MICRORESISTIVITY LOG

COMPANY	McCOY PETROLEUM CORPORATION
WELL	THOMAS & REED FARMS 'A' #1-21
FIELD	WILDCAT
PROVINCE/COUNTY	GRAY
COUNTRY/STATE	U.S.A. / KANSAS
LOCATION	660' FNL & 1980' FWL

SEC 21	TWP 29S	RGE 28W	Other Services
Latitude			MAI/MFE MPD/MDN
Longitude			MSS
API Number	15-069-20499		

Permanent Datum GL, Elevation 2728 feet
Log Measured From KB, 11.00 feet above Permanent Datum
Drilling Measured From KB

Elevations:	feet
KB	2739.00
DF	2737.00
GL	2728.00

Date	18-MAR-2017			
Run Number	ONE			
Service Order	4558-177026132			
Depth Driller	6500.00	feet		
Depth Logger	6495.00	feet		
First Reading	6449.00	feet		
Last Reading	2700.00	feet		
Casing Driller	1690.00	feet		
Casing Logger	1685.00	feet		
Bit Size	7.875	inches		
Hole Fluid Type	CHEMICAL			
Density / Viscosity	9.00 lb/USg	55.00 CP		
PH / Fluid Loss	9.50	8.00 ml/30Min		
Sample Source	FLOWLINE			
Rm @ Measured Temp	1.03 @ 75.0	ohm-m		
Rmf @ Measured Temp	0.82 @ 75.0	ohm-m		
Rmc @ Measured Temp	1.24 @ 75.0	ohm-m		
Source Rmf / Rmc	CALC	CALC		
Rm @ BHT	0.63 @123.0	ohm-m		
Time Since Circulation	5 HOURS			
Max Recorded Temp	123.00	deg F		
Equipment / Base	13096	OKC		
Recorded By	ADAM SILL			
Witnessed By	ZACH WIELE			

BOREHOLE RECORD

Last Edited: 18-MAR-2017 10:18

Bit Size inches	Depth From feet	Depth To feet
7.875	1695.00	6500.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	1695.00	24.00

REMARKS

- SOFTWARE ISSUE: WLS 16.05.4955.

- RUN ONE: MCG, MML, MDN, MPD, MFE, MSS, MAI RUN IN COMBINATION.
  - HARDWARE: DUAL BOWSPRING USED ON MDN.
  0.5 INCH STANDOFF USED ON MFE.
  TWO 0.5 INCH STANDOFFS USED ON MSS.
  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: 1752 CU.FT.

- ANNULAR HOLE VOLUME WITH 4.5 INCH PRODUCTION CASING FROM TD TO 2700 FEET: 869 CU.FT.

- RIG: STERLING #4.

- ENGINEER: A. SILL.

- OPERATOR: B. TOVAR.

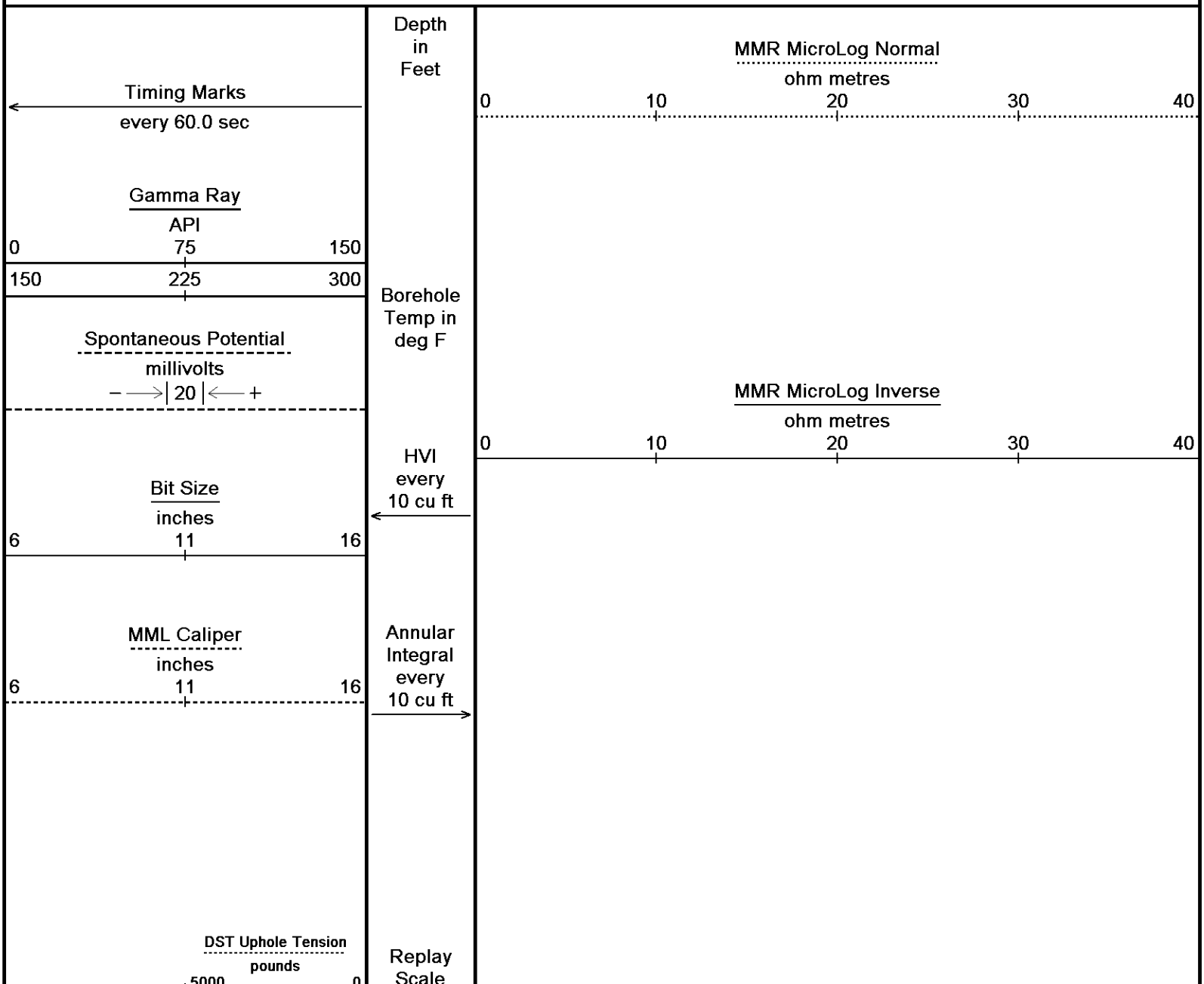
In interpreting, communicating or providing information and/or making recommendations, either written or oral, as to logs or test or other data, type or amount of material, or Work or other service to be furnished, or manner of performance, or in predicting results to be obtained, the Contractor will give the Company the benefit of the Contractor's best judgment based on its experience and will perform all such Work in a good and workmanlike manner. Any interpretation of test or other data, and any recommendation or reservoir description based upon such interpretations, are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and assumptions are not infallible, and with respect to which professional engineers and analysts may differ. ACCORDINGLY ANY INTERPRETATION OR RECOMMENDATION RESULTING FROM THE SERVICES WILL BE AT THE SOLE RISK OF THE COMPANY, AND THE CONTRACTOR CANNOT AND DOES NOT WARRANT THE ACCURACY, CORRECTNESS OR COMPLETENESS OF ANY SUCH INTERPRETATION OR RECOMMENDATION, WHICH INTERPRETATIONS AND RECOMMENDATIONS SHOULD NOT, THEREFORE, UNDER ANY CIRCUMSTANCES BE RELIED UPON AS THE SOLE OR MAIN BASIS FOR ANY DRILLING, COMPLETION, WELL TREATMENT, PRODUCTION OR FINANCIAL DECISION, OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING ACTIVITY, DRILLING RIG OR ITS CREW OR ANY OTHER INDIVIDUAL. THE COMPANY HAS FULL RESPONSIBILITY FOR ALL DECISIONS CONCERNING THE SERVICES.

