Weatherford®

COMPENSATED SONIC
WITH INTEGRATED TRANSIT TIME

COMPANY	GRAND MESA OPERATING
WELL	DBY # 1-16
FIELD	WILDCAT
PROVINCE/COUNTY	SCOTT
COUNTRY/STATE	U. S. A / KANSAS
LOCATION	524' FSL & 1307' FWL

40 Years of Wireline 1979 2019

SEC	TWP	RGE
16	16S	33W

API Number 15-171-20822
Permit Number

Other Services
MPD/MDN
MAI/MFE
MML

Permanent Datum G.L., Elevation 3075 feet
Log Measured From KB
Drilling Measured From K.B.

Elevations:	feet
KB	3086.00
DF	3084.00
GL	3075.00

Date	06-AUG-2011			
Run Number	ONE			
Depth Driller	4900.00	feet		
Depth Logger	4902.00	feet		
First Reading	4889.00	feet		
Last Reading	225.00	feet		
Casing Driller	226.00	feet		
Casing Logger	225.00	feet		
Bit Size	7.875	inches		
Hole Fluid Type	CHEMICAL			
Density / Viscosity	9.10 lb/USg	40.00 CP		
PH / Fluid Loss	10.00	9.60 ml/30Min		
Sample Source	FLOWLINE			
Rm @ Measured Temp	0.47 @ 94.0	ohm-m		
Rmf @ Measured Temp	0.34 @ 94.0	ohm-m		
Rmc @ Measured Temp	0.56 @ 94.0	ohm-m		
Source Rmf / Rmc	CALC	CALC		
Rm @ BHT	0.36 @126.0	ohm-m		
Time Since Circulation	4 HOURS			
Max Recorded Temp	126.00	deg F		
Equipment Name	COMPACT			
Equipment / Base	13025	LIB		
Recorded By	R. HOFFMAN		F. MARTINS	
Witnessed By	STEVE CARL			
S.O. # / JOB #	3529200		LB11 - 188	

BOREHOLE RECORD

Last Edited: 06-AUG-2011 07:31

Bit Size inches	Depth From feet	Depth To feet
7.875	225.00	4902.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	225.00	24.00

REMARKS

Tools Used: MPD, MCG, MDN, MML, MFE, MAI, MSS
Hardware: MPD: 8 inch profile plate used. MDN: Dual Bowspring used.
2.71 G/CC Limestone density matrix used to calculate porosity.
Sonic porosity calculated using 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 = 221 cu. ft.
Service order #3529200
Rig: Murtin # 22
Engineer: R. Hoffman / F. Martins
Operator(s): J. Lapoint

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.

5 INCH MAIN

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 31-AUG-2011 09:35
Filename: C:\DOCUME~1\sysadmin\LOCALS~1\Temp\Weatherford...\Grand Mesa DBY # 1-16_004.dta
Recorded on 06-AUG-2011 04:56
System Versions: Logged with 11.03.4044 Processed with 11.03.4044 Plotted with 12.01.3513

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

218 Casing Shoe

250

98°

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

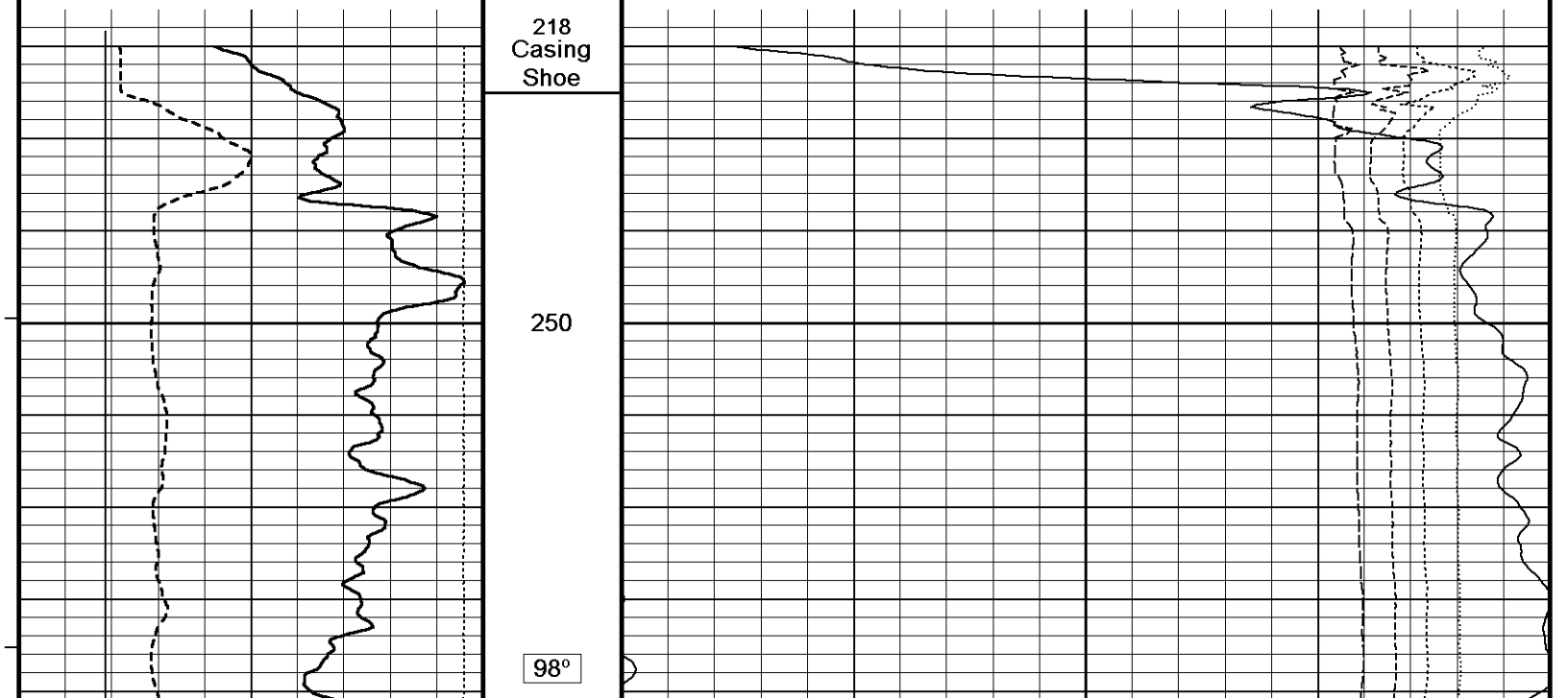
Wyllie Lime. Sonic Por.
percent
30 20 10 0 -10

