



Weatherford[®]

**COMPACT PHOTO DENSITY
COMPENSATED NEUTRON
MICRORESISTIVITY LOG**

COMPANY **MCCELVAIN ENERGY, INC.**
WELL **PRICE 14-5**
FIELD **LIANOS SE**
PROVINCE/COUNTY **SHERMAN**
COUNTRY/STATE **U.S.A. / KANSAS**
LOCATION **1717' FNL & 388' FWL
SE NW SW NW**

SEC **14** TWP **6S** RGE **37W** Other Services
MAM/MFE
API Number **15-181-20597** MSS
Permit Number **SGS**
Permanent Datum GL, Elevation 3441 feet
Log Measured From **KB**
Drilling Measured From **KB @ 11 FEET**

Elevations:
KB **3452.00**
DF **3450.00**
GL **3441.00**

Date	23-NOV-2013	
Run Number	ONE	
Service Order	3547622	
Depth Driller	5082.00	feet
Depth Logger	5078.00	feet
First Reading	5046.00	feet
Last Reading	351.00	feet
Casing Driller	352.00	feet
Casing Logger	351.00	feet
Bit Size	7.875	inches
Hole Fluid Type	CHEMICAL	
Density / Viscosity	9.30 lb/USg	50.00 CP
PH / Fluid Loss	10.50	8.00 ml/30Min
Sample Source	FLOW LINE	
Rm @ Measured Temp	1.60 @ 49.0	ohm-m
Rmf @ Measured Temp	1.28 @ 49.0	ohm-m
Rmc @ Measured Temp	1.92 @ 49.0	ohm-m
Source Rmf / Rmc	CALC	CALC
Rm @ BHT	0.60 @130.0	ohm-m
Time Since Circulation	3 HRS	
Max Recorded Temp	130.00	deg F
Equipment / Base	13057	LIB
Recorded By	J. LAPOINT	
Witnessed By	L. NICHOLSON	
IOB #	LB 13-331	

BOREHOLE RECORD

Last Edited: 24-NOV-2013 07:12

Bit Size inches	Depth From feet	Depth To feet
7.875	351.00	5078.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	351.00	24.00

REMARKS

- SOFTWARE ISSUE: WLS 13.05.9583.
- MCG, SGS, MML, MDN, MPD, MFE, MSS, MAI RAN IN COMBINATION.
 - HARDWARE: DUAL BOWSPRING USED ON MDN.
 - 0.5 INCH STANDOFF USED ON MFE.
 - TWO 0.5 INCH STANDOFFS USED ON MSS.
 - 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: 1847 CU. FT.
- ANNULAR HOLE VOLUME WITH 5.5 INCH PRODUCTION CASING FROM TD TO SURFACE CASING: 1071 CU. FT.

- RIG: H2 DRILLING

- ENGINEER: J. LAPOINT AND R. HOFFMAN

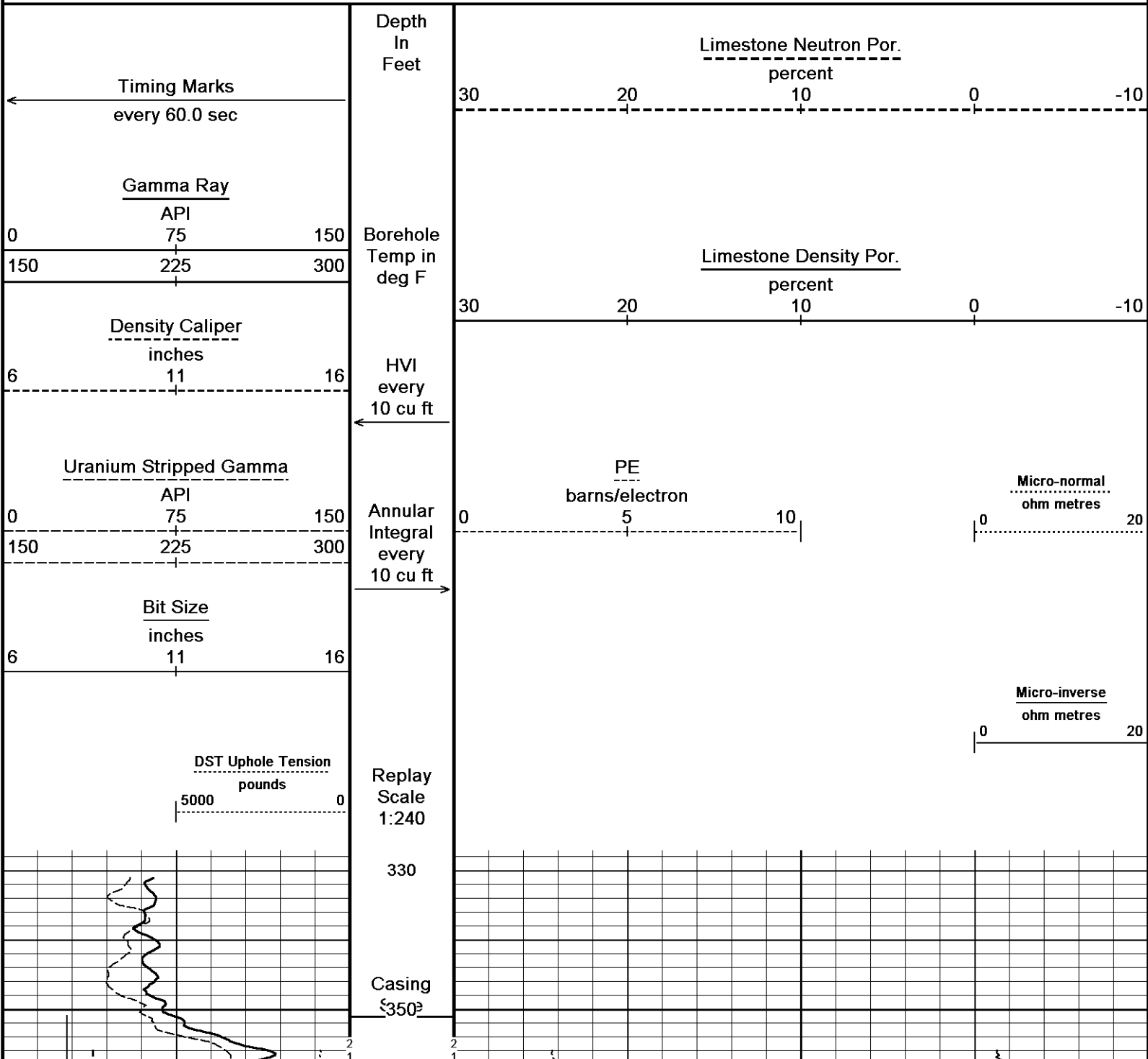
- OPERATOR(S): K. RINEHART AND C. RAMIREZ

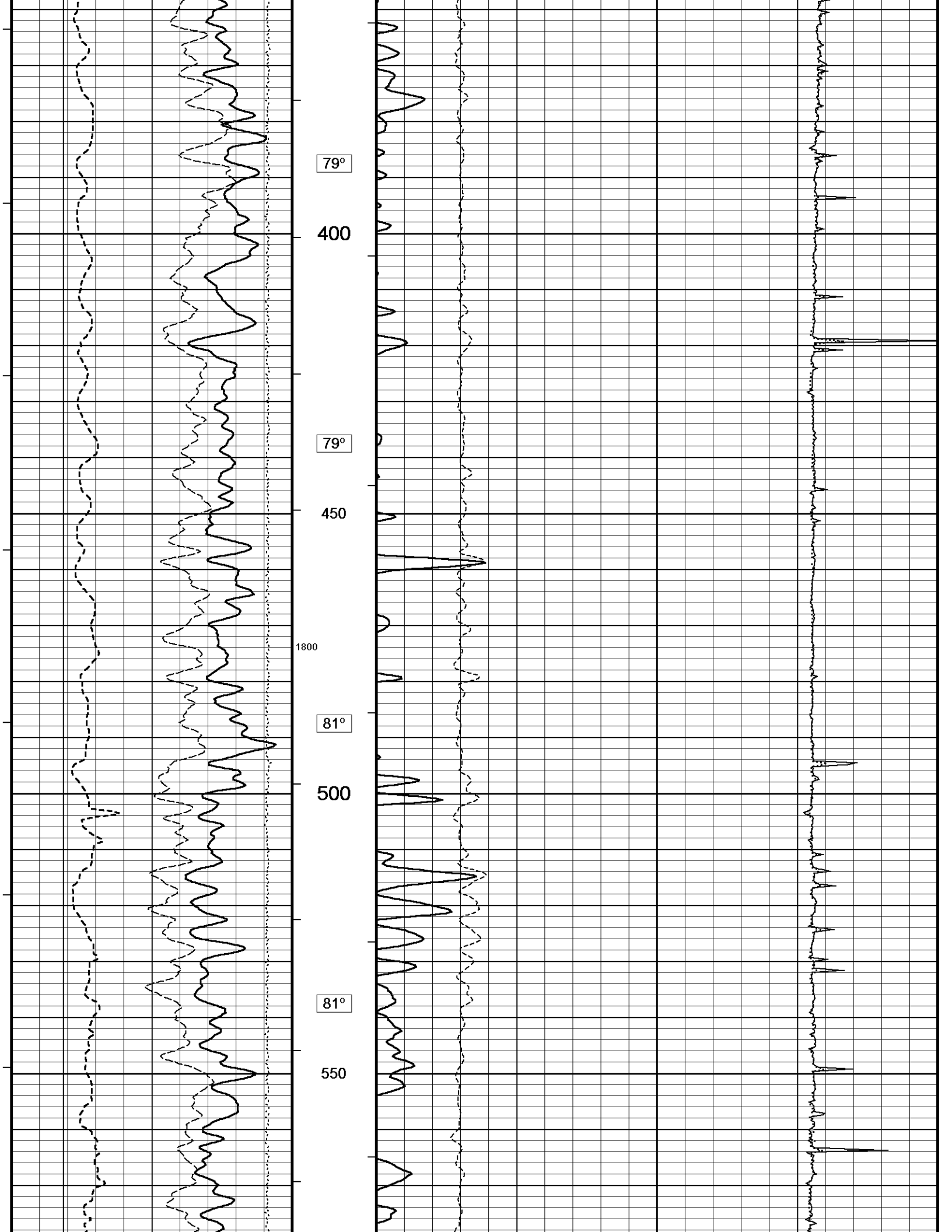
- LCM: 8 LBS/PBL

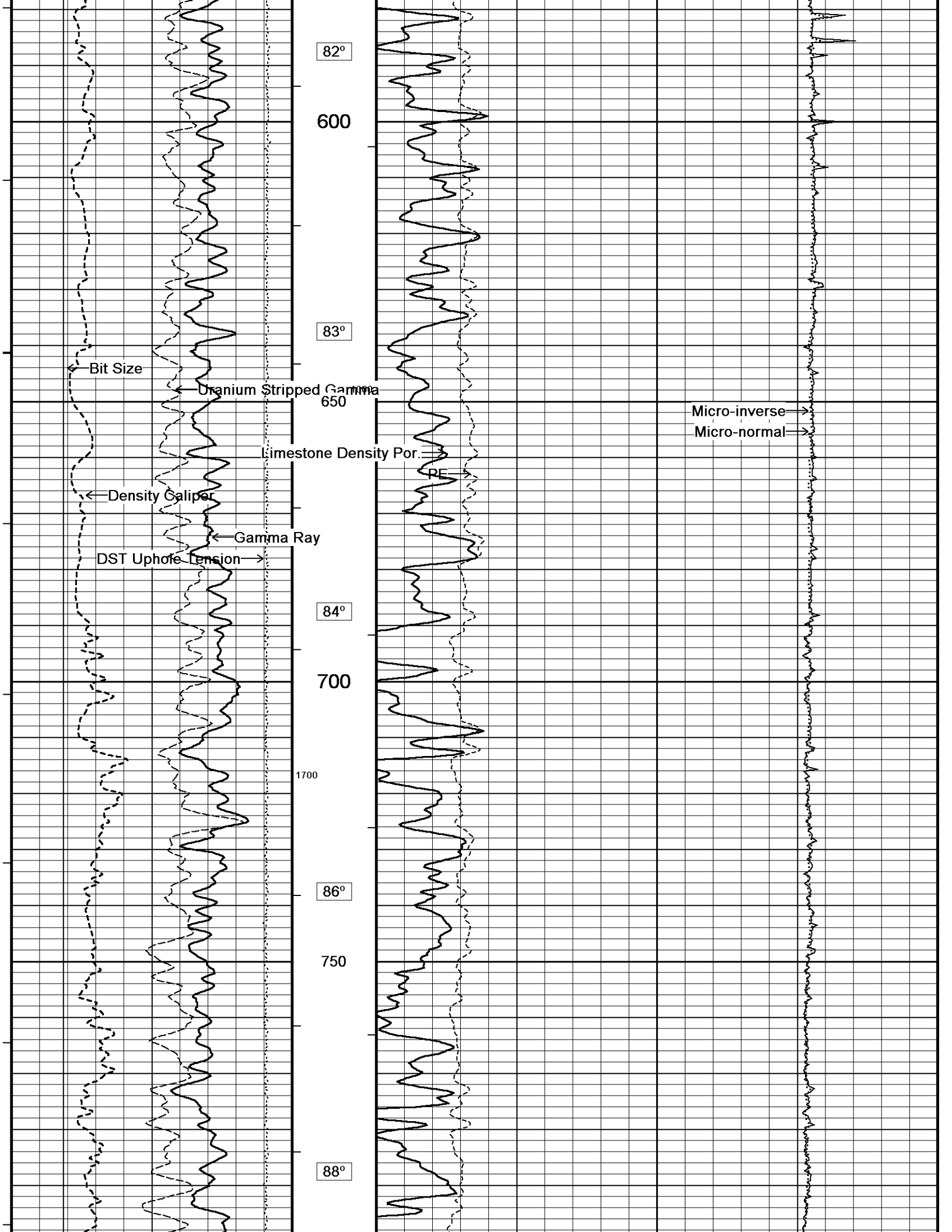
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

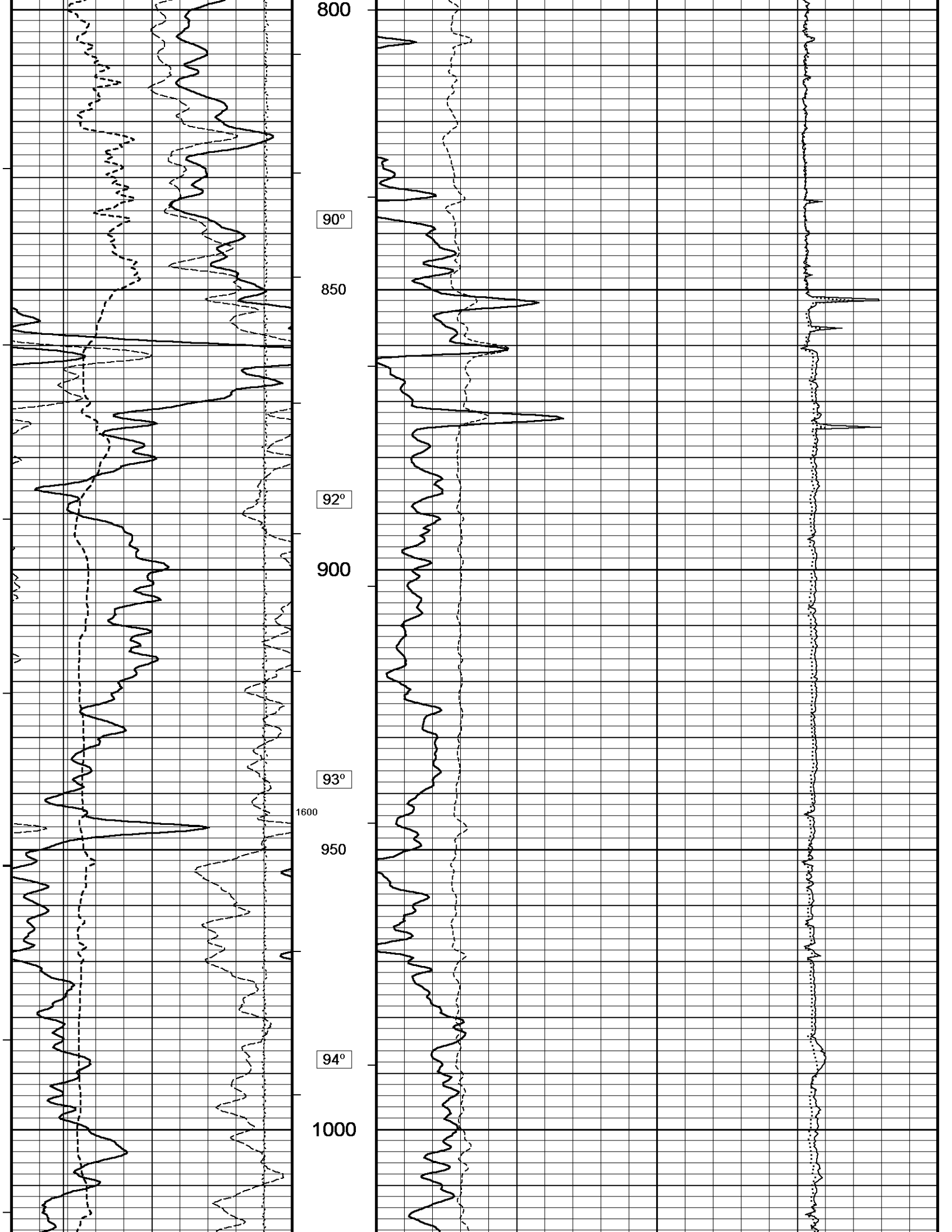
5 INCH MAIN

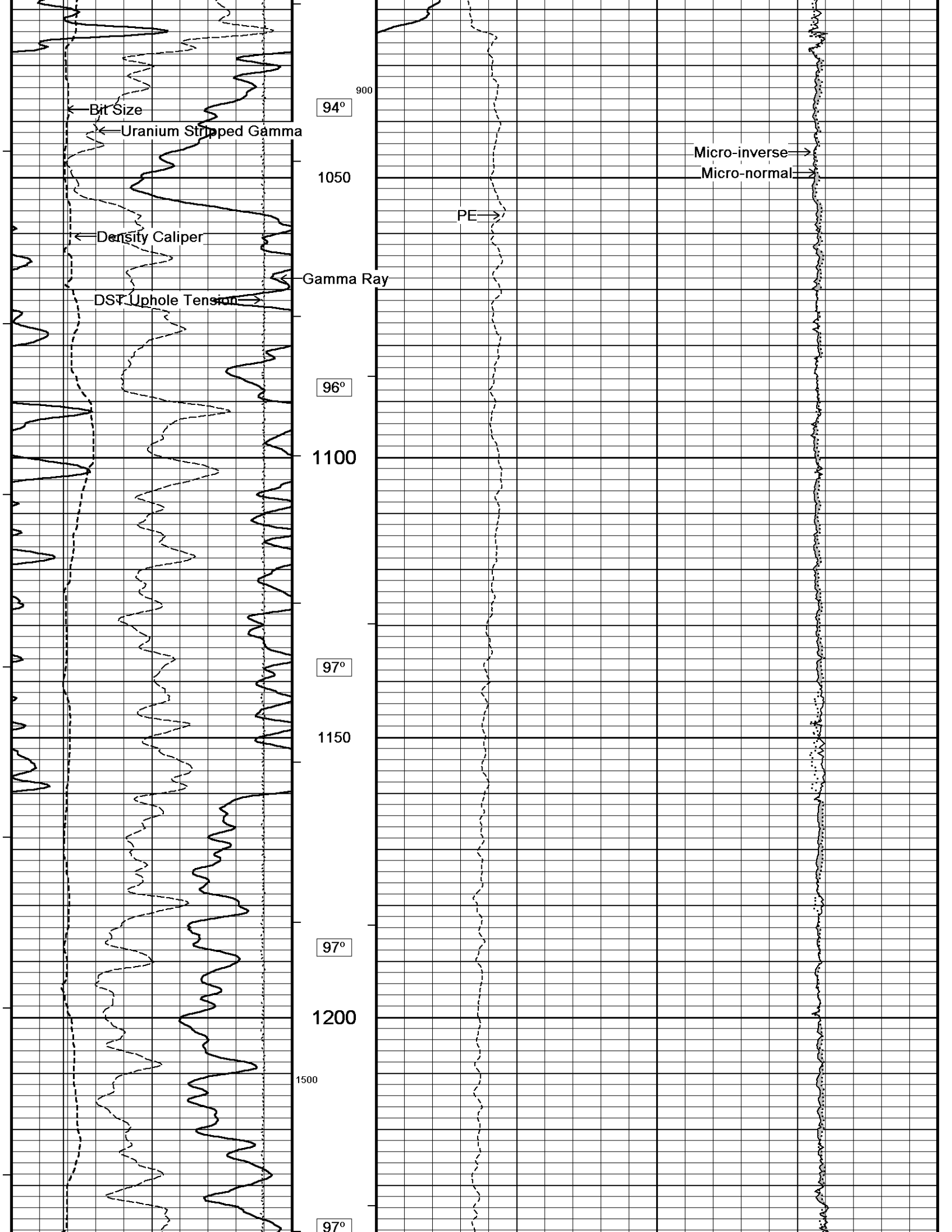
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Filename: C:\Minimus 13.05.9583\Logs\McElvain Price 14-5\McElvain Price 14-5 Main.dta
Recorded on 24-NOV-2013 02:52
System Versions: Logged with 13.05.9583 Plotted with 13.05.9583

