



Weatherford

**COMPACT PHOTO DENSITY
COMPENSATED NEUTRON
MICRORESISTIVITY LOG**

COMPANY

STELBAR OIL CORPORATION

WELL

FREESE 1-10

FIELD

WILDCAT

PROVINCE/COUNTY

SCOTT

COUNTRY/STATE

U.S.A. / KANSAS

LOCATION

1175' FNL & 2305' FEL
SE SW NW NE

SEC

TWP
10

17S

RGE
33W

Other Services
MAI/MFE

MML

MSS

API Number

15-171-20981

Permit Number

Permanent Datum GL, Elevation 2993 feet

Log Measured From KB

Drilling Measured From KB @ 7 FEET

Date

24-OCT-2013

Run Number

ONE

Service Order

3541127

Depth Driller

4798.00

Depth Logger

4798.00

First Reading

4764.00

Last Reading

3650.00

Casing Driller

305.00

Casing Logger

305.00

Bit Size

7.875

Hole Fluid Type

CHEM

Density / Viscosity

9.20 lb/USg

PH / Fluid Loss

9.50

Sample Source

PIT

Rm @ Measured Temp

0.60 @ 80.0

Rmf @ Measured Temp

0.48 @ 80.0

Rmc @ Measured Temp

0.72 @ 80.0

Source Rmf / Rmc

CALC

Rm @ BHT

0.42 @ 114.0

Time Since Circulation

4 HRS

Max Recorded Temp

114.00

Equipment / Base

13096

Recorded By

D. COLE

Witnessed By

D. GOLDAK

Elevations:
KB 3000.00
DF 2997.00
GL 2993.00

BOREHOLE RECORD

Last Edited: 24-OCT-2013 00:27

Bit Size
inches

7.875

Depth From
feet

305.00

Depth To
feet

4798.00

CASING RECORD

Type

Size
inches

8.625

Depth From
feet

0.00

Shoe Depth
feet

305.00

Weight
pounds/ft

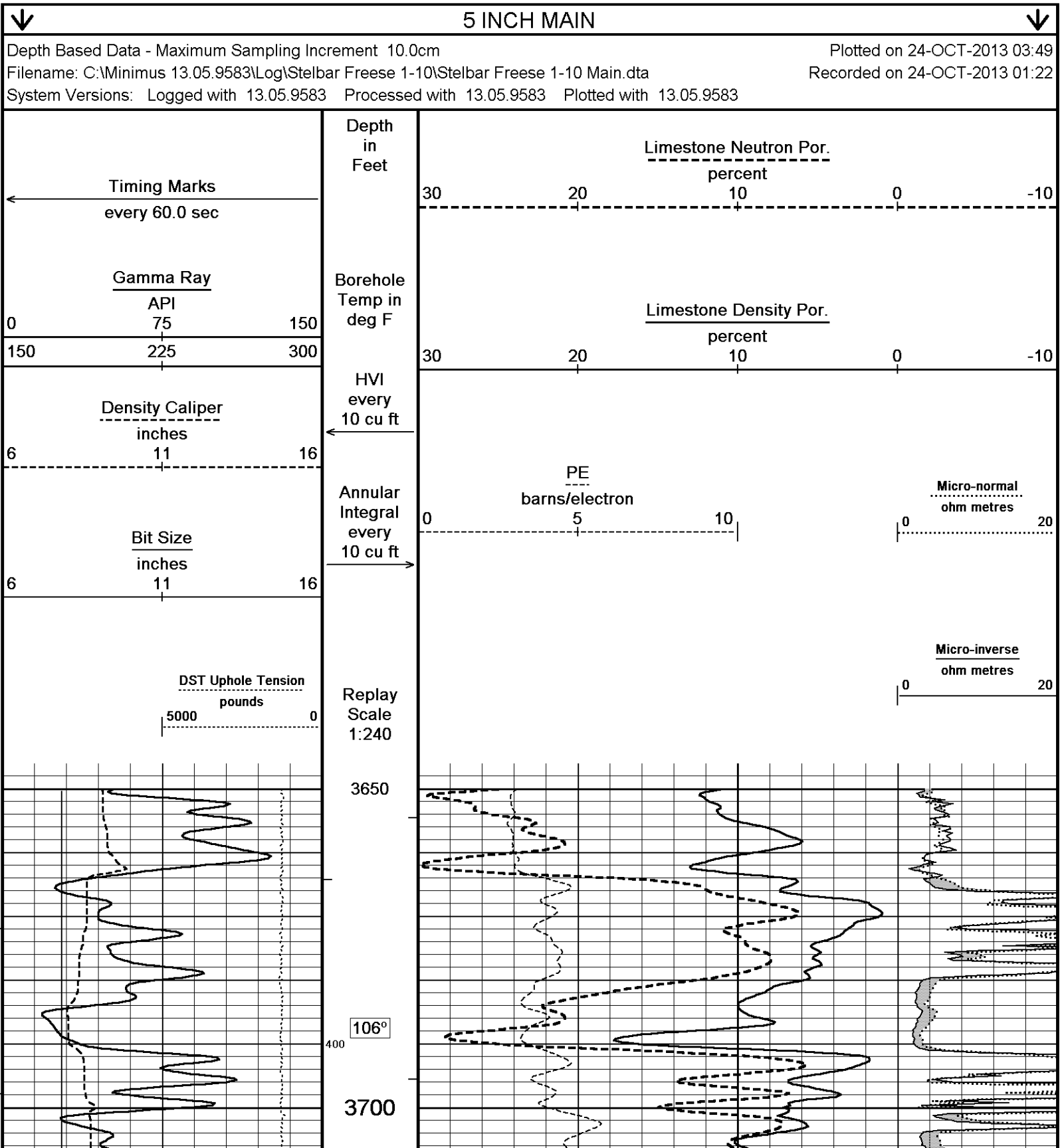
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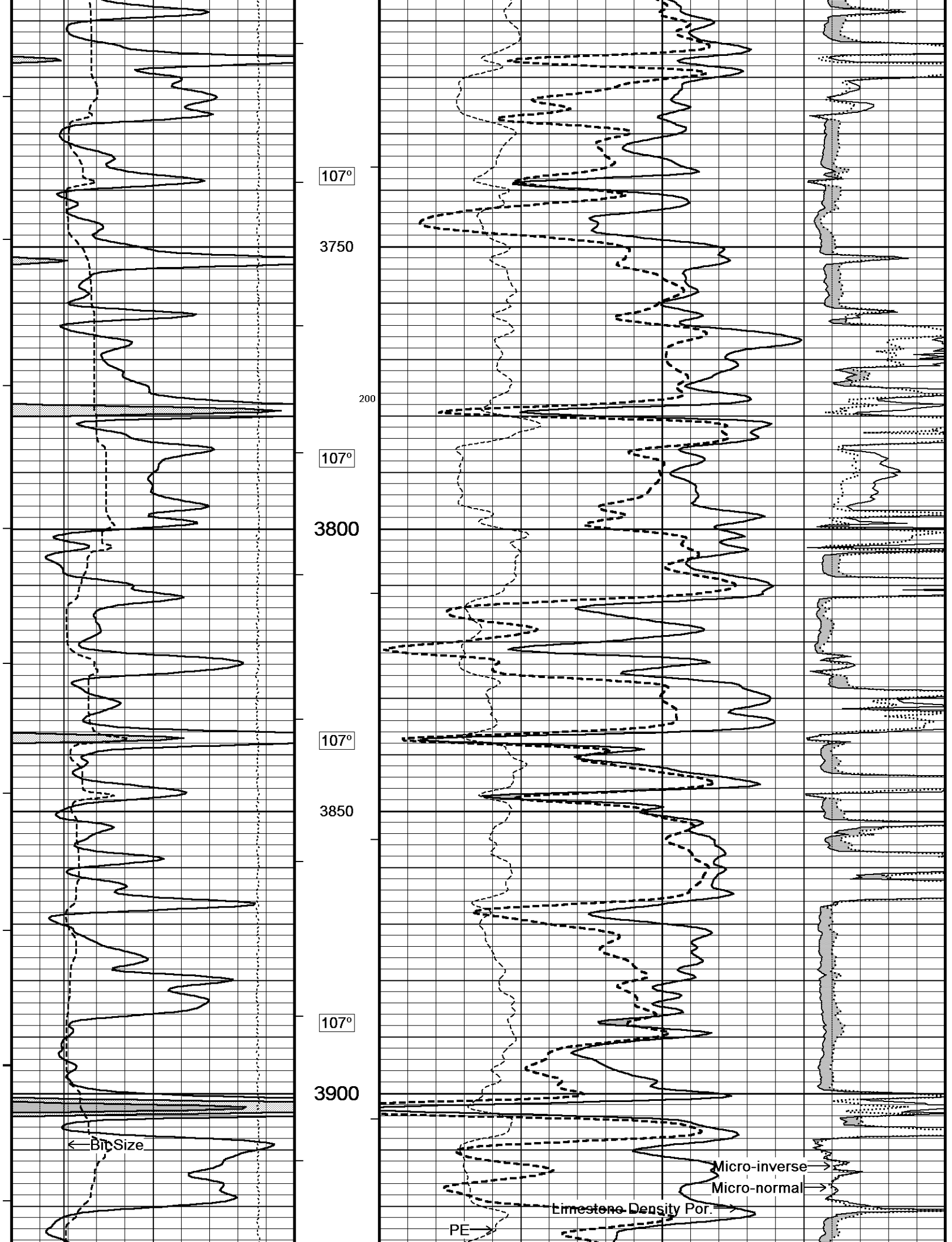
REMARKS

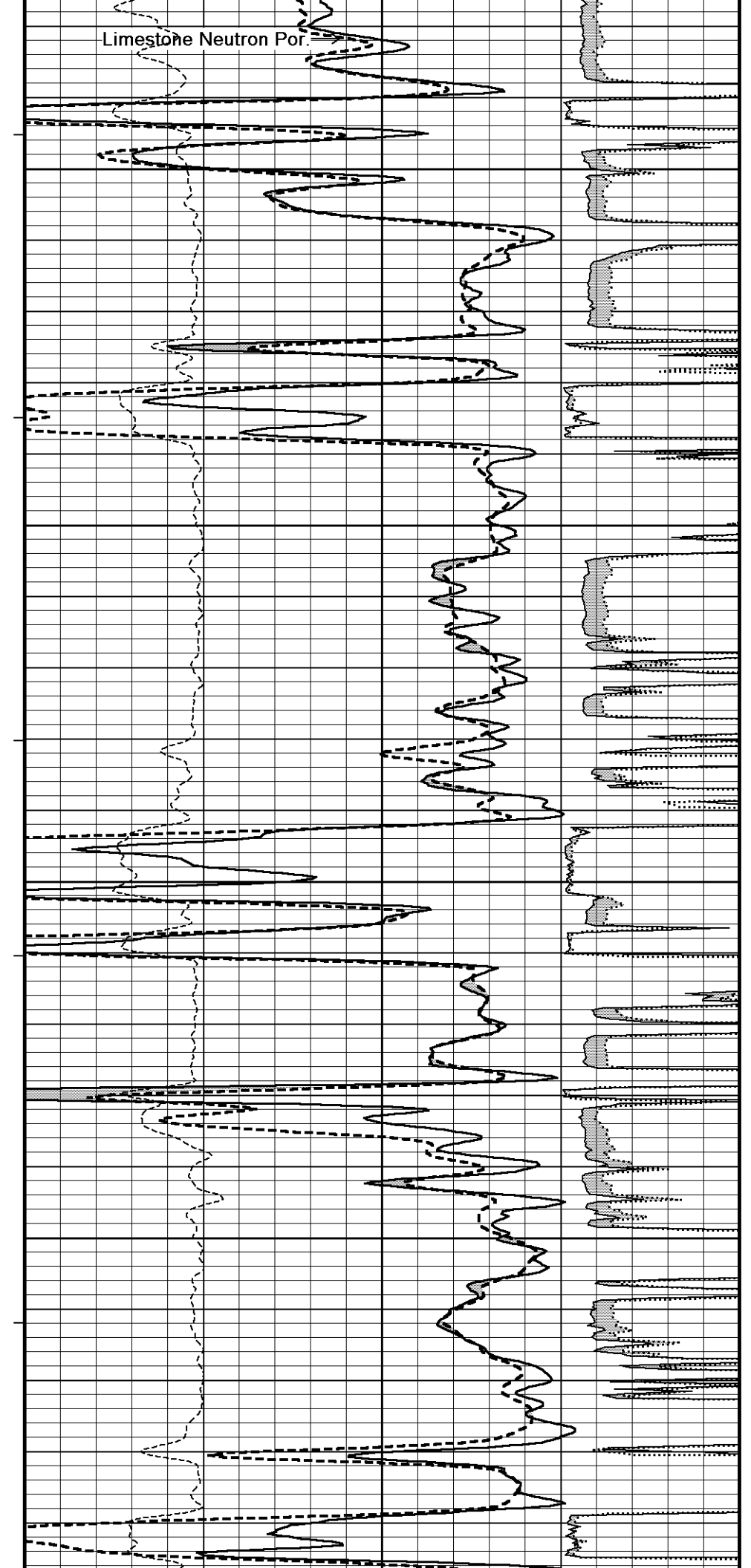
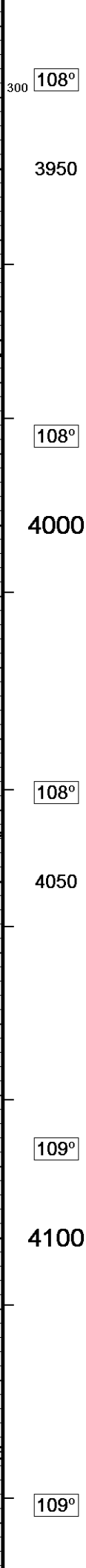
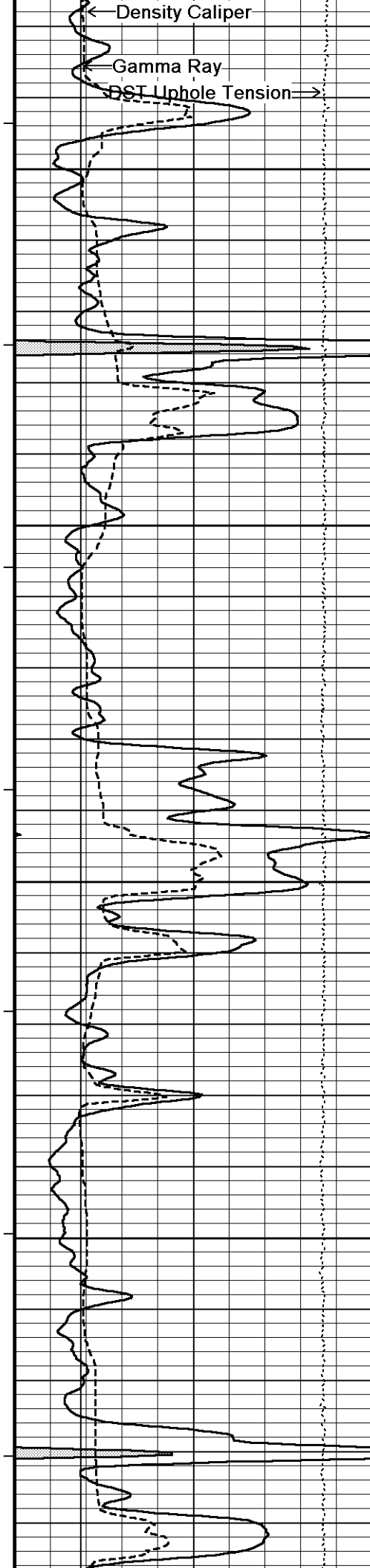
- SOFTWARE ISSUE: WLS 13.05.9583.
- MCG, MML, MDN, MPD, MFE, MSS, MAI RUN IN COMBINATION.
 - HARDWARE: DUAL BOWSPRING USED ON MDN.
 - 0.5 INCH STANDOFF USED ON MFE.
 - 0.5 INCH STANDOFF USED ON MAI.
 - 0.5 INCH STANDOFF USED ON MSS.
- 2.71 G/CC LIMESTONE DENSITY MATRIX USED TO CALCULATE POROSITY.
- BOREHOLE RUGOSITY, TIGHT PULLS, AND WASHOUTS WILL AFFECT DATA QUALITY.
- ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST.
- TOTAL HOLE VOLUME FROM TD TO 3650 FEET: 410 CU. FT.
- ANNULAR HOLE VOLUME WITH 5.5 INCH CASING FROM TD TO 3650 FEET: 230 CU. FT.