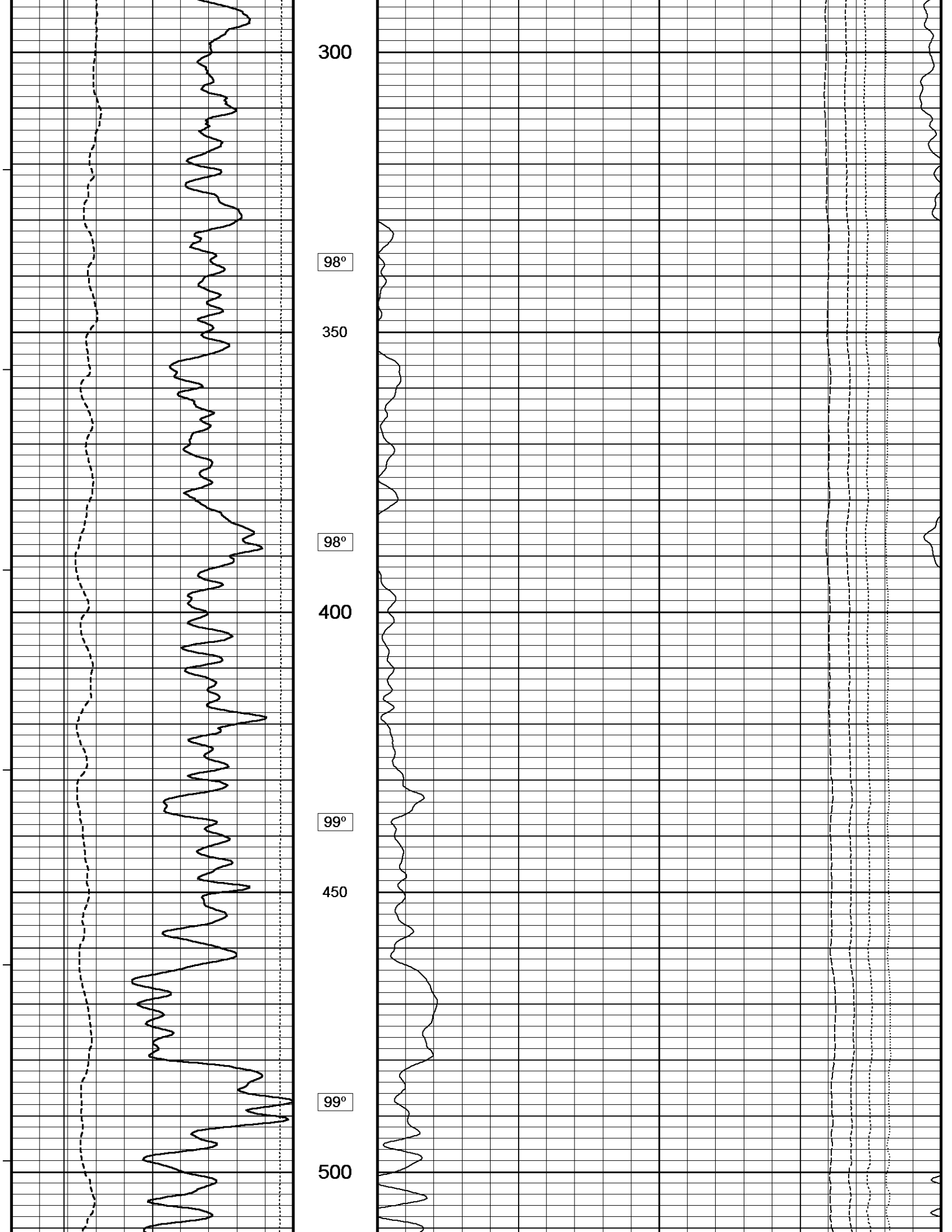
3' Transit Time
microseconds
1100 100

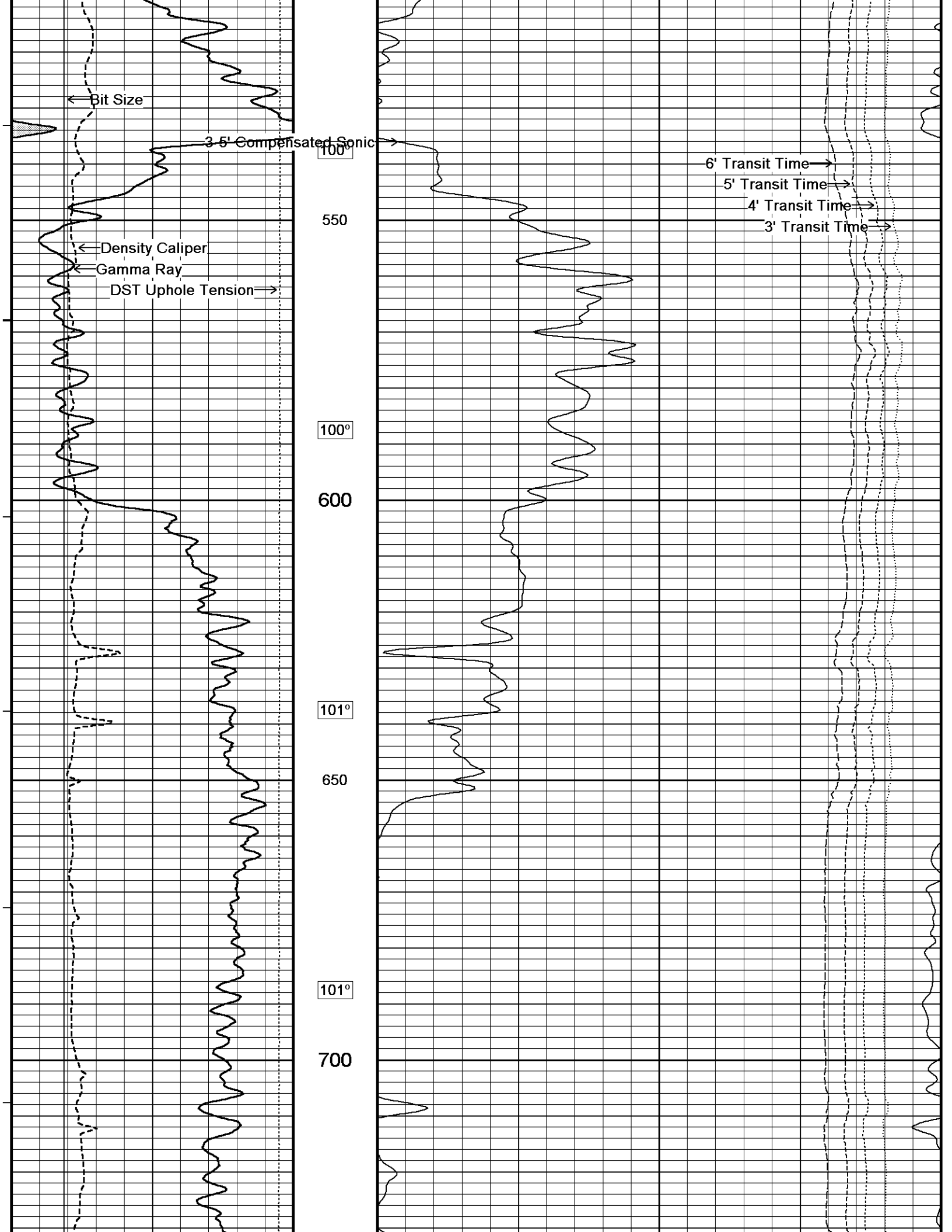
4' Transit Time
microseconds
1100 100

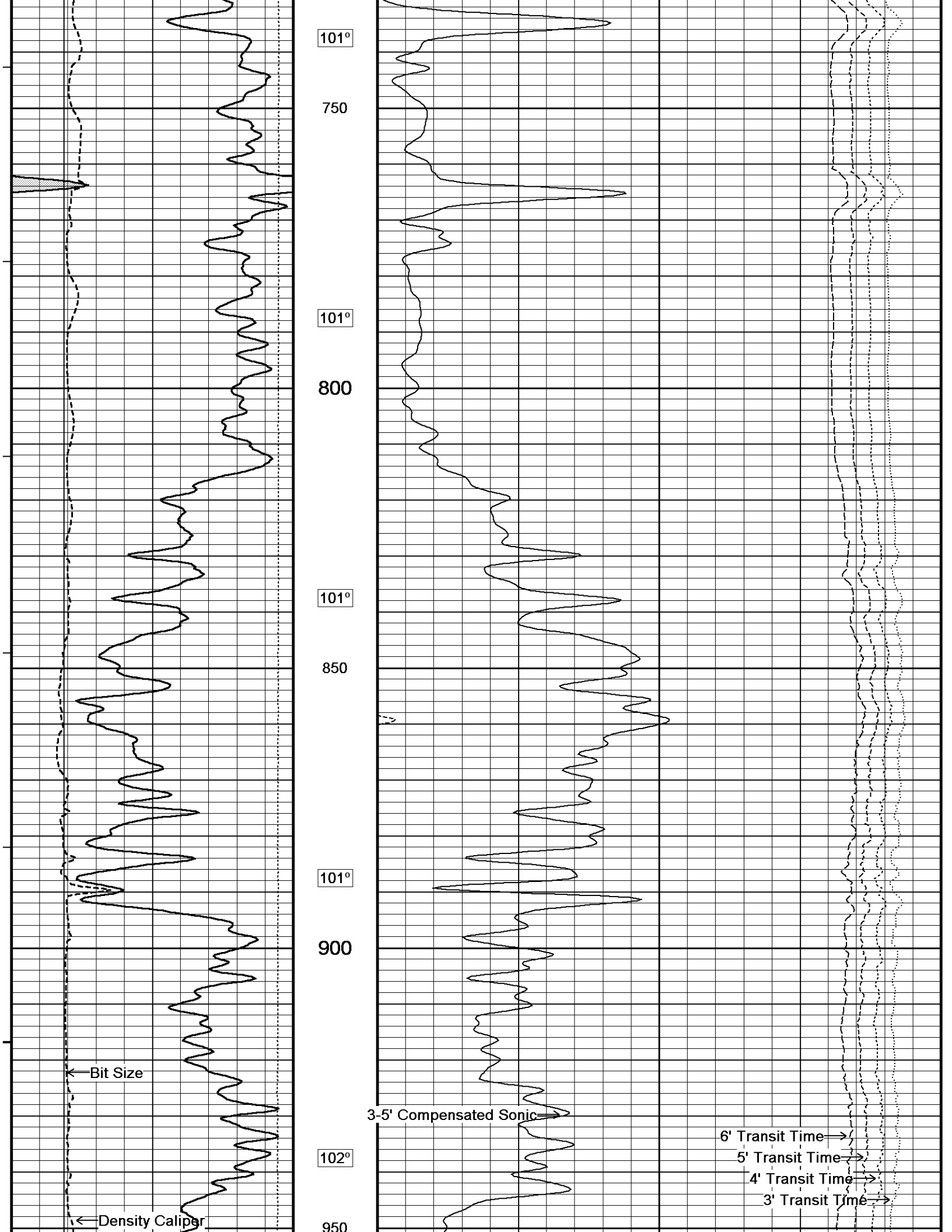
5' Transit Time
microseconds
1100 100

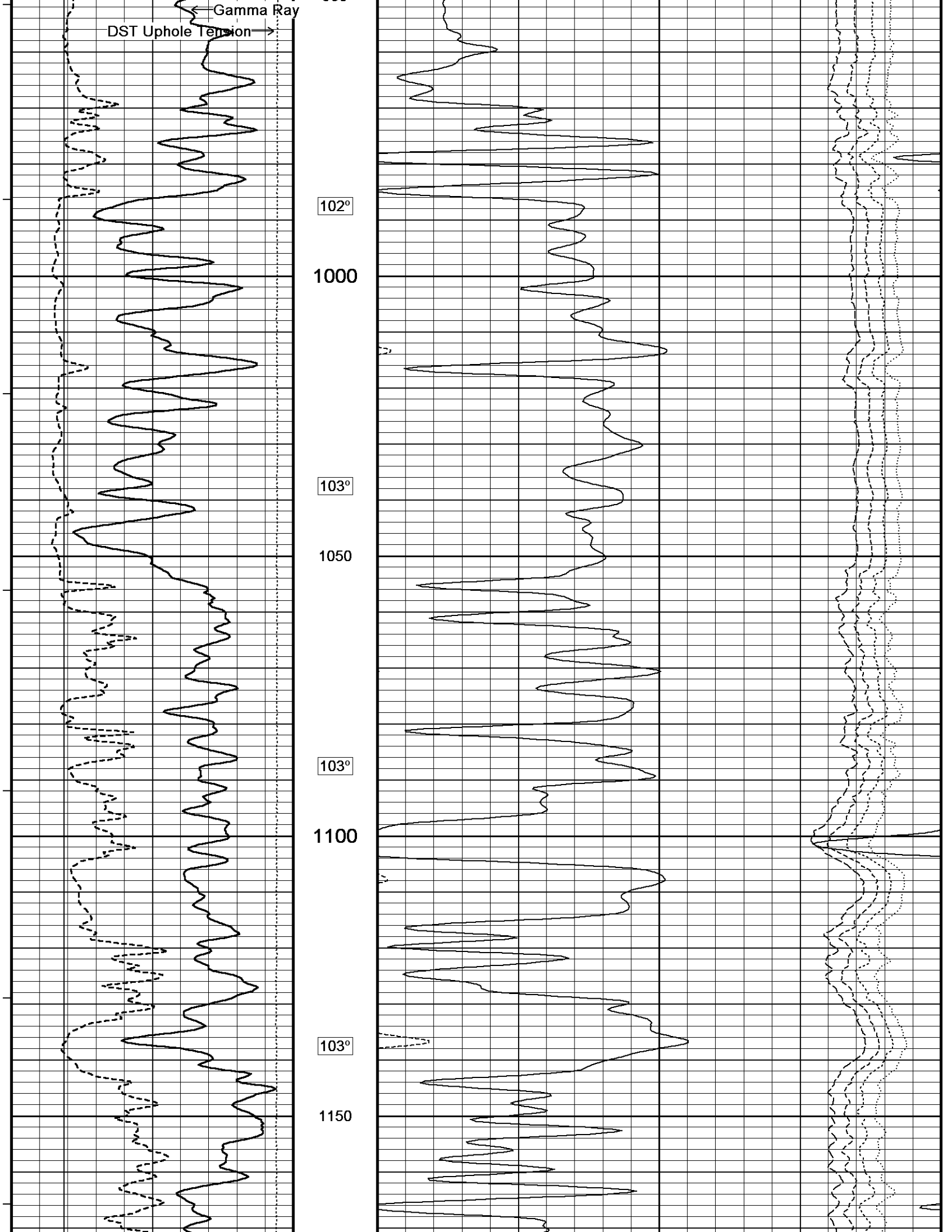
6' Transit Time
microseconds
1100 100

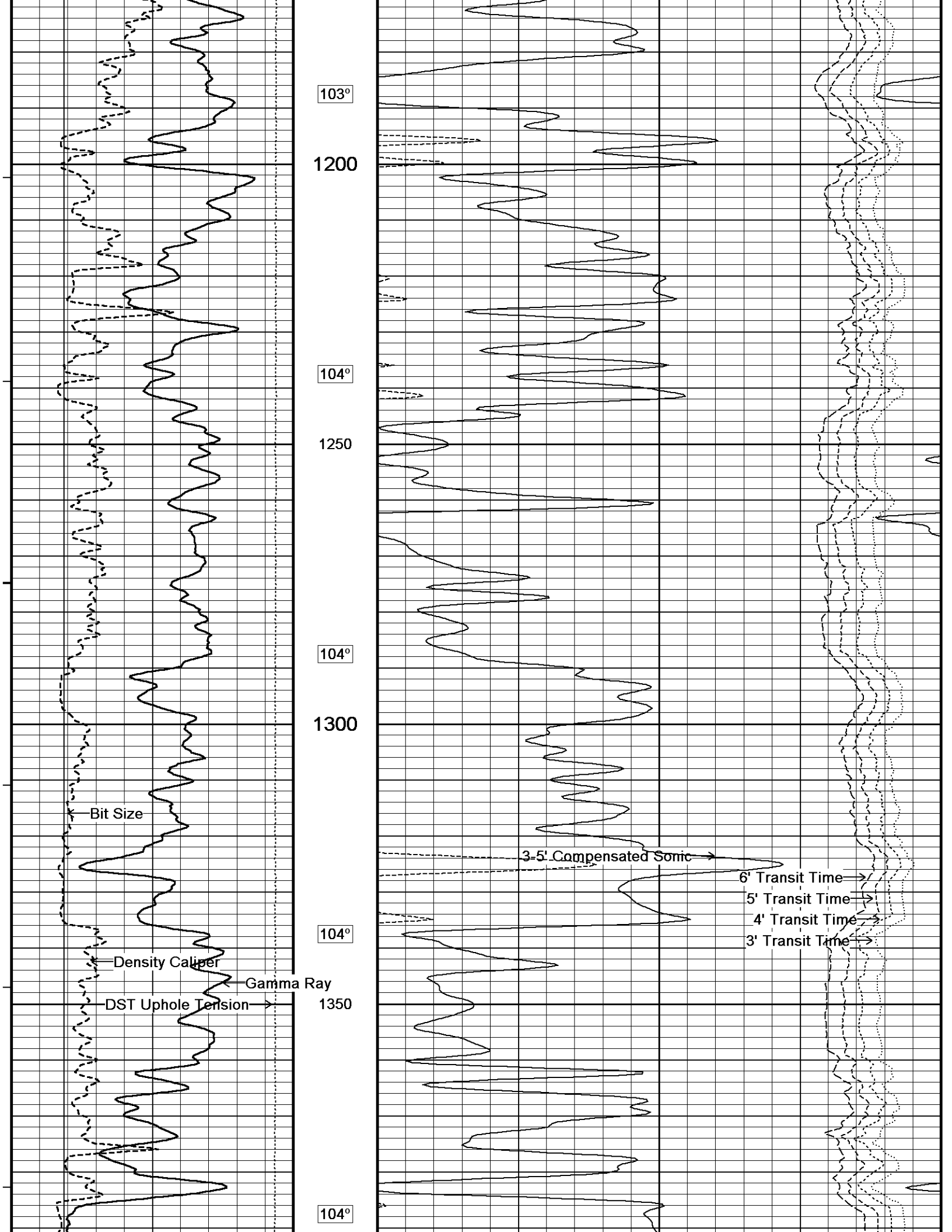


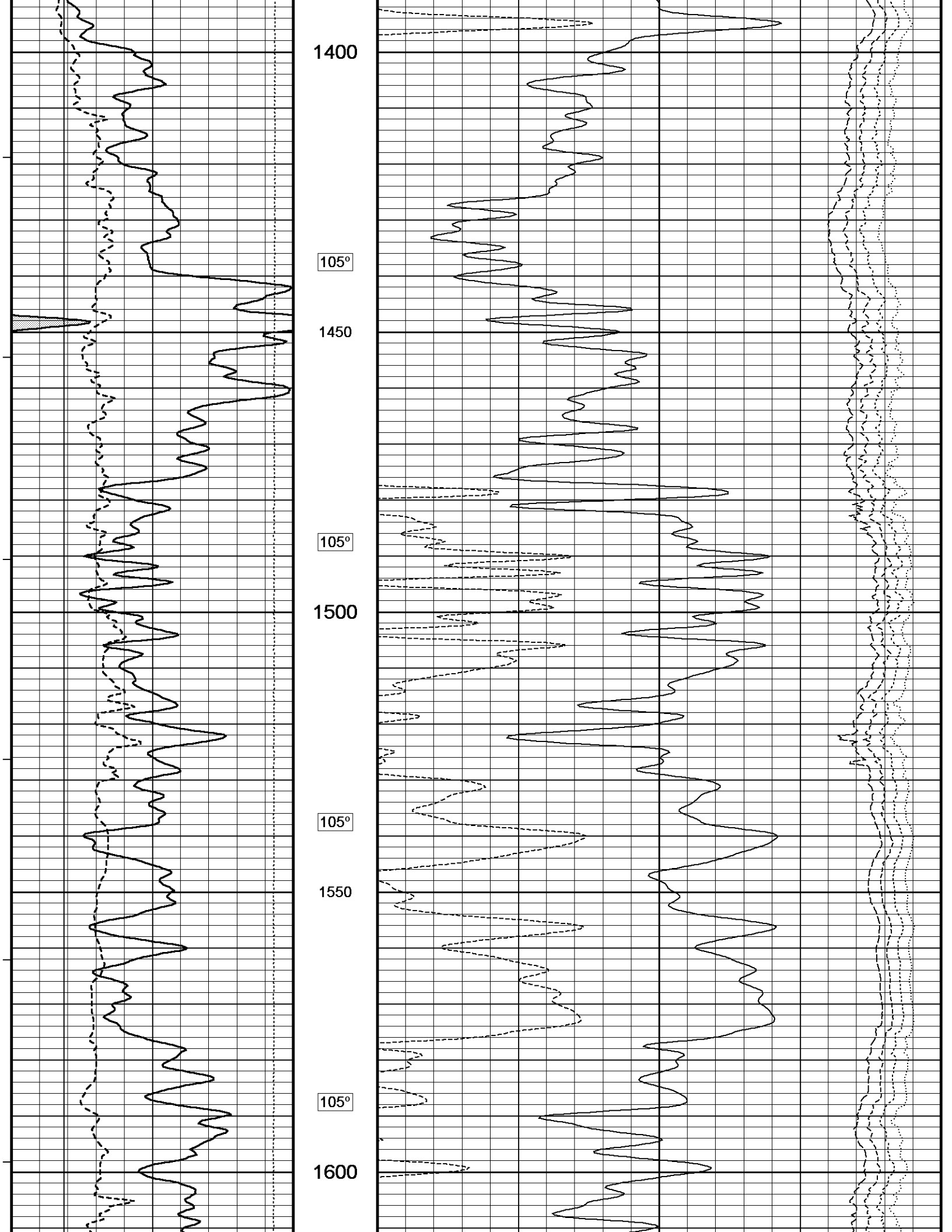

300
98°
350
98°
400
99°
450
99°
500

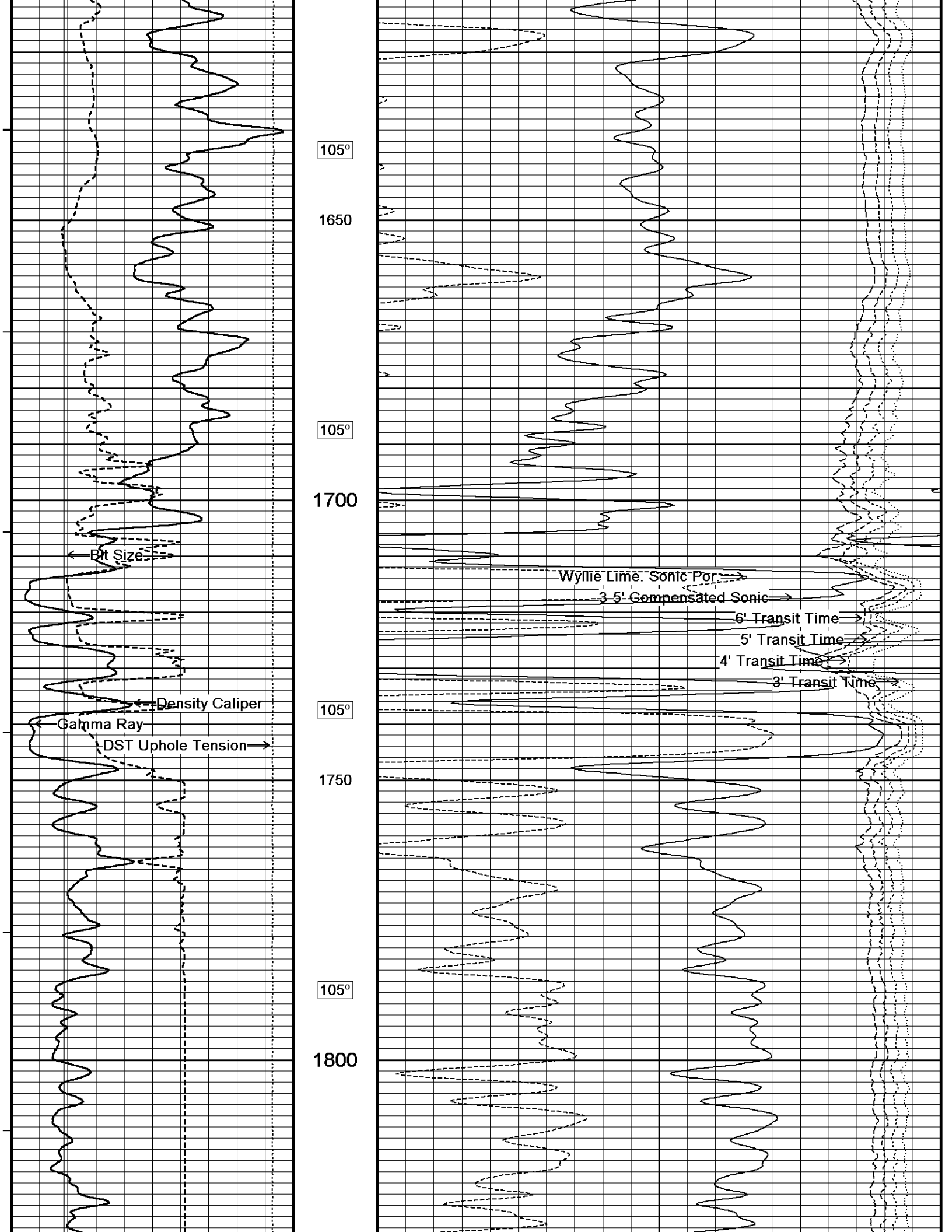

Bit Size
3.5' Compensated Sonic
100°
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