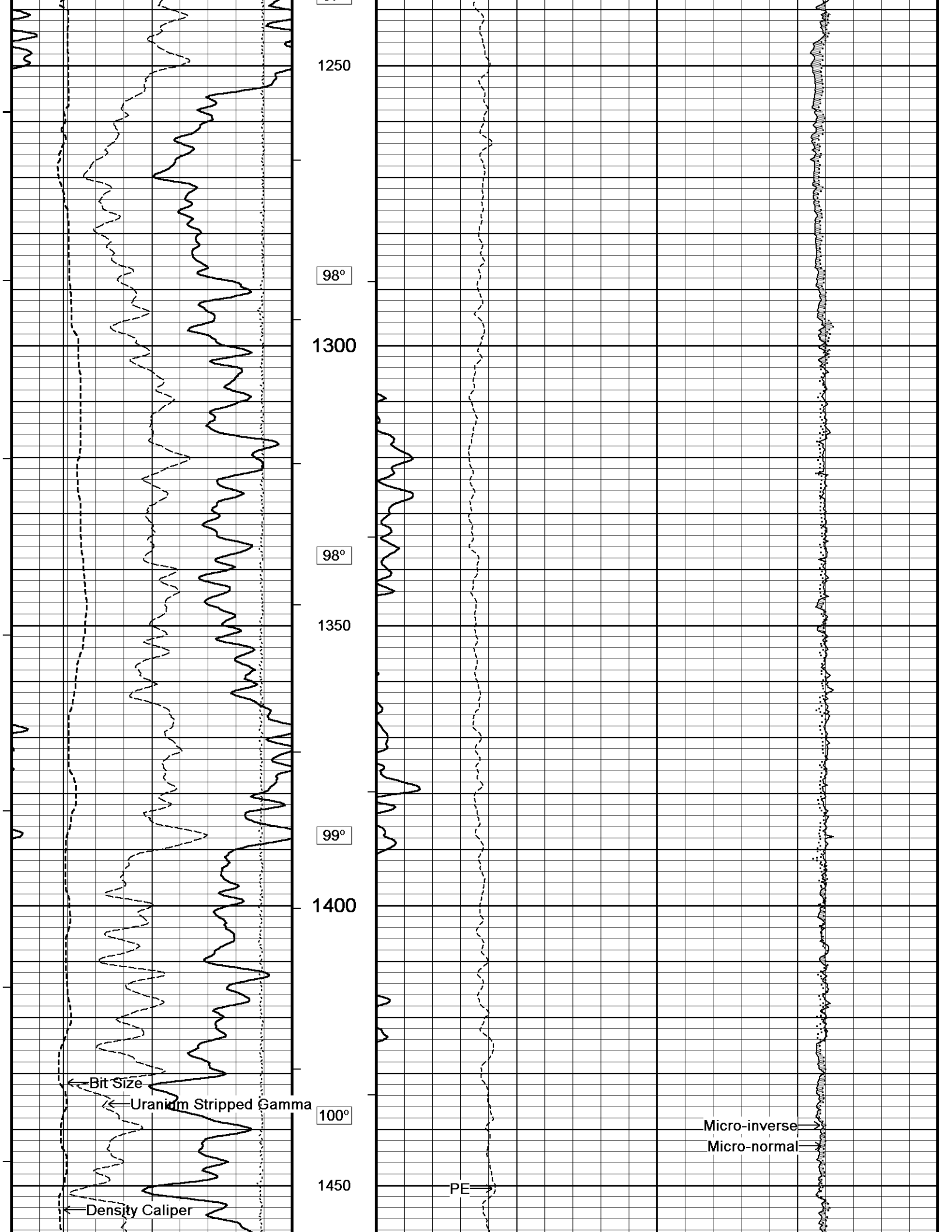


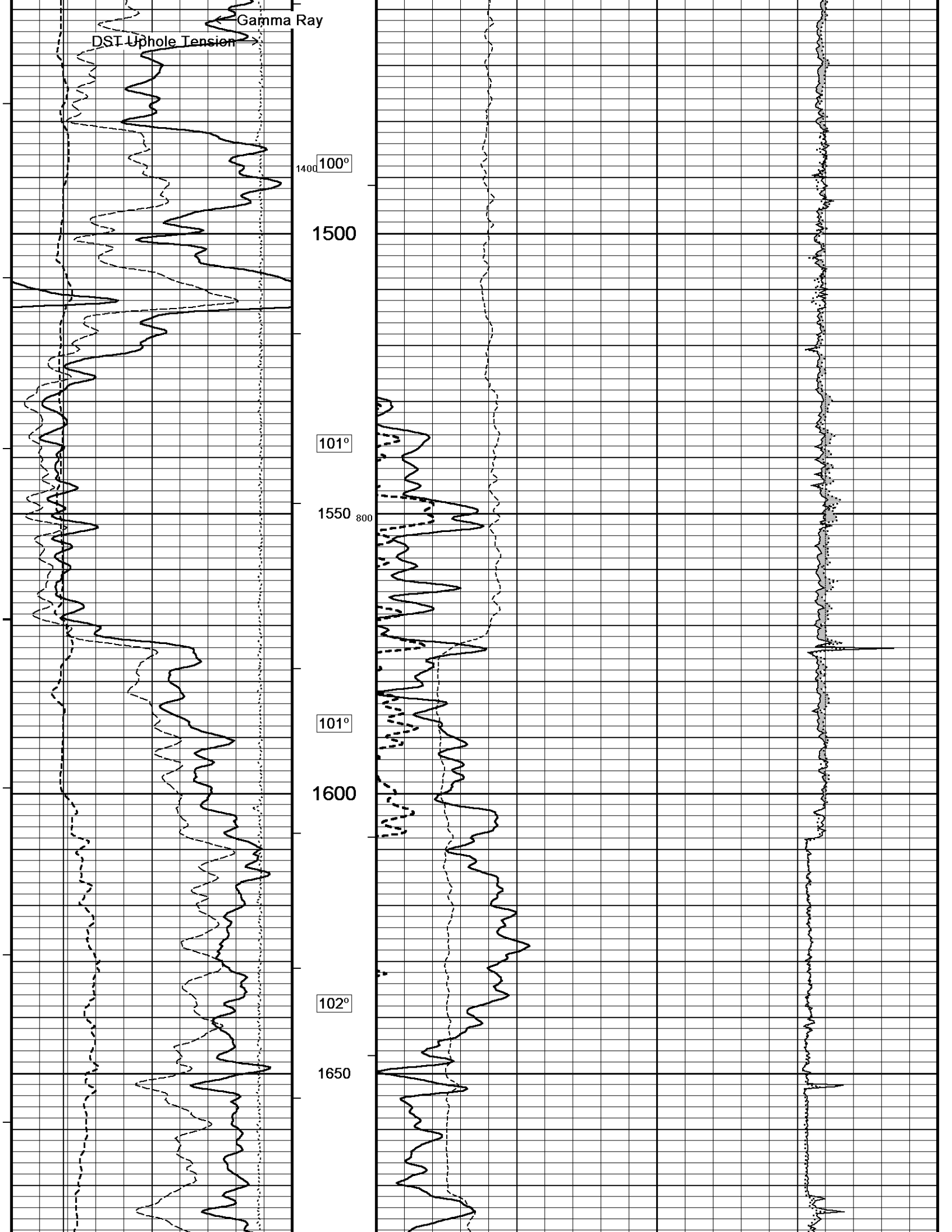


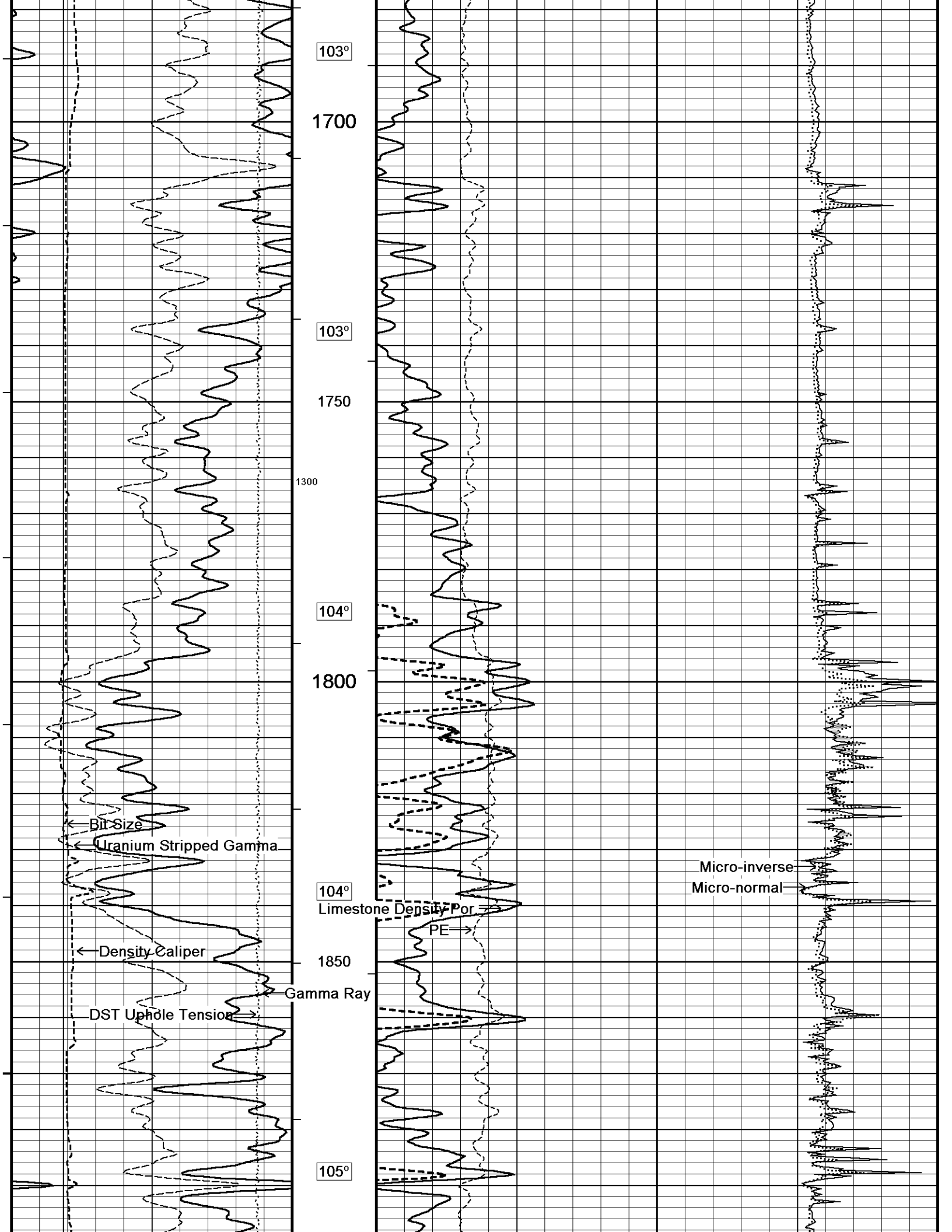


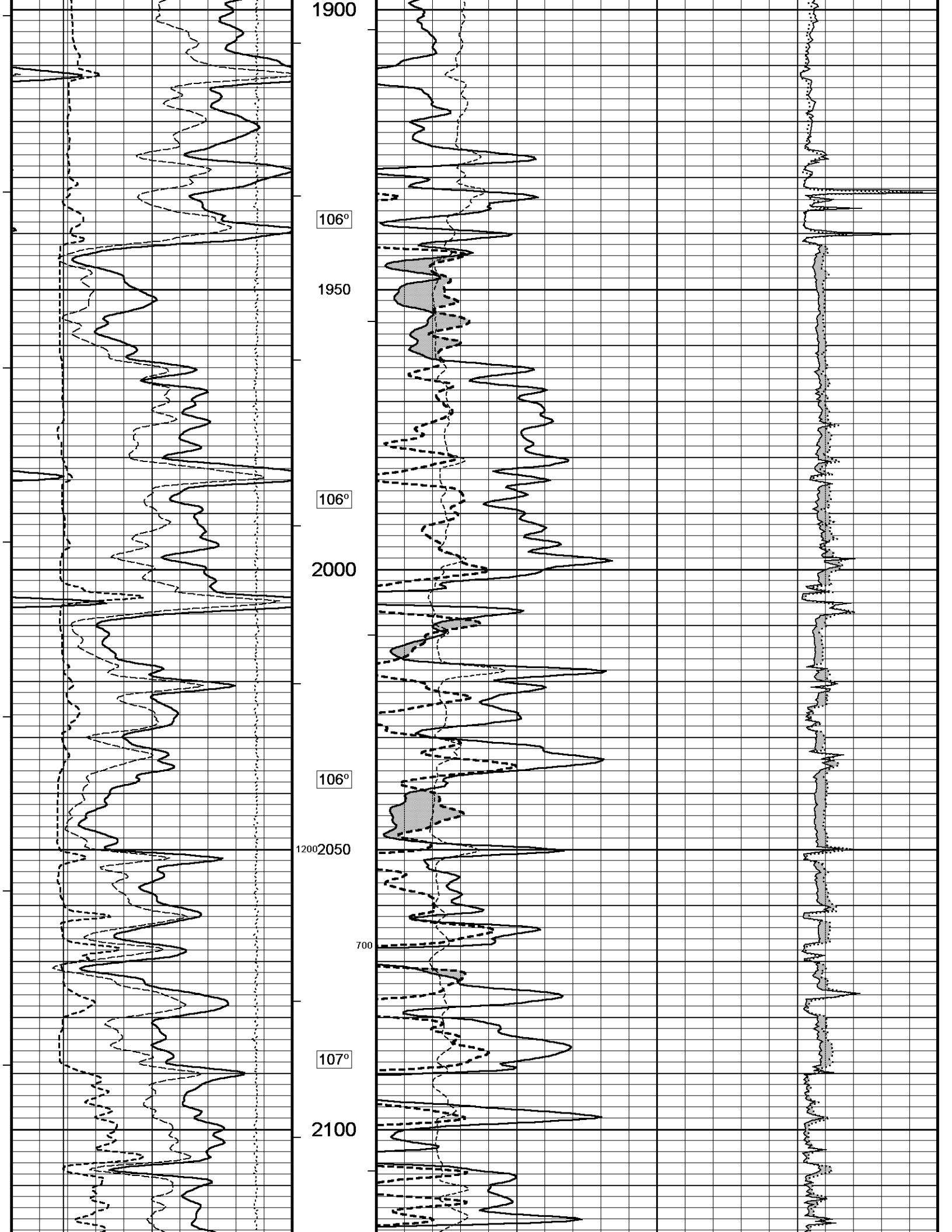


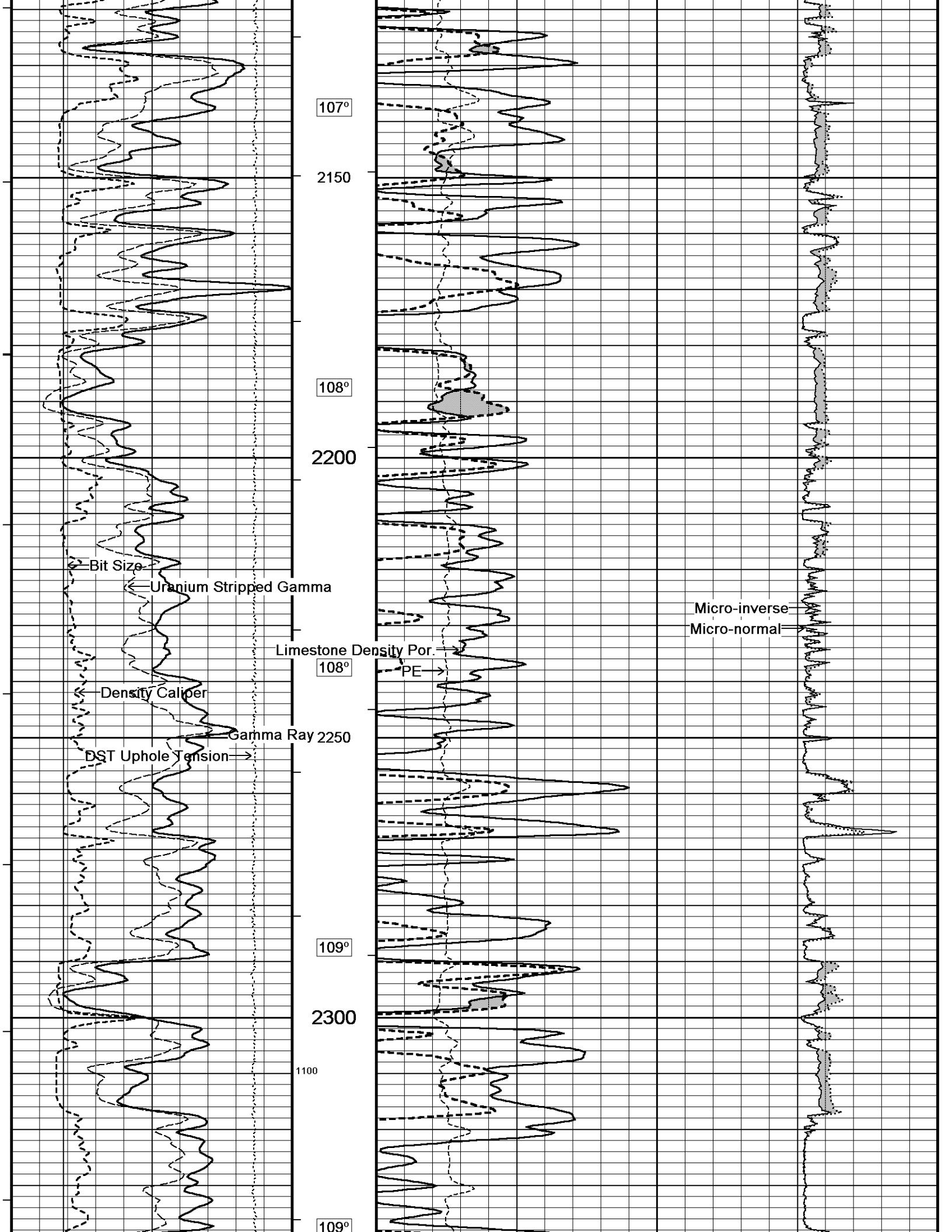


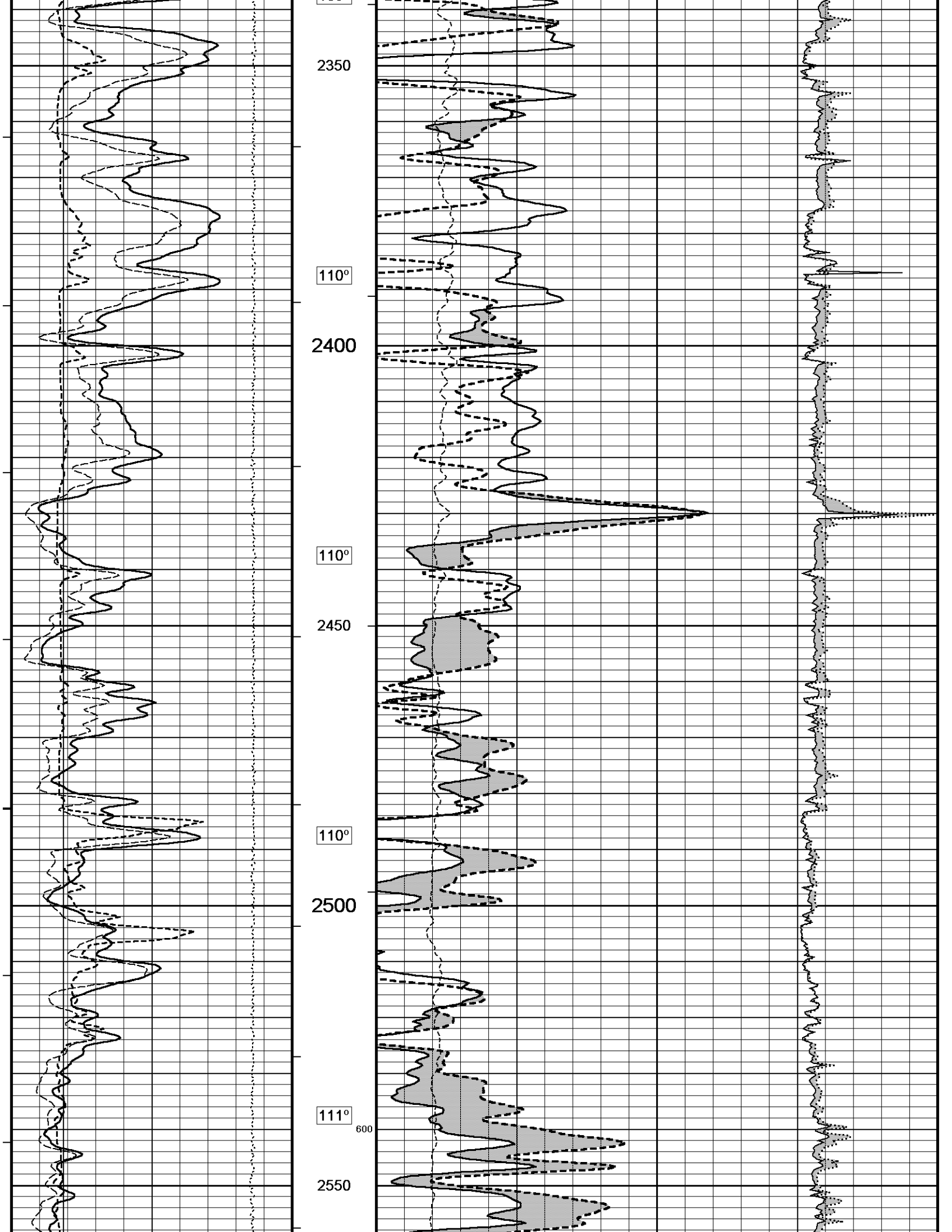


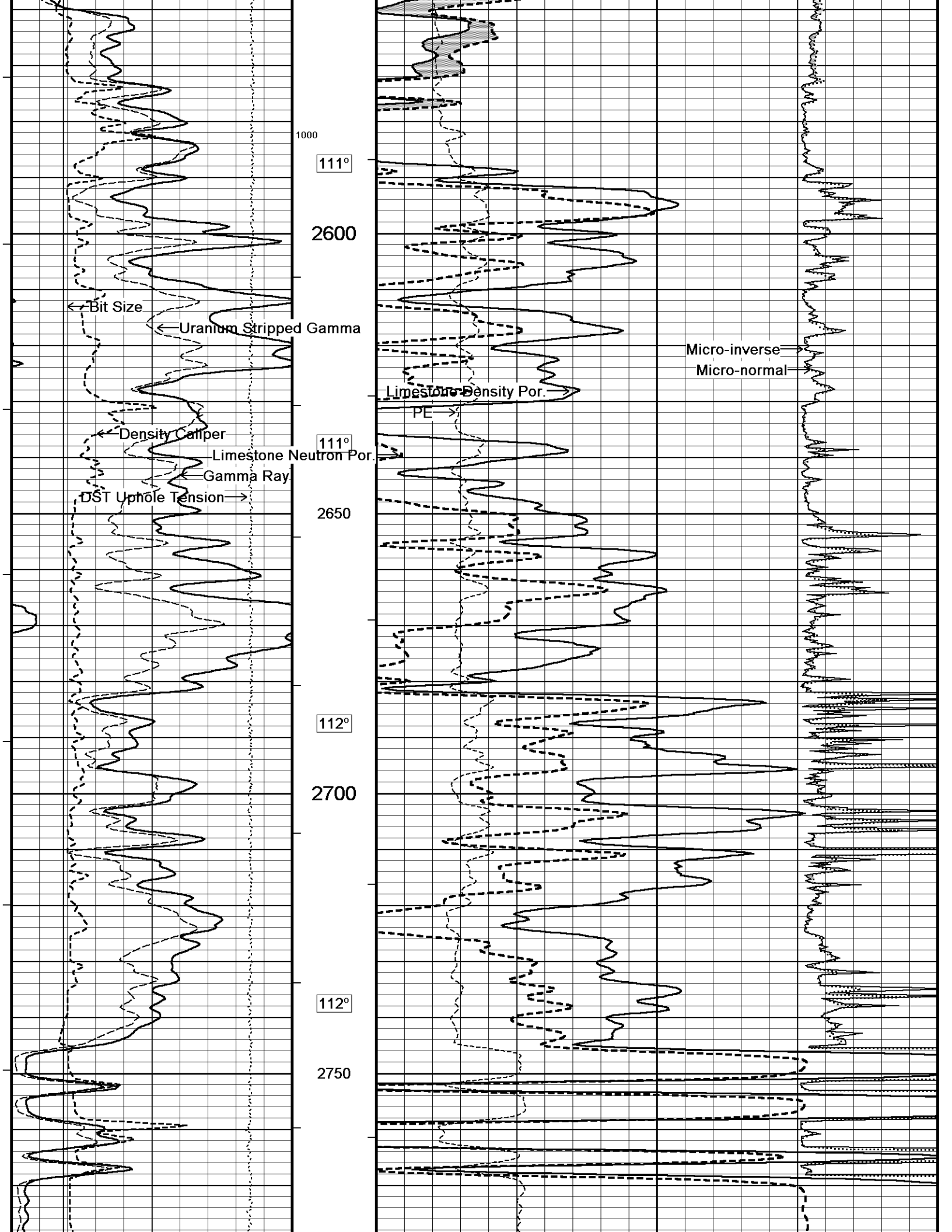


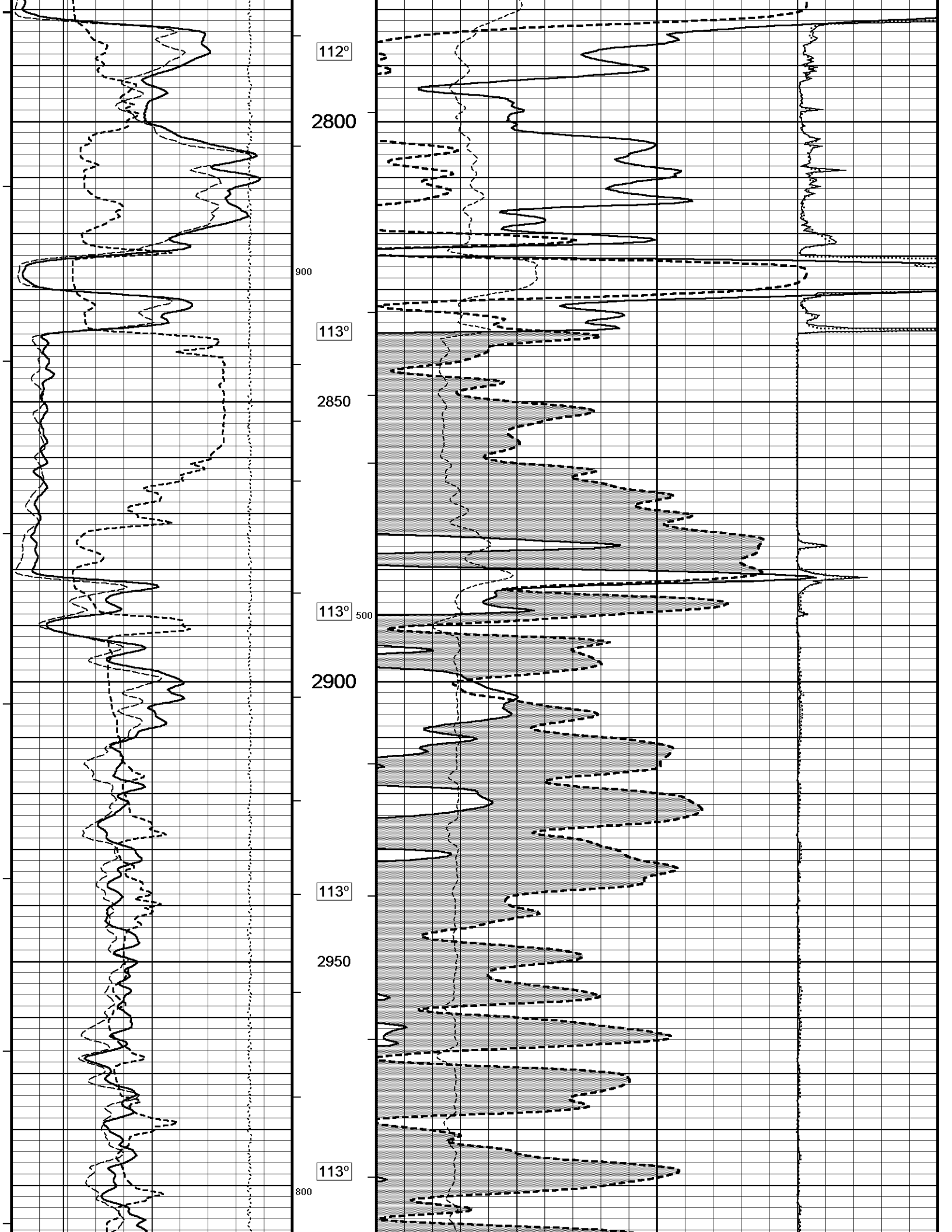


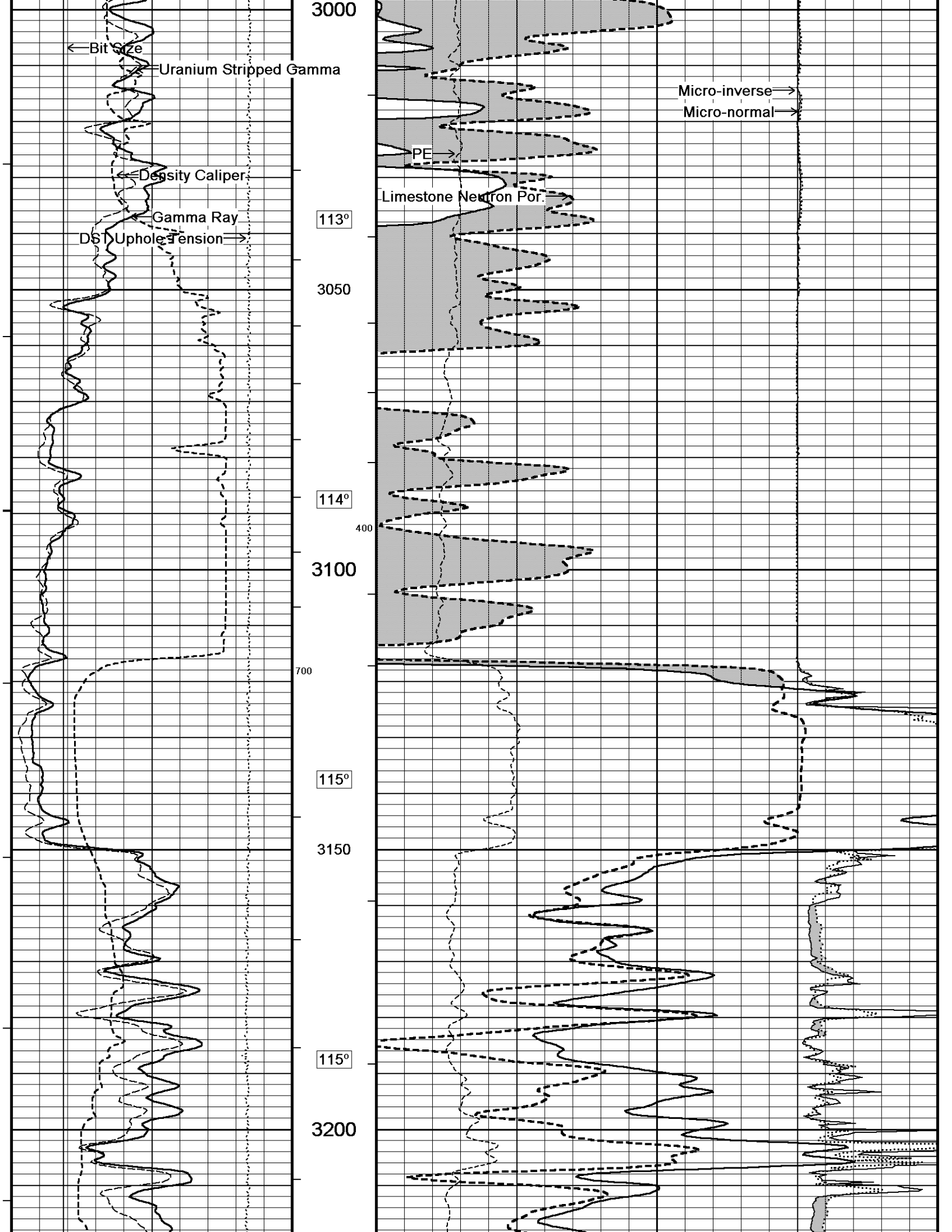


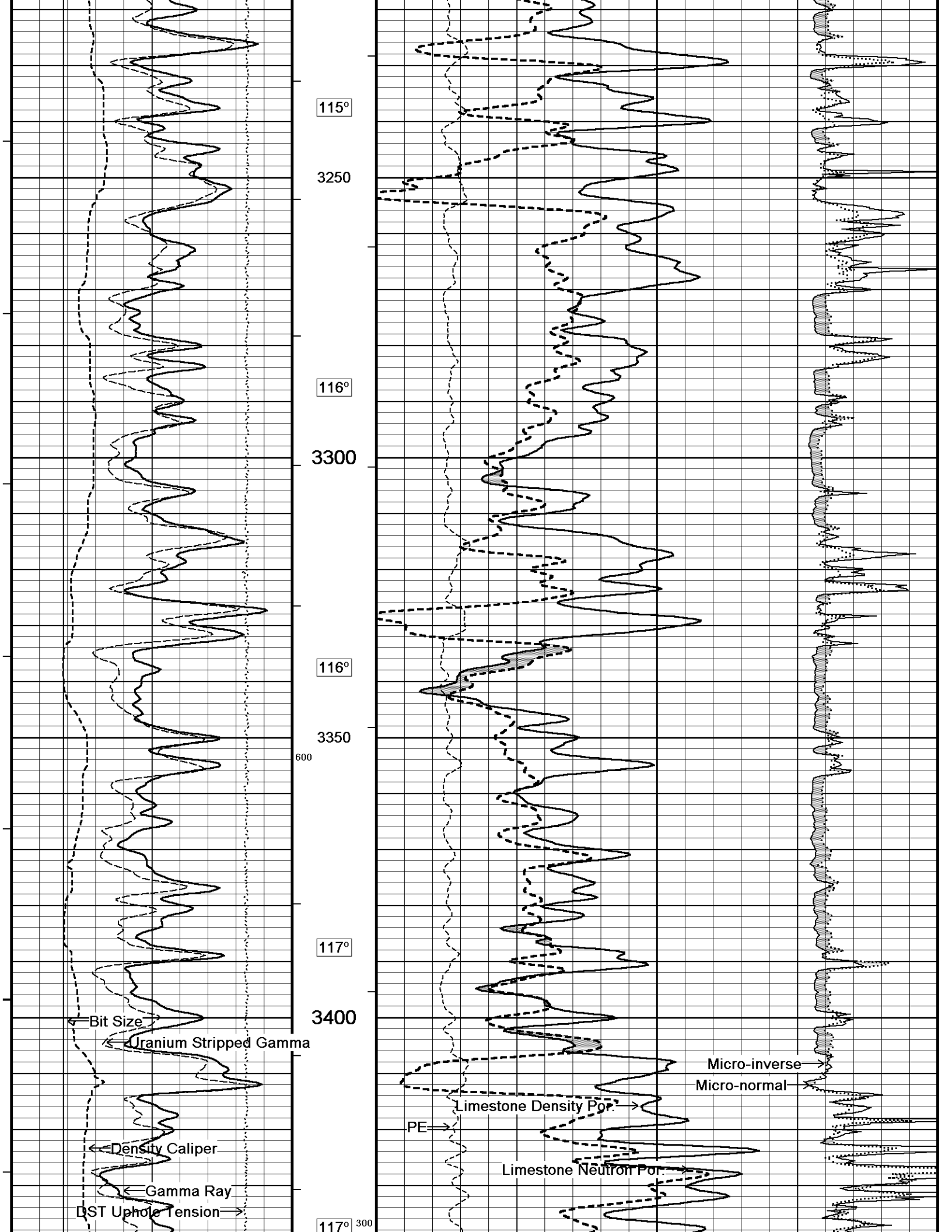


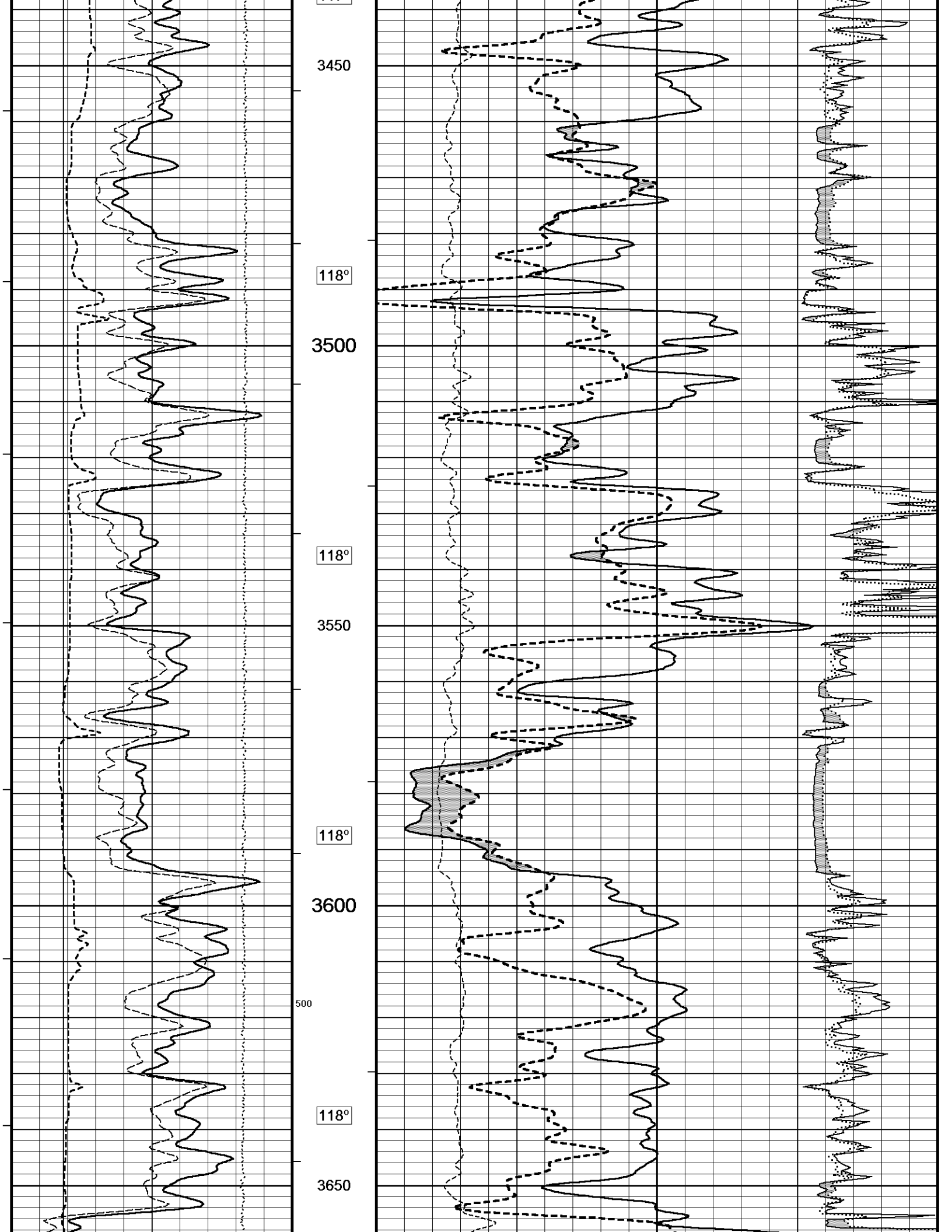


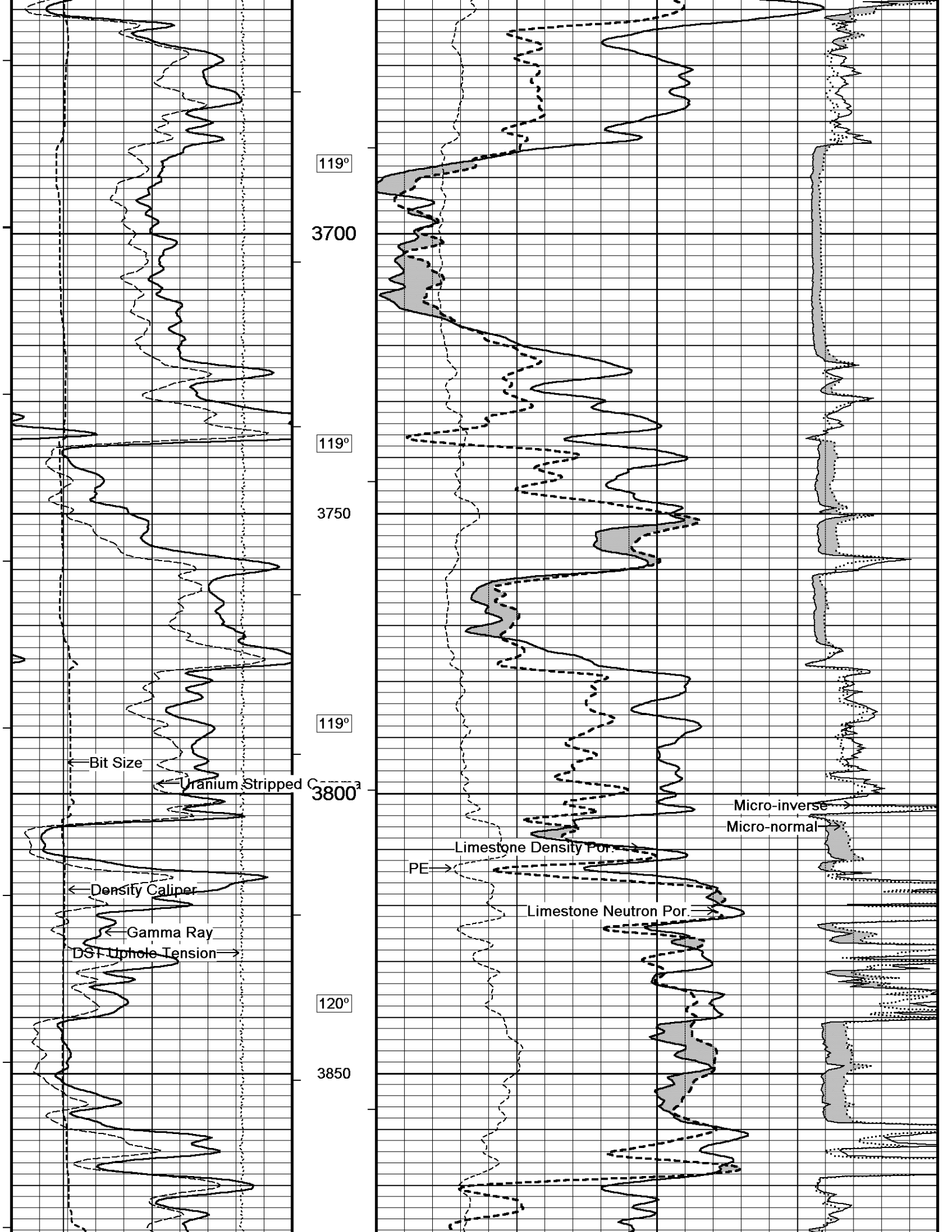


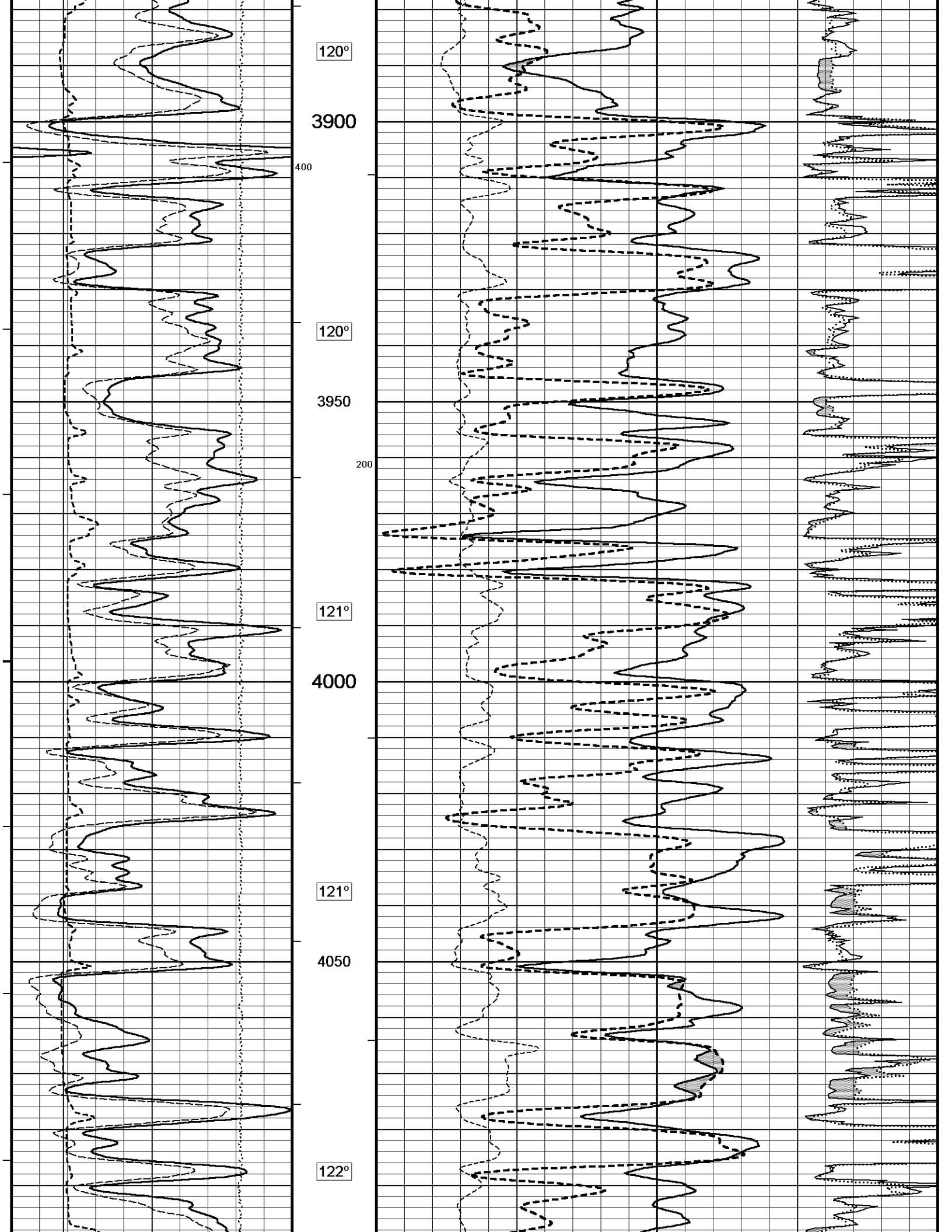


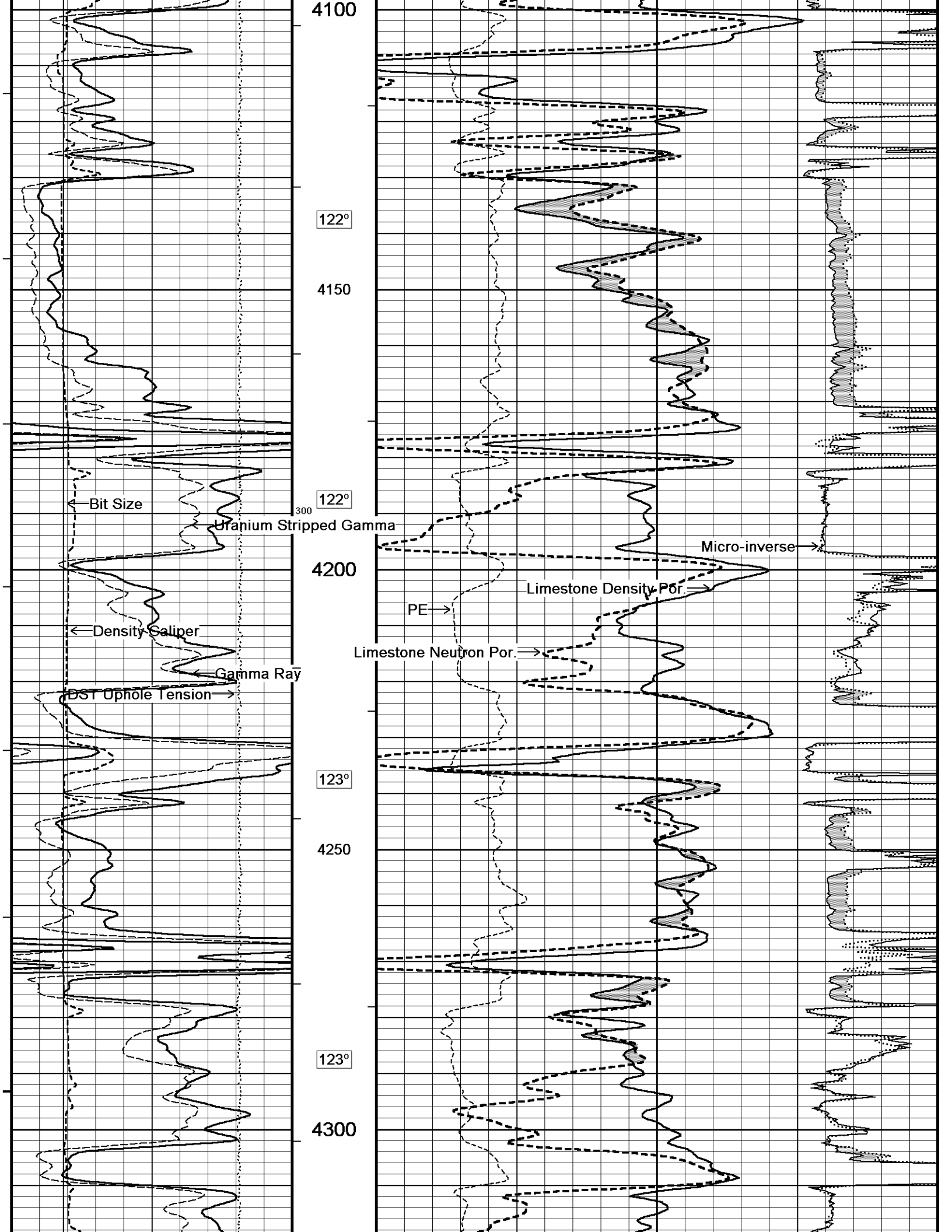


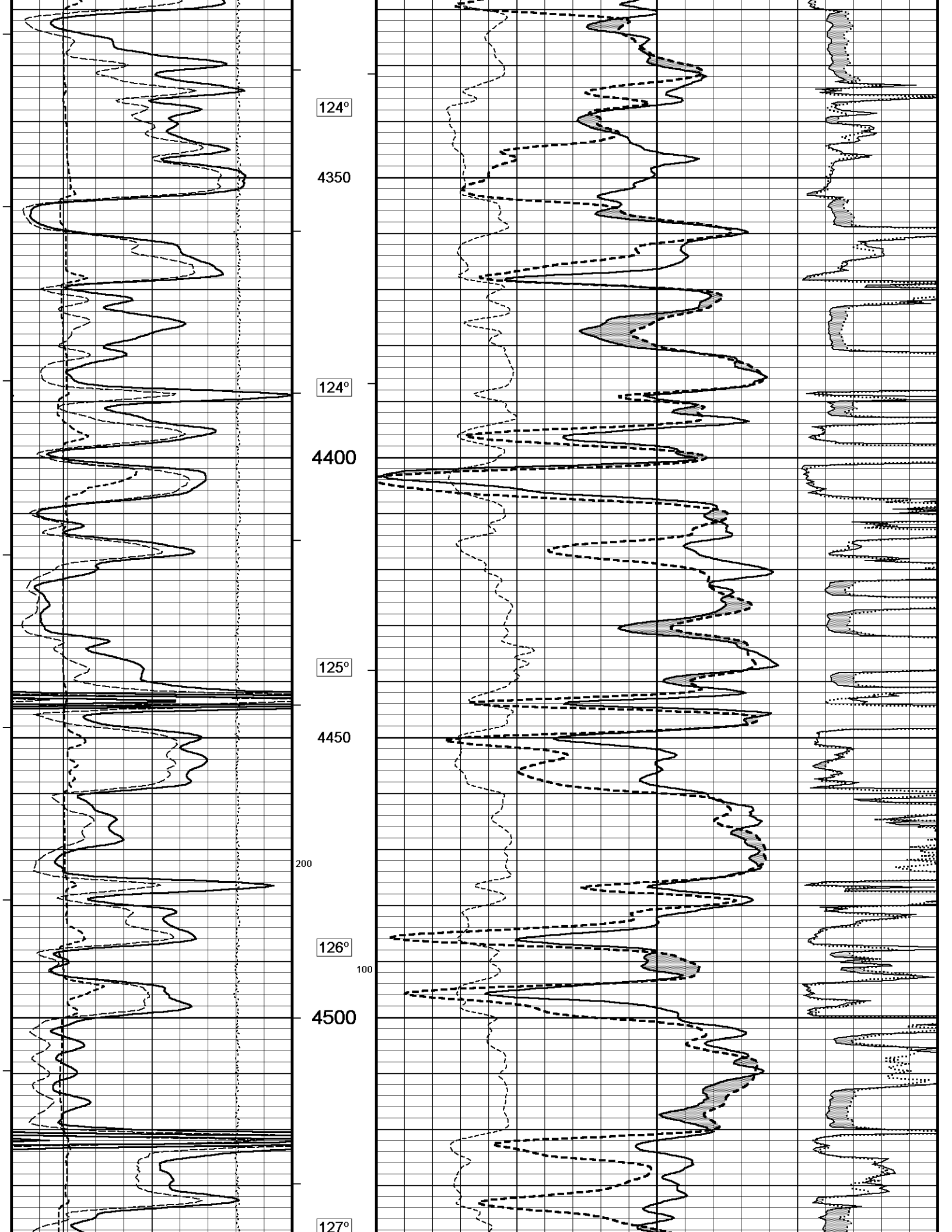


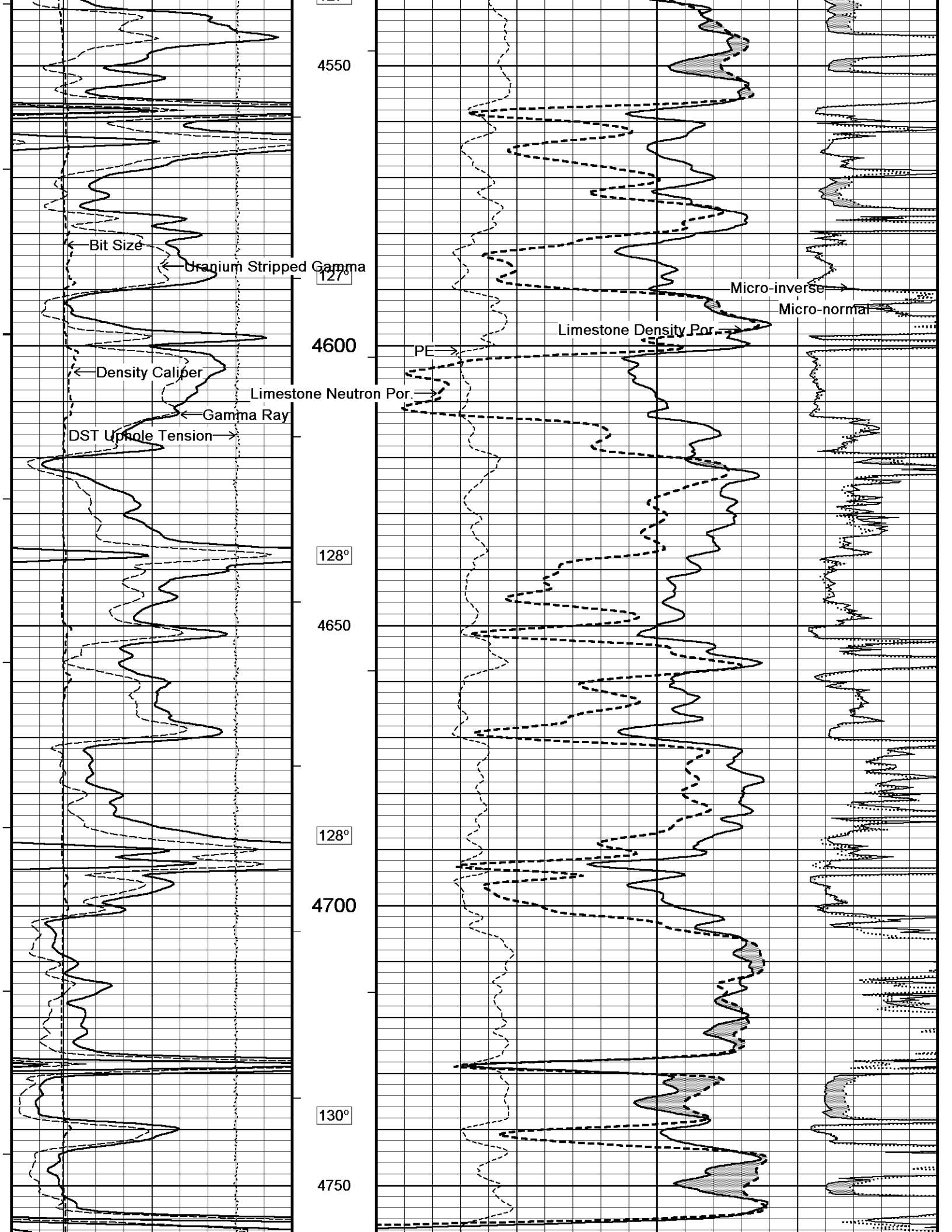


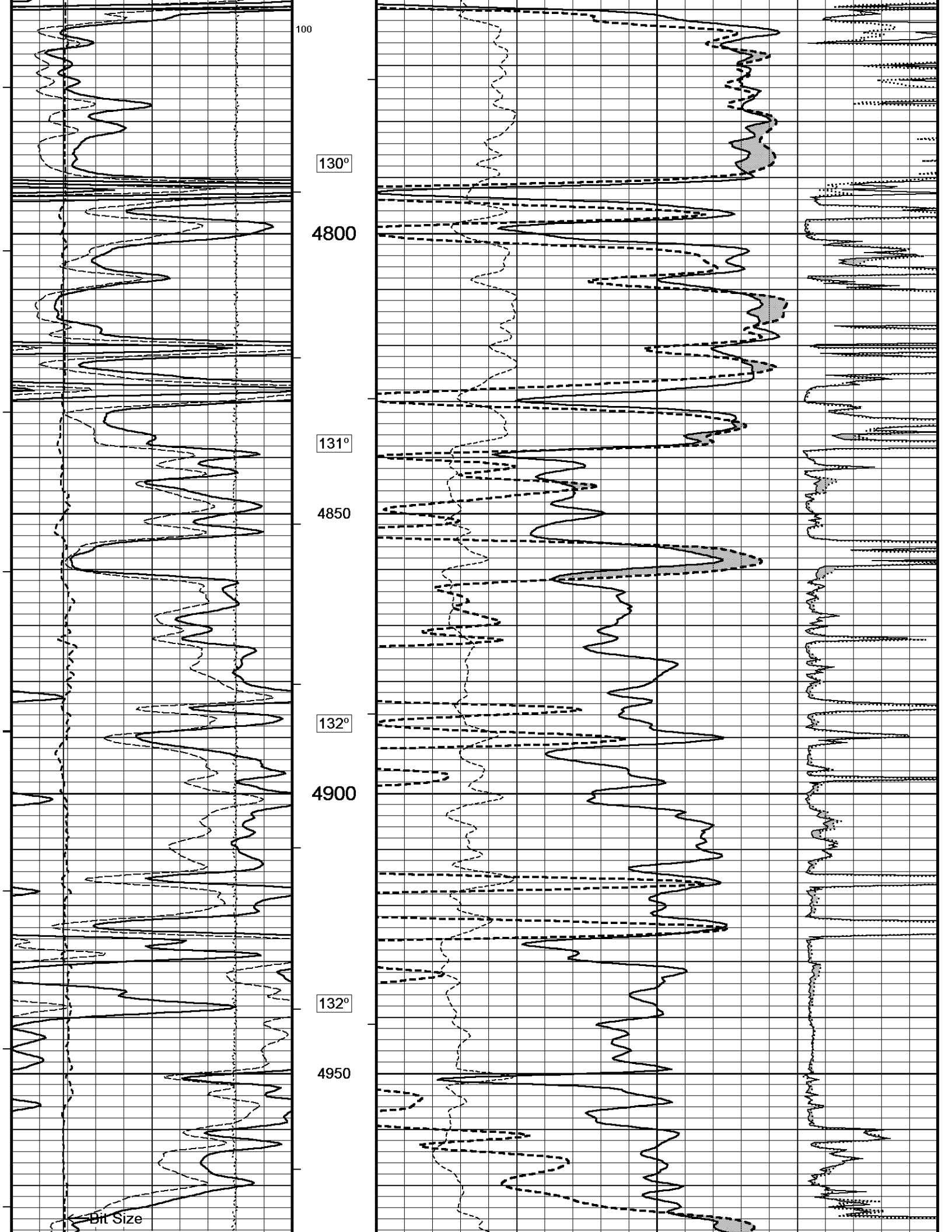






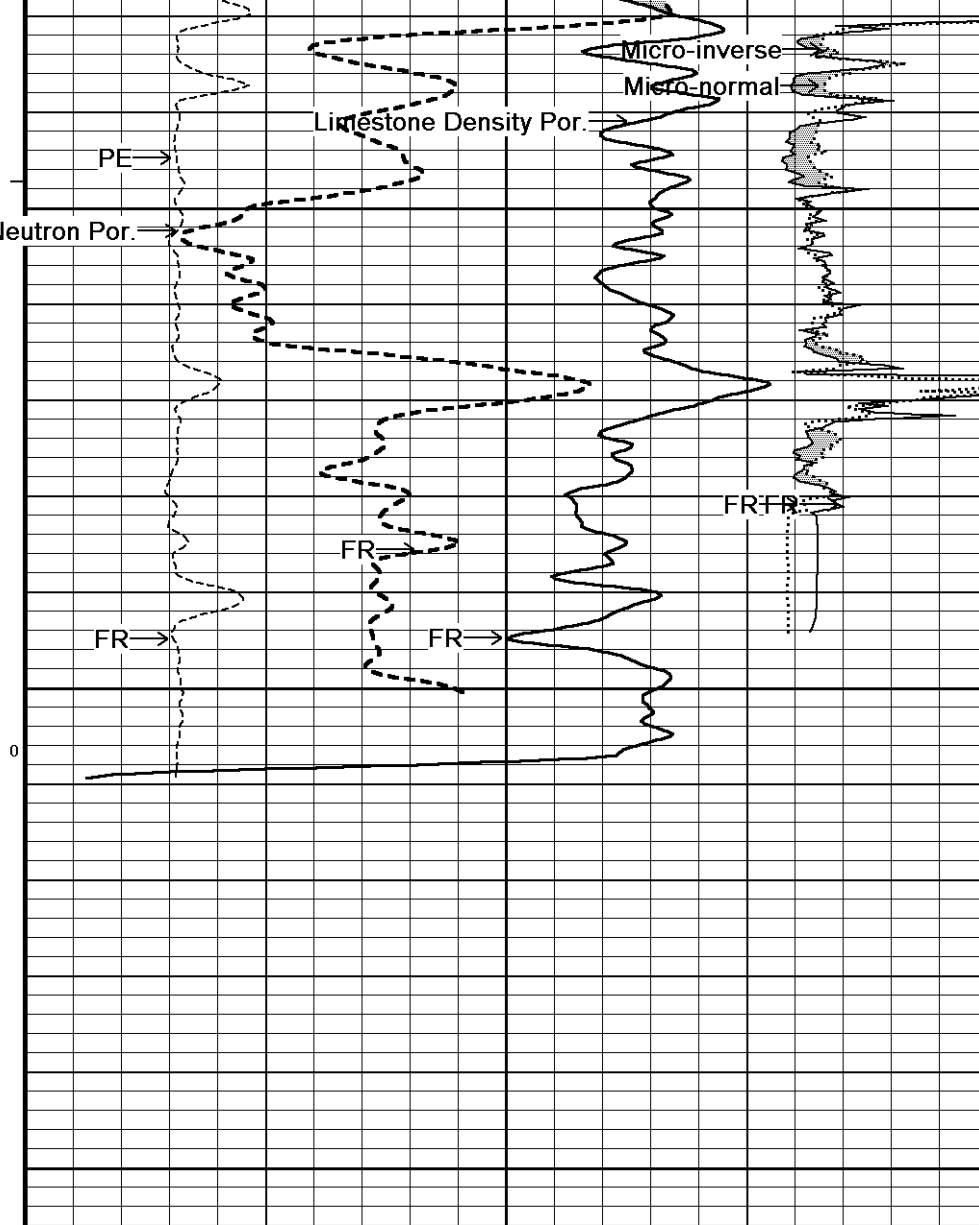








133°
5000
5050
5100
Depth In Feet



Timing Marks every 60.0 sec

Gamma Ray
API
0 75 150
150 225 300

Density Caliper
inches
6 11 16

Uranium Stripped Gamma
API
0 75 150
150 225 300

Bit Size

Borehole Temp in deg F
HVI every 10 cu ft

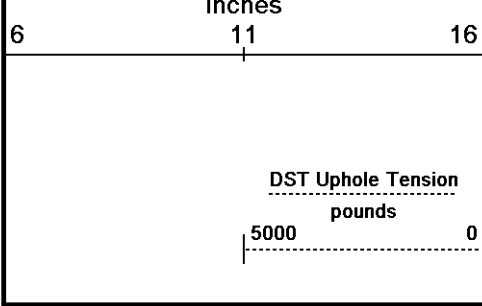
Annular Integral every 10 cu ft

Limestone Neutron Por.
percent
30 20 10 0 -10

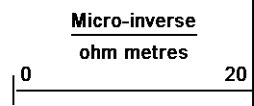
Limestone Density Por.
percent
30 20 10 0 -10

