



Weatherford

**COMPACT PHOTO DENSITY
COMPENSATED NEUTRON
MICRORESISTIVITY LOG**

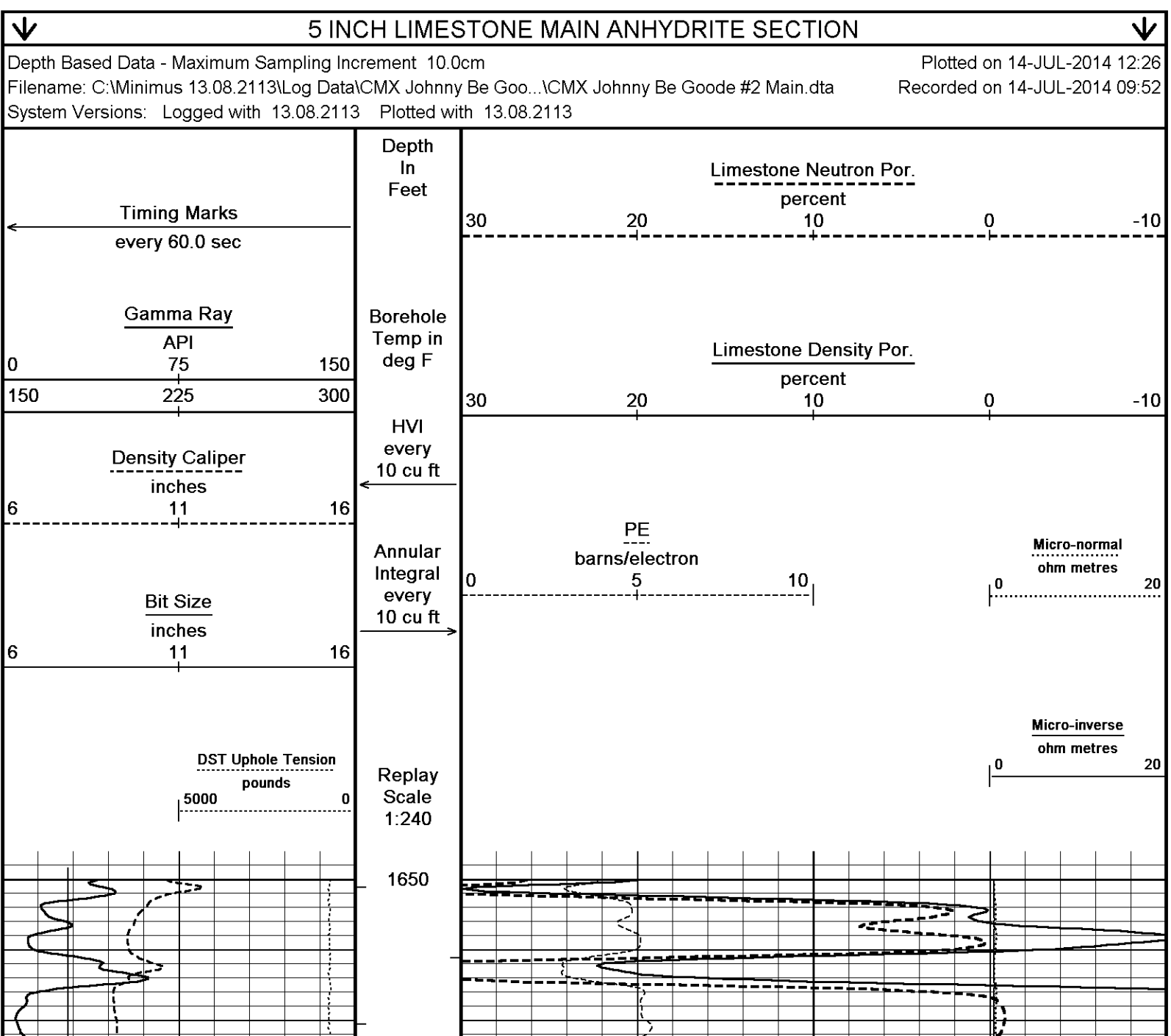
COMPANY	CMX, INC.		
WELL	JOHNNY BE GOODE #2		
FIELD	STRANATHAN		
PROVINCE/COUNTY	BARBER		
COUNTRY/STATE	U.S.A. / KANSAS		
LOCATION	1280' FSL & 330' FEL		
SEC 6	TWP 35S	RGE 11W	Other Services
Latitude	MAI/MFE		
Longitude			
API Number	15-007-24193		
Permanent Datum GL, Elevation	1367 feet		
Log Measured From	KB		
Drilling Measured From	KB @ 13 feet		
Date	14-JUL-2014	Elevations: feet	
Run Number	ONE	KB	1380.00
Service Order	7577-92520479	DF	1378.00
Depth Driller	5175.00	GL	1367.00
Depth Logger	5156.00		
First Reading	5137.00		
Last Reading	3700.00		
Casing Driller	1027.00		
Casing Logger	1030.00		
Bit Size	7.875		
Hole Fluid Type	WBM		
Density / Viscosity	9.00 lb/USg	22.00 CP	
PH / Fluid Loss	10.90	7.00 ml/30Min	
Sample Source	MUD PIT		
Rm @ Measured Temp	0.96 @ 96.0	ohm-m	
Rmf @ Measured Temp	0.77 @ 96.0	ohm-m	
Rmc @ Measured Temp	1.15 @ 96.0	ohm-m	
Source Rmf / Rmc	CALC	CALC	
Rm @ BHT	0.76 @122.0	ohm-m	
Time Since Circulation	3.75 HOURS		
Max Recorded Temp	122.00	deg F	
Equipment / Base	13096	LIB	
Recorded By	JEFFREY RANDLE		
Witnessed By	LEAH A. KASTEN	JERRON MONROE	
JOB #	LB14-208		

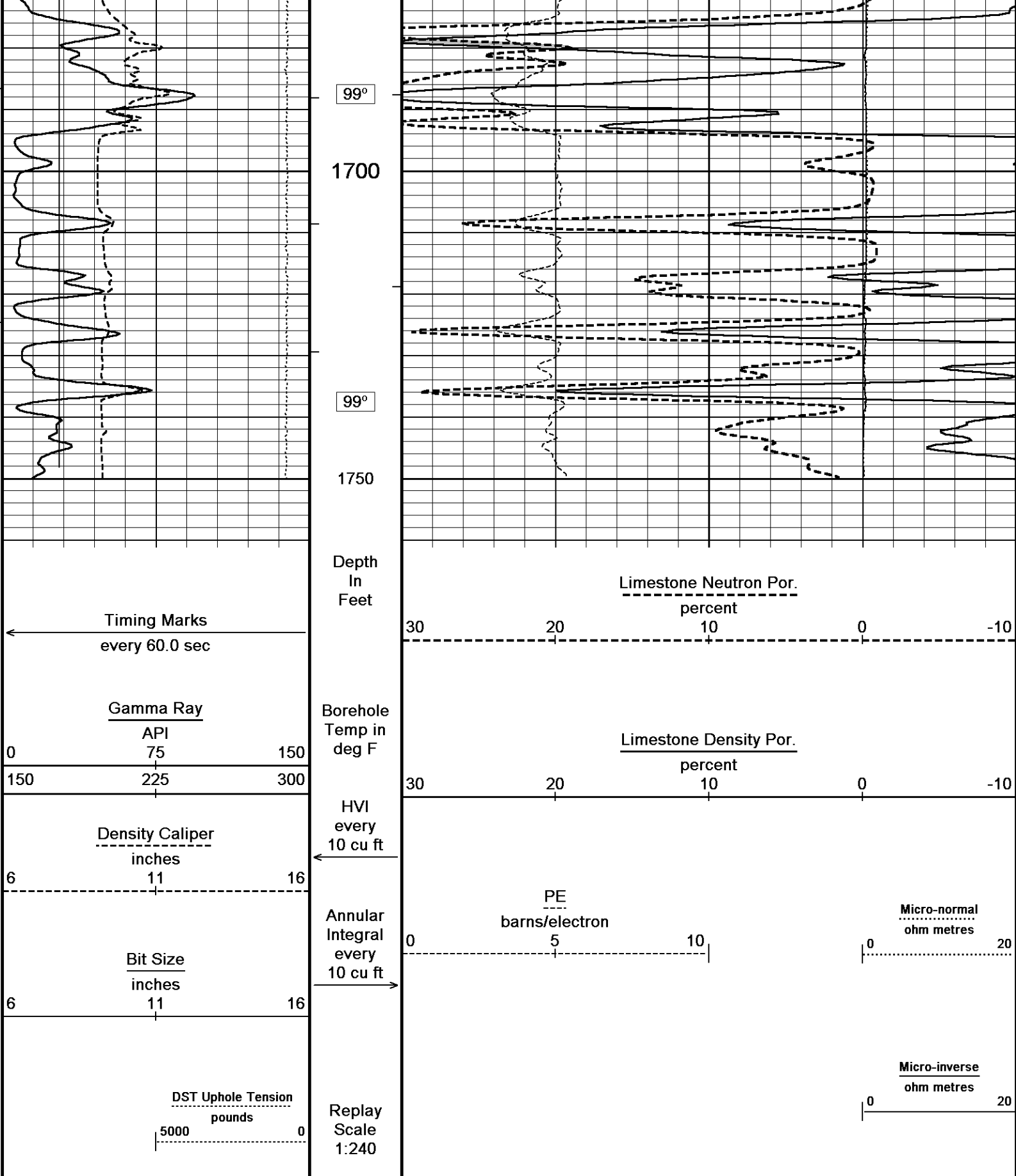
BOREHOLE RECORD				Last Edited: 14-JUL-2014 04:59
Bit Size inches		Depth From feet		Depth To feet
7.875		1027.00		5175.00
CASING RECORD				
Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	1027.00	24.00

REMARKS
- SOFTWARE ISSUE: WLS 13.08.2113
- TOOL STRING: MCG, MML, MDN, MPD, MFE, MAI RUN IN COMBINATION
- HARDWARE: MDN: DUAL BOWSPRING ECCENTRALIZER MFE: 1 X 0.5 INCH STANDOFF MAI: 2 X 0.5 INCH STANDOFF
- 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: 1845 CU. FT.
- ANNULAR HOLE VOLUME WITH 5.5 INCH CASING FROM TD TO 3700 FT.: 288 CU. FT.

- OPERATOR: KENNETH RINEHART, JOHN DUNLAP.

In interpreting, communicating or providing information and/or making recommendations, either written or oral, as to logs or test or other data, type or amount of material, or Work or other service to be furnished, or manner of performance, or in predicting results to be obtained, the Contractor will give the Company the benefit of the Contractor's best judgment based on its experience and will perform all such Work in a good and workmanlike manner. Any interpretation of test or other data, and any recommendation or reservoir description based upon such interpretations, are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and assumptions are not infallible, and with respect to which professional engineers and analysts may differ. ACCORDINGLY ANY INTERPRETATION OR RECOMMENDATION RESULTING FROM THE SERVICES WILL BE AT THE SOLE RISK OF THE COMPANY, AND THE CONTRACTOR CANNOT AND DOES NOT WARRANT THE ACCURACY, CORRECTNESS OR COMPLETENESS OF ANY SUCH INTERPRETATION OR RECOMMENDATION, WHICH INTERPRETATIONS AND RECOMMENDATIONS SHOULD NOT, THEREFORE, UNDER ANY CIRCUMSTANCES BE RELIED UPON AS THE SOLE OR MAIN BASIS FOR ANY DRILLING, COMPLETION, WELL TREATMENT, PRODUCTION OR FINANCIAL DECISION, OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING ACTIVITY, DRILLING RIG OR ITS CREW OR ANY OTHER INDIVIDUAL. THE COMPANY HAS FULL RESPONSIBILITY FOR ALL DECISIONS CONCERNING THE SERVICES.