550
Density Caliper
Gamma Ray
DST Uphole Tension
100°
600
101°
650
101°
700

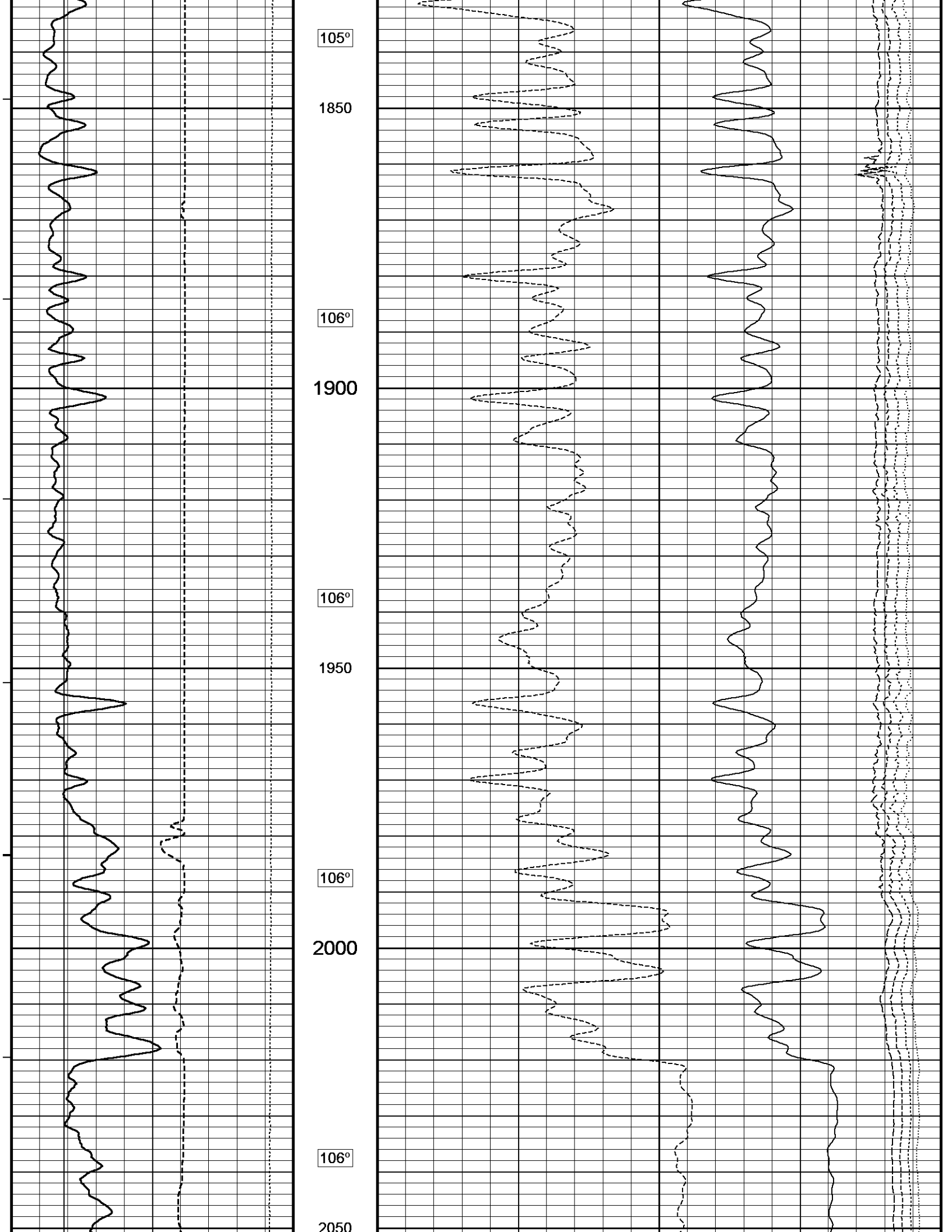

101°
750
101°
800
101°
850
101°
900
102°
950
Bit Size
Density Caliper
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time

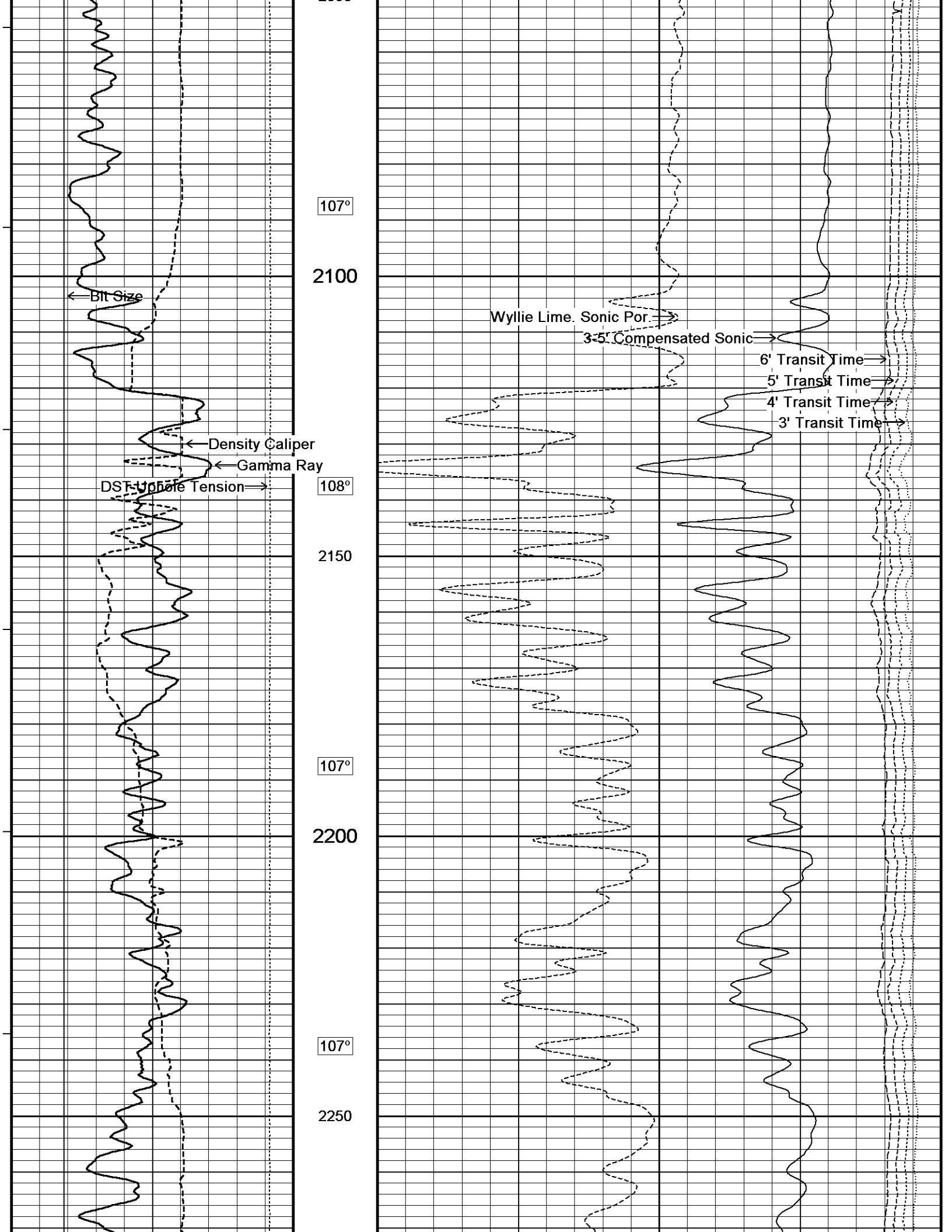

Gamma Ray
DST Uphole Tension
102°
1000
103°
1050
103°
1100
103°
1150

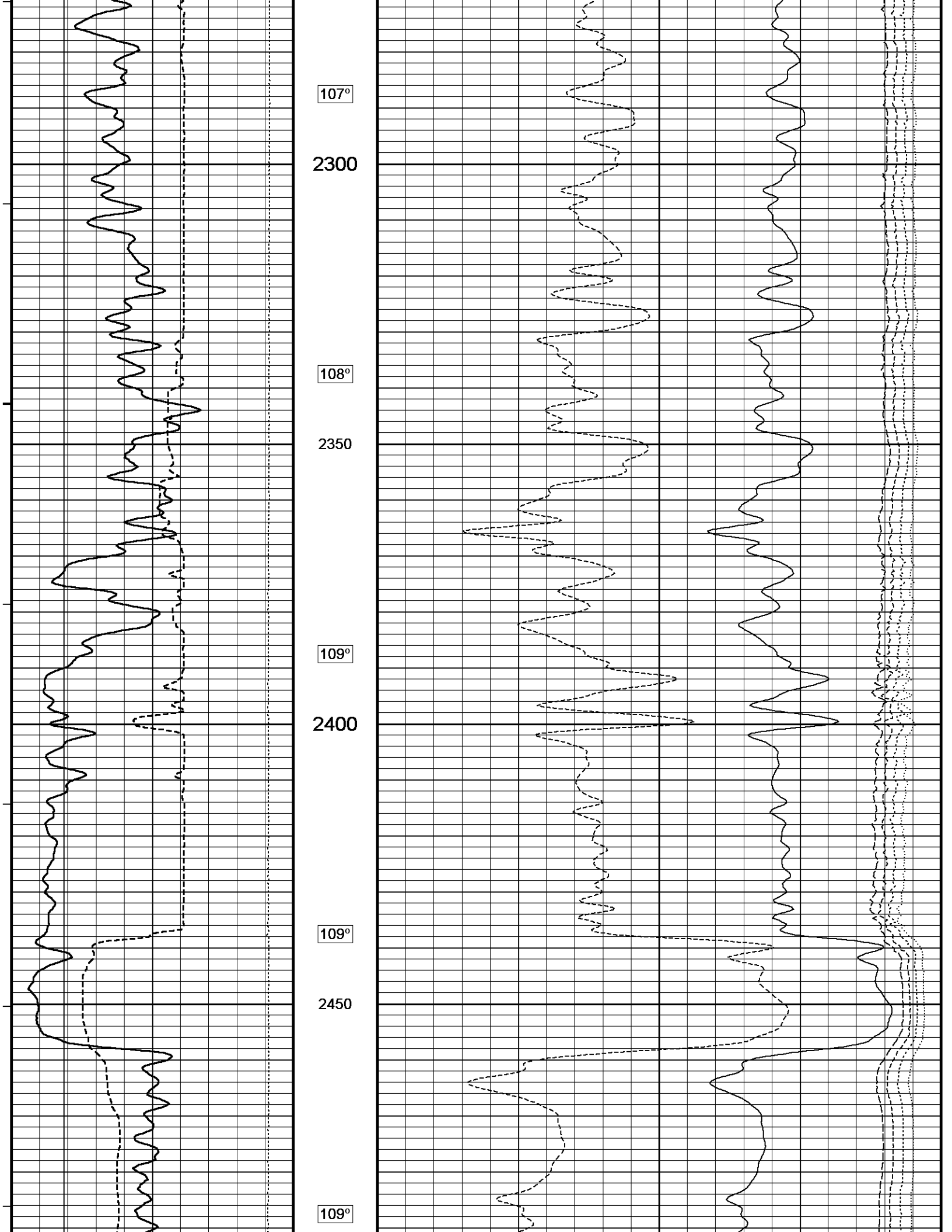

103°
1200
104°
1250
104°
1300
Bit Size
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
104°
Density Caliper
Gamma Ray
DST Uphole Tension
1350
104°

