



Weatherford

**COMPACT PHOTO DENSITY
COMPENSATED NEUTRON
LOG**

COMPANY

MCCOY PETROLEUM CORPORATION

WELL

ERSKINE "B" #1-32

FIELD

ERSKINE NORTH

PROVINCE/COUNTY

SUMNER

COUNTRY/STATE

USA / KANSAS

LOCATION

660' FNL & 660' FEL

C NE NE

SEC

TWP

RGE

Other Services
MAI/MFE
MML

32

31 S

3 W

API Number

15-191-22661

Permit Number

Permanent Datum GL, Elevation 1278 feet

Log Measured From KB

Drilling Measured From KB

Date

08-AUG-2012

Run Number

ONE

Depth Driller

4390.00 feet

Depth Logger

4378.00 feet

First Reading

4359.00 feet

Last Reading

2500.00 feet

Casing Driller

266.00 feet

Casing Logger

266.00 feet

Bit Size

7.875

inches

Hole Fluid Type

WBM

Density / Viscosity

9.50

g/cc

54.00 CP

PH / Fluid Loss

10.50

9.20 ml/30Min

Sample Source

MUD PIT

Rm @ Measured Temp

0.32 @ 91.0

ohm-m

Rmf @ Measured Temp

0.26 @ 91.0

ohm-m

Rmc @ Measured Temp

0.38 @ 91.0

ohm-m

Source Rmf / Rmc

CALC

CALC

Rm @ BHT

0.23 @ 129.0

ohm-m

Time Since Circulation

4 HOURS

Max Recorded Temp

130.00

deg F

Equipment Name

COMPACT

Equipment / Base

13039

OKC

Recorded By

JIM SCHULER

Witnessed By

JERRY A. SMITH

Ticket Number

3538700

JUSTIN SCHEFFE

BOREHOLE RECORD

Last Edited: 08-AUG-2012 19:31

Bit Size
inches

7.875

Depth From
feet

266.00

Depth To
feet

4390.00

CASING RECORD

Type

Size
inches

8.625

Depth From
feet

0.00

Shoe Depth
feet

266.00

Weight
pounds/ft

24.00

REMARKS

WLS 13.02

DEPTH CONTROL: CALIBRATED MEASURING WHEEL

TOOLS RAN: SHA, MCG, MML, MDN, MPD, MFE, MAI RAN IN COMBINATION

HARDWARE: MAI: TWO 0.5 INCH STANDOFFS USED.

MFE: ONE 0.5 INCH STANDOFF USED

MDN: DUAL NEUTRON BOW SPRINGS USED.

MPD: 8 INCH PROFILE PLATE USED.

2.71 G/CC DENSITY MATRIX USED TO CALCULATE POROSITY

ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST.

TOTAL HOLE VOLUME FROM TD TO 2500' = 2000 CU.FT.

ANNULAR HOLE VOLUME WITH 5.5 INCH PRODUCTION CASING FROM TD TO 2500' = 1325 CU.FT.

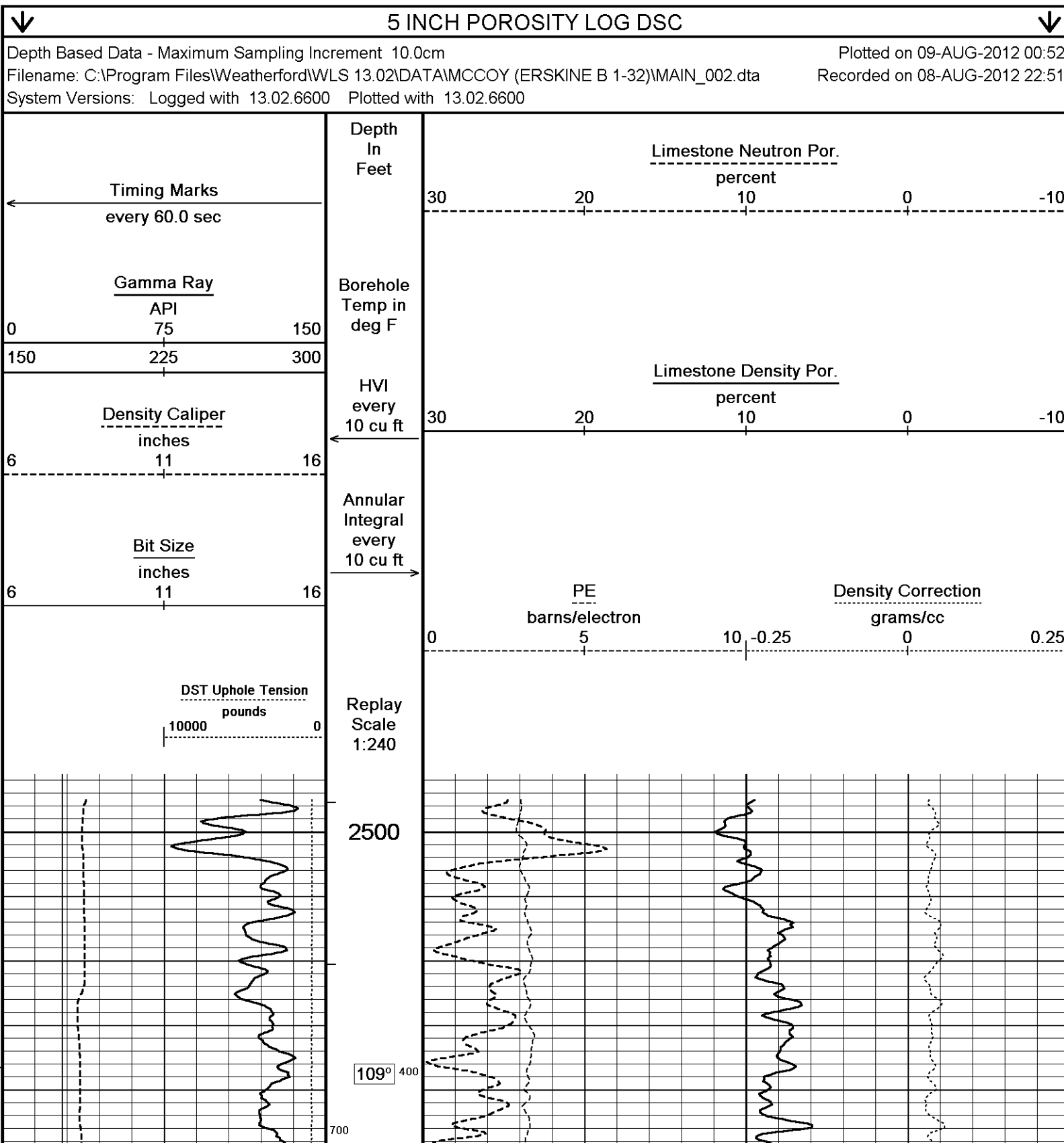
SERVICE ORDER # 3538700

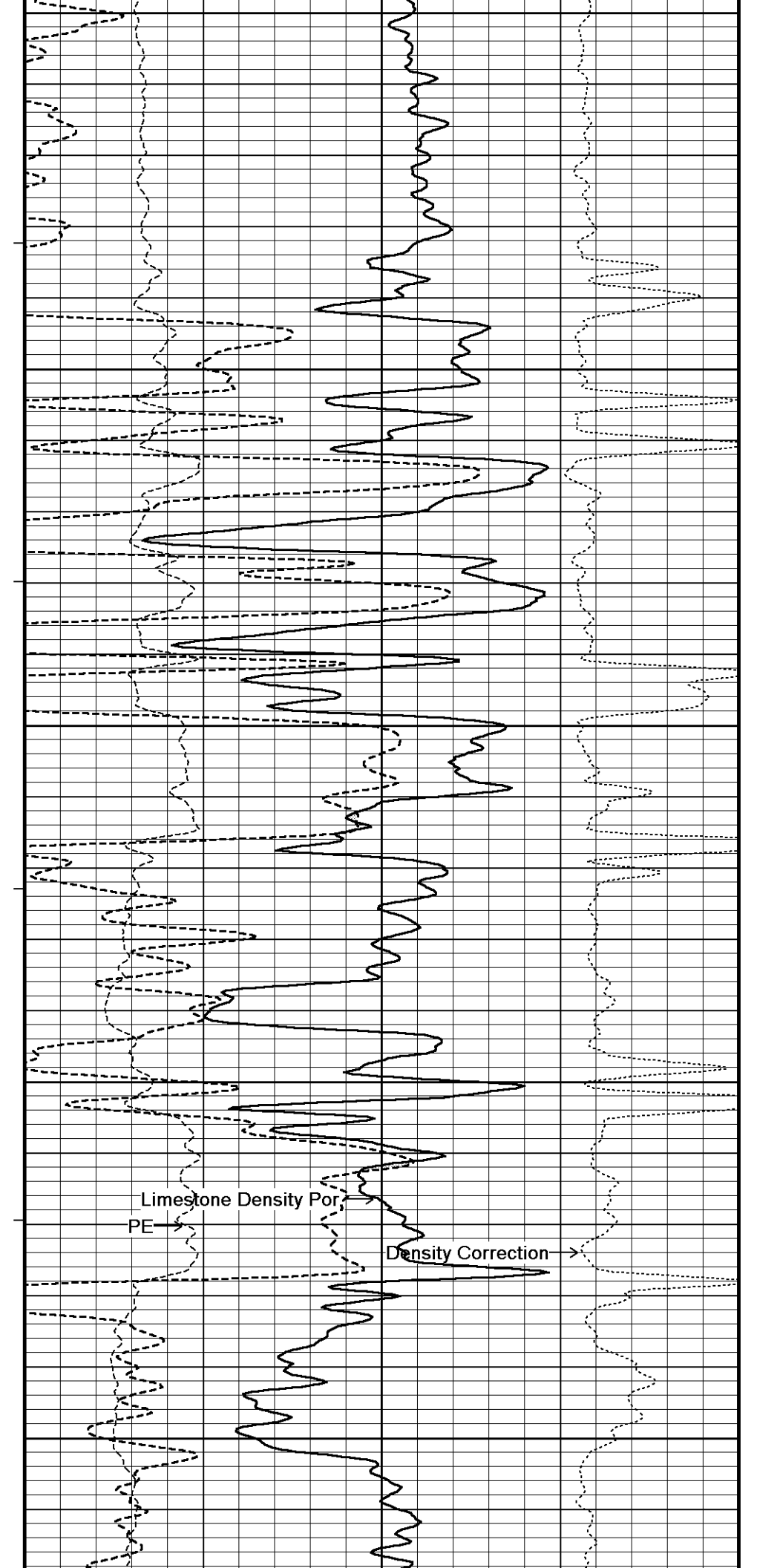
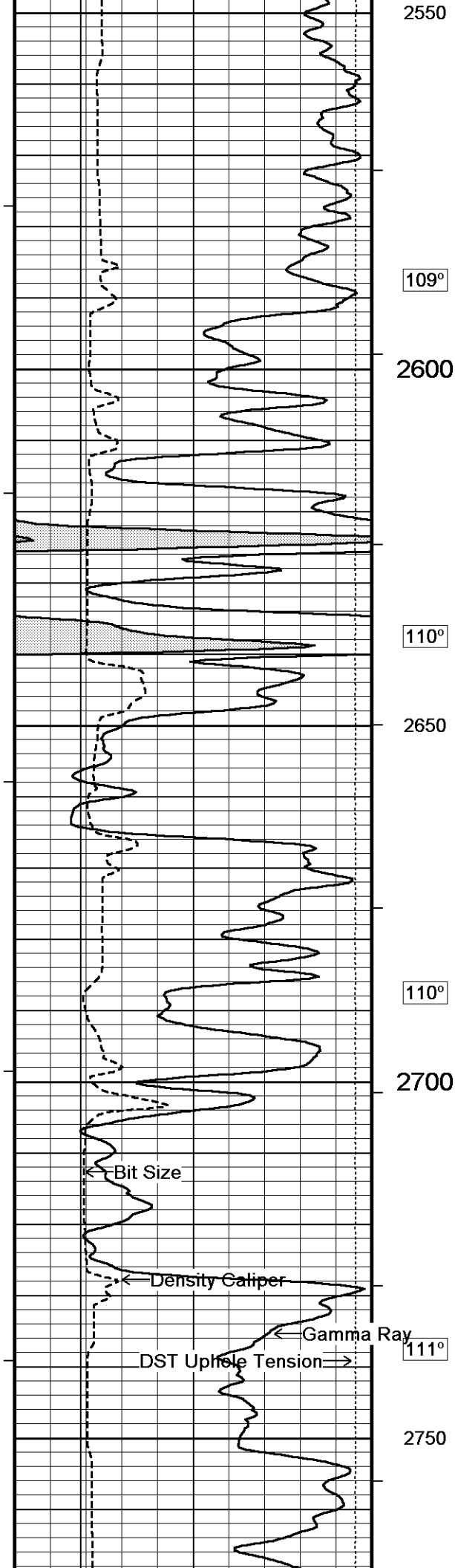
RIG: STEARLING DRILLING RIG #4

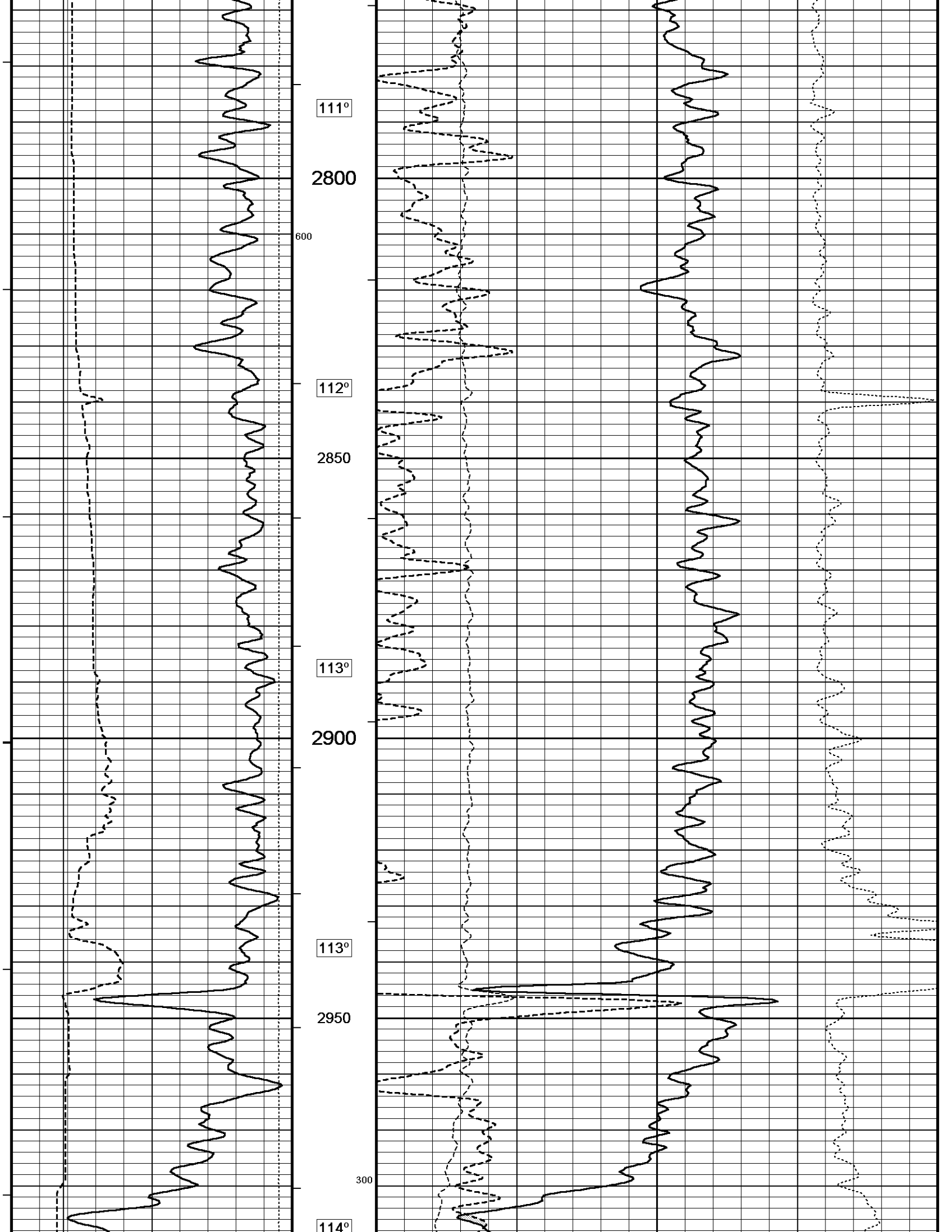
OPERATOR(S): M. SLOBODKIN, G. NANNEY, C. ALEXANDER