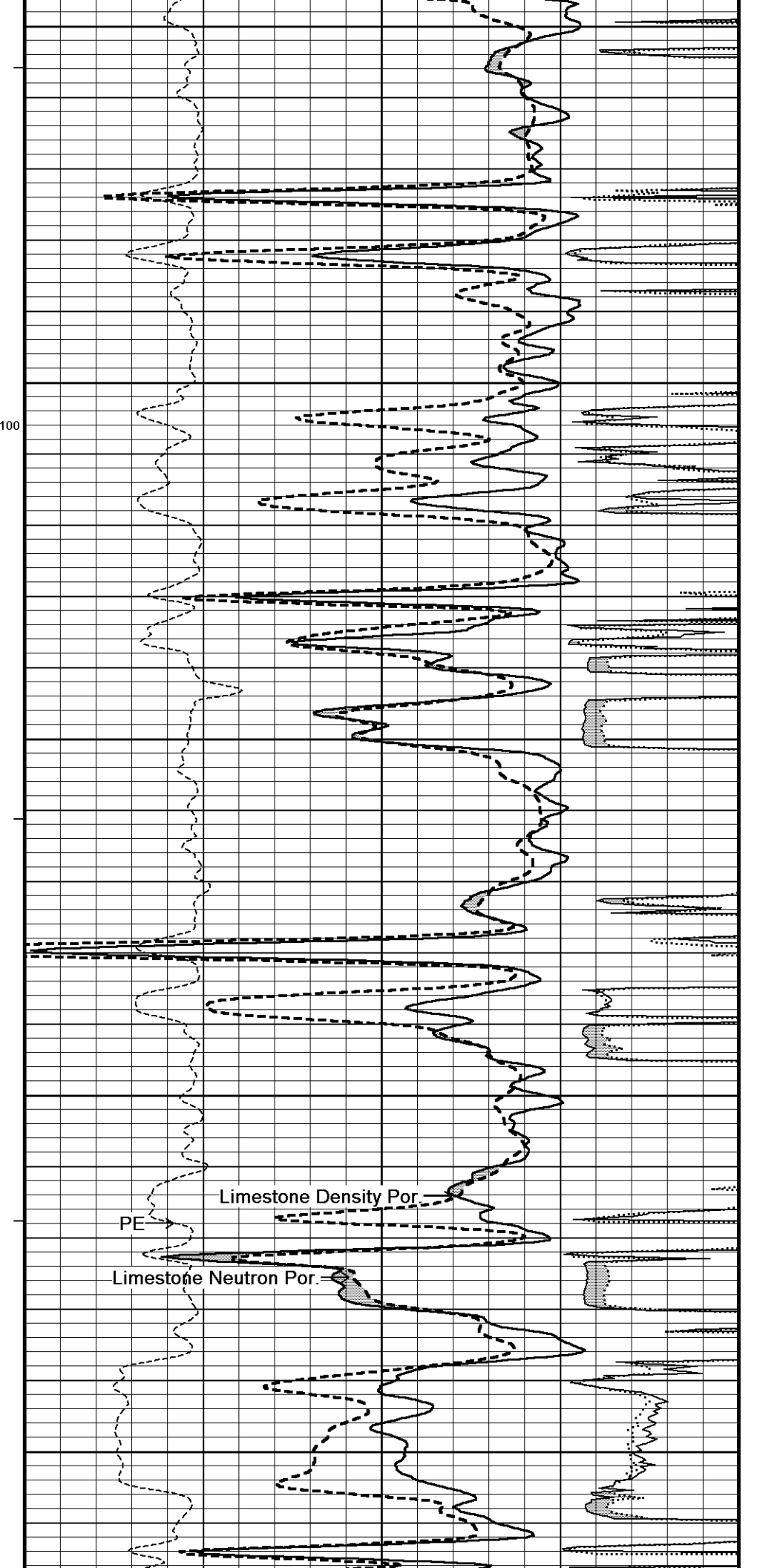
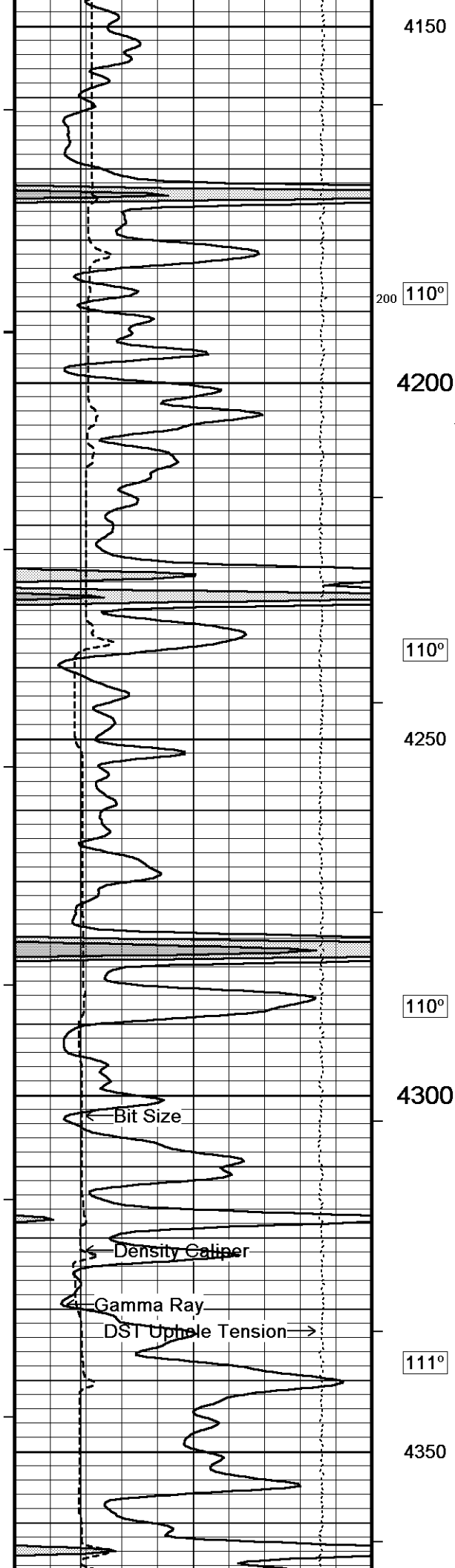
- DRILLING RIG: PICKRELL #1
- ENGINEER: D. COLE
- OPERATOR(S): K. RINEHART_D. CANADAY.

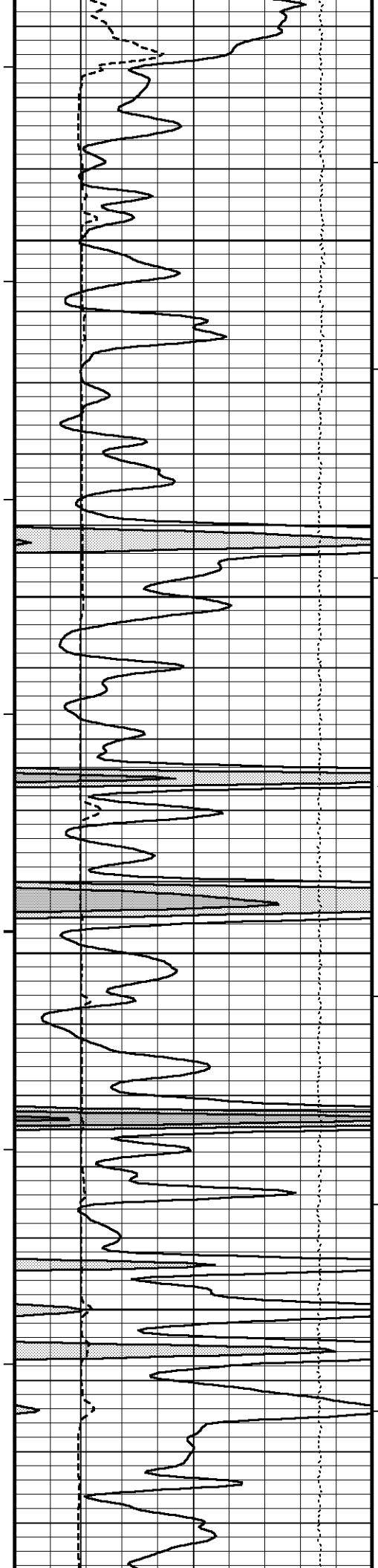
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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