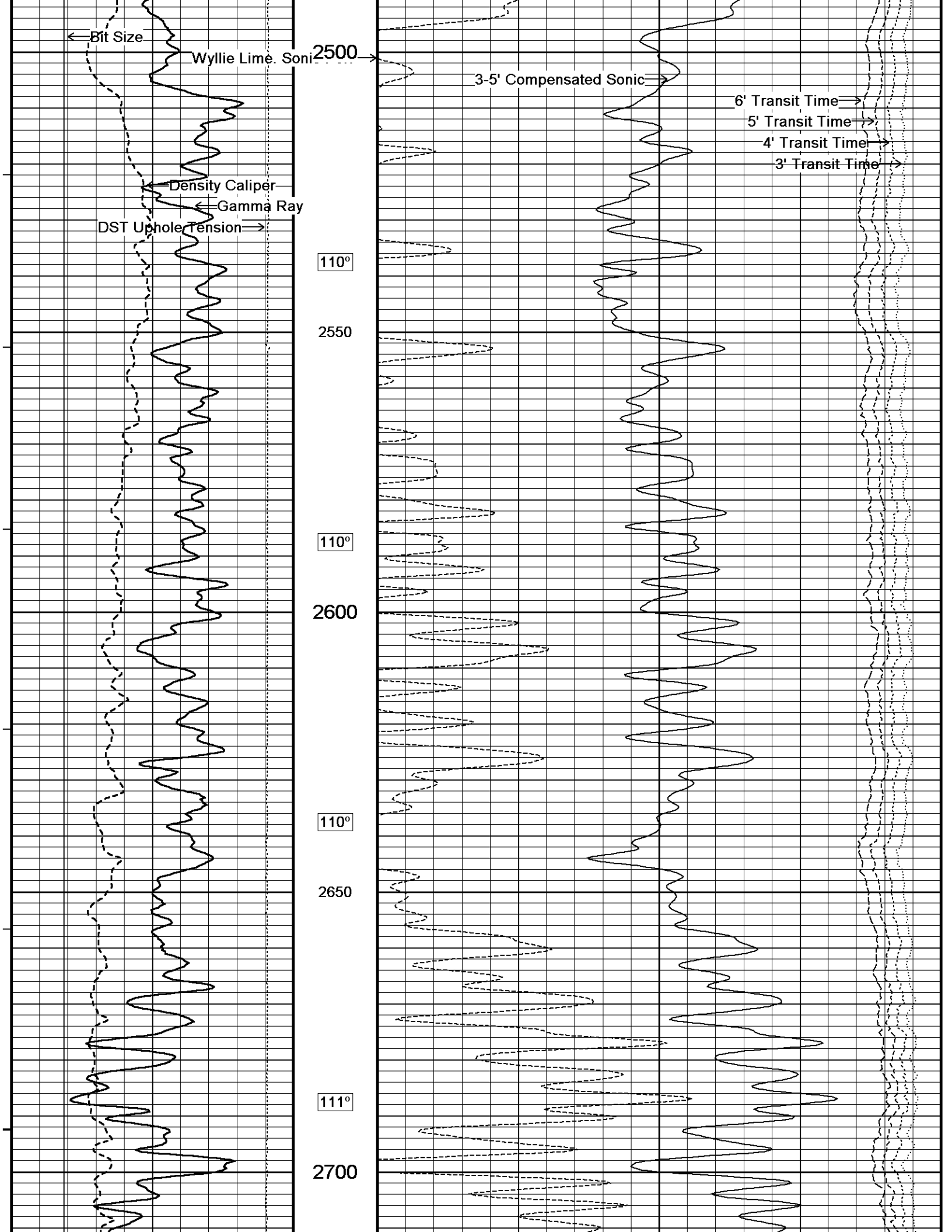

1400
105°
1450
105°
1500
105°
1550
105°
1600

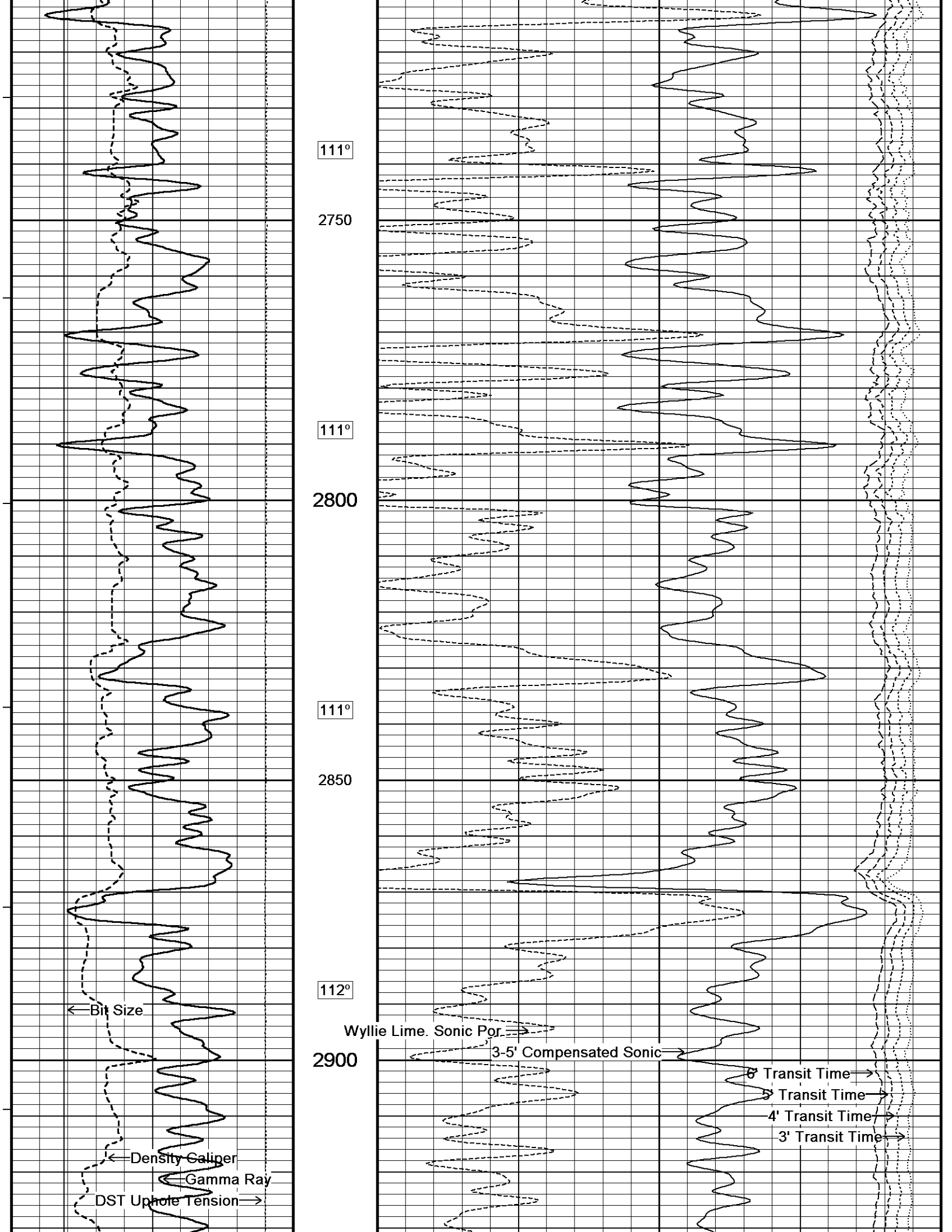

105°
1650
105°
1700
Bit Size
Wyllie Lime. Sonic Por
3 5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
Density Caliper
105°
Gamma Ray
DST Uphole Tension
1750
105°
1800

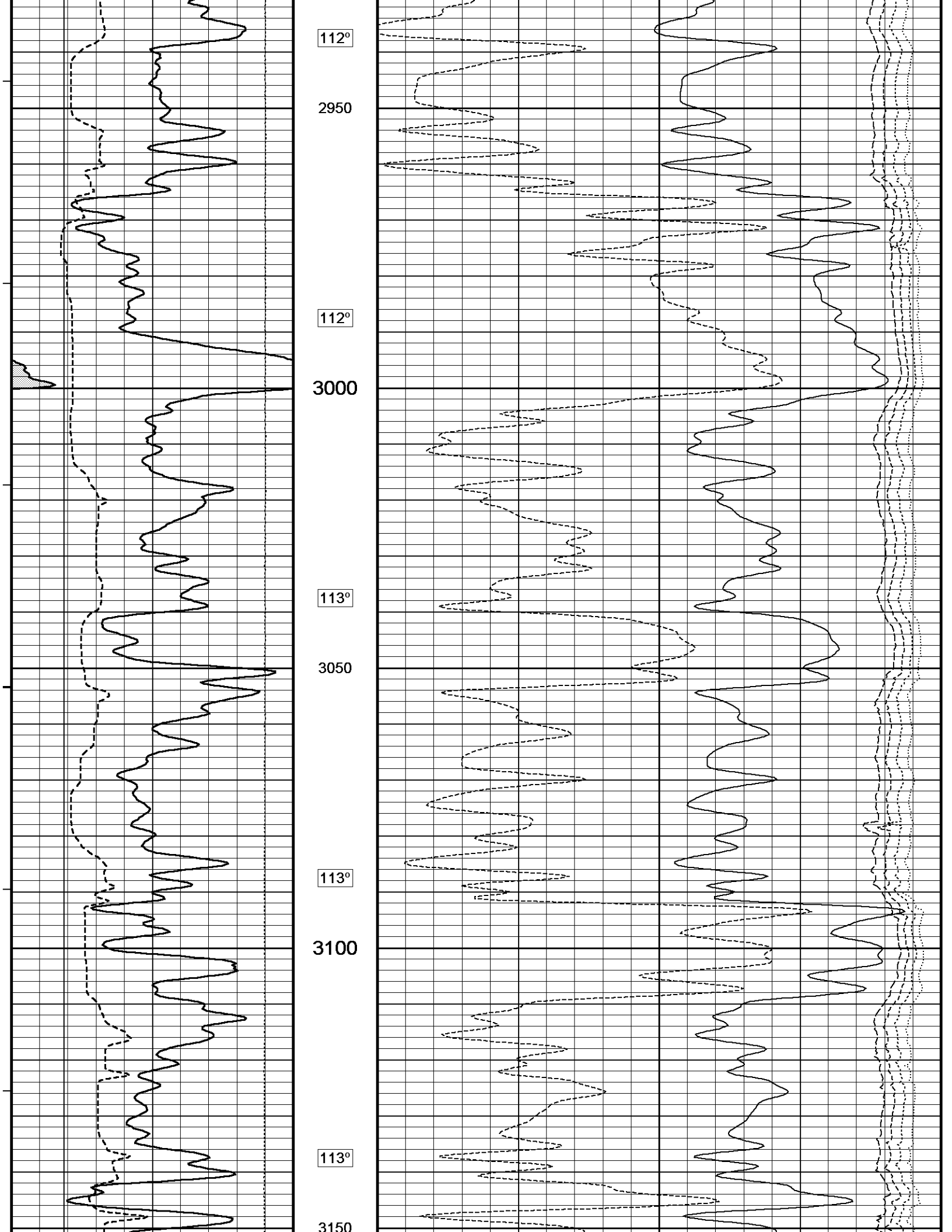

105°
1850
106°
1900
106°
1950
106°
2000
106°
2050

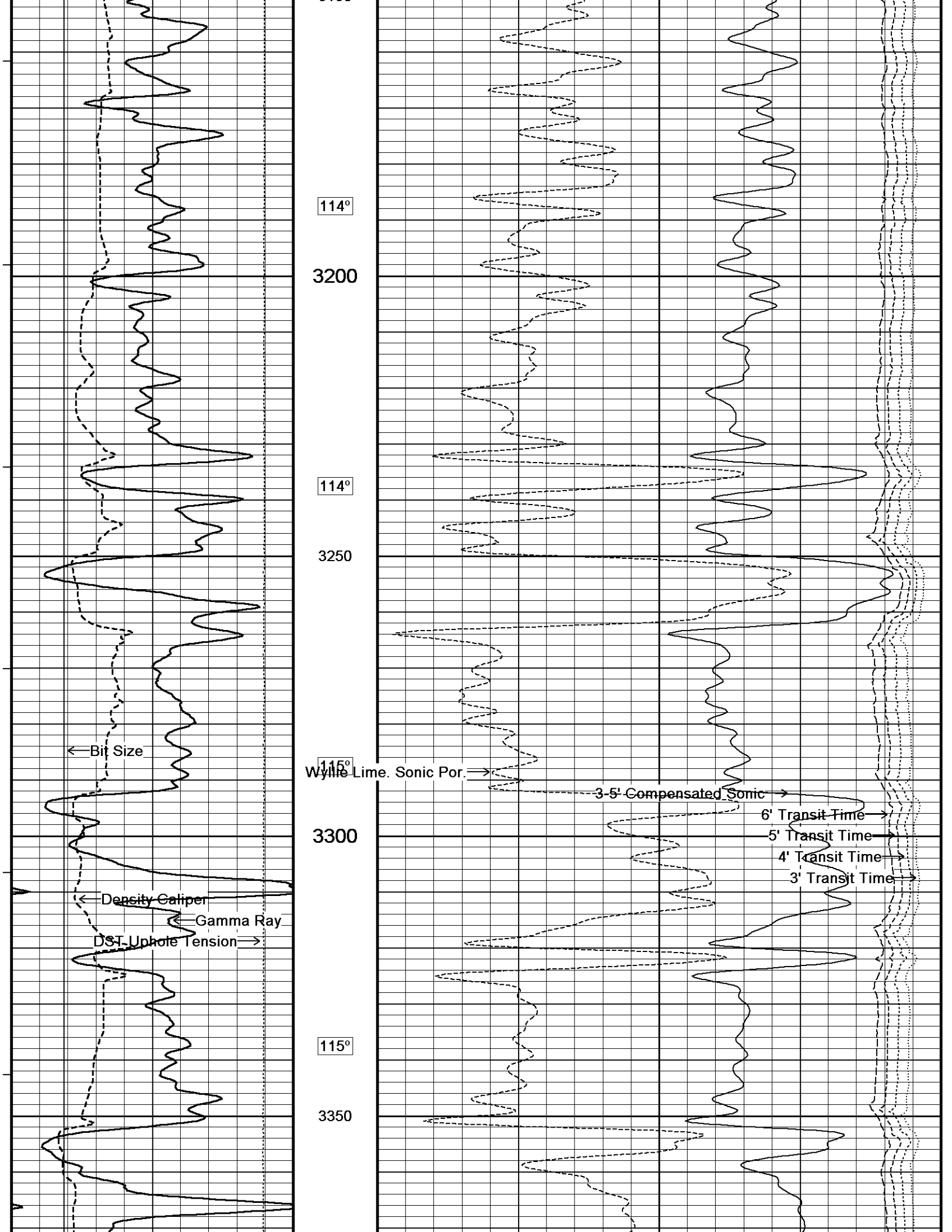

107°
2100
Bit Size
Wyllie Lime. Sonic Por.
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
Density Caliper
Gamma Ray
DST-Uphole Tension
108°
2150
107°
2200
107°
2250