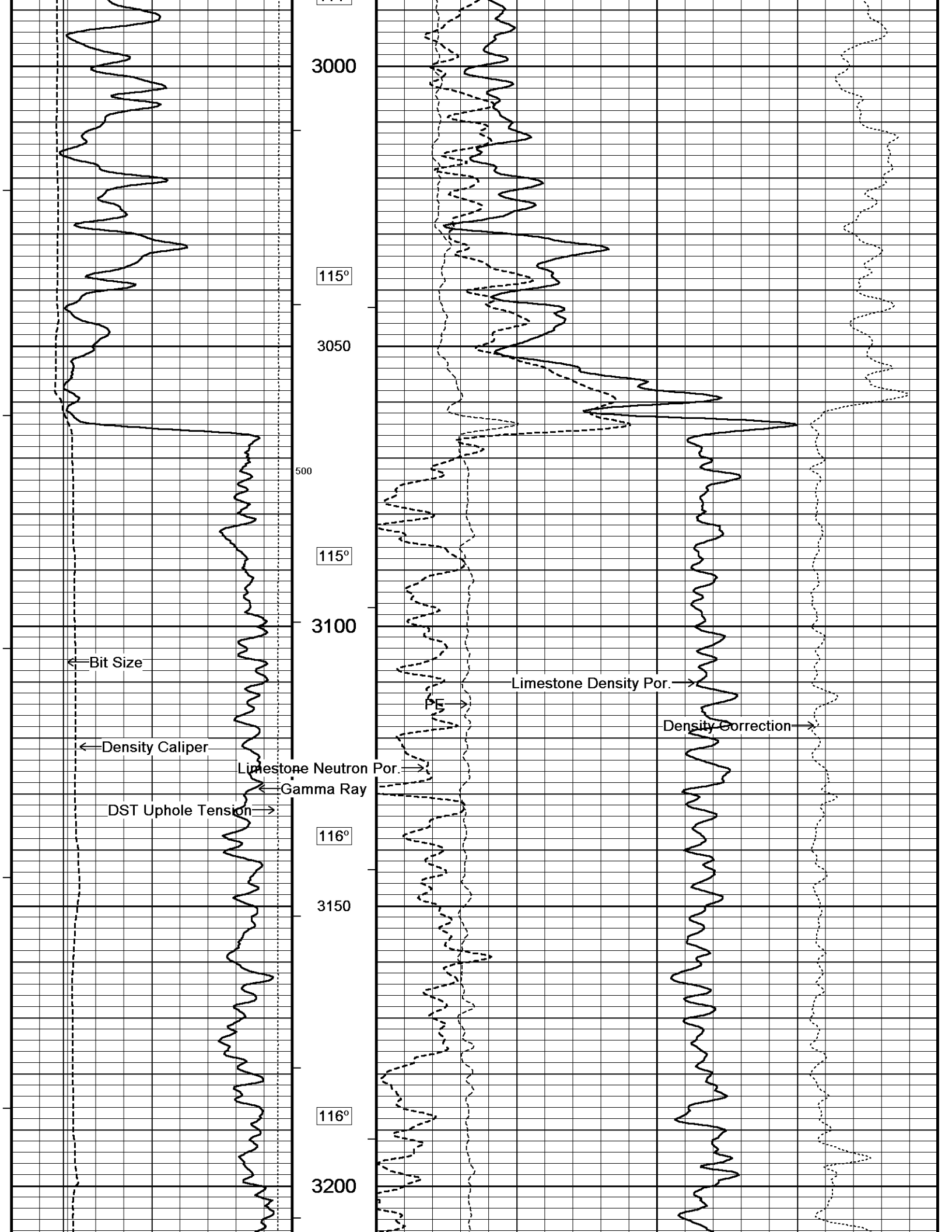
WASHOUTS AND HOLE RUGOSITY WILL AFFECT LOG QAULTY AND REPEATABILITY

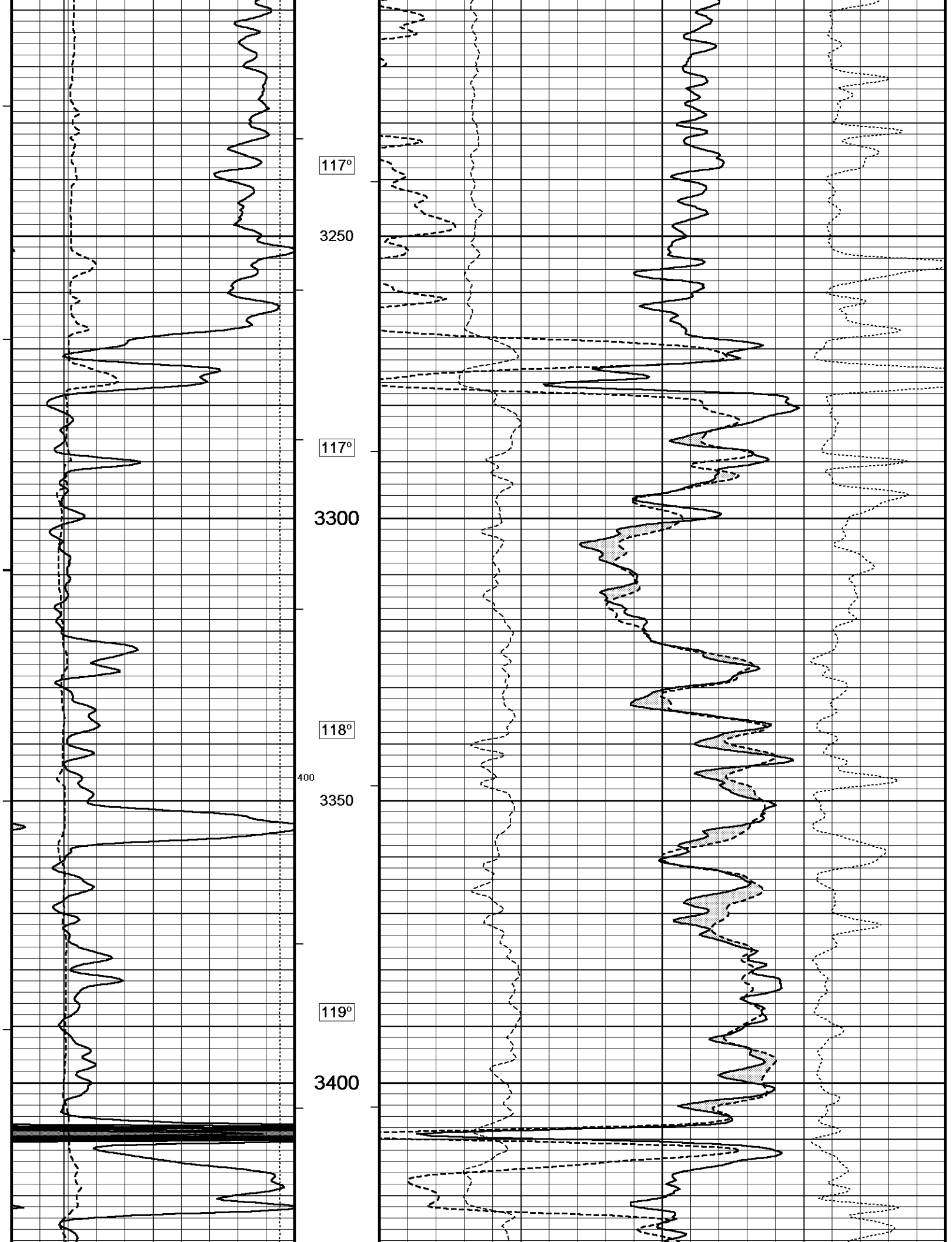
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

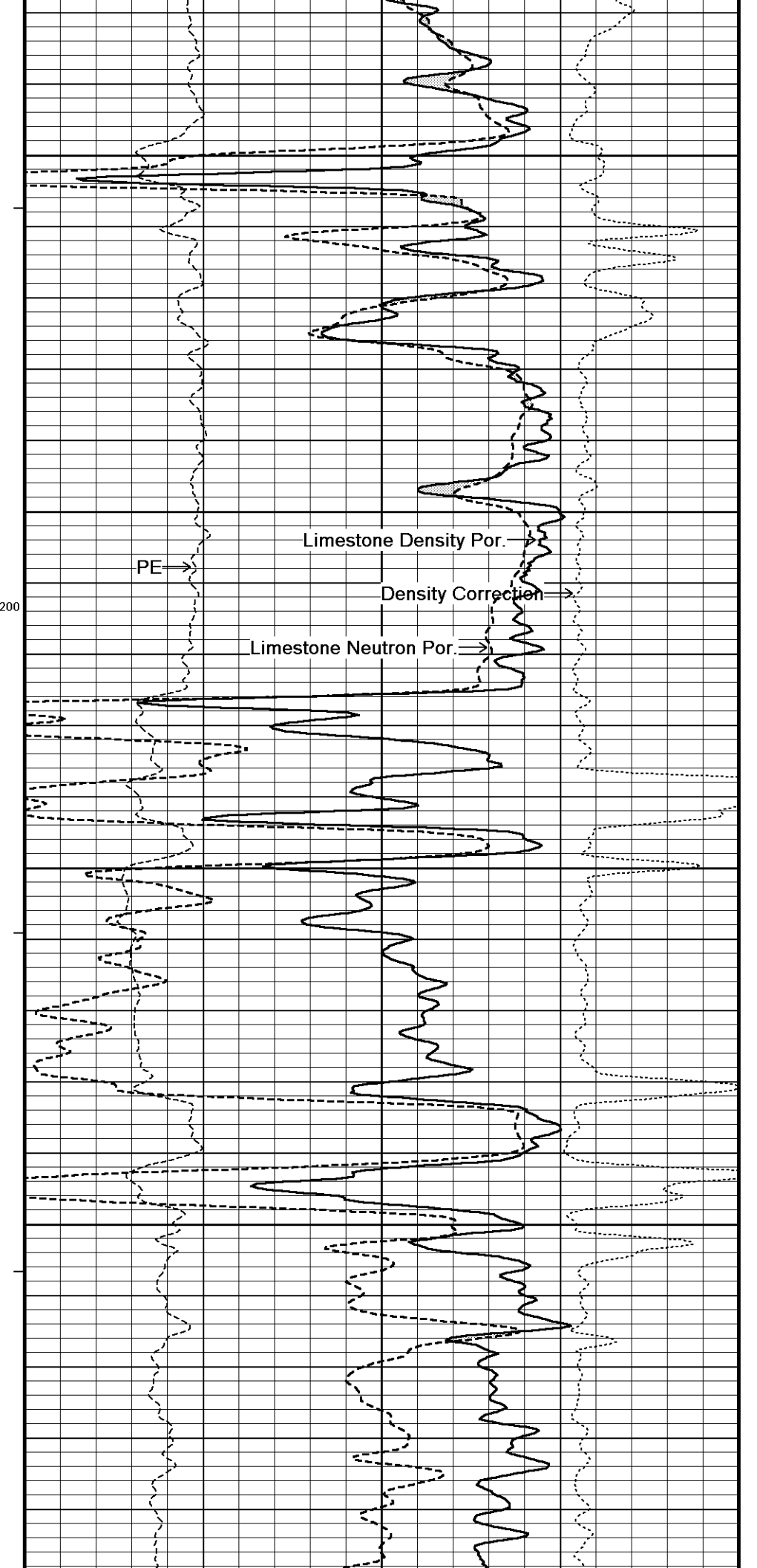
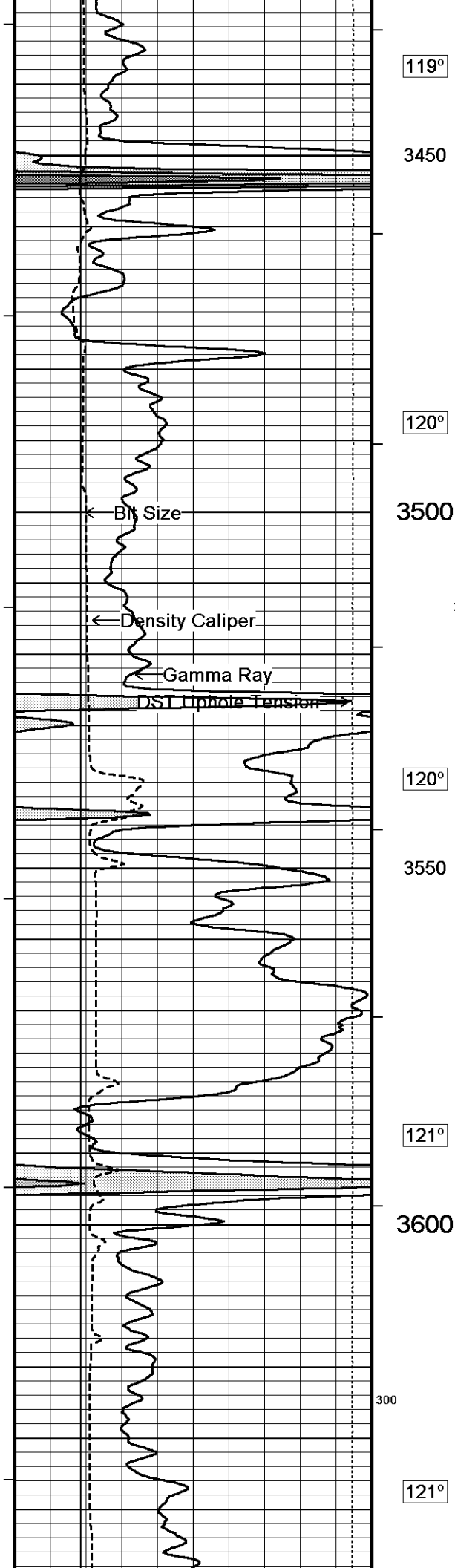


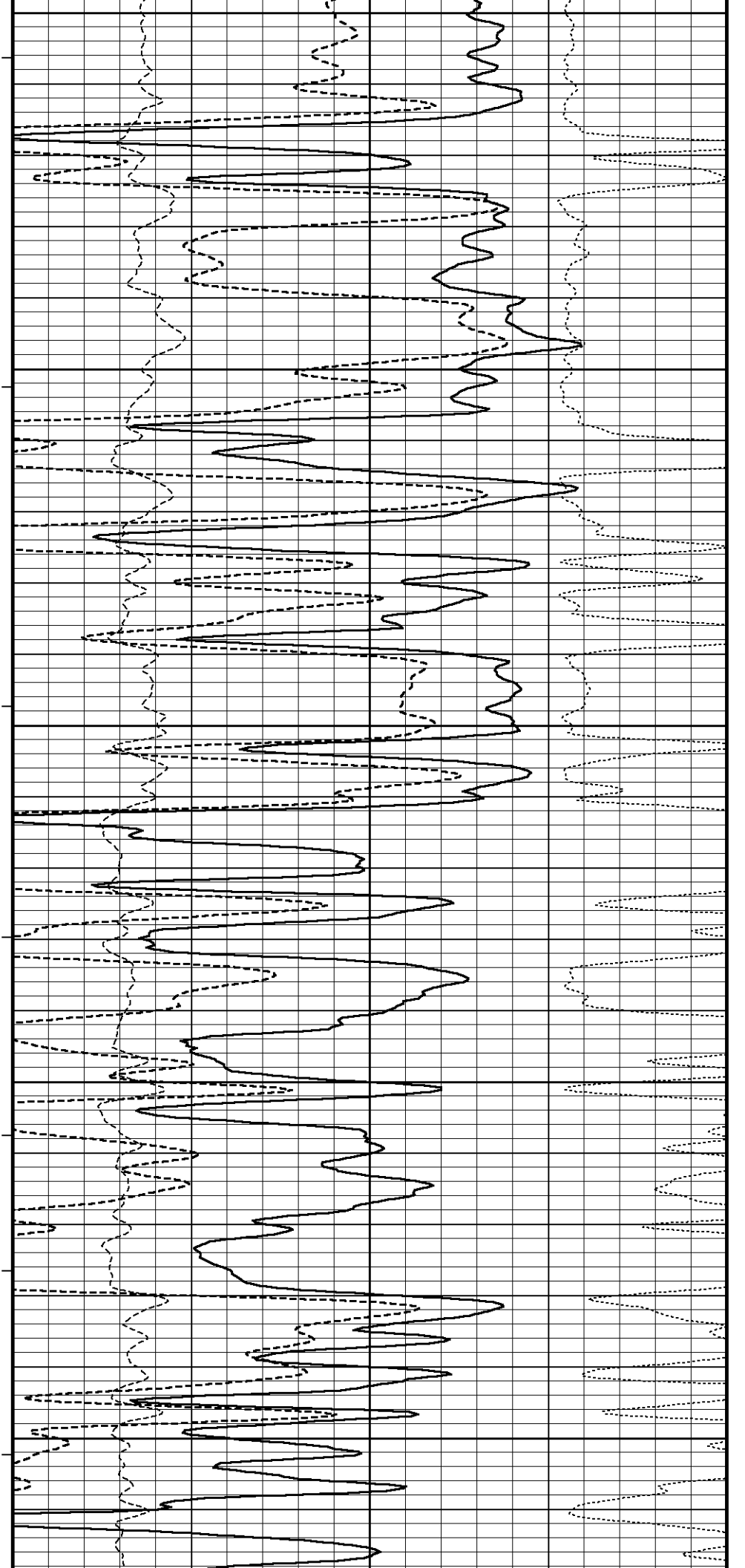
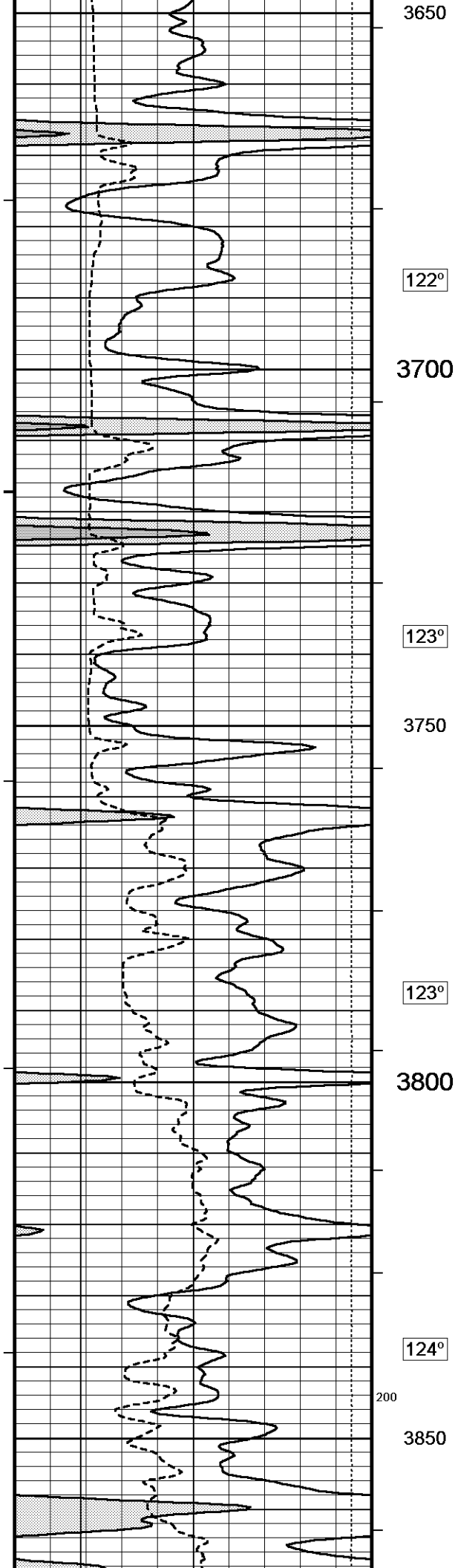