111°

4400

112°

4450

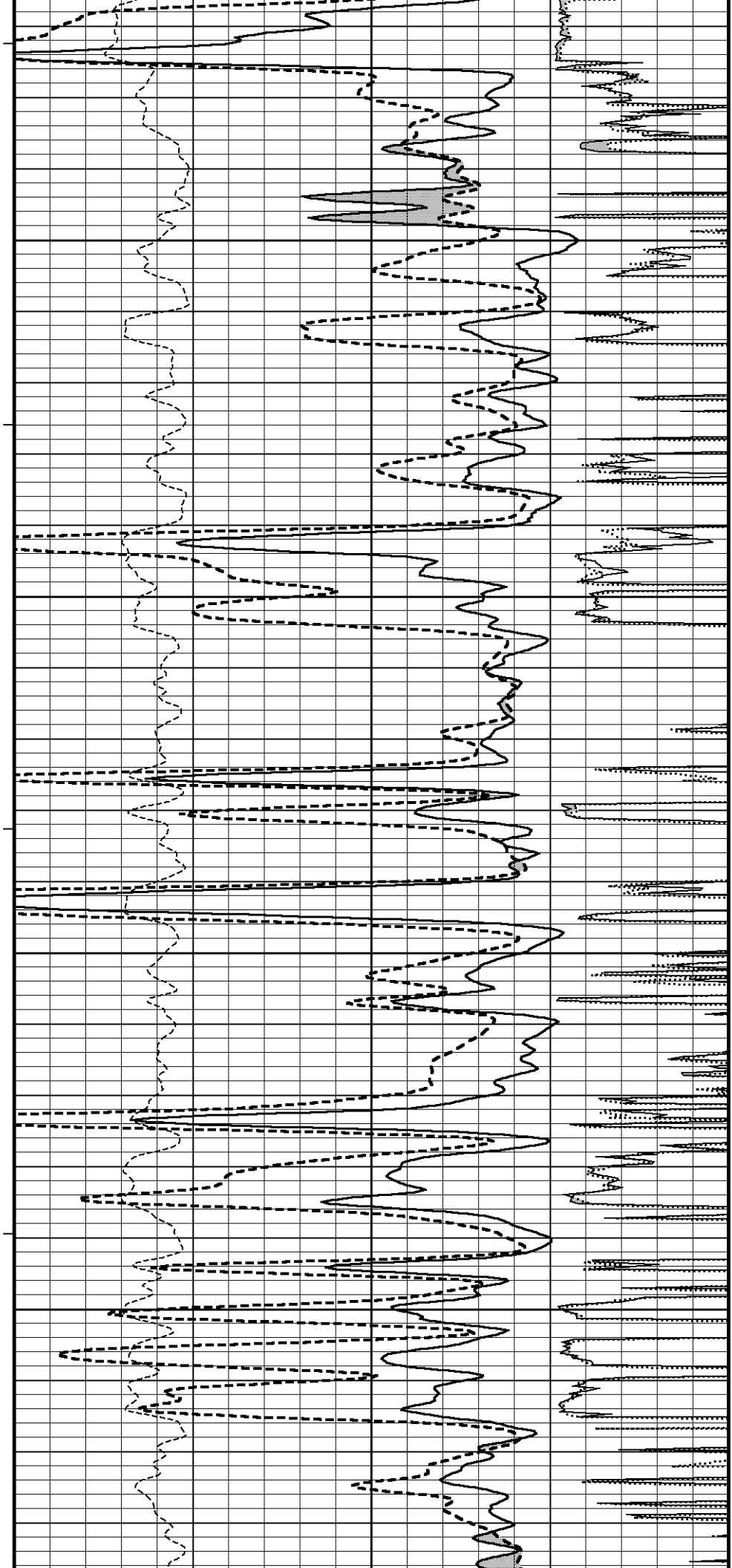
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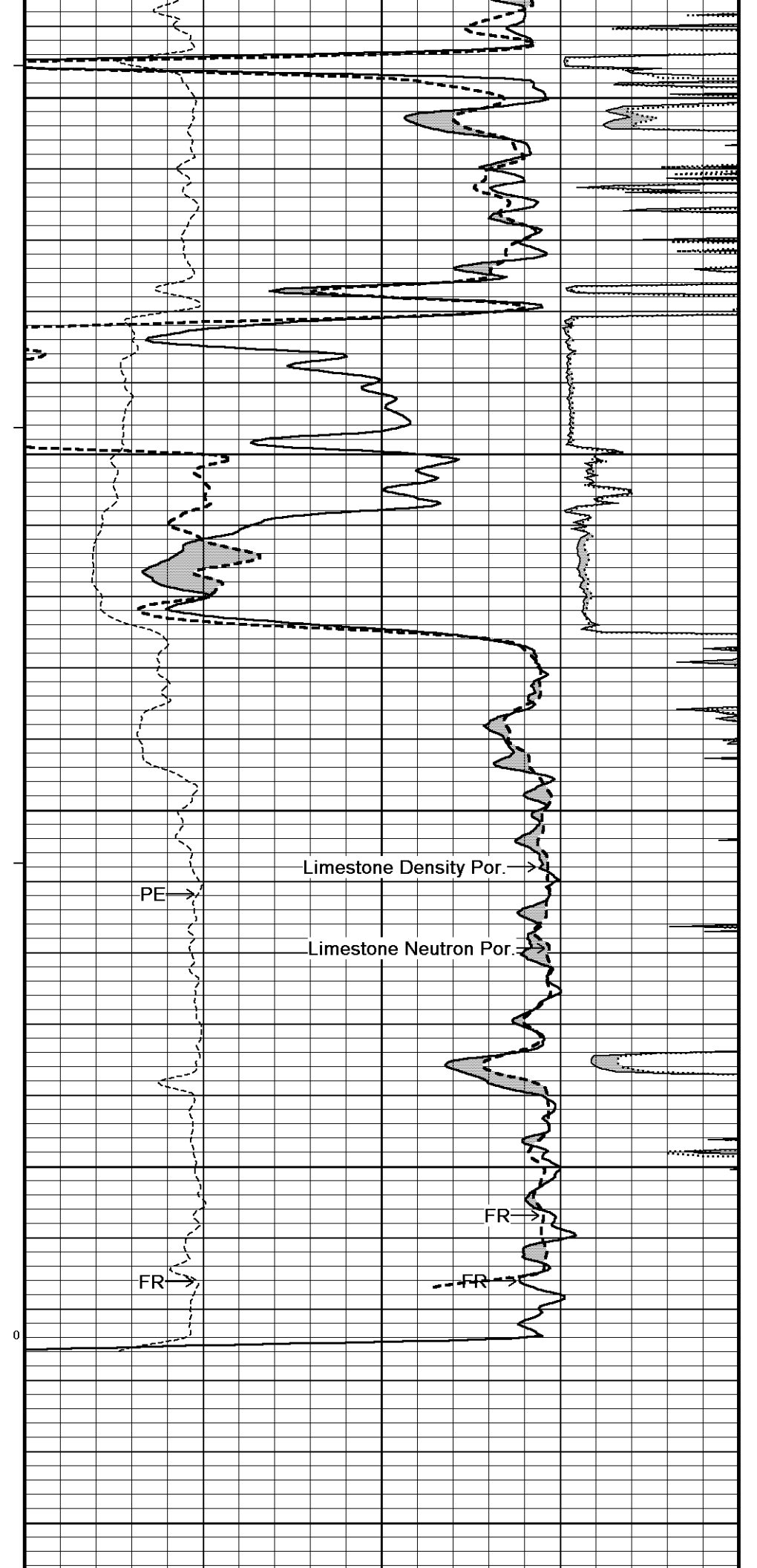
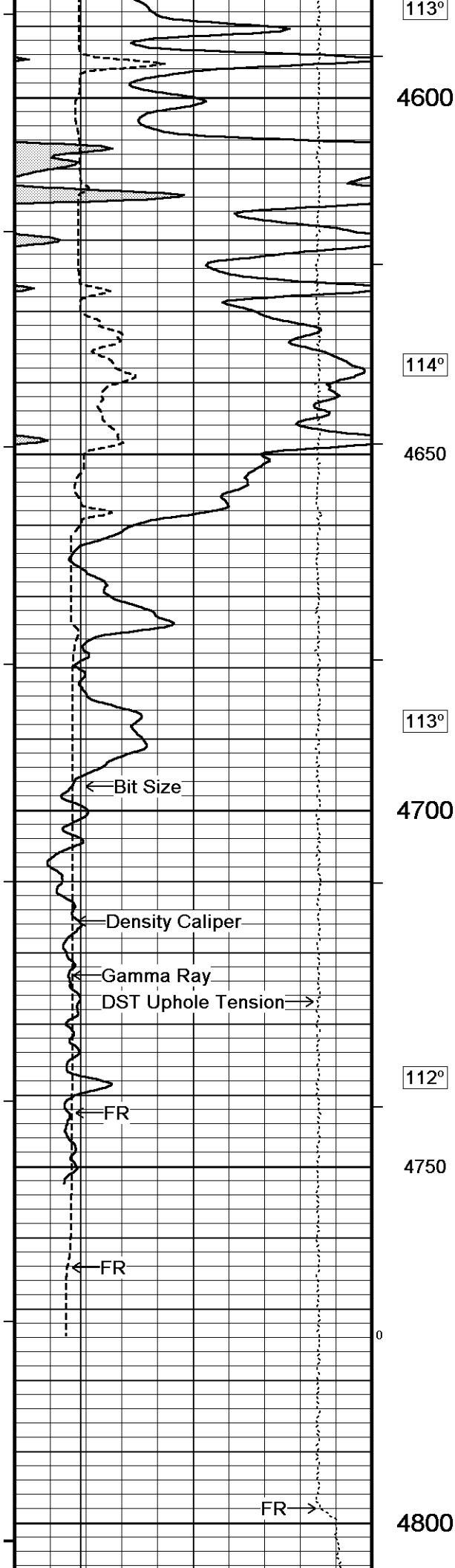
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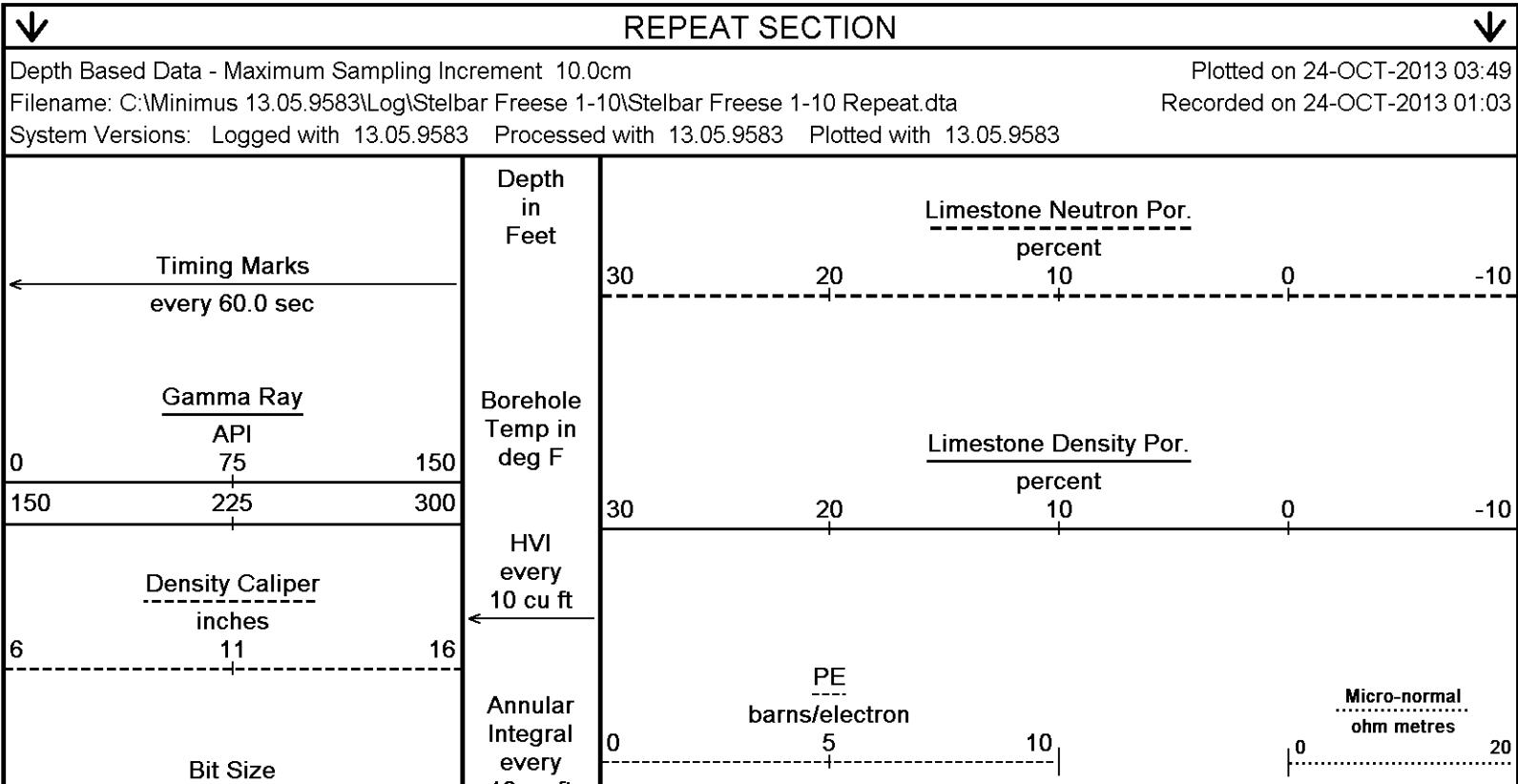
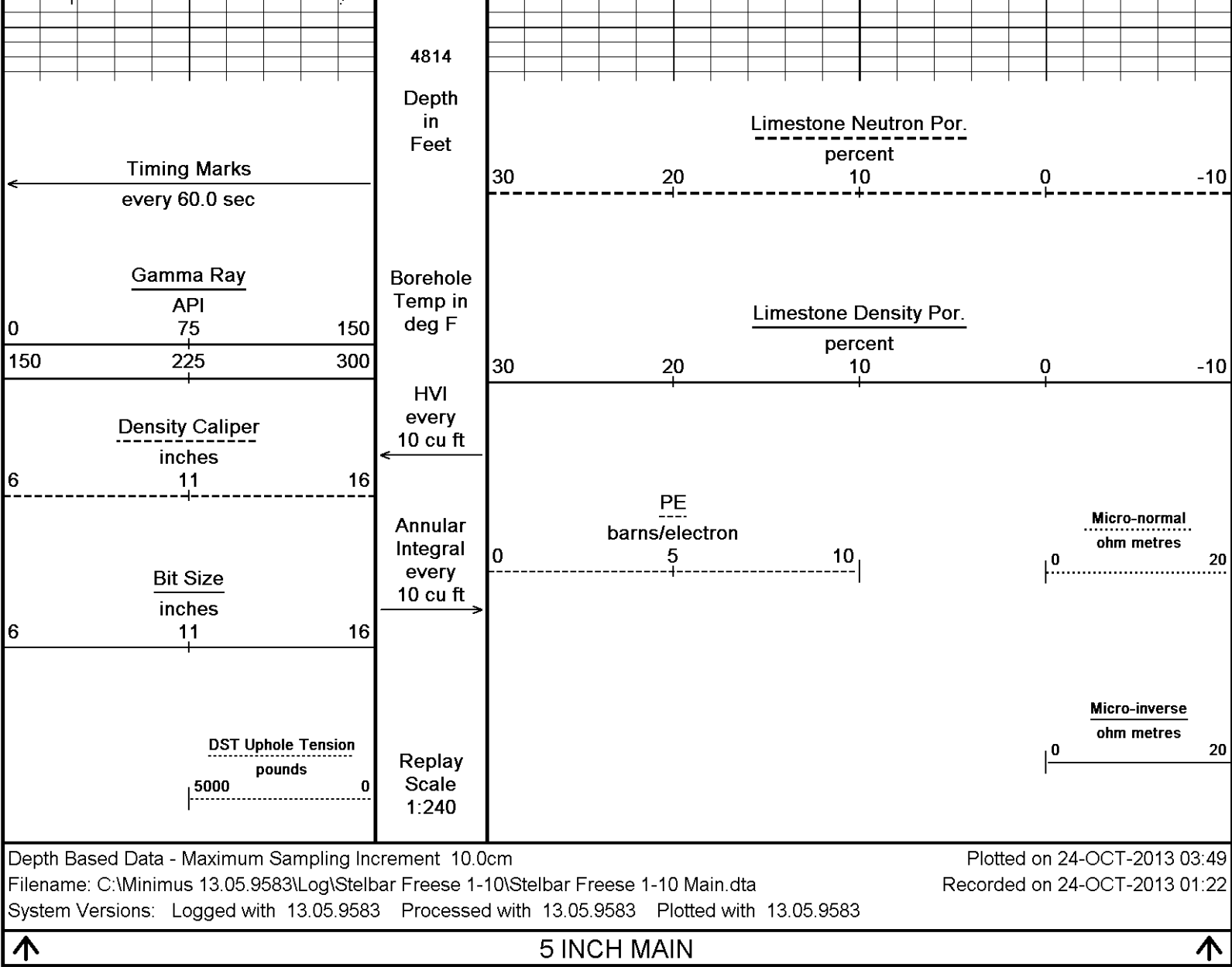
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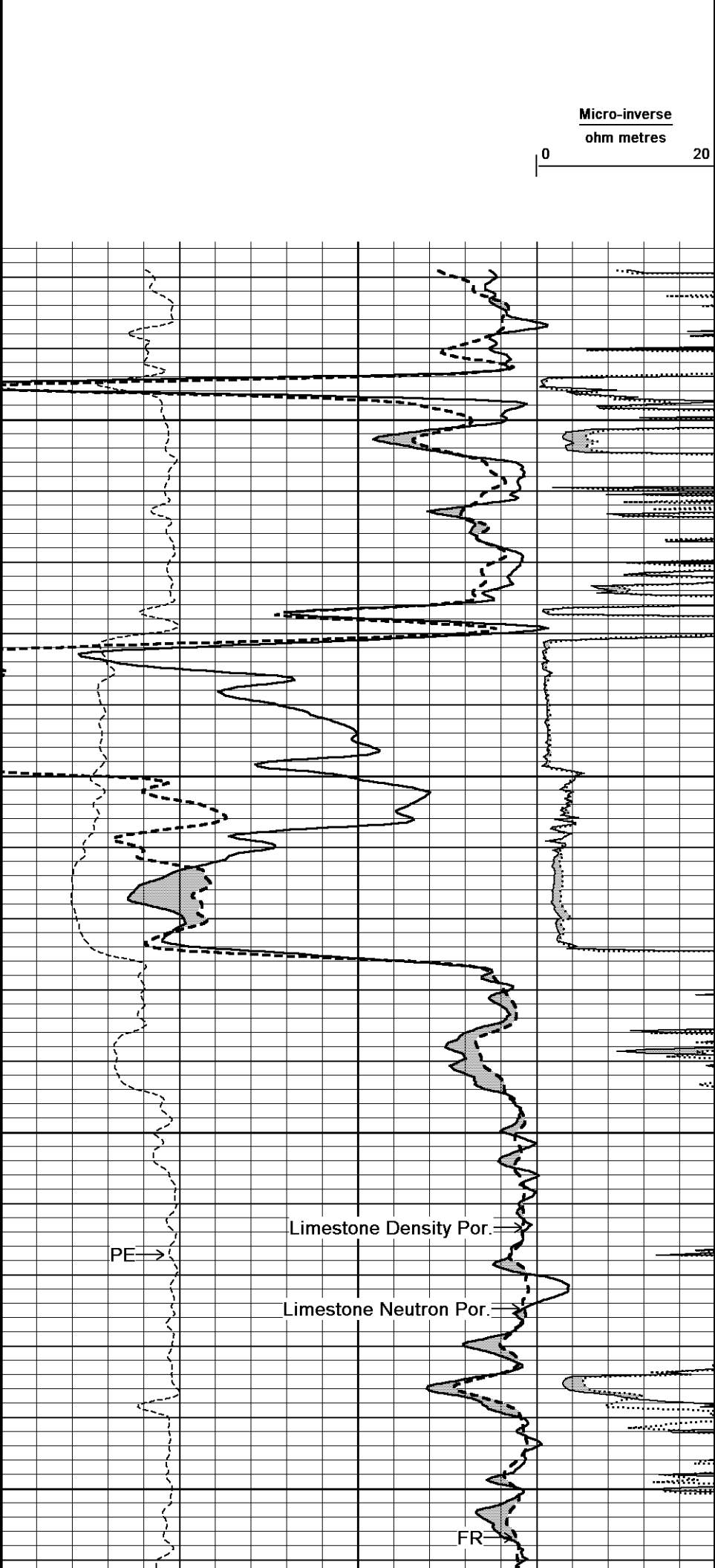
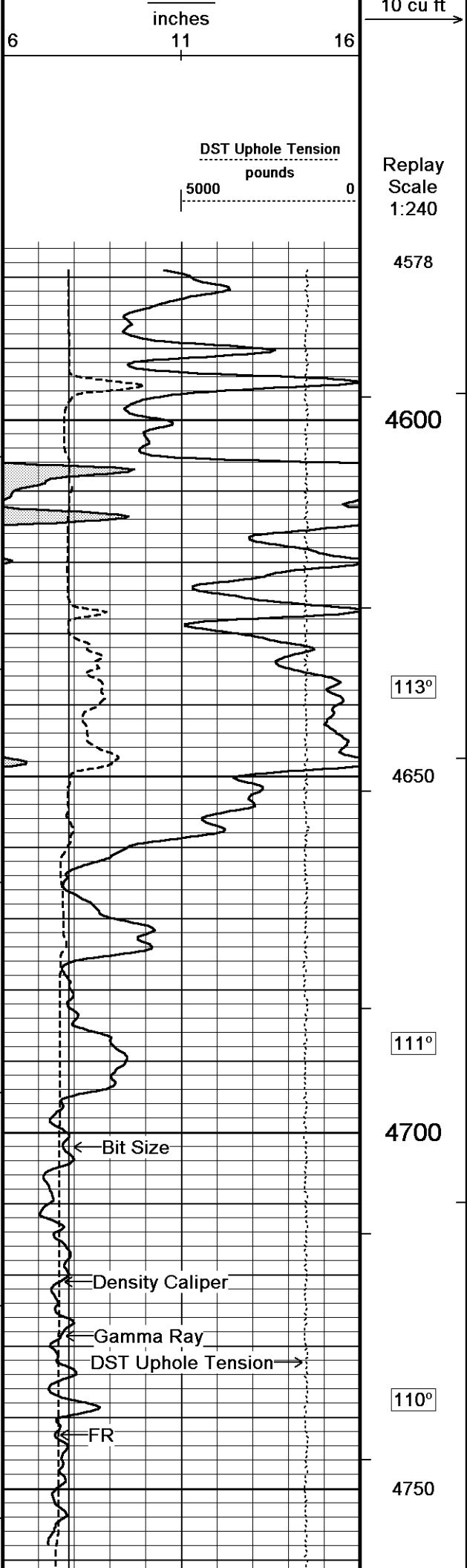
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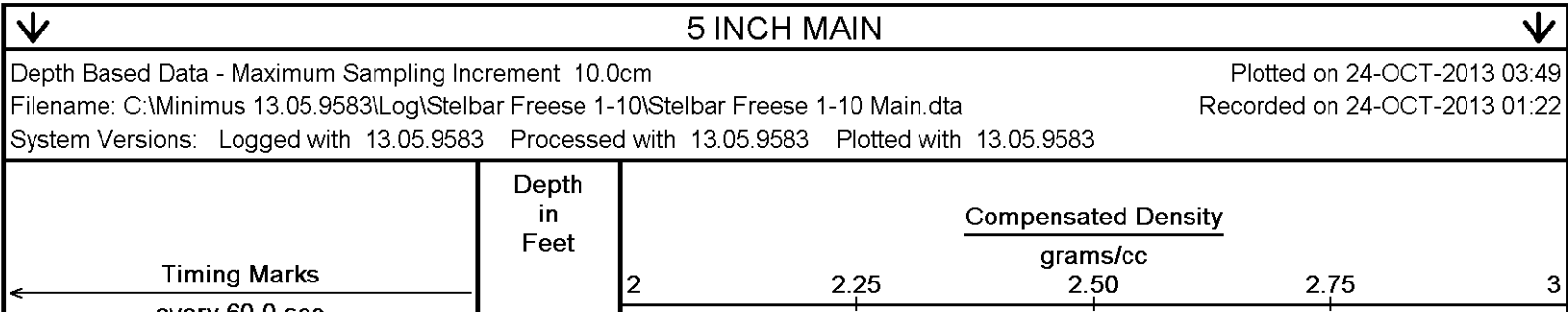
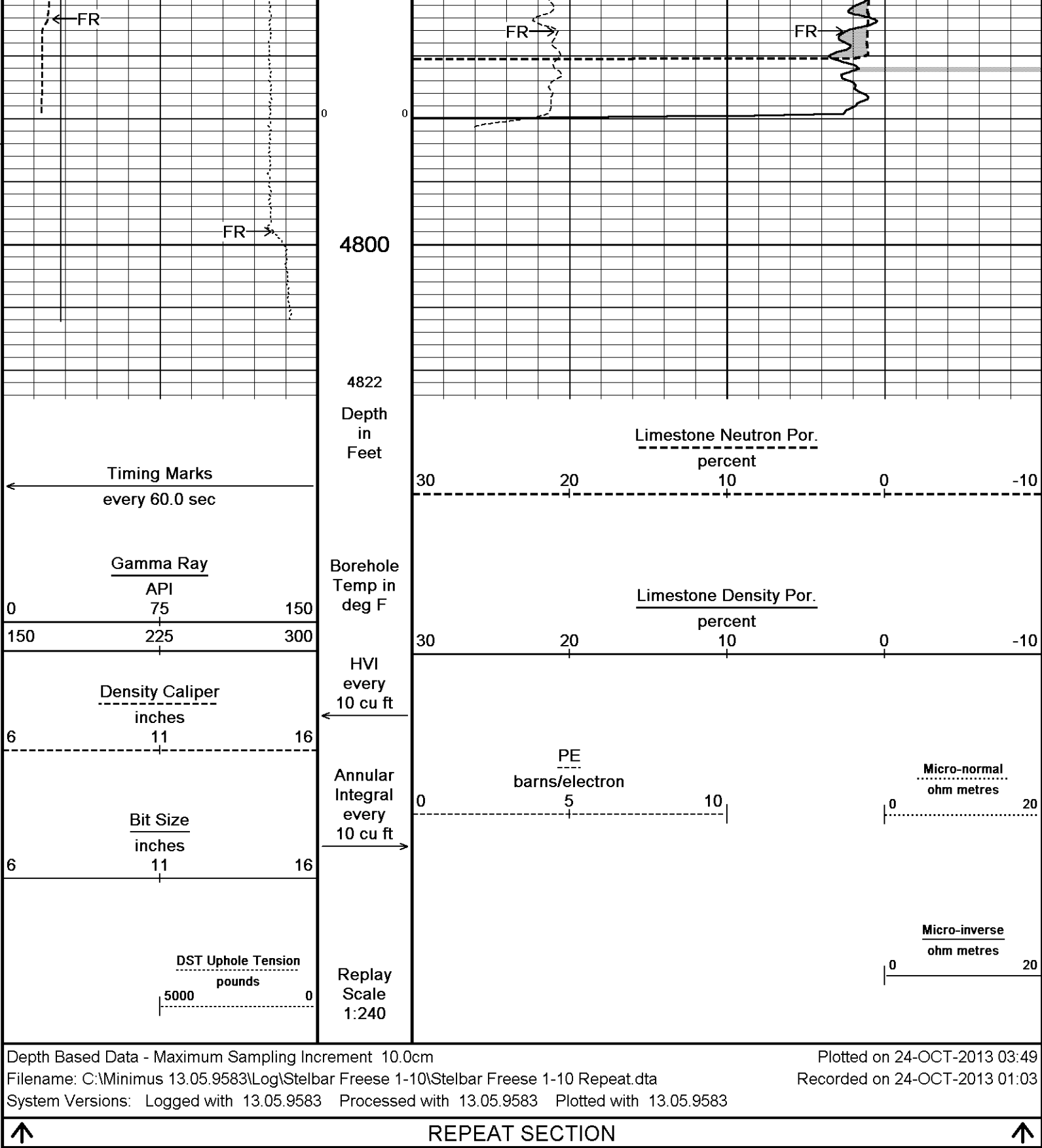
4550











