COMPACT PHOTO DENSITY
COMPENSATED NEUTRON
MICRORESISTIVITY LOG

Weatherford®

COMPANY	REDLAND RESOURCES
WELL	DAVID # 25-15
FIELD	WILDCAT
PROVINCE/COUNTY	HODGEMAN
COUNTRY/STATE	KANSAS / U.S.A.
LOCATION	353' FSL & 2561' FEL SE/4

40 Years of Wireline 1970 2010

SEC	TWP	RGE
25	23S	25W

API Number 15-083-21729
Permit Number

Other Services
MSS
MAI/MFE
MML

Permanent Datum G.L., Elevation 2497 feet
Log Measured From KB
Drilling Measured From K.B. @2509

Elevations:	feet
KB	2509.00
DF	2507.00
GL	2497.00

Date	12-DEC-2011			
Run Number	ONE			
Depth Driller	4920.00	feet		
Depth Logger	4921.00	feet		
First Reading	4887.00	feet		
Last Reading	3921.00	feet		
Casing Driller	217.00	feet		
Casing Logger	219.00	feet		
Bit Size	7.875	inches		
Hole Fluid Type	CHEMICAL			
Density / Viscosity	9.10 lb/USg	59.00 CP		
PH / Fluid Loss	10.00	7.20 ml/30Min		
Sample Source	FLOWLINE			
Rm @ Measured Temp	1.68 @ 52.0	ohm-m		
Rmf @ Measured Temp	1.34 @ 52.0	ohm-m		
Rmc @ Measured Temp	2.02 @ 52.0	ohm-m		
Source Rmf / Rmc	CALC	CALC		
Rm @ BHT	0.88 @103.0	ohm-m		
Time Since Circulation	5 HOURS			
Max Recorded Temp	103.00	deg F		
Equipment Name	COMPACT			
Equipment / Base	1396	LIB		
Recorded By	F. MARTINS		A. GIAMBALVO	
Witnessed By	C. THOMAS			
S.O. / JOB #	3534681		LB11-313	

BOREHOLE RECORD

Last Edited: 12-DEC-2011 17:27

Bit Size inches	Depth From feet	Depth To feet
7.875	219.00	4921.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	219.00	24.00

REMARKS

Tools Used: MPD, MCG, MDN, MFE, MAI, MML, MSS
Hardware: MPD: 8 inch profile plate used. MAI, MSS and MFE: 0.5 Inch standoffs used. MDN: Dual Bowspring used.
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.
Annular volume with 4.5 inch production casing = 223 cu. ft
Service order # 3534681
Rig: Duke # 9
Engineer: F. Martins, A. Giambalvo
Operator(s): M. Stegman

5 INCH MAIN

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\DOCUME~1\SchefFJL\LOCALS~1\Te...\Redland David # 25-15_003 spooled section.dta
System Versions: Logged with 11.03.4044 Plotted with 12.01.3513

