MICRORESISTIVITY LOG

COMPANY	MCCOY PETROLEUM CORPORATION
WELL	YOHN 'A' #1-26
FIELD	ALFORD SOUTH
PROVINCE/COUNTY	KIOWA
COUNTRY/STATE	U.S.A. / KANSAS
LOCATION	330' FNL & 660' FWL

SEC 26	TWP 30S	RGE 19W	Other Services
Latitude			MAI/MFE MPD/MDN
Longitude			
API Number	15-097-21794		

Permanent Datum GL, Elevation 2220 feet
Log Measured From KB
Drilling Measured From KB @ 13 FEET

Elevations:	feet
KB	2233.00
DF	2231.00
GL	2220.00

Date	25-JUN-2014			
Run Number	ONE			
Service Order	7606-90896255			
Depth Driller	5200.00	feet		
Depth Logger	5198.00	feet		
First Reading	5164.63	feet		
Last Reading	3900.00	feet		
Casing Driller	621.00	feet		
Casing Logger	623.00	feet		
Bit Size	7.875	inches		
Hole Fluid Type	CHEMICAL			
Density / Viscosity	9.45 lb/USg	54.00 CP		
PH / Fluid Loss	9.50	12.80 ml/30Min		
Sample Source	MUD PIT			
Rm @ Measured Temp	0.66 @ 75.0	ohm-m		
Rmf @ Measured Temp	0.53 @ 75.0	ohm-m		
Rmc @ Measured Temp	0.79 @ 75.0	ohm-m		
Source Rmf / Rmc	CALC	CALC		
Rm @ BHT	0.45 @113.0	ohm-m		
Time Since Circulation	3 HOURS			
Max Recorded Temp	113.00	deg F		
Equipment / Base	13096	LIB		
Recorded By	BEN WELDIN		DEREK CARTER	
Witnessed By	ZACK WIELE			
JOB #	LB14-190			

BOREHOLE RECORD

Last Edited: 25-JUN-2014 14:08

Bit Size inches	Depth From feet	Depth To feet
12.250	0.00	621.00
7.875	621.00	5200.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	621.00	24.00

REMARKS

- SOFTWARE ISSUE: WLS 13.08.2113
- TOOL STRING: MCG, MML, MDN, MPD, MFE, MAI RUN IN COMBINATION
- HARDWARE:
  - MDN: DUAL BOWSPRING ECCENTRALIZER
  - MFE: 1 X 0.5 INCH STANDOFF
  - MAI: 2 X 0.5 INCH STANDOFF
- 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: 2010 CU. FT.

- ANNULAR HOLE VOLUME WITH 5.5 INCH CASING FROM TD TO 3900 FT.: 220 CU. FT.

- SERVICE ORDER # 7606-90896255

- RIG: STERLING #5

- ENGINEER: DEREK CARTER

- JUNIOR FIELD ENGINEER: BEN WELDIN

- OPERATOR: CARLOS RAMIREZ

- LOST TENSION WHILE RUNNING IN HOLE AT 2160' ON LEDGE. PULLED BACK UP AND WORKED PAST WITH NO OTHER PROBLEMS

5 INCH MAIN

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 25-JUN-2014 17:33

Filename: C:\Minimus 13.08.2113\Log Data\McCoy Yohn 'A' #1-...\McCoy Yohn 'A' #1-26 Main Detail.dta — Recorded on 25-JUN-2014 16:02

