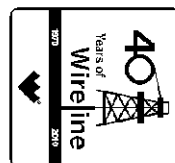


**Weatherford****MICRORESISTIVITY LOG**

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**



SEC **TWP** **RGE** Other Services
25 **23S** **25W** MPD/MDN
API Number **15-083-21729** MSS
Permit Number **MAI/MFE**

Permanent Datum G.L., Elevation 2497 feet
Log Measured From KB
Drilling Measured From K.B. @2509
Date **12-DEC-2011**

Elevations: feet
KB 2509.00
DF 2507.00
GL 2497.00

Run Number	ONE	
Depth Driller	4920.00	feet
Depth Logger	4921.00	feet
First Reading	4872.00	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

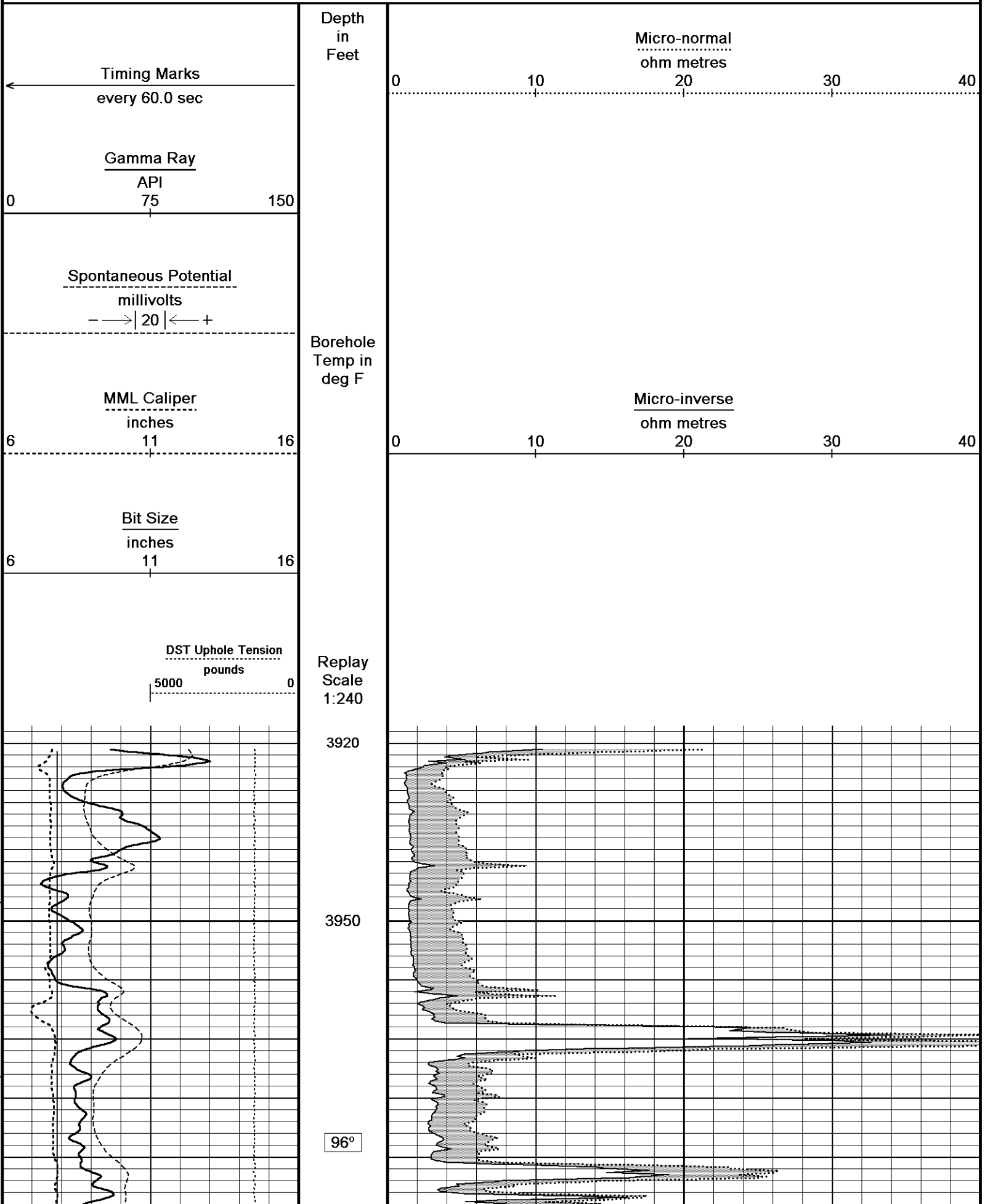
CASING RECORD

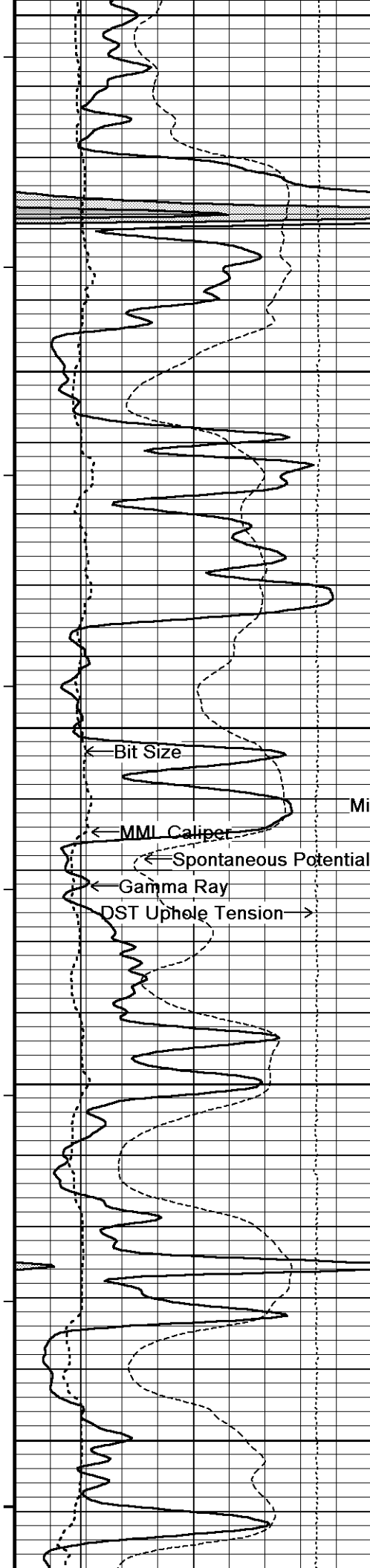
Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	219.00	24.00

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

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.





