COMPENSATED SONIC
W/ INTEGRATED TRANSIT TIMES

COMPANY	BEREXCO LLC.
WELL	NEWBY #1-21
FIELD	EVA SOUTH
PROVINCE/COUNTY	SCOTT
COUNTRY/STATE	U.S.A. / KANSAS
LOCATION	369' FSL & 452' FEL
	NW SE SE SE

SEC	TWP	RGE	Other Services
21	18S	31W	MPD/MDN MAI/MFE
			MML

API Number 15-171-20768
Permit Number

Permanent Datum G.L., Elevation 2932 feet
Log Measured From K.B. @ 13 FEET above Permanent Datum
Drilling Measured From K.B.

Elevations:	feet
KB	2945.00
DF	2944.00
GL	2932.00

Date	07-SEP-2010			
Run Number	ONE			
Depth Driller	4750.00	feet		
Depth Logger	4750.00	feet		
First Reading	4737.00	feet		
Last Reading	435.00	feet		
Casing Driller	428.00	feet		
Casing Logger	435.00	feet		
Bit Size	7.875	inches		
Hole Fluid Type	CHEMICAL			
Density / Viscosity	9.40 lb/USg	77.00 CP		
PH / Fluid Loss	9.00	10.40 ml/30Min		
Sample Source	FLOWLINE			
Rm @ Measured Temp	1.02 @ 89.0	ohm-m		
Rmf @ Measured Temp	0.82 @ 89.0	ohm-m		
Rmc @ Measured Temp	1.22 @ 89.0	ohm-m		
Source Rmf / Rmc	CALC	CALC		
Rm @ BHT	0.73 @126.0	ohm-m		
Time Since Circulation	5 HOURS			
Max Recorded Temp	126.00	deg F		
Equipment Name	COMPACT			
Equipment / Base	13057	LIB		
Recorded By	LYNN SCOTT		ROB HOFFMAN	
Witnessed By	ED GRIEVES		PETE WILSON	
S.O.# / JOB#	3524554		LB10-229	

BOREHOLE RECORD

Last Edited: 07-SEP-2010 22:57

Bit Size inches	Depth From feet	Depth To feet
7.875	435.00	4750.00

CASING RECORD

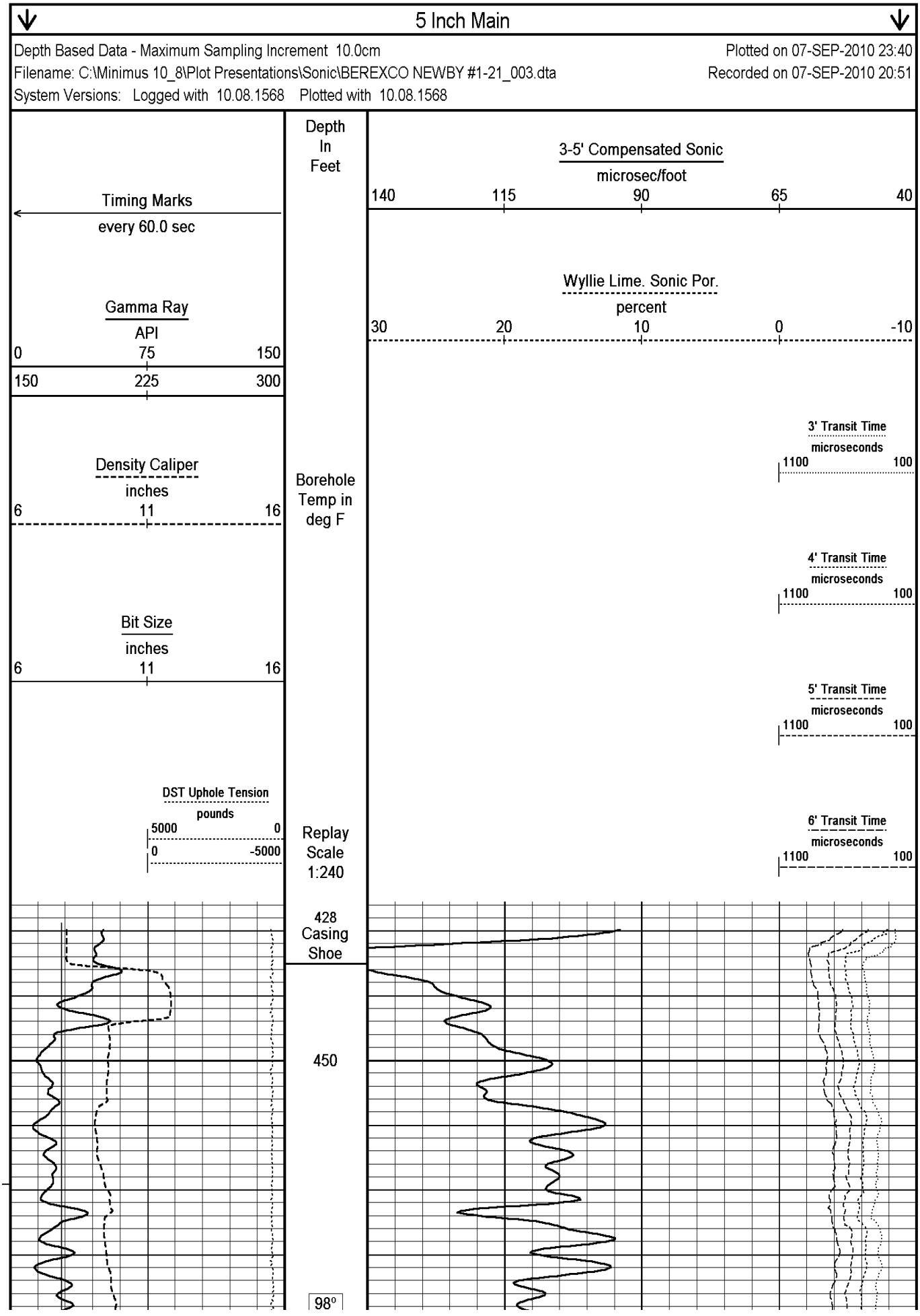
Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	435.00	24.00

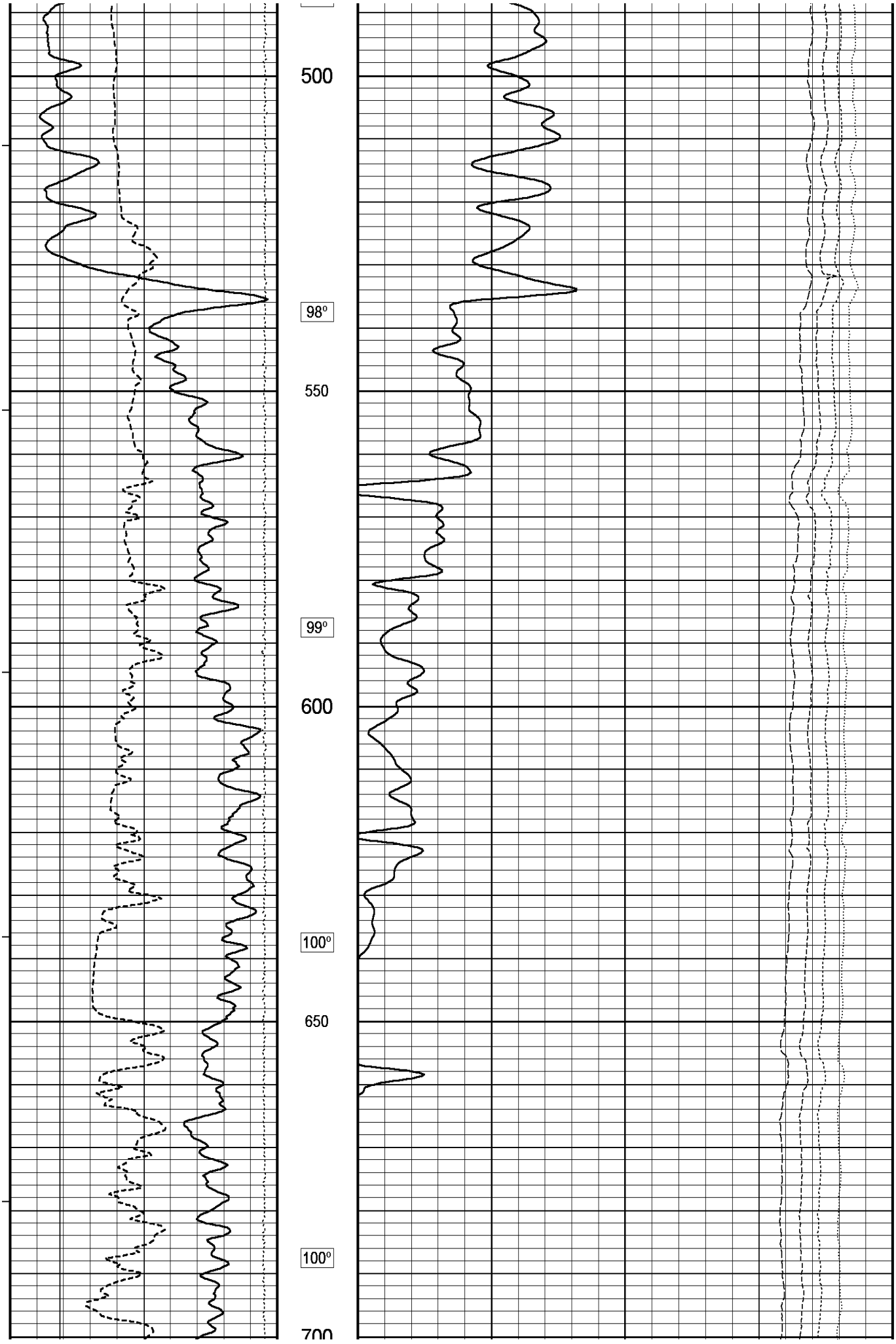
REMARKS

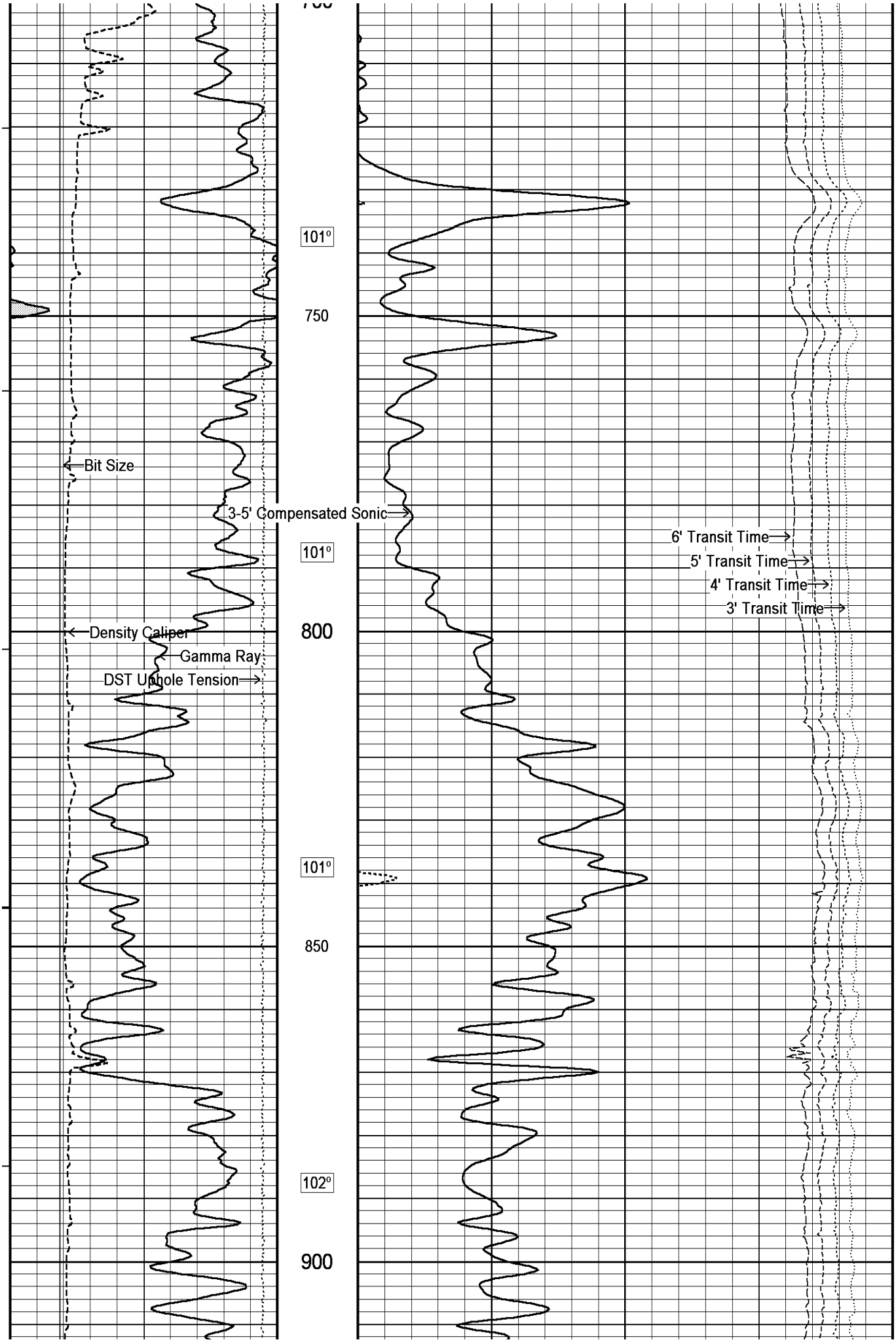
Tools Used: MAI, MPD, MCG, MDN, MML, MFE, SKJ, MSS
Hardware: MPD: 8 inch profile plate. MAI, MSS and MFE: 0.5 Inch standoffs used. MDN: Dual Bowspring used.
2.71 G/CC Limestone density matrix used to calculate porosity.
Sonic porosity calculated on a limestone scale (47.5 usec/ft).
Borehole rugosity, tight pulls, and washouts will affect data quality.
All intervals logged and scaled per customer's request.
Annular volume with 5.5 inch production casing= 717 cu. ft.
Service order #3524554
Rig: Beredco #2
Engineer: L. Scott, R. Hoffman
Operator(s): B. Reeves