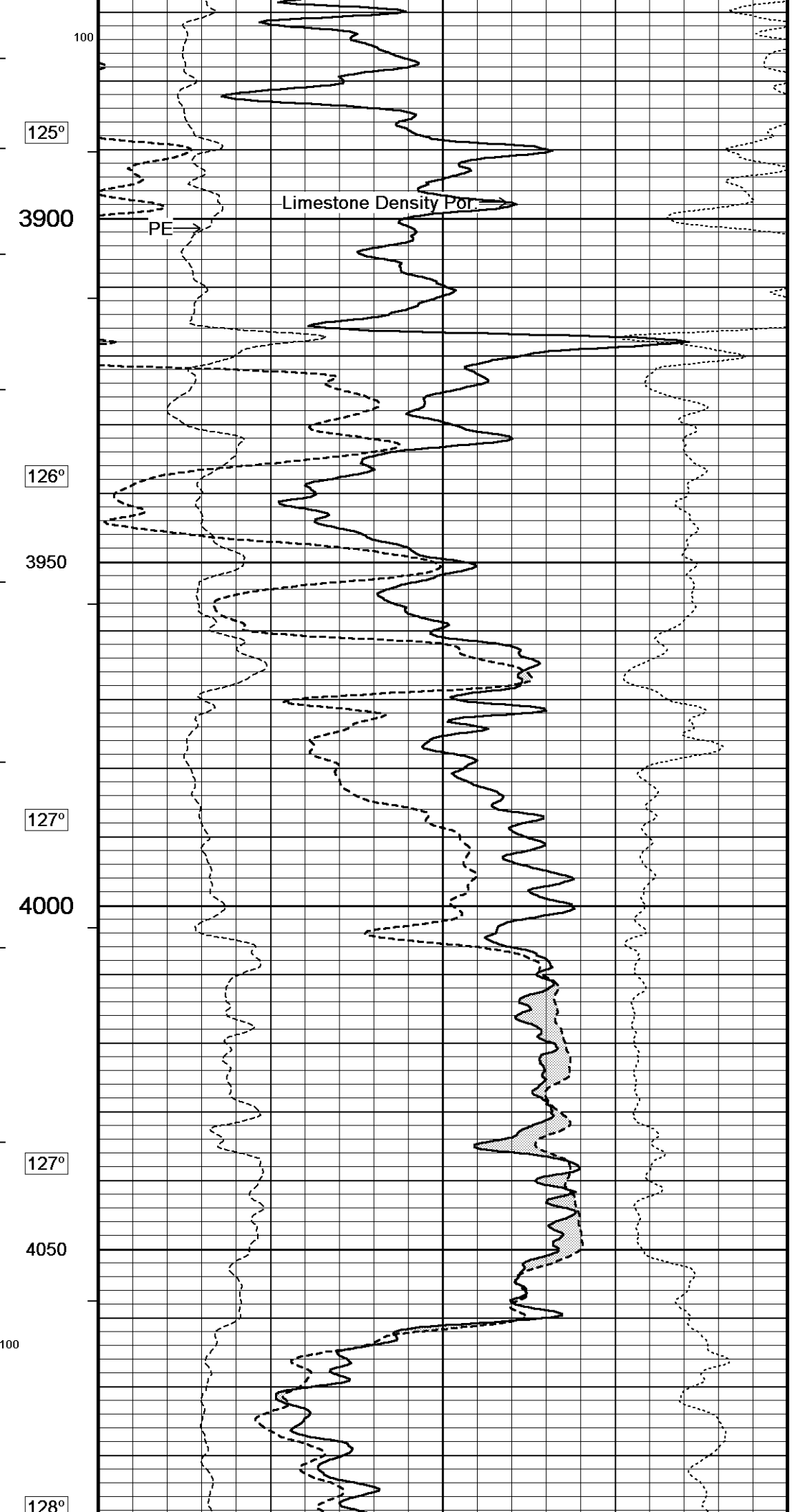
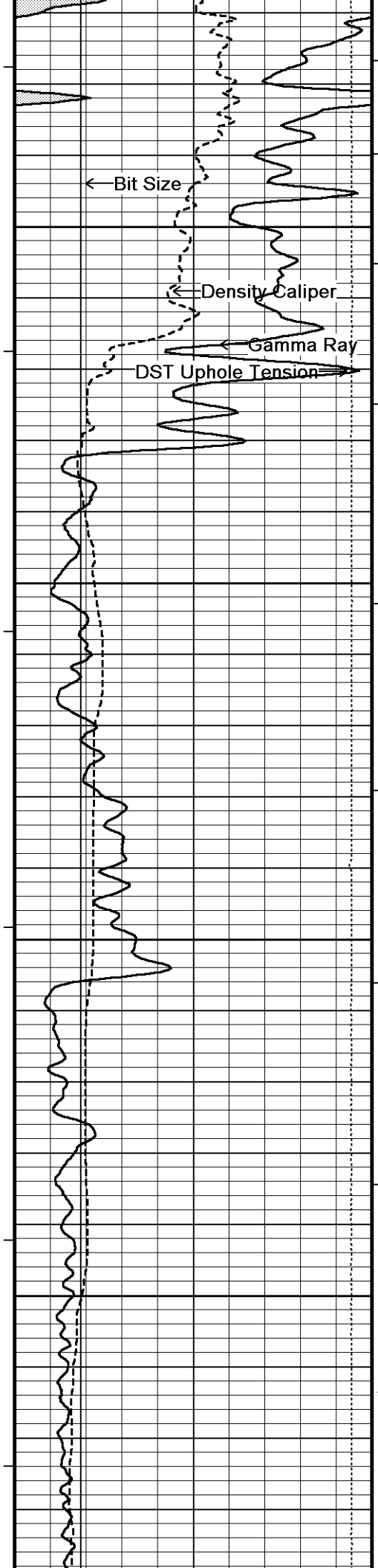


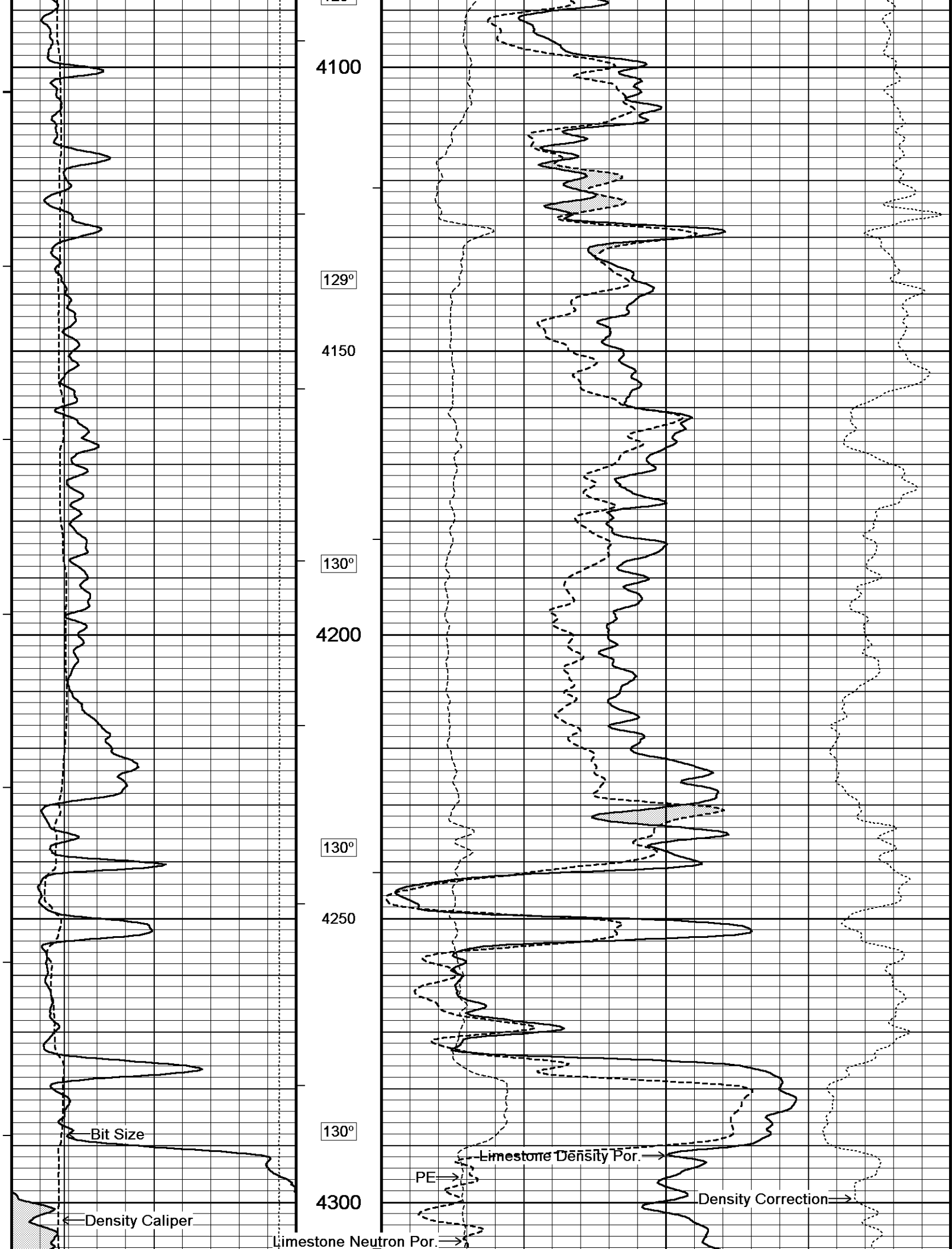


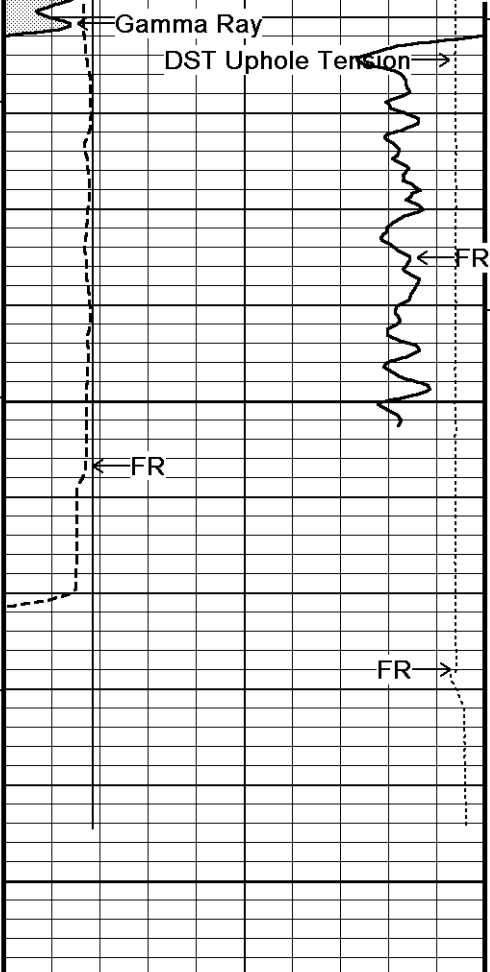












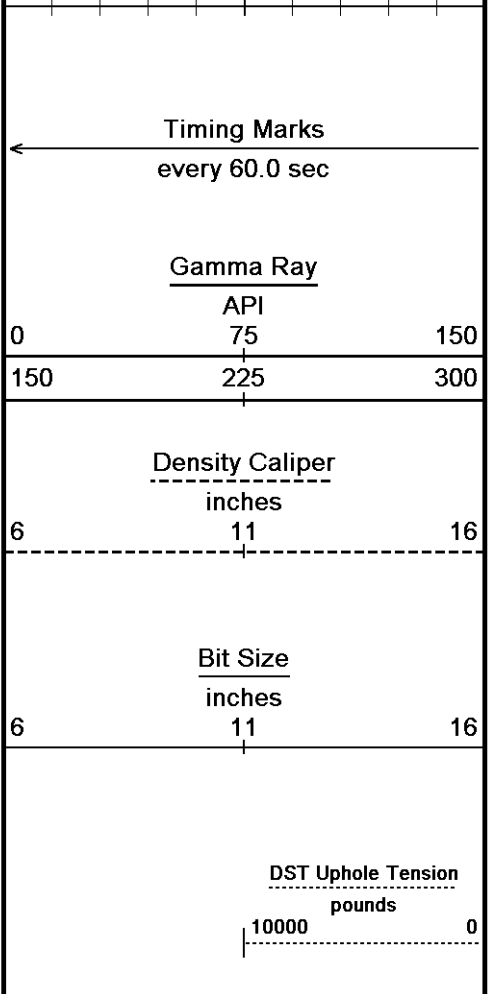
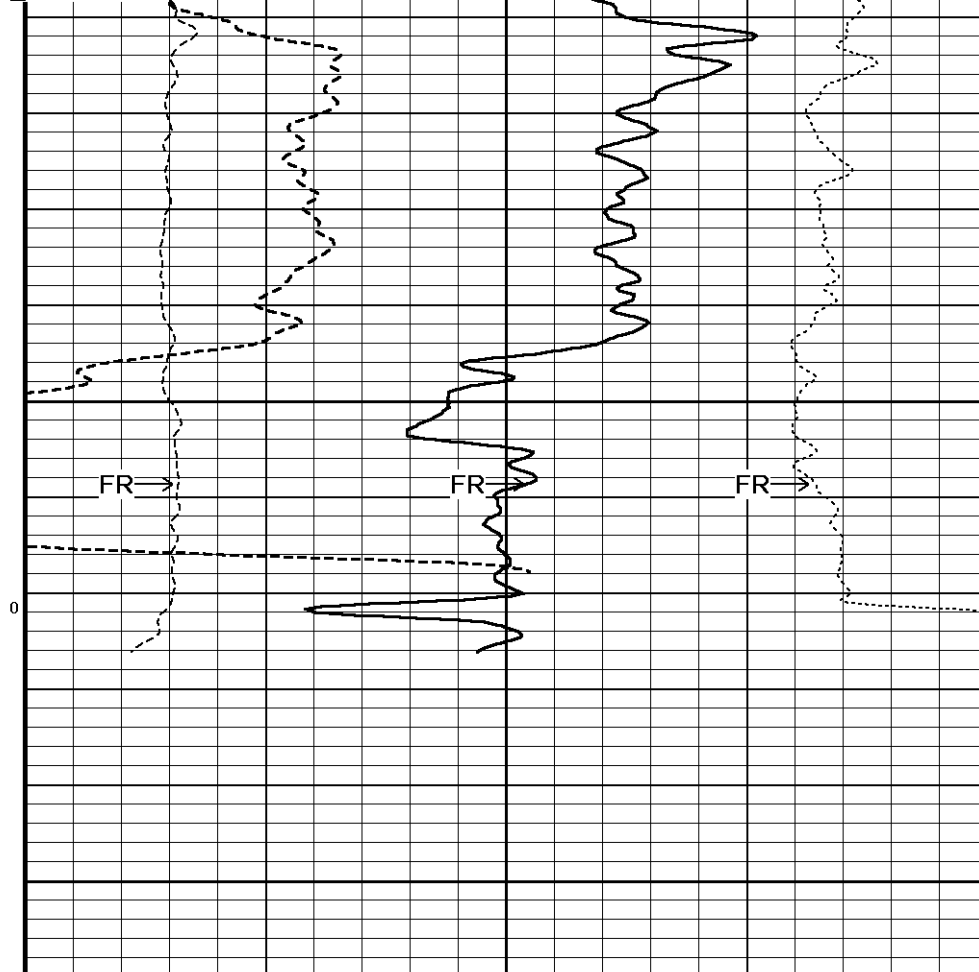
129°

