



Weatherford

**CML MESSENGER SHUTTLE
COMPACT PHOTO DENSITY
COMPENSATED NEUTRON LOG**

COMPANY	SANDRIDGE ENERGY		
WELL	MAIN 2924 1-30H		
FIELD	UNNAMED		
PROVINCE/COUNTY	FORD		
COUNTRY/STATE	USA \ KANSAS		
LOCATION	N2 N2 NW NW 200FNL & 660' FWL		
SEC	TWP 30 29S	RGE 24W	Other Services MAI
API Number	15-057-20849		SGS
Permit Number			
Permanent Datum GL, Elevation 2600 feet			Elevations: KB 2618.00 DF 2618.00 GL 2600.00
Log Measured From KB			
Drilling Measured From KB @ 18' AGL			
Date	28-NOV-2012		
Run Number	ONE		
Depth Driller	9795.00		feet
Depth Logger	9795.00		feet
First Reading	9703.00		feet
Last Reading	5450.00		feet
Casing Driller	5793.00		feet
Casing Logger	5793.00		feet
Bit Size	6.125		inches
Hole Fluid Type	WBM		
Density / Viscosity	9.60 lb/USg	40.00 CP	
PH / Fluid Loss	10.50	6.80 ml/30Min	
Sample Source	FLOWLINE		
Rm @ Measured Temp	0.21 @ 75.0		ohm-m
Rmf @ Measured Temp	0.17 @ 75.0		ohm-m
Rmc @ Measured Temp	0.25 @ 75.0		ohm-m
Source Rmf / Rmc	CALC	CALC	
Rm @ BHT	0.14 @120.0		ohm-m
Time Since Circulation	18 HOURS		
Max Recorded Temp	120.00		deg F
Equipment Name	COMPACT		
Equipment / Base	18006	OKC	
Recorded By	GUTHMUELLER		
Witnessed By	J CLARK		J CHAPMAN
AFE# DC12522	SO# 3538723		

BOREHOLE RECORD					Last Edited: 28-NOV-2012 22:58
Bit Size inches		Depth From feet		Depth To feet	
8.750		0.00		5793.00	
6.125		5793.00		9795.00	
CASING RECORD					
Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft	
INTER	7.000	0.00	5793.00	26.00	

REMARKS
LOGGED WITH WLS VER 13.03.779 SOFTWARE
TOOLS RAN: SRT-070; MBS-135;MMSE-167; MTI-072; MGS-135; MCL-060; SKJ-041; SHA-033; MISD-310; MDN-388; MPD-435;MISD-609; SHA-454; SKJ-042; MISE-573; MFE-329; MISE575; SGS-170; MISE-577; MAI-389
WELL LOGGED USING MESSENGER METHOD OF DEPLOYMENT, AND MEMORY LOGGING SYSTEM
HARDWARE: MAI:0.5" MISE STANDOFF ABOVE ISA STANDOFF BELOW MFE: 0.5" MISE STANDOFFS ABOVE AND BELOW MPD: 4"PROFILE PLATE, MIS-A SINGLE SPRING DECENTRALIZER BELOW MDN: MISD DOUBLE SPRING DECENTRALIZER RAN ABOVE
2.71 G/CC DENSITY MATRIX USED TOCALCULATE POROSITY ALL INTERVALS LOGGED AND SCALED PER CUSTOMER REQUEST
DRILL PIPE DEPTH DURING DEPLOYMENT - 9661 LOGGING TOOL DEPTH AFTER DEPLOYMENT- 9763

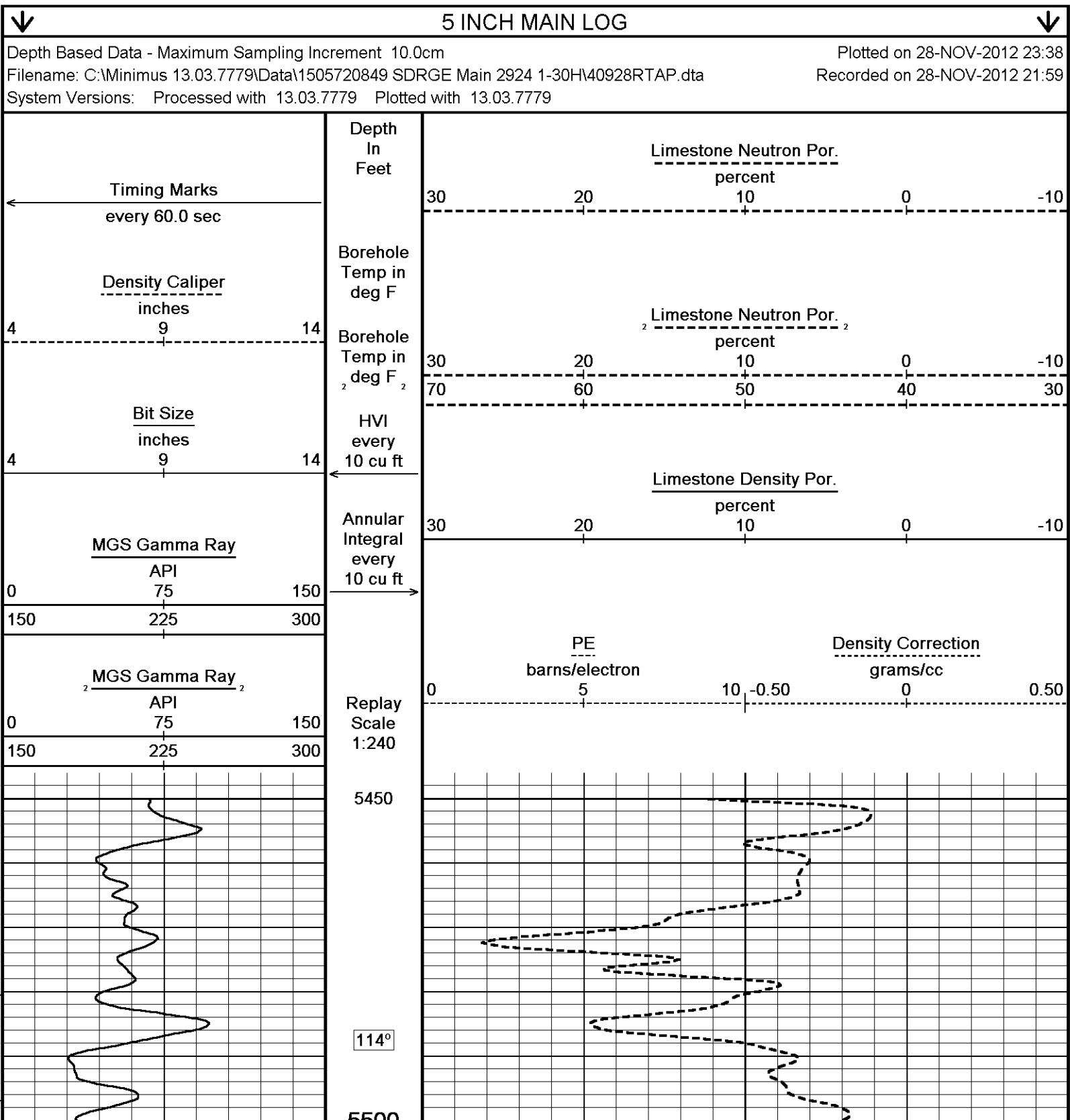
4.5" CASING USED TO CALCULATE AHV

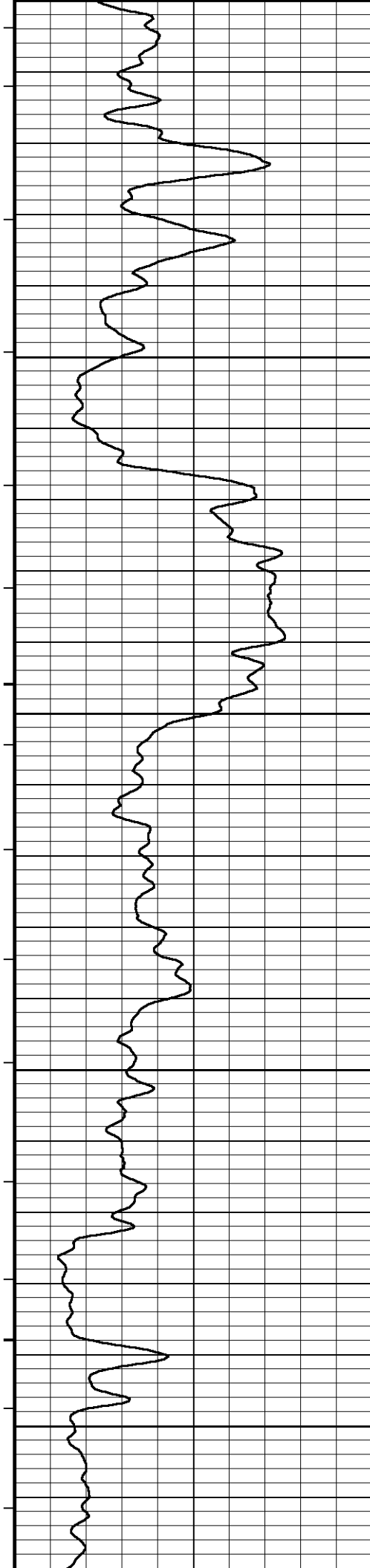
SERVICE ORDER # 3538723

RIG: LARIAT #3

OPERATORS: D TURNER; C HAWKINS

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.





5500

114°

5550

115°

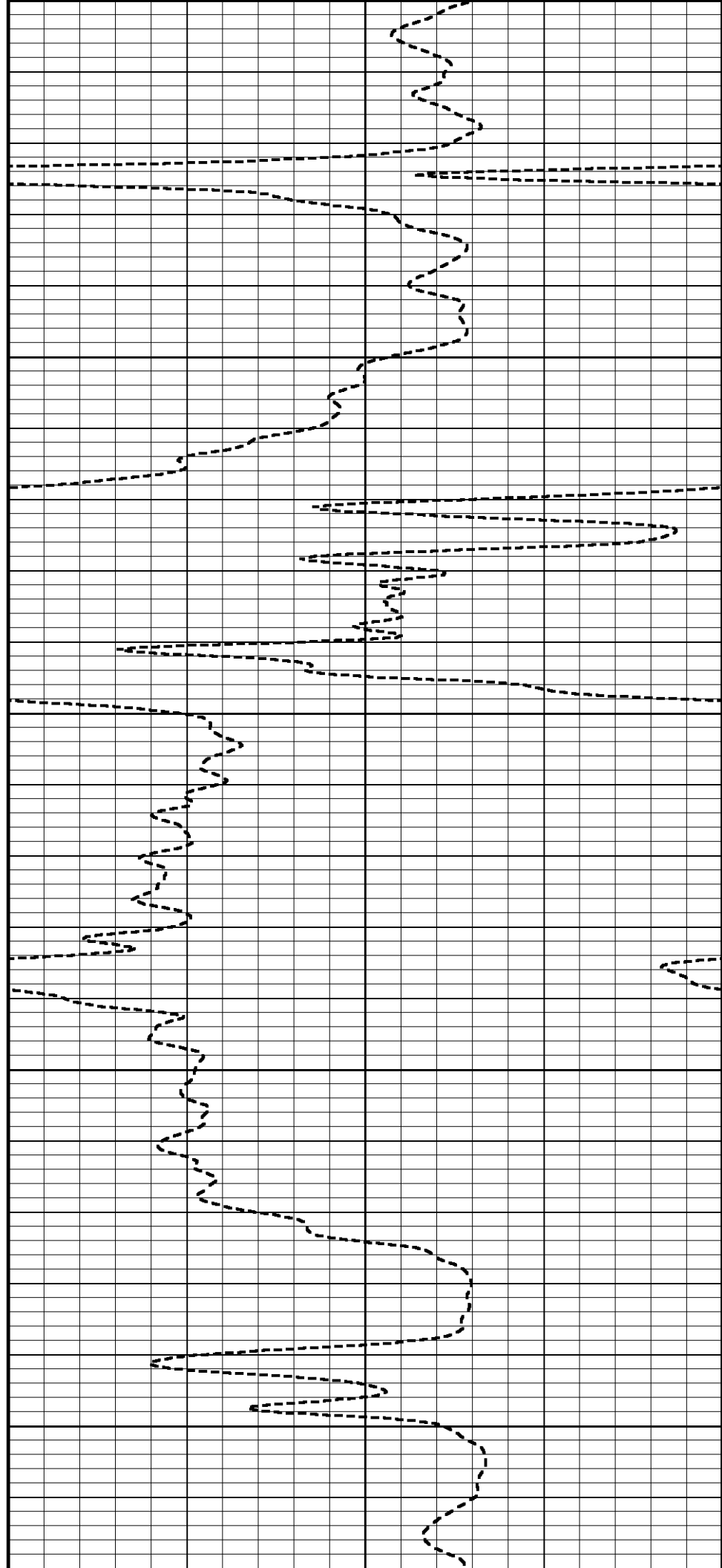
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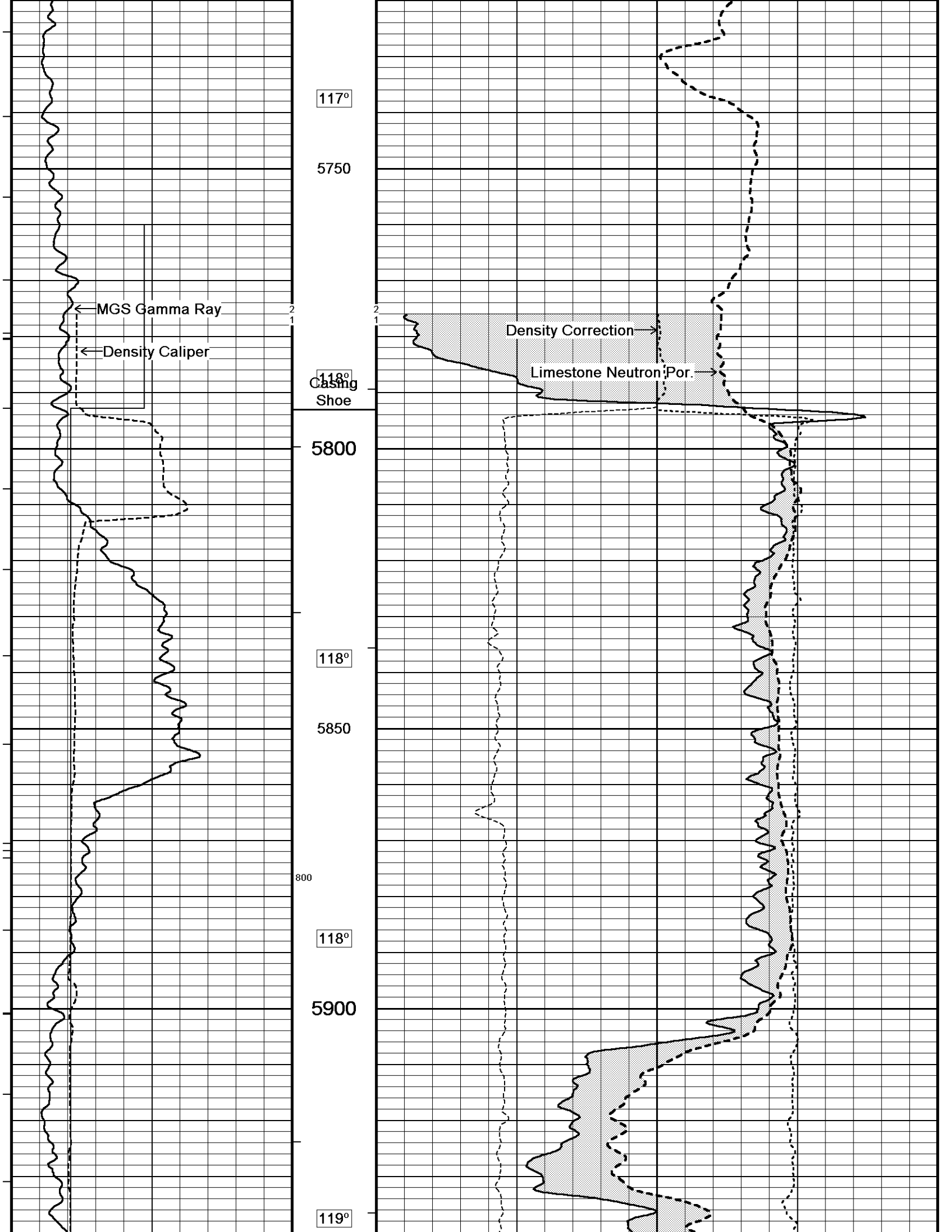
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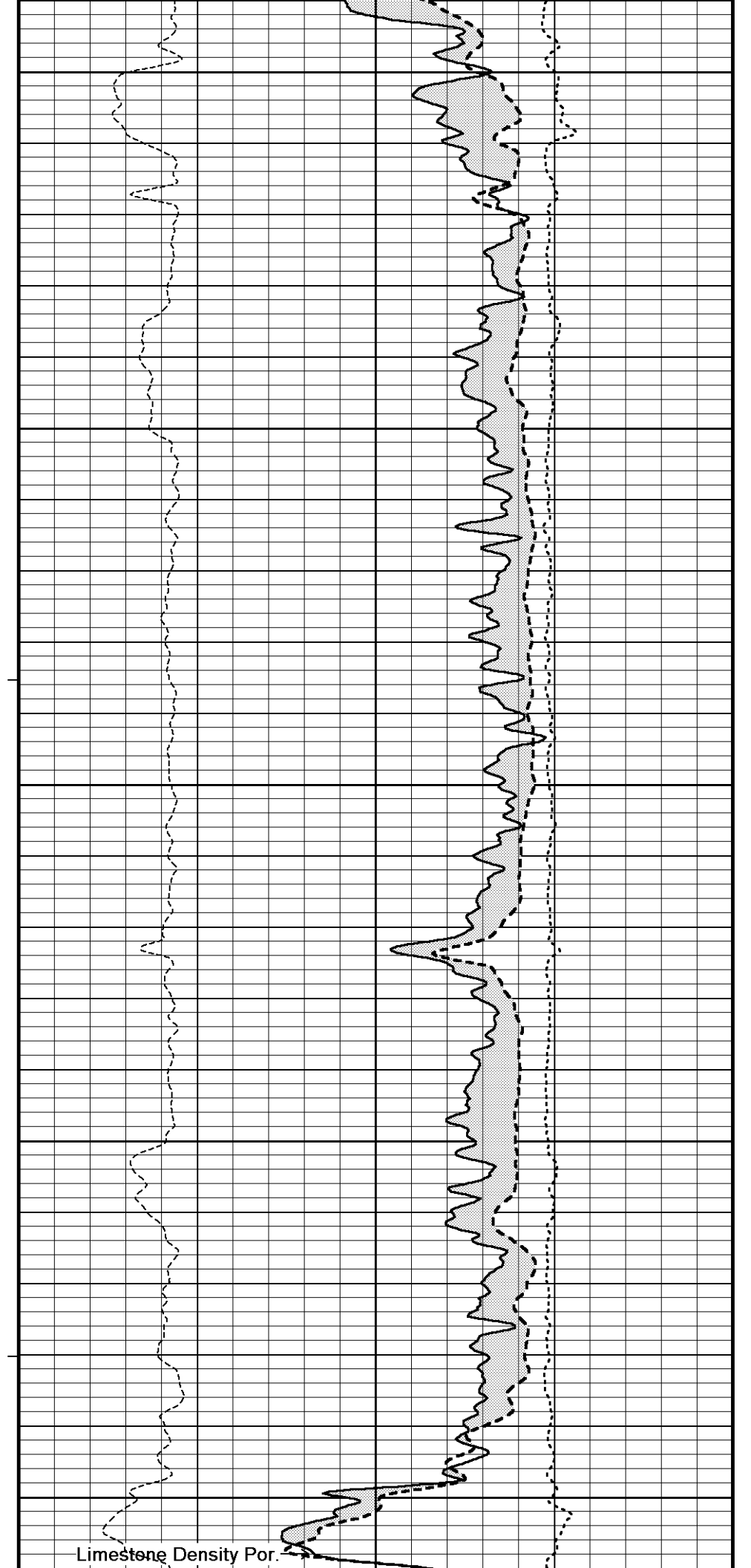
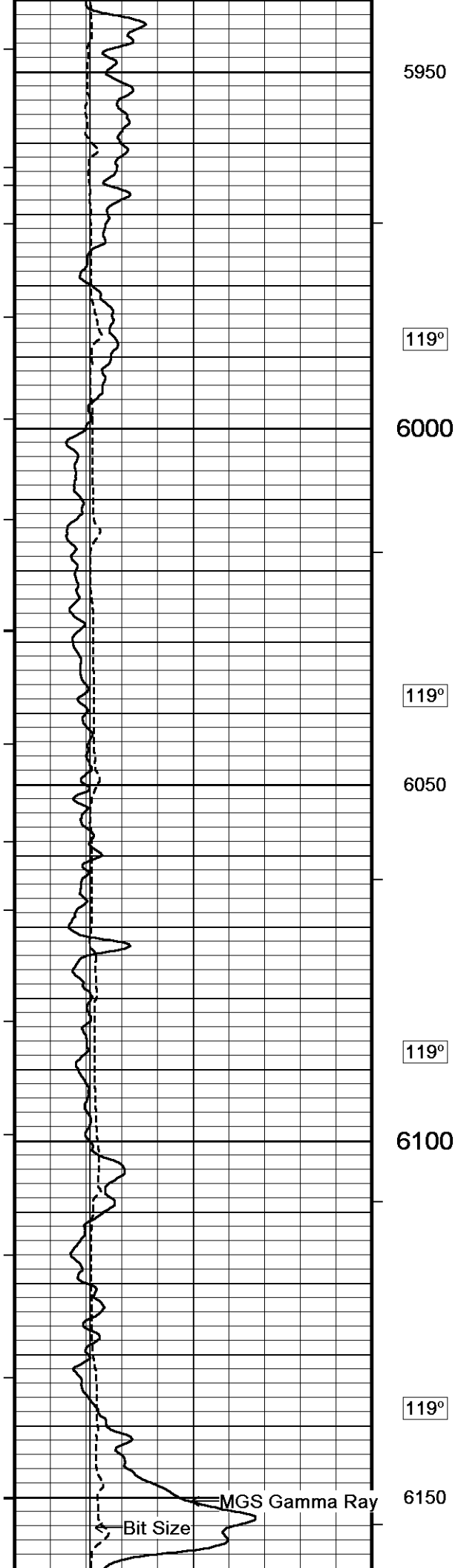
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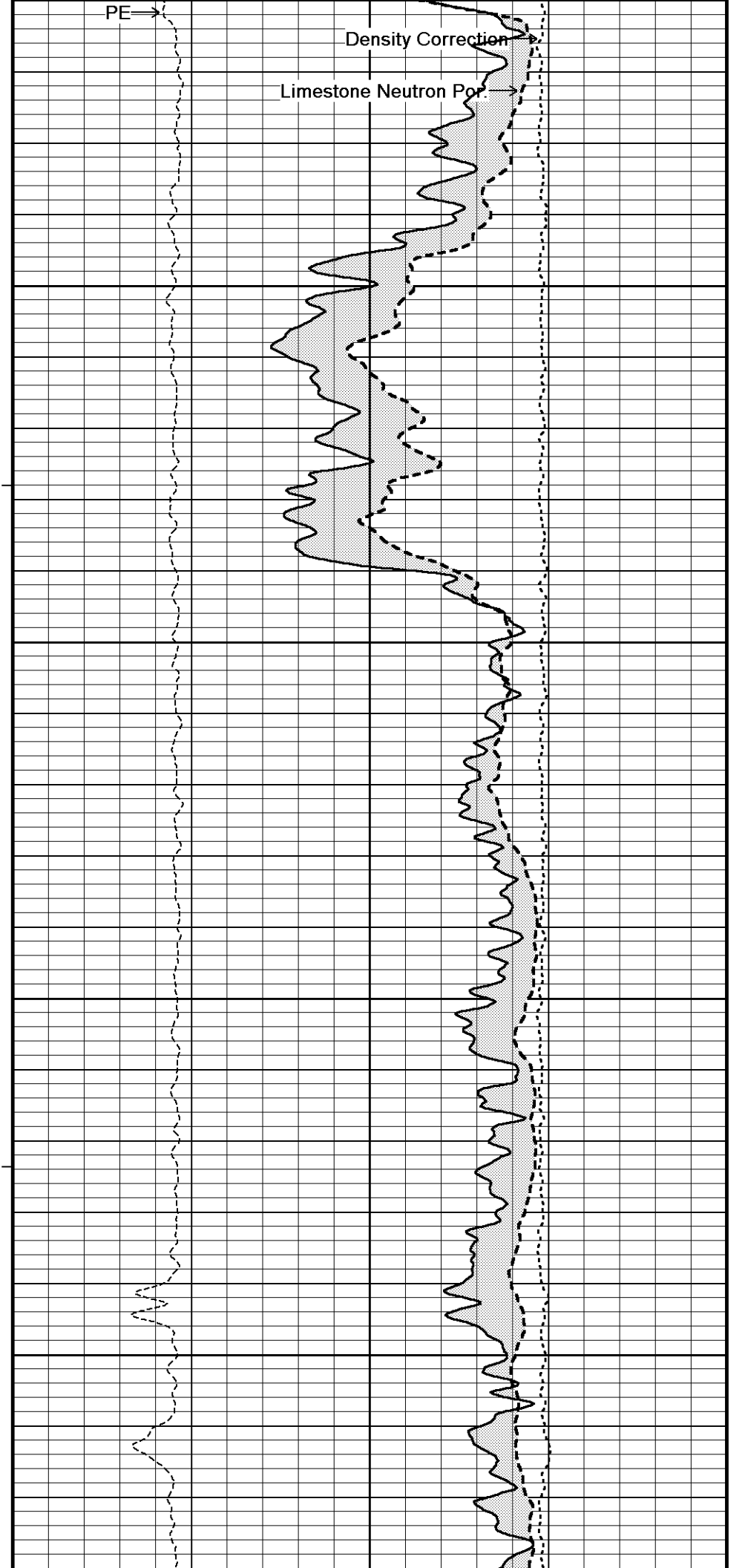
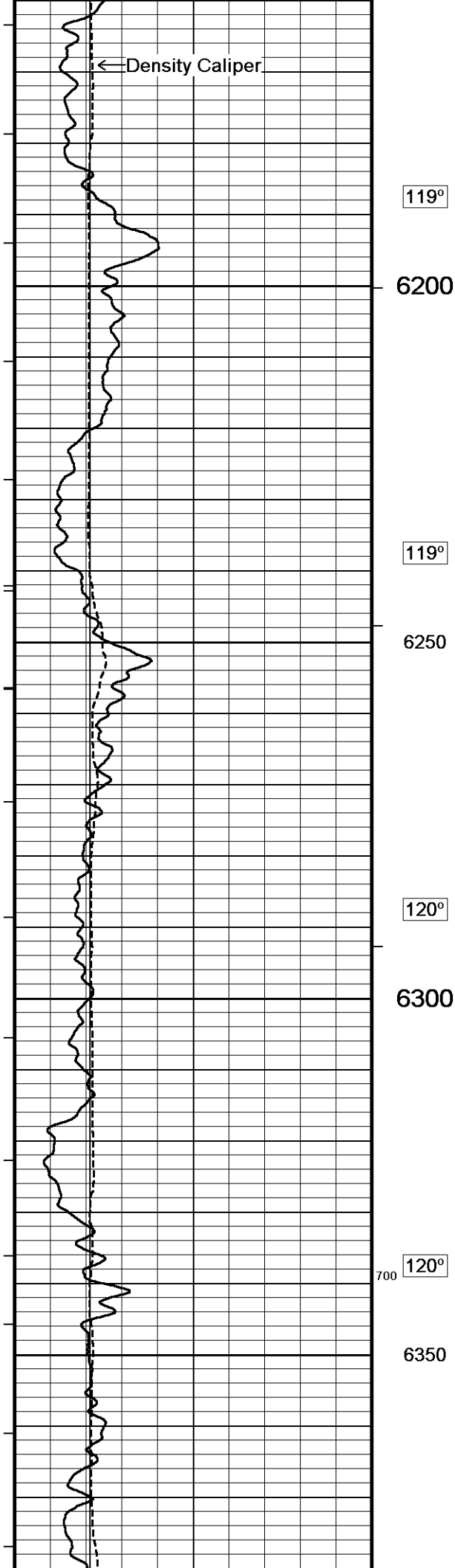
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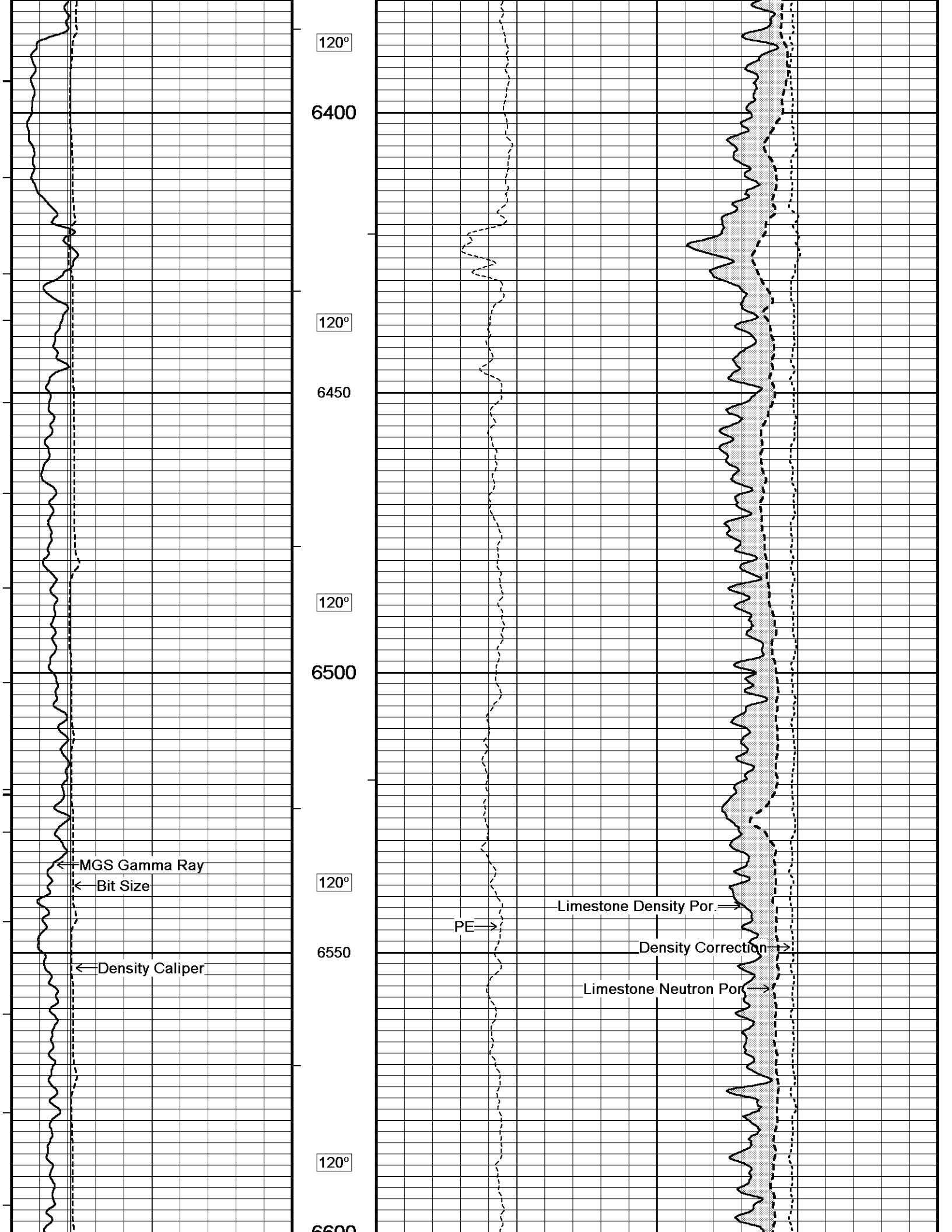
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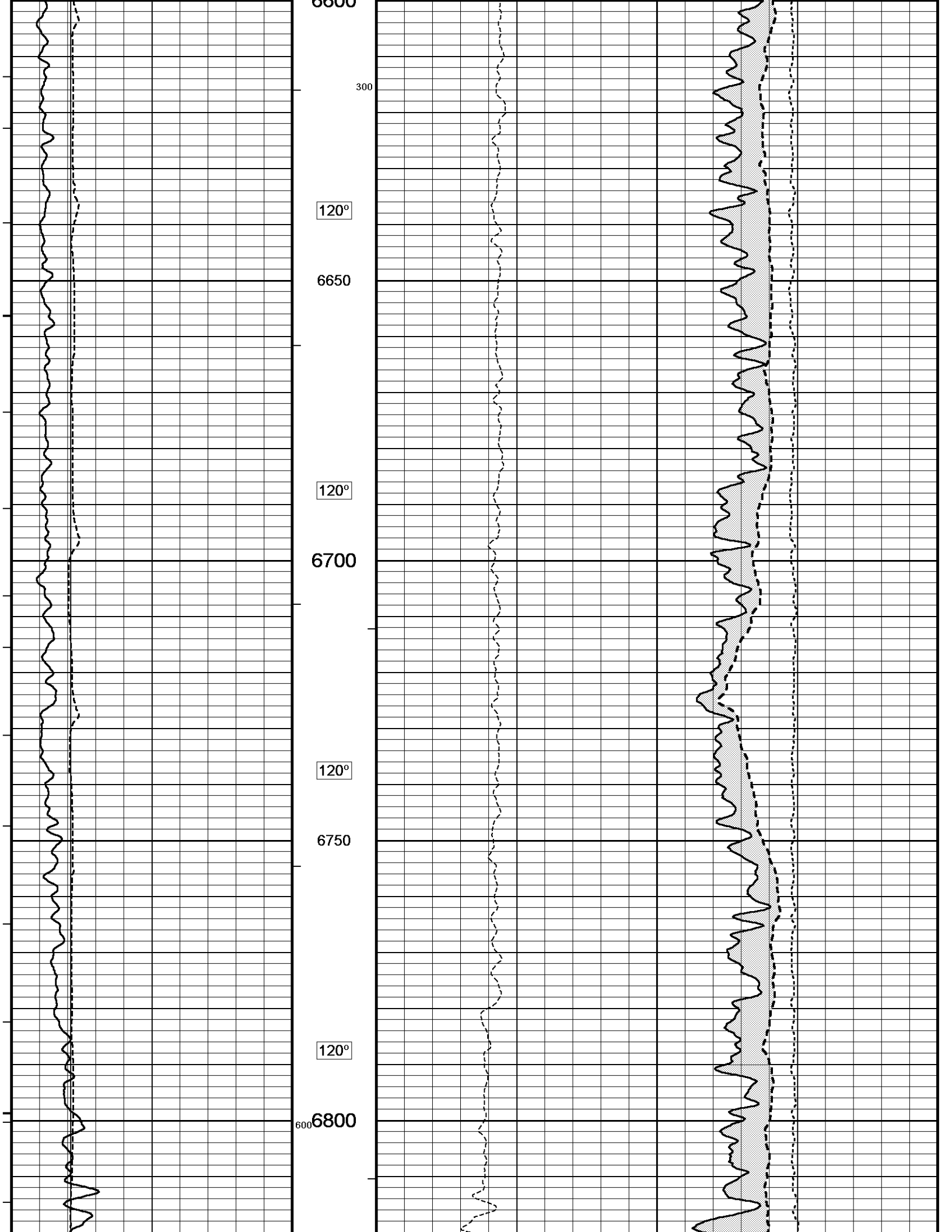


