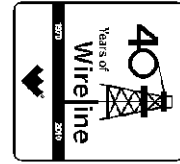




Weatherford[®]

**COMPACT PHOTO DENSITY
COMPENSATED NEUTRON
MICRORESISTIVITY LOG**

COMPANY **JO-ALLYN OIL CO., INC.**
WELL **HOWELL # 1-10**
FIELD **SNAKE CREEK WEST**
PROVINCE/COUNTY **CLARK**
COUNTRY/STATE **U.S.A. / KANSAS**
LOCATION **SW SE SE**
330' FSL & 990' FEL



SEC	TWP	RGE	Other Services	Elevations:
10	34S	22W	MA/IM/FE	KB 1859.00 DF 1857.00 GL 1852.00
API Number	15-025-21535			
Permit Number				
Permanent Datum	G.L., Elevation 1852 feet			
Log Measured From	KB			
Drilling Measured From	K.B. @ 7 FEET			

Date	21-DEC-2011		
Run Number	ONE		
Depth Driller	5600.00	feet	
Depth Logger	5599.00	feet	
First Reading	5576.00	feet	
Last Reading	4330.00	feet	
Casing Driller	750.00	feet	
Casing Logger	754.00	feet	
Bit Size	7.875	inches	
Hole Fluid Type	CHEMICAL		
Density / Viscosity	9.30 lb/USg	50.00 CP	
PH / Fluid Loss	11.00	10.00 ml/30Min	
Sample Source	FLOWLINE		
Rm @ Measured Temp	1.30 @ 65.0	ohm-m	
Rmf @ Measured Temp	1.04 @ 65.0	ohm-m	
Rmc @ Measured Temp	1.56 @ 65.0	ohm-m	
Source Rmf / Rmc	CALC	CALC	
Rm @ BHT	0.75 @ 115.0	ohm-m	
Time Since Circulation	5 HOURS		
Max Recorded Temp	115.00	deg F	
Equipment Name	COMPACT		
Equipment / Base	13057	LIB	
Recorded By	A. GIAMBALVO		
Witnessed By	ALLEN BARBY		
S.O. / JOB #	3531240	LB11-321	

BOREHOLE RECORD

Last Edited: 22-DEC-2011 04:40

Bit Size inches	Depth From feet	Depth To feet
7.875	754.00	5599.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	7.00	754.00	24.00

REMARKS

Tools Used: MPD, MCG, MDN, MAI, MFE, MML
 Hardware: MPD: 8 inch profile plate used. MDN: Dual Bowspring used.
 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.
 Annular volume with inch production casing = 325 cu. ft.
 Service order #3531240
 Rig: Landmark # 2
 Calipers stuck at surface casing and had to be closed to enter, company man requested we not repeat log section near the shoe.
 Engineer: A. Giambalvo
 Operator(s): B. Reeves

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.



5 INCH MAIN PASS



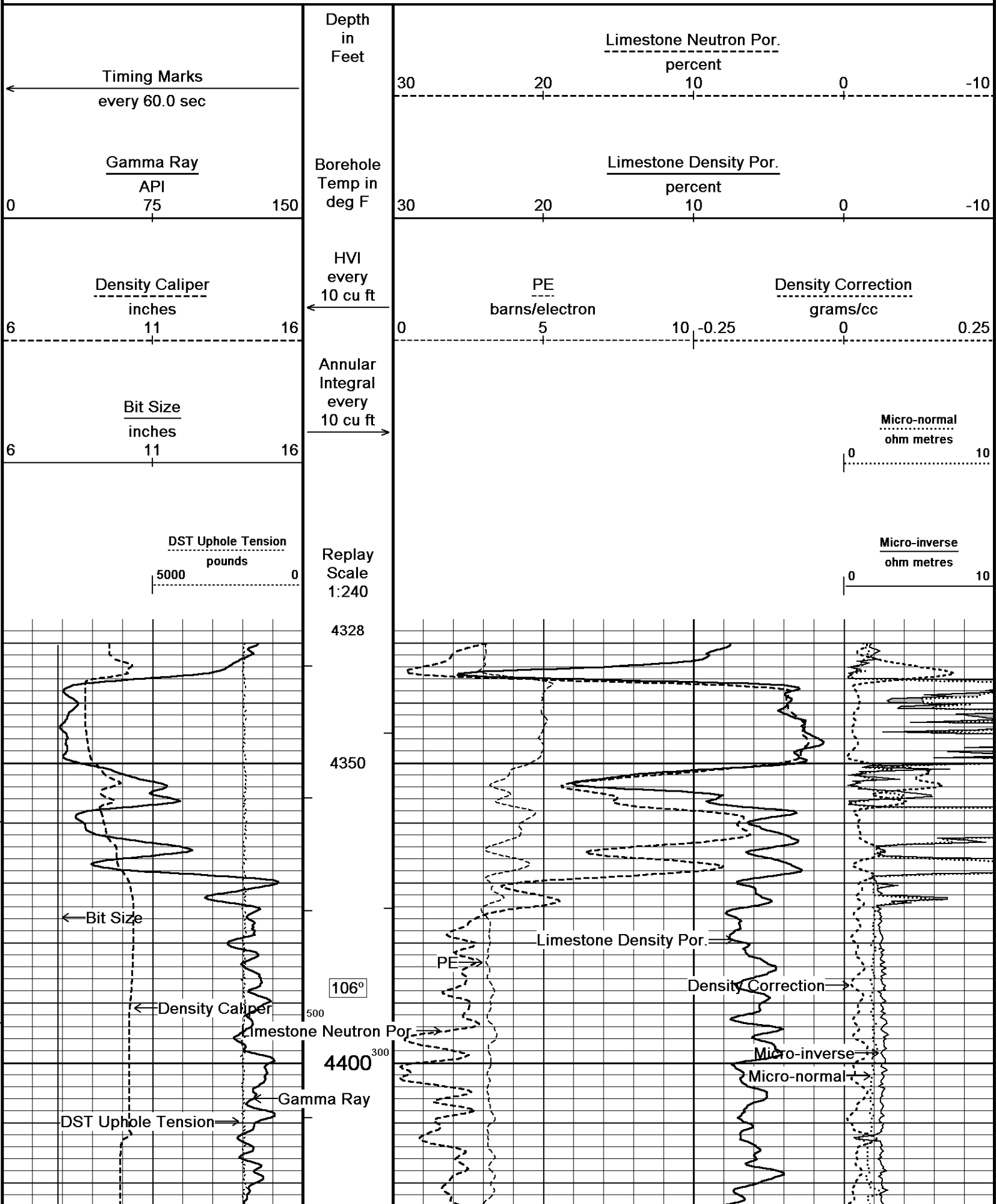
Depth Based Data - Maximum Sampling Increment 10.0cm