4350

4400

4408

Depth
In
Feet

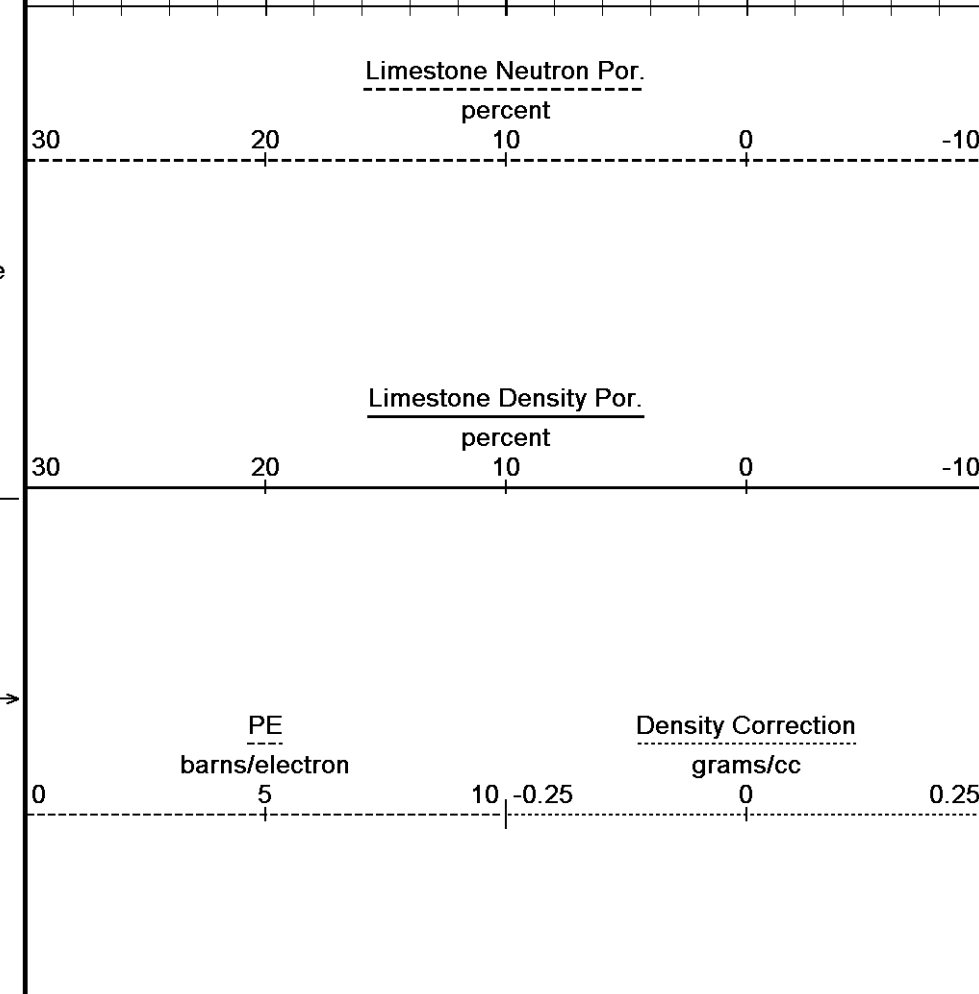


Borehole
Temp in
deg F

HVI
every
10 cu ft

Annular
Integral
every
10 cu ft

Replay
Scale
1:240



↓

REPEAT SECTION

↓

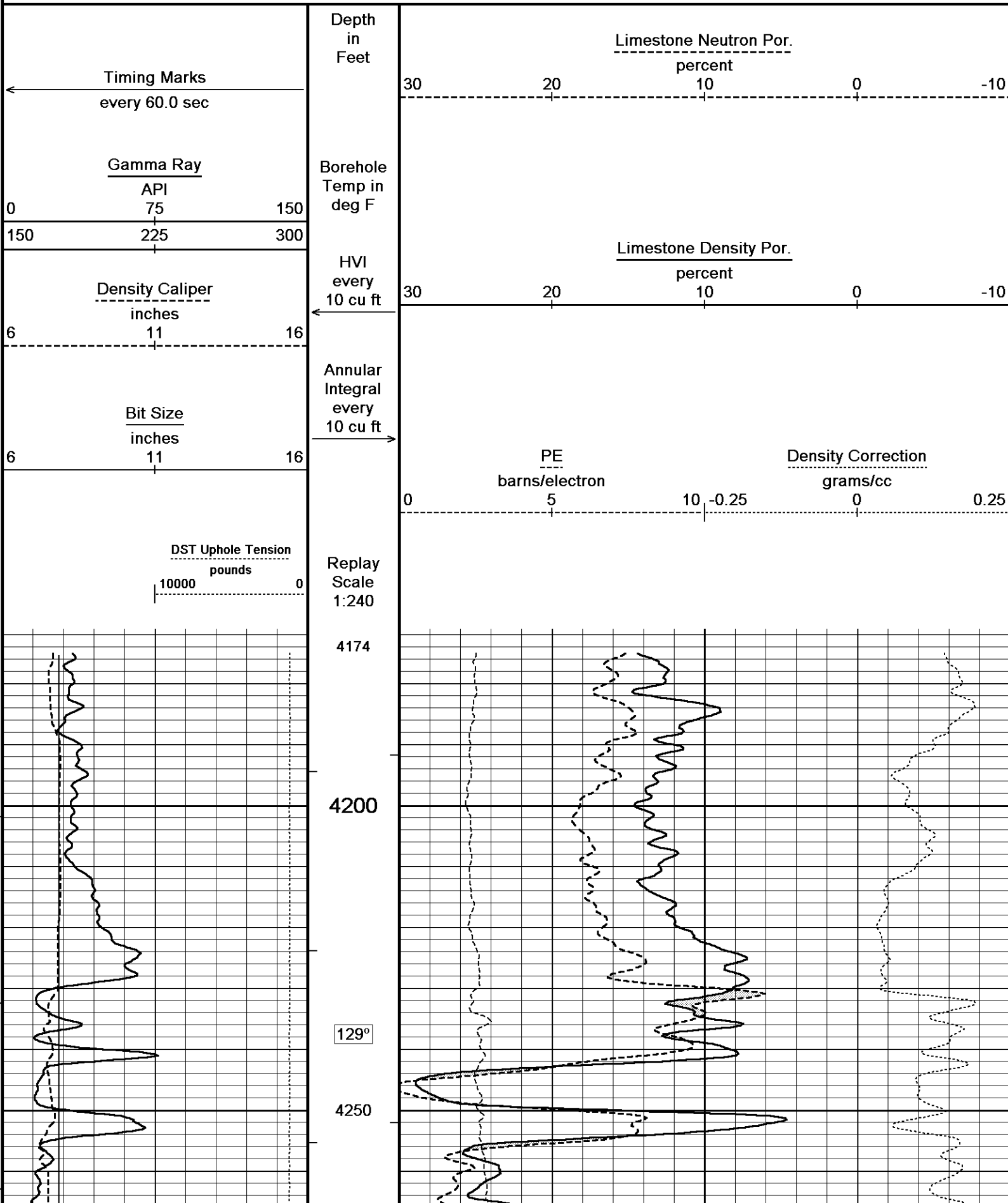
Depth Based Data - Maximum Sampling Increment 10.0cm

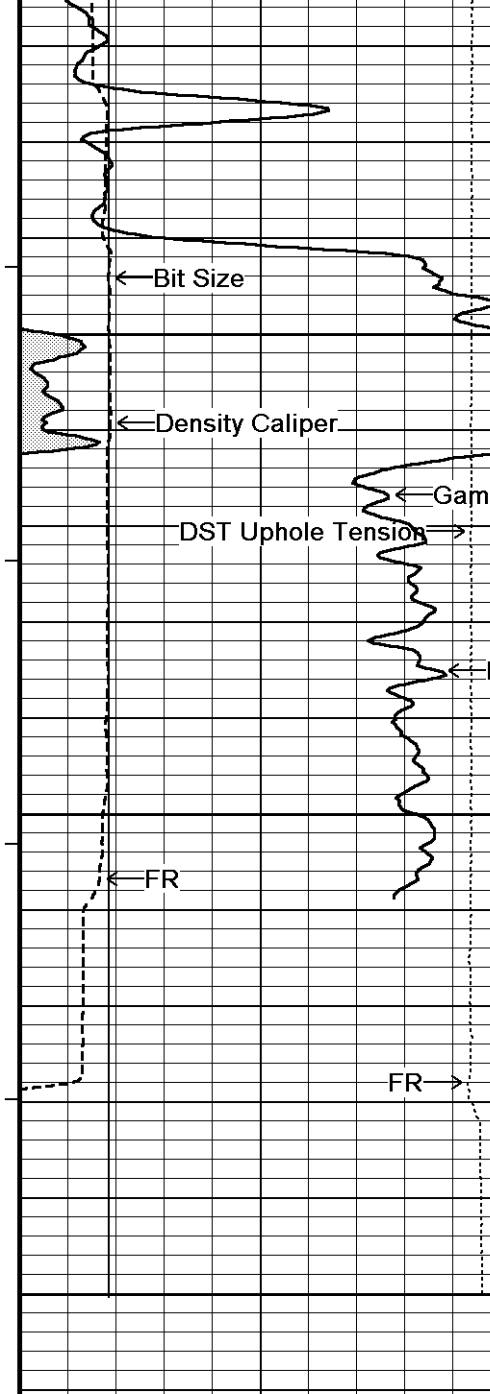
Plotted on 09-AUG-2012 00:52

Filename: C:\Program Files\Weatherford\WLS 13.02\DATA\MCCOY (ERSKINE B 1-32)\MAIN_001.dta

Recorded on 08-AUG-2012 22:38

System Versions: Logged with 13.02.6600 Plotted with 13.02.6600





128°

4300

127°

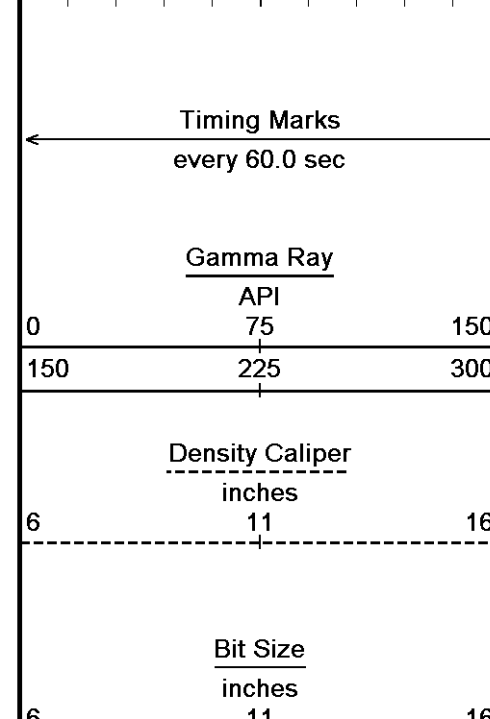
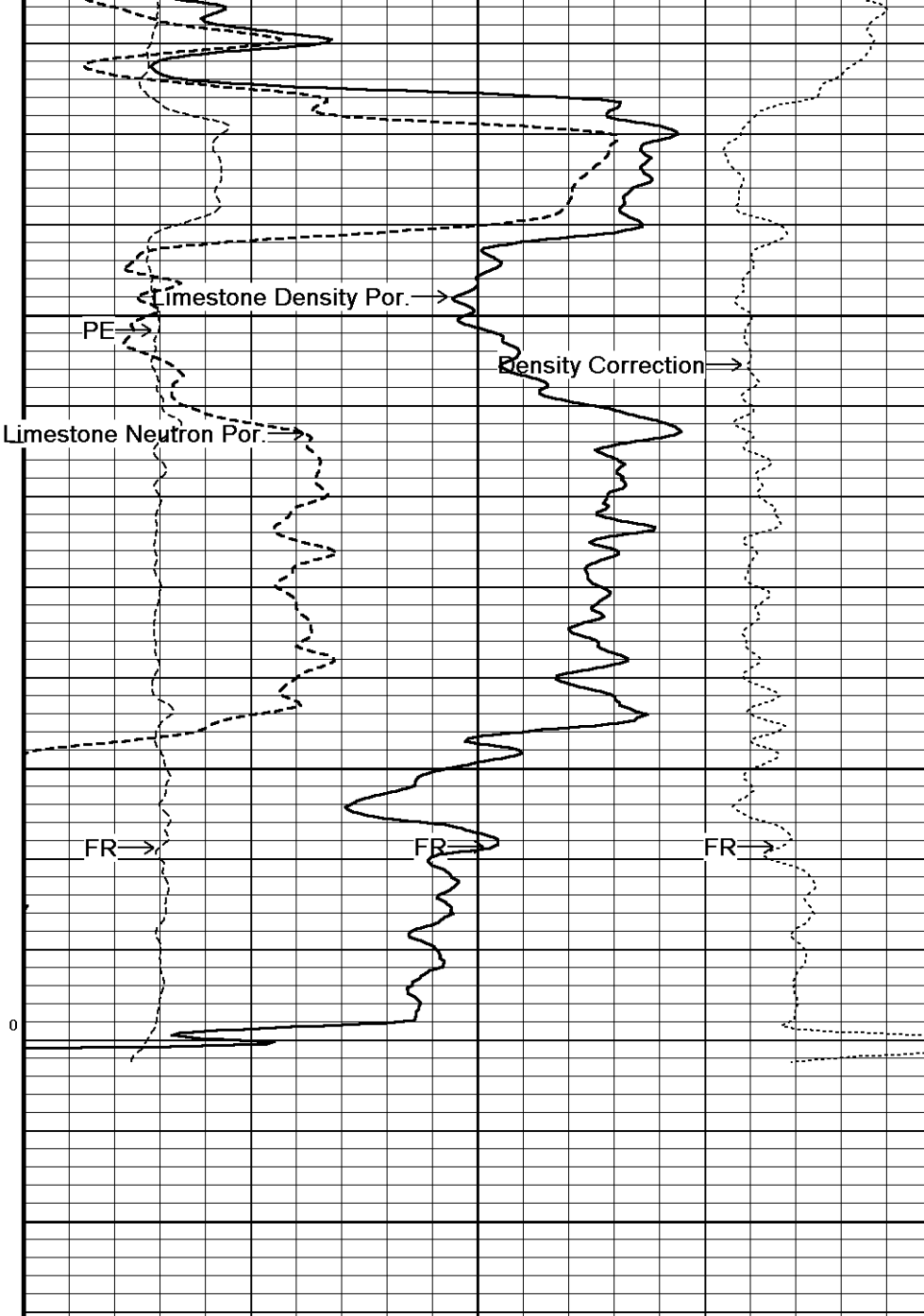
4350

