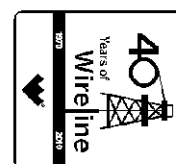


**Weatherford****MICRORESISTIVITY LOG**

COMPANY **OXY U.S.A.**
WELL **SHELL B-1**
FIELD **AMAZON GULCH**
PROVINCE/COUNTY **FINNEY**
COUNTRY/STATE **U.S.A. / KANSAS**
LOCATION **2304' FNL & 1181' FWL**



SEC **TWP** **RGE** Other Services
17 **22S** **34W** **MPD/MDN**
API Number **15-055-22110** **MAI/MFE**
Permit Number **MSS**

Permanent Datum G.L., Elevation 2975 feet
Log Measured From KB
Drilling Measured From K.B.

Elevations: feet
KB 2988.00
DF 2986.00
GL 2975.00

Date	09-AUG-2011	
Run Number	ONE	
Depth Driller	4907.00	feet
Depth Logger	4910.00	feet
First Reading	4862.00	feet
Last Reading	3700.00	feet
Casing Driller	1794.00	feet
Casing Logger	1792.00	feet
Bit Size	7.875	inches
Hole Fluid Type	CHEMICAL	
Density / Viscosity	9.30 lb/USg	47.00 CP
PH / Fluid Loss	8.70	47.00 ml/30Min
Sample Source	FLOWLINE	
Rm @ Measured Temp	0.89 @ 92.0	ohm-m
Rmf @ Measured Temp	0.71 @ 92.0	ohm-m
Rmc @ Measured Temp	1.07 @ 92.0	ohm-m
Source Rmf / Rmc	CALC	CALC
Rm @ BHT	0.66 @ 124.0	ohm-m
Time Since Circulation	4 HOURS	
Max Recorded Temp	124.00	deg F
Equipment Name	COMPACT	
Equipment / Base	13057	LIB
Recorded By	R. HOFFMAN	
Witnessed By	JOHN CARROLL	ERIC BEAM
S.O. # / JOB #	3531118	LB11-193

BOREHOLE RECORD

Last Edited: 09-AUG-2011 16:53

Bit Size inches	Depth From feet	Depth To feet
7.875	1792.00	4910.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	1792.00	24.00

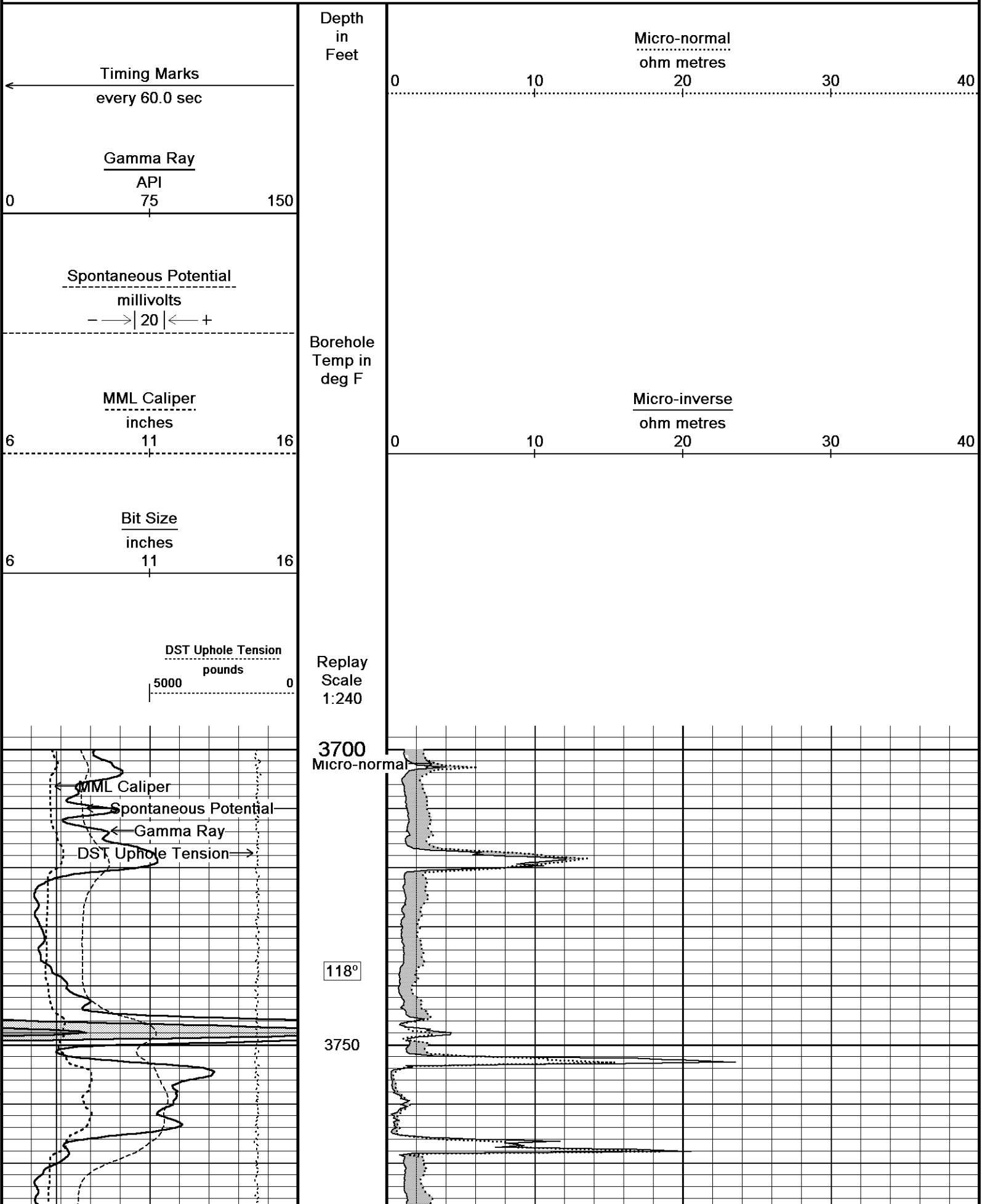
REMARKS

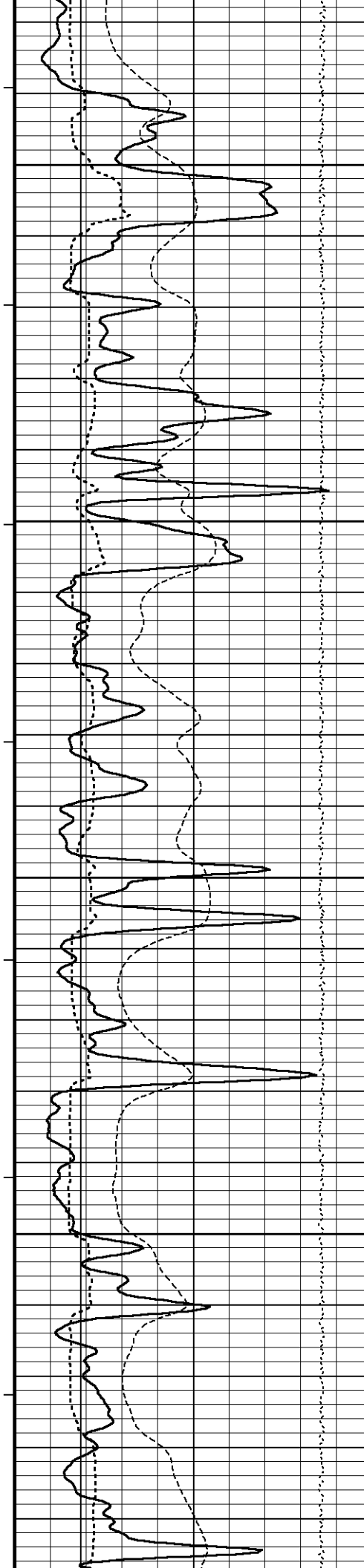
Tools Ran: MCG, MML, MDN, MPD, SKJ, MFE, MSS, MAI.
Hardware Used: MDN Dual Eccentralizer used. MPD 8 inch profile plate used. MFE, MSS and MAI 0.5 inch standoffs used.
2.71 g/cc Limestone Density Matrix used to calculate porosity.
Sonic porosity calculated using a Limestone scale (47.5 usec/ft).
All intervals logged and scaled per customer's request.
Annular volume with 5.5 inch production casing calculated 0 = 235 cu. ft.
Service order #3531118
Rig: Trinidad Drilling Rig #201
Engineer: R. Hoffman
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.