4000

97°

4050

97°

4100

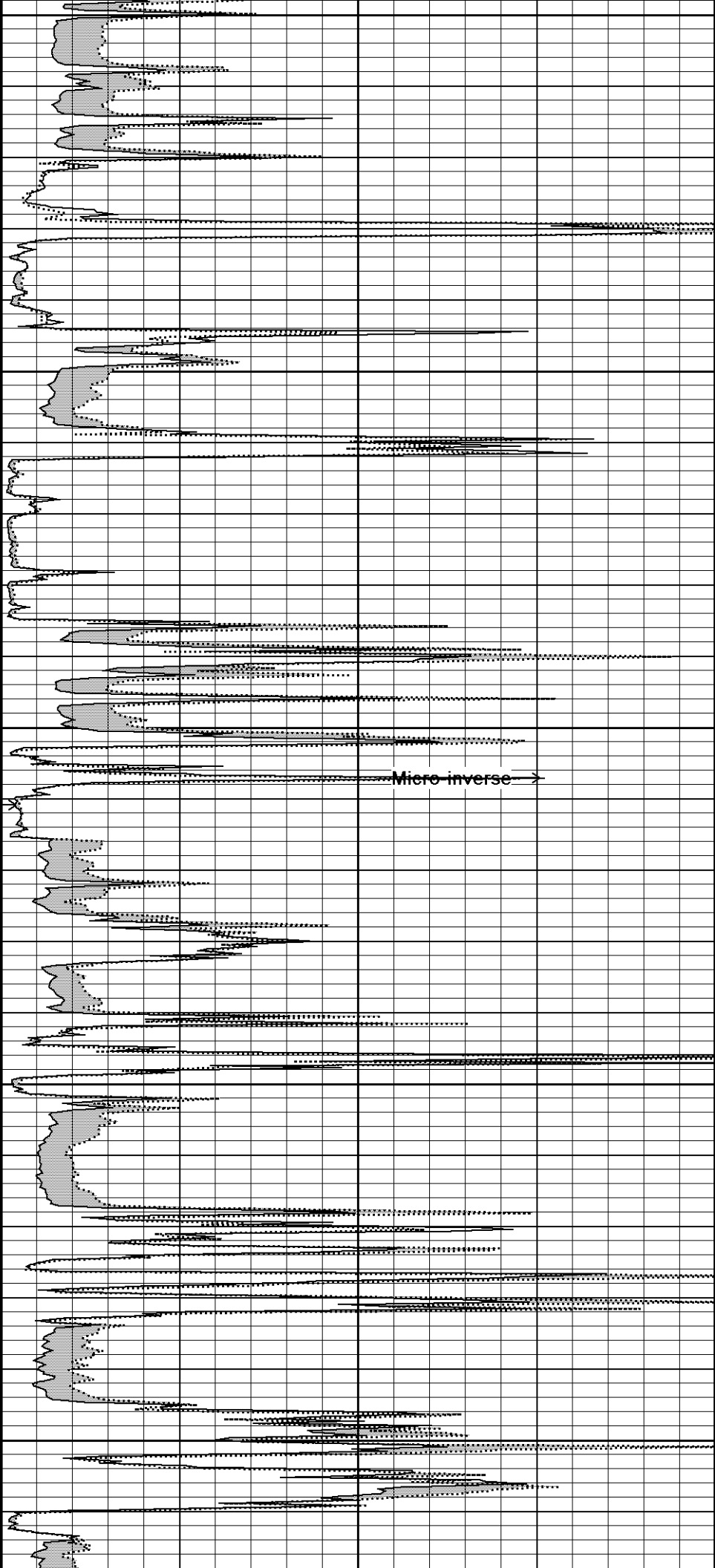
Micro-normal

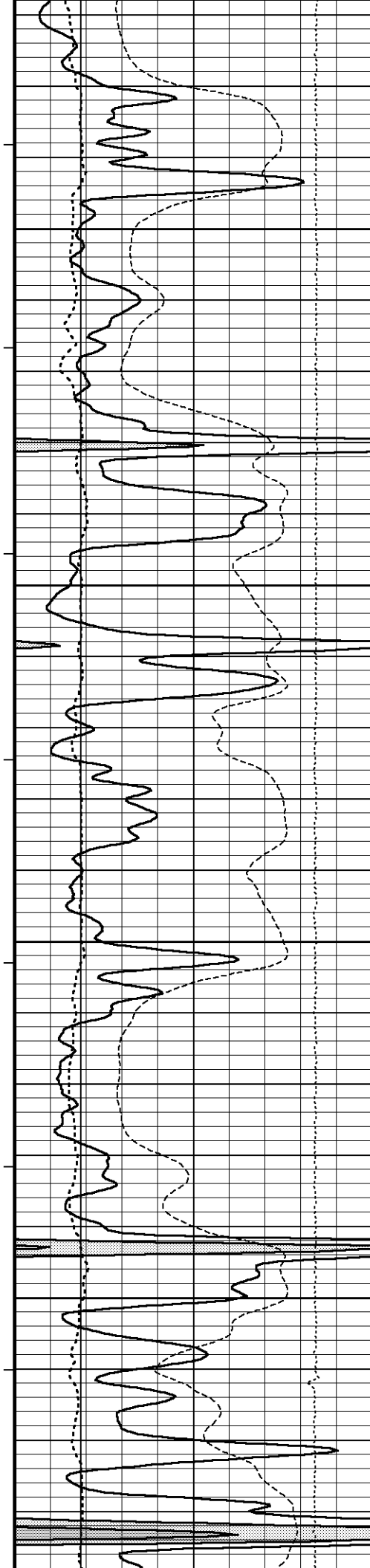
97°

4150

97°

4200





96°