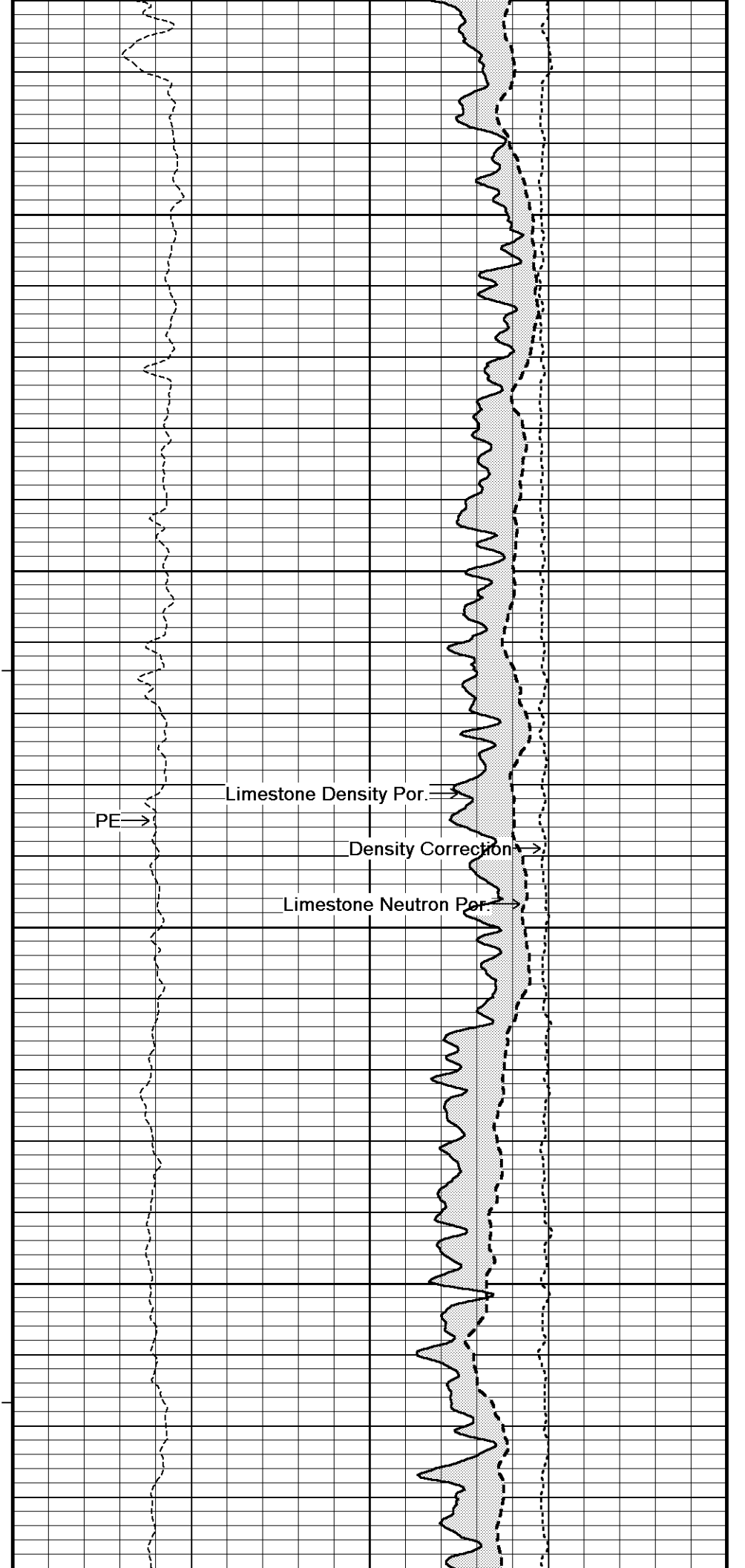
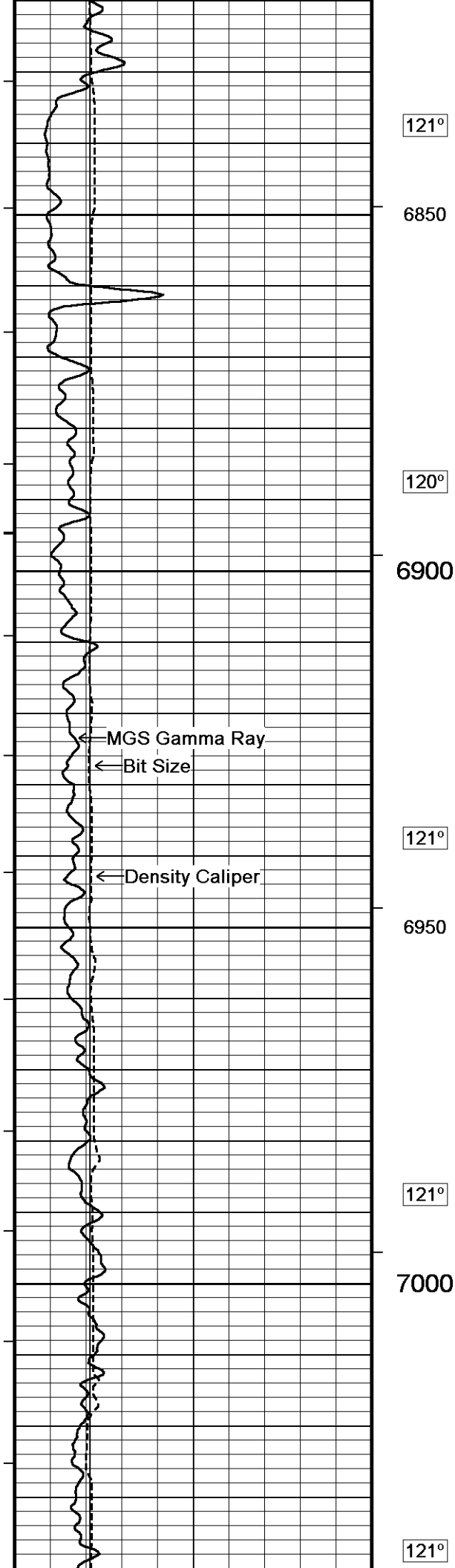


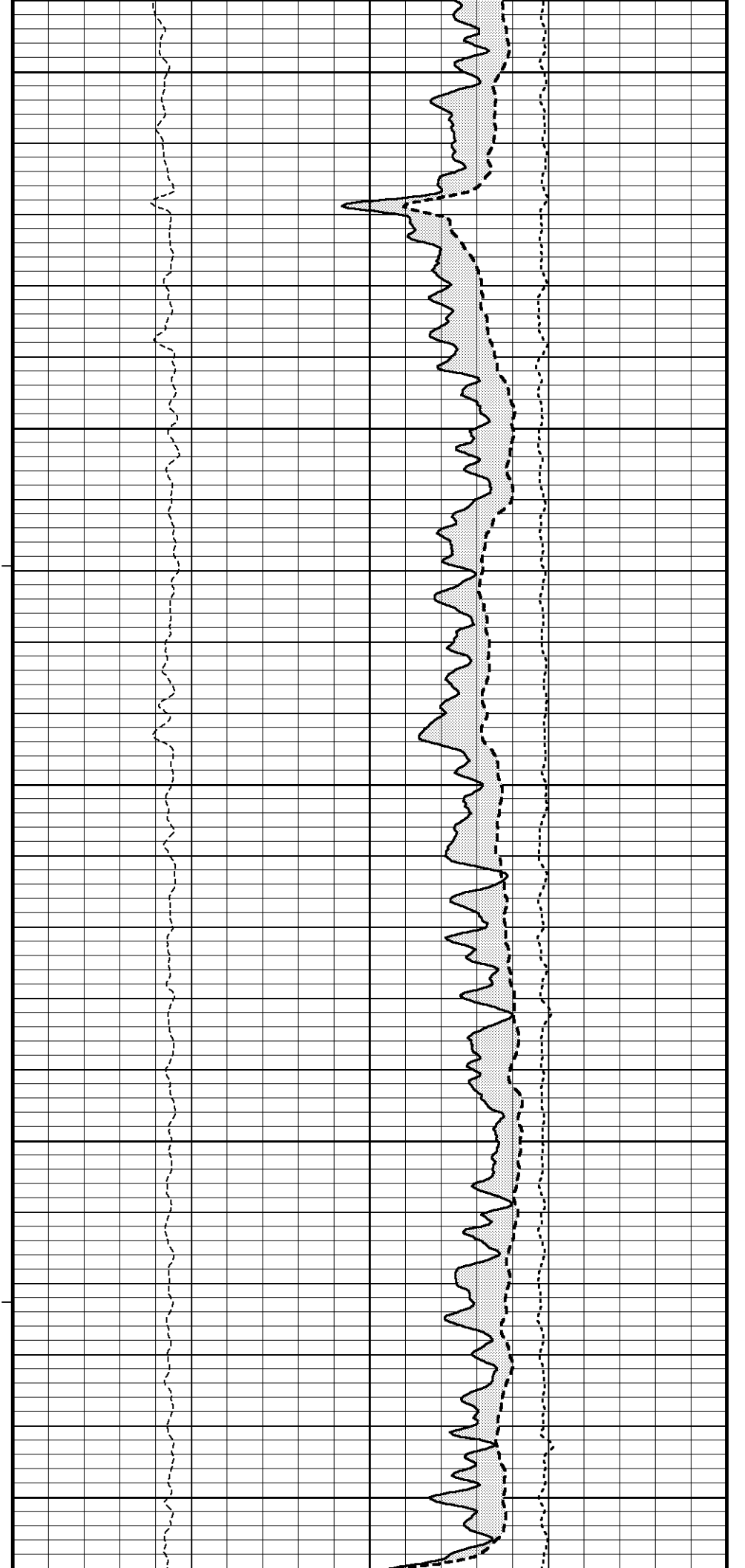
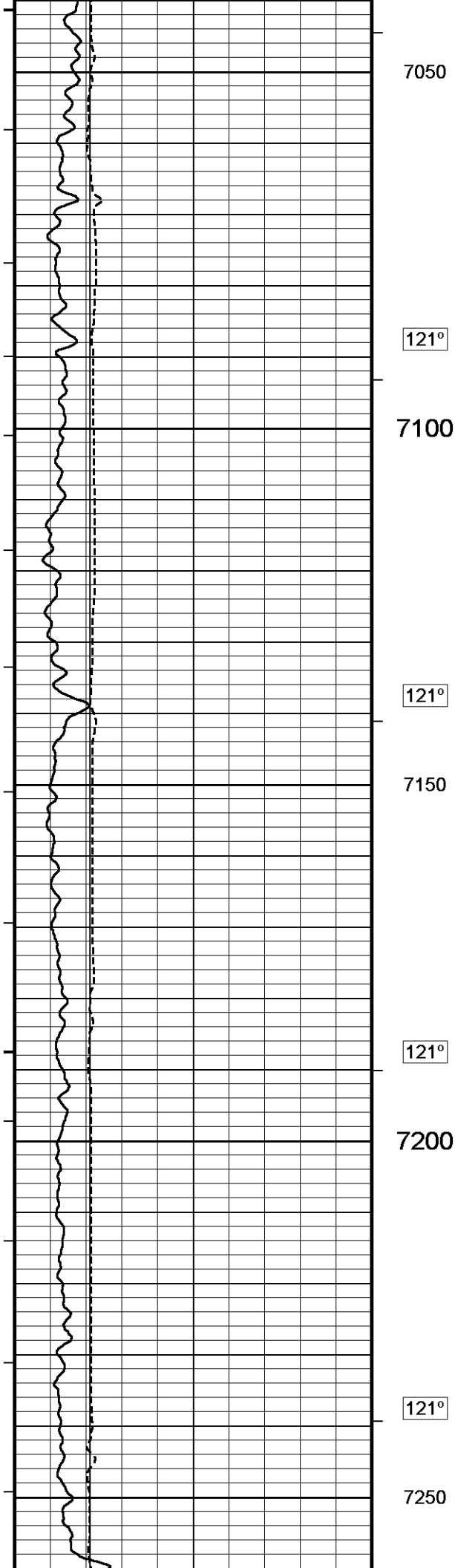


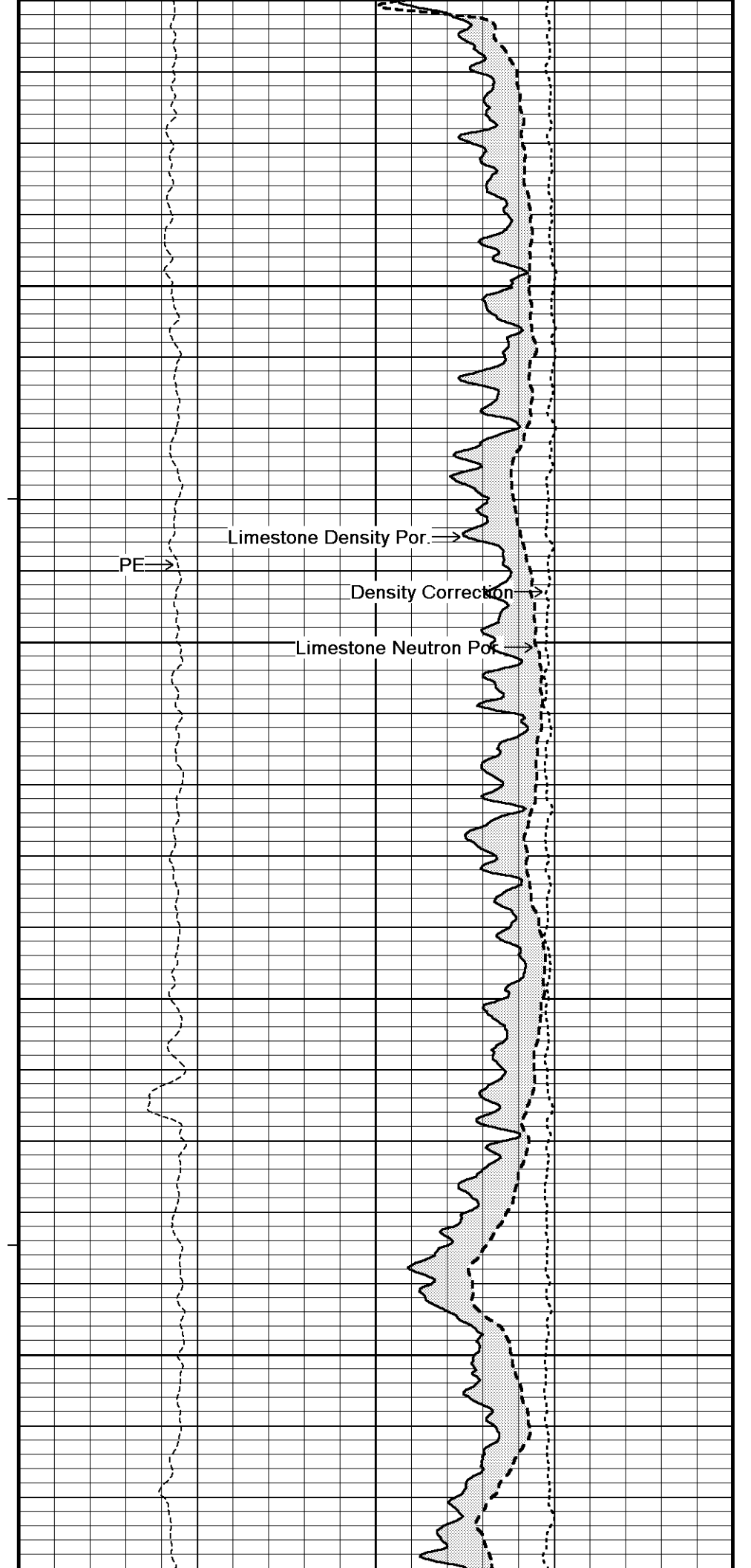
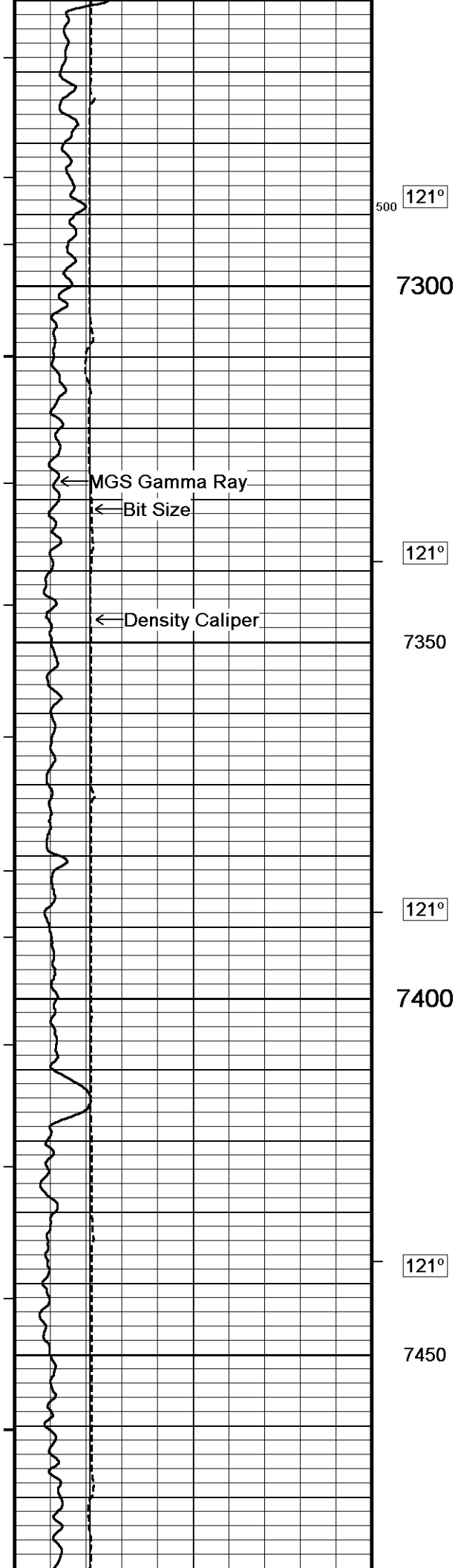


