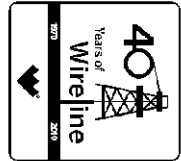




**Weatherford**<sup>®</sup>

**COMPACT PHOTO DENSITY  
COMPENSATED NEUTRON  
MICRORESISTIVITY LOG**

COMPANY GRAND MESA OPERATING  
WELL BEAZLEY-CHAMBERS 1-13  
FIELD WILDCAT  
PROVINCE/COUNTY GOVE  
COUNTRY/STATE U.S.A. / KANSAS  
LOCATION 1972' FNL & 2387' FWL



SEC TWP RGE Other Services  
13 13S 31W MAI/MFE MSS  
API Number 15-063-22004  
Permit Number

Permanent Datum GL, Elevation 2899 feet  
Log Measured From KB Elevations: KB 2904.00  
Drilling Measured From KB DF 2902.00  
GL 2899.00

Date	09-JUL-2012	
Run Number	ONE	
Depth Driller	4663.00	feet
Depth Logger	4664.00	feet
First Reading	4632.00	feet
Last Reading	3600.00	feet
Casing Driller	208.00	feet
Casing Logger	207.00	feet
Bit Size	7.875	inches
Hole Fluid Type	CHEMICAL	
Density / Viscosity	9.30 lb/USg	55.00 CP
PH / Fluid Loss	9.50	8.00 ml/30Min
Sample Source	MUDPIT	
Rm @ Measured Temp	1.35 @ 94.0	ohm-m
Rmf @ Measured Temp	1.08 @ 94.0	ohm-m
Rmc @ Measured Temp	1.62 @ 94.0	ohm-m
Source Rmf / Rmc	CALC	CALC
Rm @ BHT	1.06 @ 121.0	ohm-m
Time Since Circulation	5 HOURS	
Max Recorded Temp	121.00	deg F
Equipment Name	COMPACT	
Equipment / Base	13057	LIB
Recorded By	ADAM SILL	
Witnessed By	KENT MATSON	
S.O. # / JOB #	3534554	LB12-175

**BOREHOLE RECORD** Last Edited: 09-JUL-2012 18:15

Bit Size inches	Depth From feet	Depth To feet
7.875	208.00	4663.00

**CASING RECORD**

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	208.00	24.00

**REMARKS**

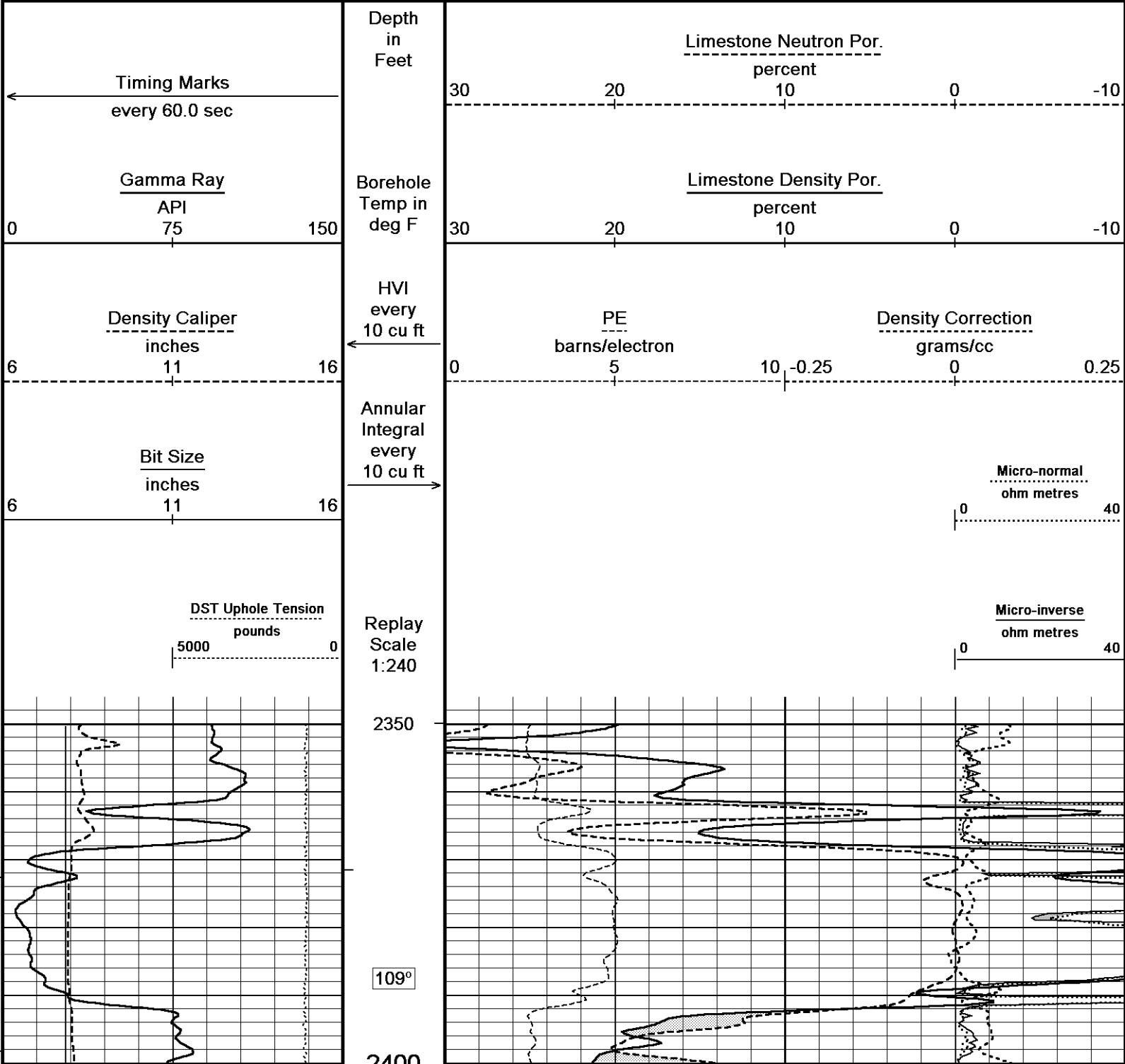
- SOFTWARE ISSUE: WLS 11.03.4044.
- MCG, MML, MDN, MPD, MFE, MSS, MAI RAN IN COMBINATION.
  - HARDWARE: DUAL BOWSPRING USED ON MDN.
  - 0.5 INCH STANDOFF USED ON MAI.
  - TWO 0.5 INCH STANDOFFS USED ON MSS.
  - 0.5 INCH STANDOFF USED ON MFE.
- 2.71 G/CC LIMESTONE DENSITY MATRIX USED TO CALCULATE POROSITY.
- 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: 1785 CU.FT.
- ANNULAR HOLE VOLUME WITH 5.5 INCH CASING: 231 CU. FT.

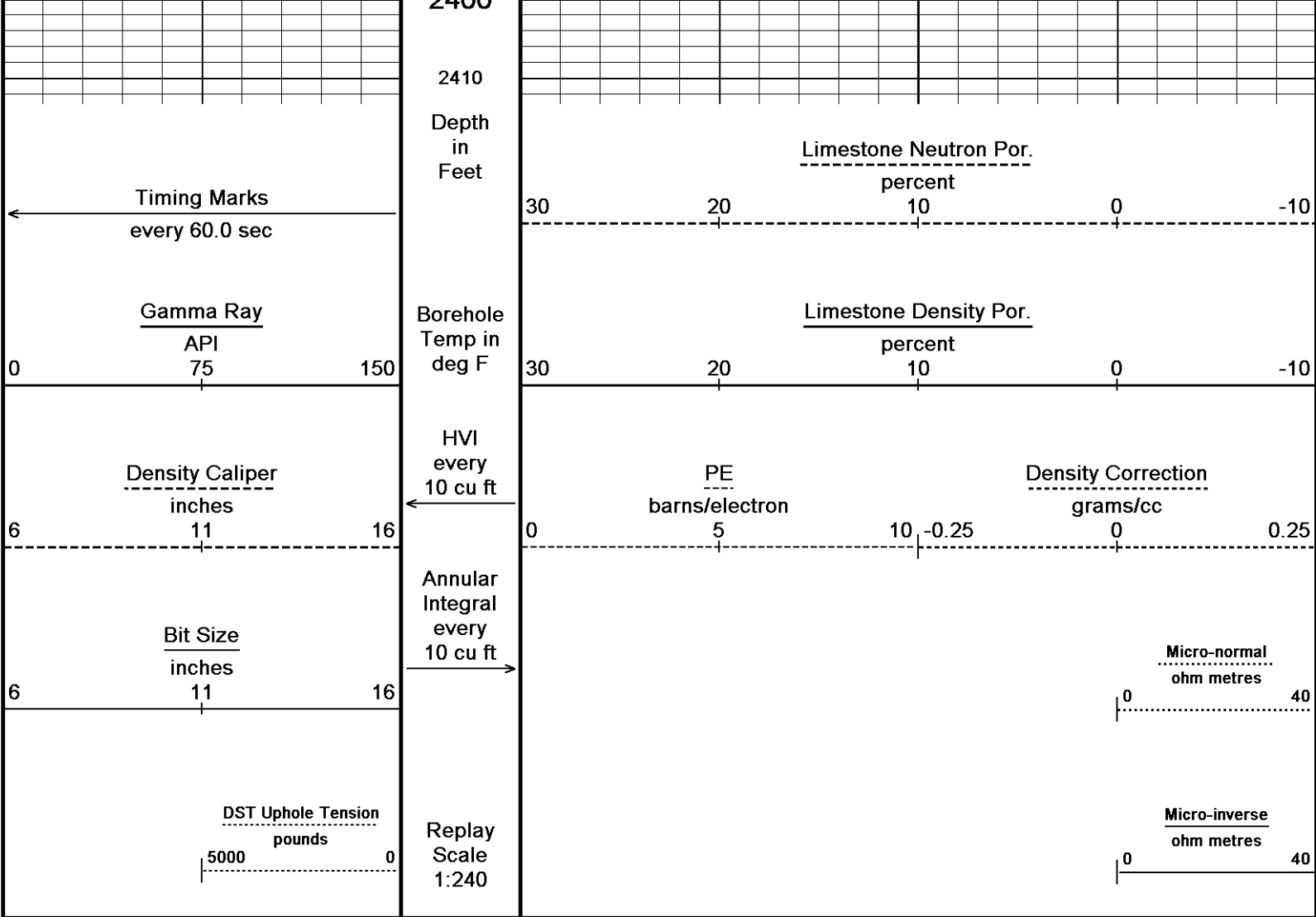
- SERVICE ORDER # 3534554.  
 - RIG: MURFIN #24.  
 - ENGINEER: A. SILL.  
 - OPERATOR(S): M. STEGMAN.

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 PASS**

Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 10-JUL-2012 10:58  
 Filename: C:\Minimus\_11\_03\_4044\Data\New Folder1\Grand Mesa Beazley-Chambers 1-13\_002.dta Recorded on 09-JUL-2012 18:50  
 System Versions: Logged with 11.03.4044 Processed with 11.03.4044 Plotted with 11.03.4044



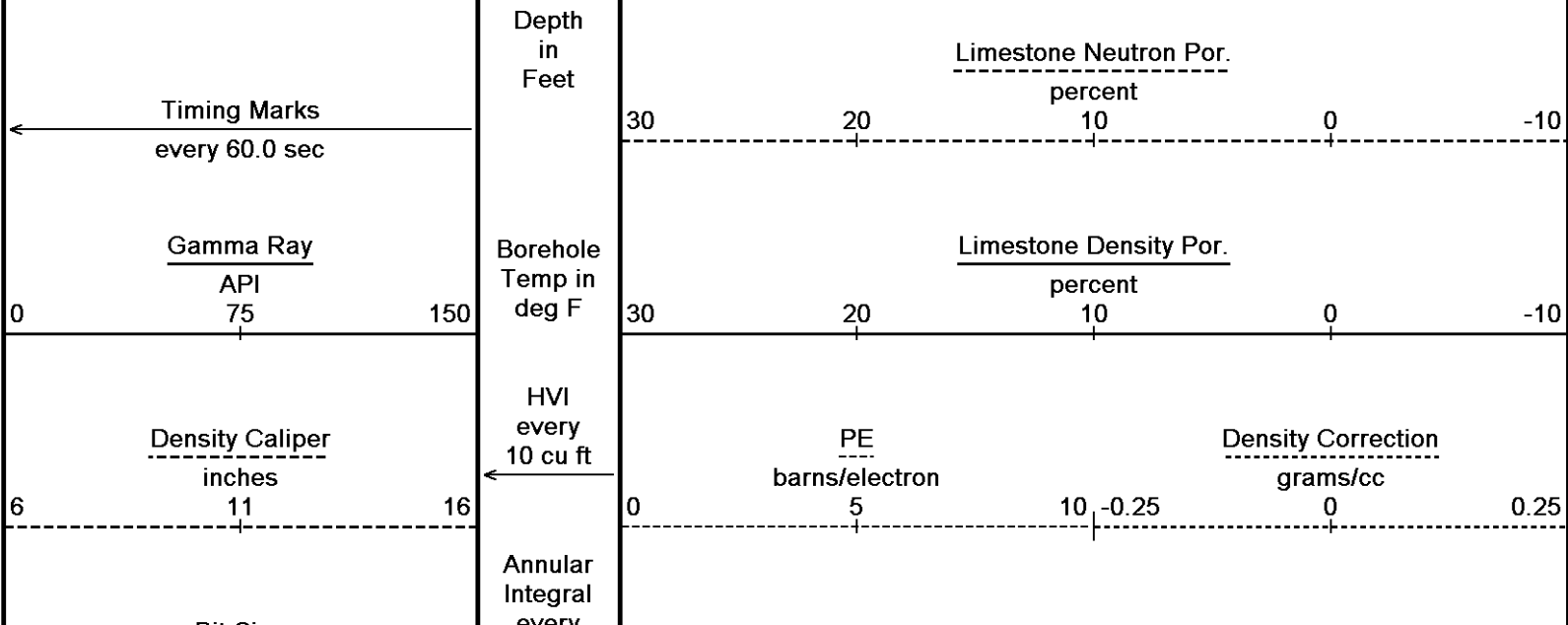


Depth Based Data - Maximum Sampling Increment 10.0cm  
 Plotted on 10-JUL-2012 10:58  
 Filename: C:\Minimus\_11\_03\_4044\Data\New Folder1\Grand Mesa Beazley-Chambers 1-13\_002.dta  
 Recorded on 09-JUL-2012 18:50  
 System Versions: Logged with 11.03.4044 Processed with 11.03.4044 Plotted with 11.03.4044

