



Weatherford[®]

**COMPACT PHOTO DENSITY
COMPENSATED NEUTRON
MICRORESISTIVITY LOG**

COMPANY **MCCOY PETROLEUM CORPORATION**
 WELL **HILL 'A' #2-23**
 FIELD **ALFORD**
 PROVINCE/COUNTY **KIOWA**
 COUNTRY/STATE **U.S.A. / KANSAS**
 LOCATION **990' FSL & 1980' FWL
SW/4**

SEC	TWP	RGE	Other Services
23	30S	19W	MA/MFE
API Number	15-097-21735		
Permit Number			
Permanent Datum GL, Elevation 2237 feet			
Log Measured From KB			
Drilling Measured From KB			

Date	15-MAR-2013	Elevations:	feet
Run Number	ONE	KB	2248.00
Service Order	3539875	DF	2247.00
Depth Driller	5240.00	GL	2237.00
Depth Logger	5241.00		
First Reading	5222.00		
Last Reading	3900.00		
Casing Driller	625.00		
Casing Logger	626.00		
Bit Size	7.875		
Hole Fluid Type	CHEMICAL		
Density / Viscosity	9.40 lb/USg	lb/USg	50.00 CP
PH / Fluid Loss	9.00		9.00
Sample Source	FLOWLINE		
Rm @ Measured Temp	0.46 @ 81.0	ohm-m	
Rmf @ Measured Temp	0.37 @ 81.0	ohm-m	
Rmc @ Measured Temp	0.55 @ 81.0	ohm-m	
Source Rmf / Rmc	CALC	CALC	
Rm @ BHT	0.36 @108.0	ohm-m	
Time Since Circulation	5 HOURS		
Max Recorded Temp	108.00	deg F	
Equipment / Base	13057	LIB	
Recorded By	ADAM SILL		
Witnessed By	EVAN STONE		
JOB #	LB13-069		

BOREHOLE RECORD

Last Edited: 15-MAR-2013 02:28

Bit Size inches	Depth From feet	Depth To feet
7.875	625.00	5240.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	625.00	24.00

REMARKS

- SOFTWARE ISSUE: WLS 13.04.8492.
- MCG, MML, MDN, MPD, MFE, MAI RAN IN COMBINATION.
 - HARDWARE: DUAL BOWSPRING USED ON MDN.
 - 0.5 INCH STANDOFF USED ON MFE.
 - 0.5 INCH STANDOFF USED ON MAI.
- 2.71 G/CC LIMESTONE DENSITY MATRIX USED TO CALCULATE POROSITY.
- BOREHOLE RUGOSITY, TIGHT PULLS, AND WASHOUTS WILL AFFECT DATA QUALITY.
- ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST.
- TOTAL HOLE VOLUME FROM TD TO SURFACE CASING: 2174 CU. FT.
- ANNULAR HOLE VOLUME WITH 5.5 INCH PRODUCTION CASING FROM TD TO 3900 FEET: 253 CU. FT.
- SERVICE ORDER # 3539875

- RIG: STERLING #2.

- ENGINEER: A. SILL.

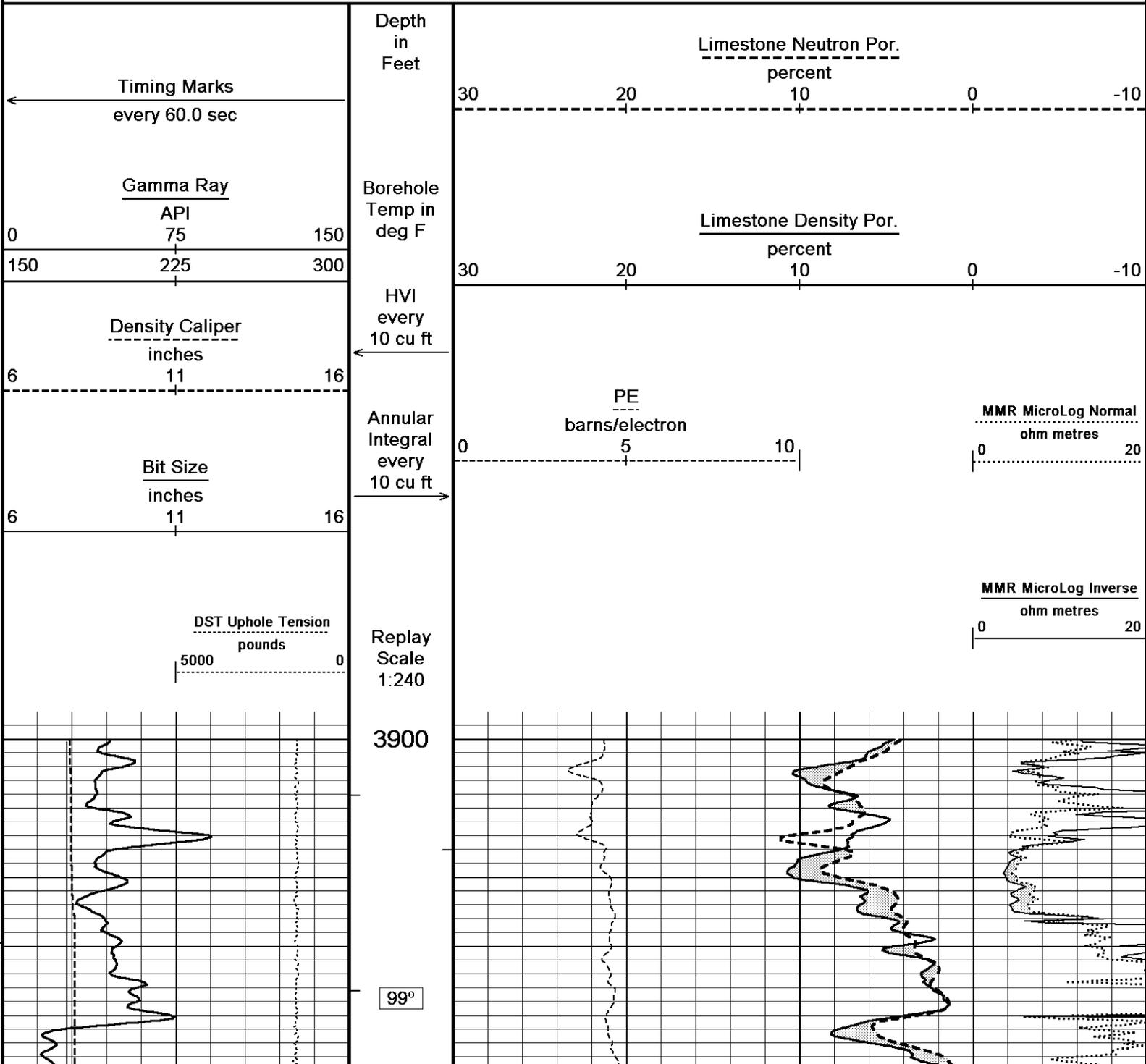
- OPERATOR(S): N. ADAME.

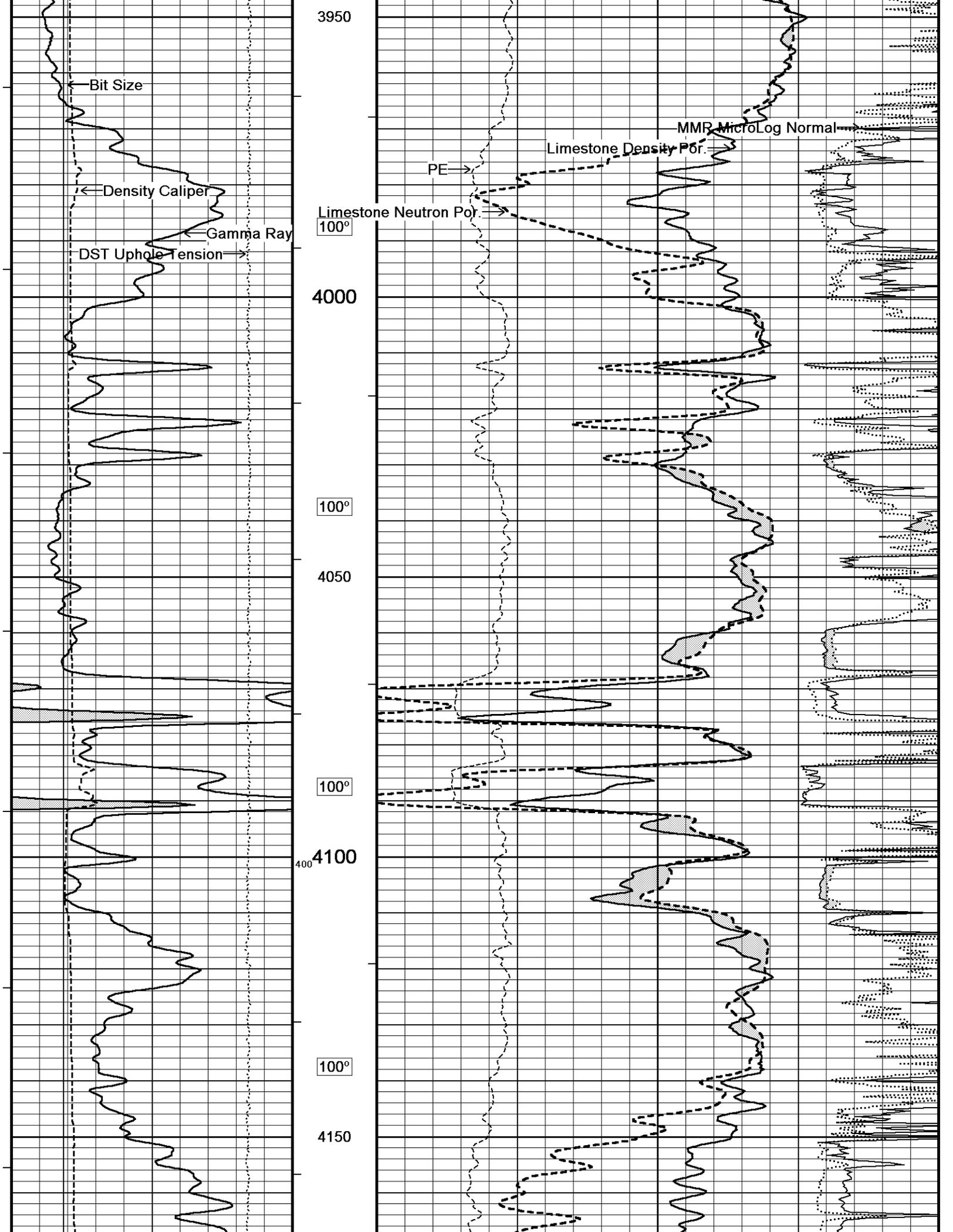
**** SOFTWARE ISSUE CHANGED FLUID LOSS TO MATCH PH. FLUID LOSS SHOULD BE 11.2 ML/30MIN. ****

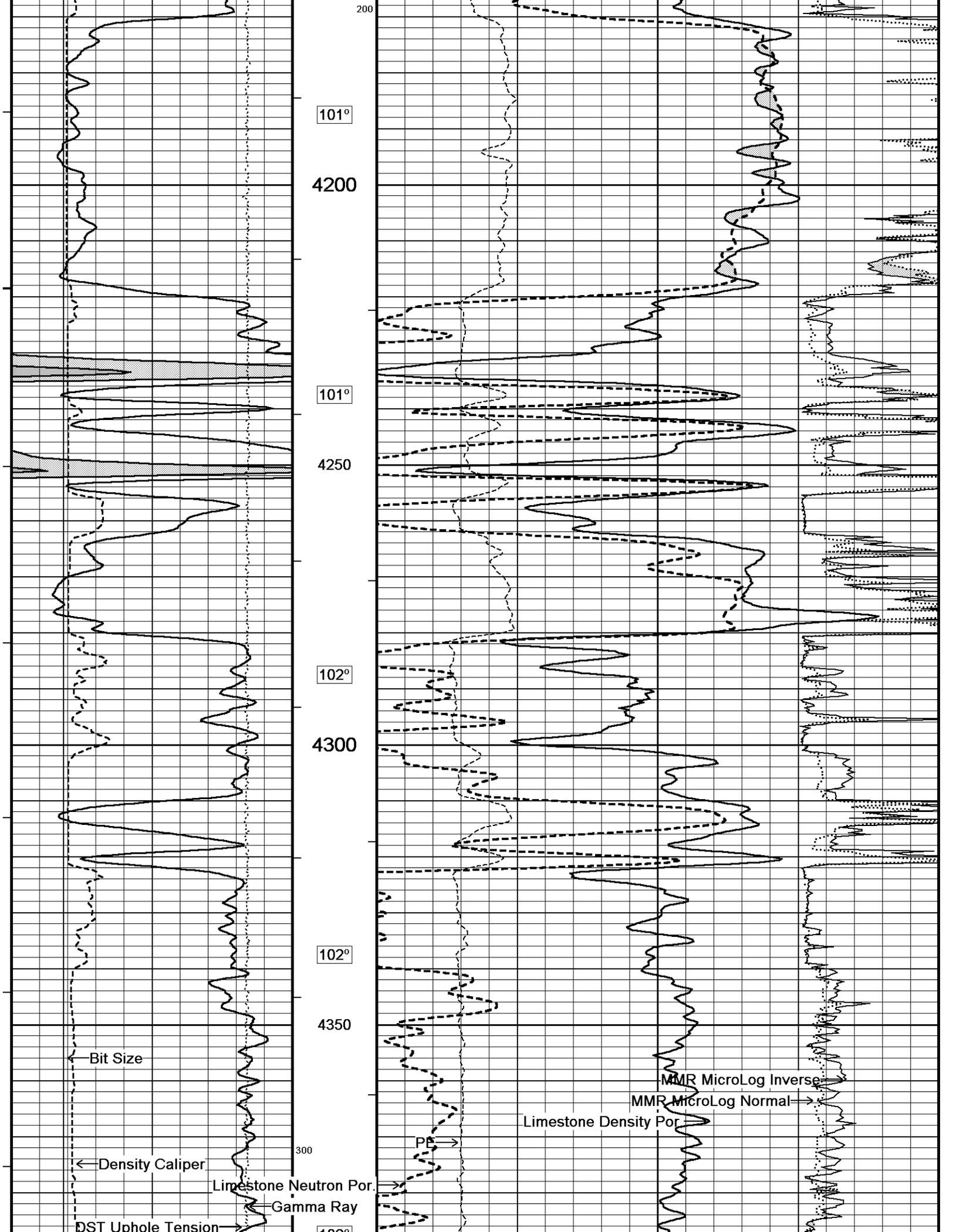
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