System Versions: Logged with 11.03.4044 Plotted with 11.03.4044





118°

3800

118°

3850

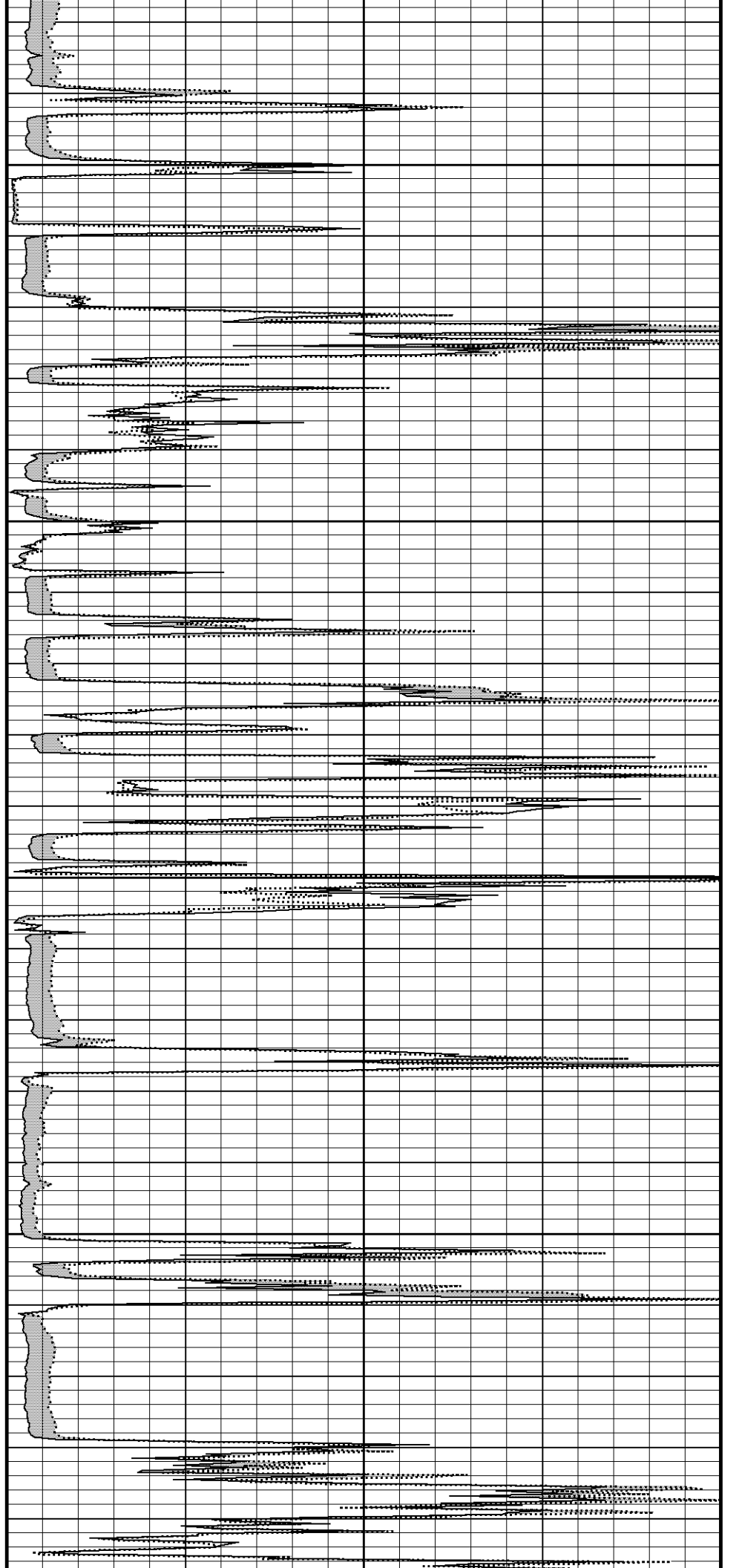
119°

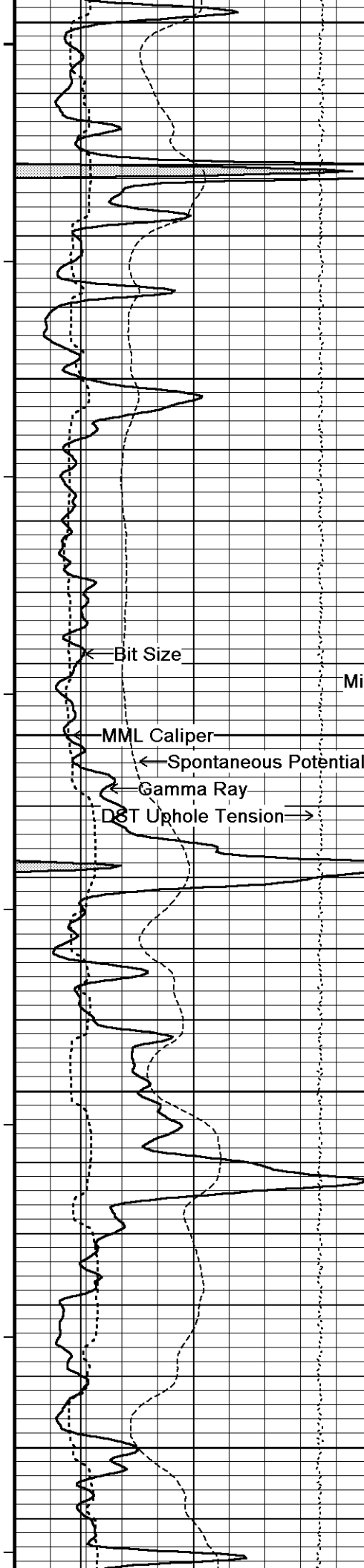
3900

119°

3950

119°





4000

120°