Plotted on 30-MAR-2012 15:13
Recorded on 12-DEC-2011 17:38

Timing Marks
every 60.0 sec

Gamma Ray
API
0 75 150

Density Caliper
inches
6 11 16

Bit Size
inches
6 11 16

DST Uphole Tension
pounds
5000 0

Depth in Feet

Borehole Temp in deg F

HVI every 10 cu ft

Annular Integral every 10 cu ft

Replay Scale 1:240

Limestone Neutron Por.
percent
30 20 10 0 -10

Limestone Density Por.
percent
30 20 10 0 -10

PE
barns/electron
0 5 10

Density Correction
grams/cc
-0.25 0 0.25

Micro-normal
ohm metres
0 10

Micro-inverse
ohm metres
0 10

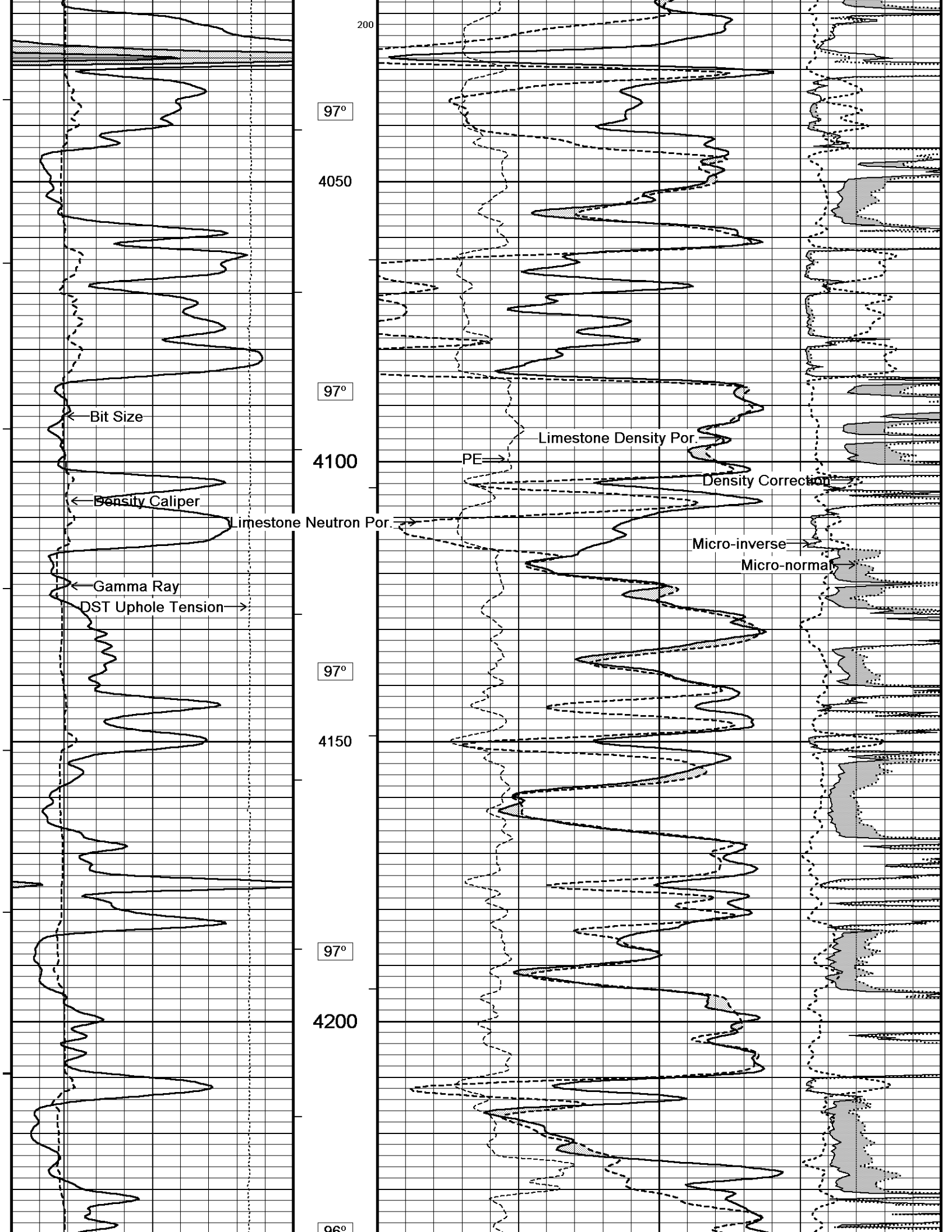
3920

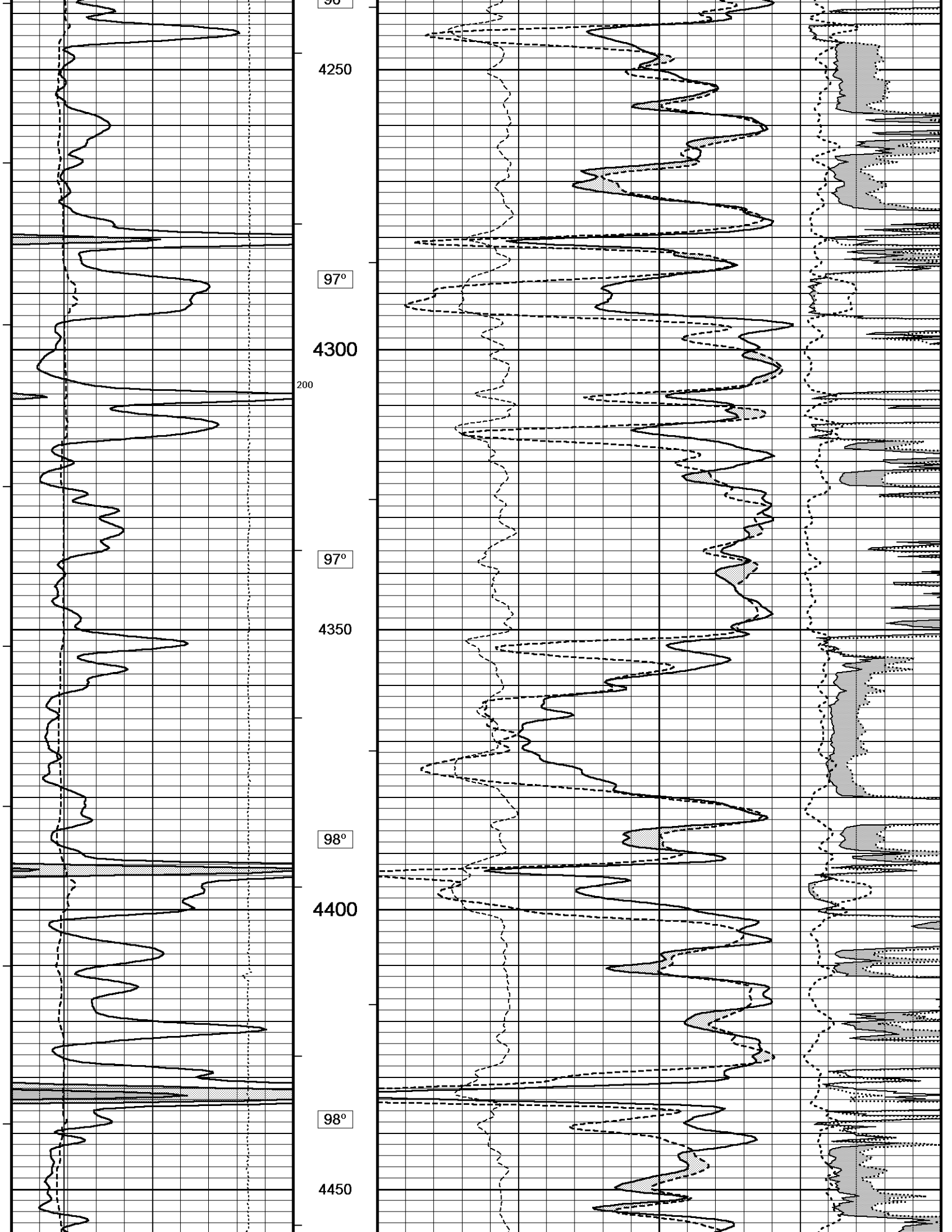
3950

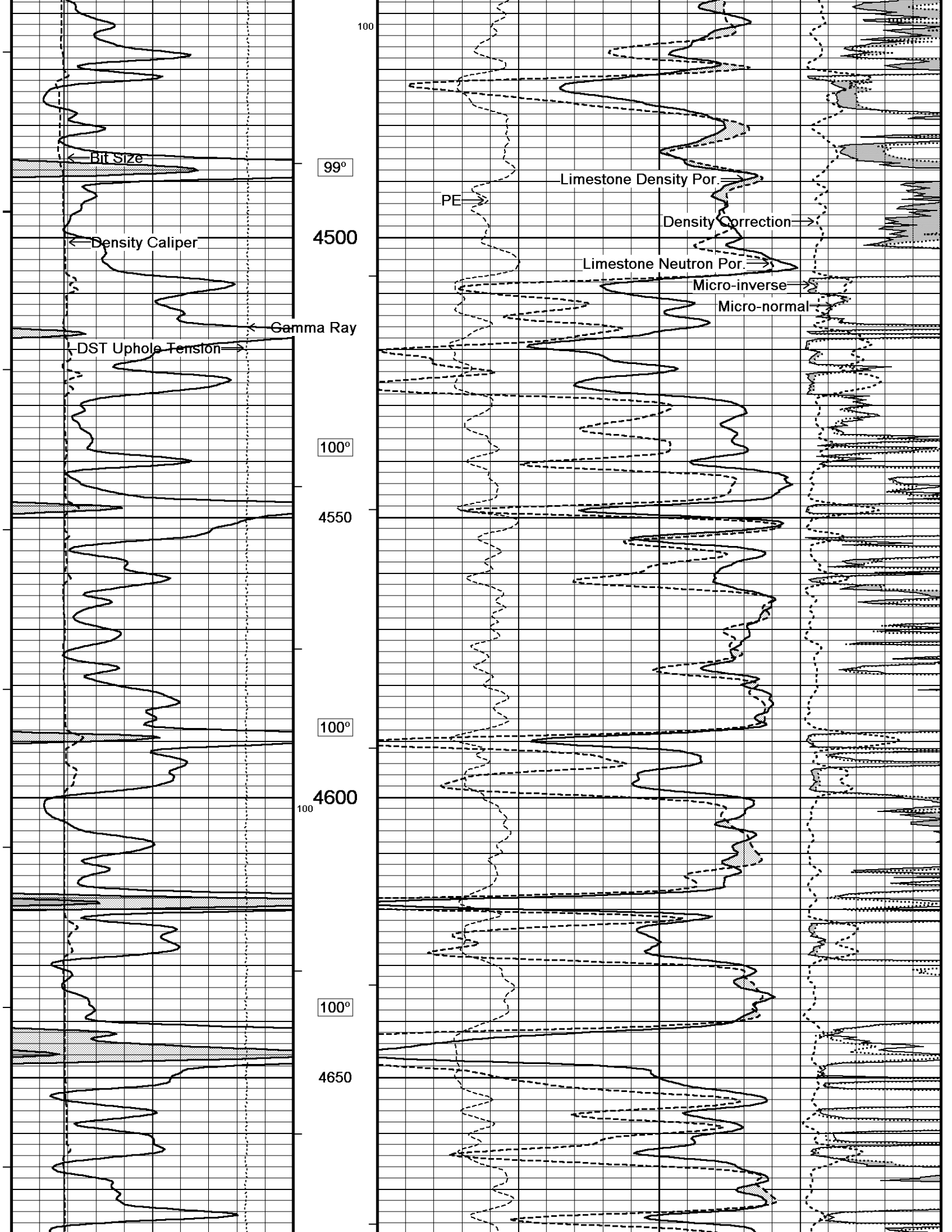
96°

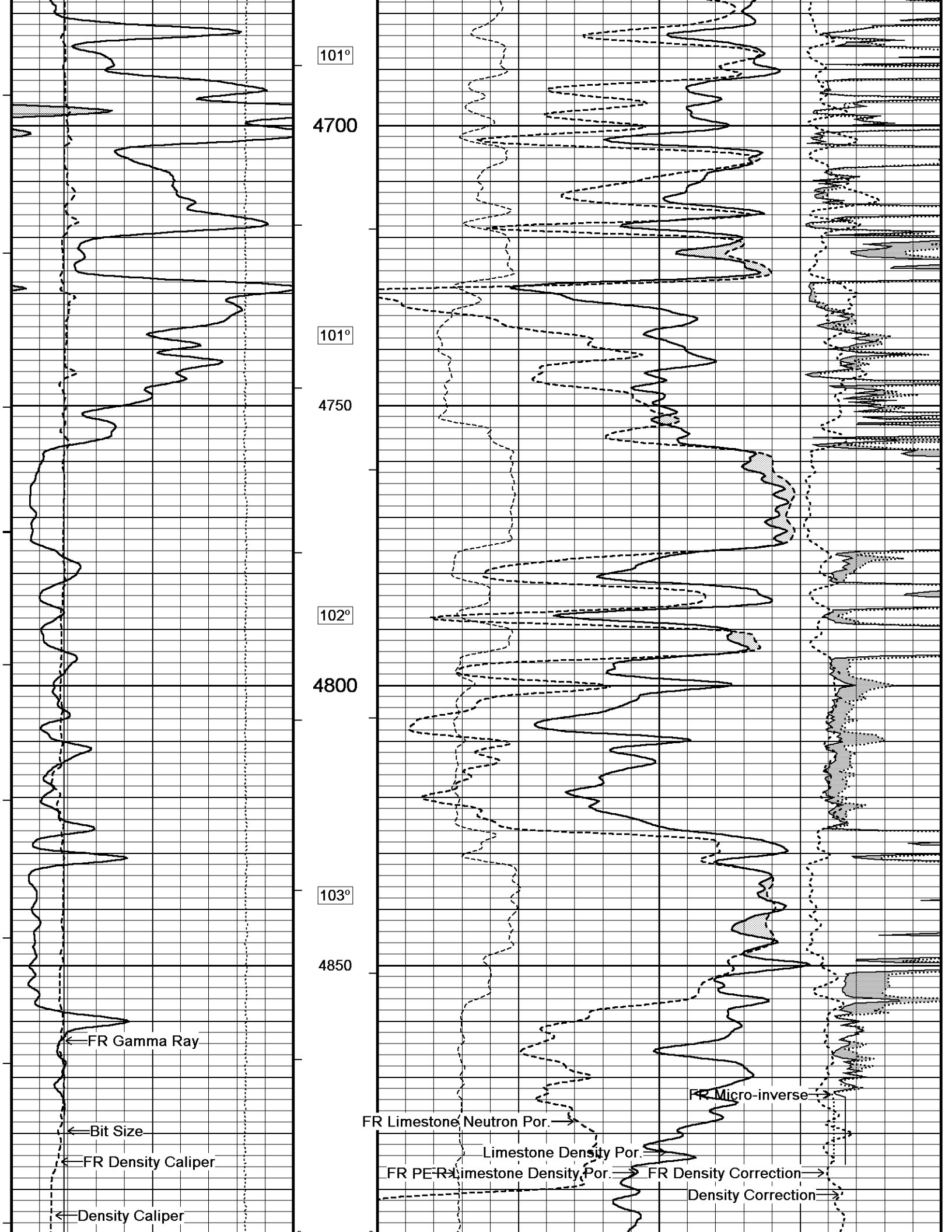
4000

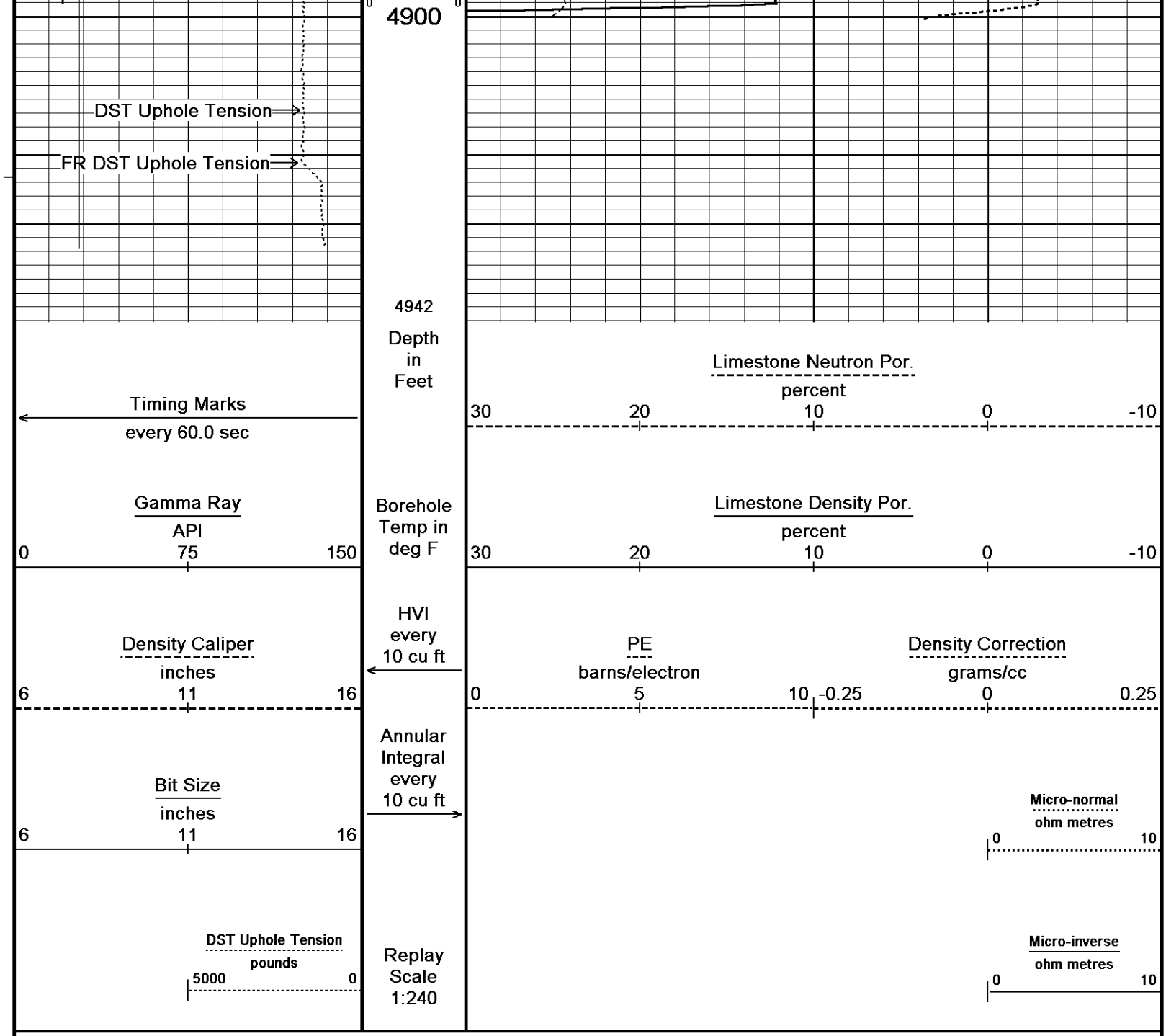
300


200
97°
4050
97°
Bit Size
Limestone Density Por.
4100
PE
Density Correction
Density Caliper
Limestone Neutron Por.
Micro-inverse
Micro-normal
Gamma Ray
DST Uphole Tension
97°
4150
97°
4200
96°