every 60.0 sec

Gamma Ray

API

75

225

0

150

150

300

Density Caliper

inches

11

6

16

Bit Size

inches

11

6

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

3650

106°

400

3700

107°

3750

200

Limestone Density Por.

percent

10

0

-10

PE

barns/electron

5

10

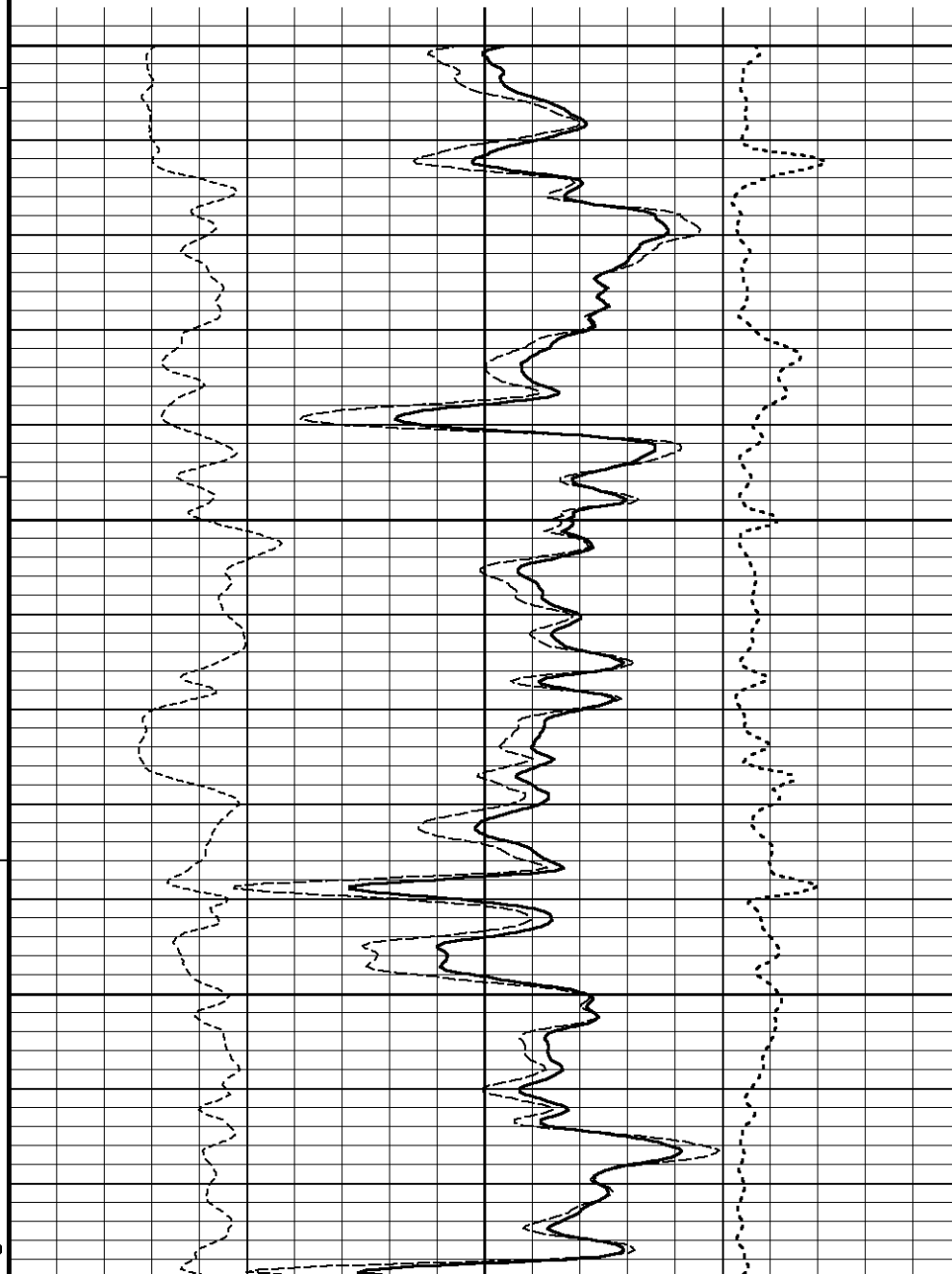
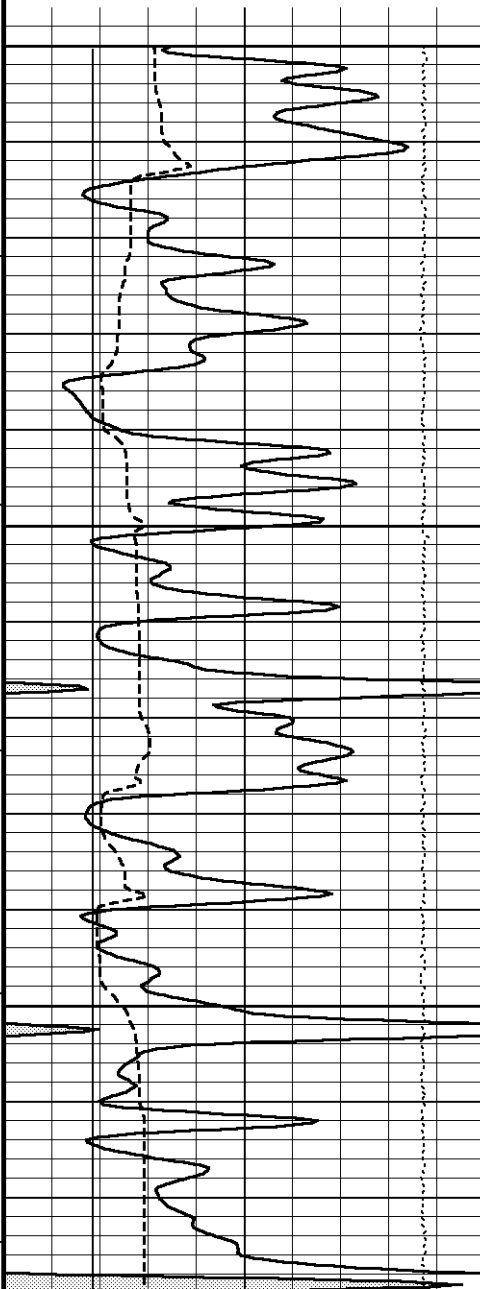
-0.50