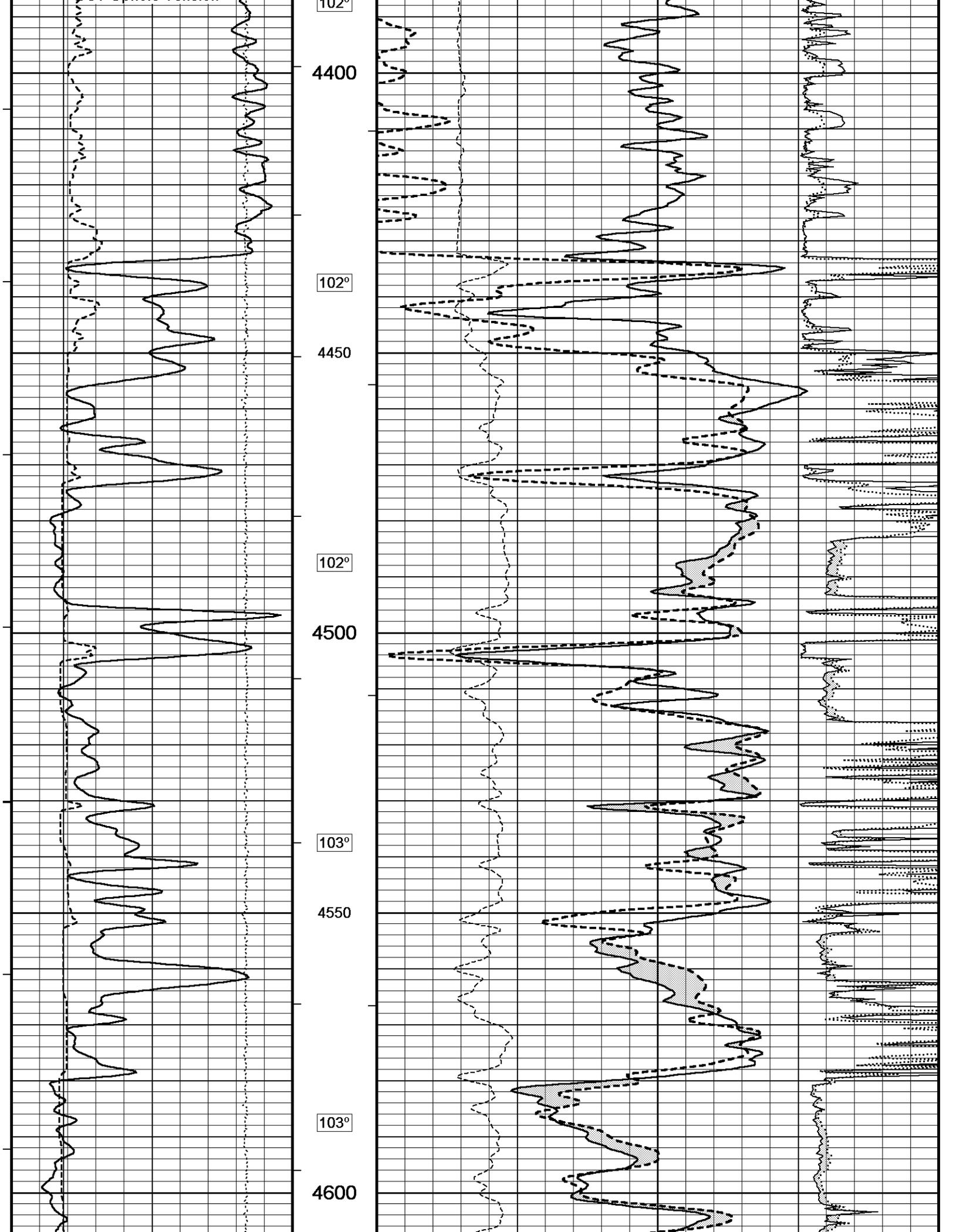
5 INCH MAIN

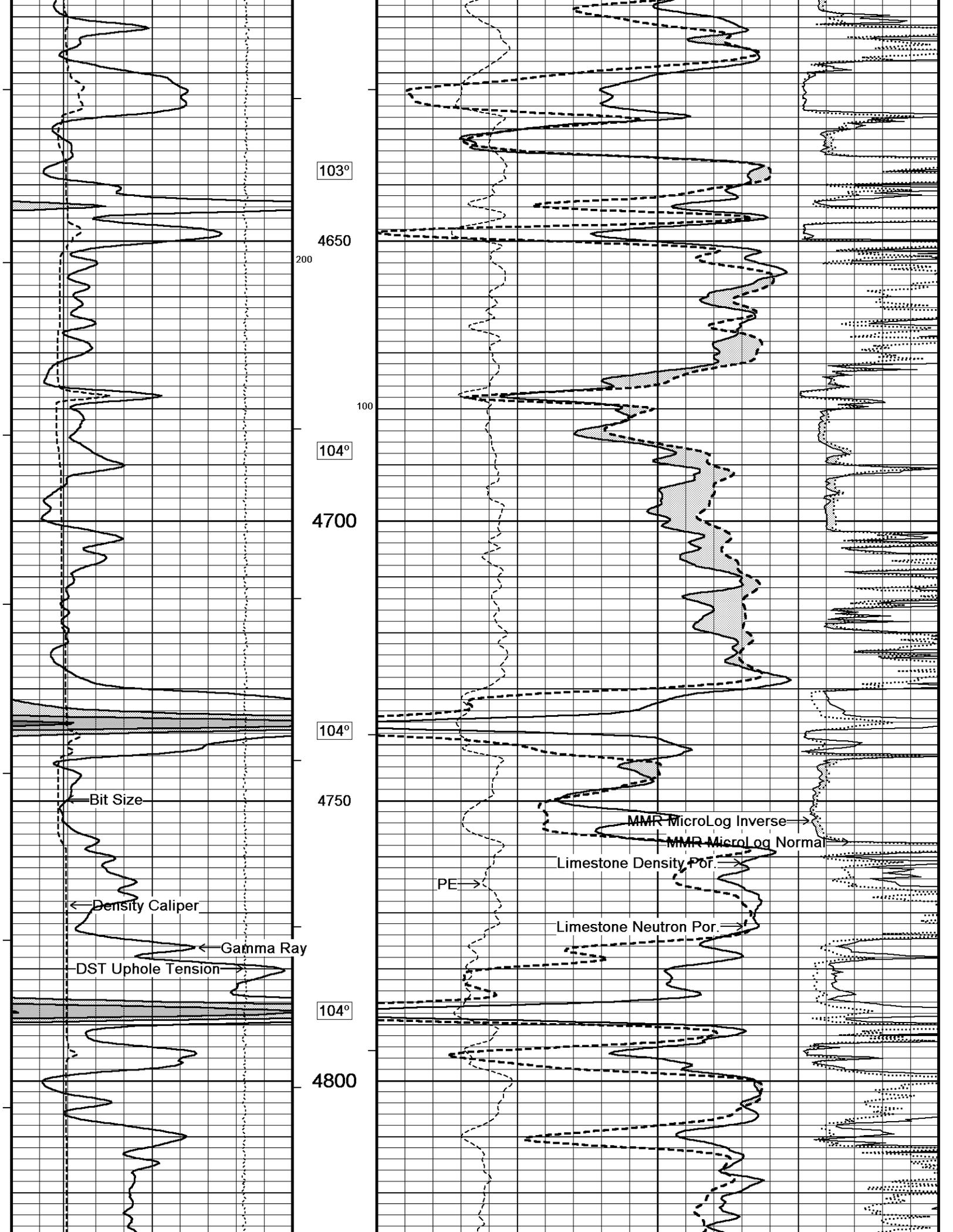
Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 15-MAR-2013 06:51
 Filename: C:\Minimus 13.04.8492\Data\McCoy Hill 'A' #2-23\McCoy Hill 'A' #2-23_002.dta Recorded on 15-MAR-2013 04:19
 System Versions: Logged with 13.04.8492 Plotted with 13.04.8492