4250
97°
4300
200
97°
4350
98°
4400
98°
4450


Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
99°
100°
100°
100°
4500
4550
4600
4650
100
100
Limestone Density Por.
PE
Density Correction
Limestone Neutron Por.
Micro-inverse
Micro-normal


101°
4700
101°
4750
102°
4800
103°
4850
FR Gamma Ray
Bit Size
FR Density Caliper
Density Caliper
FR Micro-inverse
FR Limestone Neutron Por.
Limestone Density Por.
FR PE-R
Limestone Density Por.
FR Density Correction
Density Correction

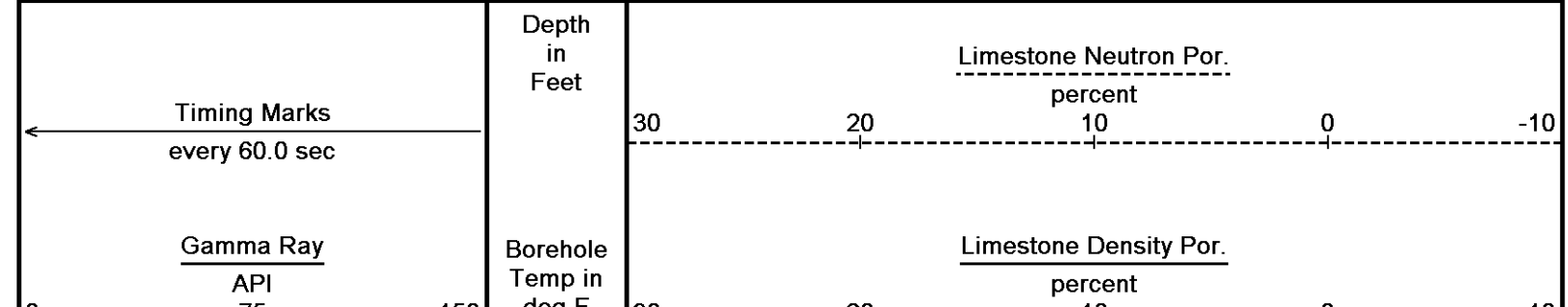


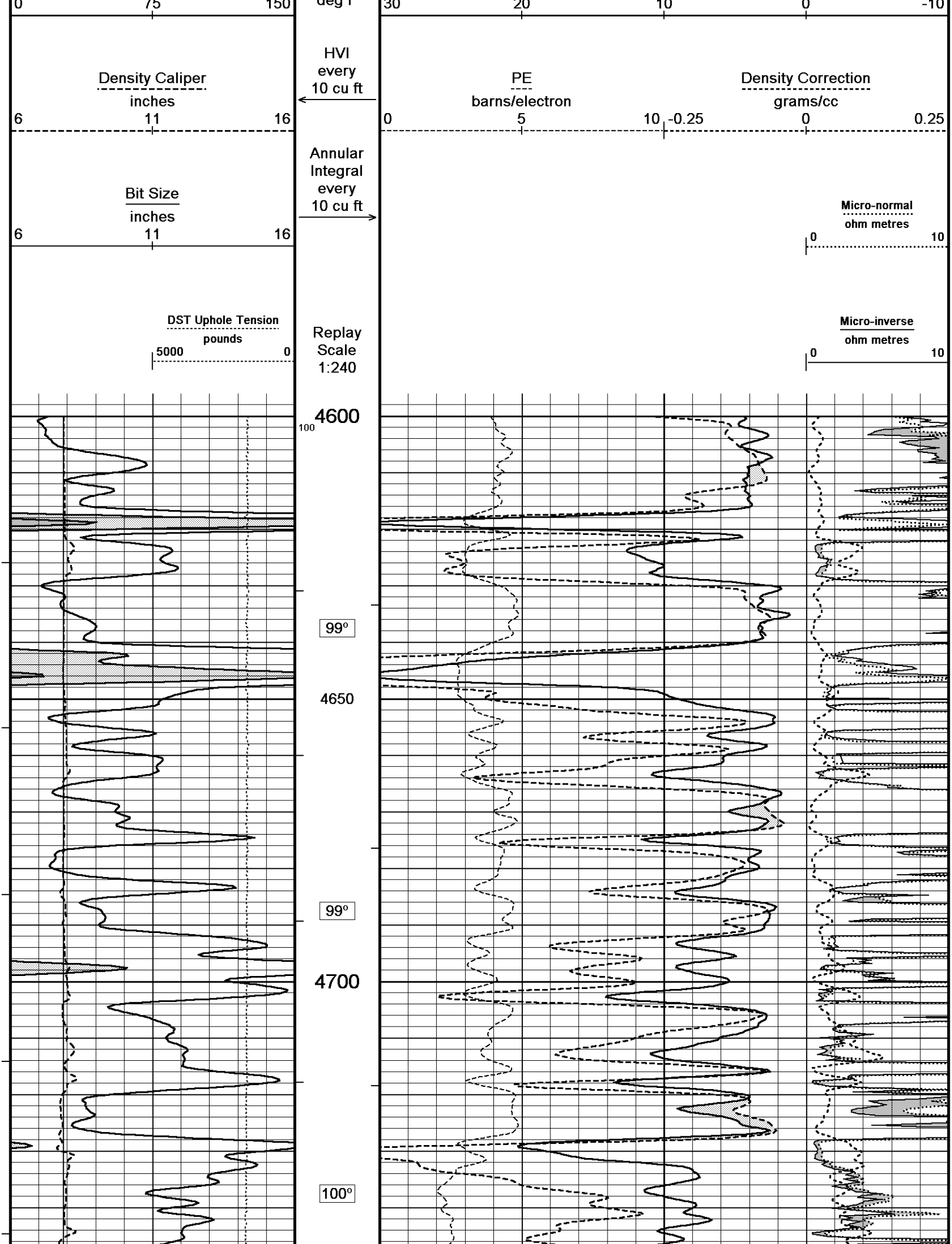
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 30-MAR-2012 15:13
Filename: C:\DOCUME~1\SchefFJL\LOCALS~1\Te...\Redland David # 25-15_003 spooled section.dta
Recorded on 12-DEC-2011 17:38
System Versions: Logged with 11.03.4044 Plotted with 12.01.3513

