Weatherford®

COMPENSATED SONIC
WITH INTEGRATED TRANSIT TIME

COMPANY	GRAND MESA OPERATING
WELL	BEAZLEY-CHAMBERS 1-13
FIELD	WILDCAT
PROVINCE/COUNTY	GOVE
COUNTRY/STATE	U.S.A. / KANSAS
LOCATION	1972' FNL & 2387' FWL

40 Years of Wireline 1970 2010

SEC	TWP	RGE	Other Services
13	13S	31W	MPD/MDN MAI/MFE
			MML

API Number 15-063-22004
Permit Number

Permanent Datum GL, Elevation 2899 feet
Log Measured From KB
Drilling Measured From KB

Elevations:	feet
KB	2904.00
DF	2902.00
GL	2899.00

Date	09-JUL-2012			
Run Number	ONE			
Depth Driller	4663.00	feet		
Depth Logger	4664.00	feet		
First Reading	4651.00	feet		
Last Reading	207.00	feet		
Casing Driller	208.00	feet		
Casing Logger	207.00	feet		
Bit Size	7.875	inches		
Hole Fluid Type	CHEMICAL			
Density / Viscosity	9.30 lb/USg	55.00 CP		
PH / Fluid Loss	9.50	8.00 ml/30Min		
Sample Source	MUDPIT			
Rm @ Measured Temp	1.35 @ 94.0	ohm-m		
Rmf @ Measured Temp	1.08 @ 94.0	ohm-m		
Rmc @ Measured Temp	1.62 @ 94.0	ohm-m		
Source Rmf / Rmc	CALC	CALC		
Rm @ BHT	1.06 @121.0	ohm-m		
Time Since Circulation	5 HOURS			
Max Recorded Temp	121.00	deg F		
Equipment Name	COMPACT			
Equipment / Base	13057	LIB		
Recorded By	ADAM SILL			
Witnessed By	KENT MATSON			
S.O. # / JOB #	3534554		LB12-175	

BOREHOLE RECORD

Last Edited: 09-JUL-2012 18:15

Bit Size inches	Depth From feet	Depth To feet
7.875	208.00	4663.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	208.00	24.00

REMARKS

- SOFTWARE ISSUE: WLS 11.03.4044.
- MCG, MML, MDN, MPD, MFE, MSS, MAI RAN IN COMBINATION.
  - HARDWARE: DUAL BOWSPRING USED ON MDN.
  0.5 INCH STANDOFF USED ON MAI.
  TWO 0.5 INCH STANDOFFS USED ON MSS.
  0.5 INCH STANDOFF USED ON MFE.
- 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: 1785 CU.FT.
- ANNULAR HOLE VOLUME WITH 5.5 INCH CASING: 231 CU. FT.

- SERVICE ORDER # 3534554.

- RIG: MURFIN #24.

- ENGINEER: A. SILL.

- OPERATOR(S): M. STEGMAN.

5 INCH MAIN PASS

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 10-JUL-2012 11:00
Filename: C:\Minimus_11_03_4044\Data\New Folder1\Grand Mesa Beazley-Chambers 1-13_002.dta — Recorded on 09-JUL-2012 18:50
System Versions: Logged with 11.03.4044 Processed with 11.03.4044 Plotted with 11.03.4044

Timing Marks
every 60.0 sec

Gamma Ray
API
0 75 150

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

Replay Scale 1:240

200
Casing Shoe

3-5' Compensated Sonic
microsec/foot
140 115 90 65 40

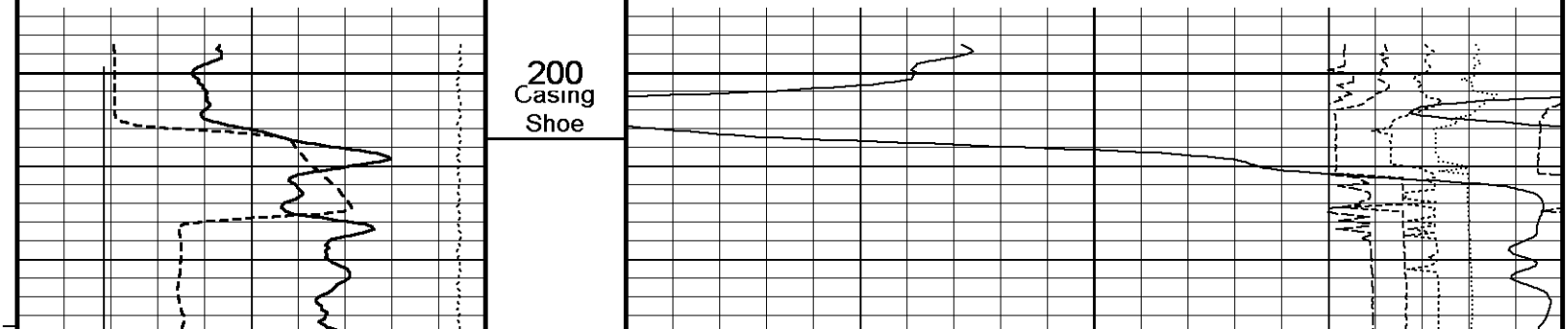
Wyllie Lime. Sonic Por.
percent
30 20 10 0 -10