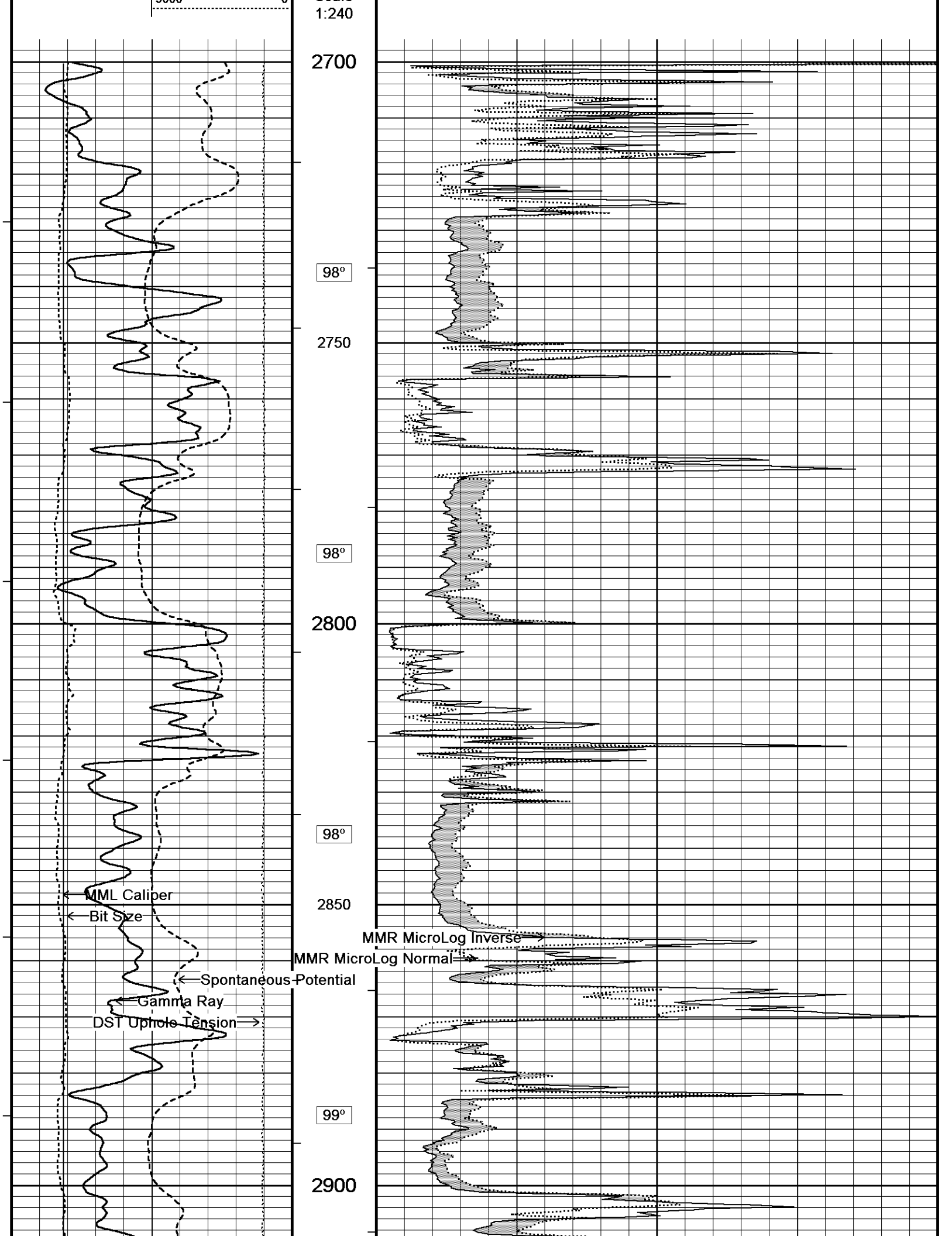
5 INCH MAIN

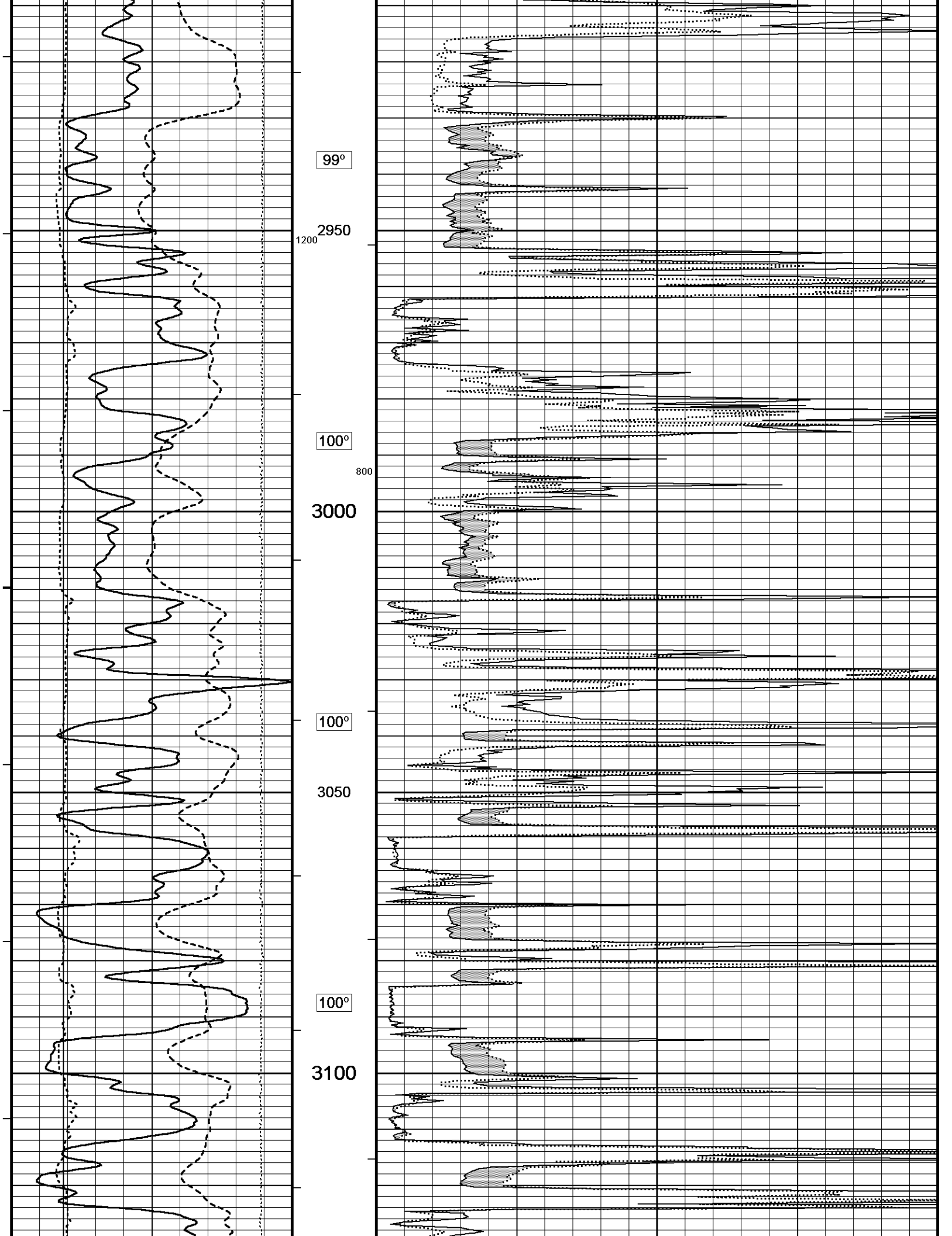
Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 18-MAR-2017 20:47

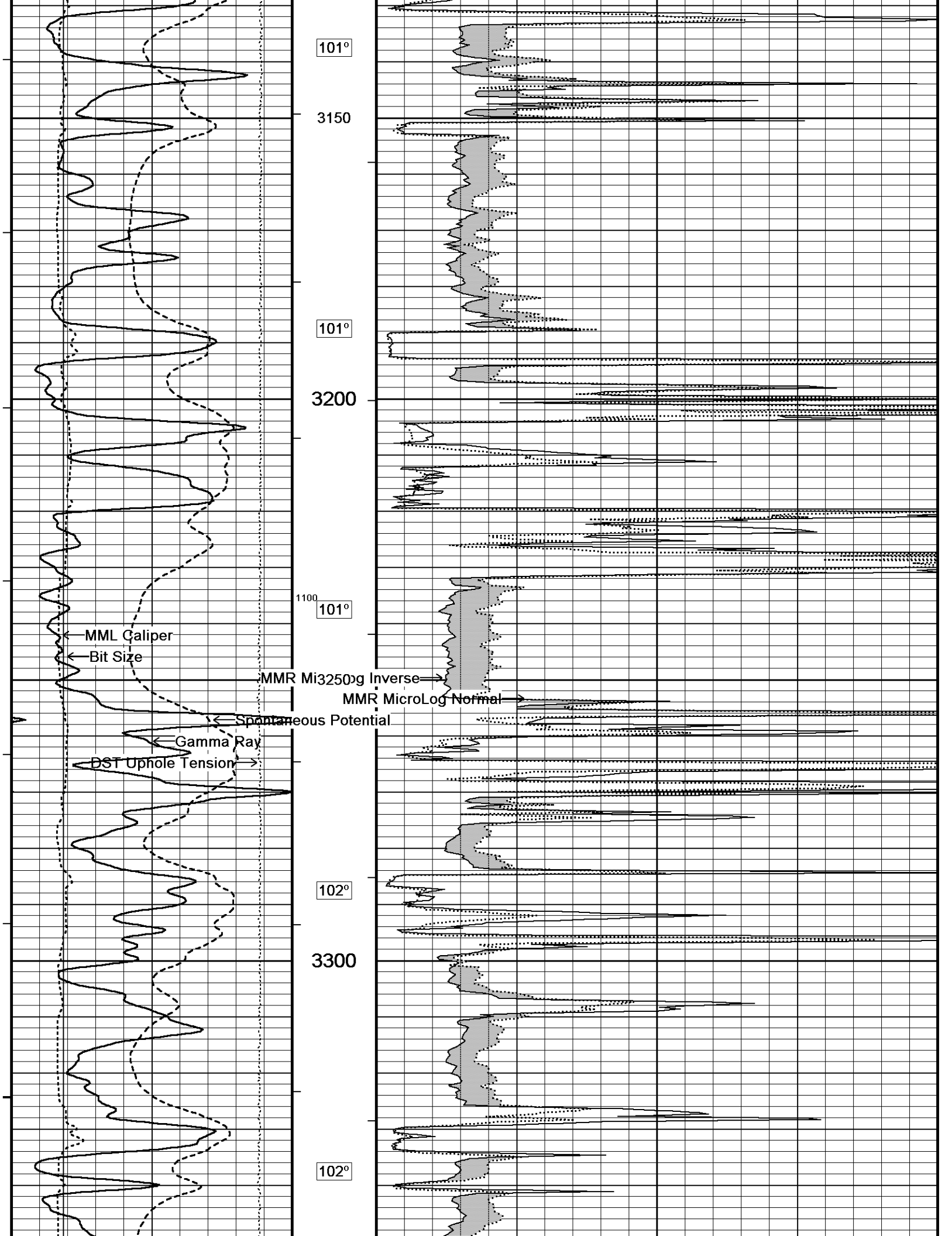
Filename: C:\Minimus 16.05.4955\Data\McCoy Tho...\McCoy Thomas & Reed Farms 'A' #1-21_003.dta — Recorded on 18-MAR-2017 16:25

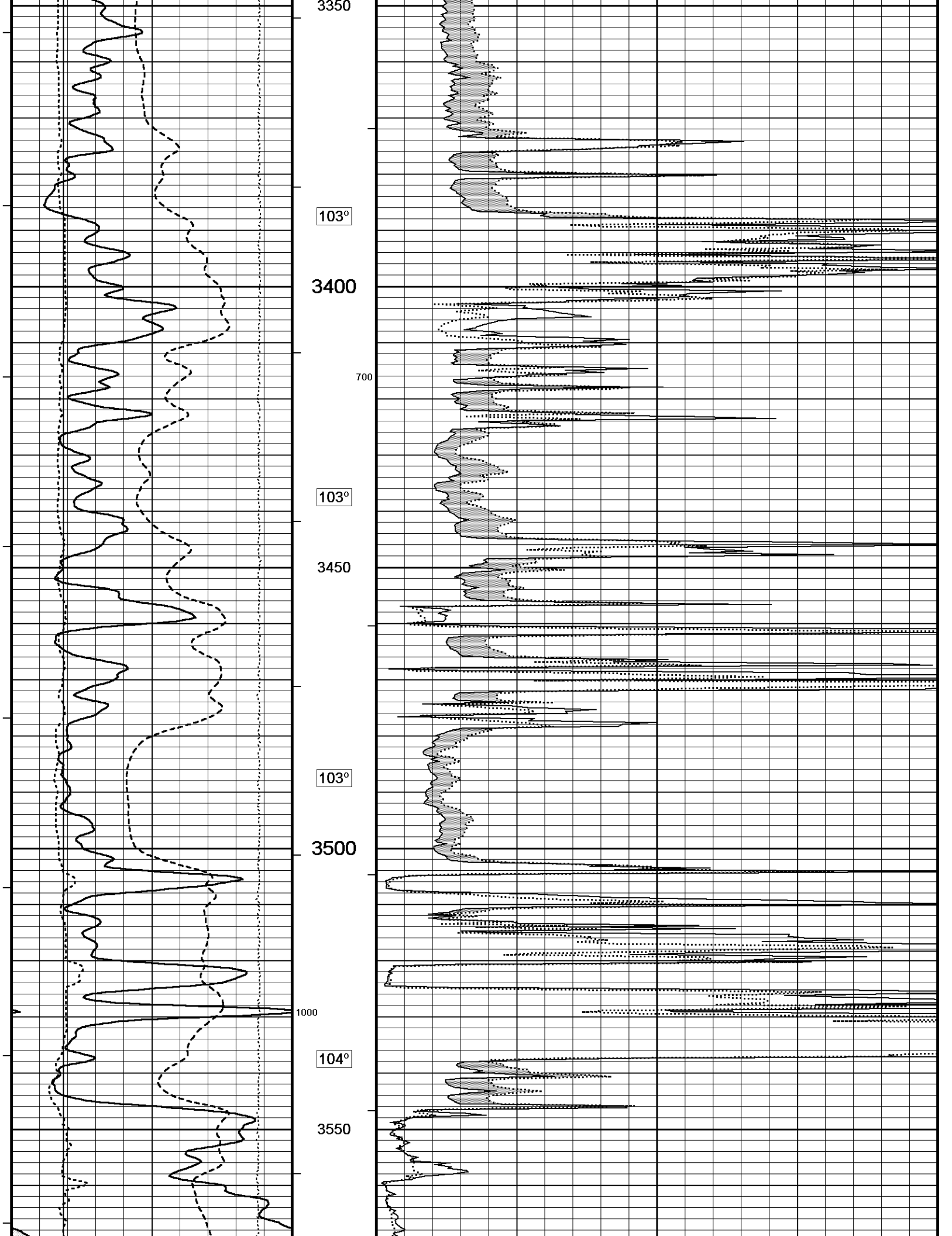
System Versions: Logged with 16.05.4955 Plotted with 16.05.4955




1:240
2700
98°
2750
98°
2800
98°
2850
99°
2900
MML Caliper
Bit Size
Spontaneous Potential
Gamma Ray
DST Uphole Tension
MMR MicroLog Inverse
MMR MicroLog Normal