System Versions: Logged with 13.08.2113 Plotted with 13.08.2113

Timing Marks
every 60.0 sec

Gamma Ray
API
0 — 75 — 150
150 — 225 — 300

Spontaneous Potential
millivolts
– → | 20 | ← +

MML Caliper
inches
6 — 11 — 16

Bit Size
inches
6 — 11 — 16

DST Uphole Tension

Depth in Feet

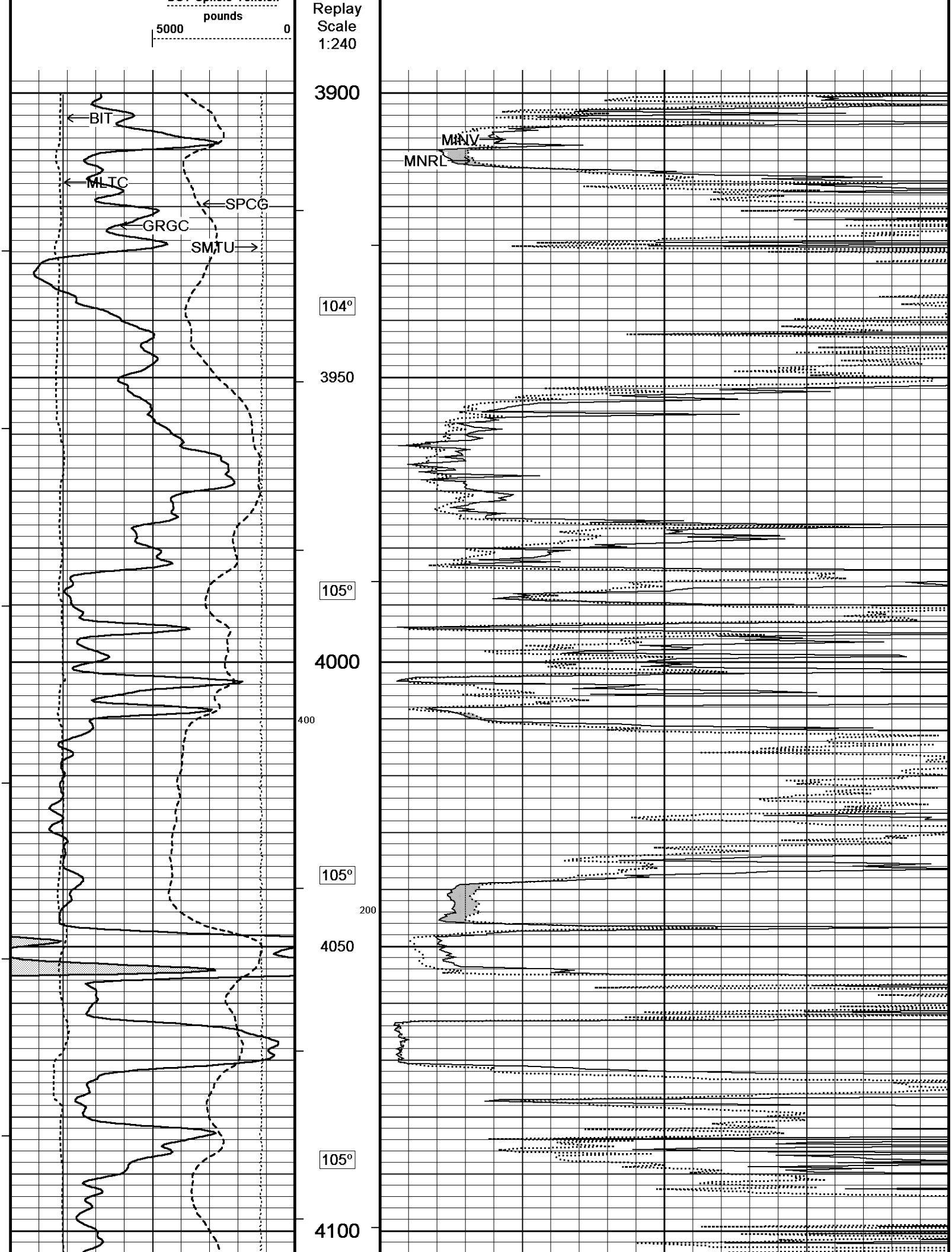