4050

120°

Micro-inverse →

Micro-normal →

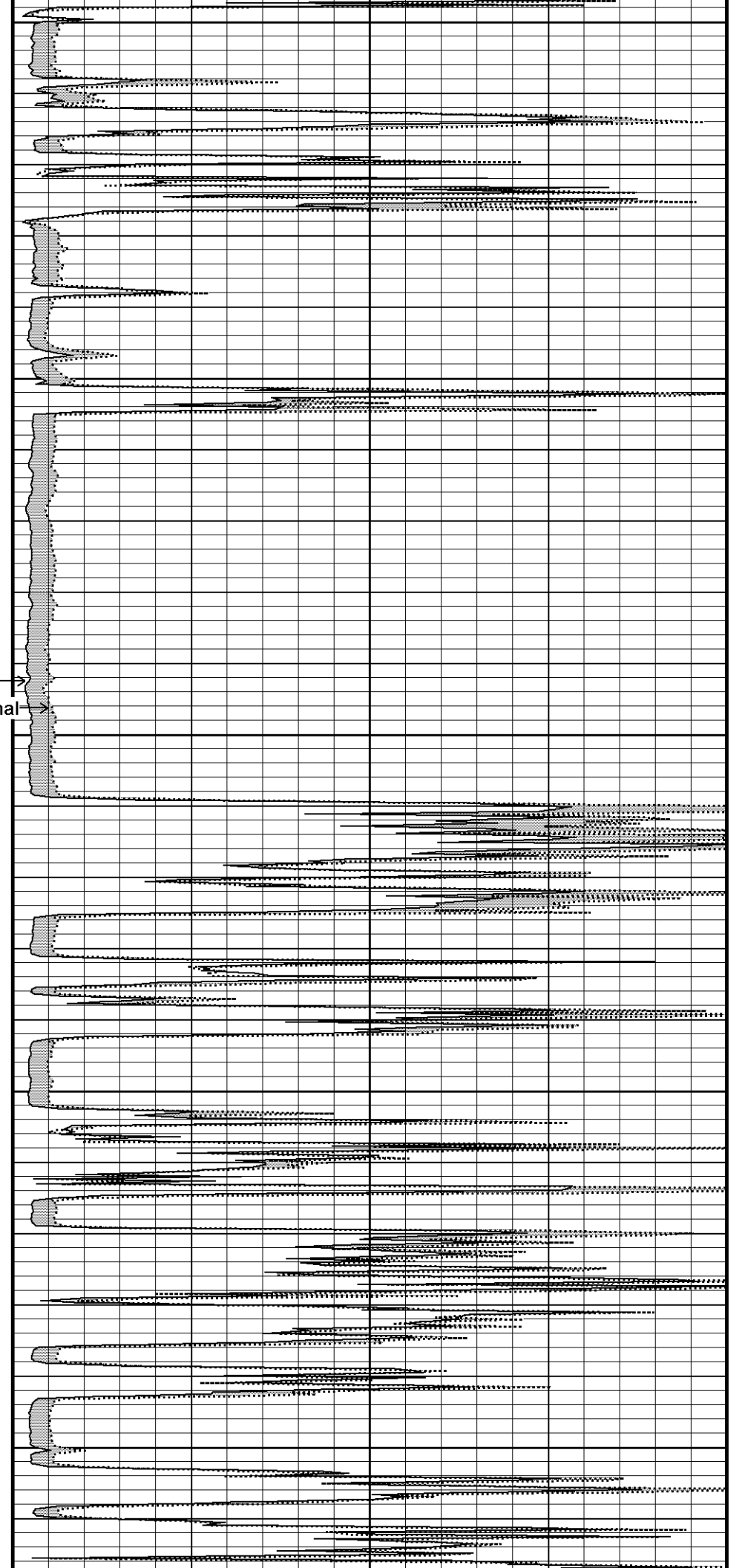
4100

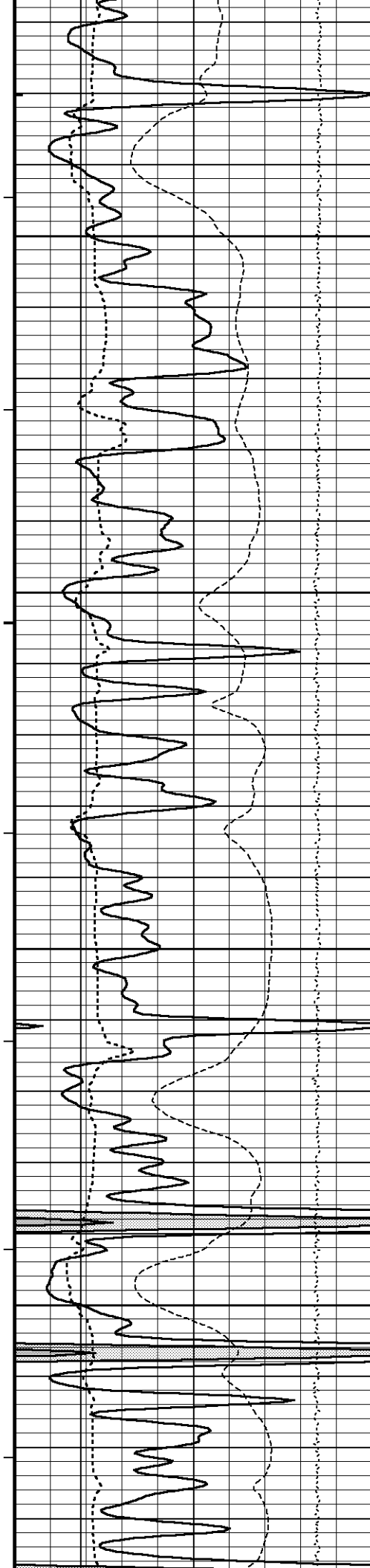
121°

4150

121°

4200





121°

4250

122°

4300

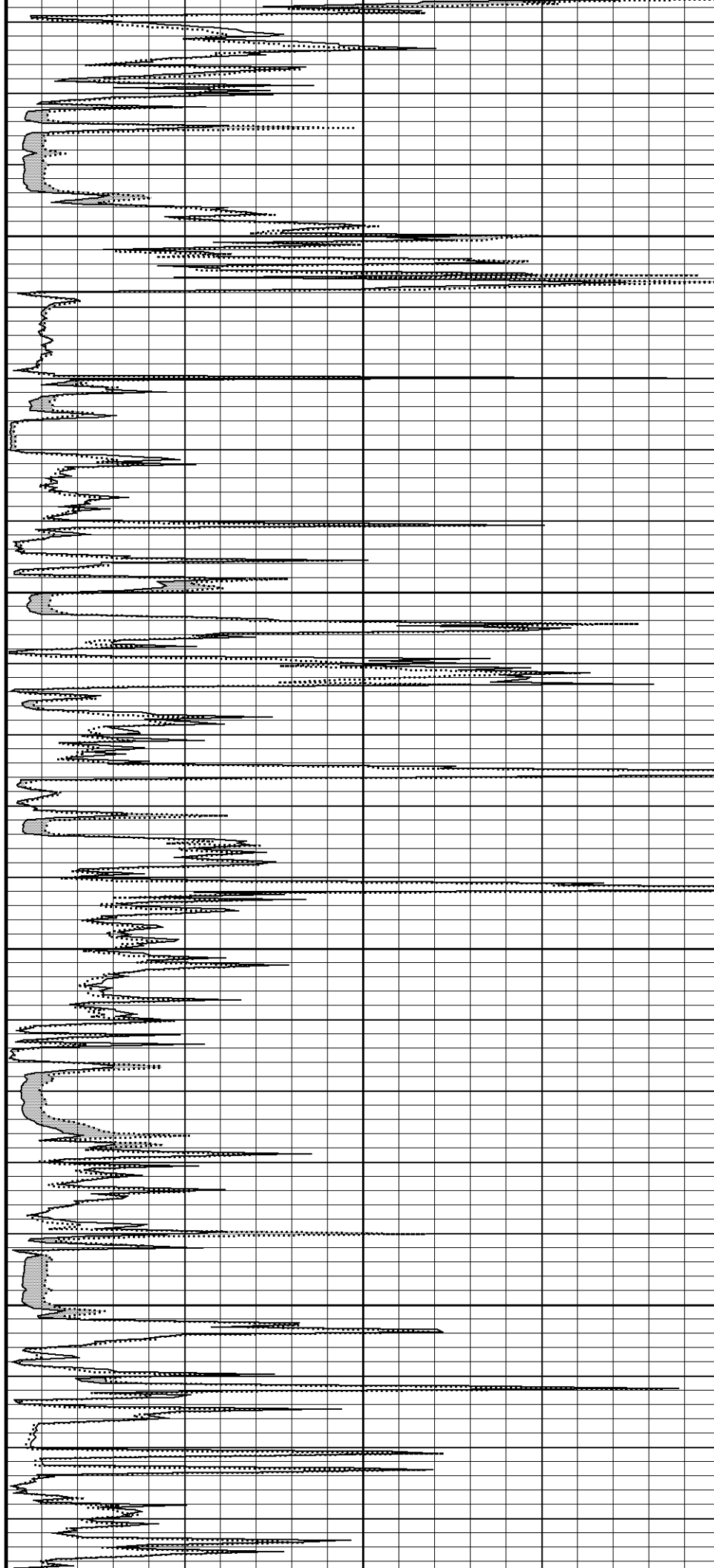