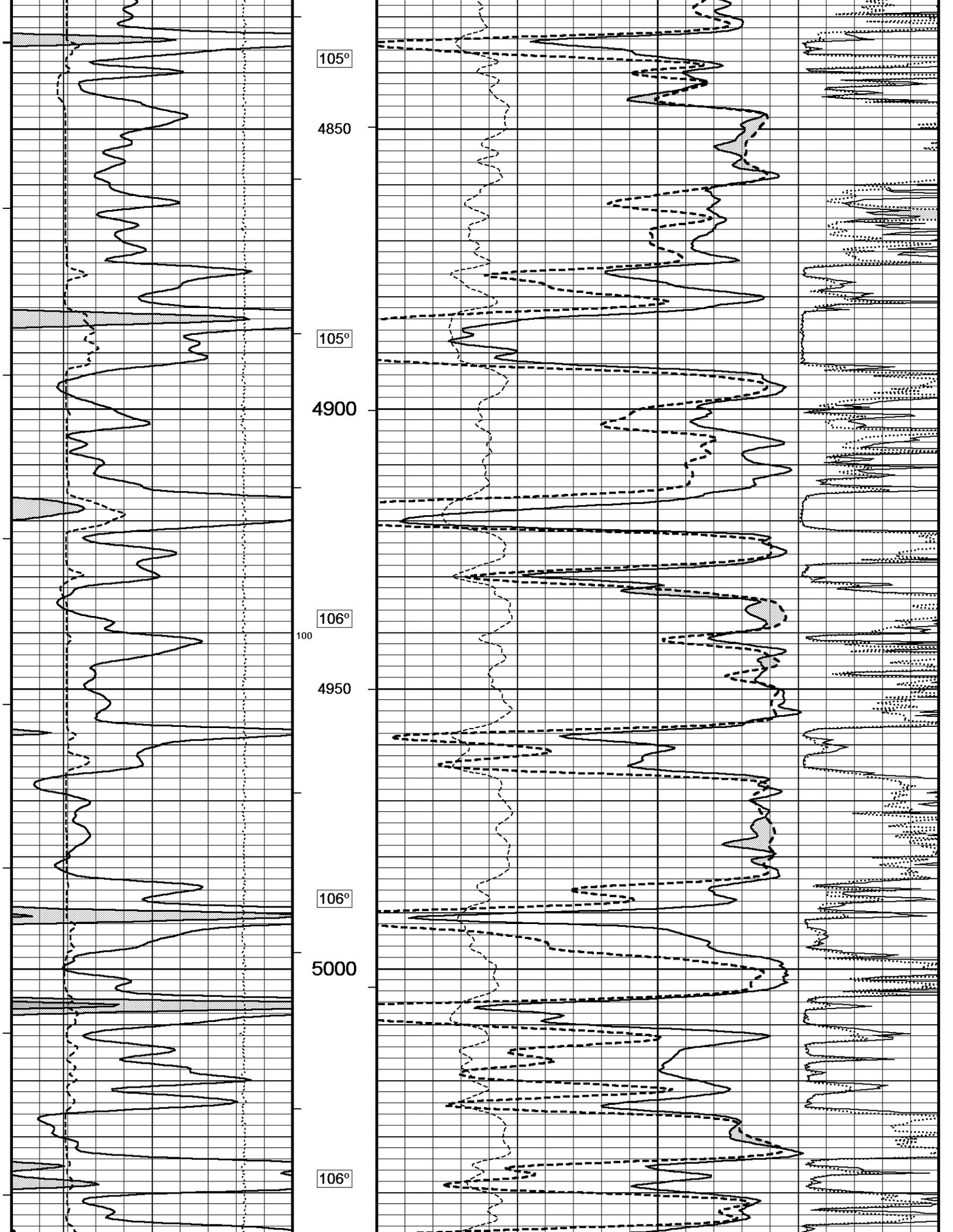


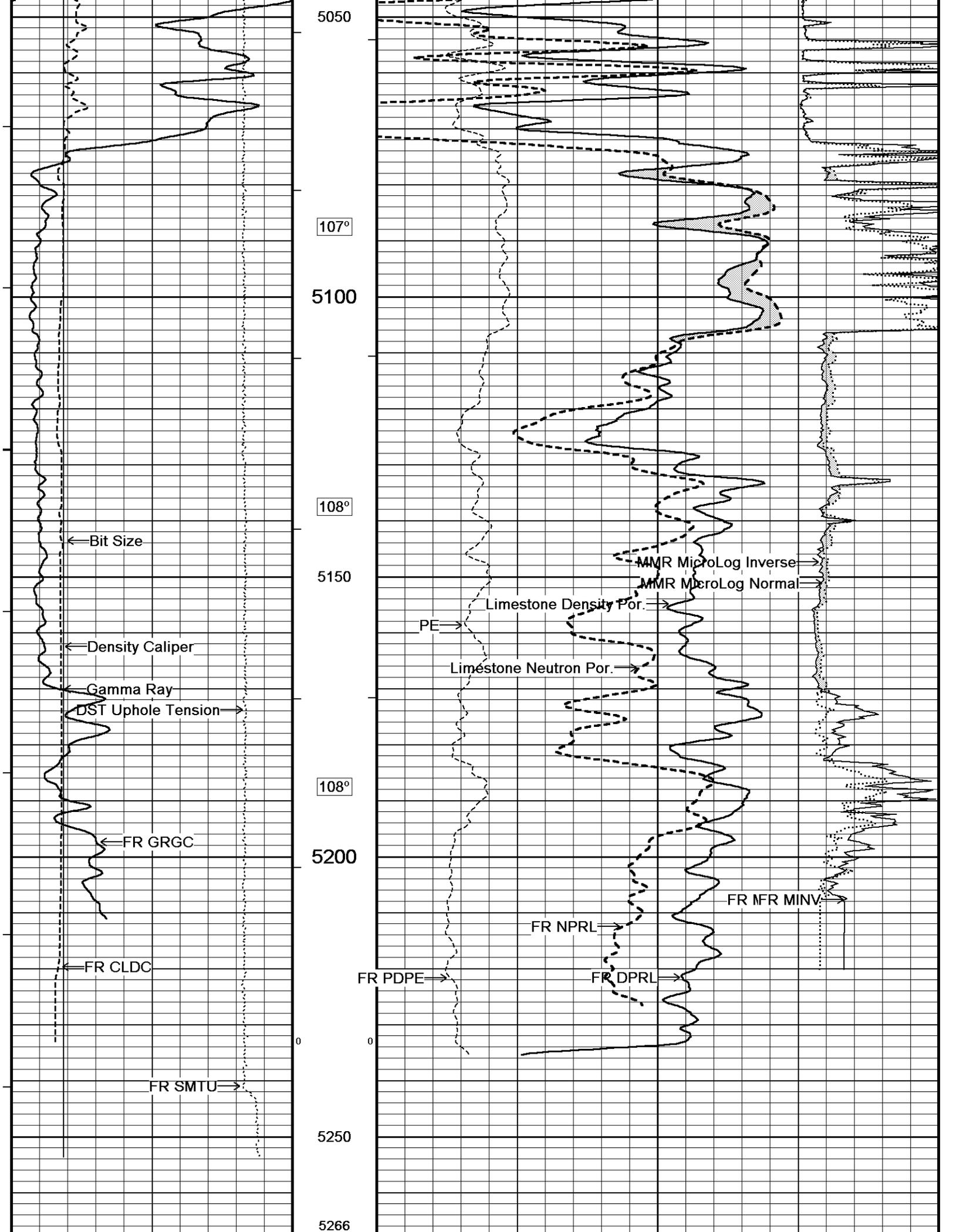


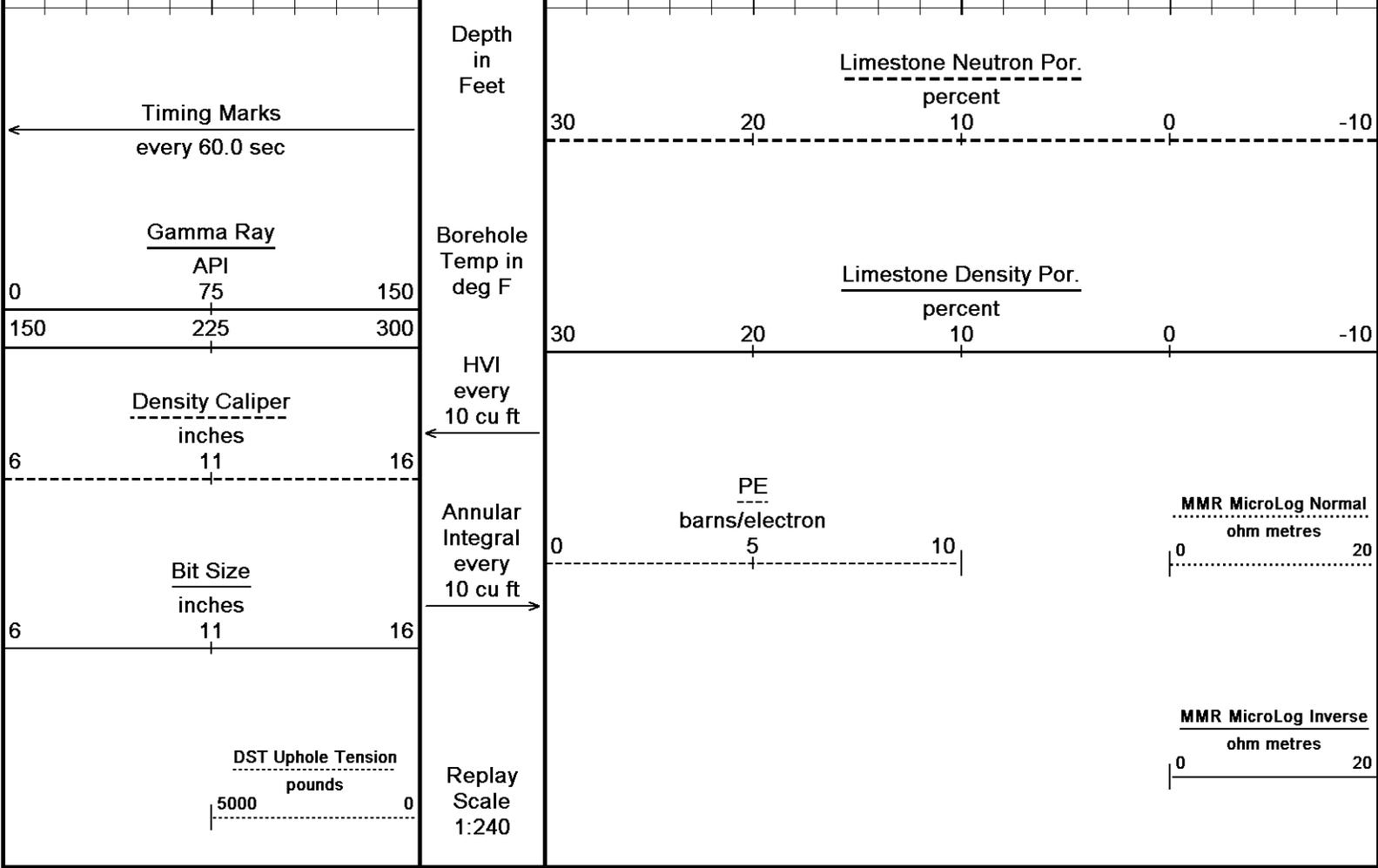




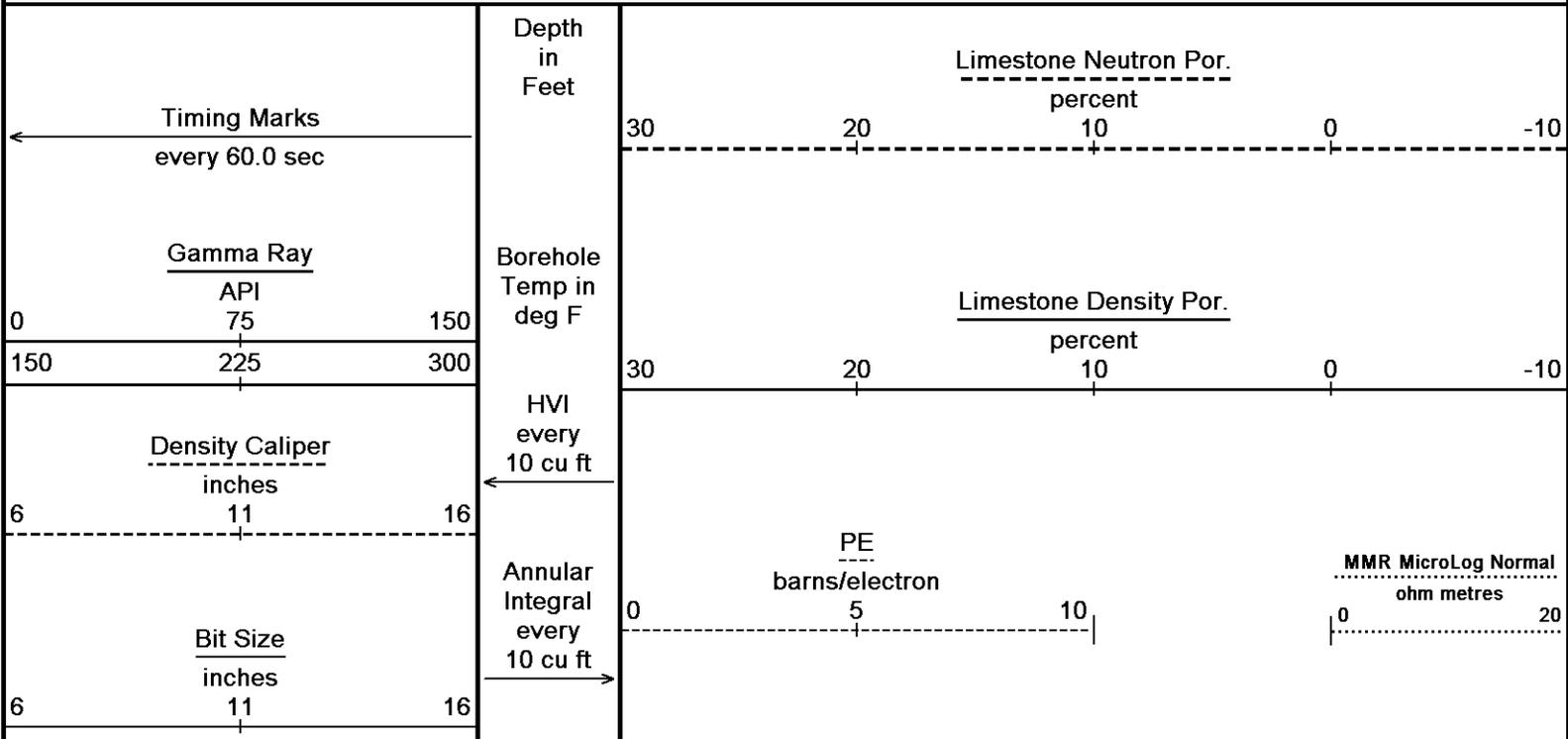
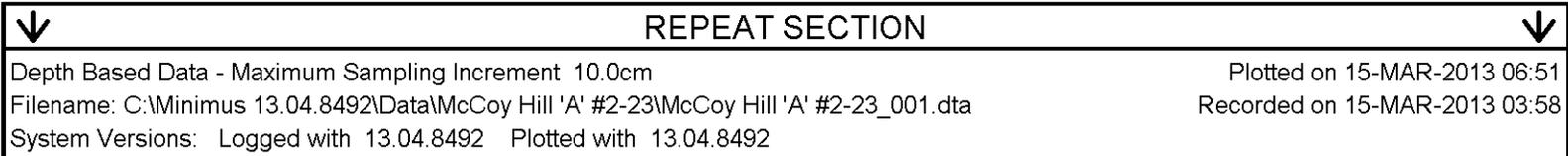




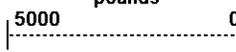




5 INCH MAIN

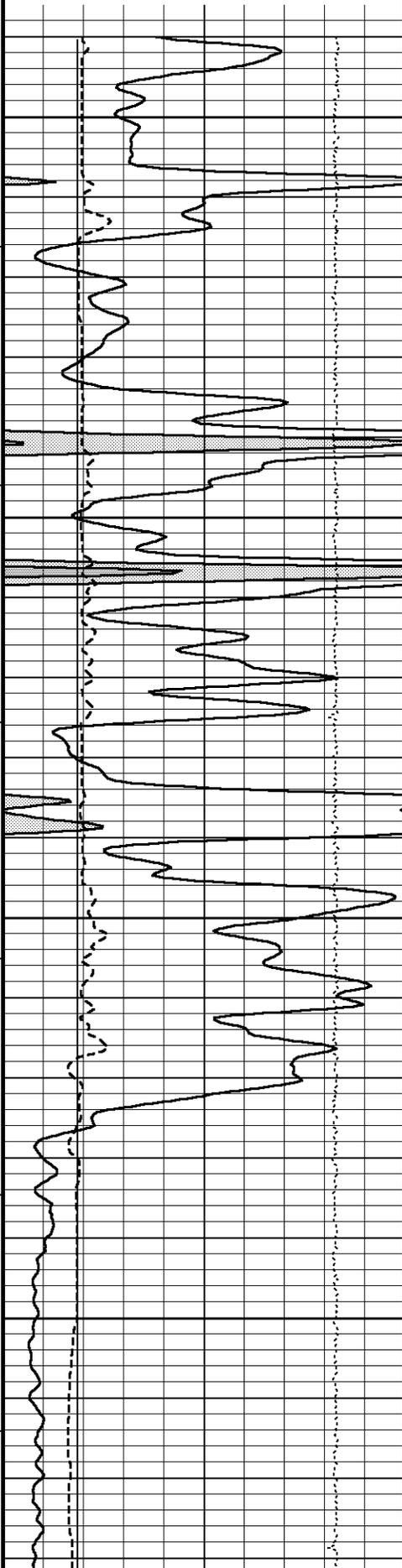
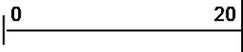


DST Uphole Tension
pounds

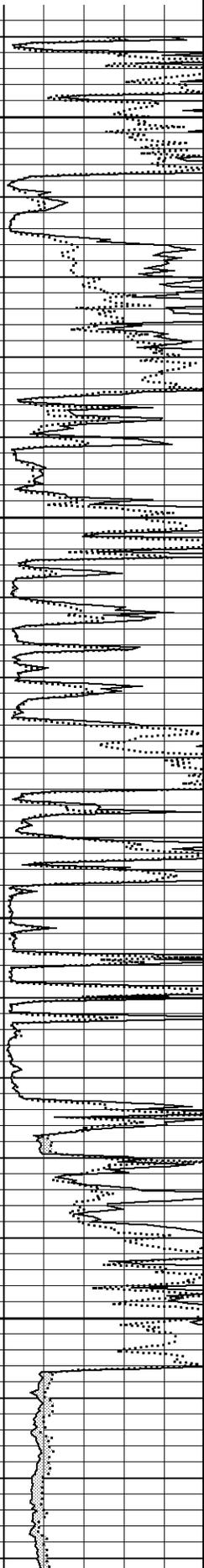
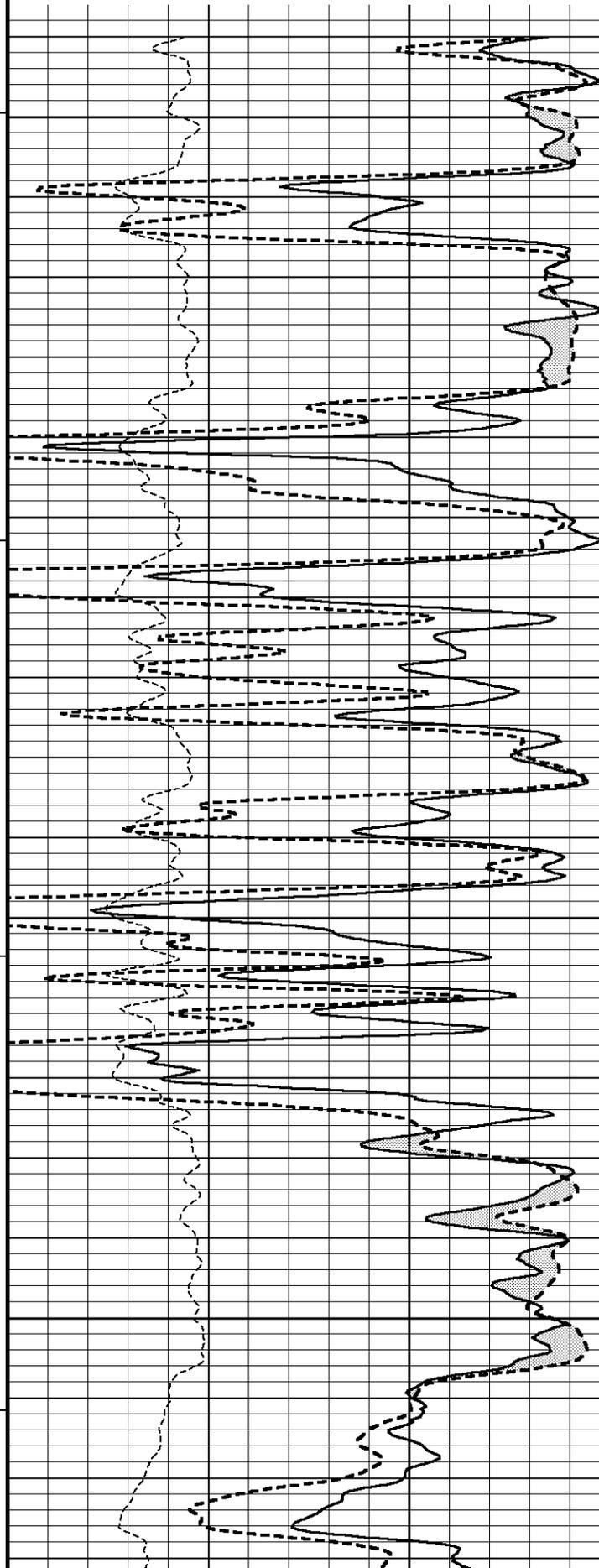