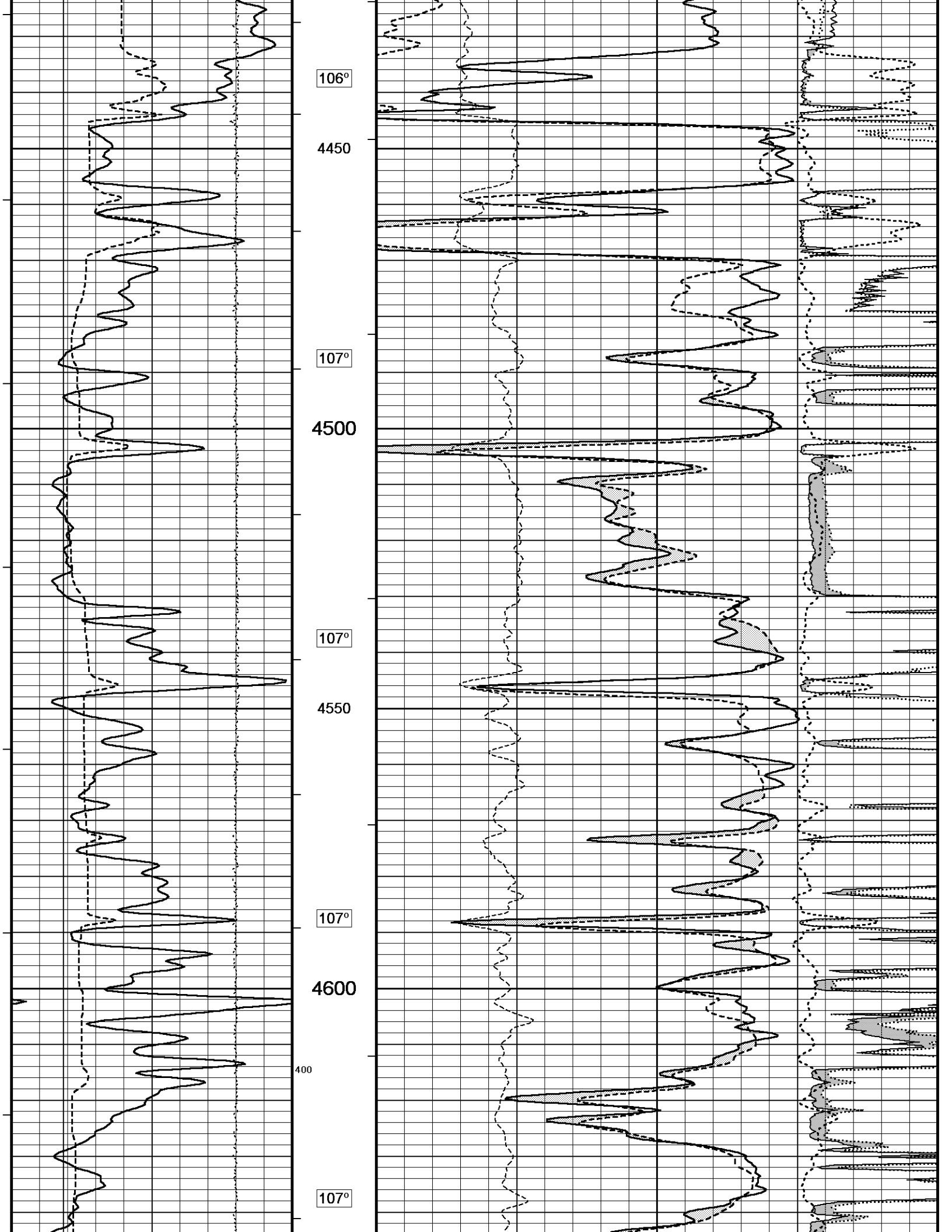
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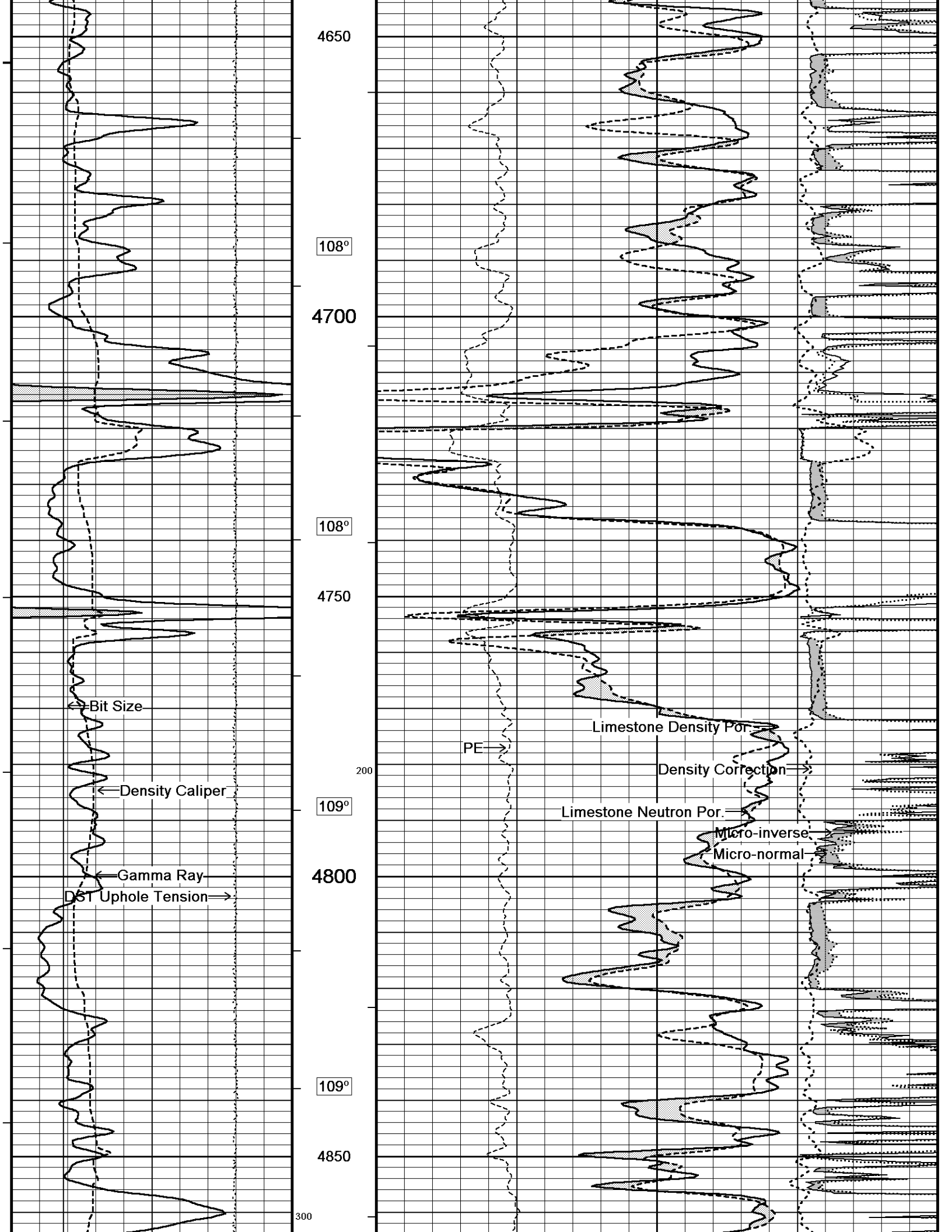
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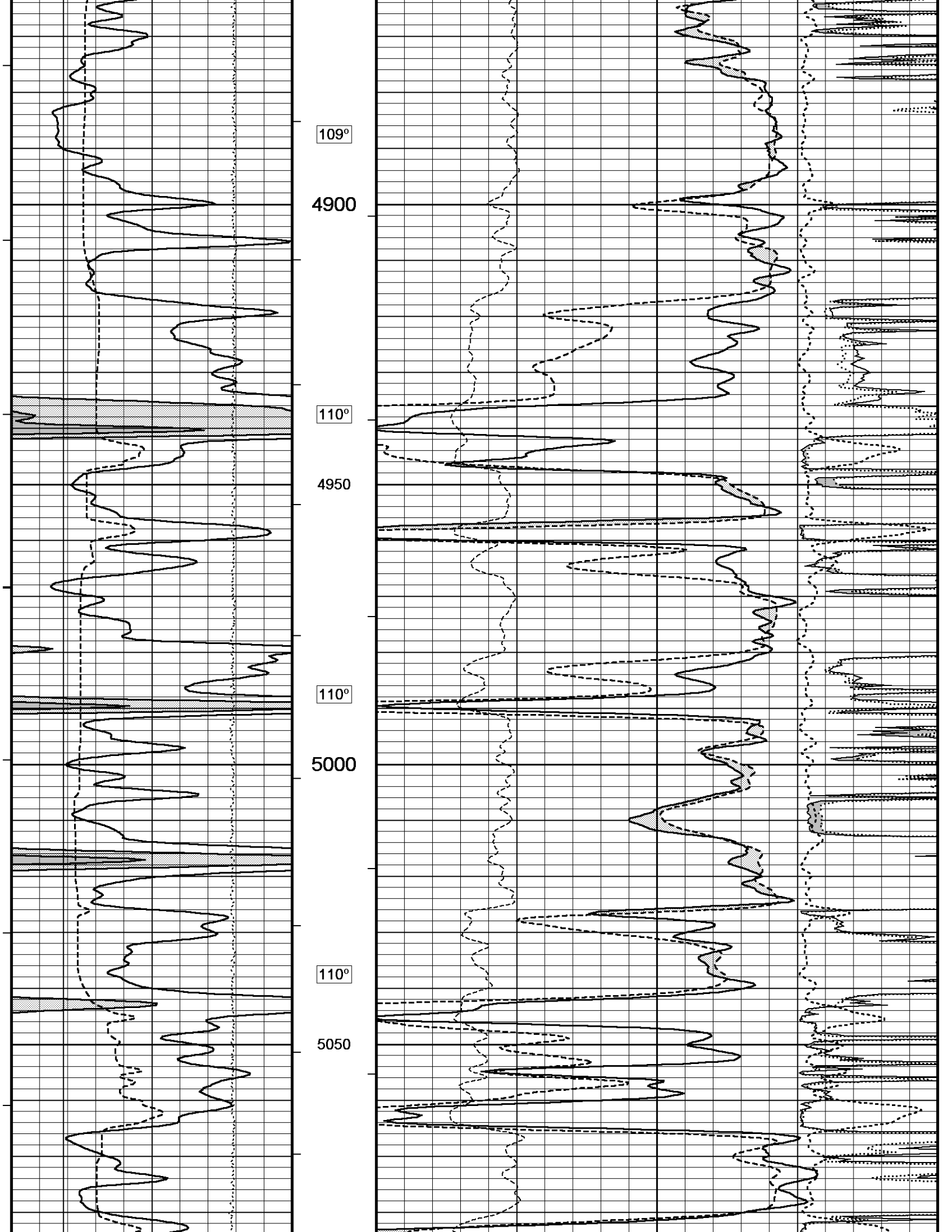
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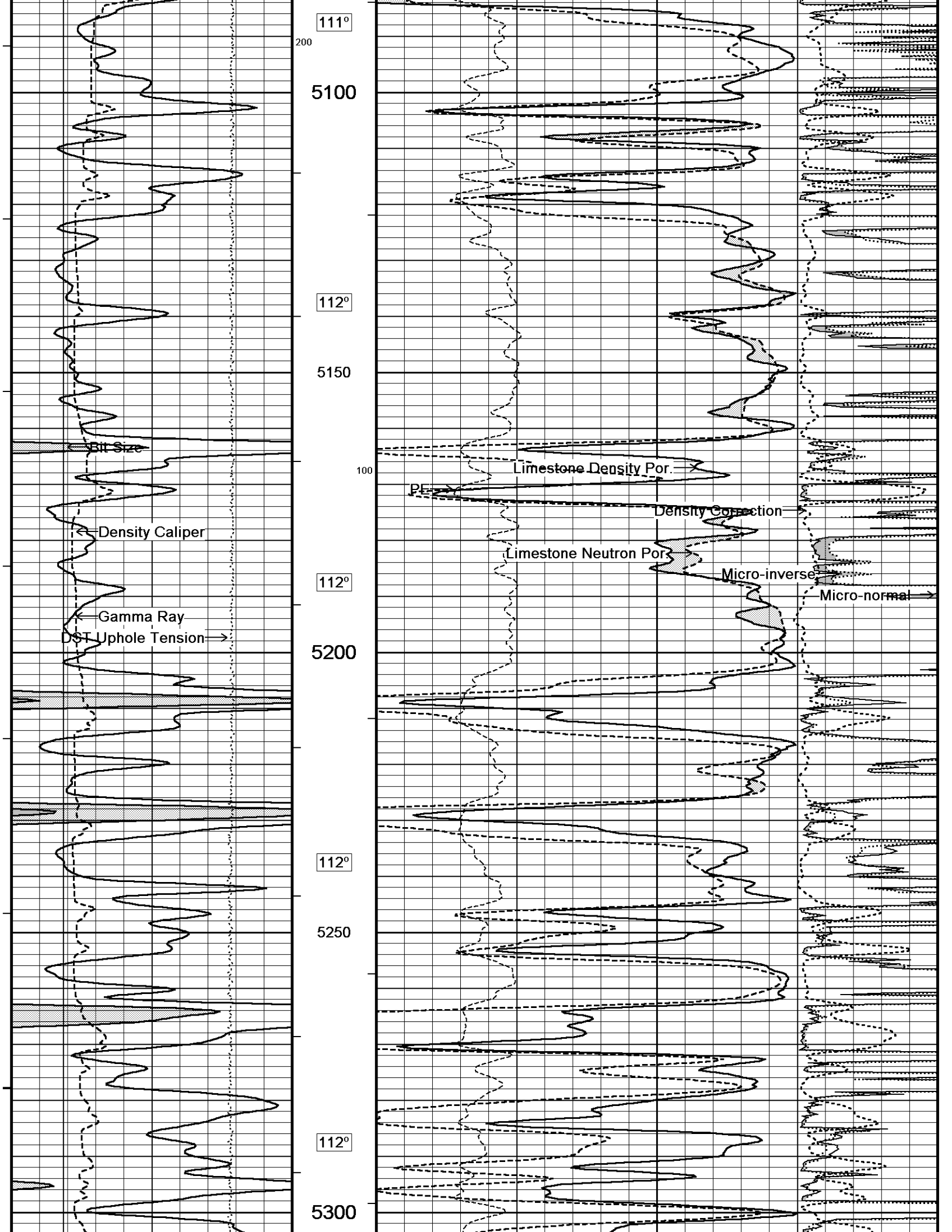
System Versions: Logged with 11.03.4044 Plotted with 11.03.4044

