

COMPACT QUAD COMBO QUICKLOOK

LOG

COMPANY	WEXPRO COMPANY							
WELL	DONNELL #16							
FIELD	POWDER WASH UNIT							
PROVINCE/COUNTY	MOFFAT							
COUNTRY/STATE	U.S.A. / COLORADO							
LOCATION	2324' FNL & 1321' FWL							
SEC	TWP	RGE	Other Services					
29	12N	97W						
API Number	05-081-07424		Permanent Datum G.L., Elevation 6586 feet Log Measured From K.B. @ 13 FEET above Permanent Datum Drilling Measured From K.B.					
Permit Number								
Date	13-MAY-2008					Elevations: KB 6599.00 DF 6598.00 GL 6586.00		
Run Number	ONE							
Depth Driller	8967.00	feet						
Depth Logger	8655.00	feet						
First Reading	8955.00							
Last Reading	467.00							
Casing Driller	468.00	feet						
Casing Logger	467.00	feet						
Bit Size	7.88	inches						
Hole Fluid Type	LSND							
Density / Viscosity	10.40 lb/USg	48.00 CP						
PH / Fluid Loss	9.50	6.00 ml/30Min						
Sample Source	FLOWLINE							
Rm @ Measured Temp	1.82 @ 63.0	ohm-m						
Rmf @ Measured Temp	1.46 @ 63.0	ohm-m						
Rmc @ Measured Temp	2.18 @ 63.0	ohm-m						
Source Rmf / Rmc	CALC	CALC						
Rm @ BHT	0.601 @198.0	ohm-m						
Time Since Circulation	8 HOURS							
Max Recorded Temp	198.00	deg F						
Equipment Name	COMPACT							
Equipment / Base	13056	RK SPR						
Recorded By	W. HANKS							
Witnessed By	R. BUSH							
Last Title	Last Line		Last Line					

BOREHOLE RECORD			Last Edited: 13-MAY-2008 21:35	
Bit Size inches	Depth From feet		Depth To feet	
7.875	468.00		7141.00	
6.125	7141.00		8967.00	
CASING RECORD				
Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	9.625	0.00	468.00	36.00

REMARKS	
TOOLS RUN: SHA, MCG, MDN, MML, MPD, MIS, SKJ, MFE, MAI RAN IN COMBINATION.	
HARDWARE: MPD: 8" PROFILE PLATE USED. MFE: ONE 0.5" STANDOFF USED. MAI: TWO 0.5" STANDOFFS USED. MDN: DUAL NEUTRON BOWSPRING USED.	
2.65 G/CC DENSITY MATRIX USED TO CALCULATE POROSITY.	
INDUCTION MODEL USED: ENHANCED.	
ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST.	
DATA SPLICED AT 7642 FEET.	
TOTAL HOLE VOLUME FROM T.D. TO SURFACE CASING = 2640 CUBIC FEET.	
ANNULAR VOLUME WITH 4.5 INCH PRODUCTION CASING = 1702 CUBIC FEET.	

TIGHT PULLS, BOREHOLE SIZE AND RUGOSITY WILL AFFECT REPEATABILITY AND DATA QUALITY.

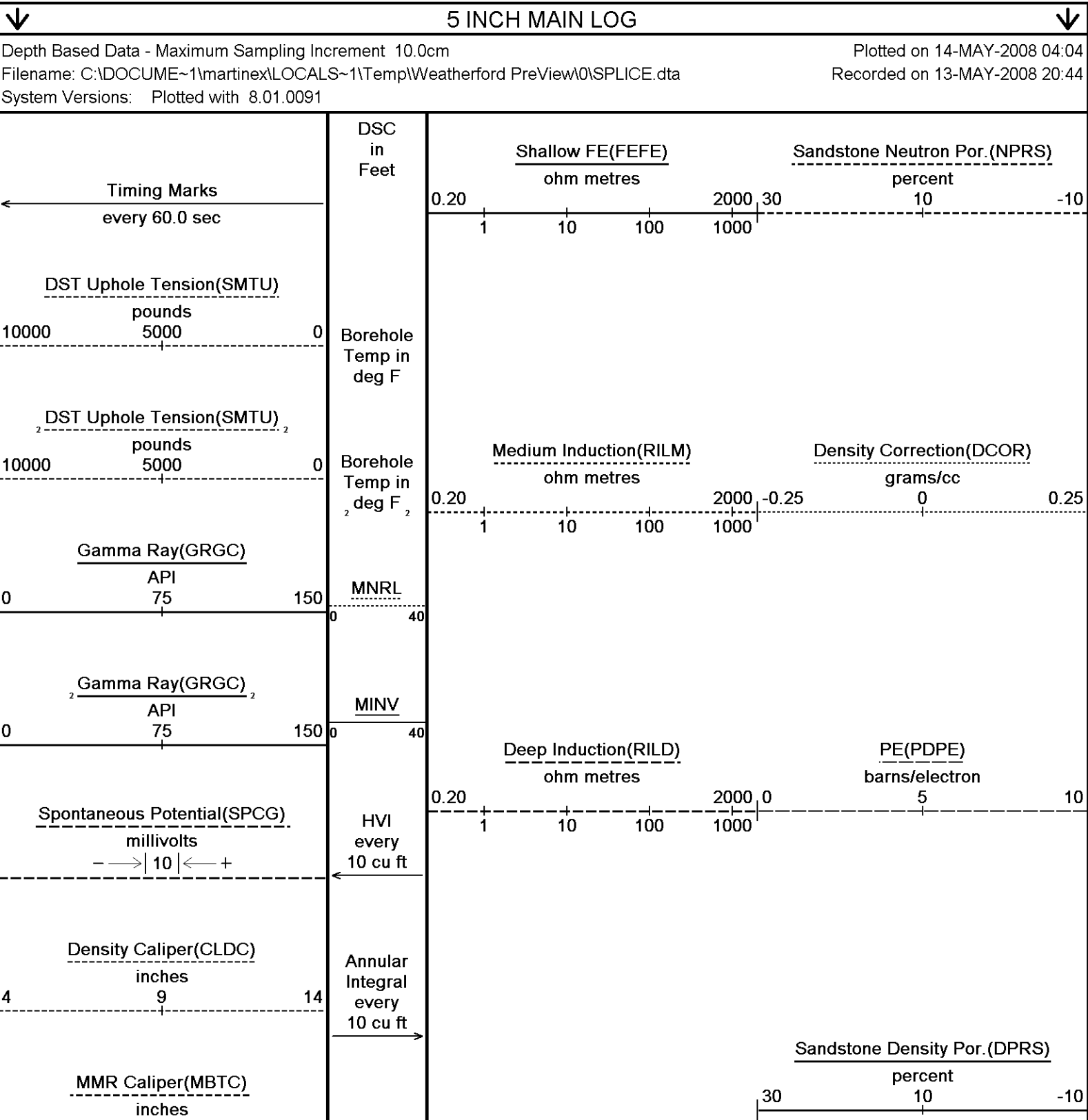
REPEAT SECTION PULLED BELOW CASING DUE TO CUSTOMER'S REQUEST.

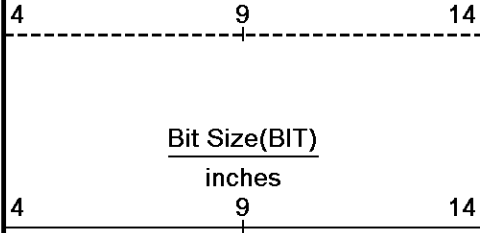
OPERATORS: K. POST.

SERVICE ORDER: #3504939.

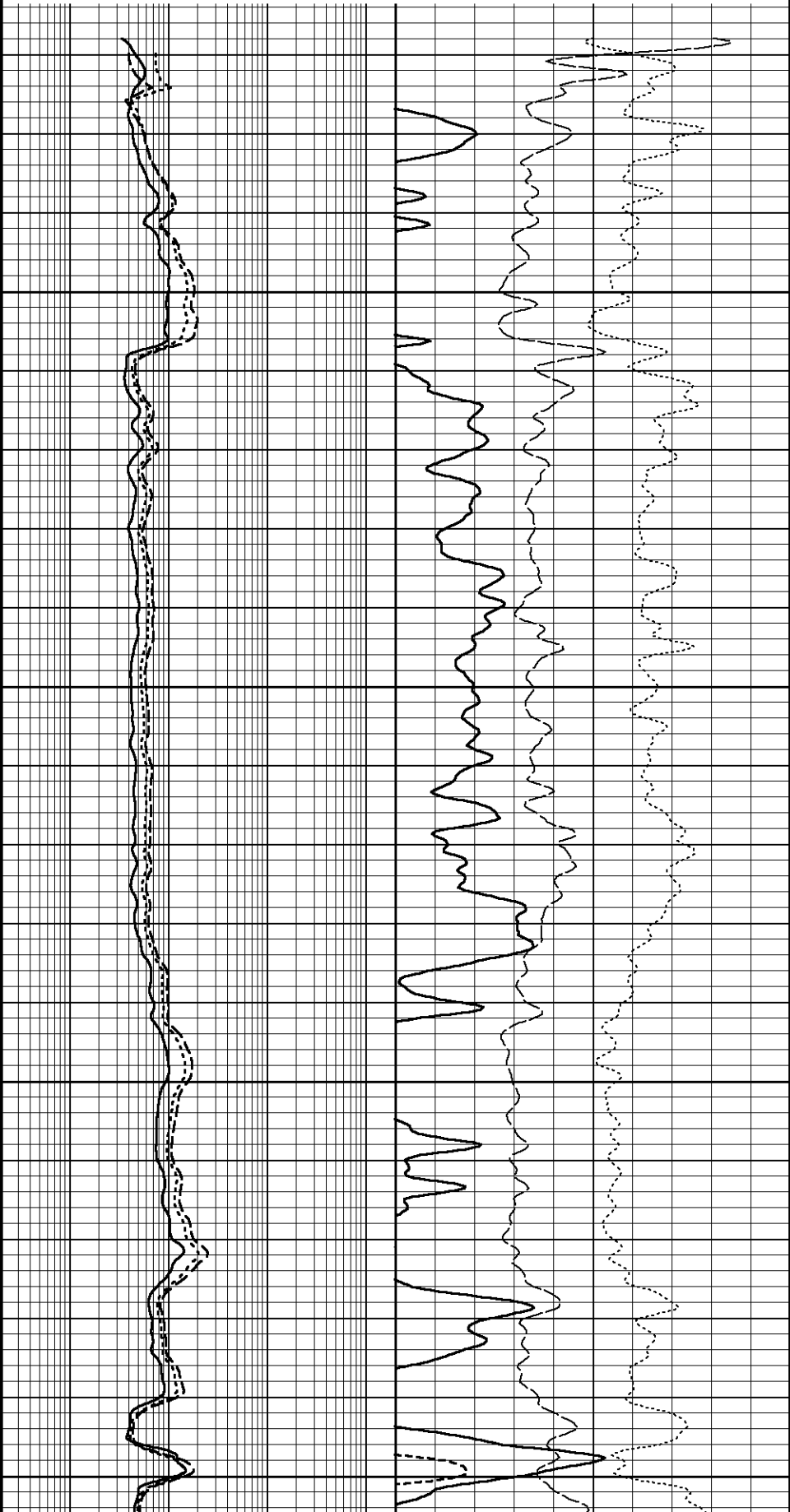
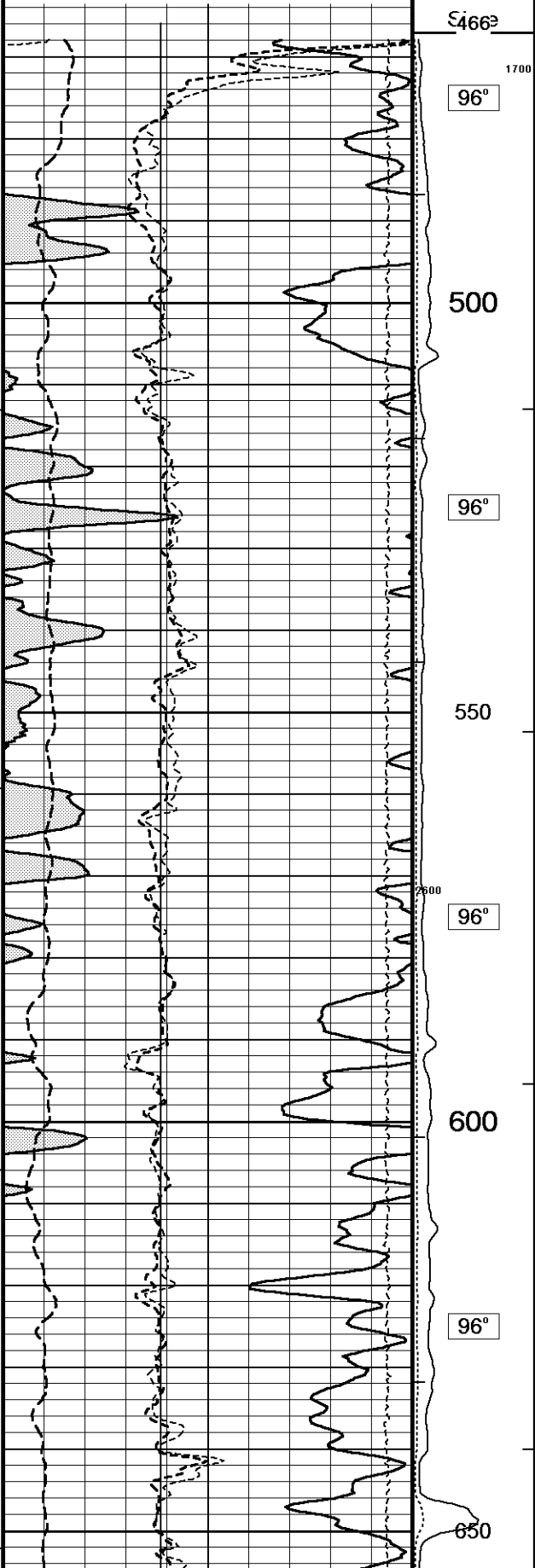
RIG: UNIT # 137.

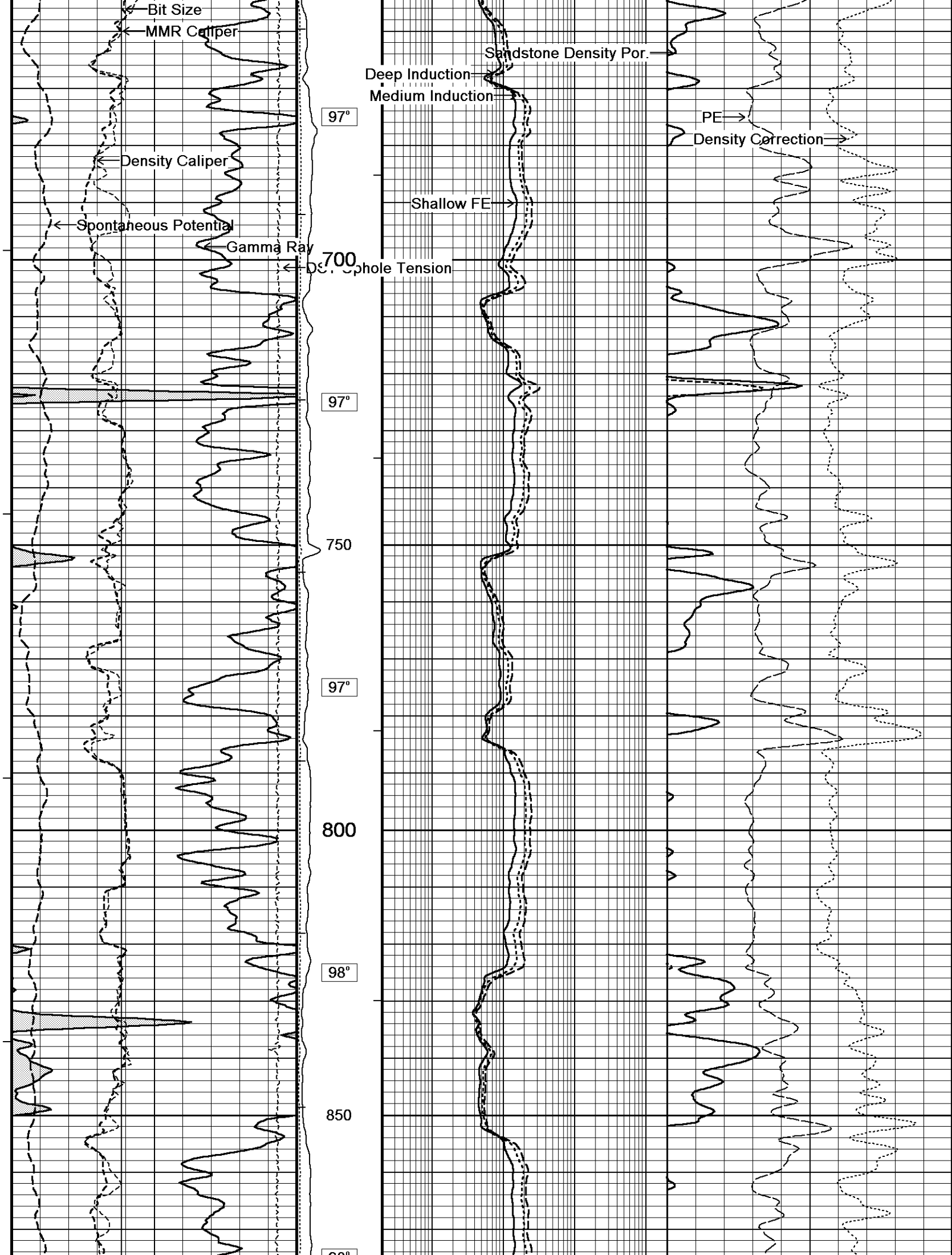
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