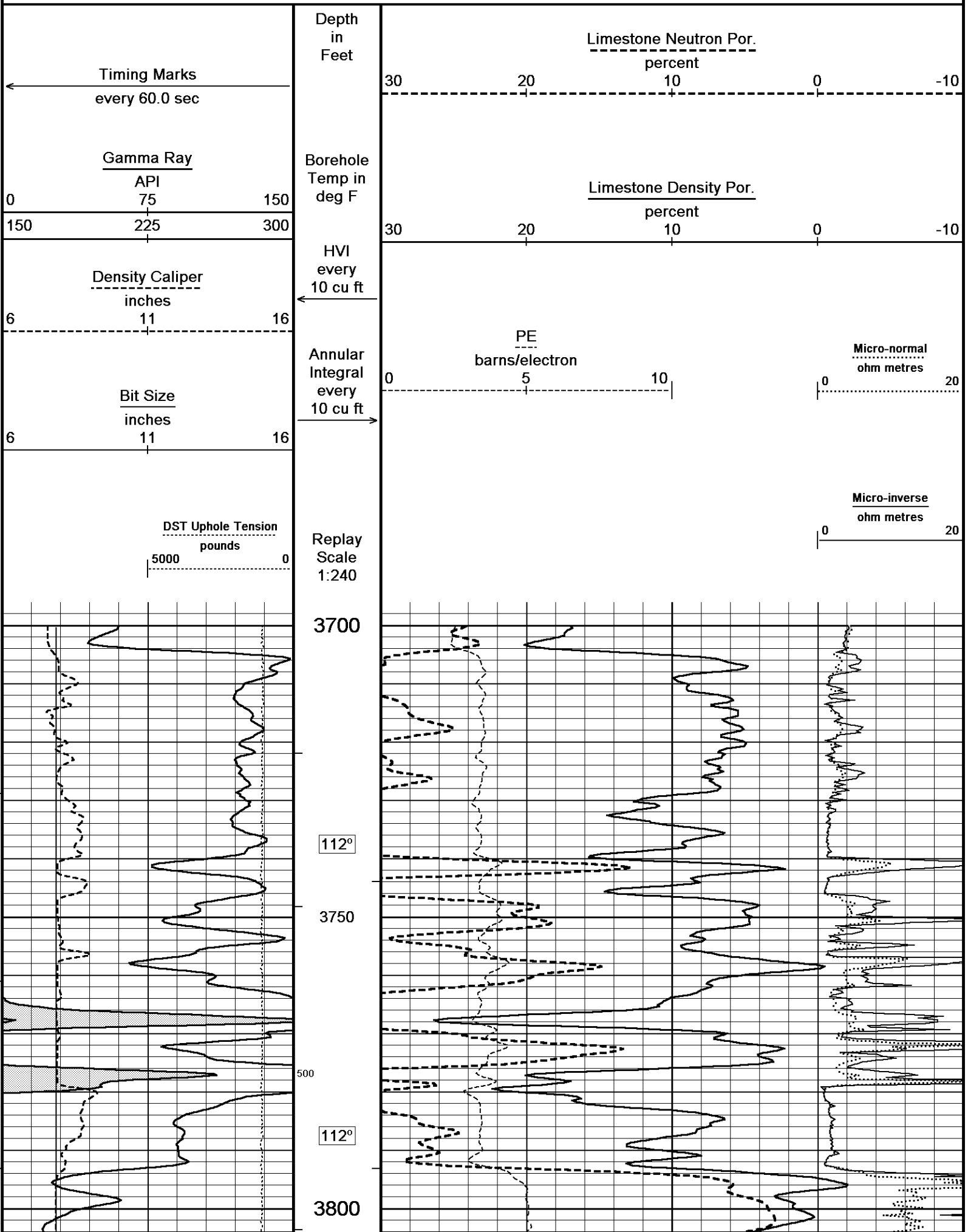


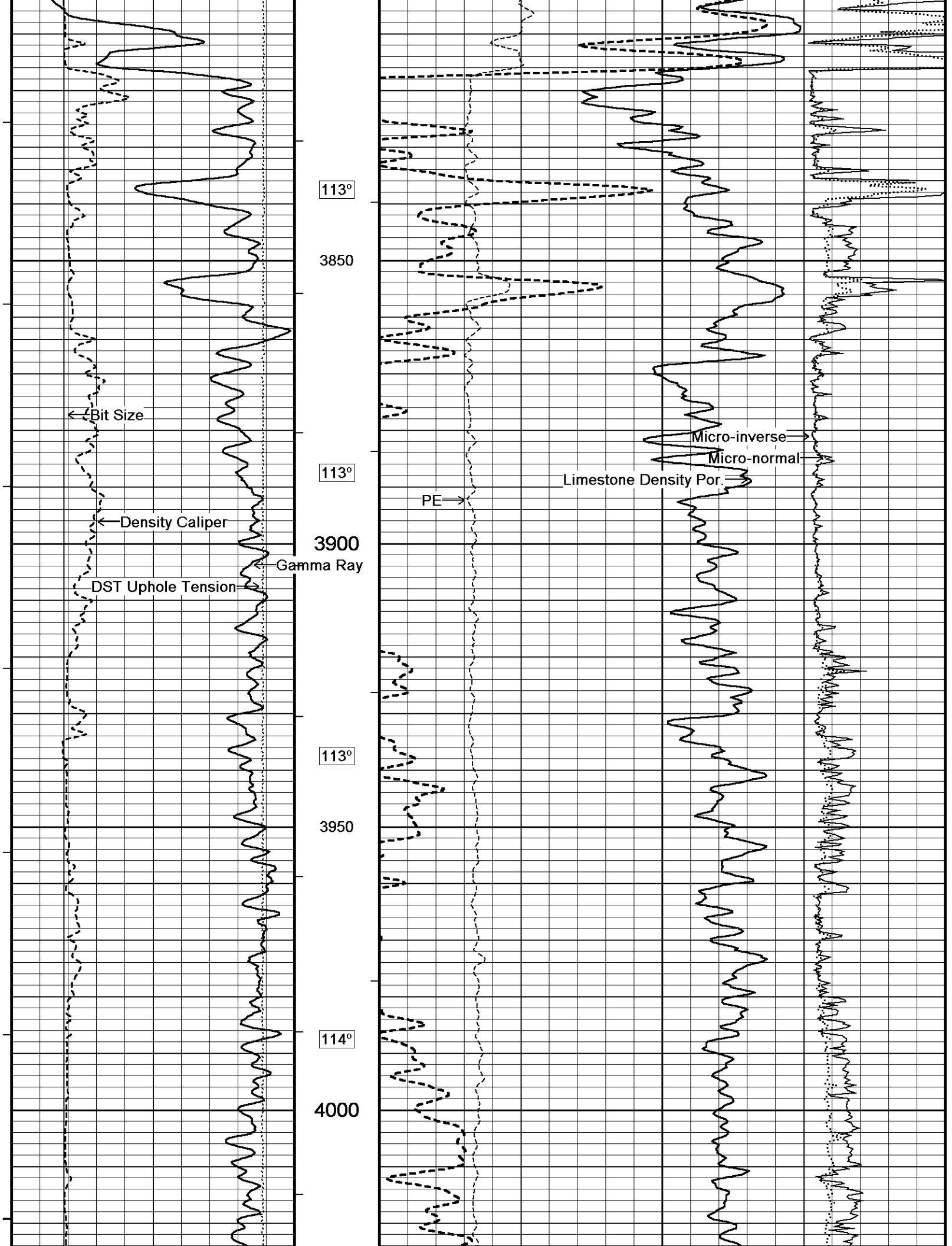
Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 14-JUL-2014 12:26
Filename: C:\Minimus 13.08.2113\Log Data\CMX Johnny Be Goo...\CMX Johnny Be Goode #2 Main.dta Recorded on 14-JUL-2014 09:52
System Versions: Logged with 13.08.2113 Plotted with 13.08.2113

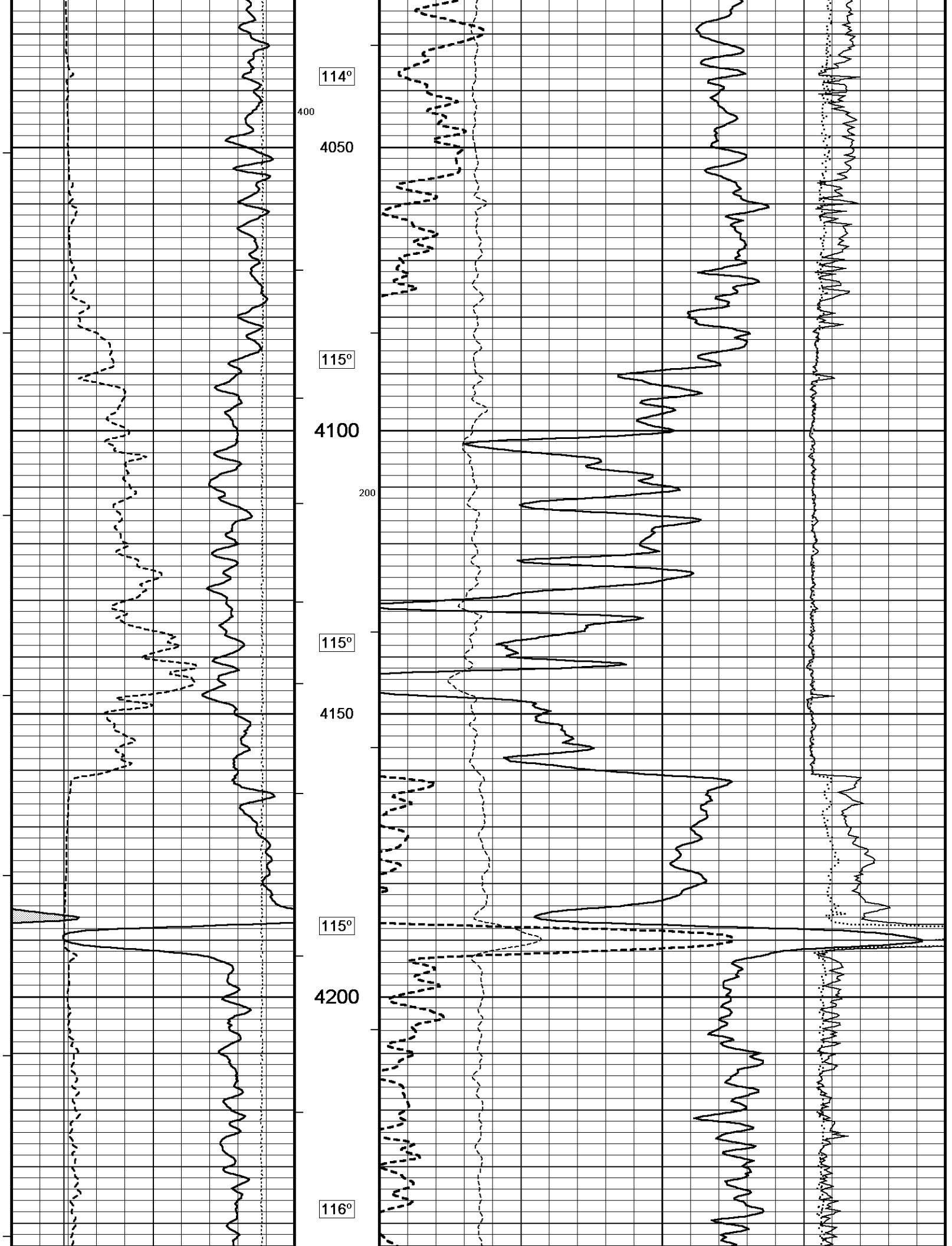
↑ 5 INCH LIMESTONE MAIN ANHYDRITE SECTION ↑

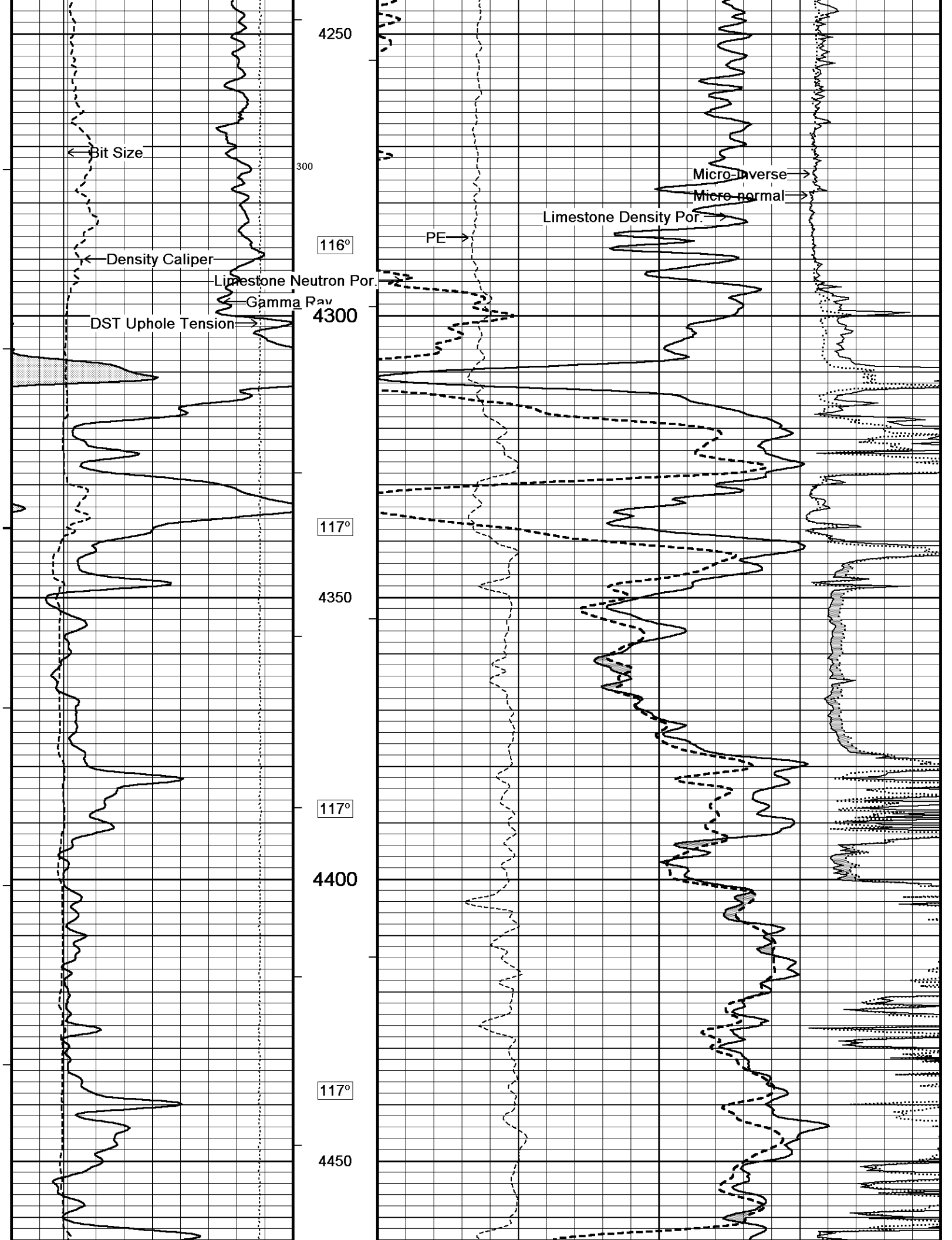
↓ 5 INCH LIMESTONE MAIN ↓

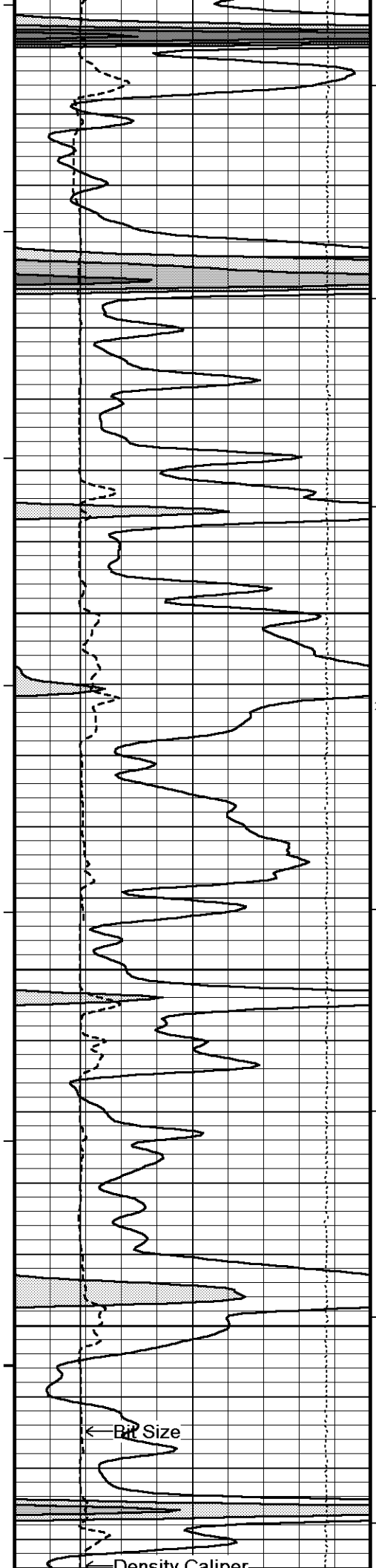
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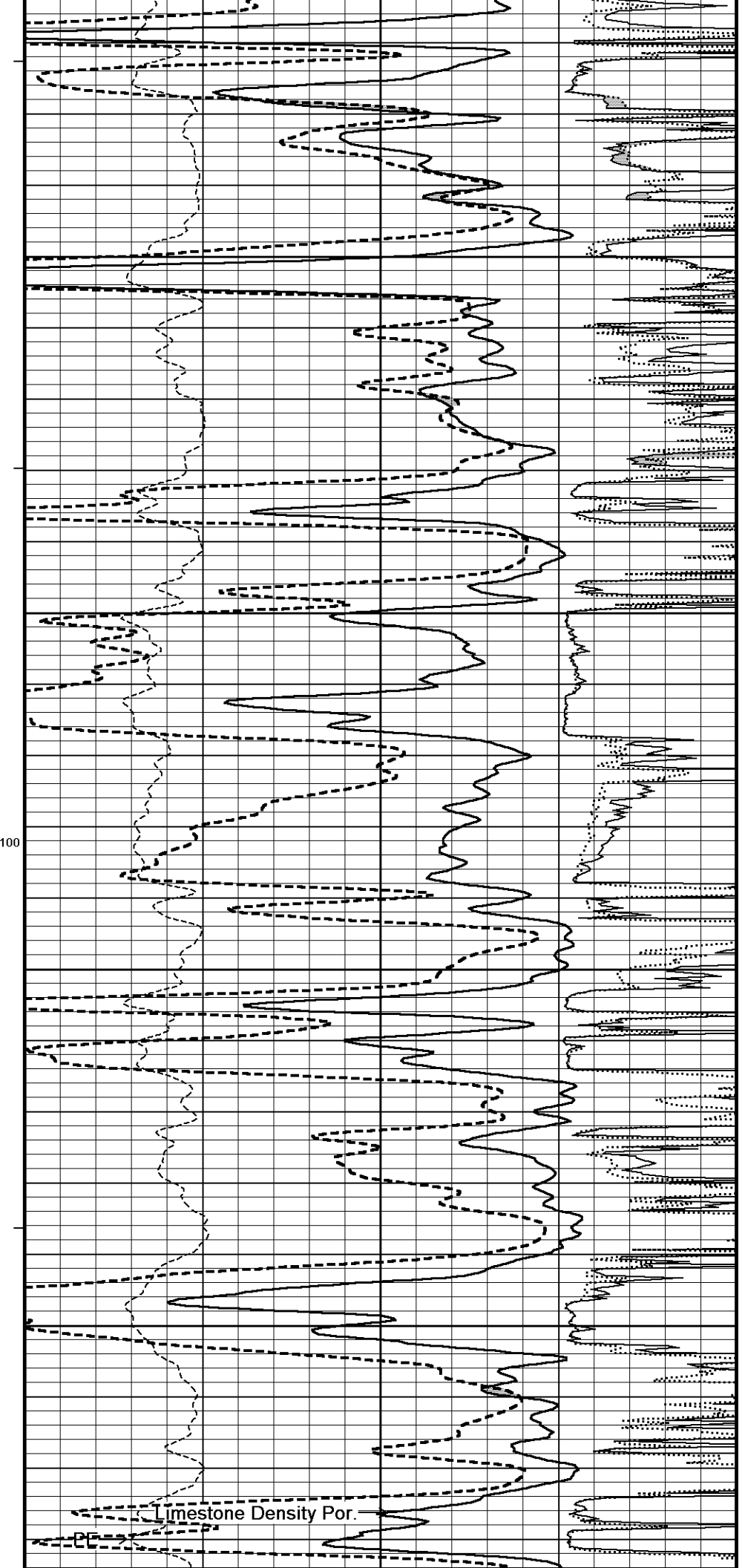