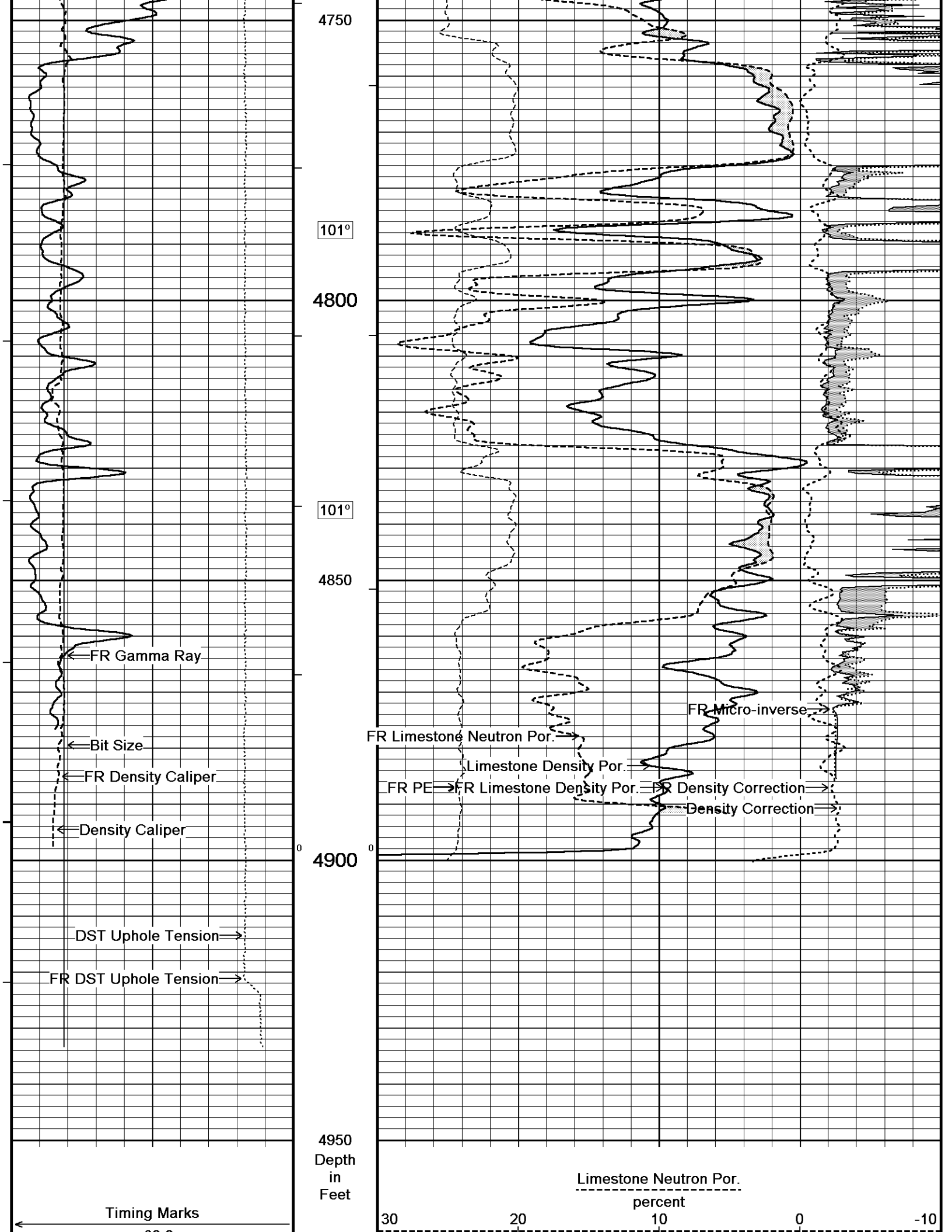
5 INCH MAIN

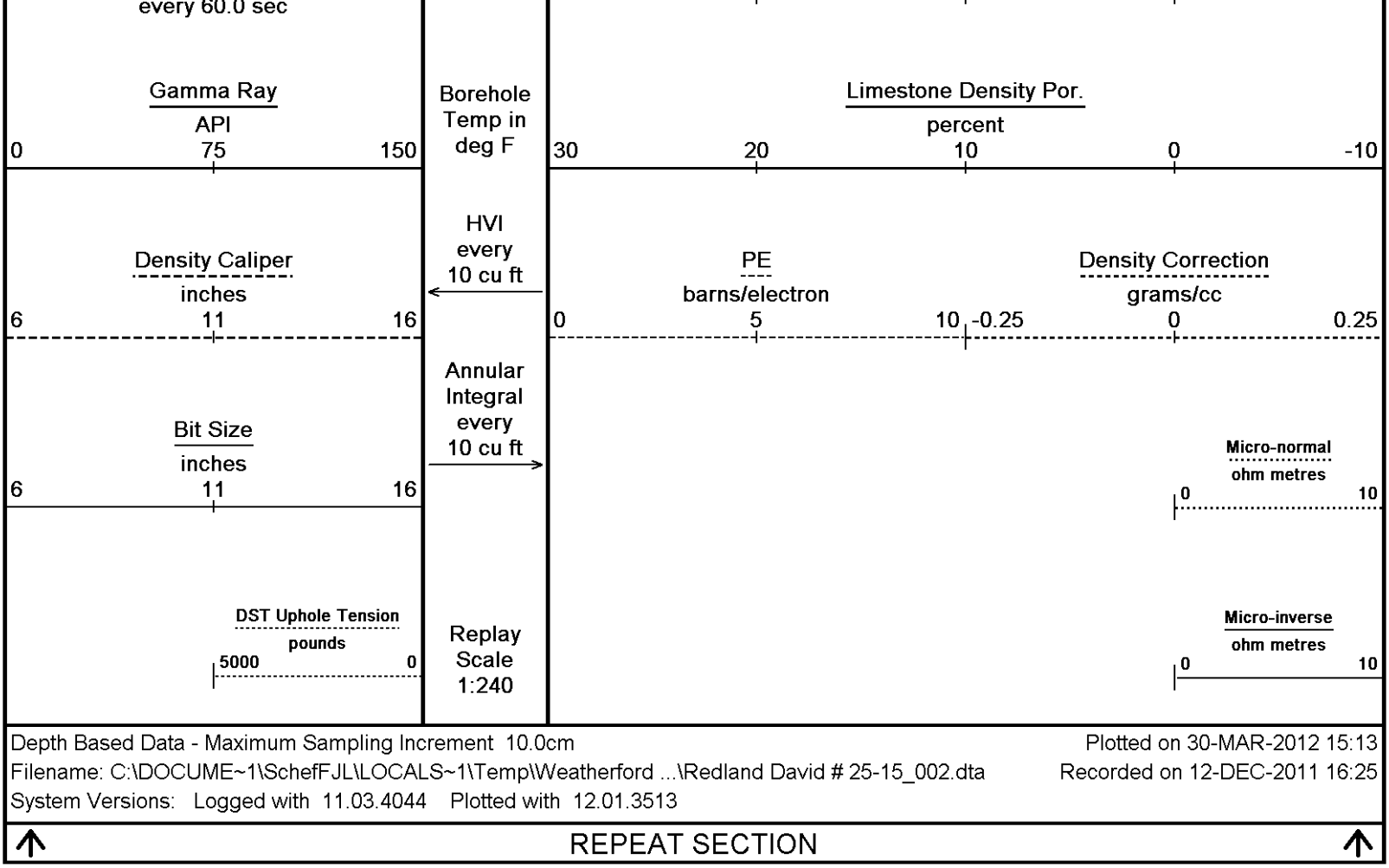
REPEAT SECTION

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 30-MAR-2012 15:13
Filename: C:\DOCUME~1\SchefFJL\LOCALS~1\Temp\Weatherford ...\Redland David # 25-15_002.dta
Recorded on 12-DEC-2011 16:25
System Versions: Logged with 11.03.4044 Plotted with 12.01.3513




0
75
150
deg F
30
20
10
0
-10
Density Caliper
inches
6
11
16
HVI
every
10 cu ft
PE
barns/electron
0
5
10
Density Correction
grams/cc
-0.25
0
0.25
Annular
Integral
every
10 cu ft
Bit Size
inches
6
11
16
Micro-normal
ohm metres
0
10
DST Uphole Tension
pounds
5000
0
Micro-inverse
ohm metres
0
10
Replay
Scale
1:240
4600
100
99°
4650
99°
4700
100°


4750
101°
4800
101°
4850
4900
4950
Depth
in
Feet
FR Gamma Ray
Bit Size
FR Density Caliper
Density Caliper
DST Uphole Tension
FR DST Uphole Tension
Timing Marks
FR Micro-inverse
FR Limestone Neutron Por.
Limestone Density Por.
FR PE
FR Limestone Density Por.
FR Density Correction
Density Correction
Limestone Neutron Por.
percent
30
20
10
0
-10