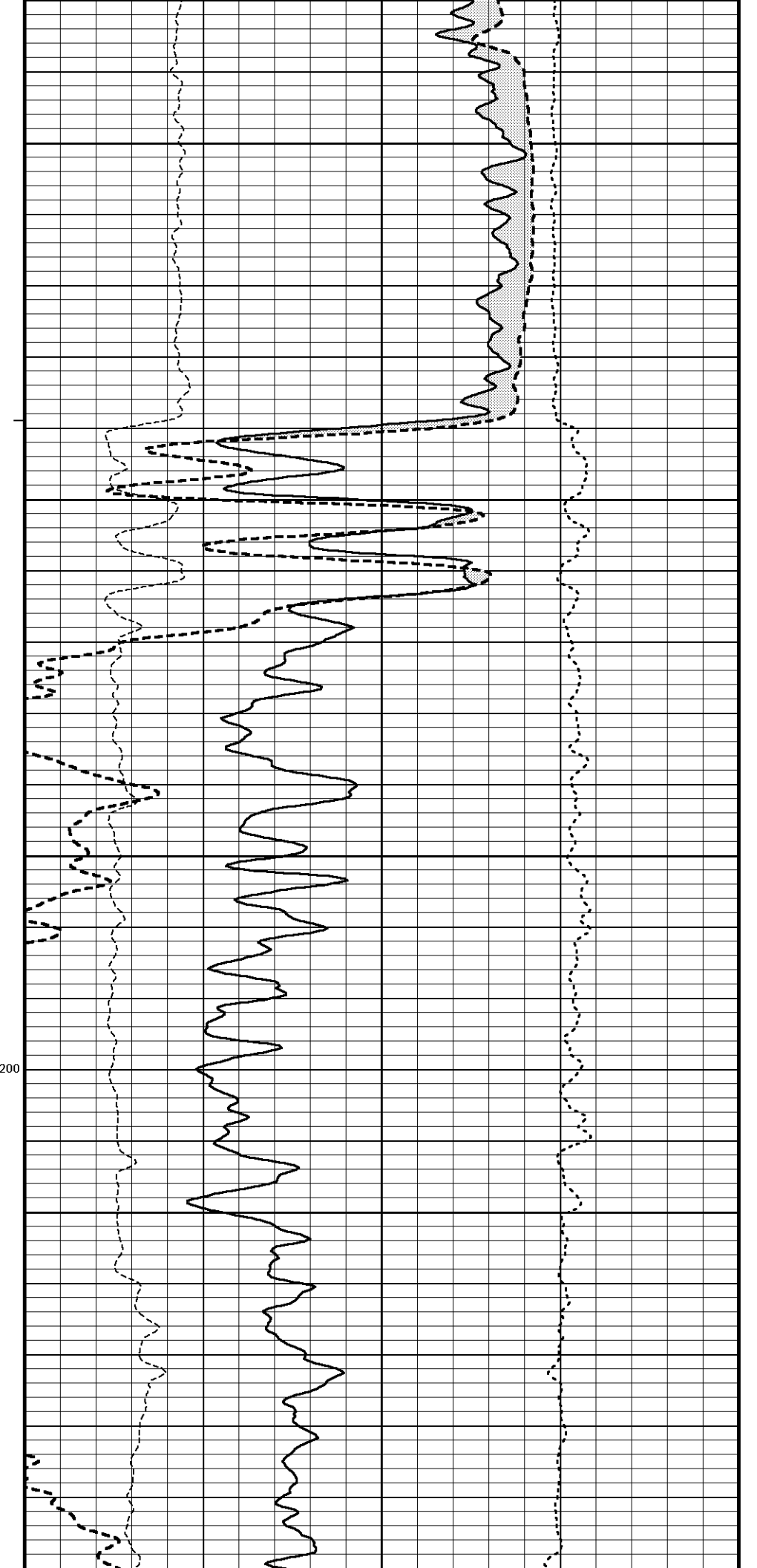
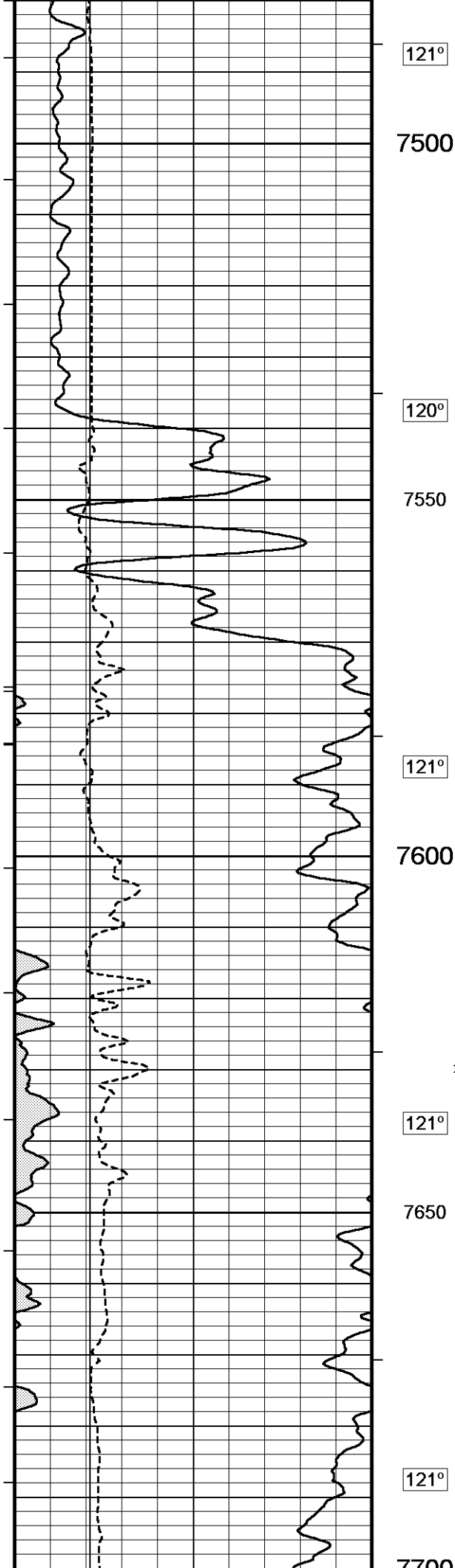


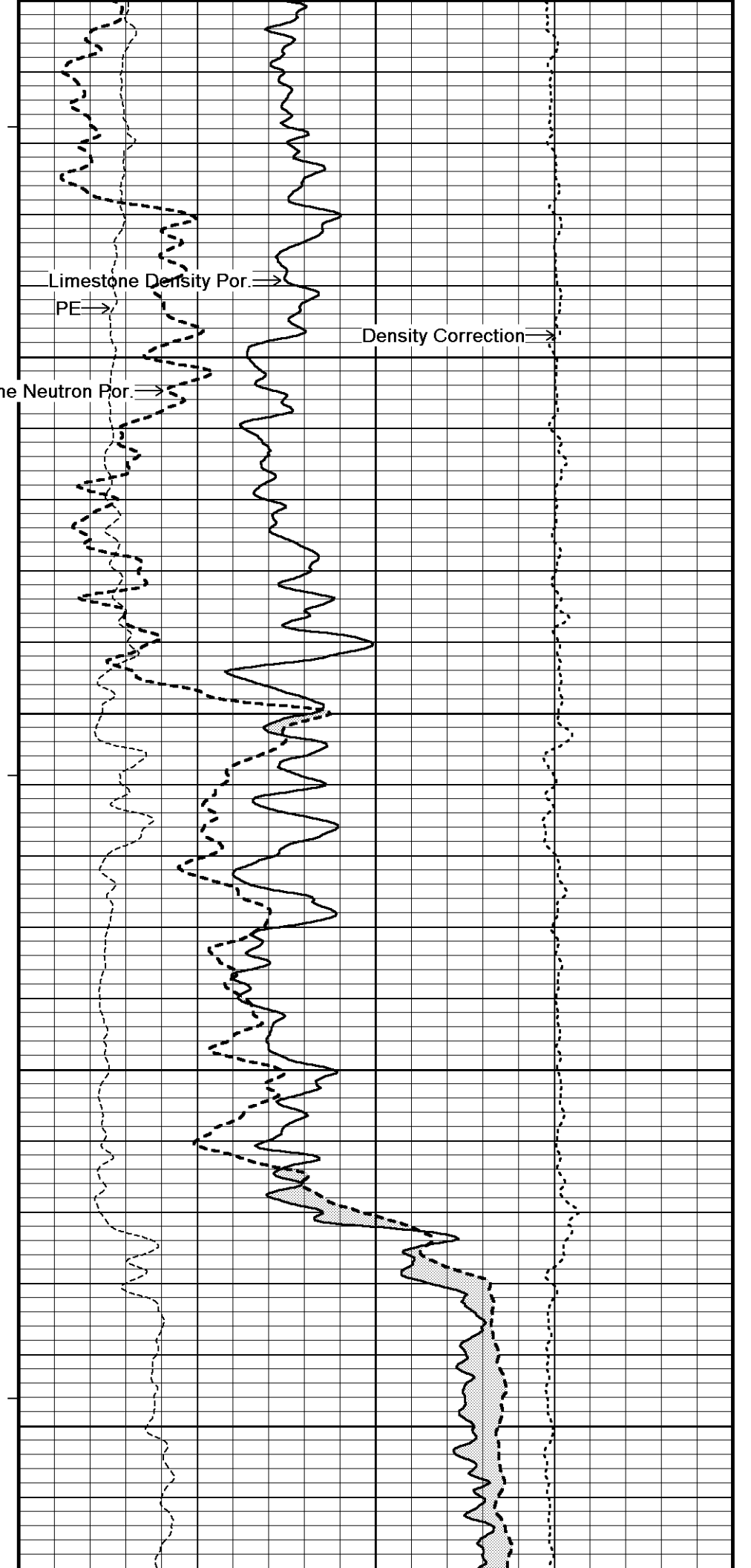
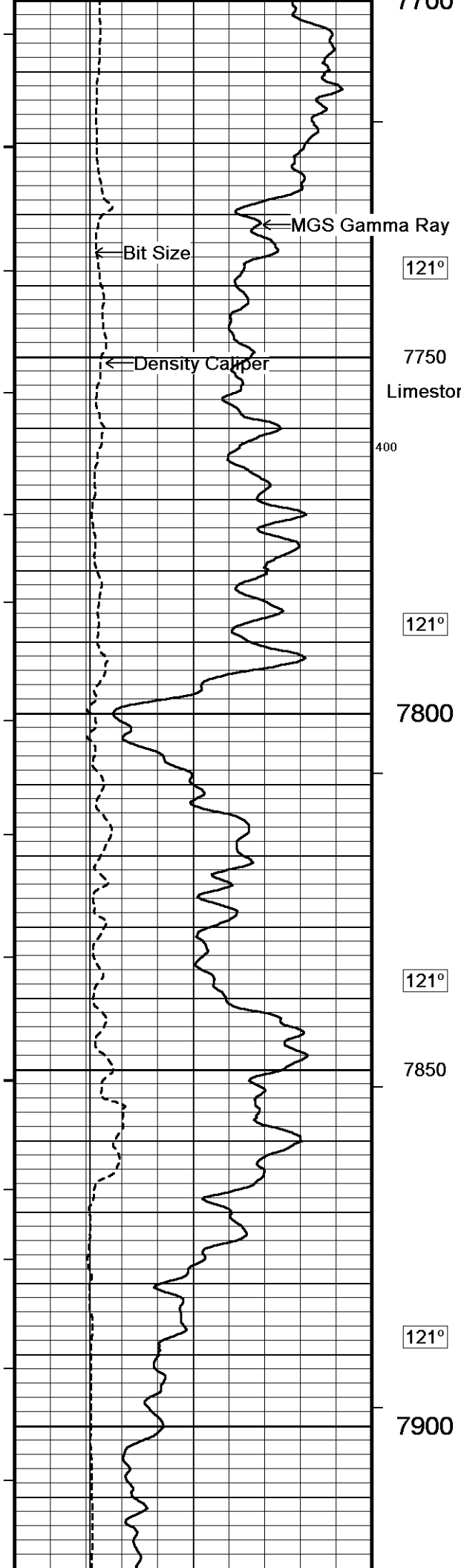


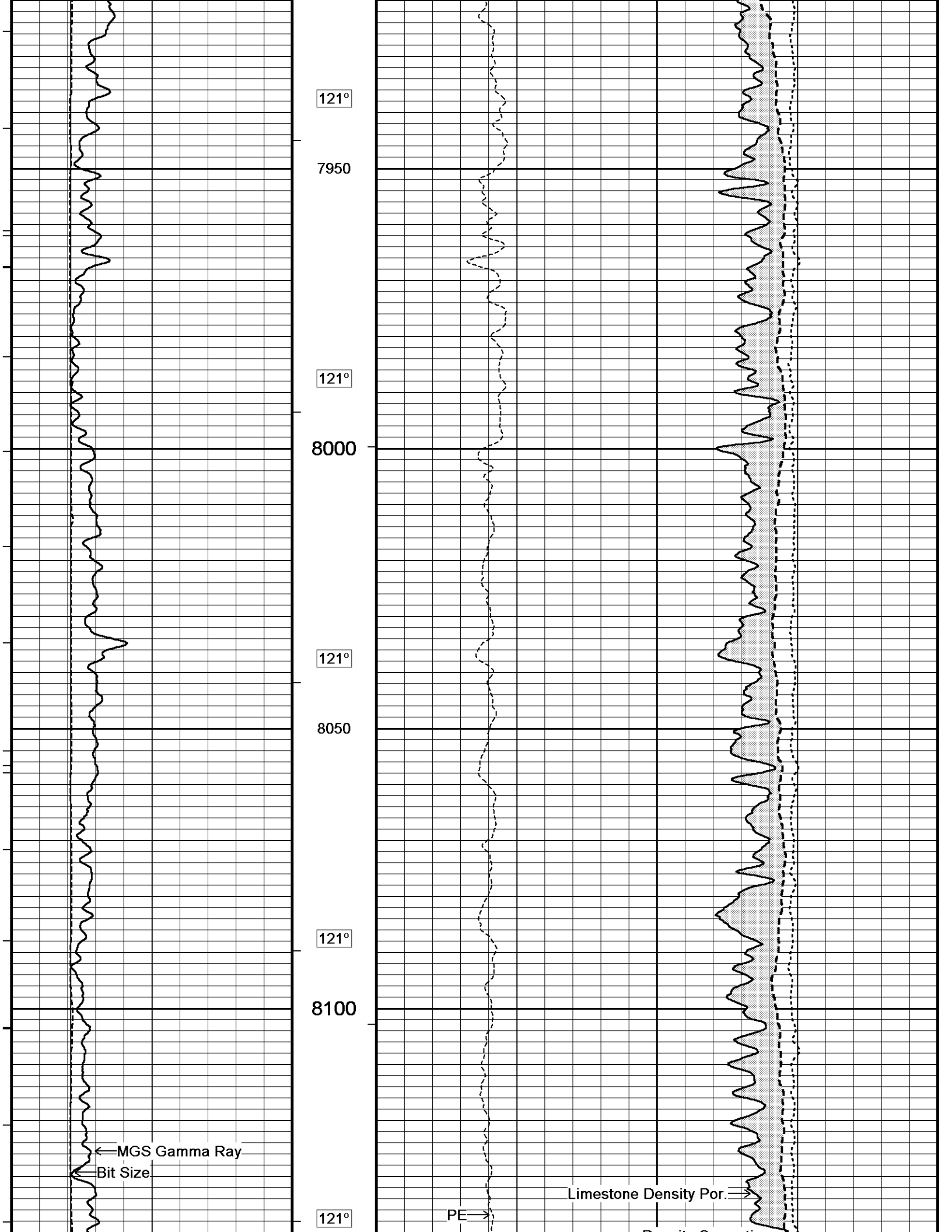


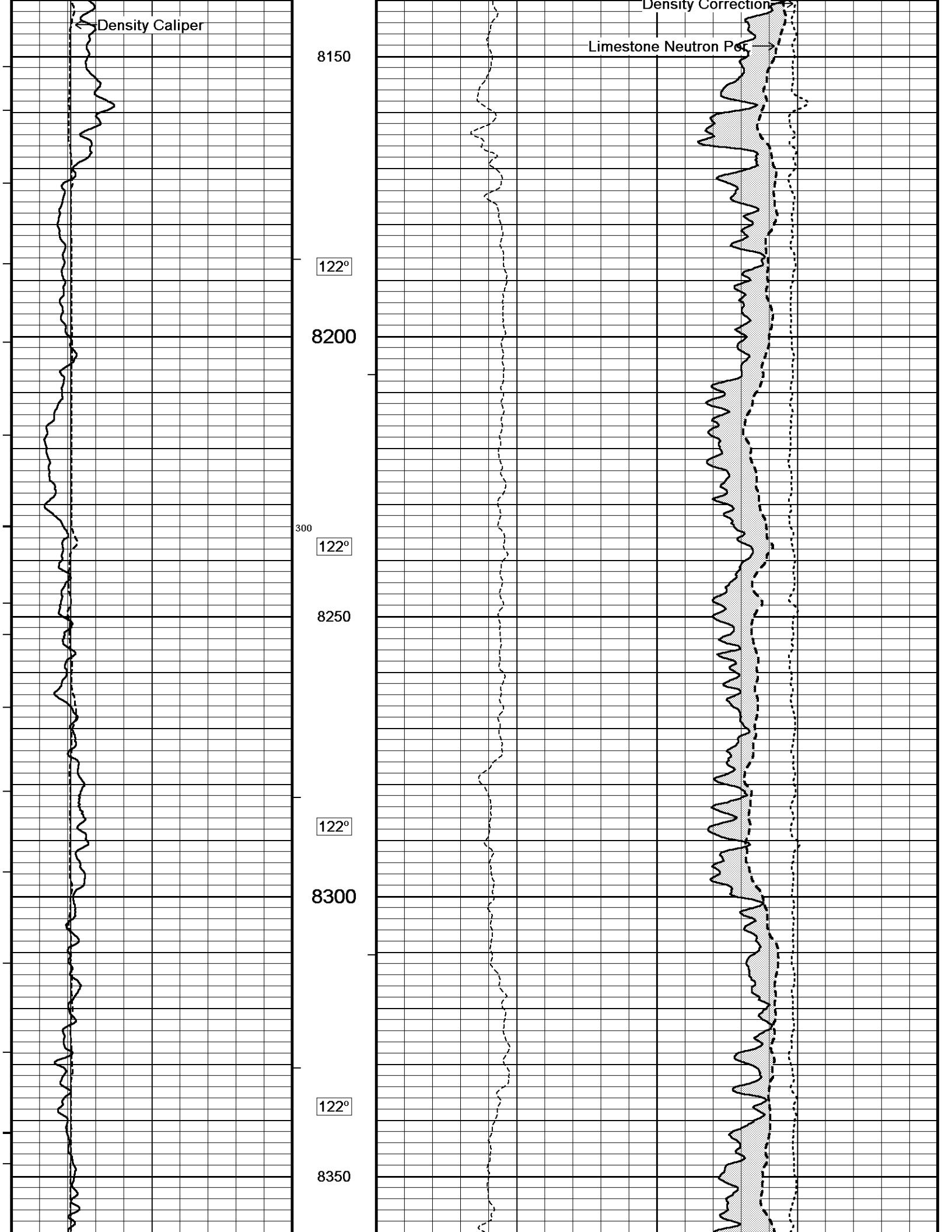


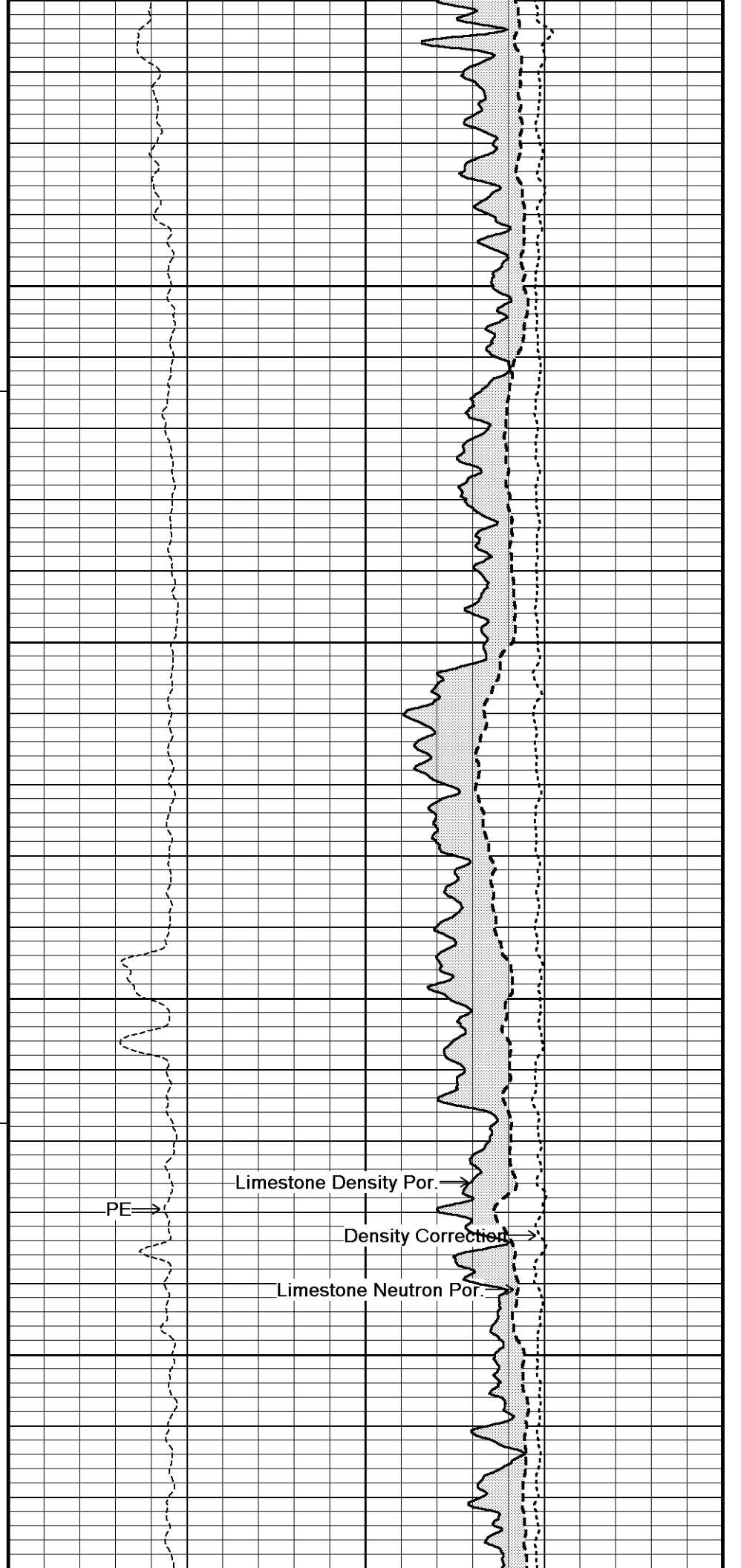
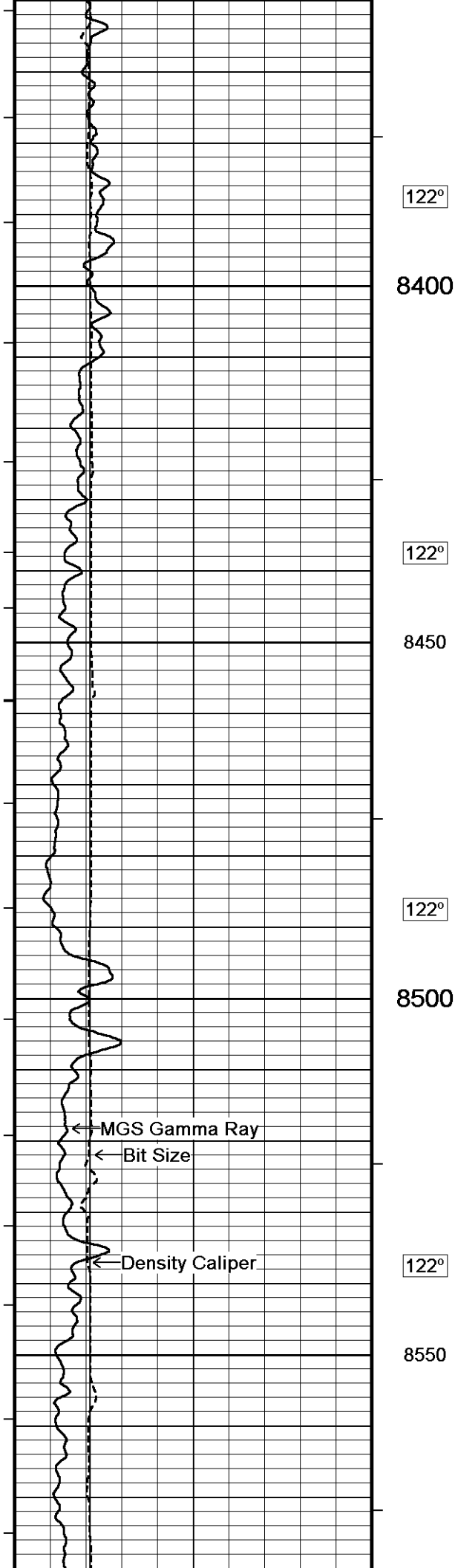