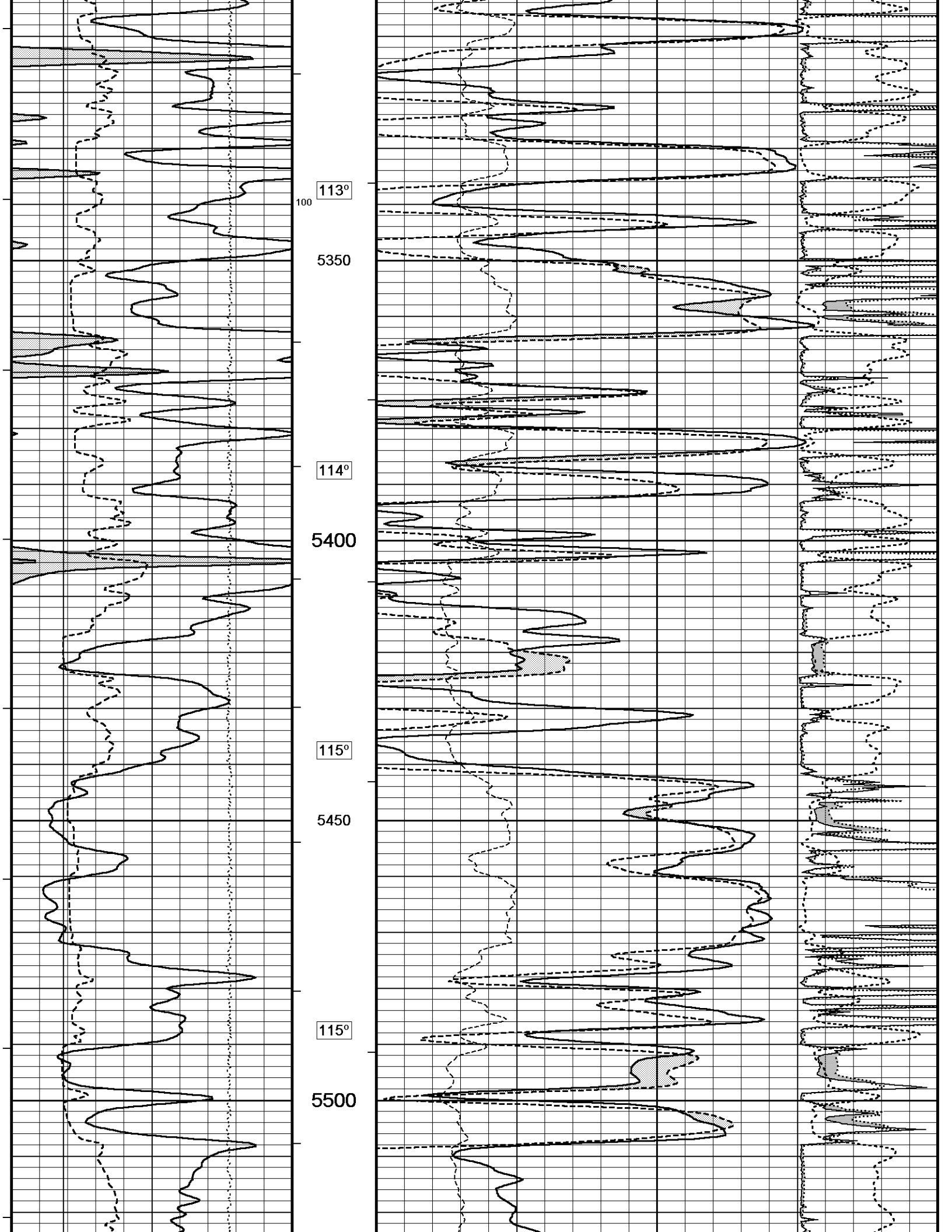


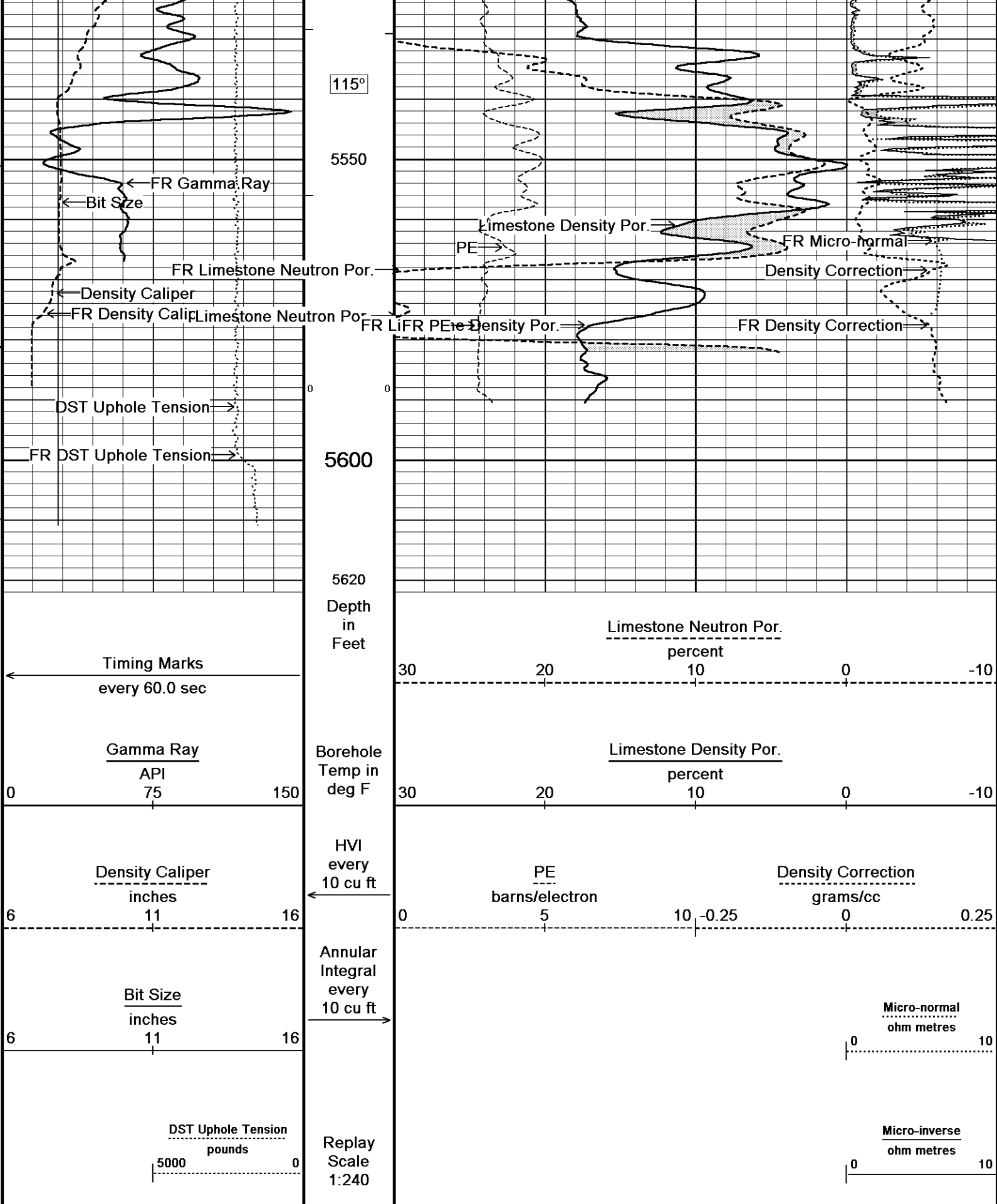












Depth Based Data - Maximum Sampling Increment 10.0cm
 Plotted on 22-DEC-2011 04:53
 Filename: C:\Minimus 11.03.4044\Data\Jo-Allyn Howell # 1-10\Jo-Allyn Howell # 1-10_003.dta
 Recorded on 22-DEC-2011 01:56
 System Versions: Logged with 11.03.4044 Plotted with 11.03.4044

5 INCH REPEAT PASS

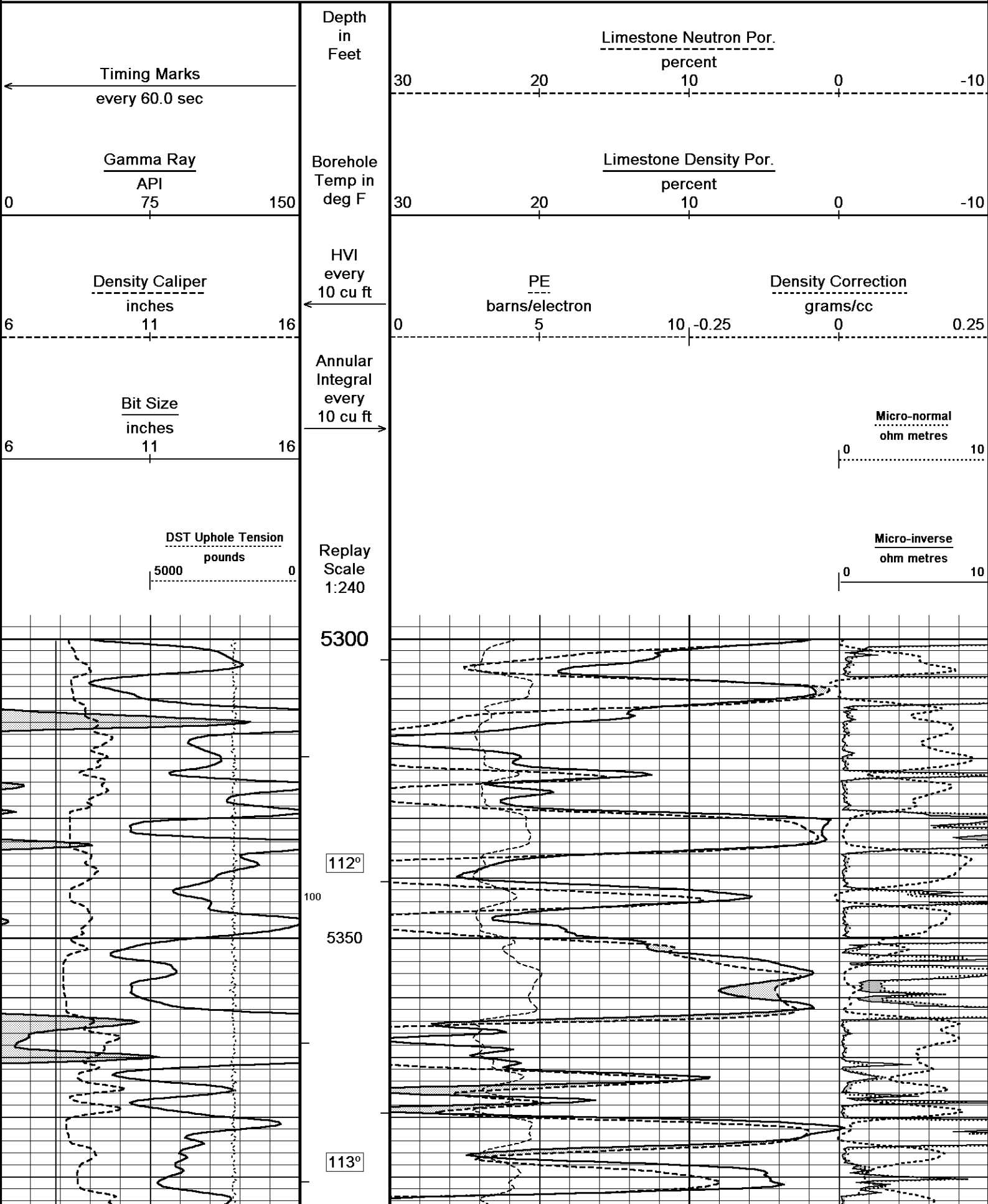
Depth Based Data - Maximum Sampling Increment 10.0cm

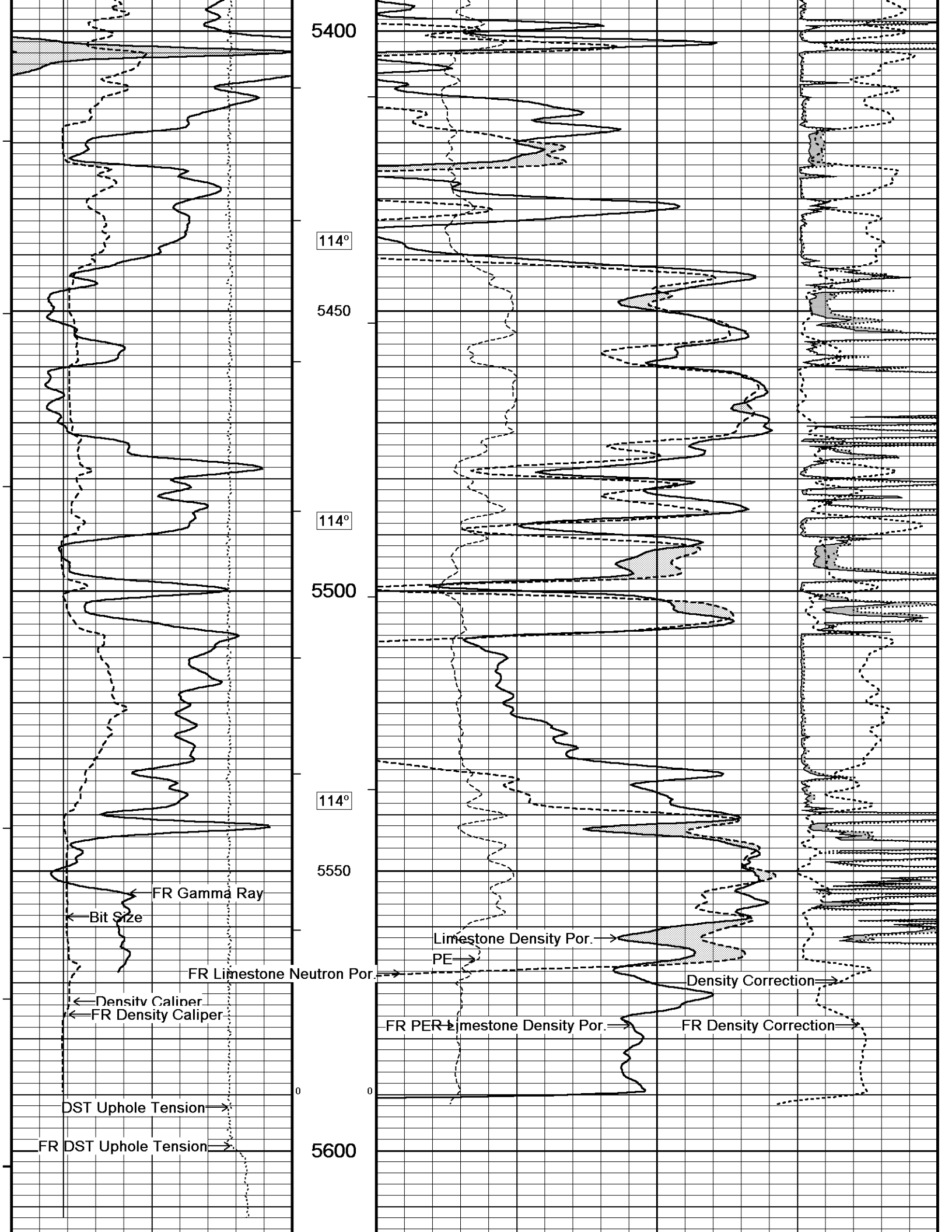
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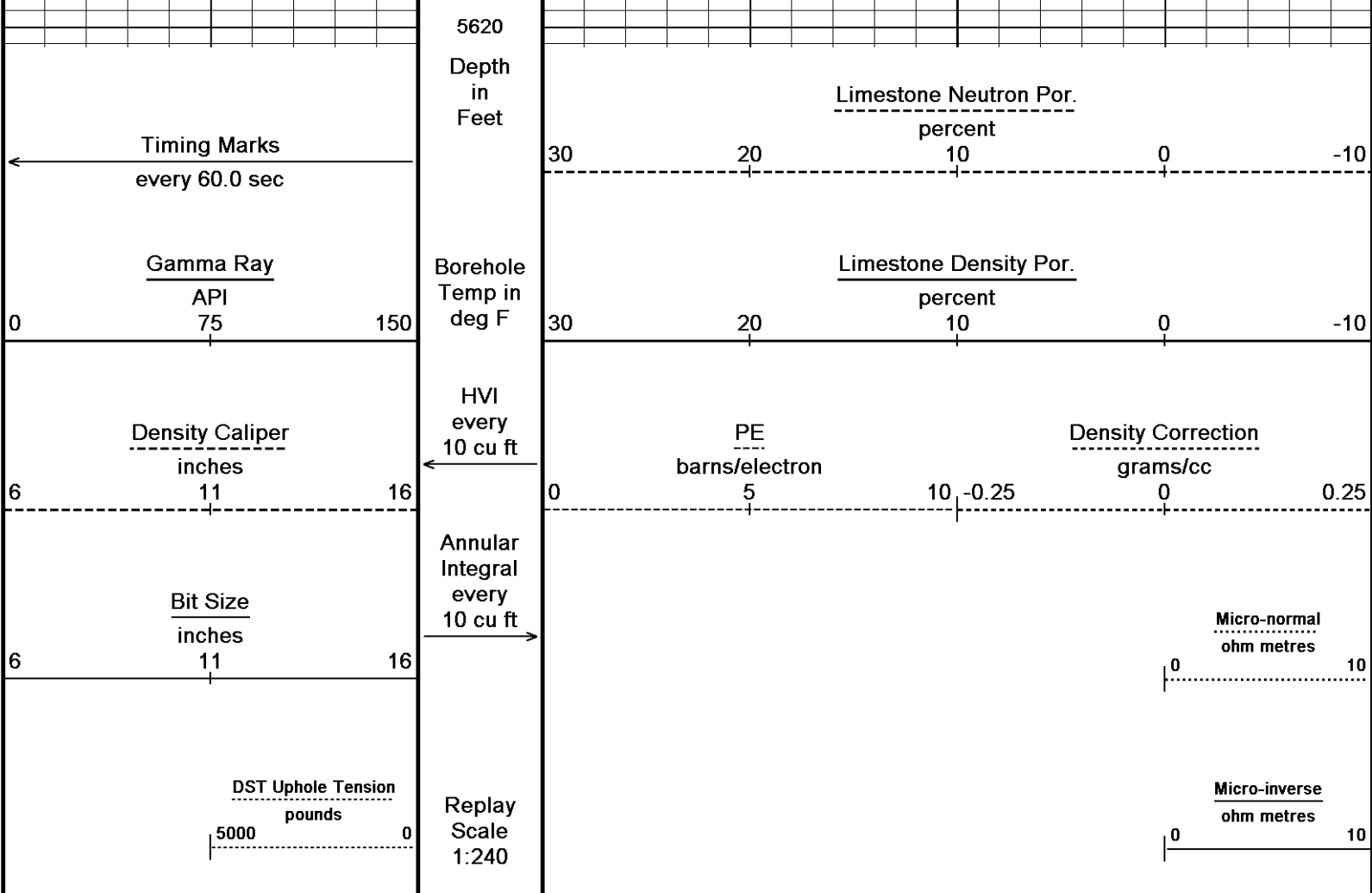
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Recorded on 22-DEC-2011 01:33

