



COMPENSATED SONIC

COMPANY			PARAMOUNT RESOURCES LTD		
WELL			PARA ET AL CAMERON E-72		
FIELD			CAMERON HILLS		
PROVINCE/COUNTY			NORTHWEST TERRITORIES		
COUNTRY/STATE			CANADA		
LOCATION			300/E-72-60-10-117-15/00		
LSD			FIELD PRINT		
SEC	TWP	RGE	Other Services		
API Number			ARRAY INDUCTION		
Permit Number 2048			MICROLOG		
Permanent Datum GROUND LEVEL, Elevation 729.00 metres			PHOTO DENSITY		
Log Measured From K.B., 5.40M above Permanent Datum			DUAL SPACED NEUTRON		
Drilling Measured From KELLY BUSHING			Elevations:		
Date			KB		
Run Number			DF		
Depth Driller			GL		
Depth Logger			metres		
First Reading			734.40		
Last Reading			729.00		
Casing Driller					
Casing Logger					
Bit Size					
Hole Fluid Type					
Density / Viscosity					
PH / Fluid Loss					
Sample Source					
Rm @ Measured Temp					
Rmf @ Measured Temp					
Rmc @ Measured Temp					
Source Rmf / Rmc					
Rm @ BHT					
Time Since Circulation					
Max Recorded Temp					
Equipment Name					
Equipment / Base					
Recorded By					
Witnessed By					
CIRC STOP					

BOREHOLE RECORD

Last Edited: 2-MAR-2007 13:39

Bit Size millimetres	Depth From metres	Depth To metres
311.000	0.00	435.00
200.000	435.00	1408.00

CASING RECORD

Type	Size millimetres	Depth From metres	Shoe Depth metres	Weight pounds/ft
SURFACE	219.100	0.00	435.00	24.00

REMARKS

- 1) SOFTWARE ISSUE: WLS 7.01.0195.
- 2) CUSTOMER SCALES AND LOGGED INTERVALS USED
- 3) TOOLS RUN: MAI, MSS, MPD, MDN, MML, ISC, MGS, MTC, MFE, MCG RUN IN COMBINATION
- 4) HARDWARE: MAI: TWO 25.4 MM STANDOFFS
MSS: THREE 25.4 MM STANDOFFS
MDN: DUAL BOWSPRING
MTC: ONE SIX LEAF CENTRALIZER

6) RIG: PD #220

7) HOLE AND CEMENT VOLUMES CALCULATED USING DENSITY AND 2-ARM CALIPERS :

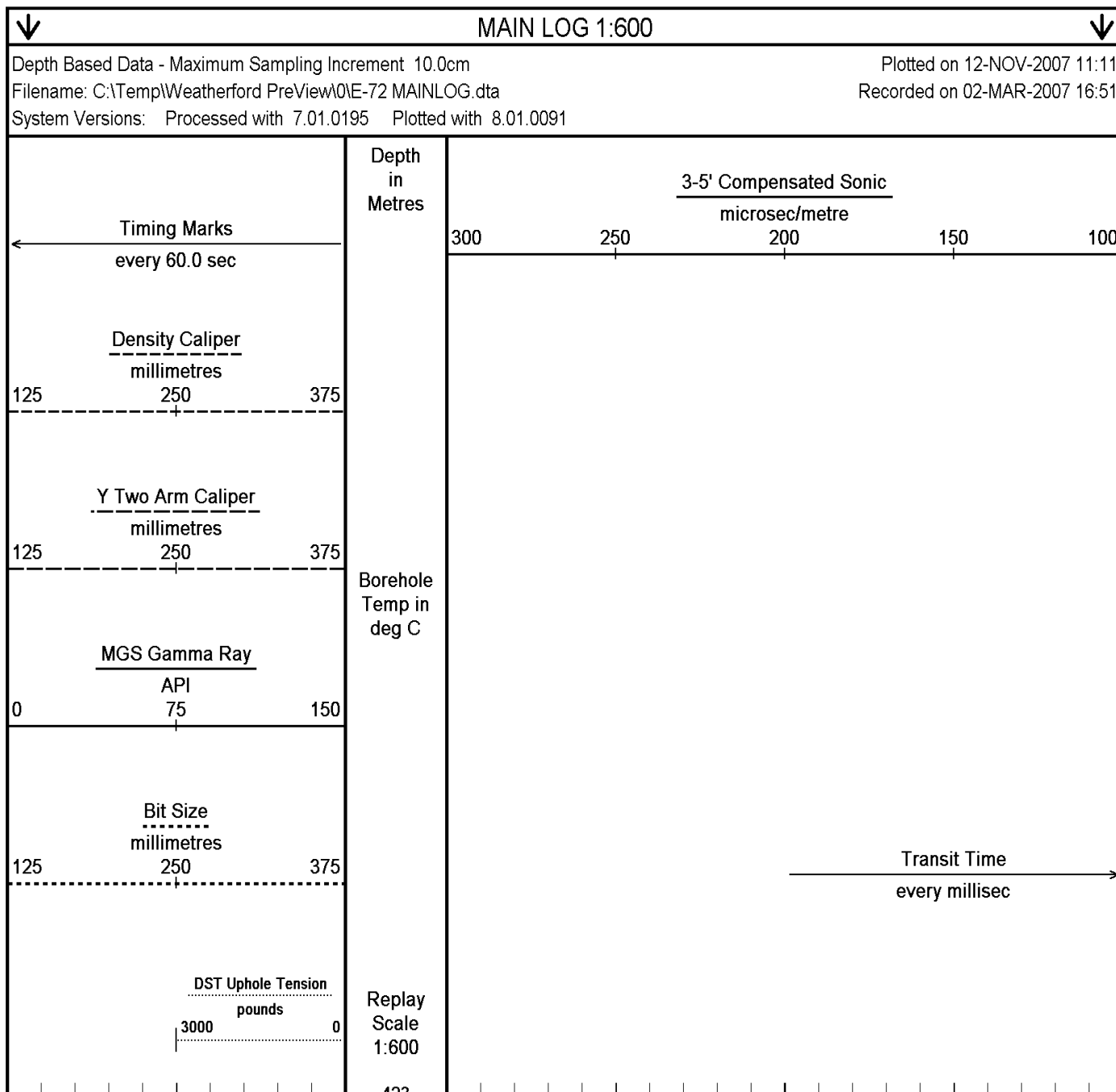
OPEN HOLE VOLUME = 36.8 CU.M.

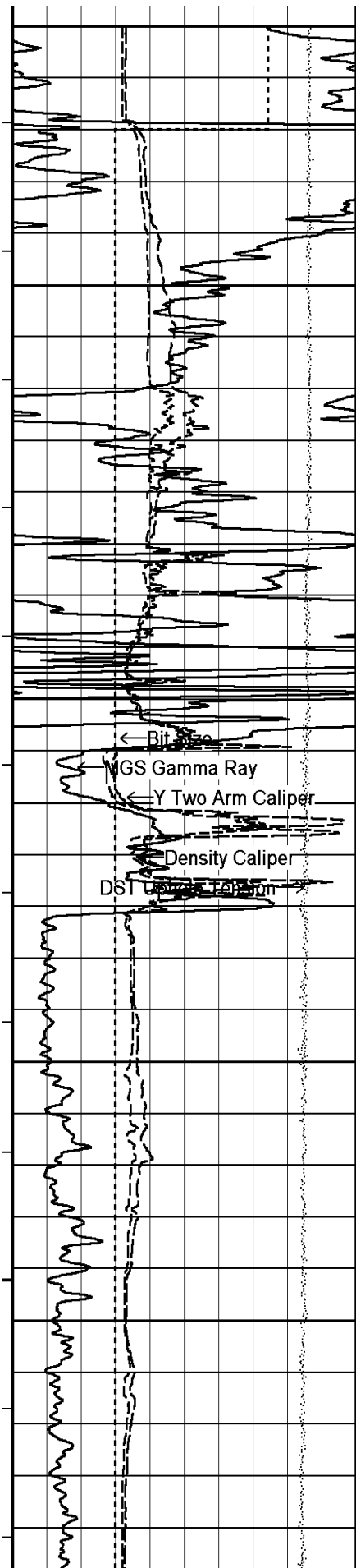
ANNULAR VOLUME USING 139.7 MM PRODUCTION CASING = 22.0 CU.M

8) AREAS OF BOREHOLE RUGOSITY MAY CAUSE POOR DENSITY PAD CONTACT AND THUS HIGH DENSITY CORRECTION.
DENSITY POROSITY DATA MAY BE SKEWED AT THOSE INTERVALS.

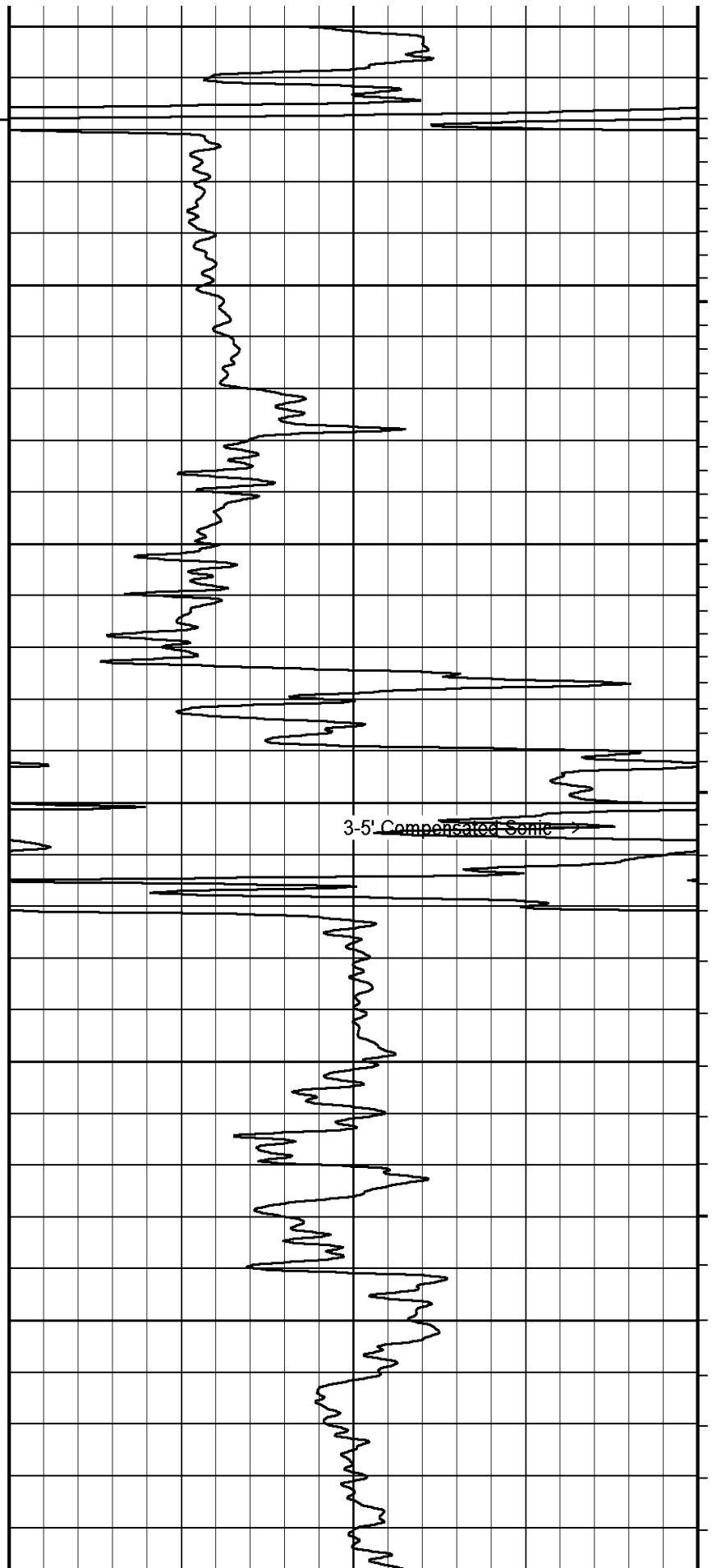
9) ADDITIONAL PASS MADE TO IMPROVE SONIC OVERLAY. DATA LOOKS GOOD BUT IS A LITTLE NOISY IN SOME SECTIONS.
ADDITIONAL REPEAT SHOWN TO FURTHER VERIFY RESPONSE.

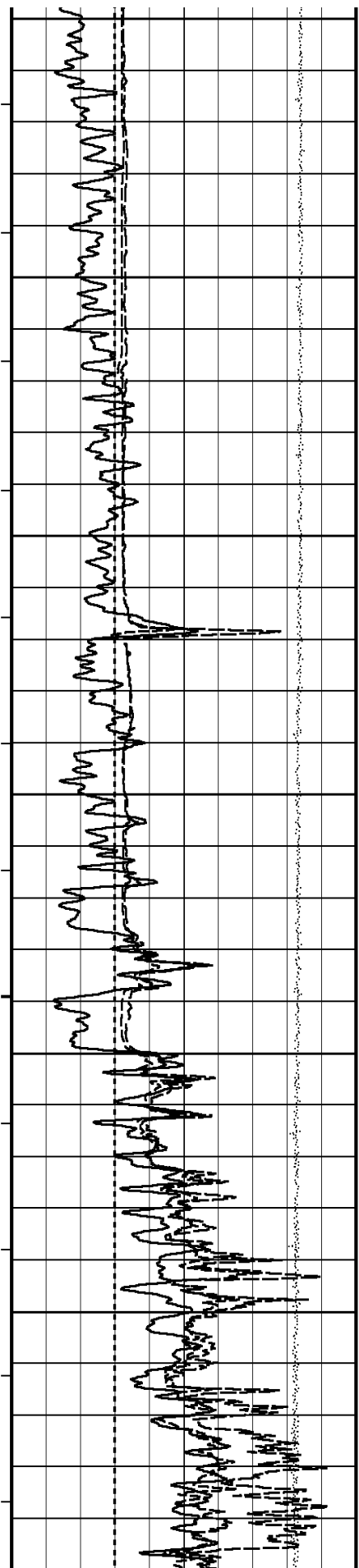
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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