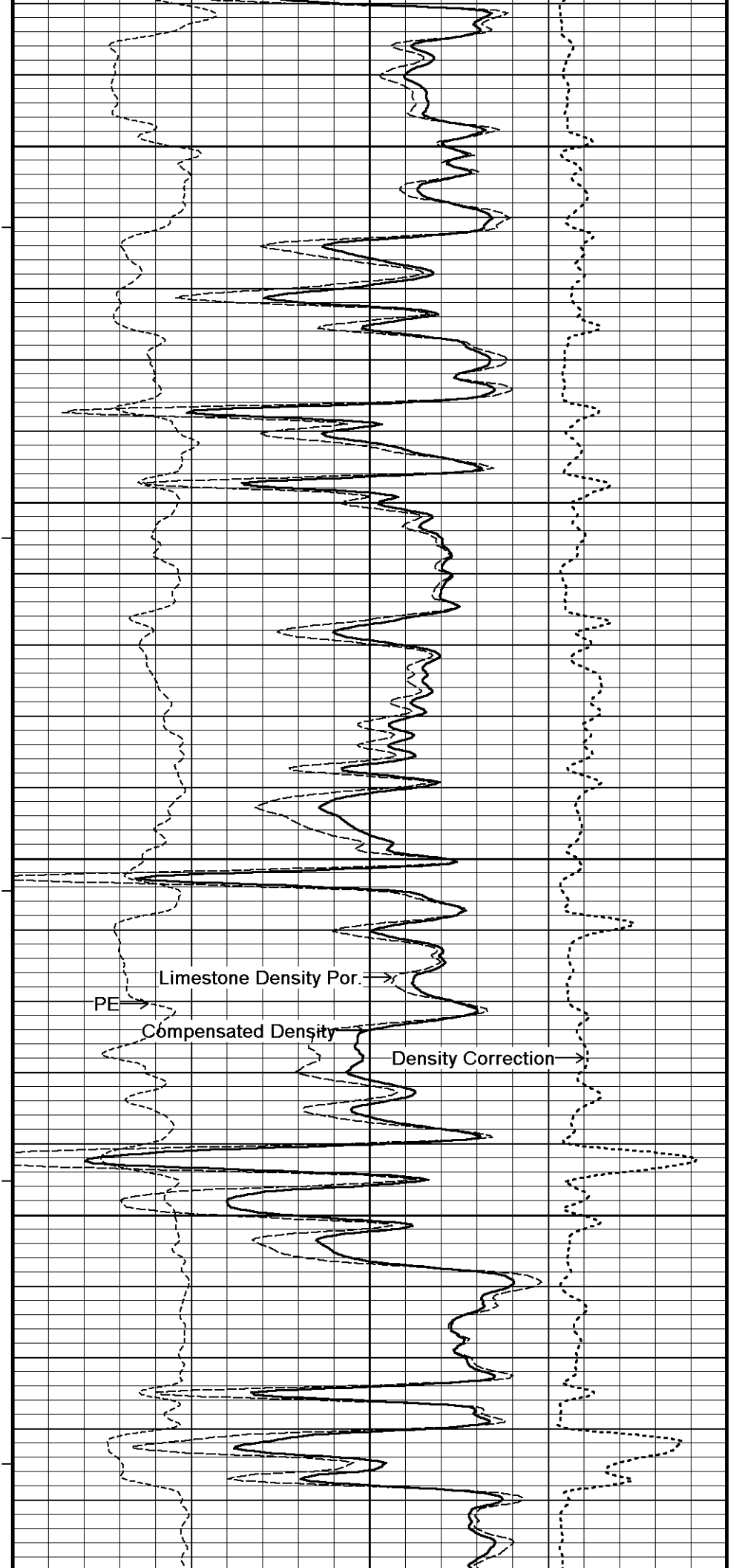
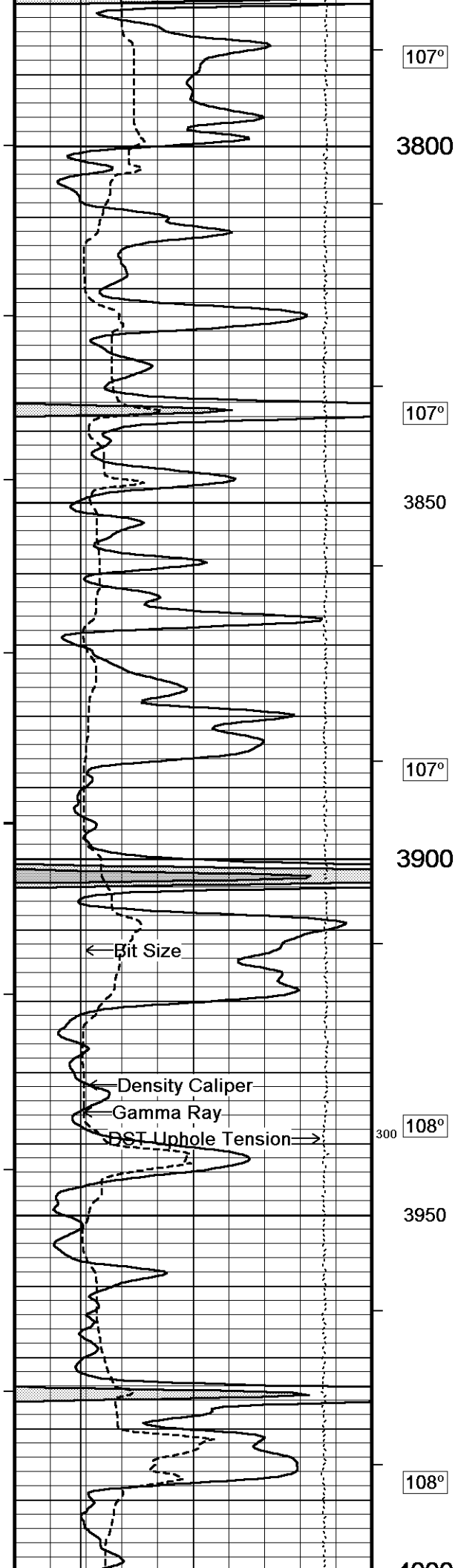
Density Correction

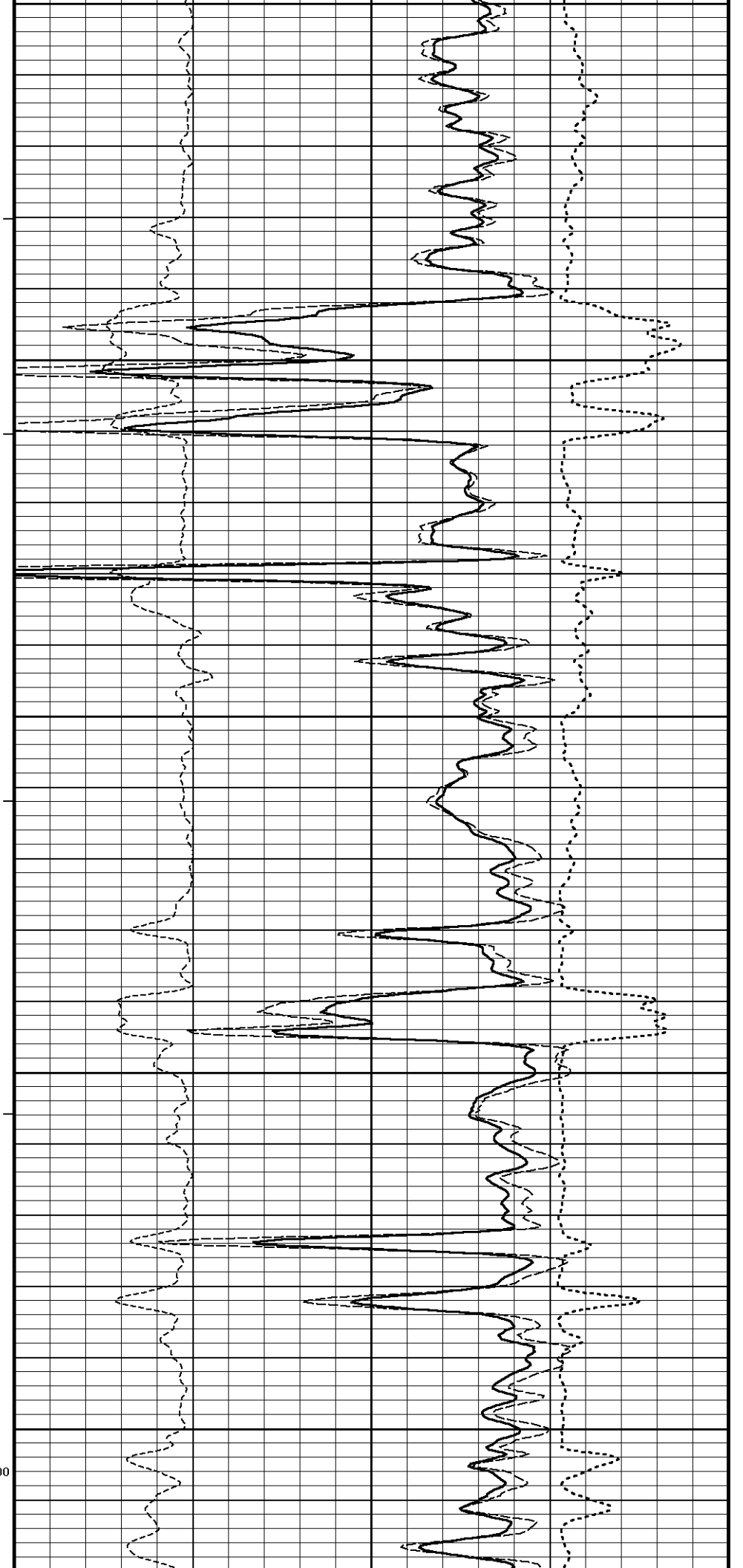
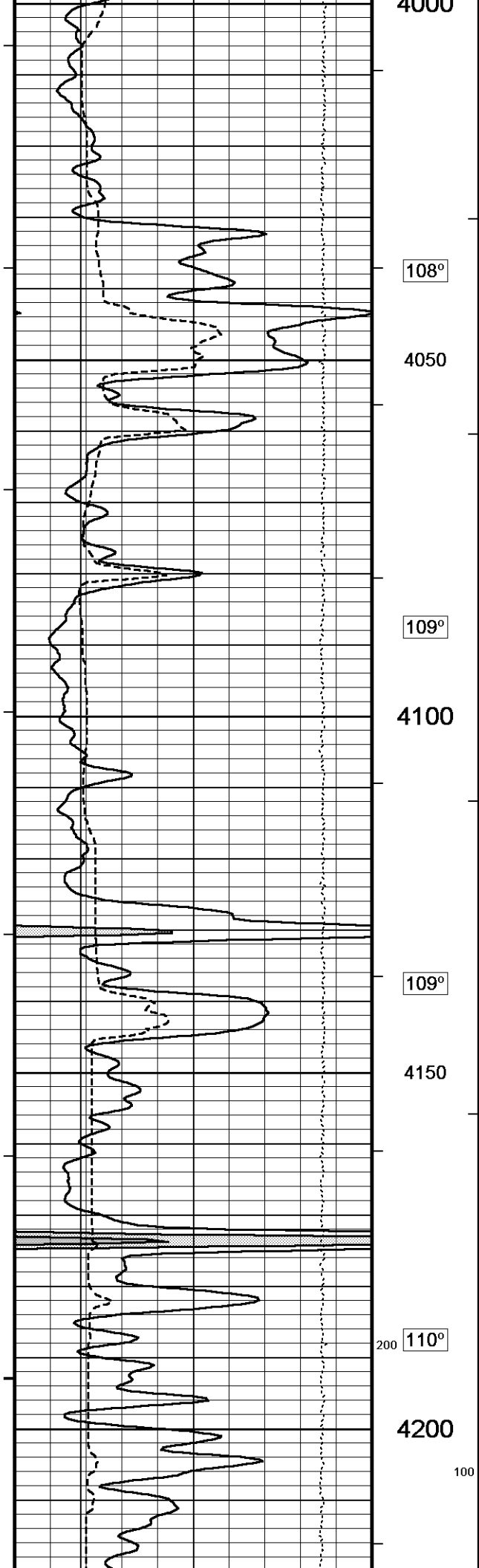
grams/cc