↑ 5 INCH MAIN PASS ↑

↓ 5 INCH MAIN PASS ↓

Depth Based Data - Maximum Sampling Increment 10.0cm  
 Plotted on 10-JUL-2012 10:58  
 Filename: C:\Minimus\_11\_03\_4044\Data\New Folder1\Grand Mesa Beazley-Chambers 1-13\_002.dta  
 Recorded on 09-JUL-2012 18:50  
 System Versions: Logged with 11.03.4044 Processed with 11.03.4044 Plotted with 11.03.4044



Bit Size  
inches

6 11 16

every  
10 cu ft

Micro-normal  
ohm metres

Micro-inverse  
ohm metres

DST Uphole Tension  
pounds

5000 0

Replay  
Scale  
1:240

3600

400

115°

3650

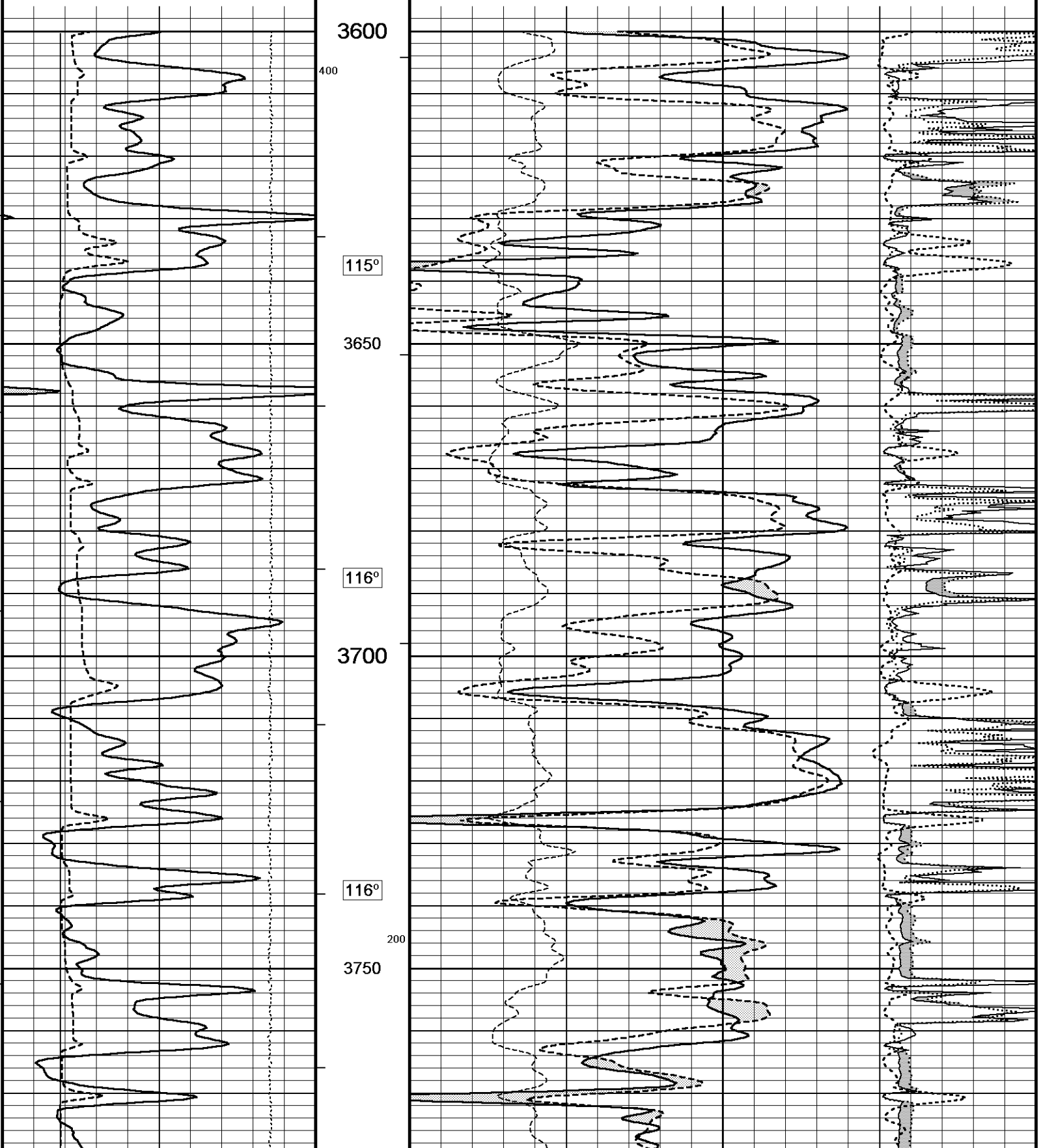
116°

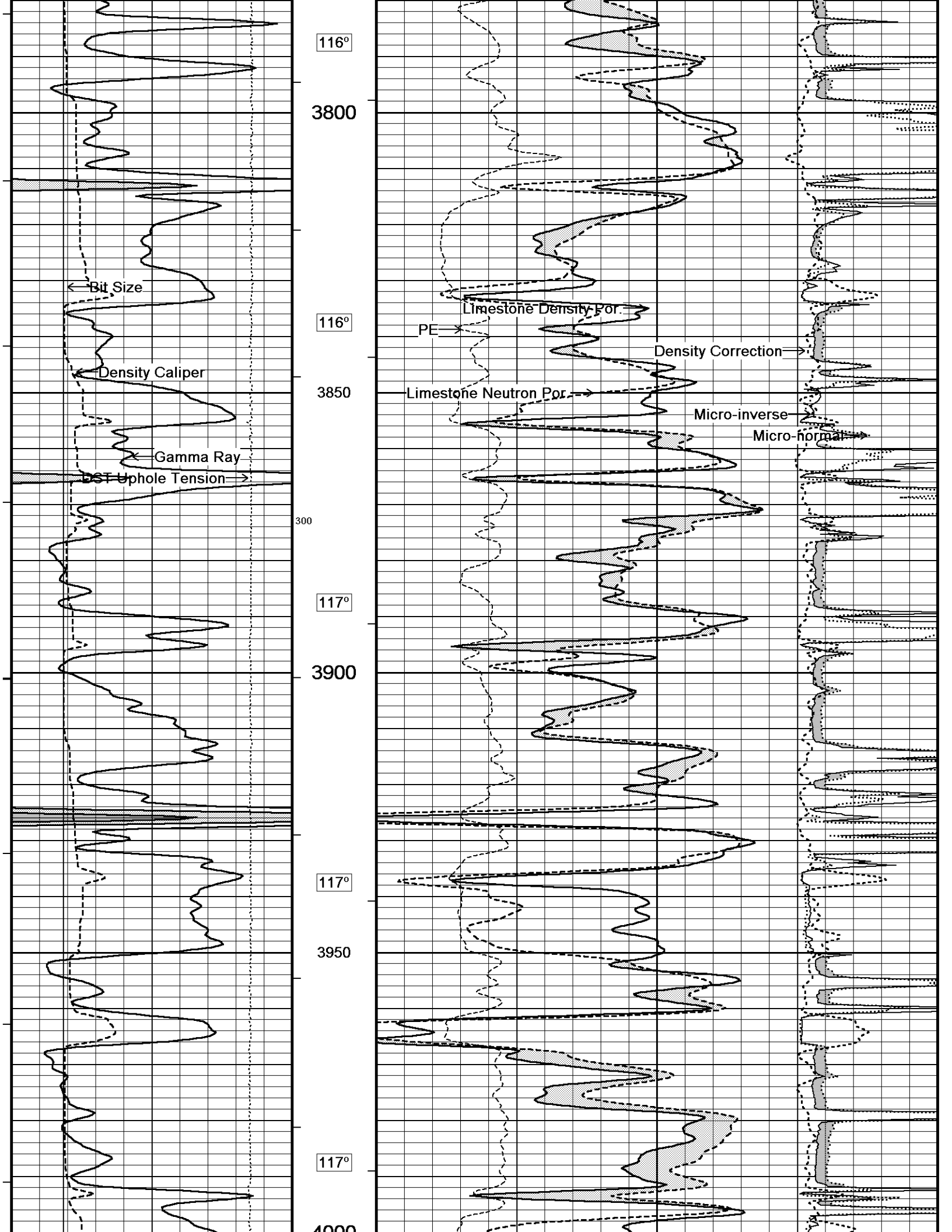
3700

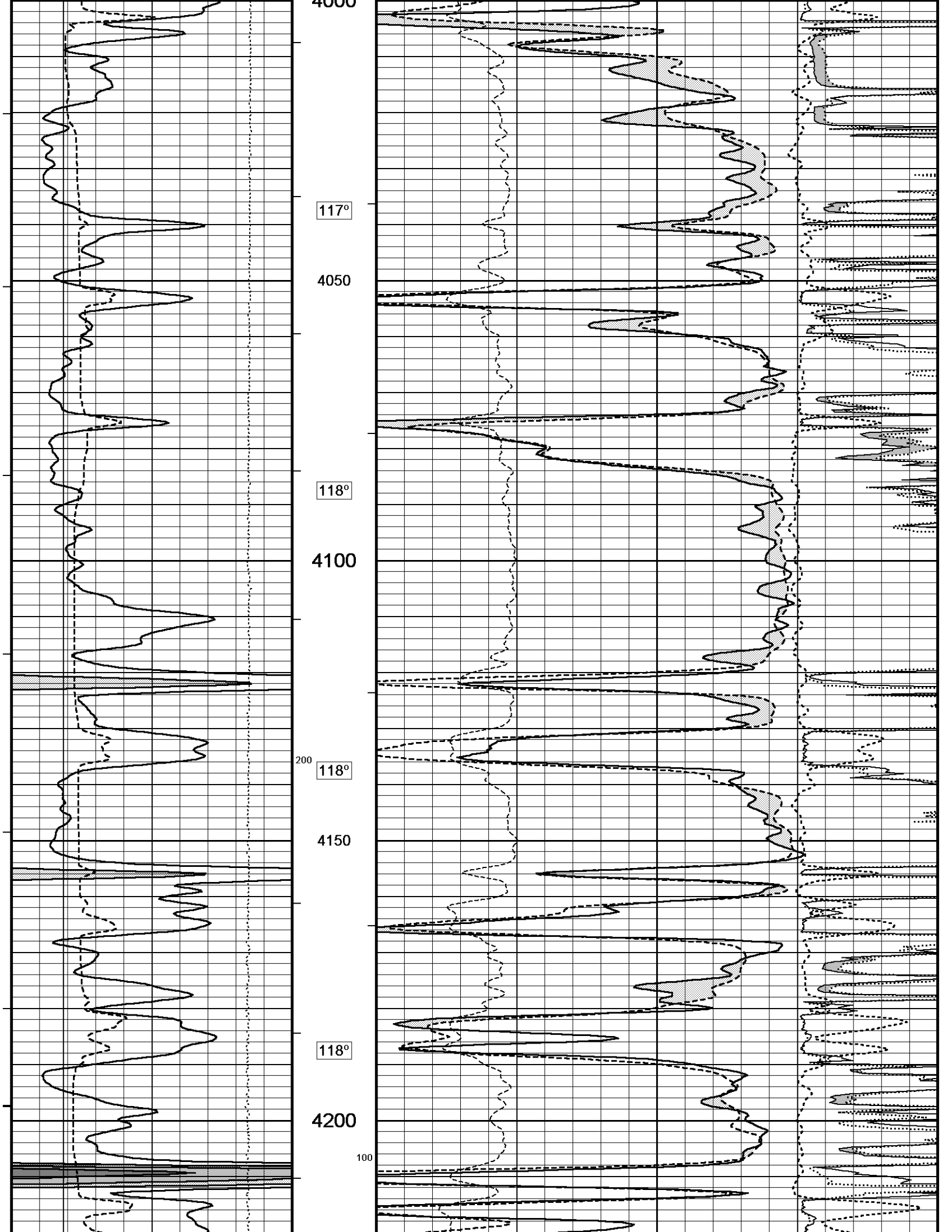
116°

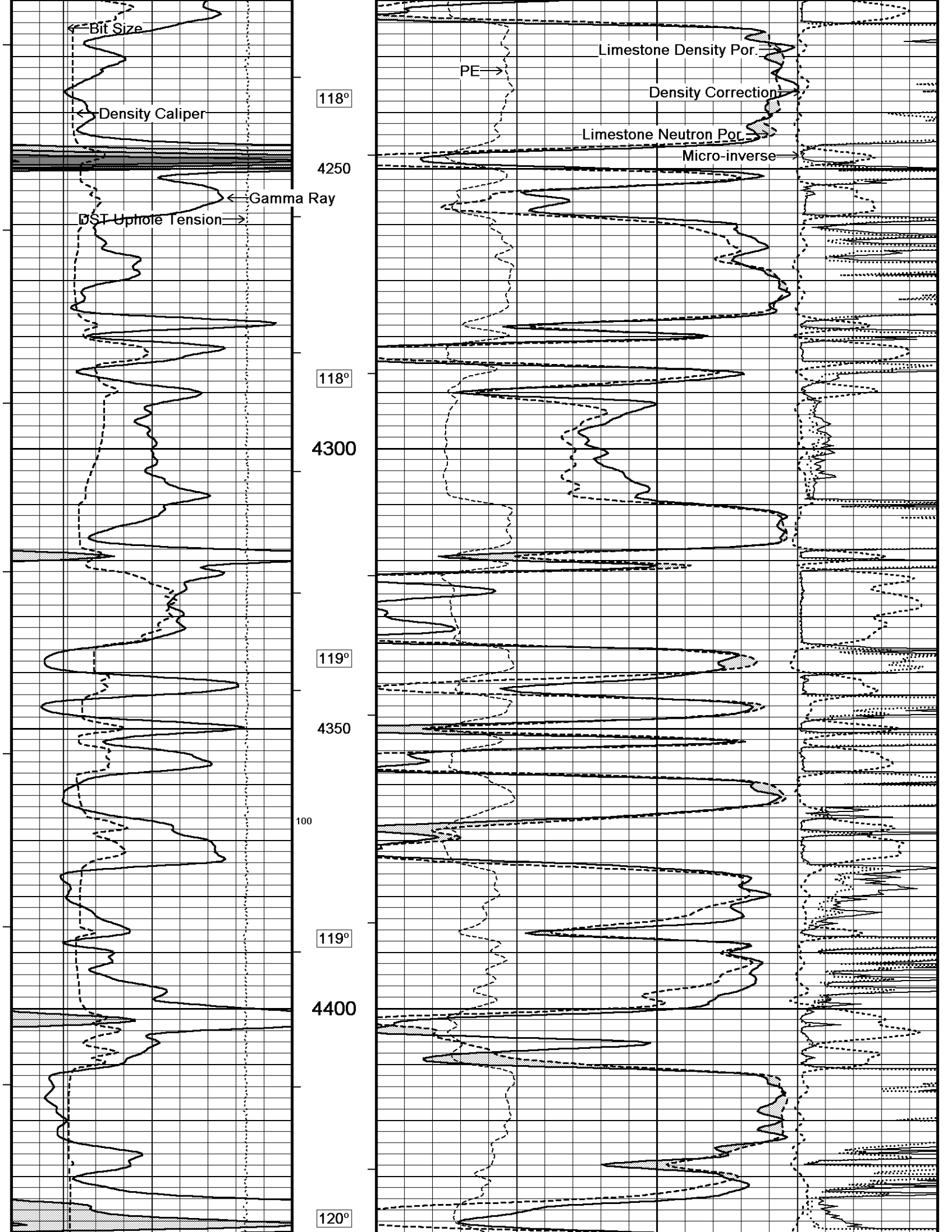
3750

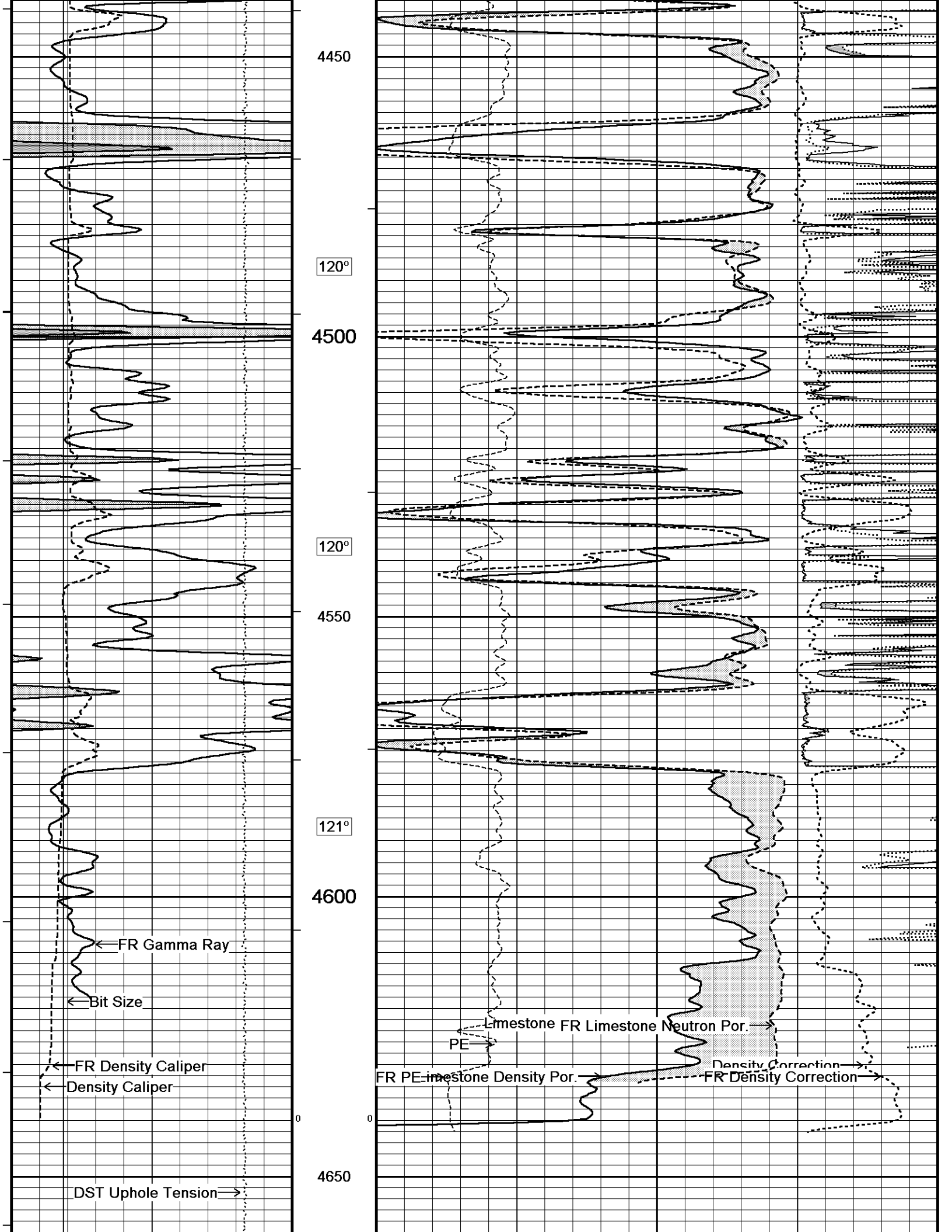
200











FR DST Uphole Tension

4688

Depth in Feet

Timing Marks every 60.0 sec

Gamma Ray API 75

Borehole Temp in deg F

HVI every 10 cu ft

Density Caliper inches 11

Annular Integral every 10 cu ft