720
Casing Shoe
27°
450
27°
28°
500
28°
550
28°





28°

600

29°

29°

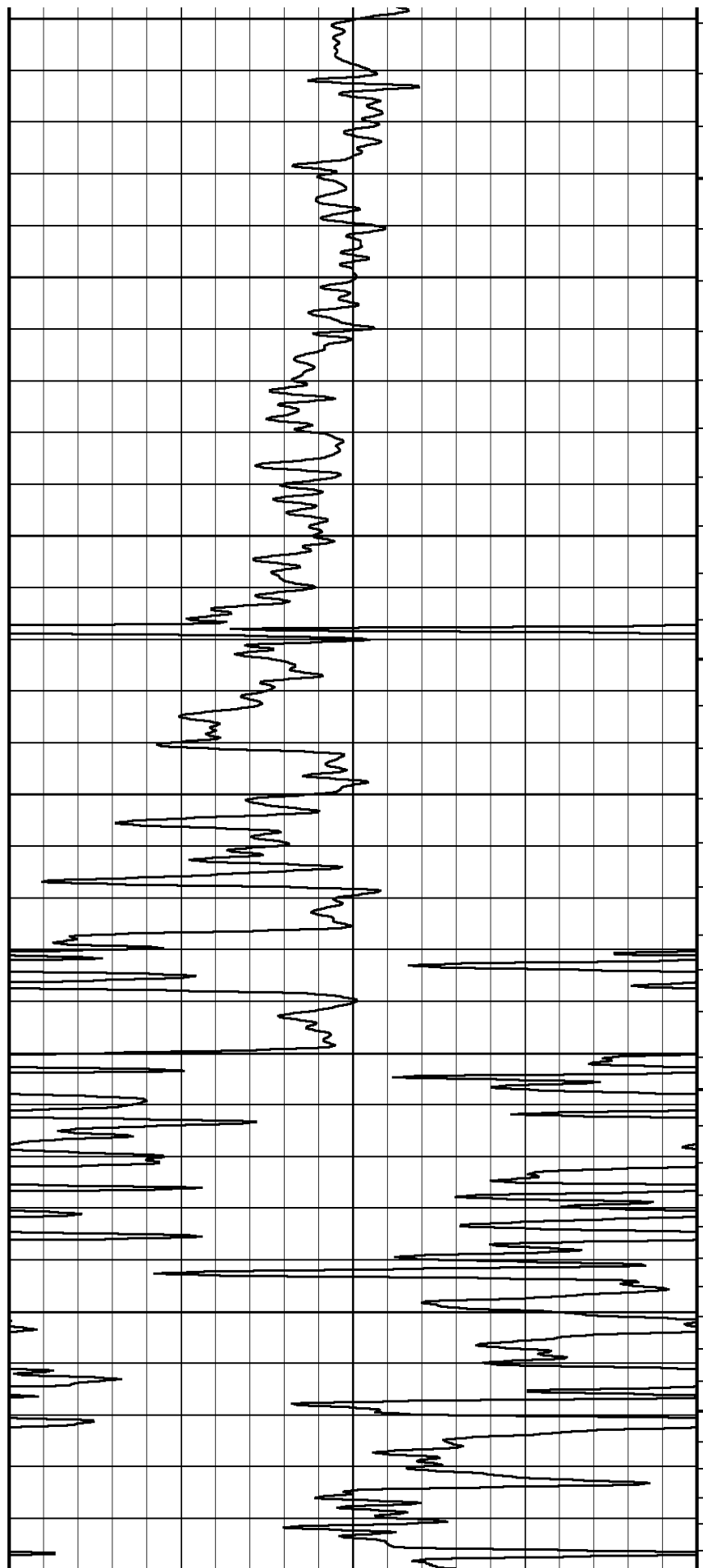
650

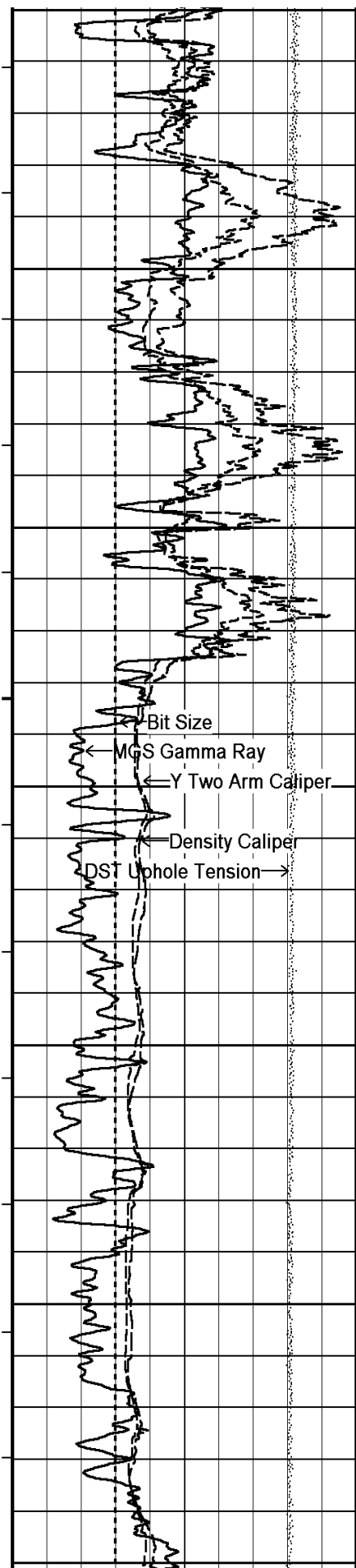
30°

31°

700

31°





32°

750

32°

32°

800

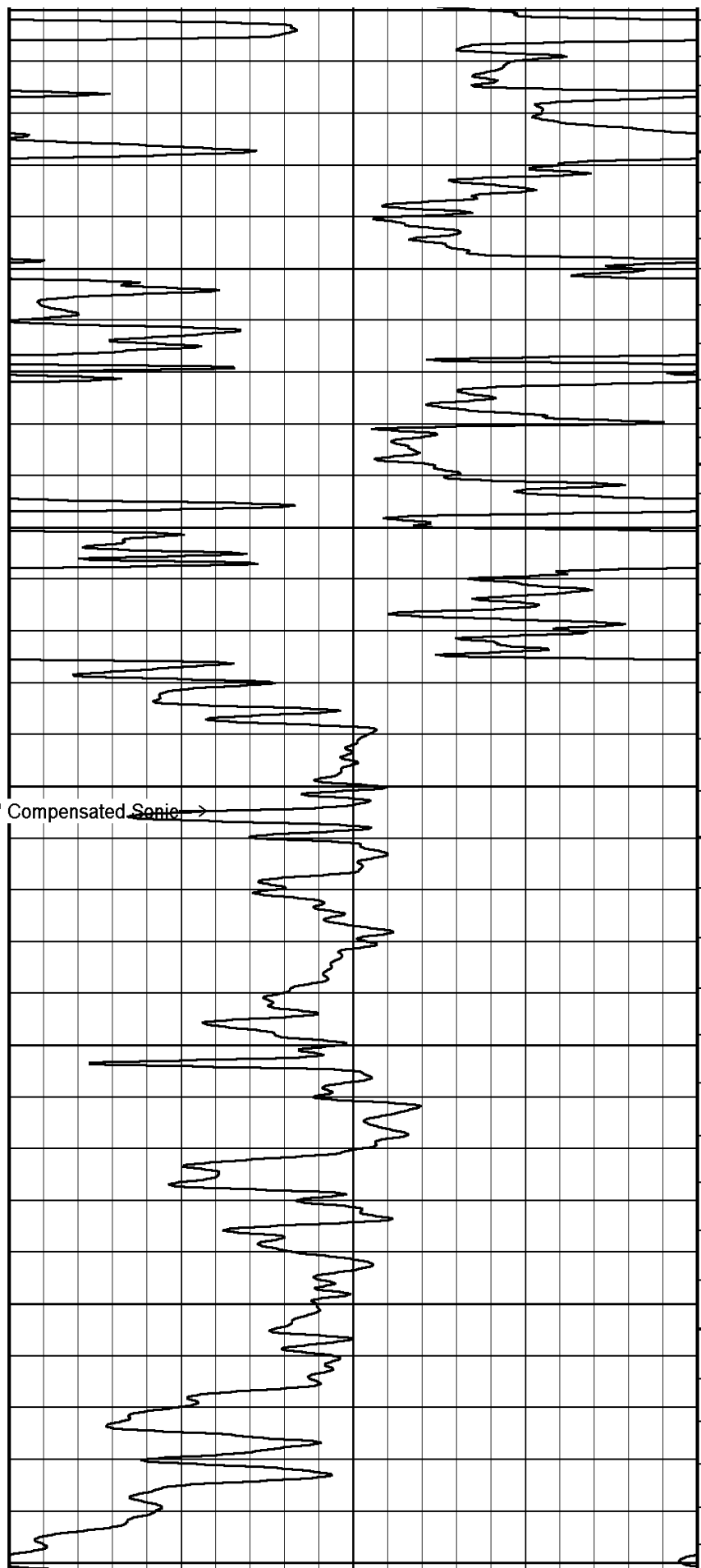
3-5' Compensated Sonic

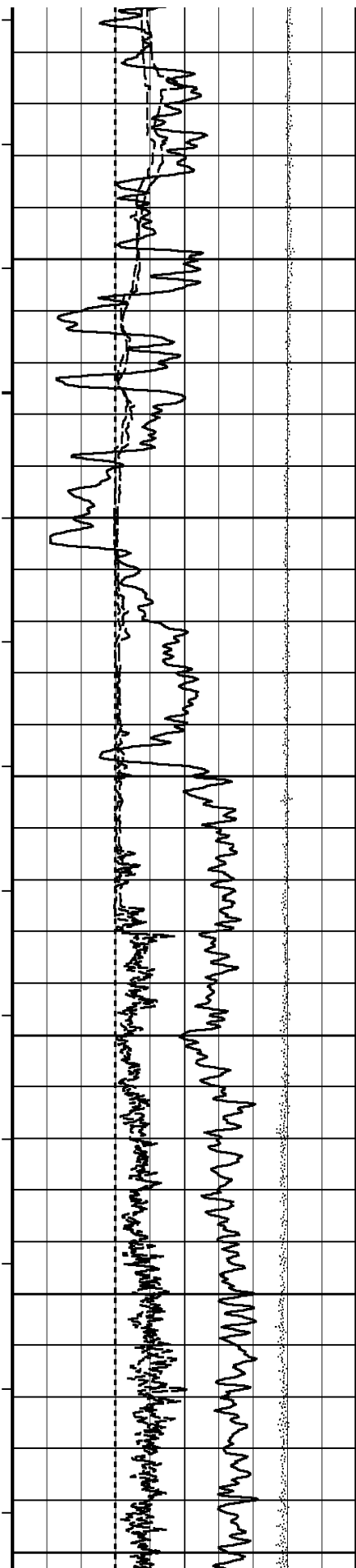
33°

33°

850

33°





34°

900

34°

35°

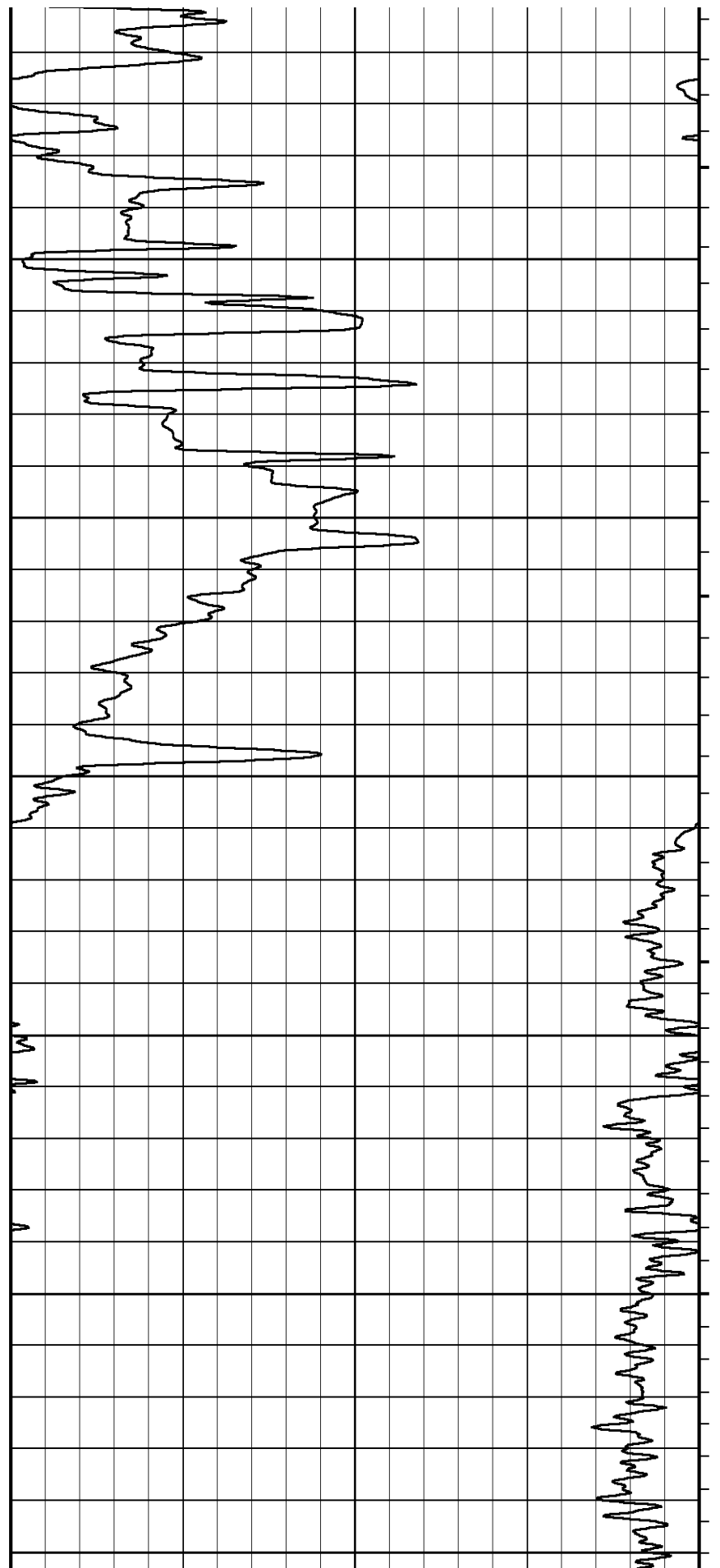
950

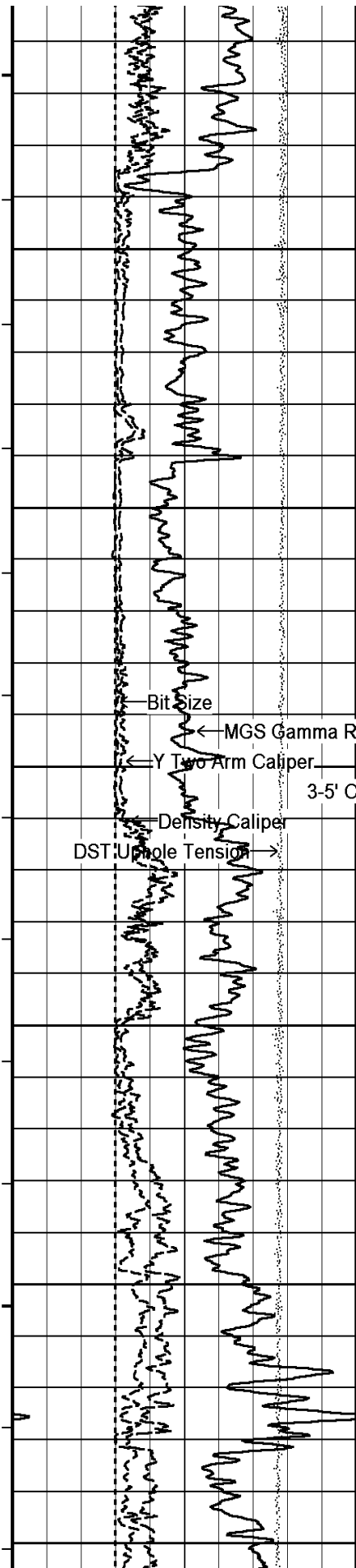
35°

36°

1000

36°





37°

1050

38°

38°

1100

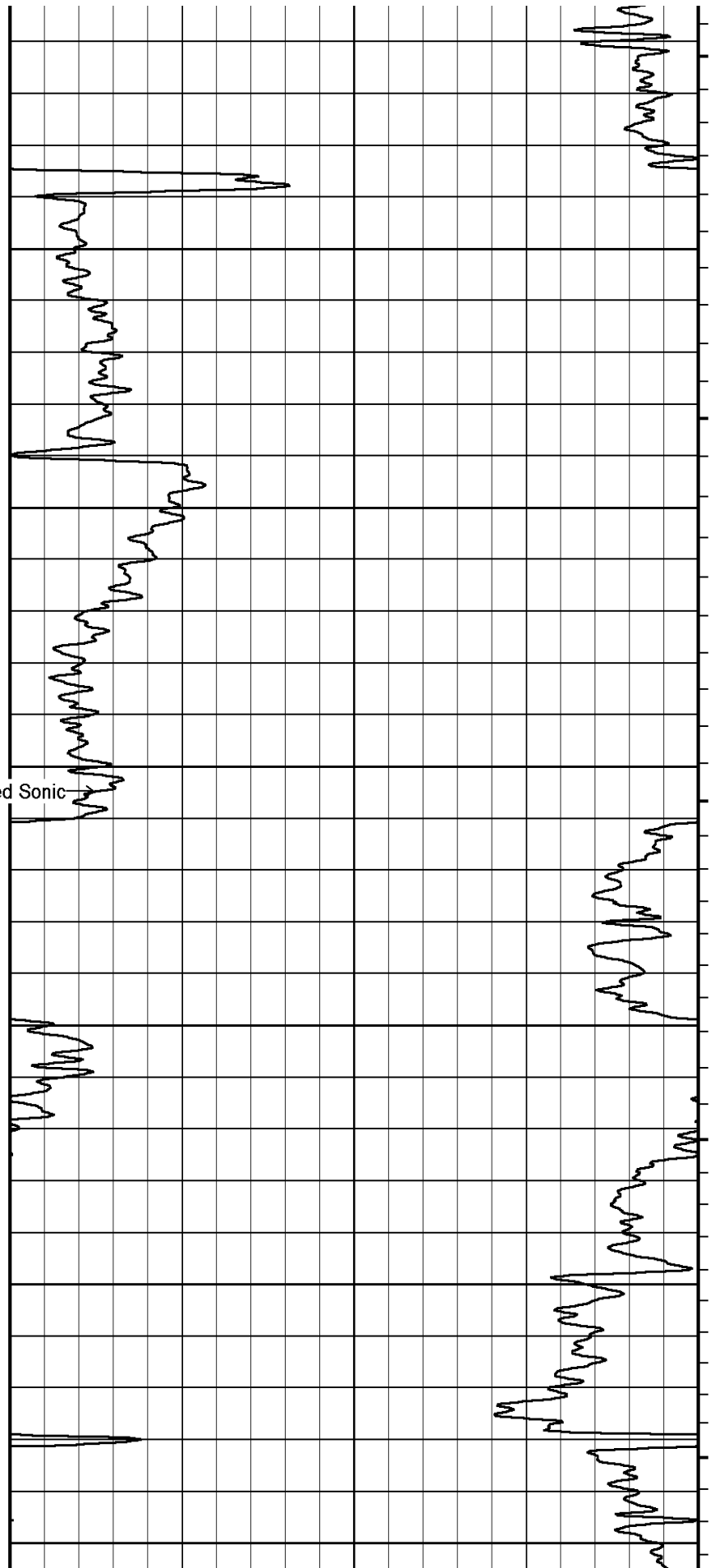
3-5' Compensated Sonic

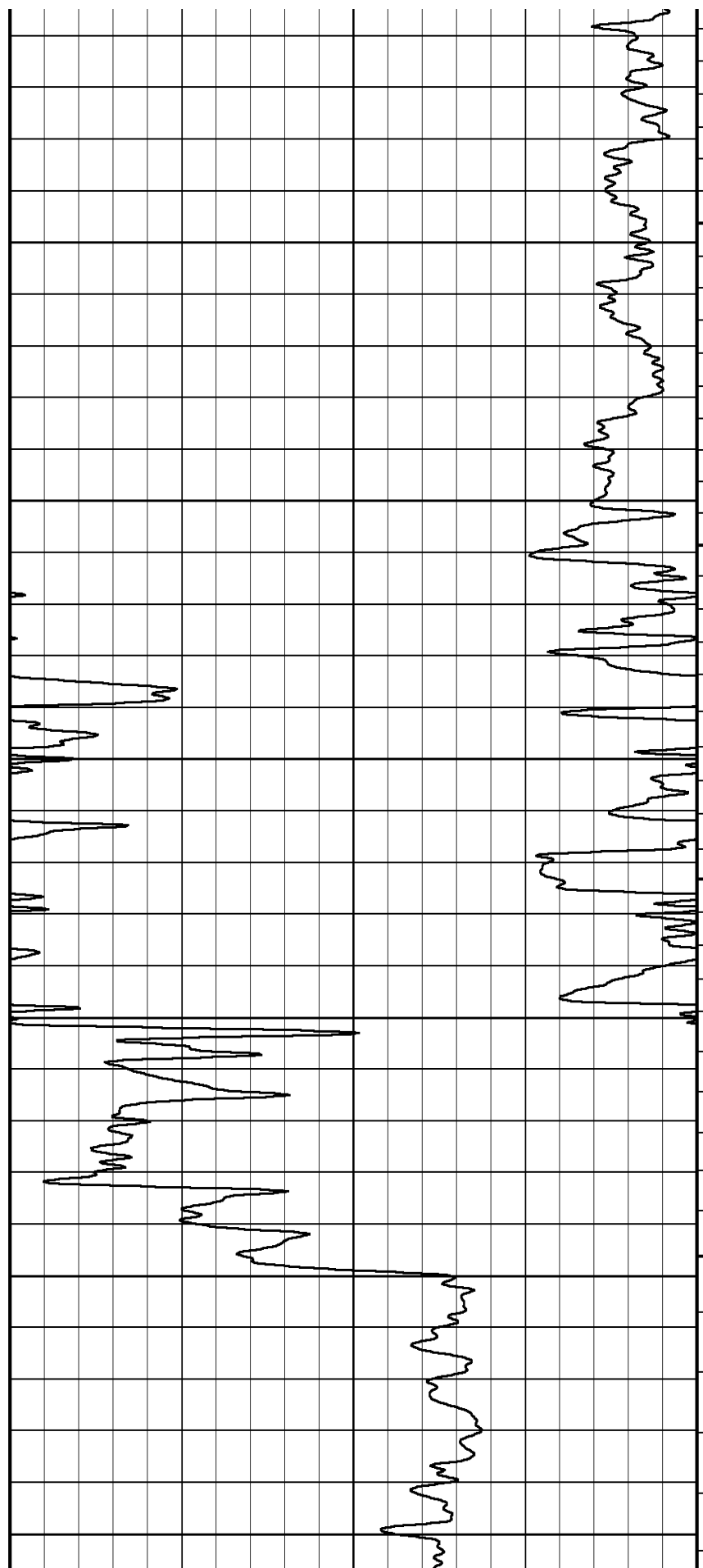
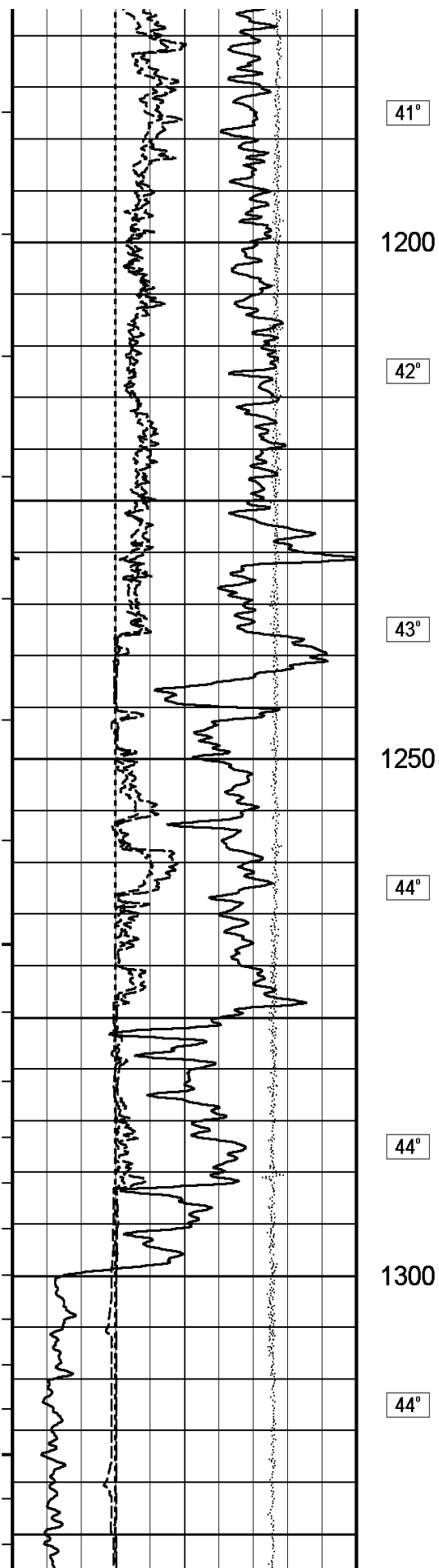
39°

