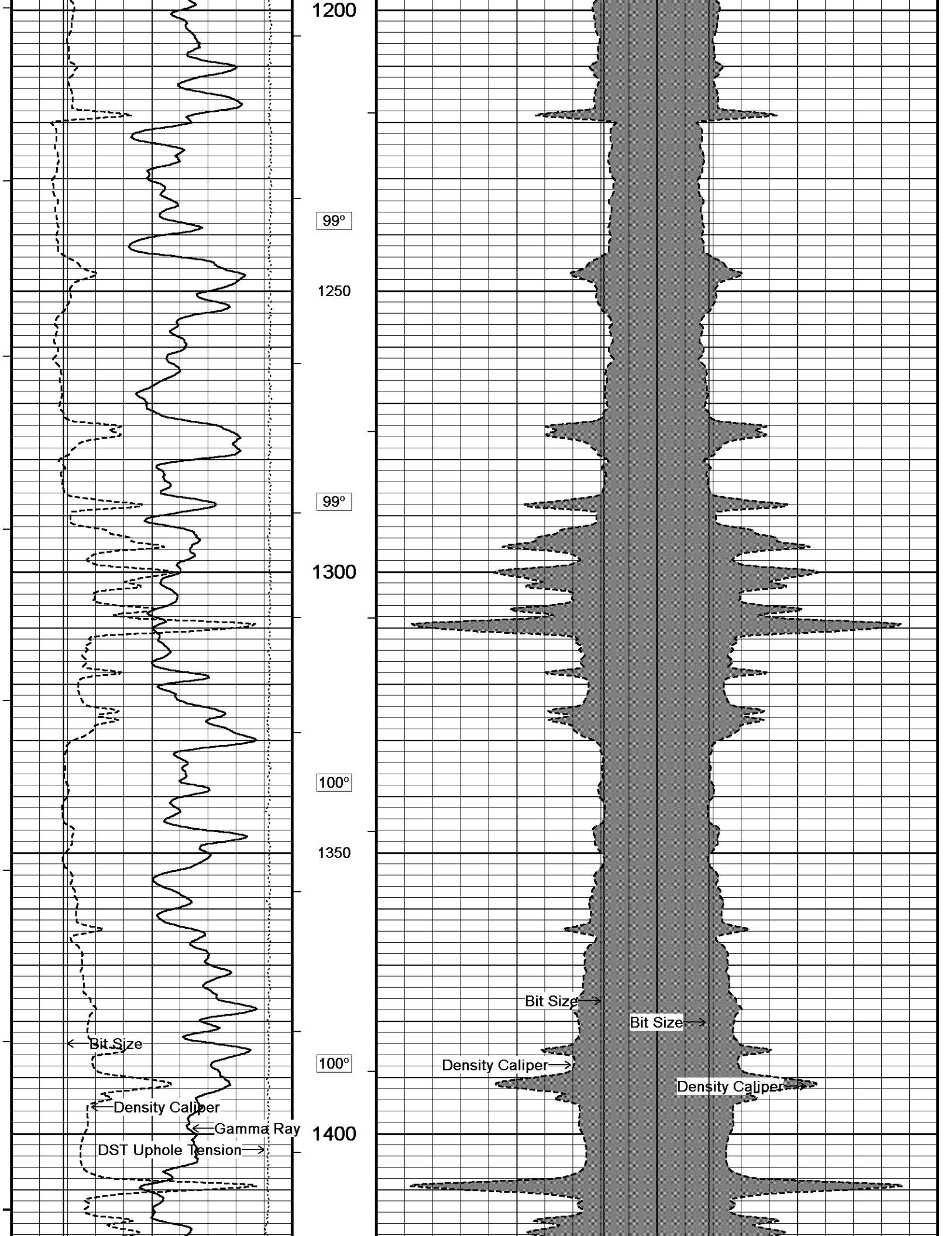
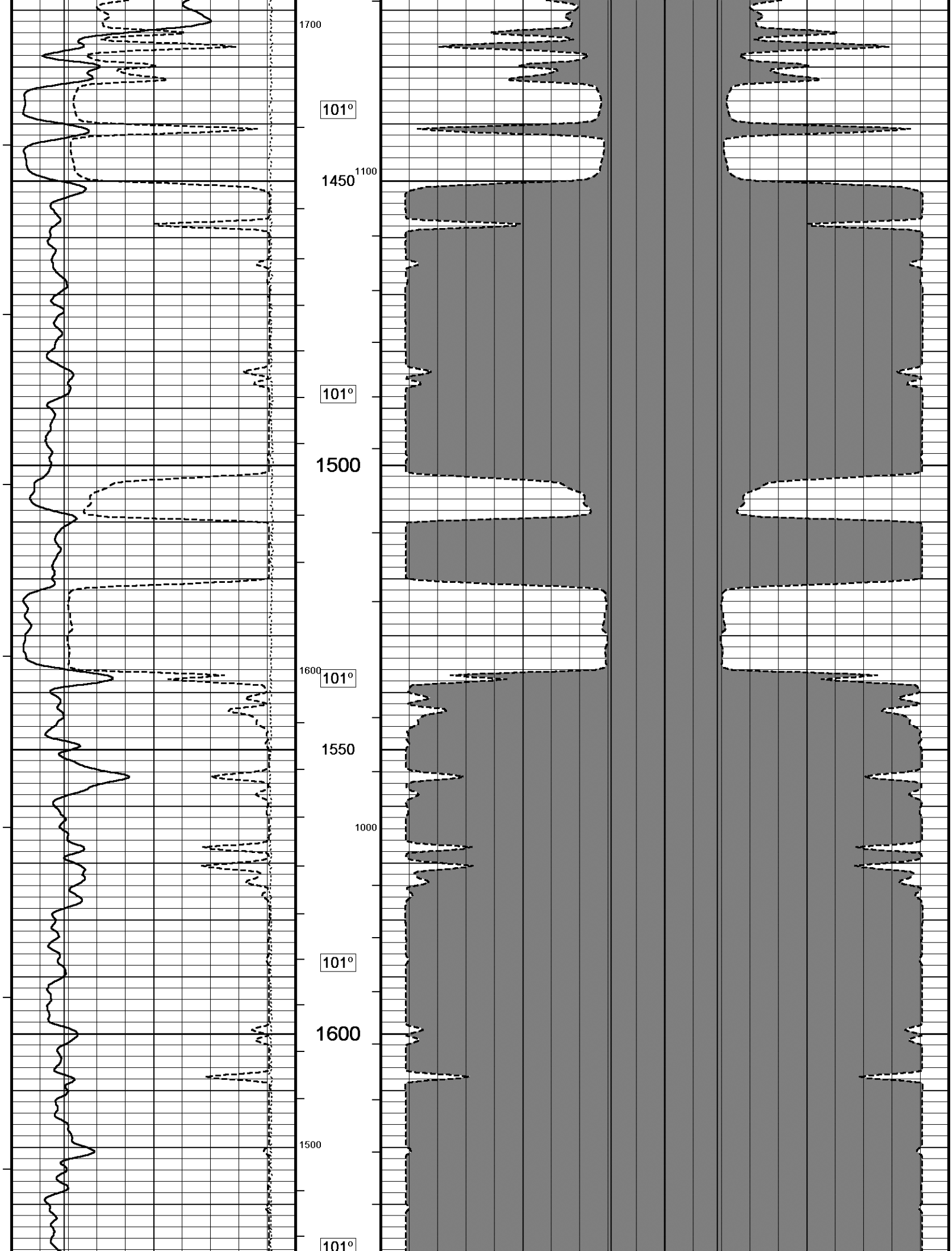
1000
97°
1200
1050
97°
1100
98°
1150
1800
98°


