Weatherford

COMPACT PHOTO DENSITY COMPENSATED NEUTRON MICRO-RESISTIVITY LOG

COMPANY	SHAKESPEARE OIL CO., INC.
WELL	BURNS #1-19
FIELD	SWIFT FOX SOUTHEAST
PROVINCE/COUNTY	GOVE
COUNTRY/STATE	USA / KANSAS
LOCATION	1600' FNL & 335' FWL OF NW/4

SEC	TWP	RGE	Other Services
19	13	30	MAI/MFE

API Number 15-063-22203

Permanent Datum GL, Elevation 2877 feet
Log Measured From KB
Drilling Measured From KB

Elevations:	feet
KB	2887.00
DF	2885.00
GL	2877.00

Date	22-DEC-2014				
Run Number	ONE				
Service Order	7055-106443839				
Depth Driller	4660.00	feet			
Depth Logger	4661.00	feet			
First Reading	4642.00	feet			
Last Reading	3661.00	feet			
Casing Driller	261.00	feet			
Casing Logger	260.00	feet			
Bit Size	7.875	inches			
Hole Fluid Type	WBM				
Density / Viscosity	9.30	lb/USg	53.00	sec/qt	
PH / Fluid Loss	10.30		6.40	ml/30Min	
Sample Source	FLOWLINE				
Rm @ Measured Temp	1.25 @ 96.0	ohm-m			
Rmf @ Measured Temp	1.0 @ 96.0	ohm-m			
Rmc @ Measured Temp	1.50 @ 96.0	ohm-m			
Source Rmf / Rmc	CALC		CALC		
Rm @ BHT	1.0 @120.0	ohm-m			
Time Since Circulation	6 HOURS				
Max Recorded Temp	120.00	deg F			
Equipment / Base	13057		LIB		
Recorded By	JUSTIN HICKS				
Witnessed By	TOBY ECK				

BOREHOLE RECORD

Last Edited: 22-DEC-2014 05:41

Bit Size (inches)	Depth From (feet)	Depth To (feet)
7.850	261.00	4660.00

CASING RECORD

Type	Size (inches)	Depth From (feet)	Shoe Depth (feet)	Weight (pounds/ft)
SURFACE	8.625	0.00	261.00	36.00

REMARKS

TOOLS RAN: CBH, MCG, MMR, MDN, MPD, MFE, MAI RAN IN COMBINATION.

HARDWARE USED:
MAI: TWO 0.5 INCH STANDOFFS.
MFE: ONE 0.5 INCH STANDOFF.
MDN: DUAL NEUTRON BOWSPRING.
MPD: 8 INCH PROFILE PLATE.

2.71 G/CC DENSITY MATRIX USED TO CALCULATE POROSITY.
ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST.

TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 1842 CU.FT.
ANNULAR HOLE VOLUME WITH 5.5 INCH PRODUCTION CASING FROM TD TO SURFACE CASING = 1118 CU.FT.

FIELD TICKET NUMBER: 7055-106443839

RIG: H-D DRILLING, RIG #2

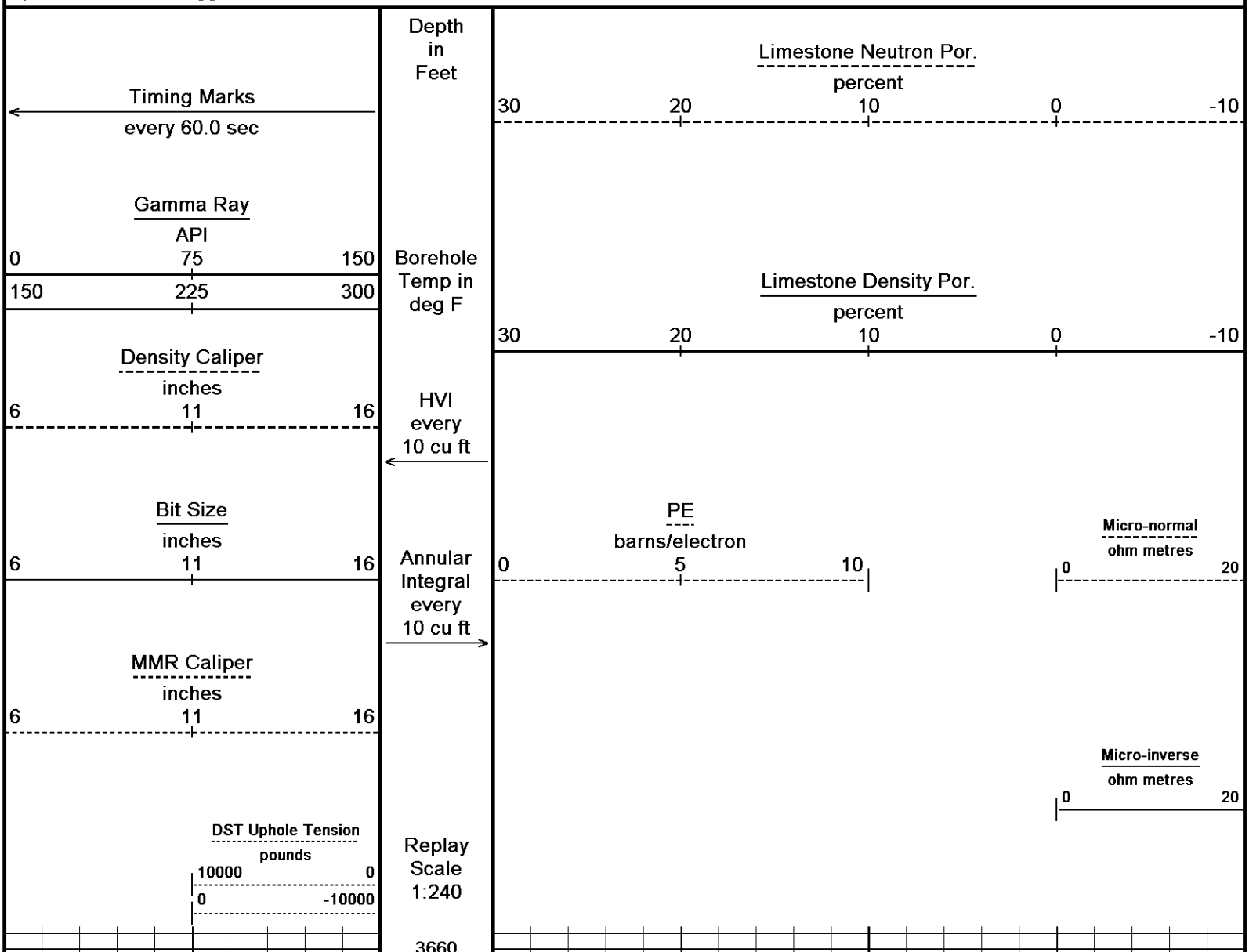
OPERATOR(S): J. LAPOINT

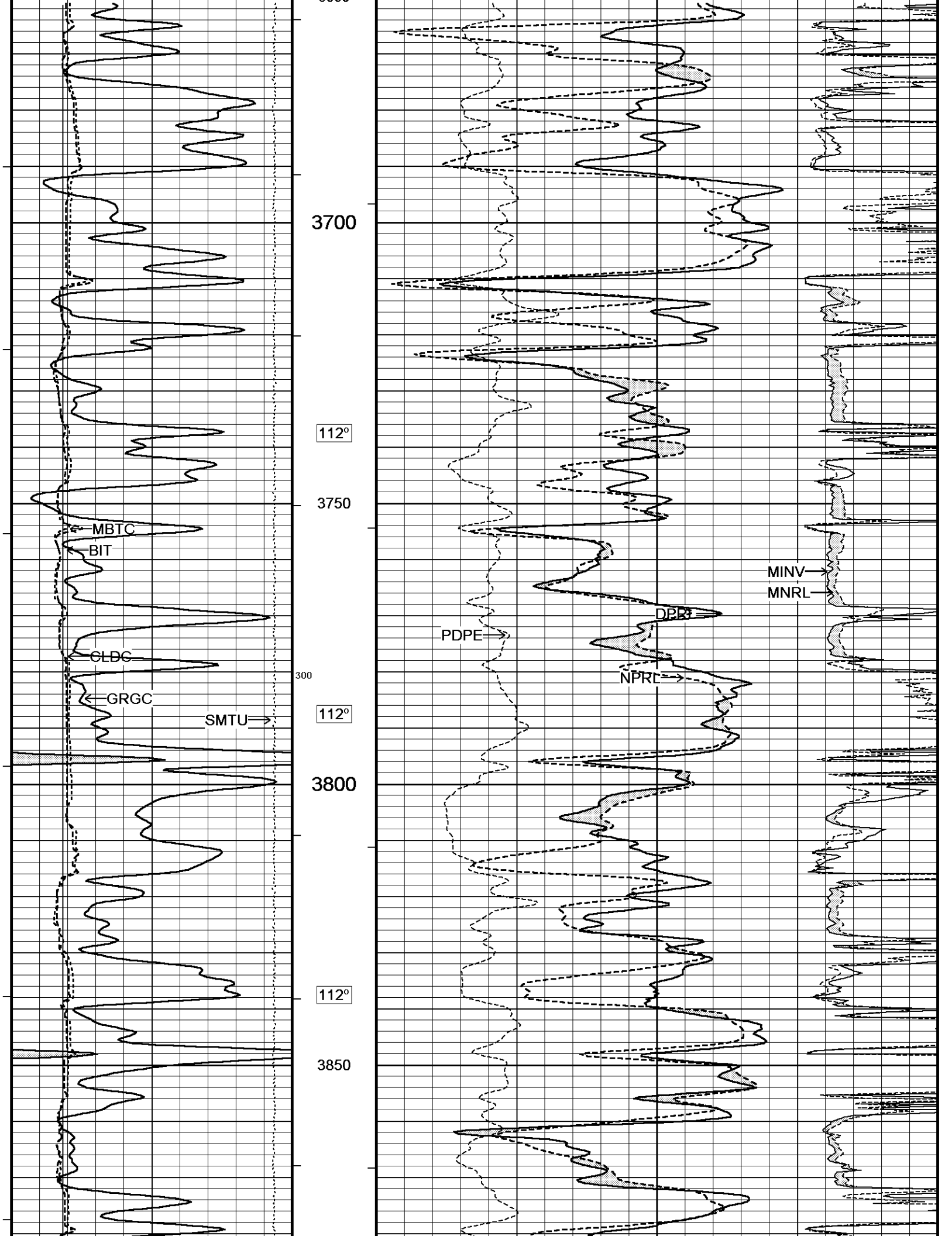
MUD PROPERTIES:
CHLORIDES: 2500 MG/L
LCM: 1 PPB

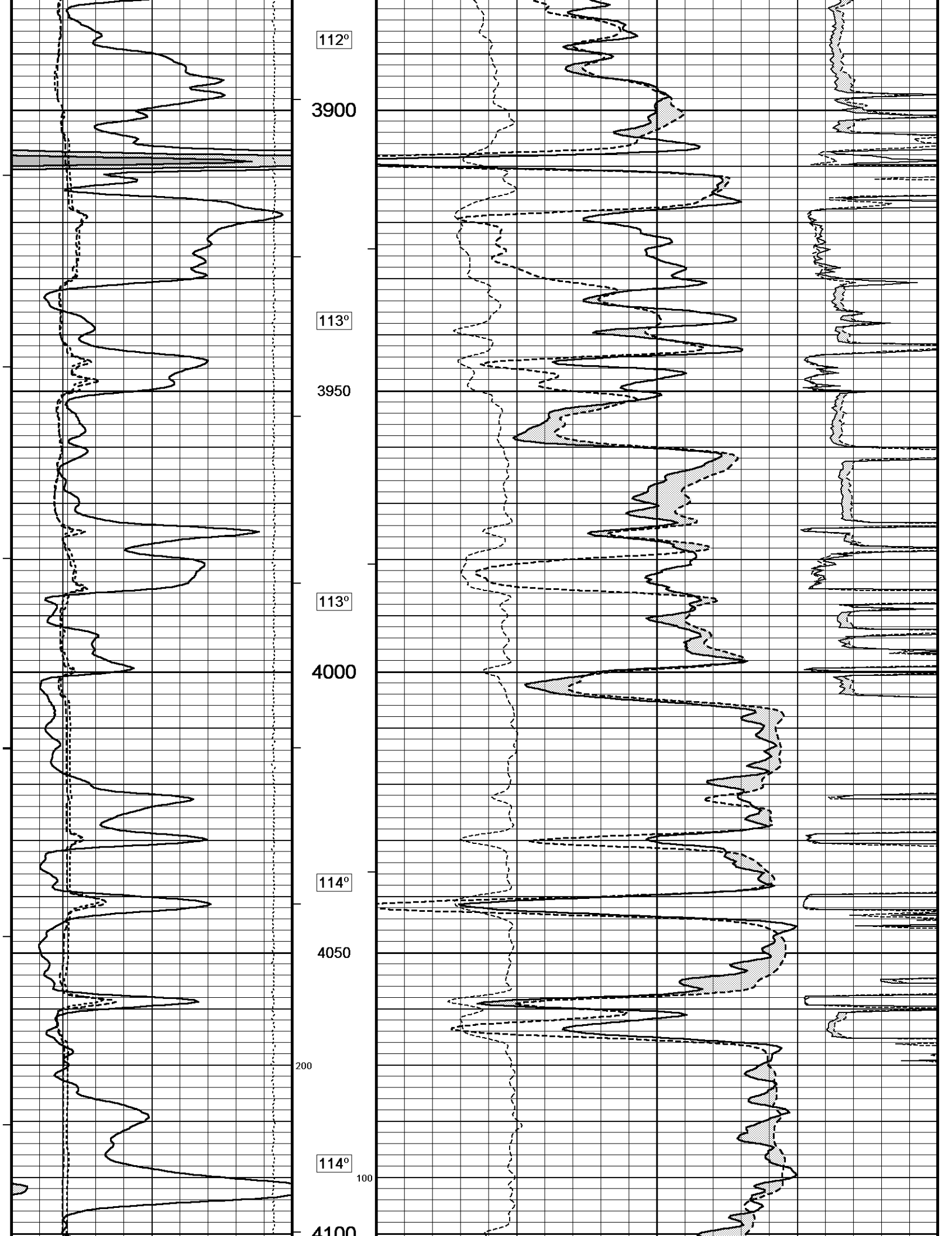
HOLE WASHOUTS AND RUGOSITY WILL AFFECT LOG QUALITY AND REPEATABILITY.