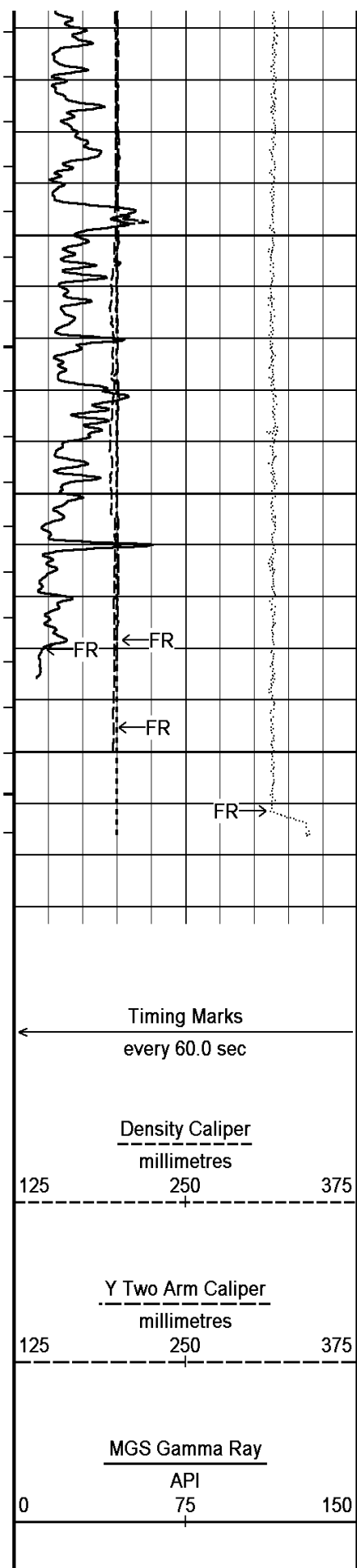
40°

1150

40°







44°

1350

45°

44°

1400

1415
Depth
in
Metres

Timing Marks
every 60.0 sec

Density Caliper
millimetres

125 250 375

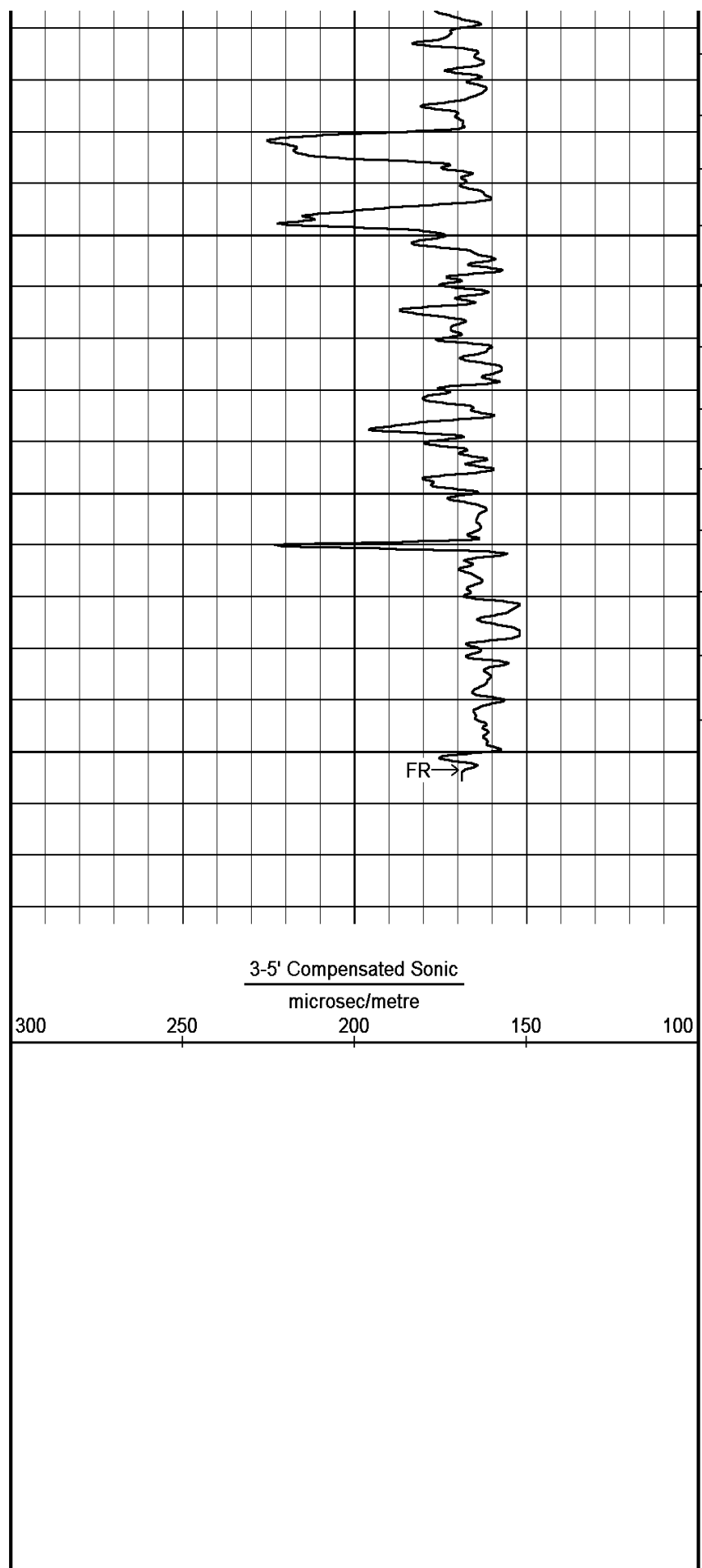
Y Two Arm Caliper
millimetres

125 250 375

MGS Gamma Ray

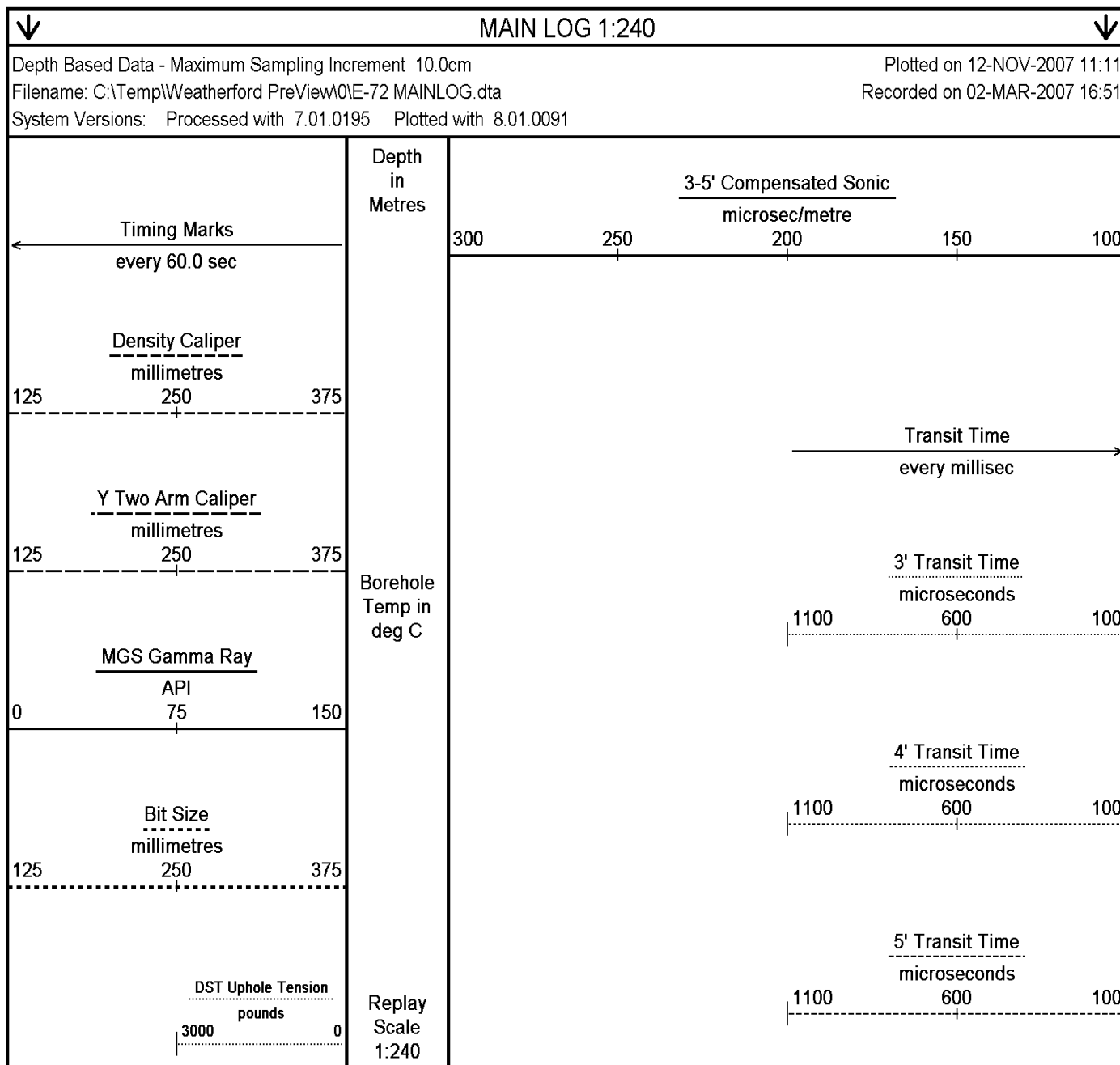
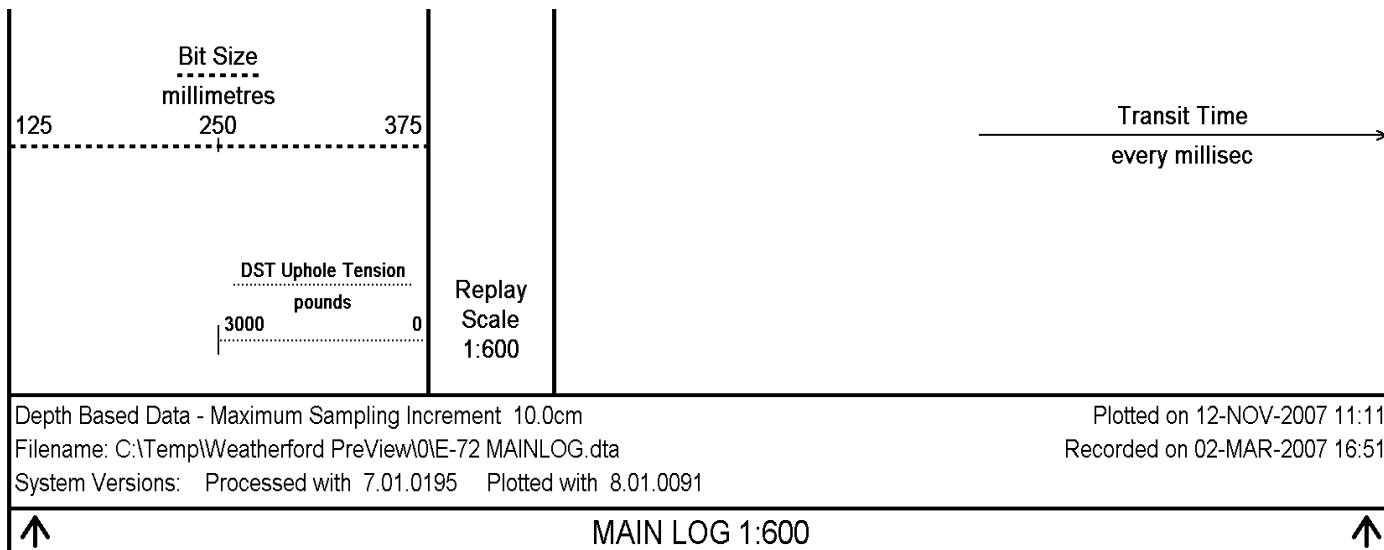
API
0 75 150

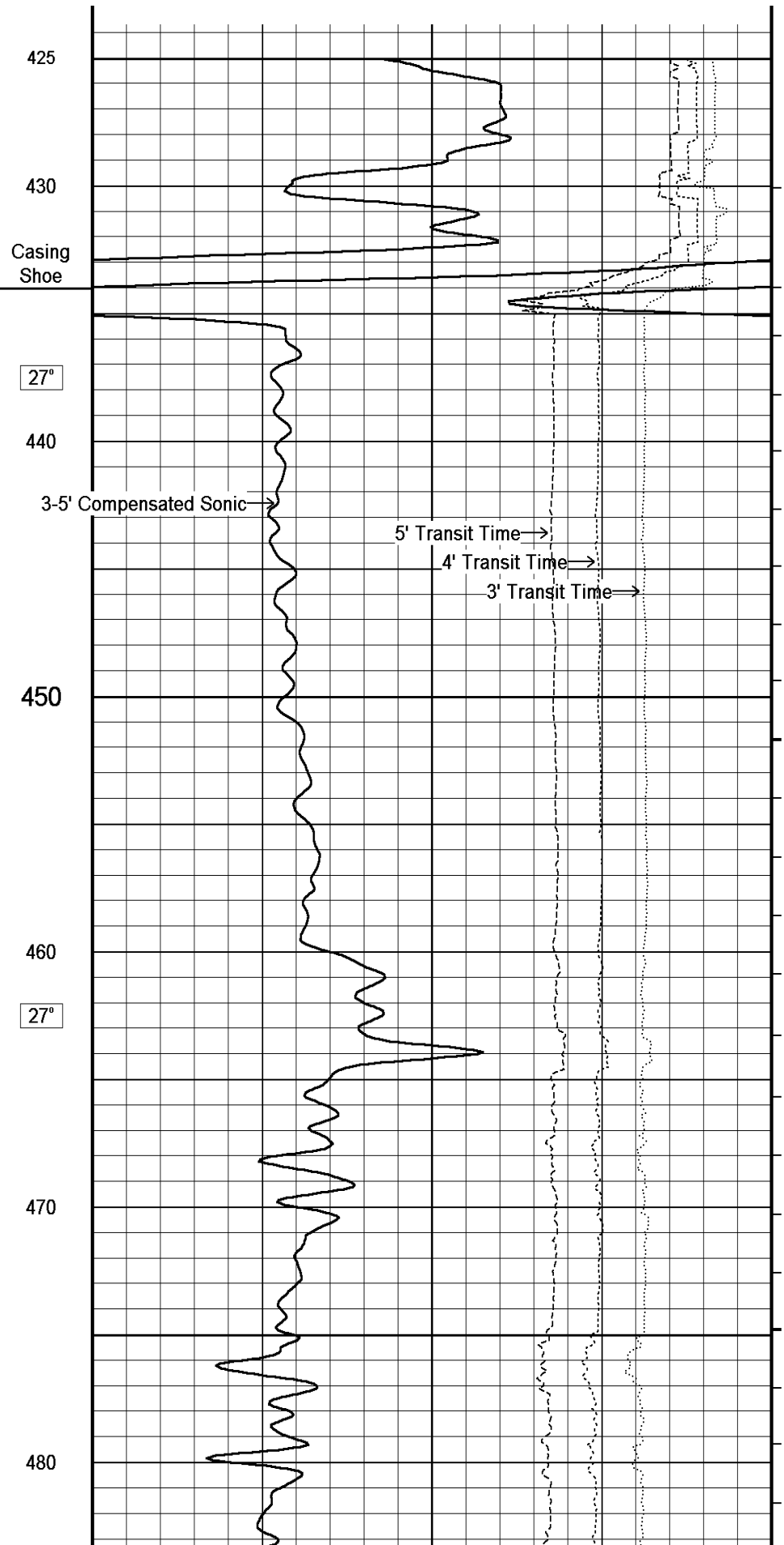
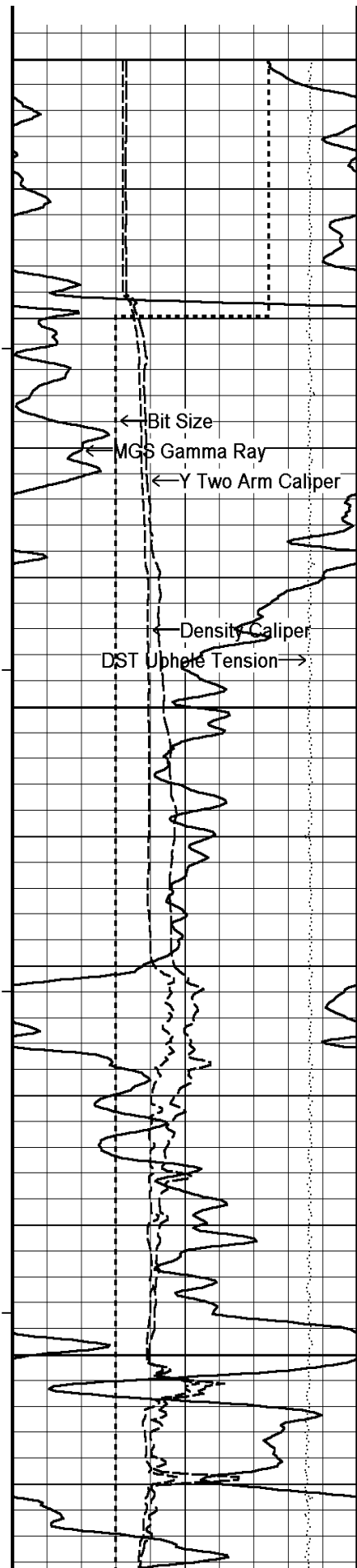
Borehole
Temp in
deg C

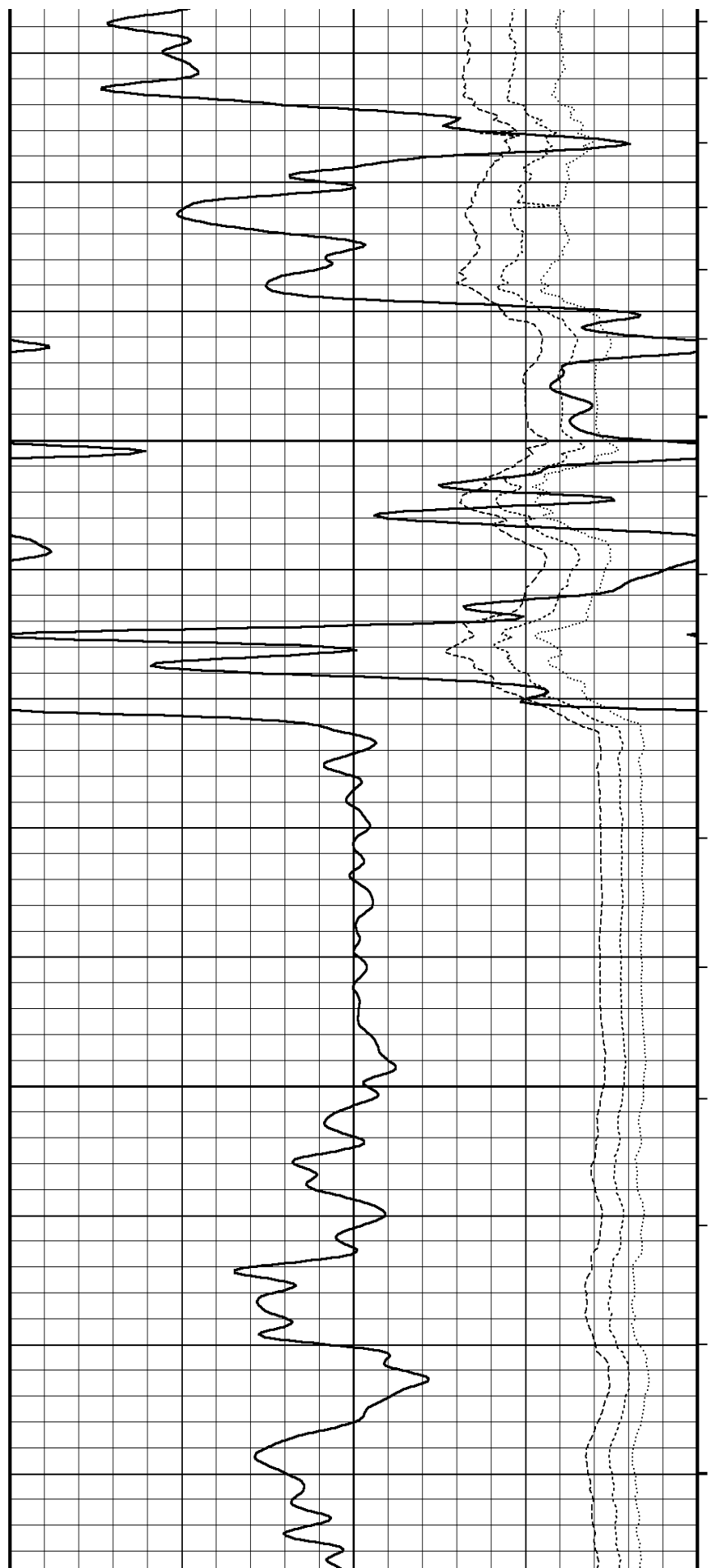
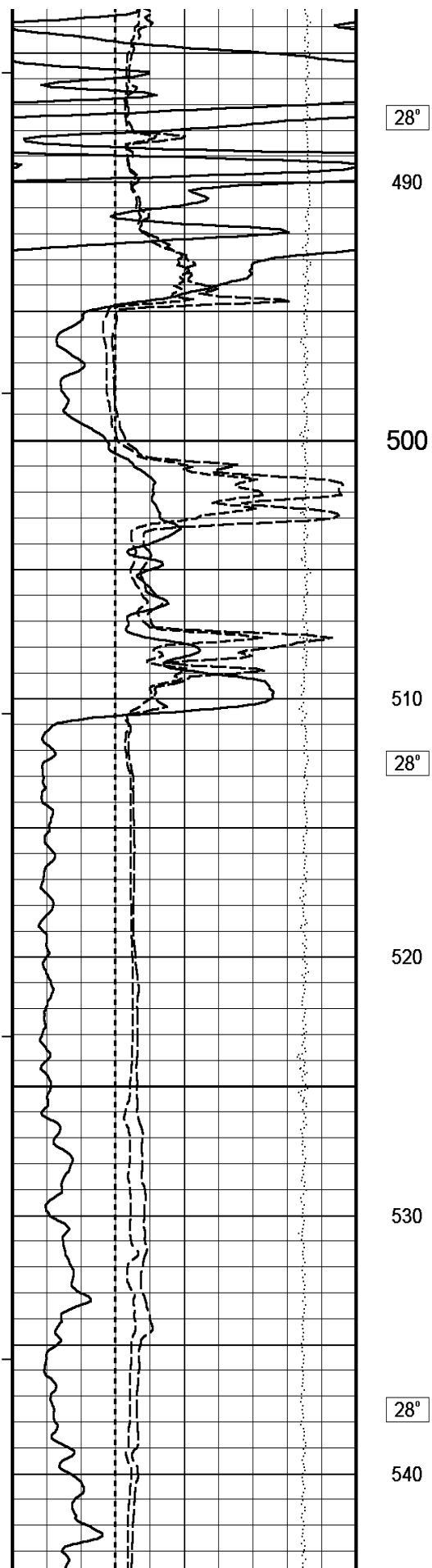


