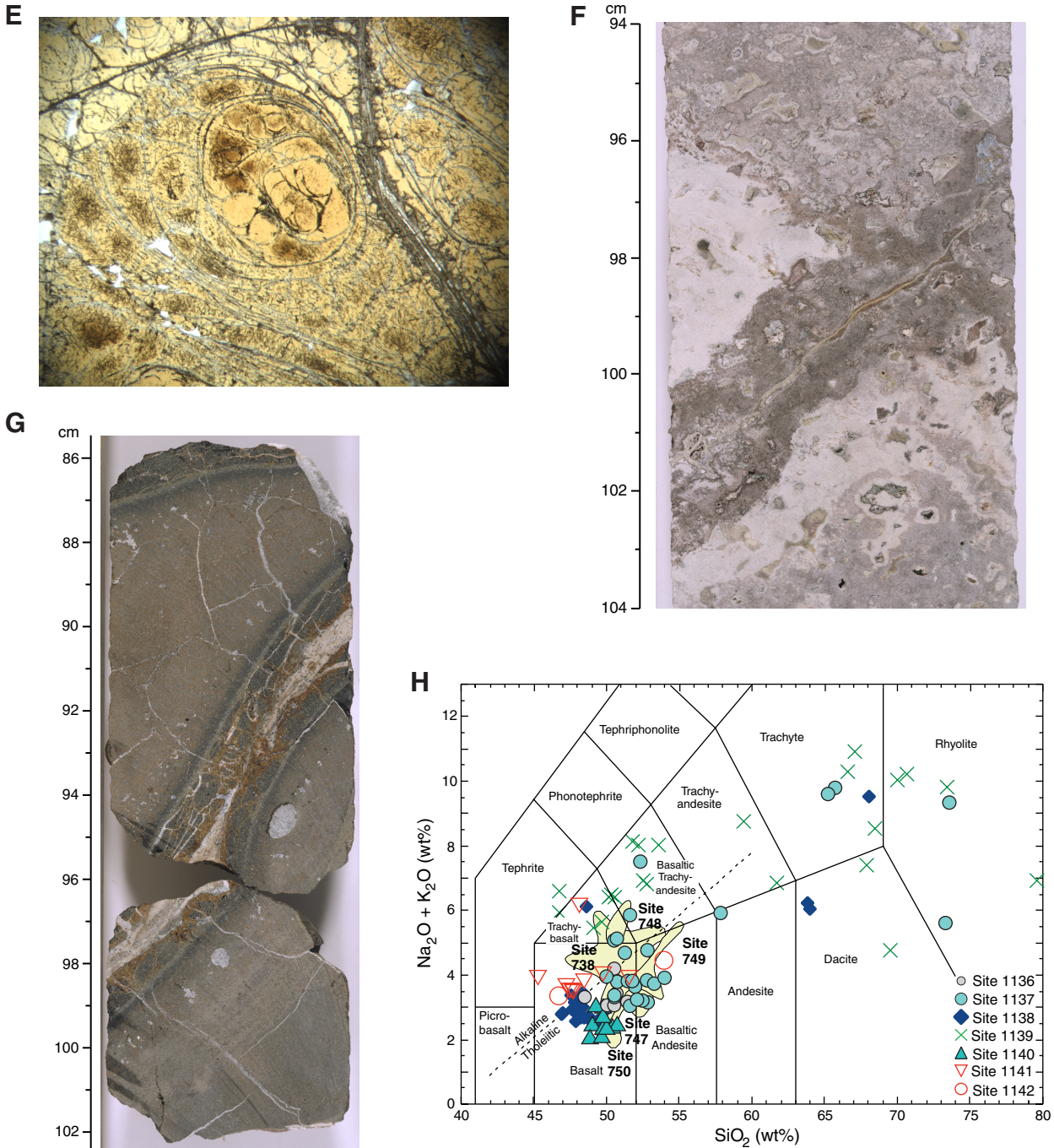


**Frontspiece.** A. Core photo of conglomerate from Site 1137 containing rare clasts of garnet-biotite gneiss. Interval 183-1137A-34R-3, 57–80 cm. B. Photomicrographs of garnet gneiss clasts from conglomerate (left) and crystal-vitric tuff (right) at Site 1137 showing poikiloblastic garnet (gt) and biotite (bt). Left: Sample 183-1137A-35R-2, 46–47 cm; field of view = 1.4 mm. Right: Sample 183-1137A-44R-4, 44–46 cm; field of view = 2.8 mm. C. Photomicrograph of crystal-vitric tuff at Site 1137 showing well-preserved cusped and tricusped glass shards, which form during explosive fragmentation of vesiculating magma. Sample 183-1137A-44R-4, 44–46 cm. Field of view = 1.40 mm. D. Formation MicroScanner image showing internal structure of a basaltic lava flow (Unit 2) at Site 1137. The horizontal exaggeration is ~4. (Continued on next page.)





**Frontispiece (continued).** **E.** Photomicrograph of spheroidal perlitic fractures in devitrified and altered felsic volcanic glass from Site 1139. Sample 183-1139A-53R-1, 127–130 cm; field of view = 5.5 mm. **F.** Core photo of highly to completely altered sanidine-phyric trachyandesite from Site 1139. Light gray rock with siderite-filled vesicles is overprinted by white (siderite and quartz) alteration. Quartz, siderite, and hematite(?) vein has prominent oxidation halo that cuts across the white alteration zone. Interval 183-1139A-70R-4, 94–104 cm. **G.** Core photo of glassy pillow rind at Site 1140 with calcite filling vesicles and veins. Open space-filled dolomite and baked white sediment is along the margin with the glass. Interval 183-1140A-28R-3, 86–101 cm. **H.** Compositions of volcanic rocks from all Leg 183 basement recovery sites on the  $\text{Na}_2\text{O} + \text{K}_2\text{O}$  vs.  $\text{SiO}_2$  classification diagram of Le Bas et al (1986)<sup>1</sup>. For comparison, fields are also indicated for volcanic rocks recovered from Kerguelen Plateau drill sites 738, 747, 748, 749, and 750.

<sup>1</sup>Le Bas, M.J., Le Maitre, R.W., Streckeisen, A., and Zanettin, B., 1986. A chemical classification of volcanic rocks based on the total alkali-silica diagram. *J. Petrol.*, 27:745–750.