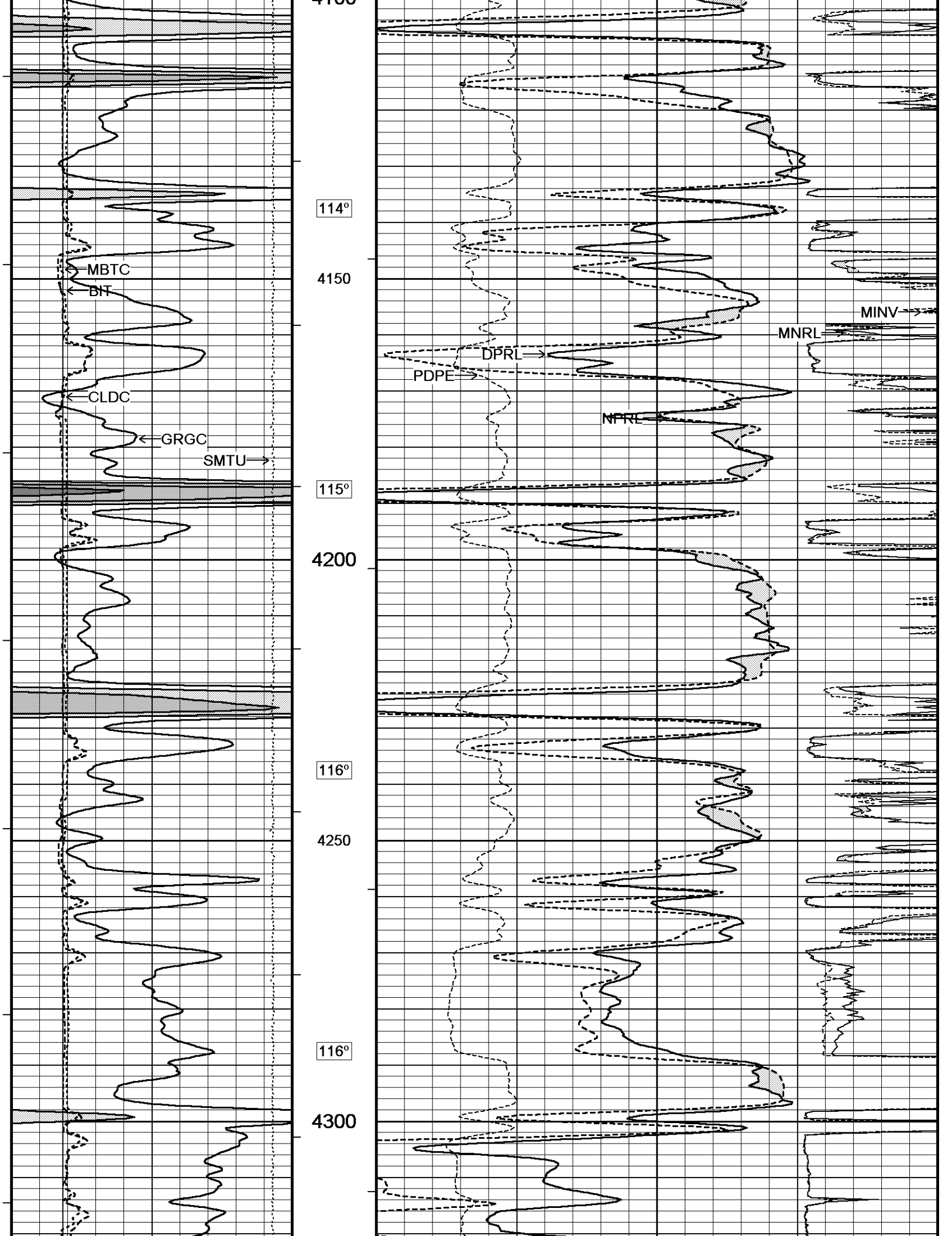
5 INCH POROSITY LOG

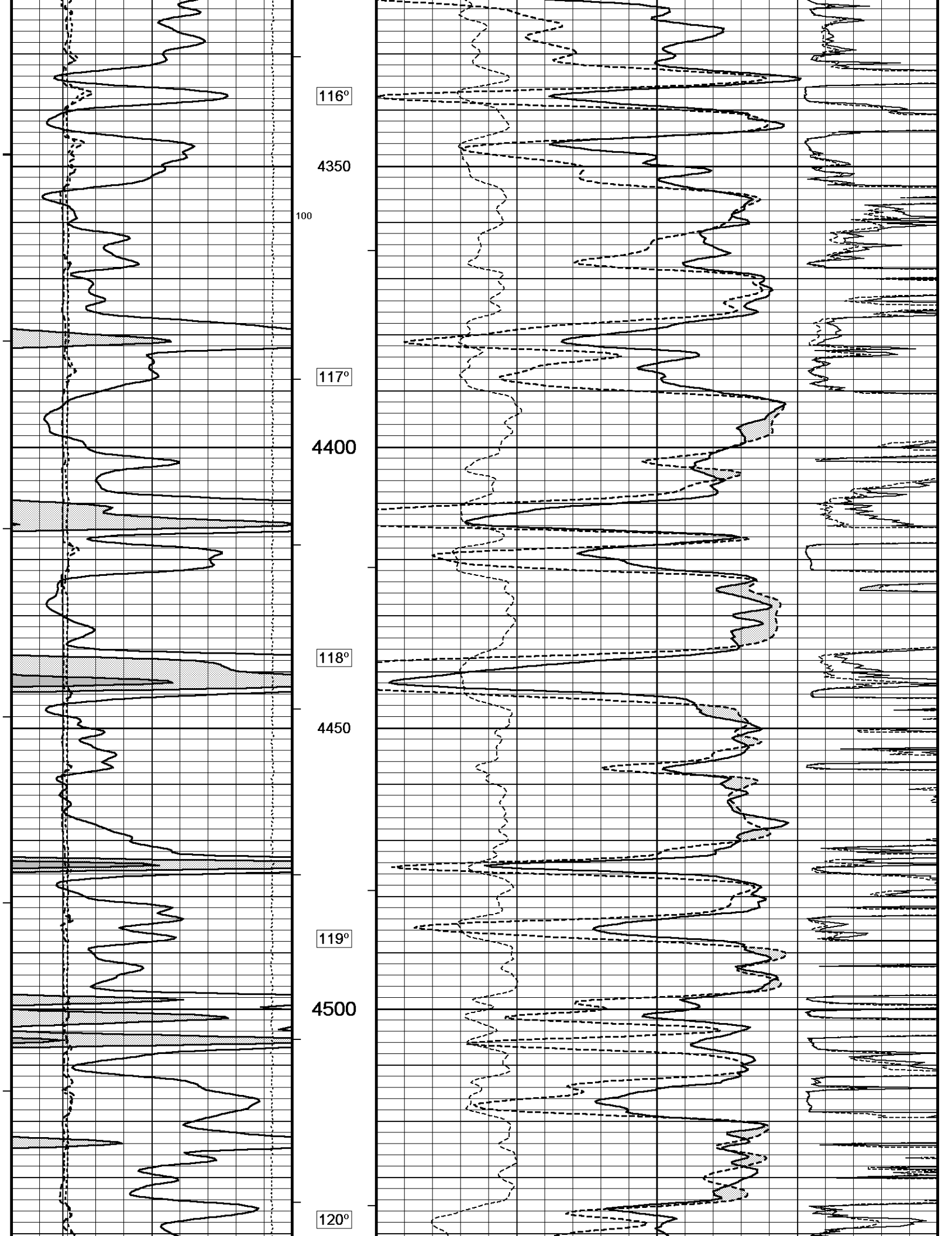
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 22-DEC-2014 10:04
Filename: C:\Minimus 14.05.5331\Data\Shakespeare (Burns #1-19)\MAIN PASS.dta
Recorded on 22-DEC-2014 07:24
System Versions: Logged with 14.05.5331 Plotted with 14.05.5331