System Versions: Logged with 11.03.4044 Plotted with 11.03.4044



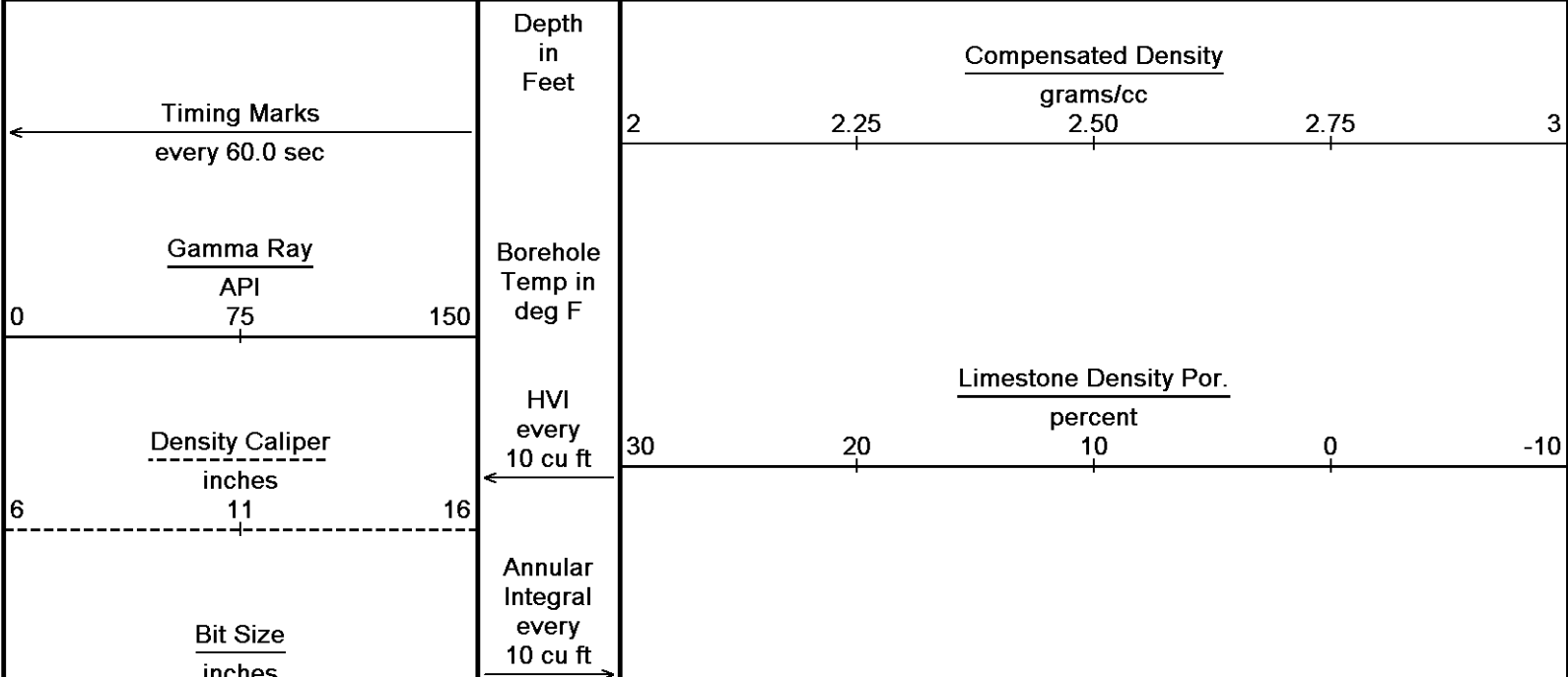




↑ **5 INCH REPEAT PASS** ↑

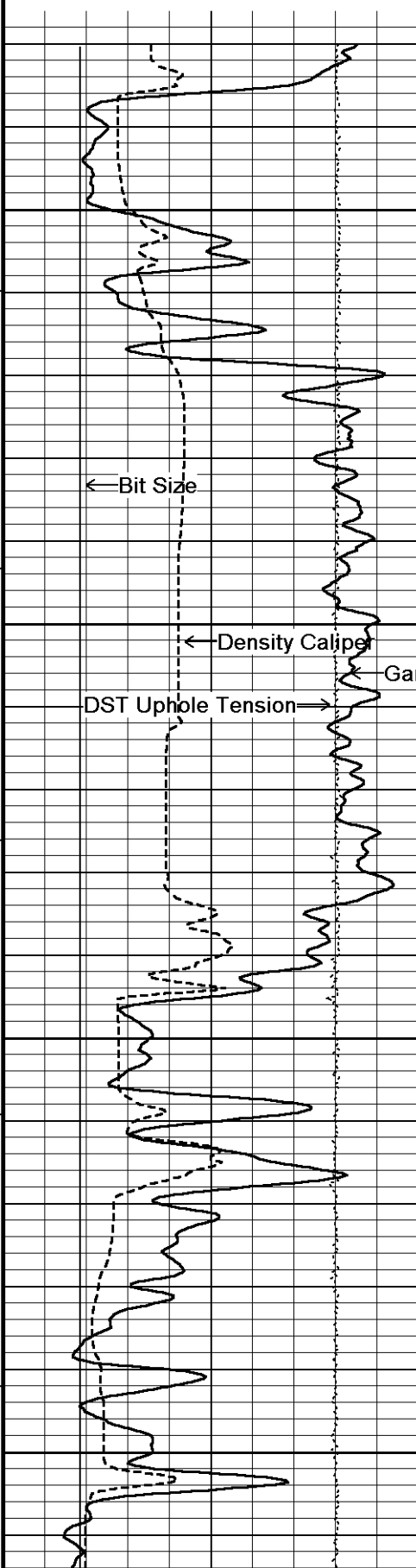
↓ **5 INCH MAIN PASS** ↓

Depth Based Data - Maximum Sampling Increment 10.0cm
 Plotted on 22-DEC-2011 04:53
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 Recorded on 22-DEC-2011 01:56
 System Versions: Logged with 11.03.4044 Plotted with 11.03.4044