Borehole Temp in deg F

HVI every 10 cu ft

Annular Integral every 10 cu ft

Micro-normal
ohm metres
0 — 10 — 20 — 30 — 40

Micro-inverse
ohm metres
0 — 10 — 20 — 30 — 40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Replay
Scale
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3900
BIT
MLTC
SPCG
GRGC
SMTU
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MNRL
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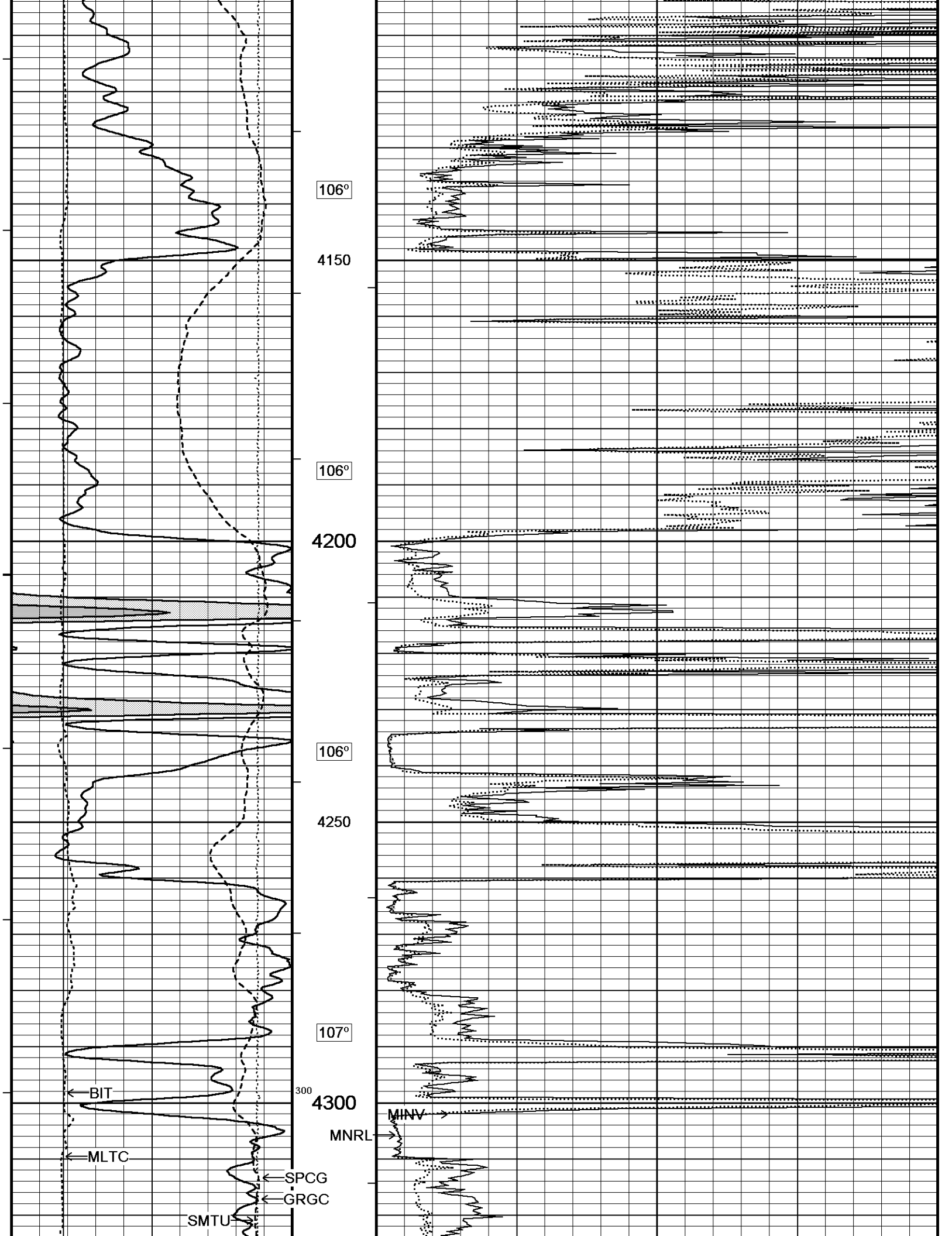
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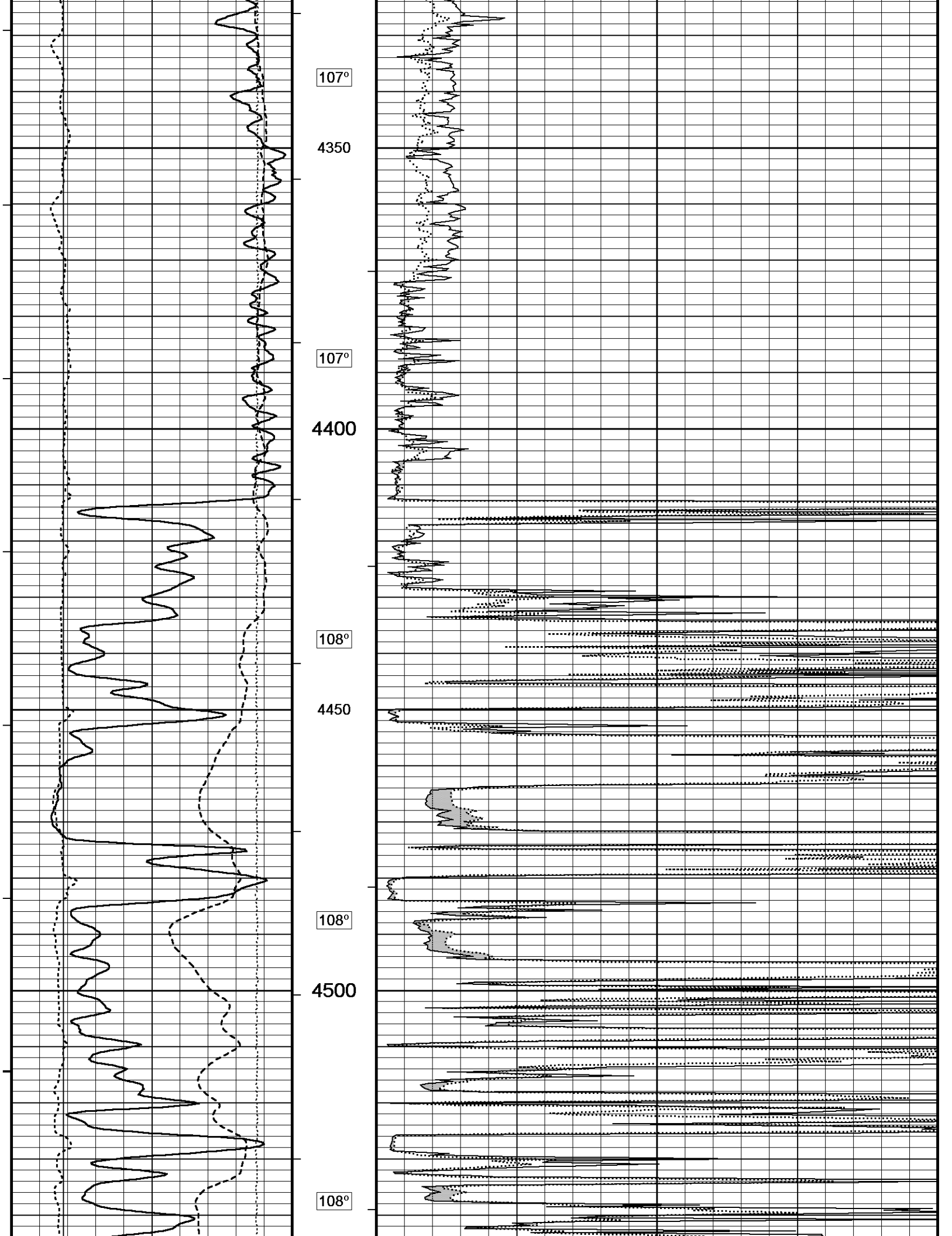
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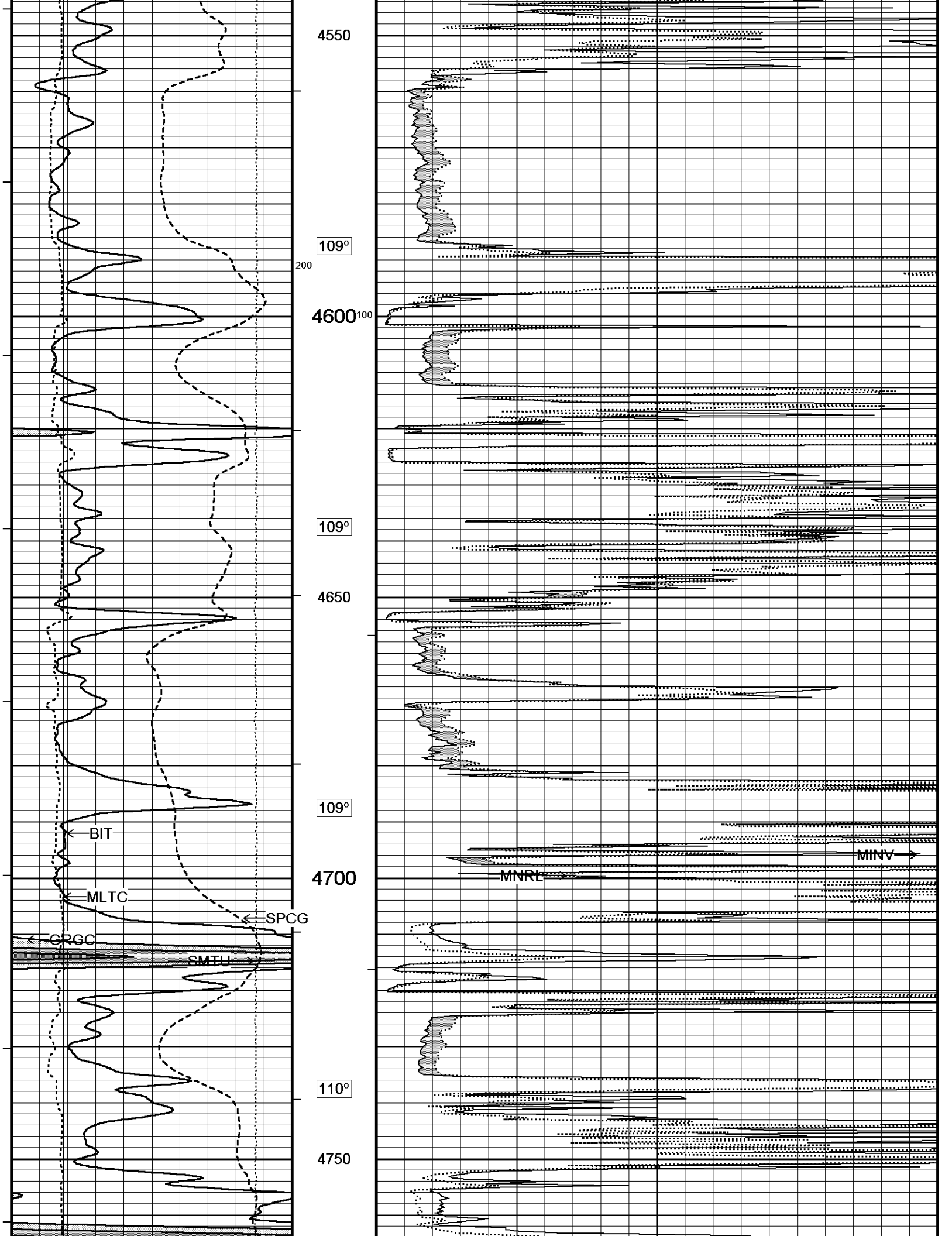