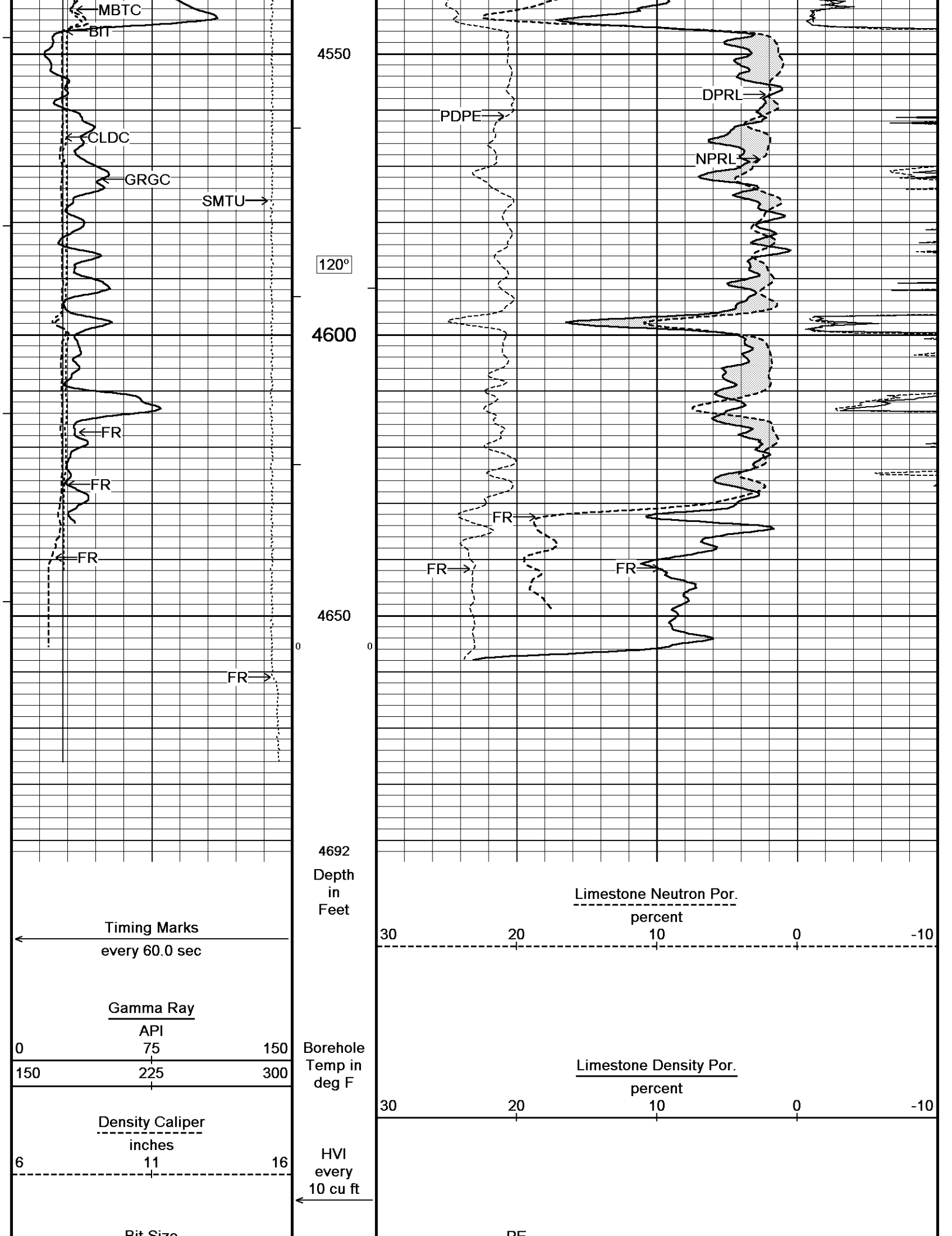


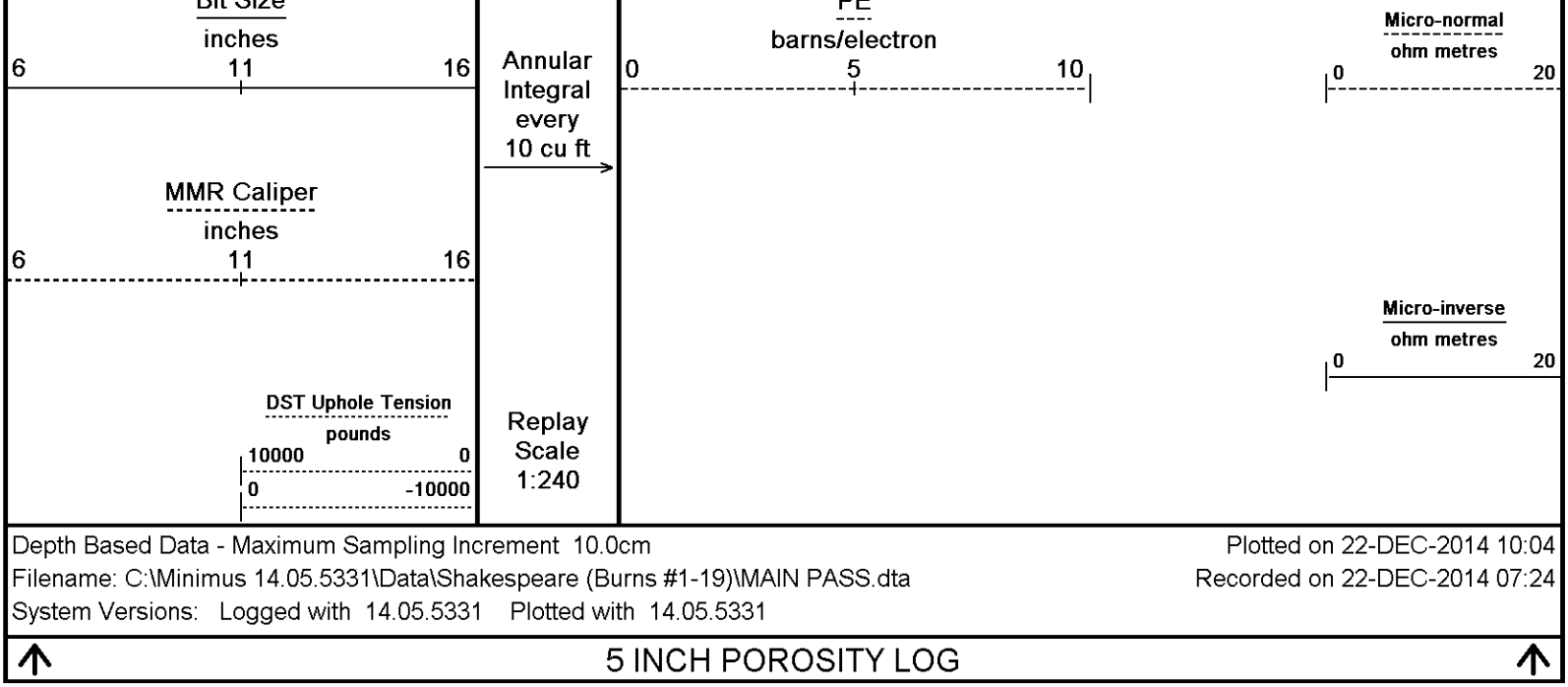

3700
112°
3750
MBTC
BIT
CLDC
300
GRGC
SMTU
112°
3800
112°
3850
PDPE
DPBT
NPRL
MINV
MNRL


112°
3900
113°
3950
113°
4000
114°
4050
200
114°
100
4100


114°
4150
MBTC
BIT
MINV
MNRL
DPRL
PDPE
CLDC
NPRL
GRGC
SMTU
115°
4200
116°
4250
116°
4300


116°
4350
100
117°
4400
118°
4450
119°
4500
120°


MBTC
BIT
CLDC
GRGC
SMTU
FR
FR
FR
FR
4550
120°
4600
4650
4692
Depth in Feet
PDPE
DPRL
NPRL
FR
FR
FR
Timing Marks
every 60.0 sec
Gamma Ray
API
0
75
150
150
225
300
Borehole Temp in deg F
Density Caliper
inches
6
11
16
HVI every 10 cu ft
Limestone Neutron Por.
percent
30
20
10
0
-10
Limestone Density Por.
percent
30
20
10
0
-10

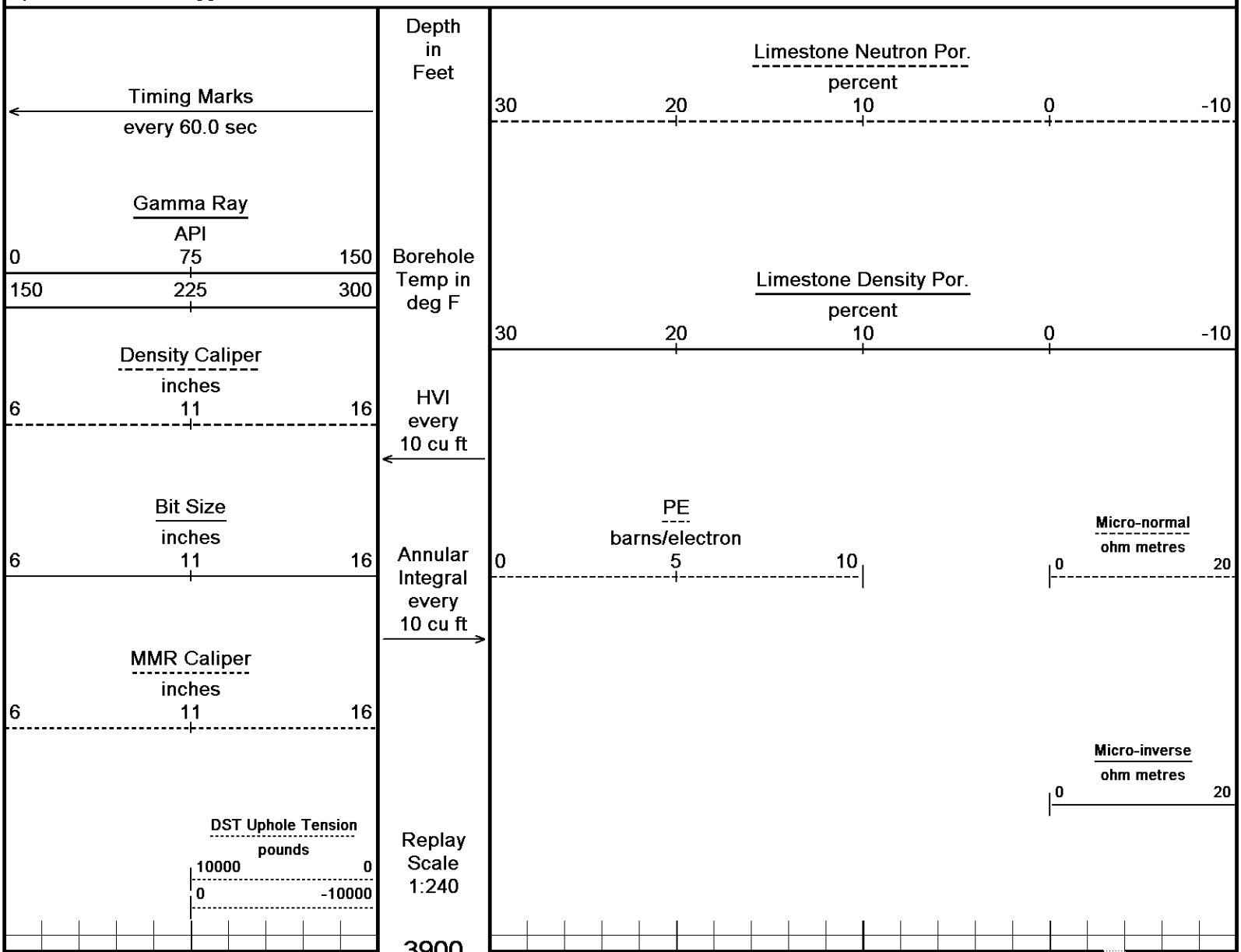


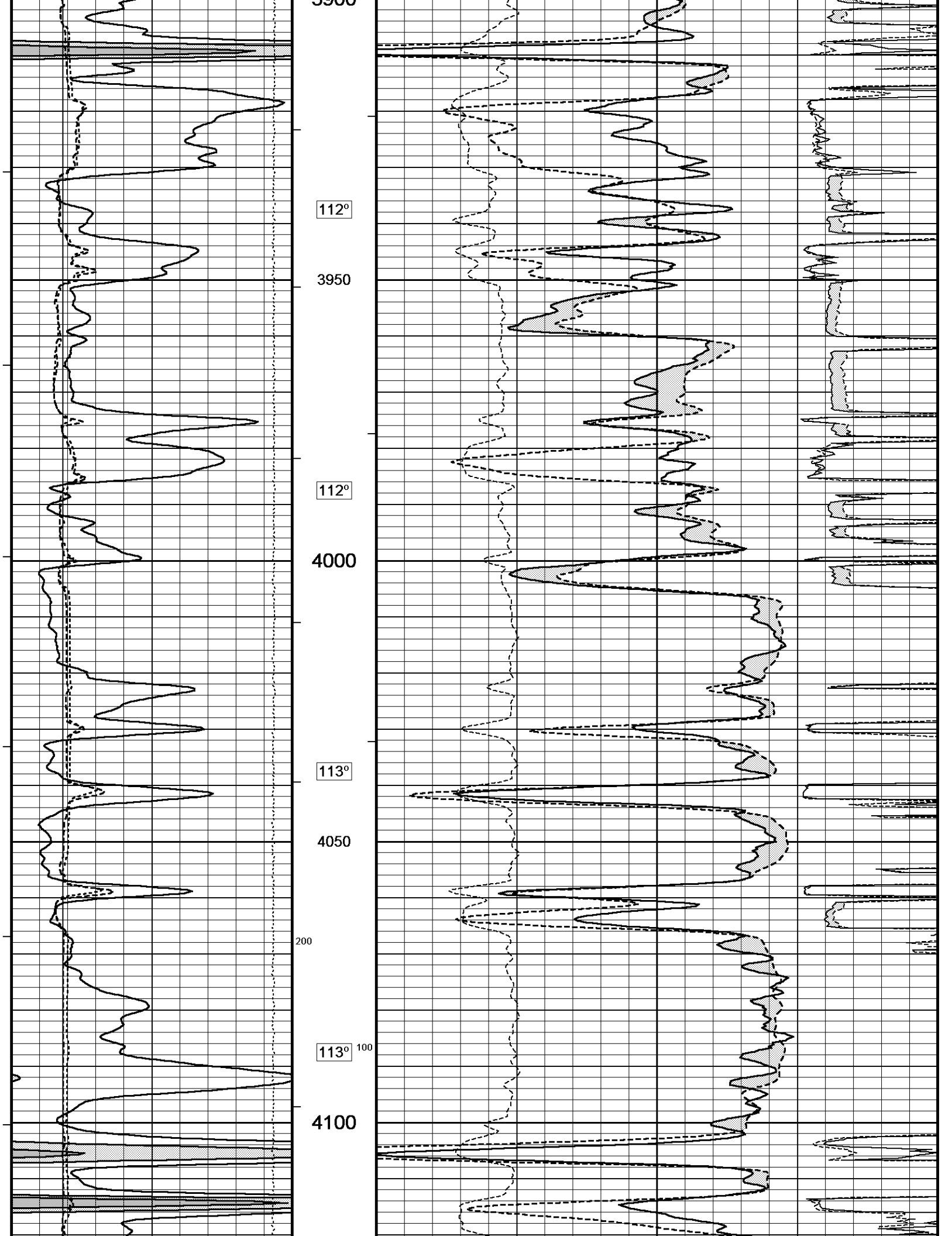
Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 22-DEC-2014 10:04
Filename: C:\Minimus 14.05.5331\Data\Shakespeare (Burns #1-19)\MAIN PASS.dta — Recorded on 22-DEC-2014 07:24
System Versions: Logged with 14.05.5331 Plotted with 14.05.5331

