SHORE-BASED LOG PROCESSING
HOLE 1061A

Bottom felt: 4058.0 mbrf
Total penetration: 350.3 mbsf
Total core recovered: 298.2 m (85.1%)

Logging Runs

Logging string 1: DIT/HLDT/APS/HNGS
Logging string 2: FMS/GPIT/SDT/NGT (2 passes)

The wireline heave compensator was used to counter ship heave during the DIT/HLDT/APS/HNGS pass and during pass 2 of the FMS/GPIT/SDT/NGT.

Bottom-Hole Assembly/Pipe

The following bottom-hole assembly depths are as they appear on the logs after differential depth shift (see "Depth shift" section) and depth shift to the seafloor. As such, there might be a discrepancy with the original depths given by the drillers on board. Possible reasons for depth discrepancies are ship heave, use of wireline heave compensator, and drill string and/or wireline stretch.

DIT/HLDT/APS/HNGS: Bottom-hole assembly at ~88 mbsf
FMS/GPIT/SDT/NGT: Bottom-hole assembly at ~88 mbsf (pass 1)
FMS/GPIT/SDT/NGT: Recorded open-hole
DIT/HLDT/APS/HNGS: Drill pipe at ~27 mbsf

Processing

Depth shift: Original logs have been interactively depth shifted with reference to NGT from FMS/GPIT/SDT/NGT pass 1 and to the seafloor (–4046.5 m). This value corresponds to the sea-bottom depth as observed on the logs and differs 11.5 m from the drillers' "bottom felt" depth. A list of the amount of differential depth shifts applied at this hole is available upon request.

Gamma-ray processing: NGT data from the FMS/GPIT/SDT/NGT runs have been processed to correct for borehole size and type of drilling fluid. HNGS data from the DIT/APS/HLDT/HNGS tool string were corrected in real-time during the recording.

Acoustic data processing: The array sonic tool was operated in standard depth-derived borehole compensated mode, including long-spacing (8-10-10-12 ft) and short-spacing (3-5-5-7 ft) logs. Because of the extremely low quality of the sonic logs, no processing from the transit times can be performed. Sonic waveform processing is necessary to obtain meaningful results.

High-resolution data: Bulk density and neutron porosity data were recorded at a sampling rate of 2.54 and 5.08 cm, respectively. The enhanced bulk density curve is the result of Schlumberger enhanced processing technique performed on the MAXIS system on board. Whereas in normal processing short-spacing data are smoothed to match the long-spacing ones, in enhanced processing this is reversed. In a situation where there is good contact between the HLDT pad and the borehole wall (low density correction) the results are improved because the short-spacing has better vertical resolution.

Quality Control

Null value = –999.25. This value generally may replace invalid log values.

During the processing, quality control of the data is mainly performed by cross-correlation of all logging data. Large (>12 in) and/or irregular borehole affects most recordings, particularly those that require eccentralization (APS, HLDT) and a good contact with the borehole wall. Hole deviation can also affect the data negatively; the FMS, for example, is not designed to be run in holes deviated more than 10°, as the tool weight might cause the caliper to close.

Data recorded through bottom-hole assembly should be used qualitatively only because of the attenuation on the incoming signal.

The deep resistivity reading (IDPH) from the phasor dual induction tool is invalid; it has been replaced by the deep dual induction curve (ILD).

Invalid photoelectric effect spikes were recorded at 168 and 191 mbsf.

Hole diameter was recorded by the hydraulic caliper on the HLDT tool (CALI) and on the FMS string (C1 and C2).

Additional information about the logs can be found in the "Explanatory Notes" and site chapters, ODP *Initial Reports* Volume 172. For further questions about the logs, please contact:

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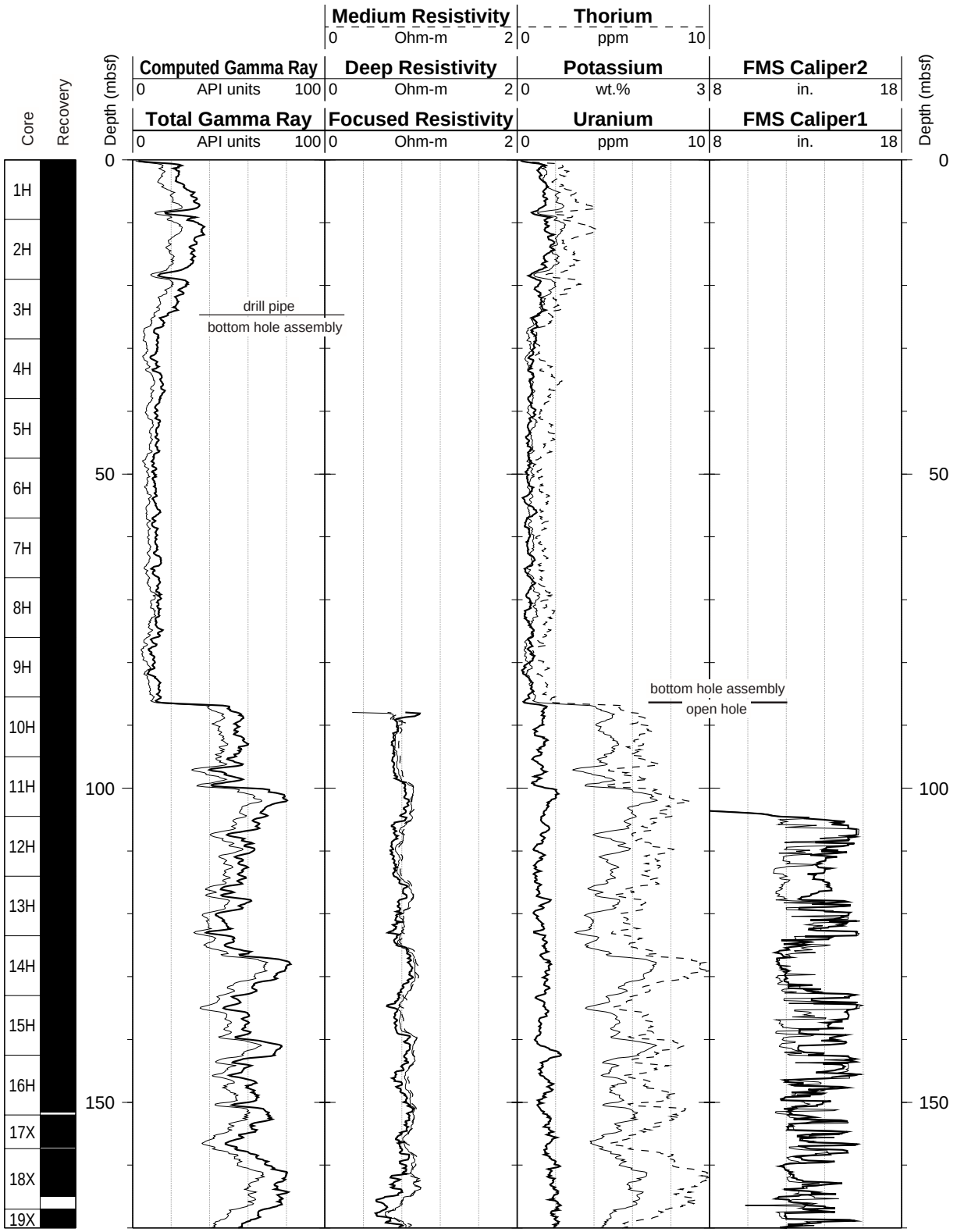
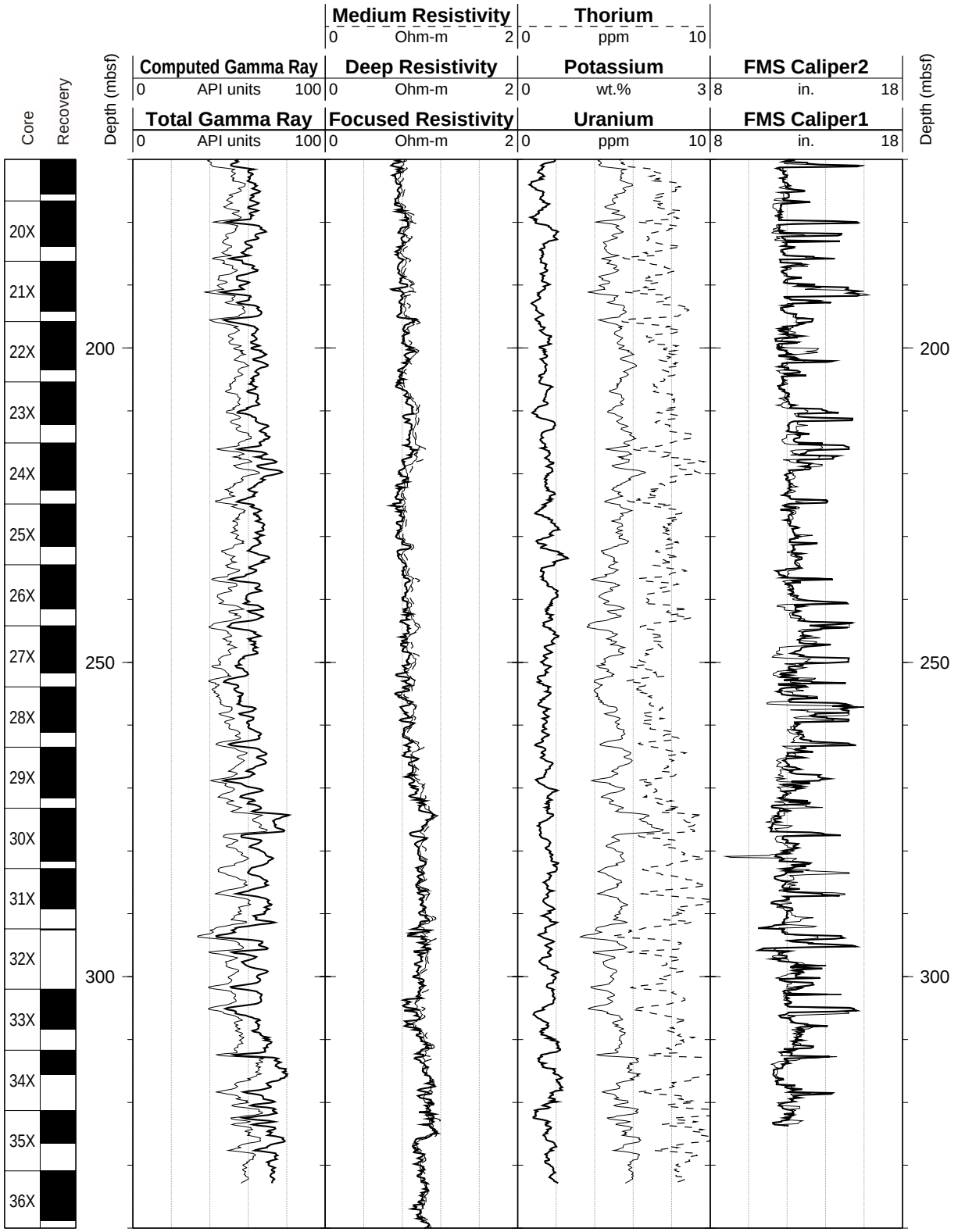
Fax: 914-365-3182
E-mail: chris@ldeo.columbia.edu