0

4400

4408

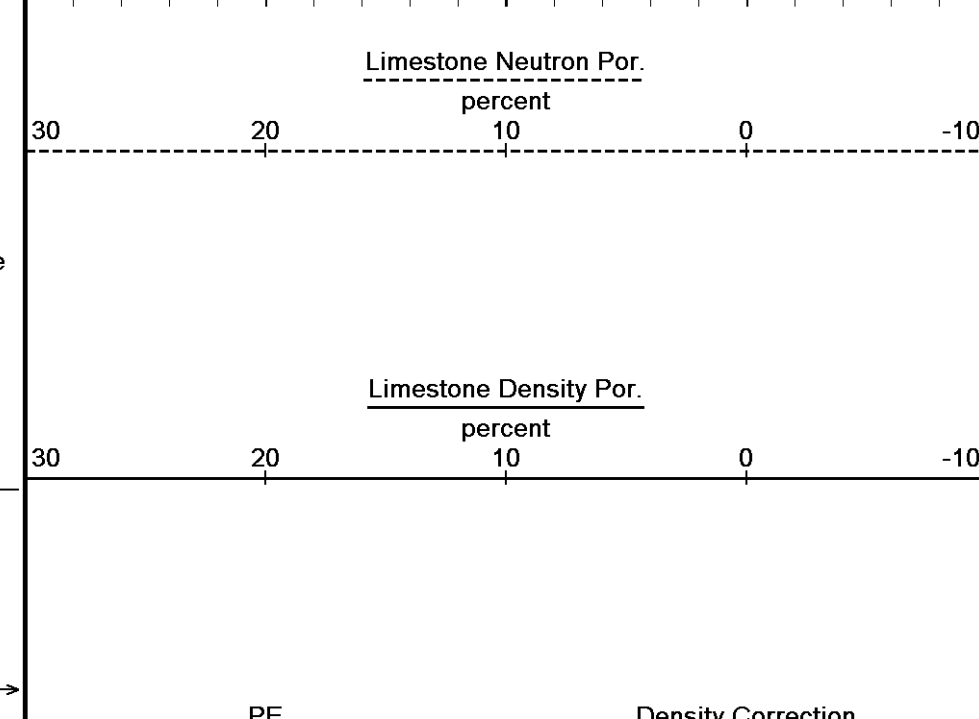
Depth in Feet



Borehole Temp in deg F

HVI every 10 cu ft

Annular Integral every 10 cu ft



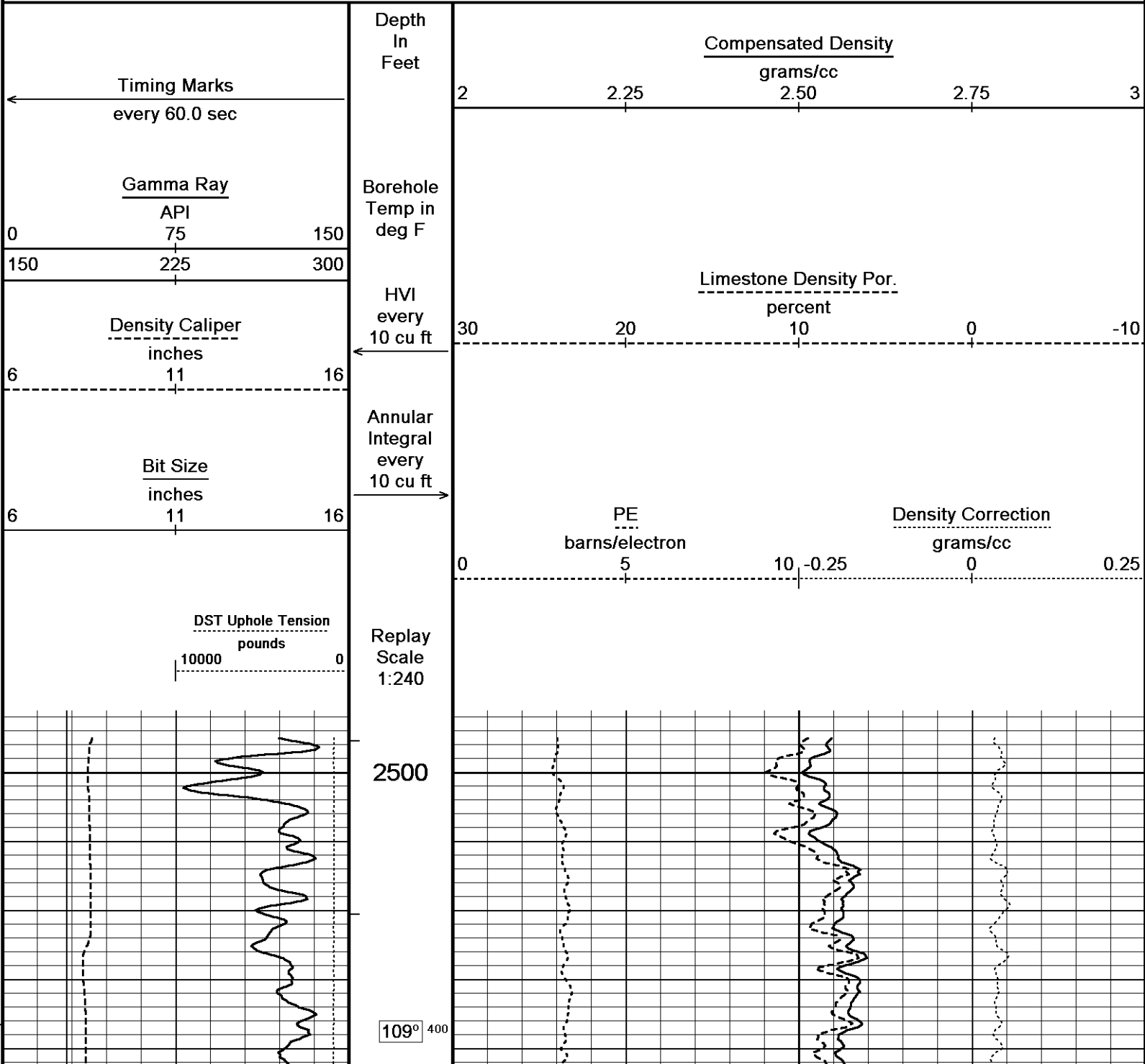


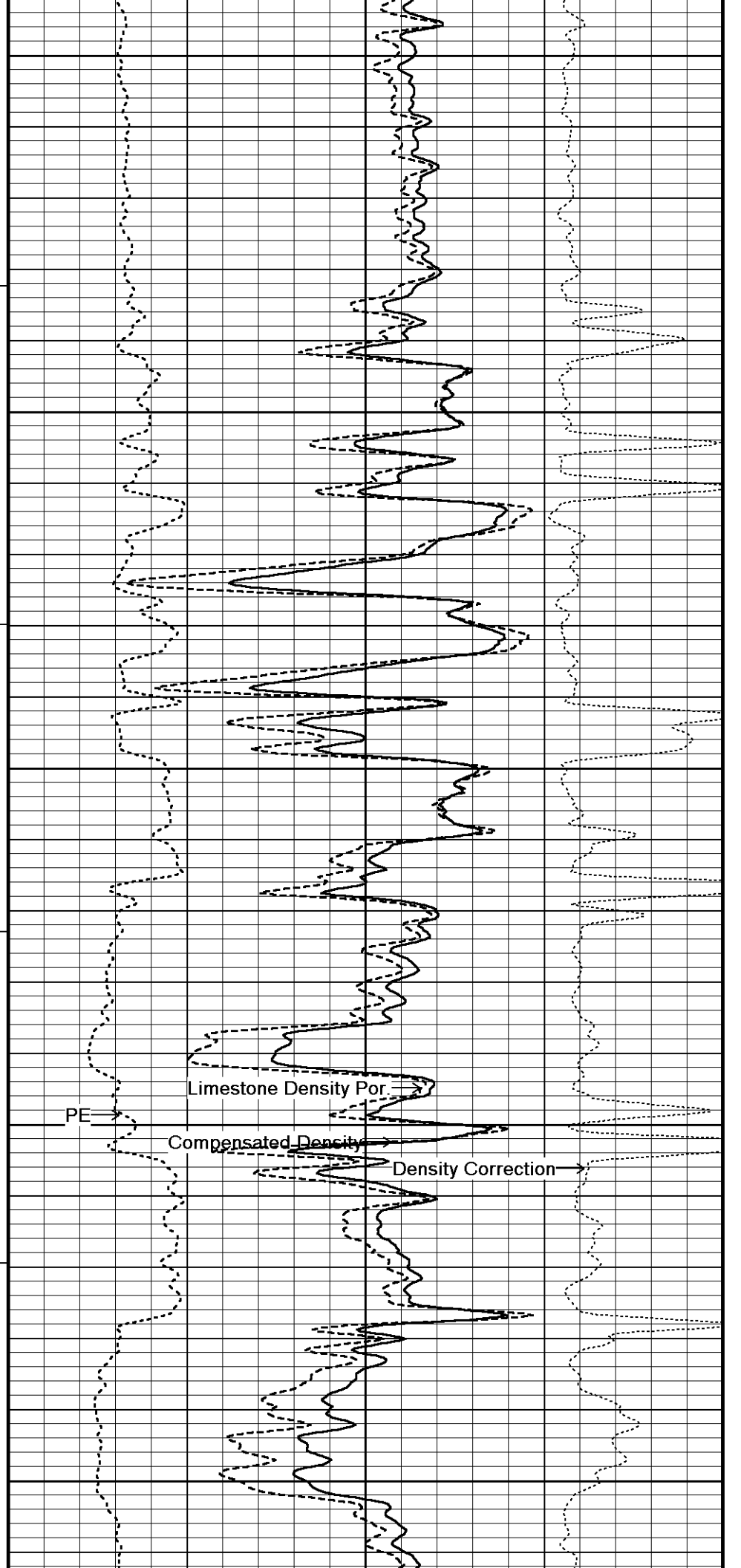
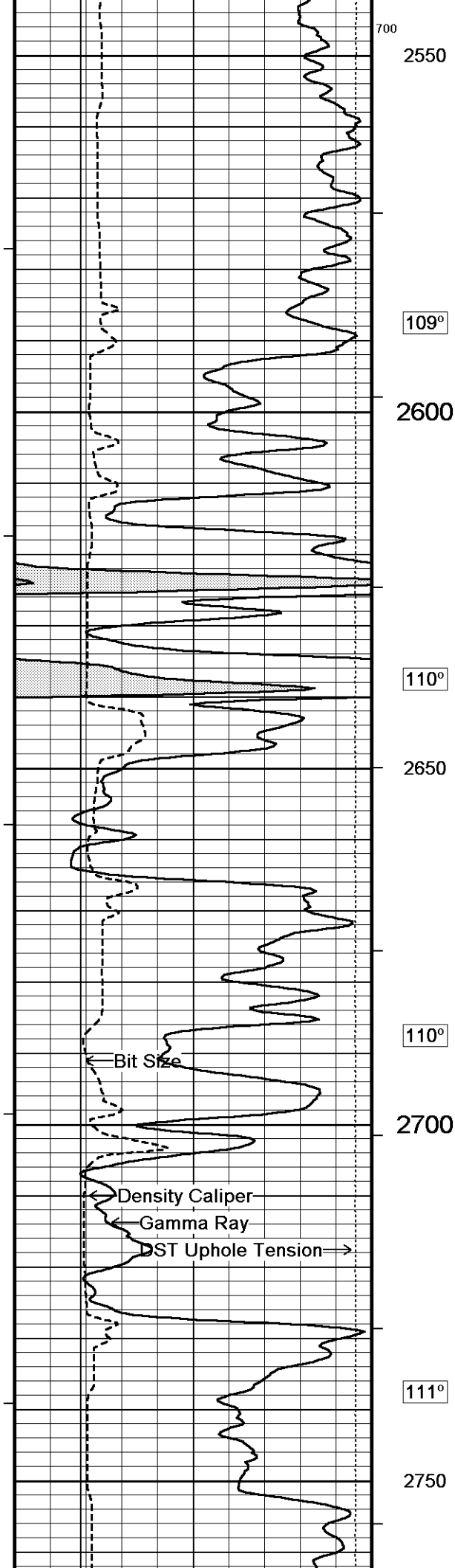
Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 09-AUG-2012 00:52
Filename: C:\Program Files\Weatherford\WLS 13.02\DATA\MCCOY (ERSKINE B 1-32)\MAIN_001.dta Recorded on 08-AUG-2012 22:38
System Versions: Logged with 13.02.6600 Plotted with 13.02.6600

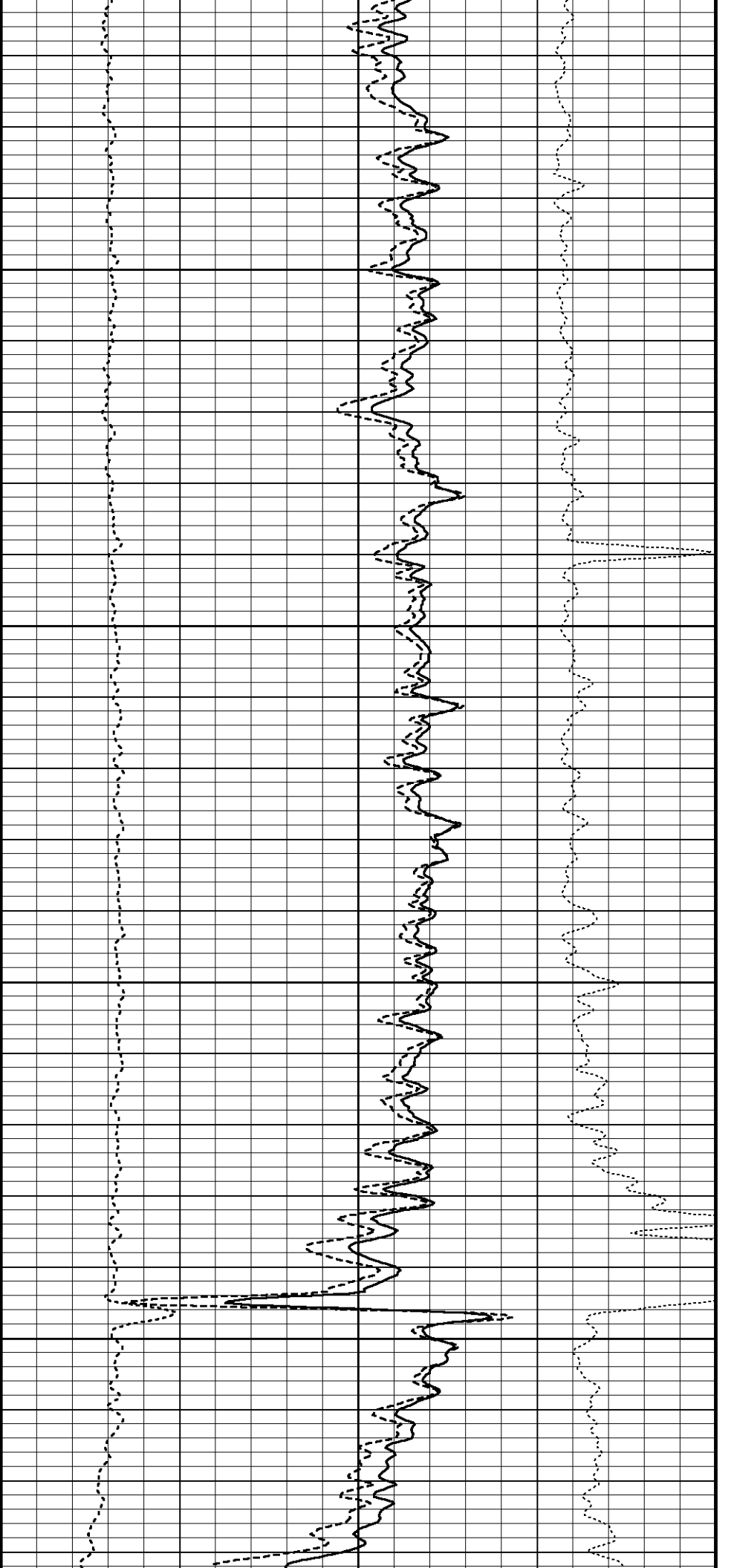
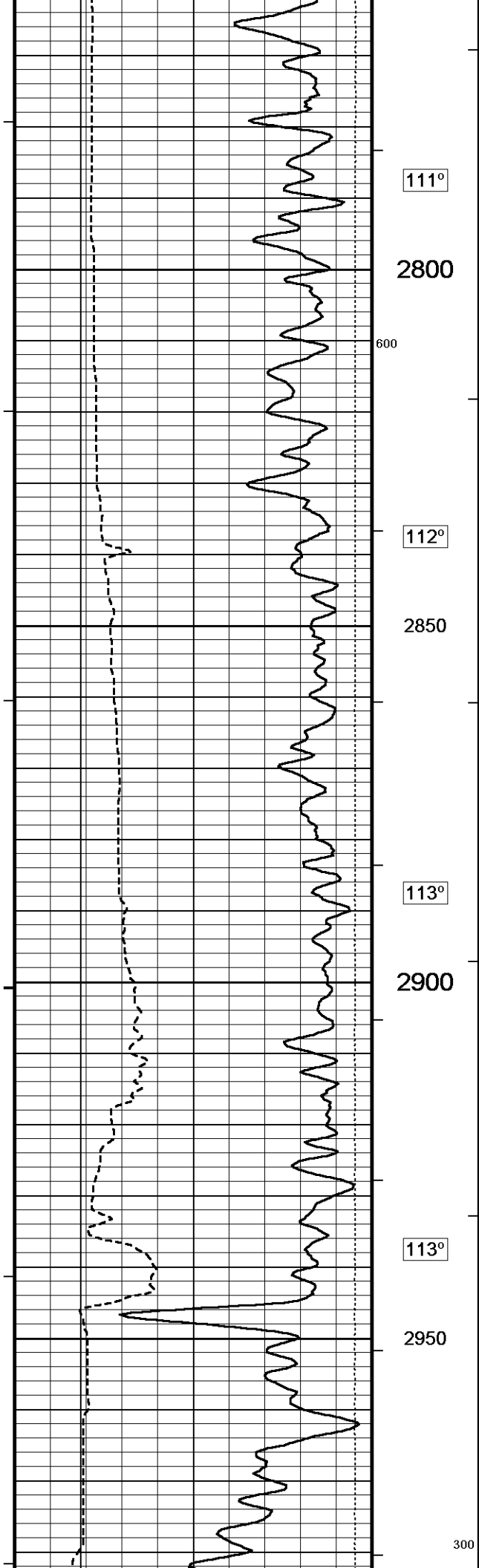
↑ REPEAT SECTION ↑

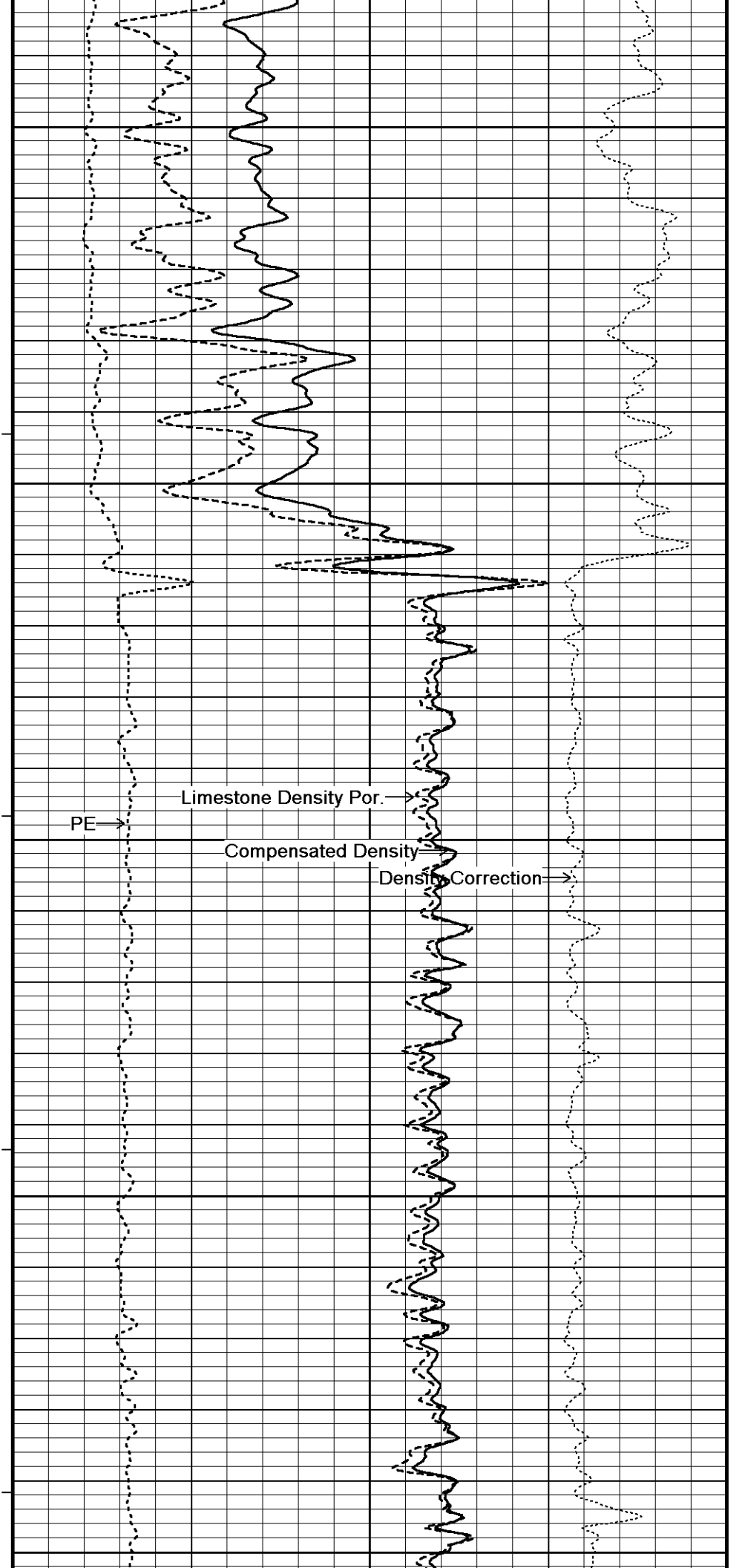
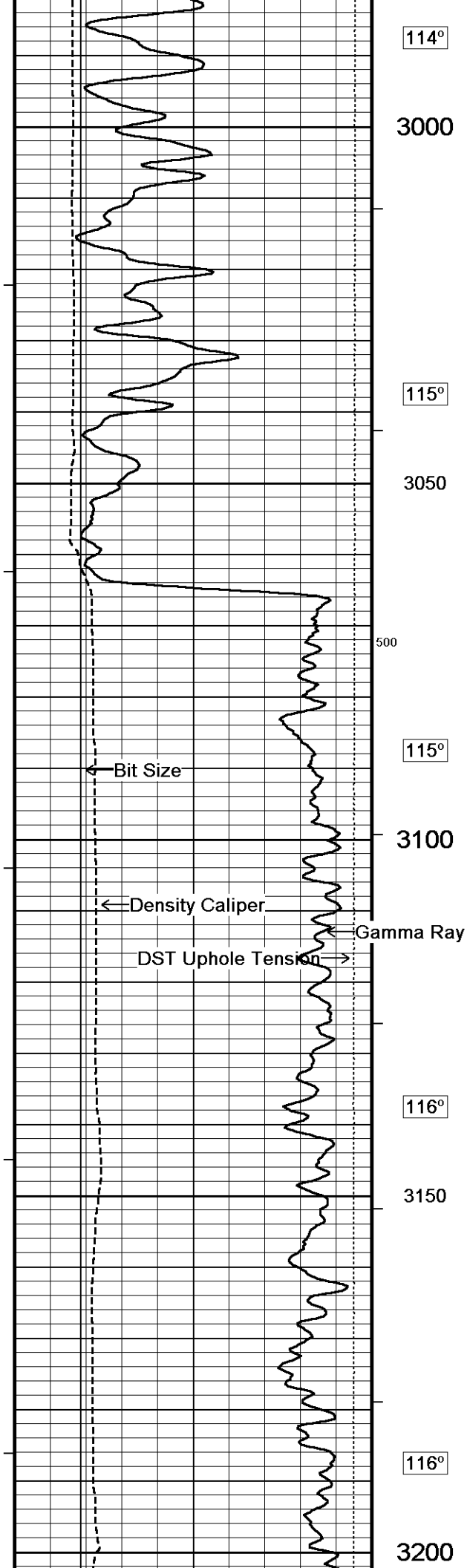
↓ 5 INCH BULK DENSITY DSC ↓