# PROCEEDINGS OF THE OCEAN DRILLING PROGRAM

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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](http://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, U.S.A. (e-mail: [database@odpemail.tamu.edu](mailto:database@odpemail.tamu.edu)).

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

Some close-up photographs of very dark cores have been tonally enhanced to better illustrate particular features of interest.

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.

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# 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.

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<sup>1</sup>Chapter 1 appears in printed format and on Disc 1 of the *Initial Reports* CD-ROMs included with this booklet. All other contents are available on the volume CDs. Disc 1 contains Acrobat Reader 4 software; the volume table of contents, chapters, and related ASCII tables; volume readme files; and Ocean Drilling Program and Deep Sea Drilling Project site maps. Disc 2 contains visual core descriptions; smear-slide and thin-section data tables; supplementary materials; and the Compiled Index to the *Proceedings of the Ocean Drilling Program*. See “CD-ROM Directory Structure,” p. xvi, for more details.



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## CORE DESCRIPTIONS

Digital images and visual core descriptions (VCDs) are included in this section. VCDs, smear-slide data tables, and thin-section data tables are combined into one PDF file for each site. Smear-slide data tables in an ASCII format are also included in the TABLES directory.

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## ASCII TABLES

The *Initial Reports* CD-ROM contains ASCII versions of some of the data tables presented in the chapters and all of the smear-slide data tables presented under “Core Descriptions.” For a complete list of ASCII tables, see **183IR.PDF** on the *Initial Reports* CD.

## OVERSIZED FIGURE

Chapter 1, Figure 4B. Satellite-derived free-air gravity map of the Kerguelen Plateau with site lithologies.

## SUPPLEMENTARY DATA

### LOGS

Microsoft Excel 97/98 spreadsheets that record the alteration, piece, vein structure, and volcanology of rocks recovered during Leg 183 are presented. The filenames of these logs are listed in **183IR.PDF**.