PE
barns/electron
0 5 10

Micro-normal
ohm metres
0 20



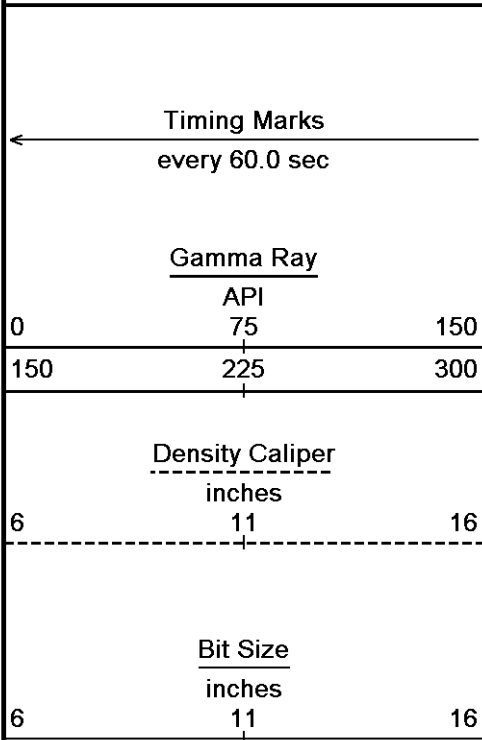
Replay
Scale
1:240



Depth Based Data - Maximum Sampling Increment 10.0cm
 Plotted on 24-NOV-2013 08:29
 Filename: C:\Minimus 13.05.9583\Logs\McElvain Price 14-5\McElvain Price 14-5 Main.dta
 Recorded on 24-NOV-2013 02:52
 System Versions: Logged with 13.05.9583 Plotted with 13.05.9583

↑ 5 INCH MAIN ↑

↓ HI-RES ↓
 Depth Based Data - Maximum Sampling Increment 2.5cm
 Plotted on 24-NOV-2013 08:29
 Filename: C:\Minimus 13.05.9583\Logs\McElvain Price 14-5\McElvain Price 14-5 High Res.dta
 Recorded on 24-NOV-2013 01:03
 System Versions: Logged with 13.05.9583 Plotted with 13.05.9583

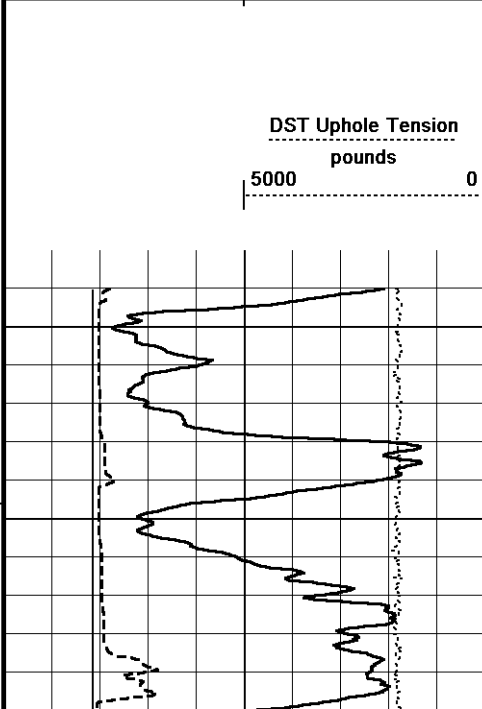
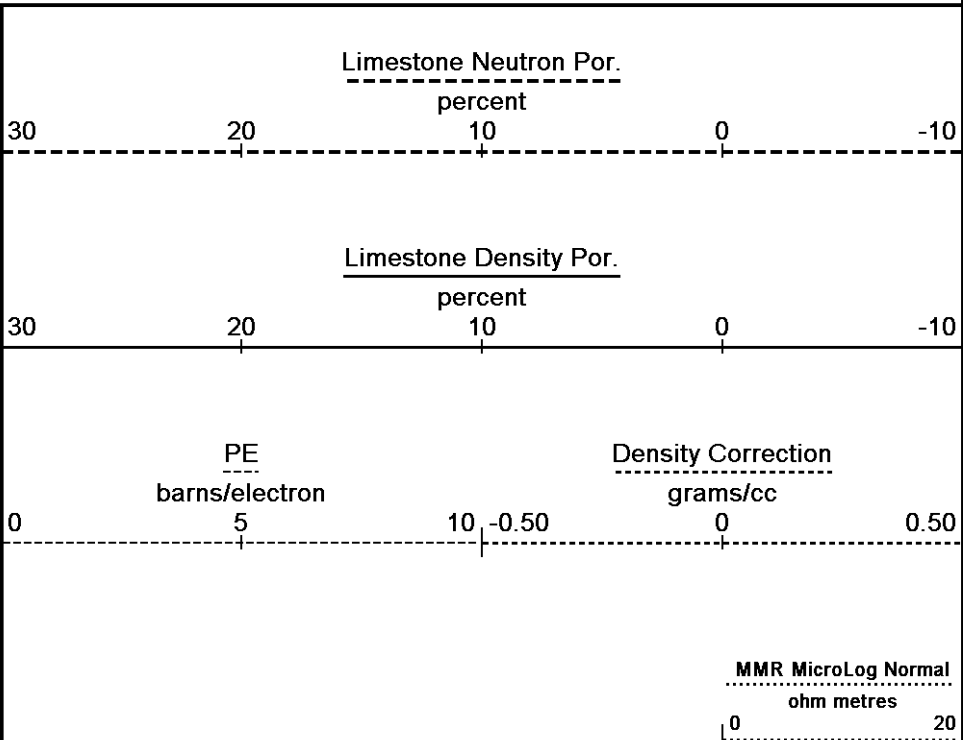


Depth
in
Feet

Borehole
Temp in
deg F

HVI
every
10 cu ft

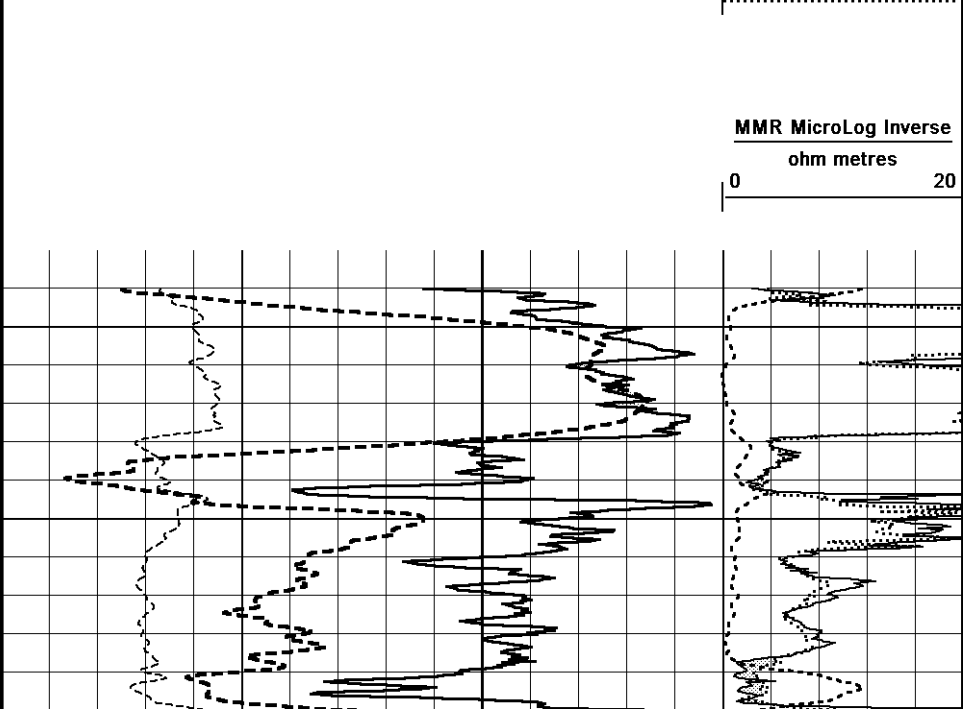
Annular
Integral
every
10 cu ft

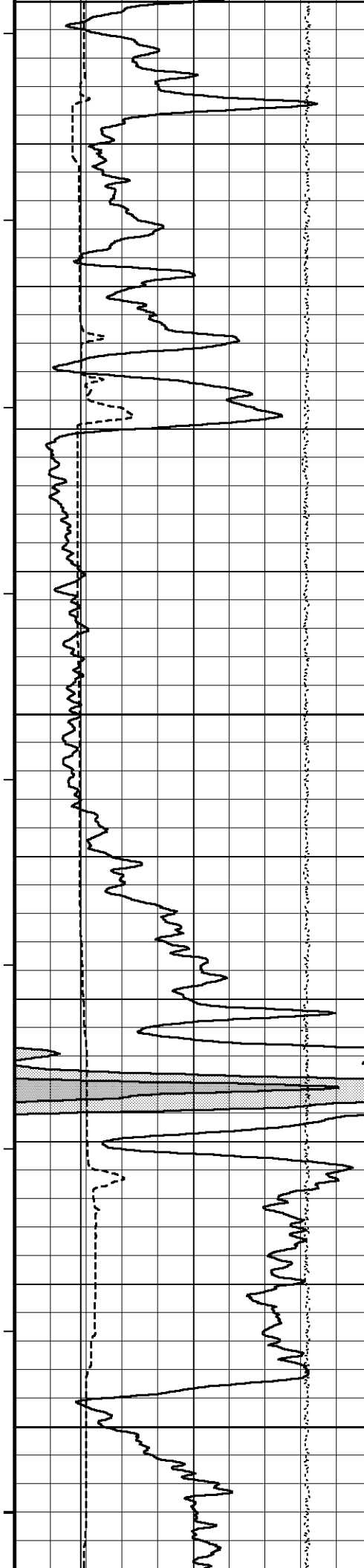


Replay
Scale
1:120

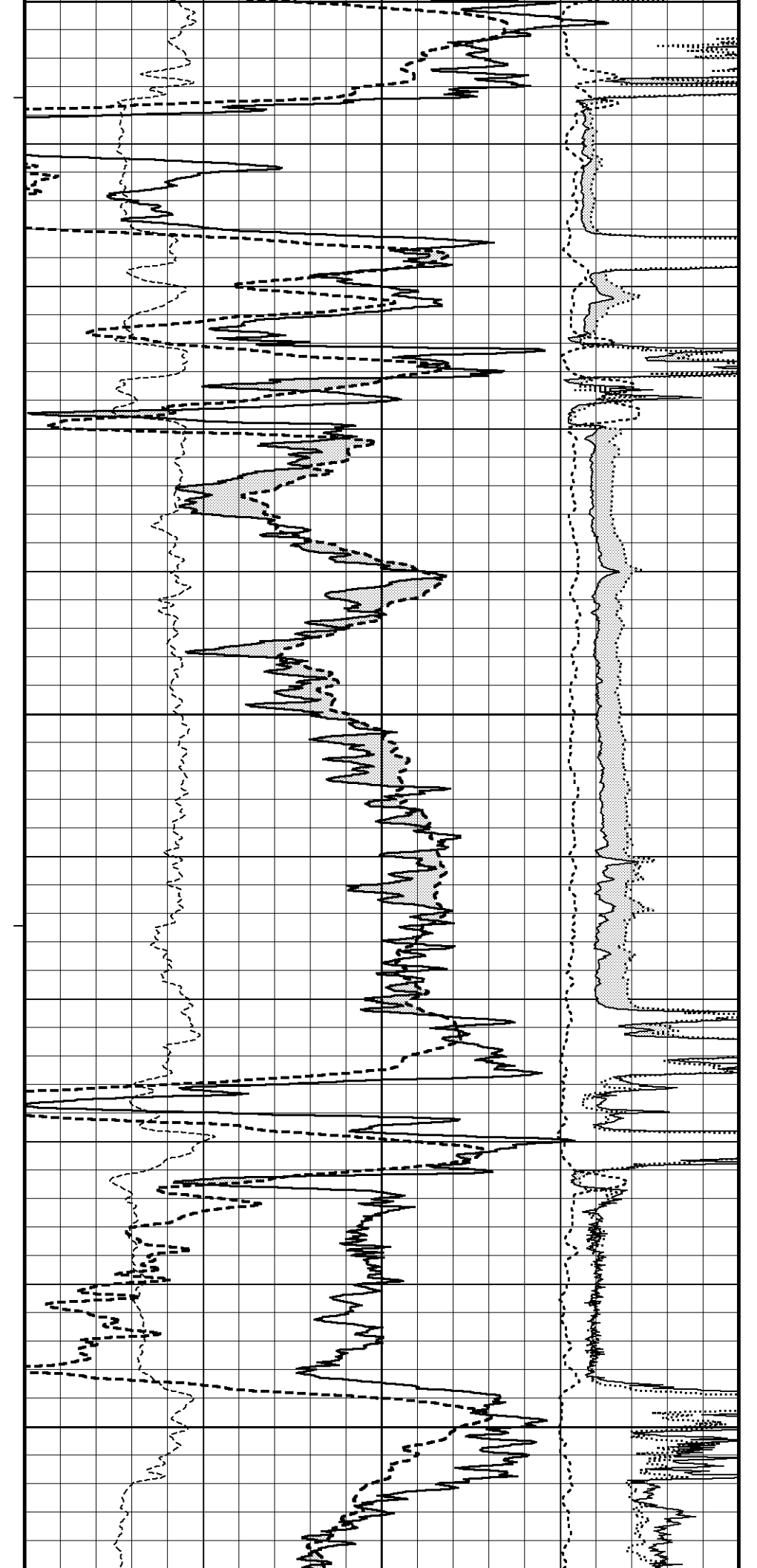
4078

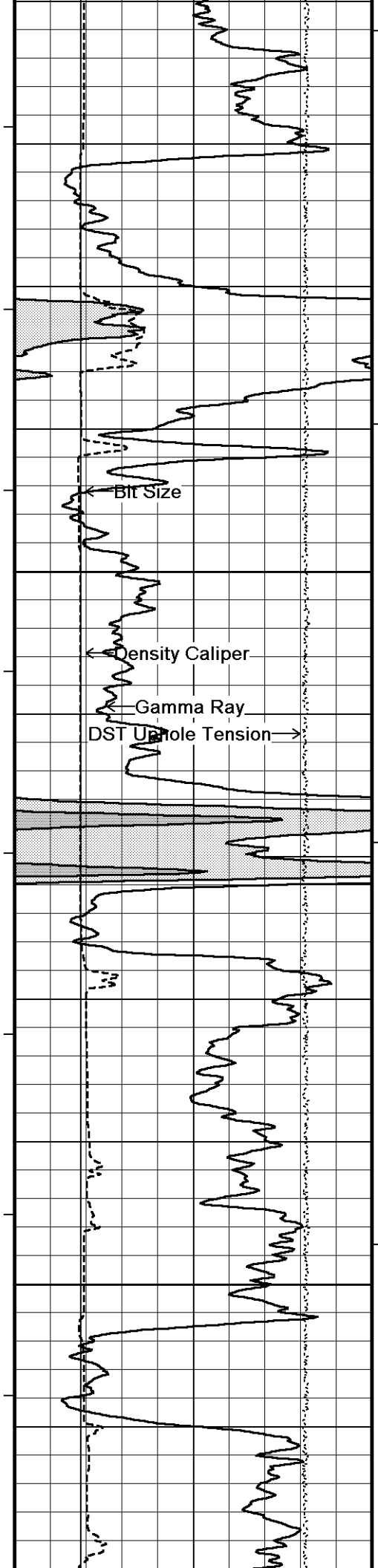
4100





4100
121°
4150
300
122°
4200



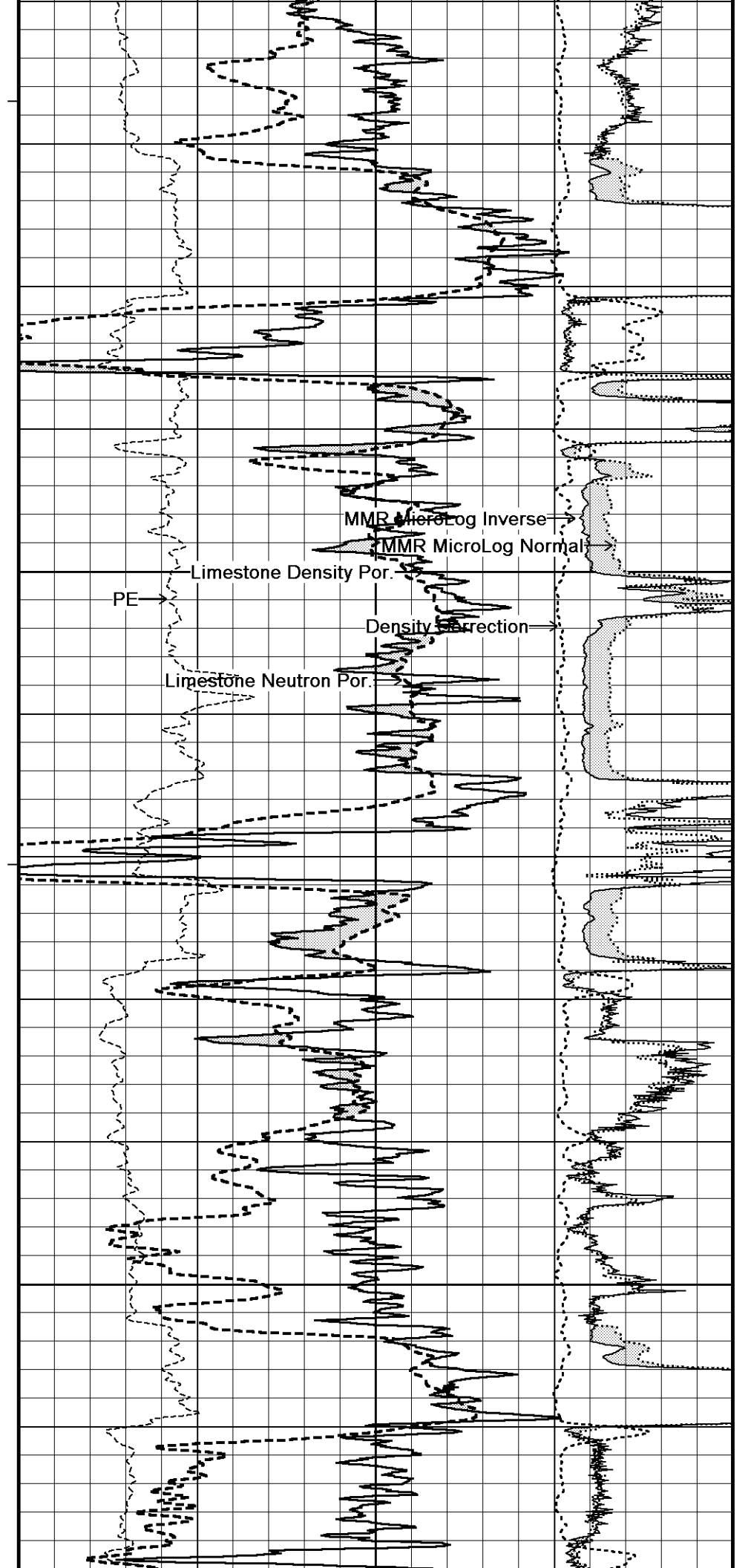


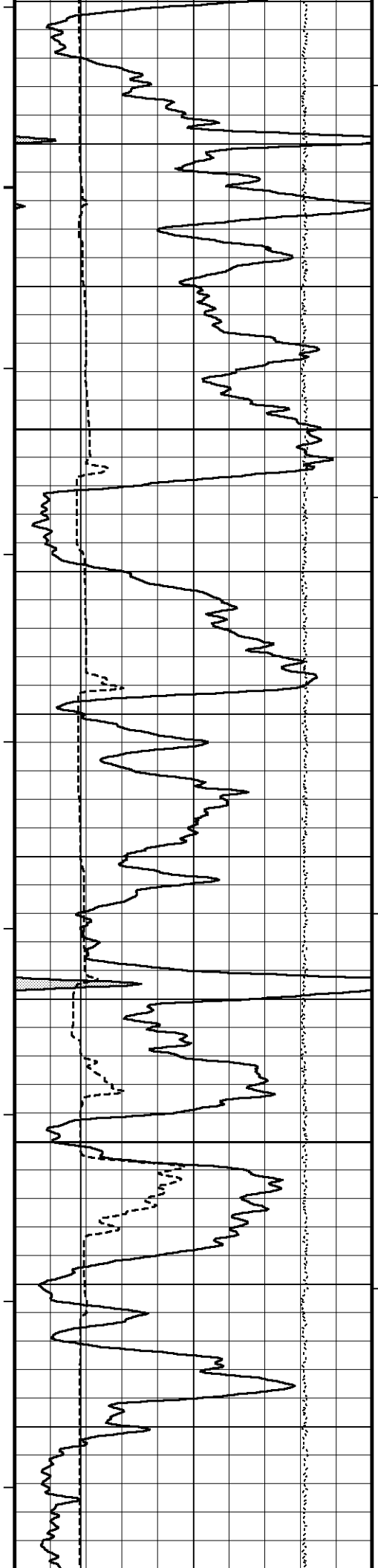
122°

4250

122°

4300



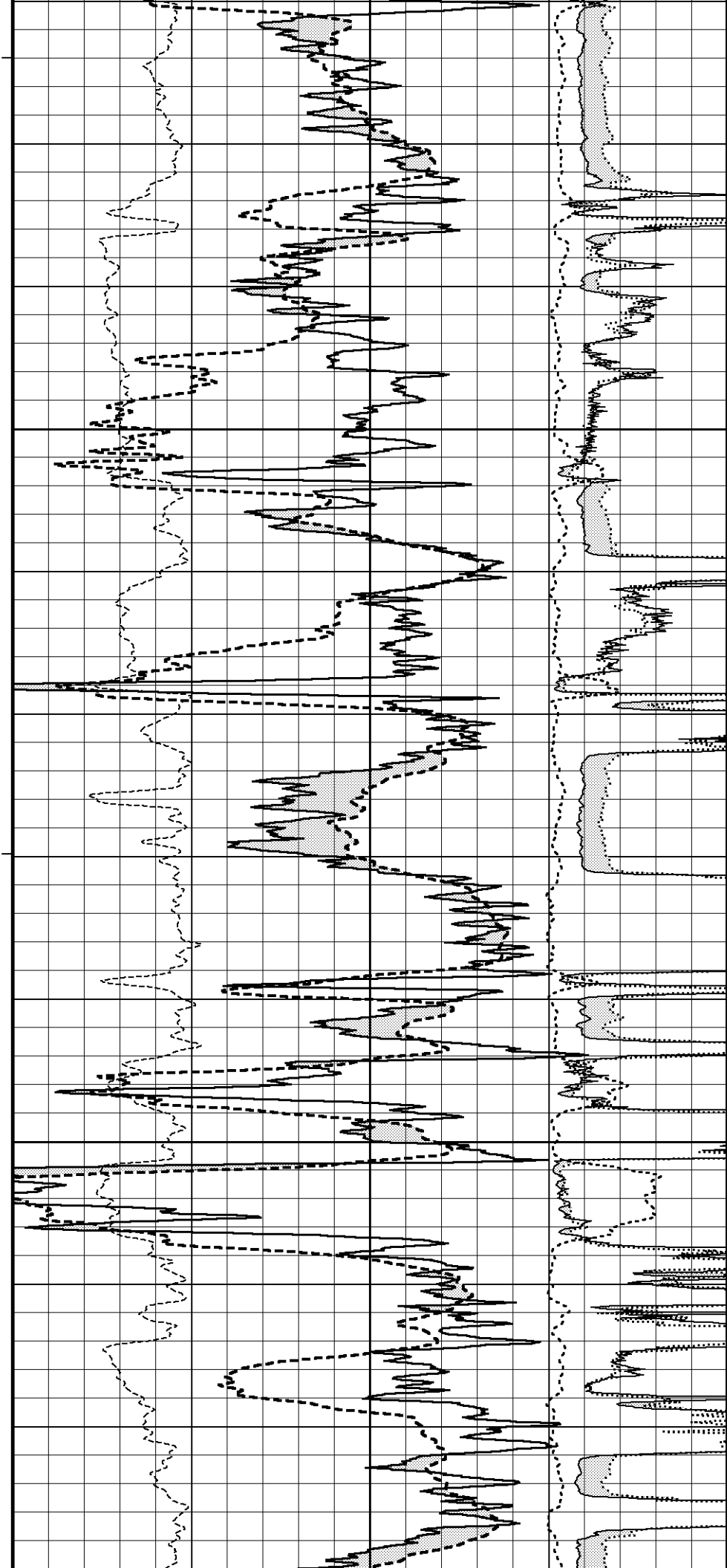


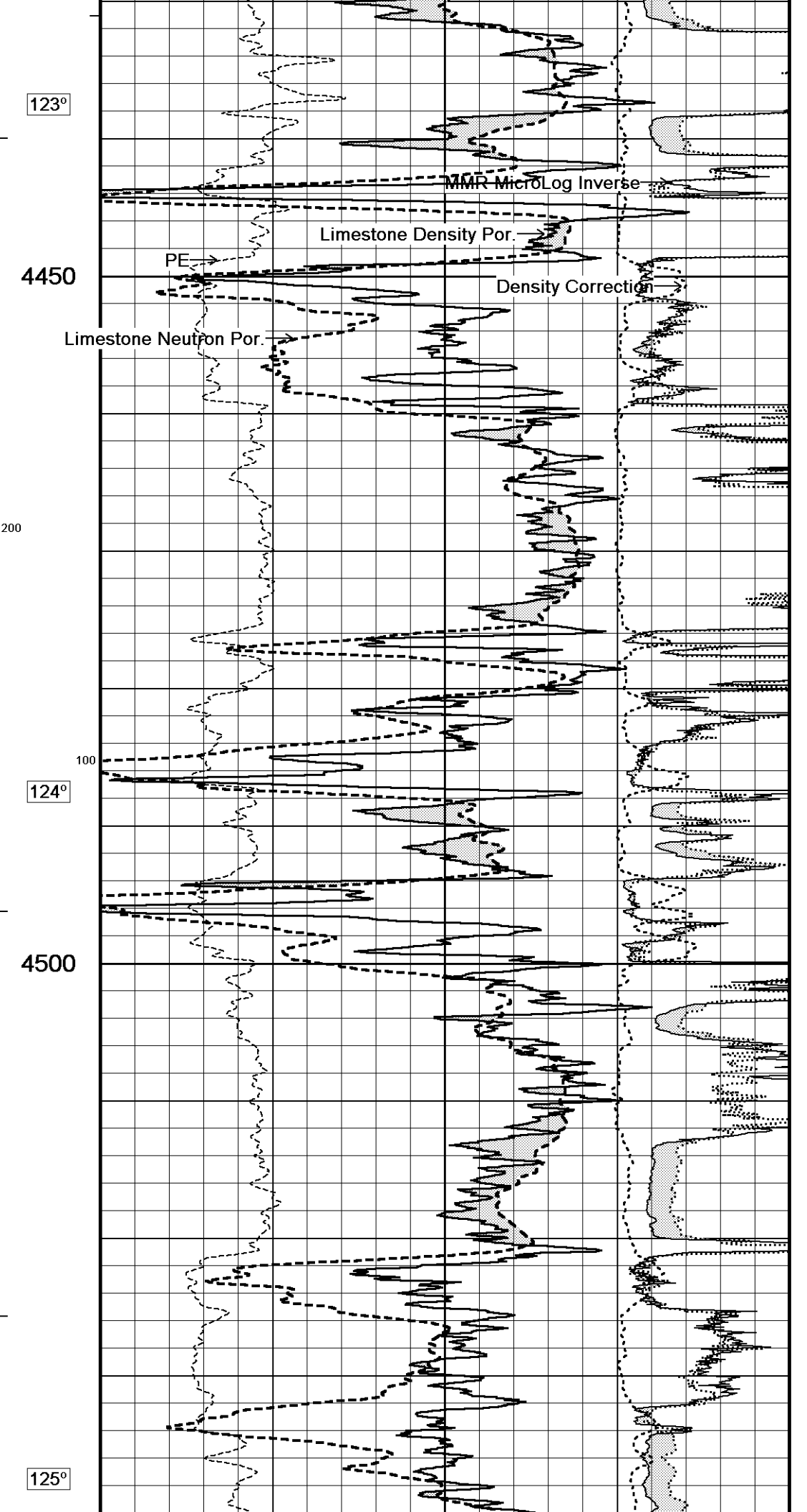
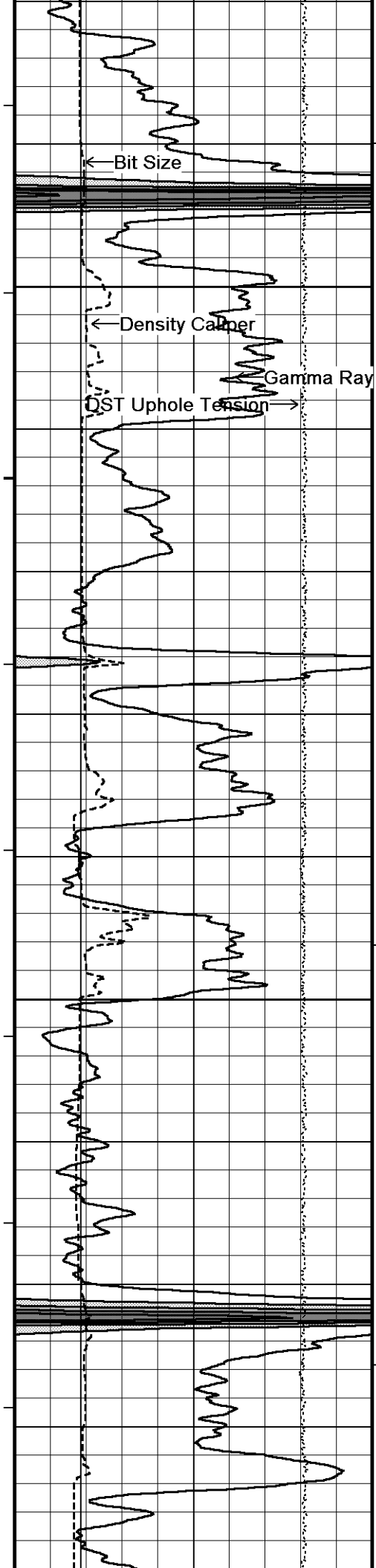
123°

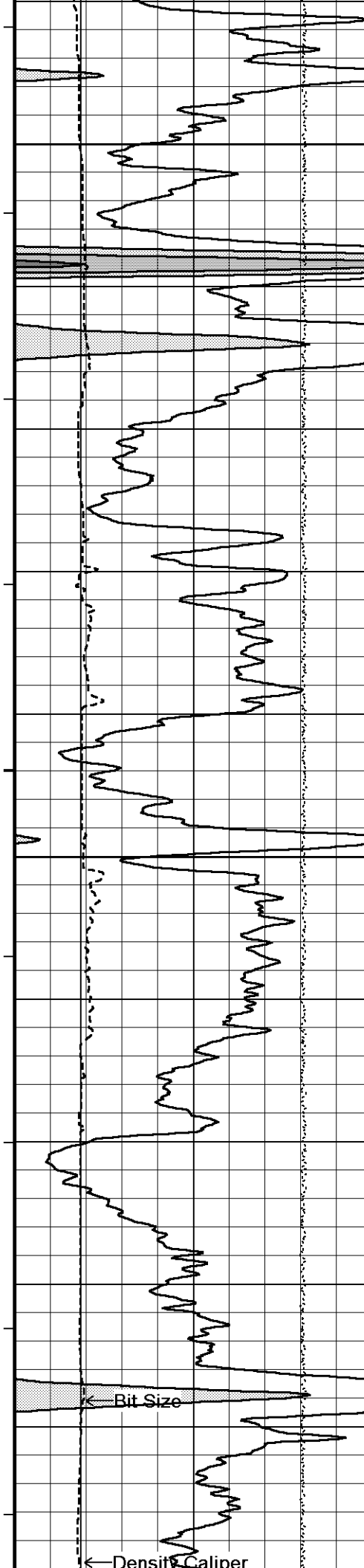
4350

123°

4400







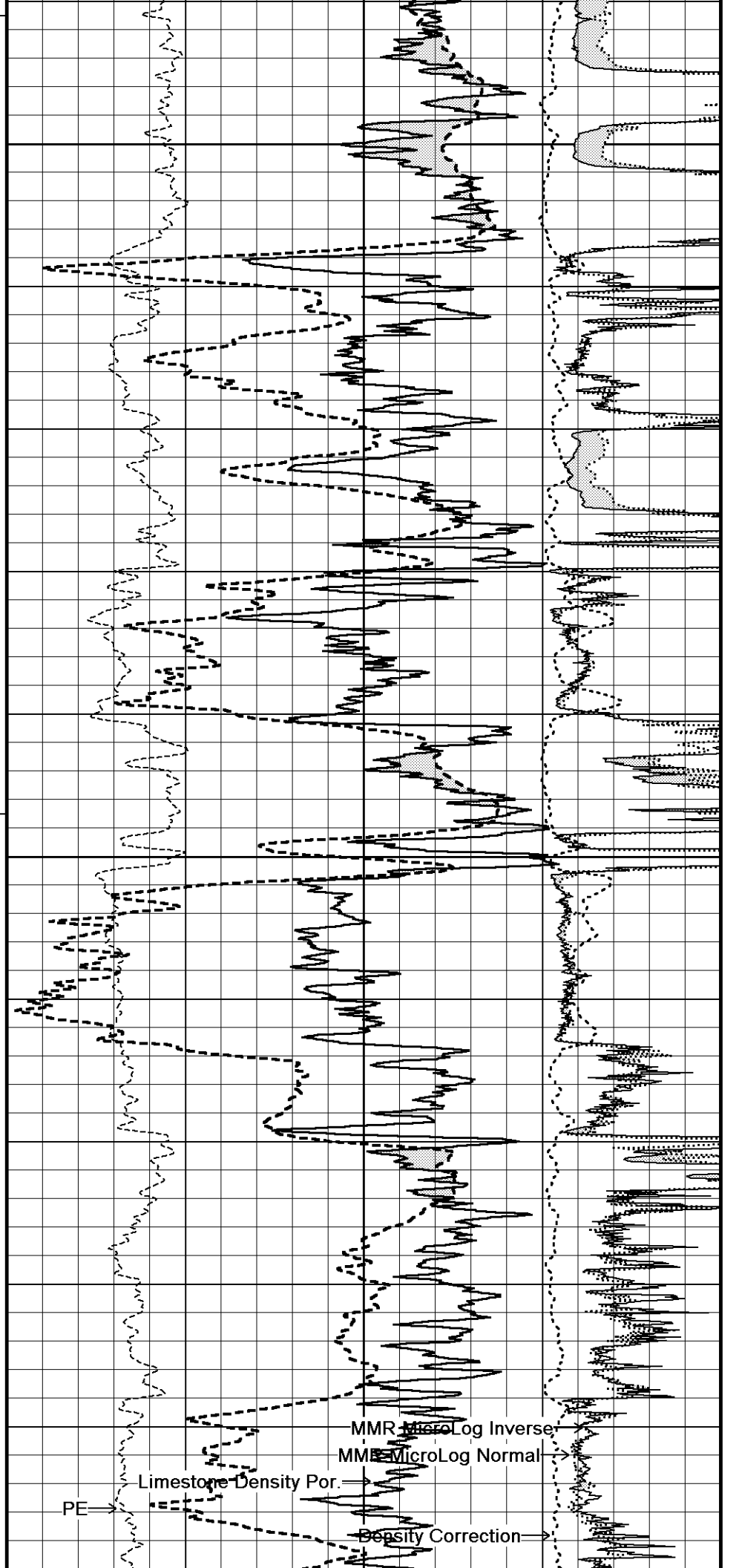
4550

125°

4600

126°

4650



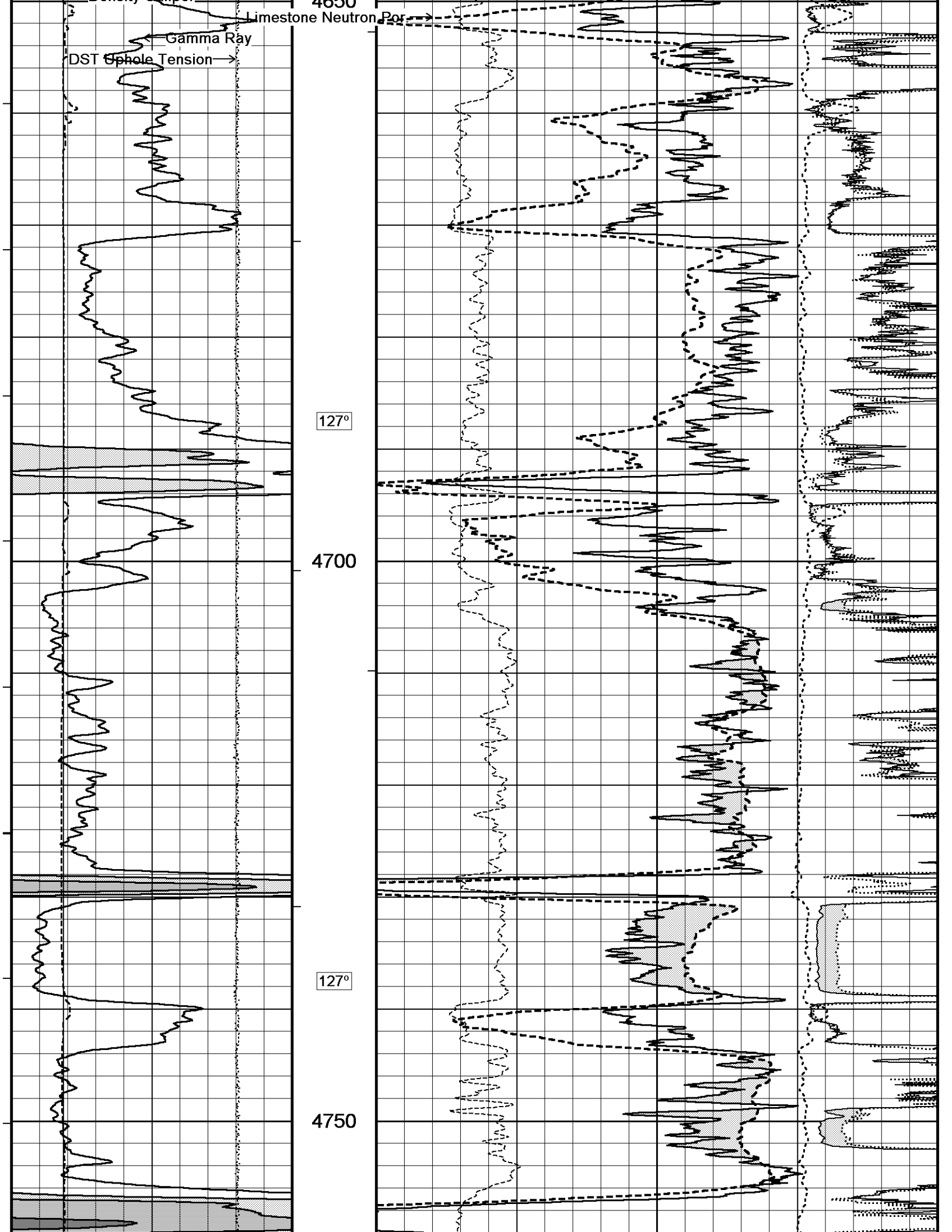
MMR MicroLog Inverse

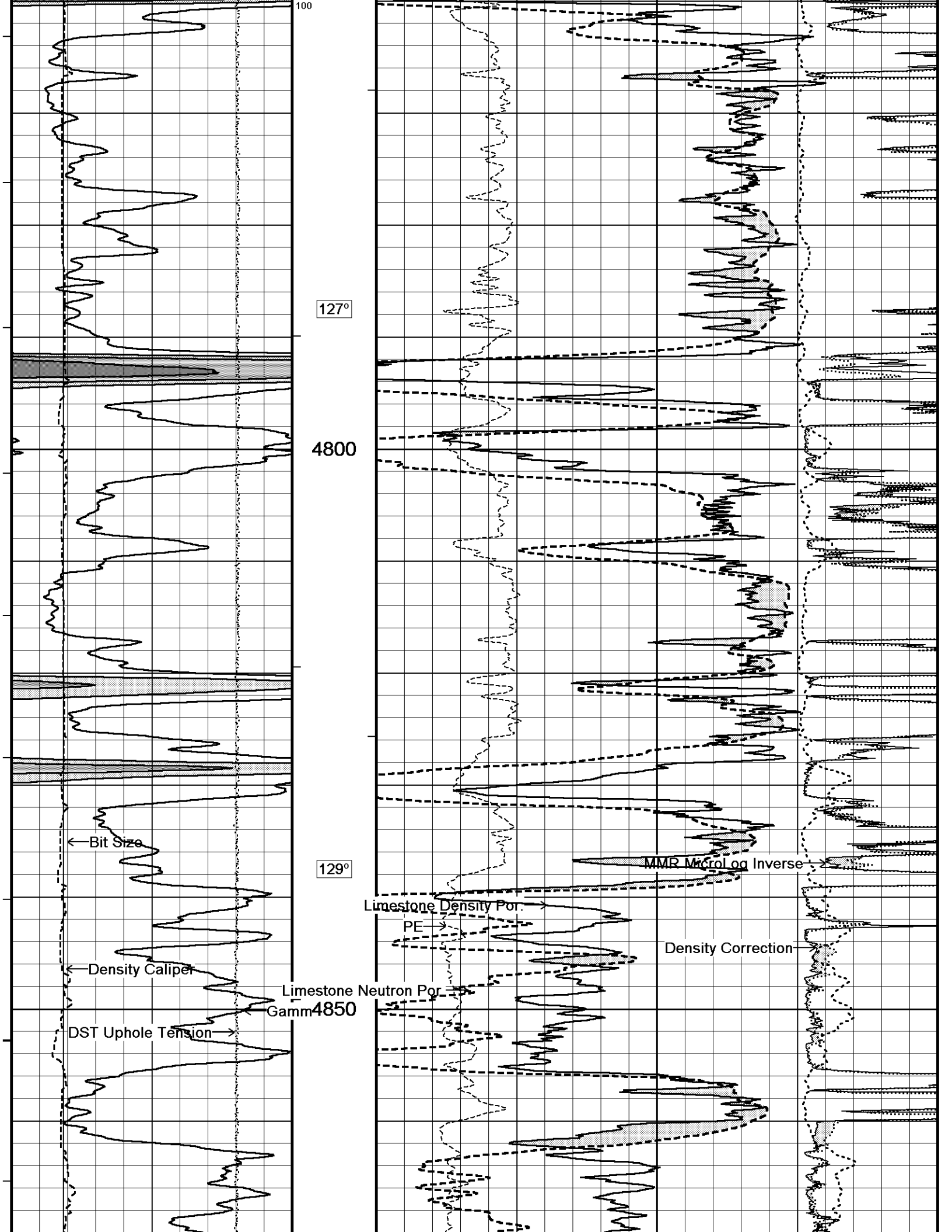
MMR MicroLog Normal

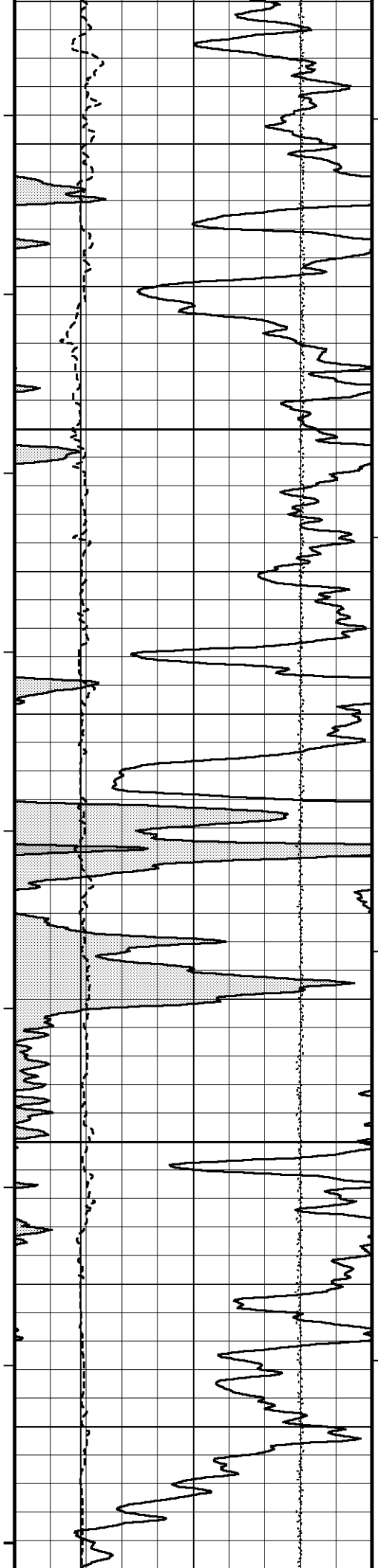
Limestone Density Por.