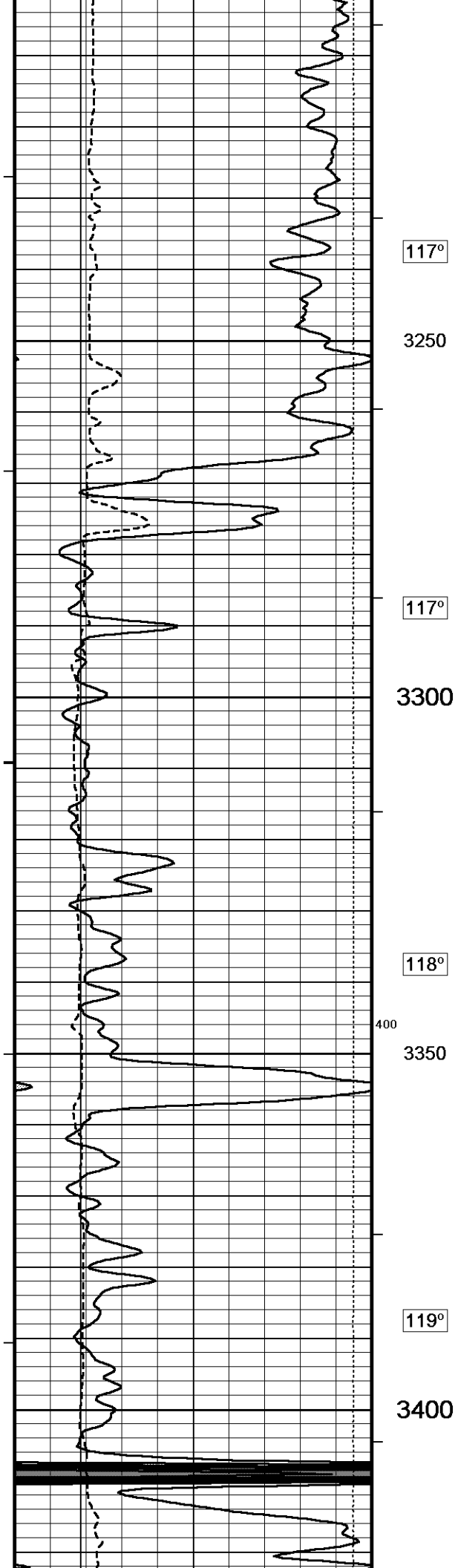
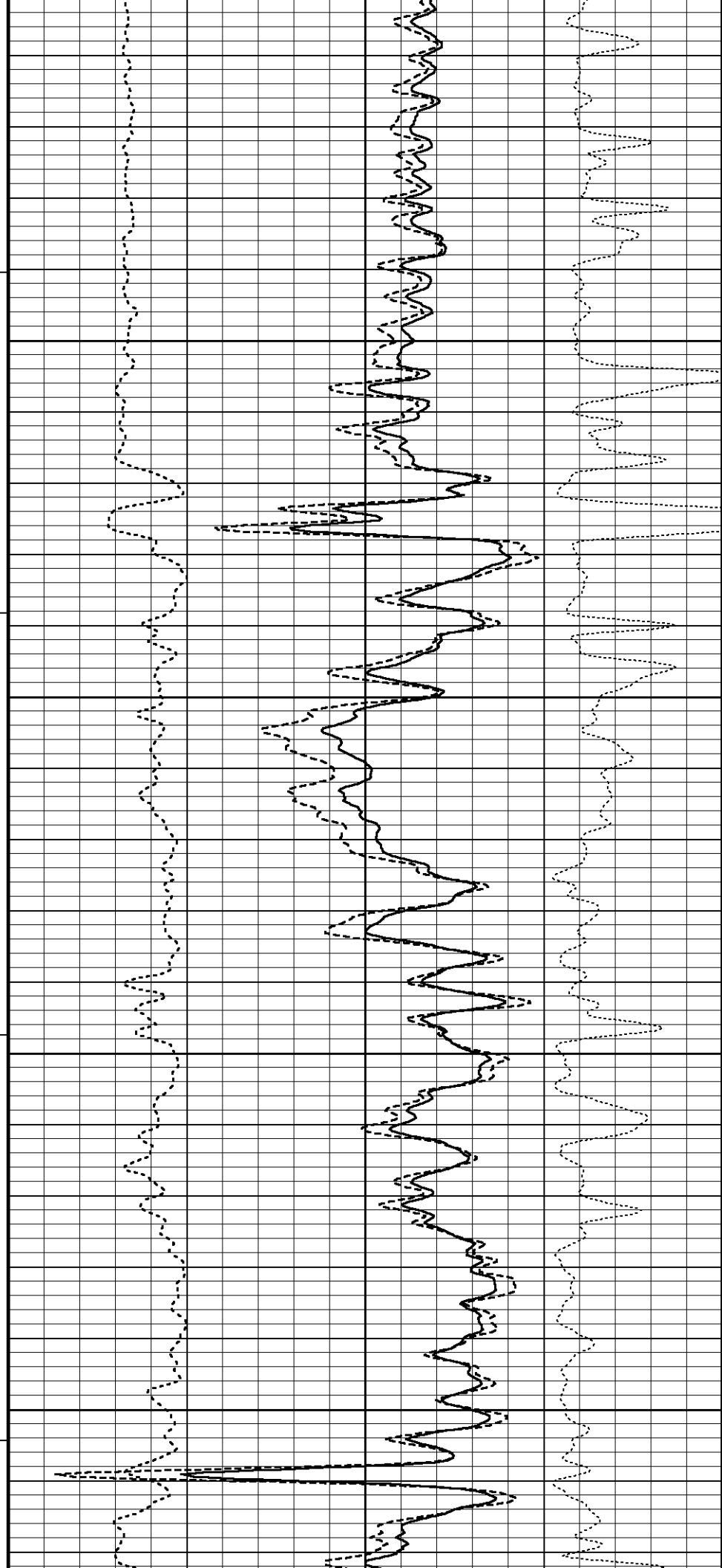
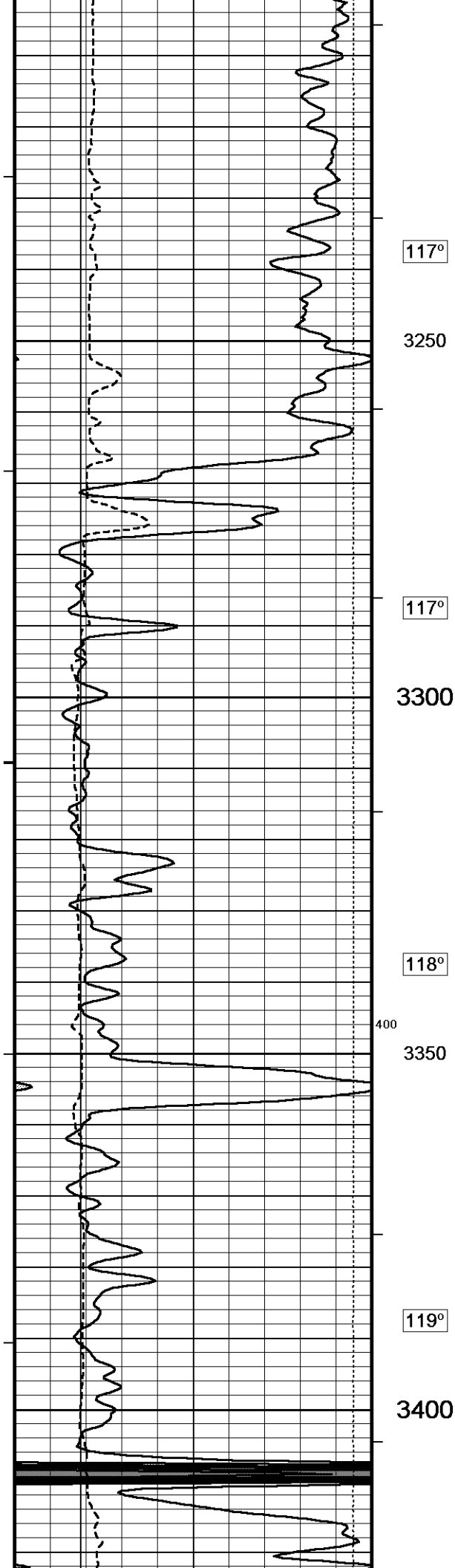
Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 09-AUG-2012 00:52
Filename: C:\Program Files\Weatherford\WLS 13.02\DATA\MCCOY (ERSKINE B 1-32)\MAIN_002.dta Recorded on 08-AUG-2012 22:51
System Versions: Logged with 13.02.6600 Plotted with 13.02.6600

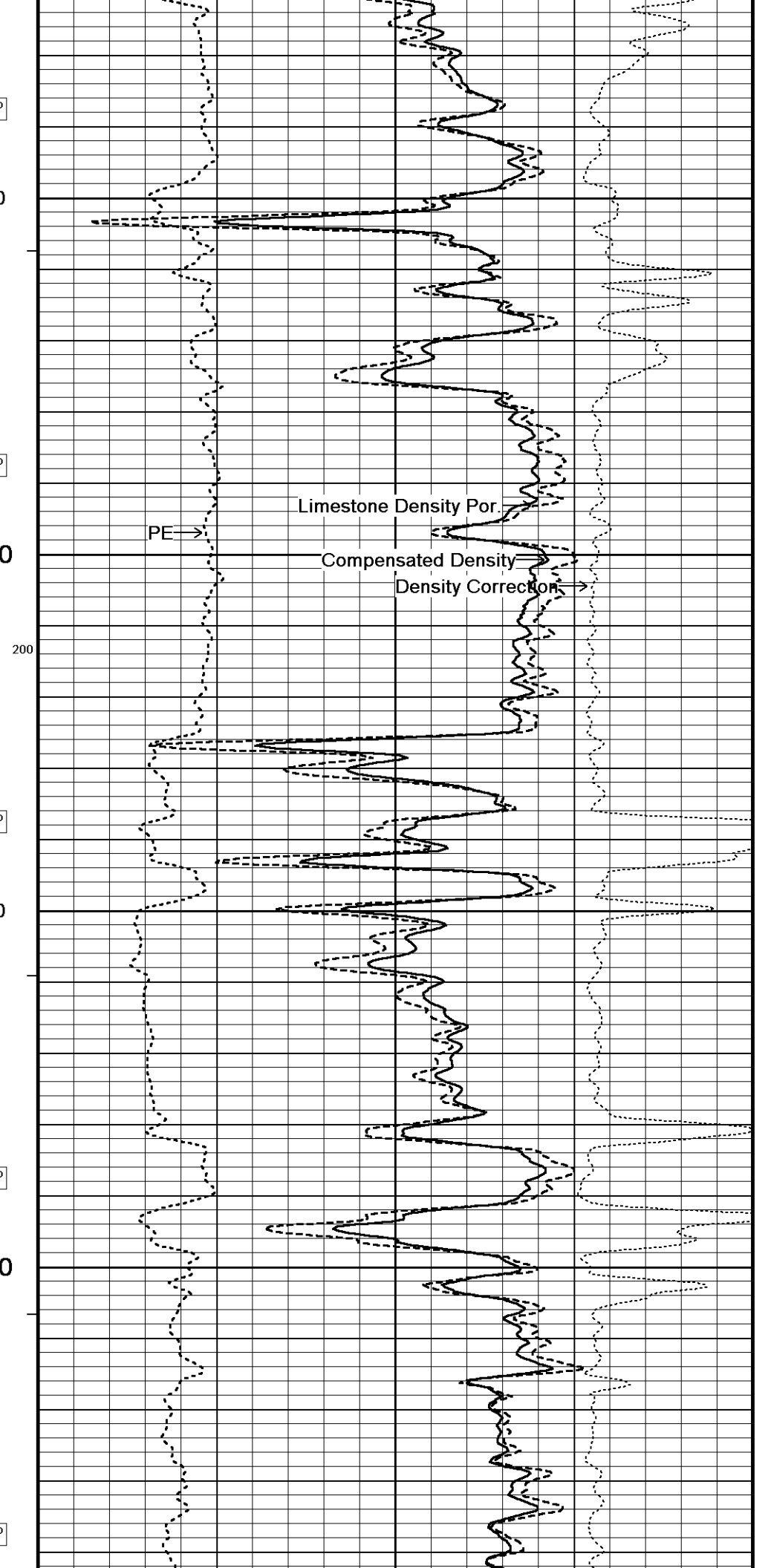
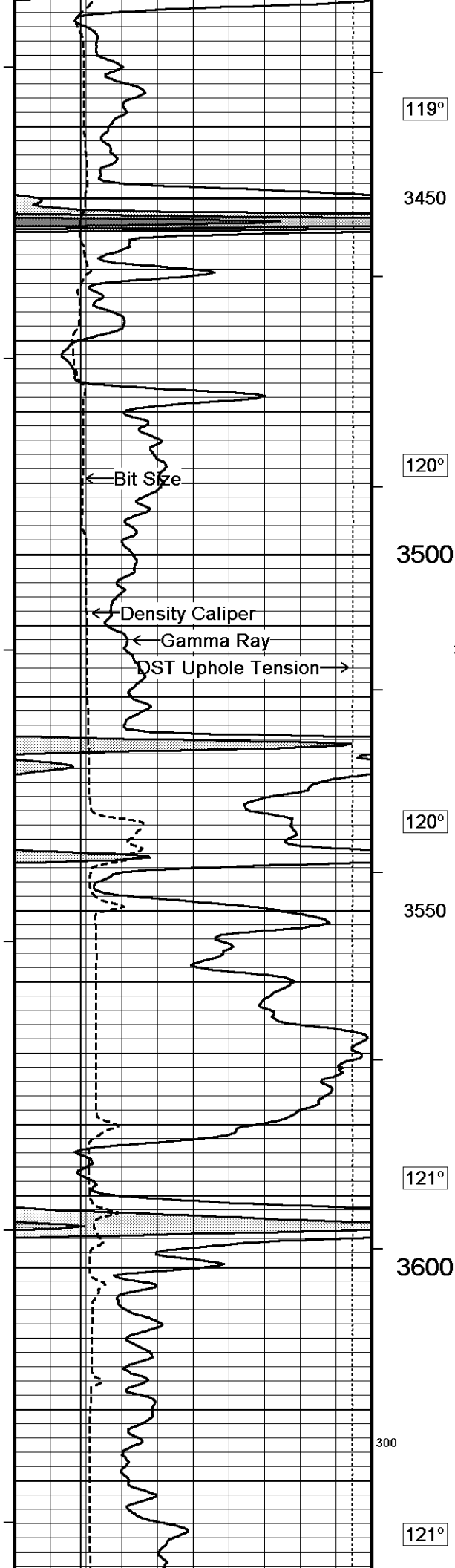