4250

97°

4300

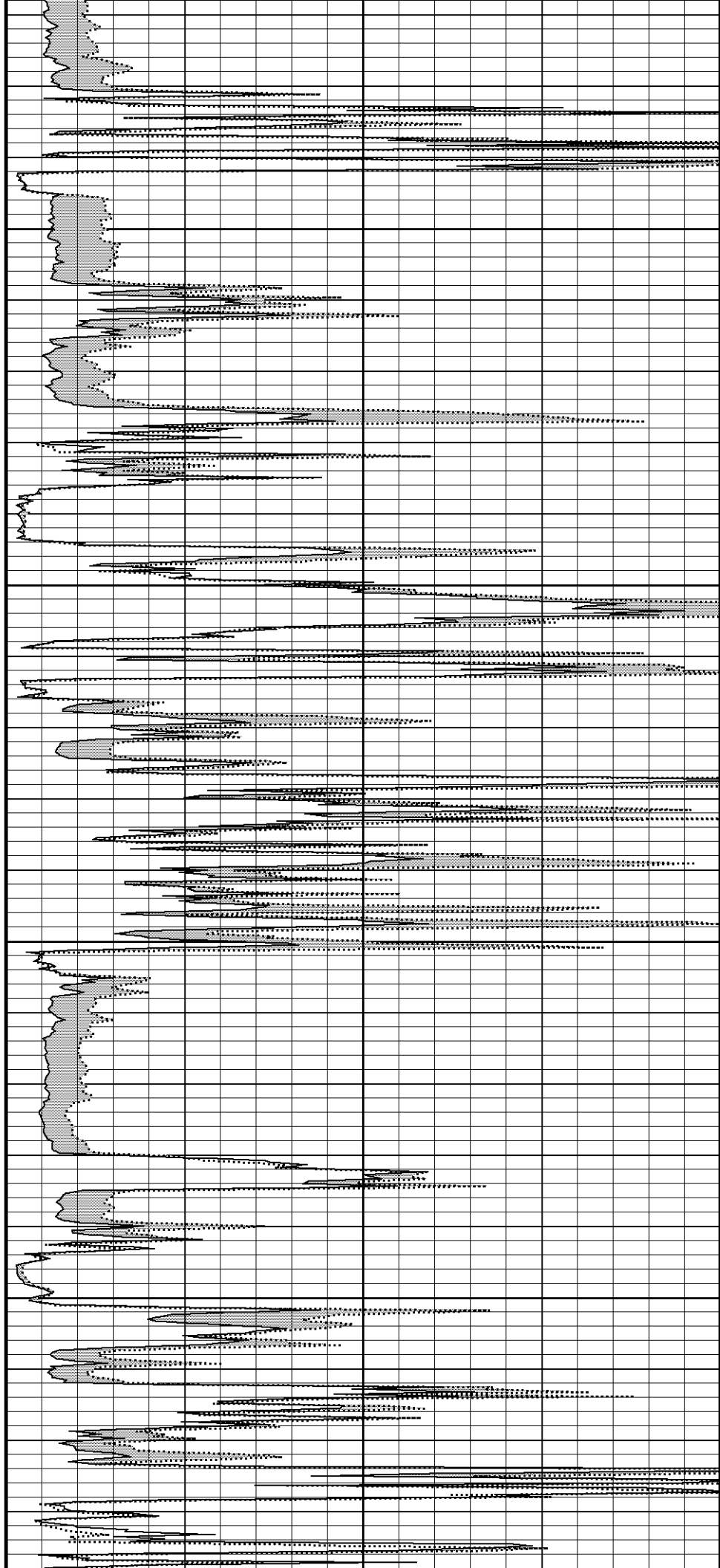
97°

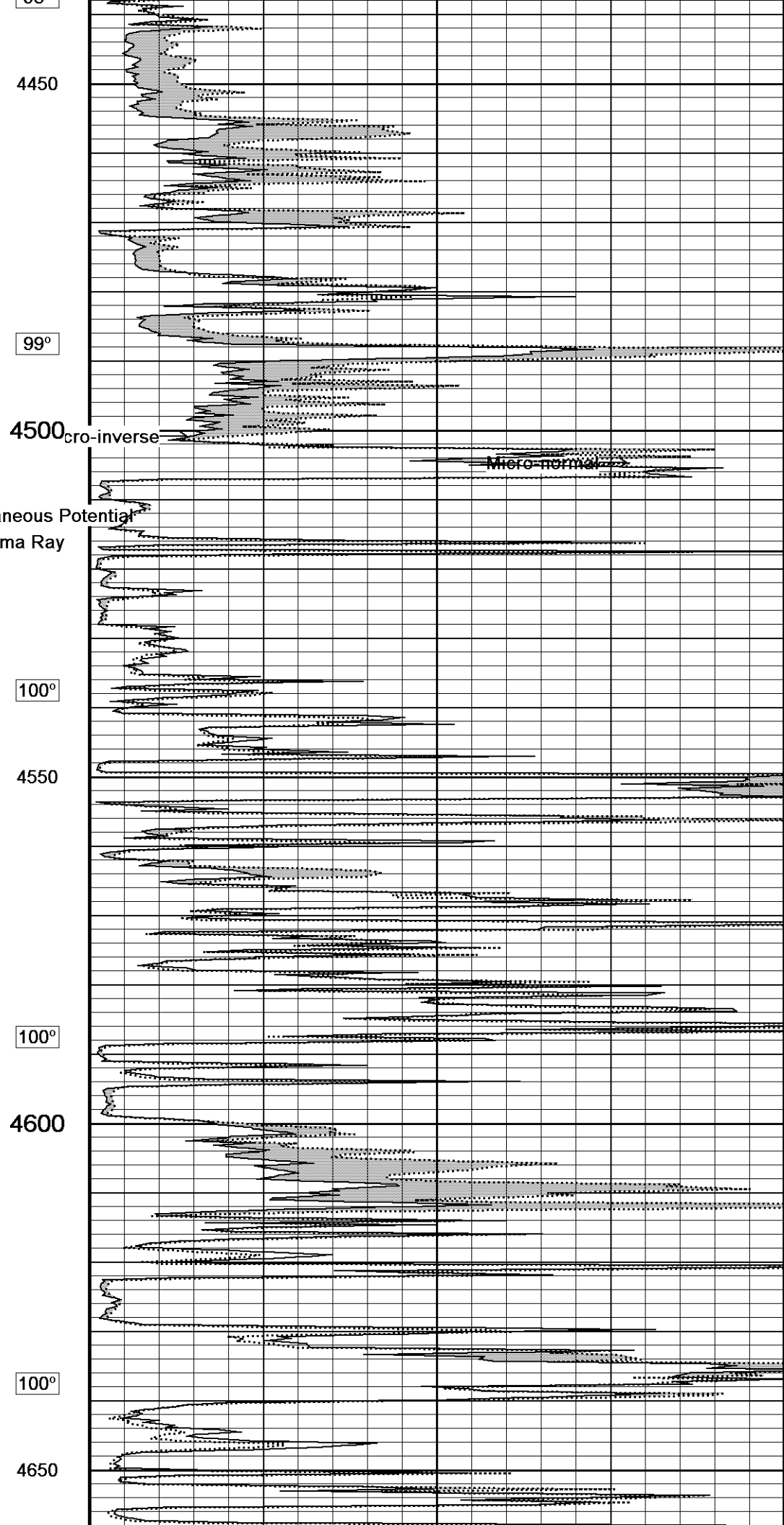
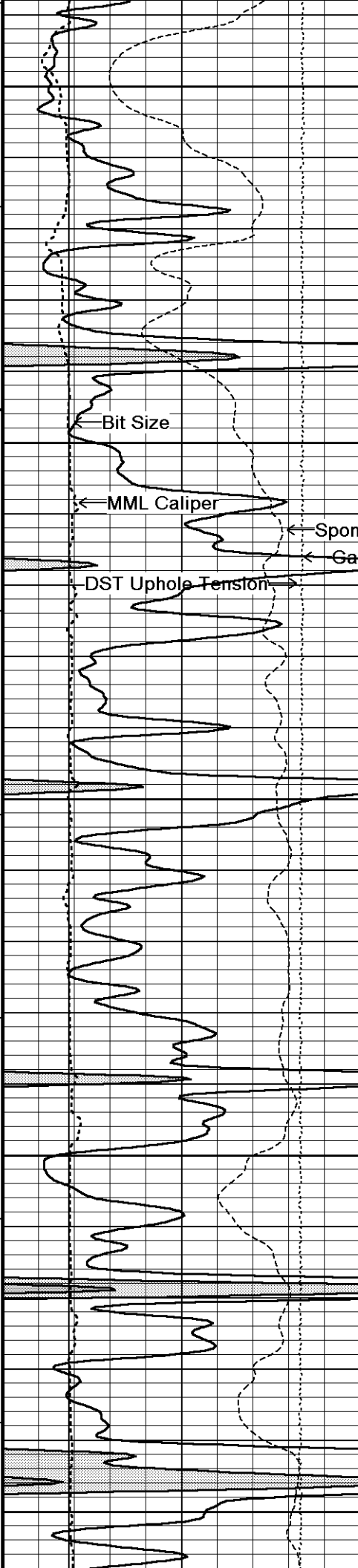
4350