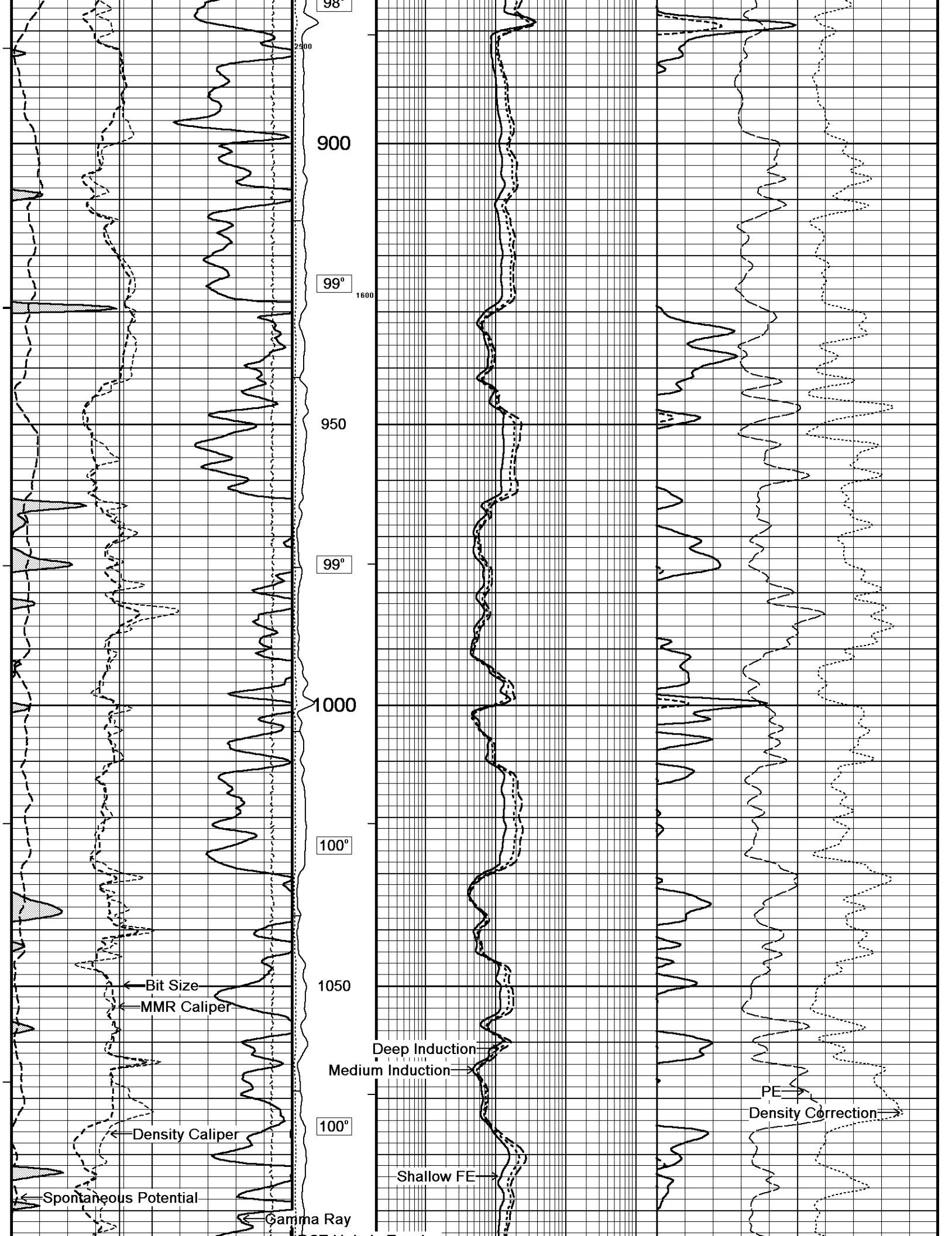


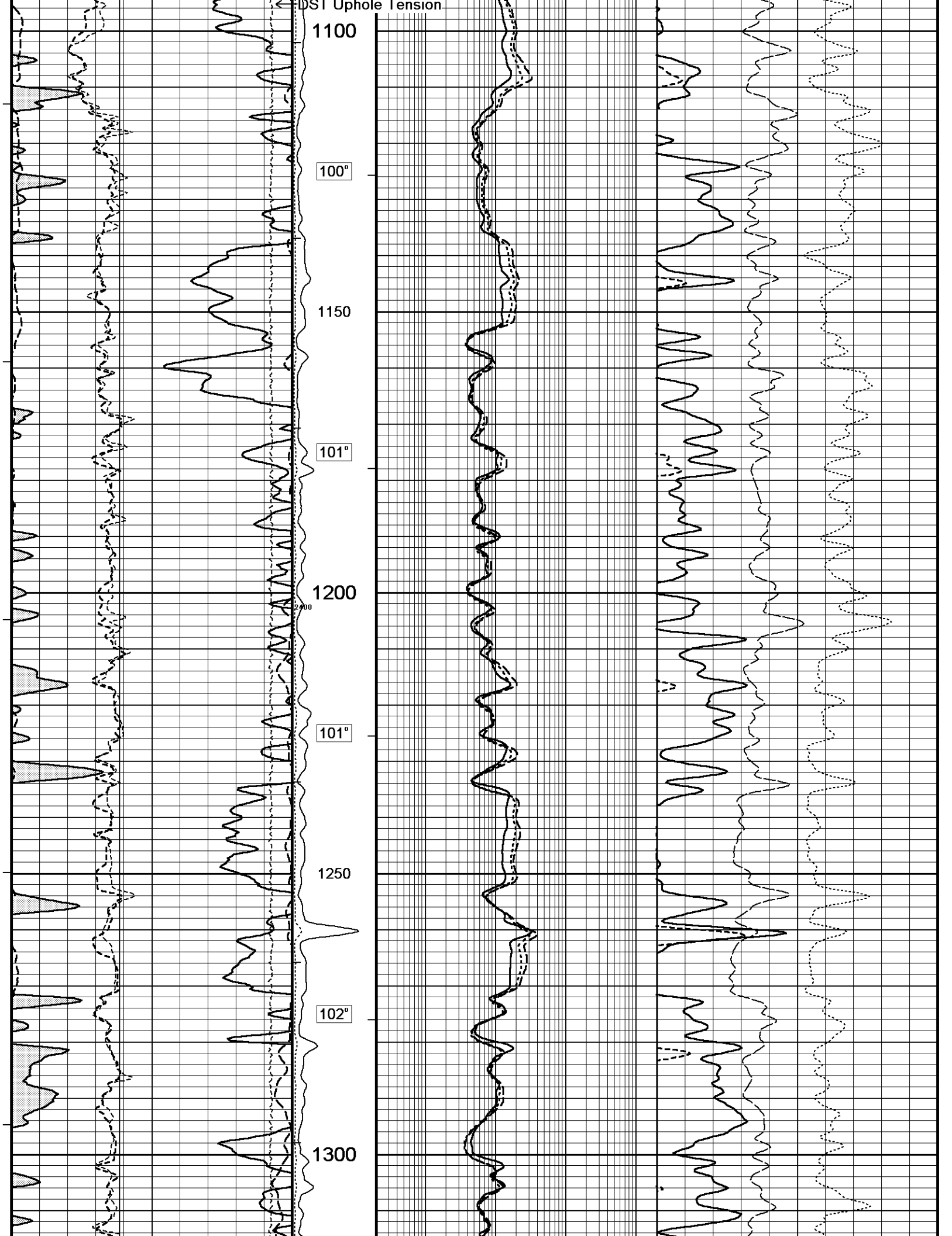


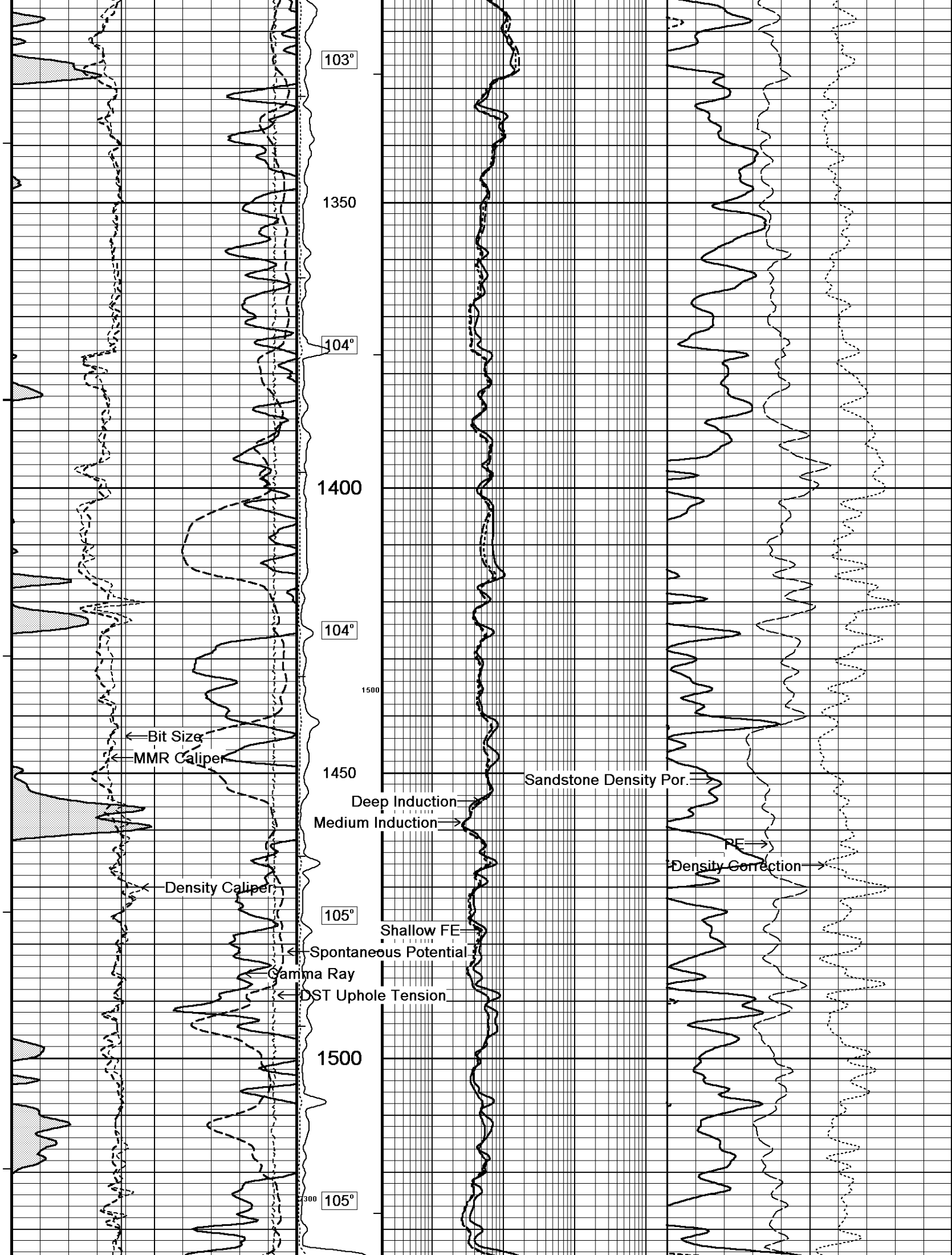
Replay
Scale
1:240

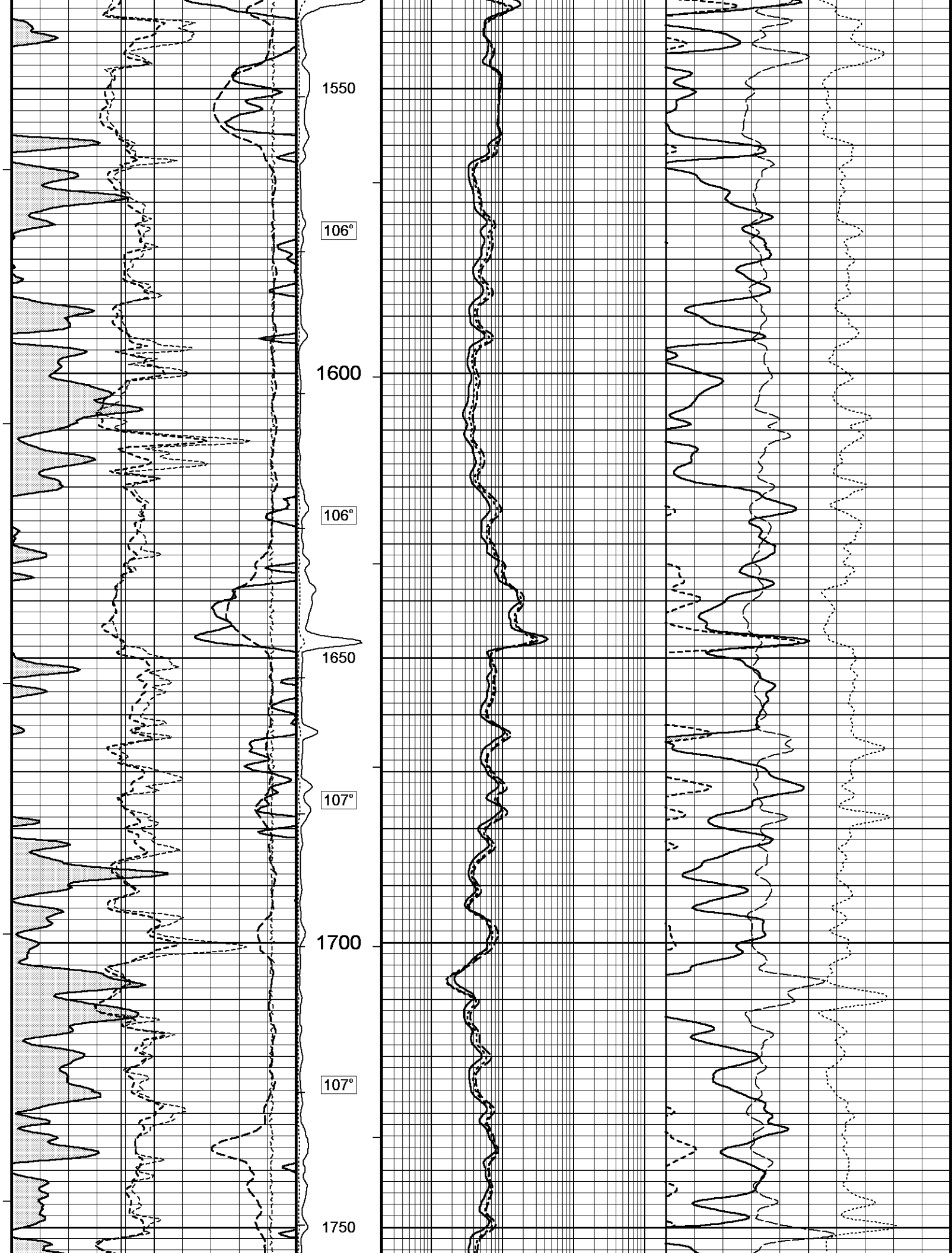


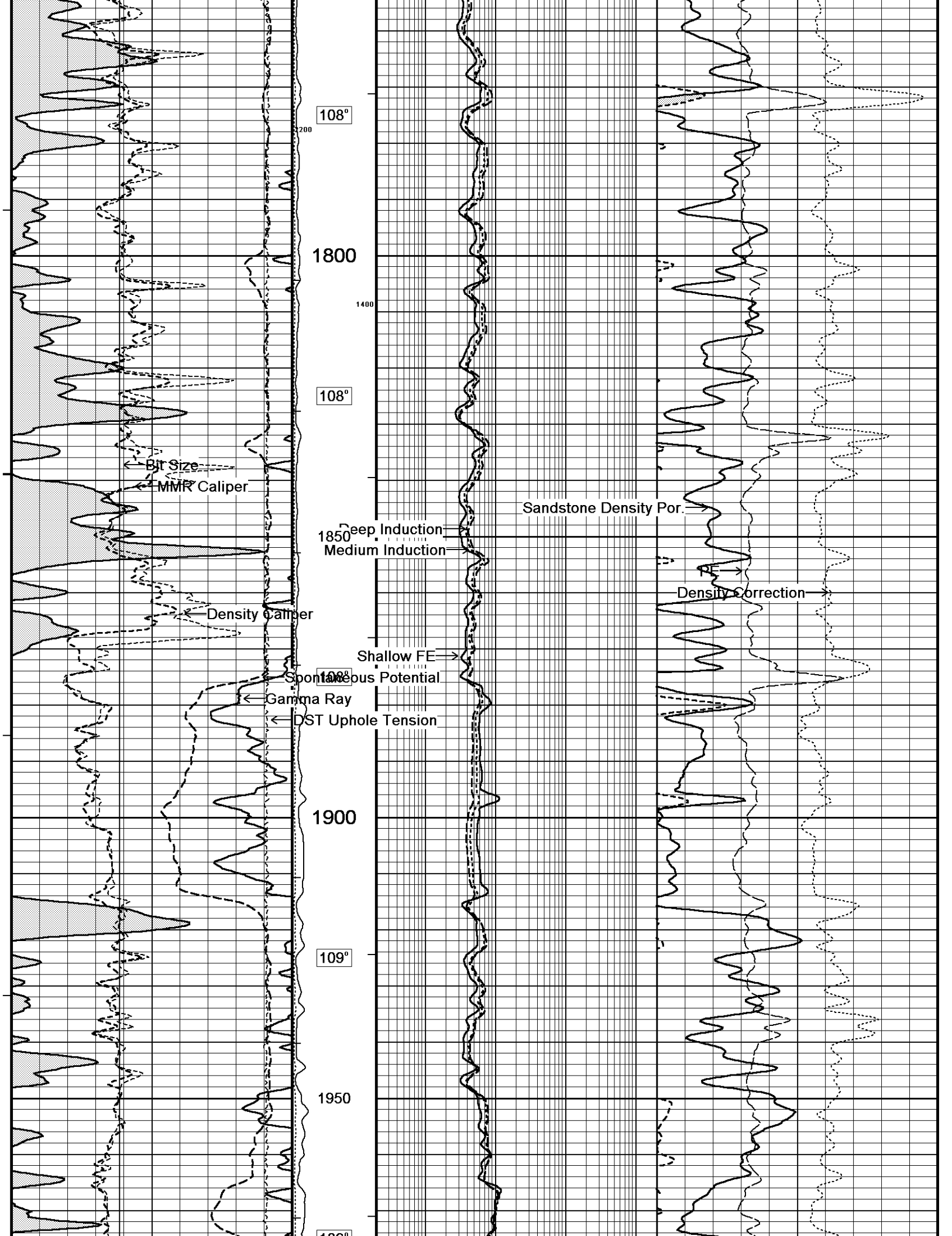


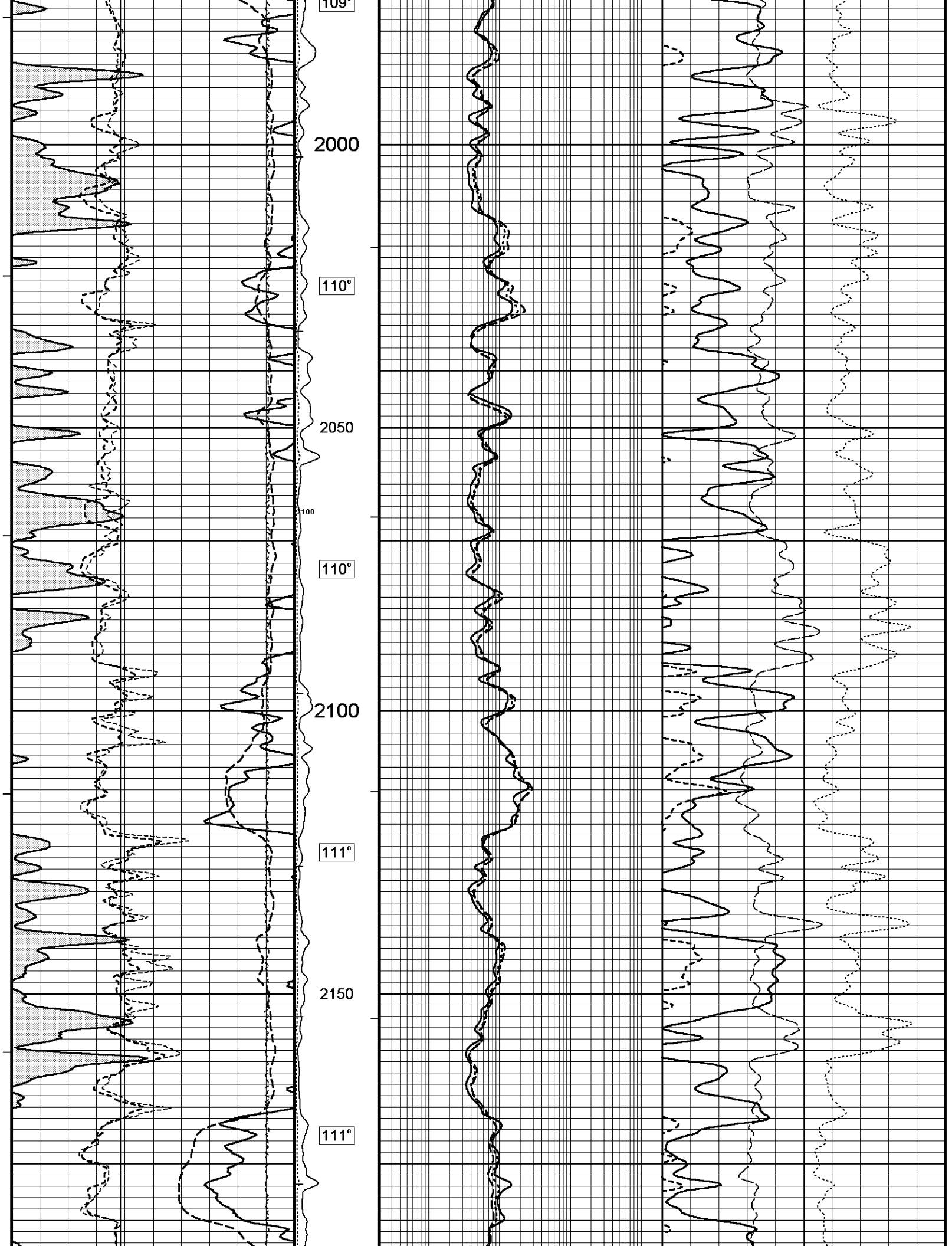


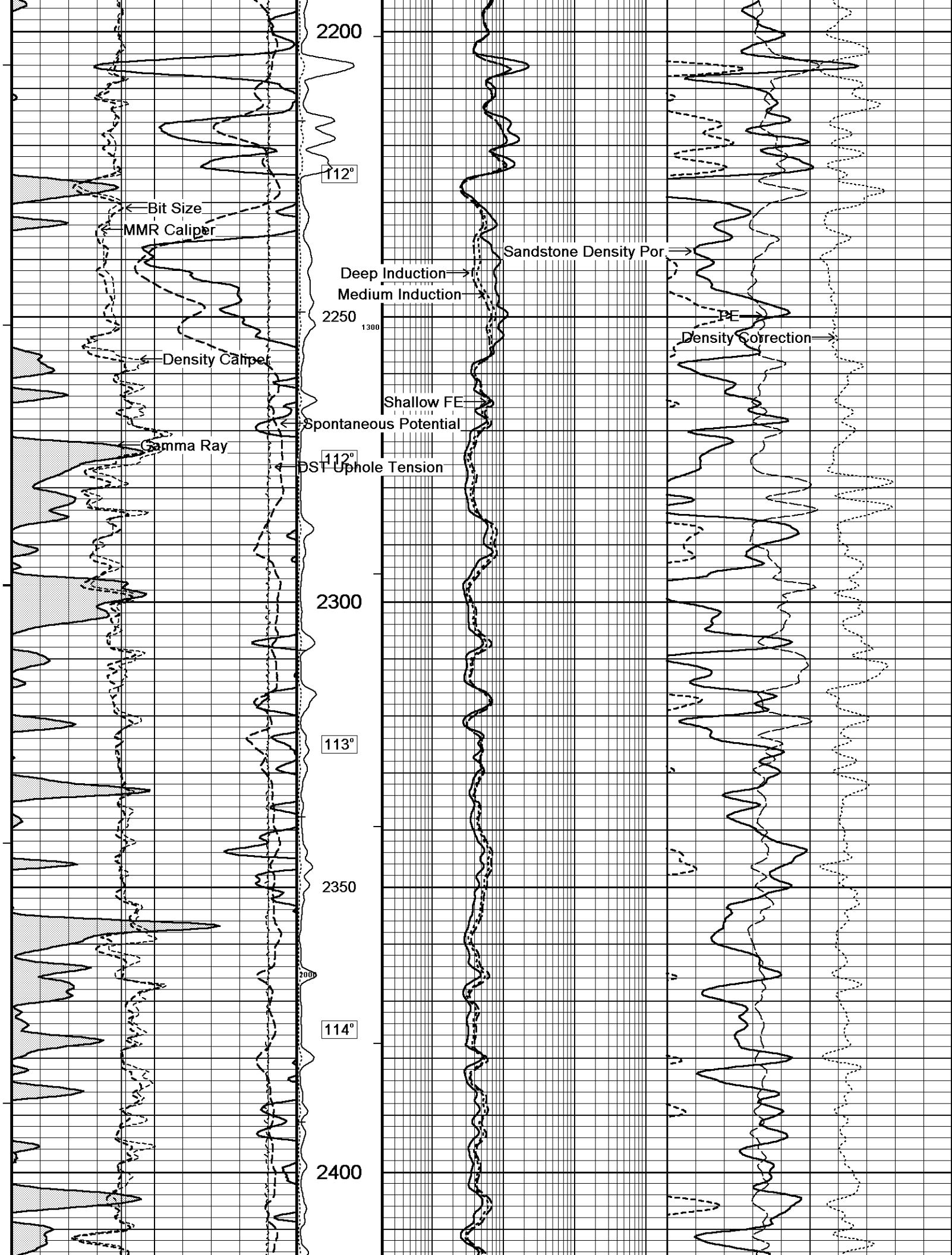


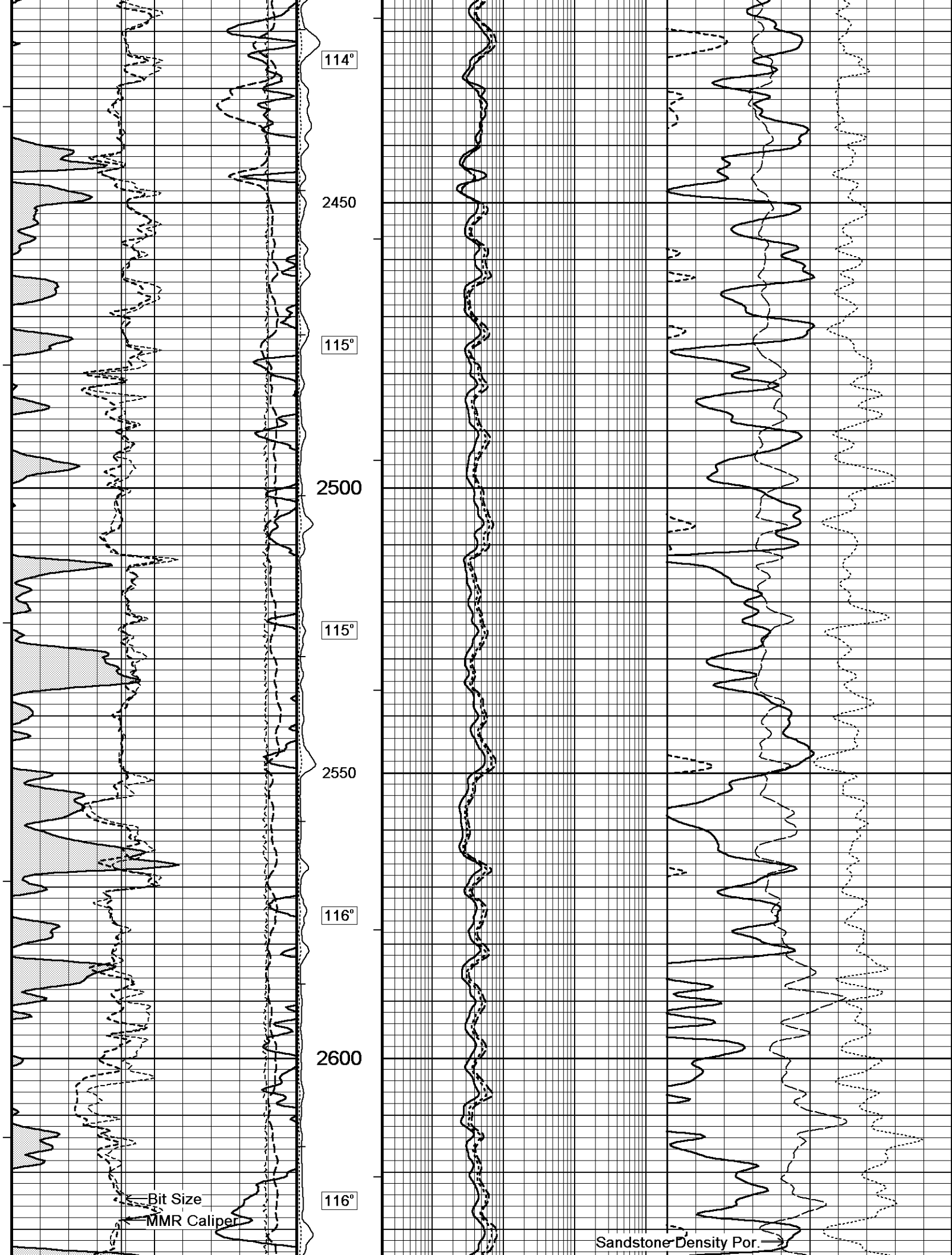


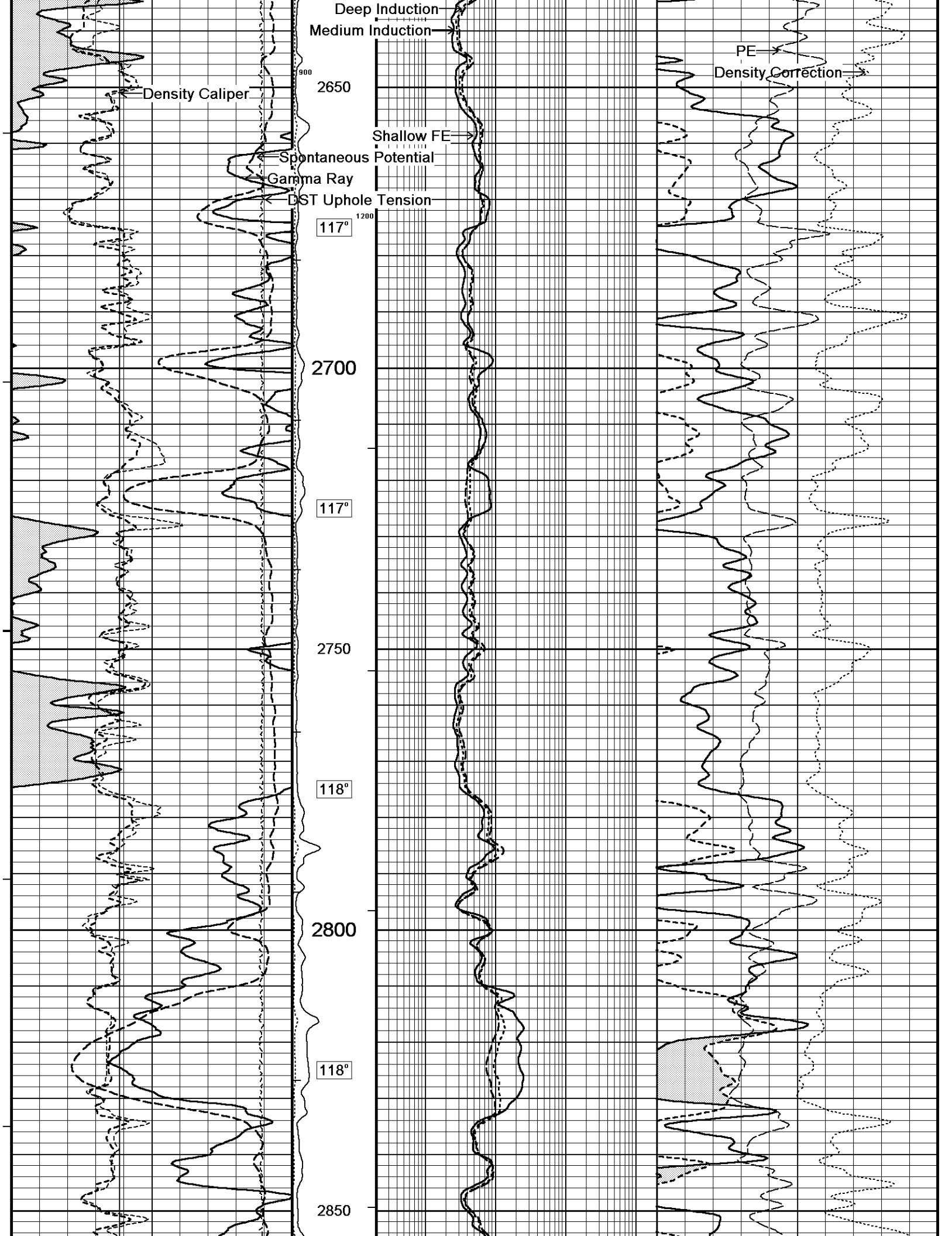


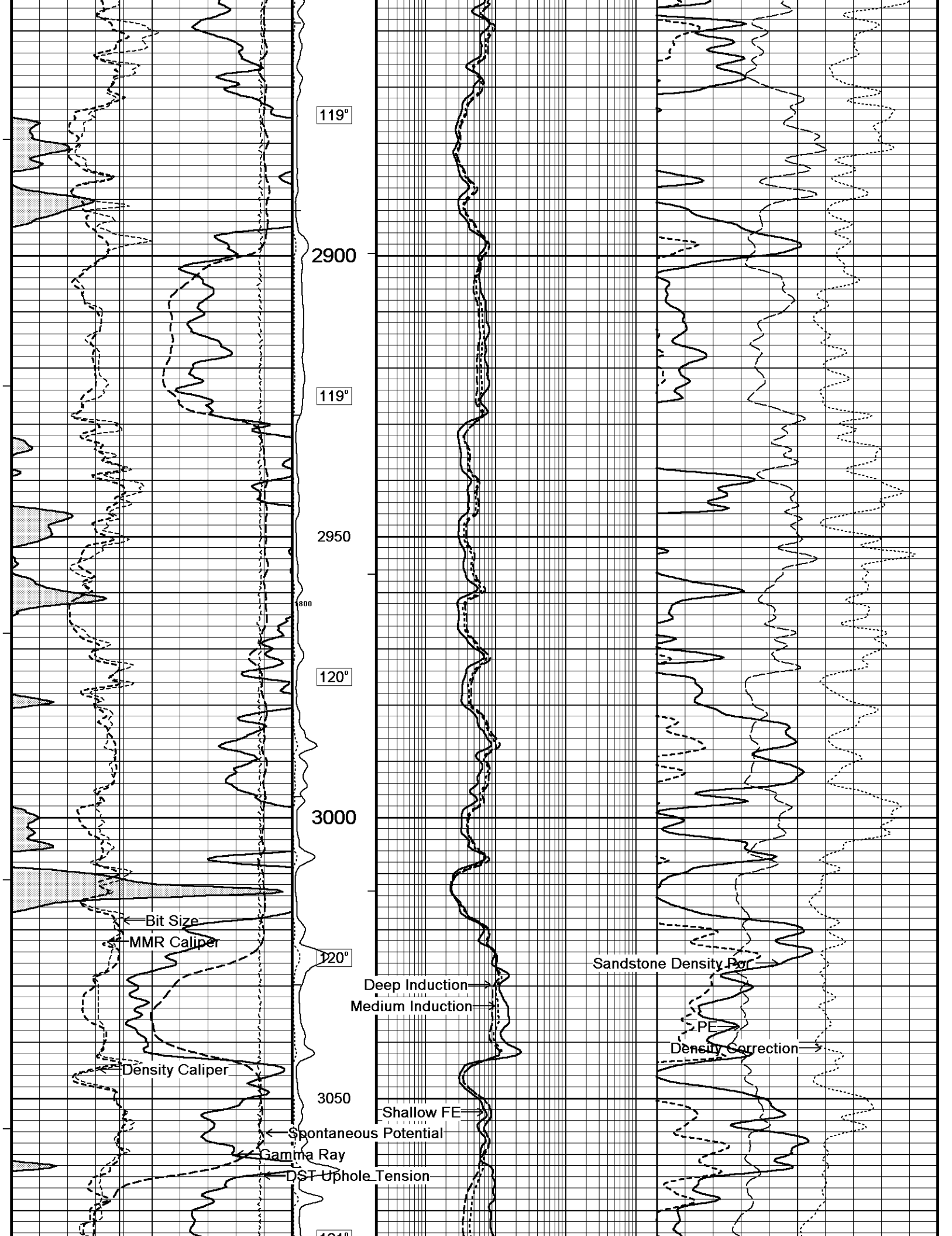


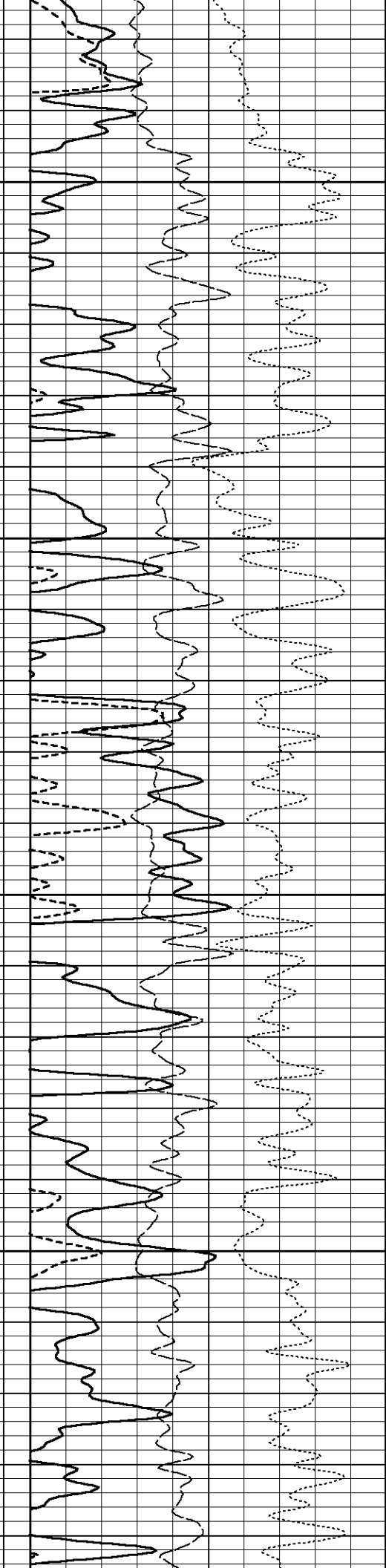
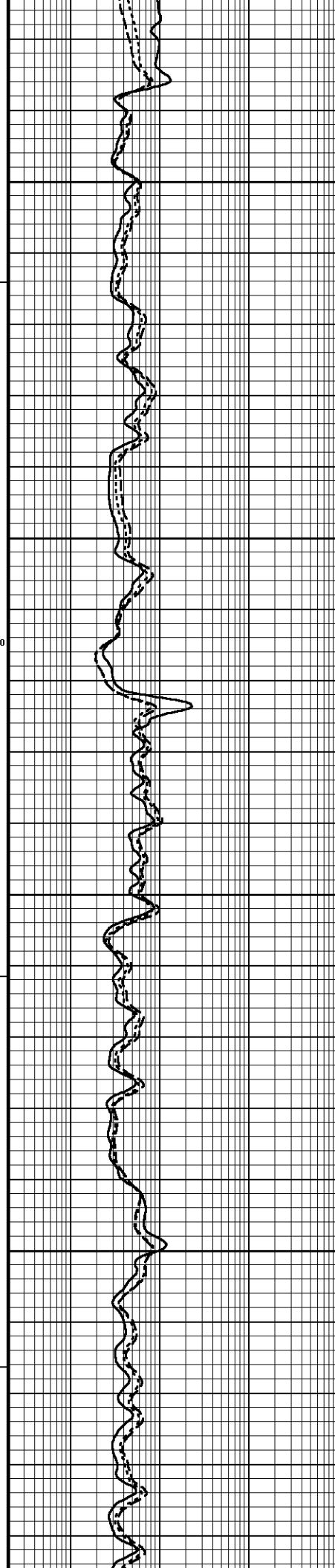
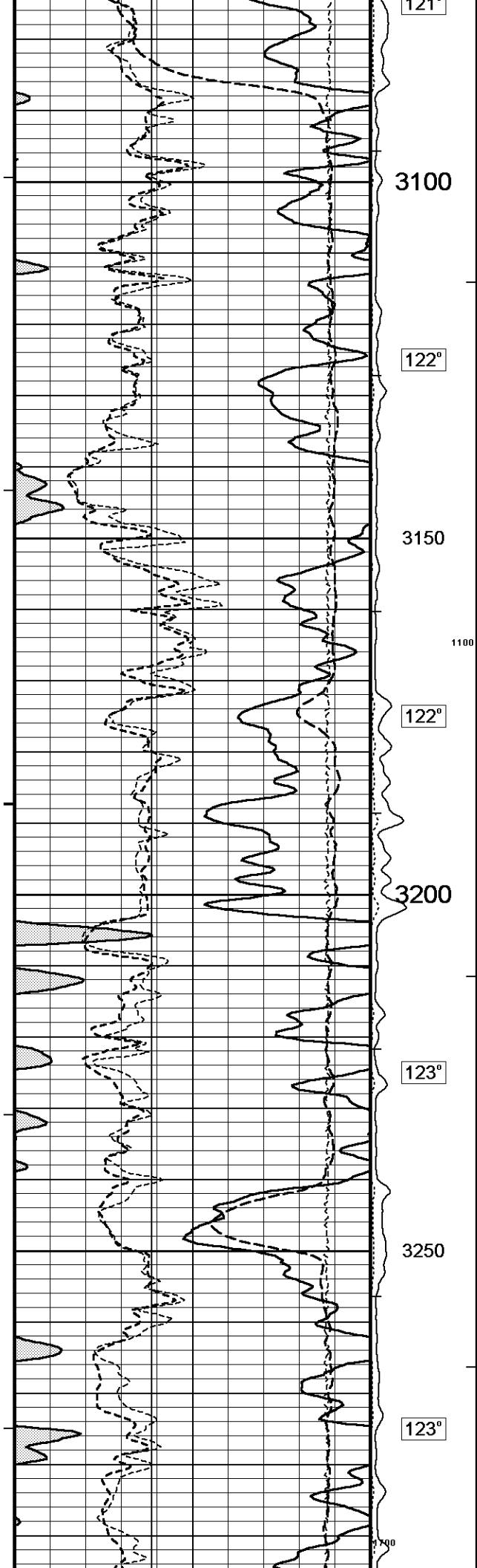