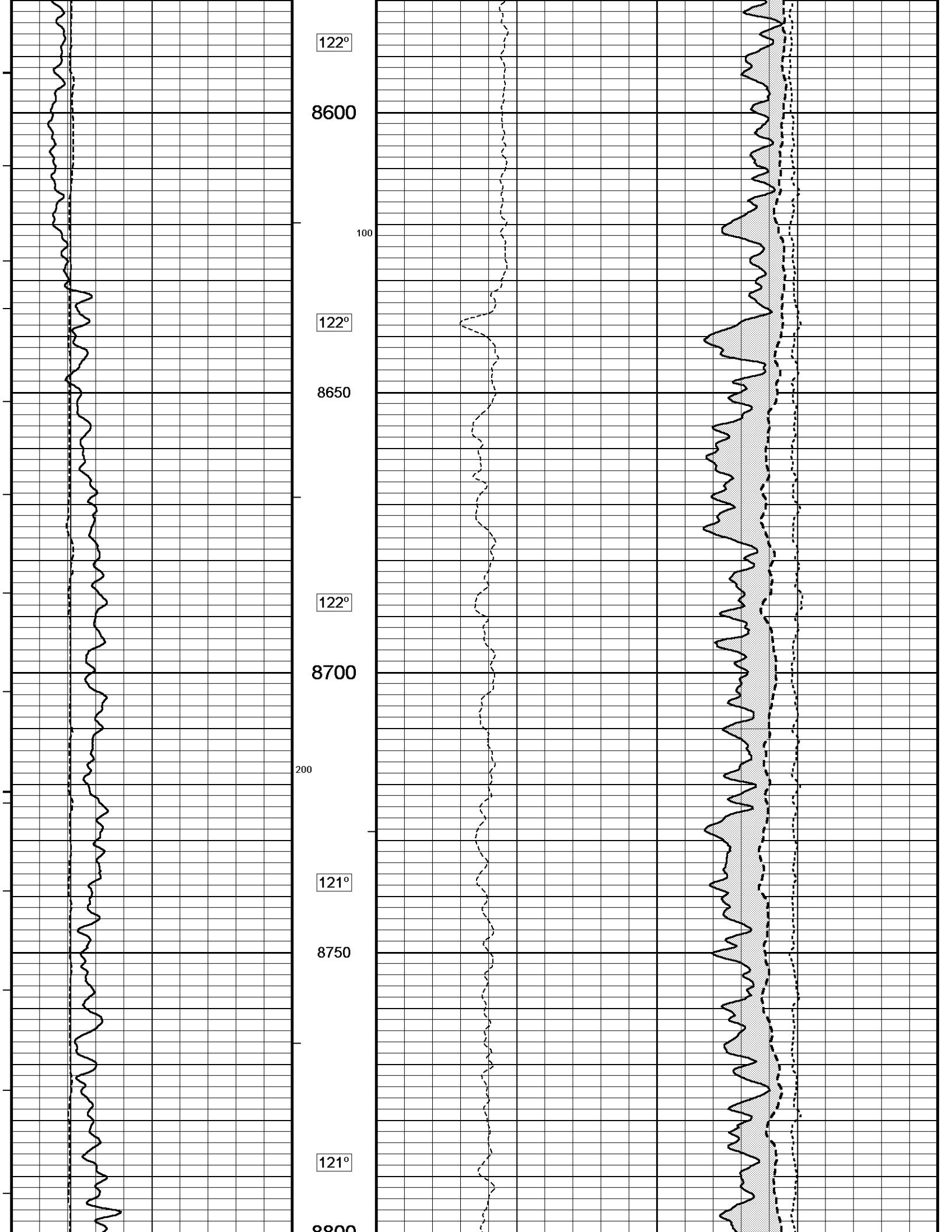


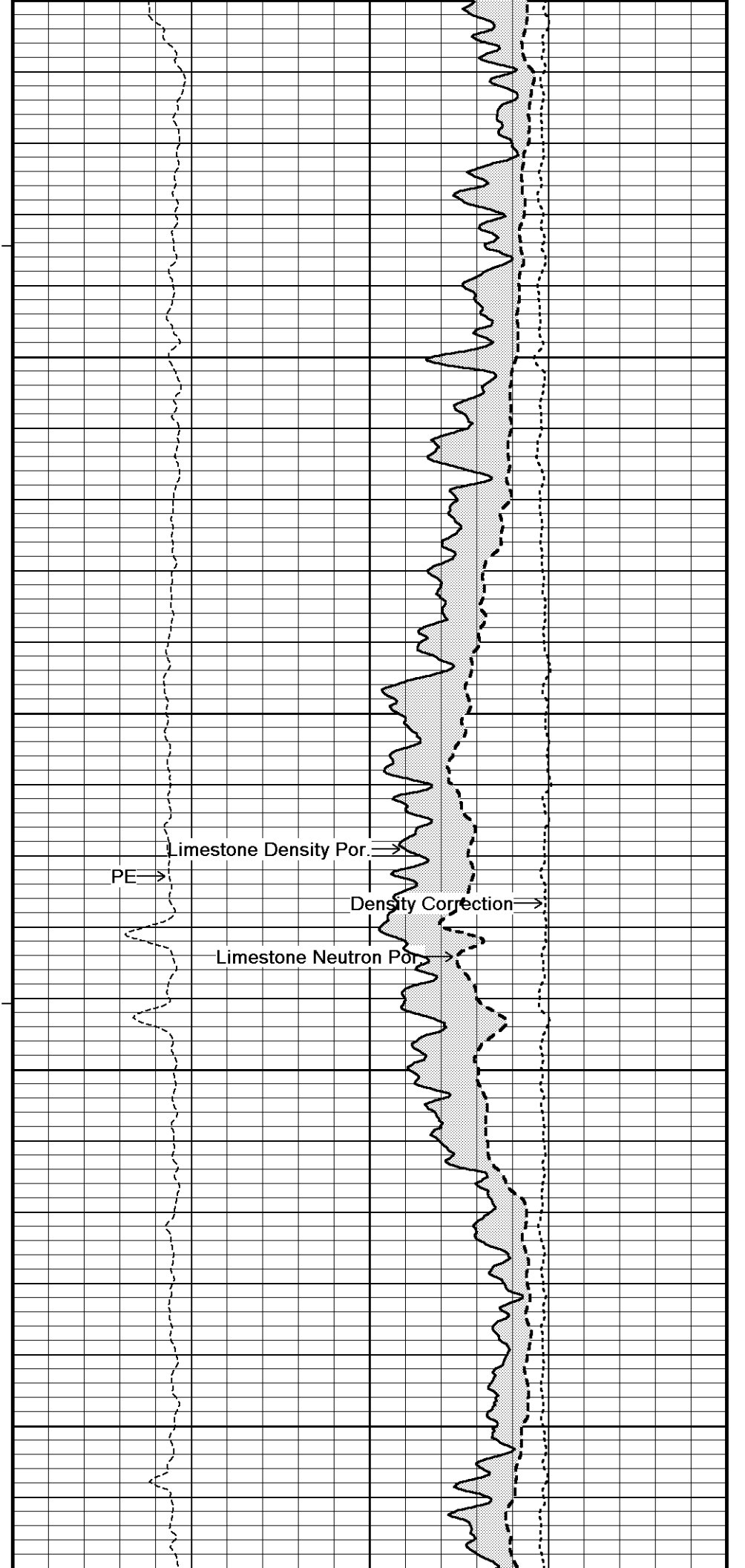
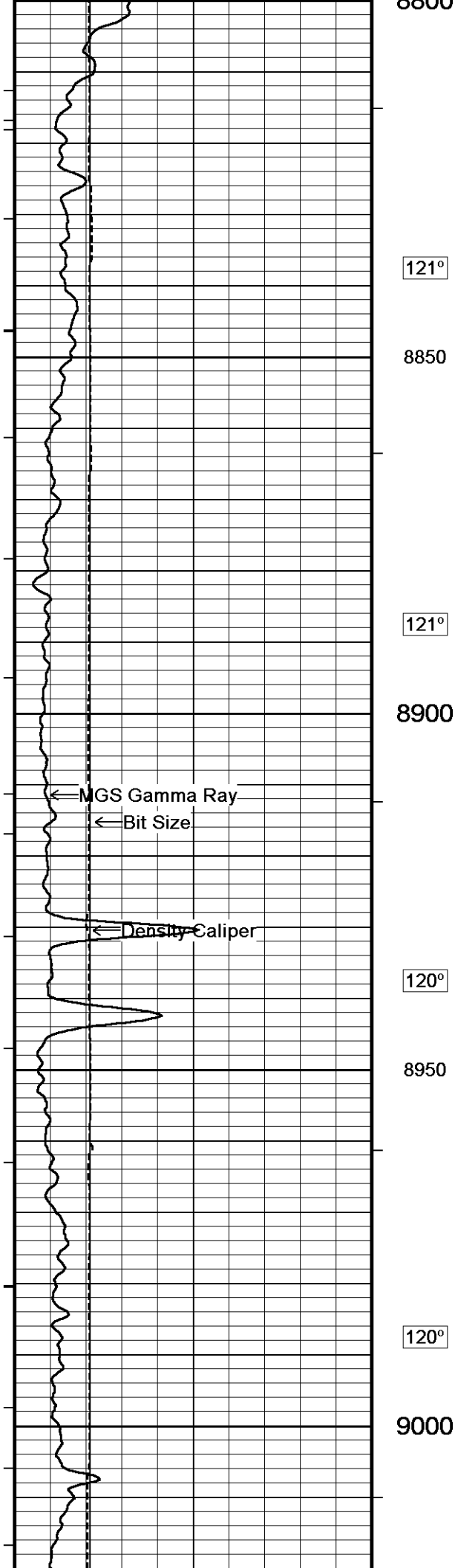


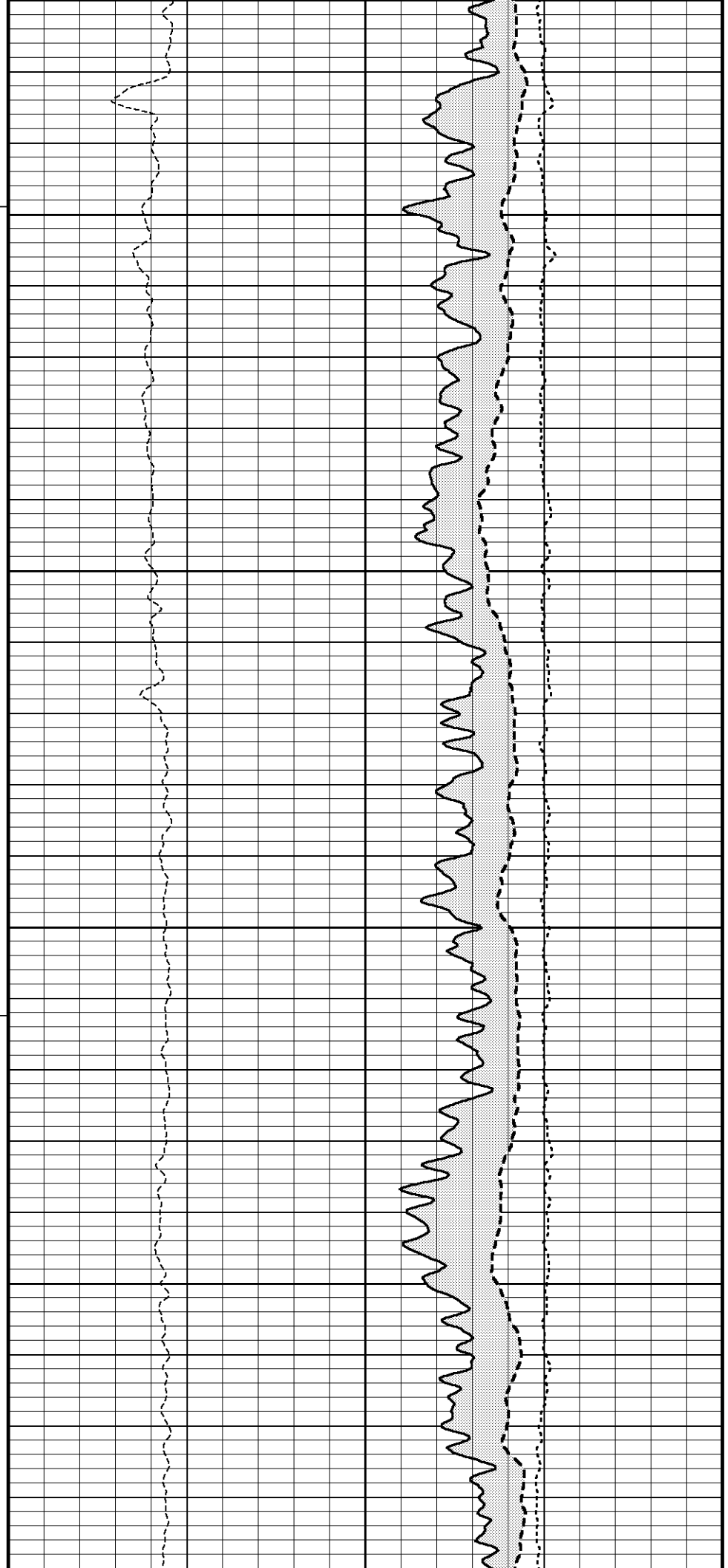
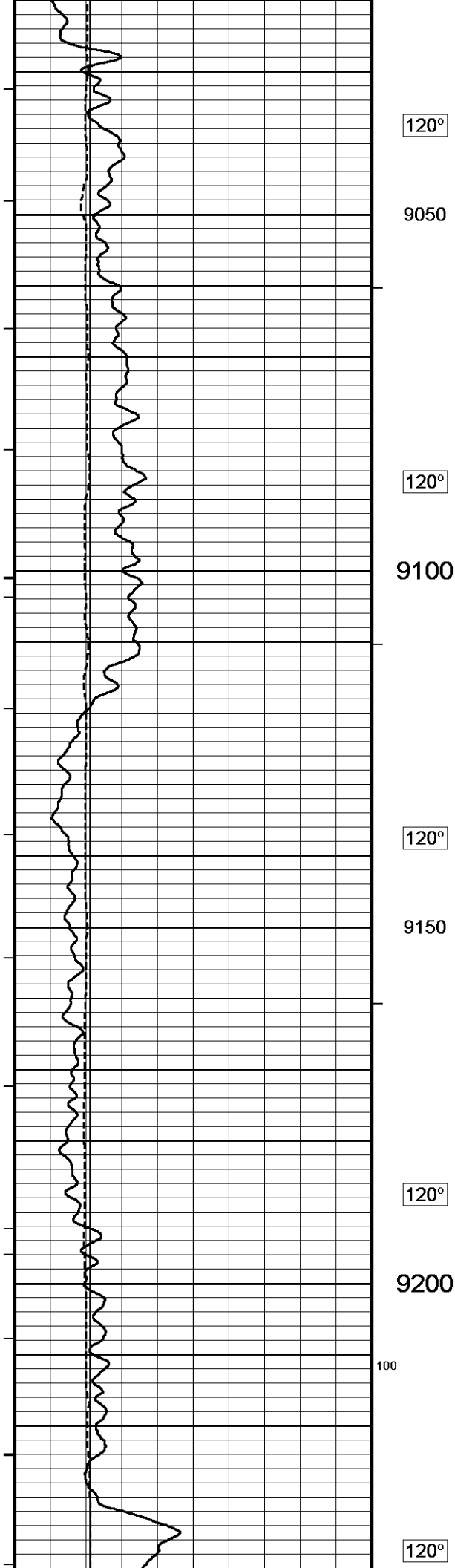


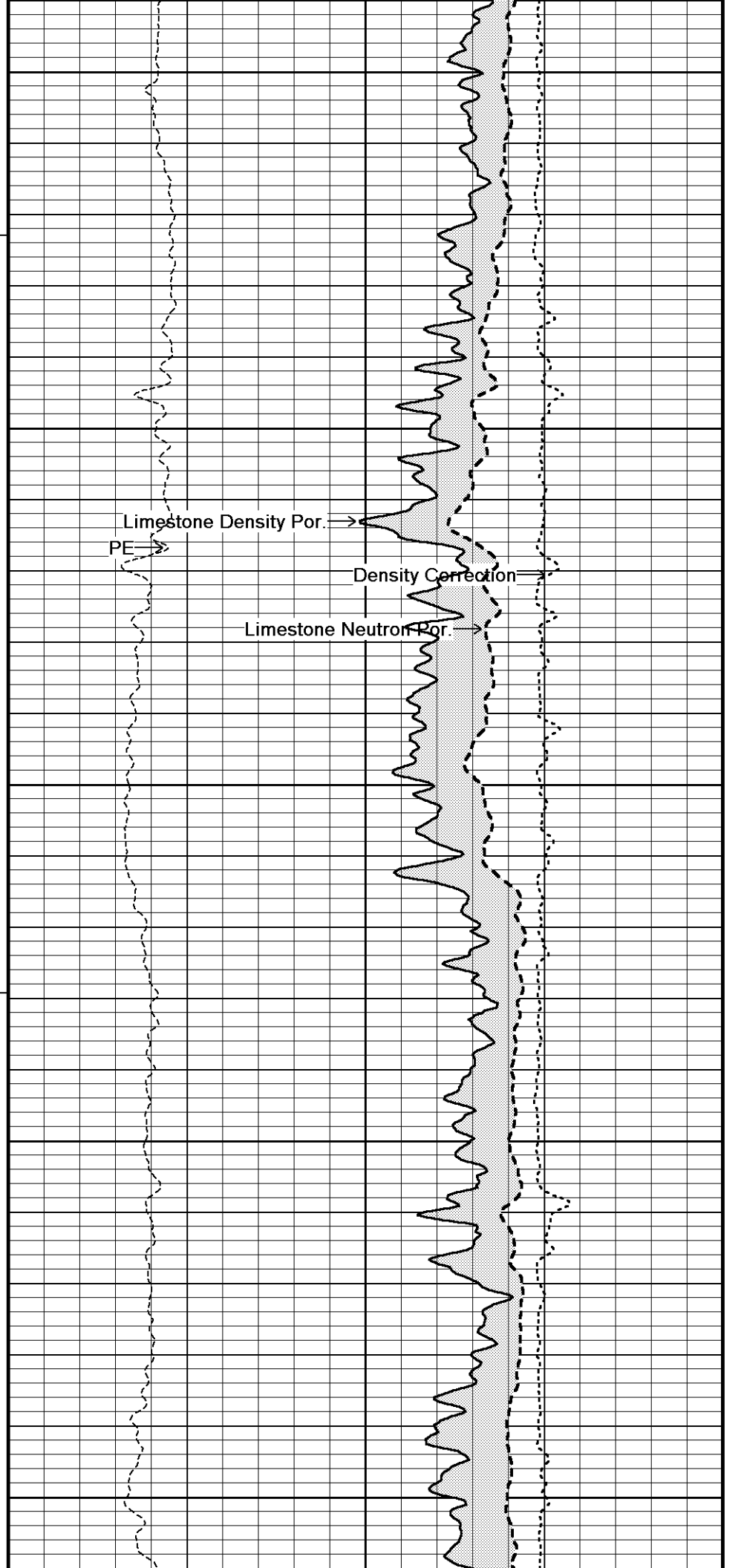
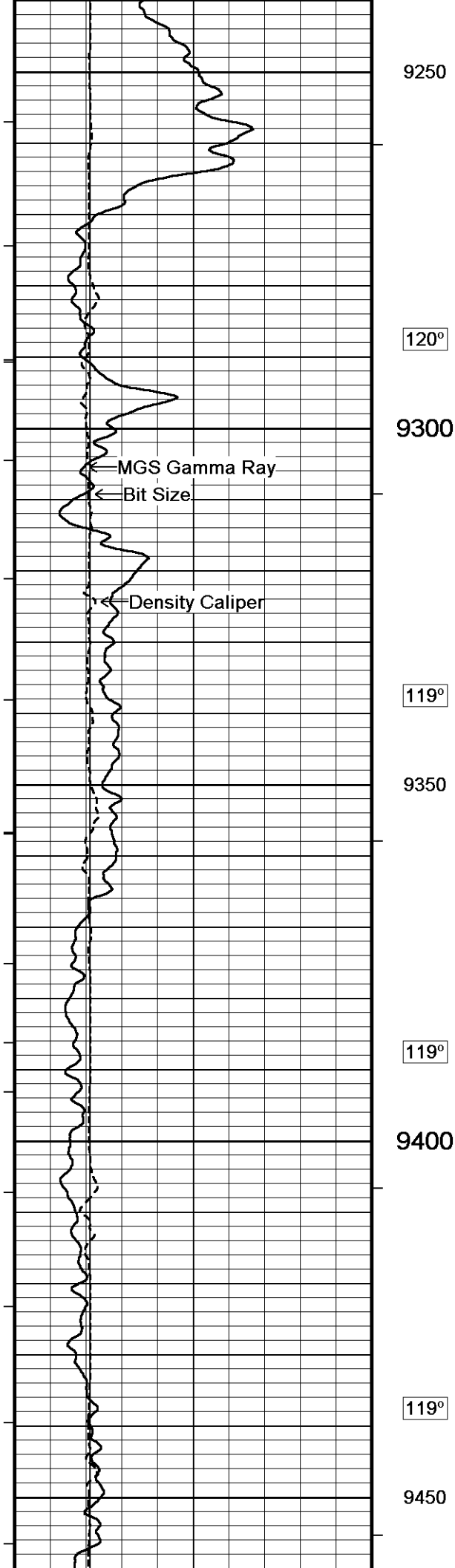


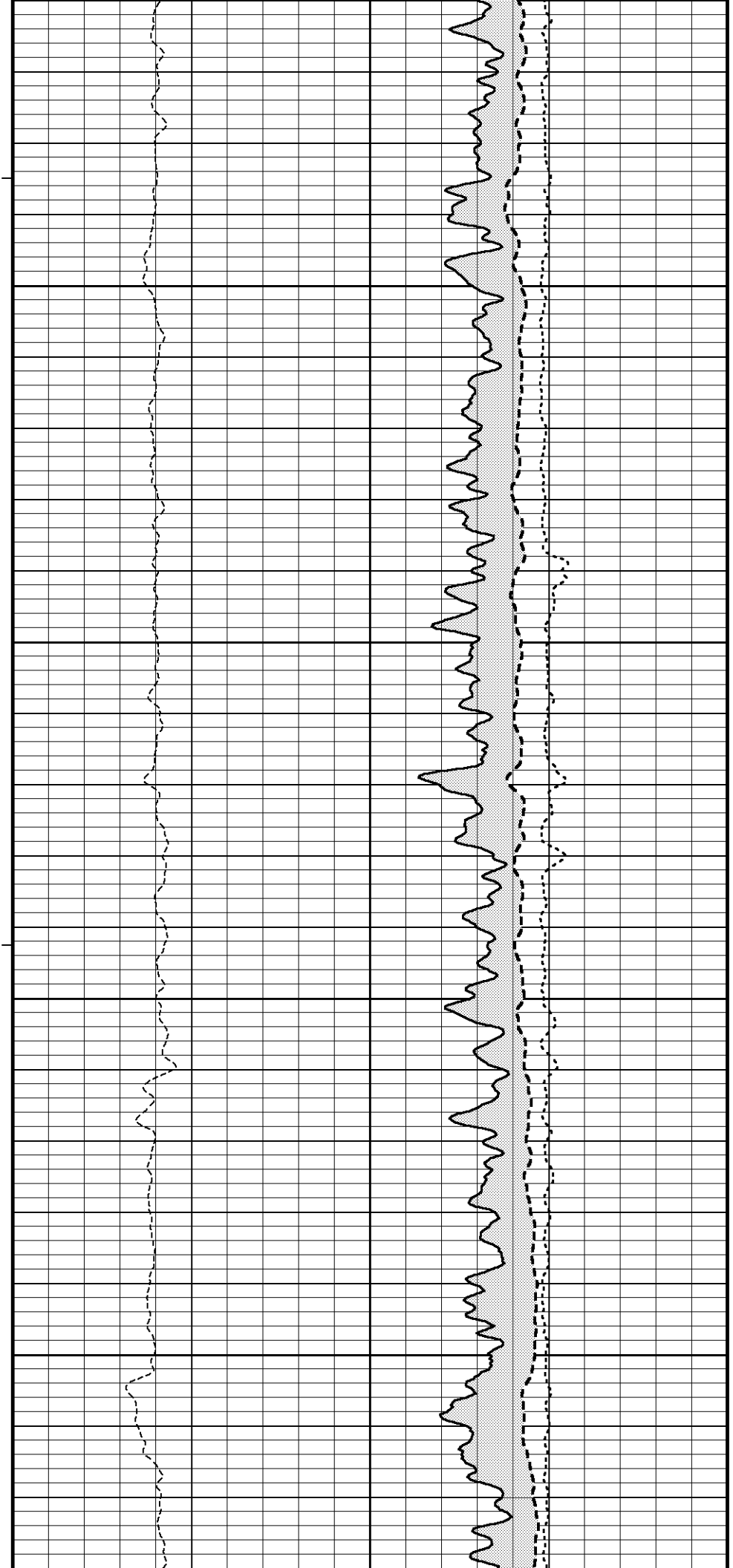
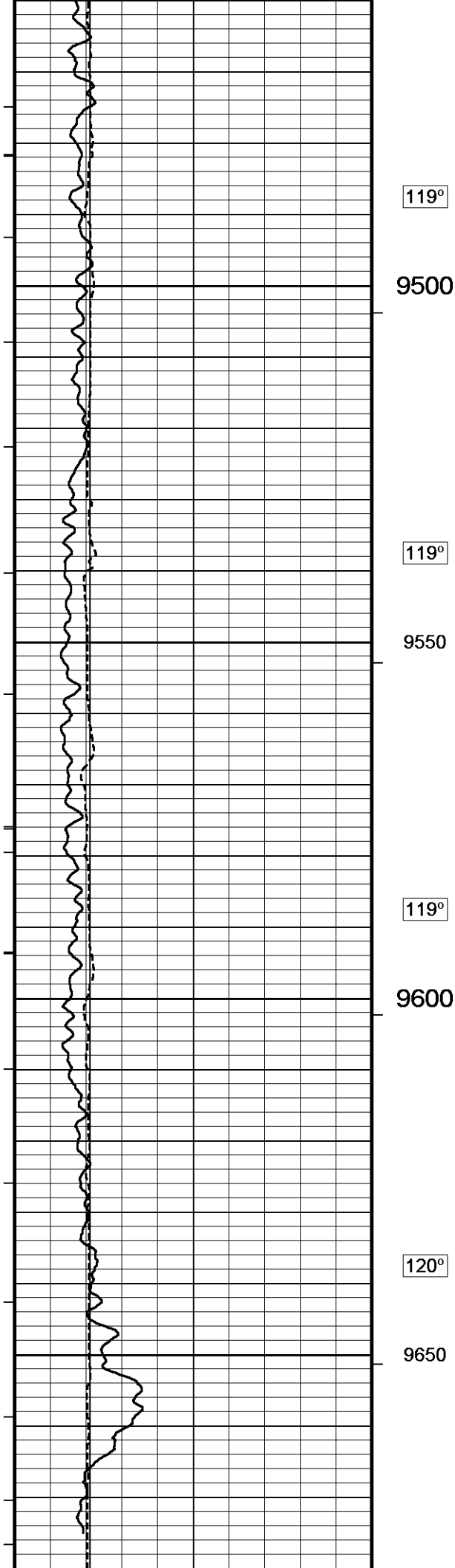