Prior Chapter Contents

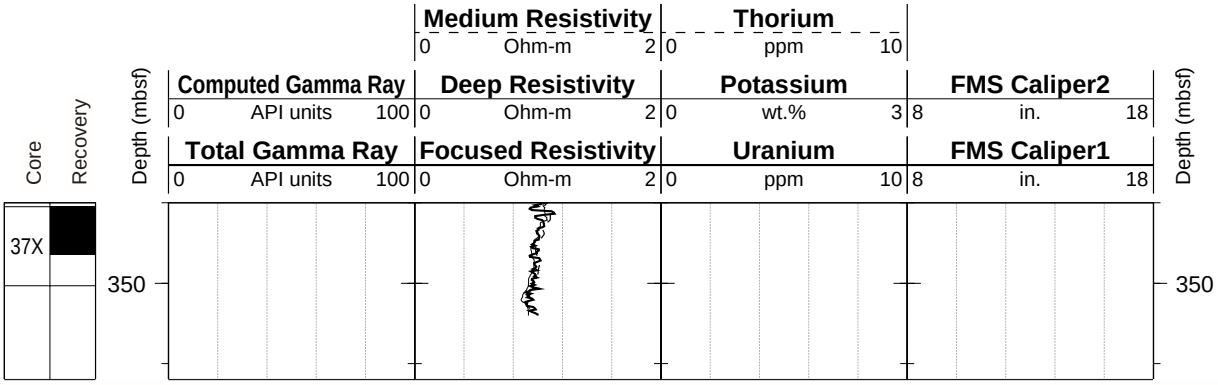
Hole 1061A: Natural Gamma Ray-Resistivity Logging Data



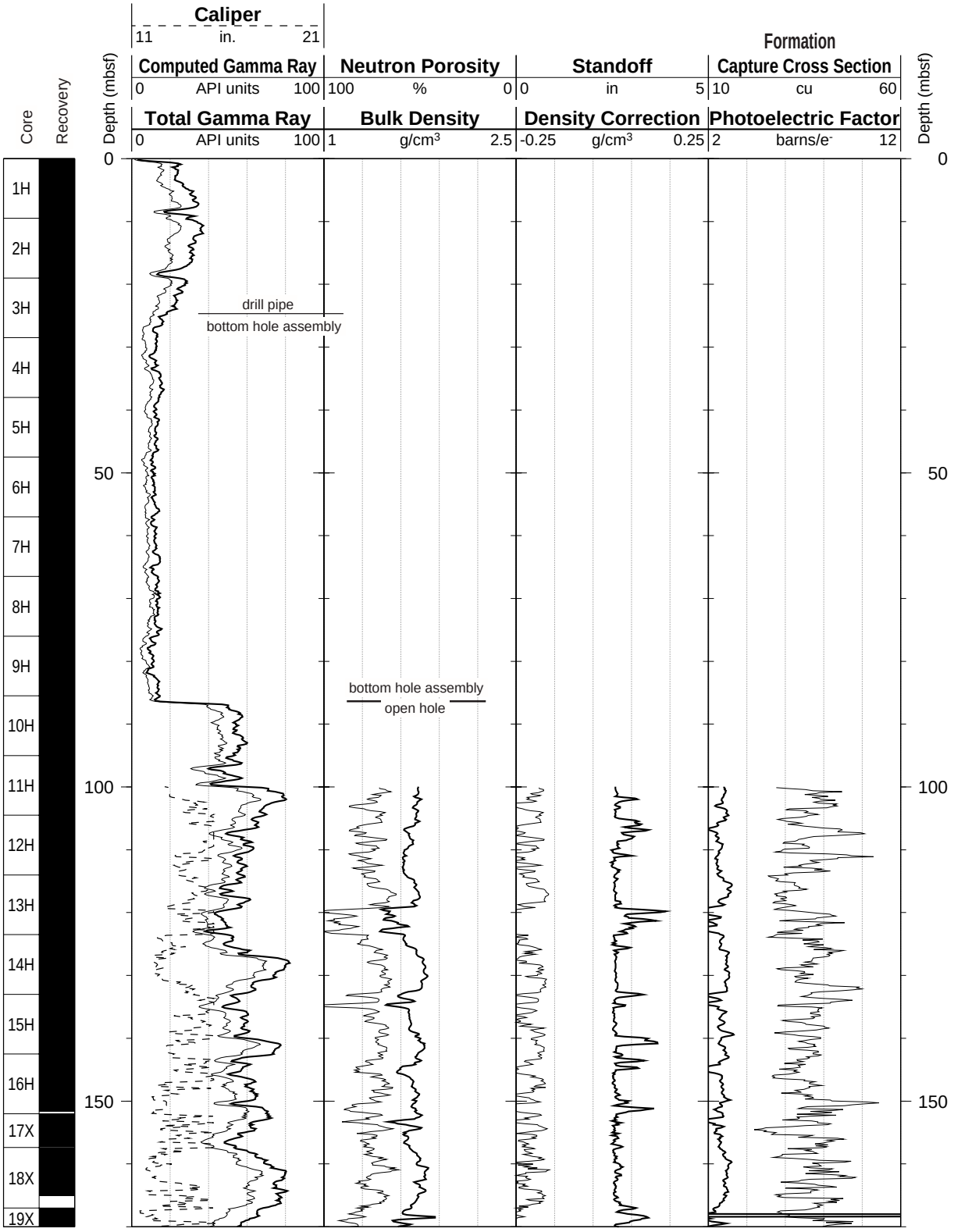
Hole 1061A: Natural Gamma Ray-Resistivity Logging Data (cont.)



