



Weatherford[®]

MICRORESISTIVITY LOG

COMPANY MCCOY PETROLEUM CORPORATION
WELL HILL 'A' #2-23
FIELD ALFORD
PROVINCE/COUNTY KIOWA
COUNTRY/STATE U.S.A. / KANSAS
LOCATION 990' FSL & 1980' FWL
SW/4

SEC	TWP	RGE	Other Services	MAI/MFE
23	30S	19W	MPD/MDN	
API Number		15-097-21735		
Permit Number				
Permanent Datum GL, Elevation 2237 feet				
Log Measured From KB				
Drilling Measured From KB				
Date	15-MAR-2013			Elevations: KB 2248.00 DF 2247.00 GL 2237.00
Run Number	ONE			
Service Order	3539875			
Depth Driller	5240.00			feet
Depth Logger	5241.00			feet
First Reading	5208.00			feet
Last Reading	3900.00			feet
Casing Driller	625.00			feet
Casing Logger	626.00			inches
Bit Size	7.875			
Hole Fluid Type	CHEMICAL			
Density / Viscosity	9.40	lb/USg	50.00	CP
PH / Fluid Loss	9.00		9.00	
Sample Source	FLOWLINE			
Rm @ Measured Temp	0.46	@ 81.0		ohm-m
Rmf @ Measured Temp	0.37	@ 81.0		ohm-m
Rmc @ Measured Temp	0.55	@ 81.0		ohm-m
Source Rmf / Rmc	CALC		CALC	
Rm @ BHT	0.36	@108.0		ohm-m
Time Since Circulation	5 HOURS			
Max Recorded Temp	108.00			deg F
Equipment / Base	13057		LIB	
Recorded By	ADAM SILL			
Witnessed By	EVAN STONE			
JOB #	LB13-069			

BOREHOLE RECORD

Last Edited: 15-MAR-2013 02:28

Bit Size inches	Depth From feet	Depth To feet
7.875	625.00	5240.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	625.00	24.00

REMARKS

- SOFTWARE ISSUE: WLS 13.04.8492.
- MCG, MML, MDN, MPD, MFE, MAI RAN IN COMBINATION.
 - HARDWARE: DUAL BOWSPRING USED ON MDN.
 - 0.5 INCH STANDOFF USED ON MFE.
 - 0.5 INCH STANDOFF USED ON MAI.
- 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 SURFACE CASING: 2174 CU. FT.
- ANNULAR HOLE VOLUME WITH 5.5 INCH PRODUCTION CASING FROM TD TO 3900 FEET: 253 CU. FT.
- SERVICE ORDER # 3539875

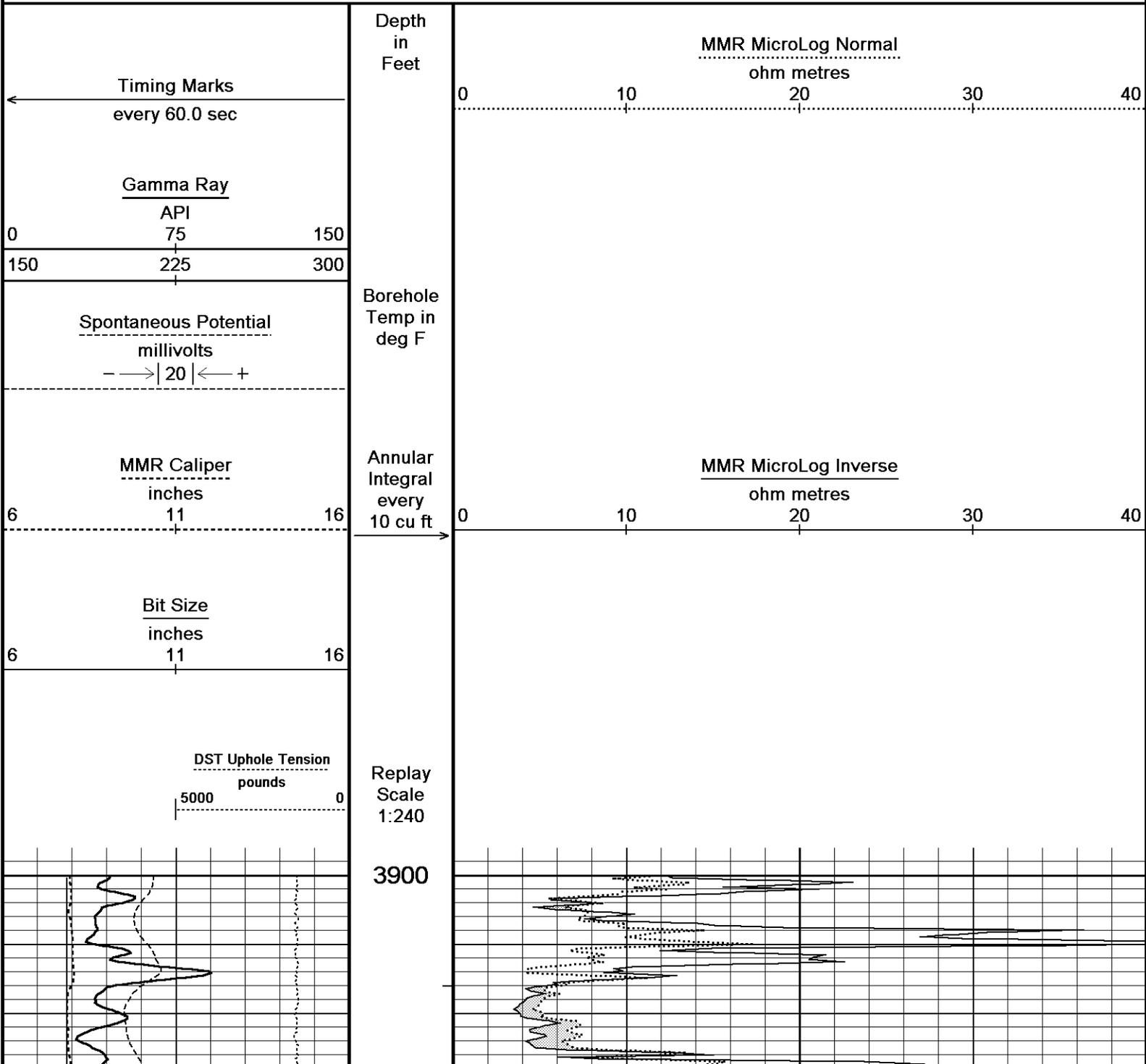
- RIG: STERLING #2.
- ENGINEER: A. SILL.
- OPERATOR(S): N. ADAME.

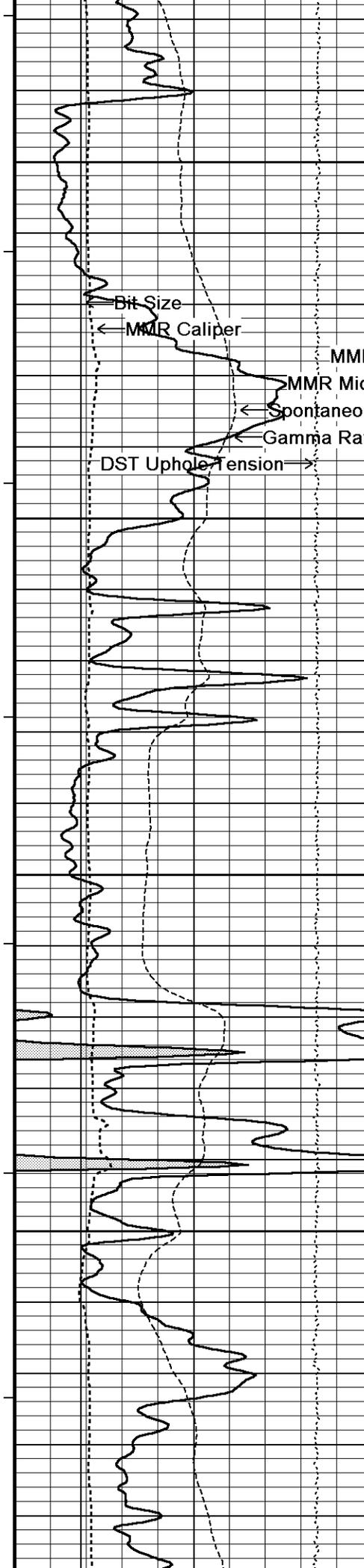
**** SOFTWARE ISSUE CHANGED FLUID LOSS TO MATCH PH. FLUID LOSS SHOULD BE 11.2 ML/30MIN. ****

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.