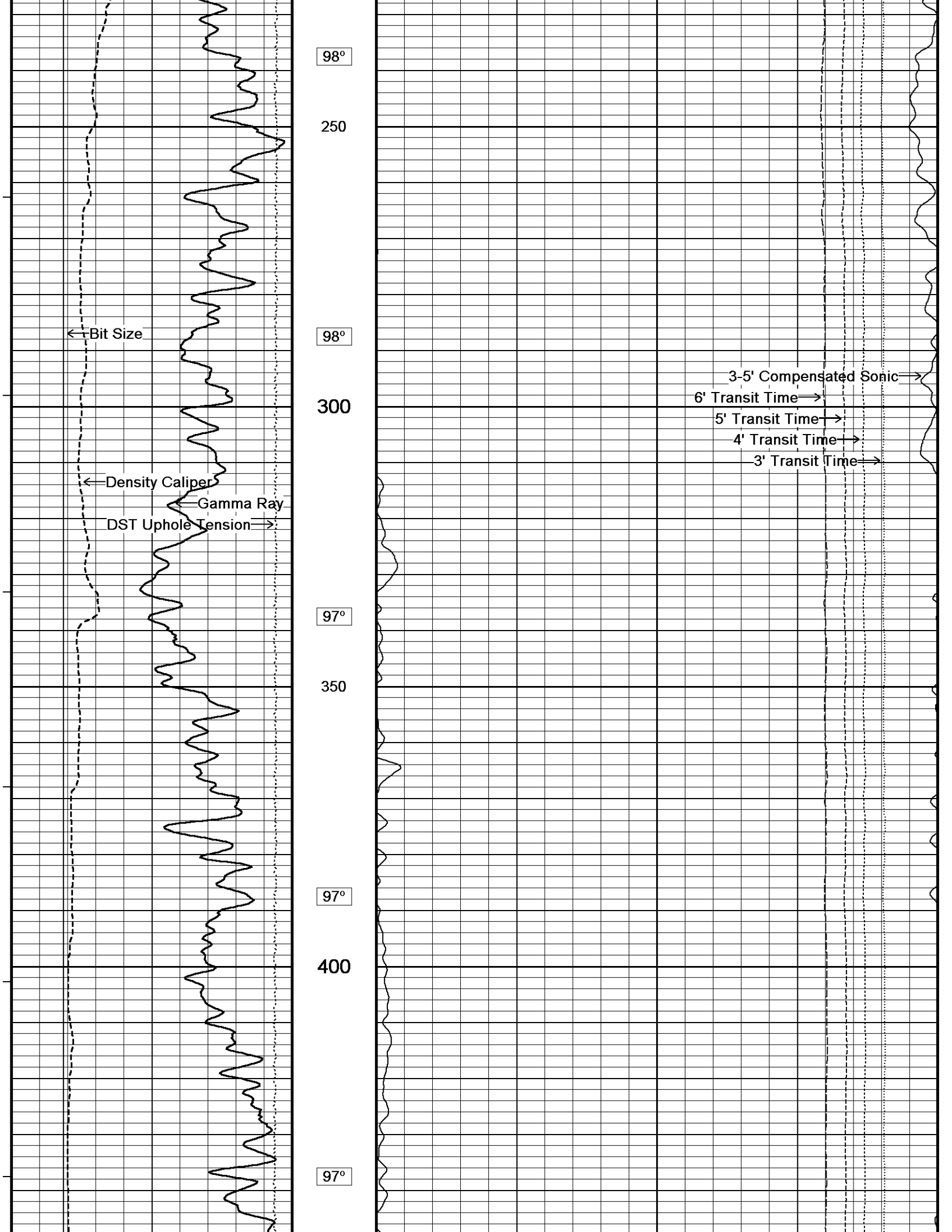
3' Transit Time
microseconds
1100 100

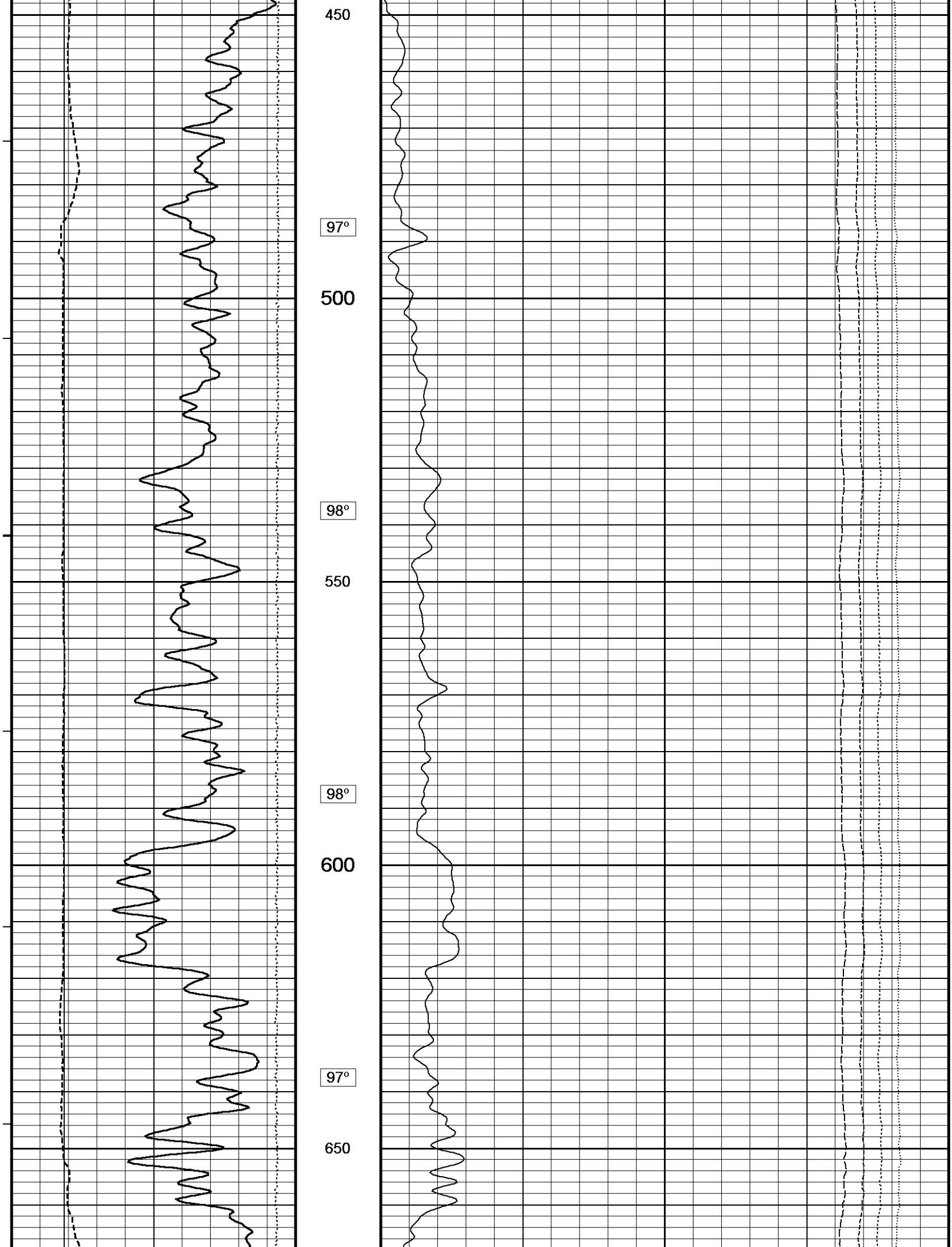
4' Transit Time
microseconds
1100 100

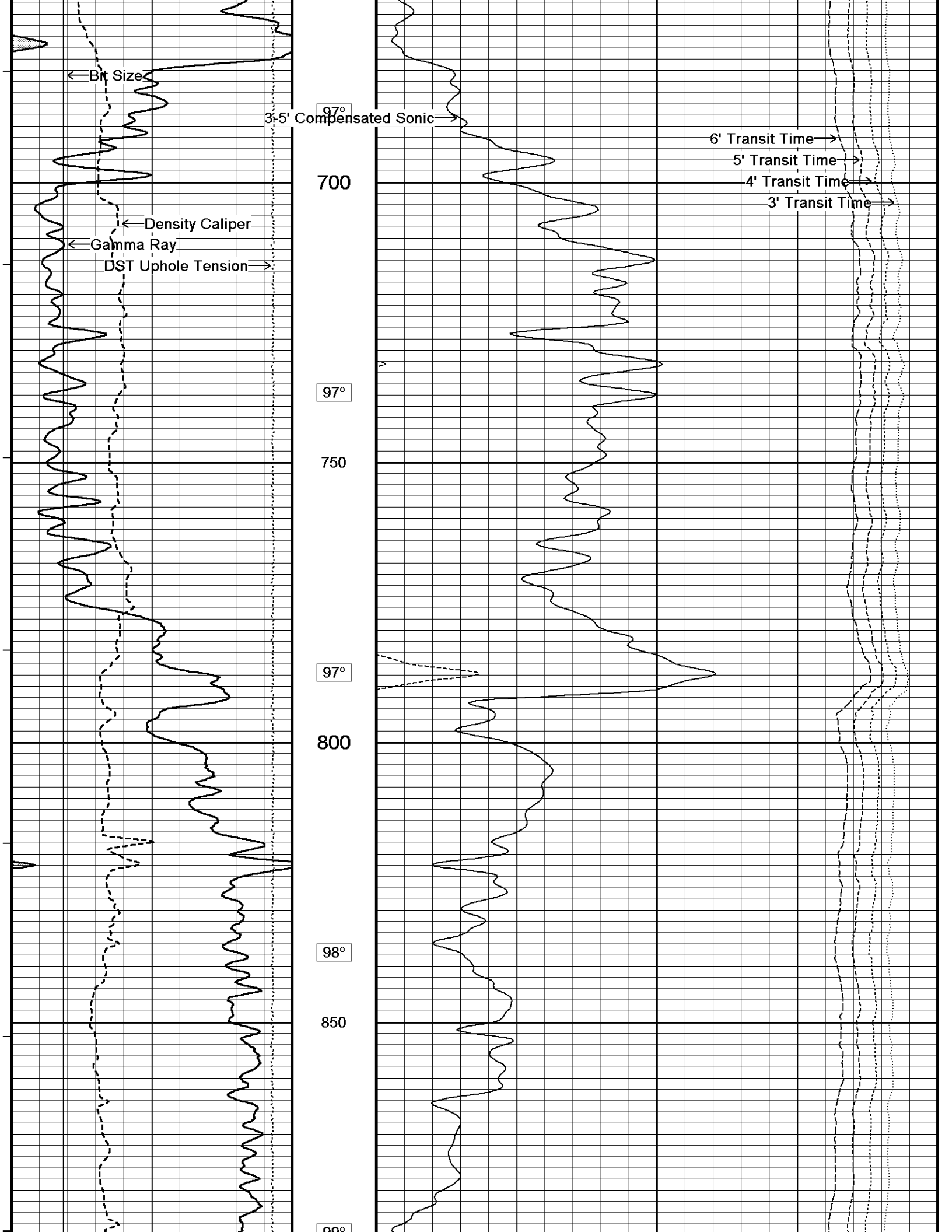
5' Transit Time
microseconds
1100 100

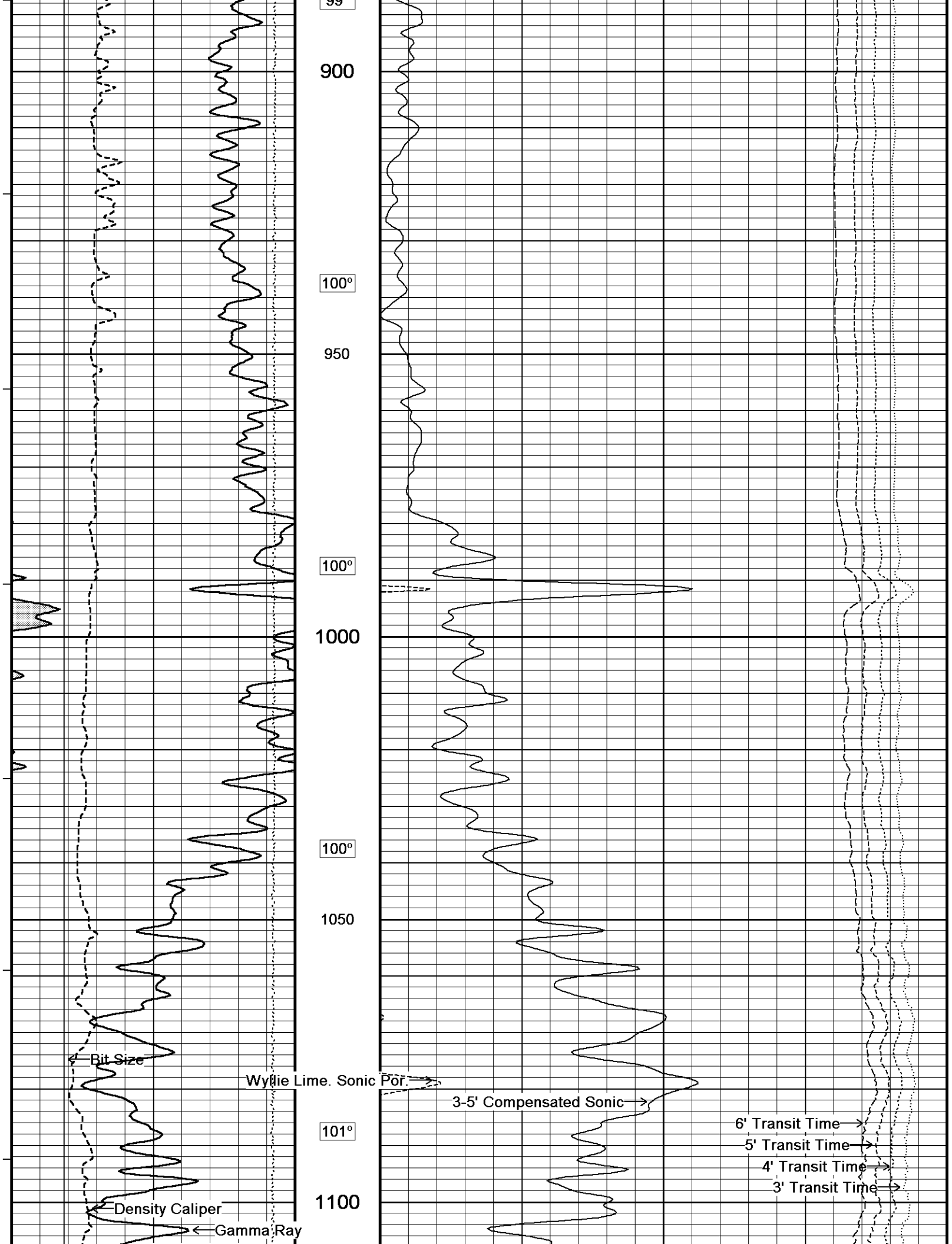
6' Transit Time
microseconds
1100 100

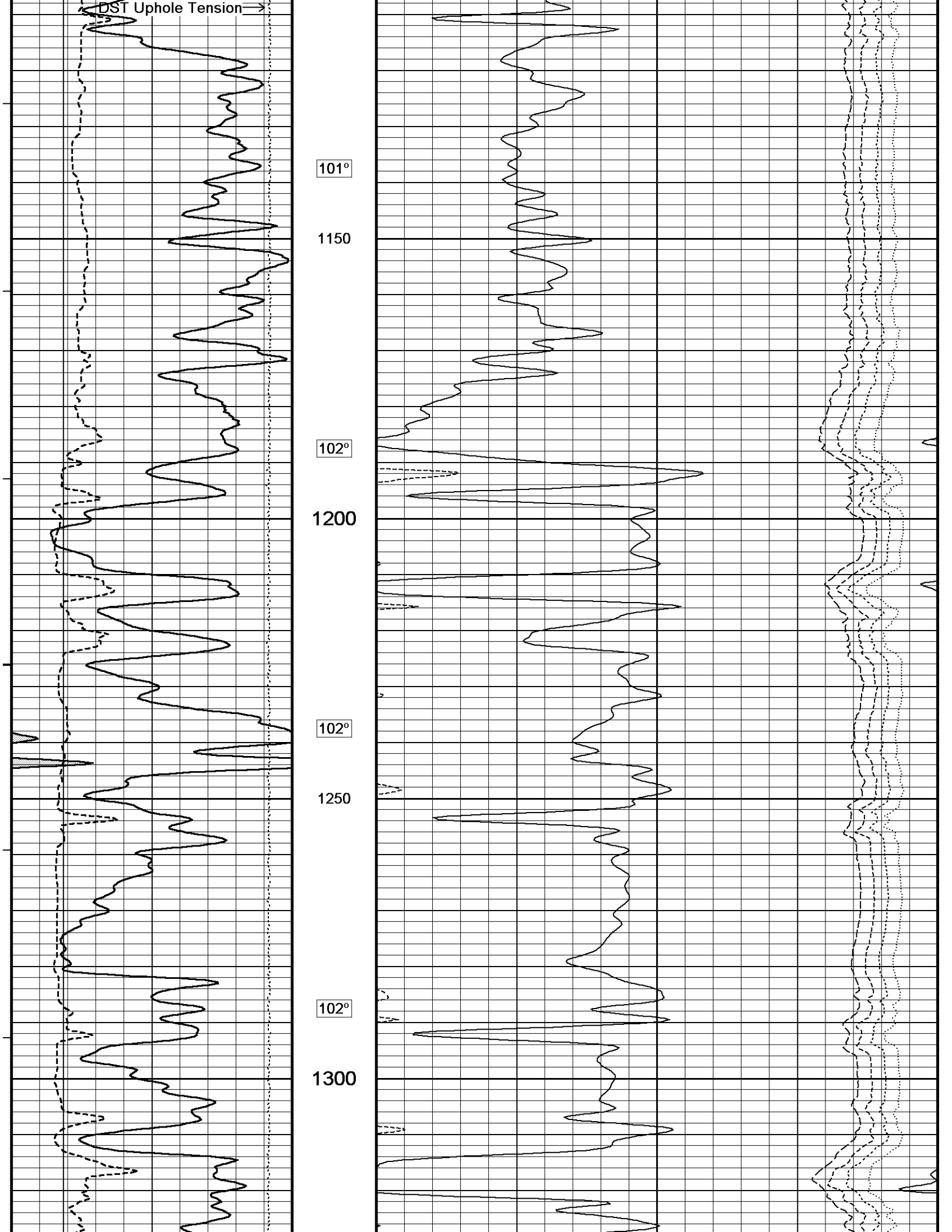


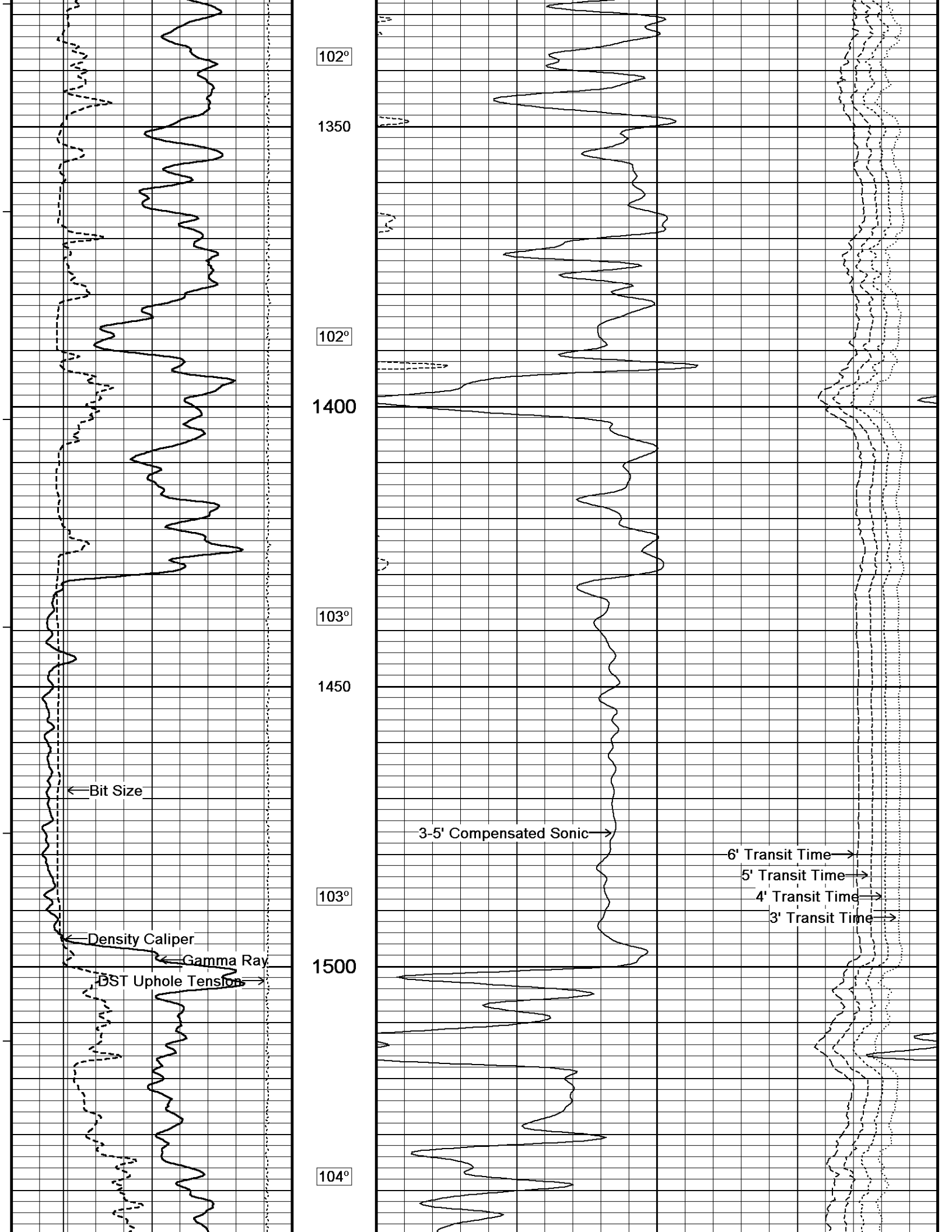

98°
250
98°
Bit Size
300
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
Density Caliper
Gamma Ray
DST Uphole Tension
97°
350
97°
400
97°