1200
99°
1250
99°
1300
100°
1350
100°
1400
Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
Bit Size
Bit Size
Density Caliper
Density Caliper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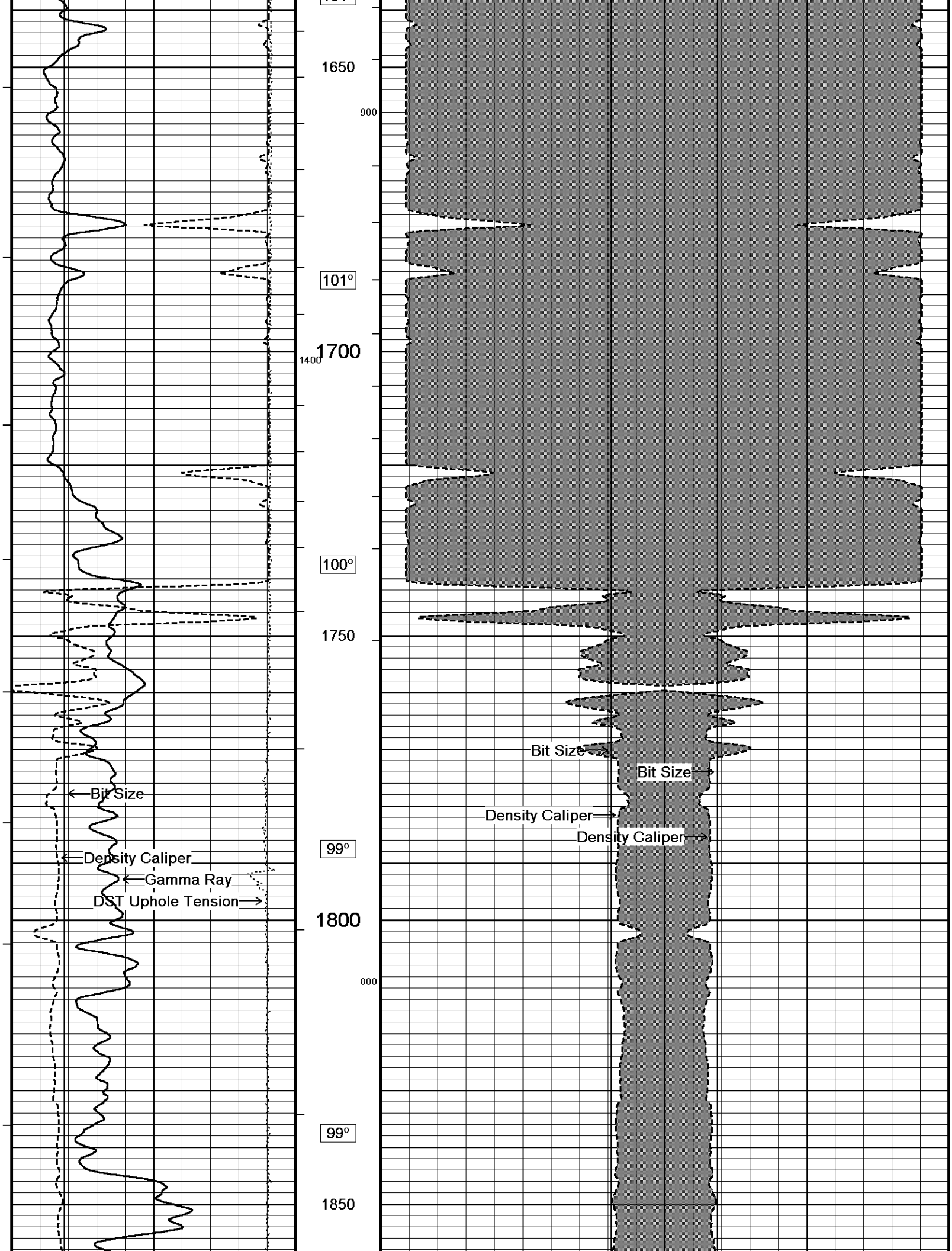
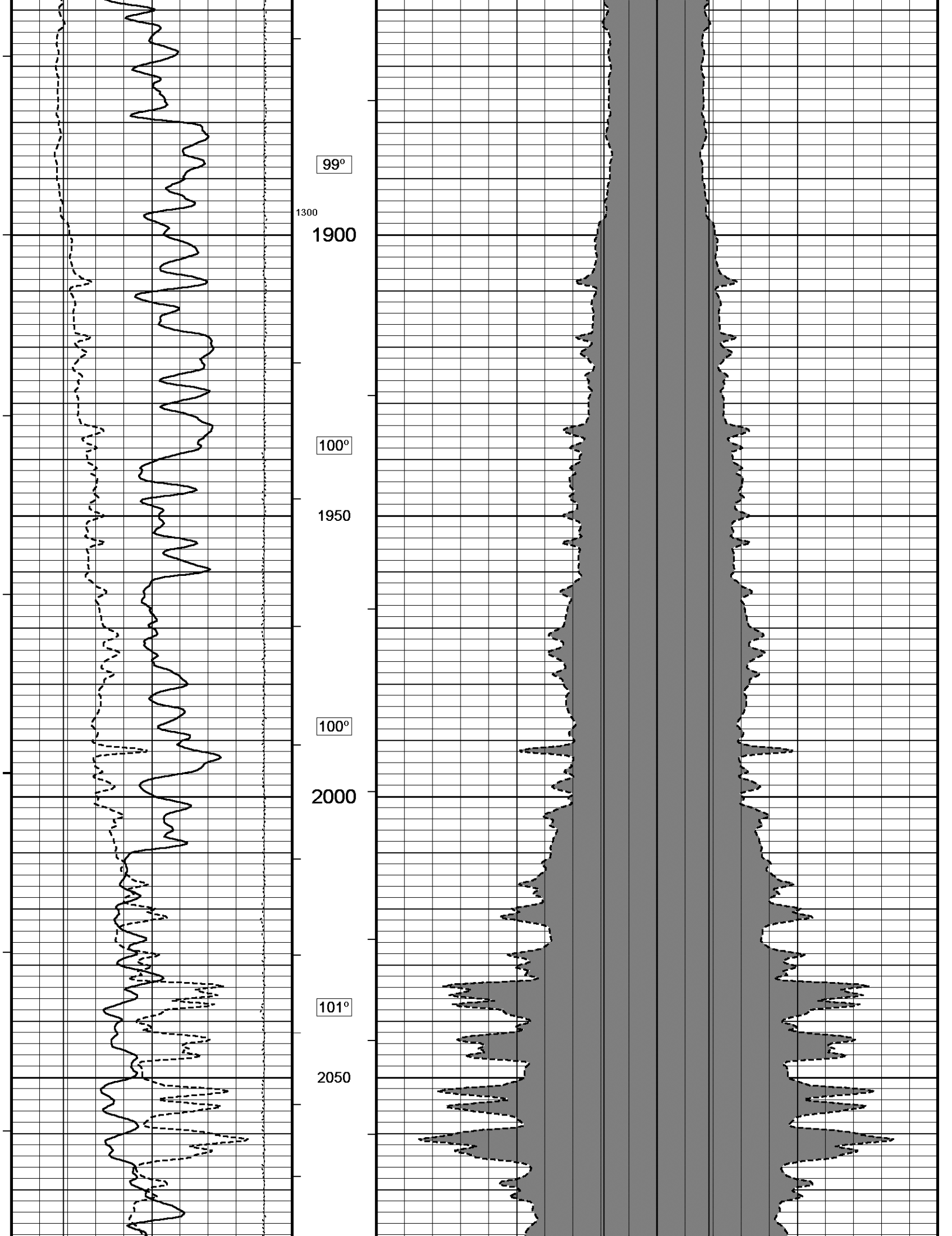
101°
1450
1100
101°
1500
1600
101°
1550
1000
101°
1600
1500
101°


