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Fremantle, Australia, to Fremantle, Australia
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National Science Foundation (United States)

Natural Environment Research Council (United Kingdom)

University of Tokyo, Ocean Research Institute (Japan)

Abbreviations for names of organizations and publications in ODP reference lists follow the style given in *Chemical Abstracts Service Source Index* (published by American Chemical Society).

The bulk of the shipboard-collected data from this leg is available on the World Wide Web and is accessible at **www-odp.tamu.edu/database**. If you cannot access this site or need additional data, please contact the ODP Data Librarian, Ocean Drilling Program, Texas A&M University, College Station TX 77845-9547, USA (e-mail: **database@odpemail.tamu.edu**).

Supplemental data on the volume CD-ROM were provided by the authors and may not conform to ODP publication formats.

A site map showing the drilling locations for this leg and maps showing the drilling locations of all Ocean Drilling Program (ODP) and Deep Sea Drilling Project (DSDP) drilling sites are available on the volume CD in PDF format. These maps were produced using Generic Mapping Tools (GMT) of Paul Wessel and Walter H.R. Smith (imina.soest.hawaii.edu/gmt/).

Cover photograph is of the *JOIDES Resolution* by Photographer Roy Davis.

Foreword

By Joint Oceanographic Institutions, Inc.

This volume presents scientific and engineering results from the Ocean Drilling Program (ODP). These results address the scientific and technical goals of the program, which are focused on the study of the dynamics of Earth's interior and environment.

ODP, an international partnership of scientists and research institutions from 22 countries, operates the drillship *JOIDES Resolution.* This state-of-the-art research vessel contains seven levels of laboratories and other scientific facilities required for carrying out the program's objectives.

The management of ODP involves a partnership of scientists and governments. International oversight and coordination are provided by the ODP Council, which is made up of representatives from the member countries. Overall scientific and management guidance is provided by representatives from the Joint Oceanographic Institutions for Deep Earth Sampling (JOIDES).

Joint Oceanographic Institutions, Inc. (JOI), a nonprofit consortium of eleven U.S. oceanographic institutions, serves as the National Science Foundation's prime contractor for ODP. JOI implements scientific objectives, plans, and recommendations of the JOIDES committees through major subcontracts to Texas A&M University (TAMU) for science operations and to Lamont-Doherty Earth Observatory (LDEO) of Columbia University for logging services.

JOI, TAMU, and LDEO have worked together successfully for many years to manage the Ocean Drilling Program. We look forward to many exciting discoveries and continued international collaboration as we further our scientific mission, especially the planning for the future of ocean drilling beyond 2003.

James D. Watkins
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Columbia University, Lamont-Doherty Earth Observatory

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University of Miami, Rosenstiel School of Marine and Atmospheric Science

University of Michigan, College of Literature, Science, and the Arts

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Oregon State University, College of Oceanic and Atmospheric Sciences

University of Rhode Island, Graduate School of Oceanography

Texas A&M University, College of Geosciences

University of Texas at Austin, Institute for Geophysics

*At time of publication. See **Publisher's Notes,** p. 5, for list of funding agencies at time of cruise. For an up-to-date list of current member organizations and office contact information, see the ODP Web site: **www.oceandrilling.org.**

University of Washington, College of Ocean and Fishery Sciences

Woods Hole Oceanographic Institution

Australia/Canada/Chinese Taipei/Korea Consortium for Ocean Drilling: Department of Primary Industries and Energy (Australia), Natural Resources Canada, National Taiwan University in Taipei, and Korean Institute for Geology, Mining and Minerals

European Science Foundation Consortium for Ocean Drilling (Belgium, Denmark, Finland, Iceland, Ireland, Italy, The Netherlands, Norway, Portugal, Spain, Sweden, and Switzerland)

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Japan, University of Tokyo, Ocean Research Institute

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Acknowledgments

Leg 187 began in Fremantle with a dirty and disorganized *JOIDES Resolution* (JR) looking far from fresh after dry dock. We returned to Fremantle clean and shipshape with new blue paint from end to end. In the interim, we had more than achieved our objectives, having recovered basalts from 23 holes, running a record length of drill pipe through the rig floor in the process.

The success of Leg 187 owes a great deal to the crews of the JR. Despite the unusual amount of maintenance and restoration work required and despite the numerous, long drill strings that were deployed and redeployed every few days, the drill crews, the ship's crews, and the science support team dedicated themselves completely to the success of our science program. We are grateful to all of them.

Leg 187 brought some unusual requirements to the Ocean Drilling Program (ODP) with its focus on a responsive drilling strategy based on having a shipboard analytical capability. We thank the various ODP staff members and the volunteer committee members who devoted their time and efforts to fulfilling these requirements.

CD-ROM Contents: Chapters

CD-ROM Contents: Core Descriptions

Digital images and visual core descriptions (VCDs) are included in this section plus structural descriptions. VCDs, thin-section data tables, and structural descriptions are combined into one PDF file for each site.