6 11 16

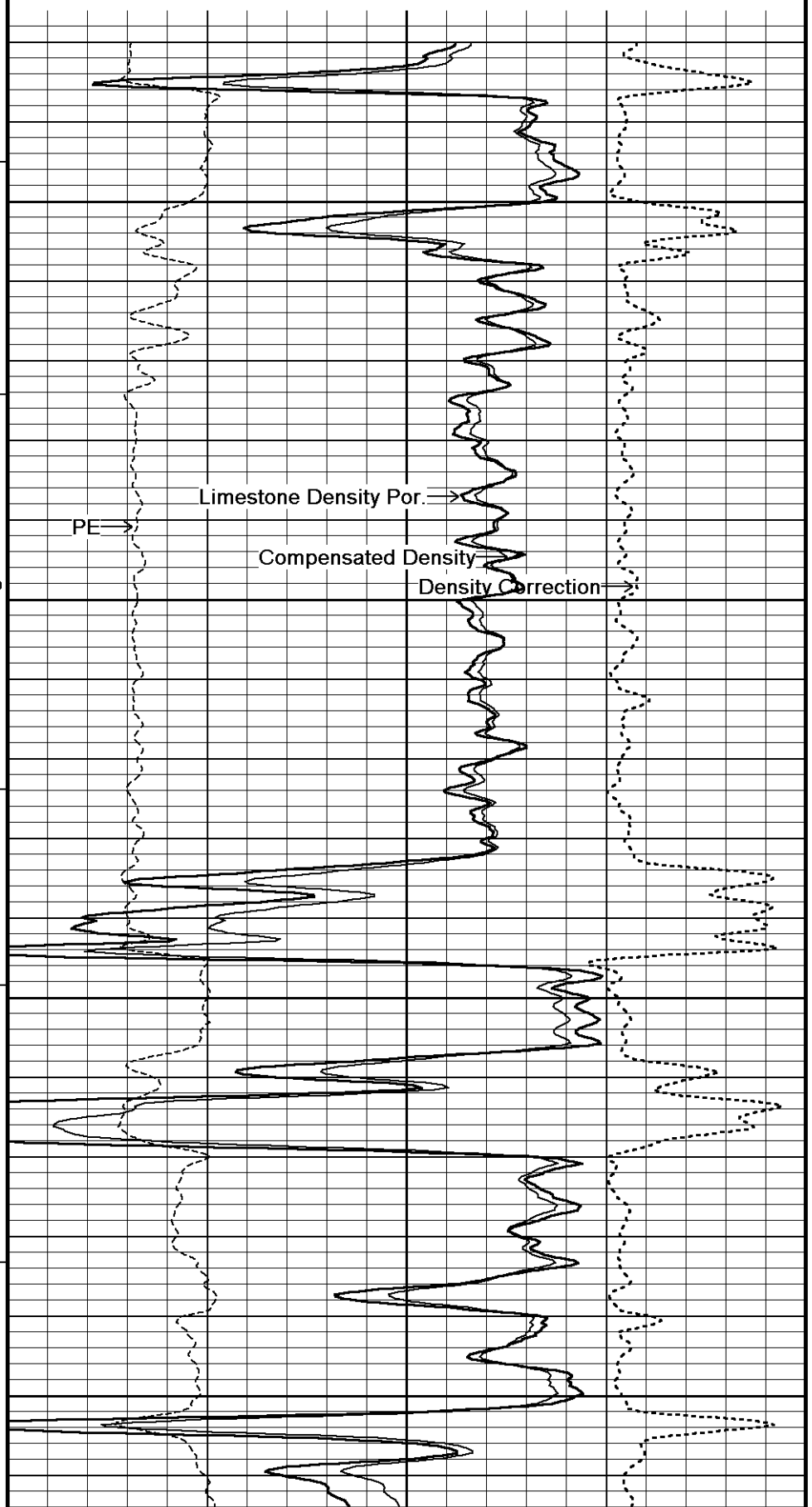
DST Uphole Tension
pounds
5000 0



Replay
Scale
1:240

4328
4350
106°
500
300
4400
106°
4450
107°
4500

PE barns/electron 0 5 10
Density Correction grams/cc -0.25 0 0.25



← Bit Size

← Density Caliper

DST Uphole Tension →

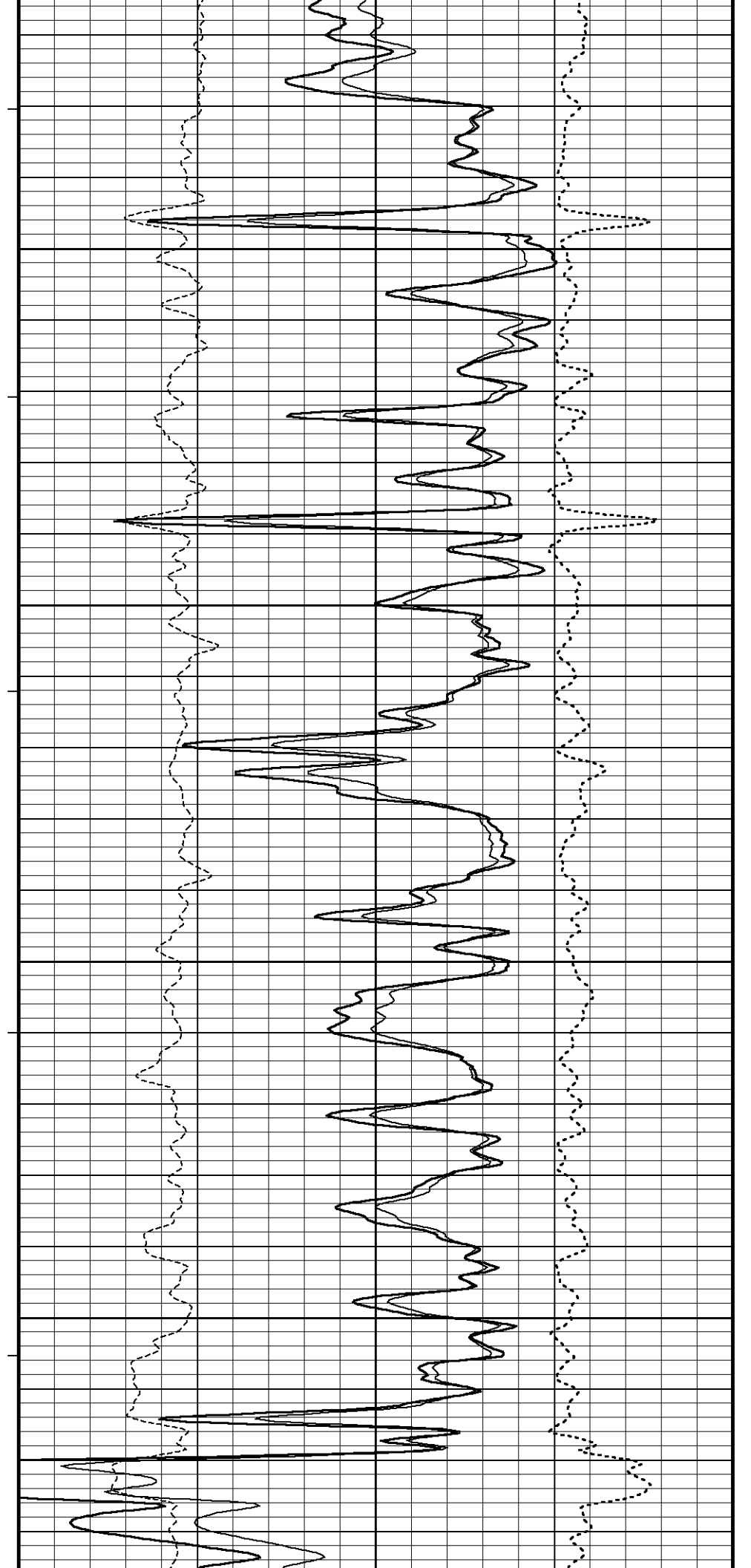
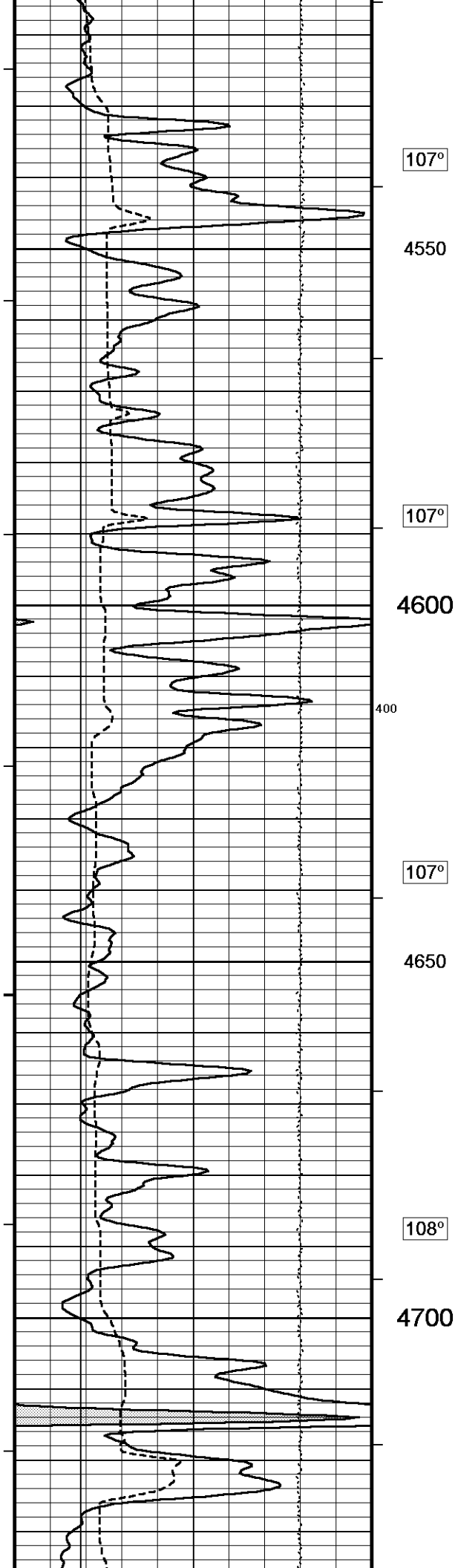
Gamma Ray

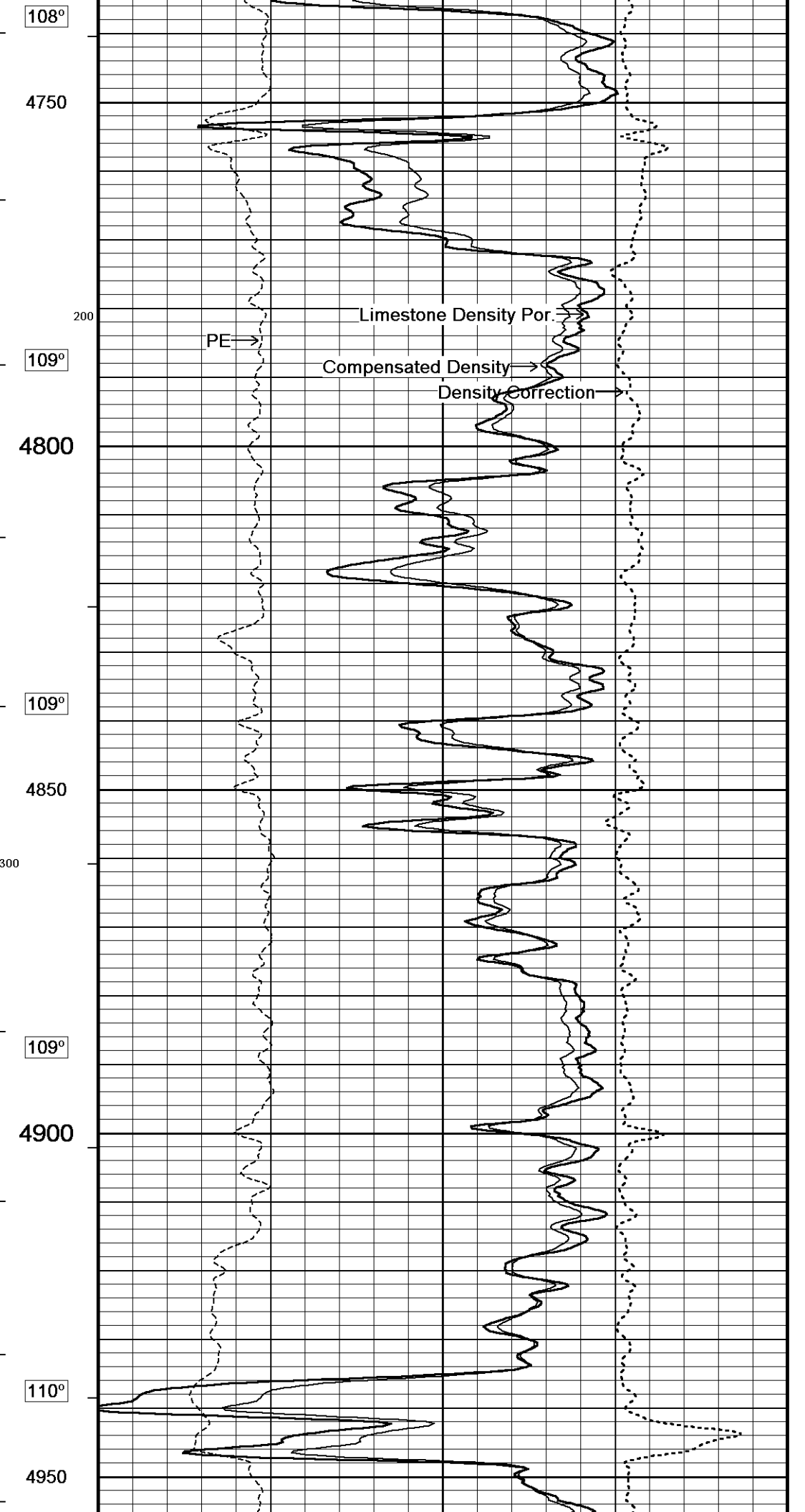
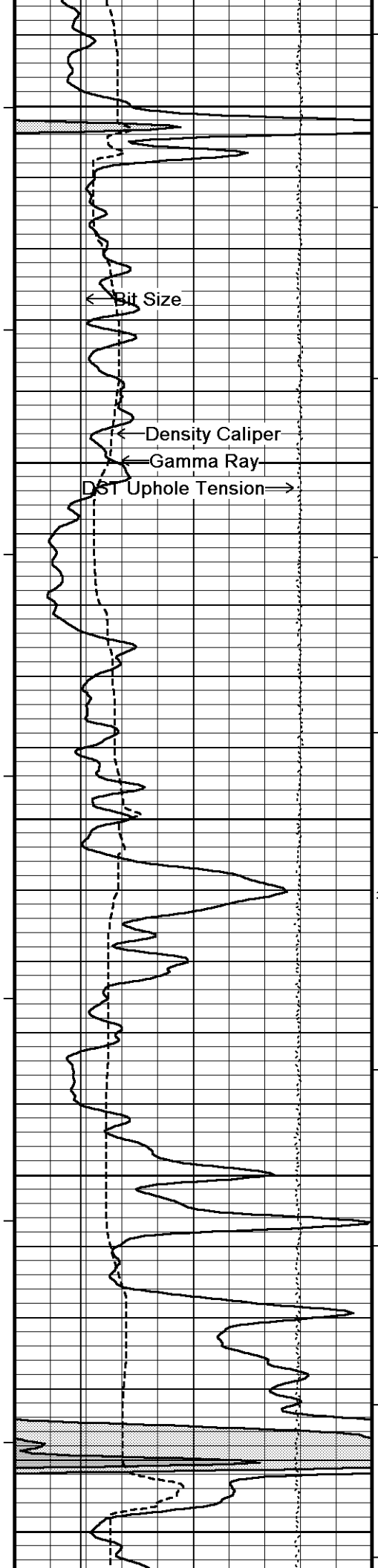
PE →

