



Weatherford

CALIPER LOG

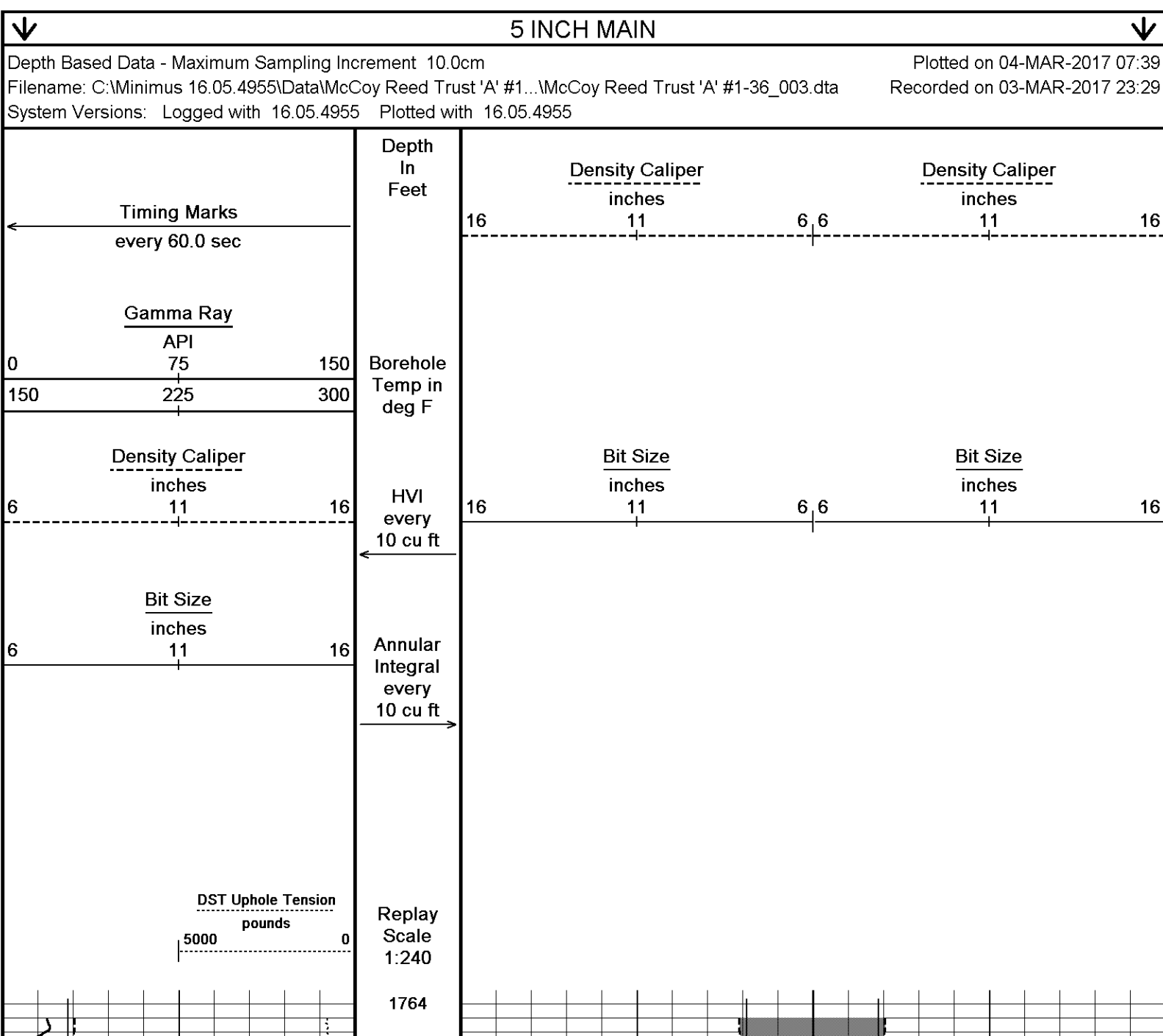
COMPANY		McCOY PETROLEUM CORPORATION			
WELL		REED TRUST "A" #1-36			
FIELD		WILDCAT			
PROVINCE/COUNTY		GRAY			
COUNTRY/STATE		U.S.A. / KANSAS			
LOCATION		660' FNL & 660' FEL			
SEC 36	TWP 28S	RGE 29W	Other Services		
Latitude		37.574874		Elevations: KB 2780.00 DF 2778.00 GL 2769.00	
Longitude		-100.436004			
API Number		15-069-20498			
Permanent Datum GL, Elevation 2769 feet					
Log Measured From KB, 11.00 feet above Permanent Datum					
Drilling Measured From KB					
Date	03-MAR-2017				
Run Number	ONE				
Service Order	4558-175770542				
Depth Driller	5500.00				feet
Depth Logger	5501.00				feet
First Reading	5469.00				feet
Last Reading	1776.00				feet
Casing Driller	1781.00				feet
Casing Logger	1776.00				feet
Bit Size	7.875				inches
Hole Fluid Type	CHEMICAL				
Density / Viscosity	9.05	lb/USg	54.00	CP	
PH / Fluid Loss	10.00		8.00	ml/30Min	
Sample Source	FLOWLINE				
Rm @ Measured Temp	0.99 @ 75.0				ohm-m
Rmf @ Measured Temp	0.79 @ 75.0				ohm-m
Rmc @ Measured Temp	1.19 @ 75.0				ohm-m
Source Rmf / Rmc	CALC		CALC		
Rm @ BHT	0.65 @115.0				ohm-m
Time Since Circulation	5 HOURS				
Max Recorded Temp	115.00				deg F
Equipment / Base	13096		LIB		
Recorded By	ADAM SILL				
Witnessed By	ZACH WIELE				

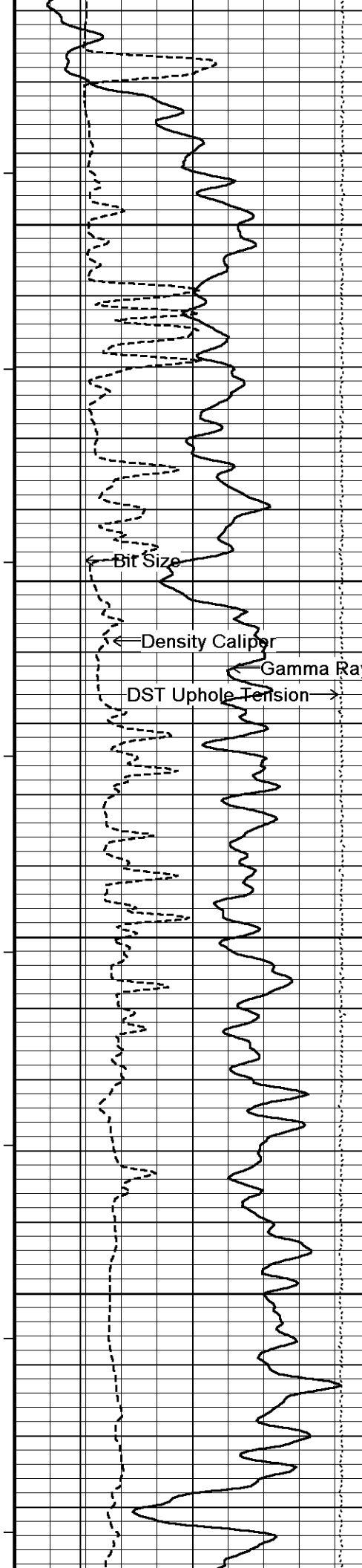
BOREHOLE RECORD					Last Edited: 03-MAR-2017 20:48
Bit Size inches		Depth From feet		Depth To feet	
7.875		1781.00		5500.00	
CASING RECORD					
Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft	
SURFACE	8.625	0.00	1781.00	24.00	

REMARKS
- SOFTWARE ISSUE: WLS 16.05.4955.
- RUN ONE: MCG, MML, MDN, MPD, MFE, MSS, MAI RUN IN COMBINATION. - HARDWARE: DUAL BOWSPRING 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.
- RUN TWO: SHA, MCG, MIM, MIE RUN IN COMBINATION.
- 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: 1385 CU.FT.

- OPERATOR: B. TOVAR.

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.