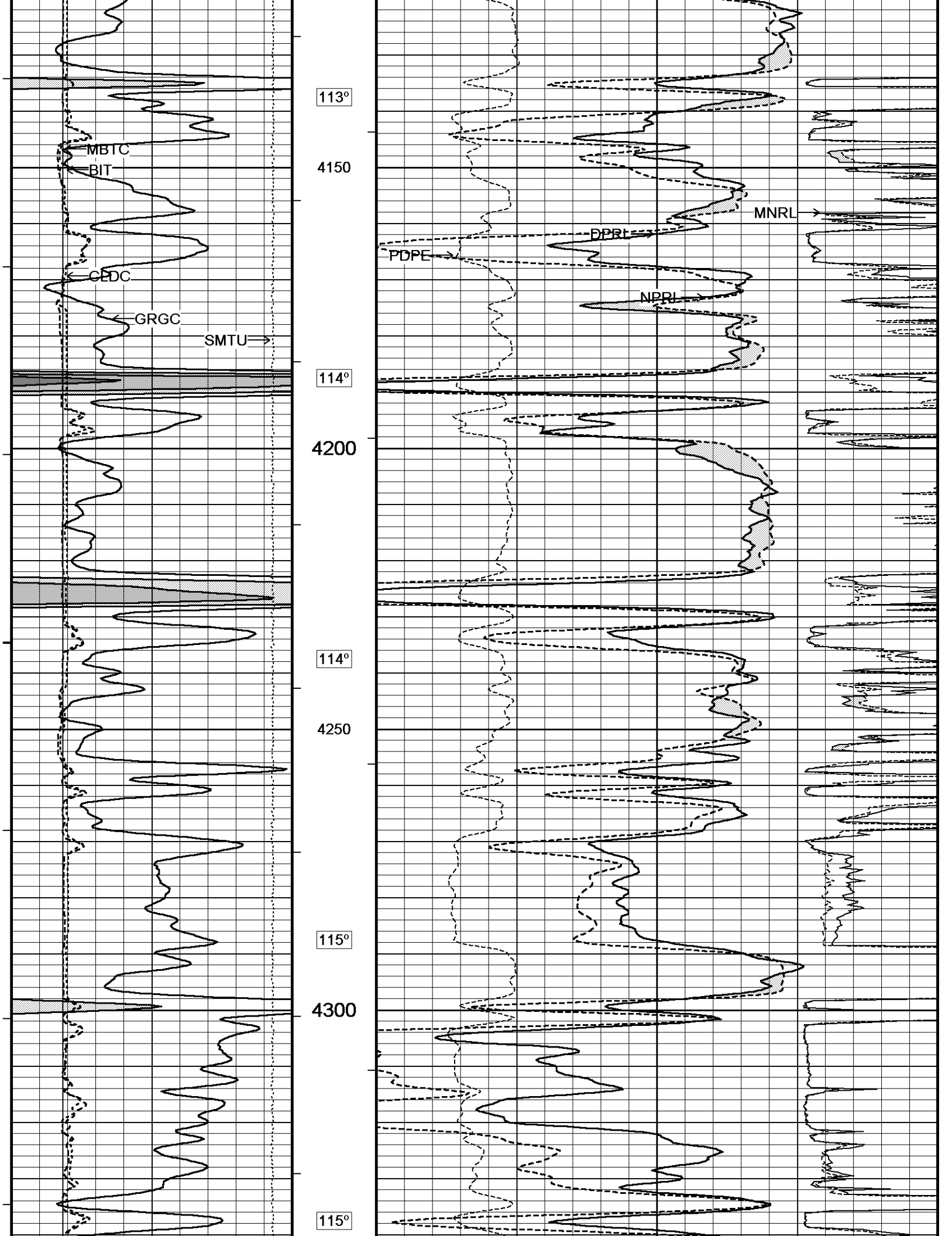
5 INCH POROSITY LOG

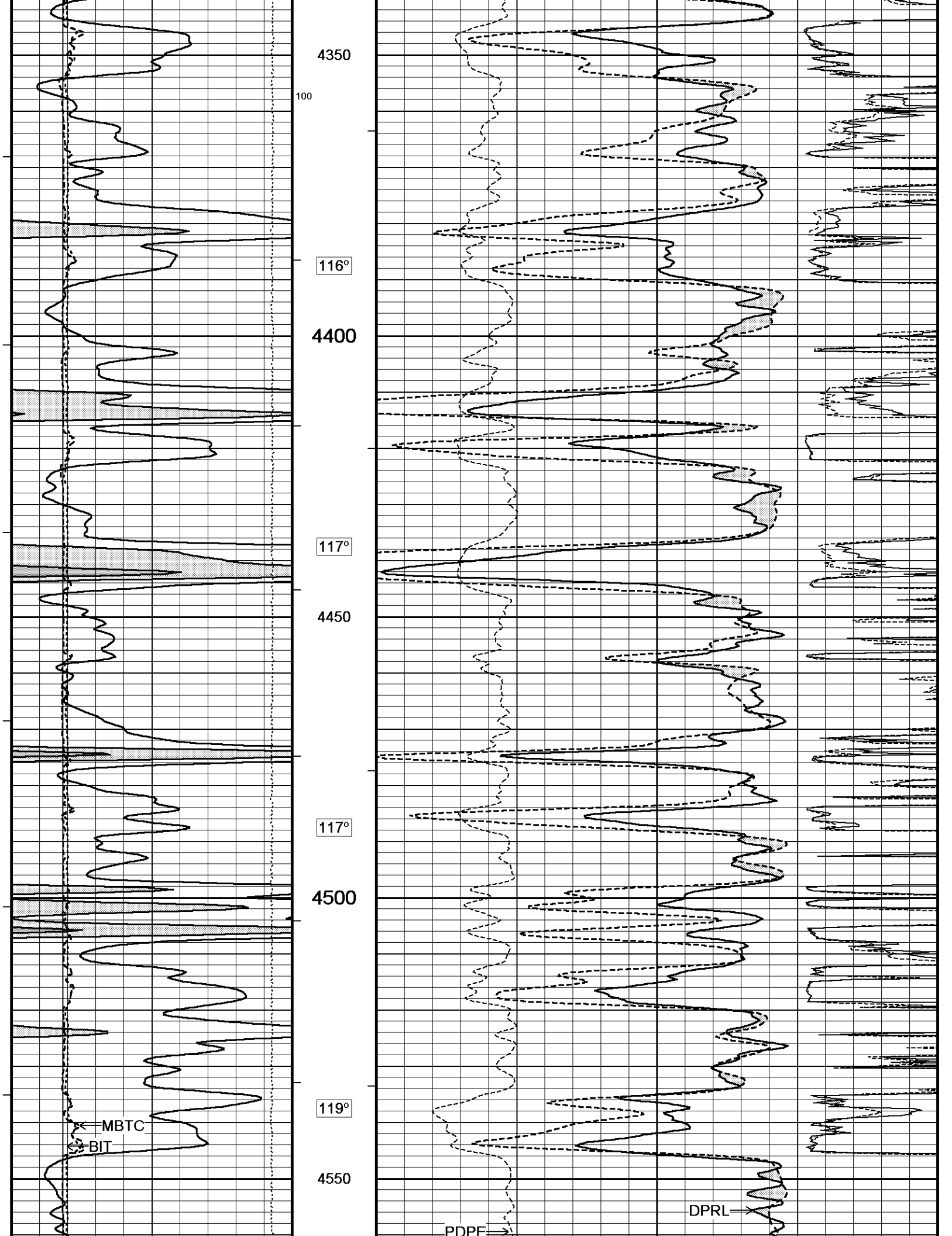
REPEAT SECTION

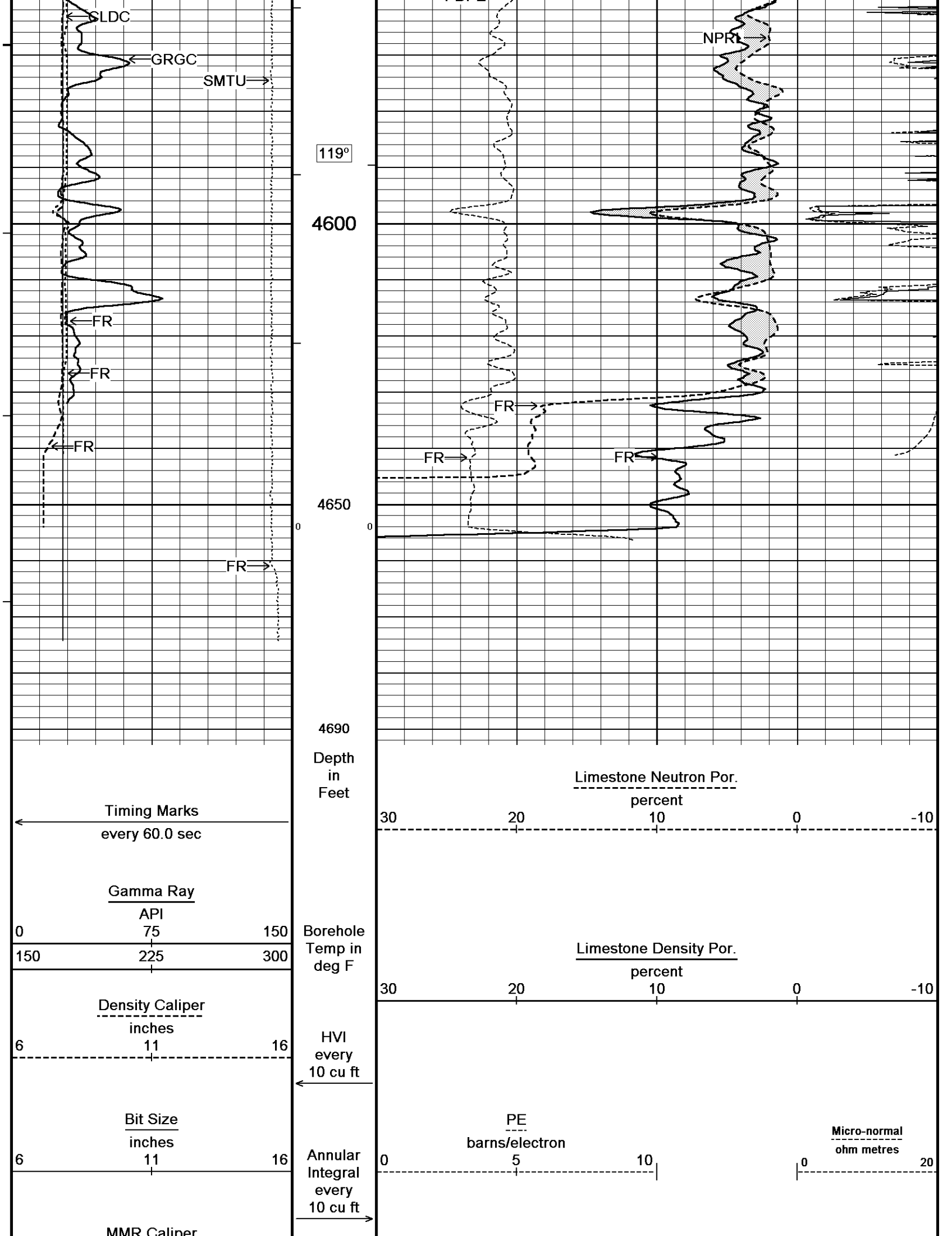
Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 22-DEC-2014 10:04
Filename: C:\Minimus 14.05.5331\Data\Shakespeare (Burns #1-19)\REPEAT PASS.dta — Recorded on 22-DEC-2014 06:54
System Versions: Logged with 14.05.5331 Plotted with 14.05.5331




112°
3950
112°
4000
113°
4050
200
113°
100
4100


MBTC
BIT
CEDC
GRGC
SMTU
113°
4150
114°
4200
114°
4250
115°
4300
115°
MNRL
DPRL
PDPE
NPRL


4350
100
116°
4400
117°
4450
117°
4500
119°
4550
MBTC
BIT
DPRL
PDPE


SLDC
GRGC
SMTU
FR
FR
FR
FR
119°
4600
4650
4690
NPRL
FR
FR
FR
Depth in Feet
Timing Marks
every 60.0 sec
Gamma Ray
API
0
75
150
150
225
300
Borehole Temp in deg F
Density Caliper
inches
6
11
16
HVI every 10 cu ft
Bit Size
inches
6
11
16
Annular Integral every 10 cu ft
MMR Caliper
Limestone Neutron Por.
percent
30
20
10
0
-10
Limestone Density Por.
percent
30
20
10
0
-10
PE
barns/electron
0
5
10
Micro-normal
ohm metres
0
20

MMR Caliper
inches
6 11 16

DST Uphole Tension
pounds
10000 0
0 -10000

Replay
Scale
1:240

Micro-inverse
ohm metres
0 20

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\Minimus 14.05.5331\Data\Shakespeare (Burns #1-19)\REPEAT PASS.dta
System Versions: Logged with 14.05.5331 Plotted with 14.05.5331

Plotted on 22-DEC-2014 10:04
Recorded on 22-DEC-2014 06:54

REPEAT SECTION

5 INCH BULK DENSITY

Depth Based Data - Maximum Sampling Increment 10.0cm
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System Versions: Logged with 14.05.5331 Plotted with 14.05.5331