122°

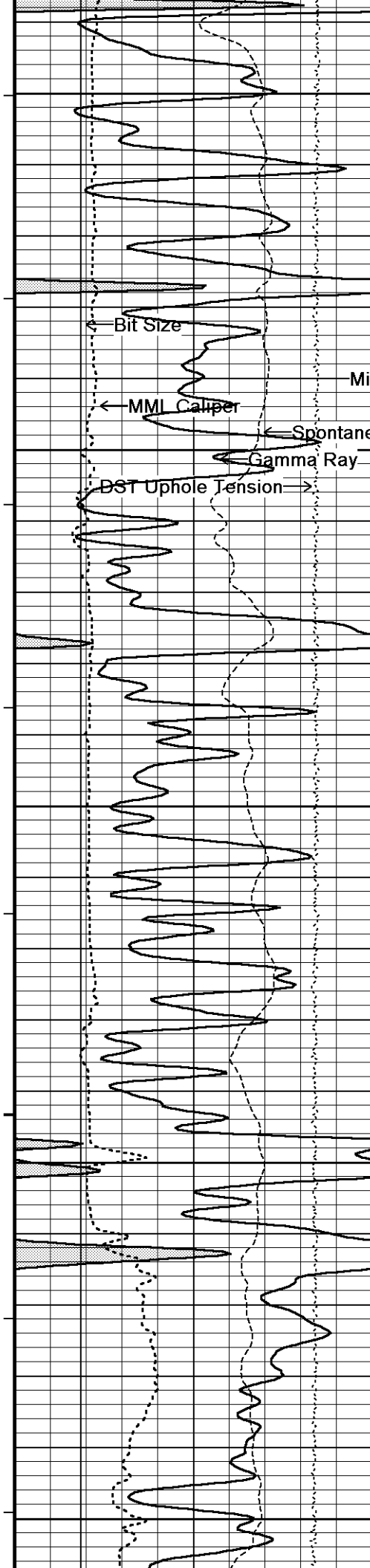
4350

123°

4400

4450





123°

4450

123°

Micro-normal

4500

124°

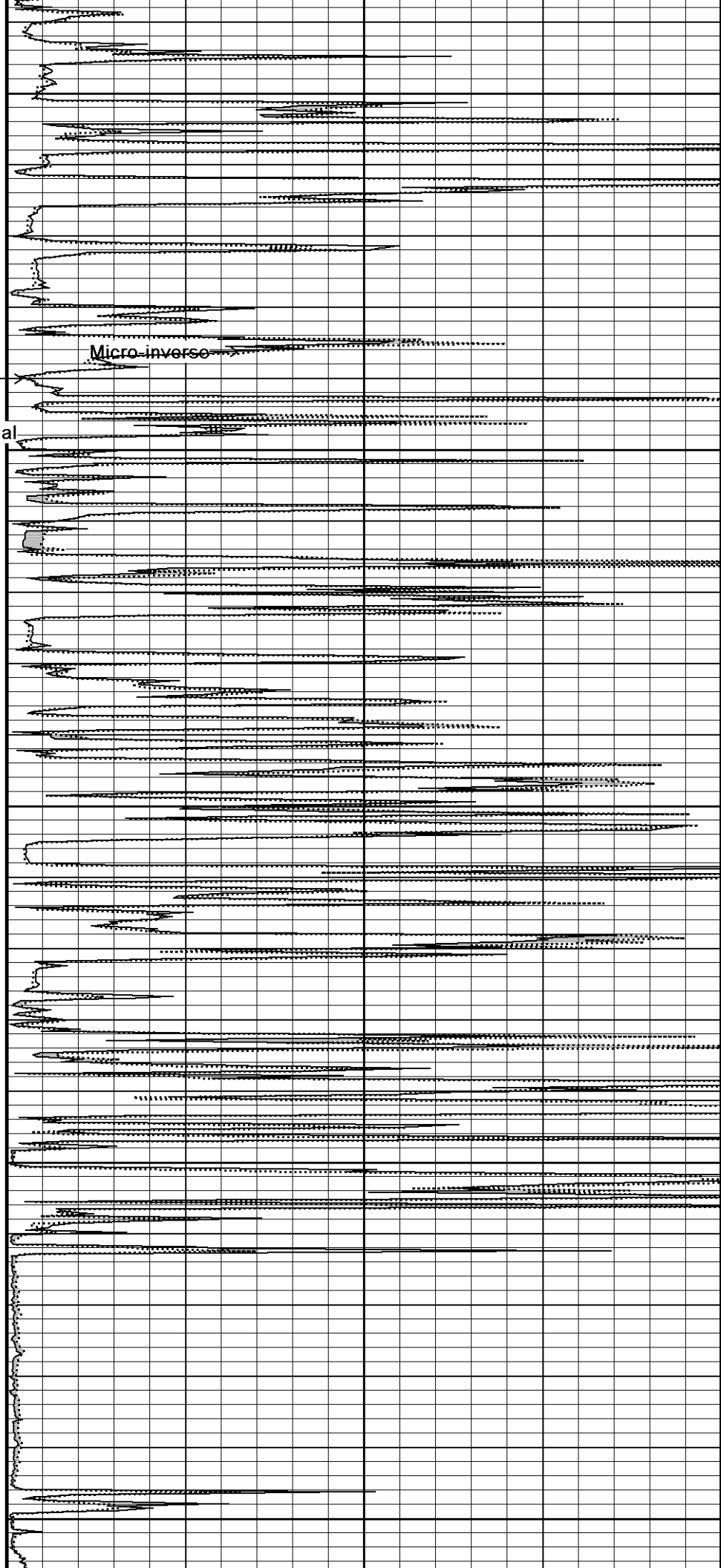
4550

125°

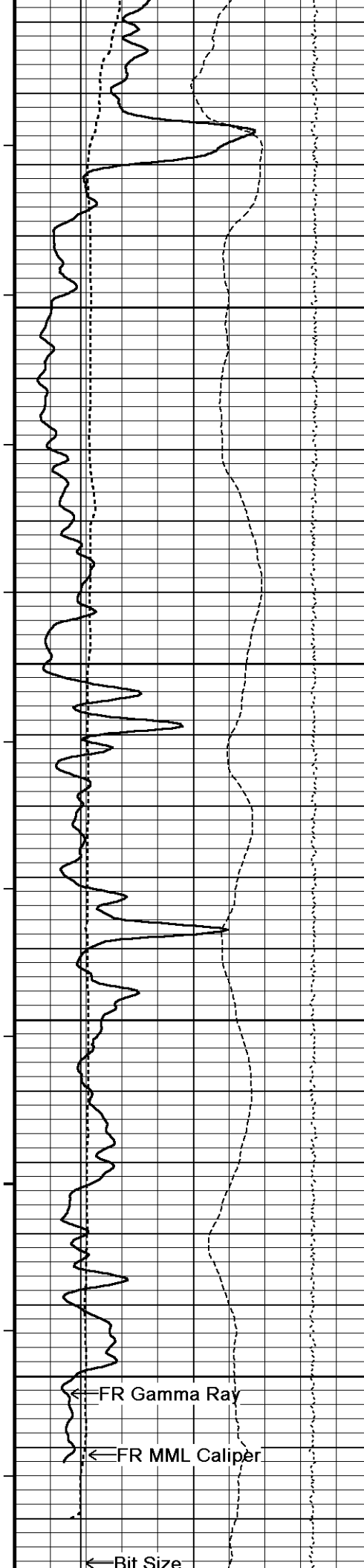