Bit Size inches 11

DST Uphole Tension pounds 5000

Replay Scale 1:240

Limestone Neutron Por. percent

Limestone Density Por. percent

PE barns/electron

Density Correction grams/cc

Micro-normal ohm metres

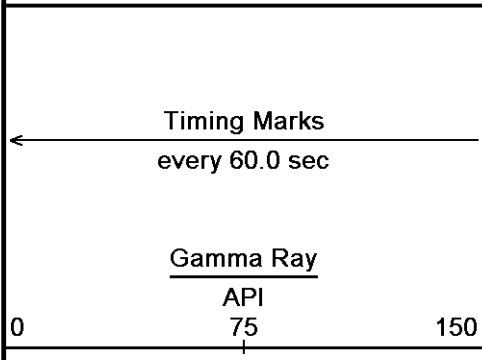
Micro-inverse ohm metres

Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 10-JUL-2012 10:58
Filename: C:\Minimus\_11\_03\_4044\Data\New Folder1\Grand Mesa Beazley-Chambers 1-13\_002.dta Recorded on 09-JUL-2012 18:50
System Versions: Logged with 11.03.4044 Processed with 11.03.4044 Plotted with 11.03.4044

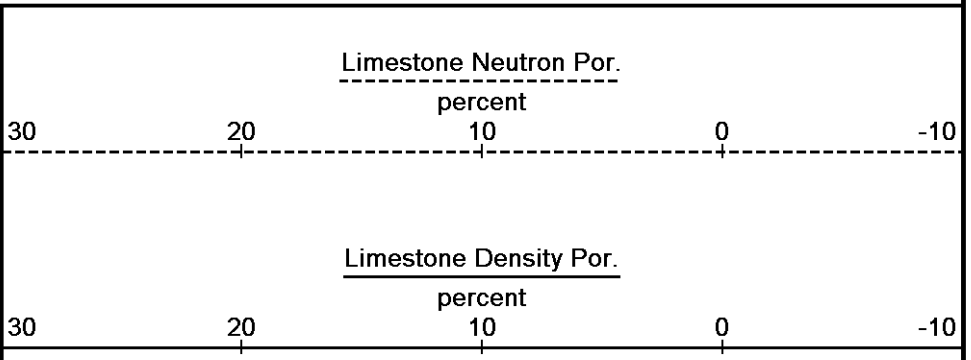
5 INCH MAIN PASS

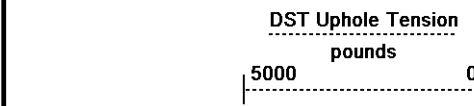
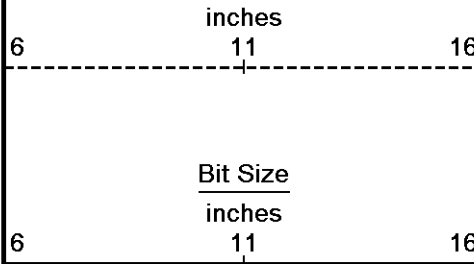
Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 10-JUL-2012 10:58
Filename: C:\Minimus\_11\_03\_4044\Data\New Folder1\Grand Mesa Beazley-Chambers 1-13\_001.dta Recorded on 09-JUL-2012 18:25
System Versions: Logged with 11.03.4044 Processed with 11.03.4044 Plotted with 11.03.4044

