SHORE-BASED LOG PROCESSING
HOLE 1044A

Bottom felt: 4983.5 mbrf (used for depth shift to seafloor)
Penetration: 684.5 mbsf

Logging Tools

The logs were recorded using the logging-while-drilling (LWD) technique, which allows for open-hole logging during drilling operations. The advantages of this technique are many: real-time analysis can accelerate drilling speed, avoid stuck pipe, and reduce borehole problems. LWD can also collect data open-hole in the uppermost part of the hole; this cannot be accomplished with wireline tools because the drill string is usually kept in the upper part of the borehole where hole conditions are generally bad.

The LWD employs the following tool combinations:
CDR = compensated dual resistivity (resistivity-gamma ray)
CDN = compensated density-neutron (density-porosity-caliper)

Processing

Depth shift: All original logs have been depth shifted to the seafloor (–4983.5 m).

Gamma-ray processing: Data were processed in real-time by onboard Schlumberger personnel. Gamma-ray data were measured as natural gamma ray (GR) and spectral gamma ray (NGT); for Leg 171A, only the former was corrected for hole size (bit size), collar size, and type of drilling fluid. Because of a bug in the acquisition software, the NGT total and computed gamma ray (SGR and CGR) could not be environmentally corrected and converted to API units. For this reason, they are not included in the database.

Neutron porosity data processing: The neutron porosity measurements have been corrected for standoff, temperature, mud salinity, and mud hydrogen index (mud pressure, temperature, and weight).

Density data processing: Density data have been processed to correct for the irregular borehole using a technique called "rotational processing," which is particularly useful in deviated or enlarged boreholes with irregular or elliptical shapes. This statistical method measures the density variation while the tool rotates in the borehole, estimates the standoff (distance between the tool and the borehole wall), and corrects the density reading (a more detailed description of this technique is available upon request).

Resistivity data processing: A deconvolution technique called "qualitative resistivity overlay," aimed at providing enhanced vertical resolutions, is used for both shallow and deep resistivity measurements to compute output with 1-2-3-4-5-ft vertical resolution (documentation on this technique is also available upon request). The outputs are sampled at a 0.0762-m (3-in) sampling rate and are included in the database, along with the standard 0.1524-m (0.5-ft) channels.

Quality Control

During the processing, quality control of the data is mainly performed by cross-correlation of all logging data. The best data are acquired in a circular borehole; this is particularly true for the density tool, which uses clamp-on stabilizers to eliminate mud standoff and to ensure proper contact with the borehole wall. A data quality indicator is given by the differential caliper (DCAL) channel, which measures the tool standoff during recording. Another quality indicator is represented by the density correction (DRHO).

Note: Additional information about the logs can be found in the "Explanatory Notes" and "Site 1044" chapters (this volume). For further information about the logs, please contact:

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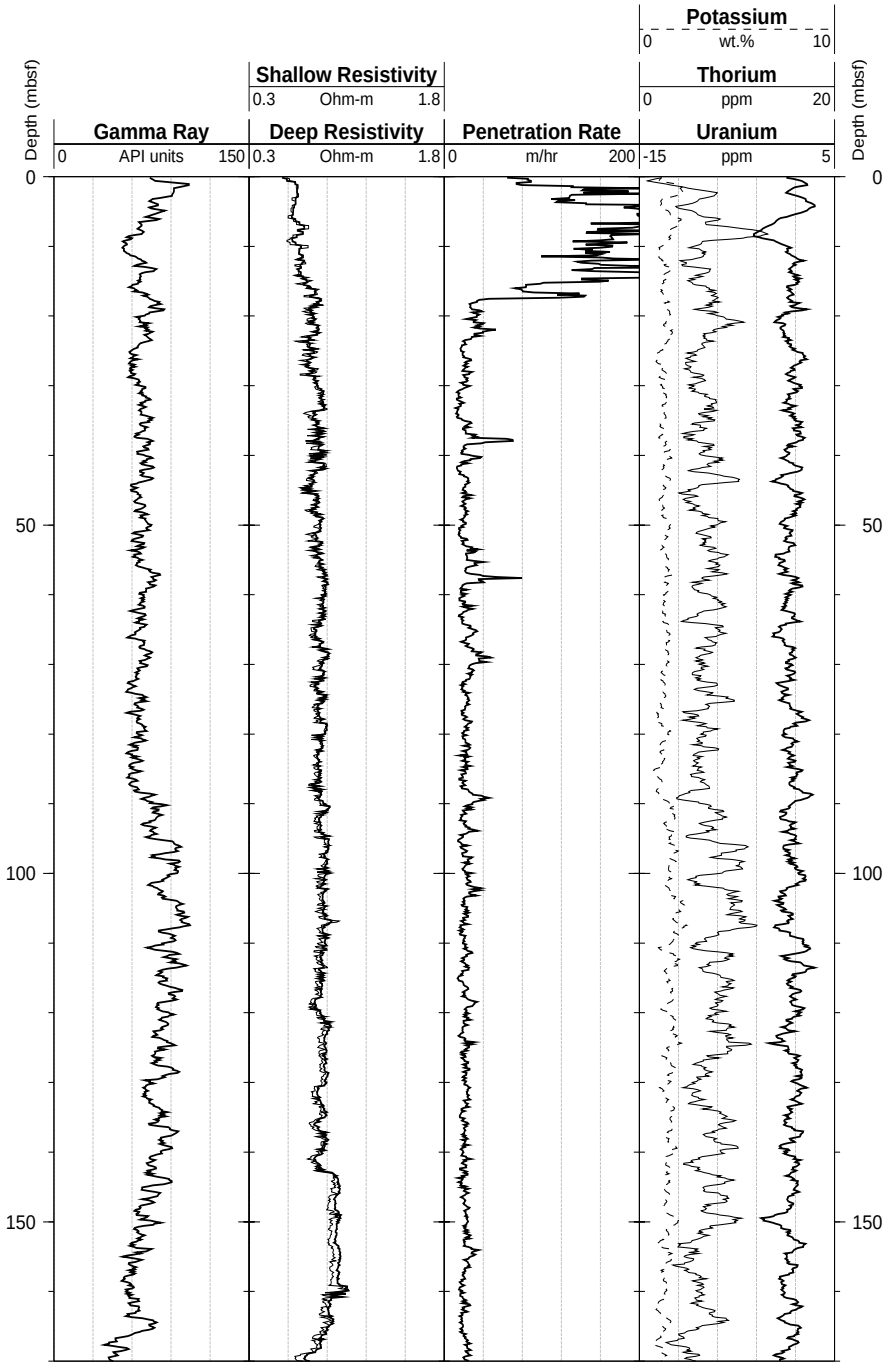
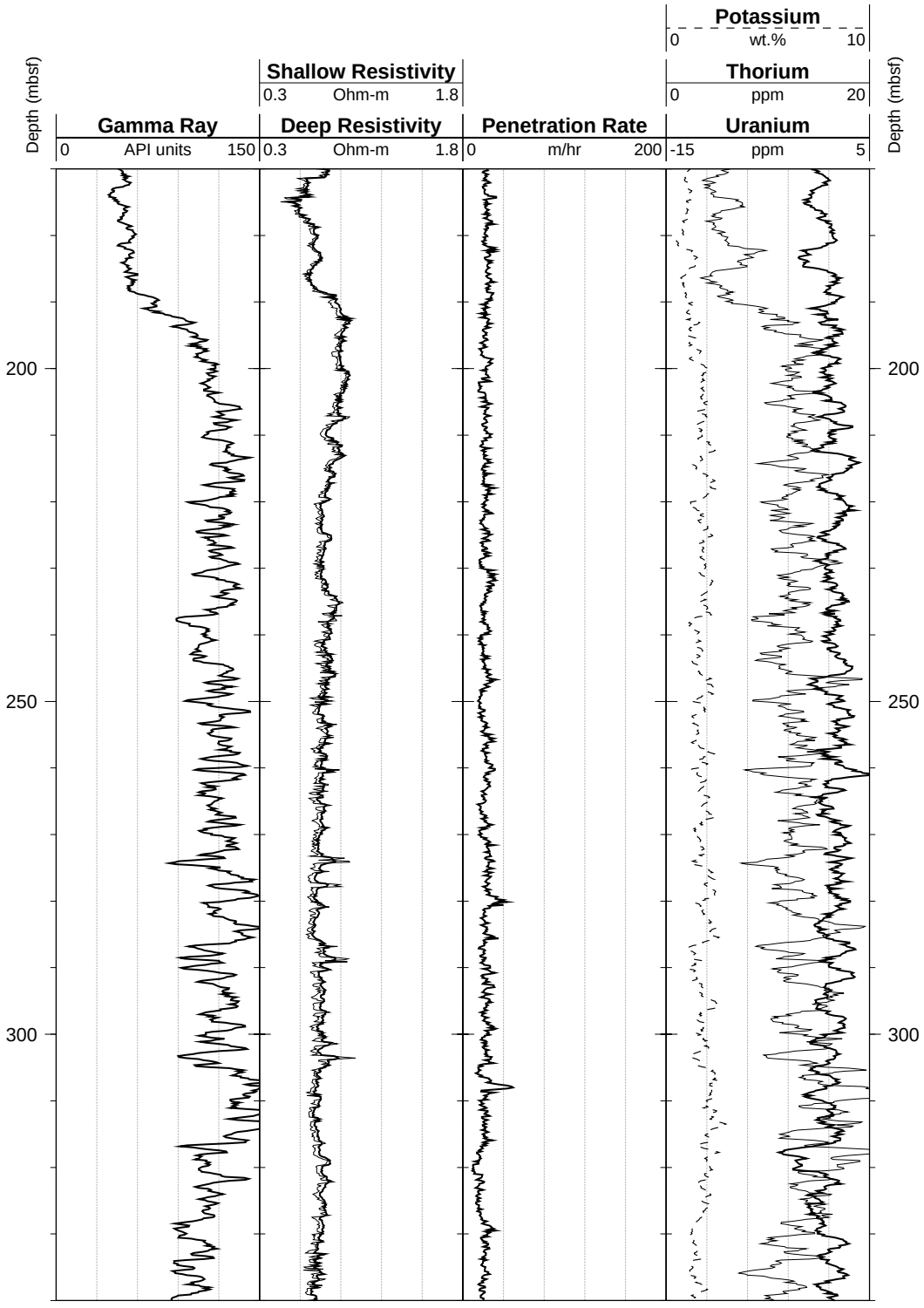
Phone: 914-365-8343
Fax: 914-365-3182
E-mail: chris@ldeo.columbia.edu

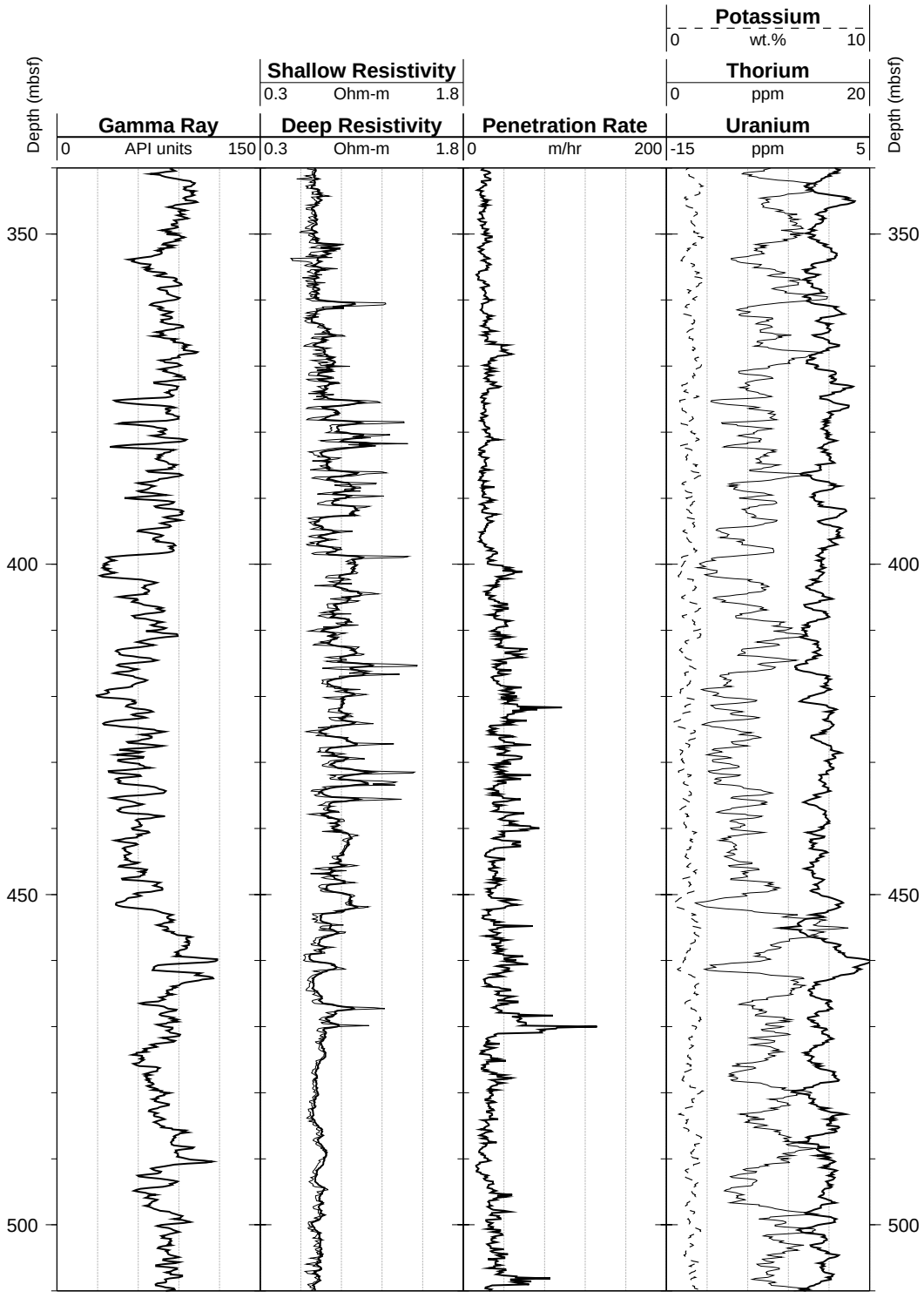
Hole 1044A: LWD Natural Gamma Ray-Resistivity Logging Data



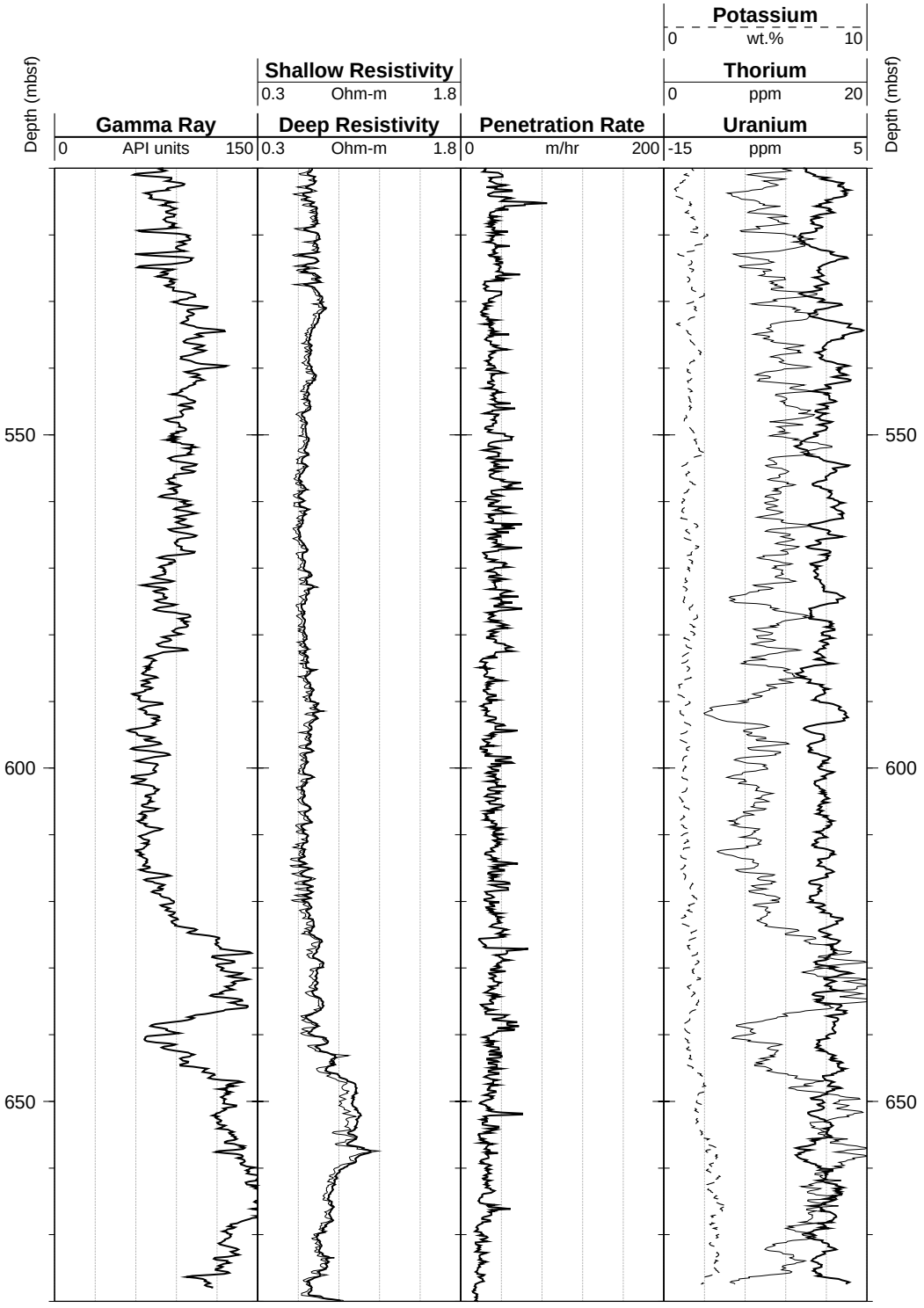
Hole 1044A: LWD Natural Gamma Ray-Resistivity Logging Data (cont.)



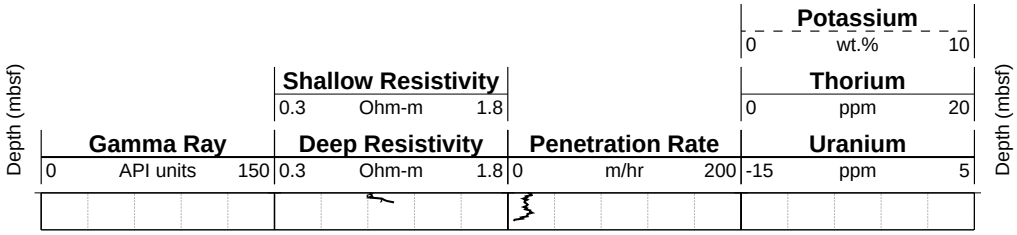
Hole 1044A: LWD Natural Gamma Ray-Resistivity Logging Data (cont.)