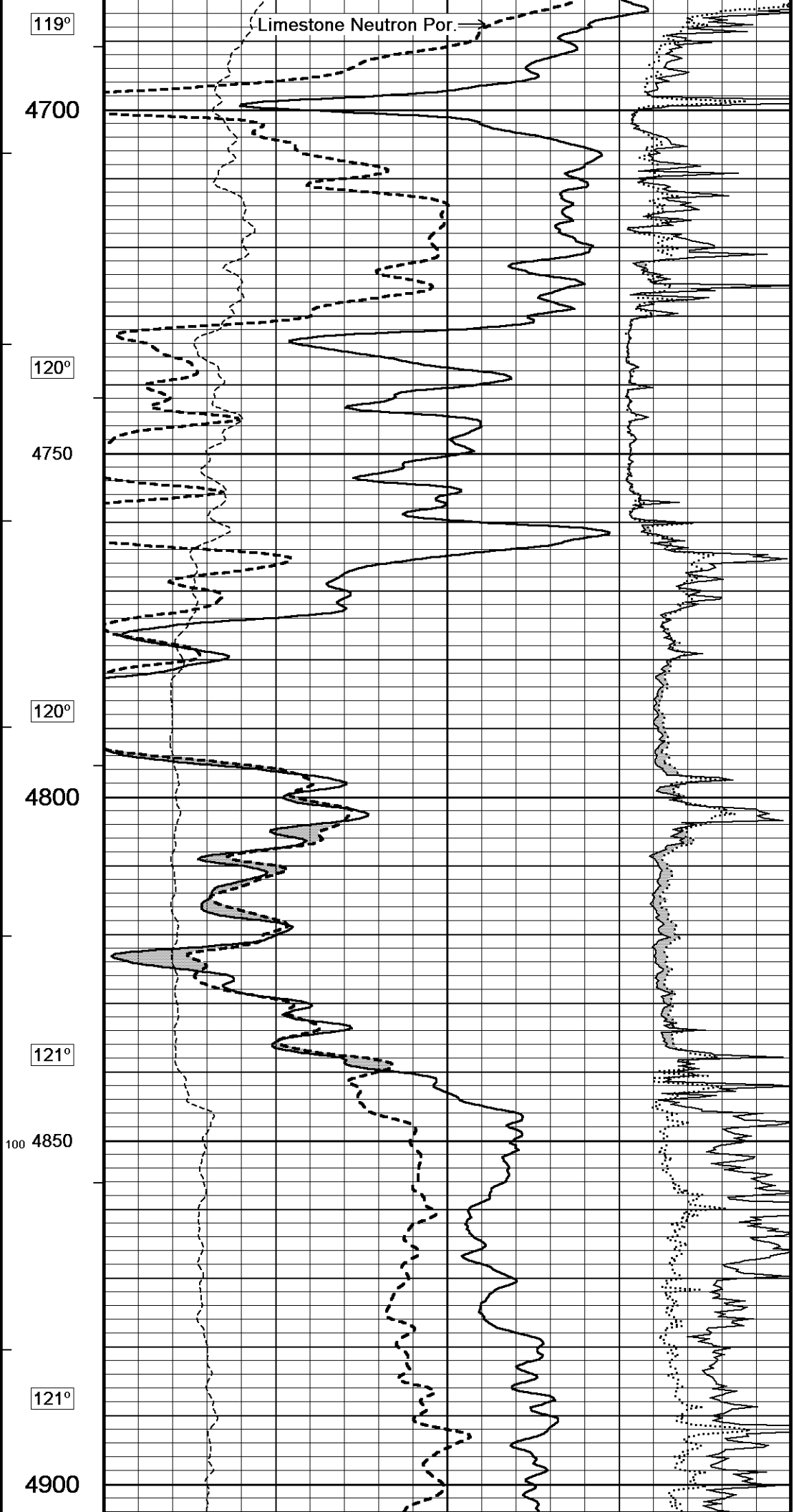
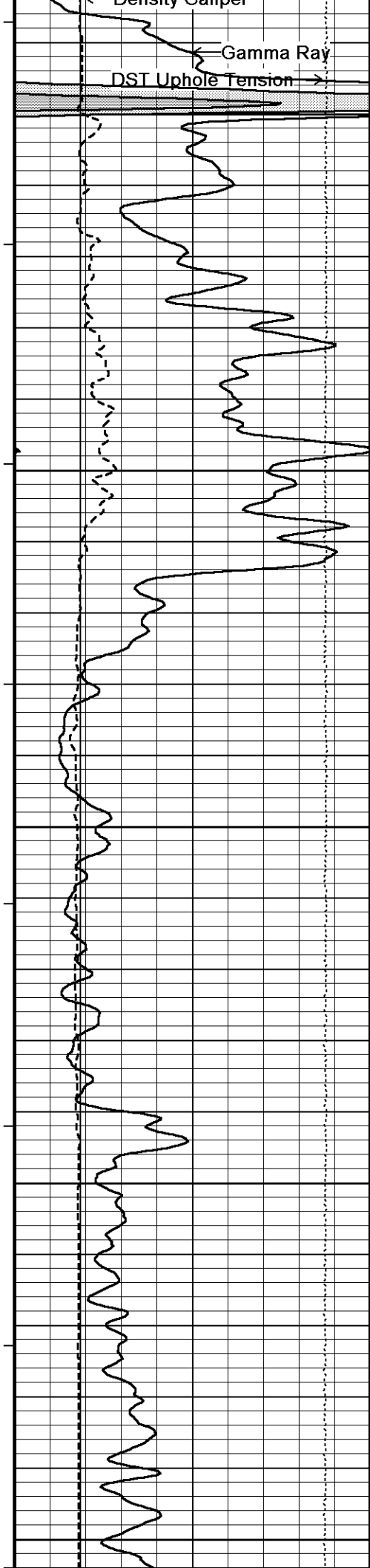


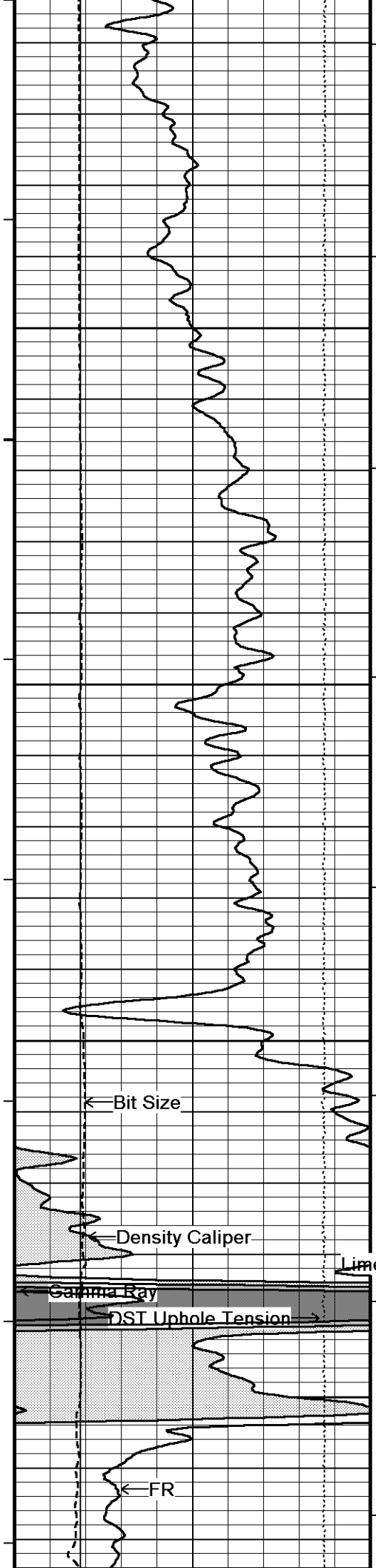




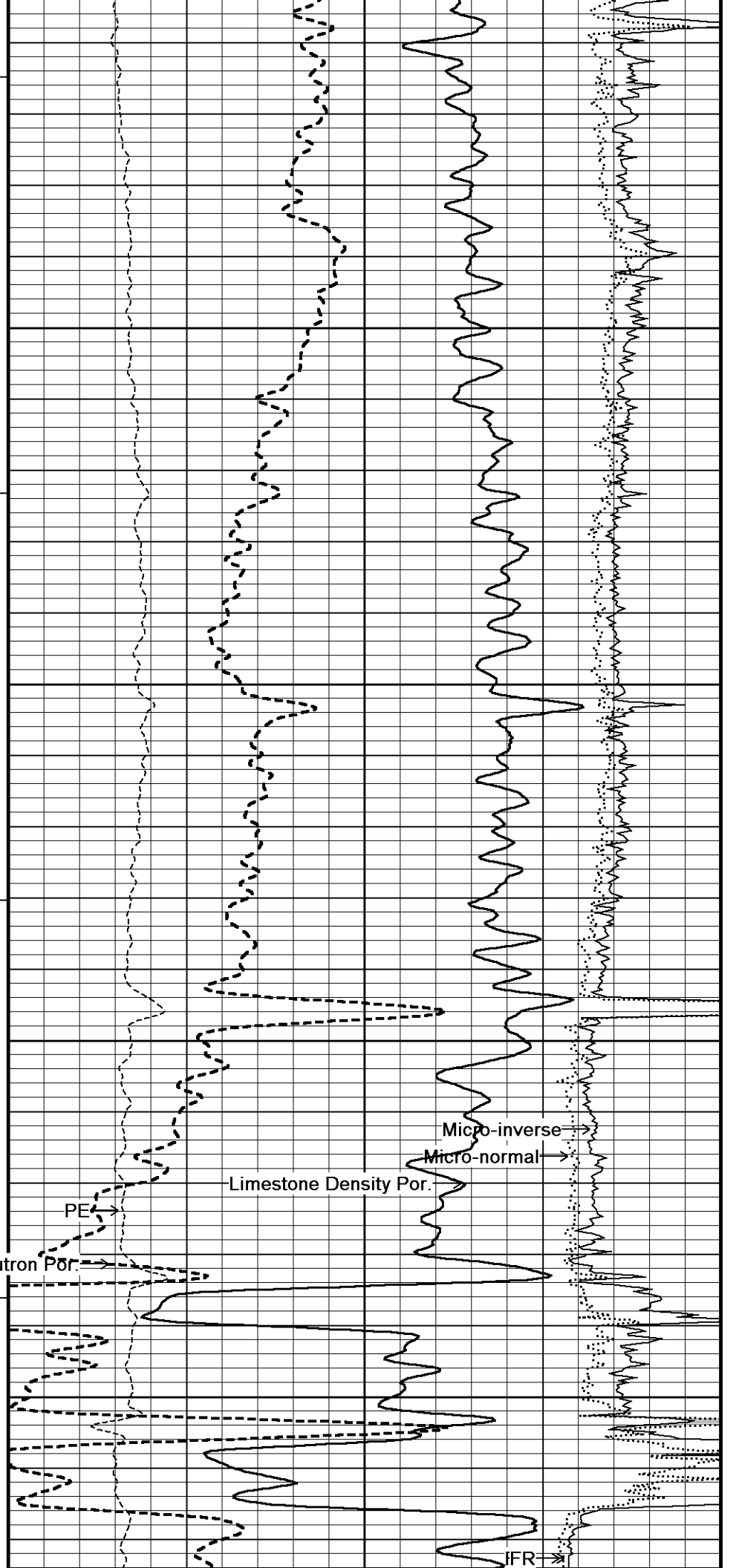
118°
4500
118°
4550
200
118°
4600
119°
4650