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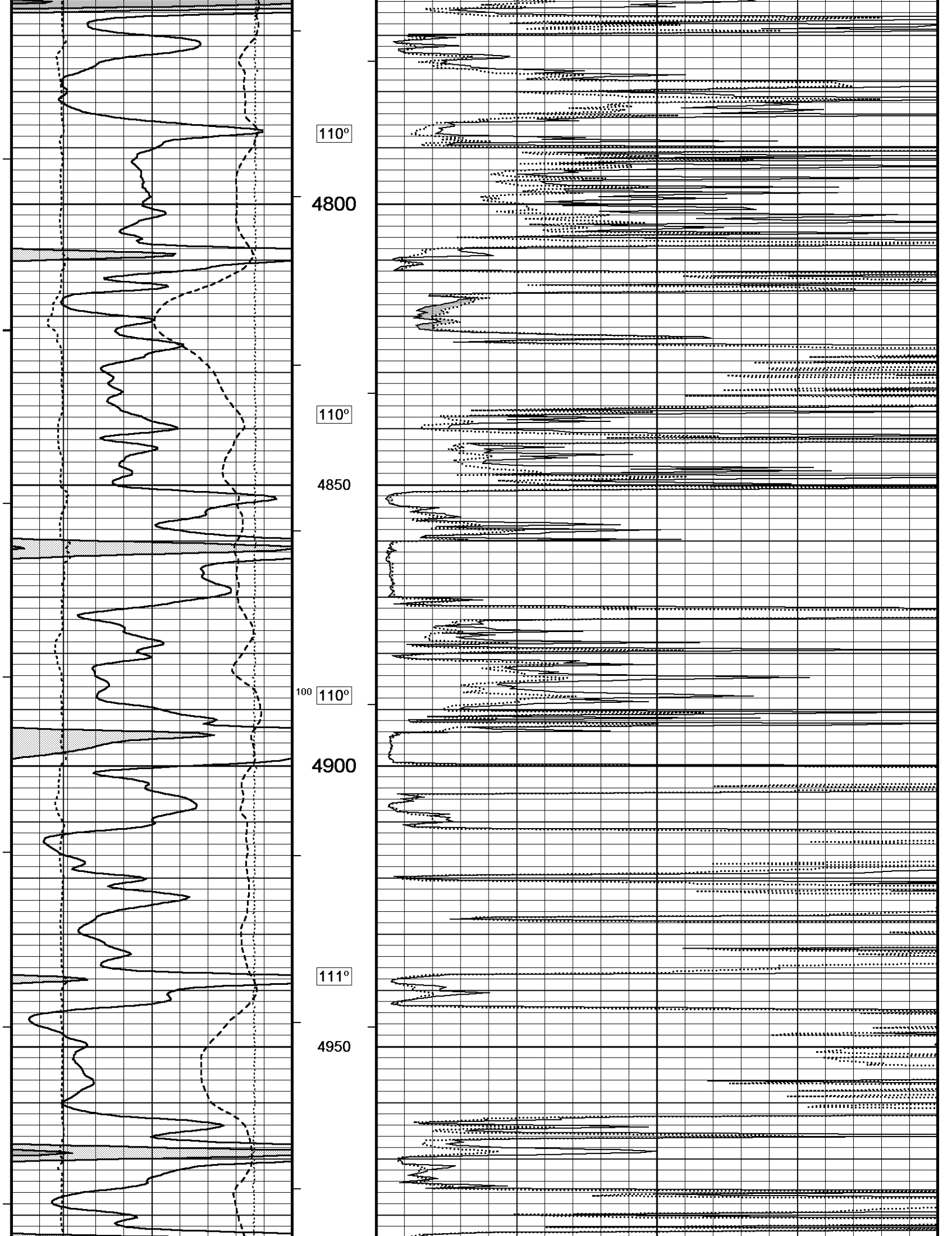
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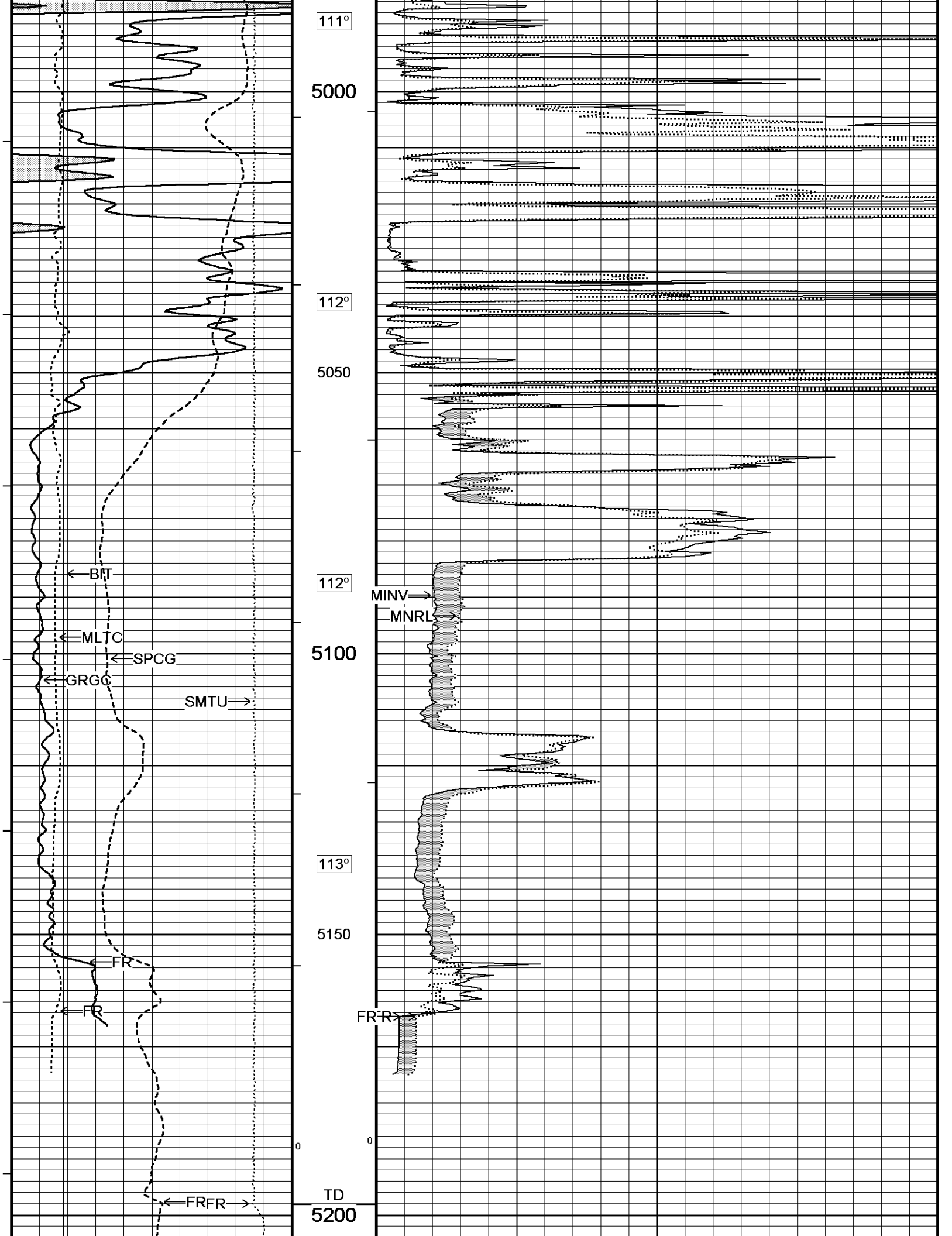
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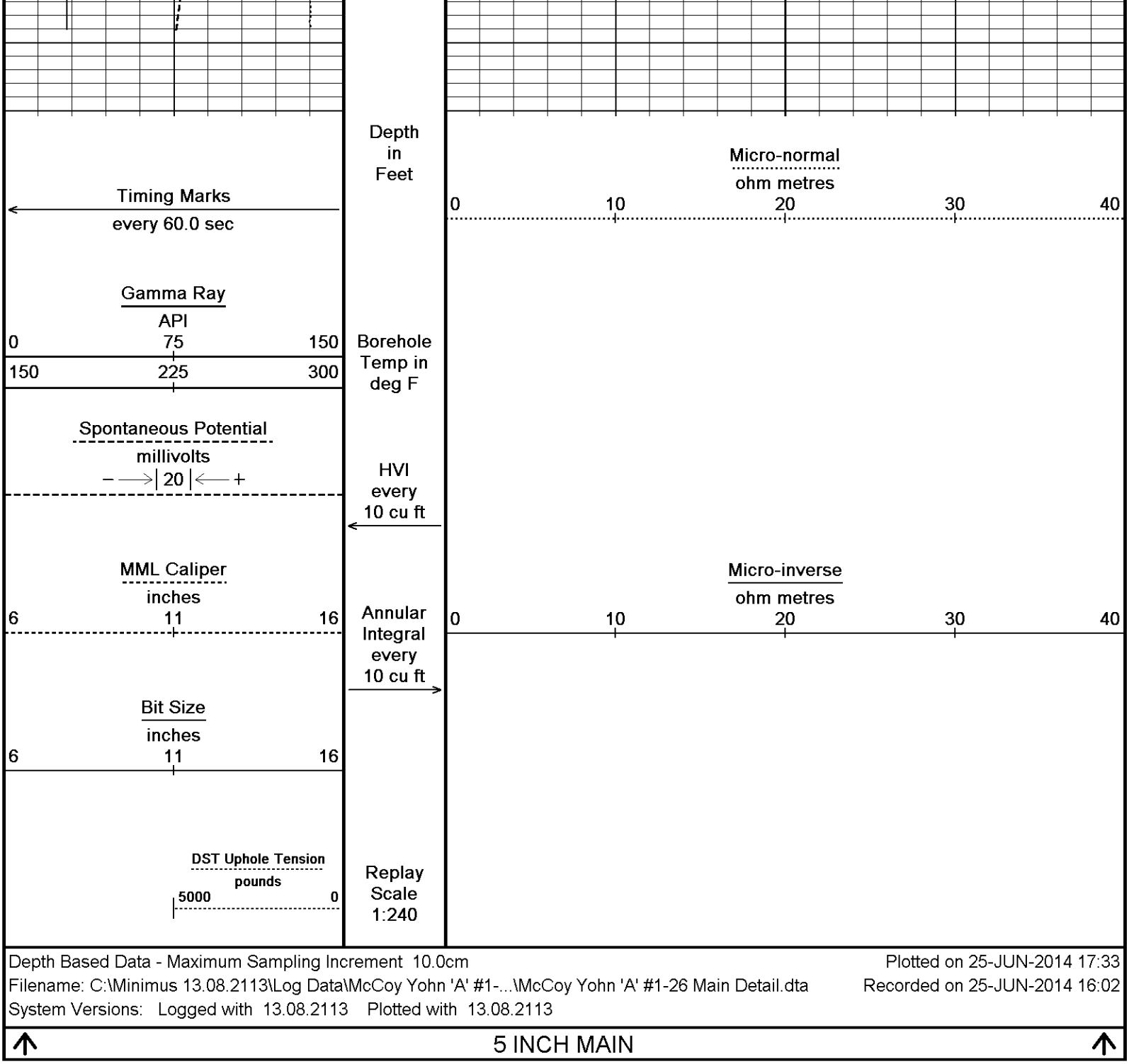
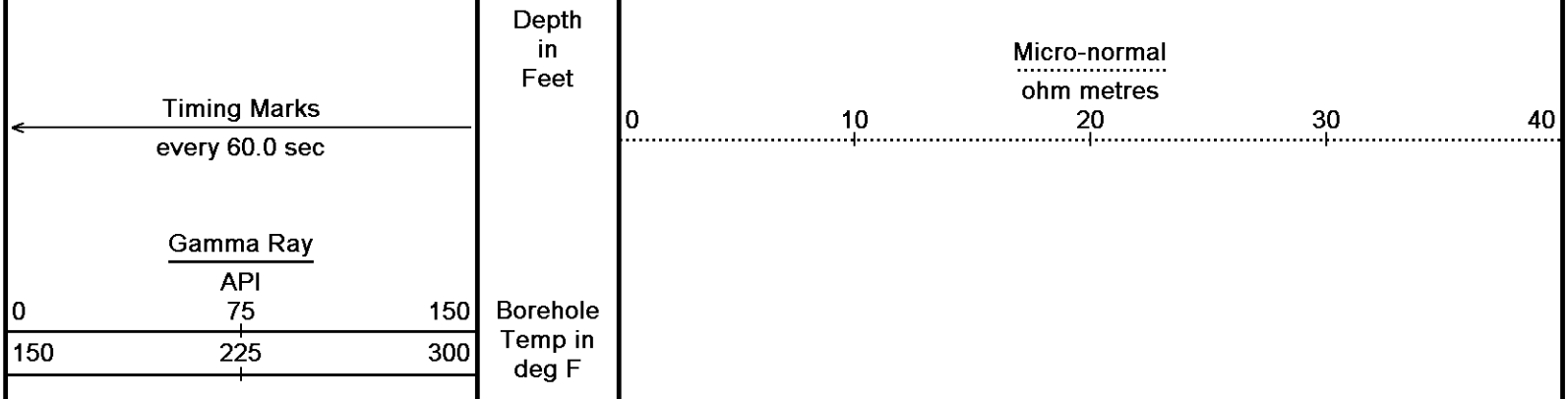


