

**Weatherford****COMPENSATED SONIC
WITH INTEGRATED TRANSIT TIME**

COMPANY			SHAKESPEARE OIL CO., INC.		
WELL			ANDERSON #1-33		
FIELD			WILDCAT		
PROVINCE/COUNTY			DECATUR		
COUNTRY/STATE			U.S.A. / KANSAS		
LOCATION			1090' FSL & 1135' FWL		
SEC 33	TWP 4S	RGE 29W	Other Services		MAI/MFE
Latitude			MDN/MPD		
Longitude			MML		
API Number	15-039-21233				
Permanent Datum GL, Elevation 2776 feet					
Log Measured From KB					
Drilling Measured From KB @ 8 FEET					
Date	16-SEP-2016				
Run Number	ONE				
Service Order	4558-161170171				
Depth Driller	4500.00		feet		
Depth Logger	4504.00		feet		
First Reading	4491.00		feet		
Last Reading	264.00		feet		
Casing Driller	264.00		feet		
Casing Logger	264.00		feet		
Bit Size	7.875		inches		
Hole Fluid Type	CHEMICAL				
Density / Viscosity	9.30	lb/USg	60.00	CP	
PH / Fluid Loss	10.00		6.80	ml/30Min	
Sample Source	FLOWLINE				
Rm @ Measured Temp	1.45 @ 75.0		ohm-m		
Rmf @ Measured Temp	1.16 @ 75.0		ohm-m		
Rmc @ Measured Temp	1.74 @ 75.0		ohm-m		
Source Rmf / Rmc	CALC		CALC		
Rm @ BHT	0.95 @ 115.0		ohm-m		
Time Since Circulation	5 HOURS				
Max Recorded Temp	115.00		deg F		
Equipment / Base	13096		OKC		
Recorded By	ADAM SILL				
Witnessed By	TIM PRIEST				

BOREHOLE RECORD					Last Edited: 16-SEP-2016 09:36
Bit Size inches		Depth From feet		Depth To feet	
7.875		264.00		4500.00	
CASING RECORD					
Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft	
SURFACE	8.625	0.00	264.00	24.00	

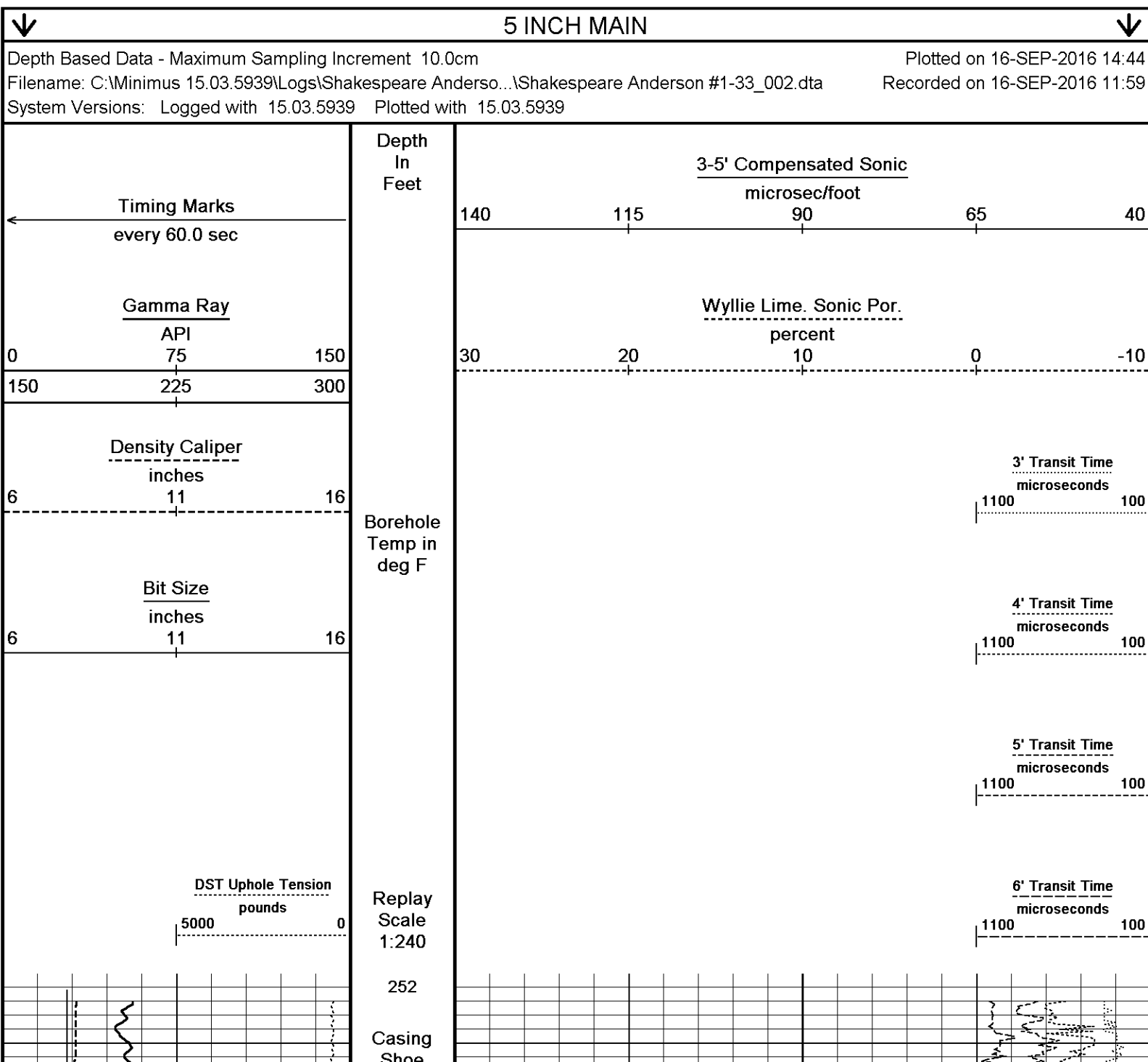
REMARKS
- SOFTWARE ISSUE: WLS 15.03.5939.
- RUN ONE: MCG, MML, MDN, MPD, MFE, MSS, MAI RUN IN COMBINATION. - HARDWARE: DUAL BOWSPRING USED ON MDN. 0.5 INCH STANDOFF USED ON MFE. TWO 0.5 INCH STANDOFFS USED ON MSS. 0.5 INCH STANDOFF USED ON MAI.
- 2.71 G/CC LIMESTONE DENSITY MATRIX USED TO CALCULATE POROSITY.
- 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: 1672 CU.FT.
- ANNULAR HOLE VOLUME WITH 5.5 INCH PRODUCTION CASING FROM TD TO 3600 FEET: 168 CU.FT.

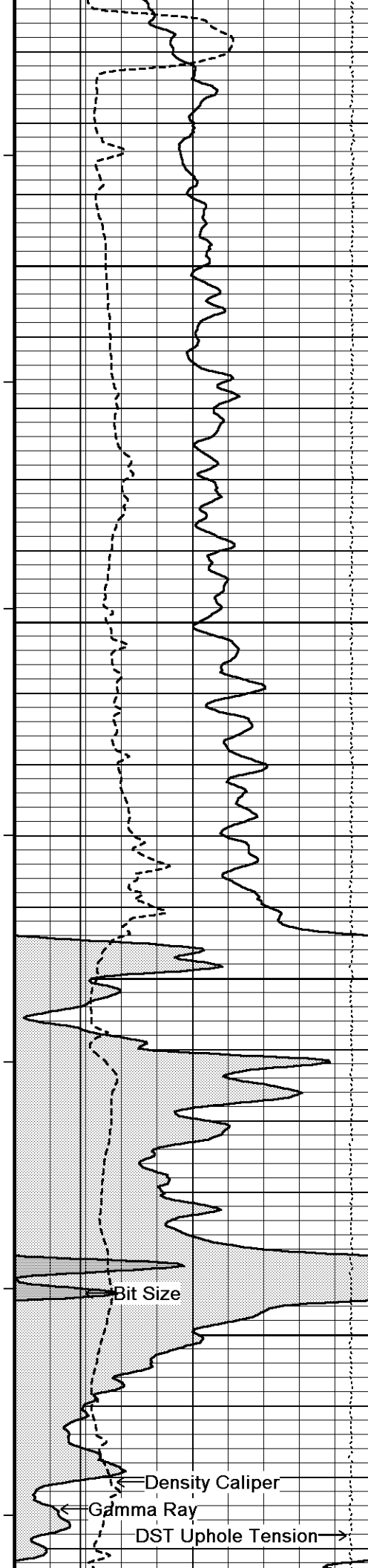
- RIG: DUKE #4.

- ENGINEER: A. SILL.

- OPERATOR: J. JONES.

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.