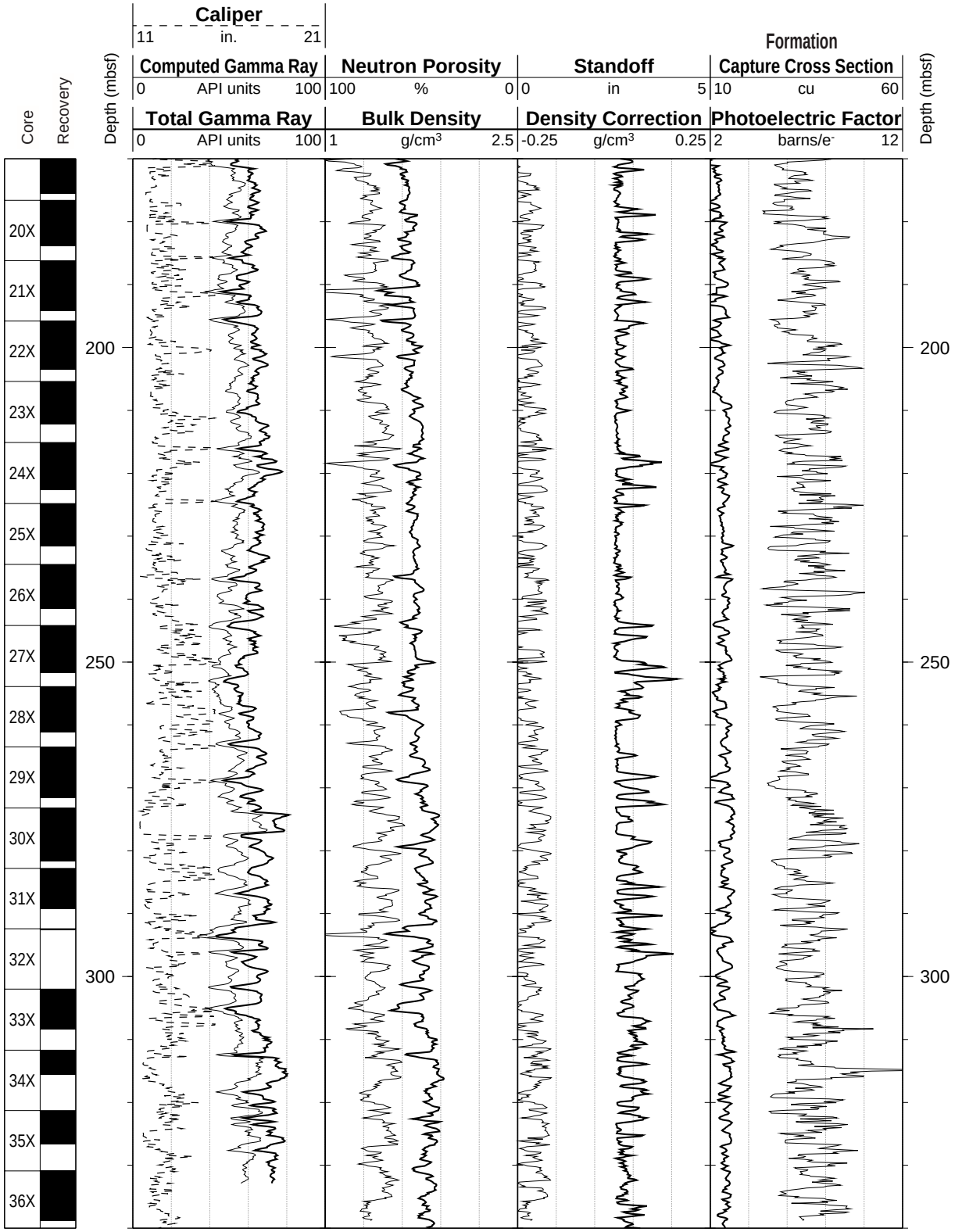
Hole 1061A: Natural Gamma Ray-Resistivity Logging Data (cont.)



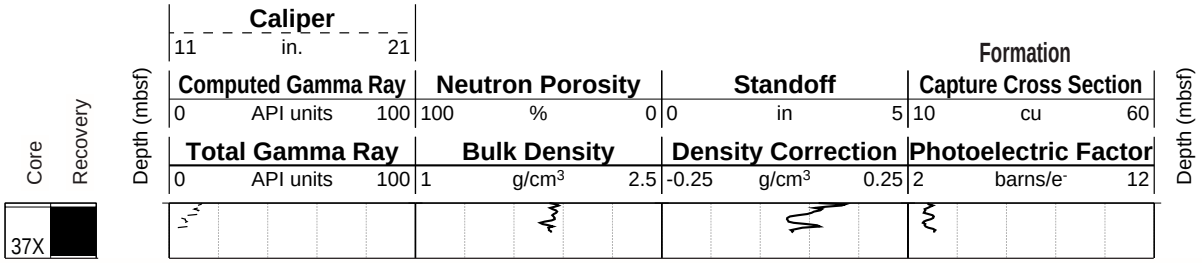
Hole 1061A: Natural Gamma Ray-Density-Porosity Logging Data



Hole 1061A: Natural Gamma Ray-Density-Porosity Logging Data (cont.)