Casing Shoe

1800

92°

1850

92°

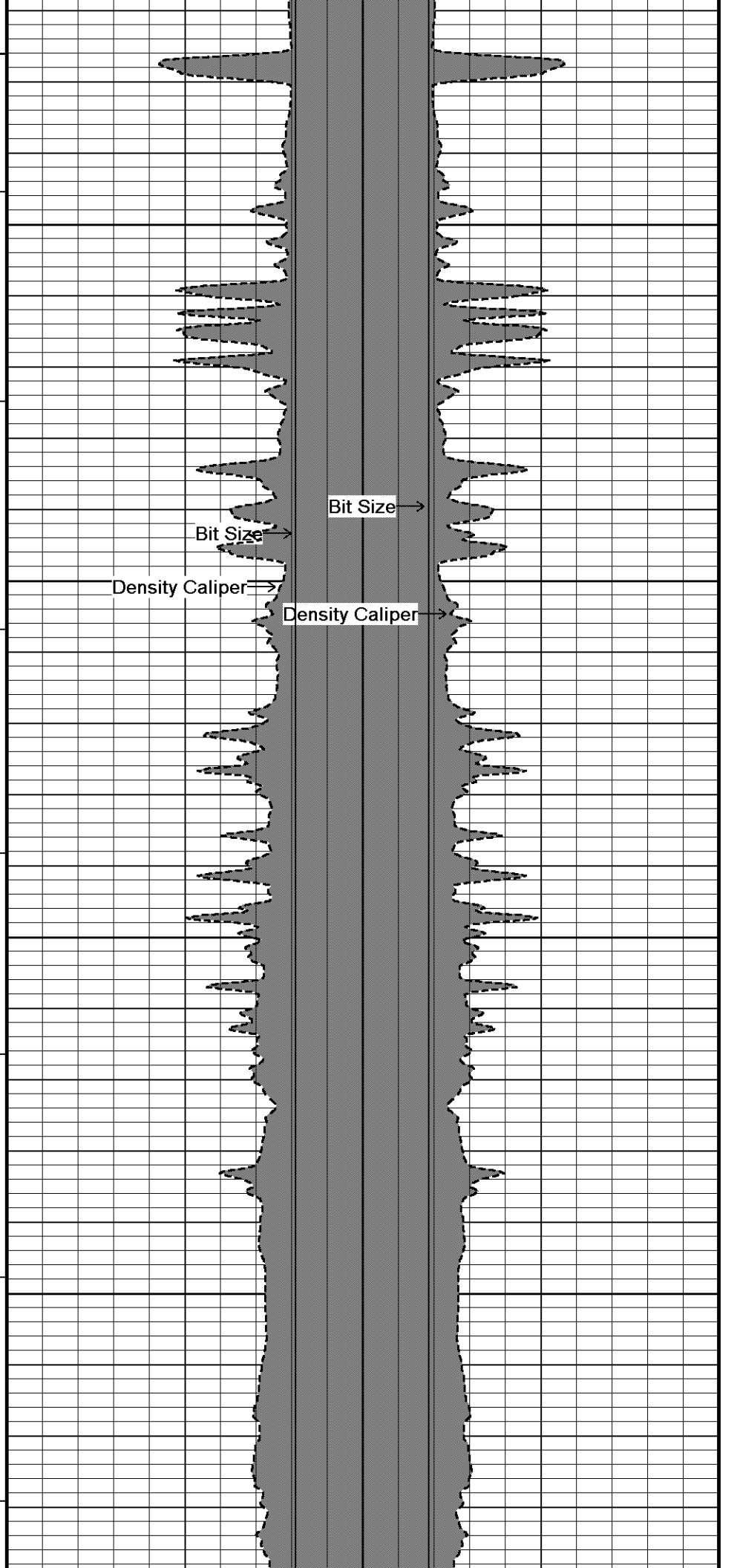
1900

92°

1950

1300

93°

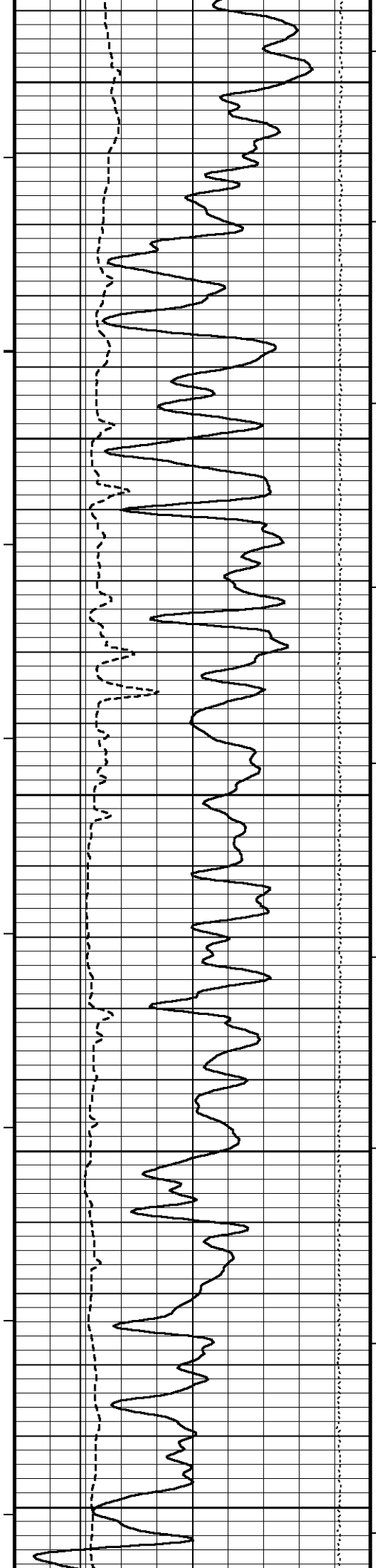


Bit Size

Bit Size

Density Caliper

Density Caliper



2000

900

93°

2050

93°

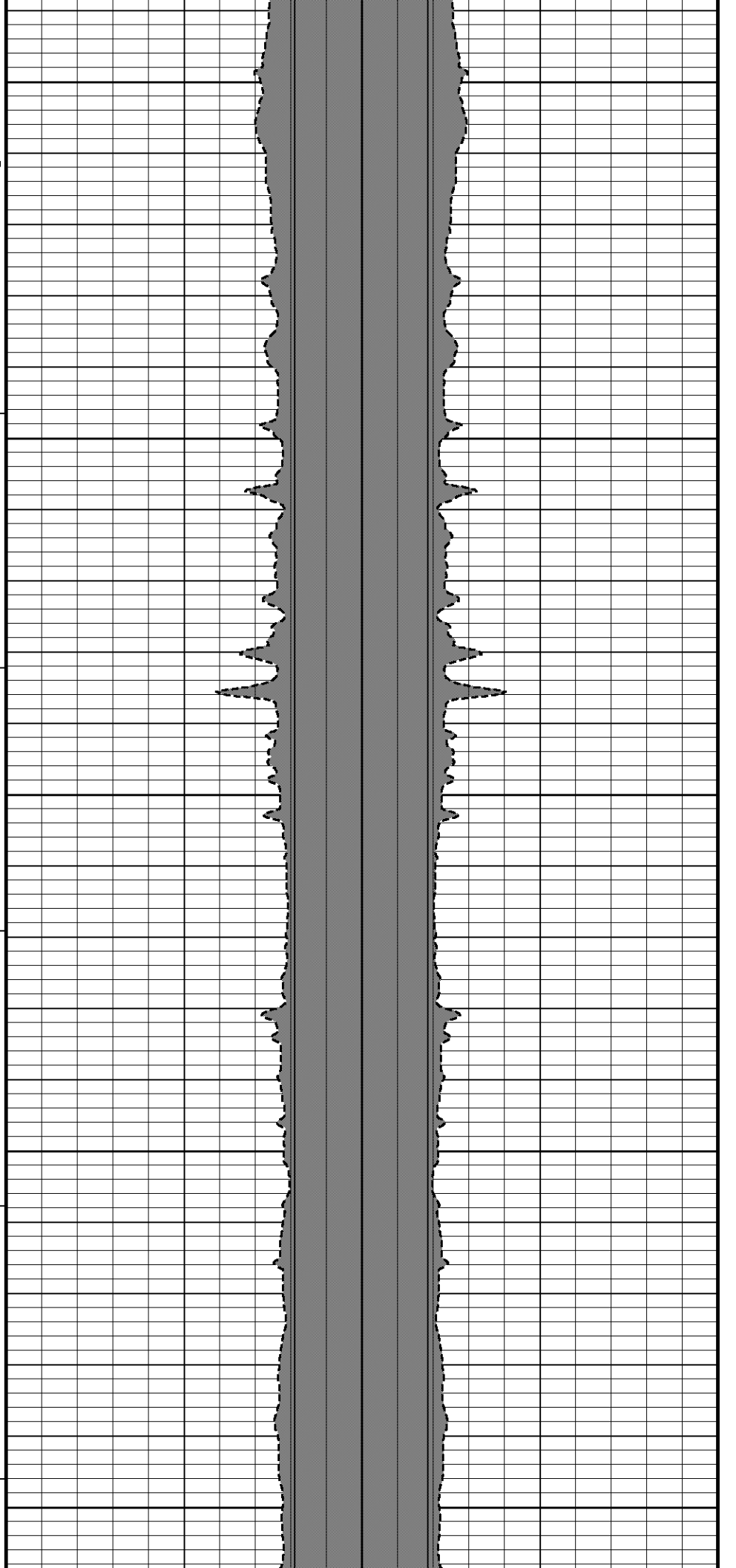
2100

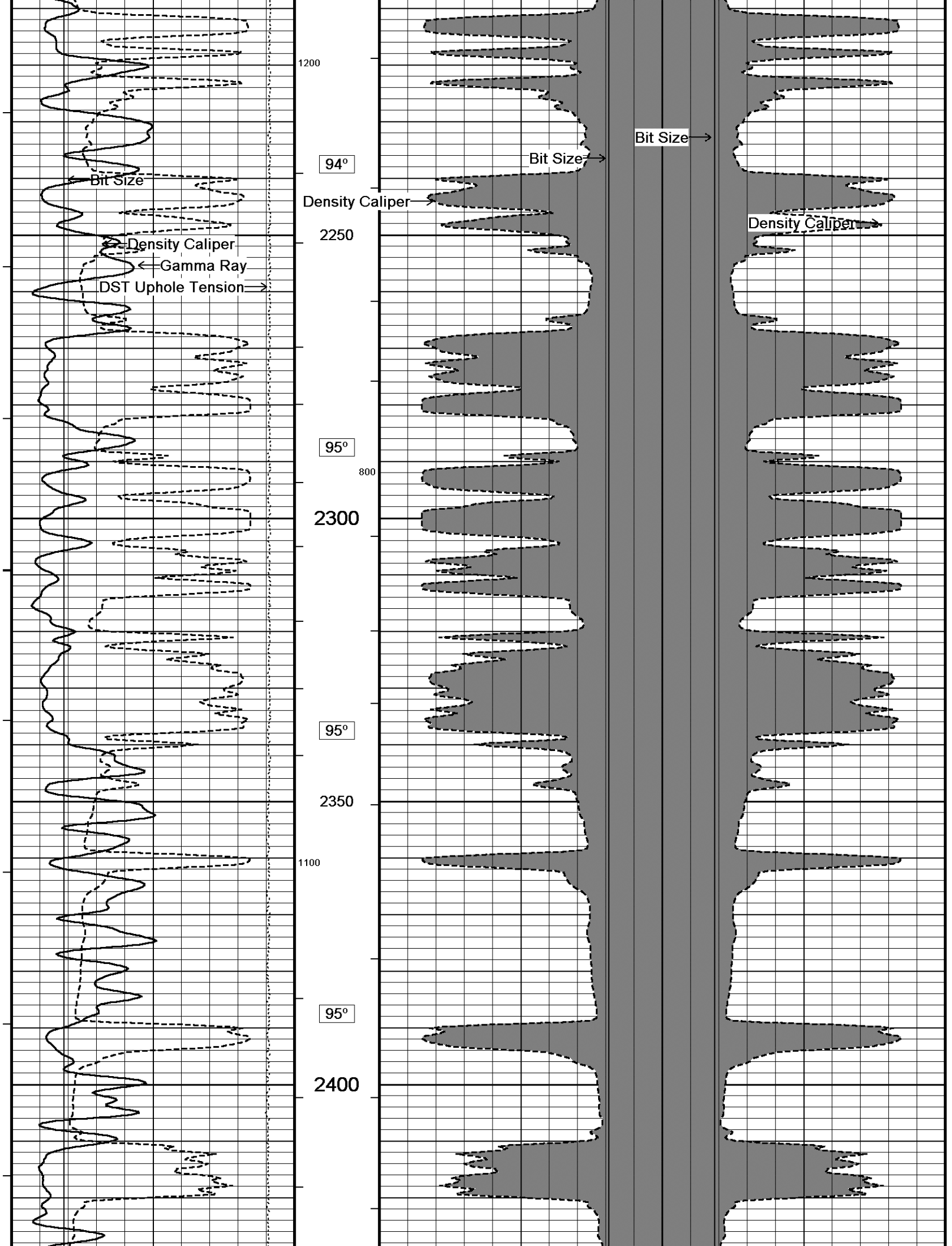
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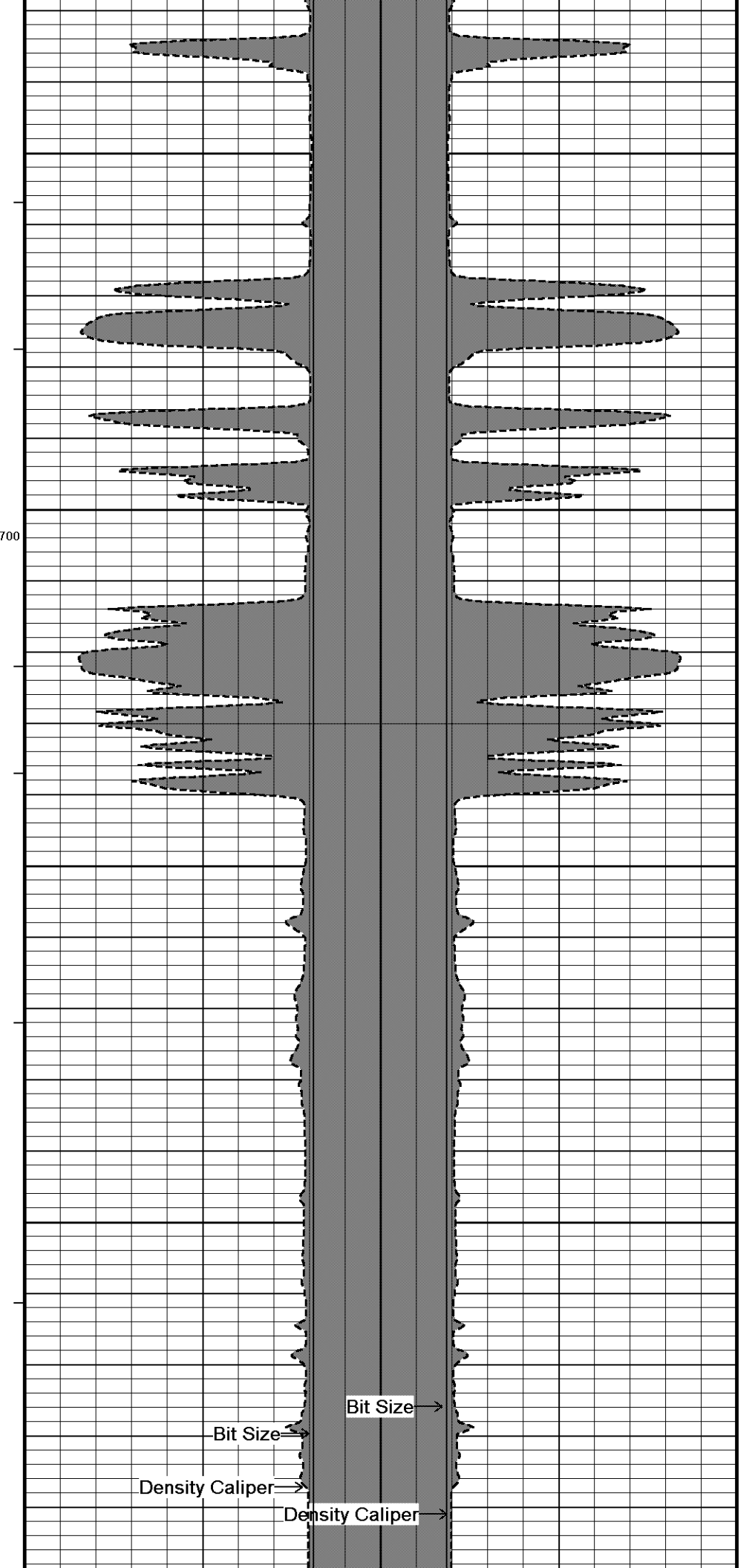