300

89°

350

89°

400

89°

450

6' Transit Time →

5' Transit Time →

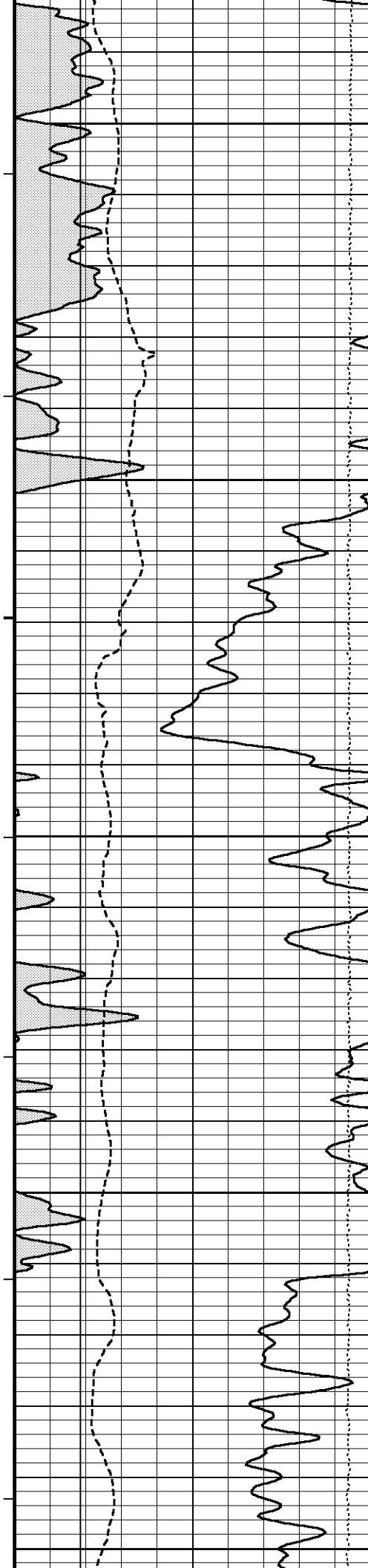
4' Transit Time →

3' Transit Time →

Density Caliper

Gamma Ray

DST Uphole Tension



90°

500

90°

550

91°

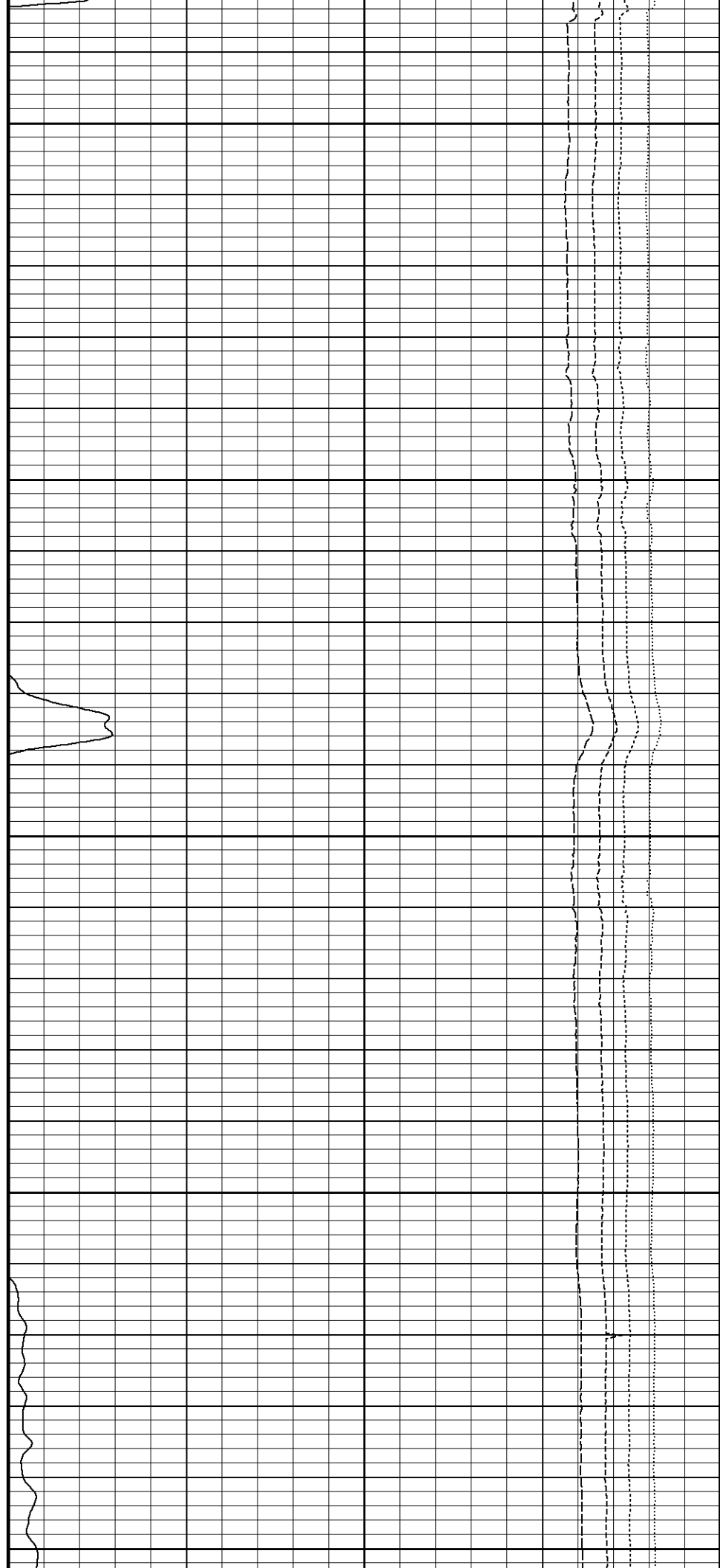
600

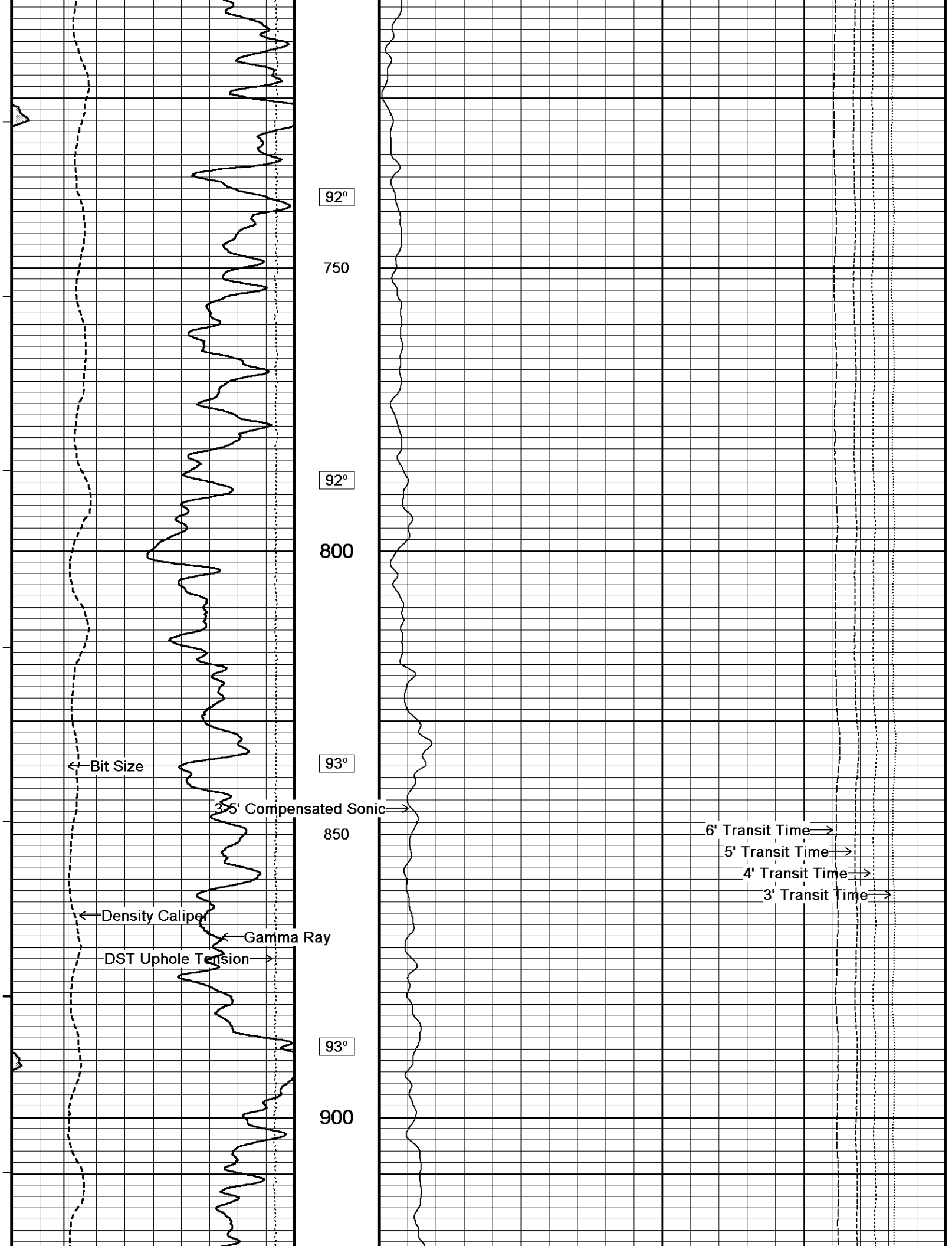
91°

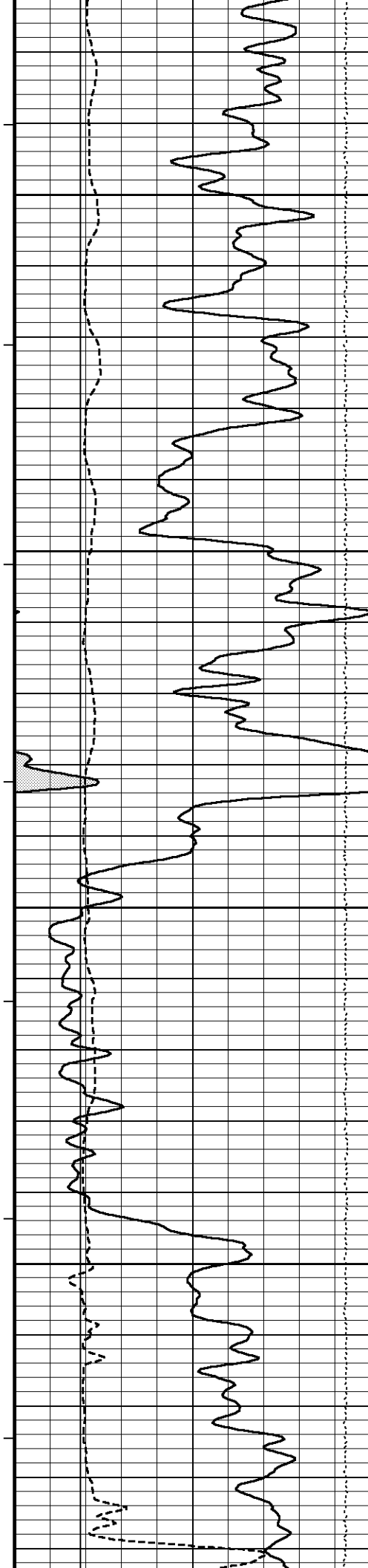
650

92°

700







94°

950

94°

1000

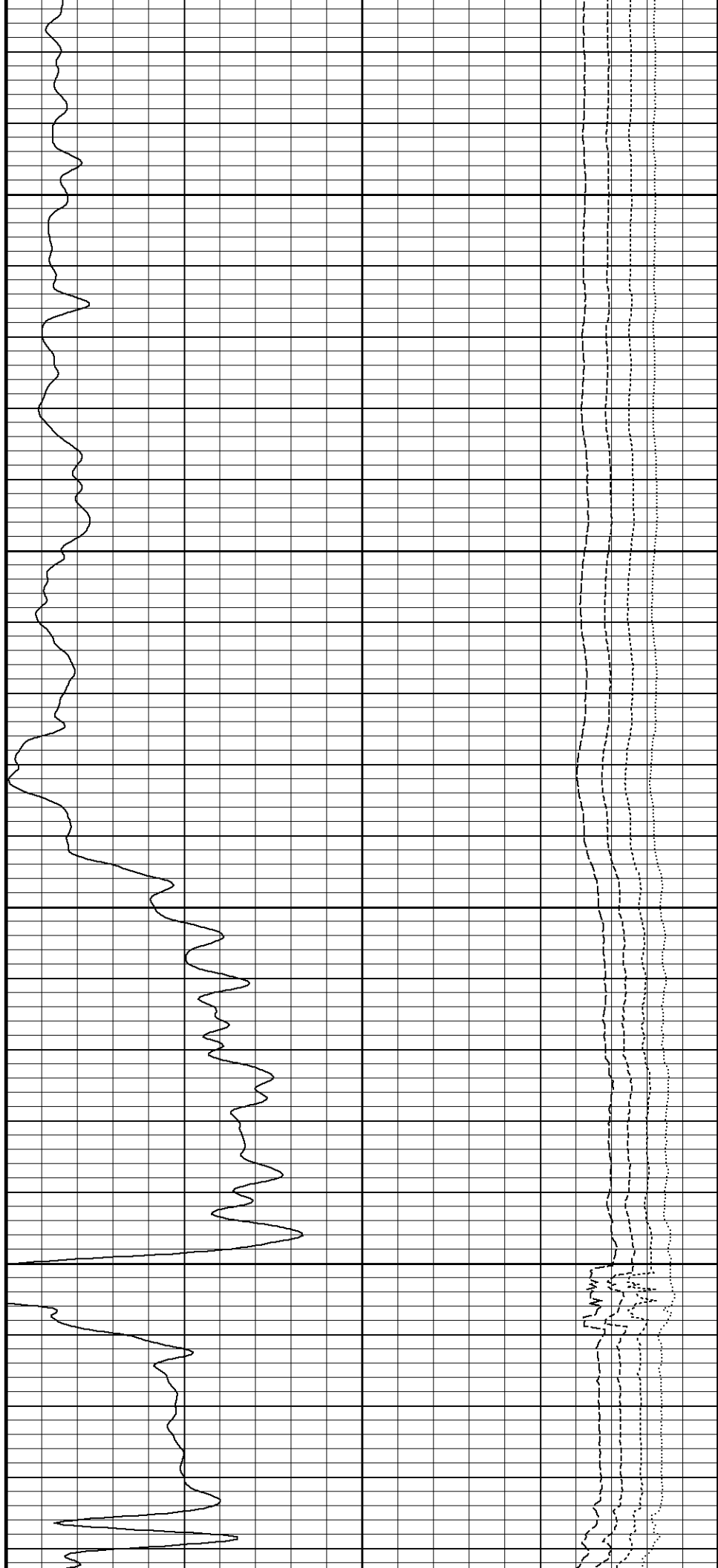