1650
900
101°
1700
1400
100°
1750
99°
1800
800
99°
1850
Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
Bit Size
Bit Size
Density Caliper
Density Caliper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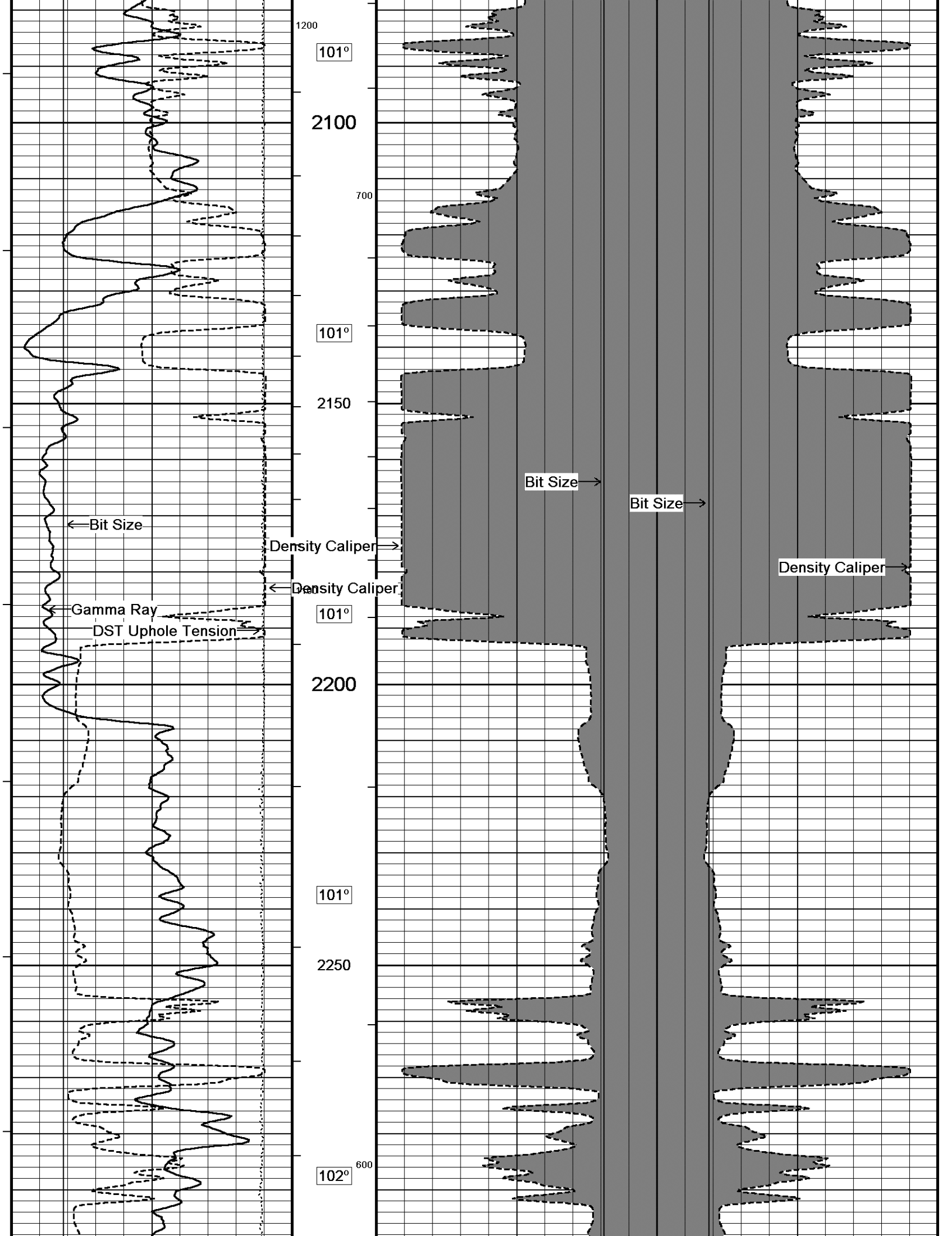
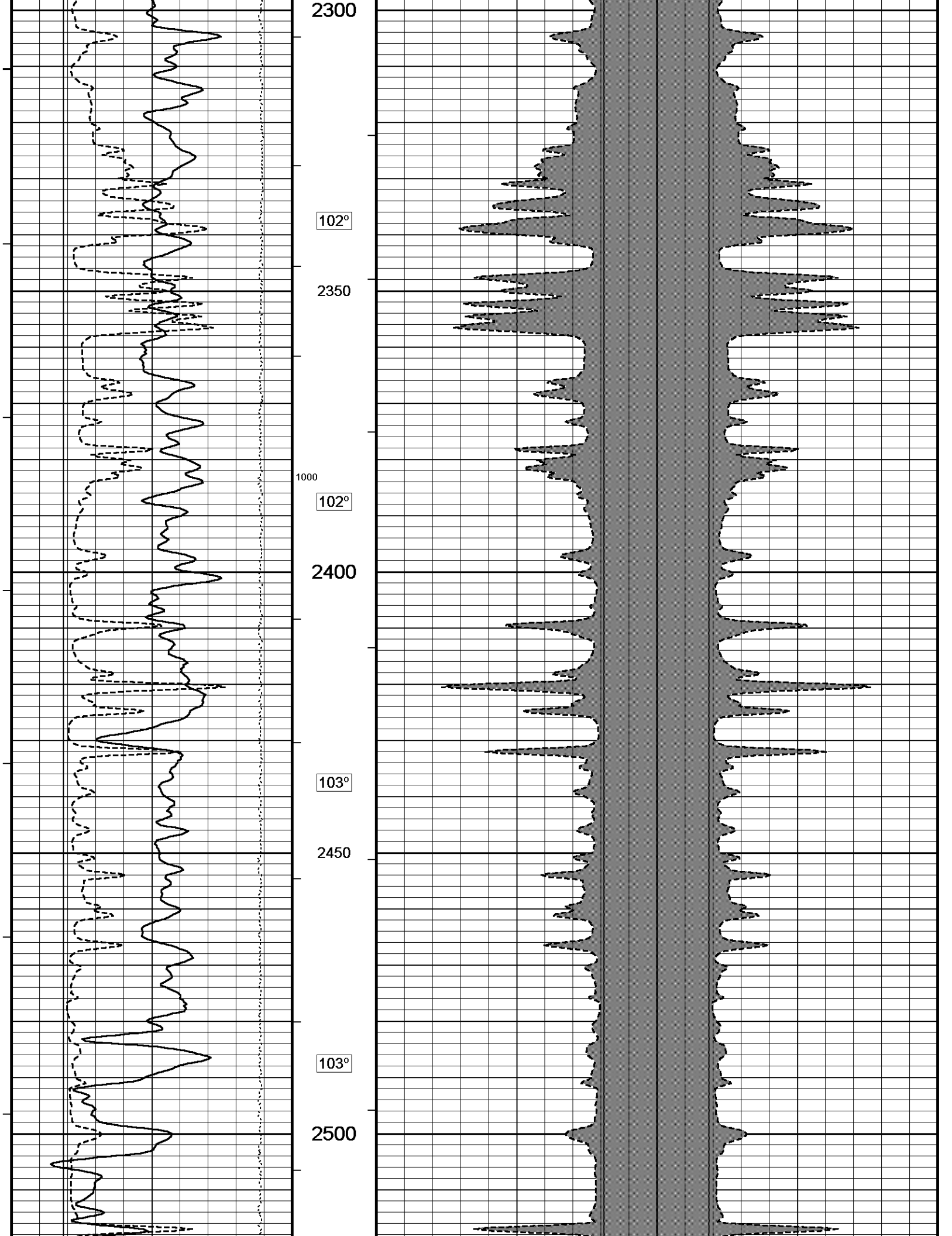
1900
100°
1950
100°
2000
101°
2050


1200
101°
2100
700
101°
2150
Bit Size
Bit Size
Bit Size
Density Caliper
Density Caliper
Density Caliper
Gamma Ray
DST Uphole Tension
101°
2200
101°
2250
600
102°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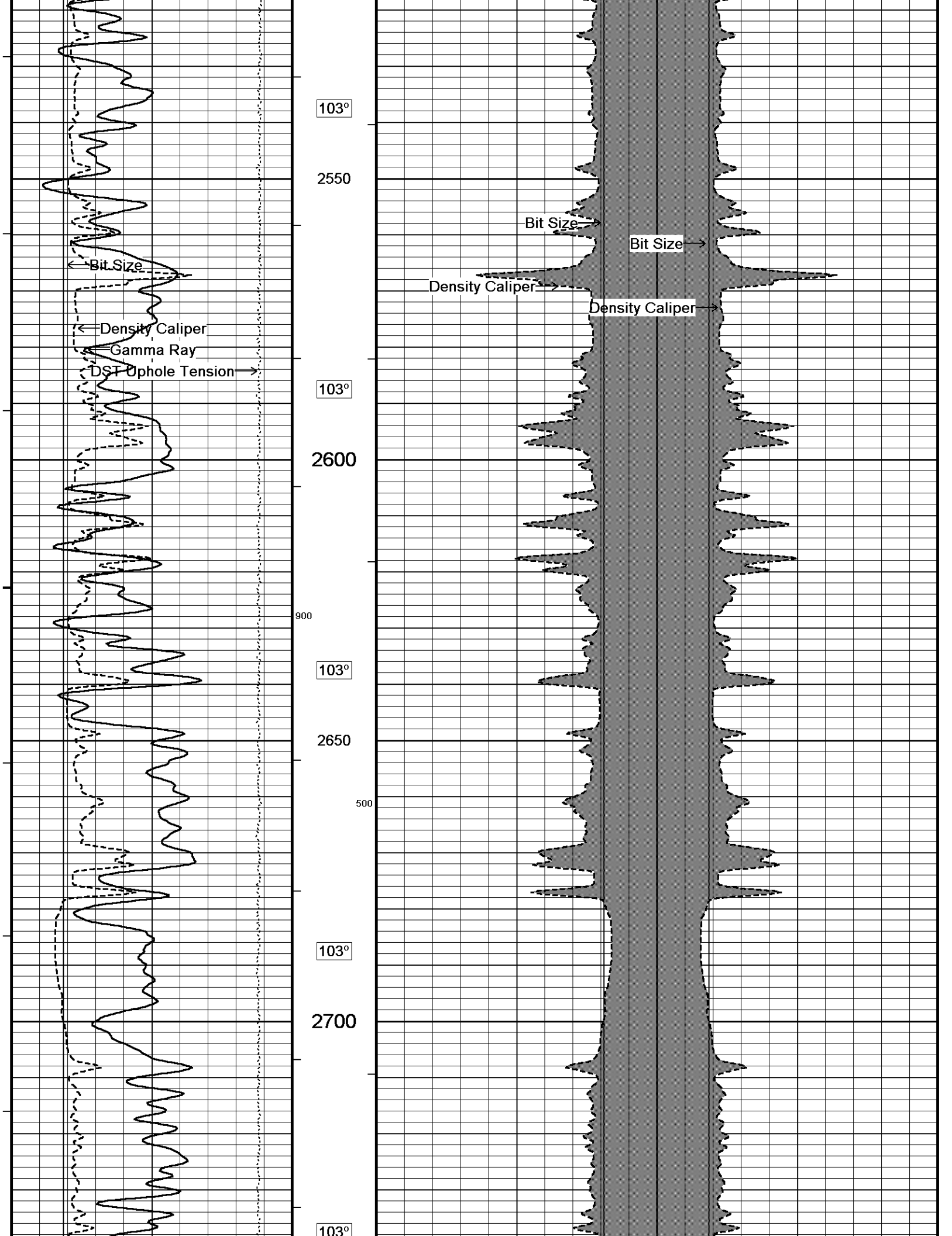
102°
2350
1000
102°
2400
103°
2450
103°
2500