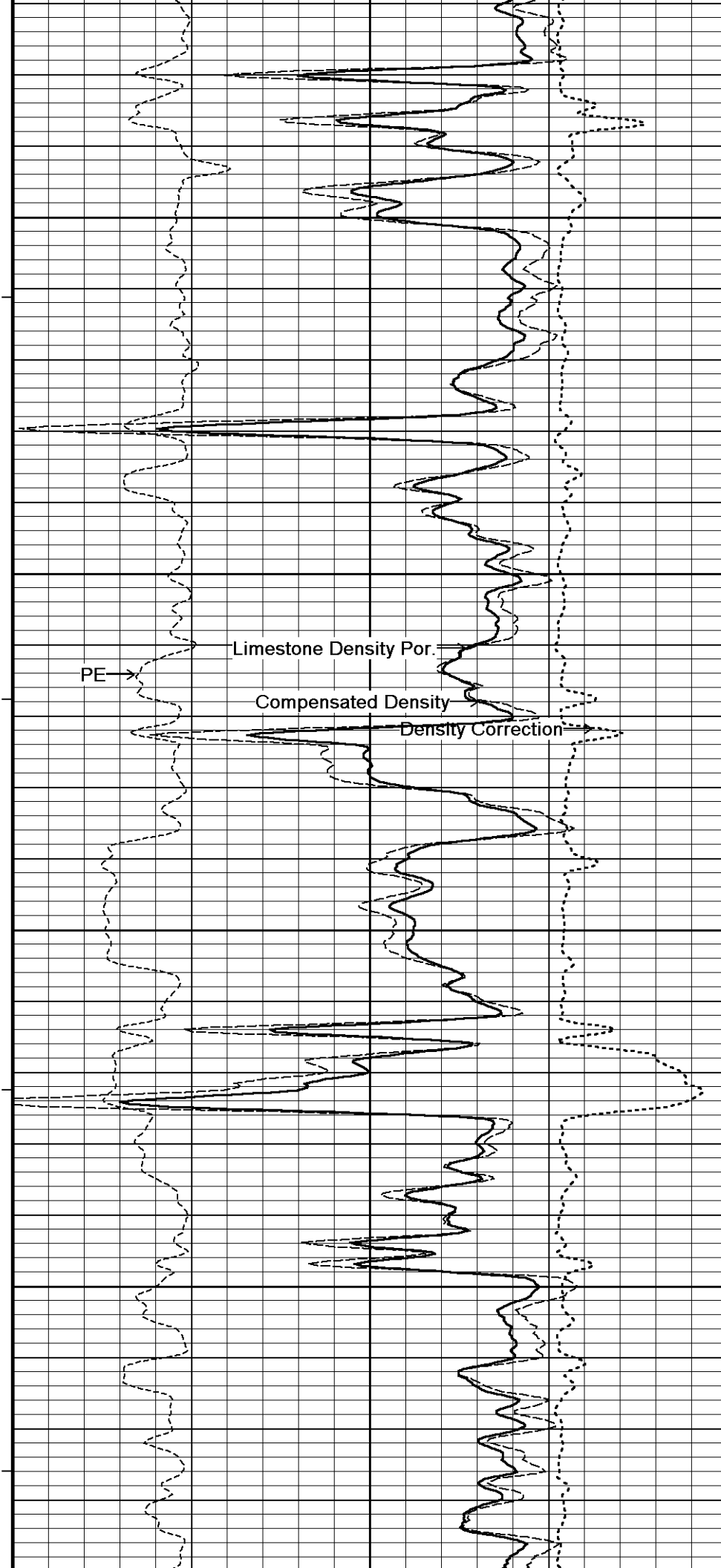
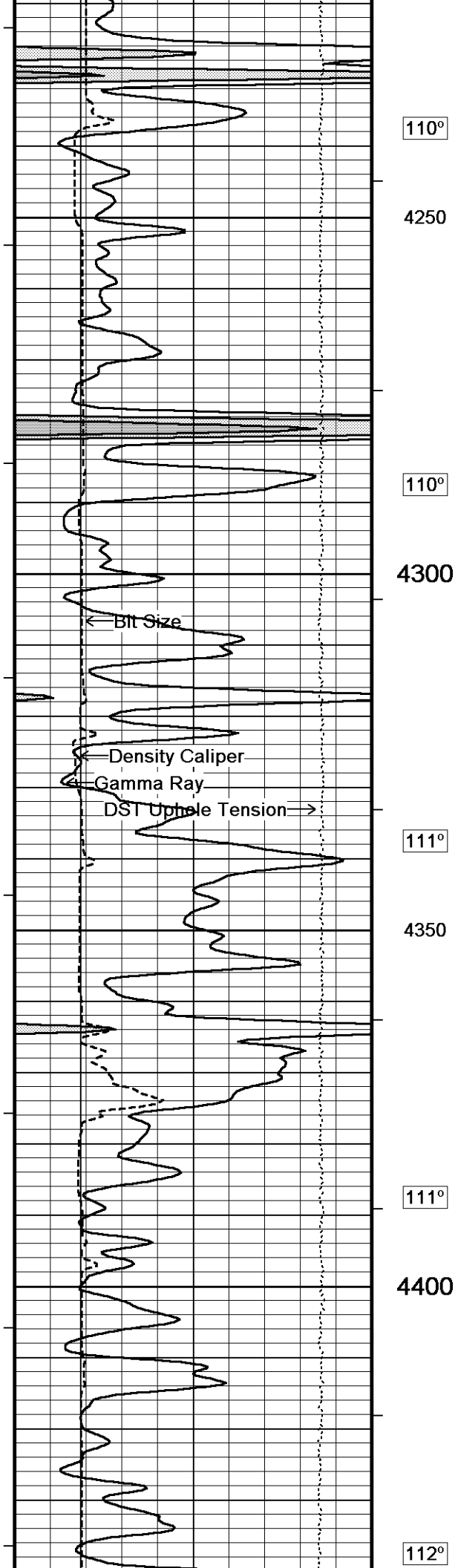
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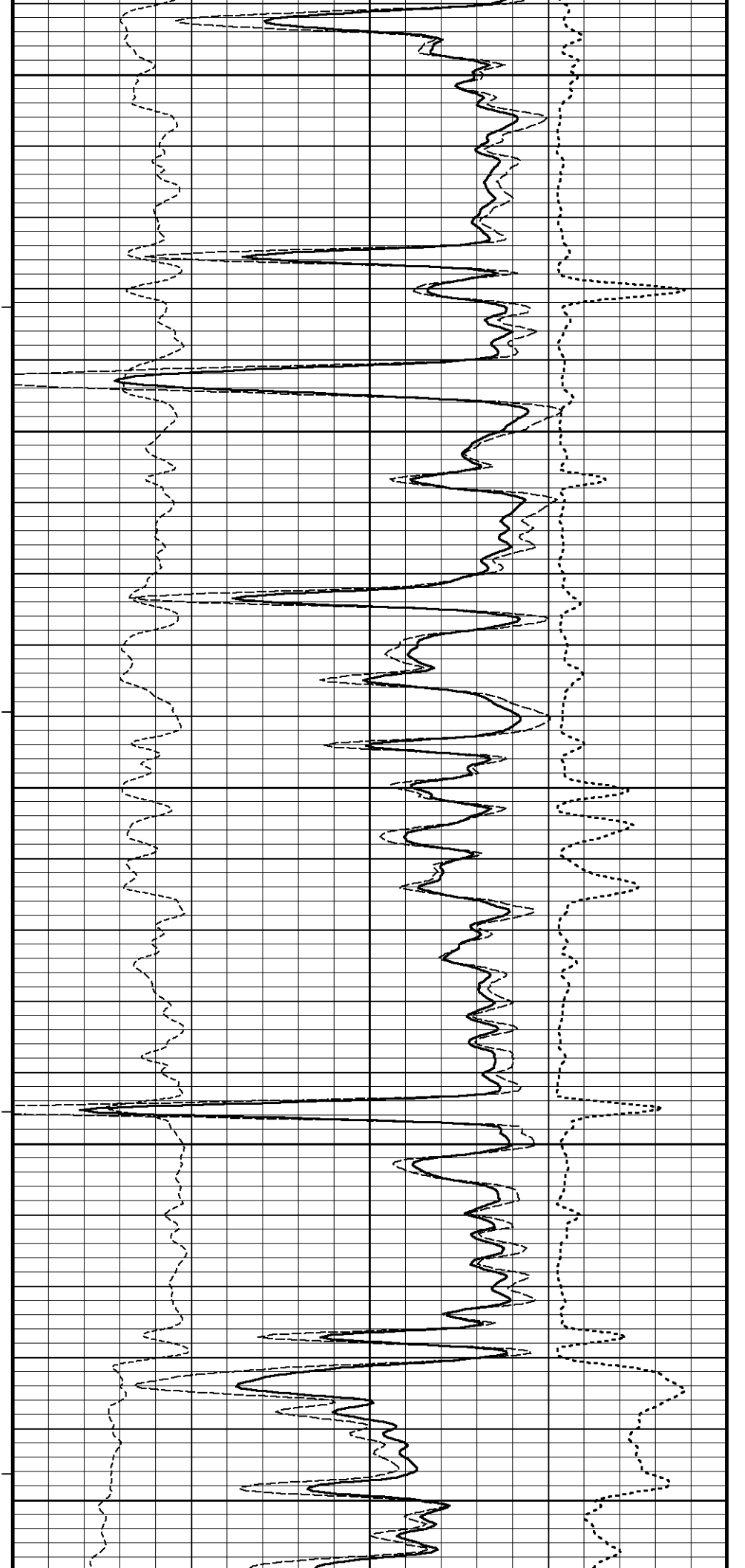
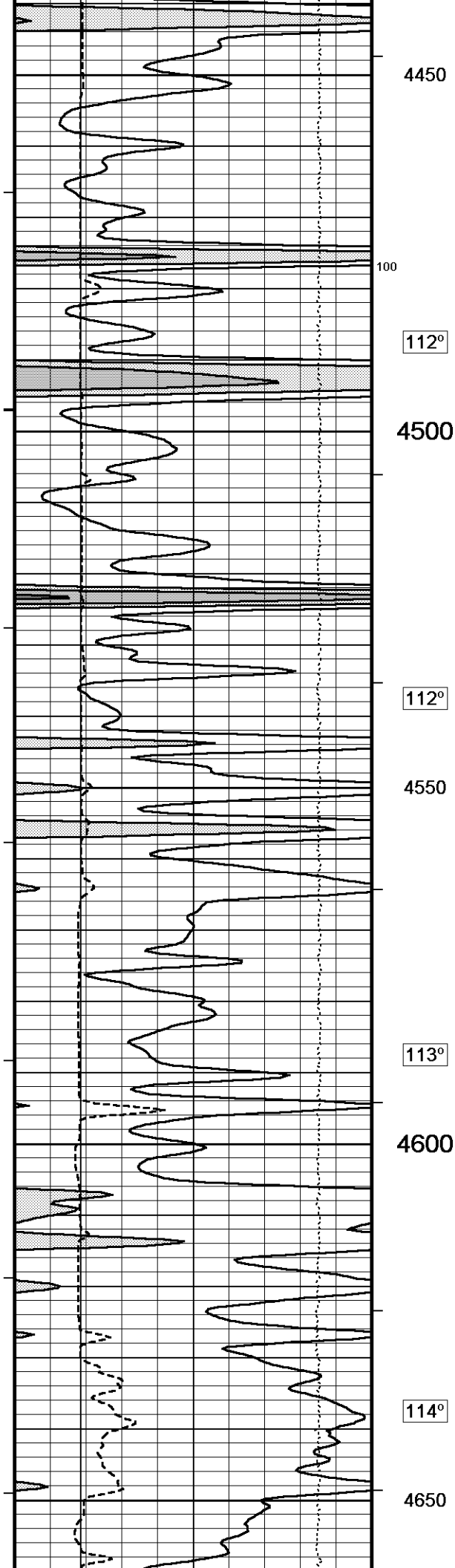
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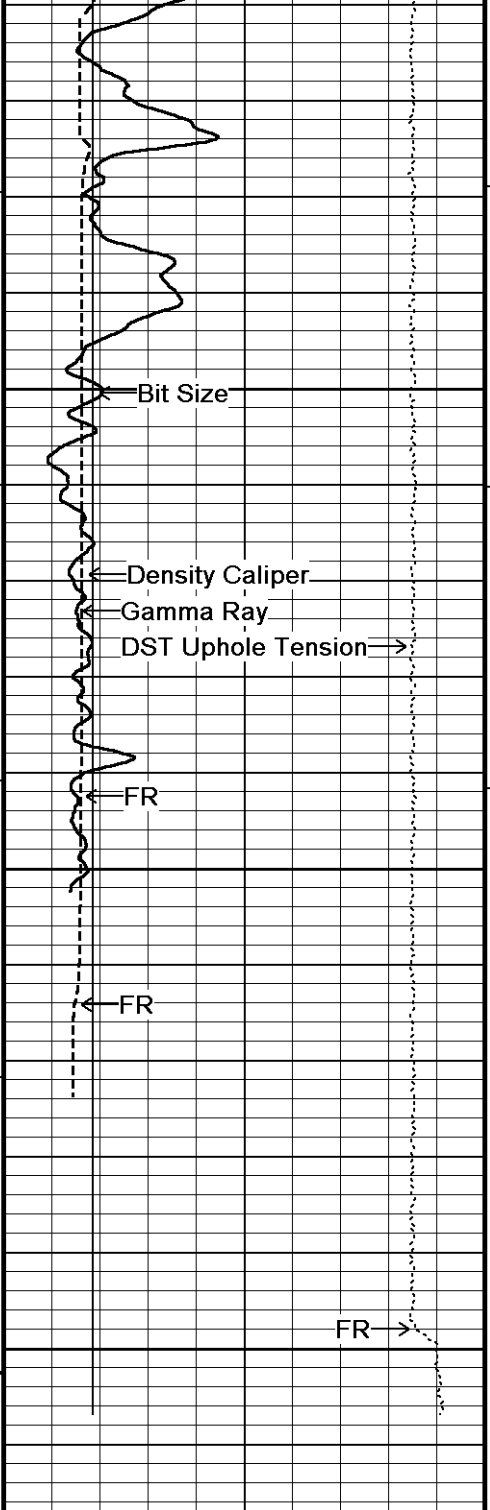