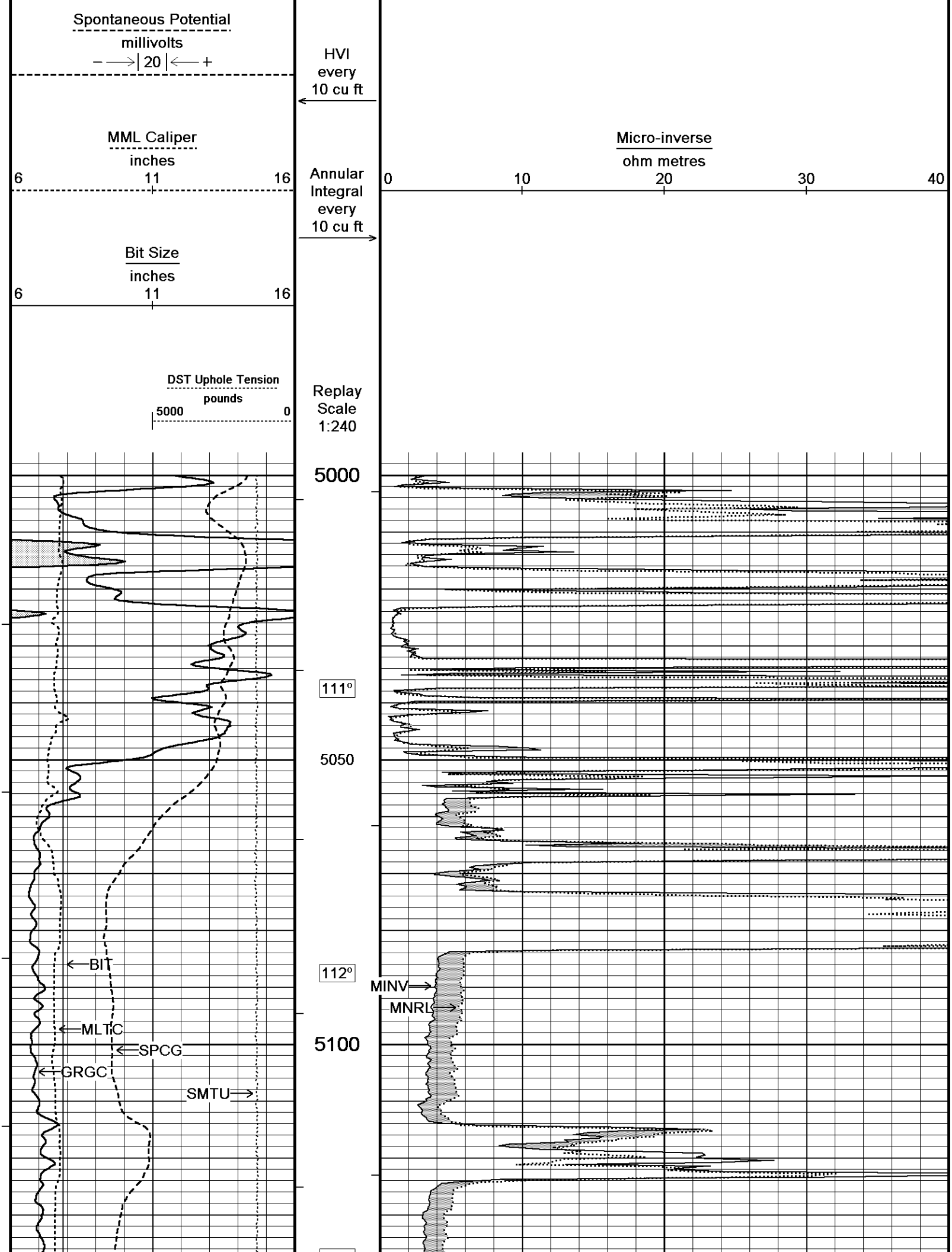
Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 25-JUN-2014 17:33
Filename: C:\Minimus 13.08.2113\Log Data\McCoy Yohn 'A' #1-...\McCoy Yohn 'A' #1-26 Main Detail.dta — Recorded on 25-JUN-2014 16:02
System Versions: Logged with 13.08.2113 Plotted with 13.08.2113