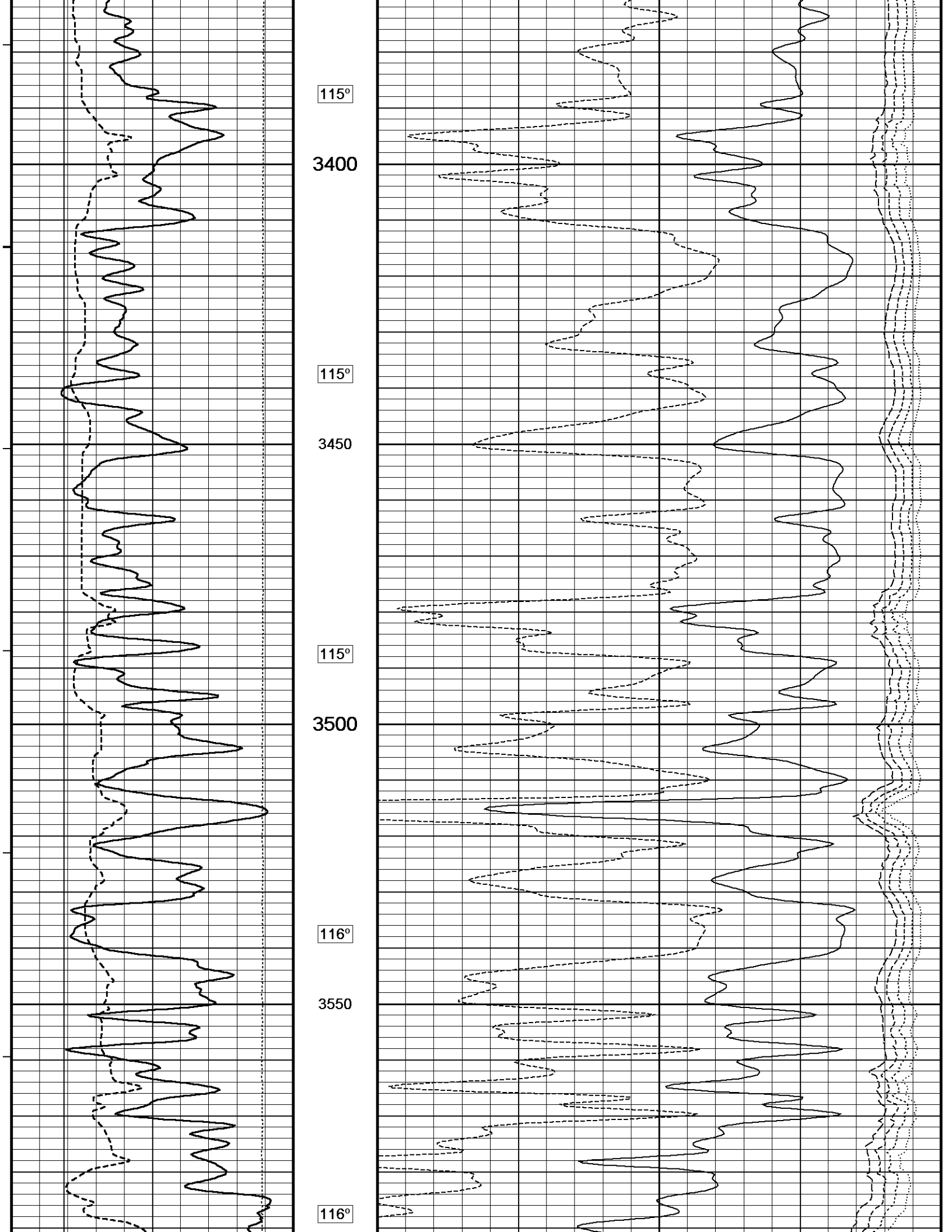

107°
2300
108°
2350
109°
2400
109°
2450
109°

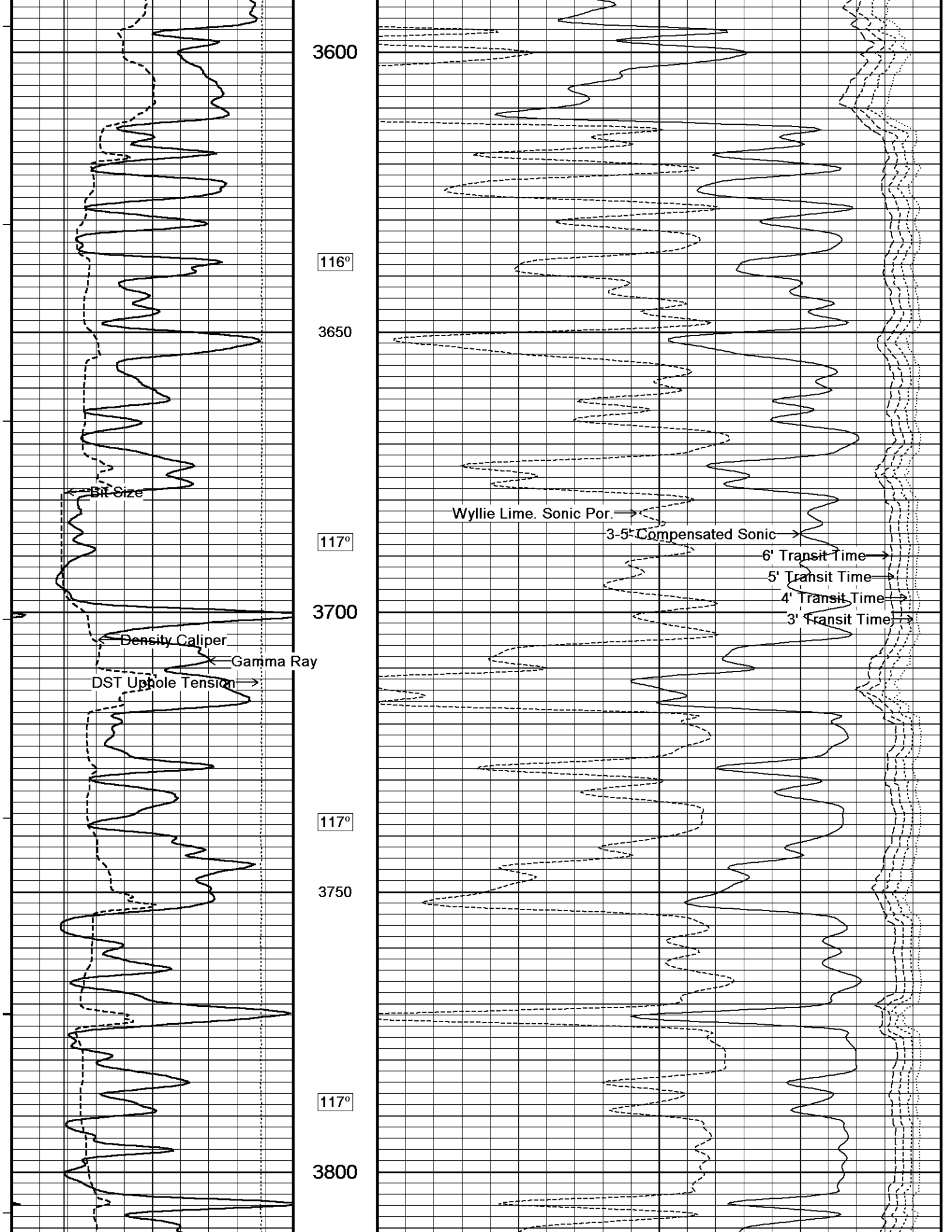

Bit Size
Wyllie Lime. Soni
2500
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
Density Caliper
Gamma Ray
DST Uphole Tension
110°
2550
110°
2600
110°
2650
111°
2700

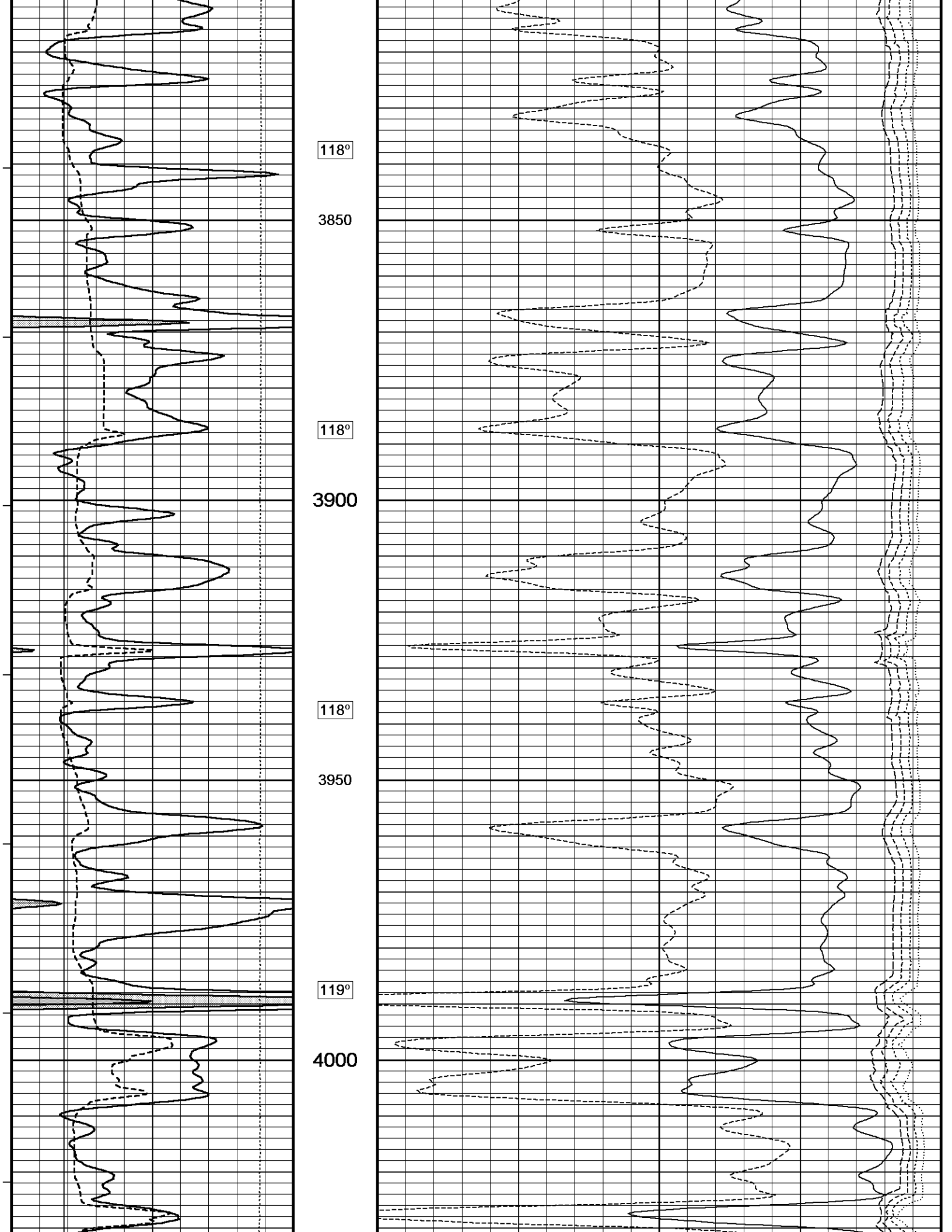

111°
2750
111°
2800
111°
2850
112°
2900
Bit Size
Wyllie Lime. Sonic Por
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
Density Caliper
Gamma Ray
DST Uphole Tension