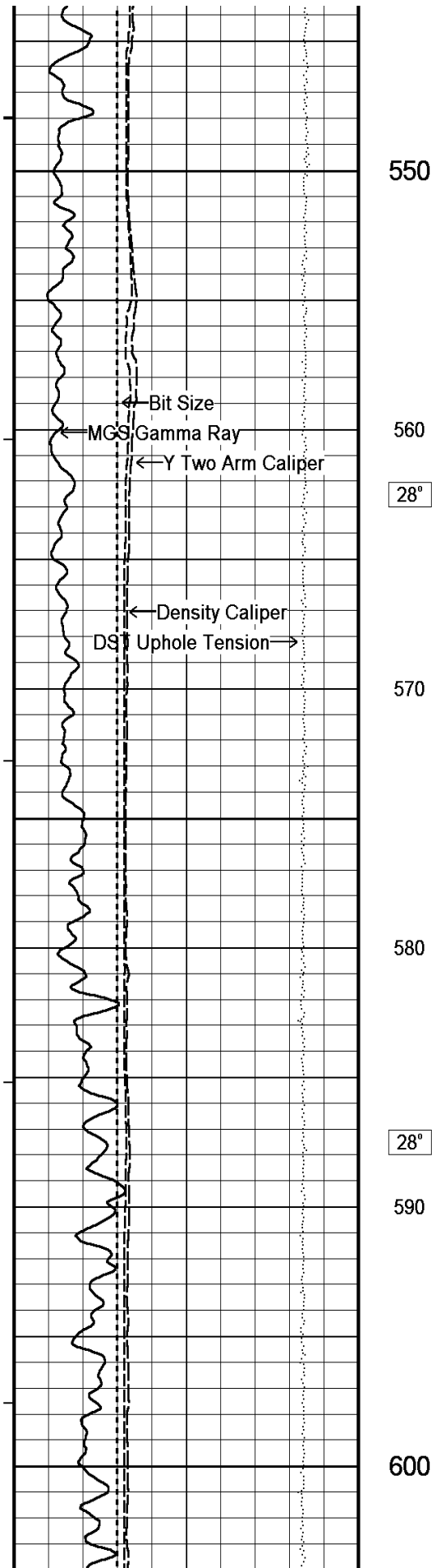
3-5' Compensated Sonic
microsec/metre

300 250 200 150 100









550

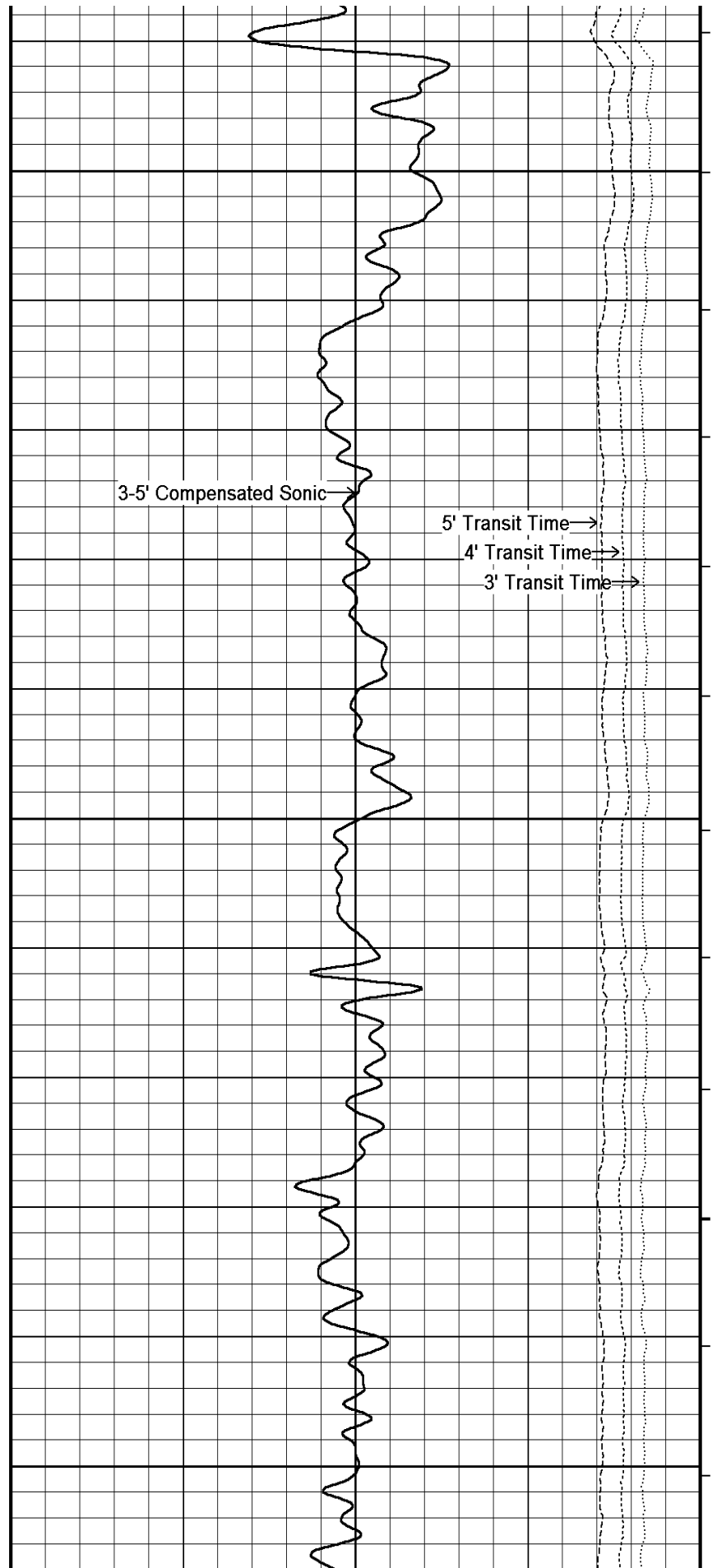
560

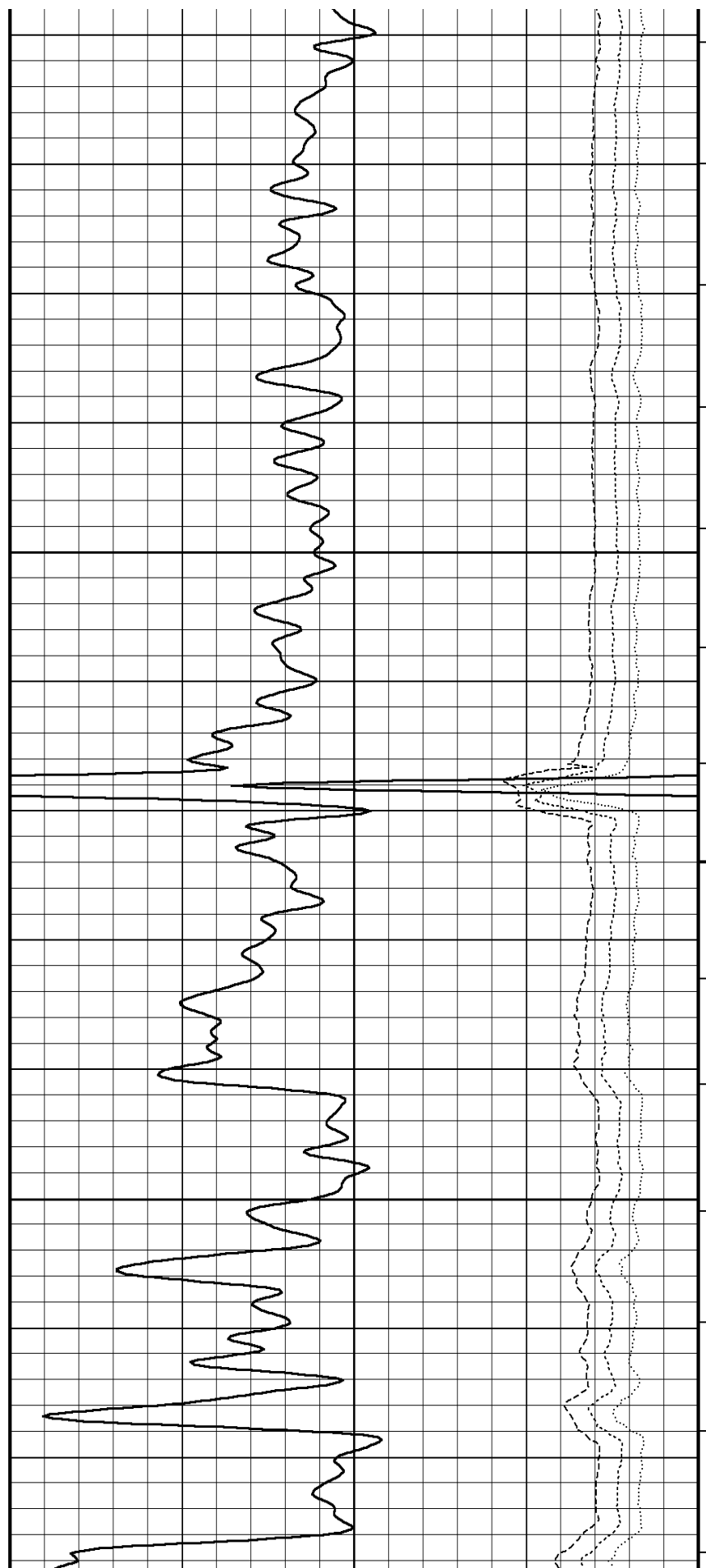
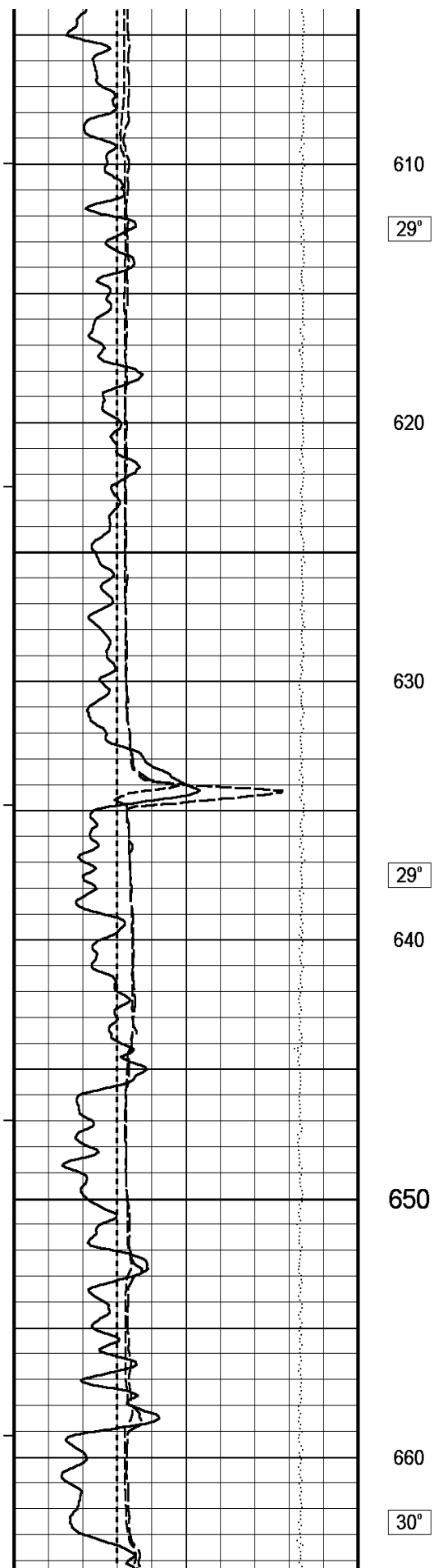
570

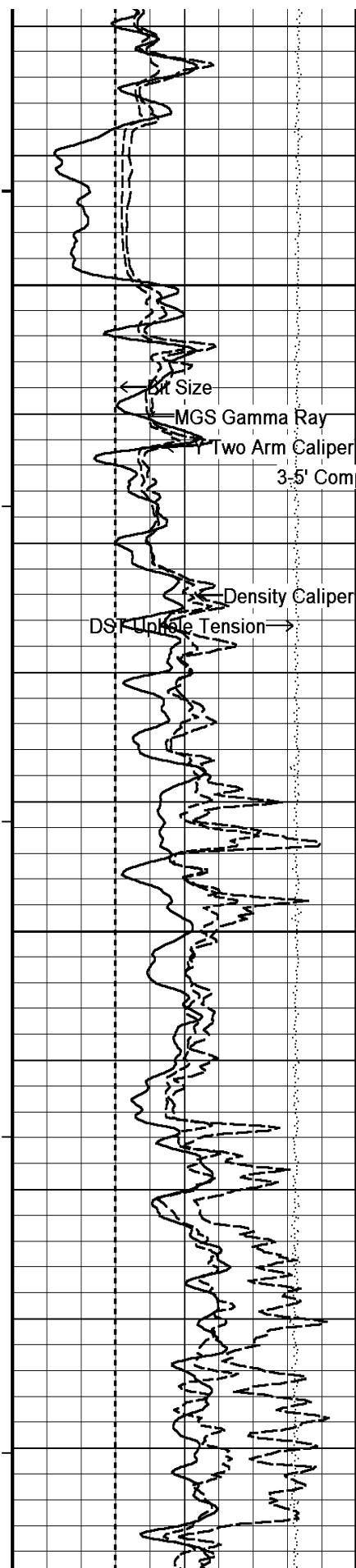
580

590

600







670

680

31°

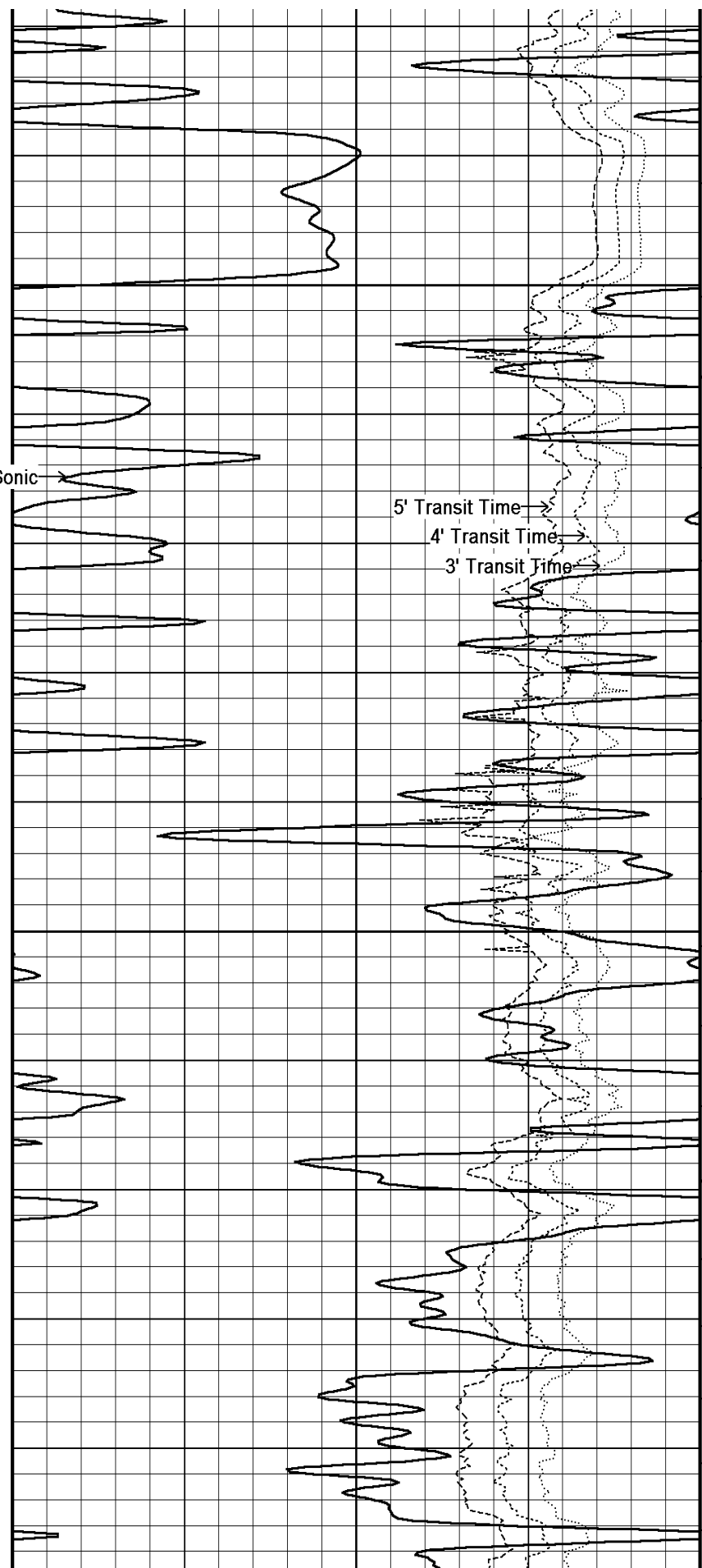
690

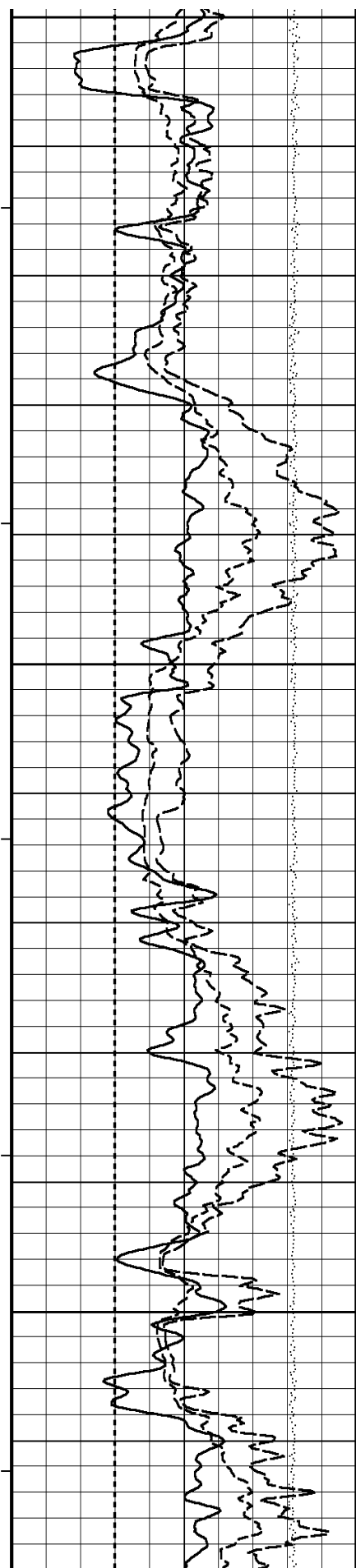
700

710

31°

720





730

32°

740

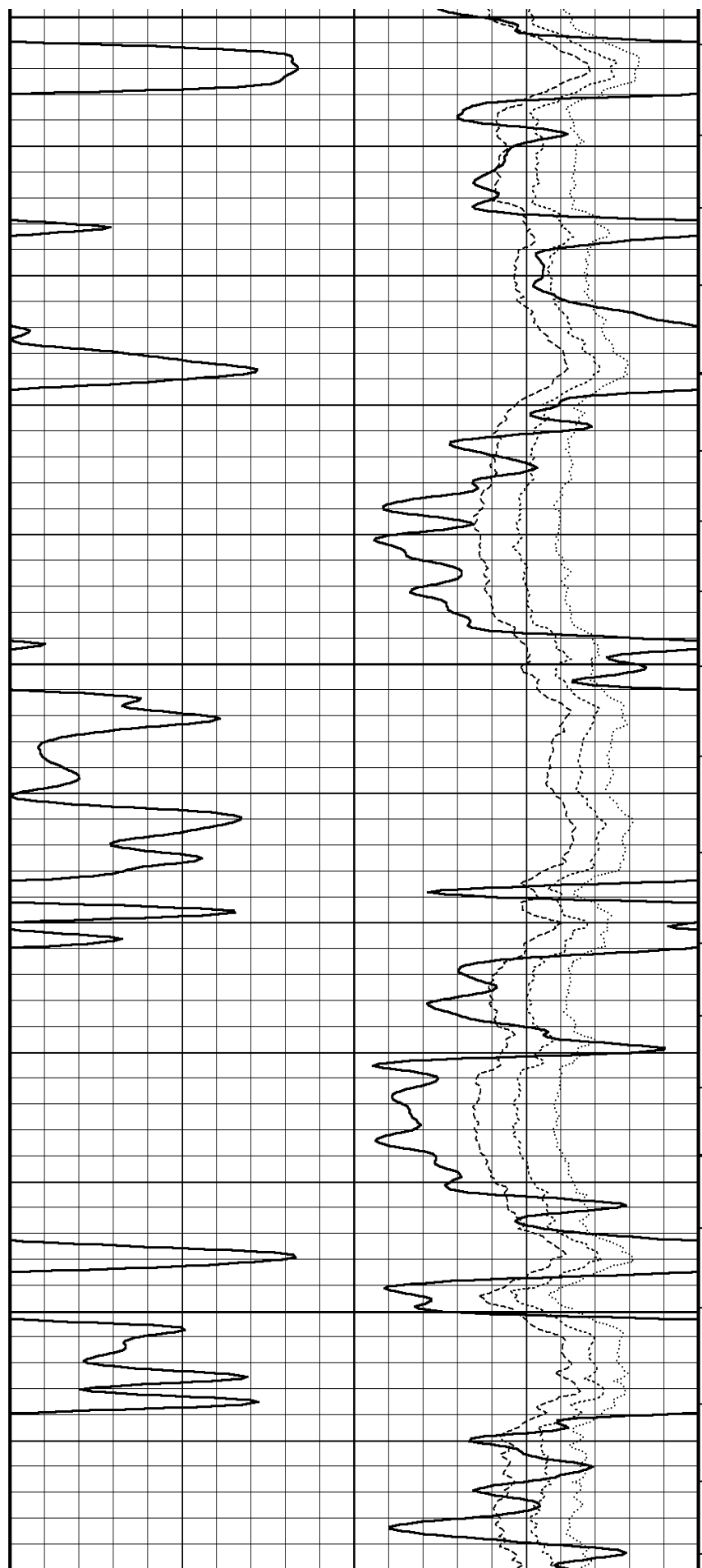
750

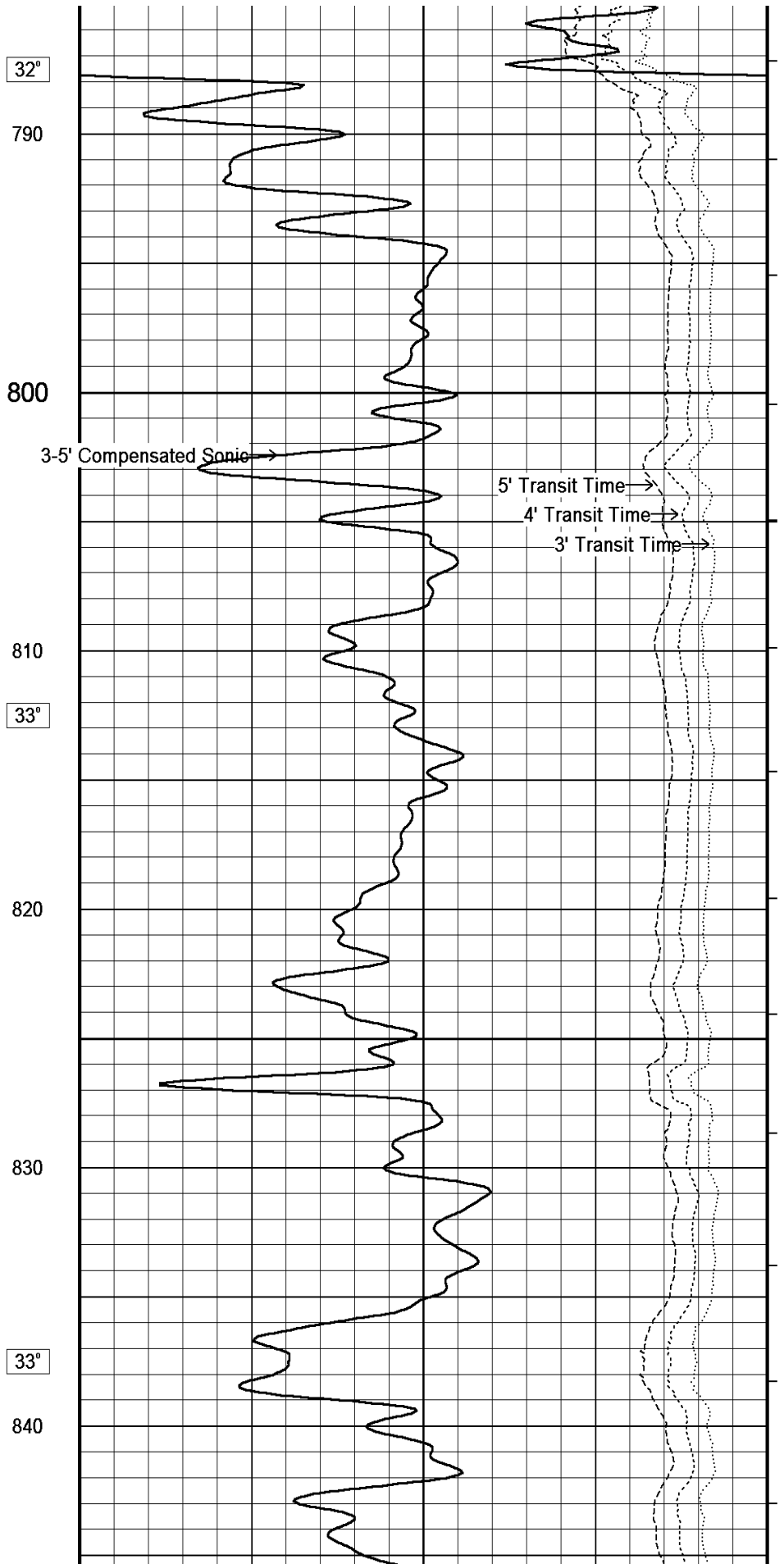
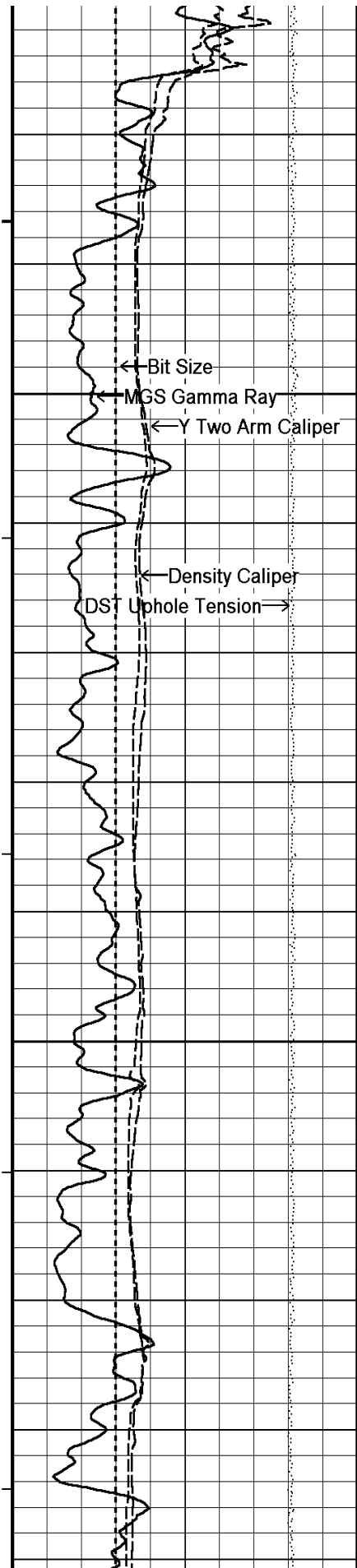
760