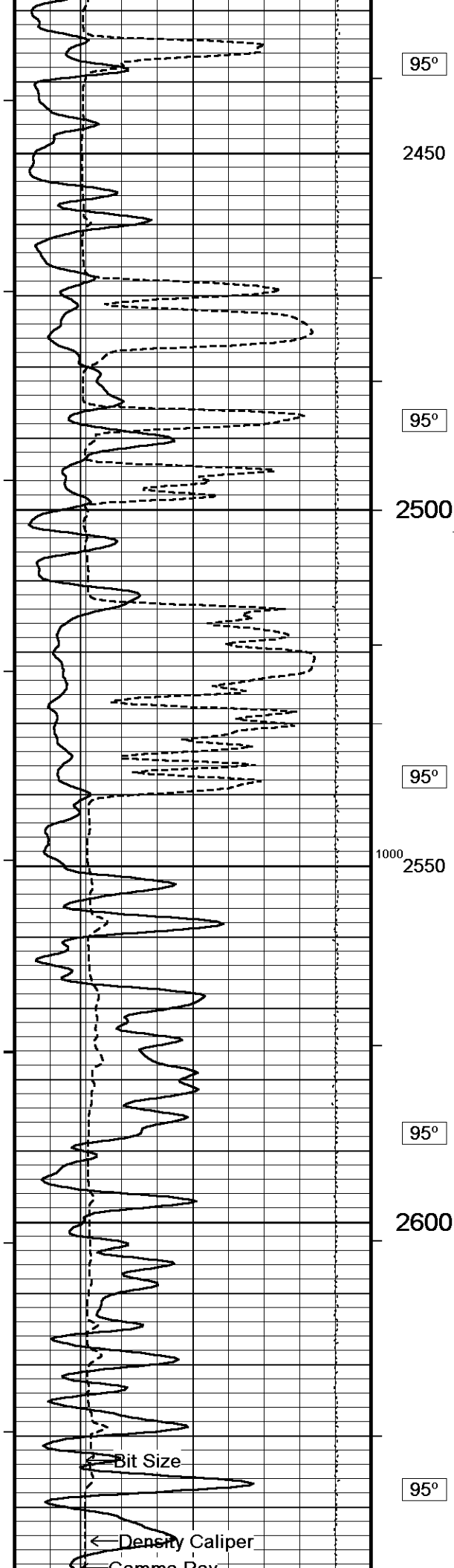
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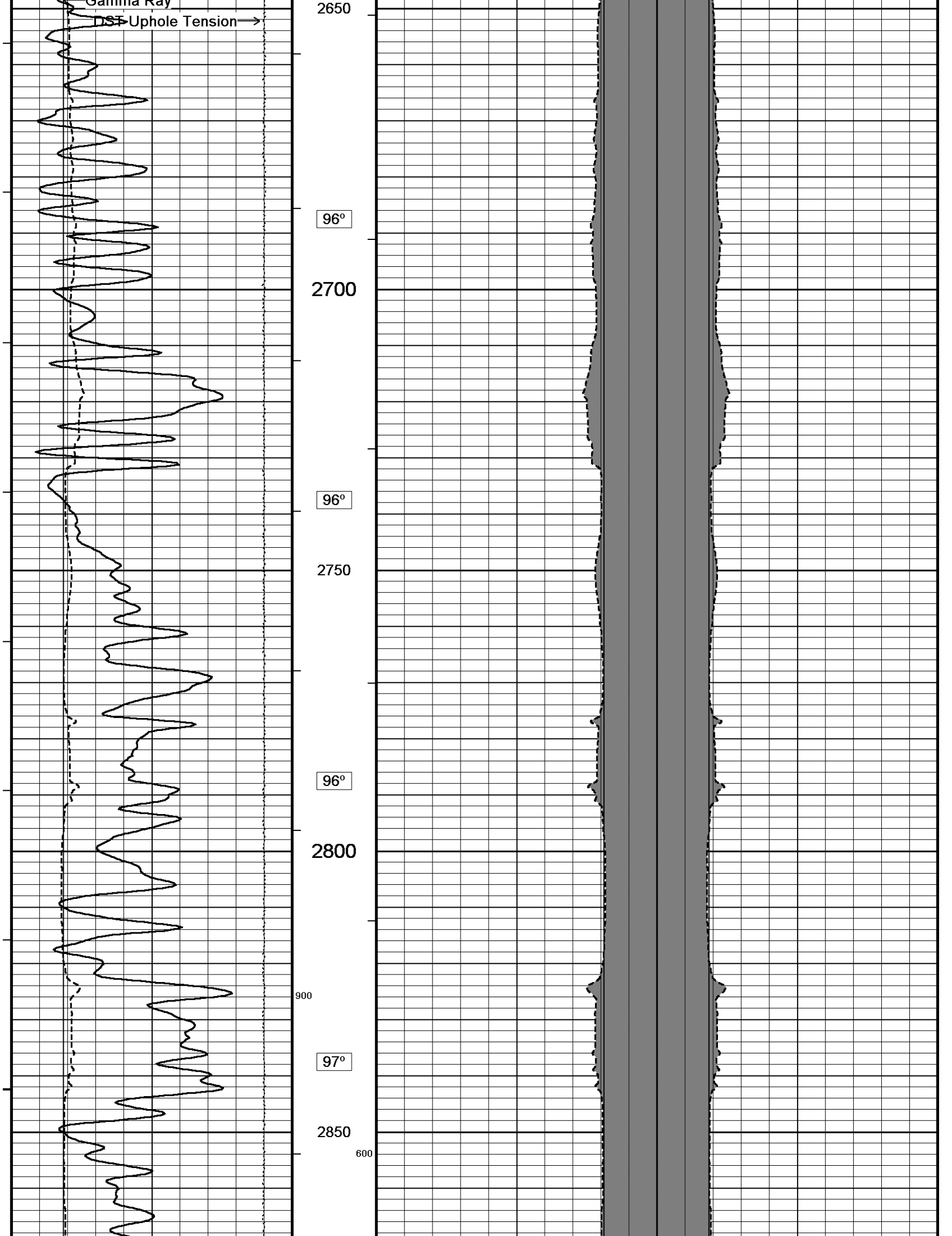
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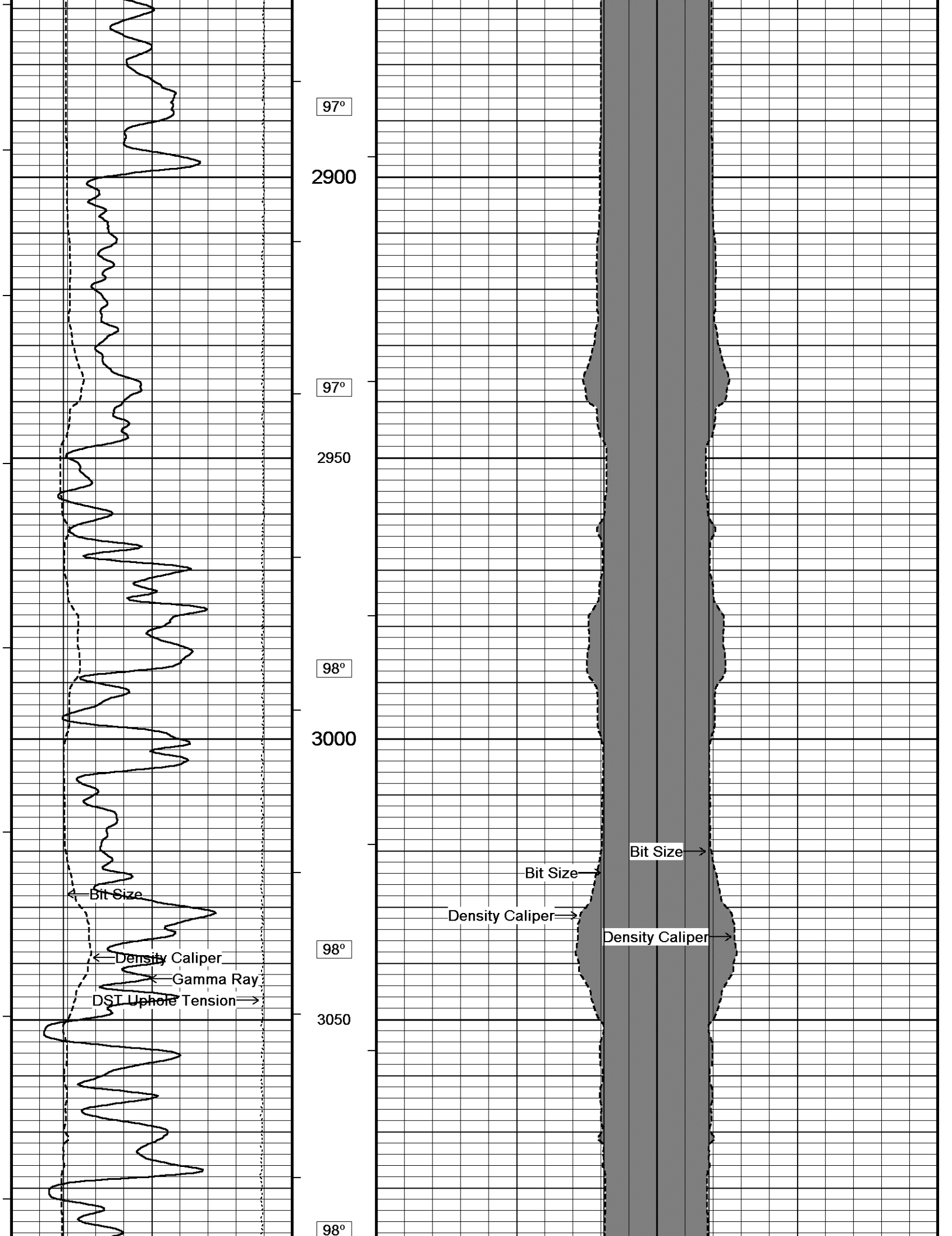
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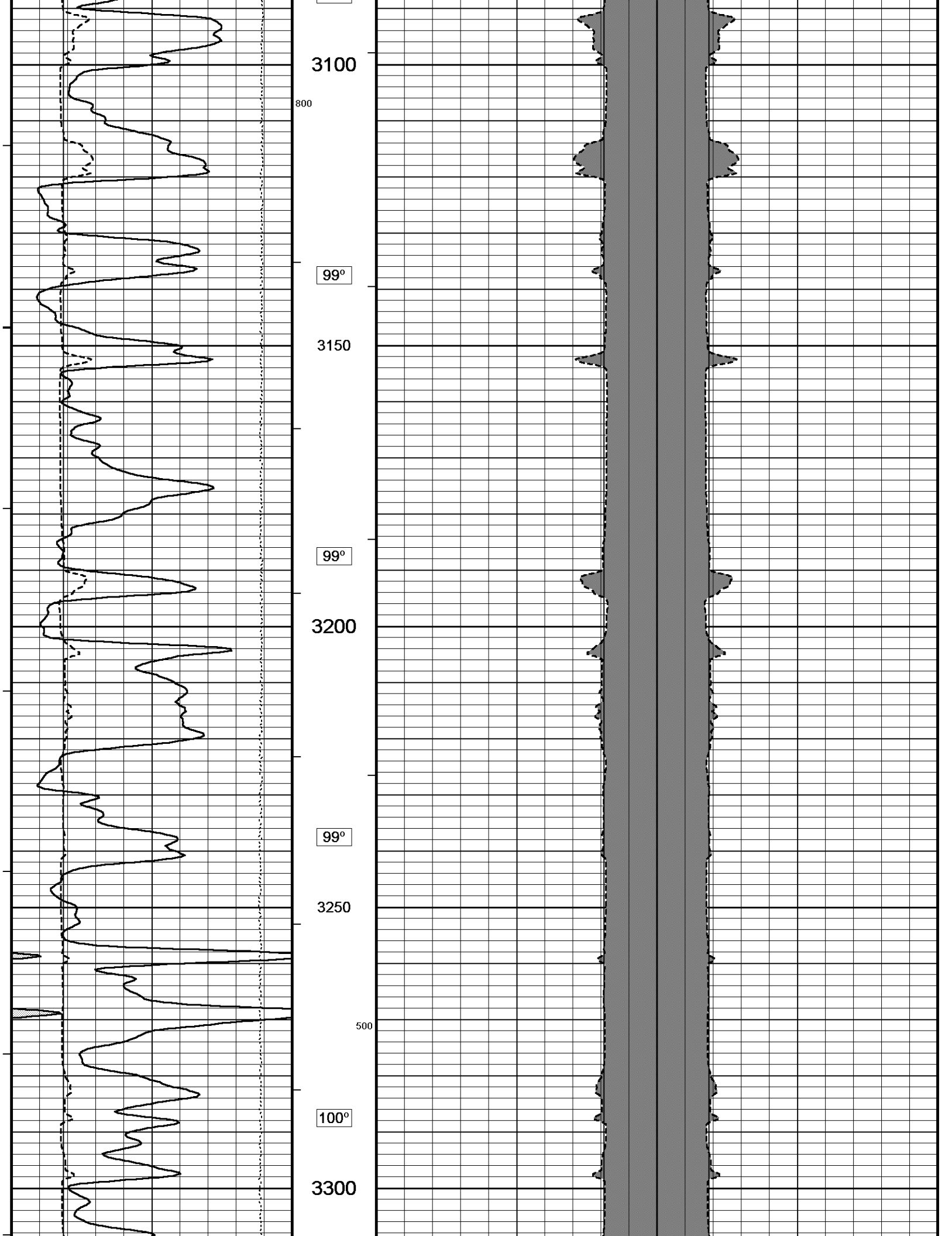