4600

124°

4650



Micro-inverse



124°

4700

124°

4750

124°

4800

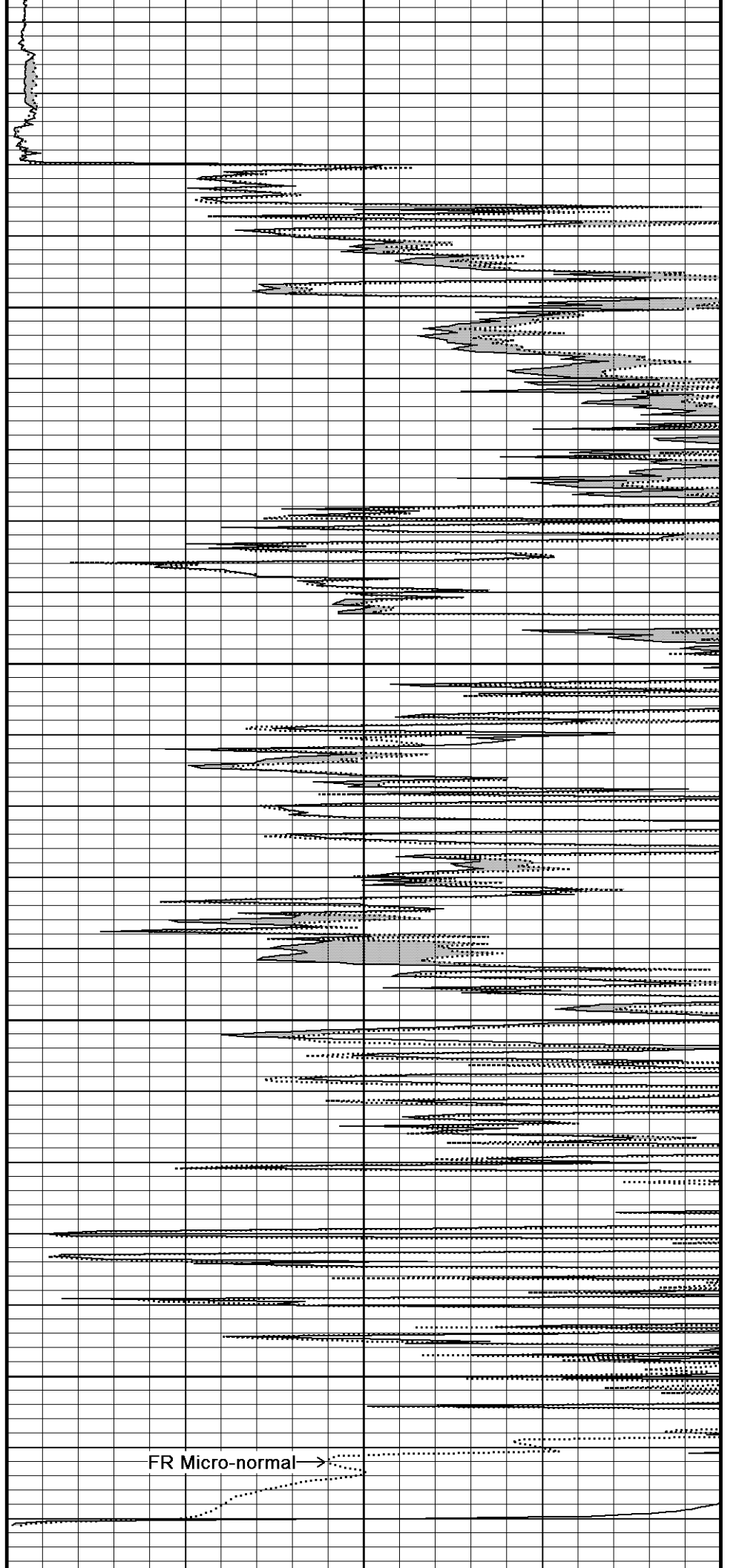
124°

4850

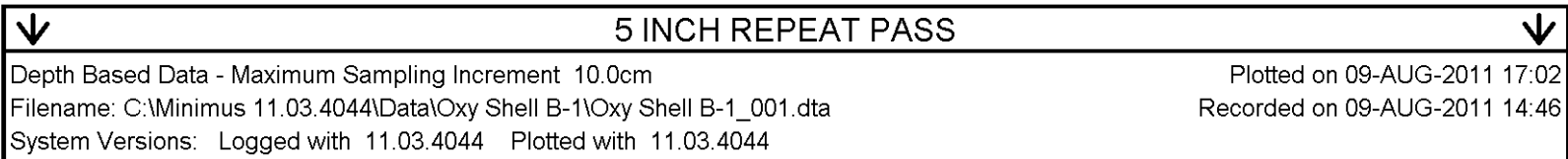
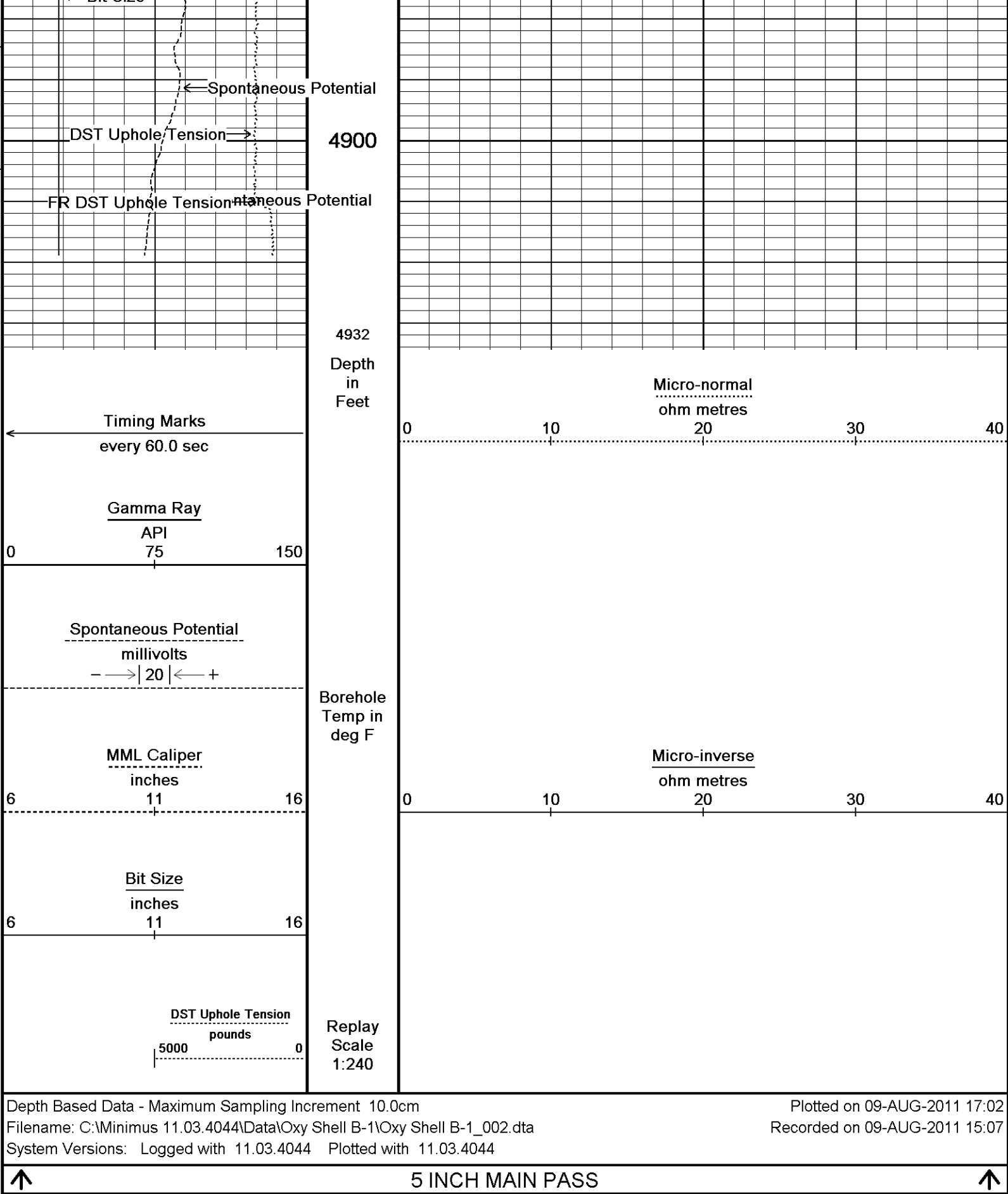
← FR Gamma Ray