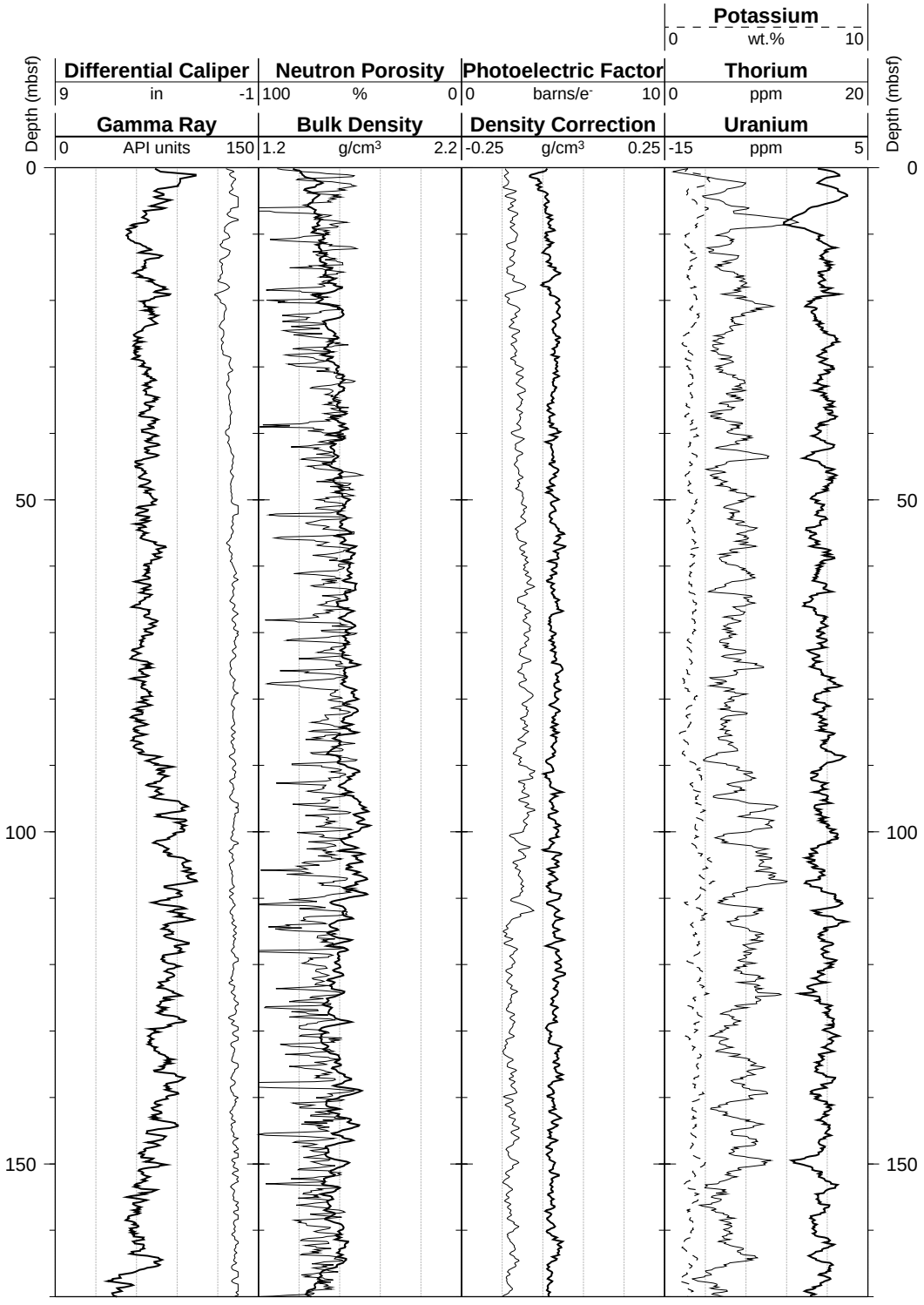
Hole 1044A: LWD Natural Gamma Ray-Resistivity Logging Data (cont.)



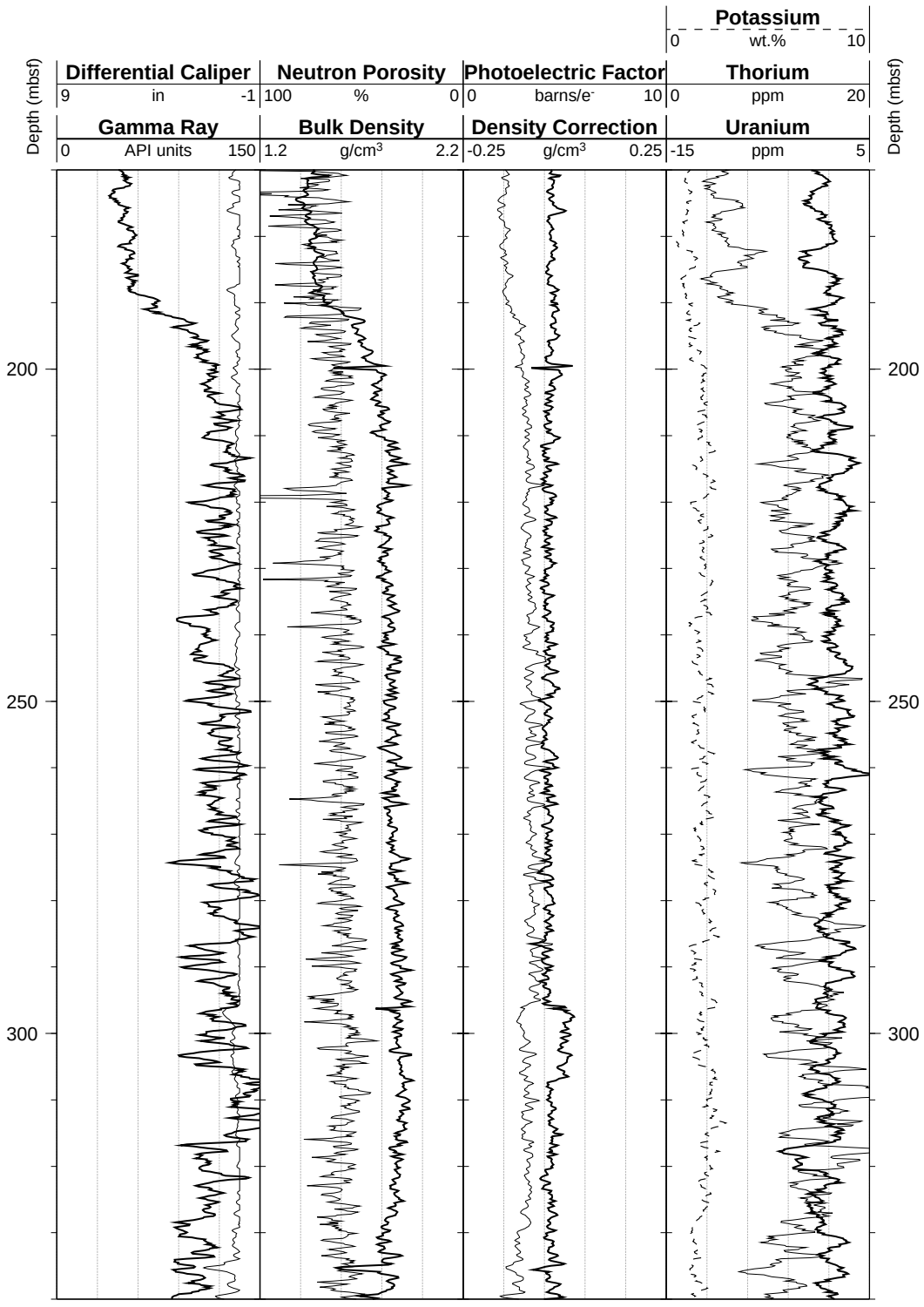
Hole 1044A: LWD Natural Gamma Ray-Resistivity Logging Data (cont.)



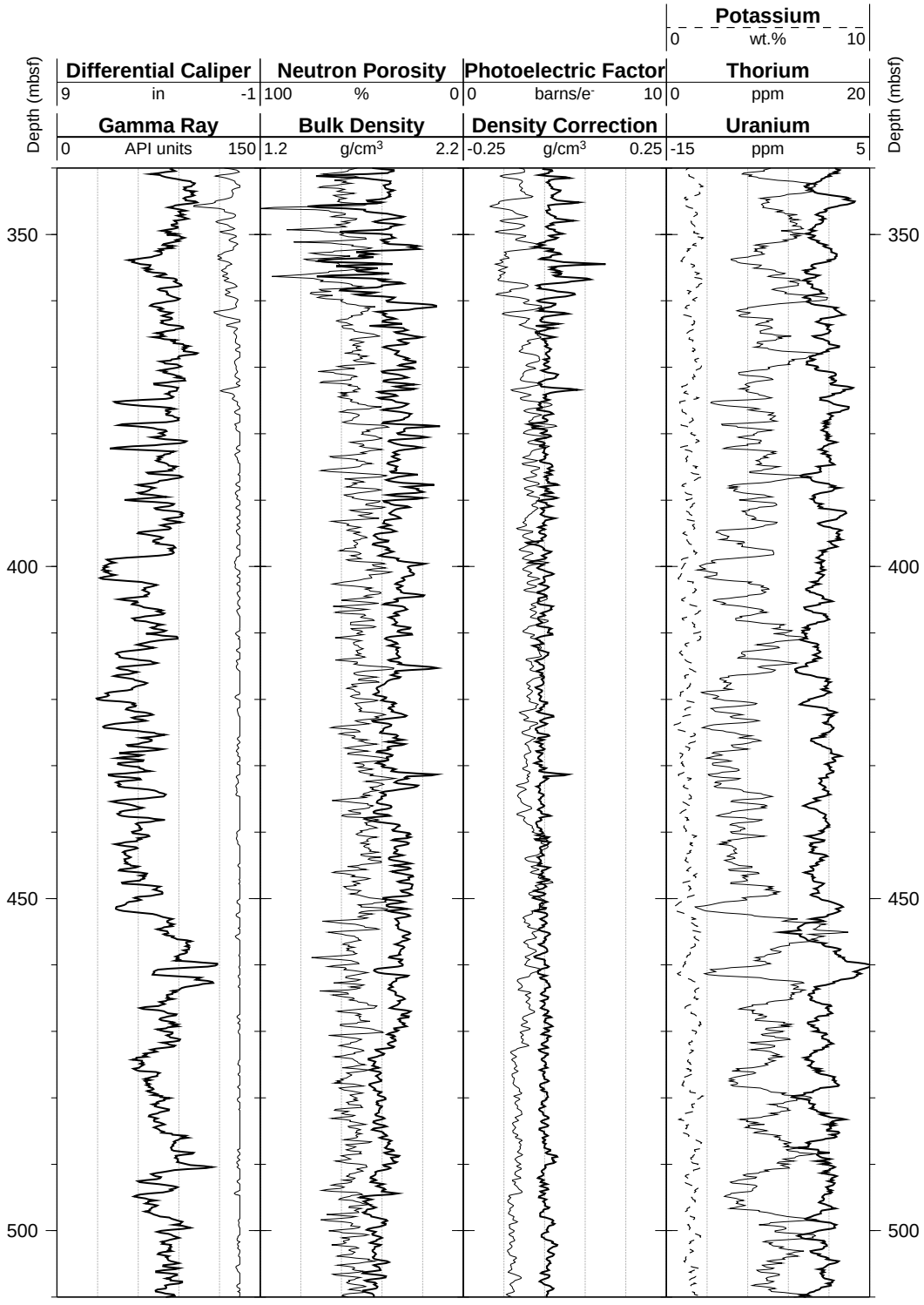
Hole 1044A: LWD Natural Gamma Ray-Density-Porosity Logging Data



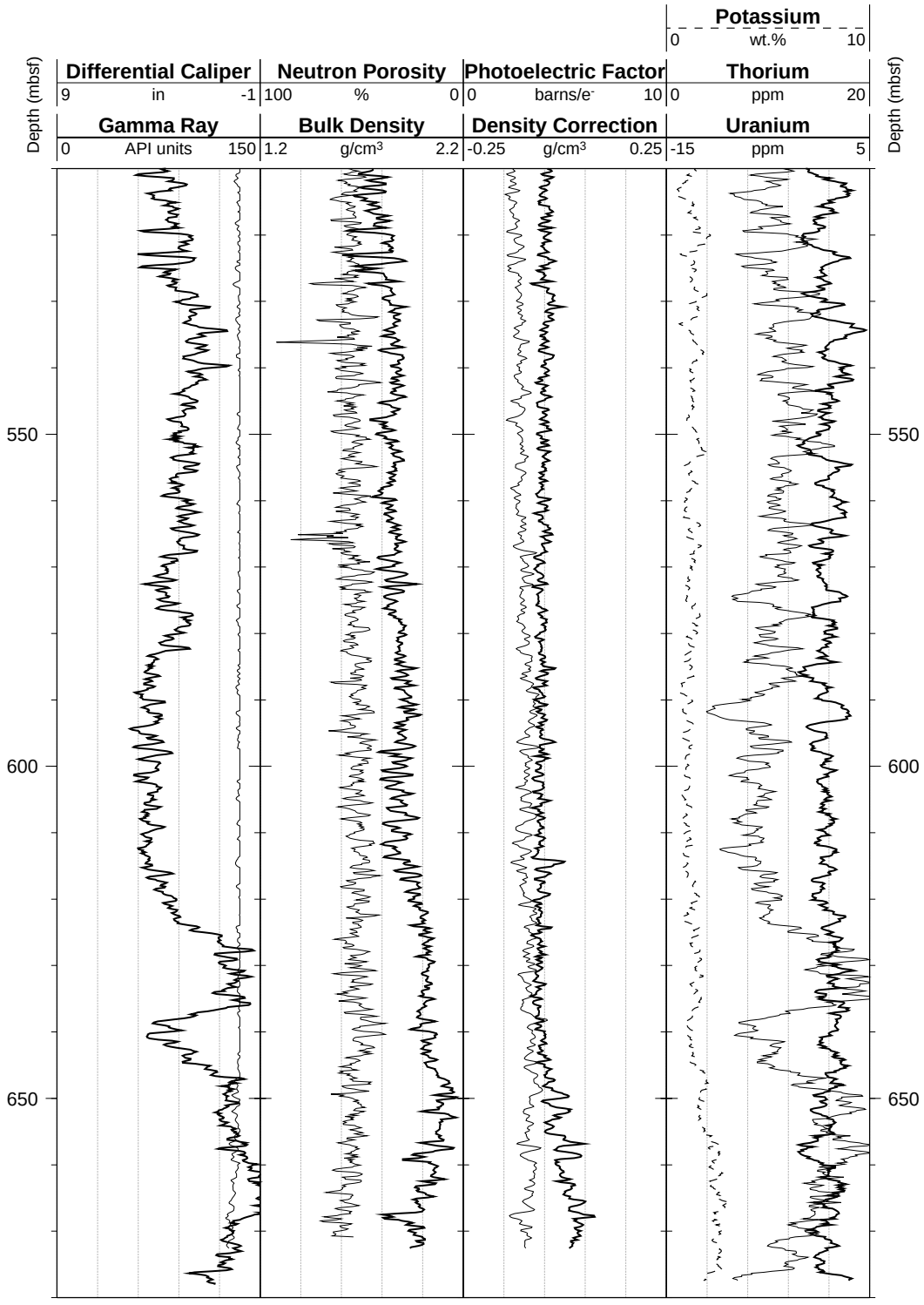
Hole 1044A: LWD Natural Gamma Ray-Density-Porosity Logging Data (cont.)



Hole 1044A: LWD Natural Gamma Ray-Density-Porosity Logging Data (cont.)



Hole 1044A: LWD Natural Gamma Ray-Density-Porosity Logging Data (cont.)



SHORE-BASED LOG PROCESSING
HOLE 1045A

Bottom felt: 4982 mbrf (used for depth shift to seafloor)
Penetration: 486 mbsf

Logging Tools

The logs were recorded using the logging-while-drilling (LWD) technique, which allows for open-hole logging during drilling operations. The advantages of this technique are many: real-time analysis can accelerate drilling speed, avoid stuck pipe, and reduce borehole problems. LWD can also collect data open-hole in the uppermost part of the hole; this cannot be accomplished with wireline tools because the drill string is usually kept in the upper part of the borehole where hole conditions are generally bad.

The LWD employs the following tool combinations:

CDR = compensated dual resistivity (resistivity-gamma ray)
CDN = compensated density-neutron (density-porosity-caliper)

Processing

Depth shift: All original logs have been depth shifted to the seafloor (–4982 m).

Gamma-ray processing: Data were processed in real-time by onboard Schlumberger personnel. Gamma-ray data were measured as natural gamma ray (GR) and spectral gamma ray (NGT); for Leg 171A, only the former has been corrected for hole size (bit size), collar size, and type of drilling fluid. Because of a defect in the acquisition software, the NGT total and computed gamma ray (SGR and CGR) could not be environmentally corrected and converted to API units. For this reason, they are not included in the database.

Neutron porosity data processing: The neutron porosity measurements have been corrected for standoff, temperature, mud salinity, and mud hydrogen index (mud pressure, temperature, and weight).

Density data processing: Density data have been processed to correct for the irregular borehole using a technique called "rotational processing," which is particularly useful in deviated or enlarged boreholes with irregular or elliptical shapes. This statistical method measures the density variation while the tool rotates in the borehole, estimates the standoff (distance between the tool and the borehole wall), and corrects the density reading (a more detailed description of this technique is available upon request).

Resistivity data processing: A deconvolution technique called "qualitative resistivity overlay," aimed at providing enhanced vertical resolutions, is used for both shallow and deep resistivity measurements to compute output with 1-2-3-4-5-ft vertical resolution (documentation on this technique is also available upon request). The outputs are sampled at a 0.0762-m (3-in) sampling rate and are included in the database, along with the standard 0.1524-m (0.5-ft) channels.

Quality Control

During the processing, quality control of the data is mainly performed by cross-correlation of all logging data. The best data are acquired in a circular borehole; this is particularly true for the density tool, which uses clamp-on stabilizers to eliminate mud standoff and to ensure proper contact with the borehole wall. A data quality indicator is given by the differential caliper (DCAL) channel, which measures the tool standoff during the recording. Another quality indicator is represented by the density correction (DRHO).