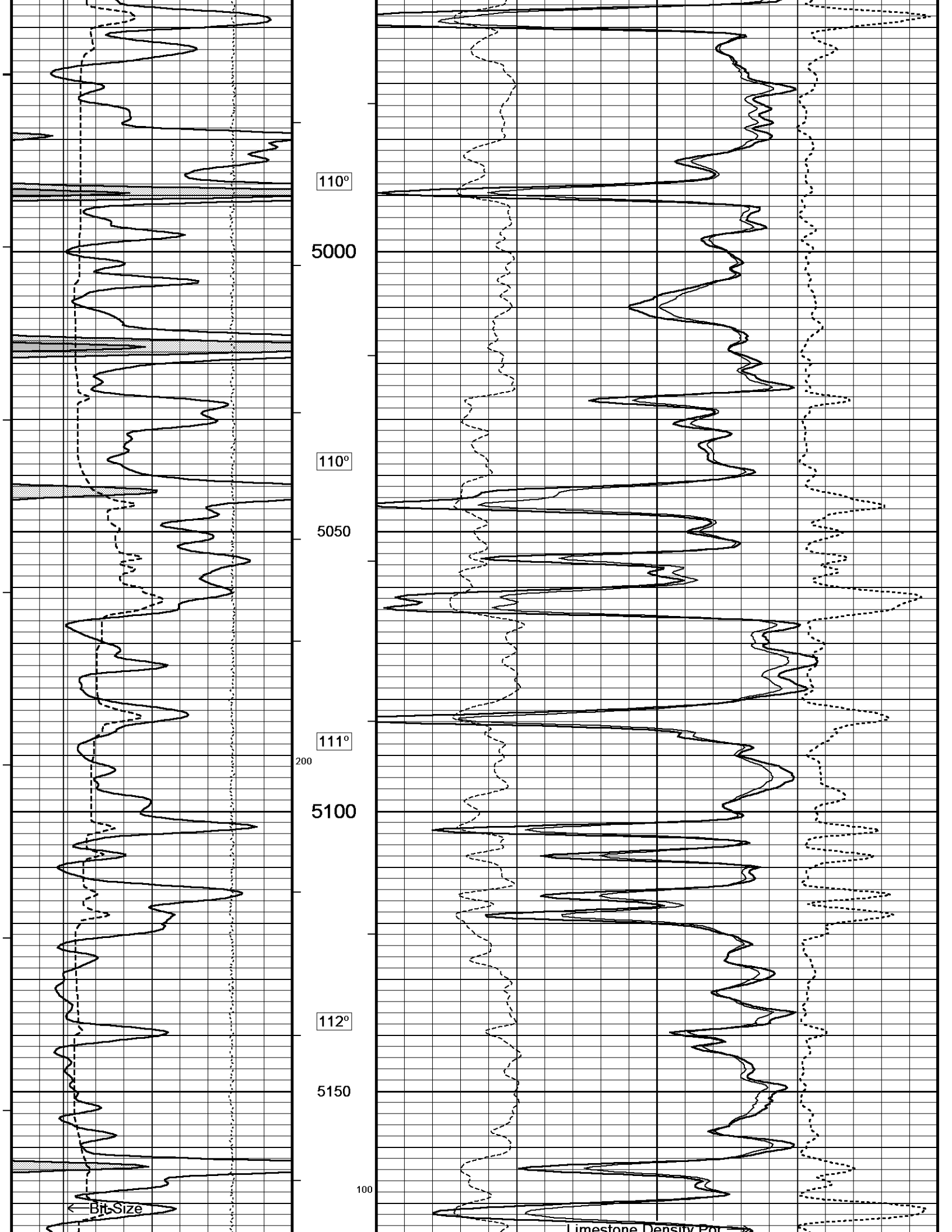
Limestone Density Por. →

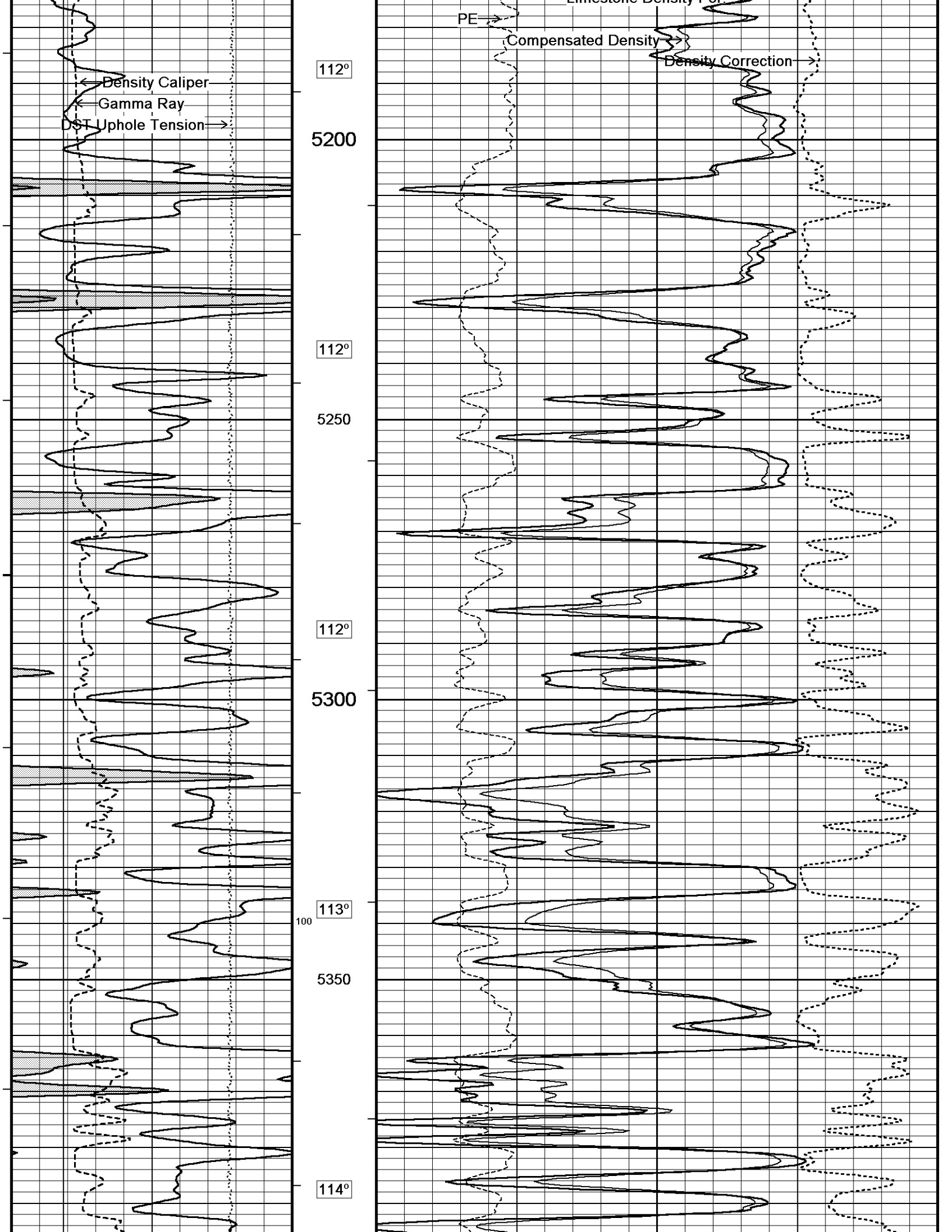
Compensated Density

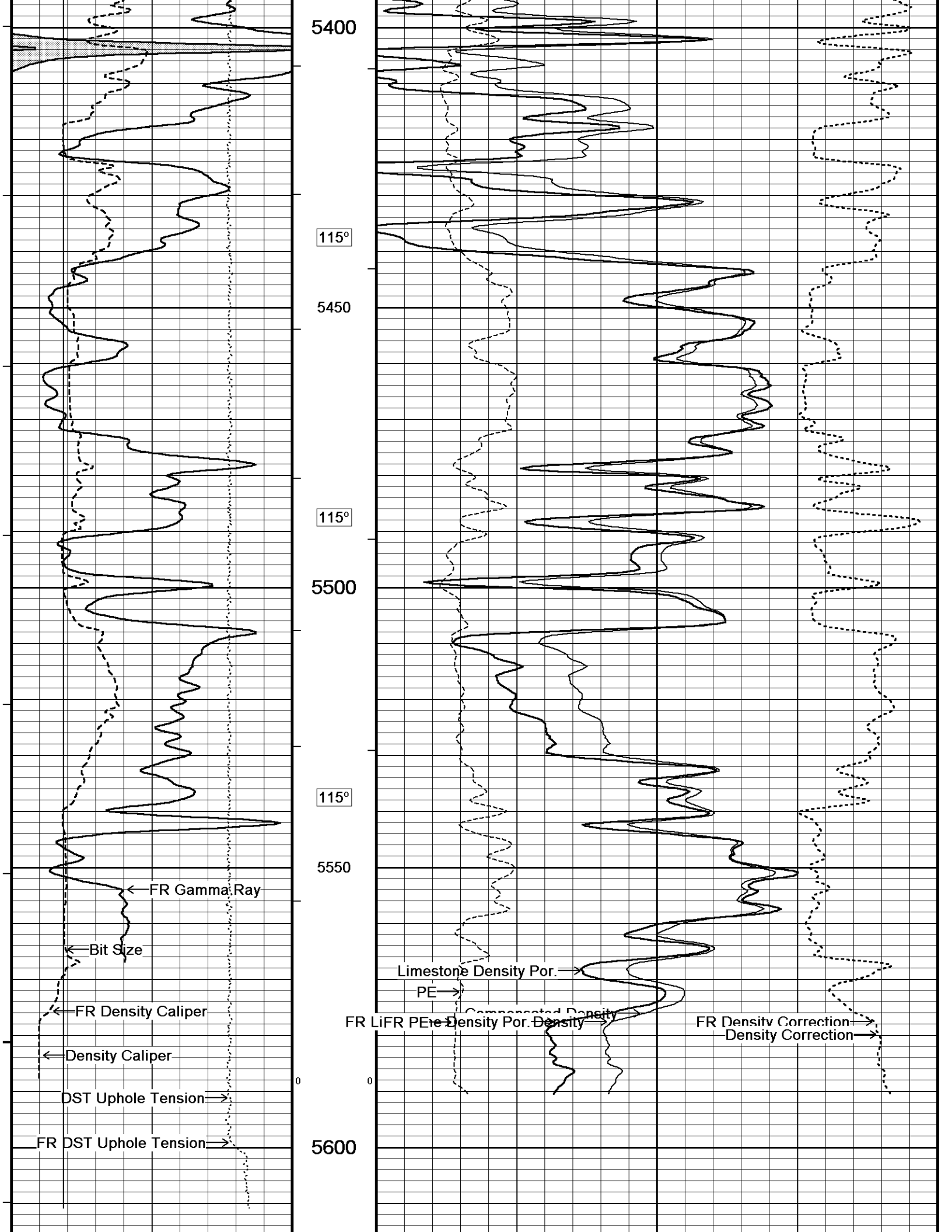
Density Correction →