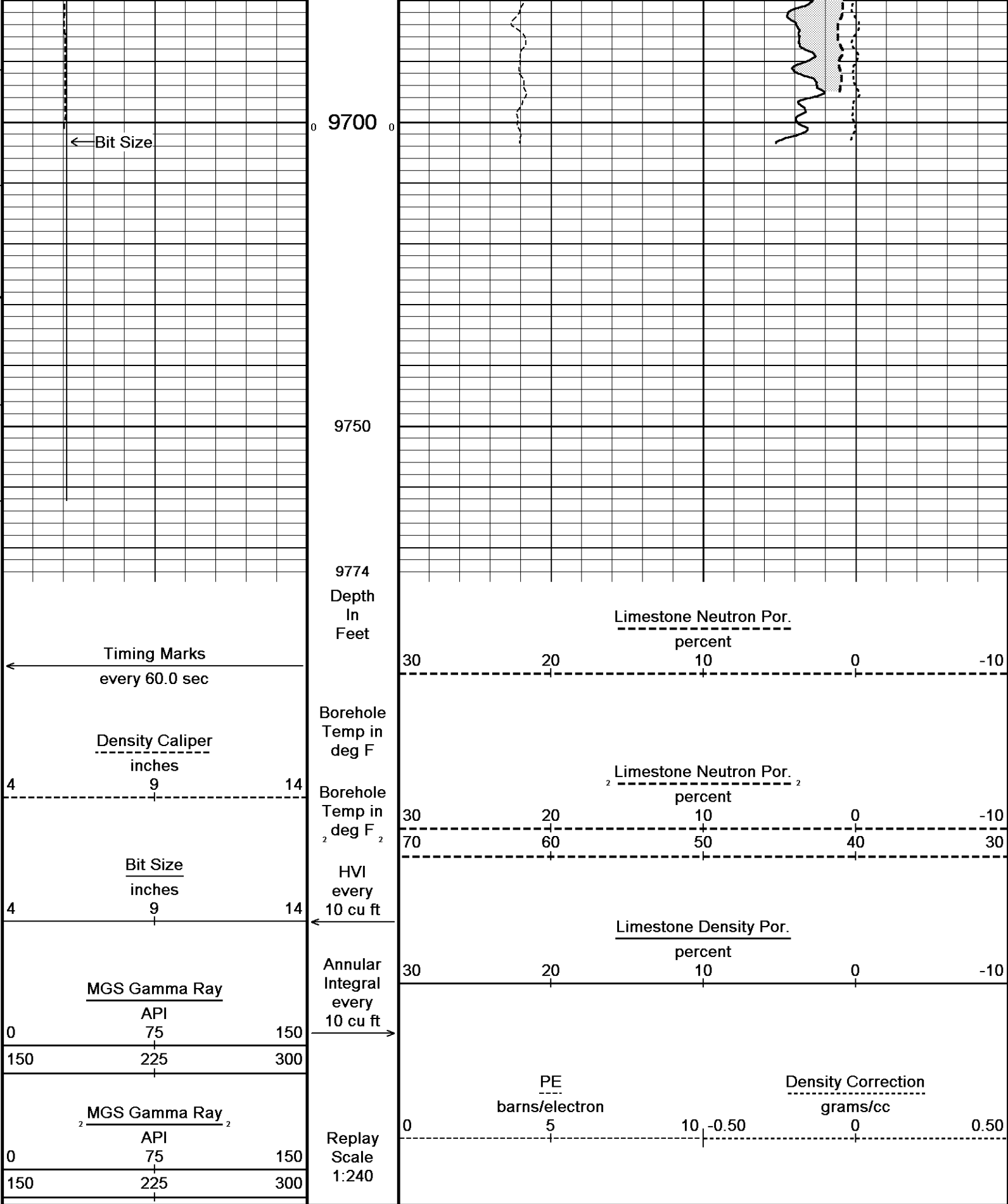












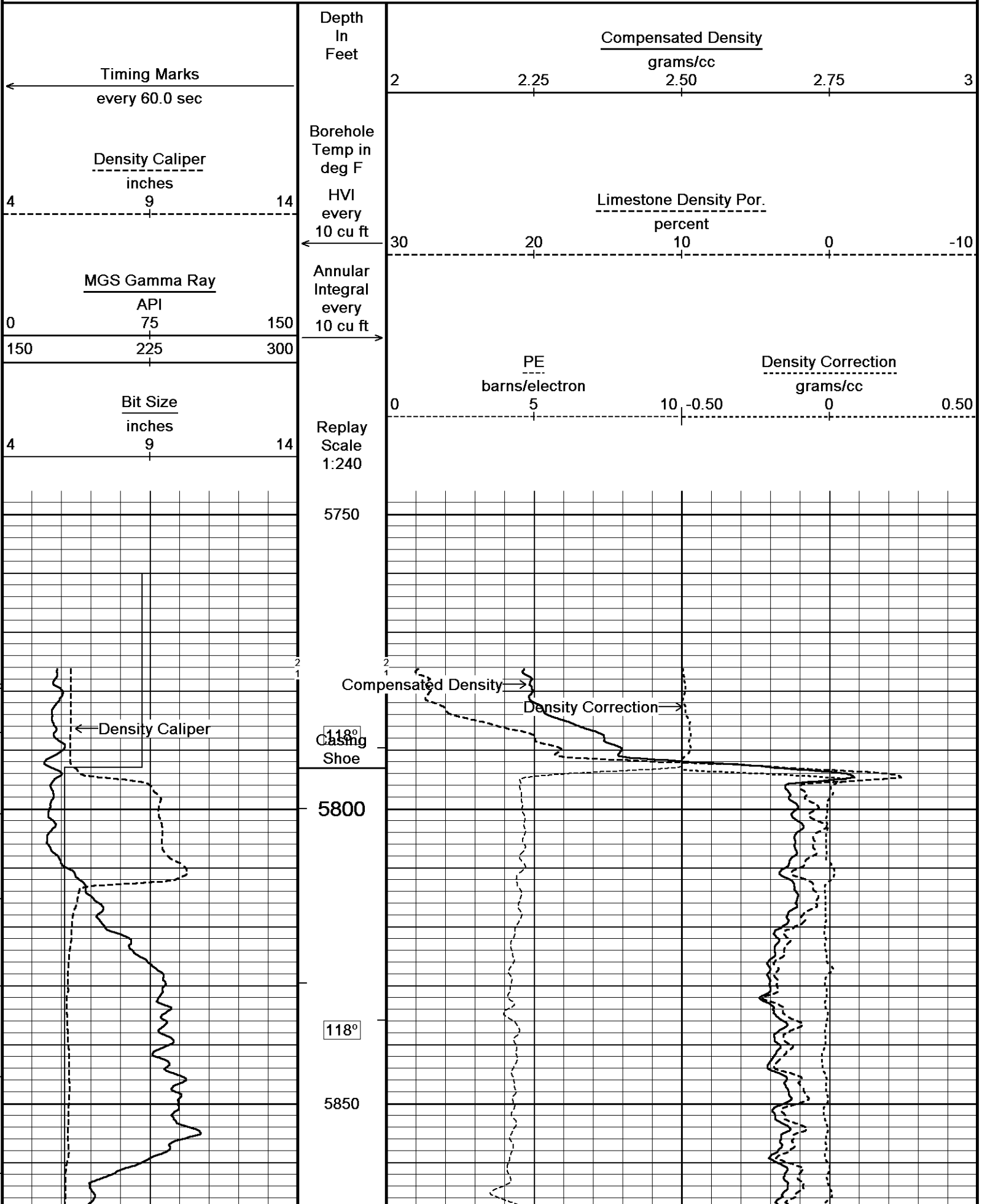
Depth Based Data - Maximum Sampling Increment 10.0cm

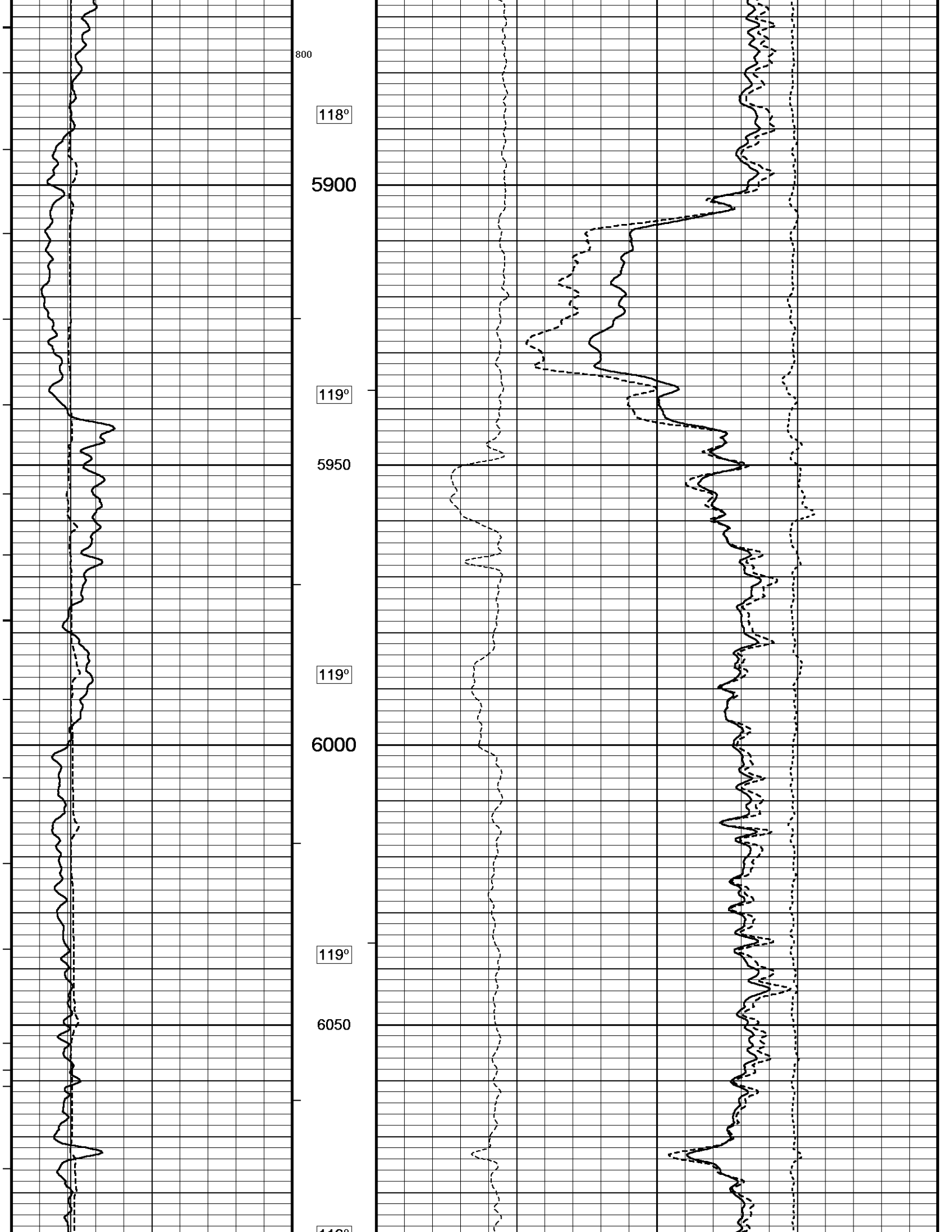
Plotted on 28-NOV-2012 23:38

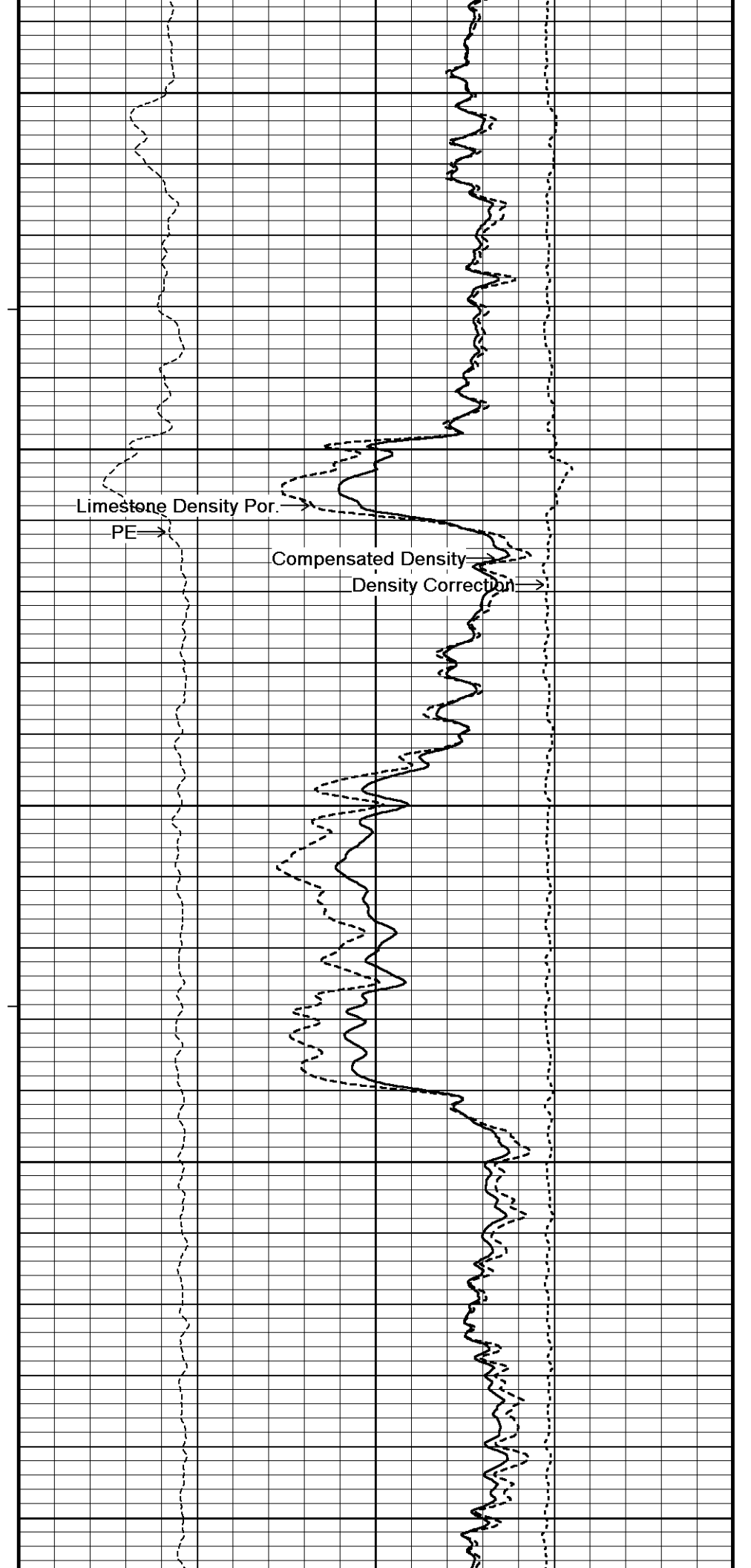
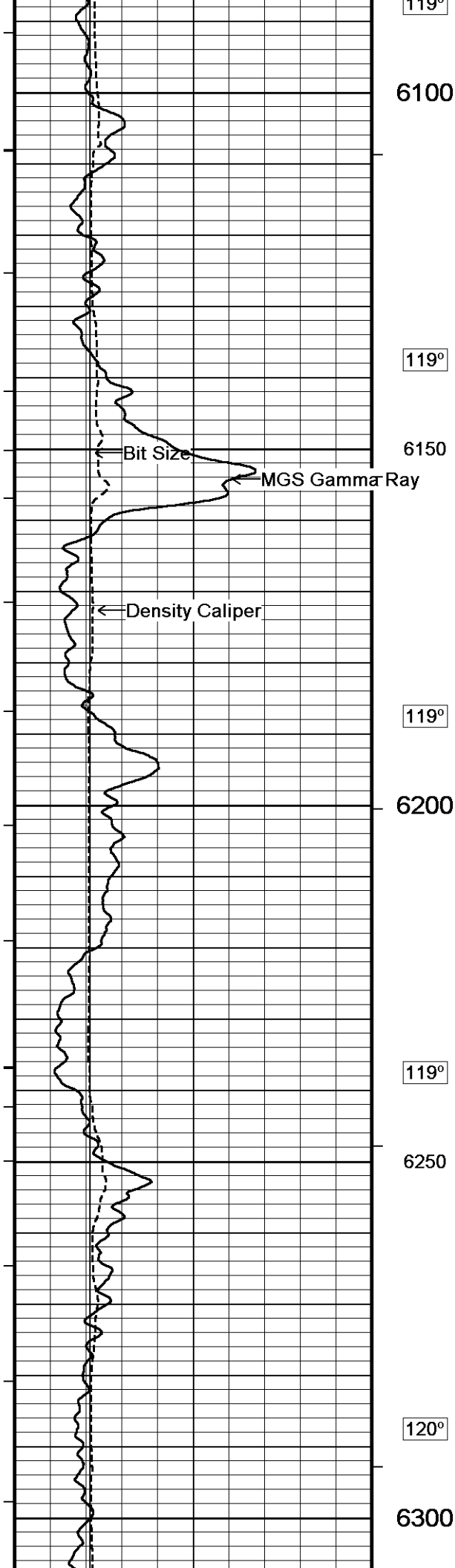
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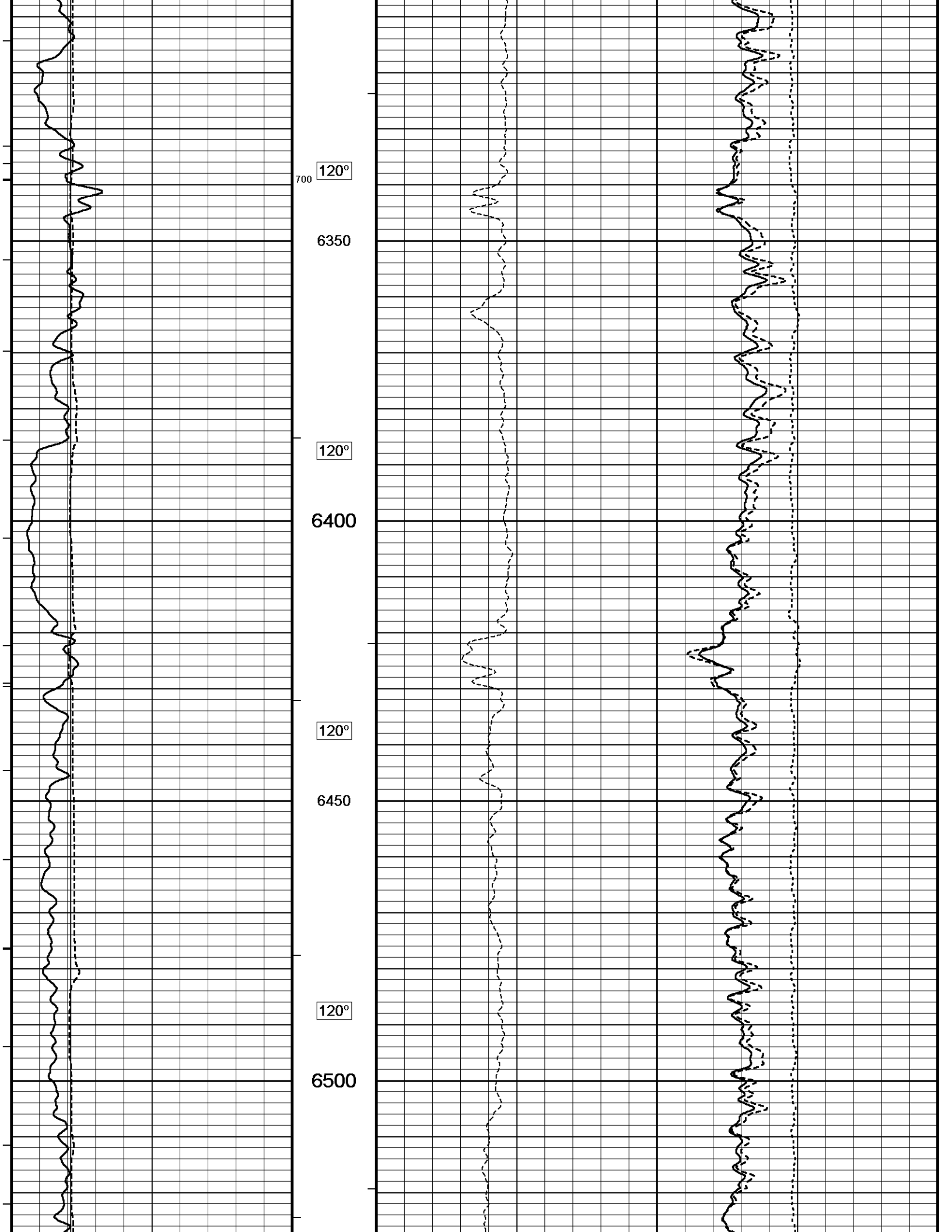
Recorded on 28-NOV-2012 21:59

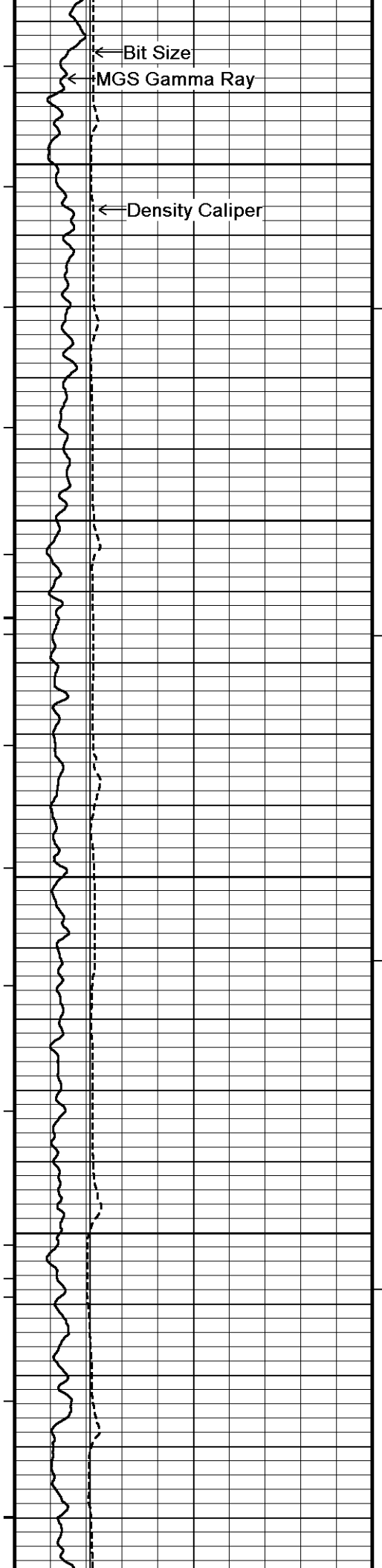
System Versions: Processed with 13.03.7779 Plotted with 13.03.7779



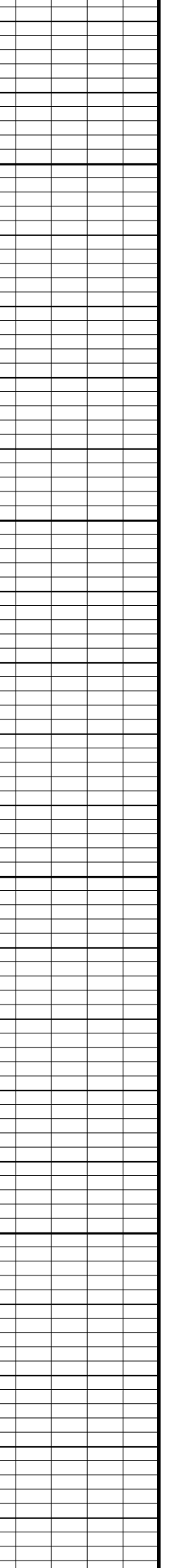
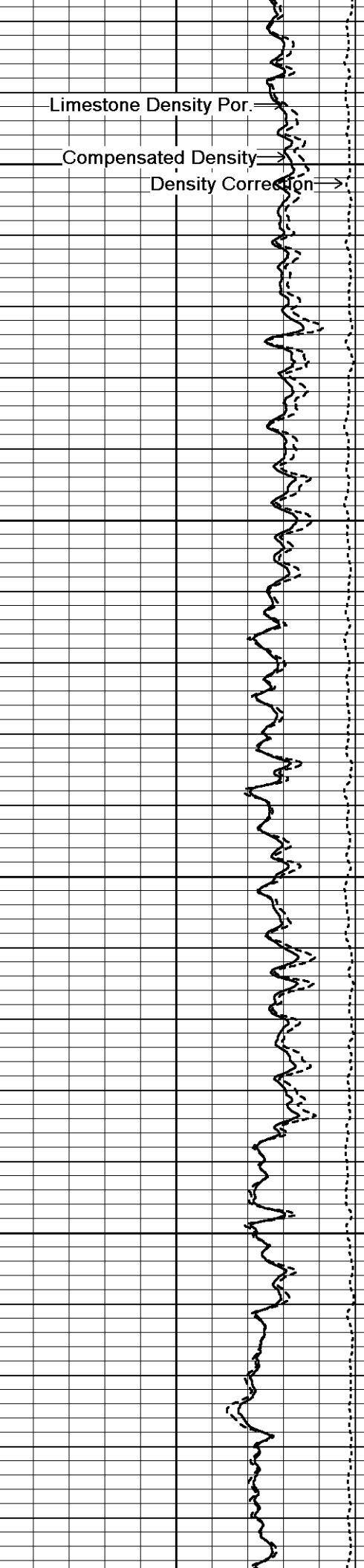
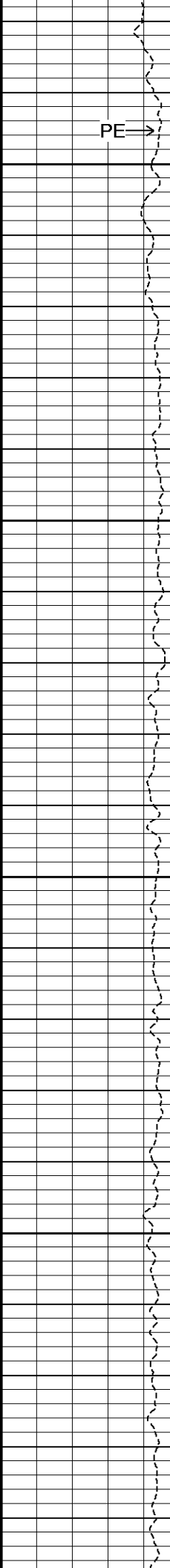