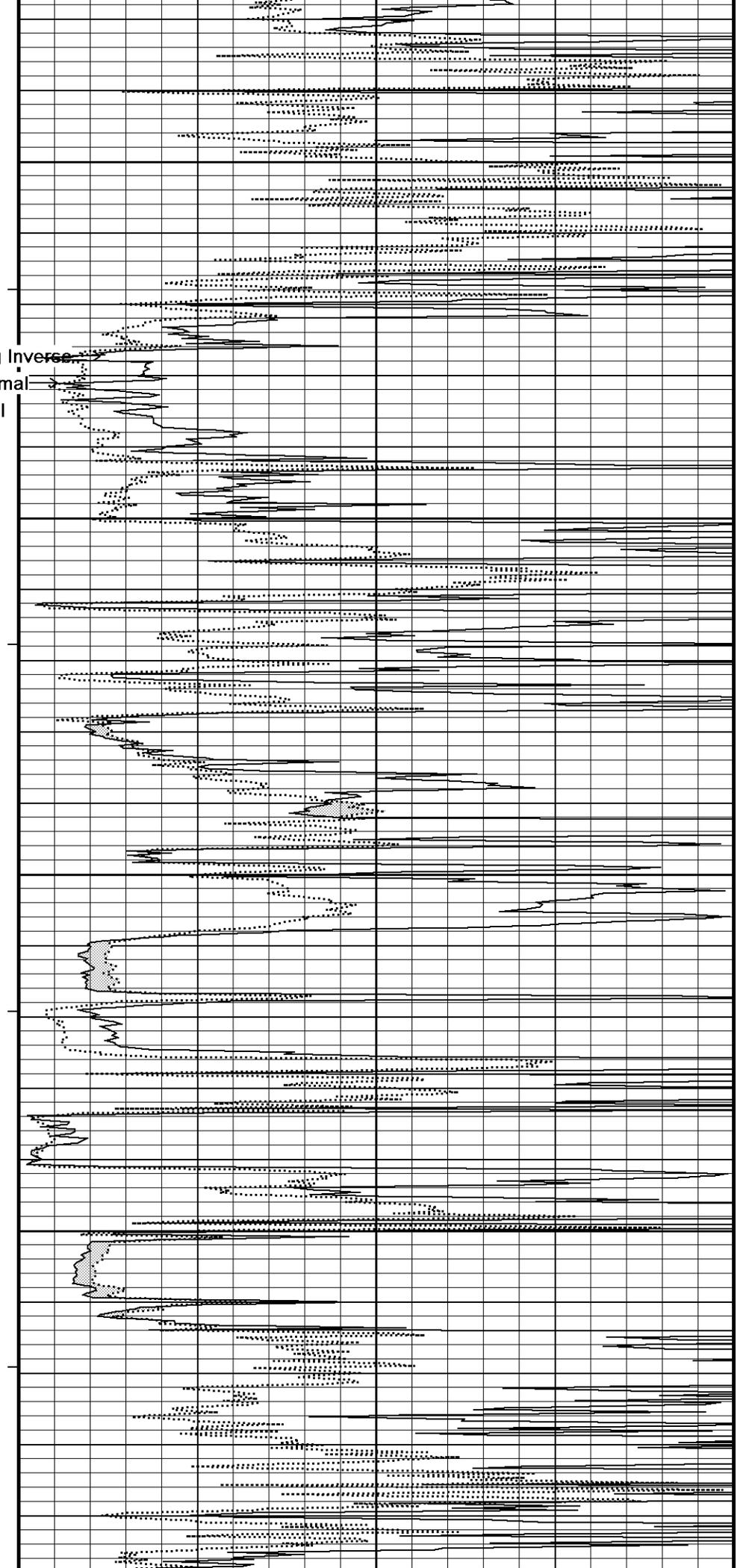
5 INCH MAIN

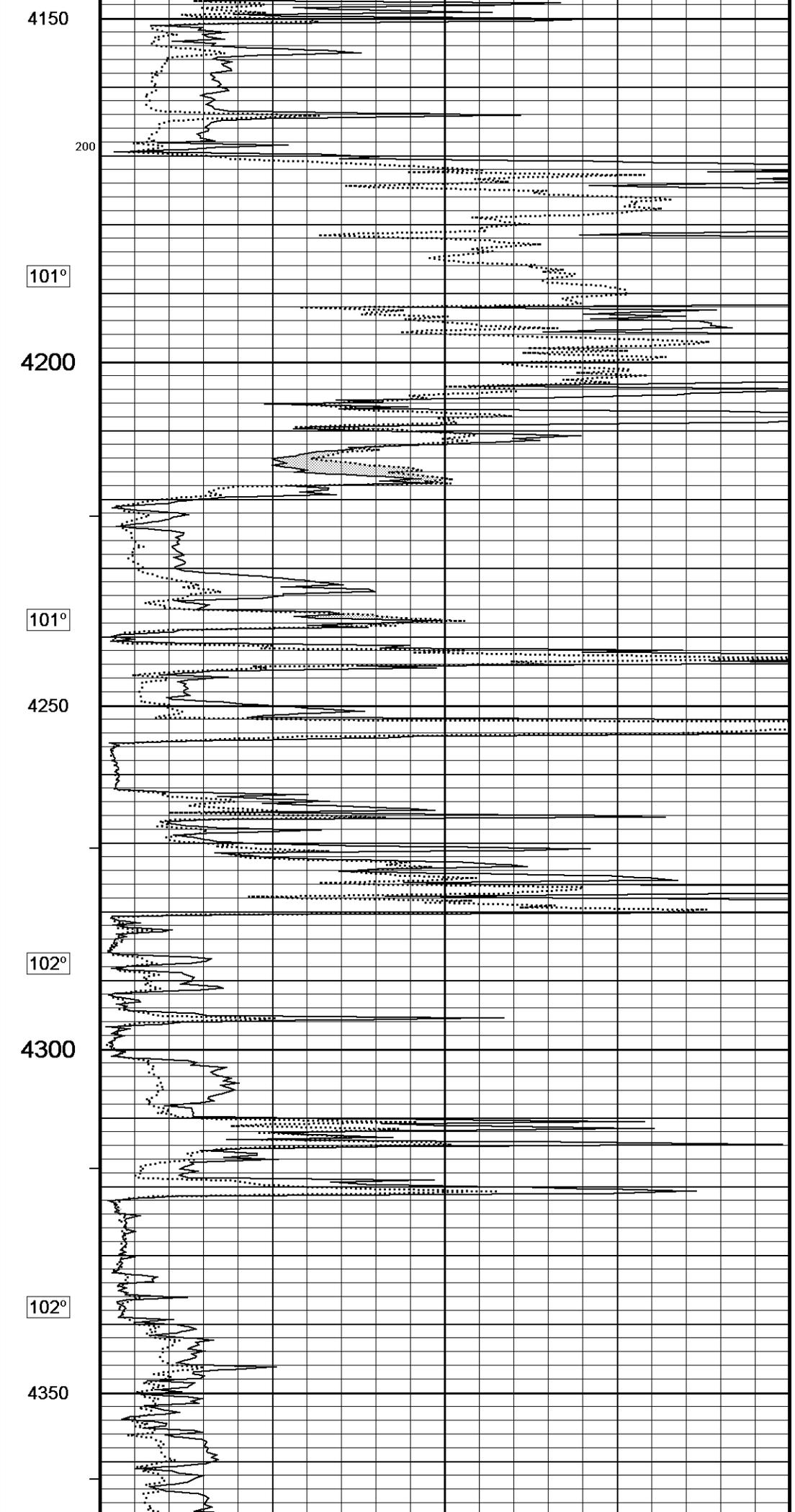
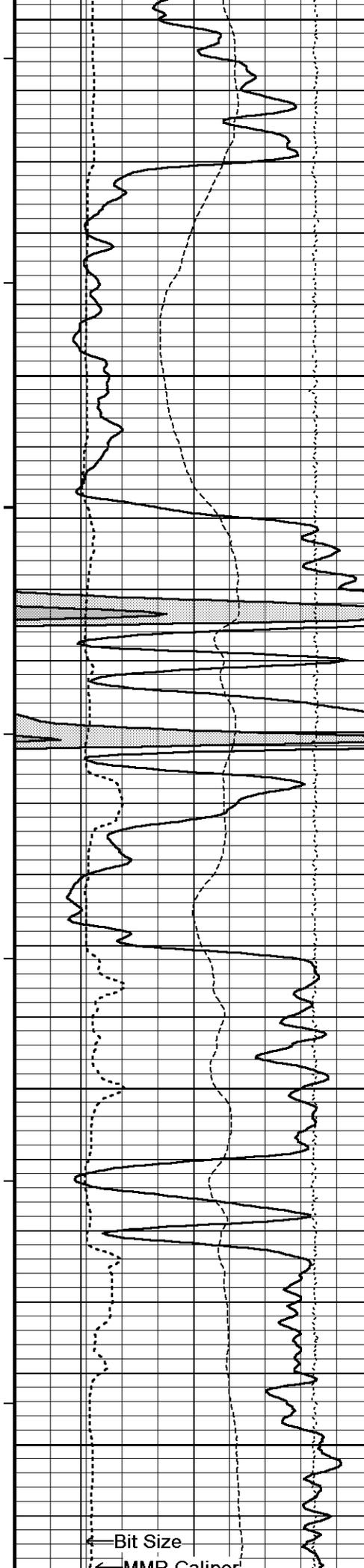
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 System Versions: Logged with 13.04.8492 Plotted with 13.04.8492