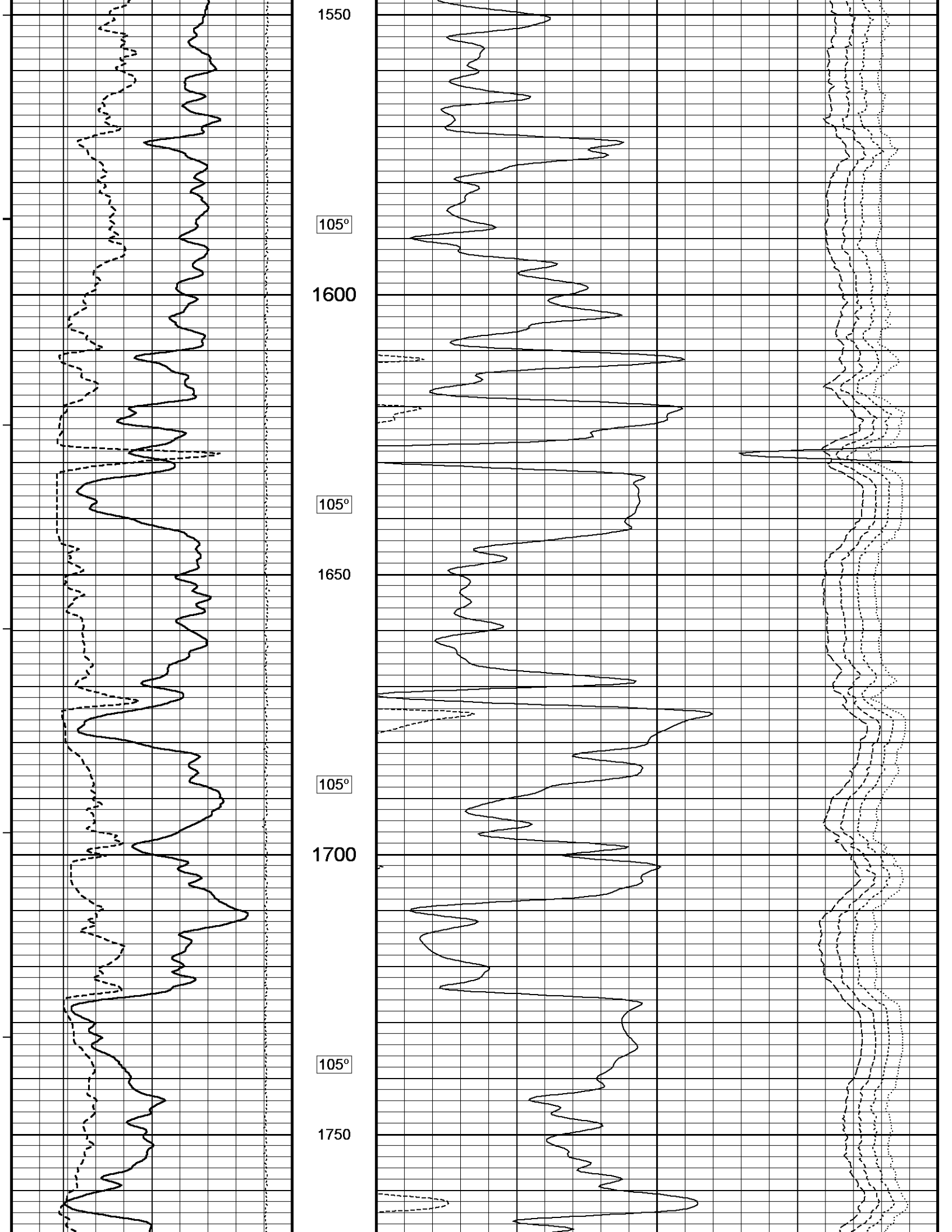

450
97°
500
98°
550
98°
600
97°
650

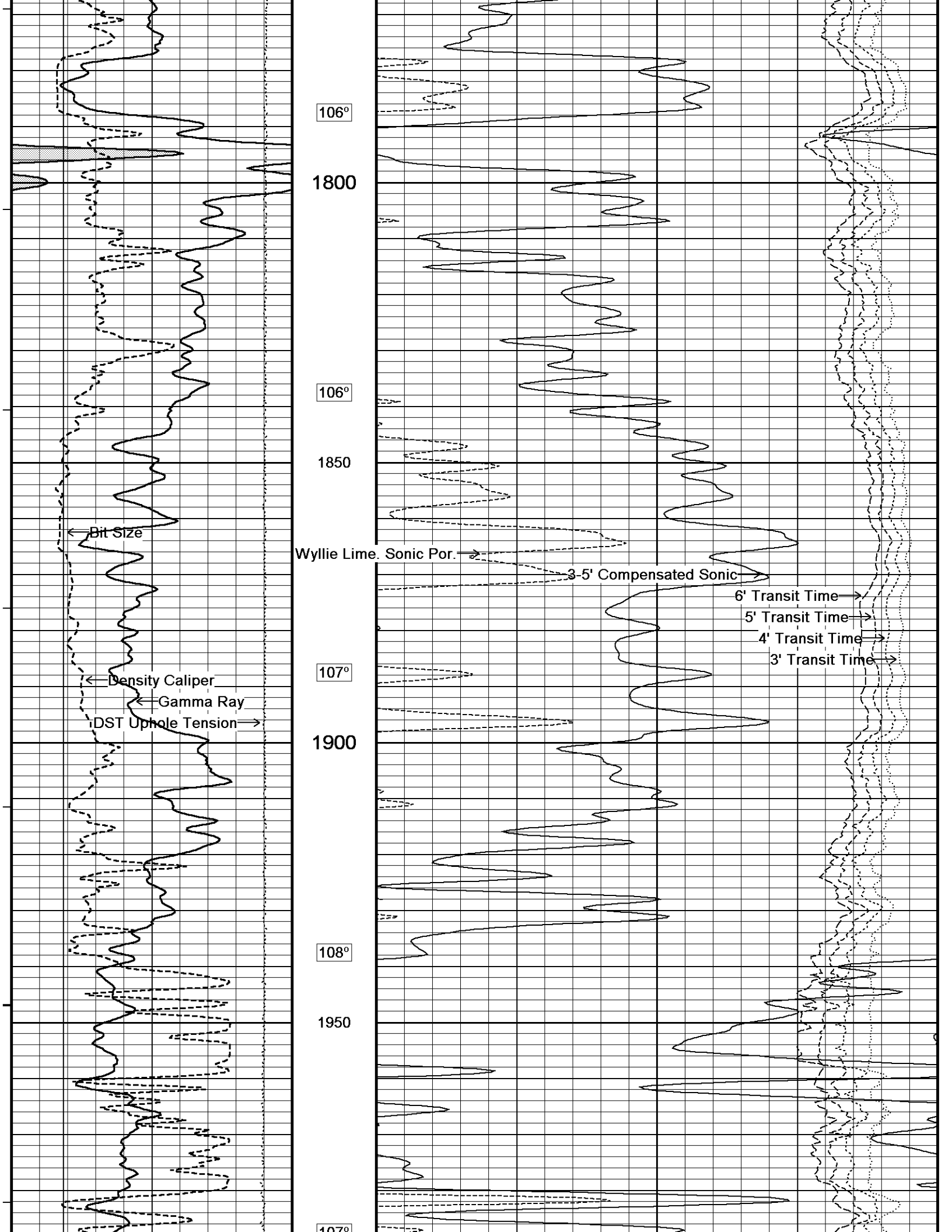

Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
97°
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
700
97°
750
97°
800
98°
850
99°

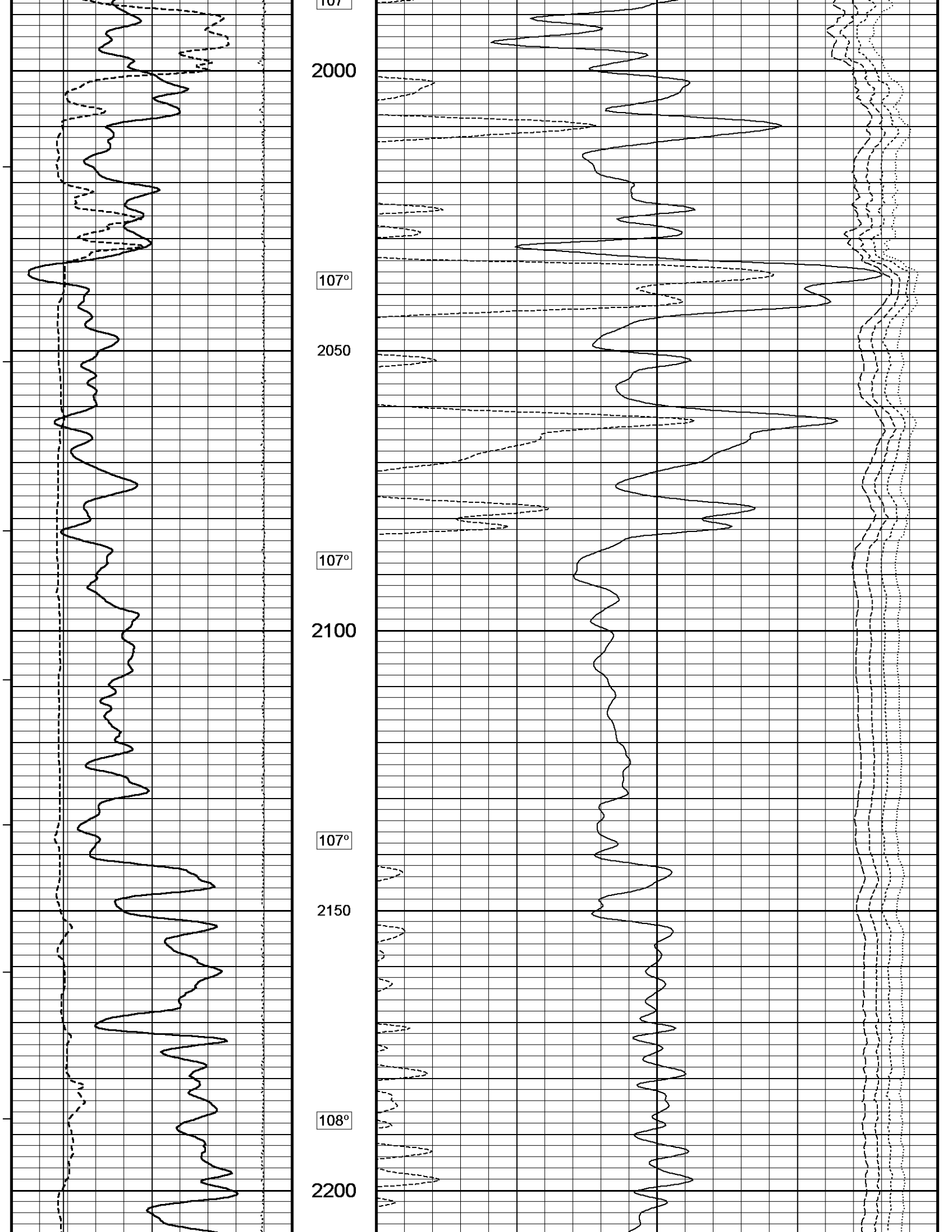

900
100°
950
100°
1000
100°
1050
101°
1100
Bit Size
Wyllie Lime. Sonic Por.
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
Density Caliper
Gamma Ray