Note: Additional information about the logs can be found in the "Explanatory Notes" and "Site 1045" chapters (this volume). For further information about the logs, please contact:

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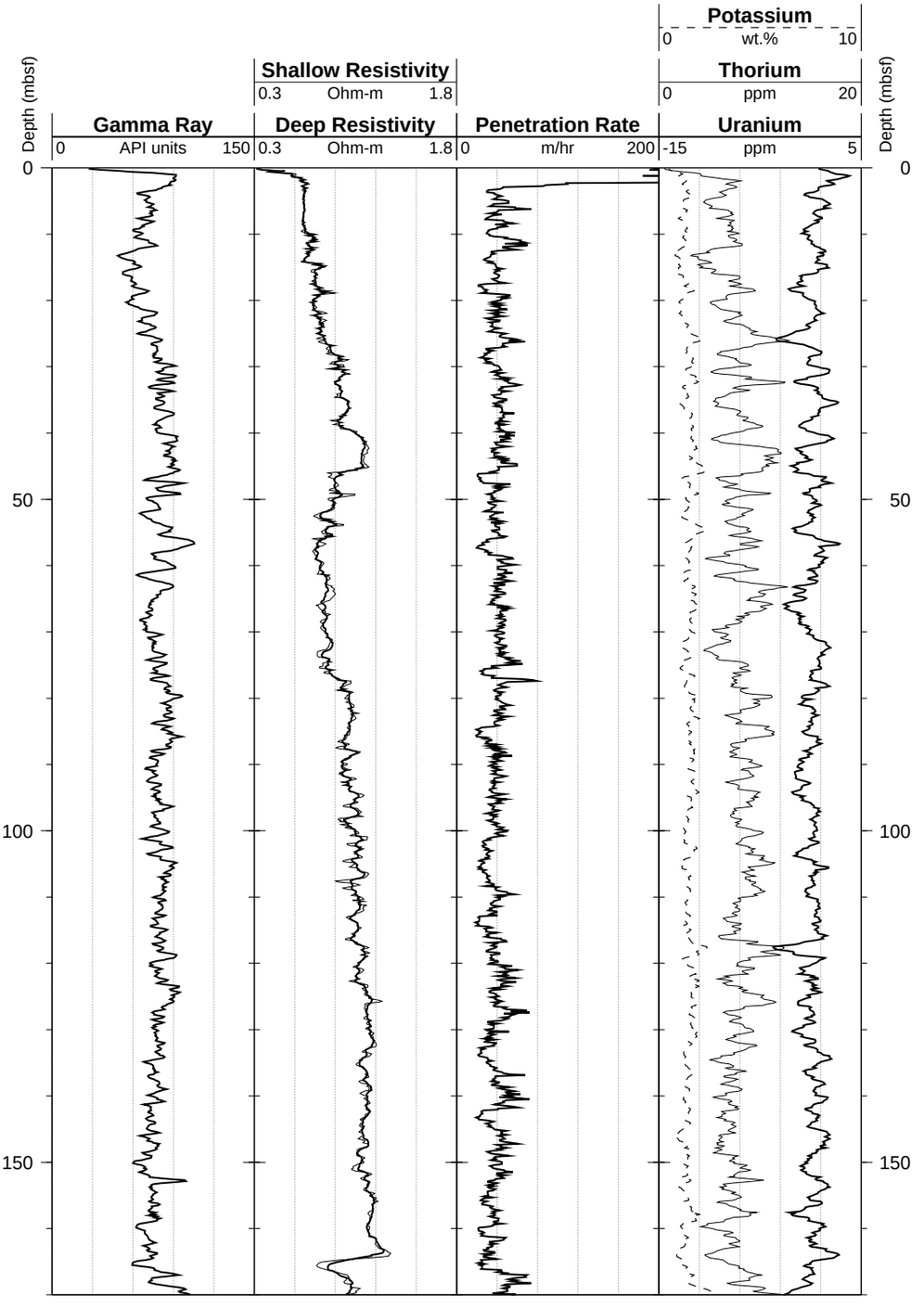
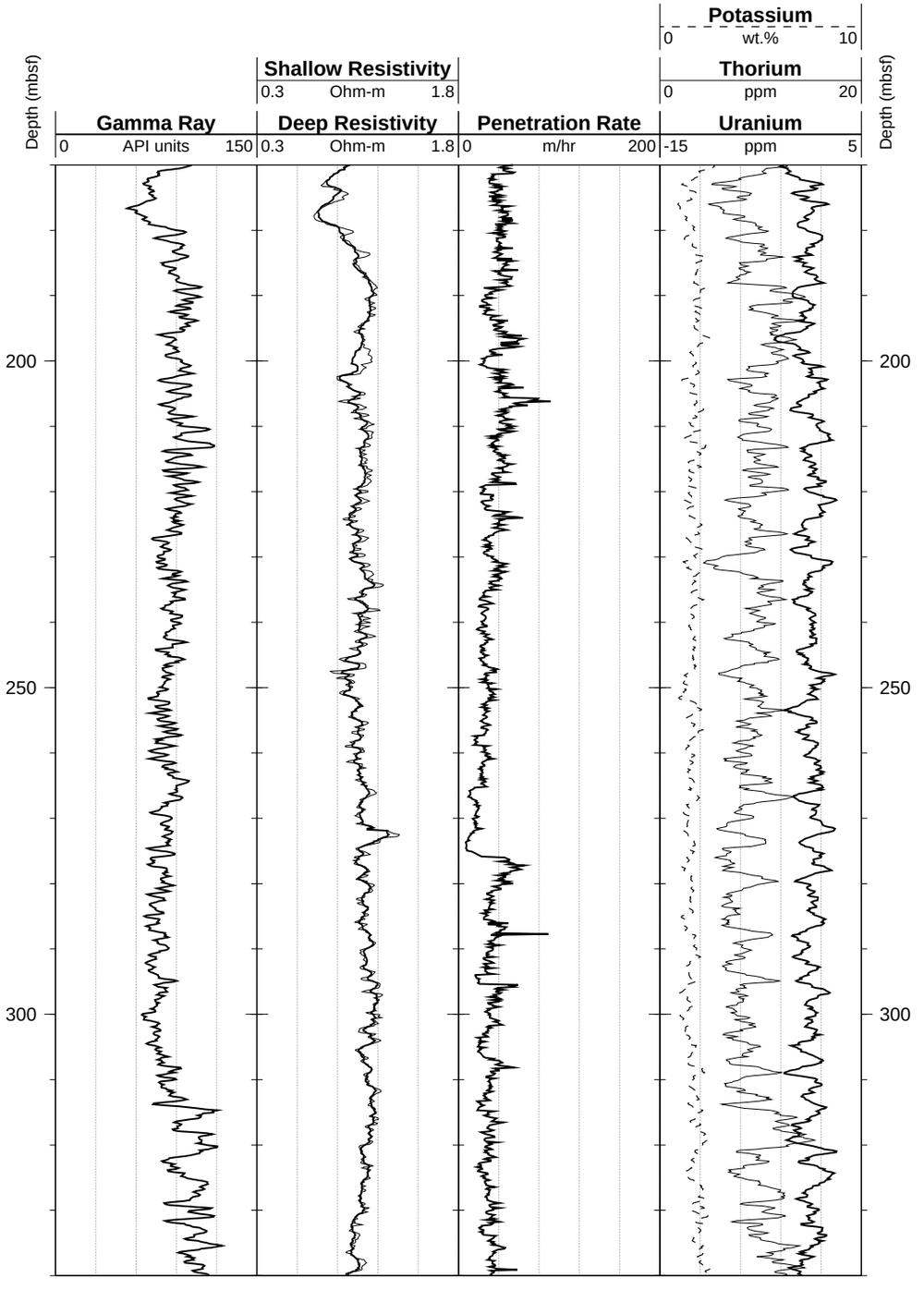
Phone: 914-365-8343
Fax: 914-365-3182
E-mail: chris@ldeo.columbia.edu

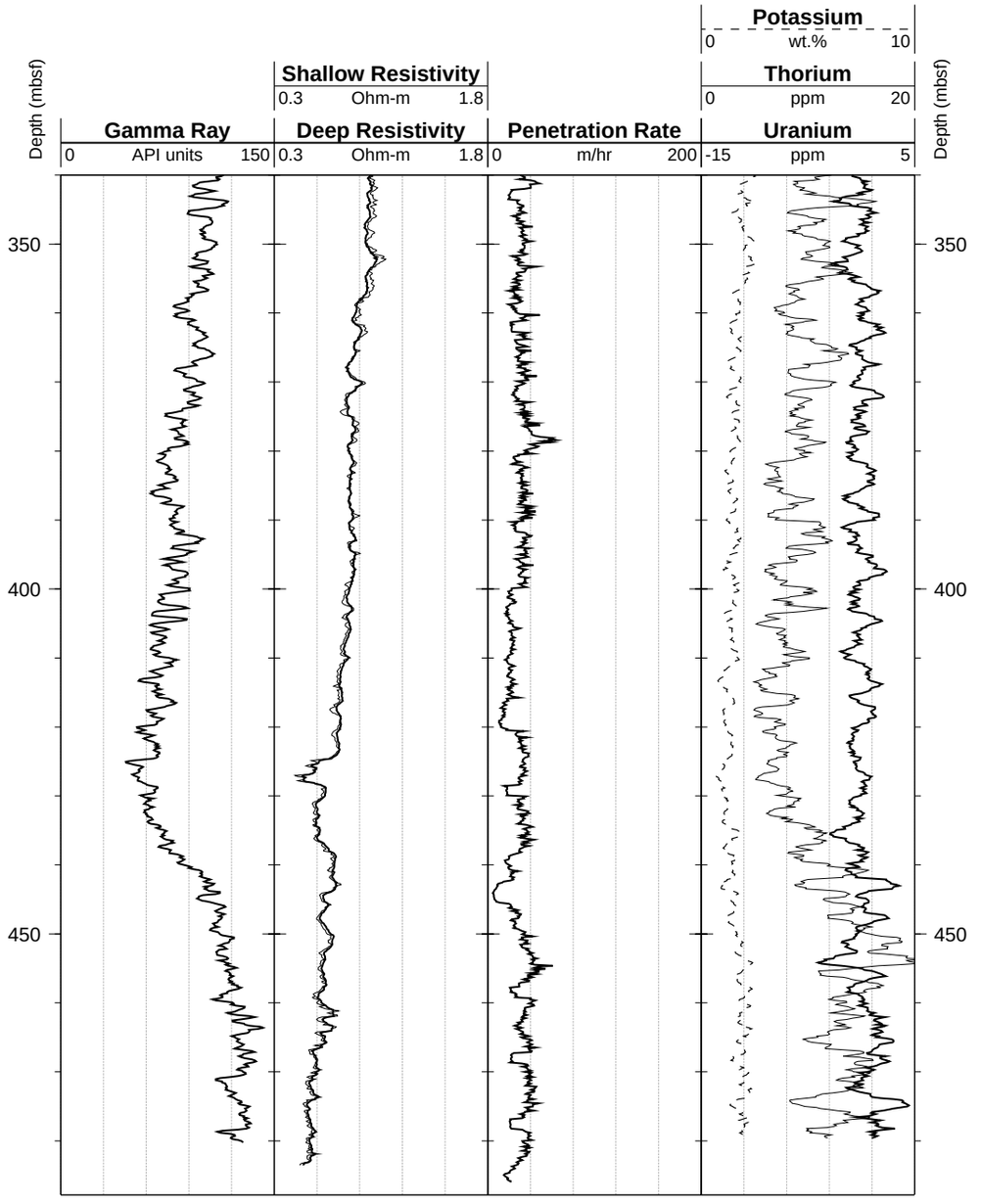
Hole 1045A: LWD Natural Gamma Ray-Resistivity Logging Data



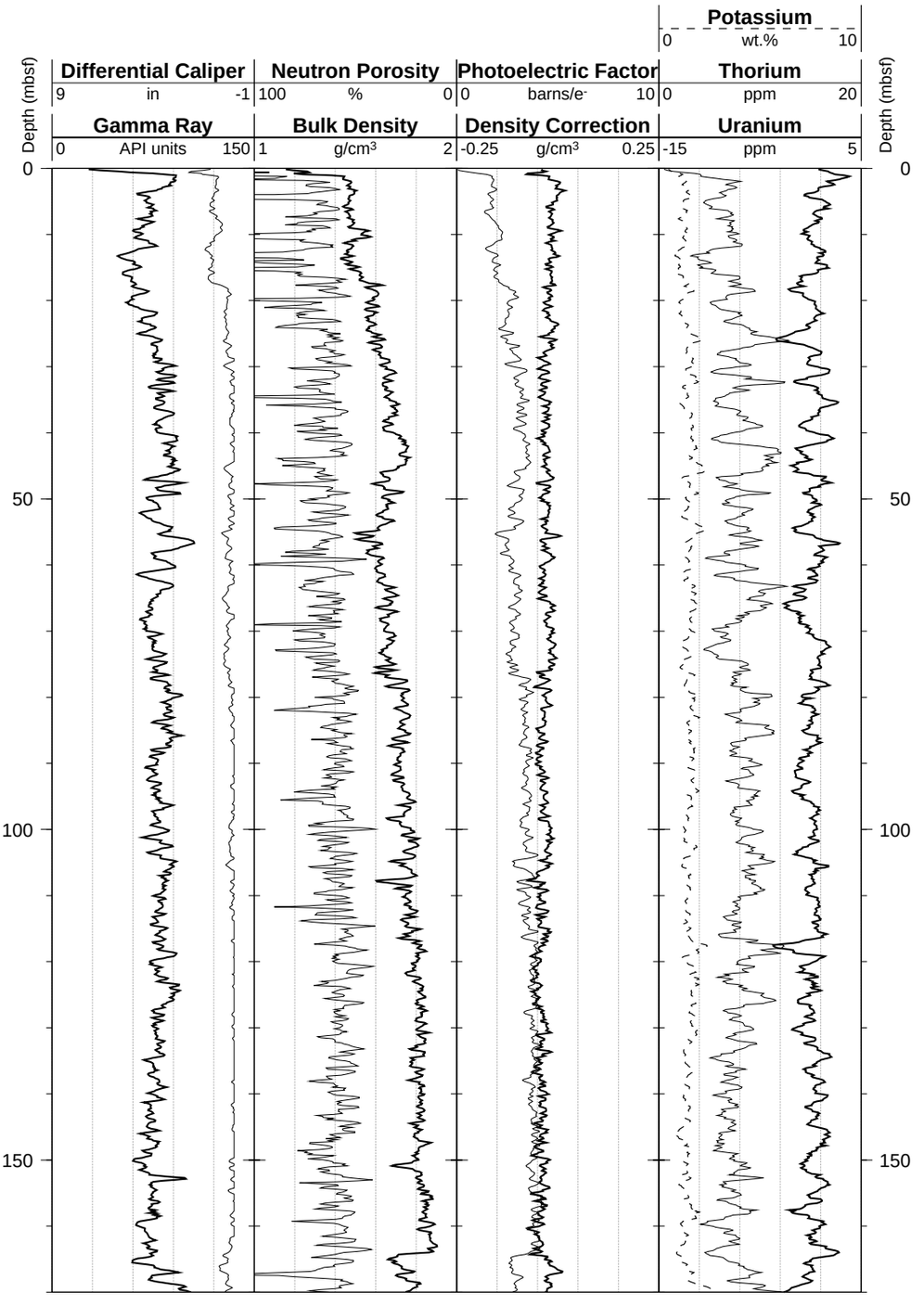
Hole 1045A: LWD Natural Gamma Ray-Resistivity Logging Data (cont.)



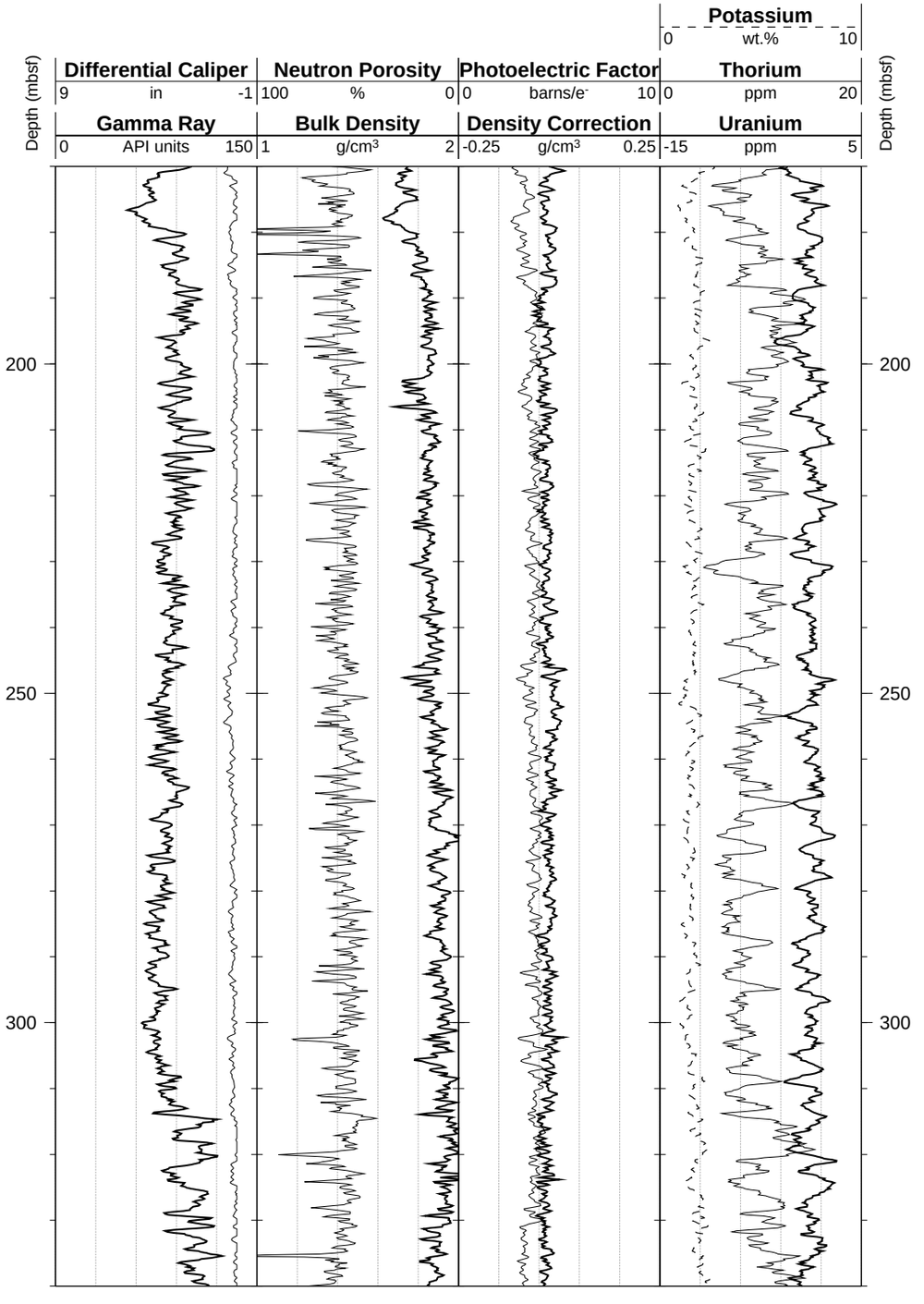
Hole 1045A: LWD Natural Gamma Ray-Resistivity Logging Data (cont.)