103°
2550
Bit Size
Bit Size
Density Caliper
Density Caliper
Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
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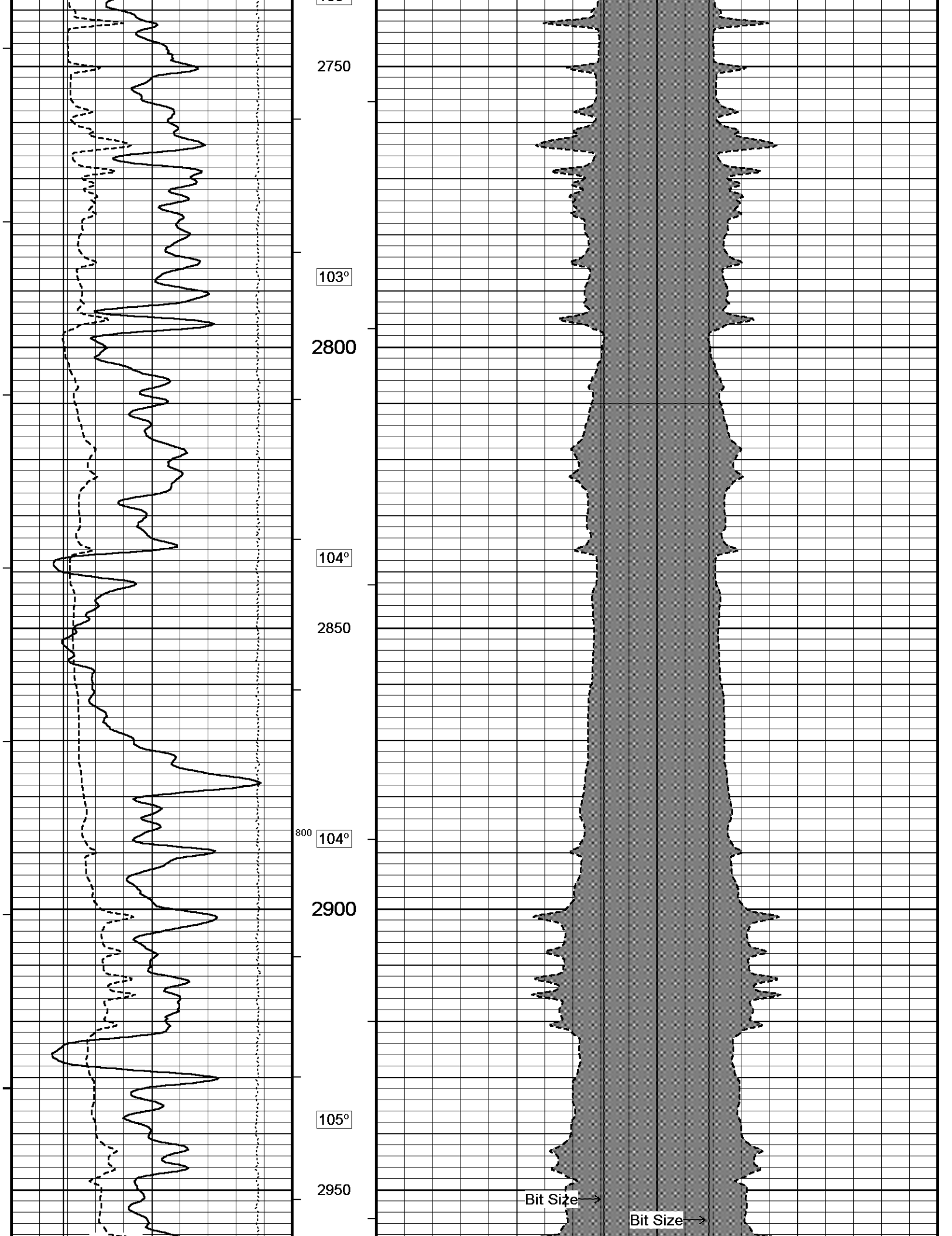
2600
900
103°
2650
500
103°
2700
103°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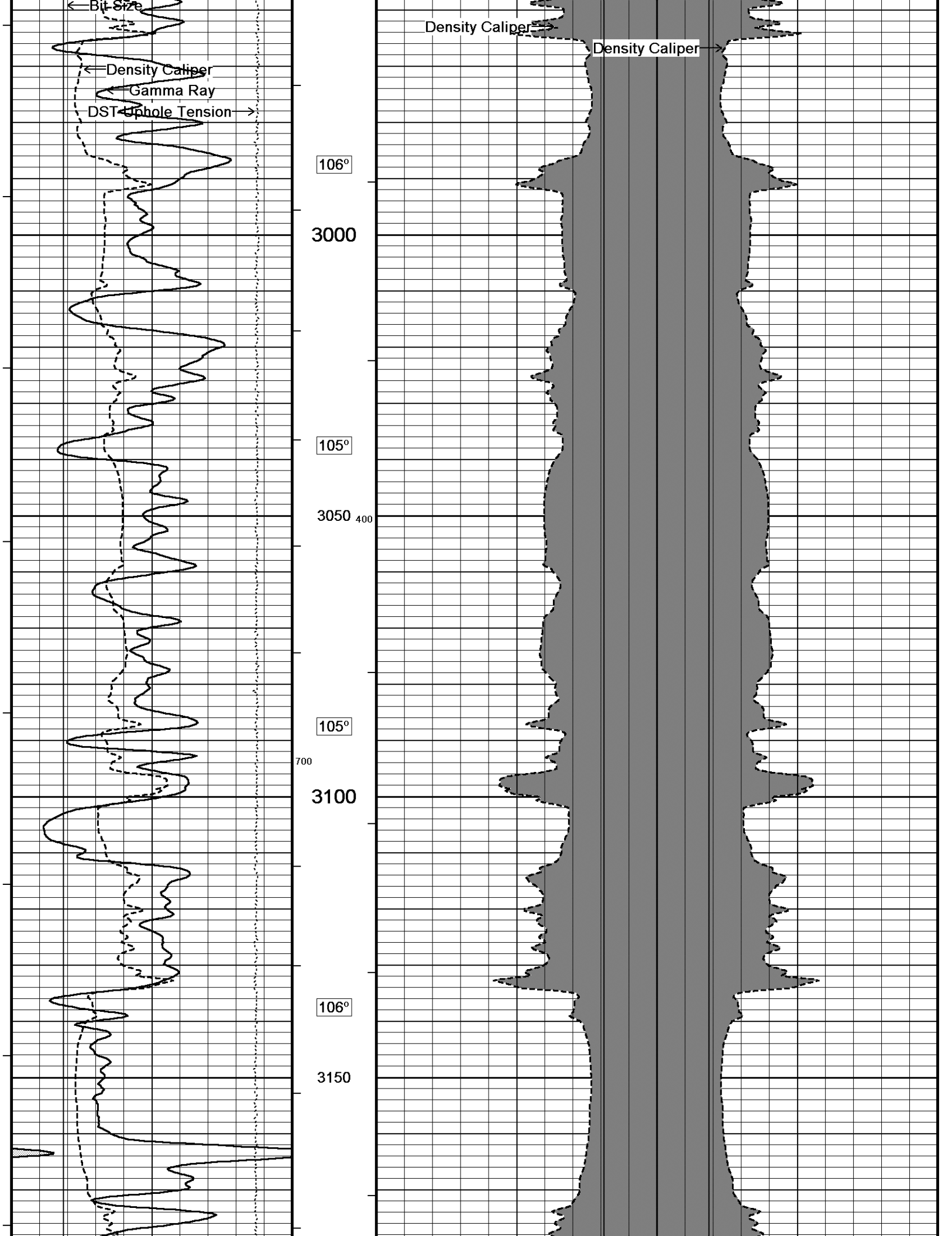
2800
104°
2850
800
104°
2900
105°
2950
Bit Size
Bit Size


Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
Density Caliper
Density Caliper
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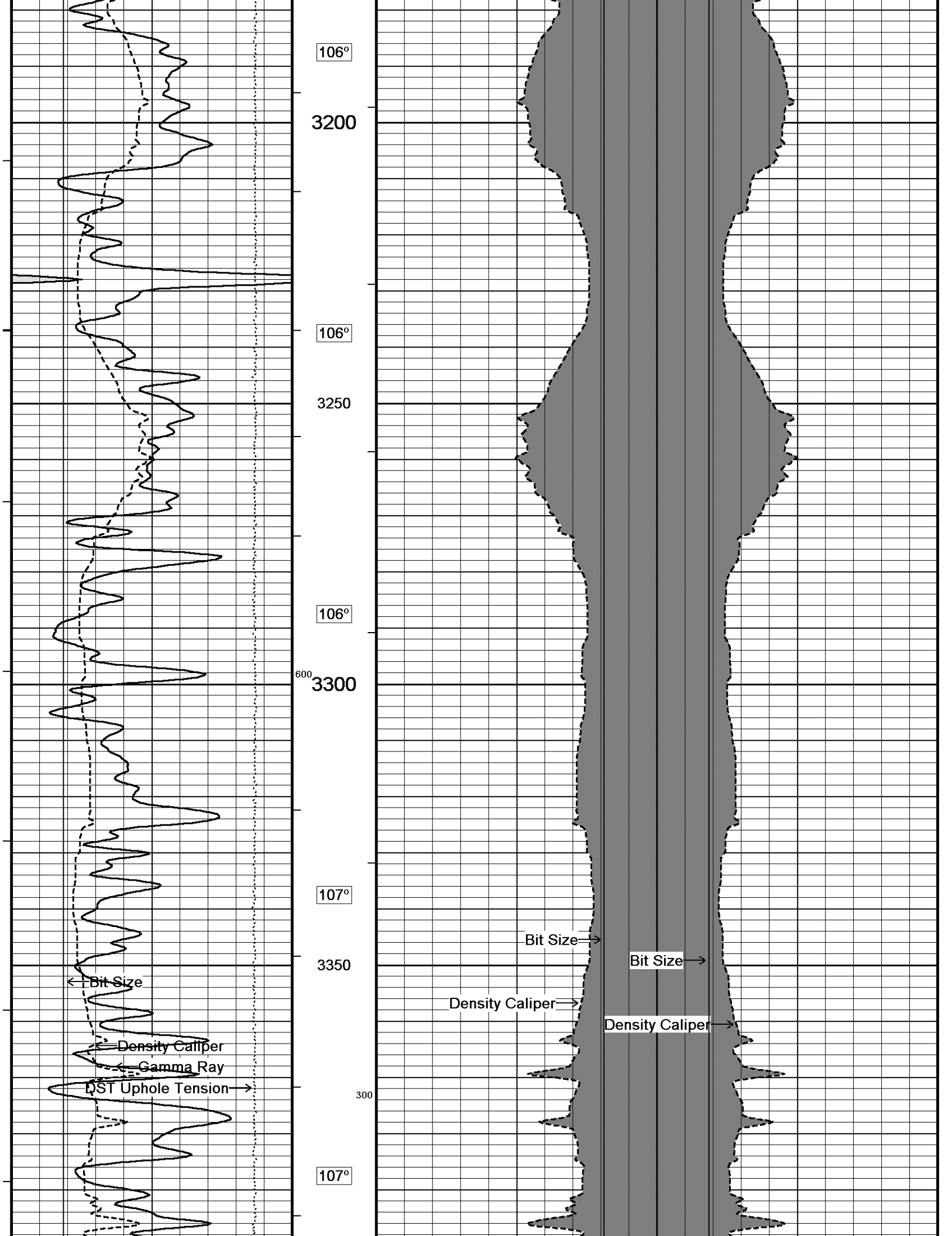
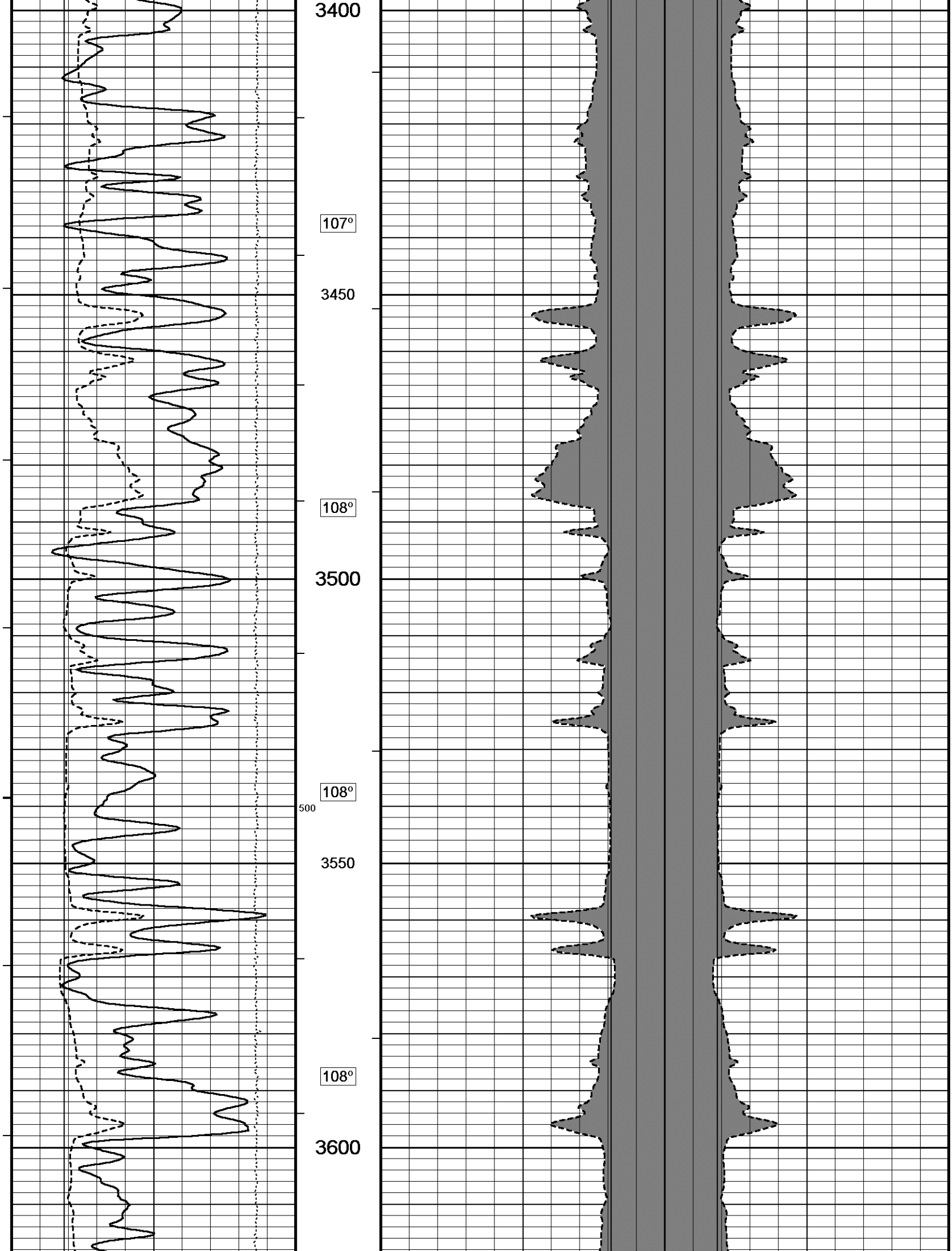
3000
105°
3050
400
105°
700
3100
106°
3150


106°
3200
106°
3250
106°
600
3300
107°
3350
Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
300
107°
Bit Size
Bit Size
Density Caliper
Density Caliper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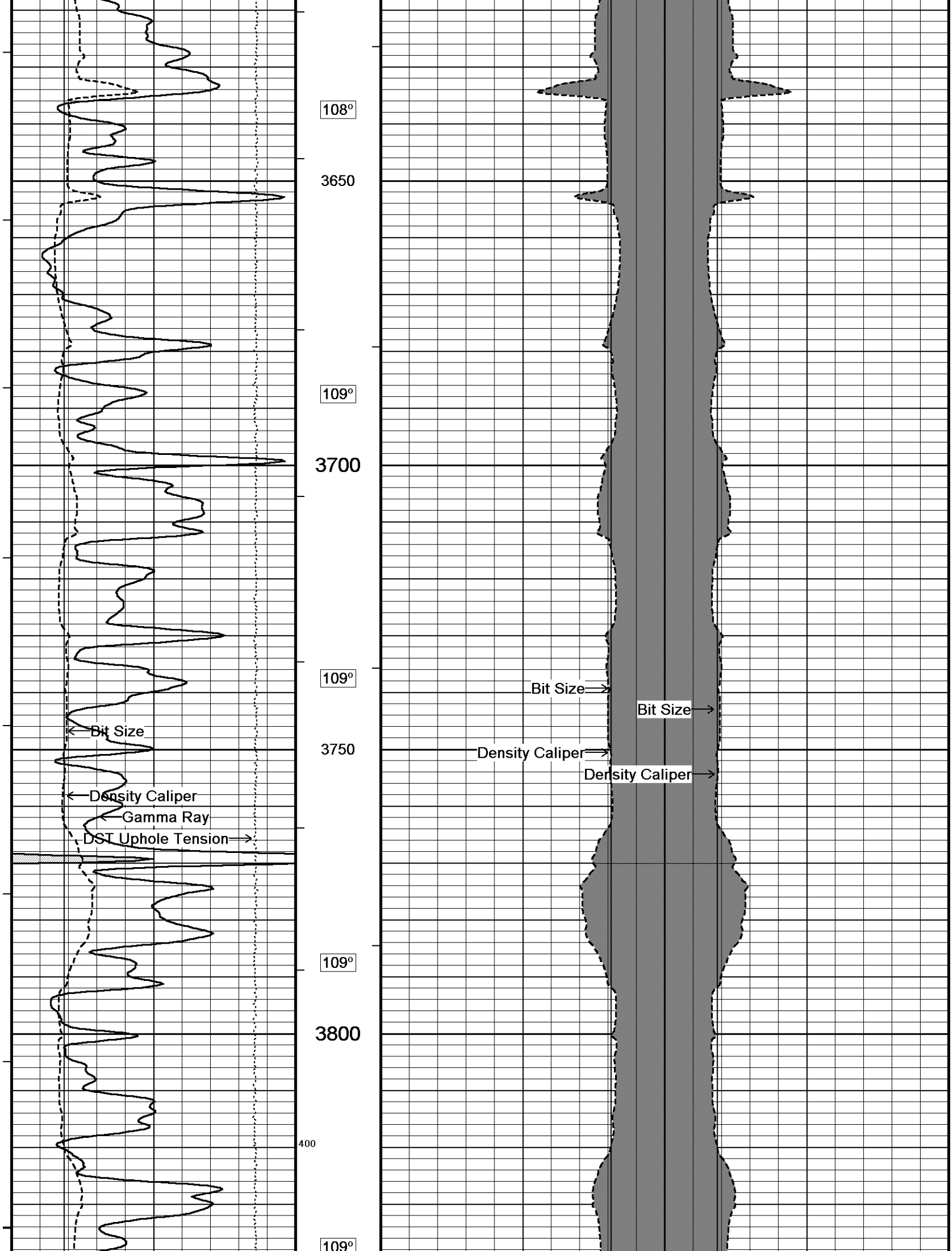
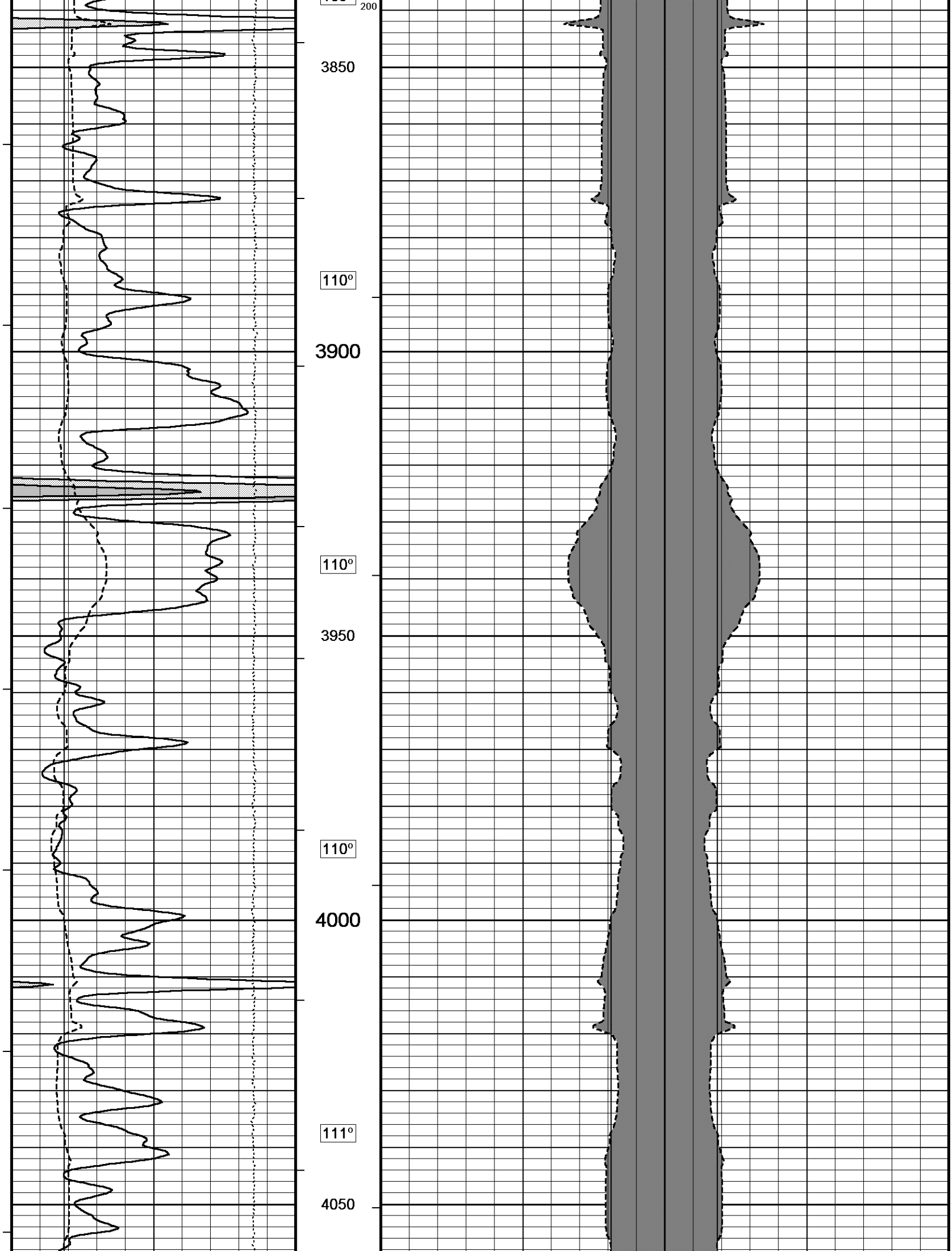
107°
3450
108°
3500
108°
500
3550
108°
3600