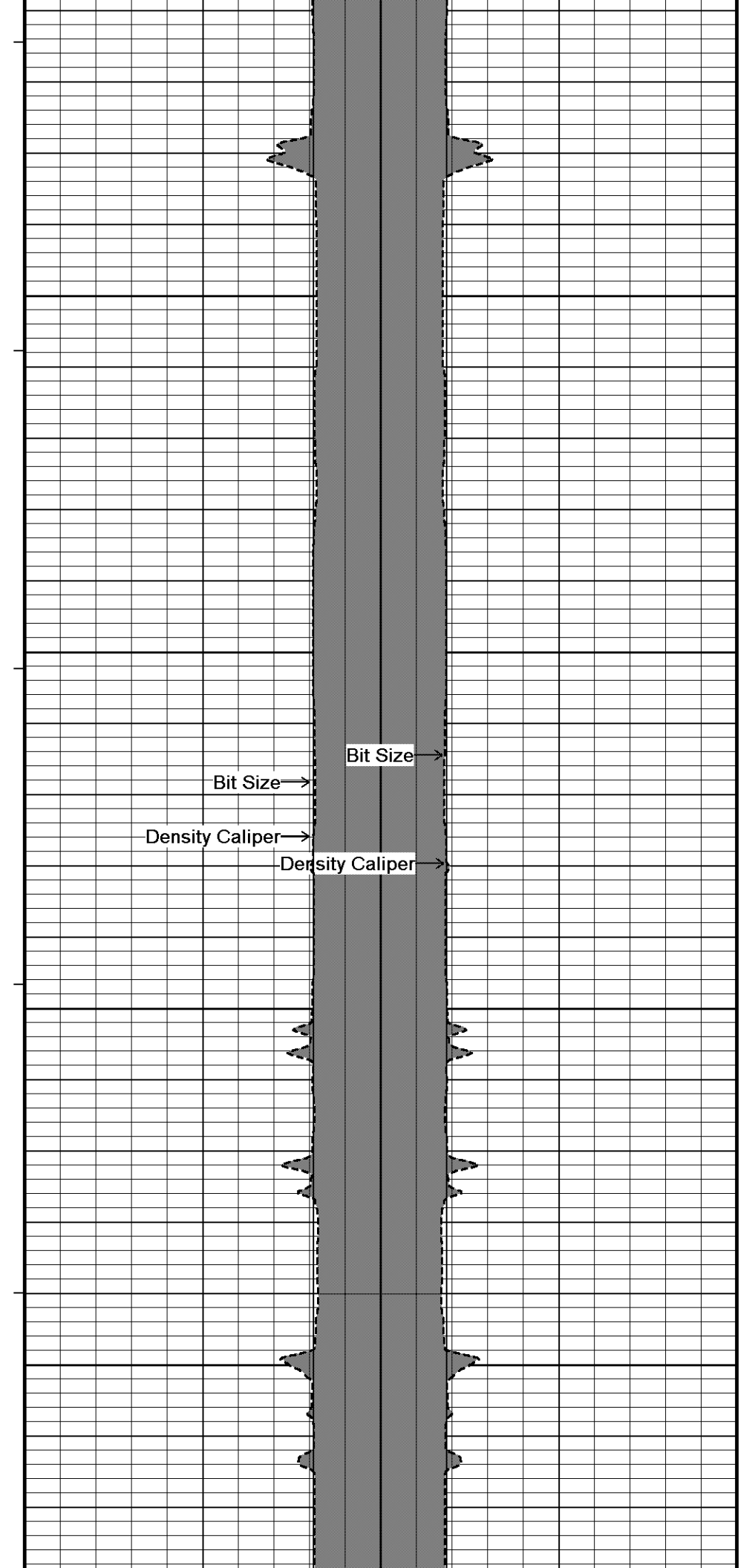
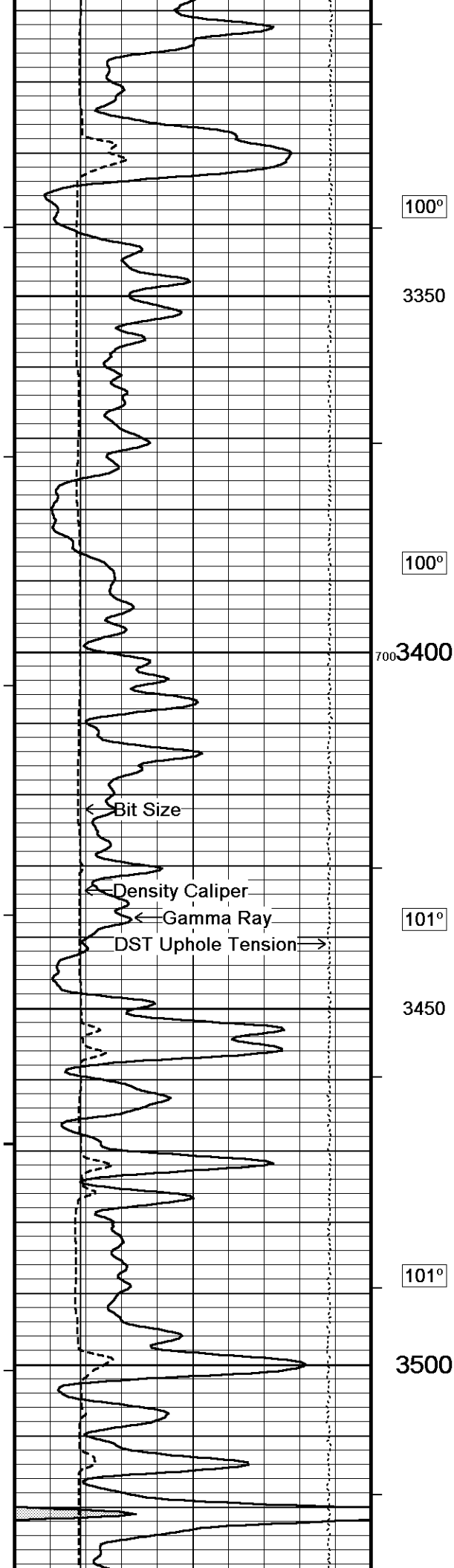