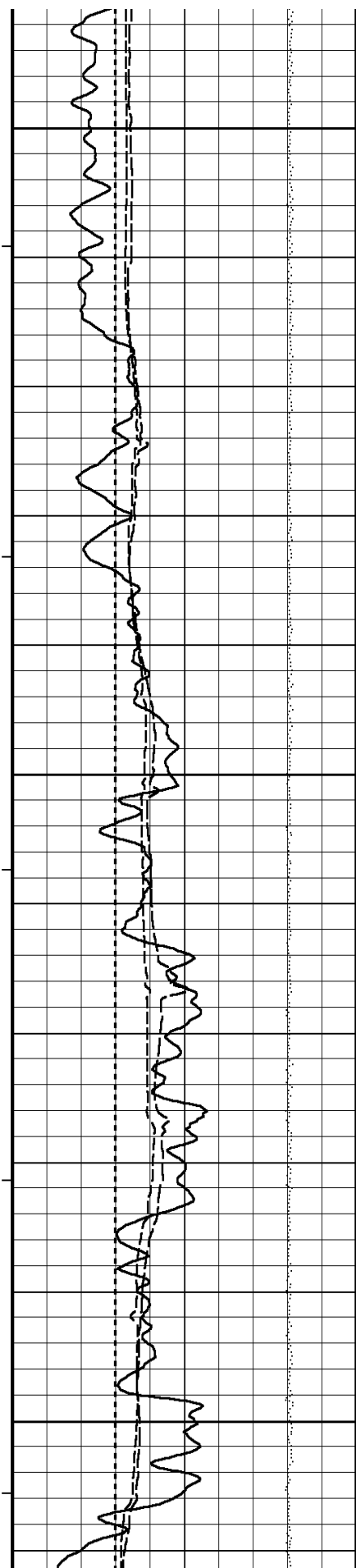
32°

770

780







850

860

33°

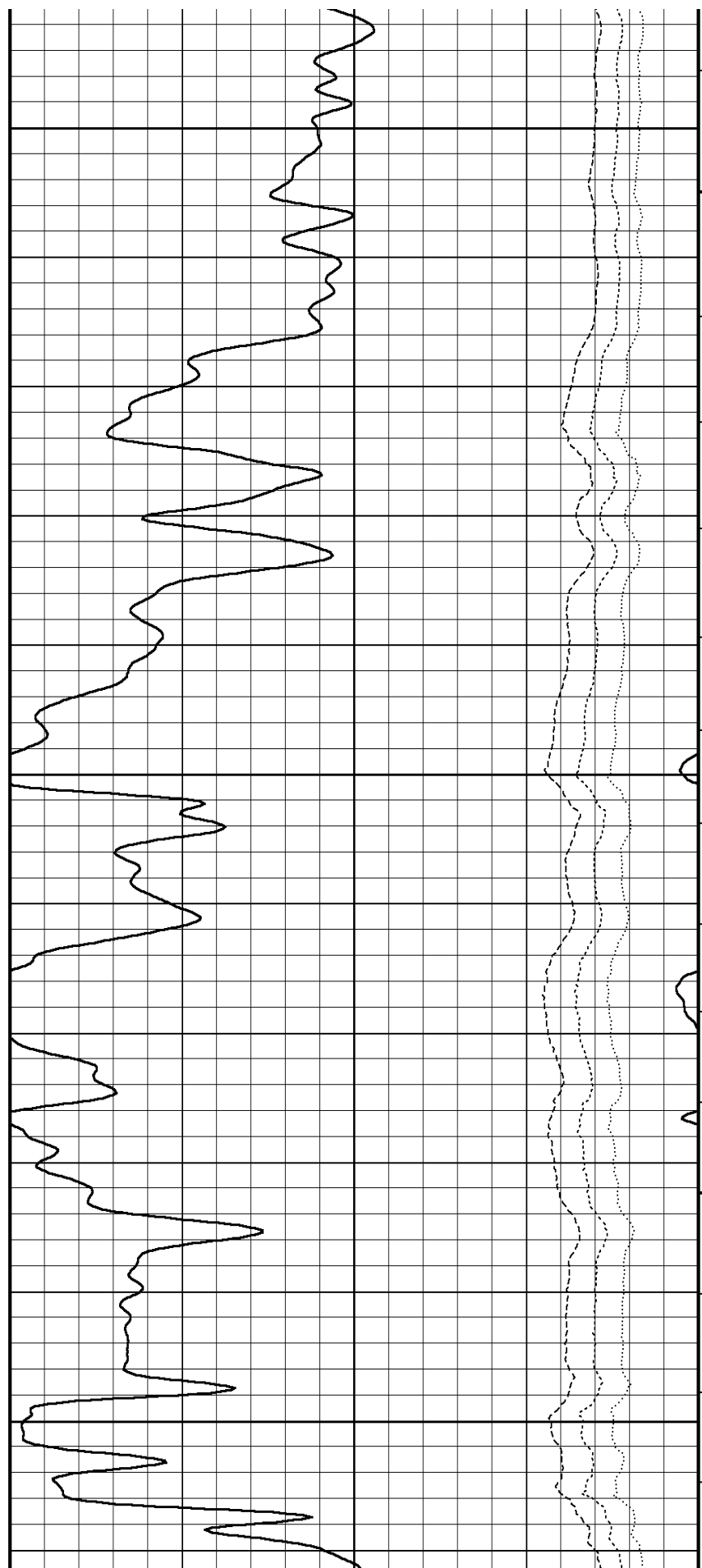
870

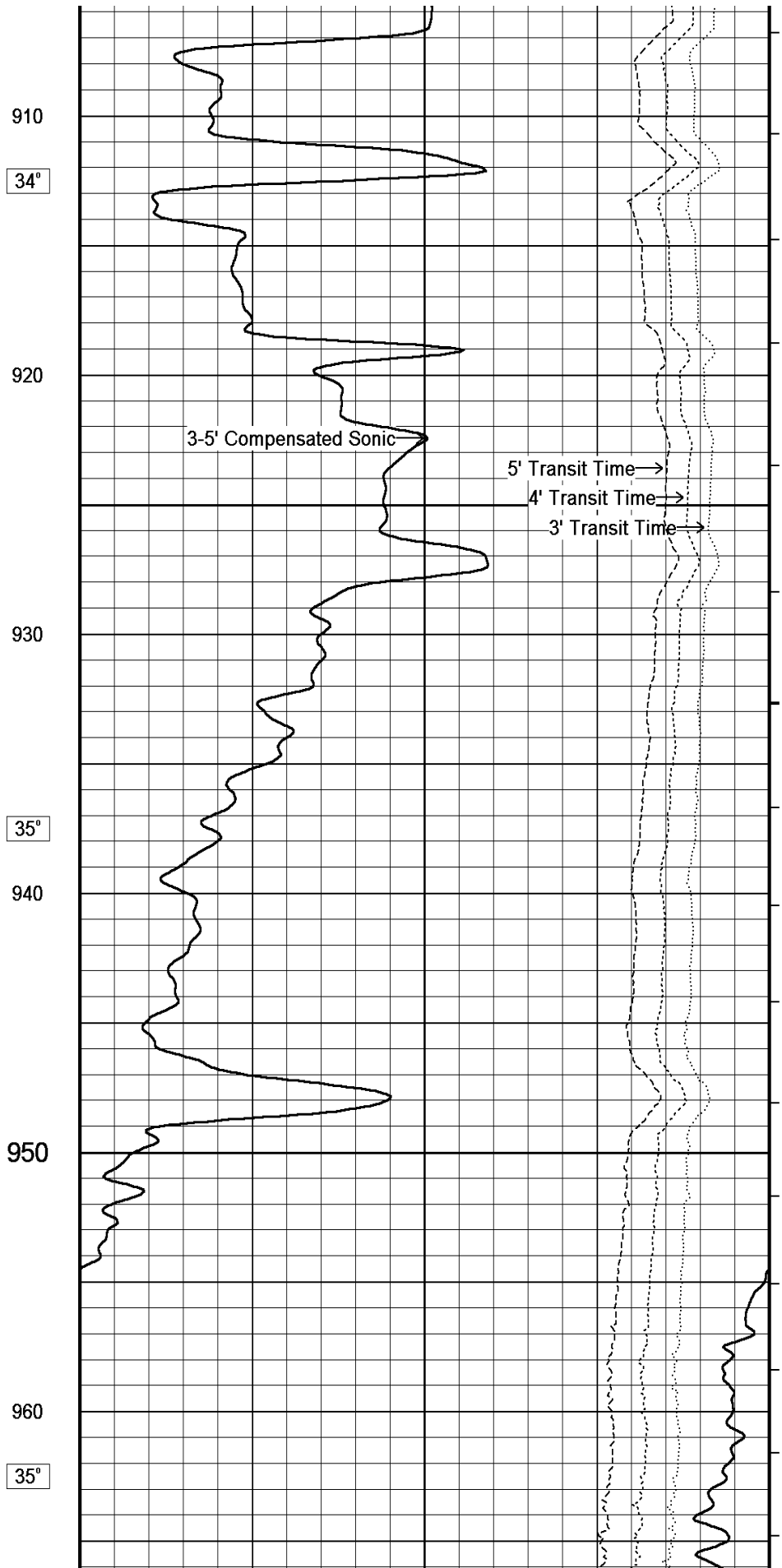
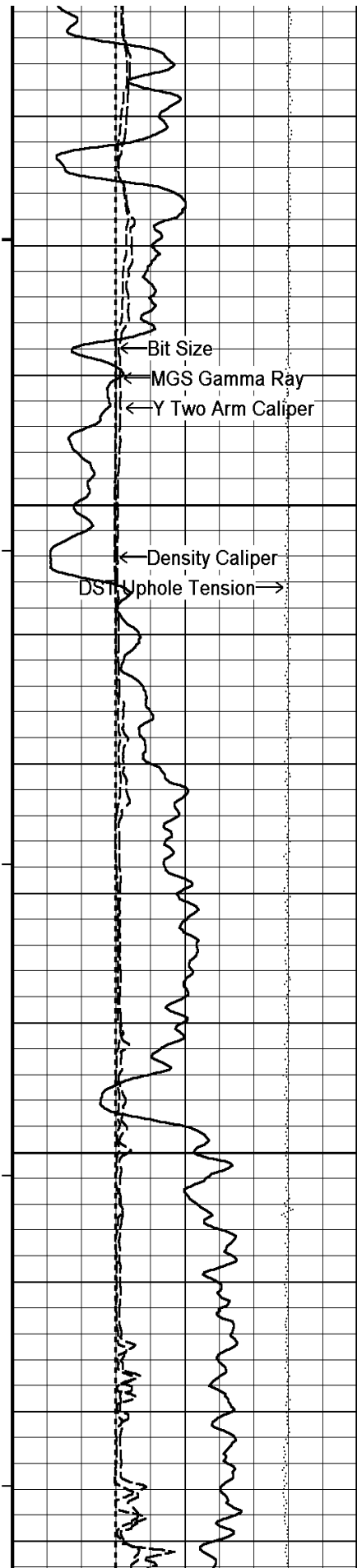
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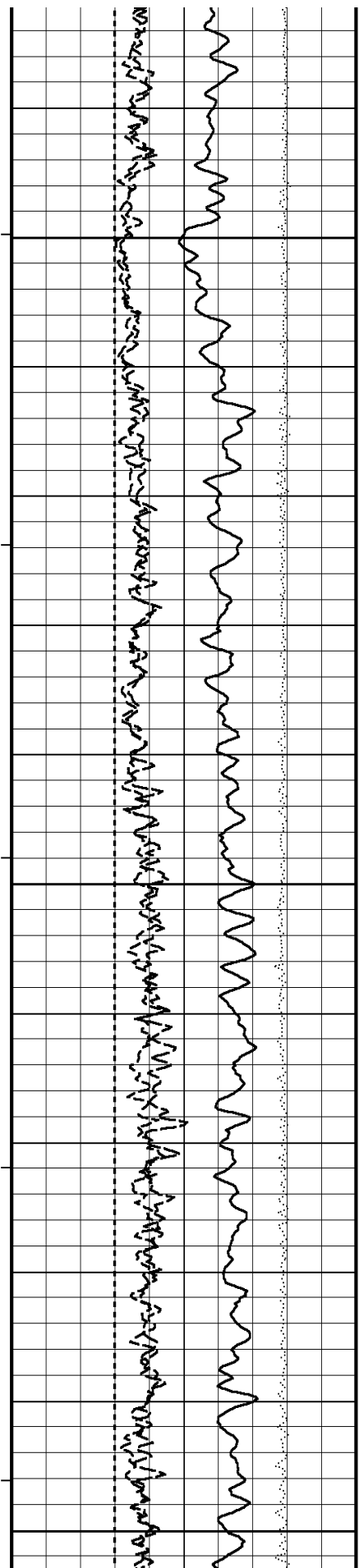
34°