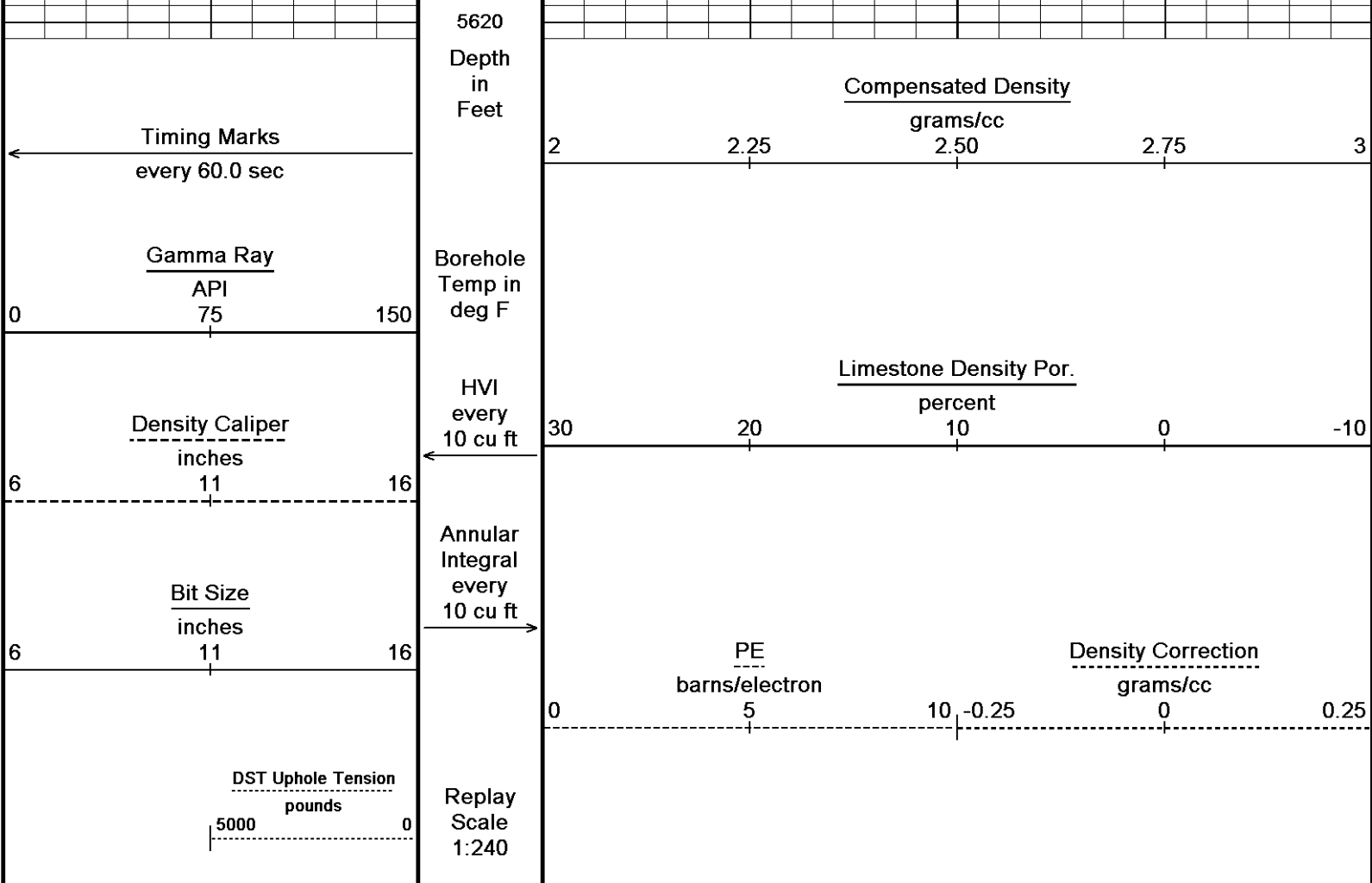








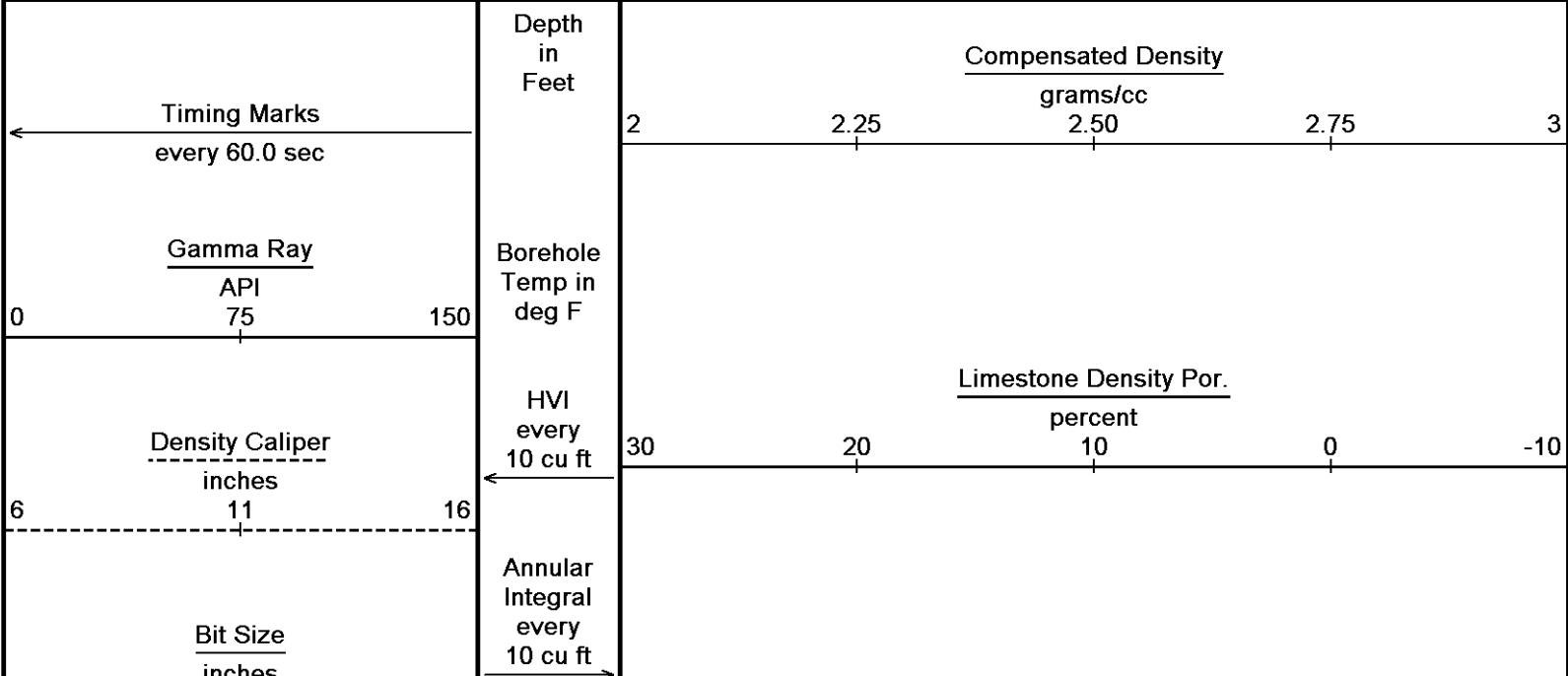


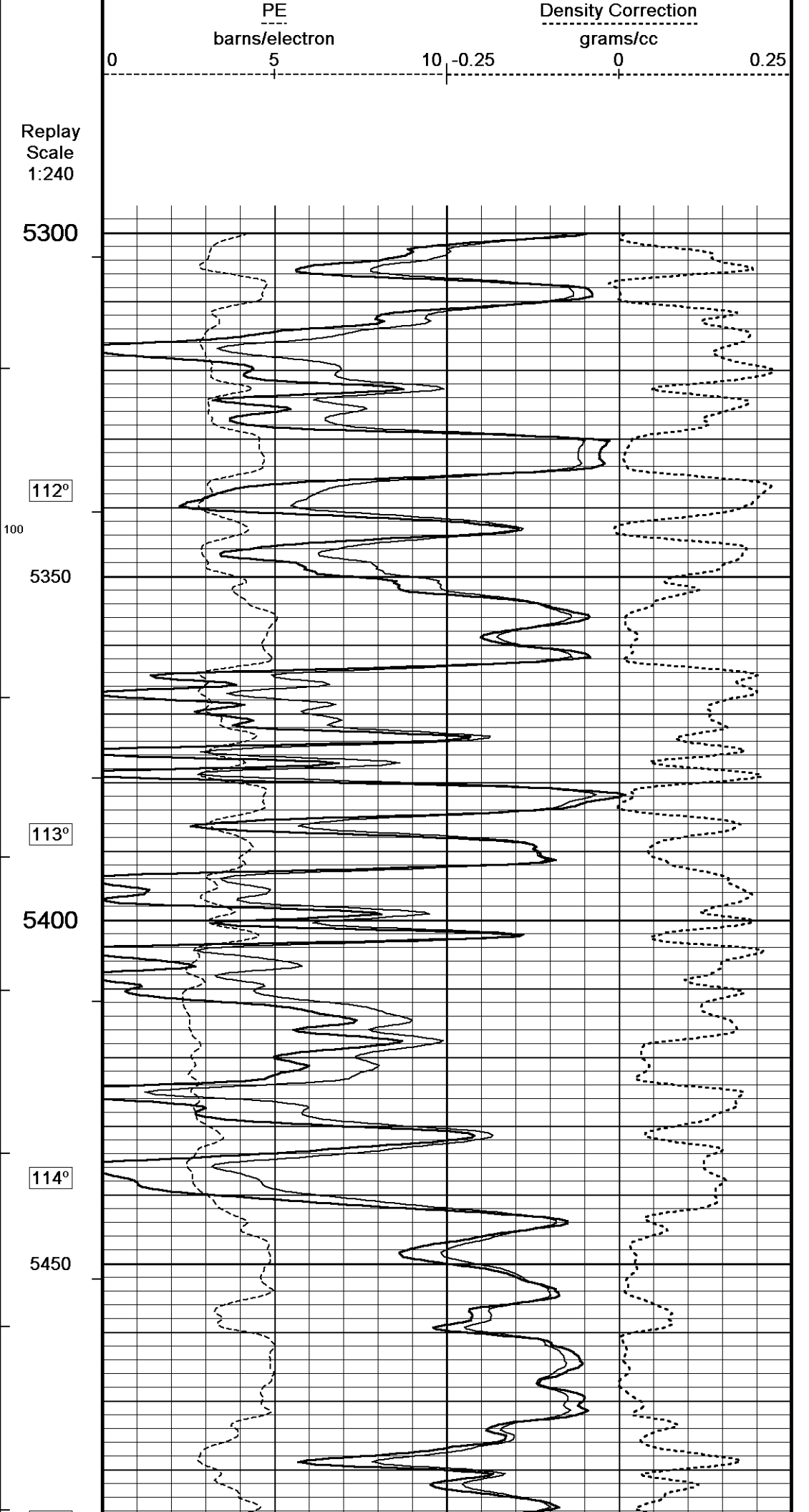
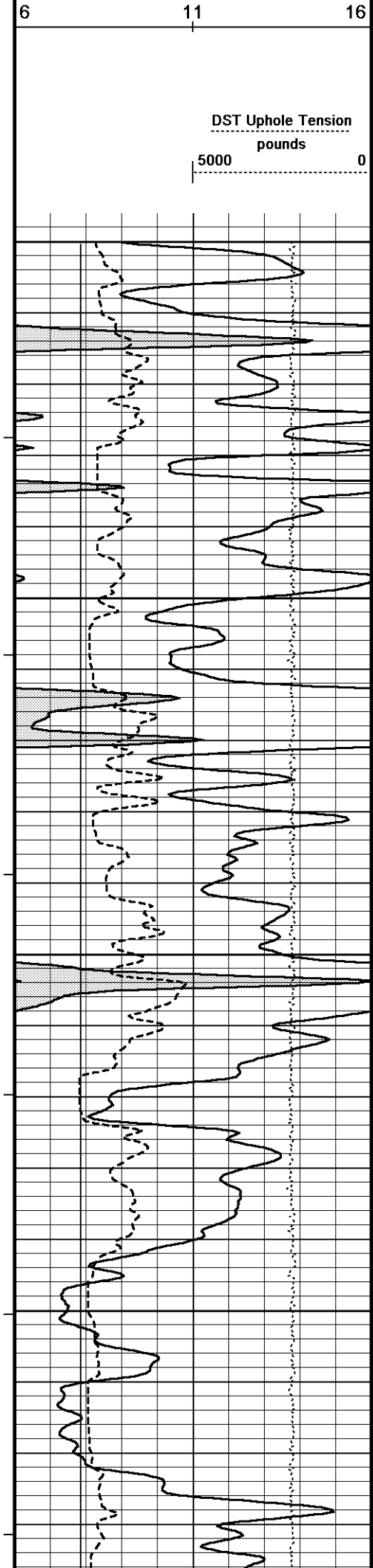