99°
2950
1200
100°
800
3000
100°
3050
100°
3100


101°
3150
101°
3200
1100
101°
MML Caliper
Bit Size
MMR Mi3250g Inverse
MMR MicroLog Normal
Spontaneous Potential
Gamma Ray
DST Uphole Tension
102°
3300
102°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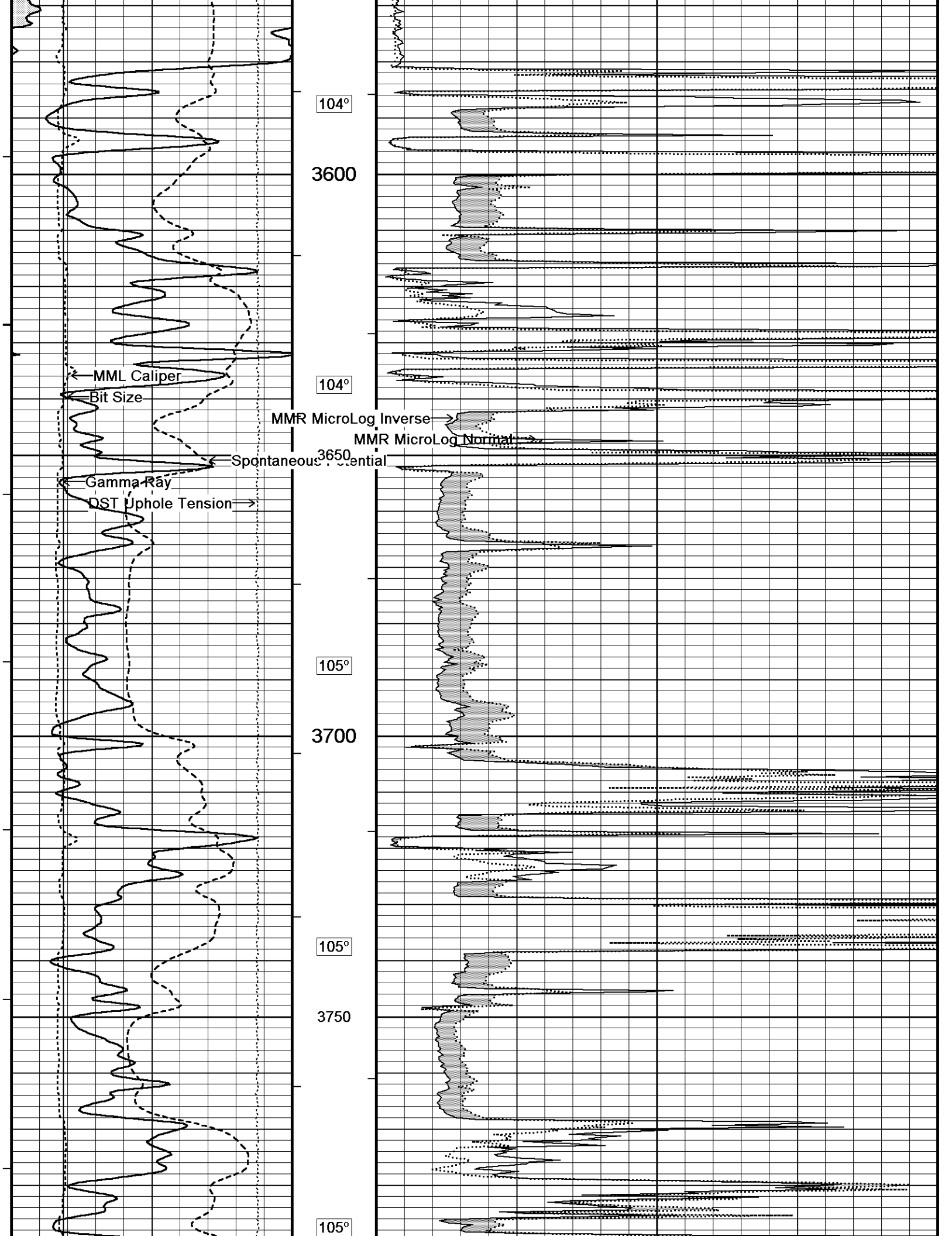
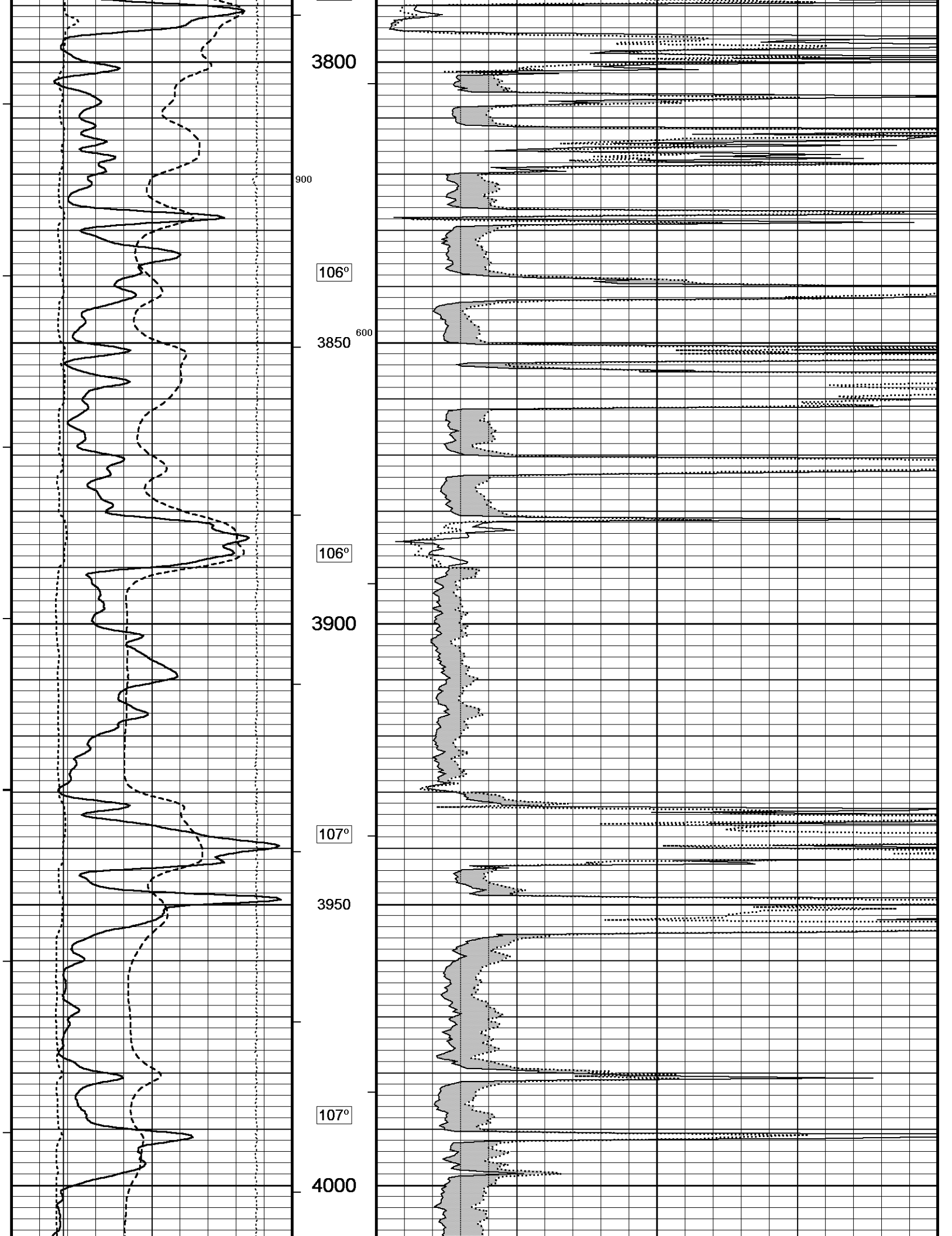
103°
3400
700
103°
3450
103°
3500
1000
104°
3550