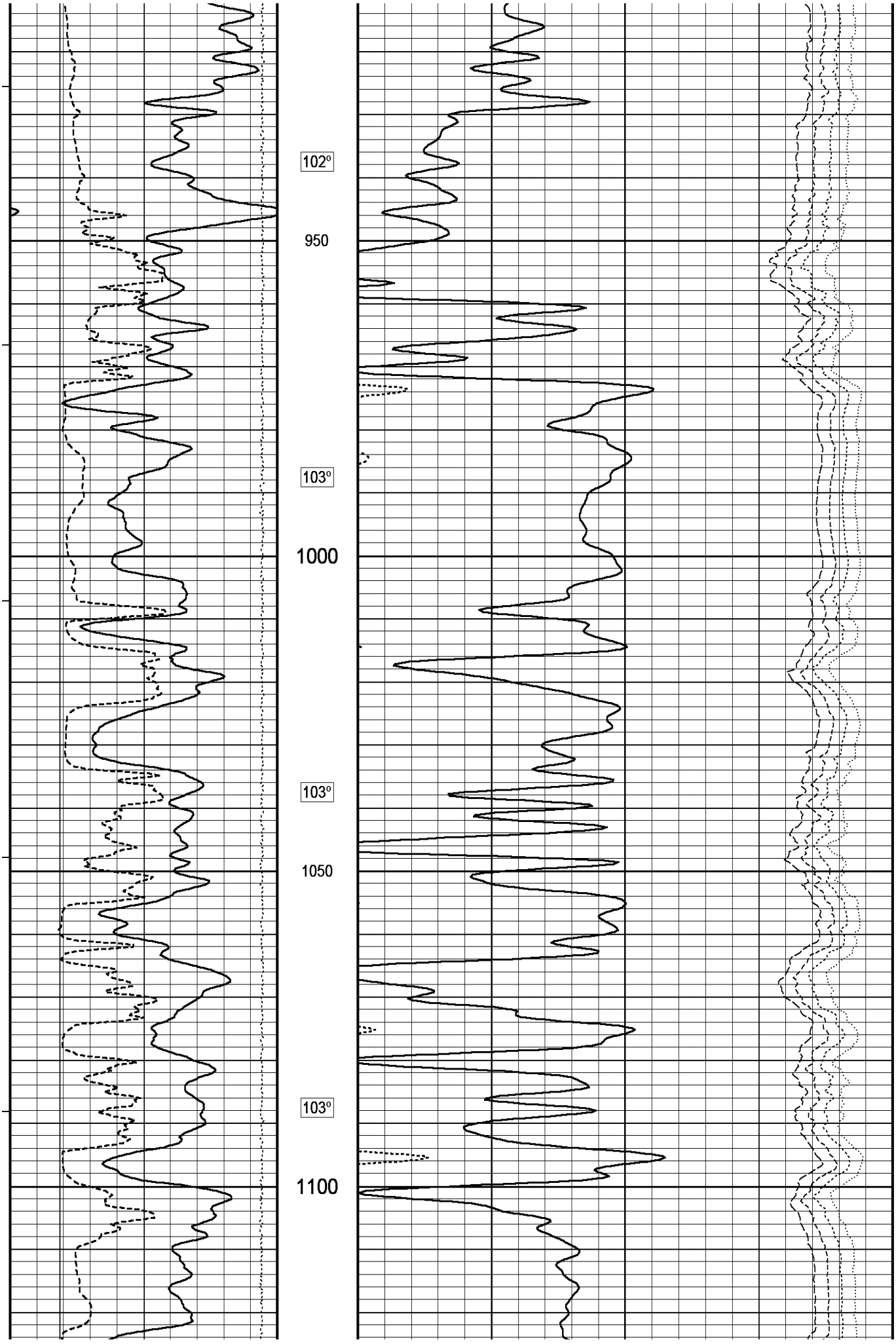
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any

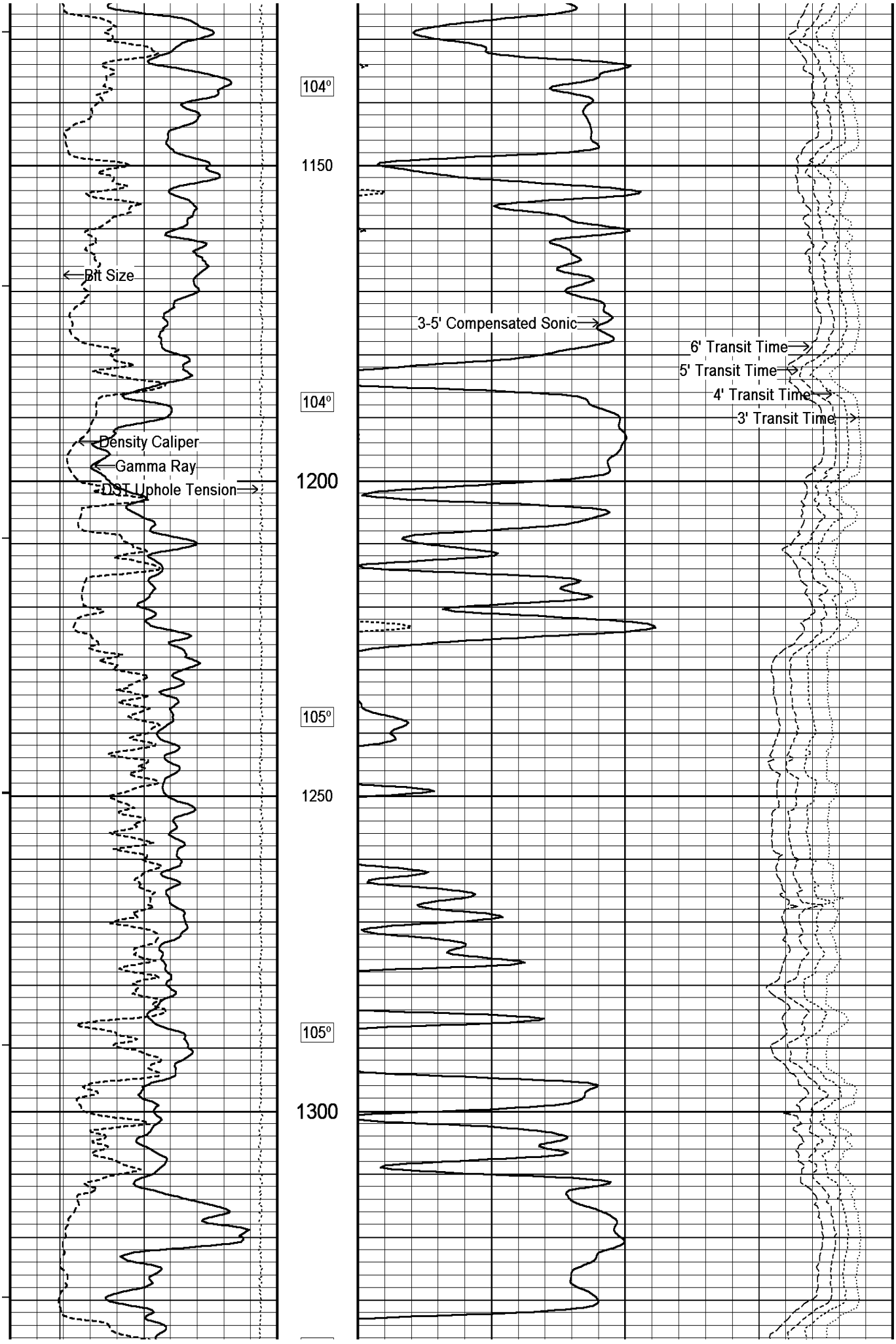
loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.