5 INCH REPEAT PASS



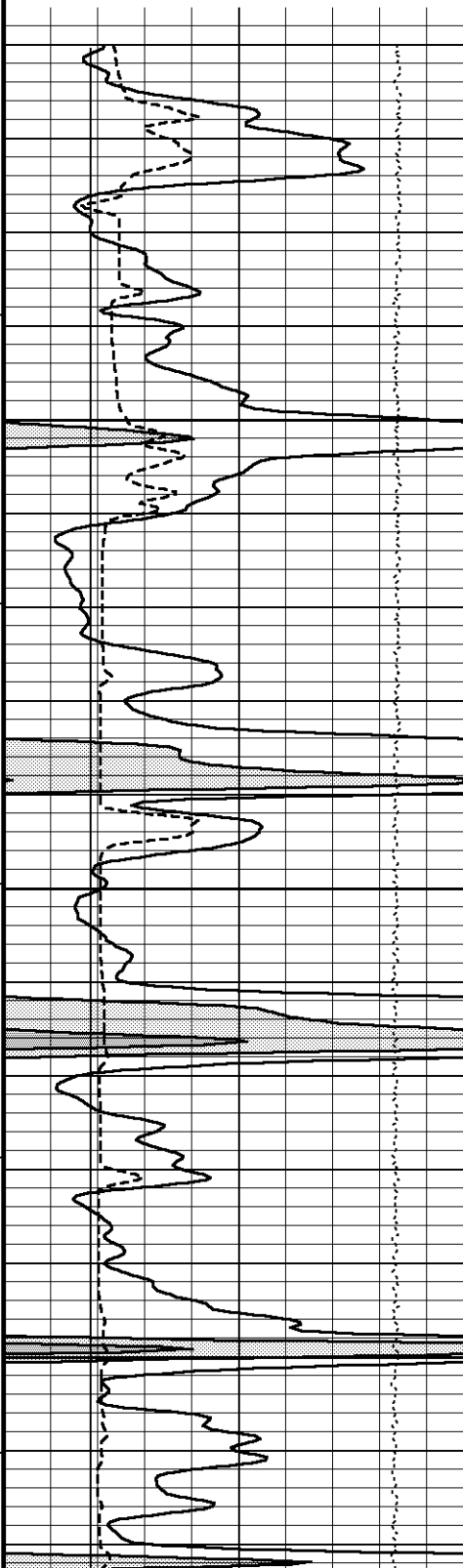
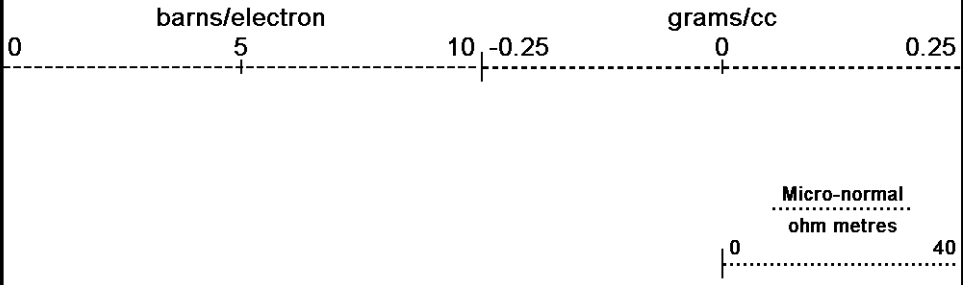
Depth in Feet, Borehole Temp in deg F, HVI every 10 cu ft



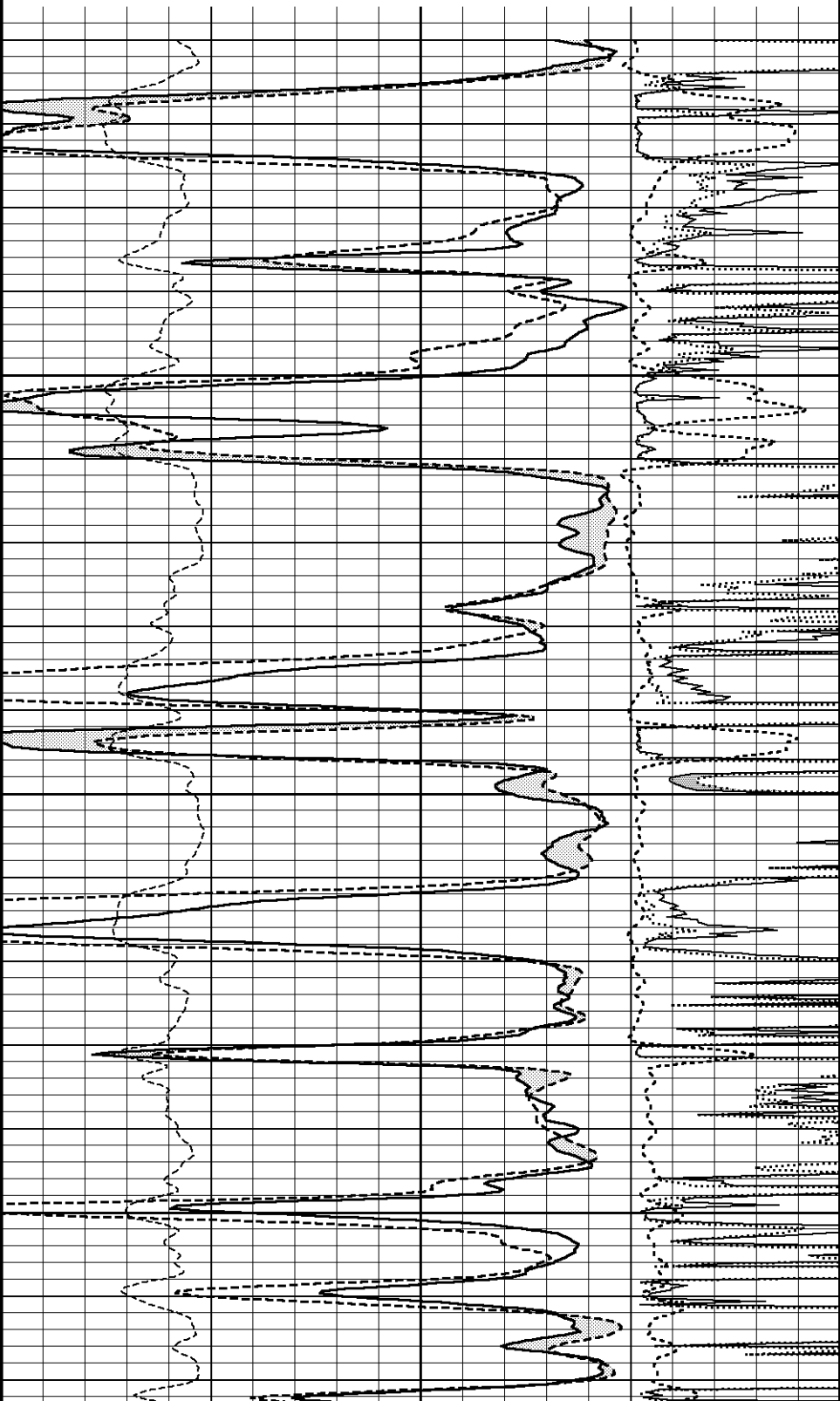


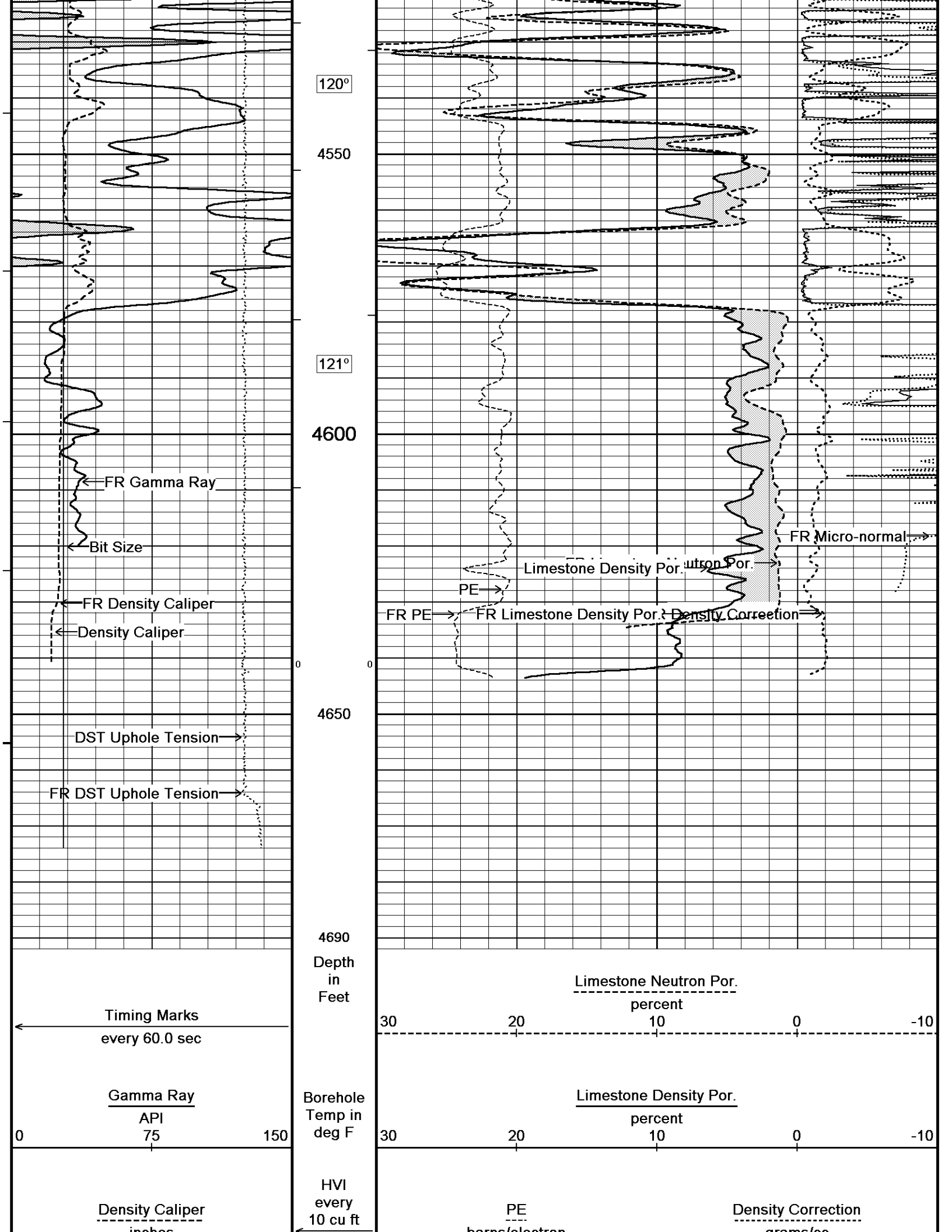
← 10 cu ft  
Annular  
Integral  
every  
10 cu ft  
→