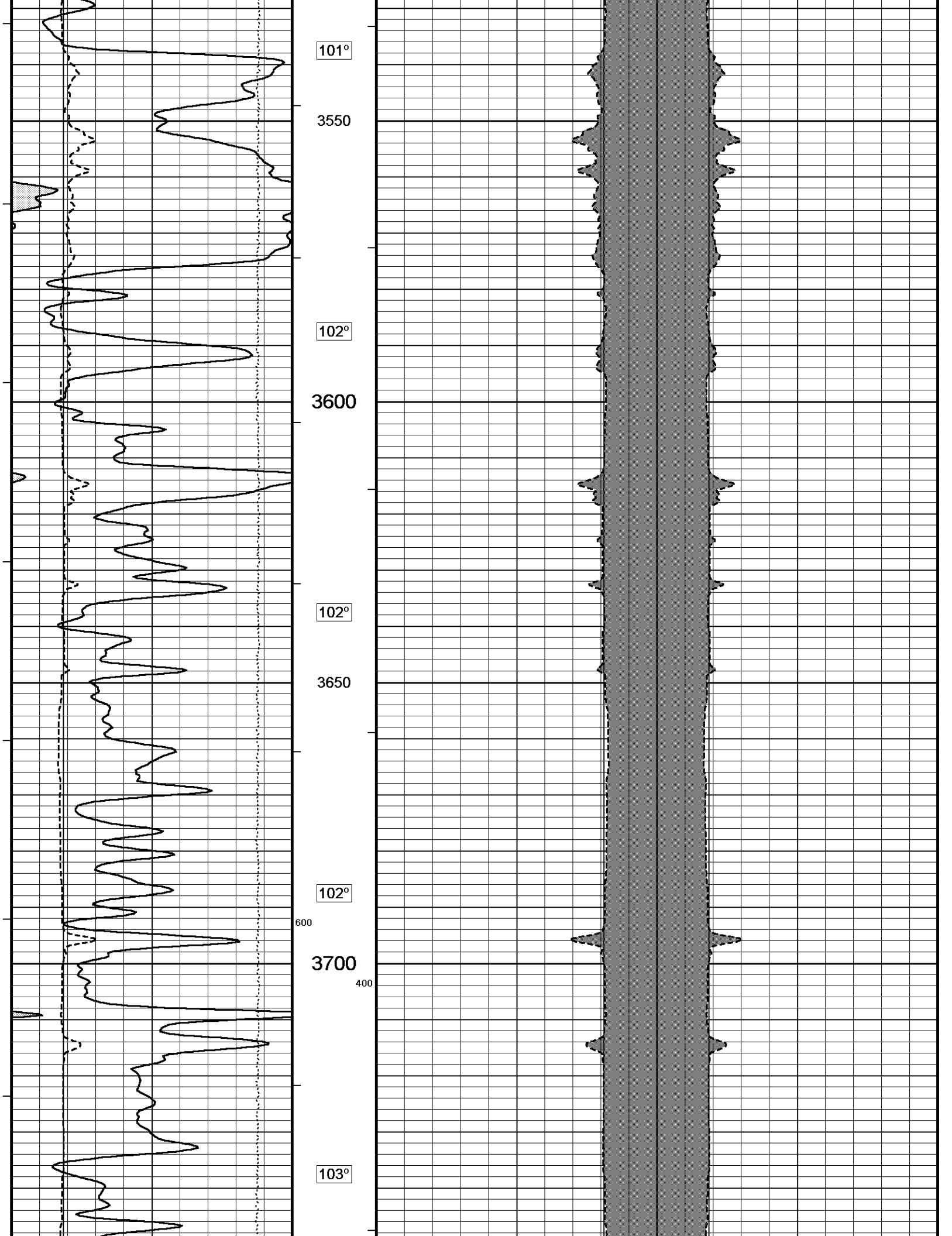


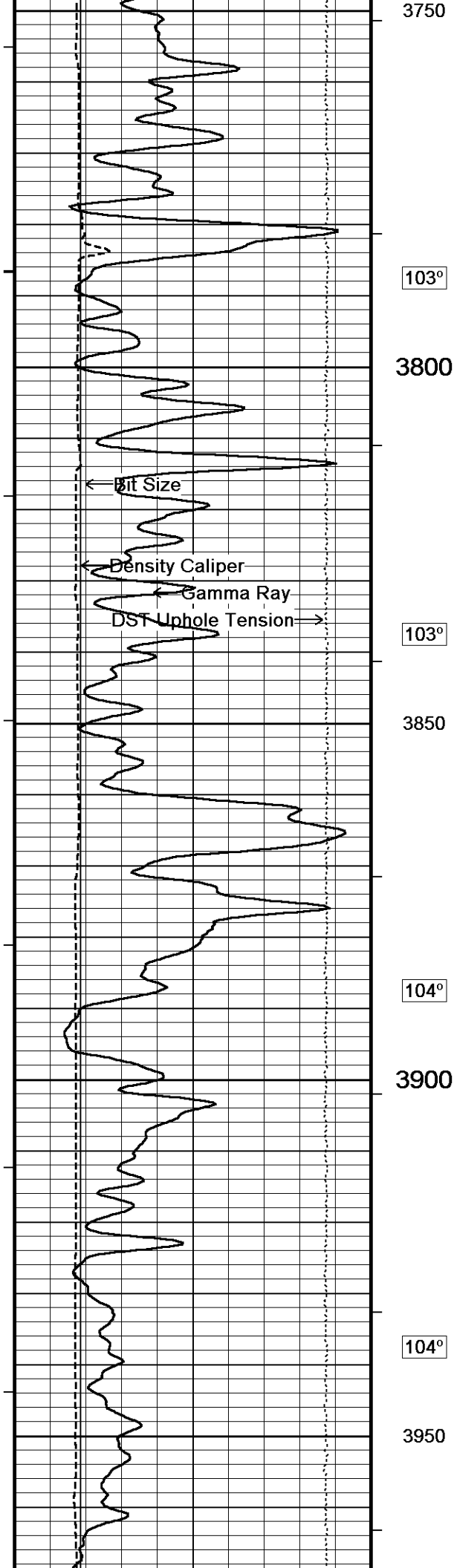




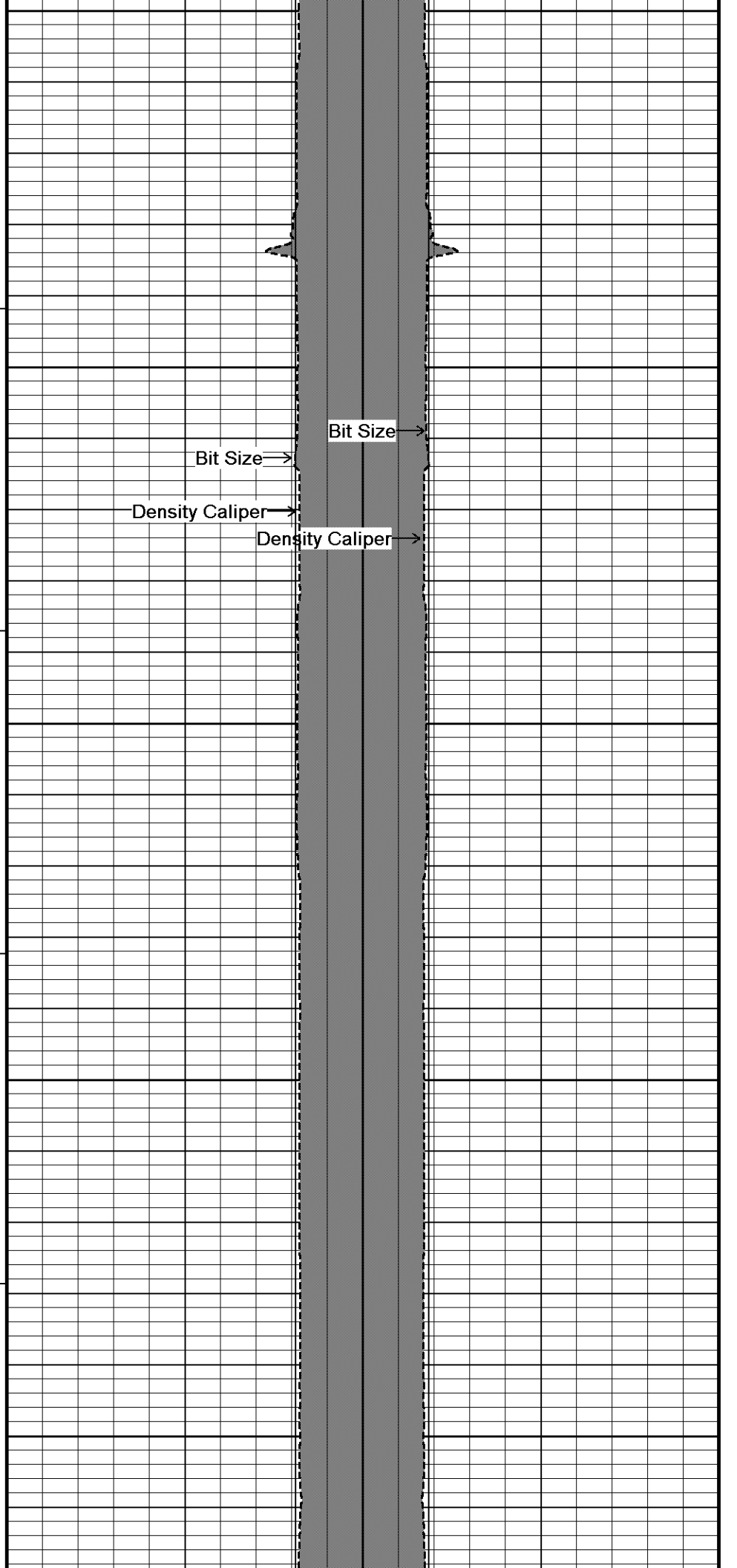




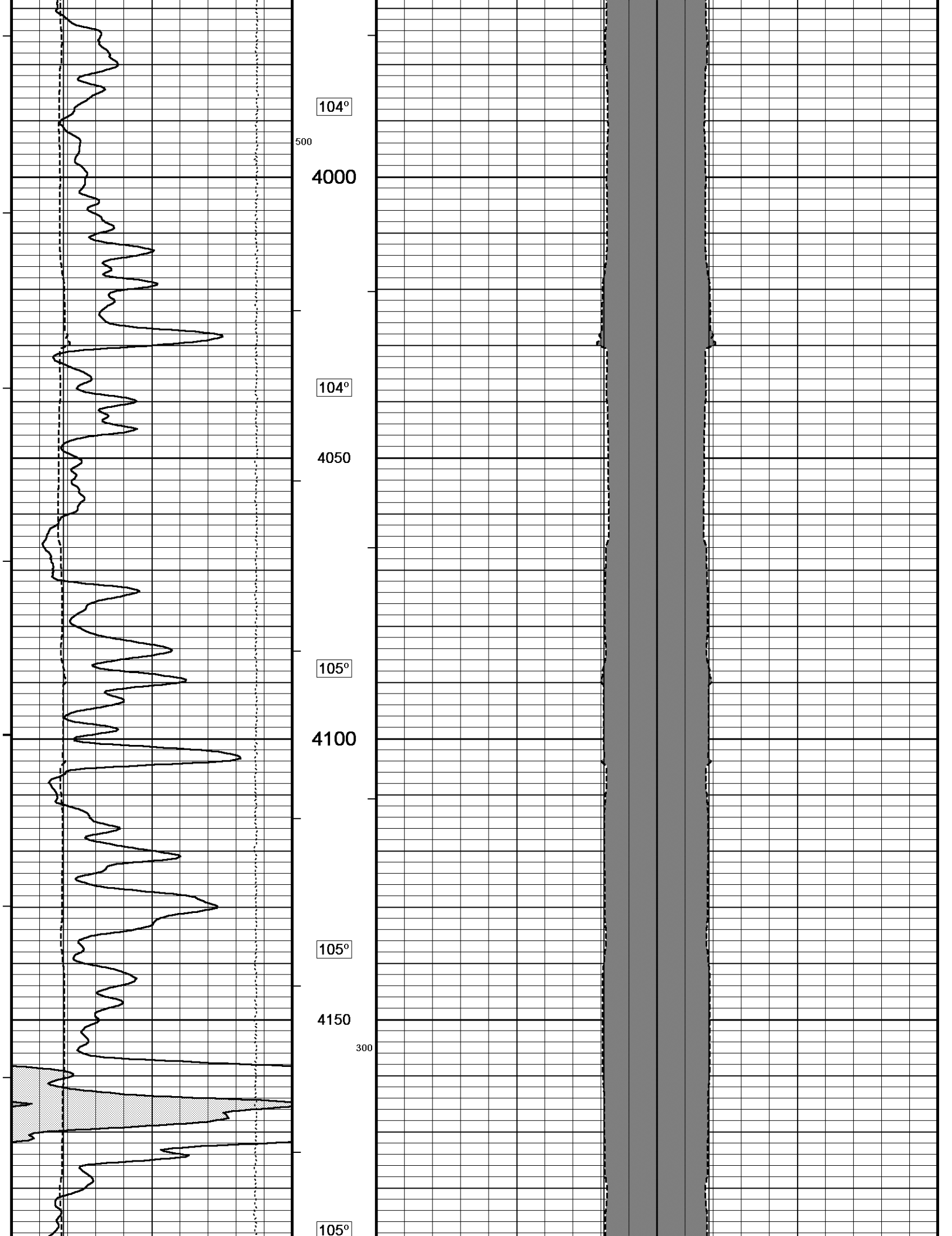


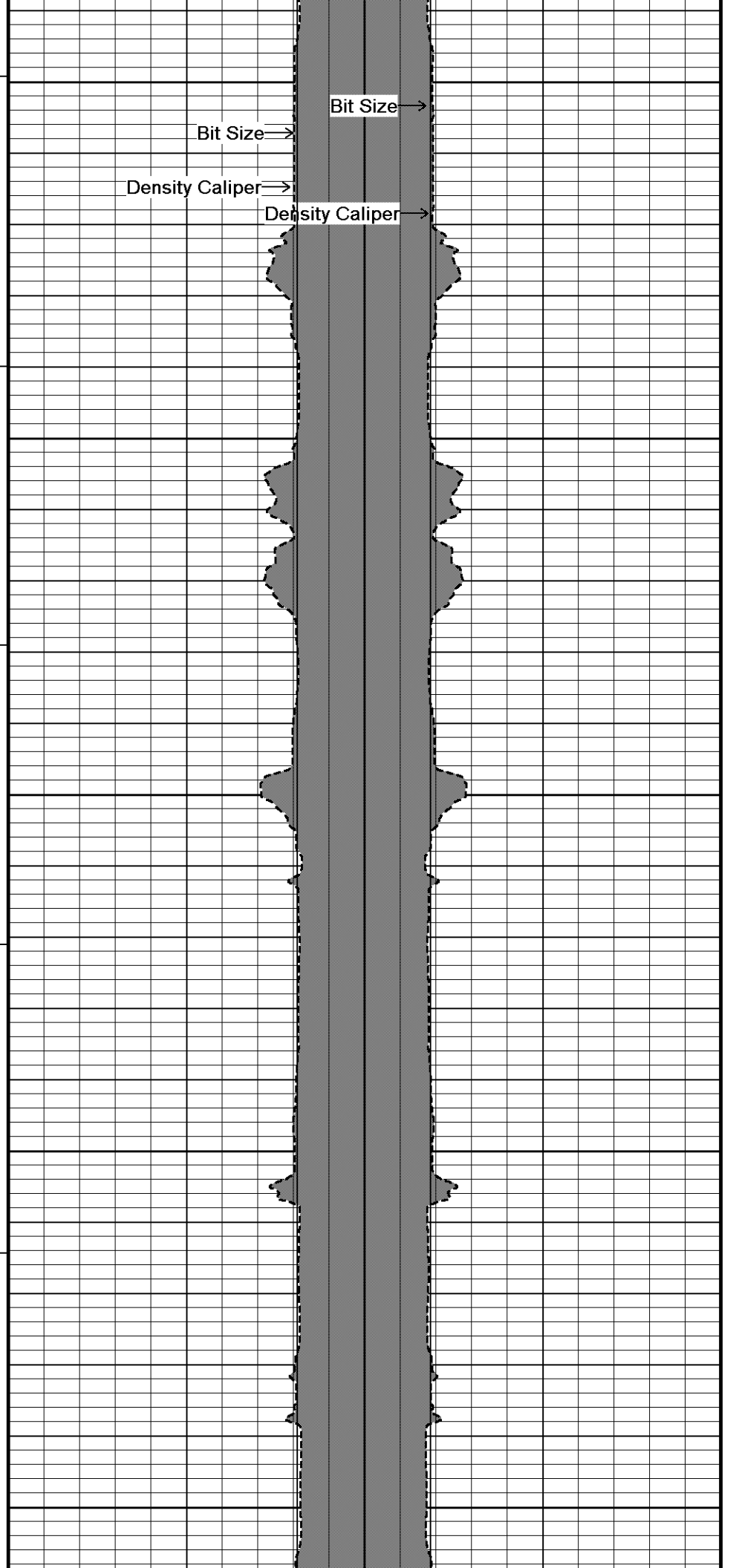
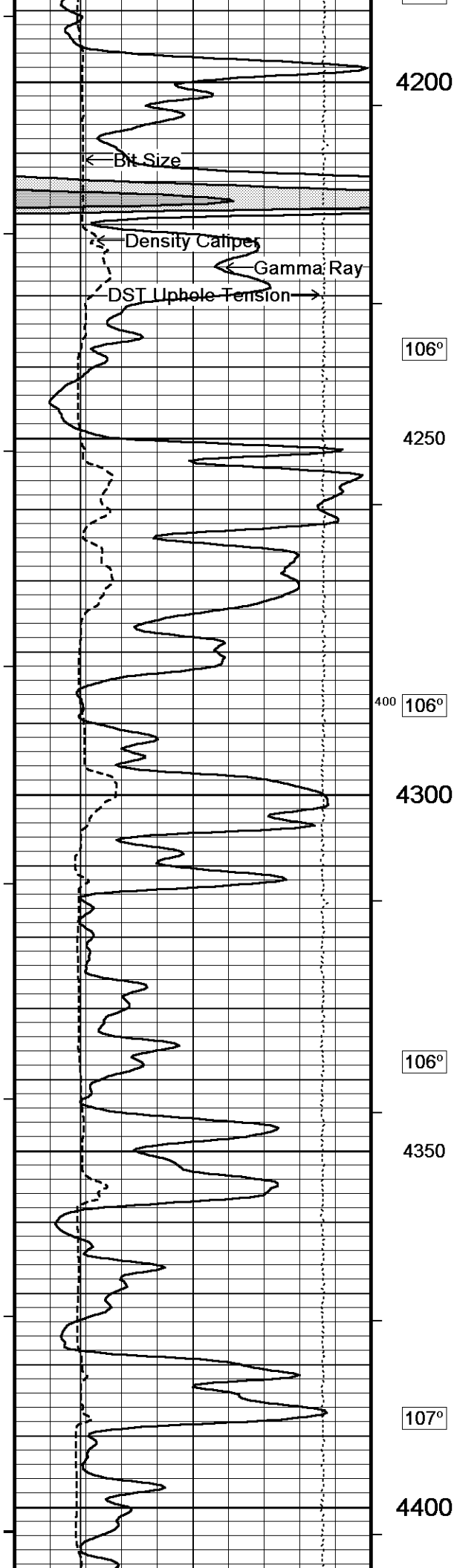


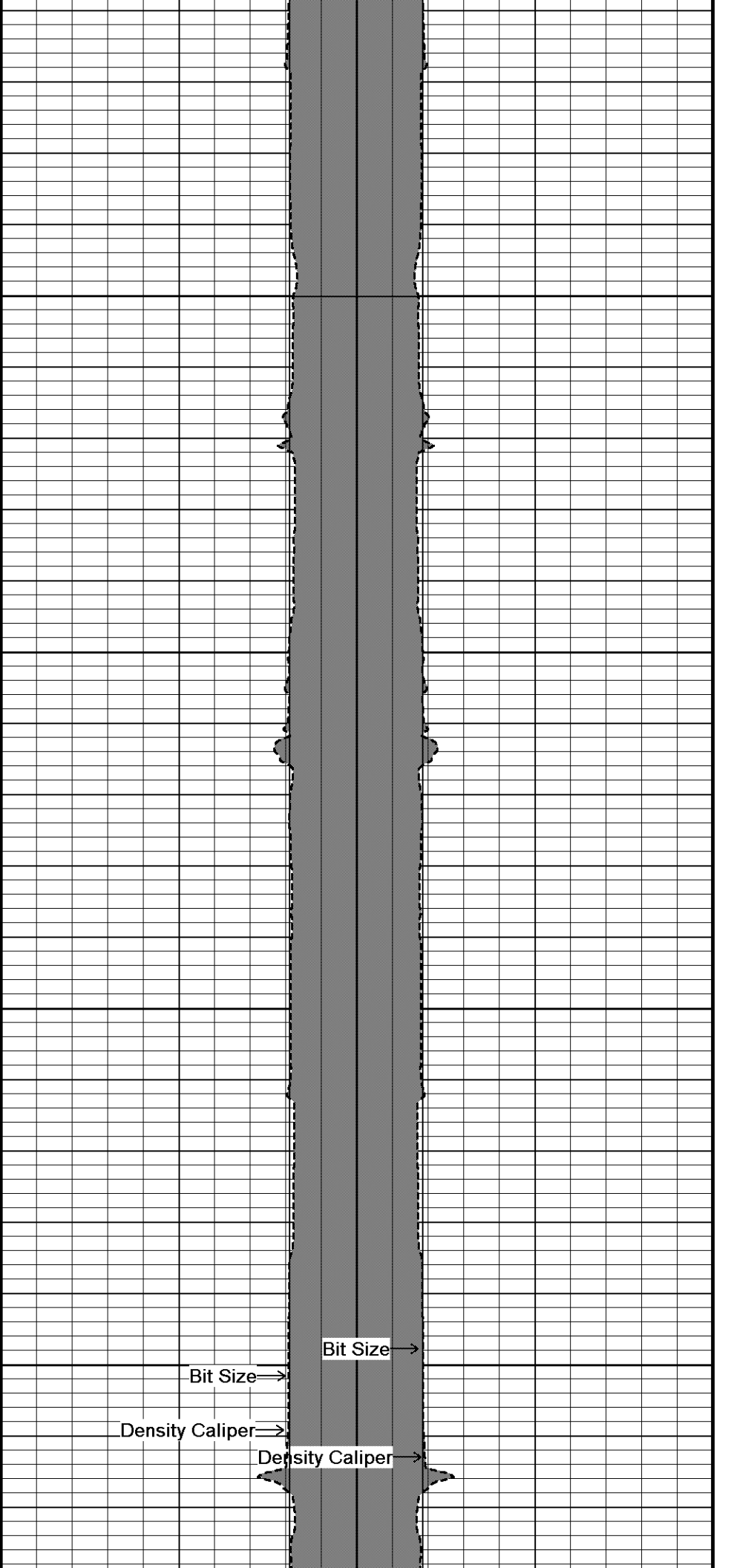
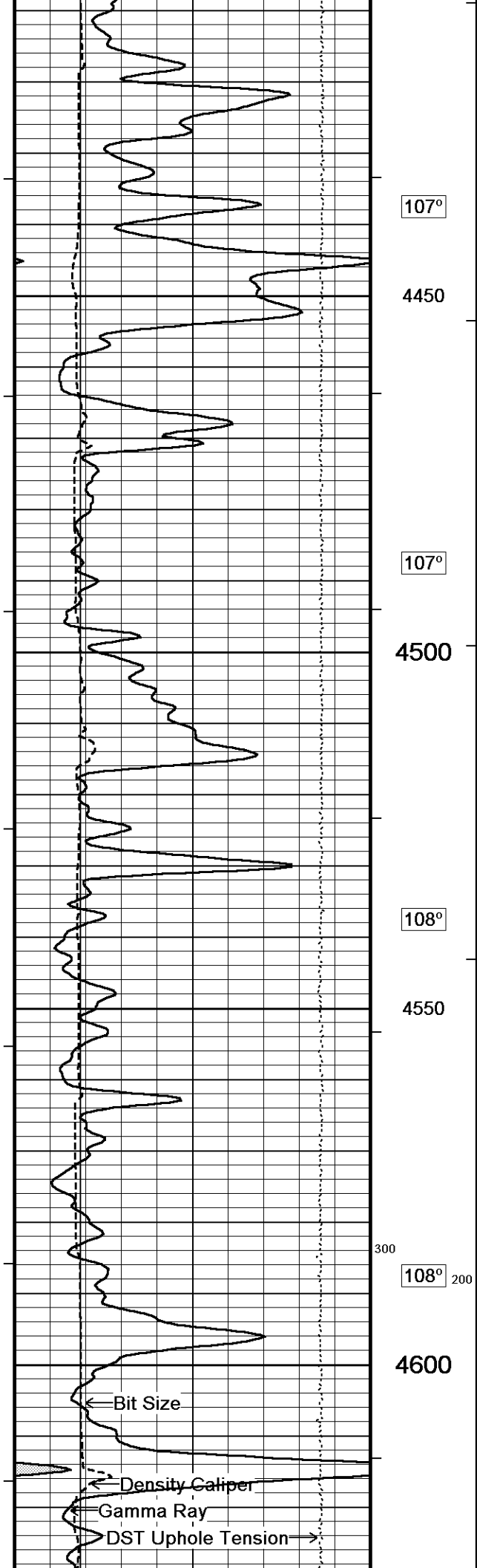
3750
103°
3800
103°
3850
104°
3900
104°
3950