113°

4700

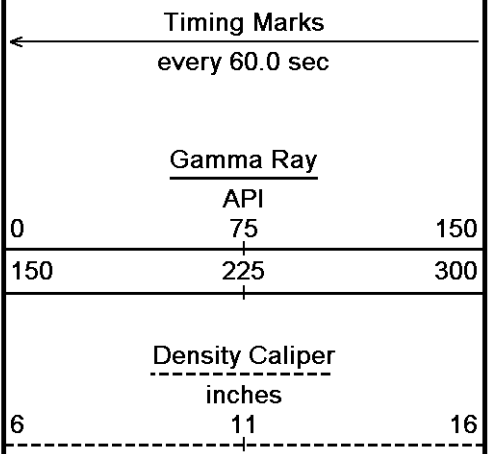
112°

4750

4800

4814

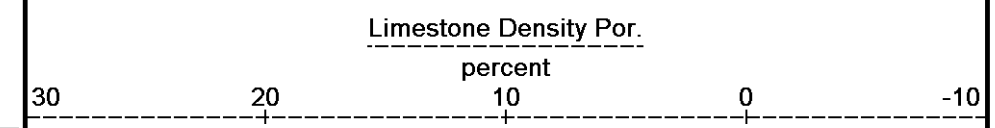
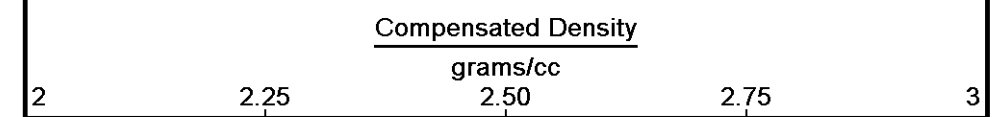
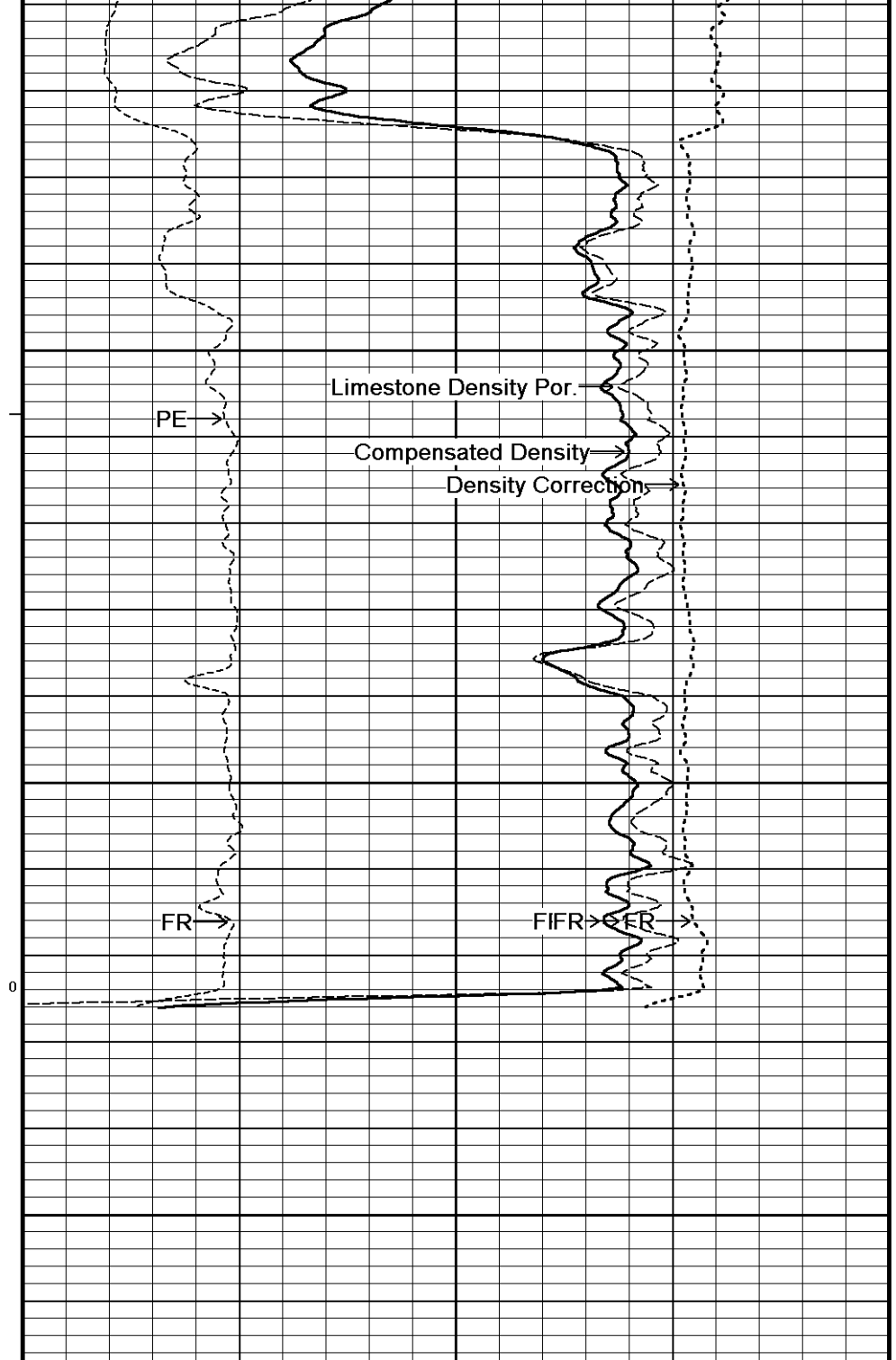
Depth
in
Feet

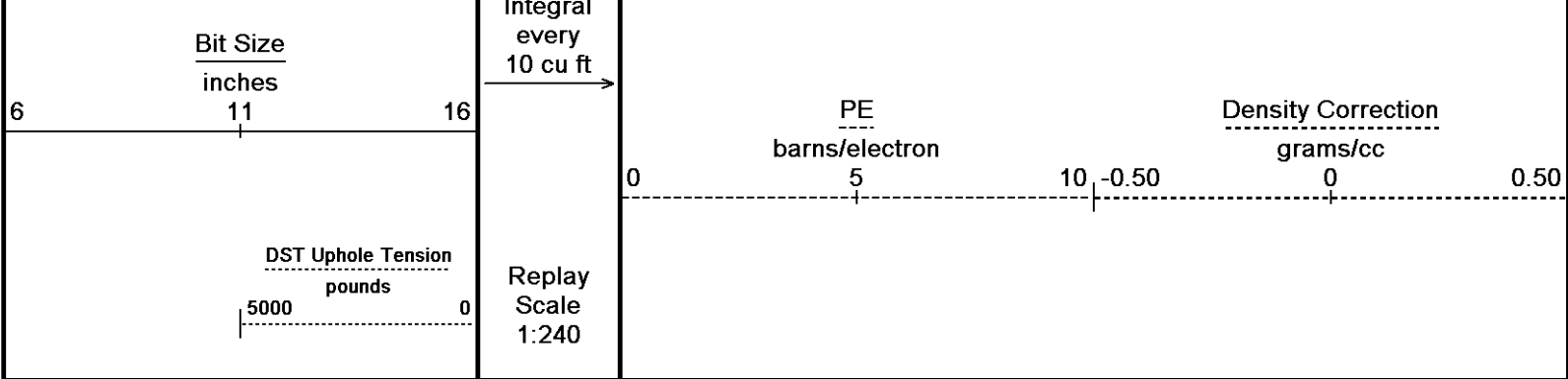


Borehole
Temp in
deg F

HVI
every
10 cu ft

Annular





Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 24-OCT-2013 03:49

Filename: C:\Minimus 13.05.9583\Log\Stelbar Freese 1-10\Stelbar Freese 1-10 Main.dta

Recorded on 24-OCT-2013 01:22

System Versions: Logged with 13.05.9583 Processed with 13.05.9583 Plotted with 13.05.9583

↑

5 INCH MAIN

↑

↓

REPEAT SECTION

↓

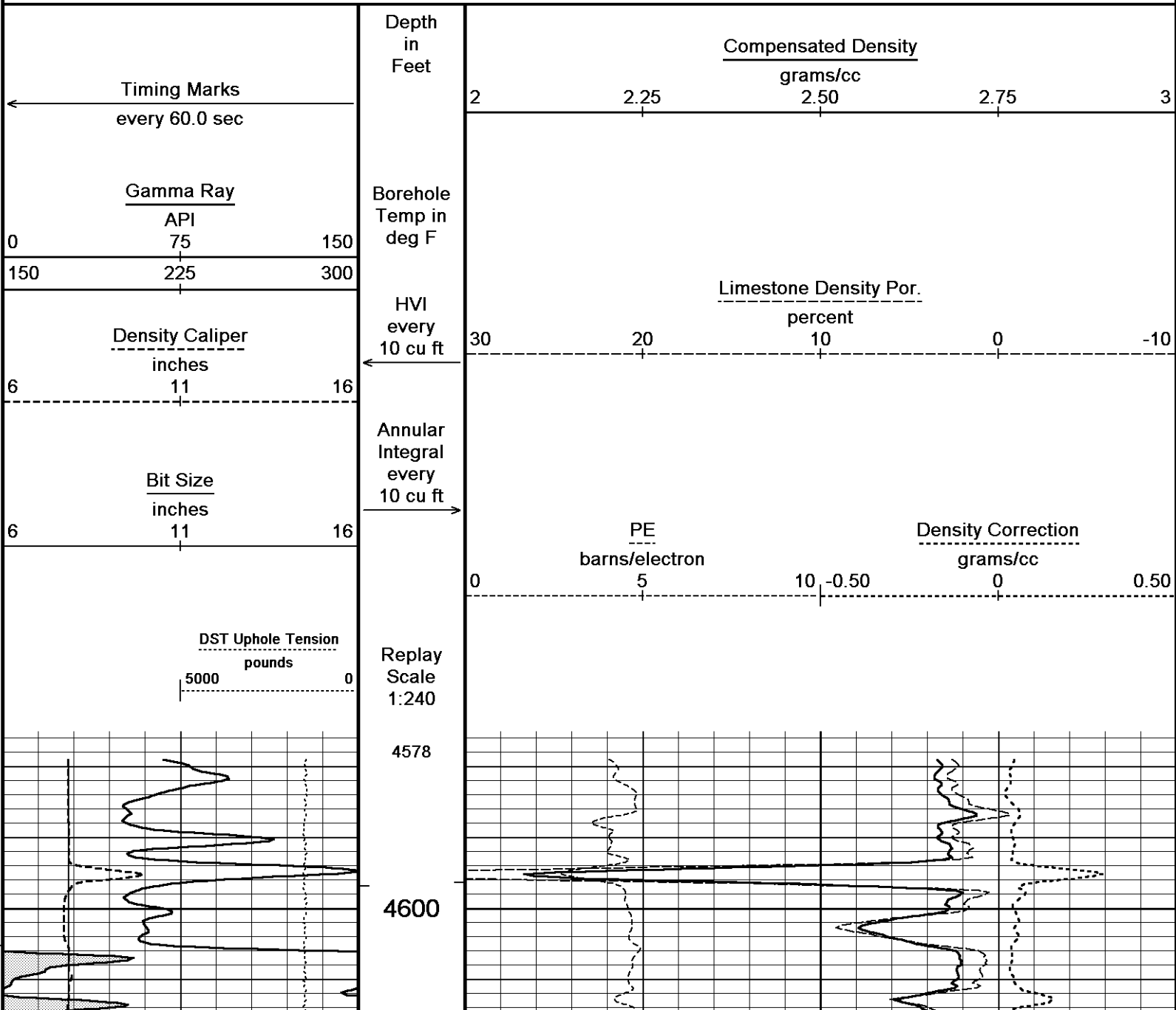
Depth Based Data - Maximum Sampling Increment 10.0cm