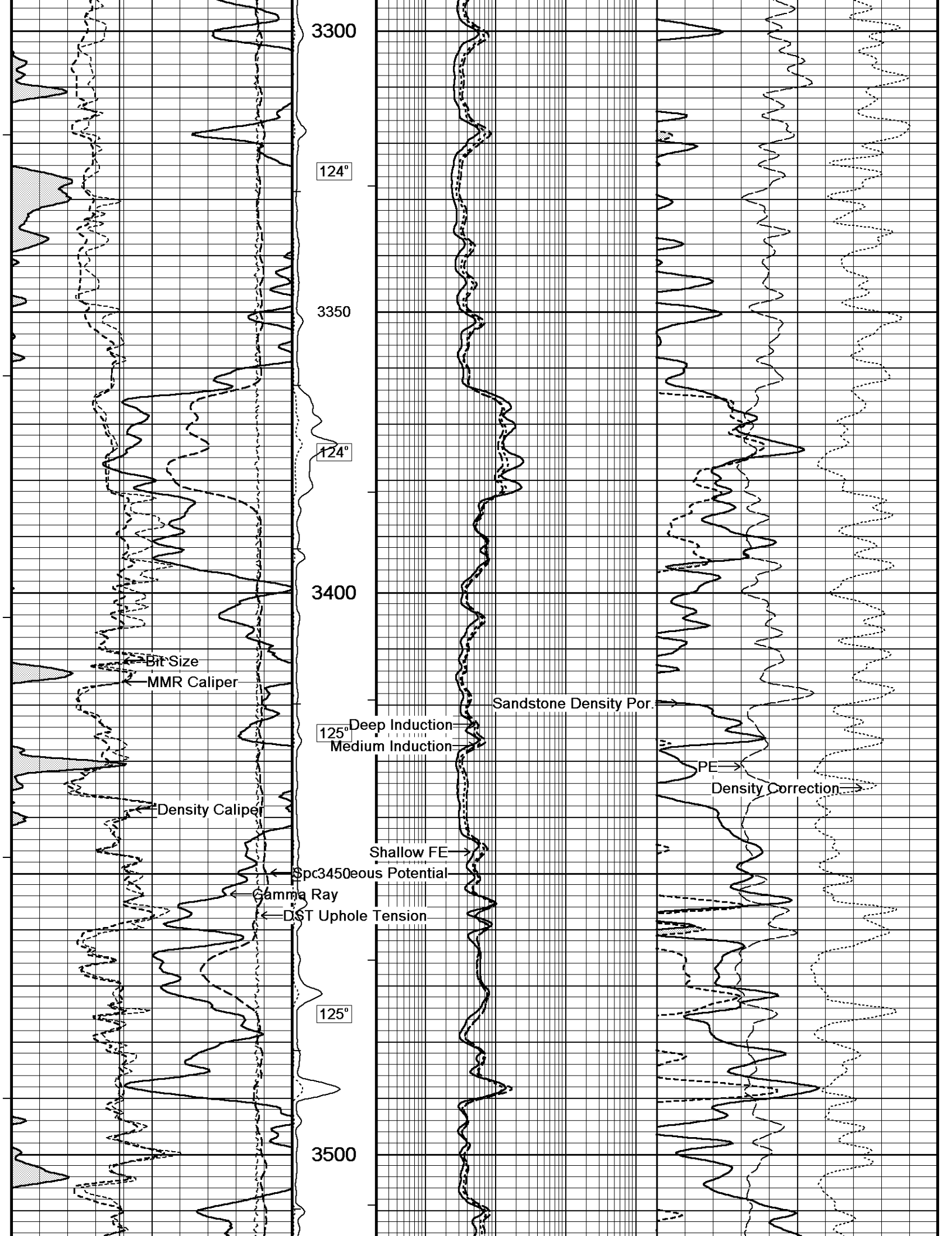


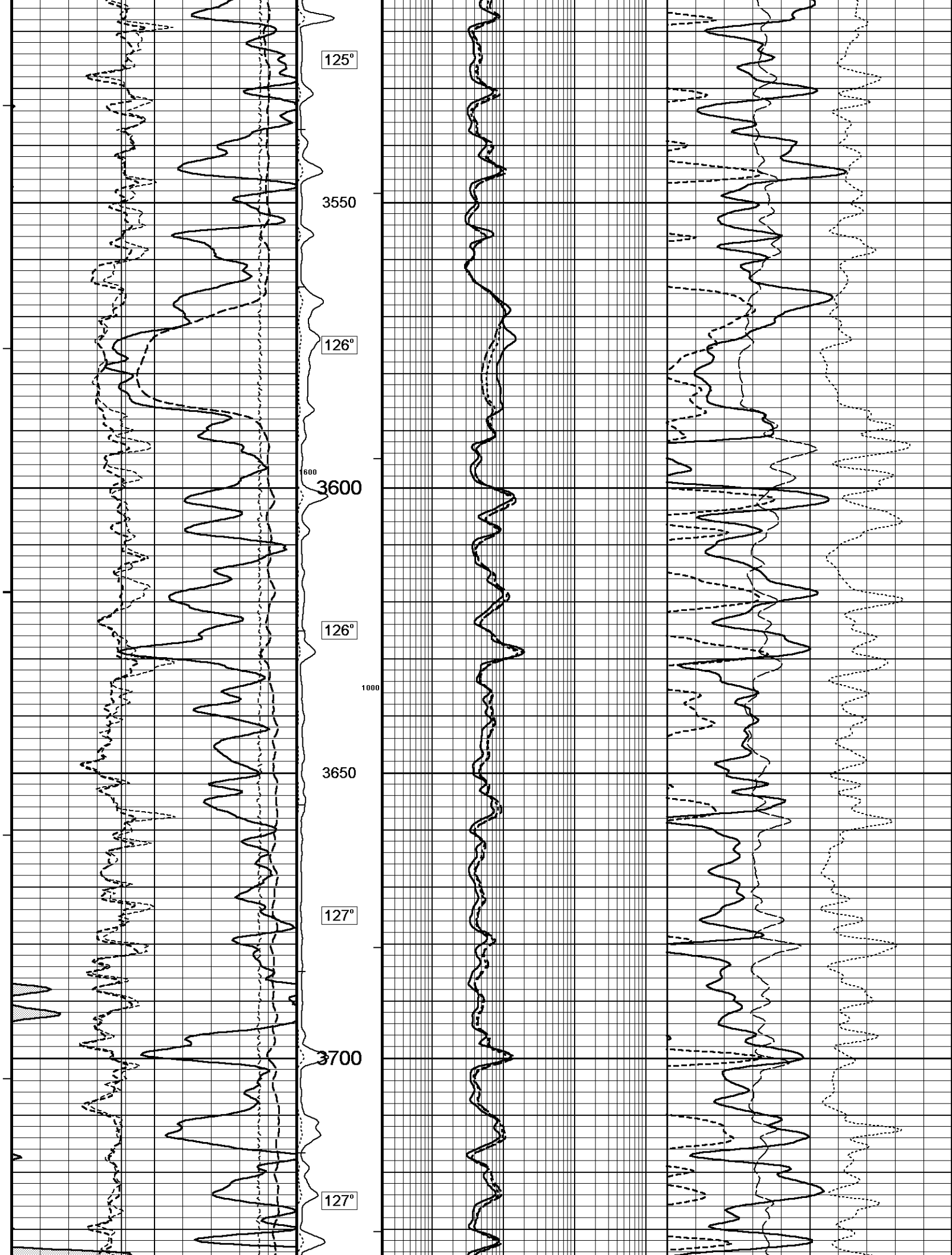


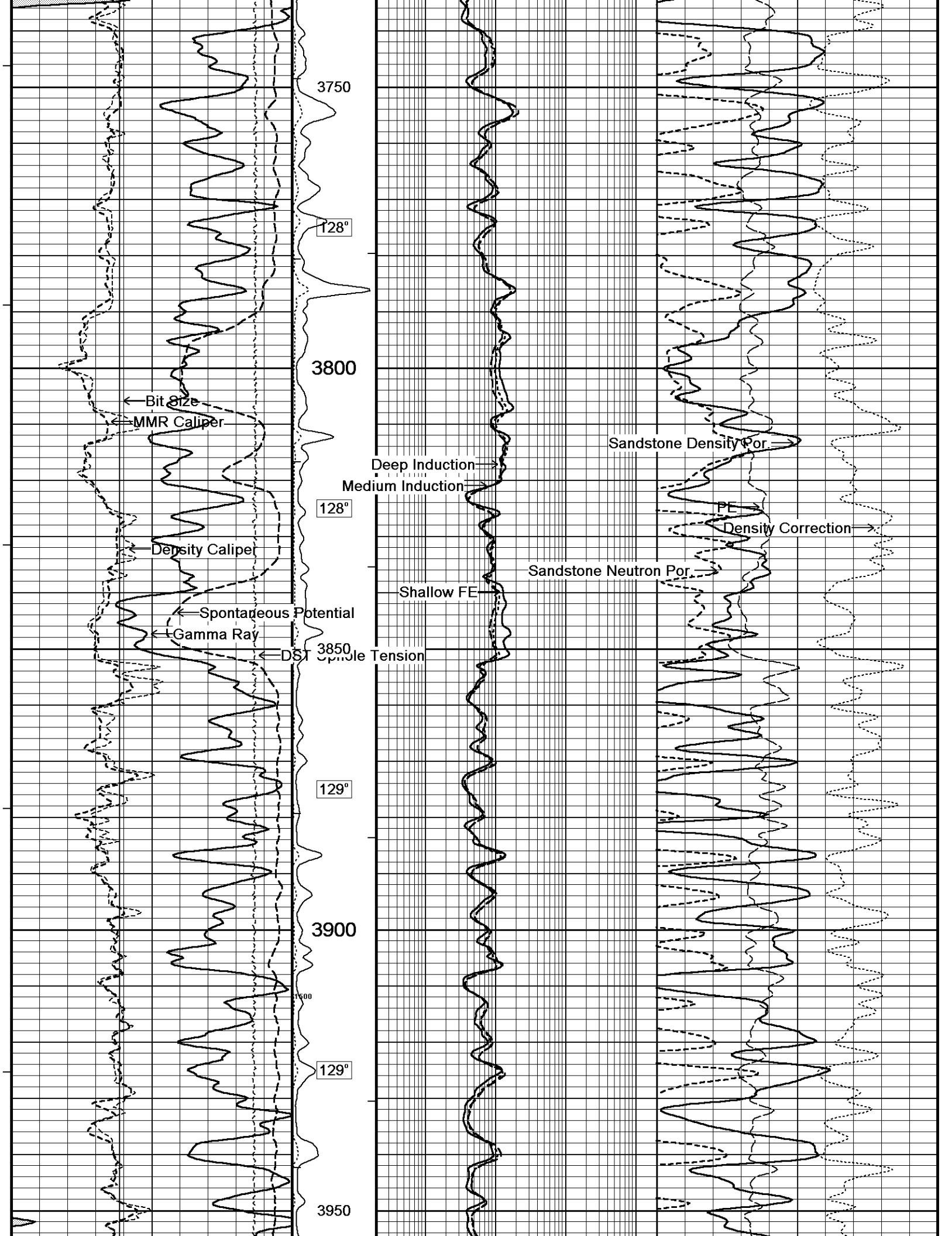


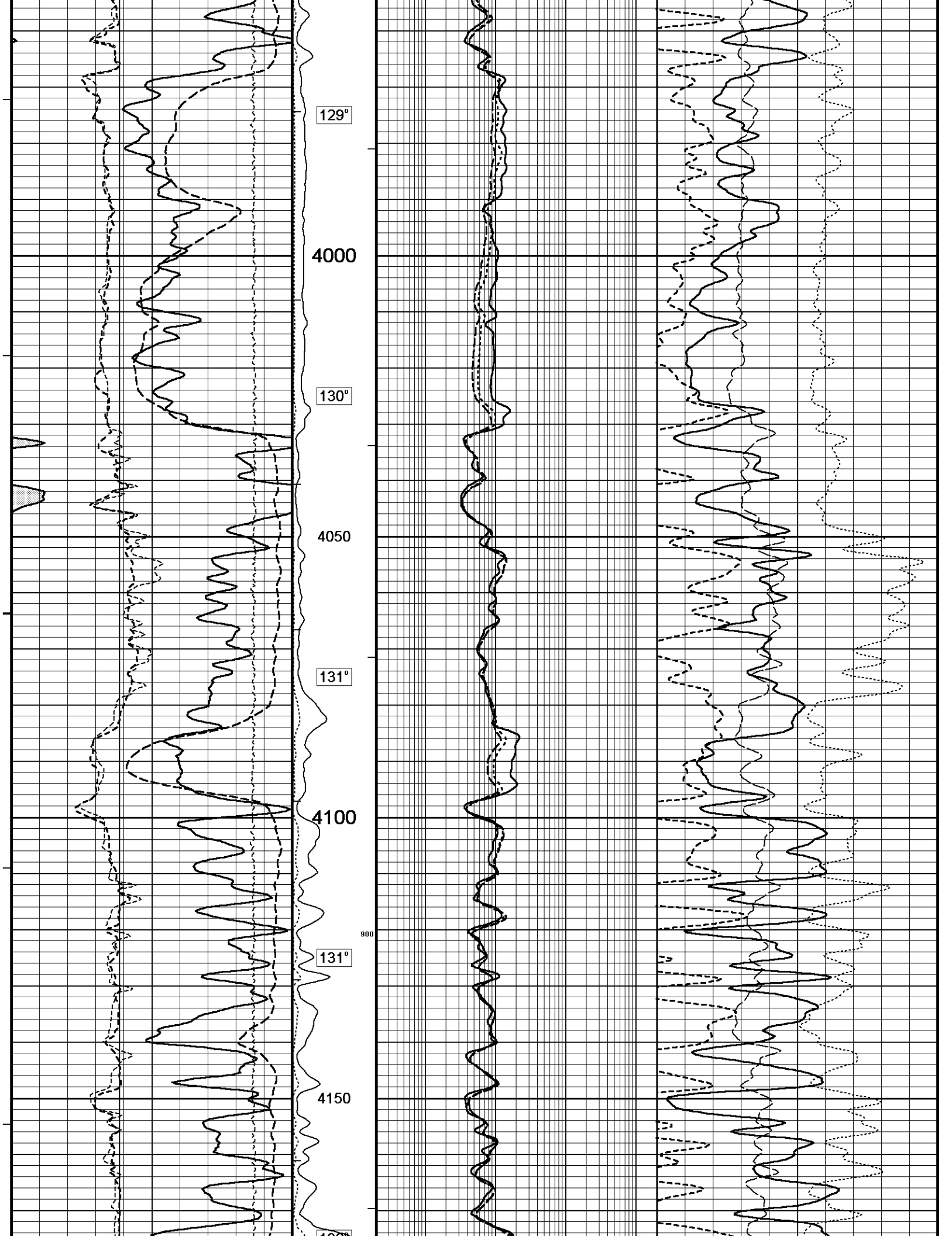


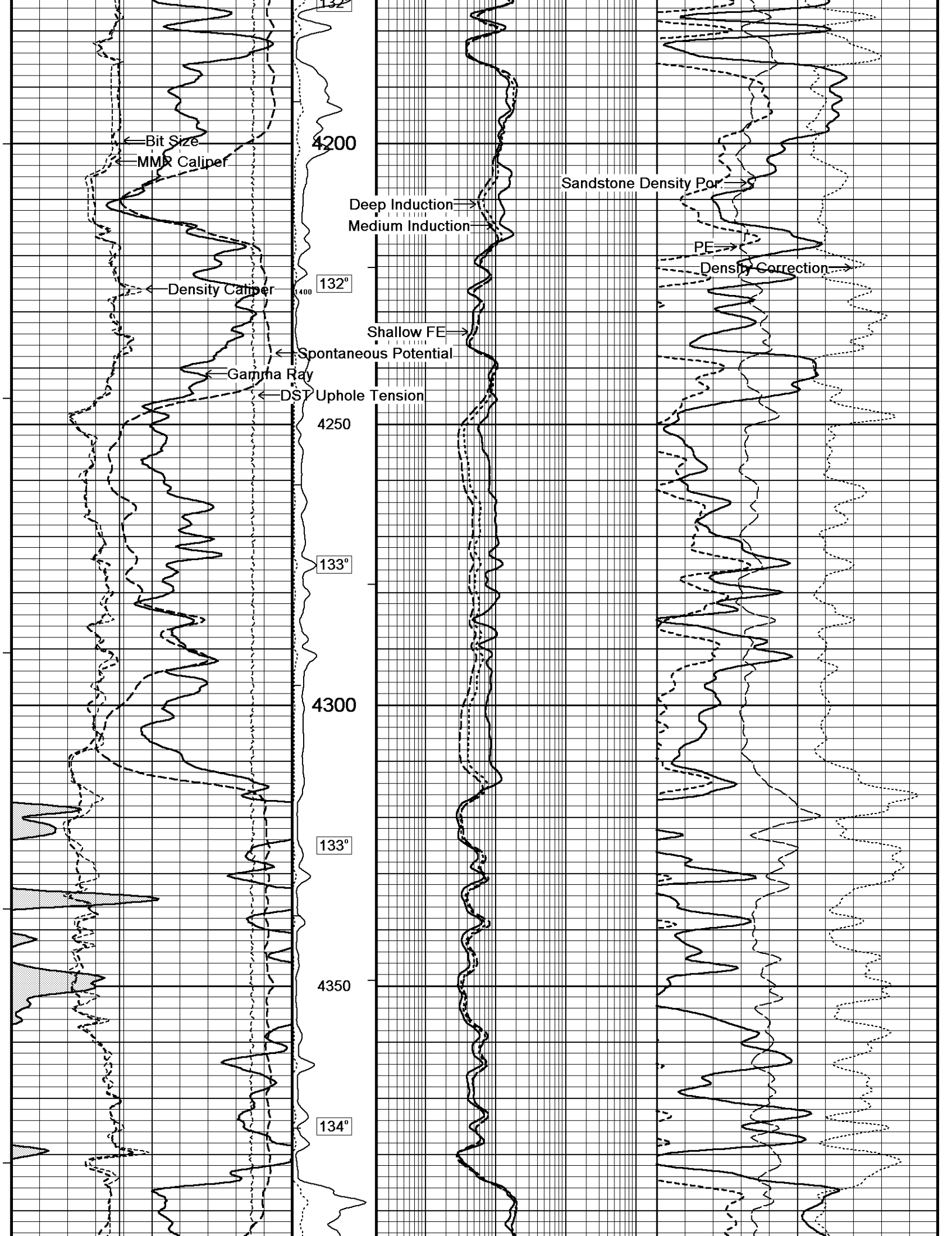


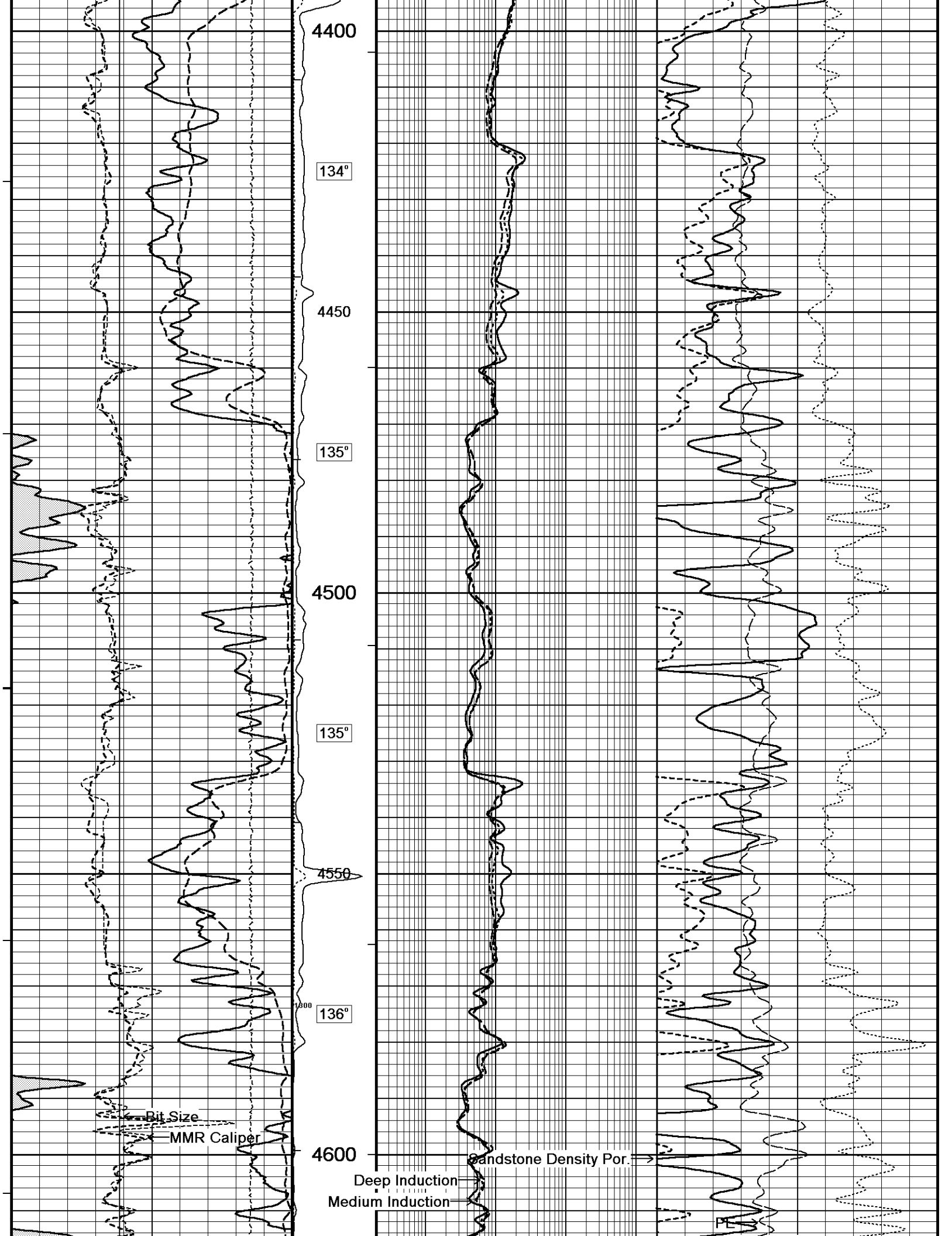


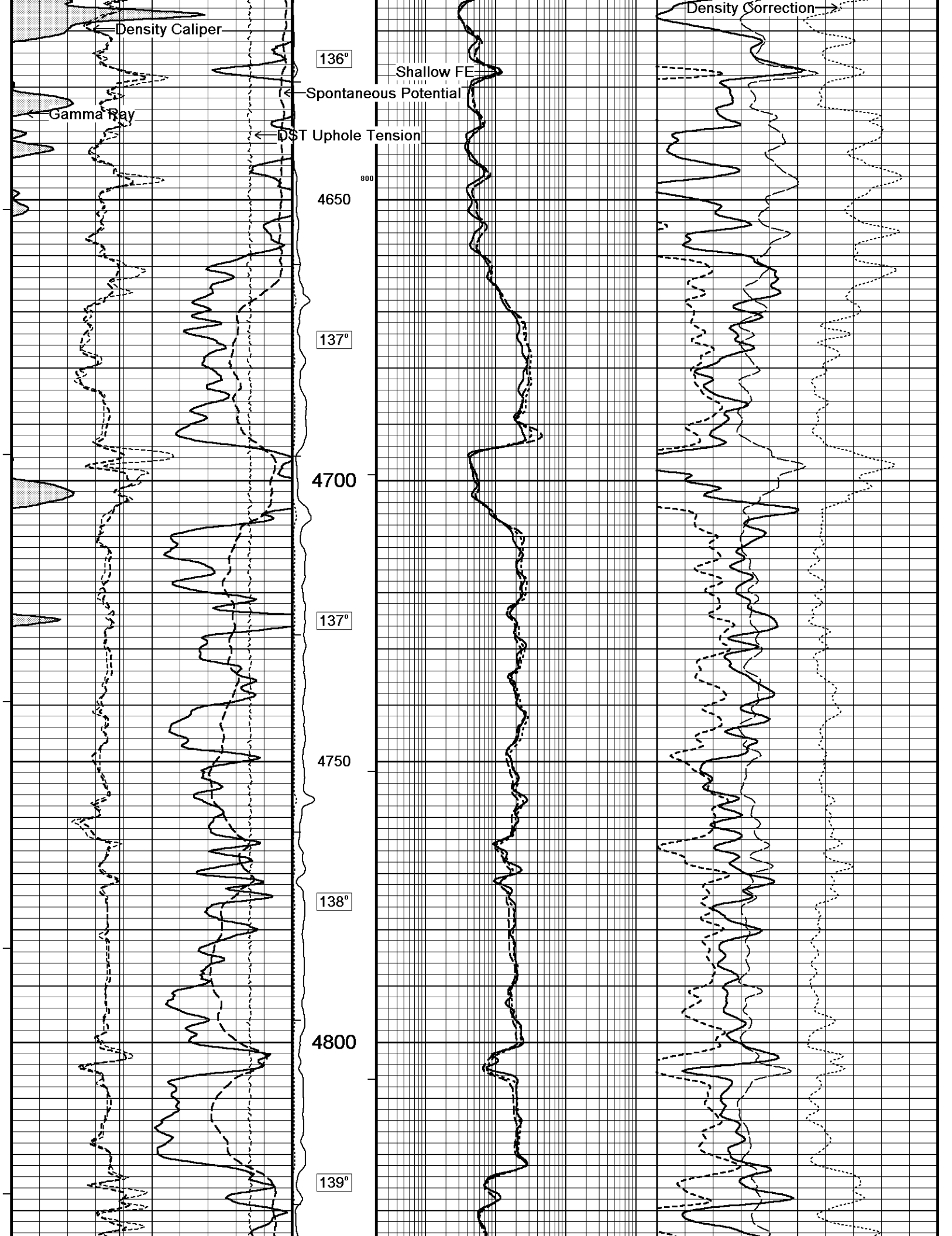


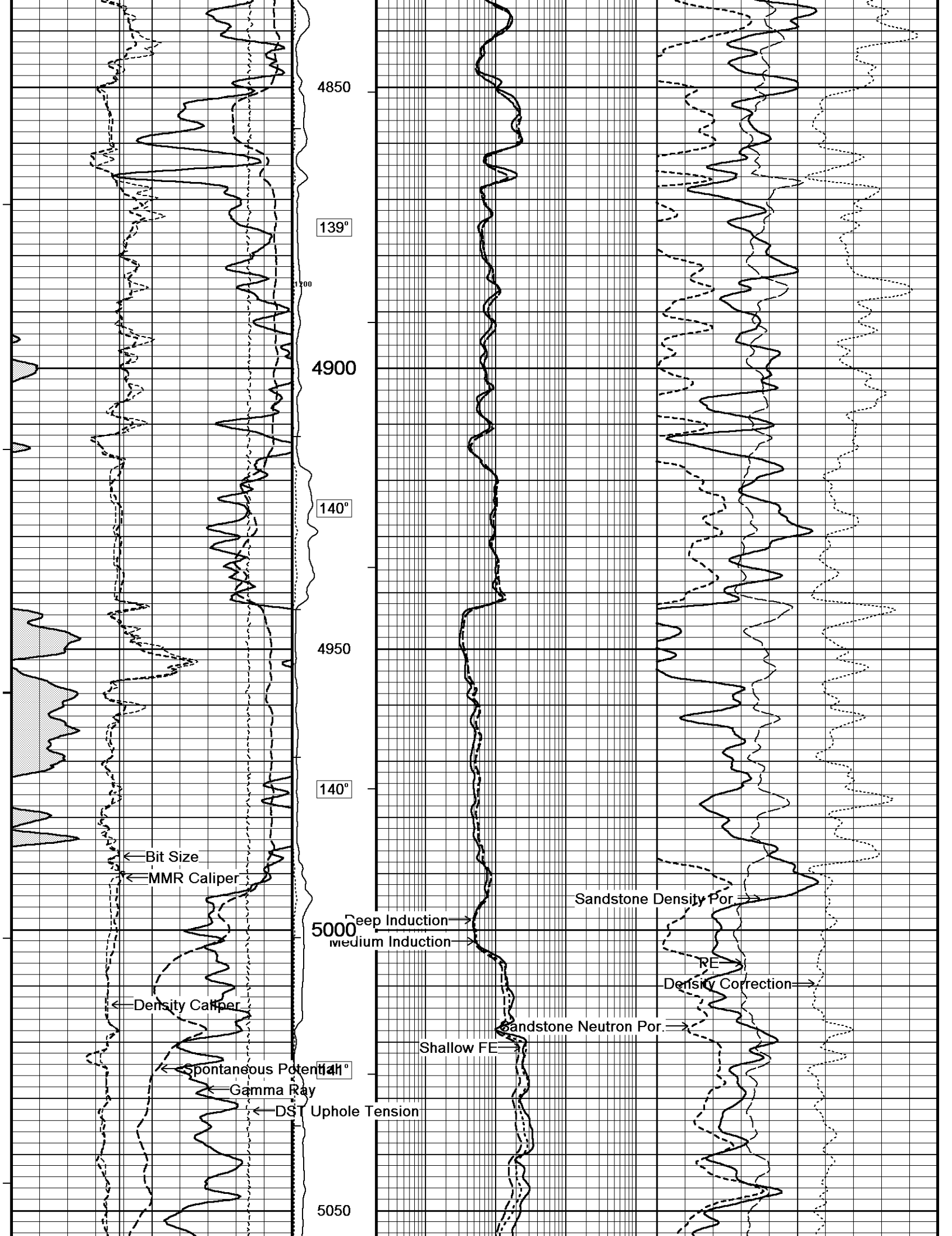