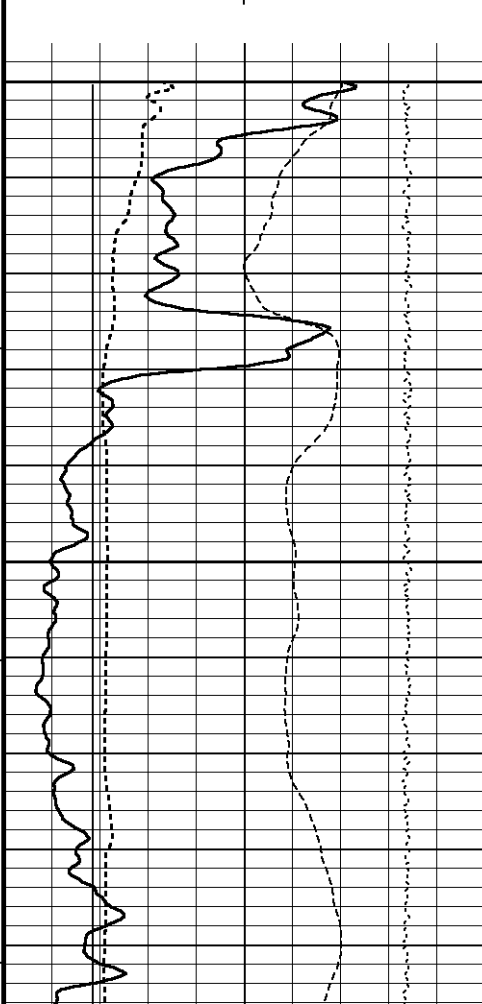
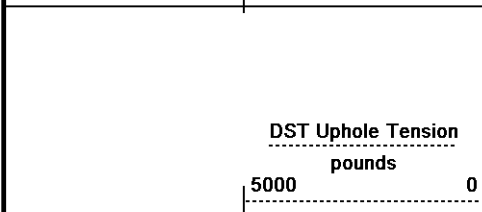
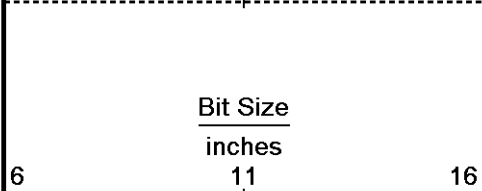
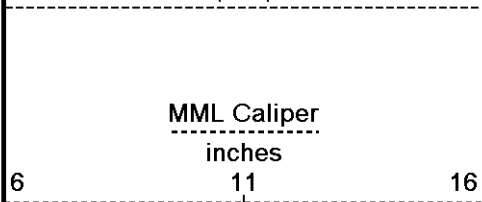
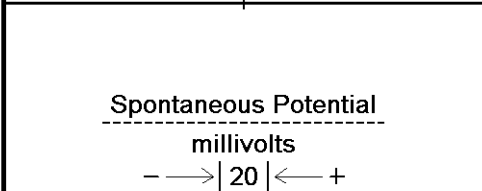
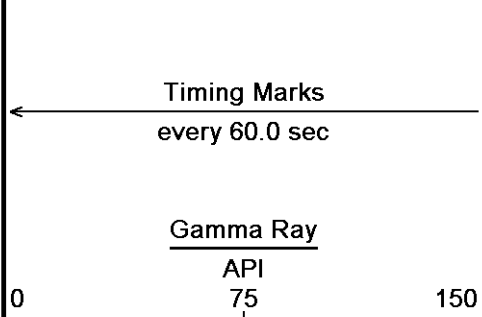
← FR MML Caliper