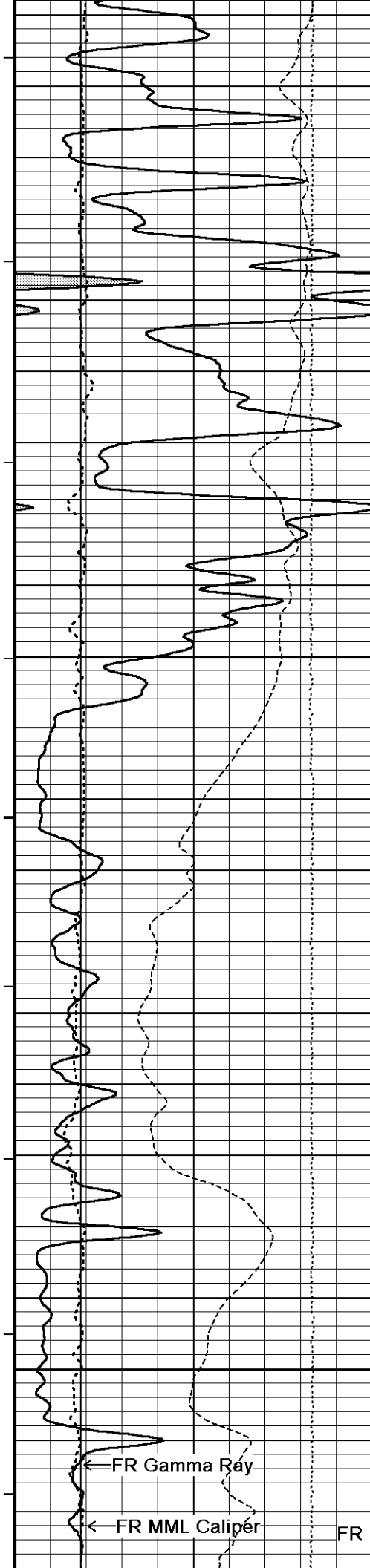
98°

4400

98°







101°

4700

101°

4750

102°

4800