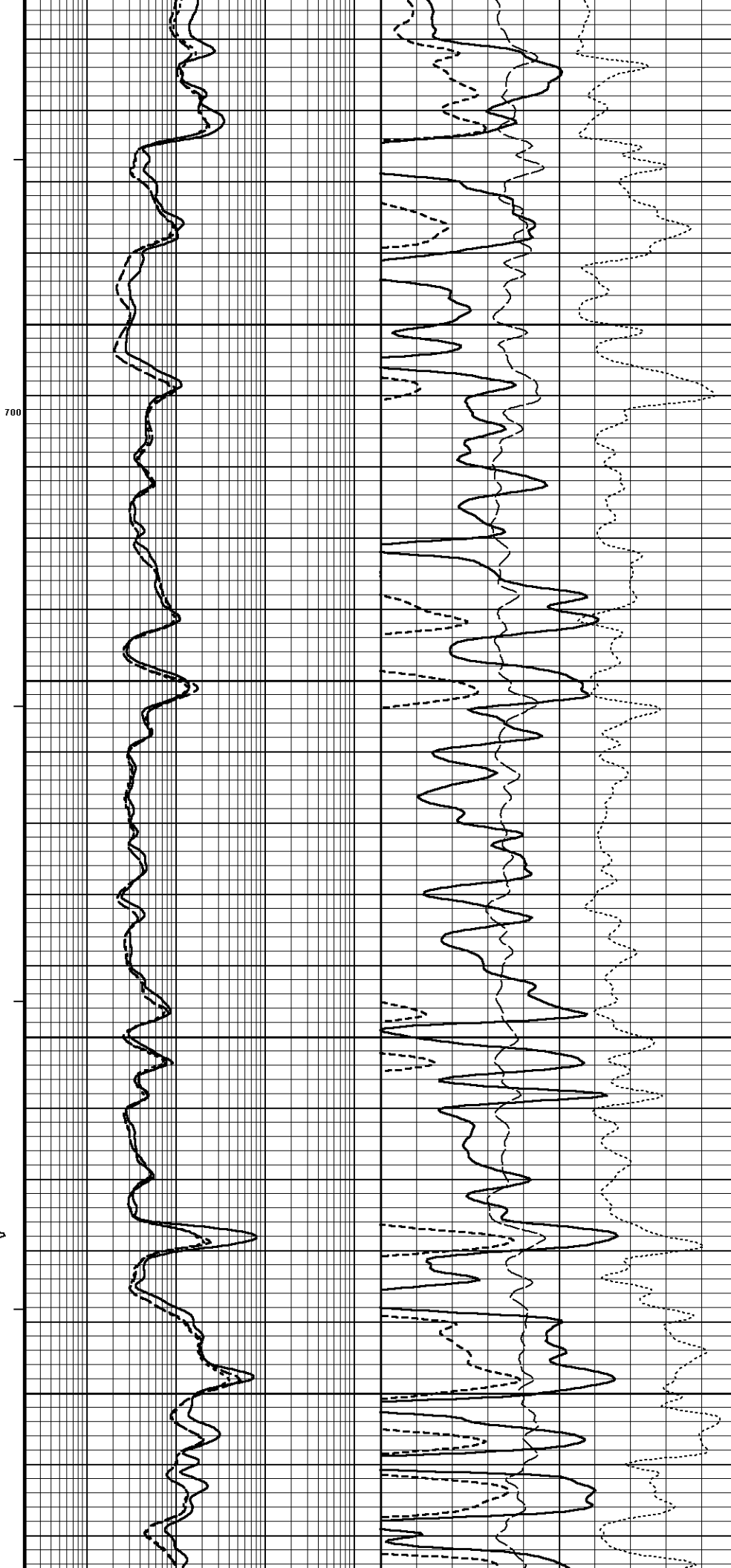
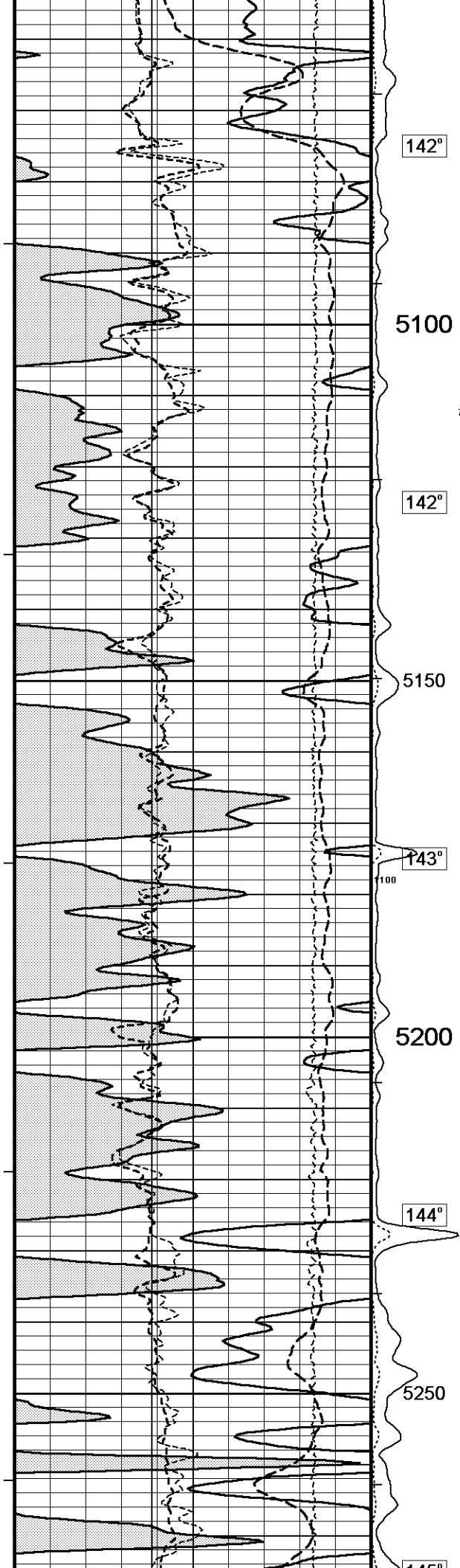


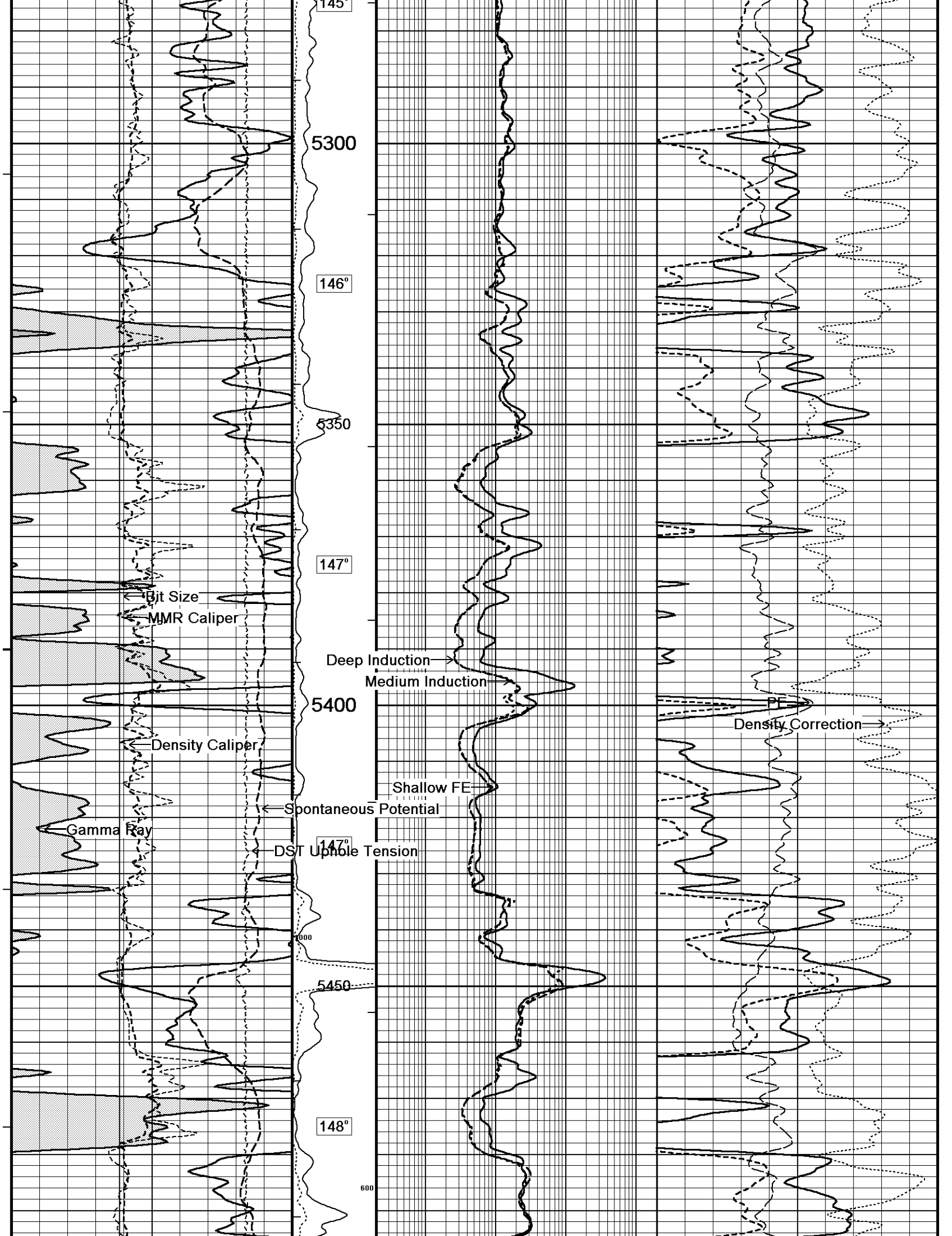


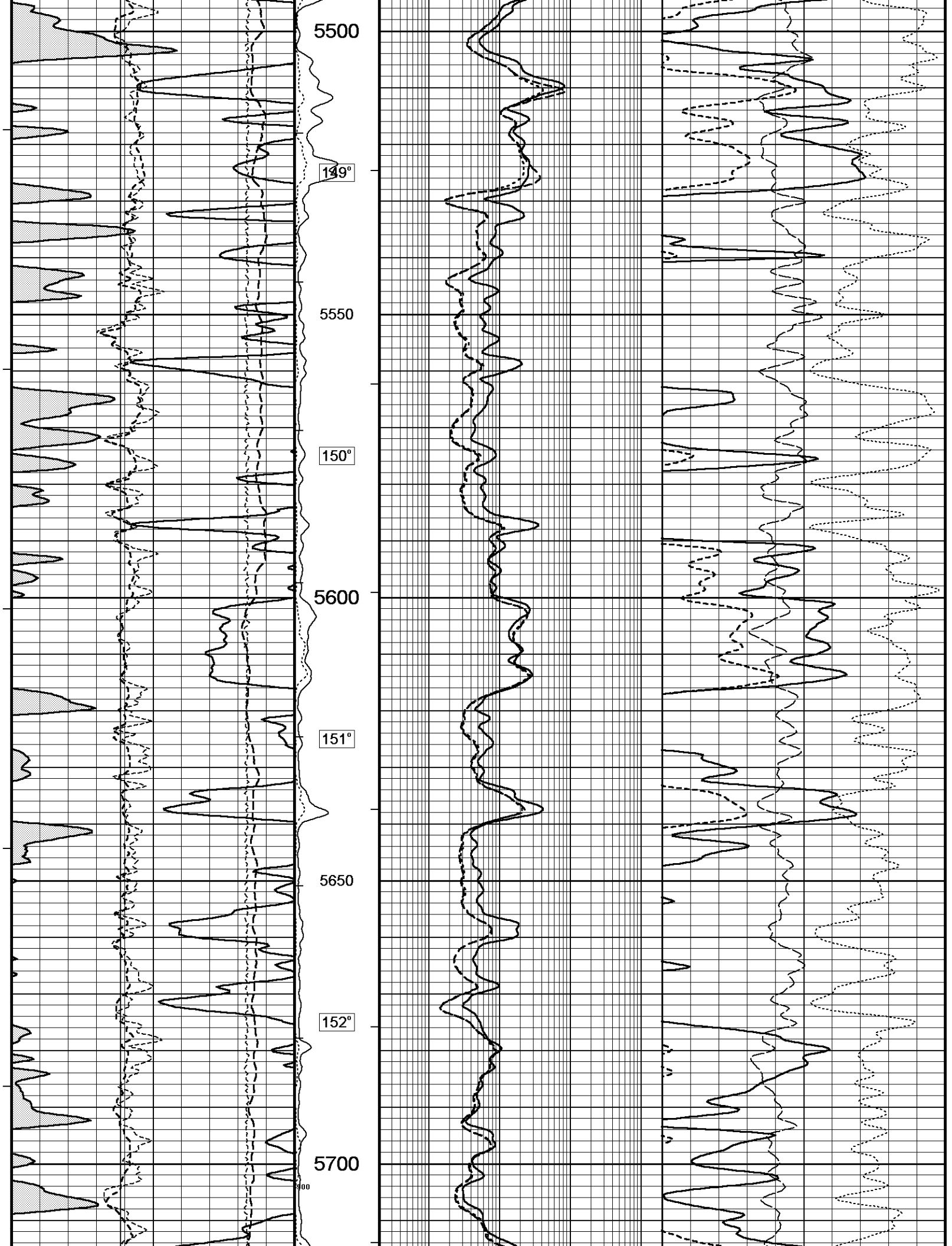


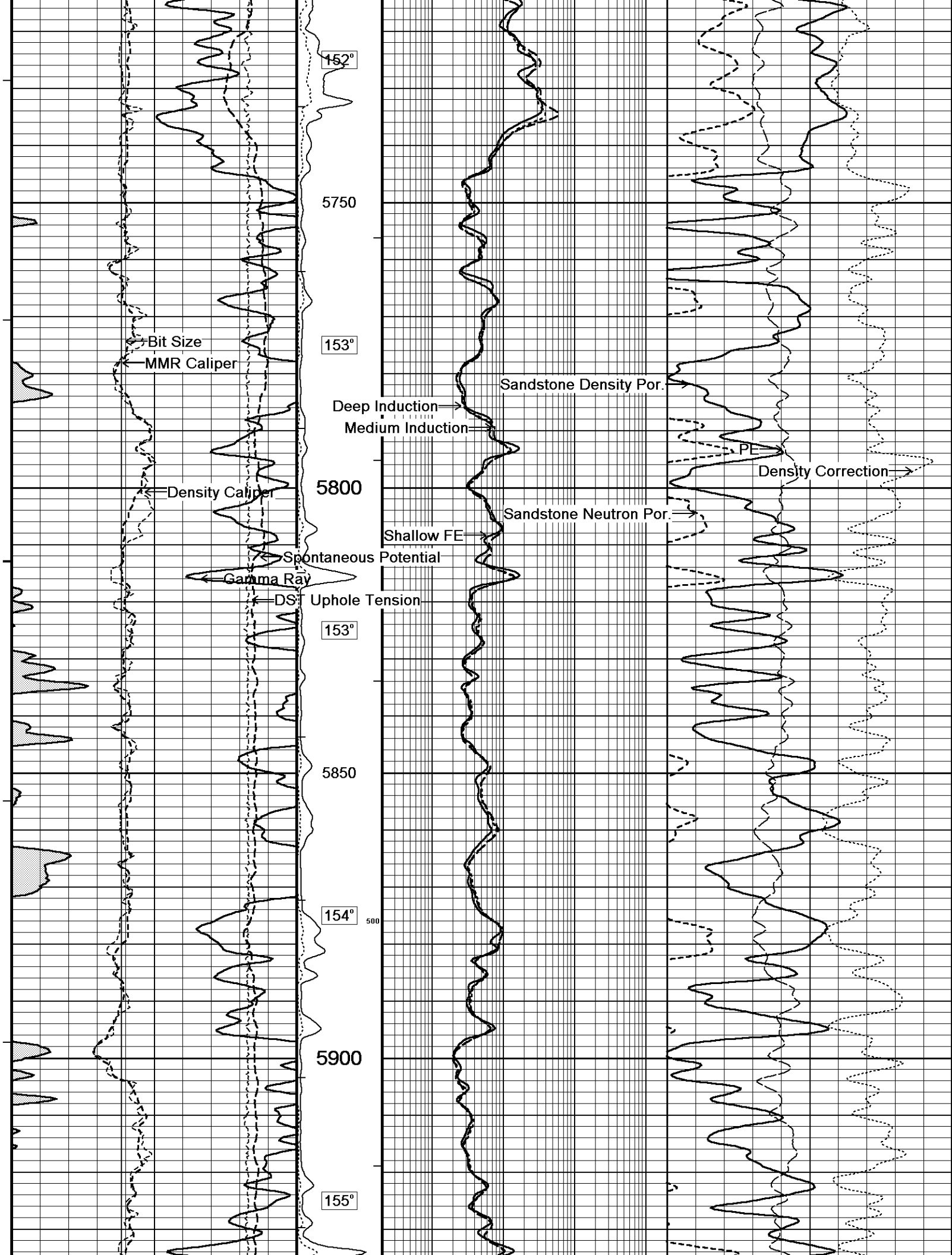


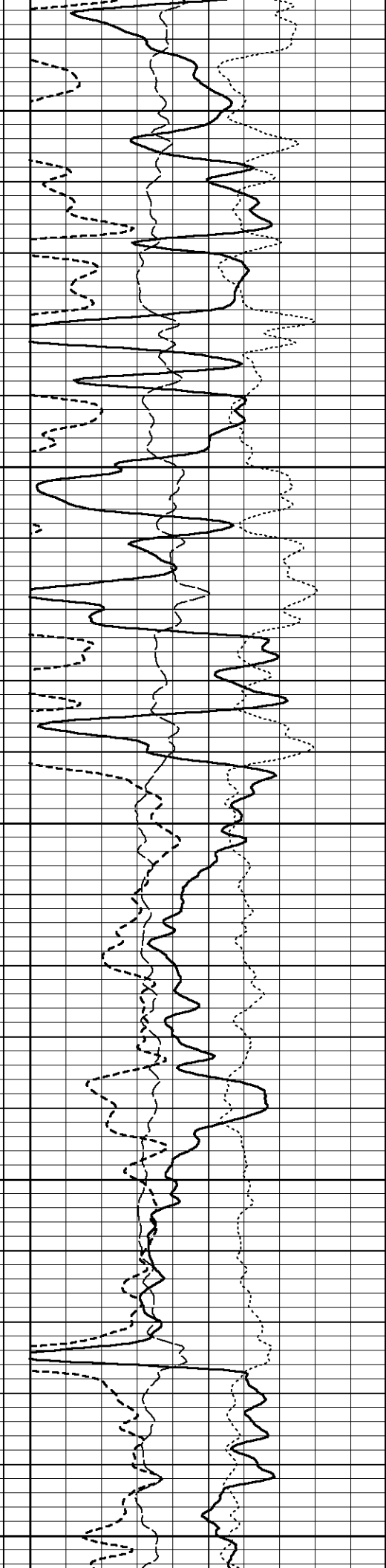
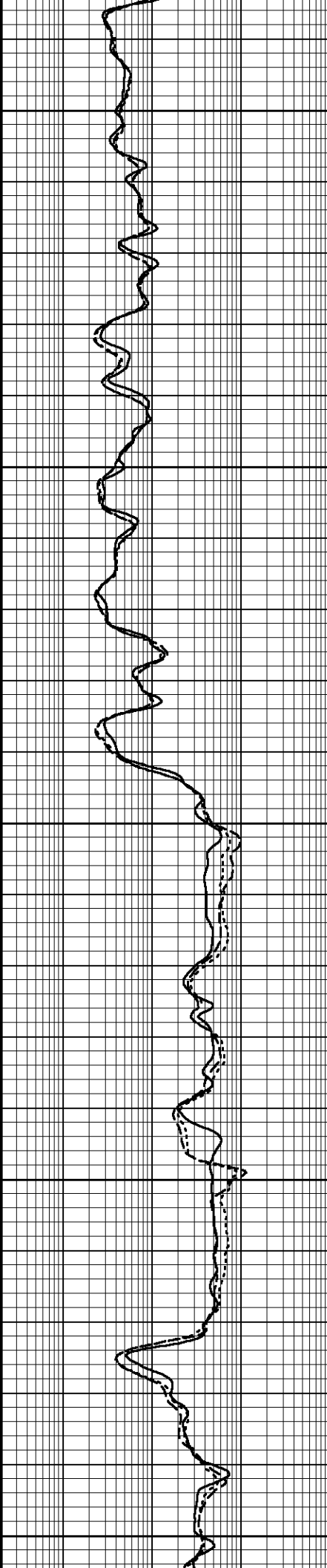
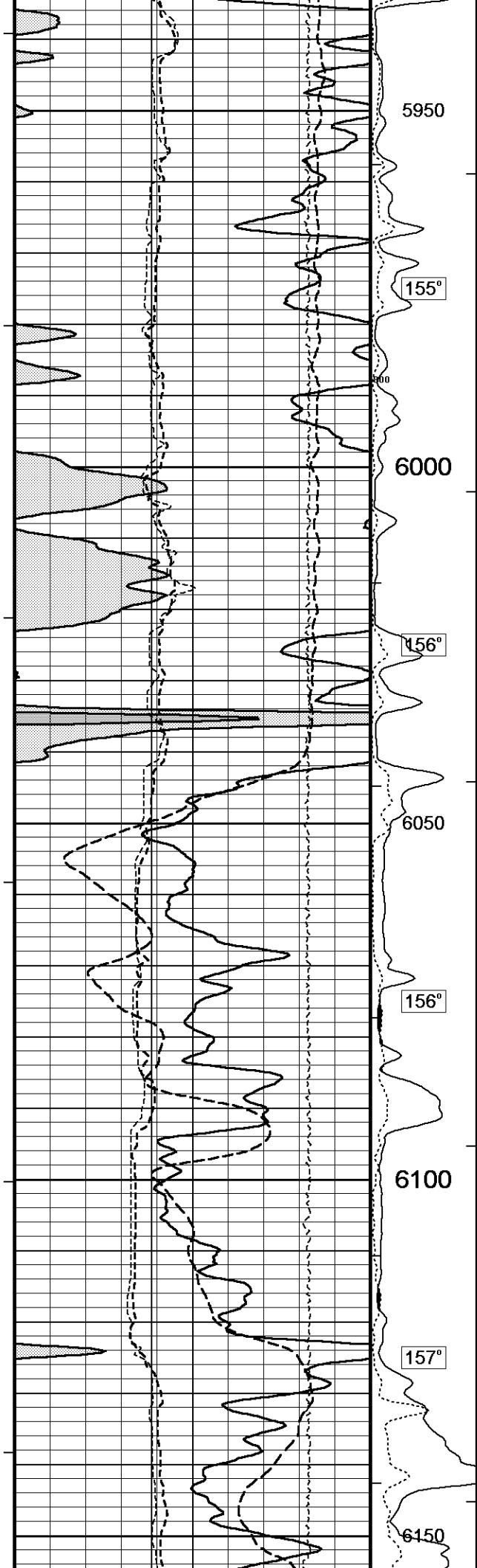