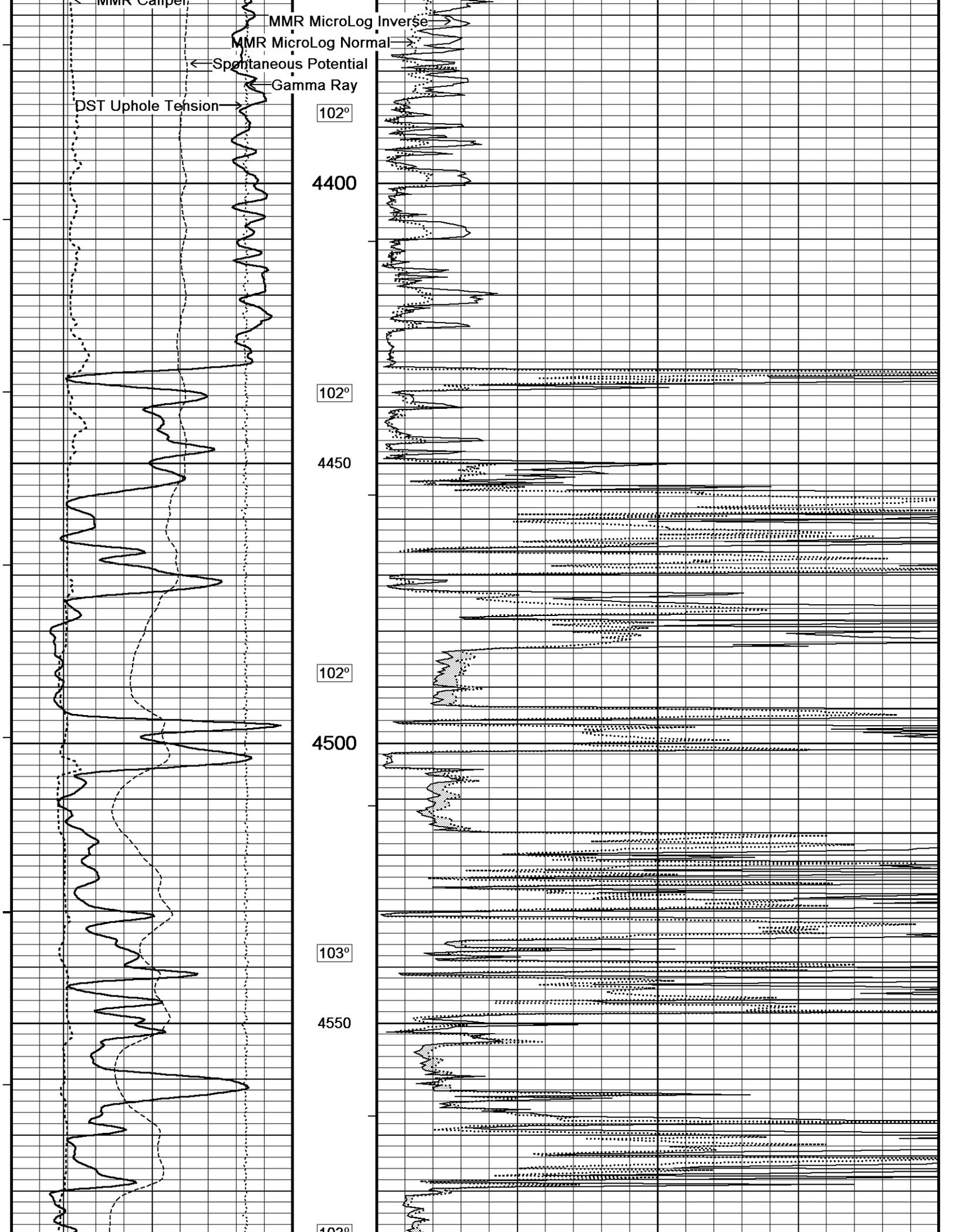
99°
3950
100°
4000
100°
4050
100°
4100
100°