Hole 1061A: Natural Gamma Ray-Density-Porosity Logging Data (cont.)



SHORE-BASED LOG PROCESSING
HOLE 1063A

Bottom felt: 4595.2 mbrf
Total penetration: 418.4 mbsf
Total core recovered: 400.3 m (95.7%)

Logging Runs

Logging string 1: DIT/HLDT/APS/HNGS
Logging string 2: FMS/GPIT/SDT/NGT (2 passes)

The wireline heave compensator was used to counter ship heave.

Bottom-Hole Assembly

The following bottom-hole assembly depths are as they appear on the logs after differential depth shift (see "Depth shift" section) and depth shift to the seafloor. As such, there might be a discrepancy with the original depths given by the drillers on board. Possible reasons for depth discrepancies are ship heave, use of wireline heave compensator, and drill string and/or wireline stretch.

DIT/HLDT/APS/HNGS: Bottom-hole assembly at ~90 mbsf
FMS/GPIT/SDT/NGT: Recorded open-hole (pass 1)
FMS/GPIT/SDT/NGT: Bottom-hole assembly at ~90 mbsf (pass 2)

Processing

Depth shift: Original logs have been interactively depth shifted with reference to NGT from DIT/HLDT/APS/HNGS and to the seafloor (–4593 m). This value corresponds to the sea-bottom depth as observed on the logs and differs 2.2 m from the drillers' "bottom felt" depth. A list of the amount of differential depth shifts applied at this hole is available upon request.

Gamma-ray processing: NGT data from the FMS/GPIT/SDT/NGT runs have been processed to correct for borehole size and type of drilling fluid. HNGS data from the DIT/APS/HLDT/HNGS tool string were corrected in real-time during the recording.

Acoustic data processing: The array sonic tool was operated in standard depth-derived borehole compensated mode, including long-spacing (8-10-10-12 ft) and short-spacing (3-5-5-7 ft) logs. The long-spacing sonic logs from the second pass have been processed despite the poor quality of the data and a 100 µs offset on one of the 10-ft spacing channels (LTT4). Processing has been performed in the 90–375 mbsf interval only. The results show poor correlation with the other channels; caution is recommended when they are used for interpretation.

High-resolution data: Bulk density and neutron porosity data were recorded at a sampling rate of 2.54 and 5.08 cm, respectively. The enhanced bulk density curve is the result of Schlumberger enhanced processing technique performed on the MAXIS system on board. Whereas in normal processing short-spacing data are smoothed to match the long-spacing ones, in enhanced processing this is reversed. In a situation where there is good contact between the HLDT pad and the borehole wall (low density correction) the results are improved because the short-spacing has better vertical resolution.

Quality Control

Null value = –999.25. This value generally may replace invalid log values.

During the processing, quality control of the data is mainly performed by cross-correlation of all logging data. Large (>12 in) and/or irregular borehole affects most recordings, particularly those that require eccentralization (APS, HLDT) and a good contact with the borehole wall. Hole deviation can also affect the data negatively; the FMS, for example, is not designed to be run in holes deviated more than 10°, because the tool weight might cause the caliper to close.

Data recorded through bottom-hole assembly should be used qualitatively only because of the attenuation on the incoming signal.

The deep resistivity reading (IDPH) from the phasor dual induction tool is invalid; it has been replaced by the deep dual induction curve (ILD).

Invalid photoelectric effect spikes were recorded at 106, 124–129, 133–134, 138, 158–160, 163, 179 216, and 247 mbsf.

Hole diameter was recorded by the hydraulic caliper on the HLDT tool (CALI) and on the FMS string (C1 and C2).

Additional information about the logs can be found in the "Explanatory Notes" and site chapters, ODP *Initial Reports* Volume 172. For further questions about the logs, please contact:

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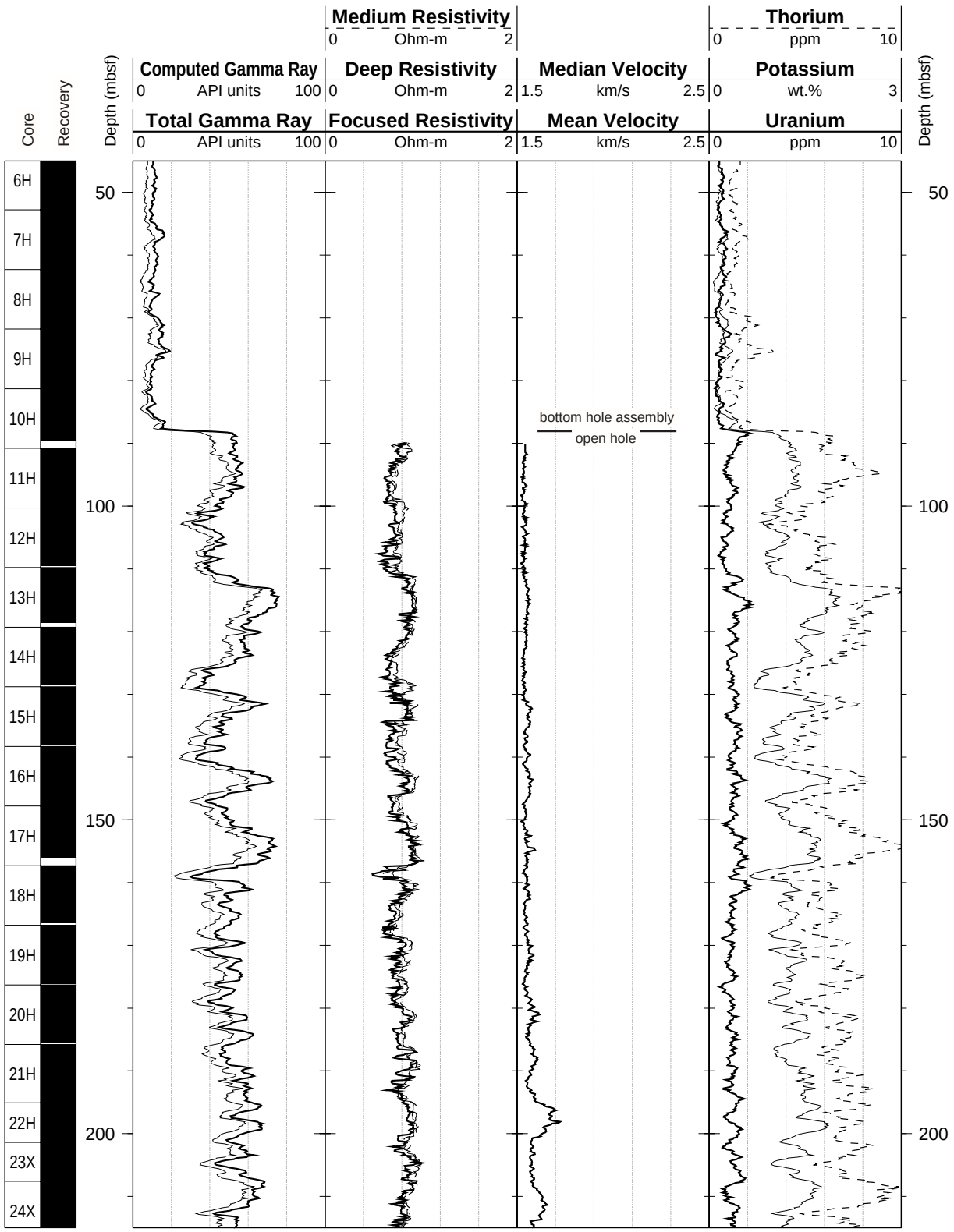
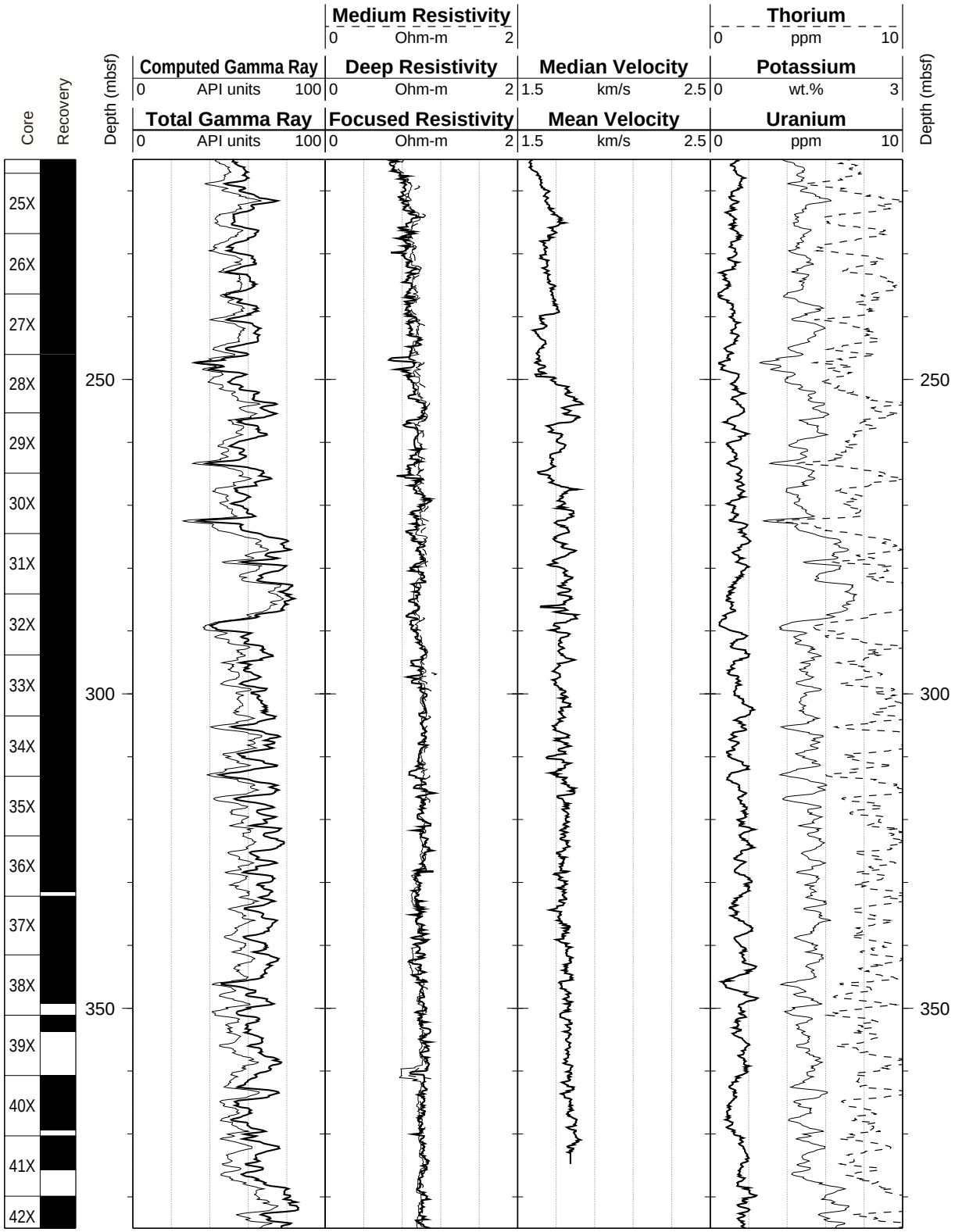
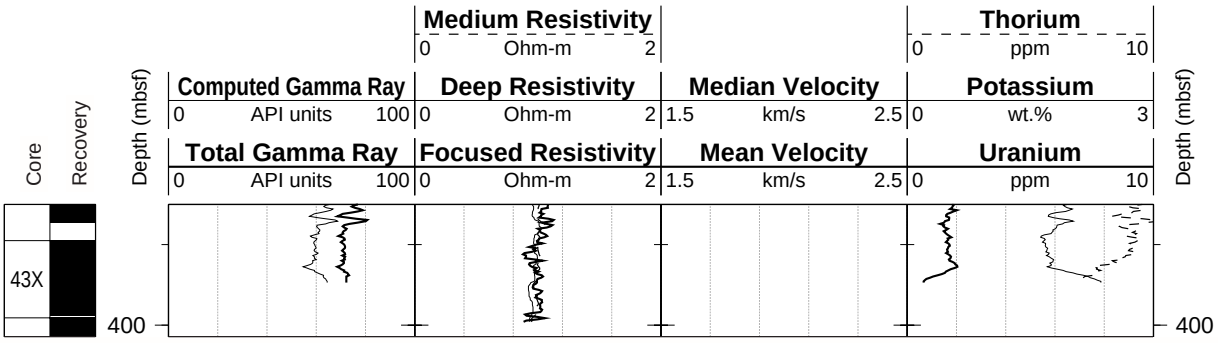
Hole 1063A: Natural Gamma Ray-Resistivity-Sonic Logging Data