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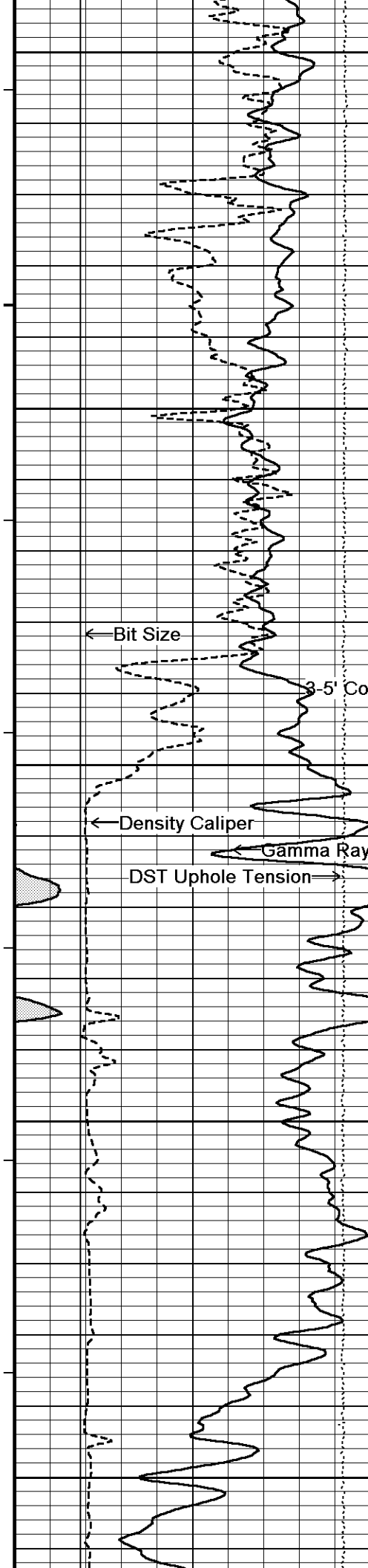
1050

95°

1100

95°





1150

96°

1200

96°

1250

96°

1300

96°

1350

3-5' Compensated Sonic

← Bit Size

← Density Caliper

← Gamma Ray

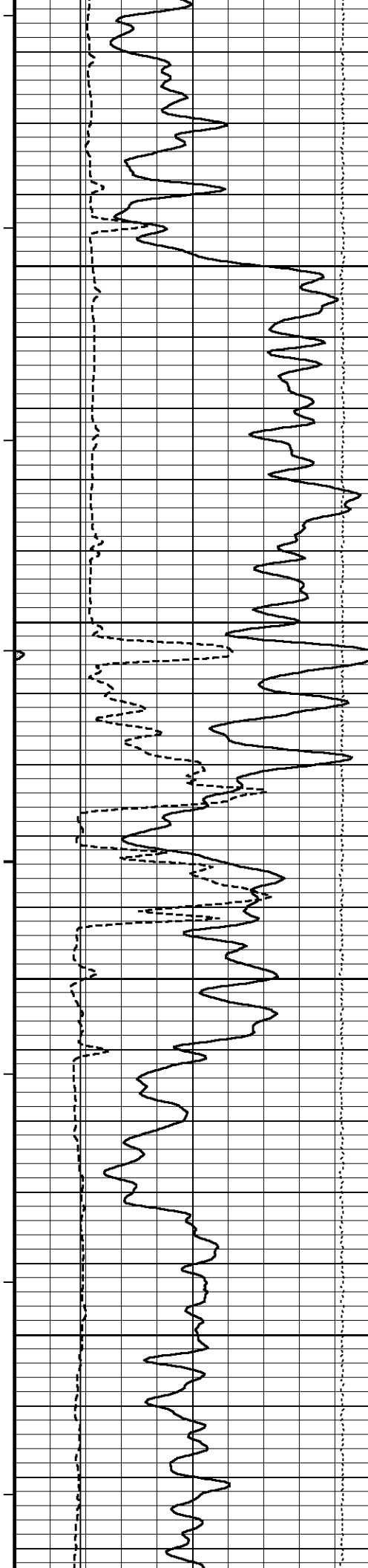
DST Uphole Tension →

6' Transit Time →

5' Transit Time →

4' Transit Time →

3' Transit Time →



97°

1400

97°

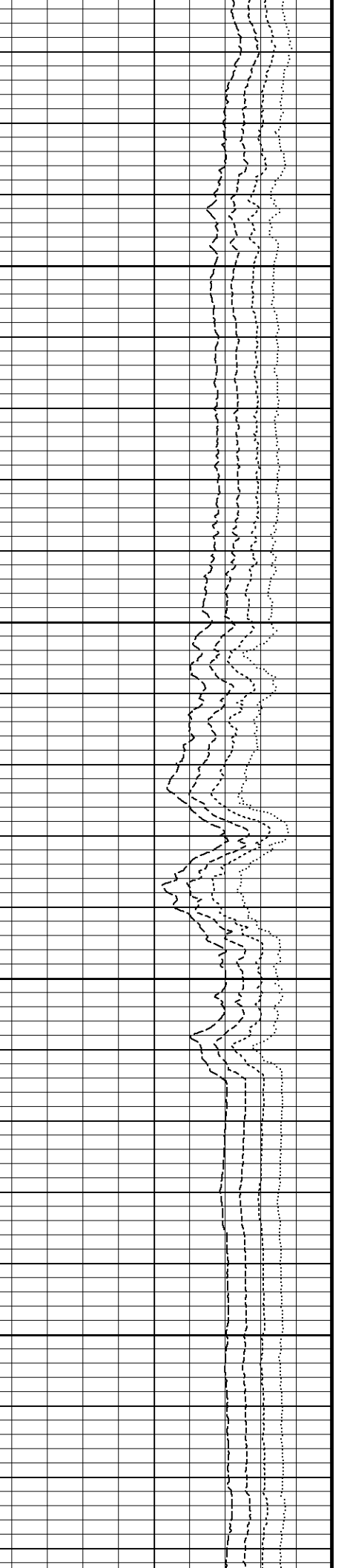
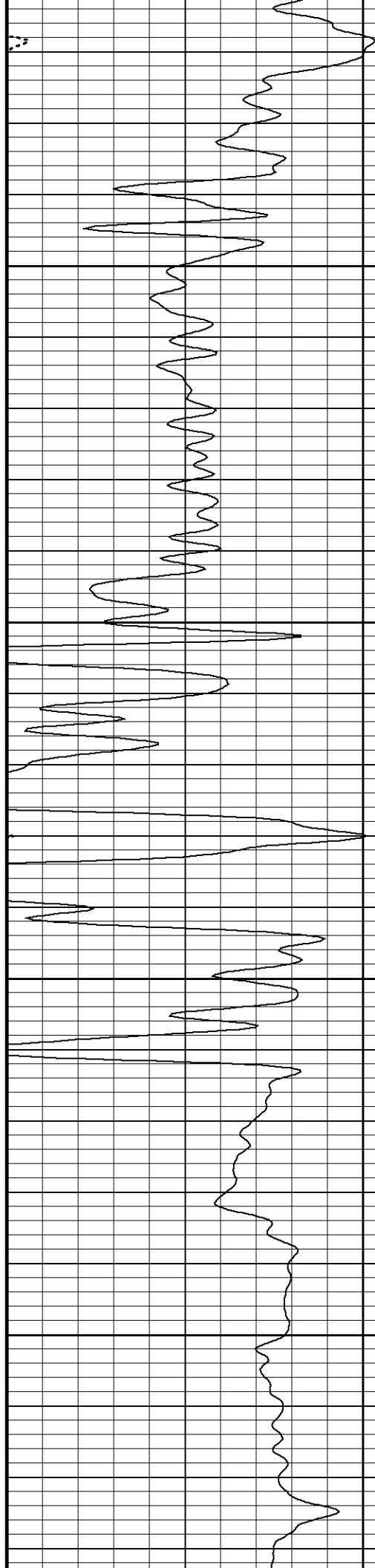
1450