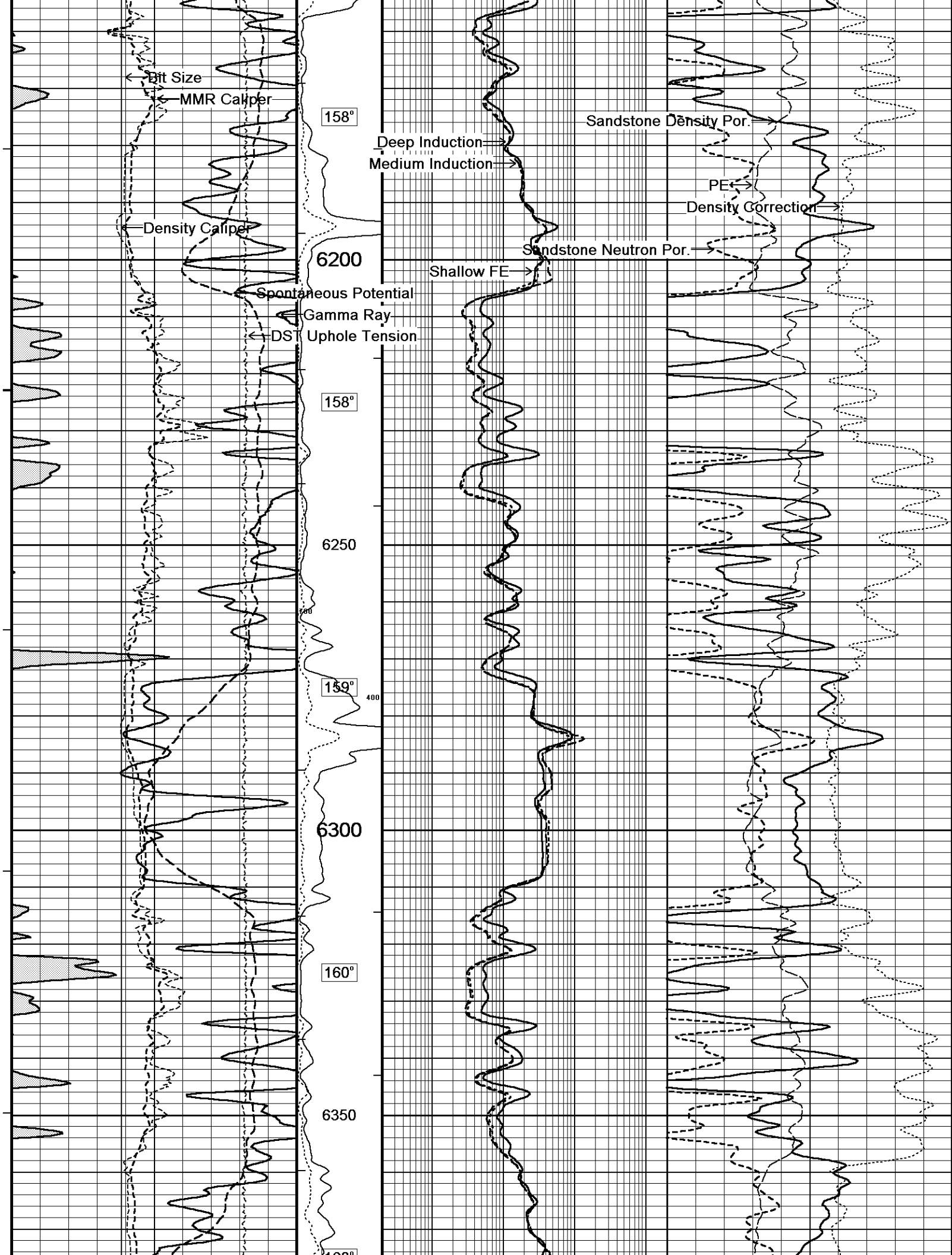


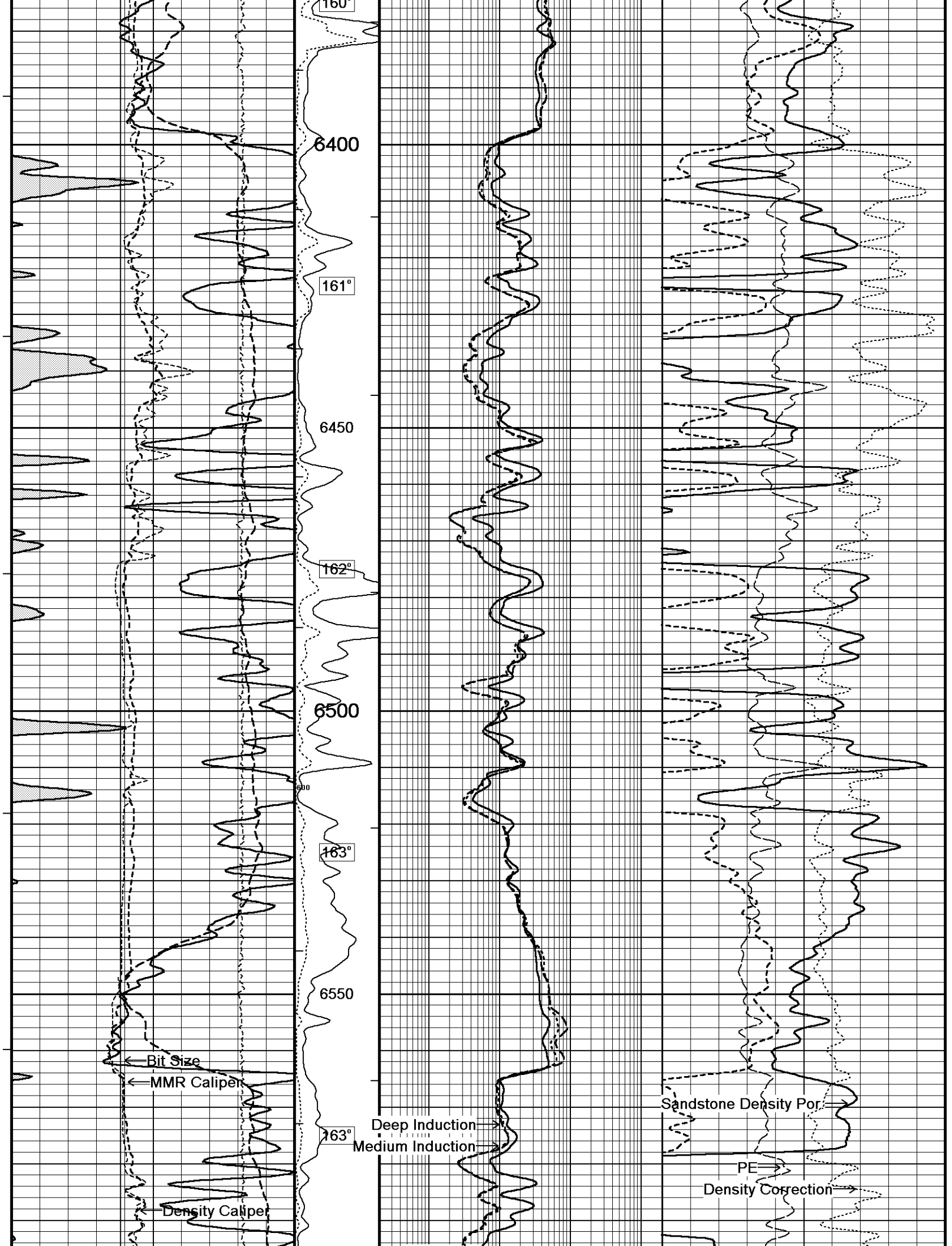


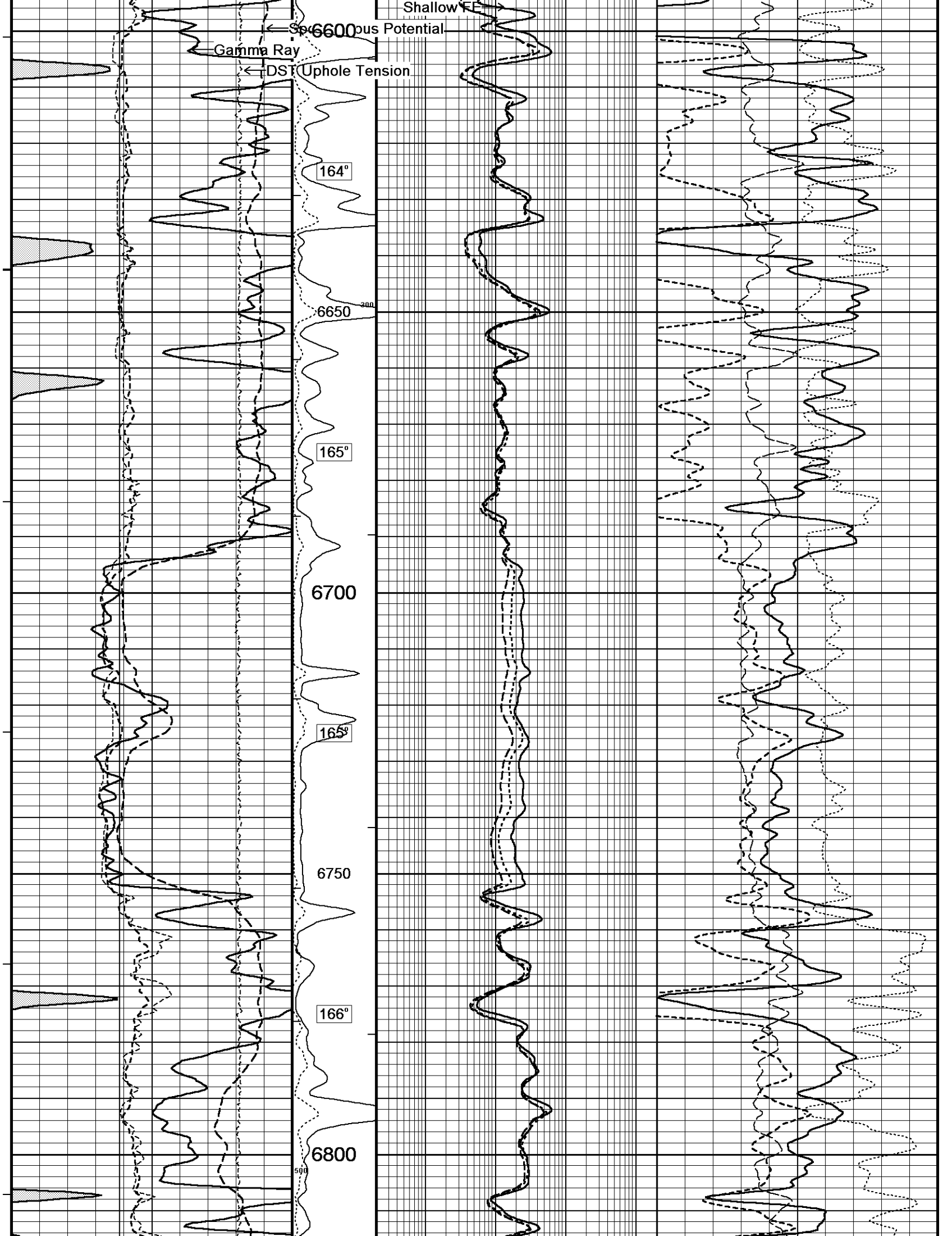


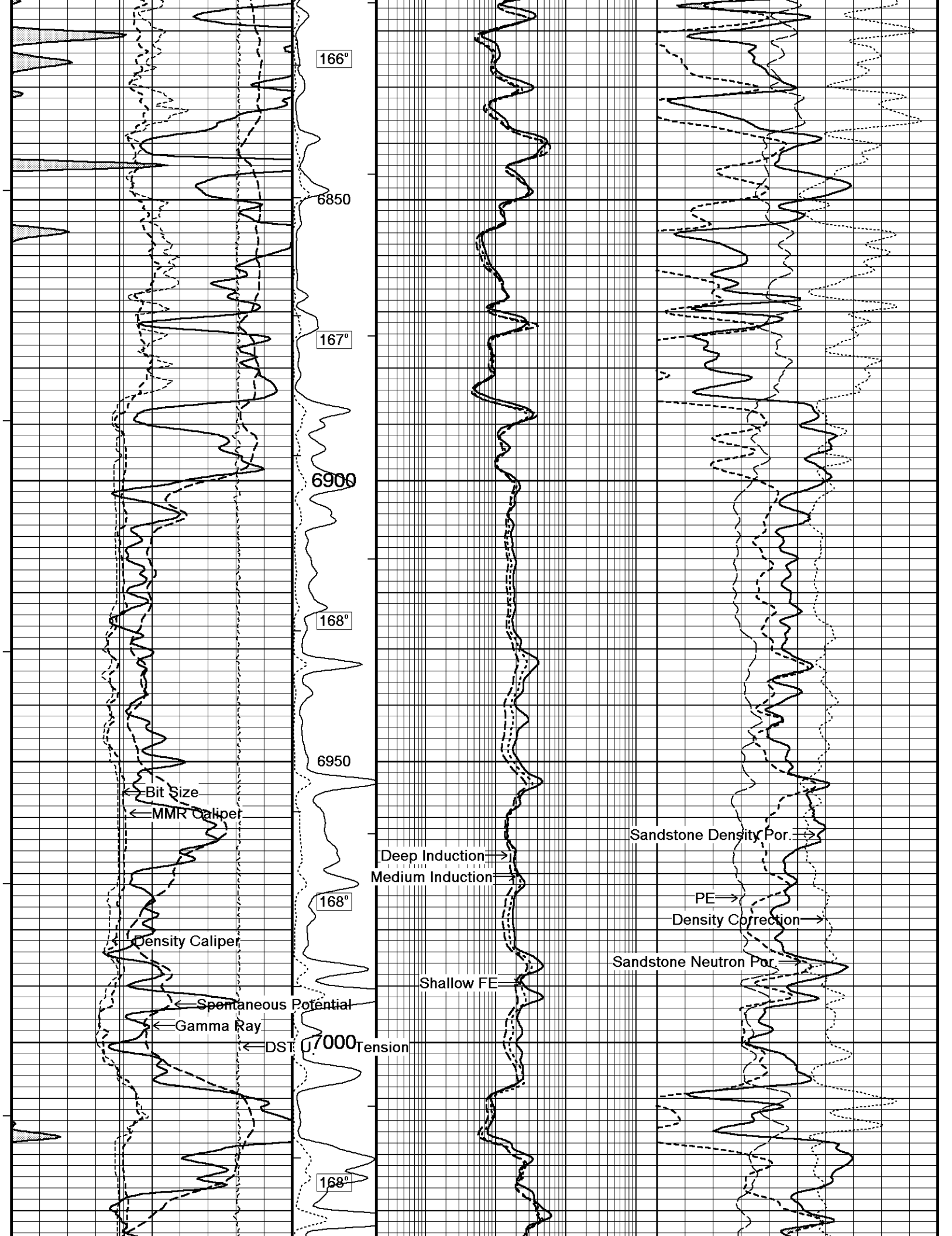


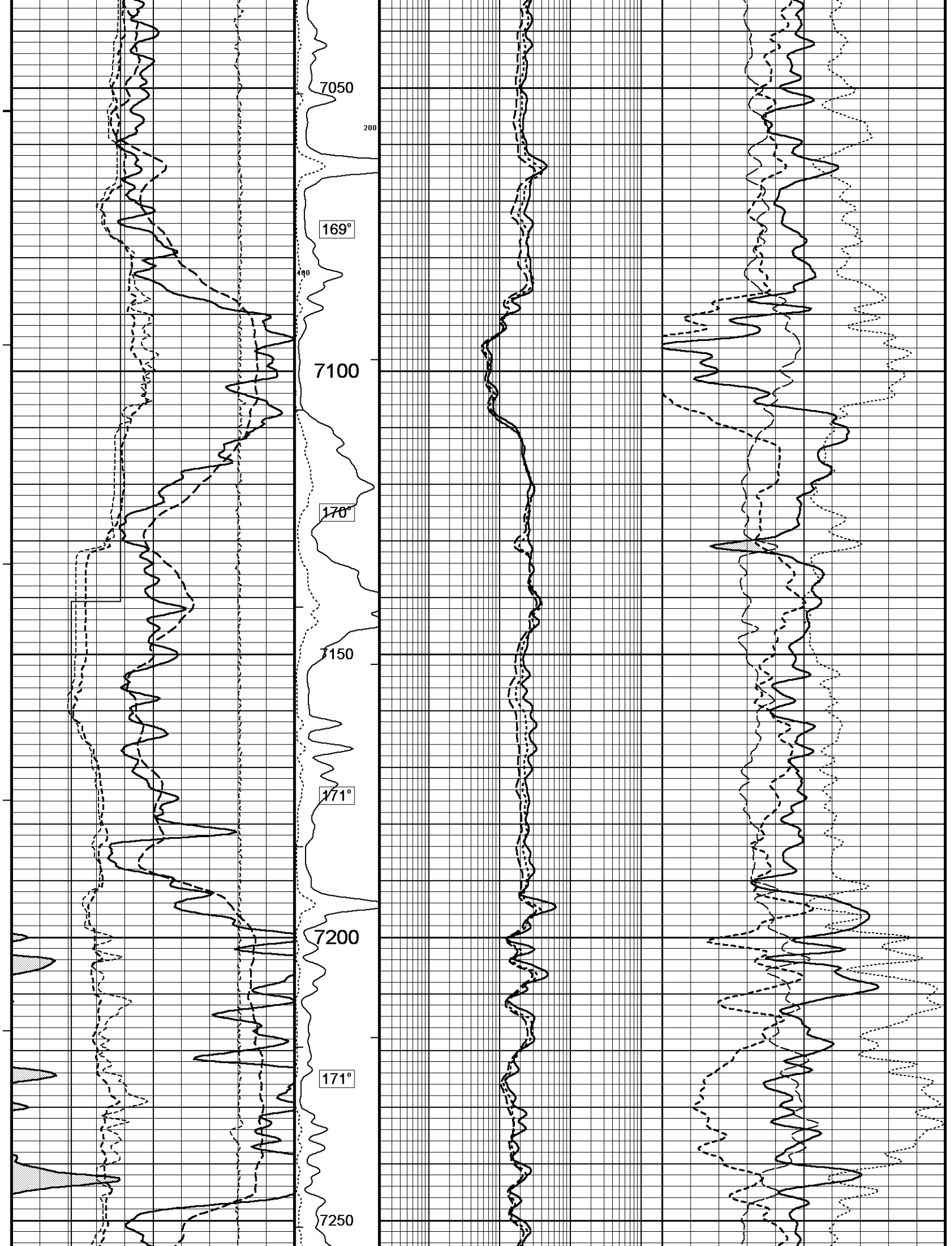


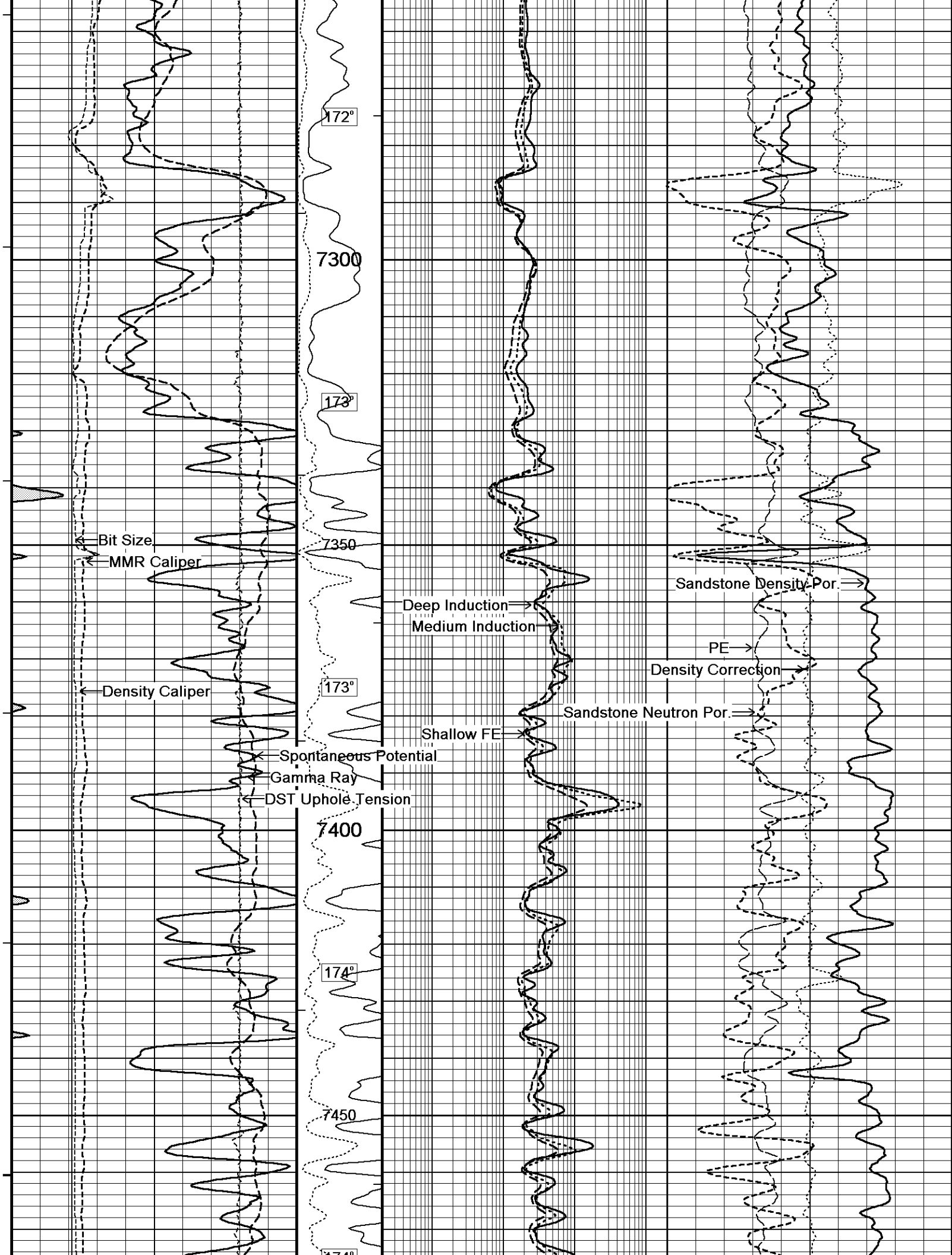


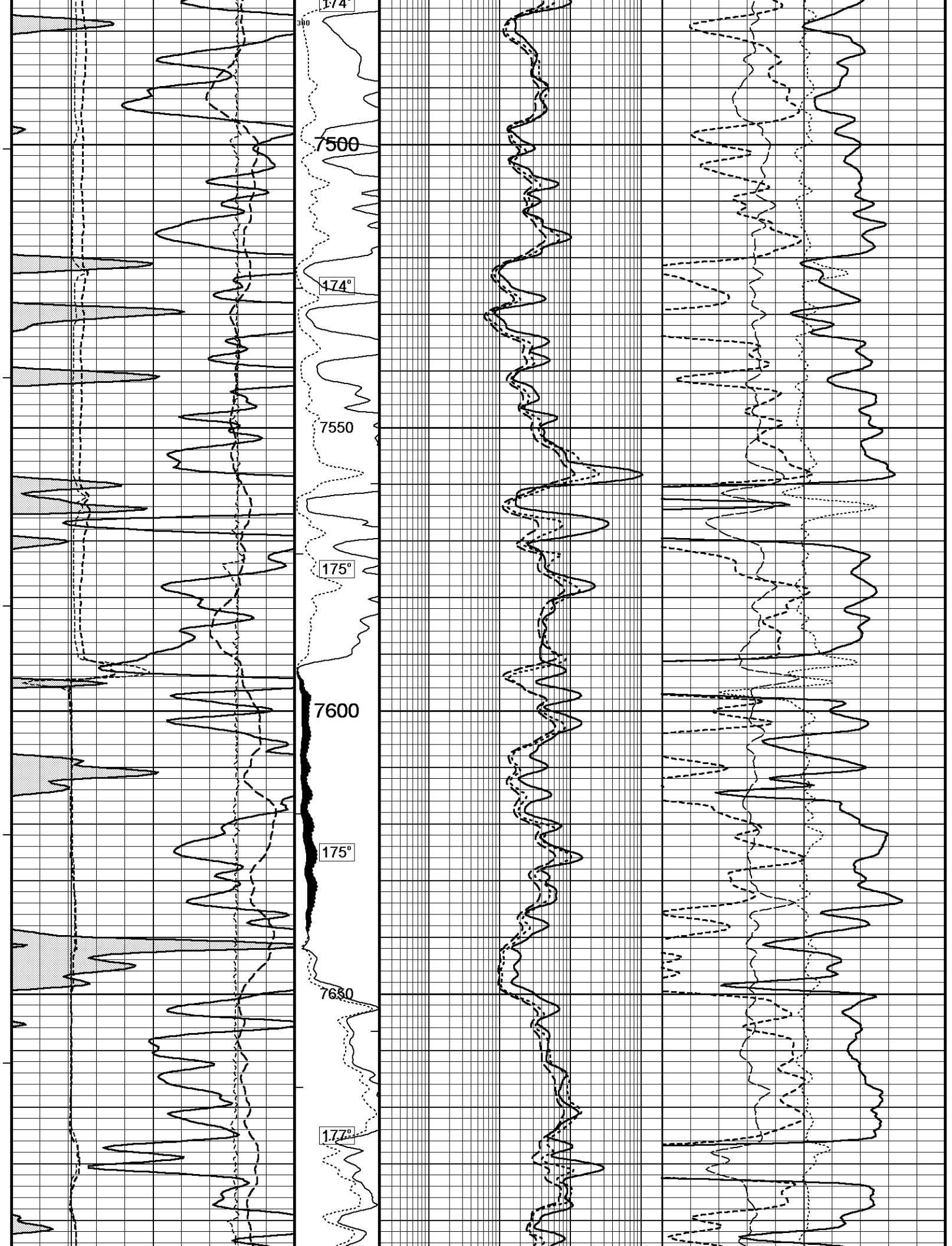


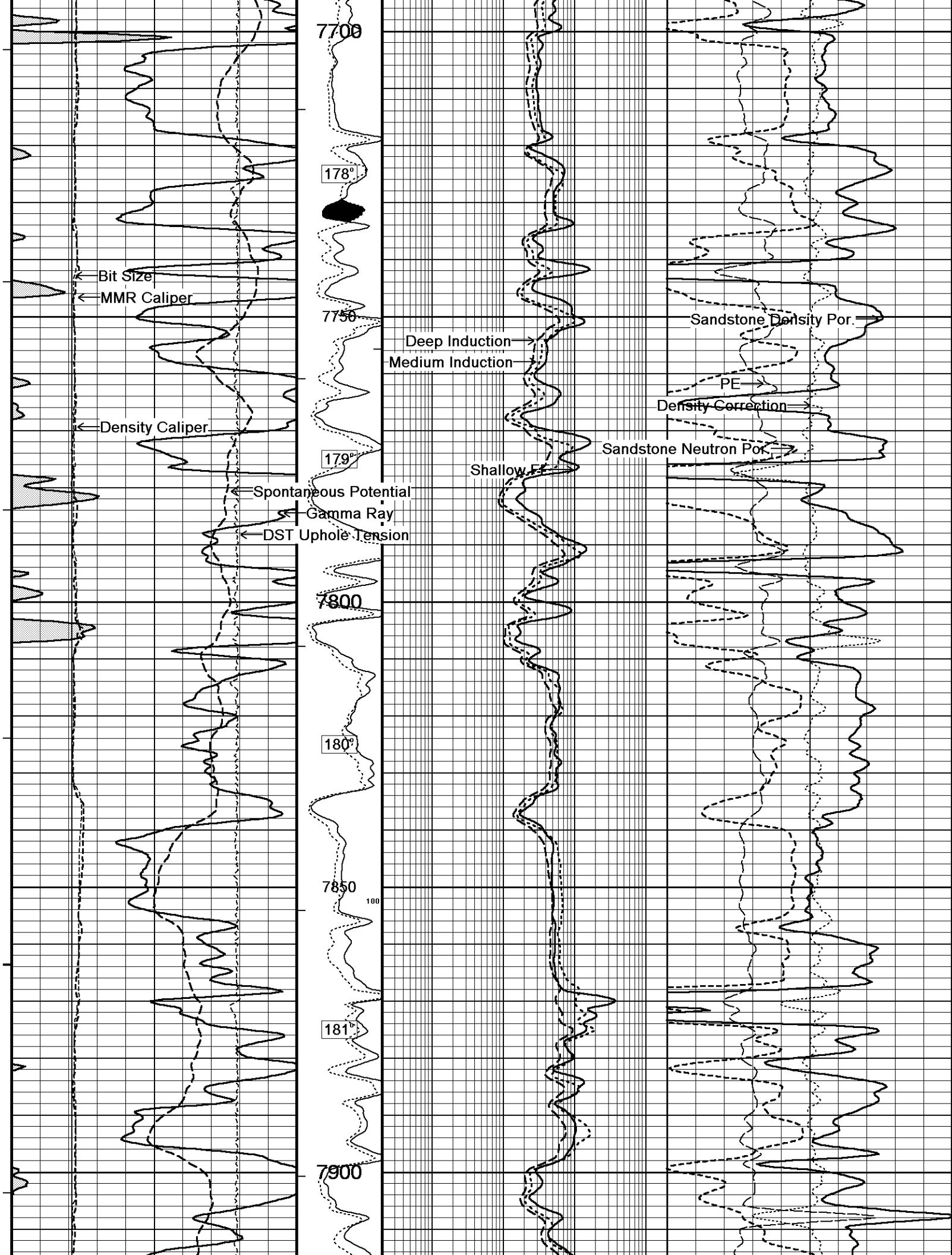


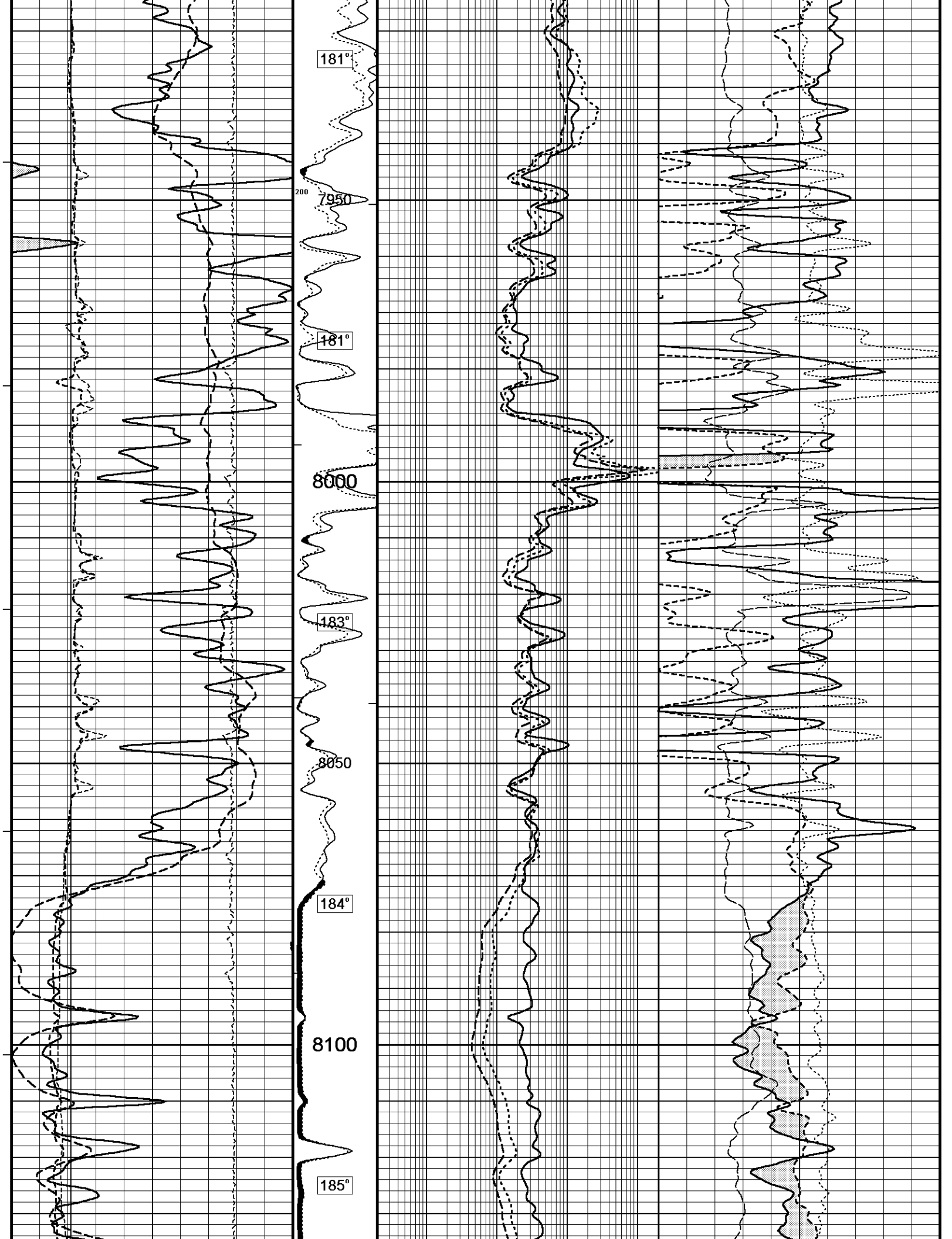


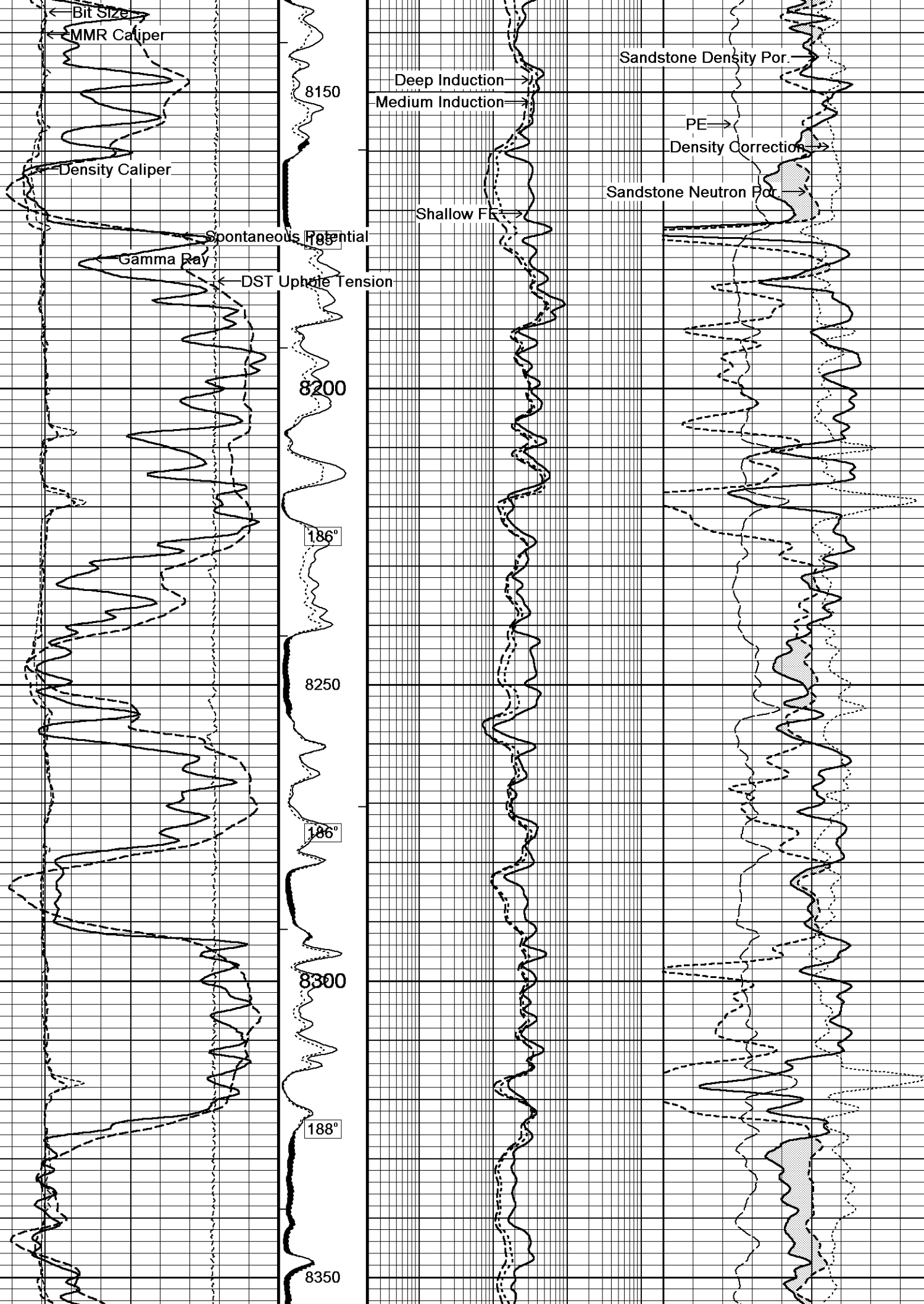


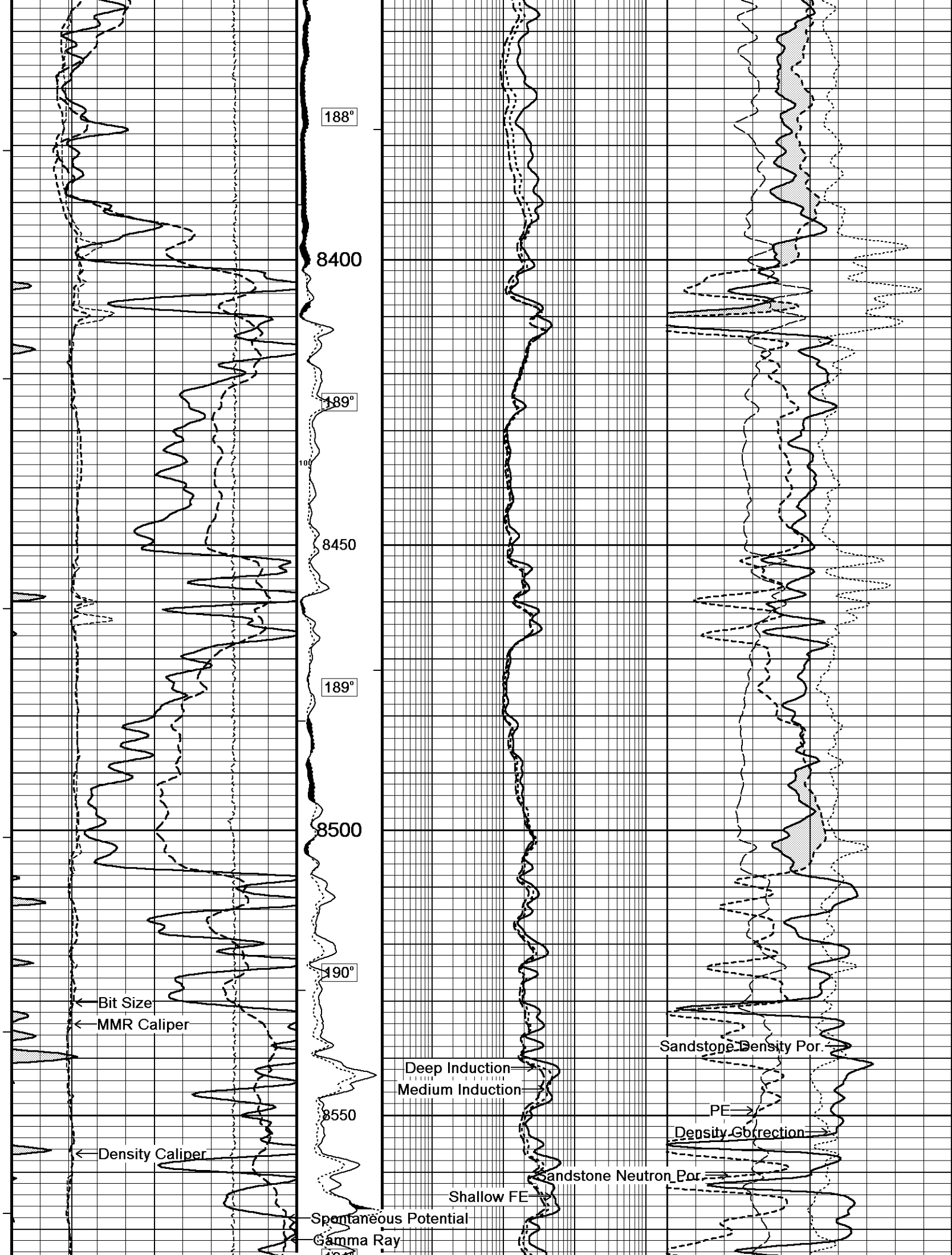


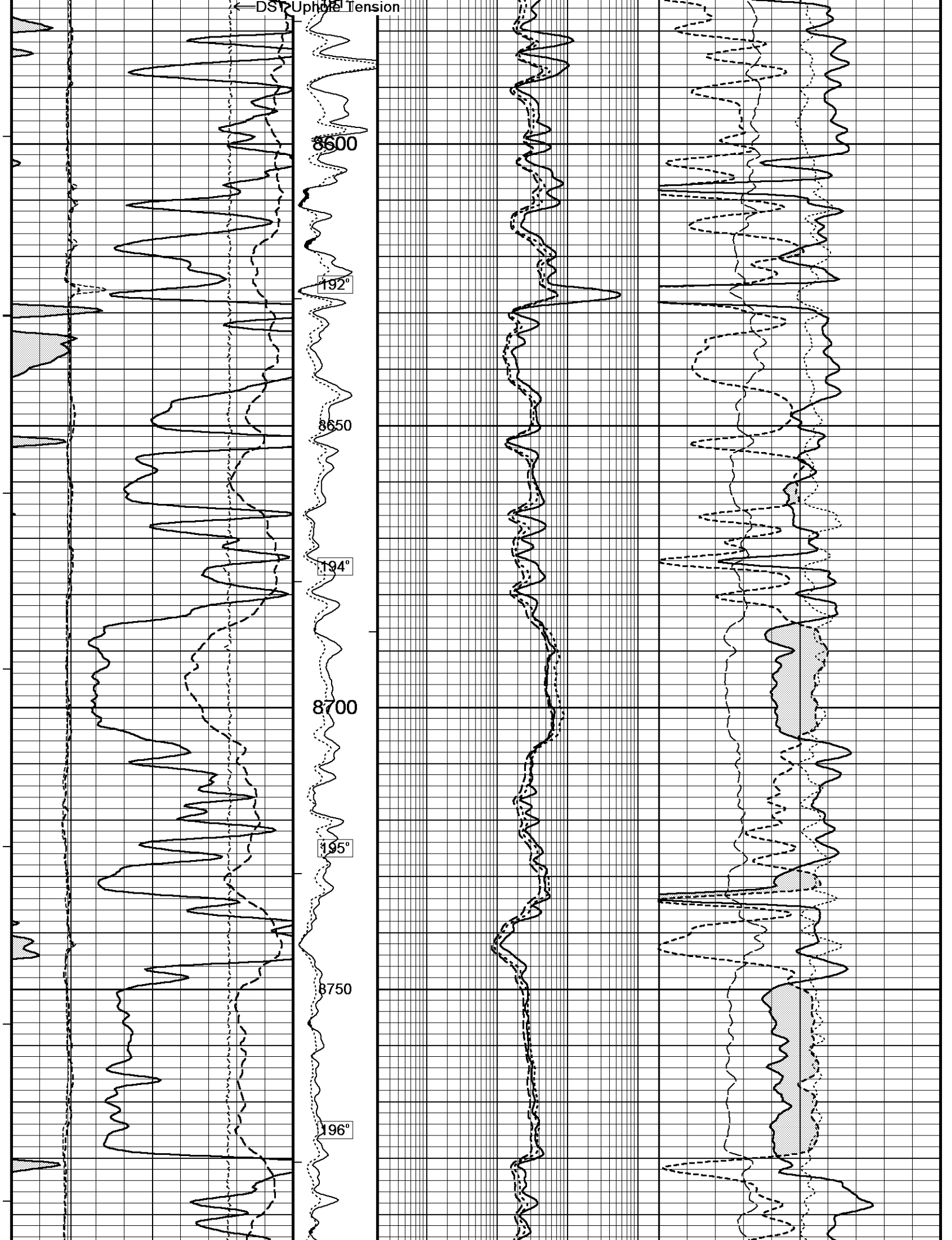


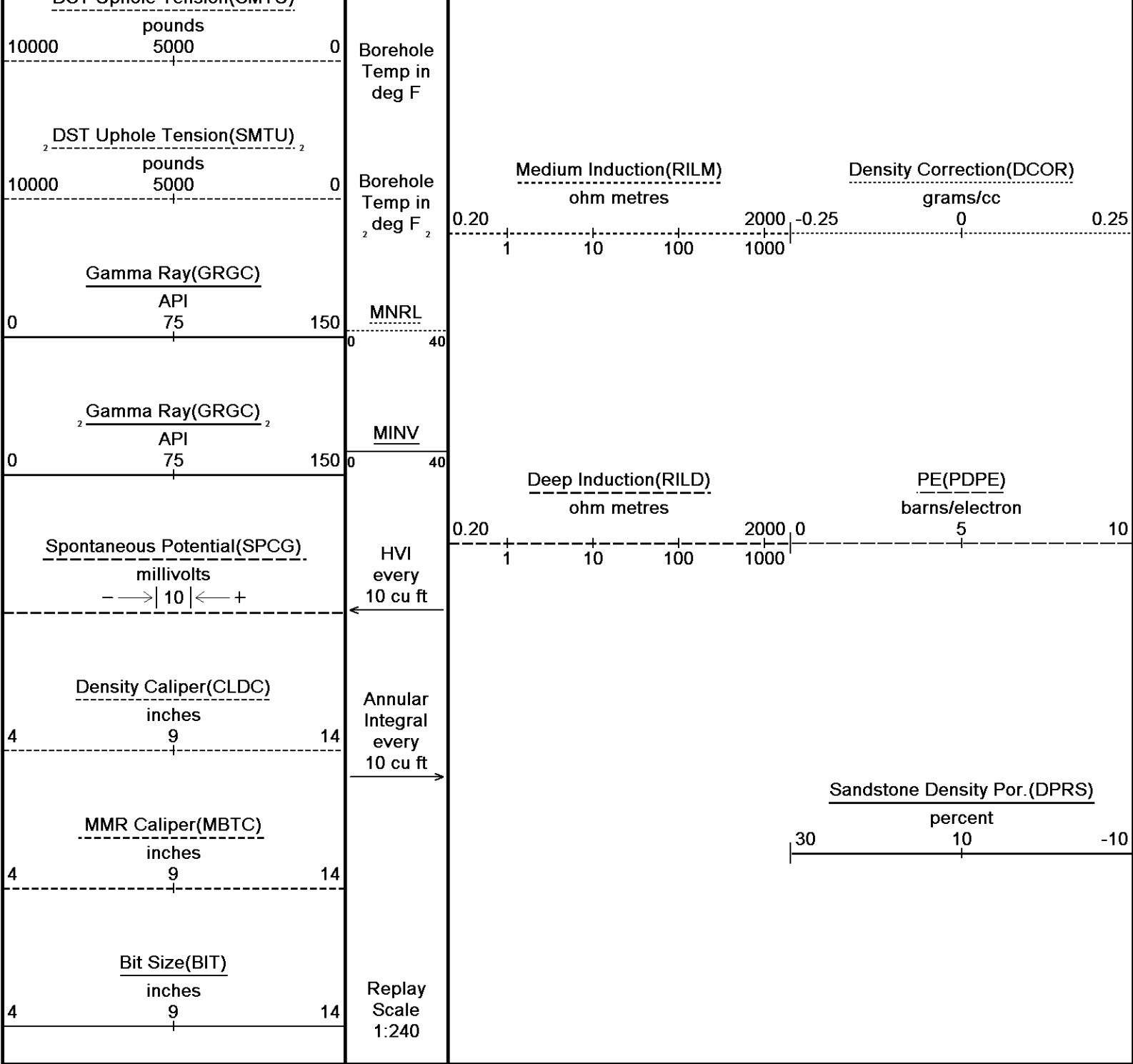












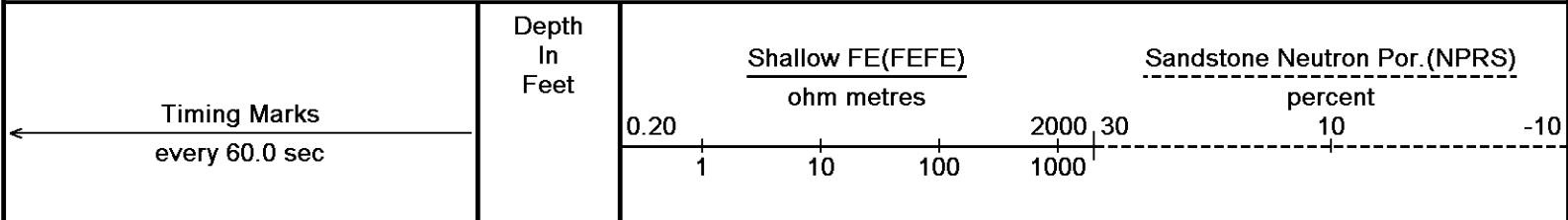
Depth Based Data - Maximum Sampling Increment 10.0cm	Plotted on 14-MAY-2008 04:05