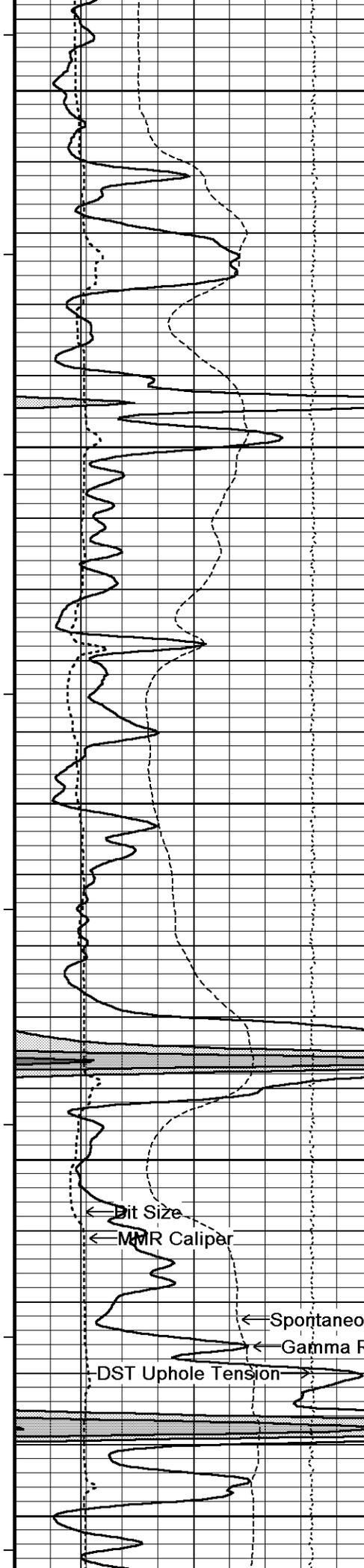




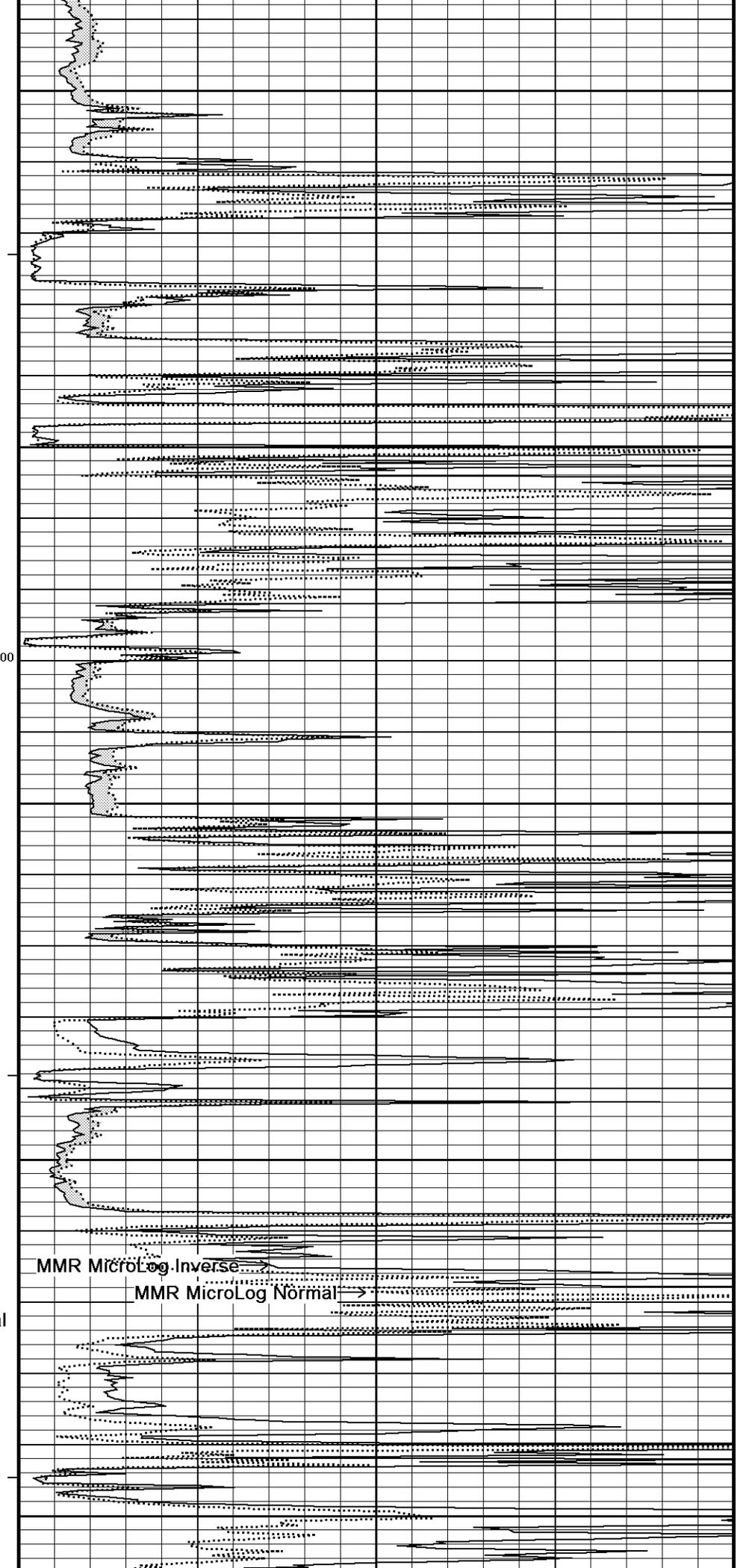
← Bit Size

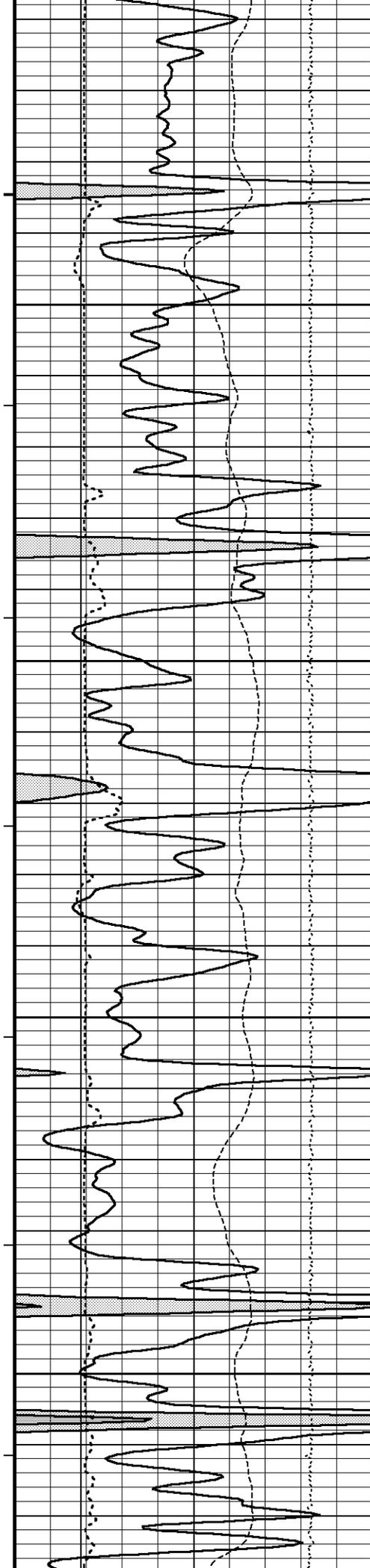
← MMP Caliper





105
4600
103°
4650
100
104°