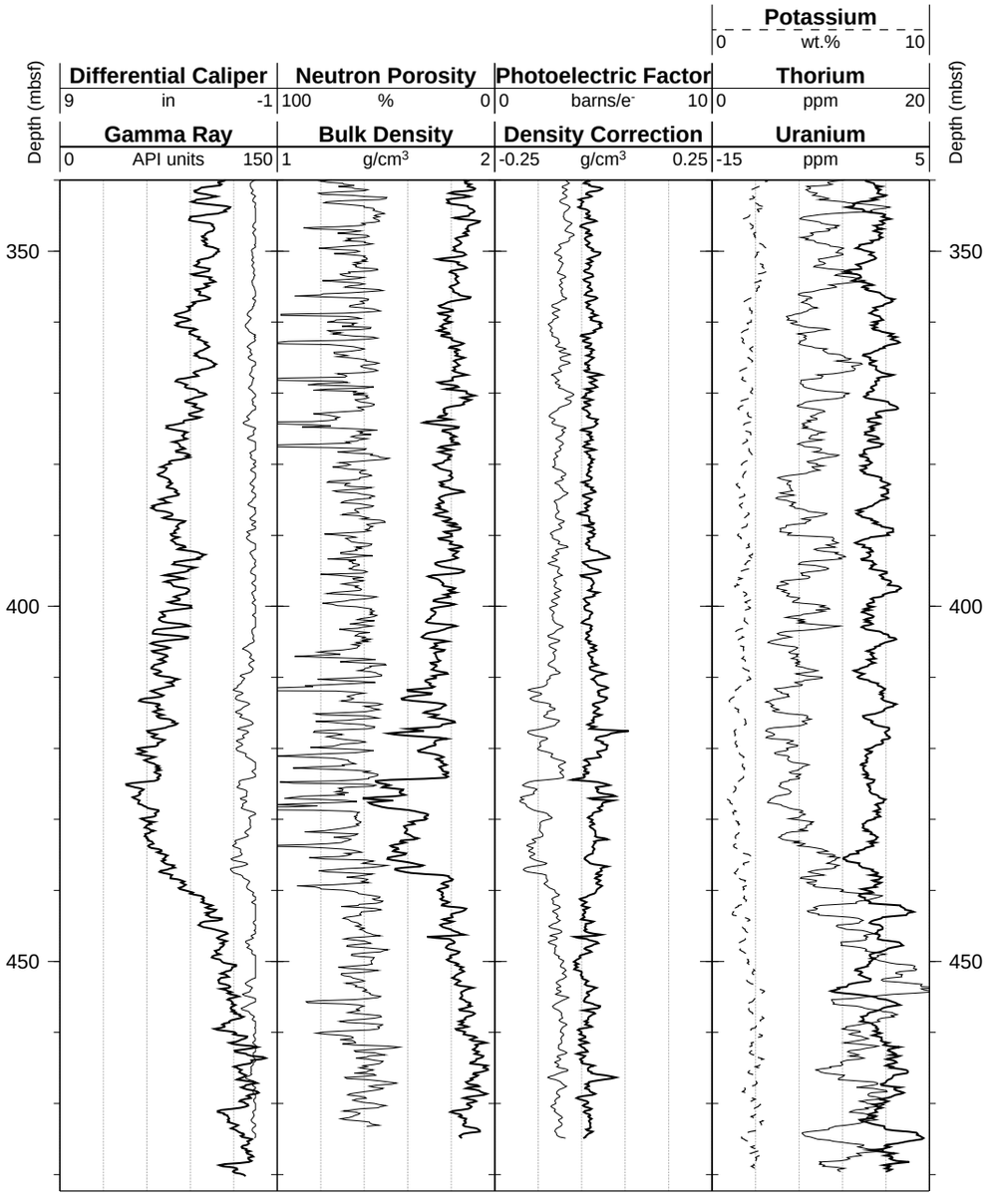
Hole 1045A: LWD Natural Gamma Ray-Density-Porosity Logging Data



Hole 1045A: LWD Natural Gamma Ray-Density-Porosity Logging Data (cont.)



Hole 1045A: LWD Natural Gamma Ray-Density-Porosity Logging Data (cont.)



SHORE-BASED LOG PROCESSING
HOLE 1046A

Bottom felt: 5028 mbrf (used for depth shift to seafloor)
Penetration: 833 mbsf

Logging Tools

The logs were recorded using the logging-while-drilling (LWD) technique, which allows for open-hole logging during drilling operations. The advantages of this technique are many: real-time analysis can accelerate drilling speed, avoid stuck pipe, and reduce borehole problems. LWD can also collect data open-hole in the uppermost part of the hole; this cannot be accomplished with wireline tools because the drill string is usually kept in the upper part of the borehole where hole conditions are generally bad.

The LWD employs the following tool combinations:

CDR = compensated dual resistivity (resistivity-gamma ray)
CDN = compensated density-neutron (density-porosity-caliper)

Processing

Depth shift: All original logs have been depth shifted to the seafloor (5028 mbsf).

Gamma-ray processing: Data were processed in real time by onboard Schlumberger personnel. Gamma-ray data were measured as natural gamma ray (NGR) and spectral gamma ray (NGT); for Leg 171A, only the former has been corrected for hole size (bit size), collar size, and type of drilling fluid. Because of a defect in the acquisition software, the NGT total and computed gamma ray (SGR and CGR) could not be environmentally corrected and converted to API units. For this reason, they are not included in the database.

Neutron porosity data processing: The neutron porosity measurements have been corrected for standoff, temperature, mud salinity, and mud hydrogen index (mud pressure, temperature, and weight).

Density data processing: Density data have been processed to correct for the irregular borehole using a technique called "rotational processing," which is particularly useful with deviated or enlarged boreholes with irregular or elliptical shapes. This statistical method measures the density variation while the tool rotates in the borehole, estimates the standoff (distance between the tool and the borehole wall), and corrects the density reading (a more detailed description of this technique is available upon request).

Resistivity data processing: A deconvolution technique called "qualitative resistivity overlay," aimed at providing enhanced vertical resolutions, is used for both shallow and deep resistivity measurements to compute output with 1-2-3-4-5-ft vertical resolution (documentation on this technique is also available upon request). The outputs are sampled at a 0.0762-m (3-in) sampling rate and are included in the database, along with the standard 0.1524-m (0.5-ft) channels.

Quality Control

During the processing, quality control of the data is mainly performed by cross-correlation of all logging data. The best data are acquired in a circular borehole; this is particularly true for the density tool, which uses clamp-on stabilizers to eliminate mud standoff and to ensure proper contact with the borehole wall. A data quality indicator is given by the differential caliper (DCAL) channel, which measures the tool standoff during the recording. Another quality indicator is represented by the density correction (DRHO).

Note: Additional information about the logs can be found in the "Explanatory Notes" and "Site 1046" chapters (this volume). For further information about the logs, please contact:

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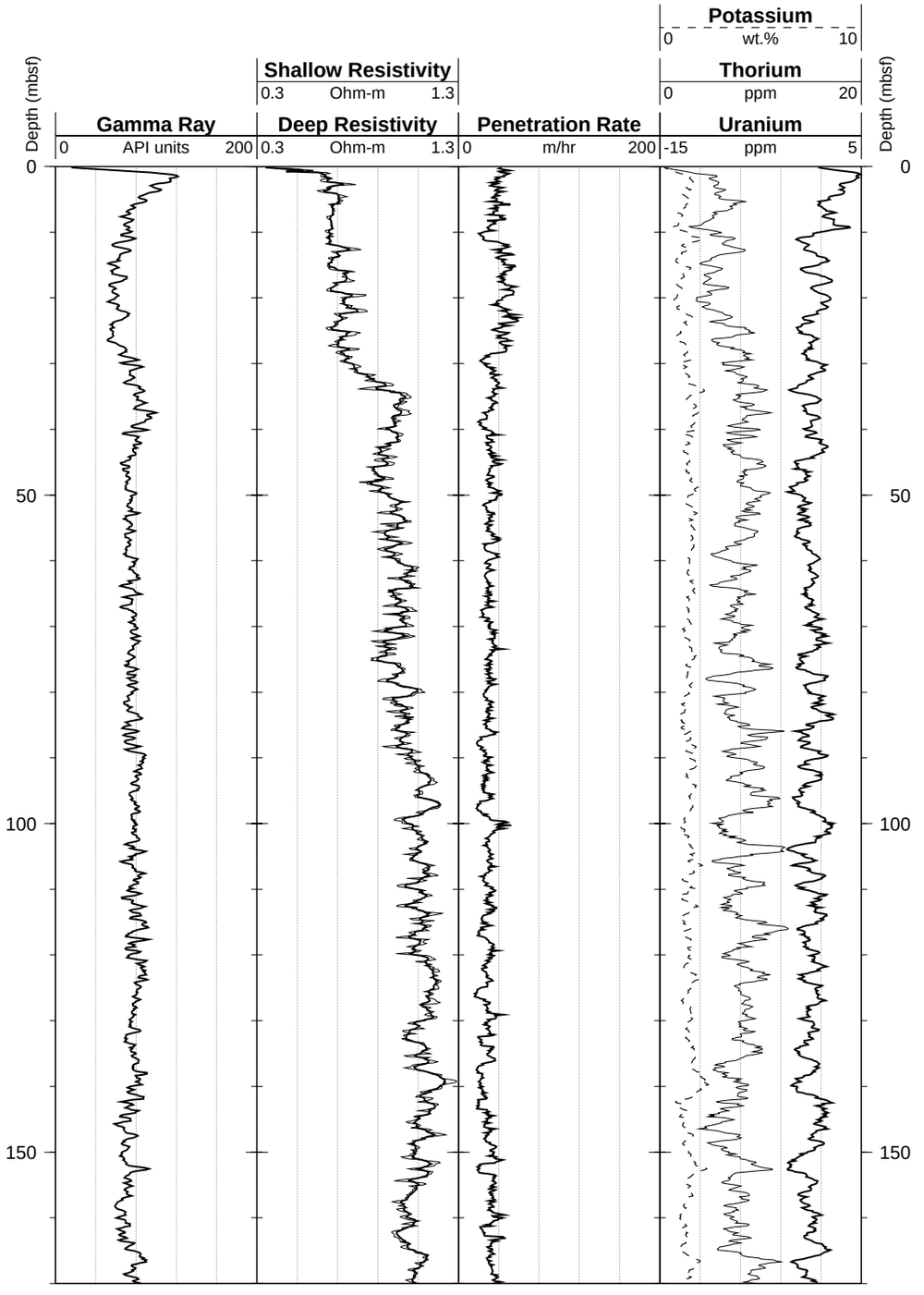
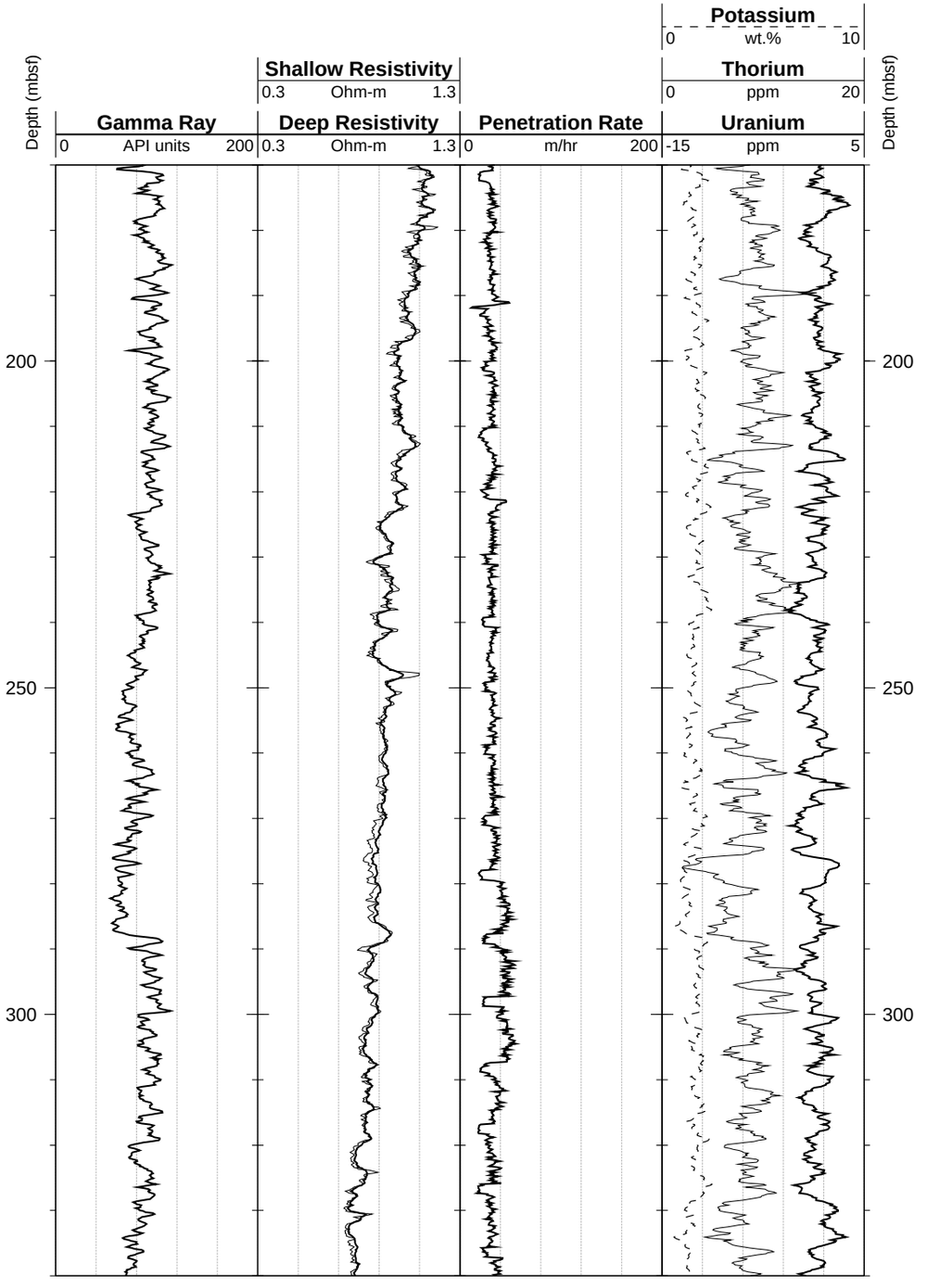
Phone: 914-365-8343
Fax: 914-365-3182
E-mail: chris@ldeo.columbia.edu

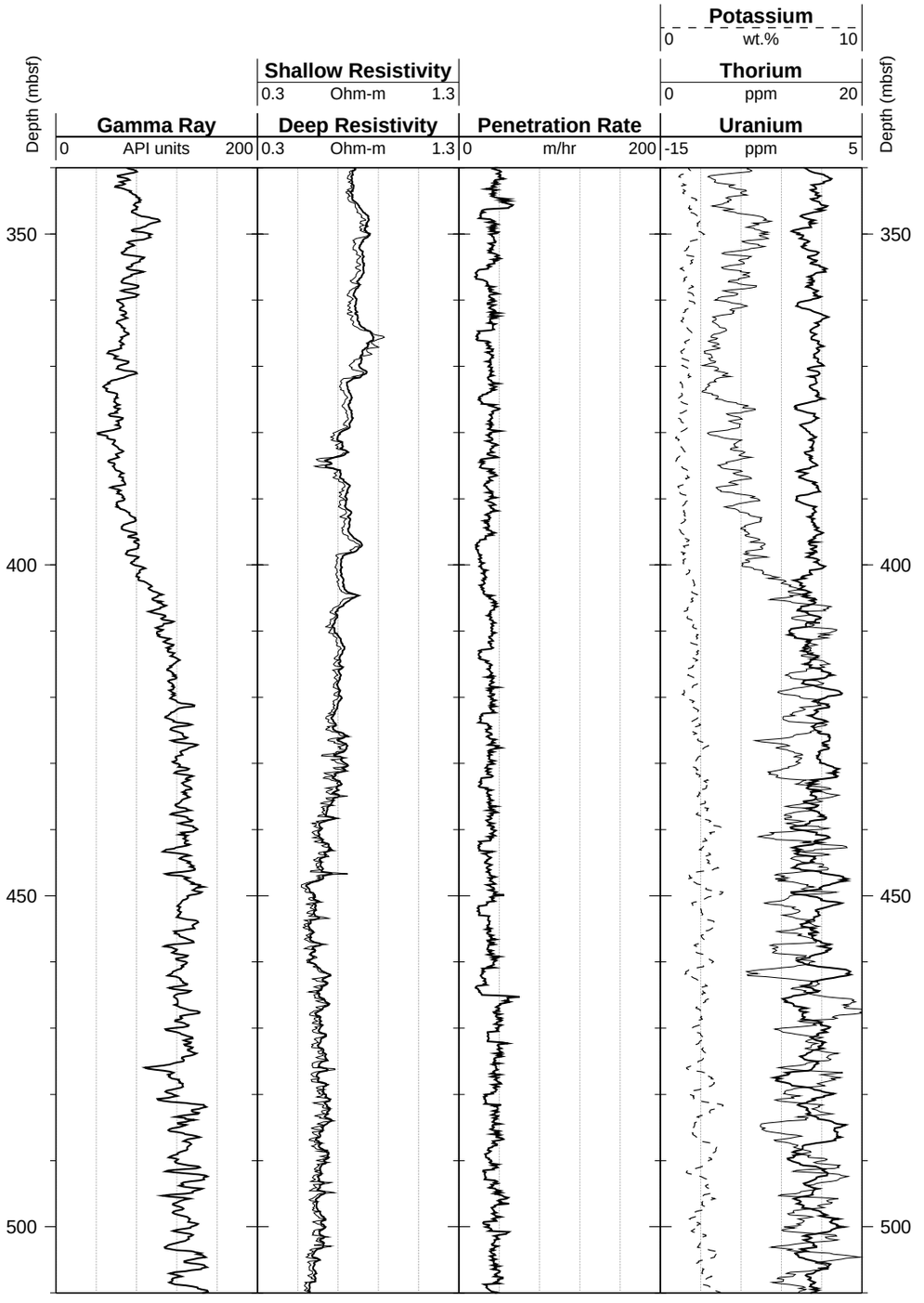
Hole 1046A: LWD Natural Gamma Ray-Resistivity Logging Data



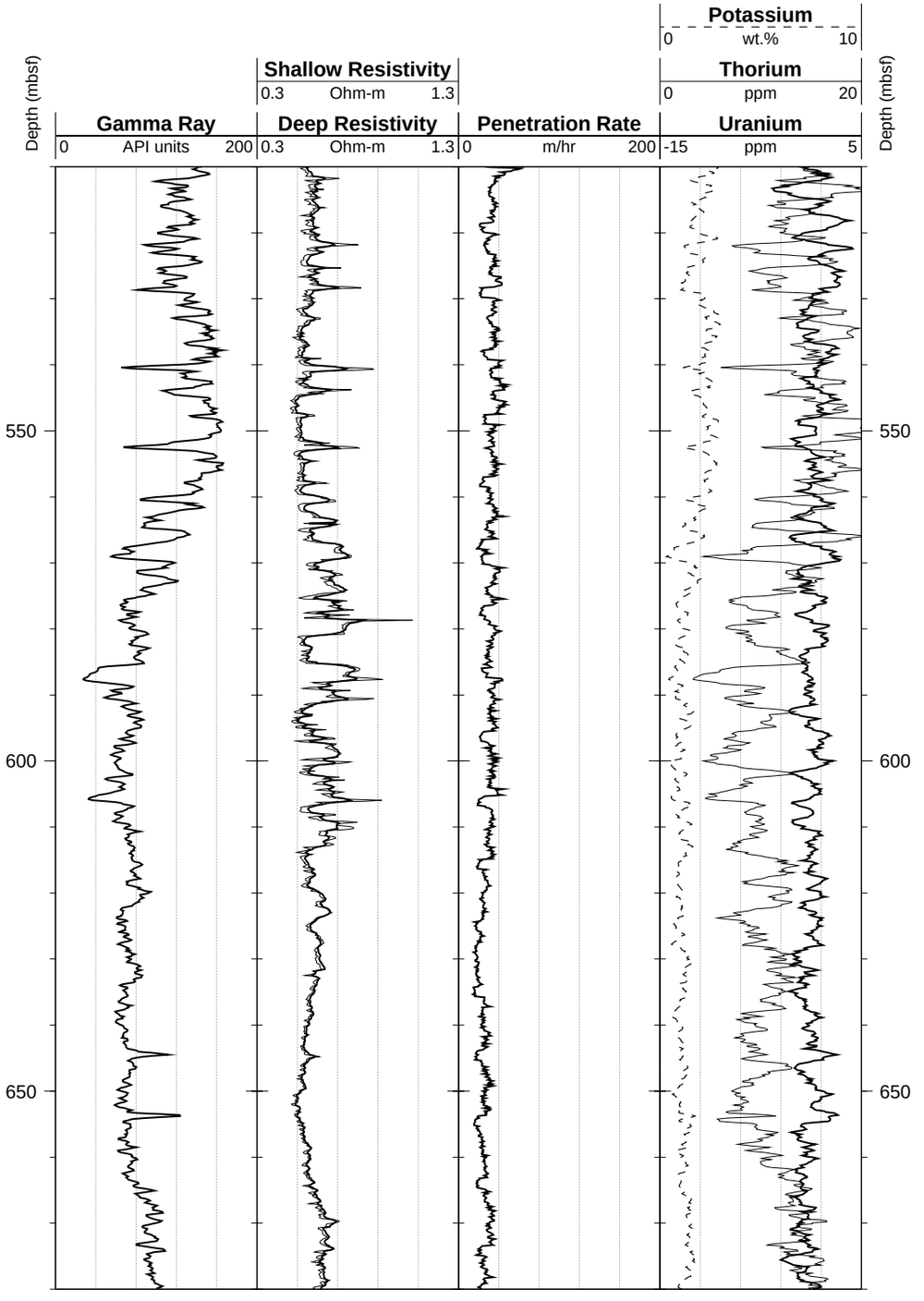
Hole 1046A: LWD Natural Gamma Ray-Resistivity Logging Data (cont.)