Plotted on 22-DEC-2014 10:04
Recorded on 22-DEC-2014 07:24

Timing Marks
every 60.0 sec

Depth
in
Feet

Compensated Density
grams/cc
2 2.25 2.50 2.75 3

Gamma Ray
API
0 75 150
150 225 300

Borehole
Temp in
deg F

Limestone Density Por.
percent
30 20 10 0 -10

HVI
every
10 cu ft

Density Caliper
inches
6 11 16

Annular
Integral
every
10 cu ft

Bit Size
inches
6 11 16

PE
barns/electron
0 5 10

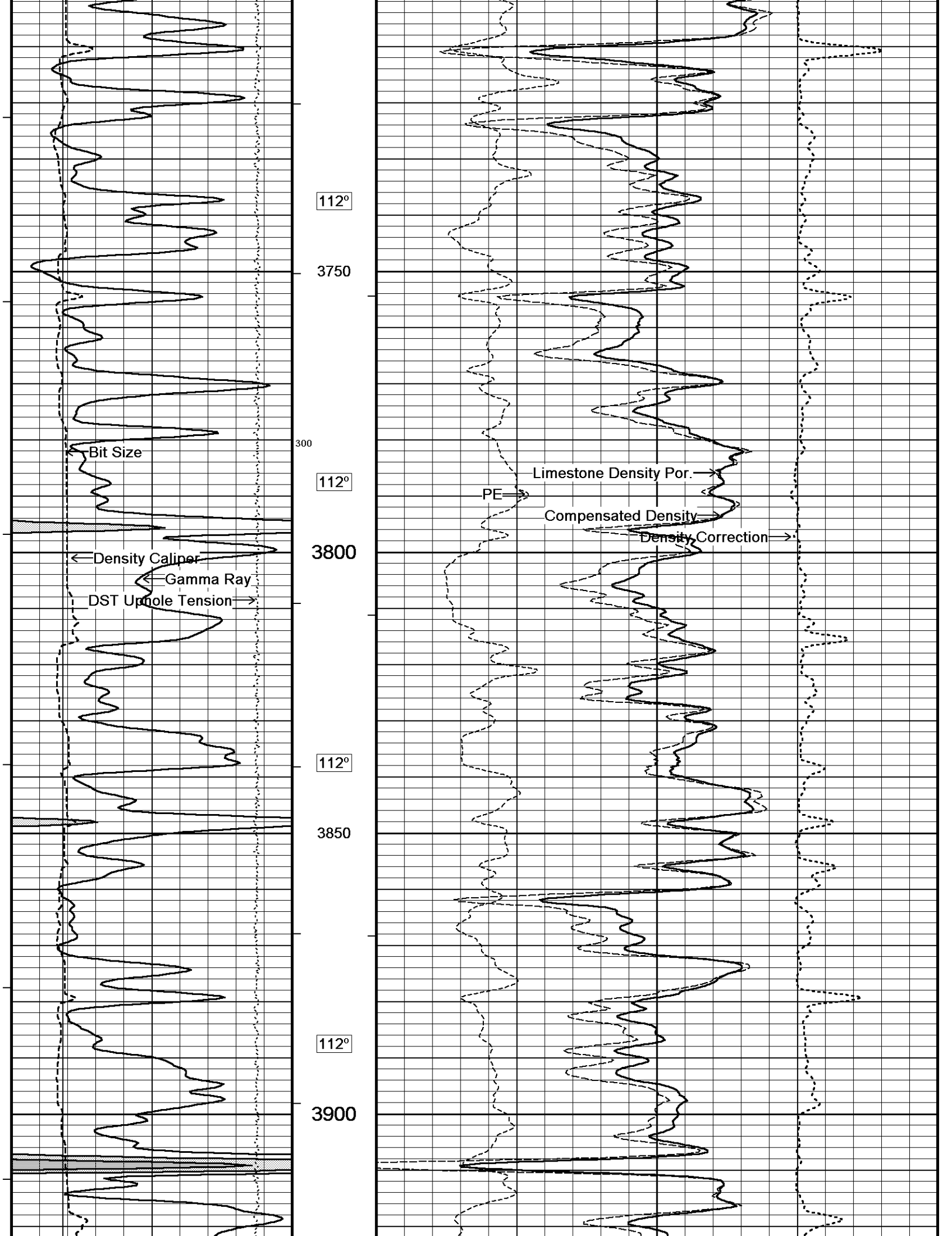
Density Correction
grams/cc
-0.50 0 0.50