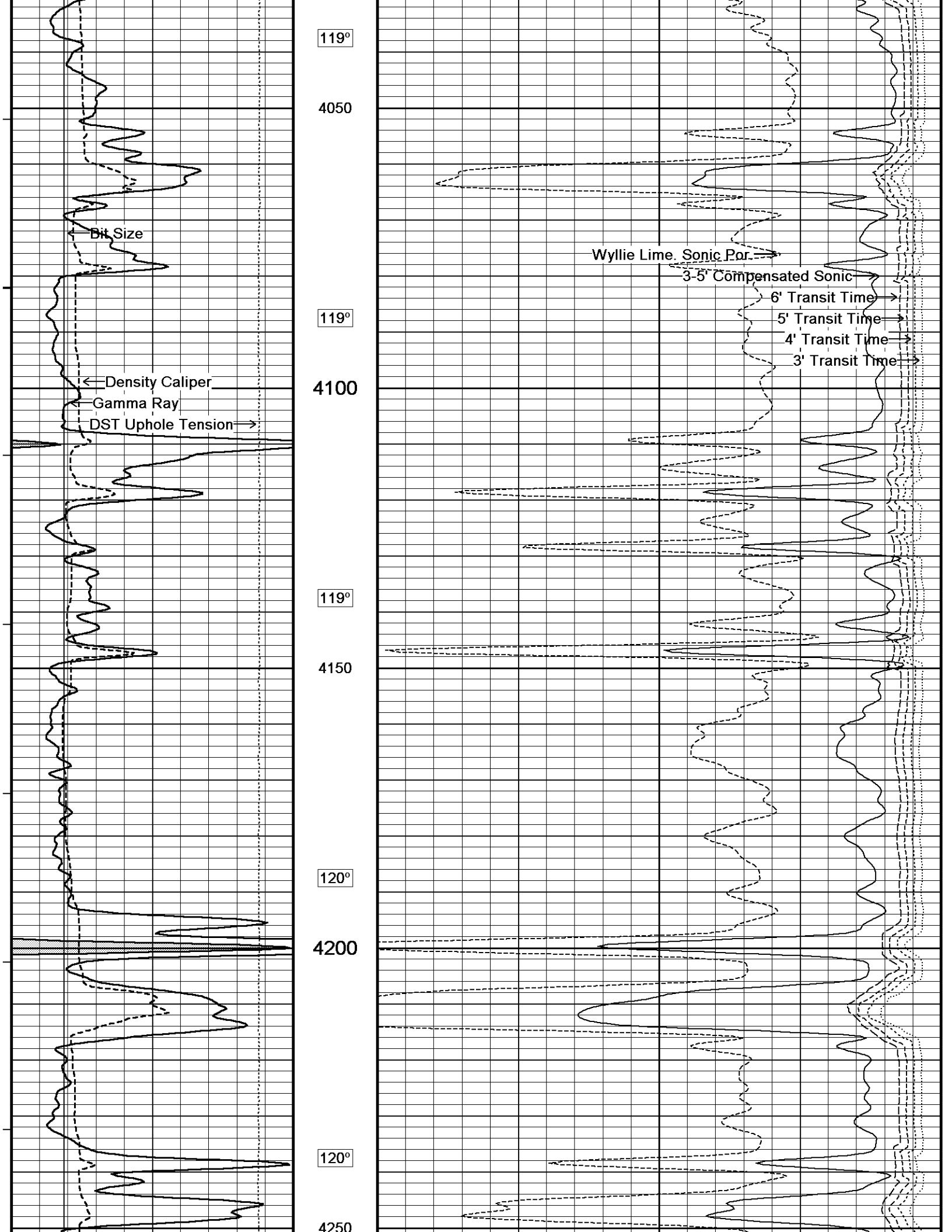

112°
2950
112°
3000
113°
3050
113°
3100
113°
3150

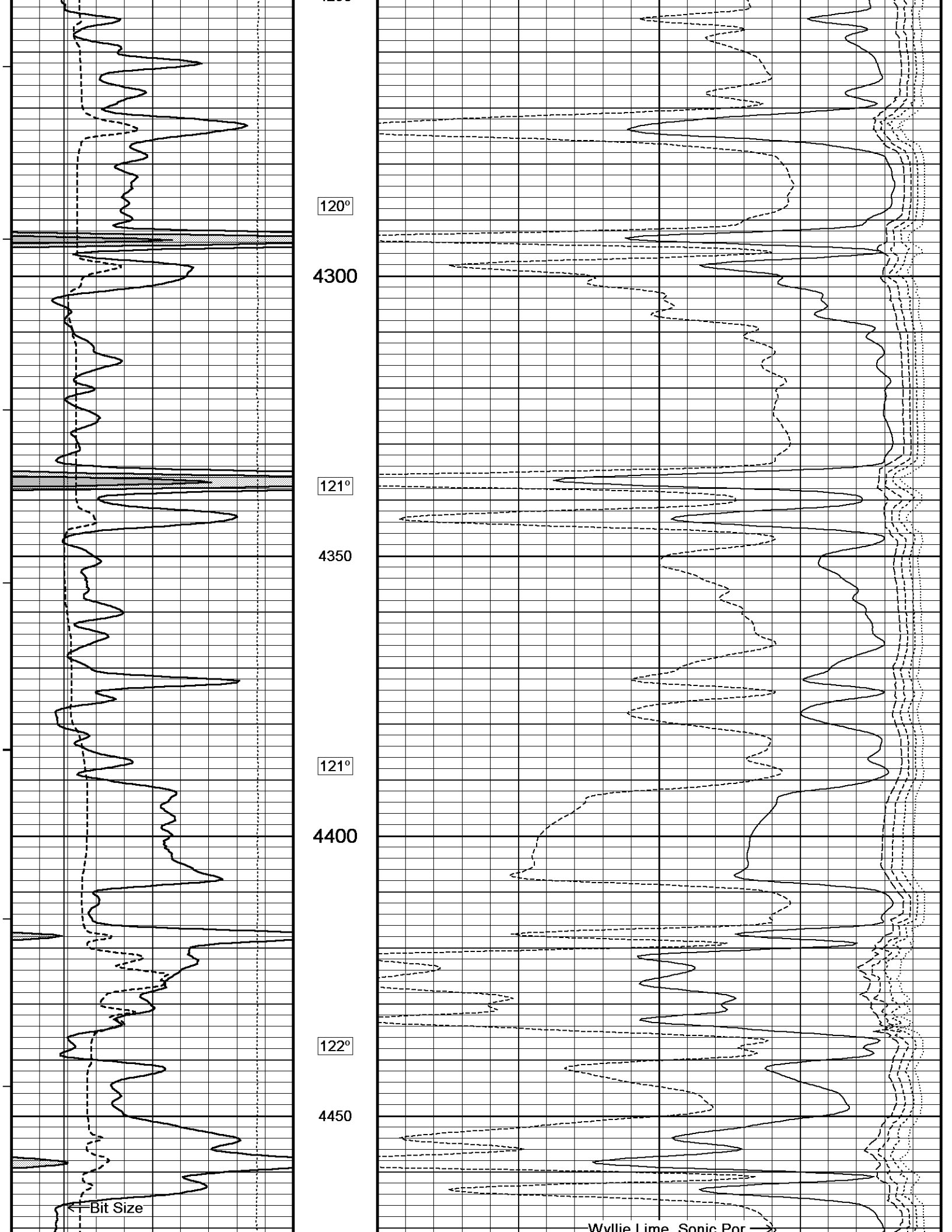

114°
3200
114°
3250
115°
3300
115°
3350
Bit Size
Wyllie Lime. Sonic Por.
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
Density Caliper
Gamma Ray
DST Uphole Tension

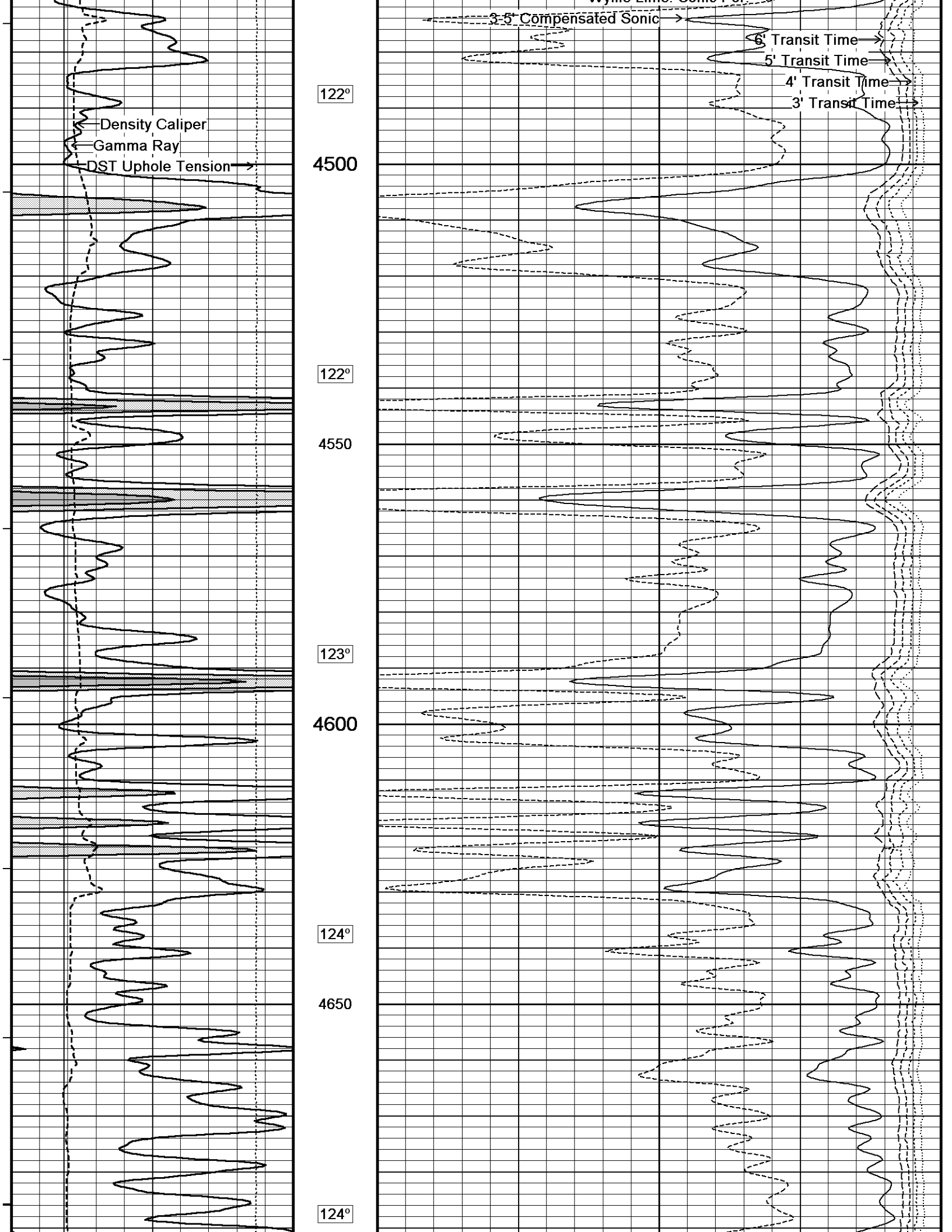

115°
3400
115°
3450
115°
3500
116°
3550
116°

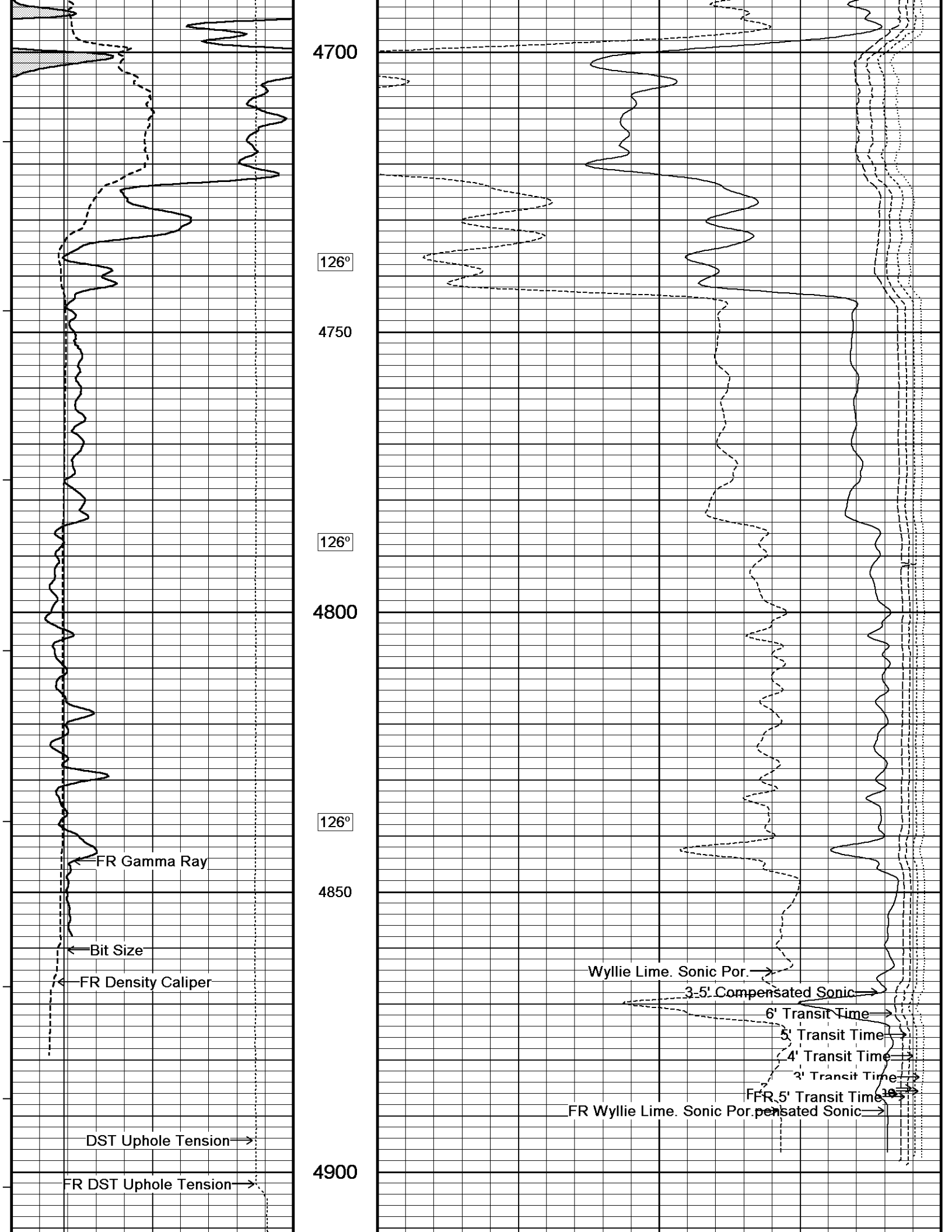

3600
116°
3650
Bit Size
Wyllie Lime. Sonic Por.
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
117°
3700
Density Caliper
Gamma Ray
DST Uphole Tension
117°
3750
117°
3800

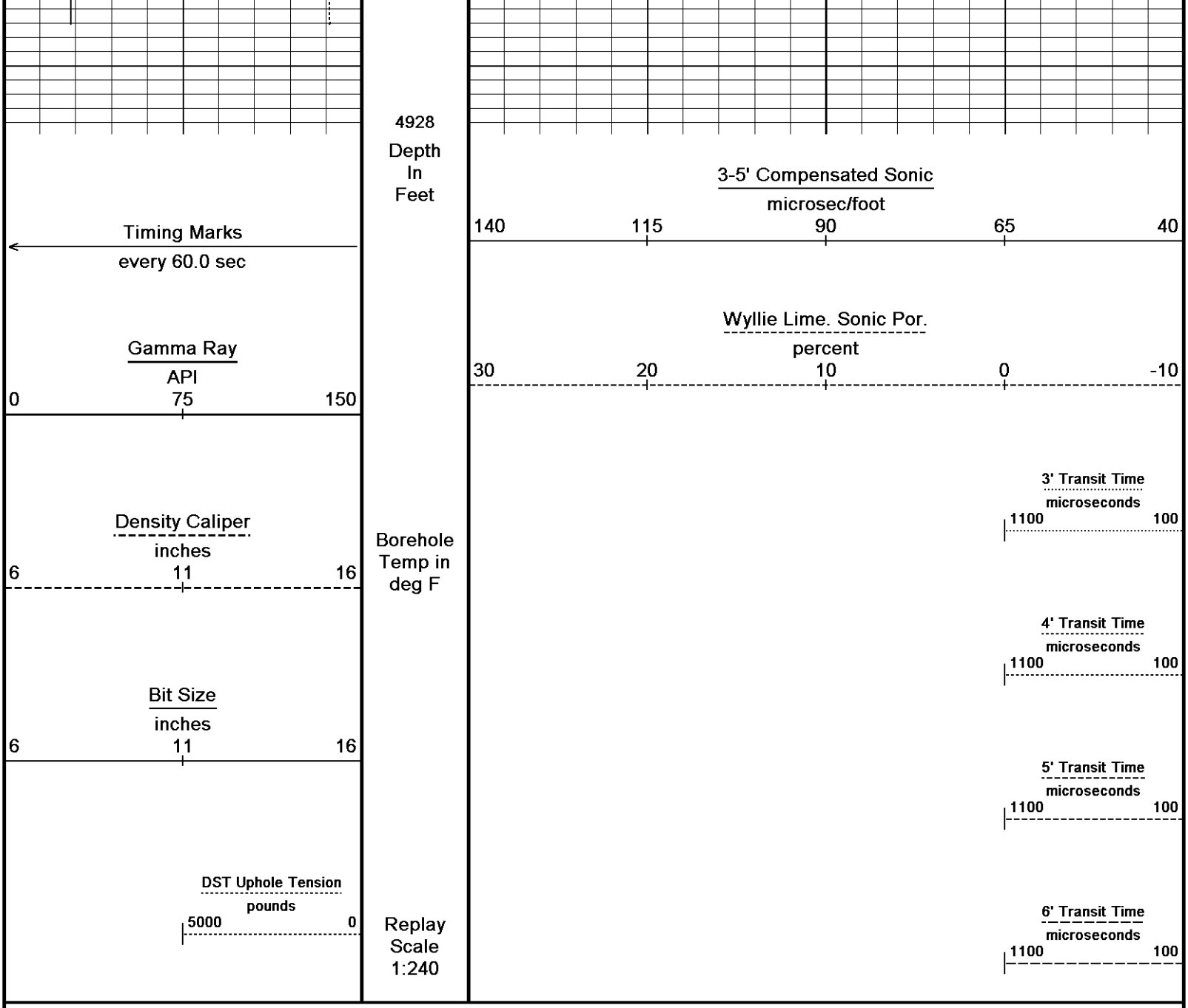

118°
3850
118°
3900
118°
3950
119°
4000


119°
4050
Bit Size
Wyllie Lime. Sonic Por.
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
119°
Density Caliper
Gamma Ray
DST Uphole Tension
4100
119°
4150
120°
4200
120°
4250