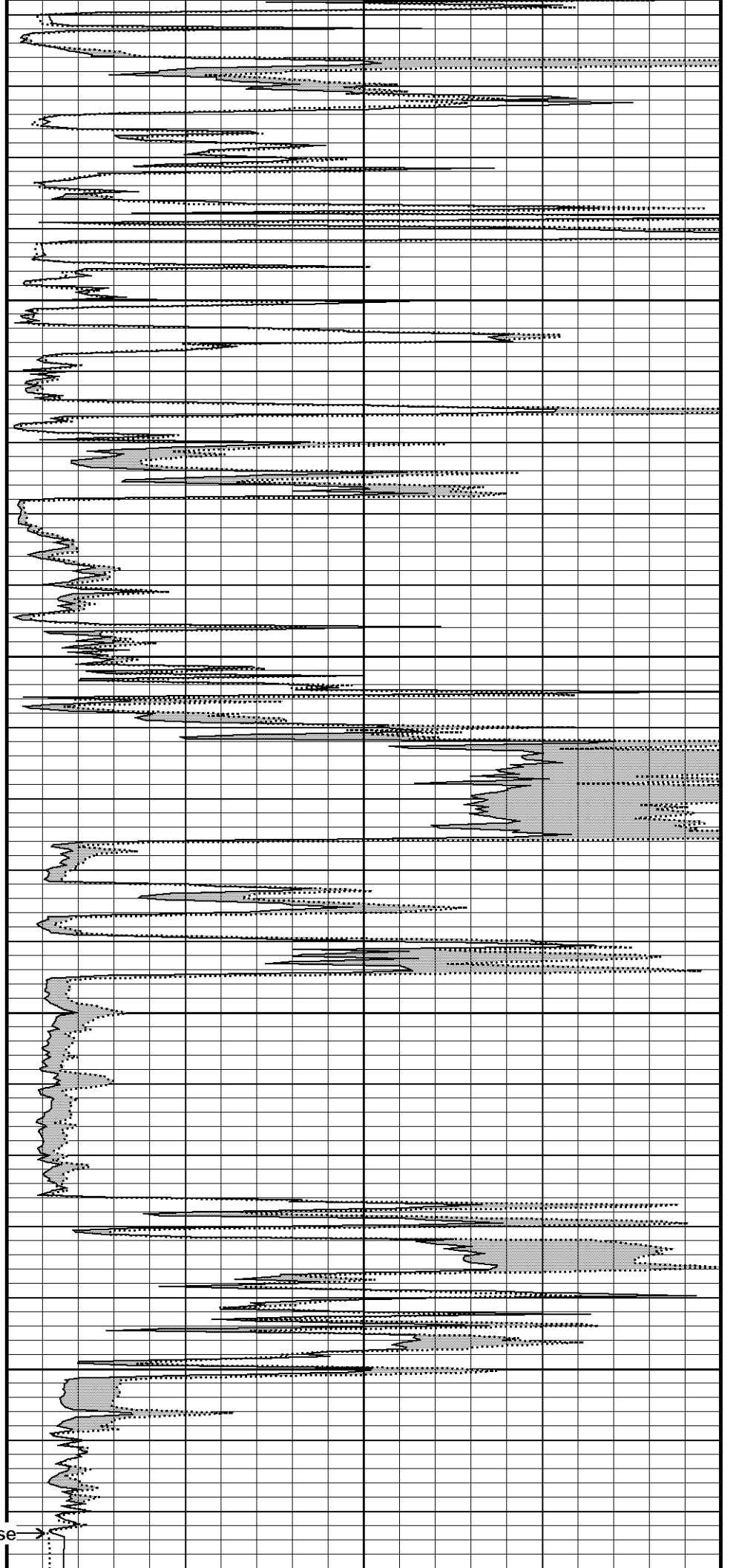
103°

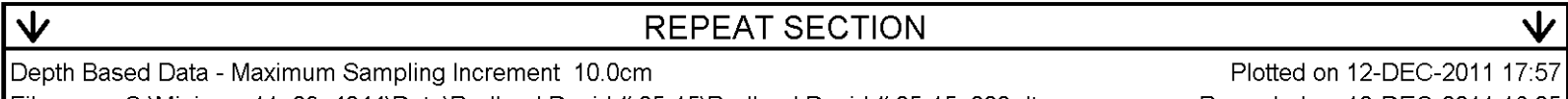
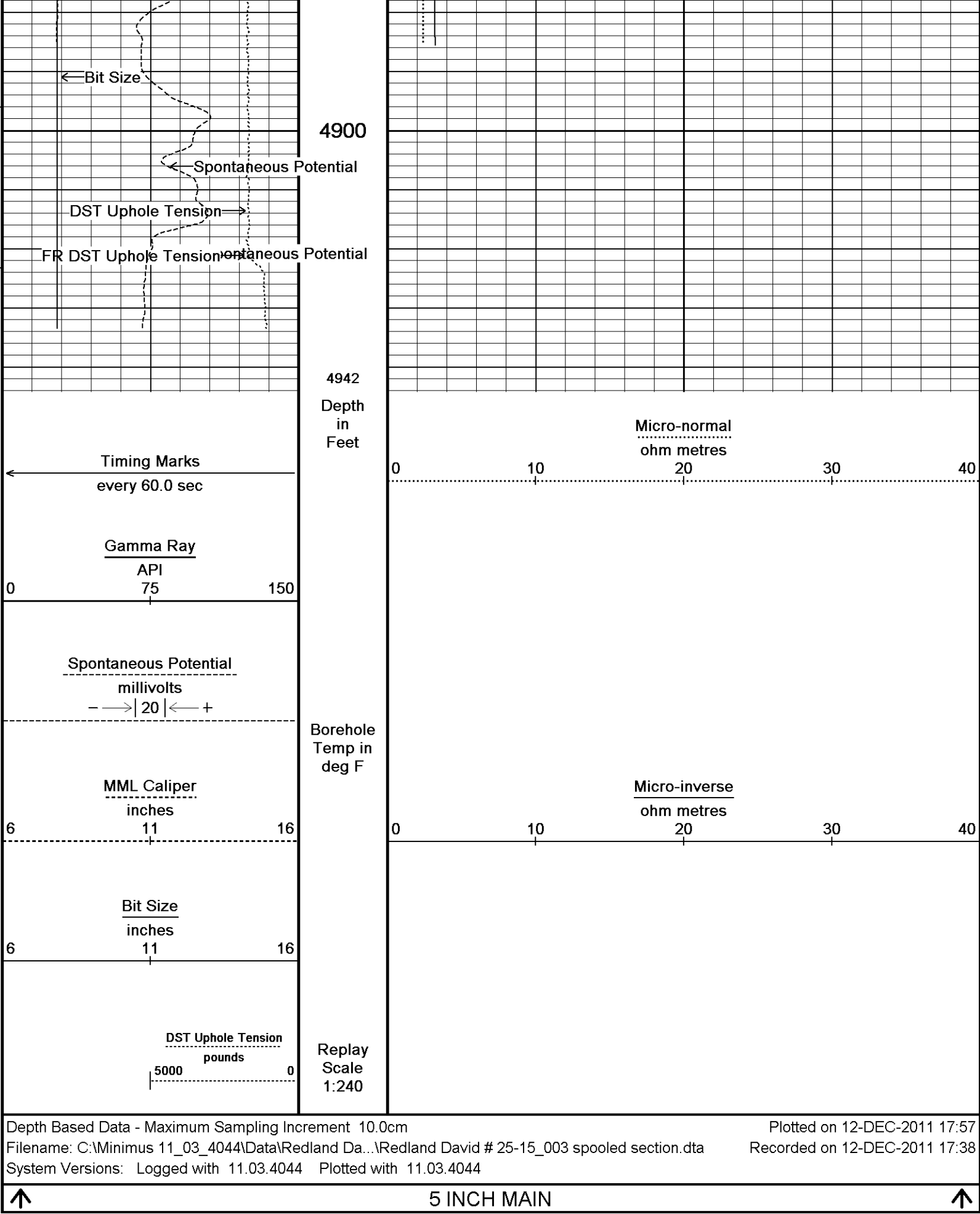
4850