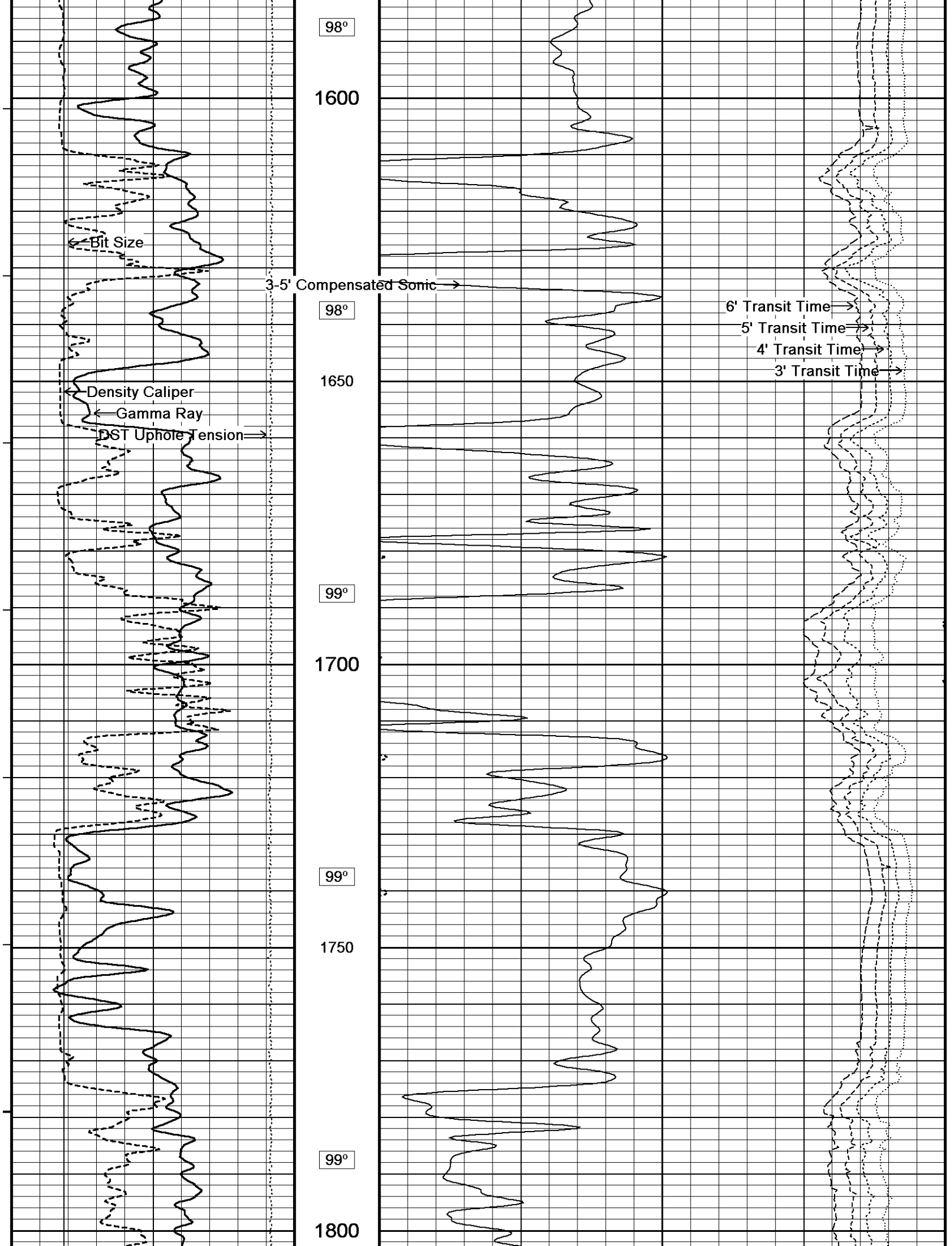
97°

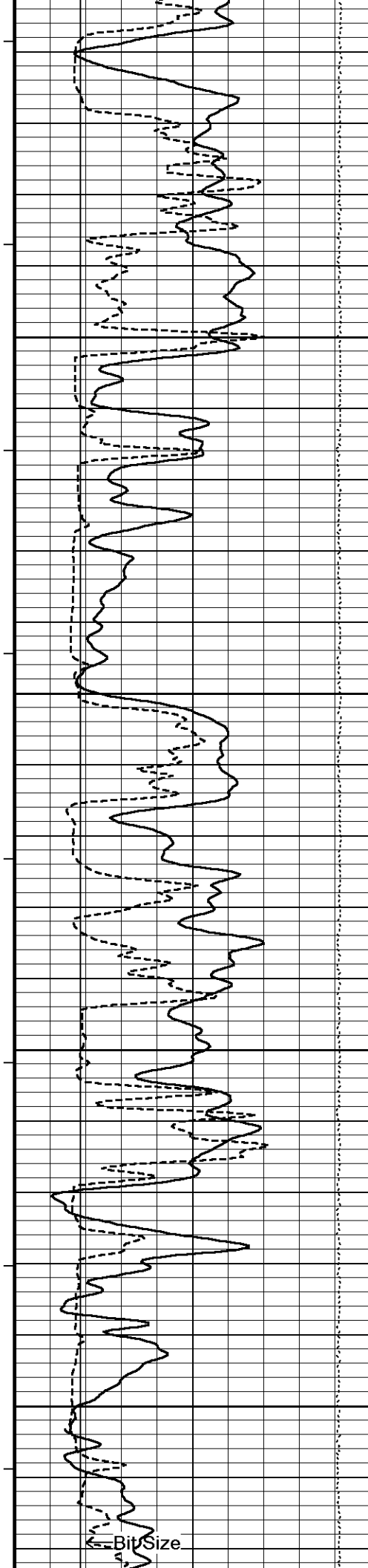
1500

97°

1550







100°

1850

100°

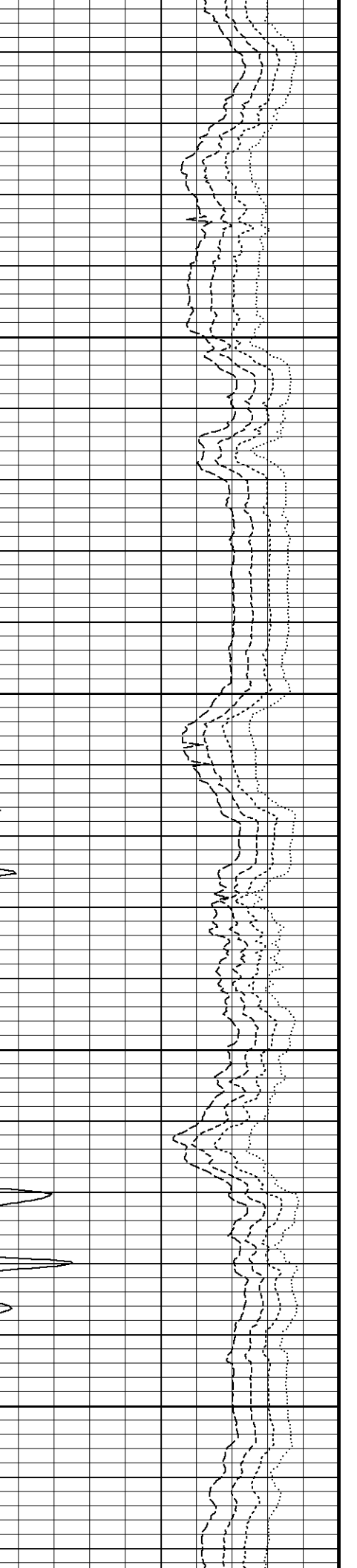
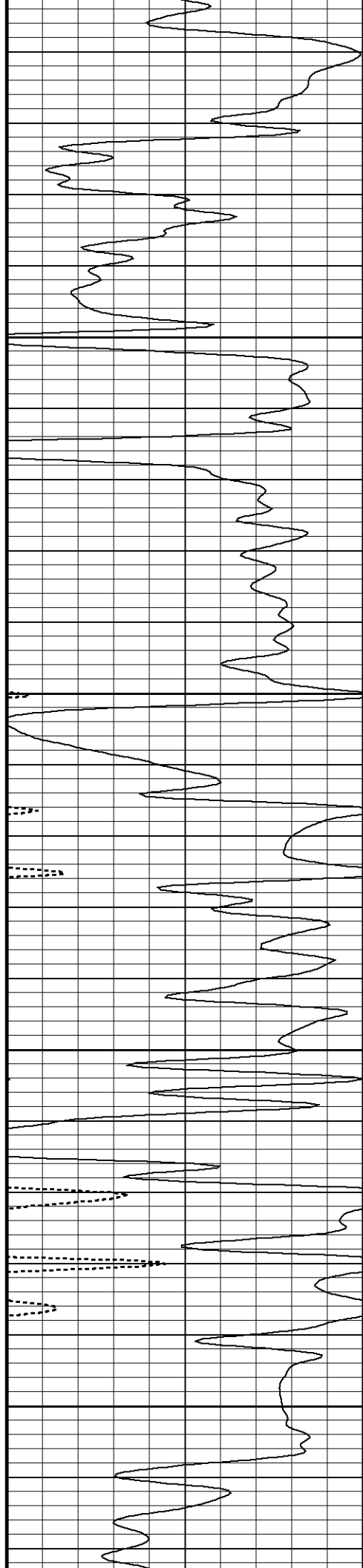
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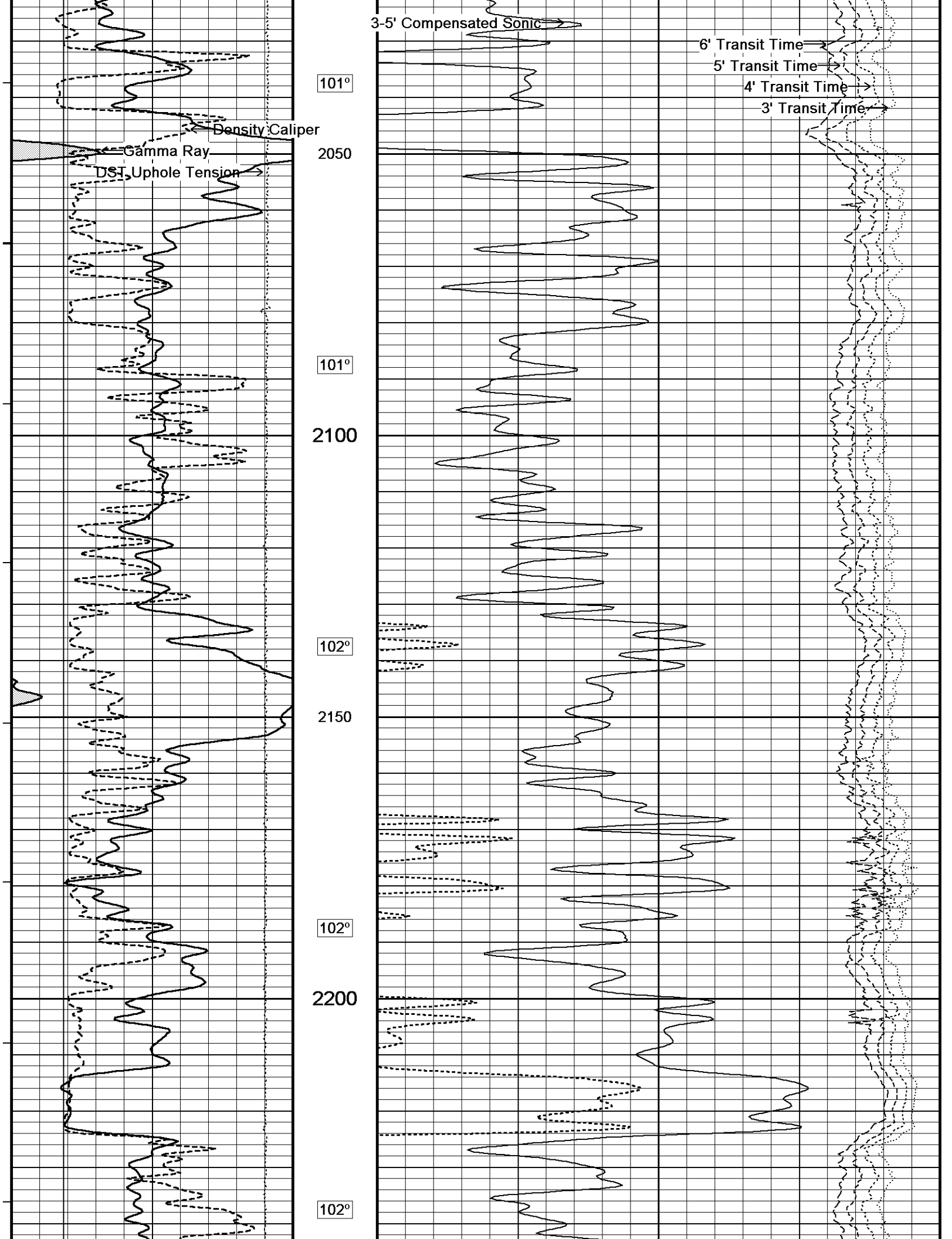
100°