Density Correction

PE





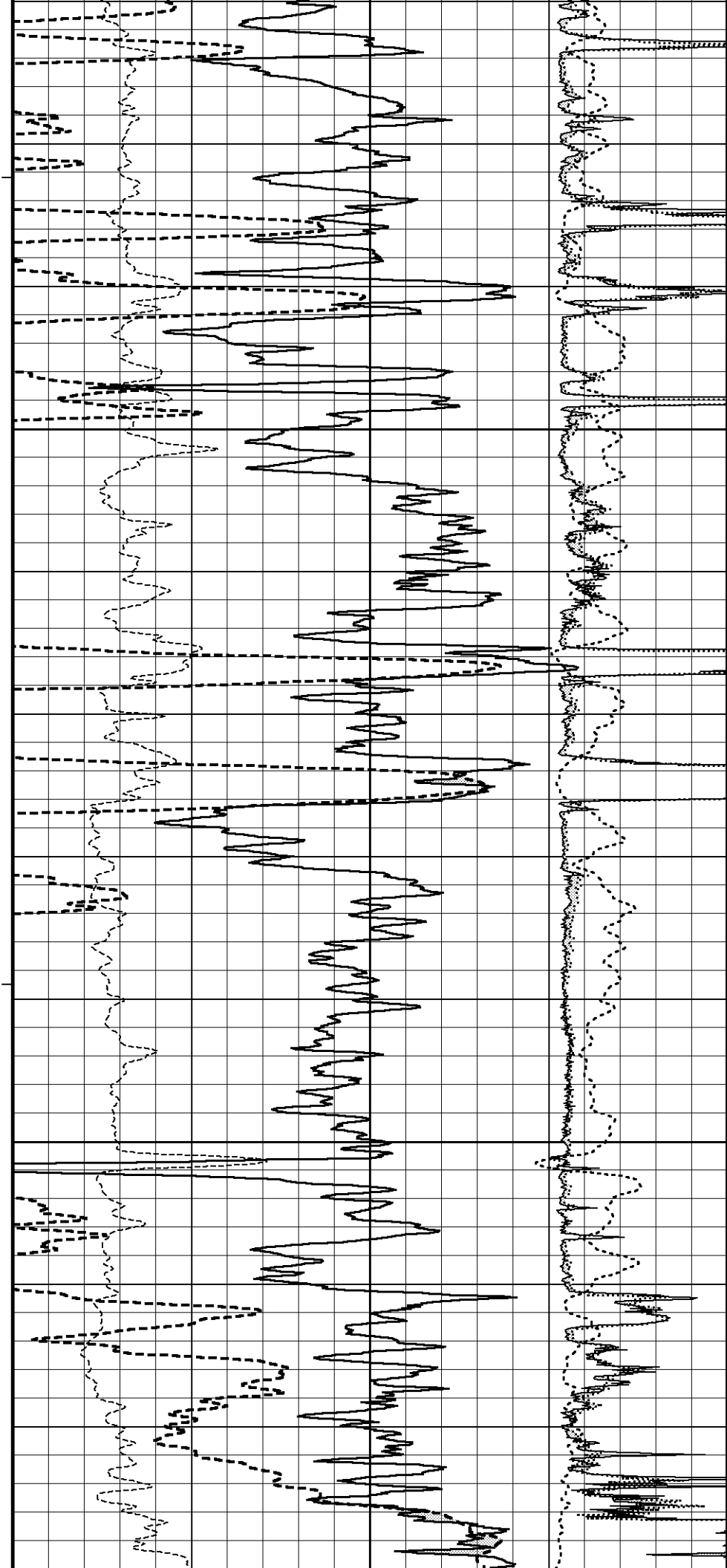


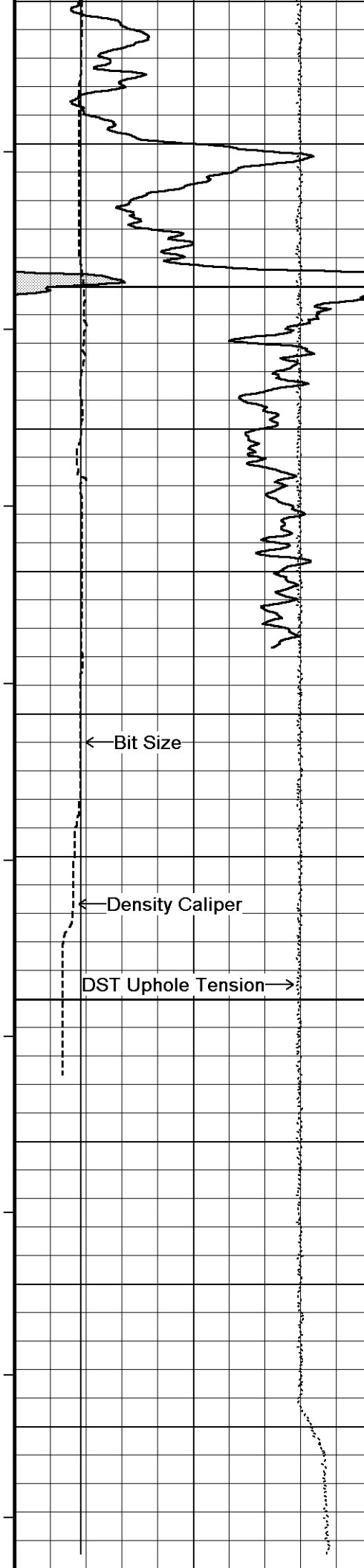
129°

4900

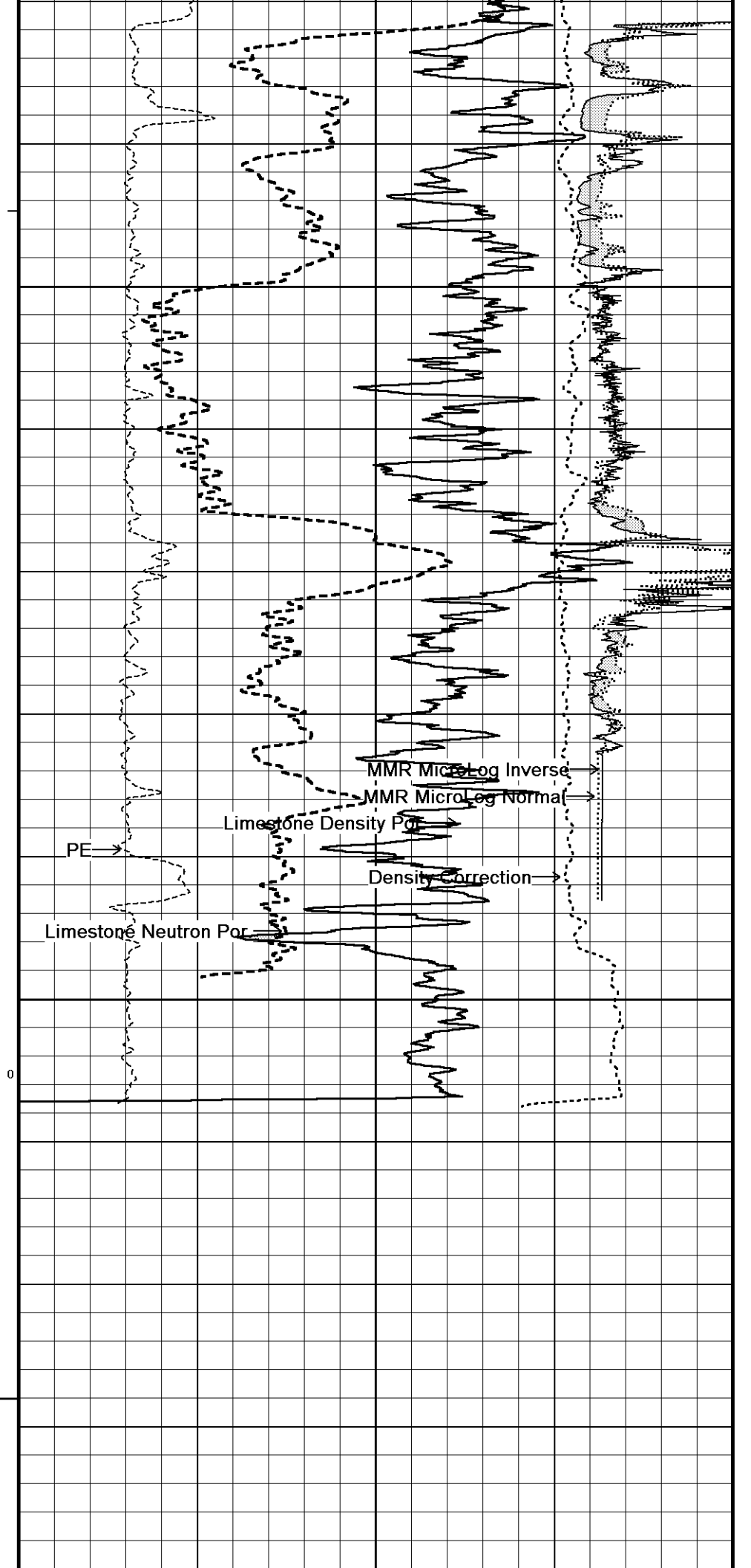
129°

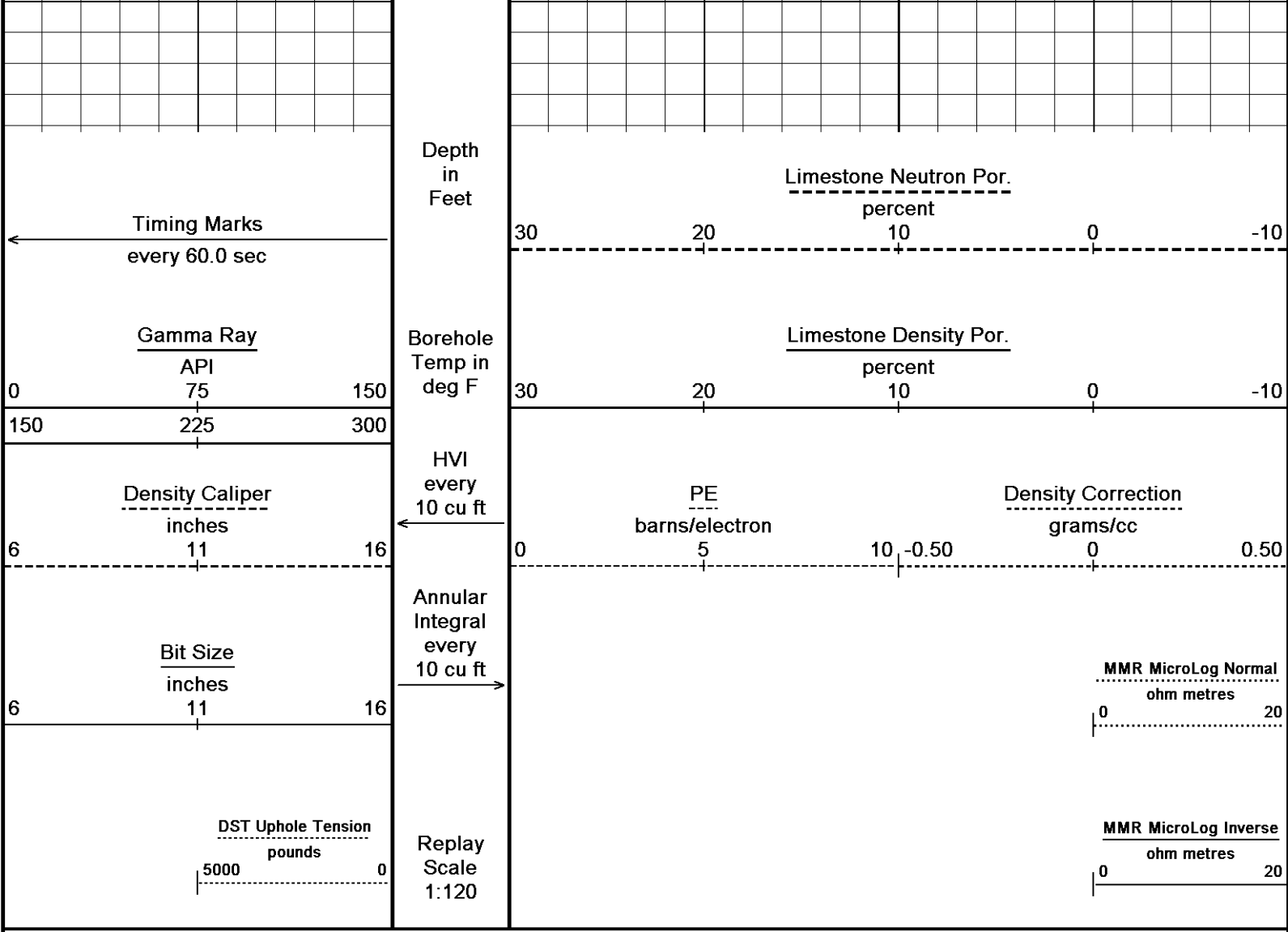
4950





130°
5000
5050
0
TD



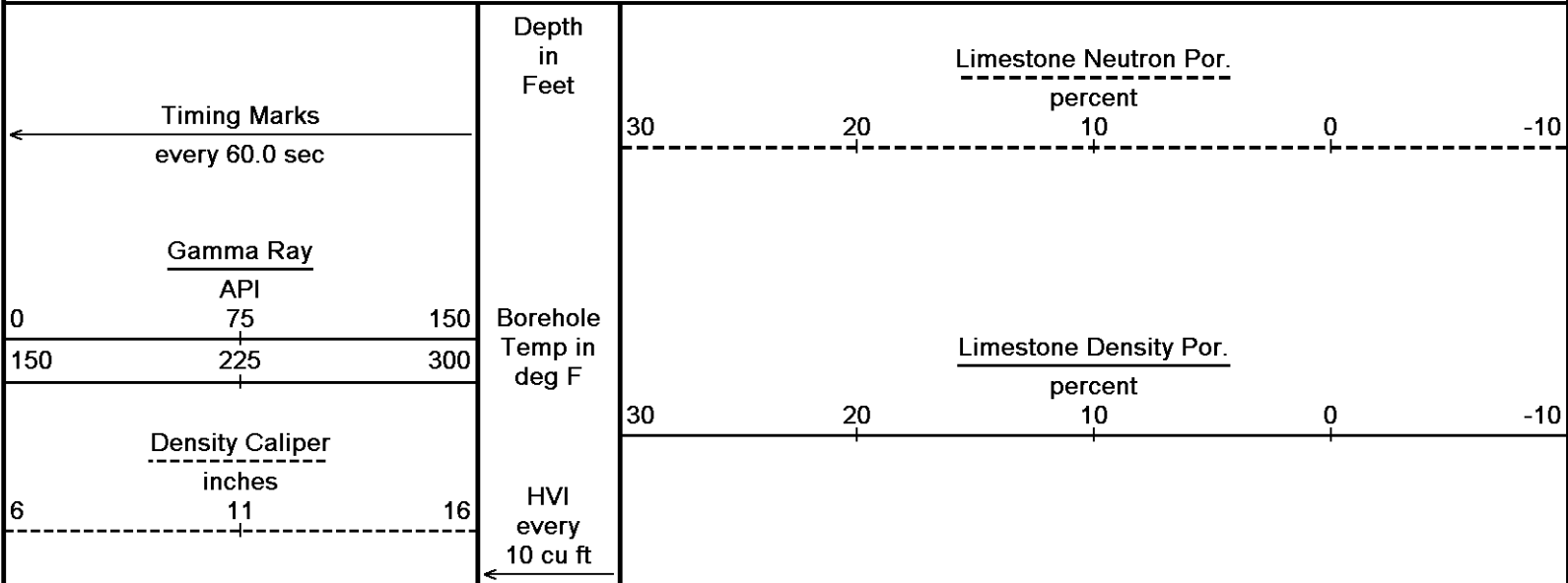


Depth Based Data - Maximum Sampling Increment 2.5cm Plotted on 24-NOV-2013 08:29
 Filename: C:\Minimus 13.05.9583\Logs\McElvain Price 14-5\McElvain Price 14-5 High Res.dta Recorded on 24-NOV-2013 01:03
 System Versions: Logged with 13.05.9583 Plotted with 13.05.9583

↑ HI-RES ↑

↓ REPEAT SECTION ↓

Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 24-NOV-2013 08:29
 Filename: C:\Minimus 13.05.9583\Logs\McElvain Price 14-5\McElvain Price 14-5 Repeat.dta Recorded on 24-NOV-2013 01:03
 System Versions: Logged with 13.05.9583 Processed with 13.05.9583 Plotted with 13.05.9583



Uranium Stripped Gamma

API
0 75 150
150 225 300

Bit Size
inches
6 11 16

DST Uphole Tension
pounds
5000 0

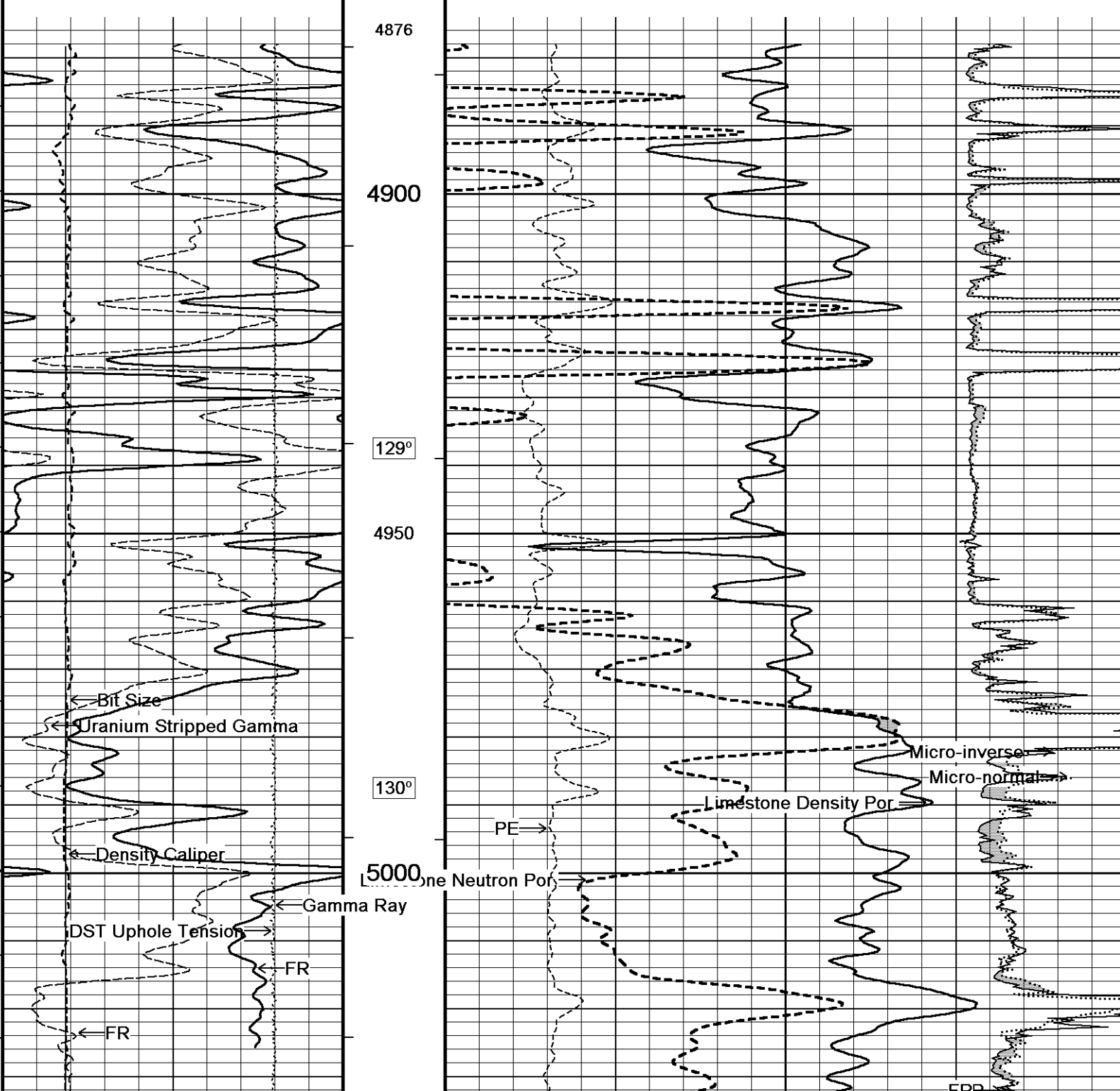
Annular Integral every 10 cu ft

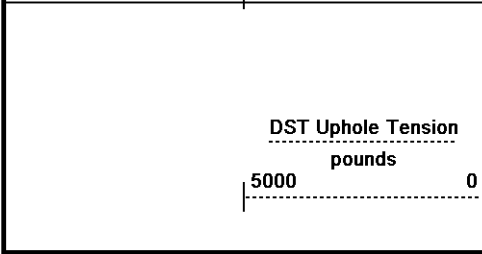
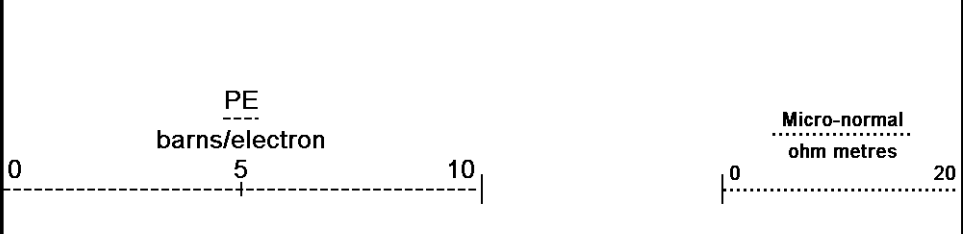
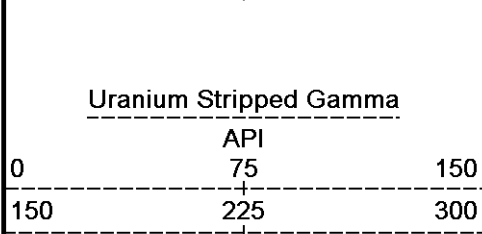
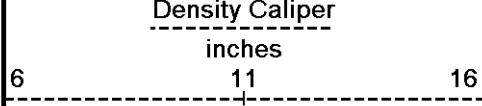
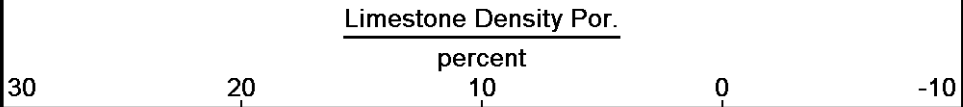
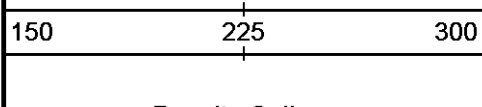
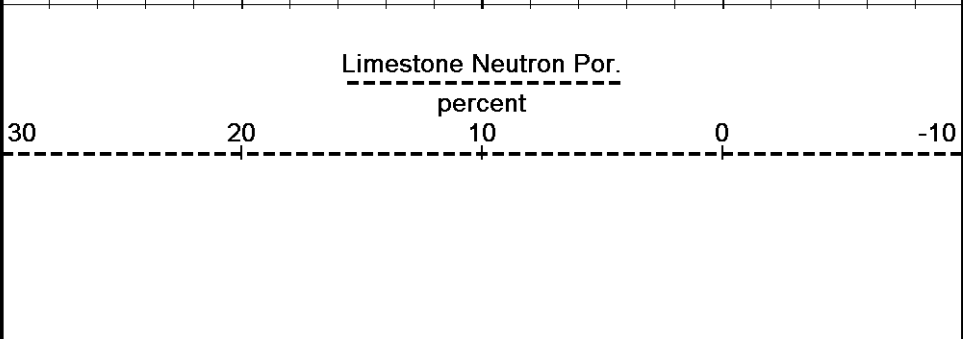
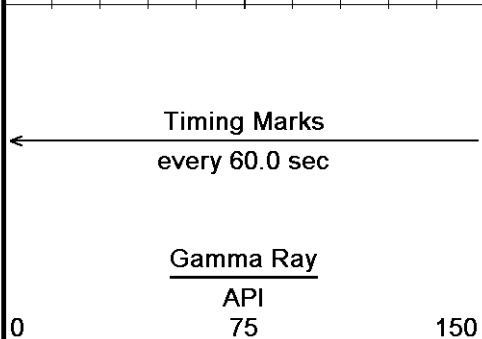
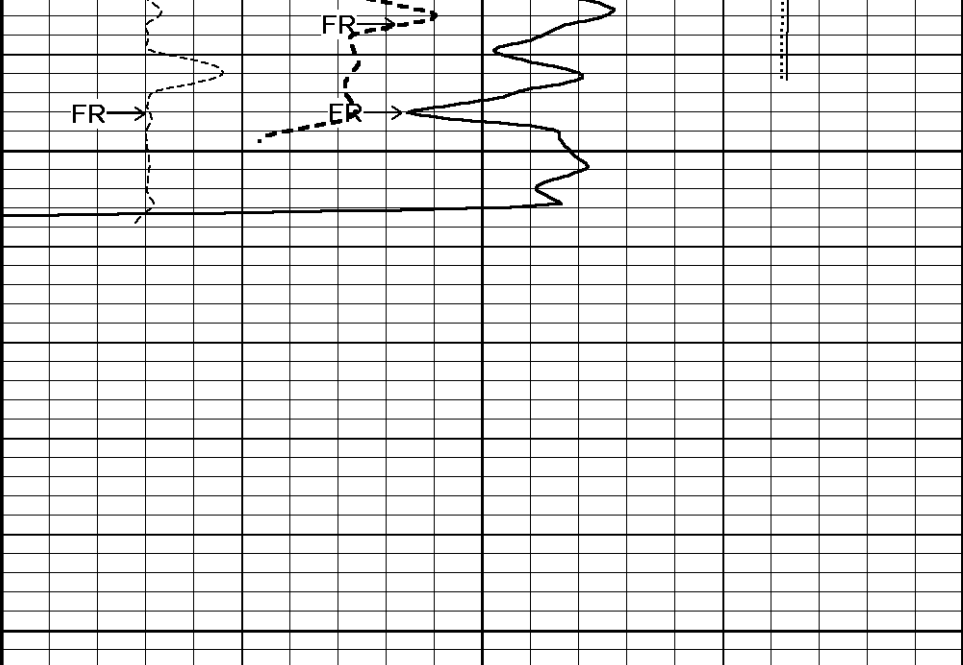
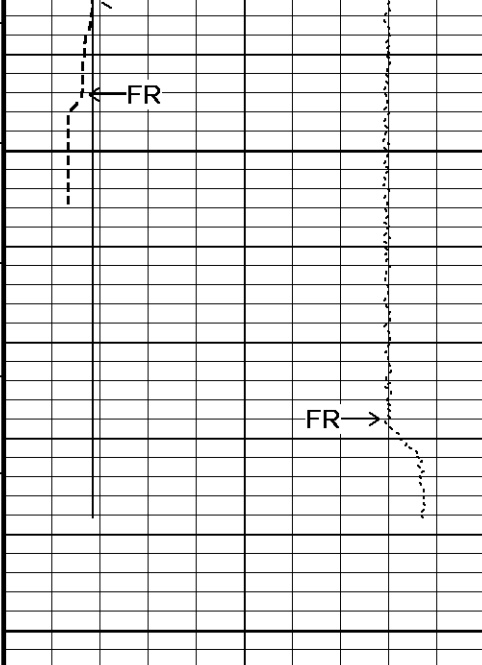
PE
barns/electron
0 5 10

Micro-normal
ohm metres
0 20

Micro-inverse
ohm metres
0 20

Replay Scale 1:240



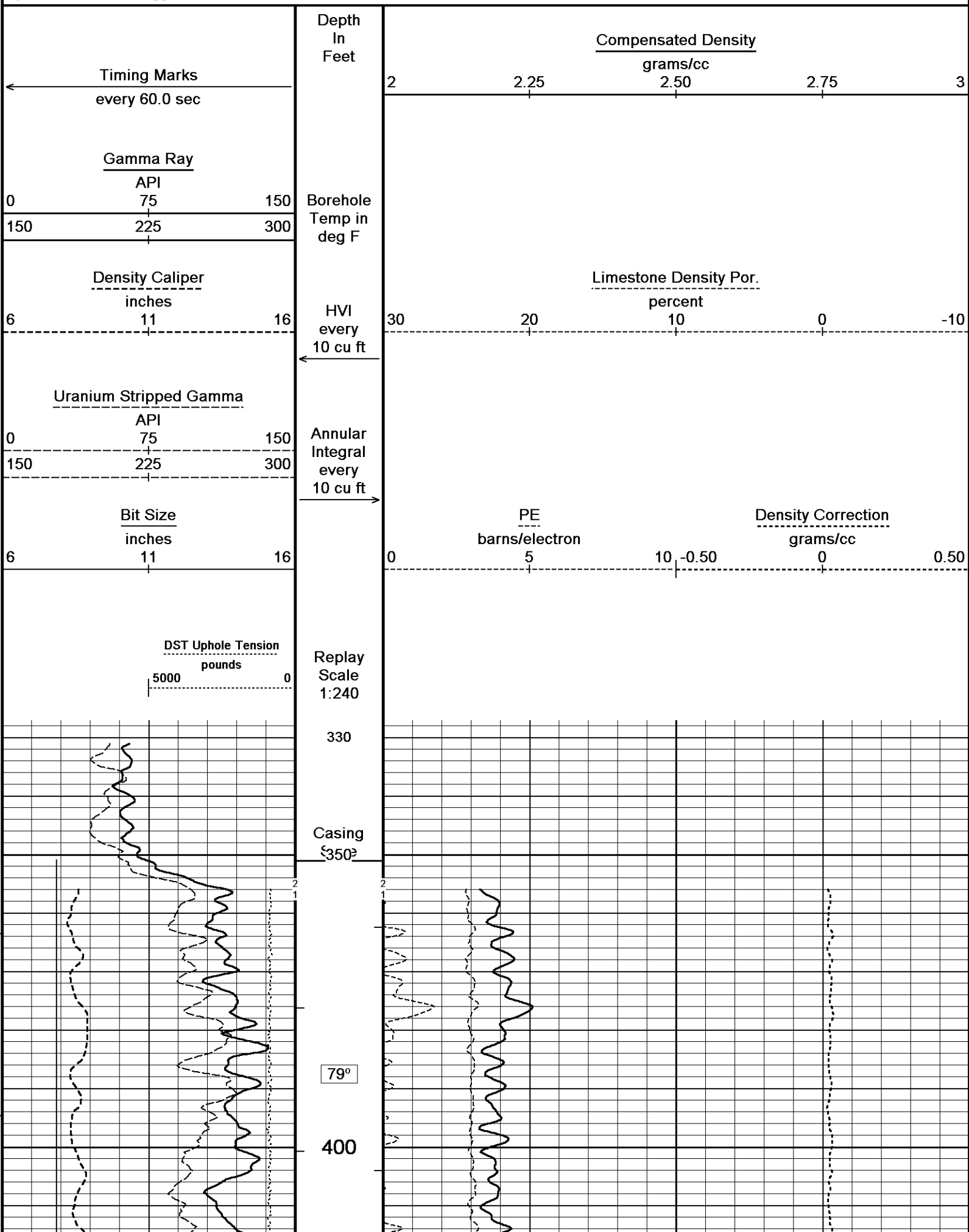


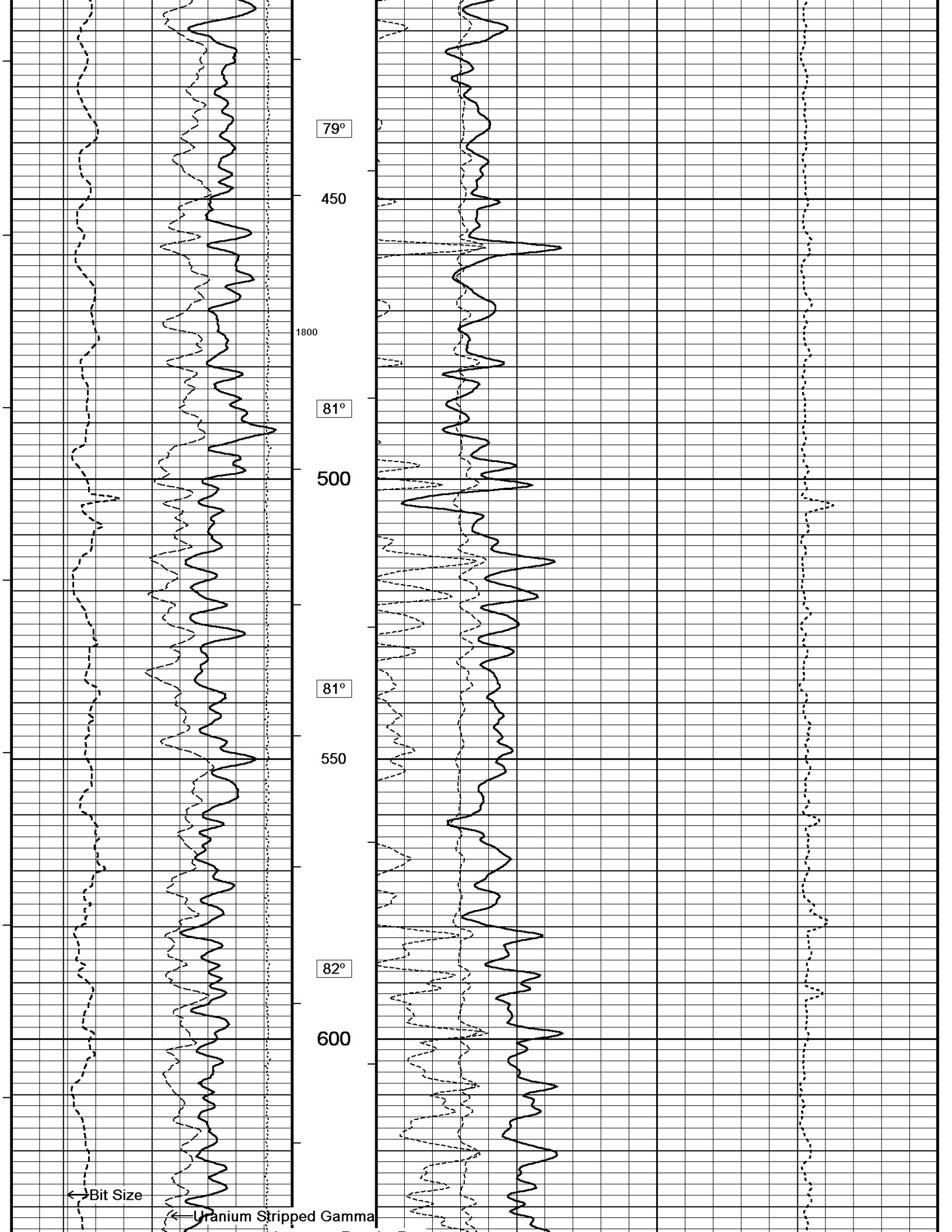
5050
0
5100
Depth in Feet
Borehole Temp in deg F
HVI every 10 cu ft
Annular Integral every 10 cu ft
Replay Scale 1:240

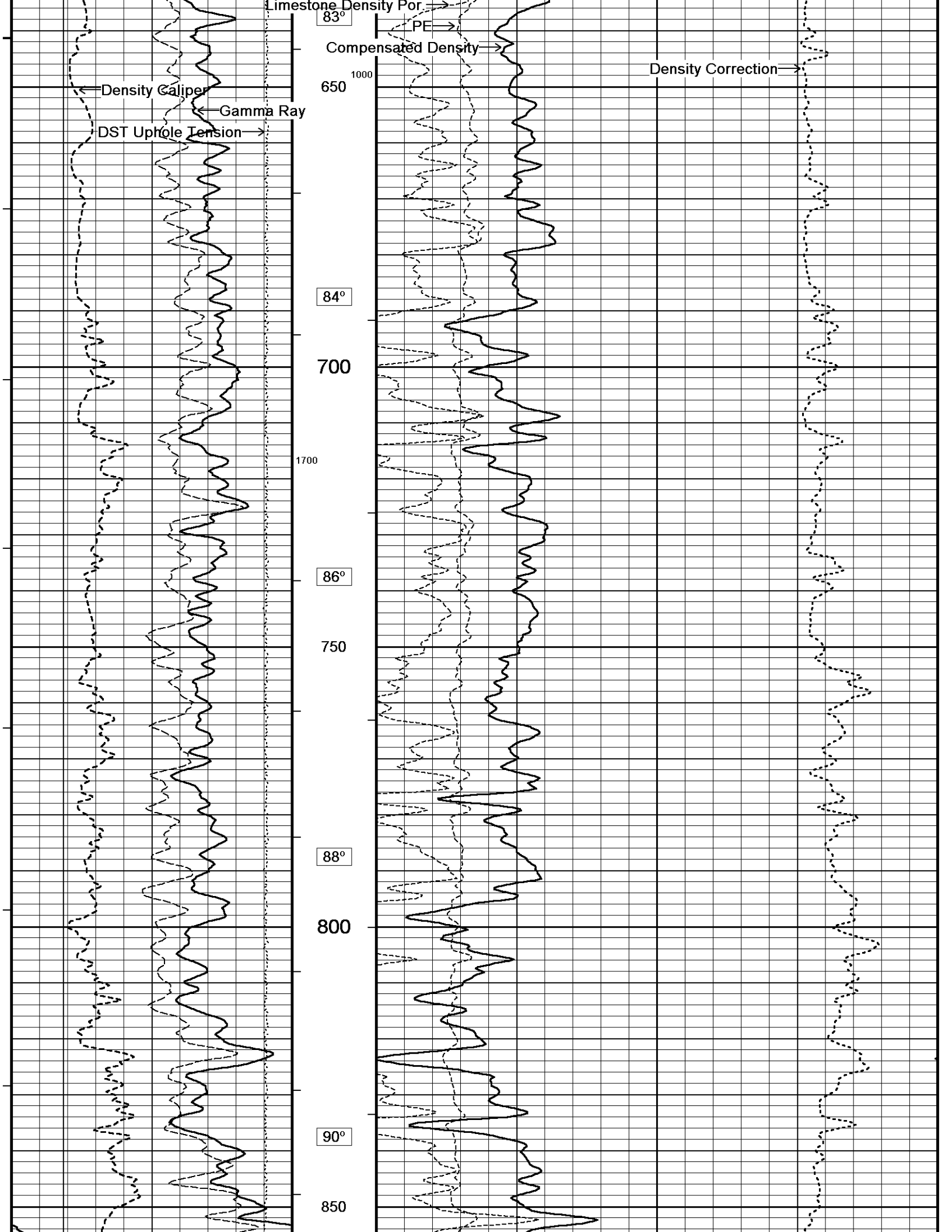
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 System Versions: Logged with 13.05.9583 Processed with 13.05.9583 Plotted with 13.05.9583
 Plotted on 24-NOV-2013 08:29
 Recorded on 24-NOV-2013 01:03