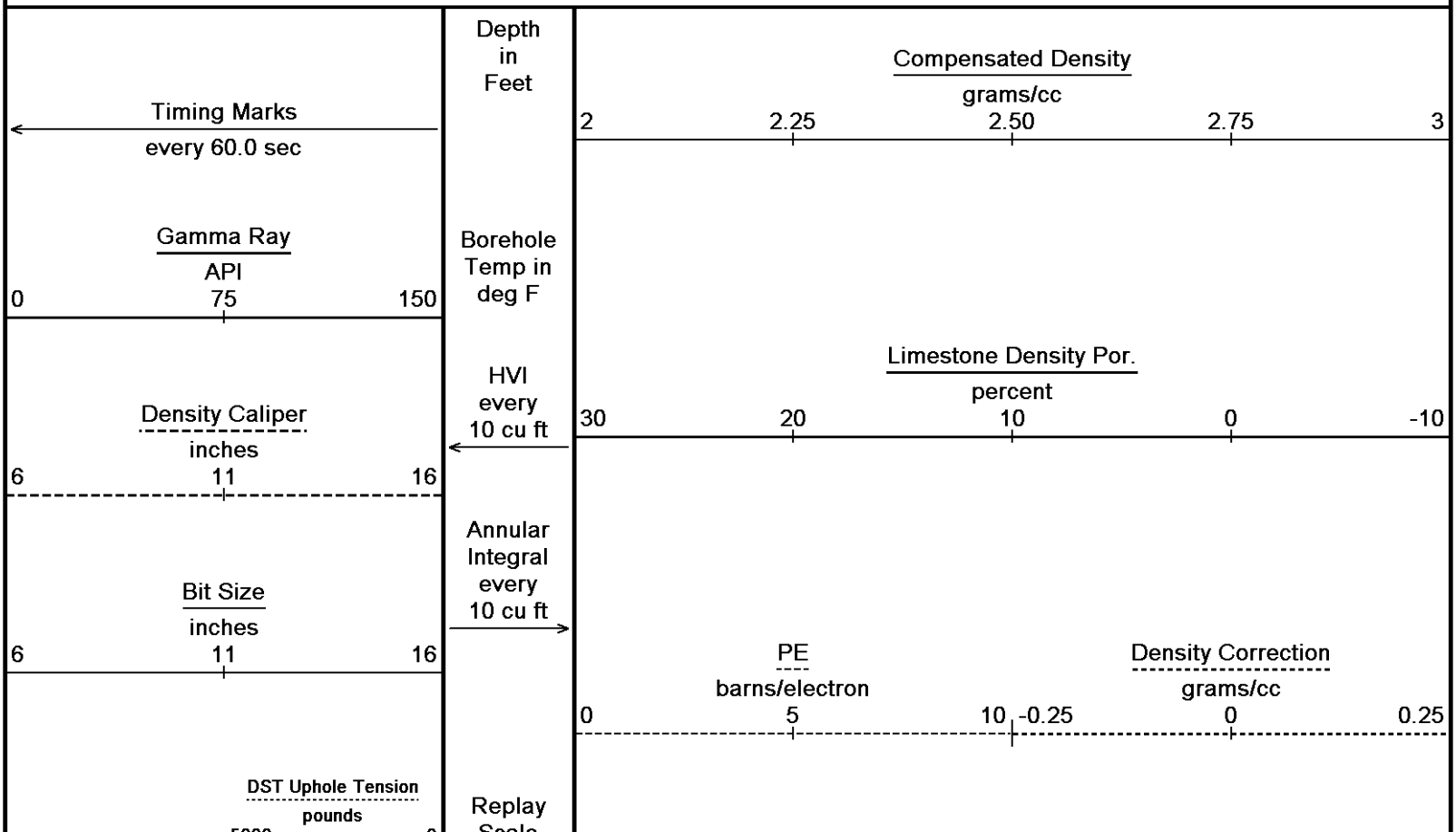


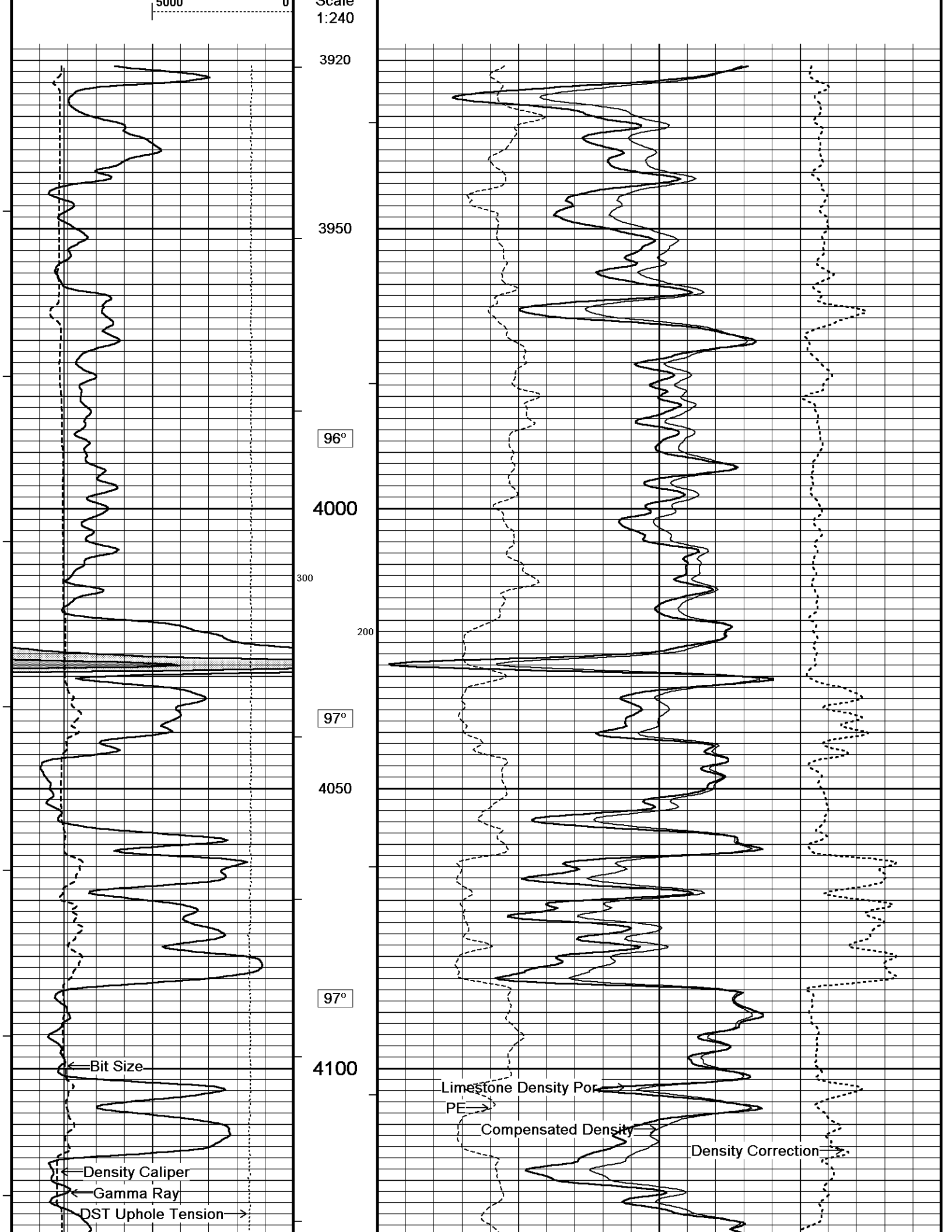
Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 30-MAR-2012 15:13
Filename: C:\DOCUME~1\SchefFJL\LOCALS~1\Temp\Weatherford ...\Redland David # 25-15_002.dta — Recorded on 12-DEC-2011 16:25
System Versions: Logged with 11.03.4044 Plotted with 12.01.3513