104°
3600
104°
MML Caliper
Bit Size
MMR MicroLog Inverse
MMR MicroLog Normal
3650
Spontaneous Potential
Gamma Ray
DST Uphole Tension
105°
3700
105°
3750
105°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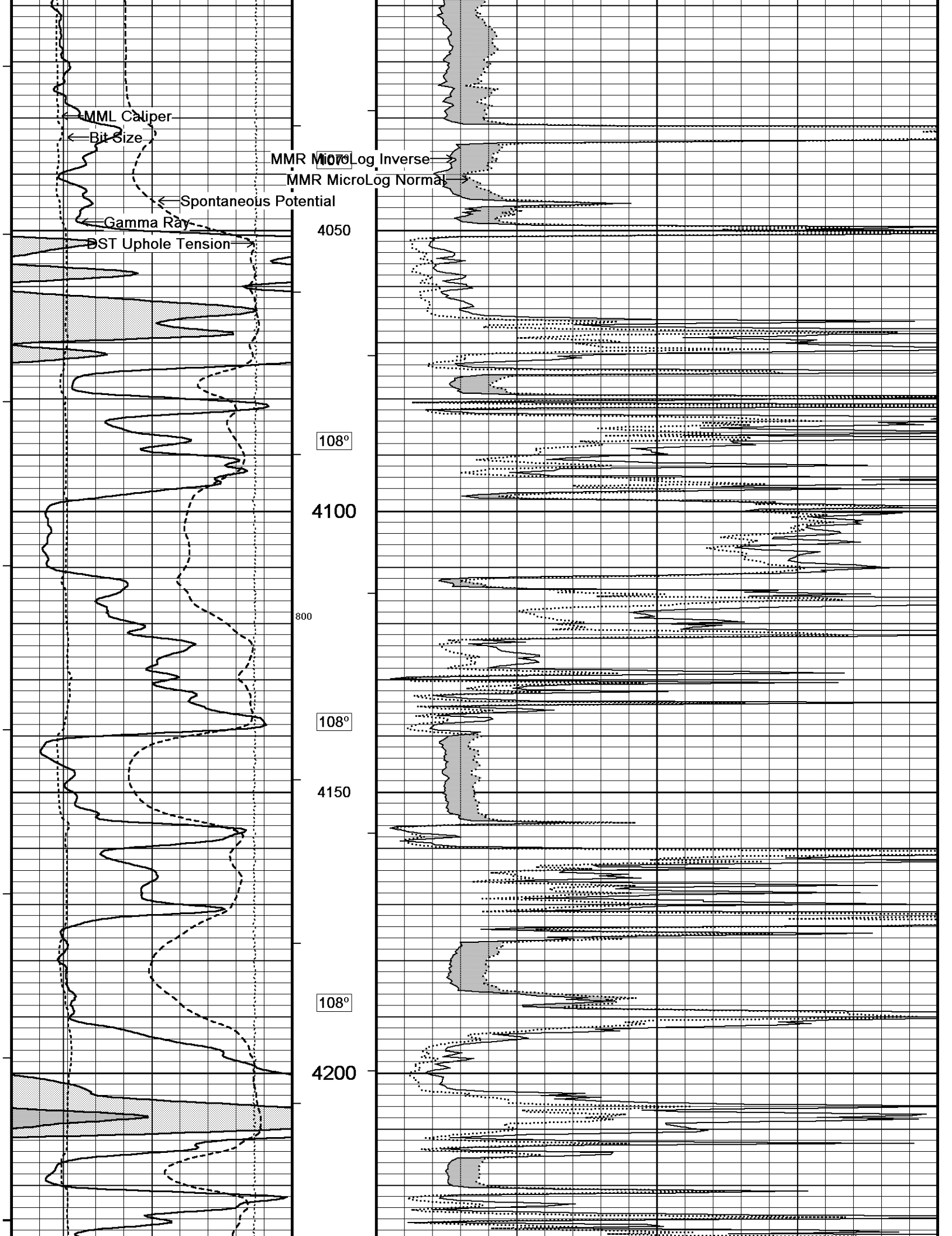
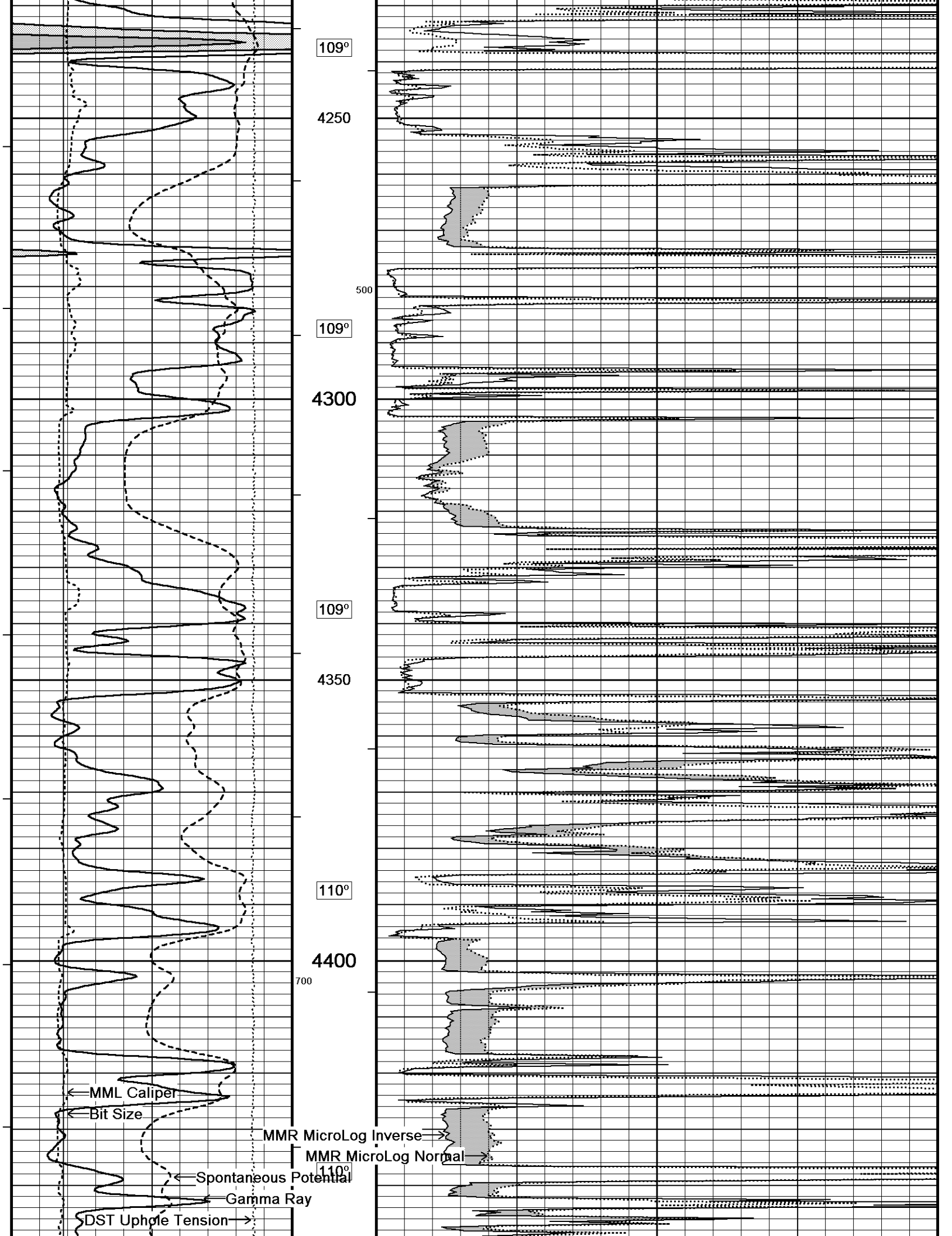
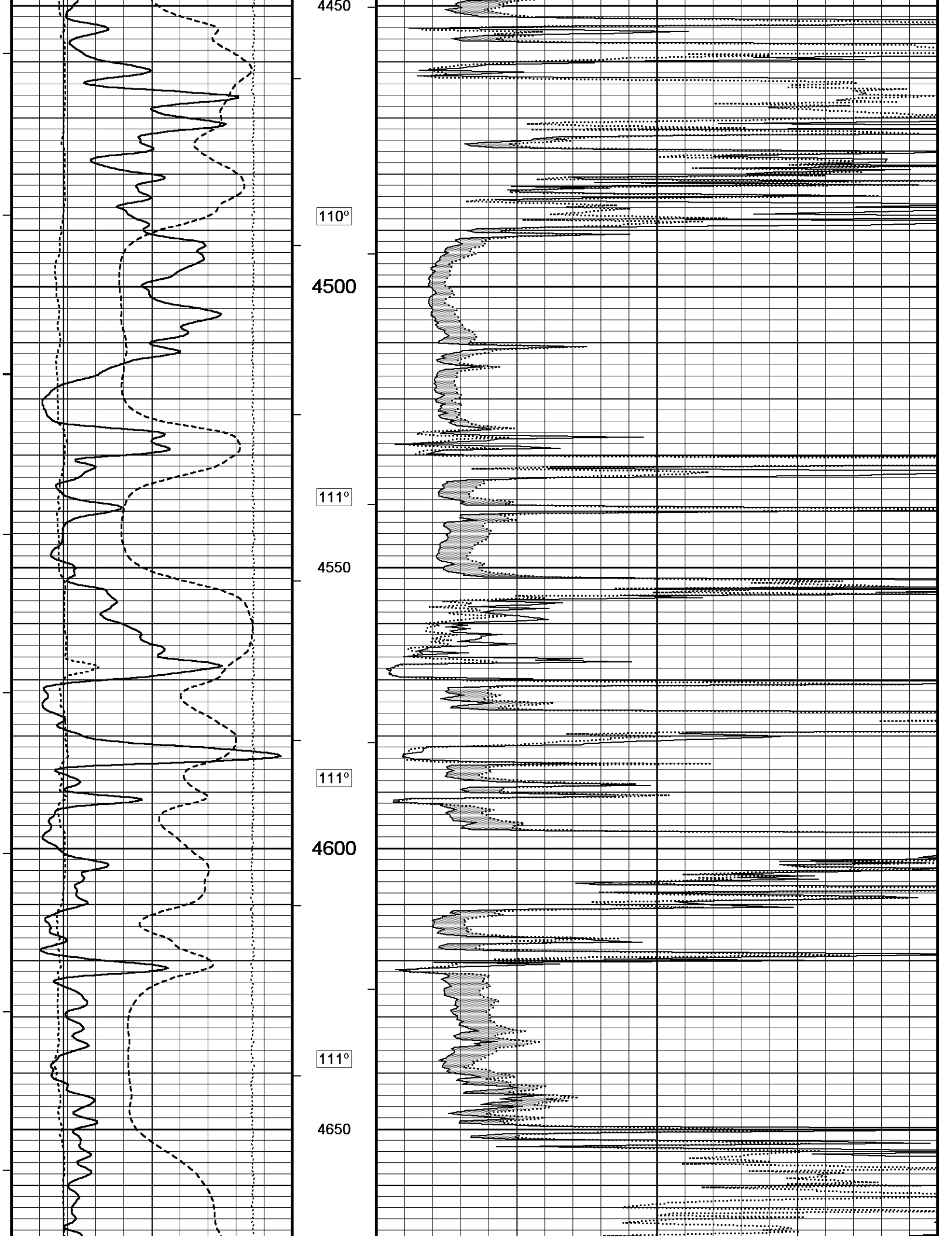
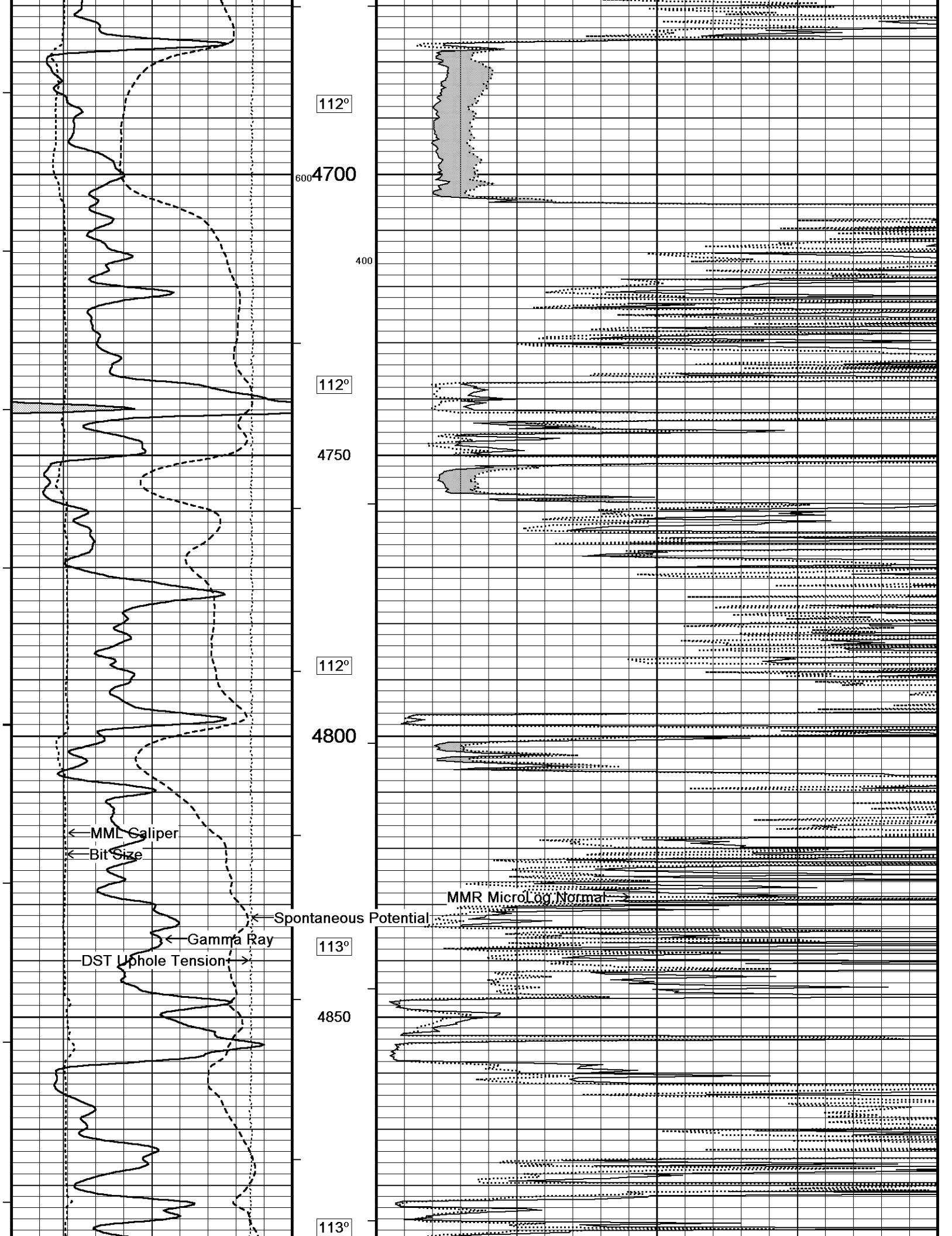
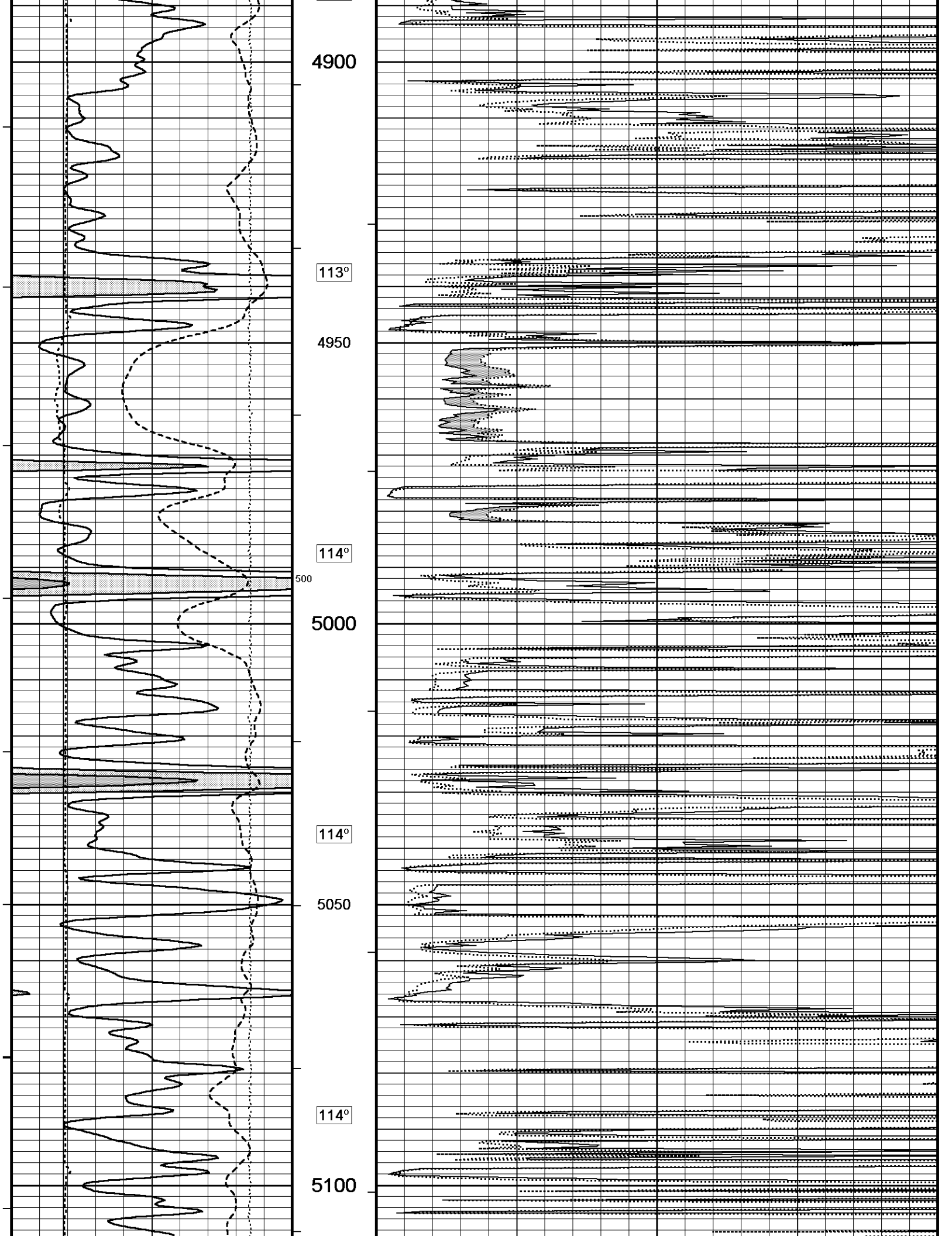
900
106°
3850
600
106°
3900
107°
3950
107°
4000

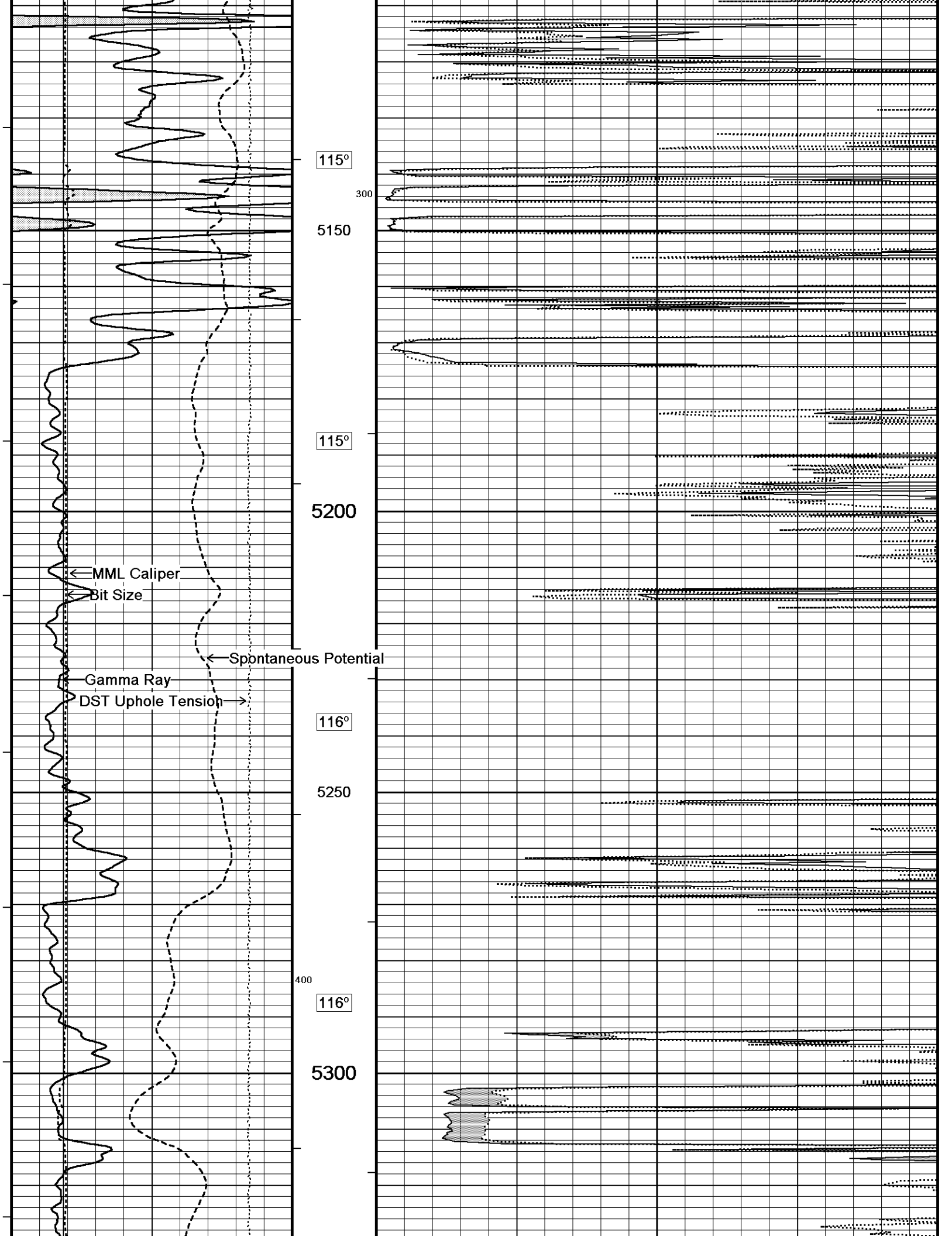

MML Caliper
Bit Size
MMR MicroLog Inverse
MMR MicroLog Normal
Spontaneous Potential
Gamma Ray
DST Uphole Tension
4050
108°
4100
800
108°
4150
108°
4200