108°
3650
109°
3700
109°
Bit Size
Bit Size
Bit Size
3750
Density Caliper
Density Caliper
Density Caliper
Gamma Ray
DST Uphole Tension
109°
3800
400
109°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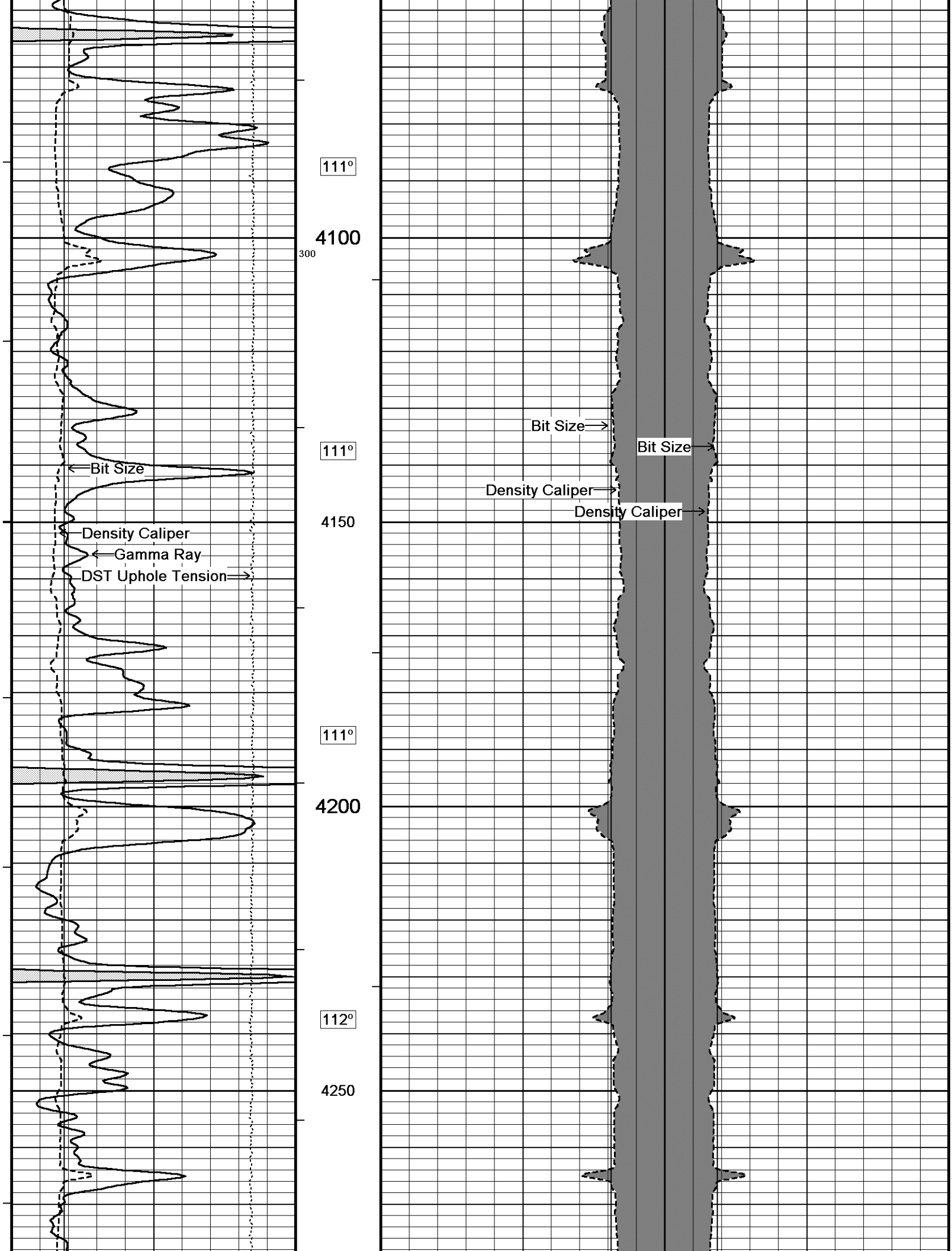
3900
110°
3950
110°
4000
111°
4050