4700
104°
4750
104°
4800





105°

4850

105°

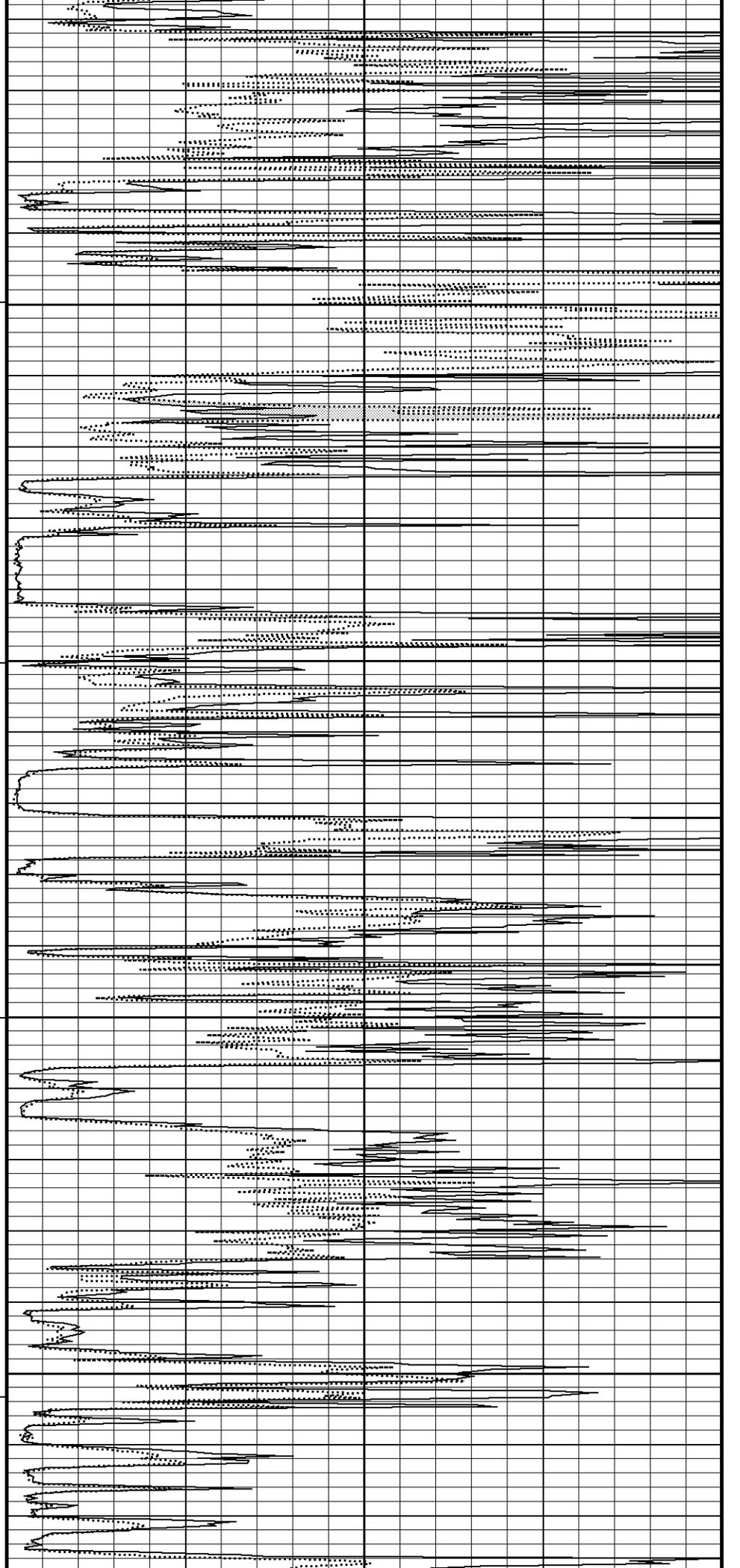
4900

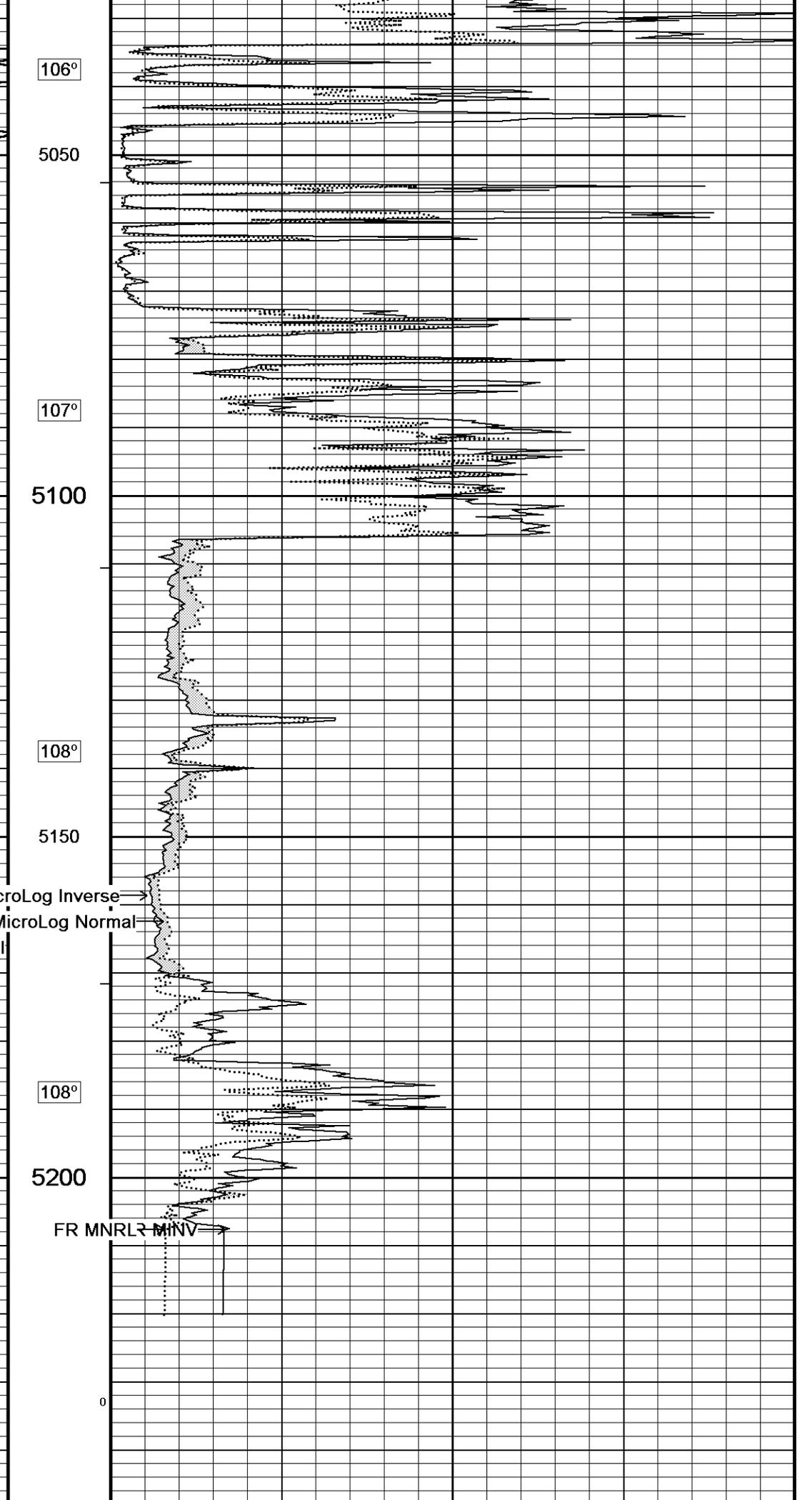
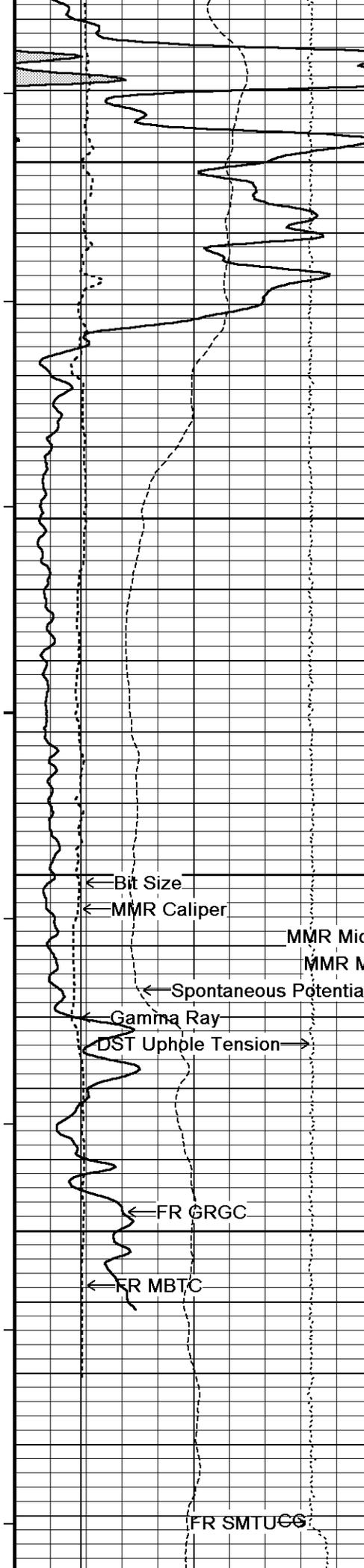
106°