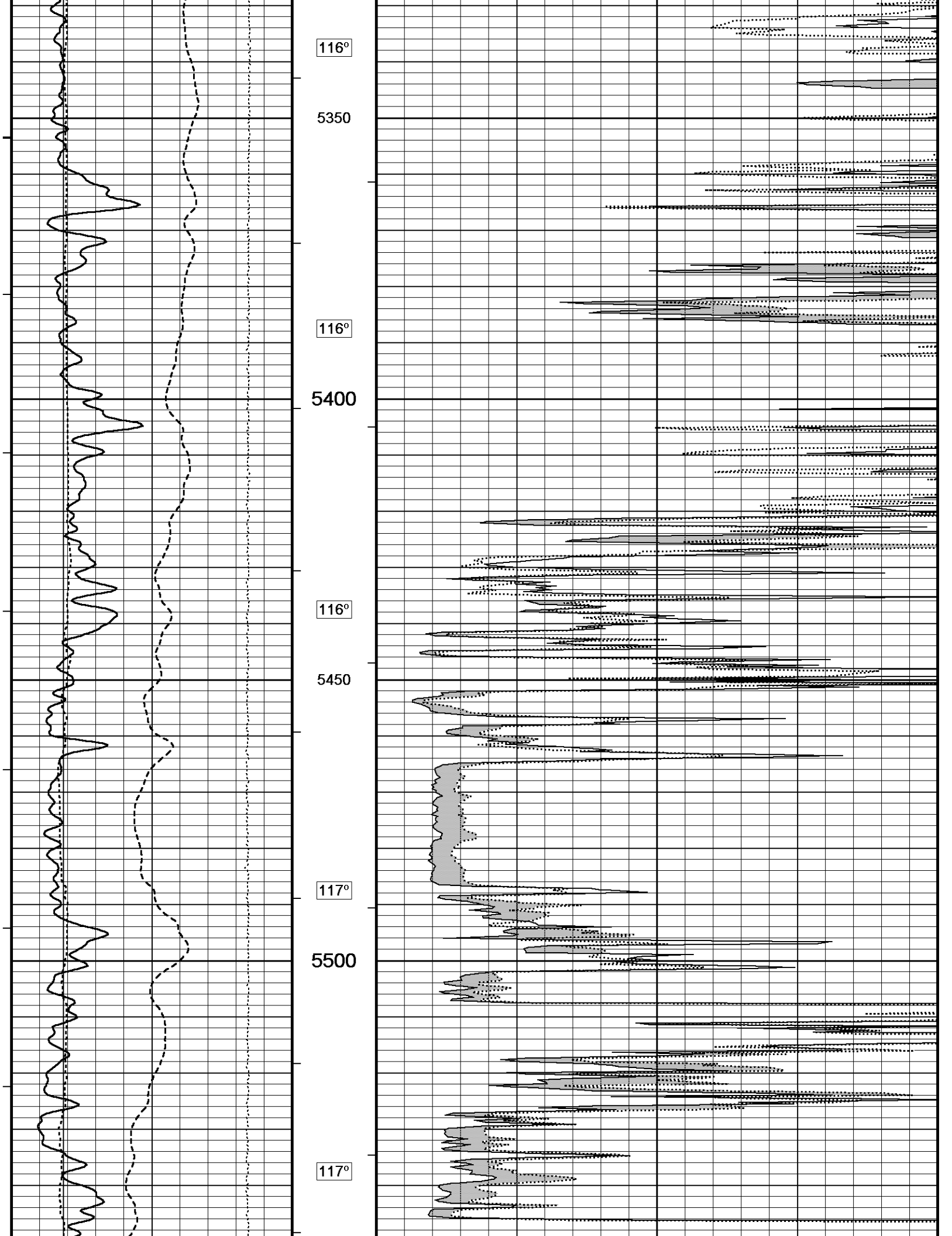

109°
4250
500
109°
4300
109°
4350
110°
4400
700
MML Caliper
Bit Size
MMR MicroLog Inverse
MMR MicroLog Normal
110°
Spontaneous Potential
Gamma Ray
DST Uphole Tension

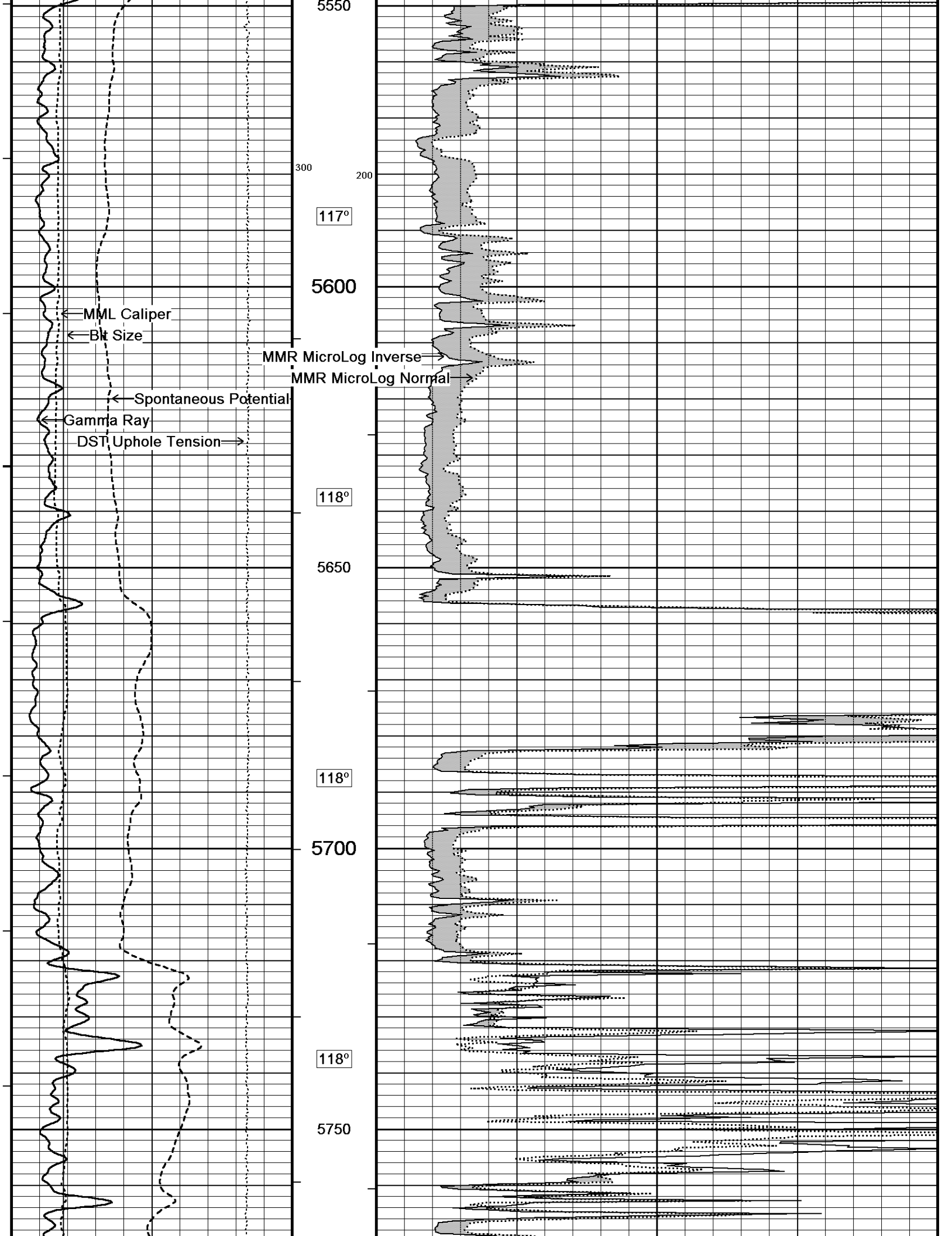

4450
110°
4500
111°
4550
111°
4600
111°
4650

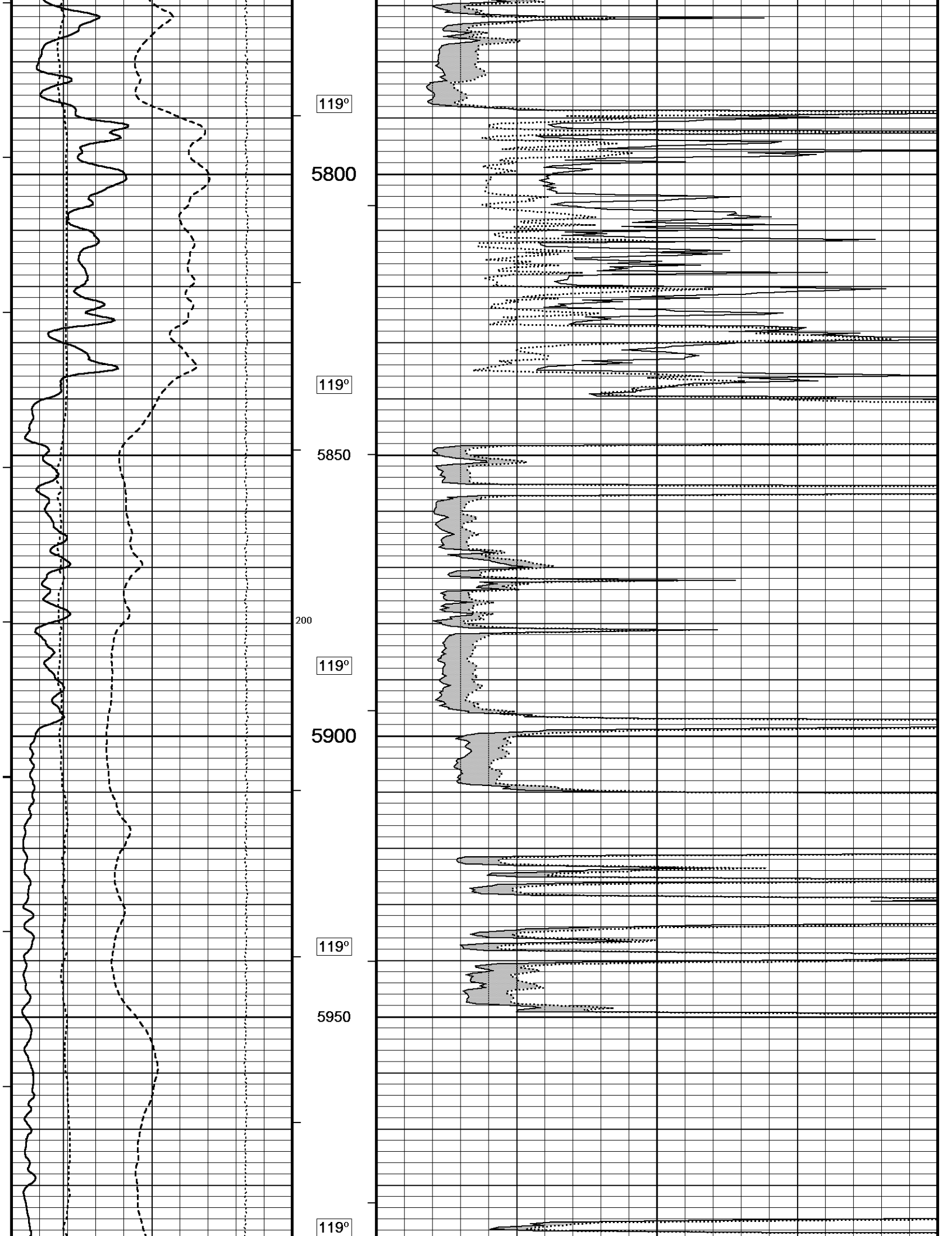

112°
600
4700
400
112°
4750
112°
4800
MML Caliper
Bit Size
MMR MicroLog Normal
Spontaneous Potential
Gamma Ray
DST Uphole Tension
113°
4850
113°