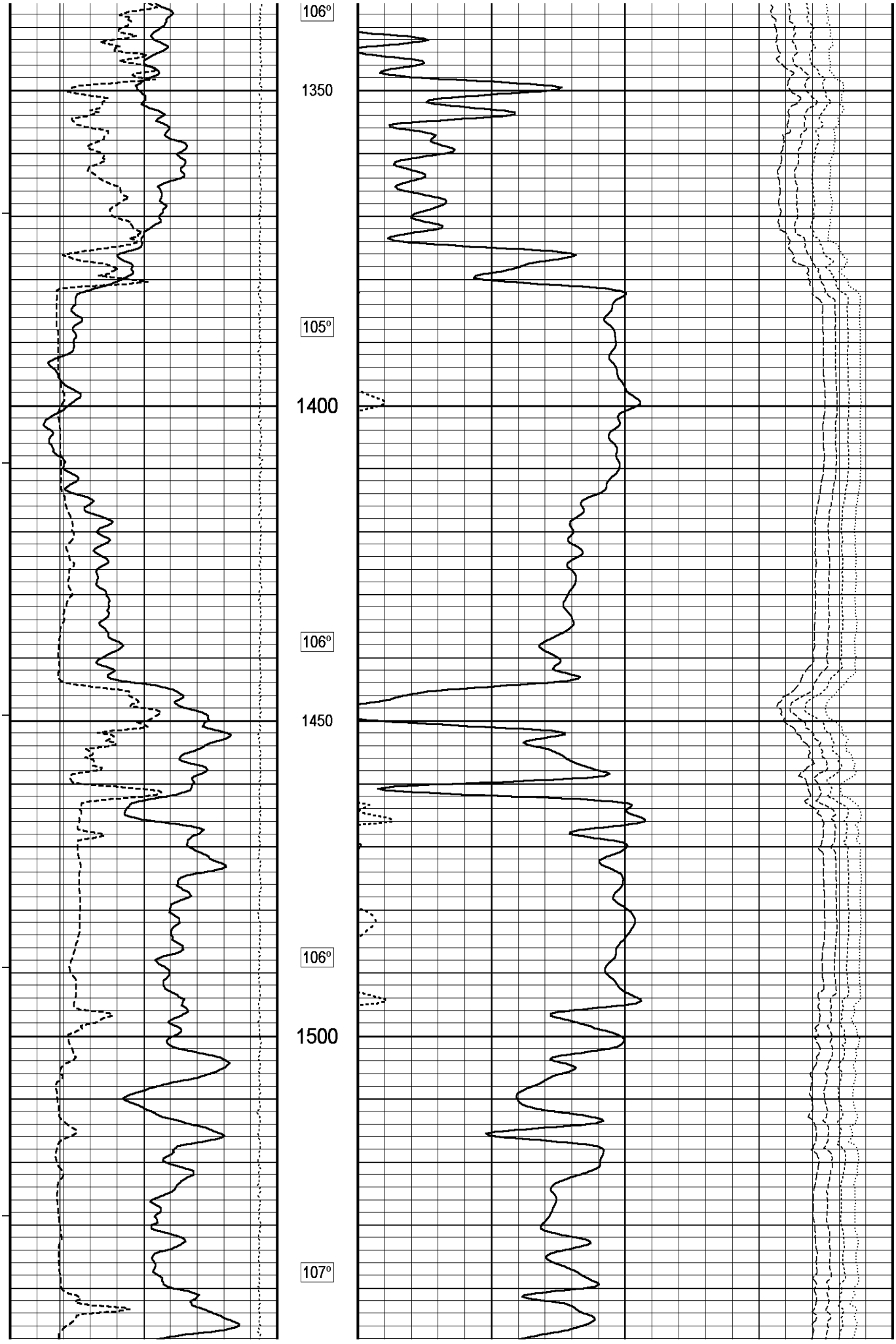


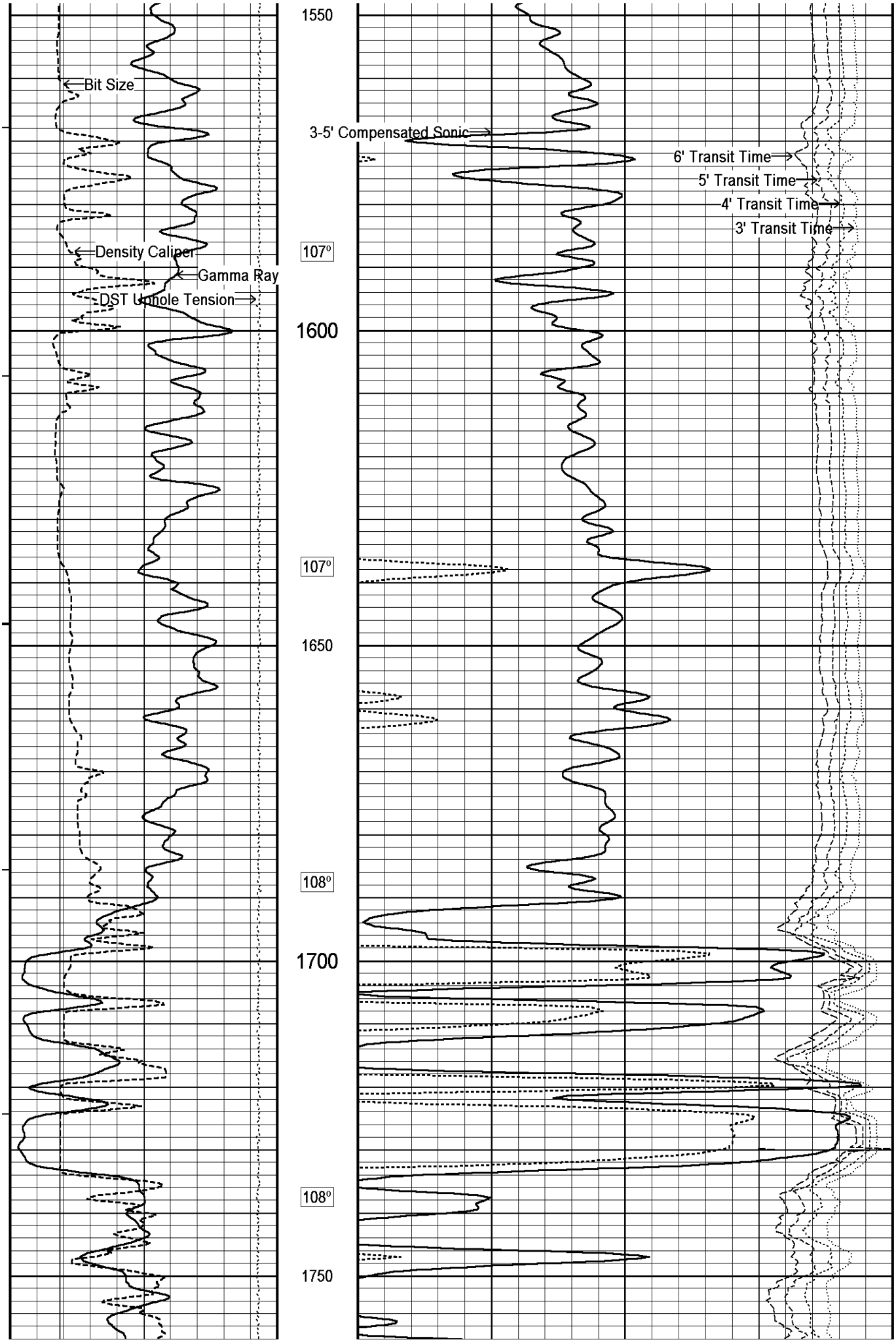

500
98°
550
99°
600
100°
650
100°
700

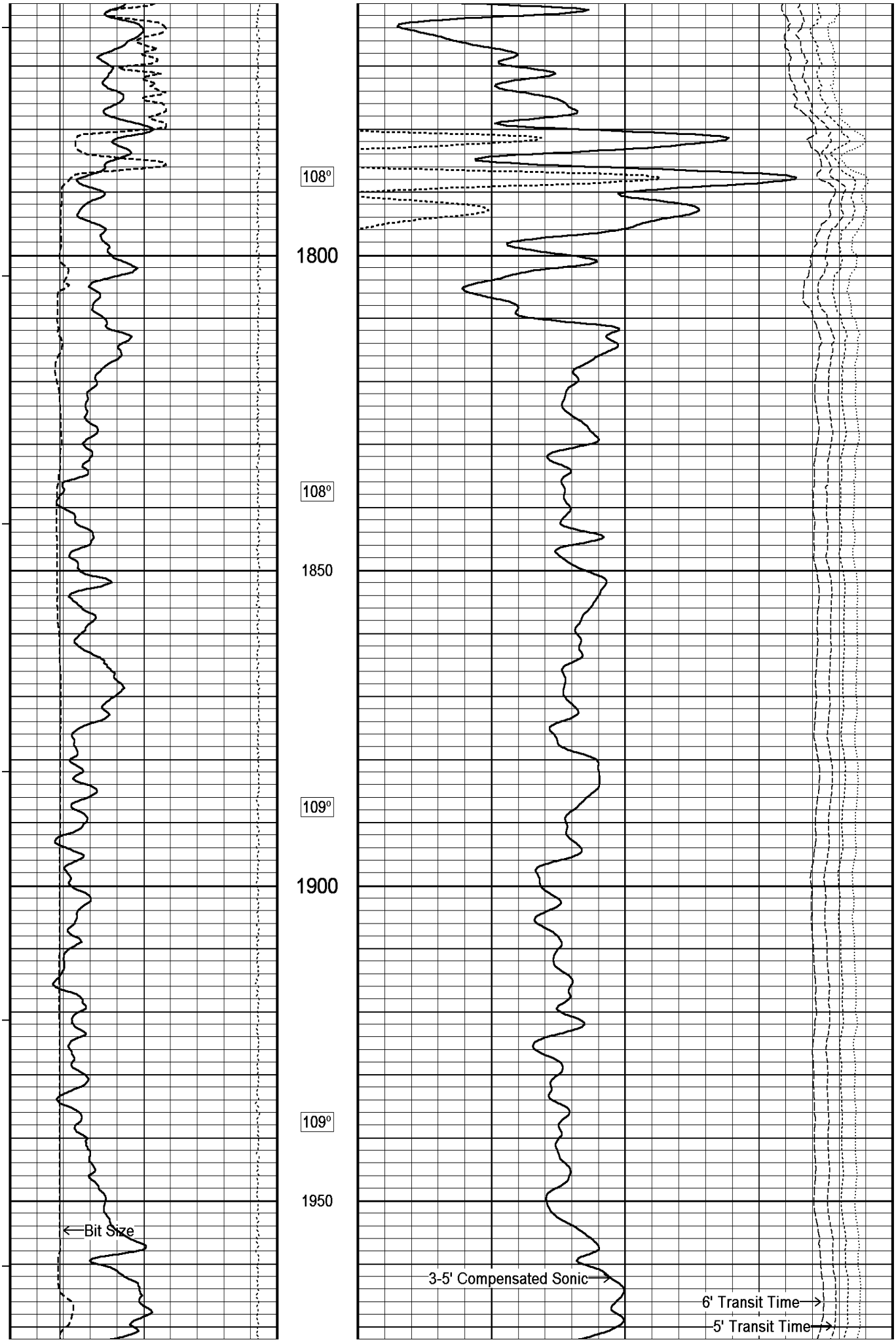

101°
750
Bit Size
3-5' Compensated Sonic
101°
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
Density Caliper
800
Gamma Ray
DST Uphole Tension
101°
850
102°
900

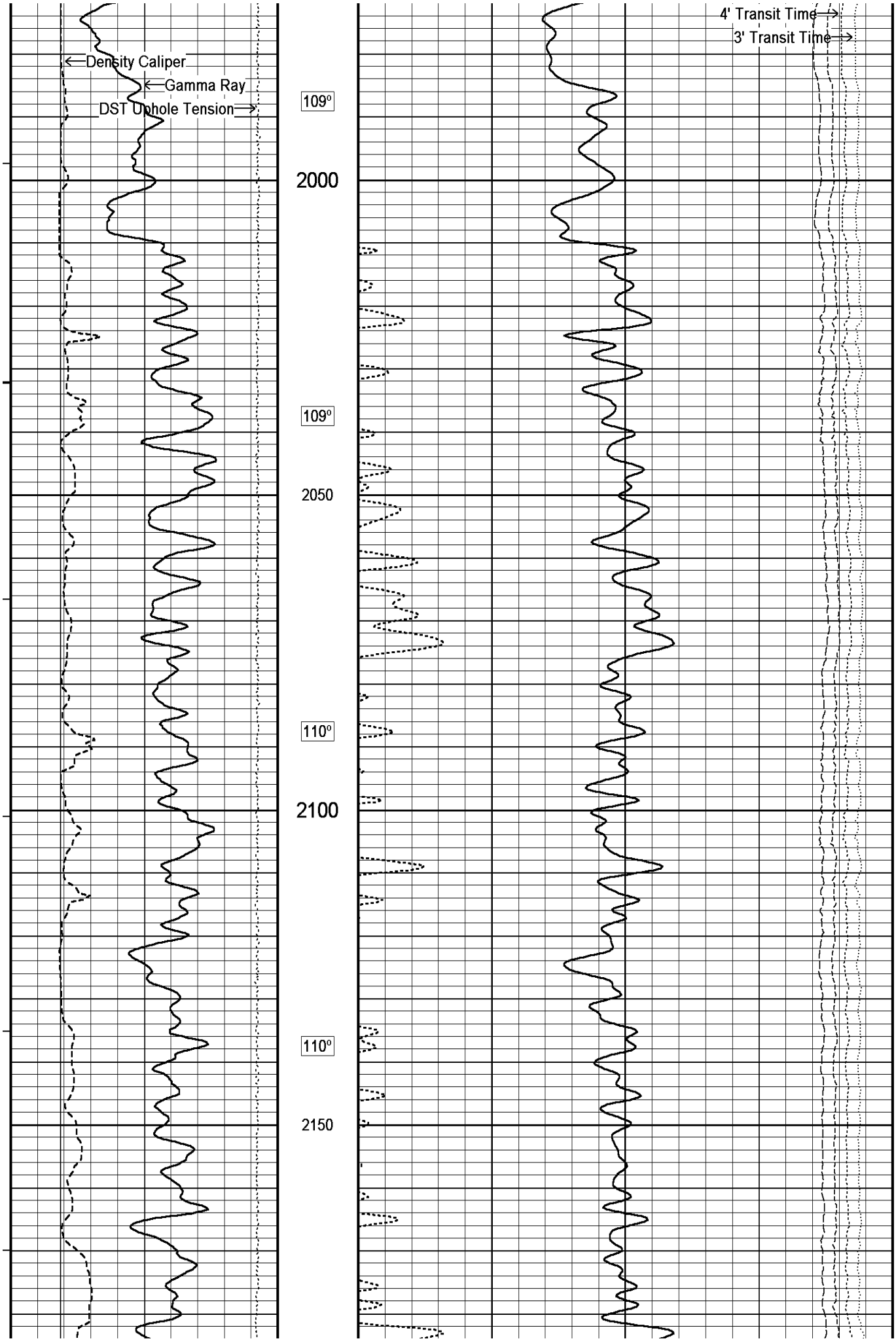

102°
950
103°
1000
103°
1050
103°
1100

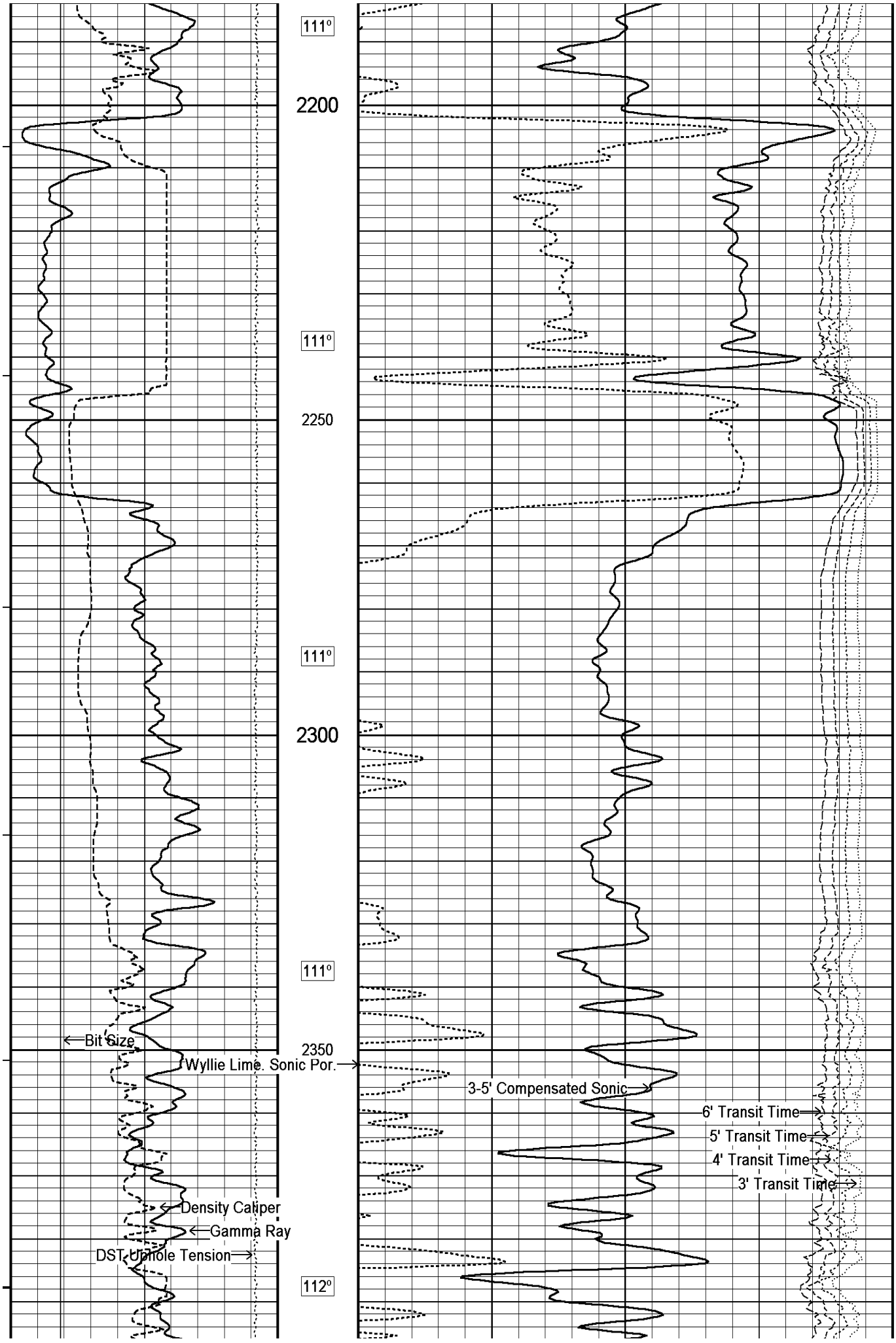

104°
1150
Bit Size
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
104°
Density Caliper
Gamma Ray
DST Uphole Tension
1200
105°
1250
105°
1300