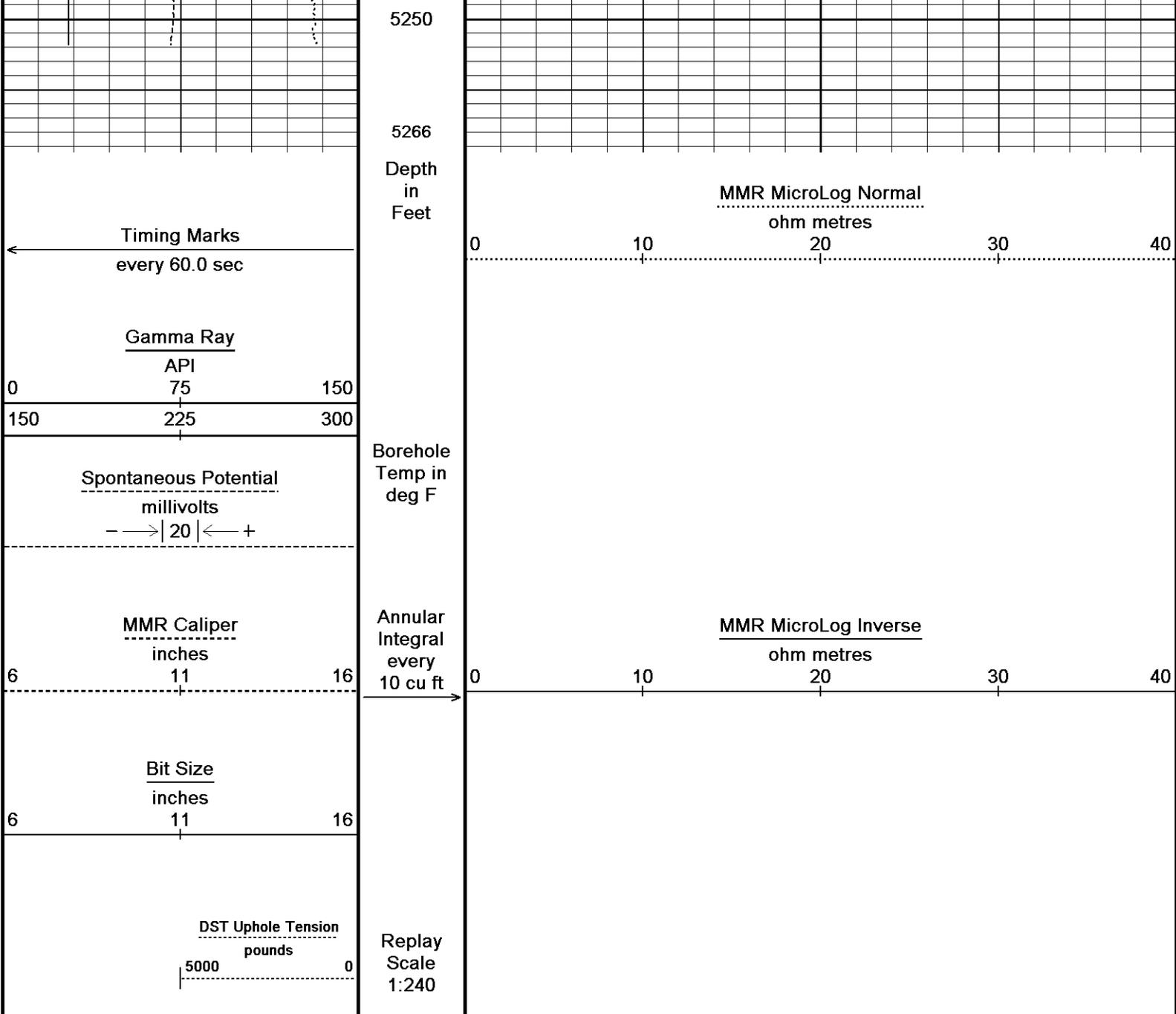
4950

106°

5000





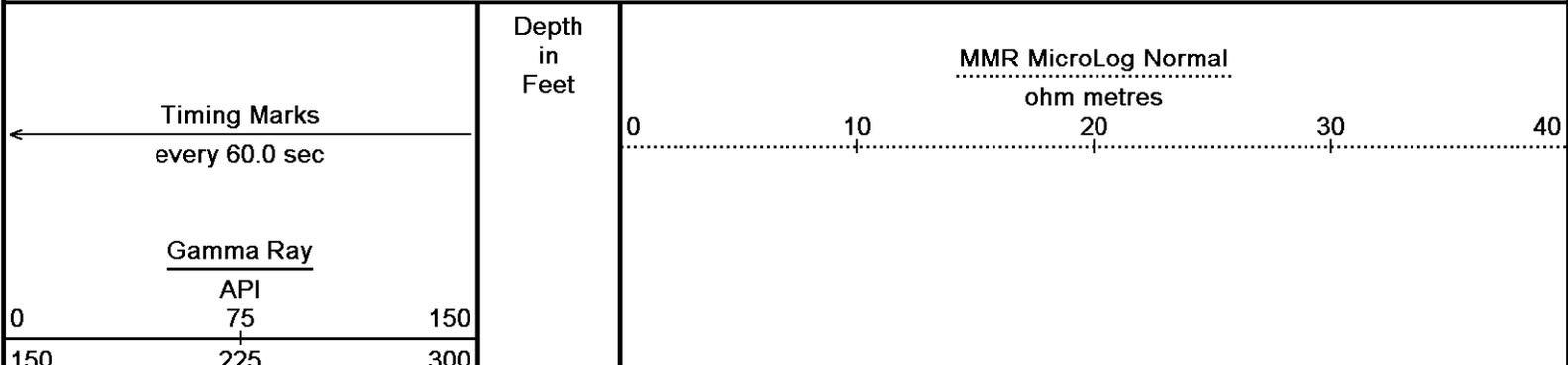


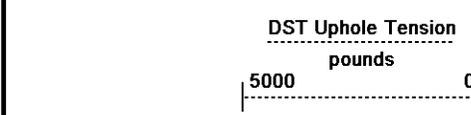
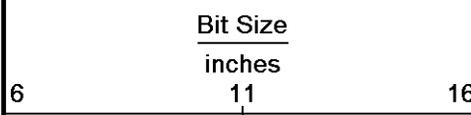
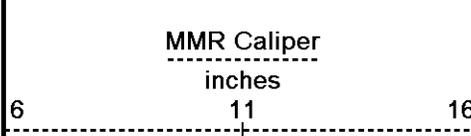
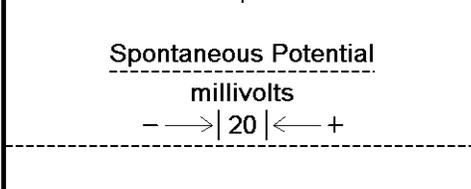
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↑ 5 INCH MAIN ↑

↓ REPEAT SECTION ↓

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 Plotted on 15-MAR-2013 06:52
 Filename: C:\Minimus 13.04.8492\Data\McCoy Hill 'A' #2-23\McCoy Hill 'A' #2-23_001.dta
 Recorded on 15-MAR-2013 03:58
 System Versions: Logged with 13.04.8492 Plotted with 13.04.8492

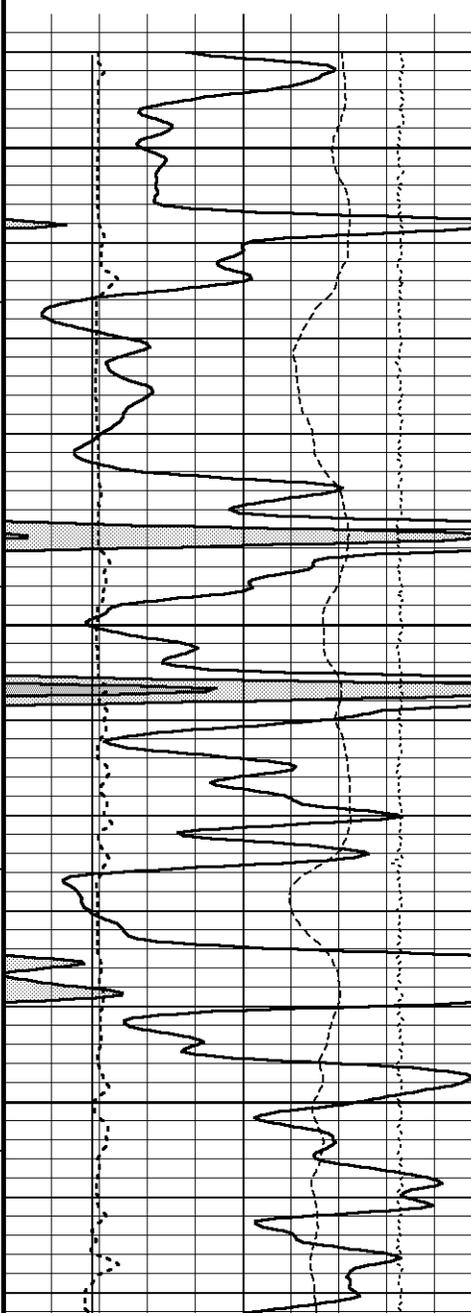
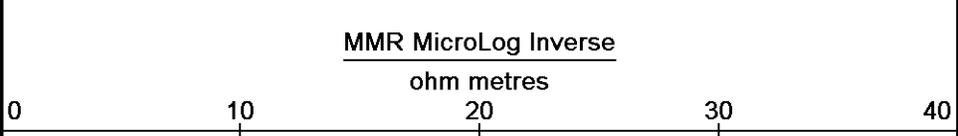