Site 1152
Visual Core Descriptions · Thin Sections · Structural Descriptions

Site 1153
Visual Core Descriptions · Thin Sections · Structural Descriptions

Site 1154
Visual Core Descriptions · Thin Sections · Structural Descriptions

Site 1155
Visual Core Descriptions · Thin Sections · Structural Descriptions

Site 1156
Visual Core Descriptions · Thin Sections · Structural Descriptions

Site 1157
Visual Core Descriptions · Thin Sections · Structural Descriptions

Site 1158
Visual Core Descriptions · Thin Sections · Structural Descriptions

Site 1159
Visual Core Descriptions · Thin Sections · Structural Descriptions

Site 1160
Visual Core Descriptions · Thin Sections · Structural Descriptions

Site 1161
Visual Core Descriptions · Thin Sections · Structural Descriptions

Site 1162
Visual Core Descriptions · Thin Sections · Structural Descriptions

Site 1163
Visual Core Descriptions · Thin Sections · Structural Descriptions

Site 1164
Visual Core Descriptions · Thin Sections · Structural Descriptions

CD-ROM Contents: ASCII Tables

This CD-ROM contains ASCII versions of all of the **data tables** presented in the volume chapters. A complete listing of the ASCII data tables can be found on the next four pages.

You can access these files directly from the PDF files. Depending on your computer platform, the following information applies.

PC computers

By default, clicking on a filename with a .TXT extension will launch the Notepad application. You can configure your computer's operating system so that files on this CD with .TXT extensions automatically open in other software, such as Microsoft Excel. Follow these steps from the pull-down menu: Windows 95 and NT operating systems: View > Options > File Types, and Windows 98 systems: View > Folder Options > File Types.

MAC computers

All table files with .TXT extensions will automatically open into Excel. If you do not have Excel installed on your computer, you may view these files through other spreadsheet or text-editor programs. Open the application of your choice, select File > Open, and open the ASCII file.

UNIX computers

You can open files with .TXT extensions in any text editor or spreadsheet program, but not directly from PDF files.

CD-ROM Contents: Supplementary Materials

These files must be viewed with appropriate software (Microsoft Excel 97/98) and are located in the SUPP_MAT directory. A complete listing of the supplementary materials can be found on the next page.

STR_LOGS

SITE1152.XLS: Structural data for Site 1152.
SITE1153.XLS: Structural data for Site 1153.
SITE1154.XLS: Structural data for Site 1154.
SITE1155.XLS: Structural data for Site 1155.
SITE1156.XLS: Structural data for Site 1156.
SITE1157.XLS: Structural data for Site 1157.
SITE1158.XLS: Structural data for Site 1158.
SITE1159.XLS: Structural data for Site 1159.
SITE1160.XLS: Structural data for Site 1160.
SITE1161.XLS: Structural data for Site 1161.
SITE1162.XLS: Structural data for Site 1162.
SITE1163.XLS: Structural data for Site 1163.
SITE1164.XLS: Structural data for Site 1164.

CURATION.XLS: Leg 187 curation data.

PHOTOLOG.XLS: Leg 187 digital photomicrograph log.

MICROBIO.XLS: Leg 187 master microbiology table.

T_SECT

1152_TS.XLS: Thin-section data table, Site 1152.
1153_TS.XLS: Thin-section data table, Site 1153.
1154_TS.XLS: Thin-section data table, Site 1154.
1155_TS.XLS: Thin-section data table, Site 1155.
1156_TS.XLS: Thin-section data table, Site 1156.
1157_TS.XLS: Thin-section data table, Site 1157.
1158_TS.XLS: Thin-section data table, Site 1158.
1159_TS.XLS: Thin-section data table, Site 1159.
1160_TS.XLS: Thin-section data table, Site 1160.

1161_TS.XLS: Thin-section data table, Site 1161.
1162_TS.XLS: Thin-section data table, Site 1162.
1163_TS.XLS: Thin-section data table, Site 1163.
1164_TS.XLS: Thin-section data table, Site 1164.

README.TXT

CD-ROM Contents: Drilling Locations Maps

A site map showing the drilling locations for this leg and maps showing the drilling locations of all Ocean Drilling Program (ODP) and Deep Sea Drilling Project (DSDP) drilling sites are available in PDF format.

ODP Leg 187 Site Maps

ODP Map (Legs 100–187)

DSDP Map (Legs 1–96)

Related Leg Data

Core Data

Core data collected during Leg 187 are available on the World Wide Web at **www-odp.tamu.edu/database**. If you cannot access the ODP database or need additional data, please contact: ODP Data Librarian, Ocean Drilling Program, Texas A&M University, 1000 Discovery Drive, College Station TX 77845-9547, USA; Tel: (979) 845-8495; Fax: (979) 458-1617; E-mail: **database@odpemail.tamu.edu**.

Compiled Electronic Index

The Compiled Electronic Index of the *Proceedings of the Ocean Drilling Program* included on the *Initial Reports* CD-ROM contains individual indexes of Volumes 101–169 and 171A. The indexes are contained in the directory titled ODPINDEX and are named ###NDX.PDF (### = the leg number). These indexes can be searched individually or collectively.

CD-ROM Directory Structure

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- **README.PDF** (Information about the volume CD-ROM)
- **README.TXT** (Information about the volume CD-ROM in ASCII format)
- **ACROREAD** (Acrobat Reader 4.0 installation software and instructions for different platforms)
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    - **MAC**
    - **WINDOWS**
    - **UNIX**
  - **README.TXT**
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  - **DSDPMAP.PDF** (DSDP map, Legs 1 through 96)
- **VOLUME** (Leg 187 *Initial Reports* volume)
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    - **IR187_12.PDF** (Site 1161)
    - **IR187_13.PDF** (Site 1162)
    - **IR187_14.PDF** (Site 1163)
    - **IR187_15.PDF** (Site 1164)
  - **CORES** (Visual core descriptions, thin-section data tables, structural descriptions, and digital core images)
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    - **COR_1163.PDF** (Site 1163)
    - **COR_1164.PDF** (Site 1164)
    - **IMAGES** (PDF files of core images)

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CD-ROM Directory Structure (continued)