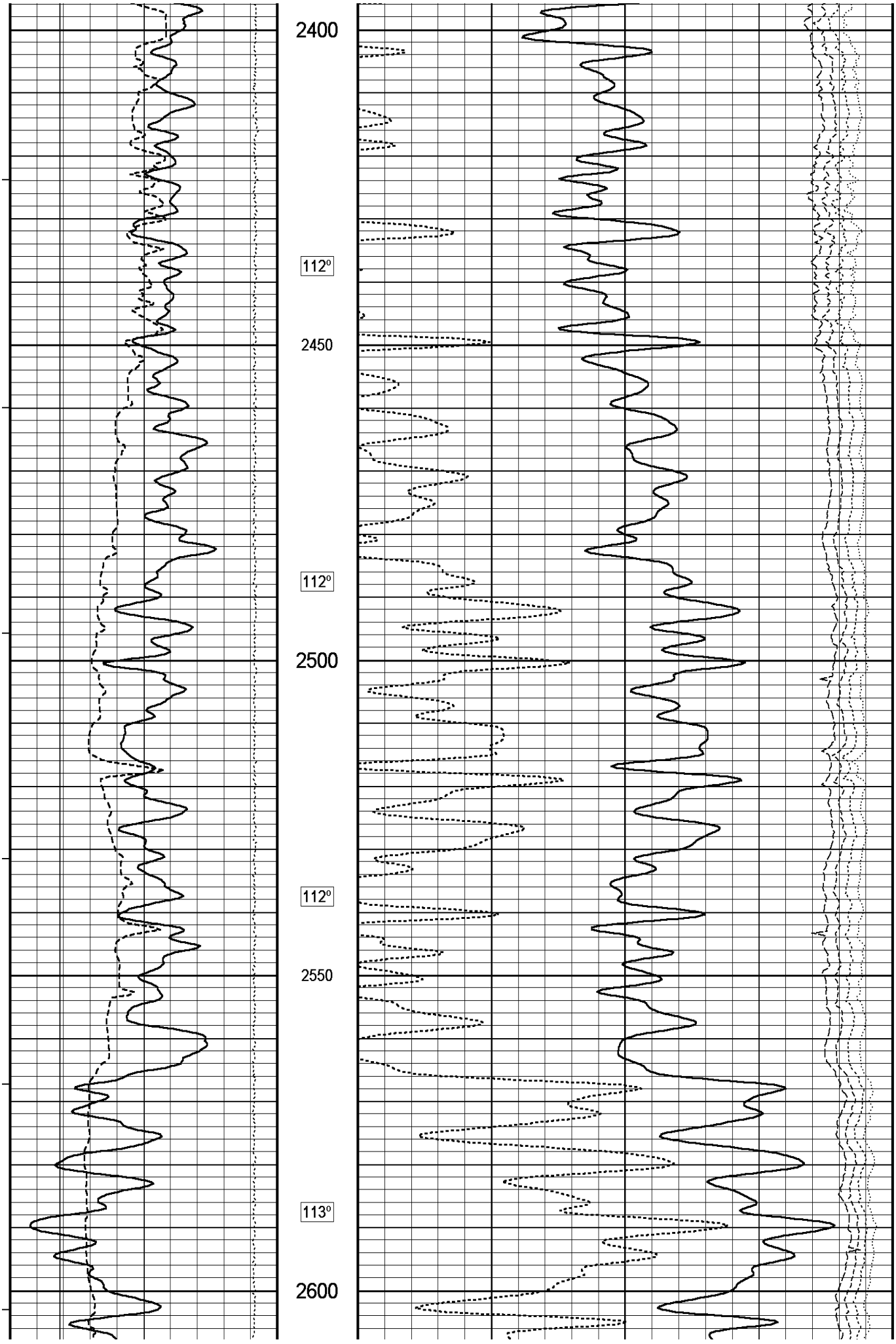

106°
1350
105°
1400
106°
1450
106°
1500
107°

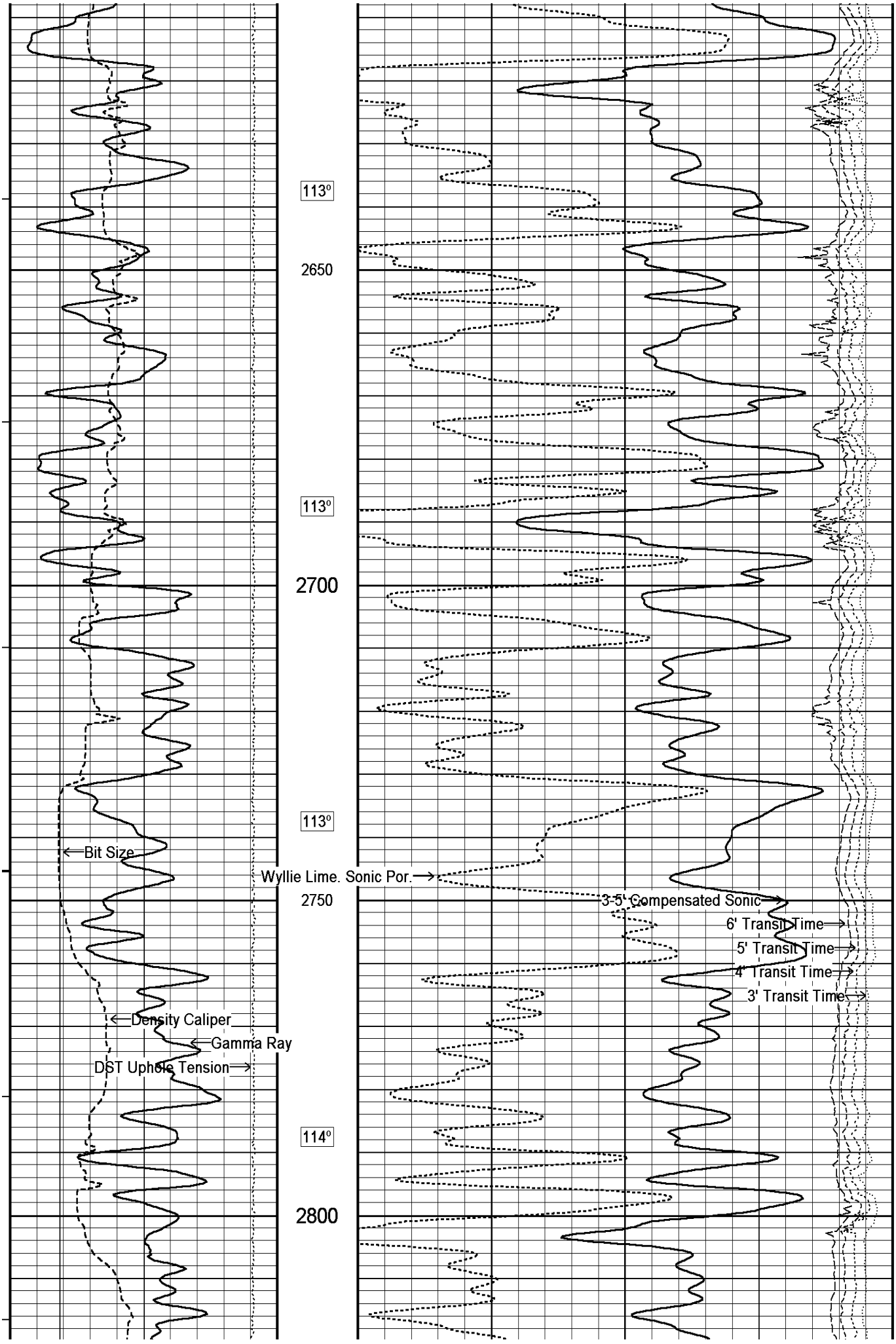

1550
Bit Size
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
Density Caliper
107°
Gamma Ray
DST Uphole Tension
1600
107°
1650
108°
1700
108°
1750

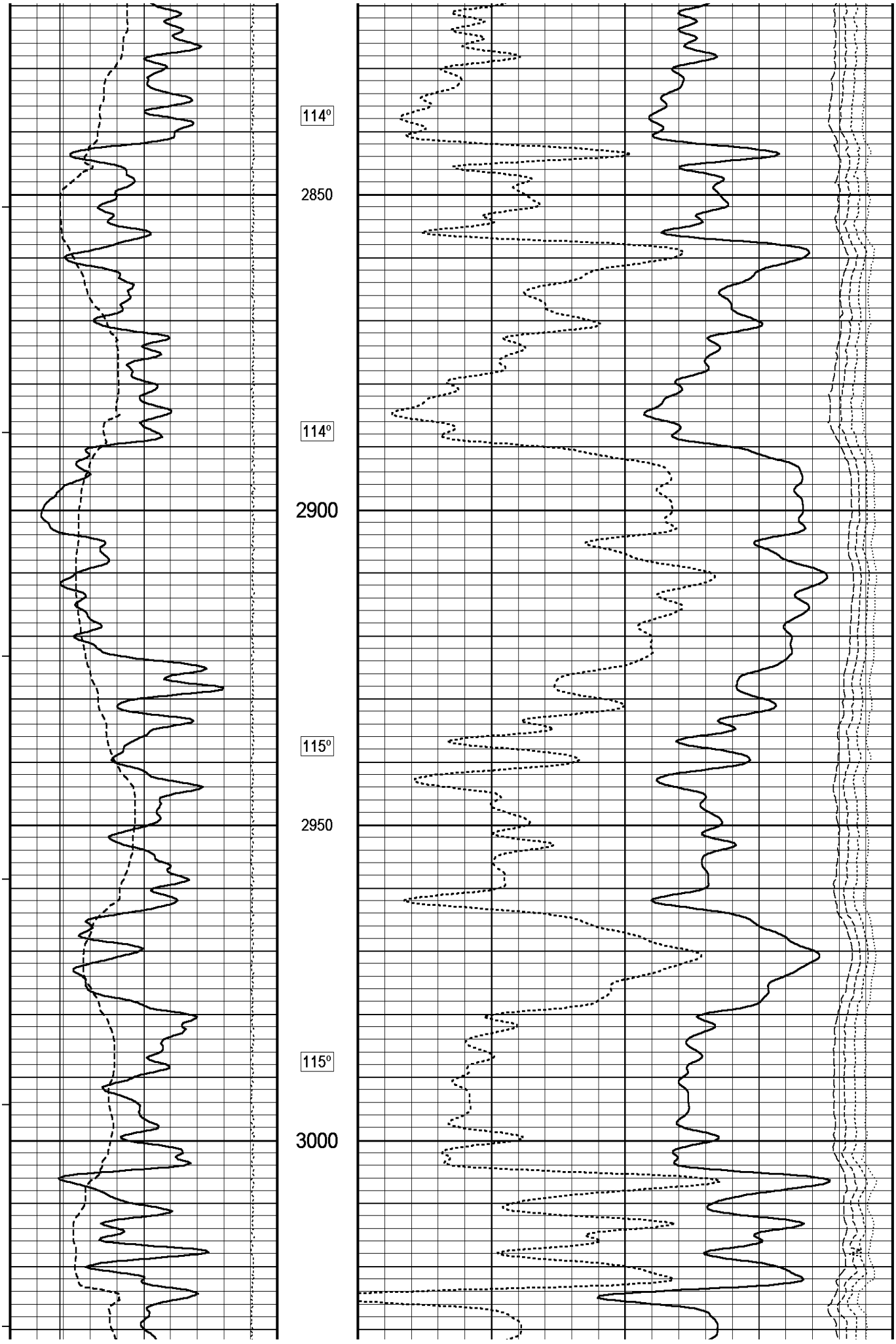

108°
1800
108°
1850
109°
1900
109°
1950
←Bit Size
3-5' Compensated Sonic→
6' Transit Time→
5' Transit Time→