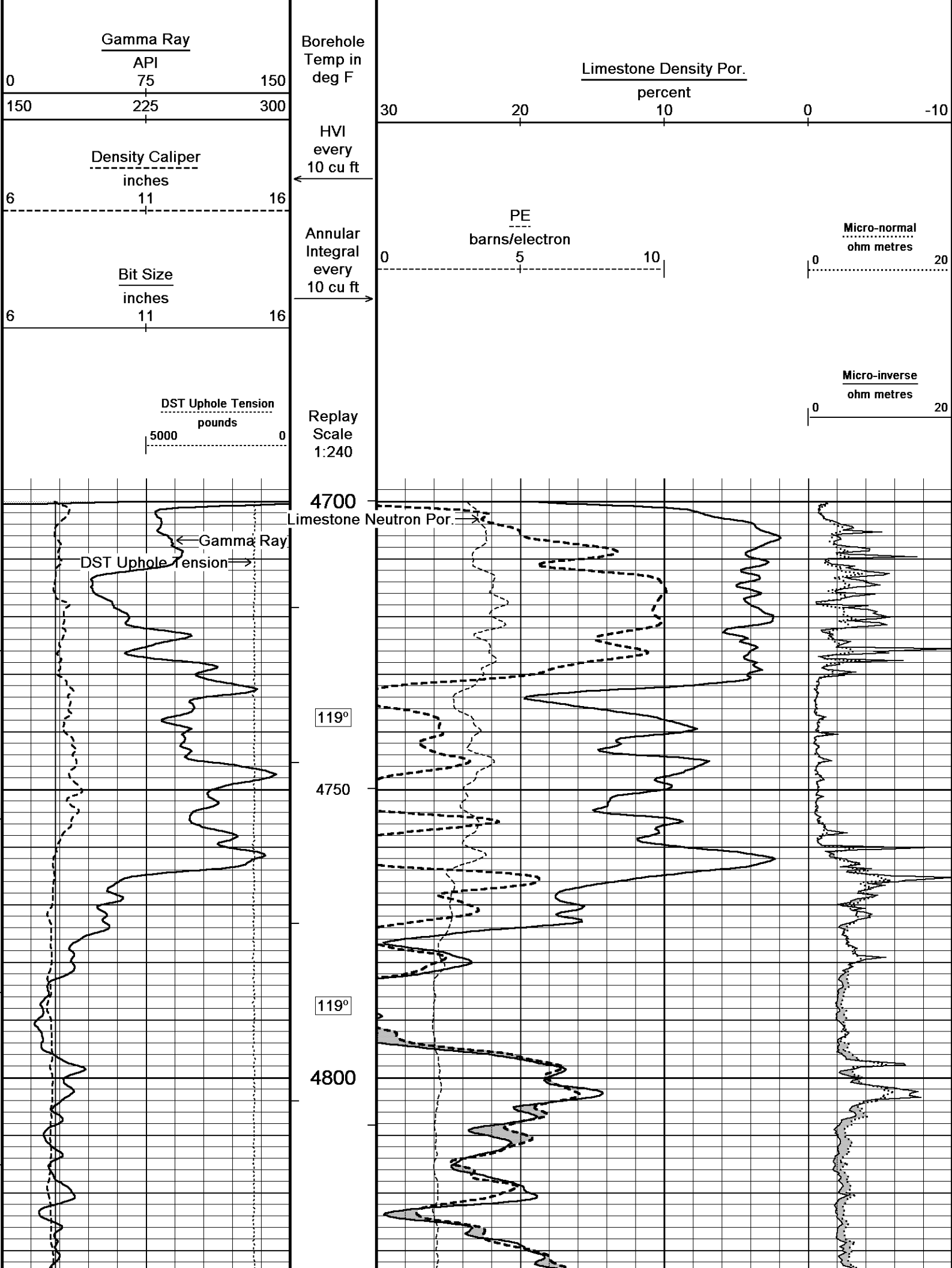


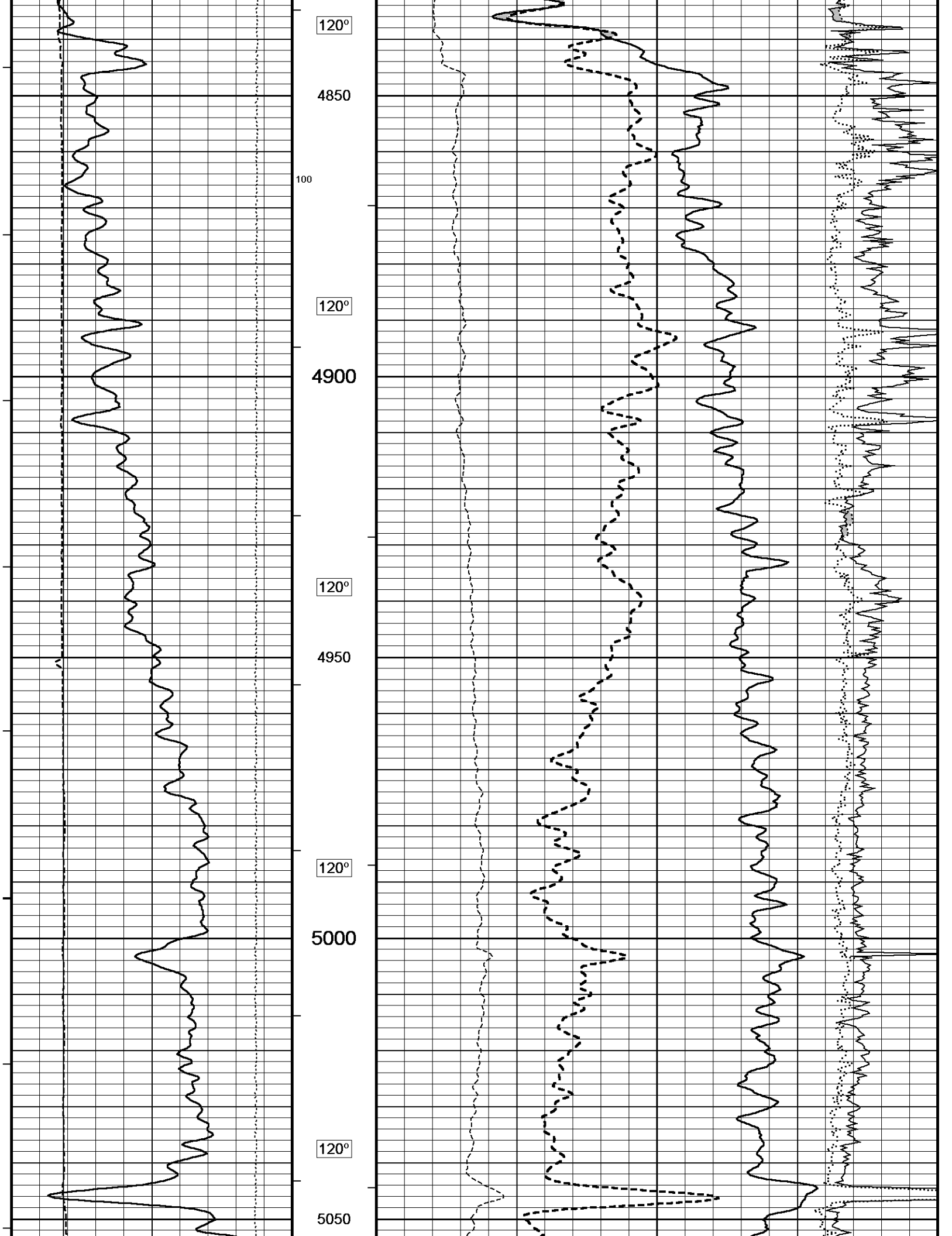


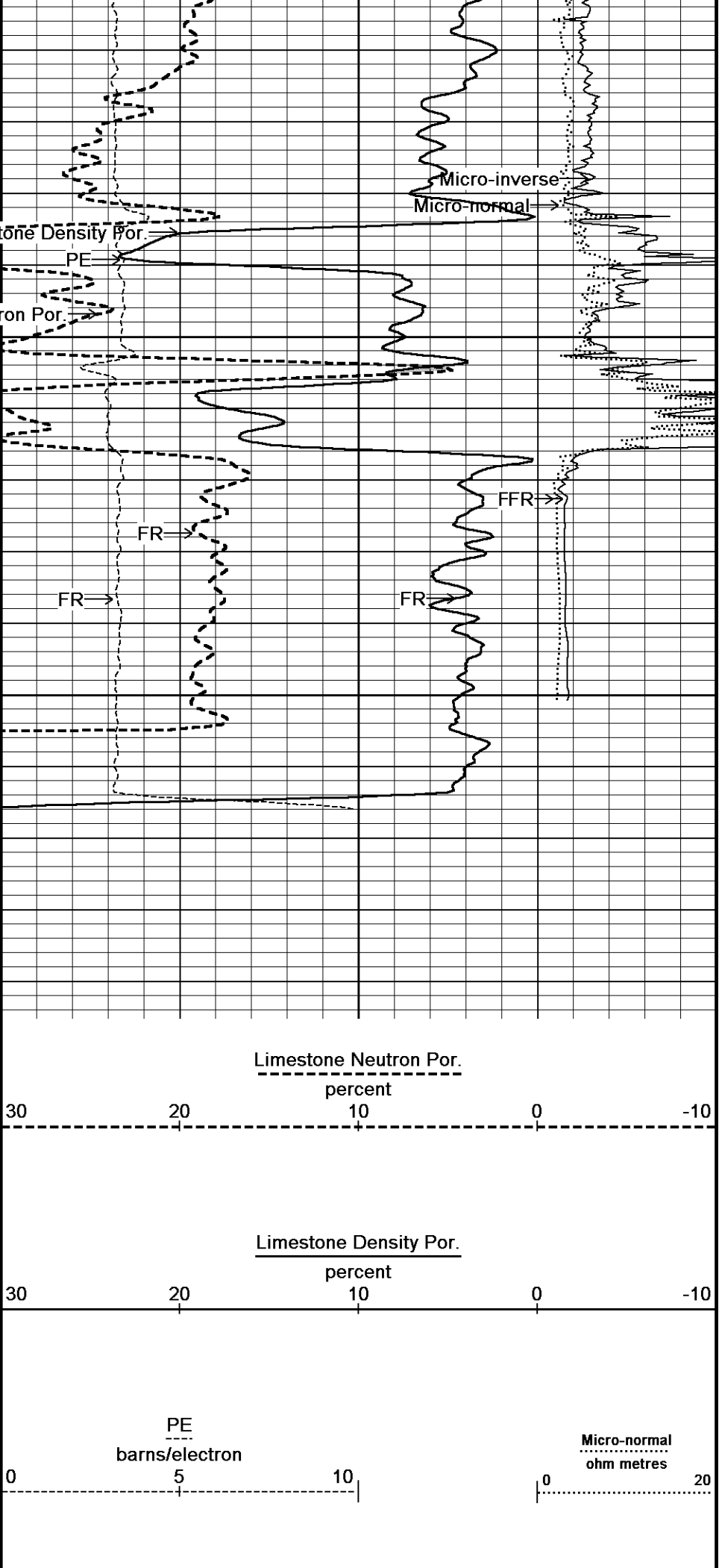
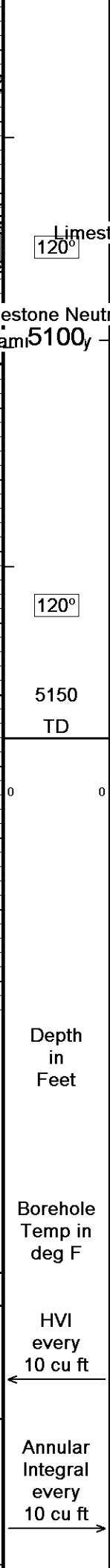
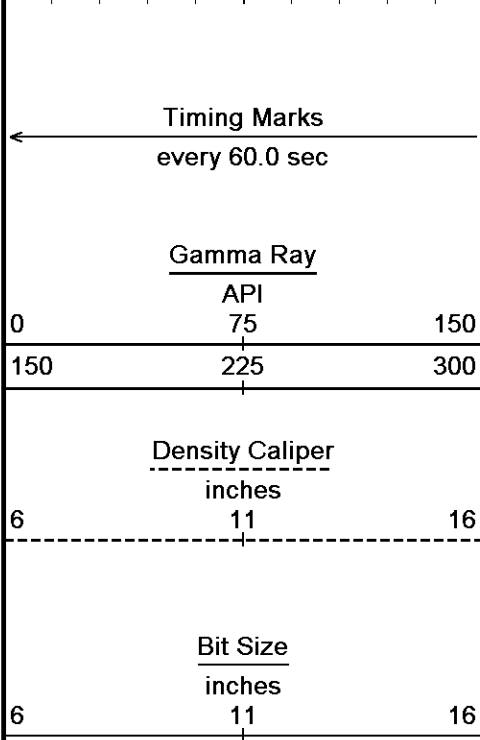
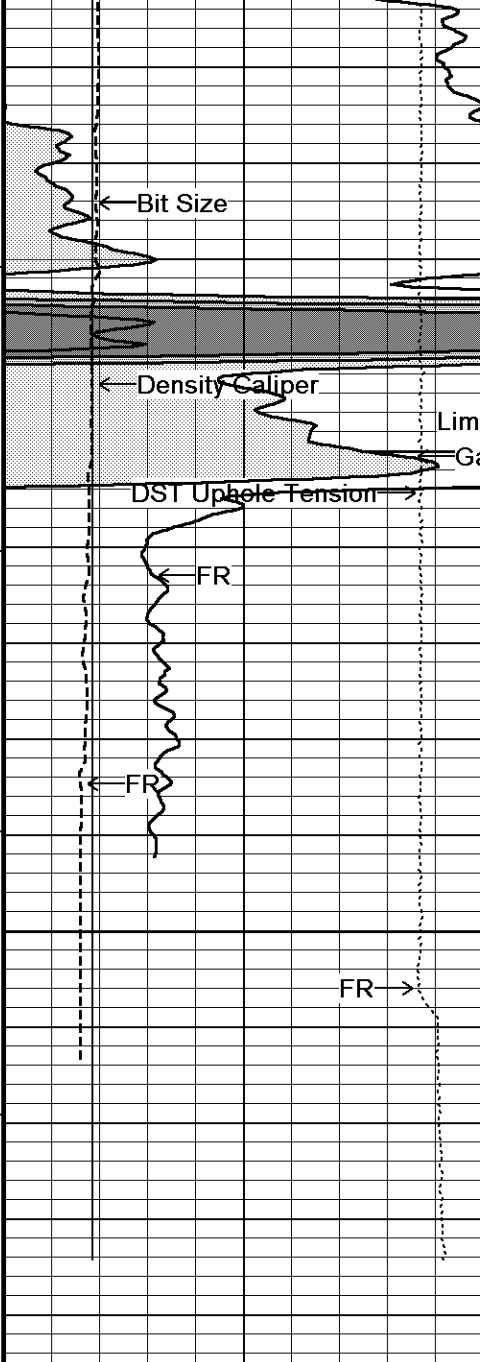


121°
4950
122°
5000
122°
5050
121°
5100









DST Uphole Tension
pounds

50000

Replay
Scale
1:240

Micro-inverse
ohm metres

020

Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 14-JUL-2014 12:26

Filename: C:\Minimus 13.08.2113\Log Data\CMX Johnny Be G...\CMX Johnny Be Goode #2 Repeat.dta

Recorded on 14-JUL-2014 09:18

System Versions: Logged with 13.08.2113 Plotted with 13.08.2113

↑

REPEAT SECTION

↑

↓

5 INCH BULK DENSITY MAIN

↓

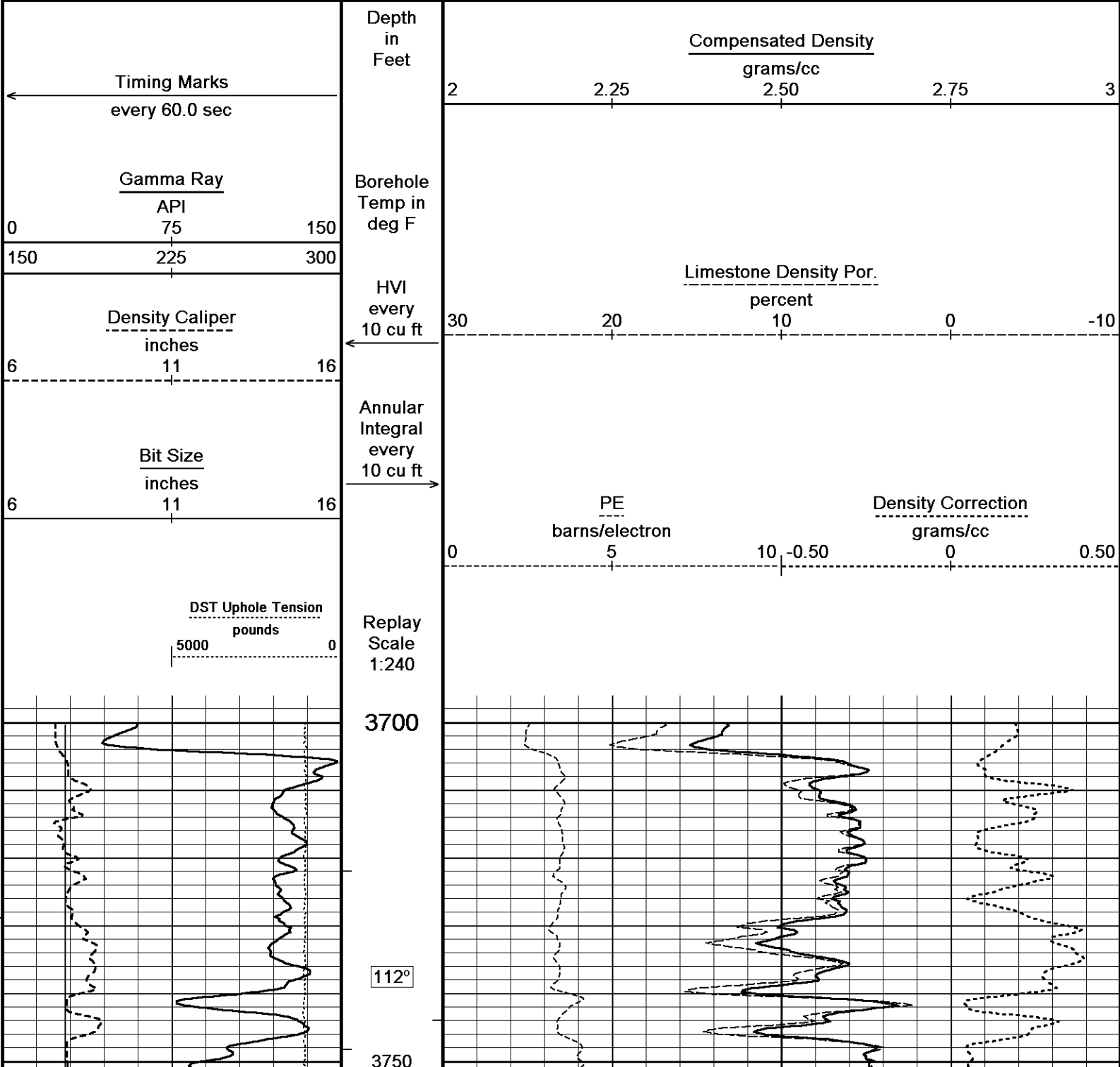
Depth Based Data - Maximum Sampling Increment 10.0cm