Replay  
Scale  
1:240

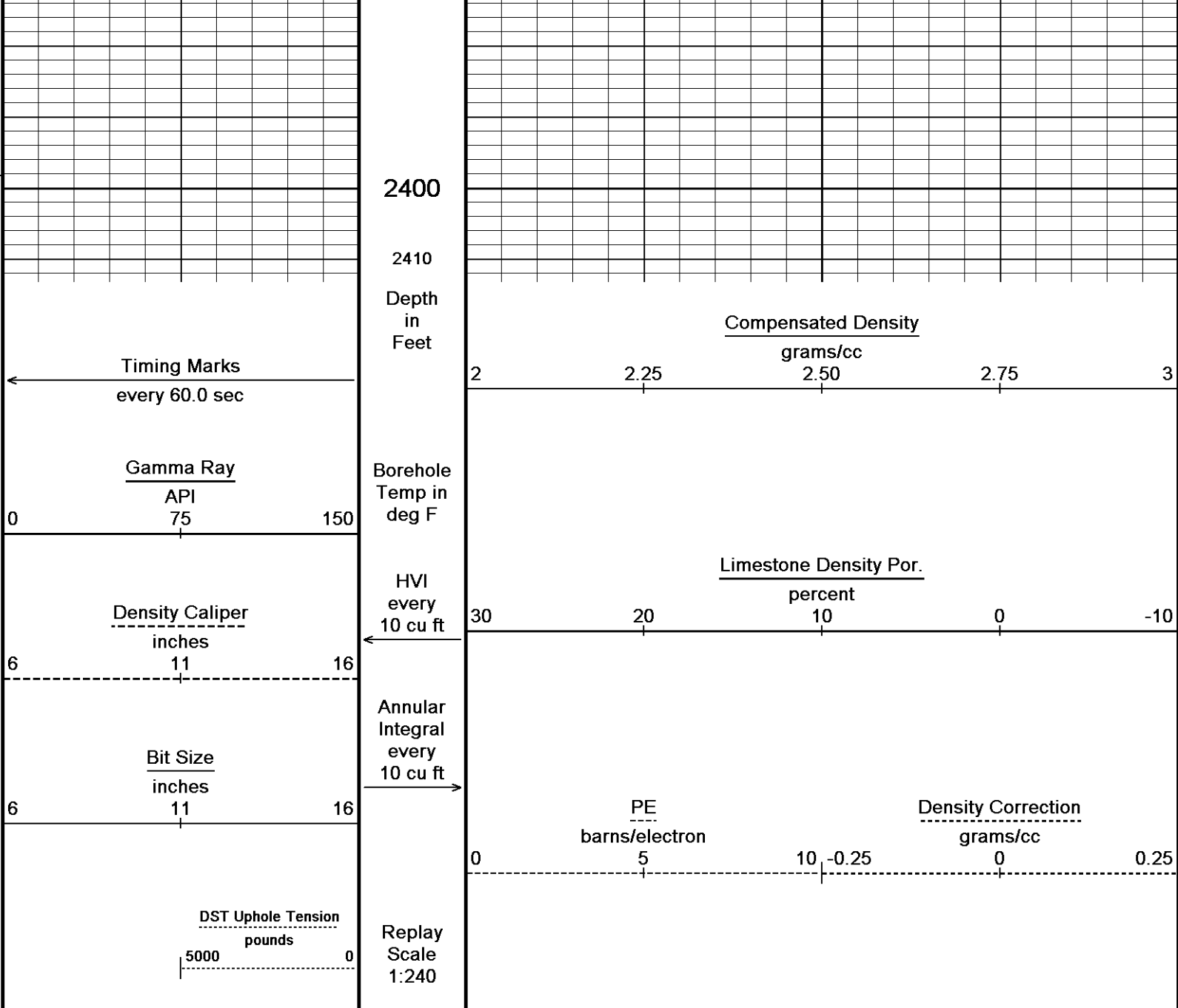


4358  
100  
4400  
119°  
4450  
120°  
4500







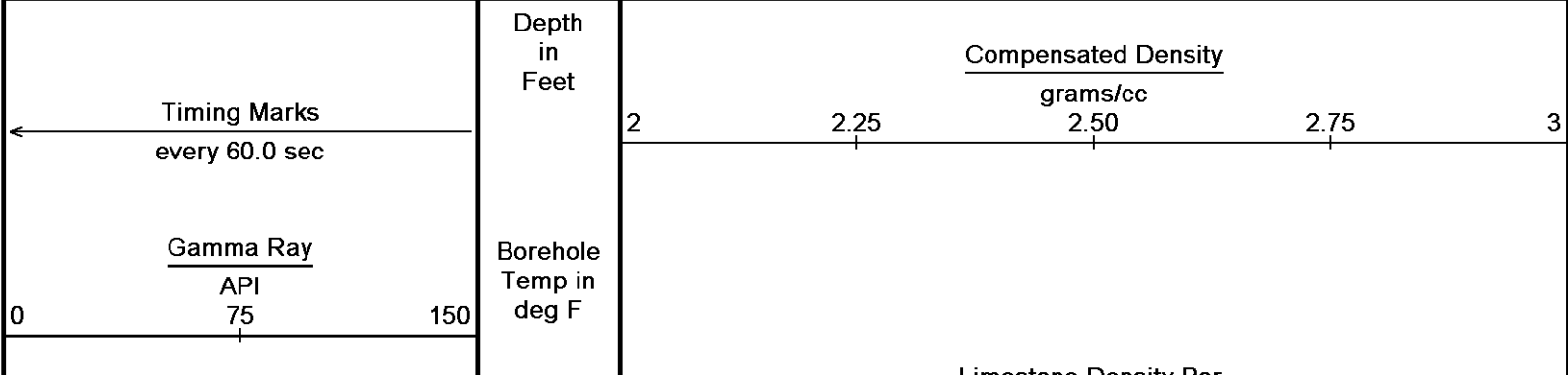


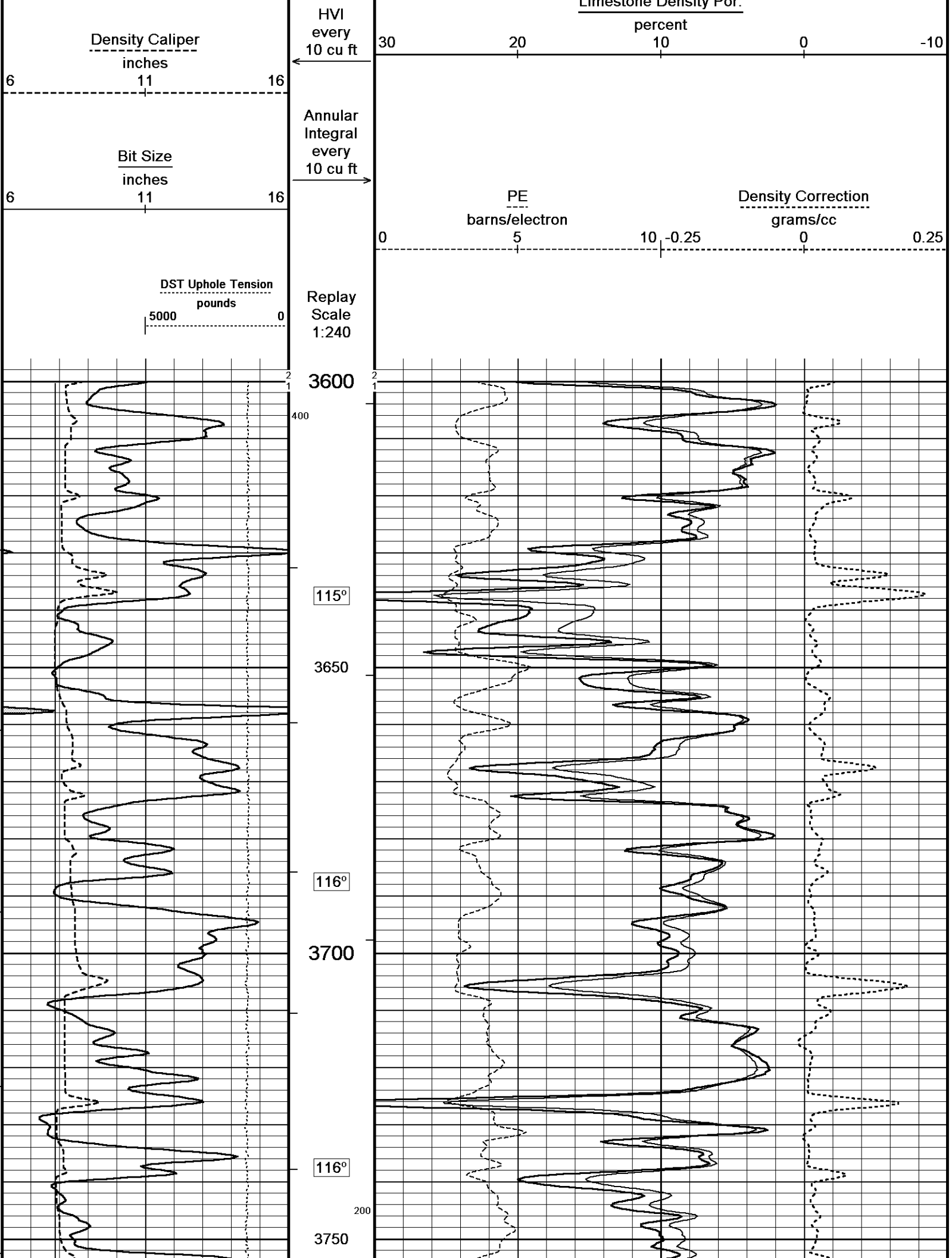
Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 10-JUL-2012 10:58  
 Filename: C:\Minimus\_11\_03\_4044\Data\New Folder1\Grand Mesa Beazley-Chambers 1-13\_002.dta Recorded on 09-JUL-2012 18:50  
 System Versions: Logged with 11.03.4044 Processed with 11.03.4044 Plotted with 11.03.4044