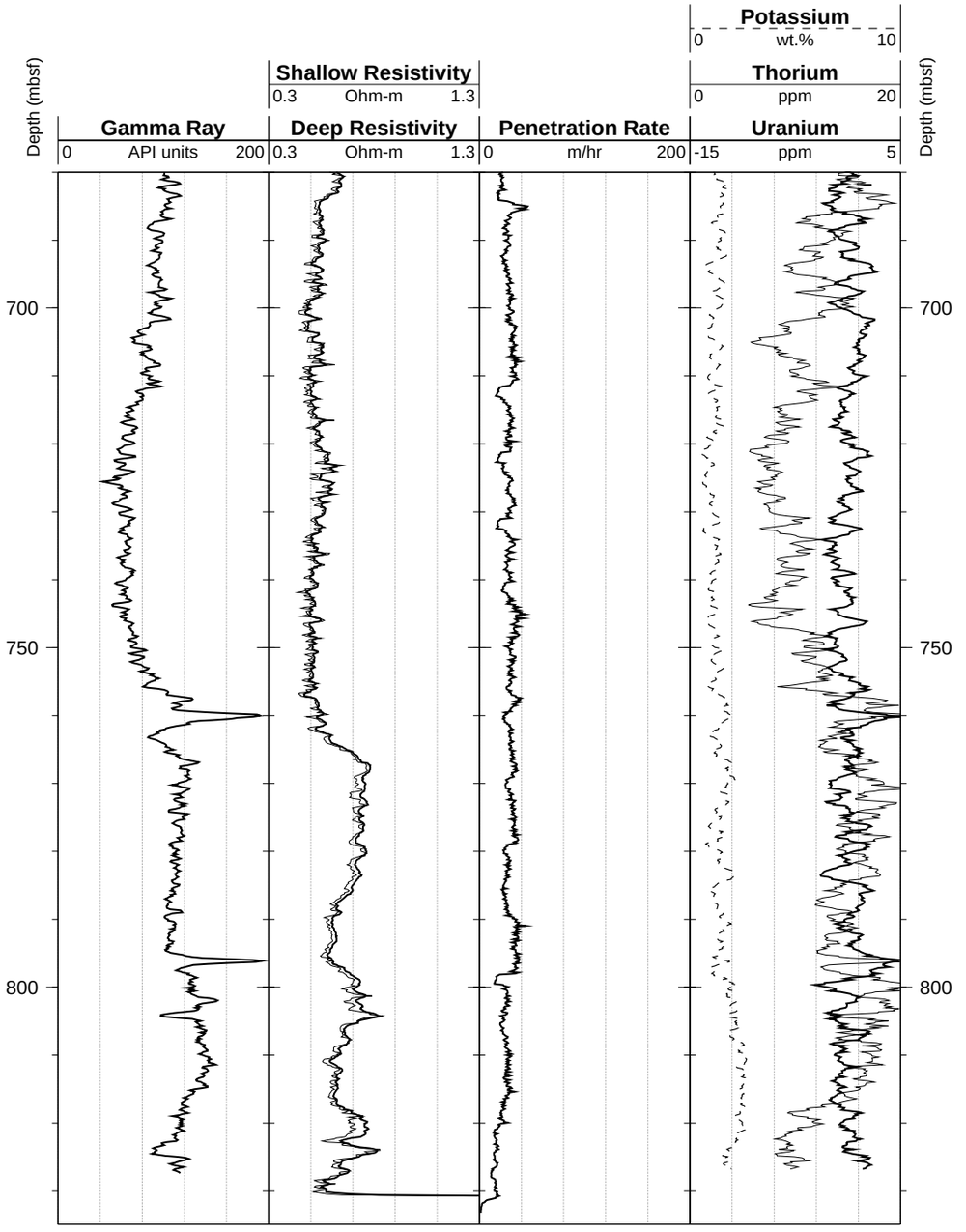
Hole 1046A: LWD Natural Gamma Ray-Resistivity Logging Data (cont.)



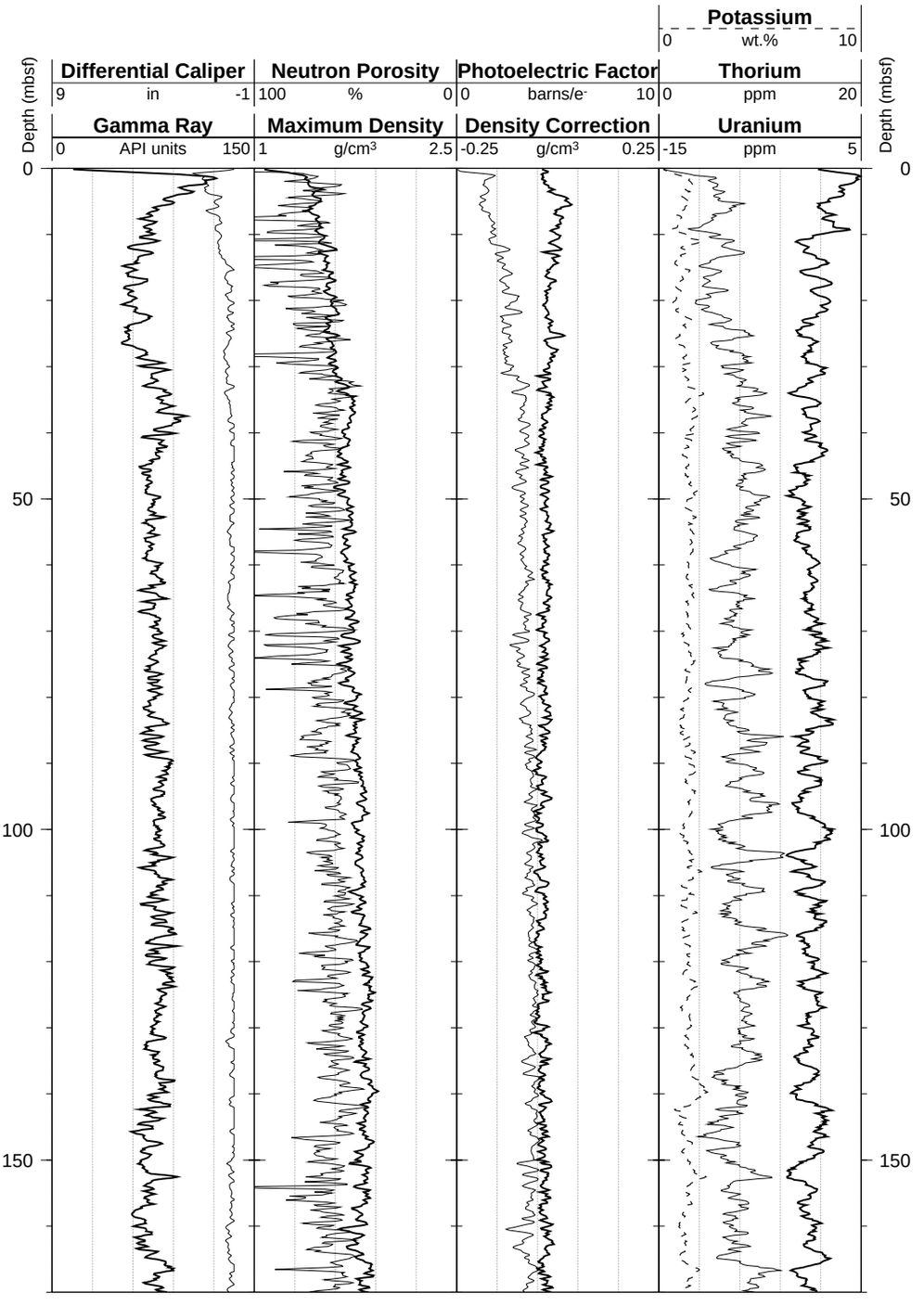
Hole 1046A: LWD Natural Gamma Ray-Resistivity Logging Data (cont.)



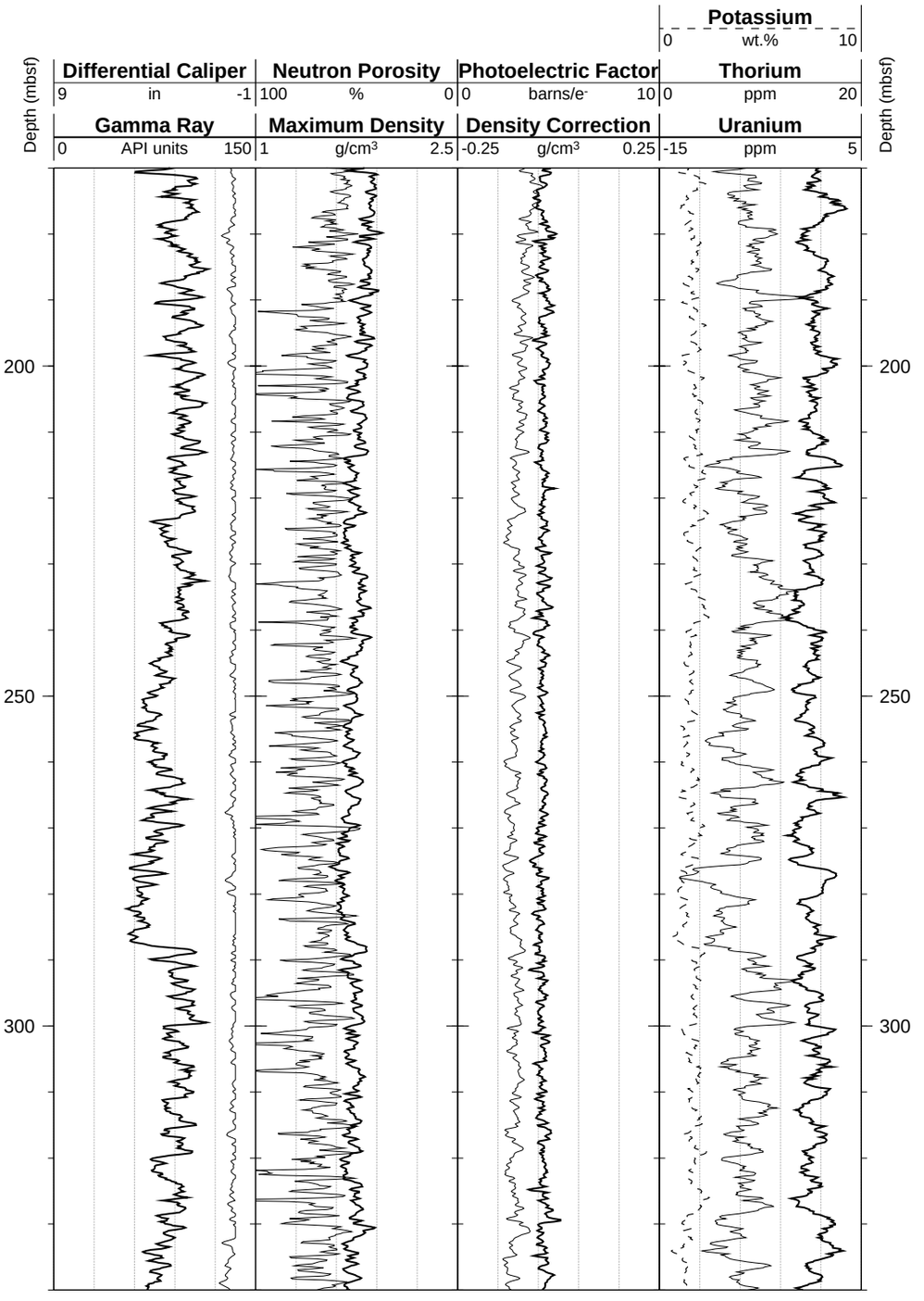
Hole 1046A: LWD Natural Gamma Ray-Resistivity Logging Data (cont.)



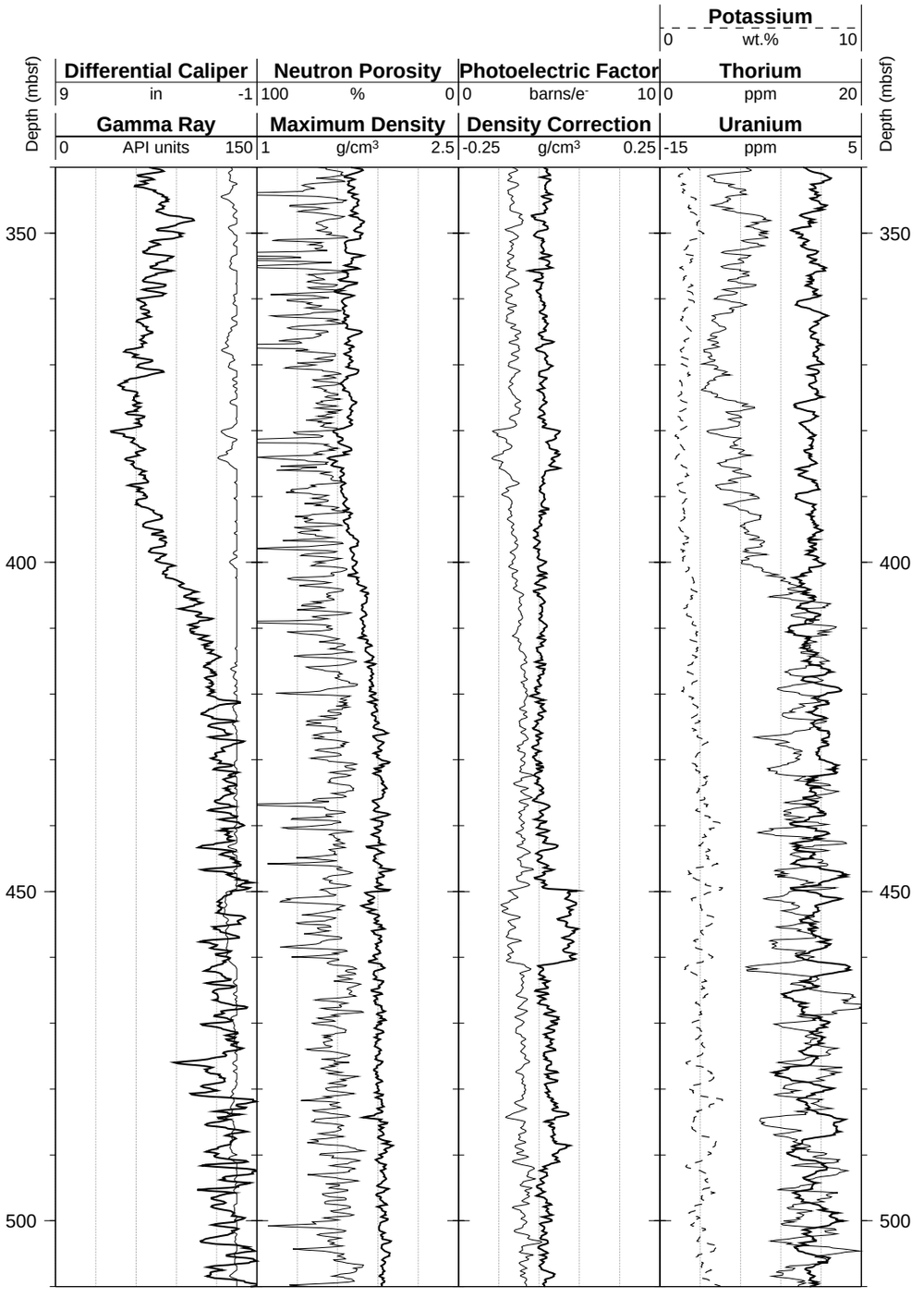
Hole 1046A: LWD Natural Gamma Ray-Density-Porosity Logging Data



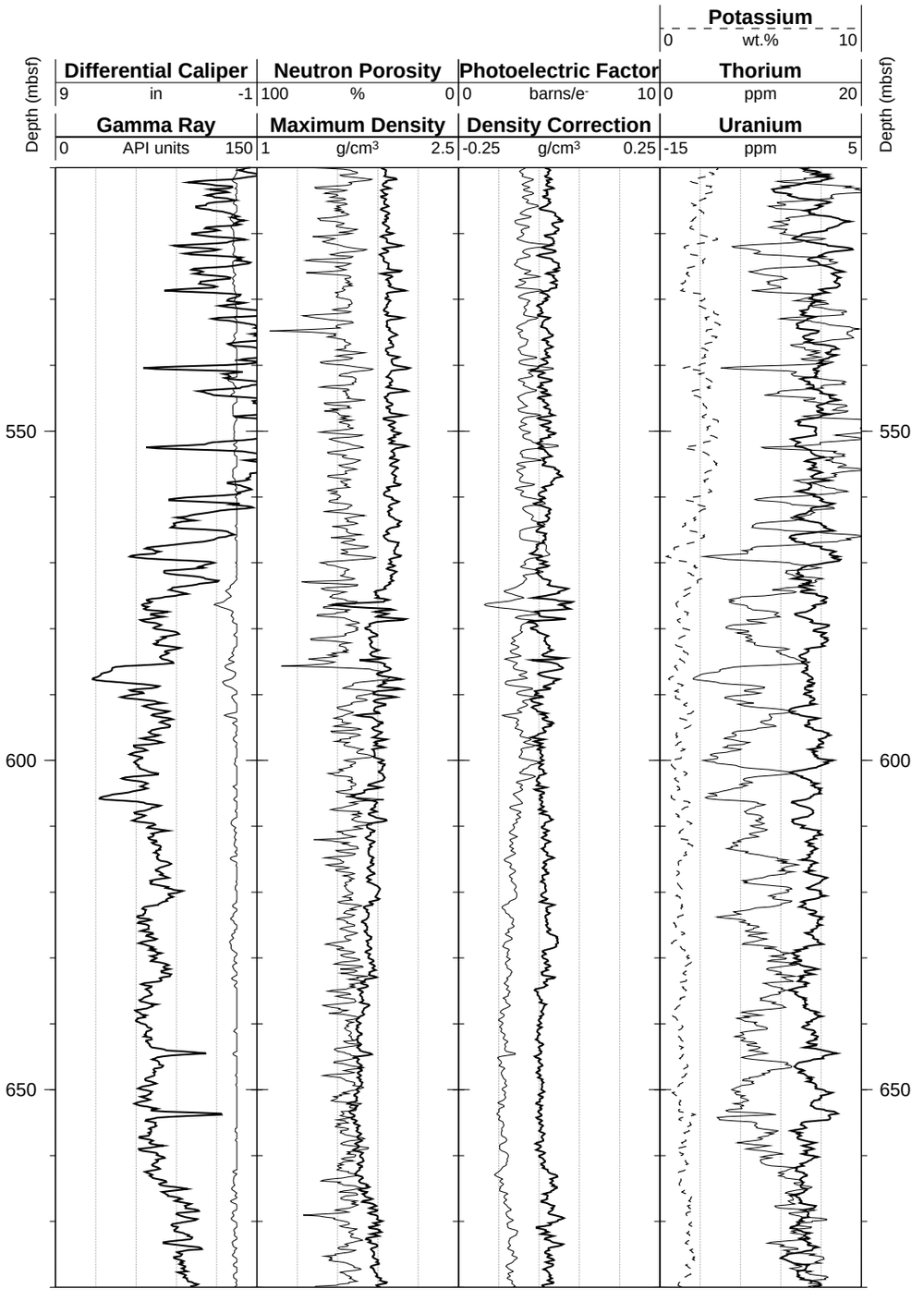
Hole 1046A: LWD Natural Gamma Ray-Density-Porosity Logging Data (cont.)