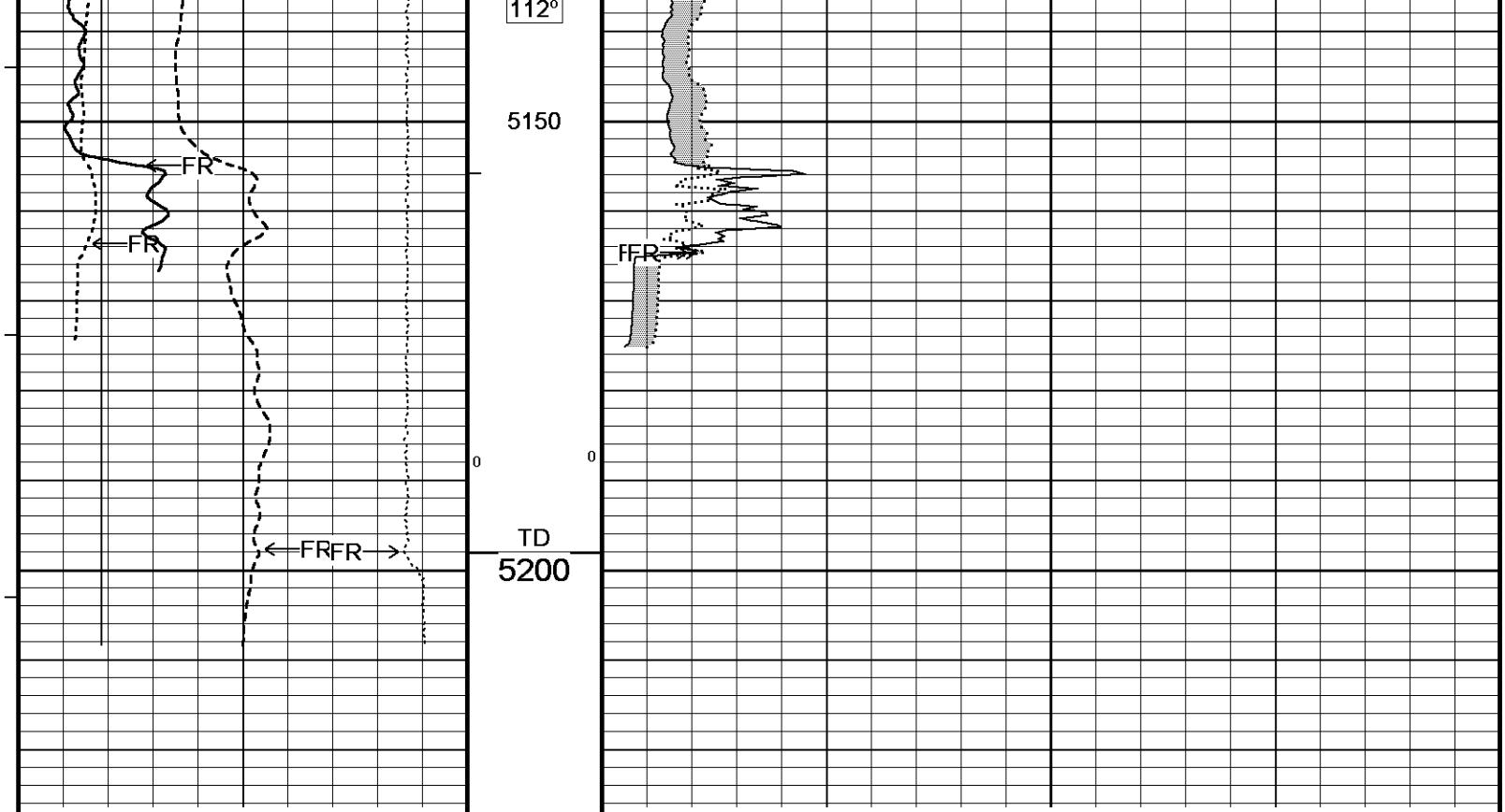
5 INCH MAIN

REPEAT SECTION

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 25-JUN-2014 17:33
Filename: C:\Minimus 13.08.2113\Log Data\McCoy Yohn 'A' #1-26\McCoy Yohn 'A' #1-26 Repeat.dta — Recorded on 25-JUN-2014 14:55
System Versions: Logged with 13.08.2113 Plotted with 13.08.2113




Spontaneous Potential
millivolts
− 20 +
HVI
every
10 cu ft
MML Caliper
inches
6 11 16
Micro-inverse
ohm metres
0 10 20 30 40
Annular
Integral
every
10 cu ft
Bit Size
inches
6 11 16
DST Uphole Tension
pounds
5000 0
Replay
Scale
1:240
5000
111°
5050
112°
5100
BIT
MLTC
SPCG
GRGC
SMTU
MINV
MNRL