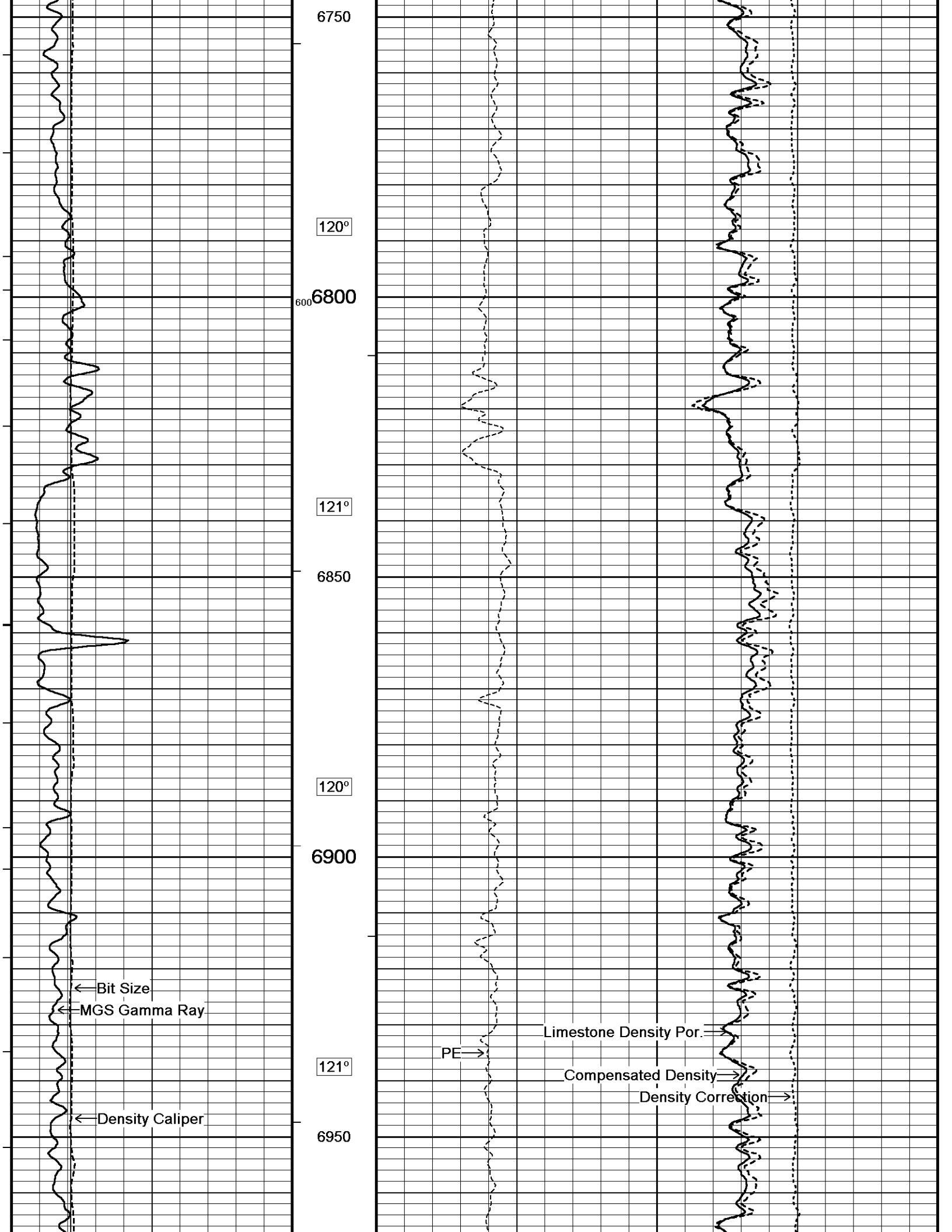


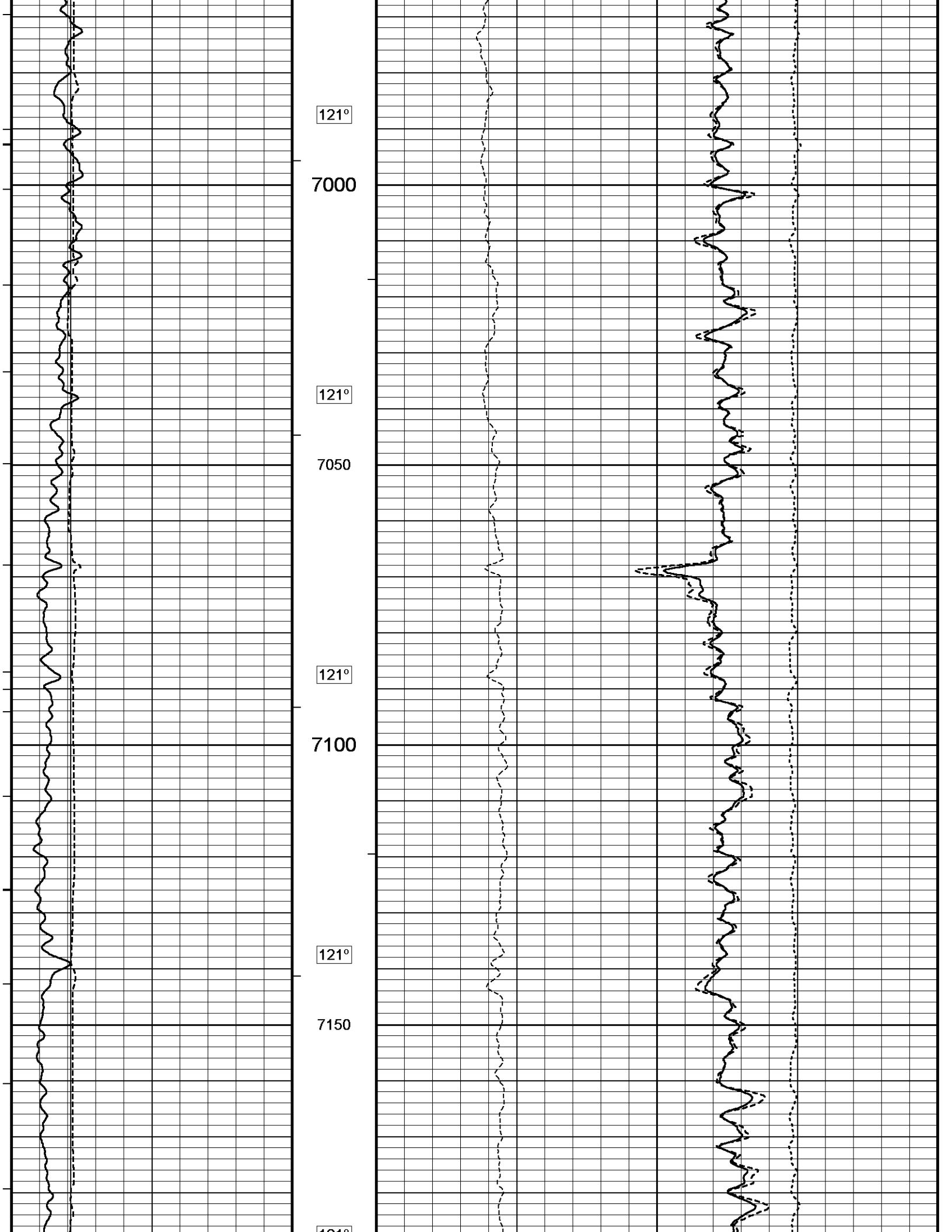


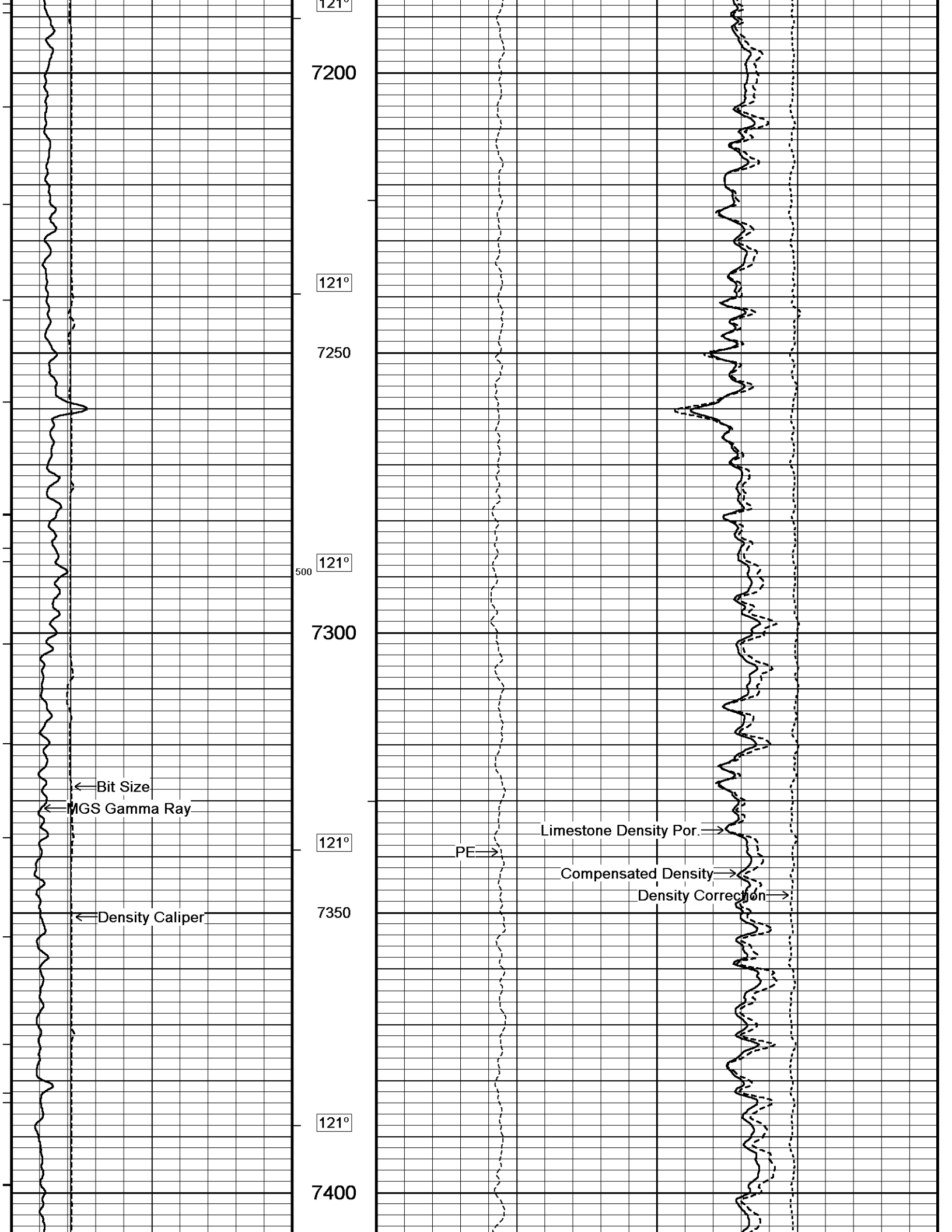


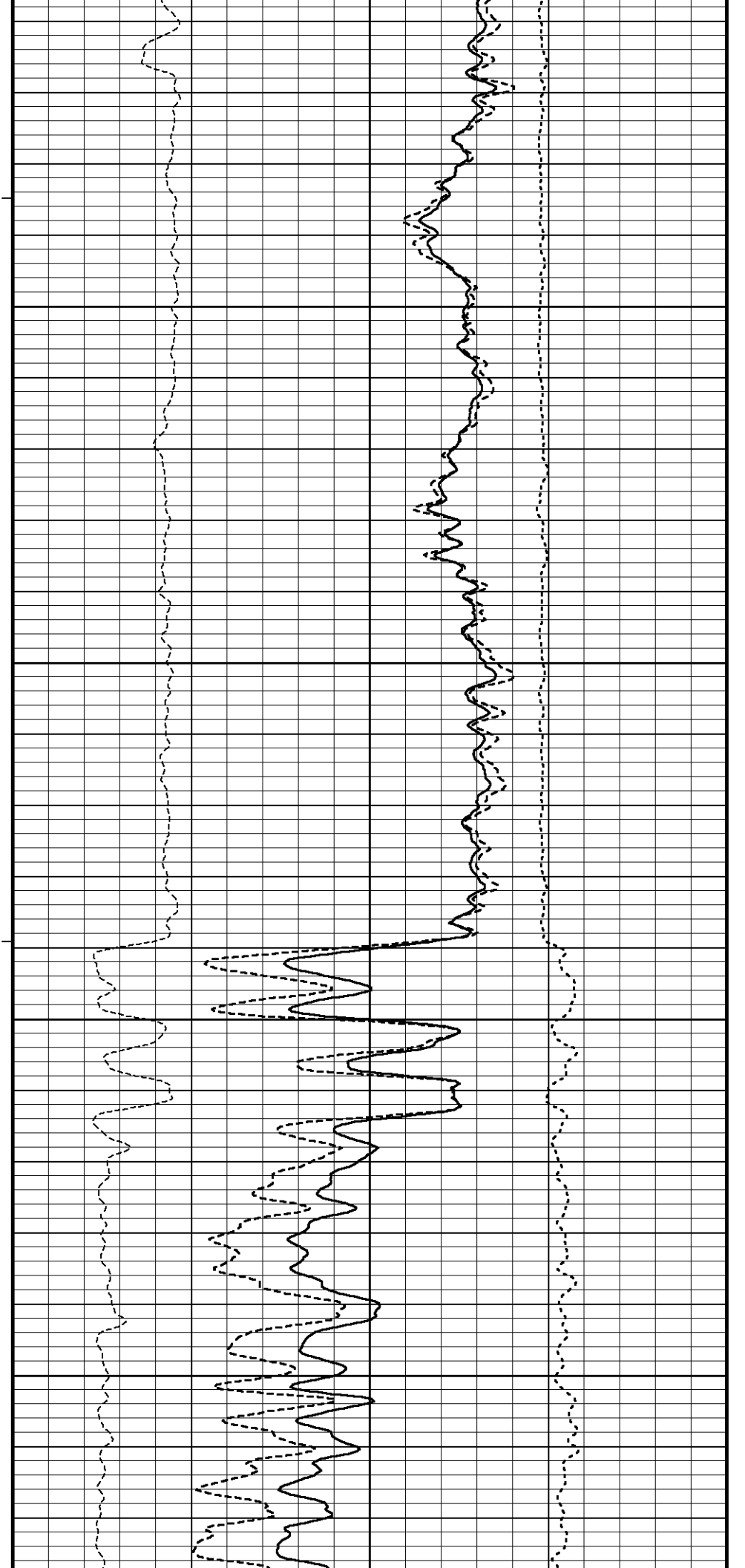
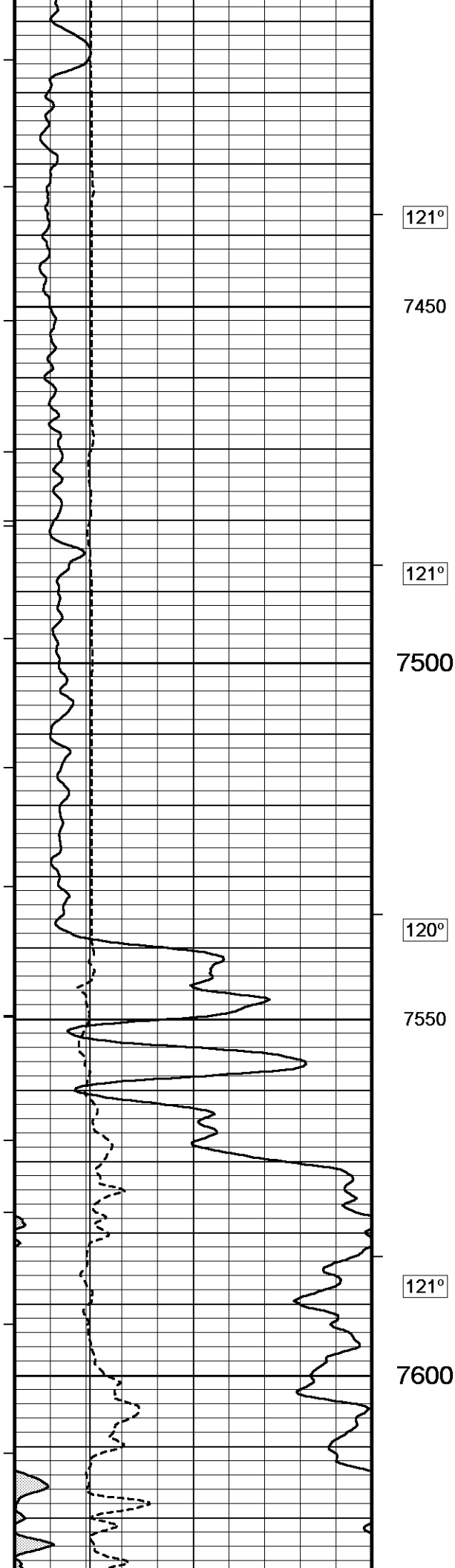
120°
6550
6600
300
6650
6700
120°

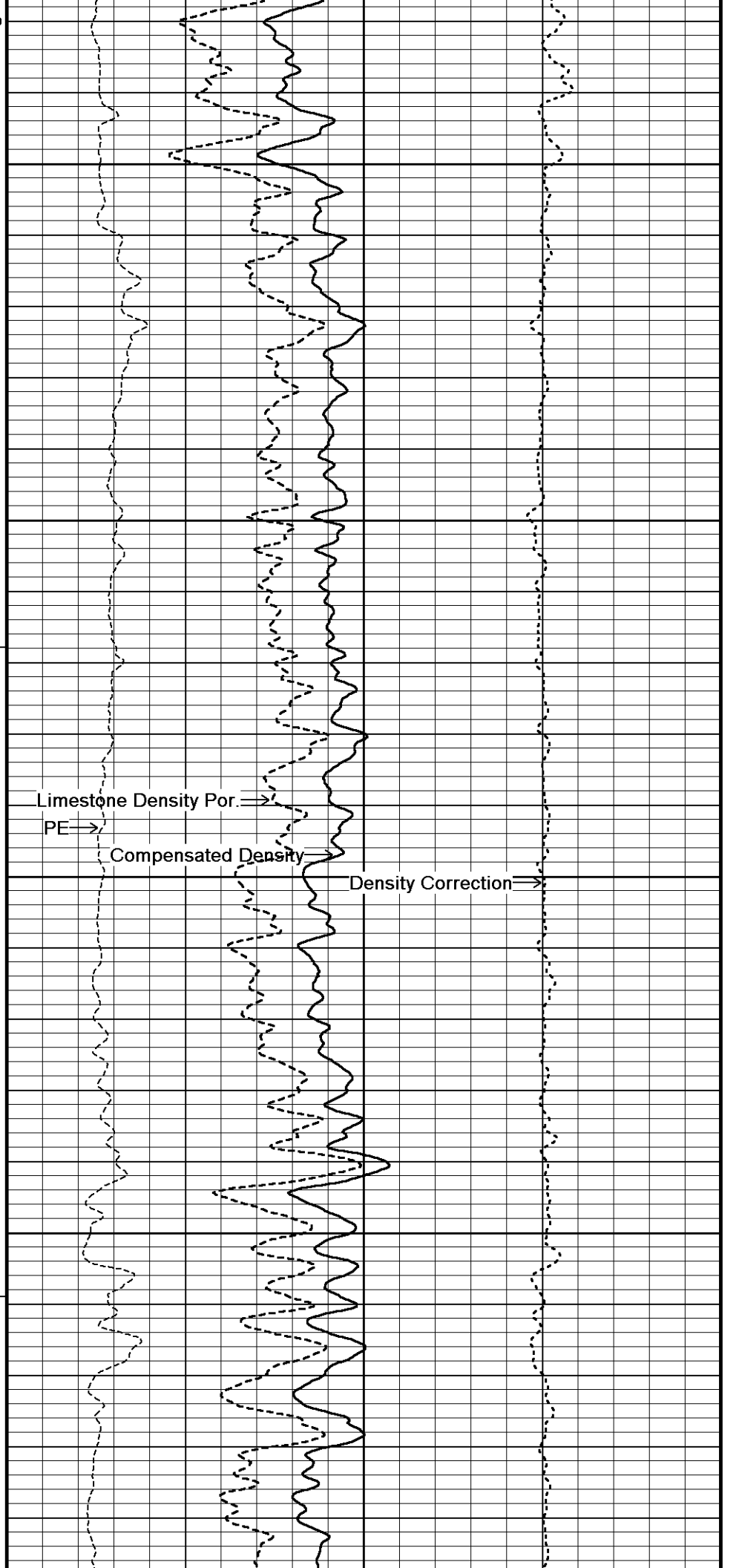
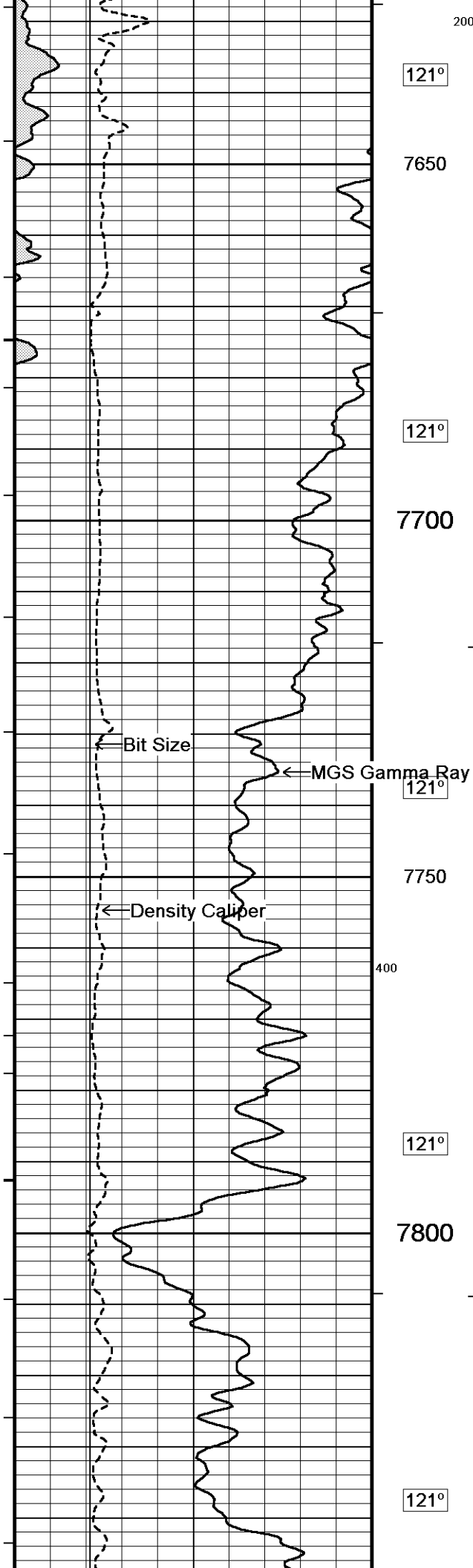