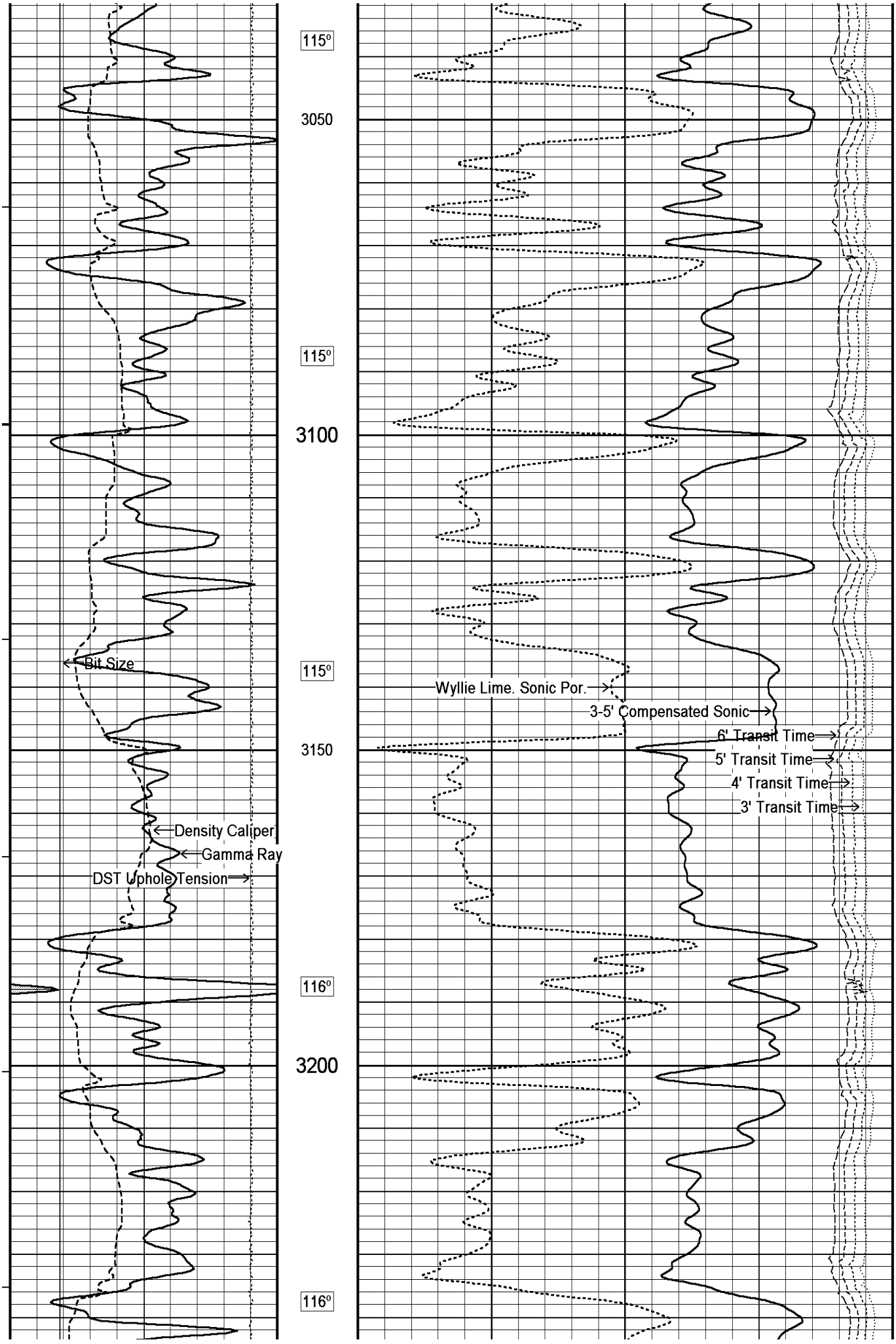

Density Caliper
Gamma Ray
DST Uphole Tension
4' Transit Time
3' Transit Time
109°
2000
109°
2050
110°
2100
110°
2150

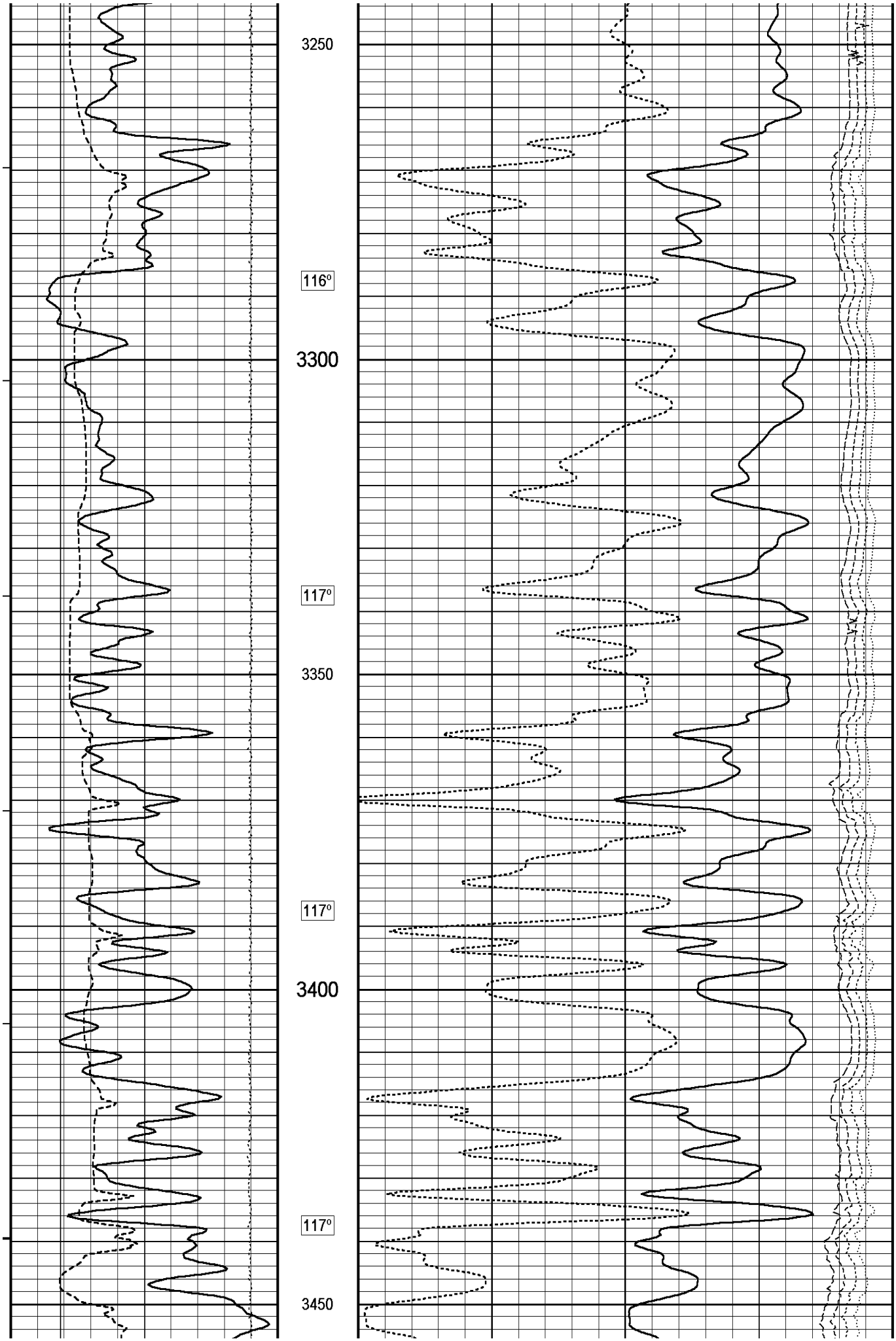

111°
2200
111°
2250
111°
2300
111°
2350
112°
←Bit Size
Wyllie Lime. Sonic Por.→
3-5' Compensated Sonic→
6' Transit Time→
5' Transit Time→
4' Transit Time→
3' Transit Time→
←Density Caliper
←Gamma Ray
DST Uphole Tension→

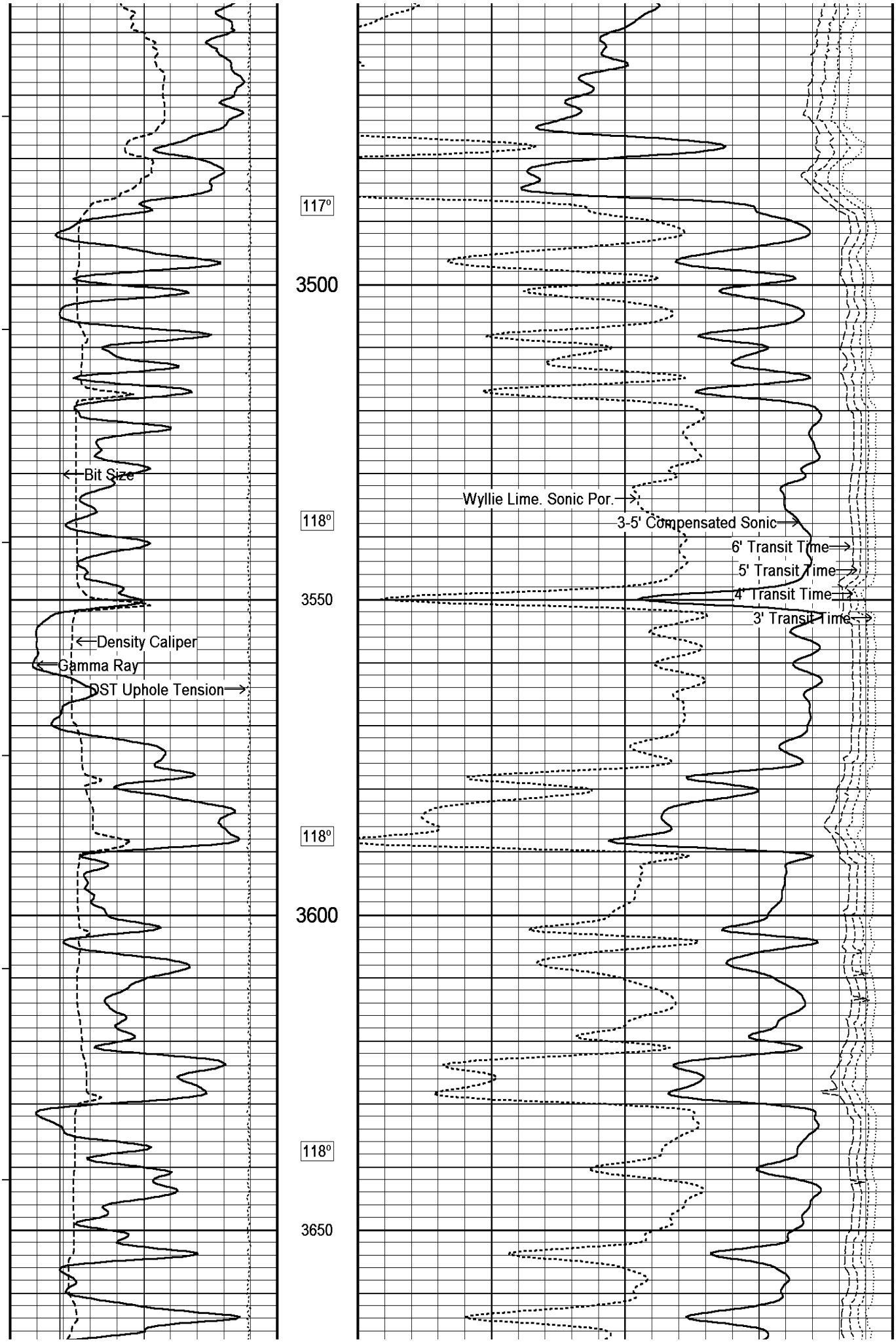

2400
112°
2450
112°
2500
112°
2550
113°
2600

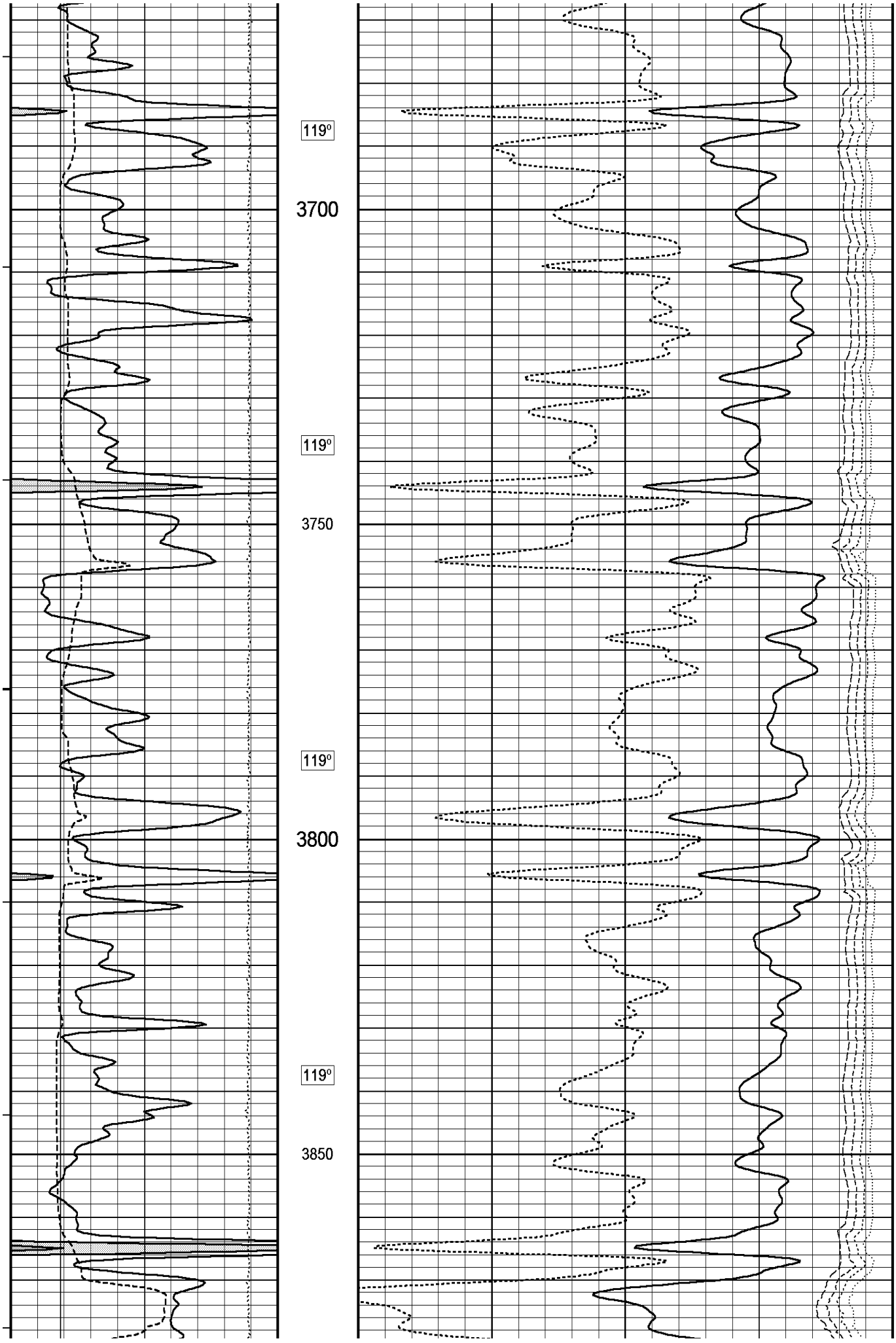

113°
2650
113°
2700
113°
Bit Size
Wyllie Lime. Sonic Por.
2750
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
Density Caliper
Gamma Ray
DST Uphole Tension
114°
2800