111°
4100
300
111°
Bit Size
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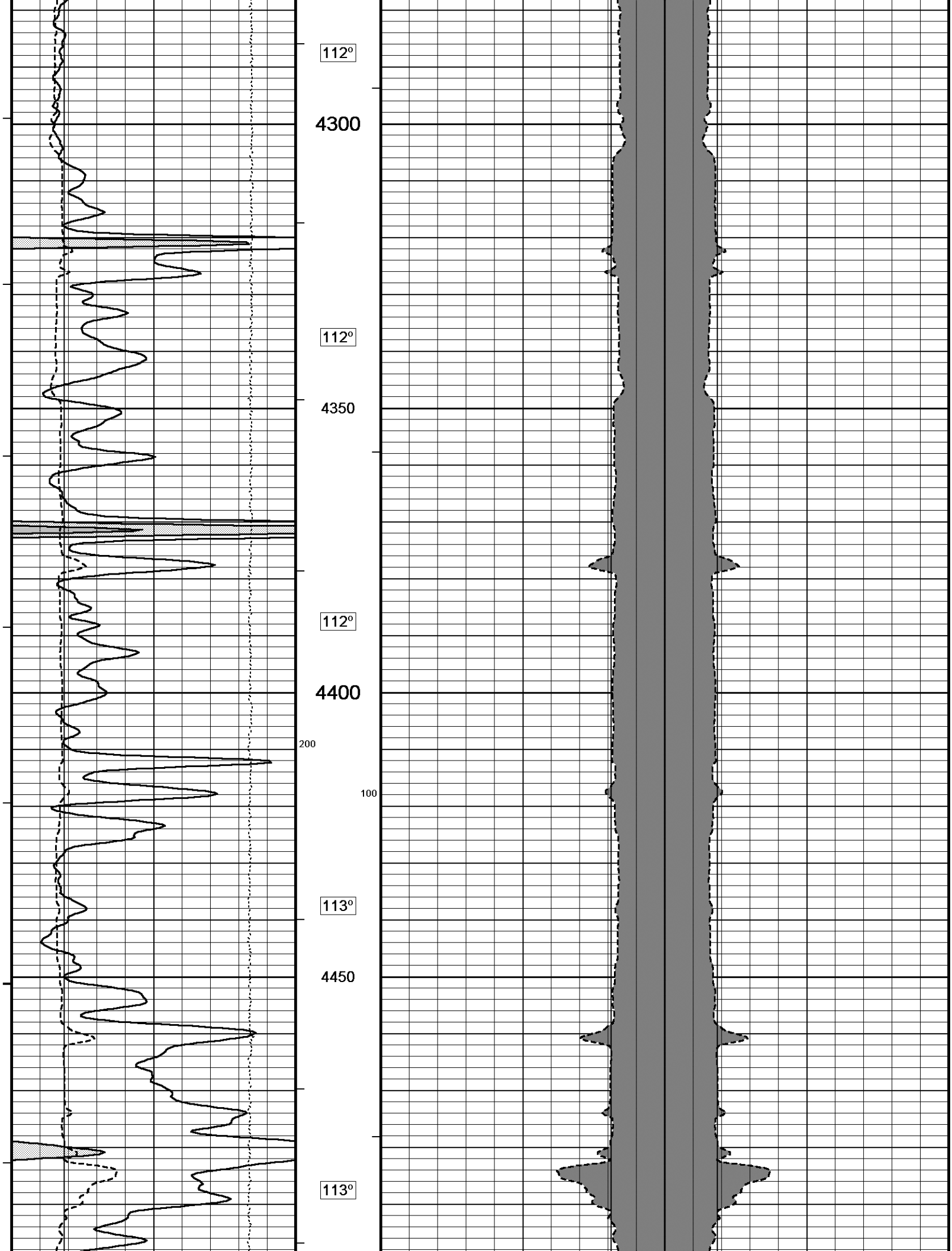
Density Caliper
Gamma Ray
DST Uphole Tension
111°
4200
112°
4250
Bit Size
Bit Size
Density Caliper
Density Caliper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4300
112°
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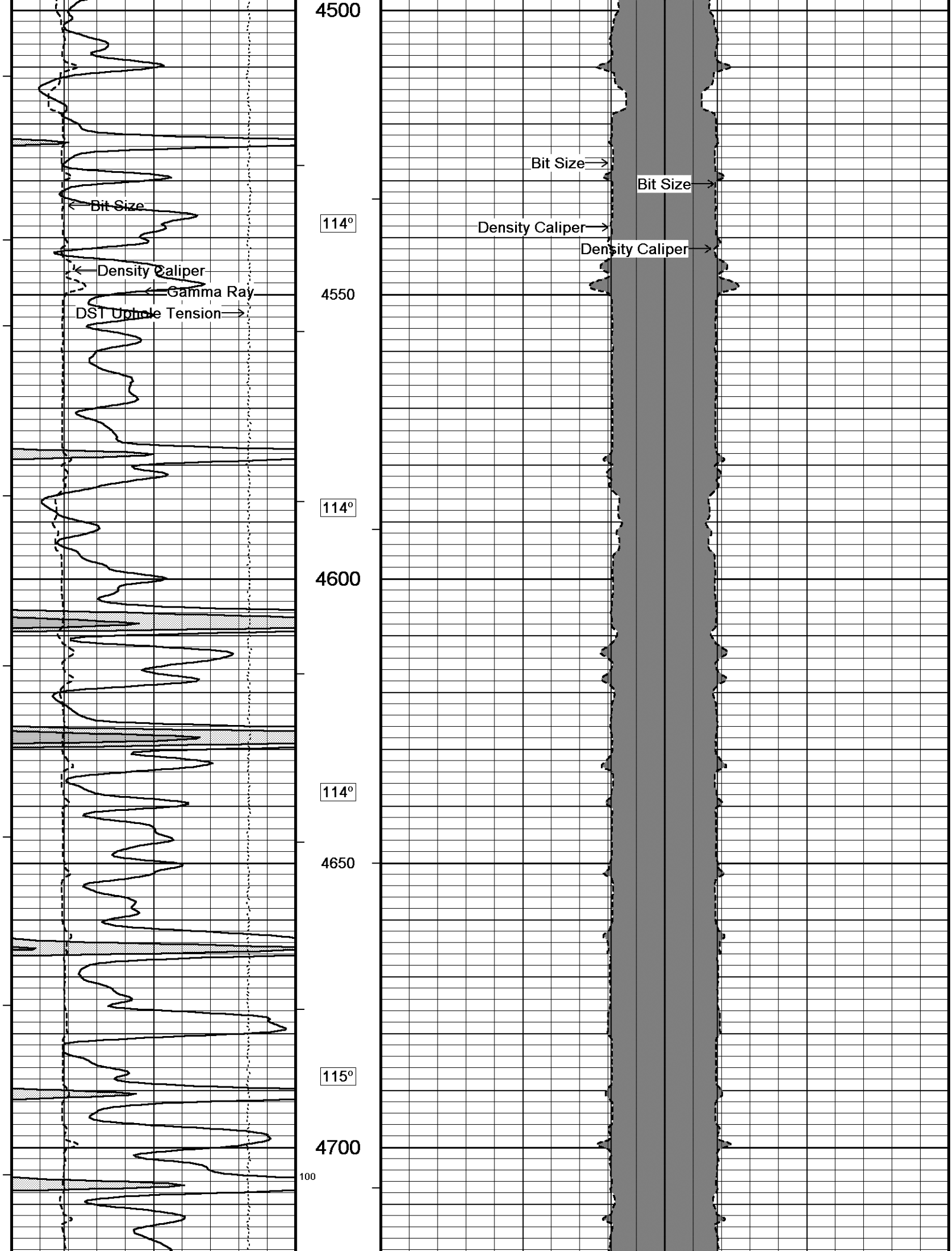
112°
4400
200
100
113°
4450
113°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Bit Size
114°
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Gamma Ray
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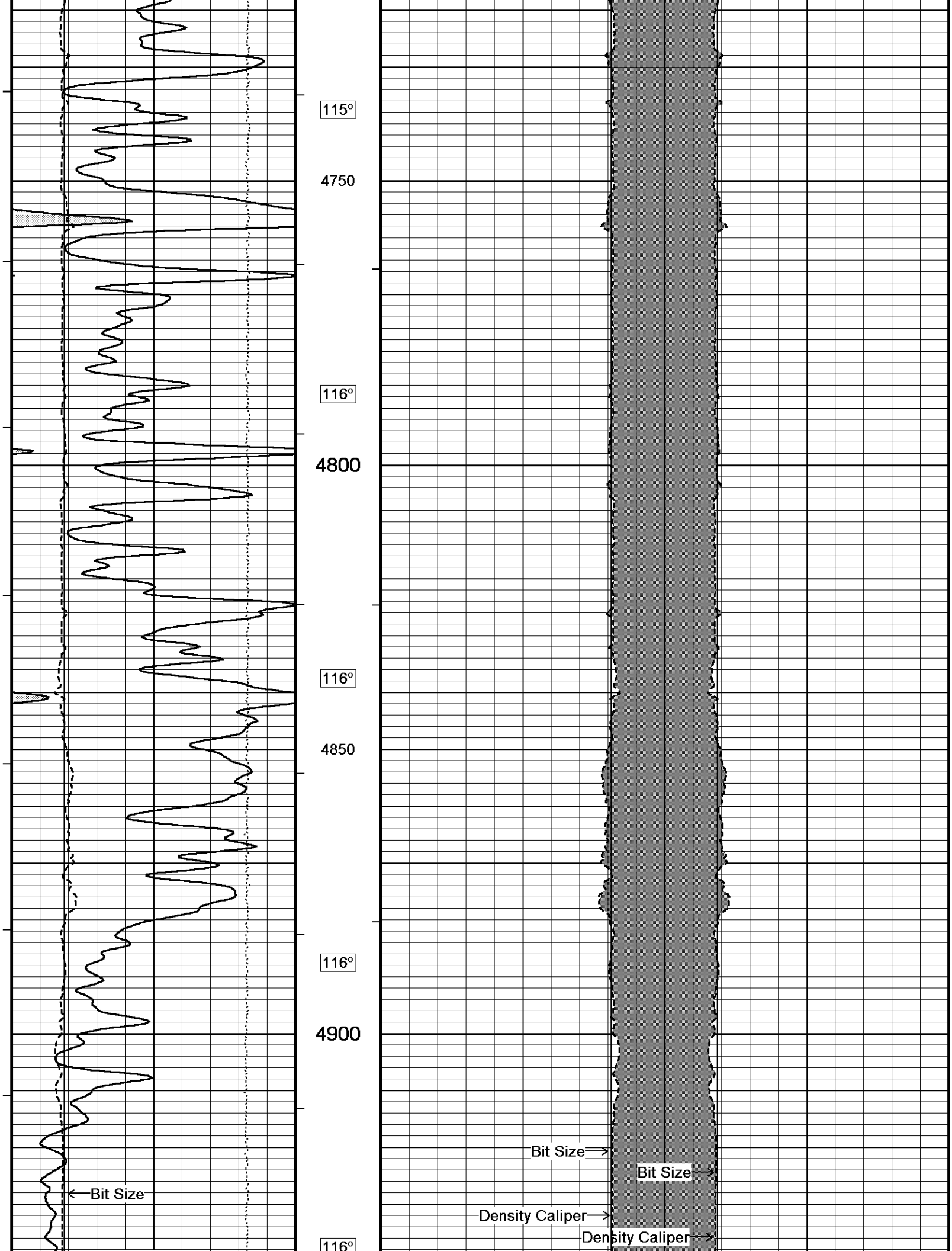
4700
100
Bit Size
Bit Size
Density Caliper
Density Caliper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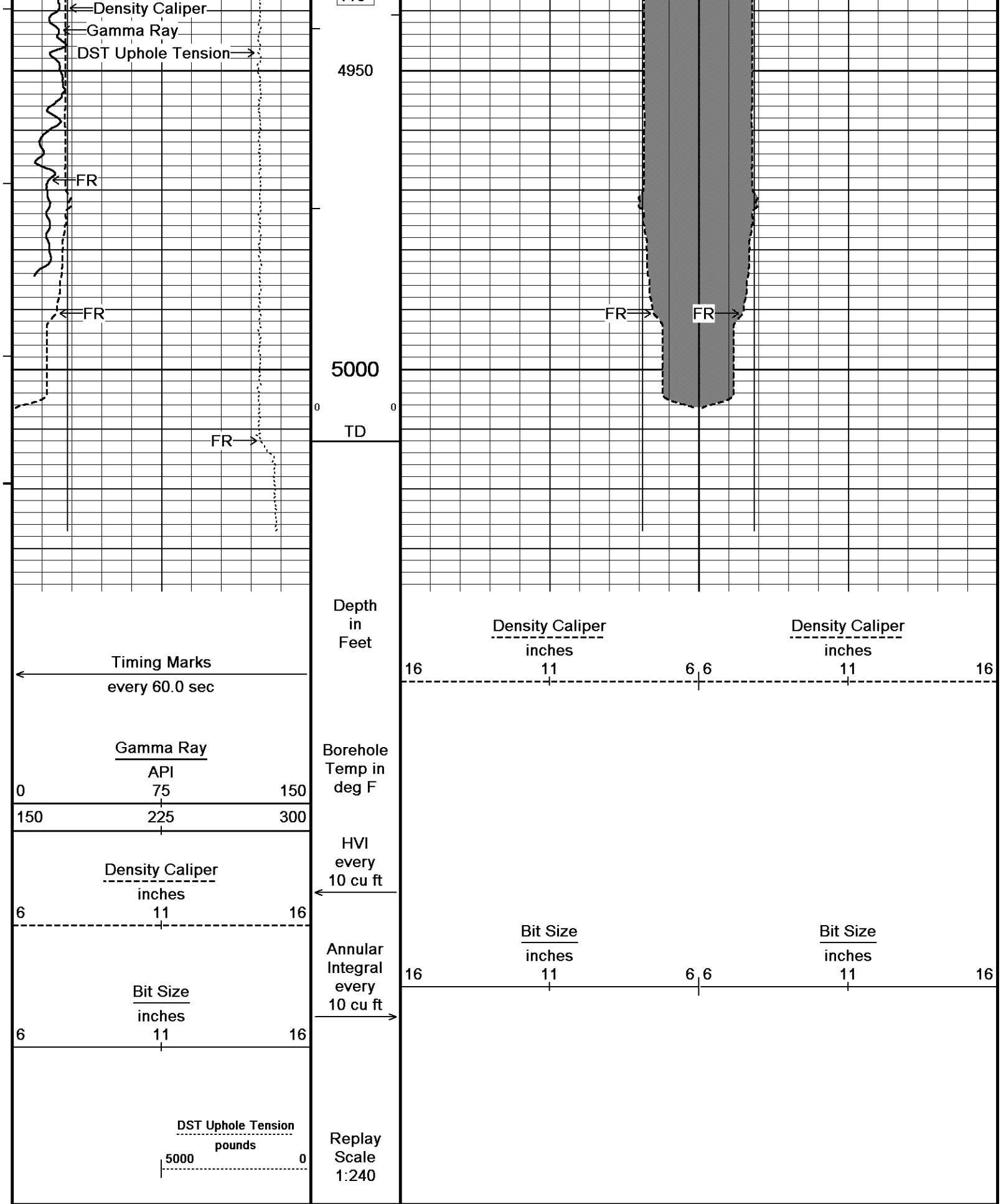
Bit Size
Bit Size
Bit Size
Density Caliper
Density Caliper