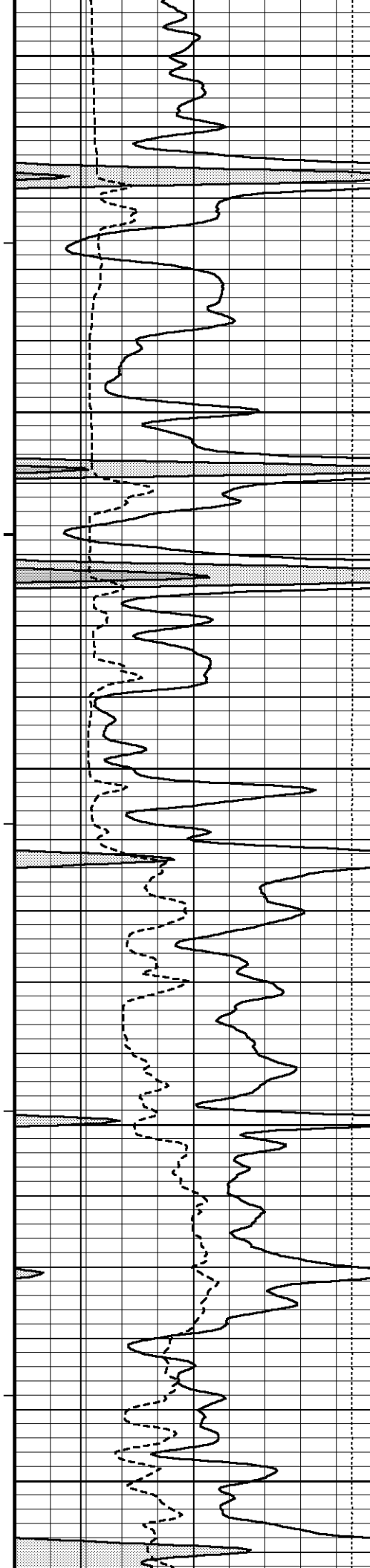












3650

122°

3700

123°

3750

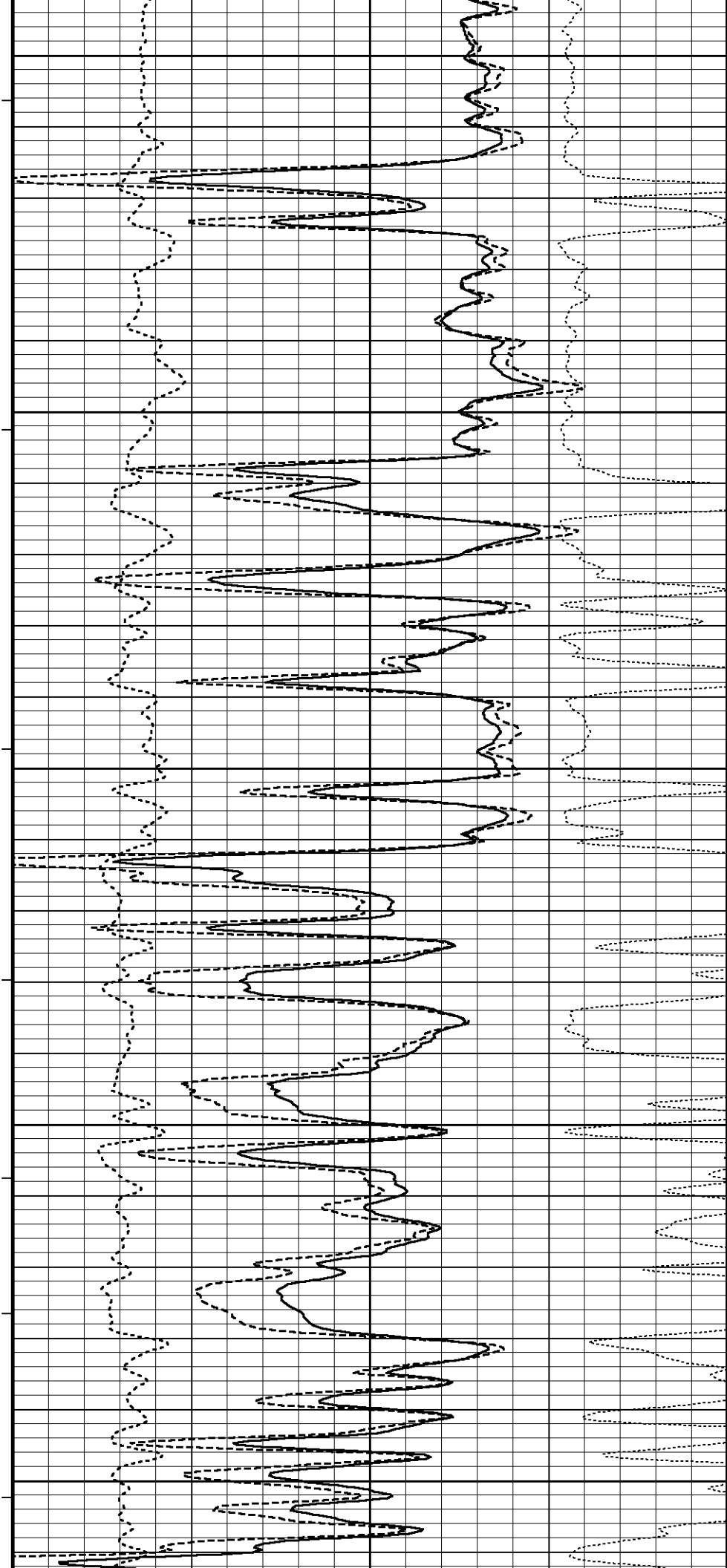
123°

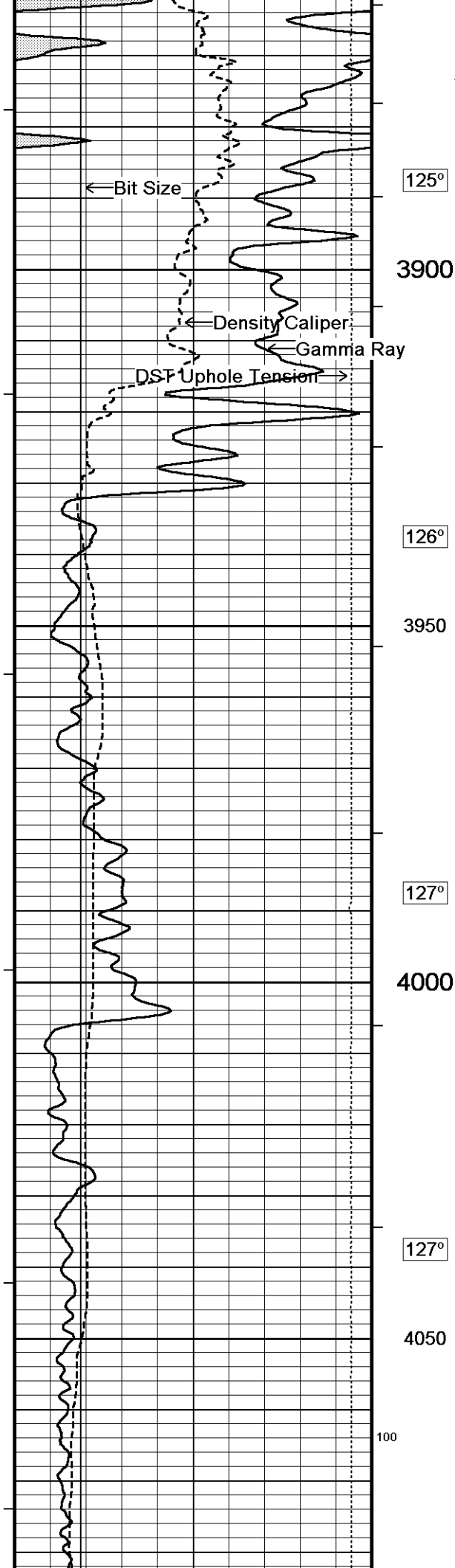
3800

124°

200

3850





125°

3900

126°

3950

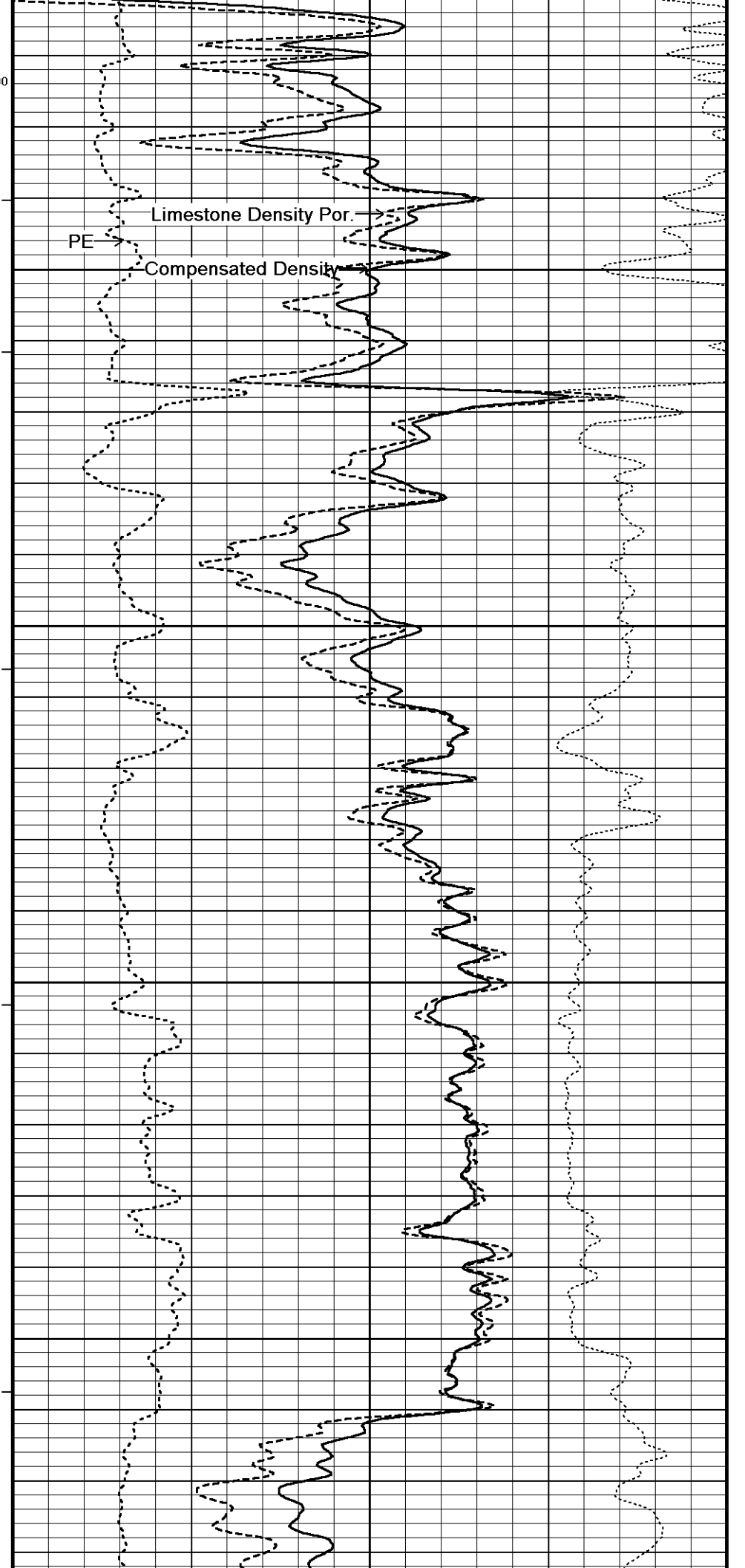
127°

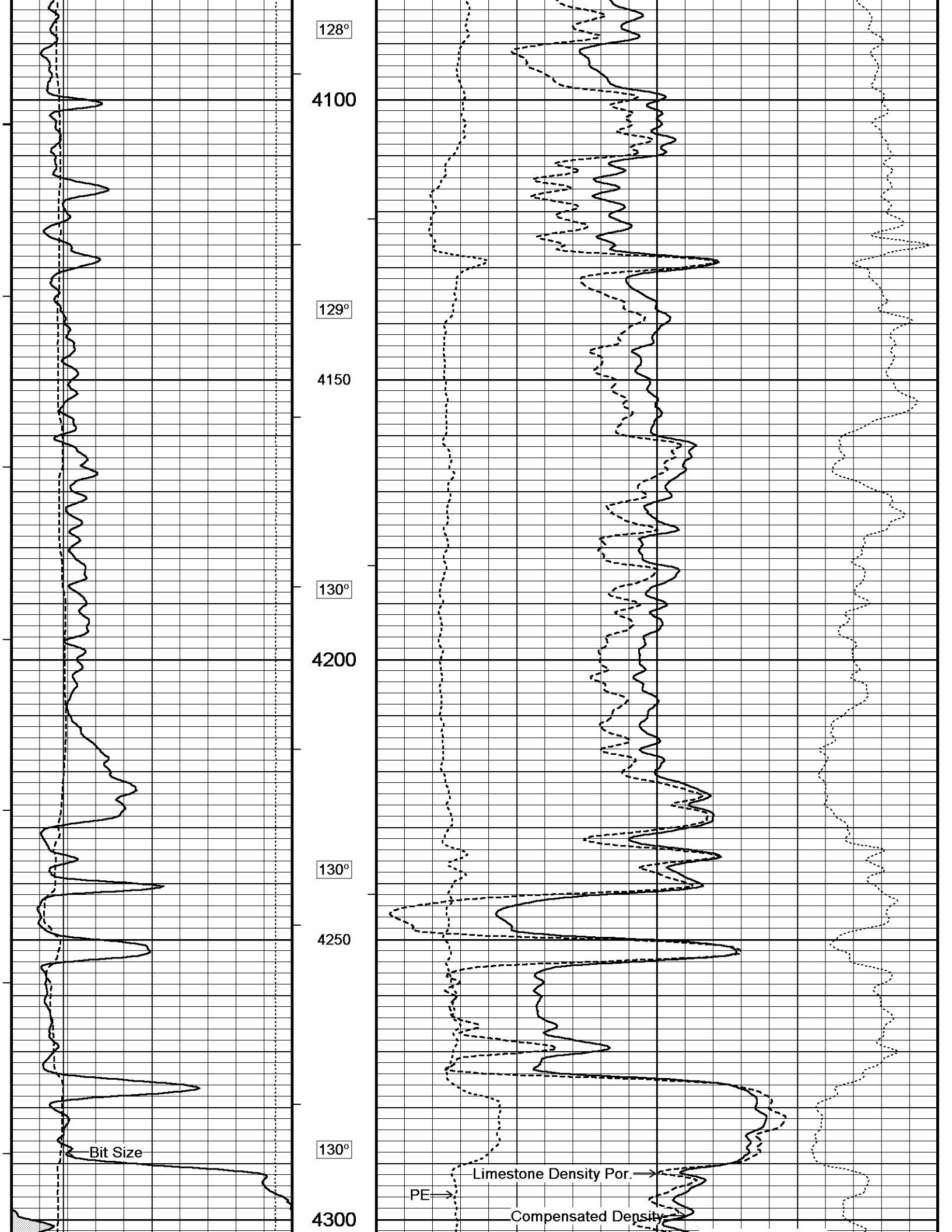
4000

127°

4050

100

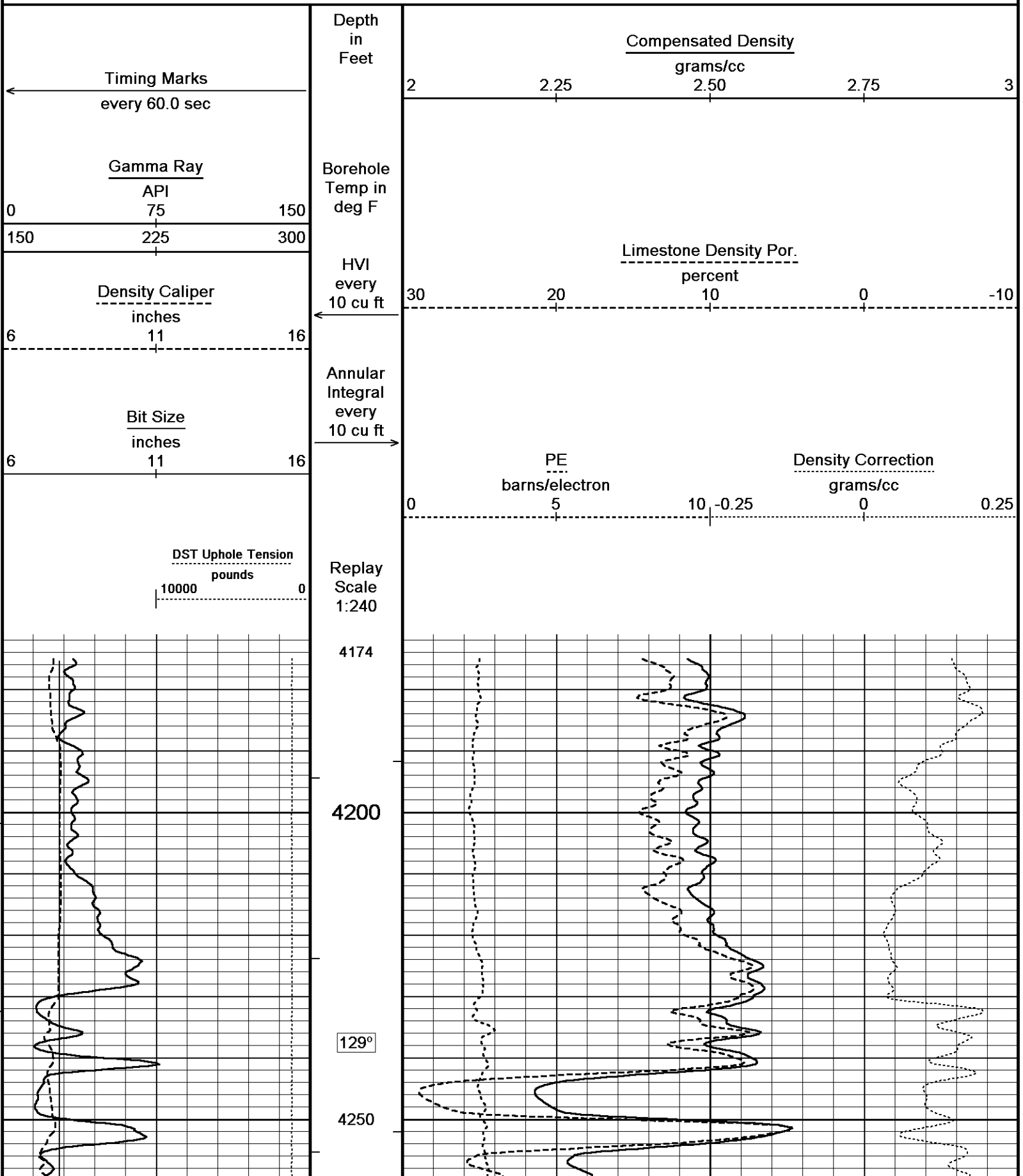


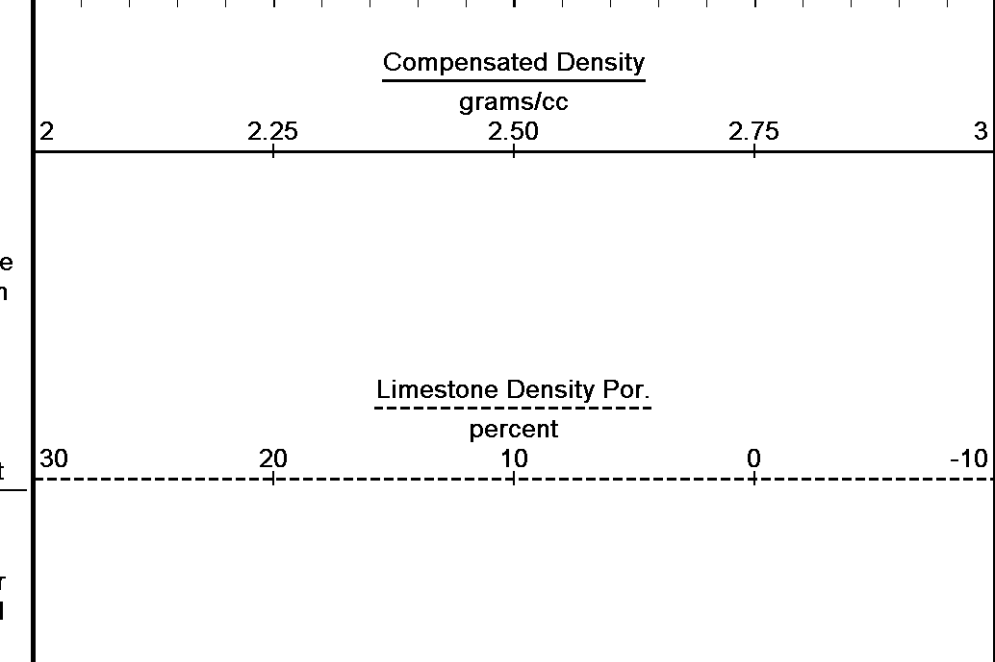
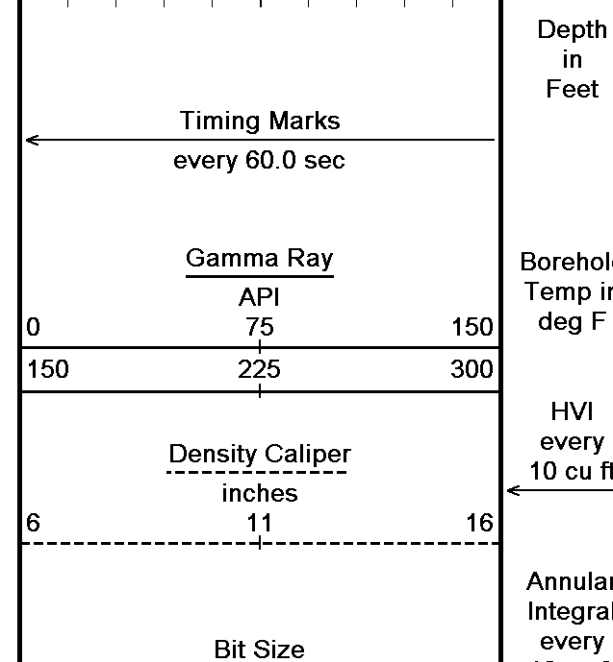
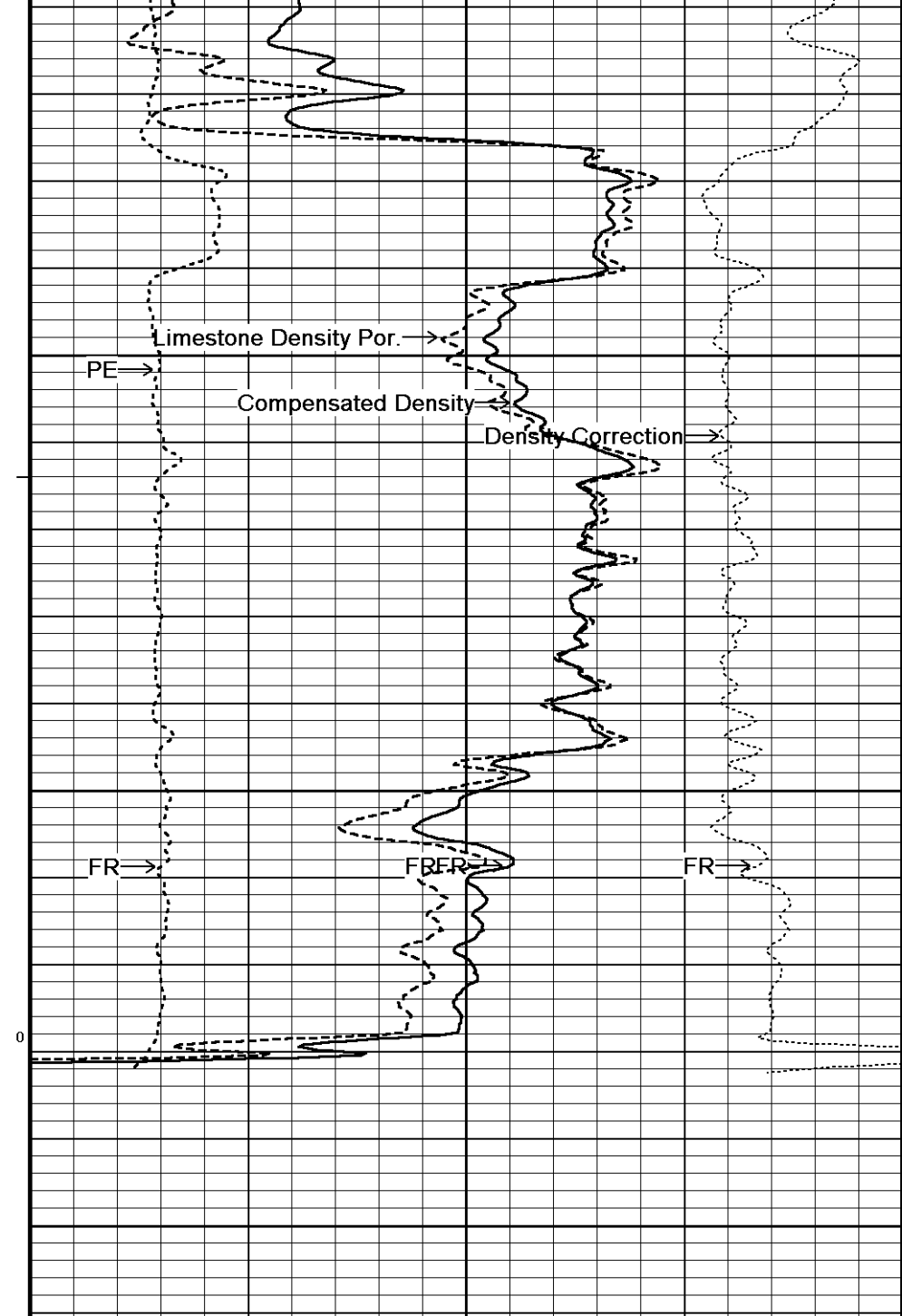
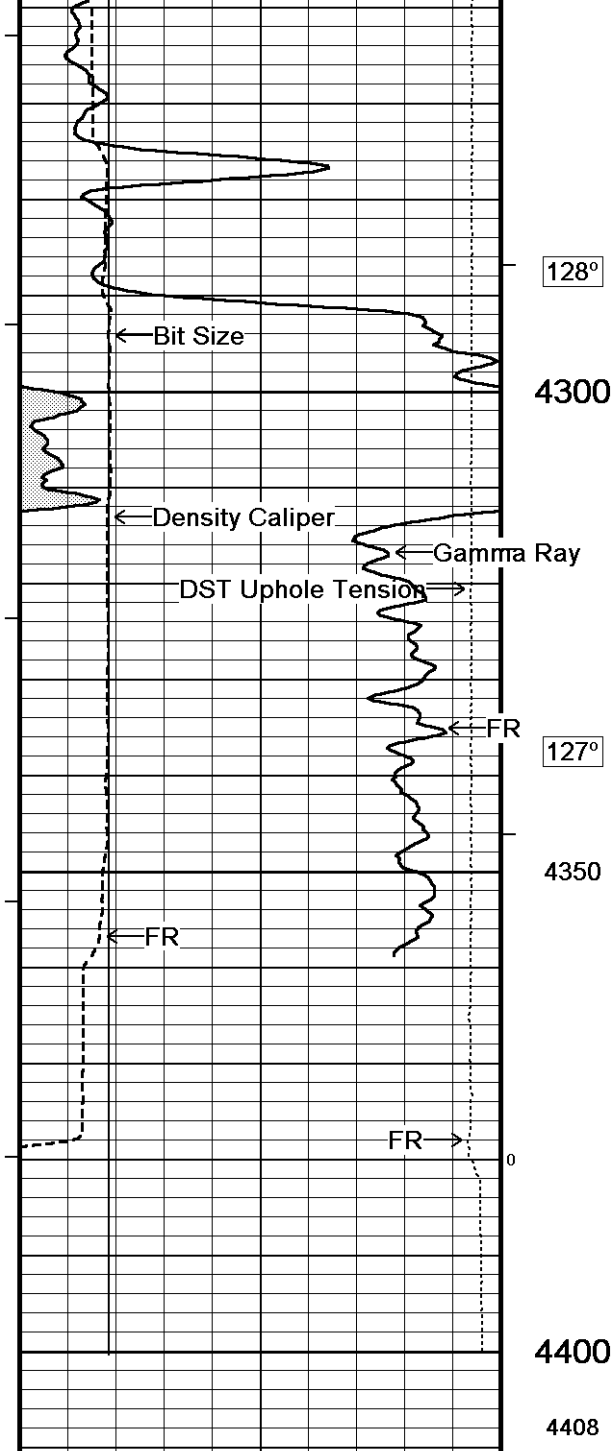