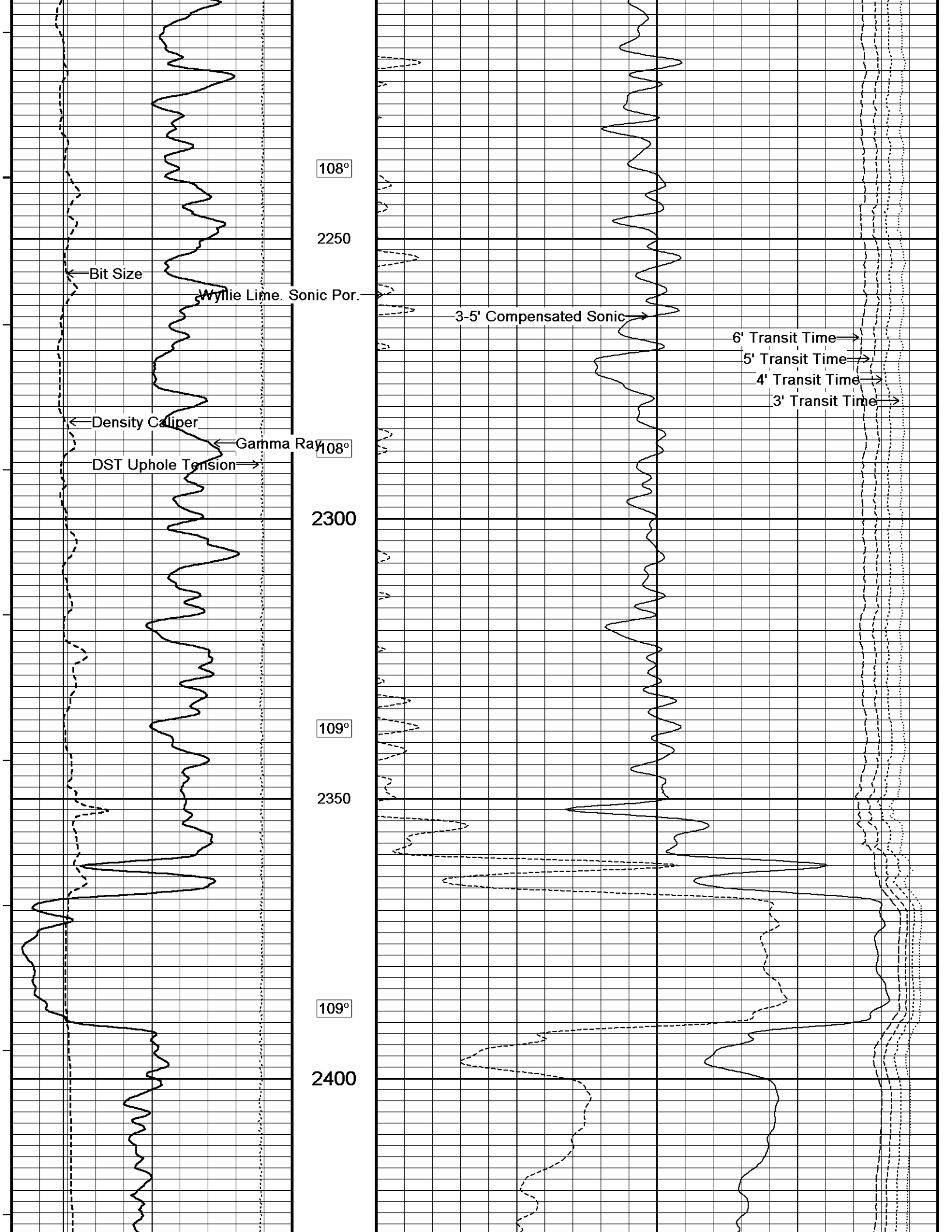

DST Uphole Tension
101°
1150
102°
1200
102°
1250
102°
1300

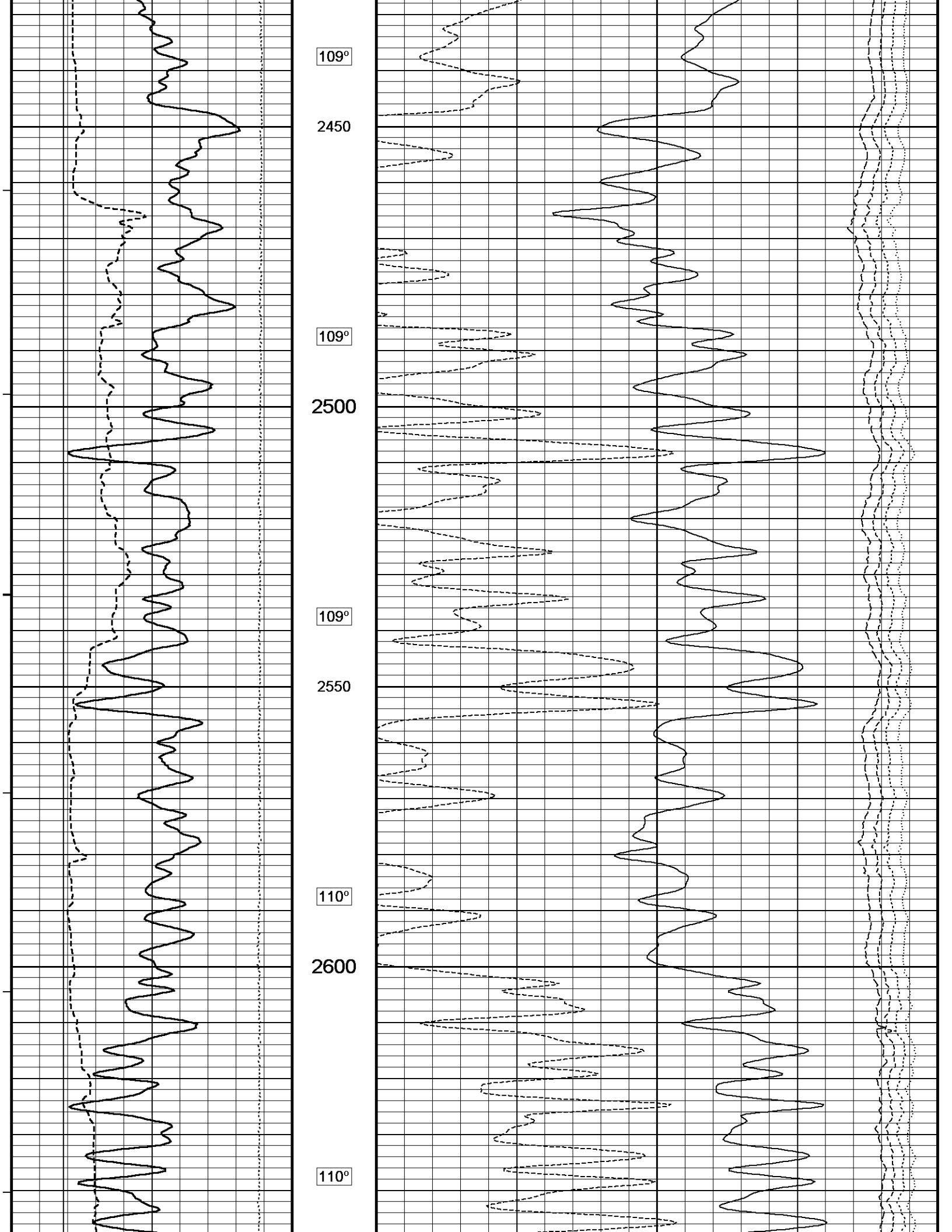

102°
1350
102°
1400
103°
1450
103°
1500
104°
Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time

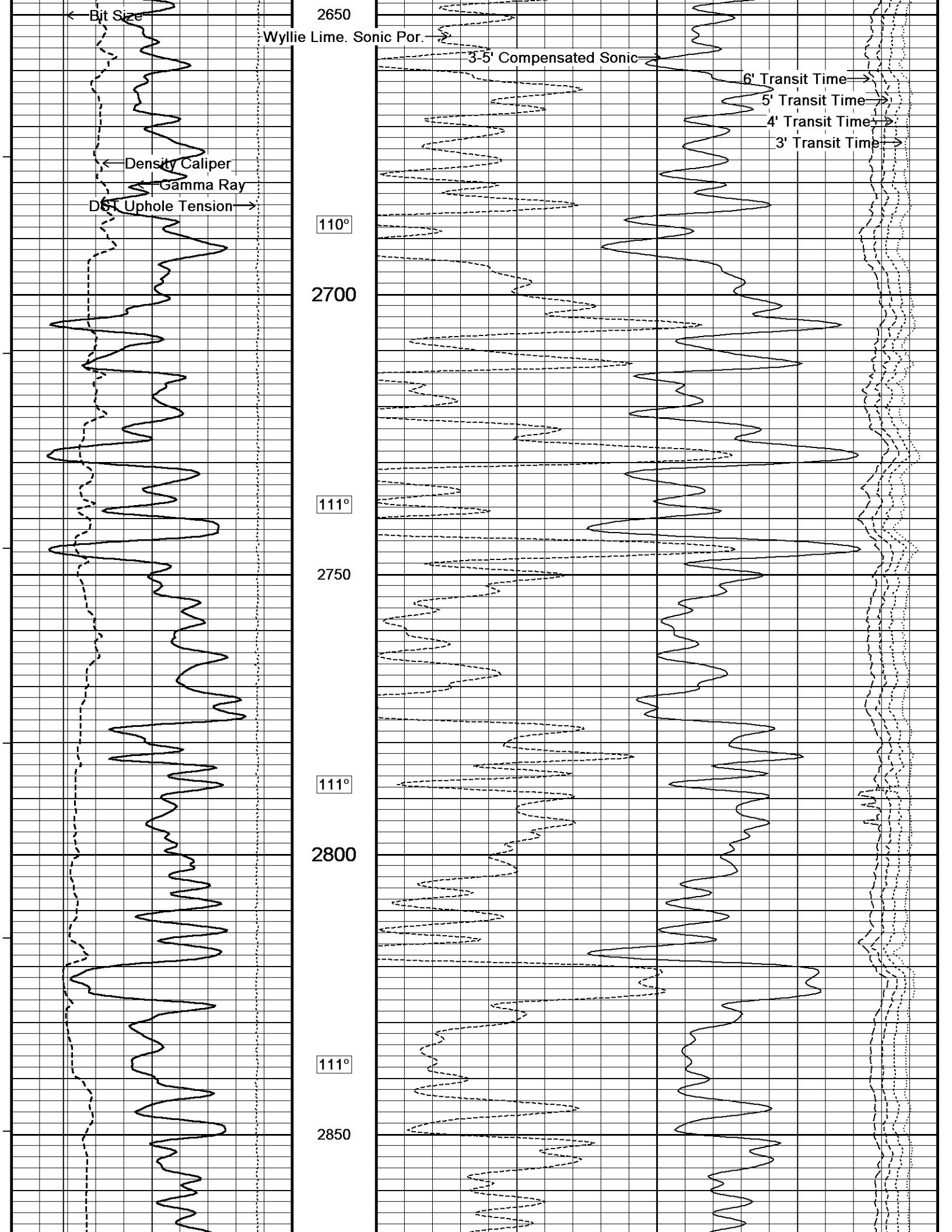

1550
105°
1600
105°
1650
105°
1700
105°
1750

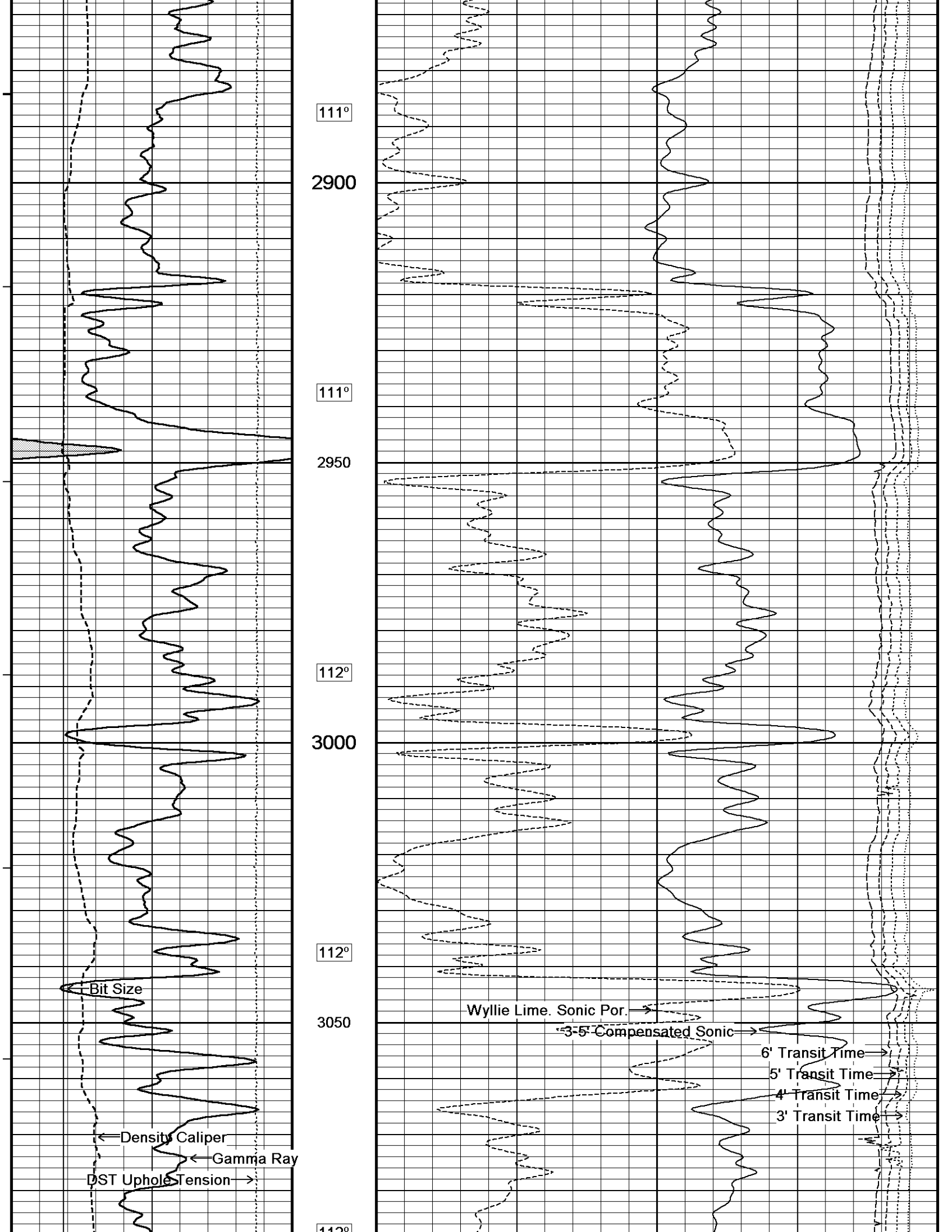

106°
1800
106°
1850
Bit Size
Wyllie Lime. Sonic Por.
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
107°
Density Caliper
Gamma Ray
DST Uphole Tension
1900
108°
1950