Borehole
Temp in
deg F

Annular
Integral
every
10 cu ft

Replay
Scale
1:240



4938

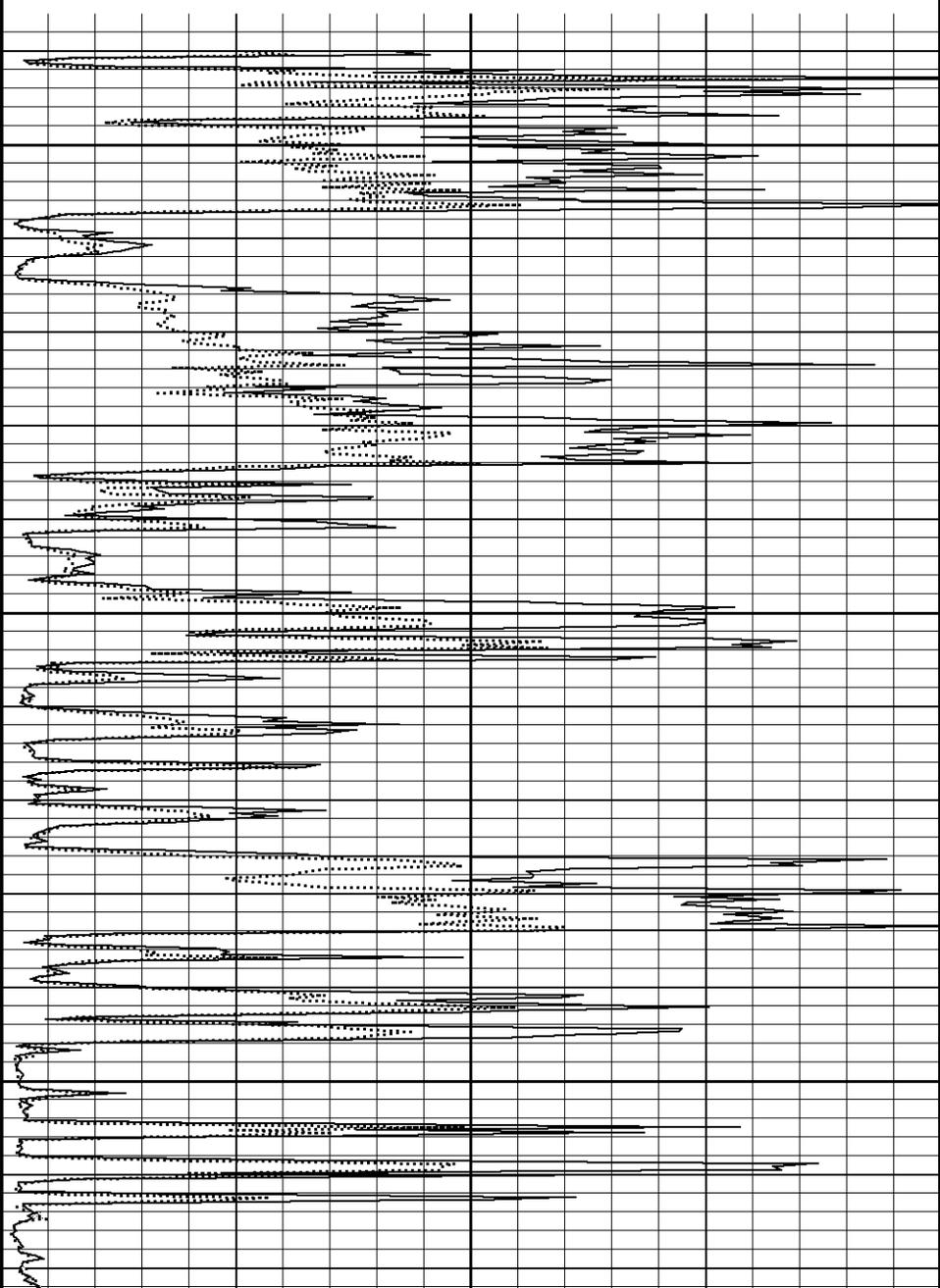
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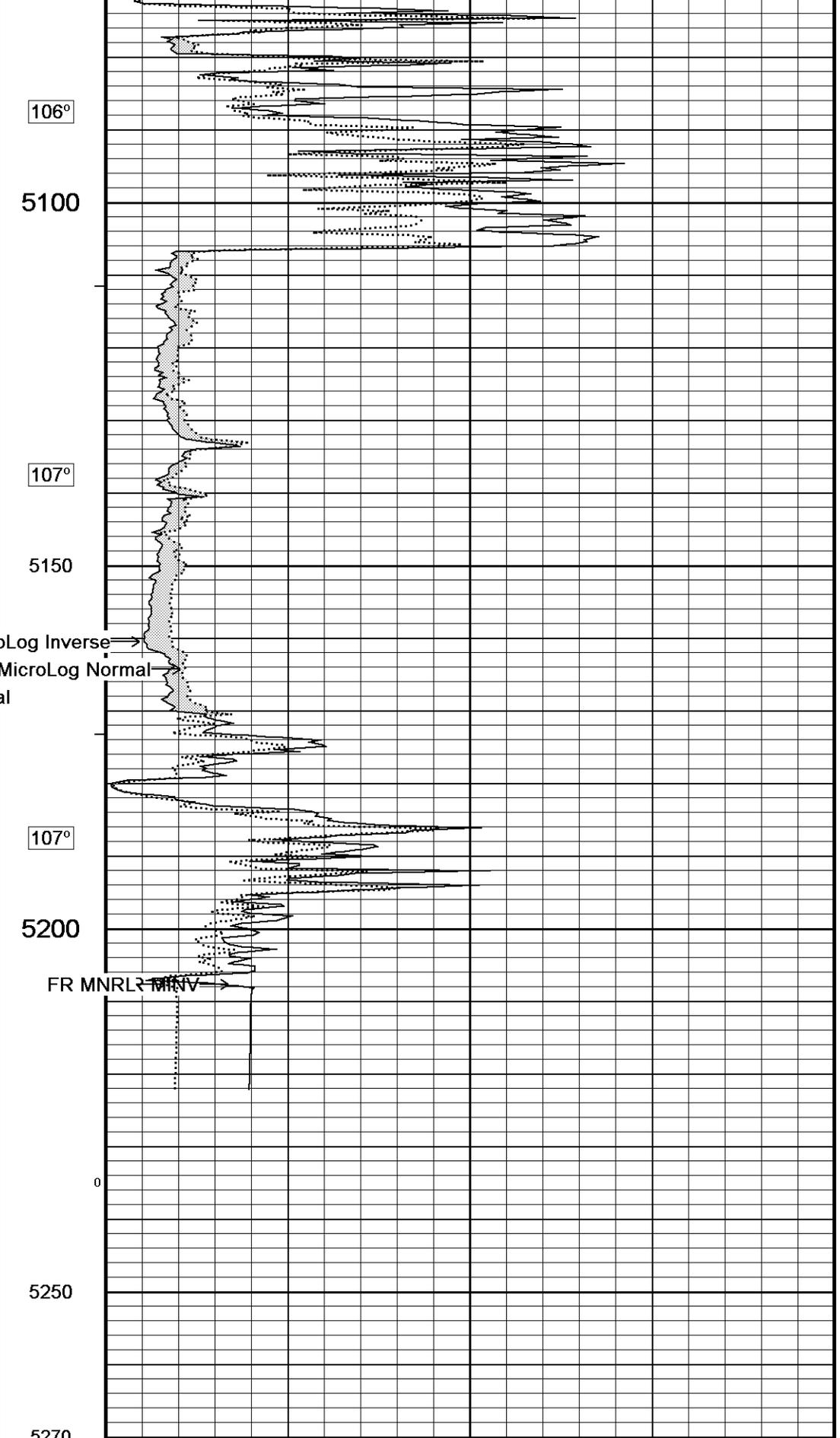
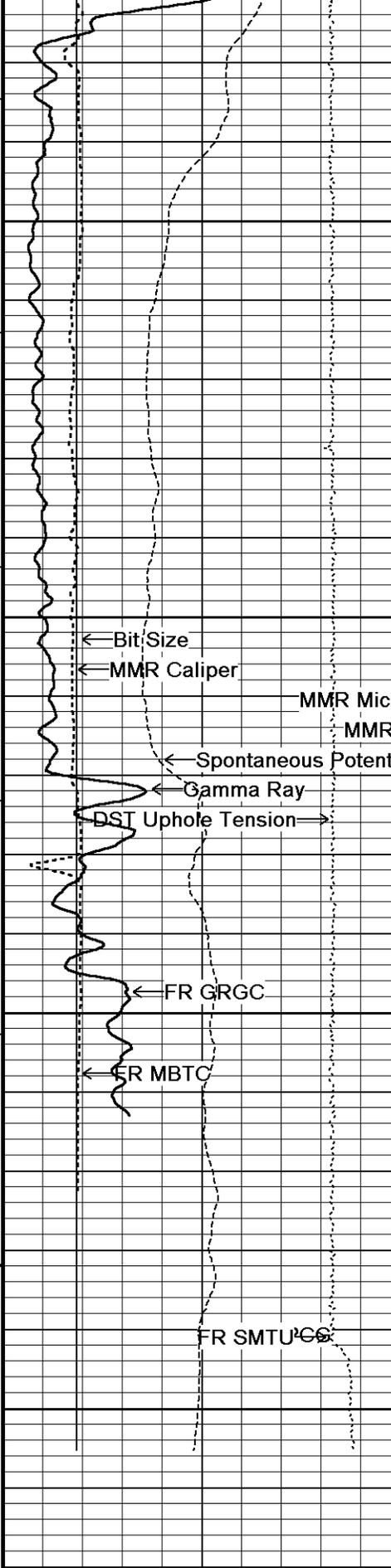
105°