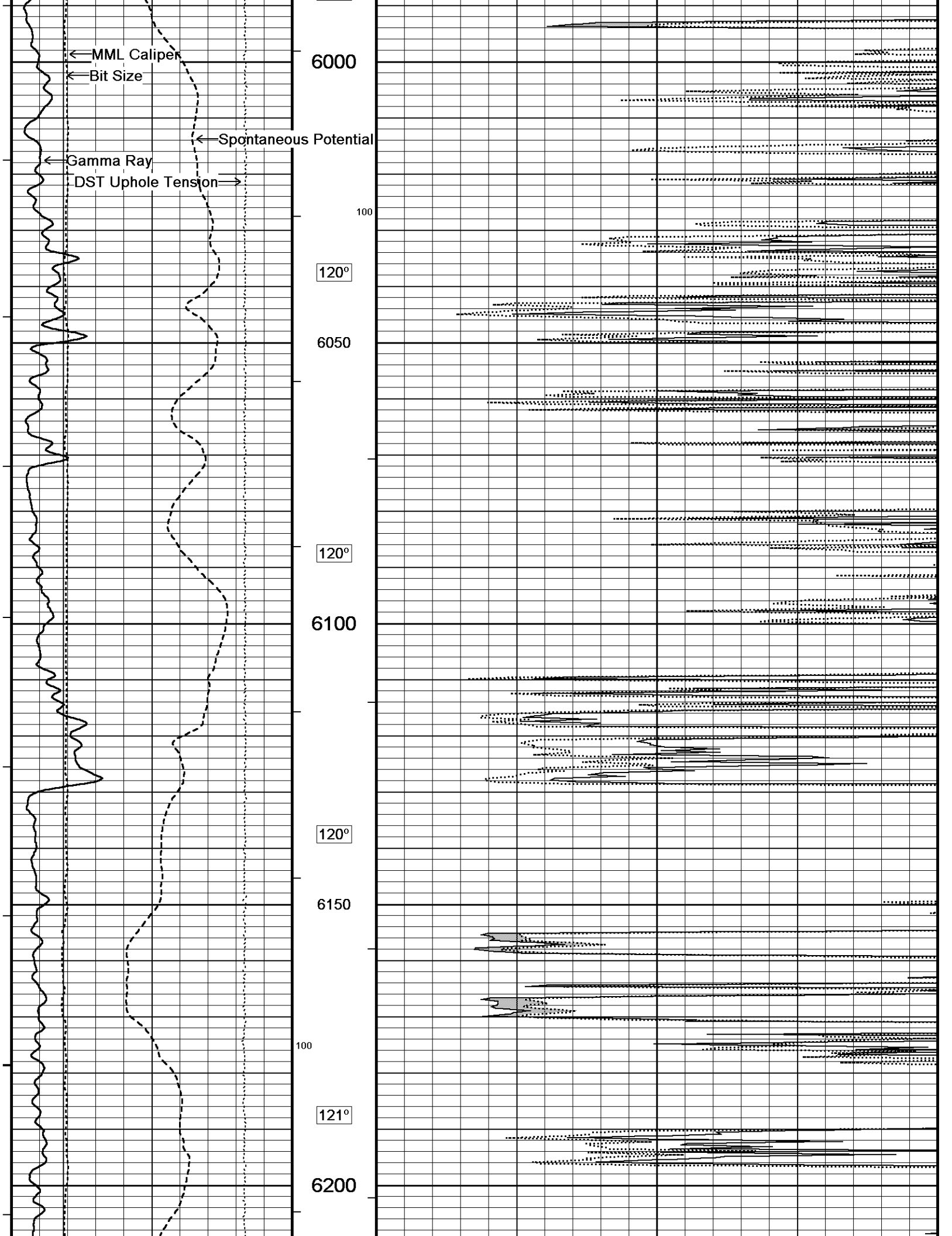

4900
113°
4950
114°
500
5000
114°
5050
114°
5100

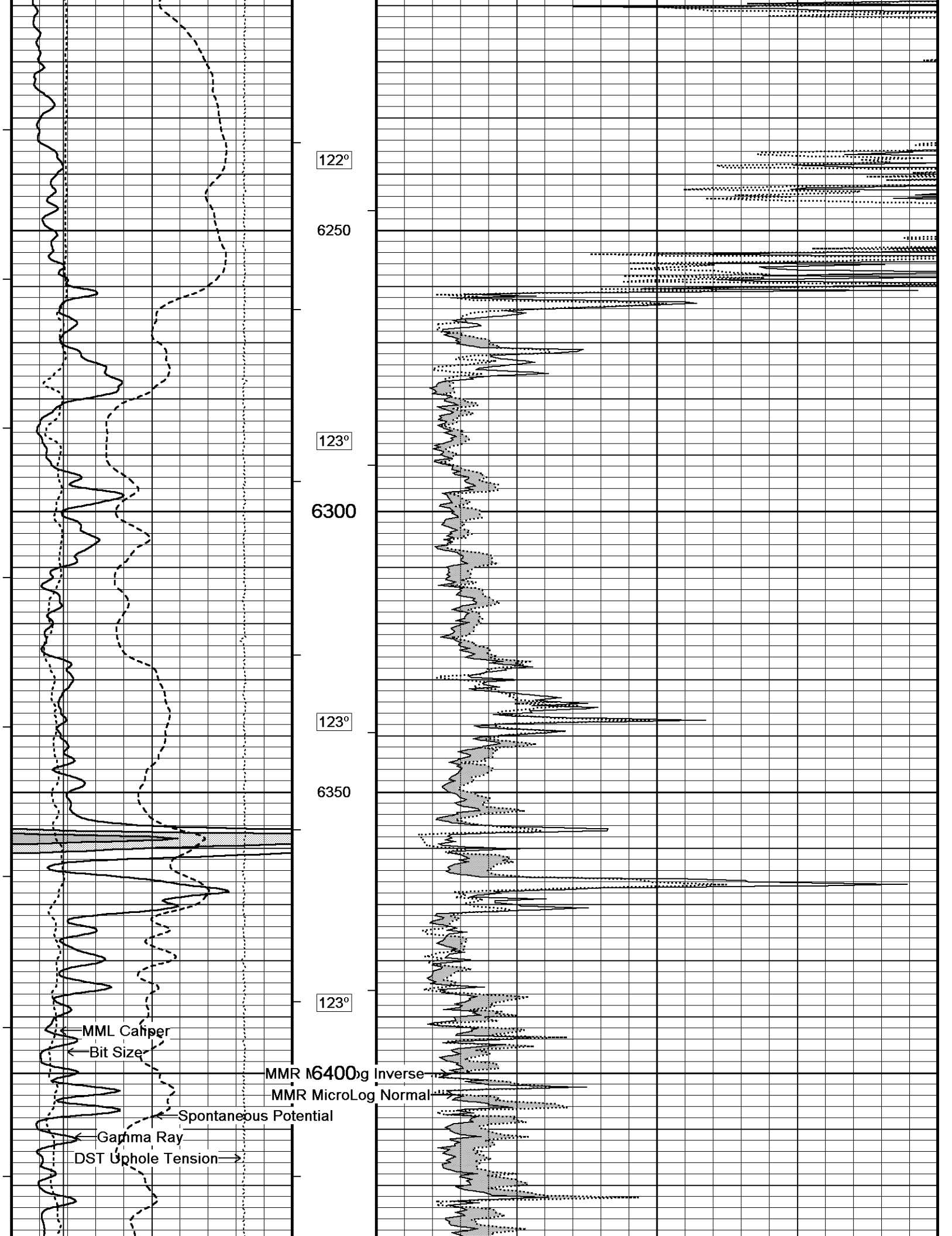

115°
300
5150
115°
5200
MML Caliper
Bit Size
Spontaneous Potential
Gamma Ray
DST Uphole Tension
116°
5250
400
116°
5300

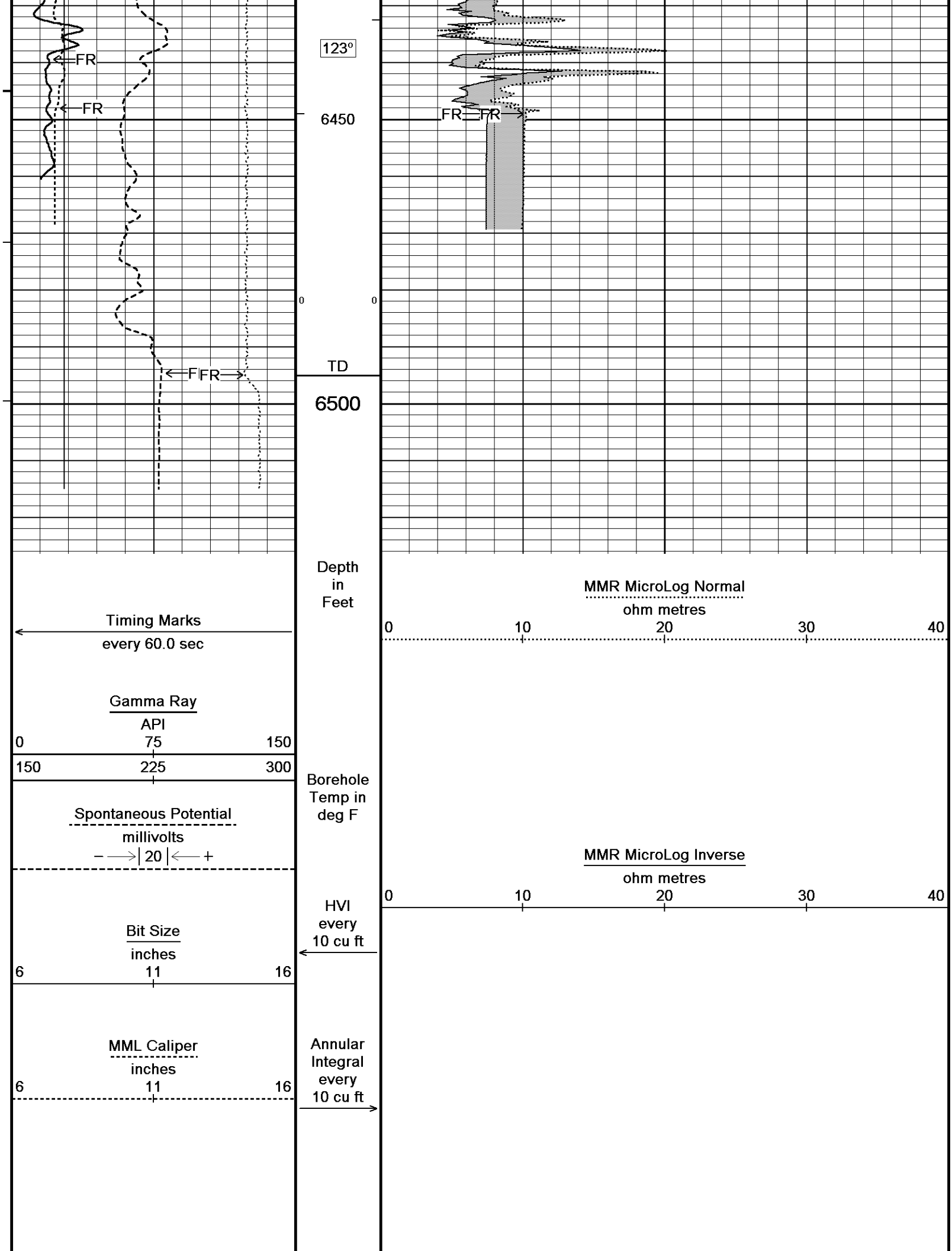

116°
5350
116°
5400
116°
5450
117°
5500
117°


5550
300
200
117°
5600
MML Caliper
Bit Size
MMR MicroLog Inverse
MMR MicroLog Normal
Spontaneous Potential
Gamma Ray
DST Uphole Tension
118°
5650
118°
5700
118°
5750


119°
5800
119°
5850
200
119°
5900
119°
5950
119°


MML Caliper
Bit Size
Spontaneous Potential
Gamma Ray
DST Uphole Tension
6000
100
120°
6050
120°
6100
120°
6150
100
121°
6200


122°
6250
123°
6300
123°
6350
123°
6400
MML Caliper
Bit Size
MMR MicroLog Inverse
MMR MicroLog Normal
Spontaneous Potential
Gamma Ray
DST Uphole Tension


123°
6450
FR
FR
FR
FR
0
0
TD
6500
Depth
in
Feet
Timing Marks
every 60.0 sec
Gamma Ray
API
0
75
150
150
225
300
Spontaneous Potential
millivolts
– 20 +
Bit Size
inches
6
11
16
MML Caliper
inches
6
11
16
Borehole
Temp in
deg F
HVI
every
10 cu ft
Annular
Integral
every
10 cu ft
MMR MicroLog Normal
ohm metres
0
10
20
30
40
MMR MicroLog Inverse
ohm metres
0
10
20
30
40

DST Uphole Tension
pounds
5000 0

Replay
Scale
1:240

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 18-MAR-2017 20:47
Filename: C:\Minimus 16.05.4955\Data\McCoy Tho...\McCoy Thomas & Reed Farms 'A' #1-21_003.dta
Recorded on 18-MAR-2017 16:25
System Versions: Logged with 16.05.4955 Plotted with 16.05.4955

5 INCH MAIN

REPEAT SECTION

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 18-MAR-2017 20:47
Filename: C:\Minimus 16.05.4955\Data\McCoy Tho...\McCoy Thomas & Reed Farms 'A' #1-21_002.dta
Recorded on 18-MAR-2017 15:48
System Versions: Logged with 16.05.4955 Plotted with 16.05.4955

Timing Marks
every 60.0 sec

Gamma Ray
API
0 75 150
150 225 300

Spontaneous Potential
millivolts
− → | 20 | ← +

Bit Size
inches
6 11 16

MML Caliper
inches
6 11 16

Depth
in
Feet

Borehole
Temp in
deg F

HVI
every
10 cu ft

Annular
Integral
every
10 cu ft

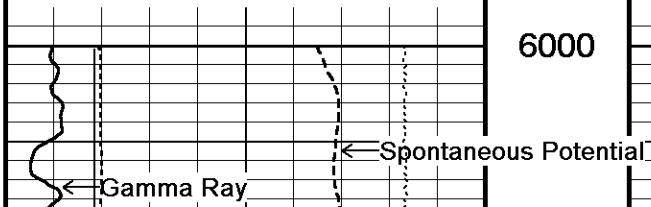
MMR MicroLog Normal
ohm metres
0 10 20 30 40