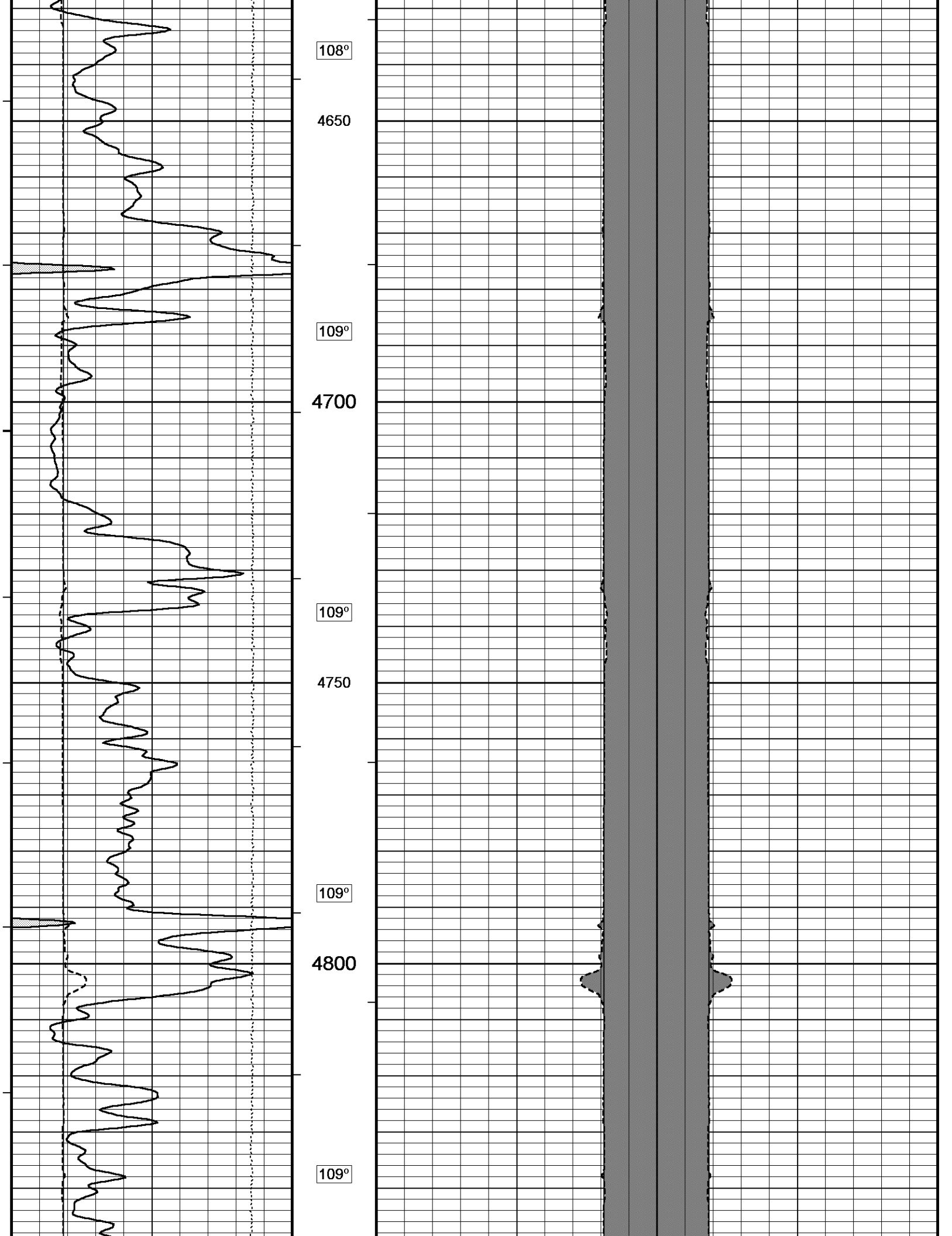


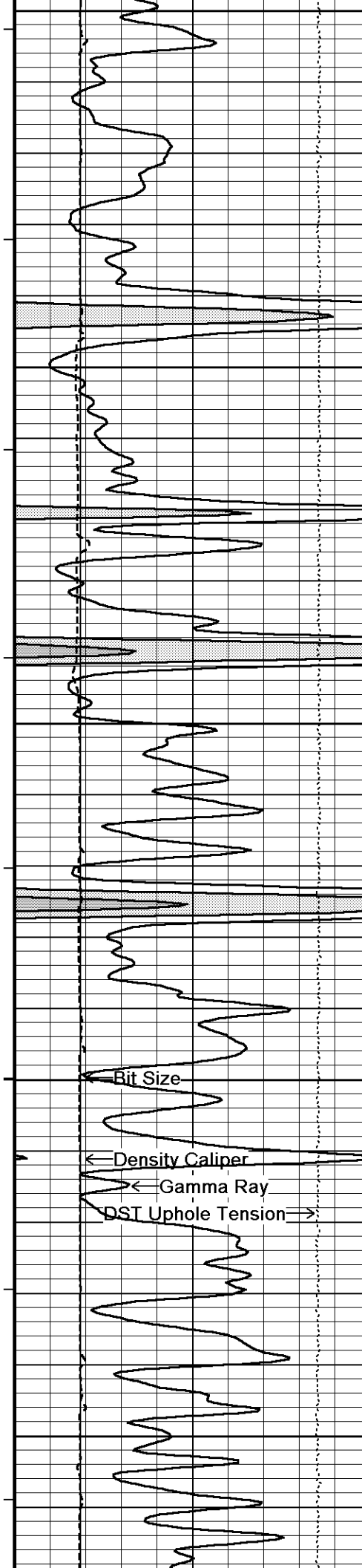
Bit Size
Density Caliper
Density Caliper