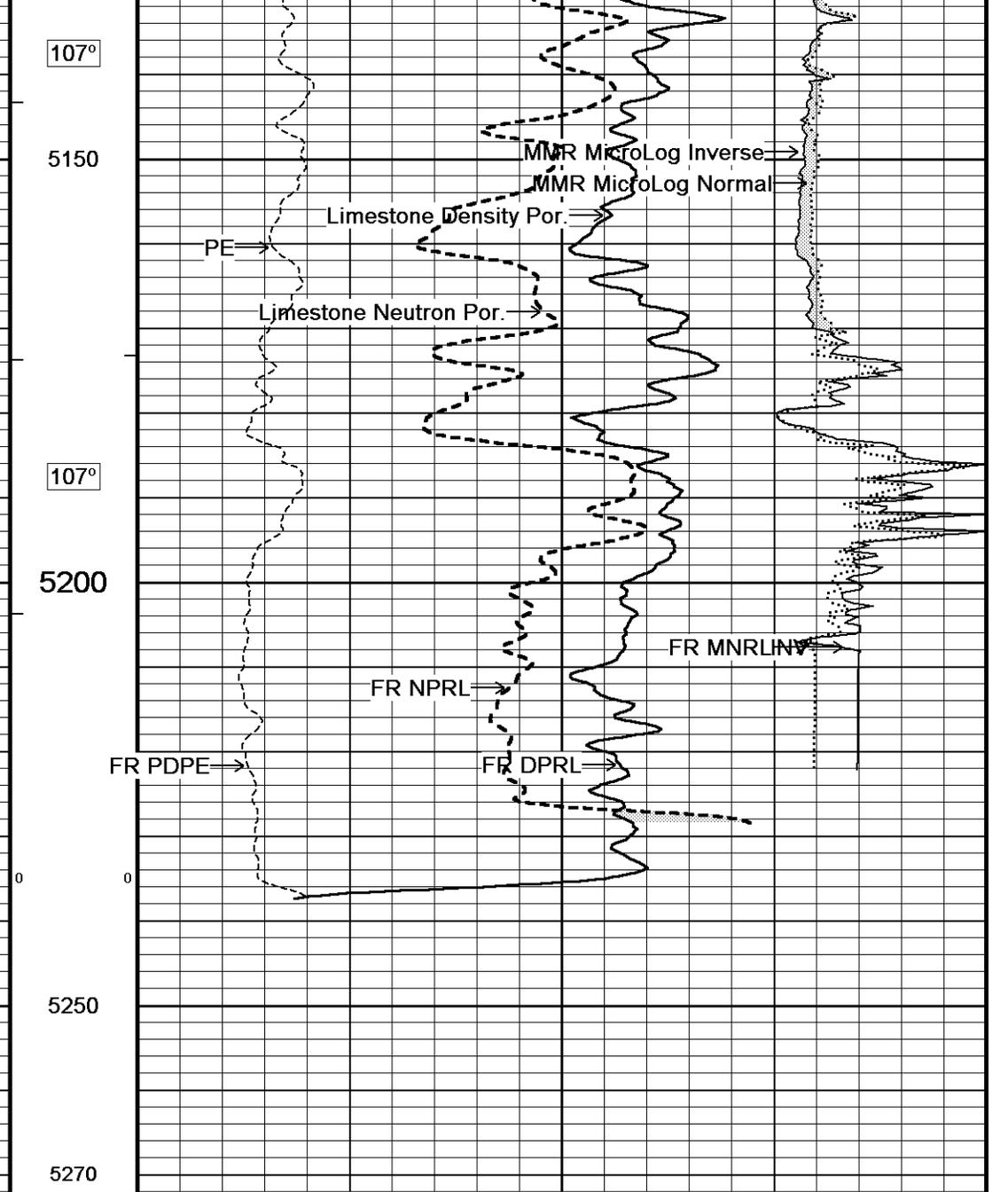
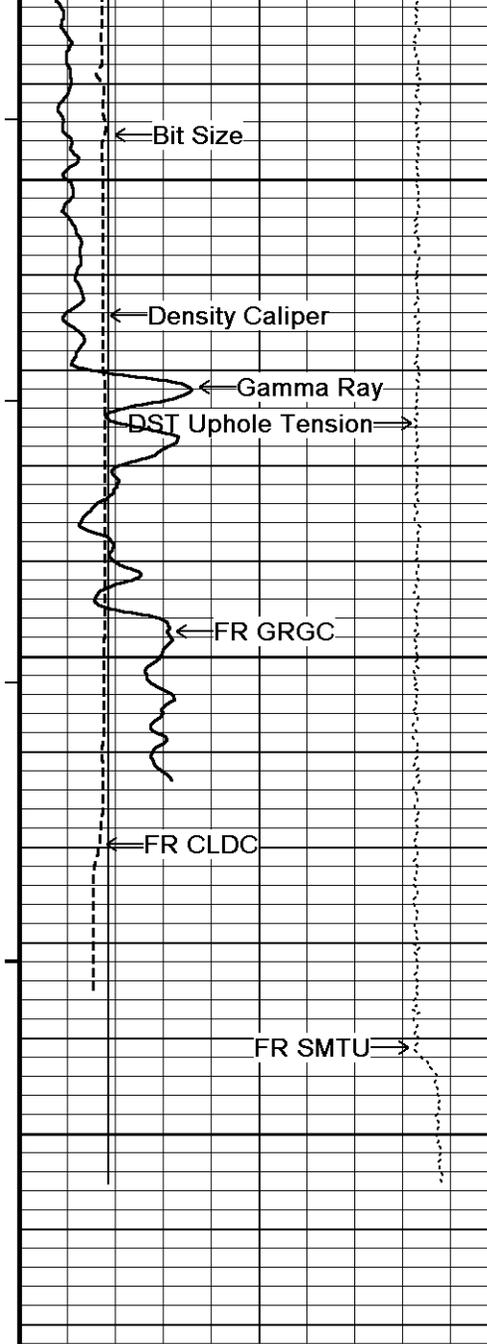
Replay
Scale
1:240