Filename: C:\DOCUME~1\martinex\LOCALS~1\Temp\Weatherford PreView\0\SPLICE.dta	Recorded on 13-MAY-2008 20:44
System Versions: Plotted with 8.01.0091	

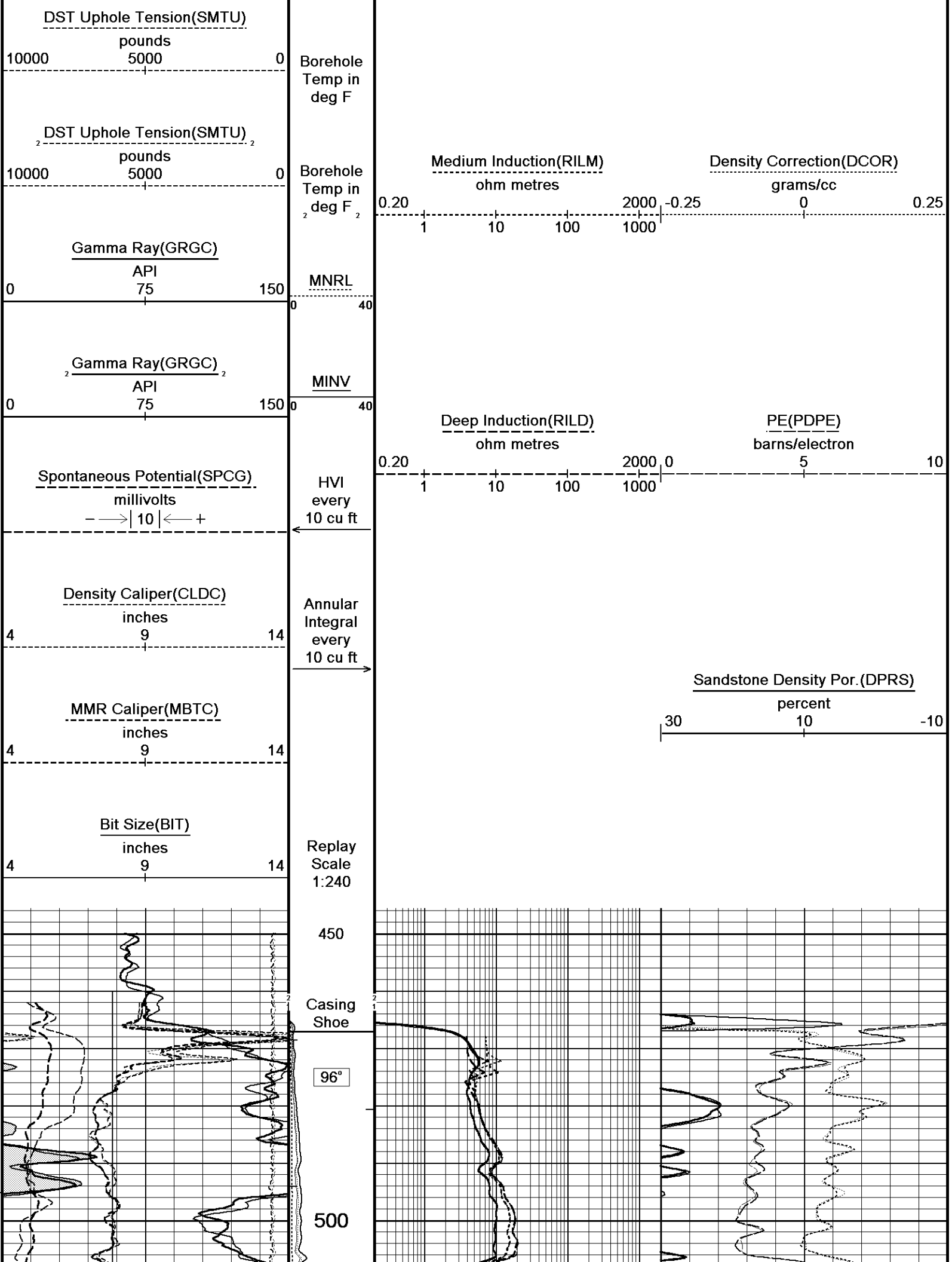
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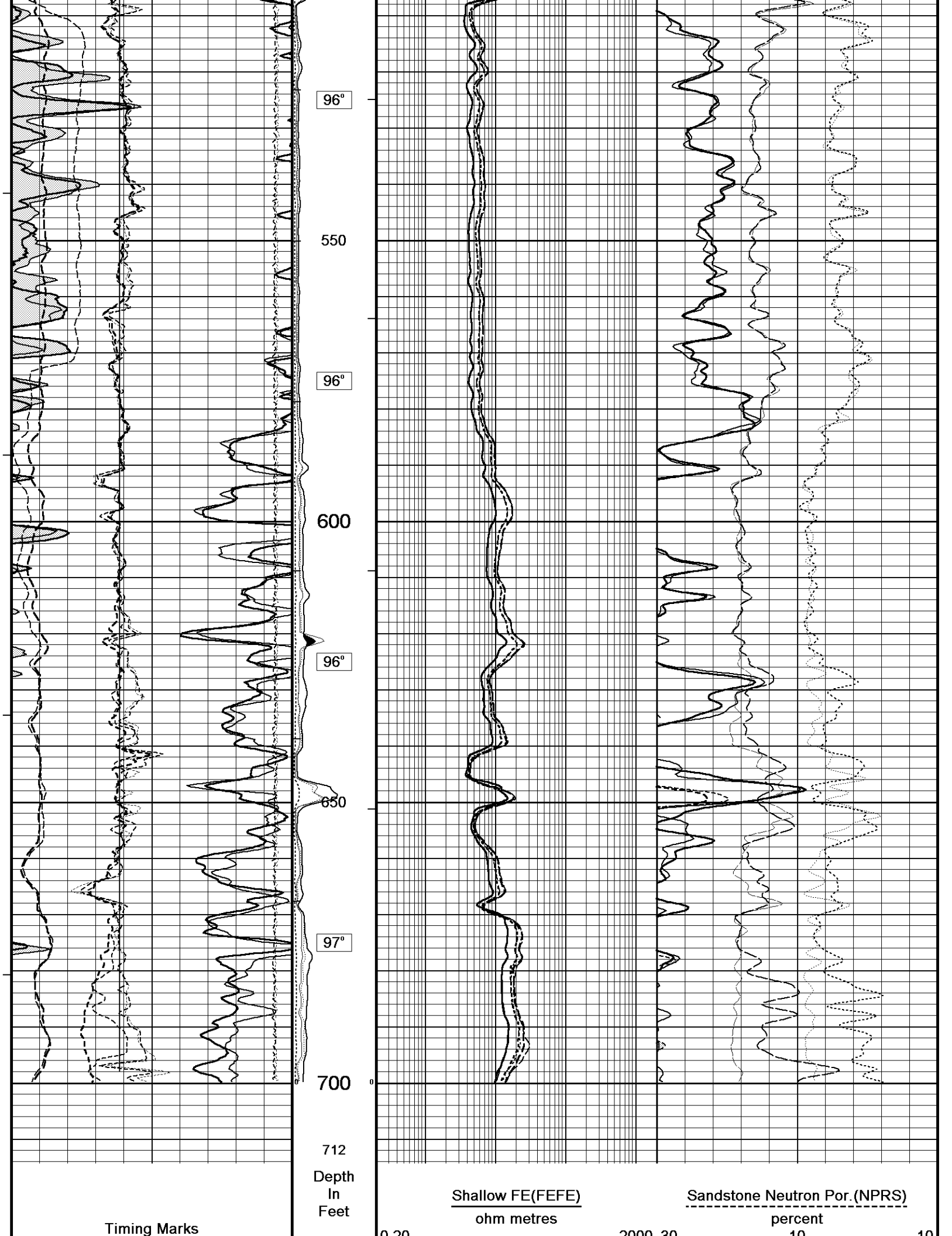
5 INCH MAIN LOG

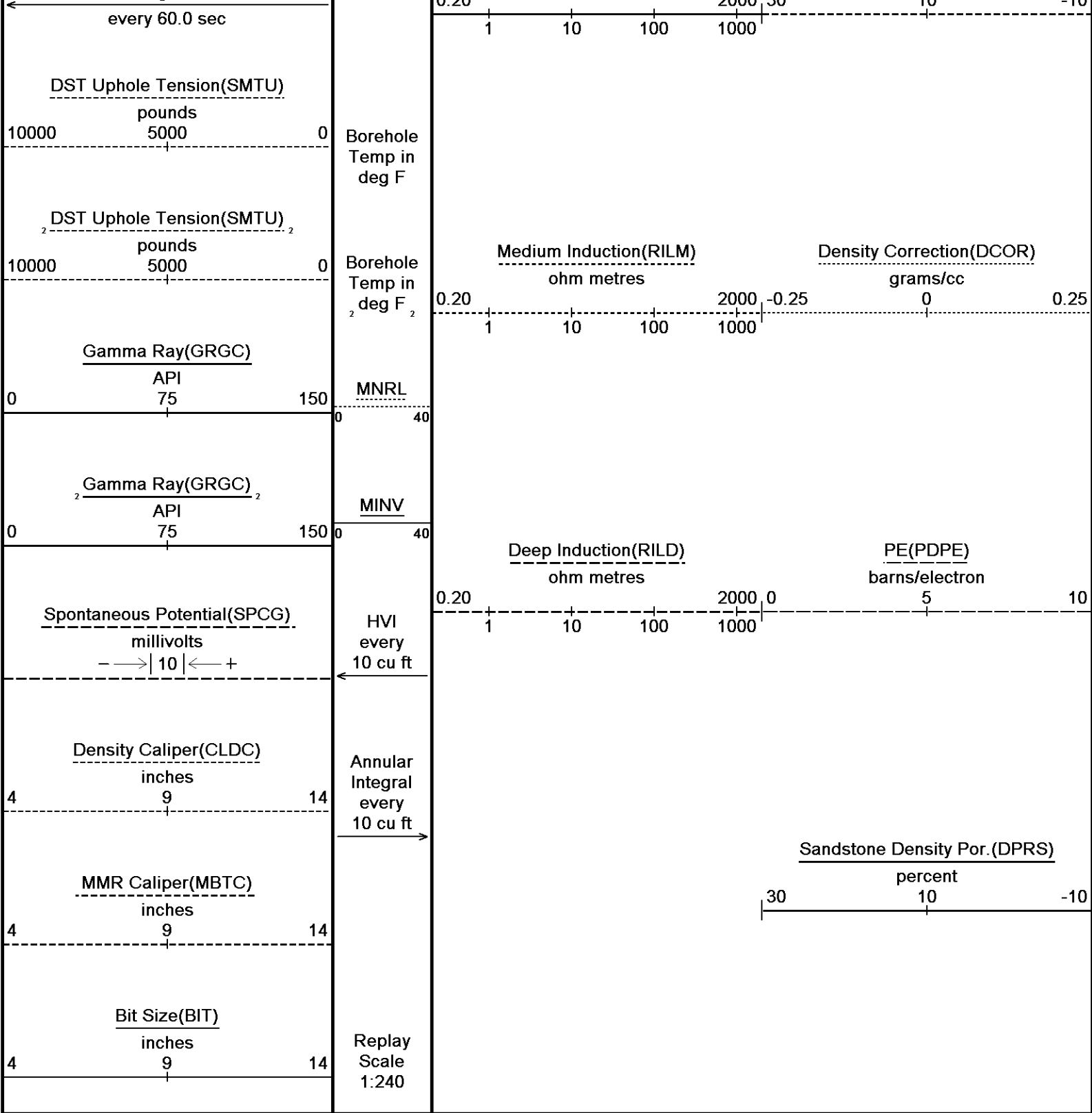
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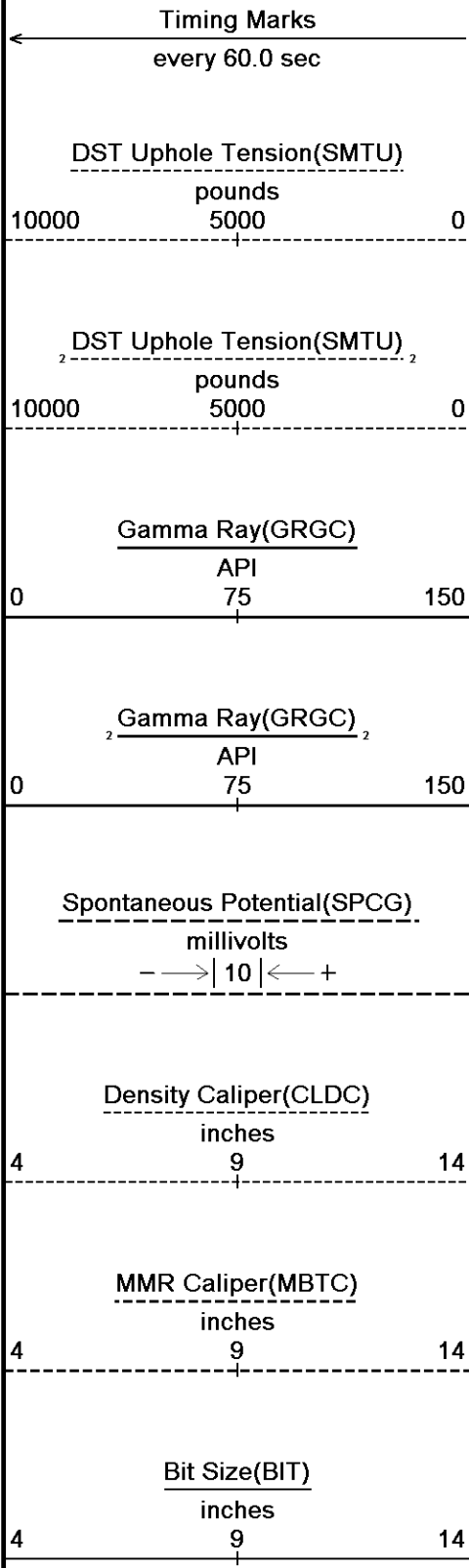
↓	UPPER OVERLAY	↓
Depth Based Data - Maximum Sampling Increment 10.0cm	Plotted on 14-MAY-2008 04:05	
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Filename: C:\DOCUME~1\martinex\LOCALS~1\Temp\Weatherford PreView\0\Wexpro Donnell #16.dta	Recorded on 13-MAY-2008 17:55	
System Versions: Plotted with 8.01.0091		