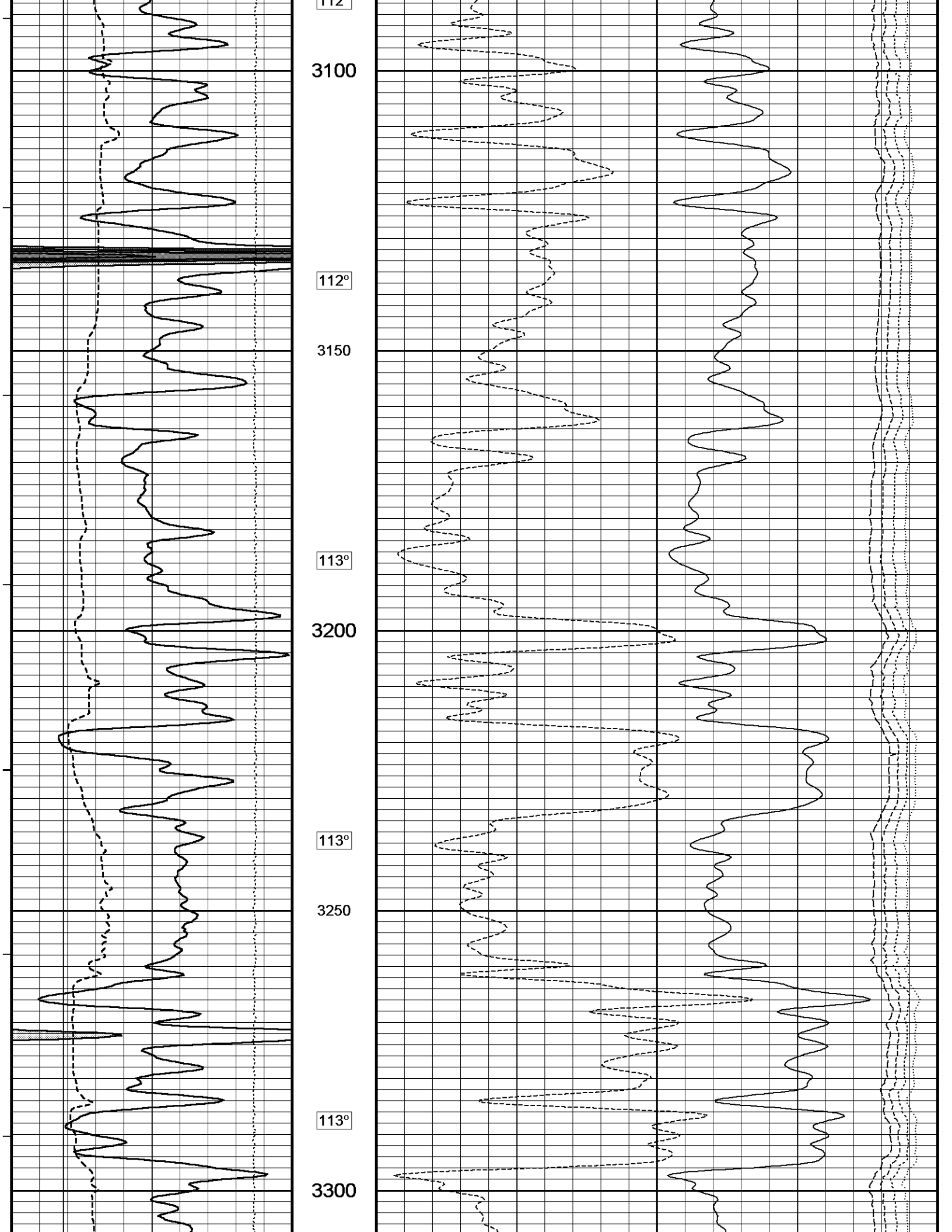

107
2000
107°
2050
107°
2100
107°
2150
108°
2200

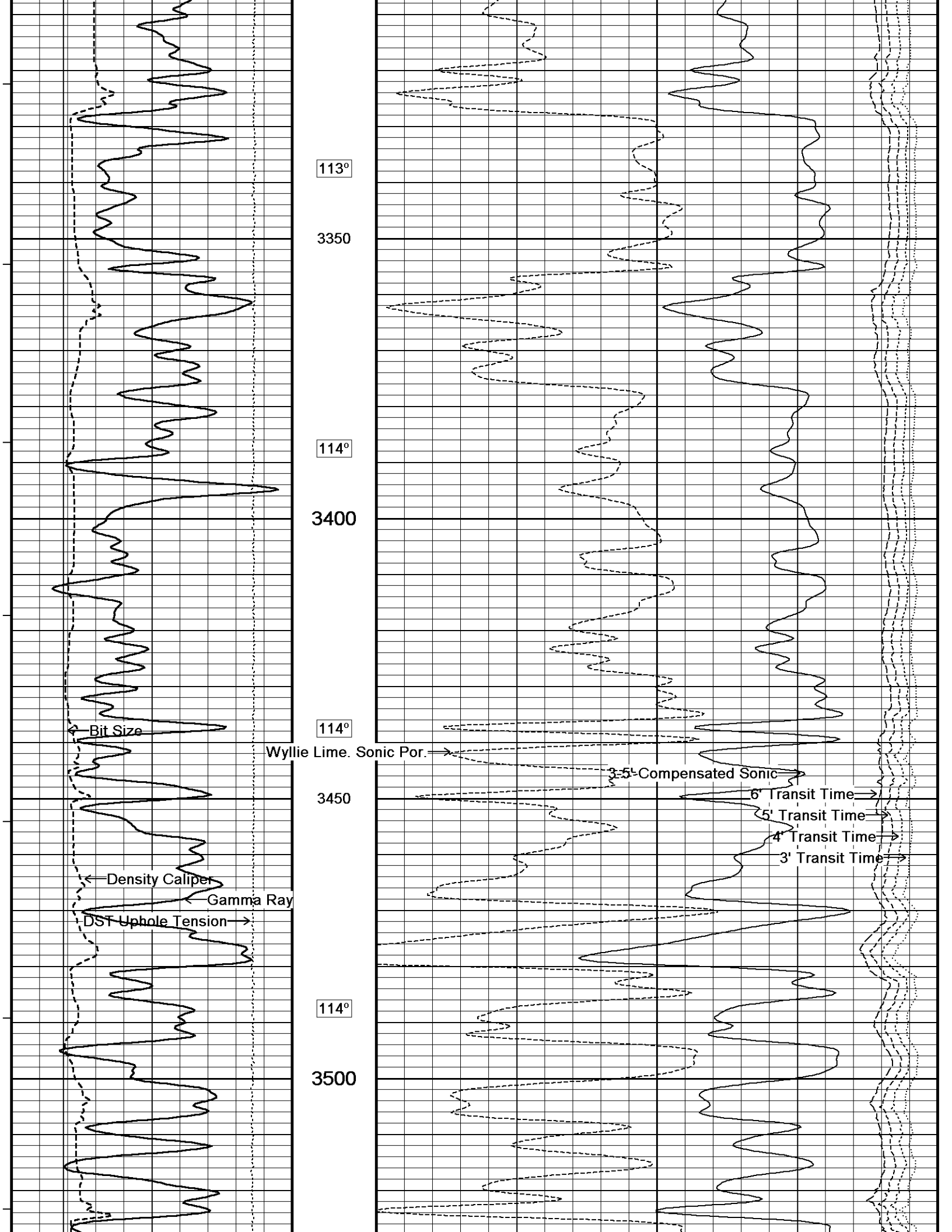

108°
2250
Bit Size
Wyllie Lime. Sonic Por.
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
Density Caliper
Gamma Ray
108°
DST Uphole Tension
2300
109°
2350
109°
2400

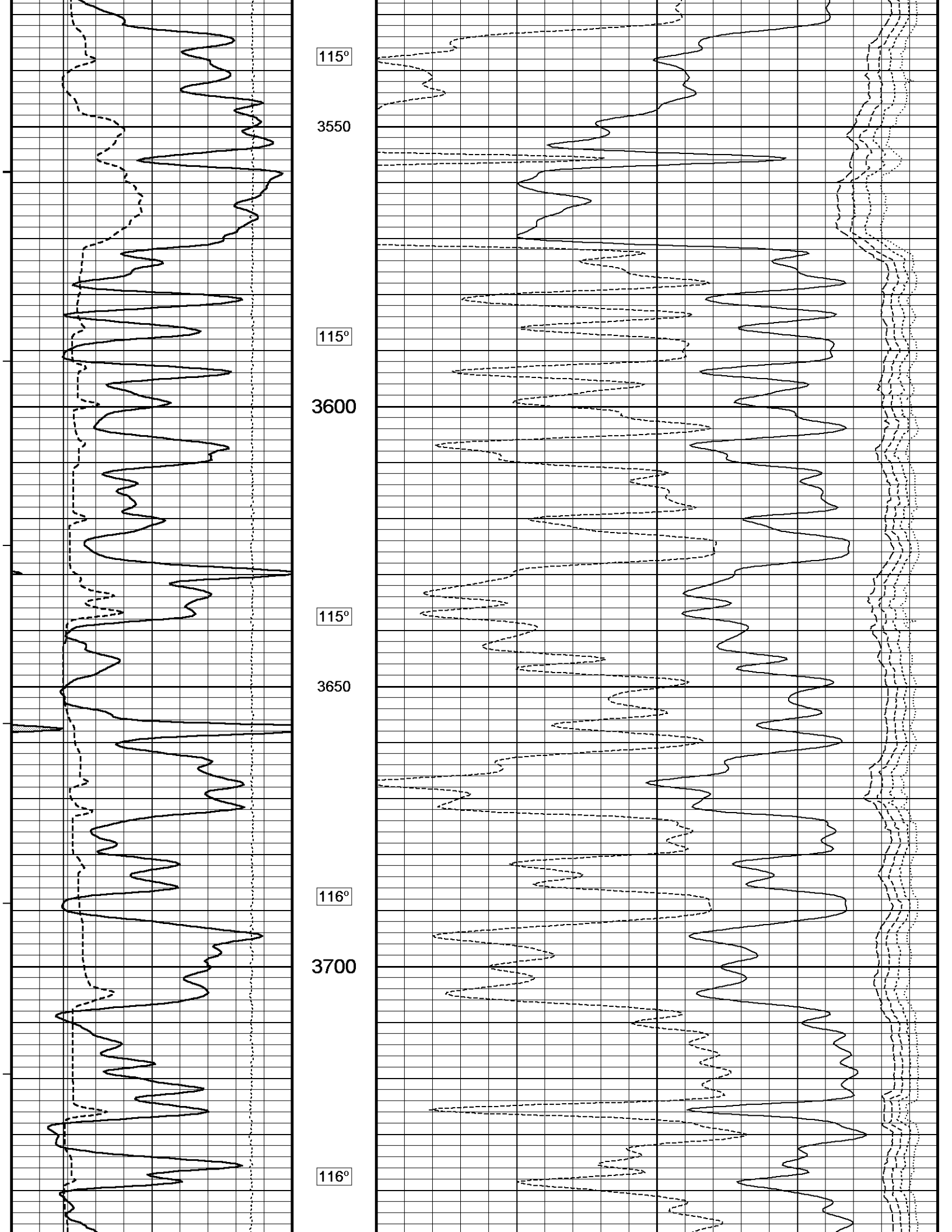

109°
2450
109°
2500
109°
2550
110°
2600
110°

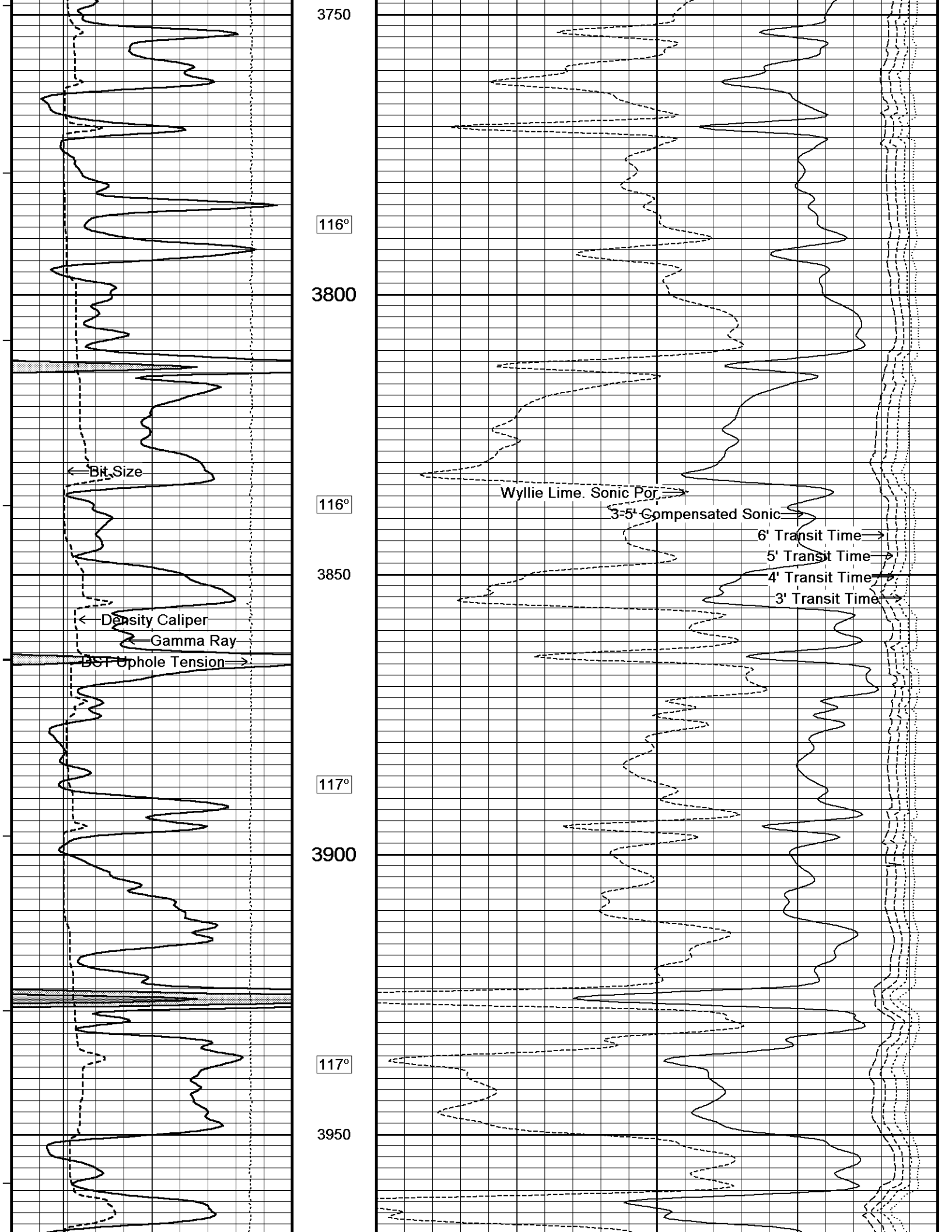

Bit Size
2650
Wyllie Lime. Sonic Por.
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
Density Caliper
Gamma Ray
DST Uphole Tension
110°
2700
111°
2750
111°
2800
111°
2850