120°
4300
121°
4350
121°
4400
122°
4450
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
122°
4500
122°
4550
123°
4600
124°
4650
124°


4700
126°
4750
126°
4800
126°
4850
FR Gamma Ray
Bit Size
FR Density Caliper
DST Uphole Tension
4900
FR DST Uphole Tension
Wyllie Lime. Sonic Por.
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
FR 5' Transit Time
FR Wyllie Lime. Sonic Por.pensated Sonic

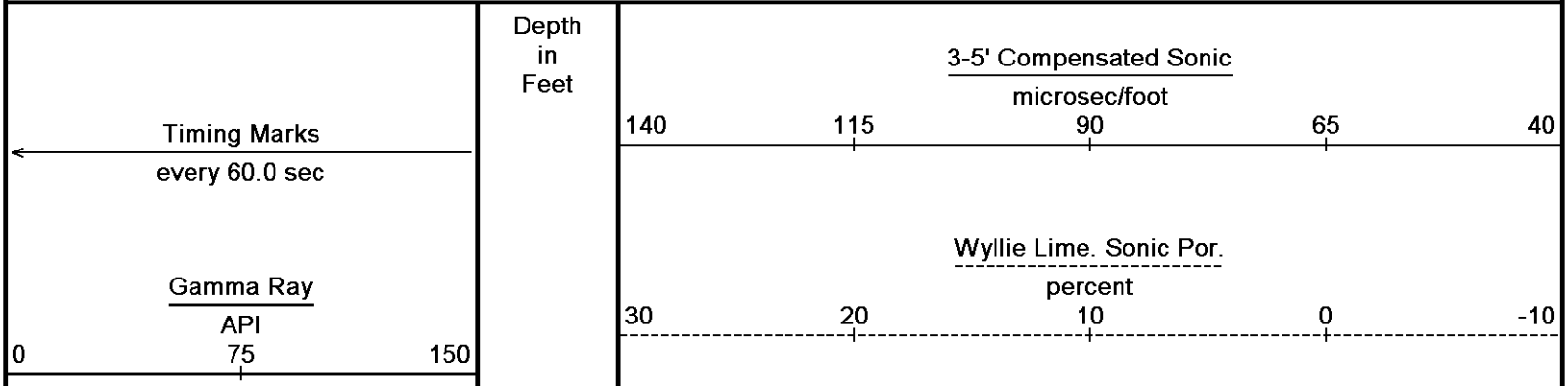


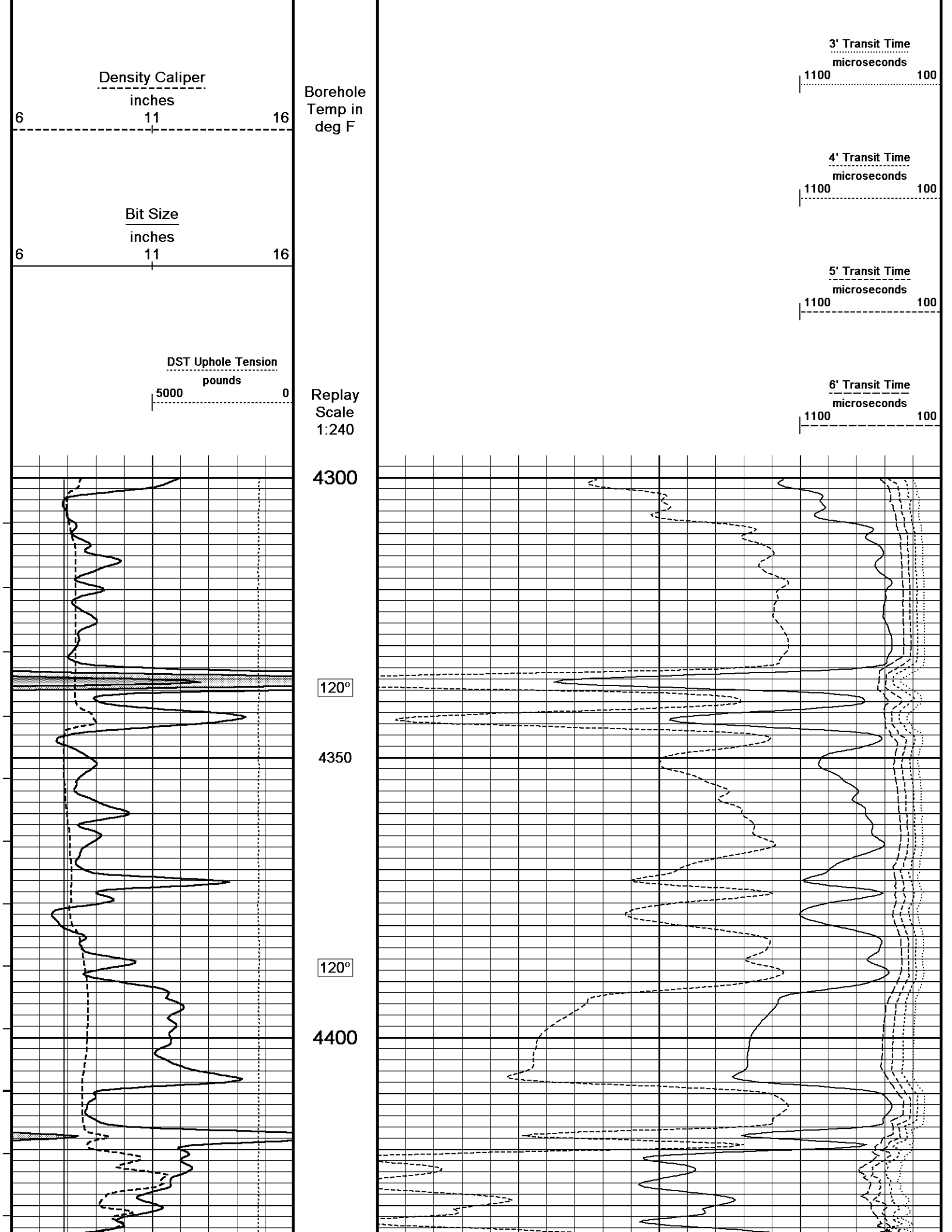
Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 31-AUG-2011 09:35
Filename: C:\DOCUME~1\sysadmin\LOCALS~1\Temp\Weatherford...\Grand Mesa DBY # 1-16_004.dta — Recorded on 06-AUG-2011 04:56
System Versions: Logged with 11.03.4044 Processed with 11.03.4044 Plotted with 12.01.3513