MMR MicroLog Inverse
ohm metres



4938
100
4950
105°
5000
105°
5050
106°
5100





Timing Marks every 60.0 sec

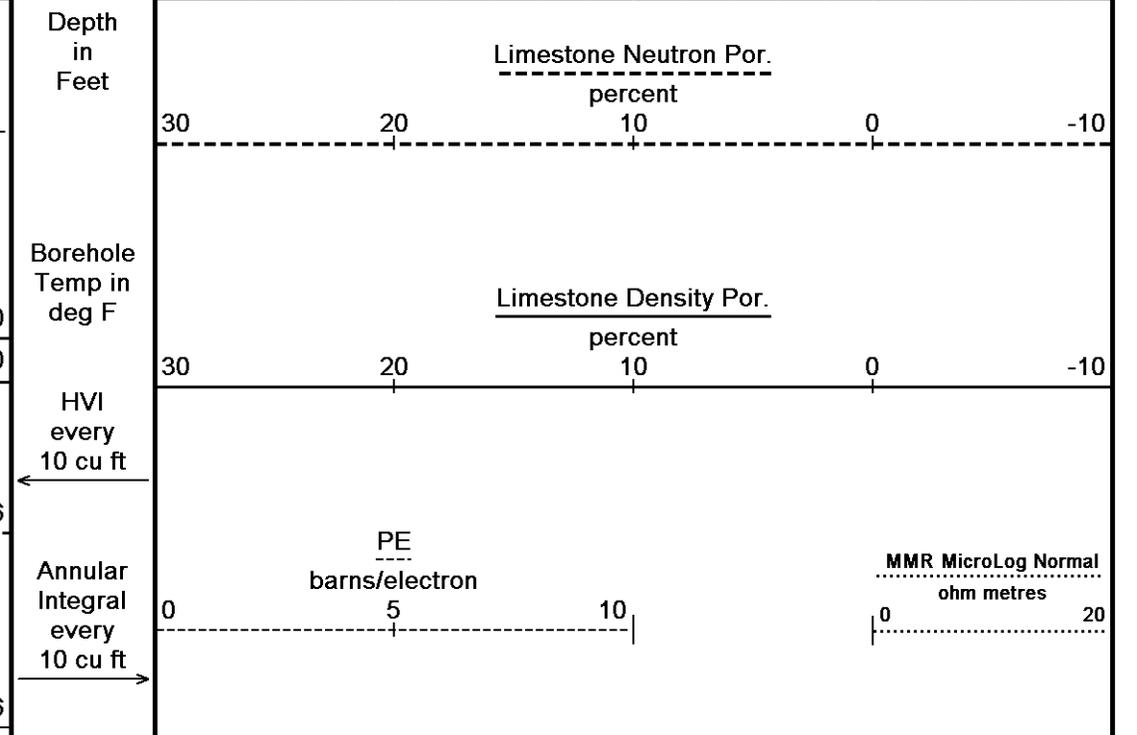
Gamma Ray		
API		
0	75	150
150	225	300

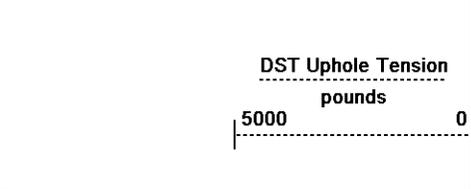
Density Caliper inches

6	11	16
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Bit Size inches

6	11	16
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Replay
Scale
1:240

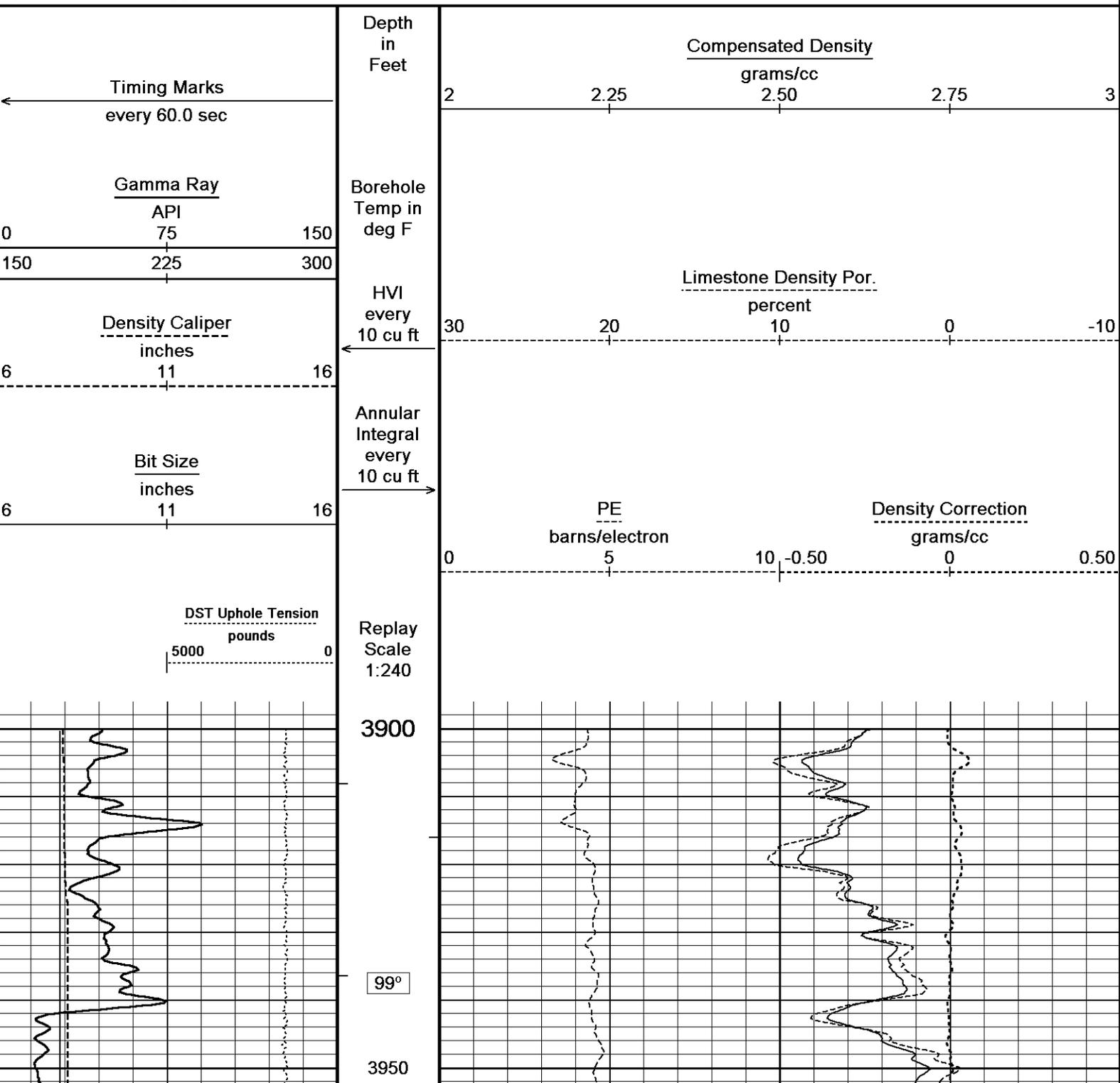
MMR MicroLog Inverse
ohm metres
0 20

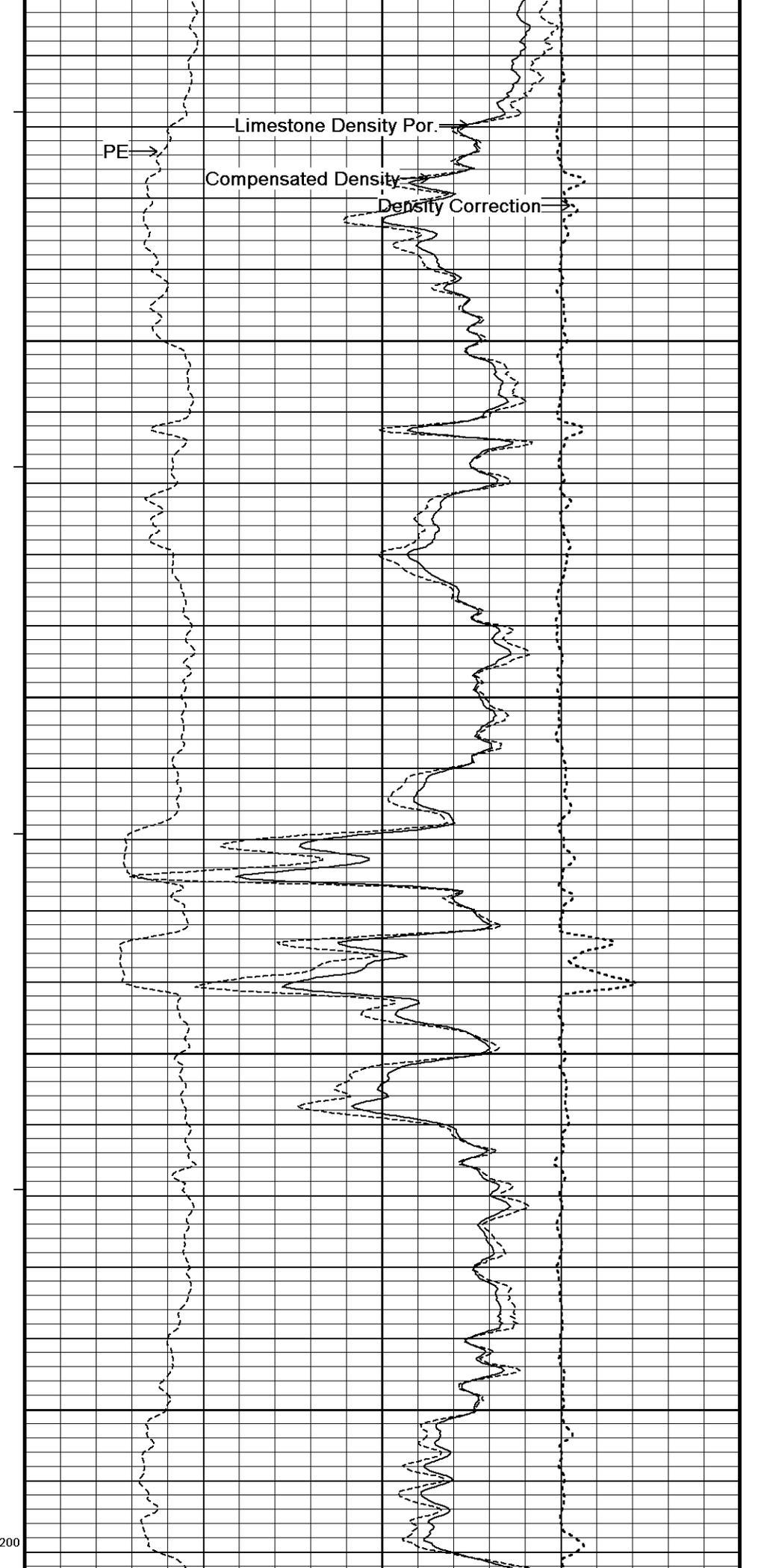
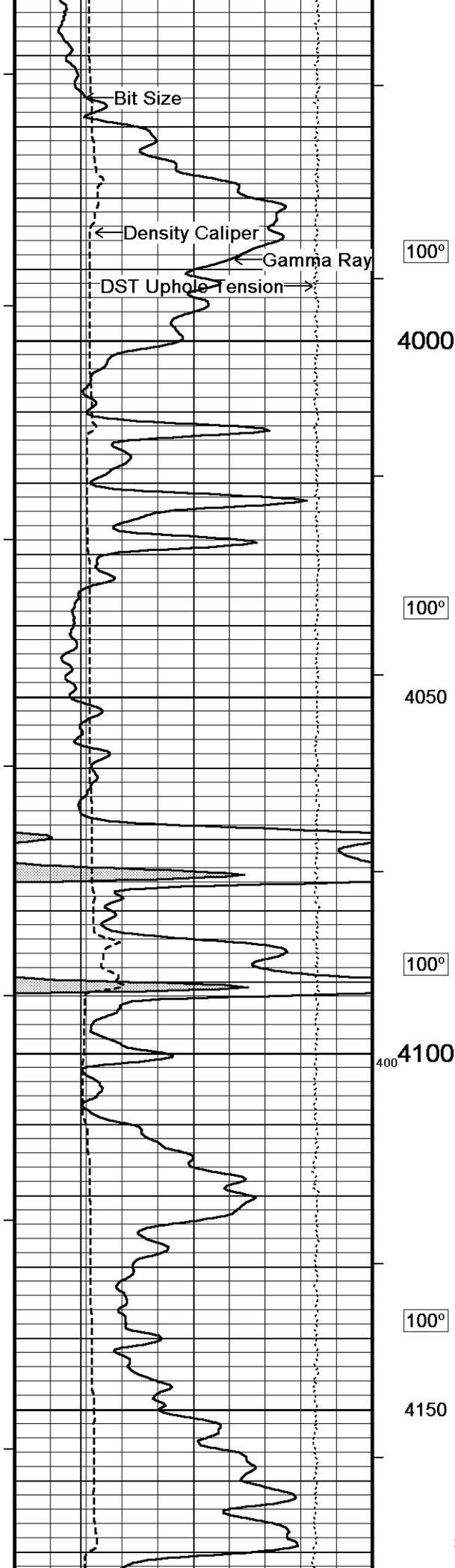
Depth Based Data - Maximum Sampling Increment 10.0cm
 Filename: C:\Minimus 13.04.8492\Data\McCoy Hill 'A' #2-23\McCoy Hill 'A' #2-23_001.dta
 System Versions: Logged with 13.04.8492 Plotted with 13.04.8492
 Plotted on 15-MAR-2013 06:51
 Recorded on 15-MAR-2013 03:58

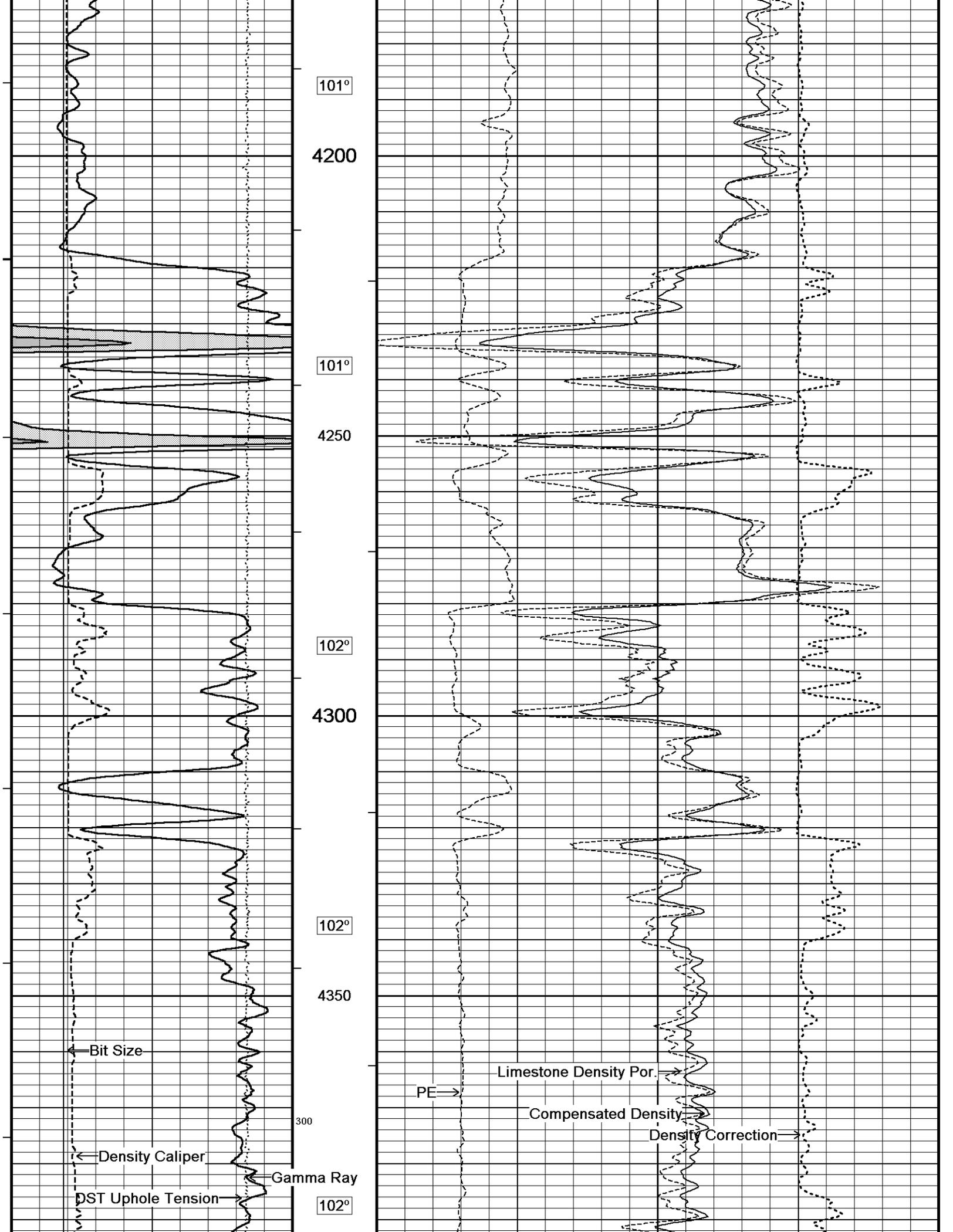
↑ REPEAT SECTION ↑

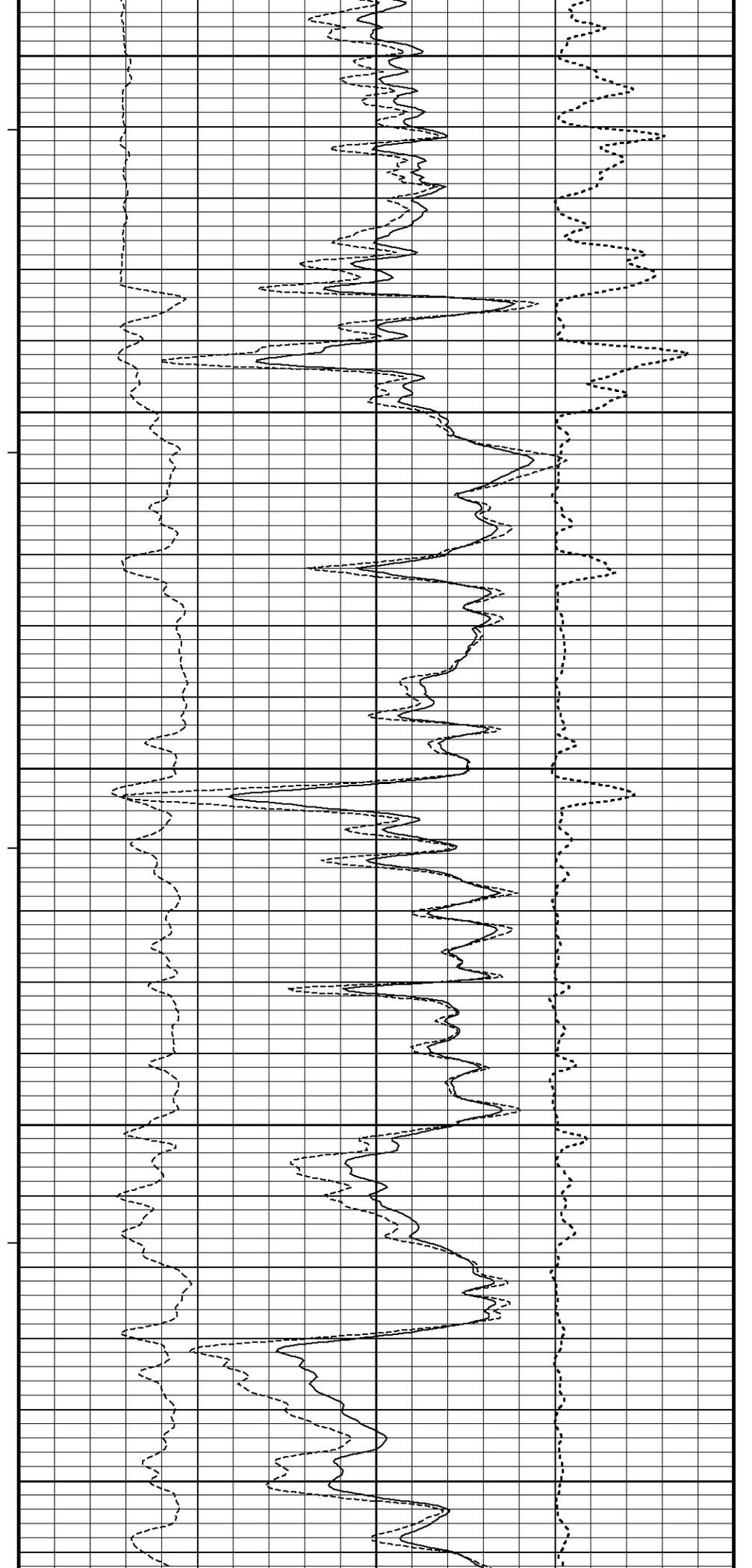
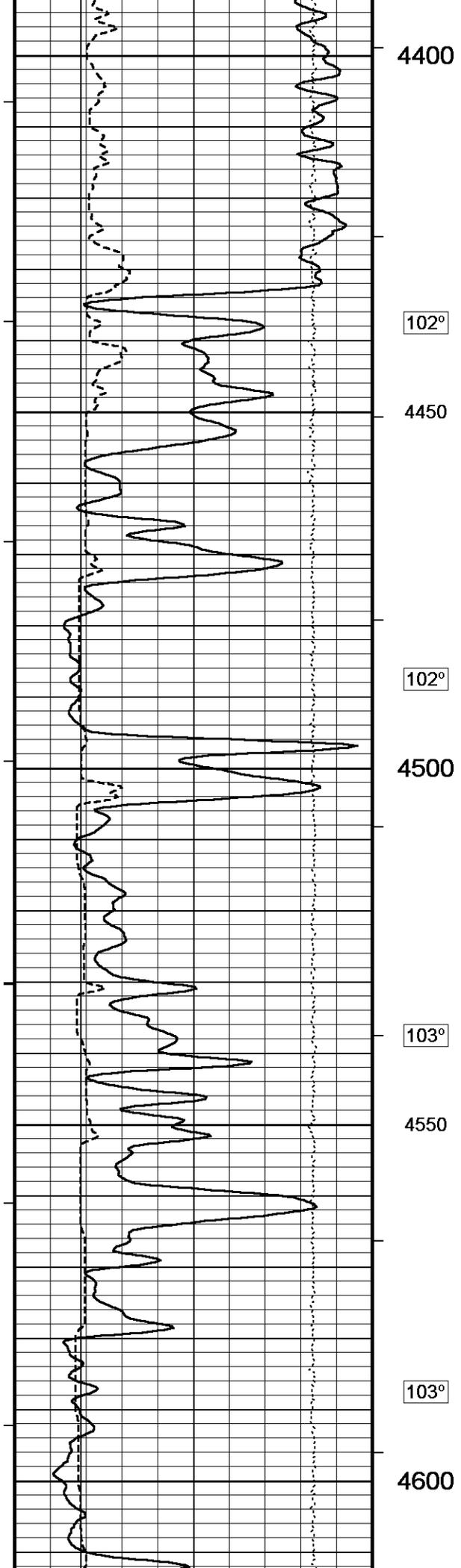
↓ 5 INCH MAIN ↓