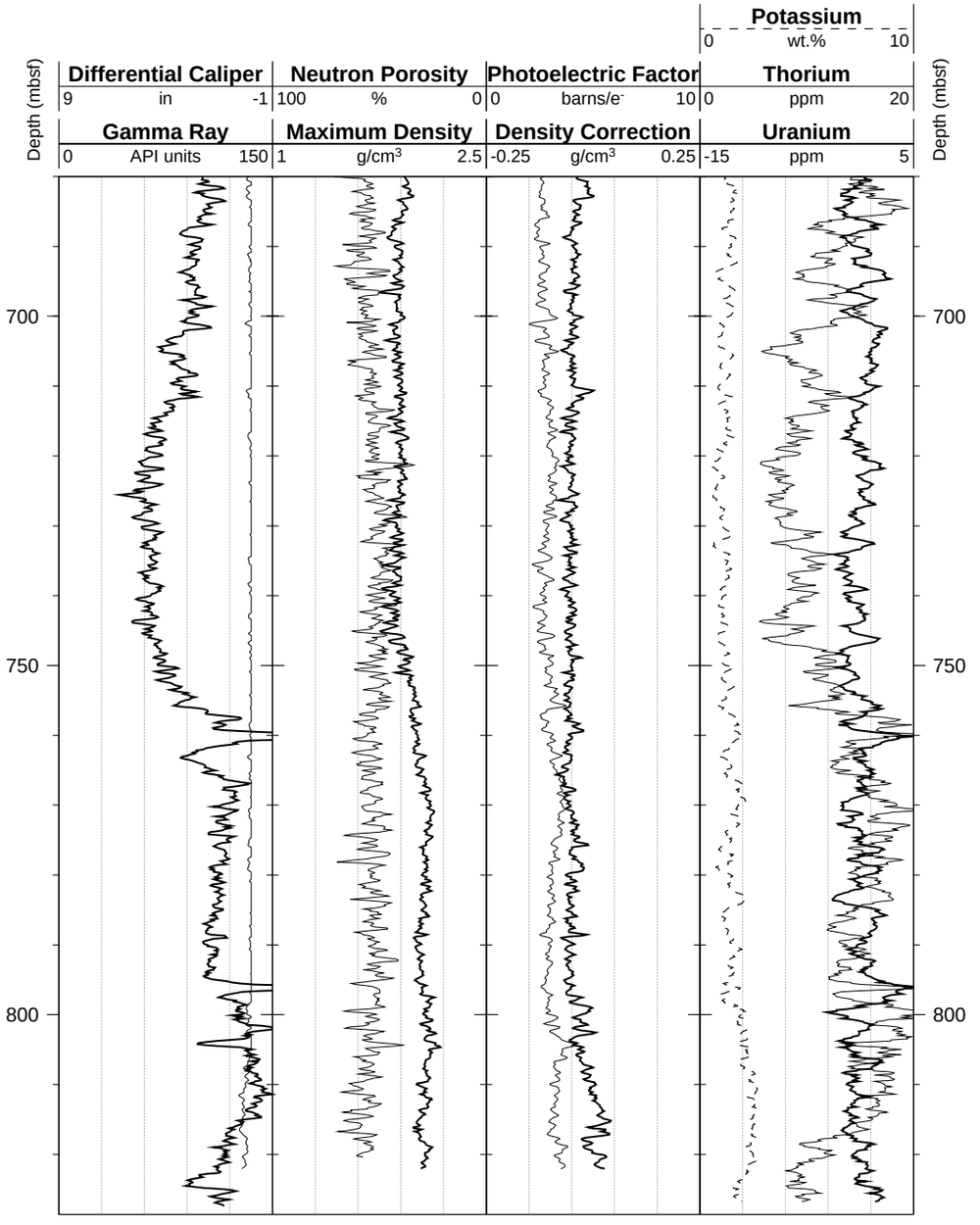
Hole 1046A: LWD Natural Gamma Ray-Density-Porosity Logging Data (cont.)



Hole 1046A: LWD Natural Gamma Ray-Density-Porosity Logging Data (cont.)



Hole 1046A: LWD Natural Gamma Ray-Density-Porosity Logging Data (cont.)



SHORE-BASED LOG PROCESSING
HOLE 1047A

Bottom felt: 5067 mbrf (used for depth shift to seafloor)
Penetration: 633 mbsf

Logging Tools

The logs were recorded using the logging-while-drilling (LWD) technique, which allows for open-hole logging during drilling operations. The advantages of this technique are many: real-time analysis can accelerate drilling speed, avoid stuck pipe, and reduce borehole problems. LWD can also collect data open-hole in the uppermost part of the hole; this cannot be accomplished with wireline tools because the drill string is usually kept in the upper part of the borehole where hole conditions are generally bad.

The LWD employs the following tool combinations:

CDR = compensated dual resistivity (resistivity-gamma ray)
CDN = compensated density-neutron (density-porosity-caliper)

Processing

Depth shift: All original logs have been depth shifted to the seafloor (–5067 m).

Gamma-ray processing: Data were processed in real time by onboard Schlumberger personnel. Gamma-ray data were measured as natural gamma ray (GR) and spectral gamma ray (NGT); for Leg 171A, only the former has been corrected for hole size (bit size), collar size, and type of drilling fluid. Because of a defect in the acquisition software, the NGT total and computed gamma ray (SGR and CGR) could not be environmentally corrected and converted to API units. For this reason, they are not included in the database.

Neutron porosity data processing: The neutron porosity measurements have been corrected for standoff, temperature, mud salinity, and mud hydrogen index (mud pressure, temperature, and weight).

Density data processing: Density data have been processed to correct for the irregular borehole using a technique called "rotational processing," which is particularly useful in deviated or enlarged boreholes with irregular or elliptical shapes. This statistical method measures the density variation while the tool rotates in the borehole, estimates the standoff (distance between the tool and the borehole wall), and corrects the density reading (a more detailed description of this technique is available upon request).

Resistivity data processing: A deconvolution technique called "qualitative resistivity overlay," aimed at providing enhanced vertical resolutions, is used for both shallow and deep resistivity measurements to compute output with 1-2-3-4-5-ft vertical resolution (documentation on this technique is also available upon request). The outputs are sampled at a 0.0762-m (3-in) sampling rate and are included in the database, along with the standard 0.1524-m (0.5-ft) channels.

Quality Control

During the processing, quality control of the data is mainly performed by cross-correlation of all logging data. The best data are acquired in a circular borehole; this is particularly true for the density tool, which uses clamp-on stabilizers to eliminate mud standoff and to ensure proper contact with the borehole wall. A data quality indicator is given by the differential caliper (DCAL) channel, which measures the tool standoff during the recording. Another quality indicator is represented by the density correction (DRHO).

Note: Additional information about the logs can be found in the "Explanatory Notes" and "Site 1047" chapters (this volume). For further information about the logs, please contact:

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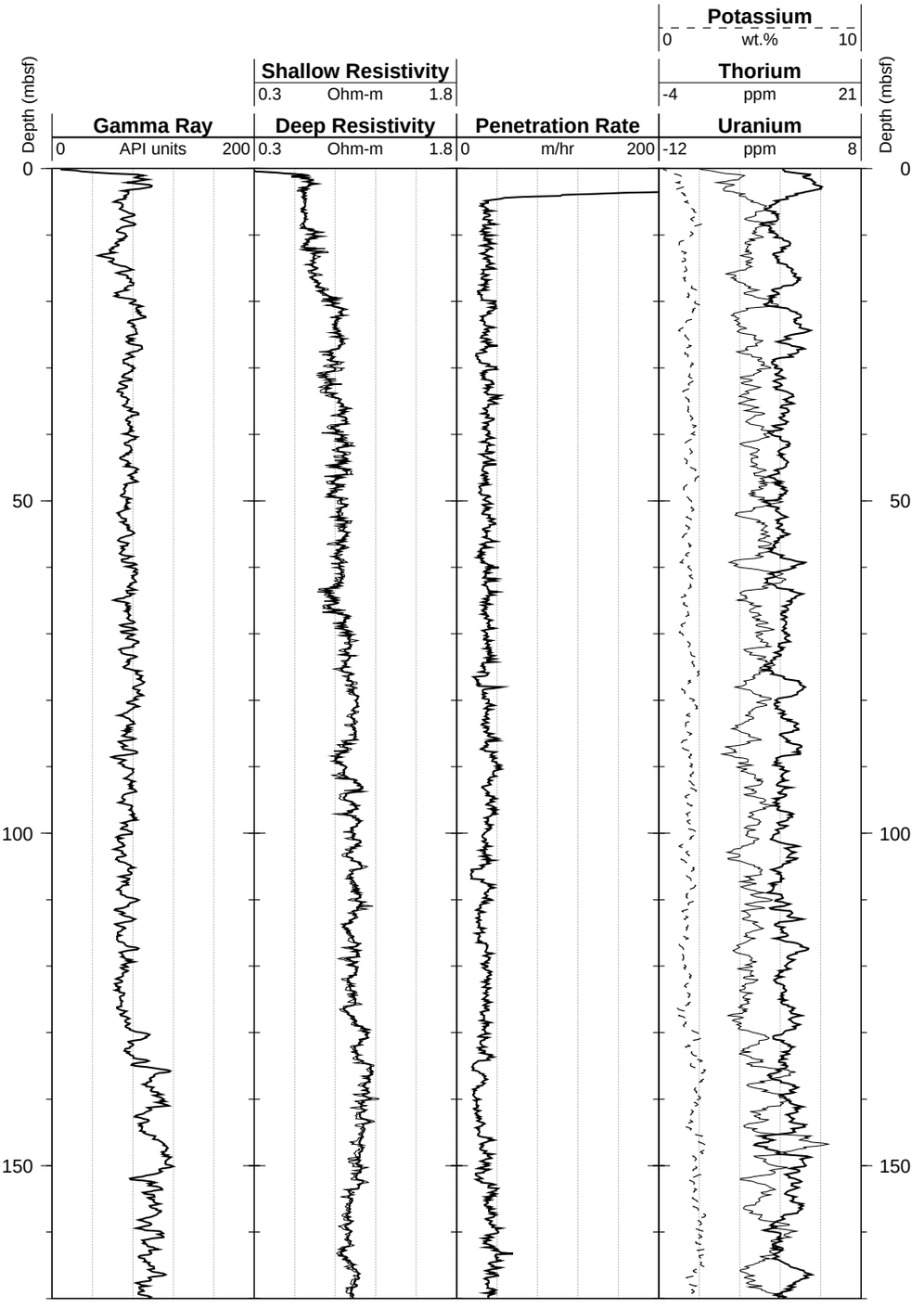
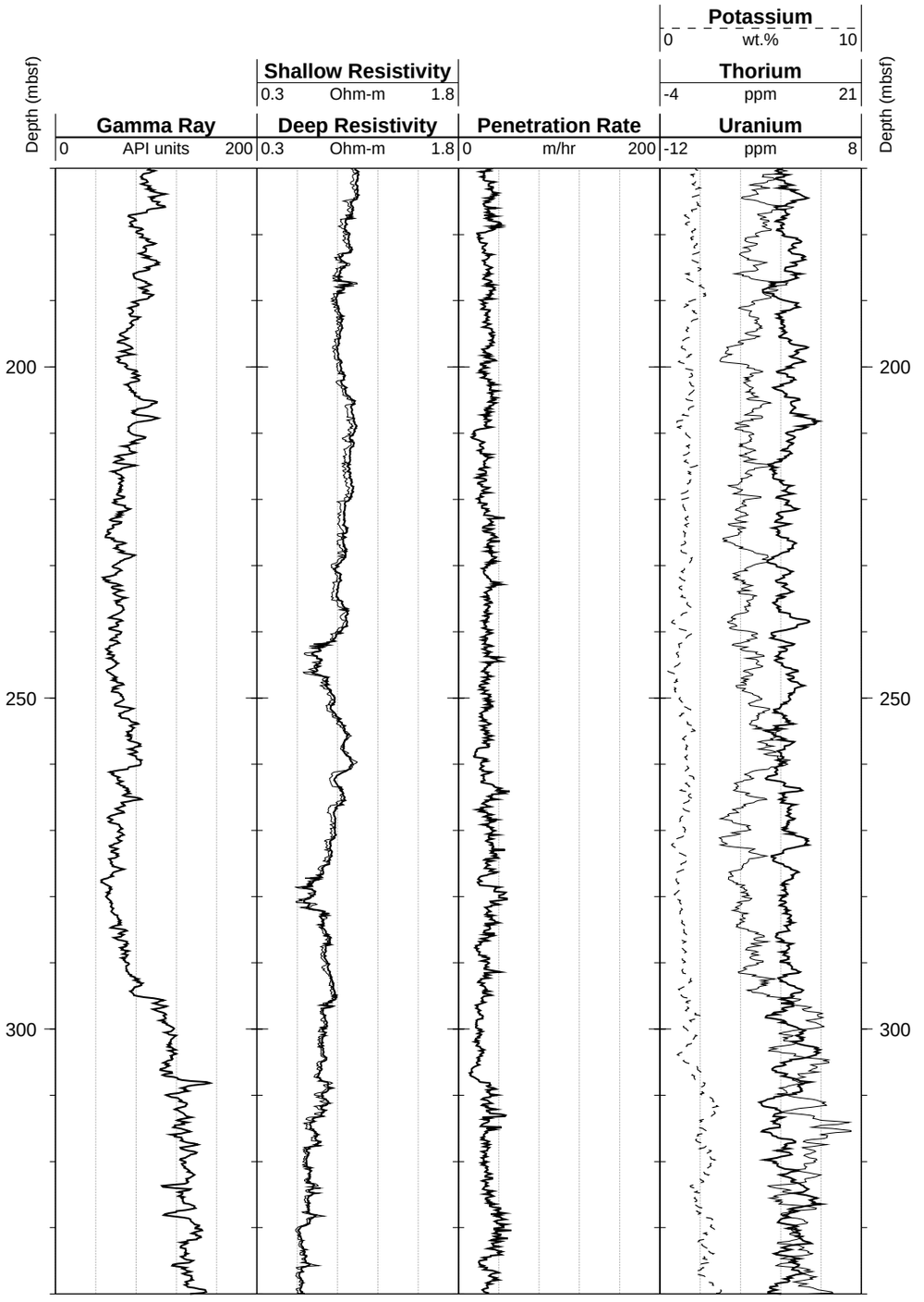
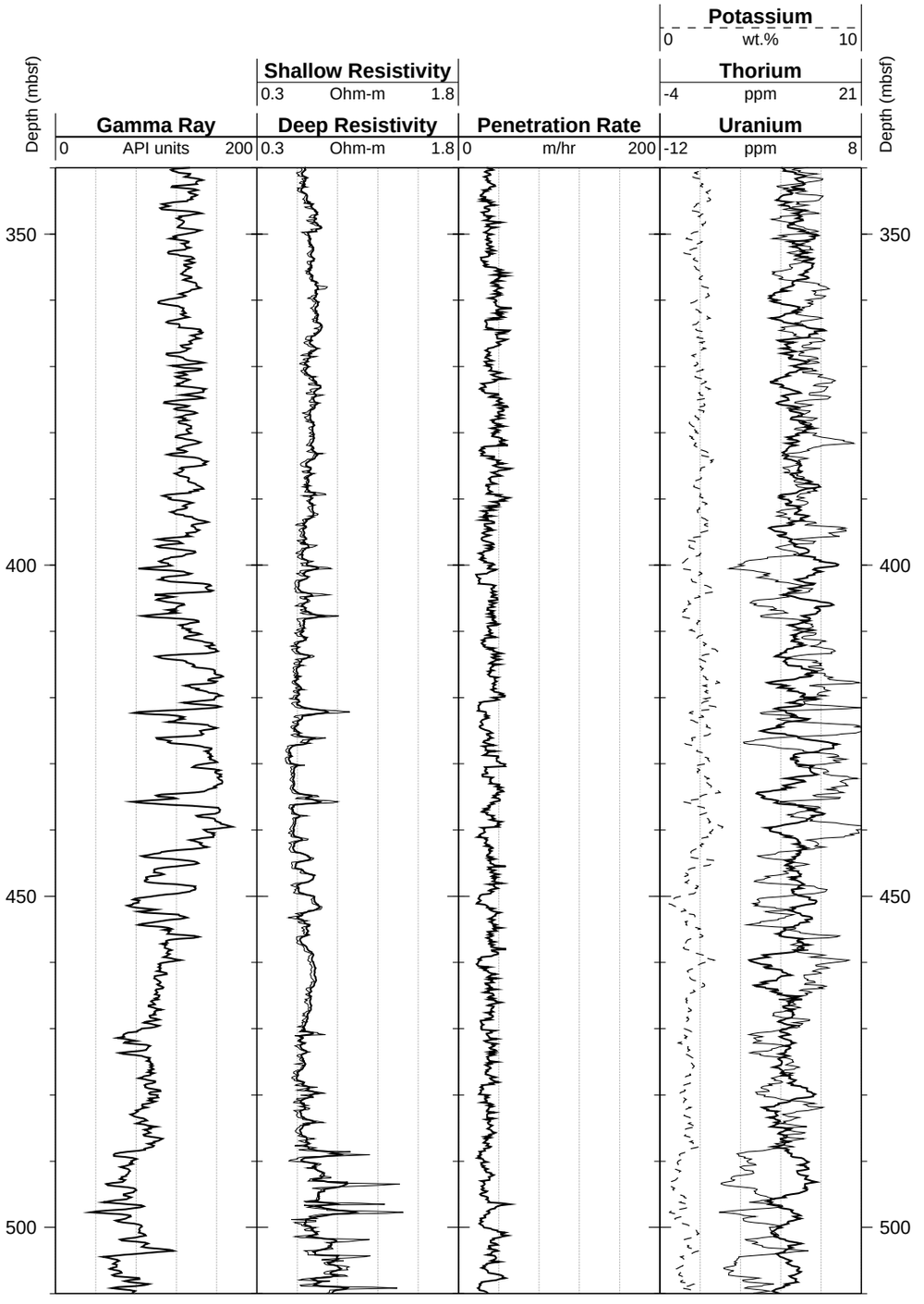
Hole 1047A: LWD Natural Gamma Ray-Resistivity Logging Data