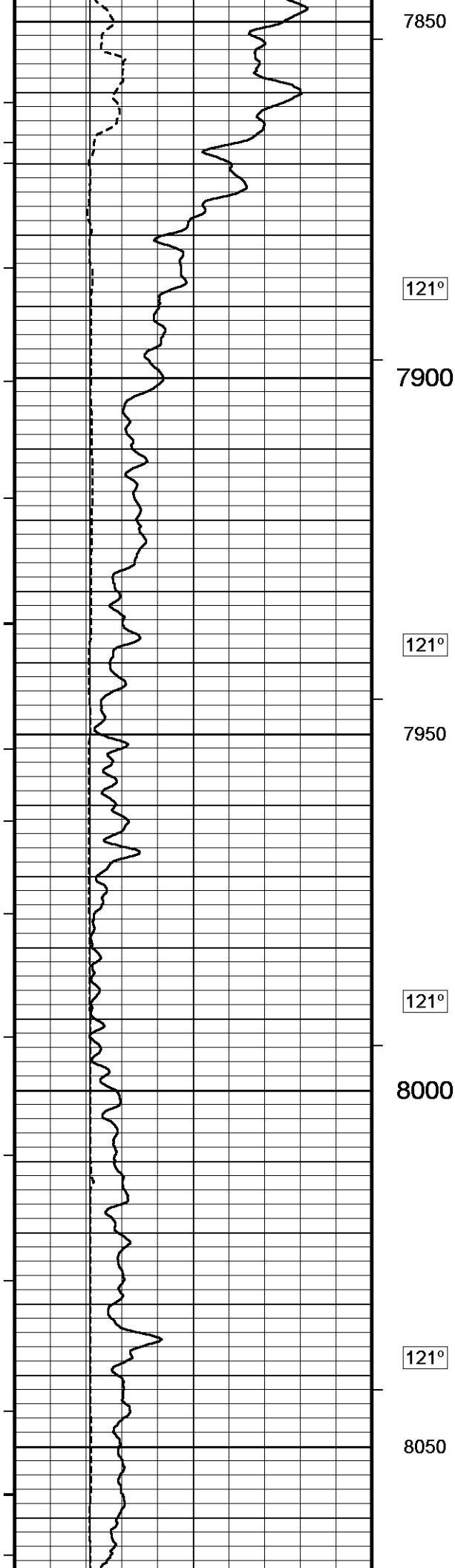












7850

121°

7900

121°

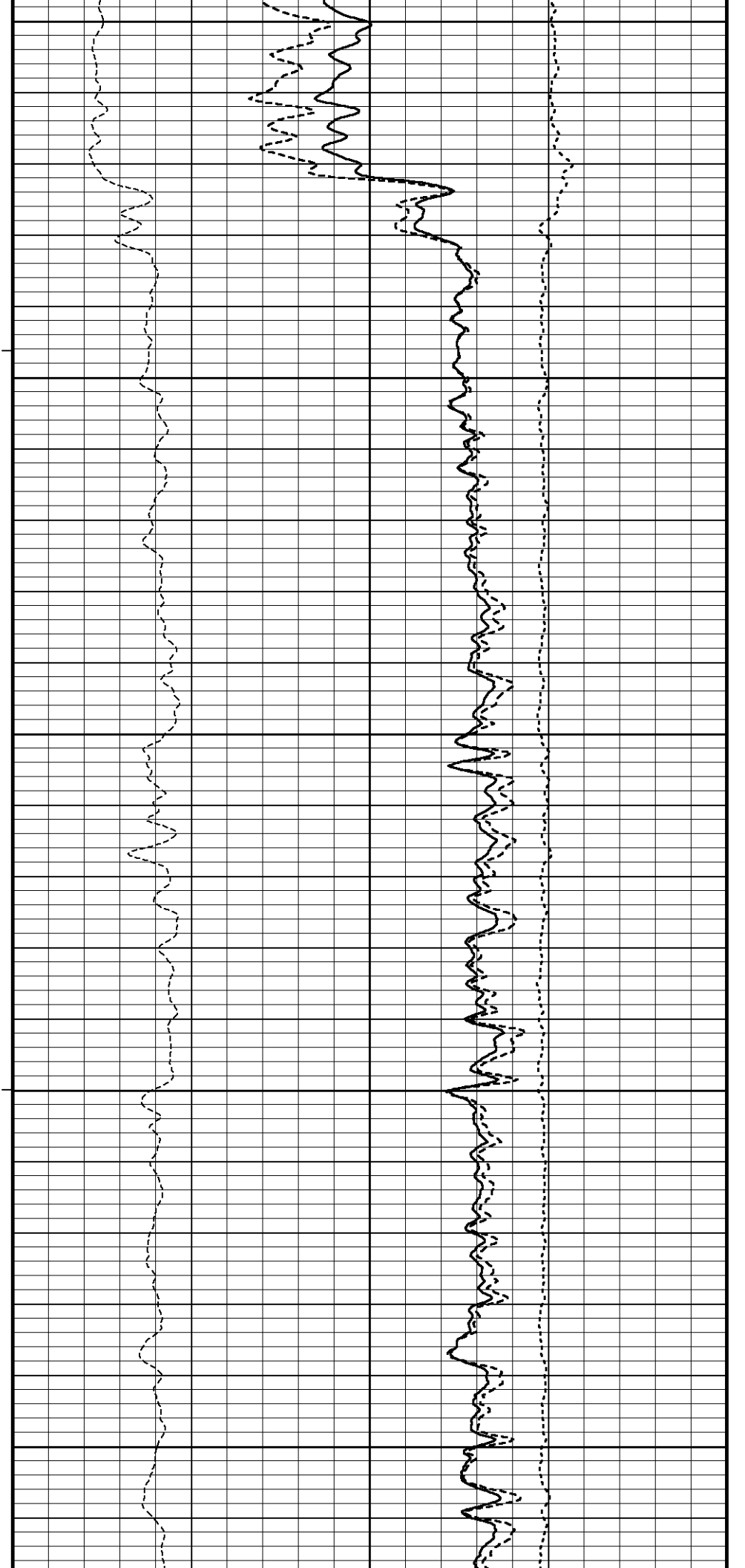
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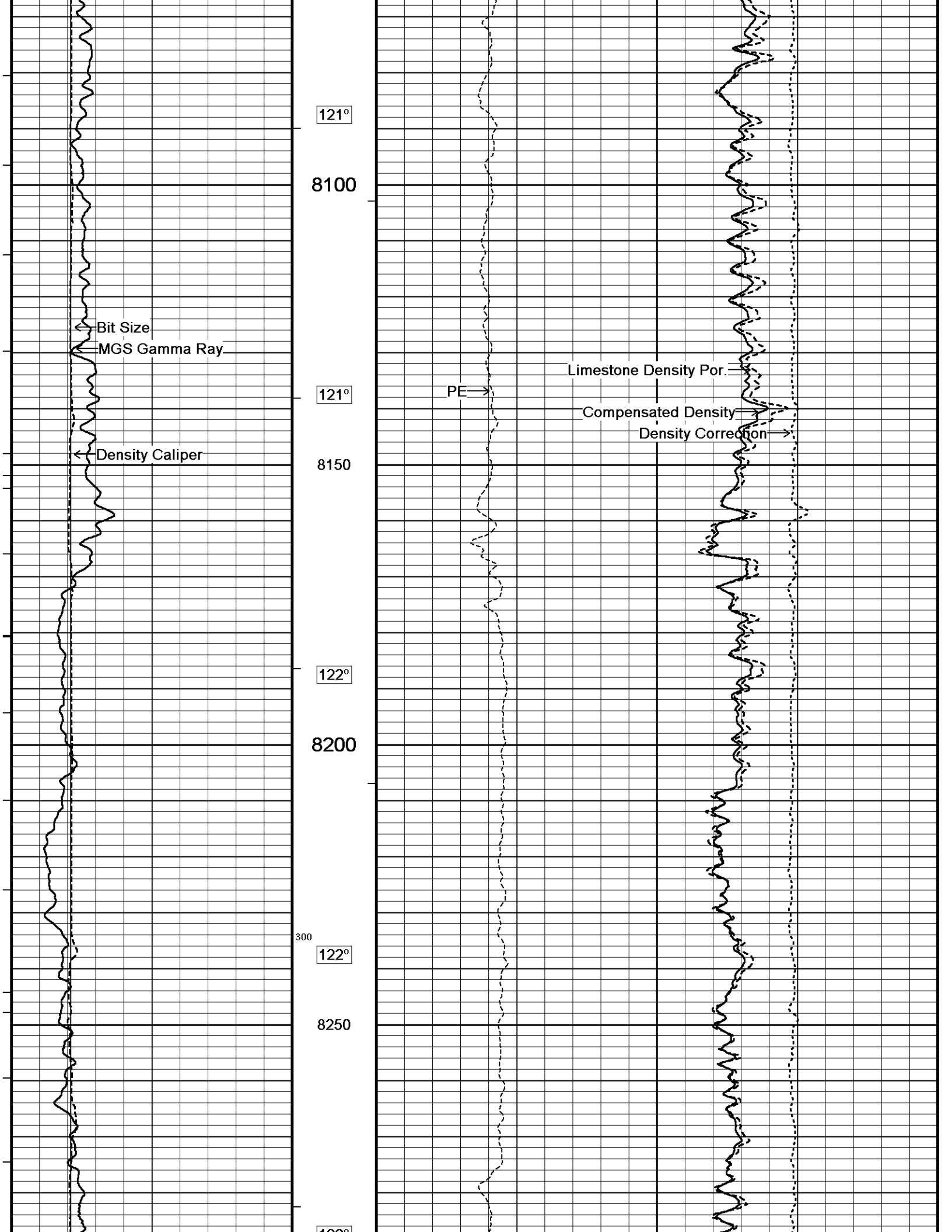
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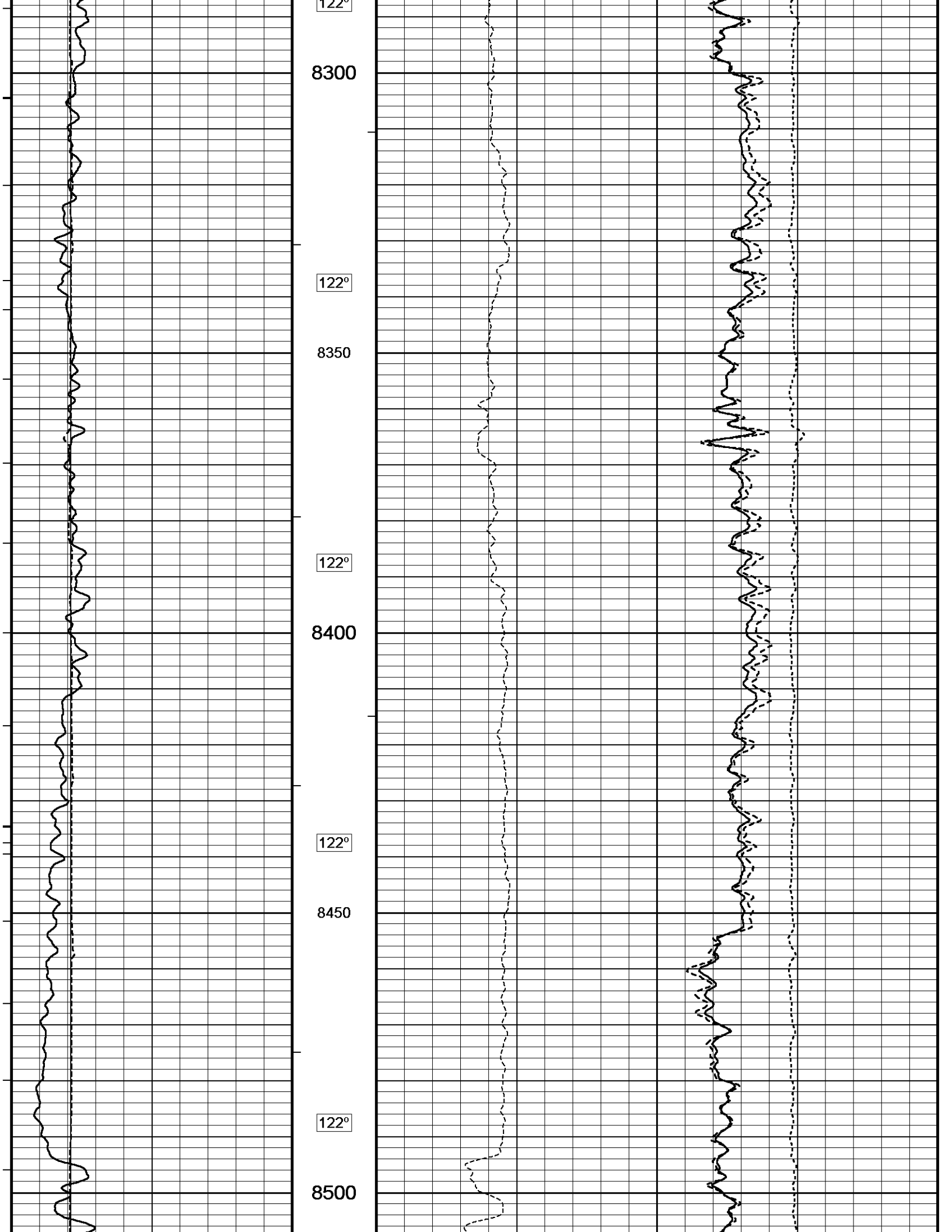
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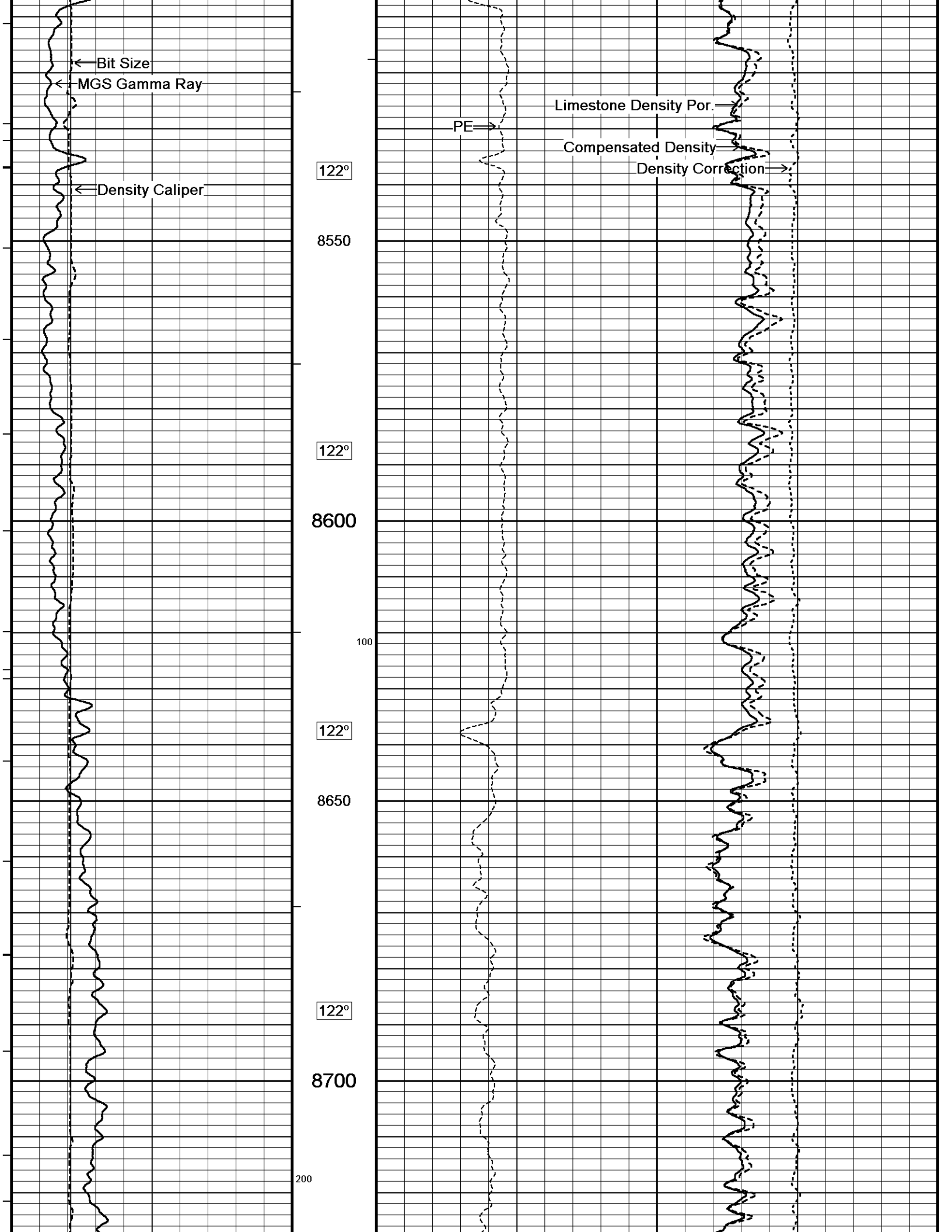
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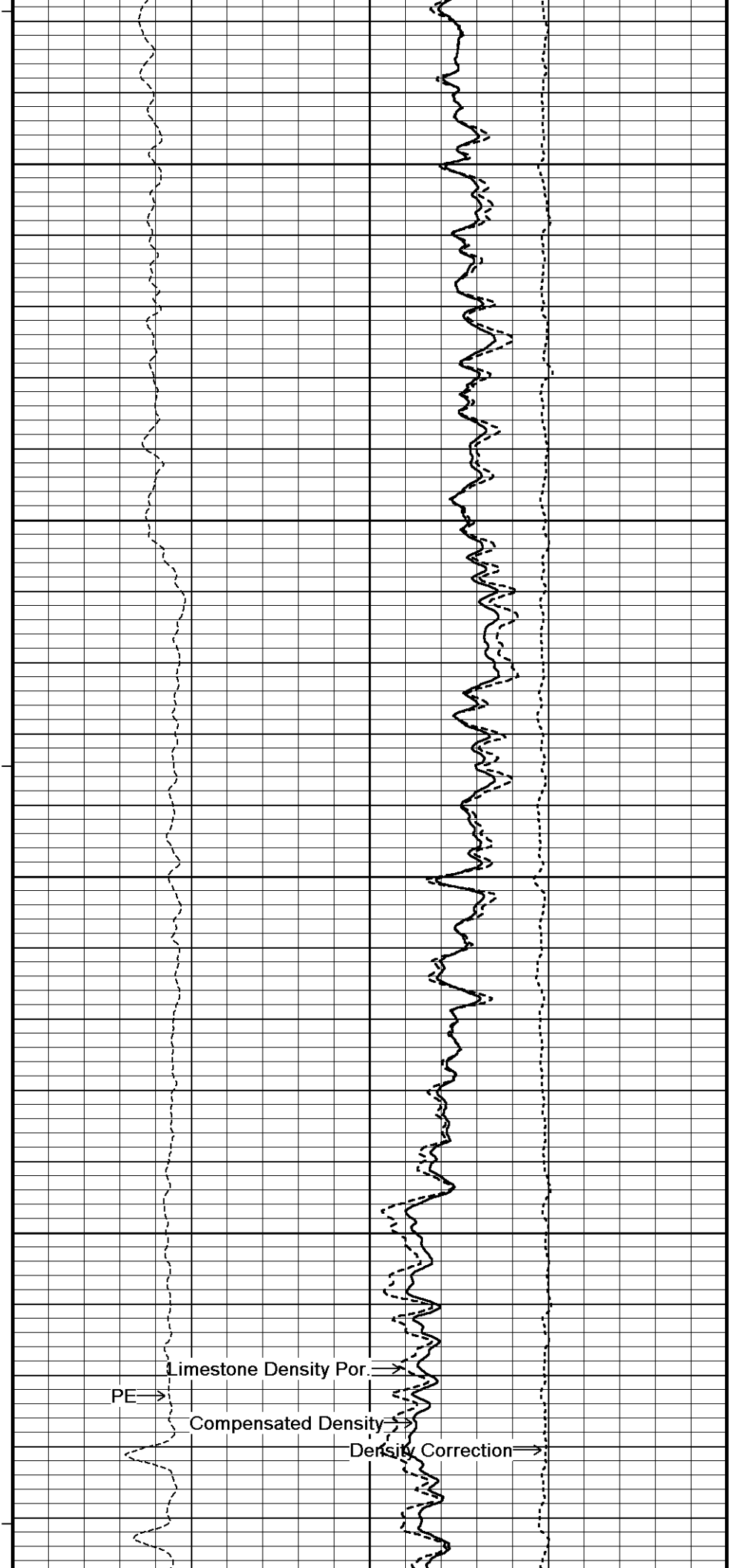
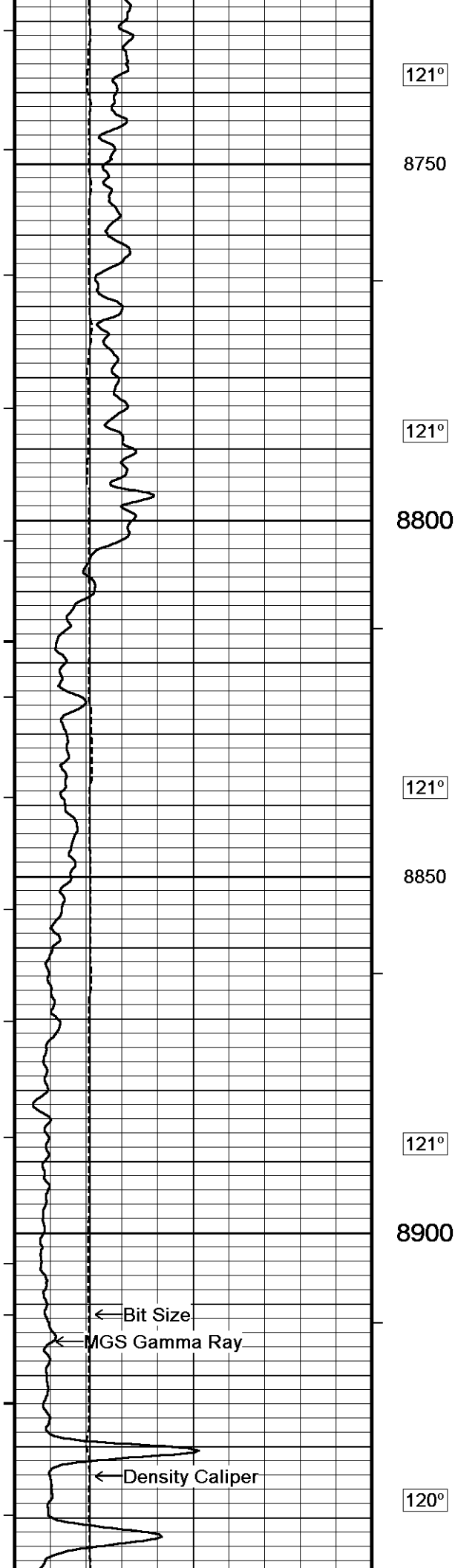
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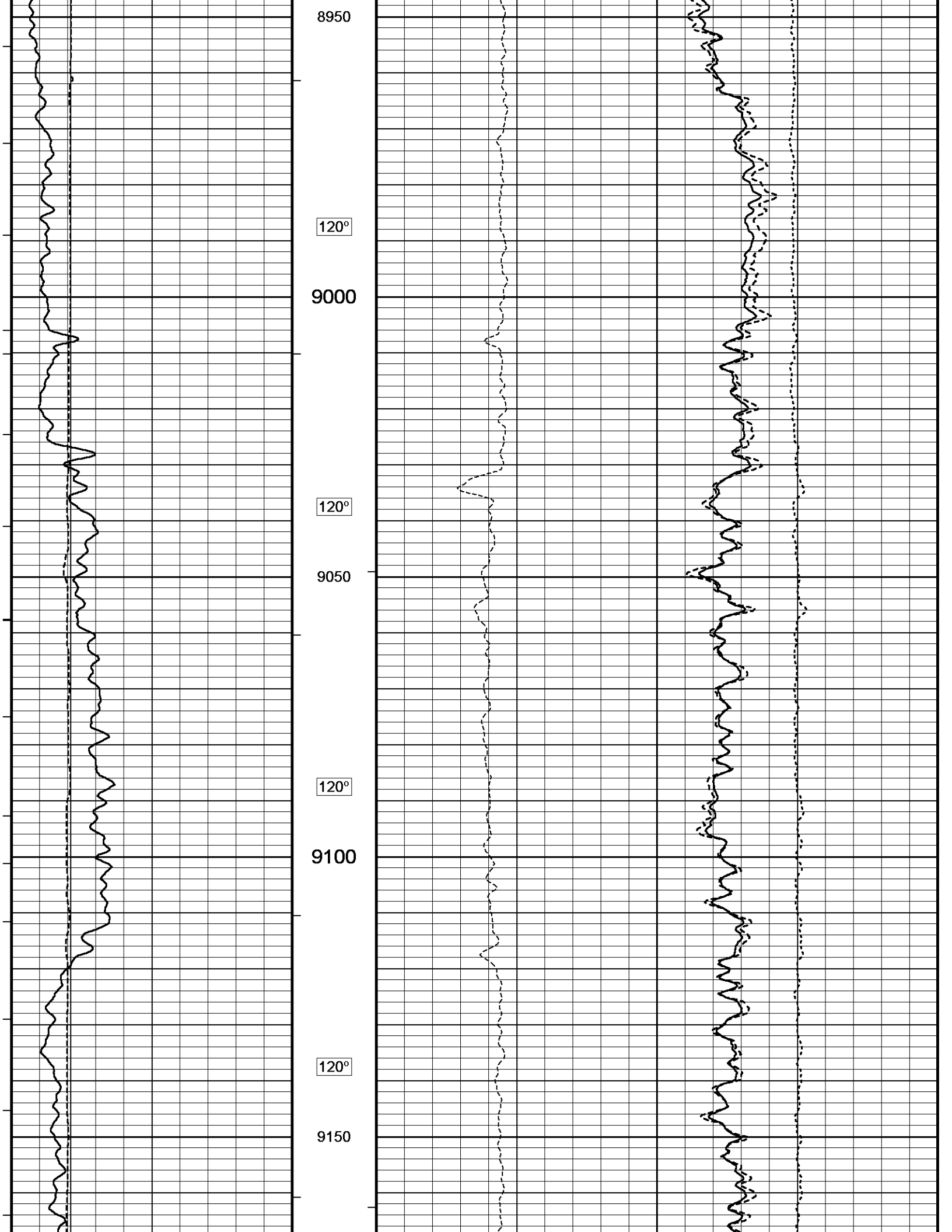