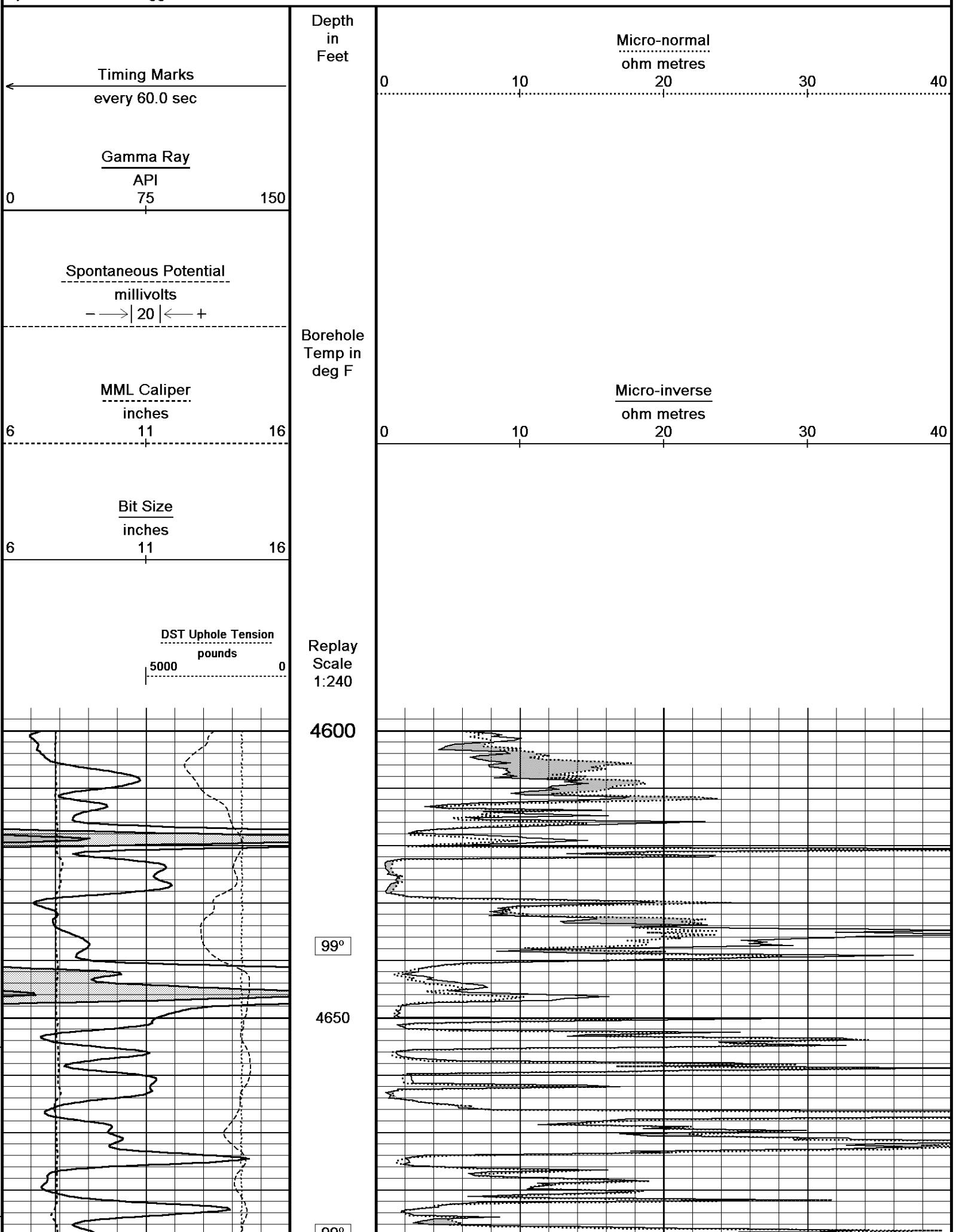
← FR Gamma Ray

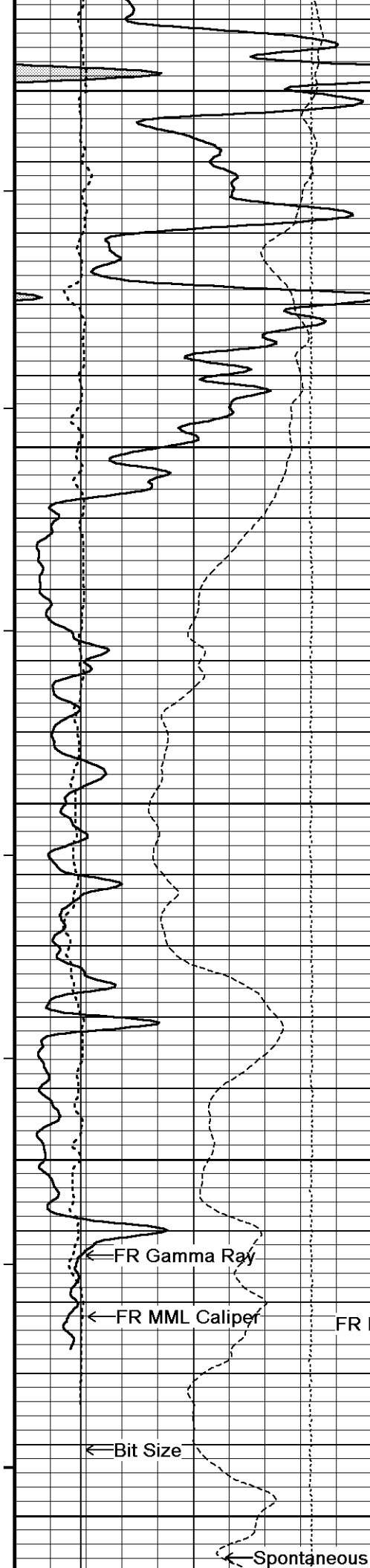
← FR MML Caliper

FR Micro-inverse →









99°

4700

100°

4750

101°

4800

101°

4850

4900

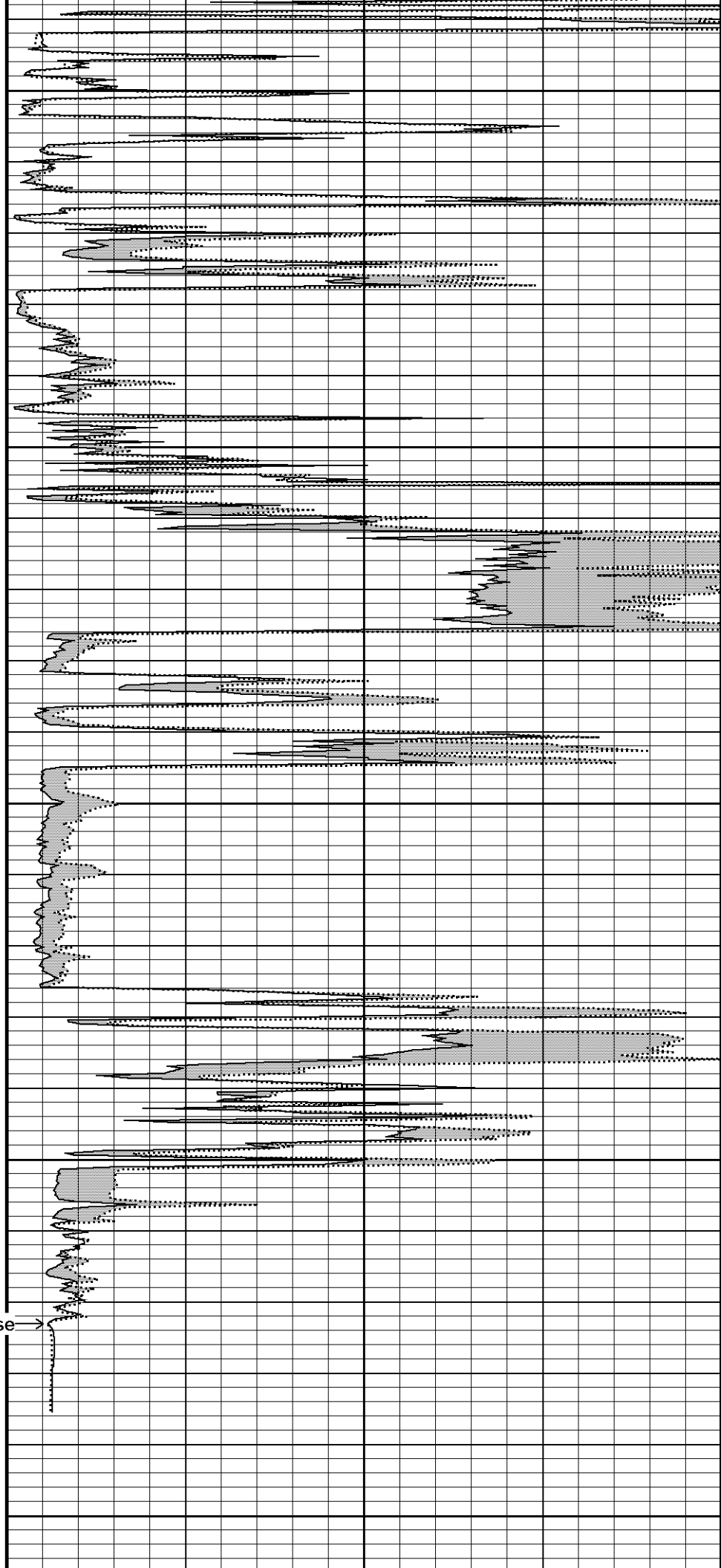
← FR Gamma Ray

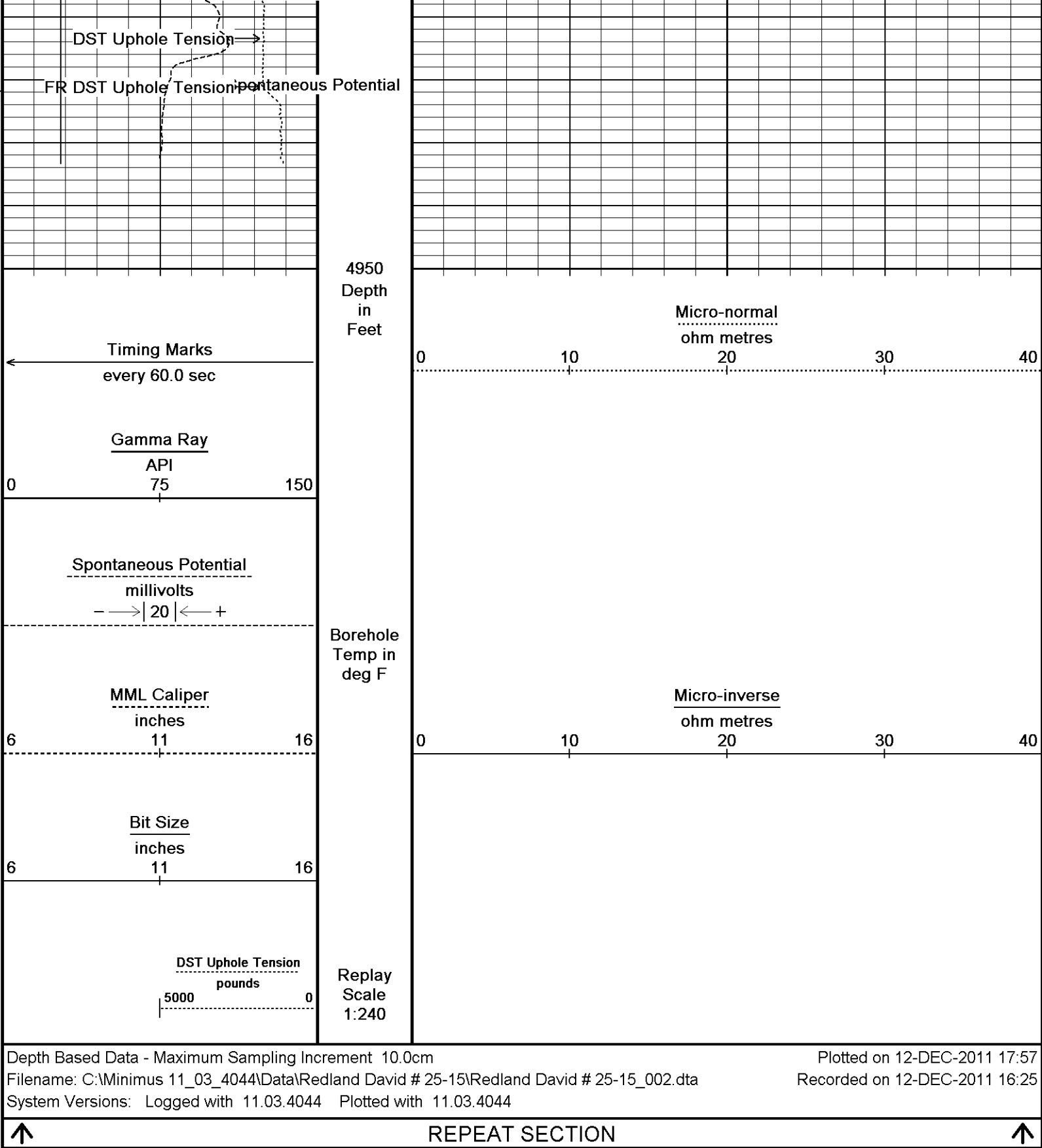
← FR MML Caliper

← Bit Size

← Spontaneous Potential

FR Micro-inverse →





BEFORE SURVEY CALIBRATION		
C:\Minimus 11_03_4044\Data\Redland David # 25-15\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

High Resolution Temperature Calibration MCG-C 84