← Bit Size



FR Micro-normal →





Depth
in
Feet

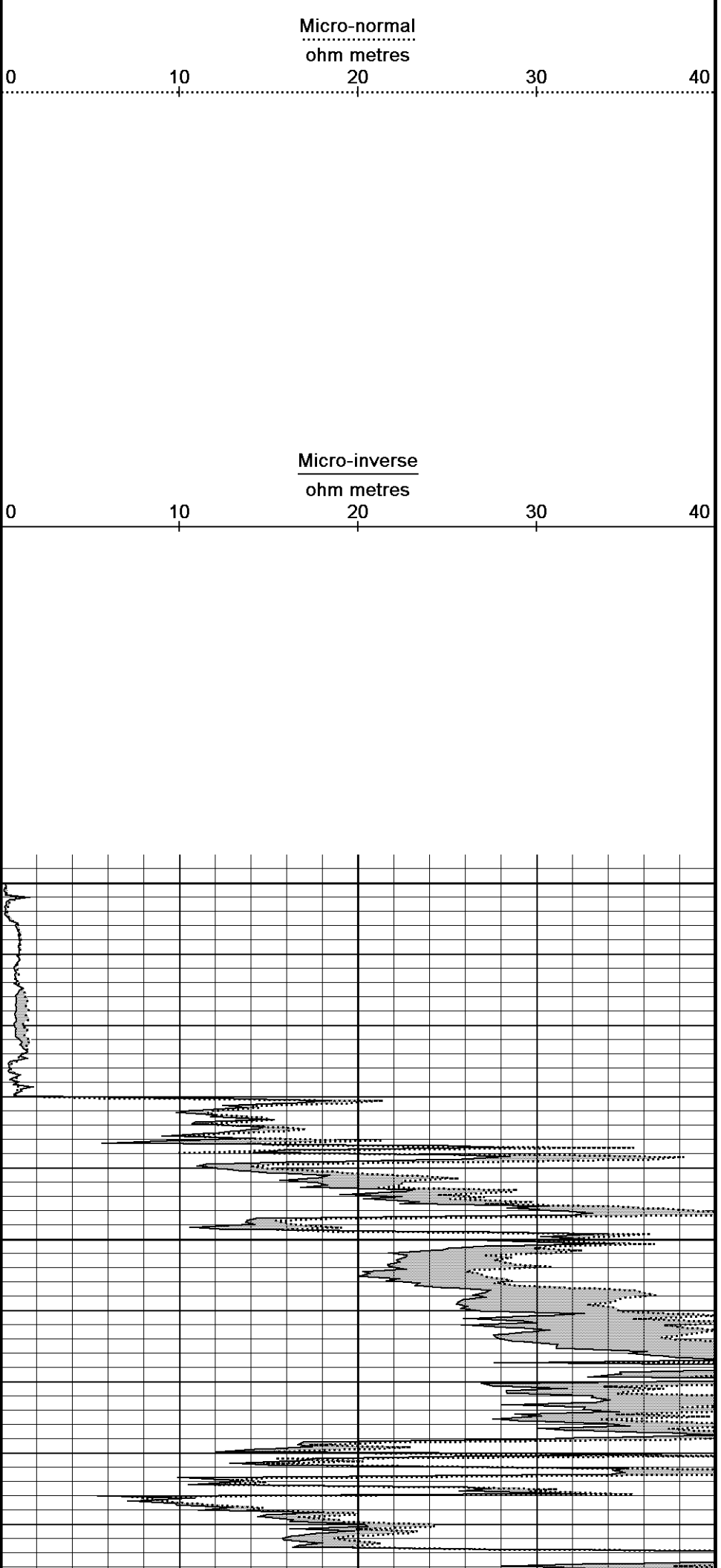
Borehole
Temp in
deg F

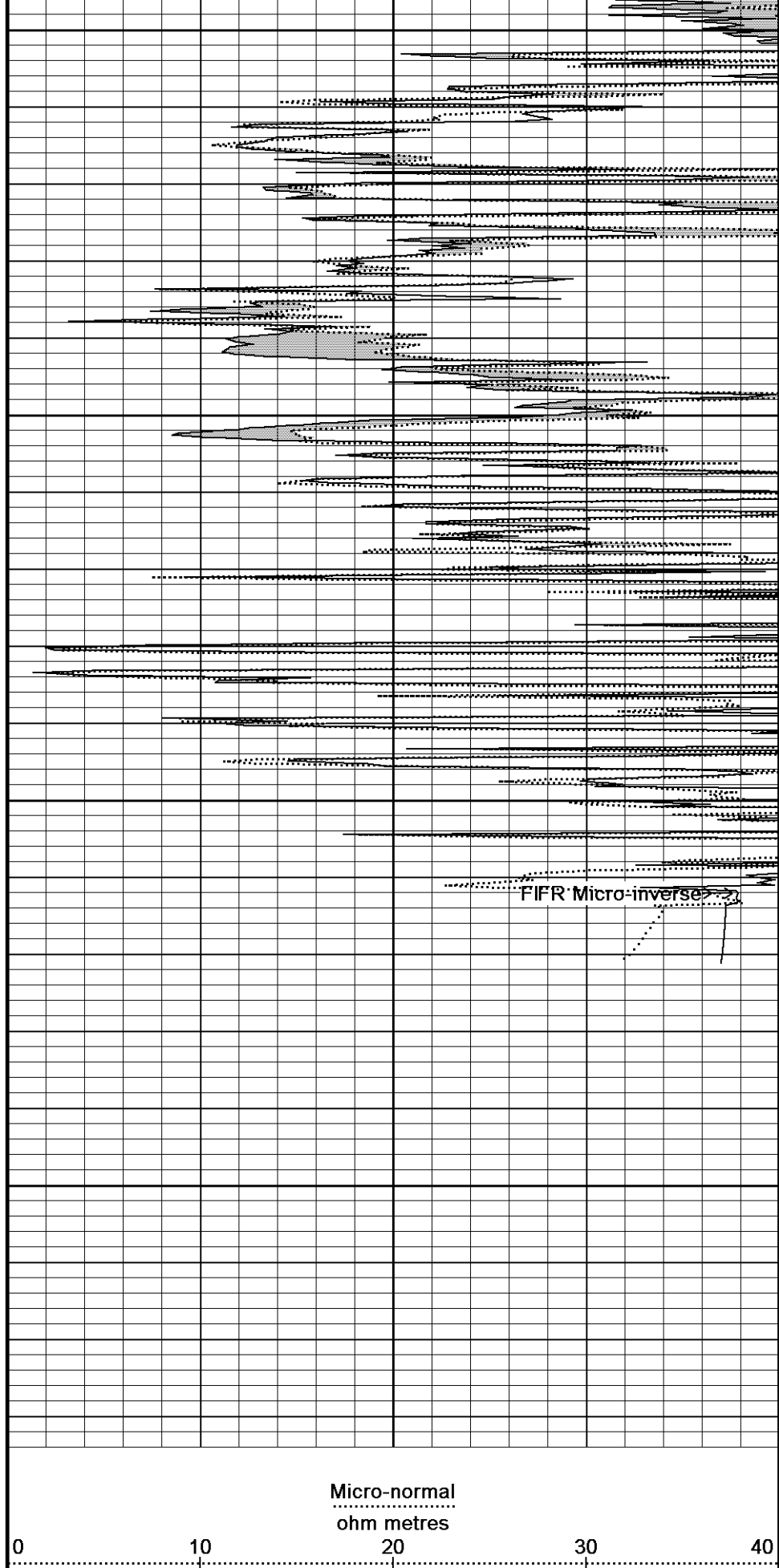
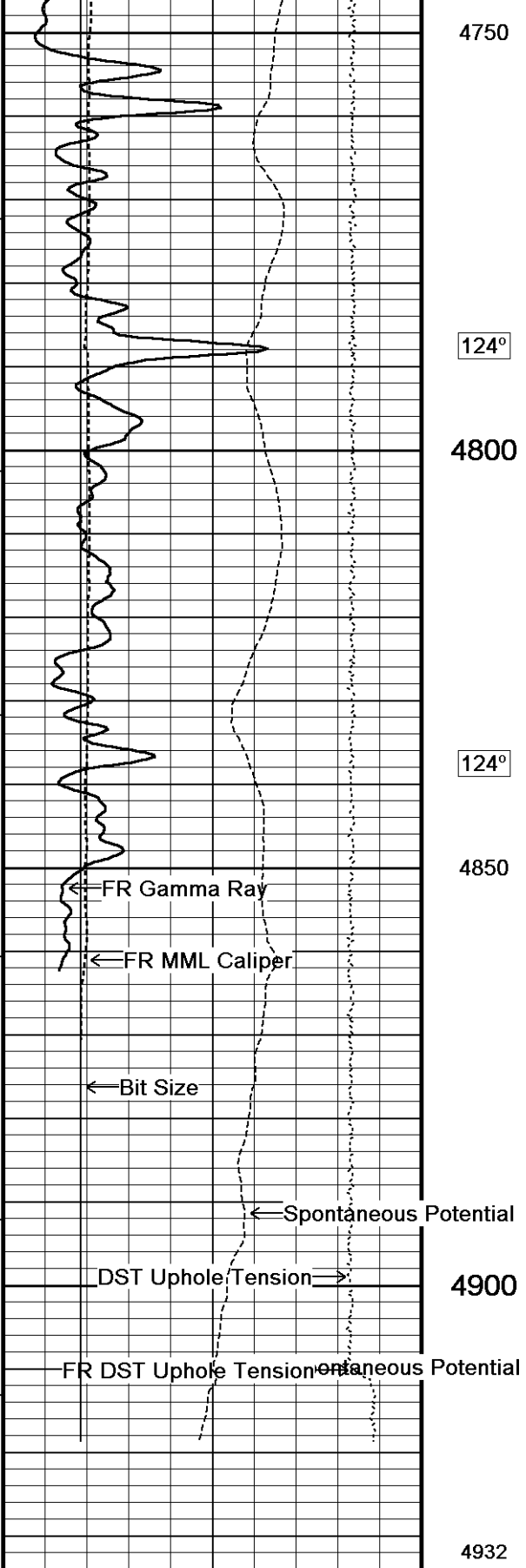
4650

124°

4700

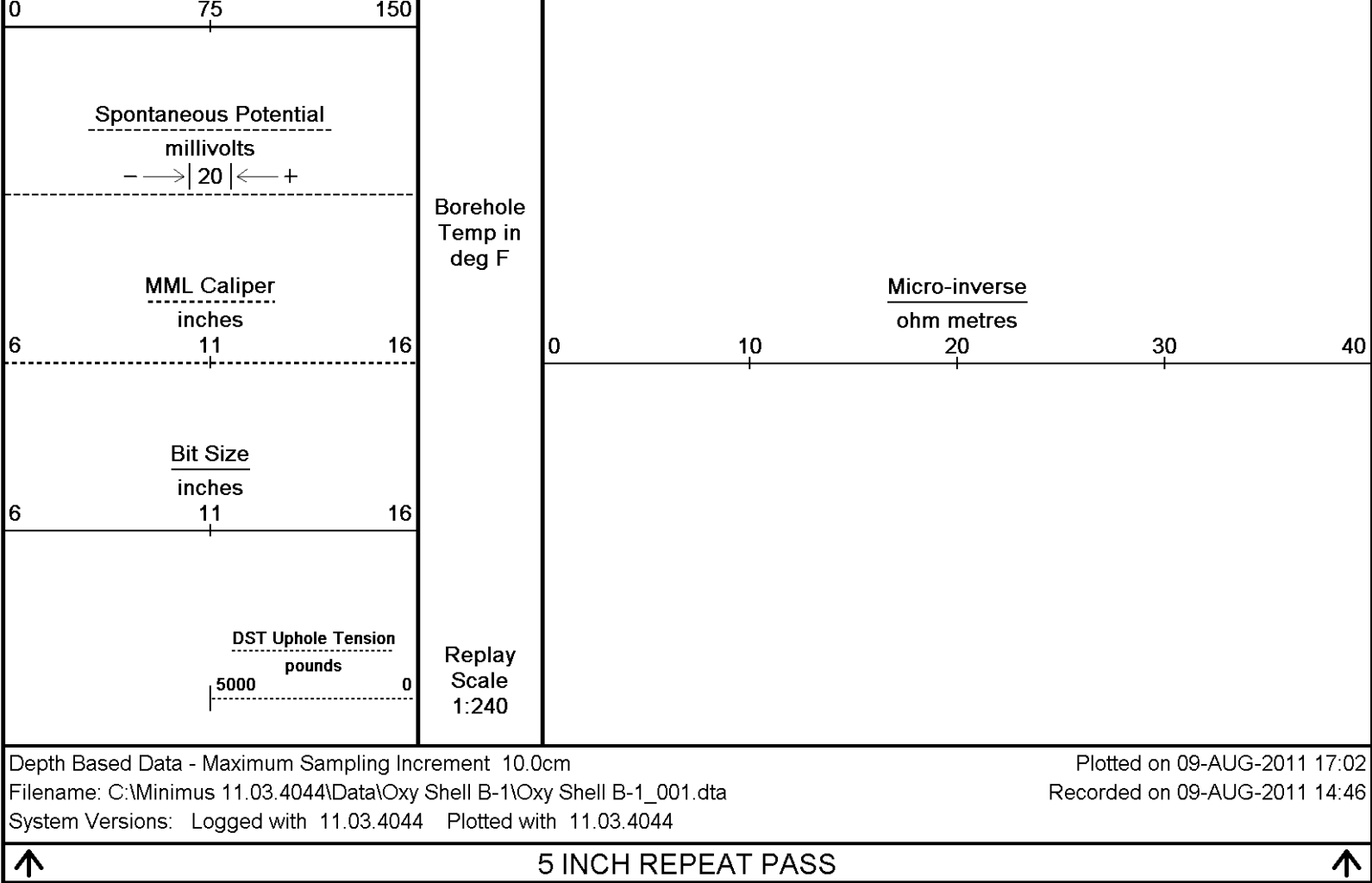
124°





← Timing Marks
every 60.0 sec

Gamma Ray
API



Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

High Resolution Temperature Calibration MCG-B 34

Field Calibration on 03-AUG-2011,22:33

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

High Resolution Temperature Constants MCG-B 34

Last Edited on

Pre-filter Length 11

Micro Normal and Micro Inverse Calibration MML-A 4

Base Calibration on 03-AUG-2011 09:42

Field Check on 08-AUG-2011 09:28

Base Calibration

		Measured	Calibrated (ohm-m)
Channel	Resistor 1	Resistor 2	Resistor 1 Resistor 2
Micro Normal	12.2	60.2	2.6 12.8
Micro Inverse	15.7	78.4	1.7 8.4