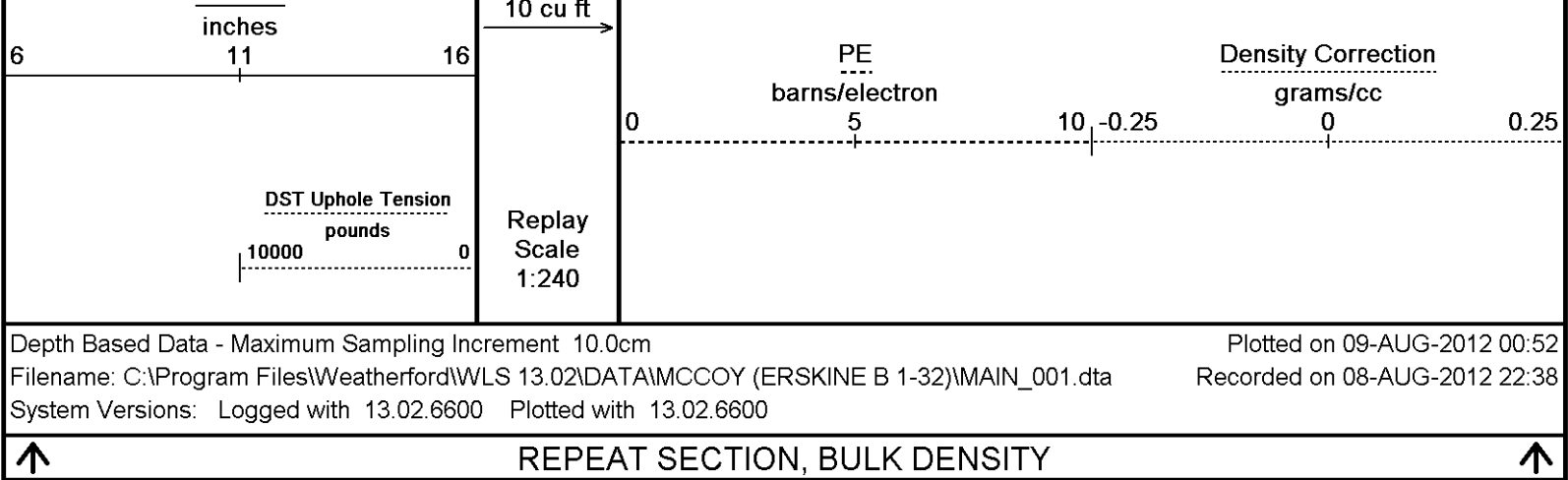


REPEAT SECTION, BULK DENSITY

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\Program Files\Weatherford\WLS 13.02\DATA\MCCOY (ERSKINE B 1-32)\MAIN_001.dta
System Versions: Logged with 13.02.6600 Plotted with 13.02.6600
Plotted on 09-AUG-2012 00:52
Recorded on 08-AUG-2012 22:38







BEFORE SURVEY CALIBRATION			
C:\Program Files\Weatherford\WLS 13.02\DATA\MCCOY (ERSKINE B 1-32)\MAIN.dta			
General Constants All 000			Last Edited on 08-AUG-2012,19:36
General Parameters			
Mud Resistivity	0.320	ohm-metres	
Mud Resistivity Temperature	91.000	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	Limestone Density Por.		
Resistivity used	Array Ind. One Res Rt		
RWA Constant A	0.610		
RWA Constant M	2.150		
Down-hole Tension Calibration SMS 0			Field Calibration on 05-AUG-2012 08:14
Reading No	Measured	Calibrated (lbs)	
1	16640.32	0.00	
2	16905.01	430.00	
Gamma Calibration MCG-B 31			Field Calibration on 08-AUG-2012,19:37
	Measured	Calibrated (API)	
Background	38	26	
Calibrator (Gross)	1063	722	
Calibrator (Net)	1025	696	
Gamma Constants MCG-B 31			Last Edited on 08-AUG-2012,19:37
Gamma Calibrator Number	036		
Mud Density	1.14	gm/cc	
Caliper Source for Processing	Density Caliper		
Tool Position	Eccentred		
Concentration of KCl	0.00	kppm	
SP Calibration MCG-B 31			Field Calibration on 08-AUG-2012,19:38
	Measured	Calibrated (mV)	
Reference 1	100.0	100.0	
Reference 2	-100.0	-100.0	
High Resolution Temperature Calibration MCG-B 31			Field Calibration on 08-AUG-2012,19:38
	Measured	Calibrated(Deg F)	

Lower	50.00	50.00		
Upper	100.00	100.00		
High Resolution Temperature Constants MCG-B 31		Last Edited on		
Pre-filter Length	11			
Caliper Calibration MML-A 7		Base Calibration on 18-APR-2012 08:58 Field Calibration on 08-AUG-2012,19:38		
Base Calibration				
Reading No	Measured	Calibrator Size (in)		
1	15211	5.96		
2	18535	7.98		
3	21950	9.94		
4	25696	11.90		
5	0	0.00		
6	N/A	N/A		
Field Calibration				
	Measured Caliper (in)	Actual Caliper (in)		
	8.24	7.98		
Micro Normal and Micro Inverse Calibration MML-A 7		Base Calibration on 18-APR-2012 08:48 Field Check on 08-AUG-2012,19:38		
Base Calibration				
Channel	Resistor 1	Measured Resistor 2	Calibrated (ohm-m) Resistor 1	Resistor 2
Micro Normal	12.1	59.8	5.0	25.0
Micro Inverse	15.7	77.9	5.0	25.0
Channel	Base Check (ohm-m)		Field Check (ohm-m)	
Micro Normal	63.4		63.4	
Micro Inverse	48.5		48.5	
Micro Normal and Micro Inverse Constants MML-A 7		Last Edited on 08-AUG-2012,19:38		
Pad Type	8-12 in Soft Rubber Inflatable 006-9011-159			
Micro Normal K Factor	1.0000			
Micro Inverse K Factor	1.0000			
Standoff Offset	N/A inches			
Neutron Calibration MDN-A.B 31		Base Calibration on 05-MAR-2012 13:28 Field Check on 08-AUG-2012,19:39		
Base Calibration				
	Near	Measured Far	Calibrated (cps) Near	Far
	3308	102	3714	110
Ratio	32.392		33.764	
Field Calibrator at Base			Calibrated (cps)	
			2229	3259
Ratio	0.684			
Field Check			Calibrated (cps)	
			1936	2801
Ratio	0.691			
Neutron Constants MDN-A.B 31		Last Edited on 08-AUG-2012,19:39		
Neutron Source Id	n1054			
Neutron Jig Number	grcc056			
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	Constant Value			
Formation Pressure	0.00		kpsi	
Temperature Source	MCG External Temperature			
Temperature	N/A		degrees F	
Mud Salinity	0.00		kppm	

Salinity Correction	Not Applied	
Formation Fluid Salinity Source	Constant Value	
Formation Fluid Salinity	0.00	kppm
Barite Mud Correction	Not Applied	

FE Calibration MFE-A.A 54		Base Calibration on 18-APR-2012 10:04 Field Check on 08-AUG-2012,19:40	
Base Calibration			
	Measured	Calibrated (ohm-m)	
Reference 1	0.0	0.0	
Reference 2	968.0	126.8	
Base Check		282.8	
Field Check		282.4	

FE Constants MFE-A.A 54			Last Edited on 08-AUG-2012,19:40		
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	

High Resolution Temperature Calibration MAI-A.A 66		Field Calibration on 08-AUG-2012,19:40	
	Measured	Calibrated(Deg F)	
Lower	10.00	10.00	
Upper	100.00	100.00	

High Resolution Temperature Constants MAI-A.A 66		Last Edited on
Pre-filter Length	11	

Induction Calibration MAI-A.A 66				Base Calibration on 29-SEP-2009,08:06	
				Field Check on 08-AUG-2012,19:40	
Base Calibration					
Test Loop Calibration		Measured		Calibrated (mmho/m)	
Channel	Low	High	Low	High	
1	16.3	454.6	9.3	966.2	
2	5.6	370.2	7.6	821.4	
3	3.7	253.8	5.2	566.0	
4	1.9	131.5	2.6	279.2	
Array Temperature		78.4	Deg F		
Channel	Base Check (mmho/m)		Field Check (mmho/m)		
	Low	High	Low	High	
1	0.0	0.0	17.8	4013.6	
2	0.0	0.0	33.4	3653.7	
3	0.0	0.0	29.6	3137.2	
4	0.0	0.0	20.5	2113.2	
Deep	0.0	0.0	17.1	2025.4	
Medium	0.0	0.0	43.1	4149.1	
Shallow	0.0	0.0	51.7	5432.3	
Array Temperature		0.0	96.8		Deg F

Induction Constants MAI-A.A 66		Last Edited on 08-AUG-2012,19:40	
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	6.0000		
Stand-off Fin Angle	60.00	degrees	
Stand-off Fin Width	0.5000	inches	
Borehole Corr. Rm Source	Temperature Corr		
Temp. for Rm Corr.	MCG External Temperature		

Squasher Start		0.0040	
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-A.A 11

Base Calibration on 24-JUL-2012 10:14
Field Calibration on 08-AUG-2012,19:39

Base Calibration		
Reading No	Measured	Calibrator Size (in)
1	19152	4.01
2	27520	5.96
3	36176	7.98
4	44688	9.94
5	53424	11.90
6	N/A	N/A
Field Calibration		
	Measured Caliper (in)	Actual Caliper (in)
	8.86	8.83

Photo Density Calibration MPD-A.A 11

Base Calibration on 23-JUL-2012 12:42
Field Check on 08-AUG-2012,19:39

Density Calibration				
Base Calibration		Measured	Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	58001	30635	59869	31110
Reference 2	24376	2748	24557	2522
Field Check at Base				
	1210.5	1305.5		
Field Check				
	1210.3	1304.2		
PE Calibration				
Base Calibration		Measured	Calibrated	
	WS	WH	Ratio	Ratio
Background	217	1059		
Reference 1	20651	57782	0.360	0.369
Reference 2	6291	24213	0.262	0.271
Field Check at Base				
	217.0	1059.4		
Field Check				
	219.3	1065.4		

Density Constants MPD-A.A 11

Last Edited on 08-AUG-2012,19:39

Density Source Id	p36135b	
Nylon Calibrator Number	dnce633	
Aluminium Calibrator Number	dacd633	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.14	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	0.00

DOWNHOLE EQUIPMENT

C:\Program Files\Weatherford\WLS 13.02\DATA\MCCOY (ERSKINE B 1-32)\MAIN.dta

SHA-D Compact Swivel Head Adaptor
SHA-D 5 LG: 2.74 ft WT: 26.5 lb OD: 2.24 in

Compact Comms Gamma
MCG-B 31 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Micro-log
MML-A 7 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

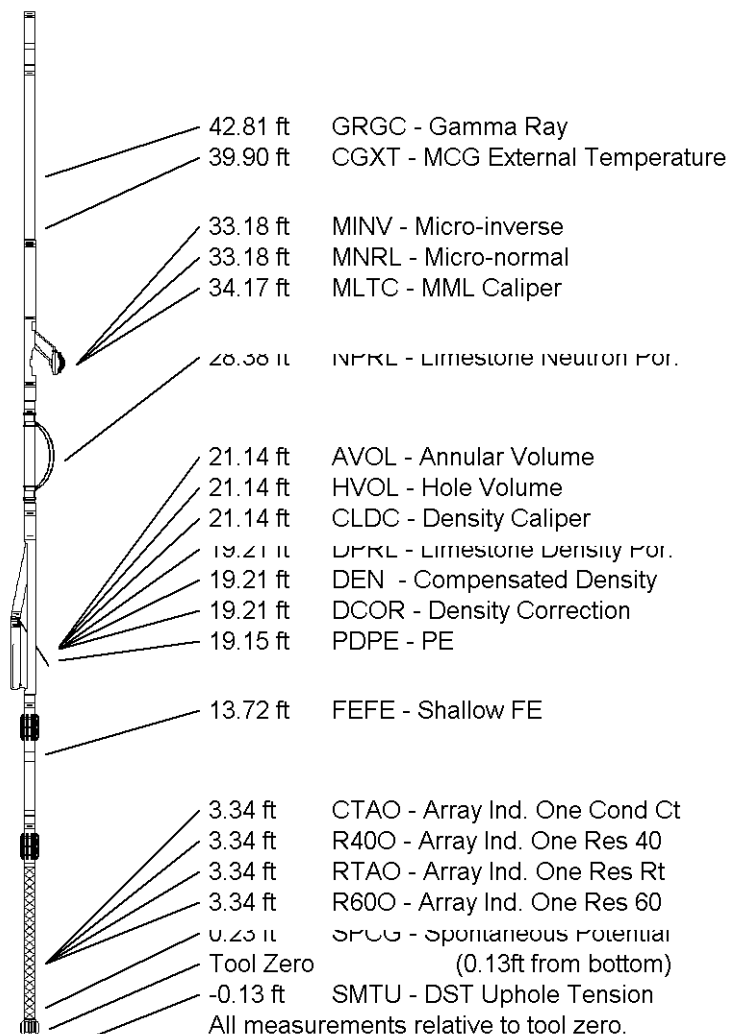
Compact Neutron
MDN-A.B 31 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper
MPD-A.A 11 LG: 9.53 ft WT: 90.4 lb OD: 2.45 in

Compact Focussed Electric
MFE-A.A 54 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Induction
MAI-A.A 66 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 50.83 ft Weight: 410.1 lb



COMPANY
WELL

MCCOY PETROLEUM CORPORATION
ERSKINE "B" #1-32

FIELD			ERSKINE NORTH		
PROVINCE/COUNTY			SUMNER		
COUNTRY/STATE			USA / KANSAS		
Elevation Kelly Bushing	1287.00	feet	First Reading	4359.00	feet
Elevation Drill Floor	1285.00	feet	Depth Driller	4390.00	feet
Elevation Ground Level	1278.00	feet	Depth Logger	4378.00	feet



Weatherford®

COMPACT PHOTO DENSITY
COMPENSATED NEUTRON
LOG