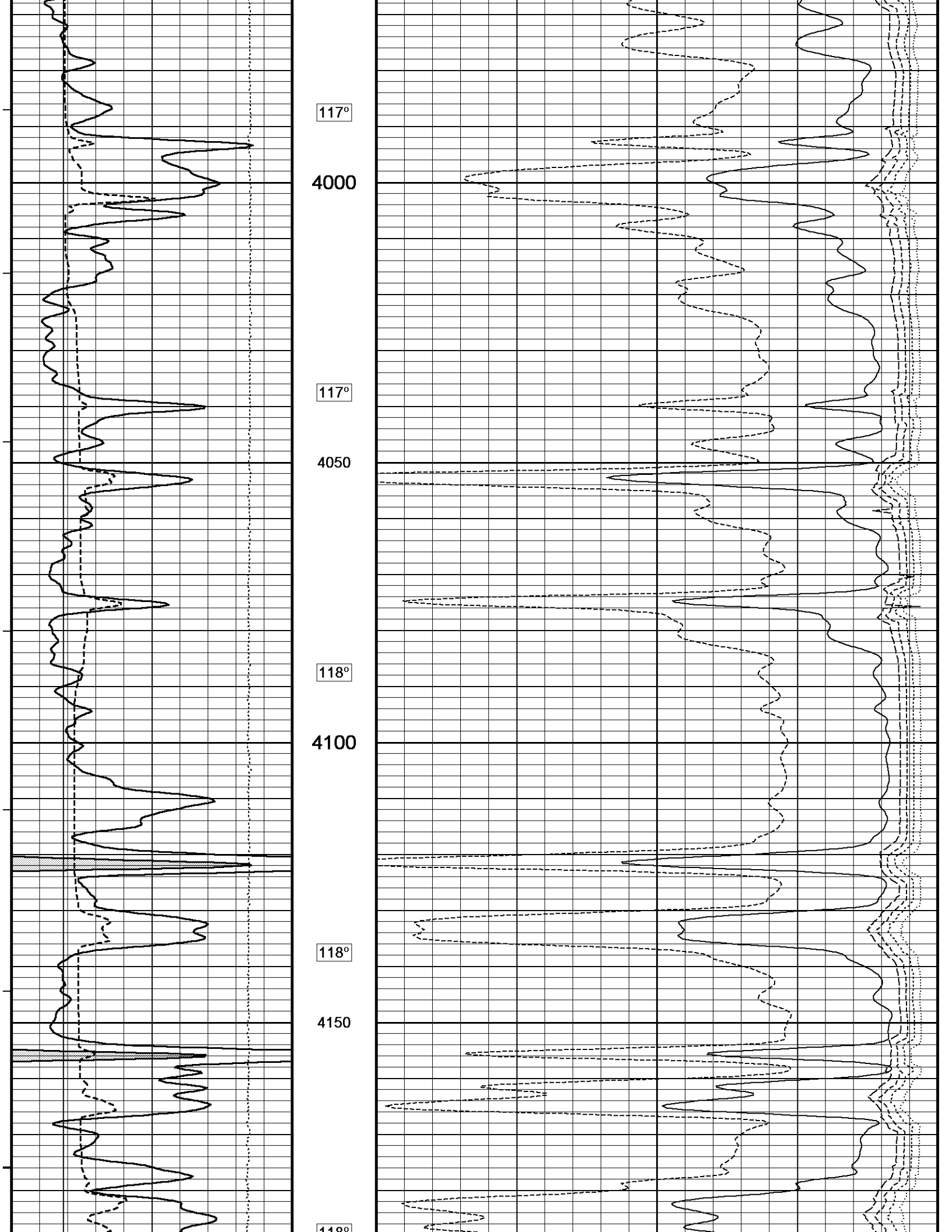

111°
2900
111°
2950
112°
3000
112°
3050
Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
Wyllie Lime. Sonic Por.
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time

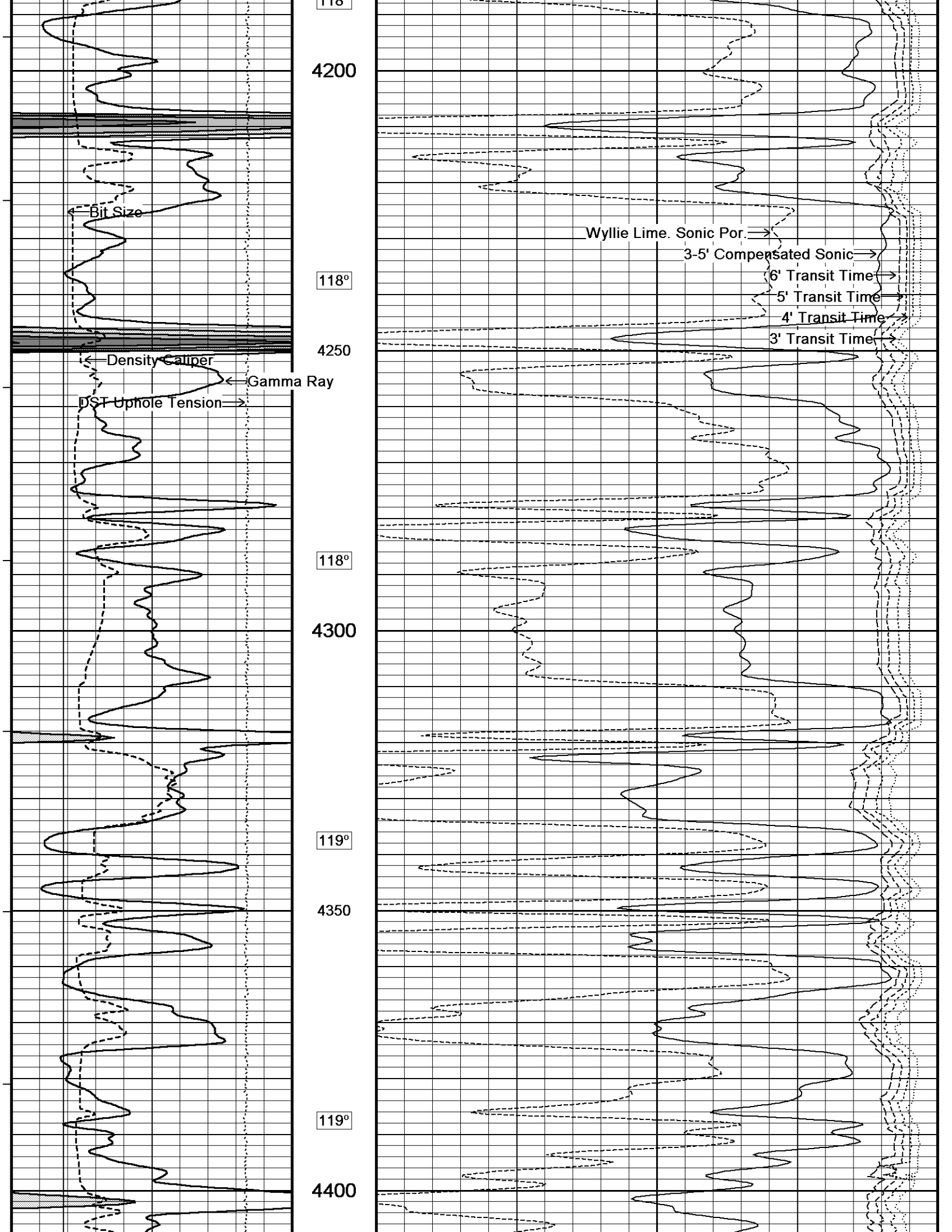

112
3100
112°
3150
113°
3200
113°
3250
113°
3300

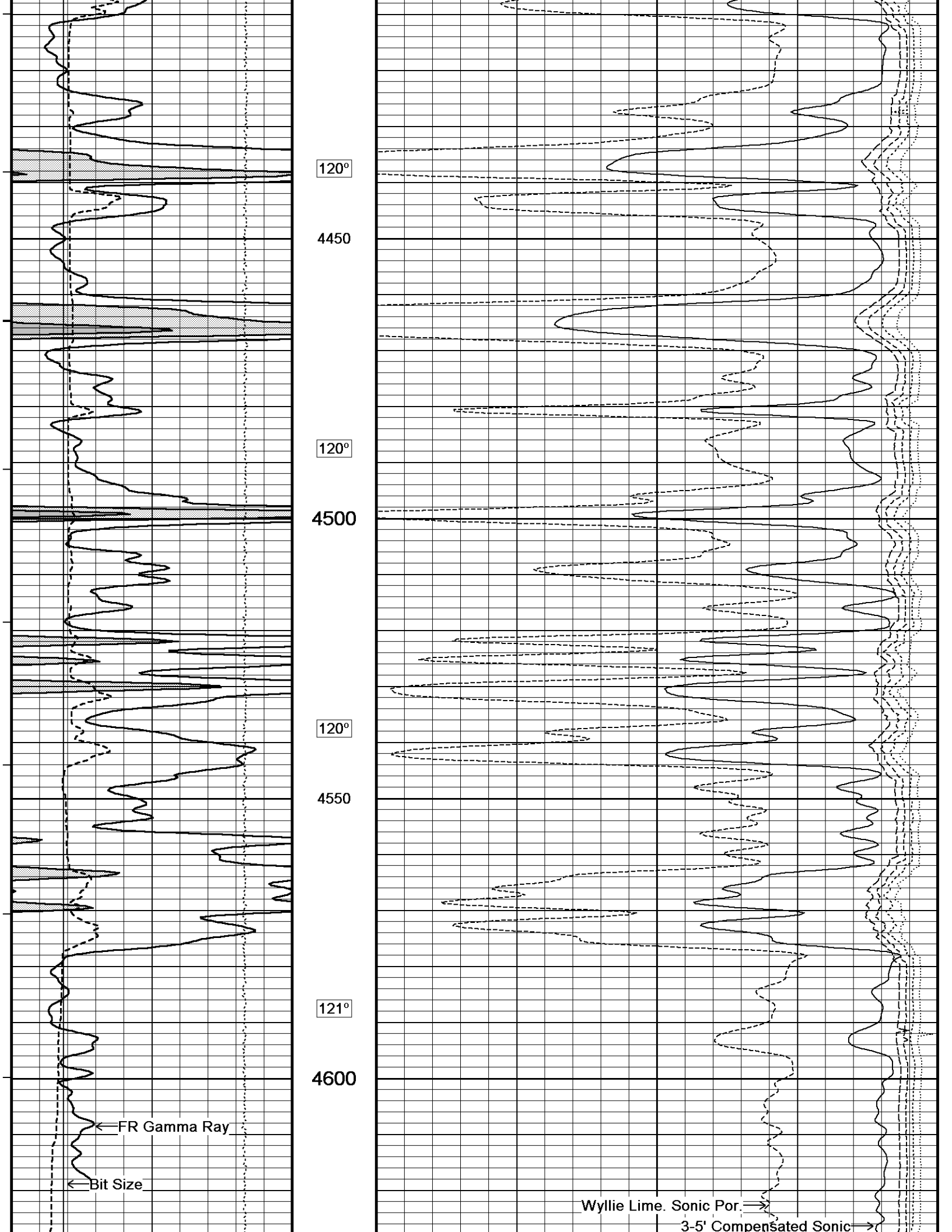

113°
3350
114°
3400
114°
Bit Size
Wyllie Lime. Sonic Por.
3.5'-Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
3450
Density Caliper
Gamma Ray
DST Uphole Tension
114°
3500

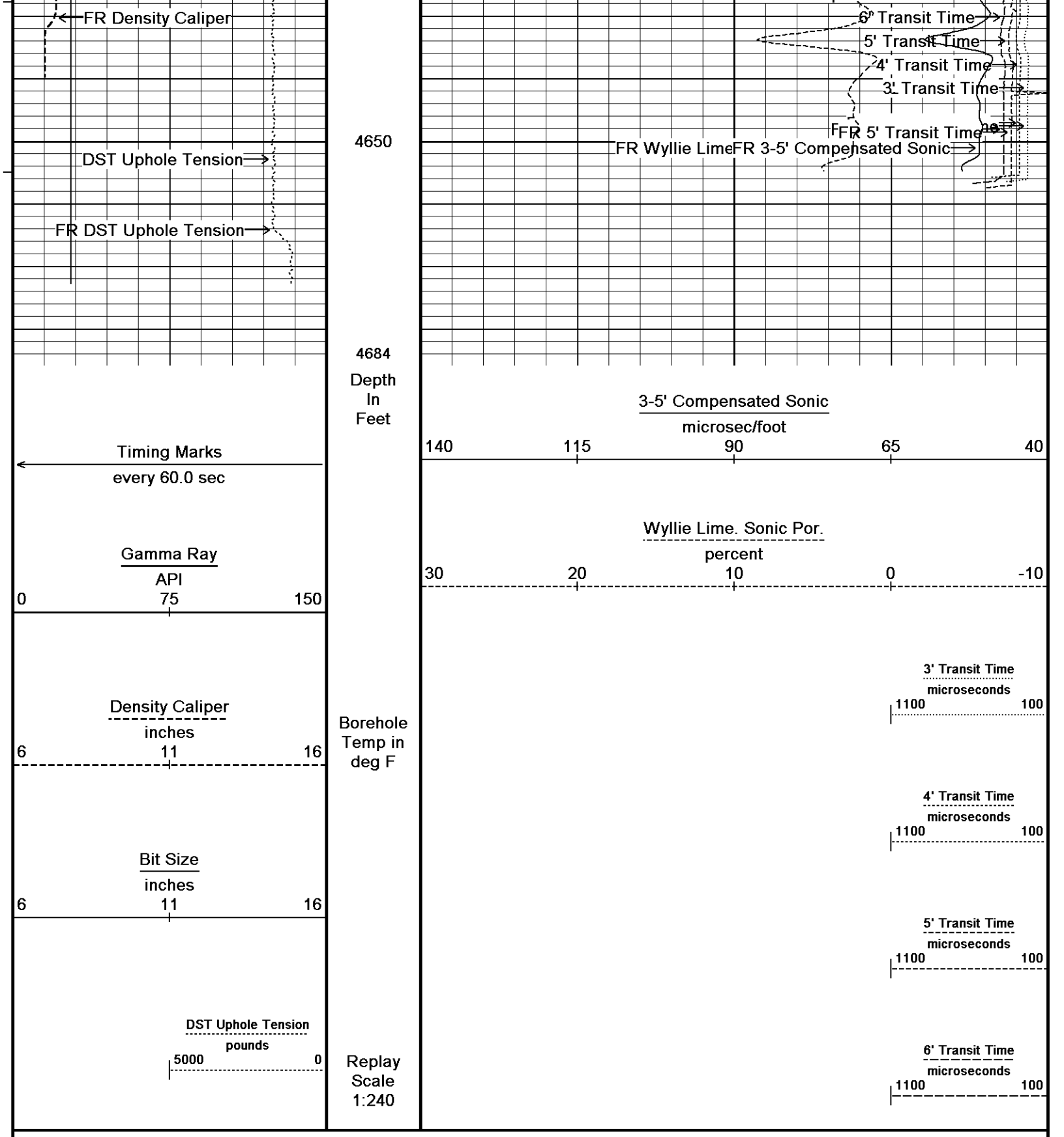

115°
3550
115°
3600
115°
3650
116°
3700
116°


3750
116°
3800
Bit Size
116°
Wyllie Lime. Sonic Por.
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
3850
Density Caliper
Gamma Ray
DCT Uphole Tension
117°
3900
117°
3950