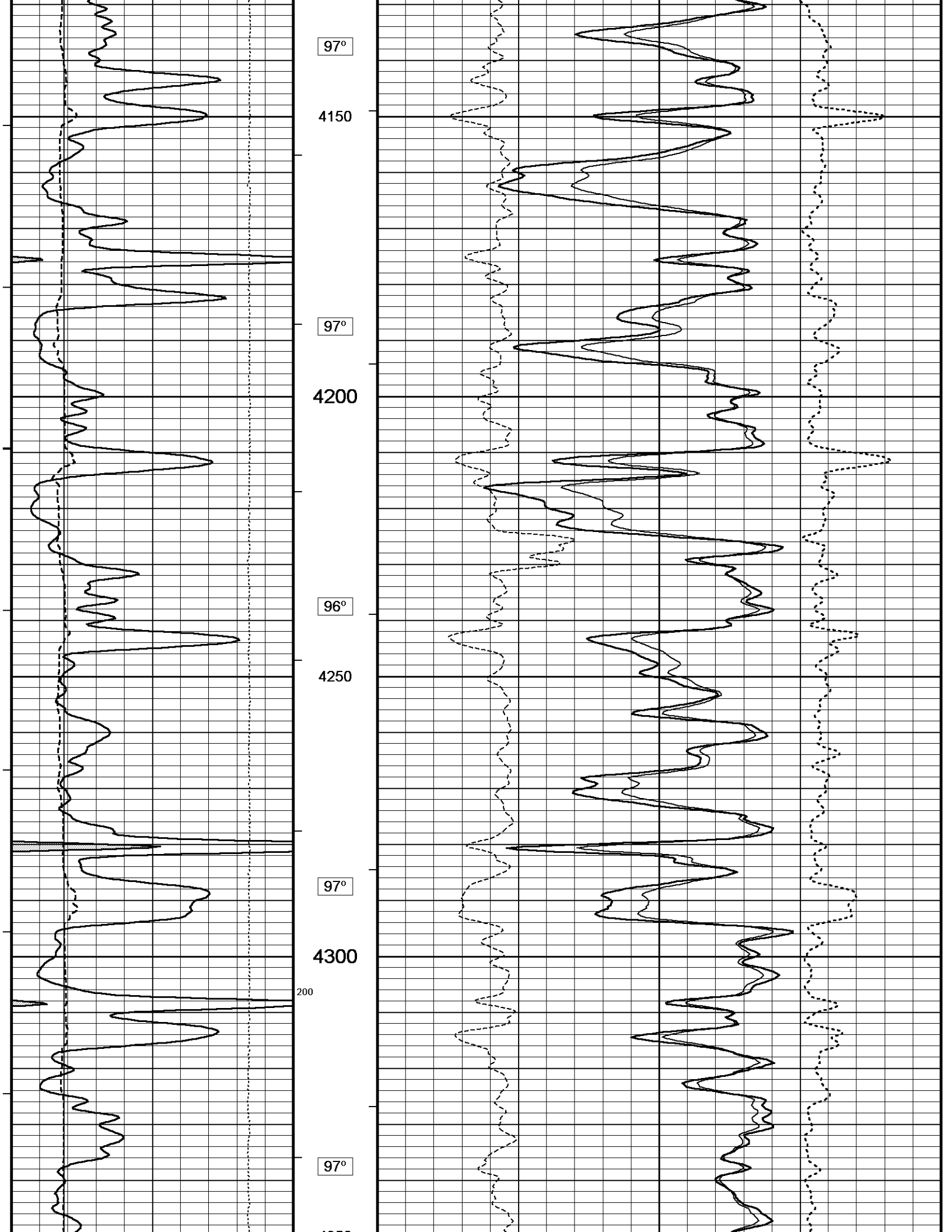
REPEAT SECTION

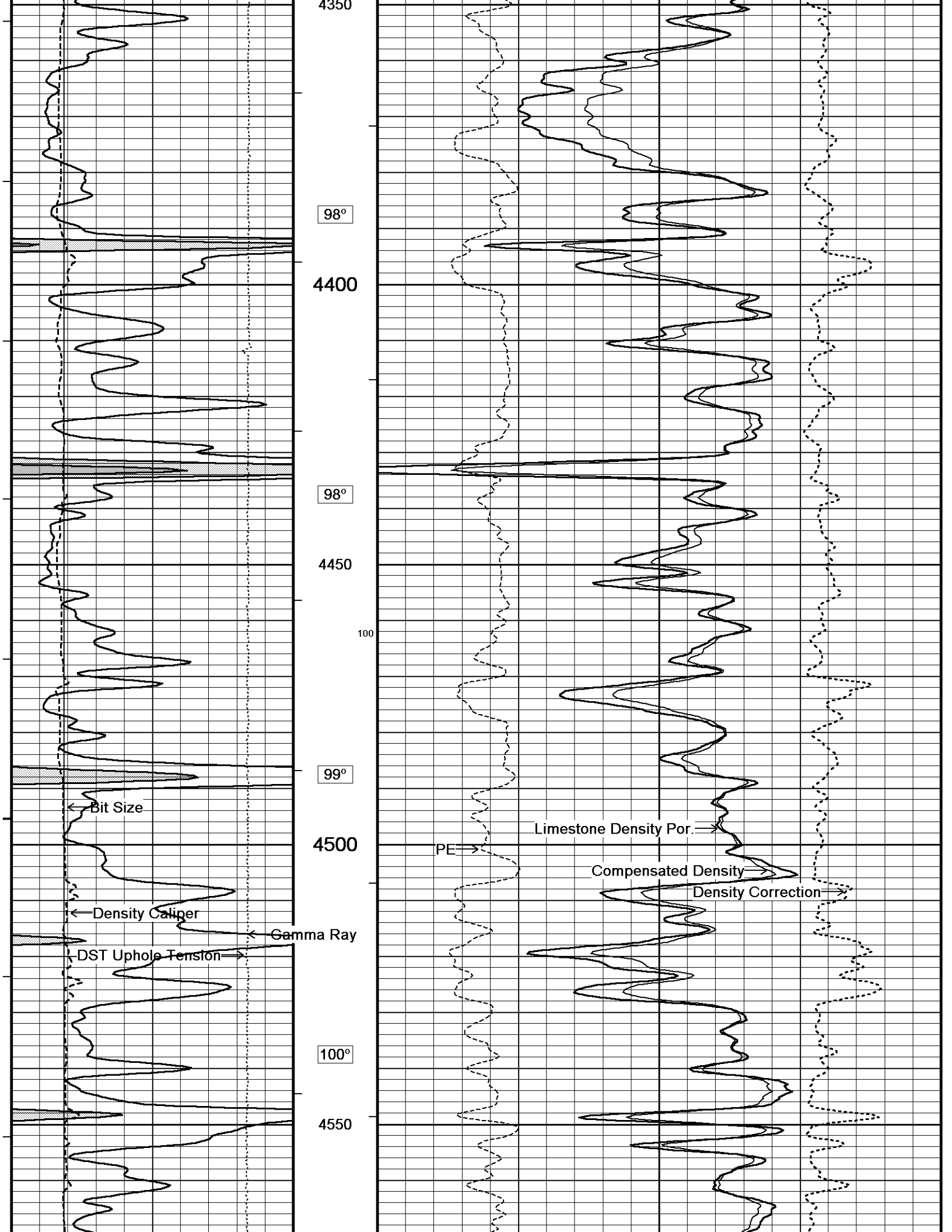
5 INCH MAIN

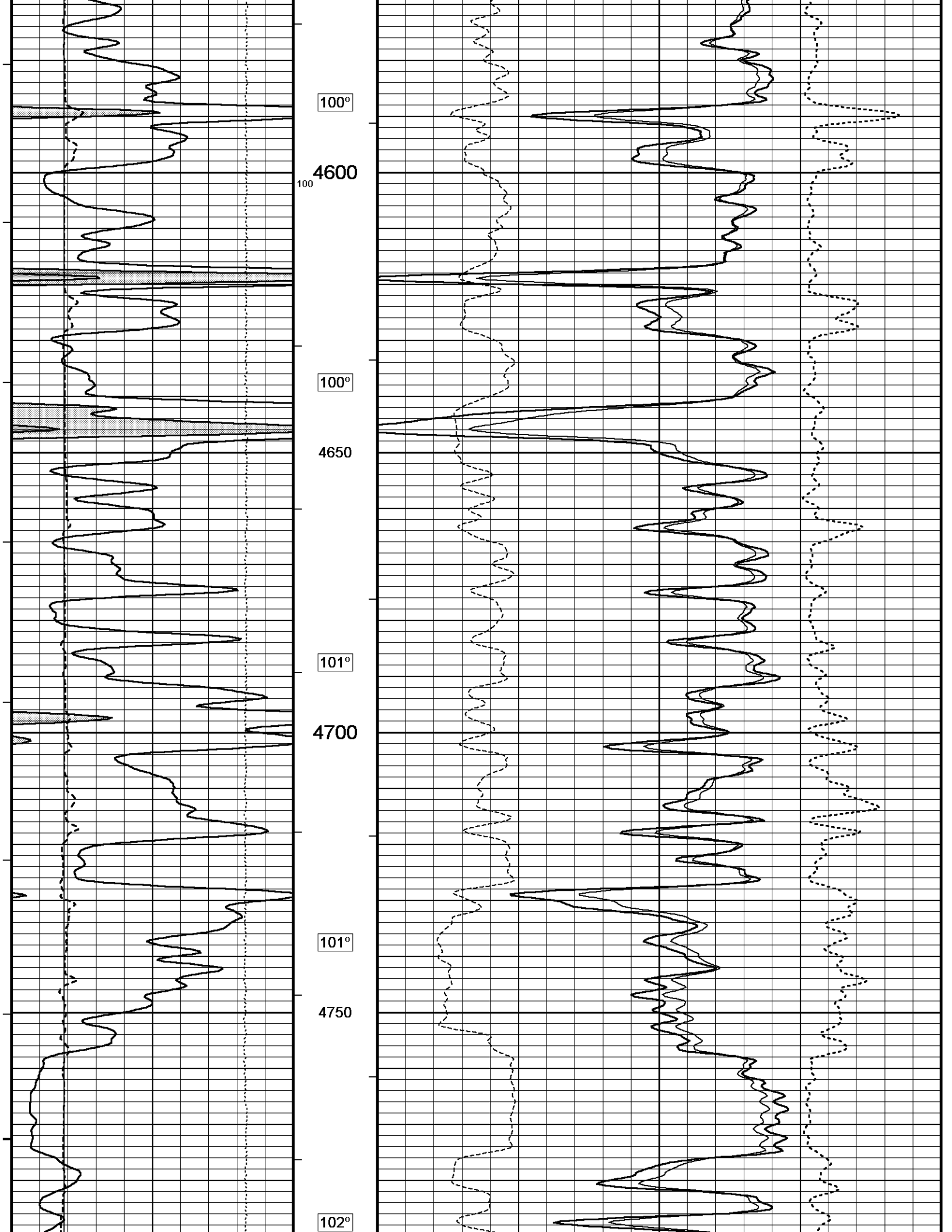
Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 30-MAR-2012 15:13
Filename: C:\DOCUME~1\SchefFJL\LOCALS~1\Te...\Redland David # 25-15_003 spooled section.dta — Recorded on 12-DEC-2011 17:38
System Versions: Logged with 11.03.4044 Plotted with 12.01.3513

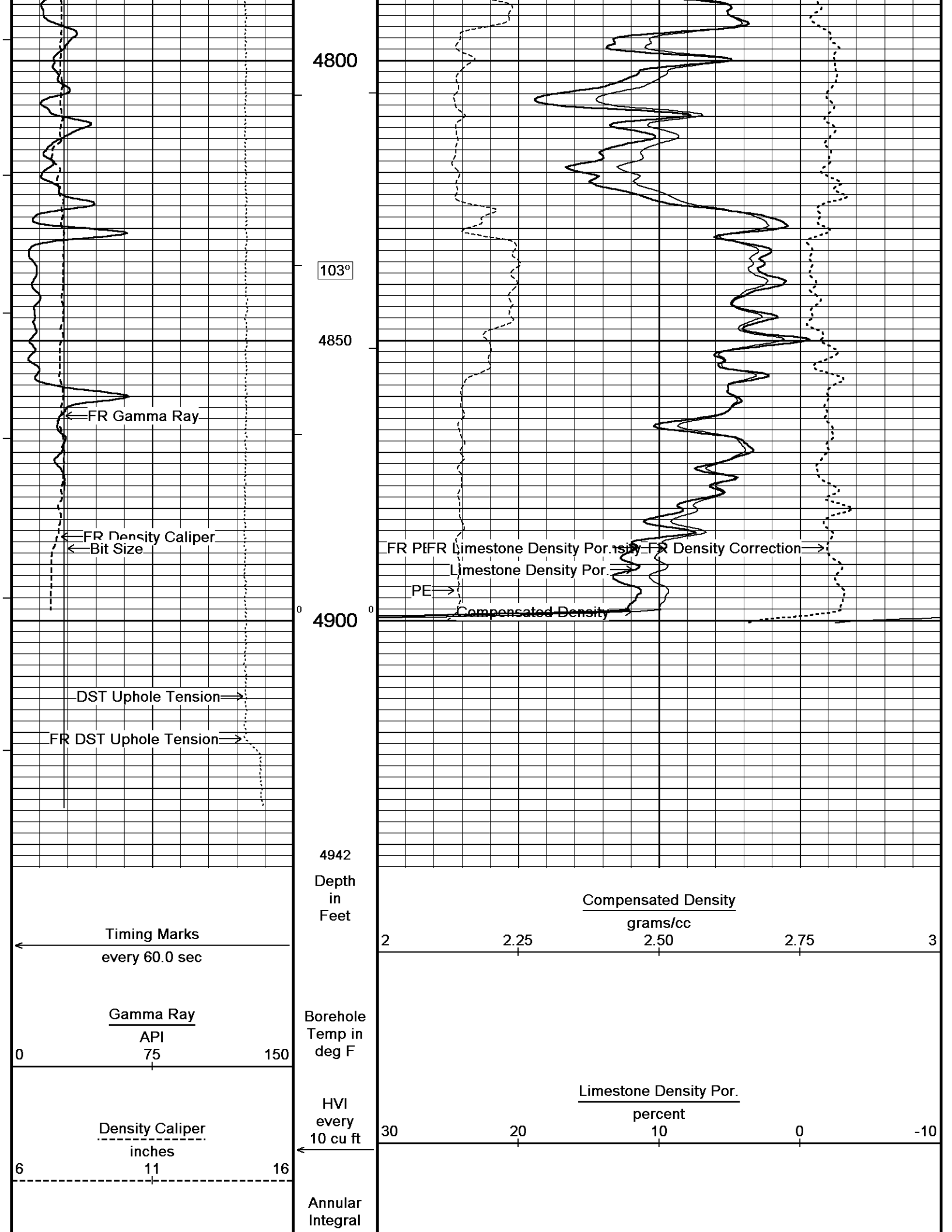



5000
0
Scale
1:240
3920
3950
96°
4000
300
200
97°
4050
97°
4100
Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
Limestone Density Por
PE
Compensated Density
Density Correction


97°
4150
97°
4200
96°
4250
97°
4300
200
97°


4350
98°
4400
98°
4450
100
99°
Bit Size
4500
Density Caliper
Gamma Ray
DST Uphole Tension
100°
4550
PE
Limestone Density Por.
Compensated Density
Density Correction


100°
100
4600
100°
4650
101°
4700
101°
4750
102°


4800
103°
4850
FR Gamma Ray
FR Density Caliper
Bit Size
FR PE
FR Limestone Density Por.
FR Density Correction
Limestone Density Por.
PE
Compensated Density
0
0
4900
DST Uphole Tension
FR DST Uphole Tension
4942
Depth in Feet
Compensated Density
grams/cc
2
2.25
2.50
2.75
3
Timing Marks
every 60.0 sec
Gamma Ray
API
0
75
150
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

Bit Size
inches
6 11 16

every
10 cu ft

PE
barns/electron
0 5 10

Density Correction
grams/cc
-0.25 0 0.25

DST Uphole Tension
pounds
5000 0

Replay
Scale
1:240

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 30-MAR-2012 15:13
Filename: C:\DOCUME~1\SchefFJL\LOCALS~1\Te...\Redland David # 25-15_003 spooled section.dta — Recorded on 12-DEC-2011 17:38
System Versions: Logged with 11.03.4044 Plotted with 12.01.3513

5 INCH MAIN

REPEAT SECTION

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 30-MAR-2012 15:13
Filename: C:\DOCUME~1\SchefFJL\LOCALS~1\Temp\Weatherford ...\Redland David # 25-15_002.dta — Recorded on 12-DEC-2011 16:25
System Versions: Logged with 11.03.4044 Plotted with 12.01.3513