890

900







970

980

36°

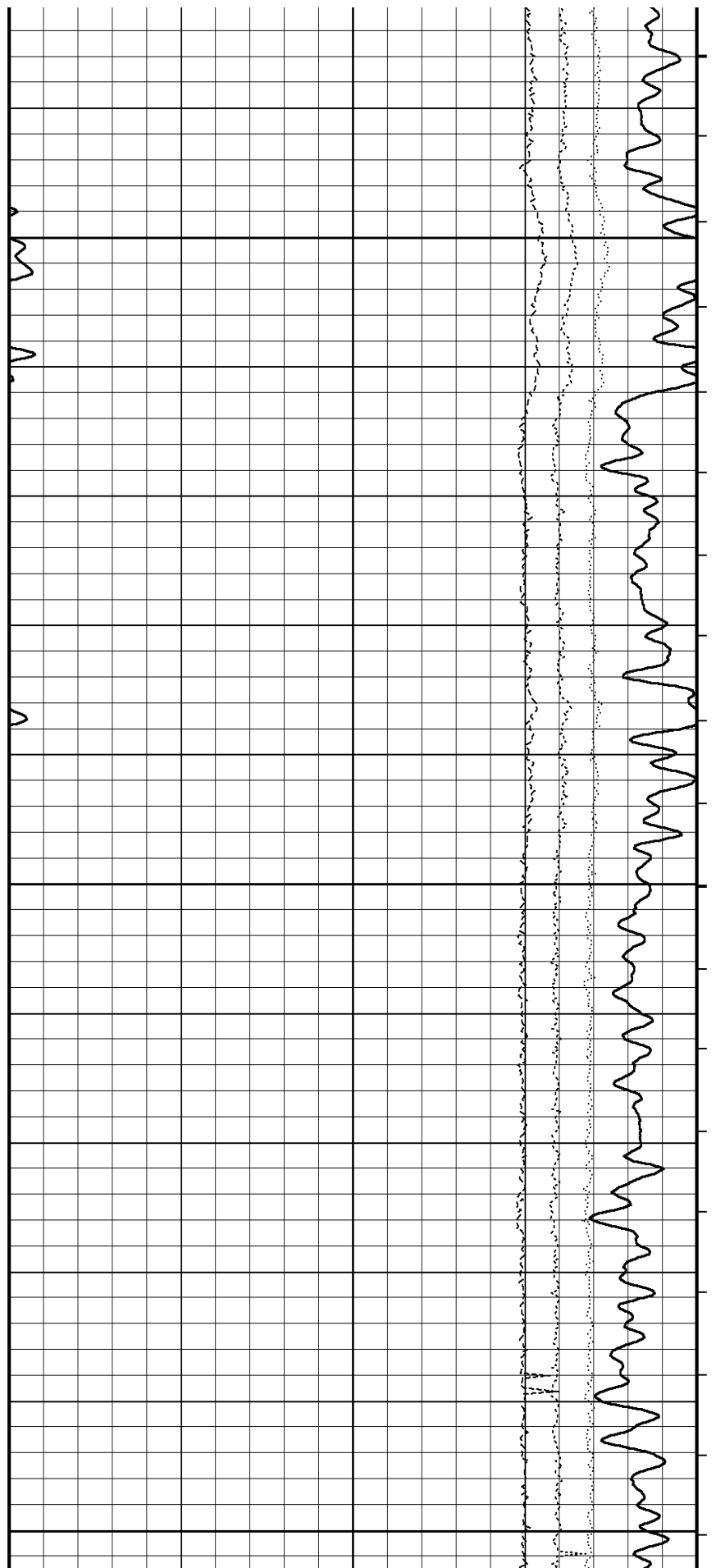
990

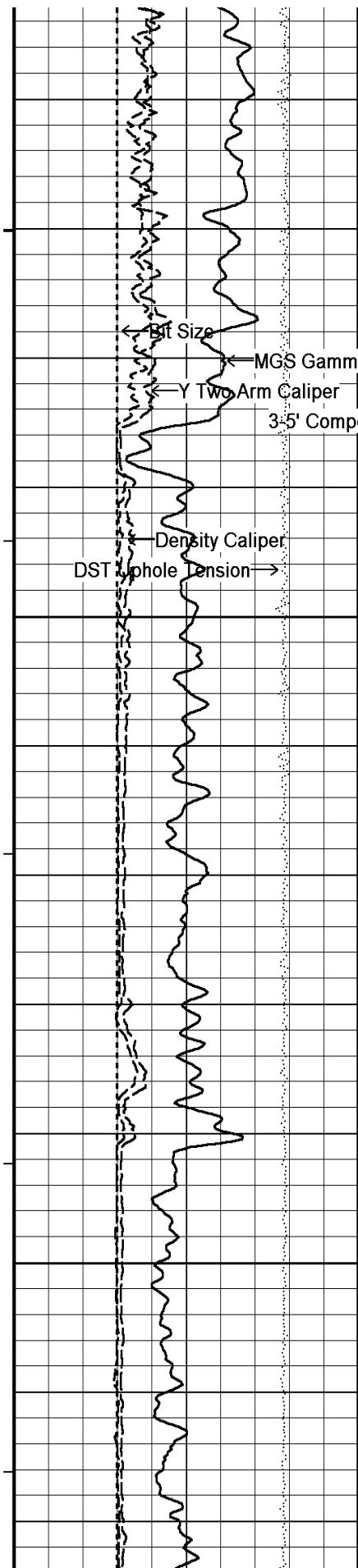
1000

1010

36°

1020





1030

37°

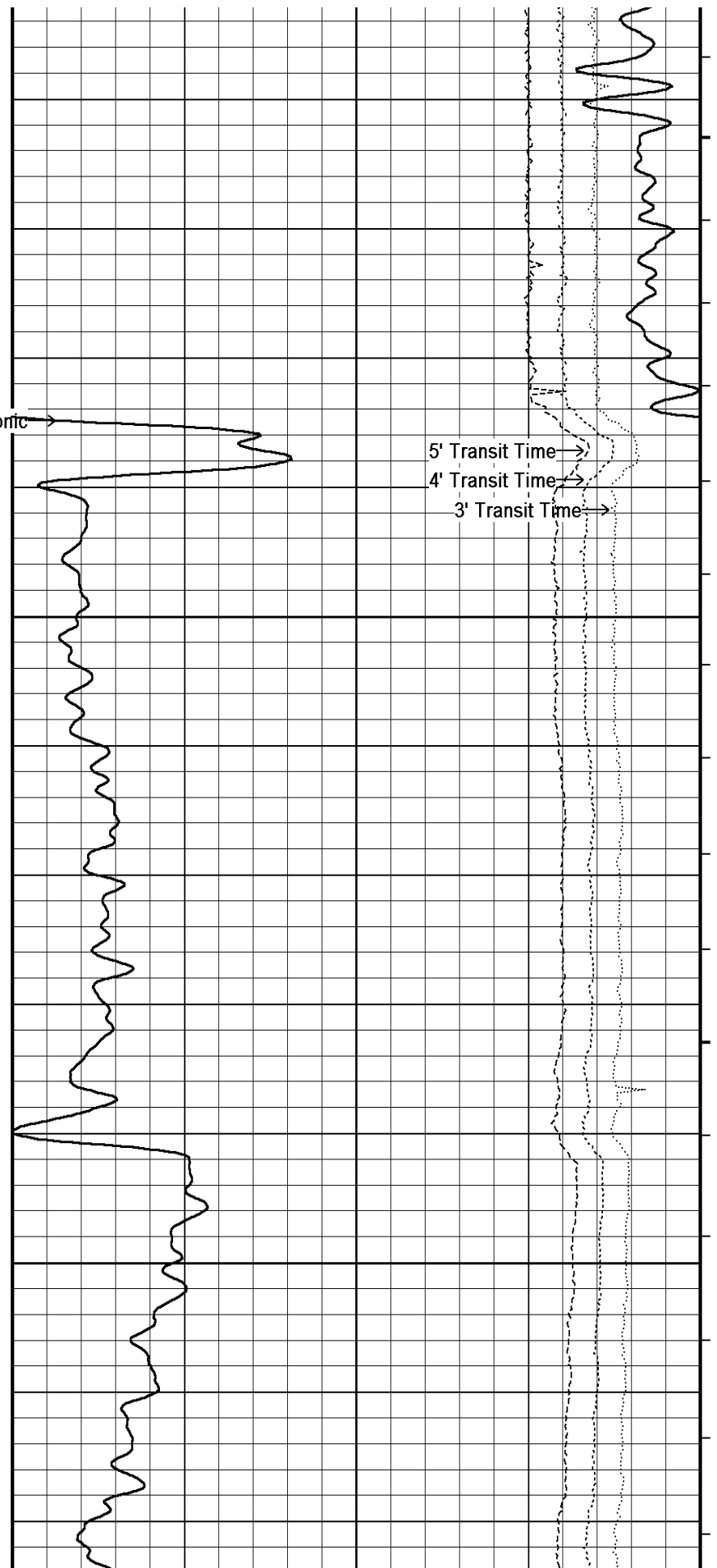
1050

1060

38°

1070

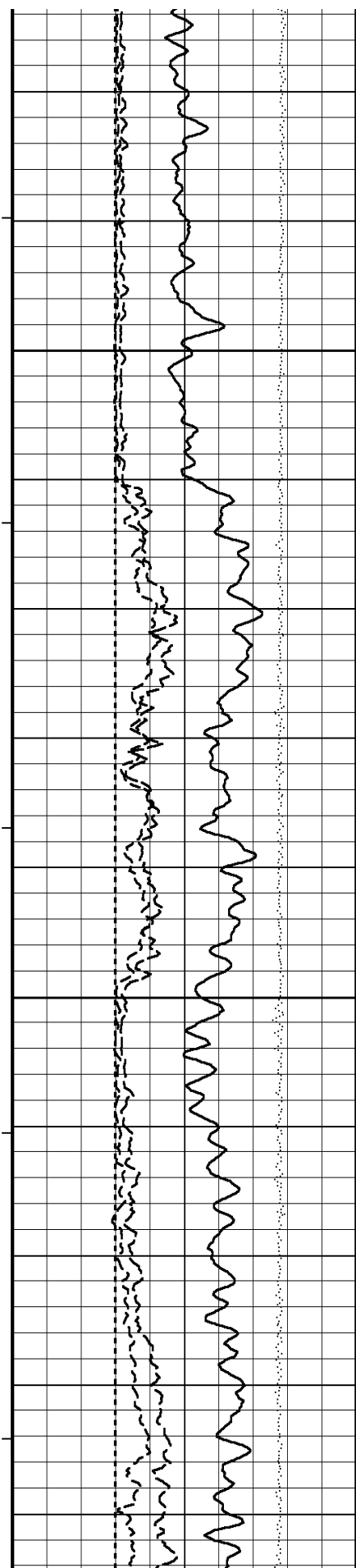
1080



5' Transit Time

4' Transit Time

3' Transit Time



38°

1090

1100

1110

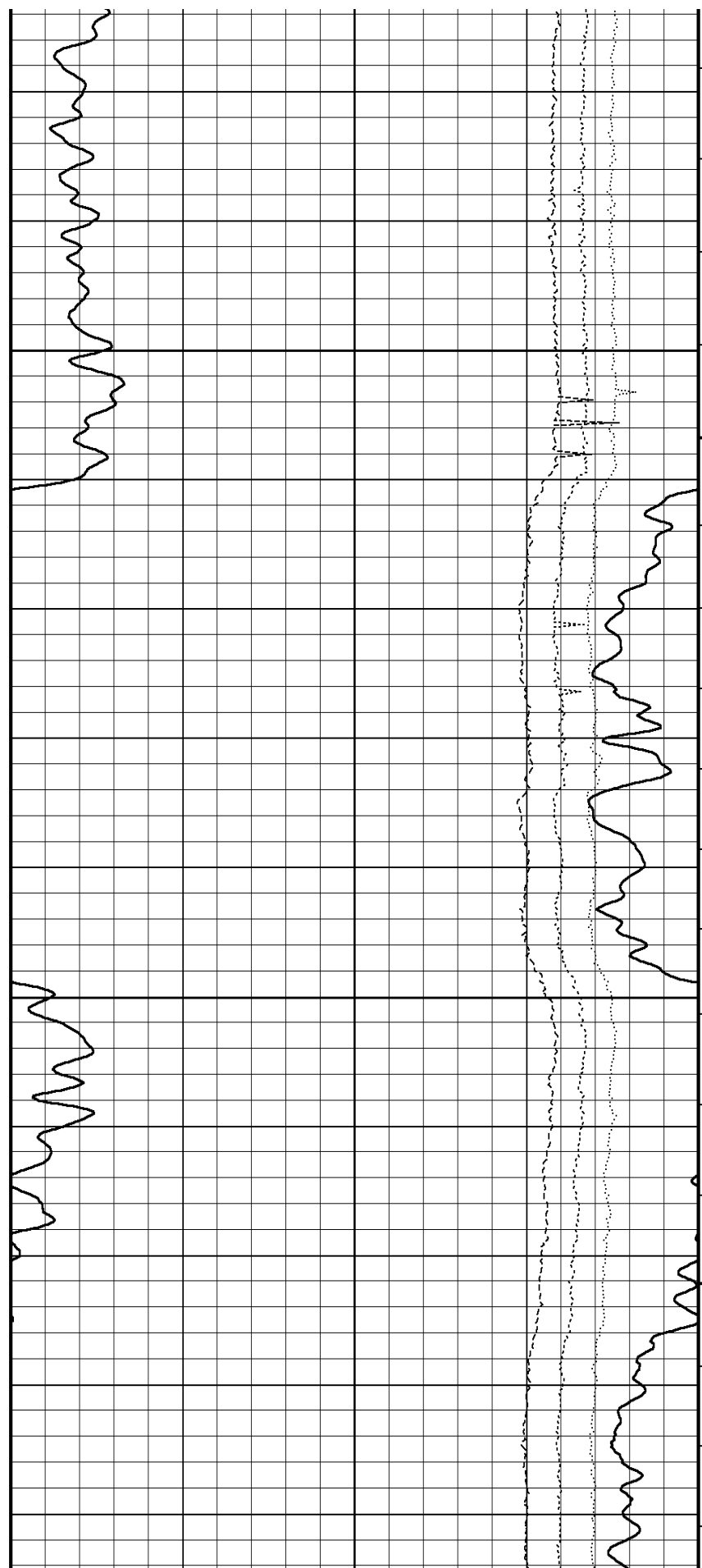
39°

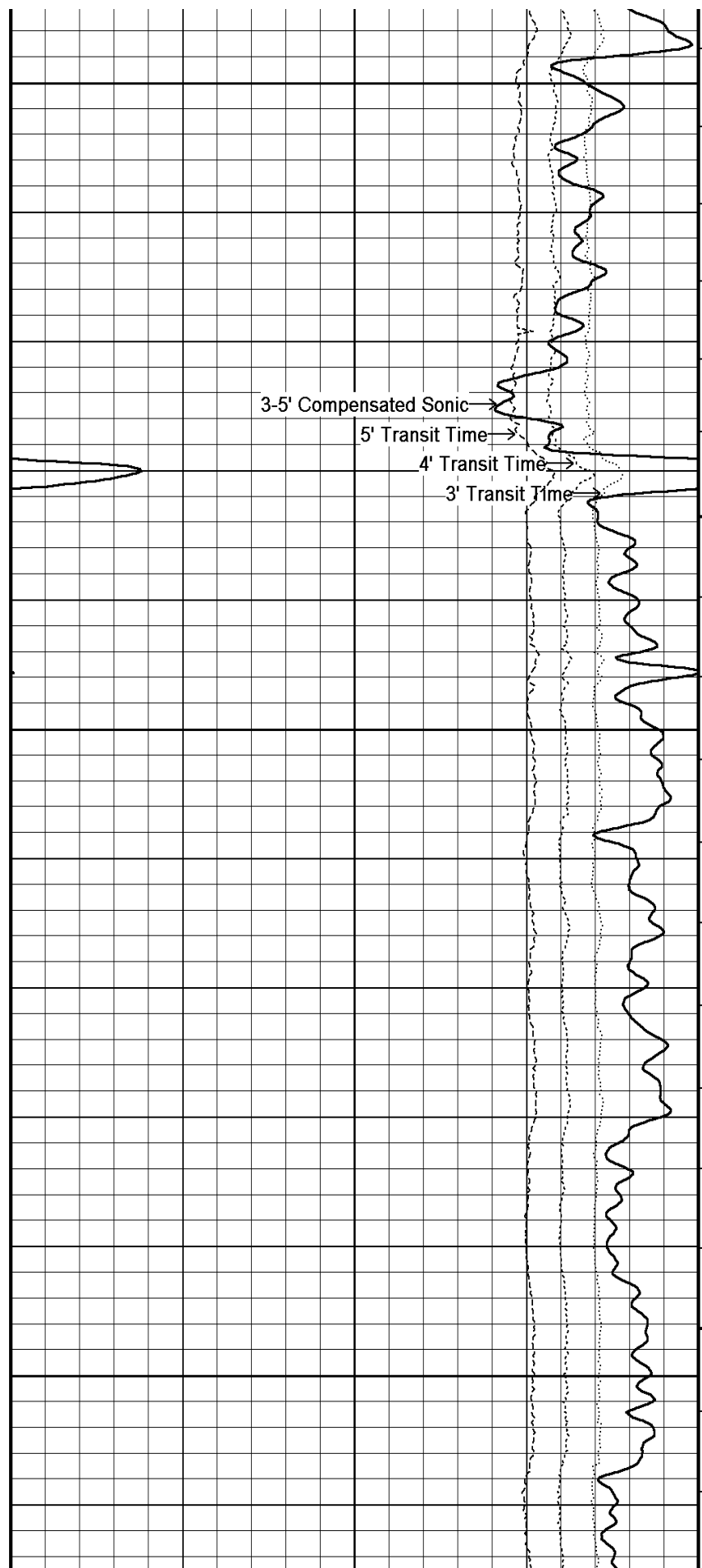
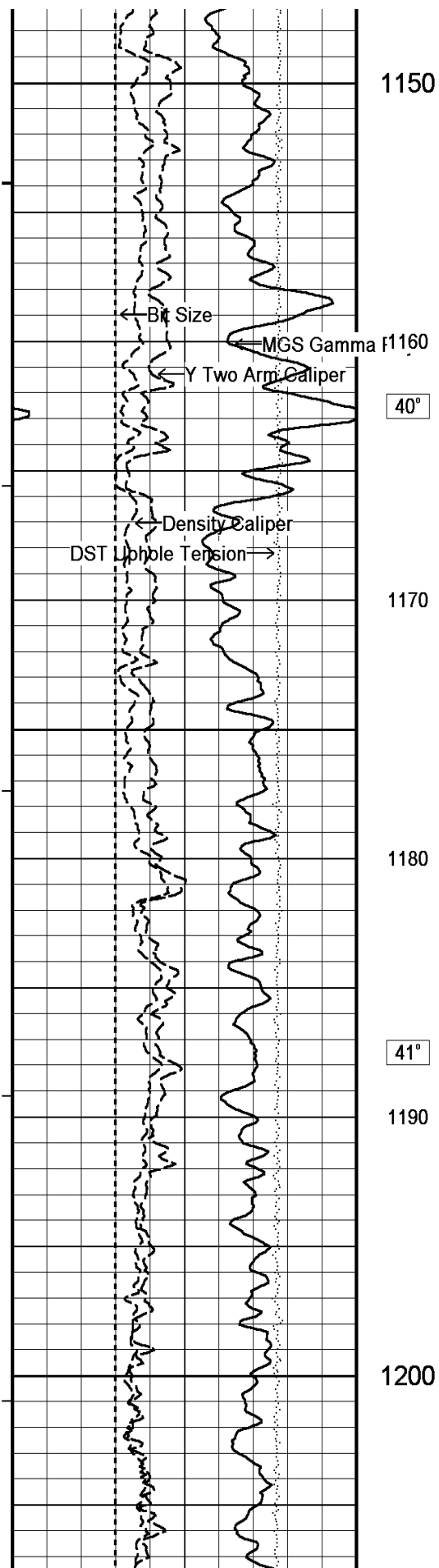
1120