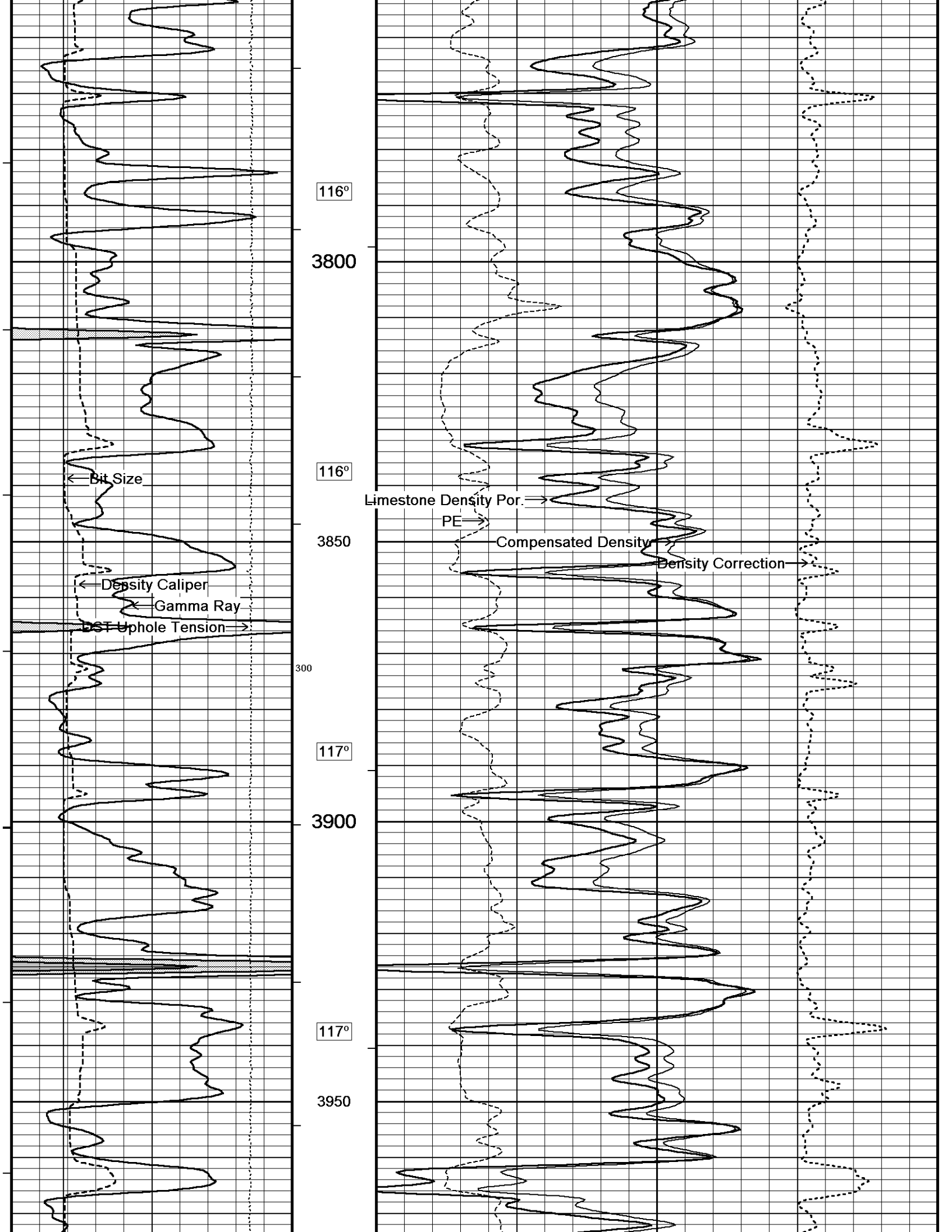
↑ **5 INCH MAIN PASS** ↑

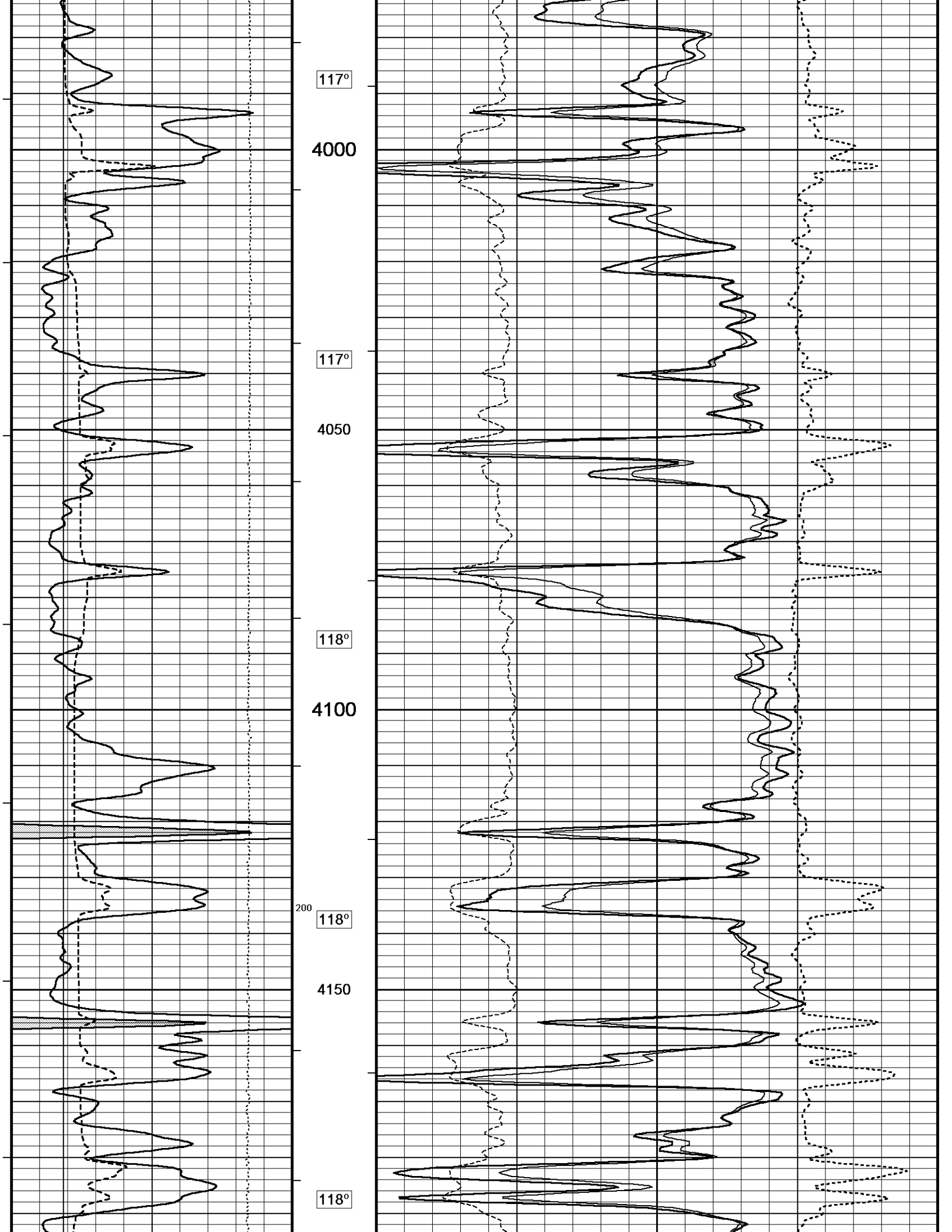
↓ **5 INCH MAIN PASS** ↓

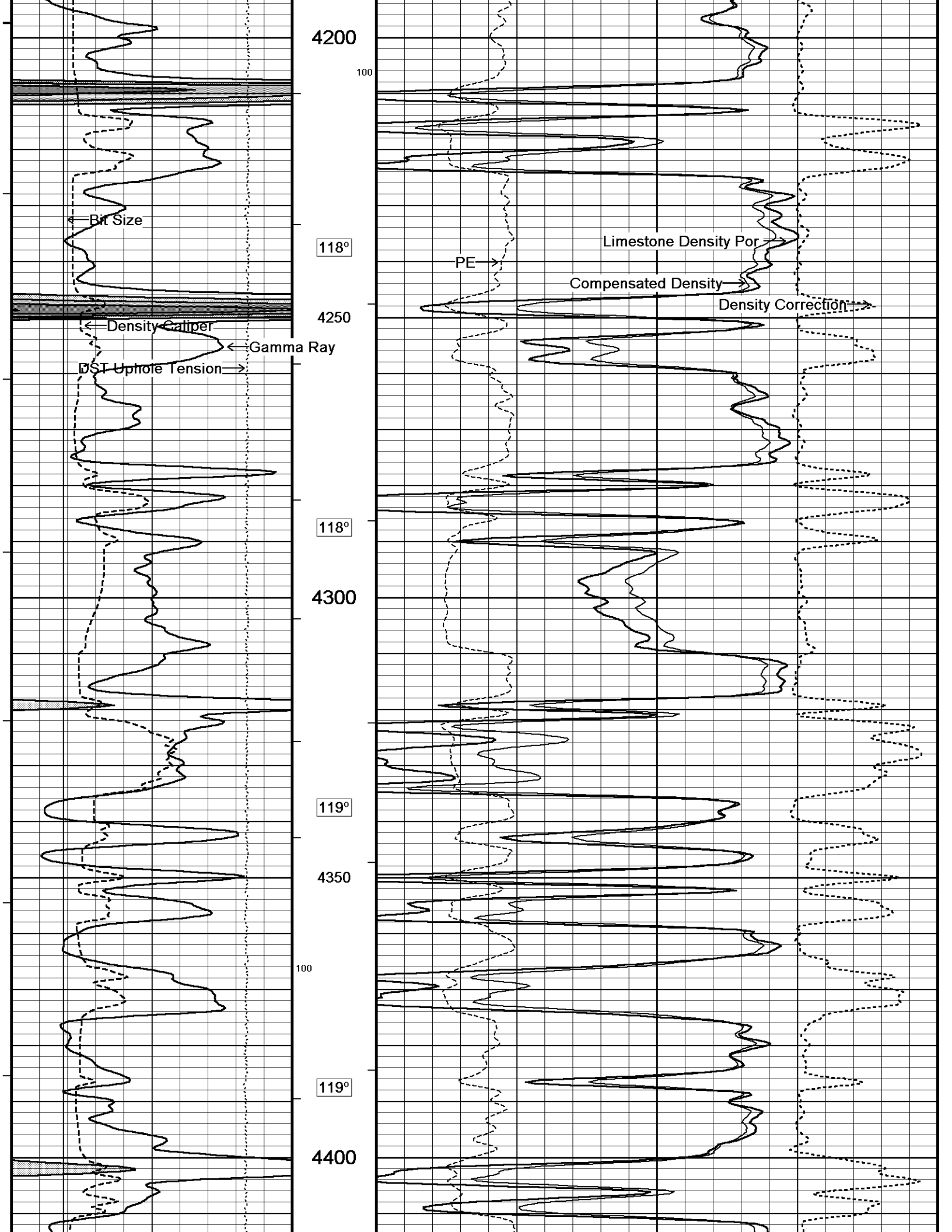
Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 10-JUL-2012 10:58  
 Filename: C:\Minimus\_11\_03\_4044\Data\New Folder1\Grand Mesa Beazley-Chambers 1-13\_002.dta Recorded on 09-JUL-2012 18:50  
 System Versions: Logged with 11.03.4044 Processed with 11.03.4044 Plotted with 11.03.4044

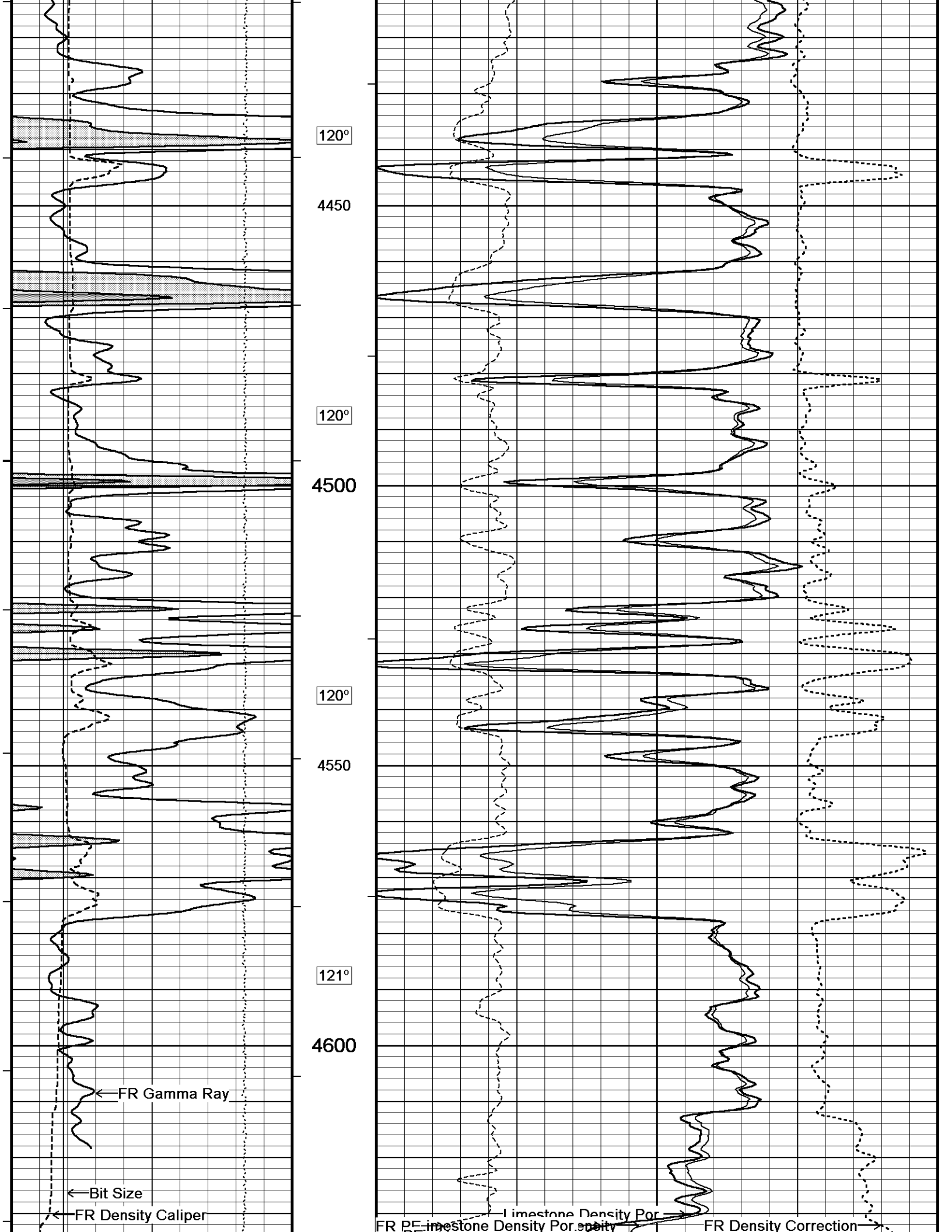


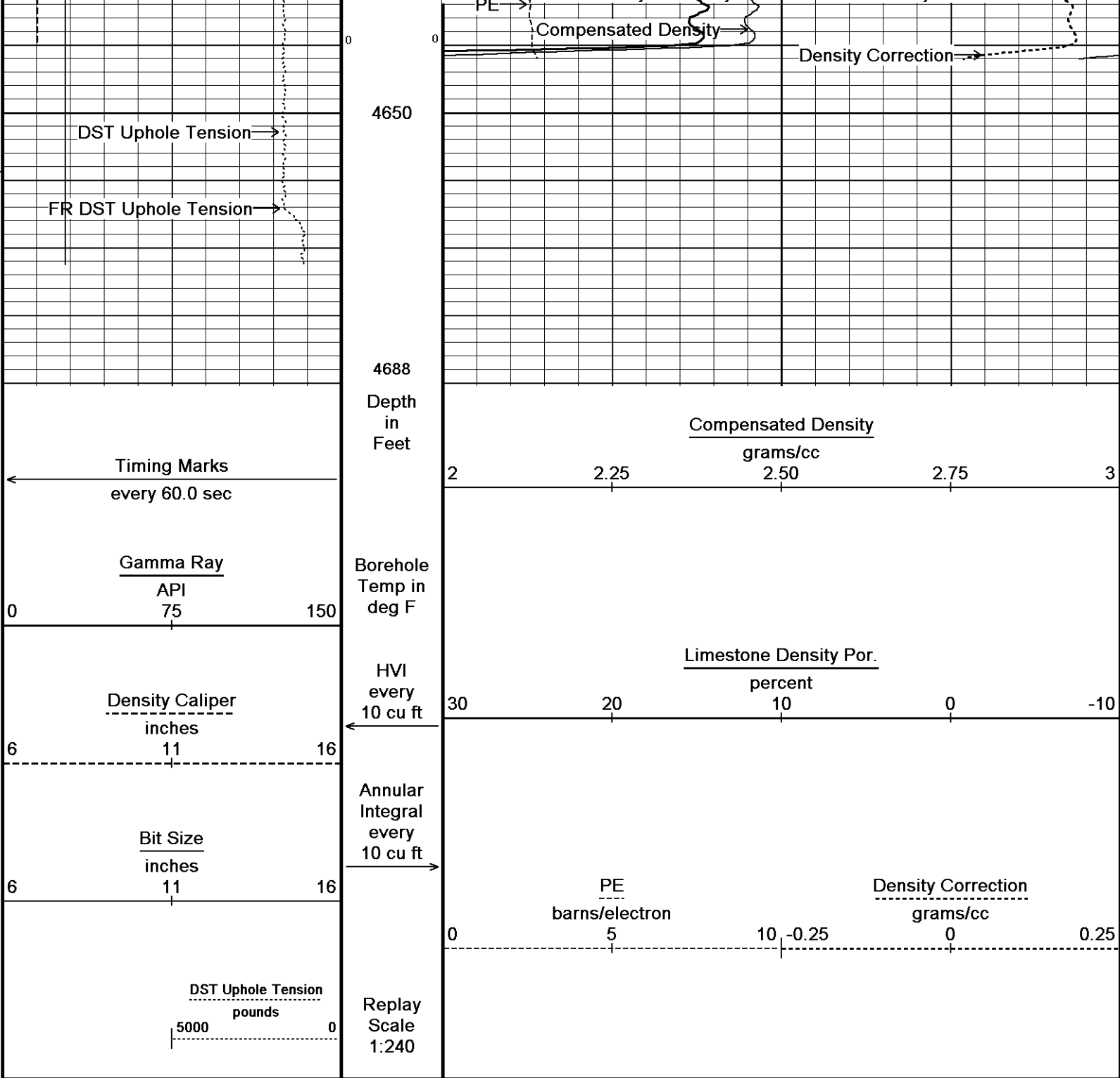










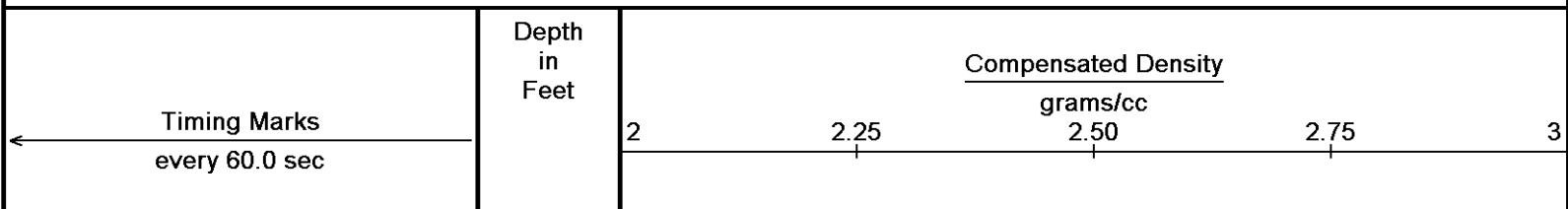


Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 10-JUL-2012 10:58  
 Filename: C:\Minimus\_11\_03\_4044\Data\New Folder1\Grand Mesa Beazley-Chambers 1-13\_002.dta Recorded on 09-JUL-2012 18:50  
 System Versions: Logged with 11.03.4044 Processed with 11.03.4044 Plotted with 11.03.4044