Depth
in
Feet

Timing Marks
every 60.0 sec

Compensated Density
grams/cc
2 2.25 2.50 2.75 3

Gamma Ray
API
0 75 150

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

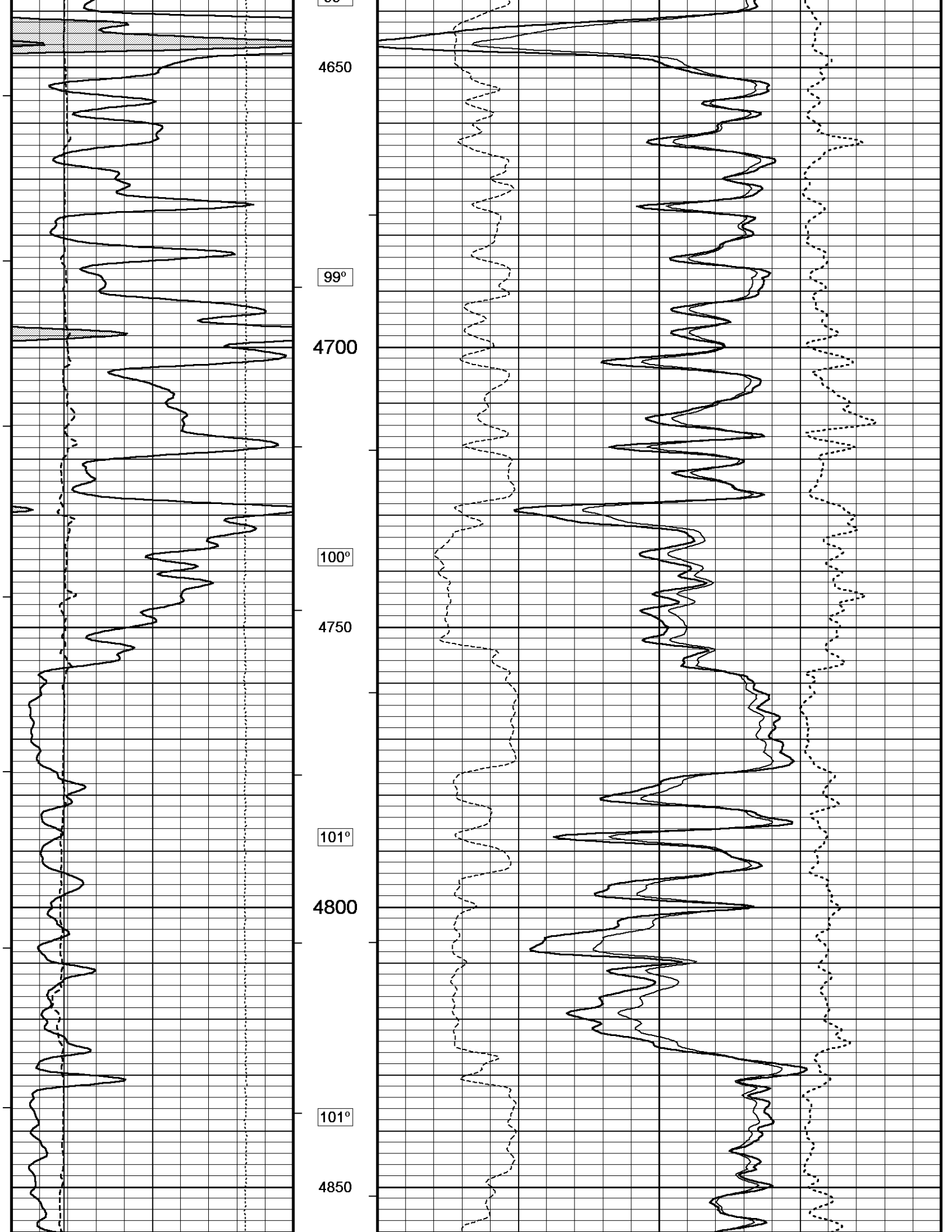
Density Correction
grams/cc
-0.25 0 0.25

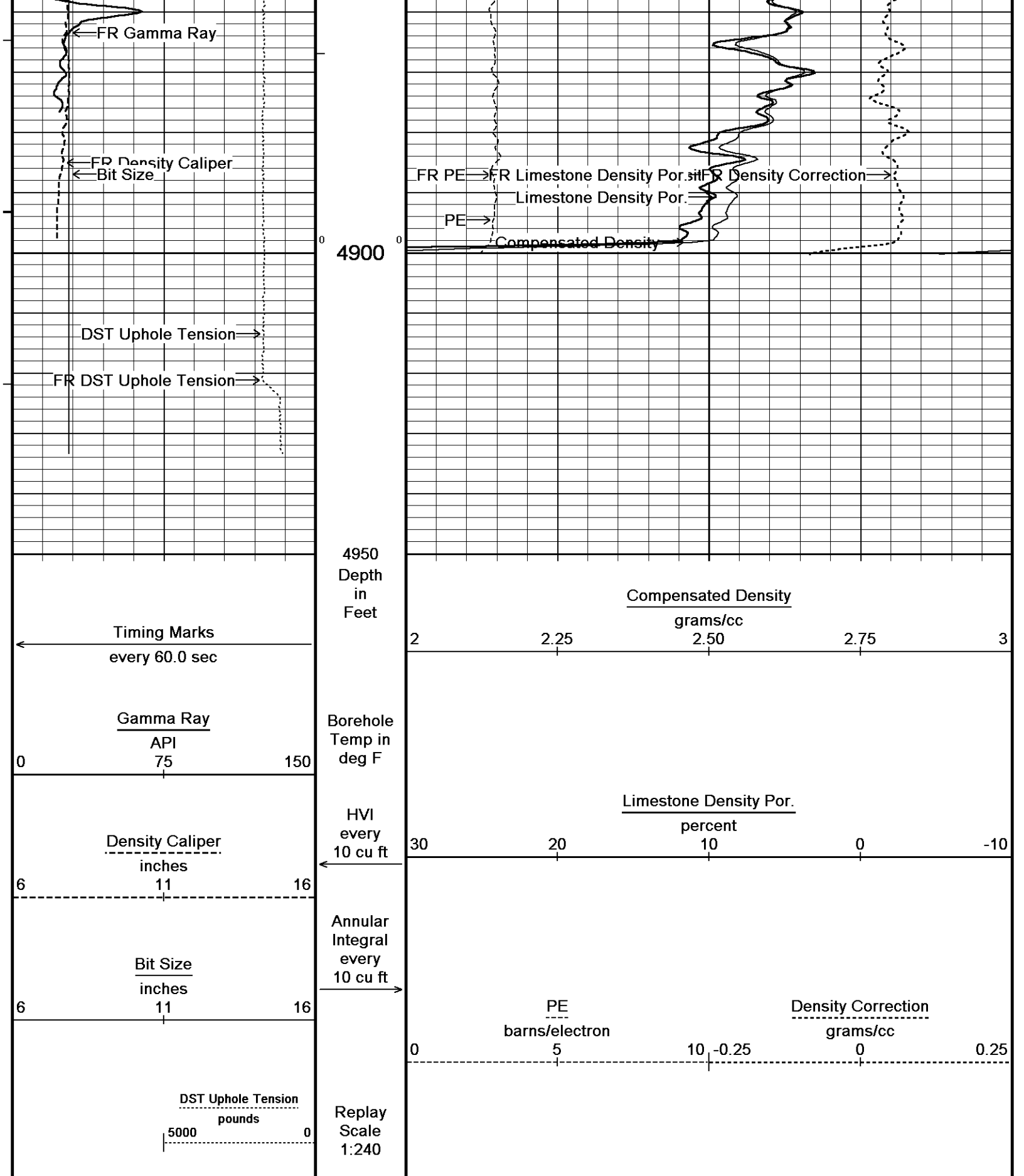
DST Uphole Tension
pounds
5000 0

Replay
Scale
1:240

100 4600

99°


4650
99°
4700
100°
4750
101°
4800
101°
4850



Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 30-MAR-2012 15:13
Filename: C:\DOCUME~1\SchefFJL\LOCALS~1\Temp\Weatherford ...\Redland David # 25-15_002.dta
Recorded on 12-DEC-2011 16:25
System Versions: Logged with 11.03.4044 Plotted with 12.01.3513

REPEAT SECTION

BEFORE SURVEY CALIBRATION

BEFORE SURVEY CALIBRATION

C:\DOCUME~1\SchefFJL\LOCALS~1\Temp\Weatherford PreView\0\Redland David # 25-15_003 spooled section.dta

General Constants All 000

Last Edited on 12-DEC-2011 15:11

General Parameters

Mud Resistivity	1.680	ohm-metres
Mud Resistivity Temperature	52.000	degrees F
Water Level	0.000	feet
Density/Neutron Processing	Wet Hole	

Hole/Annular Volume and Differential Caliper Parameters

HVOL Method	Single Caliper	
HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	N/A	
Annular Volume Diameter	4.500	inches
Caliper for Differential Caliper	Density Caliper	

Rwa Parameters

Porosity used	Base Density Porosity
Resistivity used	Array Ind. Six Res Rt
RWA Constant A	0.610
RWA Constant M	2.150

Down-hole Tension Calibration SMS 0

Field Calibration on 23-OCT-2011 04:19

Reading No	Measured	Calibrated (lbs)
1	12734.06	0.00
2	13523.27	454.00

High Resolution Temperature Calibration MCG-C 84

Field Calibration on 24-JUN-2010 14:02

	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

SP Calibration MCG-C 84

Field Calibration on 28-DEC-2010 11:28

	Measured	Calibrated (mV)
Reference 1	100.3	100.0
Reference 2	-99.7	-100.0

Gamma Calibration MCG-C 84

Field Calibration on 12-DEC-2011 11:15

	Measured	Calibrated (API)
Background	56	37
Calibrator (Gross)	741	493
Calibrator (Net)	685	456

Gamma Constants MCG-C 84

Last Edited on 12-DEC-2011 15:11

Gamma Calibrator Number	grc141	
Mud Density	1.09	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

Caliper Calibration MML-A 9

Base Calibration on 17-OCT-2011 12:45
Field Calibration on 12-DEC-2011 11:02

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	15145	5.98
2	18563	7.97
3	21887	9.86
4	25872	11.92
5	0	0.00
6	N/A	N/A

Field Calibration

	Measured Caliper (in)	Actual Caliper (in)

	5.95	5.98

Micro Normal and Micro Inverse Calibration MML-A 9

Base Calibration on 17-OCT-2011 12:28
Field Check on 12-DEC-2011 10:57

Base Calibration

Channel	Measured Resistor 1	Measured Resistor 2	Calibrated (ohm-m) Resistor 1	Calibrated (ohm-m) Resistor 2
Micro Normal	12.1	59.5	2.6	12.8
Micro Inverse	15.6	77.7	1.7	8.4

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Micro Normal	32.5	32.5
Micro Inverse	16.4	16.4

Micro Normal and Micro Inverse Constants MML-A 9

Last Edited on 12-DEC-2011 15:10

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	N/A	inches

Neutron Calibration MDN-A.B 39

Base Calibration on 19-OCT-2011 16:30
Field Check on 12-DEC-2011 11:21

Base Calibration

	Measured Near	Measured Far	Calibrated (cps) Near	Calibrated (cps) Far
	2769	86	3714	110
Ratio	32.016		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	2150	3003
Ratio	0.716	

Field Check

	Calibrated (cps)	
	2369	3373
Ratio	0.702	

Neutron Constants MDN-A.B 39

Last Edited on 12-DEC-2011 15:10

Neutron Source Id	N1095	
Neutron Jig Number	NECD117	
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	None	
Formation Pressure	N/A	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 67

Base Calibration on 21-NOV-2011 10:01
Field Check on 12-DEC-2011 10:55

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	959.2	126.8
Base Check		281.1
Field Check		281.1