Field Calibration on 24-JUN-2010,13:02

	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
-------------------	----

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 11:45

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 11:28

Field Check on 12-DEC-2011 10:57

Base Calibration				
		Measured	Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	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

DOWNHOLE EQUIPMENT

C:\Minimus 11_03_4044\Data\Redland David # 25-15\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

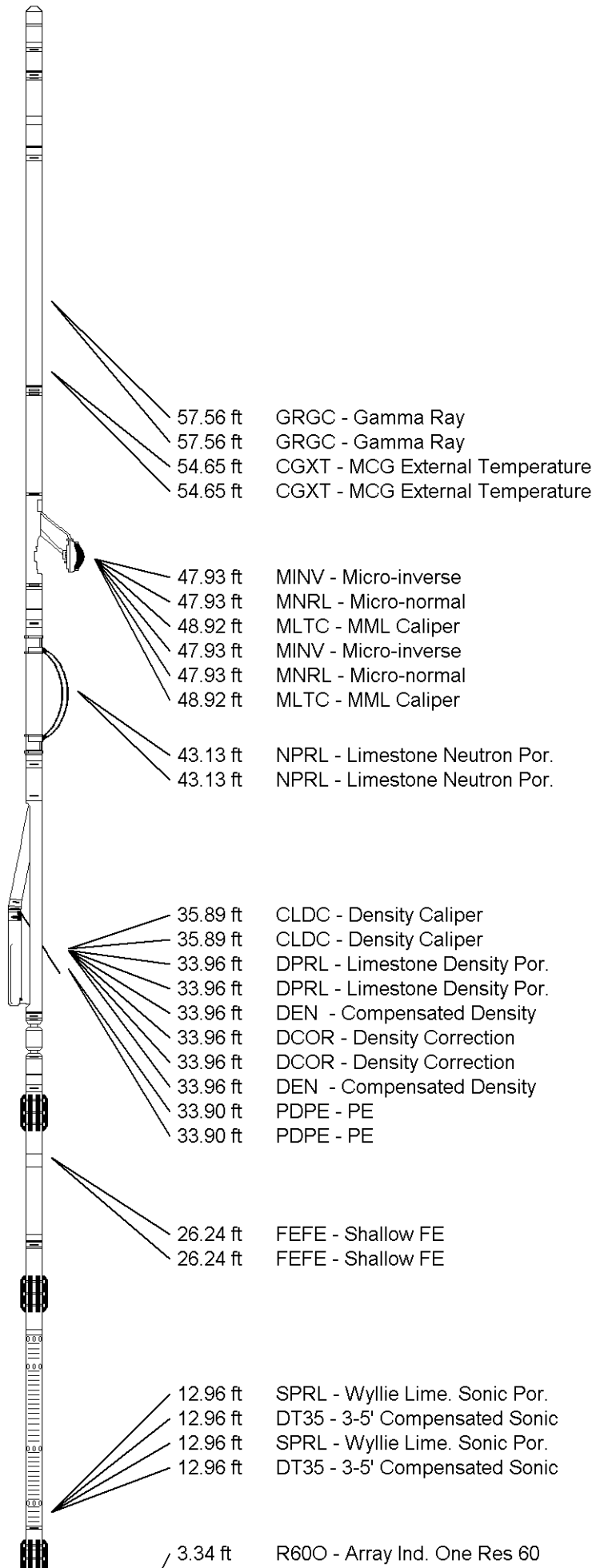
Compact Focussed Electric
MFE-A.A 67 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

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

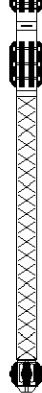
Compact Induction



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



3.34 ft R600 - Array Ind. One Res 60
3.34 ft R400 - Array Ind. One Res 40
3.34 ft R400 - 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	4872.00	feet
Elevation Drill Floor	2507.00	feet	Depth Driller	4920.00	feet
Elevation Ground Level	2497.00	feet	Depth Logger	4921.00	feet



Weatherford®

MICRORESISTIVITY LOG