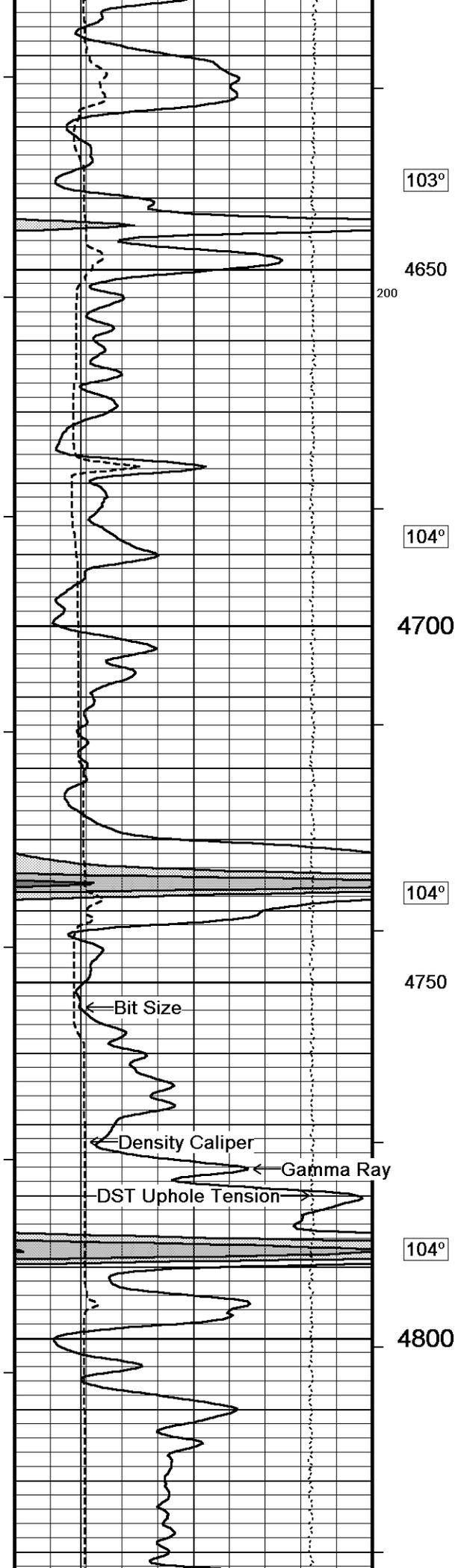
Depth Based Data - Maximum Sampling Increment 10.0cm
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 System Versions: Logged with 13.04.8492 Plotted with 13.04.8492
 Plotted on 15-MAR-2013 06:51
 Recorded on 15-MAR-2013 04:19











103°

4650

200

104°

4700

104°

4750

104°

4800

← Bit Size

← Density Caliper

← Gamma Ray

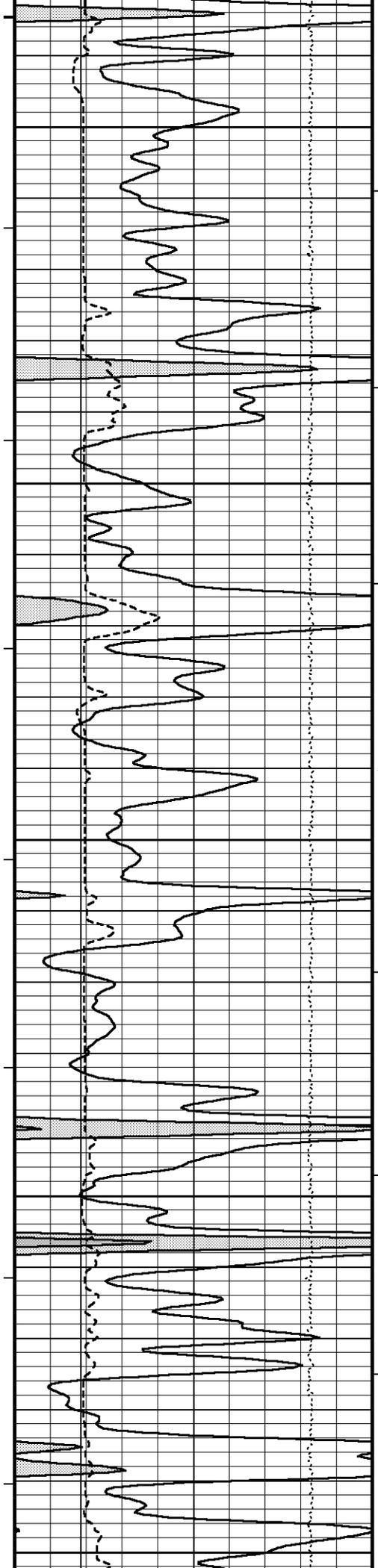
← DST Uphole Tension

PE →

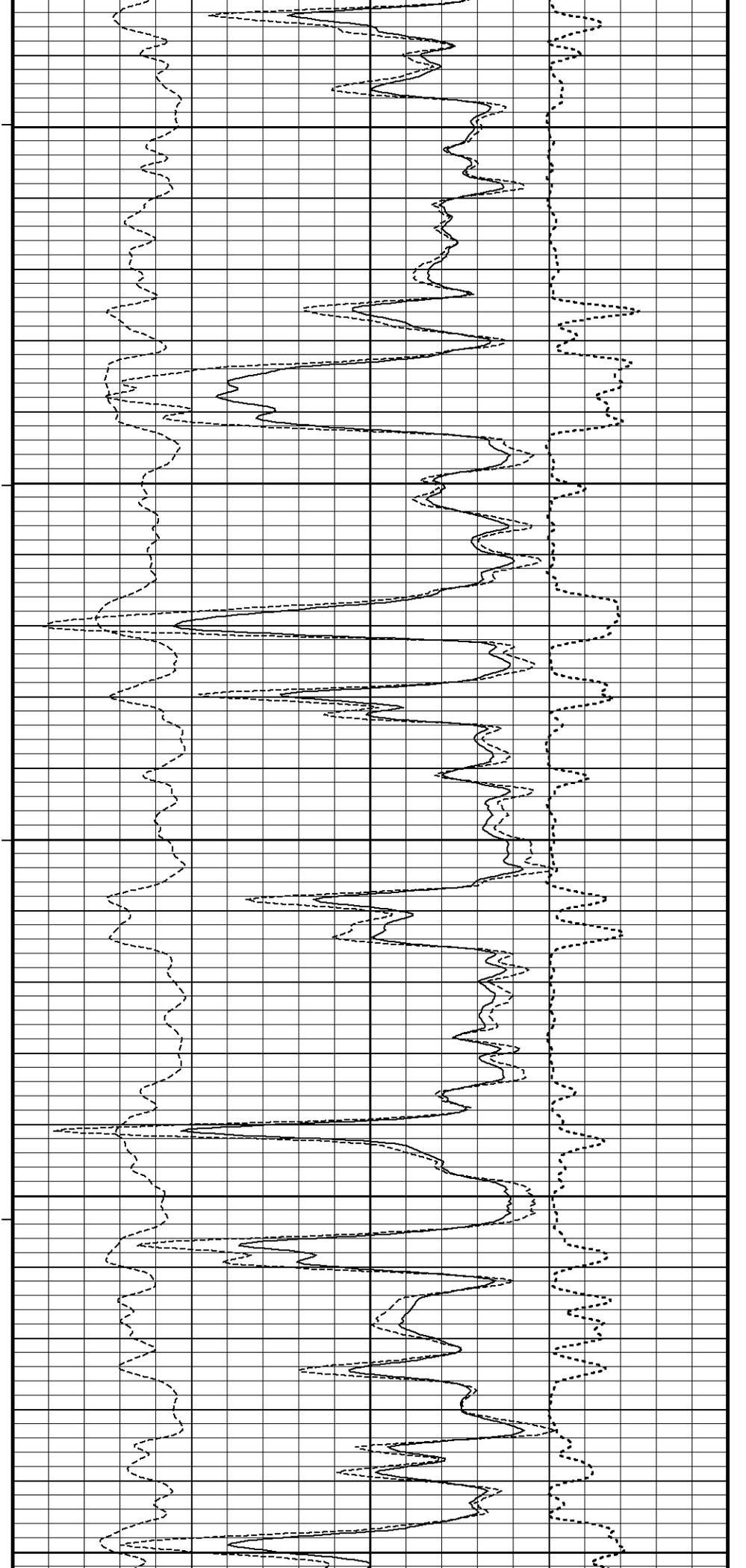
Limestone Density Por. →

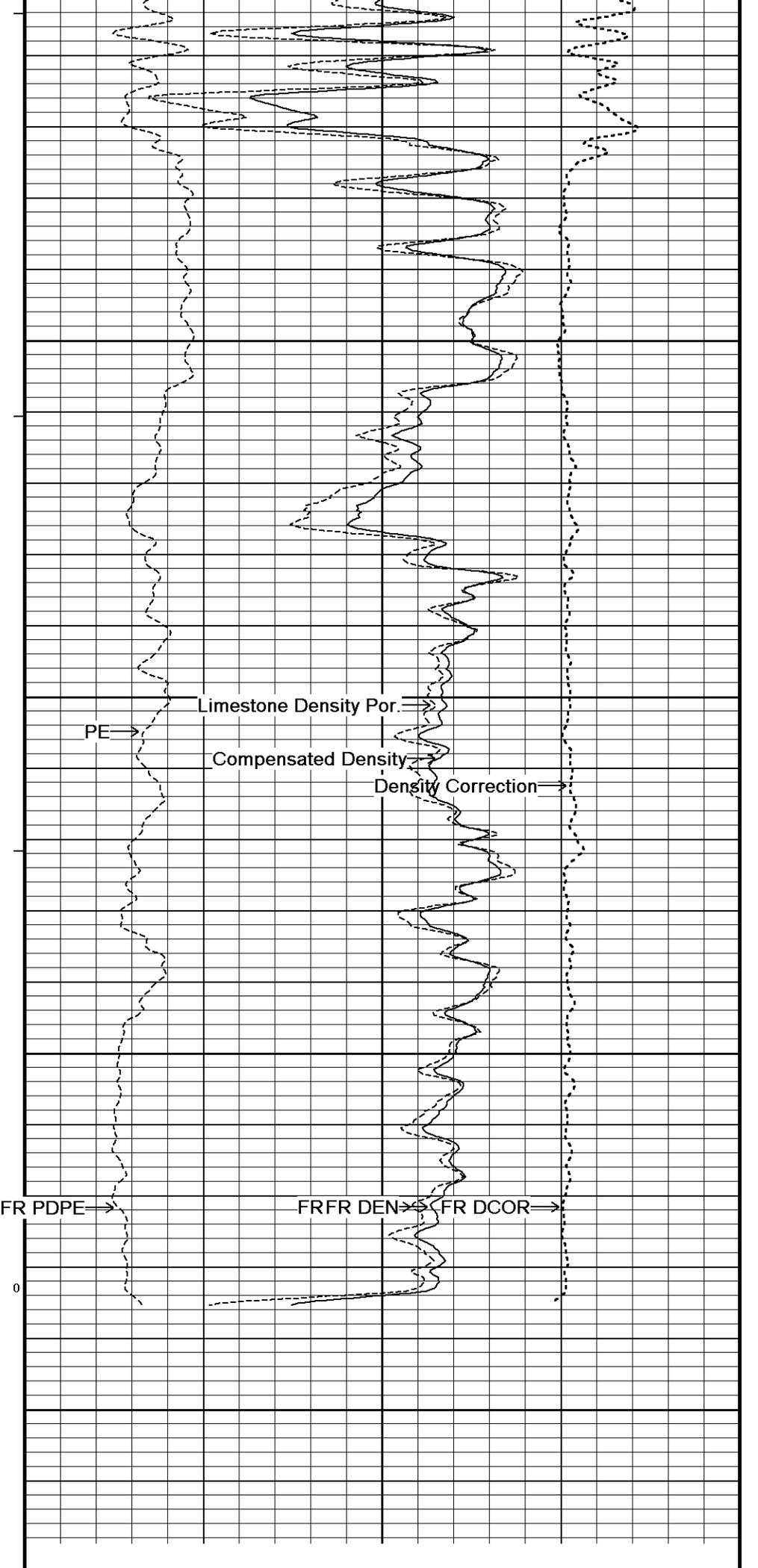
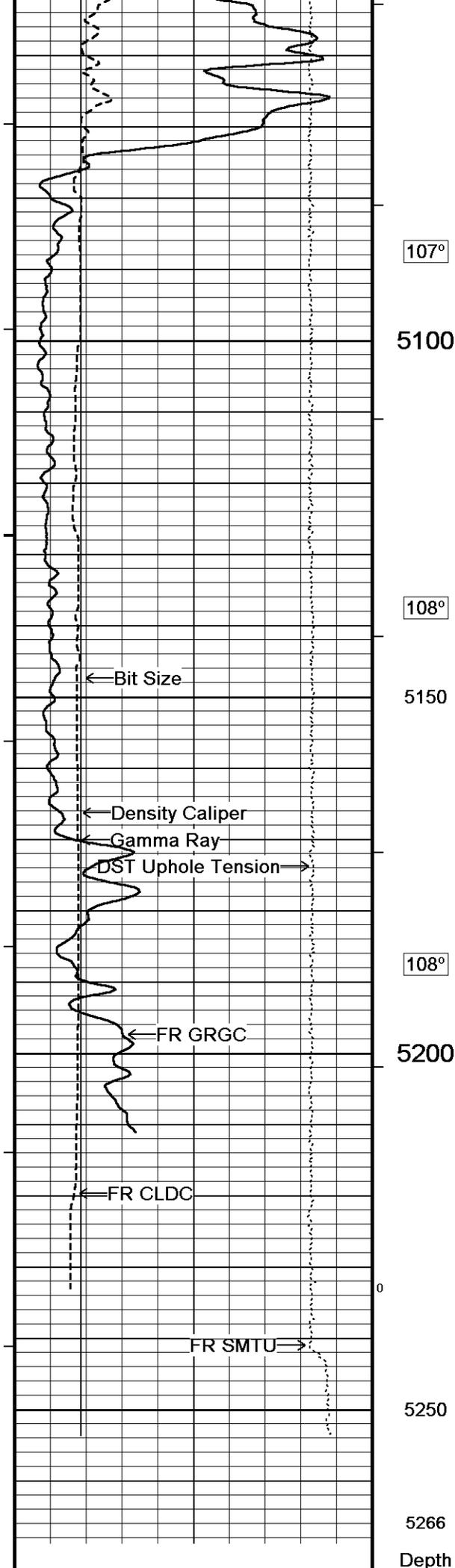
Compensated Density →