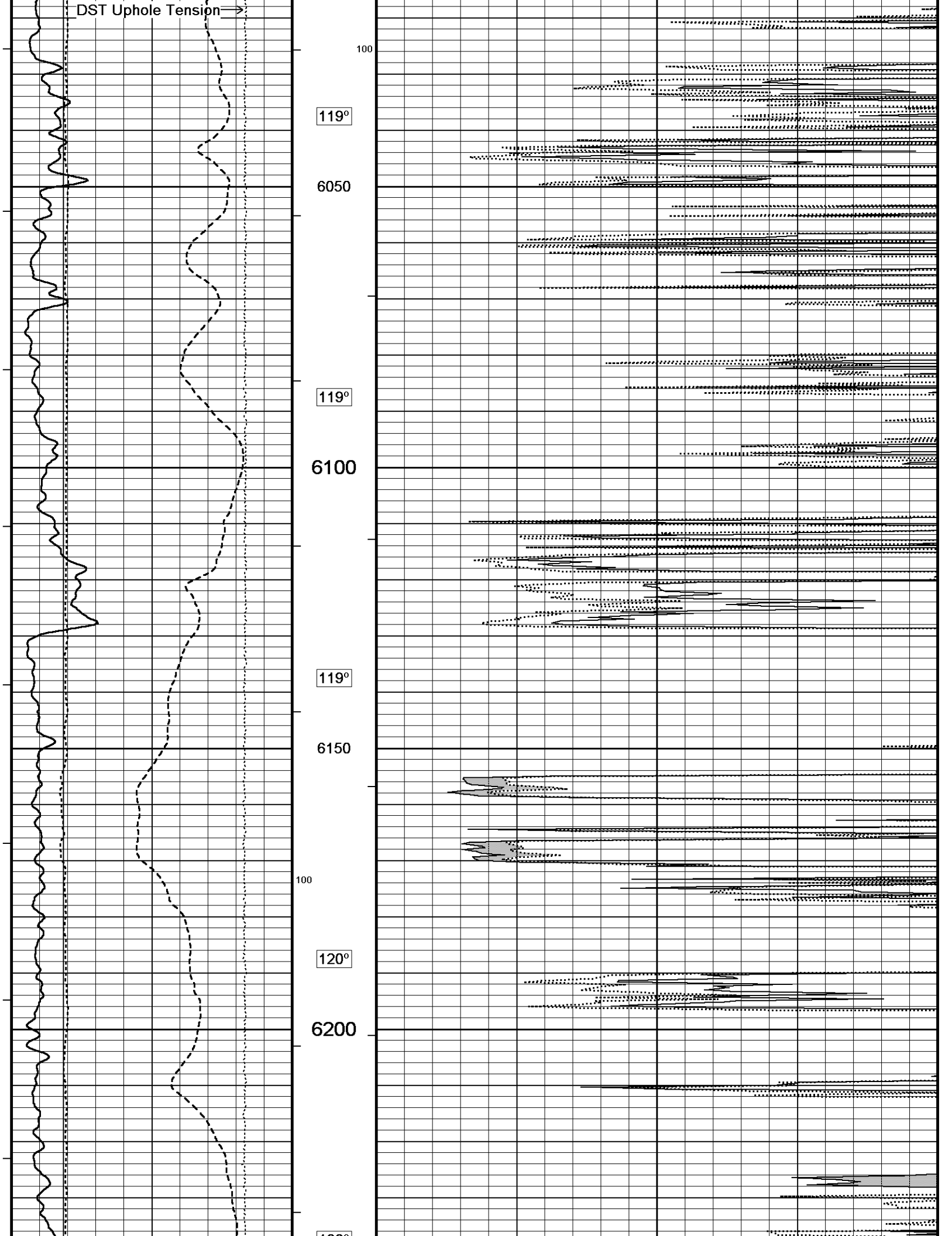
MMR MicroLog Inverse
ohm metres
0 10 20 30 40

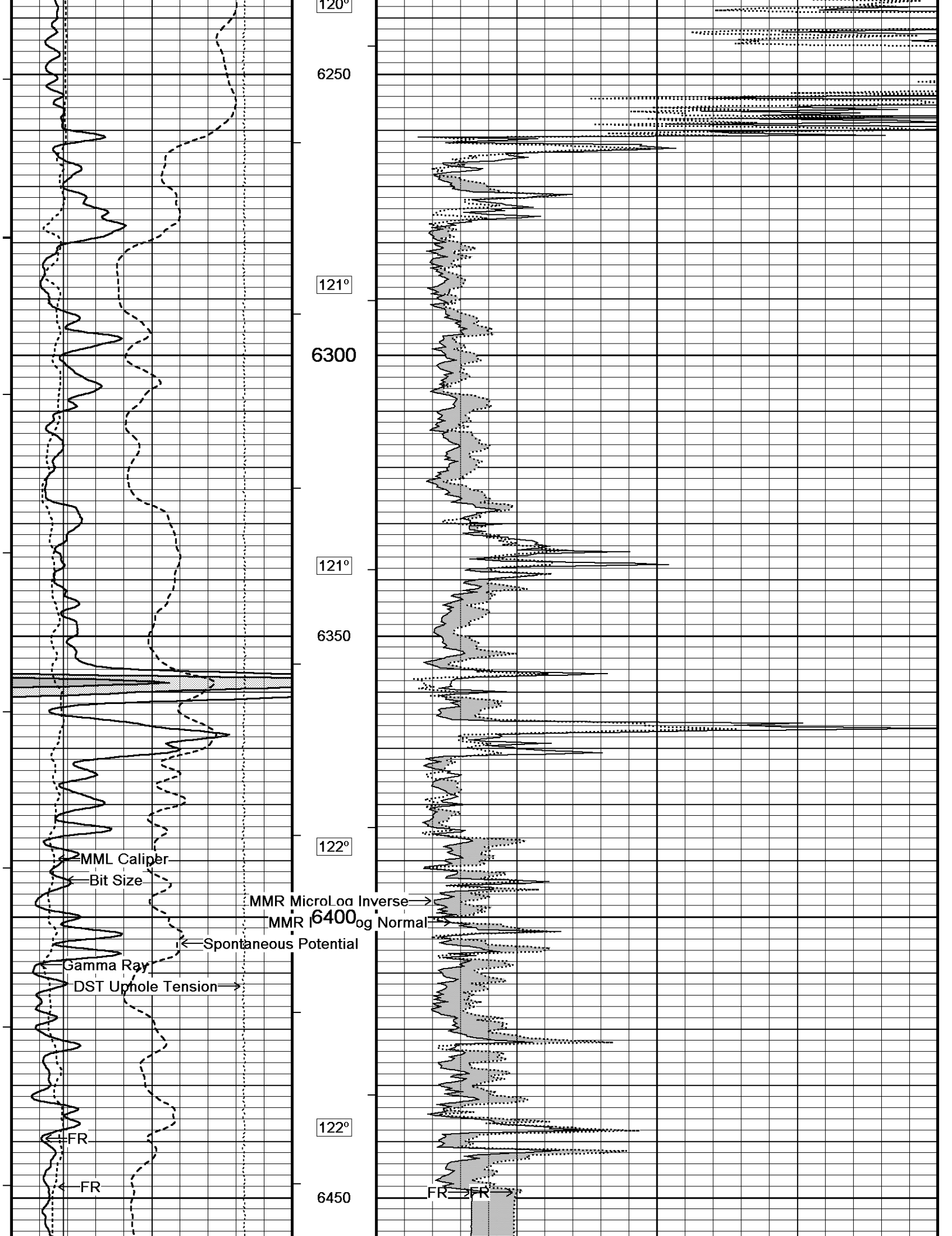
DST Uphole Tension
pounds
5000 0

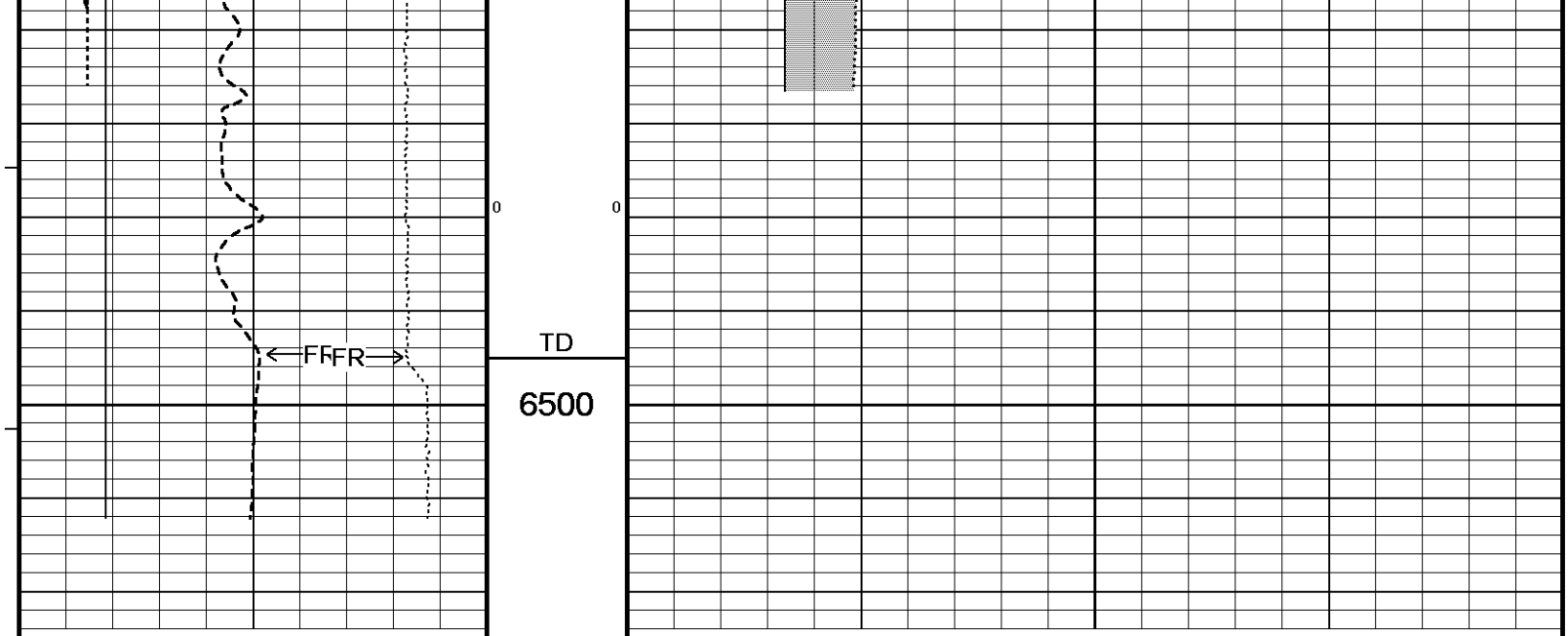
Replay
Scale
1:240

6000




DST Uphole Tension
100
119°
6050
119°
6100
119°
6150
100
120°
6200


120°
6250
121°
6300
121°
6350
122°
MML Caliper
Bit Size
MMR MicroLog Inverse
MMR MicroLog Normal
6400
Spontaneous Potential
Gamma Ray
DST Uphole Tension
122°
FR
FR
6450
FR
FR



Depth in Feet

Timing Marks
every 60.0 sec

Gamma Ray
API
0 75 150
150 225 300

Spontaneous Potential
millivolts
– 20 +

Bit Size
inches
6 11 16

MML Caliper
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

MMR MicroLog Normal
ohm metres
0 10 20 30 40

MMR MicroLog Inverse
ohm metres
0 10 20 30 40

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 18-MAR-2017 20:47
Filename: C:\Minimus 16.05.4955\Data\McCoy Tho...\McCoy Thomas & Reed Farms 'A' #1-21_002.dta
Recorded on 18-MAR-2017 15:48
System Versions: Logged with 16.05.4955 Plotted with 16.05.4955

REPEAT SECTION

BEFORE SURVEY CALIBRATION

C:\Minimus 16.05.4955\Data\McCoy Thomas & Reed Farms 'A' #1-21\McCoy Thomas & Reed Farms 'A' #1-21_002.dta

General Constants All 000

Last Edited on 18-MAR-2017,15:11

General Parameters		
Mud Resistivity	1.030	ohm-metres
Mud Resistivity Temperature	75.000	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	4.500	inches
Caliper for Differential Caliper	None	
Rwa Parameters		
Porosity used	Base Density Porosity	
Resistivity used	Array Ind. One Res Rt	
RWA Constant A	0.620	
RWA Constant M	2.150	
SW/APOR Tool Source	0.000	

Down-hole Tension Calibration SMS 0

Field Calibration on 12-MAR-2017 14:30

Reading No	Measured	Calibrated (lbs)
1	16170.41	0.00
2	17035.71	470.00

Gamma Calibration MCG-C 84

Field Calibration on 18-MAR-2017 07:26

	Measured	Calibrated (API)
Background	113	78
Calibrator (Gross)	777	534
Calibrator (Net)	664	456

Gamma Calibration Tolerances MCG-C 84

Ratio 1.456 

Counts/API

Gamma Constants MCG-C 84

Last Edited on 18-MAR-2017,10:21

Gamma Calibrator Number	MCGGRCC141	
GRC-M Calibrator Jig in Use?	NO	
Inactive Background Jig in Use?	NO	
Mud Density	1.08	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Potassium Equivalence	Chloride	
K Mud Concentration	0.00	%