5000

105°

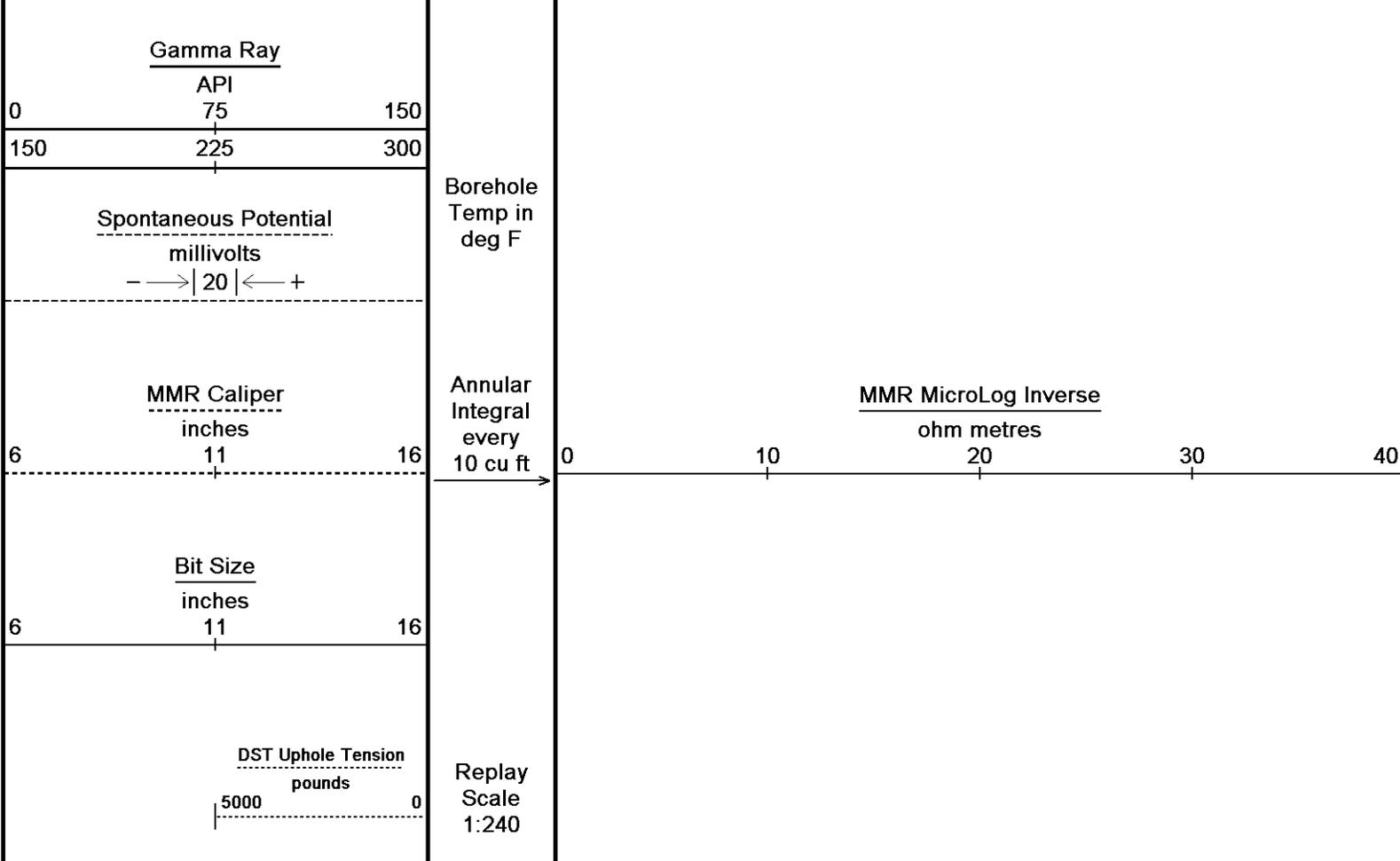
5050





← Timing Marks
 every 60.0 sec

0 10 20 30 40
 MMR MicroLog Normal
 ohm metres



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↑ REPEAT SECTION ↑

BEFORE SURVEY CALIBRATION
 C:\Minimus 13.04.8492\Data\McCoy Hill 'A' #2-23\McCoy Hill 'A' #2-23_001.dta

General Constants All 000 Last Edited on 15-MAR-2013,02:31

General Parameters		
Mud Resistivity	0.460	ohm-metres
Mud Resistivity Temperature	81.000	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	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	

Gamma Calibration MCG-D.K 469 Field Calibration on 08-MAR-2013 17:05

	Measured	Calibrated (API)
Background	74	49
Calibrator (Gross)	1167	774
Calibrator (Net)	1093	725

Gamma Calibrator Number	GR38	
Mud Density	1.13	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

High Resolution Temperature Calibration MCG-D.K 469

Field Calibration on 07-NOV-2012,10:25

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

High Resolution Temperature Constants MCG-D.K 469

Last Edited on 16-FEB-2013,15:17

Pre-filter Length	11
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Caliper Calibration MMR-A 11

Base Calibration on 08-MAR-2013 17:30

Field Calibration on 08-MAR-2013 17:31

Base Calibration		
Reading No	Measured	Calibrator Size (in)
1	13647	5.98
2	16765	7.97
3	19976	9.86
4	23885	11.92
5	0	0.00
6	N/A	N/A
Field Calibration		
	Measured Caliper (in)	Actual Caliper (in)
	5.99	5.98

Micro Normal and Micro Inverse Calibration MMR-A 11

Base Calibration on 08-MAR-2013 17:36

Field Check on 08-MAR-2013 17:37

Base Calibration				
		Measured	Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Micro Normal	12.4	60.0	5.0	25.0
Micro Inverse	15.5	77.5	5.0	25.0
Field Calibration				
Channel	Base Check (ohm-m)		Field Check (ohm-m)	
Micro Normal	76.3		76.3	
Micro Inverse	58.7		58.7	

Micro Normal and Micro Inverse Constants MMR-A 11

Last Edited on 05-NOV-2012,13:54

Pad Type	8-12 in Soft Rubber Inflatable 006-9011-159		
Micro Normal K Factor	1.0000		
Micro Inverse K Factor	1.0000		
Standoff Offset	0.0000	inches	

Caliper Calibration MPD-B 31

Base Calibration on 13-MAR-2013 15:27

Field Calibration on 13-MAR-2013 15:28

Base Calibration		
Reading No	Measured	Calibrator Size (in)
1	16480	3.99
2	25040	5.98
3	33712	7.97
4	42000	9.86
5	51360	11.92
6	N/A	N/A
Field Calibration		
	Measured Caliper (in)	Actual Caliper (in)
	5.94	5.98

DOWNHOLE EQUIPMENT

C:\Minimus 13.04.8492\Data\McCoy Hill 'A' #2-23\McCoy Hill 'A' #2-23_001.dta

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

Compact Micro-Resistivity
MMR-A 11 LG: 8.59 ft WT: 81.6 lb OD: 4.88 in

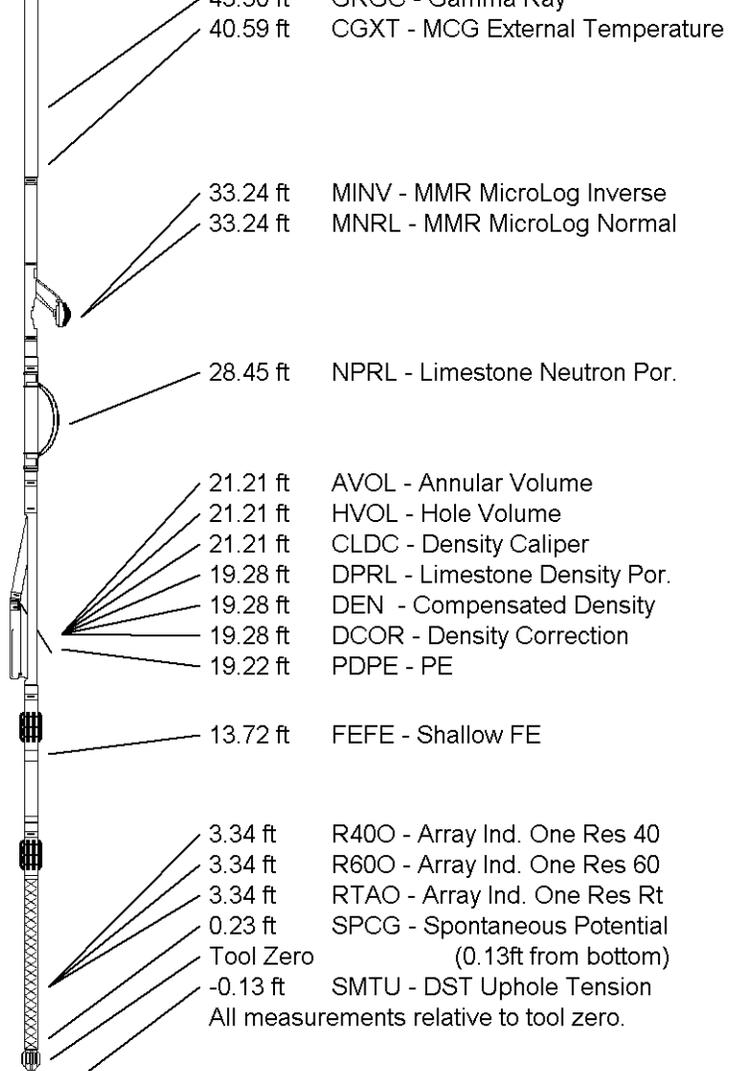
Compact Neutron
MDN-A.B 65 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper
MPD-B 31 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

Compact Focussed Electric
MFE-B.J 352 LG: 6.05 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: 48.78 ft Weight: 383.6 lb



COMPANY	MCCOY PETROLEUM CORPORATION
WELL	HILL 'A' #2-23
FIELD	ALFORD
PROVINCE/COUNTY	KIOWA
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	2248.00	feet	First Reading	5208.00	feet
Elevation Drill Floor	2247.00	feet	Depth Driller	5240.00	feet
Elevation Ground Level	2237.00	feet	Depth Logger	5241.00	feet



Weatherford[®]

MICRORESISTIVITY LOG