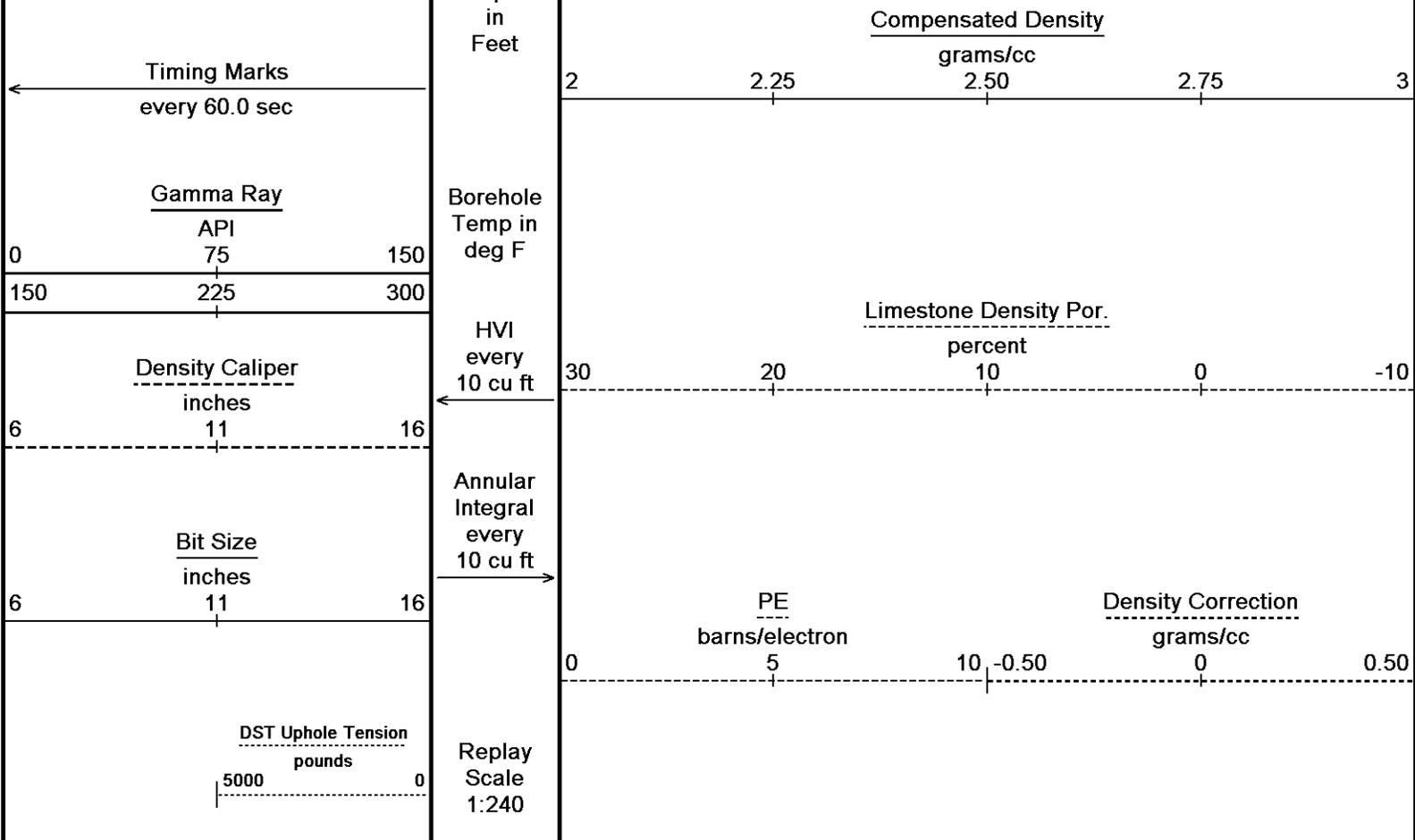
Density Correction →



105°
4850
105°
4900
106°
4950
106°
5000
106°
5050





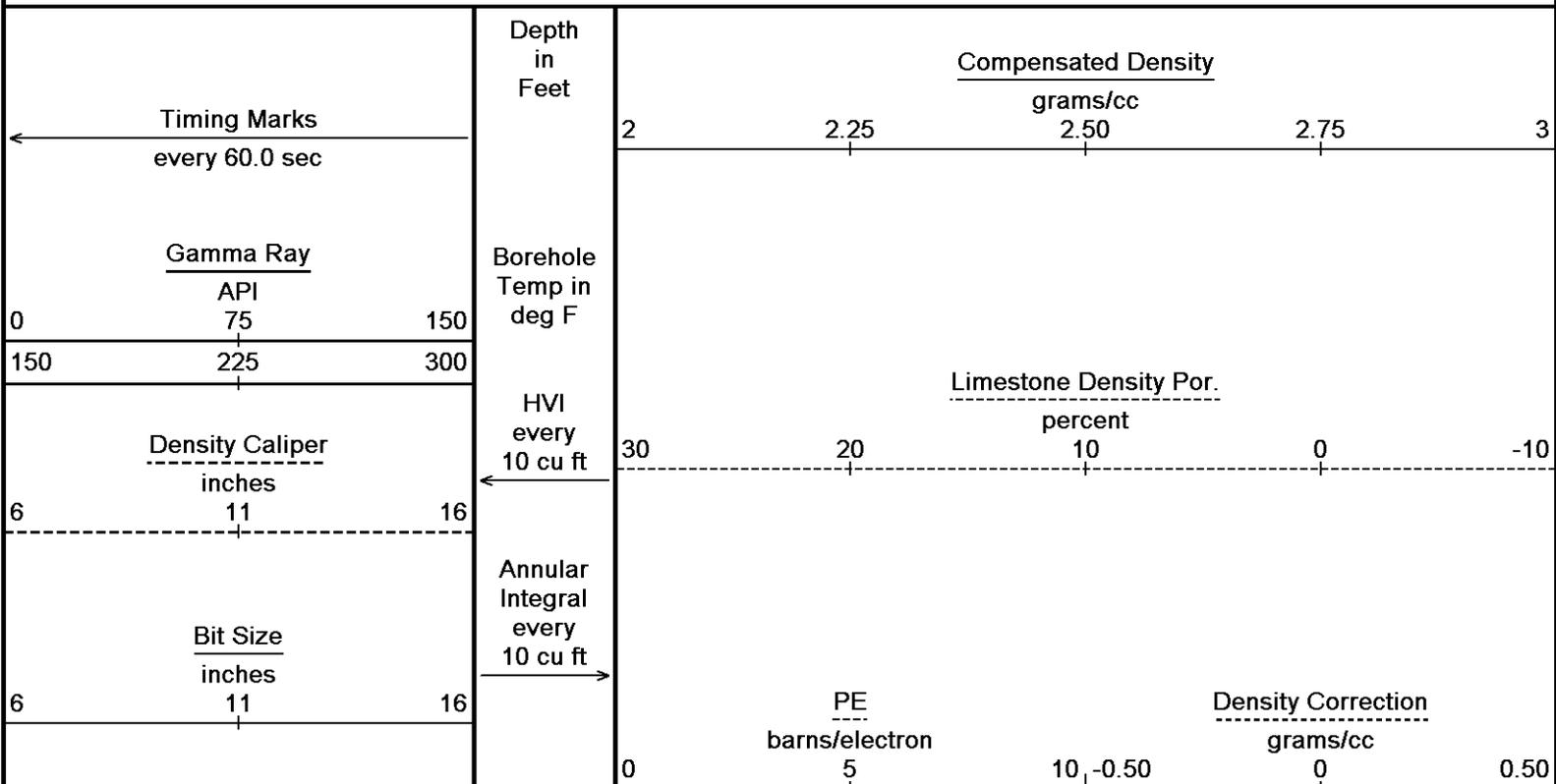


Depth Based Data - Maximum Sampling Increment 10.0cm
 Plotted on 15-MAR-2013 06:51
 Filename: C:\Minimus 13.04.8492\Data\McCoy Hill 'A' #2-23\McCoy Hill 'A' #2-23_002.dta
 Recorded on 15-MAR-2013 04:19
 System Versions: Logged with 13.04.8492 Plotted with 13.04.8492

5 INCH MAIN

REPEAT SECTION

Depth Based Data - Maximum Sampling Increment 10.0cm
 Plotted on 15-MAR-2013 06:51
 Filename: C:\Minimus 13.04.8492\Data\McCoy Hill 'A' #2-23\McCoy Hill 'A' #2-23_001.dta
 Recorded on 15-MAR-2013 03:58
 System Versions: Logged with 13.04.8492 Plotted with 13.04.8492



DST Uphole Tension
pounds

5000 0

Replay
Scale
1:240

4938

100

4950

105°

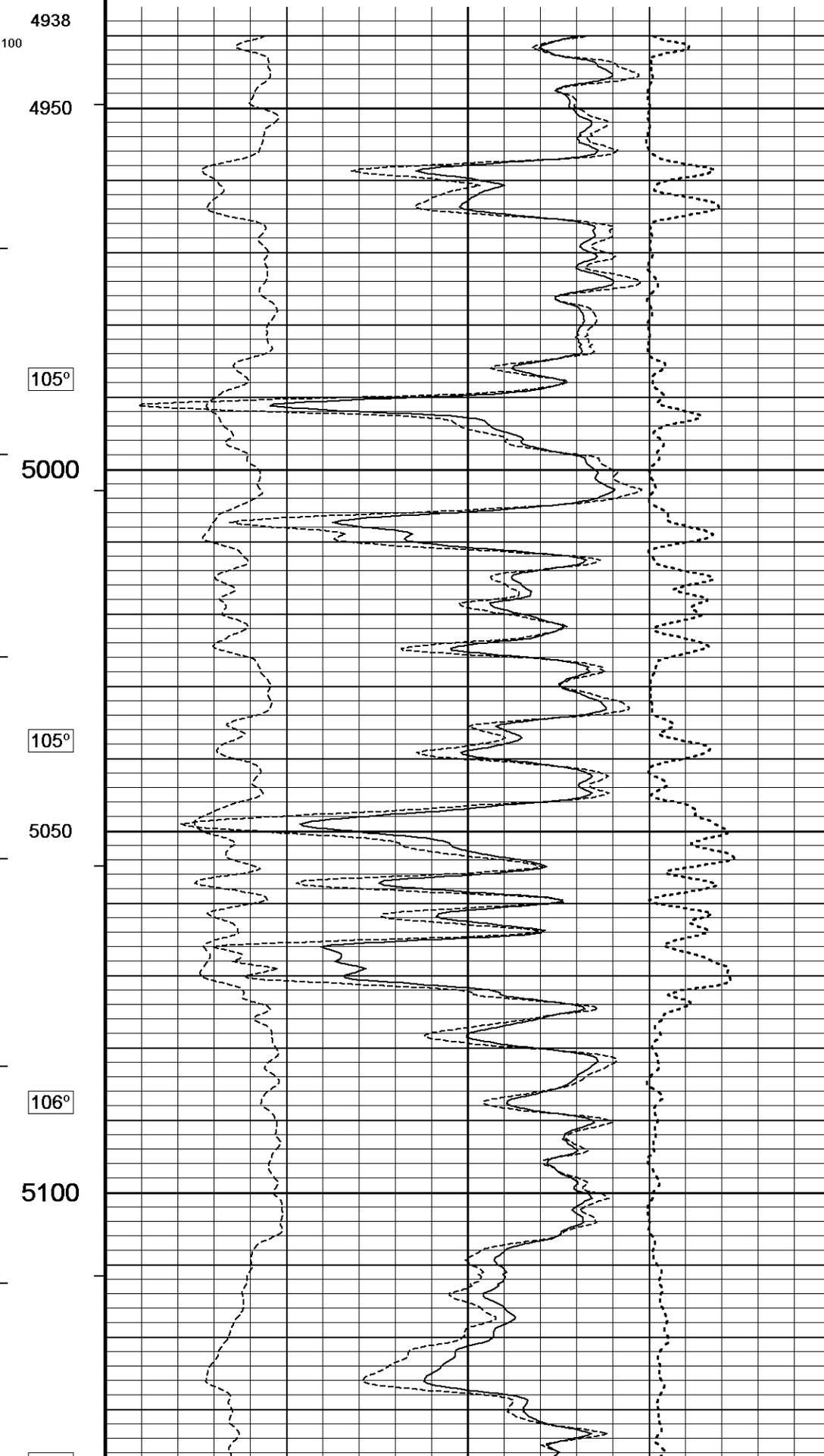
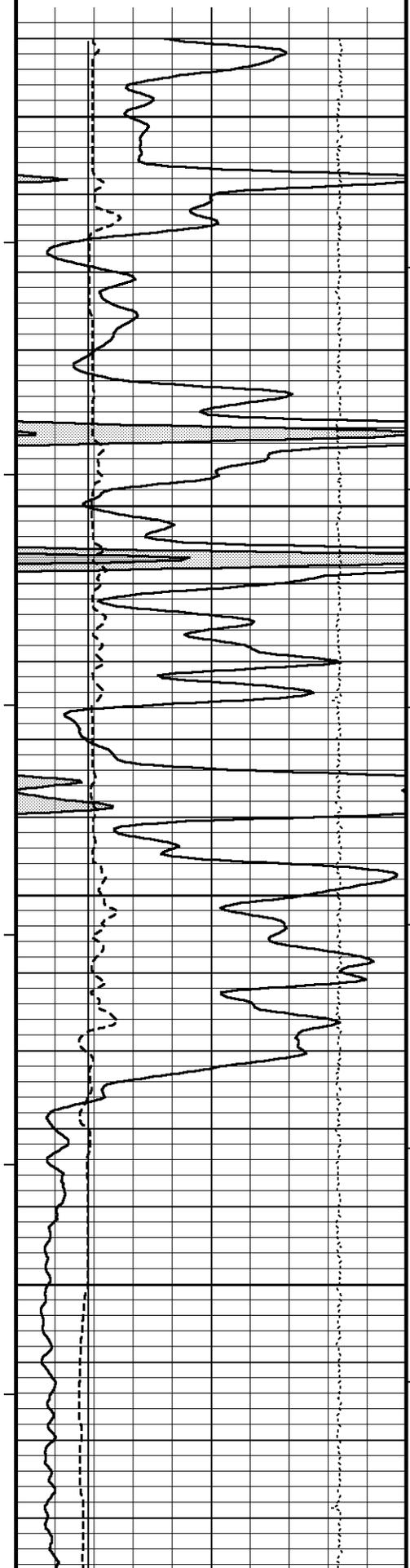
5000