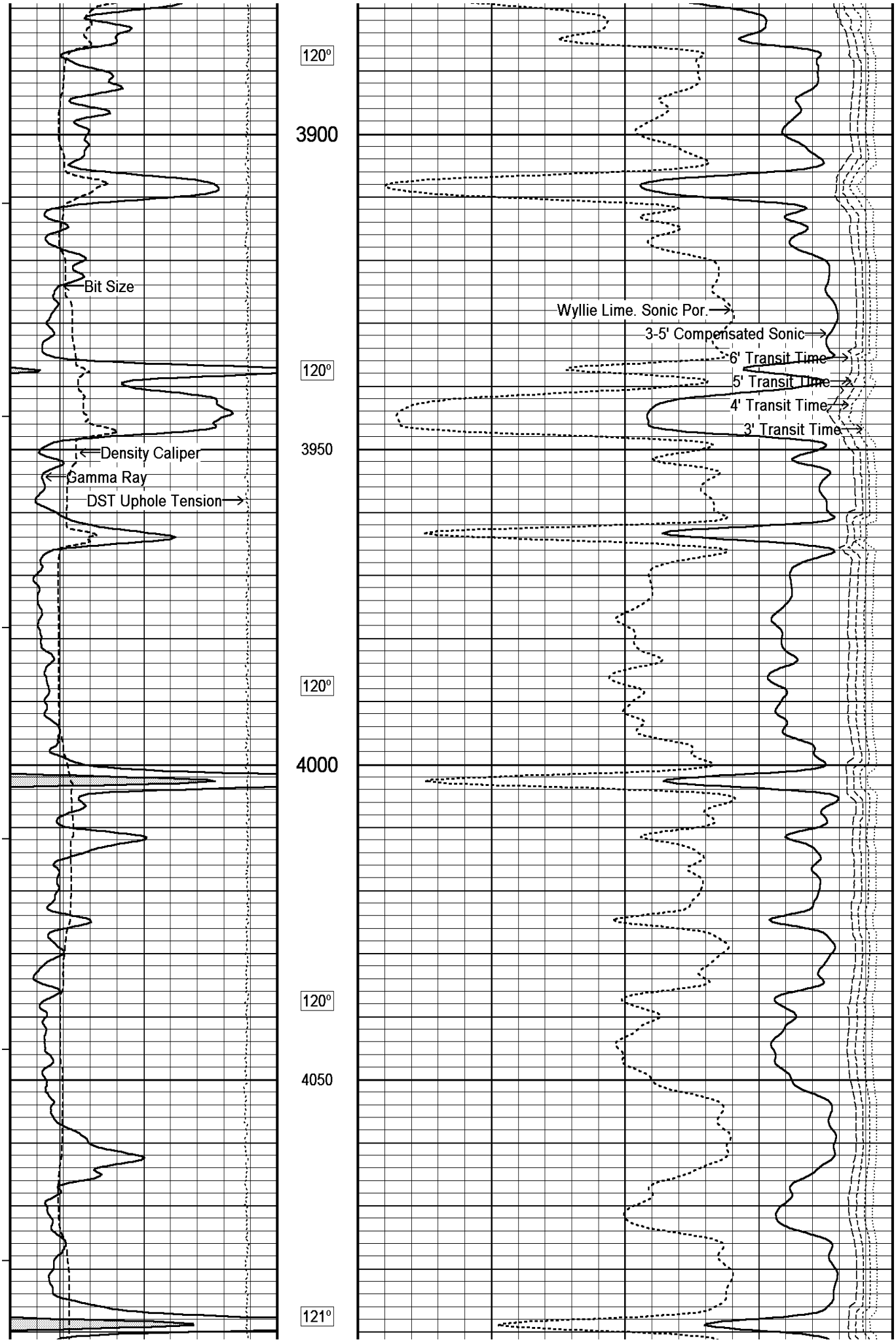

114°
2850
114°
2900
115°
2950
115°
3000

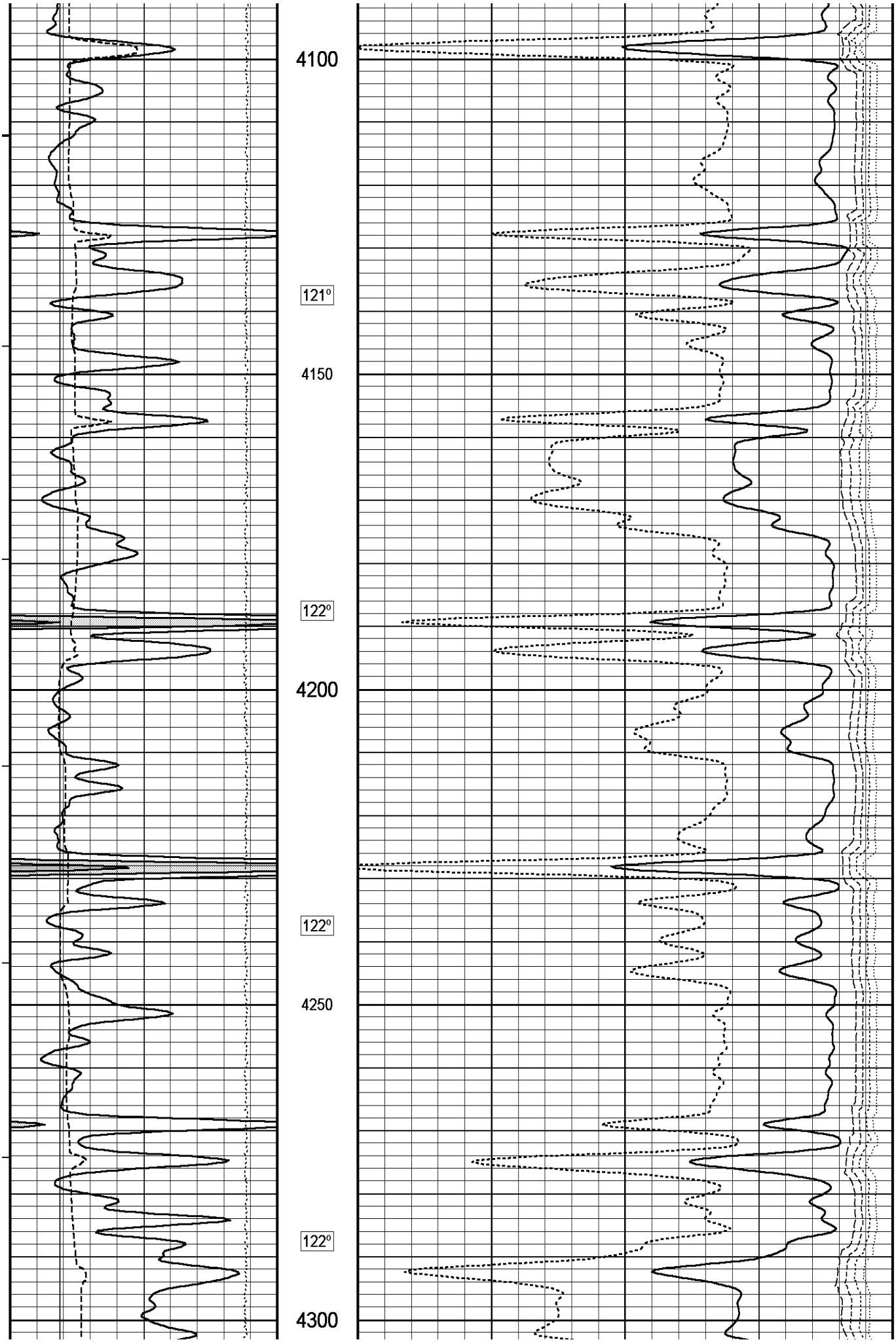

115°
3050
115°
3100
115°
3150
116°
3200
116°
Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
Wyllie Lime. Sonic Por.
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time