SP Calibration MCG-C 84

Field Calibration on 09-MAR-2017 17:03

	Measured	Calibrated (mV)
Reference 1	104.4	100.1
Reference 2	-95.8	-100.1

High Resolution Temperature Calibration MCG-C 84

Field Calibration on 09-MAR-2017,16:16

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

High Resolution Temperature Constants MCG-C 84

Last Edited on 09-SEP-2014,02:23

Pre-filter Length	11

Caliper Calibration MML-A 7

Base Calibration on 30-MAR-2017 15:30

Caliper Calibration MML-A 7

Base Calibration on 06-MAR-2017 15:09
Field Calibration on 18-MAR-2017 14:37

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	14079	5.98
2	17378	7.97
3	20596	9.86
4	24537	11.92
5	0	0.00
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
8.02	8.10

Caliper Calibration Tolerances MML-A 7

		7.90	8.10	8.30	
Short Arm Field Cal.	8.02				in

Micro Normal and Micro Inverse Calibration MML-A 7

Base Calibration on 06-MAR-2017 15:18
Field Check on 18-MAR-2017 14:40

Base Calibration

Channel	Measured Resistor 1	Measured Resistor 2	Calibrated (ohm-m) Resistor 1	Calibrated (ohm-m) Resistor 2
Micro Normal	10.3	50.5	5.1	25.6
Micro Inverse	10.0	50.1	3.4	16.9

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Micro Normal	76.7	76.7
Micro Inverse	51.0	51.0

Micro Normal & Micro Inverse Calibration Tolerance MML-A 7

		-5%	10.0	+5%	
Micro Normal Res. 1	10.3				ohm
Micro Inverse Res. 1	10.0				ohm

		-5%	50.0	+5%	
Micro Normal Res. 2	50.5				ohm
Micro Inverse Res. 2	50.1				ohm

		-2%	76.34	+2%	
Micro Normal Base Check	76.7				ohm-m

		-2%	50.97	+2%	
Micro Inverse Base Check	51.0				ohm-m

		-2%	76.7	+2%	
Micro Normal Field Check	76.7				ohm-m

		-2%	51.0	+2%	
Micro Inverse Field Check	51.0				ohm-m

Micro Normal and Micro Inverse Constants MML-A 7

Last Edited on 18-MAR-2017,14:38

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 114

Base Calibration on 07-MAR-2017 19:13
Field Check on 18-MAR-2017 07:31

Base Calibration

	Measured Near	Measured Far	Calibrated (cps) Near	Calibrated (cps) Far
	3042	94	3714	110
Ratio	32.298		33.764	

Field Calibrator at Base

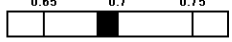
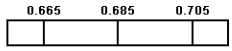
	Calibrated (cps)	
	2149	3135
Ratio	0.685	

Field Check

	Calibrated (cps)	
	2144	3130
Ratio	0.685	

Neutron Calibration Tolerances MDN-A.B 114

		-5%	33	+5%	
Ratio	32.298				

Base Check	0.685	
Field Check	0.685	

Neutron Constants MDN-A.B 114

Last Edited on 18-MAR-2017,14:40

Neutron Source Id	P0204NN	
Neutron Jig Number	NJ5736	
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	

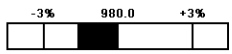
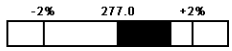
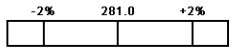
FE Calibration MFE-A.A 135

Base Calibration on 06-MAR-2017 14:24
Field Check on 18-MAR-2017 14:22

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	963.7	126.8
Base Check		281.0
Field Check		280.9

FE Calibration Tolerances MFE-A.A 135

Reference 2	963.7		ohm
Base Check	281.0		ohm-m
Field Check	280.9		ohm-m

FE Constants MFE-A.A 135

Last Edited on 18-MAR-2017,14:21

Running Mode	No Sleeve	
MFE K Factor	0.1268	
Borehole Correction Constants		
Sonde Position	0.5	inches
Hole Size Source	Density Caliper	
Hole Size Constant Value	N/A	inches
Rm Source	Global Value: Constant Temperature	
Temp. for Rm Corr.	N/A	

Sonic Constants MSS-A.A 55

Last Edited on 18-MAR-2017,10:20

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 Sonic	
Correction for Sonde Skew	Applied	
Cycle Stretch Algorithm	Applied	
MN3FT	N/A	micro-sec
MX3FT	N/A	micro-sec
Hunt-Raymer Constant	83.13	micro-sec/ft

Sonde Mode	Compensated
Hole Type	Open Hole

Sonde Parameters

	Measured	Calibrated
Offset	N/A	0.0000
Free Pipe	N/A	N/A

Peak Amplitude Source N/A

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)	N/A
N/A	N/A	N/A	
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	

Full Waveform Parameters

Use 3' Waveform to derive TR	N/A	
Use 4' Waveform to derive TR	N/A	
Use 5' Waveform to derive TR	N/A	
Use 6' Waveform to derive TR	N/A	
3' Waveform Discriminator Level	N/A	mV
4' Waveform Discriminator Level	N/A	mV
5' Waveform Discriminator Level	N/A	mV
6' Waveform Discriminator Level	N/A	mV
Waveform Discriminator Filter	N/A	
Semblance Window Width	N/A	micro-sec
Sonic Despiker	N/A	N/A

Induction Calibration MAI-A.A 111

Base Calibration on 07-MAR-2017 11:32
Field Check on 18-MAR-2017 14:36

Base Calibration

Test Loop Calibration

Channel	Measured Low	Measured High	Calibrated (mmho/m) Low	Calibrated (mmho/m) High
1	17.6	473.6	9.3	966.2
2	6.4	385.9	7.6	821.4
3	3.2	264.0	5.2	566.0
4	2.1	135.5	2.6	279.2

Array Temperature 23.0 Deg F

Test Loop Calibration Verified

Channel	Base Check (mmho/m) Low	Base Check (mmho/m) High	Field Check (mmho/m) Low	Field Check (mmho/m) High
1	12.0	3868.2	16.1	3871.1
2	29.7	3524.8	32.3	3525.1
3	29.0	3018.9	31.1	3018.6
4	19.1	2056.7	20.4	2056.5
Deep	17.6	1960.5	19.1	1960.2
Medium	43.0	3973.6	45.5	3972.7
Shallow	44.3	5227.8	48.0	5228.5
Array Temperature		64.6		91.6 Deg F

Induction Calibration Tolerances MAI-A.A 111

Low Conductivity 1	17.6	13.0 17.0 21.0	mmho/m	High Conductivity 1	473.6	430.0 475.0 520.0 mmho/m
Low Conductivity 2	6.4	4.5 6.0 7.5	mmho/m	High Conductivity 2	385.9	345.0 385.0 425.0 mmho/m
		1.0 3.5 6.0				240.0 260.0 280.0

Low Conductivity 3	3.2	0.0 2.0 4.0	mmho/m	High Conductivity 3	264.0	120.0 135.0 150.0	mmho/m
Low Conductivity 4	2.1	-110.0 -32.5 45.0	mmho/m	High Conductivity 4	135.5	-2.0 0.0 2.0	mmho/m
Background Vx 1	0.0	-35.0 20.0 75.0	mmho/m	Phase Check Loop 1	0.0	-2.0 0.0 2.0	%
Background Vx 2	0.0	-60.0 2.5 65.0	mmho/m	Phase Check Loop 2	0.0	-2.0 0.0 2.0	%
Background Vx 3	0.0	-50.0 -17.5 15.0	mmho/m	Phase Check Loop 3	0.0	-2.0 0.0 2.0	%
Background Vx 4	0.0		mmho/m	Phase Check Loop 4	0.0	-2.0 0.0 2.0	%

Induction Constants MAI-A.A 111

Last Edited on 18-MAR-2017,14:34

Induction Model	RtAP-WBM	
Borehole Correction Constants		
Tool Centred	No	
Hole Size Source	Density Caliper	
Hole Size Constant Value	N/A	inches
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
Rm Source	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		
Channel 1	0.00	mmhos/metre
Channel 2	0.00	mmhos/metre
Channel 3	0.00	mmhos/metre
Channel 4	0.00	mmhos/metre
Symmetrised Receiver Gains		
Receiver 1	1.00	
Receiver 2	1.00	
Receiver 3	1.00	
Receiver 4	1.00	
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	

High Resolution Temperature Calibration MAI-A.A 111

Field Calibration on 09-MAR-2017,23:45

	Measured	Calibrated(Deg F)
Lower	10.00	10.00
Upper	100.00	100.00

High Resolution Temperature Constants MAI-A.A 111

Last Edited on 26-JUN-2014,15:06

Pre-filter Length	11

Caliper Calibration MPD-C.A 216

Base Calibration on 05-MAR-2017 15:58
Field Calibration on 18-MAR-2017 14:33

Base Calibration

Reading No.	Measured	Calibrator Size (in)

Reading No	Measured	Calibrator Size (in)
1	17457	3.99
2	27664	5.98
3	37745	7.97
4	47504	9.86
5	58688	11.92
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
8.06	8.10

Caliper Calibration Tolerances MPD-C.A 216

Short Arm Field Cal. 8.06 in

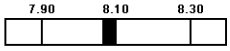


Photo Density Calibration MPD-C.A 216

Base Calibration on 05-MAR-2017 16:29
Field Check on 18-MAR-2017 14:21

Density Calibration

Base Calibration	Measured Near	Measured Far	Calibrated (sdu) Near	Calibrated (sdu) Far
Background	1036	1224		
Reference 1	51866	24752	59556	30836
Reference 2	20639	2335	24941	2541

Field Check at Base

1035.7	1223.7

Field Check

1037.3	1227.7

PE Calibration

Base Calibration	WS	Measured WH	Ratio	Calibrated Ratio
Background	191	930		
Reference 1	21544	51698	0.421	0.371
Reference 2	5964	20523	0.295	0.272

Field Check at Base

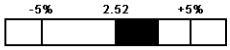
190.5	930.0

Field Check

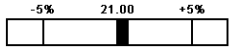
189.8	933.1

Photo Density Calibration Tolerances MPD-C.A 216

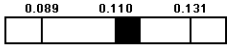
Near Density Ratio 2.59



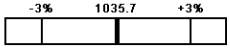
Far Density Ratio 21.17



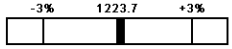
PE Calibration 0.117



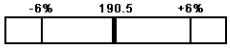
Near Den. Field Check 1037.3



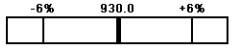
Far Den. Field Check 1227.7



PE WS Field Check 189.8



PE WH Field Check 933.1



Density Constants MPD-C.A 216

Last Edited on 18-MAR-2017,14:21

Density Source Id	P50557B	
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	1.08	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	
Precision Enhanced Density Processing	Not Applied	

Matrix Density (gm/cc)	Depth (ft)

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 16.05.4955\Data\McCoy Thomas & Reed Farms 'A' #1-21\McCoy Thomas & Reed Farms 'A' #1-21_002.dta

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

Compact Comms Gamma
MCG-C 84 LG: 8.70 ft WT: 63.9 lb OD: 2.244 in

Compact Micro-log
MML-A 7 LG: 7.97 ft WT: 81.6 lb OD: 2.244 in

Compact Neutron
MDN-A.B 114 LG: 5.04 ft WT: 50.7 lb OD: 2.244 in

Compact Density/Caliper
MPD-C.A 216 LG: 9.59 ft WT: 90.4 lb OD: 2.449 in

Compact Focussed Electric
MFE-A.A 135 LG: 6.05 ft WT: 48.5 lb OD: 2.244 in

Compact Sonic
MSS-A.A 55 LG: 12.52 ft WT: 72.8 lb OD: 2.244 in

Compact Induction
MAI-A.A 111 LG: 10.81 ft WT: 48.5 lb OD: 2.244 in

Total Length: 63.07 ft Weight: 480.6 lb

55.39 ft	GRGC - MCG Gamma Ray
52.48 ft	CGXT - MCG External Temperature
46.76 ft	MLTC - MML Caliper
45.76 ft	MINV - Micro-inverse
45.76 ft	MNRL - Micro-normal
40.97 ft	NPRL - Limestone Neutron Por.
33.73 ft	AVOL - Annular Volume
33.73 ft	HVOL - Hole Volume
33.73 ft	CLDC - Density Caliper
31.80 ft	DPRL - Limestone Density Por.
31.80 ft	DEN - Compensated Density
31.80 ft	DCOR - Density Correction
31.74 ft	PDPE - PE
26.24 ft	FEFE - Shallow FE
16.96 ft	TR11 - 4' Transit Time
16.46 ft	TR21 - 3' Transit Time
15.95 ft	TR12 - 6' Transit Time
15.46 ft	TR22 - 5' Transit Time
12.96 ft	SPRL - Wyllie Lime. Sonic Por.
12.96 ft	DT35 - 3-5' Compensated Sonic
3.34 ft	R40O - Array Ind. One Res 40
3.34 ft	R60O - Array Ind. One Res 60
3.34 ft	CTAO - Array Ind. One Cond Ct
3.34 ft	RTAO - Array Ind. One Res Rt
0.23 ft	SPCG - Spontaneous Potential
Tool Zero	(0.13ft from bottom)
-0.13 ft	SMTU - DST Uphole Tension

All measurements relative to tool zero.

COMPANY	McCOY PETROLEUM CORPORATION
WELL	THOMAS & REED FARMS 'A' #1-21
FIELD	WILDCAT
PROVINCE/COUNTY	GRAY
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	2739	feet	First Reading	6449.00	feet
Elevation Drill Floor	2737	feet	Depth Driller	6500.00	feet
Elevation Ground Level	2728	feet	Depth Logger	6495.00	feet

Weatherford®

MICRORESISTIVITY LOG