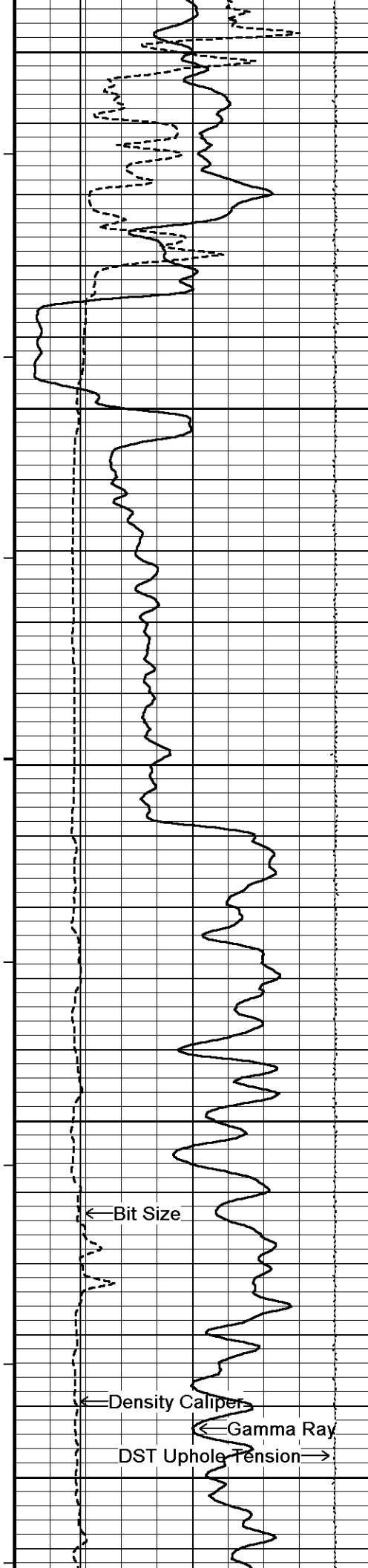
1950

100°

2000







2250

102°

2300

102°

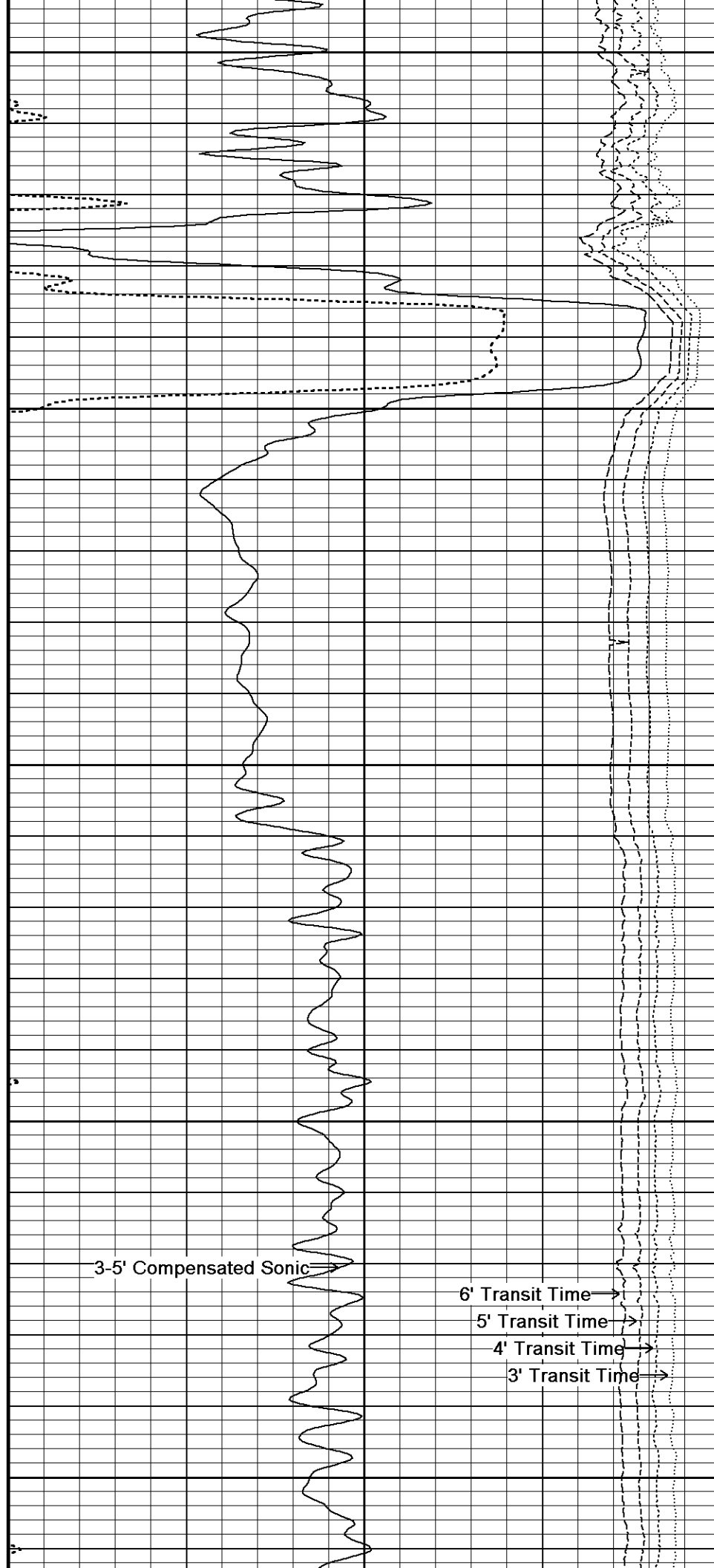
2350

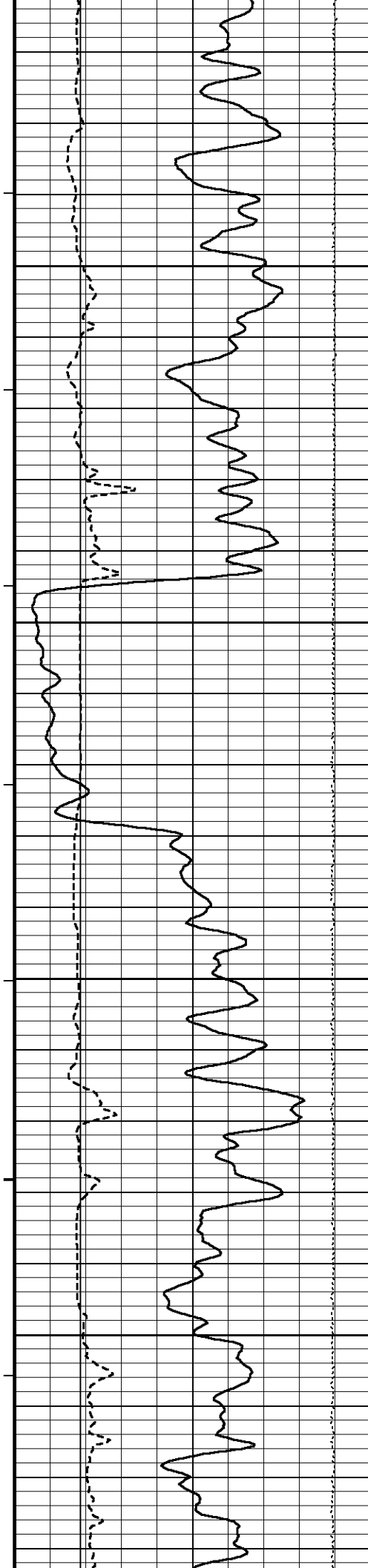
102°

2400

103°

2450





103°

2500

103°

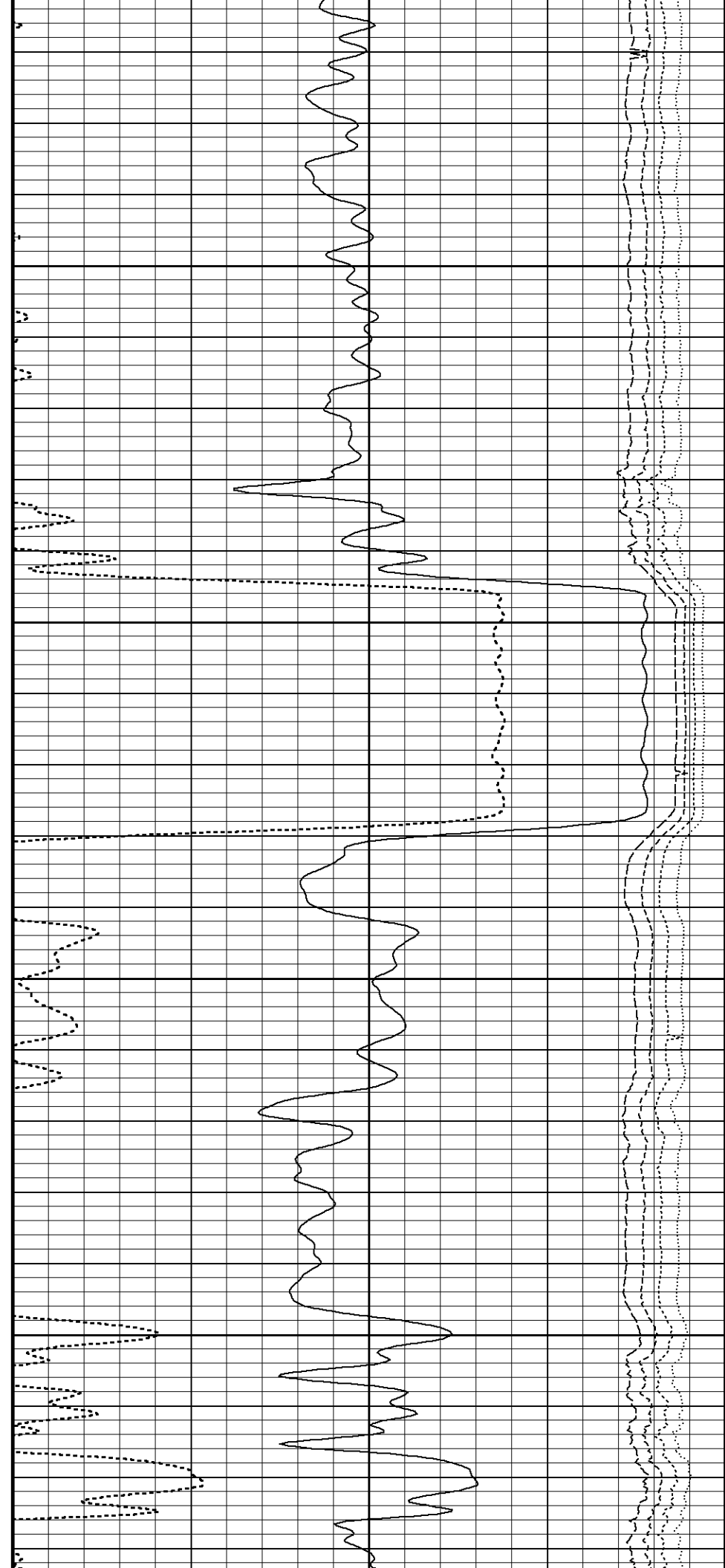
2550

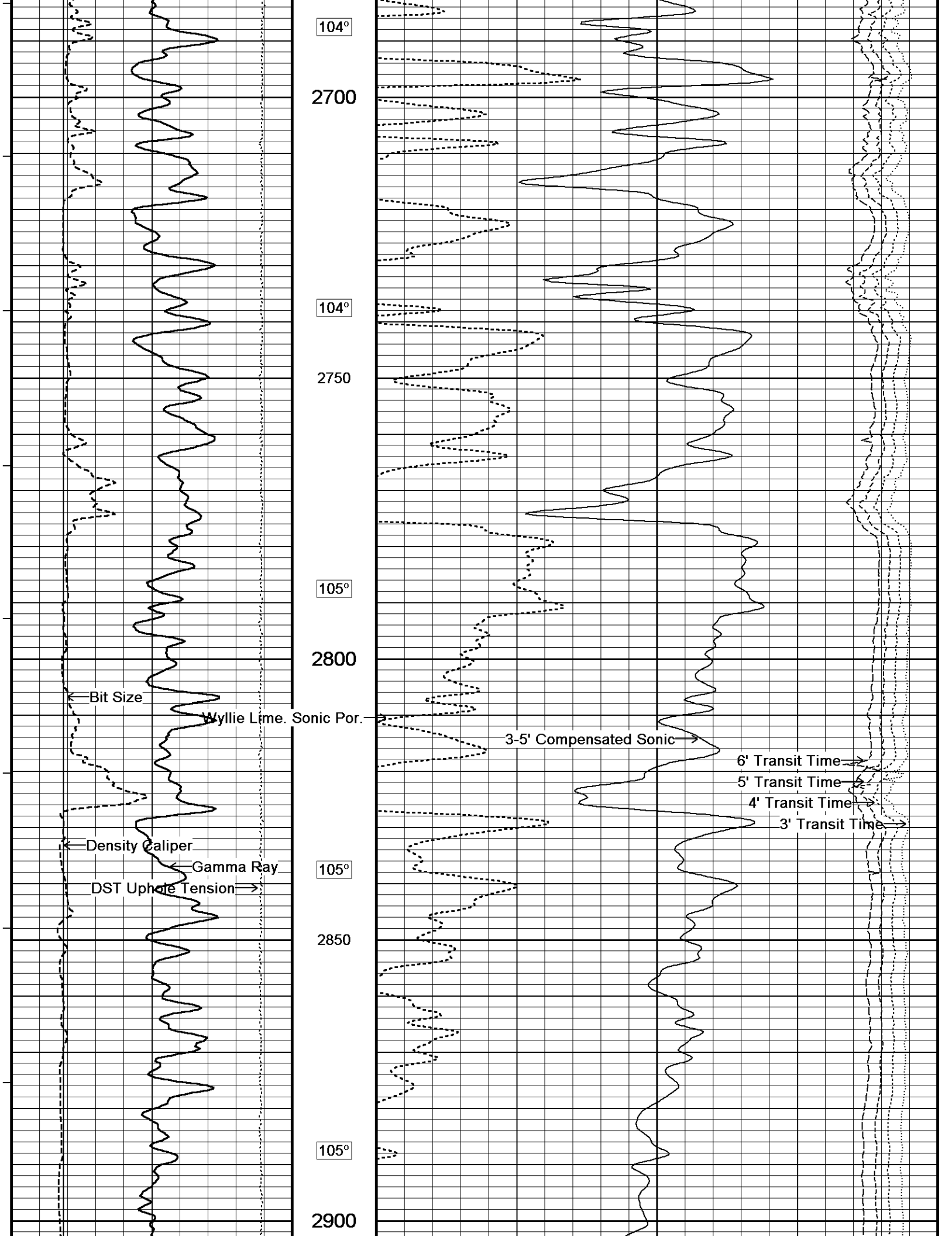
103°

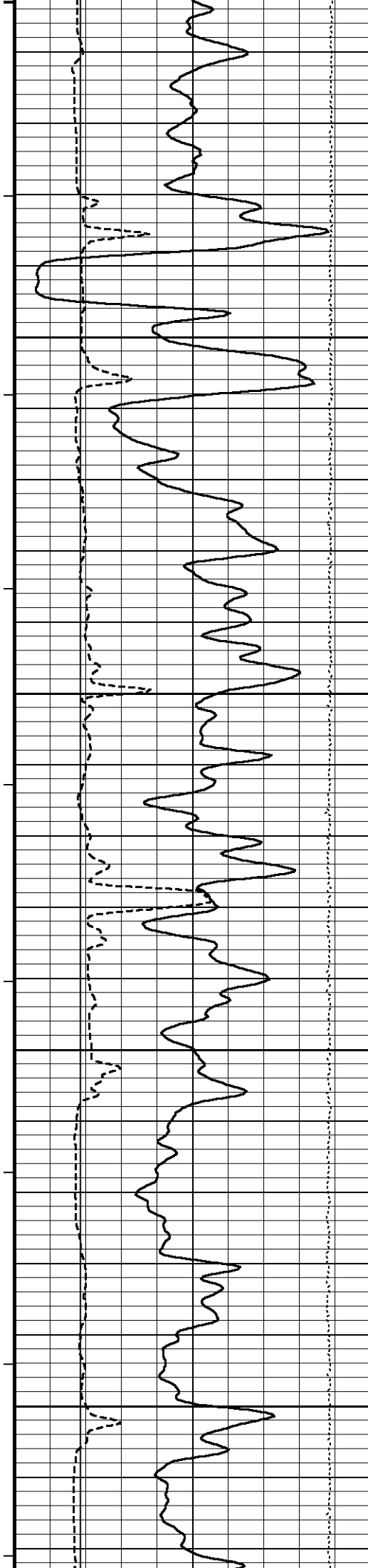
2600

104°

2650







105°

2950

106°

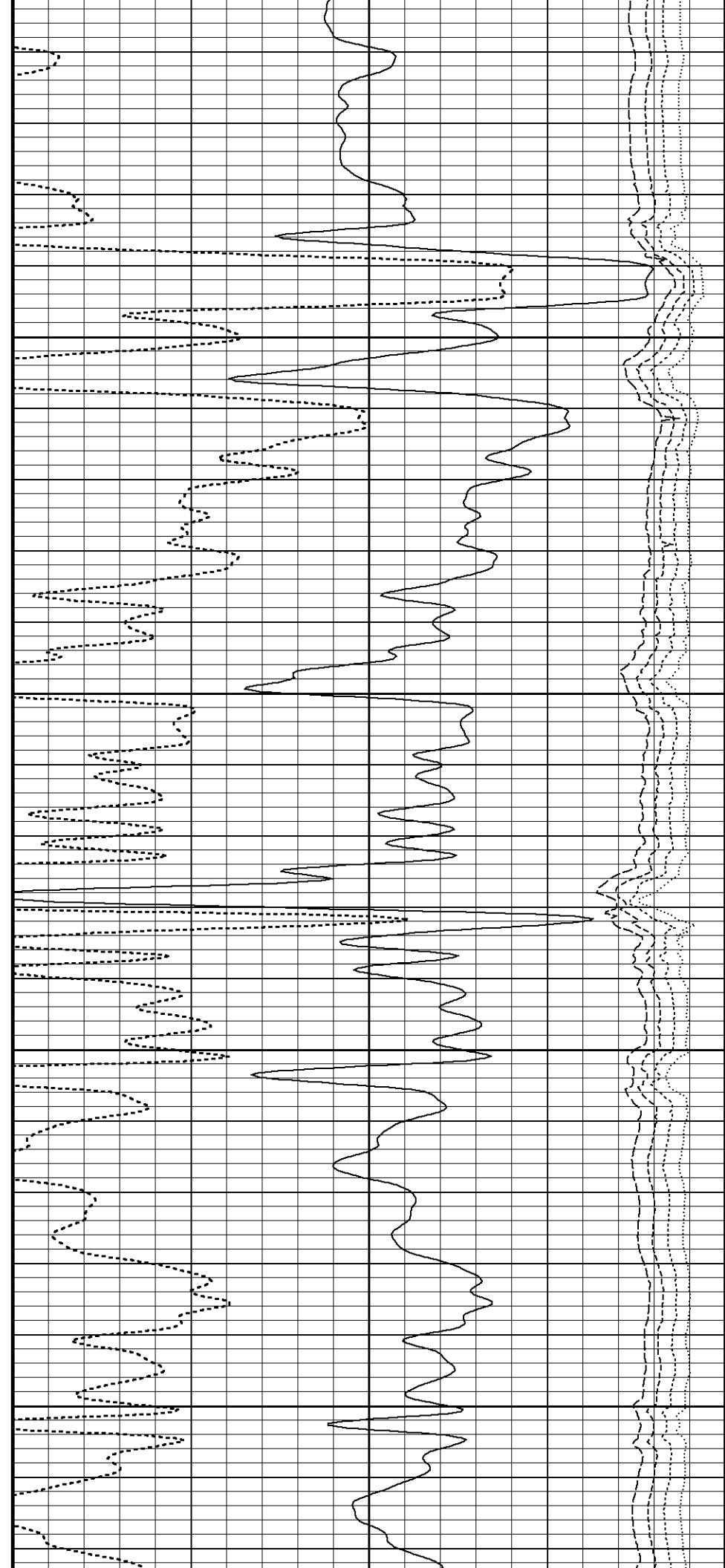
3000

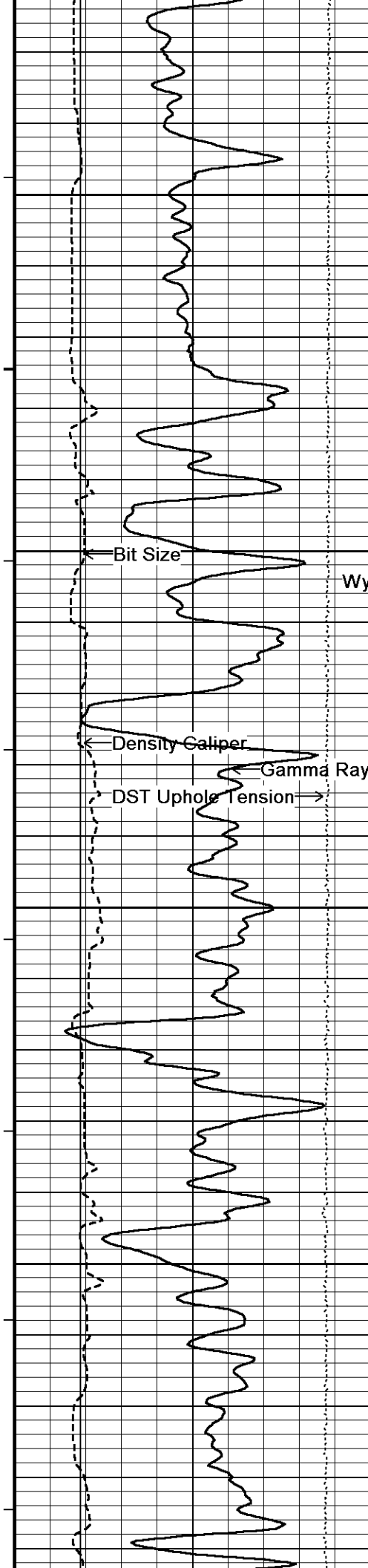