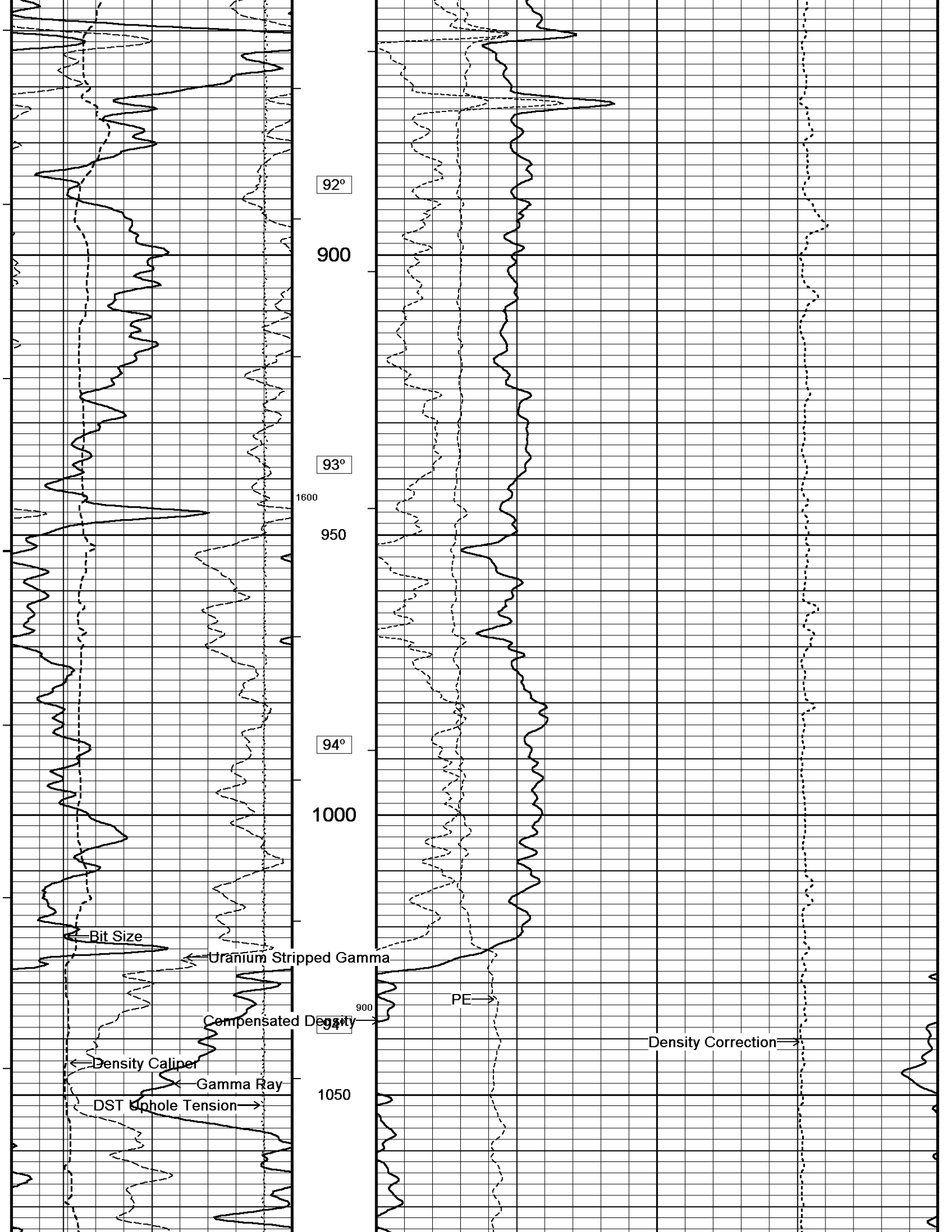
↑ REPEAT SECTION ↑

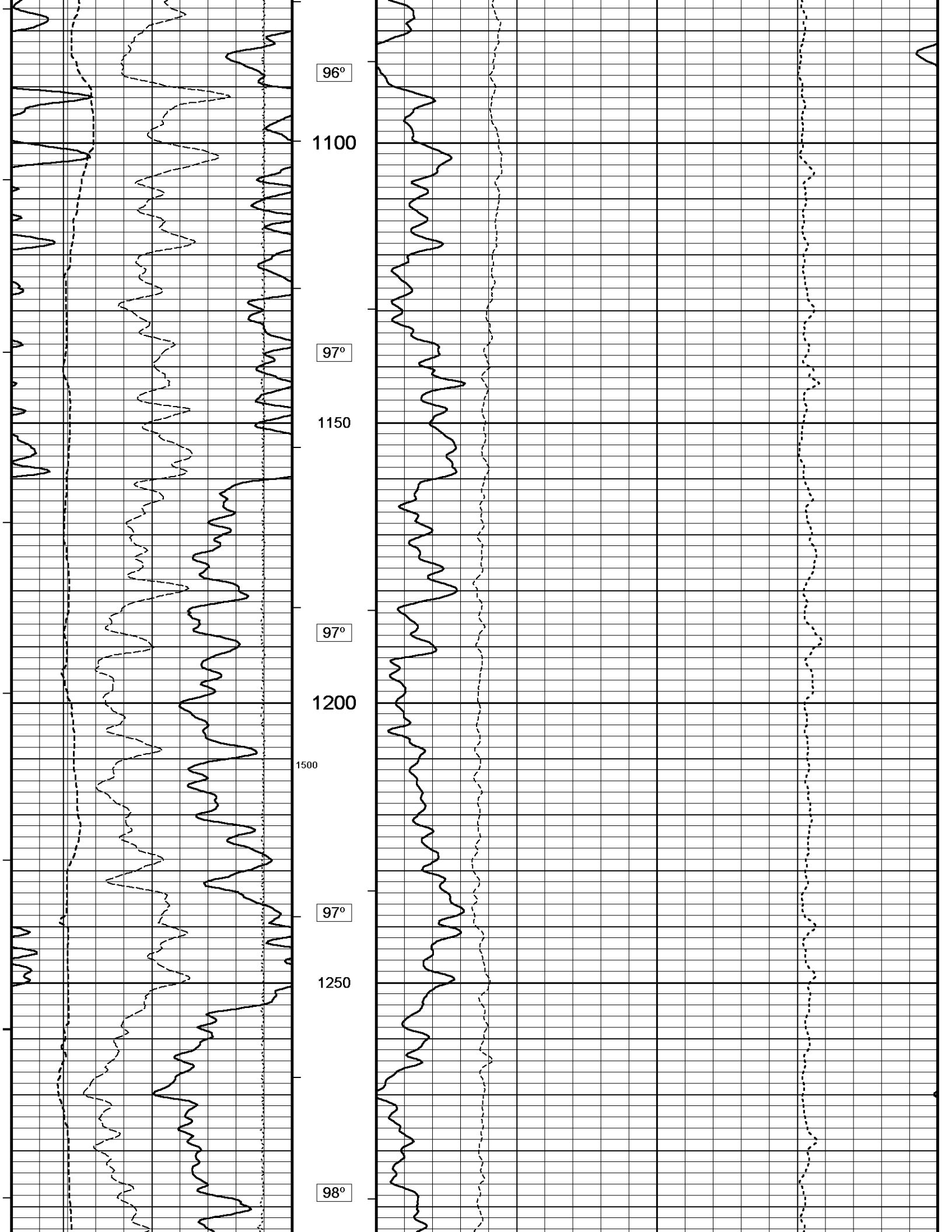
↓ 5 INCH MAIN ↓

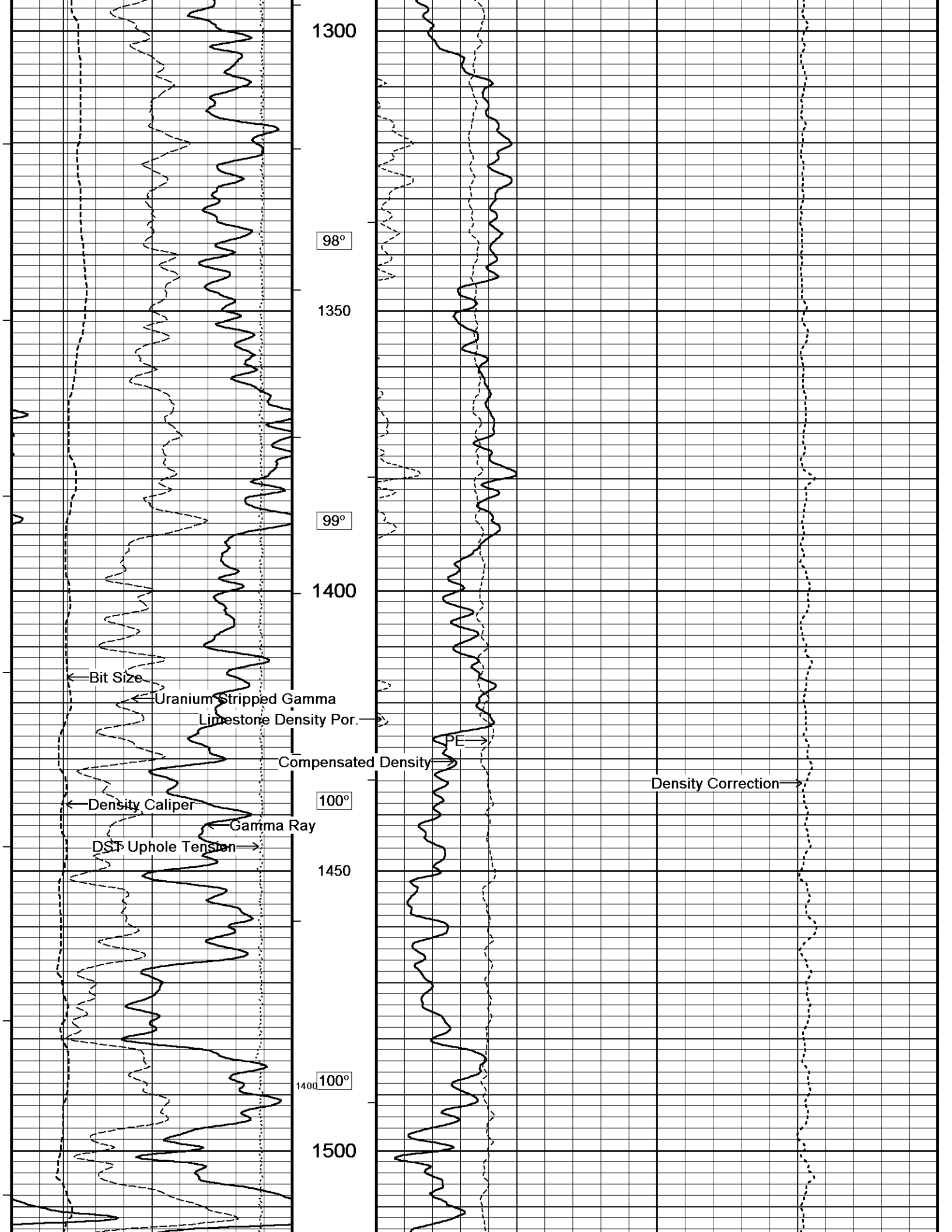


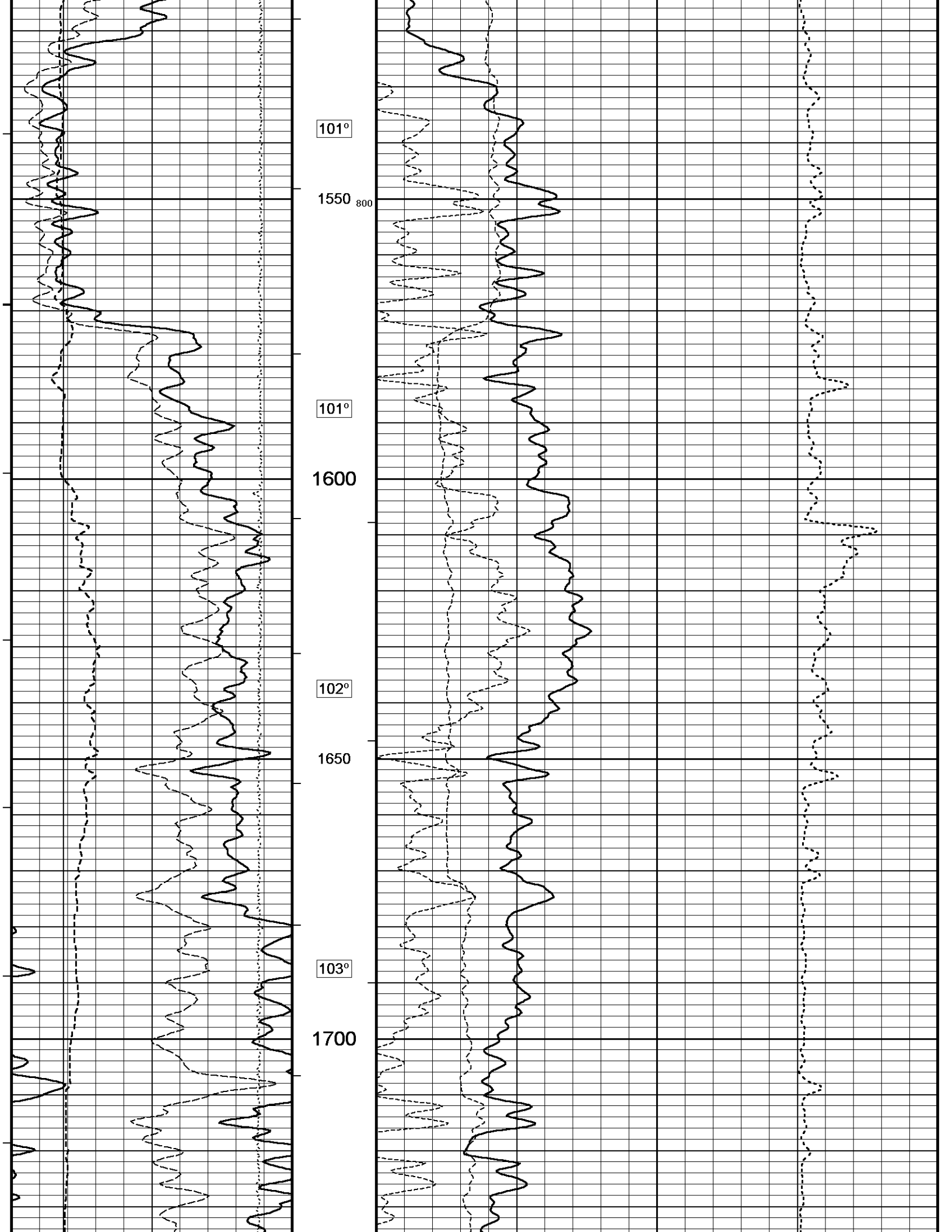


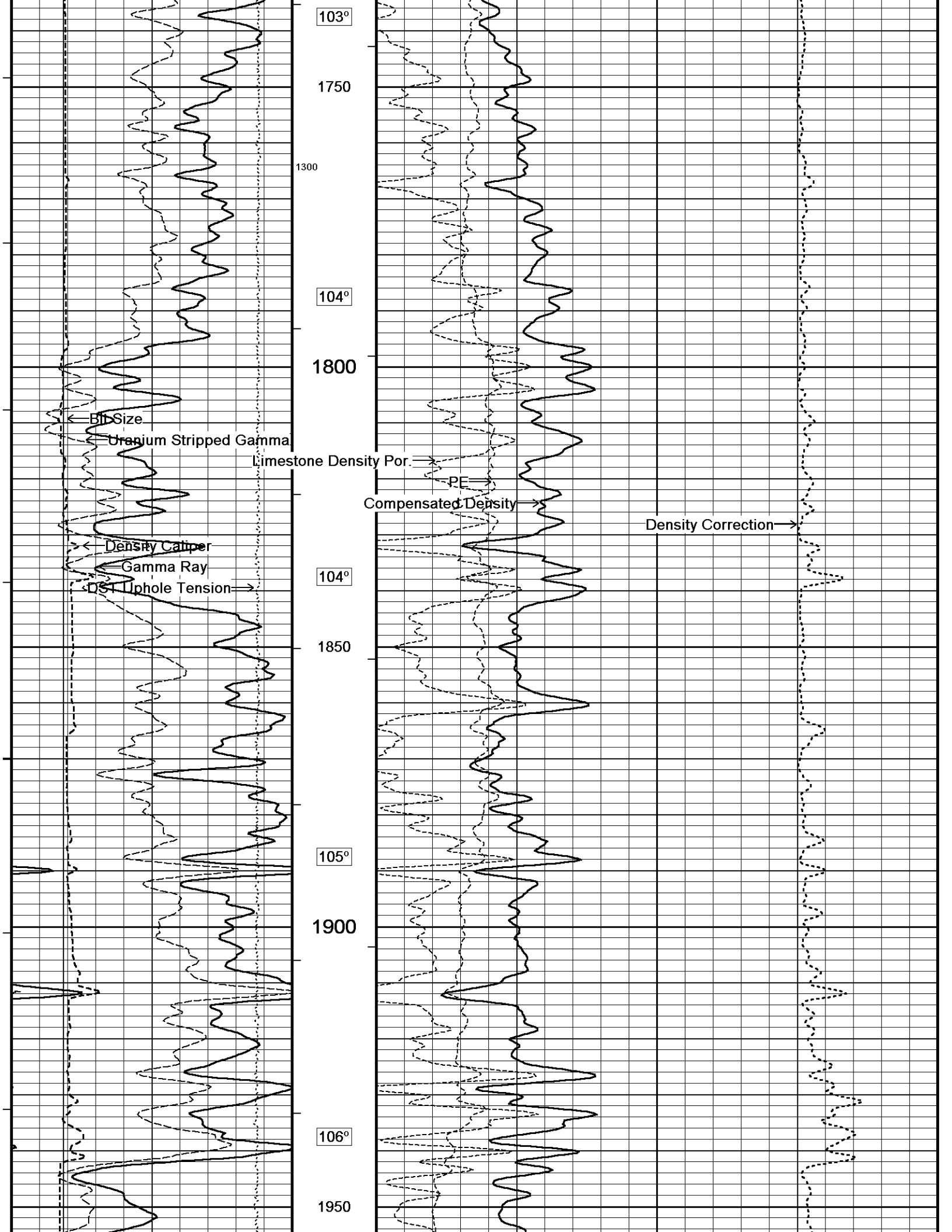


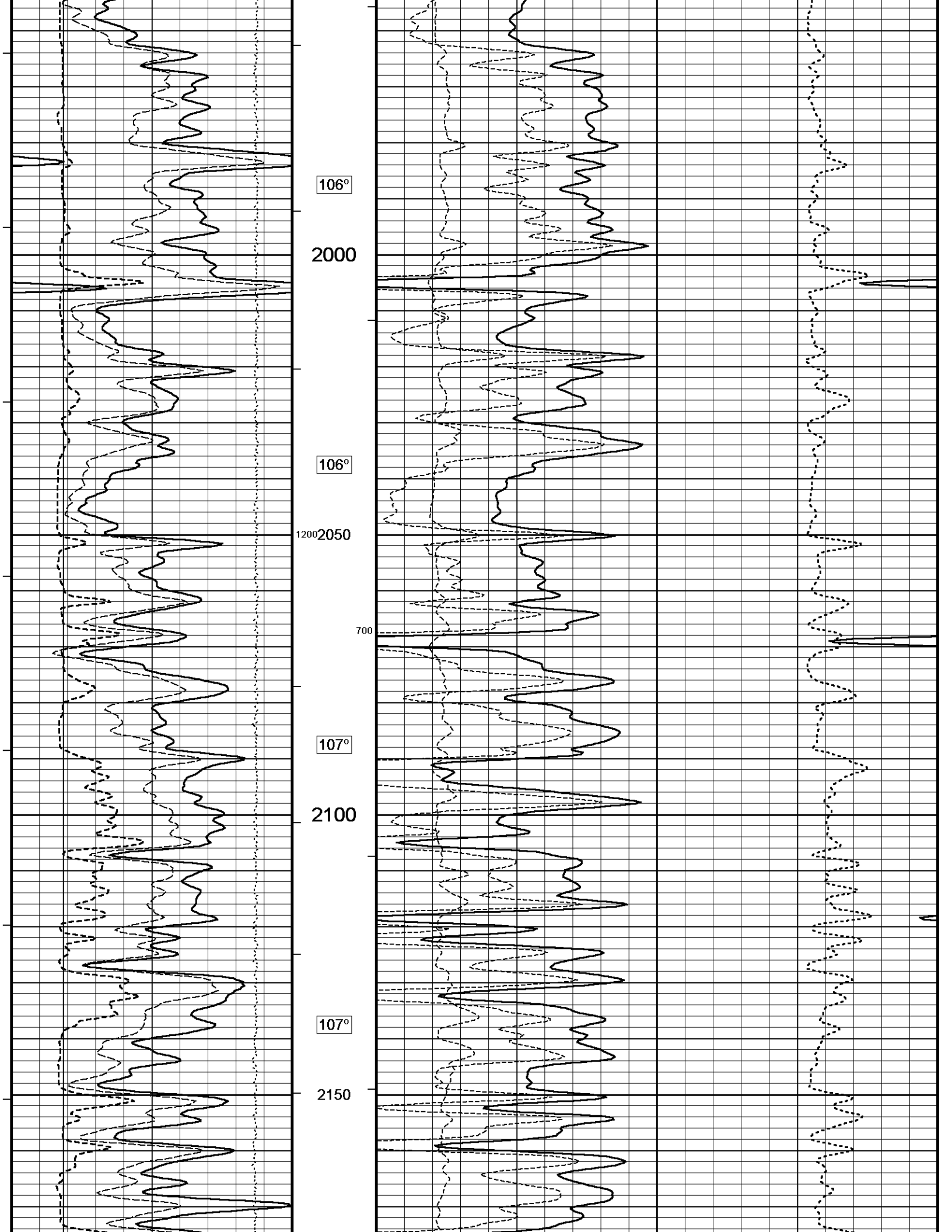


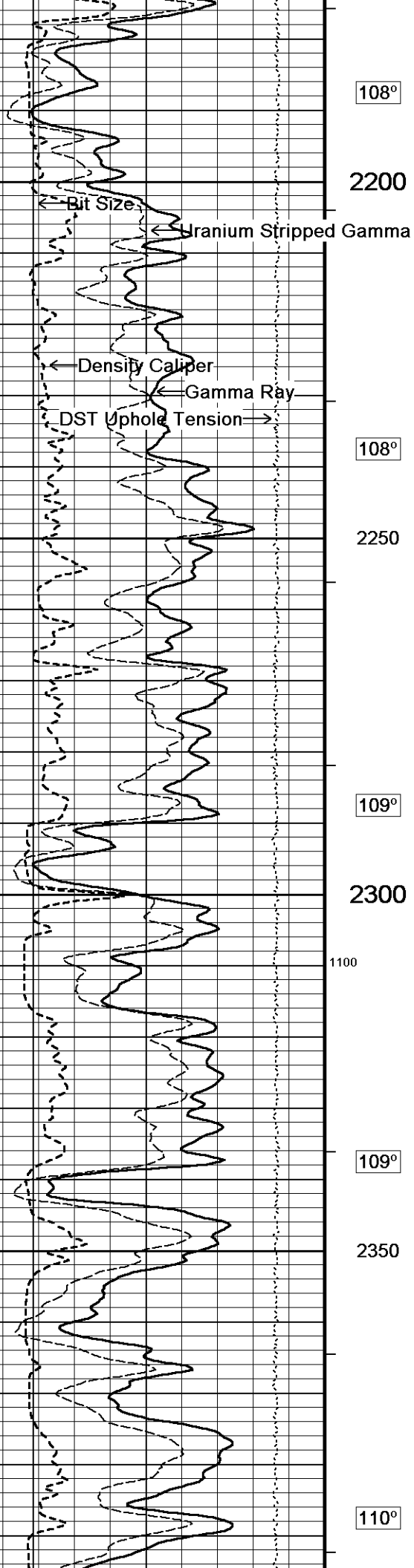




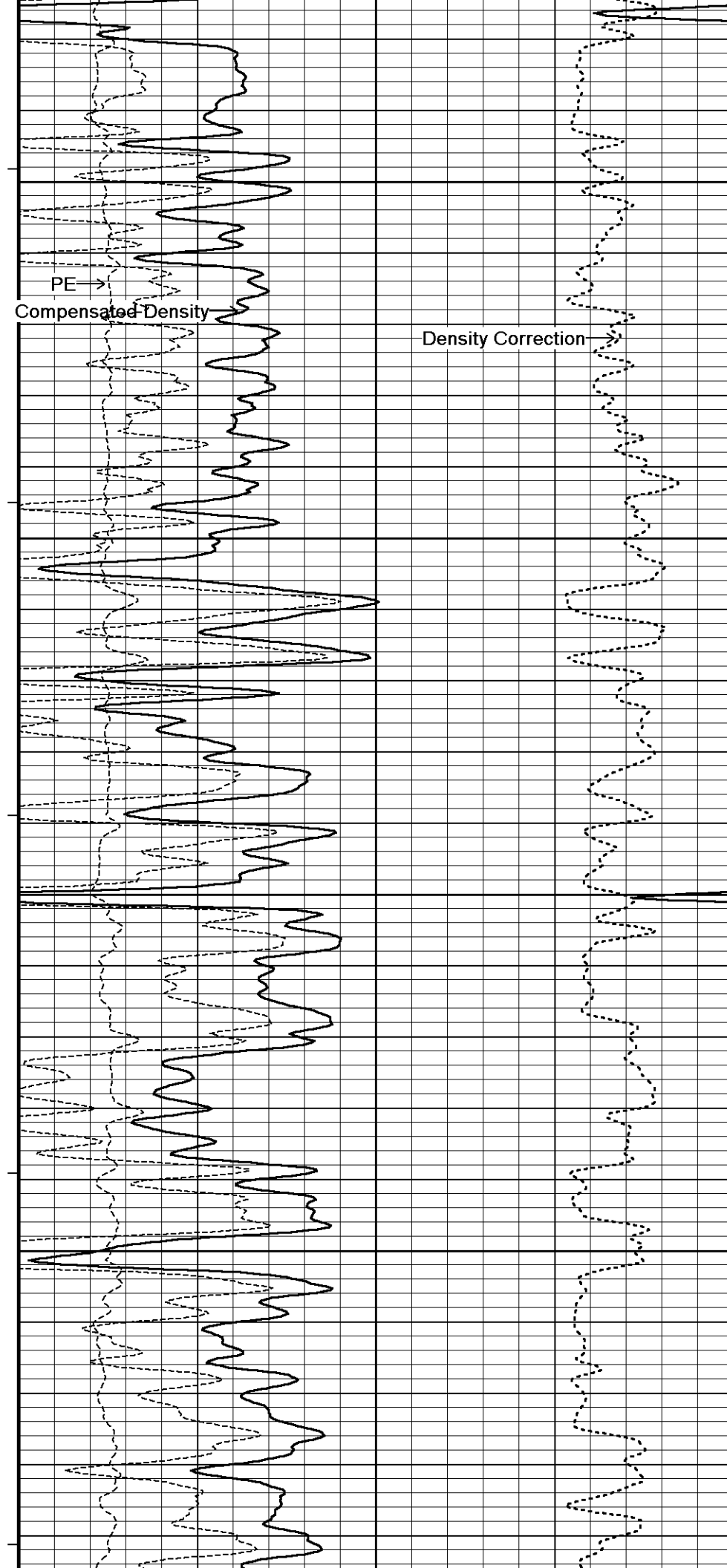


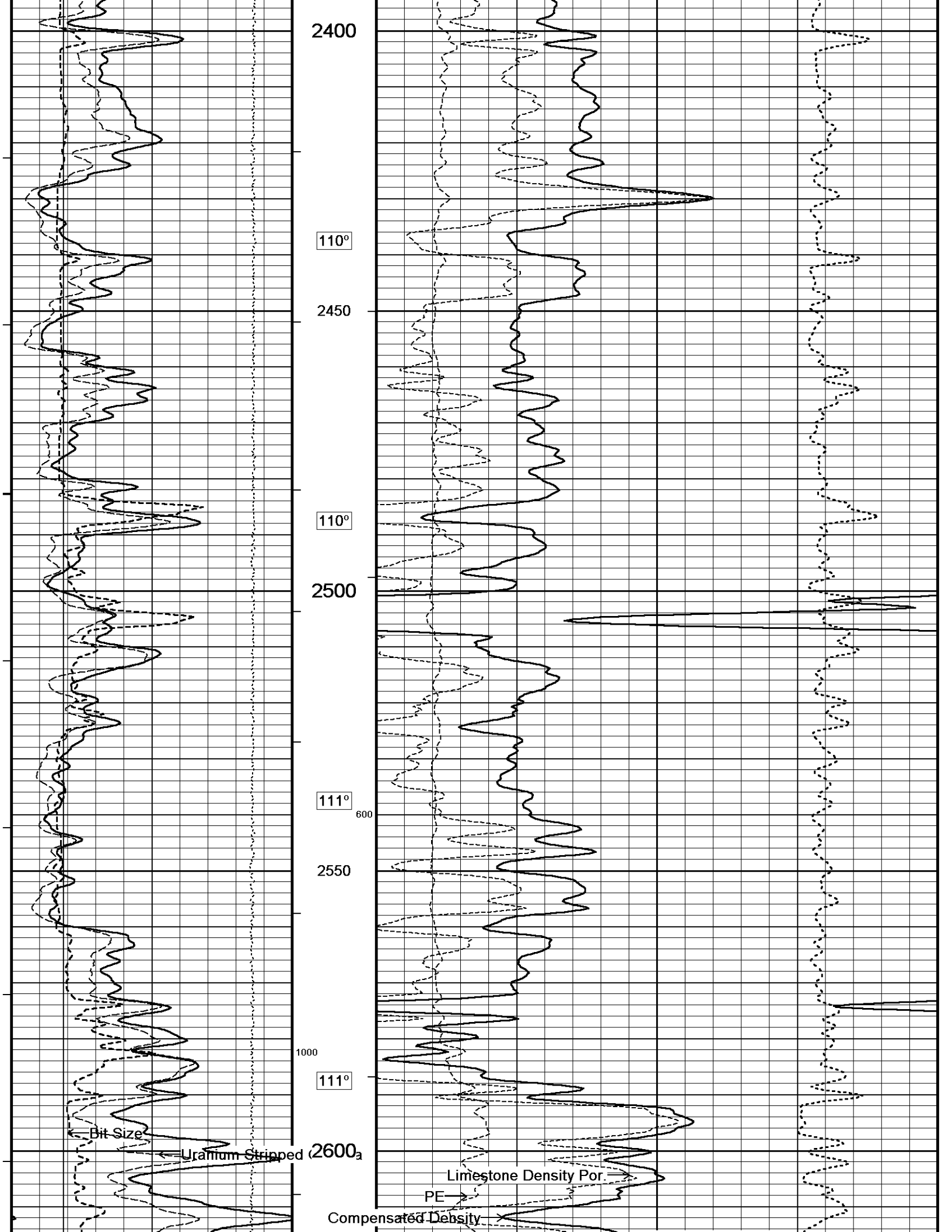


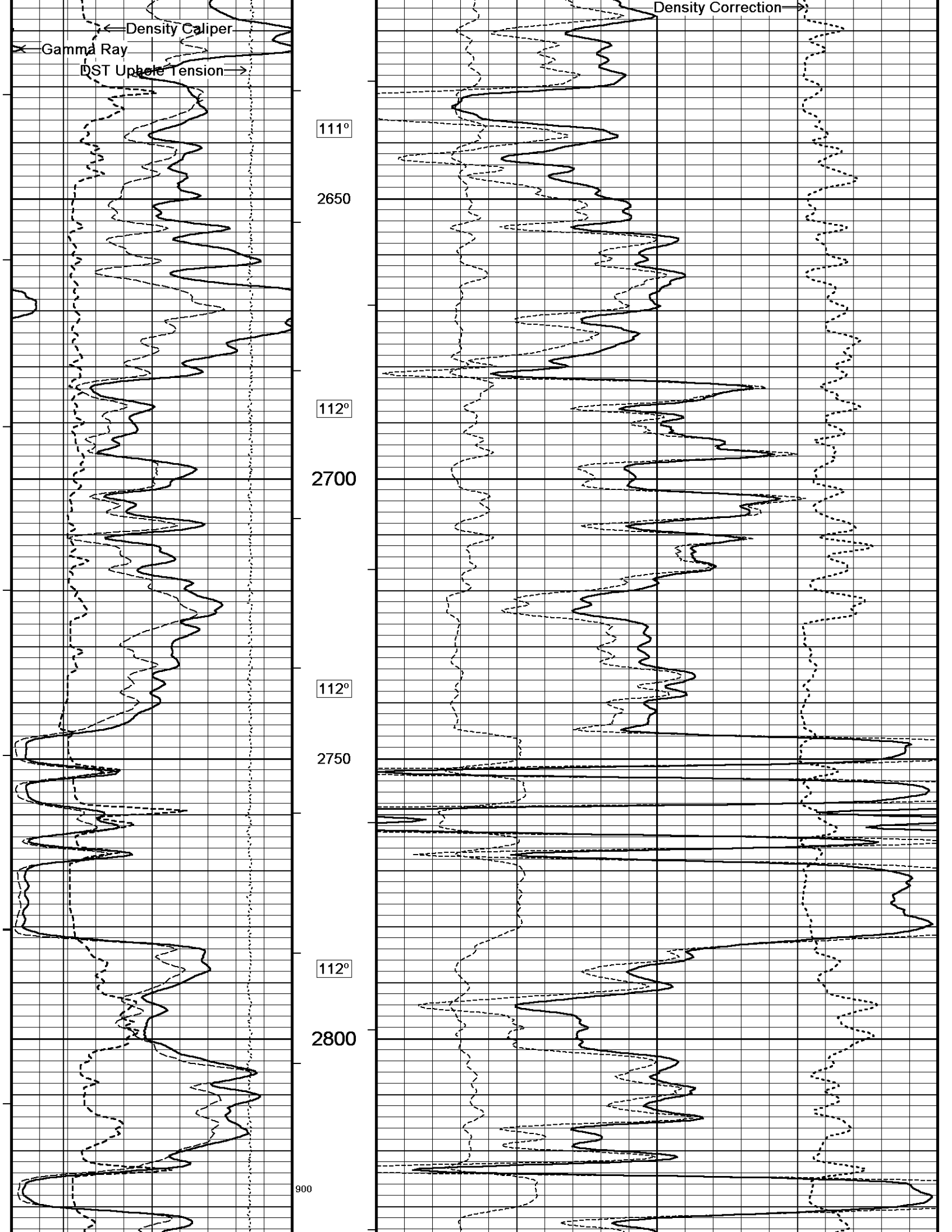


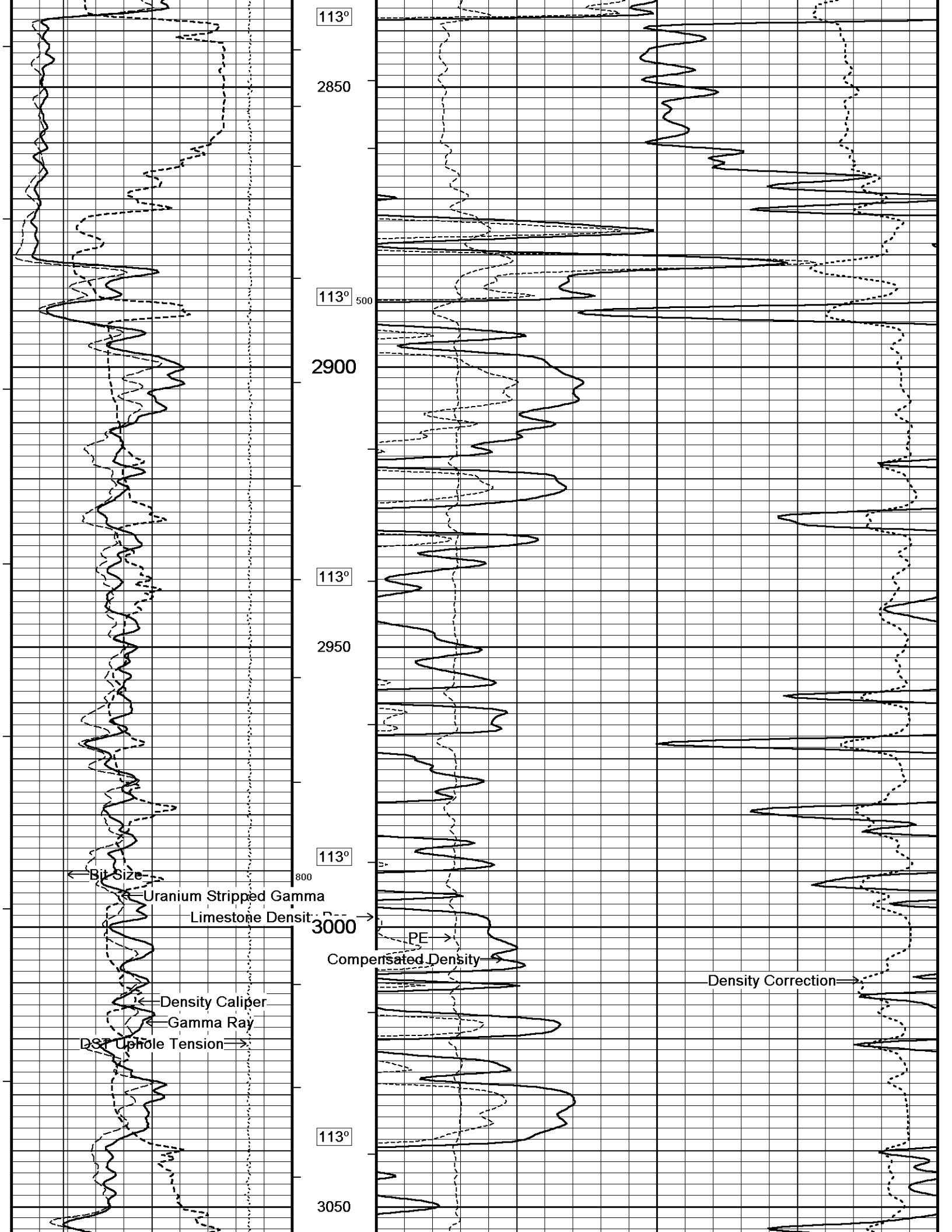


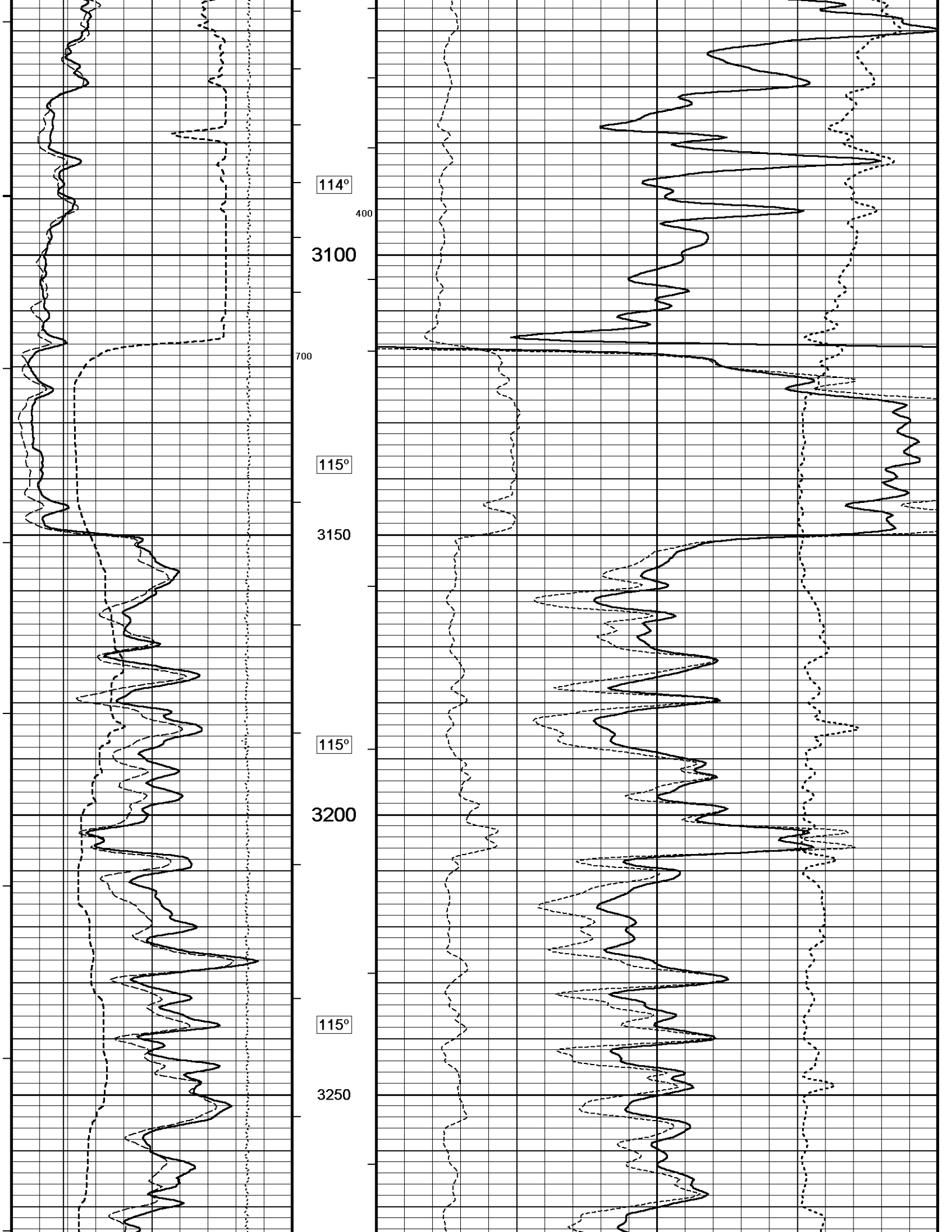
108°
2200
108°
2250
109°
2300
1100
109°
2350
110°