117°
4000
117°
4050
118°
4100
118°
4150
118°


118
4200
Bit Size
Wyllie Lime. Sonic Por.
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
118°
4250
Density Caliper
Gamma Ray
DST Uphole Tension
118°
4300
119°
4350
119°
4400


120°
4450
120°
4500
120°
4550
121°
4600
FR Gamma Ray
Bit Size
Wyllie Lime. Sonic Por.
3-5' Compensated Sonic

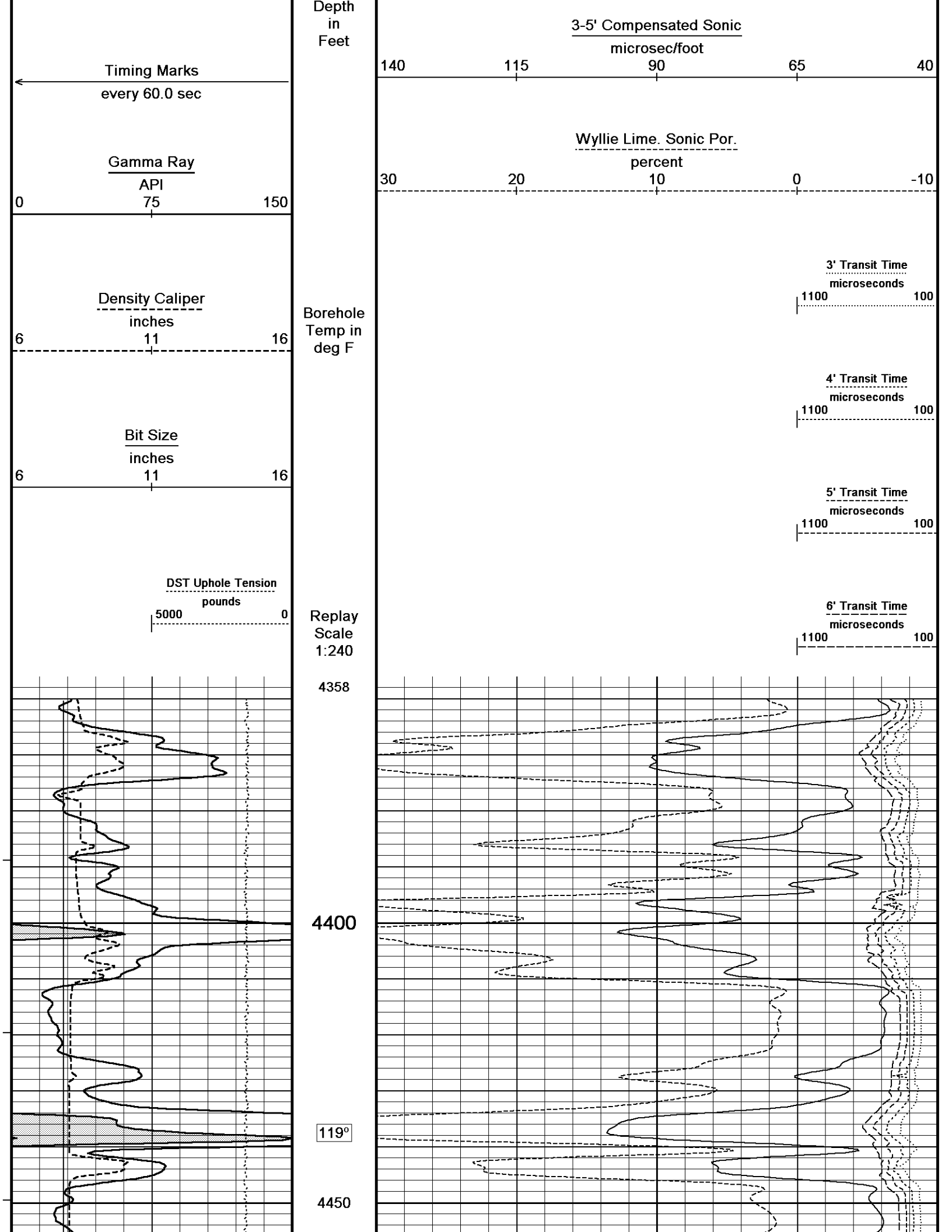


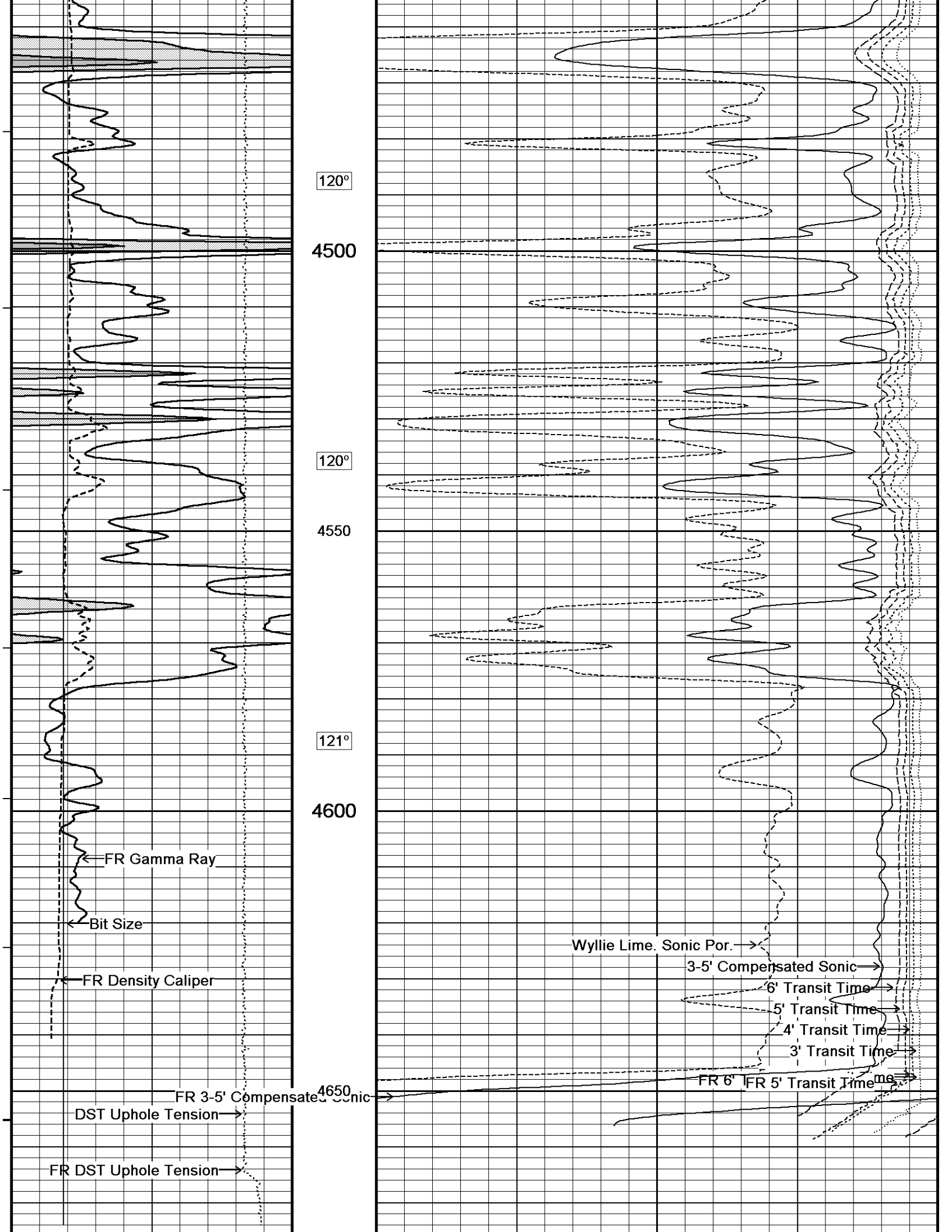
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 10-JUL-2012 11:00
Filename: C:\Minimus_11_03_4044\Data\New Folder1\Grand Mesa Beazley-Chambers 1-13_002.dta
Recorded on 09-JUL-2012 18:50
System Versions: Logged with 11.03.4044 Processed with 11.03.4044 Plotted with 11.03.4044

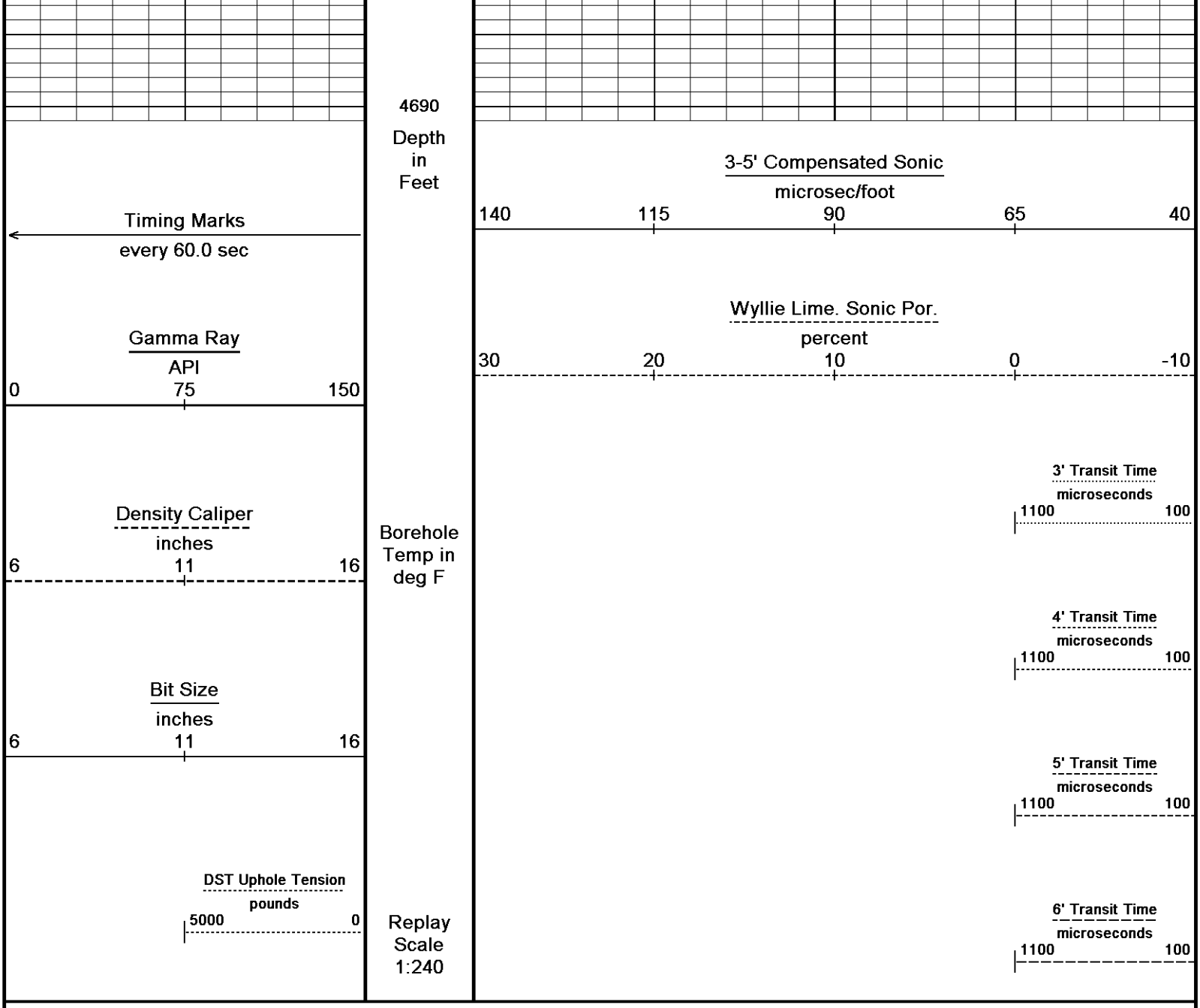
5 INCH MAIN PASS

5 INCH REPEAT PASS

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 10-JUL-2012 11:00
Filename: C:\Minimus_11_03_4044\Data\New Folder1\Grand Mesa Beazley-Chambers 1-13_001.dta
Recorded on 09-JUL-2012 18:25
System Versions: Logged with 11.03.4044 Processed with 11.03.4044 Plotted with 11.03.4044


Depth in Feet
Timing Marks
every 60.0 sec
Gamma Ray
API
0
75
150
Density Caliper
inches
6
11
16
Bit Size
inches
6
11
16
DST Uphole Tension
pounds
5000
0
Borehole Temp in deg F
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
4358
4400
119°
4450


120°
4500
120°
4550
121°
4600
FR Gamma Ray
Bit Size
FR Density Caliper
FR 3-5' Compensated Sonic
DST Uphole Tension
FR DST Uphole Tension
4650
Wyllie Lime. Sonic Por.
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
FR 6' Transit Time
FR 5' Transit Time



Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 10-JUL-2012 11:00

Filename: C:\Minimus_11_03_4044\Data\New Folder1\Grand Mesa Beazley-Chambers 1-13_001.dta
Recorded on 09-JUL-2012 18:25