Timing Marks
every 60.0 sec

Depth
in
Feet

Density Caliper
inches
16 11 6

Density Caliper
inches
6 11 16

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

Bit Size
inches
6 11 16

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 13-AUG-2014 09:00
Filename: C:\Minimus 13.08\Data\PetroSantander Scott #6-13\PetroSantander Scott #6-13 Main.dta
Recorded on 13-AUG-2014 05:16
System Versions: Logged with 13.08.2113 Plotted with 13.08.2113

5 INCH MAIN

DOWNHOLE EQUIPMENT

C:\Minimus 13.08\Data\PetroSantander Scott #6-13\PetroSantander Scott #6-13 Main.dta

3/8" Triple Cone Cable Head (MCB C A)
MCB-C.A 5 LG: 1.58 ft WT: 15.4 lb OD: 2.244 in

Compact Comms Gamma
MCG-D.K 443 LG: 8.70 ft WT: 63.9 lb OD: 2.240 in

Compact Micro-Resistivity
MMR-A 11 LG: 8.59 ft WT: 81.6 lb OD: 4.882 in

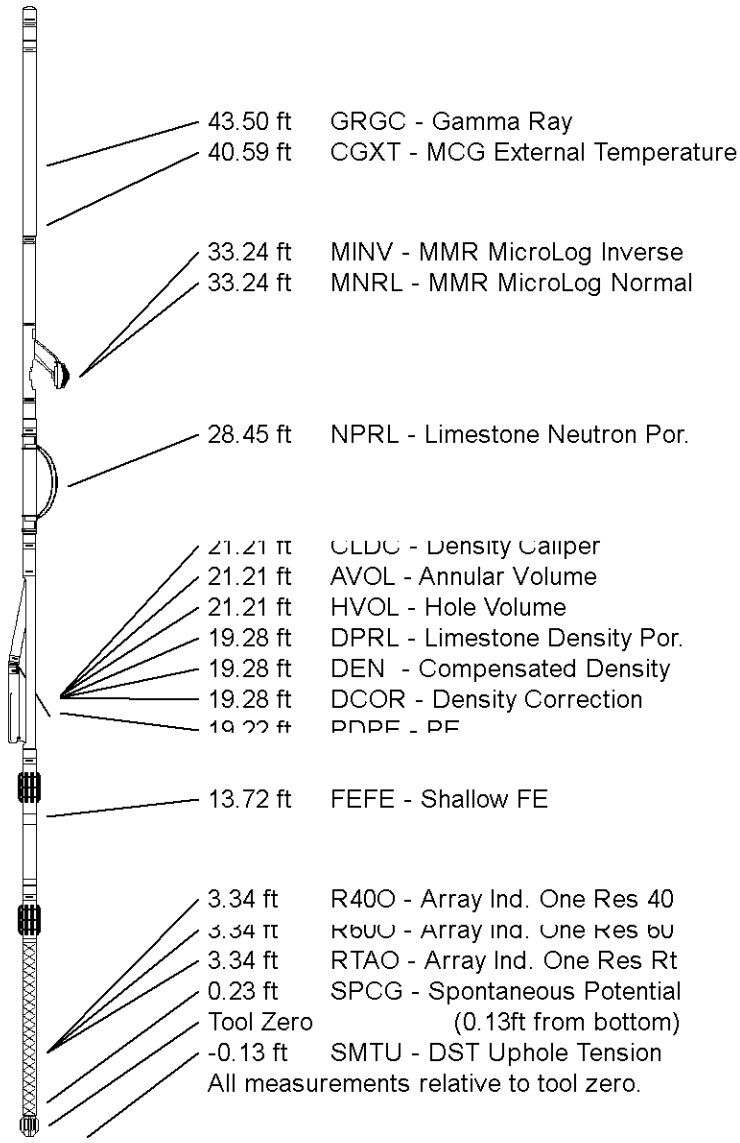
Compact Neutron
MDN-A.B 65 LG: 5.04 ft WT: 50.7 lb OD: 2.240 in

Compact Density/Caliper
MPD-B 104 LG: 9.59 ft WT: 90.4 lb OD: 2.449 in

Compact Focussed Electric
MFE-B.J 352 LG: 6.05 ft WT: 48.5 lb OD: 2.240 in

Compact Induction
MAI-A.A 158 LG: 10.81 ft WT: 48.5 lb OD: 2.240 in

Total Length: 50.36 ft Weight: 399.0 lb



COMPANY	PETROSANTANDER (USA), INC.
WELL	SCOTT #6-13
FIELD	CHRISTABELLE
PROVINCE/COUNTY	KEARNY
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	3106.00	feet	First Reading		feet
Elevation Drill Floor	3104.00	feet	Depth Driller	5010.00	feet
Elevation Ground Level	3094.00	feet	Depth Logger	5012.00	feet

Weatherford®

CALIPER LOG