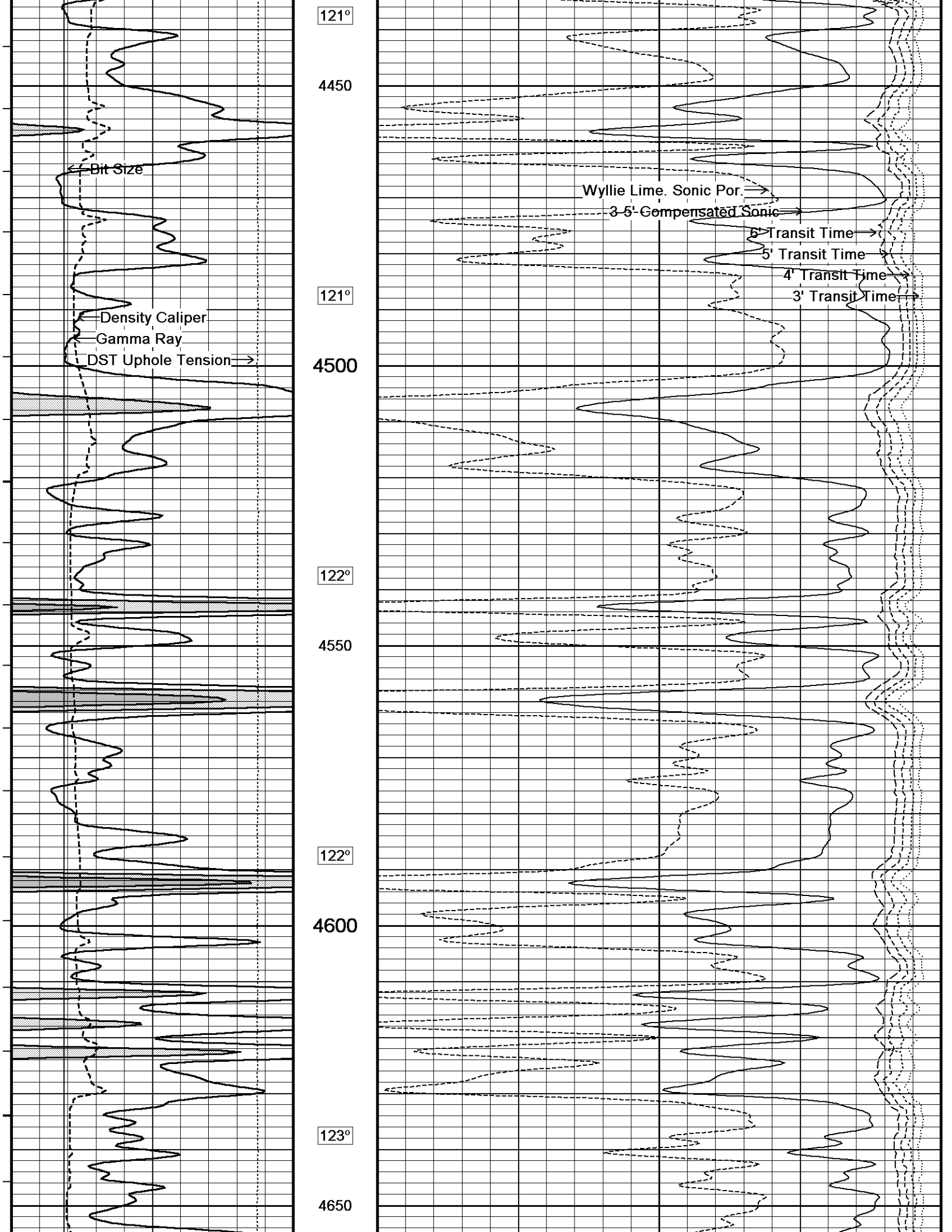
5 INCH MAIN

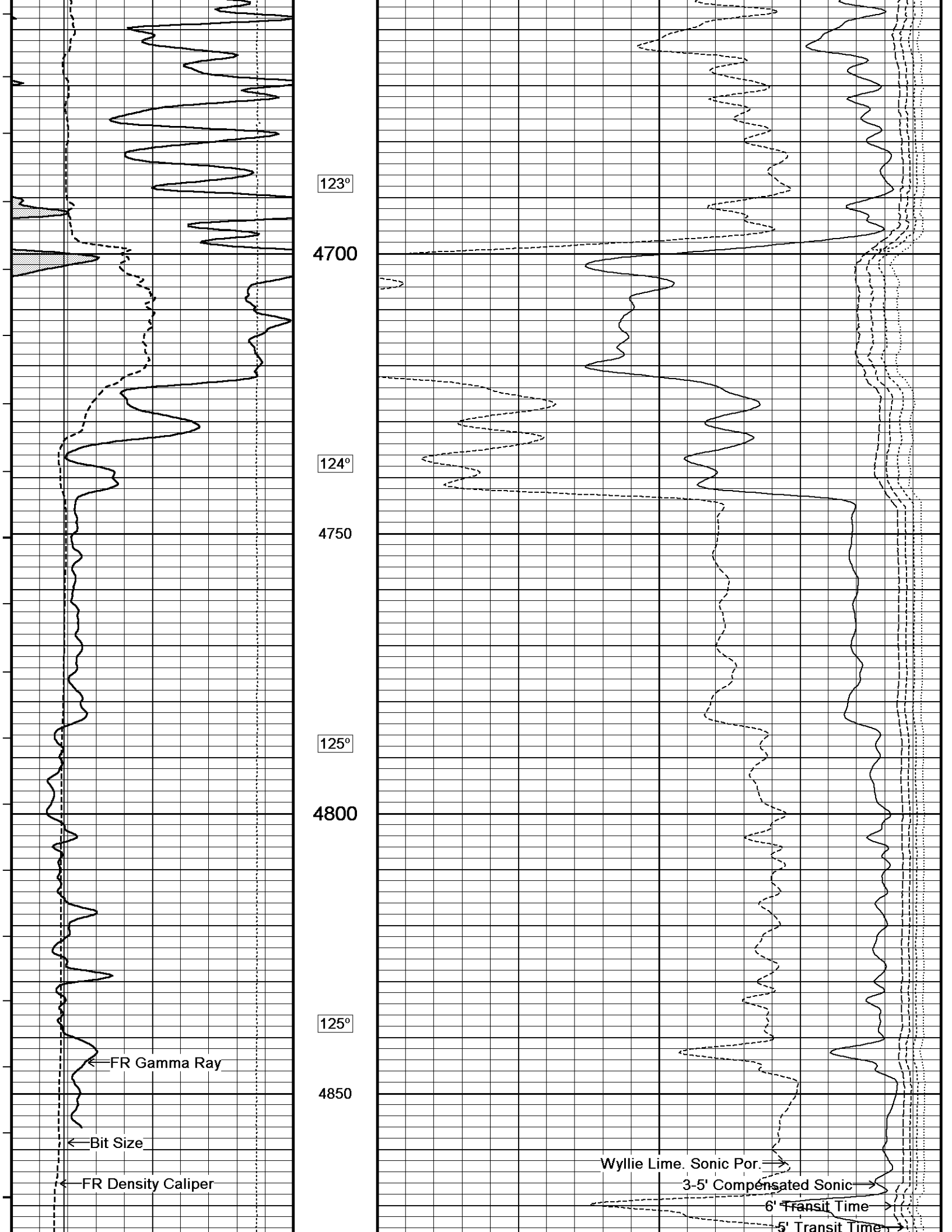
REPEAT SECTION

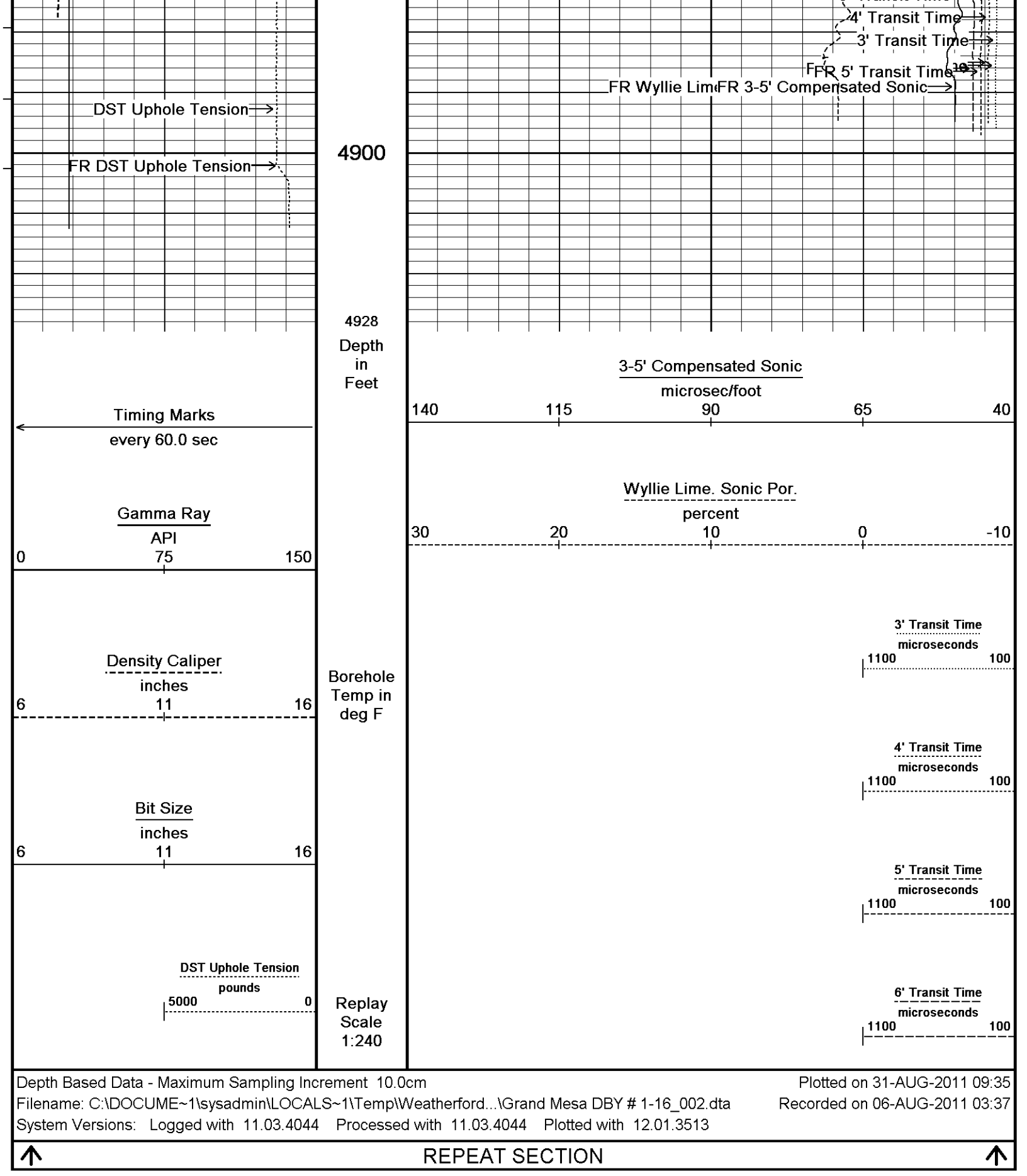
Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 31-AUG-2011 09:35
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System Versions: Logged with 11.03.4044 Processed with 11.03.4044 Plotted with 12.01.3513




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' Transit Time
microseconds
1100
100
4' Transit Time
microseconds
1100
100
5' Transit Time
microseconds
1100
100
6' Transit Time
microseconds
1100
100
4300
120°
4350
120°
4400


121°
4450
Bit Size
Wyllie Lime. Sonic Por.
3-5' Compensated Sonic
6' Transit Time
5' Transit Time
4' Transit Time
3' Transit Time
121°
Density Caliper
Gamma Ray
DST Uphole Tension
4500
122°
4550
122°
4600
123°
4650


123°
4700
124°
4750
125°
4800
125°
4850
FR Gamma Ray
Bit Size
FR Density Caliper
Wyllie Lime. Sonic Por.
3-5' Compensated Sonic
6' Transit Time
5' Transit Time



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 31-AUG-2011 09:35

Filename: C:\DOCUME~1\sysadmin\LOCALS~1\Temp\Weatherford...\Grand Mesa DBY # 1-16_002.dta — Recorded on 06-AUG-2011 03:37

System Versions: Logged with 11.03.4044 Processed with 11.03.4044 Plotted with 12.01.3513

REPEAT SECTION

BEFORE SURVEY CALIBRATION

C:\DOCUME~1\sysadmin\LOCALS~1\Temp\Weatherford PreView\0\Grand Mesa DBY # 1-16_004.dta

General Constants All 000 — Last Edited on 06-AUG-2011 08:50

General Parameters

Mud Resistivity	0.470	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

Porosity used	Base Density Porosity	
Resistivity used	Deep Induction	
RWA Constant A	0.610	
RWA Constant M	2.150	

Down-hole Tension Calibration All 000

Field Calibration on 30-JUN-2010 01:00

Reading No	Measured	Calibrated (lbs)
1	14112.01	10.00
2	15164.79	427.00

Down-hole Tension Calibration SMS 0

Field Calibration on 30-JUN-2010 01:00

Reading No	Measured	Calibrated (lbs)
1	14112.01	10.00
2	15164.79	427.00

High Resolution Temperature Calibration MCG-C 139

Field Calibration on 02-AUG-2011 18:13

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

High Resolution Temperature Constants MCG-C 139

Last Edited on

Pre-filter Length	11

SP Calibration MCG-C 139

Field Calibration on 02-AUG-2011 18:12

	Measured	Calibrated (mV)
Reference 1	103.5	100.0
Reference 2	-96.9	-100.0

Gamma Calibration MCG-C 139

Field Calibration on 02-AUG-2011 18:12

	Measured	Calibrated (API)
Background	78	54
Calibrator (Gross)	1136	779
Calibrator (Net)	1058	725

Gamma Constants MCG-C 139

Last Edited on 06-AUG-2011 02:50

Gamma Calibrator Number	grc38	
Mud Density	1.09	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

Micro Normal and Micro Inverse Calibration MML-A 16

Base Calibration on 02-AUG-2011 16:55
Field Check on 02-AUG-2011 16:57

Base Calibration

	Measured		Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Micro Normal	12.2	60.2	2.6	12.8
Micro Inverse	15.6	78.4	1.7	8.4

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Micro Normal	32.1	32.1
Micro Inverse	16.3	16.3

Micro Normal and Micro Inverse Constants MML-A 16

Last Edited on 06-AUG-2011 02:28

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

Caliper Calibration MML-A 16

Base Calibration on 02-AUG-2011 17:07
Field Calibration on 02-AUG-2011 17:09

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	14087	5.98
2	17465	7.97
3	20778	9.86
4	24732	11.92
5	0	0.00
6	N/A	N/A

Field Calibration

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

Neutron Calibration MDN-A.B 66

Base Calibration on 02-AUG-2011 19:16
Field Check on 02-AUG-2011 19:29

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3250	102	3714	110
Ratio	31.962		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	1591	2269
Ratio	0.701	

Field Check

	Calibrated (cps)	
	1573	2249
Ratio	0.699	

Neutron Constants MDN-A.B 66

Last Edited on 06-AUG-2011 02:50

Neutron Source Id	P58125B	
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	None	
Formation Pressure	N/A	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 52

Base Calibration on 02-AUG-2011 16:38
Field Check on 02-AUG-2011 16:48

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	964.4	126.8
Base Check		280.0
Field Check		280.1

FE Constants MFE-A.A 52

Last Edited on 06-AUG-2011 02:27

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 30-JUN-2011 19:01

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	
Correction for Sonde Skew	Applied	
Cycle Stretch Algorithm	Applied	
MN3FT	0.00	micro-sec
MX3FT	1500.00	micro-sec
Hunt-Raymer Constant	83.13	micro-sec/ft
Sonde Mode	Compensated	
Hole Type	Open Hole	

Sonde Parameters

	Measured	Calibrated
Offset	0.0000	0.0000
Free Pipe	0.0000	0.0000

Peak Amplitude Source 0

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)	Depth (ft)
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	0.00	0.00	

Full Waveform Parameters

Use 3' Waveform to derive TR	No	
Use 4' Waveform to derive TR	No	
Use 5' Waveform to derive TR	No	
Use 6' Waveform to derive TR	No	
3' Waveform Discriminator Level	0.30	mV
4' Waveform Discriminator Level	0.30	mV
5' Waveform Discriminator Level	0.15	mV
6' Waveform Discriminator Level	0.15	mV
3' Waveform Filter	0	
4' Waveform Filter	0	
5' Waveform Filter	0	
6' Waveform Filter	0	
Semblance Level	0.50	
Semblance Window Width	120.00	micro-sec
Sonic 1 Despiker	100.00	micro-sec/ft
Sonic 2 Despiker	100.00	micro-sec/ft

High Resolution Temperature Calibration MAI-A.A 167

Field Calibration on 02-AUG-2011 18:25

	Measured	Calibrated(Deg F)
Lower	1.00	33.80
Upper	11.00	51.80

High Resolution Temperature Constants MAI-A.A 167

Last Edited on

Pre-filter Length	11

Induction Calibration MAI-A.A 167

Base Calibration on 11-MAR-2011 09:58
Field Check on 02-AUG-2011 18:28

Base Calibration

Test Loop Calibration	Measured		Calibrated (mmho/m)	
Channel	Low	High	Low	High
1	17.3	474.2	9.3	966.2
2	6.3	388.4	7.6	821.4
3	3.3	259.4	5.2	566.0
4	1.9	133.0	2.6	279.2

Array Temperature	76.8	Deg F

Channel	Base Check (mmho/m)		Field Check (mmho/m)		
	Low	High	Low	High	
1	0.0	0.0	14.6	3835.9	
2	0.0	0.0	30.0	3472.7	
3	0.0	0.0	29.3	3049.0	
4	0.0	0.0	19.8	2078.8	
Deep	0.0	0.0	18.6	2046.2	
Medium	0.0	0.0	42.3	3985.8	
Shallow	0.0	0.0	43.7	5048.2	
Array Temperature	0.0		98.0		Deg F

Induction Constants MAI-A.A 167

Last Edited on 06-AUG-2011 02:27

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	

Caliper Calibration MPD-B 35

Base Calibration on 02-AUG-2011 17:17
Field Calibration on 02-AUG-2011 17:18

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	19303	3.99

2	29535	5.98
3	39888	7.97
4	49472	9.86
5	60384	11.92
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
5.97	5.98

Photo Density Calibration MPD-B 35

Base Calibration on 02-AUG-2011 18:00
Field Check on 02-AUG-2011 18:07

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	56174	27139	59556	30836
Reference 2	22984	2574	24941	2541
Field Check at Base	1165.2	1387.5		
Field Check	1166.3	1381.9		

PE Calibration

Base Calibration	Measured			Calibrated
	WS	WH	Ratio	Ratio
Background	207	1028		
Reference 1	20811	55977	0.375	0.371
Reference 2	6055	22836	0.268	0.272
Field Check at Base	207.3	1028.3		
Field Check	208.8	1027.5		

Density Constants MPD-B 35

Last Edited on 06-AUG-2011 02:28

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	

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	

DOWNHOLE EQUIPMENT

C:\DOCUME~1\sysadmin\LOCALS~1\Temp\Weatherford PreView\0\Grand Mesa DBY # 1-16_004.dta

Compact Comms Gamma
MCG-C 139 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in



Compact Comms Gamma
MCG-C 139 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Micro-log
MML-A 16 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

Compact Micro-log
MML-A 16 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

Compact Neutron
MDN-A.B 66 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Neutron
MDN-A.B 66 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper
MPD-B 35 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

Compact Density/Caliper
MPD-B 35 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

SKJ-D.A Compact Knuckle Joint
SKJ-D.A 36 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

SKJ-D.A Compact Knuckle Joint
SKJ-D.A 36 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

Compact Focussed Electric
MFE-A.A 52 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Focussed Electric
MFE-A.A 52 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

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

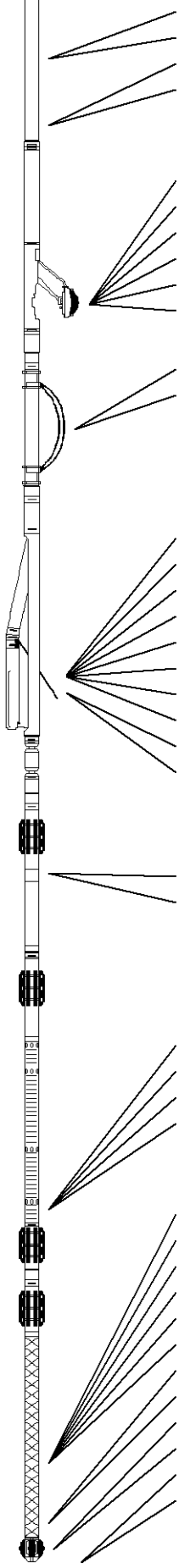
Compact Sonic
MSS-C.K 330 LG: 12.52 ft WT: 72.8 lb OD: 2.24 in

Compact Induction
MAI-A.A 167 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Compact Induction
MAI-A.A 167 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 62.84 ft Weight: 480.6 lb

Total Length: 62.84 ft Weight: 480.6 lb



57.56 ft	GRGC - Gamma Ray
57.56 ft	GRGC - Gamma Ray
54.65 ft	CGXT - MCG External Temperature
54.65 ft	CGXT - MCG External Temperature
47.93 ft	MINV - Micro-inverse
47.93 ft	MNRL - Micro-normal
48.92 ft	MLTC - MML Caliper
47.93 ft	MINV - Micro-inverse
47.93 ft	MNRL - Micro-normal
48.92 ft	MLTC - MML Caliper
43.13 ft	NPRL - Limestone Neutron Por.
43.13 ft	NPRL - Limestone Neutron Por.
35.89 ft	CLDC - Density Caliper
35.89 ft	CLDC - Density Caliper
33.96 ft	DPRL - Limestone Density Por.
33.96 ft	DPRL - Limestone Density Por.
33.96 ft	DEN - Compensated Density
33.96 ft	DCOR - Density Correction
33.96 ft	DCOR - Density Correction
33.96 ft	DEN - Compensated Density
33.90 ft	PDPE - PE
33.90 ft	PDPE - PE
26.24 ft	FEFE - Shallow FE
26.24 ft	FEFE - Shallow FE
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
3.34 ft	R60O - Array Ind. One Res 60
3.34 ft	R60O - Array Ind. One Res 60
3.34 ft	R40O - Array Ind. One Res 40
3.34 ft	R40O - Array Ind. One Res 40
3.34 ft	RTAO - Array Ind. One Res Rt
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.

COMPANY	GRAND MESA OPERATING
WELL	DBY # 1-16
FIELD	WILDCAT
PROVINCE/COUNTY	SCOTT

PROVINCE/COUNTY	SCOTT
COUNTRY/STATE	U. S. A / KANSAS

Elevation Kelly Bushing	3086.00	feet	First Reading	4889.00	feet
Elevation Drill Floor	3084.00	feet	Depth Driller	4900.00	feet
Elevation Ground Level	3075.00	feet	Depth Logger	4902.00	feet

Weatherford®

COMPENSATED SONIC
WITH INTEGRATED TRANSIT TIME

40 Years of Wireline 1970 2010