Depth in Feet

Timing Marks
every 60.0 sec

Gamma Ray
API
0 75 150
150 225 300

Spontaneous Potential
millivolts
– → | 20 | ← +

MML Caliper
inches
6 11 16

Bit Size
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

Micro-normal
ohm metres
0 10 20 30 40

Micro-inverse
ohm metres
0 10 20 30 40

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\Minimus 13.08.2113\Log Data\McCoy Yohn 'A' #1-26\McCoy Yohn 'A' #1-26 Repeat.dta

Plotted on 25-JUN-2014 17:33
Recorded on 25-JUN-2014 14:55

System Versions: Logged with 13.08.2113 Plotted with 13.08.2113

REPEAT SECTION

BEFORE SURVEY CALIBRATION

C:\Minimus 13.08.2113\Log Data\McCoy Yohn 'A' #1-26\McCoy Yohn 'A' #1-26 Main Detail.dta

General Constants All 000

Last Edited on 25-JUN-2014,13:31

General Parameters

Mud Resistivity	0.660	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	5.500	inches
Caliper for Differential Caliper	None	

Rwa Parameters

Porosity used	Crossplot Porosity	
Resistivity used	Array Ind. One Res Rt	
RWA Constant A	1.000	
RWA Constant M	2.000	
SW/APOR Tool Source	0.000	

Gamma Calibration MCG-D.K 469

Field Calibration on 25-JUN-2014 09:24

	Measured	Calibrated (API)
Background	68	46
Calibrator (Gross)	1139	771
Calibrator (Net)	1071	725

Gamma Constants MCG-D.K 469

Last Edited on 24-JUN-2014,04:24

Gamma Calibrator Number	GRC038	
Mud Density	1.13	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl		kppm
K Mud Type	Chloride	
K Mud Concentration	0.00	%

High Resolution Temperature Calibration MCG-D.K 469

Field Calibration on 12-MAY-2014,02:16

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

High Resolution Temperature Constants MCG-D.K 469

Last Edited on 12-JUN-2014,06:51

Pre-filter Length	11

Caliper Calibration MML-A 3

Base Calibration on 03-JUN-2014 20:27
Field Calibration on 25-JUN-2014 09:03

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	15102	5.98
2	18353	7.97
3	21621	9.86
4	25608	11.92
5	0	0.00
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
8.02	7.97

Micro Normal and Micro Inverse Calibration MML-A 3

Base Calibration on 03-JUN-2014 20:20

Field Check on 25-JUN-2014 09:01

Base Calibration

Channel	Measured Resistor 1	Measured Resistor 2	Calibrated (ohm-m) Resistor 1	Calibrated (ohm-m) Resistor 2
Micro Normal	10.0	50.0	5.1	25.6
Micro Inverse	10.0	49.9	3.4	16.9

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Micro Normal	77.3	77.3
Micro Inverse	51.2	51.2

Micro Normal and Micro Inverse Constants MML-A 3

Last Edited on 25-JUN-2014,13:23

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 MPD-C.A 216

Base Calibration on 18-JUN-2014 10:39
Field Calibration on 25-JUN-2014 09:05

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	16948	3.99
2	27088	5.98
3	37015	7.97
4	46800	9.86
5	58001	11.92
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.92	7.97

DOWNHOLE EQUIPMENT

C:\Minimus 13.08.2113\Log Data\McCoy Yohn 'A' #1-26\McCoy Yohn 'A' #1-26 Main Detail.dta

3/8" Triple Cone Cable Head (MCB C A)
MCB-C.A 5 LG: 1.58 ft WT: 15.4 lb OD: 2.244 in

Compact Comms Gamma
MCG-D.K 469 LG: 8.70 ft WT: 63.9 lb OD: 2.240 in

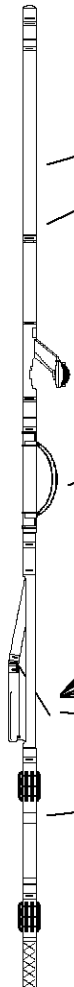
Compact Micro-log
MML-A 3 LG: 7.97 ft WT: 81.6 lb OD: 2.240 in

Compact Neutron
MDN-A.B 66 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

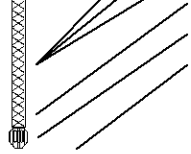
Compact Focussed Electric
MFE-A.A 135 LG: 6.05 ft WT: 48.5 lb OD: 2.244 in

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



42.87 ft	GRGC - Gamma Ray
39.96 ft	CGXT - MCG External Temperature
33.24 ft	MINV - Micro-inverse
33.24 ft	MNRL - Micro-normal
34.24 ft	MLTC - MML Caliper
28.45 ft	NPRL - Limestone Neutron Por.
21.21 ft	CLDC - Density Caliper
21.21 ft	AVOL - Annular Volume
21.21 ft	HVOL - Hole Volume
19.28 ft	DEN - Compensated Density
19.28 ft	DCOR - Density Correction
19.28 ft	DPRL - Limestone Density Por.
19.22 ft	PDPE - PE
13.72 ft	FEFE - Shallow FE
3.34 ft	R40O - Array Ind. One Res 40
3.34 ft	R1AO - Array Ind. One Res R1
3.34 ft	R60O - Array Ind. One Res 60
0.33 ft	SPSC - Spontaneous Potential

Total Length: 49.73 ft Weight: 399.0 lb



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	YOHN 'A' #1-26
FIELD	ALFORD SOUTH
PROVINCE/COUNTY	KIOWA
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	2233.00	feet	First Reading	5164.63	feet
Elevation Drill Floor	2231.00	feet	Depth Driller	5200.00	feet
Elevation Ground Level	2220.00	feet	Depth Logger	5198.00	feet

Weatherford®

MICRORESISTIVITY LOG