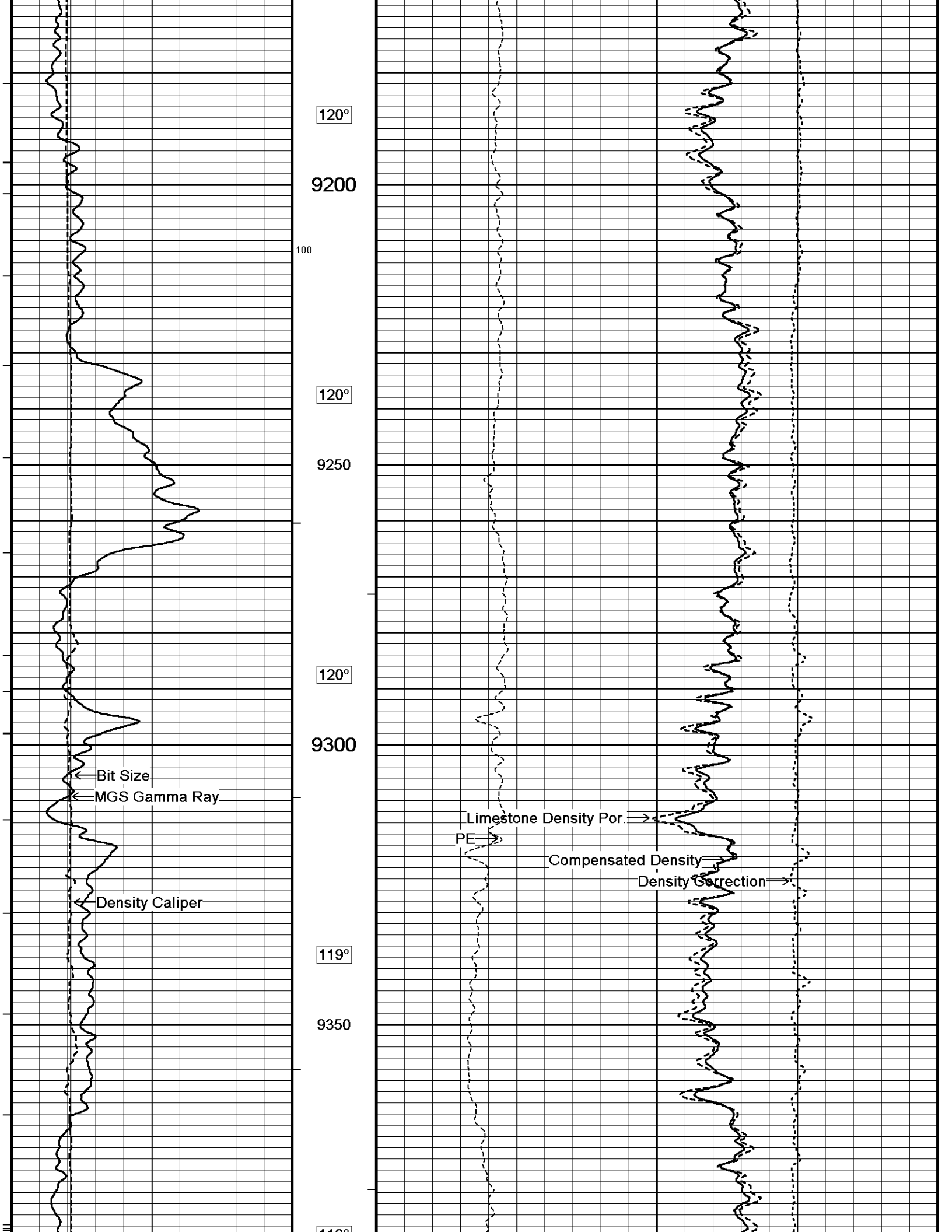


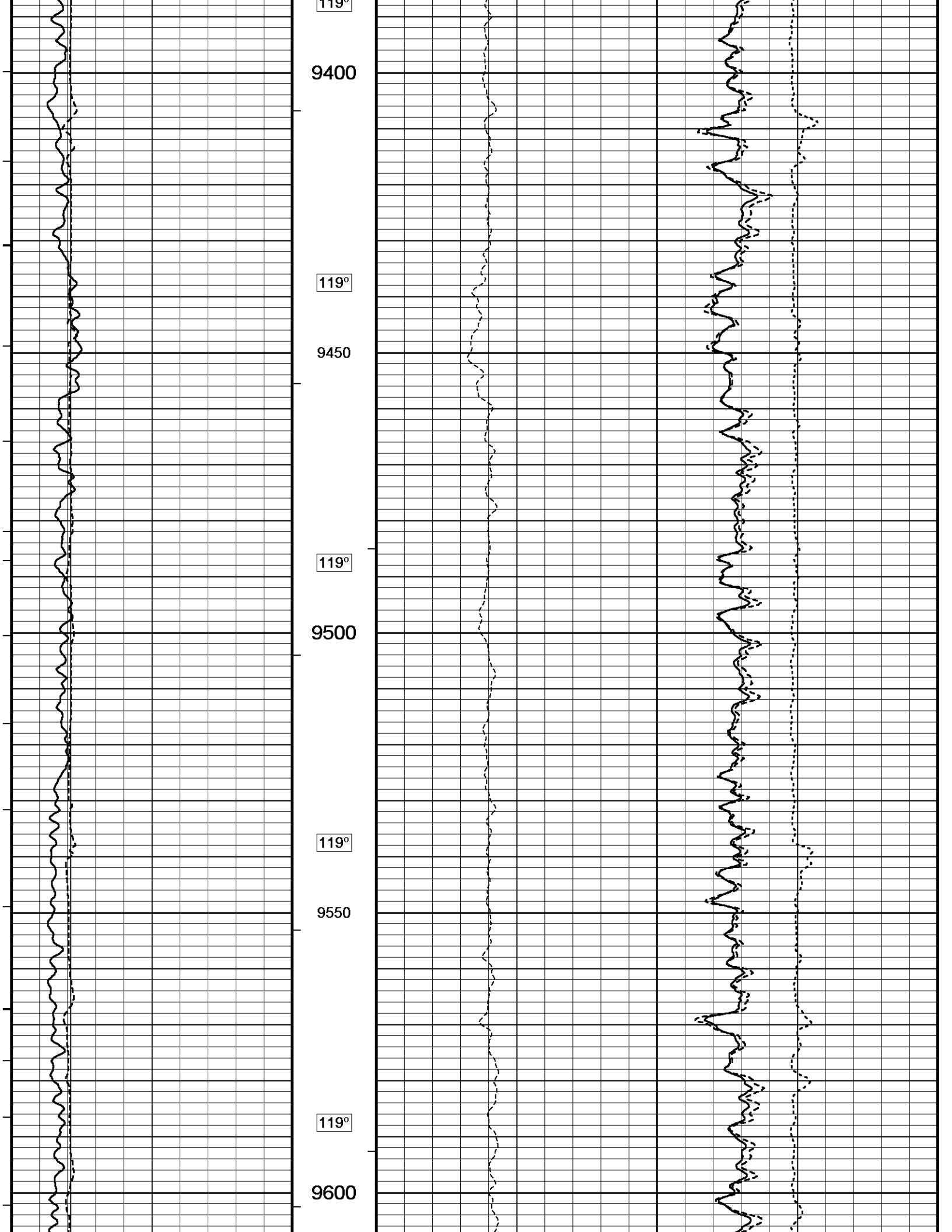


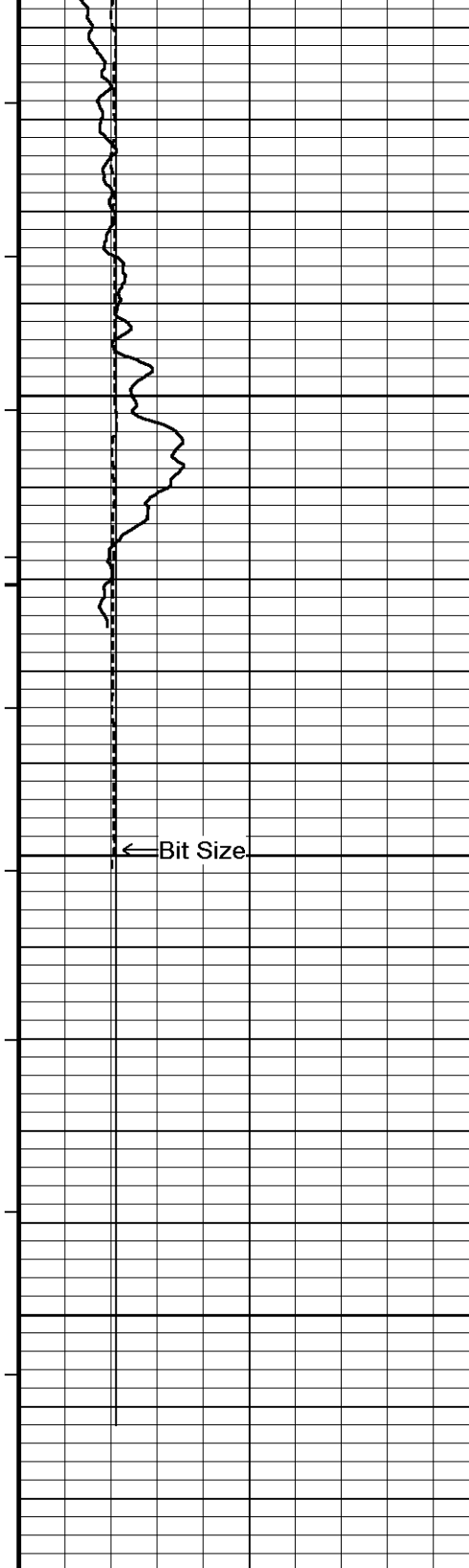












120°

9650

9700

9750

9776

Depth
In
Feet

Timing Marks
every 60.0 sec

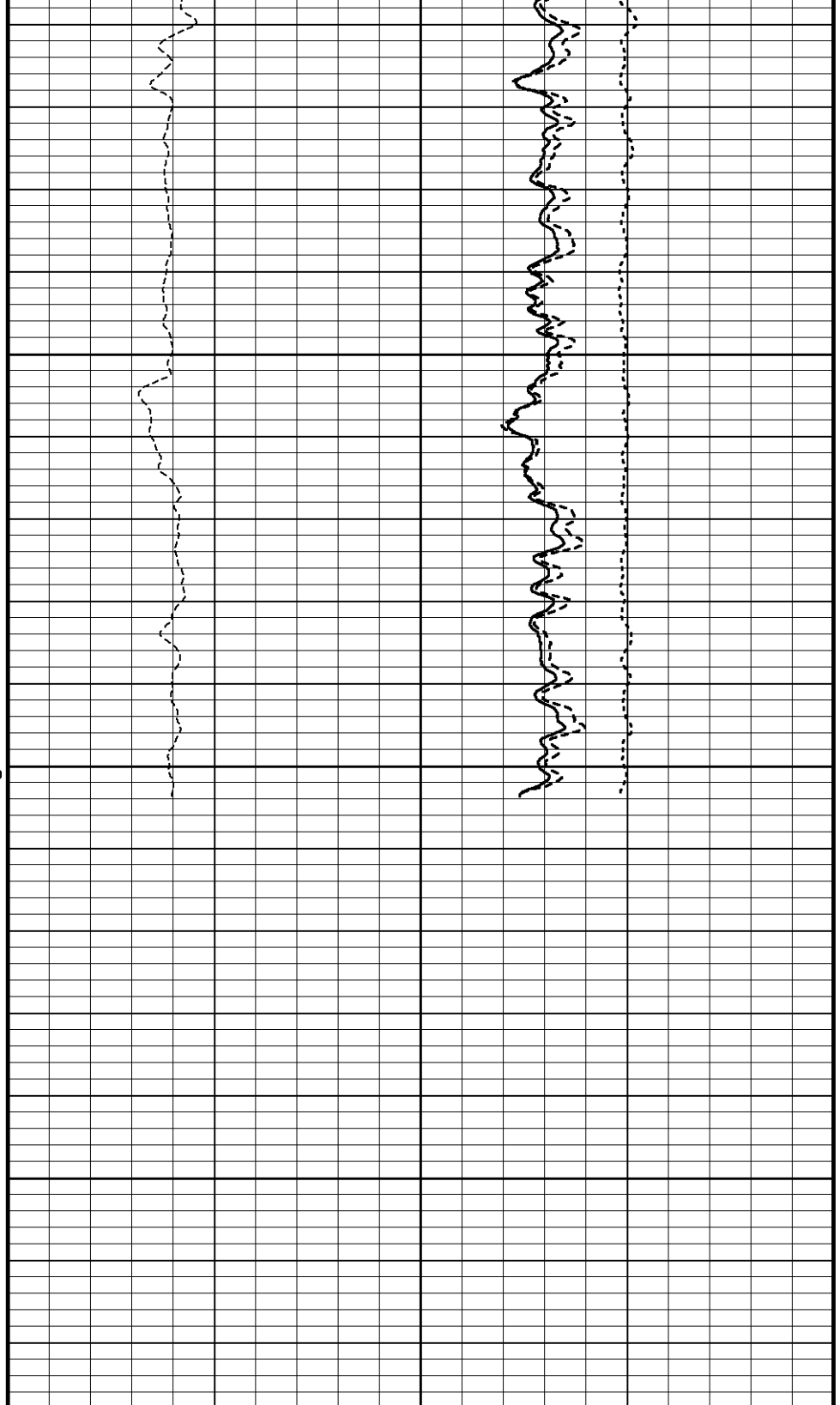
Density Caliper
inches

4 9 14

MGS Gamma Ray

Borehole
Temp in
deg F
HVI
every
10 cu ft

Annular
Integral



Compensated Density

grams/cc

2 2.25 2.50 2.75 3

Limestone Density Por.

percent

30 20 10 0 -10

0	API 75	150	Integral every 10 cu ft	PE barns/electron Density Correction grams/cc 0 5 10 -0.50 0 0.50
150	225	300	→	
Bit Size inches			Replay Scale 1:240	
4	9	14		

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 28-NOV-2012 23:38

Filename: C:\Minimus 13.03.7779\Data\1505720849 SDRGE Main 2924 1-30H\40928RTAP.dta
Recorded on 28-NOV-2012 21:59

System Versions: Processed with 13.03.7779
Plotted with 13.03.7779

↑
5 INCH BULK DENSITY
↑

BEFORE SURVEY CALIBRATION
 C:\Minimus 13.03.7779\Data\1505720849 SDRGE Main 2924 1-30H\40928RTAP.dta

Down-hole Tension Calibration All 000

Field Calibration on 24-FEB-2009 00:00

Reading No	Measured	
1	14953.75	0.00
2	17846.38	1500.00

General Constants All 000

Last Edited on 28-NOV-2012,22:39

General Parameters

Mud Resistivity	0.210	ohm-metres
Mud Resistivity Temperature	75.000	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	4.500	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-SEP-2012,13:01

Reading No	Measured	Calibrated (lbs)
1	15152.07	0.00
2	18386.74	2000.00

Strain Gauge Constants MMS-E.B 167

Last Edited on 03-AUG-2012 11:54

Atmospheric Pressure

	14.70	psi
Serial Number	0	
Calibration Date	000000000000	
Base Check Date		
Dead Weight Serial Number	0	
Dead Weight Gravitational Correction	1.0	

Temperature	75.0		150.0		250.0		350.0		degrees F
Pressure psia	Inc.	Dec.	Inc.	Dec.	Inc.	Dec.	Inc.	Dec.	
0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
2000.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4000.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
6000.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
8000.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
10000.0	0.000		0.000		0.000		0.000		

Logging Parameters

Firmware Version	2v40	
Caliper Open On	MAI	
Caliper Open Delay		minutes
Caliper Closed On	Unknown	
Caliper Closed Delay	N/A	minutes
Sample Rate	1.00	seconds
Use Deep Sleep	No	
Delay Deep Sleep	N/A	
Deep Sleep Wake Time	N/A	minutes
Deep Sleep Wake on Temperature	N/A	
Deep Sleep Wake Temperature	N/A	degrees C
Deep Sleep Wake on Pressure	N/A	
Deep Sleep Wake Pressure	N/A	psi
MMI Pad Pressure	0.0	

Release Parameters

Pulse Duration Base Level	10.0	seconds
Pulse Duration Transition Time	60.0	seconds
Pulse Duration Status Pulse From	20.0	seconds
Pulse Duration Caliper Close From	145.0	seconds
Pulse Duration Caliper Open From	150.0	seconds
Pulse Duration Release Pulse From	215.0	seconds
Pulse Duration Release Pulse To	280.0	seconds
Pulse Release Duration	240.0	seconds
Pulse Discriminator Pressure Band	96.0	seconds
Pulse Pressure Discriminator	213.0	seconds
Use Negative Pulsing	No	
Good Status Reply Open Hole	65535.0	seconds
Good Status Reply Cased Hole	20.0	seconds
Bad Status Reply	60.0	seconds
Status Pulse To	80.0	seconds
Caliper Close To		seconds
Caliper Open To	210.0	seconds

Configuration

MMS,MGS,MDN,MPD,MPD,MFE,SGS,MAI

High Resolution Temperature Calibration MGS-C.J 135

Field Calibration on 14-SEP-2012,18:43

	Measured	Calibrated(Deg F)
Lower	50.00	50.00
Upper	100.00	100.00

High Resolution Temperature Constants MGS-C.J 135

Last Edited on 14-SEP-2012,18:43

Pre-filter Length	11
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Gamma Calibration MGS-C.J 135

Field Calibration on 24-NOV-2012 02:31

	Measured	Calibrated (API)
Background	100	71
Calibrator (Gross)	1863	1332
Calibrator (Net)	1764	1261

Gamma Constants MGS-C.J 135

Last Edited on 28-NOV-2012,10:16

Gamma Calibrator Number	BLUE	
Mud Density	1.15	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

Neutron Calibration MDN-B.J 388

Base Calibration on 19-OCT-2012 09:31

Field Check on 24-NOV-2012 02:26

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3044	91	3714	110

Ratio	33.287	33.764
Field Calibrator at Base	Calibrated (cps)	
	1243	1868
Ratio	0.665	
Field Check	Calibrated (cps)	
	1251	1884
Ratio		

Neutron Constants MDN-B.J 388			Last Edited on 26-NOV-2012,06:52		
Neutron Source Id	p31112b				
Neutron Jig Number	blue				
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	Constant Value				
Temperature	20.00	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-B.J 329			Base Calibration on 19-OCT-2012 08:45 Field Check on 25-NOV-2012 06:13		
Base Calibration					
	Measured	Calibrated (ohm-m)			
Reference 1	0.0	0.0			
Reference 2	973.9	126.8			
Base Check		278.9			
Field Check		279.0			

FE Constants MFE-B.J 329			Last Edited on 26-NOV-2012,06:52		
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.		MGS External Temperature			
Stand-off		0.5		inches	

High Resolution Temperature Calibration MAI-B.J 389			Field Calibration on 19-OCT-2011 09:44
	Measured	Calibrated(Deg F)	
Lower	10.00	50.00	
Upper	100.00	212.00	

High Resolution Temperature Constants MAI-B.J 389		Last Edited on
Pre-filter Length	11	

Induction Calibration MAI-B.J 389				Base Calibration on 01-SEP-2012,07:44	
				Field Check on 24-NOV-2012 02:11	
Base Calibration					
Test Loop Calibration		Measured		Calibrated (mmho/m)	
Channel	Low	High	Low	High	
1	16.7	465.5	9.3	966.2	
2	6.4	384.0	7.6	821.4	
3	3.1	258.9	5.2	566.0	
4	1.8	133.7	2.6	279.2	
Array Temperature		78.1	Deg F		

Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1			12.4	3896.0
2			28.9	3509.1
3			29.1	3050.2
4			19.5	2063.6
Deep			18.9	2013.5
Medium			42.3	4005.5
Shallow			41.4	5152.5
Array Temperature			51.4	Deg F

Induction Constants MAI-B.J 389				Last Edited on 28-NOV-2012,22:41	
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.		MGS 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 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-C.J 435			Base Calibration on 19-OCT-2012 13:58	
			Field Calibration on 24-NOV-2012 02:19	
Base Calibration				
Reading No		Measured	Calibrator Size (in)	
1		16544	4.01	
2		26096	5.96	
3		36130	7.98	
4		45920	9.86	
5		56672	11.88	
6		N/A	N/A	
Field Calibration				
		Measured Caliper (in)	Actual Caliper (in)	
		5.93	5.96	

Photo Density Calibration MPD-C.J 435			Base Calibration on 19-OCT-2012 13:49 Field Check on 24-NOV-2012 02:17	
Density Calibration				
Base Calibration		Measured	Calibrated (sdu)	

Base Calibration		Near	Far	Near	Far
		56740	27516	59869	31110
Reference 2		23545	2589	24557	2522
Field Check at Base					
		1300.9	1340.8		
Field Check					
		1296.7	1346.2		
PE Calibration					
Base Calibration		Measured		Calibrated	
	WS	WH	Ratio	Ratio	
Background	235	1162			
Reference 1	22601	56530	0.404	0.369	
Reference 2	6364	23395	0.276	0.271	
Field Check at Base					
		235.4	1161.7		
Field Check					
		235.9	1159.8		

Density Constants MPD-C.J 435			Last Edited on 28-NOV-2012,10:15		
Density Source Id	p21137b				
Nylon Calibrator Number	633				
Aluminium Calibrator Number	633				
Density Shoe Profile	4 inch				
Caliper Source for Processing	Density Caliper				
PE Correction to Density	Not Applied				
Mud Density	1.15	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				

Spectral Gamma Calibration			SGS-E.J 170			Base Calibration on 26-MAR-2012 22:31		
						Field Calibration on 26-MAR-2012 22:03		
Base Calibration								
Potassium Calibrator								
		Gate 1	Gate 2	Gate 3	Gate 4	Gate 5		
	Background	80.0	23.7	2.4	1.0	1.3		
	Calibrator (Gross)	205.8	107.5	23.2	0.9	1.4		
	Calibrator (Net)	125.8	83.7	20.8	-0.1	0.1		
		K %	U ppm	Th ppm				
Concentrations		5.8	0.0	0.0				
Uranium Calibrator								
		Gate 1	Gate 2	Gate 3	Gate 4	Gate 5		
	Background	80.0	23.7	2.4	1.0	1.3		
	Calibrator (Gross)	480.0	163.5	14.5	7.8	4.1		
	Calibrator (Net)	400.0	139.8	12.1	6.8	2.8		
		K %	U ppm	Th ppm				
Concentrations		0.0	14.8	0.0				
Thorium Calibrator								

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	80.0	23.7	2.4	1.0	1.3
Calibrator (Gross)	394.8	138.7	11.4	6.2	14.7
Calibrator (Net)	314.7	115.0	9.1	5.2	13.5

	K %	U ppm	Th ppm
Concentrations	0.0	0.0	44.3

Mixture Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	80.0	23.7	2.4	1.0	1.3
Calibrator (Gross)	918.4	363.2	44.9	13.6	18.2
Calibrator (Net)	838.4	339.5	42.5	12.6	16.9

Field Calibration

Gamma Ray

	Measured	Calibrated (API)
Background	113	23
Calibrator (Gross)	1362	273
Calibrator (Net)	1250	250

Mixture Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	80.0	23.7	2.4	1.0	1.3
Calibrator (Gross)	918.4	363.2	44.9	13.6	18.2
Calibrator (Net)	838.4	339.5	42.5	12.6	16.9

Spectral Gamma Constants SGS-E.J 170

Last Edited on 28-NOV-2012,10:16

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	1.15	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

DOWNHOLE EQUIPMENT

C:\Minimus 13.03.7779\Data\1505720849 SDRGE Main 2924 1-30H\40928RTAP.dta

Compact Linker (Shuttle Running Tool 3.5
MLK-A 1 LG: 4.87 ft WT: 30.9 lb OD: 2.52 in

Compact Linker (MBS-D.A 400v Compact Bat
MLK-A 2 LG: 14.24 ft WT: 30.9 lb OD: 2.24 in

Compact Linker (MBS-D.A 400v Compact Bat
MLK-A 3 LG: 14.24 ft WT: 30.9 lb OD: 2.24 in

MBS-G.A 200v Compact Battery Sub
MBS-G.A 135 LG: 17.06 ft WT: 123.5 lb OD: 2.24 in

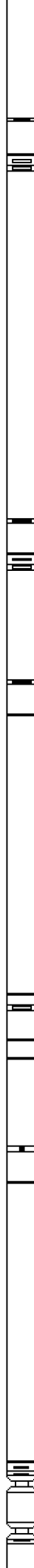
Compact Memory Sub E.B
MMS-E.B 167 LG: 5.20 ft WT: 37.5 lb OD: 2.24 in

Compact Tool Isolator sub.
MTI-B.A 72 LG: 1.54 ft WT: 13.2 lb OD: 2.24 in

Compact Short Gamma
MGS-C.J 135 LG: 3.41 ft WT: 24.3 lb OD: 2.24 in

Compact Collar Locator
MCL-B.J 60 LG: 3.17 ft WT: 26.5 lb OD: 2.24 in

SKJ-D.A Compact Knuckle Joint
SKJ-D.A 41 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in



86.35 ft GRGM - MGS Gamma Ray

84.36 ft GSXT - MGS External Temperature

82.34 ft GCSL - MCL C. Collar Locator

SHA-F Compact Swivel Head Adaptor
SHA-F 33 LG: 2.74 ft WT: 26.5 lb OD: 2.24 in

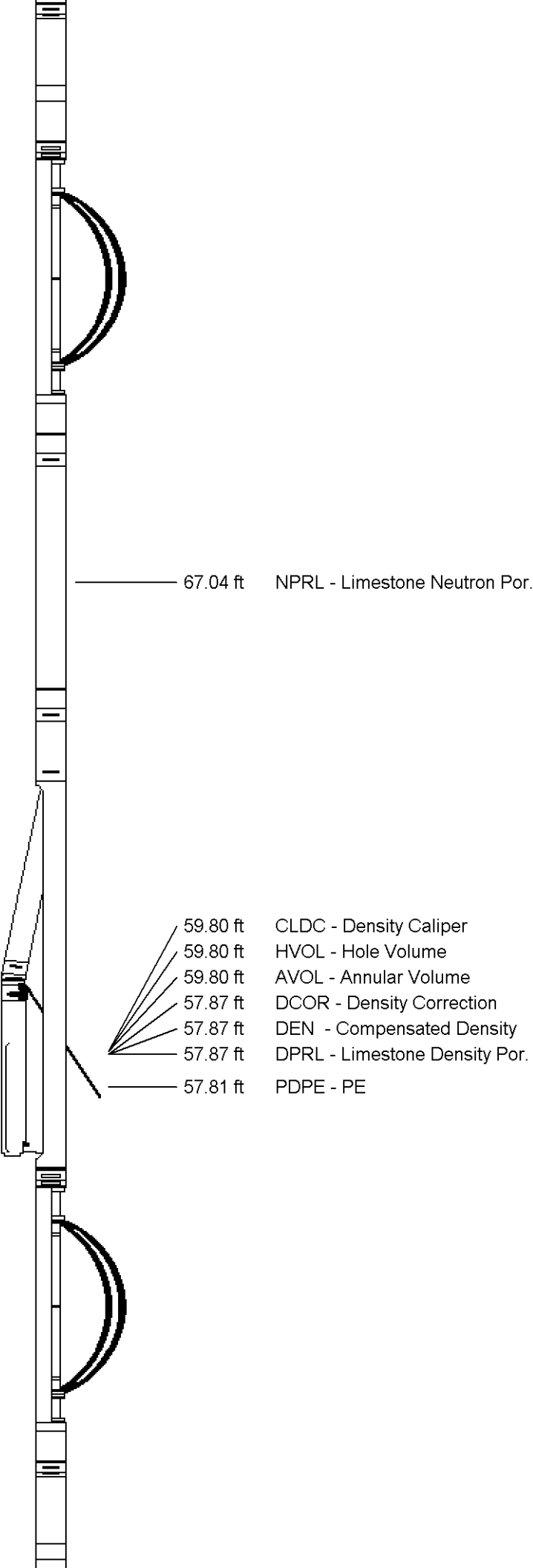
MIS-D.A Compact Inline Bowspring sub
MIS-D.A 310 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

Compact Neutron
MDN-B.J 388 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper
MPD-C.J 435 LG: 9.59 ft WT: 90.4 lb OD: 2.24 in

MIS-D.B Compact Inline Bowspring sub
MIS-D.B 609 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

SHA-J.A Compact Swivel Head Adaptor
SHA-J.A 454 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in



SKJ-D.A Compact Knuckle Joint
SKJ-D.A 42 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

MIS-E.B Compact Inline Standoff sub
MIS-E.B 573 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

Compact Focussed Electric
MFE-B.J 329 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

40.01 ft FEFE - Shallow FE

MIS-E.B Compact Inline Standoff sub
MIS-E.B 575 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

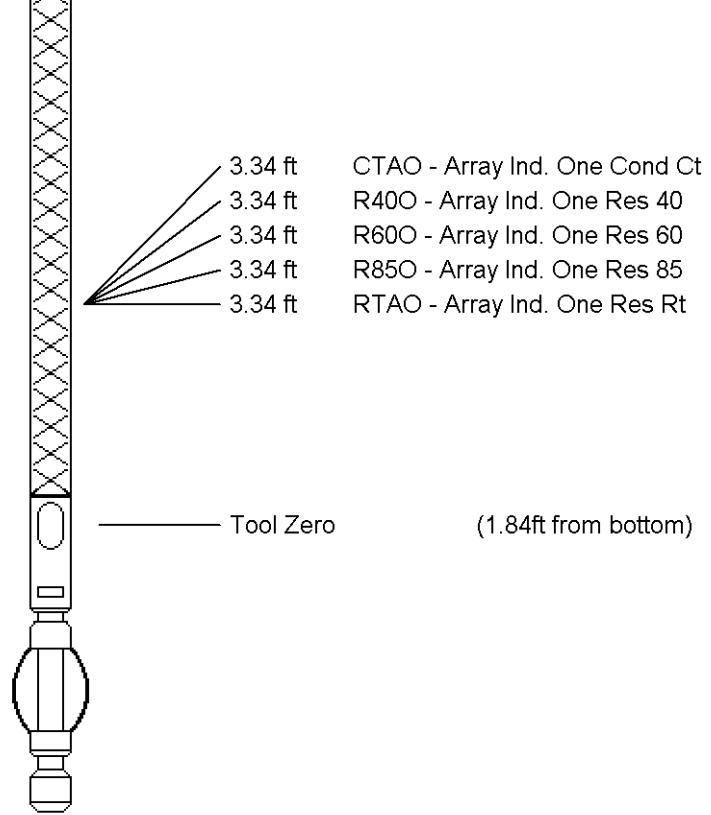
ThruWire Spacer
MLK-D.A 250 LG: 14.24 ft WT: 30.9 lb OD: 2.24 in

Spectral Gamma Ray Sub
SGS-E.J 170 LG: 7.78 ft WT: 105.8 lb OD: 3.54 in

14.67 ft GRSG - SGS Gamma Ray
14.67 ft GRTH - Thorium Gamma
14.67 ft GRPO - Potassium Gamma
14.67 ft GCGR - Uranium Stripped Gamma
14.67 ft GRUR - Uranium Gamma
14.67 ft GSGC - SGS BH Corrected Gamma

MIS-E.B Compact Inline Standoff sub
MIS-E.B 577 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

Compact Induction
MAI-B.J 389 LG: 12.52 ft WT: 48.5 lb OD: 2.24 in



Total Length: 146.12 ft Weight: 901.7 lb

All measurements relative to tool zero.

COMPANY SANDRIDGE ENERGY
 WELL MAIN 2924 1-30H
 FIELD UNNAMED
 PROVINCE/COUNTY FORD
 COUNTRY/STATE USA \ KANSAS

Elevation Kelly Bushing	2618.00	feet	First Reading	9703.00	feet
Elevation Drill Floor	2618.00	feet	Depth Driller	9795.00	feet
Elevation Ground Level	2600.00	feet	Depth Logger	9795.00	feet



CML MESSENGER SHUTTLE
 COMPACT PHOTO DENSITY
 COMPENSATED NEUTRON LOG

Weatherford®