↑ **5 INCH MAIN PASS** ↑

↓ **5 INCH REPEAT PASS** ↓

Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 10-JUL-2012 10:58  
 Filename: C:\Minimus\_11\_03\_4044\Data\New Folder1\Grand Mesa Beazley-Chambers 1-13\_001.dta Recorded on 09-JUL-2012 18:25  
 System Versions: Logged with 11.03.4044 Processed with 11.03.4044 Plotted with 11.03.4044



Gamma Ray  
API  
0 75 150

Density Caliper  
inches  
6 11 16

Bit Size  
inches  
6 11 16

DST Uphole Tension  
pounds  
5000 0

Borehole  
Temp in  
deg F

HVI  
every  
10 cu ft

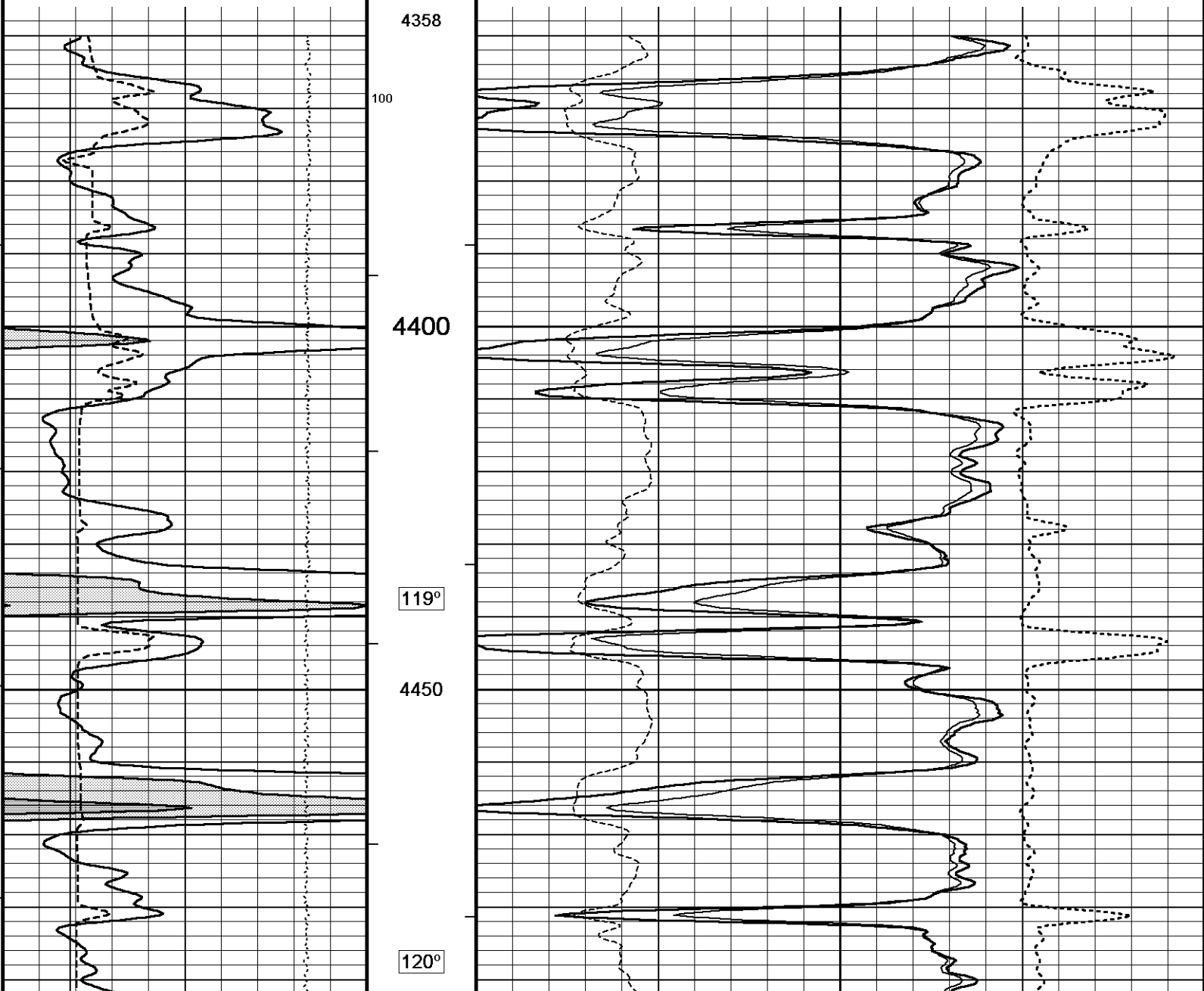
Annular  
Integral  
every  
10 cu ft

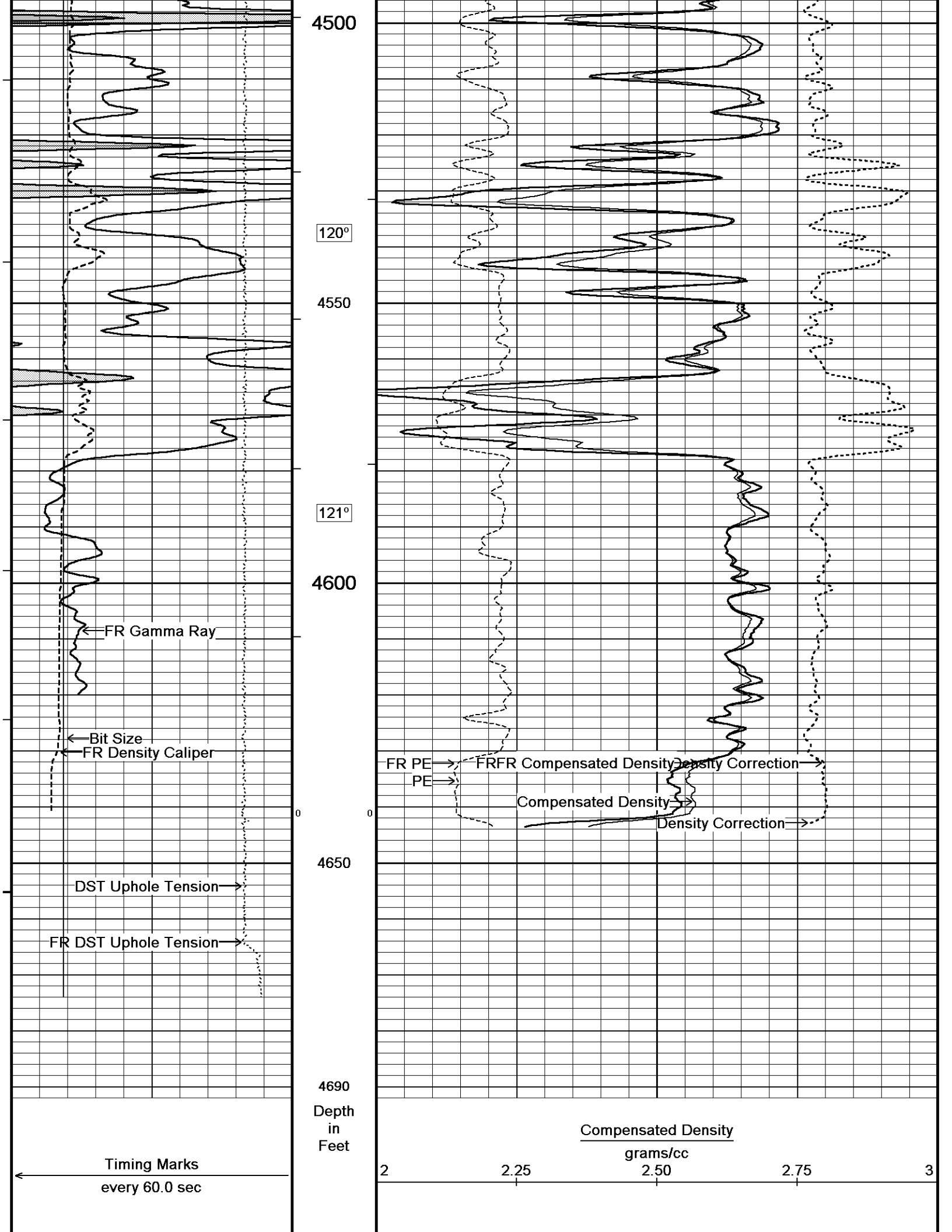
Replay  
Scale  
1:240

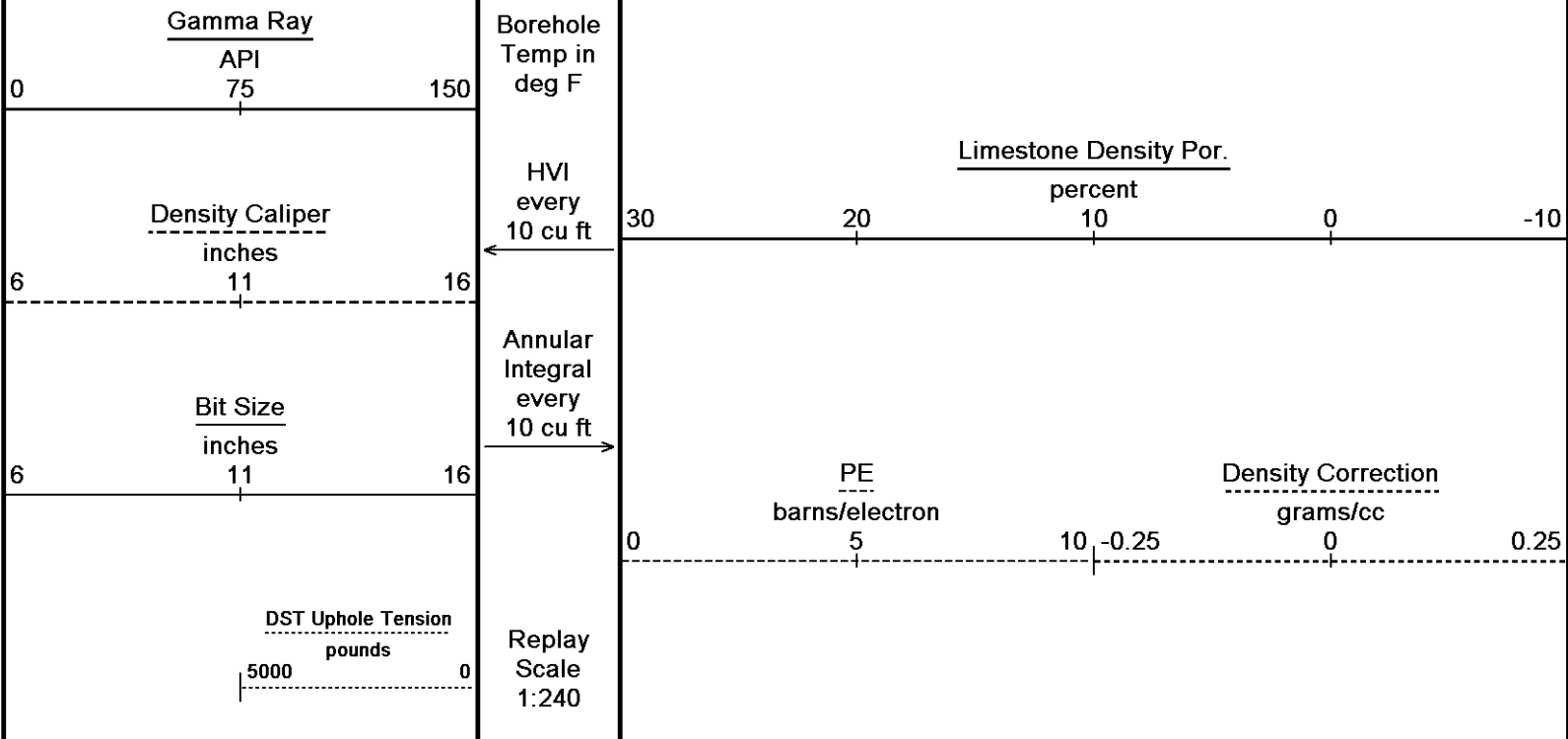
4358  
100  
4400  
119°  
4450  
120°

Limestone Density Por.  
percent  
30 20 10 0 -10

PE  
barns/electron  
0 5 10  
Density Correction  
grams/cc  
-0.25 0 0.25







Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 10-JUL-2012 10:58  
 Filename: C:\Minimus\_11\_03\_4044\Data\New Folder1\Grand Mesa Beazley-Chambers 1-13\_001.dta Recorded on 09-JUL-2012 18:25  
 System Versions: Logged with 11.03.4044 Processed with 11.03.4044 Plotted with 11.03.4044