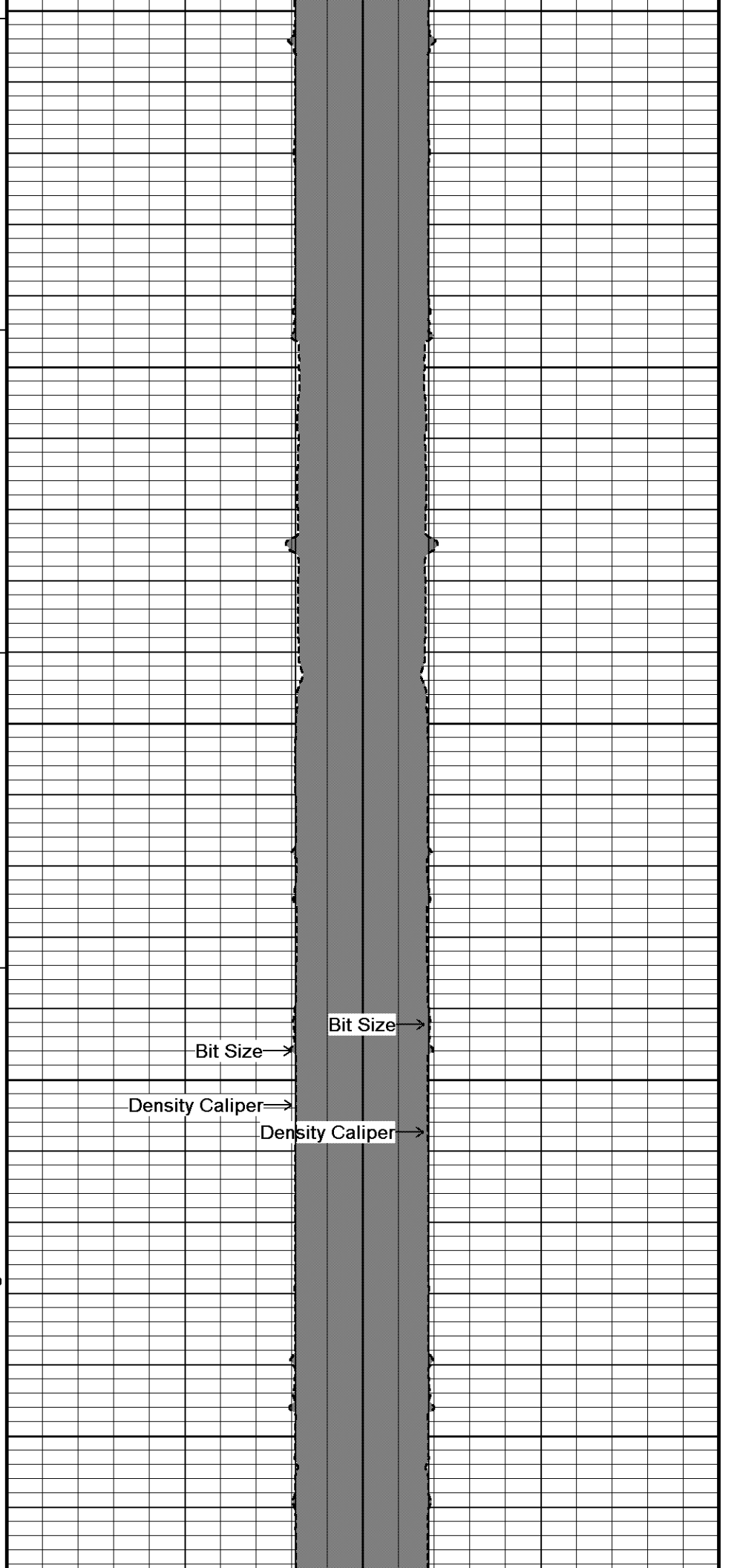
4850
200
4900
4950
5000
100
5050

110°

110°

111°

111°

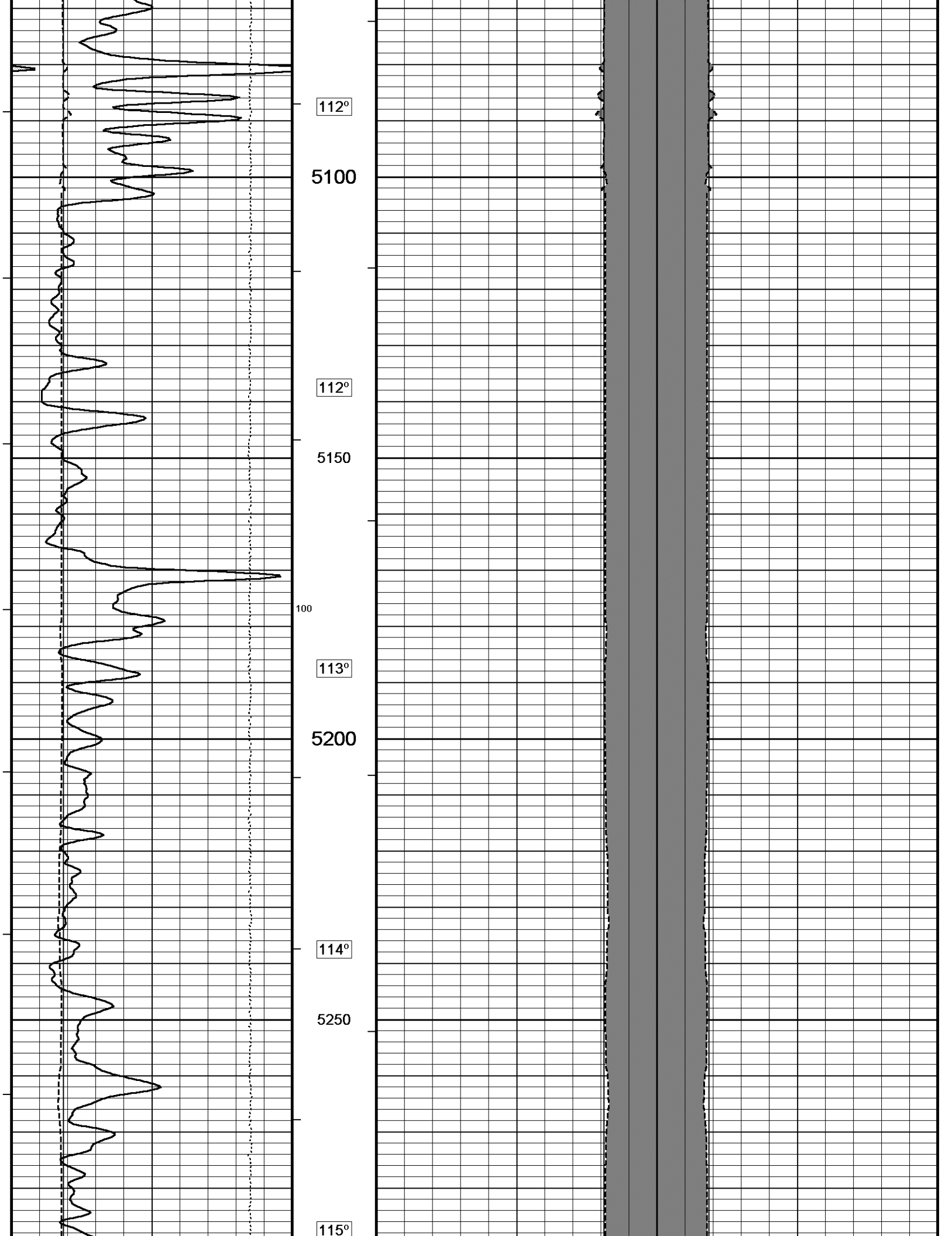


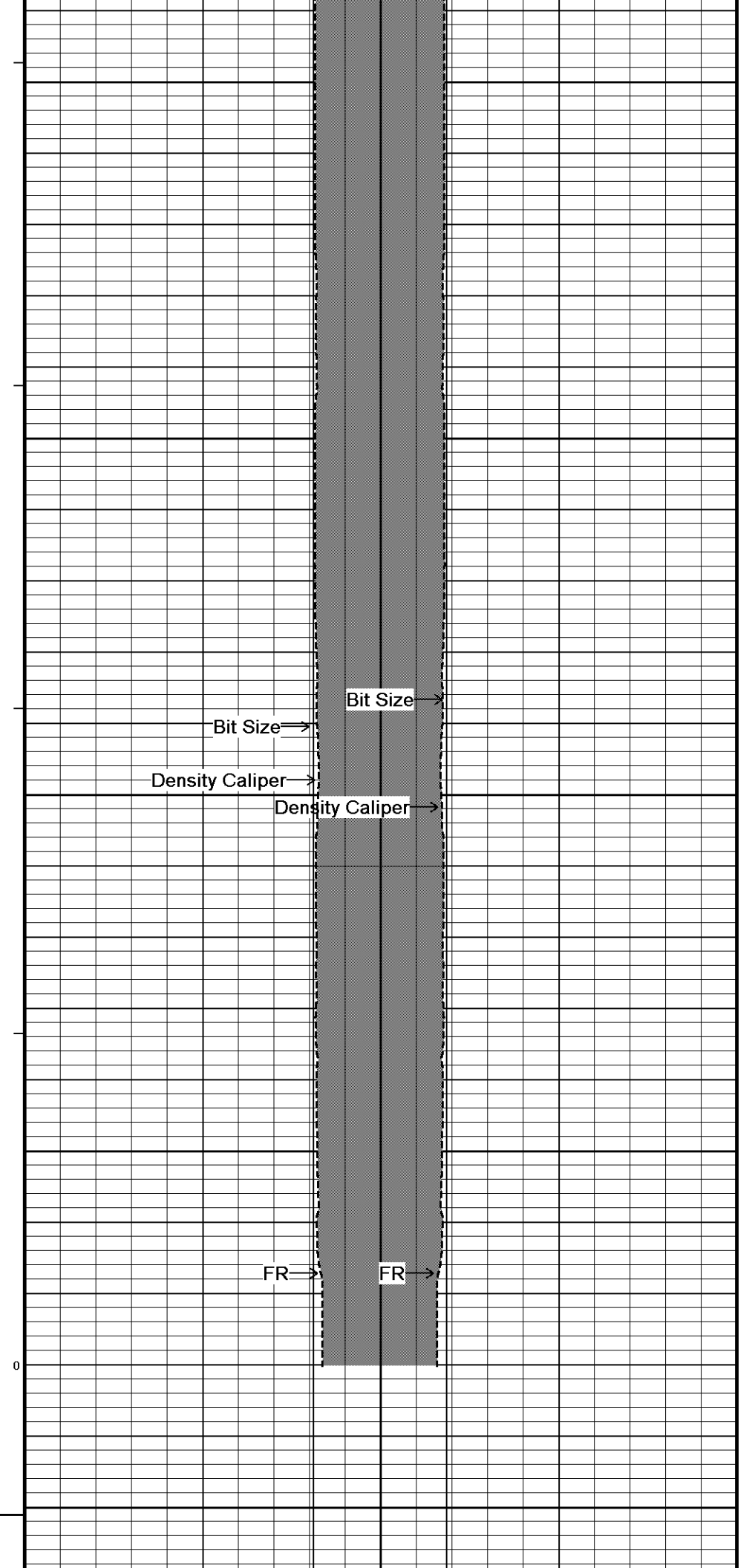
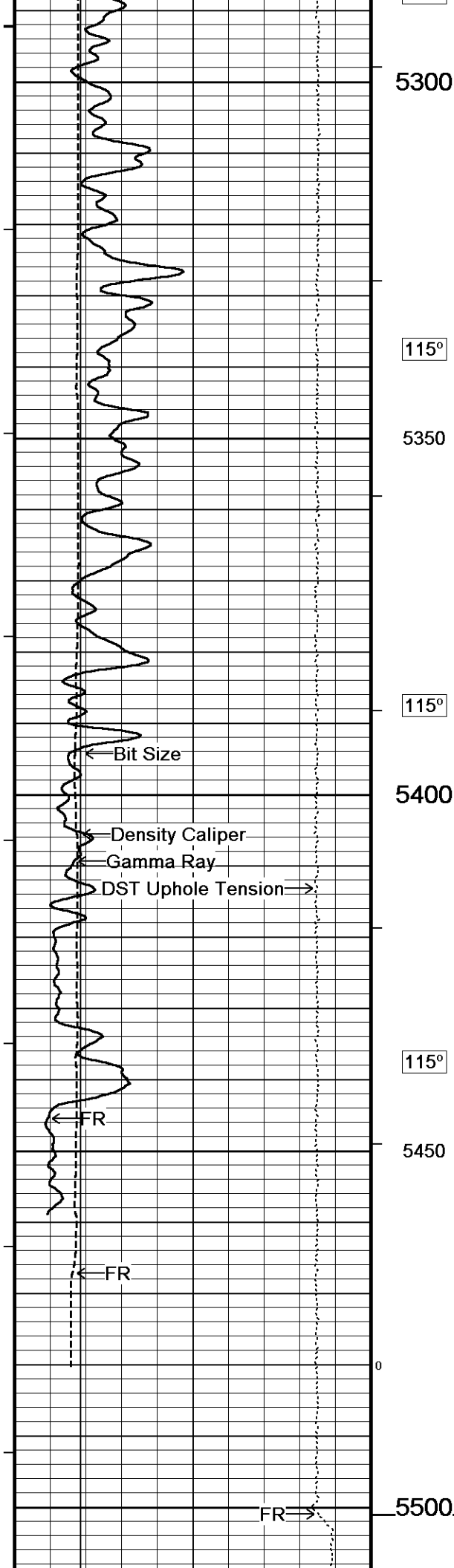
Bit Size →

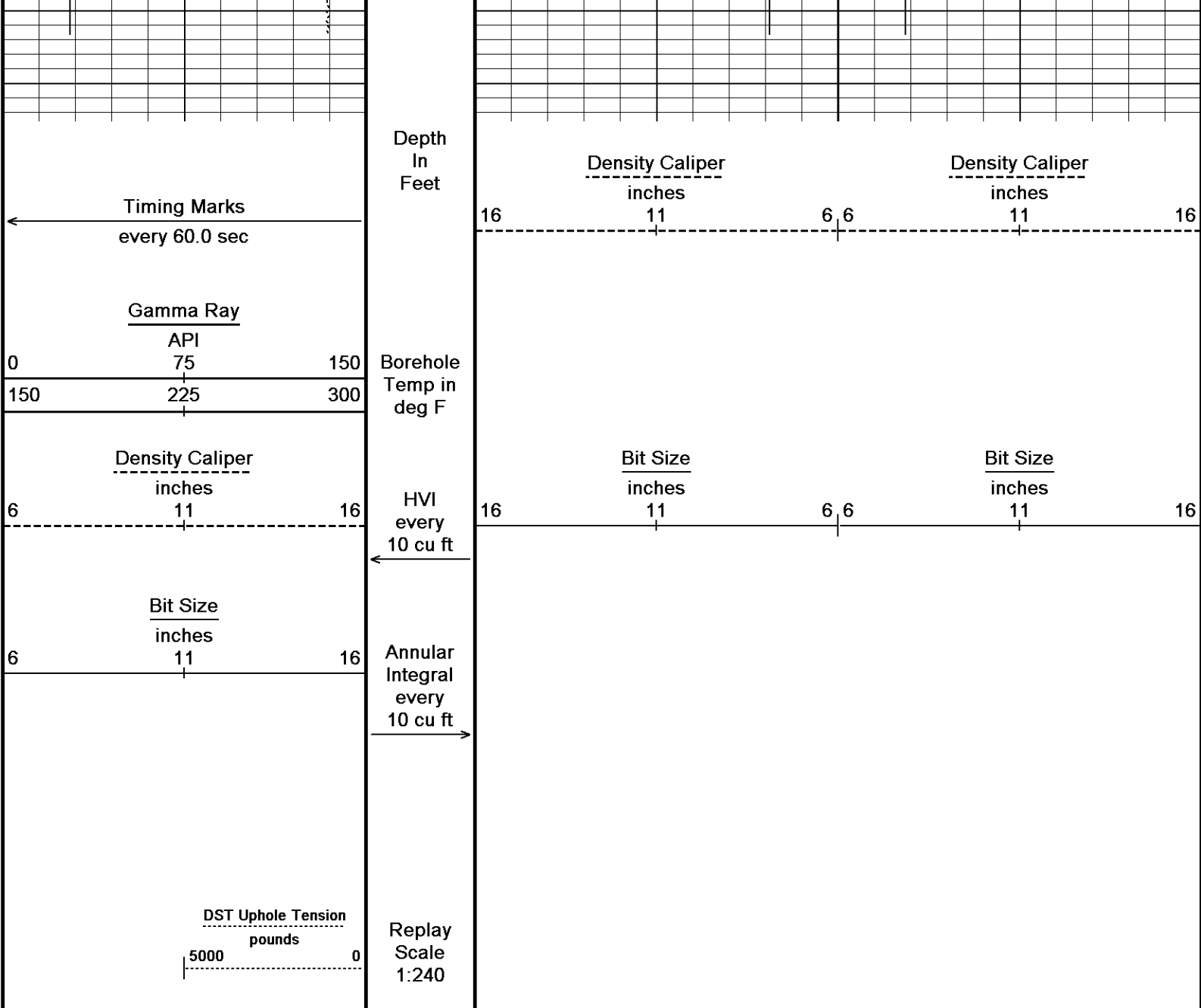
Density Caliper →

Bit Size →

Density Caliper →







Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\Minimus 16.05.4955\Data\McCoy Reed Trust 'A' #1...McCoy Reed Trust 'A' #1-36_003.dta
System Versions: Logged with 16.05.4955 Plotted with 16.05.4955

Plotted on 04-MAR-2017 07:39
Recorded on 03-MAR-2017 23:29

↑ 5 INCH MAIN ↑

BEFORE SURVEY CALIBRATION
C:\Minimus 16.05.4955\Data\McCoy Reed Trust 'A' #1-36\McCoy Reed Trust 'A' #1-36_002.dta

General Constants All 000			Last Edited on 03-MAR-2017,22:06		
General Parameters					
Mud Resistivity	0.990	ohm-metres			
Mud Resistivity Temperature	75.000	degrees F			
Water Level	0.000	feet			
Borehole Fluid Processing	Wet Hole				
Hole/Annular Volume and Differential Caliper Parameters					
HVOL Method	Single Caliper				
HVOL Caliper 1	Density Caliper				
HVOL Caliper 2	N/A				
Annular Volume Diameter	4.500	inches			
Caliper for Differential Caliper	None				

RWA Parameters		Base Density Porosity	
Porosity used		Array Ind. One Res Rt	
Resistivity used		0.620	
RWA Constant A		2.150	
RWA Constant M		0.000	
SW/APOR Tool Source			

Down-hole Tension Calibration SMS 0

Field Calibration on 16-FEB-2017 01:57

Reading No	Measured	Calibrated (lbs)
1	493.46	0.00
2	-2294.05	481.00

Gamma Calibration MCG-C 123

Field Calibration on 03-MAR-2017 11:09

	Measured	Calibrated (API)
Background	71	49
Calibrator (Gross)	733	505
Calibrator (Net)	662	456

Gamma Calibration Tolerances MCG-C 123

Ratio1.452

1.40

1.475

1.55

Counts/API

Gamma Constants MCG-C 123

Last Edited on 03-MAR-2017,20:51

Gamma Calibrator Number	MCGGRCC141	
GRC-M Calibrator Jig in Use?	NO	
Inactive Background Jig in Use?	NO	
Mud Density	1.09	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Potassium Equivalence	Chloride	
K Mud Concentration	0.00	%

High Resolution Temperature Calibration MCG-C 123

Field Calibration on 11-FEB-2017,15:04

	Measured	Calibrated(Deg F)
Lower	50.00	50.00
Upper	100.00	100.00

High Resolution Temperature Constants MCG-C 123

Last Edited on 22-SEP-2015,11:43

Pre-filter Length	11
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SP Calibration MCG-C 123

Field Calibration on 03-MAR-2017,11:10

	Measured	Calibrated (mV)
Reference 1	100.9	100.0
Reference 2	-99.4	-99.9

Caliper Calibration MML-A 7

Base Calibration on 11-FEB-2017 10:20
Field Calibration on 03-MAR-2017 10:49

Base Calibration		
Reading No	Measured	Calibrator Size (in)
1	14066	5.98
2	17366	7.97
3	20600	9.86
4	24449	11.92
5	0	0.00
6	N/A	N/A
Field Calibration		
	Measured Caliper (in)	Actual Caliper (in)
	7.99	7.97

Caliper Calibration Tolerances MML-A 7

Short Arm Field Cal.7.99

7.77

7.97

8.17

in

Micro Normal and Micro Inverse Calibration MML-A 7

Base Calibration on 11-FEB-2017 10:26
Field Check on 03-MAR-2017 10:51

Base Calibration		
	Measured	Calibrated (ohm-m)

Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Micro Normal	10.1	50.4	5.1	25.6
Micro Inverse	10.0	50.1	3.4	16.9
Channel	Base Check (ohm-m)		Field Check (ohm-m)	
Micro Normal	76.8		76.8	
Micro Inverse	51.0		51.0	

Micro Normal & Micro Inverse Calibration Tolerance MML-A 7									
Micro Normal Res. 1	10.1		ohm	Micro Normal Res. 2	50.4		ohm		
Micro Inverse Res. 1	10.0		ohm	Micro Inverse Res. 2	50.1		ohm		
Micro Normal Base Check	76.8		ohm-m						
Micro Inverse Base Check	51.0		ohm-m						
Micro Normal Field Check	76.8		ohm-m						
Micro Inverse Field Check	51.0		ohm-m						

Micro Normal and Micro Inverse Constants MML-A 7				Last Edited on 03-MAR-2017,20:50	
Pad Type	8-12 in Soft Rubber Inflatable 006-9011-159				
Micro Normal K Factor	0.5110				
Micro Inverse K Factor	0.3380				
Standoff Offset	N/A inches				

Neutron Calibration MDN-A.B 66				Base Calibration on 11-FEB-2017,10:45	
				Field Check on 03-MAR-2017 11:14	
Base Calibration					
	Measured		Calibrated (cps)		
	Near	Far	Near	Far	
	3031	94	3714	110	
Ratio	32.309		33.764		
Field Calibrator at Base					
			Calibrated (cps)		
			2092	3032	
Ratio			0.690		
Field Check					
			Calibrated (cps)		
			2196	3136	
Ratio			0.700		

Neutron Calibration Tolerances MDN-A.B 66			
Ratio	32.309		
Base Check	0.690		
Field Check	0.700		

Neutron Constants MDN-A.B 66				Last Edited on 03-MAR-2017,20:50	
Neutron Source Id	P0204NN				
Neutron Jig Number	NJ5736				
Air Hole Processing	Legacy				
Caliper Source for Processing	Density Caliper				
Stand-off	0.00			inches	
Mud Density	1.00			gm/cc	
Limestone Sigma	7.10			cu	
Sandstone Sigma	4.26			cu	
Dolomite Sigma	4.70			cu	
Formation Pressure Source	None				
Formation Pressure	N/A			kpsi	
Temperature Source	Constant Value				
Temperature	68.00			degrees F	
Mud Salinity	0.00			kppm	
Salinity Correction	Not Applied				
Formation Fluid Salinity Source	None				

Formation Fluid Salinity	N/A	kppm			
Barite Mud Correction	Not Applied				
FE Calibration MFE-B.J 352		Base Calibration on 11-FEB-2017 10:10 Field Check on 03-MAR-2017 10:39			
Base Calibration					
	Measured	Calibrated (ohm-m)			
Reference 1	0.0	0.0			
Reference 2	993.6	126.8			
Base Check		272.8			
Field Check		272.9			
FE Calibration Tolerances MFE-B.J 352					
Reference 2	993.6	-3% 980.0 +3% ohm			
Base Check	272.8	-2% 277.0 +2% ohm-m			
Field Check	272.9	-2% 272.8 +2% ohm-m			
FE Constants MFE-B.J 352		Last Edited on 03-MAR-2017,20:50			
Running Mode	No Sleeve				
MFE K Factor	0.1268				
Borehole Correction Constants					
Sonde Position	0.5	inches			
Hole Size Source	Density Caliper				
Hole Size Constant Value	N/A	inches			
Rm Source	Global Value: Temperature Corrected				
Temp. for Rm Corr.	MCG External Temperature				
Sonic Constants MSS-A.A 55		Last Edited on 03-MAR-2017,20:49			
Maximum Boundary Contrast	100.00	micro-sec/ft			
Fluid Transit Time	189.00	micro-sec/ft			
Limestone Transit Time	47.50	micro-sec/ft			
Sandstone Transit Time	55.50	micro-sec/ft			
Dolomite Transit Time	43.50	micro-sec/ft			
Sonic used for Porosities	3-5' Compensated Sonic				
Correction for Sonde Skew	Applied				
Cycle Stretch Algorithm	Applied				
MN3FT	N/A	micro-sec			
MX3FT	N/A	micro-sec			
Hunt-Raymer Constant	83.13	micro-sec/ft			
Sonde Mode	Compensated				
Hole Type	Open Hole				
Sonde Parameters					
	Measured	Calibrated			
Offset	N/A	0.0000			
Free Pipe	N/A	N/A			
Peak Amplitude Source	N/A				
Waveform	Start Time (micro-sec)	Width (micro-sec)	Pre Gain	Start Gain	Discriminator (mV)
3'	N/A	N/A	N/A	N/A	N/A
4'	N/A	N/A	N/A	N/A	N/A
5'	N/A	N/A	N/A	N/A	N/A
6'	N/A	N/A	N/A	N/A	N/A
Processed Fixed Gate Parameters					
Waveform Used For Processing	N/A				
Start Time (micro-sec)	End Time (micro-sec)	Discriminator (mV)	N/A		
N/A	N/A	N/A			
N/A	N/A	N/A			
N/A	N/A	N/A			
N/A	N/A	N/A			