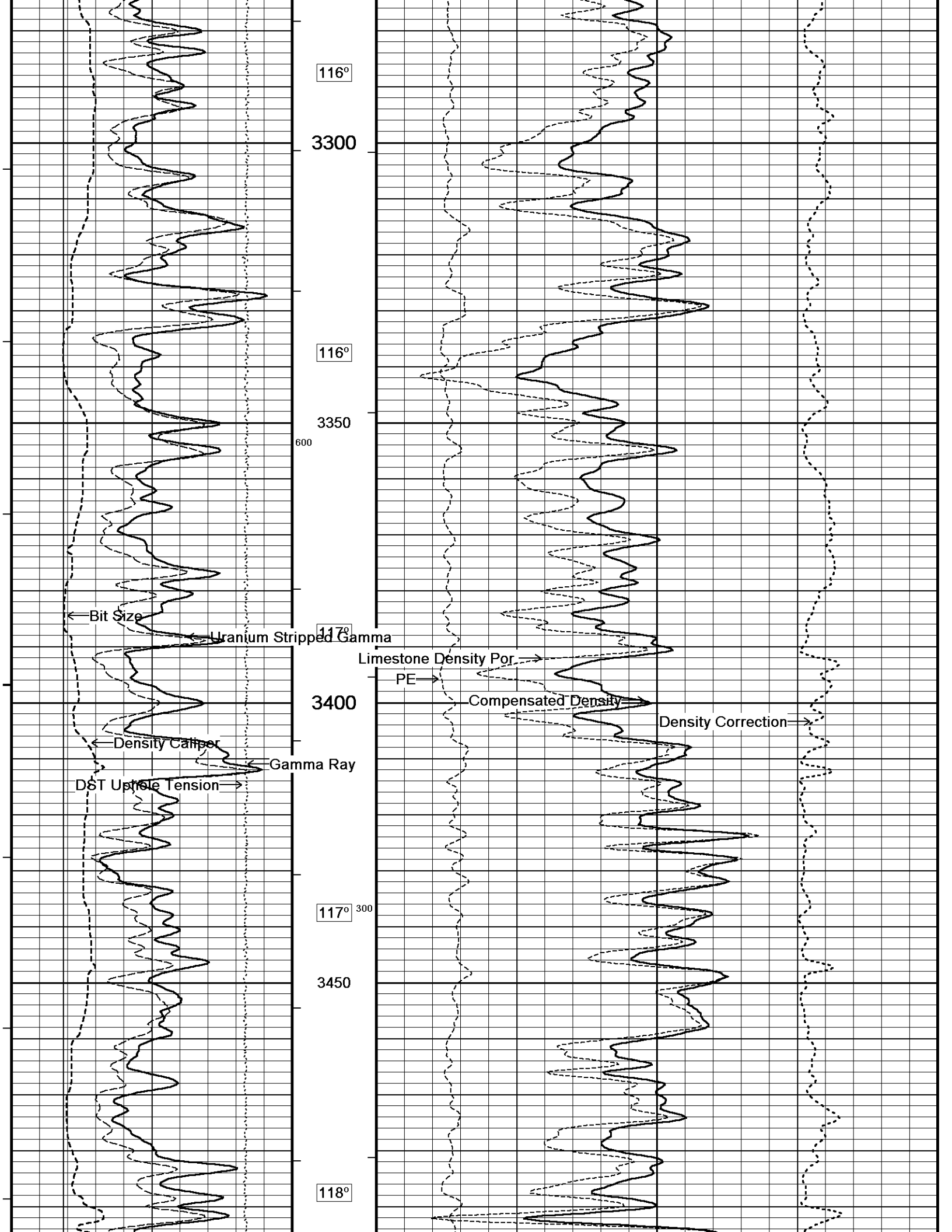


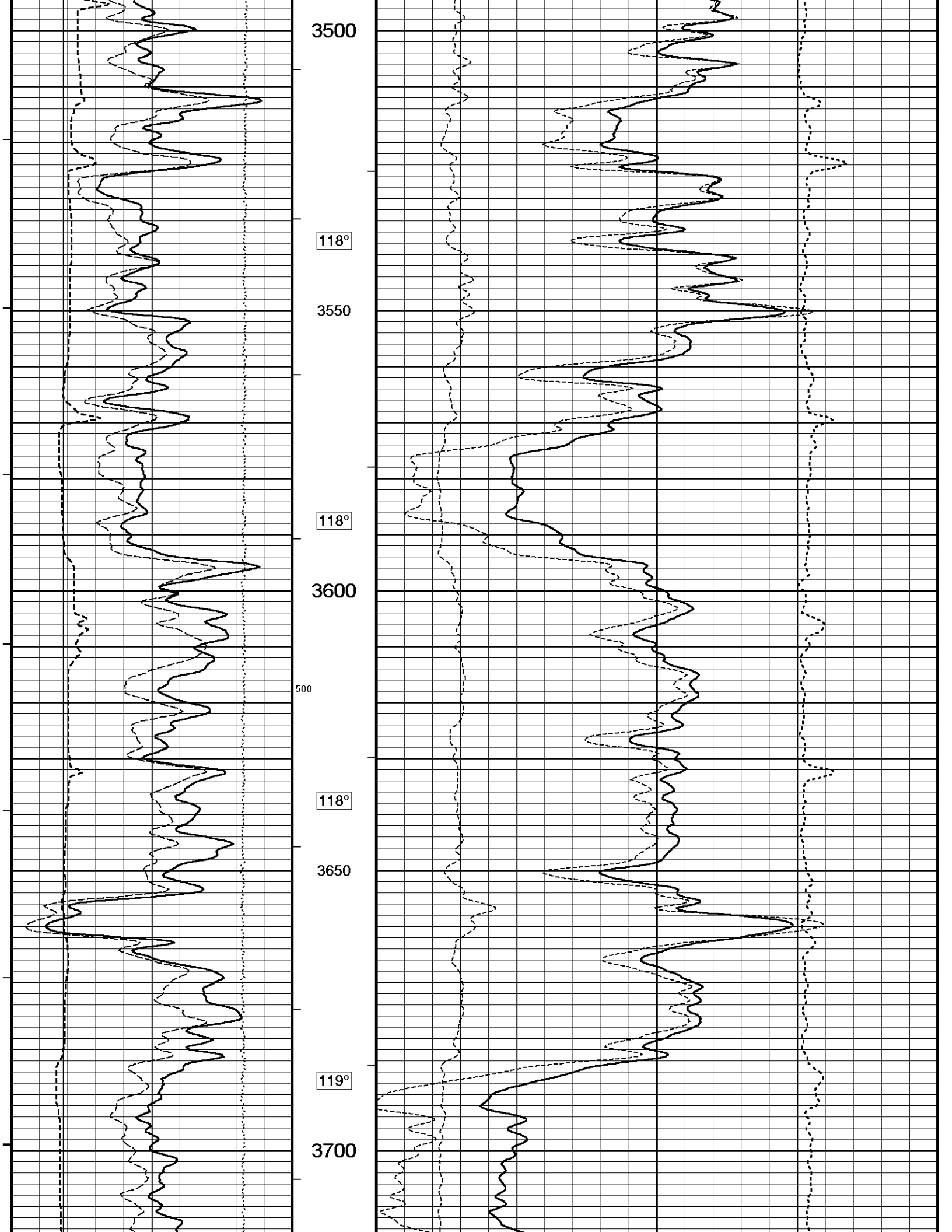


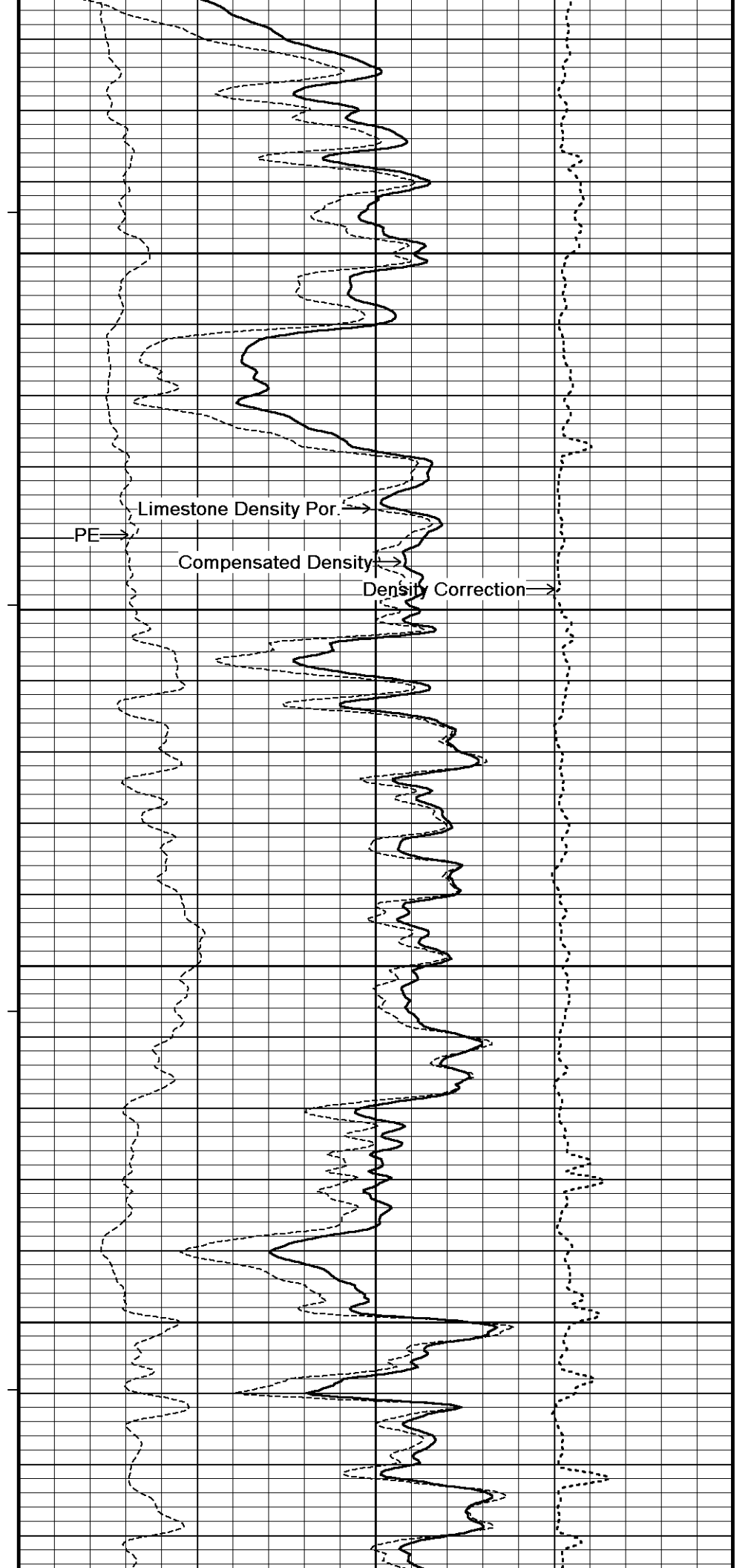
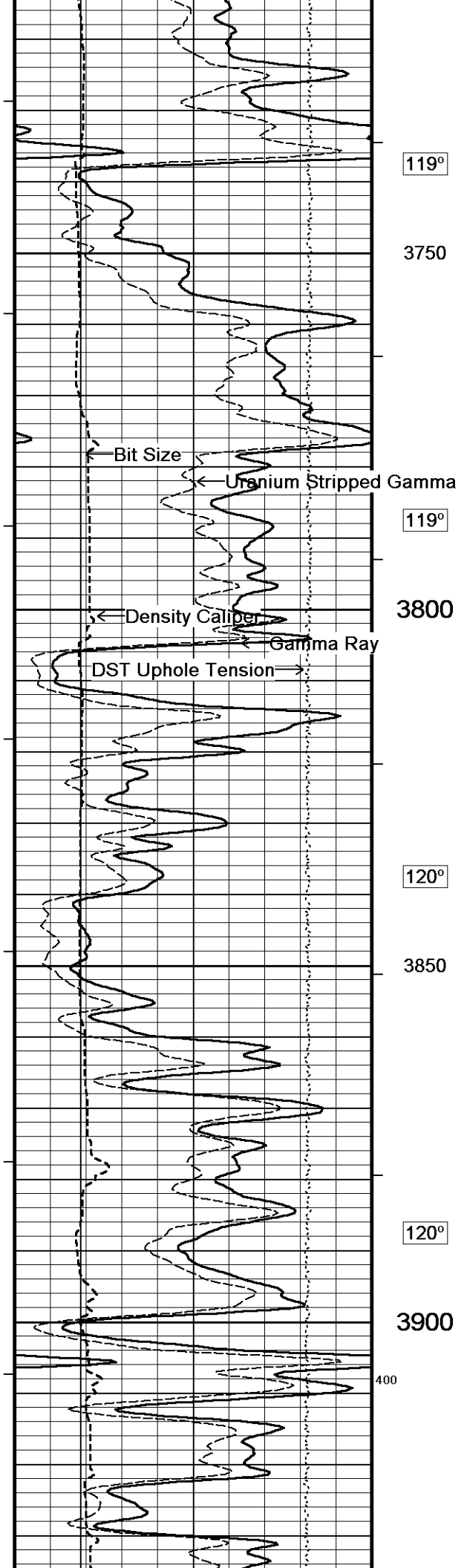


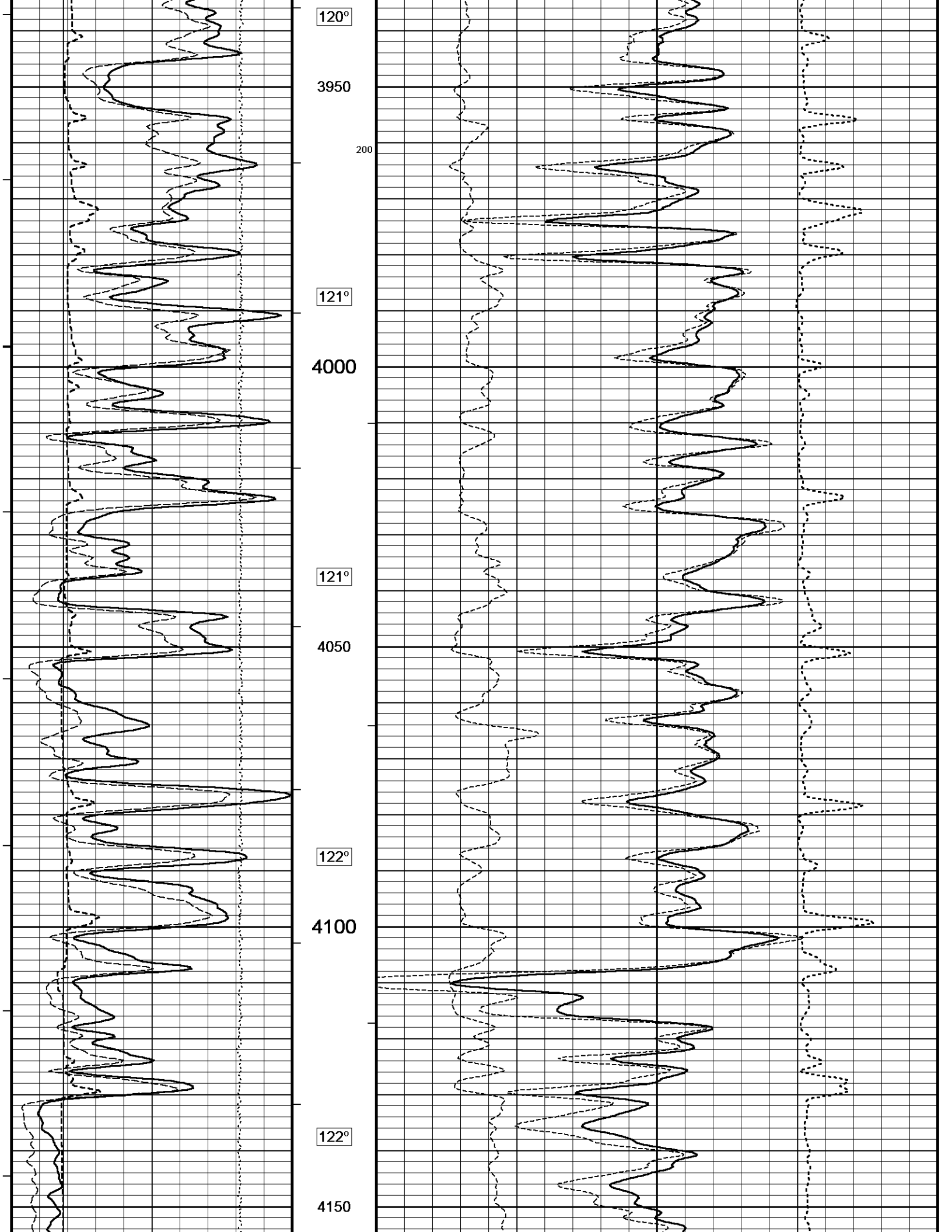


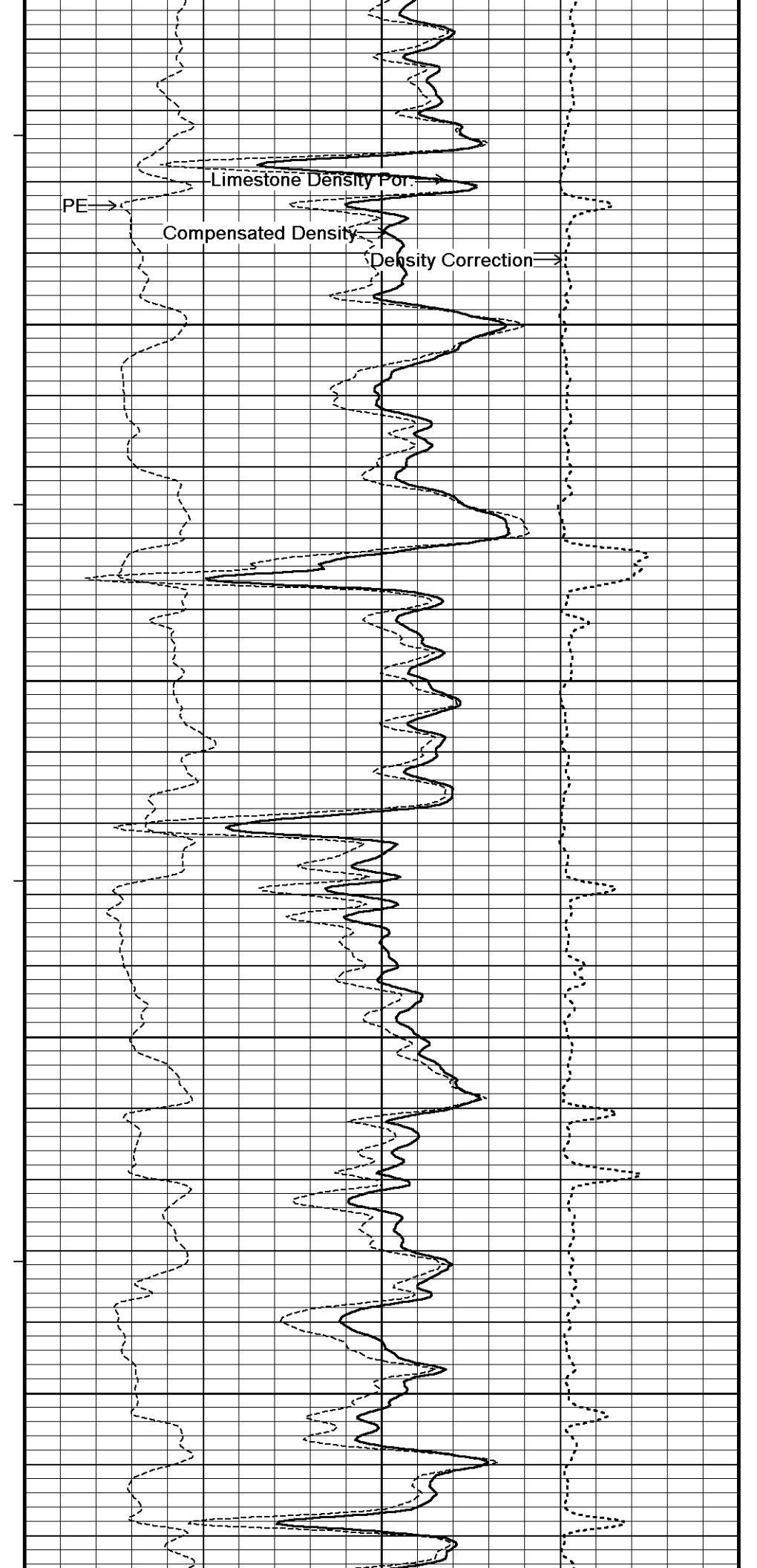
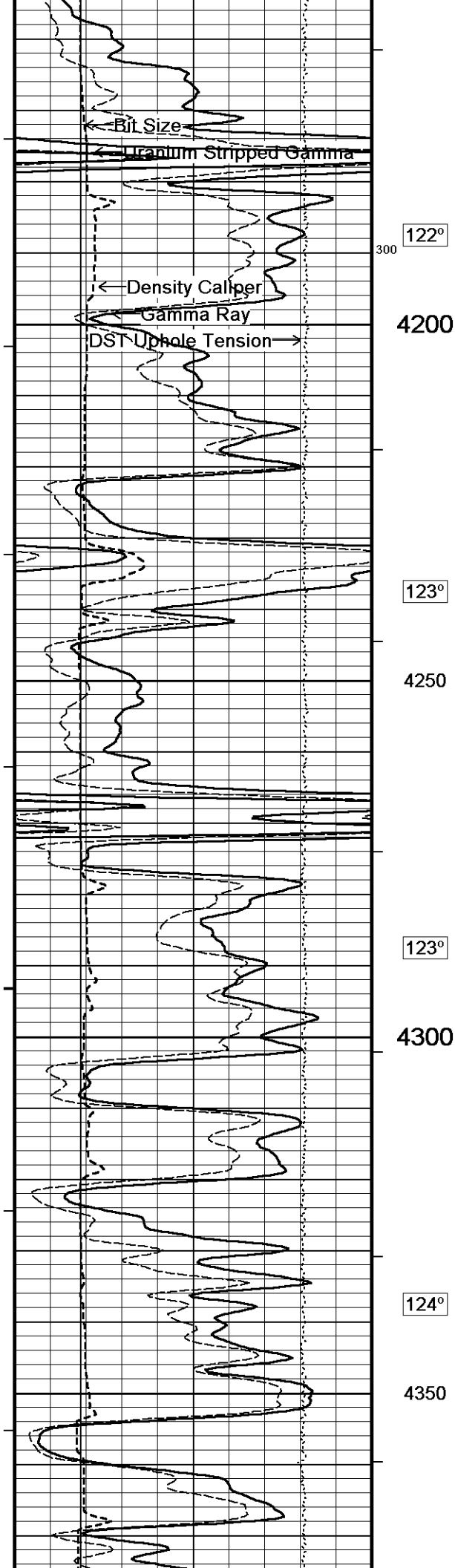


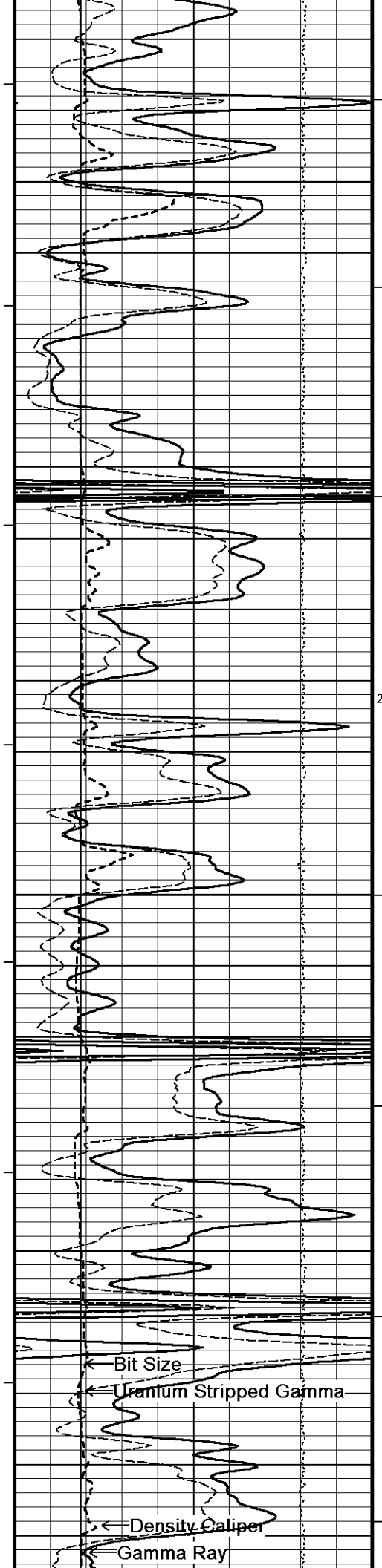












124°

4400

125°

4450

200

126°

100

4500

127°

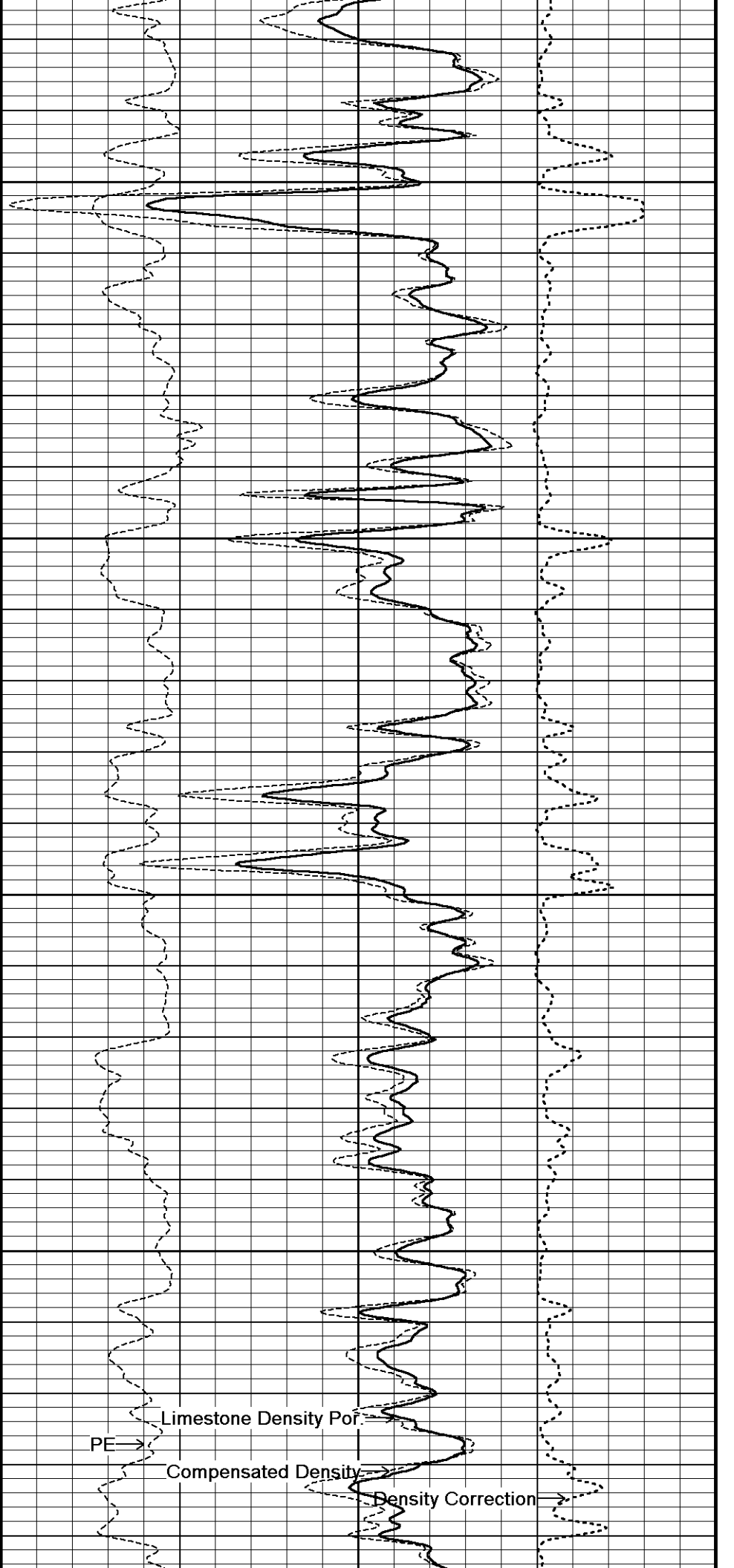
4550

← Bit Size

← Uranium Stripped Gamma

<< Density Caliper

← Gamma Ray

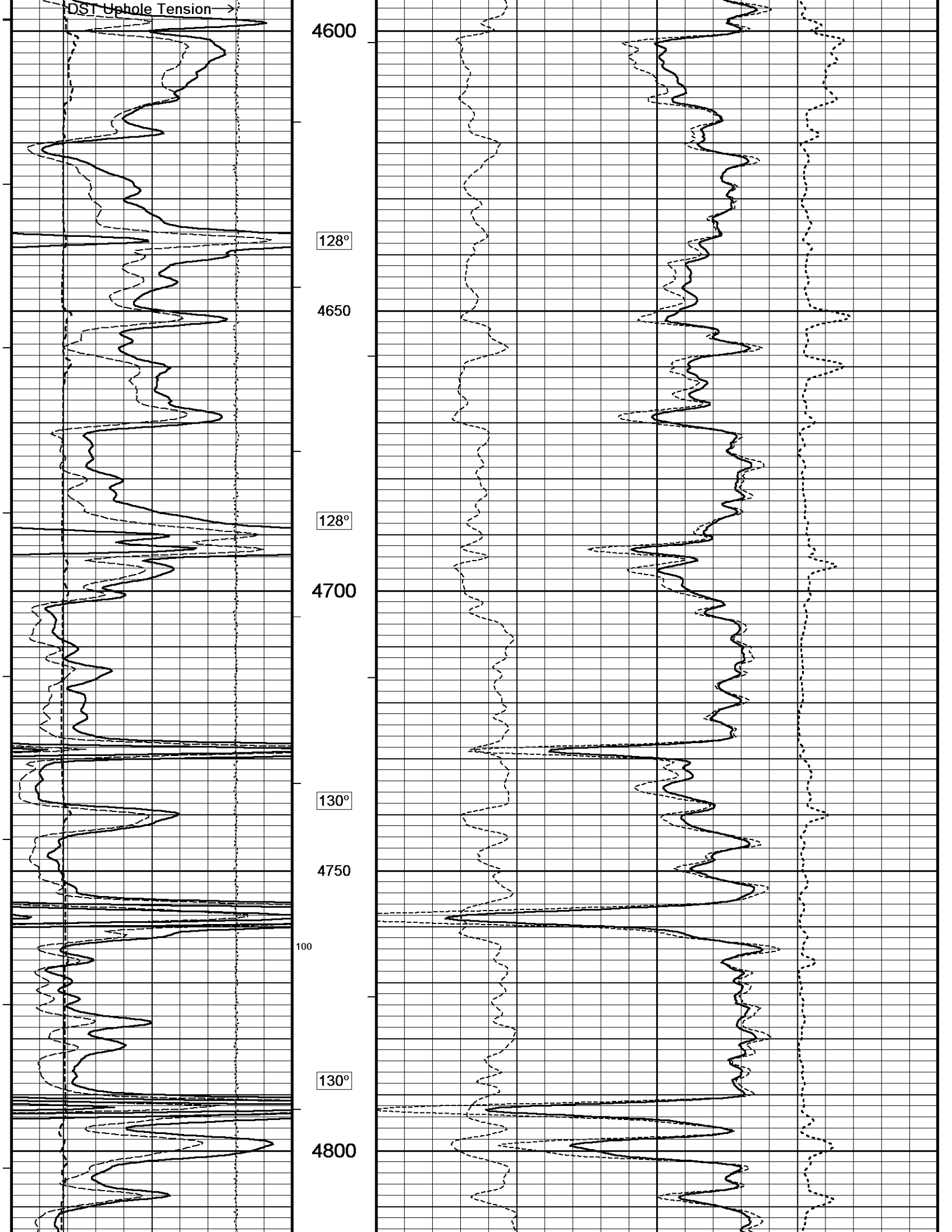


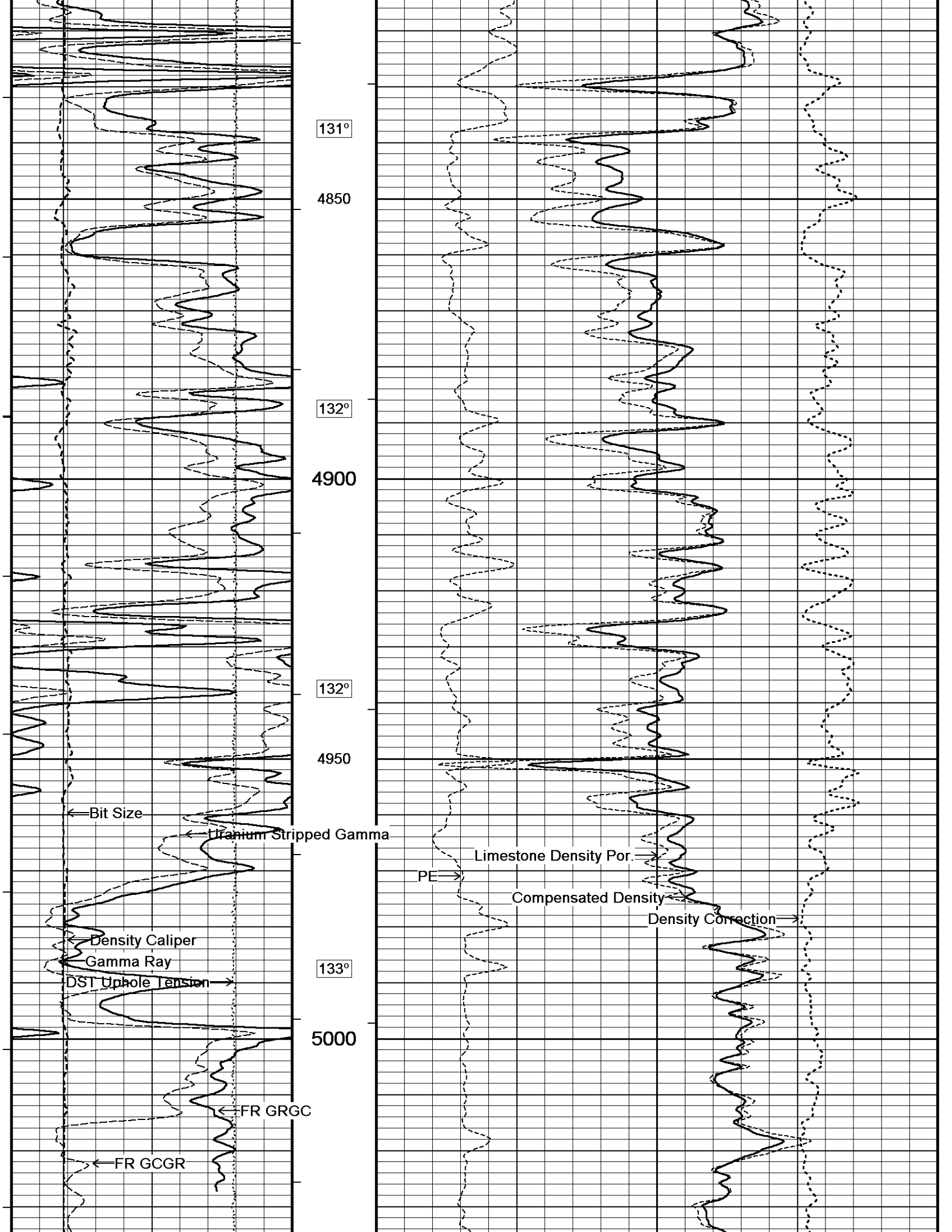
PE → Limestone Density Por

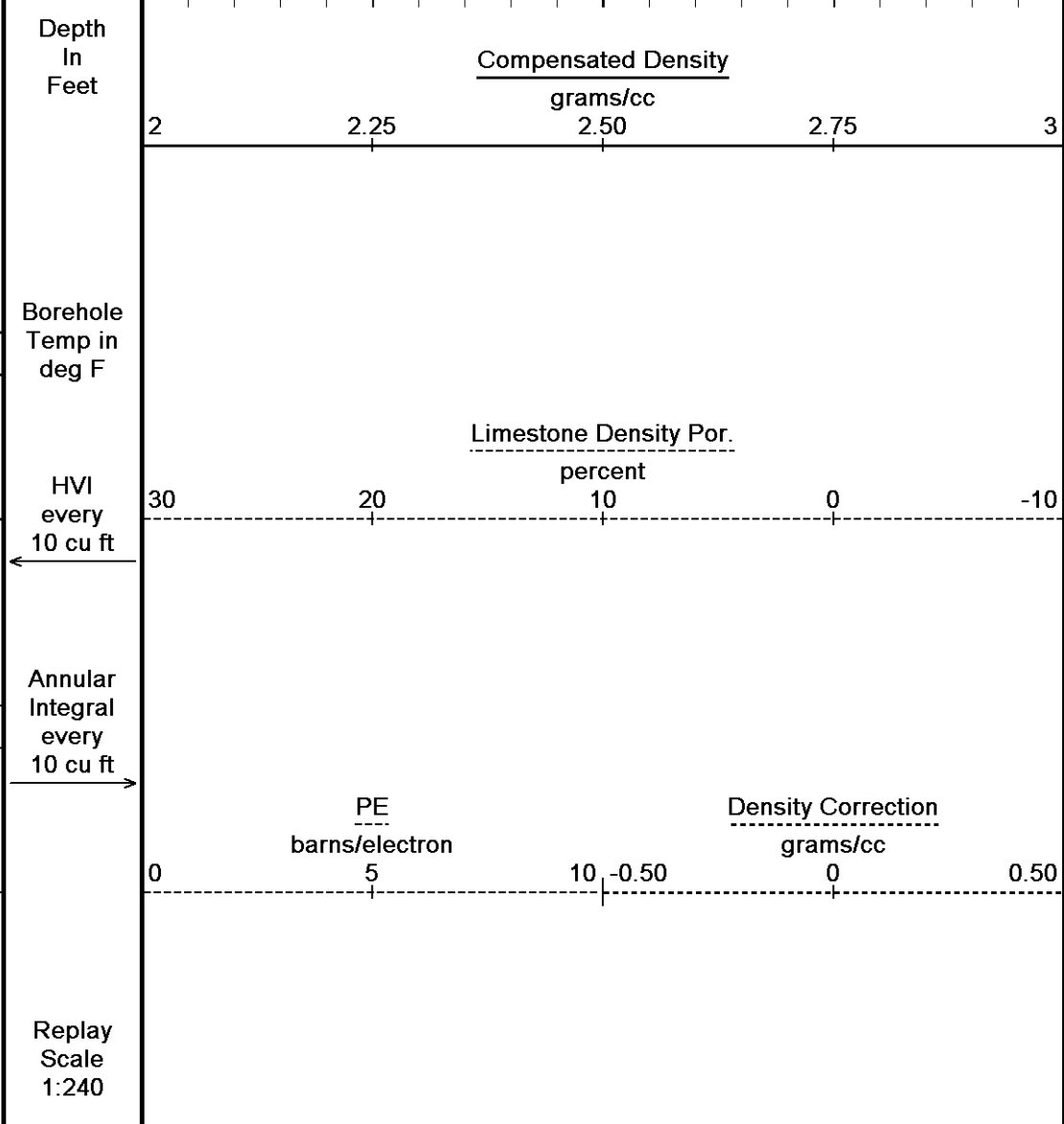
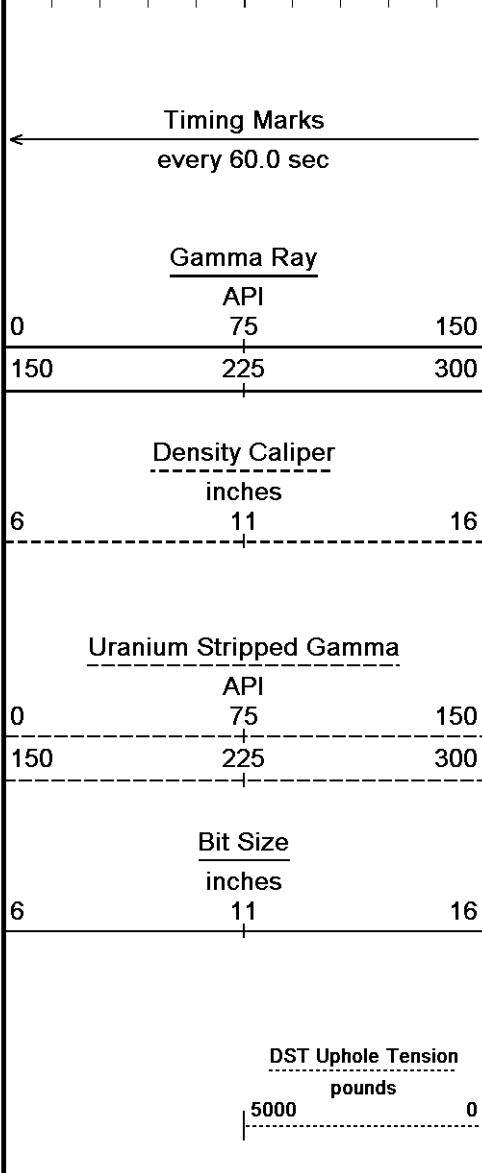
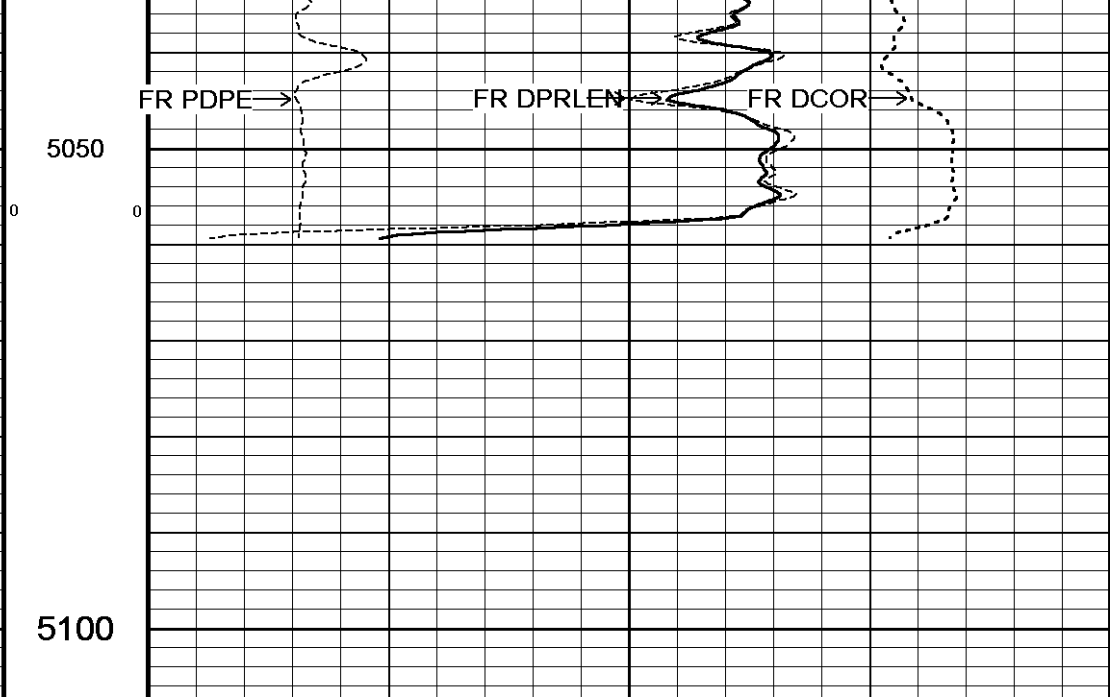
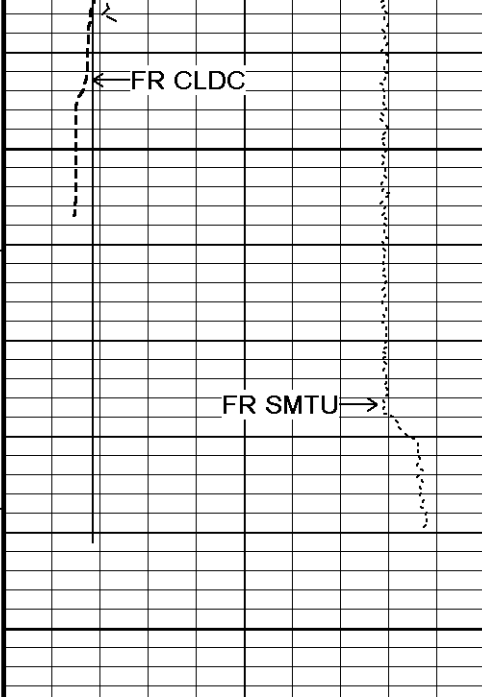
→ Compensated Density