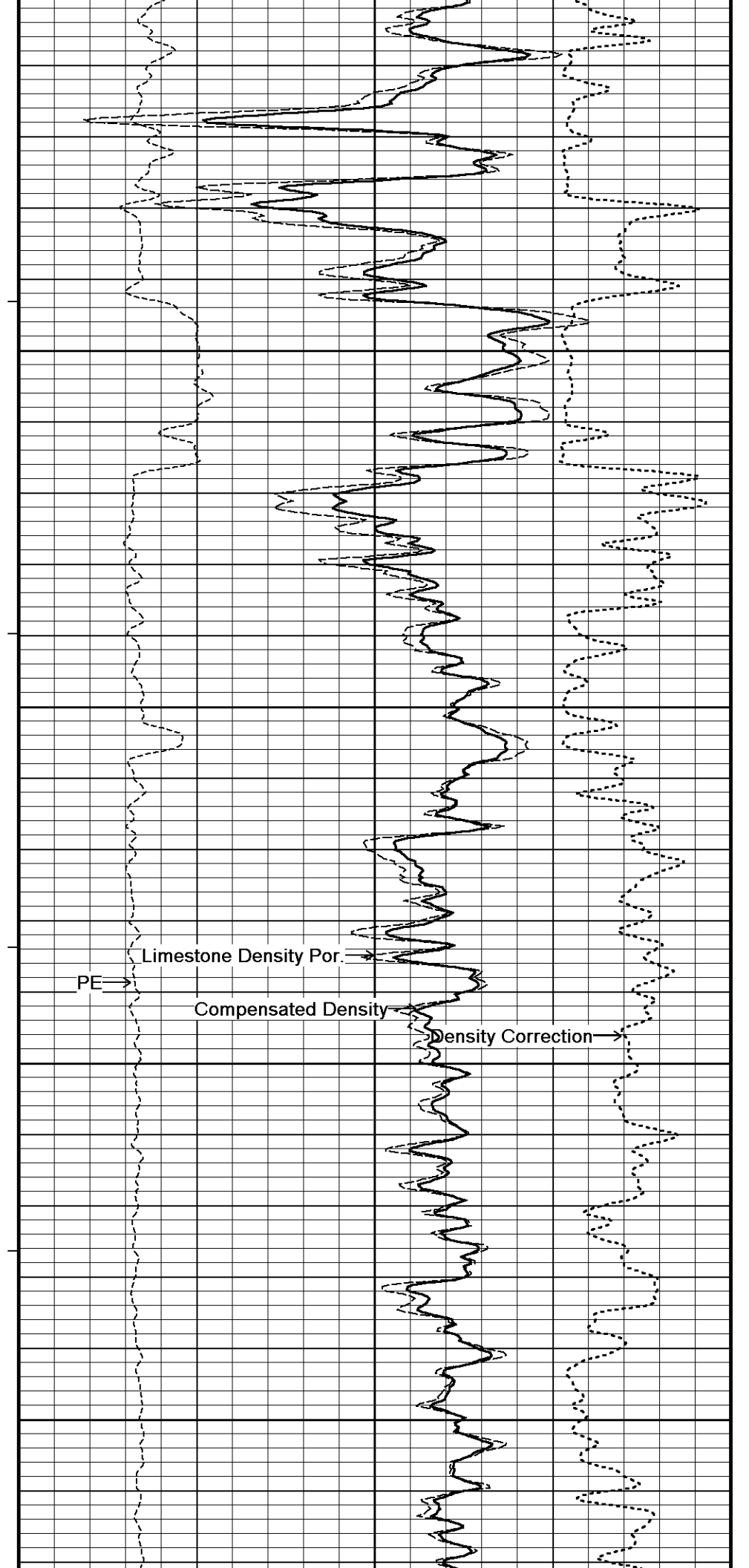
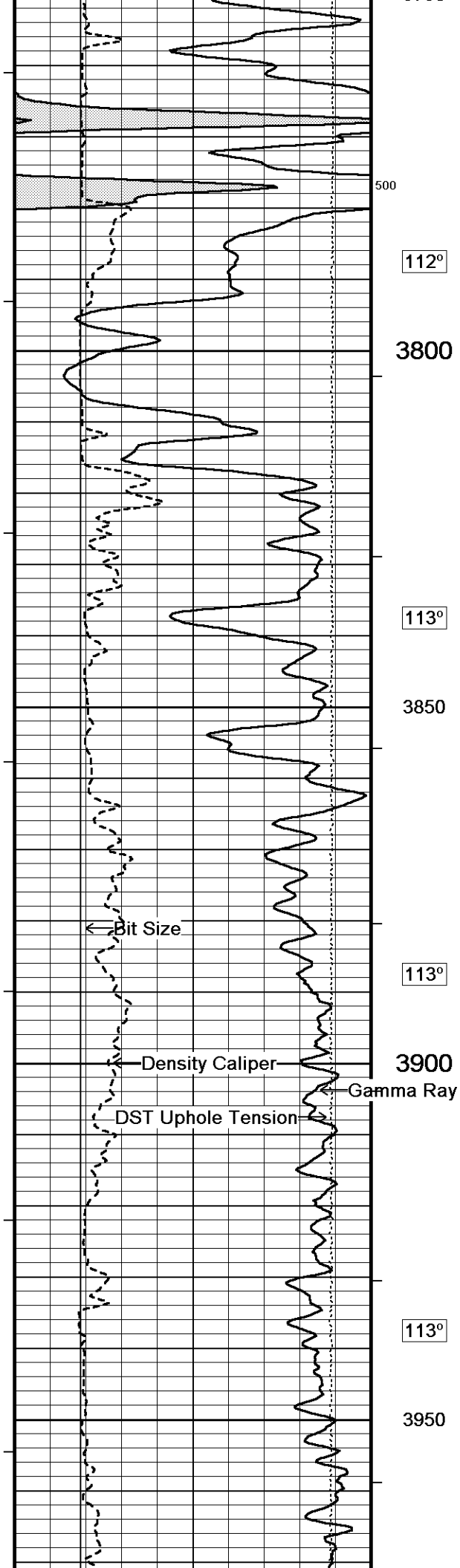
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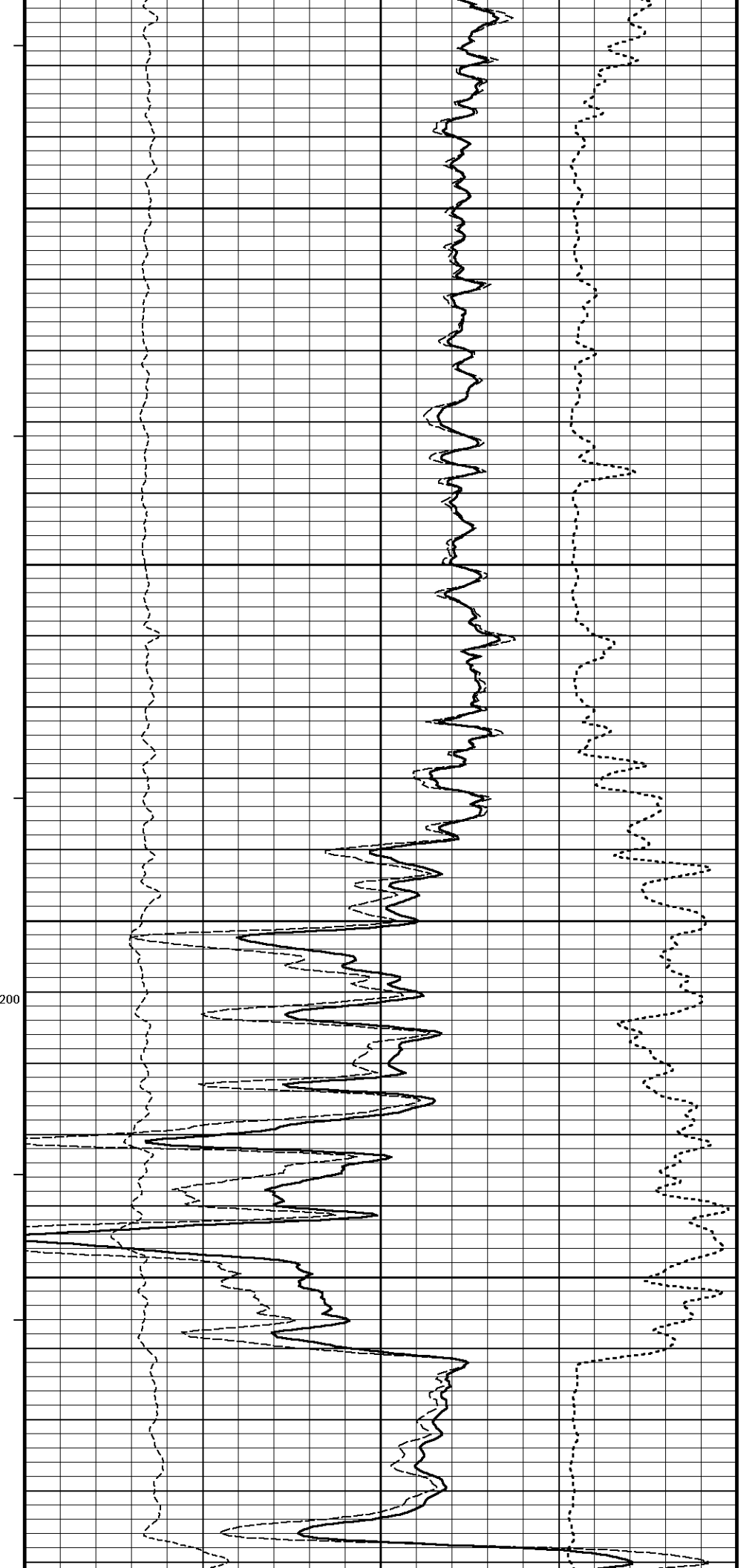
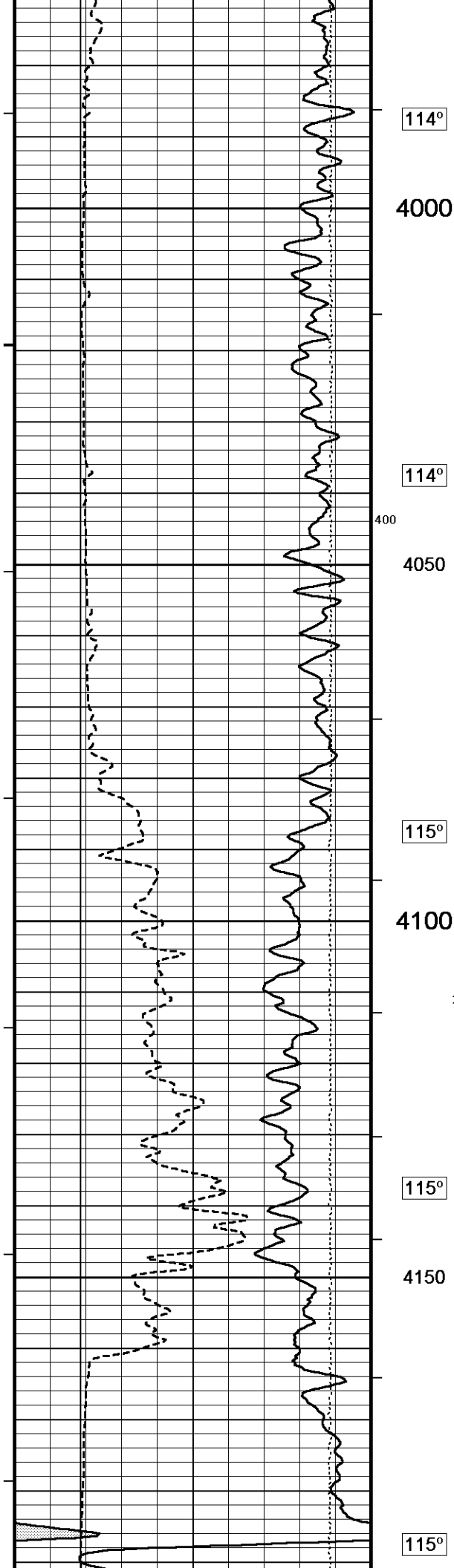
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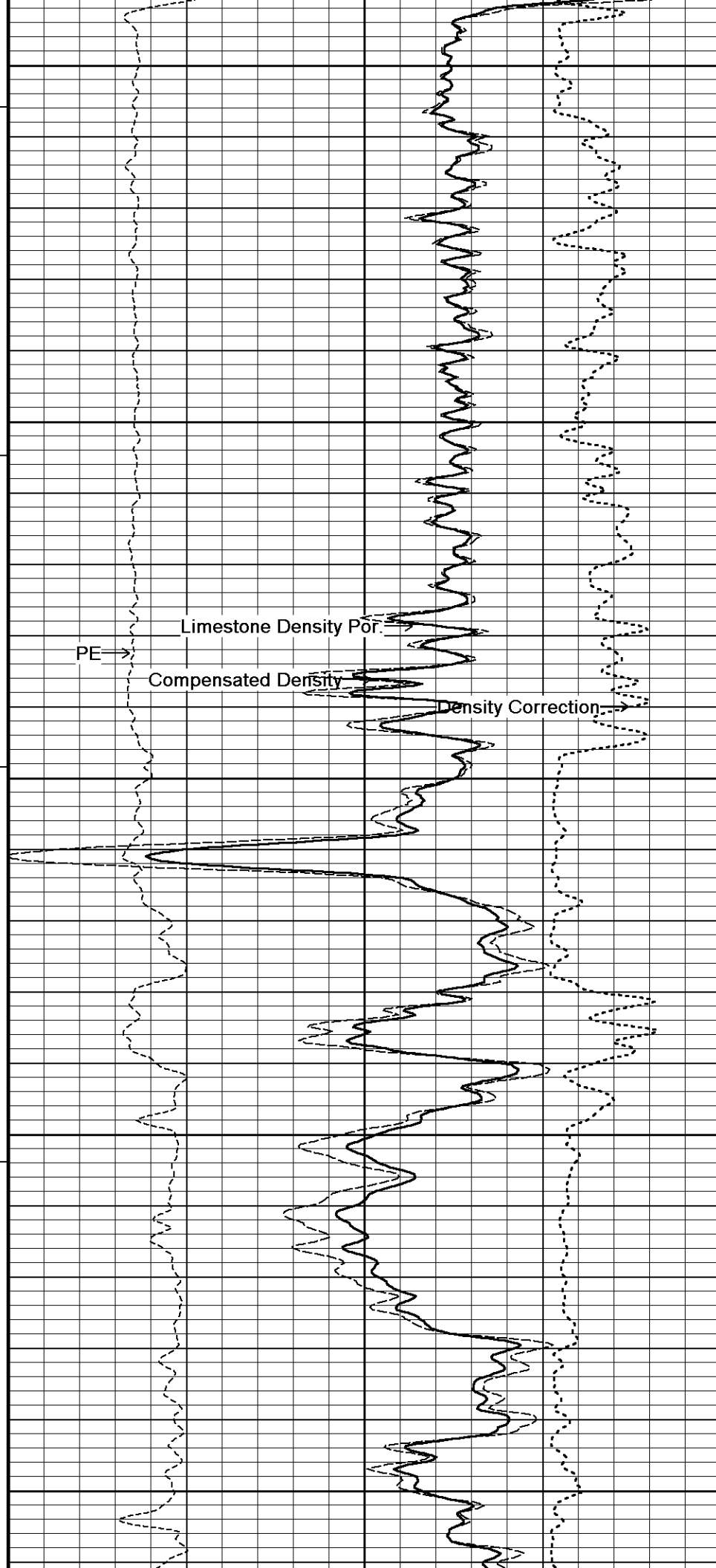