N/A

N/A

N/A

N/A

Full Waveform Parameters

Use 3' Waveform to derive TR	N/A	
Use 4' Waveform to derive TR	N/A	
Use 5' Waveform to derive TR	N/A	
Use 6' Waveform to derive TR	N/A	
3' Waveform Discriminator Level	N/A	mV
4' Waveform Discriminator Level	N/A	mV
5' Waveform Discriminator Level	N/A	mV
6' Waveform Discriminator Level	N/A	mV
Waveform Discriminator Filter	N/A	
Semblance Window Width	N/A	micro-sec
Sonic Despiker	N/A	N/A

Induction Calibration MAI-A.A 111

Base Calibration on 11-FEB-2017,10:02

Field Check on 03-MAR-2017 10:38

Base Calibration

Test Loop Calibration		Measured		Calibrated (mmho/m)	
Channel		Low	High	Low	High
1		17.6	473.6	9.3	966.2
2		6.4	385.9	7.6	821.4
3		3.2	264.0	5.2	566.0
4		2.1	135.5	2.6	279.2

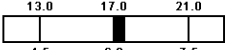
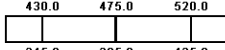
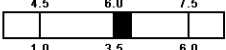
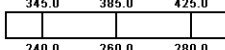
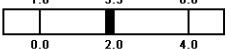
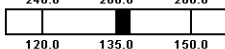
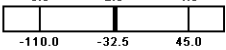
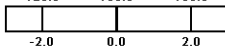
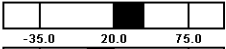
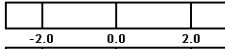
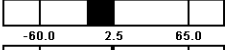
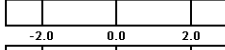
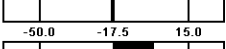
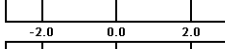
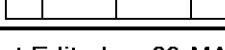
Array Temperature 23.0 Deg F

Test Loop Calibration Verified 03-DEC-2016,14:48

Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1	10.6	3867.8	9.7	3865.8
2	29.4	3524.5	27.5	3522.1
3	28.8	3018.5	27.1	3016.5
4	19.0	2056.6	17.8	2055.0
Deep	17.5	1960.2	16.4	1958.8
Medium	42.9	3973.0	40.5	3970.4
Shallow	43.8	5227.4	41.0	5224.0

Array Temperature 43.0 66.6 Deg F

Induction Calibration Tolerances MAI-A.A 111

Low Conductivity 1	17.6		mmho/m High Conductivity 1	473.6		mmho/m
Low Conductivity 2	6.4		mmho/m High Conductivity 2	385.9		mmho/m
Low Conductivity 3	3.2		mmho/m High Conductivity 3	264.0		mmho/m
Low Conductivity 4	2.1		mmho/m High Conductivity 4	135.5		mmho/m
Background Vx 1	0.0		mmho/m Phase Check Loop 1	0.0		%
Background Vx 2	0.0		mmho/m Phase Check Loop 2	0.0		%
Background Vx 3	0.0		mmho/m Phase Check Loop 3	0.0		%
Background Vx 4	0.0		mmho/m Phase Check Loop 4	0.0		%

Induction Constants MAI-A.A 111

Last Edited on 03-MAR-2017,20:49

Induction Model	RtAP-WBM		
Borehole Correction Constants			
Tool Centred	No		
Hole Size Source	Density Caliper		
Hole Size Constant Value	N/A	inches	
Stand-off Type	Fins		
Stand-off	0.50	inches	
Number of Fins on Stand-off	8.0000		
Stand-off Fin Angle	45.00	degrees	
Stand-off Fin Width	0.5000	inches	
Rm Source	Global Value: Temperature Corrected		

Rm Source Global value: Temperature Corrected
Temp. for Rm Corr. MCG External Temperature

Squasher Start		0.0020	mhos/metre
Squasher Offset		N/A	mhos/metre
Borehole Normalisation			
DRM1	0.0000	DRC1	0.0000
DRM2	0.0000	DRC2	0.0000
MRM1	0.0000	MRC1	0.0000
MRM2	0.0000	MRC2	0.0000
SRM1	0.0000	SRC1	0.0000
SRM2	0.0000	SRC2	0.0000
Calibration Site Corrections			
Channel 1		0.00	mmhos/metre
Channel 2		0.00	mmhos/metre
Channel 3		0.00	mmhos/metre
Channel 4		0.00	mmhos/metre
Symmetrised Receiver Gains			
Receiver 1		1.00	
Receiver 2		1.00	
Receiver 3		1.00	
Receiver 4		1.00	
Apparent Porosity and Water Saturation Constants			
Archie Constant (A)		1.00	
Cementation Exponent (M)		2.00	
Saturation Exponent (N)		2.00	
Saturation of Water for Apor		100.00	percent
Resistivity of Water for Apor and Sw		0.05	ohm-m
Resistivity of Mud Filtrate for Sw		0.00	ohm-m
Source for Rt		0.00	
Source for Rxo		0.00	

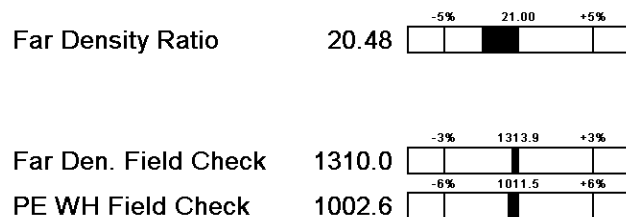
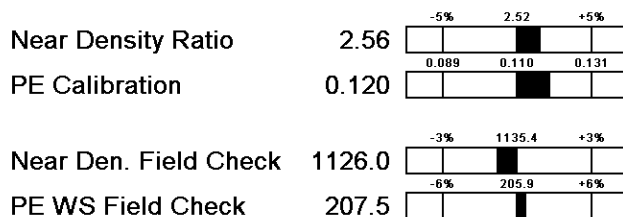
High Resolution Temperature Calibration MAI-A.A 111			Field Calibration on 13-JAN-2017,11:28
	Measured	Calibrated(Deg F)	
Lower	10.00	10.00	
Upper	100.00	100.00	

High Resolution Temperature Constants MAI-A.A 111		Last Edited on 26-JUN-2014,15:06
Pre-filter Length	11	

Photo Density Calibration MPD-B 104					Base Calibration on 11-FEB-2017 11:11	
					Field Check on 03-MAR-2017 10:47	
Density Calibration						
Base Calibration		Measured		Calibrated (sdu)		
		Near	Far	Near	Far	
	Background	1135	1314			
	Reference 1	49907	23891	59556	30836	
	Reference 2	20183	2416	24941	2541	
Field Check at Base						
		1135.4	1313.9			
Field Check						
		1126.0	1310.0			
PE Calibration						
Base Calibration		Measured		Calibrated		
	WS	WH	Ratio	Ratio		
	Background	206	1011			
	Reference 1	21020	49728	0.427	0.371	
	Reference 2	5897	20051	0.299	0.272	
Field Check at Base						
		205.9	1011.5			
Field Check						

207.5 1002.6

Photo Density Calibration Tolerances MPD-B 104



Density Constants MPD-B 104

Last Edited on 03-MAR-2017,20:50

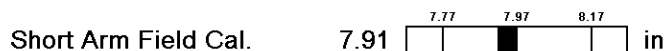
Density Source Id	P50557B	
Nylon Calibrator Number	DNCE695	
Aluminium Calibrator Number	DACD698	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.09	gm/cc
Mud Density Z/A Multiplier	1.11	
Mud Filtrate Density	1.00	gm/cc
Dry Hole Mud Filtrate Density	1.00	gm/cc
DNCT	0.00	gm/cc
CRCT	0.00	gm/cc
Density Z/A Correction	Hybrid	
Precision Enhanced Density Processing	Not Applied	
Matrix Density (gm/cc)	Depth (ft)	
2.71	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	

Caliper Calibration MPD-B 104

Base Calibration on 11-FEB-2017 10:55
Field Calibration on 03-MAR-2017 10:42

Base Calibration		
Reading No	Measured	Calibrator Size (in)
1	14696	3.99
2	23744	5.98
3	32402	7.97
4	40592	9.86
5	49680	11.92
6	N/A	N/A
Field Calibration		
	Measured Caliper (in)	Actual Caliper (in)
	7.91	7.97

Caliper Calibration Tolerances MPD-B 104



DOWNHOLE EQUIPMENT

C:\Minimus 16.05.4955\Data\McCoy Reed Trust 'A' #1-36\McCoy Reed Trust 'A' #1-36_002.dta

Cablehead, 11 pin
CBH-C 0 LG: 2.40 ft WT: 24.3 lb OD: 2.244 in

Compact Comms Gamma
MCG-C 123 LG: 8.70 ft WT: 63.9 lb OD: 2.244 in



55.39 ft GRGC - MCG Gamma Ray

52.48 ft CGXT - MCG External Temperature

Compact Micro-log
MML-A 7 LG: 7.97 ft WT: 81.6 lb OD: 2.244 in

Compact Neutron
MDN-A.B 66 LG: 5.04 ft WT: 50.7 lb OD: 2.244 in

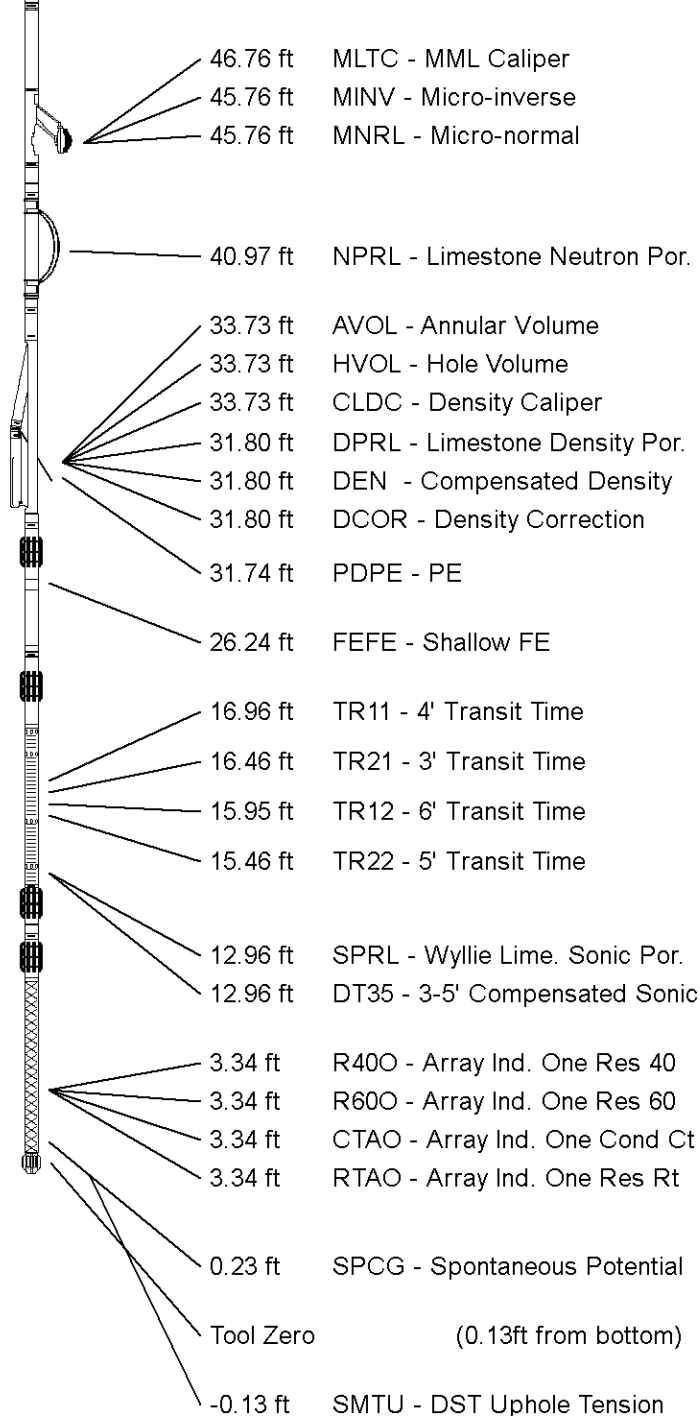
Compact Density/Caliper
MPD-B 104 LG: 9.59 ft WT: 90.4 lb OD: 2.449 in

Compact Focussed Electric
MFE-B.J 352 LG: 6.05 ft WT: 48.5 lb OD: 2.244 in

Compact Sonic
MSS-A.A 55 LG: 12.52 ft WT: 72.8 lb OD: 2.244 in

Compact Induction
MAI-A.A 111 LG: 10.81 ft WT: 48.5 lb OD: 2.244 in

Total Length: 63.07 ft Weight: 480.6 lb



All measurements relative to tool zero.

COMPANY	McCOY PETROLEUM CORPORATION
WELL	REED TRUST "A" #1-36
FIELD	WILDCAT
PROVINCE/COUNTY	GRAY
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	2780	feet	First Reading	5469.00	feet
Elevation Drill Floor	2778	feet	Depth Driller	5500.00	feet
Elevation Ground Level	2769	feet	Depth Logger	5501.00	feet



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CALIPER LOG