→ Density Correction

127°



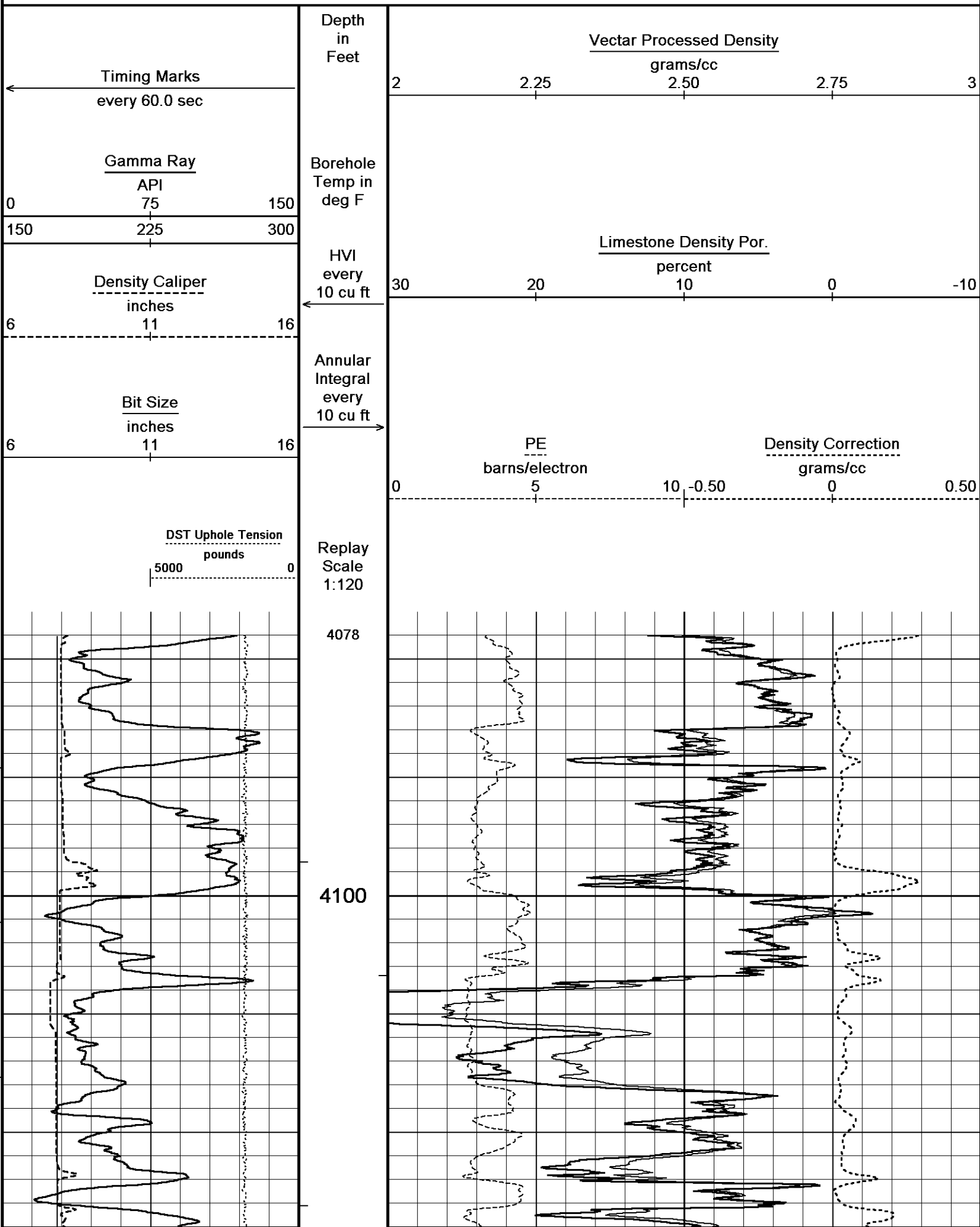


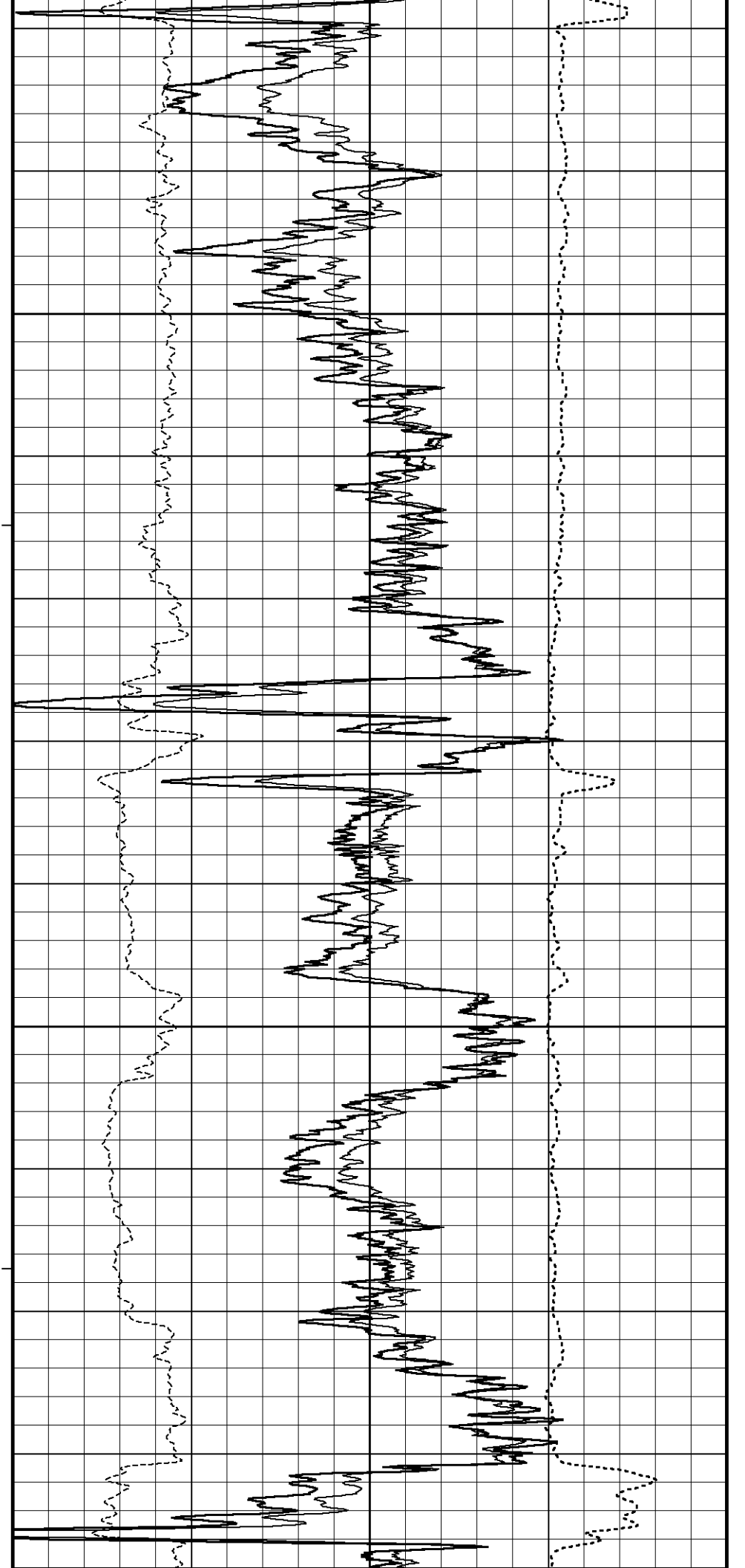
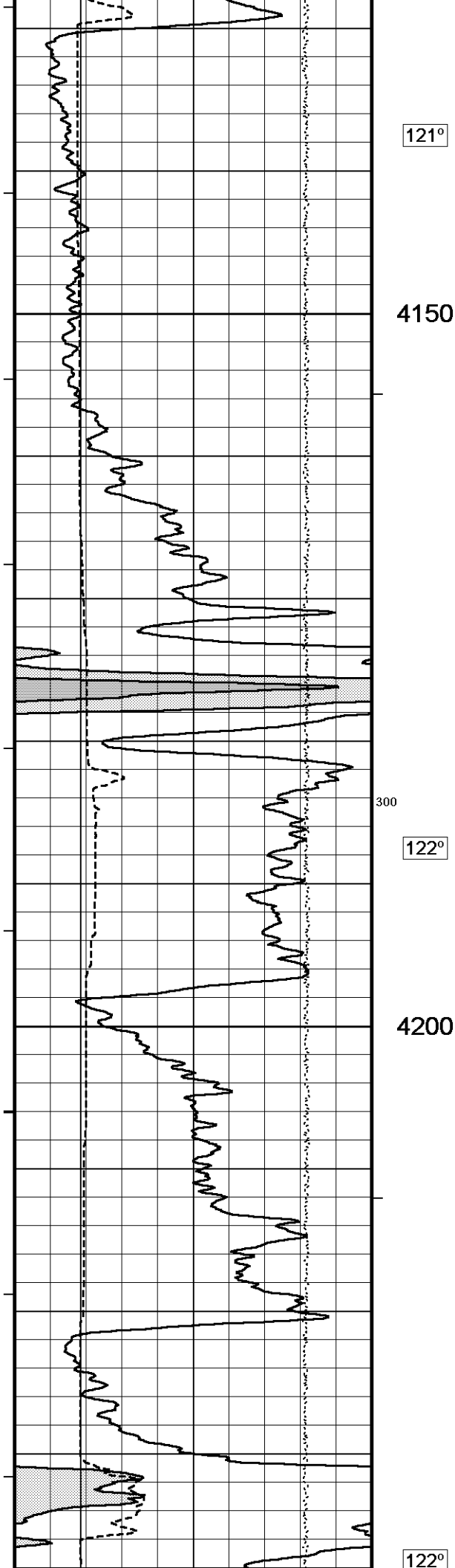


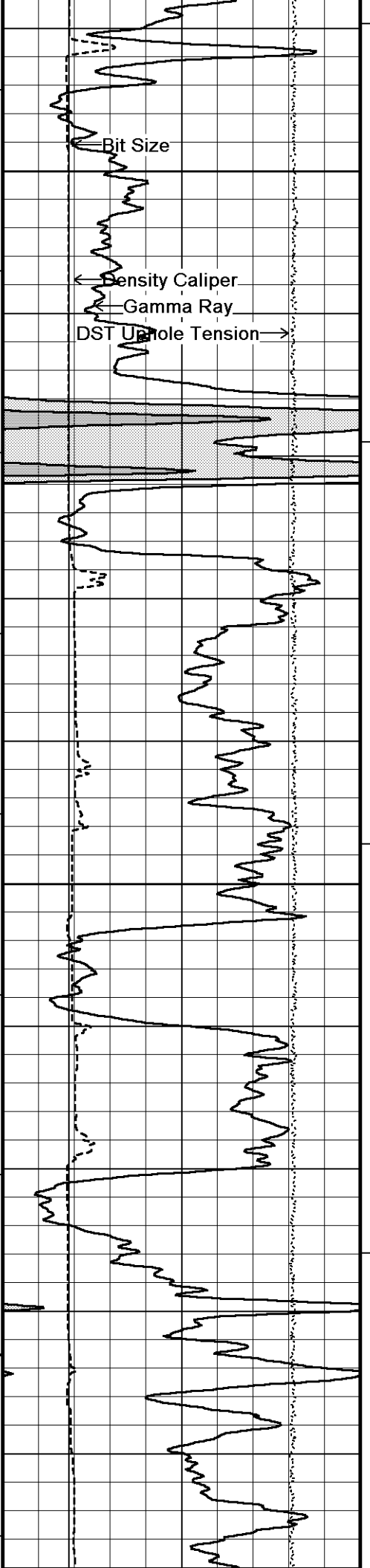
Depth Based Data - Maximum Sampling Increment 10.0cm
 Plotted on 24-NOV-2013 08:29
 Filename: C:\Minimus 13.05.9583\Logs\McElvain Price 14-5\McElvain Price 14-5 Main.dta
 Recorded on 24-NOV-2013 02:52
 System Versions: Logged with 13.05.9583 Plotted with 13.05.9583

↑ 5 INCH MAIN ↑

↓ HI-RES ↓





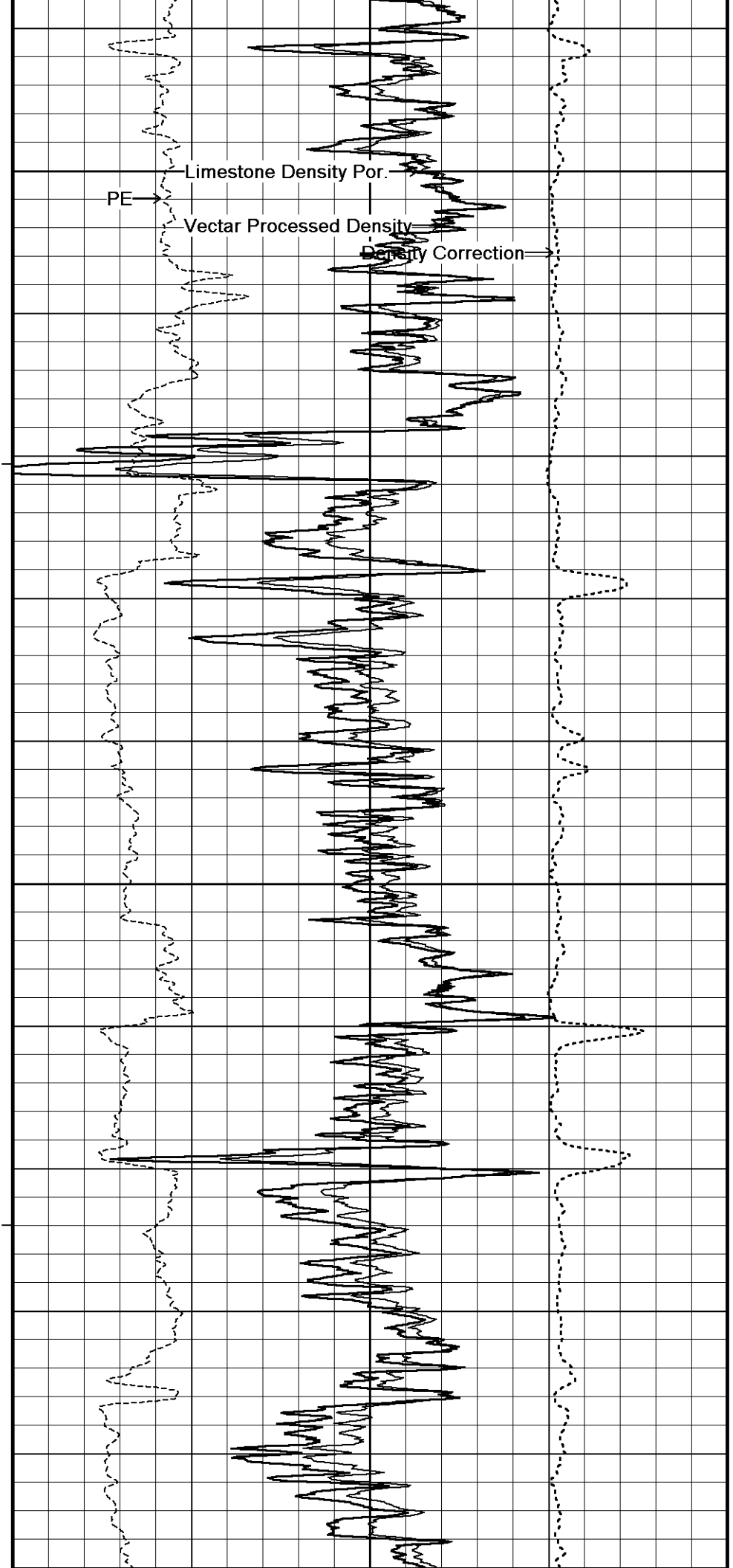


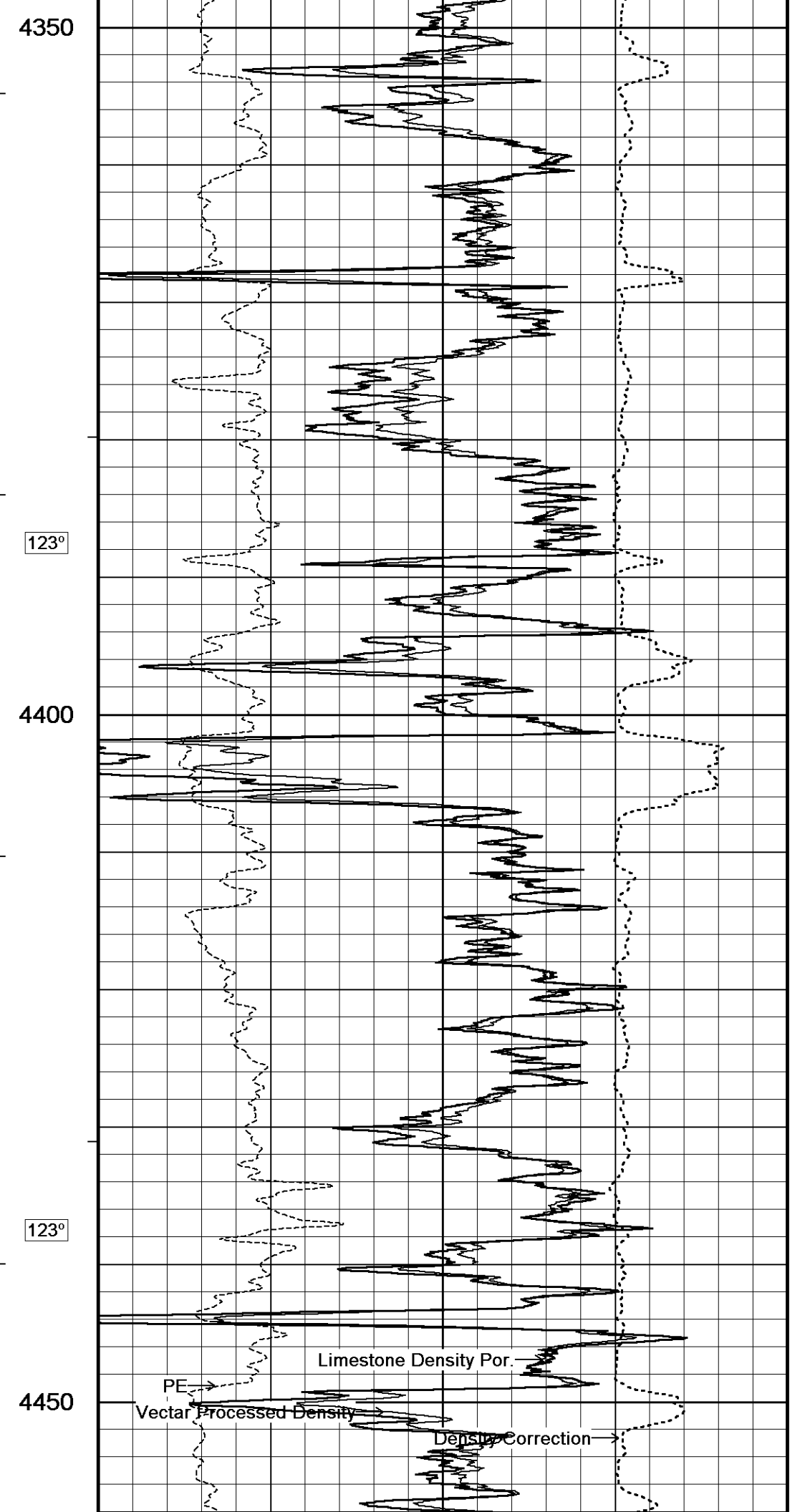
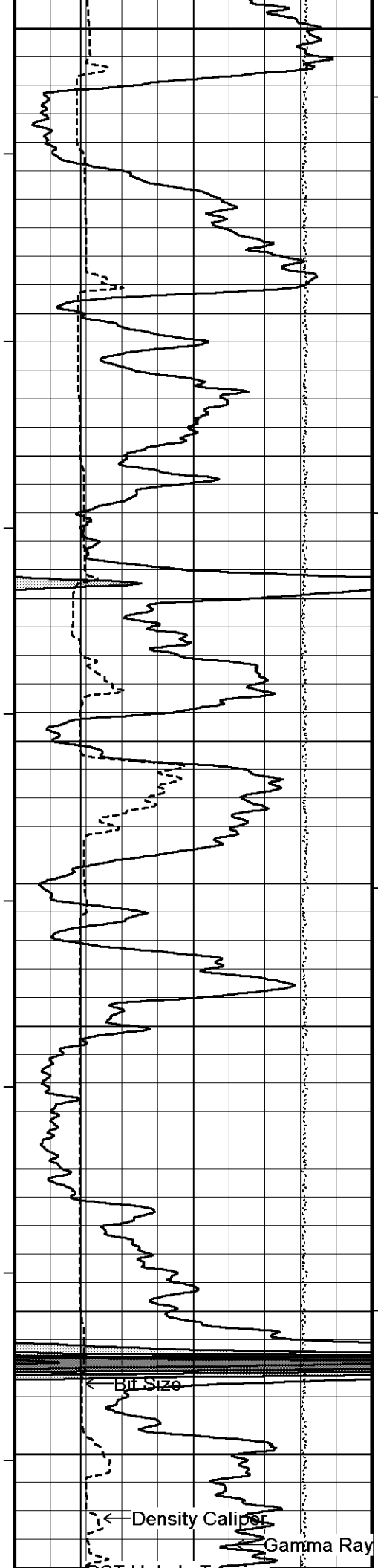
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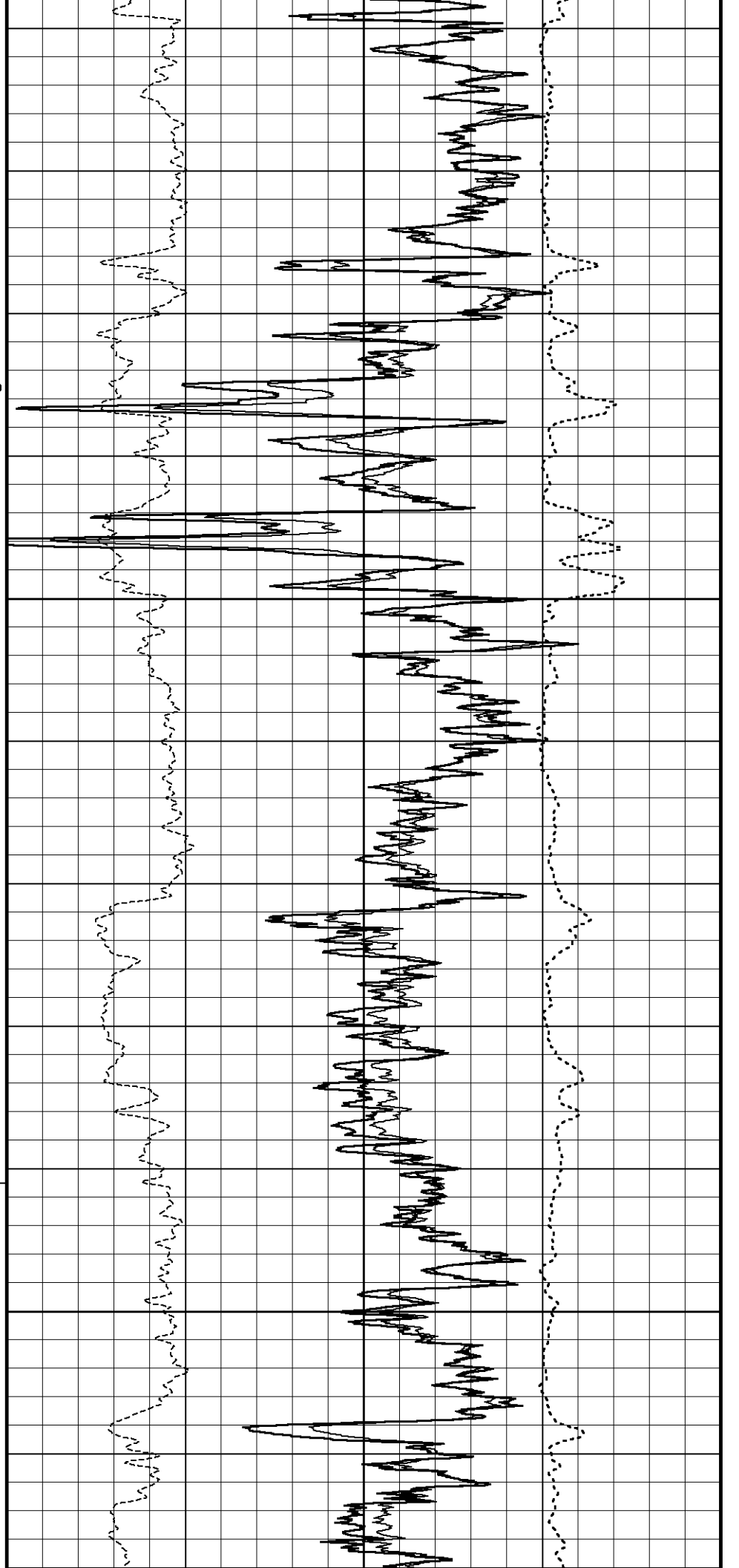
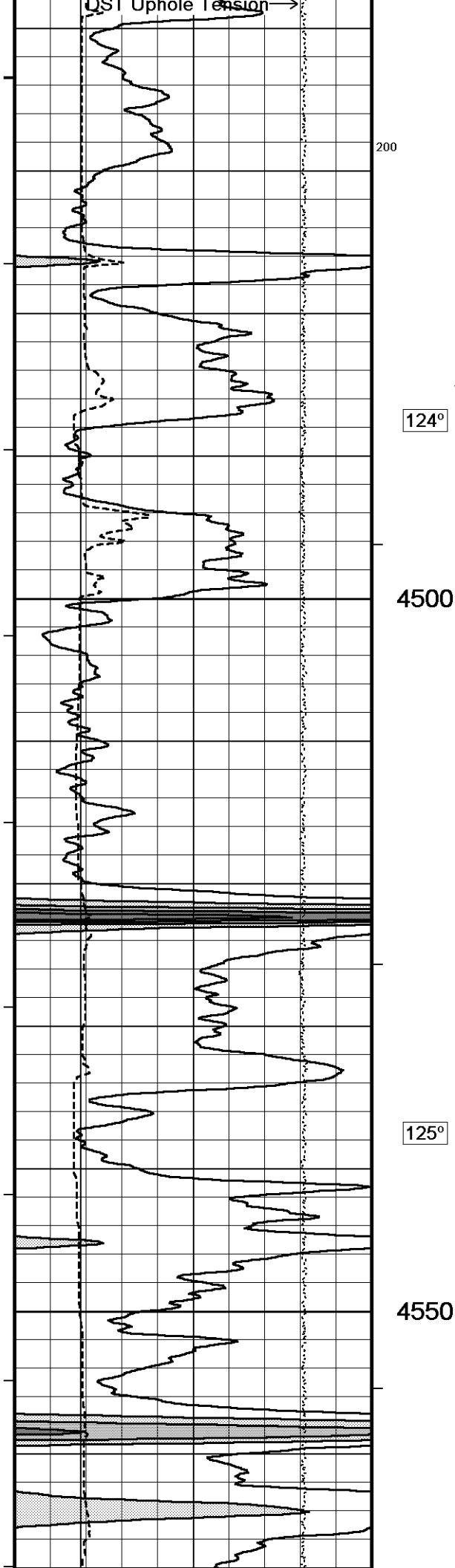
122°

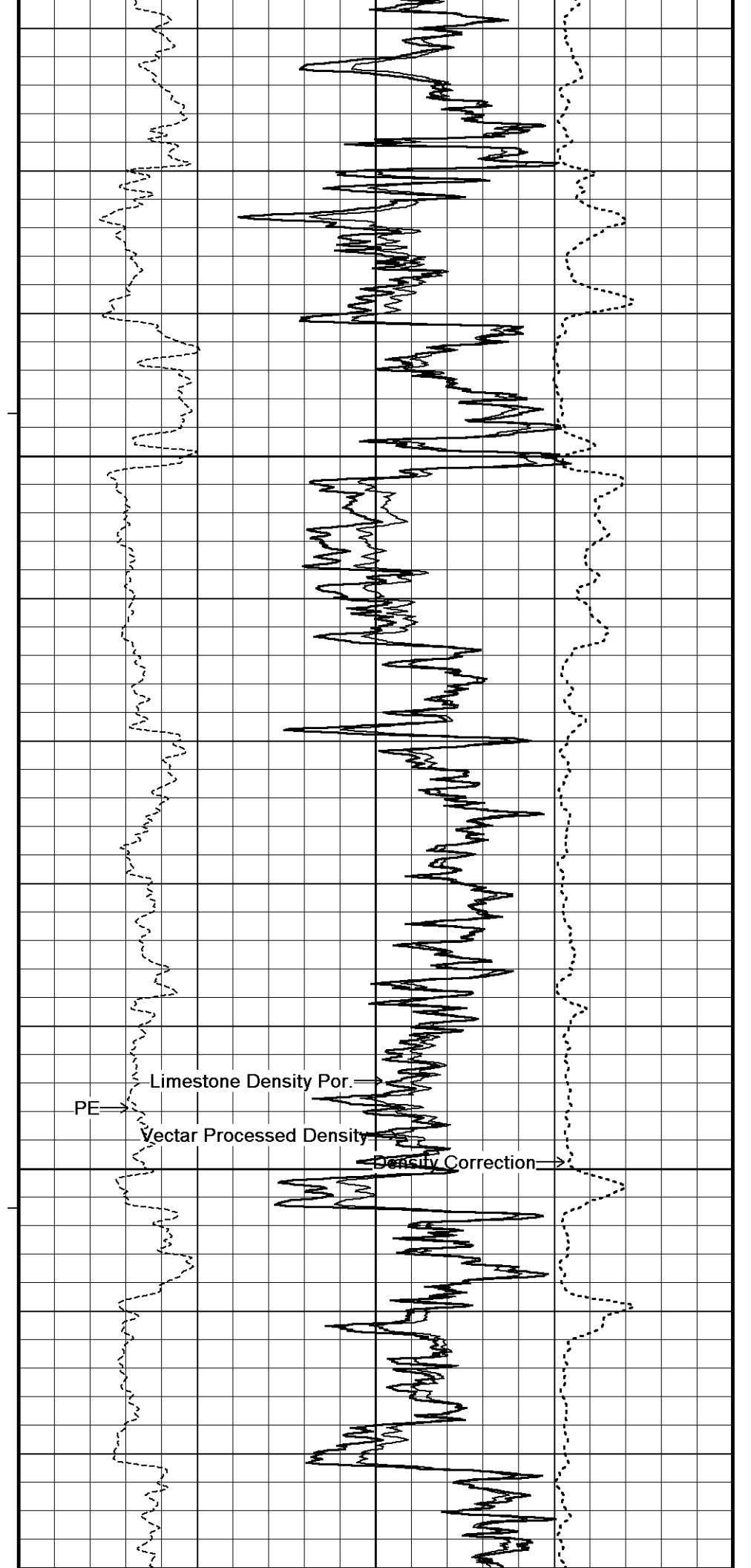
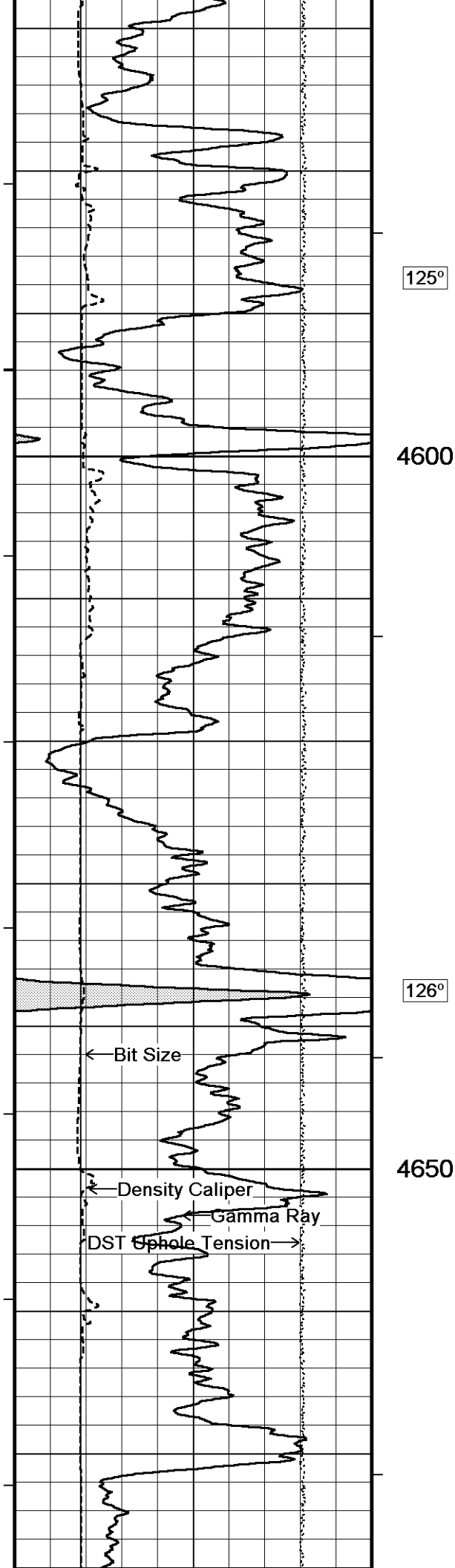
4300

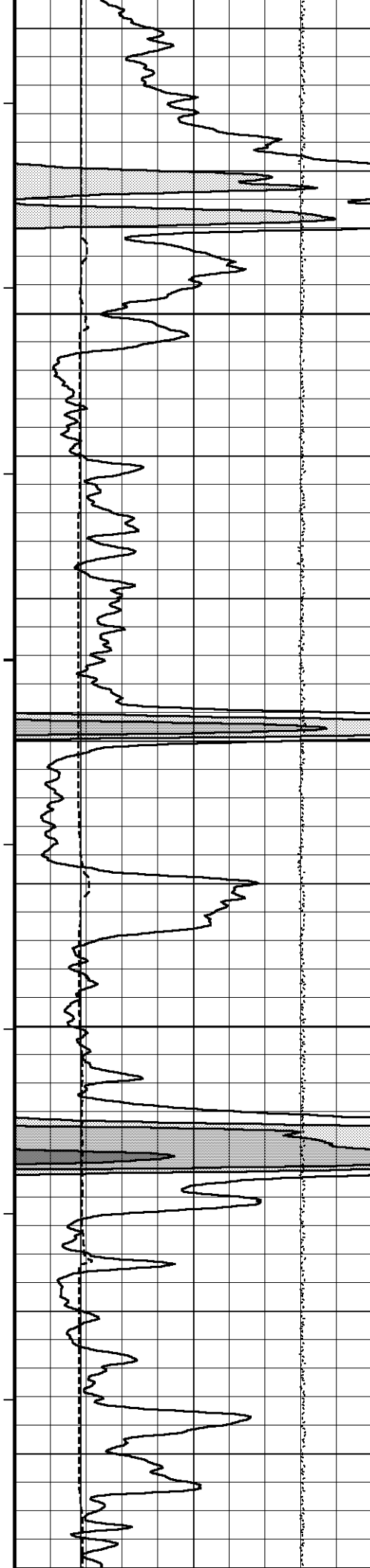
123°











127°

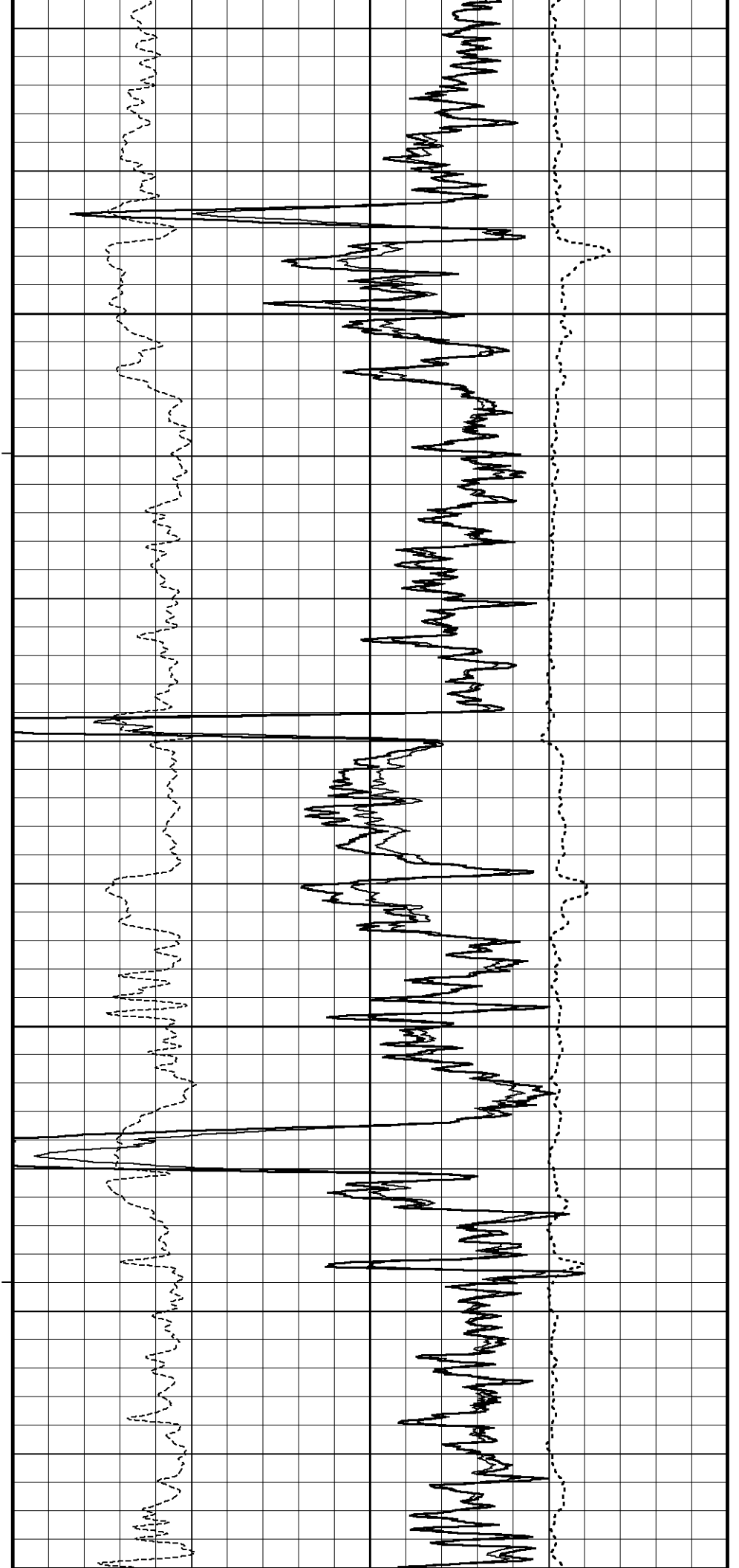
4700

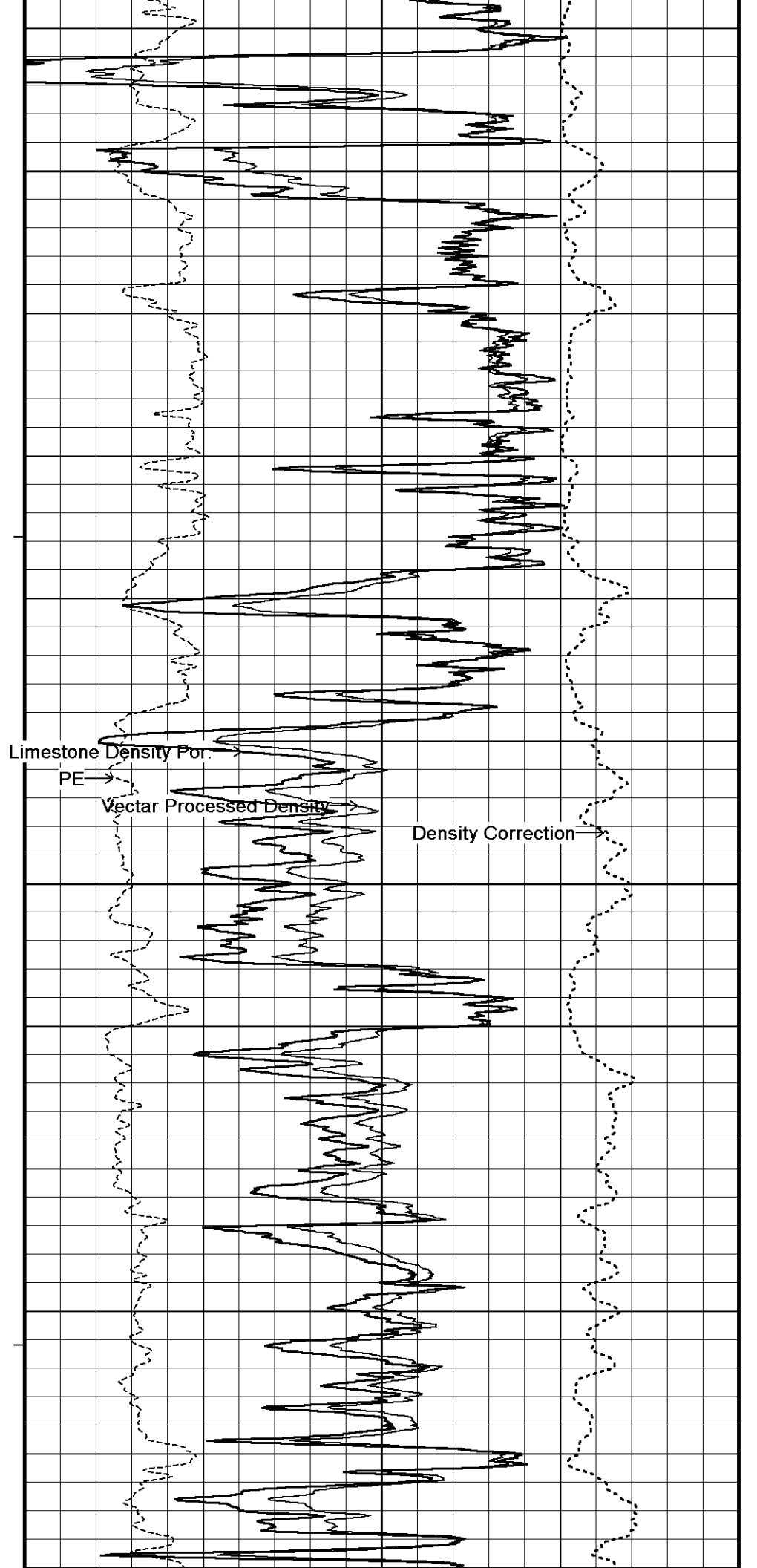
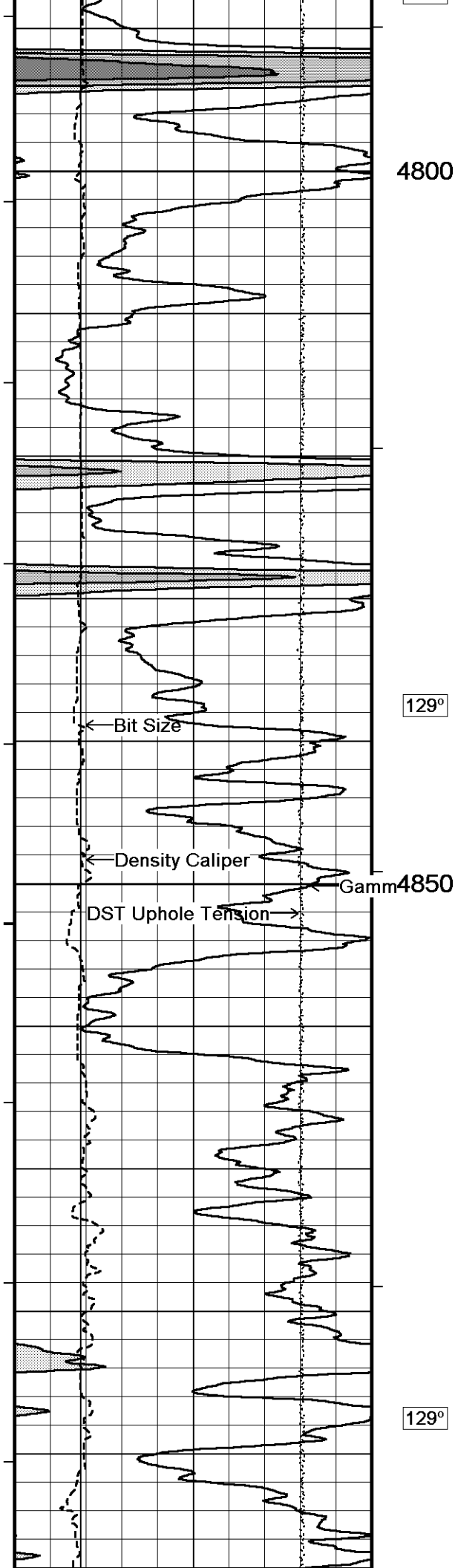
127°