Borehole
Temp in
deg F

Borehole
Temp in
deg F₂

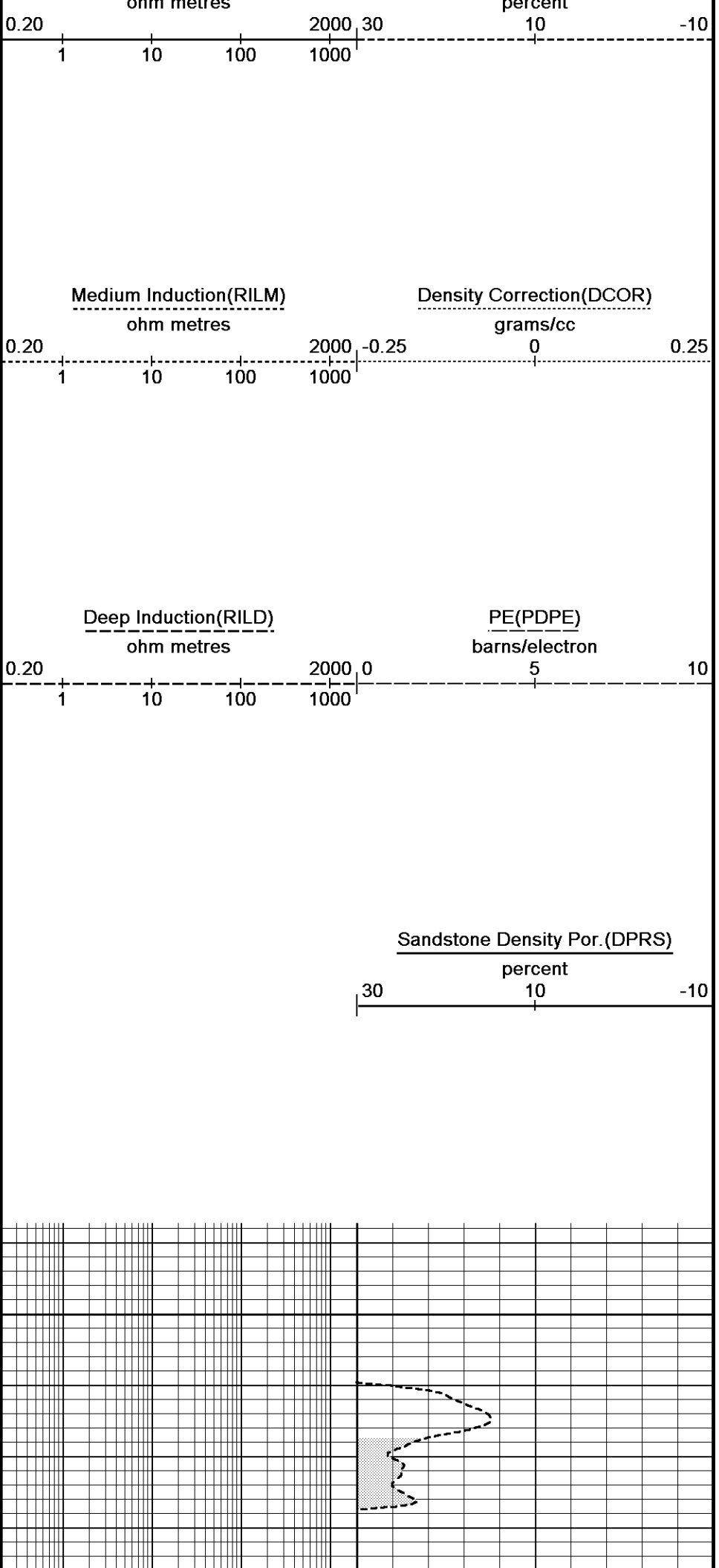
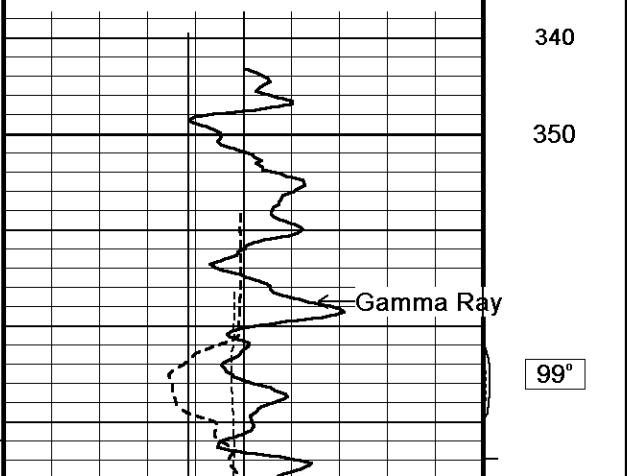
MNRL
0 40

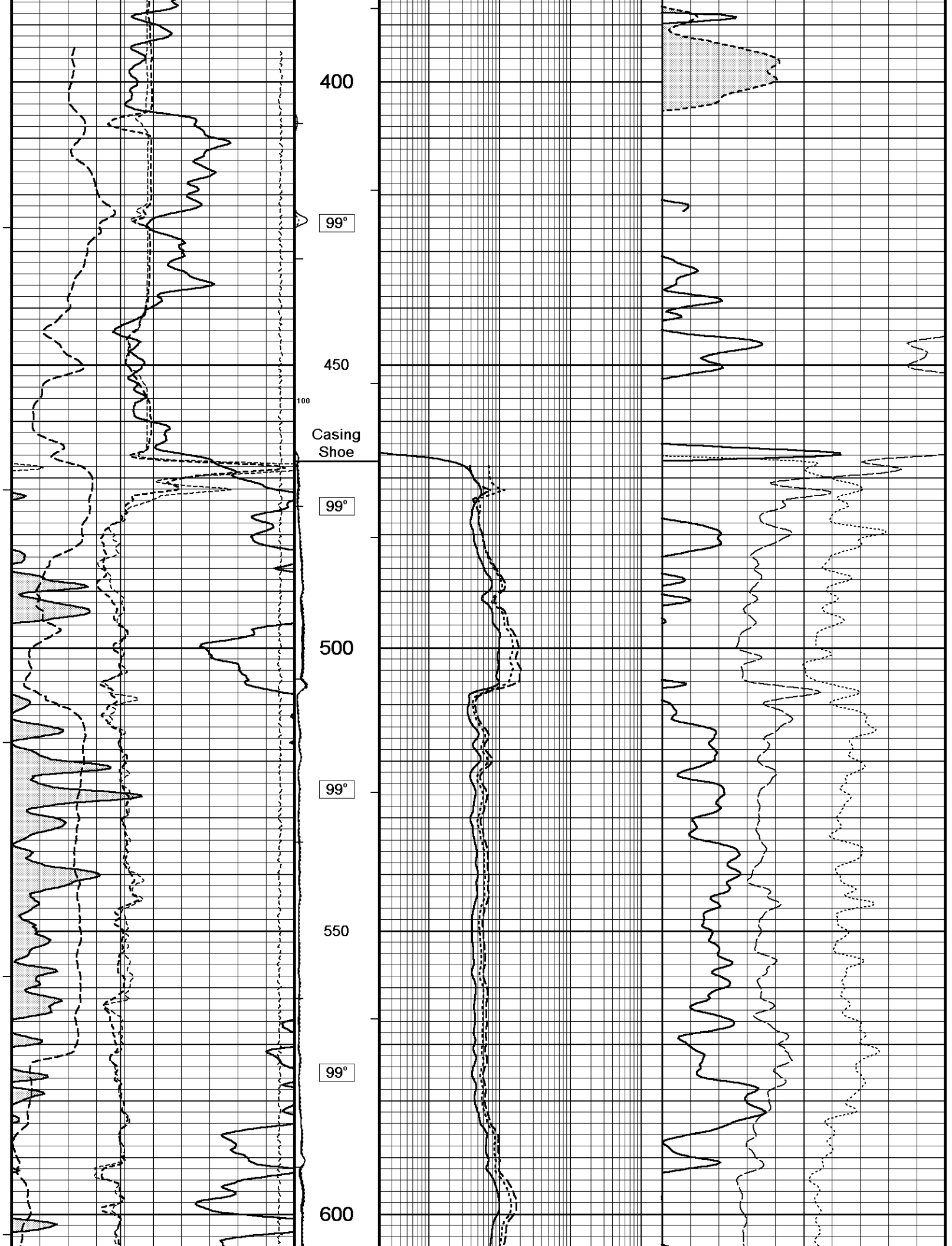
MINV
0 40

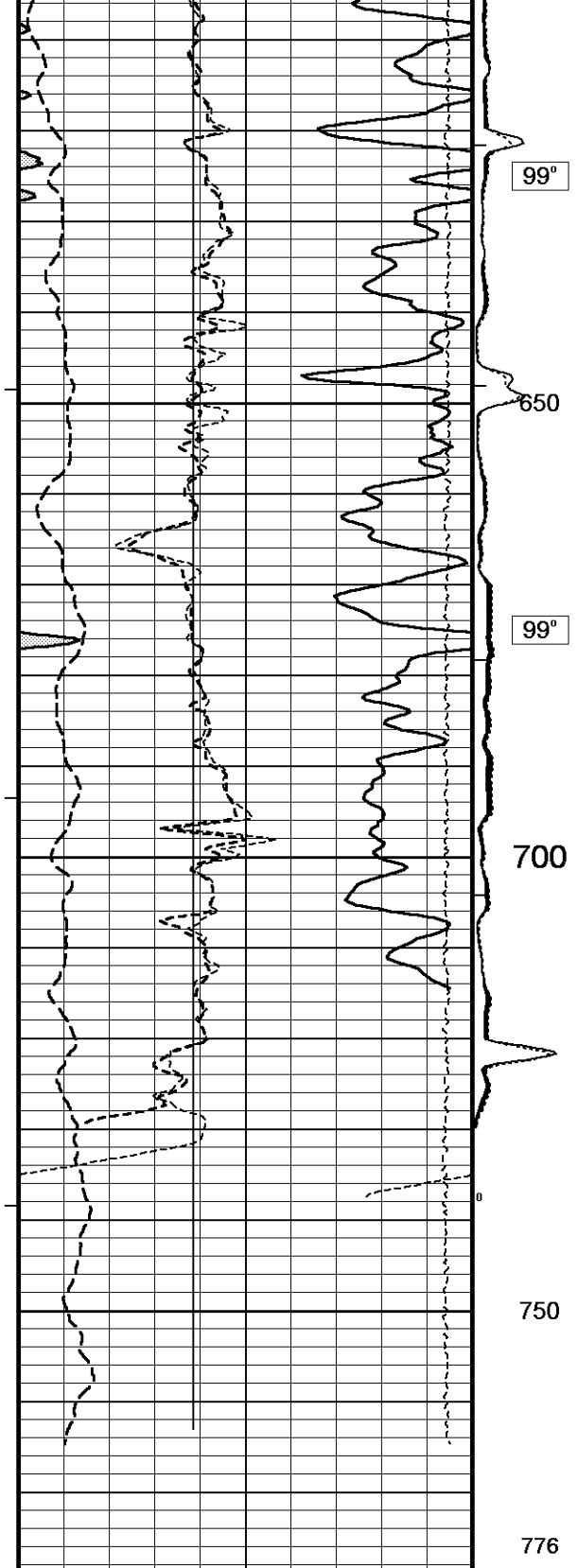
HVI
every
10 cu ft

Annular
Integral
every
10 cu ft

Replay
Scale
1:240





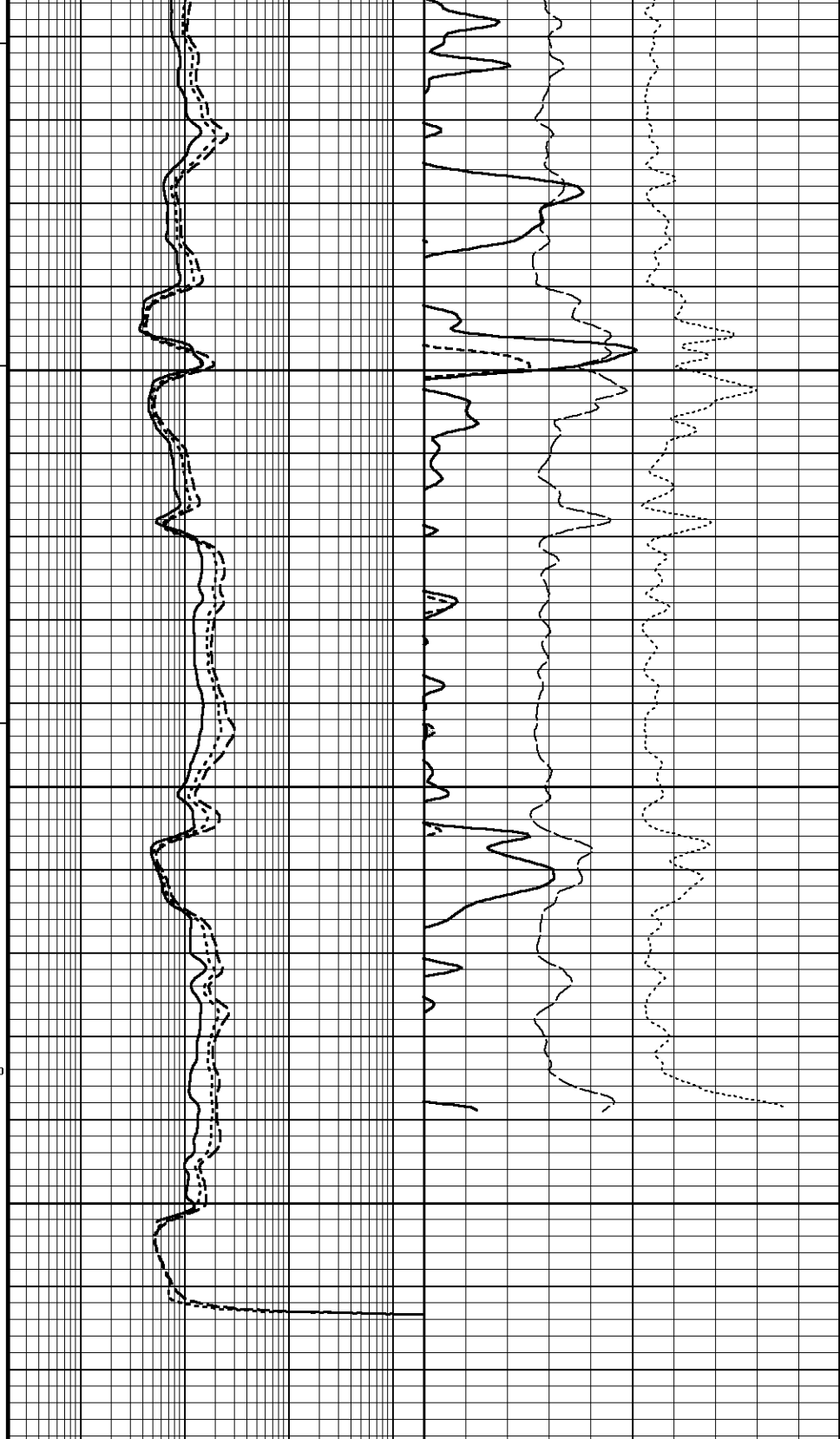


Timing Marks
every 60.0 sec

DST Uphole Tension(SMTU)
pounds
10000 5000 0

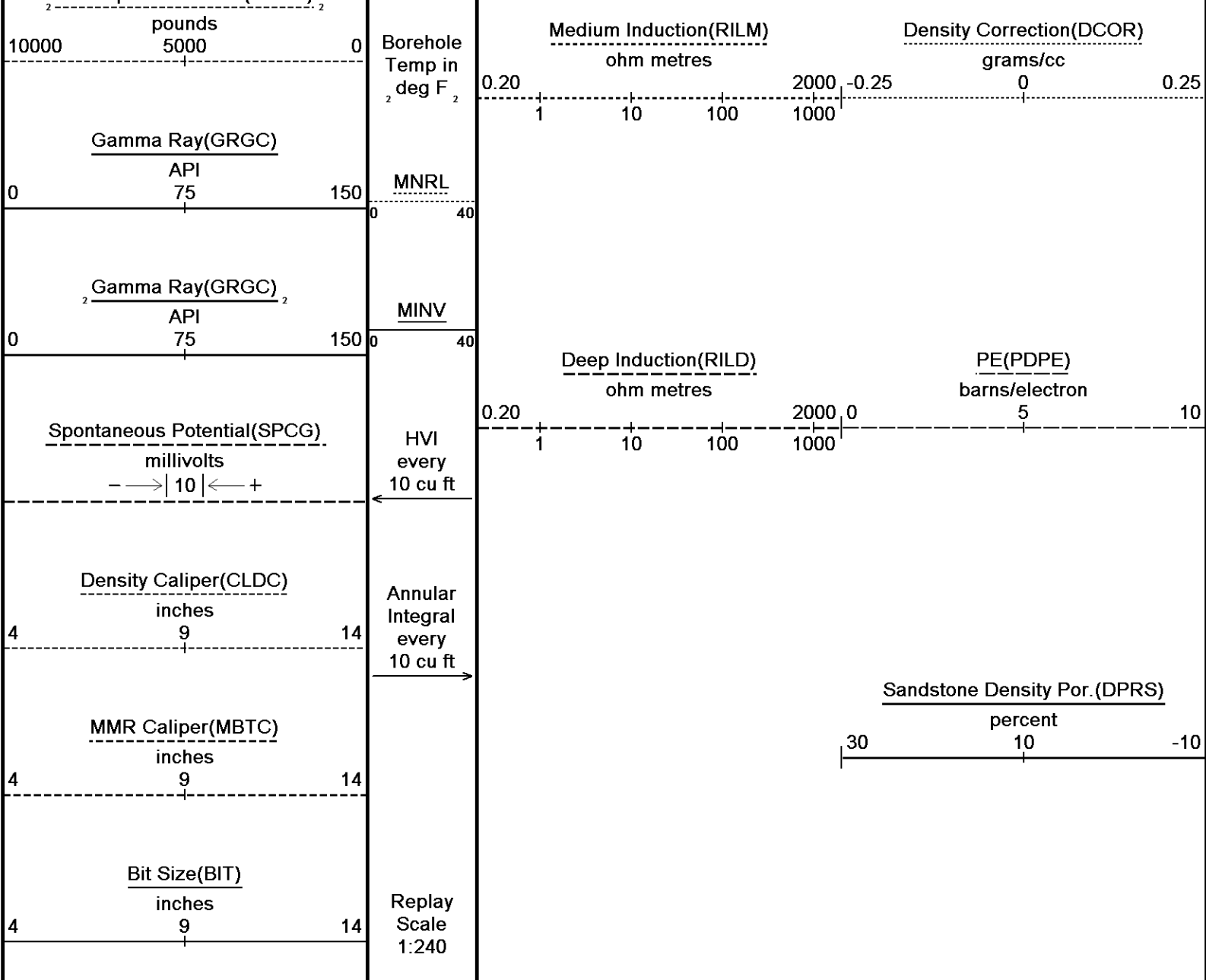
Depth
In
Feet

Borehole
Temp in
deg F



Shallow FE(FEFE)
ohm metres
0.20 1 10 100 1000

Sandstone Neutron Por. (NPRS)
percent
30 10 -10

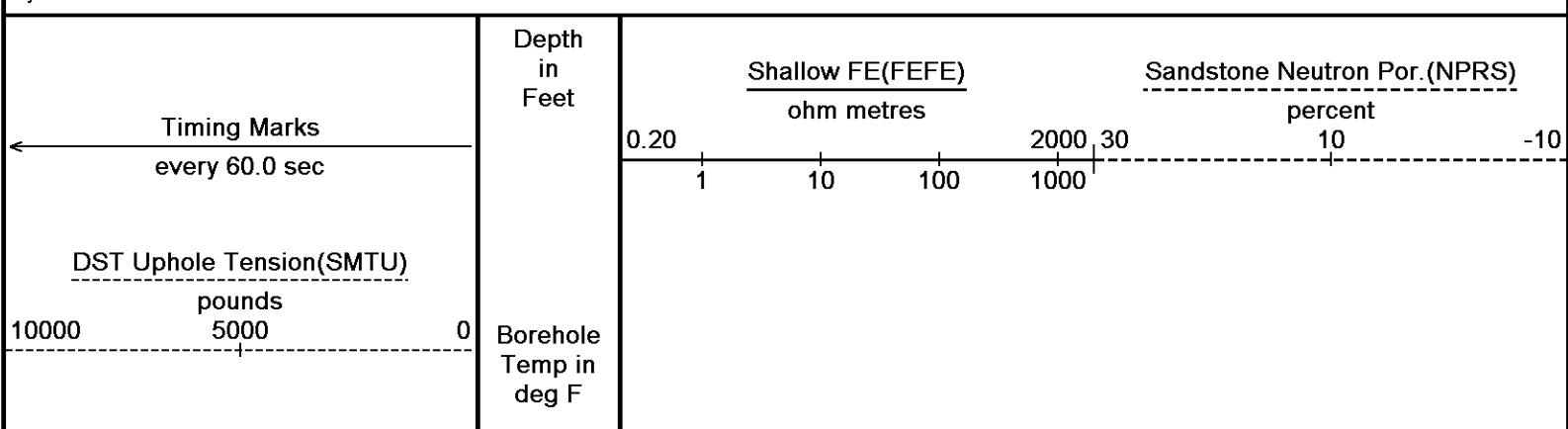


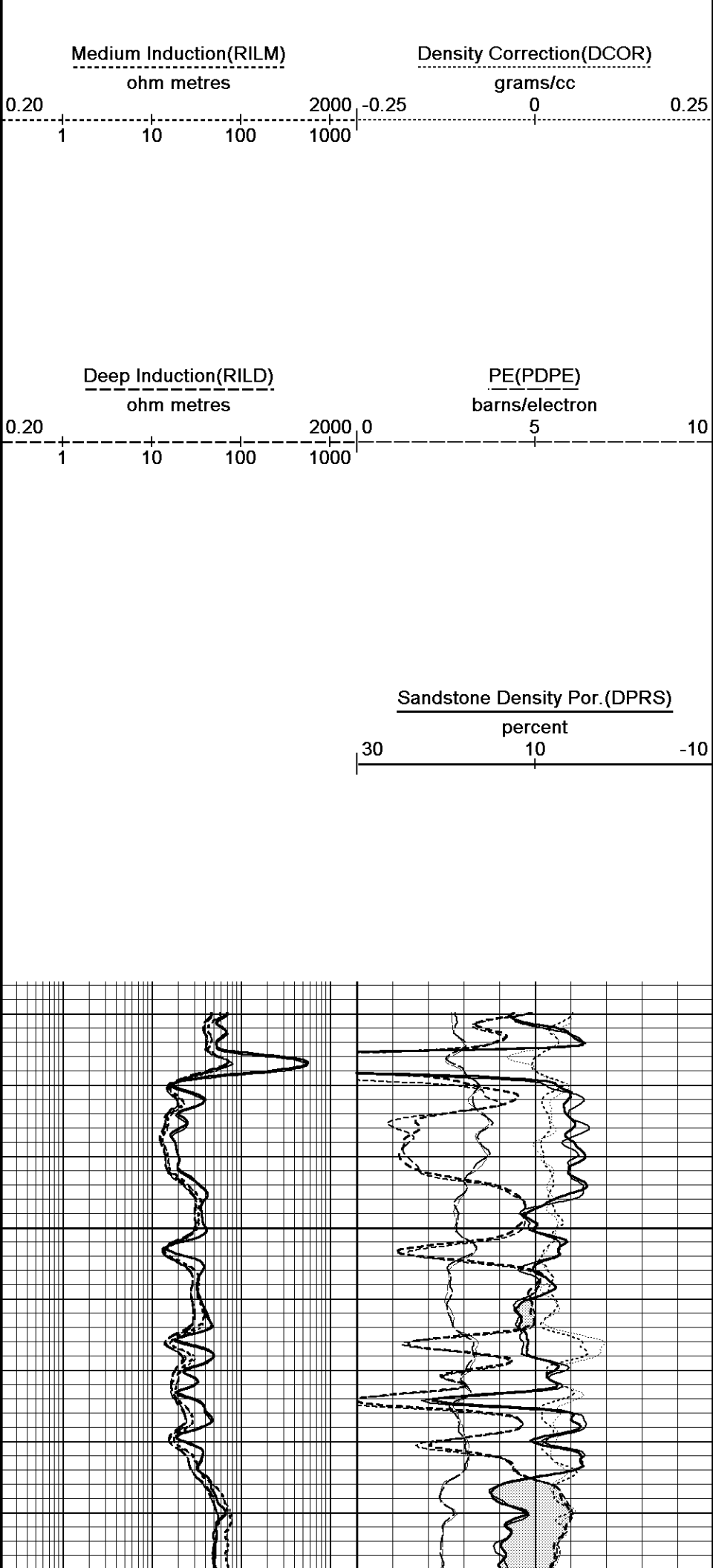
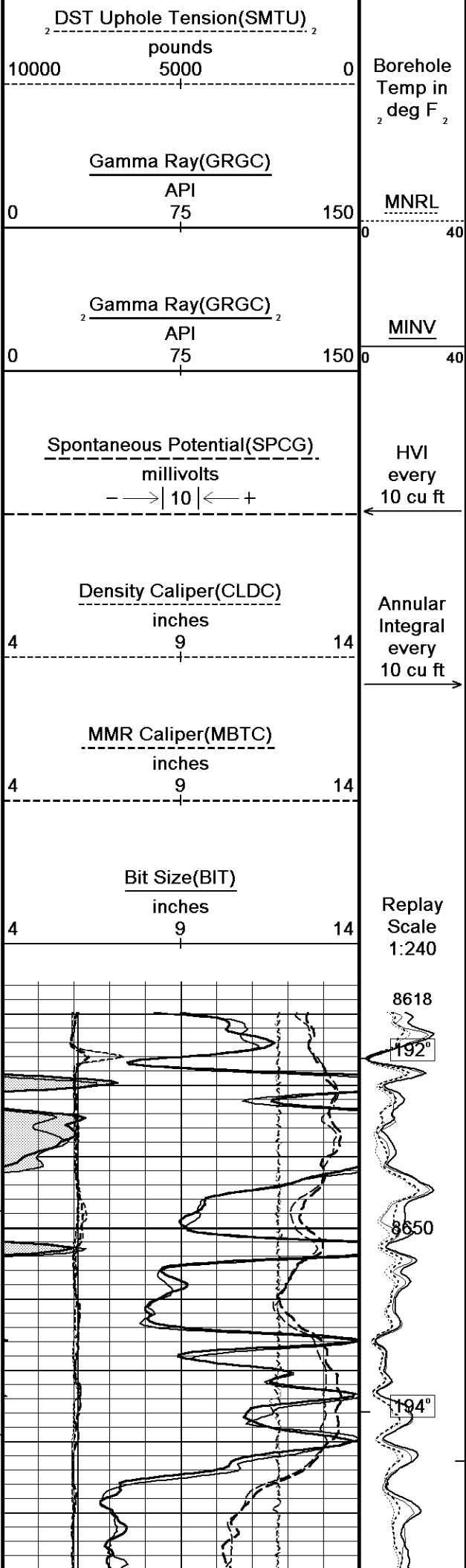
Depth Based Data - Maximum Sampling Increment 10.0cm
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System Versions: Logged with 8.00.0052 Plotted with 8.01.0091
Plotted on 14-MAY-2008 04:05
Recorded on 13-MAY-2008 17:55

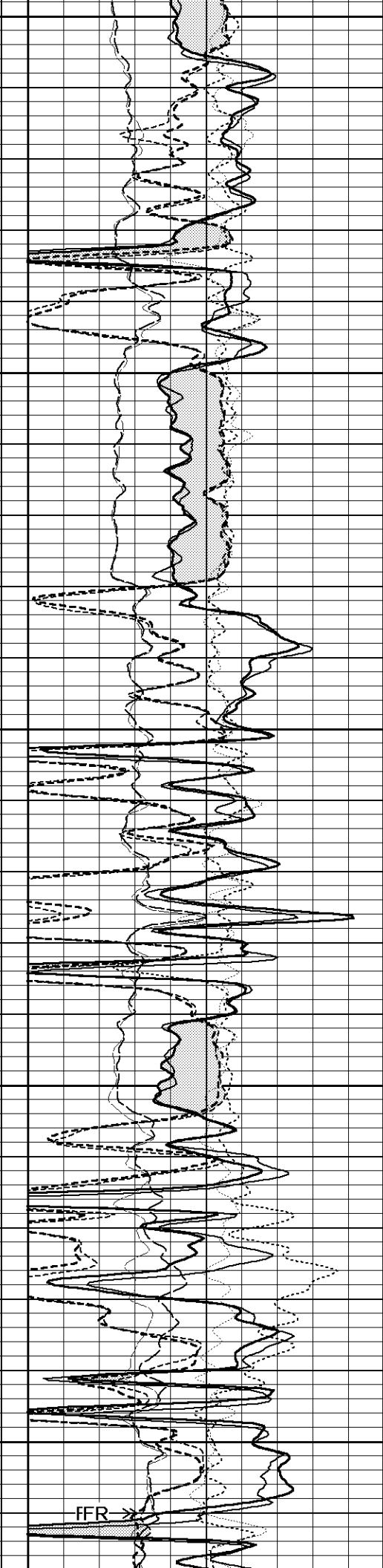
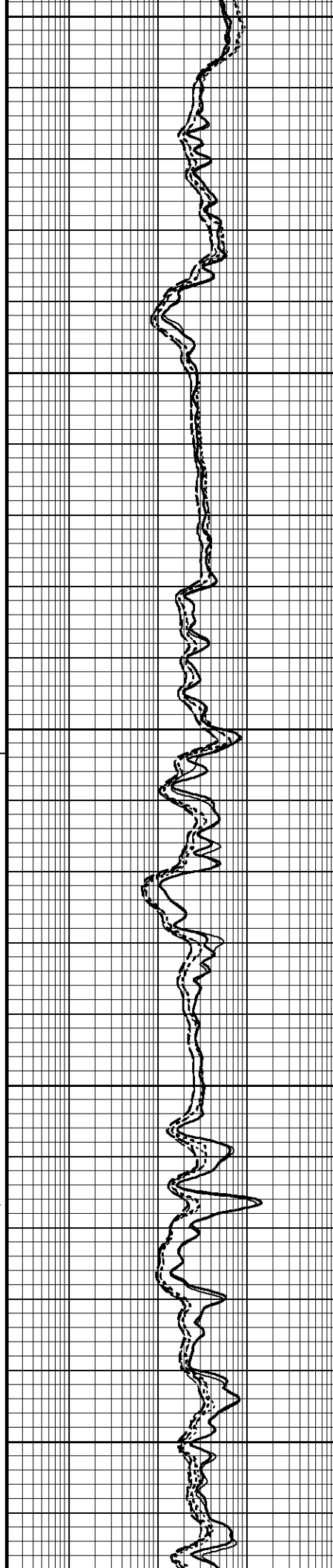
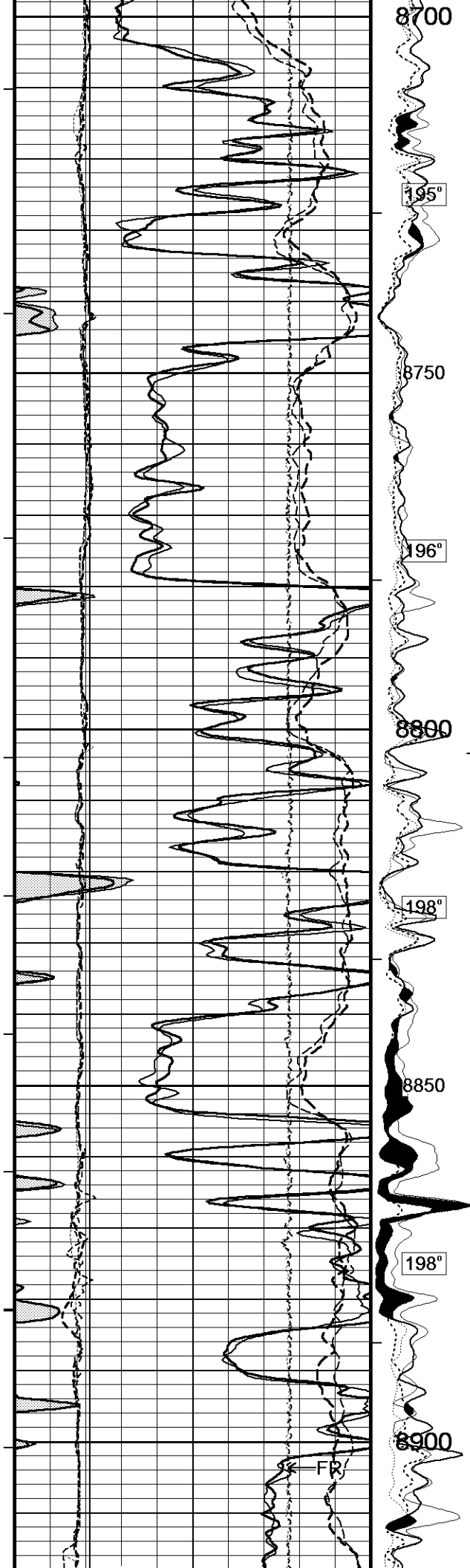
UPPER REPEAT SECTION