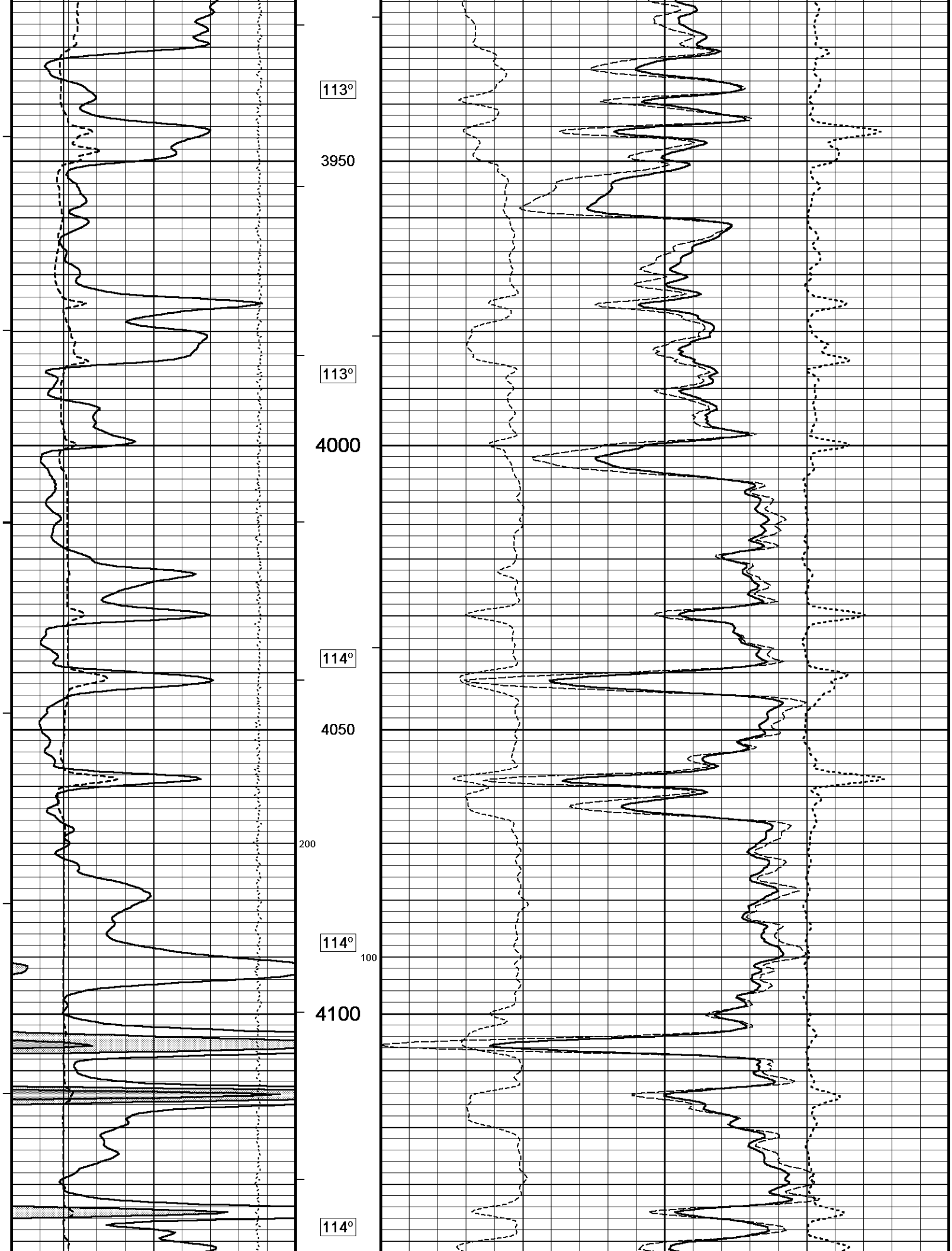
DST Uphole Tension
pounds
5000 0

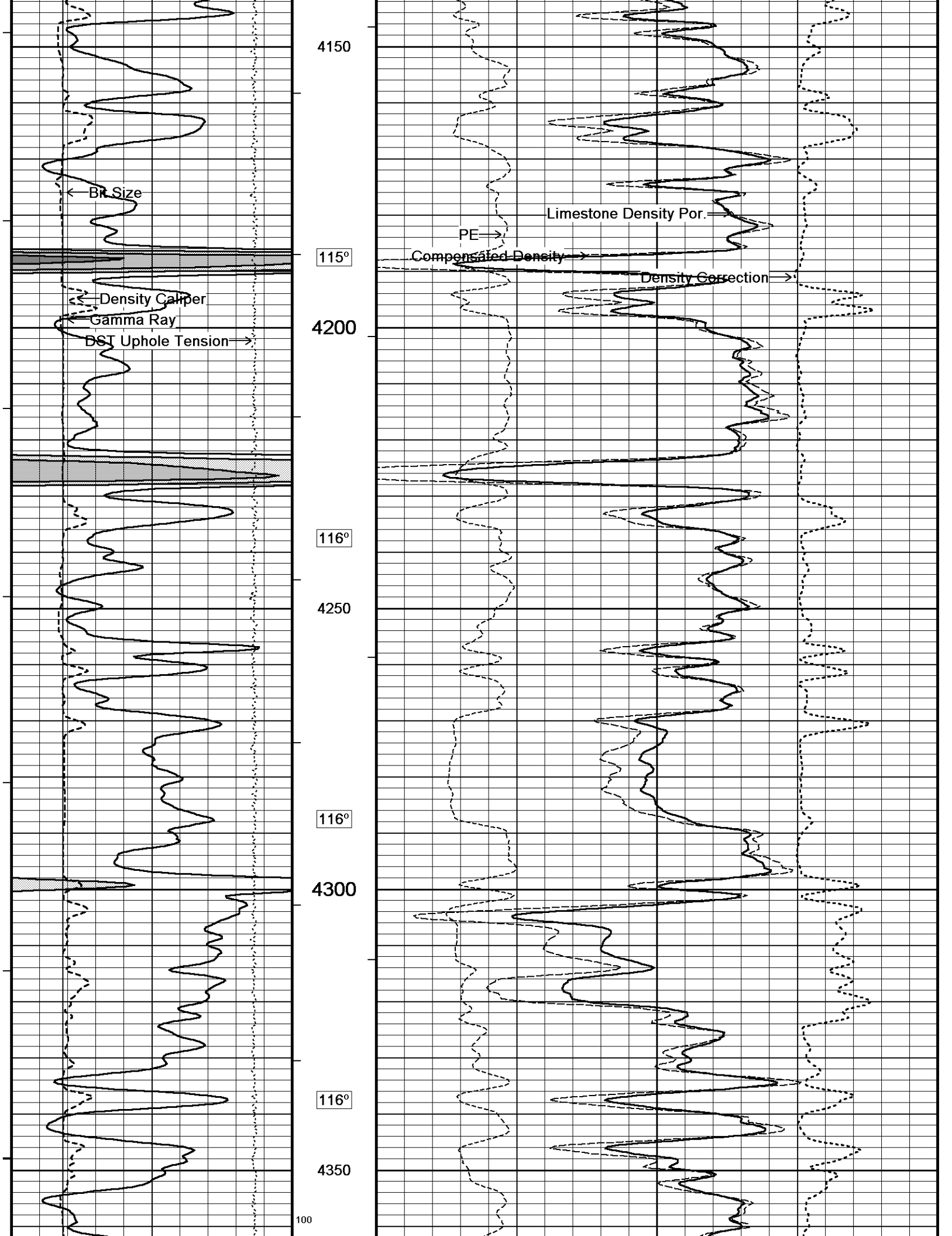
Replay
Scale
1:240

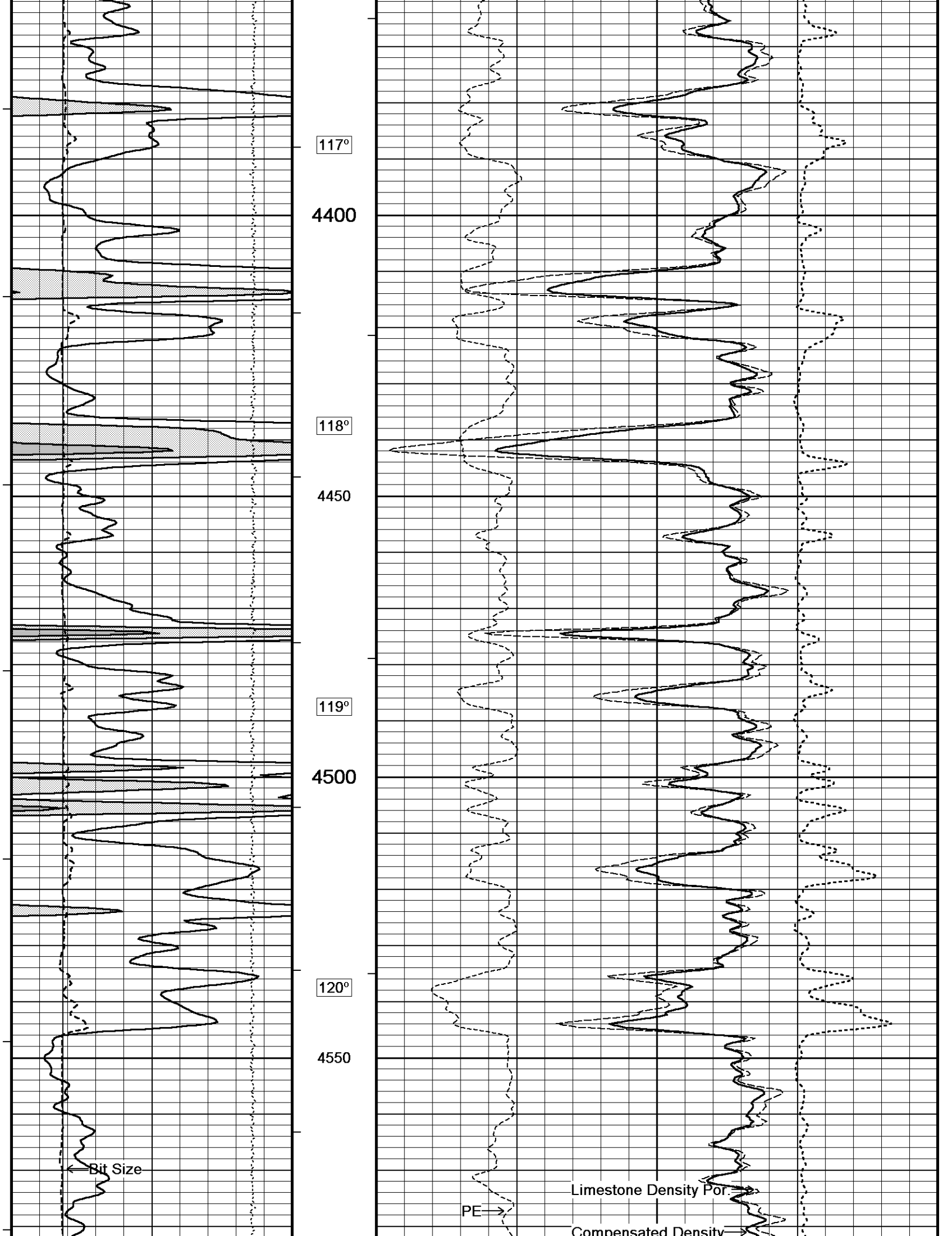
3660

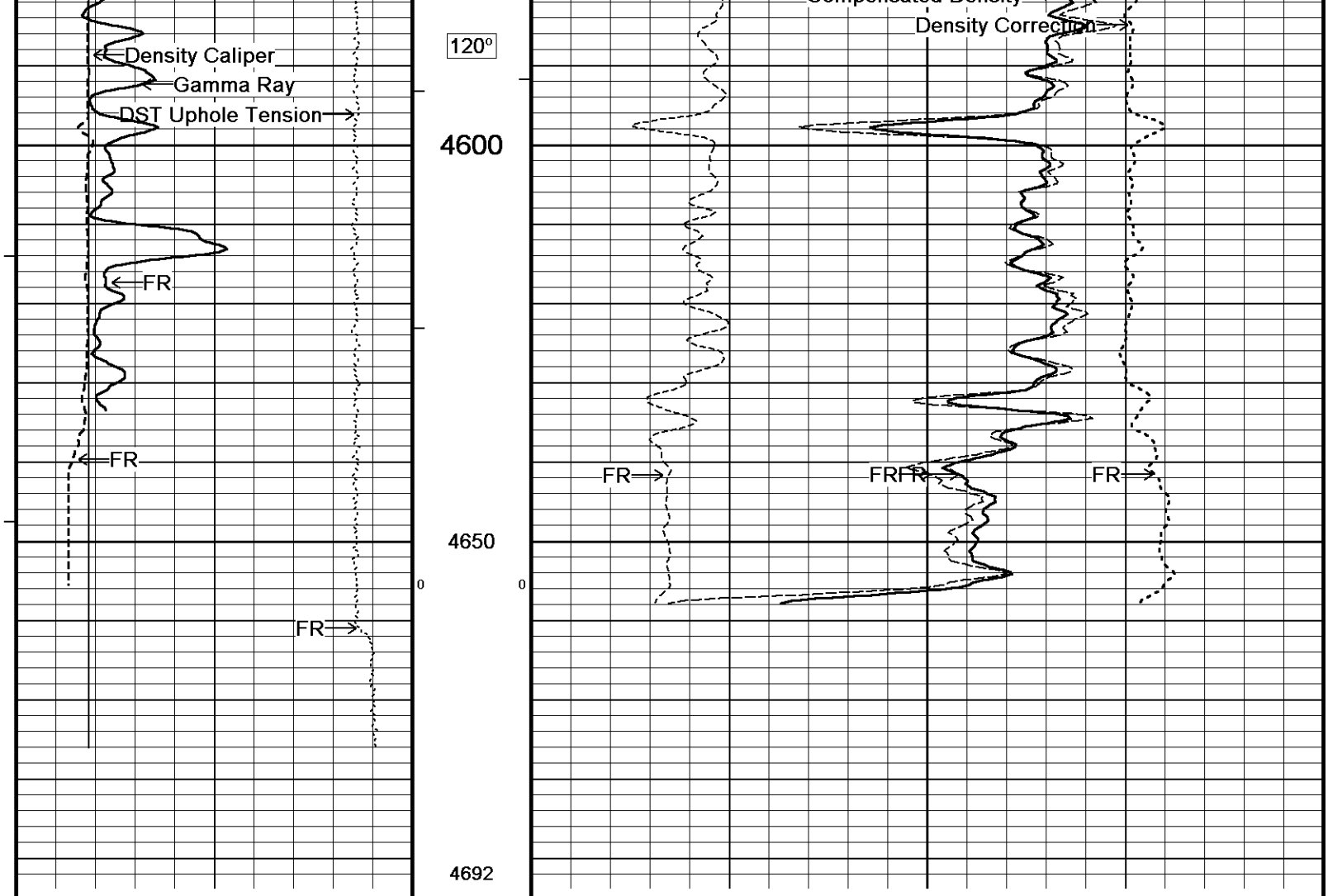
3700


112°
3750
300
Bit Size
112°
Limestone Density Por.
PE
Compensated Density
Density Correction
Density Caliper
3800
Gamma Ray
DST Uphole Tension
112°
3850
112°
3900


113°
3950
113°
4000
114°
4050
200
114°
100
4100
114°


4150
Bit Size
Limestone Density Por.
PE
115°
Compensated Density
Density Correction
Density Caliper
Gamma Ray
4200
DST Uphole Tension
116°
4250
116°
4300
116°
4350
100


117°
4400
118°
4450
119°
4500
120°
4550
Bit Size
PE
Limestone Density Por.
Compensated Density