106°

3050

106°

3100





106°

3150

107°

3200

Wyllie Lime. Sonic Por. →

3-5' Compensated Sonic →

6' Transit Time →

5' Transit Time →

4' Transit Time →

3' Transit Time →

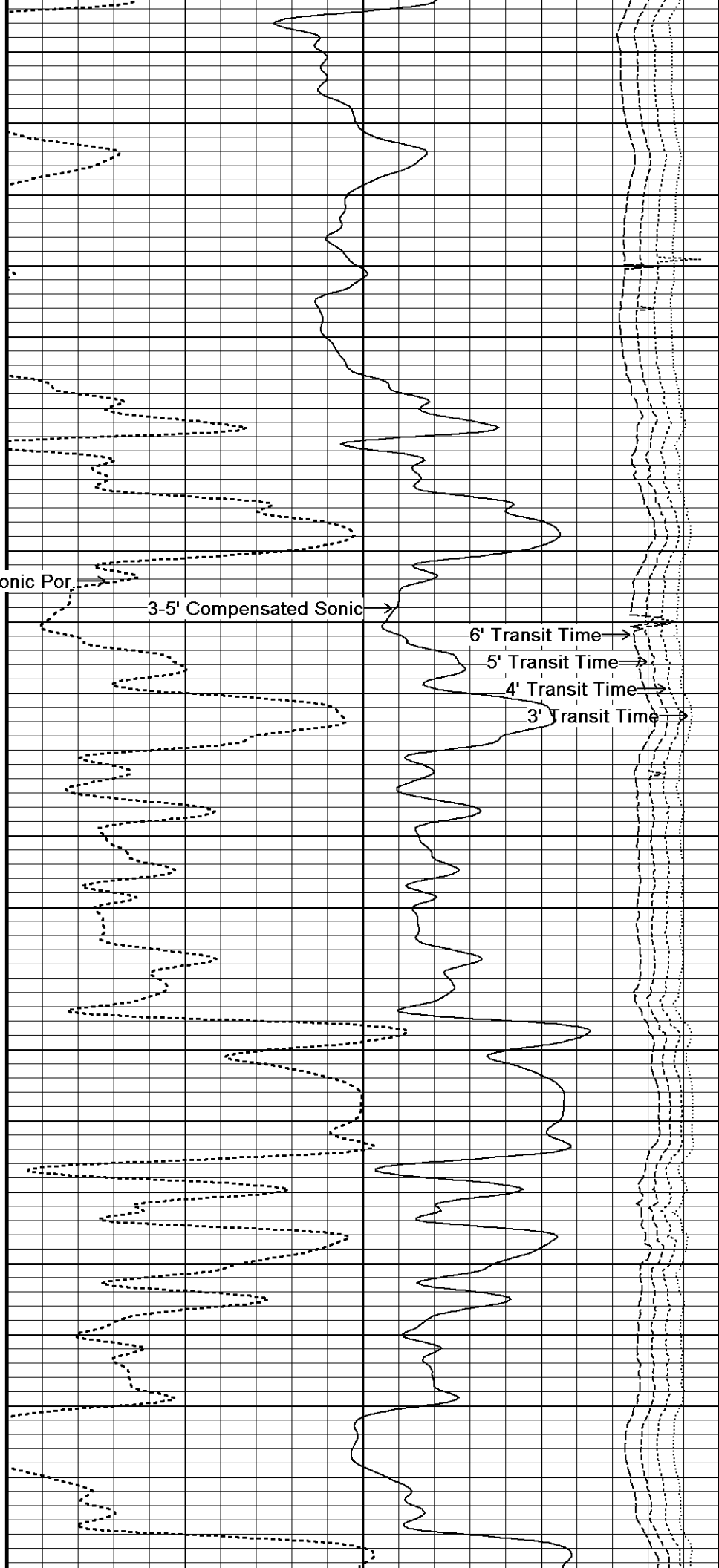
107°

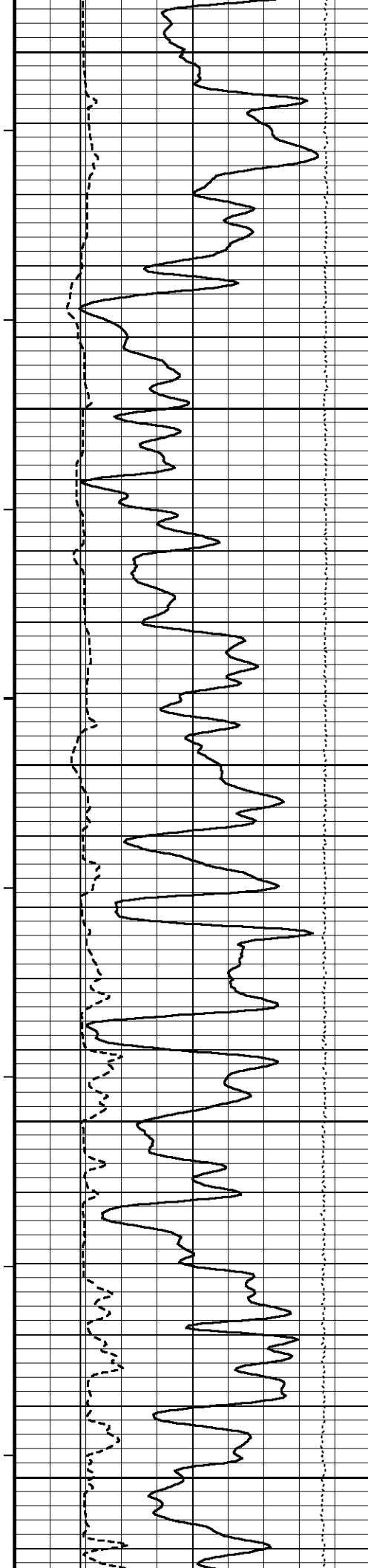
3250

107°

3300

107°





3350

108°

3400

108°

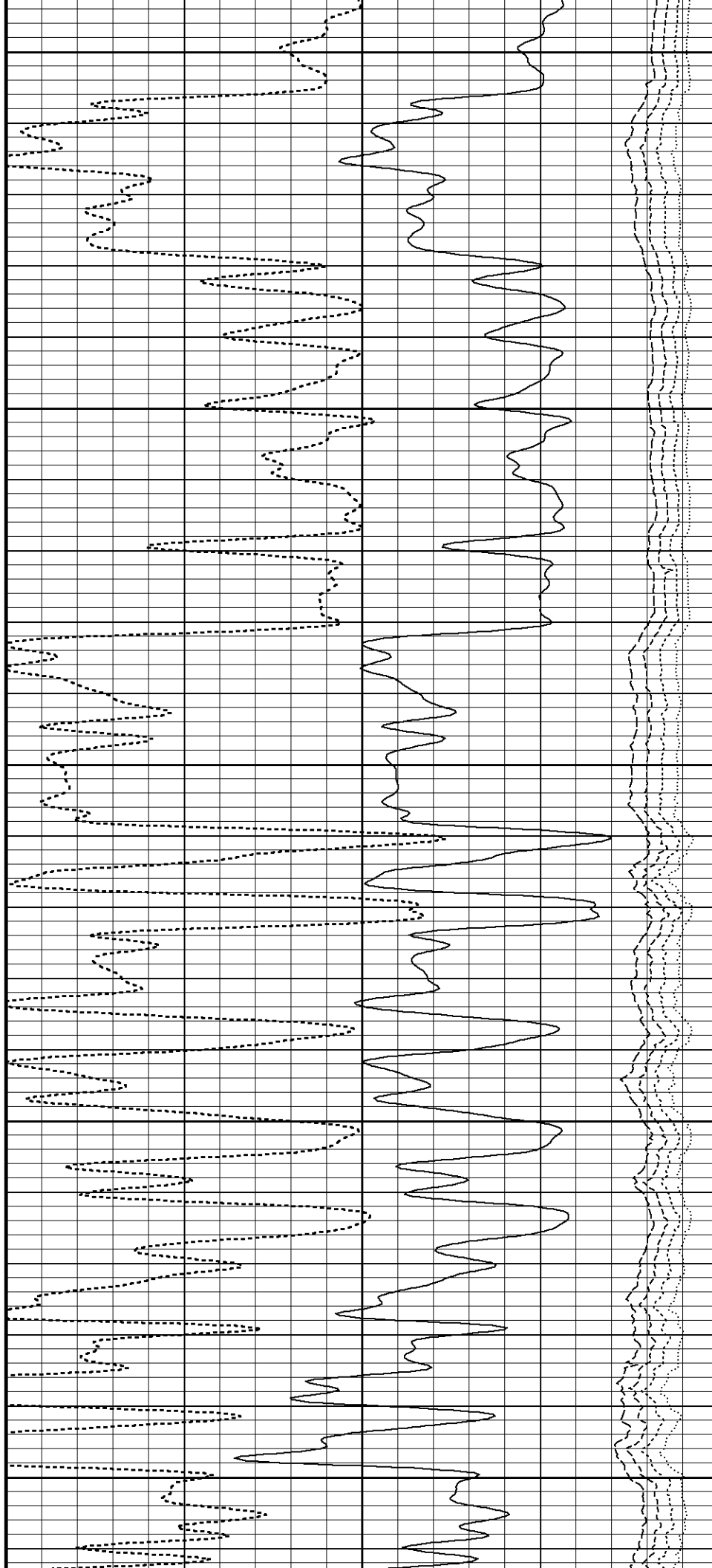
3450

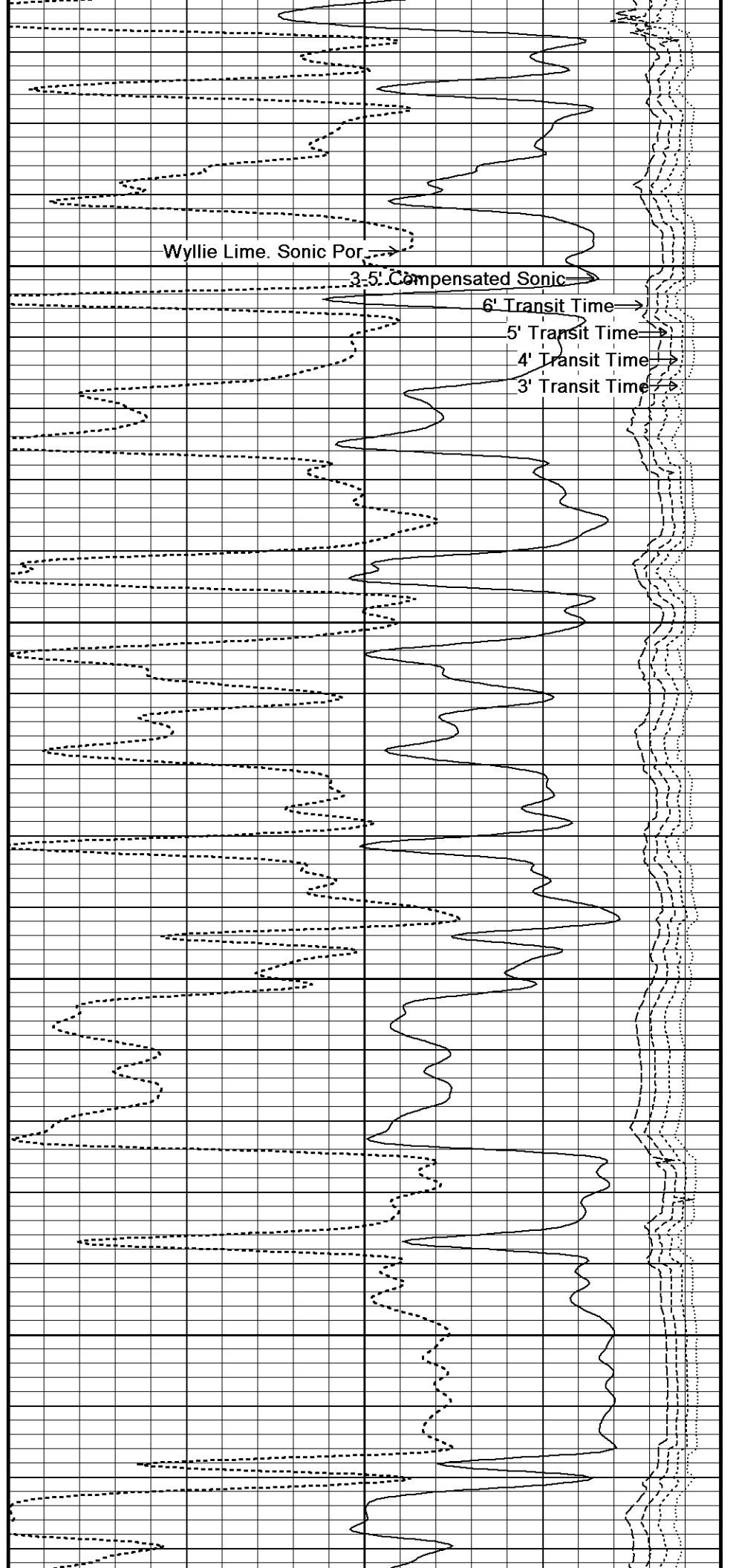
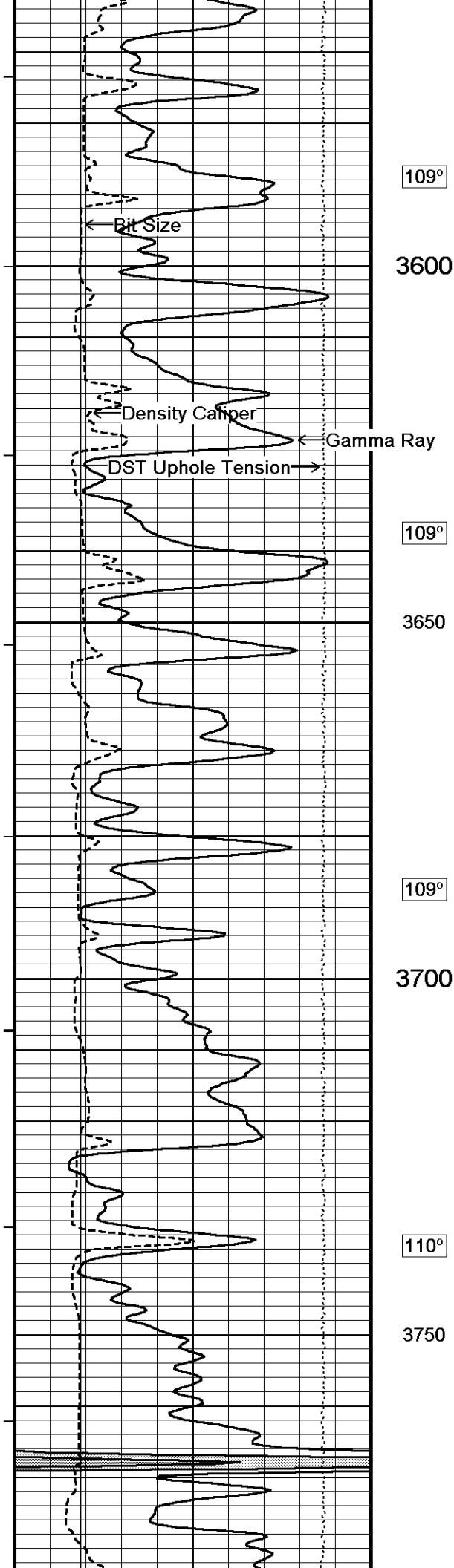
108°