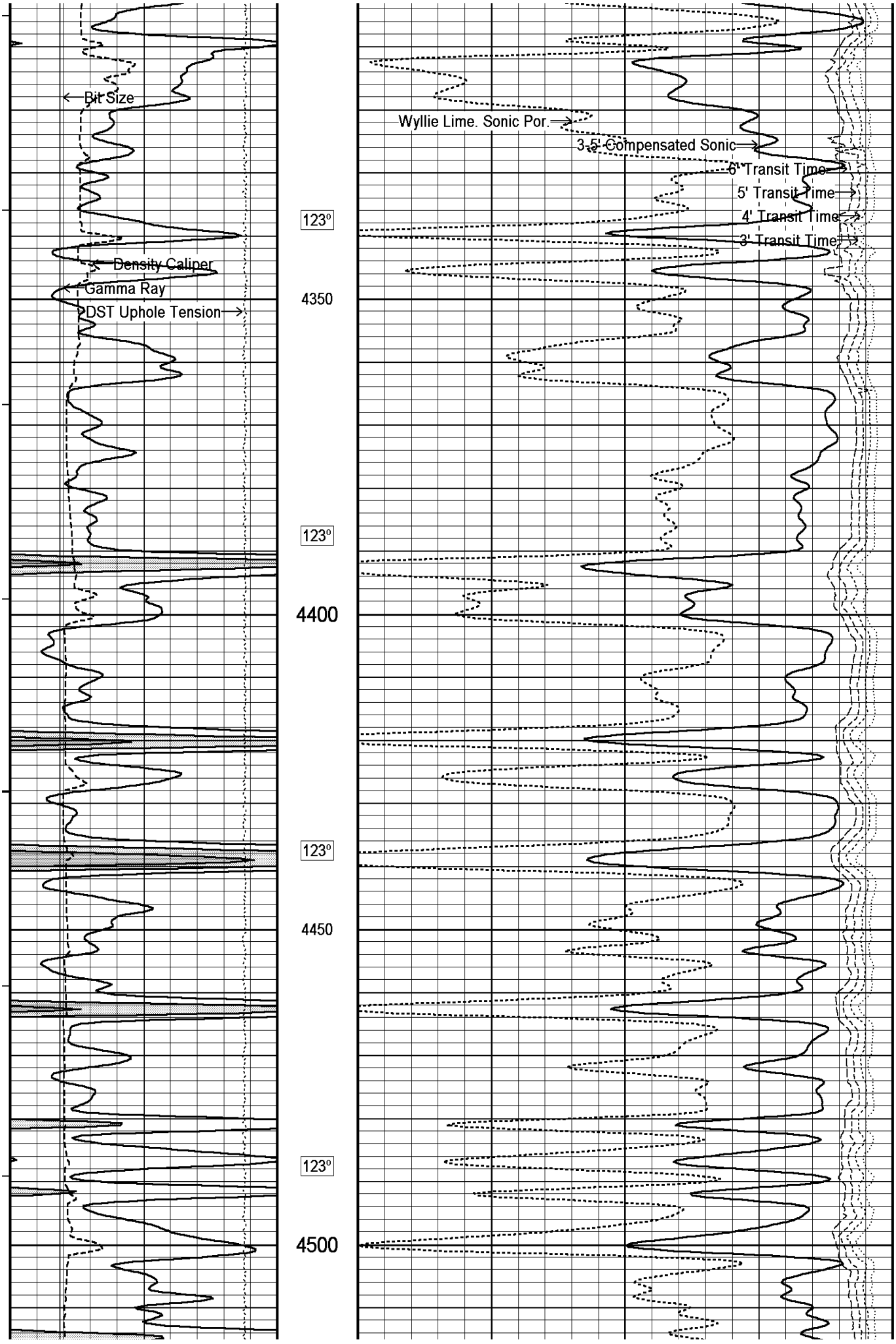

3250
116°
3300
117°
3350
117°
3400
117°
3450

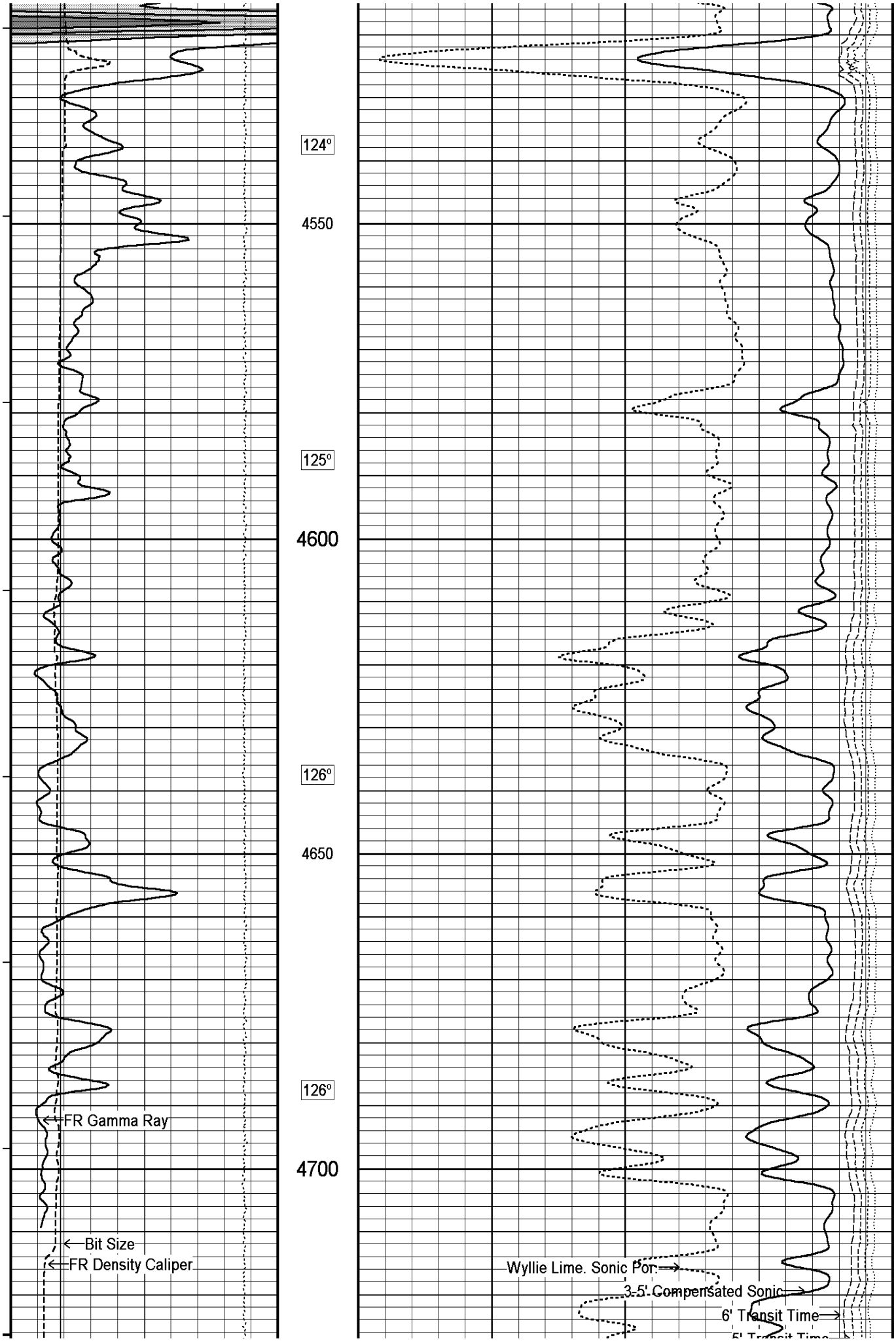

117°
3500
Bit Size
Wyllie Lime. Sonic Por.
118°
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3550
3' Transit Time
Density Caliper
Gamma Ray
DST Uphole Tension
118°
3600
118°
3650

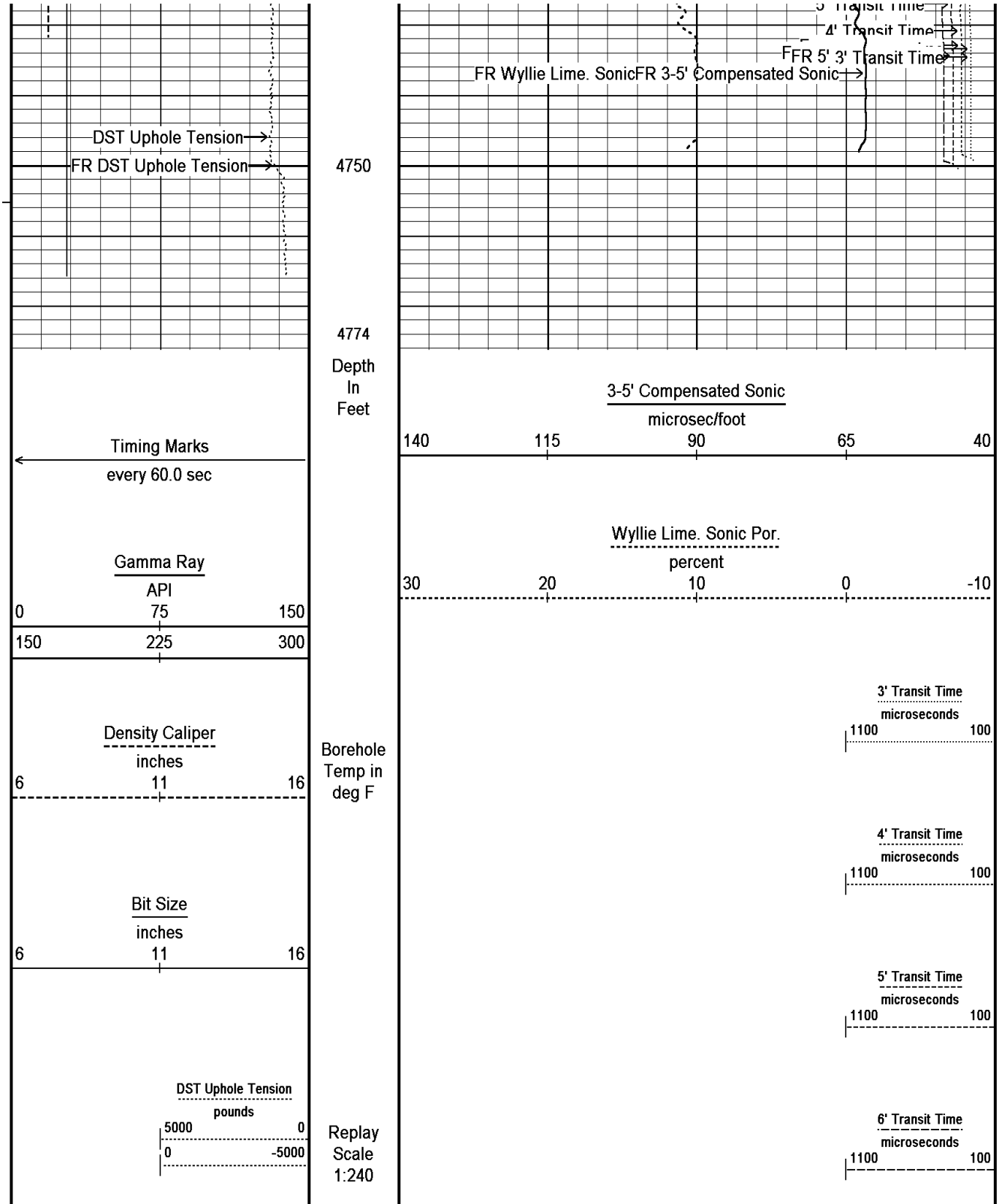

119°
3700
119°
3750
119°
3800
119°
3850


120°
3900
Bit Size
120°
Density Caliper
Gamma Ray
DST Uphole Tension
3950
120°
4000
120°
4050
121°
Wyllie Lime. Sonic Por.
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time


4100
121°
4150
122°
4200
122°
4250
122°
4300


Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
Wyllie Lime. Sonic Por.
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
123°
4350
123°
4400
123°
4450
123°
4500


124°
4550
125°
4600
126°
4650
126°
4700
←FR Gamma Ray
←Bit Size
←FR Density Caliper
Wyllie Lime. Sonic Por.→
3-5' Compensated Sonic→
6' Transit Time→



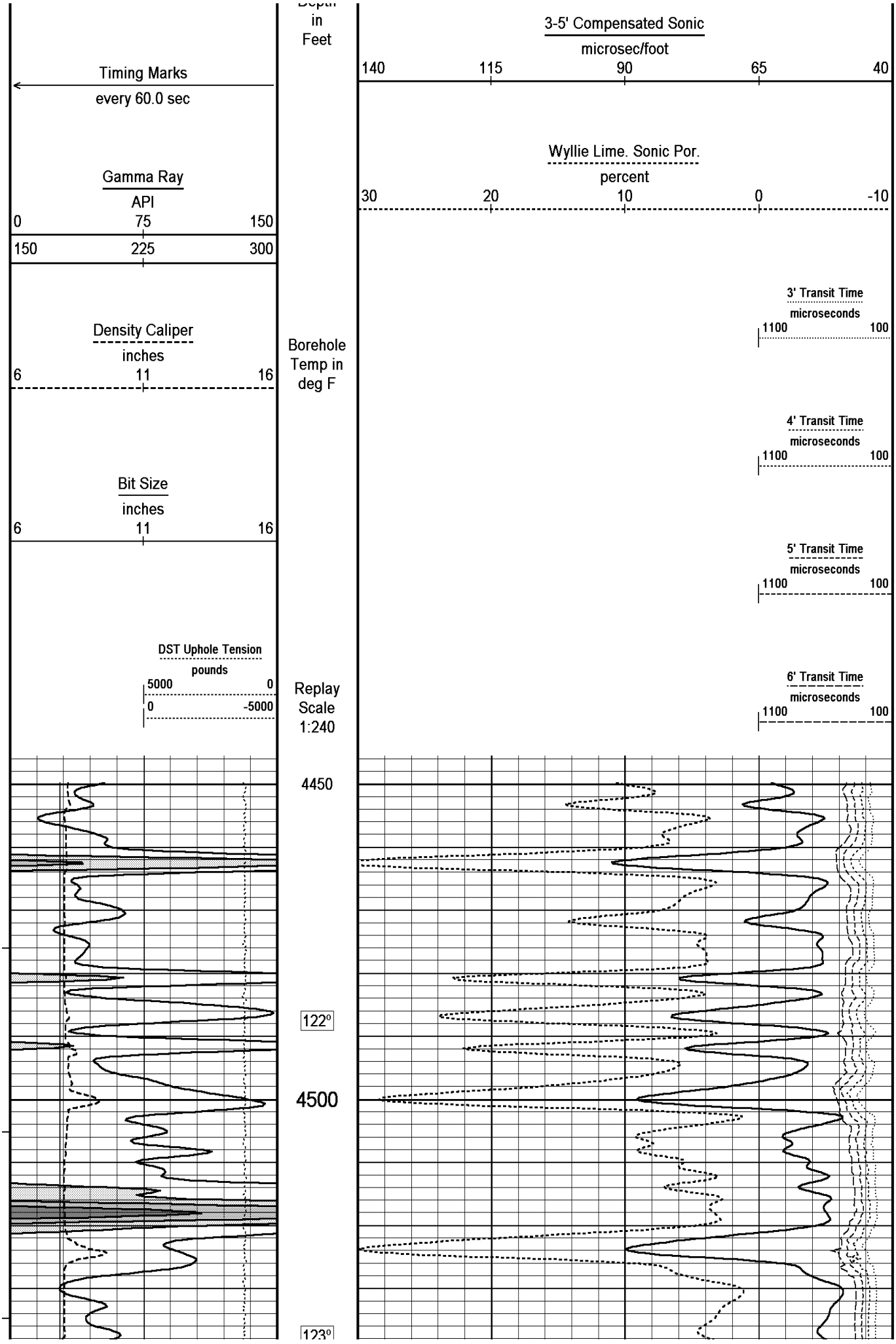
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 07-SEP-2010 23:40
Filename: C:\Minimus 10_8\Plot Presentations\Sonic\BEREXCO NEWBY #1-21_003.dta
Recorded on 07-SEP-2010 20:51
System Versions: Logged with 10.08.1568 Plotted with 10.08.1568