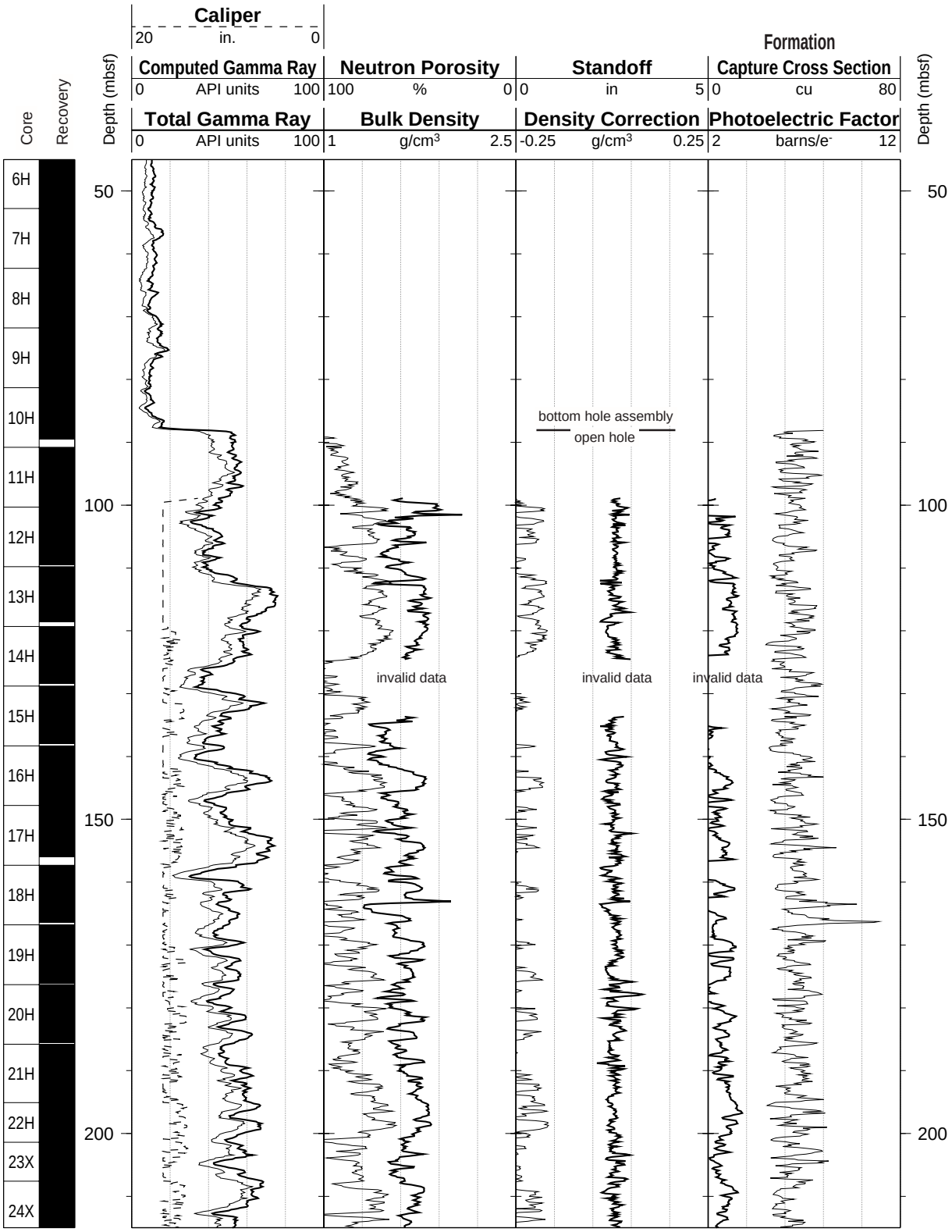
Hole 1063A: Natural Gamma Ray-Resistivity-Sonic Logging Data (cont.)