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Micro Normal	32.1	32.1
Micro Inverse	16.3	16.3

Micro Normal and Micro Inverse Constants MML-A 4

Last Edited on 08-AUG-2011,14:39

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

Caliper Calibration MML-A 4

Base Calibration on 03-AUG-2011 09:53

Field Calibration on 08-AUG-2011 09:27

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	15121	5.98
2	18479	7.97
3	21774	9.86
4	25719	11.92
5	0	0.00
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
5.94	5.98

DOWNHOLE EQUIPMENT

C:\Minimus 11.03.4044\Data\Oxy Shell B-1\Oxy Shell B-1_002.dta

3/8" Triple Cone Cable Head (MCB C A)
MCB-C.A 5 LG: 1.58 ft WT: 15.4 lb OD: 2.24 in

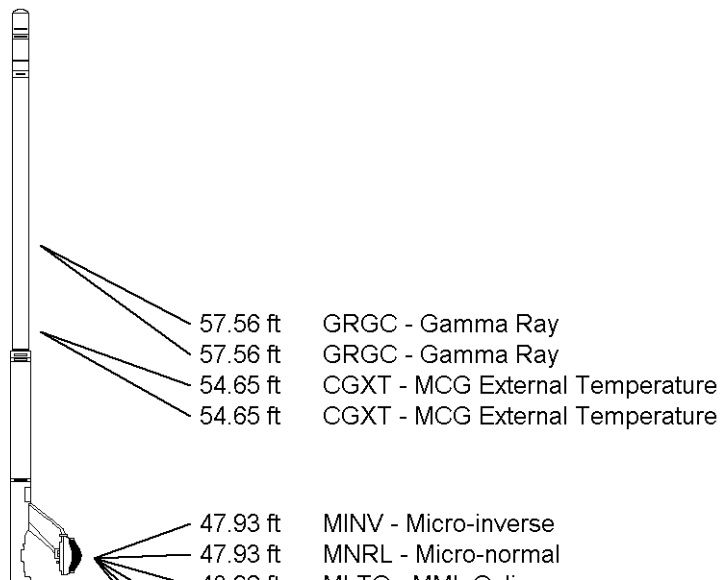
3/8" Triple Cone Cable Head (MCB C A)
MCB-C.A 5 LG: 1.58 ft WT: 15.4 lb OD: 2.24 in

Compact Comms Gamma
MCG-B 34 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Comms Gamma
MCG-B 34 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

SKJ-D.A Compact Knuckle Joint
SKJ-D.A 37 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

SKJ-D.A Compact Knuckle Joint
SKJ-D.A 37 LG: 2.17 ft WT: 24.3 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 Focussed Electric
MFE-A.A 55 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

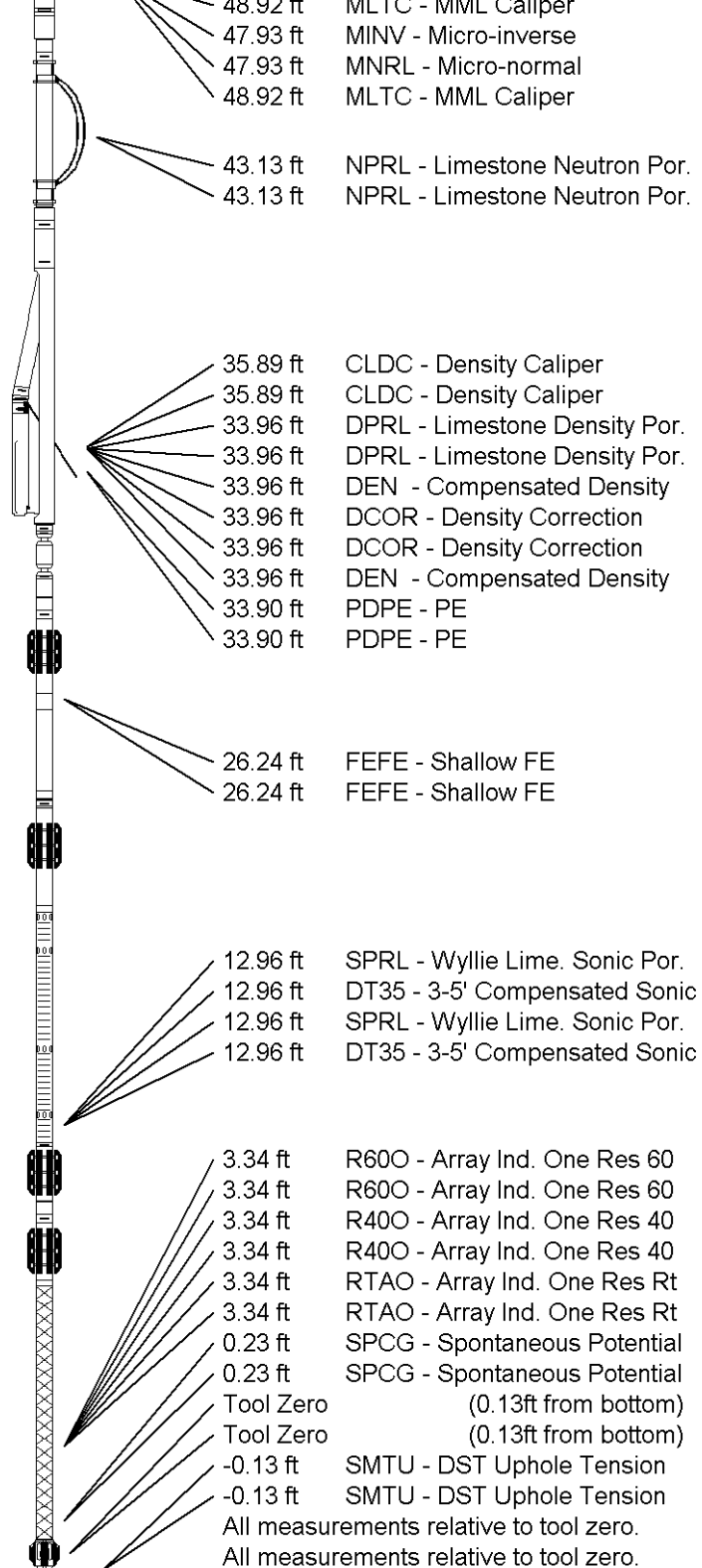
Compact Sonic
MSS-A.A 126 LG: 12.52 ft WT: 72.8 lb OD: 2.24 in

Compact Induction
MAI-A.A 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: 64.42 ft Weight: 496.0 lb

Total Length: 64.42 ft Weight: 496.0 lb



COMPANY OXY U.S.A.
WELL SHELL B-1
FIELD AMAZON GULCH
PROVINCE/COUNTY FINNEY
COUNTRY/STATE U.S.A. / KANSAS

Elevation Kelly Bushing	2988.00	feet	First Reading	4862.00	feet
Elevation Drill Floor	2986.00	feet	Depth Driller	4907.00	feet
Elevation Ground Level	2975.00	feet	Depth Logger	4910.00	feet