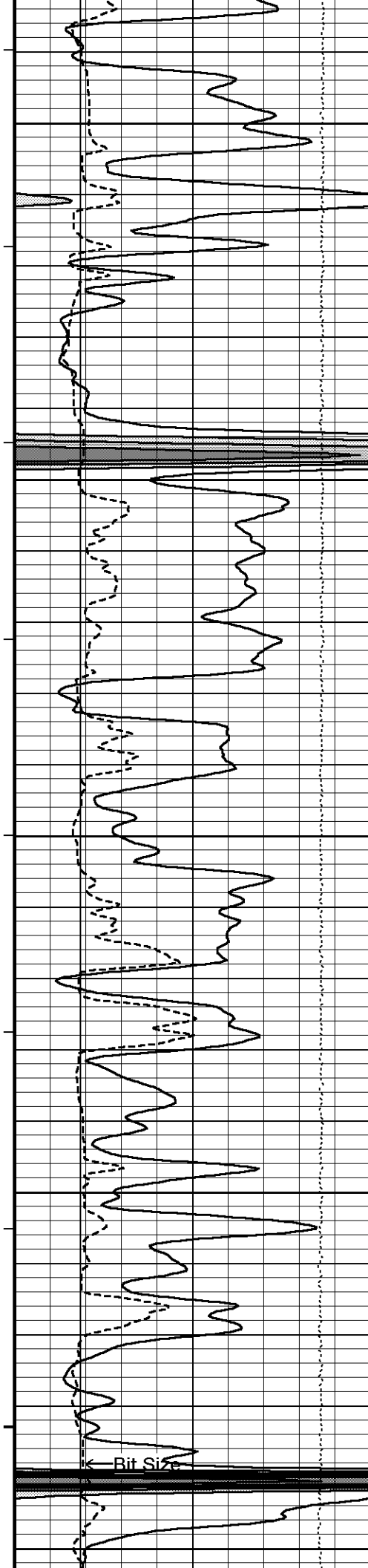
3500

108°

3550







110°

3800

110°

3850

111°

3900

111°

3950

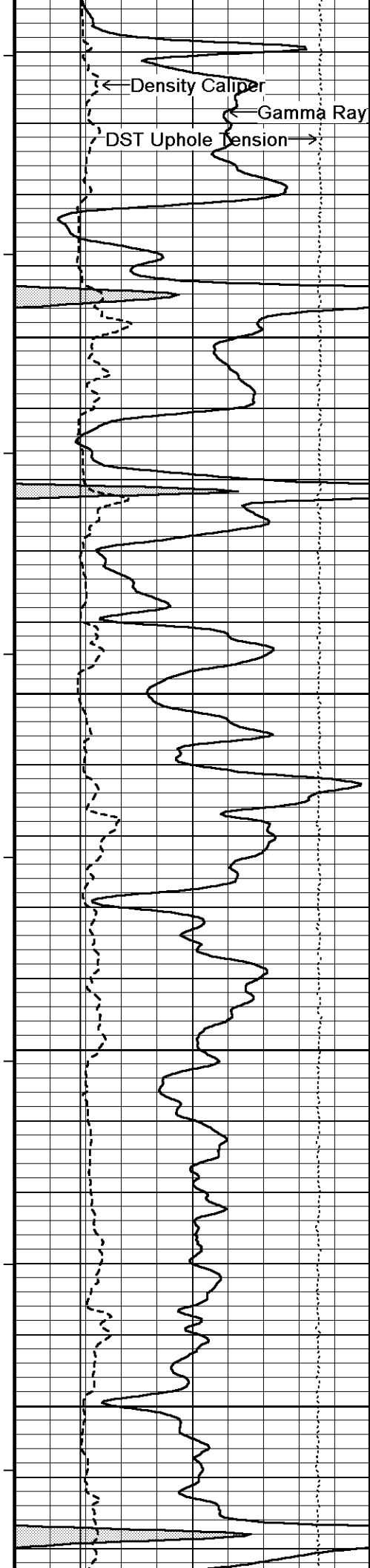
111°

4000

Wyllie Time Sonic Por. →

3-5' Compensated Sonic →

6' Transit Time →



112°

4050

112°

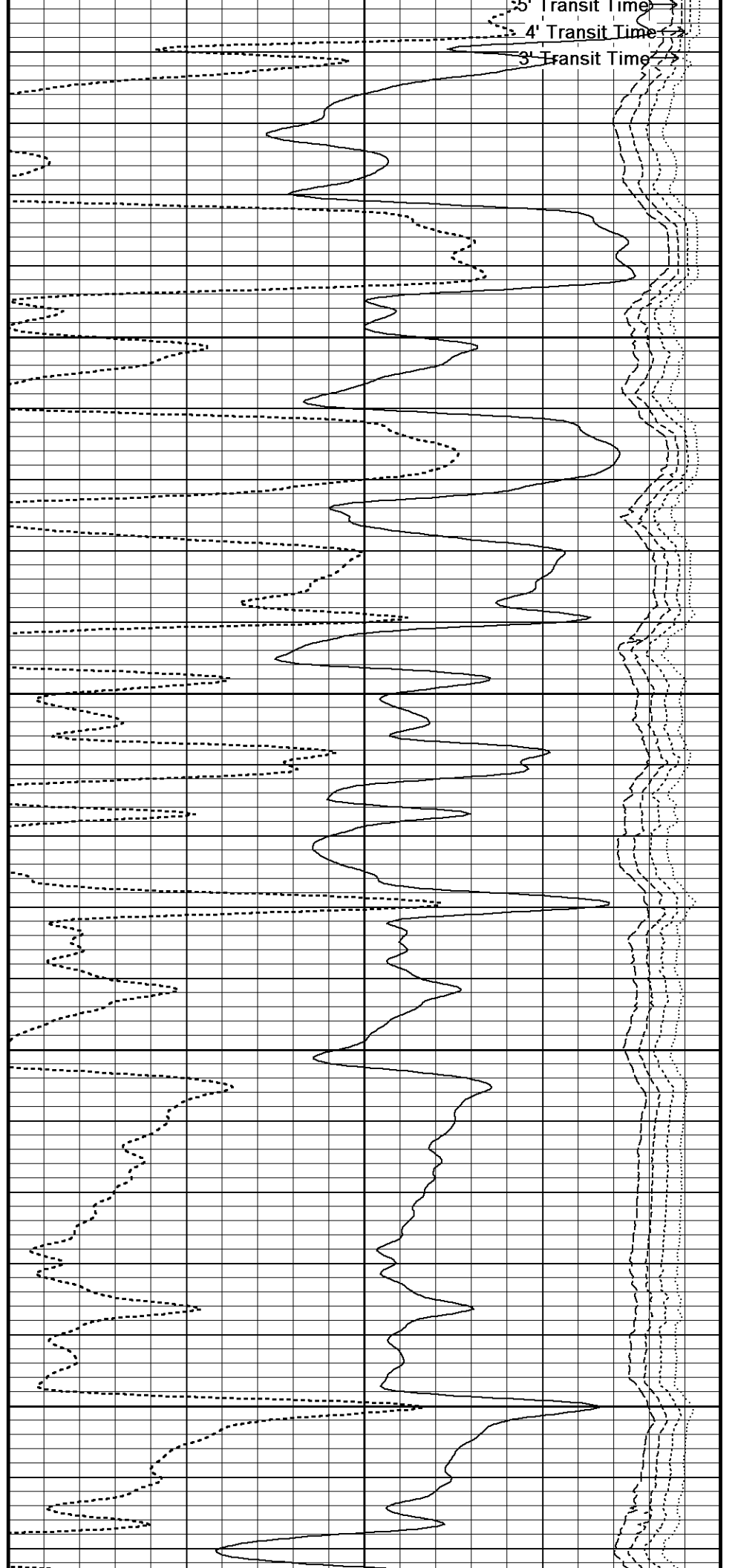
4100

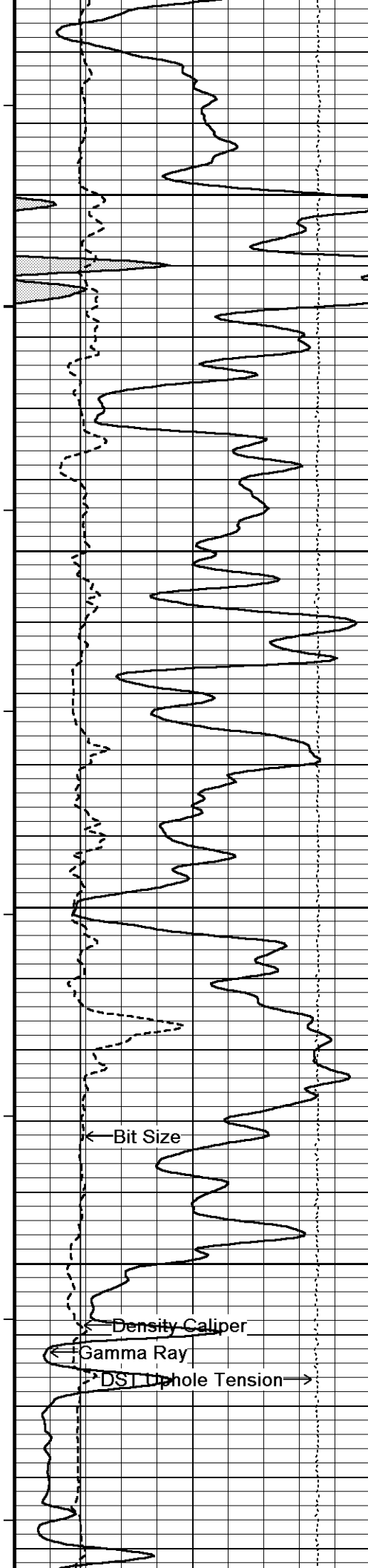
113°

4150

113°

4200





114°

4250

115°

4300

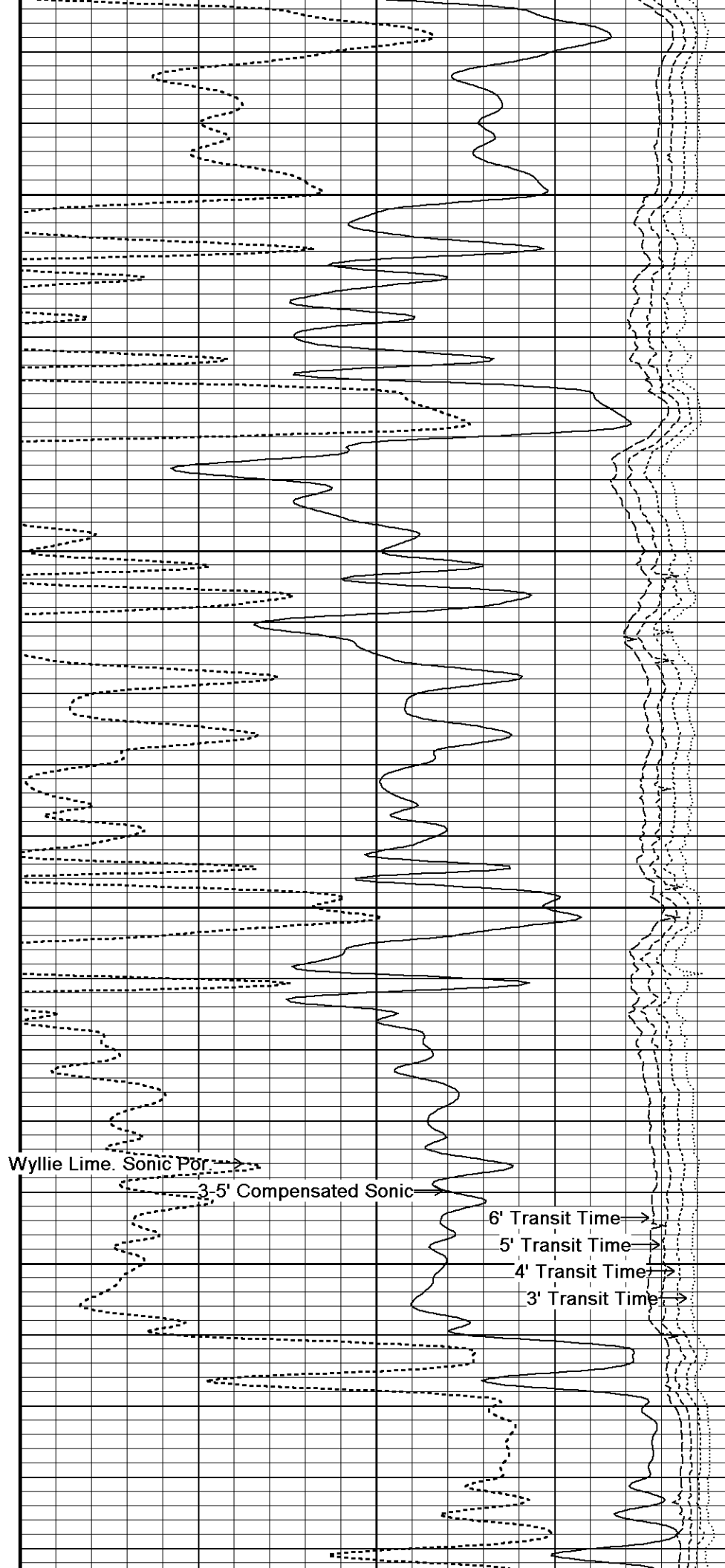
115°

4350

115°

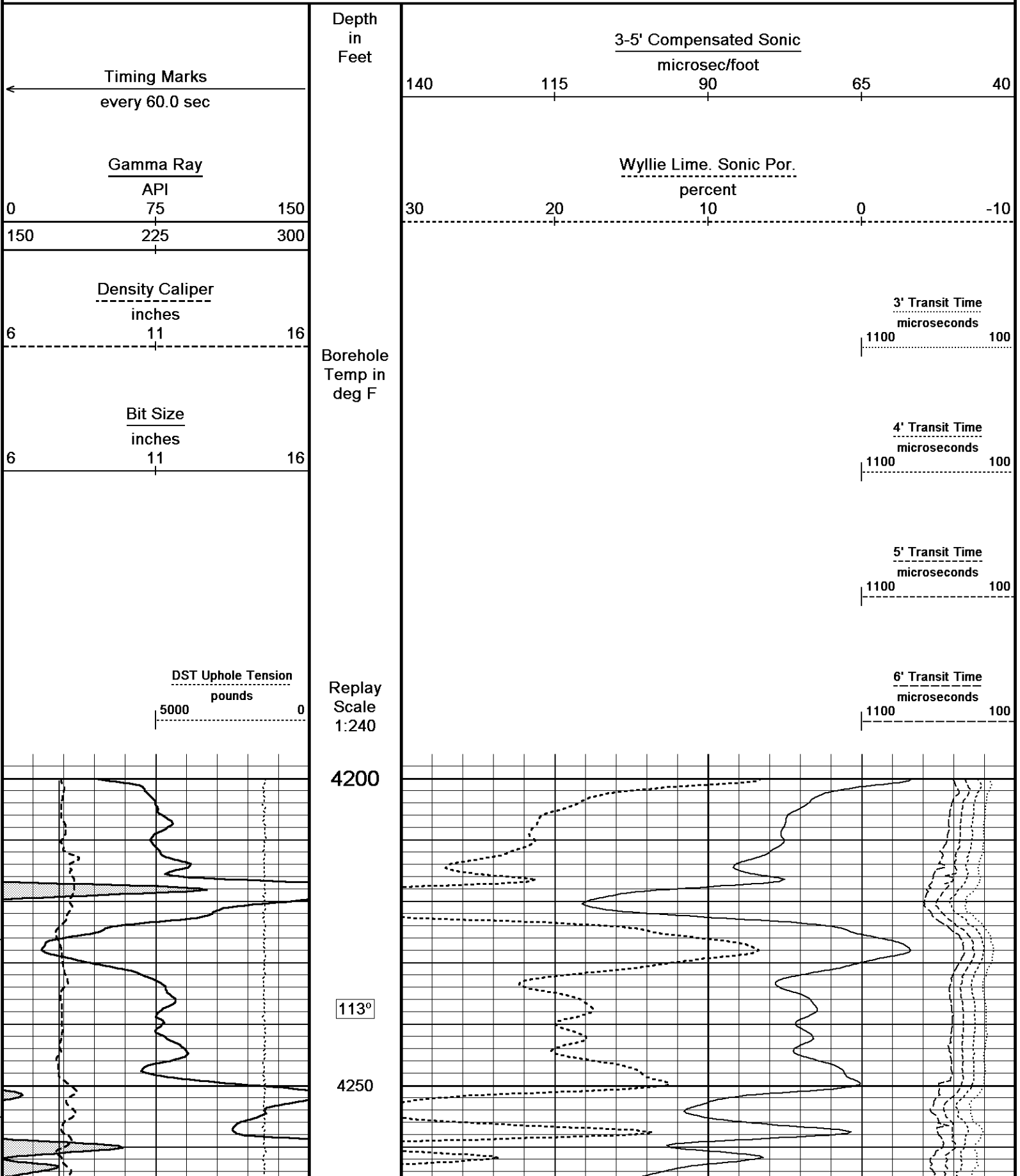
4400

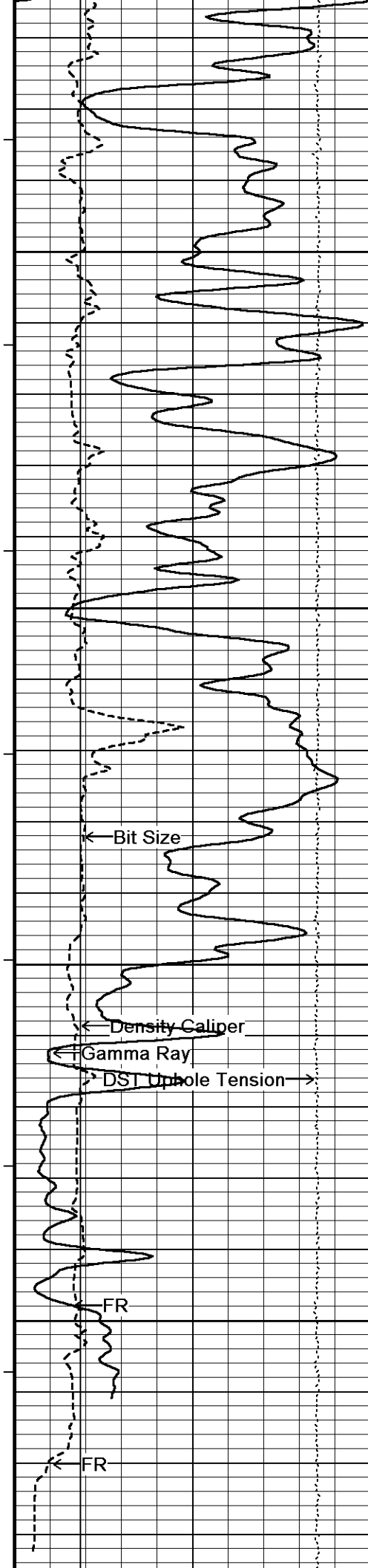
115°



↓REPEAT SECTION↓

Depth Based Data - Maximum Sampling Increment 10.0cmPlotted on 16-SEP-2016 14:44
Filename: C:\Minimus 15.03.5939\Logs\Shakespeare Anderson...\Shakespeare Anderson #1-33_001.dtaRecorded on 16-SEP-2016 11:32
System Versions: Logged with 15.03.5939 Plotted with 15.03.5939





114°

4300

114°

4350

114°

4400

114°

4450

Wyllie Lime. Sonic Por.