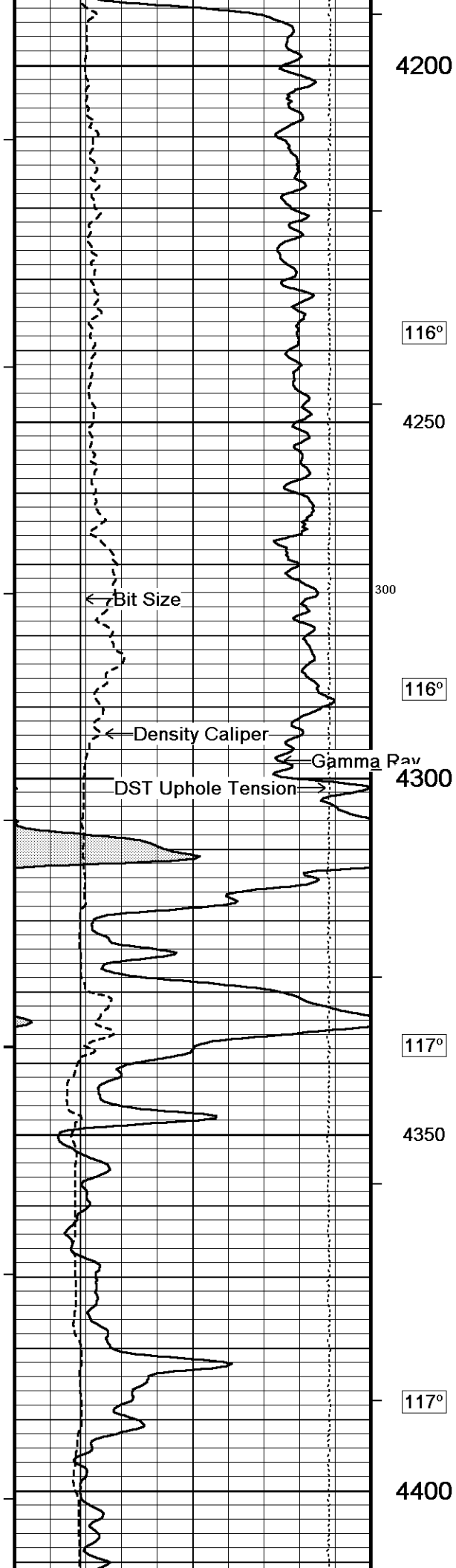
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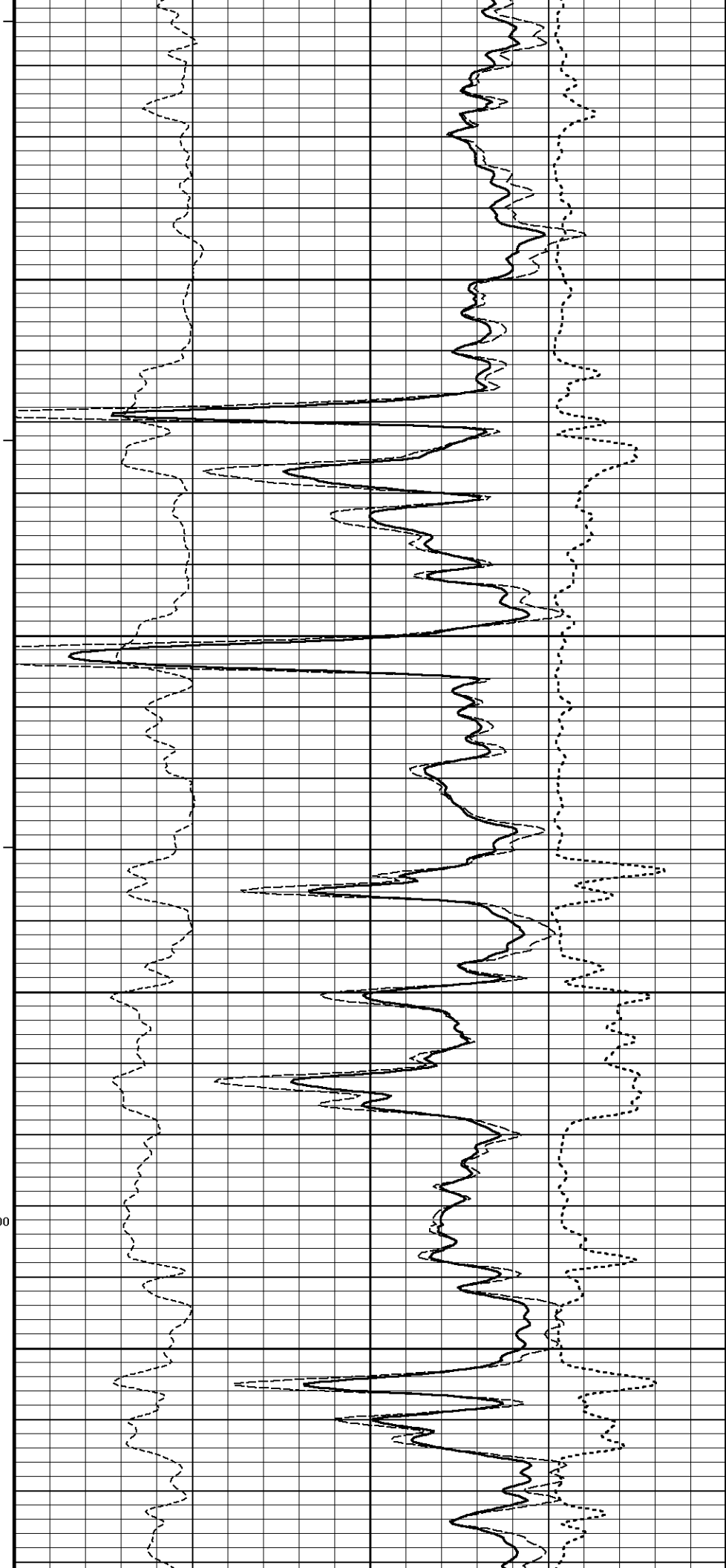
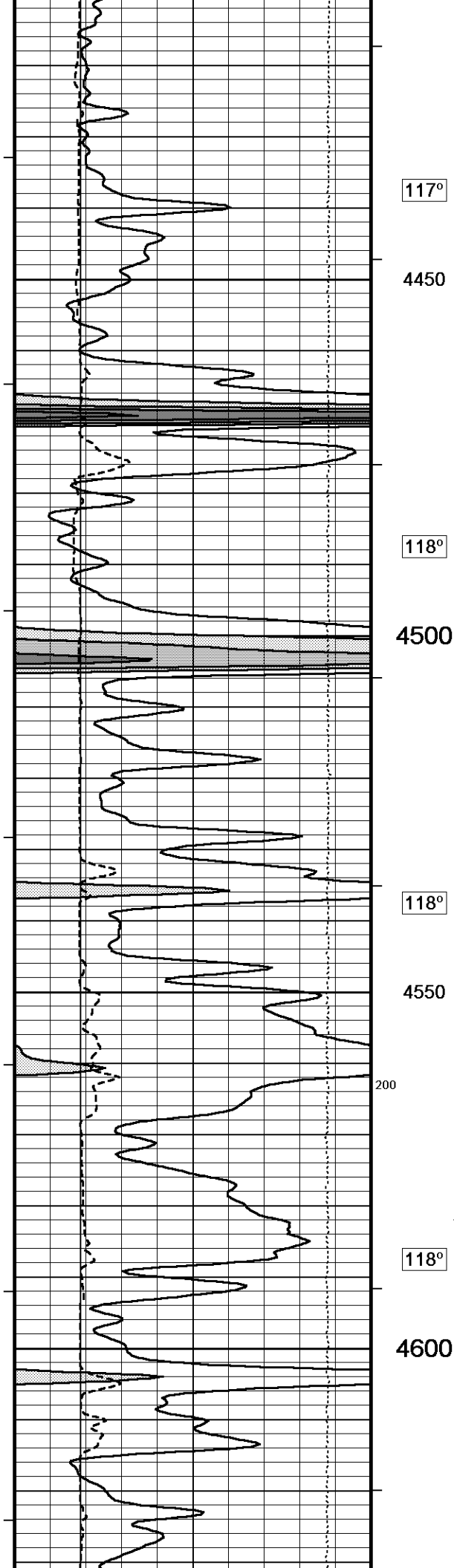
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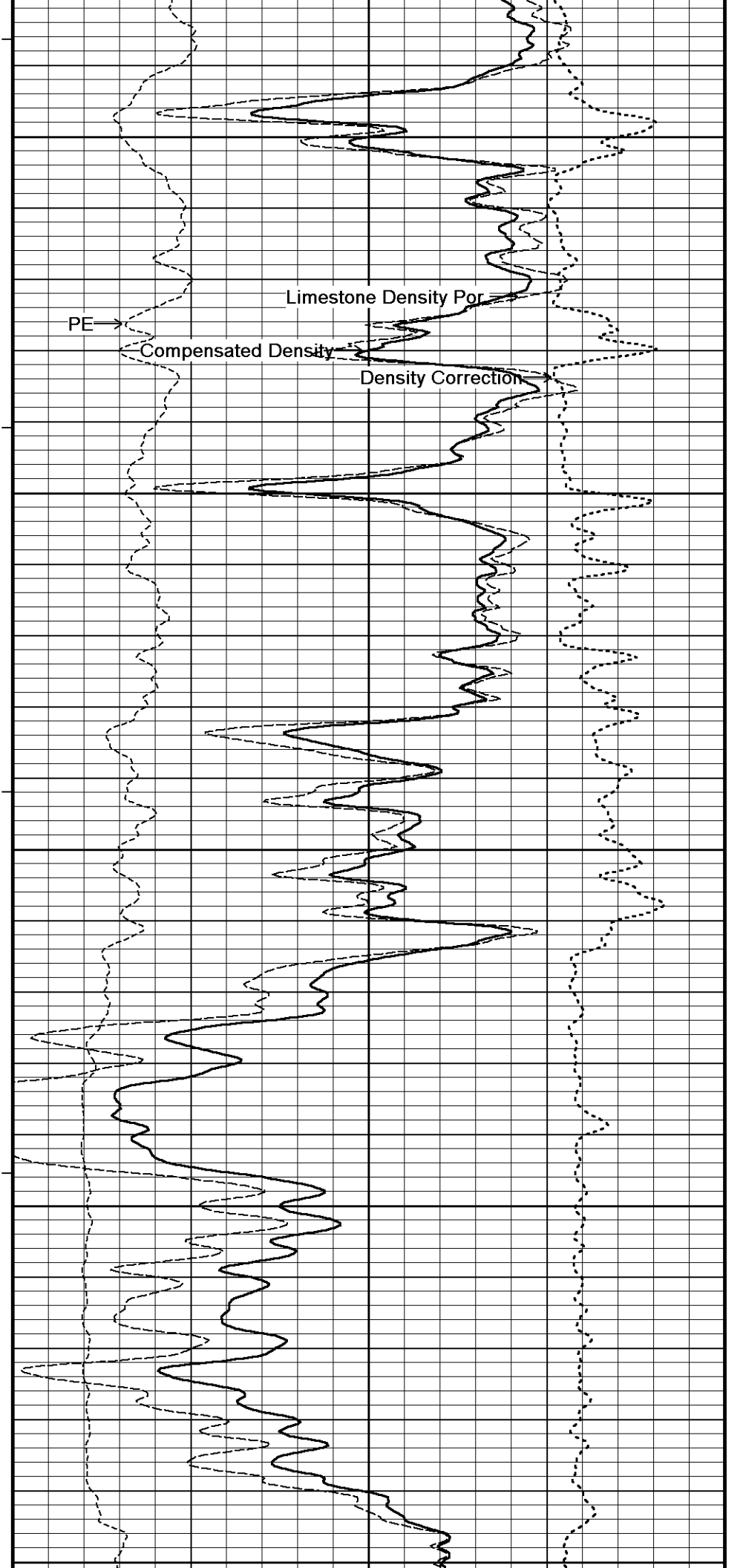
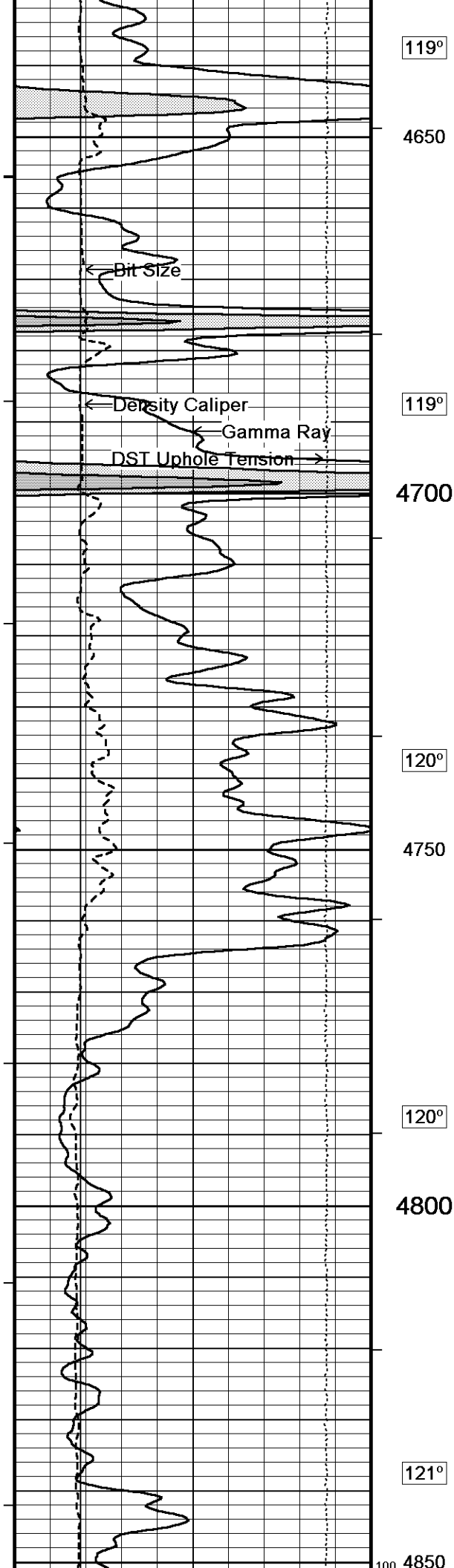