System Versions: Logged with 11.03.4044 Processed with 11.03.4044 Plotted with 11.03.4044

5 INCH REPEAT PASS

BEFORE SURVEY CALIBRATION

C:\Minimus_11_03_4044\Data\New Folder1\Grand Mesa Beazley-Chambers 1-13_002.dta

General Constants All 000

Last Edited on 09-JUL-2012,17:01

General Parameters		
Mud Resistivity	1.350	ohm-metres
Mud Resistivity Temperature	94.000	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		

Rwa Parameters

Porosity used	Limestone Density Por.
Resistivity used	Array Ind. One Res Rt
RWA Constant A	0.610
RWA Constant M	2.150

Down-hole Tension Calibration SMS 0

Field Calibration on 08-JUL-2012 04:57

Reading No	Measured	Calibrated (lbs)
1	13893.37	0.00
2	13954.26	582.00

Gamma Calibration MCG-C 84

Field Calibration on 09-JUL-2012 10:47

	Measured	Calibrated (API)
Background	66	44
Calibrator (Gross)	1146	769
Calibrator (Net)	1080	725

Gamma Constants MCG-C 84

Last Edited on 09-JUL-2012,17:01

Gamma Calibrator Number	GR38	
Mud Density	1.12	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

SP Calibration MCG-C 84

Field Calibration on 06-JUL-2012 09:32

	Measured	Calibrated (mV)
Reference 1	105.6	101.0
Reference 2	-96.1	-101.0

High Resolution Temperature Calibration MCG-C 84

Field Calibration on 28-MAY-2012,07:32

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

High Resolution Temperature Constants MCG-C 84

Last Edited on

Pre-filter Length	11

Micro Normal and Micro Inverse Calibration MML-A 4

Base Calibration on 28-JUN-2012 09:09
Field Check on 09-JUL-2012 10:36

Base Calibration

	Measured		Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Micro Normal	12.2	60.3	5.0	25.0
Micro Inverse	15.7	78.4	5.0	25.0

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Micro Normal	62.9	62.9
Micro Inverse	48.2	48.2

Micro Normal and Micro Inverse Constants MML-A 4

Last Edited on 09-JUL-2012,10:35

Pad Type	8-12 in Soft Rubber Inflatable 006-9011-159	
Micro Normal K Factor	1.0000	
Micro Inverse K Factor	1.0000	
Standoff Offset	N/A	inches

Caliper Calibration MML-A 4

Base Calibration on 28-JUN-2012 09:05
Field Calibration on 09-JUL-2012 10:35

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	15261	5.98
2	18643	7.97
3	21962	9.86
4	25966	11.92
5	0	0.00
6	N/A	N/A

Field Calibration

	Measured Caliper (in)	Actual Caliper (in)

Measured Caliper (in)	6.10	
Actual Caliper (in)	5.98	

Neutron Calibration MDN-A.B 65

Base Calibration on 28-JUN-2012 11:51
Field Check on 09-JUL-2012 10:51

Base Calibration

	Measured Near	Measured Far	Calibrated (cps) Near	Calibrated (cps) Far
	3161	99	3714	110
Ratio	31.971		33.764	

Field Calibrator at Base

	Calibrated (cps) Near	Calibrated (cps) Far
	1631	2328
Ratio	0.700	

Field Check

	Calibrated (cps) Near	Calibrated (cps) Far
	1624	2346
Ratio	0.692	

Neutron Constants MDN-A.B 65

Last Edited on 09-JUL-2012,17:02

Neutron Source Id	PN-521	
Neutron Jig Number	5824NE	
Epithermal Neutron	No	
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	Constant Value	
Formation Pressure	0.00	kpsi
Temperature Source	Constant Value	
Temperature	68.00	degrees F
Mud Salinity	0.00	kppm
Formation Fluid Salinity Source	Constant Value	
Formation Fluid Salinity	0.00	kppm
Barite Mud Correction	Not Applied	

FE Calibration MFE-A.A 55

Base Calibration on 19-JUN-2012 09:07
Field Check on 09-JUL-2012 10:30

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	952.0	126.8
Base Check		281.3
Field Check		281.7

FE Constants MFE-A.A 55

Last Edited on 09-JUL-2012,17:02

Running Mode	No Sleeve	
MFE K Factor	0.1268	
Caliper Source for FE correction	Density Caliper	
Caliper Value for FE correction	N/A	inches
Rm Source for FE correction	Temperature Corr	
Temp. for Rm Corr.	MCG External Temperature	
Stand-off	0.5	inches

Sonic Constants MSS-C.K 330

Last Edited on 09-JUL-2012,17:02

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	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 45

Base Calibration on 12-JAN-2012,13:34
Field Check on 09-JUL-2012 10:29

Base Calibration

Test Loop Calibration

Channel	Measured Low	Measured High	Calibrated (mmho/m) Low	Calibrated (mmho/m) High
1	14.4	472.6	9.3	966.2
2	5.7	374.0	7.6	821.4
3	3.4	261.2	5.2	566.0
4	2.5	133.9	2.6	279.2

Array Temperature 79.4 Deg F

Channel	Base Check (mmho/m) Low	Base Check (mmho/m) High	Field Check (mmho/m) Low	Field Check (mmho/m) High
1	0.0	0.0	18.5	3851.5
2	0.0	0.0	31.8	3629.4
3	0.0	0.0	28.7	3049.5
4	0.0	0.0	18.4	2079.1
Deep	0.0	0.0	16.1	1911.1
Medium	0.0	0.0	42.7	4060.8
Shallow	0.0	0.0	49.8	5483.3
Array Temperature		0.0		74.2 Deg F

Induction Constants MAI-A.A 45

Last Edited on 09-JUL-2012,17:02

Induction Model	RtAP-WBM	
Caliper for Borehole Corr.	Density Caliper	
Hole Size for Borehole Correction	N/A	inches
Tool Centred	No	
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
Borehole Corr. Rm Source	Temperature Corr	
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

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 45

Field Calibration on 28-JUN-2012,09:51

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

High Resolution Temperature Constants MAI-A.A 45

Last Edited on 12-JAN-2012,11:13

Pre-filter Length	11

Caliper Calibration MPD-B 31

Base Calibration on 17-JUN-2012 20:26
Field Calibration on 09-JUL-2012 10:42

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	17360	3.99
2	25891	5.98
3	34800	7.97
4	43168	9.86
5	52528	11.92
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
6.04	5.98

Photo Density Calibration MPD-B 31

Base Calibration on 17-JUN-2012 20:49
Field Check on 09-JUL-2012 10:40

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	48464	24458	59556	30836
Reference 2	19785	1991	24941	2541

Field Check at Base

Field Check at Base

	695.5	853.6

Field Check

	691.7	853.1

PE Calibration

Base Calibration

	WS	Measured WH	Ratio	Calibrated Ratio
Background	128	610		
Reference 1	19401	48326	0.404	0.371
Reference 2	5740	19688	0.294	0.272

Field Check at Base

	128.0	610.0

Field Check

	126.9	605.7

Density Constants MPD-B 31

Last Edited on 09-JUL-2012,17:02

Density Source Id	254	
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	

DOWNHOLE EQUIPMENT

C:\Minimus_11_03_4044\Data\New Folder1\Grand Mesa Beazley-Chambers 1-13_002.dta

Compact Comms Gamma
MCG-C 84 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

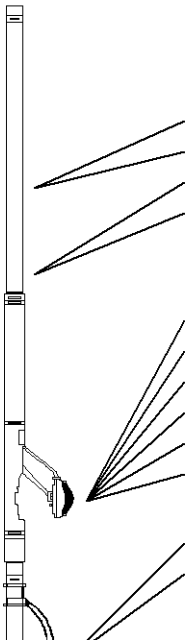
Compact Comms Gamma
MCG-C 84 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Micro-log
MML-A 4 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

Compact Micro-log
MML-A 4 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 Neutron
MDN-A.B 65 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

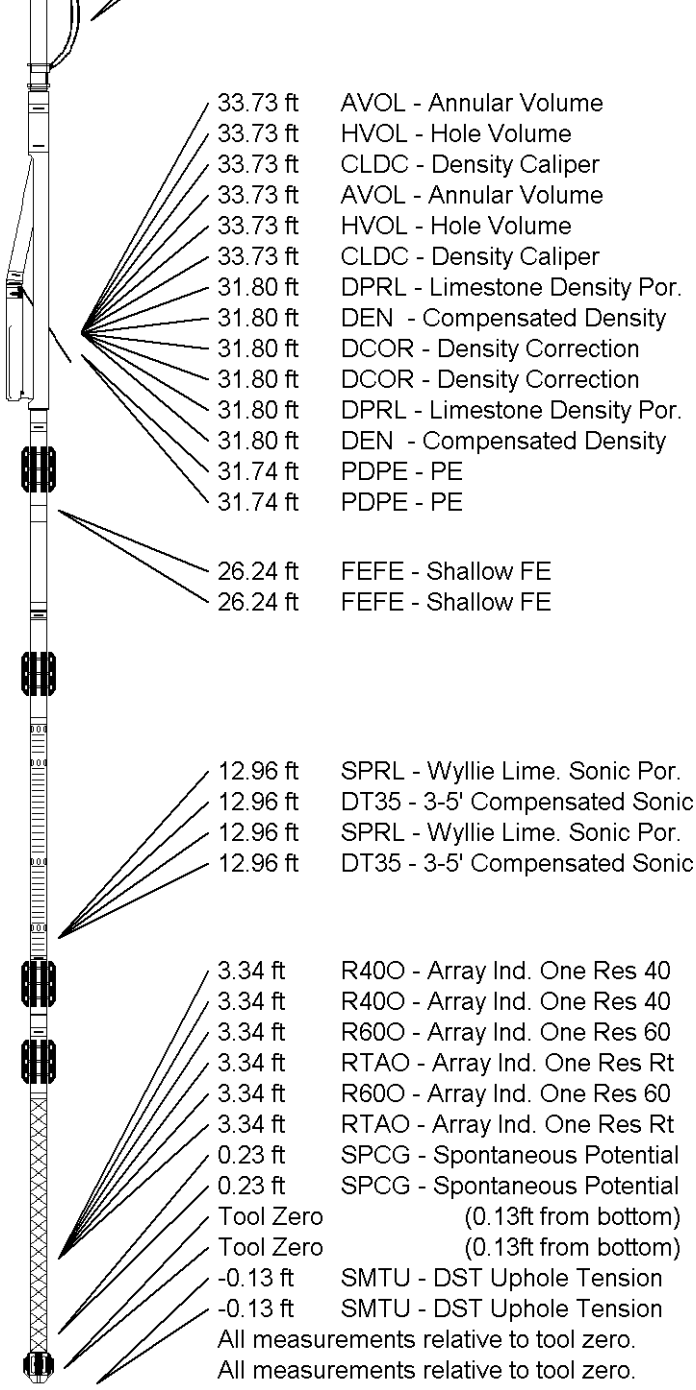


55.39 ft	GRGC - Gamma Ray
55.39 ft	GRGC - Gamma Ray
52.48 ft	CGXT - MCG External Temperature
52.48 ft	CGXT - MCG External Temperature
45.76 ft	MINV - Micro-inverse
45.76 ft	MNRL - Micro-normal
46.76 ft	MLTC - MML Caliper
45.76 ft	MINV - Micro-inverse
45.76 ft	MNRL - Micro-normal
46.76 ft	MLTC - MML Caliper
40.97 ft	NPRL - Limestone Neutron Por.
40.97 ft	NPRL - Limestone Neutron Por.

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

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

Compact Focussed Electric
MFE-A.A 55 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in



33.73 ft AVOL - Annular Volume
33.73 ft HVOL - Hole Volume
33.73 ft CLDC - Density Caliper
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
31.80 ft DCOR - Density Correction
31.80 ft DPRL - Limestone Density Por.
31.80 ft DEN - Compensated Density
31.74 ft PDPE - PE
31.74 ft PDPE - PE

Compact Focussed Electric
MFE-A.A 55 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

26.24 ft FEFE - Shallow FE
26.24 ft FEFE - Shallow FE

Compact Sonic
MSS-C.K 330 LG: 12.52 ft WT: 72.8 lb OD: 2.24 in

Compact Sonic
MSS-C.K 330 LG: 12.52 ft WT: 72.8 lb OD: 2.24 in

12.96 ft SPRL - Wyllie Lime. Sonic Por.
12.96 ft DT35 - 3-5' Compensated Sonic
12.96 ft SPRL - Wyllie Lime. Sonic Por.
12.96 ft DT35 - 3-5' Compensated Sonic

Compact Induction
MAI-A.A 45 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Compact Induction
MAI-A.A 45 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

3.34 ft R40O - Array Ind. One Res 40
3.34 ft R40O - Array Ind. One Res 40
3.34 ft R60O - Array Ind. One Res 60
3.34 ft RTAO - Array Ind. One Res Rt
3.34 ft R60O - Array Ind. One Res 60
3.34 ft RTAO - Array Ind. One Res Rt
0.23 ft SPCG - Spontaneous Potential
0.23 ft SPCG - Spontaneous Potential
Tool Zero (0.13ft from bottom)
Tool Zero (0.13ft from bottom)
-0.13 ft SMTU - DST Uphole Tension
-0.13 ft SMTU - DST Uphole Tension
All measurements relative to tool zero.
All measurements relative to tool zero.

Total Length: 60.68 ft Weight: 456.4 lb

Total Length: 60.68 ft Weight: 456.4 lb

COMPANY	GRAND MESA OPERATING
WELL	BEAZLEY-CHAMBERS 1-13
FIELD	WILDCAT
PROVINCE/COUNTY	GOVE
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	2904.00	feet	First Reading	4651.00	feet
Elevation Drill Floor	2902.00	feet	Depth Driller	4663.00	feet
Elevation Ground Level	2899.00	feet	Depth Logger	4664.00	feet

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COMPENSATED SONIC
WITH INTEGRATED TRANSIT TIME

40 Years of Wireline 1970 2010