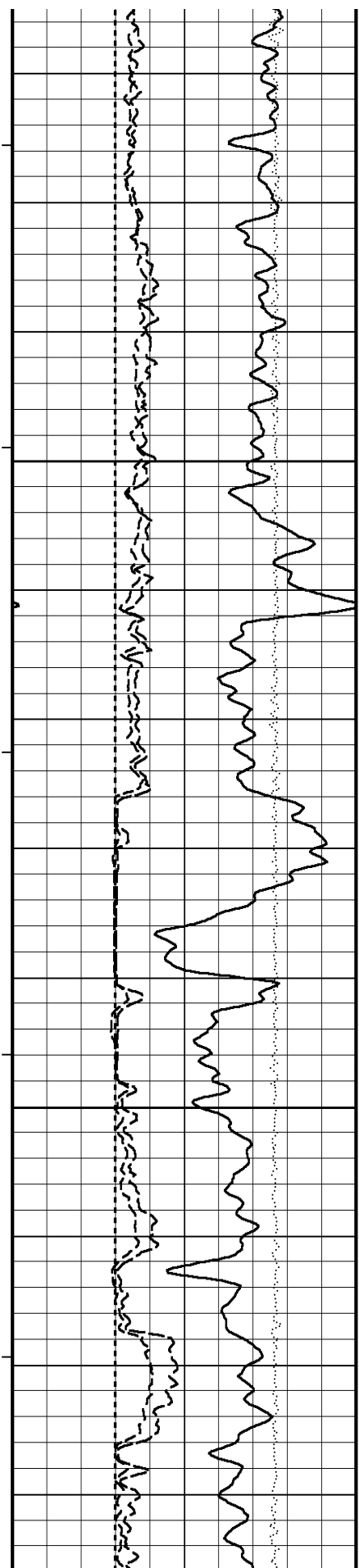
1130

40°

1140







1210

42°

1220

1230

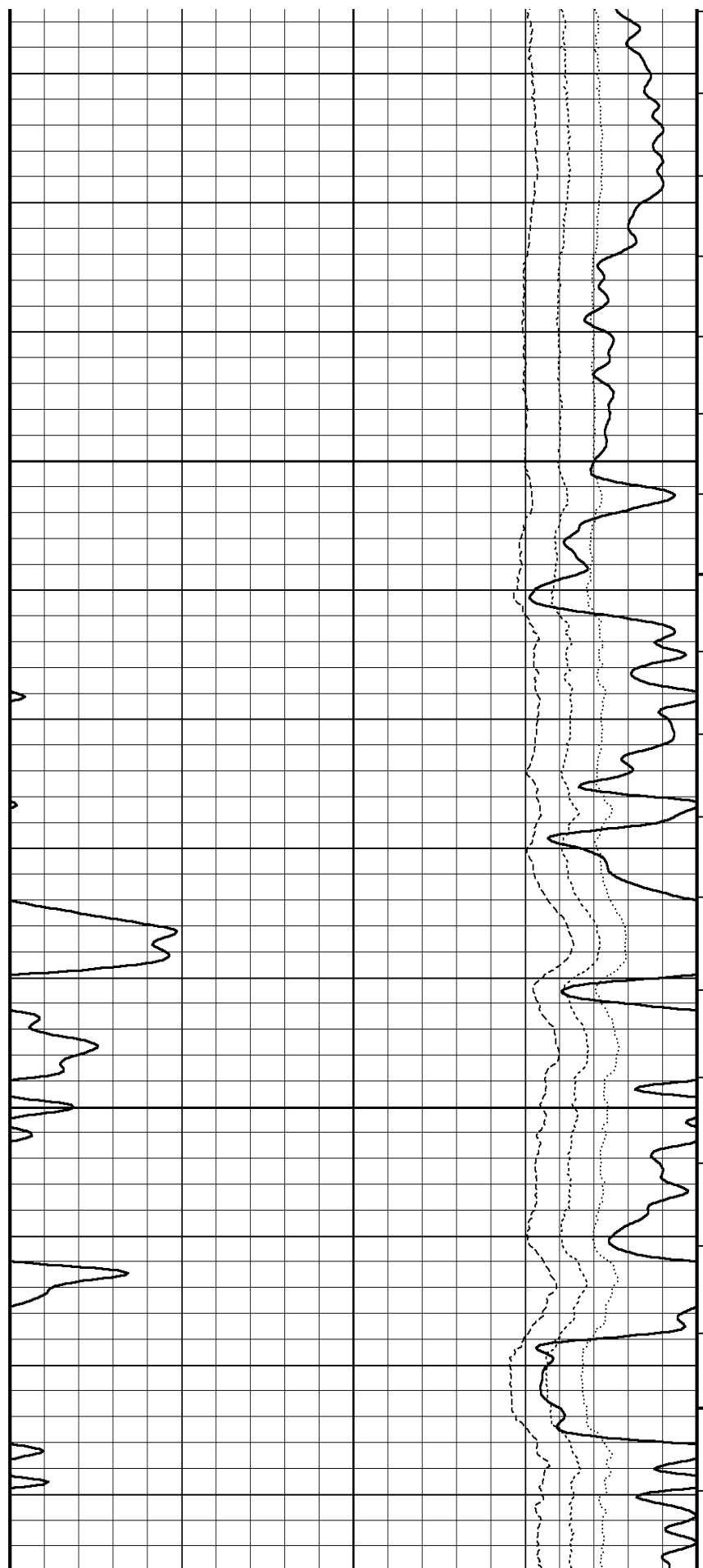
43°

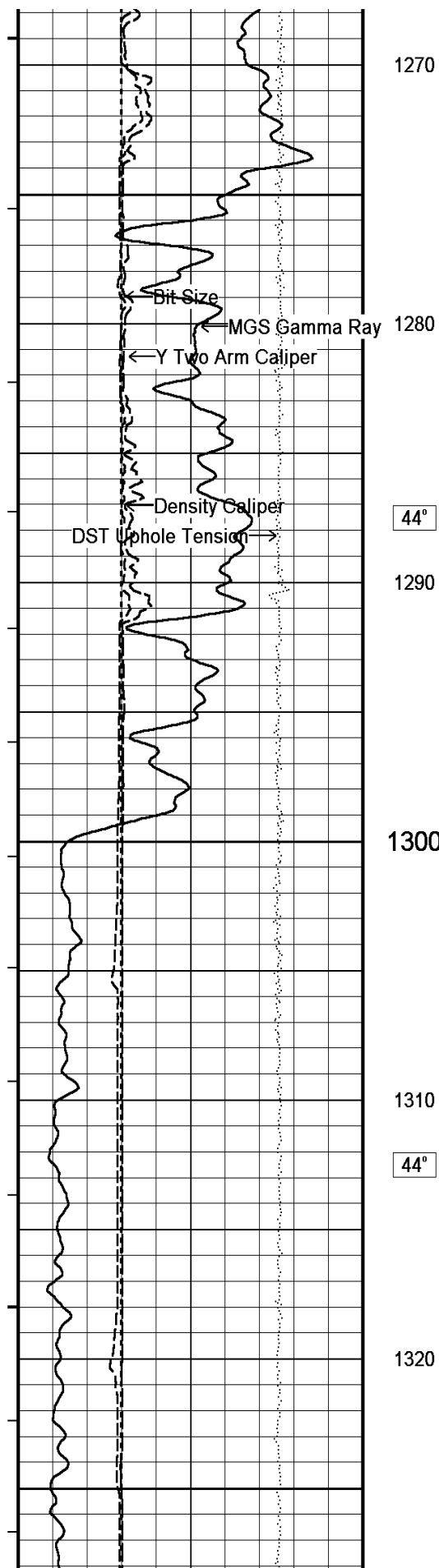
1240

1250

1260

44°





1270

1280

1290

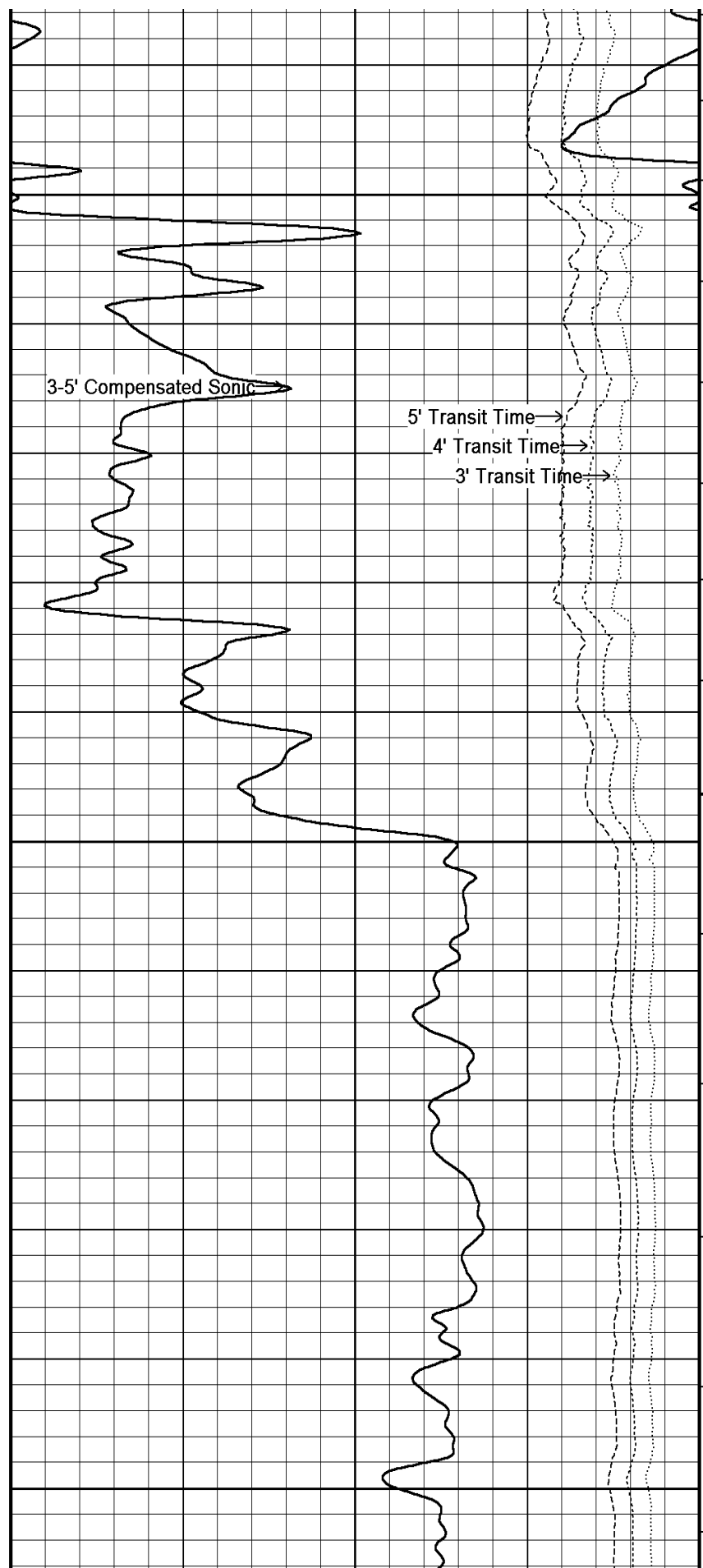
1300

1310

1320

44°

44°

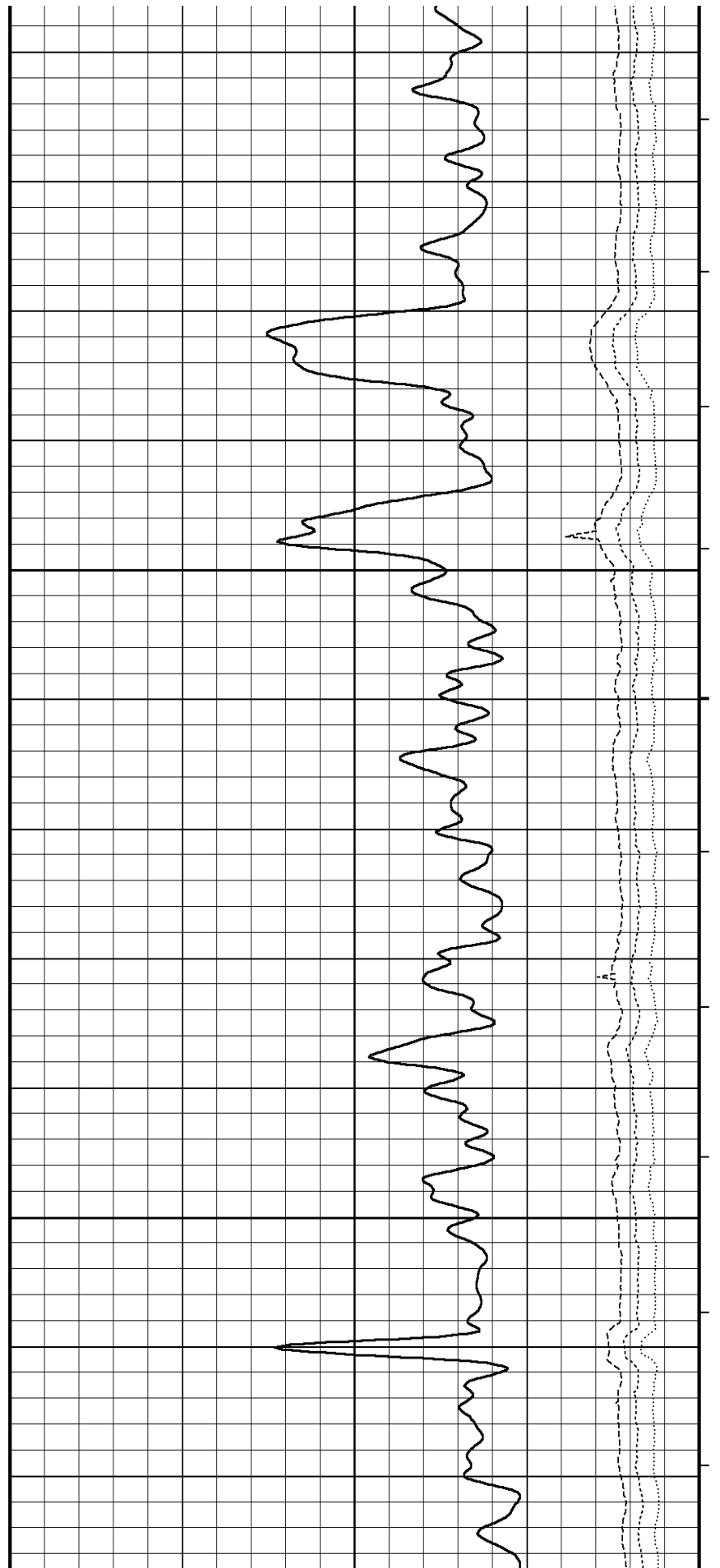
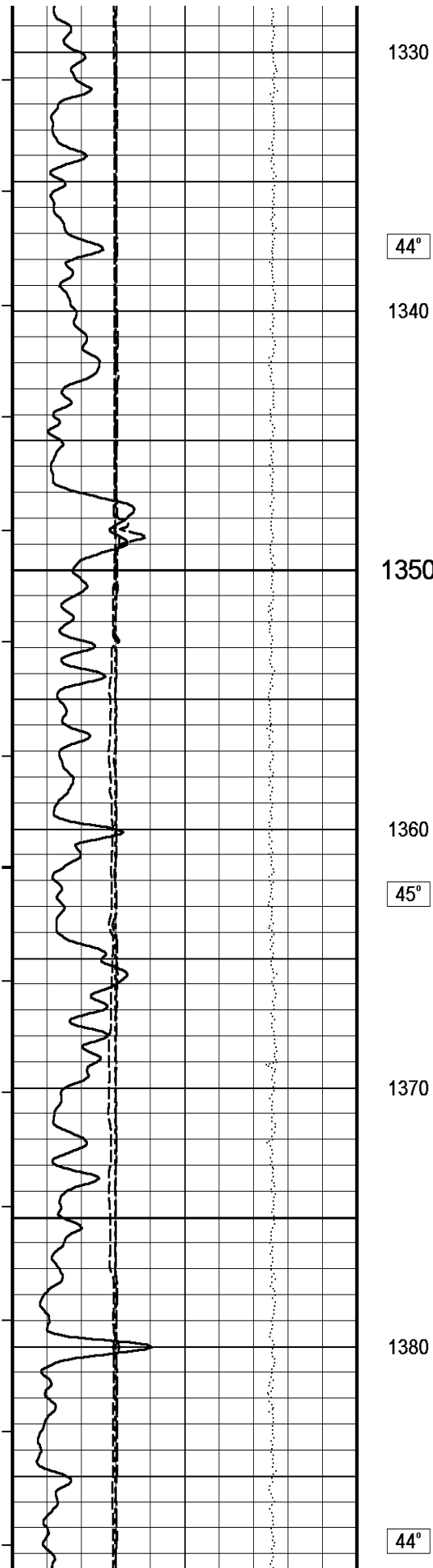


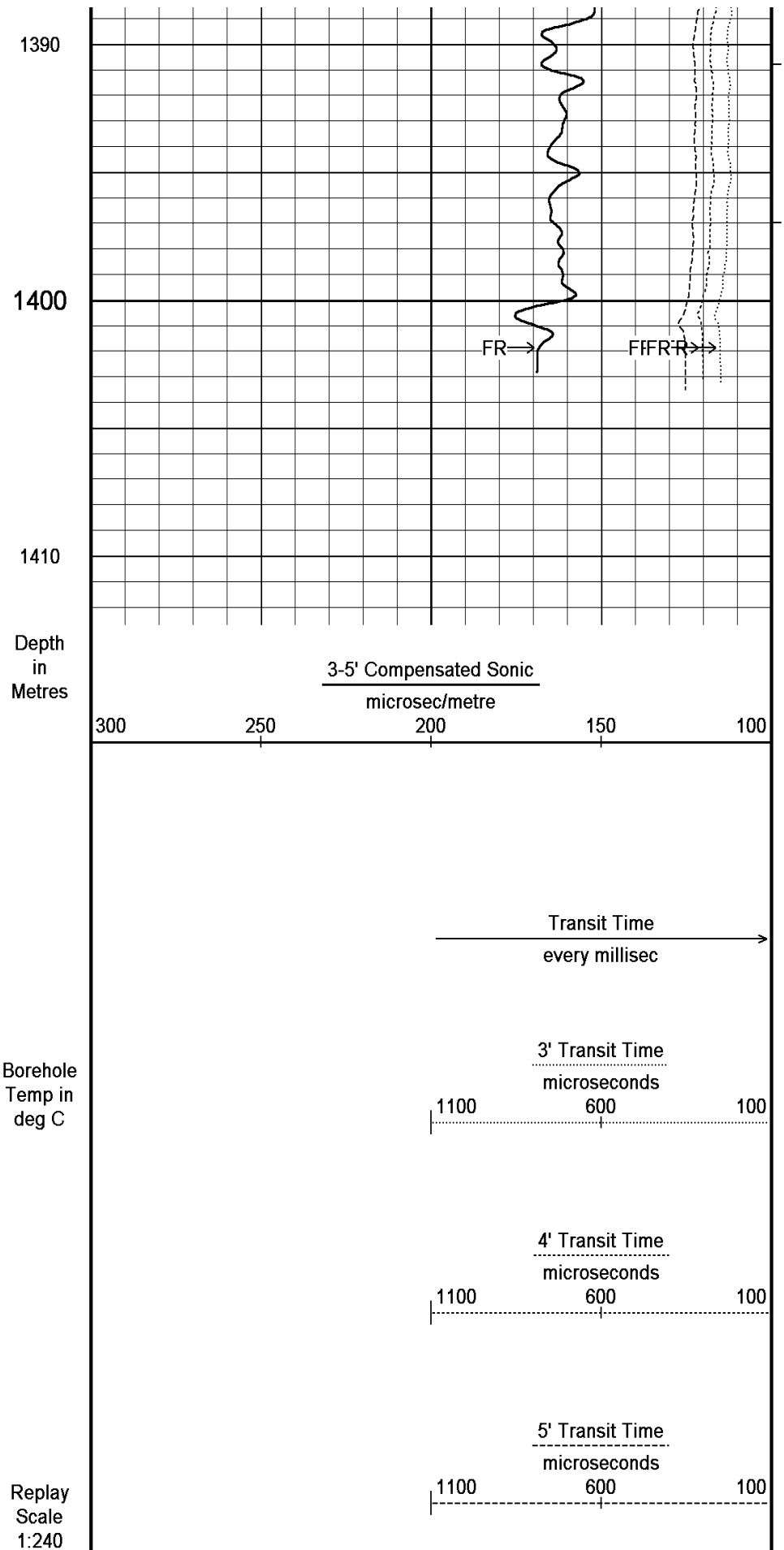
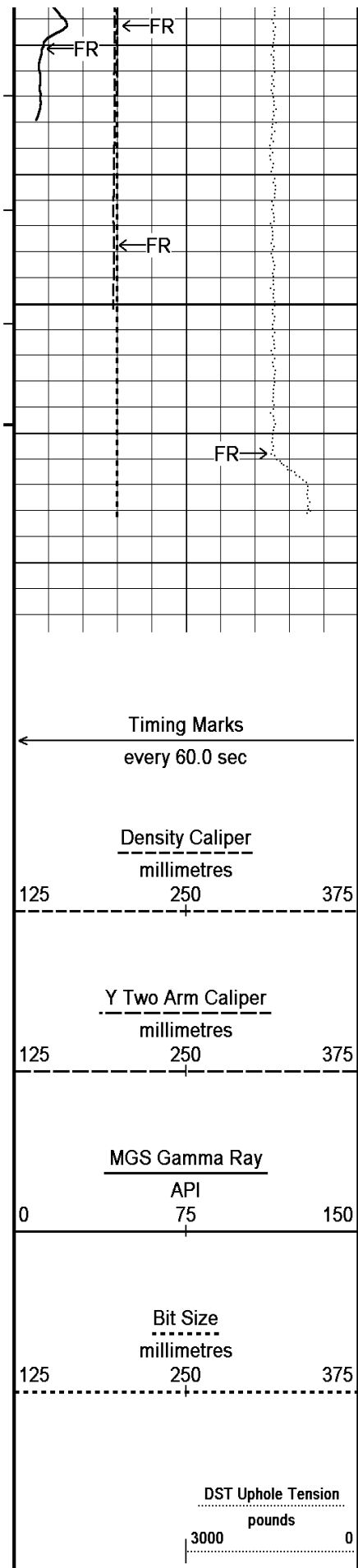
3-5' Compensated Sonic

5' Transit Time

4' Transit Time

3' Transit Time





Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\Temp\Weatherford PreView\0\E-72 MAINLOG.dta
System Versions: Processed with 7.01.0195 Plotted with 8.01.0091

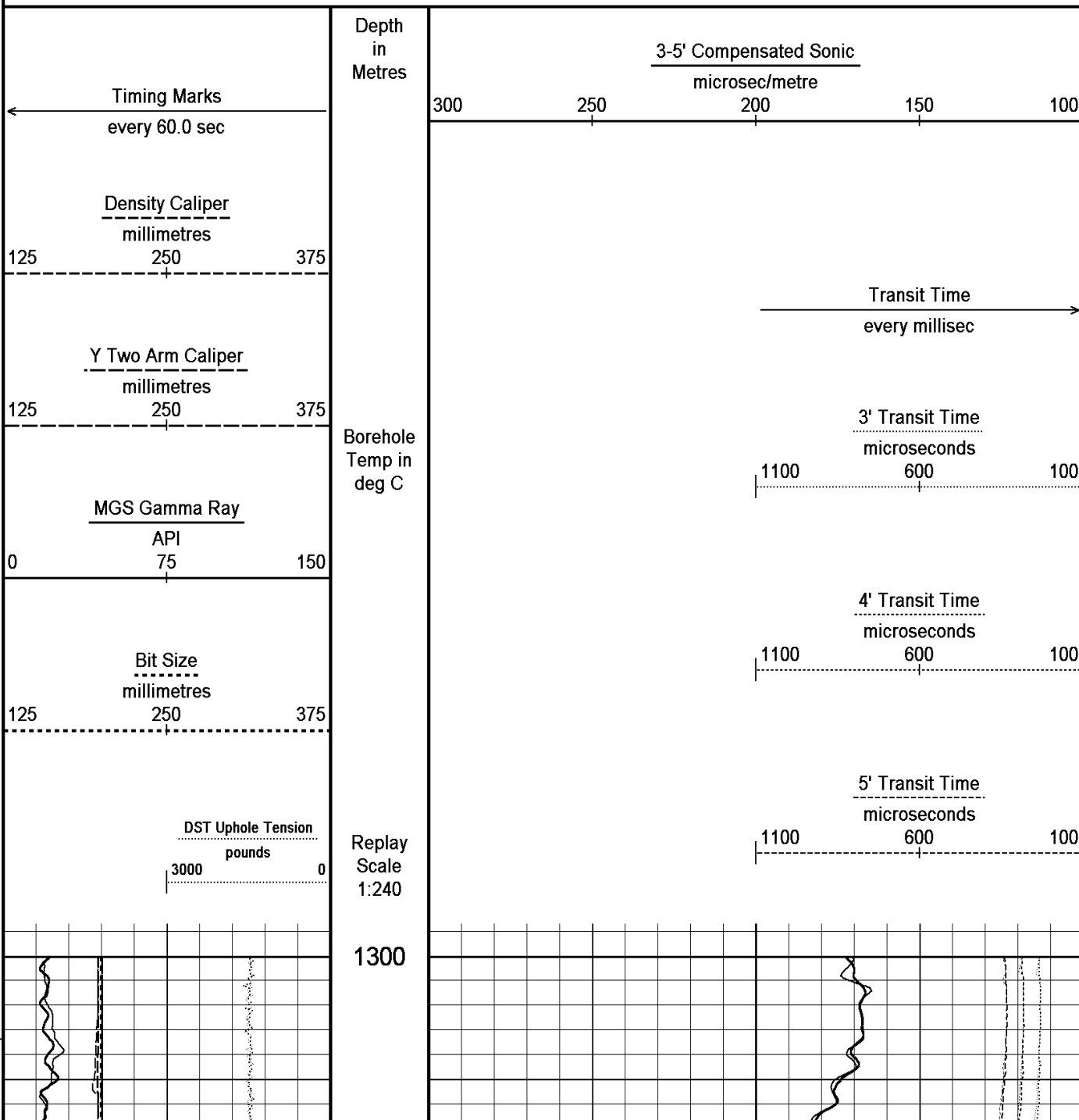
Plotted on 12-NOV-2007 11:11
Recorded on 02-MAR-2007 16:51

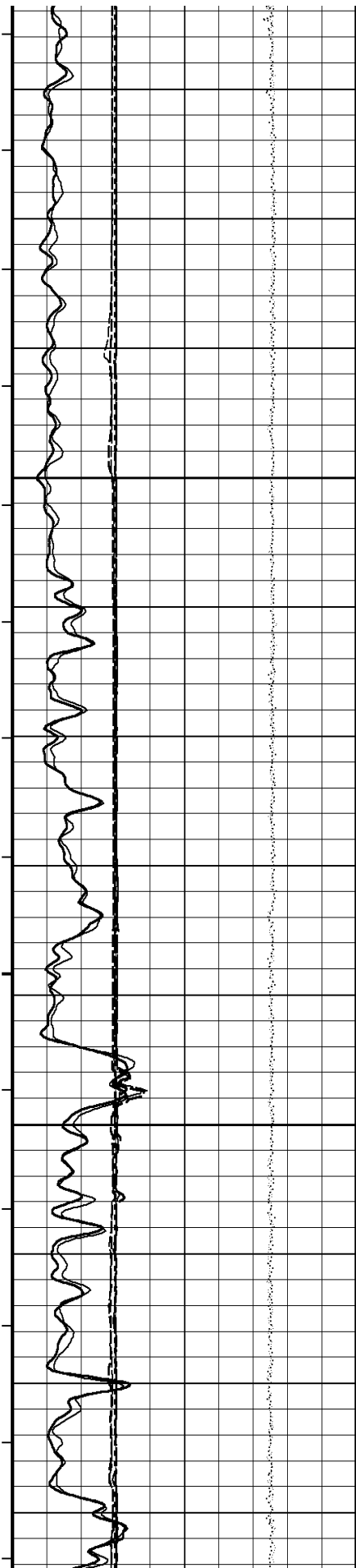
MAIN LOG 1:240

REPEAT SECTION
MAIN LOG 1:240

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\Temp\Weatherford PreView\0\E-72 REPEAT.dta
Filename: C:\Temp\Weatherford PreView\0\E-72 MAINLOG.dta
System Versions: Logged with 7.01.0195 Processed with 7.01.0195 Plotted with 8.01.0091

Plotted on 12-NOV-2007 11:11
Recorded on 02-MAR-2007 18:11
Recorded on 02-MAR-2007 16:51