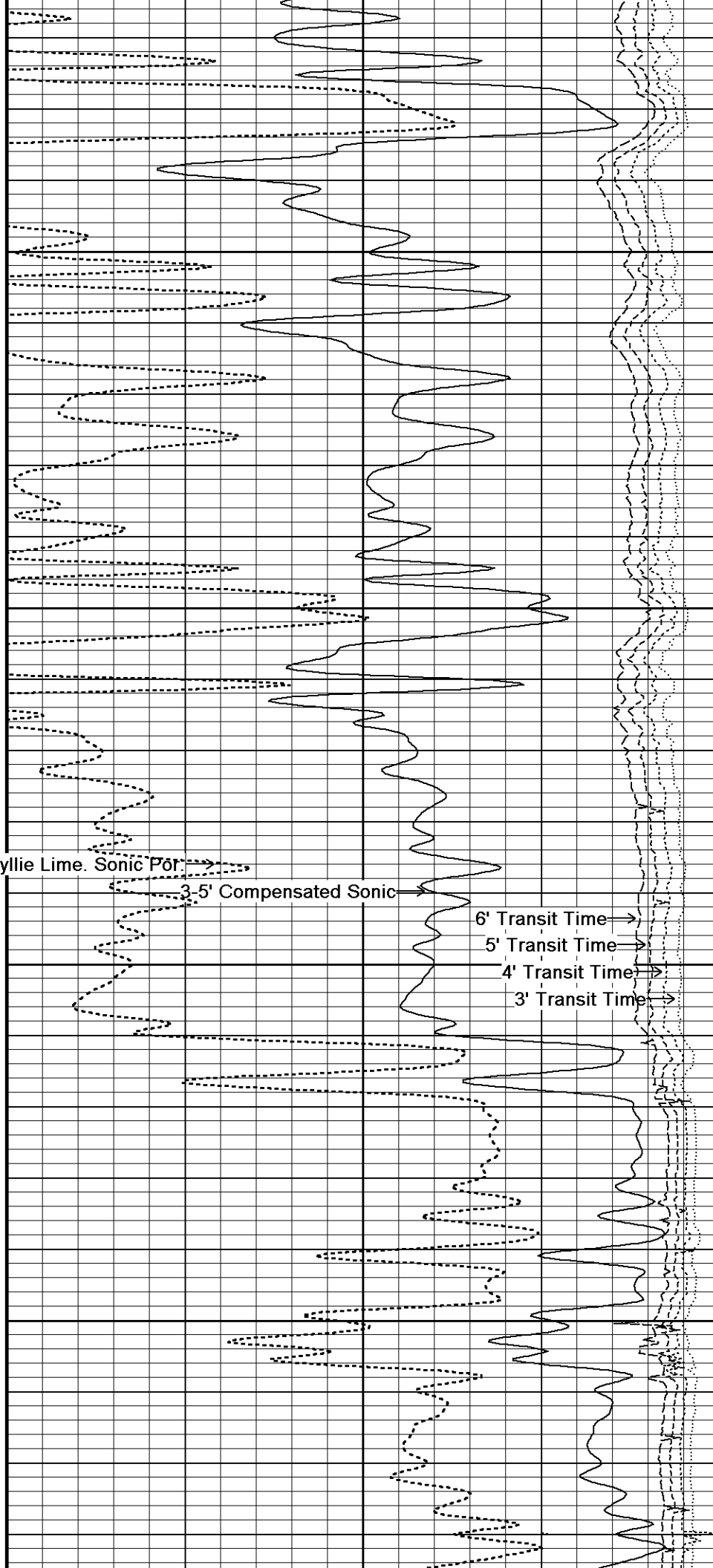
3-5' Compensated Sonic

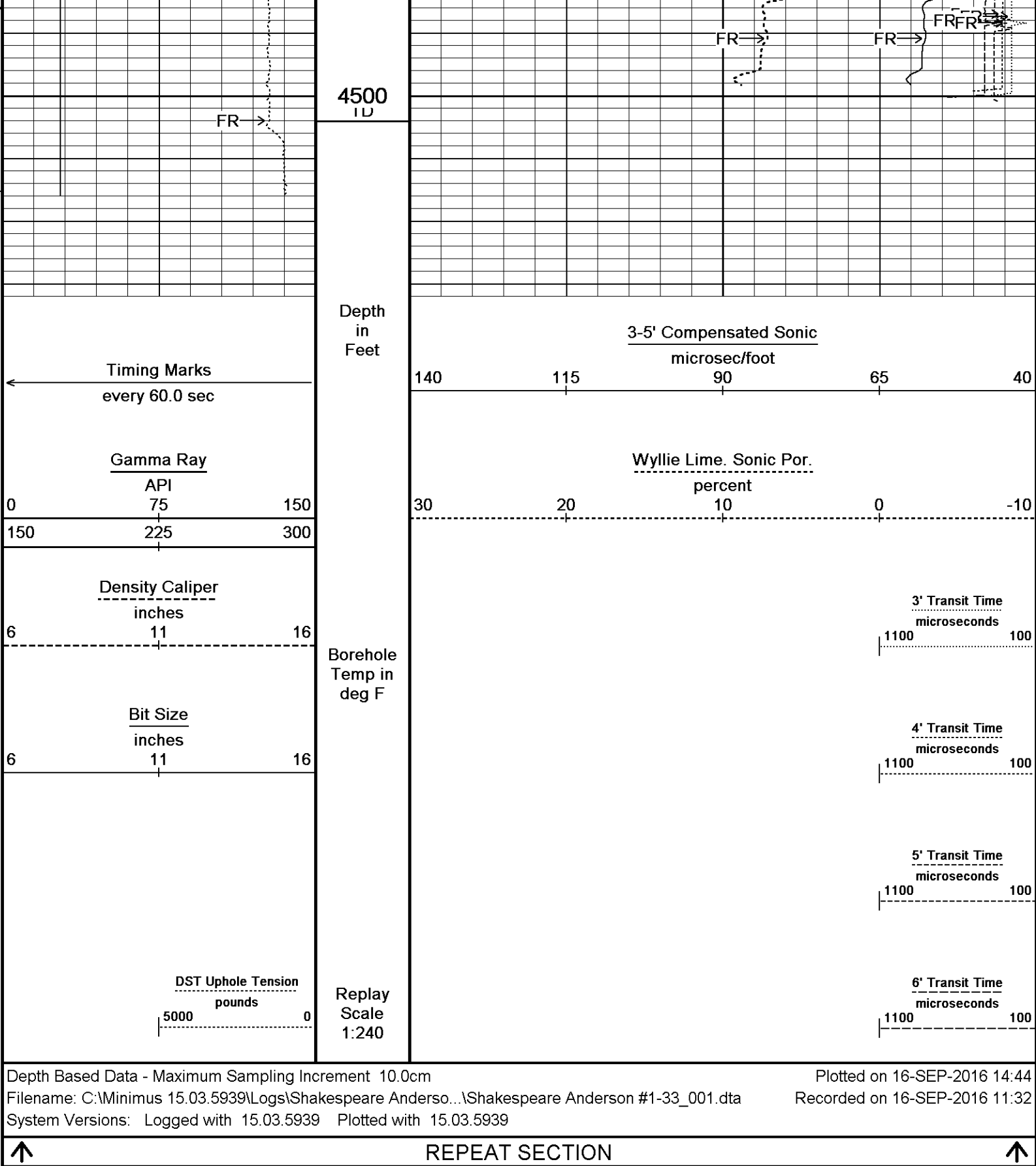
6' Transit Time

5' Transit Time

4' Transit Time

3' Transit Time





BEFORE SURVEY CALIBRATION		
C:\Minimus 15.03.5939\Logs\Shakespeare Anderson #1-33\Shakespeare Anderson #1-33_001.dta		
General Constants All 000		Last Edited on 16-SEP-2016,11:13
General Parameters		
Mud Resistivity	1.450	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	5.500	inches
Caliper for Differential Caliper	None	

Rwa Parameters

Porosity used	Limestone Density Por.
Resistivity used	Array Ind. One Res Rt
RWA Constant A	0.610
RWA Constant M	2.150
SW/APOR Tool Source	0.000

Down-hole Tension Calibration SMS 0

Field Calibration on 24-JUL-2016 15:20

Reading No	Measured	Calibrated (lbs)
1	15235.81	0.00
2	16026.61	481.00

Gamma Calibration MCG-C 123

Field Calibration on 15-SEP-2016 17:04

	Measured	Calibrated (API)
Background	70	48
Calibrator (Gross)	734	504
Calibrator (Net)	664	456

Gamma Calibration Tolerances MCG-C 123

Ratio	1.457	1.40 1.475 1.55	Counts/API
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Gamma Constants MCG-C 123

Last Edited on 16-SEP-2016,09:38

Gamma Calibrator Number	MCGGRCC141
GRC-M Calibrator Jig in Use?	NO
Inactive Background Jig in Use?	NO
Mud Density	1.12 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 31-OCT-2015,17:05

	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 14-JUL-2016 12:06

	Measured	Calibrated (mV)
Reference 1	101.2	100.6
Reference 2	-99.1	-99.9

Micro Normal and Micro Inverse Calibration MMR-C.A 247

Base Calibration on 28-AUG-2016 19:13

Field Check on 15-SEP-2016 16:48

Base Calibration

Channel	Measured		Calibrated (ohm-m)	
	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Micro Normal	10.2	49.9	5.1	25.6
Micro Inverse	10.0	49.5	3.4	16.9

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Micro Normal	93.6	93.6
Micro Inverse	62.2	62.2

Micro Normal & Micro Inverse Calibration Tolerance MMR-C.A 247

Micro Normal Res. 1	10.2		ohm	Micro Normal Res. 2	49.9		ohm
Micro Inverse Res. 1	10.0		ohm	Micro Inverse Res. 2	49.5		ohm
Micro Normal Base Check	93.6		ohm-m				
Micro Inverse Base Check	62.2		ohm-m				
Micro Normal Field Check	93.6		ohm-m				
Micro Inverse Field Check	62.2		ohm-m				

Micro Normal and Micro Inverse Constants MMR-C.A 247

Last Edited on 26-JUN-2016,15:44

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 0.0000 inches

Caliper Calibration MMR-C.A 247

Base Calibration on 28-AUG-2016 19:08
 Field Calibration on 15-SEP-2016 16:45

Base Calibration		
Reading No	Measured	Calibrator Size (in)
1	14869	5.98
2	18207	7.97
3	21411	9.86
4	25389	11.92
5	0	0.00
6	N/A	N/A
Field Calibration		
	Measured Caliper (in)	Actual Caliper (in)
	7.95	7.97

Caliper Calibration Tolerances MMR-C.A 247

Short Arm Field Cal. 7.95 in

Micro-Resistivity Caliper Constants MMR-C.A 247

Last Edited on

Sonde Configuration Resistivity Mode

Neutron Calibration MDN-A.B 66

Base Calibration on 22-MAY-2016,18:15
 Field Check on 15-SEP-2016 17:26

Base Calibration				
	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3116	97	3714	110
Ratio	32.277		33.764	
Field Calibrator at Base			Calibrated (cps)	
			2061	3028
Ratio			0.681	
Field Check			Calibrated (cps)	
			2173	3105
Ratio			0.700	

Neutron Calibration Tolerances MDN-A.B 66

Ratio 32.277

Base Check 0.681

Field Check 0.700

Neutron Constants MDN-A.B 66

Last Edited on 16-SEP-2016,09:38

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 28-AUG-2016 18:58
Field Check on 15-SEP-2016 16:35

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	963.3	126.8
Base Check		281.3
Field Check		281.4

FE Calibration Tolerances MFE-B.J 352

Reference 2	963.3		ohm
Base Check	281.3		ohm-m
Field Check	281.4		ohm-m

FE Constants MFE-B.J 352

Last Edited on 16-SEP-2016,09:37

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 16-SEP-2016,09:37

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	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
3' Waveform Filter	N/A	
4' Waveform Filter	N/A	
5' Waveform Filter	N/A	
6' Waveform Filter	N/A	
Semblance Level	N/A	
Semblance Window Width	N/A	micro-sec
Sonic 1 Despiker	N/A	N/A
Sonic 2 Despiker	N/A	N/A

Induction Calibration MAI-A.A 111

Base Calibration on 05-AUG-2014,09:34

Field Check on 15-SEP-2016 16:34

Base Calibration

Test Loop Calibration Channel	Measured		Calibrated (mmho/m)	
	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

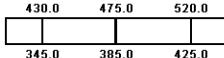
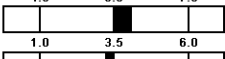
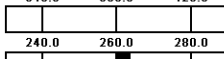
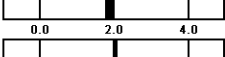
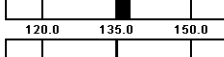
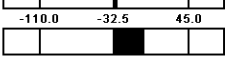
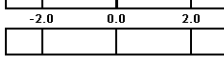
Array Temperature 23.0 Deg F

Test Loop Calibration Verified 22-MAY-2016,17:59

Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1	12.1	3873.0	10.9	3868.8
2	29.8	3528.1	28.0	3523.2
3	29.1	3021.3	27.5	3016.8
4	19.1	2058.5	18.0	2055.1
Deep	17.7	1962.1	16.7	1958.8
Medium	43.1	3976.4	40.9	3970.7
Shallow	44.4	5232.7	41.8	5226.0

Array Temperature 65.8 82.2 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 16-SEP-2016,09:37	
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			
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 24-NOV-2014,10:23
	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 28-AUG-2016 20:24	
				Field Check on 15-SEP-2016 16:42	
Density Calibration					
Base Calibration		Measured		Calibrated (sdu)	
	Near	Far		Near	Far
Background	1145	1339			
Reference 1	49665	24007		59556	30836
Reference 2	20032	2442		24941	2541

Reference 2	20032	2442	24041	2041
Field Check at Base	1144.9	1338.6		
Field Check	1140.3	1322.0		
PE Calibration				
Base Calibration		Measured		Calibrated
WS	WH	Ratio		Ratio
Background	211	1021		
Reference 1	20773	49486	0.424	0.371
Reference 2	5807	19899	0.296	0.272
Field Check at Base	211.3	1021.2		
Field Check	208.3	1017.9		

Photo Density Calibration Tolerances MPD-B 104				
Near Density Ratio	2.57	-5% 2.52 +5%	Far Density Ratio	20.54 -5% 21.00 +5%
PE Calibration	0.119	0.089 0.110 0.131		
Near Den. Field Check	1140.3	-3% 1144.9 +3%	Far Den. Field Check	1322.0 -3% 1338.6 +3%
PE WS Field Check	208.3	-6% 211.3 +6%	PE WH Field Check	1017.9 -6% 1021.2 +6%

Density Constants MPD-B 104			Last Edited on 16-SEP-2016,09:37	
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	1.12	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			
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			

Caliper Calibration MPD-B 104			Base Calibration on 28-AUG-2016 19:51 Field Calibration on 15-SEP-2016 16:36	
Base Calibration				
Reading No	Measured	Calibrator Size (in)		
1	13646	3.99		
2	22688	5.98		
3	31297	7.97		
4	39521	9.86		
5	48608	11.92		
6	N/A	N/A		
Field Calibration				
	Measured Caliper (in)	Actual Caliper (in)		
	7.90	7.97		

Caliper Calibration Tolerances MPD-B 104				
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DOWNHOLE EQUIPMENT

C:\Minimus 15.03.5939\Logs\Shakespeare Anderson #1-33\Shakespeare Anderson #1-33_001.dta

Cablehead, 11 pin

CBH-CA 176 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

Compact Micro-Resistivity

MMR-C.A 247 LG: 8.59 ft WT: 81.6 lb OD: 4.882 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

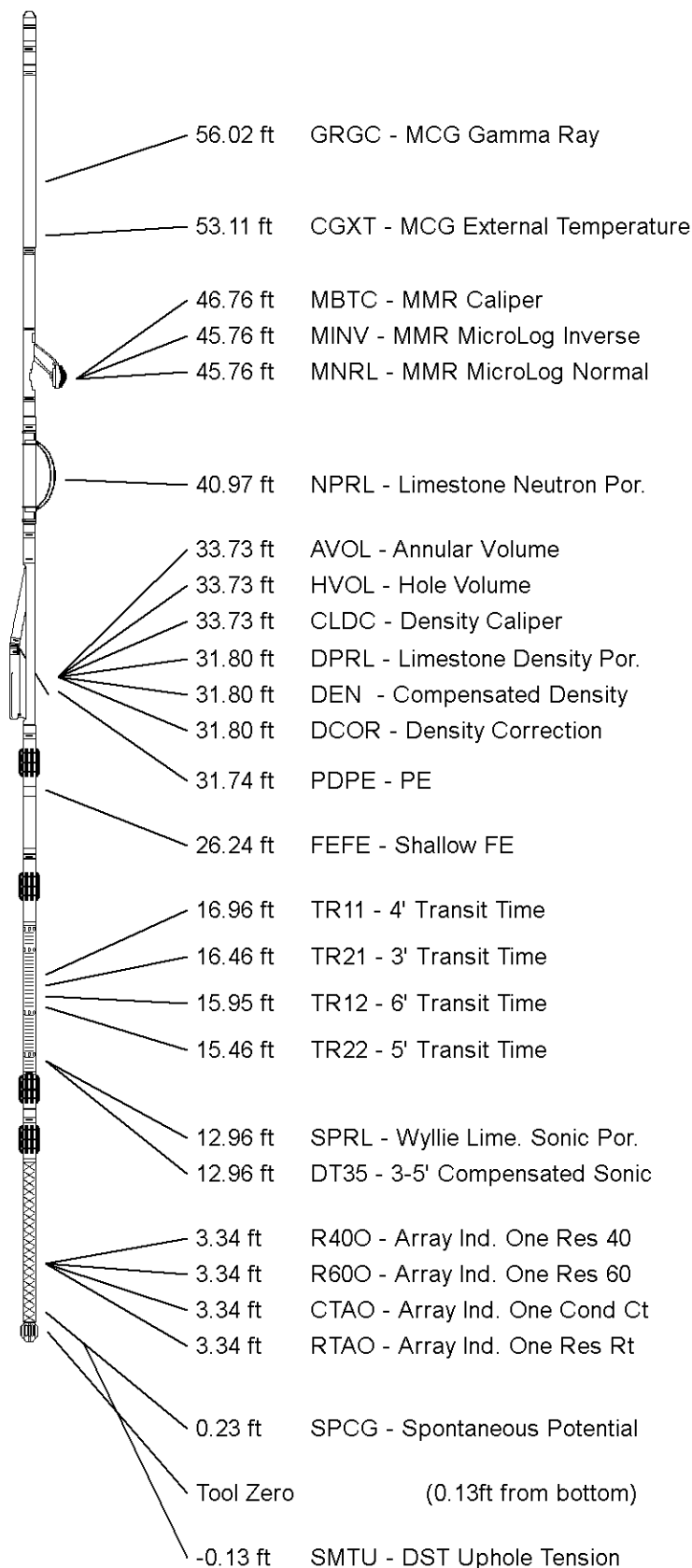
Compact Sonic

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: 63.70 ft Weight: 480.6 lb



All measurements relative to tool zero.

WELL	ANDERSON #1-33
FIELD	WILDCAT
PROVINCE/COUNTY	DECATUR
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	2784.00	feet	First Reading	4491.00	feet
Elevation Drill Floor	2782.00	feet	Depth Driller	4500.00	feet
Elevation Ground Level	2776.00	feet	Depth Logger	4504.00	feet



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