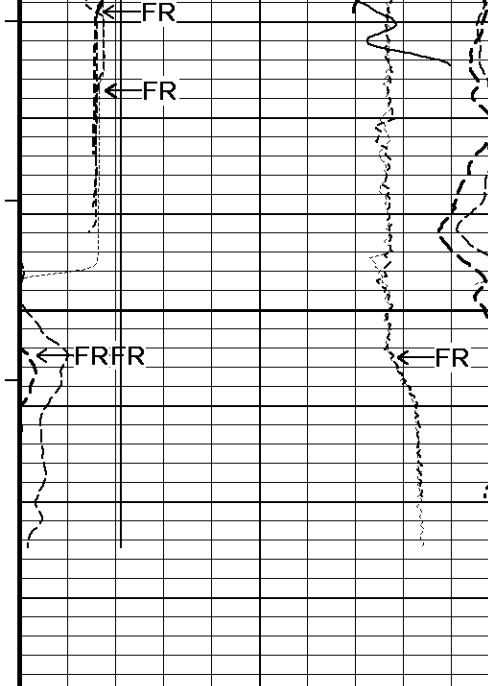
BOTTOM OVERLAY

Depth Based Data - Maximum Sampling Increment 10.0cm
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Filename: C:\DOCUME~1\martinex\LOCALS~1\Temp\Weatherford PreView\0\Wexpro Donnell #16_001.dta
System Versions: Plotted with 8.01.0091
Plotted on 14-MAY-2008 04:05
Recorded on 13-MAY-2008 20:44
Recorded on 13-MAY-2008 19:00







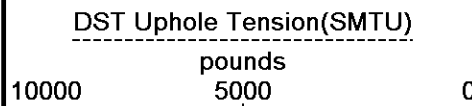


8950

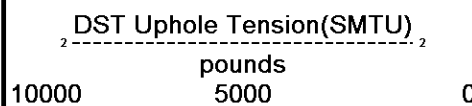
8988

Depth
in
Feet

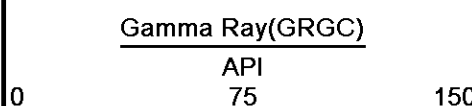
Timing Marks
every 60.0 sec



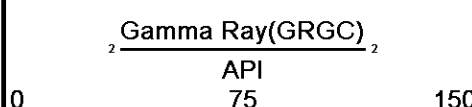
Borehole
Temp in
deg F



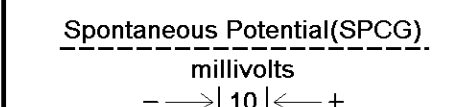
Borehole
Temp in
deg F₂



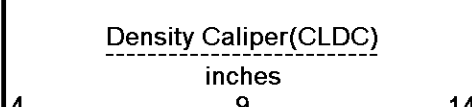
MNRL



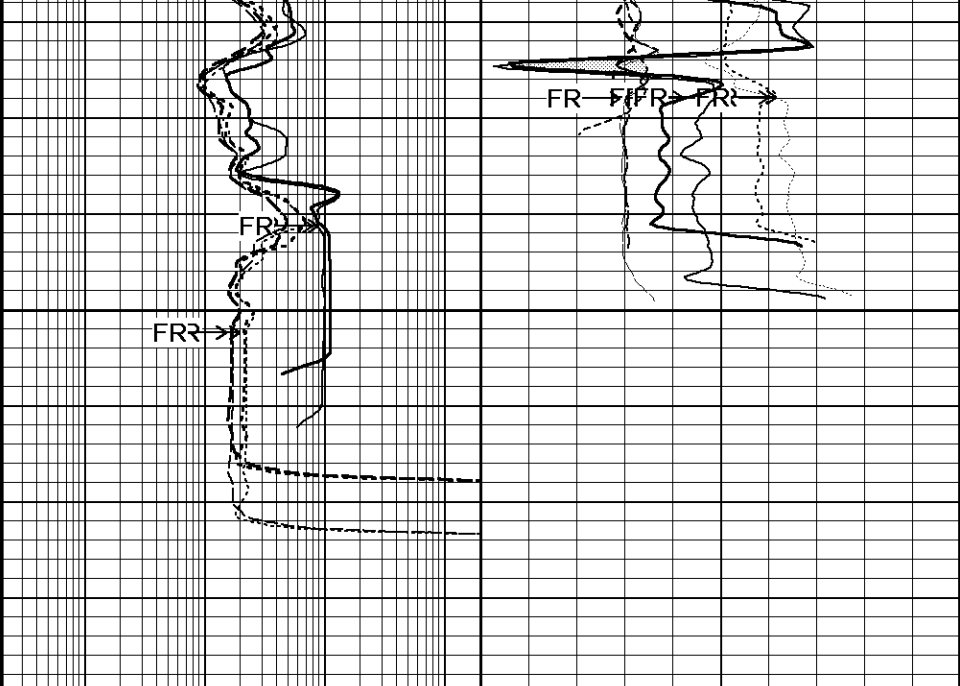
MINV



HVI
every
10 cu ft

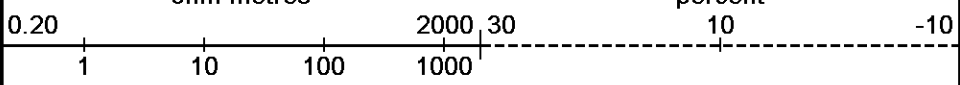


Annular
Integral
every
10 cu ft



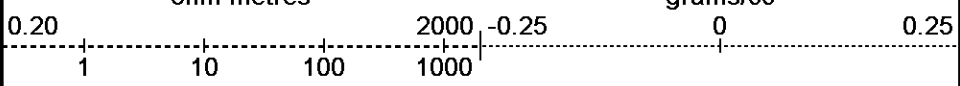
Shallow FE(FEFE)
ohm metres

Sandstone Neutron Por.(NPRS)
percent



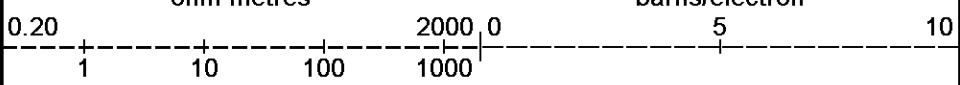
Medium Induction(RILM)
ohm metres

Density Correction(DCOR)
grams/cc



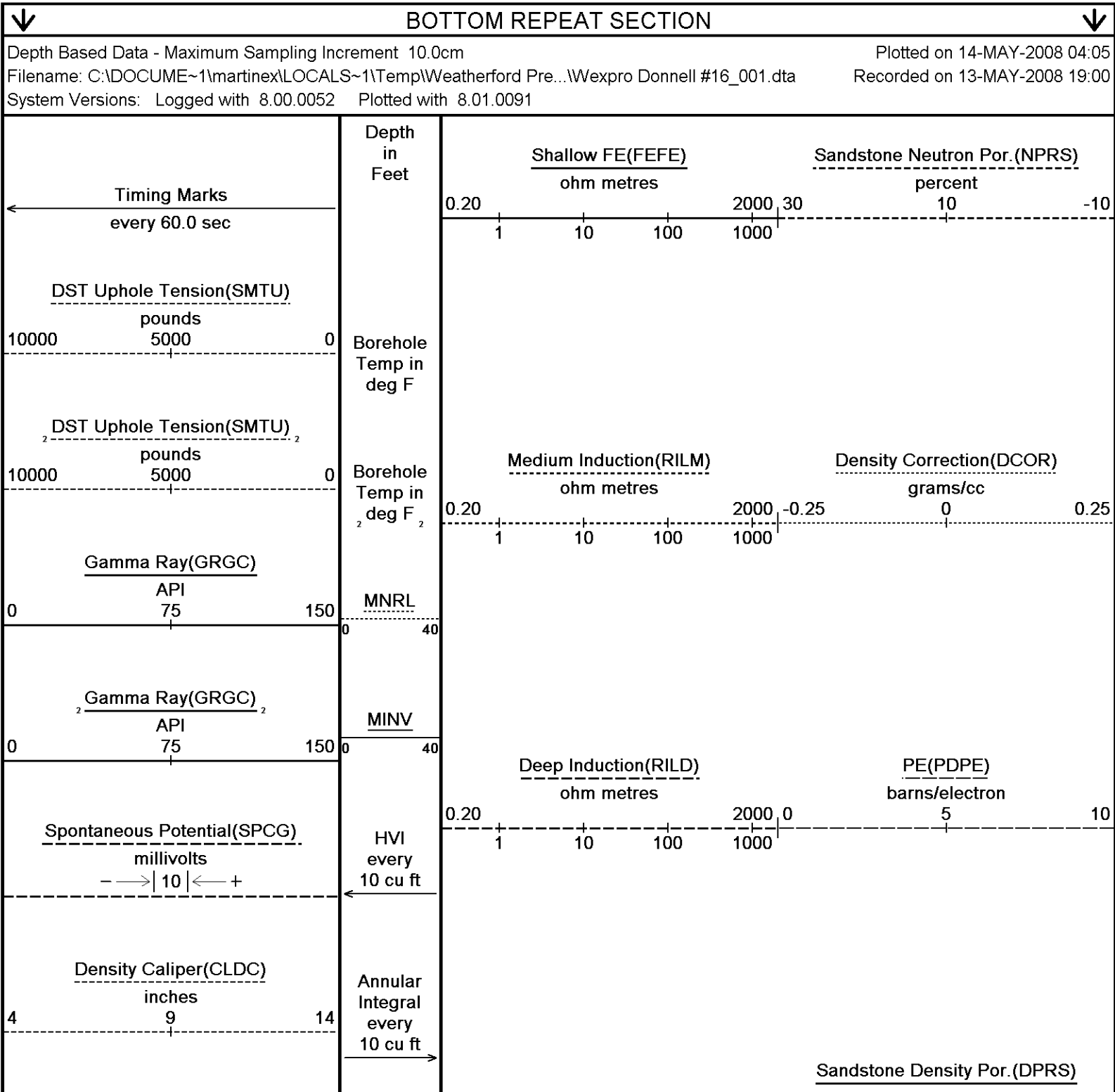
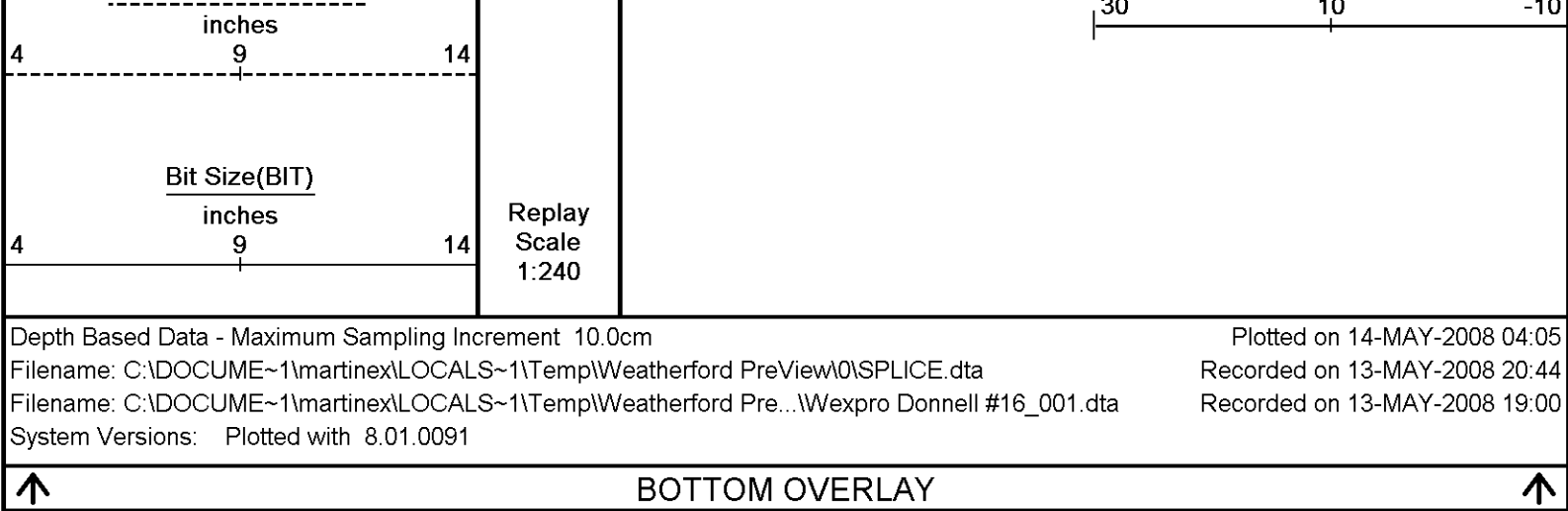
Deep Induction(RILD)
ohm metres

PE(PDPE)
barns/electron



Sandstone Density Por.(DPRS)
percent





4	9	14
---	---	----

Bit Size(BIT)

inches

4	9	14
---	---	----

Replay
Scale
1:240

8618

191⁰

8650

192⁰

~~8700~~

1.93°

8750

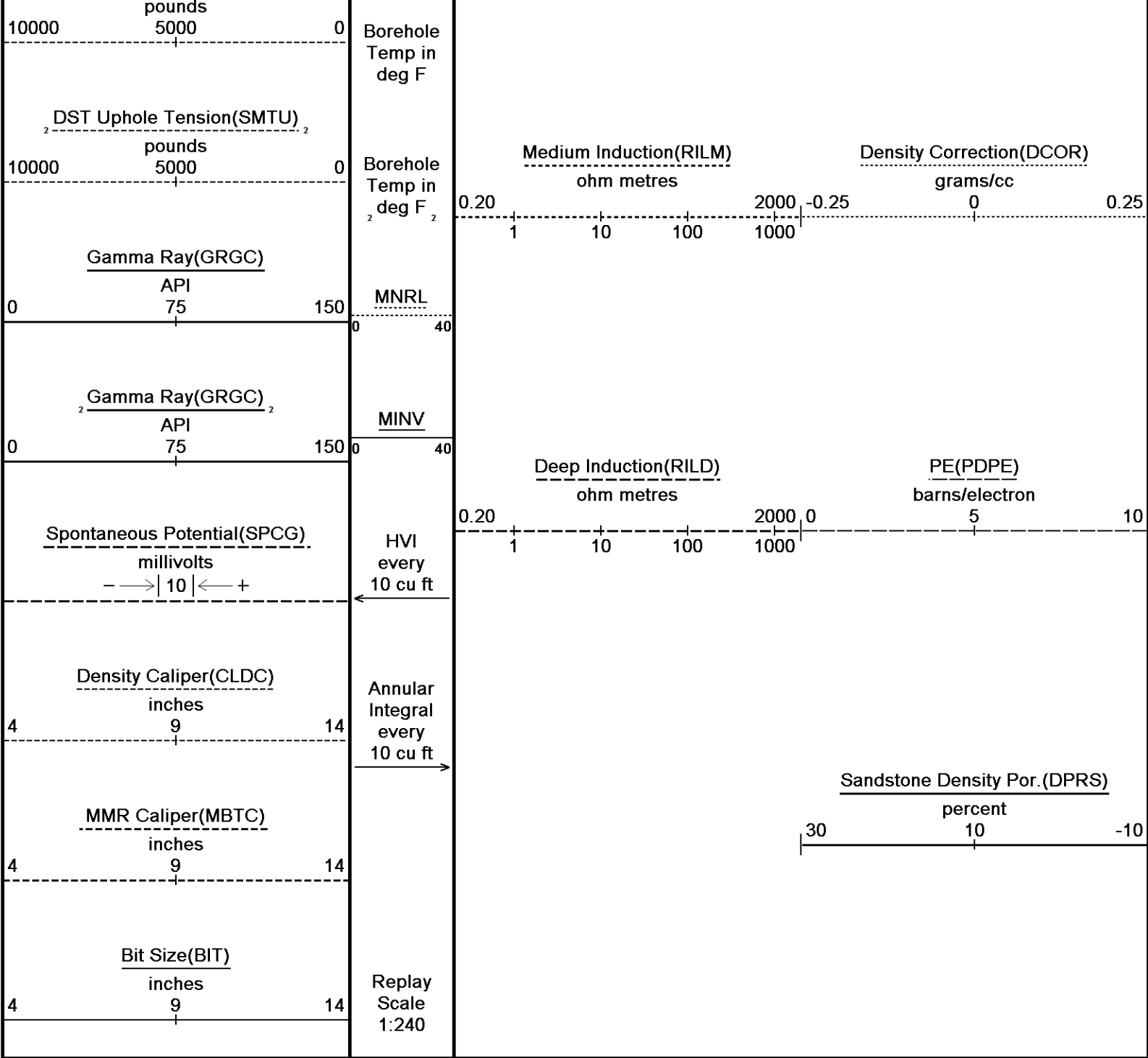
194°

30

percent
10

10

-10



Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 14-MAY-2008 04:05
Filename: C:\DOCUME~1\martinex\LOCALS~1\Temp\Weatherford PreView\0\Wexpro Donnell #16_001.dta
Recorded on 13-MAY-2008 19:00
System Versions: Logged with 8.00.0052 Plotted with 8.01.0091

↑ BOTTOM REPEAT SECTION ↑

BEFORE SURVEY CALIBRATION		
C:\DOCUME~1\martinex\LOCALS~1\Temp\Weatherford PreView\0\Wexpro Donnell #16_001.dta		
General Constants All 000		Last Edited on 13-MAY-2008,14:09
General Parameters		
Mud Resistivity	1.820	ohm-metres
Mud Resistivity Temperature	63.000	degrees F
Water Level	0.000	feet
Density/Neutron Processing	Wet Hole	
Hole/Annular Volume and Differential Caliper Parameters		
HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	None	

TVCL Caliper 2	None	
Annular Volume Diameter	4.500	inches
Caliper for Differential Caliper	None	
Rwa Parameters		
Porosity used	Sandstone Density Por.	
Resistivity used	Deep Induction	
RWA Constant A	0.610	
RWA Constant M	2.150	

Down-hole Tension Calibration SMS 000			Field Calibration on 12-MAR-2008 02:23
Reading No	Measured	Calibrated (lbs)	
1	14234.77	0.00	
2	16672.25	715.00	

High Resolution Temperature Calibration MCG 145			Field Calibration on 12-MAY-2008,15:08
	Measured	Calibrated(Deg F)	
Lower	50.00	50.00	
Upper	75.00	75.00	

High Resolution Temperature Constants MCG 145		
Pre-filter Length	11	

SP Calibration MCG 145			Field Calibration on 12-MAY-2008,15:08
	Measured	Calibrated (mV)	
Reference 1	104.4	102.0	
Reference 2	-97.2	-102.0	

Gamma Calibration MCG 145			Field Calibration on 12-MAY-2008 15:15
	Measured	Calibrated (API)	
Background	72	50	
Calibrator (Gross)	759	530	
Calibrator (Net)	687	480	

Gamma Constants MCG 145			Last Edited on 13-MAY-2008,14:10
Gamma Calibrator Number	GRCC-112		
Mud Density	1.00	gm/cc	
Caliper Source for Processing	Density Caliper		
Tool Position	Eccentred		
Concentration of KCl	0.00	kppm	

Neutron Calibration MDN 193			Base Calibration on 18-APR-2008 12:20 Field Check on 12-MAY-2008 16:03
Base Calibration			
	Measured	Calibrated (cps)	
	Near Far	Near Far	
	2569 79	3714 110	
Ratio	32.447	33.764	
Field Calibrator at Base			
		Calibrated (cps)	
		2704 3961	
Ratio		0.683	
Field Check			
		Calibrated (cps)	
		2683 3981	
Ratio		0.674	

Neutron Constants MDN 193			Last Edited on 13-MAY-2008,14:10
Neutron Source Id	728		
Neutron Jig Number	NJ5239		
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	7.00	cu	
Dolomite Sigma	4.70	cu	

Formation Pressure Source	None	
Formation Pressure	N/A	kpsi
Temperature Source	None	
Temperature	N/A	degrees F
Mud Salinity	0.00	kppm
Formation Fluid Salinity Source	None	
Formation Fluid Salinity	N/A	kppm
Barite Mud Correction	Not Applied	

Micro Laterolog Calibration MMR 068

Base Calibration on
Field Check on

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 068

Last Edited on 29-OCT-2007 22:27

Micro Laterolog K Factor	0.0128	
Standoff Offset	0.0000	inches
Borehole Correction Constants		
Mud Cake Source	Constant Value	
Mud Cake Thickness	0.4000	inches
Mud Cake Thickness Caliper	N/A	
Mud Cake Resistivity	0.1500	ohm-m

Caliper Calibration MMR 068

Base Calibration on 12-MAY-2008 15:34
Field Calibration on 12-MAY-2008 15:35

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	14237	5.97
2	17370	7.96
3	20652	9.86
4	24512	11.92
5	0	0.00
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
6.02	5.97

Micro Normal and Micro Inverse Calibration MMR 068

Base Calibration on 12-MAY-2008 15:28
Field Check on 12-MAY-2008 15:31

Base Calibration

Channel	Measured		Calibrated (ohm-m)	
	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Micro Normal	9.8	49.3	5.1	25.6
Micro Inverse	9.8	49.4	3.4	16.9
Channel	Base Check (ohm-m)		Field Check (ohm-m)	
Micro Normal	94.4		94.4	
Micro Inverse	62.3		62.3	

Micro Normal and Micro Inverse Constants MMR 068

Last Edited on 29-OCT-2007 22:28

Micro Normal K Factor	0.5110	
Micro Inverse K Factor	0.3380	
Standoff Offset	0.0000	inches

Caliper Calibration MPD 195

Base Calibration on 18-APR-2008 10:55
Field Calibration on 12-MAY-2008 15:41

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	9664	3.99
2	18111	5.97
3	26752	7.96
4	35143	9.86
5	44404	11.92
6	N/A	N/A

Field Calibration		Measured Caliper (in)		Actual Caliper (in)	
		6.08		5.97	
Photo Density Calibration MPD 195				Base Calibration on 18-APR-2008 10:36 Field Check on 12-MAY-2008 15:49	
Density Calibration					
Base Calibration		Measured		Calibrated (sdu)	
		Near	Far	Near	Far
Reference 1	52383	27088		60276	31815
Reference 2	21520	2774		24760	2550
Field Check at Base					
	1441.8	1581.1			
Field Check					
	1438.4	1575.2			
PE Calibration					
Base Calibration		Measured		Calibrated	
	WS	WH	Ratio	Ratio	
Background	256	1281			
Reference 1	20607	52153	0.400	0.366	
Reference 2	5774	21347	0.275	0.269	
Field Check at Base					
	256.4	1280.8			
Field Check					
	257.3	1276.6			
Density Constants MPD 195				Last Edited on 13-MAY-2008,14:12	
Density Source Id		237			
Nylon Calibrator Number		DNC-E-658			
Aluminium/Fe Calibrator Number		DAC-D-658			
Density Shoe Profile		8 inch			
Caliper Source for Processing		Density Caliper			
PE Correction to Density		Not Applied			
Mud Density		1.25	gm/cc		
Mud Density Z/A Correction		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		Advanced			
Matrix Density (gm/cc)		Depth (ft)			
2.65		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			
FE Calibration MFE 076					
Base Calibration on 18-APR-2008 09:14 Field Check on 10-MAY-2008 07:49					
Base Calibration		Measured		Calibrated (ohm-m)	
Reference 1		0.0		0.0	
Reference 2		959.5		126.8	
Base Check				280.0	
Field Check				280.0	
FE Constants MFE 076				Last Edited on 3-MAY-2008 08:48	
Caliper Source for FE correction		Density Caliper			

Rm Source for FE correction	Temperature Corr
Temp. for Rm Corr.	MCG External Temperature
Stand-off	0.5 inches

High Resolution Temperature Calibration MAI 192

Field Calibration on 12-MAY-2008,15:03

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

High Resolution Temperature Constants MAI 192

Pre-filter Length 11

Induction Calibration MAI 192

Base Calibration on 18-APR-2008 11:29

Field Check on 12-MAY-2008 15:07

Base Calibration

Test Loop Calibration

Channel	Measured	Calibrated (mmho/m)
	Low High	Low High
1	17.6 480.1	9.3 966.2
2	6.4 394.6	7.6 821.4
3	3.6 267.1	5.2 566.0
4	2.2 137.7	2.6 279.2

Array Temperature 79.7 Deg F

Channel	Base Check (mmho/m)	Field Check (mmho/m)
	Low High	Low High
1	12.8 3799.3	11.3 3802.8
2	29.3 3427.9	29.0 3432.3
3	28.0 2972.6	27.8 2976.5
4	18.7 2016.5	18.6 2019.3
Deep	16.9 1959.8	16.7 1962.4
Medium	41.2 3901.8	41.2 3907.2
Shallow	43.9 5038.2	43.6 5044.6

Array Temperature 79.3 55.2 Deg F

Induction Constants MAI 192

Last Edited on 13-MAY-2008,14:12

Induction Model

ENHANCED

Caliper for Borehole Corr.	Density Caliper
Hole Size for Borehole Correction	N/A inches
Stand-off	0.50 inches
Number of Fins on Stand-off	6.0000
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

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

DOWNHOLE EQUIPMENT

C:\DOCUME~1\martinex\LOCALS~1\Temp\Weatherford PreView\0\Wexpro Donnell #16_001.dta

SHA-F Compact Swivel Head Adaptor

SHA 97 Length: 2.74 ft Weight: 26.5 lb

Compact Gamma

MCG 145 Length: 8.70 ft Weight: 63.9 lb

Compact Neutron

MDN 193 Length: 5.04 ft Weight: 50.7 lb

Compact Micro-Resistivity

MMR 68 Length: 8.59 ft Weight: 81.6 lb

Compact Density/Caliper

MPD 195 Length: 9.59 ft Weight: 90.4 lb

MIS-D.A Compact Inline Bowspring sub

MIS 331 Length: 5.70 ft Weight: 33.1 lb

SKJ-D.A Compact Knuckle Joint

SKJ 115 Length: 2.17 ft Weight: 24.3 lb

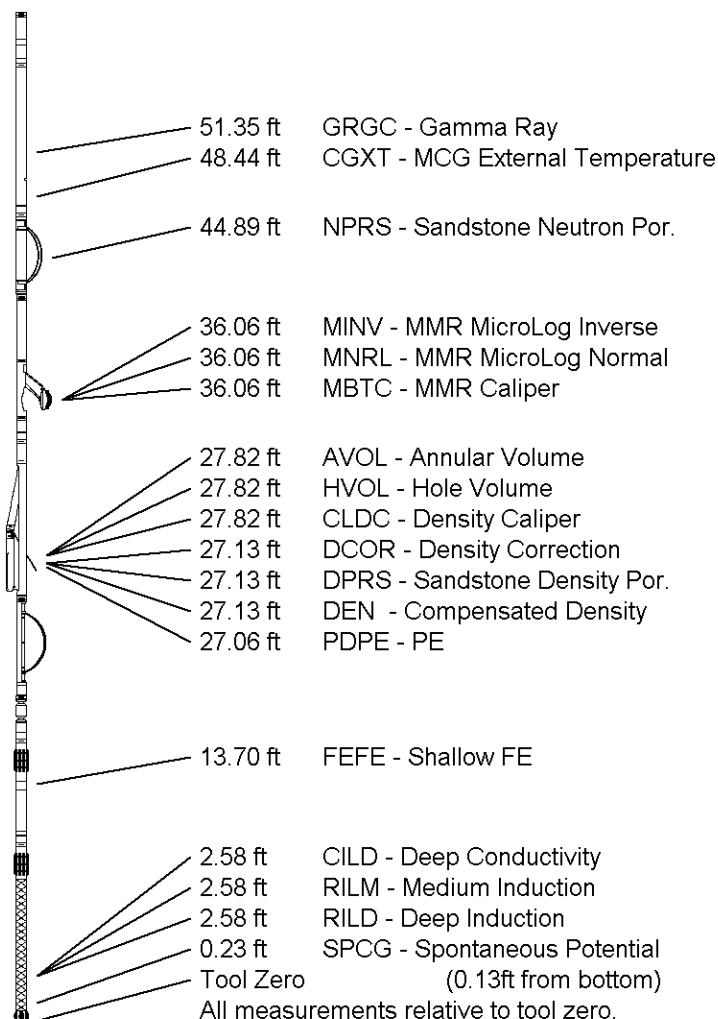
Compact Focussed Electric

MFE 76 Length: 6.03 ft Weight: 48.5 lb

Compact Induction

MAI 192 Length: 10.81 ft Weight: 48.5 lb

Total Length: 59.37 ft Weight: 467.4 lb



COMPANY

WEXPRO COMPANY

WELL

DONNELL #16

FIELD

POWDER WASH UNIT

PROVINCE/COUNTY

MOFFAT

COUNTRY/STATE

U.S.A. / COLORADO

Elevation Kelly Bushing	6599.00	feet
Elevation Drill Floor	6598.00	feet
Elevation Ground Level	6586.00	feet

First Reading		feet
Depth Driller	8967.00	feet
Depth Logger	8655.00	feet



Weatherford®