FE Constants MFE-A.A 67

Last Edited on 12-DEC-2011 15:10

Running Mode	No Sleeve
MFE K Factor	0.1268
Caliper Source for FE correction	Density Caliper

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-A.A 126

Last Edited on 18-SEP-2011 16:11

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	
Correction for Sonde Skew	Applied	
Cycle Stretch Algorithm	Applied	
MN3FT	0.00	micro-sec
MX3FT	1500.00	micro-sec
Hunt-Raymer Constant	83.13	micro-sec/ft
Sonde Mode	Compensated	
Hole Type	Open Hole	

Sonde Parameters

	Measured	Calibrated
Offset	0.0000	0.0000
Free Pipe	0.0000	0.0000

Peak Amplitude Source 0

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)	Depth (ft)
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	0.00	0.00	

Full Waveform Parameters

Use 3' Waveform to derive TR	No	
Use 4' Waveform to derive TR	No	
Use 5' Waveform to derive TR	No	
Use 6' Waveform to derive TR	No	
3' Waveform Discriminator Level	0.30	mV
4' Waveform Discriminator Level	0.30	mV
5' Waveform Discriminator Level	0.15	mV
6' Waveform Discriminator Level	0.15	mV
3' Waveform Filter	0	
4' Waveform Filter	0	
5' Waveform Filter	0	
6' Waveform Filter	0	
Semblance Level	0.50	
Semblance Window Width	120.00	micro-sec
Sonic 1 Despiker	100.00	micro-sec/ft
Sonic 2 Despiker	100.00	micro-sec/ft

High Resolution Temperature Calibration MAI-A.A 188

Field Calibration on 12-AUG-2011 22:41

	Measured	Calibrated(Deg F)
Lower	32.00	32.00
Upper	68.00	68.00

High Resolution Temperature Constants MAI-A.A 188

Last Edited on 21-JUN-2011 20:05

Pre-filter Length	11

Induction Calibration MAI-A.A 188

Base Calibration on 19-OCT-2011 15:25
Field Check on 12-DEC-2011 10:53

Base Calibration

Test Loop Calibration

Channel	Measured Low	Measured High	Calibrated (mmho/m) Low	Calibrated (mmho/m) High
1	16.9	470.2	9.3	966.2
2	6.4	377.1	7.6	821.4
3	3.9	257.8	5.2	566.0
4	1.7	135.1	2.6	279.2

Array Temperature	66.3	Deg F

Channel	Base Check (mmho/m) Low	Base Check (mmho/m) High	Field Check (mmho/m) Low	Field Check (mmho/m) High	
1	0.0	0.0	13.2	3867.6	
2	0.0	0.0	29.8	3585.3	
3	0.0	0.0	27.8	3079.7	
4	0.0	0.0	19.6	2047.6	
Deep	0.0	0.0	17.1	1956.0	
Medium	0.0	0.0	40.1	4116.0	
Shallow	0.0	0.0	44.4	5369.9	
Array Temperature	0.0		63.4		Deg F

Induction Constants MAI-A.A 188

Last Edited on 12-DEC-2011 15:10

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	

Caliper Calibration MPD-B 65

Base Calibration on 28-NOV-2011 10:07
Field Calibration on 12-DEC-2011 11:04

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	13805	3.99

2	22448	5.98
3	31025	7.97
4	39247	9.86
5	48400	11.92
6	N/A	N/A

Field Calibration

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

Photo Density Calibration MPD-B 65

Base Calibration on 28-NOV-2011 10:33
Field Check on 12-DEC-2011 11:09

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	60872	28838	59556	30836
Reference 2	24326	2449	24941	2541

Field Check at Base

1237.1	1179.7

Field Check

1232.7	1186.3

PE Calibration

Base Calibration	Measured			Calibrated
	WS	WH	Ratio	Ratio
Background	225	1100		
Reference 1	22729	60656	0.378	0.371
Reference 2	6549	24175	0.274	0.272

Field Check at Base

224.7	1100.1

Field Check

222.1	1094.8

Density Constants MPD-B 65

Last Edited on 12-DEC-2011 15:10

Density Source Id	P57072B	
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	1.09	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
0.00	

DOWNHOLE EQUIPMENT

C:\DOCUME~1\SchefFJL\LOCALS~1\Temp\Weatherford PreView\0\Redland David # 25-15_003 spooled section.dta

MCB-A.A 11B Tension Cablehead
MCB-A.A 161 LG: 2.40 ft WT: 19.8 lb OD: 2.24 in

MCB-A.A 11B Tension Cablehead
MCB-A.A 161 LG: 2.40 ft WT: 19.8 lb OD: 2.24 in

SHA-F Compact Swivel Head Adaptor
SHA-F 88 LG: 2.74 ft WT: 26.5 lb OD: 2.24 in

SHA-F Compact Swivel Head Adaptor
SHA-F 88 LG: 2.74 ft WT: 26.5 lb OD: 2.24 in

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 9 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

Compact Micro-log
MML-A 9 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

Compact Neutron
MDN-A.B 39 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Neutron
MDN-A.B 39 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper
MPD-B 65 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

Compact Density/Caliper
MPD-B 65 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

SKJ-D.A Compact Knuckle Joint
SKJ-D.A 91 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

SKJ-D.A Compact Knuckle Joint
SKJ-D.A 91 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

Compact Focussed Electric
MFE-A.A 67 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Focussed Electric
MFE-A.A 67 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Sonic
MSS-A.A 126 LG: 12.52 ft WT: 72.8 lb OD: 2.24 in

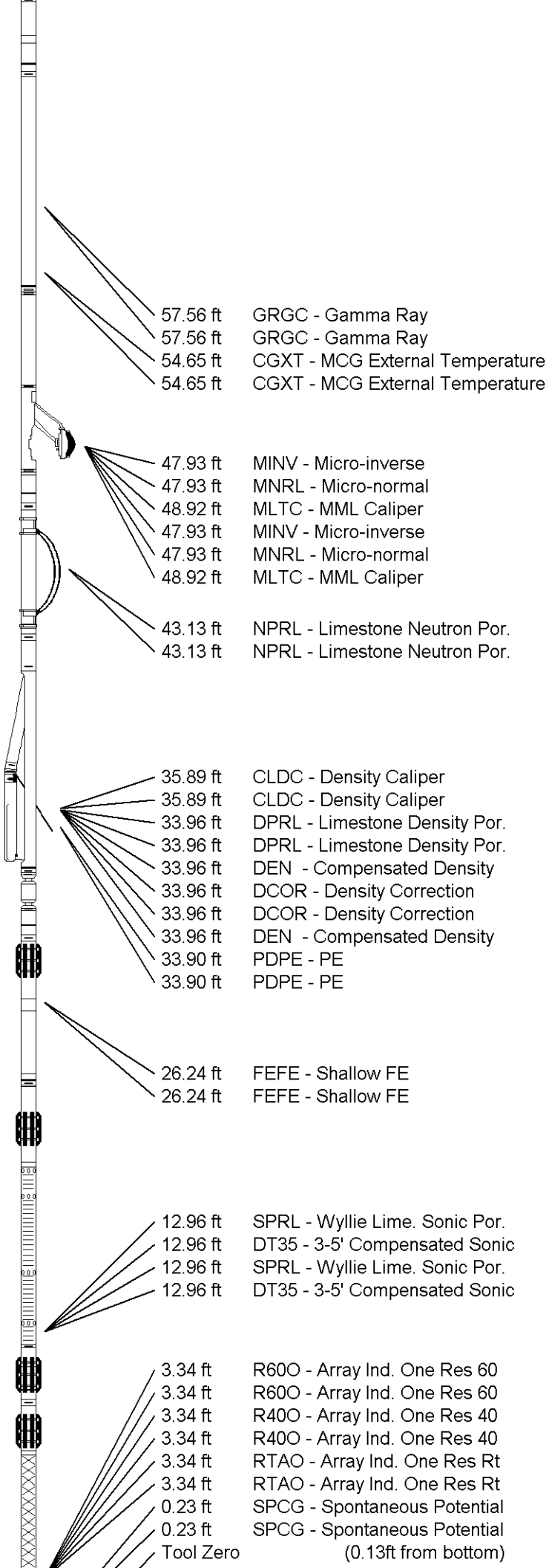
Compact Sonic
MSS-A.A 126 LG: 12.52 ft WT: 72.8 lb OD: 2.24 in

Compact Induction
MAI-A.A 188 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

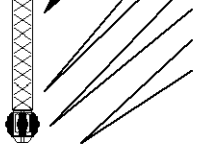
Compact Induction
MAI-A.A 188 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 67.98 ft Weight: 526.9 lb

Total Length: 67.98 ft Weight: 526.9 lb



57.56 ft	GRGC - Gamma Ray
57.56 ft	GRGC - Gamma Ray
54.65 ft	CGXT - MCG External Temperature
54.65 ft	CGXT - MCG External Temperature
47.93 ft	MINV - Micro-inverse
47.93 ft	MNRL - Micro-normal
48.92 ft	MLTC - MML Caliper
47.93 ft	MINV - Micro-inverse
47.93 ft	MNRL - Micro-normal
48.92 ft	MLTC - MML Caliper
43.13 ft	NPRL - Limestone Neutron Por.
43.13 ft	NPRL - Limestone Neutron Por.
35.89 ft	CLDC - Density Caliper
35.89 ft	CLDC - Density Caliper
33.96 ft	DPRL - Limestone Density Por.
33.96 ft	DPRL - Limestone Density Por.
33.96 ft	DEN - Compensated Density
33.96 ft	DCOR - Density Correction
33.96 ft	DCOR - Density Correction
33.96 ft	DEN - Compensated Density
33.90 ft	PDPE - PE
33.90 ft	PDPE - PE
26.24 ft	FEFE - Shallow FE
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	R60O - Array Ind. One Res 60
3.34 ft	R60O - Array Ind. One Res 60
3.34 ft	R40O - Array Ind. One Res 40
3.34 ft	R40O - Array Ind. One Res 40
3.34 ft	RTAO - Array Ind. One Res Rt
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	REDLAND RESOURCES
WELL	DAVID # 25-15
FIELD	WILDCAT
PROVINCE/COUNTY	HODGEMAN
COUNTRY/STATE	KANSAS / U.S.A.

Elevation Kelly Bushing	2509.00	feet	First Reading	4887.00	feet
Elevation Drill Floor	2507.00	feet	Depth Driller	4920.00	feet
Elevation Ground Level	2497.00	feet	Depth Logger	4921.00	feet

Weatherford®

COMPACT PHOTO DENSITY
COMPENSATED NEUTRON
MICRORESISTIVITY LOG

40 Years of Wireline 1970 2010