Depth in Feet

Timing Marks
every 60.0 sec

Gamma Ray
API
0 75 150
150 225 300

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

Compensated Density
grams/cc
2 2.25 2.50 2.75 3

Limestone Density Por.
percent
30 20 10 0 -10

PE
barns/electron
0 5 10

Density Correction
grams/cc
-0.50 0 0.50

Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 22-DEC-2014 10:04

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5 INCH BULK DENSITY

REPEAT SECTION

Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 22-DEC-2014 10:04
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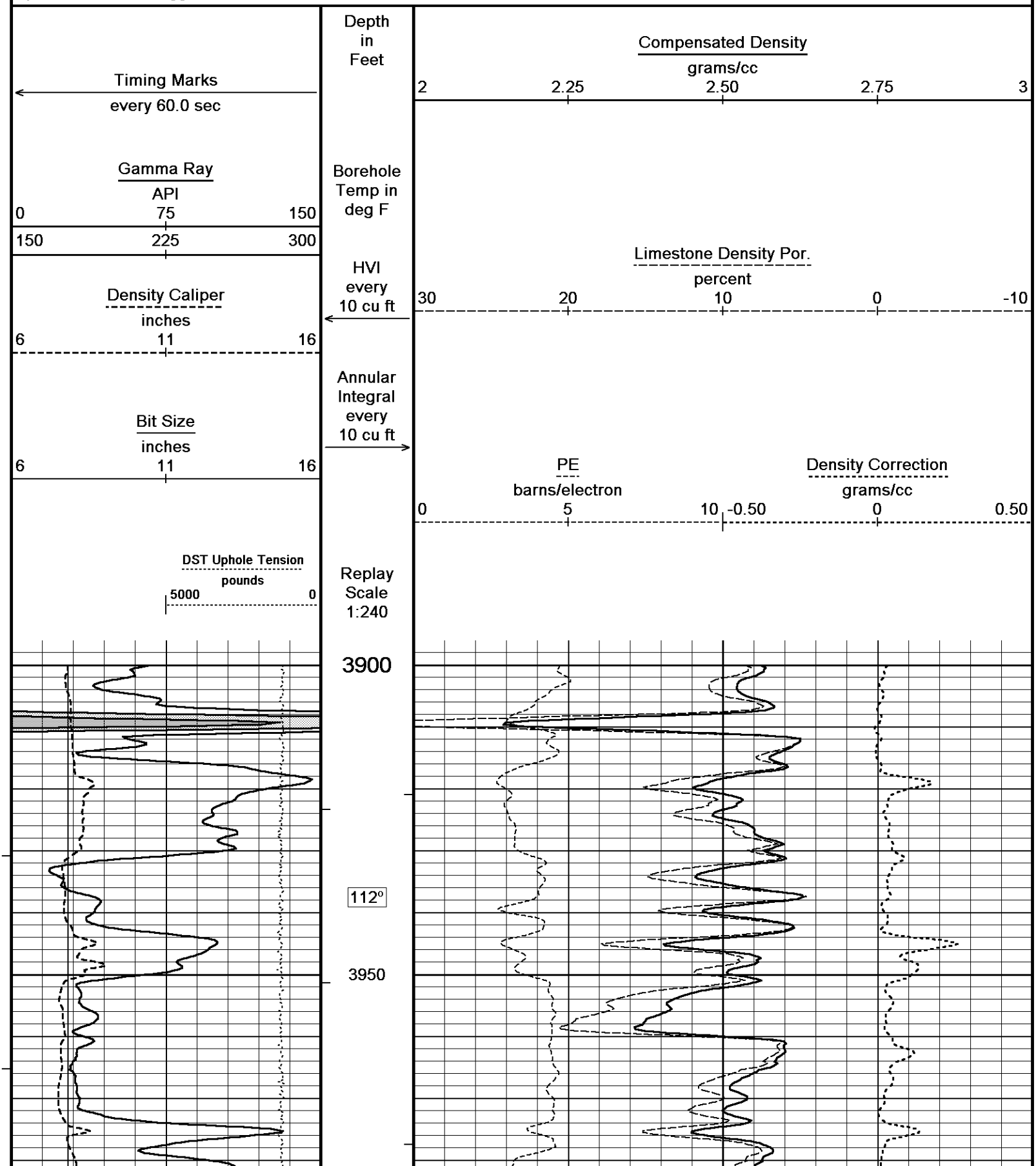
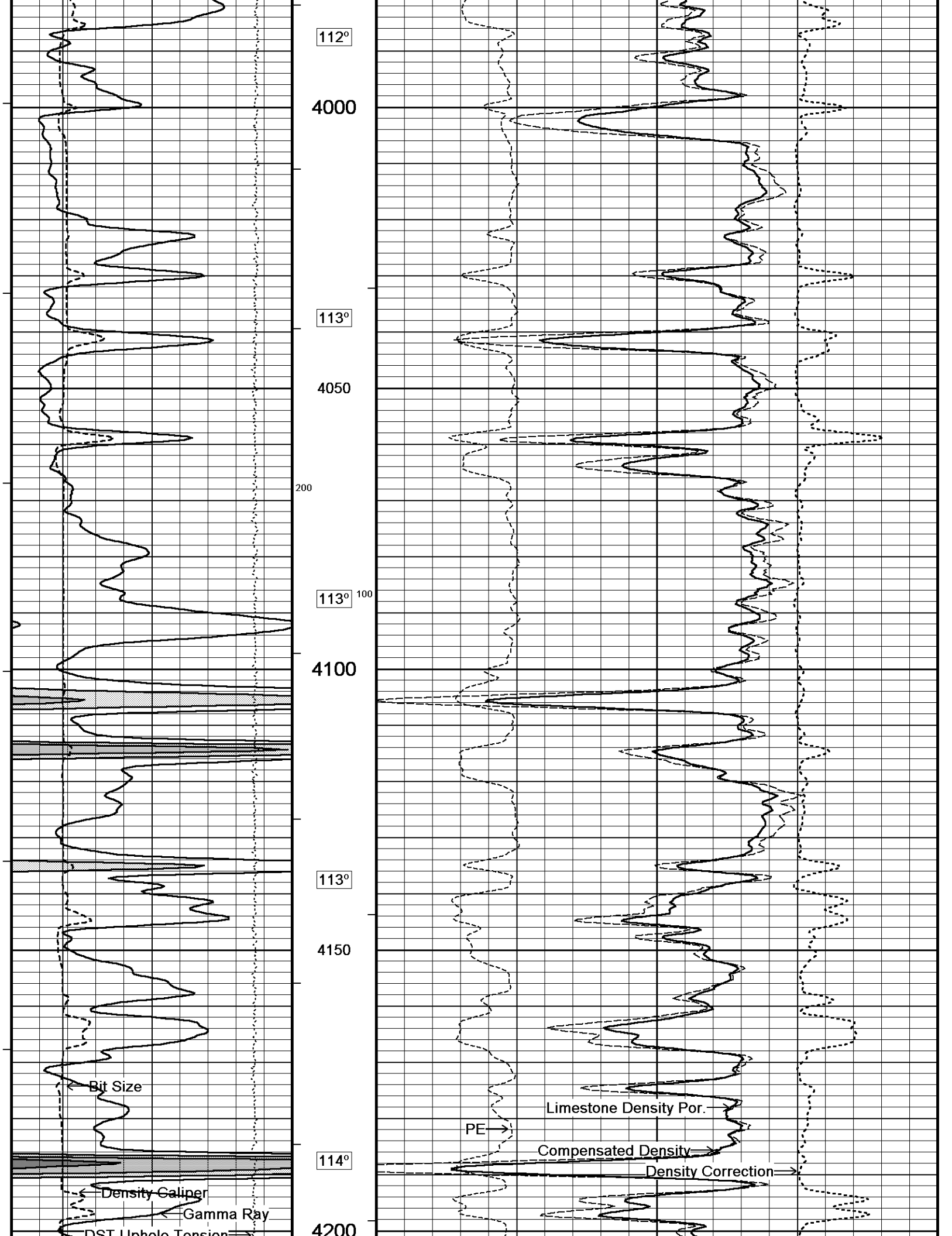
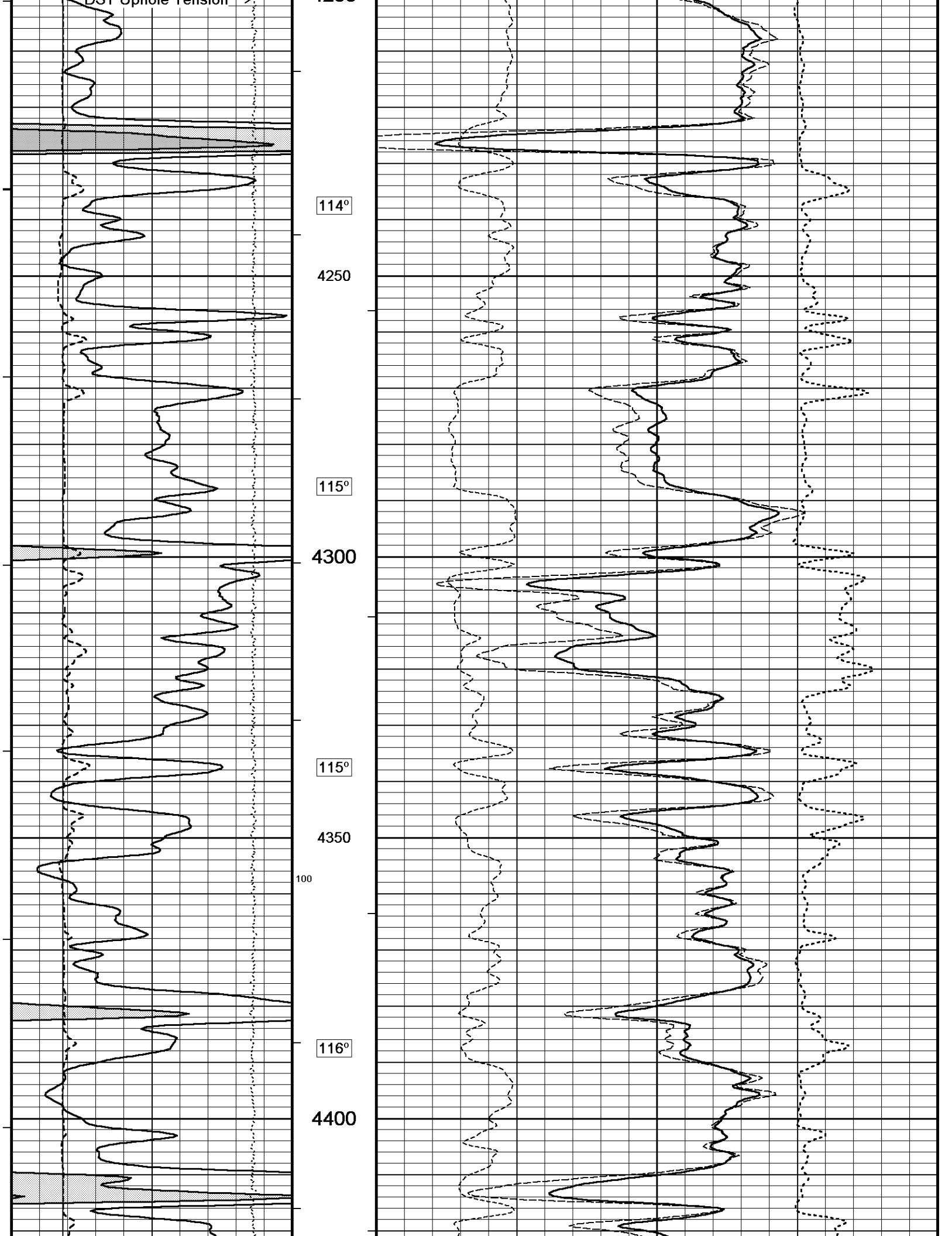
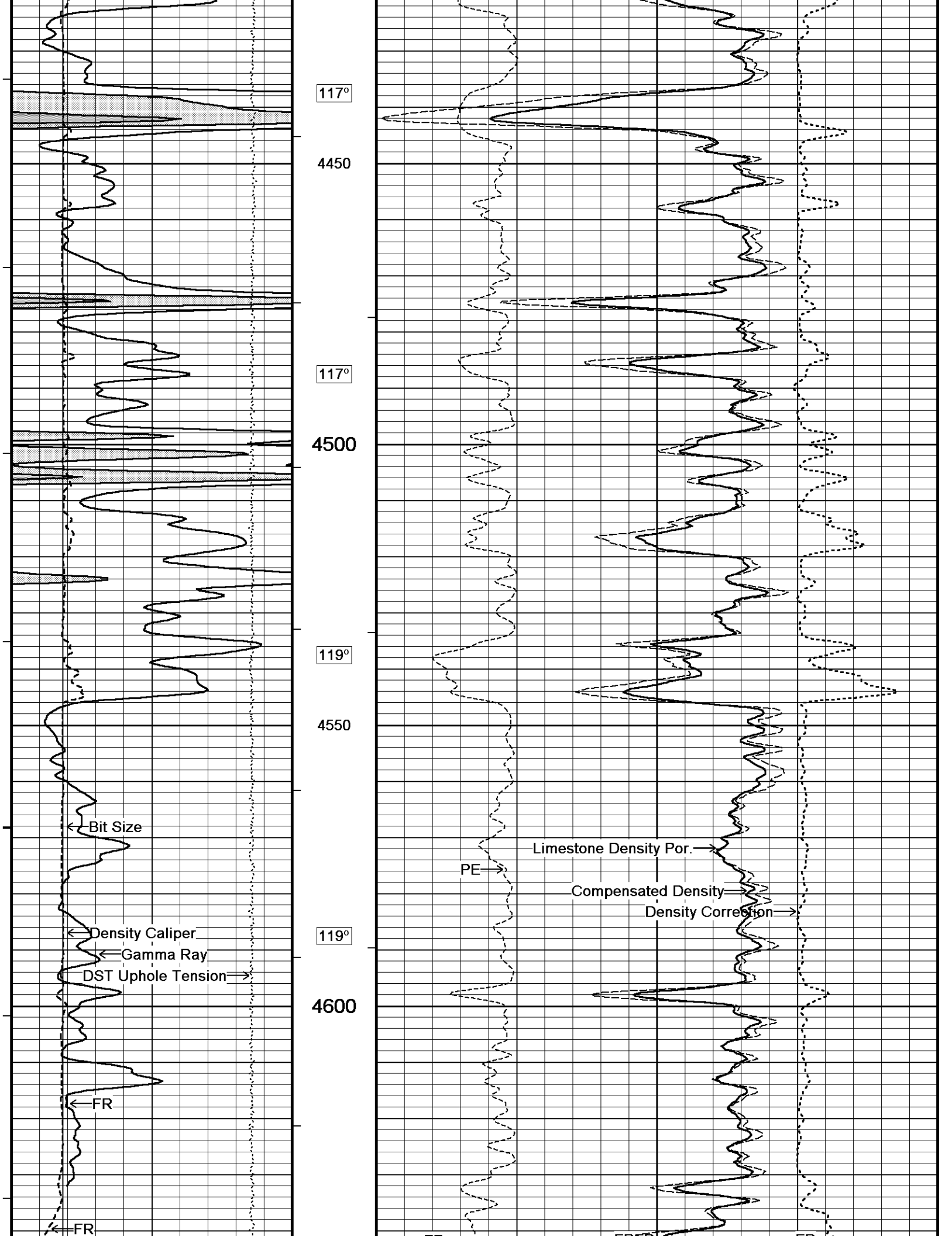
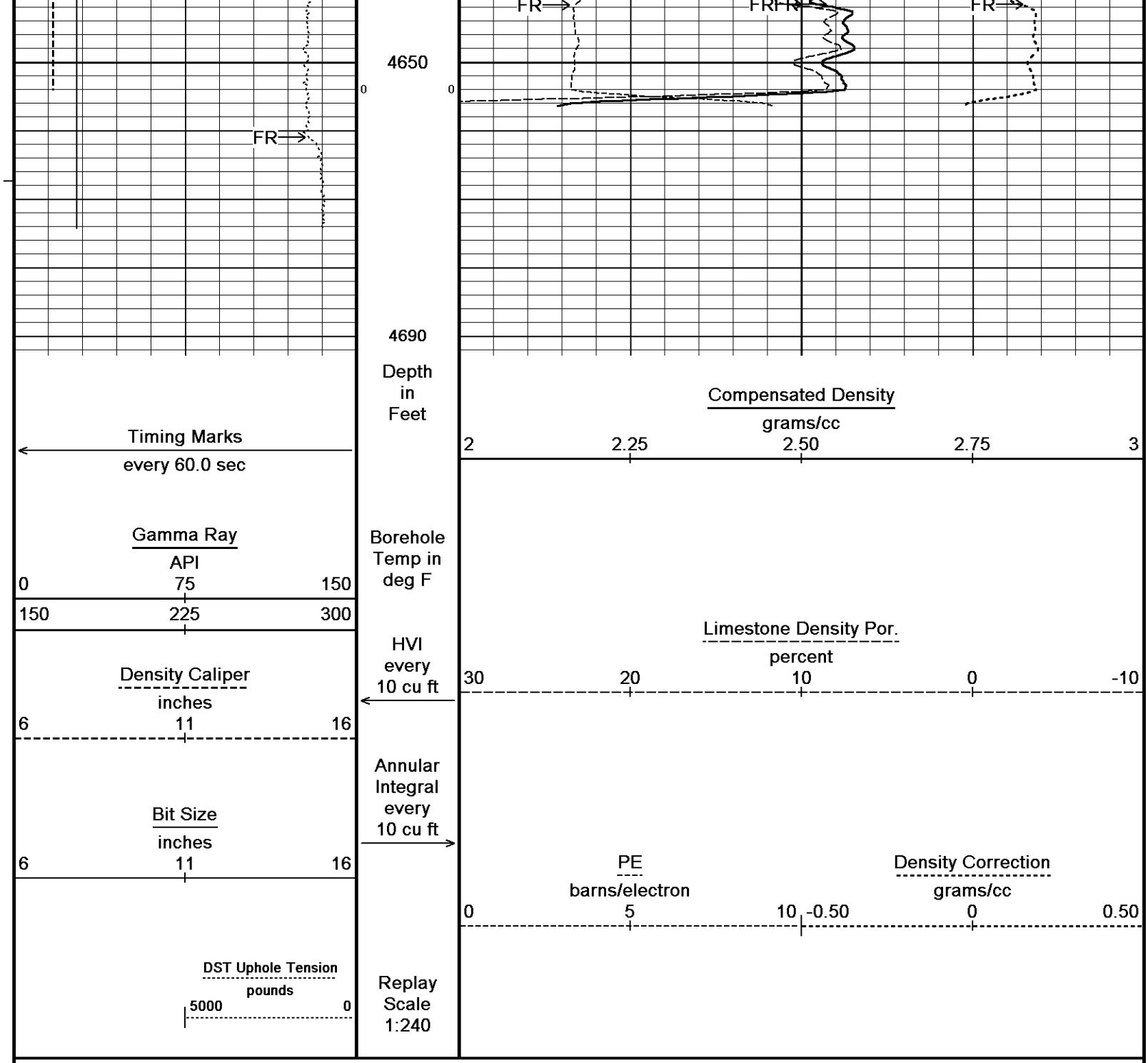



112°
4000
113°
4050
200
113°
100
4100
113°
4150
114°
4200
Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
PE
Limestone Density Por.
Compensated Density
Density Correction


DST Upihole Tension
114°
4250
115°
4300
115°
4350
100
116°
4400


117°
4450
117°
4500
119°
4550
119°
4600
Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
FR
FR
Limestone Density Por.
PE
Compensated Density
Density Correction



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Plotted on 22-DEC-2014 10:04
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REPEAT SECTION

BEFORE SURVEY CALIBRATION

C:\Minimus 14.05.5331\Data\Shakespeare (Burns #1-19)\DATA.dta

General Constants All 000

Last Edited on 22-DEC-2014,05:34

General Parameters		
Mud Resistivity	1.250	ohm-metres
Mud Resistivity Temperature	96.000	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 1	Density Caliper	
HVOL Caliper 2	N/A	
Annular Volume Diameter	5.500	inches
Caliper for Differential Caliper	None	

Rwa Parameters

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

Down-hole Tension Calibration SMS 0

Field Calibration on 22-DEC-2014 05:59

Reading No	Measured	Calibrated (lbs)
1	15275.94	0.00
2	15875.13	407.90

High Resolution Temperature Calibration MCG-D.K 443

Field Calibration on 05-MAR-2014,20:50

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

High Resolution Temperature Constants MCG-D.K 443

Last Edited on 22-JUL-2014,11:40

Pre-filter Length	11

SP Calibration MCG-D.K 443

Field Calibration on 29-SEP-2014 14:22

	Measured	Calibrated (mV)
Reference 1	102.0	100.7
Reference 2	-99.4	-100.8

Gamma Calibration MCG-D.K 443

Field Calibration on 06-DEC-2014 23:53

	Measured	Calibrated (API)
Background	74	49
Calibrator (Gross)	1165	774
Calibrator (Net)	1092	725

Gamma Calibration Tolerances MCG-D.K 443

Ratio	1.506	1.40 1.475 1.55	Counts/API

Gamma Constants MCG-D.K 443

Last Edited on 22-DEC-2014,05:40

Gamma Calibrator Number	GRC038	
GRC-M Calibrator Jig in Use?	NO	
Inactive Background Jig in Use?	NO	
Mud Density	1.11	gm/cc
Caliper Source for Processing	Bit Size	
Tool Position	Centred	
Concentration of KCl		kppm
K Mud Type	Chloride	
K Mud Concentration	0.00	%

Micro-Resistivity Caliper Constants MMR-A 11

Last Edited on

Sonde Configuration	Resistivity Mode

Micro Normal and Micro Inverse Calibration MMR-A 11

Base Calibration on 01-DEC-2014 10:00
Field Check on 06-DEC-2014 23:38

Base Calibration

	Measured		Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Micro Normal	10.2	49.9	5.1	25.6
Micro Inverse	10.0	49.5	3.4	16.9

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Micro Normal	93.7	93.7
Micro Inverse	62.3	62.3