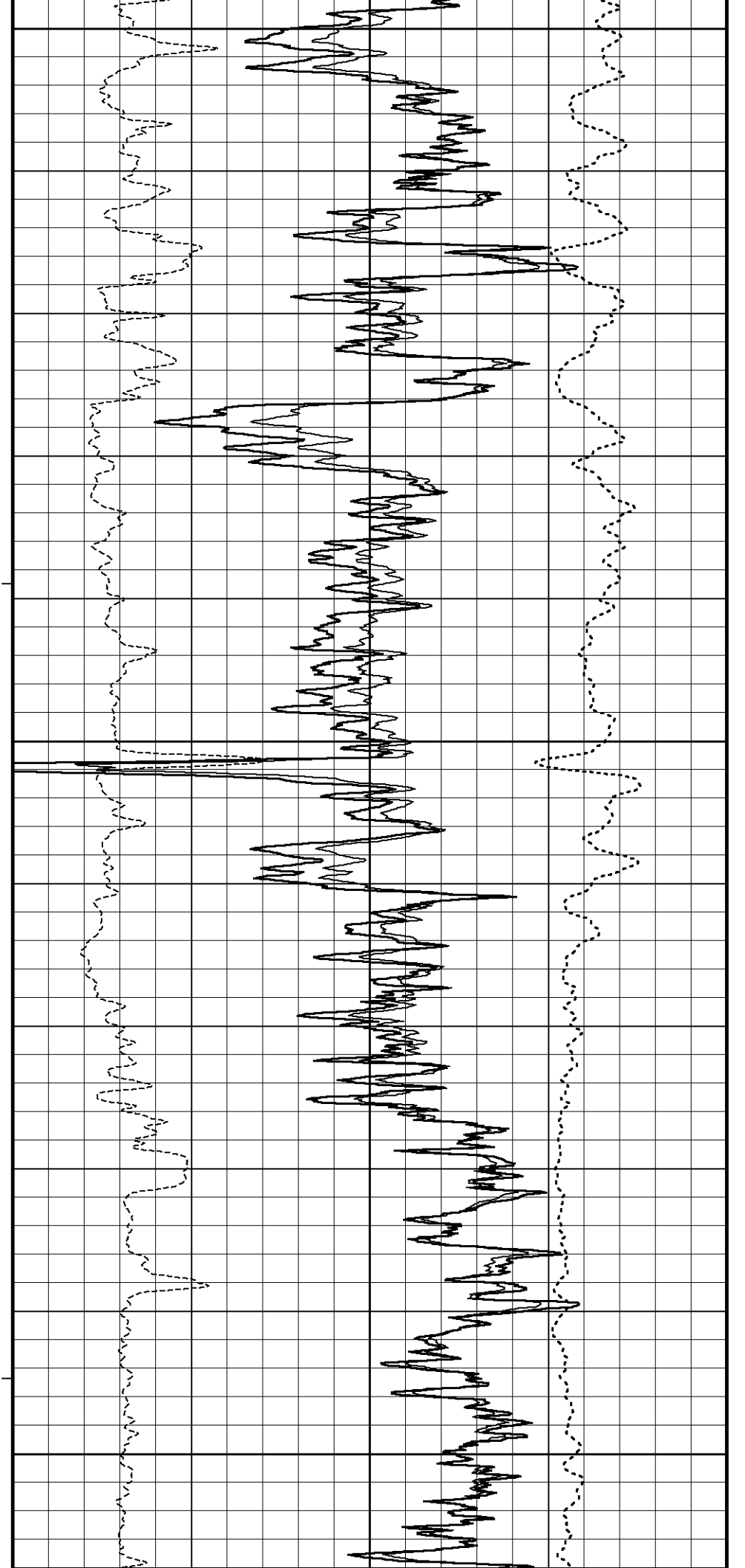
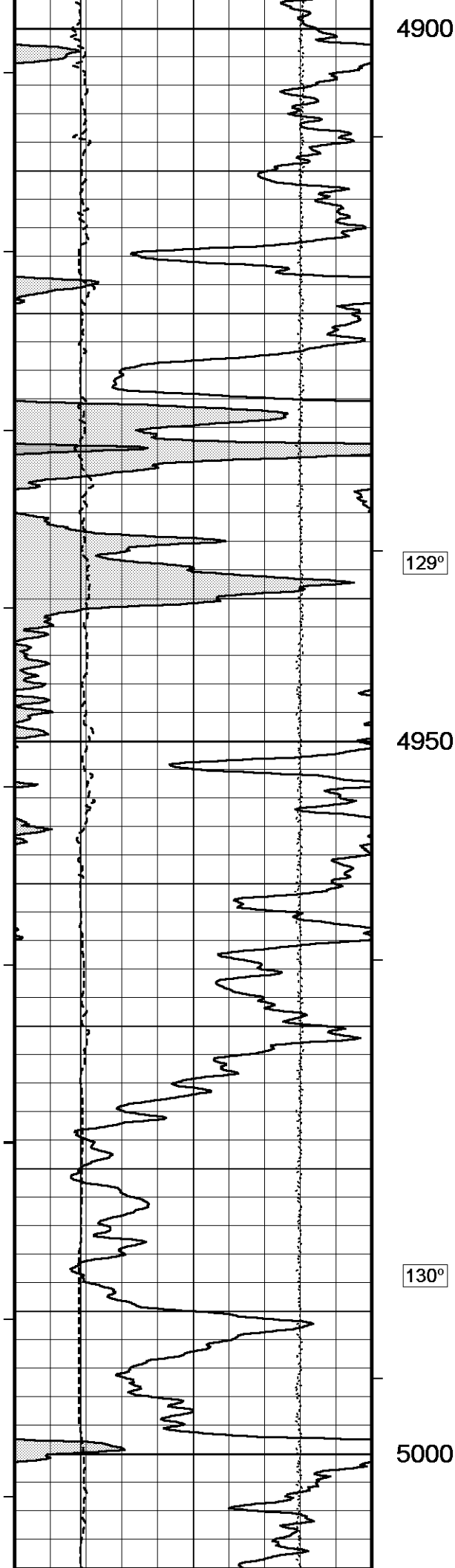
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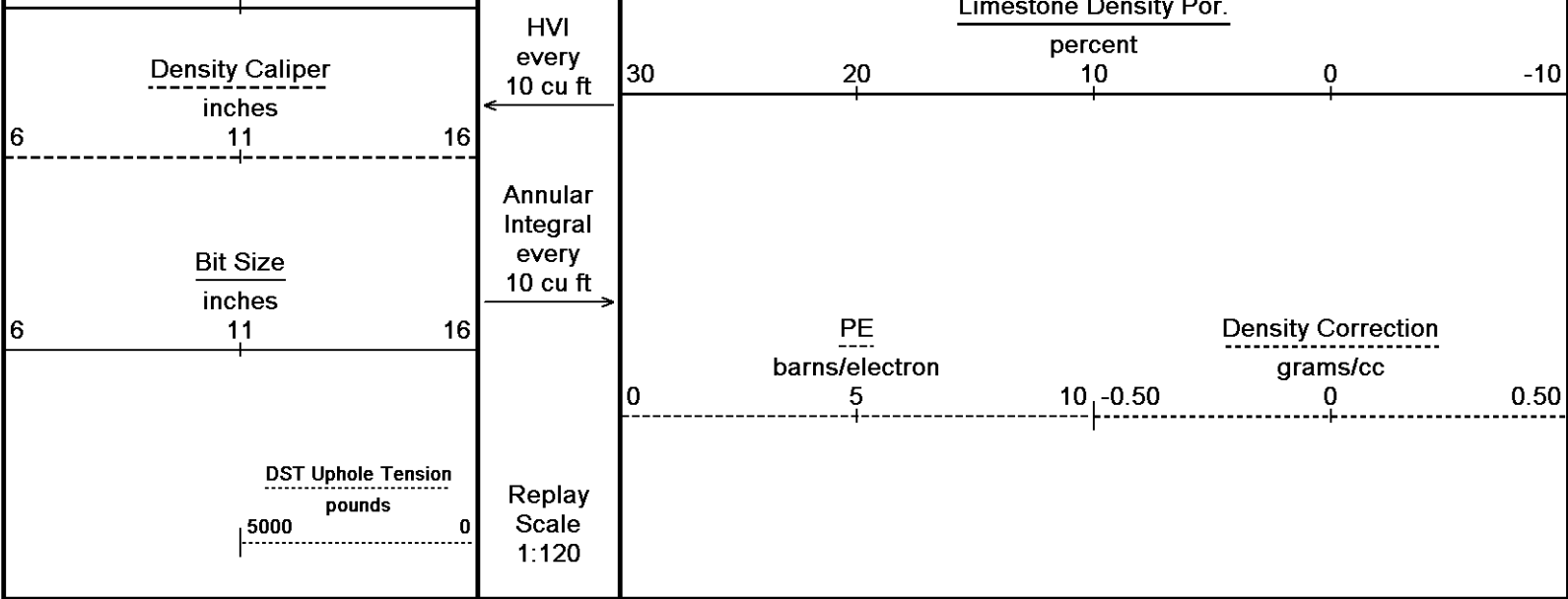
100

127°







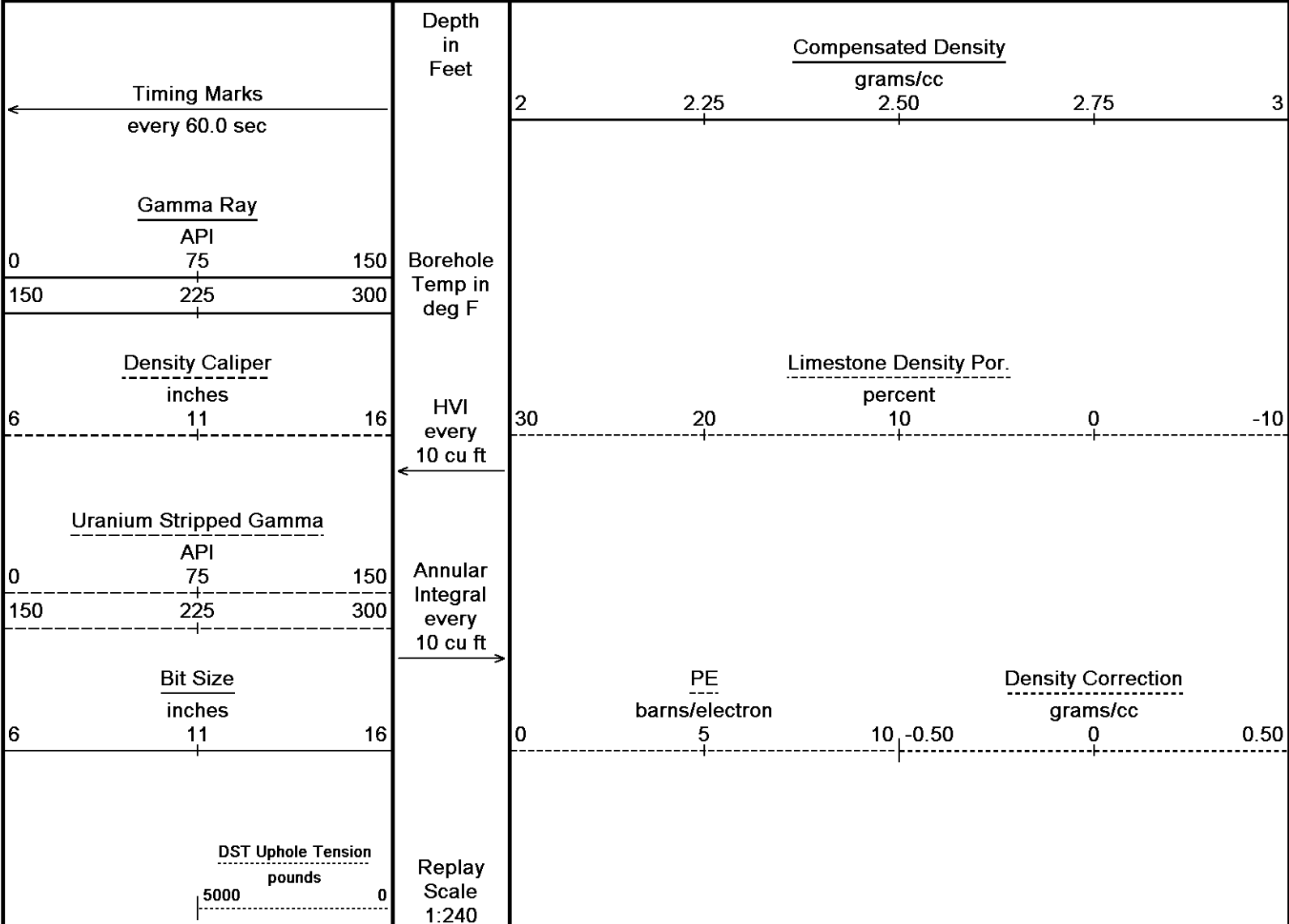


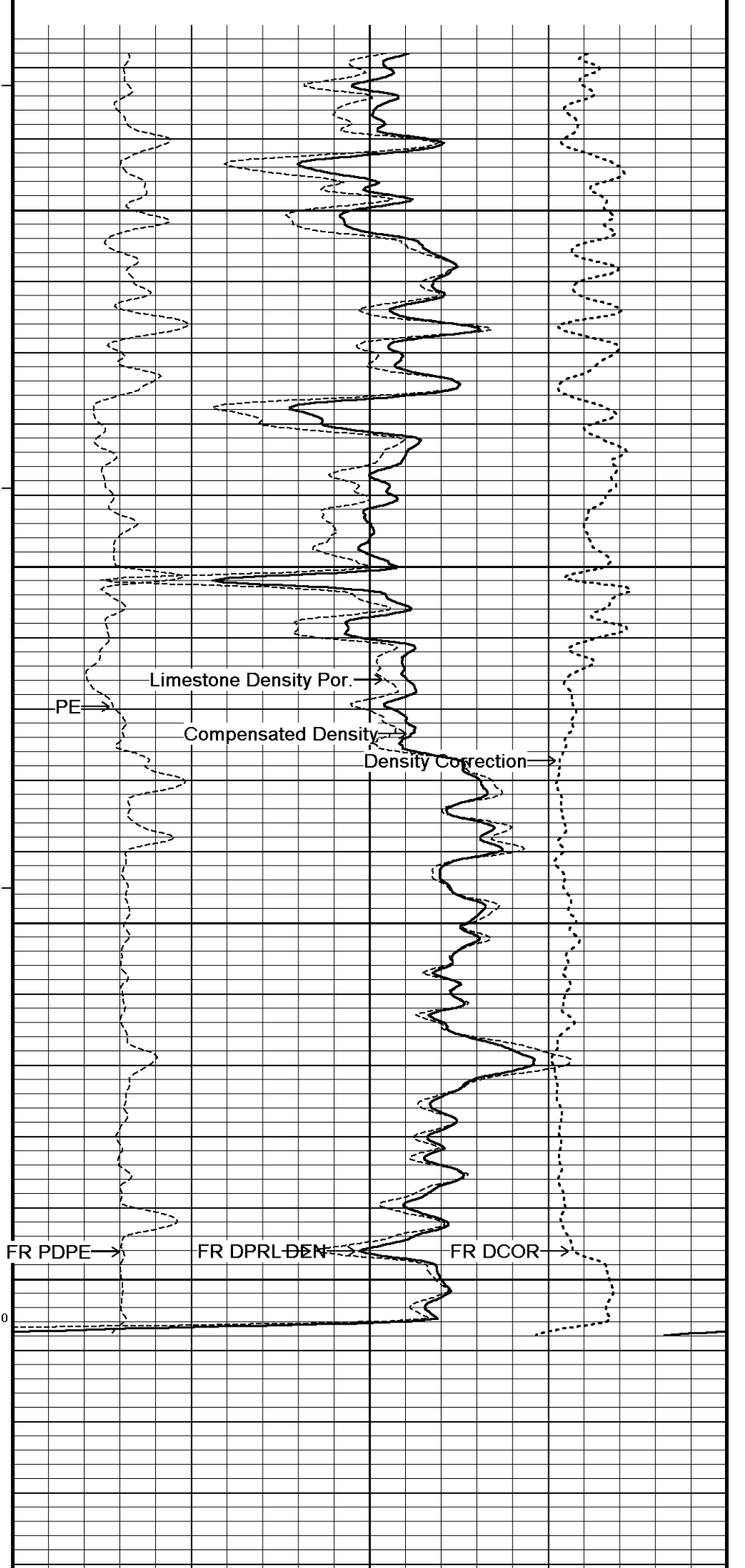
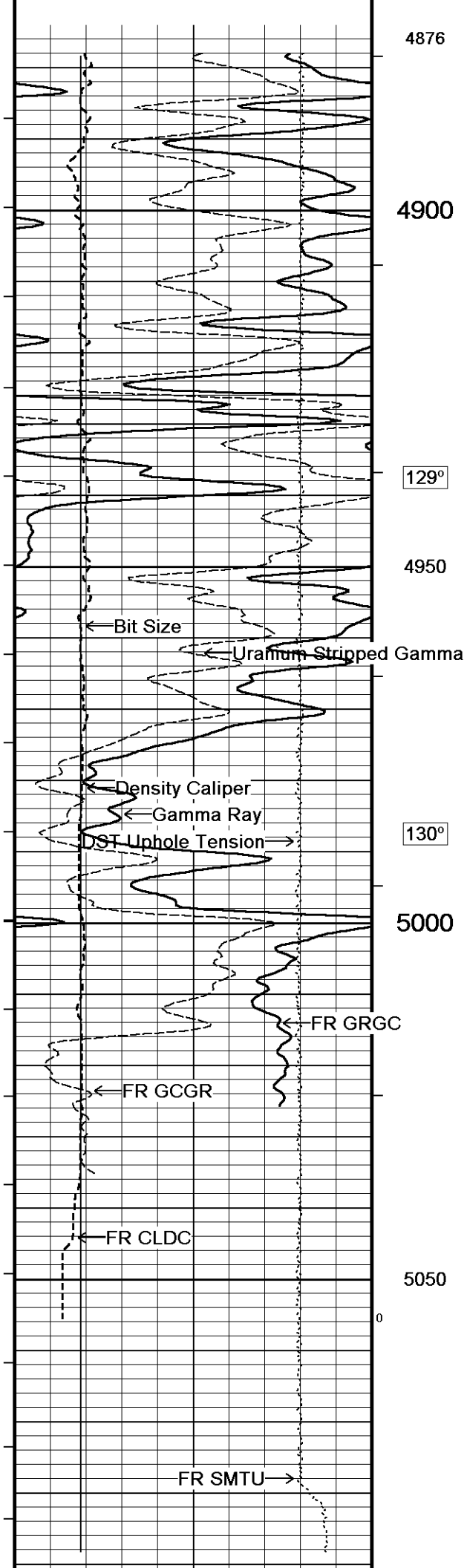
Depth Based Data - Maximum Sampling Increment 2.5cm Plotted on 24-NOV-2013 08:29
 Filename: C:\Minimus 13.05.9583\Logs\McElvain Price 14-5\McElvain Price 14-5 High Res.dta Recorded on 24-NOV-2013 01:03
 System Versions: Logged with 13.05.9583 Plotted with 13.05.9583

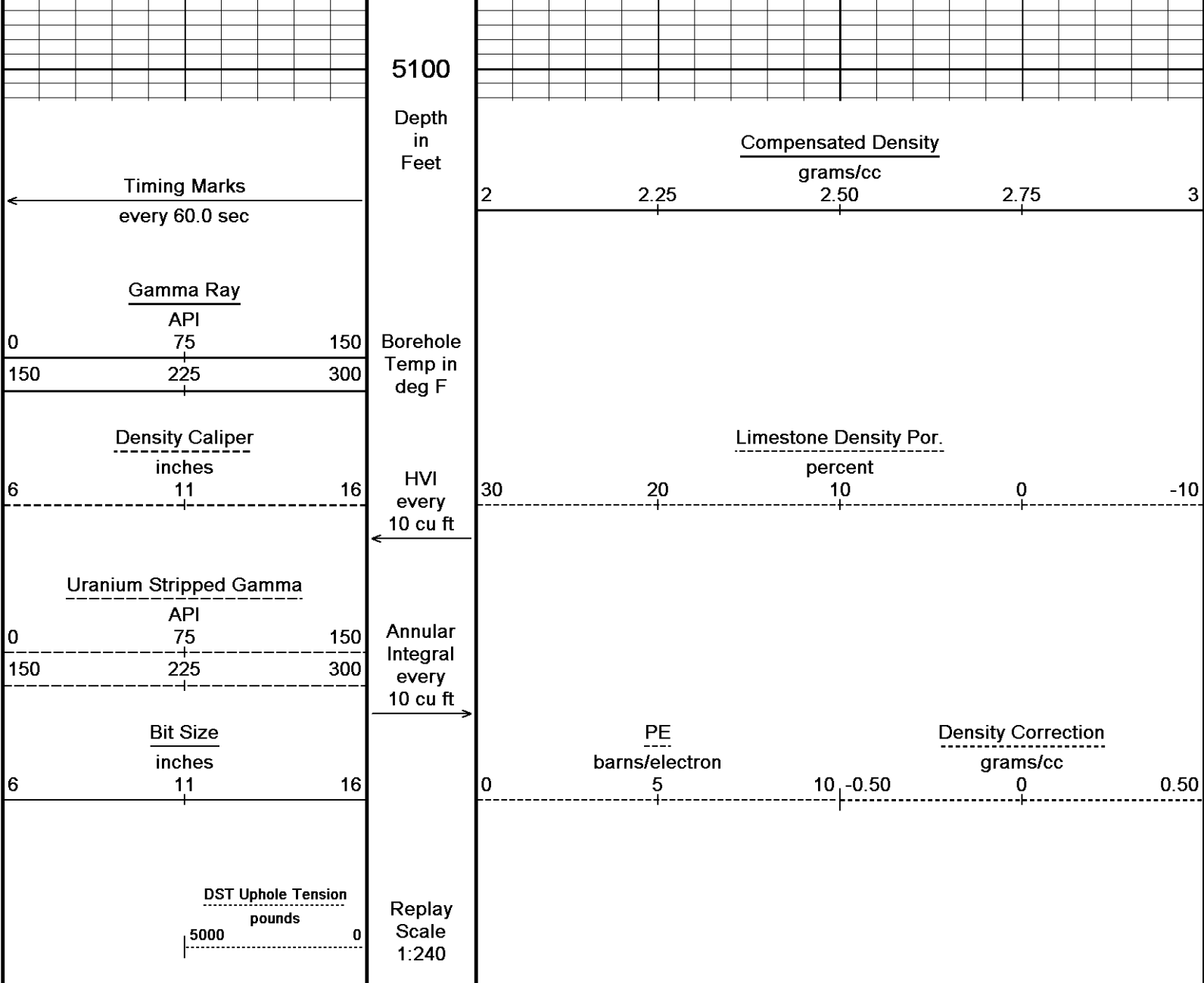
↑ HI-RES ↑

↓ REPEAT SECTION ↓

Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 24-NOV-2013 08:29
 Filename: C:\Minimus 13.05.9583\Logs\McElvain Price 14-5\McElvain Price 14-5 Repeat.dta Recorded on 24-NOV-2013 01:03
 System Versions: Logged with 13.05.9583 Processed with 13.05.9583 Plotted with 13.05.9583







Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 24-NOV-2013 08:29
 Filename: C:\Minimus 13.05.9583\Logs\McElvain Price 14-5\McElvain Price 14-5 Repeat.dta Recorded on 24-NOV-2013 01:03
 System Versions: Logged with 13.05.9583 Processed with 13.05.9583 Plotted with 13.05.9583

↑ REPEAT SECTION ↑

BEFORE SURVEY CALIBRATION

C:\Minimus 13.05.9583\Logs\McElvain Price 14-5\McElvain Price 14-5 Repeat.dta

General Constants All 000 Last Edited on 23-NOV-2013, 18:00

General Parameters		
Mud Resistivity	1.600	ohm-metres
Mud Resistivity Temperature	49.000	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	MMR Caliper	
Rwa Parameters		
Density used		
Greenplot Density		

Porosity used	Crossplot Porosity
Resistivity used	Array Ind. One Res Rt
RWA Constant A	0.610
RWA Constant M	2.150
SW/APOR Tool Source	0.000

Down-hole Tension Calibration SMS 0

Field Calibration on 24-NOV-2013 00:08

Reading No	Measured	Calibrated (lbs)
1	16041.21	0.00
2	17578.24	586.40

SP Calibration MCG-D.K 442

Field Calibration on 21-NOV-2013 09:58

	Measured	Calibrated (mV)
Reference 1	101.5	101.0
Reference 2	-100.1	-100.0

High Resolution Temperature Calibration MCG-D.K 442

Field Calibration on 29-OCT-2013,14:34

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

High Resolution Temperature Constants MCG-D.K 442

Last Edited on 29-OCT-2013,14:34

Pre-filter Length 11

Gamma Calibration MCG-D.K 442

Field Calibration on 21-NOV-2013 09:45

	Measured	Calibrated (API)
Background	72	48
Calibrator (Gross)	1151	773
Calibrator (Net)	1079	725

Gamma Constants MCG-D.K 442

Last Edited on 23-NOV-2013,18:00

Gamma Calibrator Number	GRC38	
Mud Density	1.11	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl		kppm
K Mud Type	Chloride	
K Mud Concentration	0.00	%

Micro Laterolog Calibration MMR-A 11

Base Calibration on 31-DEC-1999 00:00

Field Check on 31-DEC-1999 00:00

Base Calibration				
	Measured	Calibrated (ohm-m)		
	Ref 1	Ref 2	Ref 1	Ref 2
	0.0	0.0	0.0	0.0
	Base Check (ohm-m)	Field Check (ohm-m)		
	0.0	0.0		

Micro Laterolog Constants MMR-A 11

Last Edited on

Pad Type	6 in Solid Nylon B23059	
Micro Laterolog K Factor	0.0128	
Standoff Offset	0.0000	inches
Mudcake Thickness Correction Constants		
Mud Cake Source	Constant Value	
Mud Cake Thickness	0.4000	inches
Mud Cake Thickness Caliper		
Mud Cake Resistivity	0.1500	ohm-m
Mud Cake Resistivity Temp.	68.00	Deg F
Mud Cake Resistivity Source	Constant Value	
Temp. Source Rmc Correc.	MCG External Temperature	

Caliper Calibration MMR-A 11

Base Calibration on 08-NOV-2013 10:58

Field Calibration on 21-NOV-2013 09:33

Base Calibration		
Reading No	Measured	Calibrator Size (in)
1	14402	5.98

1	14402	5.98
2	17571	7.97
3	20586	9.86
4	24421	11.92
5	0	0.00
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.75	7.97

Micro Normal and Micro Inverse Calibration MMR-A 11

Base Calibration on 08-NOV-2013 10:46
Field Check on 21-NOV-2013 09:36

Base Calibration

Channel	Measured		Calibrated (ohm-m)	
	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Micro Normal	12.1	58.6	5.0	25.0
Micro Inverse	15.4	76.2	5.0	25.0

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Micro Normal	78.1	78.1
Micro Inverse	59.8	59.8

Micro Normal and Micro Inverse Constants MMR-A 11

Last Edited on 18-APR-2013,13:52

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	0.0000	inches	

Neutron Calibration MDN-A.B 65

Base Calibration on 20-NOV-2013 11:14
Field Check on 20-NOV-2013 11:32

Base Calibration

Ratio	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3004	93	3714	110
	32.208		33.764	

Field Calibrator at Base

Ratio	Calibrated (cps)
	1696 2451
	0.692

Field Check

Ratio	Calibrated (cps)
	1693 2463
	0.687

Neutron Constants MDN-A.B 65

Last Edited on 23-NOV-2013,18:01

Neutron Source Id	PN-521	
Neutron Jig Number	5824NE	
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	None	
Formation Pressure	N/A	kpsi
Temperature Source	Constant Value	
Temperature	68.00	degrees F
Mud Salinity	0.00	kppm
Salinity Correction	Not Applied	
Formation Fluid Salinity Source	None	
Formation Fluid Salinity	N/A	kppm
Barite Mud Correction	Not Applied	

FE Calibration MFE-B.J 352

Base Calibration on 08-NOV-2013 11:12
Field Check on 21-NOV-2013 09:38

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	964.9	126.8

Base Check 281.1

Field Check 281.2

FE Constants MFE-B.J 352

Last Edited on 23-NOV-2013,18:01

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

Sonic Constants MSS-A.A 55

Last Edited on 23-NOV-2013,18:01

Maximum Boundary Contrast	100.00	micro-sec/ft
Fluid Transit Time	189.00	micro-sec/ft
Limestone Transit Time	47.50	micro-sec/ft
Sandstone Transit Time	55.50	micro-sec/ft
Dolomite Transit Time	43.50	micro-sec/ft

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	83.13	micro-sec/ft

Sonde Mode	Compensated
Hole Type	Open Hole

Sonde Parameters

	Measured	Calibrated
Offset	N/A	0.0000
Free Pipe	N/A	N/A
Peak Amplitude Source		N/A

Waveform	Start Time (micro-sec)	Width (micro-sec)	Pre Gain	Start Gain	Discriminator (mV)
3'	N/A	N/A	N/A	N/A	N/A
4'	N/A	N/A	N/A	N/A	N/A
5'	N/A	N/A	N/A	N/A	N/A
6'	N/A	N/A	N/A	N/A	N/A

Processed Fixed Gate Parameters

Waveform Used For Processing	N/A			
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

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

High Resolution Temperature Calibration MAI-A.A 45

Field Calibration on 29-OCT-2013,14:20

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

High Resolution Temperature Constants MAI-A.A 45

Last Edited on 29-OCT-2013,14:20

Pre-filter Length 11

Induction Calibration MAI-A.A 45

Base Calibration on 21-MAY-2013,16:47

Field Check on 21-NOV-2013 09:40

Base Calibration

Test Loop Calibration

Channel	Measured		Calibrated (mmho/m)	
	Low	High	Low	High
1	14.4	472.6	9.3	966.2
2	5.7	374.0	7.6	821.4
3	3.4	261.2	5.2	566.0
4	2.5	133.9	2.6	279.2

Array Temperature 0.0 Deg F

Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1			18.5	3851.6
2			31.7	3629.5
3			28.6	3049.4
4			18.3	2079.1
Deep			16.1	1911.1
Medium			42.5	4060.7
Shallow			49.5	5483.5

Array Temperature 62.9 Deg F

Induction Constants MAI-A.A 45

Last Edited on 23-NOV-2013,18:02

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	8.0000		
Stand-off Fin Angle	45.00	degrees	
Stand-off Fin Width	0.5000	inches	
Borehole Corr. Rm Source	Temperature Corr		
Temp. for Rm Corr.	MCG External Temperature		
Squasher Start	0.0020	mhos/metre	
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 Cu	0.05	ohm m

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	

Photo Density Calibration MPD-B 31

Base Calibration on 20-NOV-2013 10:41
Field Check on 20-NOV-2013 10:47

Density Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Base Calibration				
Reference 1	45885	23182	59556	30836
Reference 2	18785	1902	24941	2541
Field Check at Base				
	671.6	820.8		
Field Check				
	670.2	825.6		

PE Calibration	WS	Measured		Calibrated Ratio
		WH	Ratio	
Base Calibration				
Background	123	595		
Reference 1	19304	45771	0.425	0.371
Reference 2	5624	18702	0.304	0.272
Field Check at Base				
	122.7	594.8		
Field Check				
	124.5	591.8		

Density Constants MPD-B 31

Last Edited on 23-NOV-2013,18:01

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	1.11	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	

Caliper Calibration MPD-B 31

Base Calibration on 20-NOV-2013 10:19
Field Calibration on 20-NOV-2013 10:21

Base Calibration	Measured	Calibrator Size (in)
Reading No		
1	18720	3.99
2	27472	5.98
3	36127	7.97
4	44368	9.86
5	53568	11.92
6	N/A	N/A
Field Calibration		
	Measured Caliper (in)	Actual Caliper (in)
	7.90	7.97

Base Calibration

Potassium Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	79.9	23.1	2.2	0.8	1.4
Calibrator (Gross)	204.7	109.8	22.0	0.9	1.3
Calibrator (Net)	124.8	86.7	19.7	0.2	-0.1

Concentrations	K %	U ppm	Th ppm
	5.8	0.0	0.0

Uranium Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	79.9	23.1	2.2	0.8	1.4
Calibrator (Gross)	480.7	164.8	14.5	7.2	4.1
Calibrator (Net)	400.8	141.7	12.3	6.5	2.7

Concentrations	K %	U ppm	Th ppm
	0.0	9.8	0.0

Thorium Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	79.9	23.1	2.2	0.8	1.4
Calibrator (Gross)	397.7	137.8	11.3	6.3	15.0
Calibrator (Net)	317.8	114.7	9.0	5.6	13.6

Concentrations	K %	U ppm	Th ppm
	0.0	0.0	44.3

Mixture Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	79.9	23.1	2.2	0.8	1.4
Calibrator (Gross)	914.0	361.7	43.2	12.9	17.8
Calibrator (Net)	834.0	338.5	41.0	12.1	16.4

Field Calibration

Gamma Ray

	Measured	Calibrated (API)
Background	112	23
Calibrator (Gross)	1354	273
Calibrator (Net)	1242	250

Mixture Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	79.9	23.1	2.2	0.8	1.4
Calibrator (Gross)	914.0	361.7	43.2	12.9	17.8
Calibrator (Net)	834.0	338.5	41.0	12.1	16.4

Spectral Gamma Constants SGS-E.J 150

Last Edited on 23-NOV-2013,18:01

Background Calibrator Number	0	
Mixture Calibrator Number	147-1	
Potassium Calibrator Number	148-1	
Uranium Calibrator Number	150-1	
Thorium Calibrator Number	149-1	
Mud Density	1.11	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl		kppm
K Mud Type	Chloride	
K Mud Concentration	0.00	%

DOWNHOLE EQUIPMENT

C:\Minimus 13.05.9583\Logs\McElvain Price 14-5\McElvain Price 14-5 Repeat.dta

CBH-C, Cablehead, 11 pin
CBH-CA 170, LG: 2.40 ft, WT: 24.3 lb, OD: 2.24 in

Compact Comms Gamma
MCG-D.K 442 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Spectral Gamma Ray Sub
SGS-E.J 150 LG: 7.78 ft WT: 105.8 lb OD: 3.54 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

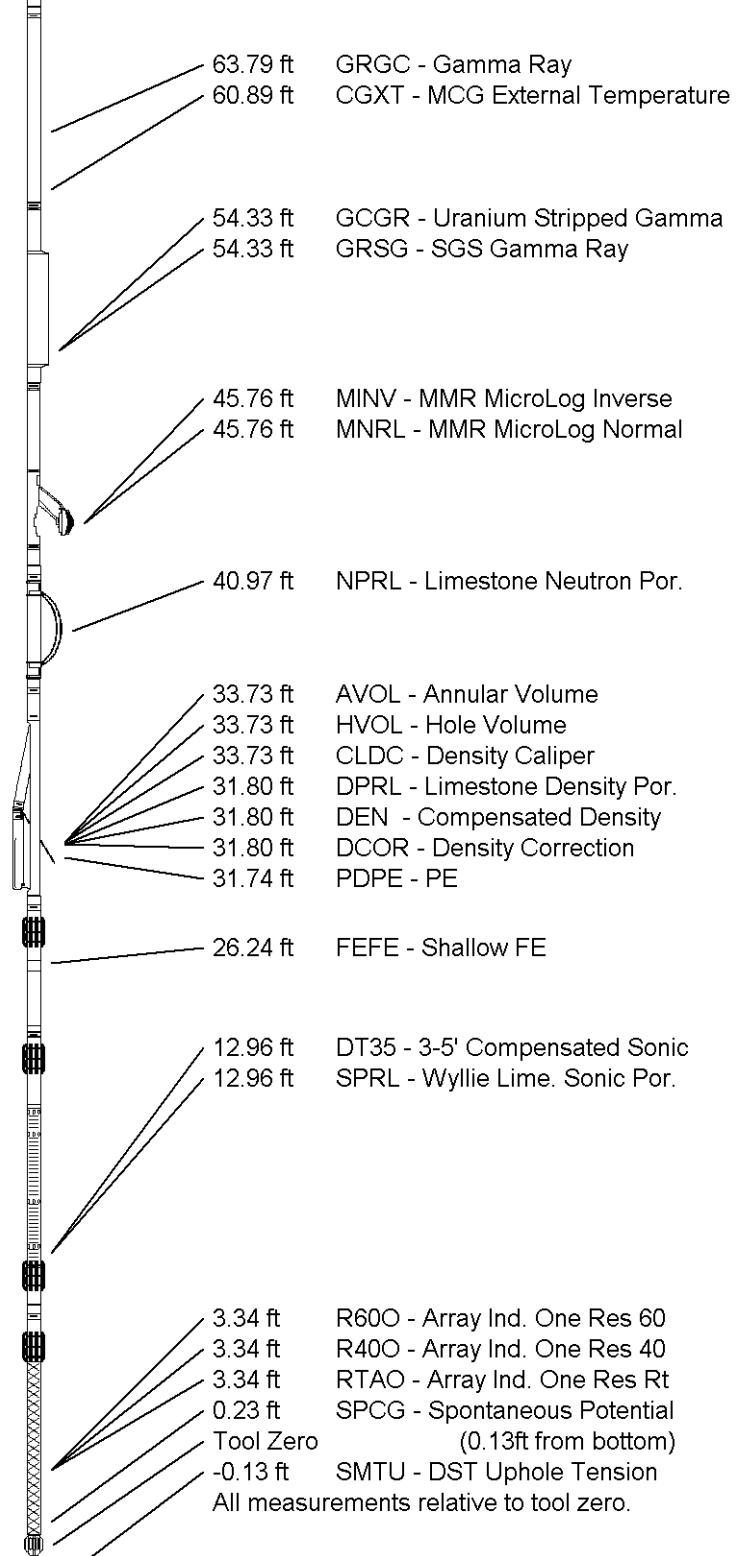
Compact Density/Caliper
MPD-B 31 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

Compact Focused Electric
MFE-B.J 352 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Sonic
MSS-A.A 55 LG: 12.52 ft WT: 72.8 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: 71.47 ft Weight: 586.4 lb



COMPANY	MCELVAIN ENERGY, INC.
WELL	PRICE 14-5
FIELD	LIANOS SE
PROVINCE/COUNTY	SHERMAN
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	3452.00	feet	First Reading	5046.00	feet
Elevation Drill Floor	3450.00	feet	Depth Driller	5082.00	feet
Elevation Ground Level	3441.00	feet	Depth Logger	5078.00	feet



COMPACT PHOTO DENSITY

COMPENSATED NEUTRON

Weatherford[®]

COMPENSATED NEUTRON
MICRORESISTIVITY LOG