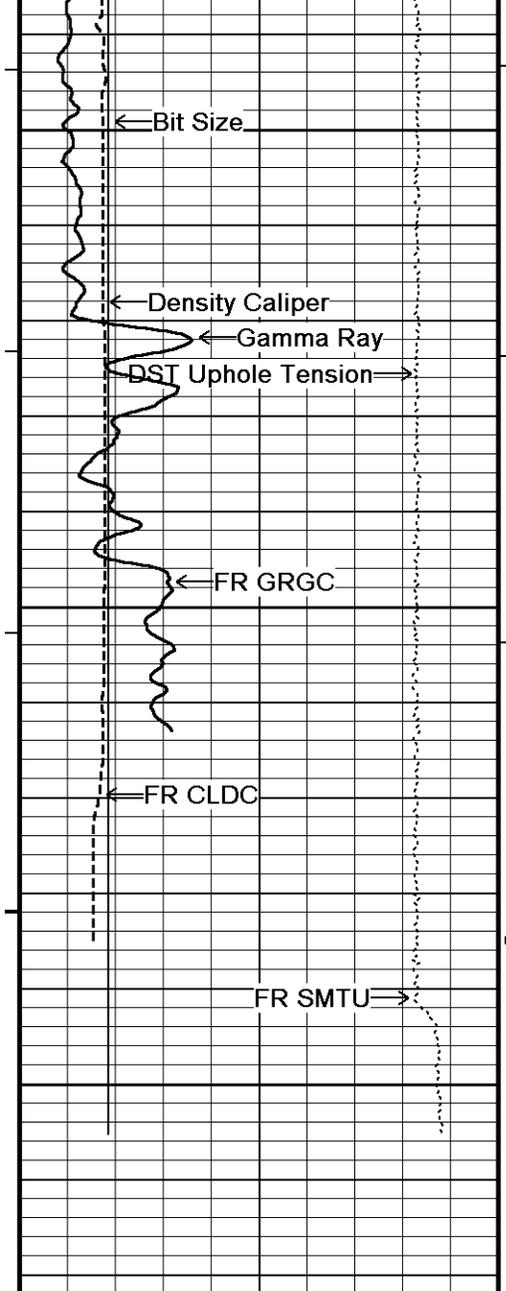
105°

5050

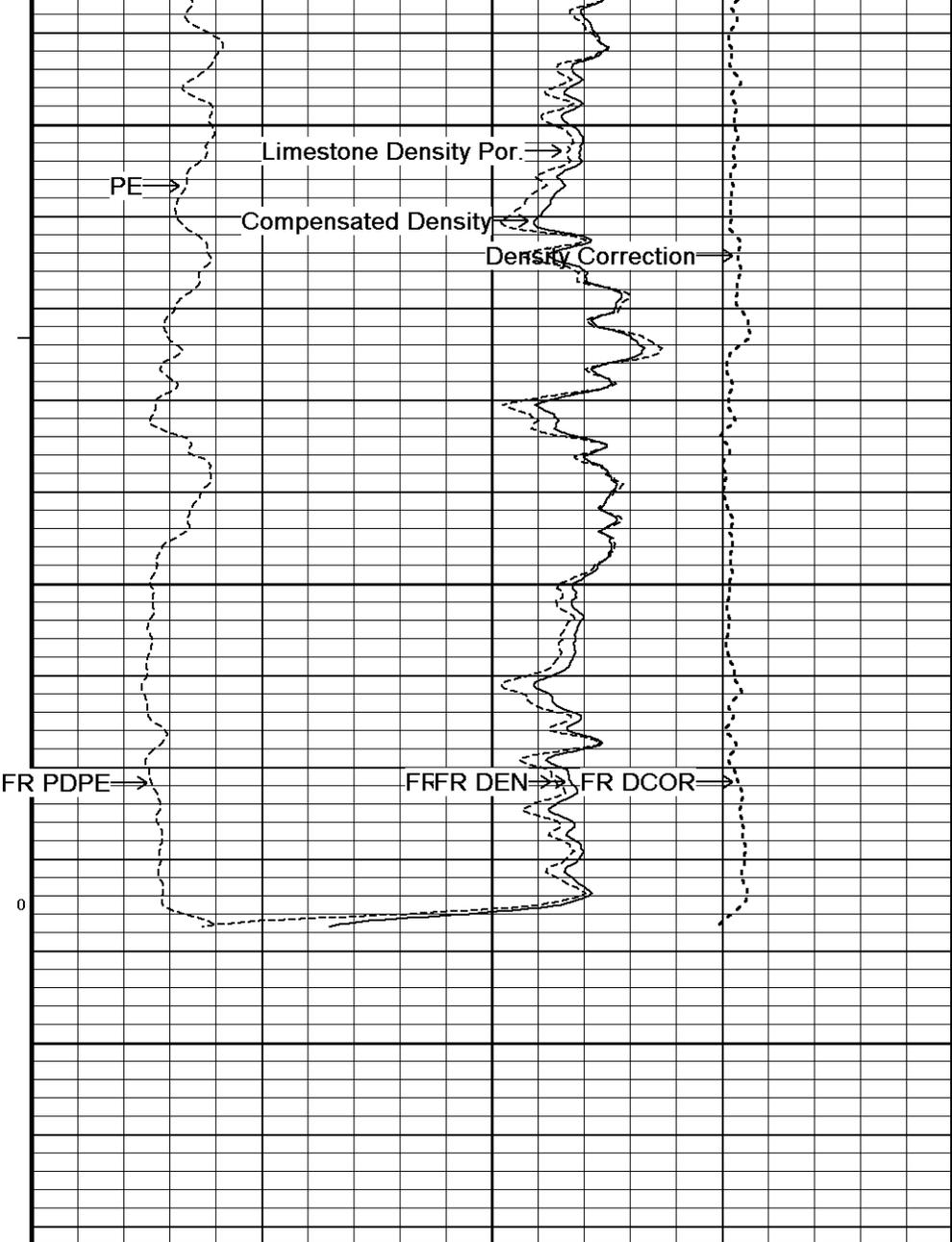
106°

5100

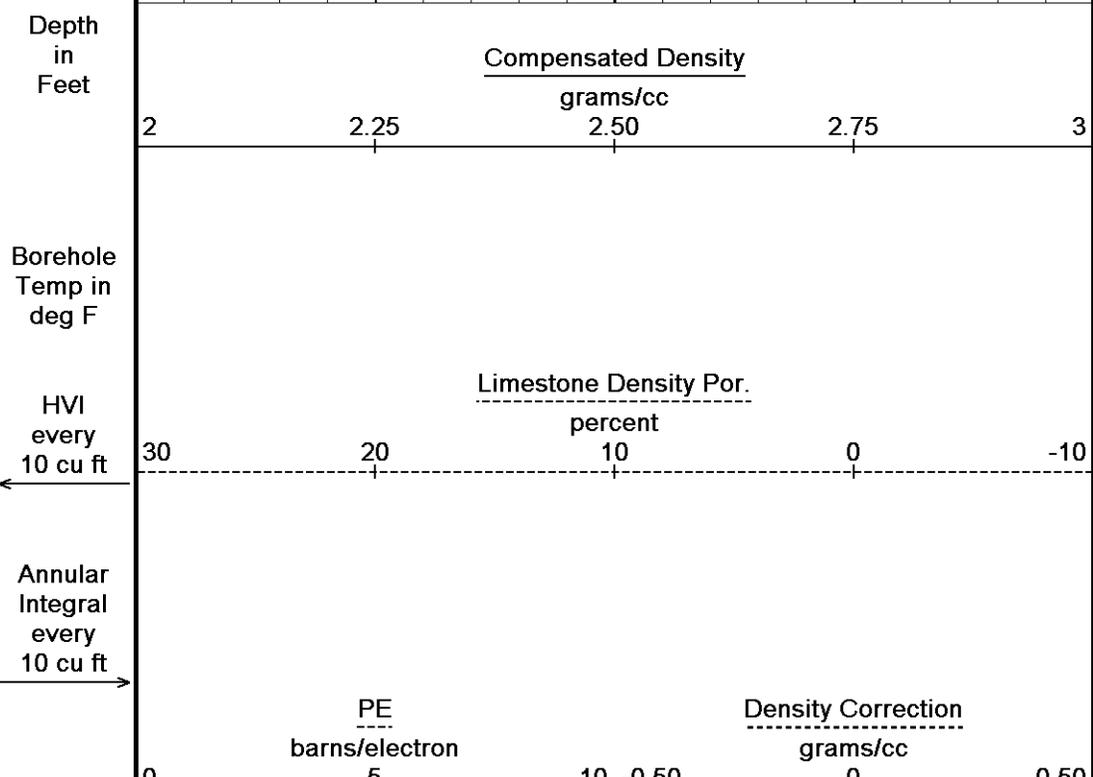




107°
 5150
 107°
 5200
 0
 5250
 5270
 Depth in Feet



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

Replay
Scale
1:240

Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 15-MAR-2013 06:51

Filename: C:\Minimus 13.04.8492\Data\McCoy Hill 'A' #2-23\McCoy Hill 'A' #2-23_001.dta

Recorded on 15-MAR-2013 03:58

System Versions: Logged with 13.04.8492 Plotted with 13.04.8492



REPEAT SECTION



BEFORE SURVEY CALIBRATION

C:\Minimus 13.04.8492\Data\McCoy Hill 'A' #2-23\McCoy Hill 'A' #2-23_001.dta

General Constants All 000

Last Edited on 15-MAR-2013,02:31

General Parameters

Mud Resistivity	0.460	ohm-metres
Mud Resistivity Temperature	81.000	degrees F
Water Level	0.000	feet
Borehole Fluid Processing	Wet Hole	

Hole/Annular Volume and Differential Caliper Parameters

HVOL Method	Single Caliper	
HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	N/A	
Annular Volume Diameter	5.500	inches
Caliper for Differential Caliper	Density Caliper	

Rwa Parameters

Porosity used	Base Density Porosity
Resistivity used	Array Ind. Six Res Rt
RWA Constant A	0.610
RWA Constant M	2.150

Gamma Calibration MCG-D.K 469

Field Calibration on 08-MAR-2013 17:05

	Measured	Calibrated (API)
Background	74	49
Calibrator (Gross)	1167	774
Calibrator (Net)	1093	725

Gamma Constants MCG-D.K 469

Last Edited on 15-MAR-2013,02:30

Gamma Calibrator Number	GR38	
Mud Density	1.13	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

High Resolution Temperature Calibration MCG-D.K 469

Field Calibration on 07-NOV-2012,10:25

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

High Resolution Temperature Constants MCG-D.K 469

Last Edited on 16-FEB-2013,15:17

Pre-filter Length	11
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Photo Density Calibration MPD-B 31

Base Calibration on 13-MAR-2013 15:17

Field Check on 13-MAR-2013 15:23

Density Calibration

Base Calibration

	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	46119	23502	59556	30836
Reference 2	19149	1933	24941	2541

Field Check at Base

681.1	838.4
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Field Check

680.3 839.9

PE Calibration

Base Calibration	WS	Measured WH	Ratio	Calibrated Ratio
Background	125	604		
Reference 1	19219	46004	0.421	0.371
Reference 2	5674	19062	0.301	0.272

Field Check at Base

125.1 603.7

Field Check

125.4 600.4

Density Constants MPD-B 31

Last Edited on 15-MAR-2013,02:30

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	1.13	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	0.00	

Caliper Calibration MPD-B 31

Base Calibration on 13-MAR-2013 15:27
Field Calibration on 13-MAR-2013 15:28

Base Calibration Reading No	Measured	Calibrator Size (in)
1	16480	3.99
2	25040	5.98
3	33712	7.97
4	42000	9.86
5	51360	11.92
6	N/A	N/A

Field Calibration

Measured Caliper (in) 5.94
Actual Caliper (in) 5.98

DOWNHOLE EQUIPMENT

C:\Minimus 13.04.8492\Data\McCoy Hill 'A' #2-23\McCoy Hill 'A' #2-23_001.dta

Compact Comms Gamma
MCG-D.K 469 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Micro-Resistivity
MMR-A 11 LG: 8.59 ft WT: 81.6 lb OD: 4.88 in



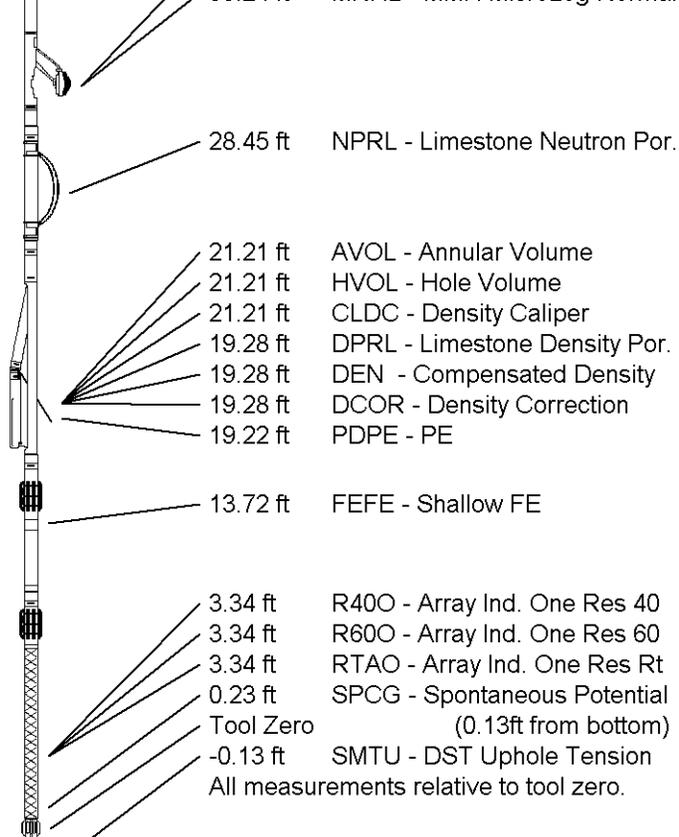
Compact Neutron
MDN-A.B 65 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

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

Compact Focussed Electric
MFE-B.J 352 LG: 6.05 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

Total Length: 48.78 ft Weight: 383.6 lb



COMPANY	MCCOY PETROLEUM CORPORATION
WELL	HILL 'A' #2-23
FIELD	ALFORD
PROVINCE/COUNTY	KIOWA
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	2248.00	feet	First Reading	5222.00	feet
Elevation Drill Floor	2247.00	feet	Depth Driller	5240.00	feet
Elevation Ground Level	2237.00	feet	Depth Logger	5241.00	feet



Weatherford®

COMPACT PHOTO DENSITY
COMPENSATED NEUTRON
MICRORESISTIVITY LOG