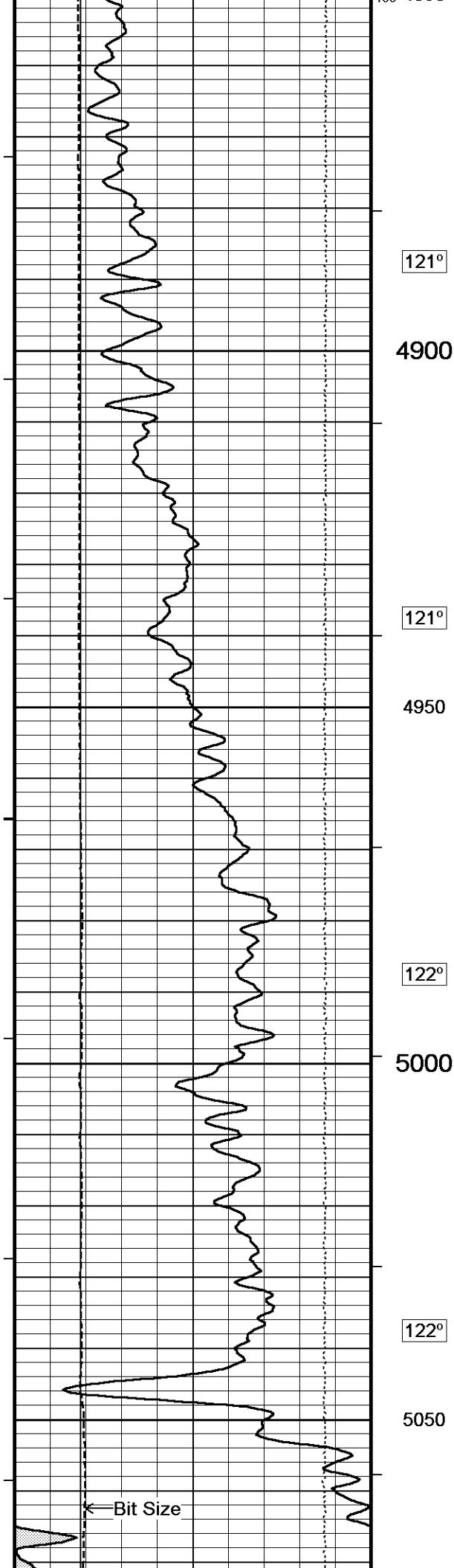












121°

4900

121°

4950

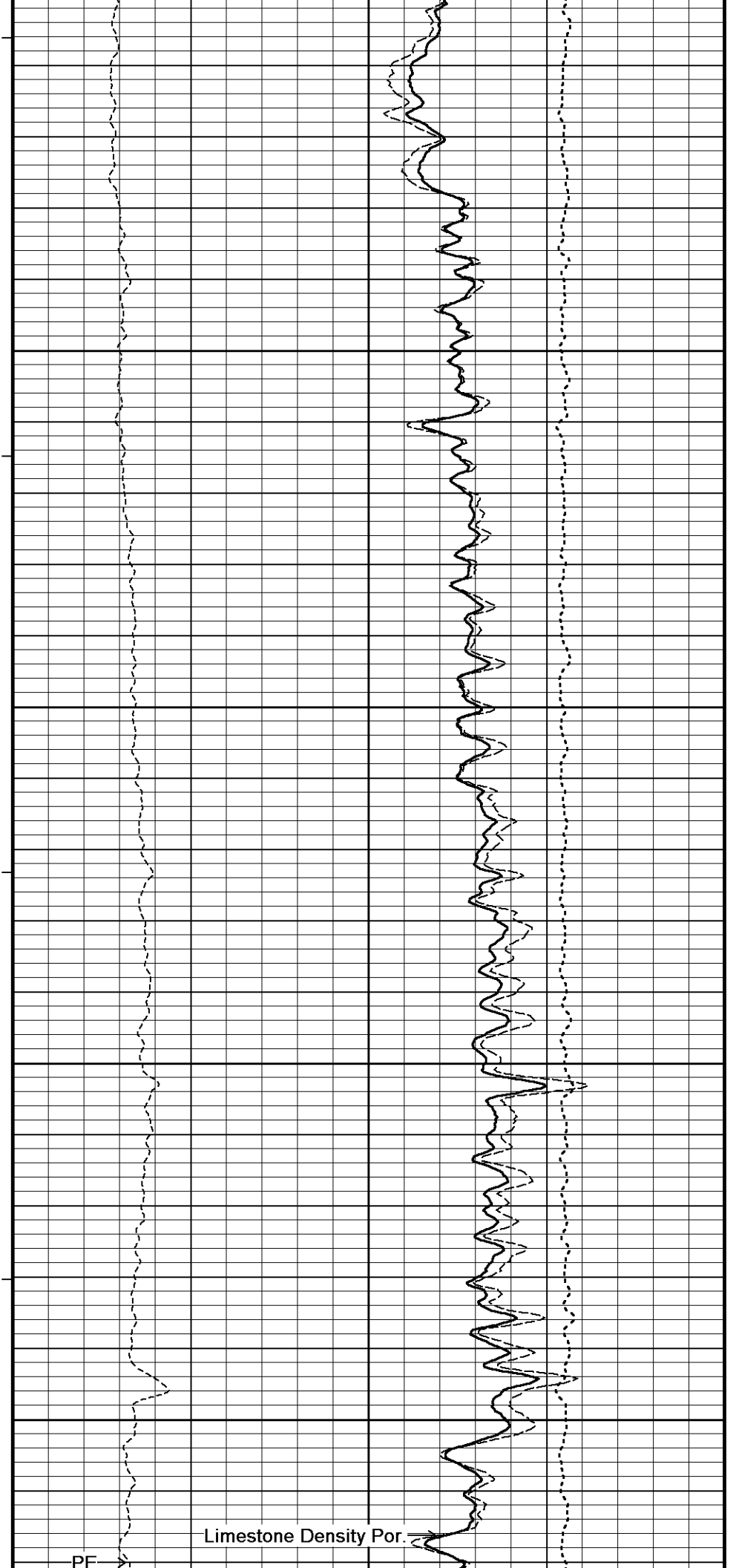
122°

5000

122°

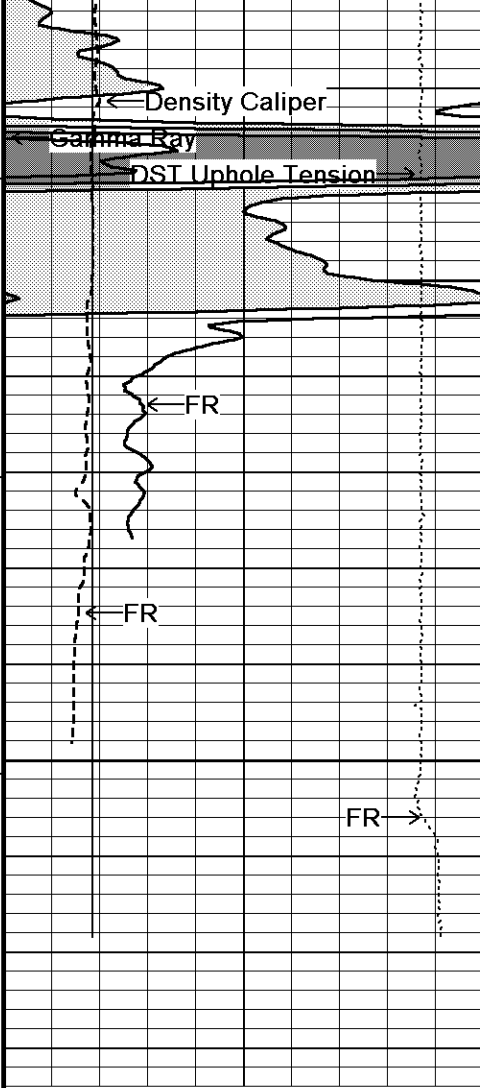
5050

← Bit Size



PF →

Limestone Density Por. →

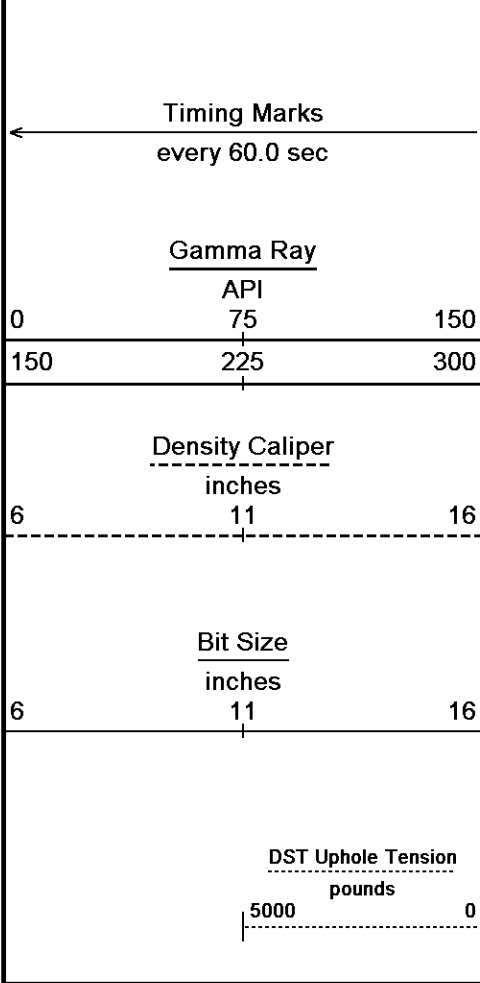
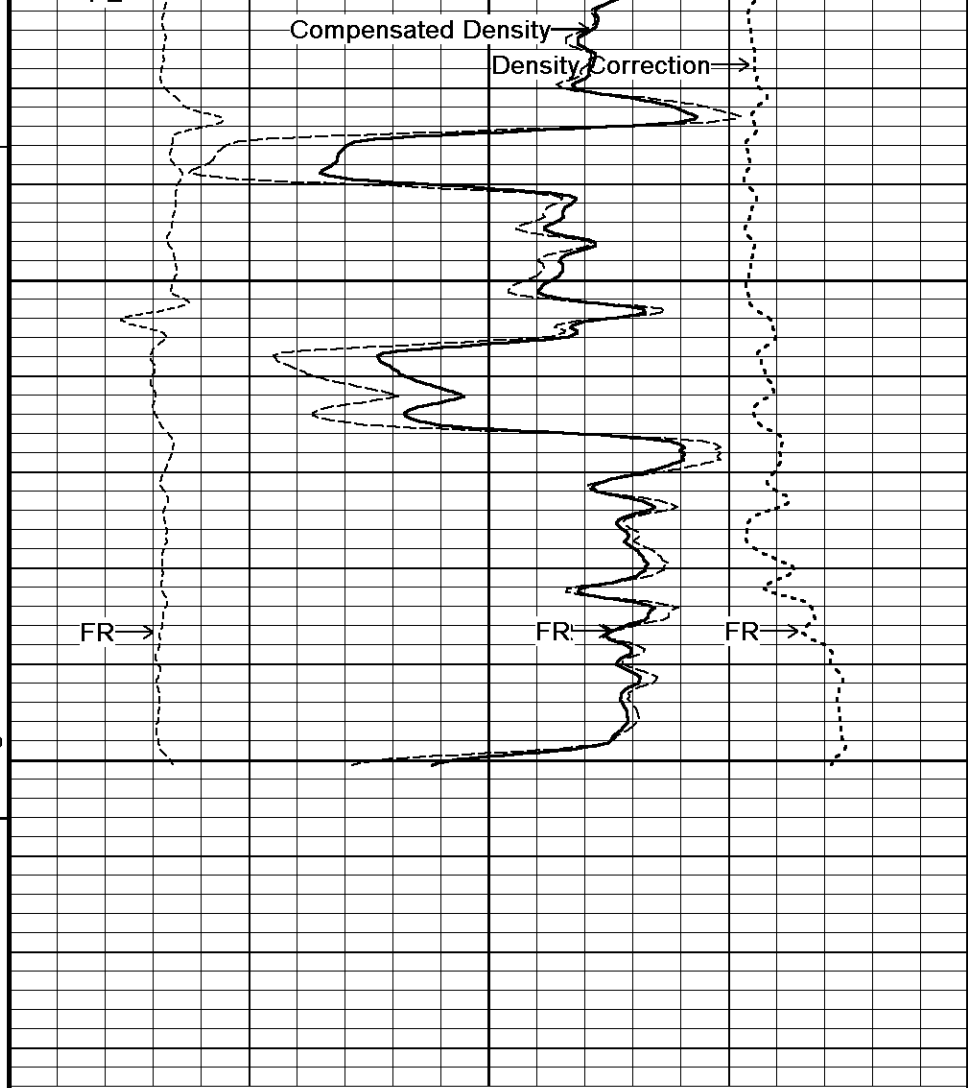


121°

5100

5150

TD



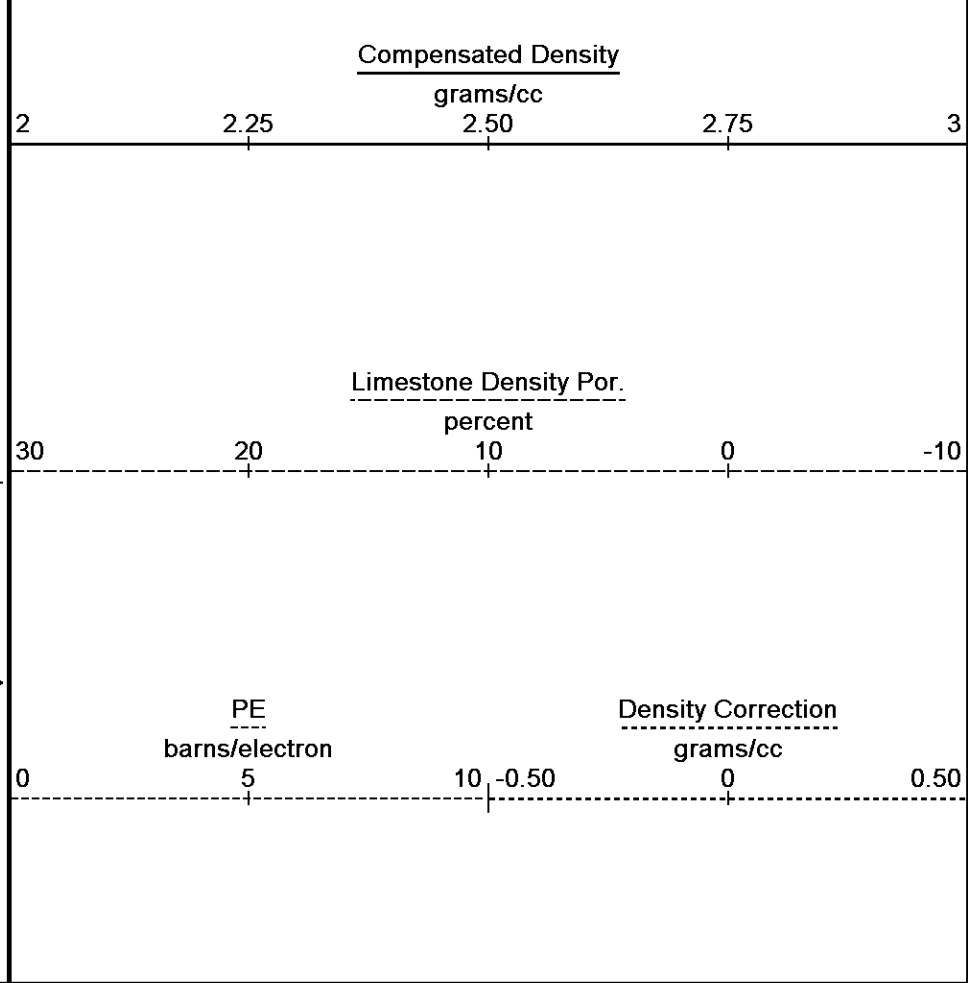
Depth in Feet

Borehole Temp in deg F

HVI every 10 cu ft

Annular Integral every 10 cu ft

Replay Scale 1:240



↑

5 INCH BULK DENSITY MAIN

↑

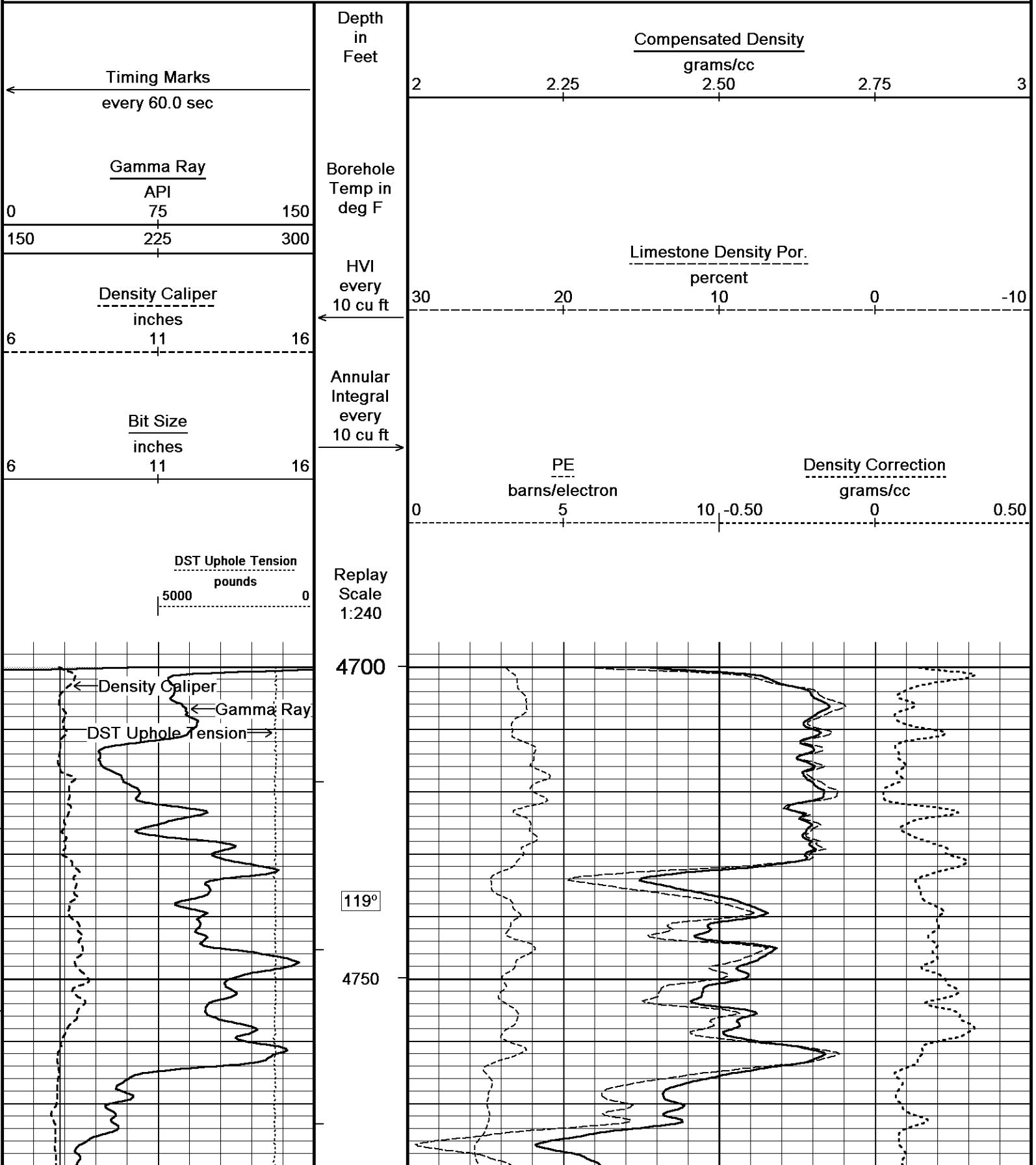
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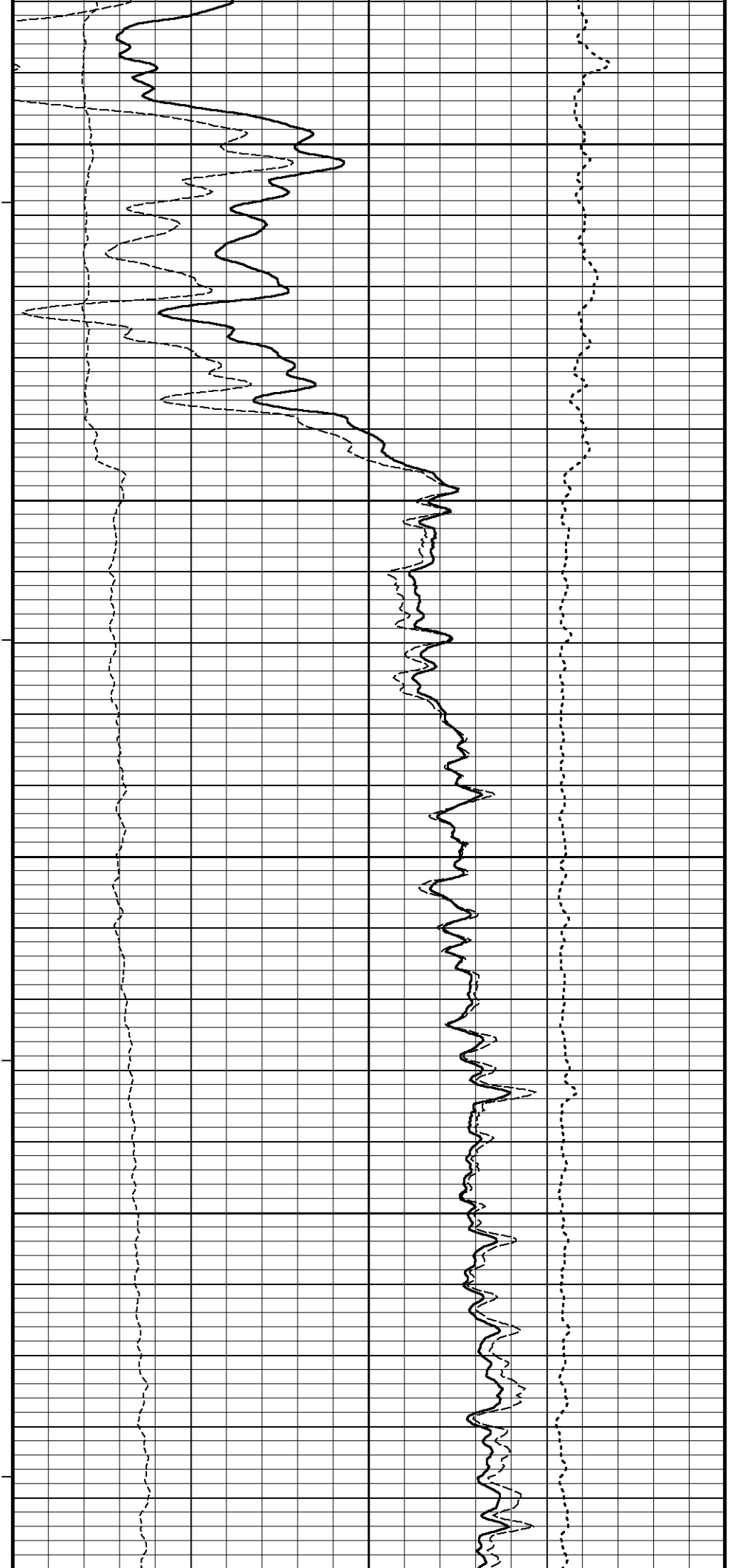
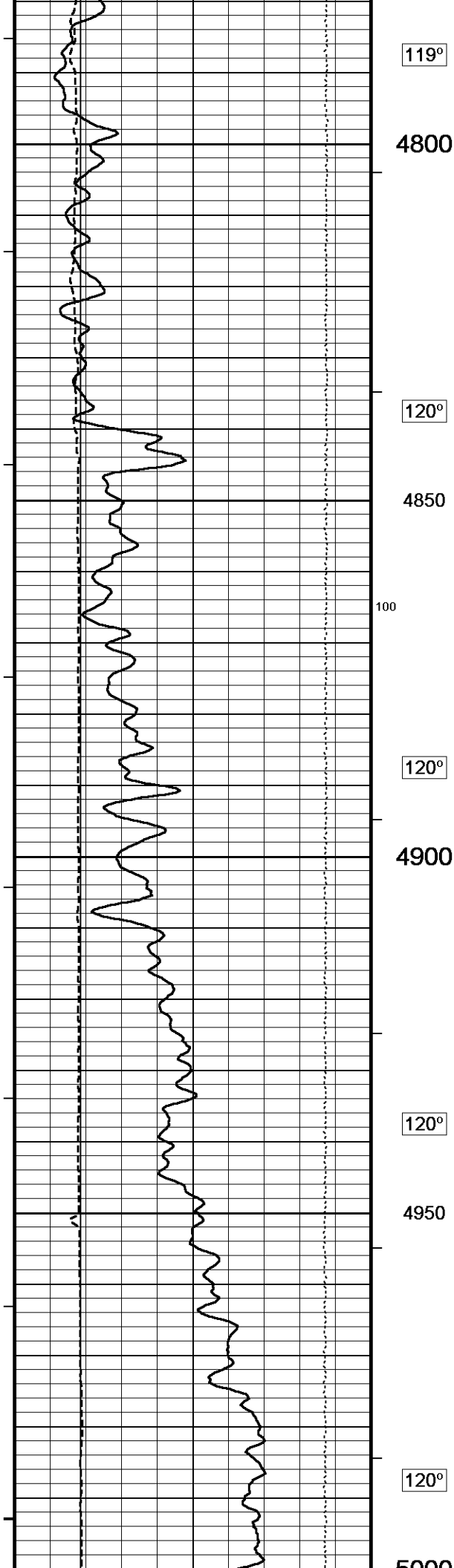
REPEAT SECTION