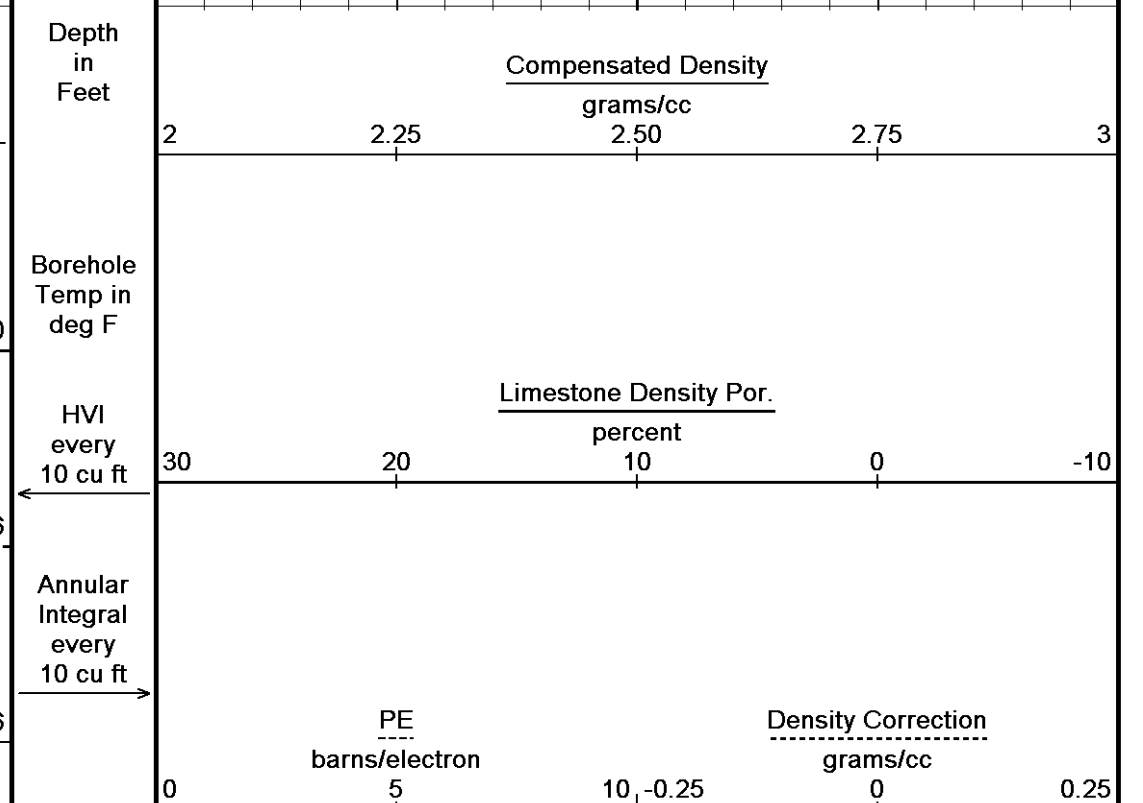
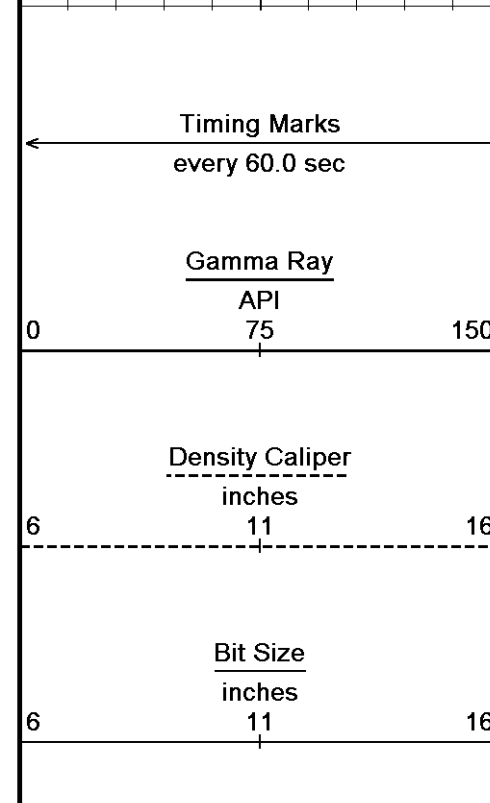
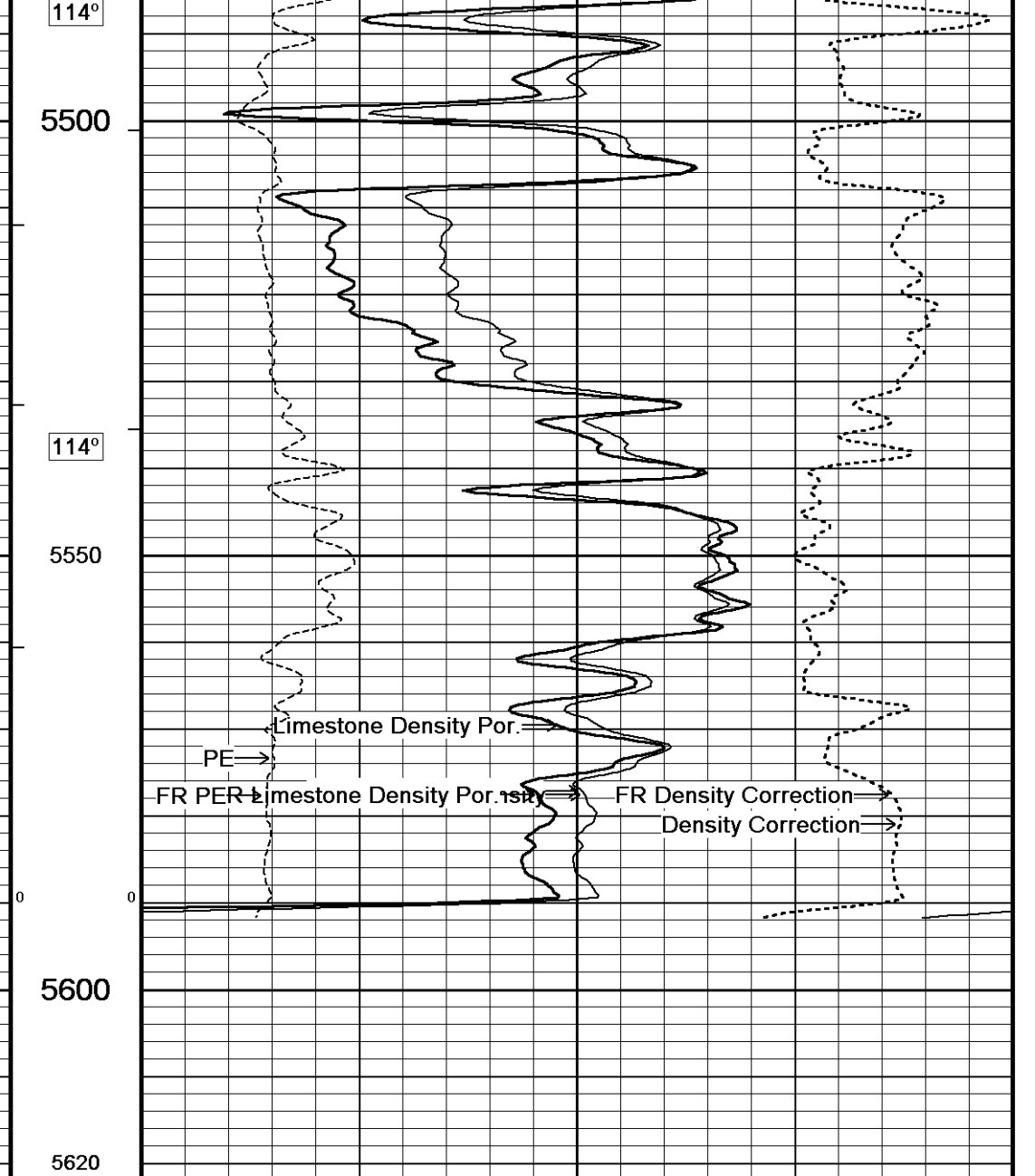
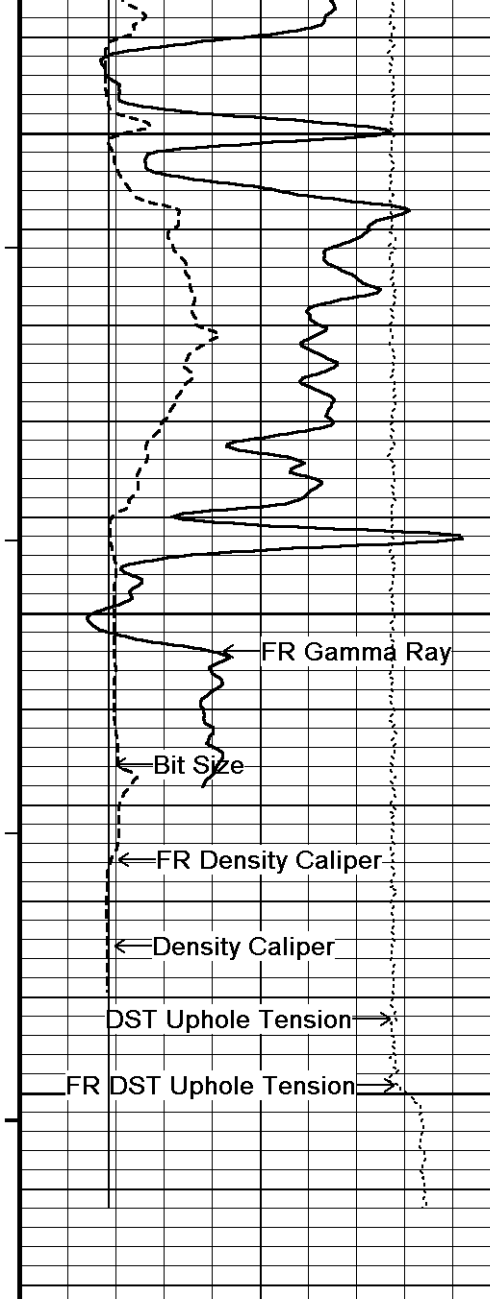
↑ 5 INCH MAIN PASS ↑

↓ 5 INCH REPEAT PASS ↓

Depth Based Data - Maximum Sampling Increment 10.0cm
 Plotted on 22-DEC-2011 04:53
 Filename: C:\Minimus 11.03.4044\Data\Jo-Allyn Howell # 1-10\Jo-Allyn Howell # 1-10_002.dta
 Recorded on 22-DEC-2011 01:33
 System Versions: Logged with 11.03.4044 Plotted with 11.03.4044







DST Uphole Tension
pounds
5000 0

Replay
Scale
1:240

Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 22-DEC-2011 04:53

Filename: C:\Minimus 11.03.4044\Data\Jo-Allyn Howell # 1-10\Jo-Allyn Howell # 1-10_002.dta

Recorded on 22-DEC-2011 01:33

System Versions: Logged with 11.03.4044 Plotted with 11.03.4044



5 INCH REPEAT PASS



DOWNHOLE EQUIPMENT

C:\Minimus 11.03.4044\Data\Jo-Allyn Howell # 1-10\Jo-Allyn Howell # 1-10_003.dta

MCB-A.A 11B Tension Cablehead
MCB-A.A 175 LG: 2.40 ft WT: 19.8 lb OD: 2.24 in

MCB-A.A 11B Tension Cablehead
MCB-A.A 175 LG: 2.40 ft WT: 19.8 lb OD: 2.24 in

SHA-F Compact Swivel Head Adaptor
SHA-F 88 LG: 2.74 ft WT: 26.5 lb OD: 2.24 in

SHA-F Compact Swivel Head Adaptor
SHA-F 88 LG: 2.74 ft WT: 26.5 lb OD: 2.24 in

Compact Comms Gamma
MCG-B 34 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Comms Gamma
MCG-B 34 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

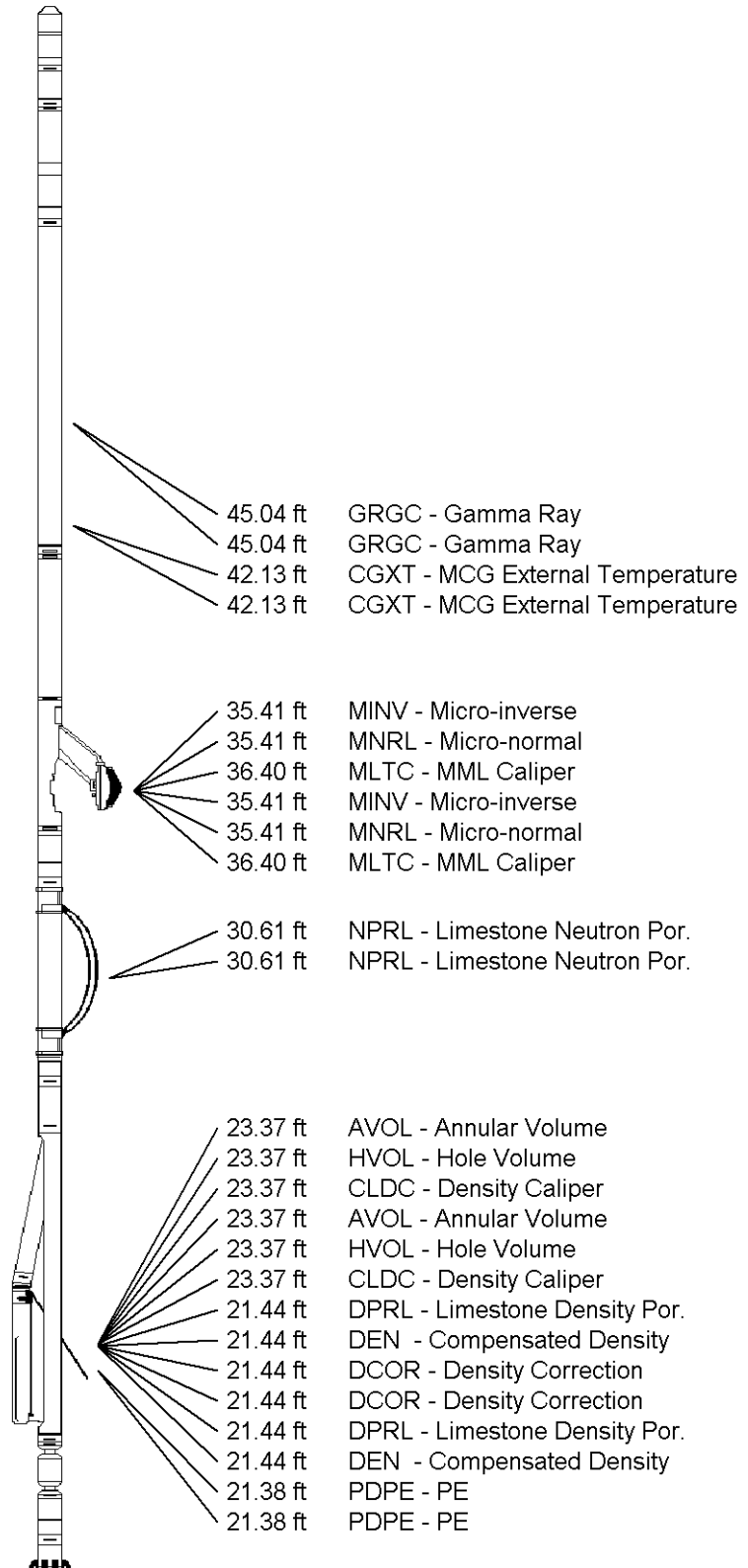
Compact Density/Caliper
MPD-B 64 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

Compact Density/Caliper
MPD-B 64 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

SKJ-D.A Compact Knuckle Joint
SKJ-D.A 37 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

SKJ-D.A Compact Knuckle Joint
SKJ-D.A 37 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

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



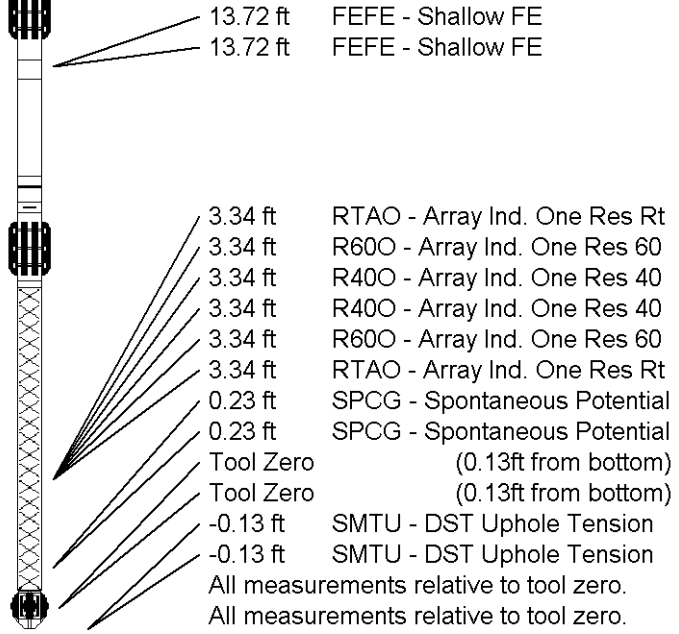
Compact Focussed Electric
 MFE-A.A 55 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in


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

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

Total Length: 55.46 ft Weight: 454.2 lb

Total Length: 55.46 ft Weight: 454.2 lb



COMPANY	JO-ALLYN OIL CO., INC.				
WELL	HOWELL # 1-10				
FIELD	SNAKE CREEK WEST				
PROVINCE/COUNTY	CLARK				
COUNTRY/STATE	U.S.A. / KANSAS				
Elevation Kelly Bushing	1859.00	feet	First Reading	5576.00	feet
Elevation Drill Floor	1857.00	feet	Depth Driller	5600.00	feet
Elevation Ground Level	1852.00	feet	Depth Logger	5599.00	feet
	COMPACT PHOTO DENSITY COMPENSATED NEUTRON MICRORESISTIVITY LOG			