1310

46°

1320

1330

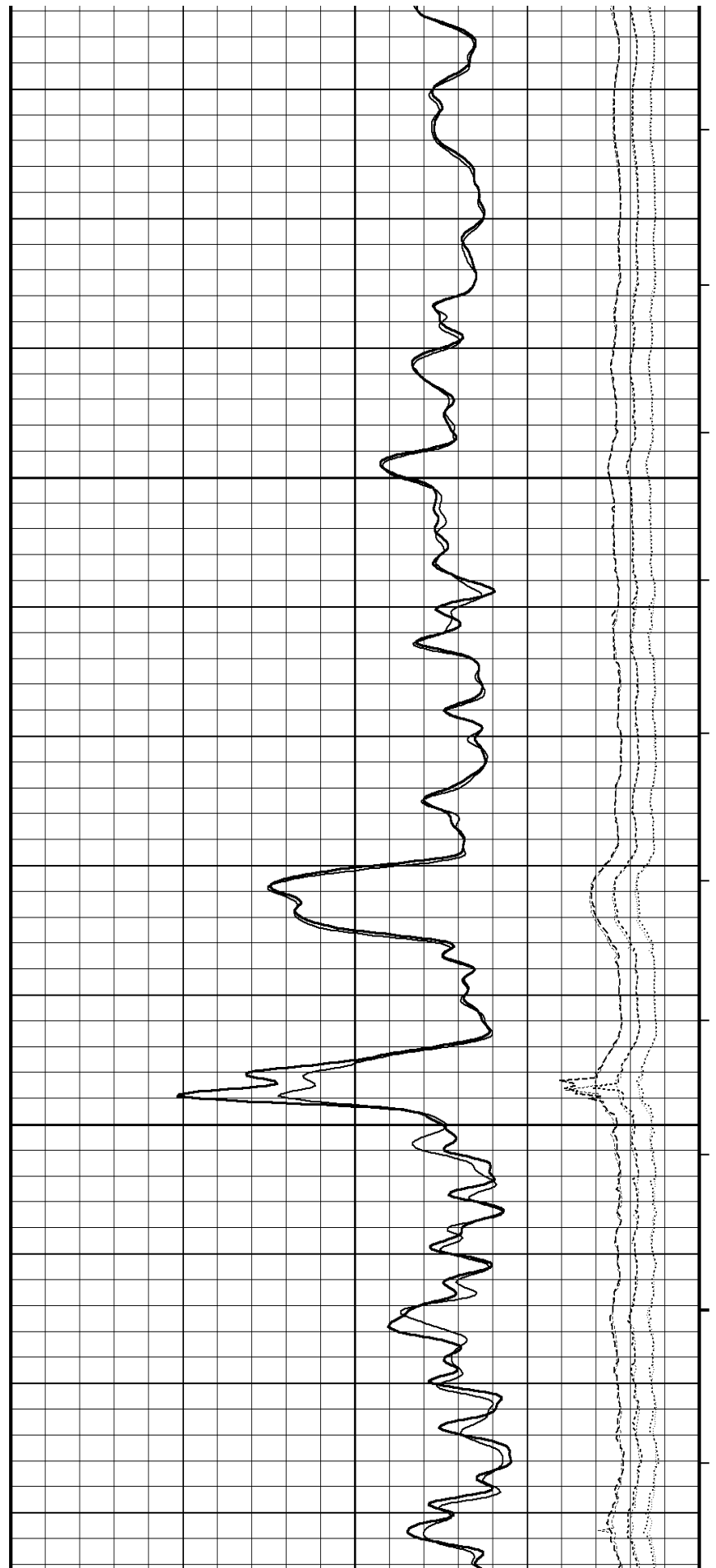
46°

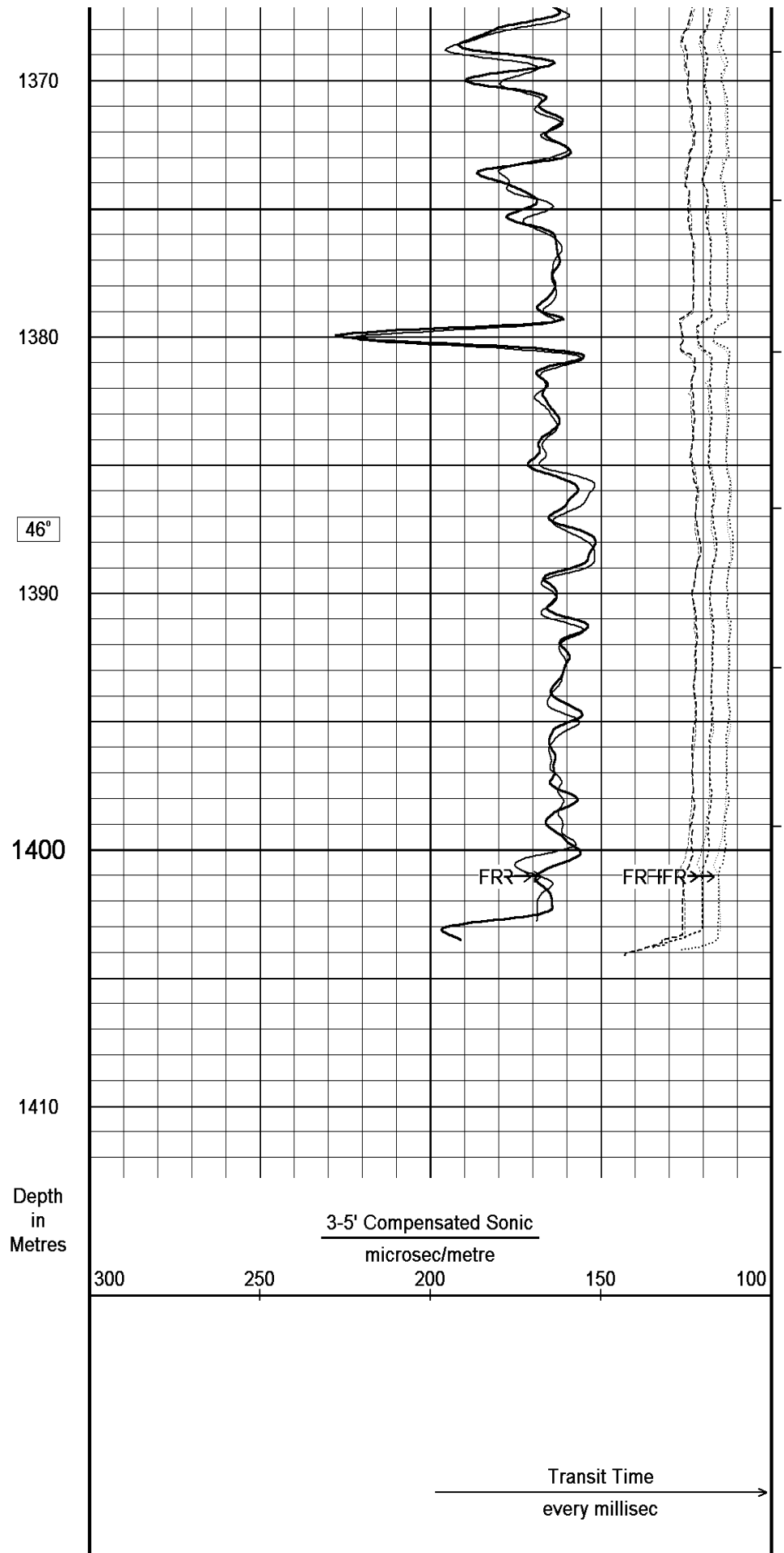
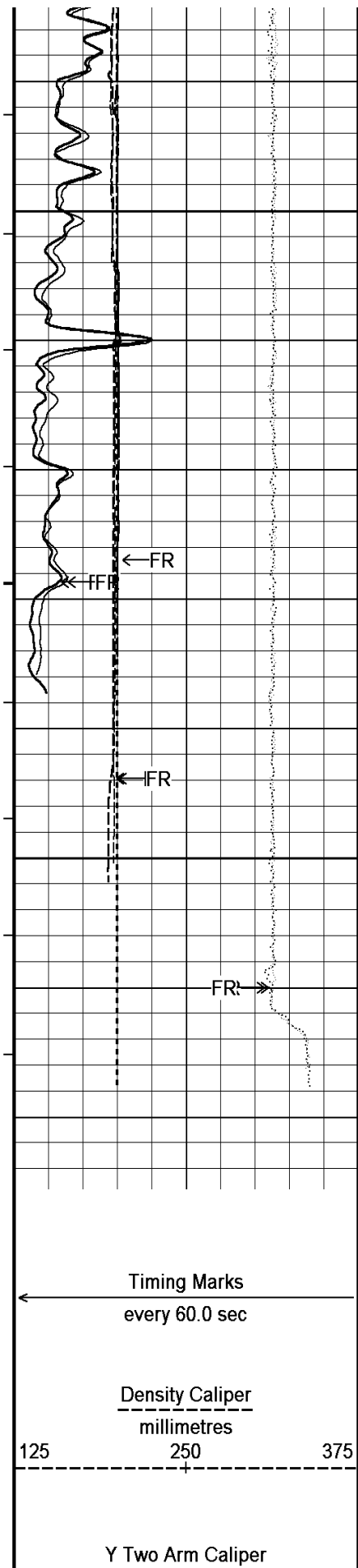
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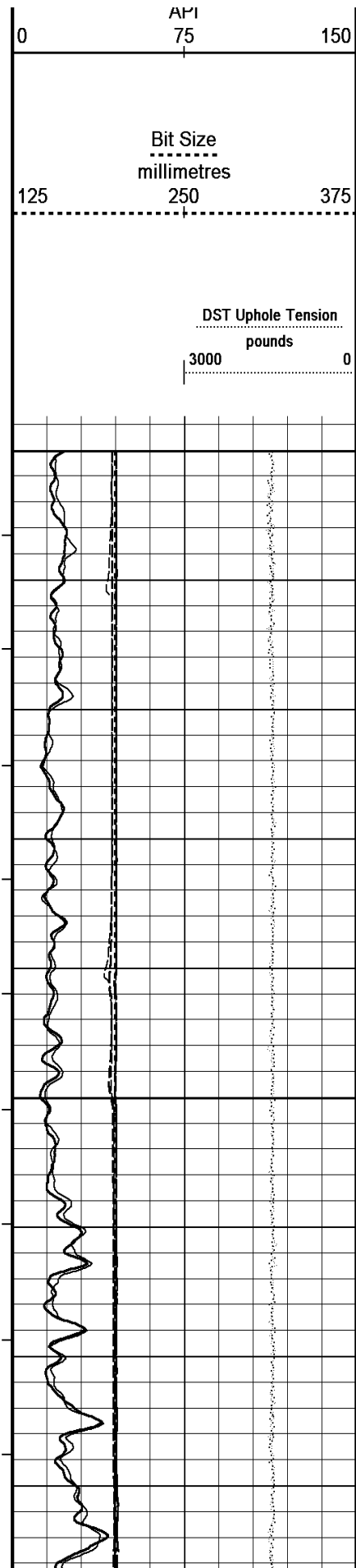
1350

1360

47°







Replay
Scale
1:240

1300

1310

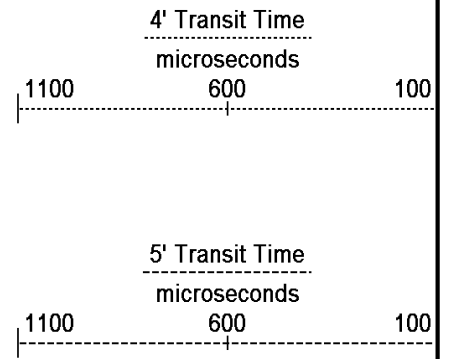
45°

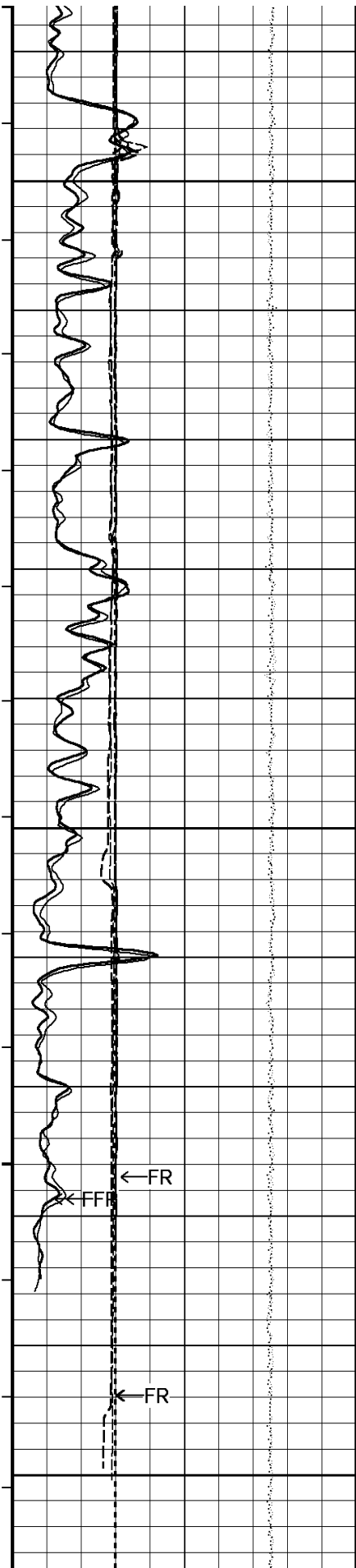
1320

1330

46°

1340





1350

1360

46°

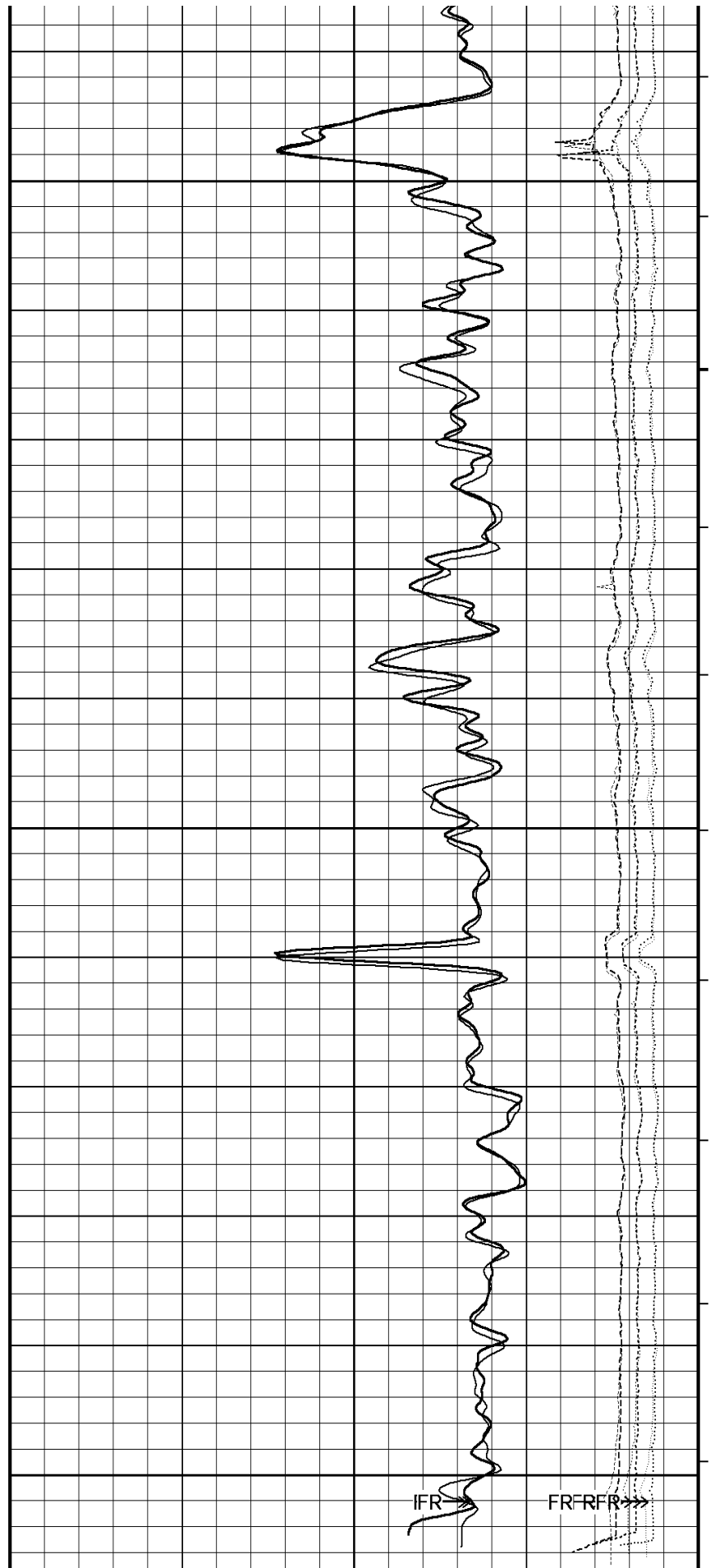
1370

1380

46°

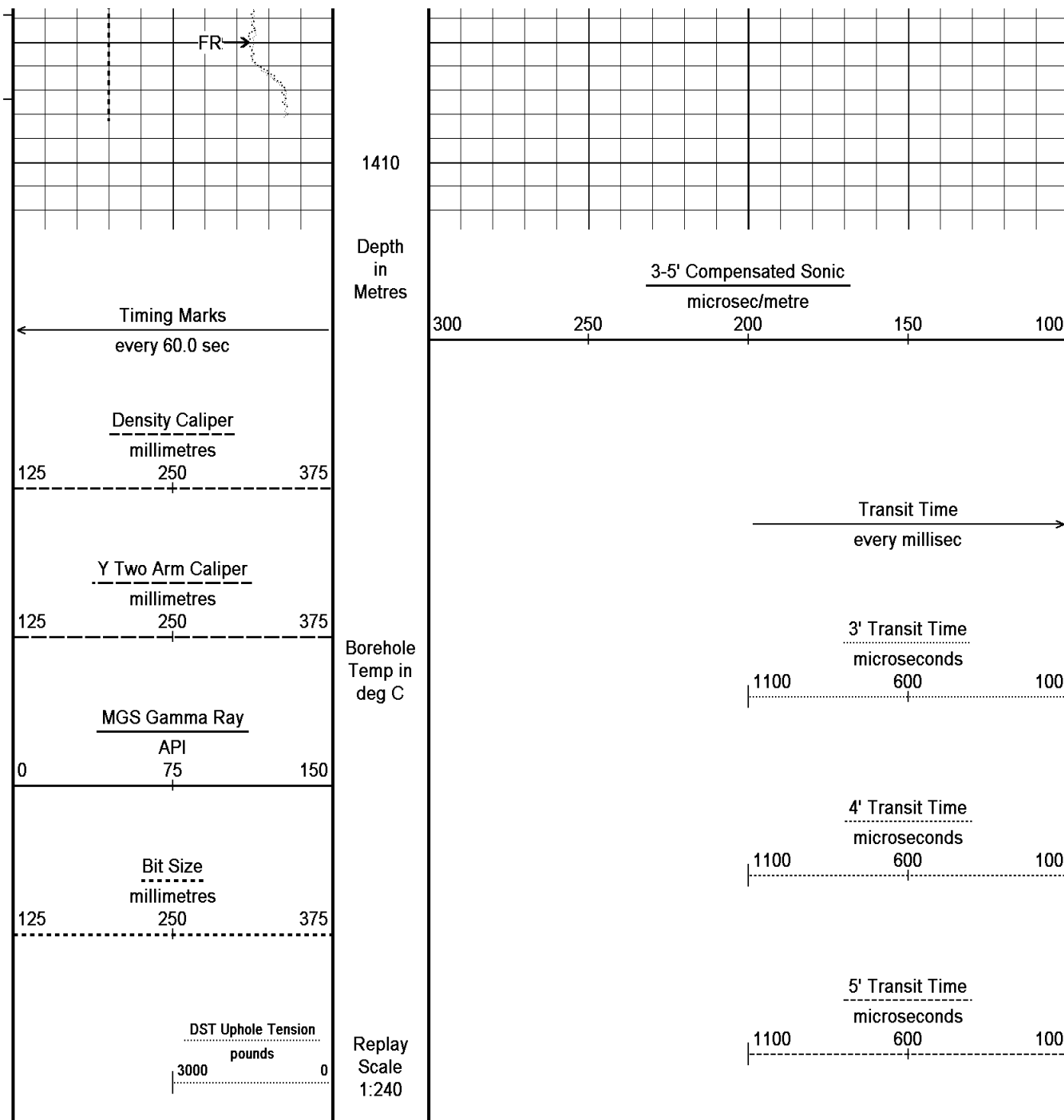
1390

1400



IFR

FRFRFR>>>



Depth Based Data - Maximum Sampling Increment 10.0cm

Filename: C:\Temp\Weatherford PreView\01E-72 REPEAT2.dta

Filename: C:\Temp\Weatherford PreView\01E-72 MAINLOG.dta

System Versions: Logged with 7.01.0195 Processed with 7.01.0195 Plotted with 8.01.0091

Plotted on 12-NOV-2007 11:11

Recorded on 02-MAR-2007 17:32

Recorded on 02-MAR-2007 16:51

↑ REPEAT SECTION (ADDITIONAL REPEAT) MAIN LOG 1:240 ↑

BEFORE SURVEY CALIBRATION

C:\Temp\Weatherford PreView\01E-72 REPEAT.dta

General Constants All 000

Last Edited on 2-MAR-2007,16:03

General Parameters		
Mud Resistivity	1.250	ohm-metres
Mud Resistivity Temperature	25.000	degrees C
Water Level	0.000	metres
Density/Neutron Processing	Wet Hole	
Hole/Annular Volume and Differential Caliper Parameters		
HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	Y Two Arm Caliper	
Annular Volume Diameter	139.700	mm
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	
High Resolution Temperature Calibration MCG 173		
	Measured	Calibrated(Deg C)
Lower	1.00	1.00
Upper	11.00	11.00
High Resolution Temperature Constants MCG 173		
		Last Edited on 4-FEB-2007,23:25
Pre-filter Length	11	
Caliper Calibration MTC 037		
		Base Calibration on 28-FEB-2007 15:42
		Field Calibration on 2-MAR-2007,15:53
Base Calibration		
Reading No	Measured	Calibrator Size (mm)
1	14092	101.98
2	16789	152.57
3	19549	203.72
4	22409	255.20
5	25210	304.45
6	N/A	N/A
Field Calibration		
	Measured Caliper (mm)	Actual Caliper (mm)
	206.00	206.00
Gamma Calibration MGS 012		
	Measured	Calibrated (API)
Background	119	78
Calibrator (Gross)	847	552
Calibrator (Net)	728	474
Gamma Constants MGS 012		
		Last Edited on 2-MAR-2007,13:09
Gamma Calibrator Number	GRC-107	
Mud Density	1120.00	kg/m3
Caliper Source for Processing	Density Caliper	
Tool Position	Centred	
Concentration of KCl	0.00	kppm
Caliper Calibration MPD 091		
		Base Calibration on 3-FEB-2007,04:39
		Field Calibration on 2-MAR-2007,15:53
Base Calibration		
Reading No	Measured	Calibrator Size (mm)
1	16446	101.98
2	26416	152.58
3	36048	203.72

4	46272	255.20
5	57271	304.45
6	N/A	N/A

Field Calibration

Measured Caliper (mm)	Actual Caliper (mm)
209.40	205.70

Sonic Constants MSS 038

Last Edited on 28-FEB-2007,20:05

Maximum Boundary Contrast	328.08	micro-sec/m
Fluid Transit Time	620.08	micro-sec/m
Limestone Transit Time	155.84	micro-sec/m
Sandstone Transit Time	182.09	micro-sec/m
Dolomite Transit Time	142.72	micro-sec/m
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	0.00	0

Fixed Gate Parameters

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

Down Hole Fixed Gate Parameters

Gate Start	N/A	micro-sec
Gate Width	N/A	micro-sec
Initial Discriminator Level	0.0000	mVolts

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

DOWNHOLE EQUIPMENT

C:\Temp\Weatherford PreView0\IE-72 REPEAT.dta

Compact Gamma
MCG 173 Length: 2.65 m

Weight: 63.9 lb



20.97 m GRGC - Gamma Ray
20.09 m CGXT - MCG External Temperature

Compact Focused Electric
MFE 123 Length: 1.84 m

Weight: 48.5 lb

18.98 m FEFE - Shallow FE

Compact Two Arm Caliper
MTC 37 Length: 2.17 m

Weight: 61.7 lb

16.52 m CLYC - Y Two Arm Caliper

Compact Short Gamma
MGS 12 Length: 1.04 m

Weight: 24.3 lb

15.65 m GRGM - MGS Gamma Ray

Compact InterSonde Crank
ISC 142 Length: 0.70 m

Weight: 24.3 lb

Compact Micro-Resistivity
MMR 54 Length: 2.62 m

Weight: 81.6 lb

12.10 m MINV - MMR MicroLog Inverse

12.10 m MNRL - MMR MicroLog Normal

Compact Neutron
MDN 127 Length: 1.53 m

Weight: 50.7 lb

10.64 m NPRL - Limestone Neutron Por.

Compact Density/Caliper
MPD 91 Length: 2.92 m

Weight: 90.4 lb

8.06 m CLDC - Density Caliper

7.85 m DPRL - Limestone Density Por.

7.85 m DCOR - Density Correction

7.83 m PDPE - PE

Compact Sonic
MSS 38 Length: 3.82 m

Weight: 72.8 lb

3.95 m TR21 - 3' Transit Time

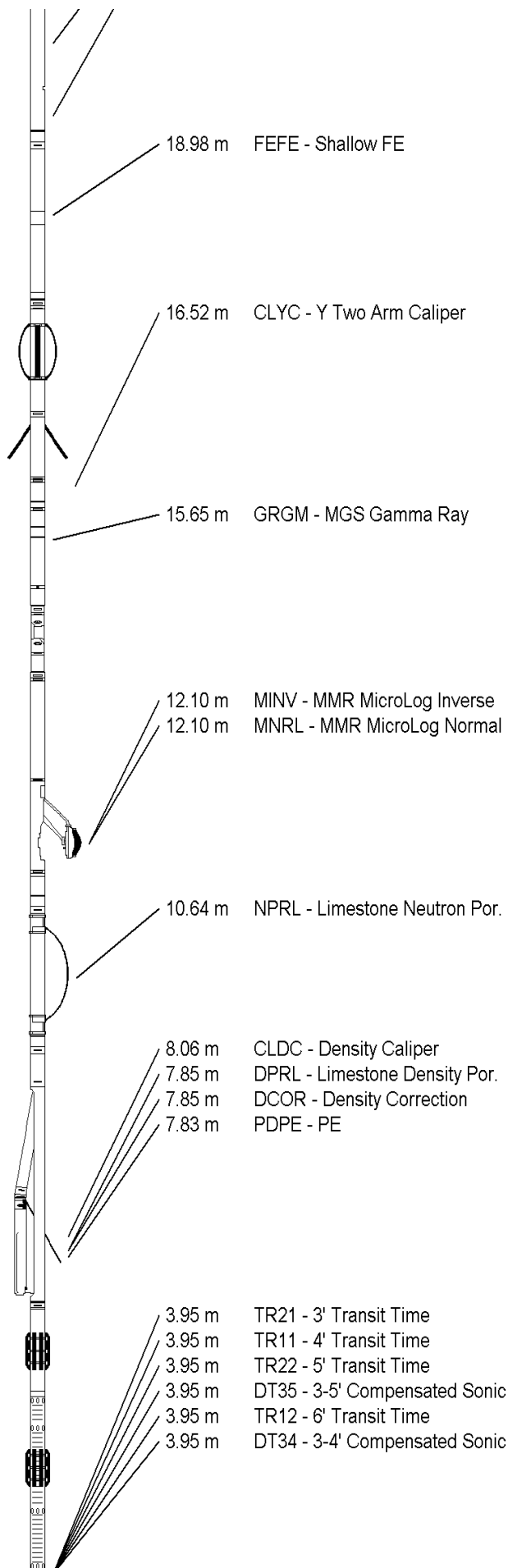
3.95 m TR11 - 4' Transit Time

3.95 m TR22 - 5' Transit Time

3.95 m DT35 - 3-5' Compensated Sonic

3.95 m TR12 - 6' Transit Time

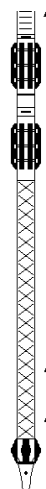
3.95 m DT34 - 3-4' Compensated Sonic



Compact Induction
MAI 137 Length: 3.29 m Weight: 48.5 lb

Compact Hole Finder
HFS 1 Length: 0.46 m Weight: 2.2 lb

Total Length: 23.05 m Weight: 568.8 lb



0.79 m RILM - Medium Induction
0.79 m RILD - Deep Induction
0.07 m SPCG - Spontaneous Potential
Tool Zero (0.50m from bottom)

All measurements relative to tool zero.

COMPANY	PARAMOUNT RESOURCES LTD
WELL	PARA ET AL CAMERON E-72
FIELD	CAMERON HILLS
PROVINCE/COUNTY	NORTHWEST TERRITORIES
COUNTRY/STATE	CANADA

Elevation Kelly Bushing	734.40	metres	First Reading	1401.80	metre
Elevation Drill Floor		metres	Depth Driller	1408.00	metres
Elevation Ground Level	729.00	metres	Depth Logger	1406.30	metres



Weatherford®

COMPENSATED SONIC