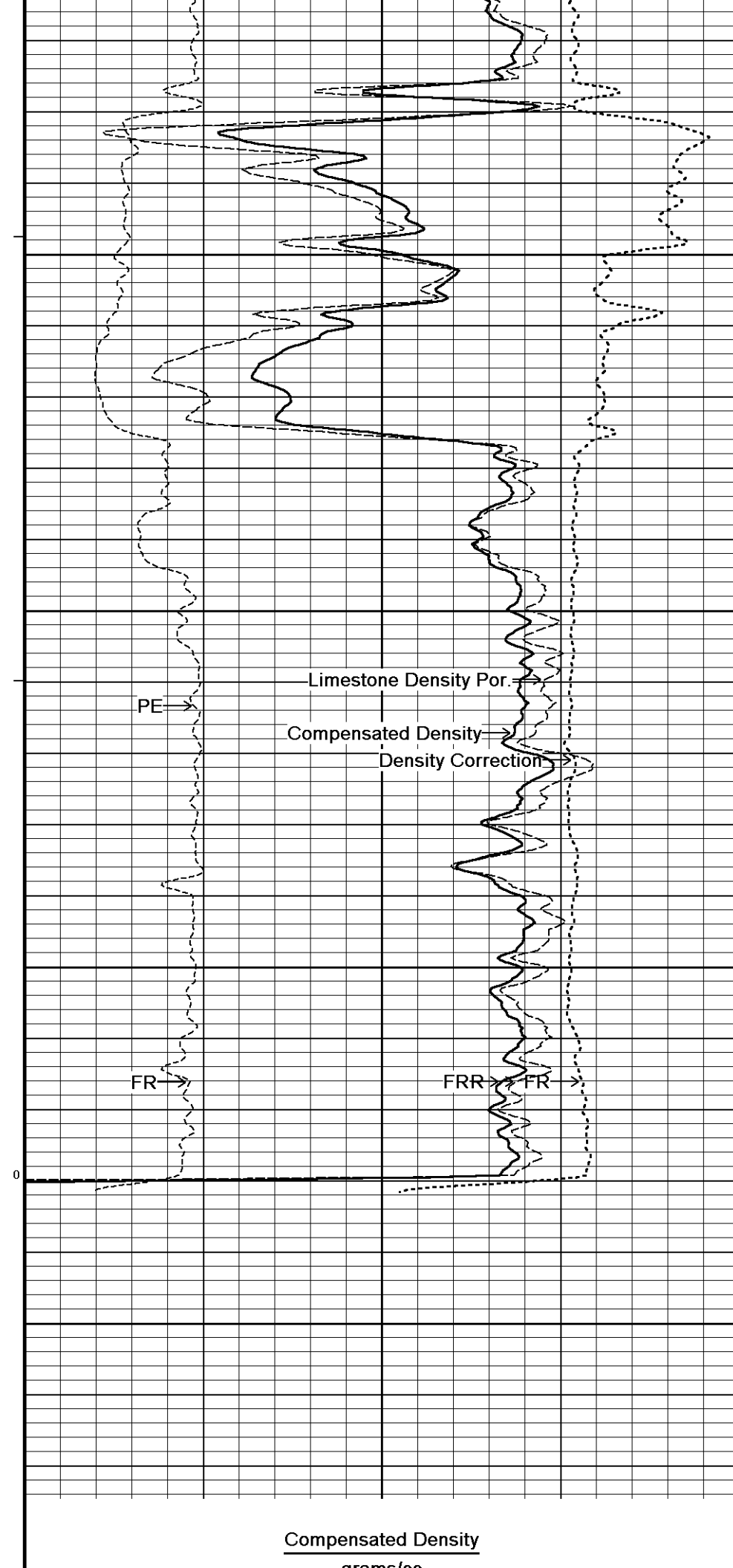
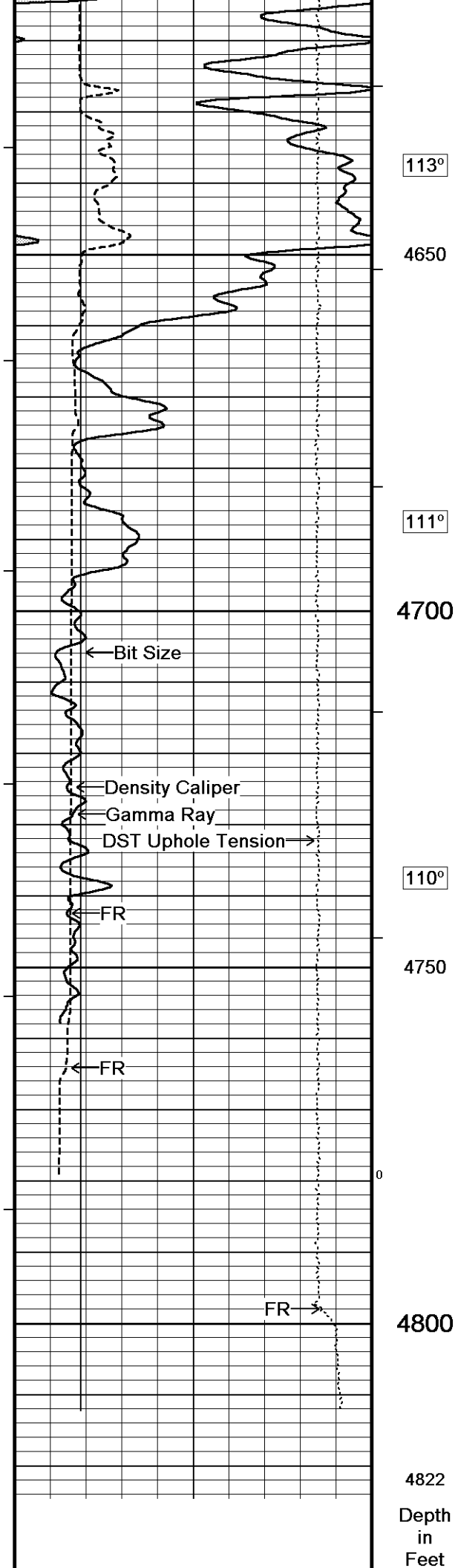
Plotted on 24-OCT-2013 03:49

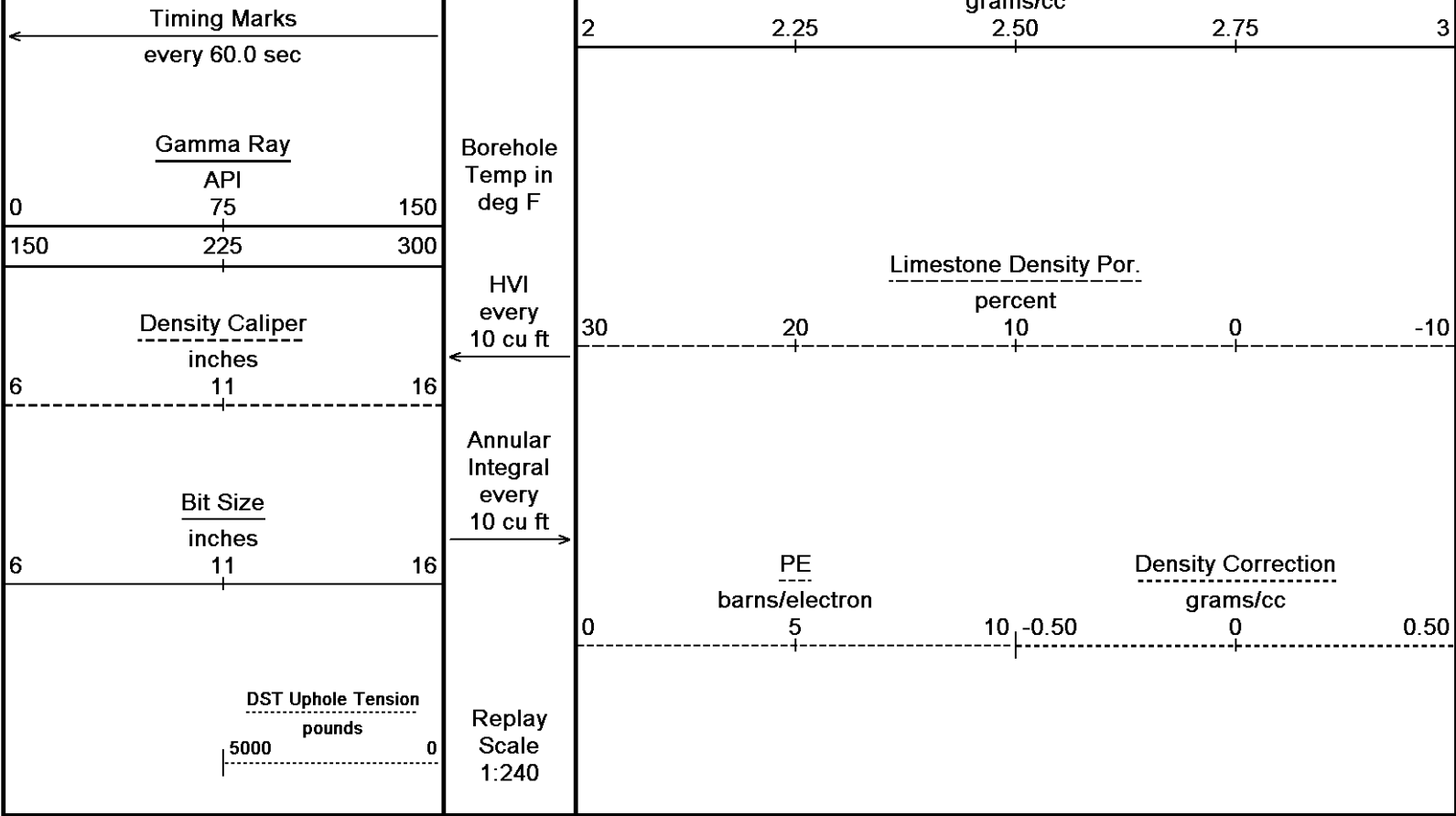
Filename: C:\Minimus 13.05.9583\Log\Stelbar Freese 1-10\Stelbar Freese 1-10 Repeat.dta

Recorded on 24-OCT-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
 Filename: C:\Minimus 13.05.9583\Log\Stelbar Freese 1-10\Stelbar Freese 1-10 Repeat.dta
 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\Log\Stelbar Freese 1-10\Stelbar Freese 1-10 Repeat.dta

General Constants All 000			Last Edited on 24-OCT-2013,00:44
General Parameters			
Mud Resistivity	0.600	ohm-metres	
Mud Resistivity Temperature	80.000	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	MML Caliper		
Rwa Parameters			
Porosity used	Base Density Porosity		
Resistivity used	Array Ind. Six Res Rt		
RWA Constant A	0.610		
RWA Constant M	2.150		
SW/APOR Tool Source	0.000		

Gamma Calibration MCG-D.K 469		Field Calibration on 10-OCT-2013 10:26	
	Measured	Calibrated (API)	
Background	70	48	
Calibrator (Gross)	1122	773	
Calibrator (Net)	1052	725	

Gamma Constants MCG-D.K 469 Last Edited on 23-OCT-2013,23:55

Gamma Calibrator Number	GRC38		
Mud Density	1.10	gm/cc	
Caliper Source for Processing	Density Caliper		
Tool Position	Eccentred		
Concentration of KCl		kppm	
K Mud Type	Chloride		
K Mud Concentration	0.00	%	
High Resolution Temperature Calibration MCG-D.K 469			
	Measured	Calibrated(Deg F)	Field Calibration on 18-AUG-2013,02:35
Lower	50.00	50.00	
Upper	100.00	100.00	
High Resolution Temperature Constants MCG-D.K 469			
Pre-filter Length	11		Last Edited on 18-AUG-2013,02:35
Caliper Calibration MPD-B 64			
Base Calibration			Base Calibration on 02-OCT-2013 15:52
Field Calibration			Field Calibration on 10-OCT-2013 10:11
Reading No	Measured	Calibrator Size (in)	
1	16381	3.99	
2	25151	5.98	
3	33629	7.97	
4	41918	9.86	
5	51268	11.92	
6	N/A	N/A	
Field Calibration	Measured Caliper (in)	Actual Caliper (in)	
	6.12	5.98	
Photo Density Calibration MPD-B 64			
Density Calibration			Base Calibration on 02-OCT-2013 16:14
Base Calibration			Field Check on 10-OCT-2013 10:08
	Measured	Calibrated (sdu)	
	Near	Far	
Reference 1	60377	33815	59556
Reference 2	25205	2910	24941
Field Check at Base	1160.4	1343.0	
Field Check	1157.1	1346.0	
PE Calibration			
Base Calibration			
	WS	WH	Ratio
Background	209	1031	
Reference 1	22936	60176	0.384
Reference 2	6851	25064	0.276
Field Check at Base	209.0	1030.6	
Field Check	208.2	1029.8	
Density Constants MPD-B 64			
Density Source Id	18235B		
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	

DNC1	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	

DOWNHOLE EQUIPMENT

C:\Minimus 13.05.9583\Log\Stelbar Freese 1-10\Stelbar Freese 1-10 Repeat.dta

CBH-C, Cablehead, 11 pin
CBH-CB 234 LG: 2.40 ft WT: 24.3 lb OD: 2.24 in

Compact Comms Gamma
MCG-D.K 469 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Micro-log
MML-A 3 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

Compact Neutron
MDN-A.B 66 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

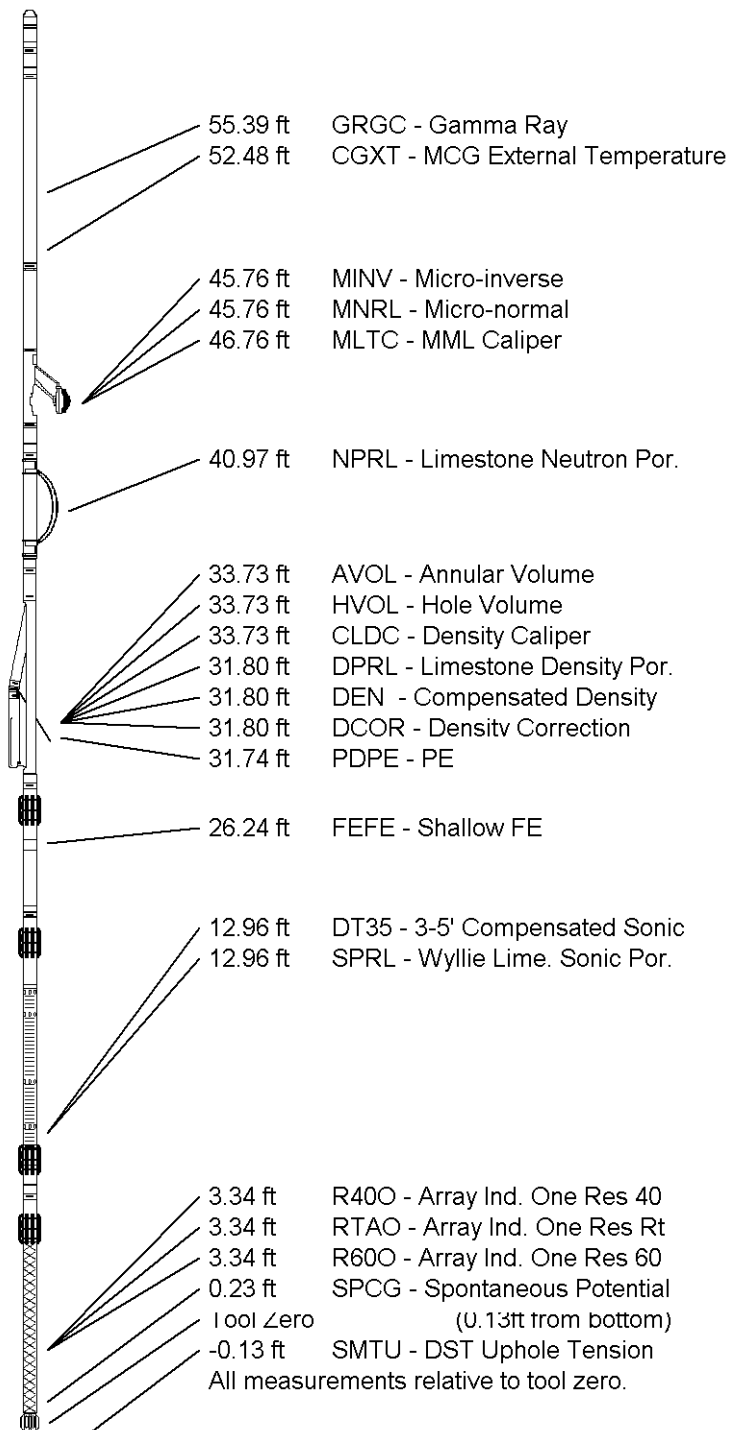
Compact Density/Caliper
MPD-B 64 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

Compact Focussed Electric
MFE-B.J 353 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 Induction
MAI-A.A 167 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 63.07 ft Weight: 480.6 lb



WELL	FREESE 1-10		
FIELD	WILDCAT		
PROVINCE/COUNTY	SCOTT		
COUNTRY/STATE	U.S.A. / KANSAS		

Elevation Kelly Bushing	3000.00	feet	First Reading	4764.00	
Elevation Drill Floor	2997.00	feet	Depth Driller	4798.00	feet
Elevation Ground Level	2993.00	feet	Depth Logger	4798.00	feet



COMPACT PHOTO DENSITY
COMPENSATED NEUTRON
MICRORESISTIVITY LOG