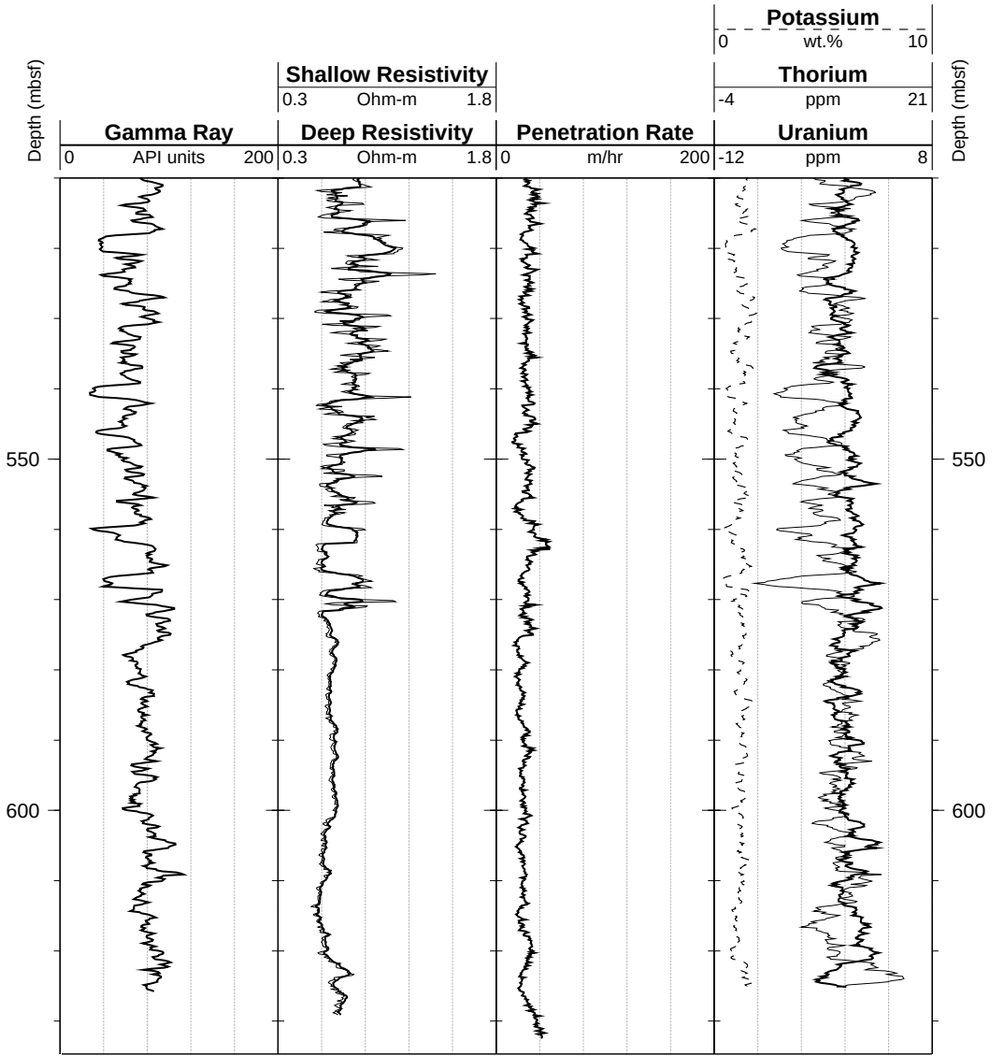
Hole 1047A: LWD Natural Gamma Ray-Resistivity Logging Data (cont.)



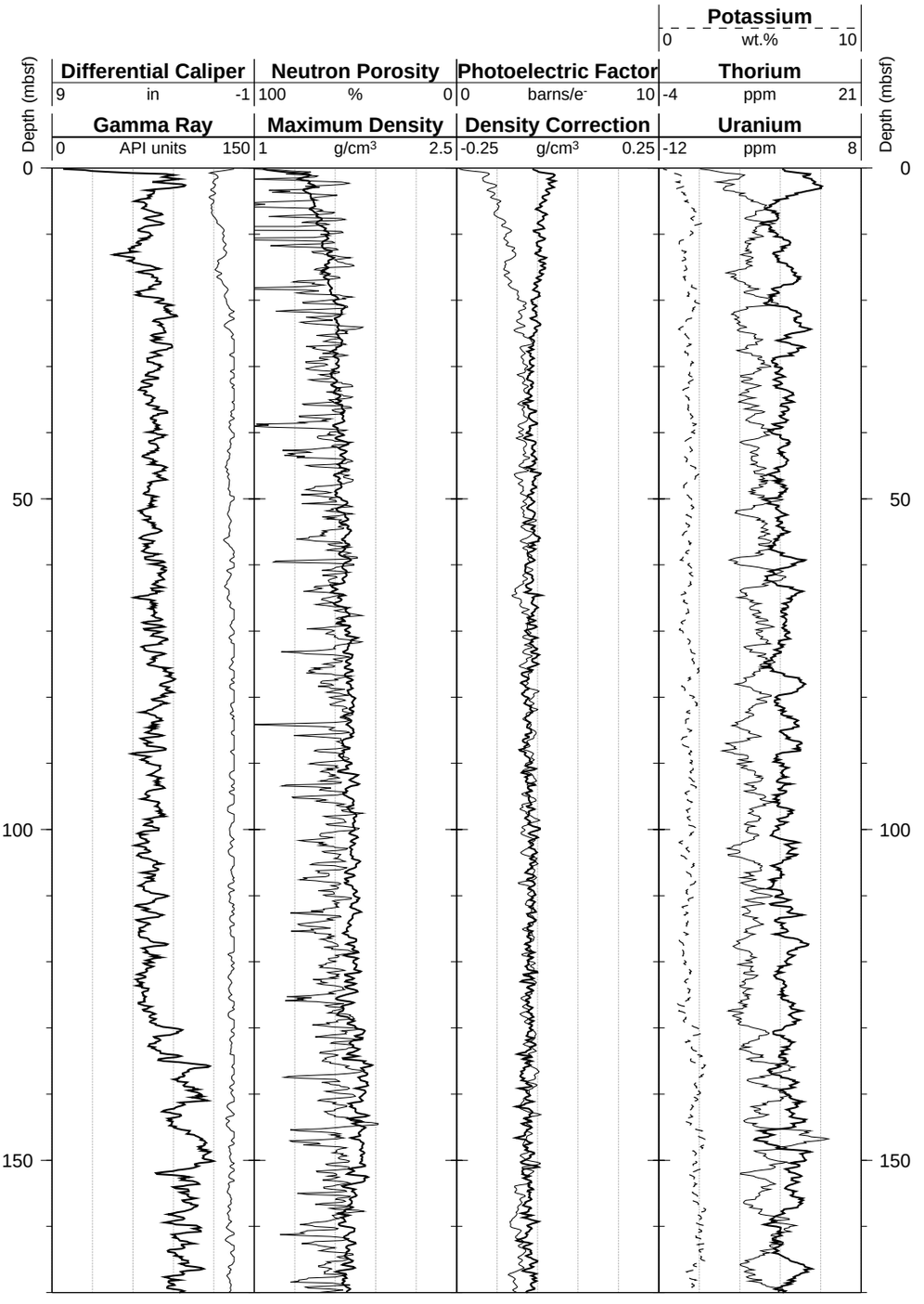
Hole 1047A: LWD Natural Gamma Ray-Resistivity Logging Data (cont.)



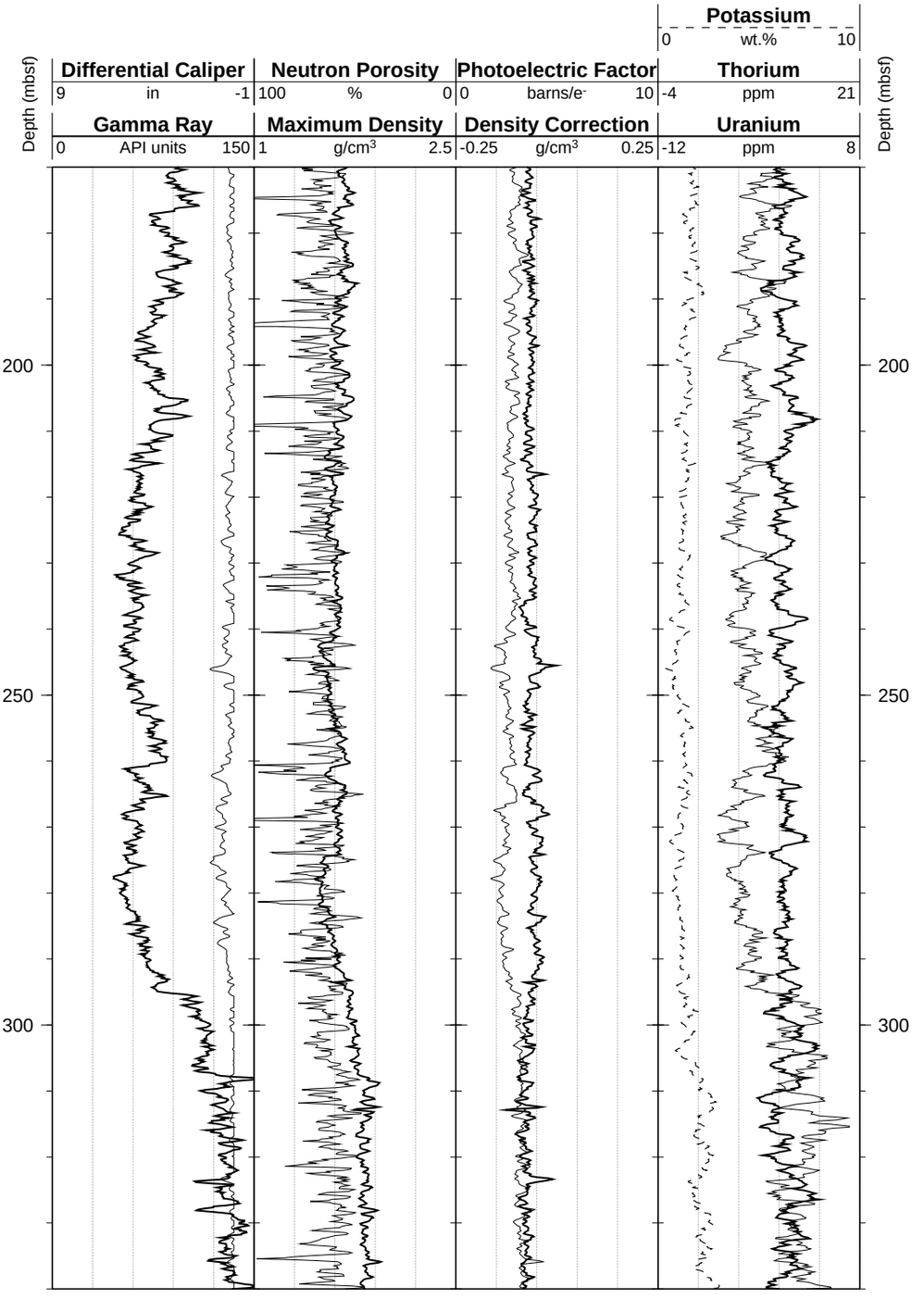
Hole 1047A: LWD Natural Gamma Ray-Resistivity Logging Data (cont.)



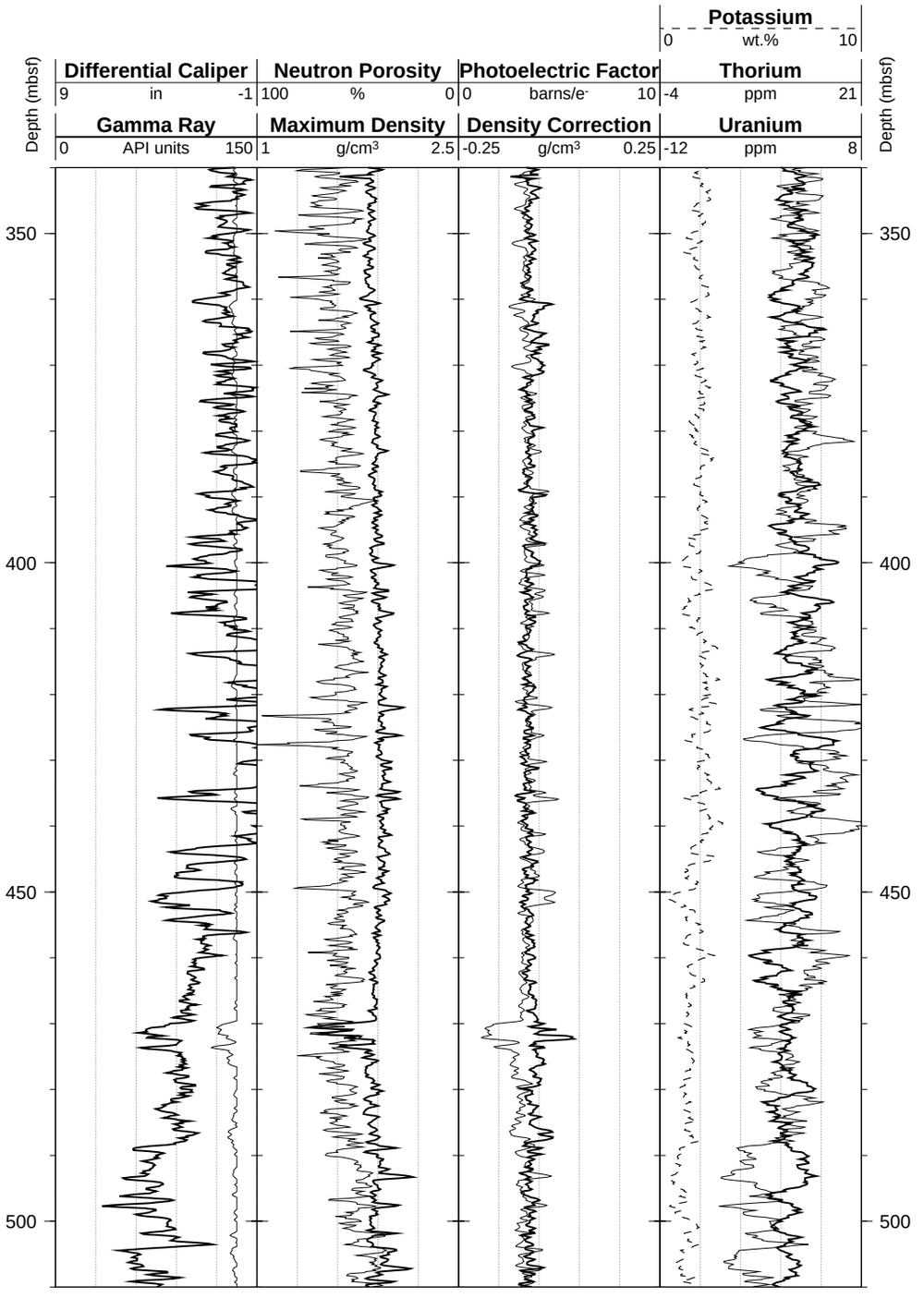
Hole 1047A: LWD Natural Gamma Ray-Density-Porosity Logging Data



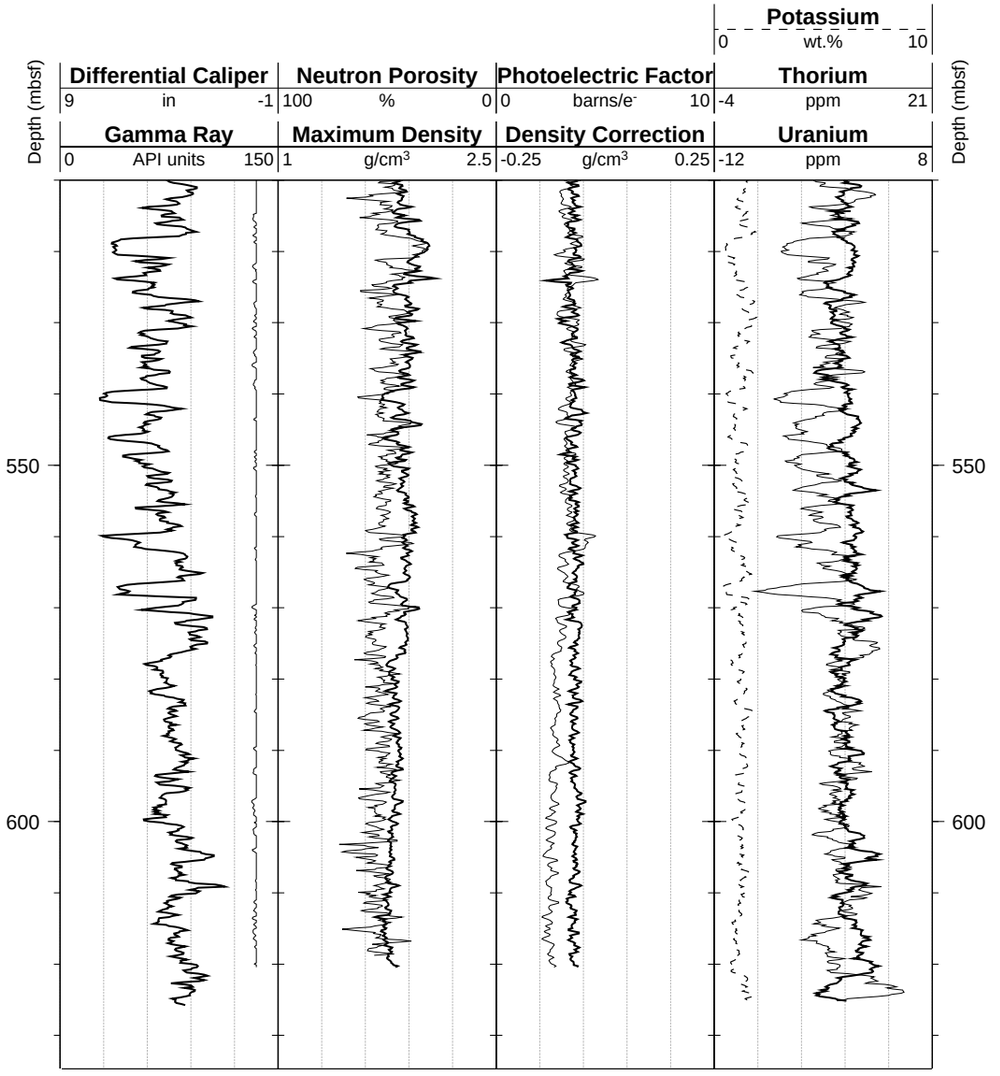
Hole 1047A: LWD Natural Gamma Ray-Density-Porosity Logging Data (cont.)