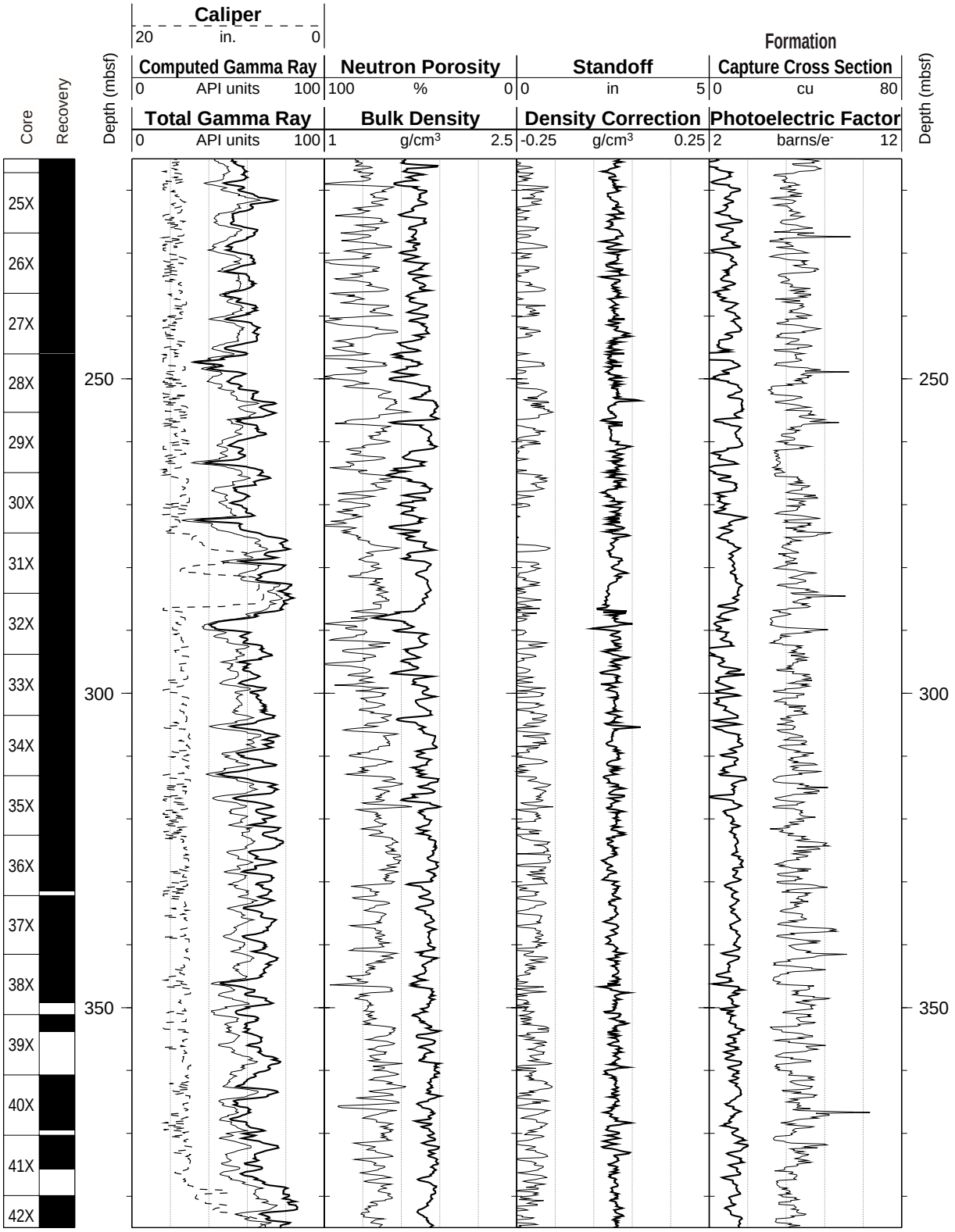
Hole 1063A: Natural Gamma Ray-Resistivity-Sonic Logging Data (cont.)



Hole 1063A: Natural Gamma Ray-Density-Porosity Logging Data



Hole 1063A: Natural Gamma Ray-Density-Porosity Logging Data (cont.)



Hole 1063A: Natural Gamma Ray-Density-Porosity Logging Data (cont.)