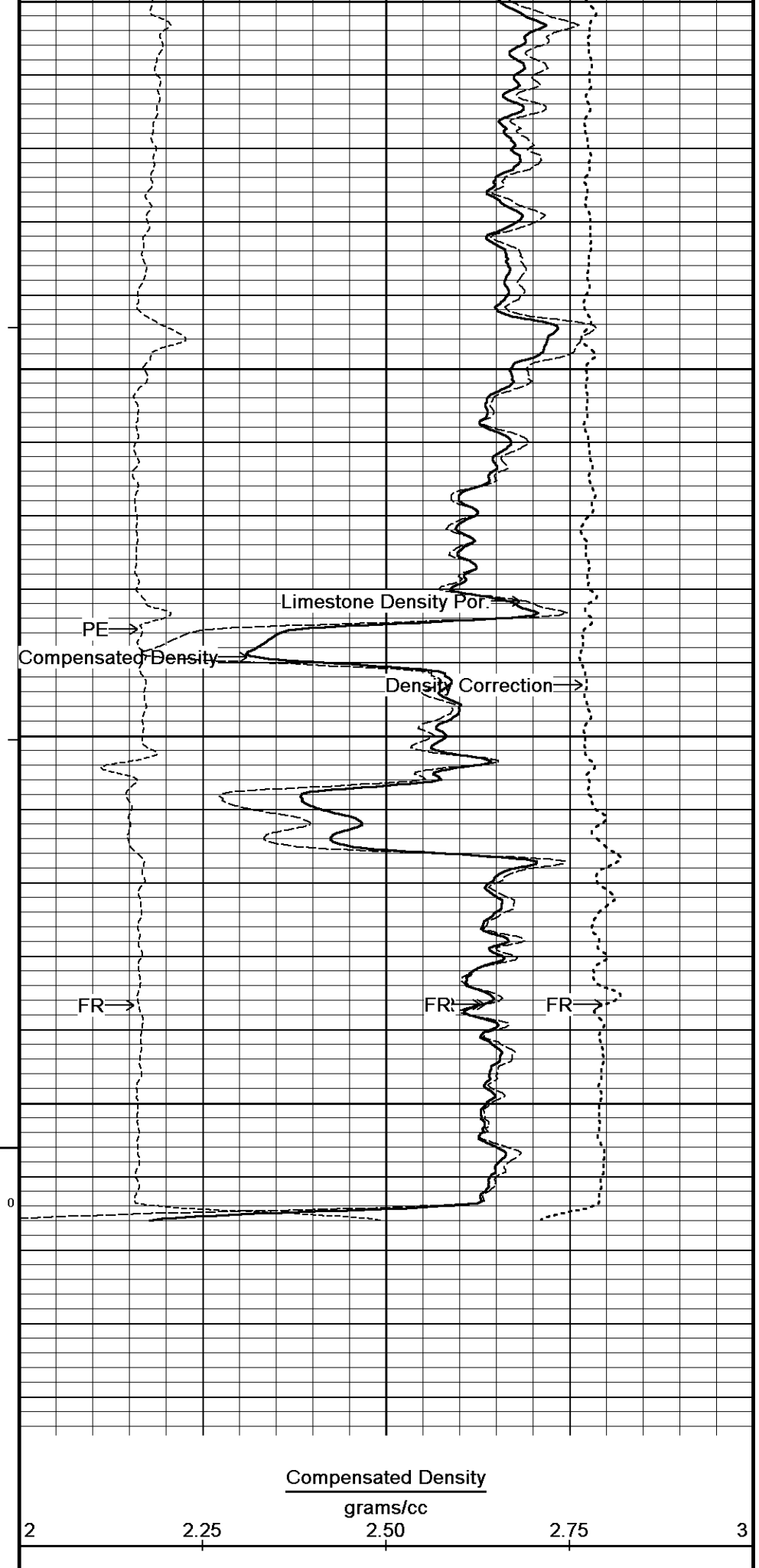
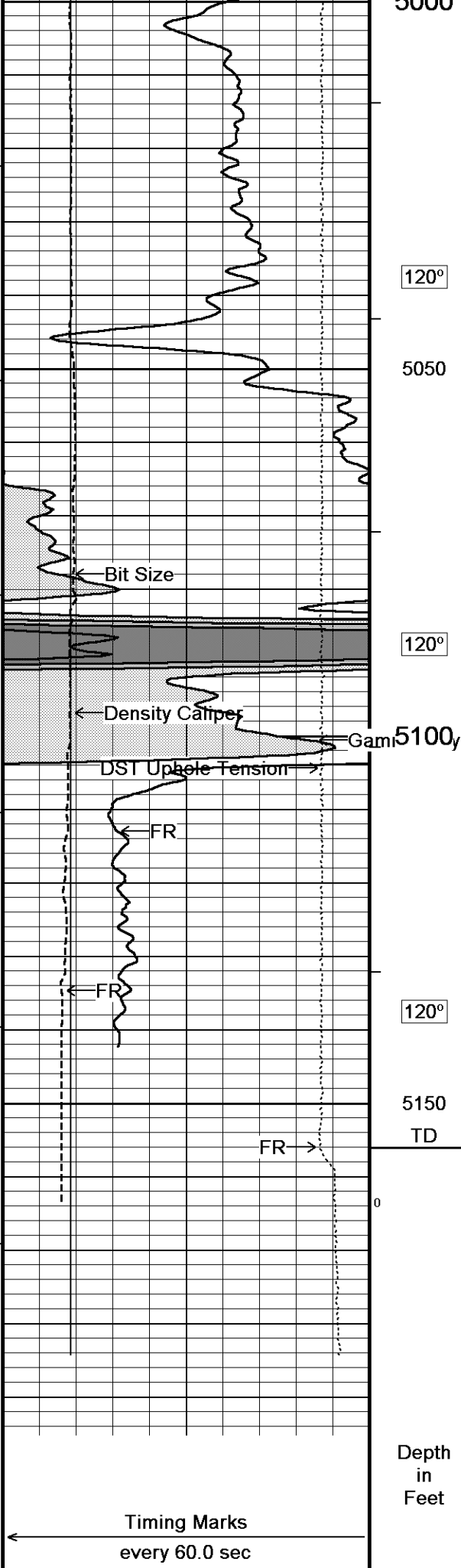
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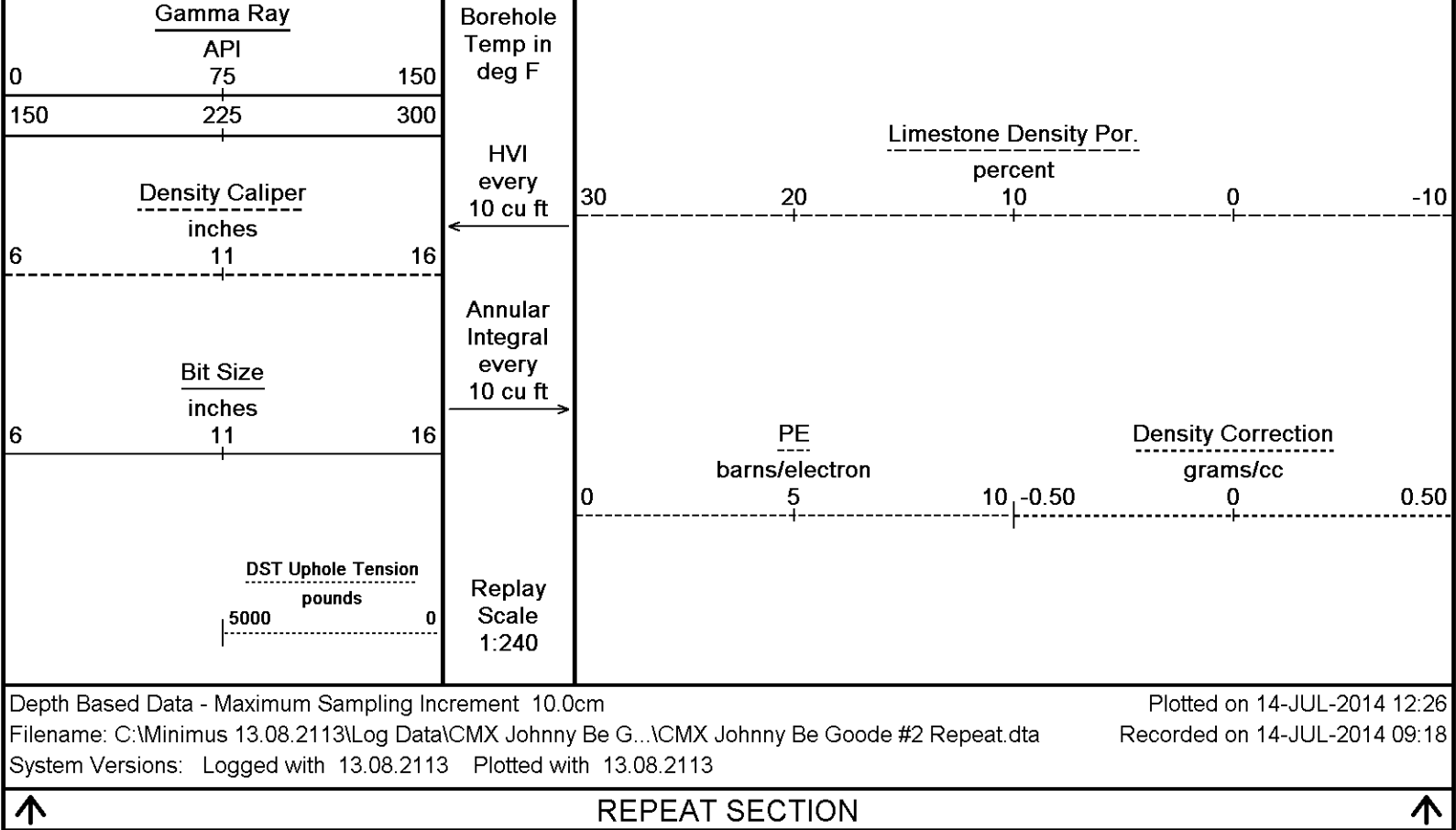
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Filename: C:\Minimus 13.08.2113\Log Data\CMX Johnny Be Goo...\CMX Johnny Be Goode #2 Repeat.dta
System Versions: Logged with 13.08.2113 Plotted with 13.08.2113

Plotted on 14-JUL-2014 12:26
Recorded on 14-JUL-2014 09:18









BEFORE SURVEY CALIBRATION			
C:\Minimus 13.08.2113\Log Data\CMX Johnny Be Goode #2\CMX Johnny Be Goode #2 Repeat.dta			
General Constants All 000		Last Edited on 14-JUL-2014,07:40	
General Parameters			
Mud Resistivity	0.960	ohm-metres	
Mud Resistivity Temperature	96.000	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	None		
Rwa Parameters			
Porosity used	Crossplot Porosity		
Resistivity used	Array Ind. One Res Rt		
RWA Constant A	1.000		
RWA Constant M	2.000		
SW/APOR Tool Source	0.000		
Gamma Calibration MCG-D.K 469		Field Calibration on 13-JUL-2014 10:58	
	Measured	Calibrated (API)	
Background	75	50	
Calibrator (Gross)	1169	775	
Calibrator (Net)	1094	725	
Gamma Constants MCG-D.K 469		Last Edited on 14-JUL-2014,07:32	
Gamma Calibrator Number GRC038			
Mud Density	1.08	gm/cc	
Caliper Source for Processing	Density Caliper		
Tool Position	Eccentred		
Concentration of KCl		kppm	

K Mud Type		Chloride		
K Mud Concentration		0.00		%
High Resolution Temperature Calibration MCG-D.K 469				Field Calibration on 12-MAY-2014,02:16
	Measured	Calibrated(Deg F)		
Lower	10.00	10.00		
Upper	100.00	100.00		
High Resolution Temperature Constants MCG-D.K 469				Last Edited on 13-JUL-2014,14:53
Pre-filter Length		11		
Caliper Calibration MPD-C.A 216				Base Calibration on 02-JUL-2014 11:15 Field Calibration on 13-JUL-2014 10:44
Base Calibration				
Reading No	Measured	Calibrator Size (in)		
1	17551	3.99		
2	27136	5.98		
3	37121	7.97		
4	46912	9.86		
5	58208	11.92		
6	N/A	N/A		
Field Calibration				
	Measured Caliper (in)	Actual Caliper (in)		
	7.99	7.97		
Photo Density Calibration MPD-C.A 216				Base Calibration on 02-JUL-2014 11:33 Field Check on 13-JUL-2014 10:40
Density Calibration				
Base Calibration				
	Near	Measured	Calibrated (sdu)	
		Far	Near	Far
Background	1104	1297		
Reference 1	60214	31884	59556	30836
Reference 2	25320	2782	24941	2541
Field Check at Base				
	1104.3	1296.6		
Field Check				
	1101.0	1299.0		
PE Calibration				
Base Calibration				
	WS	Measured	Calibrated	
		WH	Ratio	Ratio
Background	199	985		
Reference 1	24821	60024	0.417	0.371
Reference 2	7163	25188	0.288	0.272
Field Check at Base				
	199.3	984.7		
Field Check				
	201.6	984.1		
Density Constants MPD-C.A 216				Last Edited on 14-JUL-2014,07:30
Density Source Id		18235B		
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		1.08	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)		

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:\Minimus 13.08.2113\Log Data\CMX Johnny Be Goode #2\CMX Johnny Be Goode #2 Repeat.dta

CBH-C, Cablehead, 11 pin
CBH-CA 170 LG: 2.40 ft WT: 24.3 lb OD: 2.244 in

Compact Comms Gamma
MCG-D.K 469 LG: 8.70 ft WT: 63.9 lb OD: 2.240 in

Compact Micro-log
MML-A 3 LG: 7.97 ft WT: 81.6 lb OD: 2.240 in

Compact Neutron
MDN-A.B 66 LG: 5.04 ft WT: 50.7 lb OD: 2.244 in

Compact Density/Caliper
MPD-C.A 216 LG: 9.59 ft WT: 90.4 lb OD: 2.449 in

Compact Focussed Electric
MFE-A.A 135 LG: 6.05 ft WT: 48.5 lb OD: 2.244 in

Compact Induction
MAI-A.A 111 LG: 10.81 ft WT: 48.5 lb OD: 2.244 in

Total Length: 50.55 ft Weight: 407.9 lb

42.87 ft GRGC - Gamma Ray
39.96 ft CGXT - MCG External Temperature

33.24 ft MINV - Micro-inverse
33.24 ft MNRL - Micro-normal
34.24 ft MLTC - MML Caliper

28.45 ft NPRL - Limestone Neutron Por.

21.21 ft CLDC - Density Caliper
21.21 ft AVOL - Annular Volume
21.21 ft HVOL - Hole Volume
19.28 ft DEN - Compensated Density
19.28 ft DCOR - Density Correction
19.28 ft DPRL - Limestone Density Por.
19.22 ft PDPE - PE

13.72 ft FEFE - Shallow FE

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

All measurements relative to tool zero.

COMPANY	CMX, INC.				
WELL	JOHNNY BE GOODE #2				
FIELD	STRANATHAN				
PROVINCE/COUNTY	BARBER				
COUNTRY/STATE	U.S.A. / KANSAS				
Elevation Kelly Bushing	1380.00	feet	First Reading	5137.00	feet
Elevation Drill Floor	1378.00	feet	Depth Driller	5175.00	feet
Elevation Ground Level	1367.00	feet	Depth Logger	5156.00	feet



 **Weatherford**[®]

COMPACT PHOTO DENSITY
COMPENSATED NEUTRON
MICRORESISTIVITY LOG