### PHOTOMICROGRAPHS

The *Initial Reports* CD-ROM includes Microsoft Excel 97/98 photomicrograph logs and scanned digital photomicrographs from Leg 183. The photomicrographs are in JPEG format. The filenames of the photomicrographs and logs are listed in **183IR.PDF**.

## 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 on the *Initial Reports* volume CD-ROM in PDF format.

## RELATED LEG DATA

### LOGGING AND CORE DATA

A third CD-ROM is included with this volume. The Log and Core Data CD contains Leg 183 depth-shifted and processed logging data and ODP core data (shipboard gamma-ray attenuation, index properties, magnetic susceptibility, natural gamma, and *P*-wave). The logging data are provided by the Borehole Research Group at the Lamont-Doherty Earth Observatory, Wireline Logging Operator for ODP.

Most of the logging and core data included in this CD are available on the World Wide Web at [www.ldeo.columbia.edu/BRG/ODP](http://www.ldeo.columbia.edu/BRG/ODP). If you cannot access this site or want to order the CD, please contact the ODP Logging Services Operator at the Lamont-Doherty Earth Observatory, Tel: (914) 365-8672; Fax: (914) 365-3182; E-mail: [borehole@ldeo.columbia.edu](mailto:borehole@ldeo.columbia.edu).

The majority of the core data on the CD are available on the Web at [www-odp.tamu.edu/database](http://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, U.S.A; Tel: (979) 845-8495; Fax: (979) 458-1617; E-mail: [database@odpemail.tamu.edu](mailto:database@odpemail.tamu.edu).

# CD-ROM DIRECTORY STRUCTURE

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(Information about the volume CD-ROM)

### README.TXT

(Information about the volume CD-ROM in ASCII format)

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#### WINDOWS

#### UNIX

#### README.TXT

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(Drilling locations maps)

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#### ODPMAP.PDF (ODP map, Legs 100 through 183)

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#### Site 1135: IR183\_03.PDF

#### Site 1136: IR183\_04.PDF

#### Site 1137: IR183\_05.PDF

#### Site 1138: IR183\_06.PDF

#### Site 1139: IR183\_07.PDF

#### Site 1140: IR183\_08.PDF

#### Sites 1141 and 1142: IR183\_09.PDF

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(Tables in ASCII format of coring summaries, major and trace elements data, inorganic and organic geochemistry data, index properties, and smear-slide data)

#### IR183\_03 (Site 1135 files)

#### IR183\_04 (Site 1136 files)

#### IR183\_05 (Site 1137 files)

#### IR183\_06 (Site 1138 files)

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#### S\_SLIDES (Smear slides from Sites 1135–1141)

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# CD-ROM DIRECTORY STRUCTURE (CONTINUED)

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### README.PDF

(Information about the volume CD-ROM)

### README.TXT

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### VOLUME

(Continued from Disc 1)

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**Site 1137: COR\_1137.PDF**

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**Site 1141: COR\_1141.PDF**

**Site 1142: COR\_1142.PDF**

**IMAGES** (PDF files of core images)

#### INDEX.PDX

(Acrobat file used to enable Acrobat Search of 183 Initial Reports Disc 2)

### SUPP\_MAT

(Supplementary materials)

#### LOGS

(Alteration, piece, vein structure, and volcanology logs in Microsoft Excel 97/98)

**ALT\_LOG** (Alteration logs)

**PIECELOG** (Piece logs)

**VEIN\_STR** (Vein structure logs)

**VOLC\_LOG** (Volcanology logs)

#### PHOTOMIC

(Photomicrograph logs and scanned images)

**1136FOTO.XLS through 1142FOTO.XLS**

**IMAGES** (JPEG files of photomicrographs)

### ODPINDEX

(Compiled Electronic Index of the *Proceedings of the Ocean Drilling Program*)

**101NDX.PDF through 165NDX.PDF** (Index files)

#### NDX.PDX

(Adobe Acrobat file used to enable Acrobat Search of the Compiled Electronic Index)