↑ **5 INCH REPEAT PASS** ↑

**BEFORE SURVEY CALIBRATION**  
 C:\Minimus\_11\_03\_4044\Data\New Folder1\Grand Mesa Beazley-Chambers 1-13\_002.dta

General Constants All 000 Last Edited on 09-JUL-2012,17:01

<b>General Parameters</b>		
Mud Resistivity	1.350	ohm-metres
Mud Resistivity Temperature	94.000	degrees F
Water Level	0.000	feet
Density/Neutron Processing	Wet Hole	
<b>Hole/Annular Volume and Differential Caliper Parameters</b>		
HVOL Method	Single Caliper	
HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	N/A	
Annular Volume Diameter	5.500	inches
Caliper for Differential Caliper	Density Caliper	
<b>Rwa Parameters</b>		
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 08-JUL-2012 04:57

Reading No	Measured	Calibrated (lbs)
1	13893.37	0.00
2	13954.26	582.00

Gamma Calibration MCG-C 84 Field Calibration on 09-JUL-2012 10:47

	Measured	Calibrated (API)
Background	66	44
Calibrator (Gross)	1146	769
Calibrator (Net)	1080	725

Gamma Constants MCG-C 84 Last Edited on 09-JUL-2012,17:01

Gamma Calibrator Number	GR38	
Mud Density	1.12	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

SP Calibration MCG-C 84			Field Calibration on 06-JUL-2012 09:32
	Measured	Calibrated (mV)	
Reference 1	105.6	101.0	
Reference 2	-96.1	-101.0	

High Resolution Temperature Calibration MCG-C 84			Field Calibration on 28-MAY-2012,07:32
	Measured	Calibrated(Deg F)	
Lower	50.00	50.00	
Upper	75.00	75.00	

High Resolution Temperature Constants MCG-C 84			Last Edited on
Pre-filter Length	11		

Micro Normal and Micro Inverse Calibration MML-A 4			Base Calibration on 28-JUN-2012 09:09		Field Check on 09-JUL-2012 10:36	
Base Calibration						
		Measured		Calibrated (ohm-m)		
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2		
Micro Normal	12.2	60.3	5.0	25.0		
Micro Inverse	15.7	78.4	5.0	25.0		
Channel	Base Check (ohm-m)		Field Check (ohm-m)			
Micro Normal	62.9		62.9			
Micro Inverse	48.2		48.2			

Micro Normal and Micro Inverse Constants MML-A 4			Last Edited on 09-JUL-2012,10:35			
Pad Type	8-12 in Soft Rubber Inflatable 006-9011-159					
Micro Normal K Factor	1.0000					
Micro Inverse K Factor	1.0000					
Standoff Offset	N/A inches					

Caliper Calibration MML-A 4			Base Calibration on 28-JUN-2012 09:05				Field Calibration on 09-JUL-2012 10:35			
Base Calibration										
Reading No	Measured				Calibrator Size (in)					
1	15261				5.98					
2	18643				7.97					
3	21962				9.86					
4	25966				11.92					
5	0				0.00					
6	N/A				N/A					
Field Calibration										
	Measured Caliper (in)				Actual Caliper (in)					
	6.10				5.98					

Neutron Calibration MDN-A.B 65			Base Calibration on 28-JUN-2012 11:51						Field Check on 09-JUL-2012 10:51					
Base Calibration														
		Measured				Calibrated (cps)								
	Near	Far	Near	Far	Near	Far	Near	Far	Near	Far				
	3161	99	3714	110	3714	110	3714	110	3714	110				
Ratio	31.971				33.764									
Field Calibrator at Base														
	Calibrated (cps)													
	1631 2328													
Ratio	0.700													
Field Check														
	Calibrated (cps)													
	1624 2346													
Ratio	0.692													

Neutron Constants MDN-A.B 65			Last Edited on 09-JUL-2012,17:02								
------------------------------	--	--	----------------------------------	--	--	--	--	--	--	--	--

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	Constant Value	
Formation Pressure	0.00	kpsi
Temperature Source	Constant Value	
Temperature	68.00	degrees F
Mud Salinity	0.00	kppm
Formation Fluid Salinity Source	Constant Value	
Formation Fluid Salinity	0.00	kppm
Barite Mud Correction	Not Applied	

FE Calibration MFE-A.A 55

Base Calibration on 19-JUN-2012 09:07  
Field Check on 09-JUL-2012 10:30

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	952.0	126.8
Base Check		281.3
Field Check		281.7

FE Constants MFE-A.A 55

Last Edited on 09-JUL-2012,17:02

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-C.K 330

Last Edited on 09-JUL-2012,17:02

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

Induction Calibration MAI-A.A 45

Base Calibration on 12-JAN-2012,13:34  
Field Check on 09-JUL-2012 10:29

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 79.4 Deg F

Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1	0.0	0.0	18.5	3851.5
2	0.0	0.0	31.8	3629.4
3	0.0	0.0	28.7	3049.5
4	0.0	0.0	18.4	2079.1
Deep	0.0	0.0	16.1	1911.1
Medium	0.0	0.0	42.7	4060.8
Shallow	0.0	0.0	49.8	5483.3

Array Temperature 0.0 74.2 Deg F

Induction Constants MAI-A.A 45

Last Edited on 09-JUL-2012,17:02

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 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	

High Resolution Temperature Calibration MAI-A.A 45

Field Calibration on 28-JUN-2012,09:51

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

High Resolution Temperature Constants MAI-A.A 45

Last Edited on 12-JAN-2012,11:13

Pre-filter Length 11

Caliper Calibration MPD-B 31

Base Calibration on 17-JUN-2012 20:26  
Field Calibration on 09-JUL-2012 10:42

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	17360	3.99
2	25891	5.98
3	34800	7.97
4	43168	9.86
5	52528	11.92
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
6.04	5.98

Photo Density Calibration MPD-B 31

Base Calibration on 17-JUN-2012 20:49  
Field Check on 09-JUL-2012 10:40

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	48464	24458	59556	30836
Reference 2	19785	1991	24941	2541

Field Check at Base

695.5	853.6
-------	-------

Field Check

691.7	853.1
-------	-------

PE Calibration

Base Calibration	Measured			Calibrated
	WS	WH	Ratio	Ratio
Background	128	610		
Reference 1	19401	48326	0.404	0.371
Reference 2	5740	19688	0.294	0.272

Field Check at Base

128.0	610.0
-------	-------

Field Check

126.9	605.7
-------	-------

Density Constants MPD-B 31

Last Edited on 09-JUL-2012,17:02

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	1.12	gm/cc
Mud Density Z/A Multiplier	1.11	
Mud Filtrate Density	1.00	gm/cc
Dry Hole Mud Filtrate Density	1.00	gm/cc
DNCT	0.00	gm/cc
CRCT	0.00	gm/cc
Density Z/A Correction	Hybrid	

Matrix Density (gm/cc)	Depth (ft)
2.71	
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00

### DOWNHOLE EQUIPMENT

C:\Minimus\_11\_03\_4044\Data\New Folder1\Grand Mesa Beazley-Chambers 1-13\_002.dta

Compact Comms Gamma  
MCG-C 84 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Comms Gamma  
MCG-C 84 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Micro-log  
MML-A 4 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

Compact Micro-log  
MML-A 4 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

Compact Neutron  
MDN-A.B 65 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

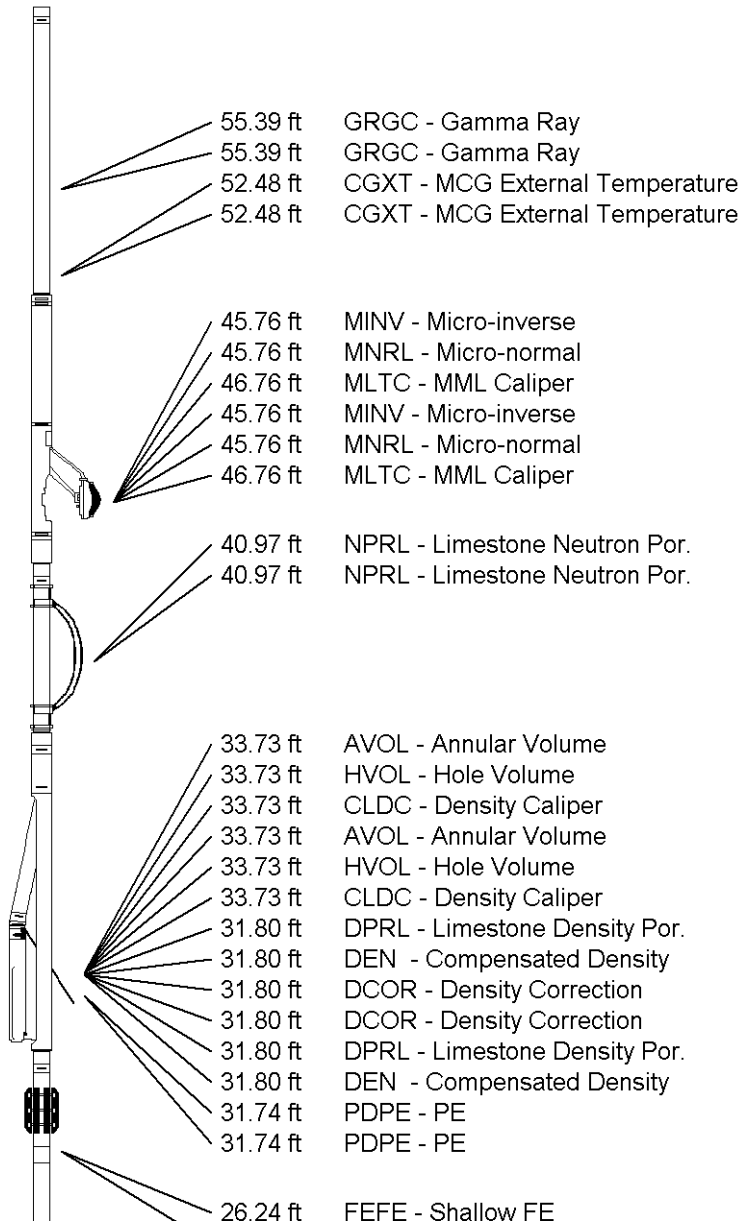
Compact Neutron  
MDN-A.B 65 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

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

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

Compact Focussed Electric  
MFE-A.A 55 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Focussed Electric



MFE-A.A 55 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Sonic  
MSS-C.K 330 LG: 12.52 ft WT: 72.8 lb OD: 2.24 in

Compact Sonic  
MSS-C.K 330 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

Compact Induction  
MAI-A.A 45 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 60.68 ft Weight: 456.4 lb

Total Length: 60.68 ft Weight: 456.4 lb



26.24 ft FEFE - Shallow FE

12.96 ft SPRL - Wyllie Lime. Sonic Por.  
12.96 ft DT35 - 3-5' Compensated Sonic  
12.96 ft SPRL - Wyllie Lime. Sonic Por.  
12.96 ft DT35 - 3-5' Compensated Sonic

3.34 ft R400 - Array Ind. One Res 40  
3.34 ft R400 - Array Ind. One Res 40  
3.34 ft R600 - Array Ind. One Res 60  
3.34 ft RTAO - Array Ind. One Res Rt  
3.34 ft R600 - Array Ind. One Res 60  
3.34 ft RTAO - Array Ind. One Res Rt  
0.23 ft SPCG - Spontaneous Potential  
0.23 ft SPCG - Spontaneous Potential  
Tool Zero (0.13ft from bottom)  
Tool Zero (0.13ft from bottom)  
-0.13 ft SMTU - DST Uphole Tension  
-0.13 ft SMTU - DST Uphole Tension

All measurements relative to tool zero.  
All measurements relative to tool zero.

COMPANY GRAND MESA OPERATING  
WELL BEAZLEY-CHAMBERS 1-13  
FIELD WILDCAT  
PROVINCE/COUNTY GOVE  
COUNTRY/STATE U.S.A. / KANSAS

Elevation Kelly Bushing	2904.00	feet	First Reading	4632.00	feet
Elevation Drill Floor	2902.00	feet	Depth Driller	4663.00	feet
Elevation Ground Level	2899.00	feet	Depth Logger	4664.00	feet



COMPACT PHOTO DENSITY  
COMPENSATED NEUTRON  
MICRORESISTIVITY LOG