Micro Normal & Micro Inverse Calibration Tolerance MMR-A 11

Micro Normal Res. 1	10.2	ohm	Micro Normal Res. 2	49.9	ohm
Micro Inverse Res. 1	10.0	ohm	Micro Inverse Res. 2	49.5	ohm
Micro Normal Base Check	93.7	ohm-m			
Micro Inverse Base Check	62.3	ohm-m			
Micro Normal Field Check	93.7	ohm-m			
Micro Inverse Field Check	62.3	ohm-m			

Micro Normal and Micro Inverse Constants MMR-A 11

Last Edited on 10-JUL-2014,16:35

Pad Type	8-12 in Soft Rubber Inflatable 006-9011-159	
Micro Normal K Factor	0.5110	
Micro Inverse K Factor	0.3380	
Standoff Offset	0.0000	inches

Micro Laterolog Calibration MMR-A 11

Base Calibration on 31-DEC-1999 00:00
Field Check on 31-DEC-1999 00:00

Base Calibration

Measured		Calibrated (ohm-m)	
Ref 1	Ref 2	Ref 1	Ref 2
0.0	0.0	0.0	0.0

Base Check (ohm-m)	Field Check (ohm-m)
0.0	0.0

Micro Laterolog Constants MMR-A 11

Last Edited on 12-MAR-2014,18:50

Pad Type	6 in Solid Nylon B23059	
Micro Laterolog K Factor	0.0128	
Standoff Offset	0.0000	inches

Mudcake Thickness Correction Constants

Mud Cake Source	Constant Value	
Mud Cake Thickness	0.4000	inches
Mud Cake Thickness Caliper	N/A	
Mud Cake Resistivity	0.1500	ohm-m
Mud Cake Resistivity Temp.	68.00	Deg F
Mud Cake Resistivity Source	Constant Value	
Temp. Source Rmc Correc.	N/A	

Caliper Calibration MMR-A 11

Base Calibration on 01-DEC-2014 09:55
Field Calibration on 06-DEC-2014 23:37

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	14033	5.98
2	17158	7.97
3	20363	9.86
4	24256	11.92
5	0	0.00
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.88	7.97

Caliper Calibration Tolerances MMR-A 11

Short Arm Field Cal.	7.88	7.77 / 7.97 / 8.17	in

Neutron Calibration MDN-A.B 65

Base Calibration on 02-OCT-2014 11:43
Field Check on 06-DEC-2014 23:57

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3078	95	3714	110
Ratio	32.249		33.764	

Field Calibrator at Base

Calibrated (cps)	
Near	Far

	1681	2420
Ratio	0.695	

Field Check	Calibrated (cps)	
	1669	2414
Ratio	0.691	

Neutron Calibration Tolerances MDN-A.B 65

Near Reading	3078	-25% 3500 +25%	cps	Far Reading	95	-50% 106 +50% cps
Ratio	32.249	-5% 33 +5%				
Base Check	0.695	0.65 0.7 0.75				
Field Check	0.691	0.675 0.695 0.715				

Neutron Constants MDN-A.B 65

Last Edited on 14-DEC-2014,20:36

Neutron Source Id	PN-521	
Neutron Jig Number	5824NE	
Air Hole Processing	Legacy	
Caliper Source for Processing	Density Caliper	
Stand-off	0.00	inches
Mud Density	1.00	gm/cc
Limestone Sigma	7.10	cu
Sandstone Sigma	4.26	cu
Dolomite Sigma	4.70	cu
Formation Pressure Source	None	
Formation Pressure	N/A	kpsi
Temperature Source	Constant Value	
Temperature	68.00	degrees F
Mud Salinity	0.00	kppm
Salinity Correction	Not Applied	
Formation Fluid Salinity Source	None	
Formation Fluid Salinity	N/A	kppm
Barite Mud Correction	Not Applied	

FE Calibration MFE-B.J 352

Base Calibration on 01-DEC-2014 09:46
Field Check on 06-DEC-2014 23:36

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	963.7	126.8
Base Check		281.5
Field Check		281.6

FE Calibration Tolerances MFE-B.J 352

Reference 2	963.7	-3% 980.0 +3%	ohm
Base Check	281.5	-2% 277.0 +2%	ohm-m
Field Check	281.6	-2% 281.5 +2%	ohm-m

FE Constants MFE-B.J 352

Last Edited on 06-DEC-2014,23:34

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	Constant Value: Temperature Corrected	
Temp. for Rm Corr.	MCG External Temperature	
Stand-off	0.5	inches

High Resolution Temperature Calibration MAI-A.A 158

Field Calibration on 03-APR-2014,15:43

	Measured	Calibrated(Deg F)

Lower	50.00	50.00
Upper	75.00	75.00

High Resolution Temperature Constants MAI-A.A 158

Last Edited on 22-MAY-2014,10:26

Pre-filter Length	11

Induction Calibration MAI-A.A 158

Base Calibration on 03-APR-2014,15:01
Field Check on 11-DEC-2014 09:52

Base Calibration

Test Loop Calibration Channel	Measured Low	Measured High	Calibrated (mmho/m) Low	Calibrated (mmho/m) High
1	17.2	475.3	9.3	966.2
2	6.1	381.2	7.6	821.4
3	3.8	265.2	5.2	566.0
4	2.7	132.2	2.6	279.2

Array Temperature 22.3 Deg F

Test Loop Calibration Verified 11-DEC-2014 09:50

Channel	Base Check (mmho/m) Low	Base Check (mmho/m) High	Field Check (mmho/m) Low	Field Check (mmho/m) High
1	11.8	3814.7	11.8	3814.8
2	30.0	3531.3	30.0	3531.3
3	27.2	2982.0	27.2	2982.1
4	18.1	2098.0	18.1	2098.0
Deep	14.9	1944.0	14.9	1944.2
Medium	41.1	3888.3	41.1	3888.4
Shallow	47.3	5237.5	47.3	5237.4
Array Temperature	52.0		51.7	Deg F

Induction Calibration Tolerances MAI-A.A 158

Low Conductivity 1	17.2	13.0 17.0 21.0	mmho/m	High Conductivity 1	475.3	430.0 475.0 520.0	mmho/m
Low Conductivity 2	6.1	4.5 6.0 7.5	mmho/m	High Conductivity 2	381.2	345.0 385.0 425.0	mmho/m
Low Conductivity 3	3.8	1.0 3.5 6.0	mmho/m	High Conductivity 3	265.2	240.0 260.0 280.0	mmho/m
Low Conductivity 4	2.7	0.0 2.0 4.0	mmho/m	High Conductivity 4	132.2	120.0 135.0 150.0	mmho/m
Background Vx 1	0.0	-110.0 -32.5 45.0	mmho/m	Phase Check Loop 1	0.0	-2.0 0.0 2.0	%
Background Vx 2	0.0	-35.0 20.0 75.0	mmho/m	Phase Check Loop 2	0.0	-2.0 0.0 2.0	%
Background Vx 3	0.0	-60.0 2.5 65.0	mmho/m	Phase Check Loop 3	0.0	-2.0 0.0 2.0	%
Background Vx 4	0.0	-50.0 -17.5 15.0	mmho/m	Phase Check Loop 4	0.0	-2.0 0.0 2.0	%

Induction Constants MAI-A.A 158

Last Edited on 14-DEC-2014,20:36

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 Global Value: Temperature Corrected		
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

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-D.A 482

Base Calibration on 25-NOV-2014 10:21
Field Calibration on 06-DEC-2014 23:39

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	16588	3.99
2	26783	5.98
3	37020	7.97
4	46817	9.86
5	57838	11.92
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.93	7.97

Caliper Calibration Tolerances MPD-D.A 482

Short Arm Field Cal. 7.93 in

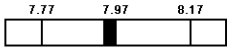


Photo Density Calibration MPD-D.A 482

Base Calibration on 25-NOV-2014 10:39
Field Check on 06-DEC-2014 23:43

Density Calibration

Base Calibration	Measured Near	Measured Far	Calibrated (sdu) Near	Calibrated (sdu) Far
Background	1221	1393		
Reference 1	46352	21700	59556	30836
Reference 2	19381	2407	24941	2541

Field Check at Base

1220.9	1393.1

Field Check

1221.5	1392.6

PE Calibration

Base Calibration	WS	Measured WH	Ratio	Calibrated Ratio
Background	231	1093		
Reference 1	20382	46170	0.447	0.371
Reference 2	5852	19247	0.310	0.272

Field Check at Base

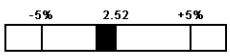
230.8	1092.6

Field Check

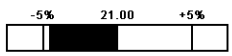
231.7	1093.4

Photo Density Calibration Tolerances MPD-D.A 482

Near Density Ratio 2.49

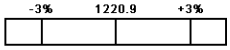


Far Density Ratio 20.03

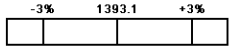


PE Calibration 0.129

Near Den. Field Check 1221.5



Far Den. Field Check 1392.6



PE WS Field Check 231.7

PE WH Field Check 1093.4

Density Constants MPD-D.A 482

Last Edited on 22-DEC-2014,05:40

Density Source Id	254	
Nylon Calibrator Number	DNCE695	
Aluminium Calibrator Number	DACD698	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.11	gm/cc
Mud Density Z/A Multiplier	1.11	
Mud Filtrate Density	1.00	gm/cc
Dry Hole Mud Filtrate Density	1.00	gm/cc
DNCT	0.00	gm/cc
CRCT	0.00	gm/cc
Density Z/A Correction	Hybrid	

Matrix density (gm/cc)	Depth (m)
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 14.05.5331\Data\Shakespeare (Burns #1-19)\DATA.dta

CBH-C, Cablehead, 11 pin
CBH-C 0 LG: 2.40 ft WT: 24.3 lb OD: 2.244 in

Compact Comms Gamma
MCG-D.K 443 LG: 8.70 ft WT: 63.9 lb OD: 2.244 in

Compact Micro-Resistivity
MMR-A 11 LG: 8.59 ft WT: 81.6 lb OD: 4.882 in

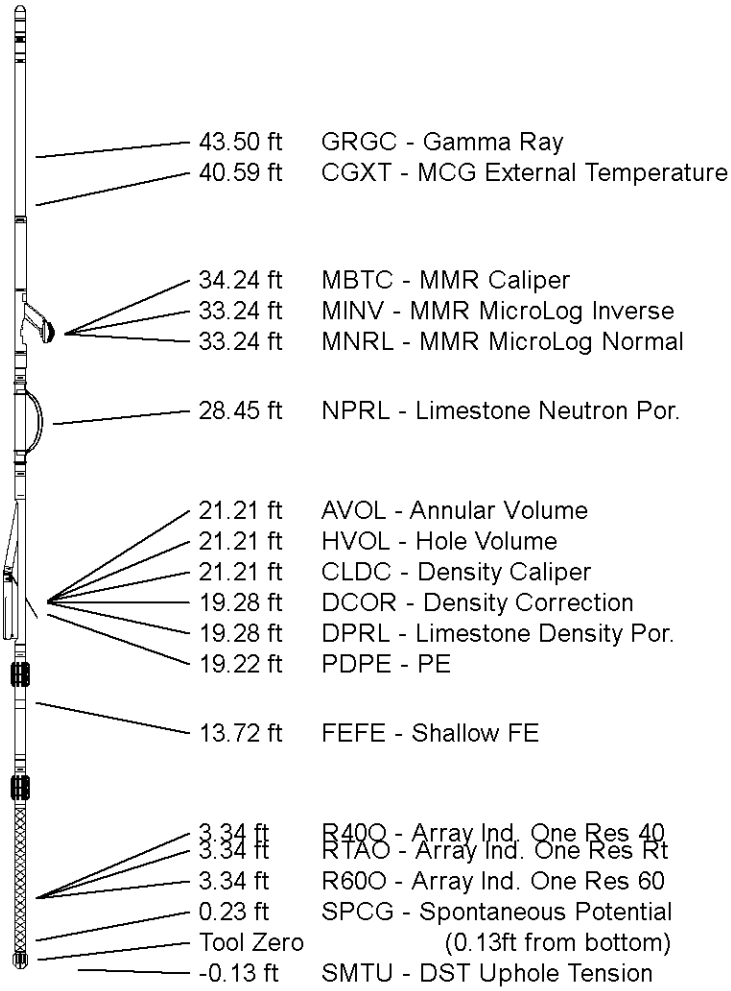
Compact Neutron
MDN-A.B 65 LG: 5.04 ft WT: 50.7 lb OD: 2.244 in

Compact Density/Caliper
MPD-D.A 482 LG: 9.59 ft WT: 90.4 lb OD: 2.449 in

Compact Focussed Electric
MFE-B.J 352 LG: 6.05 ft WT: 48.5 lb OD: 2.244 in

Compact Induction
MAI-A.A 158 LG: 10.81 ft WT: 48.5 lb OD: 2.240 in

Total Length: 51.18 ft Weight: 407.9 lb



COMPANY	SHAKESPEARE OIL CO., INC.
WELL	BURNS #1-19

WELL	BURNS #1-19
FIELD	SWIFT FOX SOUTHEAST
PROVINCE/COUNTY	GOVE
COUNTRY/STATE	USA / KANSAS

Elevation Kelly Bushing	2887.00	feet	First Reading	4642.00	feet
Elevation Drill Floor	2885.00	feet	Depth Driller	4660.00	feet
Elevation Ground Level	2877.00	feet	Depth Logger	4661.00	feet

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COMPENSATED NEUTRON
MICRO-RESISTIVITY LOG