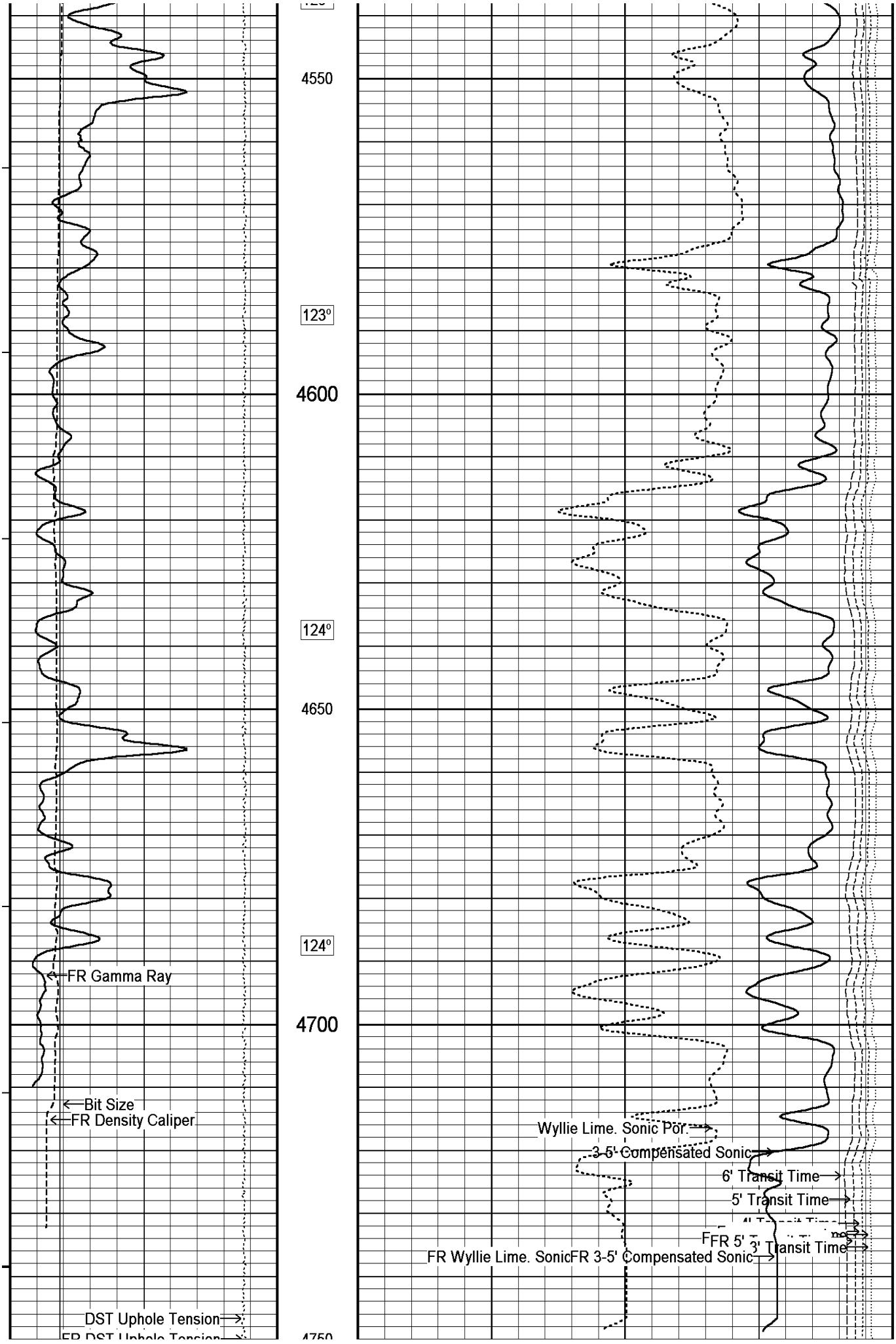
5 Inch Main

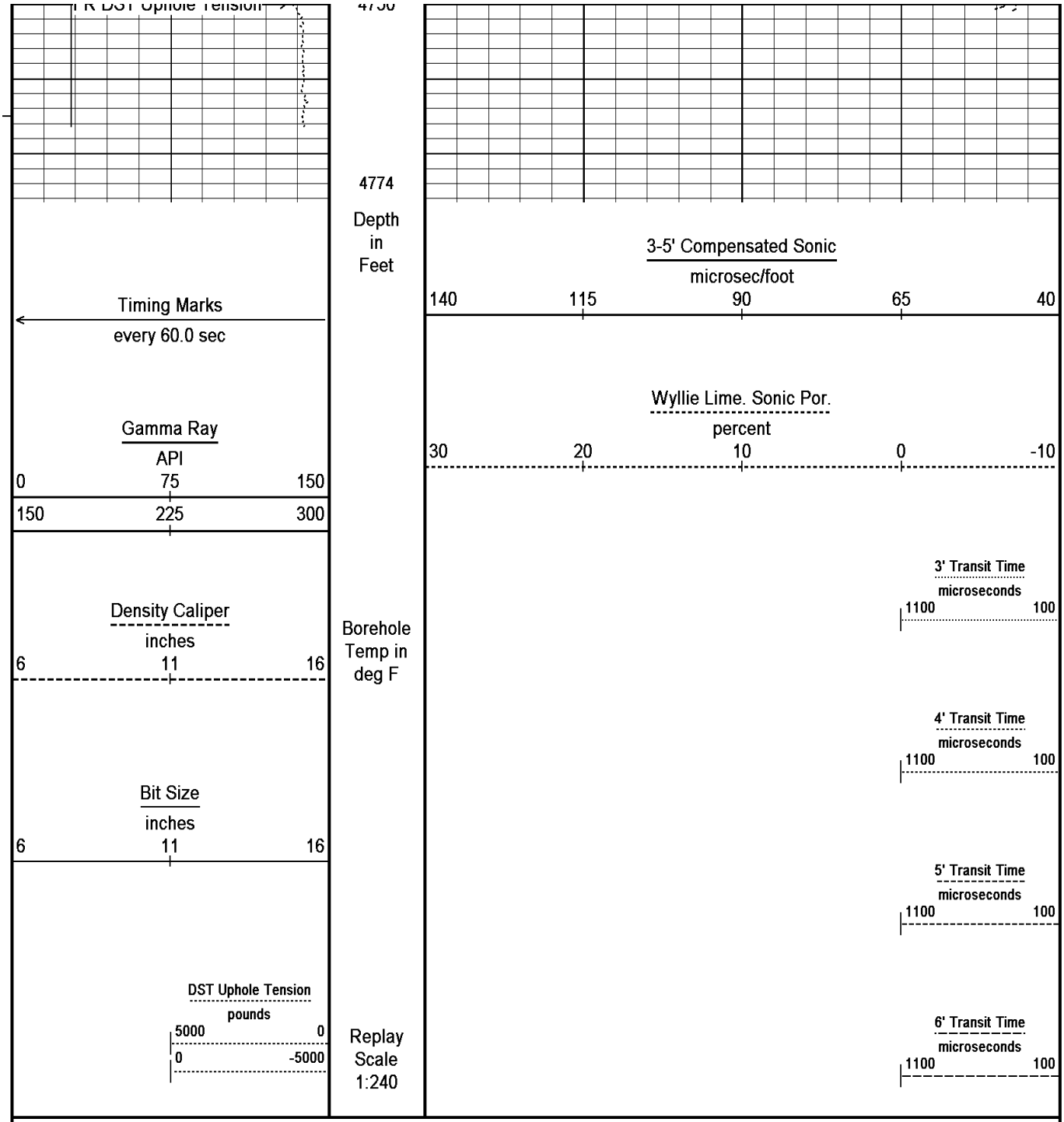
Repeat Section

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 07-SEP-2010 23:40
Filename: C:\Minimus 10_8\Plot Presentations\Sonic\BEREXCO NEWBY #1-21_002.dta
Recorded on 07-SEP-2010 20:23
System Versions: Logged with 10.08.1568 Plotted with 10.08.1568

Depth


Depth in Feet
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
0
-5000
Replay Scale 1:240
3-5' Compensated Sonic
microsec/foot
140
115
90
65
40
Wyllie Lime. Sonic Por.
percent
30
20
10
0
-10
3' Transit Time
microseconds
1100
100
4' Transit Time
microseconds
1100
100
5' Transit Time
microseconds
1100
100
6' Transit Time
microseconds
1100
100
Borehole Temp in deg F
4450
122°
4500
123°


4550
123°
4600
124°
4650
124°
4700
←FR Gamma Ray
←Bit Size
←FR Density Caliper
DST Uphole Tension→
Wyllie Lime. Sonic Por.→
3-5' Compensated Sonic→
6' Transit Time→
5' Transit Time→
FR 5' 3' Transit Time→
FR Wyllie Lime. SonicFR 3-5' Compensated Sonic→



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 07-SEP-2010 23:40

Filename: C:\Minimus 10_8\Plot Presentations\Sonic\BEREXCO NEWBY #1-21_002.dta — Recorded on 07-SEP-2010 20:23

System Versions: Logged with 10.08.1568 Plotted with 10.08.1568

Repeat Section

BEFORE SURVEY CALIBRATION

C:\Minimus 10_8\Plot Presentations\Sonic\BEREXCO NEWBY #1-21.dta

General Constants All 000 — Last Edited on 07-SEP-2010,18:50

General Parameters

Mud Resistivity	1.020	ohm-metres
Mud Resistivity Temperature	89.000	degrees F
Water Level	0.000	feet
Density/Neutron 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	Density Caliper	

Rwa Parameters

Porosity used	Limestone Density Por.	
Resistivity used	Deep Induction	
RWA Constant A	0.610	
RWA Constant M	2.150	

High Resolution Temperature Calibration MCG 034

Field Calibration on 19-OCT-2009,11:45

	Measured	Calibrated(Deg F)
Lower	50.00	50.00
Upper	75.00	75.00

High Resolution Temperature Constants MCG 034

Pre-filter Length	11

Gamma Calibration MCG 034

Field Calibration on 07-SEP-2010 15:15

	Measured	Calibrated (API)
Background	64	44
Calibrator (Gross)	1115	769
Calibrator (Net)	1051	725

Gamma Constants MCG 034

Last Edited on 04-SEP-2010,15:37

Gamma Calibrator Number	grc38	
Mud Density	1.00	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

Sonic Constants MSS 055

Last Edited on 07-SEP-2010,18:48

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

Caliper Calibration MPD 035

Base Calibration on 08-JUL-2010 15:01
Field Calibration on 07-SEP-2010 14:59

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	20128	4.01
2	30012	5.96
3	40480	7.98
4	50399	9.95
5	60832	11.91
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
6.16	5.96

DOWNHOLE EQUIPMENT

C:\Minimus 10_8\Plot Presentations\Sonic\BEREXCO NEWBY #1-21.dta

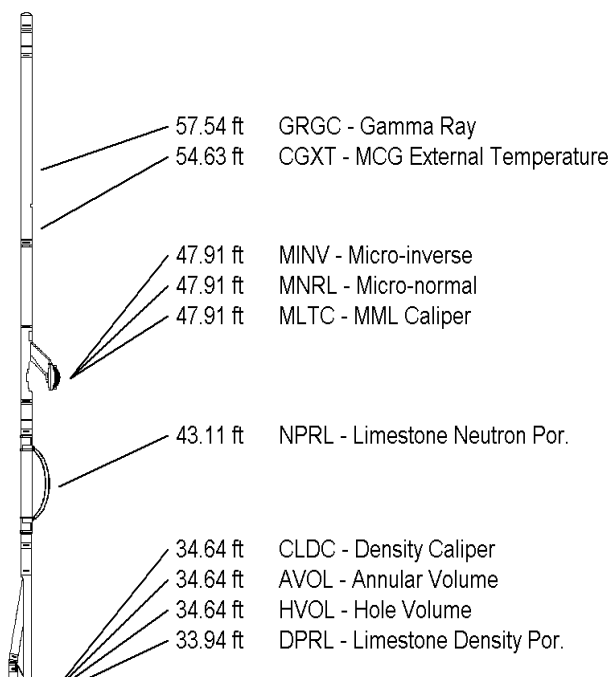
3/8" Triple Cone Cable Head (MCB C A)
MCB 5 Length: 1.58 ft Weight: 15.4 lb

Compact Gamma
MCG 34 Length: 8.70 ft Weight: 63.9 lb

Compact Micro-log
MML 9 Length: 7.97 ft Weight: 81.6 lb

Compact Neutron
MDN 65 Length: 5.04 ft Weight: 50.7 lb

Compact Density/Caliper
MPD 35 Length: 9.59 ft Weight: 90.4 lb



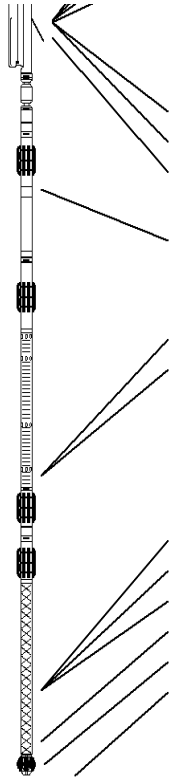
SKJ-D.A Compact Knuckle Joint
SKJ 37 Length: 2.17 ft Weight: 24.3 lb

Compact Focussed Electric
MFE 55 Length: 6.03 ft Weight: 48.5 lb

Compact Sonic
MSS 55 Length: 12.52 ft Weight: 72.8 lb

Compact Induction
MAI 178 Length: 10.81 ft Weight: 48.5 lb

Total Length: 64.40 ft Weight: 496.0 lb



33.94 ft	DEN - Compensated Density
33.94 ft	DCOR - Density Correction
33.88 ft	PDPE - PE
26.22 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	(0.13ft from bottom)
-0.13 ft	SMTU - DST Uphole Tension

All measurements relative to tool zero.

COMPANY	BEREXCO LLC.
WELL	NEWBY #1-21
FIELD	EVA SOUTH
PROVINCE/COUNTY	SCOTT
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	2945.00	feet	First Reading	4737.00	feet
Elevation Drill Floor	2944.00	feet	Depth Driller	4750.00	feet
Elevation Ground Level	2932.00	feet	Depth Logger	4750.00	feet

Weatherford®

COMPENSATED SONIC

W/ INTEGRATED TRANSIT TIMES