Hole 1047A: LWD Natural Gamma Ray-Density-Porosity Logging Data (cont.)



Hole 1047A: LWD Natural Gamma Ray-Density-Porosity Logging Data (cont.)



SHORE-BASED LOG PROCESSING
HOLE 1048A

Bottom felt: 5064 mbrf (used for depth shift to seafloor)
Penetration: 337 mbsf

Logging Tools

The logs were recorded using the logging-while-drilling (LWD) technique, which allows for open-hole logging during drilling operations. The advantages of this technique are many: real-time analysis can accelerate drilling speed, avoid stuck pipe, and reduce borehole problems. LWD can also collect data open-hole in the uppermost part of the hole; this cannot be accomplished with wireline tools because the drill string is usually kept in the upper part of the borehole where hole conditions are generally bad.

The LWD employs the following tool combinations:
CDR = compensated dual resistivity (resistivity-gamma ray)
CDN = compensated density-neutron (density-porosity-caliper)

Processing

Depth shift: All original logs have been depth shifted to the seafloor (–5064 m).

Gamma-ray processing: Dave were processed in real time by onboard Schlumberger personnel. Gamma-ray data were measured as natural gamma ray (GR) and spectral gamma ray (NGT); for Leg 171A, only the former has been corrected for hole size (bit size), collar size, and type of drilling fluid. Because of a defect in the acquisition software, the NGT total and computed gamma ray (SGR and CGR) could not be environmentally corrected and converted to API units. For this reason, they are not included in the database.

Neutron porosity data processing: The neutron porosity measurements have been corrected for standoff, temperature, mud salinity, and mud hydrogen index (mud pressure, temperature, and weight).

Density data processing: Density data have been processed to correct for the irregular borehole using a technique called "rotational processing," which is particularly useful in deviated or enlarged boreholes with irregular or elliptical shapes. This statistical method measures the density variation while the tool rotates in the borehole, estimates the standoff (distance between the tool and the borehole wall), and corrects the density reading (a more detailed description of this technique is available upon request).

Resistivity data processing: A deconvolution technique called "qualitative resistivity overlay," aimed at providing enhanced vertical resolutions, is used for both shallow and deep resistivity measurements to compute output with 1-2-3-4-5-ft vertical resolution (documentation on this technique is also available upon requests. The outputs are sampled at a 0.0762-m (3-in) sampling rate and are included in the database, along with the standard 0.1524-m (0.5-ft) channels.

Quality Control

During the processing, quality control of the data is mainly performed by cross-correlation of all logging data. The best data are acquired in a circular borehole; this is particularly true for the density tool, which uses clamp-on stabilizers to eliminate mud standoff and to ensure proper contact with the borehole wall. A data quality indicator is given by the differential caliper (DCAL) channel, which measures the tool standoff during the recording. Another quality indicator is represented by the density correction (DRHO).

Note: Additional information about the logs can be found in the "Explanatory Notes" and "Site 1048" chapters (this volume). For further information about the logs, please contact:

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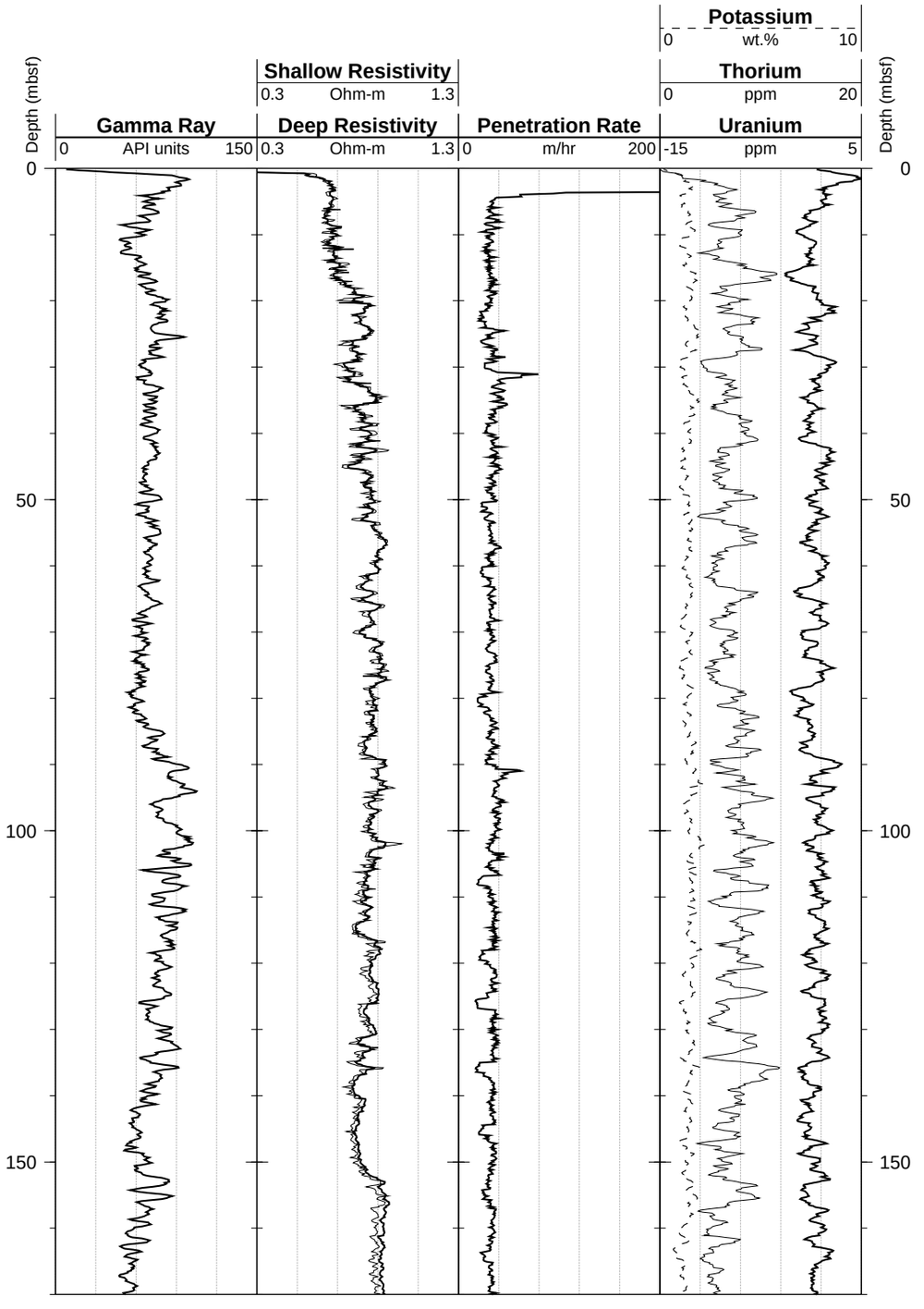
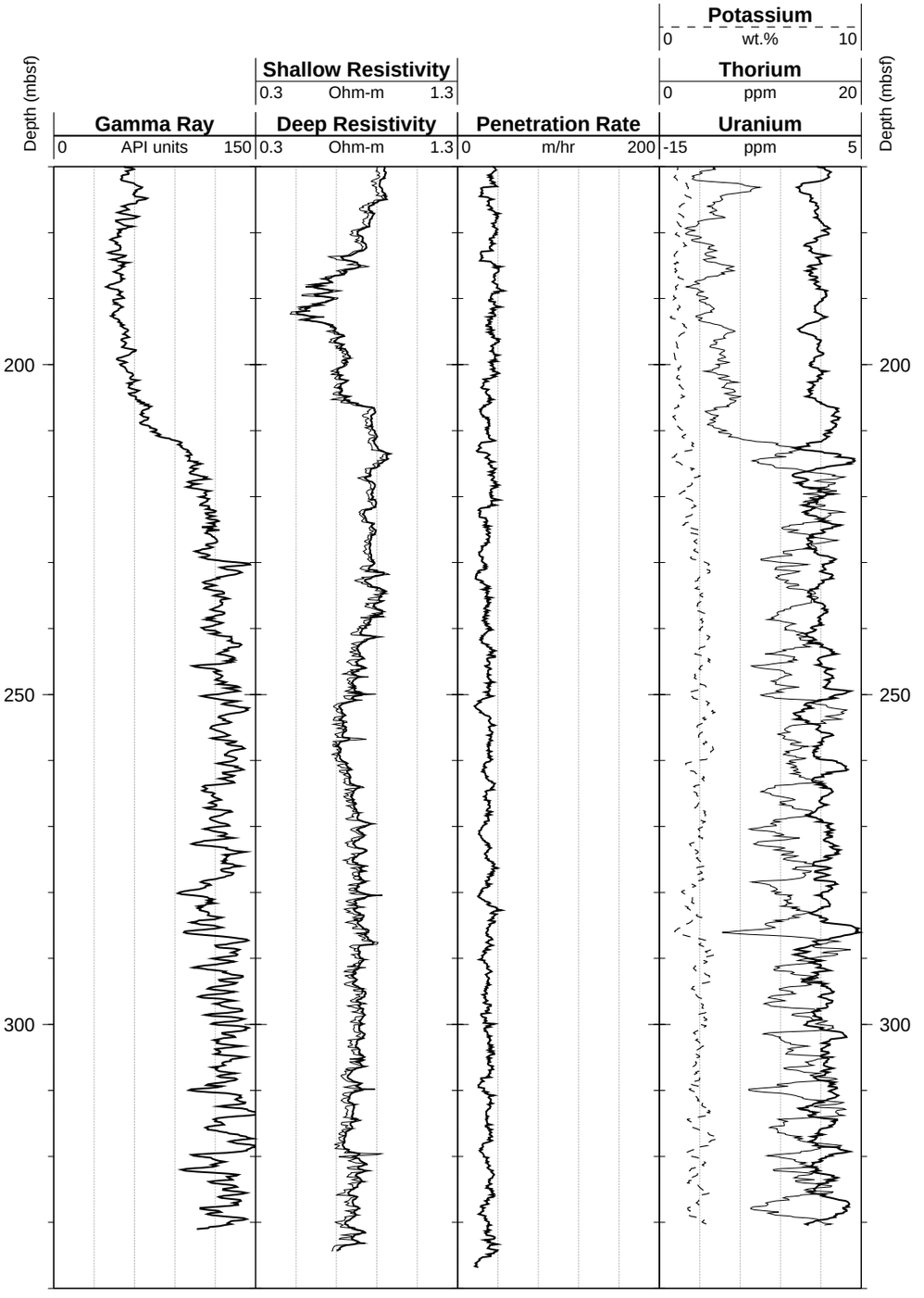
E-mail: chris@ldeo.columbia.edu

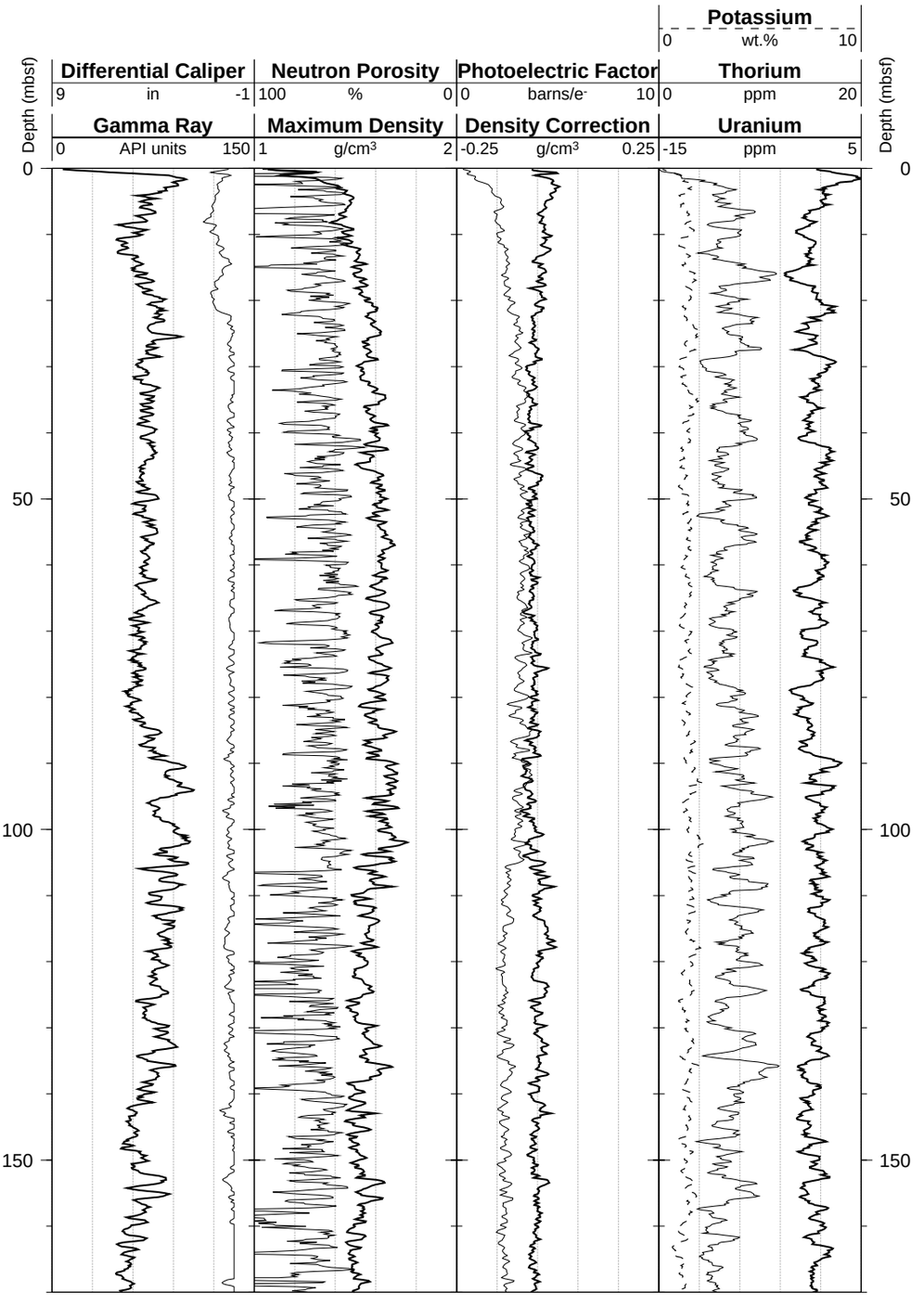
Hole 1048A: LWD Natural Gamma Ray-Resistivity Logging Data



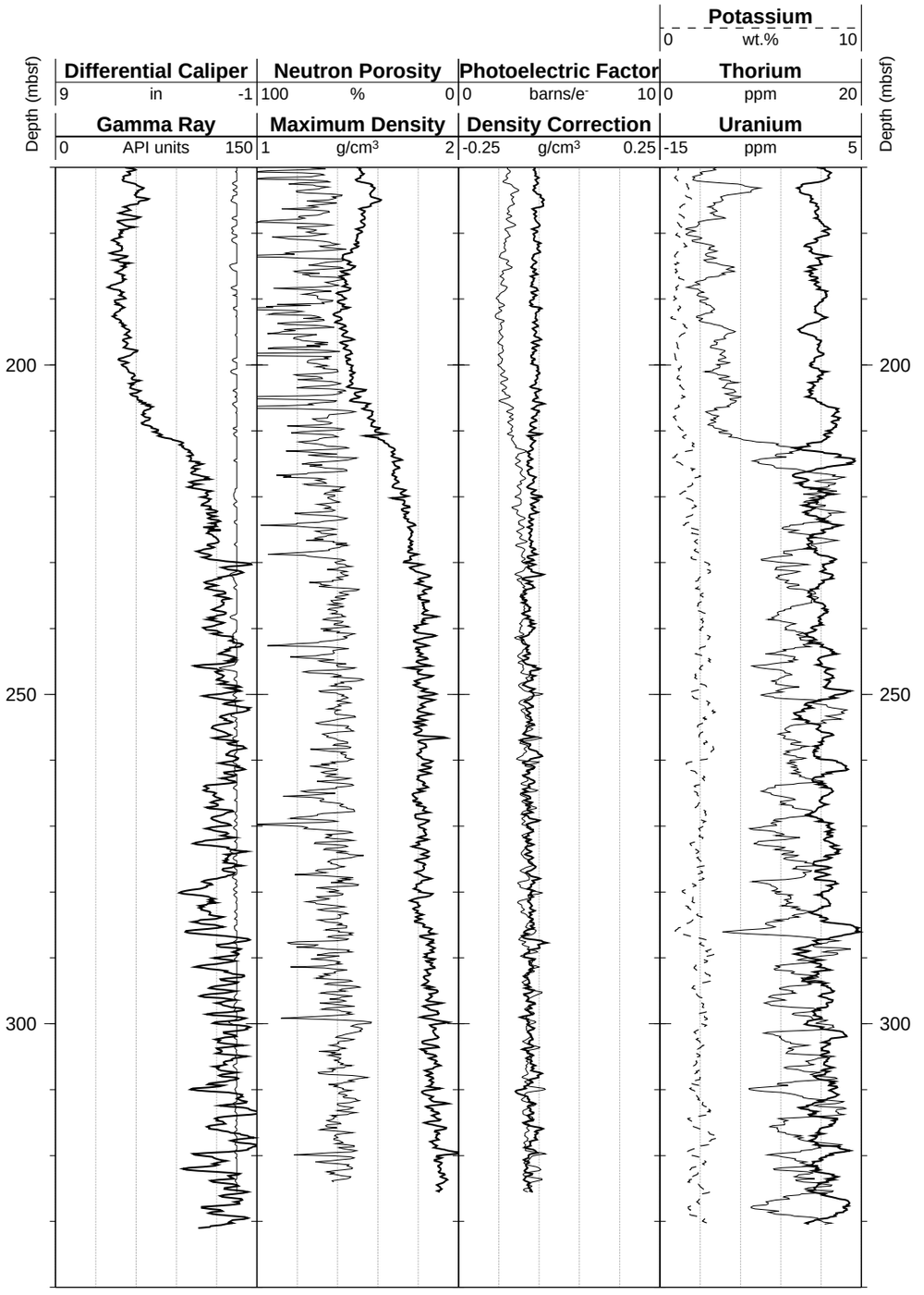
Hole 1048A: LWD Natural Gamma Ray-Resistivity Logging Data (cont.)



Hole 1048A: LWD Natural Gamma Ray-Density-Porosity Logging Data



Hole 1048A: LWD Natural Gamma Ray-Density-Porosity Logging Data (cont.)



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